# TOTAL IONIZING DOSE PROGRESS TEST REPORT

## LM124AWG-R-QMLV
## Quadruple Operational Amplifier
## DC1306A
## From
## National Semiconductor

| TRAD/TE/LM124AWG-R-QMLV/1306A/ESA/MV/1410 | | Labège, May 22nd, 2015 |
|---|---|---|
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| Revision: 0 | Creation of the document | |
| Revision: 1 | Addition of table of test parameters | |
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# 1. INTRODUCTION

This progress report describes the testing and characterization of the **LM124AWG-R-QMLV** manufactured by **National Semiconductor**. Testing began on February 16th, 2015 and ended on April 07th, 2015.

# 2. PART INFORMATION

## 2.1. Identification

| | |
|---|---|
| **Part designation** | LM124AWG-R-QMLV |
| **Manufacturer** | National Semiconductor |
| **Part function** | Quadruple Operational Amplifier |

## 2.2. Procurement information

| | |
|---|---|
| **Package** | SOIC-14 |
| **Date Code** | 1306A |
| **Charge No** | 94456 |
| **Number of tested parts** | 30 irradiated samples (Biased OFF) + 1 reference sample |

# 3. COMMENTS

The irradiation test on **30 LM124AWG-R-QMLV**, a **Quadruple Operational Amplifier** from **National Semiconductor** is using gamma rays from Cobalt 60 source, at low dose rate (210 rad(Si)/h).

For an easier result visualisation, measurements and graphs have been separated per lot.

The black curve with no drift is the DUT reference (not irradiated).

During irradiation, a large drift appears on all “Iib” and “Vio” measurements. A small drift appears on few other measurements (Icc, PSRR, SR).
Some of “Vio” parameters become out of specification and a part of them remain out of specification after the small annealing effect.
For the PSRR parameter, measurement dispersion is observed for the first four dose steps. This can be due to a low precision measurement (when the parameter is high) or a circuit effect. The PSRR of the reference part remains stable.
All parts remain functional up to total dose level.

## 4. TEST PARAMETERS

| Parameters | Symbols | Test conditions |
|---|---|---|
| **Ta=25°C, unless otherwise specified** | | |
| Input Offset Voltage | **VIO1** | +VCC=30V; -VCC=GND; VCM=+15V |
| | **VIO2** | +VCC=2V; -VCC=-28V; VCM=-13V |
| | **VIO3** | +VCC=5V; -VCC=GND; VCM=+1.4V |
| | **VIO4** | +VCC=2.5V; -VCC=-2.5V; VCM=-1.1V |
| Positive Input Bias Current | **+IIB1** | +VCC=30V; -VCC=GND; VCM=+15V |
| | **+IIB2** | +VCC=2V; -VCC=-28V; VCM=-13V |
| | **+IIB3** | +VCC=5V; -VCC=GND; VCM=+1.4V |
| | **+IIB4** | +VCC=2.5V; -VCC=-2.5V; VCM=-1.1V |
| Negative Input Bias Current | **-IIB1** | +VCC=30V; -VCC=GND; VCM=+15V |
| | **-IIB2** | +VCC=2V; -VCC=-28V; VCM=-13V |
| | **-IIB3** | +VCC=5V; -VCC=GND; VCM=+1.4V |
| | **-IIB4** | +VCC=2.5V; -VCC=-2.5V; VCM=-1.1V |
| Input Offset Current | **IIO1** | +VCC=30V; -VCC=GND; VCM=+15V |
| | **IIO2** | +VCC=2V; -VCC=-28V; VCM=-13V |
| | **IIO3** | +VCC=5V; -VCC=GND; VCM=+1.4V |
| | **IIO4** | +VCC=2.5V; -VCC=-2.5V; VCM=-1.1V |
| Voltage Gain | **AVS1** | +VCC=30V; -VCC=GND; 1V<Vout<26V; RL=10kΩ |
| | **AVS2** | +VCC=30V; -VCC=GND; 5V<Vout<20V; RL=2kΩ |
| | **AVS3** | +VCC=5V; -VCC=GND; 1V<Vout<2.5V; RL=10kΩ |
| | **AVS4** | +VCC=5V; -VCC=GND; 1V<Vout<2.5V; RL=2kΩ |
| Power Supply Current | **ICC** | +VCC=30V; -VCC=GND |
| Power Supply Rejection Ratio | **PSRR** | -VCC=GND; VCM=+1.4V; 5V<+VCC<30V |
| Common Mode Rejection Ratio | **CMRR** | |
| Low Level Output Voltage | **VOL1** | +VCC=30V; -VCC=GND; RL=10kΩ |
| | **VOL2** | +VCC=30V; -VCC=GND; IOL=5mA |
| | **VOL3** | +VCC=4.5V; -VCC=GND; IOL=2µA |
| High Level Output Voltage | **VOH1** | +VCC=30V; -VCC=GND; IOH=-10mA |
| | **VOH2** | +VCC=4.5V; -VCC=GND; IOH=-10mA |
| Maximum Outpout Voltage Swing | **+VOP1** | +VCC=30V; -VCC=GND; VO=+30V; RL=10kΩ |
| | **+VOP2** | +VCC=30V; -VCC=GND; VO=+30V; RL=2kΩ |
| Slew Rate | **SR+** | +VCC=30V; -VCC=GND |
| | **SR-** | +VCC=30V; -VCC=GND |

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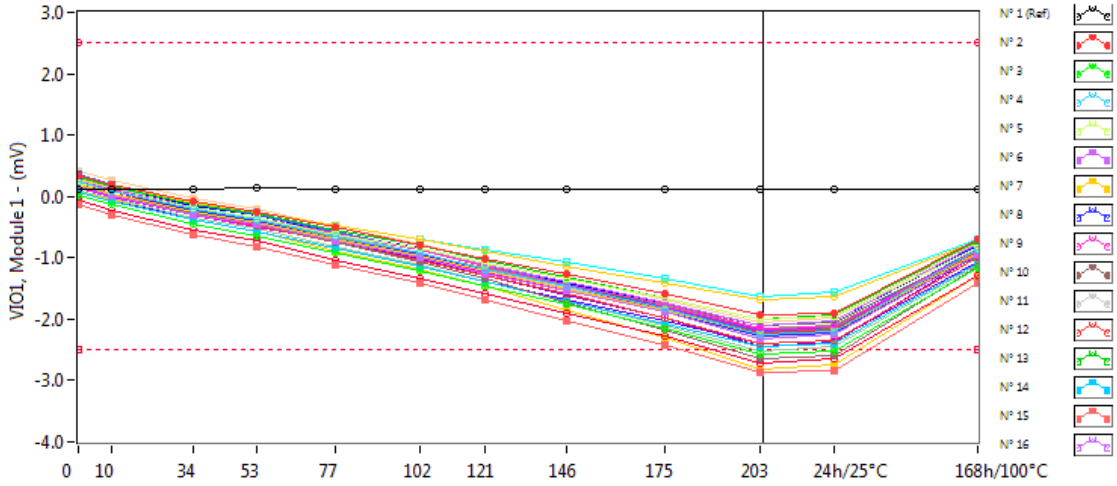
# 1. VIO1, Module 1

**Ta=25°C; +VCC=30V; -VCC=GND; VCM=+15V**

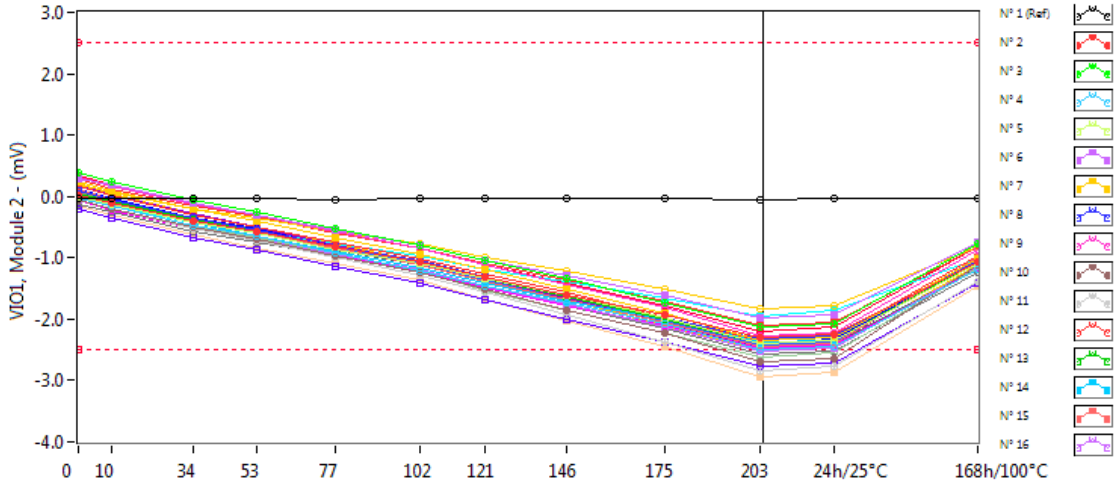



**VIO1, Module 1 . (mV)** **Min = -2.5 Max = 2.5**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 0.109 | 0.125 | 0.119 | 0.138 | 0.104 | 0.128 | 0.121 | 0.112 | 0.118 | 0.105 | 0.126 | 0.127 |
| N° 2 | 0.345 | 0.193 | -0.092 | -0.257 | -0.509 | -0.788 | -1.006 | -1.275 | -1.584 | -1.936 | -1.899 | -0.705 |
| N° 3 | 0.007 | -0.131 | -0.447 | -0.640 | -0.930 | -1.216 | -1.469 | -1.761 | -2.156 | -2.567 | -2.515 | -1.167 |
| N° 4 | 0.230 | 0.085 | -0.213 | -0.376 | -0.646 | -0.918 | -1.180 | -1.462 | -1.826 | -2.254 | -2.206 | -0.862 |
| N° 5 | 0.225 | 0.099 | -0.183 | -0.350 | -0.611 | -0.855 | -1.090 | -1.334 | -1.649 | -2.003 | -1.952 | -0.834 |
| N° 6 | 0.167 | 0.011 | -0.298 | -0.455 | -0.729 | -0.982 | -1.252 | -1.526 | -1.890 | -2.313 | -2.251 | -0.949 |
| N° 7 | 0.182 | 0.047 | -0.253 | -0.421 | -0.705 | -0.966 | -1.226 | -1.515 | -1.866 | -2.253 | -2.207 | -0.918 |
| N° 8 | 0.241 | 0.081 | -0.231 | -0.404 | -0.689 | -0.944 | -1.208 | -1.519 | -1.882 | -2.271 | -2.228 | -0.923 |
| N° 9 | 0.244 | 0.113 | -0.174 | -0.342 | -0.602 | -0.878 | -1.135 | -1.436 | -1.766 | -2.160 | -2.139 | -0.866 |
| N° 10 | 0.199 | 0.047 | -0.273 | -0.454 | -0.745 | -1.056 | -1.336 | -1.726 | -2.180 | -2.638 | -2.590 | -1.150 |
| N° 11 | 0.271 | 0.136 | -0.182 | -0.353 | -0.626 | -0.916 | -1.181 | -1.486 | -1.883 | -2.296 | -2.232 | -0.918 |
| N° 12 | 0.168 | 0.034 | -0.290 | -0.469 | -0.757 | -1.033 | -1.295 | -1.588 | -1.977 | -2.405 | -2.345 | -0.995 |
| N° 13 | 0.308 | 0.174 | -0.123 | -0.280 | -0.553 | -0.796 | -1.040 | -1.313 | -1.651 | -2.006 | -1.935 | -0.726 |
| N° 14 | 0.066 | -0.080 | -0.367 | -0.572 | -0.846 | -1.150 | -1.387 | -1.716 | -2.066 | -2.453 | -2.403 | -1.086 |
| N° 15 | -0.141 | -0.292 | -0.617 | -0.812 | -1.110 | -1.422 | -1.683 | -2.025 | -2.433 | -2.870 | -2.849 | -1.406 |
| N° 16 | 0.276 | 0.110 | -0.182 | -0.369 | -0.623 | -0.866 | -1.106 | -1.388 | -1.737 | -2.095 | -2.035 | -0.777 |
| N° 17 | 0.290 | 0.156 | -0.114 | -0.253 | -0.478 | -0.699 | -0.902 | -1.148 | -1.408 | -1.685 | -1.639 | -0.714 |
| N° 18 | 0.142 | -0.010 | -0.303 | -0.489 | -0.734 | -0.970 | -1.244 | -1.506 | -1.816 | -2.179 | -2.119 | -0.951 |
| N° 19 | 0.215 | 0.082 | -0.255 | -0.441 | -0.722 | -1.012 | -1.292 | -1.615 | -1.969 | -2.439 | -2.385 | -0.949 |
| N° 20 | 0.094 | -0.024 | -0.343 | -0.532 | -0.819 | -1.113 | -1.384 | -1.710 | -2.096 | -2.529 | -2.443 | -1.123 |
| N° 21 | 0.273 | 0.142 | -0.112 | -0.258 | -0.468 | -0.692 | -0.867 | -1.073 | -1.330 | -1.631 | -1.554 | -0.703 |
| N° 22 | 0.206 | 0.034 | -0.238 | -0.397 | -0.693 | -0.977 | -1.215 | -1.485 | -1.846 | -2.226 | -2.174 | -0.897 |
| N° 23 | 0.139 | -0.003 | -0.299 | -0.458 | -0.717 | -0.979 | -1.212 | -1.487 | -1.762 | -2.110 | -2.048 | -0.895 |
| N° 24 | 0.351 | 0.194 | -0.124 | -0.297 | -0.580 | -0.871 | -1.119 | -1.425 | -1.797 | -2.191 | -2.128 | -0.853 |
| N° 25 | -0.057 | -0.229 | -0.558 | -0.724 | -1.038 | -1.326 | -1.594 | -1.917 | -2.281 | -2.725 | -2.645 | -1.299 |
| N° 26 | 0.320 | 0.164 | -0.144 | -0.299 | -0.587 | -0.857 | -1.128 | -1.412 | -1.753 | -2.091 | -2.032 | -0.795 |
| N° 27 | 0.181 | 0.042 | -0.250 | -0.396 | -0.677 | -0.948 | -1.156 | -1.436 | -1.770 | -2.141 | -2.091 | -0.918 |
| N° 28 | 0.189 | 0.041 | -0.275 | -0.406 | -0.680 | -0.924 | -1.181 | -1.457 | -1.821 | -2.212 | -2.148 | -0.975 |
| N° 29 | 0.076 | -0.073 | -0.364 | -0.527 | -0.824 | -1.105 | -1.382 | -1.685 | -2.024 | -2.398 | -2.358 | -1.067 |
| N° 30 | 0.100 | -0.061 | -0.387 | -0.567 | -0.888 | -1.188 | -1.463 | -1.846 | -2.306 | -2.807 | -2.735 | -1.299 |
| N° 31 | 0.400 | 0.258 | -0.042 | -0.207 | -0.493 | -0.769 | -1.048 | -1.324 | -1.686 | -2.043 | -1.978 | -0.737 |

# 2. VIO1, Module 2

**Ta=25°C; +VCC=30V; -VCC=GND; VCM=+15V**

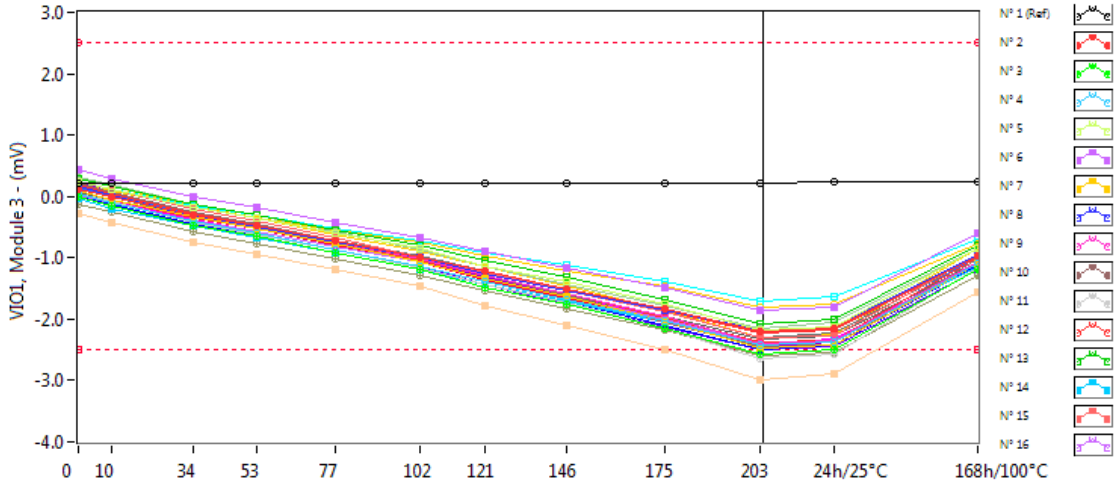



**VIO1, Module 2 . (mV)** **Min = -2.5 Max = 2.5**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | -0.044 | -0.029 | -0.035 | -0.042 | -0.050 | -0.025 | -0.032 | -0.031 | -0.035 | -0.045 | -0.035 | -0.024 |
| N° 2 | 0.007 | -0.098 | -0.392 | -0.583 | -0.832 | -1.075 | -1.312 | -1.599 | -1.938 | -2.310 | -2.260 | -1.078 |
| N° 3 | 0.394 | 0.237 | -0.062 | -0.260 | -0.518 | -0.790 | -1.047 | -1.342 | -1.735 | -2.137 | -2.072 | -0.762 |
| N° 4 | -0.030 | -0.160 | -0.469 | -0.657 | -0.927 | -1.205 | -1.458 | -1.738 | -2.079 | -2.489 | -2.439 | -1.186 |
| N° 5 | 0.005 | -0.129 | -0.426 | -0.602 | -0.864 | -1.090 | -1.339 | -1.619 | -1.975 | -2.389 | -2.341 | -1.088 |
| N° 6 | 0.283 | 0.178 | -0.113 | -0.297 | -0.555 | -0.792 | -1.031 | -1.283 | -1.617 | -1.990 | -1.936 | -0.738 |
| N° 7 | 0.231 | 0.090 | -0.214 | -0.405 | -0.664 | -0.941 | -1.187 | -1.511 | -1.893 | -2.359 | -2.304 | -1.016 |
| N° 8 | 0.101 | -0.054 | -0.360 | -0.553 | -0.809 | -1.049 | -1.322 | -1.619 | -1.971 | -2.336 | -2.285 | -1.039 |
| N° 9 | 0.314 | 0.174 | -0.128 | -0.314 | -0.575 | -0.841 | -1.106 | -1.431 | -1.813 | -2.269 | -2.215 | -0.868 |
| N° 10 | -0.049 | -0.199 | -0.510 | -0.694 | -0.963 | -1.230 | -1.512 | -1.855 | -2.225 | -2.683 | -2.635 | -1.118 |
| N° 11 | -0.064 | -0.210 | -0.514 | -0.722 | -0.996 | -1.301 | -1.569 | -1.921 | -2.382 | -2.851 | -2.777 | -1.376 |
| N° 12 | 0.174 | 0.023 | -0.300 | -0.490 | -0.752 | -1.022 | -1.270 | -1.569 | -1.977 | -2.351 | -2.293 | -0.966 |
| N° 13 | 0.043 | -0.084 | -0.373 | -0.558 | -0.810 | -1.071 | -1.333 | -1.622 | -2.007 | -2.408 | -2.347 | -1.060 |
| N° 14 | 0.028 | -0.130 | -0.422 | -0.641 | -0.896 | -1.160 | -1.403 | -1.702 | -1.994 | -2.370 | -2.340 | -1.095 |
| N° 15 | 0.115 | -0.053 | -0.358 | -0.573 | -0.836 | -1.112 | -1.375 | -1.681 | -2.050 | -2.442 | -2.397 | -0.985 |
| N° 16 | -0.046 | -0.192 | -0.499 | -0.704 | -0.951 | -1.193 | -1.457 | -1.764 | -2.121 | -2.516 | -2.463 | -1.135 |
| N° 17 | 0.187 | 0.068 | -0.198 | -0.358 | -0.565 | -0.775 | -0.987 | -1.220 | -1.508 | -1.832 | -1.785 | -0.829 |
| N° 18 | -0.064 | -0.222 | -0.534 | -0.716 | -0.975 | -1.214 | -1.485 | -1.781 | -2.096 | -2.482 | -2.426 | -1.197 |
| N° 19 | 0.184 | 0.028 | -0.279 | -0.494 | -0.786 | -1.071 | -1.334 | -1.659 | -2.055 | -2.464 | -2.407 | -1.014 |
| N° 20 | 0.009 | -0.158 | -0.475 | -0.664 | -0.935 | -1.227 | -1.525 | -1.854 | -2.231 | -2.624 | -2.538 | -1.176 |
| N° 21 | -0.021 | -0.150 | -0.422 | -0.562 | -0.781 | -0.974 | -1.195 | -1.381 | -1.652 | -1.961 | -1.867 | -1.007 |
| N° 22 | 0.280 | 0.121 | -0.150 | -0.338 | -0.600 | -0.855 | -1.094 | -1.356 | -1.706 | -2.098 | -2.056 | -0.813 |
| N° 23 | 0.029 | -0.098 | -0.412 | -0.608 | -0.858 | -1.123 | -1.385 | -1.694 | -2.057 | -2.471 | -2.407 | -1.160 |
| N° 24 | 0.101 | -0.046 | -0.361 | -0.560 | -0.823 | -1.098 | -1.360 | -1.661 | -2.040 | -2.429 | -2.381 | -1.079 |
| N° 25 | 0.340 | 0.185 | -0.122 | -0.304 | -0.562 | -0.849 | -1.124 | -1.419 | -1.782 | -2.195 | -2.116 | -0.814 |
| N° 26 | 0.112 | -0.033 | -0.348 | -0.526 | -0.789 | -1.062 | -1.328 | -1.626 | -2.006 | -2.399 | -2.327 | -1.032 |
| N° 27 | 0.068 | -0.082 | -0.382 | -0.590 | -0.848 | -1.099 | -1.342 | -1.625 | -1.988 | -2.358 | -2.301 | -1.086 |
| N° 28 | -0.139 | -0.264 | -0.573 | -0.751 | -0.979 | -1.217 | -1.480 | -1.772 | -2.162 | -2.561 | -2.514 | -1.240 |
| N° 29 | -0.209 | -0.358 | -0.666 | -0.877 | -1.138 | -1.410 | -1.685 | -1.997 | -2.377 | -2.767 | -2.715 | -1.400 |
| N° 30 | 0.223 | 0.048 | -0.284 | -0.497 | -0.762 | -1.070 | -1.333 | -1.693 | -2.092 | -2.514 | -2.437 | -1.108 |
| N° 31 | -0.163 | -0.310 | -0.628 | -0.834 | -1.098 | -1.364 | -1.681 | -2.022 | -2.454 | -2.938 | -2.877 | -1.453 |

# 3. VIO1, Module 3

**Ta=25°C; +VCC=30V; -VCC=GND; VCM=+15V**

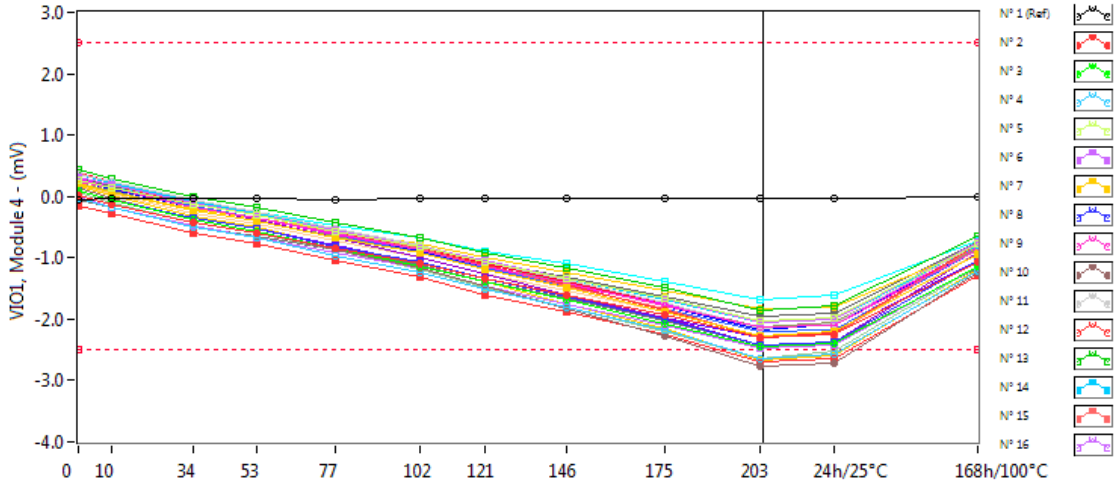



**VIO1, Module 3 . (mV)** **Min = -2.5 Max = 2.5**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 0.213 | 0.225 | 0.217 | 0.218 | 0.206 | 0.224 | 0.214 | 0.224 | 0.221 | 0.209 | 0.232 | 0.234 |
| N° 2 | 0.117 | -0.004 | -0.296 | -0.468 | -0.721 | -0.992 | -1.224 | -1.504 | -1.827 | -2.192 | -2.153 | -0.965 |
| N° 3 | -0.017 | -0.163 | -0.465 | -0.659 | -0.922 | -1.201 | -1.478 | -1.765 | -2.156 | -2.568 | -2.508 | -1.185 |
| N° 4 | 0.030 | -0.111 | -0.404 | -0.604 | -0.860 | -1.140 | -1.395 | -1.677 | -2.030 | -2.424 | -2.379 | -1.097 |
| N° 5 | 0.229 | 0.116 | -0.174 | -0.364 | -0.607 | -0.852 | -1.130 | -1.399 | -1.747 | -2.185 | -2.138 | -0.845 |
| N° 6 | 0.432 | 0.290 | -0.005 | -0.188 | -0.431 | -0.668 | -0.904 | -1.156 | -1.481 | -1.849 | -1.815 | -0.592 |
| N° 7 | 0.098 | -0.048 | -0.339 | -0.526 | -0.770 | -1.068 | -1.340 | -1.637 | -2.030 | -2.481 | -2.432 | -1.091 |
| N° 8 | 0.159 | 0.007 | -0.319 | -0.497 | -0.755 | -1.001 | -1.256 | -1.526 | -1.848 | -2.164 | -2.128 | -0.953 |
| N° 9 | 0.112 | -0.018 | -0.302 | -0.488 | -0.738 | -1.019 | -1.288 | -1.589 | -1.954 | -2.394 | -2.354 | -1.063 |
| N° 10 | 0.203 | 0.058 | -0.261 | -0.461 | -0.720 | -1.010 | -1.286 | -1.618 | -2.042 | -2.447 | -2.411 | -1.014 |
| N° 11 | 0.045 | -0.092 | -0.418 | -0.615 | -0.880 | -1.170 | -1.430 | -1.740 | -2.160 | -2.633 | -2.560 | -1.170 |
| N° 12 | 0.193 | 0.054 | -0.270 | -0.466 | -0.736 | -1.035 | -1.281 | -1.575 | -1.967 | -2.377 | -2.339 | -0.989 |
| N° 13 | 0.296 | 0.157 | -0.125 | -0.299 | -0.548 | -0.806 | -1.049 | -1.309 | -1.690 | -2.087 | -2.012 | -0.797 |
| N° 14 | -0.044 | -0.195 | -0.476 | -0.680 | -0.930 | -1.190 | -1.439 | -1.713 | -2.052 | -2.413 | -2.356 | -1.146 |
| N° 15 | 0.246 | 0.107 | -0.211 | -0.402 | -0.669 | -0.989 | -1.232 | -1.529 | -1.891 | -2.298 | -2.275 | -0.945 |
| N° 16 | 0.028 | -0.099 | -0.395 | -0.584 | -0.829 | -1.073 | -1.337 | -1.639 | -1.999 | -2.410 | -2.340 | -1.072 |
| N° 17 | 0.202 | 0.089 | -0.190 | -0.342 | -0.544 | -0.750 | -0.975 | -1.208 | -1.471 | -1.801 | -1.764 | -0.761 |
| N° 18 | 0.045 | -0.092 | -0.389 | -0.579 | -0.830 | -1.070 | -1.347 | -1.630 | -1.977 | -2.386 | -2.331 | -1.089 |
| N° 19 | 0.236 | 0.063 | -0.260 | -0.453 | -0.741 | -1.035 | -1.319 | -1.640 | -2.019 | -2.442 | -2.385 | -1.064 |
| N° 20 | 0.315 | 0.194 | -0.123 | -0.303 | -0.571 | -0.858 | -1.149 | -1.436 | -1.791 | -2.150 | -2.064 | -0.840 |
| N° 21 | 0.235 | 0.104 | -0.151 | -0.300 | -0.514 | -0.713 | -0.921 | -1.117 | -1.384 | -1.705 | -1.639 | -0.700 |
| N° 22 | 0.084 | -0.053 | -0.340 | -0.523 | -0.752 | -1.002 | -1.249 | -1.511 | -1.854 | -2.227 | -2.167 | -0.973 |
| N° 23 | 0.077 | -0.083 | -0.380 | -0.562 | -0.809 | -1.063 | -1.317 | -1.606 | -1.951 | -2.334 | -2.274 | -1.066 |
| N° 24 | 0.144 | 0.006 | -0.309 | -0.498 | -0.752 | -1.025 | -1.307 | -1.612 | -1.980 | -2.406 | -2.365 | -0.979 |
| N° 25 | 0.169 | 0.001 | -0.307 | -0.521 | -0.794 | -1.072 | -1.355 | -1.656 | -2.011 | -2.406 | -2.327 | -1.081 |
| N° 26 | 0.006 | -0.137 | -0.448 | -0.644 | -0.911 | -1.183 | -1.446 | -1.716 | -2.098 | -2.508 | -2.433 | -1.116 |
| N° 27 | -0.136 | -0.265 | -0.567 | -0.762 | -1.013 | -1.300 | -1.531 | -1.821 | -2.186 | -2.595 | -2.542 | -1.291 |
| N° 28 | 0.122 | -0.010 | -0.327 | -0.492 | -0.724 | -0.960 | -1.208 | -1.505 | -1.886 | -2.292 | -2.237 | -0.992 |
| N° 29 | 0.017 | -0.103 | -0.402 | -0.611 | -0.865 | -1.147 | -1.435 | -1.757 | -2.124 | -2.506 | -2.456 | -1.197 |
| N° 30 | 0.281 | 0.158 | -0.144 | -0.343 | -0.611 | -0.885 | -1.148 | -1.472 | -1.865 | -2.293 | -2.243 | -0.838 |
| N° 31 | -0.280 | -0.421 | -0.741 | -0.934 | -1.199 | -1.471 | -1.771 | -2.102 | -2.506 | -2.987 | -2.903 | -1.561 |

# 4. VIO1, Module 4

**Ta=25°C; +VCC=30V; -VCC=GND; VCM=+15V**

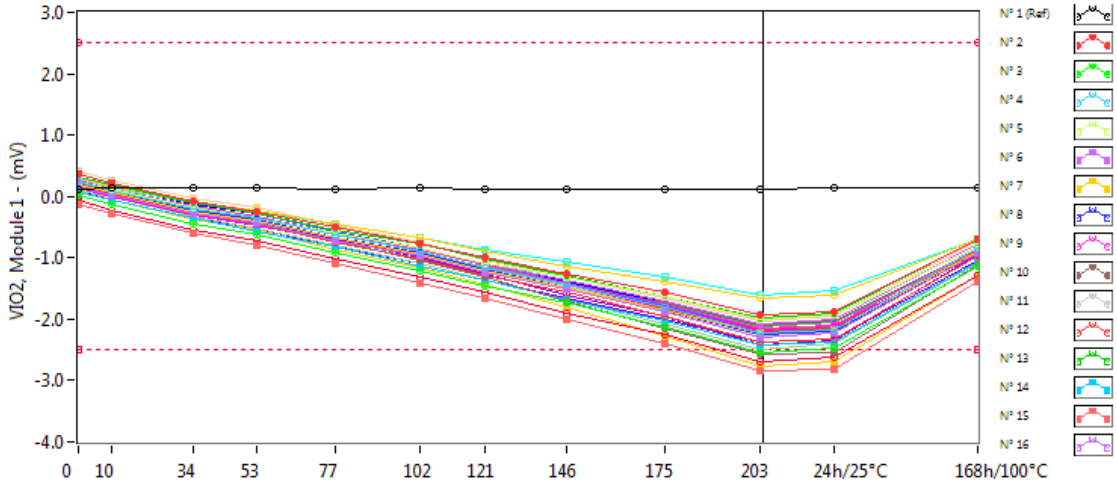



**VIO1, Module 4 . (mV)** **Min = -2.5 Max = 2.5**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | -0.046 | -0.029 | -0.033 | -0.033 | -0.045 | -0.025 | -0.034 | -0.030 | -0.027 | -0.041 | -0.026 | -0.018 |
| N° 2 | 0.014 | -0.134 | -0.430 | -0.600 | -0.848 | -1.095 | -1.330 | -1.606 | -1.935 | -2.291 | -2.240 | -1.069 |
| N° 3 | 0.084 | -0.067 | -0.383 | -0.571 | -0.845 | -1.136 | -1.384 | -1.685 | -2.076 | -2.459 | -2.403 | -1.134 |
| N° 4 | -0.025 | -0.184 | -0.491 | -0.682 | -0.960 | -1.232 | -1.504 | -1.797 | -2.170 | -2.641 | -2.574 | -1.209 |
| N° 5 | 0.270 | 0.152 | -0.141 | -0.313 | -0.568 | -0.814 | -1.058 | -1.329 | -1.666 | -2.024 | -1.986 | -0.771 |
| N° 6 | 0.323 | 0.191 | -0.117 | -0.297 | -0.554 | -0.814 | -1.054 | -1.333 | -1.669 | -2.063 | -2.004 | -0.746 |
| N° 7 | 0.205 | 0.070 | -0.231 | -0.411 | -0.662 | -0.930 | -1.197 | -1.485 | -1.871 | -2.268 | -2.211 | -0.940 |
| N° 8 | 0.103 | -0.046 | -0.357 | -0.535 | -0.815 | -1.063 | -1.344 | -1.640 | -2.007 | -2.426 | -2.381 | -1.038 |
| N° 9 | 0.232 | 0.129 | -0.175 | -0.352 | -0.594 | -0.866 | -1.131 | -1.418 | -1.776 | -2.137 | -2.093 | -0.861 |
| N° 10 | 0.137 | -0.031 | -0.379 | -0.580 | -0.863 | -1.155 | -1.470 | -1.828 | -2.285 | -2.765 | -2.719 | -1.251 |
| N° 11 | 0.374 | 0.229 | -0.067 | -0.242 | -0.523 | -0.795 | -1.056 | -1.363 | -1.740 | -2.157 | -2.081 | -0.771 |
| N° 12 | 0.317 | 0.186 | -0.138 | -0.306 | -0.586 | -0.865 | -1.124 | -1.436 | -1.844 | -2.298 | -2.234 | -0.781 |
| N° 13 | 0.433 | 0.284 | -0.018 | -0.172 | -0.424 | -0.663 | -0.913 | -1.162 | -1.483 | -1.860 | -1.788 | -0.643 |
| N° 14 | 0.367 | 0.216 | -0.078 | -0.282 | -0.532 | -0.812 | -1.060 | -1.339 | -1.678 | -2.054 | -2.009 | -0.791 |
| N° 15 | 0.394 | 0.217 | -0.111 | -0.305 | -0.559 | -0.841 | -1.126 | -1.459 | -1.836 | -2.295 | -2.256 | -0.803 |
| N° 16 | 0.002 | -0.170 | -0.485 | -0.671 | -0.923 | -1.170 | -1.459 | -1.749 | -2.101 | -2.484 | -2.425 | -1.135 |
| N° 17 | 0.193 | 0.071 | -0.202 | -0.359 | -0.563 | -0.772 | -0.999 | -1.242 | -1.535 | -1.842 | -1.796 | -0.815 |
| N° 18 | 0.280 | 0.133 | -0.188 | -0.357 | -0.625 | -0.868 | -1.138 | -1.429 | -1.755 | -2.140 | -2.085 | -0.820 |
| N° 19 | 0.299 | 0.145 | -0.182 | -0.387 | -0.679 | -0.986 | -1.273 | -1.604 | -1.970 | -2.414 | -2.365 | -0.931 |
| N° 20 | 0.056 | -0.096 | -0.421 | -0.598 | -0.879 | -1.179 | -1.475 | -1.798 | -2.209 | -2.642 | -2.530 | -1.152 |
| N° 21 | 0.263 | 0.146 | -0.108 | -0.261 | -0.466 | -0.674 | -0.883 | -1.093 | -1.375 | -1.675 | -1.602 | -0.720 |
| N° 22 | -0.152 | -0.286 | -0.596 | -0.776 | -1.038 | -1.324 | -1.605 | -1.879 | -2.251 | -2.693 | -2.636 | -1.300 |
| N° 23 | 0.322 | 0.175 | -0.129 | -0.297 | -0.555 | -0.805 | -1.064 | -1.315 | -1.629 | -1.950 | -1.898 | -0.757 |
| N° 24 | 0.299 | 0.155 | -0.163 | -0.342 | -0.615 | -0.908 | -1.169 | -1.468 | -1.830 | -2.213 | -2.173 | -0.860 |
| N° 25 | 0.388 | 0.238 | -0.083 | -0.254 | -0.517 | -0.822 | -1.098 | -1.392 | -1.758 | -2.159 | -2.077 | -0.821 |
| N° 26 | 0.262 | 0.121 | -0.182 | -0.351 | -0.626 | -0.889 | -1.161 | -1.417 | -1.794 | -2.170 | -2.087 | -0.868 |
| N° 27 | 0.222 | 0.087 | -0.221 | -0.395 | -0.642 | -0.899 | -1.131 | -1.391 | -1.753 | -2.124 | -2.051 | -0.847 |
| N° 28 | -0.059 | -0.190 | -0.498 | -0.648 | -0.882 | -1.117 | -1.379 | -1.665 | -2.027 | -2.431 | -2.374 | -1.173 |
| N° 29 | 0.090 | -0.053 | -0.362 | -0.535 | -0.807 | -1.087 | -1.347 | -1.622 | -1.967 | -2.297 | -2.252 | -1.047 |
| N° 30 | 0.154 | 0.019 | -0.323 | -0.507 | -0.817 | -1.115 | -1.385 | -1.747 | -2.163 | -2.664 | -2.601 | -1.188 |
| N° 31 | 0.202 | 0.051 | -0.270 | -0.451 | -0.728 | -0.990 | -1.254 | -1.545 | -1.886 | -2.273 | -2.219 | -0.924 |

# 5. VIO2, Module 1

**Ta=25°C; +VCC=2V; -VCC=-28V; VCM=-13V**

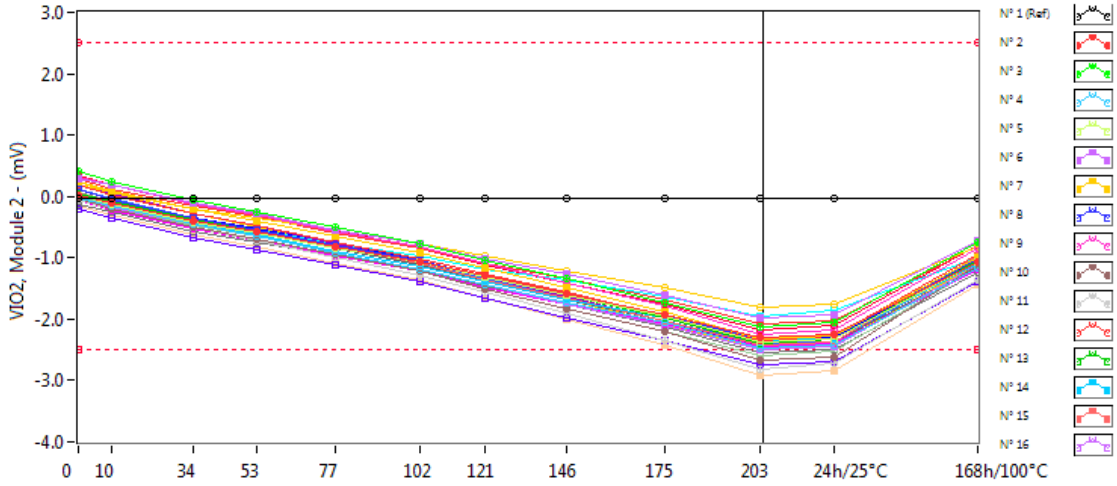



**VIO2, Module 1 . (mV)** **Min = -2.5 Max = 2.5**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 0.119 | 0.134 | 0.129 | 0.146 | 0.114 | 0.133 | 0.127 | 0.123 | 0.127 | 0.114 | 0.135 | 0.136 |
| N° 2 | 0.355 | 0.203 | -0.078 | -0.246 | -0.497 | -0.772 | -0.985 | -1.257 | -1.558 | -1.918 | -1.875 | -0.687 |
| N° 3 | 0.017 | -0.118 | -0.440 | -0.627 | -0.915 | -1.205 | -1.454 | -1.744 | -2.134 | -2.546 | -2.482 | -1.148 |
| N° 4 | 0.240 | 0.097 | -0.204 | -0.363 | -0.625 | -0.902 | -1.162 | -1.436 | -1.806 | -2.230 | -2.185 | -0.845 |
| N° 5 | 0.234 | 0.108 | -0.175 | -0.340 | -0.597 | -0.835 | -1.083 | -1.322 | -1.636 | -1.994 | -1.939 | -0.818 |
| N° 6 | 0.177 | 0.022 | -0.284 | -0.438 | -0.711 | -0.973 | -1.231 | -1.511 | -1.872 | -2.294 | -2.227 | -0.928 |
| N° 7 | 0.191 | 0.059 | -0.245 | -0.404 | -0.681 | -0.952 | -1.209 | -1.493 | -1.852 | -2.237 | -2.180 | -0.900 |
| N° 8 | 0.249 | 0.091 | -0.225 | -0.384 | -0.681 | -0.922 | -1.187 | -1.490 | -1.854 | -2.246 | -2.201 | -0.902 |
| N° 9 | 0.254 | 0.127 | -0.165 | -0.327 | -0.592 | -0.862 | -1.118 | -1.420 | -1.751 | -2.142 | -2.113 | -0.847 |
| N° 10 | 0.208 | 0.059 | -0.258 | -0.443 | -0.727 | -1.031 | -1.322 | -1.697 | -2.142 | -2.573 | -2.539 | -1.127 |
| N° 11 | 0.278 | 0.143 | -0.172 | -0.327 | -0.613 | -0.905 | -1.161 | -1.465 | -1.859 | -2.264 | -2.207 | -0.897 |
| N° 12 | 0.178 | 0.040 | -0.280 | -0.460 | -0.747 | -1.018 | -1.277 | -1.566 | -1.954 | -2.376 | -2.325 | -0.974 |
| N° 13 | 0.317 | 0.184 | -0.116 | -0.269 | -0.543 | -0.774 | -1.023 | -1.294 | -1.630 | -1.985 | -1.905 | -0.706 |
| N° 14 | 0.075 | -0.068 | -0.361 | -0.564 | -0.830 | -1.135 | -1.363 | -1.693 | -2.031 | -2.432 | -2.378 | -1.067 |
| N° 15 | -0.135 | -0.276 | -0.603 | -0.797 | -1.089 | -1.407 | -1.652 | -2.005 | -2.396 | -2.842 | -2.810 | -1.384 |
| N° 16 | 0.285 | 0.122 | -0.173 | -0.350 | -0.605 | -0.847 | -1.083 | -1.363 | -1.719 | -2.088 | -2.013 | -0.759 |
| N° 17 | 0.300 | 0.167 | -0.101 | -0.238 | -0.463 | -0.684 | -0.888 | -1.132 | -1.383 | -1.670 | -1.618 | -0.694 |
| N° 18 | 0.149 | -0.005 | -0.294 | -0.470 | -0.722 | -0.956 | -1.227 | -1.488 | -1.803 | -2.168 | -2.098 | -0.935 |
| N° 19 | 0.224 | 0.089 | -0.248 | -0.426 | -0.708 | -0.993 | -1.270 | -1.597 | -1.955 | -2.421 | -2.351 | -0.932 |
| N° 20 | 0.103 | -0.013 | -0.334 | -0.519 | -0.802 | -1.095 | -1.364 | -1.687 | -2.072 | -2.500 | -2.410 | -1.102 |
| N° 21 | 0.281 | 0.150 | -0.101 | -0.253 | -0.458 | -0.676 | -0.860 | -1.066 | -1.315 | -1.613 | -1.539 | -0.690 |
| N° 22 | 0.215 | 0.042 | -0.232 | -0.385 | -0.675 | -0.960 | -1.198 | -1.469 | -1.822 | -2.204 | -2.149 | -0.881 |
| N° 23 | 0.149 | 0.007 | -0.291 | -0.440 | -0.704 | -0.956 | -1.195 | -1.468 | -1.743 | -2.094 | -2.028 | -0.882 |
| N° 24 | 0.357 | 0.204 | -0.113 | -0.283 | -0.566 | -0.846 | -1.101 | -1.409 | -1.772 | -2.161 | -2.105 | -0.836 |
| N° 25 | -0.051 | -0.220 | -0.551 | -0.712 | -1.026 | -1.304 | -1.569 | -1.894 | -2.260 | -2.696 | -2.618 | -1.281 |
| N° 26 | 0.325 | 0.173 | -0.137 | -0.289 | -0.575 | -0.837 | -1.106 | -1.393 | -1.739 | -2.076 | -2.008 | -0.782 |
| N° 27 | 0.187 | 0.052 | -0.237 | -0.381 | -0.668 | -0.936 | -1.143 | -1.410 | -1.745 | -2.124 | -2.062 | -0.898 |
| N° 28 | 0.195 | 0.051 | -0.266 | -0.397 | -0.669 | -0.913 | -1.170 | -1.437 | -1.803 | -2.193 | -2.127 | -0.955 |
| N° 29 | 0.083 | -0.062 | -0.351 | -0.515 | -0.810 | -1.085 | -1.362 | -1.667 | -2.006 | -2.376 | -2.330 | -1.048 |
| N° 30 | 0.106 | -0.047 | -0.377 | -0.547 | -0.877 | -1.167 | -1.448 | -1.816 | -2.269 | -2.767 | -2.699 | -1.279 |
| N° 31 | 0.409 | 0.270 | -0.034 | -0.190 | -0.476 | -0.754 | -1.032 | -1.308 | -1.665 | -2.033 | -1.951 | -0.715 |

# 6. VIO2, Module 2

**Ta=25°C; +VCC=2V; -VCC=-28V; VCM=-13V**

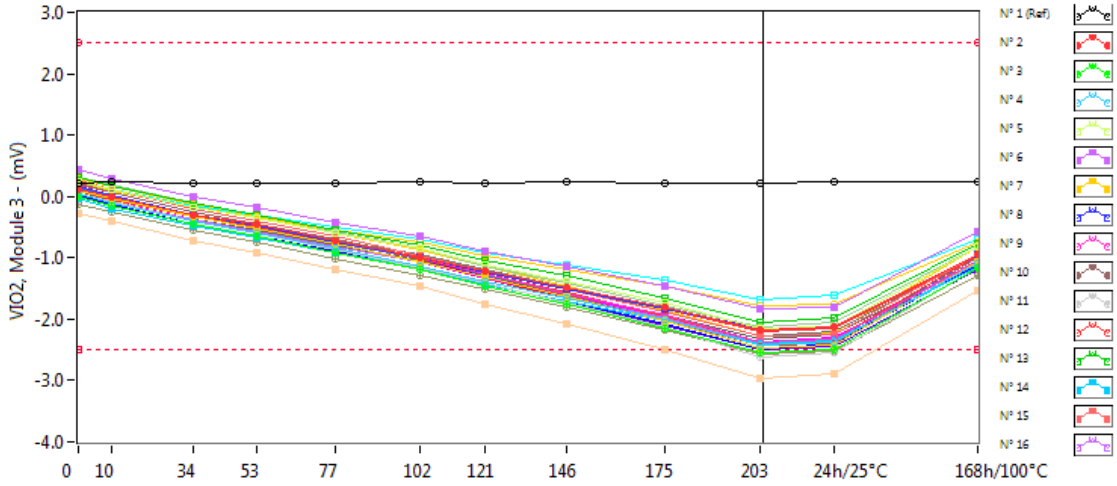



**VIO2, Module 2 . (mV)** **Min = -2.5 Max = 2.5**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | -0.038 | -0.023 | -0.029 | -0.034 | -0.043 | -0.020 | -0.027 | -0.027 | -0.031 | -0.041 | -0.030 | -0.021 |
| N° 2 | 0.012 | -0.094 | -0.391 | -0.577 | -0.821 | -1.069 | -1.297 | -1.583 | -1.922 | -2.290 | -2.243 | -1.069 |
| N° 3 | 0.400 | 0.242 | -0.057 | -0.256 | -0.507 | -0.781 | -1.034 | -1.328 | -1.722 | -2.116 | -2.047 | -0.750 |
| N° 4 | -0.024 | -0.158 | -0.463 | -0.647 | -0.917 | -1.193 | -1.441 | -1.725 | -2.064 | -2.472 | -2.427 | -1.171 |
| N° 5 | 0.010 | -0.124 | -0.420 | -0.588 | -0.853 | -1.079 | -1.325 | -1.602 | -1.951 | -2.367 | -2.317 | -1.075 |
| N° 6 | 0.290 | 0.183 | -0.109 | -0.285 | -0.544 | -0.780 | -1.016 | -1.272 | -1.600 | -1.970 | -1.922 | -0.727 |
| N° 7 | 0.237 | 0.095 | -0.207 | -0.397 | -0.653 | -0.931 | -1.175 | -1.491 | -1.872 | -2.329 | -2.280 | -1.002 |
| N° 8 | 0.106 | -0.049 | -0.353 | -0.545 | -0.799 | -1.043 | -1.307 | -1.603 | -1.953 | -2.318 | -2.273 | -1.028 |
| N° 9 | 0.320 | 0.178 | -0.122 | -0.306 | -0.565 | -0.826 | -1.086 | -1.412 | -1.790 | -2.239 | -2.188 | -0.857 |
| N° 10 | -0.044 | -0.196 | -0.502 | -0.685 | -0.951 | -1.219 | -1.501 | -1.835 | -2.206 | -2.659 | -2.611 | -1.105 |
| N° 11 | -0.058 | -0.207 | -0.507 | -0.714 | -0.987 | -1.283 | -1.551 | -1.905 | -2.356 | -2.823 | -2.720 | -1.362 |
| N° 12 | 0.179 | 0.028 | -0.290 | -0.483 | -0.744 | -1.013 | -1.258 | -1.558 | -1.962 | -2.339 | -2.268 | -0.954 |
| N° 13 | 0.048 | -0.082 | -0.367 | -0.548 | -0.803 | -1.062 | -1.319 | -1.604 | -1.984 | -2.388 | -2.326 | -1.045 |
| N° 14 | 0.035 | -0.124 | -0.415 | -0.631 | -0.885 | -1.149 | -1.387 | -1.689 | -1.974 | -2.352 | -2.322 | -1.083 |
| N° 15 | 0.120 | -0.047 | -0.352 | -0.563 | -0.821 | -1.101 | -1.363 | -1.670 | -2.027 | -2.428 | -2.379 | -0.972 |
| N° 16 | -0.041 | -0.189 | -0.491 | -0.690 | -0.940 | -1.182 | -1.447 | -1.750 | -2.101 | -2.487 | -2.444 | -1.127 |
| N° 17 | 0.193 | 0.072 | -0.192 | -0.351 | -0.558 | -0.764 | -0.974 | -1.211 | -1.494 | -1.815 | -1.766 | -0.820 |
| N° 18 | -0.061 | -0.220 | -0.533 | -0.712 | -0.970 | -1.203 | -1.475 | -1.767 | -2.080 | -2.457 | -2.405 | -1.186 |
| N° 19 | 0.196 | 0.039 | -0.276 | -0.479 | -0.765 | -1.059 | -1.316 | -1.641 | -2.024 | -2.442 | -2.383 | -1.000 |
| N° 20 | 0.015 | -0.150 | -0.475 | -0.656 | -0.925 | -1.210 | -1.509 | -1.837 | -2.212 | -2.604 | -2.509 | -1.163 |
| N° 21 | -0.014 | -0.144 | -0.415 | -0.557 | -0.771 | -0.963 | -1.179 | -1.368 | -1.641 | -1.948 | -1.848 | -0.993 |
| N° 22 | 0.285 | 0.128 | -0.144 | -0.334 | -0.590 | -0.849 | -1.082 | -1.337 | -1.690 | -2.081 | -2.038 | -0.804 |
| N° 23 | 0.034 | -0.096 | -0.408 | -0.598 | -0.848 | -1.111 | -1.366 | -1.676 | -2.036 | -2.448 | -2.380 | -1.153 |
| N° 24 | 0.107 | -0.041 | -0.355 | -0.550 | -0.815 | -1.087 | -1.346 | -1.644 | -2.022 | -2.408 | -2.362 | -1.070 |
| N° 25 | 0.345 | 0.190 | -0.115 | -0.294 | -0.549 | -0.836 | -1.108 | -1.410 | -1.766 | -2.168 | -2.096 | -0.802 |
| N° 26 | 0.117 | -0.026 | -0.345 | -0.515 | -0.782 | -1.052 | -1.315 | -1.613 | -1.991 | -2.375 | -2.304 | -1.022 |
| N° 27 | 0.073 | -0.077 | -0.375 | -0.578 | -0.838 | -1.089 | -1.331 | -1.607 | -1.970 | -2.338 | -2.285 | -1.077 |
| N° 28 | -0.135 | -0.262 | -0.570 | -0.745 | -0.972 | -1.203 | -1.471 | -1.762 | -2.139 | -2.546 | -2.492 | -1.229 |
| N° 29 | -0.205 | -0.355 | -0.661 | -0.870 | -1.128 | -1.398 | -1.669 | -1.979 | -2.351 | -2.747 | -2.686 | -1.382 |
| N° 30 | 0.228 | 0.055 | -0.278 | -0.489 | -0.750 | -1.060 | -1.317 | -1.677 | -2.067 | -2.491 | -2.413 | -1.092 |
| N° 31 | -0.157 | -0.308 | -0.623 | -0.824 | -1.088 | -1.354 | -1.663 | -2.004 | -2.433 | -2.909 | -2.852 | -1.439 |

# 7. VIO2, Module 3

**Ta=25°C; +VCC=2V; -VCC=-28V; VCM=-13V**

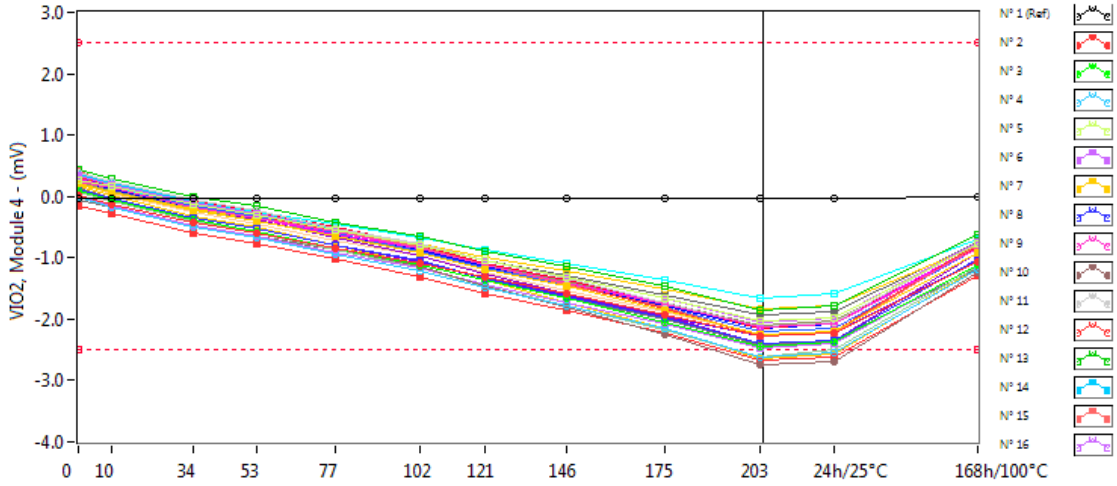



**VIO2, Module 3 . (mV)** **Min = -2.5 Max = 2.5**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 0.219 | 0.230 | 0.222 | 0.222 | 0.212 | 0.229 | 0.219 | 0.228 | 0.226 | 0.214 | 0.237 | 0.238 |
| N° 2 | 0.122 | -0.001 | -0.294 | -0.459 | -0.713 | -0.981 | -1.210 | -1.488 | -1.807 | -2.173 | -2.132 | -0.955 |
| N° 3 | -0.012 | -0.159 | -0.460 | -0.651 | -0.911 | -1.190 | -1.462 | -1.753 | -2.141 | -2.543 | -2.494 | -1.172 |
| N° 4 | 0.034 | -0.111 | -0.399 | -0.599 | -0.851 | -1.131 | -1.383 | -1.666 | -2.006 | -2.414 | -2.361 | -1.086 |
| N° 5 | 0.235 | 0.120 | -0.168 | -0.354 | -0.592 | -0.845 | -1.118 | -1.384 | -1.724 | -2.159 | -2.121 | -0.831 |
| N° 6 | 0.439 | 0.299 | 0.000 | -0.179 | -0.419 | -0.653 | -0.891 | -1.142 | -1.464 | -1.831 | -1.799 | -0.580 |
| N° 7 | 0.103 | -0.043 | -0.334 | -0.516 | -0.762 | -1.056 | -1.325 | -1.622 | -2.017 | -2.460 | -2.416 | -1.077 |
| N° 8 | 0.165 | 0.009 | -0.313 | -0.486 | -0.747 | -0.991 | -1.245 | -1.513 | -1.827 | -2.151 | -2.115 | -0.940 |
| N° 9 | 0.118 | -0.015 | -0.294 | -0.480 | -0.727 | -1.005 | -1.273 | -1.573 | -1.934 | -2.369 | -2.326 | -1.052 |
| N° 10 | 0.209 | 0.062 | -0.258 | -0.453 | -0.708 | -0.995 | -1.270 | -1.601 | -2.023 | -2.423 | -2.386 | -1.002 |
| N° 11 | 0.051 | -0.086 | -0.412 | -0.606 | -0.871 | -1.155 | -1.419 | -1.723 | -2.139 | -2.611 | -2.538 | -1.156 |
| N° 12 | 0.199 | 0.061 | -0.259 | -0.458 | -0.727 | -1.016 | -1.266 | -1.561 | -1.942 | -2.361 | -2.314 | -0.974 |
| N° 13 | 0.302 | 0.162 | -0.116 | -0.293 | -0.538 | -0.794 | -1.033 | -1.290 | -1.667 | -2.063 | -1.991 | -0.781 |
| N° 14 | -0.040 | -0.192 | -0.471 | -0.670 | -0.921 | -1.177 | -1.429 | -1.702 | -2.036 | -2.391 | -2.339 | -1.133 |
| N° 15 | 0.252 | 0.112 | -0.206 | -0.391 | -0.657 | -0.976 | -1.219 | -1.514 | -1.872 | -2.280 | -2.256 | -0.934 |
| N° 16 | 0.033 | -0.097 | -0.387 | -0.580 | -0.819 | -1.064 | -1.324 | -1.623 | -1.978 | -2.395 | -2.325 | -1.062 |
| N° 17 | 0.208 | 0.094 | -0.183 | -0.336 | -0.537 | -0.739 | -0.962 | -1.194 | -1.458 | -1.787 | -1.745 | -0.750 |
| N° 18 | 0.052 | -0.084 | -0.383 | -0.568 | -0.818 | -1.055 | -1.339 | -1.608 | -1.959 | -2.365 | -2.305 | -1.076 |
| N° 19 | 0.242 | 0.068 | -0.253 | -0.443 | -0.730 | -1.019 | -1.303 | -1.626 | -1.994 | -2.424 | -2.364 | -1.051 |
| N° 20 | 0.320 | 0.197 | -0.117 | -0.293 | -0.563 | -0.844 | -1.133 | -1.418 | -1.770 | -2.135 | -2.047 | -0.828 |
| N° 21 | 0.241 | 0.110 | -0.144 | -0.294 | -0.505 | -0.702 | -0.910 | -1.107 | -1.369 | -1.695 | -1.619 | -0.692 |
| N° 22 | 0.089 | -0.050 | -0.335 | -0.512 | -0.745 | -0.990 | -1.243 | -1.495 | -1.838 | -2.211 | -2.150 | -0.960 |
| N° 23 | 0.083 | -0.076 | -0.375 | -0.555 | -0.799 | -1.053 | -1.306 | -1.594 | -1.933 | -2.313 | -2.253 | -1.056 |
| N° 24 | 0.149 | 0.010 | -0.303 | -0.489 | -0.744 | -1.013 | -1.296 | -1.595 | -1.961 | -2.389 | -2.344 | -0.968 |
| N° 25 | 0.175 | 0.004 | -0.301 | -0.513 | -0.782 | -1.060 | -1.344 | -1.647 | -1.995 | -2.387 | -2.306 | -1.070 |
| N° 26 | 0.011 | -0.133 | -0.442 | -0.637 | -0.900 | -1.170 | -1.429 | -1.700 | -2.078 | -2.488 | -2.408 | -1.106 |
| N° 27 | -0.131 | -0.265 | -0.561 | -0.755 | -1.008 | -1.286 | -1.519 | -1.806 | -2.171 | -2.577 | -2.521 | -1.280 |
| N° 28 | 0.126 | -0.005 | -0.323 | -0.489 | -0.712 | -0.948 | -1.196 | -1.488 | -1.869 | -2.273 | -2.211 | -0.980 |
| N° 29 | 0.021 | -0.102 | -0.400 | -0.604 | -0.859 | -1.135 | -1.420 | -1.742 | -2.101 | -2.486 | -2.440 | -1.184 |
| N° 30 | 0.286 | 0.163 | -0.137 | -0.336 | -0.605 | -0.874 | -1.133 | -1.453 | -1.844 | -2.275 | -2.221 | -0.825 |
| N° 31 | -0.273 | -0.412 | -0.733 | -0.923 | -1.188 | -1.462 | -1.759 | -2.085 | -2.487 | -2.959 | -2.880 | -1.544 |

# 8. VIO2, Module 4

**Ta=25°C; +VCC=2V; -VCC=-28V; VCM=-13V**

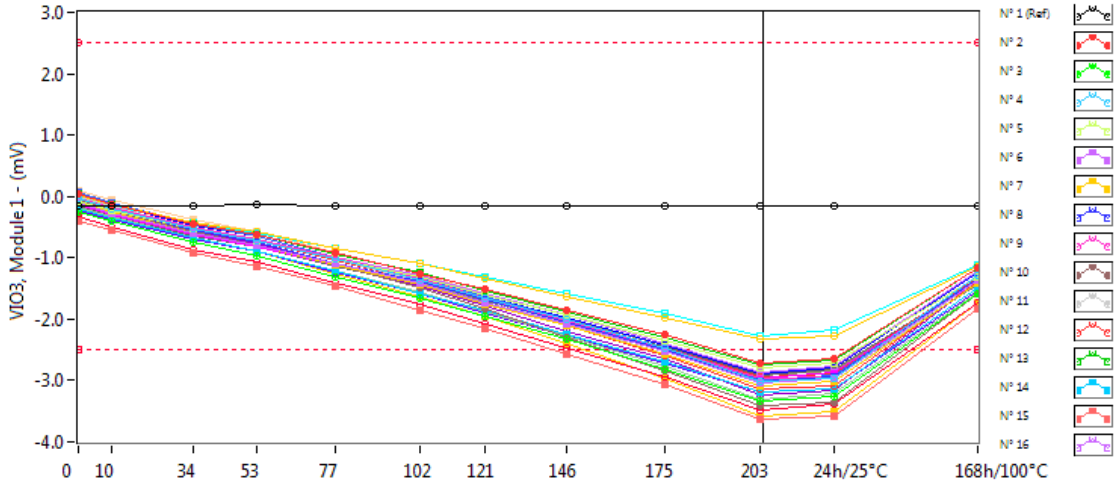



**VIO2, Module 4 . (mV)** **Min = -2.5 Max = 2.5**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | -0.041 | -0.025 | -0.027 | -0.028 | -0.039 | -0.021 | -0.029 | -0.025 | -0.021 | -0.035 | -0.020 | -0.012 |
| N° 2 | 0.019 | -0.131 | -0.424 | -0.593 | -0.840 | -1.088 | -1.316 | -1.590 | -1.920 | -2.272 | -2.221 | -1.056 |
| N° 3 | 0.089 | -0.065 | -0.378 | -0.565 | -0.837 | -1.125 | -1.371 | -1.669 | -2.057 | -2.439 | -2.381 | -1.123 |
| N° 4 | -0.019 | -0.181 | -0.488 | -0.674 | -0.949 | -1.224 | -1.492 | -1.781 | -2.150 | -2.615 | -2.554 | -1.199 |
| N° 5 | 0.276 | 0.158 | -0.132 | -0.304 | -0.558 | -0.805 | -1.047 | -1.316 | -1.648 | -2.016 | -1.969 | -0.761 |
| N° 6 | 0.330 | 0.197 | -0.111 | -0.287 | -0.546 | -0.804 | -1.041 | -1.316 | -1.648 | -2.044 | -1.984 | -0.735 |
| N° 7 | 0.210 | 0.076 | -0.225 | -0.404 | -0.656 | -0.922 | -1.185 | -1.470 | -1.852 | -2.252 | -2.195 | -0.927 |
| N° 8 | 0.109 | -0.042 | -0.352 | -0.532 | -0.803 | -1.045 | -1.331 | -1.627 | -1.991 | -2.400 | -2.359 | -1.025 |
| N° 9 | 0.238 | 0.132 | -0.168 | -0.347 | -0.586 | -0.856 | -1.115 | -1.408 | -1.759 | -2.119 | -2.074 | -0.847 |
| N° 10 | 0.143 | -0.028 | -0.370 | -0.569 | -0.851 | -1.138 | -1.456 | -1.809 | -2.259 | -2.746 | -2.691 | -1.235 |
| N° 11 | 0.379 | 0.231 | -0.062 | -0.233 | -0.515 | -0.783 | -1.040 | -1.347 | -1.725 | -2.132 | -2.058 | -0.758 |
| N° 12 | 0.324 | 0.192 | -0.132 | -0.297 | -0.575 | -0.856 | -1.114 | -1.418 | -1.820 | -2.273 | -2.211 | -0.767 |
| N° 13 | 0.439 | 0.289 | -0.009 | -0.164 | -0.414 | -0.652 | -0.901 | -1.146 | -1.463 | -1.844 | -1.770 | -0.631 |
| N° 14 | 0.373 | 0.219 | -0.071 | -0.277 | -0.523 | -0.801 | -1.040 | -1.321 | -1.663 | -2.035 | -1.991 | -0.777 |
| N° 15 | 0.401 | 0.222 | -0.105 | -0.295 | -0.548 | -0.832 | -1.109 | -1.440 | -1.818 | -2.271 | -2.232 | -0.787 |
| N° 16 | 0.007 | -0.166 | -0.475 | -0.660 | -0.916 | -1.158 | -1.447 | -1.731 | -2.087 | -2.461 | -2.410 | -1.122 |
| N° 17 | 0.200 | 0.078 | -0.194 | -0.352 | -0.550 | -0.763 | -0.988 | -1.226 | -1.521 | -1.828 | -1.780 | -0.804 |
| N° 18 | 0.285 | 0.138 | -0.178 | -0.348 | -0.615 | -0.854 | -1.125 | -1.411 | -1.742 | -2.124 | -2.066 | -0.808 |
| N° 19 | 0.305 | 0.151 | -0.178 | -0.379 | -0.670 | -0.970 | -1.257 | -1.586 | -1.948 | -2.392 | -2.343 | -0.917 |
| N° 20 | 0.062 | -0.090 | -0.413 | -0.590 | -0.868 | -1.164 | -1.459 | -1.780 | -2.184 | -2.624 | -2.508 | -1.138 |
| N° 21 | 0.269 | 0.149 | -0.102 | -0.254 | -0.460 | -0.663 | -0.874 | -1.083 | -1.358 | -1.661 | -1.582 | -0.708 |
| N° 22 | -0.147 | -0.283 | -0.589 | -0.767 | -1.027 | -1.316 | -1.590 | -1.862 | -2.226 | -2.677 | -2.613 | -1.289 |
| N° 23 | 0.329 | 0.181 | -0.121 | -0.291 | -0.544 | -0.794 | -1.047 | -1.300 | -1.610 | -1.933 | -1.884 | -0.746 |
| N° 24 | 0.304 | 0.161 | -0.155 | -0.337 | -0.602 | -0.894 | -1.155 | -1.446 | -1.812 | -2.197 | -2.151 | -0.849 |
| N° 25 | 0.394 | 0.243 | -0.075 | -0.245 | -0.505 | -0.808 | -1.081 | -1.370 | -1.736 | -2.148 | -2.059 | -0.810 |
| N° 26 | 0.268 | 0.124 | -0.175 | -0.344 | -0.613 | -0.876 | -1.142 | -1.404 | -1.775 | -2.156 | -2.068 | -0.857 |
| N° 27 | 0.228 | 0.094 | -0.215 | -0.392 | -0.633 | -0.887 | -1.116 | -1.378 | -1.735 | -2.100 | -2.034 | -0.837 |
| N° 28 | -0.054 | -0.186 | -0.492 | -0.645 | -0.873 | -1.108 | -1.370 | -1.654 | -2.010 | -2.412 | -2.359 | -1.162 |
| N° 29 | 0.095 | -0.052 | -0.361 | -0.531 | -0.797 | -1.075 | -1.332 | -1.607 | -1.948 | -2.275 | -2.233 | -1.033 |
| N° 30 | 0.159 | 0.024 | -0.319 | -0.501 | -0.808 | -1.105 | -1.365 | -1.731 | -2.142 | -2.641 | -2.571 | -1.174 |
| N° 31 | 0.207 | 0.054 | -0.264 | -0.447 | -0.719 | -0.978 | -1.245 | -1.526 | -1.871 | -2.255 | -2.203 | -0.912 |

# 9. VIO3, Module 1

**Ta=25°C; +VCC=5V; -VCC=GND; VCM=+1.4V**

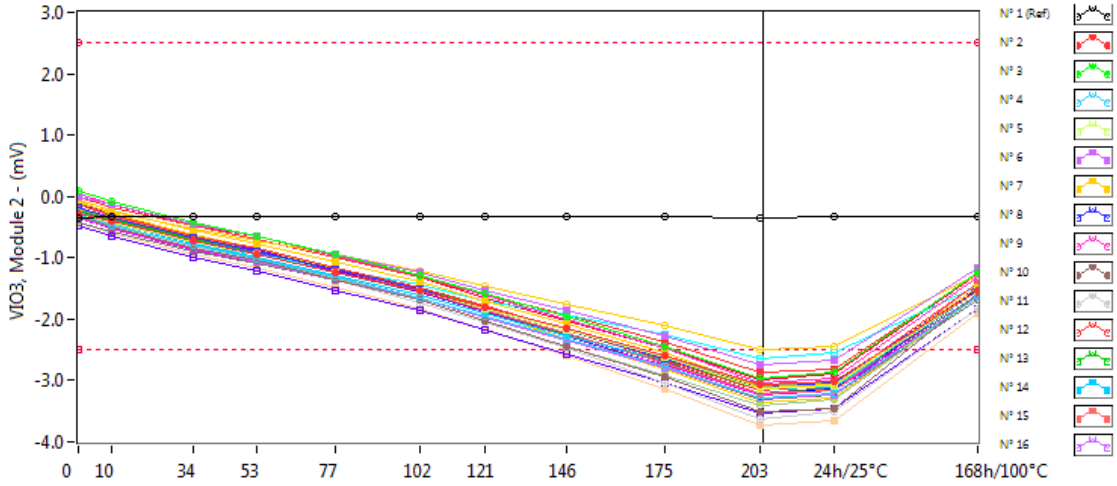



**VIO3, Module 1 . (mV)** **Min = -2.5 Max = 2.5**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | -0.160 | -0.148 | -0.150 | -0.130 | -0.158 | -0.148 | -0.152 | -0.156 | -0.151 | -0.161 | -0.143 | -0.146 |
| N° 2 | 0.036 | -0.129 | -0.441 | -0.632 | -0.920 | -1.256 | -1.515 | -1.852 | -2.242 | -2.707 | -2.655 | -1.161 |
| N° 3 | -0.254 | -0.406 | -0.757 | -0.975 | -1.302 | -1.657 | -1.955 | -2.316 | -2.807 | -3.334 | -3.254 | -1.584 |
| N° 4 | -0.031 | -0.199 | -0.530 | -0.714 | -1.012 | -1.356 | -1.668 | -2.012 | -2.478 | -3.014 | -2.953 | -1.291 |
| N° 5 | -0.080 | -0.224 | -0.535 | -0.722 | -1.021 | -1.323 | -1.620 | -1.934 | -2.338 | -2.794 | -2.726 | -1.303 |
| N° 6 | -0.098 | -0.272 | -0.606 | -0.787 | -1.097 | -1.418 | -1.724 | -2.070 | -2.515 | -3.051 | -2.971 | -1.361 |
| N° 7 | -0.111 | -0.263 | -0.602 | -0.785 | -1.105 | -1.440 | -1.747 | -2.112 | -2.579 | -3.081 | -3.010 | -1.414 |
| N° 8 | -0.036 | -0.212 | -0.559 | -0.742 | -1.080 | -1.383 | -1.692 | -2.050 | -2.506 | -3.004 | -2.949 | -1.348 |
| N° 9 | -0.040 | -0.185 | -0.506 | -0.694 | -1.001 | -1.342 | -1.652 | -2.027 | -2.466 | -2.972 | -2.933 | -1.327 |
| N° 10 | -0.061 | -0.230 | -0.579 | -0.792 | -1.118 | -1.480 | -1.828 | -2.287 | -2.842 | -3.404 | -3.353 | -1.591 |
| N° 11 | -0.012 | -0.165 | -0.513 | -0.695 | -1.022 | -1.384 | -1.692 | -2.068 | -2.575 | -3.090 | -3.020 | -1.374 |
| N° 12 | -0.069 | -0.230 | -0.582 | -0.784 | -1.118 | -1.445 | -1.760 | -2.114 | -2.603 | -3.142 | -3.081 | -1.398 |
| N° 13 | 0.033 | -0.125 | -0.444 | -0.632 | -0.944 | -1.238 | -1.536 | -1.874 | -2.308 | -2.754 | -2.670 | -1.158 |
| N° 14 | -0.193 | -0.353 | -0.675 | -0.906 | -1.211 | -1.576 | -1.849 | -2.252 | -2.684 | -3.198 | -3.134 | -1.496 |
| N° 15 | -0.394 | -0.556 | -0.916 | -1.135 | -1.470 | -1.848 | -2.146 | -2.567 | -3.059 | -3.627 | -3.590 | -1.819 |
| N° 16 | 0.005 | -0.173 | -0.495 | -0.700 | -0.996 | -1.298 | -1.585 | -1.935 | -2.391 | -2.873 | -2.779 | -1.207 |
| N° 17 | 0.016 | -0.126 | -0.419 | -0.578 | -0.835 | -1.101 | -1.344 | -1.646 | -1.969 | -2.336 | -2.273 | -1.129 |
| N° 18 | -0.133 | -0.306 | -0.626 | -0.828 | -1.125 | -1.420 | -1.743 | -2.074 | -2.485 | -2.957 | -2.871 | -1.387 |
| N° 19 | -0.047 | -0.208 | -0.577 | -0.783 | -1.105 | -1.453 | -1.780 | -2.192 | -2.654 | -3.244 | -3.156 | -1.386 |
| N° 20 | -0.175 | -0.316 | -0.669 | -0.888 | -1.205 | -1.568 | -1.889 | -2.284 | -2.774 | -3.319 | -3.209 | -1.566 |
| N° 21 | 0.004 | -0.146 | -0.417 | -0.597 | -0.834 | -1.099 | -1.321 | -1.582 | -1.899 | -2.276 | -2.183 | -1.120 |
| N° 22 | -0.052 | -0.244 | -0.543 | -0.727 | -1.053 | -1.398 | -1.682 | -2.015 | -2.465 | -2.952 | -2.885 | -1.308 |
| N° 23 | -0.166 | -0.327 | -0.654 | -0.827 | -1.135 | -1.445 | -1.742 | -2.076 | -2.443 | -2.905 | -2.820 | -1.361 |
| N° 24 | 0.062 | -0.110 | -0.458 | -0.658 | -0.982 | -1.332 | -1.636 | -2.015 | -2.484 | -2.980 | -2.915 | -1.315 |
| N° 25 | -0.320 | -0.507 | -0.873 | -1.059 | -1.422 | -1.760 | -2.076 | -2.479 | -2.942 | -3.493 | -3.393 | -1.725 |
| N° 26 | 0.038 | -0.131 | -0.471 | -0.652 | -0.982 | -1.313 | -1.633 | -1.986 | -2.434 | -2.882 | -2.793 | -1.237 |
| N° 27 | -0.120 | -0.277 | -0.590 | -0.757 | -1.088 | -1.417 | -1.675 | -2.004 | -2.431 | -2.912 | -2.836 | -1.376 |
| N° 28 | -0.119 | -0.277 | -0.625 | -0.785 | -1.096 | -1.396 | -1.707 | -2.039 | -2.512 | -3.016 | -2.932 | -1.439 |
| N° 29 | -0.219 | -0.382 | -0.704 | -0.892 | -1.234 | -1.576 | -1.909 | -2.283 | -2.723 | -3.197 | -3.137 | -1.530 |
| N° 30 | -0.170 | -0.345 | -0.703 | -0.896 | -1.273 | -1.629 | -1.959 | -2.407 | -2.968 | -3.592 | -3.508 | -1.736 |
| N° 31 | 0.100 | -0.054 | -0.388 | -0.572 | -0.907 | -1.252 | -1.587 | -1.937 | -2.407 | -2.888 | -2.791 | -1.208 |

# 10. VIO3, Module 2

**Ta=25°C; +VCC=5V; -VCC=GND; VCM=+1.4V**

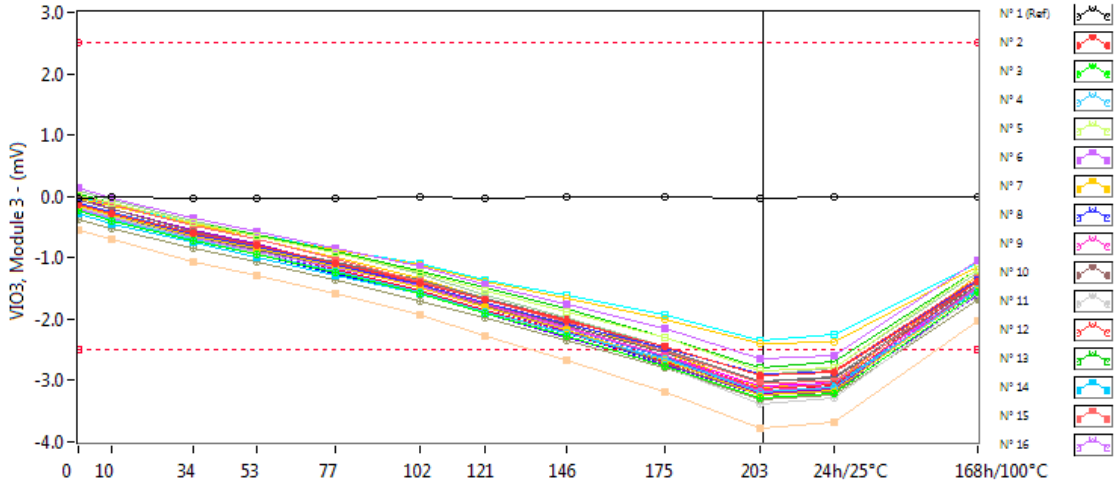



**VIO3, Module 2 . (mV)** **Min = -2.5 Max = 2.5**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | -0.342 | -0.329 | -0.332 | -0.329 | -0.339 | -0.323 | -0.329 | -0.330 | -0.335 | -0.341 | -0.333 | -0.325 |
| N° 2 | -0.285 | -0.410 | -0.730 | -0.938 | -1.233 | -1.537 | -1.813 | -2.161 | -2.589 | -3.059 | -3.002 | -1.532 |
| N° 3 | 0.088 | -0.089 | -0.418 | -0.642 | -0.941 | -1.281 | -1.583 | -1.949 | -2.453 | -2.964 | -2.876 | -1.240 |
| N° 4 | -0.308 | -0.465 | -0.798 | -1.006 | -1.319 | -1.658 | -1.958 | -2.315 | -2.760 | -3.278 | -3.220 | -1.628 |
| N° 5 | -0.274 | -0.424 | -0.753 | -0.939 | -1.251 | -1.536 | -1.827 | -2.172 | -2.616 | -3.134 | -3.079 | -1.532 |
| N° 6 | 0.004 | -0.125 | -0.441 | -0.639 | -0.943 | -1.244 | -1.527 | -1.846 | -2.263 | -2.745 | -2.679 | -1.174 |
| N° 7 | -0.060 | -0.221 | -0.552 | -0.759 | -1.062 | -1.396 | -1.699 | -2.080 | -2.553 | -3.124 | -3.064 | -1.485 |
| N° 8 | -0.179 | -0.353 | -0.684 | -0.893 | -1.198 | -1.502 | -1.828 | -2.186 | -2.640 | -3.105 | -3.047 | -1.479 |
| N° 9 | 0.041 | -0.118 | -0.441 | -0.655 | -0.960 | -1.282 | -1.599 | -1.995 | -2.469 | -3.039 | -2.972 | -1.325 |
| N° 10 | -0.331 | -0.504 | -0.844 | -1.045 | -1.364 | -1.694 | -2.033 | -2.453 | -2.938 | -3.515 | -3.453 | -1.592 |
| N° 11 | -0.331 | -0.498 | -0.823 | -1.054 | -1.374 | -1.735 | -2.056 | -2.481 | -3.043 | -3.627 | -3.512 | -1.819 |
| N° 12 | -0.128 | -0.296 | -0.641 | -0.855 | -1.161 | -1.497 | -1.791 | -2.167 | -2.670 | -3.161 | -3.073 | -1.416 |
| N° 13 | -0.234 | -0.379 | -0.695 | -0.895 | -1.195 | -1.508 | -1.812 | -2.166 | -2.633 | -3.136 | -3.065 | -1.484 |
| N° 14 | -0.262 | -0.436 | -0.759 | -1.003 | -1.290 | -1.621 | -1.905 | -2.274 | -2.660 | -3.145 | -3.106 | -1.541 |
| N° 15 | -0.139 | -0.324 | -0.659 | -0.893 | -1.196 | -1.542 | -1.855 | -2.237 | -2.707 | -3.211 | -3.163 | -1.401 |
| N° 16 | -0.345 | -0.508 | -0.838 | -1.060 | -1.356 | -1.658 | -1.971 | -2.346 | -2.794 | -3.290 | -3.233 | -1.599 |
| N° 17 | -0.113 | -0.244 | -0.531 | -0.711 | -0.949 | -1.205 | -1.457 | -1.747 | -2.100 | -2.498 | -2.438 | -1.275 |
| N° 18 | -0.342 | -0.520 | -0.865 | -1.065 | -1.368 | -1.661 | -1.988 | -2.344 | -2.747 | -3.224 | -3.157 | -1.631 |
| N° 19 | -0.108 | -0.294 | -0.636 | -0.867 | -1.207 | -1.557 | -1.875 | -2.274 | -2.771 | -3.289 | -3.231 | -1.473 |
| N° 20 | -0.272 | -0.456 | -0.812 | -1.023 | -1.333 | -1.680 | -2.036 | -2.444 | -2.915 | -3.418 | -3.301 | -1.622 |
| N° 21 | -0.341 | -0.488 | -0.786 | -0.952 | -1.192 | -1.436 | -1.697 | -1.925 | -2.259 | -2.648 | -2.534 | -1.472 |
| N° 22 | -0.011 | -0.188 | -0.486 | -0.692 | -1.001 | -1.319 | -1.601 | -1.918 | -2.367 | -2.862 | -2.811 | -1.263 |
| N° 23 | -0.242 | -0.392 | -0.733 | -0.944 | -1.237 | -1.558 | -1.864 | -2.240 | -2.691 | -3.200 | -3.122 | -1.597 |
| N° 24 | -0.180 | -0.350 | -0.688 | -0.907 | -1.218 | -1.560 | -1.871 | -2.244 | -2.725 | -3.219 | -3.150 | -1.541 |
| N° 25 | 0.043 | -0.131 | -0.466 | -0.654 | -0.969 | -1.325 | -1.649 | -2.016 | -2.481 | -2.994 | -2.902 | -1.270 |
| N° 26 | -0.191 | -0.354 | -0.703 | -0.892 | -1.211 | -1.547 | -1.867 | -2.238 | -2.723 | -3.218 | -3.133 | -1.515 |
| N° 27 | -0.202 | -0.368 | -0.698 | -0.908 | -1.227 | -1.544 | -1.829 | -2.172 | -2.629 | -3.100 | -3.031 | -1.532 |
| N° 28 | -0.422 | -0.565 | -0.906 | -1.090 | -1.361 | -1.650 | -1.970 | -2.328 | -2.798 | -3.316 | -3.248 | -1.685 |
| N° 29 | -0.478 | -0.647 | -0.984 | -1.206 | -1.523 | -1.858 | -2.180 | -2.568 | -3.035 | -3.529 | -3.459 | -1.841 |
| N° 30 | -0.078 | -0.271 | -0.634 | -0.857 | -1.178 | -1.559 | -1.873 | -2.313 | -2.817 | -3.366 | -3.275 | -1.602 |
| N° 31 | -0.437 | -0.604 | -0.949 | -1.166 | -1.486 | -1.819 | -2.184 | -2.599 | -3.127 | -3.737 | -3.660 | -1.908 |

# 11. VIO3, Module 3

**Ta=25°C; +VCC=5V; -VCC=GND; VCM=+1.4V**

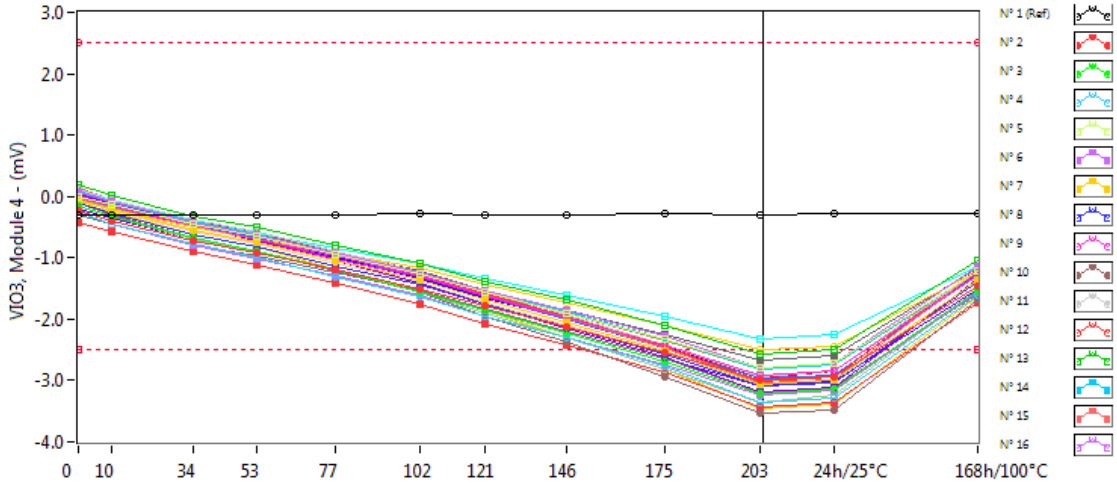



**VIO3, Module 3 . (mV)** **Min = -2.5 Max = 2.5**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | -0.025 | -0.016 | -0.023 | -0.025 | -0.030 | -0.017 | -0.025 | -0.017 | -0.017 | -0.027 | -0.009 | -0.009 |
| N° 2 | -0.137 | -0.278 | -0.603 | -0.799 | -1.084 | -1.404 | -1.685 | -2.032 | -2.435 | -2.909 | -2.865 | -1.376 |
| N° 3 | -0.228 | -0.392 | -0.726 | -0.953 | -1.250 | -1.584 | -1.911 | -2.268 | -2.765 | -3.290 | -3.223 | -1.559 |
| N° 4 | -0.220 | -0.386 | -0.700 | -0.936 | -1.226 | -1.566 | -1.871 | -2.222 | -2.656 | -3.179 | -3.115 | -1.507 |
| N° 5 | 0.015 | -0.114 | -0.428 | -0.646 | -0.924 | -1.229 | -1.546 | -1.874 | -2.303 | -2.849 | -2.804 | -1.197 |
| N° 6 | 0.130 | -0.028 | -0.357 | -0.570 | -0.846 | -1.142 | -1.430 | -1.745 | -2.161 | -2.635 | -2.592 | -1.052 |
| N° 7 | -0.154 | -0.315 | -0.639 | -0.848 | -1.133 | -1.484 | -1.806 | -2.171 | -2.662 | -3.226 | -3.174 | -1.511 |
| N° 8 | -0.096 | -0.267 | -0.620 | -0.826 | -1.124 | -1.431 | -1.738 | -2.074 | -2.479 | -2.899 | -2.859 | -1.363 |
| N° 9 | -0.141 | -0.295 | -0.600 | -0.818 | -1.105 | -1.445 | -1.767 | -2.134 | -2.596 | -3.151 | -3.102 | -1.491 |
| N° 10 | -0.052 | -0.213 | -0.563 | -0.795 | -1.089 | -1.443 | -1.775 | -2.183 | -2.718 | -3.241 | -3.196 | -1.445 |
| N° 11 | -0.187 | -0.338 | -0.697 | -0.921 | -1.231 | -1.570 | -1.889 | -2.265 | -2.778 | -3.374 | -3.284 | -1.576 |
| N° 12 | -0.058 | -0.212 | -0.563 | -0.789 | -1.100 | -1.447 | -1.751 | -2.115 | -2.593 | -3.133 | -3.073 | -1.390 |
| N° 13 | 0.046 | -0.112 | -0.415 | -0.617 | -0.904 | -1.218 | -1.498 | -1.824 | -2.292 | -2.787 | -2.704 | -1.196 |
| N° 14 | -0.274 | -0.446 | -0.752 | -0.984 | -1.278 | -1.591 | -1.893 | -2.232 | -2.662 | -3.128 | -3.069 | -1.535 |
| N° 15 | 0.022 | -0.135 | -0.483 | -0.700 | -1.015 | -1.396 | -1.686 | -2.050 | -2.517 | -3.037 | -3.012 | -1.339 |
| N° 16 | -0.204 | -0.349 | -0.671 | -0.891 | -1.176 | -1.472 | -1.788 | -2.149 | -2.605 | -3.133 | -3.051 | -1.461 |
| N° 17 | -0.038 | -0.160 | -0.462 | -0.643 | -0.871 | -1.116 | -1.381 | -1.666 | -1.999 | -2.410 | -2.363 | -1.139 |
| N° 18 | -0.189 | -0.340 | -0.673 | -0.886 | -1.174 | -1.470 | -1.803 | -2.144 | -2.587 | -3.099 | -3.035 | -1.476 |
| N° 19 | -0.016 | -0.208 | -0.559 | -0.779 | -1.110 | -1.461 | -1.800 | -2.201 | -2.674 | -3.219 | -3.149 | -1.481 |
| N° 20 | 0.085 | -0.056 | -0.405 | -0.614 | -0.922 | -1.262 | -1.611 | -1.981 | -2.435 | -2.910 | -2.799 | -1.239 |
| N° 21 | -0.015 | -0.162 | -0.438 | -0.613 | -0.858 | -1.103 | -1.352 | -1.601 | -1.935 | -2.343 | -2.260 | -1.103 |
| N° 22 | -0.140 | -0.295 | -0.611 | -0.819 | -1.084 | -1.388 | -1.689 | -2.010 | -2.441 | -2.927 | -2.853 | -1.349 |
| N° 23 | -0.148 | -0.325 | -0.657 | -0.867 | -1.148 | -1.454 | -1.754 | -2.112 | -2.539 | -3.021 | -2.953 | -1.445 |
| N° 24 | -0.097 | -0.255 | -0.603 | -0.818 | -1.114 | -1.442 | -1.777 | -2.144 | -2.612 | -3.159 | -3.103 | -1.381 |
| N° 25 | -0.103 | -0.292 | -0.626 | -0.870 | -1.180 | -1.524 | -1.864 | -2.237 | -2.687 | -3.197 | -3.096 | -1.524 |
| N° 26 | -0.225 | -0.387 | -0.726 | -0.952 | -1.260 | -1.589 | -1.896 | -2.236 | -2.721 | -3.245 | -3.148 | -1.514 |
| N° 27 | -0.375 | -0.523 | -0.851 | -1.079 | -1.365 | -1.701 | -1.983 | -2.341 | -2.797 | -3.310 | -3.238 | -1.688 |
| N° 28 | -0.124 | -0.270 | -0.619 | -0.815 | -1.075 | -1.360 | -1.656 | -2.015 | -2.491 | -3.009 | -2.934 | -1.391 |
| N° 29 | -0.213 | -0.352 | -0.679 | -0.918 | -1.214 | -1.550 | -1.893 | -2.289 | -2.744 | -3.236 | -3.176 | -1.598 |
| N° 30 | 0.012 | -0.130 | -0.457 | -0.692 | -1.004 | -1.337 | -1.654 | -2.051 | -2.553 | -3.104 | -3.038 | -1.284 |
| N° 31 | -0.548 | -0.706 | -1.058 | -1.279 | -1.590 | -1.924 | -2.279 | -2.681 | -3.181 | -3.789 | -3.687 | -2.017 |

# 12. VIO3, Module 4

**Ta=25°C; +VCC=5V; -VCC=GND; VCM=+1.4V**

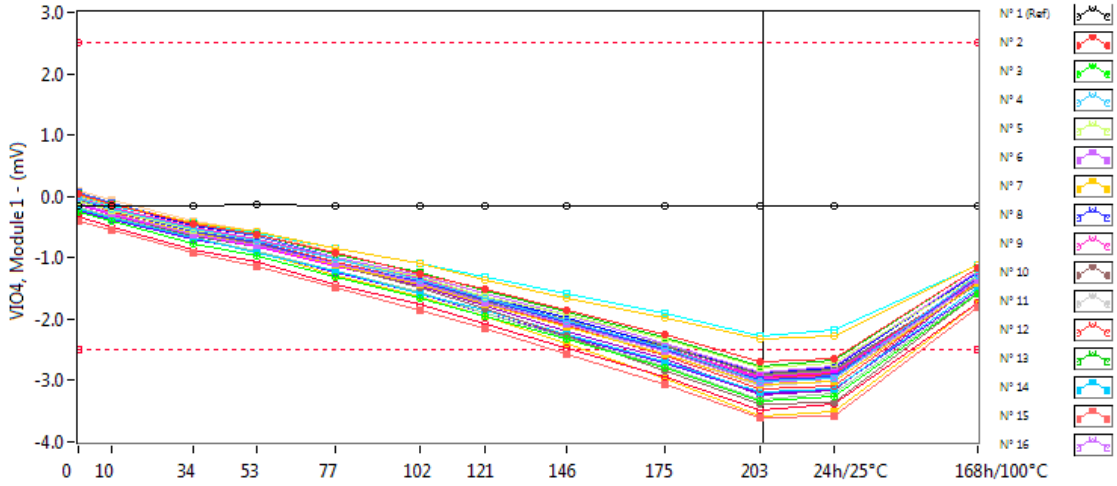



**VIO3, Module 4 . (mV)** **Min = -2.5 Max = 2.5**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | -0.307 | -0.295 | -0.296 | -0.293 | -0.302 | -0.290 | -0.296 | -0.294 | -0.290 | -0.301 | -0.290 | -0.284 |
| N° 2 | -0.228 | -0.396 | -0.720 | -0.911 | -1.200 | -1.503 | -1.779 | -2.115 | -2.534 | -2.988 | -2.930 | -1.462 |
| N° 3 | -0.158 | -0.326 | -0.671 | -0.890 | -1.202 | -1.551 | -1.852 | -2.220 | -2.704 | -3.202 | -3.130 | -1.539 |
| N° 4 | -0.263 | -0.443 | -0.780 | -0.995 | -1.309 | -1.641 | -1.954 | -2.309 | -2.768 | -3.353 | -3.277 | -1.605 |
| N° 5 | -0.004 | -0.139 | -0.455 | -0.658 | -0.953 | -1.257 | -1.550 | -1.893 | -2.320 | -2.790 | -2.730 | -1.204 |
| N° 6 | 0.058 | -0.090 | -0.423 | -0.625 | -0.927 | -1.237 | -1.523 | -1.861 | -2.282 | -2.792 | -2.719 | -1.153 |
| N° 7 | -0.061 | -0.212 | -0.540 | -0.748 | -1.038 | -1.370 | -1.681 | -2.044 | -2.531 | -3.053 | -2.981 | -1.374 |
| N° 8 | -0.115 | -0.281 | -0.618 | -0.826 | -1.136 | -1.429 | -1.761 | -2.123 | -2.565 | -3.082 | -3.035 | -1.399 |
| N° 9 | -0.030 | -0.147 | -0.479 | -0.685 | -0.965 | -1.298 | -1.609 | -1.978 | -2.434 | -2.904 | -2.852 | -1.295 |
| N° 10 | -0.112 | -0.298 | -0.677 | -0.900 | -1.222 | -1.571 | -1.942 | -2.373 | -2.929 | -3.540 | -3.483 | -1.678 |
| N° 11 | 0.114 | -0.053 | -0.374 | -0.573 | -0.903 | -1.234 | -1.545 | -1.928 | -2.418 | -2.939 | -2.852 | -1.206 |
| N° 12 | 0.070 | -0.079 | -0.429 | -0.624 | -0.944 | -1.283 | -1.585 | -1.960 | -2.457 | -3.012 | -2.946 | -1.187 |
| N° 13 | 0.178 | 0.014 | -0.317 | -0.501 | -0.786 | -1.085 | -1.380 | -1.691 | -2.101 | -2.580 | -2.492 | -1.053 |
| N° 14 | 0.102 | -0.066 | -0.390 | -0.623 | -0.909 | -1.243 | -1.534 | -1.883 | -2.323 | -2.807 | -2.754 | -1.208 |
| N° 15 | 0.145 | -0.049 | -0.405 | -0.627 | -0.915 | -1.256 | -1.589 | -1.989 | -2.463 | -3.040 | -2.992 | -1.208 |
| N° 16 | -0.261 | -0.451 | -0.794 | -1.008 | -1.301 | -1.605 | -1.943 | -2.297 | -2.748 | -3.233 | -3.172 | -1.559 |
| N° 17 | -0.082 | -0.216 | -0.509 | -0.693 | -0.920 | -1.177 | -1.443 | -1.735 | -2.104 | -2.490 | -2.437 | -1.227 |
| N° 18 | 0.012 | -0.151 | -0.500 | -0.699 | -1.008 | -1.310 | -1.635 | -1.991 | -2.420 | -2.906 | -2.840 | -1.245 |
| N° 19 | 0.048 | -0.124 | -0.481 | -0.711 | -1.050 | -1.412 | -1.749 | -2.151 | -2.617 | -3.179 | -3.118 | -1.344 |
| N° 20 | -0.162 | -0.331 | -0.686 | -0.895 | -1.210 | -1.565 | -1.913 | -2.305 | -2.812 | -3.363 | -3.227 | -1.527 |
| N° 21 | -0.020 | -0.154 | -0.425 | -0.602 | -0.840 | -1.088 | -1.336 | -1.602 | -1.950 | -2.335 | -2.248 | -1.138 |
| N° 22 | -0.420 | -0.574 | -0.906 | -1.114 | -1.413 | -1.758 | -2.083 | -2.416 | -2.864 | -3.422 | -3.350 | -1.722 |
| N° 23 | 0.082 | -0.084 | -0.413 | -0.610 | -0.908 | -1.218 | -1.524 | -1.844 | -2.245 | -2.664 | -2.606 | -1.156 |
| N° 24 | 0.054 | -0.107 | -0.447 | -0.661 | -0.969 | -1.322 | -1.637 | -2.008 | -2.470 | -2.973 | -2.925 | -1.268 |
| N° 25 | 0.109 | -0.059 | -0.404 | -0.604 | -0.912 | -1.275 | -1.604 | -1.963 | -2.434 | -2.955 | -2.853 | -1.259 |
| N° 26 | -0.003 | -0.163 | -0.490 | -0.689 | -1.004 | -1.328 | -1.653 | -1.982 | -2.456 | -2.945 | -2.842 | -1.289 |
| N° 27 | -0.022 | -0.173 | -0.509 | -0.707 | -0.995 | -1.305 | -1.577 | -1.903 | -2.356 | -2.821 | -2.746 | -1.247 |
| N° 28 | -0.308 | -0.459 | -0.791 | -0.966 | -1.237 | -1.524 | -1.842 | -2.192 | -2.648 | -3.175 | -3.110 | -1.587 |
| N° 29 | -0.199 | -0.364 | -0.704 | -0.905 | -1.212 | -1.554 | -1.865 | -2.213 | -2.652 | -3.081 | -3.026 | -1.500 |
| N° 30 | -0.102 | -0.253 | -0.625 | -0.832 | -1.192 | -1.543 | -1.866 | -2.304 | -2.822 | -3.448 | -3.372 | -1.623 |
| N° 31 | -0.054 | -0.223 | -0.572 | -0.779 | -1.097 | -1.419 | -1.743 | -2.104 | -2.550 | -3.051 | -2.987 | -1.361 |

# 13. VIO4, Module 1

**Ta=25°C; +VCC=2.5V; -VCC=-2.5V; VCM=-1.1V**

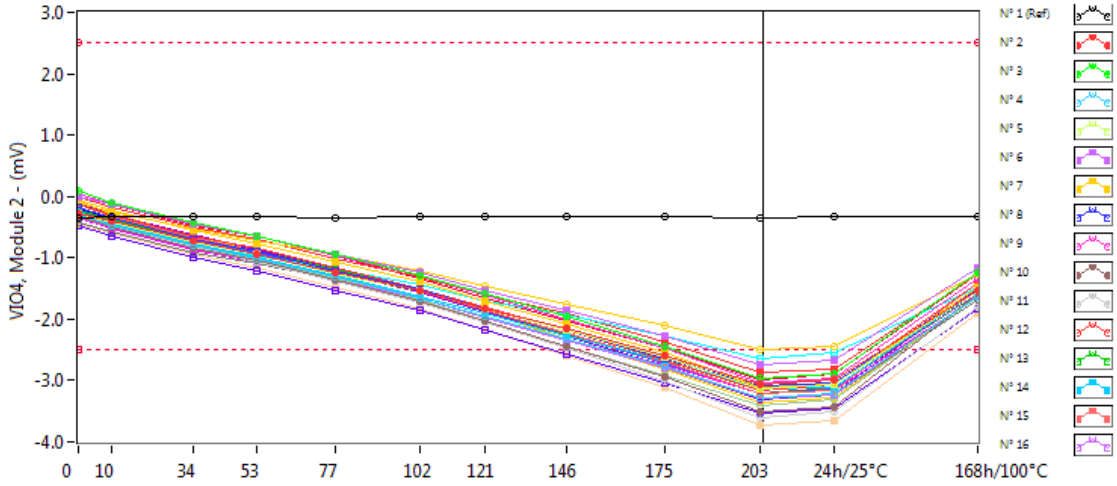



**VIO4, Module 1 . (mV)** **Min = -2.5 Max = 2.5**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | -0.162 | -0.149 | -0.153 | -0.129 | -0.163 | -0.151 | -0.155 | -0.157 | -0.153 | -0.162 | -0.145 | -0.147 |
| N° 2 | 0.034 | -0.131 | -0.445 | -0.631 | -0.930 | -1.257 | -1.520 | -1.853 | -2.248 | -2.704 | -2.655 | -1.163 |
| N° 3 | -0.256 | -0.405 | -0.761 | -0.977 | -1.306 | -1.658 | -1.962 | -2.319 | -2.802 | -3.334 | -3.253 | -1.585 |
| N° 4 | -0.034 | -0.199 | -0.535 | -0.720 | -1.021 | -1.359 | -1.666 | -2.016 | -2.476 | -3.011 | -2.955 | -1.294 |
| N° 5 | -0.082 | -0.226 | -0.538 | -0.727 | -1.028 | -1.324 | -1.628 | -1.935 | -2.334 | -2.790 | -2.724 | -1.301 |
| N° 6 | -0.101 | -0.273 | -0.612 | -0.790 | -1.102 | -1.421 | -1.727 | -2.072 | -2.511 | -3.051 | -2.972 | -1.361 |
| N° 7 | -0.112 | -0.266 | -0.605 | -0.786 | -1.110 | -1.439 | -1.752 | -2.116 | -2.569 | -3.072 | -3.010 | -1.412 |
| N° 8 | -0.038 | -0.218 | -0.562 | -0.739 | -1.084 | -1.384 | -1.695 | -2.053 | -2.503 | -3.000 | -2.943 | -1.347 |
| N° 9 | -0.042 | -0.189 | -0.510 | -0.697 | -1.008 | -1.341 | -1.652 | -2.029 | -2.468 | -2.977 | -2.930 | -1.325 |
| N° 10 | -0.063 | -0.231 | -0.580 | -0.782 | -1.123 | -1.481 | -1.831 | -2.284 | -2.842 | -3.390 | -3.348 | -1.589 |
| N° 11 | -0.014 | -0.169 | -0.513 | -0.697 | -1.029 | -1.383 | -1.694 | -2.070 | -2.577 | -3.100 | -3.014 | -1.374 |
| N° 12 | -0.071 | -0.232 | -0.584 | -0.783 | -1.118 | -1.445 | -1.760 | -2.113 | -2.599 | -3.140 | -3.080 | -1.398 |
| N° 13 | 0.030 | -0.128 | -0.452 | -0.631 | -0.954 | -1.241 | -1.539 | -1.873 | -2.305 | -2.759 | -2.672 | -1.156 |
| N° 14 | -0.194 | -0.352 | -0.677 | -0.911 | -1.214 | -1.580 | -1.846 | -2.252 | -2.688 | -3.190 | -3.135 | -1.497 |
| N° 15 | -0.397 | -0.556 | -0.917 | -1.139 | -1.477 | -1.847 | -2.146 | -2.565 | -3.057 | -3.615 | -3.583 | -1.817 |
| N° 16 | 0.003 | -0.176 | -0.497 | -0.701 | -1.004 | -1.301 | -1.591 | -1.935 | -2.389 | -2.873 | -2.778 | -1.204 |
| N° 17 | 0.013 | -0.126 | -0.420 | -0.577 | -0.843 | -1.097 | -1.351 | -1.648 | -1.970 | -2.331 | -2.279 | -1.125 |
| N° 18 | -0.135 | -0.308 | -0.627 | -0.832 | -1.131 | -1.421 | -1.740 | -2.072 | -2.482 | -2.950 | -2.874 | -1.384 |
| N° 19 | -0.049 | -0.209 | -0.580 | -0.778 | -1.108 | -1.449 | -1.784 | -2.190 | -2.653 | -3.231 | -3.155 | -1.383 |
| N° 20 | -0.180 | -0.318 | -0.671 | -0.890 | -1.214 | -1.570 | -1.894 | -2.287 | -2.770 | -3.315 | -3.205 | -1.565 |
| N° 21 | 0.001 | -0.147 | -0.421 | -0.607 | -0.839 | -1.103 | -1.325 | -1.587 | -1.906 | -2.279 | -2.188 | -1.121 |
| N° 22 | -0.053 | -0.243 | -0.547 | -0.737 | -1.063 | -1.397 | -1.681 | -2.017 | -2.461 | -2.954 | -2.884 | -1.310 |
| N° 23 | -0.168 | -0.325 | -0.654 | -0.825 | -1.140 | -1.446 | -1.745 | -2.078 | -2.441 | -2.900 | -2.826 | -1.360 |
| N° 24 | 0.060 | -0.111 | -0.458 | -0.655 | -0.991 | -1.334 | -1.637 | -2.018 | -2.478 | -2.981 | -2.919 | -1.314 |
| N° 25 | -0.322 | -0.510 | -0.877 | -1.059 | -1.426 | -1.760 | -2.080 | -2.473 | -2.941 | -3.486 | -3.392 | -1.725 |
| N° 26 | 0.036 | -0.134 | -0.478 | -0.655 | -0.989 | -1.313 | -1.636 | -1.986 | -2.435 | -2.878 | -2.799 | -1.240 |
| N° 27 | -0.122 | -0.276 | -0.593 | -0.755 | -1.095 | -1.419 | -1.674 | -2.008 | -2.429 | -2.911 | -2.840 | -1.375 |
| N° 28 | -0.121 | -0.280 | -0.632 | -0.779 | -1.098 | -1.396 | -1.705 | -2.042 | -2.513 | -3.010 | -2.929 | -1.439 |
| N° 29 | -0.222 | -0.383 | -0.707 | -0.886 | -1.240 | -1.579 | -1.905 | -2.283 | -2.717 | -3.199 | -3.139 | -1.530 |
| N° 30 | -0.172 | -0.346 | -0.708 | -0.902 | -1.278 | -1.633 | -1.965 | -2.408 | -2.966 | -3.588 | -3.498 | -1.733 |
| N° 31 | 0.098 | -0.055 | -0.390 | -0.579 | -0.912 | -1.256 | -1.591 | -1.939 | -2.403 | -2.882 | -2.786 | -1.208 |

# 14. VIO4, Module 2

**Ta=25°C; +VCC=2.5V; -VCC=-2.5V; VCM=-1.1V**

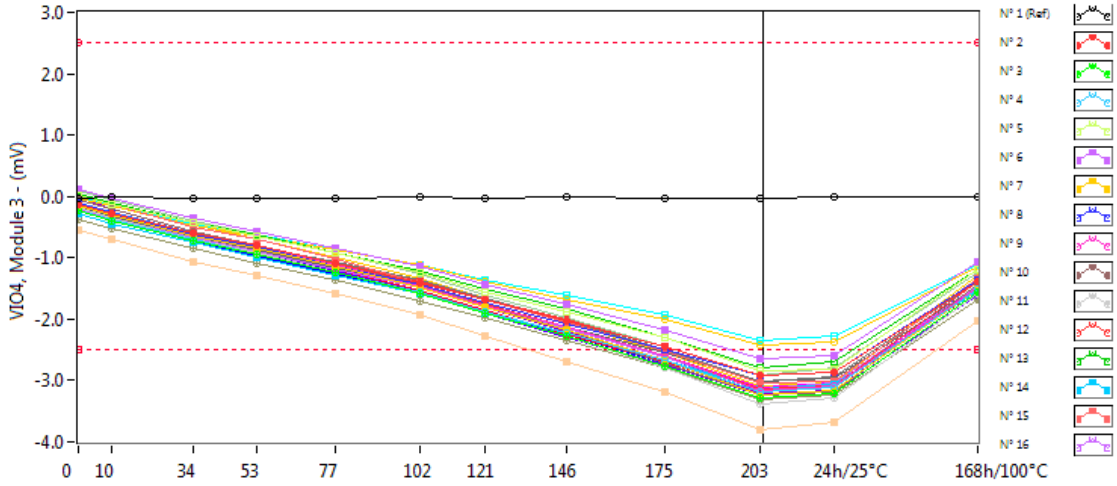



**VIO4, Module 2 . (mV)** **Min = -2.5 Max = 2.5**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | -0.344 | -0.329 | -0.333 | -0.331 | -0.344 | -0.326 | -0.331 | -0.332 | -0.335 | -0.341 | -0.334 | -0.326 |
| N° 2 | -0.287 | -0.413 | -0.732 | -0.943 | -1.238 | -1.539 | -1.819 | -2.162 | -2.583 | -3.064 | -2.996 | -1.533 |
| N° 3 | 0.086 | -0.094 | -0.422 | -0.644 | -0.948 | -1.285 | -1.583 | -1.953 | -2.453 | -2.962 | -2.881 | -1.239 |
| N° 4 | -0.311 | -0.465 | -0.805 | -1.011 | -1.325 | -1.663 | -1.965 | -2.313 | -2.760 | -3.275 | -3.212 | -1.631 |
| N° 5 | -0.276 | -0.424 | -0.758 | -0.941 | -1.260 | -1.543 | -1.832 | -2.176 | -2.608 | -3.129 | -3.075 | -1.533 |
| N° 6 | 0.002 | -0.130 | -0.447 | -0.646 | -0.952 | -1.246 | -1.530 | -1.847 | -2.266 | -2.749 | -2.674 | -1.174 |
| N° 7 | -0.061 | -0.222 | -0.559 | -0.762 | -1.063 | -1.396 | -1.700 | -2.080 | -2.554 | -3.117 | -3.068 | -1.482 |
| N° 8 | -0.180 | -0.354 | -0.687 | -0.894 | -1.203 | -1.509 | -1.829 | -2.188 | -2.638 | -3.096 | -3.047 | -1.480 |
| N° 9 | 0.039 | -0.122 | -0.446 | -0.659 | -0.965 | -1.291 | -1.604 | -1.997 | -2.470 | -3.032 | -2.971 | -1.326 |
| N° 10 | -0.333 | -0.502 | -0.849 | -1.048 | -1.367 | -1.701 | -2.034 | -2.457 | -2.935 | -3.505 | -3.445 | -1.590 |
| N° 11 | -0.333 | -0.499 | -0.825 | -1.055 | -1.381 | -1.733 | -2.051 | -2.478 | -3.019 | -3.612 | -3.515 | -1.815 |
| N° 12 | -0.130 | -0.297 | -0.646 | -0.856 | -1.167 | -1.500 | -1.795 | -2.166 | -2.667 | -3.155 | -3.066 | -1.414 |
| N° 13 | -0.235 | -0.379 | -0.699 | -0.897 | -1.198 | -1.509 | -1.812 | -2.169 | -2.632 | -3.135 | -3.063 | -1.486 |
| N° 14 | -0.264 | -0.440 | -0.761 | -1.002 | -1.300 | -1.625 | -1.910 | -2.277 | -2.663 | -3.144 | -3.105 | -1.541 |
| N° 15 | -0.141 | -0.327 | -0.661 | -0.894 | -1.197 | -1.544 | -1.854 | -2.236 | -2.704 | -3.214 | -3.161 | -1.400 |
| N° 16 | -0.350 | -0.512 | -0.846 | -1.065 | -1.359 | -1.658 | -1.974 | -2.348 | -2.793 | -3.282 | -3.226 | -1.598 |
| N° 17 | -0.115 | -0.247 | -0.535 | -0.719 | -0.955 | -1.211 | -1.463 | -1.754 | -2.102 | -2.504 | -2.442 | -1.276 |
| N° 18 | -0.343 | -0.520 | -0.868 | -1.070 | -1.367 | -1.664 | -1.987 | -2.342 | -2.744 | -3.218 | -3.157 | -1.631 |
| N° 19 | -0.109 | -0.295 | -0.633 | -0.862 | -1.199 | -1.551 | -1.868 | -2.267 | -2.773 | -3.301 | -3.223 | -1.475 |
| N° 20 | -0.274 | -0.456 | -0.818 | -1.027 | -1.339 | -1.685 | -2.040 | -2.440 | -2.916 | -3.414 | -3.302 | -1.622 |
| N° 21 | -0.346 | -0.492 | -0.793 | -0.959 | -1.197 | -1.437 | -1.703 | -1.931 | -2.263 | -2.653 | -2.541 | -1.476 |
| N° 22 | -0.013 | -0.189 | -0.493 | -0.700 | -1.006 | -1.323 | -1.604 | -1.917 | -2.365 | -2.862 | -2.809 | -1.264 |
| N° 23 | -0.244 | -0.393 | -0.738 | -0.945 | -1.240 | -1.559 | -1.868 | -2.244 | -2.682 | -3.203 | -3.120 | -1.595 |
| N° 24 | -0.182 | -0.352 | -0.694 | -0.912 | -1.224 | -1.565 | -1.871 | -2.242 | -2.719 | -3.213 | -3.149 | -1.540 |
| N° 25 | 0.039 | -0.132 | -0.470 | -0.659 | -0.978 | -1.330 | -1.651 | -2.019 | -2.483 | -2.996 | -2.903 | -1.268 |
| N° 26 | -0.193 | -0.356 | -0.706 | -0.900 | -1.219 | -1.552 | -1.872 | -2.244 | -2.722 | -3.211 | -3.128 | -1.515 |
| N° 27 | -0.205 | -0.373 | -0.701 | -0.914 | -1.237 | -1.552 | -1.831 | -2.174 | -2.626 | -3.101 | -3.031 | -1.534 |
| N° 28 | -0.424 | -0.563 | -0.911 | -1.094 | -1.368 | -1.649 | -1.968 | -2.326 | -2.799 | -3.313 | -3.245 | -1.684 |
| N° 29 | -0.480 | -0.648 | -0.988 | -1.208 | -1.527 | -1.863 | -2.181 | -2.568 | -3.032 | -3.528 | -3.457 | -1.841 |
| N° 30 | -0.081 | -0.274 | -0.638 | -0.862 | -1.188 | -1.564 | -1.876 | -2.314 | -2.825 | -3.361 | -3.274 | -1.600 |
| N° 31 | -0.439 | -0.605 | -0.951 | -1.173 | -1.490 | -1.820 | -2.184 | -2.597 | -3.123 | -3.731 | -3.656 | -1.907 |

# 15. VIO4, Module 3

**Ta=25°C; +VCC=2.5V; -VCC=-2.5V; VCM=-1.1V**

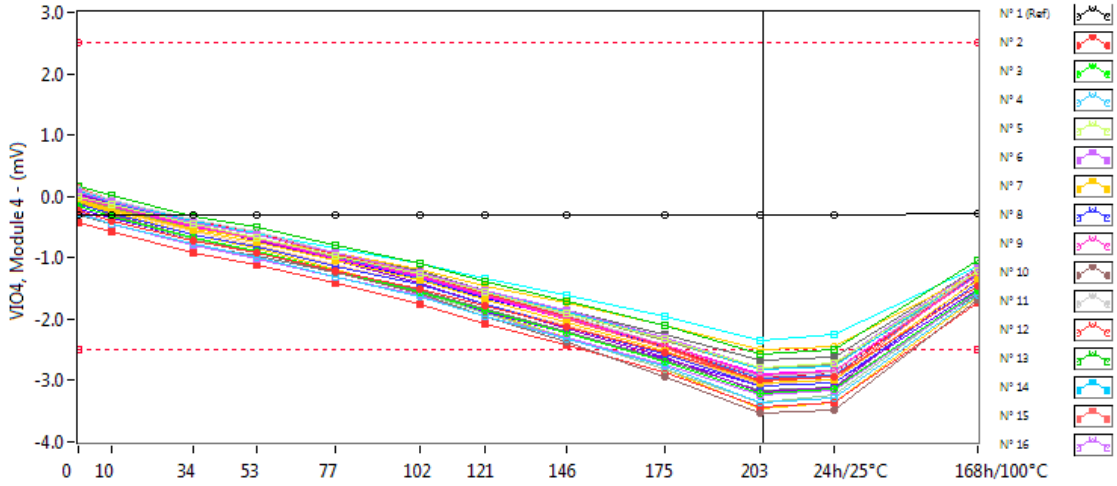



**VIO4, Module 3 . (mV)** **Min = -2.5 Max = 2.5**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | -0.027 | -0.017 | -0.025 | -0.025 | -0.033 | -0.019 | -0.027 | -0.019 | -0.020 | -0.030 | -0.010 | -0.011 |
| N° 2 | -0.139 | -0.280 | -0.606 | -0.800 | -1.088 | -1.410 | -1.692 | -2.038 | -2.437 | -2.912 | -2.863 | -1.379 |
| N° 3 | -0.230 | -0.396 | -0.731 | -0.950 | -1.249 | -1.592 | -1.912 | -2.273 | -2.765 | -3.291 | -3.219 | -1.561 |
| N° 4 | -0.222 | -0.388 | -0.703 | -0.937 | -1.233 | -1.567 | -1.874 | -2.226 | -2.659 | -3.178 | -3.112 | -1.507 |
| N° 5 | 0.012 | -0.118 | -0.432 | -0.650 | -0.928 | -1.232 | -1.549 | -1.877 | -2.307 | -2.847 | -2.808 | -1.201 |
| N° 6 | 0.126 | -0.028 | -0.360 | -0.572 | -0.851 | -1.147 | -1.437 | -1.745 | -2.164 | -2.641 | -2.596 | -1.057 |
| N° 7 | -0.156 | -0.315 | -0.642 | -0.849 | -1.139 | -1.487 | -1.809 | -2.172 | -2.664 | -3.230 | -3.172 | -1.514 |
| N° 8 | -0.098 | -0.268 | -0.624 | -0.832 | -1.132 | -1.437 | -1.740 | -2.080 | -2.485 | -2.906 | -2.857 | -1.364 |
| N° 9 | -0.143 | -0.298 | -0.606 | -0.825 | -1.109 | -1.450 | -1.776 | -2.136 | -2.599 | -3.152 | -3.099 | -1.489 |
| N° 10 | -0.054 | -0.216 | -0.568 | -0.799 | -1.098 | -1.444 | -1.780 | -2.185 | -2.724 | -3.236 | -3.192 | -1.448 |
| N° 11 | -0.190 | -0.340 | -0.701 | -0.925 | -1.238 | -1.577 | -1.893 | -2.267 | -2.784 | -3.377 | -3.281 | -1.579 |
| N° 12 | -0.060 | -0.213 | -0.567 | -0.793 | -1.104 | -1.454 | -1.756 | -2.117 | -2.594 | -3.127 | -3.077 | -1.393 |
| N° 13 | 0.043 | -0.115 | -0.419 | -0.625 | -0.910 | -1.221 | -1.501 | -1.827 | -2.290 | -2.790 | -2.703 | -1.196 |
| N° 14 | -0.277 | -0.447 | -0.755 | -0.987 | -1.283 | -1.596 | -1.900 | -2.236 | -2.663 | -3.126 | -3.069 | -1.535 |
| N° 15 | 0.019 | -0.139 | -0.488 | -0.704 | -1.019 | -1.400 | -1.690 | -2.056 | -2.519 | -3.035 | -3.008 | -1.338 |
| N° 16 | -0.206 | -0.351 | -0.672 | -0.894 | -1.178 | -1.479 | -1.792 | -2.154 | -2.608 | -3.137 | -3.048 | -1.463 |
| N° 17 | -0.040 | -0.163 | -0.468 | -0.646 | -0.880 | -1.117 | -1.384 | -1.672 | -1.999 | -2.415 | -2.365 | -1.142 |
| N° 18 | -0.191 | -0.342 | -0.676 | -0.889 | -1.183 | -1.473 | -1.809 | -2.145 | -2.589 | -3.105 | -3.040 | -1.478 |
| N° 19 | -0.019 | -0.209 | -0.562 | -0.788 | -1.118 | -1.468 | -1.800 | -2.200 | -2.674 | -3.215 | -3.151 | -1.483 |
| N° 20 | 0.083 | -0.059 | -0.409 | -0.617 | -0.926 | -1.266 | -1.612 | -1.983 | -2.438 | -2.909 | -2.800 | -1.243 |
| N° 21 | -0.017 | -0.165 | -0.442 | -0.619 | -0.866 | -1.109 | -1.356 | -1.603 | -1.941 | -2.348 | -2.267 | -1.105 |
| N° 22 | -0.143 | -0.296 | -0.614 | -0.821 | -1.094 | -1.393 | -1.691 | -2.012 | -2.443 | -2.927 | -2.855 | -1.352 |
| N° 23 | -0.151 | -0.329 | -0.658 | -0.871 | -1.157 | -1.459 | -1.758 | -2.118 | -2.539 | -3.021 | -2.954 | -1.449 |
| N° 24 | -0.098 | -0.256 | -0.605 | -0.824 | -1.119 | -1.443 | -1.781 | -2.152 | -2.613 | -3.159 | -3.102 | -1.384 |
| N° 25 | -0.106 | -0.292 | -0.633 | -0.874 | -1.186 | -1.525 | -1.866 | -2.239 | -2.690 | -3.196 | -3.100 | -1.527 |
| N° 26 | -0.227 | -0.389 | -0.730 | -0.959 | -1.267 | -1.593 | -1.904 | -2.241 | -2.722 | -3.243 | -3.155 | -1.517 |
| N° 27 | -0.377 | -0.528 | -0.853 | -1.081 | -1.369 | -1.707 | -1.984 | -2.343 | -2.798 | -3.304 | -3.241 | -1.689 |
| N° 28 | -0.126 | -0.273 | -0.625 | -0.820 | -1.075 | -1.362 | -1.661 | -2.017 | -2.493 | -3.006 | -2.943 | -1.395 |
| N° 29 | -0.214 | -0.352 | -0.682 | -0.920 | -1.217 | -1.553 | -1.893 | -2.288 | -2.742 | -3.235 | -3.176 | -1.598 |
| N° 30 | 0.009 | -0.130 | -0.462 | -0.695 | -1.005 | -1.342 | -1.654 | -2.050 | -2.556 | -3.097 | -3.038 | -1.286 |
| N° 31 | -0.552 | -0.709 | -1.066 | -1.282 | -1.594 | -1.932 | -2.286 | -2.685 | -3.182 | -3.791 | -3.685 | -2.018 |

# 16. VIO4, Module 4

**Ta=25°C; +VCC=2.5V; -VCC=-2.5V; VCM=-1.1V**

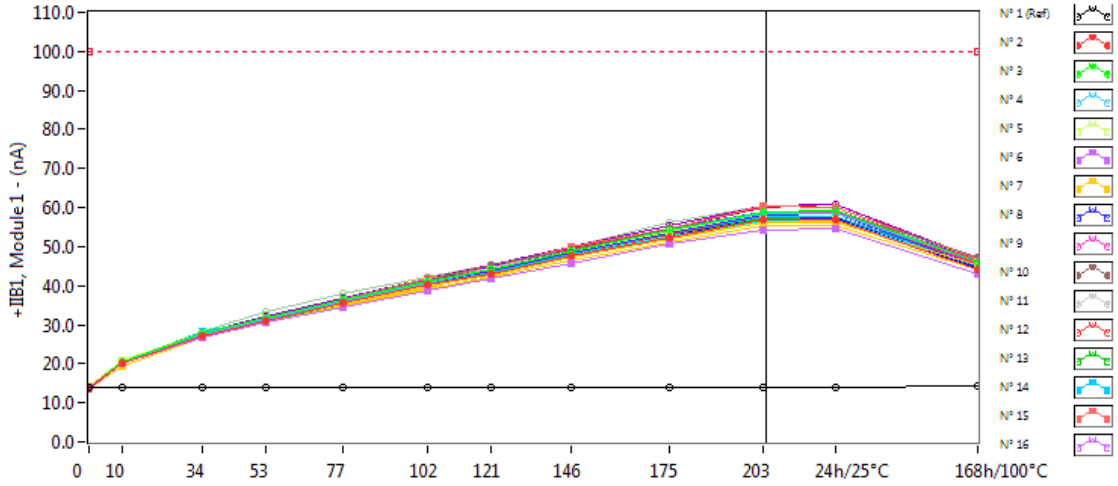



**VIO4, Module 4 . (mV)** **Min = -2.5 Max = 2.5**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | -0.310 | -0.295 | -0.299 | -0.296 | -0.306 | -0.293 | -0.299 | -0.296 | -0.292 | -0.303 | -0.292 | -0.286 |
| N° 2 | -0.231 | -0.400 | -0.724 | -0.918 | -1.206 | -1.506 | -1.781 | -2.124 | -2.537 | -2.991 | -2.928 | -1.466 |
| N° 3 | -0.160 | -0.327 | -0.674 | -0.894 | -1.207 | -1.552 | -1.853 | -2.220 | -2.699 | -3.205 | -3.133 | -1.541 |
| N° 4 | -0.266 | -0.443 | -0.782 | -0.997 | -1.311 | -1.641 | -1.959 | -2.315 | -2.769 | -3.353 | -3.277 | -1.609 |
| N° 5 | -0.007 | -0.140 | -0.458 | -0.664 | -0.959 | -1.261 | -1.557 | -1.894 | -2.323 | -2.791 | -2.729 | -1.205 |
| N° 6 | 0.055 | -0.090 | -0.426 | -0.630 | -0.927 | -1.239 | -1.524 | -1.862 | -2.294 | -2.796 | -2.714 | -1.159 |
| N° 7 | -0.063 | -0.214 | -0.542 | -0.753 | -1.044 | -1.370 | -1.687 | -2.049 | -2.529 | -3.045 | -2.978 | -1.374 |
| N° 8 | -0.118 | -0.283 | -0.622 | -0.830 | -1.140 | -1.434 | -1.767 | -2.122 | -2.576 | -3.088 | -3.037 | -1.402 |
| N° 9 | -0.032 | -0.148 | -0.484 | -0.689 | -0.971 | -1.301 | -1.610 | -1.975 | -2.431 | -2.907 | -2.853 | -1.294 |
| N° 10 | -0.115 | -0.299 | -0.680 | -0.907 | -1.229 | -1.574 | -1.942 | -2.370 | -2.928 | -3.541 | -3.476 | -1.676 |
| N° 11 | 0.112 | -0.052 | -0.380 | -0.579 | -0.909 | -1.237 | -1.549 | -1.931 | -2.415 | -2.940 | -2.854 | -1.209 |
| N° 12 | 0.067 | -0.082 | -0.436 | -0.627 | -0.949 | -1.286 | -1.586 | -1.957 | -2.455 | -3.012 | -2.945 | -1.189 |
| N° 13 | 0.176 | 0.009 | -0.320 | -0.502 | -0.798 | -1.090 | -1.385 | -1.697 | -2.101 | -2.582 | -2.495 | -1.054 |
| N° 14 | 0.099 | -0.067 | -0.392 | -0.626 | -0.911 | -1.248 | -1.540 | -1.887 | -2.330 | -2.809 | -2.756 | -1.209 |
| N° 15 | 0.142 | -0.051 | -0.410 | -0.631 | -0.918 | -1.262 | -1.590 | -1.993 | -2.461 | -3.037 | -2.991 | -1.209 |
| N° 16 | -0.264 | -0.452 | -0.794 | -1.012 | -1.304 | -1.603 | -1.942 | -2.296 | -2.749 | -3.233 | -3.174 | -1.563 |
| N° 17 | -0.085 | -0.217 | -0.518 | -0.697 | -0.925 | -1.181 | -1.450 | -1.739 | -2.114 | -2.495 | -2.443 | -1.229 |
| N° 18 | 0.010 | -0.153 | -0.504 | -0.700 | -1.015 | -1.314 | -1.635 | -1.997 | -2.422 | -2.903 | -2.837 | -1.247 |
| N° 19 | 0.045 | -0.125 | -0.483 | -0.717 | -1.052 | -1.416 | -1.751 | -2.156 | -2.620 | -3.177 | -3.123 | -1.346 |
| N° 20 | -0.165 | -0.334 | -0.690 | -0.897 | -1.212 | -1.567 | -1.915 | -2.308 | -2.812 | -3.361 | -3.227 | -1.528 |
| N° 21 | -0.023 | -0.155 | -0.428 | -0.608 | -0.844 | -1.093 | -1.339 | -1.607 | -1.955 | -2.338 | -2.246 | -1.140 |
| N° 22 | -0.422 | -0.576 | -0.913 | -1.117 | -1.418 | -1.760 | -2.086 | -2.417 | -2.872 | -3.424 | -3.352 | -1.722 |
| N° 23 | 0.078 | -0.085 | -0.419 | -0.612 | -0.914 | -1.217 | -1.526 | -1.844 | -2.245 | -2.668 | -2.610 | -1.159 |
| N° 24 | 0.051 | -0.108 | -0.453 | -0.662 | -0.976 | -1.327 | -1.641 | -2.008 | -2.474 | -2.977 | -2.924 | -1.271 |
| N° 25 | 0.106 | -0.062 | -0.409 | -0.607 | -0.919 | -1.282 | -1.607 | -1.961 | -2.441 | -2.958 | -2.856 | -1.260 |
| N° 26 | -0.006 | -0.167 | -0.496 | -0.689 | -1.008 | -1.329 | -1.659 | -1.990 | -2.463 | -2.946 | -2.840 | -1.292 |
| N° 27 | -0.025 | -0.174 | -0.514 | -0.704 | -1.001 | -1.307 | -1.576 | -1.905 | -2.360 | -2.822 | -2.748 | -1.253 |
| N° 28 | -0.311 | -0.458 | -0.794 | -0.969 | -1.239 | -1.531 | -1.842 | -2.194 | -2.657 | -3.174 | -3.105 | -1.588 |
| N° 29 | -0.201 | -0.362 | -0.707 | -0.906 | -1.213 | -1.554 | -1.868 | -2.219 | -2.650 | -3.082 | -3.027 | -1.502 |
| N° 30 | -0.104 | -0.255 | -0.629 | -0.834 | -1.194 | -1.551 | -1.870 | -2.306 | -2.821 | -3.451 | -3.371 | -1.622 |
| N° 31 | -0.057 | -0.225 | -0.576 | -0.787 | -1.105 | -1.426 | -1.750 | -2.106 | -2.547 | -3.052 | -2.985 | -1.363 |

# 17. +IIB1, Module 1

**Ta=25°C; +VCC=30V; -VCC=GND; VCM=+15V**

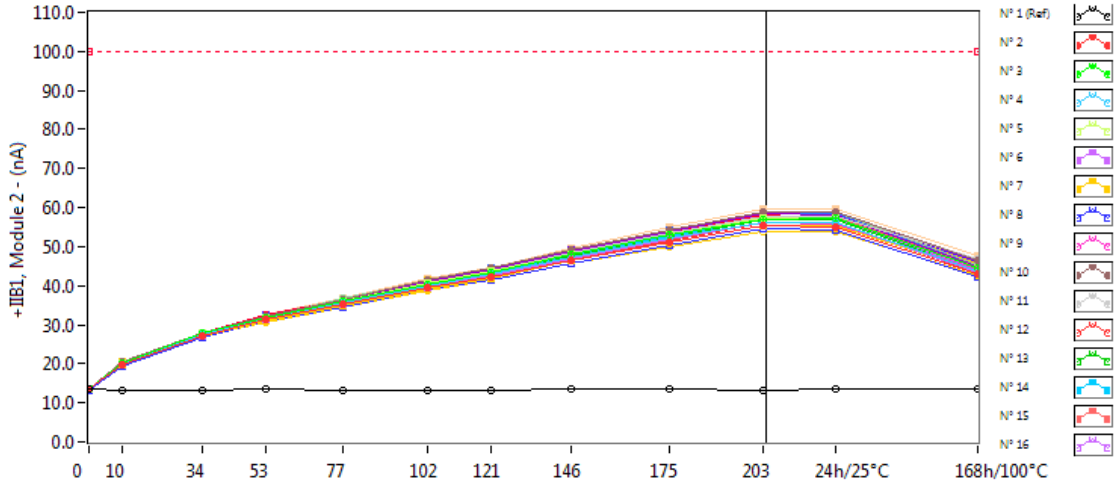



**+IIB1, Module 1 . (nA)** **Max = 100.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 14.131 | 14.072 | 14.000 | 13.996 | 14.057 | 13.941 | 13.868 | 14.133 | 14.116 | 13.974 | 14.093 | 14.162 |
| N° 2 | 13.960 | 20.199 | 27.258 | 31.117 | 35.465 | 40.097 | 43.098 | 47.455 | 52.231 | 56.905 | 56.989 | 44.265 |
| N° 3 | 13.973 | 20.388 | 27.710 | 31.692 | 36.221 | 40.914 | 44.111 | 48.895 | 54.192 | 59.040 | 59.250 | 45.965 |
| N° 4 | 13.911 | 20.378 | 27.601 | 31.552 | 36.083 | 40.659 | 44.117 | 48.845 | 54.080 | 58.587 | 58.564 | 45.902 |
| N° 5 | 14.293 | 20.729 | 27.869 | 31.894 | 36.402 | 41.036 | 44.216 | 48.764 | 53.746 | 58.561 | 58.658 | 45.961 |
| N° 6 | 13.929 | 20.083 | 26.858 | 30.415 | 34.518 | 38.779 | 41.765 | 45.875 | 50.546 | 54.365 | 54.592 | 43.041 |
| N° 7 | 14.092 | 20.272 | 27.244 | 31.236 | 35.408 | 39.747 | 42.734 | 47.077 | 51.866 | 56.116 | 56.271 | 45.196 |
| N° 8 | 13.833 | 20.108 | 27.412 | 31.420 | 35.953 | 40.685 | 43.711 | 48.291 | 53.492 | 58.198 | 58.377 | 45.025 |
| N° 9 | 14.087 | 20.457 | 27.562 | 31.577 | 36.086 | 40.947 | 44.099 | 48.801 | 54.133 | 58.847 | 58.831 | 46.616 |
| N° 10 | 14.061 | 20.528 | 27.767 | 31.774 | 36.363 | 41.286 | 45.155 | 49.219 | 54.565 | 58.396 | 59.375 | 47.311 |
| N° 11 | 14.175 | 20.572 | 27.737 | 31.661 | 36.088 | 40.596 | 44.699 | 48.786 | 54.085 | 58.931 | 58.969 | 47.301 |
| N° 12 | 13.765 | 20.373 | 27.345 | 31.573 | 36.059 | 40.834 | 43.910 | 48.566 | 53.675 | 58.563 | 58.573 | 45.647 |
| N° 13 | 14.008 | 20.237 | 27.192 | 31.165 | 35.375 | 39.894 | 42.830 | 47.794 | 52.298 | 57.234 | 56.921 | 44.223 |
| N° 14 | 14.002 | 20.398 | 28.116 | 31.311 | 35.797 | 40.240 | 43.429 | 48.039 | 53.559 | 57.669 | 57.872 | 44.796 |
| N° 15 | 13.757 | 20.348 | 27.711 | 31.807 | 36.479 | 41.945 | 44.573 | 50.007 | 54.796 | 60.390 | 59.876 | 46.706 |
| N° 16 | 14.187 | 20.559 | 27.709 | 31.688 | 36.082 | 41.028 | 44.178 | 48.826 | 54.061 | 58.711 | 58.717 | 45.567 |
| N° 17 | 14.066 | 19.998 | 27.094 | 30.682 | 34.686 | 38.949 | 42.109 | 46.567 | 51.101 | 55.264 | 55.248 | 43.995 |
| N° 18 | 13.638 | 20.227 | 27.670 | 31.580 | 36.102 | 41.052 | 44.074 | 48.670 | 53.768 | 58.634 | 58.649 | 45.448 |
| N° 19 | 13.831 | 20.871 | 28.076 | 32.082 | 36.812 | 41.660 | 45.397 | 49.995 | 55.394 | 60.510 | 60.698 | 46.790 |
| N° 20 | 14.005 | 20.695 | 28.365 | 33.354 | 38.046 | 42.130 | 45.481 | 50.157 | 56.071 | 60.596 | 60.770 | 47.029 |
| N° 21 | 14.156 | 20.531 | 27.621 | 31.563 | 36.564 | 40.198 | 43.039 | 47.644 | 52.511 | 56.737 | 56.869 | 44.785 |
| N° 22 | 14.101 | 20.543 | 27.273 | 31.273 | 35.884 | 40.402 | 43.701 | 47.979 | 53.200 | 57.755 | 57.781 | 44.794 |
| N° 23 | 13.803 | 20.191 | 27.597 | 31.678 | 36.453 | 41.217 | 44.484 | 49.091 | 54.290 | 59.057 | 59.190 | 45.923 |
| N° 24 | 13.930 | 20.552 | 27.839 | 32.009 | 36.534 | 41.099 | 44.353 | 49.004 | 54.546 | 59.062 | 59.077 | 45.961 |
| N° 25 | 13.664 | 20.435 | 27.620 | 31.935 | 36.687 | 41.376 | 44.730 | 49.603 | 54.777 | 60.060 | 60.763 | 46.403 |
| N° 26 | 13.791 | 20.306 | 27.190 | 31.280 | 35.718 | 40.373 | 43.438 | 48.099 | 52.791 | 57.144 | 57.352 | 44.725 |
| N° 27 | 14.060 | 20.487 | 27.459 | 31.435 | 36.091 | 40.674 | 43.462 | 47.869 | 52.935 | 57.441 | 57.477 | 45.143 |
| N° 28 | 14.119 | 20.235 | 27.760 | 31.410 | 35.683 | 39.912 | 43.187 | 47.698 | 52.605 | 57.409 | 57.600 | 45.387 |
| N° 29 | 13.856 | 20.538 | 27.985 | 32.077 | 36.555 | 41.650 | 44.885 | 49.863 | 54.718 | 58.999 | 59.068 | 46.802 |
| N° 30 | 13.397 | 19.553 | 26.624 | 30.616 | 35.016 | 39.624 | 43.304 | 47.249 | 52.209 | 56.409 | 56.557 | 44.647 |
| N° 31 | 13.853 | 20.414 | 27.692 | 31.827 | 36.410 | 41.368 | 44.532 | 49.199 | 54.124 | 59.028 | 59.214 | 47.204 |

# 18. +IIB1, Module 2

**Ta=25°C; +VCC=30V; -VCC=GND; VCM=+15V**

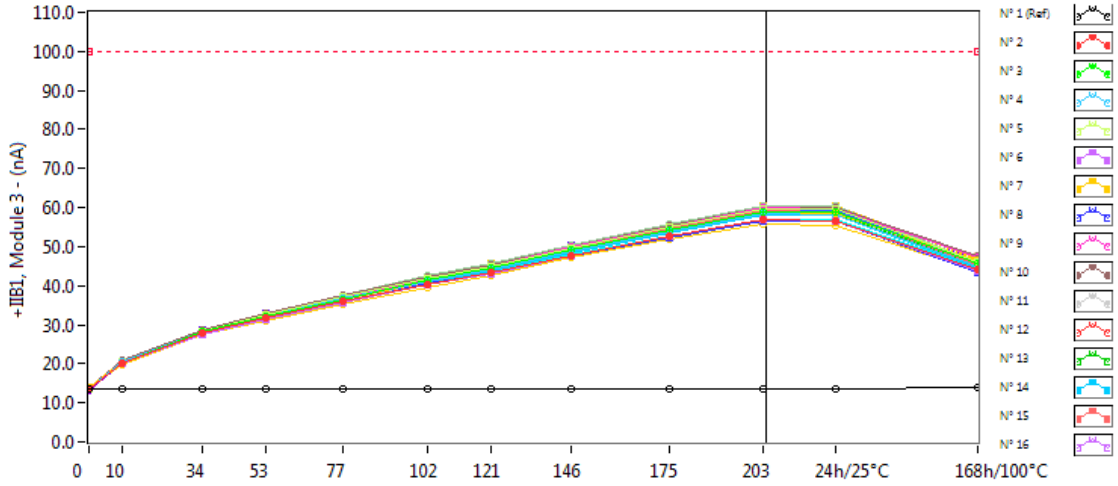



**+IIB1, Module 2 . (nA)** **Max = 100.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 13.413 | 13.349 | 13.301 | 13.639 | 13.360 | 13.289 | 13.220 | 13.415 | 13.405 | 13.311 | 13.394 | 13.471 |
| N° 2 | 13.437 | 19.883 | 27.208 | 31.260 | 35.062 | 39.479 | 42.296 | 46.444 | 51.078 | 55.285 | 55.138 | 42.916 |
| N° 3 | 13.550 | 20.128 | 27.764 | 31.892 | 36.020 | 40.430 | 43.532 | 47.961 | 52.937 | 57.123 | 57.162 | 44.621 |
| N° 4 | 13.481 | 20.030 | 27.437 | 31.443 | 35.608 | 39.932 | 42.842 | 47.375 | 52.283 | 56.234 | 56.307 | 43.830 |
| N° 5 | 13.678 | 20.321 | 27.802 | 31.797 | 35.960 | 40.653 | 43.601 | 48.035 | 53.063 | 57.473 | 57.413 | 44.703 |
| N° 6 | 13.514 | 20.081 | 27.236 | 31.215 | 35.358 | 39.682 | 42.685 | 46.998 | 52.011 | 56.097 | 56.020 | 43.376 |
| N° 7 | 13.634 | 19.893 | 27.124 | 31.176 | 35.029 | 39.214 | 41.991 | 46.401 | 51.236 | 55.343 | 55.194 | 43.675 |
| N° 8 | 13.135 | 19.520 | 26.750 | 30.928 | 34.567 | 39.034 | 41.490 | 45.732 | 50.473 | 54.693 | 54.277 | 42.323 |
| N° 9 | 13.529 | 19.981 | 27.258 | 31.039 | 35.293 | 39.735 | 42.565 | 46.896 | 51.774 | 56.005 | 55.914 | 44.010 |
| N° 10 | 13.592 | 20.348 | 27.947 | 32.263 | 36.597 | 41.348 | 44.528 | 49.087 | 54.315 | 58.917 | 58.823 | 46.643 |
| N° 11 | 13.539 | 20.005 | 27.381 | 31.485 | 35.746 | 40.127 | 43.839 | 48.227 | 53.311 | 57.891 | 57.881 | 46.819 |
| N° 12 | 13.258 | 19.791 | 27.118 | 31.208 | 35.078 | 39.529 | 42.476 | 46.837 | 51.696 | 56.157 | 55.898 | 43.443 |
| N° 13 | 13.546 | 20.054 | 27.364 | 31.473 | 35.622 | 40.163 | 42.786 | 47.475 | 52.409 | 56.979 | 56.859 | 43.660 |
| N° 14 | 13.381 | 19.918 | 27.512 | 31.360 | 35.610 | 40.196 | 43.153 | 47.592 | 52.625 | 56.847 | 56.792 | 43.787 |
| N° 15 | 13.354 | 19.980 | 27.452 | 31.547 | 35.958 | 40.718 | 43.396 | 48.406 | 53.224 | 57.863 | 57.663 | 44.393 |
| N° 16 | 13.660 | 20.273 | 27.501 | 31.513 | 35.855 | 40.450 | 43.211 | 47.750 | 52.691 | 57.039 | 56.914 | 44.119 |
| N° 17 | 13.604 | 19.682 | 27.037 | 30.545 | 34.436 | 38.634 | 41.444 | 45.756 | 50.151 | 53.997 | 53.827 | 42.555 |
| N° 18 | 13.216 | 19.879 | 27.440 | 31.597 | 35.907 | 40.700 | 43.531 | 48.119 | 53.221 | 57.699 | 57.664 | 44.281 |
| N° 19 | 13.249 | 20.180 | 27.468 | 31.784 | 36.157 | 40.881 | 44.196 | 48.691 | 53.907 | 58.364 | 58.160 | 44.962 |
| N° 20 | 13.478 | 20.192 | 27.837 | 31.755 | 36.791 | 41.009 | 44.361 | 49.037 | 54.048 | 58.819 | 59.001 | 45.195 |
| N° 21 | 13.598 | 20.193 | 27.455 | 31.390 | 35.927 | 39.891 | 42.750 | 47.386 | 52.052 | 56.152 | 56.240 | 43.958 |
| N° 22 | 13.654 | 20.285 | 27.257 | 31.310 | 35.658 | 40.137 | 43.189 | 47.424 | 52.557 | 56.894 | 56.789 | 43.755 |
| N° 23 | 13.279 | 19.857 | 27.255 | 31.592 | 35.484 | 40.220 | 43.266 | 47.890 | 53.024 | 57.556 | 57.525 | 44.122 |
| N° 24 | 13.620 | 20.319 | 27.904 | 32.312 | 36.505 | 41.195 | 44.372 | 48.797 | 54.109 | 58.435 | 58.359 | 45.347 |
| N° 25 | 13.456 | 20.227 | 27.744 | 32.371 | 36.405 | 41.020 | 44.022 | 48.754 | 53.636 | 58.262 | 58.900 | 44.798 |
| N° 26 | 13.309 | 19.789 | 27.038 | 31.572 | 35.632 | 40.312 | 43.301 | 47.995 | 52.818 | 57.327 | 57.278 | 44.198 |
| N° 27 | 13.455 | 20.009 | 27.446 | 32.125 | 35.996 | 40.473 | 43.175 | 47.745 | 52.917 | 57.359 | 57.347 | 45.059 |
| N° 28 | 13.699 | 20.048 | 27.697 | 31.767 | 35.391 | 39.617 | 42.988 | 47.576 | 52.347 | 57.275 | 57.200 | 44.739 |
| N° 29 | 13.504 | 20.219 | 27.902 | 32.589 | 36.331 | 41.232 | 44.489 | 49.359 | 54.103 | 58.490 | 58.329 | 45.923 |
| N° 30 | 13.662 | 20.428 | 27.762 | 32.502 | 36.579 | 41.314 | 44.563 | 48.911 | 53.936 | 58.442 | 58.345 | 45.746 |
| N° 31 | 13.533 | 20.300 | 27.787 | 32.558 | 36.852 | 41.829 | 44.683 | 49.481 | 54.879 | 59.784 | 59.702 | 47.820 |

# 19. +IIB1, Module 3

**Ta=25°C; +VCC=30V; -VCC=GND; VCM=+15V**

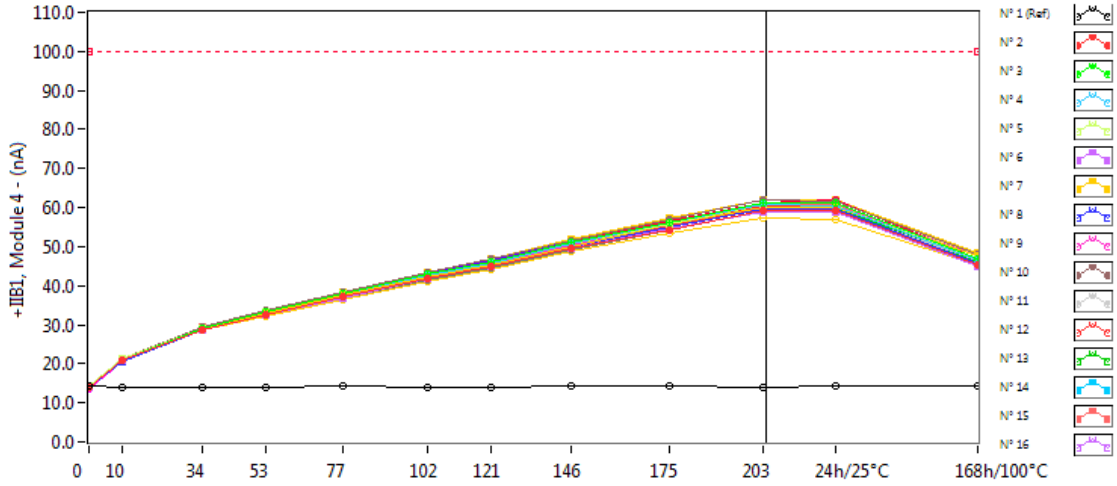



**+IIB1, Module 3 . (nA)** **Max = 100.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 13.692 | 13.643 | 13.594 | 13.685 | 13.659 | 13.605 | 13.532 | 13.727 | 13.712 | 13.607 | 13.722 | 13.771 |
| N° 2 | 13.642 | 20.235 | 27.907 | 31.660 | 35.929 | 40.282 | 43.262 | 47.682 | 52.531 | 56.946 | 56.709 | 43.975 |
| N° 3 | 13.643 | 20.266 | 28.161 | 32.262 | 36.598 | 41.334 | 44.364 | 49.191 | 54.278 | 59.031 | 58.985 | 45.785 |
| N° 4 | 13.577 | 20.523 | 28.172 | 32.070 | 36.789 | 41.177 | 44.140 | 48.809 | 53.966 | 58.424 | 58.249 | 44.950 |
| N° 5 | 13.563 | 20.427 | 28.258 | 32.478 | 37.012 | 41.849 | 44.903 | 49.746 | 54.913 | 59.698 | 59.517 | 46.259 |
| N° 6 | 13.452 | 19.954 | 27.541 | 31.332 | 35.659 | 40.213 | 43.168 | 47.695 | 52.488 | 56.857 | 56.692 | 43.917 |
| N° 7 | 13.863 | 20.414 | 28.061 | 32.087 | 36.433 | 41.129 | 44.178 | 49.007 | 54.137 | 58.818 | 58.574 | 46.372 |
| N° 8 | 13.445 | 20.094 | 27.492 | 31.353 | 35.620 | 40.503 | 43.126 | 47.549 | 52.434 | 56.498 | 56.388 | 43.284 |
| N° 9 | 13.830 | 20.683 | 28.317 | 32.465 | 36.986 | 41.910 | 44.991 | 49.891 | 55.182 | 60.015 | 59.840 | 47.342 |
| N° 10 | 13.815 | 20.726 | 28.767 | 32.909 | 37.511 | 42.208 | 45.421 | 49.986 | 55.462 | 60.221 | 60.116 | 47.450 |
| N° 11 | 13.627 | 20.287 | 27.779 | 31.803 | 36.202 | 40.882 | 44.218 | 48.630 | 53.862 | 58.693 | 58.597 | 46.249 |
| N° 12 | 13.447 | 19.973 | 27.470 | 31.536 | 35.764 | 40.224 | 43.054 | 47.745 | 52.471 | 56.780 | 56.611 | 43.540 |
| N° 13 | 13.715 | 20.440 | 28.199 | 32.177 | 36.536 | 41.334 | 44.204 | 48.909 | 53.995 | 58.725 | 58.635 | 44.856 |
| N° 14 | 13.491 | 20.195 | 27.892 | 31.719 | 36.263 | 40.816 | 43.944 | 48.349 | 53.536 | 58.043 | 57.925 | 44.493 |
| N° 15 | 13.427 | 20.392 | 28.158 | 32.087 | 36.495 | 40.873 | 44.201 | 49.360 | 54.507 | 59.300 | 58.963 | 45.253 |
| N° 16 | 13.967 | 20.631 | 28.410 | 32.431 | 37.051 | 41.896 | 44.551 | 49.123 | 54.398 | 58.887 | 58.752 | 45.133 |
| N° 17 | 13.773 | 19.913 | 27.569 | 31.115 | 35.301 | 39.527 | 42.738 | 47.263 | 51.893 | 55.692 | 55.500 | 43.775 |
| N° 18 | 13.382 | 20.134 | 27.763 | 31.783 | 36.382 | 41.543 | 44.451 | 48.918 | 54.141 | 58.563 | 58.417 | 44.822 |
| N° 19 | 13.252 | 20.190 | 27.592 | 31.699 | 36.235 | 40.793 | 43.869 | 48.494 | 53.623 | 58.273 | 58.133 | 44.706 |
| N° 20 | 13.636 | 20.588 | 28.583 | 33.071 | 37.666 | 42.437 | 45.636 | 50.293 | 55.755 | 60.459 | 60.599 | 46.136 |
| N° 21 | 13.614 | 20.349 | 27.815 | 31.699 | 36.170 | 40.430 | 43.436 | 47.958 | 52.789 | 56.875 | 56.875 | 44.408 |
| N° 22 | 13.502 | 20.300 | 27.731 | 31.932 | 36.493 | 41.218 | 44.449 | 48.645 | 53.957 | 58.546 | 58.425 | 44.981 |
| N° 23 | 13.549 | 20.271 | 27.867 | 31.936 | 36.493 | 40.911 | 44.056 | 48.790 | 53.716 | 58.365 | 58.295 | 44.728 |
| N° 24 | 13.404 | 20.227 | 27.819 | 32.006 | 36.713 | 41.482 | 44.601 | 49.379 | 54.656 | 59.359 | 59.205 | 45.623 |
| N° 25 | 13.541 | 20.527 | 28.309 | 32.519 | 36.975 | 41.859 | 45.007 | 49.752 | 55.012 | 59.836 | 60.467 | 45.779 |
| N° 26 | 13.565 | 20.191 | 27.788 | 32.167 | 36.649 | 41.277 | 44.259 | 48.942 | 53.858 | 58.400 | 58.254 | 44.892 |
| N° 27 | 13.688 | 20.398 | 28.086 | 32.222 | 36.805 | 41.386 | 44.006 | 48.689 | 53.825 | 58.302 | 58.359 | 44.982 |
| N° 28 | 13.818 | 20.221 | 28.388 | 32.336 | 36.351 | 40.667 | 43.964 | 48.749 | 53.749 | 58.654 | 58.482 | 45.147 |
| N° 29 | 13.556 | 20.528 | 28.496 | 32.735 | 37.263 | 41.895 | 45.128 | 50.199 | 54.916 | 59.250 | 59.188 | 46.341 |
| N° 30 | 13.604 | 20.566 | 28.338 | 32.647 | 37.169 | 42.165 | 45.558 | 50.268 | 55.567 | 60.283 | 60.278 | 46.735 |
| N° 31 | 13.661 | 20.434 | 28.047 | 32.412 | 36.979 | 41.786 | 44.802 | 49.601 | 54.903 | 59.508 | 59.480 | 47.450 |

# 20. +IIB1, Module 4

**Ta=25°C; +VCC=30V; -VCC=GND; VCM=+15V**

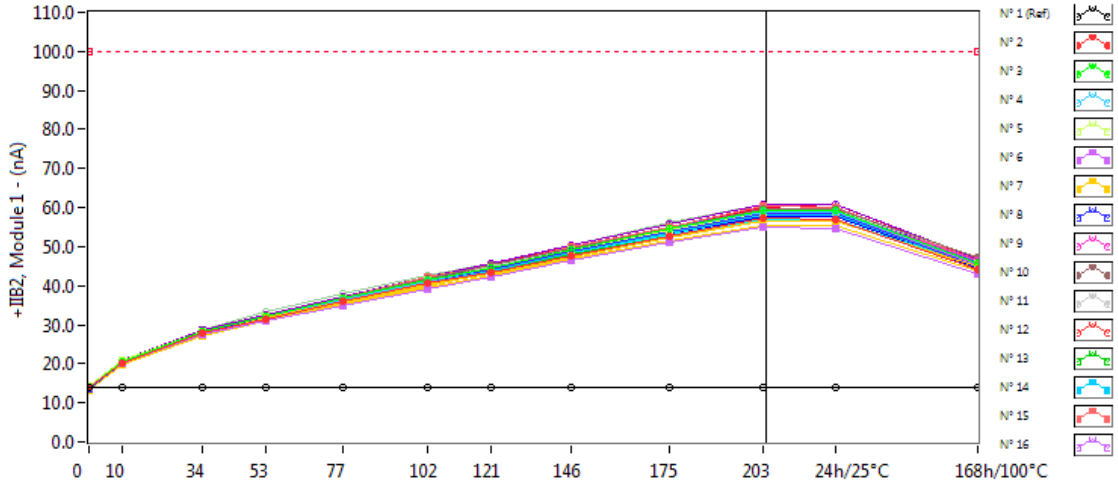



**+IIB1, Module 4 . (nA)** **Max = 100.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 14.184 | 14.134 | 14.075 | 14.130 | 14.141 | 14.088 | 14.035 | 14.202 | 14.196 | 14.098 | 14.198 | 14.271 |
| N° 2 | 14.032 | 20.988 | 28.745 | 32.600 | 37.079 | 41.837 | 44.912 | 49.619 | 54.418 | 59.232 | 59.077 | 45.420 |
| N° 3 | 13.913 | 21.042 | 29.063 | 33.386 | 38.116 | 42.941 | 46.063 | 50.971 | 56.280 | 61.203 | 61.187 | 46.904 |
| N° 4 | 13.938 | 21.084 | 29.117 | 33.302 | 38.027 | 42.700 | 45.845 | 50.737 | 56.218 | 60.825 | 60.586 | 46.450 |
| N° 5 | 14.203 | 21.276 | 29.110 | 33.240 | 37.899 | 42.774 | 46.015 | 50.679 | 55.902 | 60.637 | 60.603 | 46.937 |
| N° 6 | 13.795 | 20.881 | 28.553 | 32.563 | 36.833 | 41.718 | 44.764 | 49.415 | 54.735 | 58.959 | 58.816 | 45.042 |
| N° 7 | 14.134 | 20.999 | 28.752 | 32.785 | 37.419 | 42.251 | 45.332 | 50.124 | 55.585 | 59.952 | 59.851 | 47.727 |
| N° 8 | 13.805 | 20.549 | 28.476 | 32.741 | 37.346 | 42.166 | 45.138 | 49.907 | 55.150 | 59.759 | 59.598 | 45.607 |
| N° 9 | 14.055 | 21.119 | 28.909 | 33.116 | 37.802 | 42.645 | 45.751 | 50.485 | 55.851 | 60.658 | 60.410 | 47.602 |
| N° 10 | 14.096 | 21.139 | 29.379 | 33.585 | 38.365 | 43.404 | 46.717 | 51.406 | 56.764 | 61.884 | 61.760 | 48.033 |
| N° 11 | 14.057 | 20.901 | 28.688 | 32.827 | 37.401 | 41.963 | 45.311 | 49.788 | 54.946 | 59.468 | 59.393 | 46.425 |
| N° 12 | 13.832 | 20.613 | 28.542 | 32.711 | 37.275 | 42.037 | 45.177 | 49.968 | 55.244 | 59.864 | 59.657 | 45.876 |
| N° 13 | 14.119 | 20.958 | 28.976 | 33.174 | 37.795 | 42.687 | 45.701 | 50.442 | 55.566 | 60.214 | 60.086 | 45.972 |
| N° 14 | 14.056 | 20.912 | 29.033 | 33.147 | 37.817 | 42.501 | 45.810 | 50.377 | 55.859 | 60.703 | 60.589 | 46.092 |
| N° 15 | 14.007 | 21.081 | 29.243 | 33.171 | 38.007 | 42.894 | 45.843 | 51.019 | 56.221 | 61.256 | 60.867 | 46.687 |
| N° 16 | 14.327 | 21.182 | 29.039 | 33.276 | 37.993 | 43.012 | 46.006 | 50.799 | 56.208 | 60.651 | 60.664 | 46.509 |
| N° 17 | 14.237 | 20.856 | 28.665 | 32.278 | 36.590 | 40.940 | 44.100 | 48.749 | 53.277 | 57.358 | 57.089 | 45.480 |
| N° 18 | 13.702 | 20.689 | 28.577 | 32.632 | 37.201 | 42.194 | 45.026 | 49.653 | 55.002 | 59.708 | 59.409 | 45.533 |
| N° 19 | 13.743 | 20.877 | 28.894 | 33.005 | 37.794 | 42.590 | 45.688 | 50.572 | 55.940 | 60.712 | 60.607 | 46.262 |
| N° 20 | 14.043 | 21.130 | 29.223 | 33.585 | 37.880 | 42.354 | 45.553 | 50.220 | 55.298 | 59.731 | 59.798 | 45.749 |
| N° 21 | 14.239 | 21.277 | 28.965 | 33.068 | 37.656 | 41.960 | 45.045 | 49.669 | 54.634 | 58.911 | 58.820 | 45.712 |
| N° 22 | 13.948 | 21.008 | 28.912 | 33.067 | 37.858 | 42.603 | 45.928 | 50.305 | 55.747 | 60.372 | 60.212 | 46.189 |
| N° 23 | 13.785 | 20.781 | 28.607 | 32.707 | 37.503 | 42.055 | 45.255 | 50.009 | 55.077 | 59.595 | 59.529 | 45.891 |
| N° 24 | 13.832 | 20.822 | 28.759 | 33.021 | 37.859 | 42.646 | 45.906 | 50.719 | 56.078 | 60.844 | 60.740 | 46.944 |
| N° 25 | 13.761 | 20.968 | 28.788 | 33.180 | 38.068 | 42.963 | 46.202 | 51.097 | 56.505 | 61.321 | 62.002 | 46.795 |
| N° 26 | 14.029 | 20.954 | 28.765 | 32.948 | 37.835 | 42.805 | 45.823 | 50.720 | 55.856 | 60.642 | 60.591 | 46.310 |
| N° 27 | 14.112 | 20.990 | 28.842 | 33.021 | 37.897 | 42.510 | 45.551 | 50.176 | 55.515 | 59.991 | 59.865 | 46.752 |
| N° 28 | 14.249 | 20.932 | 28.844 | 32.738 | 36.867 | 41.268 | 44.467 | 49.359 | 54.368 | 59.236 | 59.067 | 45.567 |
| N° 29 | 13.943 | 20.943 | 29.150 | 33.477 | 38.079 | 43.017 | 46.309 | 51.201 | 55.926 | 60.269 | 60.031 | 47.009 |
| N° 30 | 14.053 | 21.180 | 29.193 | 33.429 | 38.324 | 43.401 | 46.730 | 51.975 | 57.337 | 61.860 | 61.865 | 48.605 |
| N° 31 | 13.977 | 20.878 | 28.768 | 33.175 | 37.823 | 42.696 | 45.729 | 50.696 | 55.894 | 60.656 | 60.506 | 47.858 |

# 21. +IIB2, Module 1

**Ta=25°C; +VCC=2V; -VCC=-28V; VCM=-13V**

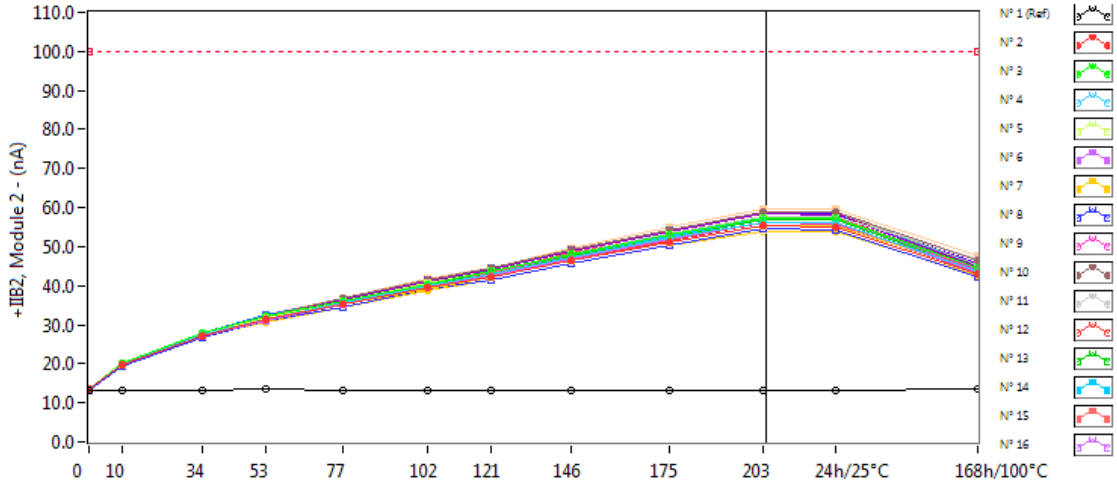



**+IIB2, Module 1 . (nA)** **Max = 100.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 14.007 | 13.903 | 13.903 | 13.897 | 13.958 | 13.880 | 13.801 | 14.004 | 13.981 | 13.870 | 13.972 | 14.058 |
| N° 2 | 13.823 | 20.305 | 27.727 | 31.498 | 35.921 | 40.483 | 43.502 | 47.812 | 52.689 | 57.218 | 57.128 | 44.176 |
| N° 3 | 13.836 | 20.467 | 28.181 | 32.152 | 36.695 | 41.360 | 44.413 | 49.216 | 54.489 | 59.343 | 59.284 | 45.878 |
| N° 4 | 13.793 | 20.533 | 28.107 | 31.966 | 36.531 | 41.128 | 44.503 | 49.194 | 54.461 | 58.895 | 58.706 | 45.800 |
| N° 5 | 14.141 | 20.840 | 28.280 | 32.304 | 36.807 | 41.469 | 44.562 | 49.093 | 54.159 | 58.869 | 58.811 | 45.880 |
| N° 6 | 13.784 | 20.204 | 27.361 | 30.872 | 34.955 | 39.253 | 42.167 | 46.346 | 51.008 | 54.846 | 54.794 | 43.001 |
| N° 7 | 13.924 | 20.398 | 27.663 | 31.637 | 35.841 | 40.161 | 43.024 | 47.396 | 52.216 | 56.505 | 56.435 | 45.122 |
| N° 8 | 13.697 | 20.267 | 27.878 | 31.849 | 36.430 | 41.100 | 43.998 | 48.624 | 53.829 | 58.497 | 58.452 | 44.927 |
| N° 9 | 13.959 | 20.602 | 28.070 | 31.975 | 36.585 | 41.302 | 44.460 | 49.147 | 54.404 | 59.133 | 58.980 | 46.502 |
| N° 10 | 13.935 | 20.602 | 28.245 | 32.115 | 36.859 | 41.771 | 45.214 | 49.546 | 54.801 | 59.579 | 59.563 | 47.252 |
| N° 11 | 14.039 | 20.706 | 28.207 | 31.983 | 36.524 | 41.011 | 44.761 | 49.155 | 54.349 | 59.215 | 59.143 | 47.207 |
| N° 12 | 13.634 | 20.335 | 27.694 | 31.940 | 36.479 | 41.280 | 44.247 | 48.910 | 53.979 | 58.852 | 58.703 | 45.572 |
| N° 13 | 13.868 | 20.388 | 27.661 | 31.589 | 35.841 | 40.347 | 43.216 | 47.878 | 52.574 | 57.328 | 56.951 | 44.176 |
| N° 14 | 13.868 | 20.545 | 28.177 | 31.675 | 36.255 | 40.614 | 43.741 | 48.407 | 53.642 | 57.996 | 58.099 | 44.742 |
| N° 15 | 13.689 | 20.460 | 28.128 | 32.104 | 36.863 | 42.063 | 44.808 | 50.104 | 55.064 | 60.391 | 59.987 | 46.617 |
| N° 16 | 14.086 | 20.677 | 28.149 | 32.099 | 36.561 | 41.528 | 44.537 | 49.226 | 54.476 | 58.999 | 58.980 | 45.497 |
| N° 17 | 13.936 | 20.122 | 27.565 | 31.092 | 35.134 | 39.383 | 42.490 | 46.974 | 51.463 | 55.572 | 55.440 | 43.910 |
| N° 18 | 13.567 | 20.380 | 28.150 | 31.936 | 36.497 | 41.514 | 44.455 | 49.048 | 54.183 | 58.928 | 58.908 | 45.376 |
| N° 19 | 13.707 | 20.817 | 28.489 | 32.501 | 37.227 | 42.105 | 45.529 | 50.208 | 55.797 | 60.829 | 60.779 | 46.712 |
| N° 20 | 13.871 | 20.851 | 28.811 | 33.412 | 38.133 | 42.438 | 45.787 | 50.506 | 56.203 | 60.905 | 60.925 | 46.942 |
| N° 21 | 14.047 | 20.692 | 28.128 | 32.006 | 36.711 | 40.599 | 43.425 | 48.018 | 52.939 | 57.087 | 57.093 | 44.736 |
| N° 22 | 14.005 | 20.610 | 27.654 | 31.696 | 36.316 | 40.839 | 44.146 | 48.305 | 53.497 | 58.036 | 57.979 | 44.757 |
| N° 23 | 13.677 | 20.323 | 28.037 | 32.103 | 36.858 | 41.571 | 44.836 | 49.373 | 54.663 | 59.409 | 59.366 | 45.862 |
| N° 24 | 13.863 | 20.663 | 28.358 | 32.447 | 37.009 | 41.547 | 44.705 | 49.386 | 54.818 | 59.300 | 59.289 | 45.905 |
| N° 25 | 13.610 | 20.536 | 28.090 | 32.365 | 37.146 | 41.832 | 45.146 | 49.947 | 55.183 | 60.151 | 60.877 | 46.351 |
| N° 26 | 13.719 | 20.495 | 27.682 | 31.740 | 36.164 | 40.844 | 43.802 | 48.497 | 53.167 | 57.540 | 57.590 | 44.697 |
| N° 27 | 13.988 | 20.612 | 27.899 | 31.913 | 36.459 | 41.088 | 43.795 | 48.211 | 53.268 | 57.740 | 57.665 | 45.093 |
| N° 28 | 14.046 | 20.310 | 28.220 | 31.836 | 36.099 | 40.350 | 43.527 | 48.059 | 53.015 | 57.808 | 57.757 | 45.362 |
| N° 29 | 13.795 | 20.715 | 28.482 | 32.464 | 36.965 | 42.030 | 45.218 | 50.095 | 55.011 | 59.273 | 59.182 | 46.709 |
| N° 30 | 13.316 | 19.752 | 27.079 | 31.047 | 35.474 | 40.051 | 43.433 | 47.534 | 52.573 | 56.761 | 56.762 | 44.572 |
| N° 31 | 13.796 | 20.537 | 28.188 | 32.240 | 36.841 | 41.774 | 44.835 | 49.564 | 54.455 | 59.326 | 59.406 | 47.137 |

# 22. +IIB2, Module 2

**Ta=25°C; +VCC=2V; -VCC=-28V; VCM=-13V**

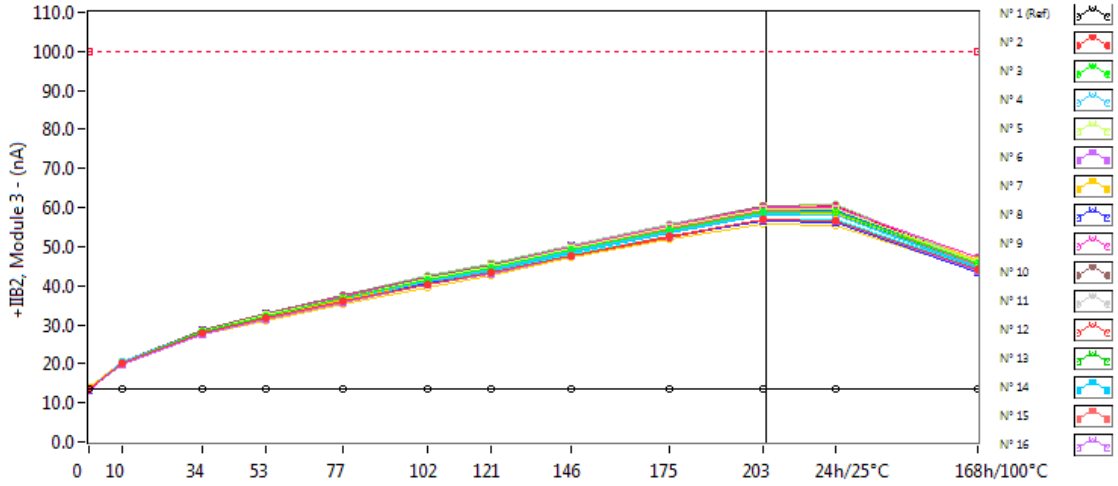



**+IIB2, Module 2 . (nA)** **Max = 100.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 13.341 | 13.231 | 13.227 | 13.442 | 13.289 | 13.243 | 13.160 | 13.315 | 13.326 | 13.222 | 13.322 | 13.389 |
| N° 2 | 13.366 | 19.829 | 27.256 | 31.291 | 35.113 | 39.497 | 42.278 | 46.460 | 51.133 | 55.360 | 55.159 | 42.874 |
| N° 3 | 13.485 | 20.071 | 27.780 | 31.978 | 36.088 | 40.467 | 43.602 | 47.974 | 52.955 | 57.145 | 57.160 | 44.592 |
| N° 4 | 13.400 | 19.986 | 27.462 | 31.395 | 35.621 | 39.967 | 42.913 | 47.433 | 52.294 | 56.309 | 56.319 | 43.736 |
| N° 5 | 13.601 | 20.278 | 27.870 | 31.800 | 36.005 | 40.675 | 43.617 | 48.032 | 53.090 | 57.494 | 57.432 | 44.637 |
| N° 6 | 13.431 | 20.035 | 27.294 | 31.159 | 35.412 | 39.766 | 42.781 | 47.039 | 52.077 | 56.136 | 56.017 | 43.307 |
| N° 7 | 13.565 | 19.801 | 27.126 | 31.202 | 35.092 | 39.289 | 42.097 | 46.401 | 51.235 | 55.352 | 55.246 | 43.626 |
| N° 8 | 13.058 | 19.455 | 26.823 | 30.942 | 34.637 | 39.113 | 41.576 | 45.761 | 50.487 | 54.702 | 54.330 | 42.261 |
| N° 9 | 13.451 | 19.897 | 27.266 | 31.147 | 35.326 | 39.770 | 42.582 | 46.941 | 51.845 | 56.069 | 55.948 | 43.968 |
| N° 10 | 13.506 | 20.320 | 27.926 | 32.252 | 36.677 | 41.348 | 44.569 | 49.050 | 54.309 | 58.936 | 58.803 | 46.574 |
| N° 11 | 13.459 | 19.940 | 27.426 | 31.567 | 35.805 | 40.145 | 43.844 | 48.203 | 53.353 | 57.806 | 57.838 | 46.745 |
| N° 12 | 13.188 | 19.748 | 27.098 | 31.275 | 35.178 | 39.542 | 42.510 | 46.847 | 51.700 | 56.134 | 55.878 | 43.378 |
| N° 13 | 13.475 | 20.020 | 27.378 | 31.480 | 35.635 | 40.188 | 42.850 | 47.482 | 52.409 | 56.969 | 56.876 | 43.582 |
| N° 14 | 13.306 | 19.872 | 27.492 | 31.343 | 35.647 | 40.267 | 43.156 | 47.635 | 52.665 | 56.823 | 56.833 | 43.717 |
| N° 15 | 13.296 | 19.911 | 27.446 | 31.513 | 36.033 | 40.720 | 43.398 | 48.358 | 53.199 | 57.888 | 57.702 | 44.318 |
| N° 16 | 13.593 | 20.214 | 27.517 | 31.508 | 35.862 | 40.528 | 43.268 | 47.777 | 52.706 | 57.137 | 56.940 | 44.051 |
| N° 17 | 13.530 | 19.597 | 27.065 | 30.563 | 34.498 | 38.595 | 41.459 | 45.763 | 50.173 | 53.979 | 53.889 | 42.498 |
| N° 18 | 13.154 | 19.811 | 27.453 | 31.616 | 35.933 | 40.754 | 43.604 | 48.145 | 53.269 | 57.663 | 57.675 | 44.215 |
| N° 19 | 13.178 | 20.098 | 27.590 | 31.777 | 36.244 | 40.979 | 44.235 | 48.686 | 53.874 | 58.392 | 58.196 | 44.873 |
| N° 20 | 13.403 | 20.129 | 27.823 | 31.832 | 36.786 | 41.094 | 44.407 | 49.055 | 54.066 | 58.801 | 58.981 | 45.126 |
| N° 21 | 13.532 | 20.118 | 27.525 | 31.428 | 35.963 | 39.991 | 42.849 | 47.407 | 52.075 | 56.158 | 56.251 | 43.906 |
| N° 22 | 13.591 | 20.214 | 27.277 | 31.537 | 35.679 | 40.159 | 43.223 | 47.469 | 52.556 | 56.924 | 56.871 | 43.731 |
| N° 23 | 13.210 | 19.774 | 27.250 | 31.572 | 35.526 | 40.218 | 43.288 | 47.911 | 53.030 | 57.498 | 57.489 | 44.093 |
| N° 24 | 13.552 | 20.269 | 27.938 | 32.390 | 36.531 | 41.198 | 44.387 | 48.759 | 54.108 | 58.401 | 58.286 | 45.289 |
| N° 25 | 13.399 | 20.152 | 27.769 | 32.342 | 36.433 | 41.043 | 44.041 | 48.713 | 53.711 | 58.296 | 58.908 | 44.723 |
| N° 26 | 13.248 | 19.705 | 27.079 | 31.614 | 35.661 | 40.366 | 43.300 | 48.019 | 52.806 | 57.350 | 57.215 | 44.131 |
| N° 27 | 13.405 | 19.992 | 27.457 | 32.066 | 36.096 | 40.537 | 43.272 | 47.780 | 52.961 | 57.447 | 57.357 | 44.995 |
| N° 28 | 13.638 | 19.999 | 27.690 | 31.803 | 35.424 | 39.625 | 43.037 | 47.683 | 52.372 | 57.315 | 57.251 | 44.680 |
| N° 29 | 13.436 | 20.134 | 27.964 | 32.586 | 36.399 | 41.269 | 44.534 | 49.339 | 54.091 | 58.478 | 58.337 | 45.852 |
| N° 30 | 13.598 | 20.333 | 27.822 | 32.560 | 36.595 | 41.386 | 44.555 | 48.879 | 53.933 | 58.460 | 58.391 | 45.674 |
| N° 31 | 13.473 | 20.260 | 27.829 | 32.566 | 36.859 | 41.836 | 44.696 | 49.542 | 54.933 | 59.767 | 59.677 | 47.734 |

# 23. +IIB2, Module 3

**Ta=25°C; +VCC=2V; -VCC=-28V; VCM=-13V**

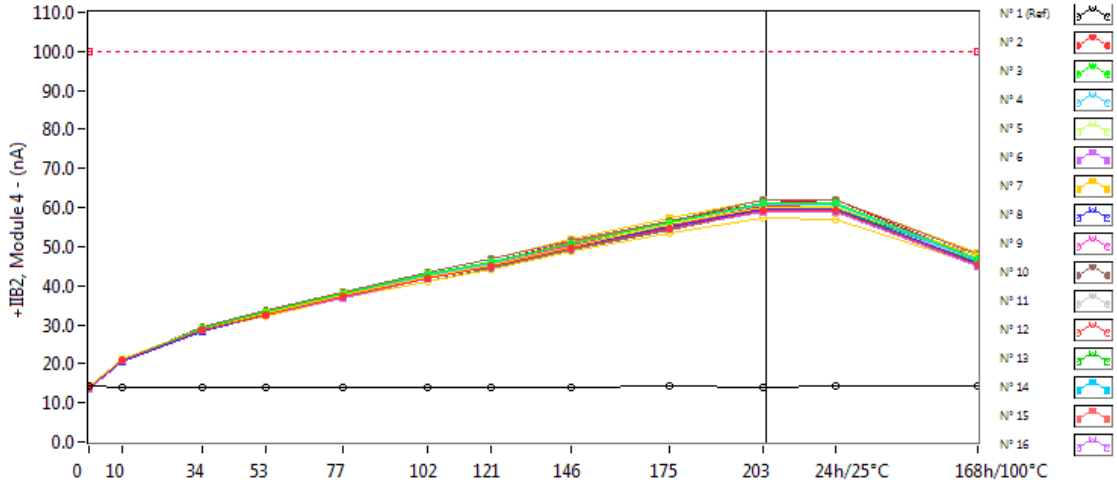



**+IIB2, Module 3 . (nA)** **Max = 100.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 13.645 | 13.561 | 13.544 | 13.647 | 13.604 | 13.558 | 13.488 | 13.648 | 13.630 | 13.549 | 13.648 | 13.708 |
| N° 2 | 13.580 | 20.161 | 27.909 | 31.650 | 35.960 | 40.286 | 43.293 | 47.688 | 52.540 | 57.012 | 56.693 | 43.975 |
| N° 3 | 13.581 | 20.222 | 28.181 | 32.219 | 36.673 | 41.353 | 44.396 | 49.144 | 54.292 | 59.045 | 59.031 | 45.733 |
| N° 4 | 13.530 | 20.479 | 28.233 | 32.105 | 36.783 | 41.168 | 44.116 | 48.838 | 54.016 | 58.381 | 58.264 | 44.915 |
| N° 5 | 13.499 | 20.350 | 28.287 | 32.525 | 36.977 | 41.880 | 44.888 | 49.742 | 54.940 | 59.709 | 59.566 | 46.233 |
| N° 6 | 13.385 | 19.857 | 27.516 | 31.338 | 35.620 | 40.197 | 43.168 | 47.643 | 52.592 | 56.844 | 56.692 | 43.849 |
| N° 7 | 13.812 | 20.368 | 28.052 | 32.058 | 36.468 | 41.099 | 44.221 | 48.980 | 54.190 | 58.793 | 58.639 | 46.330 |
| N° 8 | 13.386 | 20.026 | 27.498 | 31.339 | 35.660 | 40.483 | 43.102 | 47.567 | 52.483 | 56.449 | 56.348 | 43.235 |
| N° 9 | 13.766 | 20.642 | 28.317 | 32.479 | 37.025 | 41.911 | 45.057 | 49.918 | 55.224 | 60.027 | 59.899 | 47.275 |
| N° 10 | 13.745 | 20.673 | 28.741 | 32.932 | 37.525 | 42.220 | 45.406 | 49.986 | 55.428 | 60.240 | 60.101 | 47.400 |
| N° 11 | 13.562 | 20.262 | 27.779 | 31.802 | 36.250 | 40.870 | 44.232 | 48.642 | 53.844 | 58.689 | 58.616 | 46.197 |
| N° 12 | 13.386 | 19.916 | 27.477 | 31.562 | 35.775 | 40.230 | 43.088 | 47.716 | 52.464 | 56.790 | 56.588 | 43.482 |
| N° 13 | 13.653 | 20.394 | 28.226 | 32.159 | 36.589 | 41.360 | 44.239 | 48.909 | 54.012 | 58.800 | 58.620 | 44.812 |
| N° 14 | 13.434 | 20.137 | 27.882 | 31.696 | 36.294 | 40.838 | 43.949 | 48.392 | 53.513 | 58.038 | 57.954 | 44.436 |
| N° 15 | 13.369 | 20.311 | 28.150 | 32.056 | 36.510 | 40.907 | 44.248 | 49.394 | 54.509 | 59.407 | 58.989 | 45.196 |
| N° 16 | 13.911 | 20.590 | 28.430 | 32.417 | 37.071 | 41.887 | 44.595 | 49.151 | 54.313 | 58.915 | 58.783 | 45.084 |
| N° 17 | 13.709 | 19.894 | 27.581 | 31.124 | 35.339 | 39.535 | 42.748 | 47.243 | 51.927 | 55.735 | 55.514 | 43.705 |
| N° 18 | 13.317 | 20.077 | 27.763 | 31.817 | 36.397 | 41.604 | 44.411 | 48.925 | 54.093 | 58.559 | 58.500 | 44.749 |
| N° 19 | 13.189 | 20.114 | 27.536 | 31.722 | 36.234 | 40.813 | 43.913 | 48.477 | 53.586 | 58.328 | 58.150 | 44.631 |
| N° 20 | 13.580 | 20.519 | 28.614 | 33.070 | 37.656 | 42.415 | 45.665 | 50.313 | 55.770 | 60.480 | 60.625 | 46.103 |
| N° 21 | 13.563 | 20.317 | 27.846 | 31.723 | 36.193 | 40.446 | 43.474 | 47.952 | 52.761 | 56.910 | 56.868 | 44.359 |
| N° 22 | 13.448 | 20.282 | 27.722 | 31.932 | 36.505 | 41.225 | 44.454 | 48.642 | 54.053 | 58.555 | 58.441 | 44.920 |
| N° 23 | 13.472 | 20.213 | 27.902 | 31.922 | 36.469 | 40.989 | 44.111 | 48.772 | 53.730 | 58.370 | 58.281 | 44.697 |
| N° 24 | 13.346 | 20.142 | 27.825 | 31.998 | 36.705 | 41.536 | 44.585 | 49.356 | 54.681 | 59.348 | 59.153 | 45.589 |
| N° 25 | 13.482 | 20.477 | 28.294 | 32.478 | 36.932 | 41.837 | 45.031 | 49.769 | 54.968 | 59.817 | 60.564 | 45.723 |
| N° 26 | 13.501 | 20.163 | 27.759 | 32.138 | 36.593 | 41.307 | 44.285 | 48.916 | 53.874 | 58.423 | 58.247 | 44.868 |
| N° 27 | 13.629 | 20.345 | 28.093 | 32.229 | 36.793 | 41.407 | 44.023 | 48.762 | 53.881 | 58.389 | 58.313 | 44.918 |
| N° 28 | 13.766 | 20.197 | 28.370 | 32.329 | 36.324 | 40.669 | 44.003 | 48.771 | 53.809 | 58.689 | 58.502 | 45.085 |
| N° 29 | 13.517 | 20.485 | 28.535 | 32.780 | 37.251 | 41.868 | 45.131 | 50.209 | 54.903 | 59.330 | 59.250 | 46.277 |
| N° 30 | 13.551 | 20.502 | 28.333 | 32.668 | 37.226 | 42.185 | 45.539 | 50.227 | 55.569 | 60.308 | 60.281 | 46.648 |
| N° 31 | 13.607 | 20.372 | 28.045 | 32.434 | 36.988 | 41.793 | 44.795 | 49.589 | 54.911 | 59.545 | 59.524 | 47.368 |

# 24. +IIB2, Module 4

**Ta=25°C; +VCC=2V; -VCC=-28V; VCM=-13V**

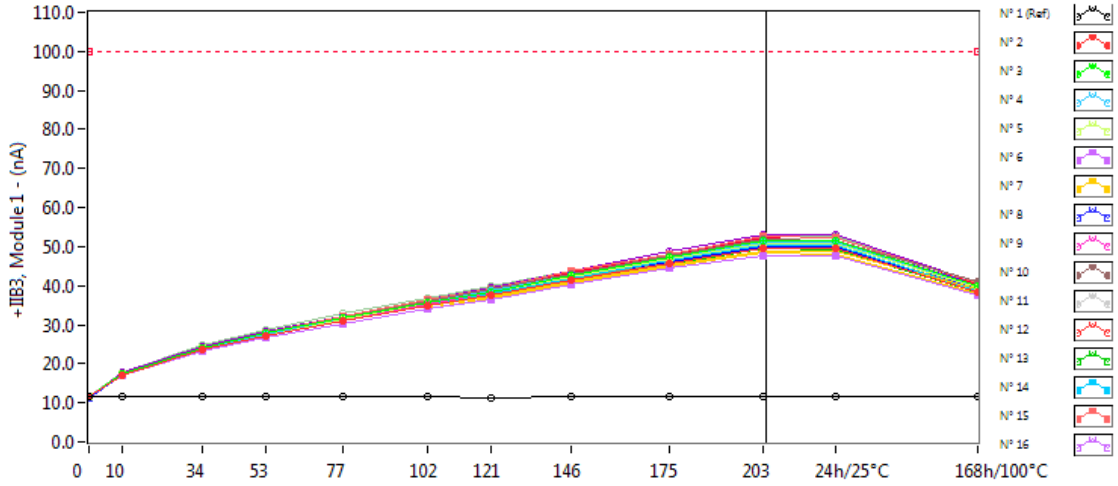



**+IIB2, Module 4 . (nA)** **Max = 100.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 14.138 | 14.050 | 14.032 | 14.087 | 14.083 | 14.048 | 13.976 | 14.132 | 14.140 | 14.041 | 14.145 | 14.204 |
| N° 2 | 13.981 | 20.878 | 28.748 | 32.613 | 37.099 | 41.828 | 44.907 | 49.657 | 54.440 | 59.290 | 59.155 | 45.349 |
| N° 3 | 13.856 | 20.959 | 29.051 | 33.421 | 38.137 | 42.974 | 46.080 | 50.925 | 56.282 | 61.259 | 61.141 | 46.871 |
| N° 4 | 13.875 | 21.027 | 29.086 | 33.293 | 38.043 | 42.710 | 45.887 | 50.797 | 56.255 | 60.844 | 60.656 | 46.389 |
| N° 5 | 14.143 | 21.217 | 29.085 | 33.242 | 37.864 | 42.805 | 45.983 | 50.692 | 55.866 | 60.656 | 60.604 | 46.884 |
| N° 6 | 13.741 | 20.819 | 28.577 | 32.563 | 36.851 | 41.737 | 44.747 | 49.490 | 54.729 | 58.948 | 58.865 | 44.979 |
| N° 7 | 14.076 | 20.945 | 28.753 | 32.775 | 37.465 | 42.191 | 45.385 | 50.154 | 55.627 | 59.964 | 59.843 | 47.716 |
| N° 8 | 13.741 | 20.474 | 28.468 | 32.711 | 37.361 | 42.137 | 45.176 | 49.872 | 55.184 | 59.798 | 59.600 | 45.545 |
| N° 9 | 14.006 | 21.061 | 28.916 | 33.126 | 37.810 | 42.683 | 45.727 | 50.531 | 55.889 | 60.689 | 60.441 | 47.559 |
| N° 10 | 14.040 | 21.072 | 29.366 | 33.555 | 38.381 | 43.386 | 46.765 | 51.422 | 56.739 | 61.912 | 61.821 | 47.982 |
| N° 11 | 13.999 | 20.829 | 28.677 | 32.833 | 37.391 | 41.964 | 45.289 | 49.826 | 55.029 | 59.571 | 59.407 | 46.401 |
| N° 12 | 13.772 | 20.553 | 28.535 | 32.701 | 37.288 | 41.987 | 45.207 | 49.935 | 55.253 | 59.865 | 59.664 | 45.814 |
| N° 13 | 14.071 | 20.888 | 28.959 | 33.155 | 37.783 | 42.749 | 45.700 | 50.460 | 55.591 | 60.217 | 60.105 | 45.954 |
| N° 14 | 13.996 | 20.807 | 29.004 | 33.124 | 37.852 | 42.475 | 45.781 | 50.383 | 55.839 | 60.711 | 60.656 | 46.028 |
| N° 15 | 13.943 | 21.006 | 29.234 | 33.242 | 38.027 | 42.893 | 45.815 | 51.005 | 56.212 | 61.270 | 60.850 | 46.643 |
| N° 16 | 14.271 | 21.114 | 29.016 | 33.317 | 38.011 | 43.028 | 45.995 | 50.783 | 56.239 | 60.703 | 60.657 | 46.451 |
| N° 17 | 14.168 | 20.766 | 28.642 | 32.304 | 36.618 | 40.913 | 44.120 | 48.707 | 53.293 | 57.336 | 57.123 | 45.410 |
| N° 18 | 13.657 | 20.648 | 28.545 | 32.641 | 37.202 | 42.210 | 45.036 | 49.627 | 54.999 | 59.654 | 59.405 | 45.489 |
| N° 19 | 13.690 | 20.819 | 28.863 | 32.980 | 37.818 | 42.597 | 45.686 | 50.559 | 55.927 | 60.671 | 60.615 | 46.224 |
| N° 20 | 13.997 | 21.070 | 29.217 | 33.562 | 37.885 | 42.359 | 45.594 | 50.270 | 55.335 | 59.771 | 59.893 | 45.716 |
| N° 21 | 14.191 | 21.203 | 28.979 | 33.042 | 37.630 | 41.993 | 45.040 | 49.657 | 54.596 | 58.926 | 58.817 | 45.629 |
| N° 22 | 13.890 | 20.918 | 28.856 | 33.046 | 37.821 | 42.624 | 45.921 | 50.239 | 55.789 | 60.396 | 60.206 | 46.174 |
| N° 23 | 13.720 | 20.707 | 28.652 | 32.685 | 37.512 | 42.107 | 45.270 | 50.057 | 55.061 | 59.630 | 59.546 | 45.837 |
| N° 24 | 13.783 | 20.787 | 28.757 | 33.016 | 37.850 | 42.661 | 45.919 | 50.727 | 56.033 | 60.884 | 60.738 | 46.928 |
| N° 25 | 13.710 | 20.925 | 28.776 | 33.170 | 38.063 | 42.955 | 46.238 | 51.073 | 56.495 | 61.343 | 61.988 | 46.754 |
| N° 26 | 13.978 | 20.860 | 28.775 | 32.975 | 37.801 | 42.782 | 45.888 | 50.655 | 55.884 | 60.588 | 60.534 | 46.278 |
| N° 27 | 14.063 | 20.939 | 28.839 | 33.035 | 37.850 | 42.541 | 45.542 | 50.151 | 55.556 | 60.038 | 59.875 | 46.680 |
| N° 28 | 14.188 | 20.829 | 28.854 | 32.744 | 36.844 | 41.210 | 44.474 | 49.351 | 54.394 | 59.278 | 59.127 | 45.545 |
| N° 29 | 13.900 | 20.909 | 29.130 | 33.466 | 38.082 | 43.072 | 46.281 | 51.228 | 55.902 | 60.223 | 60.096 | 46.952 |
| N° 30 | 13.999 | 21.113 | 29.135 | 33.458 | 38.309 | 43.448 | 46.712 | 51.940 | 57.409 | 61.825 | 61.879 | 48.561 |
| N° 31 | 13.934 | 20.801 | 28.760 | 33.178 | 37.837 | 42.683 | 45.789 | 50.662 | 55.933 | 60.659 | 60.606 | 47.811 |

# 25. +IIB3, Module 1

**Ta=25°C; +VCC=5V; -VCC=GND; VCM=+1.4V**

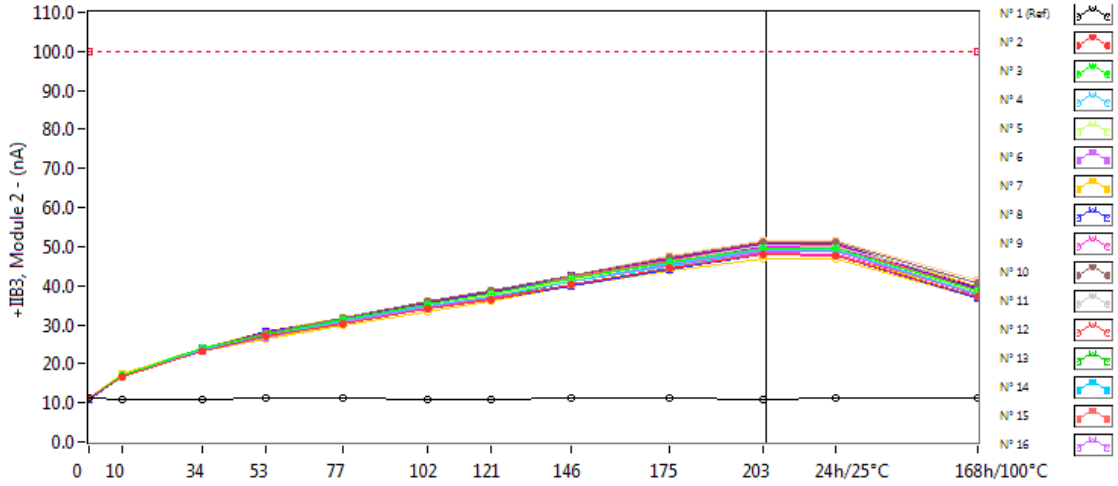



**+IIB3, Module 1 . (nA)** **Max = 100.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 11.606 | 11.529 | 11.499 | 11.542 | 11.567 | 11.530 | 11.419 | 11.611 | 11.618 | 11.509 | 11.615 | 11.675 |
| N° 2 | 11.465 | 17.170 | 23.685 | 27.056 | 30.990 | 35.014 | 37.612 | 41.439 | 45.659 | 49.559 | 49.508 | 38.274 |
| N° 3 | 11.492 | 17.354 | 24.160 | 27.697 | 31.702 | 35.748 | 38.454 | 42.735 | 47.279 | 51.489 | 51.440 | 39.840 |
| N° 4 | 11.448 | 17.405 | 24.071 | 27.562 | 31.580 | 35.678 | 38.581 | 42.748 | 47.373 | 51.177 | 51.025 | 39.808 |
| N° 5 | 11.626 | 17.456 | 24.040 | 27.560 | 31.506 | 35.644 | 38.323 | 42.313 | 46.701 | 50.727 | 50.689 | 39.509 |
| N° 6 | 11.460 | 17.120 | 23.396 | 26.660 | 30.248 | 34.051 | 36.585 | 40.356 | 44.368 | 47.657 | 47.643 | 37.379 |
| N° 7 | 11.547 | 17.202 | 23.629 | 27.153 | 30.885 | 34.702 | 37.229 | 41.093 | 45.252 | 48.947 | 48.896 | 39.140 |
| N° 8 | 11.416 | 17.226 | 23.955 | 27.573 | 31.655 | 35.748 | 38.351 | 42.461 | 46.953 | 51.058 | 51.026 | 39.225 |
| N° 9 | 11.460 | 17.281 | 23.797 | 27.274 | 31.369 | 35.423 | 38.271 | 42.301 | 46.912 | 50.955 | 50.834 | 40.076 |
| N° 10 | 11.577 | 17.481 | 24.192 | 27.702 | 31.897 | 36.160 | 39.245 | 43.055 | 47.645 | 51.767 | 51.680 | 41.113 |
| N° 11 | 11.637 | 17.507 | 24.073 | 27.512 | 31.493 | 35.466 | 38.707 | 42.581 | 47.202 | 51.310 | 51.255 | 40.990 |
| N° 12 | 11.385 | 17.319 | 23.836 | 27.694 | 31.712 | 35.986 | 38.599 | 42.744 | 47.191 | 51.372 | 51.231 | 39.792 |
| N° 13 | 11.458 | 17.162 | 23.530 | 27.072 | 30.811 | 34.818 | 37.252 | 41.356 | 45.510 | 49.556 | 49.353 | 38.184 |
| N° 14 | 11.510 | 17.406 | 24.110 | 27.254 | 31.332 | 35.123 | 37.883 | 41.993 | 46.534 | 50.288 | 50.366 | 38.836 |
| N° 15 | 11.427 | 17.407 | 24.207 | 27.814 | 31.990 | 36.501 | 38.986 | 43.604 | 47.992 | 52.572 | 52.182 | 40.648 |
| N° 16 | 11.659 | 17.461 | 24.043 | 27.599 | 31.550 | 35.942 | 38.554 | 42.745 | 47.311 | 51.220 | 51.155 | 39.473 |
| N° 17 | 11.559 | 17.020 | 23.569 | 26.741 | 30.382 | 34.077 | 36.815 | 40.786 | 44.758 | 48.293 | 48.184 | 38.115 |
| N° 18 | 11.199 | 17.148 | 23.967 | 27.429 | 31.403 | 35.803 | 38.419 | 42.437 | 46.923 | 51.053 | 51.028 | 39.224 |
| N° 19 | 11.423 | 17.696 | 24.487 | 28.100 | 32.334 | 36.585 | 39.591 | 43.867 | 48.750 | 53.056 | 53.004 | 40.764 |
| N° 20 | 11.520 | 17.691 | 24.686 | 28.755 | 32.954 | 36.787 | 39.715 | 43.872 | 48.758 | 52.881 | 52.858 | 40.765 |
| N° 21 | 11.579 | 17.387 | 23.914 | 27.383 | 31.543 | 34.995 | 37.515 | 41.573 | 45.834 | 49.424 | 49.371 | 38.643 |
| N° 22 | 11.645 | 17.450 | 23.680 | 27.316 | 31.418 | 35.440 | 38.327 | 42.011 | 46.575 | 50.479 | 50.426 | 38.905 |
| N° 23 | 11.274 | 17.128 | 23.862 | 27.503 | 31.710 | 35.858 | 38.662 | 42.699 | 47.295 | 51.392 | 51.330 | 39.634 |
| N° 24 | 11.473 | 17.465 | 24.196 | 27.926 | 31.928 | 35.919 | 38.668 | 42.887 | 47.593 | 51.441 | 51.395 | 39.805 |
| N° 25 | 11.307 | 17.427 | 24.132 | 27.961 | 32.157 | 36.305 | 39.210 | 43.444 | 48.046 | 52.288 | 52.882 | 40.308 |
| N° 26 | 11.382 | 17.325 | 23.638 | 27.351 | 31.285 | 35.375 | 37.972 | 42.149 | 46.219 | 50.033 | 50.037 | 38.812 |
| N° 27 | 11.575 | 17.411 | 23.796 | 27.417 | 31.441 | 35.480 | 37.889 | 41.789 | 46.199 | 50.048 | 49.993 | 39.072 |
| N° 28 | 11.605 | 17.093 | 23.979 | 27.266 | 31.007 | 34.781 | 37.558 | 41.544 | 45.856 | 49.997 | 49.903 | 39.221 |
| N° 29 | 11.366 | 17.372 | 24.189 | 27.780 | 31.722 | 36.106 | 38.956 | 43.196 | 47.377 | 51.067 | 51.032 | 40.274 |
| N° 30 | 11.172 | 16.860 | 23.358 | 26.985 | 30.906 | 34.950 | 37.895 | 41.602 | 45.968 | 49.617 | 49.618 | 38.994 |
| N° 31 | 11.394 | 17.287 | 24.041 | 27.682 | 31.716 | 36.060 | 38.732 | 42.850 | 47.220 | 51.363 | 51.412 | 40.831 |

# 26. +IIB3, Module 2

**Ta=25°C; +VCC=5V; -VCC=GND; VCM=+1.4V**

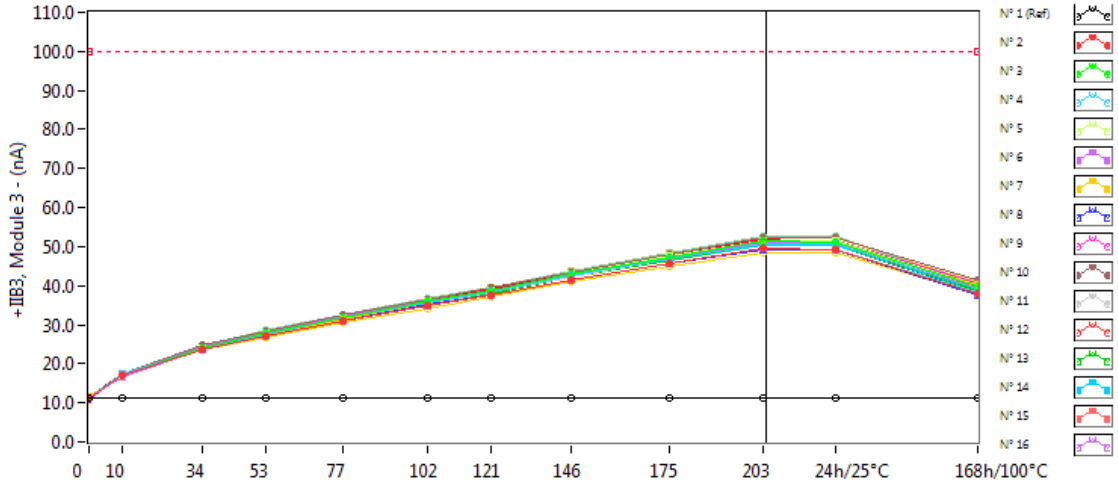



**+IIB3, Module 2 . (nA)** **Max = 100.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 11.076 | 11.022 | 10.986 | 11.308 | 11.062 | 10.990 | 10.922 | 11.081 | 11.094 | 11.003 | 11.098 | 11.144 |
| N° 2 | 11.095 | 16.741 | 23.252 | 26.979 | 30.264 | 34.076 | 36.568 | 40.223 | 44.354 | 47.920 | 47.773 | 37.141 |
| N° 3 | 11.221 | 16.996 | 23.822 | 27.653 | 31.210 | 35.137 | 37.801 | 41.712 | 46.027 | 49.683 | 49.637 | 38.748 |
| N° 4 | 11.169 | 16.940 | 23.529 | 27.190 | 30.837 | 34.746 | 37.240 | 41.246 | 45.530 | 49.013 | 49.020 | 38.070 |
| N° 5 | 11.201 | 17.030 | 23.633 | 27.261 | 30.838 | 34.893 | 37.474 | 41.377 | 45.730 | 49.492 | 49.441 | 38.422 |
| N° 6 | 11.166 | 16.934 | 23.331 | 26.913 | 30.589 | 34.468 | 37.102 | 40.925 | 45.316 | 48.787 | 48.661 | 37.673 |
| N° 7 | 11.279 | 16.736 | 23.152 | 26.822 | 30.224 | 33.931 | 36.389 | 40.220 | 44.383 | 47.931 | 47.811 | 37.797 |
| N° 8 | 10.934 | 16.576 | 23.090 | 26.964 | 30.062 | 34.062 | 36.308 | 39.997 | 44.175 | 47.841 | 47.524 | 36.968 |
| N° 9 | 11.082 | 16.725 | 23.152 | 26.739 | 30.266 | 34.163 | 36.650 | 40.453 | 44.681 | 48.307 | 48.154 | 37.875 |
| N° 10 | 11.284 | 17.205 | 23.964 | 27.908 | 31.712 | 35.899 | 38.645 | 42.666 | 47.187 | 51.229 | 51.086 | 40.583 |
| N° 11 | 11.167 | 16.828 | 23.416 | 27.233 | 30.861 | 34.691 | 37.907 | 41.814 | 46.273 | 50.169 | 50.074 | 40.589 |
| N° 12 | 11.017 | 16.799 | 23.331 | 27.202 | 30.536 | 34.421 | 37.060 | 40.917 | 45.202 | 49.029 | 48.791 | 37.872 |
| N° 13 | 11.140 | 16.876 | 23.308 | 27.072 | 30.625 | 34.649 | 36.964 | 41.041 | 45.299 | 49.252 | 49.164 | 37.684 |
| N° 14 | 11.055 | 16.824 | 23.529 | 27.079 | 30.838 | 34.893 | 37.459 | 41.411 | 45.780 | 49.393 | 49.400 | 37.986 |
| N° 15 | 11.092 | 16.935 | 23.561 | 27.326 | 31.238 | 35.344 | 37.694 | 42.109 | 46.338 | 50.387 | 50.195 | 38.604 |
| N° 16 | 11.290 | 17.090 | 23.529 | 27.128 | 30.993 | 35.077 | 37.522 | 41.483 | 45.751 | 49.532 | 49.449 | 38.253 |
| N° 17 | 11.248 | 16.574 | 23.136 | 26.365 | 29.773 | 33.415 | 35.929 | 39.757 | 43.591 | 46.893 | 46.804 | 36.894 |
| N° 18 | 10.886 | 16.718 | 23.357 | 27.235 | 30.931 | 35.163 | 37.664 | 41.617 | 46.066 | 49.916 | 49.889 | 38.275 |
| N° 19 | 10.995 | 17.095 | 23.704 | 27.541 | 31.452 | 35.683 | 38.510 | 42.475 | 47.027 | 50.899 | 50.770 | 39.123 |
| N° 20 | 11.144 | 17.061 | 23.845 | 27.487 | 31.809 | 35.603 | 38.512 | 42.695 | 46.979 | 51.069 | 51.245 | 39.212 |
| N° 21 | 11.169 | 16.920 | 23.404 | 26.937 | 30.851 | 34.414 | 36.963 | 40.988 | 45.021 | 48.568 | 48.622 | 37.900 |
| N° 22 | 11.303 | 17.120 | 23.335 | 27.238 | 30.820 | 34.750 | 37.461 | 41.219 | 45.643 | 49.423 | 49.347 | 37.952 |
| N° 23 | 10.910 | 16.670 | 23.191 | 27.188 | 30.569 | 34.699 | 37.290 | 41.393 | 45.873 | 49.677 | 49.685 | 38.103 |
| N° 24 | 11.256 | 17.149 | 23.883 | 27.940 | 31.539 | 35.662 | 38.432 | 42.330 | 46.994 | 50.621 | 50.551 | 39.304 |
| N° 25 | 11.144 | 17.082 | 23.777 | 28.005 | 31.519 | 35.563 | 38.255 | 42.373 | 46.710 | 50.616 | 51.149 | 38.878 |
| N° 26 | 11.005 | 16.668 | 23.138 | 27.395 | 30.766 | 34.951 | 37.508 | 41.700 | 45.865 | 49.729 | 49.701 | 38.322 |
| N° 27 | 11.111 | 16.883 | 23.454 | 27.685 | 31.145 | 35.045 | 37.442 | 41.457 | 45.955 | 49.852 | 49.786 | 39.033 |
| N° 28 | 11.264 | 16.835 | 23.589 | 27.414 | 30.441 | 34.177 | 37.159 | 41.214 | 45.379 | 49.618 | 49.507 | 38.688 |
| N° 29 | 11.069 | 16.888 | 23.756 | 28.144 | 31.194 | 35.496 | 38.316 | 42.551 | 46.625 | 50.383 | 50.260 | 39.518 |
| N° 30 | 11.322 | 17.271 | 23.849 | 28.297 | 31.658 | 35.916 | 38.747 | 42.550 | 47.019 | 50.853 | 50.741 | 39.757 |
| N° 31 | 11.127 | 17.097 | 23.707 | 28.023 | 31.688 | 36.080 | 38.556 | 42.791 | 47.474 | 51.638 | 51.588 | 41.337 |

# 27. +IIB3, Module 3

**Ta=25°C; +VCC=5V; -VCC=GND; VCM=+1.4V**

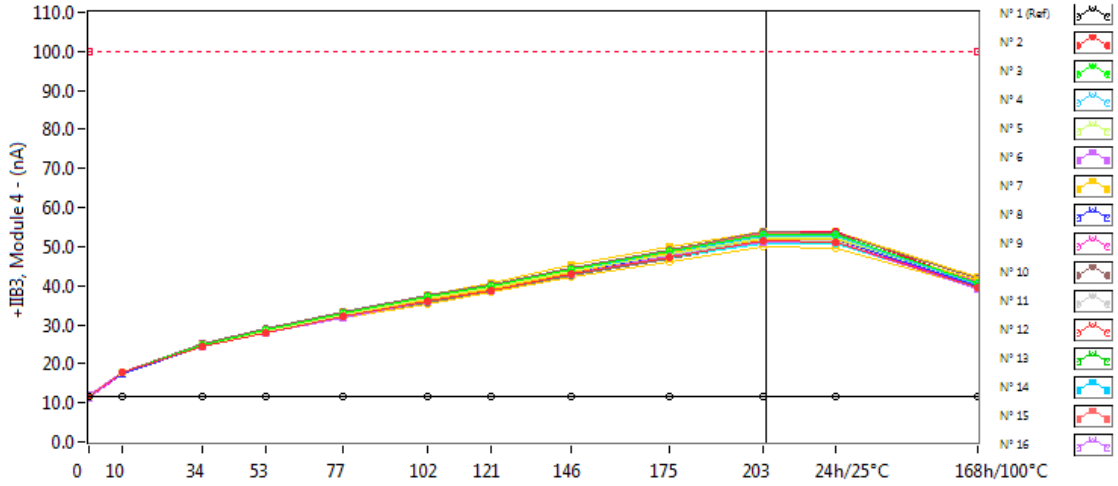



**+IIB3, Module 3 . (nA)** **Max = 100.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 11.328 | 11.264 | 11.230 | 11.348 | 11.295 | 11.247 | 11.170 | 11.355 | 11.322 | 11.237 | 11.357 | 11.402 |
| N° 2 | 11.265 | 17.037 | 23.811 | 27.170 | 31.020 | 34.813 | 37.446 | 41.314 | 45.583 | 49.427 | 49.168 | 38.073 |
| N° 3 | 11.322 | 17.140 | 24.145 | 27.829 | 31.750 | 35.840 | 38.542 | 42.812 | 47.254 | 51.385 | 51.316 | 39.843 |
| N° 4 | 11.265 | 17.375 | 24.175 | 27.650 | 31.833 | 35.661 | 38.292 | 42.471 | 46.954 | 50.784 | 50.657 | 39.031 |
| N° 5 | 11.151 | 17.120 | 24.088 | 27.820 | 31.775 | 36.026 | 38.685 | 42.944 | 47.453 | 51.566 | 51.454 | 39.926 |
| N° 6 | 11.130 | 16.845 | 23.560 | 27.015 | 30.858 | 34.855 | 37.507 | 41.474 | 45.799 | 49.454 | 49.318 | 38.126 |
| N° 7 | 11.464 | 17.190 | 23.937 | 27.525 | 31.410 | 35.514 | 38.256 | 42.453 | 46.973 | 50.919 | 50.860 | 40.150 |
| N° 8 | 11.167 | 17.033 | 23.603 | 27.099 | 30.906 | 35.213 | 37.526 | 41.468 | 45.813 | 49.280 | 49.189 | 37.714 |
| N° 9 | 11.321 | 17.303 | 23.945 | 27.657 | 31.635 | 35.889 | 38.643 | 42.889 | 47.480 | 51.592 | 51.456 | 40.703 |
| N° 10 | 11.443 | 17.522 | 24.636 | 28.394 | 32.476 | 36.599 | 39.424 | 43.437 | 48.209 | 52.383 | 52.198 | 41.258 |
| N° 11 | 11.262 | 17.119 | 23.712 | 27.306 | 31.213 | 35.312 | 38.257 | 42.143 | 46.692 | 50.839 | 50.745 | 40.068 |
| N° 12 | 11.170 | 16.935 | 23.650 | 27.244 | 31.060 | 35.000 | 37.496 | 41.616 | 45.805 | 49.555 | 49.378 | 37.925 |
| N° 13 | 11.276 | 17.164 | 23.998 | 27.503 | 31.446 | 35.624 | 38.124 | 42.266 | 46.665 | 50.761 | 50.641 | 38.709 |
| N° 14 | 11.165 | 17.055 | 23.857 | 27.258 | 31.403 | 35.351 | 38.133 | 42.058 | 46.534 | 50.473 | 50.392 | 38.610 |
| N° 15 | 11.138 | 17.251 | 24.142 | 27.679 | 31.646 | 35.501 | 38.430 | 42.956 | 47.464 | 51.695 | 51.342 | 39.381 |
| N° 16 | 11.555 | 17.427 | 24.316 | 27.862 | 31.992 | 36.191 | 38.613 | 42.645 | 47.191 | 51.123 | 50.997 | 39.097 |
| N° 17 | 11.403 | 16.788 | 23.566 | 26.740 | 30.505 | 34.215 | 37.025 | 41.011 | 45.083 | 48.426 | 48.235 | 37.911 |
| N° 18 | 11.032 | 16.933 | 23.627 | 27.268 | 31.292 | 35.858 | 38.341 | 42.350 | 46.833 | 50.678 | 50.589 | 38.694 |
| N° 19 | 11.018 | 17.129 | 23.666 | 27.440 | 31.445 | 35.500 | 38.192 | 42.295 | 46.799 | 50.793 | 50.682 | 38.940 |
| N° 20 | 11.307 | 17.403 | 24.486 | 28.504 | 32.572 | 36.773 | 39.656 | 43.724 | 48.481 | 52.536 | 52.668 | 40.075 |
| N° 21 | 11.234 | 17.100 | 23.721 | 27.192 | 31.131 | 34.874 | 37.547 | 41.526 | 45.760 | 49.318 | 49.265 | 38.370 |
| N° 22 | 11.183 | 17.178 | 23.770 | 27.507 | 31.591 | 35.787 | 38.547 | 42.322 | 47.015 | 50.911 | 50.843 | 39.086 |
| N° 23 | 11.134 | 16.986 | 23.709 | 27.286 | 31.315 | 35.200 | 37.995 | 42.117 | 46.376 | 50.379 | 50.325 | 38.530 |
| N° 24 | 11.087 | 17.041 | 23.841 | 27.551 | 31.714 | 35.976 | 38.627 | 42.861 | 47.499 | 51.573 | 51.423 | 39.606 |
| N° 25 | 11.214 | 17.333 | 24.239 | 27.992 | 31.971 | 36.290 | 39.004 | 43.230 | 47.779 | 51.963 | 52.611 | 39.765 |
| N° 26 | 11.211 | 17.053 | 23.723 | 27.641 | 31.588 | 35.713 | 38.326 | 42.460 | 46.763 | 50.712 | 50.545 | 38.912 |
| N° 27 | 11.288 | 17.144 | 23.921 | 27.710 | 31.686 | 35.736 | 38.070 | 42.167 | 46.676 | 50.574 | 50.487 | 38.888 |
| N° 28 | 11.396 | 16.988 | 24.223 | 27.729 | 31.256 | 35.063 | 37.991 | 42.199 | 46.571 | 50.778 | 50.640 | 39.005 |
| N° 29 | 11.167 | 17.227 | 24.249 | 28.061 | 31.997 | 35.999 | 38.898 | 43.293 | 47.369 | 51.169 | 51.110 | 39.968 |
| N° 30 | 11.281 | 17.391 | 24.292 | 28.178 | 32.189 | 36.518 | 39.508 | 43.691 | 48.297 | 52.356 | 52.322 | 40.579 |
| N° 31 | 11.249 | 17.161 | 23.856 | 27.743 | 31.764 | 35.980 | 38.638 | 42.829 | 47.483 | 51.412 | 51.403 | 40.962 |

# 28. +IIB3, Module 4

**Ta=25°C; +VCC=5V; -VCC=GND; VCM=+1.4V**

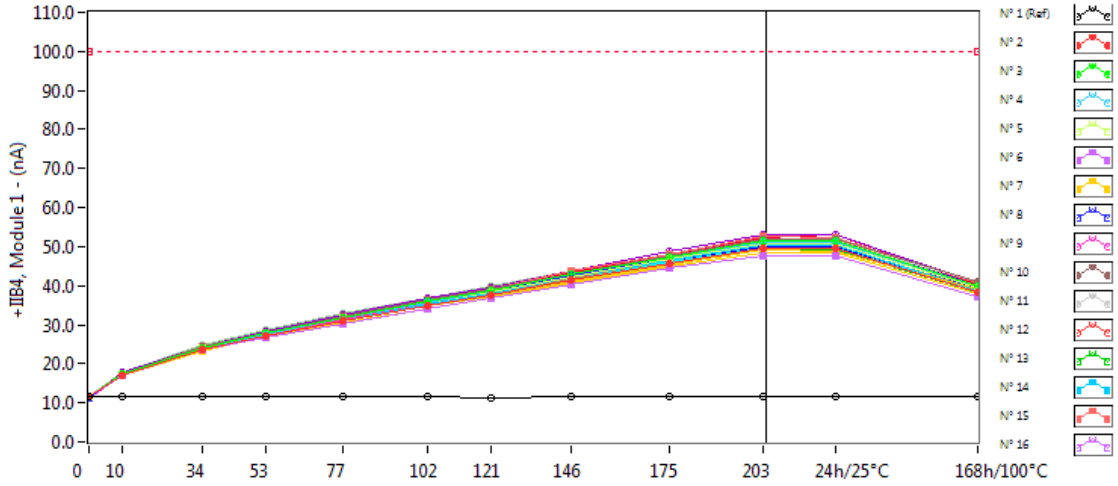



**+IIB3, Module 4 . (nA)** **Max = 100.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 11.728 | 11.660 | 11.616 | 11.683 | 11.688 | 11.614 | 11.563 | 11.731 | 11.721 | 11.653 | 11.733 | 11.784 |
| N° 2 | 11.587 | 17.666 | 24.525 | 28.010 | 32.002 | 36.123 | 38.873 | 43.024 | 47.214 | 51.435 | 51.280 | 39.329 |
| N° 3 | 11.518 | 17.767 | 24.874 | 28.803 | 32.951 | 37.239 | 39.975 | 44.251 | 48.938 | 53.229 | 53.091 | 40.724 |
| N° 4 | 11.542 | 17.823 | 24.903 | 28.684 | 32.904 | 37.013 | 39.791 | 44.168 | 48.881 | 52.849 | 52.713 | 40.338 |
| N° 5 | 11.647 | 17.787 | 24.658 | 28.379 | 32.473 | 36.789 | 39.553 | 43.695 | 48.216 | 52.356 | 52.198 | 40.431 |
| N° 6 | 11.426 | 17.631 | 24.428 | 28.040 | 31.892 | 36.140 | 38.852 | 43.009 | 47.589 | 51.269 | 51.209 | 39.106 |
| N° 7 | 11.661 | 17.668 | 24.550 | 28.134 | 32.294 | 36.485 | 39.276 | 43.496 | 48.250 | 52.020 | 51.901 | 41.380 |
| N° 8 | 11.496 | 17.443 | 24.492 | 28.315 | 32.464 | 36.695 | 39.347 | 43.550 | 48.185 | 52.216 | 52.021 | 39.767 |
| N° 9 | 11.509 | 17.612 | 24.462 | 28.202 | 32.337 | 36.588 | 39.269 | 43.447 | 48.068 | 52.224 | 51.980 | 40.926 |
| N° 10 | 11.661 | 17.854 | 25.113 | 28.906 | 33.160 | 37.605 | 40.454 | 44.610 | 49.285 | 53.676 | 53.599 | 41.674 |
| N° 11 | 11.607 | 17.589 | 24.478 | 28.203 | 32.237 | 36.297 | 39.216 | 43.198 | 47.693 | 51.616 | 51.535 | 40.245 |
| N° 12 | 11.491 | 17.470 | 24.511 | 28.219 | 32.340 | 36.498 | 39.297 | 43.488 | 48.118 | 52.158 | 51.931 | 39.948 |
| N° 13 | 11.620 | 17.608 | 24.636 | 28.359 | 32.491 | 36.857 | 39.484 | 43.600 | 48.092 | 52.110 | 51.989 | 39.716 |
| N° 14 | 11.608 | 17.599 | 24.787 | 28.471 | 32.664 | 36.773 | 39.648 | 43.713 | 48.499 | 52.692 | 52.625 | 39.942 |
| N° 15 | 11.608 | 17.847 | 25.051 | 28.634 | 32.921 | 37.164 | 39.750 | 44.345 | 48.927 | 53.267 | 52.871 | 40.607 |
| N° 16 | 11.845 | 17.867 | 24.816 | 28.590 | 32.784 | 37.207 | 39.841 | 44.076 | 48.841 | 52.702 | 52.626 | 40.304 |
| N° 17 | 11.780 | 17.578 | 24.446 | 27.756 | 31.573 | 35.398 | 38.190 | 42.274 | 46.258 | 49.804 | 49.662 | 39.389 |
| N° 18 | 11.304 | 17.400 | 24.315 | 27.906 | 31.994 | 36.412 | 38.901 | 42.981 | 47.622 | 51.627 | 51.450 | 39.360 |
| N° 19 | 11.426 | 17.686 | 24.790 | 28.506 | 32.840 | 37.043 | 39.805 | 44.112 | 48.761 | 52.909 | 52.840 | 40.350 |
| N° 20 | 11.618 | 17.823 | 24.989 | 28.866 | 32.699 | 36.657 | 39.492 | 43.575 | 48.016 | 51.832 | 51.923 | 39.666 |
| N° 21 | 11.699 | 17.833 | 24.575 | 28.197 | 32.277 | 36.127 | 38.800 | 42.852 | 47.189 | 50.913 | 50.860 | 39.361 |
| N° 22 | 11.558 | 17.728 | 24.691 | 28.405 | 32.718 | 36.944 | 39.829 | 43.697 | 48.487 | 52.506 | 52.317 | 40.129 |
| N° 23 | 11.313 | 17.379 | 24.387 | 27.947 | 32.230 | 36.239 | 39.036 | 43.217 | 47.571 | 51.526 | 51.489 | 39.613 |
| N° 24 | 11.436 | 17.554 | 24.598 | 28.393 | 32.707 | 36.941 | 39.801 | 44.094 | 48.711 | 52.892 | 52.732 | 40.772 |
| N° 25 | 11.409 | 17.748 | 24.676 | 28.588 | 32.947 | 37.224 | 40.120 | 44.454 | 49.193 | 53.307 | 53.954 | 40.669 |
| N° 26 | 11.579 | 17.596 | 24.532 | 28.273 | 32.561 | 36.940 | 39.689 | 43.935 | 48.475 | 52.601 | 52.516 | 40.141 |
| N° 27 | 11.647 | 17.683 | 24.555 | 28.343 | 32.654 | 36.744 | 39.370 | 43.472 | 48.172 | 52.061 | 51.885 | 40.499 |
| N° 28 | 11.736 | 17.535 | 24.533 | 27.998 | 31.648 | 35.490 | 38.332 | 42.627 | 47.033 | 51.227 | 51.084 | 39.309 |
| N° 29 | 11.457 | 17.526 | 24.739 | 28.584 | 32.711 | 37.030 | 39.878 | 44.188 | 48.229 | 52.005 | 51.826 | 40.567 |
| N° 30 | 11.653 | 17.919 | 24.995 | 28.822 | 33.194 | 37.688 | 40.545 | 45.162 | 49.883 | 53.720 | 53.796 | 42.271 |
| N° 31 | 11.494 | 17.522 | 24.471 | 28.413 | 32.524 | 36.782 | 39.510 | 43.816 | 48.399 | 52.510 | 52.418 | 41.390 |

# 29. +IIB4, Module 1

**Ta=25°C; +VCC=2.5V; -VCC=-2.5V; VCM=-1.1V**

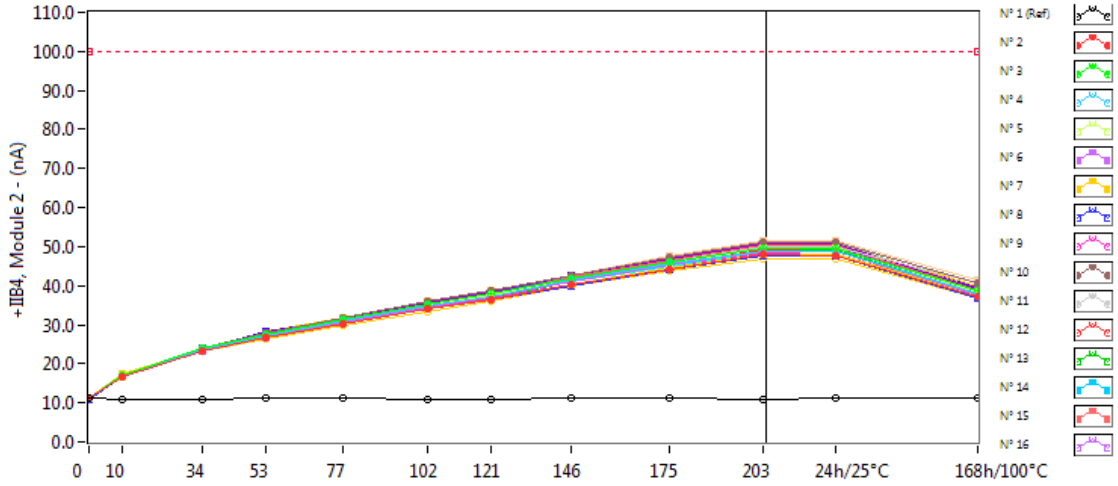



**+IIB4, Module 1 . (nA)** **Max = 100.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 11.592 | 11.542 | 11.484 | 11.528 | 11.560 | 11.493 | 11.424 | 11.603 | 11.602 | 11.509 | 11.612 | 11.661 |
| N° 2 | 11.444 | 17.191 | 23.746 | 27.100 | 31.032 | 35.049 | 37.709 | 41.485 | 45.790 | 49.635 | 49.554 | 38.275 |
| N° 3 | 11.465 | 17.358 | 24.190 | 27.800 | 31.761 | 35.835 | 38.554 | 42.817 | 47.332 | 51.514 | 51.459 | 39.824 |
| N° 4 | 11.427 | 17.425 | 24.126 | 27.651 | 31.675 | 35.757 | 38.649 | 42.817 | 47.407 | 51.185 | 51.047 | 39.842 |
| N° 5 | 11.608 | 17.483 | 24.084 | 27.638 | 31.614 | 35.679 | 38.401 | 42.326 | 46.782 | 50.772 | 50.736 | 39.472 |
| N° 6 | 11.441 | 17.121 | 23.483 | 26.683 | 30.349 | 34.084 | 36.631 | 40.417 | 44.430 | 47.828 | 47.717 | 37.366 |
| N° 7 | 11.529 | 17.213 | 23.699 | 27.216 | 30.988 | 34.781 | 37.308 | 41.189 | 45.328 | 49.041 | 48.964 | 39.120 |
| N° 8 | 11.411 | 17.257 | 24.050 | 27.597 | 31.710 | 35.868 | 38.386 | 42.513 | 47.031 | 51.107 | 51.059 | 39.189 |
| N° 9 | 11.468 | 17.293 | 23.862 | 27.330 | 31.442 | 35.514 | 38.262 | 42.381 | 46.953 | 50.945 | 50.821 | 40.067 |
| N° 10 | 11.550 | 17.506 | 24.284 | 27.809 | 31.981 | 36.253 | 39.215 | 43.049 | 47.659 | 51.790 | 51.729 | 41.105 |
| N° 11 | 11.595 | 17.501 | 24.127 | 27.554 | 31.583 | 35.518 | 38.710 | 42.624 | 47.255 | 51.348 | 51.266 | 40.977 |
| N° 12 | 11.374 | 17.347 | 23.898 | 27.741 | 31.777 | 36.011 | 38.615 | 42.805 | 47.168 | 51.447 | 51.281 | 39.774 |
| N° 13 | 11.442 | 17.199 | 23.649 | 27.062 | 30.903 | 34.812 | 37.381 | 41.404 | 45.556 | 49.568 | 49.381 | 38.169 |
| N° 14 | 11.500 | 17.439 | 24.076 | 27.269 | 31.381 | 35.215 | 37.886 | 42.075 | 46.563 | 50.371 | 50.399 | 38.809 |
| N° 15 | 11.400 | 17.376 | 24.243 | 27.865 | 32.000 | 36.507 | 39.036 | 43.602 | 48.042 | 52.557 | 52.230 | 40.639 |
| N° 16 | 11.655 | 17.502 | 24.116 | 27.660 | 31.643 | 35.950 | 38.662 | 42.751 | 47.356 | 51.300 | 51.236 | 39.475 |
| N° 17 | 11.564 | 17.019 | 23.606 | 26.811 | 30.463 | 34.115 | 36.870 | 40.848 | 44.826 | 48.316 | 48.286 | 38.107 |
| N° 18 | 11.190 | 17.153 | 24.053 | 27.437 | 31.473 | 35.905 | 38.436 | 42.457 | 47.006 | 51.047 | 50.984 | 39.203 |
| N° 19 | 11.416 | 17.690 | 24.502 | 28.150 | 32.394 | 36.639 | 39.651 | 43.933 | 48.752 | 53.092 | 52.975 | 40.744 |
| N° 20 | 11.506 | 17.756 | 24.739 | 28.786 | 32.965 | 36.843 | 39.771 | 43.873 | 48.756 | 52.895 | 52.949 | 40.783 |
| N° 21 | 11.579 | 17.397 | 23.982 | 27.427 | 31.572 | 35.086 | 37.591 | 41.588 | 45.899 | 49.489 | 49.497 | 38.638 |
| N° 22 | 11.611 | 17.480 | 23.712 | 27.422 | 31.522 | 35.486 | 38.365 | 42.092 | 46.657 | 50.495 | 50.472 | 38.884 |
| N° 23 | 11.259 | 17.117 | 23.886 | 27.493 | 31.729 | 35.865 | 38.782 | 42.858 | 47.410 | 51.367 | 51.339 | 39.627 |
| N° 24 | 11.475 | 17.471 | 24.249 | 27.955 | 31.961 | 35.990 | 38.727 | 42.943 | 47.594 | 51.450 | 51.427 | 39.791 |
| N° 25 | 11.311 | 17.459 | 24.144 | 28.032 | 32.190 | 36.368 | 39.267 | 43.452 | 48.103 | 52.324 | 52.896 | 40.293 |
| N° 26 | 11.400 | 17.357 | 23.708 | 27.400 | 31.335 | 35.428 | 38.027 | 42.238 | 46.323 | 50.056 | 50.099 | 38.795 |
| N° 27 | 11.577 | 17.410 | 23.841 | 27.478 | 31.512 | 35.575 | 37.950 | 41.875 | 46.297 | 50.090 | 50.072 | 39.037 |
| N° 28 | 11.601 | 17.138 | 24.025 | 27.305 | 31.068 | 34.783 | 37.558 | 41.579 | 45.914 | 50.006 | 49.913 | 39.173 |
| N° 29 | 11.343 | 17.396 | 24.223 | 27.827 | 31.753 | 36.229 | 38.995 | 43.273 | 47.425 | 51.087 | 51.048 | 40.258 |
| N° 30 | 11.168 | 16.884 | 23.379 | 27.060 | 31.056 | 35.030 | 37.931 | 41.640 | 46.062 | 49.643 | 49.664 | 38.980 |
| N° 31 | 11.379 | 17.303 | 24.077 | 27.720 | 31.766 | 36.101 | 38.788 | 42.931 | 47.226 | 51.350 | 51.379 | 40.820 |

# 30. +IIB4, Module 2

**Ta=25°C; +VCC=2.5V; -VCC=-2.5V; VCM=-1.1V**

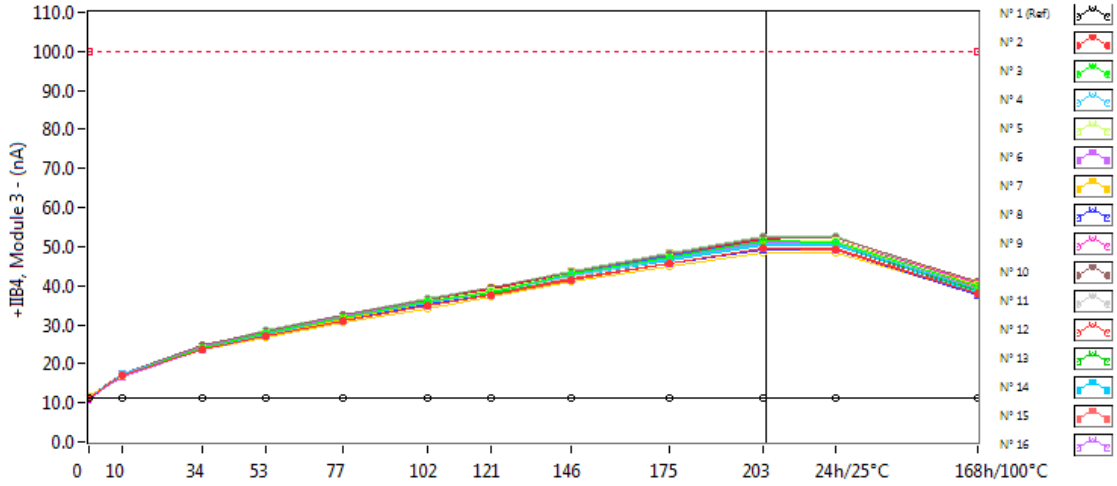



**+IIB4, Module 2 . (nA)** **Max = 100.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 11.058 | 11.007 | 10.957 | 11.345 | 11.042 | 10.973 | 10.931 | 11.068 | 11.092 | 11.009 | 11.096 | 11.137 |
| N° 2 | 11.075 | 16.736 | 23.227 | 26.917 | 30.283 | 34.117 | 36.593 | 40.229 | 44.314 | 47.909 | 47.771 | 37.155 |
| N° 3 | 11.202 | 17.022 | 23.837 | 27.684 | 31.210 | 35.106 | 37.785 | 41.738 | 46.059 | 49.628 | 49.643 | 38.735 |
| N° 4 | 11.146 | 16.924 | 23.512 | 27.206 | 30.828 | 34.736 | 37.264 | 41.310 | 45.581 | 48.993 | 48.994 | 38.075 |
| N° 5 | 11.178 | 16.987 | 23.600 | 27.296 | 30.831 | 34.914 | 37.454 | 41.414 | 45.685 | 49.482 | 49.441 | 38.412 |
| N° 6 | 11.162 | 16.942 | 23.344 | 26.889 | 30.631 | 34.427 | 37.127 | 40.937 | 45.320 | 48.771 | 48.660 | 37.671 |
| N° 7 | 11.255 | 16.721 | 23.153 | 26.906 | 30.264 | 33.977 | 36.430 | 40.246 | 44.388 | 47.937 | 47.844 | 37.748 |
| N° 8 | 10.918 | 16.554 | 23.075 | 26.943 | 30.066 | 34.068 | 36.269 | 40.041 | 44.200 | 47.740 | 47.522 | 36.927 |
| N° 9 | 11.071 | 16.739 | 23.123 | 26.759 | 30.254 | 34.175 | 36.655 | 40.449 | 44.684 | 48.323 | 48.140 | 37.873 |
| N° 10 | 11.249 | 17.199 | 23.950 | 27.920 | 31.692 | 35.914 | 38.654 | 42.620 | 47.242 | 51.234 | 51.066 | 40.571 |
| N° 11 | 11.130 | 16.837 | 23.446 | 27.212 | 30.851 | 34.710 | 37.876 | 41.831 | 46.268 | 50.146 | 50.130 | 40.590 |
| N° 12 | 11.006 | 16.794 | 23.336 | 27.209 | 30.536 | 34.417 | 37.089 | 40.936 | 45.163 | 49.007 | 48.770 | 37.865 |
| N° 13 | 11.148 | 16.868 | 23.277 | 27.209 | 30.631 | 34.638 | 36.966 | 40.996 | 45.299 | 49.240 | 49.175 | 37.679 |
| N° 14 | 11.045 | 16.818 | 23.512 | 27.122 | 30.845 | 34.885 | 37.478 | 41.422 | 45.775 | 49.396 | 49.361 | 38.002 |
| N° 15 | 11.074 | 16.911 | 23.578 | 27.246 | 31.202 | 35.339 | 37.684 | 42.107 | 46.345 | 50.389 | 50.185 | 38.600 |
| N° 16 | 11.279 | 17.071 | 23.549 | 27.186 | 30.979 | 35.120 | 37.490 | 41.496 | 45.794 | 49.569 | 49.459 | 38.240 |
| N° 17 | 11.266 | 16.595 | 23.132 | 26.414 | 29.790 | 33.437 | 35.945 | 39.725 | 43.649 | 46.905 | 46.827 | 36.894 |
| N° 18 | 10.876 | 16.699 | 23.377 | 27.145 | 30.954 | 35.181 | 37.668 | 41.652 | 46.087 | 49.931 | 49.932 | 38.231 |
| N° 19 | 10.959 | 17.103 | 23.730 | 27.580 | 31.465 | 35.666 | 38.495 | 42.481 | 47.024 | 50.910 | 50.743 | 39.105 |
| N° 20 | 11.141 | 17.040 | 23.834 | 27.567 | 31.825 | 35.594 | 38.494 | 42.653 | 46.978 | 51.121 | 51.270 | 39.225 |
| N° 21 | 11.166 | 16.933 | 23.420 | 26.944 | 30.845 | 34.450 | 37.006 | 40.978 | 45.075 | 48.599 | 48.632 | 37.879 |
| N° 22 | 11.284 | 17.124 | 23.315 | 27.246 | 30.843 | 34.775 | 37.472 | 41.253 | 45.681 | 49.417 | 49.320 | 37.956 |
| N° 23 | 10.923 | 16.668 | 23.185 | 27.099 | 30.610 | 34.733 | 37.341 | 41.413 | 45.862 | 49.682 | 49.716 | 38.080 |
| N° 24 | 11.243 | 17.120 | 23.909 | 28.041 | 31.565 | 35.664 | 38.418 | 42.380 | 46.997 | 50.666 | 50.559 | 39.283 |
| N° 25 | 11.137 | 17.090 | 23.806 | 28.062 | 31.517 | 35.572 | 38.250 | 42.448 | 46.720 | 50.657 | 51.166 | 38.856 |
| N° 26 | 11.000 | 16.691 | 23.153 | 27.291 | 30.745 | 34.962 | 37.512 | 41.703 | 45.919 | 49.756 | 49.727 | 38.289 |
| N° 27 | 11.118 | 16.878 | 23.446 | 27.522 | 31.160 | 35.073 | 37.451 | 41.490 | 45.947 | 49.849 | 49.812 | 39.025 |
| N° 28 | 11.257 | 16.789 | 23.556 | 27.449 | 30.463 | 34.186 | 37.136 | 41.241 | 45.371 | 49.597 | 49.527 | 38.616 |
| N° 29 | 11.070 | 16.882 | 23.716 | 28.109 | 31.211 | 35.457 | 38.310 | 42.528 | 46.631 | 50.380 | 50.236 | 39.508 |
| N° 30 | 11.323 | 17.265 | 23.815 | 28.264 | 31.625 | 35.909 | 38.700 | 42.558 | 47.039 | 50.862 | 50.723 | 39.728 |
| N° 31 | 11.122 | 17.091 | 23.682 | 28.001 | 31.697 | 36.076 | 38.550 | 42.789 | 47.451 | 51.611 | 51.565 | 41.313 |

# 31. +IIB4, Module 3

**Ta=25°C; +VCC=2.5V; -VCC=-2.5V; VCM=-1.1V**

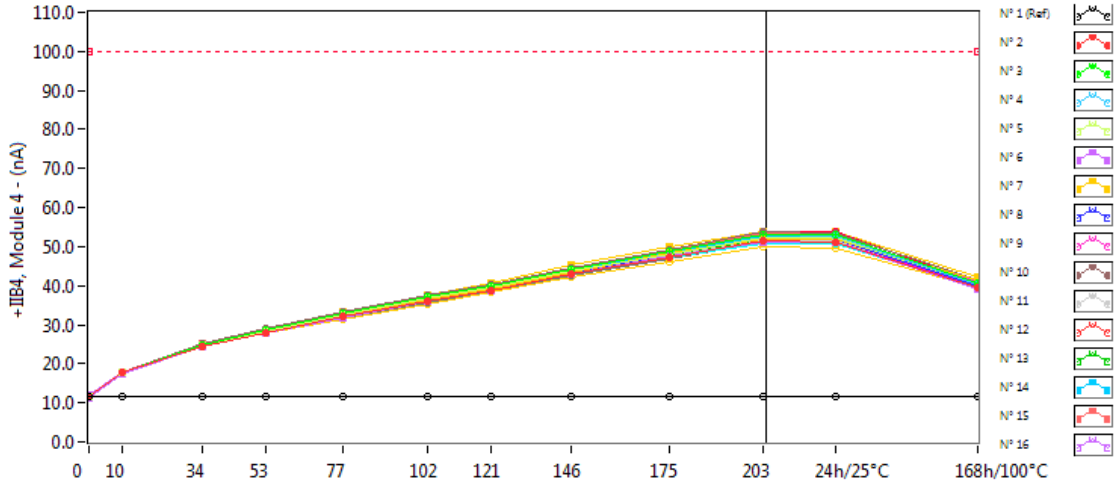



**+IIB4, Module 3 . (nA)** **Max = 100.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 11.320 | 11.264 | 11.217 | 11.315 | 11.286 | 11.243 | 11.182 | 11.338 | 11.307 | 11.235 | 11.340 | 11.396 |
| N° 2 | 11.247 | 17.014 | 23.753 | 27.173 | 30.931 | 34.790 | 37.444 | 41.365 | 45.598 | 49.422 | 49.187 | 38.070 |
| N° 3 | 11.305 | 17.130 | 24.128 | 27.775 | 31.709 | 35.852 | 38.534 | 42.834 | 47.282 | 51.327 | 51.307 | 39.804 |
| N° 4 | 11.255 | 17.370 | 24.144 | 27.637 | 31.811 | 35.696 | 38.297 | 42.467 | 46.946 | 50.743 | 50.628 | 39.011 |
| N° 5 | 11.131 | 17.115 | 24.029 | 27.810 | 31.742 | 36.043 | 38.683 | 42.965 | 47.404 | 51.485 | 51.401 | 39.900 |
| N° 6 | 11.122 | 16.824 | 23.535 | 26.988 | 30.858 | 34.839 | 37.486 | 41.503 | 45.803 | 49.439 | 49.320 | 38.135 |
| N° 7 | 11.444 | 17.176 | 23.923 | 27.500 | 31.386 | 35.482 | 38.181 | 42.428 | 46.984 | 50.926 | 50.795 | 40.129 |
| N° 8 | 11.157 | 17.046 | 23.584 | 27.067 | 30.884 | 35.192 | 37.489 | 41.454 | 45.816 | 49.267 | 49.202 | 37.682 |
| N° 9 | 11.309 | 17.277 | 23.953 | 27.623 | 31.622 | 35.879 | 38.602 | 42.843 | 47.440 | 51.575 | 51.344 | 40.656 |
| N° 10 | 11.444 | 17.531 | 24.643 | 28.346 | 32.466 | 36.578 | 39.406 | 43.396 | 48.171 | 52.335 | 52.198 | 41.220 |
| N° 11 | 11.237 | 17.095 | 23.668 | 27.253 | 31.226 | 35.330 | 38.275 | 42.121 | 46.682 | 50.829 | 50.761 | 40.008 |
| N° 12 | 11.170 | 16.931 | 23.614 | 27.219 | 31.046 | 34.982 | 37.529 | 41.645 | 45.790 | 49.553 | 49.415 | 37.916 |
| N° 13 | 11.271 | 17.129 | 23.971 | 27.514 | 31.417 | 35.560 | 38.089 | 42.236 | 46.720 | 50.721 | 50.631 | 38.690 |
| N° 14 | 11.146 | 17.030 | 23.837 | 27.287 | 31.357 | 35.354 | 38.127 | 42.065 | 46.538 | 50.483 | 50.388 | 38.547 |
| N° 15 | 11.132 | 17.223 | 24.110 | 27.691 | 31.635 | 35.502 | 38.441 | 42.948 | 47.436 | 51.656 | 51.346 | 39.355 |
| N° 16 | 11.530 | 17.408 | 24.277 | 27.860 | 31.974 | 36.181 | 38.581 | 42.623 | 47.189 | 51.124 | 51.015 | 39.080 |
| N° 17 | 11.389 | 16.782 | 23.527 | 26.716 | 30.485 | 34.202 | 37.025 | 41.029 | 45.089 | 48.463 | 48.251 | 37.884 |
| N° 18 | 11.020 | 16.906 | 23.641 | 27.198 | 31.241 | 35.861 | 38.336 | 42.333 | 46.858 | 50.639 | 50.539 | 38.679 |
| N° 19 | 11.000 | 17.114 | 23.667 | 27.416 | 31.465 | 35.517 | 38.211 | 42.291 | 46.807 | 50.826 | 50.678 | 38.926 |
| N° 20 | 11.280 | 17.401 | 24.459 | 28.471 | 32.550 | 36.785 | 39.590 | 43.681 | 48.472 | 52.539 | 52.708 | 40.060 |
| N° 21 | 11.211 | 17.128 | 23.697 | 27.160 | 31.119 | 34.878 | 37.532 | 41.491 | 45.738 | 49.332 | 49.302 | 38.368 |
| N° 22 | 11.162 | 17.176 | 23.728 | 27.510 | 31.561 | 35.746 | 38.546 | 42.325 | 47.002 | 50.917 | 50.804 | 39.059 |
| N° 23 | 11.116 | 16.983 | 23.670 | 27.253 | 31.344 | 35.225 | 37.962 | 42.072 | 46.362 | 50.357 | 50.325 | 38.514 |
| N° 24 | 11.067 | 17.019 | 23.807 | 27.560 | 31.719 | 35.940 | 38.649 | 42.881 | 47.519 | 51.546 | 51.388 | 39.596 |
| N° 25 | 11.201 | 17.365 | 24.197 | 28.020 | 31.925 | 36.247 | 39.030 | 43.231 | 47.772 | 51.950 | 52.570 | 39.755 |
| N° 26 | 11.215 | 17.036 | 23.692 | 27.643 | 31.580 | 35.631 | 38.318 | 42.453 | 46.755 | 50.719 | 50.534 | 38.908 |
| N° 27 | 11.274 | 17.149 | 23.886 | 27.709 | 31.667 | 35.688 | 38.026 | 42.191 | 46.640 | 50.534 | 50.505 | 38.885 |
| N° 28 | 11.387 | 16.988 | 24.174 | 27.739 | 31.242 | 35.042 | 38.001 | 42.166 | 46.585 | 50.717 | 50.626 | 38.988 |
| N° 29 | 11.142 | 17.207 | 24.218 | 27.998 | 31.970 | 35.993 | 38.867 | 43.251 | 47.358 | 51.102 | 51.046 | 39.920 |
| N° 30 | 11.271 | 17.379 | 24.222 | 28.146 | 32.147 | 36.520 | 39.469 | 43.658 | 48.325 | 52.327 | 52.326 | 40.553 |
| N° 31 | 11.224 | 17.143 | 23.846 | 27.745 | 31.730 | 35.999 | 38.605 | 42.840 | 47.448 | 51.407 | 51.372 | 40.915 |

# 32. +IIB4, Module 4

**Ta=25°C; +VCC=2.5V; -VCC=-2.5V; VCM=-1.1V**

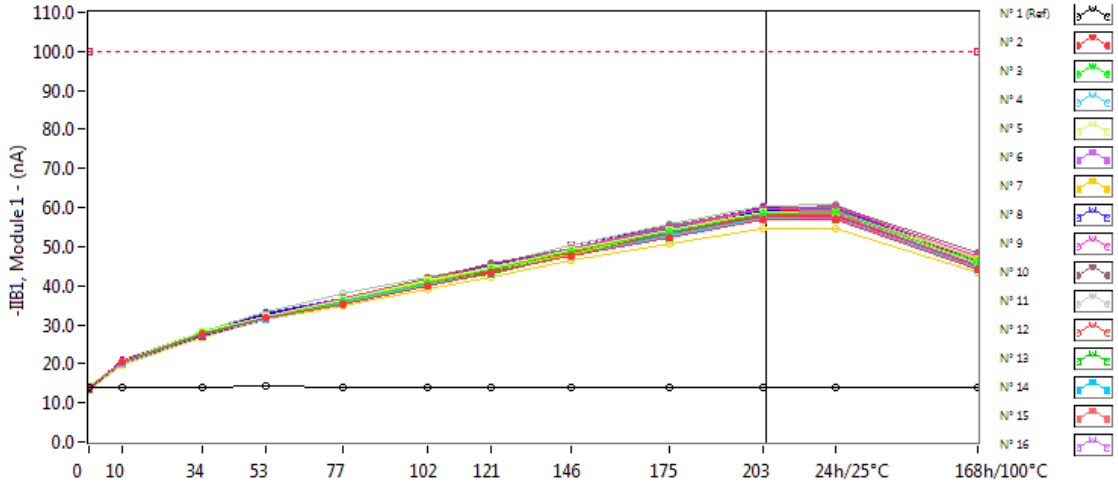



**+IIB4, Module 4 . (nA)** **Max = 100.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 11.702 | 11.653 | 11.601 | 11.683 | 11.680 | 11.612 | 11.566 | 11.730 | 11.713 | 11.641 | 11.732 | 11.786 |
| N° 2 | 11.556 | 17.661 | 24.507 | 27.992 | 31.997 | 36.127 | 38.855 | 43.022 | 47.205 | 51.390 | 51.287 | 39.321 |
| N° 3 | 11.505 | 17.753 | 24.878 | 28.741 | 32.901 | 37.233 | 39.948 | 44.255 | 48.920 | 53.179 | 53.093 | 40.715 |
| N° 4 | 11.530 | 17.787 | 24.879 | 28.654 | 32.863 | 36.994 | 39.718 | 44.100 | 48.856 | 52.873 | 52.678 | 40.325 |
| N° 5 | 11.638 | 17.769 | 24.657 | 28.351 | 32.437 | 36.757 | 39.517 | 43.697 | 48.187 | 52.324 | 52.227 | 40.419 |
| N° 6 | 11.407 | 17.616 | 24.418 | 28.041 | 31.839 | 36.126 | 38.843 | 42.993 | 47.567 | 51.232 | 51.222 | 39.100 |
| N° 7 | 11.651 | 17.677 | 24.505 | 28.099 | 32.281 | 36.452 | 39.243 | 43.497 | 48.226 | 52.007 | 51.860 | 41.376 |
| N° 8 | 11.479 | 17.443 | 24.479 | 28.290 | 32.458 | 36.681 | 39.337 | 43.553 | 48.176 | 52.220 | 52.044 | 39.773 |
| N° 9 | 11.493 | 17.576 | 24.442 | 28.166 | 32.317 | 36.527 | 39.216 | 43.405 | 48.044 | 52.247 | 51.978 | 40.896 |
| N° 10 | 11.657 | 17.844 | 25.105 | 28.924 | 33.122 | 37.588 | 40.455 | 44.572 | 49.233 | 53.662 | 53.571 | 41.636 |
| N° 11 | 11.596 | 17.574 | 24.486 | 28.189 | 32.213 | 36.251 | 39.188 | 43.156 | 47.705 | 51.591 | 51.538 | 40.224 |
| N° 12 | 11.479 | 17.443 | 24.497 | 28.217 | 32.290 | 36.456 | 39.241 | 43.484 | 48.148 | 52.134 | 51.926 | 39.942 |
| N° 13 | 11.618 | 17.573 | 24.627 | 28.362 | 32.451 | 36.874 | 39.479 | 43.593 | 48.034 | 52.057 | 51.975 | 39.702 |
| N° 14 | 11.597 | 17.589 | 24.752 | 28.421 | 32.647 | 36.760 | 39.629 | 43.704 | 48.406 | 52.659 | 52.640 | 39.916 |
| N° 15 | 11.604 | 17.787 | 25.031 | 28.614 | 32.892 | 37.124 | 39.752 | 44.317 | 48.898 | 53.285 | 52.870 | 40.566 |
| N° 16 | 11.845 | 17.844 | 24.788 | 28.584 | 32.790 | 37.187 | 39.808 | 44.041 | 48.845 | 52.683 | 52.659 | 40.300 |
| N° 17 | 11.764 | 17.566 | 24.453 | 27.724 | 31.527 | 35.374 | 38.187 | 42.243 | 46.244 | 49.816 | 49.621 | 39.383 |
| N° 18 | 11.293 | 17.392 | 24.286 | 27.880 | 31.983 | 36.409 | 38.901 | 42.947 | 47.581 | 51.587 | 51.392 | 39.339 |
| N° 19 | 11.416 | 17.708 | 24.803 | 28.519 | 32.823 | 37.034 | 39.748 | 44.072 | 48.826 | 52.911 | 52.826 | 40.323 |
| N° 20 | 11.604 | 17.824 | 24.976 | 28.852 | 32.675 | 36.620 | 39.480 | 43.541 | 48.011 | 51.818 | 51.918 | 39.631 |
| N° 21 | 11.683 | 17.831 | 24.551 | 28.172 | 32.255 | 36.090 | 38.791 | 42.849 | 47.127 | 50.922 | 50.818 | 39.351 |
| N° 22 | 11.532 | 17.731 | 24.662 | 28.423 | 32.643 | 36.920 | 39.782 | 43.665 | 48.461 | 52.438 | 52.309 | 40.078 |
| N° 23 | 11.310 | 17.395 | 24.361 | 27.953 | 32.168 | 36.230 | 38.973 | 43.185 | 47.561 | 51.498 | 51.413 | 39.569 |
| N° 24 | 11.430 | 17.550 | 24.623 | 28.369 | 32.662 | 36.918 | 39.771 | 44.072 | 48.670 | 52.864 | 52.739 | 40.751 |
| N° 25 | 11.403 | 17.742 | 24.635 | 28.558 | 32.893 | 37.232 | 40.114 | 44.416 | 49.165 | 53.318 | 53.878 | 40.658 |
| N° 26 | 11.557 | 17.601 | 24.493 | 28.244 | 32.557 | 36.959 | 39.691 | 43.901 | 48.481 | 52.570 | 52.515 | 40.095 |
| N° 27 | 11.630 | 17.666 | 24.541 | 28.296 | 32.617 | 36.721 | 39.344 | 43.449 | 48.201 | 52.005 | 51.872 | 40.510 |
| N° 28 | 11.712 | 17.509 | 24.506 | 27.967 | 31.663 | 35.503 | 38.317 | 42.593 | 47.026 | 51.226 | 51.076 | 39.274 |
| N° 29 | 11.438 | 17.523 | 24.740 | 28.548 | 32.672 | 37.068 | 39.814 | 44.180 | 48.228 | 51.928 | 51.795 | 40.543 |
| N° 30 | 11.636 | 17.873 | 24.968 | 28.803 | 33.169 | 37.629 | 40.501 | 45.137 | 49.871 | 53.694 | 53.757 | 42.199 |
| N° 31 | 11.494 | 17.508 | 24.465 | 28.393 | 32.491 | 36.765 | 39.474 | 43.810 | 48.331 | 52.477 | 52.356 | 41.370 |

# 33. -IIB1, Module 1

**Ta=25°C; +VCC=30V; -VCC=GND; VCM=+15V**

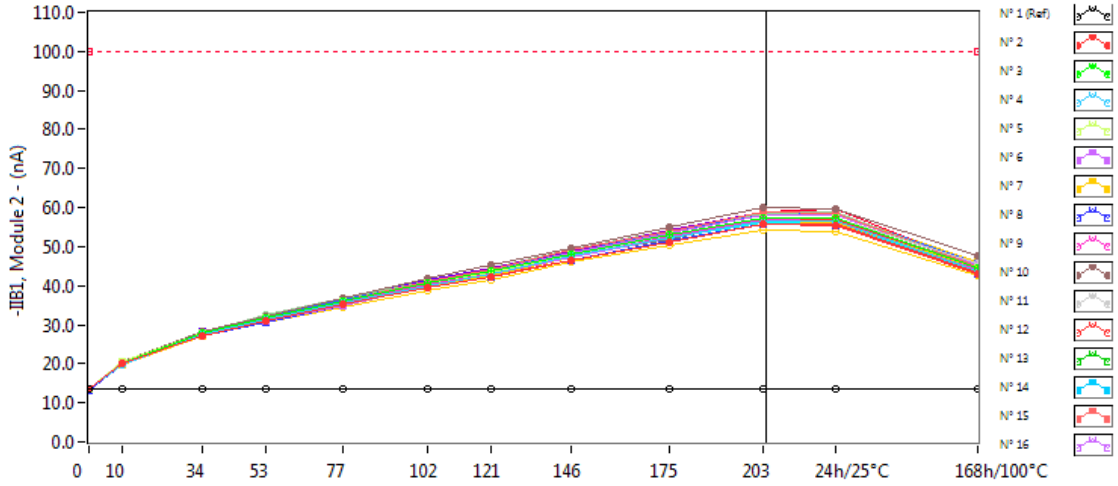



**-IIB1, Module 1 . (nA)** **Max = 100.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 14.128 | 14.116 | 14.063 | 14.300 | 14.016 | 14.018 | 13.951 | 14.115 | 14.085 | 13.959 | 14.066 | 14.112 |
| N° 2 | 14.024 | 20.439 | 27.627 | 31.574 | 35.380 | 40.081 | 43.193 | 47.495 | 52.416 | 56.943 | 56.910 | 44.289 |
| N° 3 | 14.048 | 20.523 | 27.939 | 31.869 | 36.112 | 40.834 | 44.112 | 48.690 | 53.983 | 58.522 | 58.687 | 46.014 |
| N° 4 | 13.821 | 20.202 | 27.610 | 31.510 | 35.647 | 40.090 | 43.315 | 47.727 | 52.751 | 57.131 | 57.093 | 44.668 |
| N° 5 | 14.170 | 20.615 | 28.104 | 32.315 | 36.526 | 41.379 | 44.534 | 49.206 | 54.111 | 58.936 | 59.054 | 45.846 |
| N° 6 | 13.930 | 20.274 | 27.443 | 31.476 | 35.553 | 40.264 | 43.288 | 47.569 | 52.699 | 57.032 | 57.206 | 44.545 |
| N° 7 | 14.307 | 20.683 | 27.997 | 32.082 | 36.316 | 40.920 | 44.060 | 47.945 | 54.174 | 59.005 | 59.032 | 46.934 |
| N° 8 | 13.740 | 20.088 | 27.299 | 31.387 | 35.489 | 40.304 | 43.244 | 47.608 | 52.719 | 57.241 | 57.347 | 44.461 |
| N° 9 | 14.031 | 20.655 | 28.050 | 32.133 | 36.689 | 41.490 | 44.733 | 49.484 | 54.873 | 59.725 | 59.853 | 47.547 |
| N° 10 | 14.065 | 20.687 | 27.966 | 32.253 | 36.758 | 41.874 | 45.601 | 49.709 | 55.293 | 59.455 | 60.455 | 48.345 |
| N° 11 | 14.092 | 20.569 | 27.592 | 31.818 | 36.250 | 40.921 | 45.064 | 49.115 | 54.228 | 59.029 | 59.036 | 47.134 |
| N° 12 | 13.832 | 20.452 | 27.385 | 31.599 | 35.663 | 40.422 | 43.649 | 48.324 | 53.277 | 57.990 | 57.964 | 44.936 |
| N° 13 | 14.029 | 20.325 | 27.285 | 31.369 | 35.587 | 40.230 | 43.150 | 47.888 | 52.352 | 57.398 | 56.849 | 44.623 |
| N° 14 | 13.910 | 20.227 | 28.144 | 31.528 | 35.601 | 40.248 | 43.308 | 47.728 | 53.148 | 57.149 | 57.212 | 44.330 |
| N° 15 | 13.781 | 20.426 | 27.865 | 31.738 | 36.303 | 41.782 | 44.419 | 49.631 | 54.339 | 59.692 | 59.168 | 45.817 |
| N° 16 | 14.299 | 20.685 | 28.012 | 32.000 | 36.231 | 41.361 | 44.286 | 48.772 | 53.963 | 58.538 | 58.611 | 45.479 |
| N° 17 | 14.106 | 20.050 | 27.463 | 31.213 | 34.897 | 39.133 | 42.159 | 46.477 | 50.879 | 54.805 | 54.726 | 43.462 |
| N° 18 | 13.846 | 20.386 | 27.763 | 31.807 | 36.259 | 41.296 | 44.252 | 48.792 | 54.132 | 59.065 | 59.068 | 45.484 |
| N° 19 | 13.852 | 20.766 | 27.971 | 32.014 | 36.654 | 41.493 | 45.248 | 49.761 | 55.132 | 59.935 | 60.040 | 46.236 |
| N° 20 | 14.075 | 20.846 | 28.419 | 33.448 | 37.801 | 42.072 | 45.470 | 50.223 | 55.869 | 60.441 | 60.670 | 46.514 |
| N° 21 | 14.223 | 20.572 | 27.839 | 31.867 | 36.663 | 40.475 | 43.337 | 47.980 | 52.681 | 57.046 | 57.259 | 44.851 |
| N° 22 | 14.017 | 20.509 | 27.398 | 31.859 | 35.787 | 40.618 | 43.857 | 48.017 | 53.143 | 57.748 | 57.790 | 44.894 |
| N° 23 | 13.783 | 20.286 | 27.585 | 31.836 | 36.245 | 41.056 | 44.248 | 48.895 | 53.968 | 58.710 | 58.845 | 45.659 |
| N° 24 | 13.870 | 20.498 | 27.951 | 32.260 | 36.509 | 41.437 | 44.652 | 49.171 | 54.552 | 59.509 | 59.529 | 46.289 |
| N° 25 | 13.763 | 20.358 | 27.472 | 32.105 | 36.208 | 40.946 | 44.159 | 48.687 | 53.779 | 59.008 | 59.794 | 45.379 |
| N° 26 | 13.680 | 20.329 | 27.711 | 32.346 | 36.390 | 41.319 | 44.508 | 48.977 | 54.217 | 59.111 | 59.075 | 45.742 |
| N° 27 | 14.019 | 20.619 | 27.735 | 32.129 | 36.343 | 41.006 | 43.946 | 48.390 | 53.669 | 58.319 | 58.545 | 45.692 |
| N° 28 | 13.950 | 20.186 | 27.663 | 31.957 | 35.471 | 39.995 | 43.327 | 48.037 | 52.968 | 57.914 | 57.997 | 45.953 |
| N° 29 | 14.092 | 20.656 | 28.362 | 32.907 | 36.745 | 41.772 | 45.273 | 50.262 | 55.373 | 59.682 | 59.720 | 47.011 |
| N° 30 | 13.288 | 19.759 | 26.833 | 31.317 | 35.298 | 40.175 | 43.914 | 47.823 | 52.996 | 57.550 | 57.645 | 45.427 |
| N° 31 | 13.823 | 20.530 | 27.864 | 32.288 | 36.368 | 41.642 | 44.856 | 49.695 | 54.844 | 59.783 | 59.833 | 47.546 |

# 34. -IIB1, Module 2

**Ta=25°C; +VCC=30V; -VCC=GND; VCM=+15V**

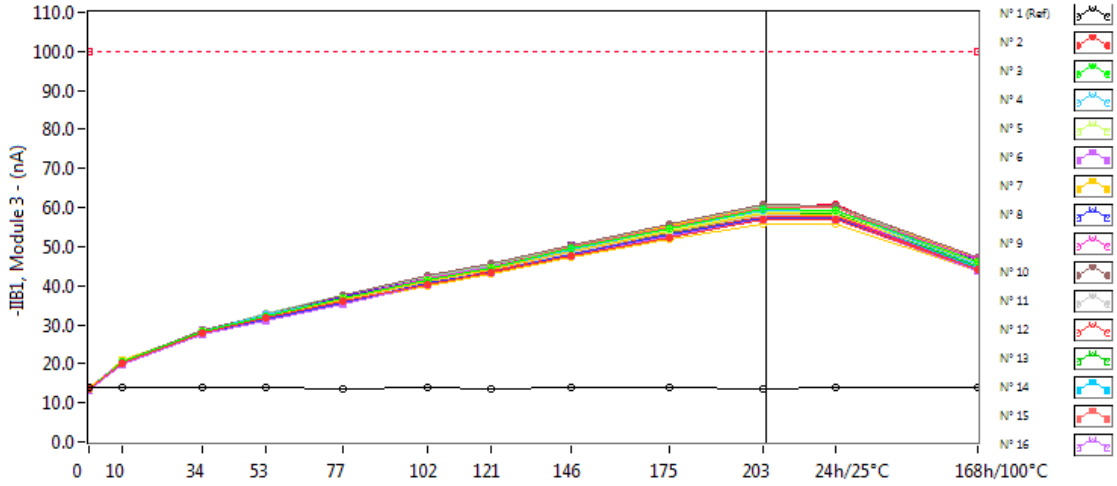



**-IIB1, Module 2 . (nA)** **Max = 100.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 13.539 | 13.521 | 13.488 | 13.520 | 13.450 | 13.482 | 13.427 | 13.537 | 13.531 | 13.439 | 13.520 | 13.584 |
| N° 2 | 13.518 | 19.974 | 27.282 | 31.053 | 35.120 | 39.594 | 42.408 | 46.644 | 51.289 | 55.749 | 55.529 | 42.815 |
| N° 3 | 13.450 | 20.157 | 27.753 | 31.699 | 35.957 | 40.539 | 43.579 | 47.987 | 52.985 | 57.347 | 57.371 | 44.548 |
| N° 4 | 13.392 | 19.942 | 27.420 | 31.220 | 35.572 | 39.997 | 43.113 | 47.500 | 52.409 | 56.604 | 56.590 | 43.862 |
| N° 5 | 13.741 | 20.367 | 27.784 | 31.686 | 35.960 | 40.645 | 43.525 | 48.003 | 52.977 | 57.402 | 57.169 | 44.544 |
| N° 6 | 13.394 | 20.059 | 27.432 | 30.967 | 35.047 | 39.918 | 42.800 | 47.268 | 52.298 | 56.631 | 56.590 | 43.616 |
| N° 7 | 13.487 | 19.928 | 27.156 | 31.019 | 35.262 | 39.698 | 42.634 | 47.063 | 52.161 | 56.472 | 56.304 | 44.576 |
| N° 8 | 13.171 | 19.785 | 27.081 | 30.784 | 34.996 | 39.725 | 42.393 | 46.570 | 51.428 | 55.806 | 55.559 | 43.121 |
| N° 9 | 13.424 | 19.963 | 27.483 | 31.222 | 35.564 | 40.184 | 43.067 | 47.433 | 52.535 | 56.865 | 56.697 | 44.293 |
| N° 10 | 13.634 | 20.485 | 28.155 | 32.004 | 36.826 | 41.904 | 45.170 | 49.498 | 55.006 | 59.946 | 59.837 | 47.822 |
| N° 11 | 13.528 | 20.150 | 27.501 | 31.185 | 35.556 | 39.940 | 43.362 | 47.591 | 52.652 | 57.230 | 57.192 | 45.723 |
| N° 12 | 13.266 | 19.958 | 27.128 | 31.221 | 35.477 | 40.271 | 43.257 | 47.679 | 52.703 | 57.282 | 57.052 | 44.096 |
| N° 13 | 13.478 | 19.994 | 27.312 | 31.293 | 35.786 | 40.395 | 43.128 | 47.712 | 52.437 | 57.257 | 57.078 | 44.010 |
| N° 14 | 13.455 | 20.091 | 27.656 | 31.359 | 35.806 | 40.409 | 43.359 | 47.827 | 52.612 | 57.165 | 57.136 | 44.003 |
| N° 15 | 13.407 | 20.175 | 27.866 | 31.757 | 36.202 | 41.236 | 44.052 | 49.007 | 53.848 | 58.771 | 58.357 | 44.892 |
| N° 16 | 13.683 | 20.344 | 27.748 | 31.528 | 36.162 | 40.813 | 43.787 | 48.400 | 53.629 | 58.098 | 57.986 | 45.488 |
| N° 17 | 13.479 | 19.702 | 26.975 | 30.412 | 34.401 | 38.543 | 41.594 | 45.951 | 50.291 | 54.212 | 54.031 | 42.583 |
| N° 18 | 13.231 | 19.938 | 27.344 | 31.299 | 35.674 | 40.613 | 43.523 | 47.816 | 52.916 | 57.348 | 57.343 | 44.173 |
| N° 19 | 13.365 | 20.341 | 27.675 | 31.813 | 36.108 | 41.057 | 44.371 | 48.873 | 54.132 | 58.866 | 58.569 | 44.953 |
| N° 20 | 13.534 | 20.399 | 28.018 | 32.378 | 36.810 | 41.217 | 44.565 | 49.029 | 54.197 | 58.659 | 58.753 | 45.080 |
| N° 21 | 13.622 | 20.240 | 27.597 | 31.544 | 35.852 | 40.208 | 42.973 | 47.318 | 52.111 | 56.168 | 56.278 | 43.839 |
| N° 22 | 13.517 | 20.095 | 27.017 | 30.978 | 35.192 | 39.667 | 42.591 | 46.665 | 51.629 | 55.843 | 55.755 | 43.322 |
| N° 23 | 13.318 | 19.853 | 27.432 | 31.330 | 35.487 | 40.214 | 43.101 | 47.561 | 52.457 | 56.791 | 56.651 | 43.783 |
| N° 24 | 13.457 | 20.282 | 27.998 | 31.992 | 36.373 | 41.051 | 44.233 | 48.821 | 53.891 | 58.458 | 58.320 | 45.641 |
| N° 25 | 13.401 | 20.169 | 27.626 | 31.655 | 36.079 | 41.028 | 44.090 | 48.682 | 53.903 | 58.759 | 59.481 | 44.966 |
| N° 26 | 13.298 | 19.957 | 27.283 | 31.308 | 35.716 | 40.253 | 43.342 | 47.794 | 52.606 | 57.087 | 56.924 | 44.033 |
| N° 27 | 13.515 | 20.191 | 27.500 | 31.440 | 35.856 | 40.436 | 43.203 | 47.631 | 52.729 | 57.197 | 57.095 | 45.042 |
| N° 28 | 13.671 | 20.038 | 27.786 | 31.280 | 35.424 | 39.658 | 42.926 | 47.524 | 52.061 | 56.971 | 56.935 | 44.715 |
| N° 29 | 13.488 | 20.241 | 28.156 | 32.234 | 36.556 | 41.548 | 44.690 | 49.306 | 53.950 | 58.341 | 58.347 | 45.469 |
| N° 30 | 13.455 | 20.189 | 27.750 | 31.977 | 36.478 | 41.191 | 44.703 | 48.909 | 53.998 | 58.759 | 58.672 | 45.980 |
| N° 31 | 13.528 | 20.283 | 27.853 | 31.870 | 36.403 | 41.191 | 44.150 | 48.698 | 53.695 | 58.465 | 58.327 | 45.876 |

# 35. -IIB1, Module 3

**Ta=25°C; +VCC=30V; -VCC=GND; VCM=+15V**

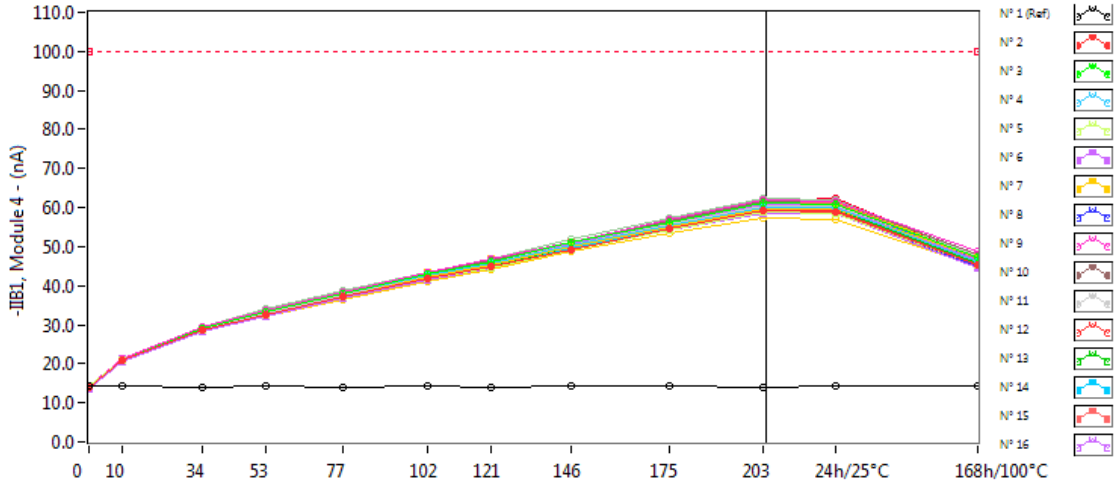



**-IIB1, Module 3 . (nA)** **Max = 100.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 13.810 | 13.796 | 13.776 | 13.785 | 13.723 | 13.784 | 13.728 | 13.824 | 13.805 | 13.716 | 13.799 | 13.864 |
| N° 2 | 13.584 | 20.133 | 27.773 | 31.650 | 35.982 | 40.439 | 43.383 | 47.747 | 52.378 | 57.025 | 56.752 | 43.972 |
| N° 3 | 13.684 | 20.574 | 28.282 | 32.323 | 36.690 | 41.593 | 44.678 | 49.446 | 54.667 | 59.461 | 59.328 | 46.079 |
| N° 4 | 13.656 | 20.496 | 28.395 | 32.364 | 36.694 | 41.506 | 44.652 | 49.383 | 54.639 | 59.276 | 59.165 | 45.239 |
| N° 5 | 13.733 | 20.694 | 28.273 | 32.305 | 36.750 | 41.423 | 44.543 | 49.281 | 54.217 | 58.952 | 58.780 | 45.205 |
| N° 6 | 13.301 | 19.932 | 27.595 | 31.070 | 35.369 | 40.194 | 43.255 | 47.696 | 52.606 | 56.903 | 56.796 | 43.607 |
| N° 7 | 13.755 | 20.314 | 27.922 | 31.929 | 36.419 | 41.134 | 44.169 | 48.779 | 53.834 | 58.415 | 58.213 | 45.908 |
| N° 8 | 13.433 | 20.107 | 27.627 | 31.539 | 35.702 | 40.571 | 43.380 | 47.951 | 53.008 | 57.506 | 57.289 | 43.935 |
| N° 9 | 13.742 | 20.509 | 28.352 | 32.362 | 36.795 | 41.677 | 44.724 | 49.466 | 54.747 | 59.583 | 59.395 | 46.933 |
| N° 10 | 13.564 | 20.655 | 28.485 | 32.720 | 37.463 | 42.458 | 45.830 | 50.198 | 55.742 | 60.737 | 60.450 | 47.317 |
| N° 11 | 13.618 | 20.304 | 27.823 | 31.699 | 36.032 | 40.763 | 44.256 | 48.375 | 53.696 | 58.206 | 57.995 | 45.875 |
| N° 12 | 13.280 | 20.050 | 27.527 | 31.622 | 36.038 | 40.655 | 43.798 | 48.342 | 53.253 | 57.857 | 57.720 | 44.325 |
| N° 13 | 13.745 | 20.579 | 28.123 | 32.177 | 36.465 | 41.349 | 44.279 | 48.889 | 53.876 | 58.764 | 58.531 | 45.028 |
| N° 14 | 13.566 | 20.310 | 27.957 | 31.731 | 36.408 | 41.245 | 44.339 | 48.907 | 54.160 | 58.701 | 58.621 | 44.703 |
| N° 15 | 13.427 | 20.429 | 28.205 | 32.318 | 36.794 | 41.286 | 44.700 | 49.780 | 55.048 | 60.204 | 59.889 | 45.562 |
| N° 16 | 13.940 | 20.673 | 28.538 | 32.424 | 36.937 | 41.882 | 44.881 | 49.347 | 54.412 | 59.152 | 59.130 | 45.292 |
| N° 17 | 13.748 | 20.107 | 27.859 | 31.436 | 35.449 | 39.802 | 42.859 | 47.350 | 51.729 | 55.834 | 55.652 | 43.818 |
| N° 18 | 13.391 | 20.176 | 27.723 | 31.769 | 36.163 | 41.288 | 44.167 | 48.625 | 53.814 | 58.402 | 58.155 | 44.389 |
| N° 19 | 13.281 | 20.094 | 27.860 | 31.753 | 36.339 | 40.970 | 44.249 | 48.843 | 54.026 | 58.624 | 58.539 | 44.871 |
| N° 20 | 13.592 | 20.695 | 28.430 | 32.876 | 37.417 | 42.213 | 45.400 | 50.127 | 55.855 | 60.461 | 60.604 | 46.035 |
| N° 21 | 13.587 | 20.347 | 27.832 | 31.781 | 36.246 | 40.556 | 43.541 | 47.853 | 52.704 | 56.920 | 56.933 | 44.381 |
| N° 22 | 13.619 | 20.422 | 27.804 | 32.030 | 36.529 | 41.417 | 44.680 | 48.776 | 53.974 | 58.431 | 58.188 | 44.716 |
| N° 23 | 13.318 | 20.174 | 27.670 | 31.693 | 36.215 | 40.941 | 44.022 | 48.432 | 53.356 | 57.909 | 57.846 | 44.345 |
| N° 24 | 13.458 | 20.286 | 28.107 | 32.222 | 36.535 | 41.455 | 44.439 | 49.119 | 54.349 | 59.150 | 58.938 | 45.744 |
| N° 25 | 13.528 | 20.484 | 28.195 | 32.458 | 36.915 | 41.940 | 44.980 | 49.665 | 54.963 | 59.976 | 60.709 | 45.617 |
| N° 26 | 13.481 | 20.240 | 27.649 | 31.844 | 36.209 | 41.122 | 44.261 | 48.909 | 53.711 | 58.286 | 58.013 | 44.518 |
| N° 27 | 13.637 | 20.607 | 27.974 | 32.203 | 36.508 | 41.228 | 44.038 | 48.598 | 53.807 | 58.566 | 58.490 | 45.011 |
| N° 28 | 13.692 | 20.267 | 28.193 | 32.024 | 36.006 | 40.451 | 43.760 | 48.570 | 53.433 | 58.351 | 58.209 | 45.002 |
| N° 29 | 13.616 | 20.697 | 28.460 | 32.699 | 37.267 | 42.390 | 45.471 | 50.376 | 54.777 | 59.293 | 59.071 | 46.494 |
| N° 30 | 13.675 | 20.746 | 28.320 | 32.539 | 37.089 | 42.021 | 45.456 | 50.093 | 55.319 | 60.174 | 60.156 | 46.966 |
| N° 31 | 13.671 | 20.472 | 27.999 | 32.265 | 36.546 | 41.684 | 44.640 | 49.360 | 54.574 | 59.335 | 59.310 | 46.437 |

# 36. -IIB1, Module 4

**Ta=25°C; +VCC=30V; -VCC=GND; VCM=+15V**

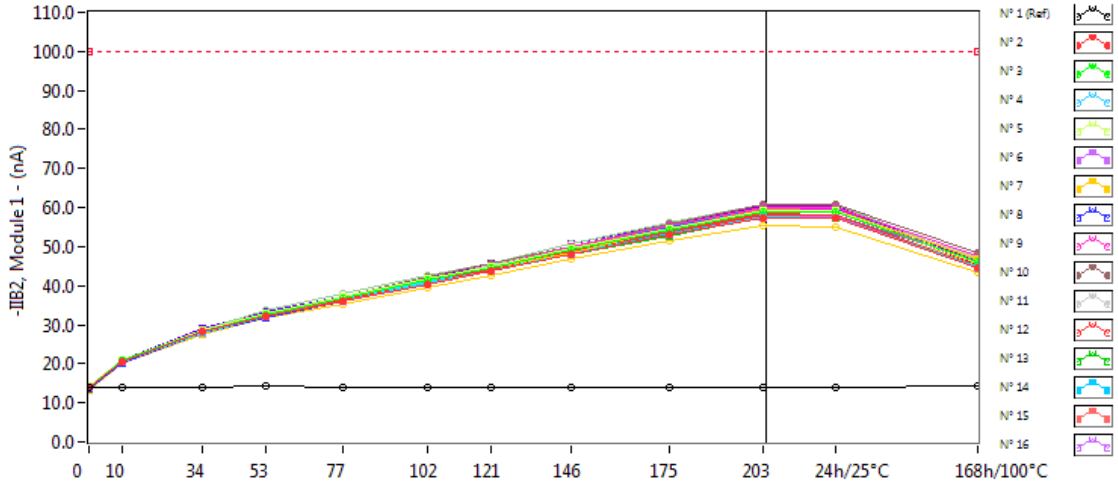



**-IIB1, Module 4 . (nA)** **Max = 100.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 14.167 | 14.149 | 14.107 | 14.148 | 14.076 | 14.138 | 14.073 | 14.172 | 14.176 | 14.061 | 14.144 | 14.213 |
| N° 2 | 14.018 | 20.874 | 28.606 | 32.633 | 37.247 | 41.937 | 44.935 | 49.343 | 54.478 | 59.113 | 59.006 | 45.191 |
| N° 3 | 14.050 | 21.100 | 29.088 | 33.397 | 38.116 | 42.880 | 46.182 | 50.953 | 56.326 | 61.071 | 60.989 | 47.151 |
| N° 4 | 14.023 | 21.102 | 29.230 | 33.239 | 37.871 | 42.680 | 45.670 | 50.283 | 55.503 | 60.084 | 59.878 | 46.170 |
| N° 5 | 14.192 | 21.032 | 28.796 | 32.685 | 37.087 | 41.793 | 44.728 | 49.279 | 54.390 | 59.014 | 58.660 | 45.393 |
| N° 6 | 13.741 | 20.587 | 28.413 | 32.314 | 36.666 | 41.517 | 44.522 | 49.101 | 54.225 | 58.650 | 58.379 | 44.692 |
| N° 7 | 14.153 | 20.945 | 28.784 | 32.709 | 37.178 | 42.093 | 45.260 | 49.937 | 55.174 | 59.798 | 59.689 | 47.263 |
| N° 8 | 13.715 | 20.692 | 28.498 | 32.690 | 36.826 | 41.740 | 44.702 | 49.092 | 54.322 | 58.977 | 58.692 | 45.105 |
| N° 9 | 14.181 | 21.202 | 29.321 | 33.603 | 38.371 | 43.450 | 46.695 | 51.269 | 56.814 | 61.821 | 61.572 | 48.699 |
| N° 10 | 14.026 | 21.277 | 29.314 | 33.381 | 38.282 | 43.521 | 46.644 | 51.161 | 56.700 | 61.741 | 61.626 | 48.034 |
| N° 11 | 14.045 | 21.002 | 28.765 | 32.980 | 37.510 | 42.456 | 45.961 | 50.446 | 55.712 | 60.460 | 60.347 | 47.670 |
| N° 12 | 13.839 | 20.884 | 28.693 | 32.804 | 37.269 | 42.163 | 45.244 | 49.833 | 54.923 | 59.413 | 59.255 | 45.430 |
| N° 13 | 14.147 | 20.947 | 28.689 | 32.805 | 37.264 | 42.179 | 45.072 | 49.828 | 55.034 | 59.937 | 59.521 | 45.548 |
| N° 14 | 14.094 | 20.977 | 28.821 | 32.643 | 37.101 | 41.819 | 44.955 | 49.477 | 54.518 | 59.064 | 58.908 | 45.050 |
| N° 15 | 13.783 | 20.907 | 29.078 | 33.189 | 37.856 | 43.002 | 46.107 | 51.085 | 56.426 | 61.429 | 61.023 | 46.910 |
| N° 16 | 14.294 | 21.351 | 29.220 | 33.234 | 38.025 | 43.080 | 45.938 | 50.614 | 56.032 | 60.699 | 60.475 | 46.435 |
| N° 17 | 14.189 | 20.751 | 28.652 | 32.140 | 36.441 | 41.025 | 44.165 | 48.671 | 53.358 | 57.296 | 57.125 | 45.116 |
| N° 18 | 13.692 | 20.695 | 28.594 | 32.613 | 37.203 | 42.372 | 45.248 | 49.682 | 55.397 | 59.895 | 59.752 | 45.440 |
| N° 19 | 13.756 | 20.842 | 28.776 | 32.769 | 37.125 | 42.234 | 45.475 | 49.967 | 55.311 | 60.199 | 60.030 | 46.072 |
| N° 20 | 14.194 | 21.465 | 29.611 | 34.153 | 38.731 | 43.554 | 46.934 | 51.834 | 57.338 | 62.200 | 62.156 | 47.493 |
| N° 21 | 14.241 | 21.210 | 29.106 | 33.056 | 37.542 | 42.211 | 45.168 | 49.720 | 54.563 | 58.873 | 58.923 | 45.565 |
| N° 22 | 14.030 | 21.103 | 28.957 | 33.097 | 37.679 | 42.581 | 45.840 | 50.100 | 55.530 | 60.097 | 60.059 | 45.917 |
| N° 23 | 13.747 | 20.860 | 28.776 | 32.930 | 37.480 | 42.506 | 45.690 | 50.385 | 55.677 | 60.321 | 60.176 | 45.961 |
| N° 24 | 13.829 | 20.903 | 28.849 | 33.044 | 37.667 | 42.496 | 45.950 | 50.785 | 56.116 | 60.959 | 60.835 | 46.966 |
| N° 25 | 13.873 | 21.177 | 29.287 | 33.502 | 38.190 | 43.194 | 46.302 | 51.121 | 56.606 | 61.512 | 62.167 | 47.081 |
| N° 26 | 13.945 | 20.905 | 28.881 | 33.389 | 37.835 | 42.826 | 45.849 | 50.951 | 56.160 | 60.723 | 60.681 | 46.374 |
| N° 27 | 14.243 | 21.239 | 28.856 | 33.024 | 37.537 | 42.621 | 45.359 | 50.034 | 55.425 | 60.115 | 60.039 | 46.811 |
| N° 28 | 14.252 | 20.992 | 29.266 | 33.192 | 37.393 | 41.962 | 45.309 | 50.302 | 55.252 | 60.407 | 60.211 | 46.591 |
| N° 29 | 13.929 | 21.024 | 29.113 | 33.476 | 37.906 | 43.025 | 46.455 | 51.317 | 55.857 | 60.320 | 60.157 | 47.488 |
| N° 30 | 13.985 | 21.108 | 29.068 | 33.574 | 38.220 | 43.290 | 46.704 | 51.251 | 56.706 | 61.466 | 61.317 | 47.777 |
| N° 31 | 14.025 | 20.936 | 28.794 | 33.198 | 37.941 | 43.053 | 45.928 | 50.698 | 56.000 | 60.858 | 60.696 | 47.240 |

# 37. -IIB2, Module 1

**Ta=25°C; +VCC=2V; -VCC=-28V; VCM=-13V**

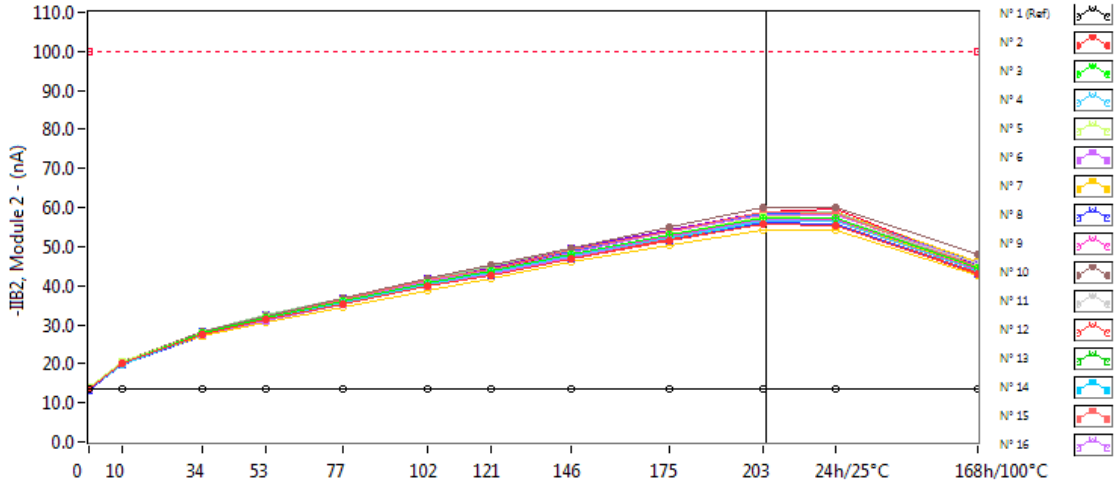



**-IIB2, Module 1 . (nA)** **Max = 100.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 14.102 | 14.086 | 14.047 | 14.317 | 14.007 | 14.036 | 13.984 | 14.085 | 14.077 | 13.967 | 14.079 | 14.145 |
| N° 2 | 14.004 | 20.642 | 28.167 | 31.985 | 35.848 | 40.467 | 43.617 | 47.923 | 52.873 | 57.250 | 57.143 | 44.356 |
| N° 3 | 14.013 | 20.760 | 28.465 | 32.421 | 36.637 | 41.355 | 44.498 | 49.166 | 54.405 | 58.877 | 58.947 | 46.057 |
| N° 4 | 13.783 | 20.477 | 28.037 | 32.017 | 36.125 | 40.589 | 43.673 | 48.216 | 53.245 | 57.539 | 57.380 | 44.757 |
| N° 5 | 14.145 | 20.866 | 28.544 | 32.798 | 37.010 | 41.769 | 44.884 | 49.671 | 54.607 | 59.426 | 59.280 | 45.888 |
| N° 6 | 13.892 | 20.487 | 27.931 | 31.956 | 36.012 | 40.690 | 43.721 | 48.047 | 53.141 | 57.382 | 57.536 | 44.591 |
| N° 7 | 14.282 | 20.879 | 28.388 | 32.651 | 36.818 | 41.403 | 44.465 | 48.572 | 54.513 | 59.299 | 59.237 | 46.968 |
| N° 8 | 13.703 | 20.319 | 27.742 | 31.938 | 35.950 | 40.782 | 43.650 | 48.024 | 53.200 | 57.609 | 57.569 | 44.518 |
| N° 9 | 13.998 | 20.872 | 28.550 | 32.667 | 37.034 | 41.909 | 45.076 | 49.849 | 55.210 | 60.043 | 60.068 | 47.563 |
| N° 10 | 14.029 | 20.925 | 28.431 | 32.645 | 37.189 | 42.253 | 45.732 | 50.036 | 55.604 | 60.687 | 60.683 | 48.355 |
| N° 11 | 14.070 | 20.735 | 28.043 | 32.419 | 36.670 | 41.473 | 45.208 | 49.485 | 54.585 | 59.319 | 59.253 | 47.127 |
| N° 12 | 13.791 | 20.518 | 27.896 | 31.993 | 36.146 | 40.778 | 44.025 | 48.680 | 53.671 | 58.361 | 58.226 | 44.969 |
| N° 13 | 14.003 | 20.514 | 27.782 | 31.863 | 36.123 | 40.747 | 43.592 | 48.122 | 52.779 | 57.531 | 57.178 | 44.683 |
| N° 14 | 13.887 | 20.457 | 28.284 | 31.958 | 36.127 | 40.704 | 43.714 | 48.126 | 53.386 | 57.493 | 57.481 | 44.377 |
| N° 15 | 13.811 | 20.616 | 28.338 | 32.246 | 36.714 | 41.941 | 44.777 | 49.801 | 54.781 | 59.840 | 59.366 | 45.868 |
| N° 16 | 14.276 | 20.964 | 28.549 | 32.543 | 36.817 | 41.898 | 44.750 | 49.241 | 54.369 | 58.898 | 58.798 | 45.555 |
| N° 17 | 14.095 | 20.239 | 27.943 | 31.706 | 35.339 | 39.639 | 42.597 | 46.966 | 51.346 | 55.235 | 55.058 | 43.543 |
| N° 18 | 13.832 | 20.531 | 28.273 | 32.354 | 36.720 | 41.689 | 44.742 | 49.244 | 54.530 | 59.423 | 59.474 | 45.554 |
| N° 19 | 13.831 | 20.853 | 28.466 | 32.759 | 37.134 | 42.003 | 45.452 | 50.057 | 55.538 | 60.288 | 60.340 | 46.259 |
| N° 20 | 14.060 | 21.052 | 28.845 | 33.617 | 38.011 | 42.493 | 45.810 | 50.590 | 56.068 | 60.764 | 60.952 | 46.581 |
| N° 21 | 14.209 | 20.859 | 28.329 | 32.270 | 36.840 | 40.922 | 43.751 | 48.395 | 53.183 | 57.462 | 57.607 | 44.935 |
| N° 22 | 13.995 | 20.708 | 27.948 | 32.309 | 36.311 | 41.067 | 44.309 | 48.405 | 53.586 | 58.181 | 58.055 | 44.964 |
| N° 23 | 13.750 | 20.532 | 28.025 | 32.279 | 36.732 | 41.543 | 44.652 | 49.389 | 54.404 | 58.989 | 59.108 | 45.724 |
| N° 24 | 13.887 | 20.700 | 28.539 | 32.698 | 37.063 | 41.927 | 45.077 | 49.630 | 54.961 | 59.925 | 59.760 | 46.334 |
| N° 25 | 13.784 | 20.598 | 27.915 | 32.550 | 36.757 | 41.462 | 44.590 | 49.126 | 54.319 | 59.109 | 59.998 | 45.454 |
| N° 26 | 13.699 | 20.558 | 28.097 | 32.842 | 36.912 | 41.830 | 44.839 | 49.395 | 54.596 | 59.504 | 59.369 | 45.776 |
| N° 27 | 14.036 | 20.792 | 28.235 | 32.680 | 36.786 | 41.497 | 44.351 | 48.813 | 54.072 | 58.601 | 58.711 | 45.767 |
| N° 28 | 13.964 | 20.358 | 28.163 | 32.398 | 35.991 | 40.450 | 43.663 | 48.423 | 53.423 | 58.306 | 58.203 | 45.995 |
| N° 29 | 14.110 | 20.893 | 28.870 | 33.384 | 37.245 | 42.246 | 45.649 | 50.646 | 55.715 | 60.046 | 59.994 | 47.020 |
| N° 30 | 13.304 | 20.002 | 27.324 | 31.822 | 35.861 | 40.654 | 44.120 | 48.234 | 53.351 | 57.965 | 57.888 | 45.488 |
| N° 31 | 13.851 | 20.756 | 28.337 | 32.767 | 36.866 | 42.088 | 45.304 | 50.126 | 55.263 | 60.185 | 60.096 | 47.589 |

# 38. -IIB2, Module 2

**Ta=25°C; +VCC=2V; -VCC=-28V; VCM=-13V**

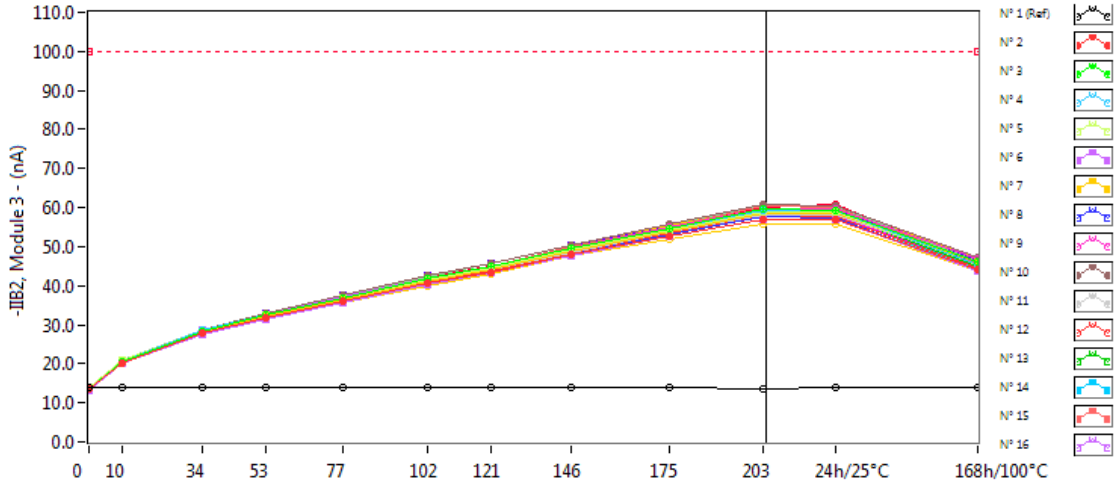



**-IIB2, Module 2 . (nA)** **Max = 100.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 13.557 | 13.530 | 13.506 | 13.553 | 13.466 | 13.499 | 13.440 | 13.549 | 13.522 | 13.438 | 13.510 | 13.593 |
| N° 2 | 13.536 | 19.996 | 27.402 | 31.202 | 35.277 | 39.728 | 42.530 | 46.748 | 51.452 | 55.879 | 55.564 | 42.822 |
| N° 3 | 13.463 | 20.188 | 27.899 | 31.831 | 36.123 | 40.751 | 43.681 | 48.102 | 53.121 | 57.488 | 57.430 | 44.561 |
| N° 4 | 13.400 | 19.947 | 27.558 | 31.406 | 35.728 | 40.158 | 43.263 | 47.656 | 52.482 | 56.706 | 56.695 | 43.900 |
| N° 5 | 13.756 | 20.418 | 27.907 | 31.878 | 36.121 | 40.731 | 43.630 | 48.163 | 53.113 | 57.559 | 57.265 | 44.568 |
| N° 6 | 13.410 | 20.134 | 27.597 | 31.142 | 35.207 | 40.070 | 42.920 | 47.432 | 52.480 | 56.769 | 56.684 | 43.635 |
| N° 7 | 13.471 | 19.995 | 27.306 | 31.127 | 35.406 | 39.796 | 42.819 | 47.206 | 52.328 | 56.642 | 56.473 | 44.611 |
| N° 8 | 13.194 | 19.802 | 27.233 | 30.962 | 35.132 | 39.870 | 42.577 | 46.705 | 51.621 | 55.976 | 55.629 | 43.158 |
| N° 9 | 13.428 | 20.013 | 27.595 | 31.411 | 35.661 | 40.292 | 43.197 | 47.586 | 52.647 | 56.993 | 56.831 | 44.327 |
| N° 10 | 13.641 | 20.539 | 28.335 | 32.152 | 36.956 | 42.017 | 45.257 | 49.606 | 55.106 | 59.991 | 59.889 | 47.849 |
| N° 11 | 13.551 | 20.165 | 27.610 | 31.320 | 35.685 | 40.066 | 43.477 | 47.703 | 52.757 | 57.502 | 57.301 | 45.743 |
| N° 12 | 13.279 | 19.980 | 27.247 | 31.317 | 35.650 | 40.414 | 43.412 | 47.819 | 52.786 | 57.380 | 57.139 | 44.110 |
| N° 13 | 13.493 | 20.052 | 27.410 | 31.437 | 35.883 | 40.551 | 43.240 | 47.792 | 52.548 | 57.351 | 57.090 | 43.999 |
| N° 14 | 13.470 | 20.137 | 27.762 | 31.515 | 35.931 | 40.576 | 43.442 | 47.944 | 52.690 | 57.235 | 57.206 | 44.019 |
| N° 15 | 13.427 | 20.228 | 28.024 | 31.936 | 36.384 | 41.307 | 44.117 | 49.041 | 53.955 | 58.869 | 58.509 | 44.928 |
| N° 16 | 13.691 | 20.377 | 27.864 | 31.691 | 36.249 | 40.971 | 43.934 | 48.495 | 53.786 | 58.228 | 58.090 | 45.517 |
| N° 17 | 13.494 | 19.692 | 27.125 | 30.549 | 34.529 | 38.641 | 41.777 | 46.059 | 50.451 | 54.346 | 54.080 | 42.604 |
| N° 18 | 13.261 | 19.989 | 27.513 | 31.467 | 35.834 | 40.737 | 43.667 | 47.917 | 53.059 | 57.463 | 57.397 | 44.216 |
| N° 19 | 13.370 | 20.393 | 27.827 | 31.903 | 36.236 | 41.219 | 44.478 | 48.997 | 54.316 | 58.943 | 58.630 | 44.958 |
| N° 20 | 13.554 | 20.441 | 28.152 | 32.456 | 36.945 | 41.399 | 44.768 | 49.063 | 54.277 | 58.754 | 58.853 | 45.081 |
| N° 21 | 13.647 | 20.313 | 27.752 | 31.722 | 35.977 | 40.287 | 43.157 | 47.451 | 52.211 | 56.287 | 56.407 | 43.872 |
| N° 22 | 13.529 | 20.197 | 27.171 | 31.148 | 35.295 | 39.845 | 42.734 | 46.828 | 51.759 | 55.972 | 55.835 | 43.350 |
| N° 23 | 13.338 | 19.941 | 27.612 | 31.501 | 35.651 | 40.364 | 43.229 | 47.657 | 52.587 | 56.948 | 56.782 | 43.793 |
| N° 24 | 13.478 | 20.378 | 28.092 | 32.083 | 36.485 | 41.144 | 44.371 | 48.900 | 54.032 | 58.538 | 58.415 | 45.622 |
| N° 25 | 13.435 | 20.235 | 27.704 | 31.783 | 36.211 | 41.159 | 44.251 | 48.839 | 53.993 | 58.865 | 59.556 | 45.014 |
| N° 26 | 13.305 | 20.015 | 27.394 | 31.435 | 35.842 | 40.387 | 43.481 | 47.918 | 52.699 | 57.188 | 57.100 | 44.060 |
| N° 27 | 13.541 | 20.209 | 27.615 | 31.599 | 35.989 | 40.545 | 43.370 | 47.760 | 52.825 | 57.273 | 57.219 | 45.059 |
| N° 28 | 13.683 | 20.057 | 27.890 | 31.431 | 35.542 | 39.819 | 43.046 | 47.607 | 52.217 | 57.068 | 57.064 | 44.742 |
| N° 29 | 13.499 | 20.291 | 28.296 | 32.377 | 36.696 | 41.701 | 44.829 | 49.480 | 54.109 | 58.433 | 58.397 | 45.507 |
| N° 30 | 13.478 | 20.246 | 27.837 | 32.163 | 36.633 | 41.390 | 44.839 | 48.992 | 54.130 | 58.857 | 58.754 | 46.003 |
| N° 31 | 13.552 | 20.351 | 27.984 | 31.950 | 36.590 | 41.300 | 44.267 | 48.872 | 53.858 | 58.558 | 58.487 | 45.906 |

# 39. -IIB2, Module 3

**Ta=25°C; +VCC=2V; -VCC=-28V; VCM=-13V**

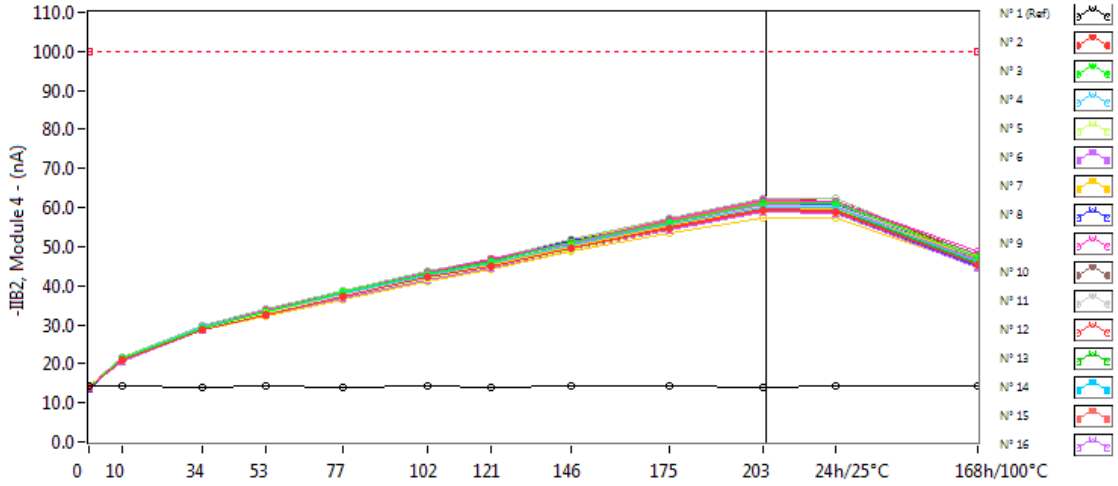



**-IIB2, Module 3 . (nA)** **Max = 100.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 13.835 | 13.807 | 13.802 | 13.825 | 13.752 | 13.808 | 13.766 | 13.837 | 13.822 | 13.740 | 13.806 | 13.866 |
| N° 2 | 13.605 | 20.174 | 27.876 | 31.769 | 36.070 | 40.547 | 43.490 | 47.879 | 52.543 | 57.116 | 56.886 | 44.025 |
| N° 3 | 13.706 | 20.598 | 28.331 | 32.447 | 36.850 | 41.731 | 44.804 | 49.559 | 54.761 | 59.552 | 59.358 | 46.090 |
| N° 4 | 13.685 | 20.561 | 28.515 | 32.473 | 36.816 | 41.686 | 44.756 | 49.521 | 54.745 | 59.365 | 59.252 | 45.254 |
| N° 5 | 13.759 | 20.724 | 28.394 | 32.402 | 36.839 | 41.538 | 44.705 | 49.300 | 54.367 | 59.047 | 58.876 | 45.235 |
| N° 6 | 13.327 | 20.006 | 27.682 | 31.190 | 35.471 | 40.344 | 43.342 | 47.817 | 52.733 | 57.025 | 56.905 | 43.632 |
| N° 7 | 13.781 | 20.359 | 28.049 | 32.040 | 36.552 | 41.242 | 44.257 | 48.803 | 53.990 | 58.473 | 58.341 | 45.940 |
| N° 8 | 13.447 | 20.120 | 27.736 | 31.618 | 35.793 | 40.676 | 43.499 | 48.038 | 53.130 | 57.607 | 57.348 | 43.960 |
| N° 9 | 13.768 | 20.552 | 28.487 | 32.480 | 36.912 | 41.781 | 44.849 | 49.592 | 54.849 | 59.697 | 59.496 | 46.947 |
| N° 10 | 13.602 | 20.706 | 28.588 | 32.867 | 37.600 | 42.597 | 45.893 | 50.287 | 55.851 | 60.819 | 60.575 | 47.315 |
| N° 11 | 13.653 | 20.359 | 27.926 | 31.842 | 36.118 | 40.892 | 44.333 | 48.468 | 53.811 | 58.266 | 58.093 | 45.926 |
| N° 12 | 13.315 | 20.097 | 27.627 | 31.703 | 36.180 | 40.798 | 43.923 | 48.468 | 53.330 | 57.937 | 57.786 | 44.366 |
| N° 13 | 13.775 | 20.597 | 28.212 | 32.293 | 36.553 | 41.488 | 44.375 | 48.978 | 53.969 | 58.762 | 58.621 | 45.034 |
| N° 14 | 13.596 | 20.322 | 28.052 | 31.812 | 36.526 | 41.416 | 44.479 | 49.045 | 54.260 | 58.789 | 58.737 | 44.725 |
| N° 15 | 13.445 | 20.448 | 28.304 | 32.402 | 36.947 | 41.380 | 44.749 | 49.883 | 55.158 | 60.285 | 59.951 | 45.585 |
| N° 16 | 13.960 | 20.700 | 28.573 | 32.527 | 37.078 | 41.955 | 44.996 | 49.357 | 54.511 | 59.263 | 59.173 | 45.319 |
| N° 17 | 13.772 | 20.156 | 27.986 | 31.567 | 35.541 | 39.940 | 42.958 | 47.488 | 51.866 | 55.920 | 55.735 | 43.852 |
| N° 18 | 13.412 | 20.221 | 27.854 | 31.909 | 36.276 | 41.405 | 44.280 | 48.756 | 53.905 | 58.483 | 58.258 | 44.443 |
| N° 19 | 13.305 | 20.138 | 27.943 | 31.826 | 36.478 | 41.085 | 44.352 | 48.955 | 54.142 | 58.744 | 58.645 | 44.911 |
| N° 20 | 13.609 | 20.773 | 28.549 | 32.920 | 37.488 | 42.305 | 45.534 | 50.230 | 55.927 | 60.558 | 60.615 | 46.063 |
| N° 21 | 13.623 | 20.389 | 27.891 | 31.935 | 36.329 | 40.698 | 43.632 | 47.957 | 52.797 | 56.984 | 57.004 | 44.379 |
| N° 22 | 13.655 | 20.467 | 27.886 | 32.127 | 36.659 | 41.556 | 44.748 | 48.882 | 54.059 | 58.534 | 58.263 | 44.713 |
| N° 23 | 13.334 | 20.240 | 27.717 | 31.774 | 36.326 | 41.039 | 44.143 | 48.521 | 53.434 | 58.074 | 57.909 | 44.381 |
| N° 24 | 13.483 | 20.339 | 28.207 | 32.324 | 36.643 | 41.589 | 44.566 | 49.217 | 54.527 | 59.228 | 59.039 | 45.774 |
| N° 25 | 13.545 | 20.506 | 28.306 | 32.599 | 37.059 | 42.042 | 45.122 | 49.769 | 55.068 | 60.067 | 60.738 | 45.614 |
| N° 26 | 13.517 | 20.251 | 27.698 | 31.944 | 36.345 | 41.242 | 44.382 | 48.960 | 53.824 | 58.397 | 58.128 | 44.525 |
| N° 27 | 13.654 | 20.619 | 28.086 | 32.316 | 36.604 | 41.333 | 44.098 | 48.668 | 53.884 | 58.664 | 58.610 | 45.052 |
| N° 28 | 13.733 | 20.299 | 28.252 | 32.128 | 36.124 | 40.526 | 43.857 | 48.653 | 53.597 | 58.408 | 58.315 | 45.027 |
| N° 29 | 13.634 | 20.728 | 28.533 | 32.776 | 37.391 | 42.469 | 45.561 | 50.448 | 54.897 | 59.445 | 59.163 | 46.515 |
| N° 30 | 13.712 | 20.761 | 28.432 | 32.633 | 37.185 | 42.136 | 45.594 | 50.192 | 55.384 | 60.293 | 60.184 | 46.992 |
| N° 31 | 13.700 | 20.515 | 28.085 | 32.329 | 36.674 | 41.776 | 44.774 | 49.450 | 54.705 | 59.499 | 59.423 | 46.467 |

# 40. -IIB2, Module 4

**Ta=25°C; +VCC=2V; -VCC=-28V; VCM=-13V**

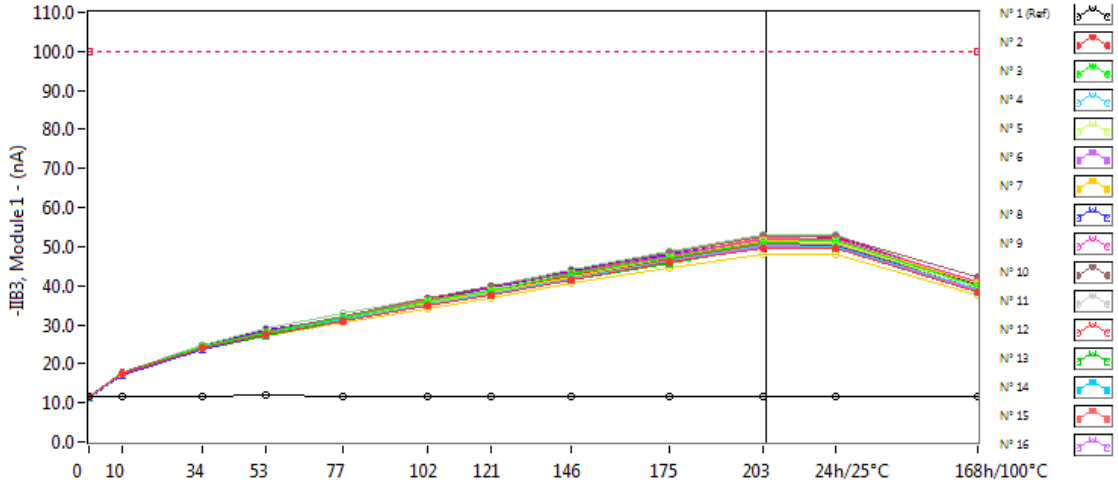



**-IIB2, Module 4 . (nA)** **Max = 100.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 14.194 | 14.155 | 14.115 | 14.162 | 14.102 | 14.162 | 14.103 | 14.169 | 14.167 | 14.082 | 14.171 | 14.228 |
| N° 2 | 14.037 | 20.906 | 28.676 | 32.721 | 37.261 | 42.026 | 45.005 | 49.406 | 54.621 | 59.230 | 59.040 | 45.187 |
| N° 3 | 14.077 | 21.136 | 29.155 | 33.440 | 38.213 | 43.014 | 46.278 | 51.000 | 56.338 | 61.146 | 61.028 | 47.235 |
| N° 4 | 14.040 | 21.127 | 29.307 | 33.285 | 37.980 | 42.743 | 45.738 | 50.358 | 55.611 | 60.211 | 59.923 | 46.178 |
| N° 5 | 14.207 | 21.059 | 28.873 | 32.785 | 37.175 | 41.922 | 44.843 | 49.380 | 54.487 | 59.094 | 58.760 | 45.392 |
| N° 6 | 13.767 | 20.635 | 28.488 | 32.402 | 36.778 | 41.582 | 44.583 | 49.158 | 54.330 | 58.798 | 58.486 | 44.696 |
| N° 7 | 14.180 | 20.990 | 28.844 | 32.785 | 37.249 | 42.138 | 45.372 | 50.028 | 55.237 | 59.842 | 59.797 | 47.287 |
| N° 8 | 13.742 | 20.728 | 28.607 | 32.732 | 36.915 | 41.860 | 44.771 | 49.225 | 54.406 | 59.034 | 58.749 | 45.119 |
| N° 9 | 14.209 | 21.225 | 29.396 | 33.698 | 38.465 | 43.501 | 46.754 | 51.285 | 56.974 | 61.890 | 61.677 | 48.705 |
| N° 10 | 14.051 | 21.303 | 29.350 | 33.442 | 38.369 | 43.572 | 46.668 | 51.234 | 56.818 | 61.831 | 61.667 | 48.069 |
| N° 11 | 14.072 | 21.066 | 28.882 | 33.036 | 37.607 | 42.583 | 46.108 | 50.513 | 55.814 | 60.547 | 60.450 | 47.704 |
| N° 12 | 13.871 | 20.879 | 28.793 | 32.880 | 37.347 | 42.192 | 45.289 | 49.915 | 54.952 | 59.478 | 59.326 | 45.473 |
| N° 13 | 14.175 | 20.956 | 28.788 | 32.922 | 37.393 | 42.241 | 45.149 | 49.902 | 55.109 | 60.025 | 59.575 | 45.553 |
| N° 14 | 14.112 | 21.002 | 28.861 | 32.769 | 37.197 | 41.899 | 45.048 | 49.572 | 54.582 | 59.194 | 58.957 | 45.086 |
| N° 15 | 13.818 | 20.934 | 29.160 | 33.296 | 37.946 | 43.069 | 46.186 | 51.158 | 56.483 | 61.501 | 61.021 | 46.963 |
| N° 16 | 14.320 | 21.383 | 29.272 | 33.361 | 38.095 | 43.133 | 46.082 | 50.720 | 56.135 | 60.787 | 60.521 | 46.462 |
| N° 17 | 14.225 | 20.793 | 28.700 | 32.219 | 36.538 | 41.067 | 44.267 | 48.761 | 53.507 | 57.368 | 57.185 | 45.120 |
| N° 18 | 13.718 | 20.723 | 28.691 | 32.709 | 37.338 | 42.471 | 45.333 | 49.775 | 55.470 | 59.961 | 59.831 | 45.451 |
| N° 19 | 13.786 | 20.871 | 28.784 | 32.869 | 37.205 | 42.315 | 45.547 | 50.063 | 55.456 | 60.284 | 60.134 | 46.097 |
| N° 20 | 14.215 | 21.502 | 29.660 | 34.222 | 38.793 | 43.665 | 47.003 | 51.862 | 57.446 | 62.258 | 62.197 | 47.481 |
| N° 21 | 14.270 | 21.226 | 29.198 | 33.137 | 37.620 | 42.296 | 45.253 | 49.779 | 54.579 | 58.931 | 58.999 | 45.592 |
| N° 22 | 14.054 | 21.164 | 29.014 | 33.206 | 37.812 | 42.639 | 45.936 | 50.160 | 55.627 | 60.134 | 60.102 | 45.899 |
| N° 23 | 13.764 | 20.891 | 28.828 | 33.037 | 37.543 | 42.572 | 45.833 | 50.460 | 55.811 | 60.434 | 60.202 | 45.956 |
| N° 24 | 13.864 | 20.933 | 28.927 | 33.082 | 37.729 | 42.594 | 46.060 | 50.885 | 56.178 | 61.081 | 60.929 | 46.958 |
| N° 25 | 13.897 | 21.183 | 29.355 | 33.574 | 38.289 | 43.270 | 46.426 | 51.231 | 56.698 | 61.612 | 62.203 | 47.101 |
| N° 26 | 13.959 | 20.975 | 28.929 | 33.451 | 37.940 | 42.903 | 45.973 | 51.015 | 56.276 | 60.776 | 60.757 | 46.375 |
| N° 27 | 14.261 | 21.267 | 28.938 | 33.126 | 37.642 | 42.793 | 45.495 | 50.139 | 55.562 | 60.170 | 60.140 | 46.844 |
| N° 28 | 14.276 | 21.044 | 29.317 | 33.256 | 37.522 | 42.042 | 45.419 | 50.357 | 55.329 | 60.500 | 60.220 | 46.598 |
| N° 29 | 13.964 | 21.058 | 29.214 | 33.545 | 38.009 | 43.090 | 46.556 | 51.413 | 55.971 | 60.371 | 60.140 | 47.523 |
| N° 30 | 14.011 | 21.153 | 29.172 | 33.603 | 38.302 | 43.428 | 46.817 | 51.378 | 56.762 | 61.526 | 61.420 | 47.792 |
| N° 31 | 14.058 | 20.969 | 28.913 | 33.311 | 38.086 | 43.090 | 46.008 | 50.811 | 56.095 | 60.912 | 60.749 | 47.254 |

# 41. -IIB3, Module 1

**Ta=25°C; +VCC=5V; -VCC=GND; VCM=+1.4V**

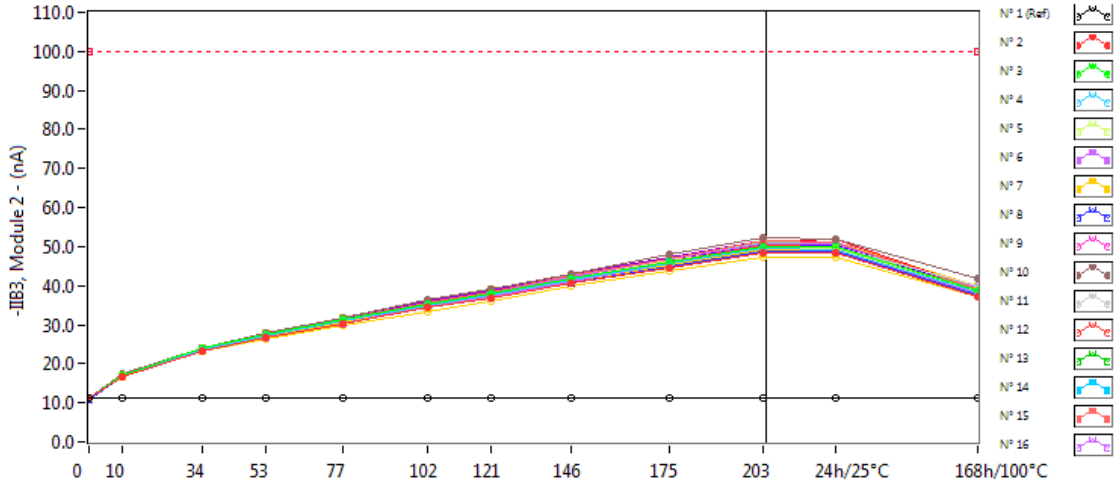



**-IIB3, Module 1 . (nA)** **Max = 100.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 11.630 | 11.631 | 11.596 | 11.910 | 11.555 | 11.625 | 11.541 | 11.652 | 11.630 | 11.546 | 11.603 | 11.698 |
| N° 2 | 11.546 | 17.349 | 23.976 | 27.434 | 30.857 | 34.969 | 37.701 | 41.548 | 45.912 | 49.726 | 49.587 | 38.435 |
| N° 3 | 11.587 | 17.519 | 24.359 | 27.959 | 31.636 | 35.847 | 38.599 | 42.824 | 47.395 | 51.247 | 51.331 | 40.058 |
| N° 4 | 11.412 | 17.268 | 24.011 | 27.618 | 31.254 | 35.268 | 37.971 | 42.011 | 46.471 | 50.211 | 50.096 | 38.990 |
| N° 5 | 11.581 | 17.425 | 24.140 | 27.977 | 31.633 | 35.862 | 38.583 | 42.809 | 47.115 | 51.286 | 51.159 | 39.522 |
| N° 6 | 11.474 | 17.282 | 23.867 | 27.541 | 31.124 | 35.259 | 37.975 | 41.788 | 46.330 | 50.051 | 50.101 | 38.791 |
| N° 7 | 11.754 | 17.543 | 24.127 | 27.977 | 31.652 | 35.728 | 38.414 | 42.368 | 47.273 | 51.466 | 51.399 | 40.748 |
| N° 8 | 11.381 | 17.219 | 23.804 | 27.672 | 31.216 | 35.483 | 38.062 | 41.949 | 46.566 | 50.415 | 50.368 | 38.862 |
| N° 9 | 11.467 | 17.398 | 24.119 | 27.856 | 31.672 | 35.970 | 38.735 | 42.963 | 47.627 | 51.793 | 51.801 | 40.988 |
| N° 10 | 11.594 | 17.655 | 24.283 | 28.140 | 32.129 | 36.640 | 39.709 | 43.557 | 48.473 | 52.868 | 52.806 | 42.165 |
| N° 11 | 11.565 | 17.412 | 23.840 | 27.833 | 31.527 | 35.762 | 39.075 | 42.874 | 47.373 | 51.522 | 51.387 | 40.857 |
| N° 12 | 11.473 | 17.377 | 23.952 | 27.681 | 31.326 | 35.503 | 38.364 | 42.551 | 46.962 | 51.062 | 50.944 | 39.314 |
| N° 13 | 11.510 | 17.172 | 23.606 | 27.262 | 31.003 | 35.103 | 37.618 | 41.616 | 45.693 | 49.927 | 49.565 | 38.648 |
| N° 14 | 11.478 | 17.240 | 24.126 | 27.474 | 31.165 | 35.218 | 37.870 | 41.809 | 46.409 | 50.027 | 49.978 | 38.524 |
| N° 15 | 11.443 | 17.434 | 24.230 | 27.877 | 31.786 | 36.411 | 38.900 | 43.392 | 47.803 | 52.237 | 51.759 | 39.987 |
| N° 16 | 11.769 | 17.616 | 24.317 | 27.968 | 31.715 | 36.211 | 38.698 | 42.677 | 47.245 | 51.175 | 51.107 | 39.482 |
| N° 17 | 11.635 | 17.003 | 23.806 | 27.203 | 30.444 | 34.229 | 36.893 | 40.769 | 44.628 | 48.039 | 47.887 | 37.744 |
| N° 18 | 11.386 | 17.223 | 24.047 | 27.771 | 31.534 | 35.926 | 38.659 | 42.643 | 47.260 | 51.509 | 51.528 | 39.410 |
| N° 19 | 11.479 | 17.646 | 24.432 | 28.289 | 32.189 | 36.548 | 39.640 | 43.735 | 48.537 | 52.713 | 52.775 | 40.390 |
| N° 20 | 11.625 | 17.777 | 24.630 | 28.943 | 32.822 | 36.818 | 39.746 | 43.965 | 48.756 | 52.901 | 53.064 | 40.472 |
| N° 21 | 11.666 | 17.476 | 24.040 | 27.562 | 31.584 | 35.224 | 37.728 | 41.804 | 46.069 | 49.805 | 49.899 | 38.806 |
| N° 22 | 11.532 | 17.443 | 23.804 | 27.752 | 31.337 | 35.595 | 38.395 | 42.093 | 46.623 | 50.637 | 50.521 | 39.042 |
| N° 23 | 11.283 | 17.176 | 23.807 | 27.601 | 31.491 | 35.774 | 38.503 | 42.620 | 47.074 | 51.062 | 51.151 | 39.465 |
| N° 24 | 11.438 | 17.435 | 24.326 | 28.200 | 31.929 | 36.235 | 39.013 | 43.091 | 47.811 | 52.096 | 51.896 | 40.224 |
| N° 25 | 11.392 | 17.403 | 23.870 | 28.162 | 31.779 | 35.933 | 38.699 | 42.708 | 47.313 | 51.545 | 52.219 | 39.532 |
| N° 26 | 11.312 | 17.374 | 24.005 | 28.327 | 31.822 | 36.236 | 38.853 | 42.965 | 47.539 | 51.791 | 51.708 | 39.790 |
| N° 27 | 11.577 | 17.473 | 24.060 | 28.119 | 31.693 | 35.791 | 38.393 | 42.376 | 46.949 | 50.970 | 50.988 | 39.677 |
| N° 28 | 11.494 | 17.064 | 23.952 | 27.819 | 30.895 | 34.897 | 37.697 | 41.941 | 46.357 | 50.564 | 50.529 | 39.851 |
| N° 29 | 11.552 | 17.445 | 24.514 | 28.621 | 31.922 | 36.305 | 39.294 | 43.687 | 48.093 | 51.823 | 51.818 | 40.533 |
| N° 30 | 11.070 | 16.980 | 23.459 | 27.723 | 31.170 | 35.485 | 38.525 | 42.244 | 46.777 | 50.870 | 50.783 | 39.818 |
| N° 31 | 11.372 | 17.406 | 24.125 | 28.162 | 31.683 | 36.312 | 39.145 | 43.357 | 47.962 | 52.151 | 52.097 | 41.205 |

# 42. -IIB3, Module 2

**Ta=25°C; +VCC=5V; -VCC=GND; VCM=+1.4V**

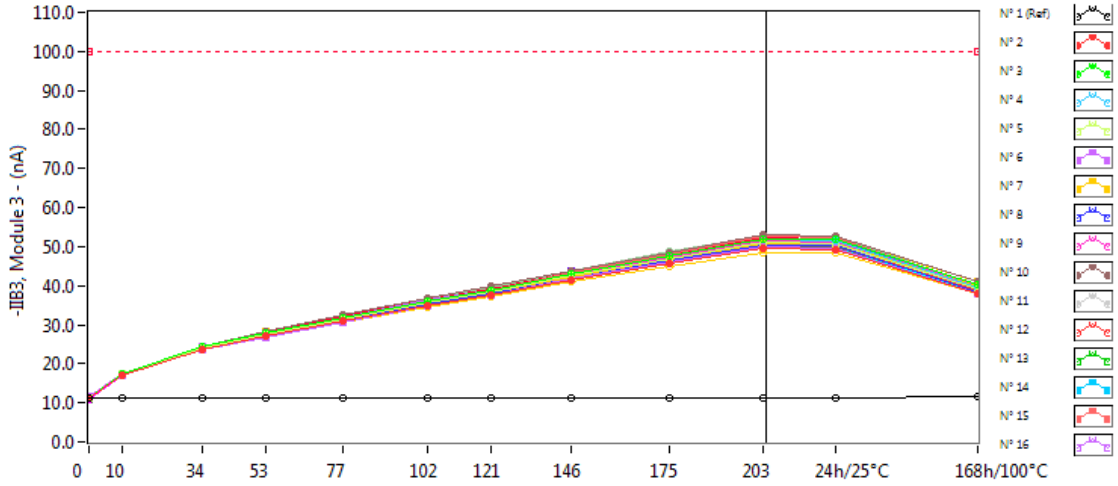



**-IIB3, Module 2 . (nA)** **Max = 100.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 11.218 | 11.189 | 11.169 | 11.265 | 11.145 | 11.164 | 11.132 | 11.225 | 11.206 | 11.125 | 11.190 | 11.262 |
| N° 2 | 11.158 | 16.819 | 23.320 | 26.778 | 30.379 | 34.342 | 36.835 | 40.555 | 44.724 | 48.547 | 48.280 | 37.194 |
| N° 3 | 11.144 | 17.046 | 23.878 | 27.404 | 31.219 | 35.266 | 37.948 | 41.874 | 46.281 | 50.144 | 50.064 | 38.788 |
| N° 4 | 11.088 | 16.819 | 23.576 | 26.974 | 30.870 | 34.813 | 37.568 | 41.447 | 45.741 | 49.410 | 49.343 | 38.162 |
| N° 5 | 11.244 | 17.037 | 23.618 | 27.155 | 30.881 | 34.975 | 37.473 | 41.482 | 45.862 | 49.692 | 49.449 | 38.398 |
| N° 6 | 11.060 | 16.972 | 23.530 | 26.755 | 30.399 | 34.670 | 37.200 | 41.201 | 45.699 | 49.453 | 49.344 | 37.899 |
| N° 7 | 11.114 | 16.791 | 23.275 | 26.763 | 30.467 | 34.407 | 37.045 | 40.974 | 45.510 | 49.301 | 49.118 | 38.747 |
| N° 8 | 10.942 | 16.798 | 23.377 | 26.826 | 30.466 | 34.720 | 37.113 | 40.851 | 45.107 | 48.937 | 48.707 | 37.680 |
| N° 9 | 11.008 | 16.719 | 23.368 | 26.760 | 30.533 | 34.602 | 37.142 | 41.030 | 45.491 | 49.249 | 49.045 | 38.265 |
| N° 10 | 11.276 | 17.302 | 24.153 | 27.711 | 31.874 | 36.374 | 39.213 | 43.096 | 47.933 | 52.201 | 52.086 | 41.691 |
| N° 11 | 11.139 | 16.943 | 23.525 | 26.859 | 30.681 | 34.614 | 37.627 | 41.365 | 45.804 | 49.965 | 49.817 | 39.769 |
| N° 12 | 11.051 | 16.953 | 23.399 | 27.056 | 30.933 | 35.127 | 37.812 | 41.734 | 46.171 | 50.181 | 49.990 | 38.503 |
| N° 13 | 11.085 | 16.809 | 23.297 | 26.914 | 30.797 | 34.921 | 37.348 | 41.339 | 45.531 | 49.672 | 49.496 | 38.080 |
| N° 14 | 11.134 | 16.975 | 23.715 | 27.060 | 31.039 | 35.113 | 37.664 | 41.714 | 45.914 | 49.879 | 49.822 | 38.245 |
| N° 15 | 11.125 | 17.102 | 23.987 | 27.548 | 31.471 | 35.812 | 38.388 | 42.730 | 47.029 | 51.340 | 50.938 | 39.134 |
| N° 16 | 11.307 | 17.166 | 23.783 | 27.189 | 31.285 | 35.447 | 38.052 | 42.165 | 46.778 | 50.723 | 50.574 | 39.604 |
| N° 17 | 11.151 | 16.593 | 23.131 | 26.242 | 29.771 | 33.462 | 36.213 | 40.015 | 43.851 | 47.278 | 47.095 | 37.009 |
| N° 18 | 10.892 | 16.767 | 23.370 | 26.906 | 30.828 | 35.152 | 37.707 | 41.507 | 45.976 | 49.793 | 49.810 | 38.253 |
| N° 19 | 11.094 | 17.276 | 23.925 | 27.618 | 31.410 | 35.888 | 38.754 | 42.800 | 47.423 | 51.698 | 51.265 | 39.271 |
| N° 20 | 11.223 | 17.259 | 24.042 | 27.855 | 31.870 | 35.838 | 38.819 | 42.653 | 47.227 | 51.155 | 51.233 | 39.195 |
| N° 21 | 11.201 | 17.010 | 23.516 | 27.050 | 30.861 | 34.649 | 37.171 | 41.008 | 45.154 | 48.697 | 48.844 | 37.894 |
| N° 22 | 11.171 | 16.996 | 23.164 | 26.758 | 30.414 | 34.485 | 37.051 | 40.664 | 45.019 | 48.711 | 48.624 | 37.646 |
| N° 23 | 10.947 | 16.707 | 23.419 | 26.960 | 30.632 | 34.774 | 37.338 | 41.231 | 45.564 | 49.397 | 49.221 | 37.851 |
| N° 24 | 11.104 | 17.111 | 23.969 | 27.570 | 31.405 | 35.552 | 38.395 | 42.418 | 46.889 | 50.895 | 50.777 | 39.614 |
| N° 25 | 11.120 | 17.072 | 23.689 | 27.411 | 31.290 | 35.677 | 38.411 | 42.510 | 47.010 | 51.244 | 51.830 | 39.121 |
| N° 26 | 11.013 | 16.825 | 23.390 | 27.017 | 30.931 | 34.967 | 37.728 | 41.645 | 45.886 | 49.803 | 49.716 | 38.305 |
| N° 27 | 11.132 | 16.988 | 23.531 | 27.099 | 30.959 | 35.025 | 37.533 | 41.443 | 45.839 | 49.761 | 49.725 | 39.126 |
| N° 28 | 11.258 | 16.817 | 23.713 | 26.903 | 30.470 | 34.335 | 37.140 | 41.167 | 45.236 | 49.448 | 49.464 | 38.710 |
| N° 29 | 11.063 | 16.932 | 23.974 | 27.644 | 31.423 | 35.817 | 38.586 | 42.698 | 46.735 | 50.509 | 50.461 | 39.245 |
| N° 30 | 11.160 | 17.113 | 23.786 | 27.723 | 31.633 | 35.838 | 38.947 | 42.631 | 47.166 | 51.243 | 51.193 | 40.061 |
| N° 31 | 11.121 | 17.045 | 23.778 | 27.400 | 31.349 | 35.553 | 38.210 | 42.184 | 46.671 | 50.761 | 50.628 | 39.738 |

# 43. -IIB3, Module 3

**Ta=25°C; +VCC=5V; -VCC=GND; VCM=+1.4V**

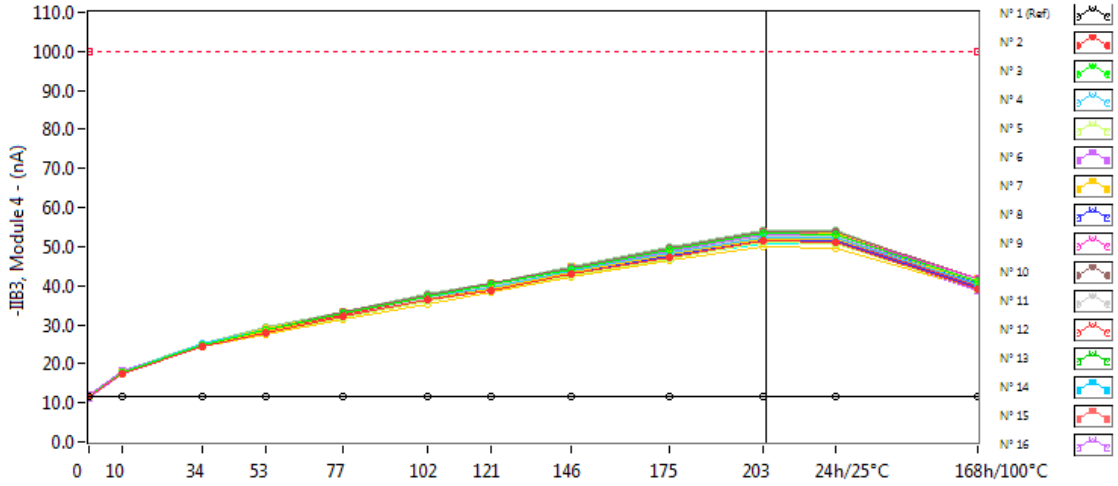



**-IIB3, Module 3 . (nA)** **Max = 100.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 11.413 | 11.390 | 11.381 | 11.426 | 11.332 | 11.413 | 11.349 | 11.414 | 11.424 | 11.350 | 11.403 | 11.462 |
| N° 2 | 11.204 | 16.951 | 23.721 | 27.178 | 31.027 | 35.013 | 37.600 | 41.484 | 45.639 | 49.580 | 49.357 | 38.147 |
| N° 3 | 11.350 | 17.397 | 24.223 | 27.885 | 31.781 | 36.104 | 38.847 | 43.096 | 47.675 | 51.865 | 51.728 | 40.103 |
| N° 4 | 11.322 | 17.374 | 24.361 | 27.954 | 31.760 | 36.107 | 38.867 | 43.065 | 47.732 | 51.720 | 51.629 | 39.377 |
| N° 5 | 11.273 | 17.362 | 24.052 | 27.642 | 31.542 | 35.717 | 38.453 | 42.549 | 47.012 | 51.074 | 50.858 | 39.011 |
| N° 6 | 11.044 | 16.889 | 23.663 | 26.862 | 30.687 | 34.950 | 37.631 | 41.667 | 45.990 | 49.799 | 49.661 | 37.989 |
| N° 7 | 11.364 | 17.131 | 23.840 | 27.493 | 31.416 | 35.598 | 38.282 | 42.369 | 46.890 | 50.881 | 50.692 | 39.900 |
| N° 8 | 11.178 | 17.046 | 23.764 | 27.255 | 30.979 | 35.344 | 37.780 | 41.870 | 46.370 | 50.346 | 50.168 | 38.335 |
| N° 9 | 11.248 | 17.146 | 24.066 | 27.605 | 31.472 | 35.845 | 38.519 | 42.682 | 47.278 | 51.480 | 51.258 | 40.470 |
| N° 10 | 11.254 | 17.468 | 24.401 | 28.245 | 32.397 | 36.857 | 39.797 | 43.697 | 48.563 | 52.940 | 52.623 | 41.213 |
| N° 11 | 11.231 | 17.130 | 23.784 | 27.311 | 31.092 | 35.341 | 38.320 | 42.024 | 46.746 | 50.605 | 50.514 | 39.851 |
| N° 12 | 11.058 | 17.002 | 23.708 | 27.349 | 31.346 | 35.478 | 38.248 | 42.318 | 46.636 | 50.663 | 50.580 | 38.723 |
| N° 13 | 11.311 | 17.287 | 23.987 | 27.573 | 31.359 | 35.666 | 38.276 | 42.327 | 46.702 | 50.916 | 50.779 | 38.930 |
| N° 14 | 11.232 | 17.145 | 23.936 | 27.297 | 31.457 | 35.784 | 38.552 | 42.621 | 47.238 | 51.191 | 51.074 | 38.815 |
| N° 15 | 11.157 | 17.293 | 24.206 | 27.927 | 31.954 | 35.897 | 38.893 | 43.452 | 48.088 | 52.622 | 52.325 | 39.777 |
| N° 16 | 11.516 | 17.408 | 24.365 | 27.890 | 31.899 | 36.224 | 38.922 | 42.783 | 47.381 | 51.481 | 51.443 | 39.299 |
| N° 17 | 11.379 | 16.936 | 23.822 | 27.060 | 30.592 | 34.474 | 37.209 | 41.185 | 45.052 | 48.594 | 48.439 | 38.055 |
| N° 18 | 11.015 | 16.953 | 23.632 | 27.242 | 31.112 | 35.638 | 38.143 | 42.127 | 46.714 | 50.687 | 50.518 | 38.402 |
| N° 19 | 11.050 | 17.040 | 23.976 | 27.450 | 31.572 | 35.690 | 38.583 | 42.723 | 47.298 | 51.342 | 51.193 | 39.178 |
| N° 20 | 11.257 | 17.516 | 24.382 | 28.304 | 32.350 | 36.640 | 39.455 | 43.630 | 48.697 | 52.772 | 52.837 | 40.016 |
| N° 21 | 11.199 | 17.120 | 23.703 | 27.295 | 31.177 | 35.086 | 37.670 | 41.476 | 45.761 | 49.436 | 49.411 | 38.395 |
| N° 22 | 11.287 | 17.236 | 23.783 | 27.598 | 31.637 | 35.914 | 38.796 | 42.479 | 47.075 | 50.965 | 50.725 | 38.865 |
| N° 23 | 10.907 | 16.902 | 23.465 | 27.089 | 31.078 | 35.267 | 38.008 | 41.882 | 46.219 | 50.223 | 50.070 | 38.281 |
| N° 24 | 11.122 | 17.102 | 24.062 | 27.747 | 31.591 | 35.947 | 38.578 | 42.771 | 47.479 | 51.531 | 51.381 | 39.757 |
| N° 25 | 11.192 | 17.288 | 24.177 | 28.000 | 31.984 | 36.372 | 39.131 | 43.235 | 47.979 | 52.258 | 52.842 | 39.664 |
| N° 26 | 11.145 | 17.028 | 23.602 | 27.380 | 31.294 | 35.647 | 38.399 | 42.471 | 46.757 | 50.754 | 50.507 | 38.614 |
| N° 27 | 11.240 | 17.334 | 23.861 | 27.685 | 31.476 | 35.651 | 38.114 | 42.149 | 46.736 | 50.905 | 50.845 | 38.984 |
| N° 28 | 11.271 | 17.017 | 24.045 | 27.471 | 31.003 | 34.915 | 37.867 | 42.119 | 46.487 | 50.674 | 50.580 | 38.951 |
| N° 29 | 11.168 | 17.357 | 24.180 | 27.953 | 32.013 | 36.522 | 39.264 | 43.594 | 47.442 | 51.378 | 51.229 | 40.212 |
| N° 30 | 11.336 | 17.538 | 24.275 | 28.100 | 32.125 | 36.502 | 39.579 | 43.654 | 48.250 | 52.515 | 52.468 | 40.897 |
| N° 31 | 11.225 | 17.193 | 23.829 | 27.632 | 31.492 | 35.967 | 38.564 | 42.731 | 47.368 | 51.512 | 51.448 | 40.219 |

# 44. -IIB3, Module 4

**Ta=25°C; +VCC=5V; -VCC=GND; VCM=+1.4V**

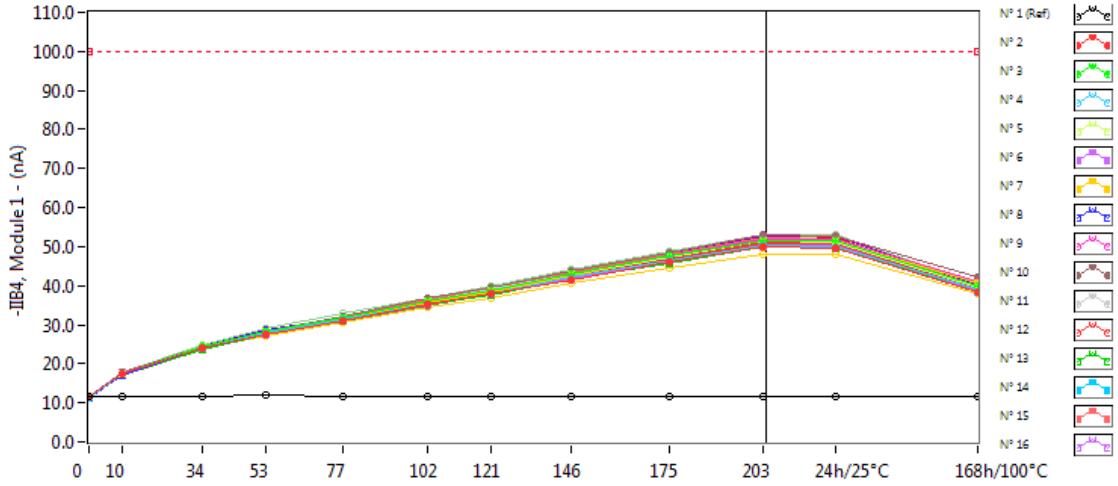



**-IIB3, Module 4 . (nA)** **Max = 100.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 11.695 | 11.694 | 11.668 | 11.702 | 11.638 | 11.696 | 11.637 | 11.718 | 11.720 | 11.618 | 11.701 | 11.757 |
| N° 2 | 11.571 | 17.560 | 24.372 | 27.995 | 32.042 | 36.264 | 38.911 | 42.860 | 47.438 | 51.462 | 51.261 | 39.167 |
| N° 3 | 11.651 | 17.800 | 24.919 | 28.719 | 32.946 | 37.271 | 40.139 | 44.340 | 49.109 | 53.279 | 53.235 | 41.113 |
| N° 4 | 11.621 | 17.856 | 25.023 | 28.602 | 32.794 | 37.050 | 39.685 | 43.821 | 48.445 | 52.419 | 52.212 | 40.206 |
| N° 5 | 11.654 | 17.619 | 24.467 | 27.925 | 31.835 | 35.975 | 38.599 | 42.581 | 47.053 | 51.088 | 50.801 | 39.162 |
| N° 6 | 11.403 | 17.422 | 24.342 | 27.873 | 31.769 | 36.059 | 38.696 | 42.745 | 47.366 | 51.245 | 50.973 | 38.922 |
| N° 7 | 11.689 | 17.672 | 24.586 | 28.092 | 32.050 | 36.400 | 39.270 | 43.403 | 48.034 | 52.035 | 51.906 | 41.049 |
| N° 8 | 11.410 | 17.563 | 24.517 | 28.276 | 32.000 | 36.394 | 39.008 | 42.994 | 47.593 | 51.653 | 51.414 | 39.400 |
| N° 9 | 11.617 | 17.702 | 24.833 | 28.641 | 32.828 | 37.249 | 40.117 | 44.144 | 49.048 | 53.441 | 53.160 | 41.975 |
| N° 10 | 11.616 | 17.972 | 25.101 | 28.756 | 33.138 | 37.730 | 40.486 | 44.547 | 49.440 | 53.899 | 53.689 | 41.819 |
| N° 11 | 11.610 | 17.689 | 24.571 | 28.290 | 32.337 | 36.804 | 39.896 | 43.805 | 48.527 | 52.659 | 52.549 | 41.417 |
| N° 12 | 11.502 | 17.695 | 24.652 | 28.352 | 32.296 | 36.650 | 39.425 | 43.514 | 47.988 | 52.005 | 51.838 | 39.695 |
| N° 13 | 11.664 | 17.579 | 24.437 | 28.126 | 32.073 | 36.347 | 38.955 | 43.136 | 47.714 | 51.993 | 51.621 | 39.379 |
| N° 14 | 11.675 | 17.712 | 24.625 | 28.114 | 32.047 | 36.233 | 39.038 | 43.058 | 47.476 | 51.465 | 51.266 | 39.106 |
| N° 15 | 11.453 | 17.688 | 24.947 | 28.634 | 32.784 | 37.346 | 40.152 | 44.563 | 49.283 | 53.684 | 53.251 | 40.927 |
| N° 16 | 11.822 | 18.030 | 24.960 | 28.584 | 32.839 | 37.302 | 39.864 | 44.004 | 48.783 | 52.871 | 52.686 | 40.322 |
| N° 17 | 11.733 | 17.444 | 24.440 | 27.551 | 31.405 | 35.439 | 38.298 | 42.259 | 46.438 | 49.871 | 49.678 | 39.122 |
| N° 18 | 11.271 | 17.377 | 24.369 | 27.911 | 32.044 | 36.586 | 39.133 | 43.066 | 48.053 | 51.968 | 51.832 | 39.284 |
| N° 19 | 11.459 | 17.703 | 24.714 | 28.357 | 32.242 | 36.777 | 39.678 | 43.630 | 48.495 | 52.719 | 52.526 | 40.231 |
| N° 20 | 11.753 | 18.125 | 25.357 | 29.376 | 33.472 | 37.784 | 40.711 | 45.036 | 49.968 | 54.210 | 54.107 | 41.249 |
| N° 21 | 11.712 | 17.790 | 24.746 | 28.264 | 32.229 | 36.343 | 38.949 | 42.957 | 47.198 | 50.932 | 50.987 | 39.314 |
| N° 22 | 11.623 | 17.843 | 24.740 | 28.509 | 32.628 | 36.934 | 39.848 | 43.638 | 48.434 | 52.381 | 52.359 | 39.927 |
| N° 23 | 11.300 | 17.521 | 24.452 | 28.201 | 32.174 | 36.635 | 39.494 | 43.588 | 48.230 | 52.247 | 52.107 | 39.717 |
| N° 24 | 11.440 | 17.627 | 24.698 | 28.400 | 32.511 | 36.800 | 39.911 | 44.176 | 48.882 | 53.153 | 53.017 | 40.826 |
| N° 25 | 11.492 | 17.891 | 25.125 | 28.853 | 33.101 | 37.526 | 40.297 | 44.591 | 49.383 | 53.663 | 54.176 | 41.023 |
| N° 26 | 11.504 | 17.646 | 24.628 | 28.646 | 32.663 | 37.050 | 39.718 | 44.169 | 48.837 | 52.738 | 52.737 | 40.177 |
| N° 27 | 11.754 | 17.835 | 24.613 | 28.337 | 32.359 | 36.863 | 39.298 | 43.416 | 48.201 | 52.217 | 52.215 | 40.587 |
| N° 28 | 11.738 | 17.656 | 24.912 | 28.428 | 32.182 | 36.178 | 39.164 | 43.610 | 47.976 | 52.458 | 52.231 | 40.347 |
| N° 29 | 11.453 | 17.628 | 24.784 | 28.631 | 32.554 | 37.077 | 40.066 | 44.388 | 48.359 | 52.218 | 52.027 | 41.051 |
| N° 30 | 11.616 | 17.862 | 24.966 | 28.934 | 33.119 | 37.668 | 40.661 | 44.748 | 49.545 | 53.685 | 53.562 | 41.657 |
| N° 31 | 11.550 | 17.601 | 24.513 | 28.422 | 32.671 | 37.115 | 39.672 | 43.930 | 48.558 | 52.741 | 52.571 | 40.859 |

# 45. -IIB4, Module 1

**Ta=25°C; +VCC=2.5V; -VCC=-2.5V; VCM=-1.1V**

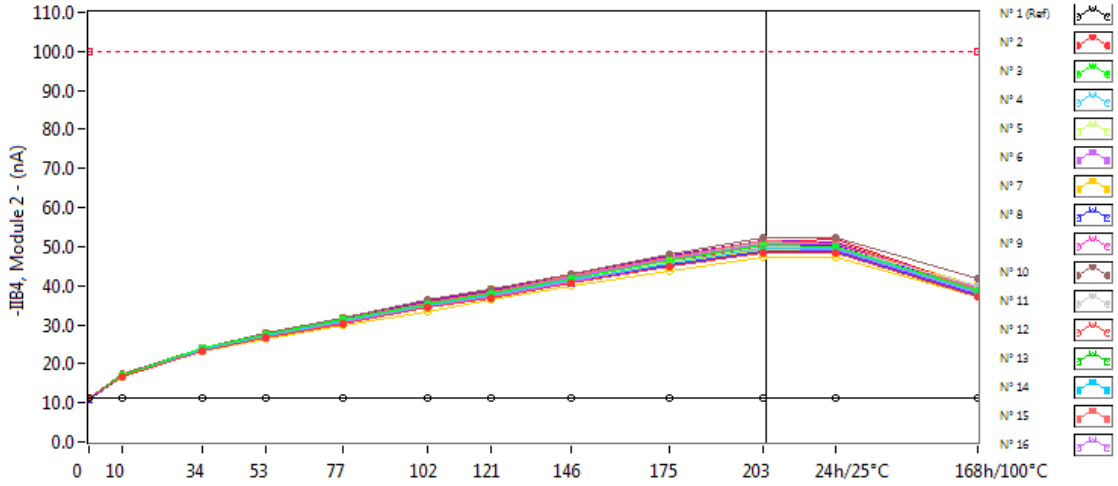



**-IIB4, Module 1 . (nA)** **Max = 100.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 11.622 | 11.613 | 11.581 | 11.903 | 11.535 | 11.571 | 11.515 | 11.626 | 11.625 | 11.534 | 11.593 | 11.667 |
| N° 2 | 11.520 | 17.352 | 24.016 | 27.561 | 30.915 | 35.081 | 37.793 | 41.612 | 46.044 | 49.789 | 49.680 | 38.447 |
| N° 3 | 11.578 | 17.510 | 24.410 | 28.090 | 31.692 | 35.924 | 38.637 | 42.837 | 47.503 | 51.398 | 51.406 | 40.046 |
| N° 4 | 11.399 | 17.296 | 24.057 | 27.751 | 31.362 | 35.354 | 38.055 | 42.049 | 46.553 | 50.292 | 50.146 | 38.991 |
| N° 5 | 11.574 | 17.452 | 24.221 | 28.058 | 31.731 | 35.977 | 38.639 | 42.861 | 47.233 | 51.333 | 51.187 | 39.558 |
| N° 6 | 11.475 | 17.289 | 23.926 | 27.552 | 31.196 | 35.346 | 38.025 | 41.872 | 46.414 | 50.138 | 50.180 | 38.767 |
| N° 7 | 11.734 | 17.560 | 24.181 | 28.090 | 31.717 | 35.811 | 38.492 | 42.607 | 47.349 | 51.547 | 51.397 | 40.709 |
| N° 8 | 11.368 | 17.230 | 23.861 | 27.767 | 31.291 | 35.592 | 38.151 | 42.053 | 46.627 | 50.478 | 50.430 | 38.873 |
| N° 9 | 11.442 | 17.427 | 24.189 | 27.876 | 31.750 | 36.069 | 38.770 | 42.997 | 47.632 | 51.866 | 51.877 | 41.007 |
| N° 10 | 11.577 | 17.655 | 24.378 | 28.264 | 32.192 | 36.731 | 39.700 | 43.616 | 48.520 | 52.981 | 52.854 | 42.163 |
| N° 11 | 11.579 | 17.459 | 23.926 | 27.907 | 31.619 | 35.850 | 39.097 | 42.878 | 47.395 | 51.504 | 51.456 | 40.833 |
| N° 12 | 11.457 | 17.385 | 24.017 | 27.801 | 31.396 | 35.575 | 38.457 | 42.656 | 47.037 | 51.120 | 50.996 | 39.277 |
| N° 13 | 11.493 | 17.223 | 23.629 | 27.411 | 31.041 | 35.172 | 37.735 | 41.659 | 45.777 | 49.901 | 49.635 | 38.654 |
| N° 14 | 11.445 | 17.246 | 24.160 | 27.471 | 31.204 | 35.223 | 37.929 | 41.906 | 46.408 | 50.083 | 49.986 | 38.507 |
| N° 15 | 11.438 | 17.430 | 24.290 | 27.906 | 31.831 | 36.440 | 38.934 | 43.431 | 47.881 | 52.271 | 51.824 | 39.965 |
| N° 16 | 11.766 | 17.650 | 24.356 | 28.036 | 31.782 | 36.292 | 38.800 | 42.773 | 47.312 | 51.227 | 51.135 | 39.510 |
| N° 17 | 11.614 | 17.027 | 23.866 | 27.277 | 30.498 | 34.345 | 36.937 | 40.836 | 44.733 | 48.182 | 47.950 | 37.768 |
| N° 18 | 11.380 | 17.235 | 24.078 | 27.820 | 31.638 | 35.995 | 38.702 | 42.657 | 47.343 | 51.599 | 51.567 | 39.437 |
| N° 19 | 11.469 | 17.659 | 24.424 | 28.455 | 32.278 | 36.630 | 39.628 | 43.804 | 48.609 | 52.840 | 52.804 | 40.395 |
| N° 20 | 11.608 | 17.800 | 24.653 | 28.966 | 32.839 | 36.830 | 39.843 | 44.015 | 48.855 | 52.966 | 53.138 | 40.473 |
| N° 21 | 11.659 | 17.459 | 24.144 | 27.652 | 31.599 | 35.287 | 37.802 | 41.867 | 46.098 | 49.847 | 49.903 | 38.824 |
| N° 22 | 11.549 | 17.440 | 23.856 | 27.723 | 31.382 | 35.661 | 38.444 | 42.185 | 46.697 | 50.705 | 50.575 | 39.051 |
| N° 23 | 11.270 | 17.189 | 23.825 | 27.755 | 31.569 | 35.853 | 38.574 | 42.650 | 47.249 | 51.133 | 51.155 | 39.458 |
| N° 24 | 11.442 | 17.436 | 24.393 | 28.280 | 31.990 | 36.334 | 39.104 | 43.146 | 47.881 | 52.112 | 52.010 | 40.216 |
| N° 25 | 11.385 | 17.407 | 23.930 | 28.185 | 31.852 | 36.020 | 38.783 | 42.792 | 47.382 | 51.534 | 52.220 | 39.536 |
| N° 26 | 11.291 | 17.365 | 24.100 | 28.355 | 31.919 | 36.278 | 38.925 | 42.977 | 47.617 | 51.880 | 51.771 | 39.777 |
| N° 27 | 11.557 | 17.512 | 24.110 | 28.221 | 31.757 | 35.892 | 38.438 | 42.423 | 47.080 | 51.023 | 51.022 | 39.659 |
| N° 28 | 11.480 | 17.064 | 24.011 | 27.979 | 30.989 | 34.996 | 37.766 | 42.016 | 46.388 | 50.687 | 50.544 | 39.838 |
| N° 29 | 11.554 | 17.458 | 24.548 | 28.706 | 31.945 | 36.357 | 39.399 | 43.792 | 48.166 | 51.935 | 51.843 | 40.548 |
| N° 30 | 11.079 | 16.992 | 23.541 | 27.768 | 31.243 | 35.590 | 38.605 | 42.331 | 46.829 | 50.913 | 50.813 | 39.849 |
| N° 31 | 11.383 | 17.378 | 24.156 | 28.198 | 31.748 | 36.391 | 39.179 | 43.439 | 48.007 | 52.205 | 52.135 | 41.215 |

# 46. -IIB4, Module 2

**Ta=25°C; +VCC=2.5V; -VCC=-2.5V; VCM=-1.1V**

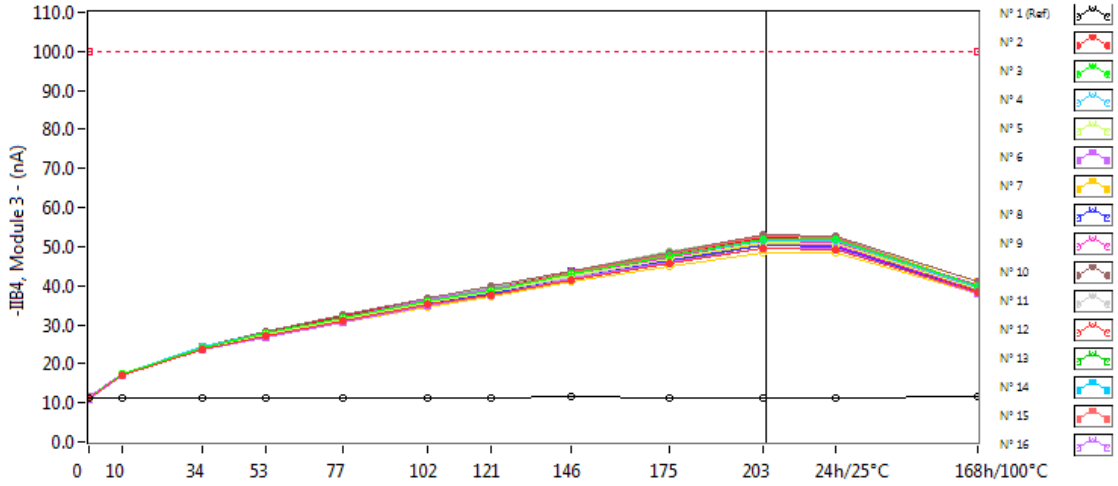



**-IIB4, Module 2 . (nA)** **Max = 100.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 11.203 | 11.180 | 11.172 | 11.221 | 11.114 | 11.180 | 11.110 | 11.220 | 11.197 | 11.119 | 11.174 | 11.249 |
| N° 2 | 11.146 | 16.828 | 23.319 | 26.790 | 30.382 | 34.324 | 36.839 | 40.599 | 44.791 | 48.582 | 48.277 | 37.158 |
| N° 3 | 11.123 | 17.014 | 23.896 | 27.466 | 31.274 | 35.308 | 38.018 | 41.923 | 46.293 | 50.187 | 50.090 | 38.802 |
| N° 4 | 11.086 | 16.814 | 23.563 | 27.019 | 30.891 | 34.820 | 37.592 | 41.572 | 45.779 | 49.390 | 49.387 | 38.156 |
| N° 5 | 11.243 | 17.027 | 23.596 | 27.123 | 30.890 | 35.048 | 37.487 | 41.563 | 45.935 | 49.717 | 49.502 | 38.395 |
| N° 6 | 11.069 | 16.971 | 23.541 | 26.783 | 30.441 | 34.683 | 37.243 | 41.193 | 45.666 | 49.450 | 49.353 | 37.873 |
| N° 7 | 11.123 | 16.797 | 23.253 | 26.747 | 30.468 | 34.449 | 37.052 | 41.024 | 45.534 | 49.335 | 49.136 | 38.733 |
| N° 8 | 10.955 | 16.787 | 23.375 | 26.775 | 30.448 | 34.745 | 37.177 | 40.834 | 45.188 | 48.992 | 48.696 | 37.688 |
| N° 9 | 10.986 | 16.714 | 23.410 | 26.781 | 30.562 | 34.623 | 37.162 | 41.078 | 45.446 | 49.289 | 49.065 | 38.265 |
| N° 10 | 11.276 | 17.303 | 24.172 | 27.695 | 31.937 | 36.430 | 39.241 | 43.168 | 47.966 | 52.242 | 52.106 | 41.667 |
| N° 11 | 11.145 | 16.925 | 23.522 | 26.886 | 30.692 | 34.611 | 37.602 | 41.381 | 45.850 | 49.971 | 49.813 | 39.750 |
| N° 12 | 11.034 | 16.958 | 23.433 | 27.027 | 30.936 | 35.158 | 37.845 | 41.770 | 46.257 | 50.196 | 50.059 | 38.510 |
| N° 13 | 11.066 | 16.818 | 23.297 | 26.868 | 30.795 | 34.942 | 37.375 | 41.375 | 45.568 | 49.708 | 49.526 | 38.073 |
| N° 14 | 11.125 | 16.936 | 23.677 | 27.090 | 31.060 | 35.182 | 37.716 | 41.746 | 45.930 | 49.909 | 49.801 | 38.268 |
| N° 15 | 11.132 | 17.099 | 23.994 | 27.481 | 31.453 | 35.820 | 38.374 | 42.722 | 47.097 | 51.339 | 50.929 | 39.110 |
| N° 16 | 11.295 | 17.182 | 23.792 | 27.187 | 31.271 | 35.479 | 38.068 | 42.195 | 46.831 | 50.731 | 50.595 | 39.585 |
| N° 17 | 11.125 | 16.598 | 23.138 | 26.243 | 29.799 | 33.463 | 36.283 | 40.005 | 43.906 | 47.317 | 47.107 | 36.990 |
| N° 18 | 10.871 | 16.734 | 23.348 | 26.928 | 30.843 | 35.172 | 37.721 | 41.550 | 46.057 | 49.868 | 49.823 | 38.235 |
| N° 19 | 11.104 | 17.183 | 23.907 | 27.560 | 31.454 | 35.939 | 38.735 | 42.825 | 47.482 | 51.583 | 51.299 | 39.276 |
| N° 20 | 11.190 | 17.235 | 24.069 | 27.868 | 31.848 | 35.872 | 38.837 | 42.723 | 47.227 | 51.158 | 51.284 | 39.182 |
| N° 21 | 11.189 | 16.986 | 23.563 | 27.102 | 30.834 | 34.688 | 37.183 | 41.058 | 45.187 | 48.775 | 48.843 | 37.871 |
| N° 22 | 11.177 | 17.001 | 23.167 | 26.736 | 30.446 | 34.520 | 37.142 | 40.678 | 45.065 | 48.711 | 48.607 | 37.644 |
| N° 23 | 10.919 | 16.693 | 23.420 | 26.956 | 30.670 | 34.809 | 37.308 | 41.265 | 45.568 | 49.453 | 49.216 | 37.878 |
| N° 24 | 11.105 | 17.108 | 23.988 | 27.482 | 31.431 | 35.625 | 38.408 | 42.454 | 46.970 | 50.946 | 50.833 | 39.618 |
| N° 25 | 11.113 | 17.064 | 23.702 | 27.438 | 31.309 | 35.693 | 38.363 | 42.528 | 47.042 | 51.255 | 51.851 | 39.112 |
| N° 26 | 10.996 | 16.838 | 23.416 | 27.035 | 30.945 | 35.006 | 37.748 | 41.664 | 45.937 | 49.877 | 49.738 | 38.299 |
| N° 27 | 11.151 | 16.990 | 23.538 | 27.190 | 30.946 | 35.055 | 37.536 | 41.453 | 45.915 | 49.830 | 49.748 | 39.140 |
| N° 28 | 11.247 | 16.825 | 23.700 | 26.865 | 30.502 | 34.347 | 37.150 | 41.198 | 45.249 | 49.509 | 49.444 | 38.723 |
| N° 29 | 11.051 | 16.922 | 23.972 | 27.649 | 31.451 | 35.801 | 38.609 | 42.712 | 46.773 | 50.561 | 50.508 | 39.249 |
| N° 30 | 11.146 | 17.098 | 23.833 | 27.710 | 31.654 | 35.870 | 38.952 | 42.693 | 47.225 | 51.332 | 51.188 | 40.055 |
| N° 31 | 11.113 | 17.035 | 23.778 | 27.386 | 31.415 | 35.564 | 38.208 | 42.249 | 46.725 | 50.799 | 50.658 | 39.728 |

# 47. -IIB4, Module 3

**Ta=25°C; +VCC=2.5V; -VCC=-2.5V; VCM=-1.1V**

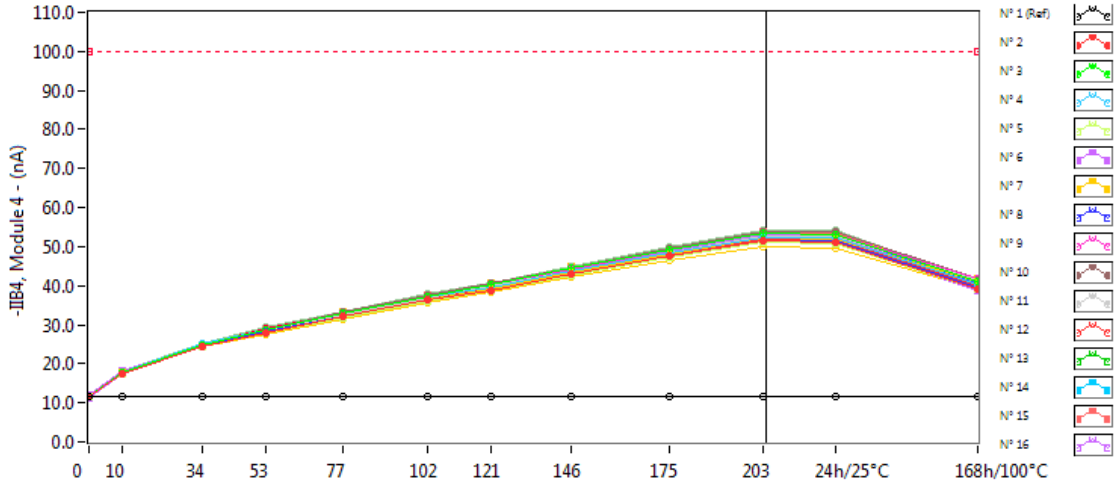



**-IIB4, Module 3 . (nA)** **Max = 100.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 11.400 | 11.388 | 11.386 | 11.416 | 11.320 | 11.377 | 11.332 | 11.429 | 11.415 | 11.328 | 11.398 | 11.460 |
| N° 2 | 11.198 | 16.915 | 23.707 | 27.183 | 31.028 | 35.058 | 37.601 | 41.520 | 45.603 | 49.643 | 49.377 | 38.156 |
| N° 3 | 11.344 | 17.383 | 24.188 | 27.886 | 31.765 | 36.133 | 38.830 | 43.120 | 47.714 | 51.896 | 51.776 | 40.075 |
| N° 4 | 11.314 | 17.361 | 24.385 | 27.946 | 31.802 | 36.118 | 38.855 | 43.051 | 47.756 | 51.687 | 51.637 | 39.386 |
| N° 5 | 11.264 | 17.330 | 24.076 | 27.662 | 31.550 | 35.712 | 38.480 | 42.564 | 47.032 | 51.129 | 50.902 | 38.997 |
| N° 6 | 11.024 | 16.876 | 23.608 | 26.855 | 30.682 | 35.014 | 37.664 | 41.660 | 45.977 | 49.768 | 49.660 | 37.979 |
| N° 7 | 11.349 | 17.098 | 23.855 | 27.467 | 31.453 | 35.680 | 38.298 | 42.420 | 46.922 | 50.862 | 50.731 | 39.912 |
| N° 8 | 11.163 | 17.024 | 23.760 | 27.261 | 30.977 | 35.324 | 37.835 | 41.899 | 46.395 | 50.337 | 50.155 | 38.311 |
| N° 9 | 11.234 | 17.126 | 24.052 | 27.624 | 31.501 | 35.803 | 38.537 | 42.677 | 47.294 | 51.471 | 51.279 | 40.464 |
| N° 10 | 11.230 | 17.443 | 24.459 | 28.207 | 32.409 | 36.863 | 39.803 | 43.739 | 48.557 | 52.931 | 52.683 | 41.189 |
| N° 11 | 11.231 | 17.132 | 23.779 | 27.284 | 31.095 | 35.332 | 38.336 | 42.082 | 46.730 | 50.638 | 50.546 | 39.852 |
| N° 12 | 11.044 | 17.009 | 23.695 | 27.357 | 31.374 | 35.488 | 38.236 | 42.298 | 46.663 | 50.723 | 50.547 | 38.706 |
| N° 13 | 11.294 | 17.267 | 23.974 | 27.590 | 31.352 | 35.676 | 38.284 | 42.354 | 46.748 | 50.938 | 50.816 | 38.934 |
| N° 14 | 11.207 | 17.150 | 23.920 | 27.291 | 31.474 | 35.812 | 38.558 | 42.683 | 47.190 | 51.174 | 51.113 | 38.804 |
| N° 15 | 11.149 | 17.290 | 24.219 | 27.919 | 31.947 | 35.878 | 38.865 | 43.444 | 48.141 | 52.652 | 52.331 | 39.755 |
| N° 16 | 11.505 | 17.409 | 24.347 | 27.931 | 31.949 | 36.250 | 38.941 | 42.820 | 47.423 | 51.507 | 51.447 | 39.279 |
| N° 17 | 11.358 | 16.936 | 23.826 | 27.057 | 30.560 | 34.476 | 37.221 | 41.164 | 45.033 | 48.583 | 48.416 | 38.049 |
| N° 18 | 11.001 | 16.950 | 23.651 | 27.234 | 31.096 | 35.637 | 38.196 | 42.187 | 46.764 | 50.700 | 50.502 | 38.405 |
| N° 19 | 11.042 | 17.030 | 23.947 | 27.431 | 31.555 | 35.678 | 38.572 | 42.665 | 47.328 | 51.359 | 51.253 | 39.188 |
| N° 20 | 11.249 | 17.530 | 24.410 | 28.326 | 32.395 | 36.660 | 39.482 | 43.631 | 48.677 | 52.726 | 52.854 | 40.036 |
| N° 21 | 11.192 | 17.093 | 23.699 | 27.254 | 31.166 | 35.038 | 37.695 | 41.508 | 45.777 | 49.448 | 49.411 | 38.399 |
| N° 22 | 11.285 | 17.253 | 23.791 | 27.645 | 31.648 | 35.986 | 38.807 | 42.489 | 47.095 | 50.957 | 50.765 | 38.856 |
| N° 23 | 10.896 | 16.895 | 23.473 | 27.107 | 31.096 | 35.252 | 38.033 | 41.889 | 46.237 | 50.231 | 50.134 | 38.282 |
| N° 24 | 11.119 | 17.106 | 24.056 | 27.749 | 31.585 | 35.945 | 38.644 | 42.762 | 47.470 | 51.554 | 51.366 | 39.754 |
| N° 25 | 11.192 | 17.258 | 24.168 | 27.998 | 31.997 | 36.441 | 39.123 | 43.258 | 47.956 | 52.300 | 52.848 | 39.669 |
| N° 26 | 11.133 | 17.030 | 23.588 | 27.401 | 31.291 | 35.629 | 38.409 | 42.525 | 46.767 | 50.781 | 50.564 | 38.592 |
| N° 27 | 11.223 | 17.292 | 23.855 | 27.644 | 31.467 | 35.649 | 38.108 | 42.172 | 46.792 | 50.905 | 50.833 | 38.986 |
| N° 28 | 11.281 | 17.024 | 24.012 | 27.473 | 30.998 | 34.926 | 37.872 | 42.103 | 46.506 | 50.658 | 50.623 | 38.952 |
| N° 29 | 11.174 | 17.337 | 24.161 | 27.942 | 32.041 | 36.572 | 39.303 | 43.576 | 47.454 | 51.422 | 51.192 | 40.215 |
| N° 30 | 11.328 | 17.509 | 24.259 | 28.076 | 32.142 | 36.512 | 39.572 | 43.686 | 48.315 | 52.554 | 52.481 | 40.880 |
| N° 31 | 11.246 | 17.144 | 23.798 | 27.682 | 31.475 | 35.983 | 38.611 | 42.726 | 47.391 | 51.553 | 51.436 | 40.206 |

# 48. -IIB4, Module 4

**Ta=25°C; +VCC=2.5V; -VCC=-2.5V; VCM=-1.1V**

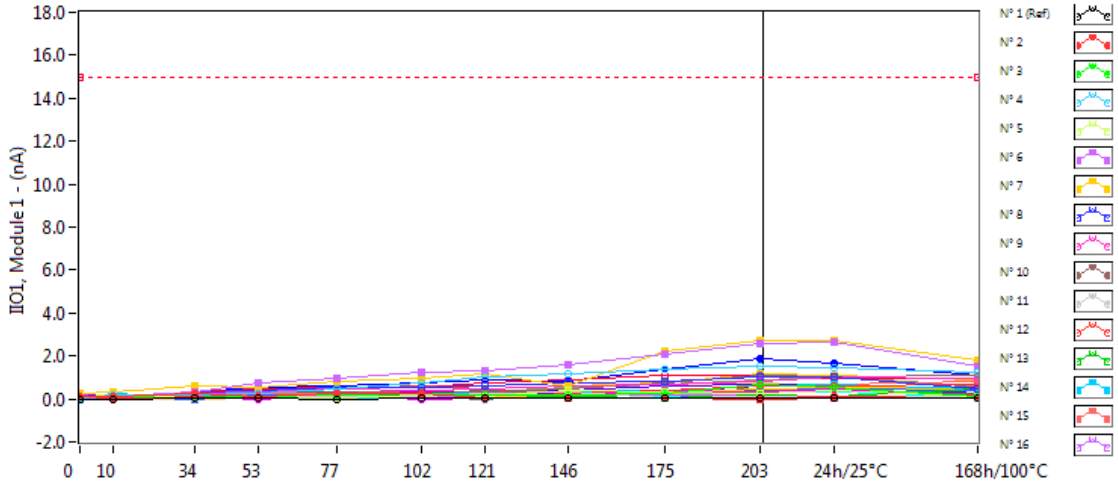



**-IIB4, Module 4 . (nA)** **Max = 100.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 11.700 | 11.686 | 11.646 | 11.665 | 11.625 | 11.680 | 11.611 | 11.699 | 11.704 | 11.602 | 11.688 | 11.745 |
| N° 2 | 11.555 | 17.549 | 24.360 | 27.975 | 32.023 | 36.243 | 38.926 | 42.865 | 47.495 | 51.449 | 51.303 | 39.159 |
| N° 3 | 11.642 | 17.812 | 24.875 | 28.740 | 32.952 | 37.272 | 40.109 | 44.415 | 49.153 | 53.297 | 53.221 | 41.088 |
| N° 4 | 11.627 | 17.846 | 25.003 | 28.650 | 32.783 | 37.023 | 39.693 | 43.808 | 48.456 | 52.431 | 52.185 | 40.210 |
| N° 5 | 11.649 | 17.607 | 24.448 | 27.899 | 31.837 | 36.043 | 38.605 | 42.628 | 47.091 | 51.129 | 50.844 | 39.154 |
| N° 6 | 11.387 | 17.423 | 24.333 | 27.869 | 31.766 | 36.101 | 38.686 | 42.805 | 47.271 | 51.293 | 50.999 | 38.885 |
| N° 7 | 11.685 | 17.655 | 24.575 | 28.053 | 32.051 | 36.383 | 39.259 | 43.421 | 48.037 | 52.115 | 51.944 | 41.045 |
| N° 8 | 11.411 | 17.563 | 24.505 | 28.287 | 32.004 | 36.395 | 39.045 | 43.032 | 47.620 | 51.655 | 51.409 | 39.396 |
| N° 9 | 11.613 | 17.712 | 24.844 | 28.656 | 32.819 | 37.281 | 40.127 | 44.144 | 49.078 | 53.409 | 53.162 | 41.938 |
| N° 10 | 11.595 | 17.988 | 25.083 | 28.752 | 33.125 | 37.711 | 40.504 | 44.571 | 49.498 | 53.823 | 53.675 | 41.858 |
| N° 11 | 11.600 | 17.680 | 24.566 | 28.286 | 32.346 | 36.814 | 39.868 | 43.849 | 48.480 | 52.654 | 52.541 | 41.426 |
| N° 12 | 11.493 | 17.696 | 24.645 | 28.333 | 32.310 | 36.647 | 39.393 | 43.521 | 48.025 | 51.994 | 51.868 | 39.681 |
| N° 13 | 11.643 | 17.558 | 24.447 | 28.124 | 32.061 | 36.360 | 38.933 | 43.154 | 47.710 | 52.007 | 51.626 | 39.393 |
| N° 14 | 11.657 | 17.701 | 24.609 | 28.103 | 32.065 | 36.242 | 39.041 | 43.038 | 47.473 | 51.435 | 51.309 | 39.125 |
| N° 15 | 11.433 | 17.698 | 24.934 | 28.661 | 32.803 | 37.379 | 40.147 | 44.601 | 49.288 | 53.651 | 53.290 | 40.906 |
| N° 16 | 11.817 | 18.016 | 24.923 | 28.625 | 32.843 | 37.282 | 39.888 | 44.032 | 48.812 | 52.907 | 52.674 | 40.317 |
| N° 17 | 11.718 | 17.446 | 24.398 | 27.545 | 31.403 | 35.490 | 38.290 | 42.304 | 46.396 | 49.861 | 49.704 | 39.126 |
| N° 18 | 11.277 | 17.387 | 24.363 | 27.919 | 32.028 | 36.579 | 39.139 | 43.084 | 48.065 | 51.984 | 51.867 | 39.284 |
| N° 19 | 11.463 | 17.687 | 24.685 | 28.362 | 32.257 | 36.823 | 39.674 | 43.683 | 48.462 | 52.738 | 52.562 | 40.255 |
| N° 20 | 11.750 | 18.090 | 25.324 | 29.361 | 33.441 | 37.779 | 40.701 | 45.082 | 49.992 | 54.256 | 54.161 | 41.241 |
| N° 21 | 11.696 | 17.782 | 24.715 | 28.240 | 32.217 | 36.342 | 38.926 | 42.977 | 47.226 | 50.989 | 51.010 | 39.329 |
| N° 22 | 11.620 | 17.802 | 24.763 | 28.516 | 32.609 | 36.930 | 39.867 | 43.608 | 48.413 | 52.415 | 52.389 | 39.899 |
| N° 23 | 11.296 | 17.480 | 24.457 | 28.195 | 32.203 | 36.661 | 39.463 | 43.580 | 48.250 | 52.246 | 52.089 | 39.688 |
| N° 24 | 11.437 | 17.634 | 24.680 | 28.368 | 32.495 | 36.880 | 39.940 | 44.200 | 48.888 | 53.130 | 53.032 | 40.803 |
| N° 25 | 11.478 | 17.887 | 25.080 | 28.865 | 33.060 | 37.527 | 40.290 | 44.643 | 49.367 | 53.713 | 54.231 | 41.013 |
| N° 26 | 11.504 | 17.604 | 24.631 | 28.627 | 32.637 | 37.050 | 39.722 | 44.231 | 48.803 | 52.781 | 52.699 | 40.206 |
| N° 27 | 11.750 | 17.857 | 24.591 | 28.329 | 32.338 | 36.900 | 39.264 | 43.418 | 48.161 | 52.254 | 52.194 | 40.600 |
| N° 28 | 11.731 | 17.653 | 24.927 | 28.370 | 32.207 | 36.186 | 39.173 | 43.628 | 47.962 | 52.472 | 52.254 | 40.326 |
| N° 29 | 11.448 | 17.630 | 24.724 | 28.586 | 32.548 | 37.034 | 40.075 | 44.359 | 48.419 | 52.233 | 52.058 | 41.012 |
| N° 30 | 11.601 | 17.858 | 24.971 | 28.926 | 33.124 | 37.630 | 40.631 | 44.794 | 49.582 | 53.678 | 53.602 | 41.662 |
| N° 31 | 11.533 | 17.591 | 24.537 | 28.411 | 32.604 | 37.127 | 39.675 | 43.957 | 48.575 | 52.740 | 52.591 | 40.847 |

# 49. IIO1, Module 1

**Ta=25°C; +VCC=30V; -VCC=GND; VCM=+15V**

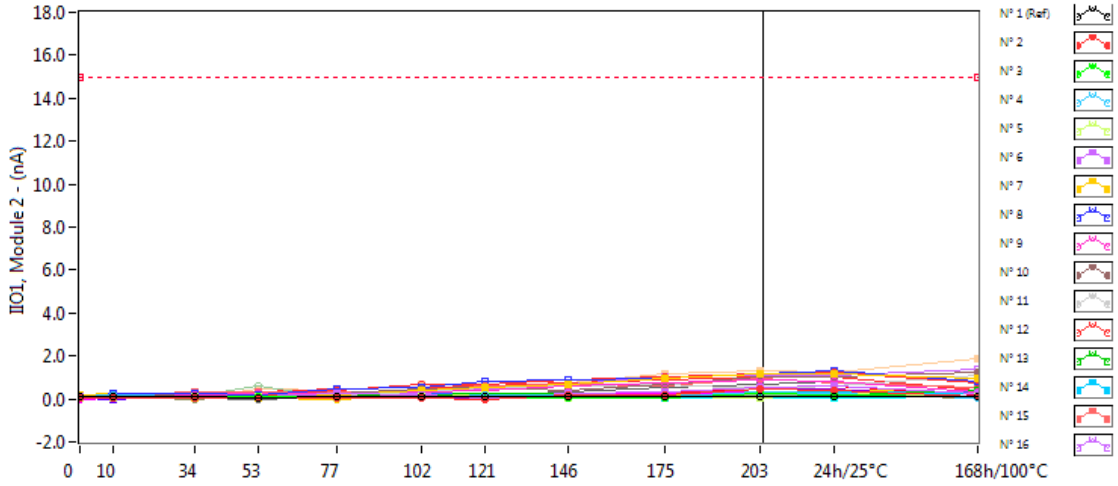



**IIO1, Module 1 . (nA)** **Max = 15.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 0.006 | 0.006 | 0.013 | 0.033 | 0.006 | 0.009 | 0.015 | 0.010 | 0.012 | 0.014 | 0.010 | 0.013 |
| N° 2 | 0.081 | 0.144 | 0.243 | 0.132 | 0.220 | 0.237 | 0.075 | 0.008 | 0.041 | 0.060 | 0.107 | 0.060 |
| N° 3 | 0.111 | 0.085 | 0.070 | 0.080 | 0.194 | 0.277 | 0.160 | 0.185 | 0.286 | 0.650 | 0.524 | 0.084 |
| N° 4 | 0.074 | 0.212 | 0.187 | 0.280 | 0.478 | 0.758 | 0.994 | 1.149 | 1.380 | 1.510 | 1.457 | 1.208 |
| N° 5 | 0.087 | 0.179 | 0.031 | 0.112 | 0.051 | 0.218 | 0.124 | 0.365 | 0.345 | 0.235 | 0.384 | 0.088 |
| N° 6 | 0.033 | 0.125 | 0.344 | 0.728 | 0.974 | 1.222 | 1.323 | 1.626 | 2.068 | 2.552 | 2.616 | 1.542 |
| N° 7 | 0.247 | 0.357 | 0.587 | 0.515 | 0.842 | 0.991 | 1.180 | 0.622 | 2.255 | 2.752 | 2.750 | 1.808 |
| N° 8 | 0.043 | 0.109 | 0.309 | 0.418 | 0.515 | 0.516 | 0.606 | 0.722 | 0.809 | 1.026 | 1.045 | 0.485 |
| N° 9 | 0.024 | 0.143 | 0.230 | 0.320 | 0.490 | 0.429 | 0.433 | 0.619 | 0.678 | 0.835 | 1.041 | 0.991 |
| N° 10 | 0.037 | 0.131 | 0.011 | 0.092 | 0.234 | 0.364 | 0.359 | 0.440 | 0.717 | 1.083 | 1.033 | 1.087 |
| N° 11 | 0.049 | 0.091 | 0.302 | 0.034 | 0.093 | 0.128 | 0.273 | 0.289 | 0.046 | 0.082 | 0.078 | 0.138 |
| N° 12 | 0.115 | 0.070 | 0.111 | 0.293 | 0.470 | 0.611 | 0.485 | 0.287 | 0.421 | 0.578 | 0.622 | 0.656 |
| N° 13 | 0.062 | 0.043 | 0.097 | 0.094 | 0.176 | 0.199 | 0.151 | 0.101 | 0.030 | 0.187 | 0.118 | 0.430 |
| N° 14 | 0.047 | 0.232 | 0.056 | 0.110 | 0.249 | 0.151 | 0.226 | 0.301 | 0.375 | 0.576 | 0.656 | 0.432 |
| N° 15 | 0.056 | 0.018 | 0.067 | 0.271 | 0.229 | 0.271 | 0.280 | 0.327 | 0.421 | 0.607 | 0.651 | 0.832 |
| N° 16 | 0.146 | 0.085 | 0.176 | 0.071 | 0.133 | 0.181 | 0.035 | 0.082 | 0.188 | 0.217 | 0.142 | 0.055 |
| N° 17 | 0.082 | 0.006 | 0.216 | 0.311 | 0.120 | 0.081 | 0.133 | 0.175 | 0.281 | 0.474 | 0.518 | 0.464 |
| N° 18 | 0.193 | 0.047 | 0.097 | 0.003 | 0.150 | 0.004 | 0.065 | 0.126 | 0.377 | 0.331 | 0.492 | 0.114 |
| N° 19 | 0.049 | 0.090 | 0.262 | 0.073 | 0.195 | 0.340 | 0.255 | 0.243 | 0.356 | 0.611 | 0.573 | 0.546 |
| N° 20 | 0.100 | 0.091 | 0.135 | 0.100 | 0.227 | 0.211 | 0.174 | 0.026 | 0.241 | 0.182 | 0.133 | 0.460 |
| N° 21 | 0.093 | 0.013 | 0.083 | 0.032 | 0.066 | 0.132 | 0.101 | 0.279 | 0.132 | 0.299 | 0.350 | 0.112 |
| N° 22 | 0.076 | 0.089 | 0.054 | 0.144 | 0.162 | 0.019 | 0.049 | 0.010 | 0.057 | 0.005 | 0.021 | 0.163 |
| N° 23 | 0.007 | 0.033 | 0.188 | 0.290 | 0.302 | 0.274 | 0.405 | 0.176 | 0.294 | 0.401 | 0.386 | 0.235 |
| N° 24 | 0.038 | 0.103 | 0.002 | 0.201 | 0.125 | 0.183 | 0.167 | 0.107 | 0.013 | 0.477 | 0.431 | 0.403 |
| N° 25 | 0.119 | 0.085 | 0.325 | 0.466 | 0.558 | 0.569 | 0.774 | 0.887 | 1.078 | 1.078 | 0.935 | 0.967 |
| N° 26 | 0.095 | 0.053 | 0.323 | 0.569 | 0.616 | 0.744 | 0.875 | 0.807 | 1.409 | 1.890 | 1.685 | 1.067 |
| N° 27 | 0.012 | 0.046 | 0.140 | 0.122 | 0.162 | 0.167 | 0.343 | 0.539 | 0.699 | 0.861 | 1.033 | 0.625 |
| N° 28 | 0.136 | 0.102 | 0.208 | 0.072 | 0.218 | 0.132 | 0.005 | 0.294 | 0.310 | 0.432 | 0.411 | 0.601 |
| N° 29 | 0.267 | 0.086 | 0.221 | 0.270 | 0.128 | 0.027 | 0.262 | 0.384 | 0.609 | 0.654 | 0.662 | 0.276 |
| N° 30 | 0.076 | 0.151 | 0.092 | 0.159 | 0.214 | 0.394 | 0.459 | 0.592 | 0.771 | 1.137 | 1.103 | 0.874 |
| N° 31 | 0.013 | 0.058 | 0.007 | 0.010 | 0.082 | 0.185 | 0.196 | 0.518 | 0.674 | 0.727 | 0.626 | 0.392 |

# 50. IIO1, Module 2

**Ta=25°C; +VCC=30V; -VCC=GND; VCM=+15V**

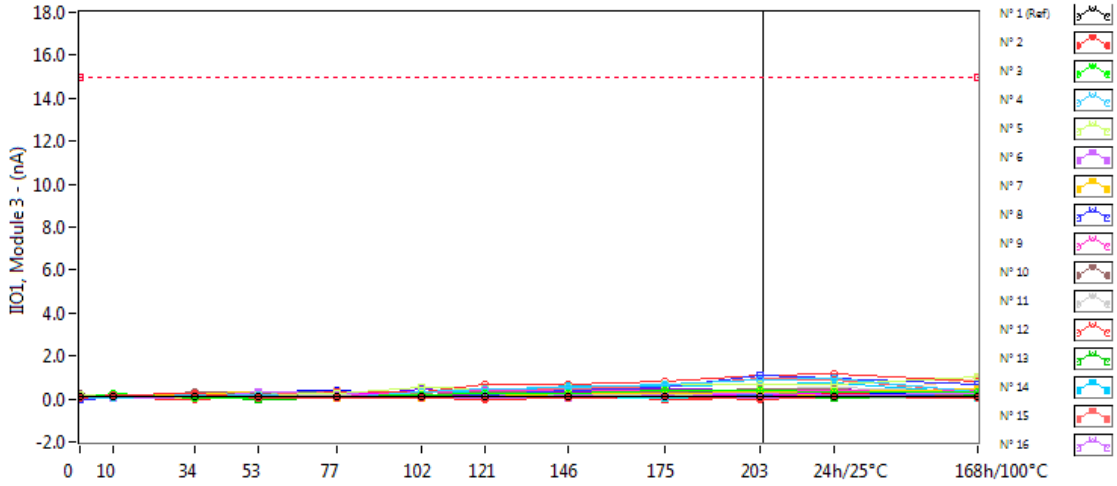



**IIO1, Module 2 . (nA)** **Max = 15.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 0.124 | 0.126 | 0.135 | 0.076 | 0.123 | 0.121 | 0.123 | 0.114 | 0.108 | 0.117 | 0.114 | 0.120 |
| N° 2 | 0.074 | 0.008 | 0.016 | 0.057 | 0.042 | 0.056 | 0.003 | 0.195 | 0.150 | 0.431 | 0.388 | 0.119 |
| N° 3 | 0.117 | 0.031 | 0.101 | 0.131 | 0.046 | 0.033 | 0.099 | 0.012 | 0.072 | 0.234 | 0.168 | 0.087 |
| N° 4 | 0.081 | 0.152 | 0.093 | 0.088 | 0.031 | 0.009 | 0.171 | 0.154 | 0.089 | 0.352 | 0.231 | 0.050 |
| N° 5 | 0.072 | 0.023 | 0.125 | 0.084 | 0.022 | 0.101 | 0.188 | 0.023 | 0.100 | 0.039 | 0.234 | 0.136 |
| N° 6 | 0.108 | 0.070 | 0.119 | 0.107 | 0.288 | 0.161 | 0.033 | 0.279 | 0.307 | 0.562 | 0.616 | 0.283 |
| N° 7 | 0.148 | 0.021 | 0.035 | 0.054 | 0.202 | 0.391 | 0.549 | 0.645 | 0.977 | 1.204 | 1.178 | 0.954 |
| N° 8 | 0.042 | 0.236 | 0.283 | 0.148 | 0.466 | 0.565 | 0.786 | 0.883 | 0.979 | 1.163 | 1.285 | 0.824 |
| N° 9 | 0.088 | 0.031 | 0.150 | 0.232 | 0.261 | 0.313 | 0.429 | 0.585 | 0.753 | 0.855 | 0.819 | 0.329 |
| N° 10 | 0.052 | 0.106 | 0.167 | 0.046 | 0.236 | 0.473 | 0.531 | 0.408 | 0.695 | 1.009 | 1.039 | 1.218 |
| N° 11 | 0.014 | 0.114 | 0.049 | 0.136 | 0.197 | 0.300 | 0.538 | 0.572 | 0.683 | 0.455 | 0.593 | 1.070 |
| N° 12 | 0.037 | 0.145 | 0.018 | 0.100 | 0.378 | 0.690 | 0.704 | 0.860 | 1.035 | 1.167 | 1.233 | 0.715 |
| N° 13 | 0.042 | 0.088 | 0.119 | 0.091 | 0.199 | 0.170 | 0.240 | 0.251 | 0.091 | 0.307 | 0.189 | 0.372 |
| N° 14 | 0.100 | 0.139 | 0.085 | 0.101 | 0.238 | 0.120 | 0.132 | 0.224 | 0.020 | 0.324 | 0.325 | 0.257 |
| N° 15 | 0.077 | 0.171 | 0.348 | 0.336 | 0.296 | 0.429 | 0.618 | 0.657 | 0.628 | 0.927 | 0.735 | 0.530 |
| N° 16 | 0.039 | 0.045 | 0.180 | 0.127 | 0.327 | 0.286 | 0.469 | 0.646 | 1.015 | 1.068 | 1.118 | 1.409 |
| N° 17 | 0.096 | 0.027 | 0.138 | 0.044 | 0.004 | 0.183 | 0.059 | 0.211 | 0.187 | 0.265 | 0.227 | 0.041 |
| N° 18 | 0.006 | 0.061 | 0.158 | 0.163 | 0.178 | 0.174 | 0.126 | 0.280 | 0.260 | 0.313 | 0.334 | 0.057 |
| N° 19 | 0.117 | 0.150 | 0.108 | 0.107 | 0.014 | 0.096 | 0.074 | 0.221 | 0.348 | 0.552 | 0.441 | 0.010 |
| N° 20 | 0.058 | 0.235 | 0.133 | 0.593 | 0.061 | 0.162 | 0.136 | 0.034 | 0.151 | 0.153 | 0.186 | 0.106 |
| N° 21 | 0.026 | 0.047 | 0.051 | 0.181 | 0.028 | 0.144 | 0.128 | 0.038 | 0.072 | 0.010 | 0.064 | 0.093 |
| N° 22 | 0.131 | 0.209 | 0.316 | 0.314 | 0.447 | 0.538 | 0.636 | 0.715 | 0.886 | 1.032 | 1.036 | 0.412 |
| N° 23 | 0.044 | 0.044 | 0.122 | 0.071 | 0.011 | 0.094 | 0.215 | 0.289 | 0.505 | 0.678 | 0.834 | 0.328 |
| N° 24 | 0.137 | 0.048 | 0.015 | 0.141 | 0.121 | 0.238 | 0.200 | 0.052 | 0.163 | 0.101 | 0.044 | 0.319 |
| N° 25 | 0.027 | 0.051 | 0.198 | 0.323 | 0.318 | 0.047 | 0.022 | 0.008 | 0.258 | 0.454 | 0.589 | 0.210 |
| N° 26 | 0.013 | 0.166 | 0.168 | 0.048 | 0.112 | 0.115 | 0.022 | 0.133 | 0.209 | 0.171 | 0.266 | 0.128 |
| N° 27 | 0.079 | 0.132 | 0.003 | 0.200 | 0.102 | 0.110 | 0.068 | 0.095 | 0.211 | 0.165 | 0.206 | 0.014 |
| N° 28 | 0.002 | 0.042 | 0.025 | 0.007 | 0.083 | 0.017 | 0.143 | 0.116 | 0.187 | 0.305 | 0.223 | 0.008 |
| N° 29 | 0.009 | 0.001 | 0.188 | 0.039 | 0.237 | 0.190 | 0.121 | 0.064 | 0.091 | 0.131 | 0.043 | 0.370 |
| N° 30 | 0.178 | 0.243 | 0.109 | 0.110 | 0.035 | 0.185 | 0.015 | 0.044 | 0.106 | 0.335 | 0.383 | 0.306 |
| N° 31 | 0.035 | 0.027 | 0.022 | 0.448 | 0.415 | 0.686 | 0.615 | 0.721 | 1.153 | 1.290 | 1.274 | 1.867 |

# 51. IIO1, Module 3

**Ta=25°C; +VCC=30V; -VCC=GND; VCM=+15V**

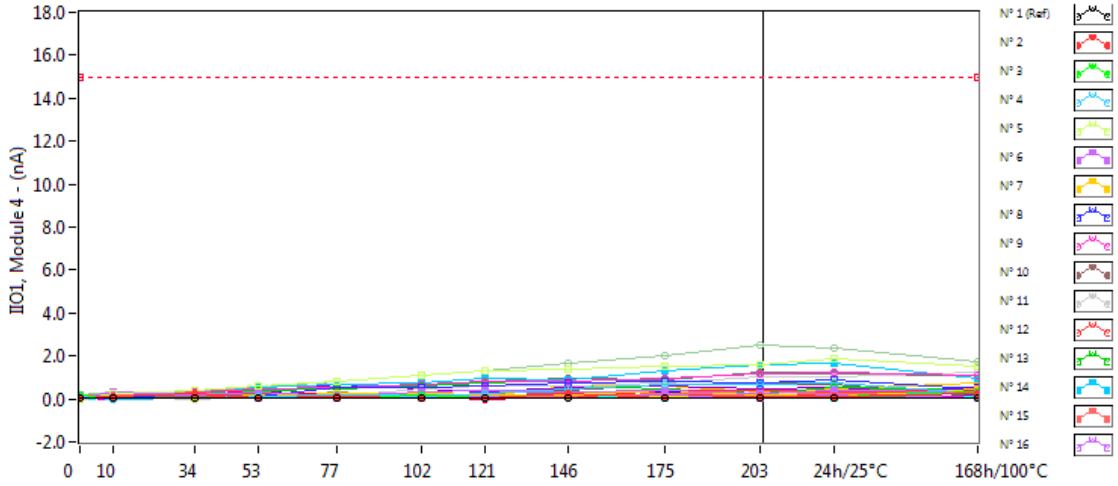



**IIO1, Module 3 . (nA)** **Max = 15.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 0.103 | 0.103 | 0.114 | 0.096 | 0.099 | 0.110 | 0.114 | 0.095 | 0.096 | 0.104 | 0.095 | 0.102 |
| N° 2 | 0.063 | 0.151 | 0.225 | 0.035 | 0.034 | 0.064 | 0.006 | 0.060 | 0.141 | 0.005 | 0.085 | 0.008 |
| N° 3 | 0.047 | 0.234 | 0.012 | 0.067 | 0.089 | 0.148 | 0.219 | 0.242 | 0.397 | 0.424 | 0.325 | 0.292 |
| N° 4 | 0.064 | 0.064 | 0.158 | 0.207 | 0.055 | 0.292 | 0.438 | 0.563 | 0.698 | 0.878 | 0.935 | 0.304 |
| N° 5 | 0.182 | 0.193 | 0.064 | 0.171 | 0.257 | 0.533 | 0.460 | 0.507 | 0.688 | 0.685 | 0.705 | 1.044 |
| N° 6 | 0.136 | 0.017 | 0.008 | 0.293 | 0.266 | 0.093 | 0.033 | 0.012 | 0.110 | 0.065 | 0.157 | 0.261 |
| N° 7 | 0.104 | 0.124 | 0.181 | 0.142 | 0.026 | 0.058 | 0.112 | 0.238 | 0.266 | 0.320 | 0.333 | 0.434 |
| N° 8 | 0.004 | 0.048 | 0.052 | 0.138 | 0.057 | 0.008 | 0.152 | 0.393 | 0.533 | 1.076 | 0.967 | 0.707 |
| N° 9 | 0.076 | 0.245 | 0.021 | 0.096 | 0.123 | 0.316 | 0.363 | 0.417 | 0.426 | 0.397 | 0.408 | 0.372 |
| N° 10 | 0.219 | 0.076 | 0.335 | 0.228 | 0.031 | 0.174 | 0.295 | 0.267 | 0.302 | 0.488 | 0.444 | 0.086 |
| N° 11 | 0.019 | 0.014 | 0.016 | 0.084 | 0.149 | 0.163 | 0.066 | 0.228 | 0.116 | 0.464 | 0.535 | 0.324 |
| N° 12 | 0.149 | 0.048 | 0.006 | 0.085 | 0.303 | 0.355 | 0.668 | 0.688 | 0.840 | 1.084 | 1.190 | 0.814 |
| N° 13 | 0.056 | 0.121 | 0.131 | 0.006 | 0.037 | 0.045 | 0.039 | 0.025 | 0.118 | 0.048 | 0.032 | 0.178 |
| N° 14 | 0.098 | 0.088 | 0.009 | 0.012 | 0.124 | 0.341 | 0.291 | 0.617 | 0.595 | 0.675 | 0.727 | 0.223 |
| N° 15 | 0.028 | 0.040 | 0.010 | 0.213 | 0.353 | 0.316 | 0.395 | 0.456 | 0.582 | 0.932 | 0.919 | 0.357 |
| N° 16 | 0.007 | 0.021 | 0.009 | 0.041 | 0.078 | 0.053 | 0.209 | 0.212 | 0.164 | 0.244 | 0.390 | 0.202 |
| N° 17 | 0.009 | 0.199 | 0.220 | 0.321 | 0.172 | 0.198 | 0.046 | 0.134 | 0.113 | 0.140 | 0.180 | 0.117 |
| N° 18 | 0.006 | 0.013 | 0.124 | 0.053 | 0.194 | 0.353 | 0.314 | 0.260 | 0.246 | 0.127 | 0.299 | 0.354 |
| N° 19 | 0.019 | 0.111 | 0.241 | 0.014 | 0.131 | 0.129 | 0.272 | 0.352 | 0.438 | 0.402 | 0.472 | 0.172 |
| N° 20 | 0.045 | 0.105 | 0.224 | 0.256 | 0.250 | 0.302 | 0.296 | 0.146 | 0.096 | 0.029 | 0.033 | 0.110 |
| N° 21 | 0.023 | 0.016 | 0.075 | 0.045 | 0.094 | 0.027 | 0.022 | 0.099 | 0.067 | 0.082 | 0.042 | 0.014 |
| N° 22 | 0.133 | 0.097 | 0.015 | 0.099 | 0.040 | 0.132 | 0.144 | 0.178 | 0.007 | 0.066 | 0.194 | 0.237 |
| N° 23 | 0.215 | 0.099 | 0.277 | 0.271 | 0.257 | 0.104 | 0.128 | 0.314 | 0.295 | 0.384 | 0.419 | 0.328 |
| N° 24 | 0.070 | 0.088 | 0.198 | 0.205 | 0.139 | 0.127 | 0.234 | 0.234 | 0.240 | 0.164 | 0.212 | 0.173 |
| N° 25 | 0.005 | 0.053 | 0.178 | 0.033 | 0.019 | 0.015 | 0.062 | 0.037 | 0.008 | 0.151 | 0.244 | 0.126 |
| N° 26 | 0.065 | 0.029 | 0.188 | 0.316 | 0.399 | 0.215 | 0.067 | 0.023 | 0.096 | 0.097 | 0.171 | 0.355 |
| N° 27 | 0.034 | 0.201 | 0.199 | 0.034 | 0.236 | 0.225 | 0.035 | 0.074 | 0.042 | 0.224 | 0.222 | 0.054 |
| N° 28 | 0.103 | 0.029 | 0.249 | 0.332 | 0.344 | 0.322 | 0.267 | 0.120 | 0.242 | 0.277 | 0.199 | 0.099 |
| N° 29 | 0.071 | 0.140 | 0.119 | 0.045 | 0.058 | 0.431 | 0.277 | 0.200 | 0.062 | 0.051 | 0.066 | 0.163 |
| N° 30 | 0.103 | 0.192 | 0.070 | 0.045 | 0.091 | 0.201 | 0.207 | 0.149 | 0.241 | 0.044 | 0.059 | 0.308 |
| N° 31 | 0.046 | 0.050 | 0.092 | 0.146 | 0.412 | 0.167 | 0.213 | 0.212 | 0.316 | 0.112 | 0.103 | 0.934 |

# 52. IIO1, Module 4

**Ta=25°C; +VCC=30V; -VCC=GND; VCM=+15V**

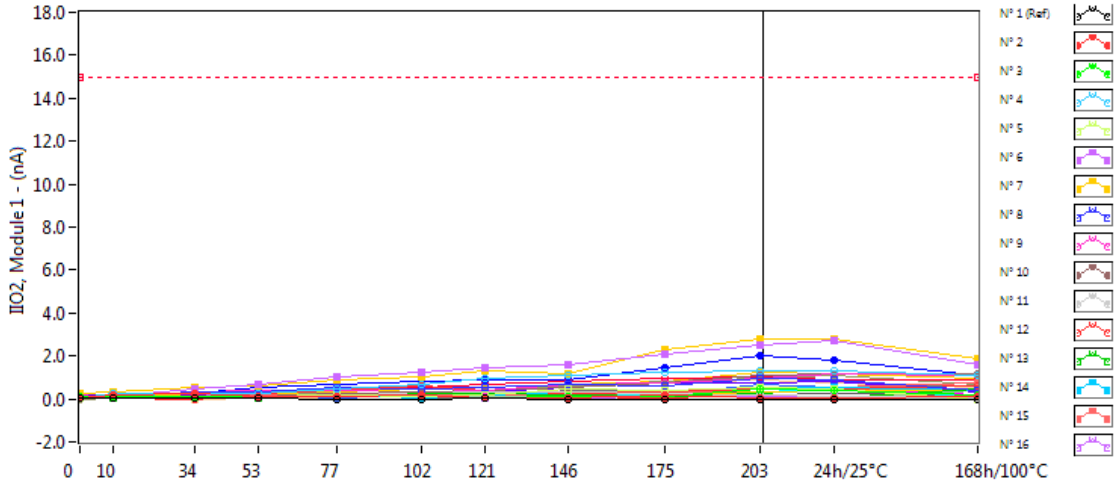



**IIO1, Module 4 . (nA)** **Max = 15.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 0.038 | 0.033 | 0.036 | 0.018 | 0.036 | 0.025 | 0.017 | 0.033 | 0.031 | 0.033 | 0.043 | 0.037 |
| N° 2 | 0.025 | 0.141 | 0.282 | 0.041 | 0.128 | 0.017 | 0.075 | 0.267 | 0.076 | 0.147 | 0.079 | 0.229 |
| N° 3 | 0.150 | 0.027 | 0.045 | 0.057 | 0.035 | 0.201 | 0.015 | 0.012 | 0.008 | 0.131 | 0.141 | 0.296 |
| N° 4 | 0.093 | 0.002 | 0.051 | 0.118 | 0.149 | 0.110 | 0.274 | 0.460 | 0.681 | 0.708 | 0.730 | 0.233 |
| N° 5 | 0.002 | 0.264 | 0.419 | 0.625 | 0.786 | 1.081 | 1.343 | 1.350 | 1.509 | 1.625 | 1.868 | 1.526 |
| N° 6 | 0.052 | 0.343 | 0.216 | 0.312 | 0.143 | 0.305 | 0.373 | 0.344 | 0.418 | 0.287 | 0.384 | 0.312 |
| N° 7 | 0.035 | 0.074 | 0.051 | 0.104 | 0.252 | 0.221 | 0.191 | 0.176 | 0.393 | 0.186 | 0.121 | 0.448 |
| N° 8 | 0.070 | 0.111 | 0.044 | 0.100 | 0.513 | 0.537 | 0.594 | 0.773 | 0.786 | 0.759 | 0.880 | 0.465 |
| N° 9 | 0.135 | 0.036 | 0.337 | 0.437 | 0.567 | 0.660 | 0.819 | 0.824 | 0.976 | 1.138 | 1.238 | 1.114 |
| N° 10 | 0.072 | 0.111 | 0.131 | 0.251 | 0.045 | 0.023 | 0.178 | 0.226 | 0.019 | 0.086 | 0.103 | 0.059 |
| N° 11 | 0.003 | 0.093 | 0.006 | 0.096 | 0.099 | 0.431 | 0.581 | 0.632 | 0.748 | 1.004 | 0.996 | 1.269 |
| N° 12 | 0.029 | 0.235 | 0.107 | 0.059 | 0.016 | 0.080 | 0.034 | 0.070 | 0.360 | 0.423 | 0.333 | 0.404 |
| N° 13 | 0.043 | 0.045 | 0.344 | 0.390 | 0.497 | 0.621 | 0.713 | 0.606 | 0.486 | 0.235 | 0.530 | 0.405 |
| N° 14 | 0.069 | 0.058 | 0.278 | 0.502 | 0.704 | 0.749 | 0.927 | 0.892 | 1.331 | 1.577 | 1.650 | 0.990 |
| N° 15 | 0.196 | 0.166 | 0.225 | 0.080 | 0.149 | 0.061 | 0.201 | 0.137 | 0.242 | 0.197 | 0.223 | 0.273 |
| N° 16 | 0.015 | 0.136 | 0.124 | 0.072 | 0.029 | 0.052 | 0.143 | 0.159 | 0.159 | 0.068 | 0.171 | 0.016 |
| N° 17 | 0.012 | 0.125 | 0.076 | 0.215 | 0.109 | 0.038 | 0.044 | 0.049 | 0.100 | 0.042 | 0.059 | 0.329 |
| N° 18 | 0.027 | 0.007 | 0.039 | 0.074 | 0.033 | 0.096 | 0.100 | 0.059 | 0.430 | 0.226 | 0.404 | 0.042 |
| N° 19 | 0.024 | 0.045 | 0.179 | 0.243 | 0.670 | 0.446 | 0.349 | 0.539 | 0.573 | 0.475 | 0.535 | 0.184 |
| N° 20 | 0.151 | 0.347 | 0.312 | 0.531 | 0.847 | 1.097 | 1.284 | 1.652 | 2.025 | 2.487 | 2.350 | 1.766 |
| N° 21 | 0.003 | 0.071 | 0.068 | 0.030 | 0.114 | 0.167 | 0.050 | 0.090 | 0.037 | 0.060 | 0.076 | 0.081 |
| N° 22 | 0.103 | 0.118 | 0.010 | 0.022 | 0.135 | 0.146 | 0.115 | 0.163 | 0.175 | 0.247 | 0.078 | 0.259 |
| N° 23 | 0.030 | 0.060 | 0.084 | 0.185 | 0.015 | 0.330 | 0.385 | 0.367 | 0.673 | 0.780 | 0.676 | 0.089 |
| N° 24 | 0.024 | 0.079 | 0.046 | 0.039 | 0.177 | 0.203 | 0.035 | 0.133 | 0.141 | 0.185 | 0.157 | 0.050 |
| N° 25 | 0.121 | 0.183 | 0.429 | 0.295 | 0.152 | 0.143 | 0.007 | 0.116 | 0.110 | 0.201 | 0.182 | 0.340 |
| N° 26 | 0.067 | 0.049 | 0.051 | 0.368 | 0.034 | 0.023 | 0.044 | 0.267 | 0.299 | 0.125 | 0.156 | 0.097 |
| N° 27 | 0.155 | 0.244 | 0.019 | 0.030 | 0.291 | 0.074 | 0.236 | 0.104 | 0.063 | 0.165 | 0.190 | 0.110 |
| N° 28 | 0.039 | 0.096 | 0.366 | 0.404 | 0.555 | 0.627 | 0.798 | 0.981 | 0.889 | 1.206 | 1.147 | 1.066 |
| N° 29 | 0.013 | 0.088 | 0.070 | 0.018 | 0.112 | 0.098 | 0.084 | 0.187 | 0.013 | 0.099 | 0.134 | 0.551 |
| N° 30 | 0.038 | 0.064 | 0.139 | 0.080 | 0.068 | 0.241 | 0.138 | 0.611 | 0.588 | 0.318 | 0.469 | 0.771 |
| N° 31 | 0.069 | 0.071 | 0.014 | 0.029 | 0.130 | 0.288 | 0.080 | 0.093 | 0.135 | 0.237 | 0.206 | 0.559 |

# 53. IIO2, Module 1

**Ta=25°C; +VCC=2V; -VCC=-28V; VCM=-13V**

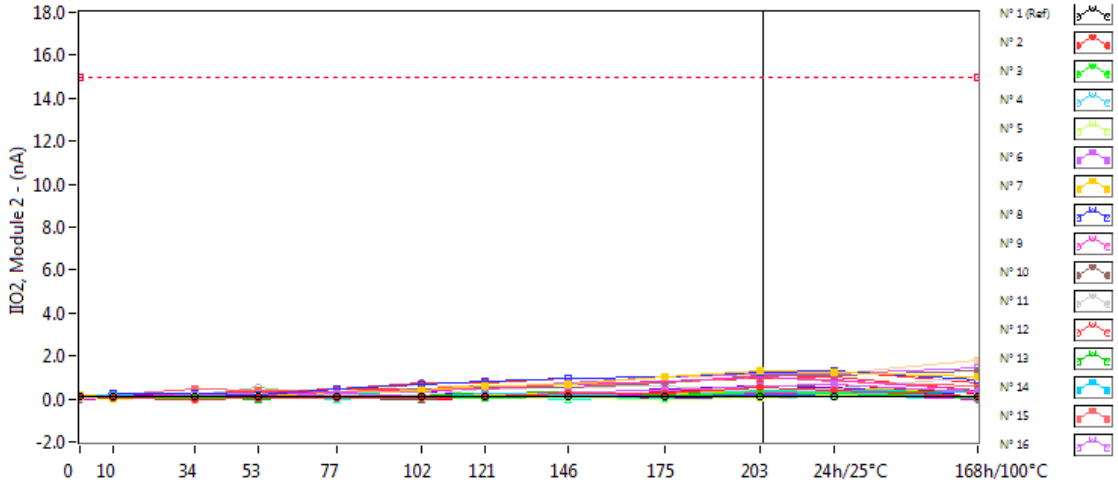



**IIO2, Module 1 . (nA)** **Max = 15.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 0.008 | 0.014 | 0.012 | 0.034 | 0.006 | 0.007 | 0.015 | 0.007 | 0.006 | 0.006 | 0.004 | 0.001 |
| N° 2 | 0.077 | 0.162 | 0.230 | 0.103 | 0.133 | 0.182 | 0.055 | 0.024 | 0.155 | 0.036 | 0.026 | 0.125 |
| N° 3 | 0.102 | 0.146 | 0.081 | 0.107 | 0.102 | 0.148 | 0.059 | 0.112 | 0.129 | 0.440 | 0.384 | 0.162 |
| N° 4 | 0.071 | 0.241 | 0.240 | 0.219 | 0.449 | 0.699 | 0.944 | 1.071 | 1.239 | 1.328 | 1.296 | 1.098 |
| N° 5 | 0.073 | 0.105 | 0.061 | 0.116 | 0.149 | 0.108 | 0.162 | 0.499 | 0.397 | 0.563 | 0.449 | 0.002 |
| N° 6 | 0.029 | 0.140 | 0.434 | 0.679 | 1.013 | 1.249 | 1.420 | 1.587 | 2.112 | 2.500 | 2.722 | 1.565 |
| N° 7 | 0.254 | 0.338 | 0.507 | 0.617 | 0.878 | 1.039 | 1.277 | 1.167 | 2.312 | 2.812 | 2.794 | 1.864 |
| N° 8 | 0.047 | 0.088 | 0.327 | 0.355 | 0.515 | 0.469 | 0.520 | 0.647 | 0.582 | 0.923 | 0.865 | 0.421 |
| N° 9 | 0.022 | 0.102 | 0.323 | 0.406 | 0.392 | 0.480 | 0.428 | 0.692 | 0.735 | 0.952 | 1.139 | 1.088 |
| N° 10 | 0.039 | 0.207 | 0.024 | 0.101 | 0.276 | 0.357 | 0.392 | 0.526 | 0.766 | 1.110 | 1.141 | 1.149 |
| N° 11 | 0.042 | 0.145 | 0.307 | 0.052 | 0.098 | 0.291 | 0.324 | 0.342 | 0.219 | 0.158 | 0.132 | 0.068 |
| N° 12 | 0.109 | 0.056 | 0.007 | 0.288 | 0.419 | 0.577 | 0.378 | 0.228 | 0.308 | 0.451 | 0.446 | 0.594 |
| N° 13 | 0.063 | 0.049 | 0.024 | 0.016 | 0.228 | 0.268 | 0.246 | 0.174 | 0.131 | 0.227 | 0.053 | 0.475 |
| N° 14 | 0.034 | 0.230 | 0.038 | 0.051 | 0.168 | 0.047 | 0.176 | 0.303 | 0.324 | 0.433 | 0.566 | 0.363 |
| N° 15 | 0.062 | 0.031 | 0.016 | 0.206 | 0.195 | 0.165 | 0.148 | 0.272 | 0.276 | 0.494 | 0.550 | 0.770 |
| N° 16 | 0.146 | 0.157 | 0.220 | 0.077 | 0.163 | 0.202 | 0.066 | 0.015 | 0.094 | 0.127 | 0.114 | 0.049 |
| N° 17 | 0.093 | 0.028 | 0.233 | 0.299 | 0.115 | 0.094 | 0.013 | 0.053 | 0.174 | 0.305 | 0.391 | 0.382 |
| N° 18 | 0.191 | 0.039 | 0.025 | 0.047 | 0.159 | 0.042 | 0.166 | 0.213 | 0.317 | 0.468 | 0.559 | 0.200 |
| N° 19 | 0.045 | 0.074 | 0.178 | 0.044 | 0.171 | 0.215 | 0.197 | 0.239 | 0.253 | 0.508 | 0.390 | 0.480 |
| N° 20 | 0.105 | 0.057 | 0.141 | 0.063 | 0.156 | 0.133 | 0.107 | 0.058 | 0.151 | 0.118 | 0.021 | 0.369 |
| N° 21 | 0.096 | 0.078 | 0.056 | 0.039 | 0.090 | 0.204 | 0.160 | 0.280 | 0.198 | 0.342 | 0.480 | 0.140 |
| N° 22 | 0.081 | 0.028 | 0.127 | 0.149 | 0.080 | 0.085 | 0.043 | 0.109 | 0.049 | 0.178 | 0.076 | 0.198 |
| N° 23 | 0.014 | 0.045 | 0.142 | 0.232 | 0.211 | 0.171 | 0.313 | 0.024 | 0.253 | 0.352 | 0.254 | 0.156 |
| N° 24 | 0.036 | 0.090 | 0.047 | 0.173 | 0.013 | 0.208 | 0.230 | 0.187 | 0.160 | 0.684 | 0.504 | 0.425 |
| N° 25 | 0.121 | 0.074 | 0.348 | 0.381 | 0.453 | 0.556 | 0.694 | 0.792 | 0.933 | 1.039 | 0.901 | 0.894 |
| N° 26 | 0.088 | 0.036 | 0.283 | 0.559 | 0.659 | 0.820 | 0.919 | 0.861 | 1.439 | 2.014 | 1.791 | 1.084 |
| N° 27 | 0.004 | 0.039 | 0.184 | 0.172 | 0.255 | 0.250 | 0.422 | 0.598 | 0.811 | 0.944 | 1.068 | 0.674 |
| N° 28 | 0.136 | 0.074 | 0.199 | 0.072 | 0.180 | 0.050 | 0.027 | 0.362 | 0.410 | 0.484 | 0.514 | 0.637 |
| N° 29 | 0.270 | 0.088 | 0.247 | 0.278 | 0.175 | 0.065 | 0.304 | 0.525 | 0.764 | 0.777 | 0.846 | 0.349 |
| N° 30 | 0.069 | 0.149 | 0.063 | 0.148 | 0.305 | 0.468 | 0.525 | 0.676 | 0.805 | 1.237 | 1.153 | 0.961 |
| N° 31 | 0.015 | 0.110 | 0.001 | 0.013 | 0.041 | 0.181 | 0.331 | 0.555 | 0.781 | 0.864 | 0.745 | 0.505 |

# 54. IIO2, Module 2

**Ta=25°C; +VCC=2V; -VCC=-28V; VCM=-13V**

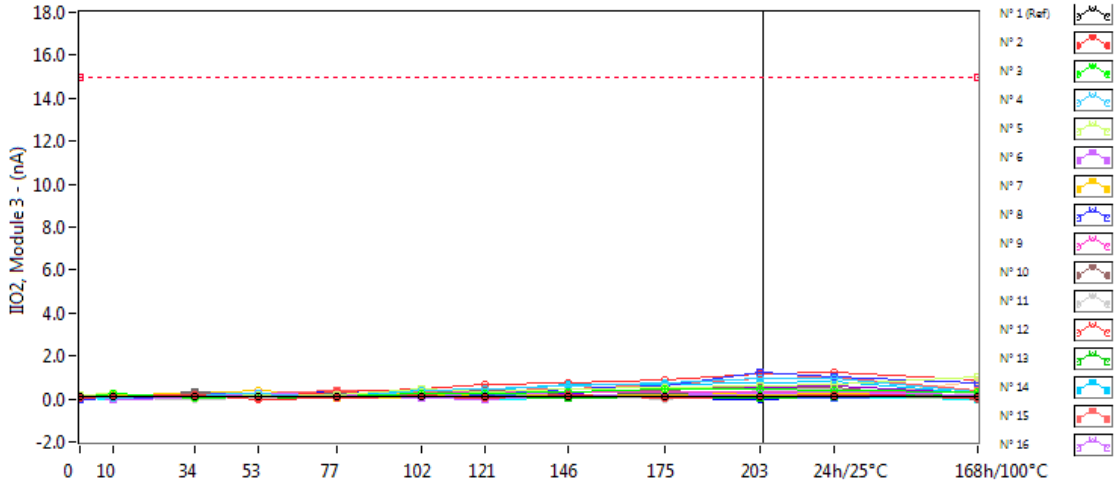



**IIO2, Module 2 . (nA)** **Max = 15.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 0.126 | 0.120 | 0.139 | 0.096 | 0.131 | 0.126 | 0.130 | 0.111 | 0.106 | 0.107 | 0.111 | 0.111 |
| N° 2 | 0.080 | 0.028 | 0.006 | 0.009 | 0.074 | 0.077 | 0.083 | 0.257 | 0.245 | 0.510 | 0.404 | 0.099 |
| N° 3 | 0.109 | 0.034 | 0.077 | 0.101 | 0.011 | 0.060 | 0.014 | 0.094 | 0.103 | 0.329 | 0.257 | 0.058 |
| N° 4 | 0.079 | 0.174 | 0.071 | 0.087 | 0.058 | 0.010 | 0.240 | 0.194 | 0.135 | 0.375 | 0.331 | 0.105 |
| N° 5 | 0.075 | 0.003 | 0.118 | 0.132 | 0.061 | 0.059 | 0.147 | 0.059 | 0.006 | 0.061 | 0.172 | 0.104 |
| N° 6 | 0.108 | 0.029 | 0.159 | 0.017 | 0.252 | 0.136 | 0.009 | 0.302 | 0.376 | 0.627 | 0.672 | 0.289 |
| N° 7 | 0.144 | 0.033 | 0.013 | 0.087 | 0.248 | 0.423 | 0.598 | 0.692 | 1.010 | 1.301 | 1.262 | 1.010 |
| N° 8 | 0.048 | 0.221 | 0.281 | 0.188 | 0.484 | 0.653 | 0.830 | 0.973 | 1.058 | 1.260 | 1.310 | 0.878 |
| N° 9 | 0.087 | 0.034 | 0.221 | 0.215 | 0.301 | 0.405 | 0.443 | 0.662 | 0.848 | 0.996 | 0.907 | 0.385 |
| N° 10 | 0.045 | 0.094 | 0.206 | 0.015 | 0.251 | 0.483 | 0.533 | 0.519 | 0.767 | 1.067 | 1.117 | 1.311 |
| N° 11 | 0.023 | 0.091 | 0.050 | 0.151 | 0.198 | 0.193 | 0.455 | 0.534 | 0.573 | 0.326 | 0.483 | 0.993 |
| N° 12 | 0.038 | 0.132 | 0.016 | 0.117 | 0.456 | 0.757 | 0.749 | 0.935 | 1.060 | 1.273 | 1.277 | 0.714 |
| N° 13 | 0.038 | 0.121 | 0.085 | 0.004 | 0.212 | 0.213 | 0.270 | 0.289 | 0.173 | 0.354 | 0.228 | 0.388 |
| N° 14 | 0.105 | 0.127 | 0.132 | 0.100 | 0.251 | 0.176 | 0.118 | 0.281 | 0.031 | 0.428 | 0.393 | 0.296 |
| N° 15 | 0.080 | 0.192 | 0.452 | 0.380 | 0.300 | 0.461 | 0.632 | 0.681 | 0.744 | 1.014 | 0.815 | 0.582 |
| N° 16 | 0.046 | 0.064 | 0.203 | 0.237 | 0.343 | 0.300 | 0.535 | 0.718 | 1.061 | 1.163 | 1.148 | 1.454 |
| N° 17 | 0.101 | 0.013 | 0.102 | 0.045 | 0.009 | 0.117 | 0.169 | 0.252 | 0.224 | 0.360 | 0.192 | 0.083 |
| N° 18 | 0.002 | 0.068 | 0.062 | 0.160 | 0.173 | 0.136 | 0.096 | 0.169 | 0.163 | 0.247 | 0.251 | 0.006 |
| N° 19 | 0.121 | 0.180 | 0.106 | 0.132 | 0.035 | 0.108 | 0.094 | 0.284 | 0.434 | 0.575 | 0.517 | 0.059 |
| N° 20 | 0.064 | 0.206 | 0.158 | 0.548 | 0.105 | 0.178 | 0.233 | 0.009 | 0.176 | 0.032 | 0.093 | 0.083 |
| N° 21 | 0.025 | 0.077 | 0.075 | 0.187 | 0.006 | 0.185 | 0.132 | 0.001 | 0.101 | 0.084 | 0.136 | 0.057 |
| N° 22 | 0.125 | 0.162 | 0.274 | 0.321 | 0.467 | 0.466 | 0.575 | 0.673 | 0.821 | 0.963 | 1.003 | 0.395 |
| N° 23 | 0.048 | 0.035 | 0.208 | 0.008 | 0.046 | 0.007 | 0.144 | 0.240 | 0.447 | 0.529 | 0.703 | 0.313 |
| N° 24 | 0.138 | 0.022 | 0.064 | 0.128 | 0.063 | 0.201 | 0.139 | 0.086 | 0.115 | 0.203 | 0.164 | 0.353 |
| N° 25 | 0.023 | 0.044 | 0.190 | 0.317 | 0.244 | 0.006 | 0.022 | 0.085 | 0.293 | 0.564 | 0.683 | 0.286 |
| N° 26 | 0.008 | 0.190 | 0.183 | 0.041 | 0.162 | 0.100 | 0.064 | 0.117 | 0.102 | 0.077 | 0.105 | 0.080 |
| N° 27 | 0.079 | 0.100 | 0.016 | 0.106 | 0.184 | 0.138 | 0.010 | 0.033 | 0.153 | 0.123 | 0.115 | 0.098 |
| N° 28 | 0.005 | 0.033 | 0.077 | 0.044 | 0.080 | 0.046 | 0.113 | 0.014 | 0.196 | 0.244 | 0.126 | 0.063 |
| N° 29 | 0.012 | 0.043 | 0.157 | 0.091 | 0.271 | 0.291 | 0.170 | 0.099 | 0.008 | 0.024 | 0.132 | 0.310 |
| N° 30 | 0.174 | 0.194 | 0.088 | 0.041 | 0.018 | 0.125 | 0.102 | 0.126 | 0.168 | 0.376 | 0.447 | 0.368 |
| N° 31 | 0.041 | 0.030 | 0.000 | 0.377 | 0.346 | 0.676 | 0.546 | 0.648 | 1.002 | 1.128 | 1.161 | 1.774 |

# 55. IIO2, Module 3

**Ta=25°C; +VCC=2V; -VCC=-28V; VCM=-13V**

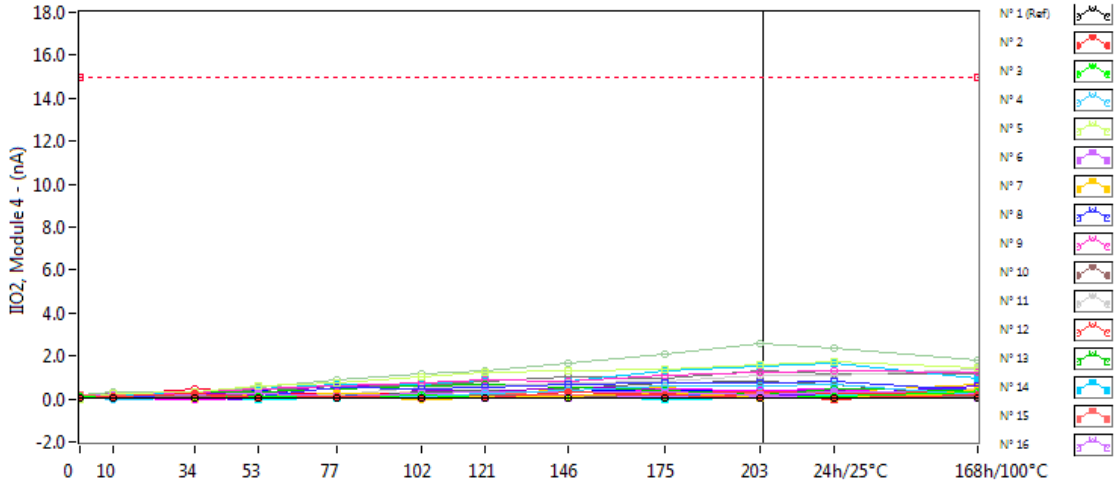



**IIO2, Module 3 . (nA)** **Max = 15.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 0.096 | 0.089 | 0.114 | 0.099 | 0.095 | 0.112 | 0.117 | 0.088 | 0.091 | 0.095 | 0.094 | 0.085 |
| N° 2 | 0.060 | 0.146 | 0.152 | 0.004 | 0.046 | 0.099 | 0.050 | 0.169 | 0.021 | 0.089 | 0.168 | 0.017 |
| N° 3 | 0.054 | 0.242 | 0.047 | 0.101 | 0.101 | 0.256 | 0.268 | 0.341 | 0.478 | 0.491 | 0.418 | 0.356 |
| N° 4 | 0.068 | 0.063 | 0.150 | 0.274 | 0.060 | 0.362 | 0.463 | 0.639 | 0.736 | 0.974 | 0.992 | 0.345 |
| N° 5 | 0.179 | 0.234 | 0.043 | 0.181 | 0.212 | 0.450 | 0.351 | 0.452 | 0.554 | 0.609 | 0.682 | 1.004 |
| N° 6 | 0.133 | 0.001 | 0.008 | 0.260 | 0.214 | 0.010 | 0.007 | 0.149 | 0.101 | 0.223 | 0.293 | 0.217 |
| N° 7 | 0.104 | 0.155 | 0.145 | 0.097 | 0.028 | 0.038 | 0.096 | 0.184 | 0.210 | 0.239 | 0.257 | 0.349 |
| N° 8 | 0.003 | 0.034 | 0.098 | 0.196 | 0.130 | 0.038 | 0.206 | 0.469 | 0.635 | 1.206 | 1.027 | 0.729 |
| N° 9 | 0.071 | 0.213 | 0.056 | 0.081 | 0.131 | 0.260 | 0.356 | 0.312 | 0.350 | 0.319 | 0.347 | 0.329 |
| N° 10 | 0.215 | 0.076 | 0.278 | 0.145 | 0.011 | 0.246 | 0.380 | 0.340 | 0.408 | 0.590 | 0.508 | 0.007 |
| N° 11 | 0.024 | 0.009 | 0.006 | 0.016 | 0.148 | 0.075 | 0.065 | 0.169 | 0.007 | 0.372 | 0.445 | 0.233 |
| N° 12 | 0.141 | 0.057 | 0.002 | 0.110 | 0.359 | 0.456 | 0.691 | 0.721 | 0.901 | 1.192 | 1.249 | 0.874 |
| N° 13 | 0.054 | 0.093 | 0.103 | 0.052 | 0.066 | 0.018 | 0.050 | 0.032 | 0.040 | 0.057 | 0.083 | 0.215 |
| N° 14 | 0.096 | 0.073 | 0.034 | 0.033 | 0.181 | 0.415 | 0.385 | 0.688 | 0.687 | 0.753 | 0.795 | 0.274 |
| N° 15 | 0.023 | 0.037 | 0.018 | 0.222 | 0.362 | 0.338 | 0.412 | 0.474 | 0.703 | 0.973 | 1.017 | 0.413 |
| N° 16 | 0.012 | 0.008 | 0.008 | 0.026 | 0.025 | 0.044 | 0.297 | 0.212 | 0.212 | 0.351 | 0.467 | 0.241 |
| N° 17 | 0.001 | 0.181 | 0.229 | 0.365 | 0.165 | 0.280 | 0.079 | 0.197 | 0.030 | 0.187 | 0.225 | 0.149 |
| N° 18 | 0.007 | 0.020 | 0.073 | 0.042 | 0.153 | 0.347 | 0.287 | 0.204 | 0.130 | 0.059 | 0.168 | 0.316 |
| N° 19 | 0.023 | 0.079 | 0.257 | 0.014 | 0.197 | 0.127 | 0.275 | 0.459 | 0.526 | 0.501 | 0.581 | 0.246 |
| N° 20 | 0.047 | 0.131 | 0.200 | 0.231 | 0.200 | 0.230 | 0.292 | 0.073 | 0.145 | 0.166 | 0.114 | 0.076 |
| N° 21 | 0.011 | 0.004 | 0.046 | 0.079 | 0.072 | 0.095 | 0.007 | 0.047 | 0.011 | 0.108 | 0.131 | 0.005 |
| N° 22 | 0.140 | 0.098 | 0.017 | 0.123 | 0.093 | 0.159 | 0.221 | 0.187 | 0.044 | 0.044 | 0.121 | 0.212 |
| N° 23 | 0.215 | 0.082 | 0.323 | 0.219 | 0.199 | 0.077 | 0.069 | 0.289 | 0.236 | 0.213 | 0.331 | 0.297 |
| N° 24 | 0.062 | 0.085 | 0.219 | 0.228 | 0.130 | 0.059 | 0.178 | 0.153 | 0.107 | 0.074 | 0.065 | 0.186 |
| N° 25 | 0.001 | 0.063 | 0.136 | 0.026 | 0.110 | 0.032 | 0.027 | 0.024 | 0.161 | 0.248 | 0.245 | 0.065 |
| N° 26 | 0.060 | 0.016 | 0.206 | 0.271 | 0.292 | 0.180 | 0.004 | 0.042 | 0.054 | 0.003 | 0.092 | 0.368 |
| N° 27 | 0.034 | 0.179 | 0.124 | 0.014 | 0.192 | 0.182 | 0.035 | 0.035 | 0.064 | 0.341 | 0.370 | 0.129 |
| N° 28 | 0.105 | 0.009 | 0.219 | 0.255 | 0.262 | 0.306 | 0.255 | 0.089 | 0.164 | 0.191 | 0.086 | 0.043 |
| N° 29 | 0.071 | 0.142 | 0.095 | 0.035 | 0.081 | 0.497 | 0.303 | 0.257 | 0.021 | 0.146 | 0.010 | 0.268 |
| N° 30 | 0.103 | 0.171 | 0.032 | 0.043 | 0.043 | 0.150 | 0.133 | 0.052 | 0.127 | 0.062 | 0.026 | 0.367 |
| N° 31 | 0.045 | 0.043 | 0.066 | 0.130 | 0.355 | 0.118 | 0.184 | 0.143 | 0.174 | 0.008 | 0.013 | 0.832 |

# 56. IIO2, Module 4

**Ta=25°C; +VCC=2V; -VCC=-28V; VCM=-13V**

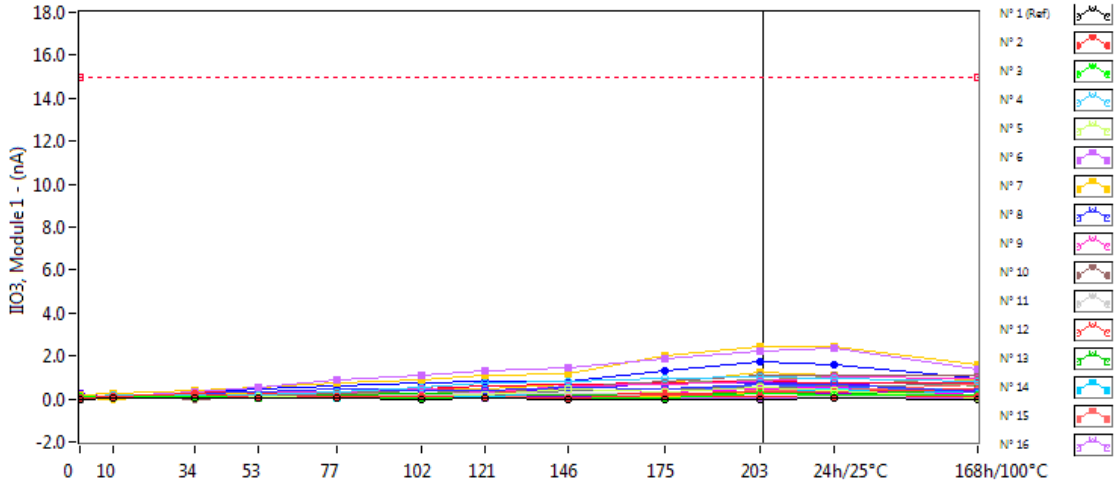



**IIO2, Module 4 . (nA)** **Max = 15.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 0.037 | 0.033 | 0.033 | 0.017 | 0.027 | 0.028 | 0.022 | 0.043 | 0.039 | 0.043 | 0.041 | 0.039 |
| N° 2 | 0.025 | 0.143 | 0.231 | 0.023 | 0.089 | 0.071 | 0.037 | 0.299 | 0.189 | 0.044 | 0.064 | 0.203 |
| N° 3 | 0.143 | 0.034 | 0.055 | 0.126 | 0.024 | 0.152 | 0.028 | 0.064 | 0.071 | 0.020 | 0.096 | 0.358 |
| N° 4 | 0.100 | 0.003 | 0.058 | 0.119 | 0.115 | 0.095 | 0.241 | 0.414 | 0.622 | 0.623 | 0.689 | 0.192 |
| N° 5 | 0.005 | 0.279 | 0.334 | 0.601 | 0.771 | 1.023 | 1.252 | 1.340 | 1.415 | 1.568 | 1.758 | 1.477 |
| N° 6 | 0.046 | 0.283 | 0.200 | 0.268 | 0.127 | 0.272 | 0.332 | 0.332 | 0.346 | 0.161 | 0.347 | 0.257 |
| N° 7 | 0.041 | 0.070 | 0.044 | 0.098 | 0.260 | 0.159 | 0.138 | 0.120 | 0.344 | 0.062 | 0.032 | 0.367 |
| N° 8 | 0.067 | 0.109 | 0.028 | 0.093 | 0.515 | 0.441 | 0.515 | 0.655 | 0.726 | 0.738 | 0.835 | 0.409 |
| N° 9 | 0.138 | 0.068 | 0.340 | 0.488 | 0.611 | 0.731 | 0.906 | 0.832 | 1.113 | 1.223 | 1.291 | 1.206 |
| N° 10 | 0.067 | 0.111 | 0.105 | 0.221 | 0.020 | 0.055 | 0.149 | 0.141 | 0.056 | 0.019 | 0.061 | 0.143 |
| N° 11 | 0.009 | 0.099 | 0.056 | 0.084 | 0.163 | 0.521 | 0.629 | 0.719 | 0.841 | 1.072 | 1.072 | 1.355 |
| N° 12 | 0.025 | 0.240 | 0.120 | 0.091 | 0.016 | 0.099 | 0.027 | 0.042 | 0.274 | 0.328 | 0.246 | 0.343 |
| N° 13 | 0.040 | 0.052 | 0.300 | 0.327 | 0.442 | 0.638 | 0.670 | 0.515 | 0.416 | 0.169 | 0.434 | 0.391 |
| N° 14 | 0.064 | 0.083 | 0.292 | 0.467 | 0.693 | 0.702 | 0.867 | 0.810 | 1.283 | 1.498 | 1.653 | 0.934 |
| N° 15 | 0.194 | 0.199 | 0.230 | 0.070 | 0.122 | 0.061 | 0.243 | 0.171 | 0.284 | 0.268 | 0.281 | 0.326 |
| N° 16 | 0.010 | 0.190 | 0.092 | 0.050 | 0.080 | 0.016 | 0.058 | 0.076 | 0.101 | 0.120 | 0.077 | 0.021 |
| N° 17 | 0.011 | 0.099 | 0.077 | 0.230 | 0.126 | 0.006 | 0.012 | 0.028 | 0.157 | 0.009 | 0.045 | 0.282 |
| N° 18 | 0.028 | 0.027 | 0.004 | 0.039 | 0.114 | 0.151 | 0.176 | 0.145 | 0.499 | 0.385 | 0.445 | 0.013 |
| N° 19 | 0.020 | 0.059 | 0.220 | 0.215 | 0.657 | 0.393 | 0.303 | 0.503 | 0.437 | 0.372 | 0.416 | 0.151 |
| N° 20 | 0.152 | 0.336 | 0.299 | 0.547 | 0.905 | 1.190 | 1.305 | 1.650 | 2.094 | 2.582 | 2.361 | 1.778 |
| N° 21 | 0.009 | 0.086 | 0.086 | 0.007 | 0.069 | 0.182 | 0.052 | 0.089 | 0.003 | 0.010 | 0.180 | 0.059 |
| N° 22 | 0.106 | 0.129 | 0.022 | 0.053 | 0.044 | 0.141 | 0.100 | 0.050 | 0.146 | 0.213 | 0.002 | 0.247 |
| N° 23 | 0.021 | 0.101 | 0.044 | 0.243 | 0.015 | 0.353 | 0.417 | 0.438 | 0.764 | 0.838 | 0.708 | 0.122 |
| N° 24 | 0.026 | 0.085 | 0.064 | 0.036 | 0.186 | 0.168 | 0.015 | 0.167 | 0.214 | 0.282 | 0.254 | 0.063 |
| N° 25 | 0.122 | 0.149 | 0.446 | 0.290 | 0.191 | 0.238 | 0.080 | 0.129 | 0.149 | 0.320 | 0.221 | 0.380 |
| N° 26 | 0.061 | 0.013 | 0.075 | 0.370 | 0.086 | 0.009 | 0.045 | 0.341 | 0.445 | 0.221 | 0.240 | 0.117 |
| N° 27 | 0.156 | 0.228 | 0.030 | 0.016 | 0.250 | 0.121 | 0.170 | 0.030 | 0.019 | 0.208 | 0.370 | 0.183 |
| N° 28 | 0.037 | 0.104 | 0.340 | 0.407 | 0.617 | 0.640 | 0.815 | 1.037 | 0.948 | 1.287 | 1.162 | 1.134 |
| N° 29 | 0.015 | 0.099 | 0.014 | 0.002 | 0.113 | 0.089 | 0.137 | 0.209 | 0.089 | 0.178 | 0.170 | 0.616 |
| N° 30 | 0.038 | 0.071 | 0.097 | 0.083 | 0.059 | 0.133 | 0.044 | 0.512 | 0.543 | 0.239 | 0.345 | 0.690 |
| N° 31 | 0.070 | 0.092 | 0.006 | 0.047 | 0.210 | 0.330 | 0.121 | 0.161 | 0.188 | 0.321 | 0.251 | 0.475 |

# 57. IIO3, Module 1

**Ta=25°C; +VCC=5V; -VCC=GND; VCM=+1.4V**

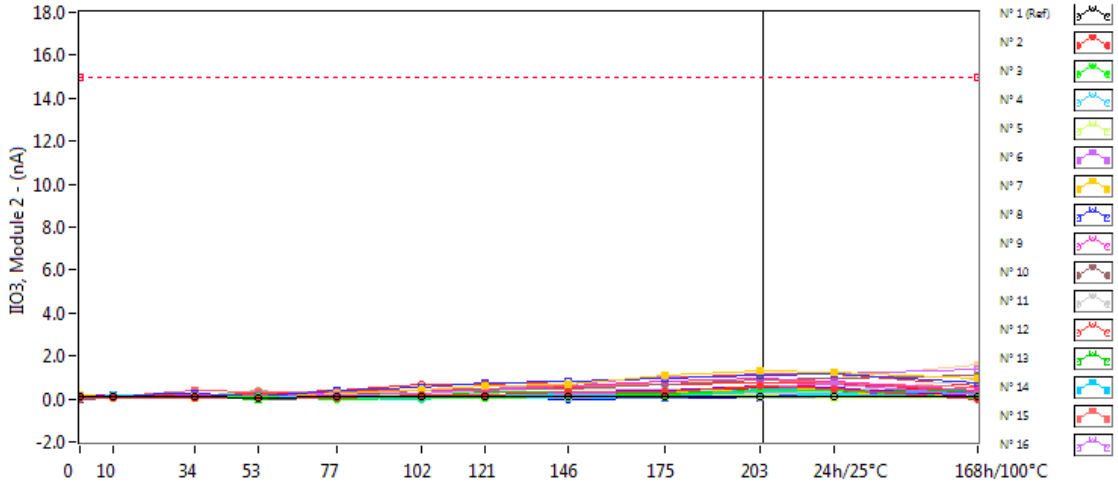



**IIO3, Module 1 . (nA)** **Max = 15.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 0.000 | 0.014 | 0.019 | 0.026 | 0.008 | 0.006 | 0.020 | 0.003 | 0.004 | 0.003 | 0.008 | 0.005 |
| N° 2 | 0.064 | 0.104 | 0.226 | 0.068 | 0.103 | 0.128 | 0.052 | 0.056 | 0.190 | 0.089 | 0.047 | 0.116 |
| N° 3 | 0.093 | 0.116 | 0.121 | 0.012 | 0.068 | 0.047 | 0.032 | 0.020 | 0.068 | 0.255 | 0.181 | 0.196 |
| N° 4 | 0.054 | 0.203 | 0.167 | 0.174 | 0.345 | 0.529 | 0.714 | 0.812 | 0.923 | 0.996 | 0.972 | 0.851 |
| N° 5 | 0.059 | 0.067 | 0.029 | 0.104 | 0.081 | 0.106 | 0.152 | 0.462 | 0.343 | 0.503 | 0.417 | 0.009 |
| N° 6 | 0.029 | 0.129 | 0.355 | 0.562 | 0.875 | 1.103 | 1.291 | 1.443 | 1.891 | 2.254 | 2.390 | 1.383 |
| N° 7 | 0.199 | 0.286 | 0.412 | 0.514 | 0.749 | 0.919 | 1.105 | 1.185 | 1.999 | 2.426 | 2.402 | 1.594 |
| N° 8 | 0.031 | 0.094 | 0.262 | 0.319 | 0.430 | 0.368 | 0.416 | 0.515 | 0.469 | 0.707 | 0.689 | 0.325 |
| N° 9 | 0.015 | 0.091 | 0.278 | 0.341 | 0.294 | 0.444 | 0.355 | 0.613 | 0.644 | 0.821 | 1.018 | 0.950 |
| N° 10 | 0.021 | 0.159 | 0.002 | 0.146 | 0.237 | 0.371 | 0.358 | 0.562 | 0.786 | 1.094 | 1.069 | 1.066 |
| N° 11 | 0.030 | 0.115 | 0.308 | 0.017 | 0.087 | 0.187 | 0.245 | 0.266 | 0.155 | 0.097 | 0.112 | 0.142 |
| N° 12 | 0.085 | 0.023 | 0.060 | 0.261 | 0.358 | 0.521 | 0.329 | 0.220 | 0.226 | 0.339 | 0.325 | 0.493 |
| N° 13 | 0.054 | 0.031 | 0.031 | 0.027 | 0.173 | 0.256 | 0.227 | 0.203 | 0.213 | 0.319 | 0.153 | 0.469 |
| N° 14 | 0.032 | 0.193 | 0.060 | 0.024 | 0.118 | 0.021 | 0.105 | 0.231 | 0.235 | 0.323 | 0.425 | 0.296 |
| N° 15 | 0.041 | 0.025 | 0.032 | 0.217 | 0.196 | 0.161 | 0.145 | 0.215 | 0.205 | 0.387 | 0.417 | 0.689 |
| N° 16 | 0.117 | 0.121 | 0.192 | 0.098 | 0.171 | 0.202 | 0.049 | 0.031 | 0.066 | 0.073 | 0.098 | 0.028 |
| N° 17 | 0.073 | 0.004 | 0.162 | 0.226 | 0.111 | 0.117 | 0.026 | 0.004 | 0.131 | 0.224 | 0.370 | 0.344 |
| N° 18 | 0.164 | 0.047 | 0.010 | 0.035 | 0.185 | 0.032 | 0.130 | 0.209 | 0.295 | 0.460 | 0.546 | 0.207 |
| N° 19 | 0.034 | 0.060 | 0.131 | 0.020 | 0.085 | 0.121 | 0.129 | 0.115 | 0.196 | 0.314 | 0.288 | 0.391 |
| N° 20 | 0.084 | 0.038 | 0.128 | 0.020 | 0.122 | 0.065 | 0.053 | 0.095 | 0.061 | 0.007 | 0.116 | 0.317 |
| N° 21 | 0.081 | 0.061 | 0.071 | 0.061 | 0.056 | 0.119 | 0.122 | 0.255 | 0.169 | 0.376 | 0.444 | 0.174 |
| N° 22 | 0.093 | 0.060 | 0.079 | 0.103 | 0.069 | 0.043 | 0.011 | 0.069 | 0.038 | 0.134 | 0.100 | 0.168 |
| N° 23 | 0.007 | 0.032 | 0.132 | 0.181 | 0.197 | 0.194 | 0.312 | 0.092 | 0.227 | 0.307 | 0.236 | 0.183 |
| N° 24 | 0.024 | 0.064 | 0.083 | 0.070 | 0.045 | 0.265 | 0.225 | 0.223 | 0.255 | 0.646 | 0.532 | 0.412 |
| N° 25 | 0.092 | 0.059 | 0.336 | 0.339 | 0.351 | 0.490 | 0.577 | 0.672 | 0.735 | 0.807 | 0.742 | 0.759 |
| N° 26 | 0.066 | 0.005 | 0.255 | 0.495 | 0.588 | 0.771 | 0.801 | 0.799 | 1.287 | 1.759 | 1.621 | 0.978 |
| N° 27 | 0.005 | 0.074 | 0.174 | 0.161 | 0.241 | 0.240 | 0.427 | 0.546 | 0.765 | 0.889 | 1.000 | 0.618 |
| N° 28 | 0.098 | 0.057 | 0.101 | 0.017 | 0.089 | 0.044 | 0.112 | 0.410 | 0.483 | 0.559 | 0.604 | 0.657 |
| N° 29 | 0.229 | 0.060 | 0.243 | 0.247 | 0.197 | 0.096 | 0.267 | 0.459 | 0.730 | 0.734 | 0.779 | 0.304 |
| N° 30 | 0.073 | 0.092 | 0.037 | 0.143 | 0.272 | 0.455 | 0.496 | 0.644 | 0.775 | 1.218 | 1.116 | 0.854 |
| N° 31 | 0.003 | 0.087 | 0.016 | 0.019 | 0.010 | 0.194 | 0.317 | 0.527 | 0.724 | 0.771 | 0.704 | 0.399 |

# 58. IIO3, Module 2

**Ta=25°C; +VCC=5V; -VCC=GND; VCM=+1.4V**

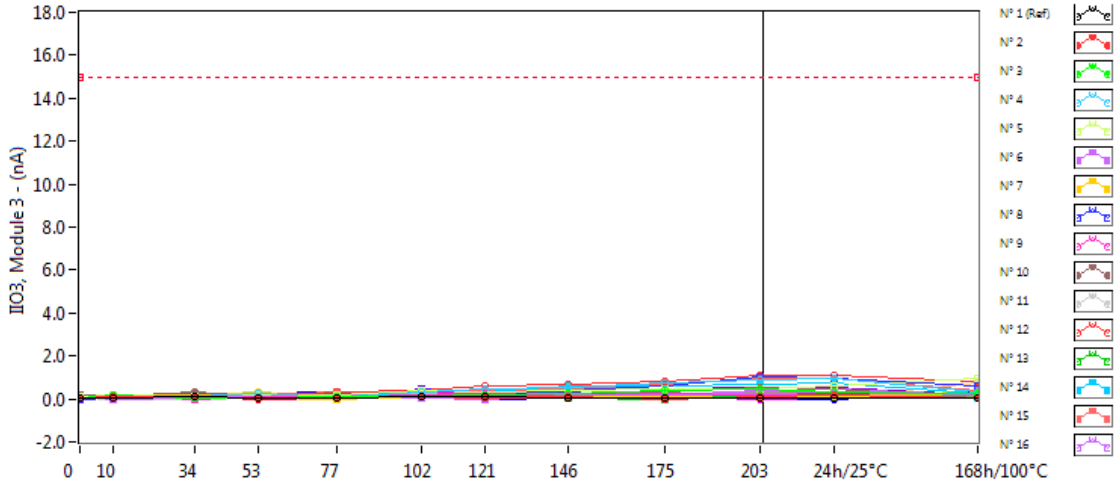



**IIO3, Module 2 . (nA)** **Max = 15.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 0.120 | 0.111 | 0.124 | 0.071 | 0.116 | 0.114 | 0.116 | 0.101 | 0.098 | 0.101 | 0.096 | 0.102 |
| N° 2 | 0.058 | 0.026 | 0.045 | 0.038 | 0.051 | 0.158 | 0.154 | 0.294 | 0.324 | 0.586 | 0.497 | 0.005 |
| N° 3 | 0.090 | 0.030 | 0.032 | 0.086 | 0.004 | 0.060 | 0.039 | 0.146 | 0.165 | 0.404 | 0.375 | 0.025 |
| N° 4 | 0.065 | 0.166 | 0.049 | 0.142 | 0.069 | 0.001 | 0.191 | 0.177 | 0.145 | 0.359 | 0.276 | 0.066 |
| N° 5 | 0.063 | 0.017 | 0.080 | 0.066 | 0.070 | 0.031 | 0.075 | 0.094 | 0.095 | 0.180 | 0.010 | 0.034 |
| N° 6 | 0.090 | 0.019 | 0.137 | 0.031 | 0.192 | 0.125 | 0.018 | 0.258 | 0.350 | 0.603 | 0.649 | 0.210 |
| N° 7 | 0.137 | 0.030 | 0.027 | 0.065 | 0.227 | 0.372 | 0.587 | 0.681 | 1.116 | 1.306 | 1.250 | 0.942 |
| N° 8 | 0.032 | 0.174 | 0.241 | 0.110 | 0.416 | 0.557 | 0.730 | 0.804 | 0.955 | 1.106 | 1.167 | 0.746 |
| N° 9 | 0.076 | 0.034 | 0.186 | 0.189 | 0.287 | 0.381 | 0.412 | 0.581 | 0.803 | 0.931 | 0.846 | 0.393 |
| N° 10 | 0.018 | 0.070 | 0.167 | 0.040 | 0.209 | 0.377 | 0.450 | 0.477 | 0.682 | 0.914 | 0.976 | 1.121 |
| N° 11 | 0.018 | 0.071 | 0.057 | 0.127 | 0.153 | 0.158 | 0.400 | 0.449 | 0.453 | 0.231 | 0.326 | 0.860 |
| N° 12 | 0.033 | 0.138 | 0.017 | 0.057 | 0.403 | 0.664 | 0.648 | 0.835 | 0.976 | 1.153 | 1.185 | 0.627 |
| N° 13 | 0.038 | 0.100 | 0.081 | 0.002 | 0.223 | 0.205 | 0.296 | 0.317 | 0.219 | 0.414 | 0.325 | 0.389 |
| N° 14 | 0.091 | 0.116 | 0.098 | 0.061 | 0.226 | 0.175 | 0.115 | 0.272 | 0.106 | 0.449 | 0.423 | 0.262 |
| N° 15 | 0.070 | 0.142 | 0.377 | 0.316 | 0.310 | 0.403 | 0.575 | 0.623 | 0.670 | 0.918 | 0.762 | 0.505 |
| N° 16 | 0.024 | 0.048 | 0.146 | 0.184 | 0.287 | 0.278 | 0.495 | 0.699 | 1.024 | 1.111 | 1.137 | 1.361 |
| N° 17 | 0.087 | 0.009 | 0.080 | 0.079 | 0.018 | 0.044 | 0.212 | 0.290 | 0.290 | 0.363 | 0.258 | 0.103 |
| N° 18 | 0.014 | 0.040 | 0.072 | 0.164 | 0.089 | 0.058 | 0.052 | 0.157 | 0.119 | 0.139 | 0.109 | 0.008 |
| N° 19 | 0.109 | 0.173 | 0.134 | 0.143 | 0.033 | 0.129 | 0.115 | 0.310 | 0.414 | 0.625 | 0.510 | 0.109 |
| N° 20 | 0.049 | 0.206 | 0.097 | 0.411 | 0.080 | 0.133 | 0.220 | 0.012 | 0.195 | 0.067 | 0.052 | 0.038 |
| N° 21 | 0.022 | 0.075 | 0.065 | 0.157 | 0.032 | 0.156 | 0.131 | 0.028 | 0.090 | 0.119 | 0.148 | 0.042 |
| N° 22 | 0.108 | 0.150 | 0.218 | 0.224 | 0.377 | 0.366 | 0.471 | 0.519 | 0.652 | 0.727 | 0.763 | 0.297 |
| N° 23 | 0.034 | 0.019 | 0.163 | 0.002 | 0.039 | 0.020 | 0.097 | 0.168 | 0.334 | 0.332 | 0.479 | 0.223 |
| N° 24 | 0.135 | 0.065 | 0.011 | 0.179 | 0.107 | 0.197 | 0.122 | 0.083 | 0.068 | 0.212 | 0.211 | 0.324 |
| N° 25 | 0.022 | 0.038 | 0.148 | 0.239 | 0.192 | 0.011 | 0.053 | 0.111 | 0.260 | 0.532 | 0.651 | 0.261 |
| N° 26 | 0.008 | 0.158 | 0.198 | 0.055 | 0.205 | 0.035 | 0.128 | 0.003 | 0.025 | 0.063 | 0.023 | 0.025 |
| N° 27 | 0.051 | 0.106 | 0.013 | 0.155 | 0.142 | 0.122 | 0.009 | 0.024 | 0.103 | 0.075 | 0.077 | 0.095 |
| N° 28 | 0.004 | 0.022 | 0.065 | 0.034 | 0.064 | 0.055 | 0.110 | 0.028 | 0.119 | 0.148 | 0.048 | 0.091 |
| N° 29 | 0.007 | 0.041 | 0.187 | 0.032 | 0.255 | 0.268 | 0.210 | 0.188 | 0.124 | 0.060 | 0.211 | 0.252 |
| N° 30 | 0.153 | 0.178 | 0.081 | 0.087 | 0.020 | 0.137 | 0.067 | 0.060 | 0.154 | 0.380 | 0.432 | 0.330 |
| N° 31 | 0.023 | 0.054 | 0.042 | 0.305 | 0.311 | 0.587 | 0.463 | 0.543 | 0.814 | 0.898 | 0.971 | 1.589 |

# 59. IIO3, Module 3

**Ta=25°C; +VCC=5V; -VCC=GND; VCM=+1.4V**

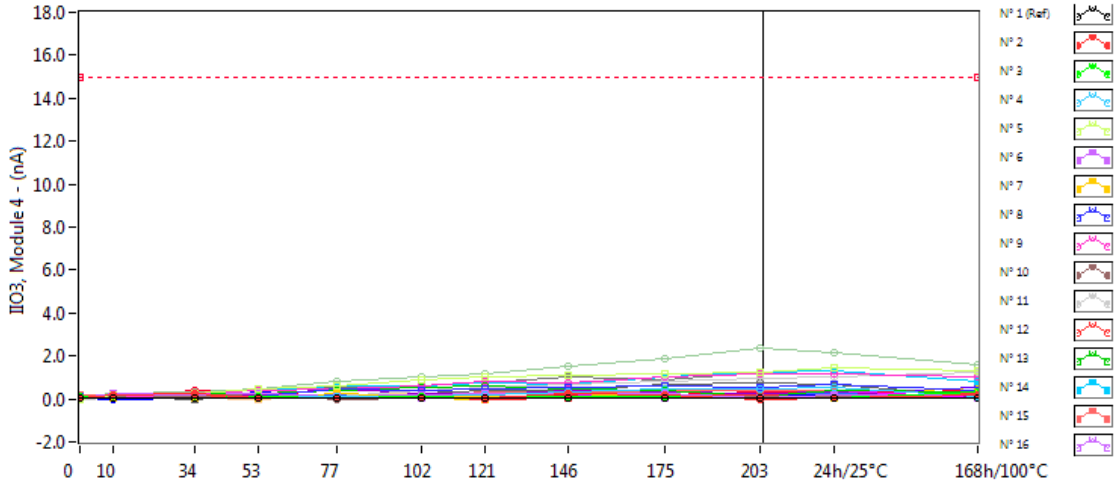



**IIO3, Module 3 . (nA)** **Max = 15.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 0.072 | 0.065 | 0.085 | 0.070 | 0.064 | 0.085 | 0.080 | 0.065 | 0.066 | 0.076 | 0.071 | 0.063 |
| N° 2 | 0.072 | 0.138 | 0.142 | 0.009 | 0.045 | 0.101 | 0.069 | 0.126 | 0.002 | 0.128 | 0.207 | 0.025 |
| N° 3 | 0.022 | 0.199 | 0.013 | 0.071 | 0.080 | 0.141 | 0.190 | 0.263 | 0.412 | 0.439 | 0.337 | 0.243 |
| N° 4 | 0.059 | 0.059 | 0.119 | 0.245 | 0.053 | 0.314 | 0.433 | 0.564 | 0.739 | 0.910 | 0.930 | 0.322 |
| N° 5 | 0.120 | 0.176 | 0.085 | 0.153 | 0.183 | 0.374 | 0.346 | 0.410 | 0.490 | 0.488 | 0.576 | 0.925 |
| N° 6 | 0.107 | 0.002 | 0.039 | 0.195 | 0.163 | 0.027 | 0.001 | 0.191 | 0.187 | 0.255 | 0.342 | 0.152 |
| N° 7 | 0.099 | 0.115 | 0.145 | 0.074 | 0.035 | 0.029 | 0.064 | 0.078 | 0.080 | 0.069 | 0.134 | 0.243 |
| N° 8 | 0.003 | 0.044 | 0.077 | 0.170 | 0.122 | 0.026 | 0.125 | 0.421 | 0.572 | 1.045 | 0.948 | 0.634 |
| N° 9 | 0.066 | 0.171 | 0.007 | 0.082 | 0.116 | 0.159 | 0.225 | 0.200 | 0.232 | 0.163 | 0.162 | 0.181 |
| N° 10 | 0.189 | 0.079 | 0.294 | 0.141 | 0.047 | 0.168 | 0.314 | 0.283 | 0.341 | 0.546 | 0.461 | 0.038 |
| N° 11 | 0.010 | 0.002 | 0.005 | 0.030 | 0.111 | 0.084 | 0.033 | 0.128 | 0.064 | 0.241 | 0.289 | 0.178 |
| N° 12 | 0.120 | 0.052 | 0.008 | 0.091 | 0.324 | 0.414 | 0.612 | 0.658 | 0.807 | 1.085 | 1.122 | 0.802 |
| N° 13 | 0.042 | 0.093 | 0.074 | 0.069 | 0.064 | 0.014 | 0.082 | 0.068 | 0.003 | 0.166 | 0.133 | 0.203 |
| N° 14 | 0.072 | 0.088 | 0.026 | 0.011 | 0.121 | 0.368 | 0.319 | 0.600 | 0.639 | 0.672 | 0.713 | 0.232 |
| N° 15 | 0.023 | 0.019 | 0.005 | 0.198 | 0.309 | 0.382 | 0.391 | 0.457 | 0.641 | 0.932 | 0.953 | 0.383 |
| N° 16 | 0.029 | 0.022 | 0.003 | 0.011 | 0.032 | 0.031 | 0.232 | 0.192 | 0.169 | 0.365 | 0.441 | 0.204 |
| N° 17 | 0.019 | 0.141 | 0.197 | 0.307 | 0.127 | 0.170 | 0.100 | 0.136 | 0.045 | 0.162 | 0.182 | 0.164 |
| N° 18 | 0.034 | 0.000 | 0.069 | 0.072 | 0.123 | 0.294 | 0.269 | 0.192 | 0.129 | 0.003 | 0.057 | 0.266 |
| N° 19 | 0.011 | 0.075 | 0.193 | 0.015 | 0.155 | 0.141 | 0.227 | 0.414 | 0.482 | 0.505 | 0.540 | 0.216 |
| N° 20 | 0.062 | 0.094 | 0.173 | 0.210 | 0.175 | 0.236 | 0.242 | 0.076 | 0.159 | 0.181 | 0.116 | 0.060 |
| N° 21 | 0.035 | 0.010 | 0.069 | 0.081 | 0.056 | 0.077 | 0.028 | 0.039 | 0.051 | 0.124 | 0.149 | 0.025 |
| N° 22 | 0.100 | 0.057 | 0.026 | 0.097 | 0.057 | 0.097 | 0.145 | 0.192 | 0.017 | 0.033 | 0.089 | 0.212 |
| N° 23 | 0.211 | 0.086 | 0.284 | 0.217 | 0.223 | 0.025 | 0.047 | 0.186 | 0.151 | 0.158 | 0.235 | 0.233 |
| N° 24 | 0.045 | 0.048 | 0.169 | 0.192 | 0.131 | 0.077 | 0.167 | 0.071 | 0.056 | 0.015 | 0.010 | 0.180 |
| N° 25 | 0.014 | 0.057 | 0.101 | 0.002 | 0.049 | 0.030 | 0.016 | 0.038 | 0.168 | 0.267 | 0.245 | 0.072 |
| N° 26 | 0.068 | 0.020 | 0.187 | 0.274 | 0.290 | 0.152 | 0.006 | 0.053 | 0.031 | 0.072 | 0.006 | 0.289 |
| N° 27 | 0.038 | 0.158 | 0.104 | 0.017 | 0.162 | 0.170 | 0.027 | 0.010 | 0.105 | 0.322 | 0.350 | 0.121 |
| N° 28 | 0.097 | 0.016 | 0.251 | 0.237 | 0.237 | 0.251 | 0.180 | 0.060 | 0.099 | 0.080 | 0.059 | 0.036 |
| N° 29 | 0.038 | 0.116 | 0.131 | 0.095 | 0.041 | 0.457 | 0.313 | 0.293 | 0.059 | 0.255 | 0.103 | 0.295 |
| N° 30 | 0.079 | 0.151 | 0.058 | 0.043 | 0.004 | 0.117 | 0.082 | 0.017 | 0.048 | 0.178 | 0.181 | 0.329 |
| N° 31 | 0.036 | 0.006 | 0.093 | 0.118 | 0.231 | 0.098 | 0.165 | 0.067 | 0.102 | 0.089 | 0.060 | 0.727 |

# 60. IIO3, Module 4

**Ta=25°C; +VCC=5V; -VCC=GND; VCM=+1.4V**

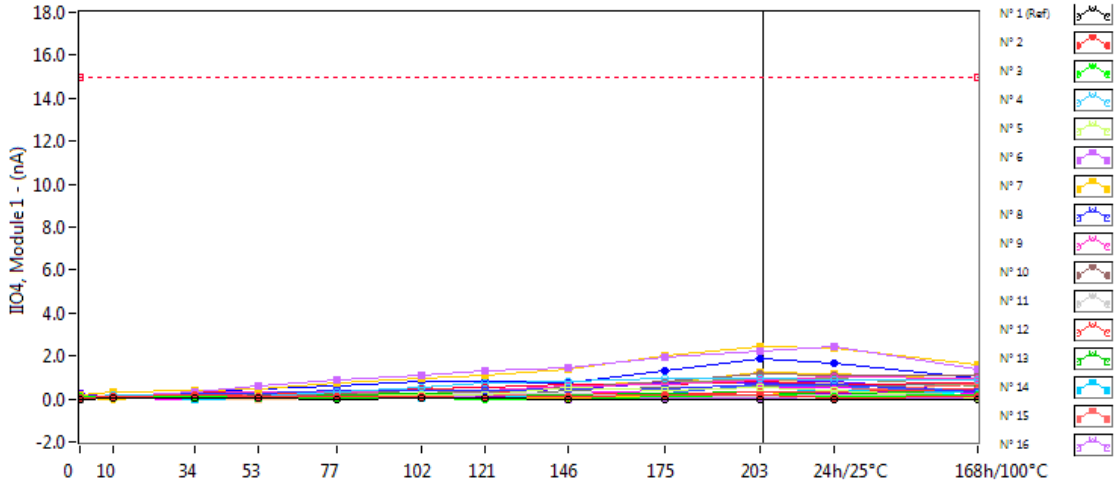



**IIO3, Module 4 . (nA)** **Max = 15.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 0.028 | 0.025 | 0.021 | 0.013 | 0.022 | 0.019 | 0.013 | 0.029 | 0.029 | 0.028 | 0.031 | 0.026 |
| N° 2 | 0.030 | 0.156 | 0.239 | 0.056 | 0.039 | 0.020 | 0.074 | 0.232 | 0.197 | 0.007 | 0.048 | 0.184 |
| N° 3 | 0.117 | 0.015 | 0.049 | 0.113 | 0.010 | 0.080 | 0.052 | 0.121 | 0.146 | 0.025 | 0.054 | 0.350 |
| N° 4 | 0.075 | 0.012 | 0.016 | 0.131 | 0.092 | 0.087 | 0.193 | 0.340 | 0.468 | 0.497 | 0.528 | 0.127 |
| N° 5 | 0.005 | 0.202 | 0.288 | 0.481 | 0.636 | 0.895 | 1.061 | 1.094 | 1.202 | 1.262 | 1.419 | 1.281 |
| N° 6 | 0.040 | 0.256 | 0.174 | 0.227 | 0.119 | 0.196 | 0.267 | 0.278 | 0.258 | 0.018 | 0.207 | 0.186 |
| N° 7 | 0.027 | 0.042 | 0.028 | 0.073 | 0.234 | 0.144 | 0.101 | 0.086 | 0.246 | 0.030 | 0.034 | 0.333 |
| N° 8 | 0.084 | 0.077 | 0.018 | 0.114 | 0.448 | 0.376 | 0.455 | 0.526 | 0.619 | 0.555 | 0.660 | 0.376 |
| N° 9 | 0.106 | 0.047 | 0.274 | 0.417 | 0.485 | 0.610 | 0.800 | 0.723 | 1.013 | 1.156 | 1.142 | 1.061 |
| N° 10 | 0.053 | 0.084 | 0.081 | 0.221 | 0.002 | 0.073 | 0.046 | 0.044 | 0.156 | 0.146 | 0.086 | 0.163 |
| N° 11 | 0.002 | 0.060 | 0.037 | 0.055 | 0.130 | 0.427 | 0.555 | 0.647 | 0.794 | 0.964 | 0.999 | 1.214 |
| N° 12 | 0.010 | 0.216 | 0.083 | 0.072 | 0.008 | 0.104 | 0.007 | 0.051 | 0.178 | 0.195 | 0.076 | 0.250 |
| N° 13 | 0.032 | 0.054 | 0.262 | 0.272 | 0.384 | 0.563 | 0.604 | 0.499 | 0.371 | 0.147 | 0.370 | 0.321 |
| N° 14 | 0.060 | 0.079 | 0.223 | 0.375 | 0.579 | 0.639 | 0.723 | 0.657 | 1.035 | 1.269 | 1.337 | 0.796 |
| N° 15 | 0.161 | 0.159 | 0.170 | 0.044 | 0.098 | 0.112 | 0.299 | 0.243 | 0.385 | 0.377 | 0.383 | 0.328 |
| N° 16 | 0.019 | 0.144 | 0.062 | 0.078 | 0.097 | 0.040 | 0.041 | 0.085 | 0.070 | 0.202 | 0.011 | 0.032 |
| N° 17 | 0.038 | 0.148 | 0.121 | 0.223 | 0.111 | 0.023 | 0.014 | 0.033 | 0.155 | 0.059 | 0.060 | 0.256 |
| N° 18 | 0.047 | 0.054 | 0.017 | 0.021 | 0.061 | 0.093 | 0.137 | 0.089 | 0.473 | 0.366 | 0.408 | 0.046 |
| N° 19 | 0.016 | 0.024 | 0.164 | 0.177 | 0.500 | 0.283 | 0.205 | 0.420 | 0.328 | 0.225 | 0.299 | 0.135 |
| N° 20 | 0.122 | 0.288 | 0.305 | 0.473 | 0.787 | 1.054 | 1.169 | 1.498 | 1.882 | 2.340 | 2.171 | 1.569 |
| N° 21 | 0.006 | 0.060 | 0.123 | 0.038 | 0.024 | 0.145 | 0.061 | 0.136 | 0.023 | 0.019 | 0.171 | 0.062 |
| N° 22 | 0.078 | 0.121 | 0.010 | 0.060 | 0.057 | 0.117 | 0.075 | 0.023 | 0.091 | 0.104 | 0.053 | 0.217 |
| N° 23 | 0.023 | 0.082 | 0.007 | 0.221 | 0.008 | 0.287 | 0.367 | 0.382 | 0.658 | 0.730 | 0.642 | 0.122 |
| N° 24 | 0.005 | 0.059 | 0.029 | 0.070 | 0.184 | 0.195 | 0.008 | 0.144 | 0.161 | 0.279 | 0.259 | 0.065 |
| N° 25 | 0.087 | 0.114 | 0.372 | 0.251 | 0.153 | 0.217 | 0.070 | 0.168 | 0.149 | 0.335 | 0.249 | 0.360 |
| N° 26 | 0.061 | 0.005 | 0.037 | 0.346 | 0.105 | 0.013 | 0.042 | 0.266 | 0.365 | 0.207 | 0.212 | 0.043 |
| N° 27 | 0.122 | 0.172 | 0.032 | 0.018 | 0.273 | 0.078 | 0.156 | 0.019 | 0.020 | 0.164 | 0.318 | 0.105 |
| N° 28 | 0.037 | 0.114 | 0.338 | 0.392 | 0.570 | 0.619 | 0.757 | 0.997 | 0.900 | 1.235 | 1.147 | 1.044 |
| N° 29 | 0.016 | 0.088 | 0.032 | 0.049 | 0.122 | 0.047 | 0.127 | 0.192 | 0.109 | 0.223 | 0.240 | 0.516 |
| N° 30 | 0.024 | 0.064 | 0.091 | 0.128 | 0.074 | 0.067 | 0.002 | 0.358 | 0.367 | 0.113 | 0.218 | 0.553 |
| N° 31 | 0.059 | 0.072 | 0.012 | 0.005 | 0.176 | 0.284 | 0.116 | 0.159 | 0.169 | 0.281 | 0.204 | 0.511 |

# 61. IIO4, Module 1

**Ta=25°C; +VCC=2.5V; -VCC=-2.5V; VCM=-1.1V**

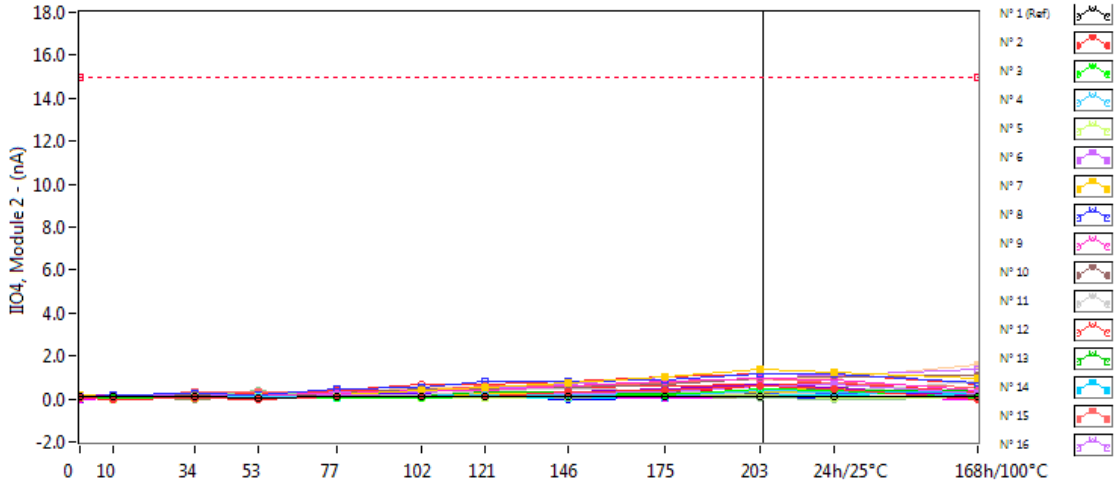



**IIO4, Module 1 . (nA)** **Max = 15.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 0.005 | 0.010 | 0.016 | 0.030 | 0.004 | 0.014 | 0.018 | 0.001 | 0.006 | 0.005 | 0.006 | 0.002 |
| N° 2 | 0.065 | 0.114 | 0.172 | 0.112 | 0.112 | 0.082 | 0.008 | 0.124 | 0.149 | 0.152 | 0.060 | 0.113 |
| N° 3 | 0.095 | 0.101 | 0.146 | 0.043 | 0.062 | 0.042 | 0.005 | 0.007 | 0.087 | 0.211 | 0.130 | 0.184 |
| N° 4 | 0.049 | 0.183 | 0.153 | 0.145 | 0.302 | 0.531 | 0.742 | 0.807 | 0.933 | 0.973 | 0.906 | 0.865 |
| N° 5 | 0.050 | 0.068 | 0.083 | 0.104 | 0.108 | 0.158 | 0.189 | 0.503 | 0.385 | 0.521 | 0.428 | 0.039 |
| N° 6 | 0.025 | 0.143 | 0.350 | 0.627 | 0.855 | 1.114 | 1.281 | 1.442 | 1.909 | 2.246 | 2.436 | 1.398 |
| N° 7 | 0.201 | 0.303 | 0.390 | 0.473 | 0.720 | 0.930 | 1.071 | 1.376 | 2.004 | 2.470 | 2.379 | 1.612 |
| N° 8 | 0.040 | 0.083 | 0.268 | 0.279 | 0.408 | 0.379 | 0.383 | 0.452 | 0.459 | 0.689 | 0.685 | 0.348 |
| N° 9 | 0.013 | 0.134 | 0.286 | 0.354 | 0.310 | 0.426 | 0.366 | 0.598 | 0.674 | 0.856 | 1.026 | 0.953 |
| N° 10 | 0.027 | 0.124 | 0.053 | 0.116 | 0.265 | 0.384 | 0.342 | 0.546 | 0.834 | 1.134 | 1.079 | 1.068 |
| N° 11 | 0.025 | 0.060 | 0.247 | 0.019 | 0.076 | 0.171 | 0.279 | 0.268 | 0.132 | 0.141 | 0.192 | 0.107 |
| N° 12 | 0.083 | 0.011 | 0.078 | 0.274 | 0.340 | 0.515 | 0.307 | 0.226 | 0.153 | 0.335 | 0.299 | 0.483 |
| N° 13 | 0.054 | 0.008 | 0.017 | 0.061 | 0.193 | 0.261 | 0.264 | 0.213 | 0.246 | 0.313 | 0.208 | 0.476 |
| N° 14 | 0.031 | 0.190 | 0.005 | 0.026 | 0.146 | 0.051 | 0.069 | 0.212 | 0.237 | 0.317 | 0.425 | 0.307 |
| N° 15 | 0.045 | 0.013 | 0.058 | 0.233 | 0.169 | 0.153 | 0.174 | 0.180 | 0.162 | 0.347 | 0.409 | 0.691 |
| N° 16 | 0.111 | 0.124 | 0.204 | 0.118 | 0.124 | 0.242 | 0.012 | 0.001 | 0.076 | 0.059 | 0.100 | 0.027 |
| N° 17 | 0.074 | 0.005 | 0.177 | 0.220 | 0.078 | 0.158 | 0.056 | 0.023 | 0.099 | 0.184 | 0.378 | 0.333 |
| N° 18 | 0.162 | 0.037 | 0.005 | 0.103 | 0.165 | 0.018 | 0.151 | 0.235 | 0.368 | 0.522 | 0.558 | 0.234 |
| N° 19 | 0.031 | 0.078 | 0.124 | 0.024 | 0.100 | 0.085 | 0.136 | 0.105 | 0.173 | 0.318 | 0.238 | 0.374 |
| N° 20 | 0.086 | 0.057 | 0.146 | 0.038 | 0.114 | 0.087 | 0.072 | 0.133 | 0.014 | 0.015 | 0.177 | 0.316 |
| N° 21 | 0.075 | 0.043 | 0.089 | 0.045 | 0.061 | 0.088 | 0.113 | 0.231 | 0.198 | 0.337 | 0.427 | 0.180 |
| N° 22 | 0.086 | 0.069 | 0.096 | 0.074 | 0.120 | 0.072 | 0.030 | 0.078 | 0.079 | 0.173 | 0.083 | 0.171 |
| N° 23 | 0.006 | 0.032 | 0.157 | 0.152 | 0.157 | 0.163 | 0.286 | 0.133 | 0.212 | 0.305 | 0.228 | 0.162 |
| N° 24 | 0.030 | 0.046 | 0.084 | 0.043 | 0.038 | 0.231 | 0.260 | 0.197 | 0.251 | 0.658 | 0.568 | 0.401 |
| N° 25 | 0.098 | 0.073 | 0.300 | 0.351 | 0.321 | 0.451 | 0.565 | 0.668 | 0.709 | 0.787 | 0.691 | 0.737 |
| N° 26 | 0.072 | 0.013 | 0.299 | 0.465 | 0.600 | 0.788 | 0.832 | 0.770 | 1.314 | 1.863 | 1.655 | 0.989 |
| N° 27 | 0.002 | 0.086 | 0.191 | 0.132 | 0.271 | 0.237 | 0.402 | 0.535 | 0.793 | 0.855 | 0.979 | 0.621 |
| N° 28 | 0.101 | 0.075 | 0.073 | 0.075 | 0.074 | 0.108 | 0.122 | 0.407 | 0.505 | 0.626 | 0.608 | 0.689 |
| N° 29 | 0.233 | 0.067 | 0.288 | 0.239 | 0.206 | 0.082 | 0.303 | 0.500 | 0.730 | 0.768 | 0.797 | 0.317 |
| N° 30 | 0.070 | 0.117 | 0.075 | 0.134 | 0.236 | 0.479 | 0.543 | 0.684 | 0.756 | 1.250 | 1.139 | 0.884 |
| N° 31 | 0.006 | 0.022 | 0.004 | 0.004 | 0.024 | 0.203 | 0.331 | 0.524 | 0.760 | 0.835 | 0.751 | 0.413 |

# 62. IIO4, Module 2

**Ta=25°C; +VCC=2.5V; -VCC=-2.5V; VCM=-1.1V**

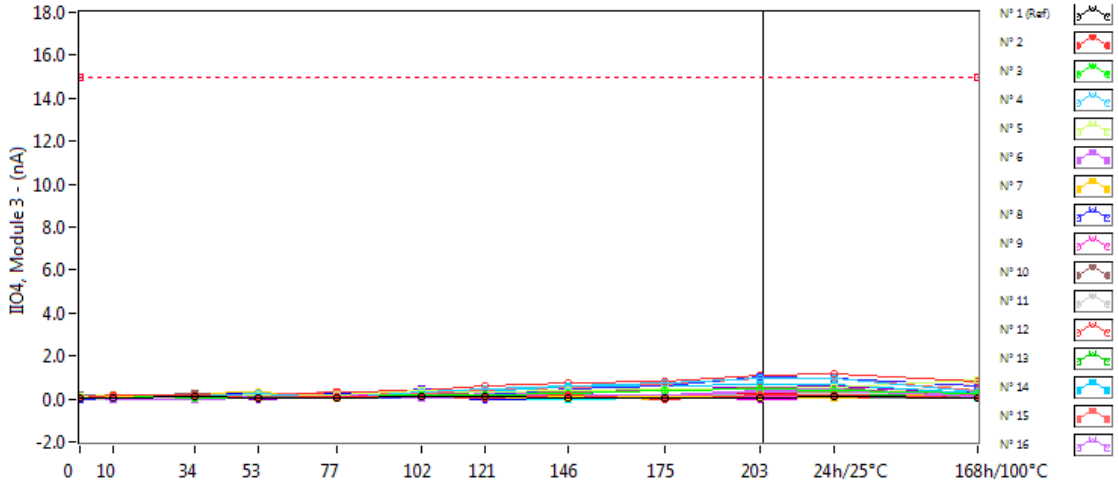



**IIO4, Module 2 . (nA)** **Max = 15.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 0.118 | 0.117 | 0.122 | 0.062 | 0.117 | 0.117 | 0.113 | 0.106 | 0.099 | 0.099 | 0.102 | 0.105 |
| N° 2 | 0.055 | 0.004 | 0.016 | 0.004 | 0.102 | 0.131 | 0.103 | 0.309 | 0.399 | 0.625 | 0.500 | 0.006 |
| N° 3 | 0.091 | 0.048 | 0.044 | 0.050 | 0.047 | 0.046 | 0.084 | 0.141 | 0.213 | 0.476 | 0.374 | 0.062 |
| N° 4 | 0.058 | 0.124 | 0.050 | 0.106 | 0.059 | 0.016 | 0.186 | 0.200 | 0.096 | 0.369 | 0.290 | 0.090 |
| N° 5 | 0.076 | 0.005 | 0.083 | 0.112 | 0.085 | 0.020 | 0.076 | 0.128 | 0.160 | 0.200 | 0.025 | 0.034 |
| N° 6 | 0.090 | 0.005 | 0.120 | 0.008 | 0.202 | 0.130 | 0.023 | 0.239 | 0.344 | 0.638 | 0.654 | 0.238 |
| N° 7 | 0.132 | 0.032 | 0.031 | 0.049 | 0.214 | 0.383 | 0.568 | 0.727 | 1.062 | 1.350 | 1.264 | 0.975 |
| N° 8 | 0.039 | 0.200 | 0.240 | 0.163 | 0.432 | 0.567 | 0.811 | 0.787 | 0.910 | 1.148 | 1.148 | 0.746 |
| N° 9 | 0.079 | 0.049 | 0.147 | 0.179 | 0.285 | 0.366 | 0.422 | 0.599 | 0.789 | 0.936 | 0.903 | 0.393 |
| N° 10 | 0.025 | 0.077 | 0.159 | 0.024 | 0.248 | 0.439 | 0.454 | 0.530 | 0.695 | 0.951 | 1.035 | 1.118 |
| N° 11 | 0.019 | 0.033 | 0.052 | 0.145 | 0.141 | 0.172 | 0.407 | 0.447 | 0.392 | 0.202 | 0.313 | 0.843 |
| N° 12 | 0.035 | 0.149 | 0.015 | 0.052 | 0.414 | 0.646 | 0.680 | 0.825 | 1.033 | 1.145 | 1.187 | 0.661 |
| N° 13 | 0.043 | 0.077 | 0.038 | 0.035 | 0.219 | 0.188 | 0.318 | 0.326 | 0.273 | 0.419 | 0.382 | 0.407 |
| N° 14 | 0.088 | 0.121 | 0.107 | 0.032 | 0.255 | 0.194 | 0.147 | 0.289 | 0.142 | 0.500 | 0.420 | 0.281 |
| N° 15 | 0.069 | 0.141 | 0.344 | 0.331 | 0.288 | 0.390 | 0.609 | 0.617 | 0.722 | 0.949 | 0.760 | 0.519 |
| N° 16 | 0.022 | 0.091 | 0.158 | 0.128 | 0.308 | 0.307 | 0.498 | 0.701 | 1.020 | 1.150 | 1.111 | 1.372 |
| N° 17 | 0.084 | 0.006 | 0.047 | 0.088 | 0.036 | 0.065 | 0.222 | 0.299 | 0.281 | 0.358 | 0.297 | 0.105 |
| N° 18 | 0.006 | 0.043 | 0.087 | 0.139 | 0.113 | 0.109 | 0.043 | 0.103 | 0.074 | 0.133 | 0.091 | 0.007 |
| N° 19 | 0.117 | 0.163 | 0.126 | 0.127 | 0.019 | 0.152 | 0.110 | 0.317 | 0.433 | 0.666 | 0.523 | 0.110 |
| N° 20 | 0.047 | 0.176 | 0.137 | 0.383 | 0.069 | 0.153 | 0.264 | 0.070 | 0.177 | 0.038 | 0.000 | 0.027 |
| N° 21 | 0.024 | 0.061 | 0.082 | 0.176 | 0.014 | 0.164 | 0.063 | 0.050 | 0.105 | 0.174 | 0.189 | 0.032 |
| N° 22 | 0.111 | 0.126 | 0.231 | 0.240 | 0.368 | 0.346 | 0.443 | 0.562 | 0.591 | 0.697 | 0.742 | 0.290 |
| N° 23 | 0.025 | 0.025 | 0.171 | 0.015 | 0.094 | 0.022 | 0.106 | 0.158 | 0.300 | 0.288 | 0.511 | 0.216 |
| N° 24 | 0.132 | 0.035 | 0.047 | 0.140 | 0.065 | 0.137 | 0.144 | 0.091 | 0.067 | 0.286 | 0.230 | 0.338 |
| N° 25 | 0.017 | 0.034 | 0.158 | 0.213 | 0.152 | 0.047 | 0.039 | 0.129 | 0.287 | 0.572 | 0.644 | 0.269 |
| N° 26 | 0.007 | 0.146 | 0.212 | 0.058 | 0.234 | 0.030 | 0.144 | 0.001 | 0.043 | 0.097 | 0.020 | 0.021 |
| N° 27 | 0.052 | 0.087 | 0.000 | 0.103 | 0.189 | 0.075 | 0.010 | 0.047 | 0.066 | 0.057 | 0.026 | 0.127 |
| N° 28 | 0.001 | 0.020 | 0.059 | 0.022 | 0.060 | 0.073 | 0.098 | 0.027 | 0.086 | 0.100 | 0.088 | 0.100 |
| N° 29 | 0.003 | 0.068 | 0.190 | 0.068 | 0.264 | 0.262 | 0.188 | 0.227 | 0.139 | 0.110 | 0.247 | 0.229 |
| N° 30 | 0.152 | 0.181 | 0.079 | 0.066 | 0.024 | 0.103 | 0.103 | 0.128 | 0.181 | 0.409 | 0.459 | 0.347 |
| N° 31 | 0.018 | 0.039 | 0.036 | 0.284 | 0.253 | 0.557 | 0.433 | 0.552 | 0.787 | 0.869 | 0.933 | 1.566 |

# 63. IIO4, Module 3

**Ta=25°C; +VCC=2.5V; -VCC=-2.5V; VCM=-1.1V**

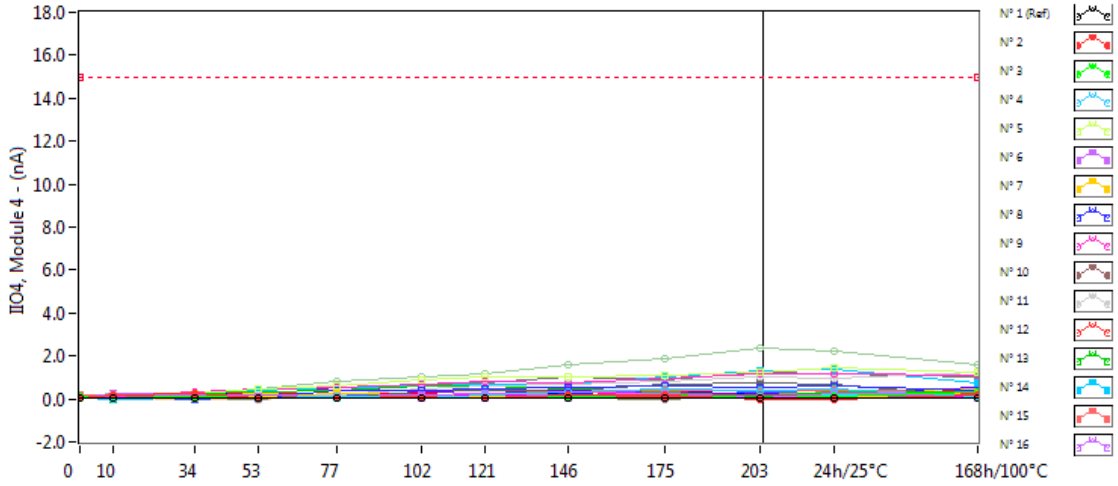



**IIO4, Module 3 . (nA)** **Max = 15.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 0.070 | 0.070 | 0.086 | 0.076 | 0.070 | 0.085 | 0.085 | 0.073 | 0.071 | 0.073 | 0.078 | 0.063 |
| N° 2 | 0.067 | 0.157 | 0.172 | 0.058 | 0.083 | 0.141 | 0.056 | 0.149 | 0.005 | 0.179 | 0.211 | 0.050 |
| N° 3 | 0.023 | 0.210 | 0.032 | 0.050 | 0.102 | 0.216 | 0.168 | 0.229 | 0.393 | 0.496 | 0.416 | 0.283 |
| N° 4 | 0.059 | 0.049 | 0.142 | 0.226 | 0.017 | 0.323 | 0.432 | 0.597 | 0.761 | 0.948 | 0.966 | 0.346 |
| N° 5 | 0.124 | 0.168 | 0.052 | 0.151 | 0.179 | 0.383 | 0.334 | 0.370 | 0.459 | 0.461 | 0.523 | 0.887 |
| N° 6 | 0.107 | 0.001 | 0.007 | 0.184 | 0.169 | 0.054 | 0.036 | 0.169 | 0.183 | 0.292 | 0.374 | 0.137 |
| N° 7 | 0.102 | 0.118 | 0.145 | 0.026 | 0.039 | 0.096 | 0.023 | 0.037 | 0.094 | 0.053 | 0.061 | 0.234 |
| N° 8 | 0.003 | 0.064 | 0.102 | 0.171 | 0.139 | 0.037 | 0.200 | 0.438 | 0.603 | 1.035 | 0.937 | 0.631 |
| N° 9 | 0.066 | 0.198 | 0.045 | 0.037 | 0.087 | 0.164 | 0.171 | 0.161 | 0.184 | 0.105 | 0.079 | 0.163 |
| N° 10 | 0.192 | 0.079 | 0.260 | 0.141 | 0.026 | 0.187 | 0.313 | 0.301 | 0.381 | 0.531 | 0.503 | 0.018 |
| N° 11 | 0.003 | 0.006 | 0.033 | 0.008 | 0.105 | 0.099 | 0.033 | 0.050 | 0.075 | 0.185 | 0.263 | 0.155 |
| N° 12 | 0.118 | 0.038 | 0.009 | 0.092 | 0.337 | 0.423 | 0.601 | 0.721 | 0.814 | 1.122 | 1.171 | 0.795 |
| N° 13 | 0.040 | 0.097 | 0.058 | 0.034 | 0.024 | 0.014 | 0.054 | 0.072 | 0.017 | 0.151 | 0.131 | 0.233 |
| N° 14 | 0.072 | 0.092 | 0.014 | 0.017 | 0.169 | 0.368 | 0.351 | 0.638 | 0.623 | 0.675 | 0.707 | 0.237 |
| N° 15 | 0.026 | 0.017 | 0.015 | 0.175 | 0.346 | 0.271 | 0.397 | 0.528 | 0.669 | 0.929 | 0.973 | 0.396 |
| N° 16 | 0.022 | 0.001 | 0.007 | 0.034 | 0.014 | 0.042 | 0.236 | 0.183 | 0.212 | 0.394 | 0.447 | 0.214 |
| N° 17 | 0.017 | 0.120 | 0.228 | 0.321 | 0.124 | 0.201 | 0.106 | 0.146 | 0.001 | 0.170 | 0.185 | 0.184 |
| N° 18 | 0.030 | 0.031 | 0.052 | 0.012 | 0.104 | 0.267 | 0.193 | 0.163 | 0.079 | 0.007 | 0.058 | 0.236 |
| N° 19 | 0.015 | 0.081 | 0.190 | 0.004 | 0.095 | 0.103 | 0.202 | 0.382 | 0.492 | 0.508 | 0.573 | 0.230 |
| N° 20 | 0.051 | 0.112 | 0.132 | 0.215 | 0.160 | 0.211 | 0.211 | 0.037 | 0.201 | 0.177 | 0.139 | 0.048 |
| N° 21 | 0.030 | 0.035 | 0.031 | 0.077 | 0.059 | 0.072 | 0.064 | 0.004 | 0.043 | 0.155 | 0.081 | 0.046 |
| N° 22 | 0.100 | 0.071 | 0.033 | 0.106 | 0.087 | 0.131 | 0.150 | 0.198 | 0.088 | 0.088 | 0.048 | 0.206 |
| N° 23 | 0.213 | 0.113 | 0.252 | 0.214 | 0.196 | 0.049 | 0.040 | 0.184 | 0.145 | 0.114 | 0.224 | 0.228 |
| N° 24 | 0.047 | 0.085 | 0.144 | 0.175 | 0.087 | 0.070 | 0.124 | 0.085 | 0.051 | 0.022 | 0.014 | 0.197 |
| N° 25 | 0.009 | 0.099 | 0.086 | 0.038 | 0.068 | 0.081 | 0.022 | 0.052 | 0.194 | 0.275 | 0.247 | 0.072 |
| N° 26 | 0.070 | 0.018 | 0.156 | 0.258 | 0.263 | 0.140 | 0.004 | 0.075 | 0.016 | 0.068 | 0.021 | 0.260 |
| N° 27 | 0.044 | 0.149 | 0.090 | 0.035 | 0.175 | 0.118 | 0.009 | 0.015 | 0.149 | 0.373 | 0.345 | 0.139 |
| N° 28 | 0.090 | 0.013 | 0.225 | 0.246 | 0.214 | 0.183 | 0.209 | 0.031 | 0.024 | 0.087 | 0.015 | 0.014 |
| N° 29 | 0.040 | 0.114 | 0.112 | 0.035 | 0.081 | 0.481 | 0.333 | 0.282 | 0.130 | 0.241 | 0.104 | 0.319 |
| N° 30 | 0.078 | 0.109 | 0.037 | 0.021 | 0.015 | 0.114 | 0.033 | 0.034 | 0.015 | 0.155 | 0.170 | 0.337 |
| N° 31 | 0.034 | 0.005 | 0.063 | 0.097 | 0.260 | 0.120 | 0.110 | 0.073 | 0.066 | 0.147 | 0.122 | 0.727 |

# 64. IIO4, Module 4

**Ta=25°C; +VCC=2.5V; -VCC=-2.5V; VCM=-1.1V**

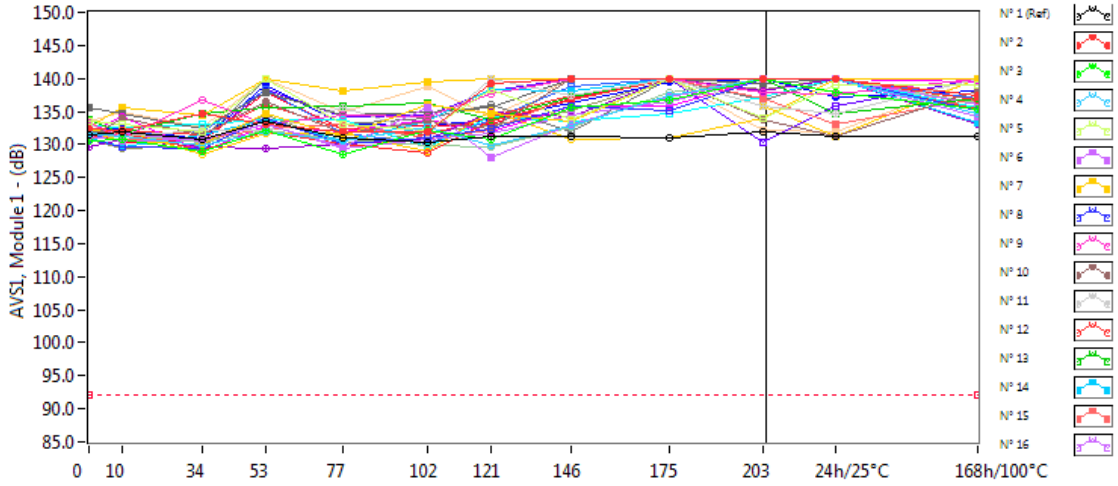



**IIO4, Module 4 . (nA)** **Max = 15.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 0.024 | 0.026 | 0.023 | 0.012 | 0.023 | 0.013 | 0.011 | 0.021 | 0.026 | 0.027 | 0.027 | 0.021 |
| N° 2 | 0.030 | 0.164 | 0.229 | 0.064 | 0.018 | 0.032 | 0.073 | 0.207 | 0.217 | 0.007 | 0.005 | 0.181 |
| N° 3 | 0.121 | 0.027 | 0.086 | 0.067 | 0.041 | 0.066 | 0.045 | 0.118 | 0.181 | 0.058 | 0.078 | 0.343 |
| N° 4 | 0.076 | 0.003 | 0.065 | 0.061 | 0.098 | 0.074 | 0.187 | 0.323 | 0.453 | 0.421 | 0.478 | 0.106 |
| N° 5 | 0.009 | 0.189 | 0.280 | 0.498 | 0.583 | 0.870 | 1.030 | 1.045 | 1.127 | 1.252 | 1.420 | 1.269 |
| N° 6 | 0.039 | 0.236 | 0.148 | 0.212 | 0.091 | 0.169 | 0.240 | 0.184 | 0.239 | 0.016 | 0.226 | 0.177 |
| N° 7 | 0.027 | 0.048 | 0.011 | 0.095 | 0.222 | 0.148 | 0.128 | 0.082 | 0.203 | 0.049 | 0.077 | 0.298 |
| N° 8 | 0.074 | 0.057 | 0.040 | 0.075 | 0.411 | 0.377 | 0.439 | 0.522 | 0.589 | 0.562 | 0.612 | 0.364 |
| N° 9 | 0.111 | 0.103 | 0.326 | 0.433 | 0.513 | 0.664 | 0.826 | 0.733 | 0.989 | 1.143 | 1.190 | 1.083 |
| N° 10 | 0.052 | 0.096 | 0.089 | 0.184 | 0.019 | 0.052 | 0.085 | 0.044 | 0.238 | 0.175 | 0.095 | 0.181 |
| N° 11 | 0.009 | 0.081 | 0.028 | 0.031 | 0.154 | 0.479 | 0.575 | 0.659 | 0.798 | 1.026 | 0.961 | 1.242 |
| N° 12 | 0.015 | 0.221 | 0.078 | 0.122 | 0.032 | 0.088 | 0.058 | 0.038 | 0.144 | 0.173 | 0.086 | 0.248 |
| N° 13 | 0.031 | 0.007 | 0.266 | 0.296 | 0.374 | 0.572 | 0.623 | 0.483 | 0.341 | 0.105 | 0.348 | 0.318 |
| N° 14 | 0.072 | 0.060 | 0.239 | 0.378 | 0.568 | 0.634 | 0.700 | 0.676 | 1.003 | 1.279 | 1.358 | 0.776 |
| N° 15 | 0.168 | 0.117 | 0.157 | 0.013 | 0.078 | 0.162 | 0.279 | 0.299 | 0.391 | 0.392 | 0.415 | 0.341 |
| N° 16 | 0.013 | 0.137 | 0.080 | 0.041 | 0.101 | 0.024 | 0.035 | 0.032 | 0.050 | 0.189 | 0.009 | 0.033 |
| N° 17 | 0.036 | 0.133 | 0.123 | 0.223 | 0.137 | 0.030 | 0.033 | 0.061 | 0.188 | 0.083 | 0.089 | 0.239 |
| N° 18 | 0.040 | 0.030 | 0.010 | 0.033 | 0.037 | 0.096 | 0.168 | 0.130 | 0.482 | 0.415 | 0.462 | 0.015 |
| N° 19 | 0.012 | 0.034 | 0.187 | 0.215 | 0.513 | 0.321 | 0.241 | 0.389 | 0.354 | 0.209 | 0.250 | 0.098 |
| N° 20 | 0.126 | 0.274 | 0.263 | 0.482 | 0.792 | 1.051 | 1.146 | 1.564 | 1.908 | 2.385 | 2.202 | 1.614 |
| N° 21 | 0.009 | 0.072 | 0.100 | 0.038 | 0.063 | 0.143 | 0.080 | 0.130 | 0.066 | 0.017 | 0.181 | 0.052 |
| N° 22 | 0.083 | 0.079 | 0.023 | 0.050 | 0.014 | 0.081 | 0.047 | 0.009 | 0.075 | 0.082 | 0.099 | 0.189 |
| N° 23 | 0.020 | 0.071 | 0.042 | 0.214 | 0.042 | 0.334 | 0.391 | 0.386 | 0.692 | 0.755 | 0.647 | 0.119 |
| N° 24 | 0.011 | 0.089 | 0.003 | 0.085 | 0.160 | 0.169 | 0.062 | 0.152 | 0.189 | 0.291 | 0.283 | 0.085 |
| N° 25 | 0.091 | 0.120 | 0.352 | 0.231 | 0.176 | 0.248 | 0.078 | 0.201 | 0.197 | 0.356 | 0.281 | 0.363 |
| N° 26 | 0.054 | 0.010 | 0.052 | 0.363 | 0.088 | 0.024 | 0.037 | 0.316 | 0.371 | 0.218 | 0.208 | 0.096 |
| N° 27 | 0.119 | 0.179 | 0.020 | 0.001 | 0.260 | 0.124 | 0.145 | 0.023 | 0.005 | 0.211 | 0.330 | 0.137 |
| N° 28 | 0.037 | 0.124 | 0.356 | 0.415 | 0.551 | 0.625 | 0.773 | 1.056 | 0.898 | 1.252 | 1.177 | 1.063 |
| N° 29 | 0.020 | 0.082 | 0.050 | 0.015 | 0.101 | 0.056 | 0.128 | 0.232 | 0.131 | 0.252 | 0.241 | 0.512 |
| N° 30 | 0.025 | 0.034 | 0.085 | 0.100 | 0.032 | 0.077 | 0.027 | 0.321 | 0.307 | 0.021 | 0.151 | 0.505 |
| N° 31 | 0.064 | 0.072 | 0.006 | 0.000 | 0.153 | 0.273 | 0.104 | 0.157 | 0.205 | 0.225 | 0.273 | 0.476 |

# 65. AVS1, Module 1

**Ta=25°C; +VCC=30V; -VCC=GND; 1V<Vout<26V; RL=10kOhms**

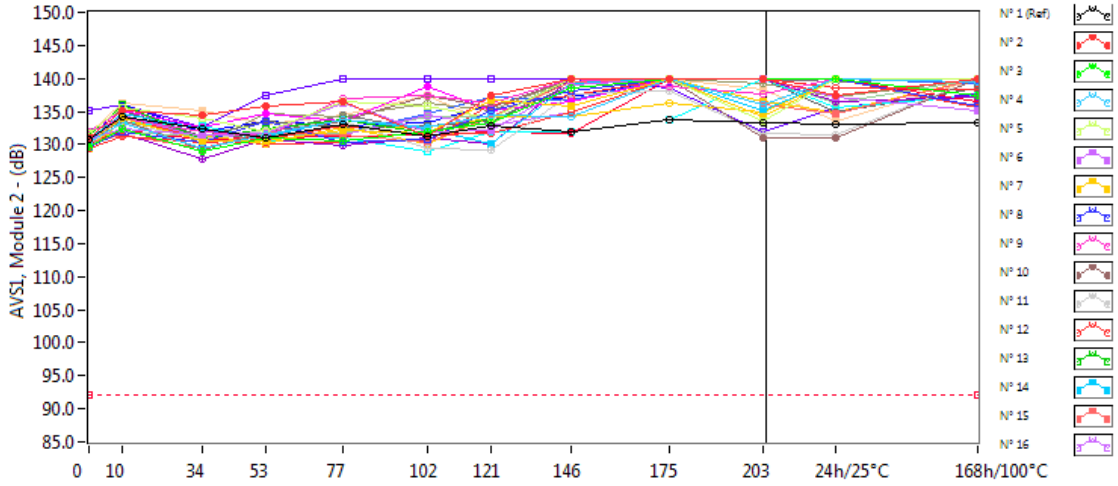



**AVS1, Module 1 . (dB)** **Min = 92.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 131.39 | 131.94 | 130.82 | 133.43 | 130.96 | 130.30 | 131.32 | 131.28 | 131.09 | 131.87 | 131.32 | 131.34 |
| N° 2 | 132.34 | 132.26 | 134.69 | 133.05 | 131.92 | 131.99 | 139.26 | 139.83 | 140.00 | 140.00 | 140.00 | 137.42 |
| N° 3 | 130.51 | 130.67 | 128.97 | 132.14 | 128.53 | 132.07 | 130.78 | 135.65 | 136.76 | 140.00 | 137.84 | 135.41 |
| N° 4 | 131.61 | 131.18 | 129.92 | 131.95 | 130.44 | 132.62 | 129.81 | 132.80 | 137.35 | 140.00 | 140.00 | 134.70 |
| N° 5 | 133.57 | 133.01 | 131.82 | 140.00 | 133.17 | 132.19 | 138.37 | 133.85 | 140.00 | 133.99 | 139.07 | 138.97 |
| N° 6 | 131.23 | 130.59 | 130.77 | 133.07 | 129.74 | 135.59 | 127.99 | 133.13 | 137.07 | 140.00 | 140.00 | 134.32 |
| N° 7 | 131.98 | 130.55 | 130.04 | 134.68 | 131.20 | 136.08 | 134.76 | 133.46 | 140.00 | 140.00 | 140.00 | 140.00 |
| N° 8 | 130.75 | 129.73 | 129.51 | 134.02 | 130.12 | 130.99 | 132.36 | 135.86 | 135.17 | 140.00 | 140.00 | 135.19 |
| N° 9 | 133.35 | 131.09 | 136.81 | 133.15 | 134.35 | 134.30 | 137.74 | 140.00 | 140.00 | 137.86 | 137.73 | 140.00 |
| N° 10 | 130.97 | 133.90 | 131.50 | 136.58 | 131.77 | 133.57 | 132.40 | 140.00 | 140.00 | 133.82 | 131.12 | 138.05 |
| N° 11 | 132.97 | 131.16 | 132.18 | 132.12 | 135.67 | 131.75 | 140.00 | 137.45 | 140.00 | 135.76 | 134.77 | 140.00 |
| N° 12 | 131.30 | 131.66 | 129.16 | 131.84 | 130.13 | 128.61 | 133.49 | 136.75 | 140.00 | 140.00 | 140.00 | 136.70 |
| N° 13 | 133.76 | 131.68 | 134.71 | 135.57 | 135.77 | 136.31 | 133.74 | 137.24 | 140.00 | 140.00 | 134.69 | 136.90 |
| N° 14 | 131.10 | 129.62 | 131.48 | 133.82 | 130.65 | 133.45 | 138.40 | 138.04 | 140.00 | 140.00 | 140.00 | 133.33 |
| N° 15 | 130.94 | 130.71 | 130.72 | 132.27 | 133.07 | 131.07 | 132.15 | 137.32 | 140.00 | 136.85 | 133.13 | 137.05 |
| N° 16 | 130.82 | 131.59 | 130.65 | 133.04 | 129.50 | 130.68 | 131.64 | 134.40 | 136.47 | 140.00 | 140.00 | 136.07 |
| N° 17 | 132.13 | 132.07 | 128.60 | 131.78 | 131.71 | 128.89 | 135.06 | 130.69 | 131.09 | 133.97 | 140.00 | 140.00 |
| N° 18 | 131.60 | 134.22 | 128.95 | 132.87 | 132.03 | 133.73 | 132.00 | 135.76 | 135.87 | 140.00 | 140.00 | 139.51 |
| N° 19 | 129.63 | 130.82 | 129.53 | 129.47 | 130.07 | 130.88 | 134.86 | 134.11 | 140.00 | 138.11 | 140.00 | 133.01 |
| N° 20 | 130.73 | 131.45 | 130.35 | 132.11 | 130.68 | 129.80 | 129.58 | 132.59 | 137.94 | 139.87 | 140.00 | 136.25 |
| N° 21 | 132.86 | 132.51 | 132.96 | 133.81 | 133.69 | 129.54 | 134.14 | 133.43 | 134.75 | 137.09 | 140.00 | 135.48 |
| N° 22 | 131.43 | 132.23 | 131.43 | 135.95 | 132.38 | 131.42 | 134.19 | 137.36 | 140.00 | 140.00 | 140.00 | 135.28 |
| N° 23 | 135.55 | 134.73 | 132.48 | 137.91 | 134.42 | 134.86 | 135.68 | 140.00 | 140.00 | 139.21 | 140.00 | 140.00 |
| N° 24 | 131.04 | 131.52 | 131.90 | 138.37 | 131.76 | 130.10 | 133.68 | 138.81 | 140.00 | 140.00 | 140.00 | 136.89 |
| N° 25 | 131.69 | 130.26 | 130.47 | 137.84 | 132.31 | 132.73 | 133.13 | 136.95 | 140.00 | 140.00 | 140.00 | 136.31 |
| N° 26 | 132.38 | 132.40 | 130.83 | 139.09 | 132.95 | 132.76 | 133.66 | 136.30 | 139.53 | 140.00 | 137.07 | 138.11 |
| N° 27 | 130.78 | 129.47 | 129.89 | 134.50 | 130.06 | 131.98 | 132.89 | 135.19 | 140.00 | 138.42 | 140.00 | 136.11 |
| N° 28 | 131.86 | 131.89 | 130.73 | 140.00 | 133.15 | 133.94 | 136.04 | 131.97 | 140.00 | 136.72 | 140.00 | 140.00 |
| N° 29 | 133.30 | 131.25 | 130.54 | 138.33 | 134.13 | 134.53 | 138.11 | 140.00 | 140.00 | 130.21 | 135.77 | 140.00 |
| N° 30 | 132.66 | 135.51 | 134.35 | 140.00 | 138.04 | 139.55 | 140.00 | 140.00 | 140.00 | 135.84 | 131.22 | 140.00 |
| N° 31 | 133.56 | 134.99 | 132.54 | 140.00 | 134.81 | 138.67 | 134.17 | 140.00 | 140.00 | 132.25 | 131.85 | 140.00 |

# 66. AVS1, Module 2

**Ta=25°C; +VCC=30V; -VCC=GND; 1V<Vout<26V; RL=10kOhms**

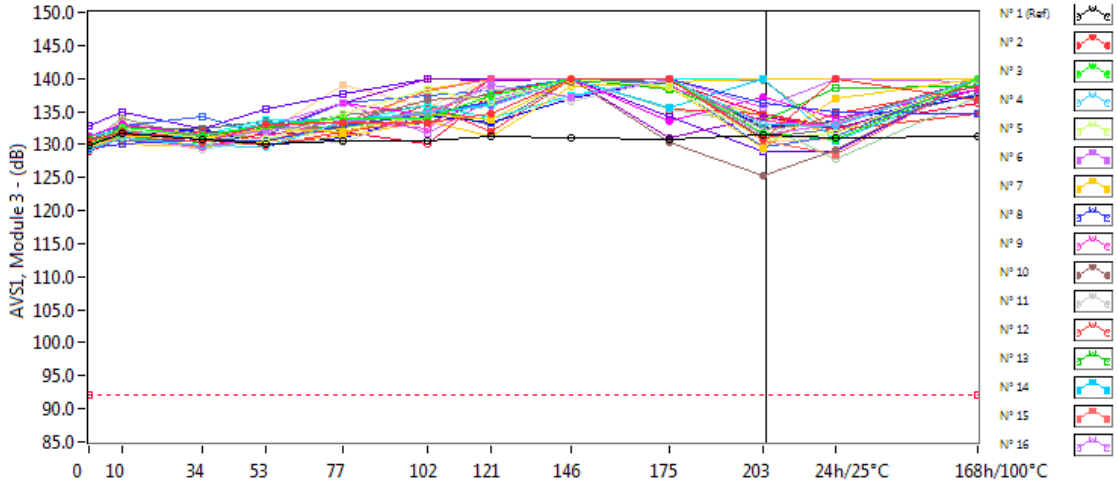



**AVS1, Module 2 . (dB)** **Min = 92.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 130.74 | 134.32 | 132.33 | 130.97 | 133.10 | 131.22 | 132.80 | 131.82 | 133.82 | 133.28 | 133.16 | 133.24 |
| N° 2 | 130.94 | 135.05 | 134.41 | 135.86 | 136.60 | 131.27 | 137.45 | 140.00 | 140.00 | 140.00 | 137.44 | 140.00 |
| N° 3 | 129.52 | 132.26 | 129.00 | 131.08 | 130.54 | 131.89 | 133.33 | 138.47 | 140.00 | 140.00 | 140.00 | 137.44 |
| N° 4 | 130.36 | 133.35 | 129.45 | 131.50 | 133.71 | 132.70 | 134.35 | 134.26 | 140.00 | 136.10 | 140.00 | 139.43 |
| N° 5 | 131.69 | 135.49 | 134.03 | 132.03 | 136.40 | 135.76 | 133.96 | 140.00 | 140.00 | 133.47 | 140.00 | 140.00 |
| N° 6 | 130.71 | 132.42 | 131.35 | 131.76 | 136.23 | 131.95 | 132.15 | 138.93 | 140.00 | 140.00 | 137.09 | 135.02 |
| N° 7 | 130.22 | 134.00 | 130.51 | 130.46 | 132.24 | 131.77 | 136.78 | 135.86 | 140.00 | 134.31 | 140.00 | 140.00 |
| N° 8 | 129.54 | 132.02 | 130.21 | 133.53 | 130.28 | 130.77 | 135.13 | 138.02 | 140.00 | 140.00 | 140.00 | 135.83 |
| N° 9 | 131.97 | 134.05 | 131.85 | 131.17 | 136.94 | 137.44 | 136.25 | 140.00 | 138.86 | 137.73 | 140.00 | 140.00 |
| N° 10 | 130.32 | 133.80 | 129.22 | 131.93 | 133.61 | 137.43 | 135.66 | 140.00 | 140.00 | 130.92 | 131.10 | 140.00 |
| N° 11 | 130.12 | 133.27 | 130.74 | 132.20 | 133.46 | 129.32 | 129.27 | 137.62 | 138.05 | 131.64 | 131.47 | 140.00 |
| N° 12 | 129.33 | 131.24 | 130.35 | 130.76 | 132.80 | 131.46 | 131.76 | 134.79 | 140.00 | 140.00 | 138.66 | 138.36 |
| N° 13 | 131.19 | 136.07 | 130.88 | 132.32 | 133.83 | 131.77 | 133.96 | 140.00 | 140.00 | 140.00 | 140.00 | 140.00 |
| N° 14 | 130.71 | 134.78 | 132.43 | 131.24 | 133.66 | 132.29 | 130.08 | 139.30 | 140.00 | 135.02 | 140.00 | 140.00 |
| N° 15 | 130.23 | 131.42 | 129.38 | 131.84 | 131.41 | 130.24 | 134.17 | 139.38 | 140.00 | 136.02 | 134.57 | 140.00 |
| N° 16 | 130.24 | 134.41 | 130.91 | 131.67 | 131.51 | 134.32 | 132.94 | 134.89 | 140.00 | 140.00 | 140.00 | 140.00 |
| N° 17 | 130.35 | 132.29 | 131.52 | 130.15 | 132.49 | 130.03 | 134.17 | 134.20 | 136.37 | 134.89 | 140.00 | 140.00 |
| N° 18 | 131.86 | 135.21 | 132.58 | 134.63 | 133.50 | 138.82 | 135.16 | 136.59 | 140.00 | 140.00 | 140.00 | 140.00 |
| N° 19 | 129.77 | 131.70 | 127.86 | 130.86 | 129.82 | 130.91 | 130.20 | 140.00 | 140.00 | 140.00 | 136.58 | 137.08 |
| N° 20 | 129.78 | 131.84 | 131.29 | 131.46 | 131.62 | 134.14 | 134.20 | 140.00 | 140.00 | 140.00 | 136.19 | 140.00 |
| N° 21 | 131.20 | 133.23 | 132.82 | 130.55 | 130.93 | 128.97 | 131.93 | 131.91 | 133.83 | 140.00 | 135.68 | 137.48 |
| N° 22 | 129.97 | 134.22 | 130.77 | 130.16 | 130.27 | 130.61 | 136.02 | 137.52 | 140.00 | 140.00 | 140.00 | 135.49 |
| N° 23 | 131.92 | 135.13 | 131.20 | 133.49 | 132.69 | 132.73 | 133.49 | 139.01 | 140.00 | 140.00 | 134.96 | 138.58 |
| N° 24 | 130.59 | 134.27 | 131.97 | 131.36 | 131.58 | 134.68 | 137.21 | 136.70 | 140.00 | 140.00 | 140.00 | 139.33 |
| N° 25 | 130.07 | 132.18 | 130.82 | 131.04 | 131.21 | 131.56 | 132.02 | 131.80 | 140.00 | 140.00 | 140.00 | 136.40 |
| N° 26 | 130.78 | 136.06 | 131.86 | 133.56 | 132.82 | 133.21 | 136.00 | 137.28 | 140.00 | 140.00 | 140.00 | 140.00 |
| N° 27 | 130.71 | 136.13 | 130.13 | 134.64 | 134.24 | 136.16 | 135.05 | 140.00 | 140.00 | 139.22 | 137.11 | 140.00 |
| N° 28 | 131.65 | 135.39 | 130.83 | 131.64 | 134.47 | 132.22 | 133.33 | 140.00 | 140.00 | 140.00 | 139.47 | 140.00 |
| N° 29 | 135.04 | 135.95 | 132.63 | 137.33 | 140.00 | 140.00 | 140.00 | 140.00 | 138.45 | 131.83 | 135.48 | 137.66 |
| N° 30 | 129.45 | 133.45 | 131.34 | 130.16 | 132.69 | 132.68 | 133.98 | 140.00 | 140.00 | 136.61 | 134.80 | 139.87 |
| N° 31 | 131.58 | 136.38 | 135.04 | 132.99 | 134.39 | 137.30 | 132.95 | 140.00 | 140.00 | 138.32 | 133.60 | 140.00 |

# 67. AVS1, Module 3

**Ta=25°C; +VCC=30V; -VCC=GND; 1V<Vout<26V; RL=10kOhms**

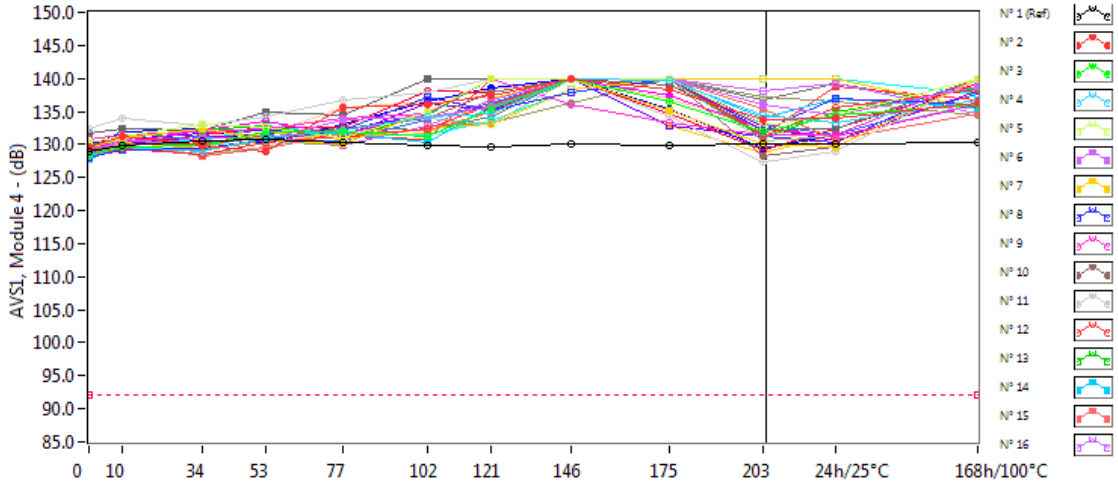



**AVS1, Module 3 . (dB)** **Min = 92.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 129.86 | 131.68 | 130.66 | 130.15 | 130.52 | 130.48 | 131.12 | 131.03 | 130.82 | 131.36 | 130.97 | 131.15 |
| N° 2 | 130.56 | 131.87 | 130.31 | 133.07 | 133.30 | 133.31 | 134.71 | 140.00 | 140.00 | 130.78 | 140.00 | 136.62 |
| N° 3 | 129.97 | 132.55 | 131.44 | 132.93 | 133.88 | 133.95 | 137.38 | 140.00 | 140.00 | 131.71 | 130.70 | 140.00 |
| N° 4 | 129.25 | 130.97 | 129.89 | 129.53 | 133.45 | 134.96 | 135.71 | 140.00 | 140.00 | 133.16 | 132.76 | 139.87 |
| N° 5 | 130.41 | 132.48 | 130.90 | 130.86 | 134.62 | 138.22 | 136.54 | 140.00 | 138.80 | 130.88 | 131.65 | 140.00 |
| N° 6 | 129.88 | 131.62 | 130.80 | 132.14 | 133.49 | 134.75 | 138.97 | 137.15 | 140.00 | 131.37 | 133.10 | 140.00 |
| N° 7 | 129.68 | 131.34 | 131.09 | 132.32 | 131.82 | 134.71 | 133.80 | 140.00 | 138.72 | 129.50 | 137.01 | 140.00 |
| N° 8 | 129.50 | 130.16 | 130.68 | 130.61 | 132.87 | 134.75 | 136.54 | 140.00 | 140.00 | 136.28 | 134.80 | 134.72 |
| N° 9 | 130.56 | 130.95 | 129.71 | 131.30 | 133.71 | 132.45 | 140.00 | 140.00 | 138.88 | 133.52 | 132.84 | 140.00 |
| N° 10 | 130.47 | 130.60 | 131.02 | 132.94 | 133.20 | 136.82 | 137.49 | 140.00 | 130.39 | 125.38 | 129.12 | 140.00 |
| N° 11 | 129.82 | 131.19 | 129.19 | 131.06 | 130.31 | 134.82 | 138.66 | 136.48 | 140.00 | 132.06 | 133.28 | 139.73 |
| N° 12 | 129.26 | 131.08 | 131.92 | 129.90 | 132.01 | 133.72 | 140.00 | 140.00 | 140.00 | 130.87 | 134.65 | 138.74 |
| N° 13 | 130.81 | 131.28 | 130.39 | 132.54 | 132.61 | 134.98 | 133.65 | 140.00 | 138.41 | 133.45 | 138.59 | 138.75 |
| N° 14 | 130.53 | 131.90 | 130.97 | 133.25 | 133.96 | 134.55 | 136.27 | 140.00 | 135.62 | 140.00 | 130.57 | 139.31 |
| N° 15 | 129.22 | 131.03 | 129.94 | 130.64 | 133.22 | 138.05 | 139.98 | 140.00 | 140.00 | 130.56 | 128.59 | 139.82 |
| N° 16 | 129.60 | 132.13 | 131.56 | 132.91 | 136.24 | 131.65 | 136.82 | 140.00 | 140.00 | 135.63 | 140.00 | 139.45 |
| N° 17 | 130.01 | 131.81 | 129.54 | 130.49 | 131.23 | 133.63 | 131.24 | 138.73 | 139.58 | 140.00 | 140.00 | 140.00 |
| N° 18 | 131.16 | 133.04 | 131.35 | 132.91 | 136.17 | 134.53 | 136.08 | 140.00 | 133.43 | 137.10 | 133.96 | 138.32 |
| N° 19 | 130.54 | 131.23 | 131.89 | 131.87 | 136.29 | 140.00 | 139.70 | 140.00 | 130.90 | 134.31 | 132.46 | 138.40 |
| N° 20 | 129.43 | 131.24 | 129.85 | 132.29 | 132.63 | 133.94 | 140.00 | 140.00 | 135.32 | 133.06 | 127.78 | 137.15 |
| N° 21 | 131.26 | 132.08 | 131.35 | 133.81 | 133.41 | 136.10 | 134.09 | 137.39 | 140.00 | 140.00 | 140.00 | 139.53 |
| N° 22 | 129.83 | 131.55 | 130.72 | 129.85 | 131.53 | 136.08 | 131.94 | 140.00 | 135.44 | 134.73 | 132.07 | 134.57 |
| N° 23 | 130.75 | 132.60 | 132.47 | 133.46 | 132.16 | 133.18 | 136.67 | 139.58 | 140.00 | 132.45 | 133.55 | 140.00 |
| N° 24 | 131.28 | 132.79 | 134.21 | 131.37 | 136.31 | 137.47 | 138.17 | 140.00 | 139.16 | 129.54 | 131.26 | 140.00 |
| N° 25 | 128.85 | 131.04 | 129.65 | 131.69 | 131.89 | 130.13 | 137.55 | 140.00 | 139.52 | 134.63 | 132.69 | 136.32 |
| N° 26 | 129.79 | 131.33 | 132.38 | 129.79 | 131.05 | 134.46 | 133.23 | 137.03 | 140.00 | 132.52 | 133.46 | 137.50 |
| N° 27 | 130.35 | 134.06 | 130.72 | 131.35 | 133.12 | 135.14 | 137.83 | 140.00 | 140.00 | 139.60 | 131.84 | 140.00 |
| N° 28 | 130.81 | 132.14 | 131.32 | 132.42 | 134.45 | 135.91 | 132.81 | 140.00 | 140.00 | 130.97 | 132.31 | 137.56 |
| N° 29 | 132.73 | 134.80 | 132.41 | 135.39 | 137.72 | 140.00 | 140.00 | 140.00 | 134.14 | 128.97 | 128.83 | 140.00 |
| N° 30 | 129.31 | 130.09 | 129.63 | 130.22 | 132.68 | 138.44 | 140.00 | 140.00 | 138.49 | 134.24 | 131.67 | 140.00 |
| N° 31 | 131.06 | 133.29 | 131.64 | 131.66 | 138.93 | 135.65 | 140.00 | 140.00 | 140.00 | 130.53 | 130.72 | 140.00 |

# 68. AVS1, Module 4

**Ta=25°C; +VCC=30V; -VCC=GND; 1V<Vout<26V; RL=10kOhms**

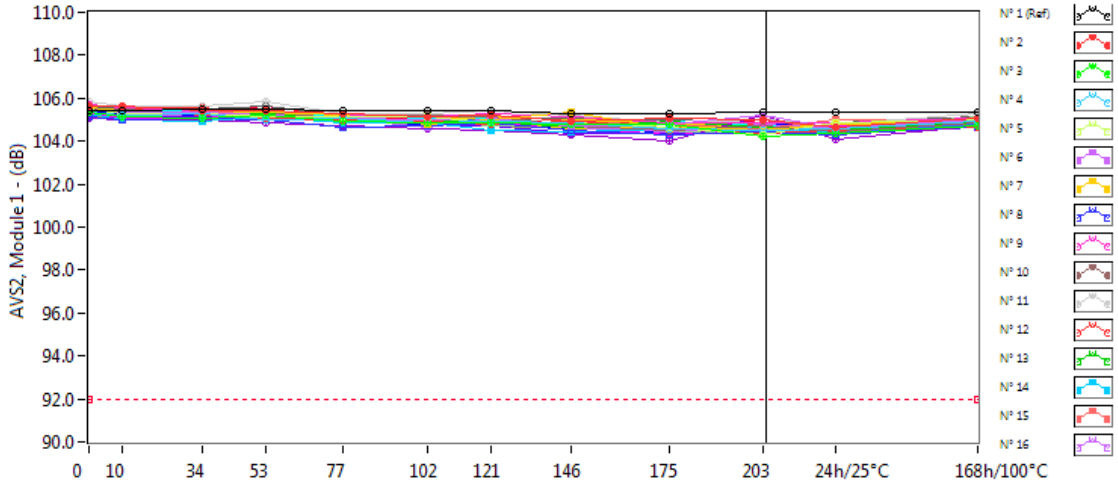



**AVS1, Module 4 . (dB)** **Min = 92.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 129.00 | 129.76 | 130.44 | 130.72 | 130.22 | 129.91 | 129.67 | 130.00 | 129.97 | 130.04 | 129.97 | 130.35 |
| N° 2 | 129.52 | 131.22 | 129.76 | 129.01 | 135.58 | 135.95 | 137.50 | 140.00 | 138.42 | 133.66 | 133.92 | 136.26 |
| N° 3 | 128.53 | 129.54 | 129.91 | 131.96 | 131.81 | 131.16 | 135.35 | 140.00 | 136.53 | 131.94 | 134.51 | 135.97 |
| N° 4 | 128.35 | 129.60 | 128.87 | 131.07 | 132.26 | 134.11 | 134.70 | 140.00 | 139.66 | 134.47 | 133.34 | 136.74 |
| N° 5 | 130.32 | 131.18 | 133.13 | 132.70 | 131.11 | 134.81 | 140.00 | 140.00 | 140.00 | 132.82 | 134.46 | 140.00 |
| N° 6 | 129.52 | 129.86 | 130.93 | 130.89 | 133.70 | 134.27 | 135.53 | 140.00 | 140.00 | 136.02 | 134.44 | 138.75 |
| N° 7 | 129.44 | 131.00 | 132.27 | 130.79 | 130.17 | 134.78 | 140.00 | 140.00 | 135.18 | 130.19 | 129.64 | 140.00 |
| N° 8 | 128.09 | 129.11 | 129.37 | 130.76 | 132.05 | 137.25 | 135.02 | 137.94 | 140.00 | 132.06 | 136.96 | 136.10 |
| N° 9 | 130.79 | 131.48 | 131.95 | 132.38 | 134.00 | 134.72 | 140.00 | 136.02 | 133.27 | 131.48 | 131.38 | 140.00 |
| N° 10 | 129.19 | 130.20 | 130.10 | 131.03 | 132.31 | 133.87 | 137.80 | 140.00 | 140.00 | 128.34 | 129.74 | 140.00 |
| N° 11 | 132.38 | 133.97 | 132.76 | 134.21 | 136.77 | 137.87 | 140.00 | 140.00 | 134.23 | 127.27 | 129.02 | 140.00 |
| N° 12 | 128.29 | 129.41 | 128.51 | 130.32 | 131.24 | 132.26 | 136.12 | 140.00 | 140.00 | 131.12 | 135.56 | 138.38 |
| N° 13 | 129.81 | 131.12 | 132.10 | 132.85 | 131.04 | 134.42 | 140.00 | 140.00 | 140.00 | 131.06 | 134.90 | 138.49 |
| N° 14 | 127.90 | 129.69 | 129.97 | 131.16 | 131.62 | 130.23 | 135.74 | 140.00 | 140.00 | 134.09 | 136.86 | 135.53 |
| N° 15 | 128.56 | 130.19 | 128.18 | 129.29 | 131.62 | 132.21 | 134.79 | 140.00 | 140.00 | 135.38 | 130.78 | 134.70 |
| N° 16 | 128.70 | 130.73 | 129.78 | 131.18 | 129.94 | 132.85 | 136.70 | 140.00 | 140.00 | 138.07 | 139.27 | 134.77 |
| N° 17 | 128.98 | 130.31 | 129.40 | 131.97 | 130.82 | 132.41 | 133.16 | 138.24 | 140.00 | 140.00 | 140.00 | 135.30 |
| N° 18 | 129.62 | 130.42 | 132.24 | 133.44 | 131.54 | 134.74 | 140.00 | 140.00 | 137.35 | 132.34 | 131.34 | 136.07 |
| N° 19 | 128.71 | 130.03 | 130.93 | 131.70 | 131.21 | 136.16 | 135.12 | 140.00 | 140.00 | 132.60 | 130.49 | 138.09 |
| N° 20 | 128.23 | 130.02 | 128.49 | 129.72 | 132.11 | 134.09 | 133.13 | 140.00 | 140.00 | 130.63 | 131.15 | 136.31 |
| N° 21 | 129.94 | 130.46 | 130.61 | 132.85 | 131.52 | 131.50 | 133.46 | 138.28 | 140.00 | 140.00 | 140.00 | 137.68 |
| N° 22 | 128.47 | 129.46 | 130.21 | 131.20 | 131.33 | 130.66 | 140.00 | 140.00 | 140.00 | 131.41 | 138.76 | 136.68 |
| N° 23 | 131.59 | 132.31 | 132.17 | 134.79 | 134.48 | 140.00 | 140.00 | 140.00 | 139.05 | 132.12 | 132.42 | 140.00 |
| N° 24 | 129.41 | 130.53 | 131.31 | 130.72 | 130.47 | 133.83 | 136.20 | 140.00 | 140.00 | 133.14 | 131.54 | 137.68 |
| N° 25 | 129.31 | 129.90 | 131.48 | 132.51 | 132.55 | 138.06 | 137.86 | 140.00 | 134.71 | 129.06 | 132.27 | 139.25 |
| N° 26 | 129.67 | 131.81 | 132.42 | 130.13 | 133.06 | 136.56 | 138.45 | 140.00 | 135.36 | 129.31 | 131.52 | 140.00 |
| N° 27 | 129.02 | 129.41 | 129.16 | 130.64 | 129.96 | 132.93 | 133.30 | 136.17 | 140.00 | 137.28 | 136.59 | 134.40 |
| N° 28 | 129.43 | 130.19 | 129.94 | 131.55 | 132.53 | 132.10 | 134.18 | 140.00 | 140.00 | 136.81 | 139.23 | 135.60 |
| N° 29 | 130.30 | 130.78 | 131.72 | 132.20 | 132.25 | 134.70 | 140.00 | 140.00 | 132.78 | 131.15 | 130.37 | 140.00 |
| N° 30 | 129.27 | 130.94 | 130.82 | 132.32 | 130.92 | 131.76 | 136.99 | 140.00 | 132.94 | 128.67 | 131.48 | 140.00 |
| N° 31 | 130.25 | 130.75 | 131.19 | 131.57 | 135.60 | 136.52 | 138.29 | 140.00 | 136.98 | 132.49 | 129.55 | 140.00 |

# 69. AVS2, Module 1

**Ta=25°C; +VCC=30V; -VCC=GND; 5V<Vout<20V; RL=2kOhms**

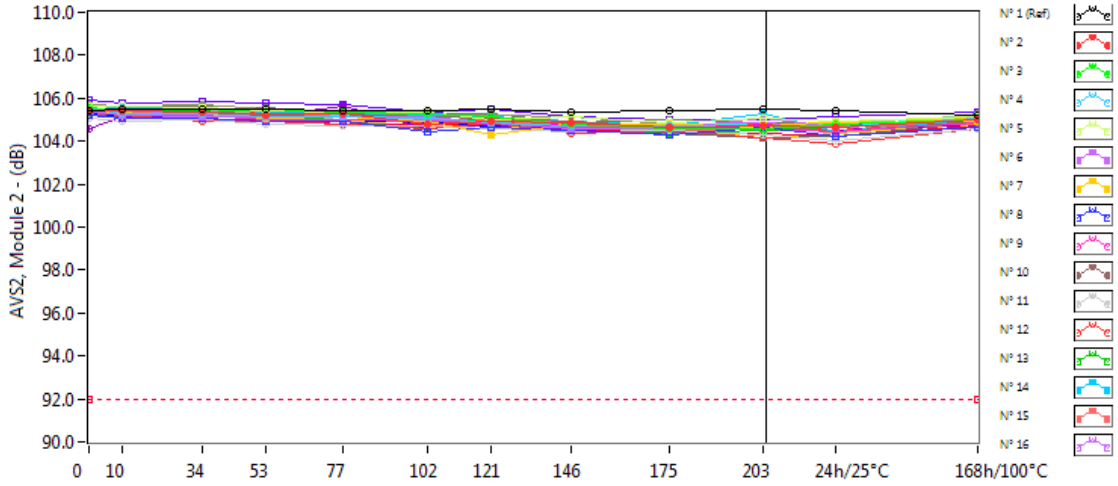



**AVS2, Module 1 . (dB)** **Min = 92.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 105.43 | 105.41 | 105.46 | 105.48 | 105.45 | 105.44 | 105.45 | 105.30 | 105.29 | 105.33 | 105.33 | 105.34 |
| N° 2 | 105.66 | 105.65 | 105.39 | 105.42 | 105.29 | 105.14 | 105.20 | 104.95 | 105.10 | 105.01 | 104.63 | 105.09 |
| N° 3 | 105.32 | 105.15 | 105.09 | 105.25 | 104.91 | 104.84 | 104.88 | 104.79 | 104.80 | 104.25 | 104.40 | 104.74 |
| N° 4 | 105.36 | 105.22 | 105.25 | 104.98 | 105.09 | 104.86 | 104.95 | 104.86 | 104.55 | 104.49 | 104.59 | 104.93 |
| N° 5 | 105.52 | 105.31 | 105.27 | 105.17 | 105.14 | 105.17 | 104.87 | 104.88 | 104.63 | 104.29 | 104.83 | 104.98 |
| N° 6 | 105.45 | 105.38 | 105.32 | 105.22 | 105.07 | 104.99 | 104.92 | 104.69 | 104.77 | 105.20 | 104.59 | 104.97 |
| N° 7 | 105.53 | 105.44 | 105.28 | 105.33 | 105.22 | 104.79 | 105.00 | 105.36 | 104.58 | 104.54 | 104.77 | 104.90 |
| N° 8 | 105.11 | 105.03 | 105.08 | 104.99 | 104.64 | 104.72 | 104.88 | 104.47 | 104.31 | 104.44 | 104.29 | 104.74 |
| N° 9 | 105.69 | 105.60 | 105.44 | 105.41 | 105.19 | 105.16 | 105.28 | 105.17 | 104.88 | 104.86 | 104.86 | 105.07 |
| N° 10 | 105.50 | 105.53 | 105.31 | 105.33 | 105.06 | 105.23 | 105.15 | 104.69 | 104.53 | 104.71 | 104.43 | 104.88 |
| N° 11 | 105.85 | 105.63 | 105.67 | 105.87 | 105.31 | 105.25 | 105.43 | 105.19 | 104.89 | 104.97 | 104.79 | 105.28 |
| N° 12 | 105.37 | 105.58 | 105.18 | 105.06 | 105.03 | 104.94 | 104.79 | 104.90 | 104.67 | 104.38 | 104.51 | 104.68 |
| N° 13 | 105.52 | 105.30 | 105.28 | 105.25 | 105.10 | 104.92 | 104.93 | 104.62 | 104.95 | 104.64 | 104.54 | 104.88 |
| N° 14 | 105.25 | 105.00 | 104.96 | 105.11 | 104.83 | 104.86 | 104.49 | 104.45 | 104.59 | 104.65 | 104.36 | 104.69 |
| N° 15 | 105.43 | 105.38 | 105.37 | 105.31 | 105.09 | 105.01 | 104.92 | 104.85 | 104.82 | 104.61 | 104.98 | 104.99 |
| N° 16 | 105.37 | 105.16 | 105.32 | 105.05 | 105.04 | 104.65 | 105.06 | 104.67 | 104.45 | 104.80 | 104.55 | 104.96 |
| N° 17 | 105.51 | 105.35 | 105.35 | 105.20 | 105.30 | 105.12 | 105.03 | 104.61 | 104.66 | 104.55 | 104.82 | 104.91 |
| N° 18 | 105.38 | 105.08 | 105.08 | 105.25 | 105.03 | 104.95 | 104.86 | 104.67 | 104.27 | 104.53 | 104.75 | 104.87 |
| N° 19 | 105.10 | 104.97 | 105.00 | 104.86 | 104.75 | 104.59 | 104.52 | 104.26 | 103.99 | 105.18 | 104.11 | 104.70 |
| N° 20 | 105.32 | 105.13 | 105.25 | 105.06 | 104.93 | 104.92 | 104.74 | 104.79 | 104.46 | 104.40 | 104.59 | 105.14 |
| N° 21 | 105.48 | 105.41 | 105.40 | 105.21 | 105.24 | 105.09 | 105.04 | 104.68 | 104.92 | 104.69 | 104.55 | 104.98 |
| N° 22 | 105.47 | 105.47 | 105.54 | 105.21 | 105.13 | 105.17 | 104.84 | 104.86 | 104.84 | 104.76 | 104.60 | 104.96 |
| N° 23 | 105.67 | 105.50 | 105.46 | 105.65 | 105.24 | 105.31 | 105.00 | 105.08 | 105.00 | 104.87 | 104.89 | 105.16 |
| N° 24 | 105.46 | 105.40 | 105.28 | 105.15 | 105.08 | 105.19 | 104.89 | 104.72 | 104.78 | 104.48 | 104.45 | 104.82 |
| N° 25 | 105.60 | 105.46 | 105.36 | 105.62 | 105.13 | 105.00 | 105.07 | 104.77 | 104.59 | 104.99 | 104.49 | 105.15 |
| N° 26 | 105.42 | 105.28 | 105.18 | 105.25 | 105.11 | 104.70 | 104.87 | 104.60 | 104.44 | 104.78 | 104.87 | 104.83 |
| N° 27 | 105.22 | 105.09 | 105.04 | 105.22 | 104.92 | 104.95 | 104.69 | 104.60 | 104.41 | 104.56 | 104.26 | 104.75 |
| N° 28 | 105.43 | 105.50 | 105.40 | 105.41 | 105.10 | 105.07 | 104.93 | 104.70 | 104.51 | 104.73 | 104.75 | 104.97 |
| N° 29 | 105.12 | 105.21 | 105.13 | 105.19 | 104.91 | 104.79 | 104.71 | 104.40 | 104.37 | 104.45 | 104.40 | 104.66 |
| N° 30 | 105.58 | 105.37 | 105.48 | 105.47 | 105.09 | 105.19 | 105.13 | 105.00 | 104.83 | 104.67 | 104.64 | 105.11 |
| N° 31 | 105.44 | 105.35 | 105.16 | 105.27 | 105.16 | 105.05 | 105.03 | 104.77 | 104.58 | 104.44 | 104.67 | 104.98 |

# 70. AVS2, Module 2

**Ta=25°C; +VCC=30V; -VCC=GND; 5V<Vout<20V; RL=2kOhms**

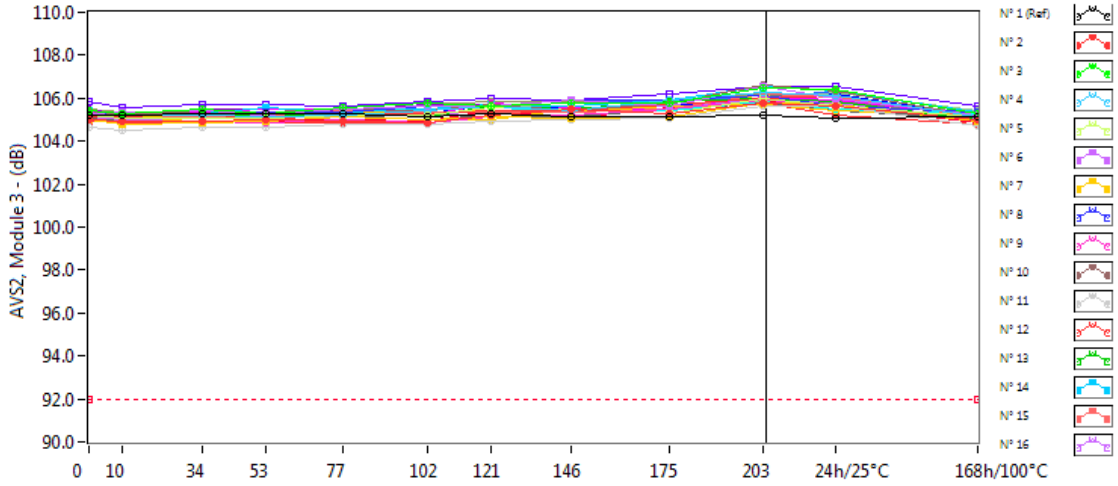



**AVS2, Module 2 . (dB)** **Min = 92.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 105.46 | 105.47 | 105.51 | 105.49 | 105.46 | 105.43 | 105.53 | 105.37 | 105.42 | 105.50 | 105.40 | 105.24 |
| N° 2 | 105.42 | 105.43 | 105.35 | 105.23 | 105.25 | 104.82 | 104.93 | 104.86 | 104.67 | 104.71 | 104.65 | 105.02 |
| N° 3 | 105.57 | 105.42 | 105.33 | 105.50 | 105.34 | 105.27 | 105.13 | 104.82 | 104.56 | 104.57 | 104.81 | 105.00 |
| N° 4 | 105.55 | 105.31 | 105.28 | 105.14 | 105.12 | 105.04 | 104.86 | 104.71 | 104.71 | 104.69 | 104.64 | 105.09 |
| N° 5 | 105.67 | 105.64 | 105.56 | 105.42 | 105.32 | 105.32 | 105.02 | 105.16 | 104.83 | 105.10 | 104.90 | 105.12 |
| N° 6 | 105.40 | 105.22 | 105.17 | 105.16 | 105.11 | 105.17 | 104.84 | 104.55 | 104.60 | 105.05 | 104.66 | 105.05 |
| N° 7 | 105.49 | 105.31 | 105.26 | 105.10 | 105.17 | 104.90 | 104.27 | 104.78 | 104.76 | 104.71 | 104.84 | 104.95 |
| N° 8 | 105.18 | 105.09 | 105.04 | 104.91 | 104.90 | 104.46 | 104.64 | 104.54 | 104.30 | 104.62 | 104.26 | 104.66 |
| N° 9 | 105.39 | 105.23 | 105.22 | 105.01 | 105.03 | 104.90 | 104.87 | 104.63 | 104.60 | 104.58 | 104.44 | 104.83 |
| N° 10 | 105.54 | 105.30 | 105.38 | 105.32 | 105.26 | 105.13 | 105.08 | 104.96 | 104.64 | 104.73 | 104.44 | 104.92 |
| N° 11 | 105.04 | 104.95 | 105.01 | 104.78 | 104.71 | 104.73 | 104.55 | 104.40 | 104.47 | 104.27 | 103.99 | 104.56 |
| N° 12 | 105.07 | 105.18 | 104.95 | 104.93 | 104.80 | 104.58 | 104.84 | 104.33 | 104.51 | 104.14 | 103.86 | 104.57 |
| N° 13 | 105.48 | 105.41 | 105.42 | 105.14 | 105.00 | 104.92 | 105.08 | 104.78 | 104.40 | 104.52 | 104.65 | 104.98 |
| N° 14 | 105.61 | 105.57 | 105.53 | 105.36 | 105.39 | 105.22 | 105.15 | 104.92 | 104.71 | 105.29 | 104.46 | 104.98 |
| N° 15 | 105.33 | 105.41 | 105.13 | 105.33 | 105.12 | 104.94 | 105.01 | 104.67 | 104.48 | 104.57 | 104.72 | 104.78 |
| N° 16 | 105.42 | 105.39 | 105.20 | 105.20 | 105.14 | 105.01 | 105.02 | 104.82 | 104.76 | 104.83 | 104.65 | 104.83 |
| N° 17 | 105.47 | 105.39 | 105.30 | 105.29 | 105.15 | 105.02 | 104.97 | 104.78 | 104.78 | 104.68 | 104.95 | 105.07 |
| N° 18 | 105.45 | 105.21 | 105.13 | 105.16 | 105.00 | 104.91 | 104.77 | 104.78 | 104.44 | 104.78 | 104.45 | 104.96 |
| N° 19 | 104.54 | 105.17 | 105.14 | 105.12 | 105.67 | 104.61 | 104.75 | 104.52 | 104.36 | 104.49 | 104.47 | 104.76 |
| N° 20 | 105.46 | 105.47 | 105.45 | 105.29 | 105.02 | 104.92 | 105.13 | 104.83 | 104.52 | 104.64 | 104.81 | 105.25 |
| N° 21 | 105.44 | 105.36 | 105.34 | 105.08 | 105.19 | 104.91 | 105.07 | 104.89 | 104.65 | 104.84 | 104.61 | 105.22 |
| N° 22 | 105.47 | 105.47 | 105.28 | 105.37 | 105.15 | 104.97 | 104.84 | 104.89 | 104.74 | 104.82 | 104.54 | 104.95 |
| N° 23 | 105.25 | 105.08 | 105.30 | 105.13 | 104.96 | 104.58 | 104.86 | 104.52 | 104.39 | 104.12 | 104.25 | 104.86 |
| N° 24 | 105.53 | 105.53 | 105.43 | 105.33 | 105.22 | 105.24 | 105.14 | 104.92 | 104.69 | 104.67 | 104.70 | 105.07 |
| N° 25 | 105.23 | 105.13 | 104.99 | 104.99 | 104.77 | 104.82 | 104.83 | 104.48 | 104.44 | 104.39 | 104.19 | 104.75 |
| N° 26 | 105.35 | 105.17 | 105.21 | 105.13 | 105.03 | 104.84 | 104.69 | 104.67 | 104.64 | 104.50 | 104.78 | 104.82 |
| N° 27 | 105.70 | 105.61 | 105.69 | 105.48 | 105.44 | 105.24 | 105.24 | 105.15 | 104.80 | 104.87 | 104.46 | 105.30 |
| N° 28 | 105.71 | 105.58 | 105.64 | 105.54 | 105.25 | 105.26 | 105.30 | 104.83 | 104.98 | 104.88 | 104.78 | 105.03 |
| N° 29 | 105.95 | 105.78 | 105.83 | 105.76 | 105.70 | 105.39 | 105.48 | 105.16 | 104.97 | 105.01 | 105.11 | 105.38 |
| N° 30 | 105.25 | 105.22 | 105.17 | 105.15 | 104.98 | 104.65 | 104.73 | 104.61 | 104.55 | 104.12 | 104.37 | 104.75 |
| N° 31 | 105.52 | 105.55 | 105.56 | 105.25 | 105.29 | 104.92 | 104.96 | 104.56 | 104.80 | 104.86 | 104.67 | 105.07 |

# 71. AVS2, Module 3

**Ta=25°C; +VCC=30V; -VCC=GND; 5V<Vout<20V; RL=2kOhms**

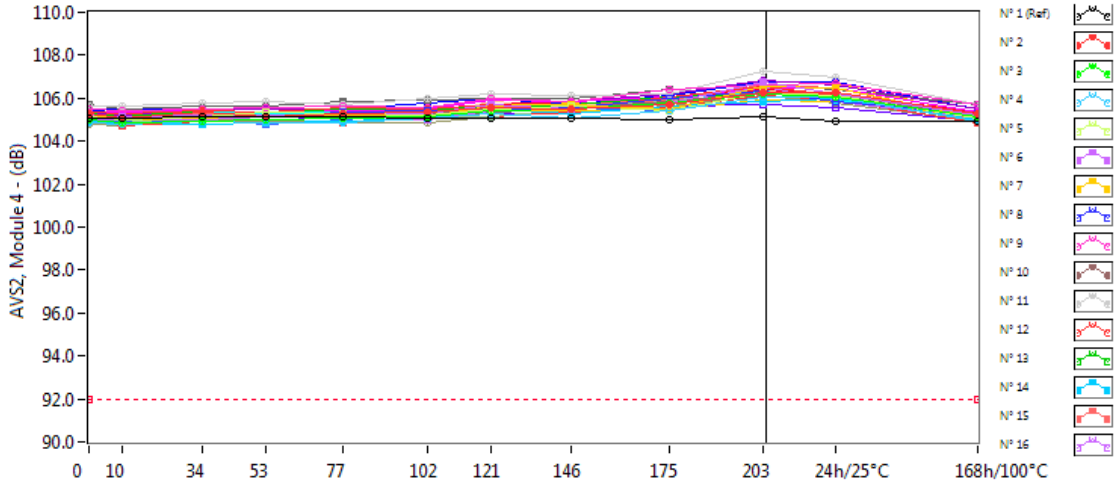



**AVS2, Module 3 . (dB)** **Min = 92.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 105.18 | 105.20 | 105.28 | 105.25 | 105.26 | 105.12 | 105.25 | 105.17 | 105.13 | 105.19 | 105.05 | 105.11 |
| N° 2 | 105.03 | 104.93 | 104.94 | 105.00 | 104.92 | 104.89 | 105.21 | 105.46 | 105.25 | 105.77 | 105.63 | 104.97 |
| N° 3 | 105.41 | 105.27 | 105.49 | 105.25 | 105.55 | 105.76 | 105.66 | 105.77 | 105.76 | 106.46 | 106.42 | 105.29 |
| N° 4 | 105.24 | 105.20 | 105.24 | 105.12 | 105.23 | 105.39 | 105.62 | 105.42 | 105.90 | 106.27 | 106.12 | 105.17 |
| N° 5 | 105.20 | 105.10 | 105.05 | 105.05 | 105.20 | 105.22 | 105.56 | 105.52 | 105.29 | 106.02 | 105.60 | 105.11 |
| N° 6 | 105.30 | 105.35 | 105.42 | 105.28 | 105.46 | 105.61 | 105.60 | 105.92 | 105.65 | 106.55 | 105.97 | 105.18 |
| N° 7 | 104.98 | 104.79 | 104.89 | 104.95 | 105.14 | 104.98 | 105.13 | 105.04 | 105.15 | 105.80 | 105.73 | 104.93 |
| N° 8 | 105.29 | 105.18 | 105.28 | 105.35 | 105.36 | 105.60 | 105.65 | 105.90 | 105.90 | 106.13 | 105.66 | 105.34 |
| N° 9 | 104.99 | 104.92 | 104.96 | 104.86 | 105.03 | 104.87 | 105.17 | 105.20 | 105.51 | 105.89 | 105.70 | 104.92 |
| N° 10 | 105.40 | 105.23 | 105.42 | 105.33 | 105.49 | 105.45 | 105.72 | 105.41 | 105.79 | 106.59 | 106.35 | 105.13 |
| N° 11 | 104.67 | 104.49 | 104.67 | 104.68 | 104.76 | 104.81 | 104.96 | 104.97 | 105.05 | 105.63 | 105.64 | 104.75 |
| N° 12 | 105.15 | 105.14 | 105.29 | 104.99 | 105.26 | 105.25 | 105.44 | 105.44 | 105.72 | 106.01 | 106.12 | 105.13 |
| N° 13 | 105.30 | 105.19 | 105.28 | 105.13 | 105.25 | 105.15 | 105.61 | 105.47 | 105.82 | 105.97 | 105.83 | 105.03 |
| N° 14 | 105.42 | 105.31 | 105.27 | 105.55 | 105.35 | 105.52 | 105.73 | 105.65 | 105.88 | 106.55 | 106.33 | 105.37 |
| N° 15 | 105.18 | 105.10 | 105.16 | 105.11 | 105.39 | 105.33 | 105.37 | 105.35 | 105.48 | 106.22 | 106.03 | 105.16 |
| N° 16 | 105.13 | 105.01 | 105.09 | 105.19 | 105.23 | 105.27 | 105.37 | 105.32 | 105.53 | 105.97 | 105.76 | 105.05 |
| N° 17 | 105.26 | 105.15 | 105.10 | 105.35 | 105.33 | 105.33 | 105.45 | 105.38 | 105.63 | 105.72 | 105.41 | 105.20 |
| N° 18 | 105.34 | 105.26 | 105.34 | 105.47 | 105.48 | 105.23 | 105.77 | 105.59 | 105.53 | 106.07 | 105.93 | 105.22 |
| N° 19 | 105.47 | 105.19 | 105.53 | 105.51 | 105.45 | 105.67 | 105.69 | 105.66 | 105.95 | 106.55 | 106.35 | 105.33 |
| N° 20 | 105.28 | 105.08 | 105.12 | 105.16 | 105.16 | 105.43 | 105.65 | 105.66 | 105.89 | 105.86 | 106.23 | 105.41 |
| N° 21 | 105.30 | 105.27 | 105.32 | 105.30 | 105.42 | 105.47 | 105.55 | 105.44 | 105.45 | 105.87 | 105.49 | 105.30 |
| N° 22 | 104.94 | 104.89 | 104.94 | 104.86 | 104.87 | 104.84 | 105.12 | 105.10 | 105.16 | 105.77 | 105.22 | 104.77 |
| N° 23 | 105.10 | 104.98 | 105.05 | 105.11 | 105.12 | 105.18 | 105.11 | 105.16 | 105.46 | 105.79 | 105.41 | 105.08 |
| N° 24 | 105.26 | 105.23 | 105.19 | 105.31 | 105.39 | 105.49 | 105.65 | 105.77 | 105.90 | 106.02 | 106.33 | 105.17 |
| N° 25 | 104.91 | 104.89 | 104.96 | 104.92 | 104.98 | 104.95 | 105.42 | 105.06 | 105.59 | 105.86 | 105.71 | 104.89 |
| N° 26 | 105.18 | 104.98 | 105.25 | 105.04 | 105.21 | 105.26 | 105.70 | 105.50 | 105.72 | 105.84 | 106.21 | 105.15 |
| N° 27 | 105.46 | 105.33 | 105.45 | 105.47 | 105.45 | 105.72 | 105.85 | 105.82 | 105.90 | 106.23 | 106.07 | 105.31 |
| N° 28 | 105.26 | 105.14 | 105.29 | 105.17 | 105.53 | 105.20 | 105.45 | 105.46 | 105.76 | 106.21 | 105.84 | 105.20 |
| N° 29 | 105.81 | 105.59 | 105.69 | 105.73 | 105.65 | 105.81 | 106.01 | 105.89 | 106.20 | 106.54 | 106.54 | 105.61 |
| N° 30 | 105.07 | 104.96 | 105.05 | 105.15 | 105.16 | 105.03 | 105.01 | 105.46 | 105.85 | 106.14 | 106.10 | 105.05 |
| N° 31 | 105.26 | 105.35 | 105.32 | 105.21 | 105.29 | 105.48 | 105.71 | 105.50 | 105.80 | 106.24 | 105.78 | 105.25 |

# 72. AVS2, Module 4

**Ta=25°C; +VCC=30V; -VCC=GND; 5V<Vout<20V; RL=2kOhms**

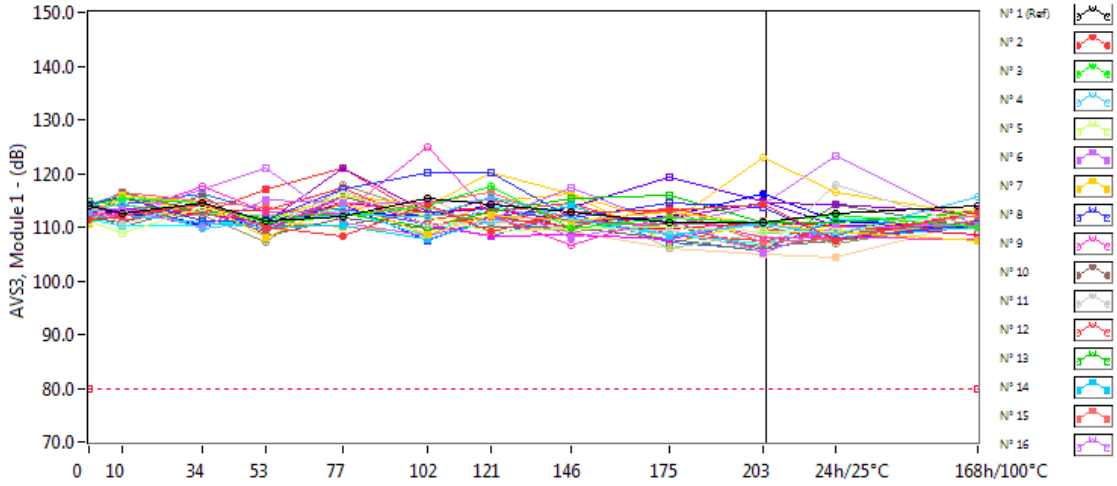



**AVS2, Module 4 . (dB)** **Min = 92.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 105.05 | 105.11 | 105.11 | 105.11 | 105.12 | 105.08 | 105.11 | 105.04 | 104.99 | 105.12 | 104.91 | 104.96 |
| N° 2 | 105.28 | 105.08 | 105.33 | 105.16 | 105.30 | 105.37 | 105.59 | 105.48 | 105.70 | 106.25 | 106.28 | 105.27 |
| N° 3 | 105.01 | 104.86 | 104.96 | 105.00 | 105.04 | 105.16 | 105.44 | 105.48 | 105.80 | 106.16 | 106.07 | 105.11 |
| N° 4 | 104.86 | 104.76 | 104.94 | 104.87 | 104.86 | 105.09 | 105.25 | 105.10 | 105.44 | 106.08 | 106.09 | 104.92 |
| N° 5 | 105.12 | 104.97 | 105.14 | 105.32 | 105.28 | 105.23 | 105.51 | 105.65 | 105.44 | 106.25 | 106.15 | 105.06 |
| N° 6 | 105.22 | 105.15 | 105.24 | 105.22 | 105.27 | 105.27 | 105.70 | 105.52 | 105.75 | 106.78 | 106.22 | 105.20 |
| N° 7 | 105.19 | 105.01 | 105.10 | 105.20 | 105.20 | 105.14 | 105.61 | 105.70 | 105.48 | 106.53 | 106.51 | 105.09 |
| N° 8 | 105.16 | 105.01 | 105.14 | 105.17 | 105.37 | 105.45 | 105.41 | 105.58 | 105.96 | 106.33 | 105.86 | 105.28 |
| N° 9 | 105.52 | 105.39 | 105.46 | 105.56 | 105.62 | 105.59 | 105.95 | 105.84 | 106.41 | 106.61 | 106.69 | 105.68 |
| N° 10 | 105.15 | 105.02 | 105.14 | 105.16 | 105.20 | 105.30 | 105.55 | 105.59 | 105.82 | 106.27 | 106.10 | 105.19 |
| N° 11 | 105.64 | 105.61 | 105.76 | 105.81 | 105.70 | 106.01 | 106.23 | 106.10 | 106.23 | 107.23 | 106.99 | 105.69 |
| N° 12 | 105.36 | 105.28 | 105.45 | 105.34 | 105.55 | 105.50 | 105.73 | 105.47 | 106.06 | 106.58 | 106.14 | 105.29 |
| N° 13 | 105.28 | 105.13 | 105.40 | 105.32 | 105.47 | 105.49 | 105.53 | 105.74 | 106.07 | 106.22 | 106.14 | 105.29 |
| N° 14 | 104.90 | 104.87 | 104.82 | 104.89 | 104.96 | 105.06 | 105.46 | 105.28 | 105.64 | 105.84 | 105.95 | 105.02 |
| N° 15 | 105.14 | 105.15 | 105.29 | 105.18 | 105.17 | 105.38 | 105.57 | 105.73 | 105.93 | 106.61 | 106.46 | 105.00 |
| N° 16 | 104.99 | 105.02 | 105.01 | 105.13 | 105.18 | 105.03 | 105.45 | 105.58 | 105.74 | 106.54 | 105.83 | 105.05 |
| N° 17 | 105.16 | 105.11 | 105.25 | 105.13 | 105.32 | 105.40 | 105.41 | 105.44 | 105.51 | 105.93 | 105.88 | 105.17 |
| N° 18 | 105.36 | 105.32 | 105.42 | 105.37 | 105.43 | 105.47 | 105.93 | 105.88 | 106.04 | 106.47 | 106.50 | 105.37 |
| N° 19 | 105.37 | 105.18 | 105.42 | 105.48 | 105.43 | 105.55 | 105.90 | 105.83 | 106.22 | 106.80 | 106.60 | 105.52 |
| N° 20 | 105.00 | 104.88 | 105.14 | 104.98 | 105.07 | 105.12 | 105.12 | 105.49 | 105.91 | 106.19 | 106.11 | 105.26 |
| N° 21 | 105.32 | 105.23 | 105.32 | 105.25 | 105.37 | 105.47 | 105.52 | 105.51 | 105.84 | 106.35 | 105.89 | 105.29 |
| N° 22 | 104.91 | 104.75 | 104.94 | 104.84 | 104.83 | 105.11 | 105.11 | 105.35 | 105.57 | 106.15 | 105.91 | 104.85 |
| N° 23 | 105.67 | 105.49 | 105.65 | 105.61 | 105.83 | 105.91 | 106.00 | 105.98 | 106.44 | 106.60 | 106.43 | 105.70 |
| N° 24 | 104.99 | 104.95 | 104.98 | 104.81 | 104.98 | 105.25 | 105.43 | 105.57 | 105.42 | 106.24 | 106.09 | 104.98 |
| N° 25 | 105.31 | 105.28 | 105.41 | 105.30 | 105.26 | 105.39 | 105.73 | 105.86 | 106.07 | 106.42 | 106.22 | 105.32 |
| N° 26 | 105.42 | 105.49 | 105.42 | 105.48 | 105.47 | 105.76 | 106.00 | 105.71 | 106.12 | 106.75 | 106.73 | 105.49 |
| N° 27 | 104.76 | 104.74 | 104.98 | 104.92 | 104.83 | 104.87 | 105.11 | 105.37 | 105.65 | 106.12 | 105.77 | 104.91 |
| N° 28 | 105.06 | 104.95 | 105.04 | 105.33 | 105.27 | 105.11 | 105.33 | 105.50 | 105.76 | 106.07 | 106.00 | 105.07 |
| N° 29 | 104.89 | 104.81 | 104.90 | 104.86 | 105.27 | 105.12 | 105.25 | 105.35 | 105.65 | 105.69 | 105.53 | 104.92 |
| N° 30 | 105.29 | 105.11 | 105.40 | 105.22 | 105.41 | 105.40 | 105.66 | 105.77 | 105.93 | 106.59 | 106.67 | 105.19 |
| N° 31 | 105.20 | 105.07 | 105.21 | 105.17 | 105.36 | 105.16 | 105.86 | 105.65 | 105.84 | 106.36 | 106.29 | 105.22 |

# 73. AVS3, Module 1

**Ta=25°C; +VCC=5V; -VCC=GND; 1V<Vout<2.5V; RL=10kOhms**

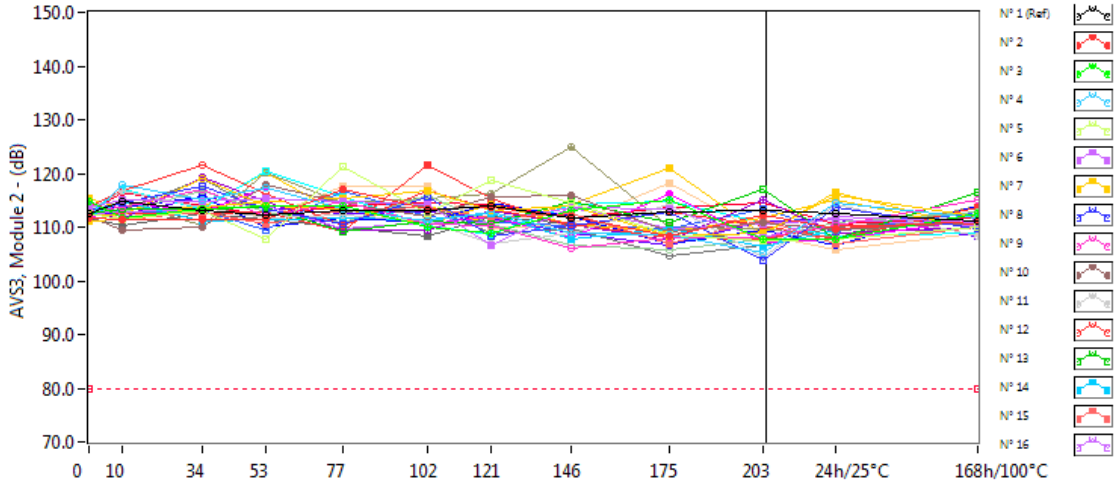



**AVS3, Module 1 . (dB)** **Min = 80.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 114.04 | 112.41 | 114.56 | 111.04 | 111.99 | 115.31 | 114.17 | 112.72 | 110.96 | 110.80 | 112.42 | 114.06 |
| N° 2 | 111.35 | 111.94 | 114.59 | 110.10 | 108.24 | 114.32 | 109.10 | 112.77 | 113.11 | 114.21 | 107.47 | 112.76 |
| N° 3 | 113.85 | 115.31 | 114.41 | 110.83 | 111.85 | 113.85 | 117.50 | 109.83 | 111.76 | 110.81 | 112.36 | 110.05 |
| N° 4 | 112.87 | 114.41 | 109.75 | 111.23 | 112.33 | 111.99 | 115.77 | 111.80 | 108.66 | 110.61 | 108.53 | 115.66 |
| N° 5 | 111.00 | 108.87 | 113.69 | 110.87 | 115.80 | 111.94 | 109.16 | 109.66 | 110.05 | 109.18 | 109.08 | 112.79 |
| N° 6 | 113.16 | 113.27 | 110.13 | 115.16 | 114.50 | 114.48 | 114.94 | 108.02 | 111.29 | 105.11 | 110.03 | 110.26 |
| N° 7 | 110.83 | 115.92 | 114.47 | 108.05 | 114.54 | 108.46 | 112.16 | 110.99 | 112.93 | 110.52 | 109.23 | 107.59 |
| N° 8 | 114.31 | 115.52 | 111.19 | 111.48 | 116.93 | 120.07 | 120.13 | 111.80 | 114.39 | 113.78 | 107.63 | 110.59 |
| N° 9 | 112.47 | 112.22 | 117.61 | 112.72 | 112.48 | 124.82 | 112.33 | 106.74 | 112.25 | 107.91 | 108.14 | 107.61 |
| N° 10 | 113.53 | 116.62 | 112.91 | 109.19 | 115.55 | 111.84 | 115.43 | 110.75 | 110.68 | 105.75 | 108.66 | 111.22 |
| N° 11 | 113.68 | 110.69 | 114.75 | 109.81 | 116.70 | 110.20 | 111.24 | 109.63 | 109.55 | 105.51 | 118.02 | 109.81 |
| N° 12 | 113.95 | 112.96 | 112.97 | 113.19 | 117.19 | 110.14 | 111.83 | 109.87 | 113.67 | 109.59 | 107.81 | 110.86 |
| N° 13 | 114.73 | 113.93 | 113.08 | 111.59 | 112.45 | 110.09 | 112.84 | 115.24 | 115.96 | 110.74 | 110.75 | 112.84 |
| N° 14 | 111.83 | 112.16 | 110.89 | 109.86 | 110.21 | 107.80 | 111.19 | 113.94 | 108.42 | 110.88 | 108.03 | 110.11 |
| N° 15 | 111.53 | 116.38 | 114.66 | 113.54 | 111.87 | 114.42 | 116.51 | 110.85 | 113.18 | 107.09 | 107.73 | 112.21 |
| N° 16 | 111.76 | 111.95 | 116.99 | 121.04 | 110.92 | 108.27 | 111.33 | 117.42 | 110.21 | 114.32 | 123.16 | 110.13 |
| N° 17 | 113.06 | 115.08 | 113.36 | 111.29 | 115.98 | 113.94 | 120.10 | 116.28 | 110.48 | 122.83 | 116.38 | 112.31 |
| N° 18 | 112.01 | 112.42 | 114.18 | 109.47 | 115.83 | 110.35 | 108.17 | 108.60 | 107.75 | 111.15 | 107.49 | 113.07 |
| N° 19 | 112.89 | 113.45 | 114.06 | 110.82 | 121.03 | 112.85 | 113.49 | 111.19 | 111.64 | 114.57 | 114.23 | 112.40 |
| N° 20 | 114.29 | 116.17 | 112.41 | 112.24 | 112.39 | 113.61 | 110.58 | 114.40 | 106.19 | 108.84 | 109.42 | 109.70 |
| N° 21 | 111.44 | 110.17 | 110.25 | 111.67 | 113.04 | 108.30 | 113.86 | 110.94 | 108.52 | 107.03 | 111.40 | 111.94 |
| N° 22 | 112.55 | 111.50 | 112.63 | 117.12 | 120.96 | 111.45 | 112.94 | 114.49 | 108.52 | 107.37 | 108.82 | 112.37 |
| N° 23 | 111.58 | 110.75 | 115.82 | 108.34 | 111.82 | 109.58 | 110.11 | 109.94 | 107.75 | 105.45 | 114.27 | 109.83 |
| N° 24 | 113.83 | 114.15 | 116.13 | 112.77 | 113.31 | 110.53 | 108.18 | 112.40 | 107.28 | 105.91 | 111.47 | 110.04 |
| N° 25 | 111.60 | 113.04 | 112.56 | 110.67 | 114.51 | 112.84 | 113.70 | 109.79 | 109.77 | 110.74 | 110.17 | 108.53 |
| N° 26 | 112.45 | 112.69 | 110.32 | 111.45 | 112.58 | 112.20 | 113.84 | 110.85 | 112.10 | 116.13 | 111.26 | 109.69 |
| N° 27 | 113.02 | 111.50 | 112.27 | 107.28 | 117.90 | 112.52 | 111.09 | 109.05 | 110.48 | 110.18 | 106.82 | 111.21 |
| N° 28 | 112.79 | 109.93 | 114.17 | 110.36 | 110.31 | 113.19 | 110.73 | 111.37 | 108.70 | 106.22 | 107.58 | 110.15 |
| N° 29 | 110.93 | 113.55 | 110.49 | 110.24 | 114.21 | 107.47 | 111.96 | 113.74 | 119.18 | 114.75 | 110.27 | 109.87 |
| N° 30 | 110.66 | 112.42 | 112.54 | 111.14 | 109.91 | 108.85 | 114.77 | 116.09 | 106.84 | 111.08 | 109.73 | 113.37 |
| N° 31 | 113.07 | 114.16 | 112.14 | 111.51 | 113.08 | 115.30 | 110.28 | 109.24 | 106.07 | 104.87 | 104.29 | 111.20 |

# 74. AVS3, Module 2

**Ta=25°C; +VCC=5V; -VCC=GND; 1V<Vout<2.5V; RL=10kOhms**

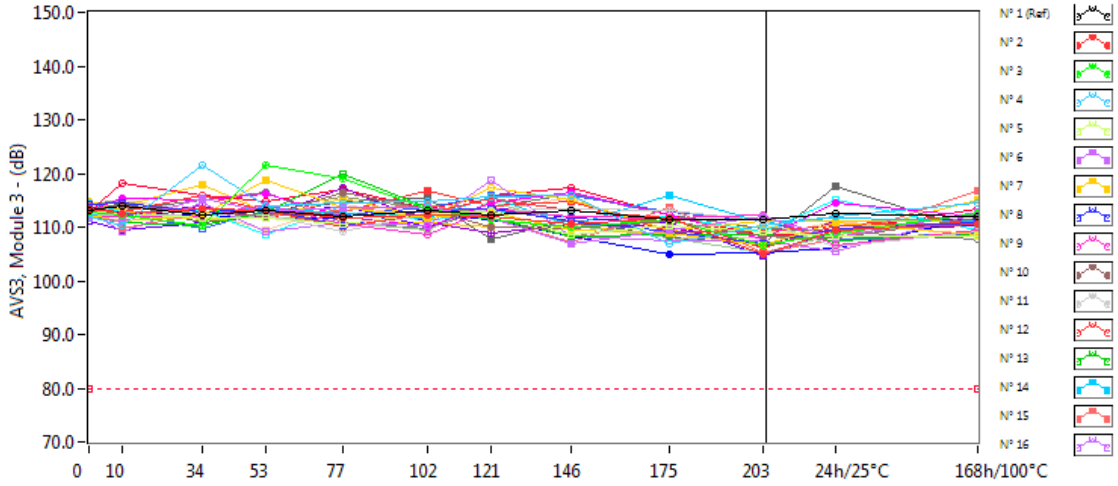



**AVS3, Module 2 . (dB)** **Min = 80.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 112.50 | 114.84 | 113.23 | 112.29 | 113.16 | 113.07 | 113.96 | 111.82 | 112.89 | 113.12 | 112.64 | 111.25 |
| N° 2 | 111.77 | 111.51 | 111.28 | 111.51 | 117.00 | 113.43 | 113.52 | 111.96 | 108.20 | 112.16 | 109.66 | 111.16 |
| N° 3 | 114.70 | 111.56 | 113.31 | 114.05 | 113.92 | 109.89 | 108.89 | 113.19 | 115.20 | 107.61 | 107.88 | 112.52 |
| N° 4 | 111.92 | 117.79 | 114.94 | 117.28 | 113.36 | 111.05 | 112.83 | 108.94 | 108.54 | 105.12 | 114.53 | 111.64 |
| N° 5 | 112.45 | 111.34 | 113.05 | 107.67 | 121.23 | 112.61 | 118.86 | 114.47 | 108.65 | 107.46 | 107.68 | 110.06 |
| N° 6 | 113.70 | 114.95 | 114.69 | 115.31 | 114.72 | 114.18 | 106.61 | 113.64 | 113.44 | 108.05 | 111.95 | 110.78 |
| N° 7 | 111.00 | 111.29 | 113.60 | 114.78 | 115.38 | 116.73 | 113.17 | 113.87 | 108.30 | 108.84 | 116.01 | 111.95 |
| N° 8 | 113.00 | 114.47 | 117.62 | 113.38 | 110.58 | 115.60 | 108.19 | 110.30 | 112.95 | 103.94 | 113.80 | 109.75 |
| N° 9 | 113.24 | 113.63 | 117.00 | 112.01 | 114.87 | 110.46 | 110.24 | 105.94 | 108.08 | 108.02 | 110.32 | 114.94 |
| N° 10 | 111.85 | 109.46 | 110.02 | 118.02 | 114.61 | 111.88 | 115.62 | 115.81 | 109.14 | 110.77 | 109.33 | 110.72 |
| N° 11 | 112.99 | 116.82 | 113.58 | 111.69 | 112.34 | 111.12 | 106.81 | 108.83 | 114.30 | 104.39 | 114.25 | 108.25 |
| N° 12 | 113.74 | 116.62 | 121.47 | 116.24 | 110.36 | 116.68 | 113.29 | 110.50 | 107.99 | 107.83 | 110.34 | 110.60 |
| N° 13 | 112.46 | 113.42 | 113.29 | 113.64 | 109.22 | 111.11 | 110.56 | 114.71 | 110.88 | 116.94 | 107.72 | 116.42 |
| N° 14 | 111.94 | 114.67 | 111.01 | 111.36 | 111.76 | 111.54 | 112.66 | 107.84 | 109.72 | 106.20 | 109.39 | 111.25 |
| N° 15 | 111.73 | 111.33 | 112.95 | 110.57 | 113.08 | 113.72 | 111.65 | 112.47 | 106.90 | 111.35 | 106.79 | 110.05 |
| N° 16 | 112.53 | 112.86 | 113.35 | 113.81 | 109.70 | 110.72 | 110.87 | 113.61 | 109.78 | 110.67 | 111.48 | 110.40 |
| N° 17 | 112.23 | 112.19 | 119.11 | 113.90 | 113.24 | 110.60 | 114.21 | 110.55 | 109.18 | 111.83 | 114.97 | 109.70 |
| N° 18 | 111.36 | 114.80 | 112.77 | 117.45 | 113.27 | 110.45 | 111.99 | 108.10 | 116.15 | 107.09 | 107.62 | 111.41 |
| N° 19 | 112.91 | 111.32 | 119.26 | 114.82 | 109.30 | 109.46 | 113.09 | 110.49 | 107.52 | 115.13 | 108.92 | 109.90 |
| N° 20 | 113.35 | 112.94 | 116.62 | 112.96 | 110.91 | 115.86 | 110.49 | 106.54 | 105.81 | 107.80 | 110.81 | 112.89 |
| N° 21 | 112.42 | 117.09 | 113.34 | 120.49 | 115.77 | 110.22 | 108.54 | 114.14 | 114.71 | 110.86 | 108.31 | 109.01 |
| N° 22 | 113.23 | 112.50 | 112.62 | 112.95 | 109.27 | 121.47 | 115.35 | 109.95 | 112.79 | 110.29 | 107.73 | 113.60 |
| N° 23 | 111.61 | 110.18 | 112.44 | 111.42 | 109.90 | 108.26 | 111.83 | 110.42 | 109.17 | 107.36 | 110.90 | 112.76 |
| N° 24 | 113.93 | 112.80 | 113.03 | 109.57 | 116.66 | 111.92 | 110.79 | 110.34 | 109.77 | 113.51 | 109.03 | 112.76 |
| N° 25 | 112.57 | 116.48 | 113.98 | 112.37 | 114.00 | 114.41 | 114.17 | 111.75 | 113.73 | 114.56 | 110.56 | 111.79 |
| N° 26 | 113.41 | 113.73 | 115.58 | 109.92 | 111.76 | 110.76 | 114.38 | 111.90 | 106.85 | 109.48 | 106.56 | 113.87 |
| N° 27 | 112.68 | 114.90 | 110.34 | 120.02 | 114.59 | 115.42 | 116.06 | 124.82 | 110.14 | 109.66 | 108.08 | 114.06 |
| N° 28 | 112.56 | 113.20 | 118.88 | 112.48 | 112.95 | 113.81 | 108.78 | 109.80 | 104.76 | 106.76 | 110.05 | 112.07 |
| N° 29 | 112.79 | 112.31 | 115.65 | 113.77 | 112.60 | 112.75 | 111.79 | 108.92 | 106.68 | 111.14 | 111.37 | 108.44 |
| N° 30 | 115.31 | 113.39 | 113.64 | 120.25 | 112.33 | 113.82 | 110.63 | 114.13 | 120.86 | 108.67 | 116.36 | 109.66 |
| N° 31 | 112.47 | 111.68 | 114.26 | 111.60 | 117.47 | 117.65 | 109.69 | 110.54 | 118.15 | 108.73 | 105.73 | 108.95 |

# 75. AVS3, Module 3

**Ta=25°C; +VCC=5V; -VCC=GND; 1V<Vout<2.5V; RL=10kOhms**

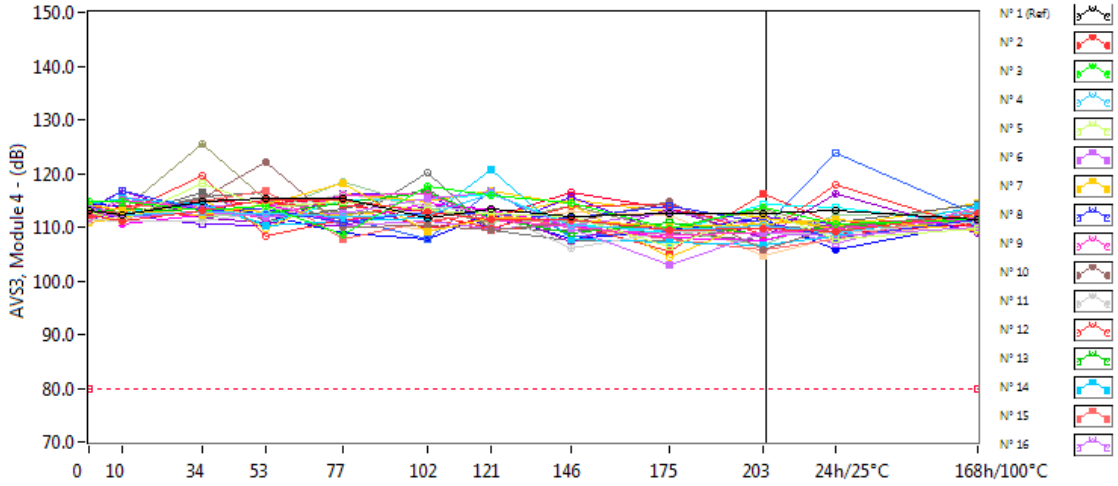



**AVS3, Module 3 . (dB)** **Min = 80.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 113.04 | 113.99 | 112.33 | 113.01 | 111.89 | 113.17 | 112.26 | 113.19 | 111.47 | 111.53 | 112.45 | 111.94 |
| N° 2 | 113.31 | 112.58 | 113.48 | 113.18 | 111.56 | 112.22 | 112.05 | 110.42 | 111.64 | 104.98 | 109.55 | 110.46 |
| N° 3 | 112.71 | 112.15 | 110.14 | 121.58 | 118.89 | 113.28 | 111.42 | 110.05 | 111.31 | 106.58 | 108.94 | 112.40 |
| N° 4 | 111.92 | 110.32 | 121.63 | 114.03 | 114.48 | 114.66 | 115.64 | 115.92 | 106.88 | 110.42 | 111.86 | 114.56 |
| N° 5 | 112.82 | 112.65 | 111.57 | 111.64 | 110.44 | 112.49 | 112.94 | 108.56 | 110.23 | 109.14 | 108.29 | 108.28 |
| N° 6 | 111.75 | 111.12 | 115.26 | 112.75 | 113.72 | 113.59 | 111.60 | 106.81 | 109.51 | 111.88 | 108.05 | 112.76 |
| N° 7 | 112.21 | 111.15 | 112.35 | 118.86 | 113.69 | 111.73 | 112.71 | 109.40 | 108.84 | 106.58 | 110.97 | 108.60 |
| N° 8 | 114.13 | 114.55 | 112.80 | 113.35 | 110.28 | 113.21 | 113.30 | 111.02 | 109.06 | 107.01 | 109.75 | 110.78 |
| N° 9 | 112.02 | 112.06 | 112.10 | 114.35 | 110.63 | 108.64 | 113.32 | 111.93 | 111.74 | 112.32 | 106.59 | 109.50 |
| N° 10 | 113.37 | 113.96 | 112.83 | 112.04 | 116.46 | 113.30 | 109.98 | 109.67 | 111.21 | 108.32 | 108.14 | 111.70 |
| N° 11 | 112.65 | 111.91 | 112.61 | 112.12 | 109.27 | 112.61 | 113.07 | 113.34 | 113.10 | 111.09 | 106.31 | 109.06 |
| N° 12 | 111.57 | 112.86 | 115.78 | 113.08 | 109.99 | 112.41 | 115.33 | 113.17 | 111.58 | 105.99 | 110.22 | 110.94 |
| N° 13 | 112.12 | 110.87 | 110.33 | 112.94 | 119.94 | 113.59 | 111.56 | 108.18 | 108.72 | 108.70 | 107.49 | 108.60 |
| N° 14 | 112.12 | 111.86 | 112.49 | 113.57 | 112.51 | 111.81 | 115.65 | 110.33 | 115.85 | 110.74 | 111.74 | 111.10 |
| N° 15 | 113.81 | 109.83 | 112.56 | 112.31 | 113.08 | 114.28 | 111.71 | 107.10 | 113.75 | 105.29 | 107.66 | 116.83 |
| N° 16 | 112.84 | 109.05 | 114.64 | 109.20 | 110.93 | 110.20 | 118.84 | 108.37 | 107.54 | 107.41 | 105.44 | 112.61 |
| N° 17 | 114.82 | 113.06 | 111.46 | 111.68 | 115.38 | 111.82 | 117.36 | 115.08 | 109.50 | 111.06 | 111.26 | 110.99 |
| N° 18 | 113.01 | 115.38 | 115.00 | 116.16 | 112.11 | 110.01 | 114.42 | 116.60 | 112.15 | 107.75 | 114.48 | 111.86 |
| N° 19 | 112.41 | 112.16 | 114.02 | 111.64 | 117.23 | 110.93 | 108.77 | 110.67 | 109.92 | 106.46 | 110.99 | 111.31 |
| N° 20 | 112.76 | 112.00 | 111.82 | 111.90 | 110.84 | 109.45 | 114.80 | 110.37 | 107.94 | 105.23 | 108.47 | 111.53 |
| N° 21 | 114.48 | 112.78 | 113.16 | 108.53 | 114.03 | 111.22 | 113.06 | 111.95 | 112.02 | 109.09 | 115.02 | 109.55 |
| N° 22 | 112.14 | 113.63 | 113.26 | 111.87 | 112.68 | 116.86 | 113.89 | 114.67 | 109.10 | 109.25 | 110.18 | 112.20 |
| N° 23 | 112.89 | 114.52 | 110.88 | 112.18 | 114.72 | 115.27 | 107.72 | 111.50 | 108.15 | 106.85 | 117.68 | 109.08 |
| N° 24 | 112.46 | 112.52 | 109.62 | 112.98 | 112.29 | 113.58 | 115.89 | 115.97 | 112.79 | 111.22 | 107.65 | 108.81 |
| N° 25 | 112.90 | 118.23 | 115.82 | 114.79 | 117.03 | 113.27 | 115.96 | 117.28 | 112.39 | 108.34 | 109.09 | 113.33 |
| N° 26 | 113.75 | 112.58 | 112.24 | 111.66 | 111.58 | 112.35 | 111.50 | 108.25 | 104.82 | 105.26 | 106.05 | 111.62 |
| N° 27 | 114.38 | 114.90 | 112.31 | 113.52 | 115.63 | 113.40 | 113.12 | 108.07 | 112.19 | 108.23 | 107.38 | 109.18 |
| N° 28 | 113.29 | 113.01 | 115.03 | 116.37 | 110.84 | 109.61 | 113.69 | 116.33 | 112.21 | 109.61 | 109.12 | 107.63 |
| N° 29 | 111.01 | 109.49 | 110.71 | 112.26 | 114.06 | 110.04 | 113.54 | 111.66 | 110.76 | 104.75 | 109.43 | 110.25 |
| N° 30 | 113.26 | 113.83 | 117.83 | 112.89 | 110.55 | 110.84 | 109.98 | 110.22 | 108.25 | 110.42 | 108.33 | 115.12 |
| N° 31 | 113.85 | 115.19 | 112.88 | 109.45 | 114.15 | 111.62 | 112.78 | 115.67 | 107.91 | 108.16 | 110.99 | 108.18 |

# 76. AVS3, Module 4

**Ta=25°C; +VCC=5V; -VCC=GND; 1V<Vout<2.5V; RL=10kOhms**

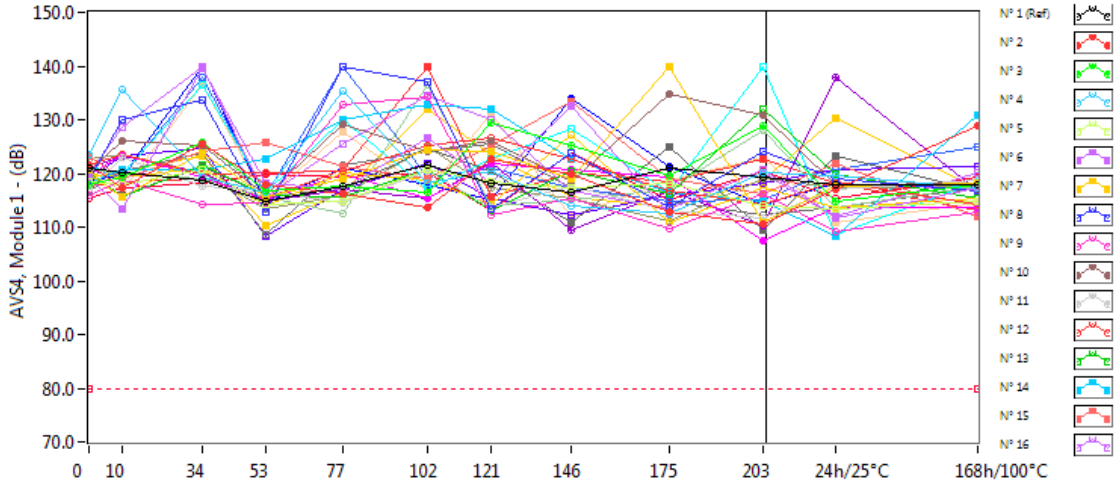



**AVS3, Module 4 . (dB)** **Min = 80.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 113.04 | 112.28 | 114.67 | 115.45 | 115.40 | 111.71 | 113.26 | 111.97 | 112.47 | 112.42 | 113.20 | 111.52 |
| N° 2 | 112.28 | 111.14 | 112.99 | 115.21 | 114.94 | 112.80 | 111.39 | 111.31 | 109.32 | 109.67 | 109.27 | 112.54 |
| N° 3 | 114.70 | 114.82 | 113.19 | 114.07 | 108.59 | 117.62 | 115.84 | 114.40 | 109.62 | 113.76 | 110.65 | 111.29 |
| N° 4 | 113.11 | 112.31 | 112.75 | 112.47 | 111.95 | 112.13 | 116.08 | 110.21 | 109.39 | 110.40 | 108.94 | 112.91 |
| N° 5 | 112.90 | 111.11 | 118.21 | 113.59 | 114.87 | 112.98 | 112.55 | 112.07 | 106.37 | 113.15 | 107.74 | 109.75 |
| N° 6 | 113.40 | 111.64 | 112.85 | 112.00 | 112.53 | 115.25 | 116.56 | 109.75 | 102.97 | 108.82 | 108.36 | 109.89 |
| N° 7 | 114.30 | 113.00 | 112.24 | 114.16 | 118.25 | 109.10 | 111.67 | 111.47 | 109.92 | 110.56 | 111.51 | 109.58 |
| N° 8 | 112.98 | 116.64 | 112.96 | 113.40 | 110.83 | 112.68 | 112.63 | 111.64 | 113.81 | 110.84 | 108.03 | 111.36 |
| N° 9 | 111.78 | 114.98 | 113.34 | 111.69 | 115.86 | 116.09 | 111.48 | 109.91 | 108.52 | 108.98 | 109.76 | 111.57 |
| N° 10 | 112.44 | 112.13 | 115.23 | 122.07 | 109.90 | 110.41 | 109.31 | 110.87 | 114.77 | 105.73 | 109.95 | 112.44 |
| N° 11 | 111.33 | 111.22 | 111.02 | 112.94 | 116.10 | 114.04 | 112.84 | 106.04 | 109.22 | 108.90 | 108.93 | 111.08 |
| N° 12 | 113.03 | 112.53 | 119.64 | 108.28 | 111.46 | 112.44 | 109.77 | 113.91 | 114.30 | 108.66 | 117.88 | 109.66 |
| N° 13 | 112.76 | 113.31 | 112.94 | 112.54 | 114.58 | 116.60 | 111.69 | 108.74 | 110.79 | 108.57 | 110.02 | 111.67 |
| N° 14 | 114.35 | 115.38 | 114.16 | 110.39 | 111.12 | 111.82 | 120.80 | 107.62 | 107.08 | 106.49 | 108.30 | 113.97 |
| N° 15 | 111.51 | 113.78 | 114.70 | 116.85 | 107.71 | 111.08 | 112.40 | 109.96 | 107.61 | 105.87 | 107.71 | 113.03 |
| N° 16 | 112.05 | 115.75 | 113.77 | 114.92 | 110.20 | 111.20 | 109.72 | 110.41 | 112.91 | 110.41 | 106.97 | 113.58 |
| N° 17 | 110.93 | 111.73 | 114.94 | 109.60 | 116.25 | 114.91 | 116.69 | 114.17 | 104.33 | 111.65 | 109.84 | 111.85 |
| N° 18 | 113.57 | 110.69 | 112.21 | 114.11 | 110.97 | 114.53 | 113.03 | 110.33 | 108.02 | 107.44 | 110.56 | 111.01 |
| N° 19 | 113.39 | 116.80 | 111.78 | 110.92 | 110.30 | 113.81 | 113.26 | 107.15 | 113.41 | 107.99 | 116.33 | 108.98 |
| N° 20 | 112.10 | 115.58 | 112.05 | 112.59 | 118.51 | 113.69 | 111.02 | 111.26 | 109.47 | 106.68 | 112.26 | 112.87 |
| N° 21 | 111.80 | 112.88 | 114.31 | 110.51 | 115.18 | 115.18 | 116.32 | 110.57 | 109.00 | 114.35 | 113.66 | 110.55 |
| N° 22 | 113.77 | 113.36 | 111.84 | 114.32 | 114.31 | 111.31 | 109.33 | 110.52 | 105.57 | 116.09 | 110.68 | 112.05 |
| N° 23 | 113.37 | 112.11 | 116.41 | 111.22 | 113.24 | 117.12 | 109.64 | 109.31 | 108.85 | 107.47 | 110.81 | 114.18 |
| N° 24 | 113.99 | 112.02 | 112.84 | 112.23 | 111.74 | 107.71 | 116.66 | 108.27 | 109.07 | 109.84 | 123.74 | 112.22 |
| N° 25 | 111.84 | 113.82 | 114.81 | 114.64 | 115.03 | 109.61 | 111.70 | 116.49 | 113.50 | 109.94 | 108.84 | 110.60 |
| N° 26 | 114.10 | 113.90 | 114.09 | 112.39 | 108.87 | 107.67 | 112.59 | 107.82 | 109.33 | 111.42 | 105.92 | 110.83 |
| N° 27 | 111.95 | 113.12 | 125.58 | 115.07 | 112.57 | 113.26 | 110.72 | 113.88 | 109.36 | 113.30 | 109.38 | 111.20 |
| N° 28 | 112.23 | 112.27 | 115.64 | 116.48 | 110.32 | 120.12 | 109.51 | 107.48 | 107.60 | 110.52 | 109.23 | 112.56 |
| N° 29 | 111.77 | 112.14 | 110.63 | 110.17 | 116.30 | 116.16 | 109.48 | 115.60 | 108.64 | 111.97 | 110.43 | 110.34 |
| N° 30 | 113.78 | 112.41 | 113.73 | 112.91 | 112.13 | 113.25 | 112.02 | 115.19 | 112.94 | 111.84 | 110.05 | 114.54 |
| N° 31 | 110.76 | 113.89 | 112.04 | 113.31 | 111.44 | 109.33 | 110.93 | 112.89 | 112.17 | 104.73 | 108.08 | 110.75 |

# 77. AVS4, Module 1

**Ta=25°C; +VCC=5V; -VCC=GND; 1V<Vout<2.5V; RL=2kOhms**

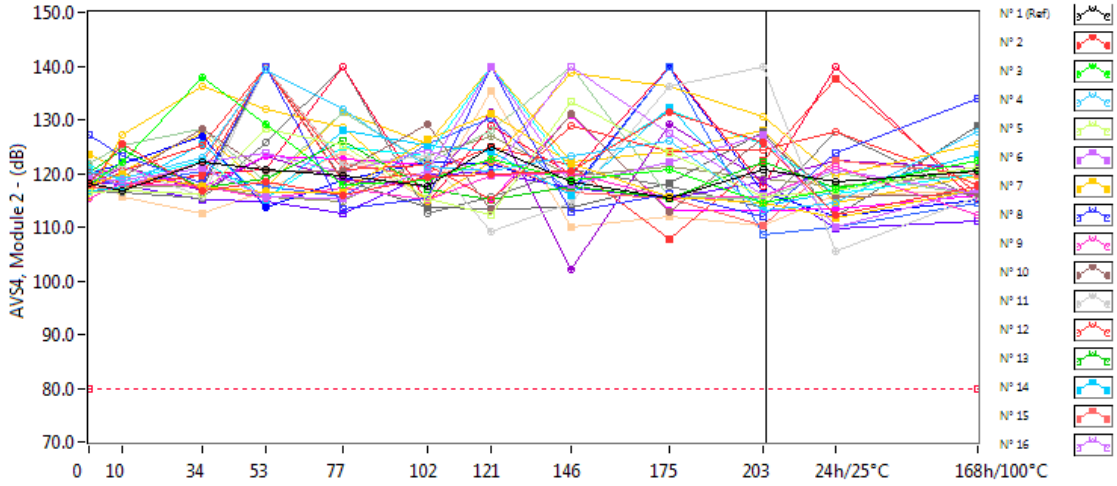



**AVS4, Module 1 . (dB)** **Min = 80.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 120.90 | 120.04 | 118.64 | 114.80 | 117.74 | 121.53 | 118.23 | 116.49 | 120.92 | 119.26 | 117.86 | 117.80 |
| N° 2 | 121.52 | 117.33 | 125.45 | 118.01 | 116.09 | 113.58 | 122.70 | 119.93 | 112.88 | 110.68 | 116.95 | 128.87 |
| N° 3 | 117.95 | 119.22 | 125.77 | 116.90 | 117.57 | 116.34 | 129.41 | 125.25 | 119.50 | 128.94 | 114.90 | 118.02 |
| N° 4 | 123.40 | 135.53 | 119.17 | 116.39 | 135.31 | 118.22 | 120.48 | 113.94 | 112.67 | 120.19 | 119.58 | 117.35 |
| N° 5 | 118.37 | 117.96 | 120.58 | 114.23 | 114.78 | 120.66 | 118.52 | 117.42 | 118.18 | 113.89 | 113.32 | 114.70 |
| N° 6 | 119.42 | 113.32 | 139.56 | 118.16 | 116.95 | 126.59 | 118.10 | 132.45 | 112.54 | 120.03 | 111.75 | 117.30 |
| N° 7 | 120.00 | 115.58 | 123.70 | 115.75 | 119.10 | 124.44 | 124.08 | 118.90 | 140.00 | 110.85 | 117.65 | 118.15 |
| N° 8 | 118.69 | 129.94 | 133.60 | 112.79 | 140.00 | 136.99 | 113.27 | 123.85 | 113.76 | 124.19 | 118.99 | 116.76 |
| N° 9 | 115.84 | 118.68 | 114.36 | 114.47 | 132.95 | 134.18 | 112.35 | 115.25 | 109.66 | 116.27 | 109.28 | 112.92 |
| N° 10 | 120.37 | 126.03 | 125.32 | 115.79 | 129.11 | 124.01 | 126.01 | 118.44 | 134.78 | 130.72 | 117.97 | 118.05 |
| N° 11 | 117.17 | 122.96 | 117.70 | 116.79 | 114.37 | 120.32 | 113.56 | 117.65 | 113.18 | 111.62 | 116.91 | 118.62 |
| N° 12 | 121.49 | 123.47 | 119.75 | 120.10 | 120.53 | 125.09 | 126.69 | 122.73 | 116.73 | 114.34 | 118.58 | 114.24 |
| N° 13 | 120.16 | 115.64 | 121.60 | 115.93 | 115.70 | 120.62 | 112.97 | 120.52 | 116.18 | 132.09 | 119.96 | 115.45 |
| N° 14 | 118.08 | 120.82 | 120.58 | 122.55 | 129.99 | 132.72 | 131.88 | 122.59 | 116.61 | 114.84 | 108.39 | 130.76 |
| N° 15 | 123.18 | 118.91 | 124.14 | 125.66 | 121.25 | 118.90 | 125.17 | 133.45 | 119.13 | 116.17 | 121.96 | 111.98 |
| N° 16 | 119.84 | 128.56 | 140.00 | 115.67 | 125.44 | 134.63 | 130.05 | 116.67 | 113.43 | 120.81 | 112.04 | 120.02 |
| N° 17 | 119.78 | 119.33 | 121.01 | 113.84 | 120.20 | 118.60 | 114.29 | 127.23 | 110.98 | 117.41 | 113.78 | 115.29 |
| N° 18 | 119.69 | 123.44 | 119.28 | 114.98 | 119.80 | 115.45 | 121.76 | 120.78 | 119.25 | 107.44 | 113.64 | 113.76 |
| N° 19 | 121.01 | 123.17 | 120.15 | 114.92 | 117.10 | 115.31 | 122.05 | 109.40 | 116.82 | 110.24 | 137.97 | 116.65 |
| N° 20 | 120.65 | 119.88 | 119.08 | 115.62 | 112.50 | 136.38 | 113.99 | 115.13 | 116.98 | 128.08 | 113.66 | 117.59 |
| N° 21 | 121.15 | 119.97 | 136.37 | 116.45 | 130.01 | 117.14 | 122.66 | 128.43 | 116.40 | 140.00 | 108.50 | 118.41 |
| N° 22 | 117.73 | 118.52 | 119.02 | 115.33 | 120.81 | 140.00 | 115.75 | 120.14 | 118.44 | 122.75 | 118.28 | 112.97 |
| N° 23 | 119.48 | 115.92 | 121.18 | 116.00 | 117.08 | 124.61 | 120.44 | 110.72 | 125.07 | 109.46 | 123.31 | 116.84 |
| N° 24 | 120.87 | 119.36 | 137.93 | 115.93 | 140.00 | 119.19 | 121.07 | 117.33 | 114.67 | 115.17 | 120.64 | 124.79 |
| N° 25 | 115.36 | 117.20 | 118.15 | 119.86 | 119.33 | 120.24 | 113.02 | 123.88 | 115.07 | 120.42 | 115.21 | 119.19 |
| N° 26 | 118.71 | 119.57 | 140.00 | 114.50 | 120.98 | 117.91 | 115.03 | 134.01 | 121.25 | 114.25 | 118.21 | 117.09 |
| N° 27 | 122.66 | 123.47 | 120.06 | 113.30 | 115.96 | 124.81 | 117.44 | 115.26 | 111.21 | 119.04 | 117.42 | 117.68 |
| N° 28 | 116.69 | 120.41 | 123.77 | 108.70 | 121.50 | 123.99 | 125.51 | 117.28 | 114.78 | 112.12 | 113.75 | 117.33 |
| N° 29 | 119.03 | 123.19 | 124.53 | 108.45 | 116.94 | 121.91 | 115.30 | 112.22 | 115.83 | 118.03 | 120.57 | 121.28 |
| N° 30 | 119.17 | 120.43 | 123.28 | 110.26 | 116.53 | 131.97 | 123.60 | 115.72 | 113.69 | 118.66 | 130.28 | 117.00 |
| N° 31 | 119.97 | 116.68 | 136.56 | 115.34 | 127.72 | 116.62 | 131.20 | 111.94 | 118.84 | 122.84 | 110.79 | 114.42 |

# 78. AVS4, Module 2

**Ta=25°C; +VCC=5V; -VCC=GND; 1V<Vout<2.5V; RL=2kOhms**

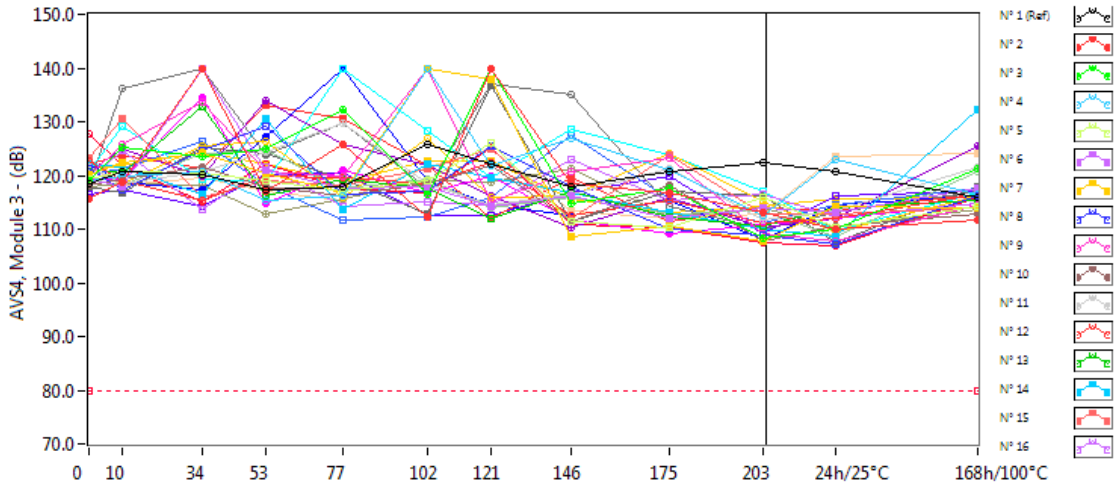



**AVS4, Module 2 . (dB)** **Min = 80.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 118.11 | 116.82 | 122.07 | 120.75 | 119.46 | 117.70 | 124.99 | 118.33 | 115.28 | 120.80 | 118.43 | 120.48 |
| N° 2 | 117.82 | 125.42 | 116.65 | 118.38 | 116.05 | 119.21 | 119.74 | 120.47 | 131.28 | 125.85 | 112.35 | 117.51 |
| N° 3 | 117.84 | 122.00 | 137.87 | 129.03 | 117.95 | 118.83 | 122.61 | 118.60 | 120.64 | 114.38 | 117.08 | 122.50 |
| N° 4 | 120.52 | 118.90 | 122.94 | 139.30 | 131.90 | 121.25 | 120.53 | 123.22 | 126.10 | 113.00 | 114.44 | 127.85 |
| N° 5 | 116.49 | 116.80 | 116.26 | 128.28 | 125.29 | 115.48 | 112.13 | 133.25 | 123.74 | 115.74 | 116.72 | 121.33 |
| N° 6 | 118.94 | 118.78 | 121.02 | 115.62 | 115.35 | 120.32 | 140.00 | 117.98 | 122.06 | 127.20 | 109.98 | 116.99 |
| N° 7 | 117.96 | 119.99 | 117.58 | 116.44 | 116.53 | 126.47 | 131.11 | 121.80 | 115.53 | 114.51 | 111.75 | 117.01 |
| N° 8 | 127.22 | 123.13 | 118.28 | 140.00 | 113.34 | 115.47 | 140.00 | 112.92 | 116.28 | 111.89 | 123.92 | 133.92 |
| N° 9 | 115.35 | 118.31 | 117.53 | 115.26 | 117.22 | 115.07 | 119.49 | 120.08 | 115.24 | 115.55 | 121.26 | 112.20 |
| N° 10 | 120.21 | 119.32 | 128.41 | 120.46 | 120.37 | 129.11 | 113.08 | 131.01 | 112.79 | 126.65 | 115.68 | 116.13 |
| N° 11 | 118.27 | 121.19 | 115.60 | 140.00 | 121.65 | 123.28 | 109.27 | 114.47 | 136.27 | 140.00 | 105.37 | 115.52 |
| N° 12 | 116.92 | 120.37 | 125.28 | 140.00 | 120.84 | 121.44 | 115.01 | 128.99 | 124.17 | 124.42 | 127.72 | 117.90 |
| N° 13 | 120.26 | 124.36 | 117.37 | 119.14 | 125.98 | 117.09 | 114.96 | 117.53 | 115.49 | 122.09 | 117.27 | 120.72 |
| N° 14 | 116.64 | 117.40 | 125.50 | 114.94 | 127.94 | 125.29 | 124.14 | 115.85 | 132.19 | 113.89 | 116.51 | 123.58 |
| N° 15 | 117.32 | 117.39 | 122.13 | 140.00 | 121.92 | 119.27 | 122.33 | 116.59 | 115.43 | 110.24 | 122.37 | 119.98 |
| N° 16 | 120.25 | 117.51 | 122.03 | 123.72 | 120.25 | 124.33 | 119.66 | 140.00 | 127.38 | 116.01 | 120.78 | 116.17 |
| N° 17 | 115.64 | 127.19 | 136.06 | 131.94 | 128.69 | 114.91 | 122.19 | 138.78 | 136.15 | 130.61 | 119.64 | 125.39 |
| N° 18 | 119.91 | 120.97 | 117.35 | 123.35 | 122.62 | 121.47 | 115.00 | 130.84 | 113.01 | 113.02 | 113.49 | 115.97 |
| N° 19 | 117.24 | 121.39 | 116.85 | 123.35 | 118.83 | 117.55 | 131.32 | 102.22 | 129.29 | 118.61 | 122.52 | 121.05 |
| N° 20 | 121.84 | 125.20 | 128.39 | 118.31 | 131.53 | 121.70 | 128.08 | 140.00 | 115.64 | 115.37 | 120.17 | 115.78 |
| N° 21 | 121.62 | 118.44 | 122.49 | 115.38 | 124.82 | 123.19 | 140.00 | 120.44 | 131.66 | 125.39 | 116.11 | 119.79 |
| N° 22 | 120.20 | 118.17 | 119.48 | 140.00 | 118.50 | 120.08 | 125.00 | 121.50 | 107.74 | 122.35 | 137.59 | 116.15 |
| N° 23 | 119.09 | 121.16 | 117.34 | 140.00 | 118.77 | 113.71 | 113.31 | 113.55 | 118.16 | 127.73 | 111.89 | 128.86 |
| N° 24 | 118.92 | 117.79 | 120.39 | 117.61 | 115.67 | 125.62 | 130.25 | 116.10 | 140.00 | 108.59 | 110.09 | 114.54 |
| N° 25 | 117.30 | 117.34 | 119.97 | 120.80 | 140.00 | 114.61 | 128.82 | 119.80 | 140.00 | 117.74 | 140.00 | 114.45 |
| N° 26 | 119.82 | 121.90 | 126.89 | 113.58 | 118.62 | 122.15 | 121.92 | 116.74 | 140.00 | 116.50 | 111.88 | 115.12 |
| N° 27 | 121.32 | 117.19 | 117.82 | 115.56 | 114.76 | 123.13 | 126.90 | 119.61 | 121.16 | 118.94 | 117.70 | 119.95 |
| N° 28 | 116.72 | 116.47 | 115.45 | 125.82 | 140.00 | 112.63 | 115.50 | 120.78 | 117.71 | 113.58 | 127.67 | 115.06 |
| N° 29 | 118.51 | 117.98 | 115.12 | 114.73 | 112.53 | 119.97 | 120.11 | 117.46 | 115.38 | 118.54 | 109.66 | 111.19 |
| N° 30 | 123.65 | 120.52 | 127.53 | 117.34 | 131.48 | 125.59 | 140.00 | 122.19 | 124.22 | 128.08 | 114.47 | 119.64 |
| N° 31 | 119.71 | 115.63 | 112.62 | 116.78 | 124.05 | 115.11 | 135.41 | 110.02 | 111.95 | 110.26 | 115.81 | 116.69 |

# 79. AVS4, Module 3

**Ta=25°C; +VCC=5V; -VCC=GND; 1V<Vout<2.5V; RL=2kOhms**

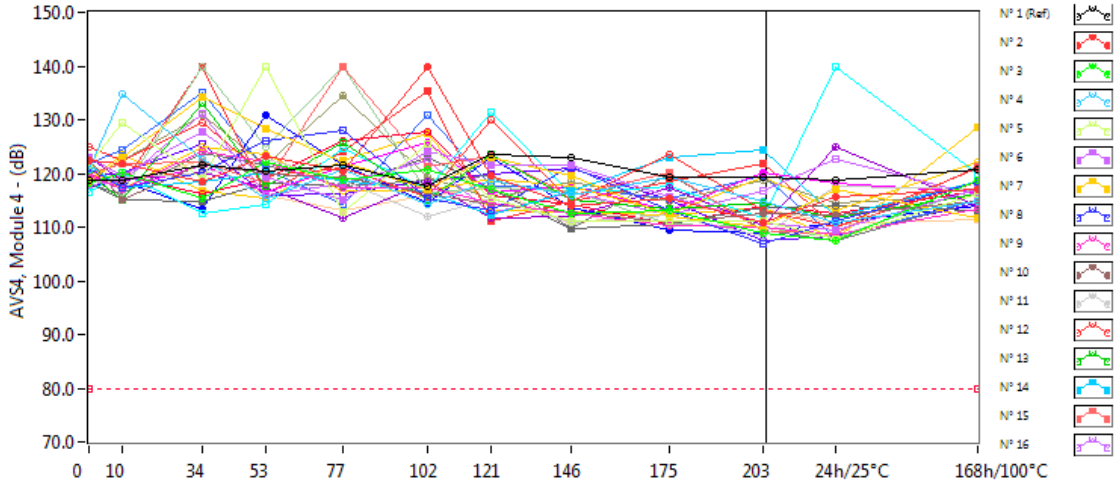



**AVS4, Module 3 . (dB)** **Min = 80.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 118.35 | 120.73 | 120.13 | 117.45 | 117.82 | 125.81 | 121.99 | 117.81 | 120.60 | 122.30 | 120.72 | 115.86 |
| N° 2 | 115.66 | 118.80 | 140.00 | 117.12 | 125.83 | 112.27 | 140.00 | 118.54 | 116.82 | 112.97 | 110.05 | 111.66 |
| N° 3 | 119.15 | 125.09 | 123.40 | 125.07 | 132.32 | 116.44 | 140.00 | 114.87 | 117.71 | 108.44 | 110.05 | 121.28 |
| N° 4 | 118.98 | 119.83 | 120.71 | 115.49 | 116.24 | 140.00 | 121.96 | 126.79 | 121.12 | 112.43 | 122.83 | 116.61 |
| N° 5 | 119.16 | 120.80 | 120.47 | 118.89 | 117.12 | 119.10 | 126.15 | 111.39 | 110.27 | 115.95 | 110.34 | 114.09 |
| N° 6 | 119.23 | 117.75 | 140.00 | 120.86 | 117.53 | 117.83 | 114.20 | 116.09 | 111.85 | 113.97 | 113.11 | 117.58 |
| N° 7 | 120.06 | 122.50 | 124.07 | 120.30 | 116.73 | 140.00 | 137.77 | 108.72 | 110.59 | 107.82 | 114.14 | 113.97 |
| N° 8 | 121.38 | 117.20 | 124.66 | 129.23 | 116.36 | 117.11 | 125.55 | 117.96 | 110.04 | 108.99 | 107.20 | 116.11 |
| N° 9 | 119.96 | 125.89 | 133.54 | 120.83 | 119.98 | 140.00 | 115.16 | 120.74 | 123.15 | 109.11 | 107.85 | 114.39 |
| N° 10 | 118.05 | 119.22 | 121.68 | 117.80 | 116.18 | 118.57 | 121.94 | 111.55 | 118.09 | 107.87 | 110.62 | 112.72 |
| N° 11 | 121.64 | 118.47 | 120.79 | 124.31 | 129.62 | 118.44 | 114.50 | 116.47 | 121.21 | 111.64 | 113.26 | 121.47 |
| N° 12 | 122.77 | 118.94 | 115.48 | 119.94 | 119.48 | 118.50 | 122.27 | 112.49 | 115.32 | 111.18 | 111.89 | 116.56 |
| N° 13 | 121.35 | 120.40 | 132.69 | 116.31 | 119.30 | 117.52 | 111.86 | 117.02 | 112.16 | 110.42 | 114.04 | 115.23 |
| N° 14 | 122.17 | 121.43 | 116.44 | 130.68 | 113.60 | 122.10 | 119.65 | 116.62 | 112.98 | 110.05 | 108.65 | 132.36 |
| N° 15 | 123.35 | 130.56 | 115.83 | 118.89 | 118.03 | 121.16 | 124.84 | 112.07 | 123.93 | 112.87 | 112.79 | 114.03 |
| N° 16 | 118.95 | 124.74 | 113.64 | 121.54 | 114.35 | 115.21 | 114.49 | 122.97 | 115.42 | 116.34 | 112.26 | 114.77 |
| N° 17 | 121.65 | 118.47 | 125.50 | 126.22 | 115.85 | 126.90 | 116.03 | 116.23 | 124.06 | 115.00 | 109.37 | 116.33 |
| N° 18 | 119.40 | 119.18 | 134.63 | 114.83 | 121.06 | 116.83 | 119.99 | 111.68 | 109.05 | 110.92 | 111.99 | 114.90 |
| N° 19 | 120.75 | 124.91 | 119.78 | 133.85 | 125.82 | 121.76 | 116.07 | 110.30 | 115.82 | 110.27 | 111.99 | 125.62 |
| N° 20 | 119.18 | 118.11 | 124.01 | 124.67 | 117.68 | 119.23 | 113.83 | 115.90 | 112.88 | 113.34 | 108.63 | 120.63 |
| N° 21 | 120.81 | 129.13 | 119.32 | 118.69 | 140.00 | 128.25 | 119.48 | 128.64 | 123.82 | 117.12 | 109.61 | 116.71 |
| N° 22 | 122.22 | 123.67 | 121.17 | 132.96 | 130.49 | 121.88 | 111.94 | 119.54 | 111.44 | 113.84 | 113.36 | 116.60 |
| N° 23 | 117.84 | 116.83 | 125.14 | 124.08 | 119.16 | 112.90 | 136.65 | 111.42 | 117.09 | 116.19 | 107.54 | 117.88 |
| N° 24 | 120.01 | 121.26 | 126.25 | 118.11 | 111.80 | 112.33 | 116.00 | 127.33 | 115.53 | 111.08 | 114.58 | 117.66 |
| N° 25 | 127.68 | 121.71 | 115.07 | 122.24 | 117.58 | 116.89 | 125.20 | 110.94 | 110.32 | 107.39 | 106.80 | 115.83 |
| N° 26 | 122.02 | 118.83 | 117.25 | 127.28 | 140.00 | 118.98 | 114.63 | 112.43 | 115.38 | 108.12 | 114.46 | 116.09 |
| N° 27 | 117.95 | 118.35 | 118.11 | 112.68 | 115.50 | 118.97 | 118.77 | 121.19 | 112.22 | 113.96 | 110.19 | 113.70 |
| N° 28 | 118.14 | 136.07 | 140.00 | 123.87 | 129.80 | 117.55 | 136.97 | 135.05 | 114.13 | 109.89 | 113.16 | 117.14 |
| N° 29 | 116.61 | 117.43 | 114.25 | 120.19 | 120.46 | 112.43 | 112.40 | 116.72 | 119.93 | 109.24 | 116.13 | 117.01 |
| N° 30 | 121.35 | 121.94 | 124.50 | 122.18 | 118.81 | 122.80 | 122.56 | 115.57 | 113.18 | 114.19 | 115.51 | 115.93 |
| N° 31 | 121.55 | 118.08 | 119.58 | 117.07 | 115.46 | 121.64 | 124.96 | 113.50 | 112.09 | 112.92 | 123.56 | 124.22 |

# 80. AVS4, Module 4

**Ta=25°C; +VCC=5V; -VCC=GND; 1V<Vout<2.5V; RL=2kOhms**

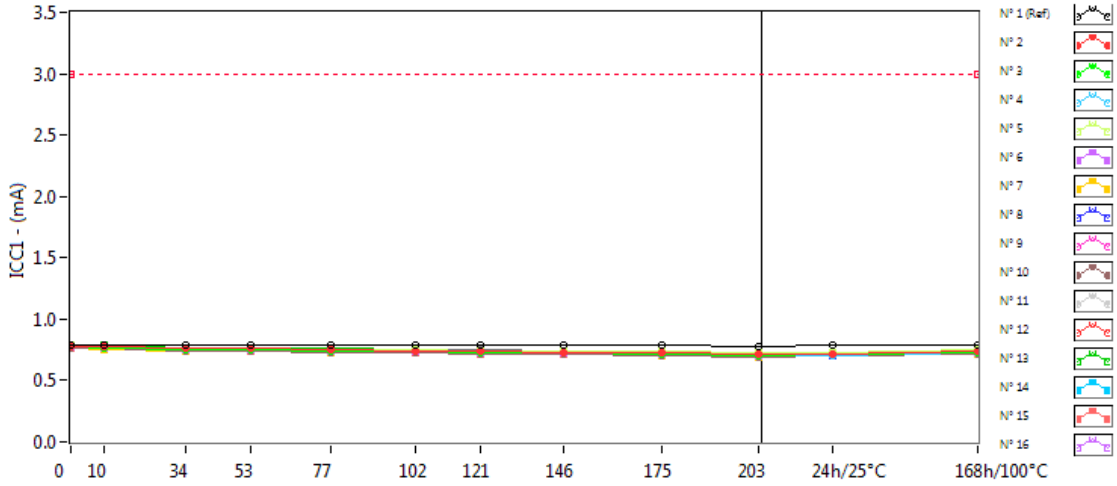



**AVS4, Module 4 . (dB)** **Min = 80.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 118.78 | 118.83 | 121.66 | 120.41 | 121.62 | 117.73 | 123.65 | 122.96 | 119.25 | 119.38 | 118.67 | 120.75 |
| N° 2 | 122.40 | 121.81 | 118.38 | 123.20 | 120.34 | 140.00 | 119.48 | 113.85 | 115.47 | 110.97 | 115.57 | 117.18 |
| N° 3 | 118.03 | 120.17 | 115.37 | 122.13 | 118.81 | 120.58 | 117.07 | 112.52 | 113.14 | 108.84 | 107.53 | 118.85 |
| N° 4 | 120.68 | 134.91 | 122.72 | 115.25 | 120.78 | 114.26 | 118.73 | 115.84 | 119.31 | 114.73 | 110.73 | 114.85 |
| N° 5 | 121.66 | 129.53 | 119.07 | 140.00 | 112.78 | 125.48 | 115.27 | 111.17 | 111.02 | 111.21 | 107.62 | 116.23 |
| N° 6 | 123.00 | 119.71 | 127.84 | 119.18 | 114.98 | 124.11 | 121.45 | 121.68 | 115.72 | 110.83 | 109.31 | 116.93 |
| N° 7 | 118.42 | 123.09 | 134.12 | 128.18 | 122.01 | 116.97 | 122.92 | 119.53 | 112.11 | 109.92 | 117.01 | 111.82 |
| N° 8 | 120.98 | 117.34 | 120.03 | 125.94 | 128.08 | 115.42 | 113.11 | 121.29 | 113.03 | 106.79 | 111.01 | 118.46 |
| N° 9 | 119.64 | 117.17 | 124.13 | 122.07 | 117.31 | 117.36 | 114.48 | 112.62 | 110.28 | 110.06 | 108.67 | 113.43 |
| N° 10 | 122.62 | 115.21 | 121.92 | 119.74 | 119.36 | 116.29 | 114.12 | 112.80 | 110.81 | 112.61 | 112.30 | 114.84 |
| N° 11 | 118.10 | 119.16 | 119.88 | 122.70 | 118.85 | 112.09 | 115.49 | 110.97 | 112.18 | 108.37 | 117.52 | 117.11 |
| N° 12 | 125.05 | 122.36 | 129.46 | 119.50 | 120.99 | 115.61 | 129.89 | 114.87 | 123.39 | 113.02 | 110.04 | 120.86 |
| N° 13 | 119.93 | 114.97 | 133.05 | 117.74 | 125.79 | 115.06 | 123.64 | 115.05 | 113.27 | 114.48 | 111.80 | 116.20 |
| N° 14 | 121.69 | 117.22 | 118.56 | 120.20 | 118.82 | 116.60 | 112.30 | 116.88 | 122.96 | 124.24 | 111.99 | 118.59 |
| N° 15 | 119.87 | 121.89 | 122.11 | 118.08 | 140.00 | 121.31 | 123.31 | 115.78 | 120.02 | 109.21 | 108.92 | 121.28 |
| N° 16 | 117.95 | 118.48 | 131.10 | 115.99 | 118.10 | 122.50 | 112.56 | 116.46 | 112.30 | 116.71 | 122.77 | 115.80 |
| N° 17 | 121.07 | 116.94 | 124.96 | 123.56 | 116.62 | 116.62 | 119.00 | 117.65 | 112.65 | 119.20 | 113.12 | 122.09 |
| N° 18 | 119.81 | 116.97 | 121.55 | 116.52 | 121.28 | 125.71 | 116.39 | 117.69 | 113.04 | 120.27 | 118.06 | 116.48 |
| N° 19 | 122.94 | 118.84 | 120.24 | 117.36 | 111.82 | 118.47 | 111.69 | 111.98 | 117.43 | 110.22 | 124.96 | 113.92 |
| N° 20 | 122.22 | 116.55 | 140.00 | 124.94 | 140.00 | 116.48 | 117.19 | 116.62 | 110.46 | 109.90 | 108.14 | 117.39 |
| N° 21 | 116.47 | 120.23 | 112.41 | 114.25 | 124.64 | 117.13 | 131.51 | 116.33 | 117.61 | 111.72 | 140.00 | 119.99 |
| N° 22 | 119.95 | 117.76 | 140.00 | 116.12 | 124.08 | 135.39 | 111.05 | 114.91 | 118.46 | 121.82 | 109.90 | 118.48 |
| N° 23 | 118.22 | 115.13 | 114.69 | 118.15 | 117.50 | 122.97 | 117.04 | 109.71 | 110.64 | 113.80 | 113.91 | 113.17 |
| N° 24 | 121.85 | 124.31 | 135.09 | 120.65 | 114.15 | 130.95 | 117.61 | 117.42 | 115.43 | 119.64 | 108.05 | 115.12 |
| N° 25 | 118.22 | 119.65 | 116.20 | 118.89 | 126.06 | 127.69 | 115.86 | 114.10 | 110.60 | 113.96 | 112.47 | 116.87 |
| N° 26 | 117.73 | 118.36 | 113.33 | 130.96 | 121.66 | 114.39 | 123.08 | 113.57 | 109.52 | 108.80 | 110.88 | 114.08 |
| N° 27 | 118.70 | 122.31 | 130.83 | 121.44 | 134.38 | 119.39 | 115.31 | 118.59 | 114.86 | 118.87 | 114.43 | 116.00 |
| N° 28 | 117.90 | 116.29 | 123.93 | 121.56 | 117.54 | 118.65 | 119.58 | 109.77 | 119.97 | 109.38 | 107.52 | 115.14 |
| N° 29 | 119.32 | 120.20 | 125.55 | 115.88 | 116.14 | 118.75 | 119.94 | 121.00 | 115.16 | 107.41 | 108.34 | 114.41 |
| N° 30 | 118.61 | 123.54 | 116.73 | 115.29 | 122.29 | 127.43 | 113.01 | 112.77 | 112.17 | 113.72 | 107.88 | 128.49 |
| N° 31 | 121.93 | 118.47 | 122.43 | 115.89 | 113.10 | 115.92 | 117.23 | 110.61 | 113.25 | 113.38 | 110.70 | 111.43 |

# 81. ICC1

**Ta=25°C; +VCC=30V; -VCC=GND**

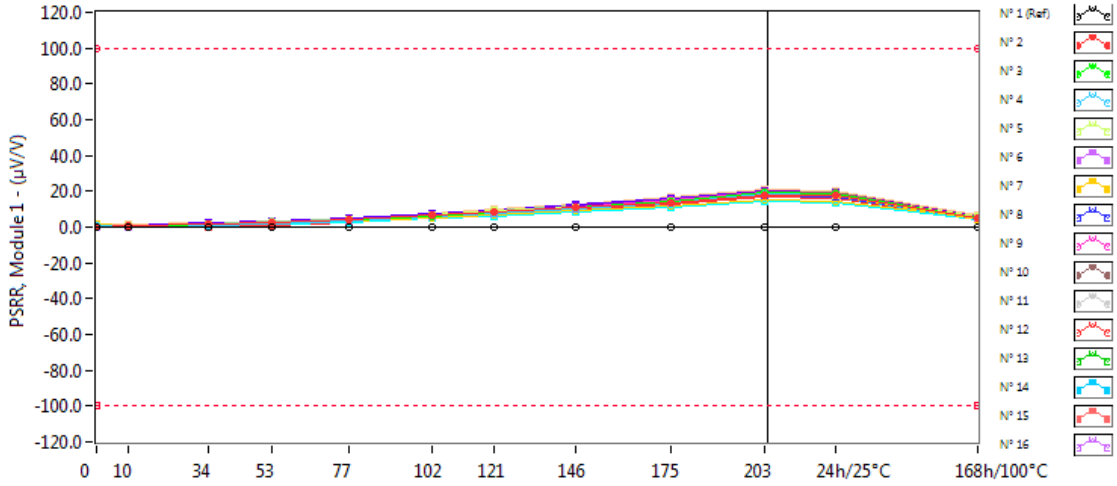



**ICC1 . (mA)** **Max = 3.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 0.786 | 0.787 | 0.784 | 0.786 | 0.783 | 0.787 | 0.783 | 0.788 | 0.787 | 0.782 | 0.787 | 0.791 |
| N° 2 | 0.781 | 0.775 | 0.762 | 0.760 | 0.750 | 0.745 | 0.736 | 0.733 | 0.730 | 0.718 | 0.719 | 0.742 |
| N° 3 | 0.774 | 0.767 | 0.754 | 0.752 | 0.742 | 0.736 | 0.728 | 0.727 | 0.720 | 0.708 | 0.711 | 0.731 |
| N° 4 | 0.772 | 0.765 | 0.752 | 0.751 | 0.740 | 0.736 | 0.725 | 0.725 | 0.719 | 0.706 | 0.708 | 0.729 |
| N° 5 | 0.789 | 0.782 | 0.768 | 0.766 | 0.757 | 0.754 | 0.743 | 0.742 | 0.737 | 0.723 | 0.725 | 0.747 |
| N° 6 | 0.772 | 0.765 | 0.750 | 0.749 | 0.739 | 0.736 | 0.726 | 0.724 | 0.719 | 0.706 | 0.709 | 0.731 |
| N° 7 | 0.787 | 0.781 | 0.767 | 0.764 | 0.755 | 0.750 | 0.740 | 0.739 | 0.734 | 0.721 | 0.723 | 0.741 |
| N° 8 | 0.771 | 0.763 | 0.749 | 0.747 | 0.738 | 0.737 | 0.725 | 0.722 | 0.717 | 0.706 | 0.707 | 0.729 |
| N° 9 | 0.788 | 0.781 | 0.766 | 0.763 | 0.755 | 0.750 | 0.740 | 0.737 | 0.732 | 0.720 | 0.721 | 0.742 |
| N° 10 | 0.765 | 0.758 | 0.743 | 0.740 | 0.732 | 0.728 | 0.717 | 0.712 | 0.706 | 0.688 | 0.697 | 0.718 |
| N° 11 | 0.783 | 0.775 | 0.761 | 0.759 | 0.750 | 0.744 | 0.736 | 0.734 | 0.725 | 0.715 | 0.718 | 0.736 |
| N° 12 | 0.768 | 0.761 | 0.746 | 0.745 | 0.735 | 0.730 | 0.722 | 0.720 | 0.712 | 0.700 | 0.703 | 0.724 |
| N° 13 | 0.790 | 0.783 | 0.768 | 0.766 | 0.758 | 0.755 | 0.743 | 0.741 | 0.735 | 0.724 | 0.729 | 0.747 |
| N° 14 | 0.780 | 0.772 | 0.760 | 0.754 | 0.746 | 0.741 | 0.732 | 0.730 | 0.723 | 0.713 | 0.715 | 0.738 |
| N° 15 | 0.770 | 0.761 | 0.747 | 0.742 | 0.735 | 0.731 | 0.720 | 0.718 | 0.714 | 0.701 | 0.702 | 0.725 |
| N° 16 | 0.792 | 0.784 | 0.770 | 0.766 | 0.760 | 0.757 | 0.745 | 0.742 | 0.737 | 0.724 | 0.728 | 0.749 |
| N° 17 | 0.785 | 0.778 | 0.764 | 0.763 | 0.757 | 0.751 | 0.743 | 0.741 | 0.737 | 0.726 | 0.729 | 0.745 |
| N° 18 | 0.787 | 0.781 | 0.766 | 0.764 | 0.755 | 0.756 | 0.741 | 0.739 | 0.734 | 0.721 | 0.724 | 0.746 |
| N° 19 | 0.768 | 0.761 | 0.746 | 0.743 | 0.735 | 0.729 | 0.719 | 0.717 | 0.713 | 0.700 | 0.703 | 0.723 |
| N° 20 | 0.772 | 0.764 | 0.750 | 0.750 | 0.741 | 0.734 | 0.724 | 0.720 | 0.715 | 0.705 | 0.710 | 0.728 |
| N° 21 | 0.784 | 0.778 | 0.765 | 0.764 | 0.756 | 0.752 | 0.743 | 0.743 | 0.738 | 0.727 | 0.732 | 0.746 |
| N° 22 | 0.781 | 0.775 | 0.760 | 0.760 | 0.750 | 0.744 | 0.735 | 0.734 | 0.728 | 0.716 | 0.718 | 0.739 |
| N° 23 | 0.786 | 0.780 | 0.765 | 0.763 | 0.754 | 0.750 | 0.740 | 0.737 | 0.733 | 0.720 | 0.724 | 0.744 |
| N° 24 | 0.781 | 0.775 | 0.760 | 0.758 | 0.750 | 0.745 | 0.735 | 0.733 | 0.728 | 0.715 | 0.717 | 0.736 |
| N° 25 | 0.771 | 0.763 | 0.749 | 0.748 | 0.739 | 0.734 | 0.723 | 0.721 | 0.717 | 0.703 | 0.709 | 0.727 |
| N° 26 | 0.783 | 0.776 | 0.761 | 0.761 | 0.752 | 0.748 | 0.736 | 0.736 | 0.727 | 0.716 | 0.720 | 0.742 |
| N° 27 | 0.788 | 0.781 | 0.766 | 0.764 | 0.757 | 0.750 | 0.741 | 0.739 | 0.733 | 0.721 | 0.725 | 0.744 |
| N° 28 | 0.792 | 0.785 | 0.770 | 0.769 | 0.760 | 0.756 | 0.746 | 0.744 | 0.737 | 0.725 | 0.728 | 0.748 |
| N° 29 | 0.783 | 0.776 | 0.762 | 0.761 | 0.751 | 0.745 | 0.735 | 0.734 | 0.726 | 0.716 | 0.717 | 0.738 |
| N° 30 | 0.765 | 0.757 | 0.742 | 0.740 | 0.732 | 0.727 | 0.719 | 0.714 | 0.708 | 0.695 | 0.699 | 0.717 |
| N° 31 | 0.783 | 0.776 | 0.760 | 0.758 | 0.750 | 0.748 | 0.735 | 0.731 | 0.726 | 0.714 | 0.717 | 0.735 |

# 82. PSRR, Module 1

**Ta=25°C; -VCC=GND; VCM=+1.4V; 5V<+VCC<30V**

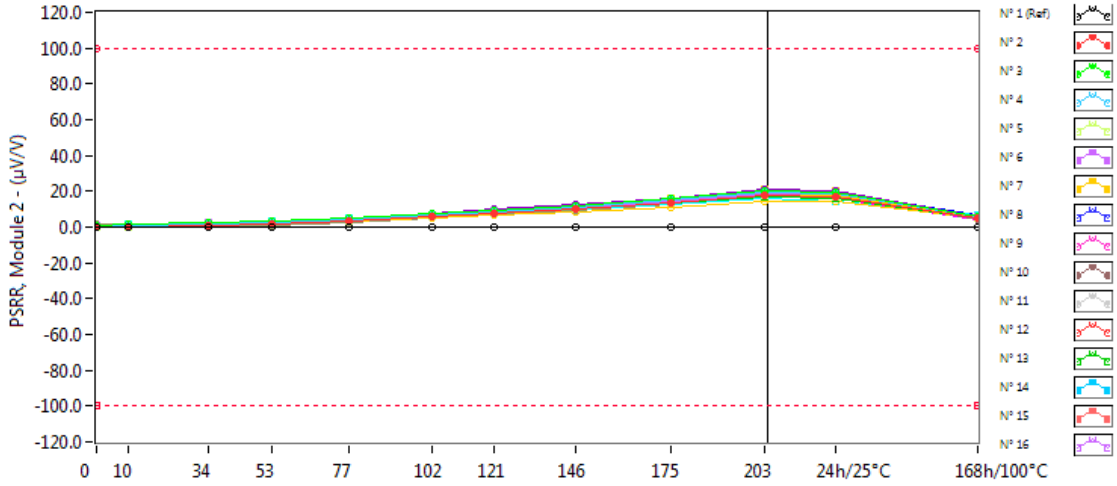



**PSRR, Module 1 . (µV/V)** **Min = -100.0 Max = 100.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 0.100 | 0.168 | 0.127 | 0.100 | 0.100 | 0.138 | 0.160 | 0.100 | 0.110 | 0.100 | 0.100 | 0.100 |
| N° 2 | 0.349 | 0.861 | 1.962 | 2.669 | 4.241 | 6.428 | 8.324 | 10.692 | 13.935 | 17.987 | 17.452 | 5.357 |
| N° 3 | 0.211 | 0.254 | 1.374 | 2.318 | 4.088 | 6.299 | 8.459 | 10.858 | 14.550 | 19.116 | 18.344 | 5.184 |
| N° 4 | 0.462 | 0.100 | 1.242 | 2.005 | 3.468 | 5.768 | 7.871 | 10.129 | 13.699 | 18.207 | 17.492 | 4.835 |
| N° 5 | 0.523 | 1.014 | 2.015 | 2.859 | 4.456 | 6.555 | 8.883 | 11.187 | 14.513 | 18.692 | 18.047 | 5.938 |
| N° 6 | 0.295 | 0.100 | 1.227 | 1.961 | 3.524 | 5.786 | 7.668 | 10.091 | 13.543 | 18.184 | 17.356 | 4.850 |
| N° 7 | 0.874 | 0.369 | 0.847 | 1.601 | 3.274 | 5.532 | 7.701 | 10.170 | 14.064 | 18.597 | 17.904 | 4.602 |
| N° 8 | 0.332 | 0.167 | 1.491 | 2.133 | 3.800 | 5.872 | 7.944 | 10.065 | 13.536 | 17.515 | 17.118 | 5.136 |
| N° 9 | 0.139 | 0.257 | 1.390 | 2.229 | 3.887 | 6.191 | 8.449 | 11.103 | 14.866 | 19.311 | 18.806 | 5.320 |
| N° 10 | 0.762 | 0.364 | 0.778 | 1.700 | 3.261 | 5.566 | 7.749 | 10.618 | 14.847 | 19.620 | 19.072 | 4.669 |
| N° 11 | 0.611 | 0.100 | 1.187 | 1.980 | 3.739 | 6.219 | 8.261 | 11.048 | 15.151 | 19.638 | 18.780 | 5.058 |
| N° 12 | 0.100 | 0.495 | 1.534 | 2.478 | 4.280 | 6.344 | 8.464 | 10.720 | 14.548 | 19.048 | 18.283 | 5.446 |
| N° 13 | 0.100 | 0.530 | 1.497 | 2.387 | 4.011 | 6.107 | 8.216 | 10.610 | 14.268 | 18.034 | 17.320 | 5.059 |
| N° 14 | 0.962 | 0.529 | 0.535 | 1.474 | 3.200 | 5.499 | 7.363 | 9.974 | 13.508 | 17.954 | 17.205 | 4.336 |
| N° 15 | 0.478 | 0.100 | 1.380 | 2.110 | 3.830 | 6.191 | 8.212 | 10.864 | 14.590 | 19.304 | 18.893 | 5.445 |
| N° 16 | 0.583 | 0.158 | 1.012 | 1.936 | 3.541 | 5.566 | 7.644 | 10.193 | 13.818 | 18.159 | 17.392 | 4.744 |
| N° 17 | 0.157 | 0.557 | 1.623 | 2.134 | 3.505 | 5.305 | 7.053 | 9.153 | 11.840 | 15.019 | 14.451 | 5.058 |
| N° 18 | 0.254 | 0.753 | 1.811 | 2.768 | 4.395 | 6.561 | 8.819 | 11.251 | 14.642 | 19.059 | 18.155 | 5.719 |
| N° 19 | 0.100 | 0.432 | 1.787 | 2.649 | 4.290 | 6.518 | 8.823 | 11.564 | 15.075 | 20.207 | 19.402 | 5.573 |
| N° 20 | 0.181 | 0.625 | 1.961 | 2.979 | 4.514 | 6.875 | 9.212 | 11.758 | 15.631 | 20.089 | 19.121 | 6.025 |
| N° 21 | 0.742 | 0.241 | 0.701 | 1.598 | 2.833 | 4.759 | 6.334 | 8.212 | 10.919 | 14.036 | 13.146 | 4.498 |
| N° 22 | 1.248 | 0.638 | 0.283 | 1.112 | 2.614 | 5.046 | 6.938 | 9.146 | 12.795 | 16.965 | 16.449 | 4.152 |
| N° 23 | 0.100 | 0.617 | 1.863 | 2.488 | 4.171 | 6.434 | 8.584 | 11.017 | 14.106 | 18.233 | 17.438 | 5.414 |
| N° 24 | 0.816 | 0.306 | 1.036 | 1.804 | 3.508 | 5.866 | 8.025 | 10.695 | 14.488 | 18.720 | 18.063 | 4.999 |
| N° 25 | 0.328 | 0.182 | 1.586 | 2.281 | 4.189 | 6.383 | 8.531 | 11.196 | 14.921 | 19.595 | 18.210 | 5.400 |
| N° 26 | 0.100 | 0.414 | 1.665 | 2.345 | 4.342 | 6.744 | 8.991 | 11.456 | 15.470 | 19.416 | 18.621 | 5.520 |
| N° 27 | 0.100 | 0.476 | 1.522 | 2.117 | 4.058 | 6.330 | 8.194 | 10.665 | 13.917 | 18.032 | 17.336 | 5.488 |
| N° 28 | 0.317 | 0.836 | 2.072 | 2.572 | 4.368 | 6.454 | 8.630 | 10.957 | 14.794 | 19.167 | 18.488 | 5.893 |
| N° 29 | 0.737 | 1.267 | 2.345 | 2.972 | 5.028 | 7.332 | 9.679 | 12.359 | 16.119 | 20.038 | 19.389 | 6.189 |
| N° 30 | 1.311 | 0.712 | 0.481 | 0.873 | 3.089 | 5.306 | 7.662 | 10.402 | 14.511 | 19.722 | 18.776 | 4.633 |
| N° 31 | 0.922 | 1.324 | 2.590 | 3.268 | 5.279 | 7.631 | 10.094 | 12.795 | 16.697 | 21.350 | 20.429 | 6.618 |

# 83. PSRR, Module 2

**Ta=25°C; -VCC=GND; VCM=+1.4V; 5V<+VCC<30V**

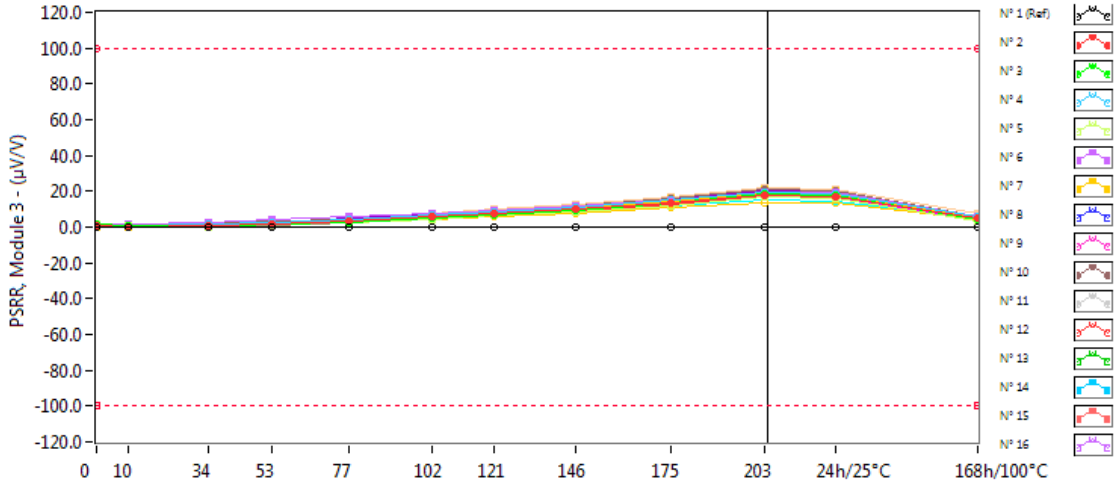



**PSRR, Module 2 . (µV/V)** **Min = -100.0 Max = 100.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 0.100 | 0.100 | 0.100 | 0.170 | 0.164 | 0.100 | 0.100 | 0.100 | 0.100 | 0.100 | 0.100 | 0.100 |
| N° 2 | 0.371 | 0.100 | 1.111 | 2.072 | 3.745 | 5.676 | 7.796 | 10.138 | 13.289 | 17.509 | 16.856 | 5.185 |
| N° 3 | 0.803 | 1.277 | 2.440 | 3.404 | 4.999 | 7.374 | 9.442 | 11.970 | 16.097 | 20.568 | 19.686 | 6.245 |
| N° 4 | 0.123 | 0.470 | 1.592 | 2.488 | 4.241 | 6.391 | 8.734 | 11.101 | 14.832 | 19.371 | 18.634 | 5.510 |
| N° 5 | 0.303 | 0.125 | 1.396 | 2.042 | 3.759 | 5.863 | 7.863 | 10.126 | 13.423 | 17.677 | 17.177 | 5.257 |
| N° 6 | 0.619 | 1.213 | 2.209 | 2.942 | 4.646 | 6.811 | 8.963 | 11.188 | 14.491 | 18.923 | 18.228 | 5.774 |
| N° 7 | 0.471 | 0.110 | 1.228 | 1.929 | 3.587 | 5.905 | 7.815 | 10.271 | 13.882 | 18.332 | 17.840 | 5.396 |
| N° 8 | 0.390 | 0.185 | 1.240 | 2.026 | 3.881 | 6.090 | 8.378 | 10.966 | 14.728 | 18.694 | 18.143 | 5.151 |
| N° 9 | 0.672 | 0.124 | 0.947 | 1.996 | 3.423 | 5.639 | 7.796 | 10.410 | 13.969 | 18.550 | 17.939 | 5.107 |
| N° 10 | 0.606 | 0.100 | 1.148 | 1.826 | 3.580 | 5.667 | 7.994 | 10.884 | 15.000 | 19.573 | 19.180 | 4.535 |
| N° 11 | 0.393 | 0.100 | 1.195 | 2.105 | 3.844 | 6.256 | 8.434 | 10.977 | 15.378 | 19.882 | 19.063 | 5.460 |
| N° 12 | 0.380 | 0.901 | 1.954 | 2.768 | 4.455 | 6.704 | 8.742 | 11.409 | 15.385 | 19.604 | 18.950 | 5.343 |
| N° 13 | 0.381 | 0.100 | 1.233 | 1.896 | 3.541 | 5.537 | 7.506 | 9.810 | 13.216 | 17.258 | 16.434 | 4.750 |
| N° 14 | 0.132 | 0.650 | 1.812 | 2.865 | 4.320 | 6.558 | 8.570 | 11.075 | 14.730 | 18.722 | 18.340 | 5.490 |
| N° 15 | 0.334 | 0.242 | 1.383 | 2.237 | 3.794 | 6.218 | 8.428 | 11.040 | 14.988 | 19.458 | 18.854 | 5.027 |
| N° 16 | 0.486 | 0.100 | 1.073 | 2.070 | 3.661 | 5.753 | 7.961 | 10.526 | 14.012 | 18.437 | 17.896 | 5.007 |
| N° 17 | 0.200 | 0.247 | 1.309 | 2.029 | 3.241 | 5.078 | 6.795 | 8.688 | 11.349 | 14.521 | 14.181 | 4.728 |
| N° 18 | 1.163 | 0.704 | 0.681 | 1.446 | 3.105 | 5.341 | 7.560 | 9.993 | 13.151 | 17.149 | 16.472 | 4.323 |
| N° 19 | 0.485 | 1.055 | 2.162 | 3.252 | 5.122 | 7.546 | 9.851 | 12.615 | 16.186 | 21.045 | 20.460 | 6.194 |
| N° 20 | 0.754 | 1.221 | 2.575 | 3.493 | 4.949 | 7.316 | 9.775 | 12.546 | 16.398 | 20.666 | 19.391 | 6.277 |
| N° 21 | 1.035 | 1.514 | 2.721 | 3.507 | 4.696 | 6.514 | 8.405 | 9.799 | 12.409 | 15.722 | 14.612 | 6.376 |
| N° 22 | 0.663 | 0.100 | 0.863 | 1.696 | 3.418 | 5.709 | 7.612 | 9.827 | 13.289 | 17.480 | 16.963 | 4.721 |
| N° 23 | 0.677 | 0.100 | 1.139 | 1.907 | 3.426 | 5.666 | 7.712 | 10.074 | 13.213 | 17.384 | 16.457 | 5.086 |
| N° 24 | 0.962 | 0.343 | 0.722 | 1.697 | 3.350 | 5.818 | 7.954 | 10.692 | 14.220 | 18.572 | 17.799 | 5.200 |
| N° 25 | 0.467 | 0.978 | 2.232 | 2.694 | 4.694 | 7.176 | 9.446 | 11.977 | 15.860 | 20.457 | 19.211 | 6.062 |
| N° 26 | 0.908 | 1.411 | 2.707 | 3.354 | 5.234 | 7.458 | 9.688 | 12.408 | 16.269 | 20.545 | 19.649 | 6.732 |
| N° 27 | 1.326 | 0.852 | 0.419 | 1.127 | 2.911 | 5.295 | 7.245 | 9.508 | 12.967 | 16.961 | 16.487 | 4.770 |
| N° 28 | 0.421 | 0.100 | 1.390 | 1.909 | 3.506 | 5.367 | 7.531 | 9.937 | 13.494 | 17.820 | 17.153 | 5.042 |
| N° 29 | 0.275 | 0.193 | 1.409 | 2.095 | 4.111 | 6.360 | 8.603 | 11.023 | 14.784 | 18.787 | 18.273 | 5.463 |
| N° 30 | 0.100 | 0.366 | 1.606 | 2.299 | 4.287 | 6.820 | 9.056 | 12.141 | 16.207 | 21.089 | 20.251 | 6.121 |
| N° 31 | 0.369 | 0.166 | 1.356 | 2.138 | 4.034 | 6.215 | 8.676 | 11.435 | 15.300 | 20.352 | 19.463 | 5.766 |

# 84. PSRR, Module 3

**Ta=25°C; -VCC=GND; VCM=+1.4V; 5V<+VCC<30V**

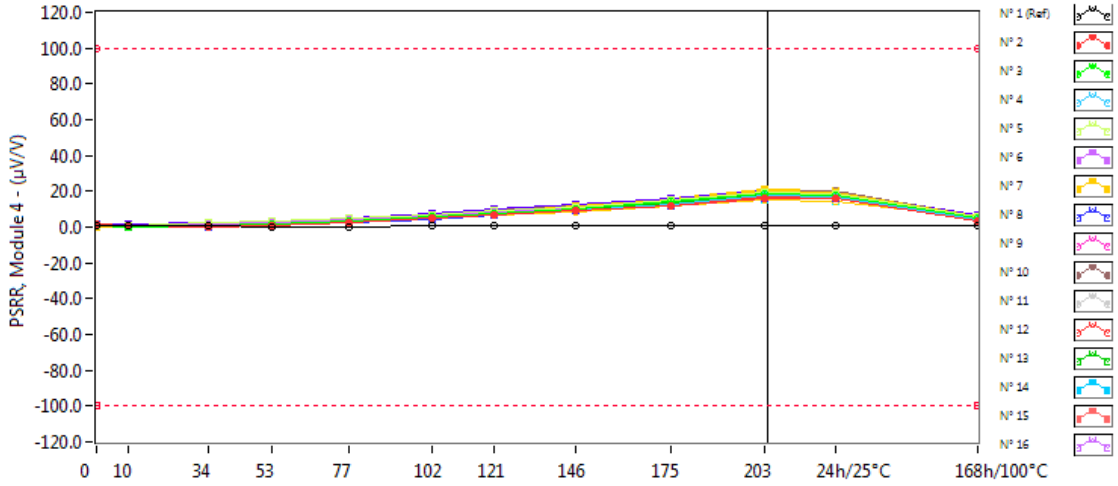



**PSRR, Module 3 . (µV/V)** **Min = -100.0 Max = 100.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 0.264 | 0.180 | 0.207 | 0.100 | 0.189 | 0.182 | 0.214 | 0.276 | 0.293 | 0.220 | 0.231 | 0.275 |
| N° 2 | 0.633 | 0.140 | 1.206 | 2.109 | 3.517 | 5.559 | 7.525 | 10.138 | 13.130 | 17.426 | 17.006 | 4.760 |
| N° 3 | 1.474 | 0.992 | 0.267 | 1.426 | 2.857 | 5.064 | 7.161 | 9.692 | 13.549 | 18.260 | 17.618 | 3.935 |
| N° 4 | 0.100 | 0.640 | 1.651 | 2.948 | 4.554 | 6.738 | 8.841 | 11.328 | 14.942 | 19.629 | 18.954 | 5.537 |
| N° 5 | 1.361 | 0.954 | 0.100 | 1.278 | 2.784 | 4.613 | 6.722 | 8.780 | 12.188 | 16.577 | 16.306 | 3.777 |
| N° 6 | 1.419 | 1.726 | 2.957 | 4.018 | 5.494 | 7.577 | 9.451 | 11.781 | 15.130 | 19.366 | 19.072 | 6.317 |
| N° 7 | 0.234 | 0.166 | 1.358 | 2.497 | 3.969 | 6.131 | 8.241 | 10.591 | 14.486 | 19.116 | 18.681 | 5.359 |
| N° 8 | 0.188 | 0.248 | 1.513 | 2.550 | 4.225 | 6.324 | 8.511 | 11.089 | 14.491 | 18.408 | 18.153 | 5.014 |
| N° 9 | 0.642 | 0.132 | 1.001 | 2.049 | 3.512 | 5.781 | 8.008 | 10.546 | 14.091 | 18.713 | 18.374 | 4.834 |
| N° 10 | 0.182 | 0.555 | 1.795 | 3.051 | 4.547 | 6.707 | 9.099 | 11.988 | 16.209 | 20.744 | 20.359 | 5.677 |
| N° 11 | 0.403 | 0.100 | 1.327 | 2.559 | 4.251 | 6.368 | 8.463 | 11.110 | 14.851 | 19.777 | 18.917 | 5.515 |
| N° 12 | 0.416 | 0.828 | 1.972 | 3.090 | 4.590 | 6.707 | 8.841 | 11.345 | 15.183 | 19.836 | 19.220 | 5.638 |
| N° 13 | 0.100 | 0.469 | 1.470 | 2.489 | 3.896 | 5.882 | 7.843 | 10.086 | 13.671 | 17.638 | 16.809 | 4.932 |
| N° 14 | 0.100 | 0.576 | 1.719 | 2.887 | 4.616 | 6.645 | 8.750 | 11.116 | 14.710 | 18.739 | 18.376 | 5.524 |
| N° 15 | 0.307 | 0.223 | 1.476 | 2.597 | 4.319 | 6.138 | 8.541 | 11.107 | 14.919 | 19.322 | 19.127 | 5.257 |
| N° 16 | 0.344 | 0.100 | 1.248 | 2.262 | 3.783 | 5.761 | 8.035 | 10.566 | 14.223 | 18.664 | 18.043 | 4.892 |
| N° 17 | 0.858 | 0.555 | 0.564 | 1.589 | 2.595 | 4.241 | 5.977 | 7.894 | 10.577 | 13.825 | 13.519 | 3.914 |
| N° 18 | 0.946 | 0.697 | 0.572 | 1.716 | 3.270 | 5.218 | 7.447 | 9.820 | 13.384 | 17.762 | 17.155 | 4.240 |
| N° 19 | 0.179 | 0.545 | 1.810 | 2.944 | 4.681 | 6.910 | 9.247 | 12.092 | 15.774 | 20.654 | 20.042 | 5.893 |
| N° 20 | 0.575 | 0.204 | 1.163 | 2.304 | 3.729 | 6.033 | 8.472 | 11.430 | 15.300 | 19.584 | 18.535 | 4.994 |
| N° 21 | 0.229 | 0.325 | 1.285 | 2.138 | 3.607 | 5.242 | 7.039 | 8.771 | 11.535 | 15.028 | 14.210 | 4.882 |
| N° 22 | 0.821 | 0.460 | 0.729 | 1.683 | 3.171 | 5.176 | 7.236 | 9.524 | 13.059 | 17.292 | 16.850 | 4.130 |
| N° 23 | 1.440 | 0.969 | 0.333 | 1.489 | 2.956 | 4.792 | 6.910 | 9.293 | 12.575 | 16.582 | 15.988 | 3.901 |
| N° 24 | 1.163 | 0.722 | 0.748 | 1.886 | 3.366 | 5.483 | 7.834 | 10.227 | 13.825 | 18.741 | 18.090 | 4.370 |
| N° 25 | 0.122 | 0.403 | 1.704 | 2.881 | 4.538 | 6.879 | 9.258 | 11.806 | 15.576 | 20.235 | 19.309 | 6.008 |
| N° 26 | 1.183 | 0.656 | 0.580 | 1.716 | 3.425 | 5.527 | 7.674 | 10.098 | 14.033 | 18.548 | 17.728 | 4.510 |
| N° 27 | 1.616 | 1.161 | 0.100 | 1.112 | 2.649 | 4.797 | 6.847 | 9.274 | 12.772 | 17.020 | 16.430 | 3.950 |
| N° 28 | 0.551 | 0.100 | 1.196 | 2.223 | 3.452 | 5.321 | 7.371 | 9.741 | 13.401 | 17.885 | 17.235 | 4.645 |
| N° 29 | 0.740 | 0.322 | 0.799 | 2.068 | 3.541 | 5.689 | 7.943 | 10.654 | 14.274 | 18.435 | 17.779 | 4.775 |
| N° 30 | 0.100 | 0.430 | 1.539 | 2.764 | 4.461 | 6.722 | 9.036 | 11.840 | 15.924 | 20.871 | 20.066 | 5.719 |
| N° 31 | 0.781 | 1.343 | 2.723 | 3.841 | 5.584 | 7.771 | 10.174 | 12.877 | 16.640 | 21.697 | 20.821 | 7.239 |

# 85. PSRR, Module 4

**Ta=25°C; -VCC=GND; VCM=+1.4V; 5V<+VCC<30V**

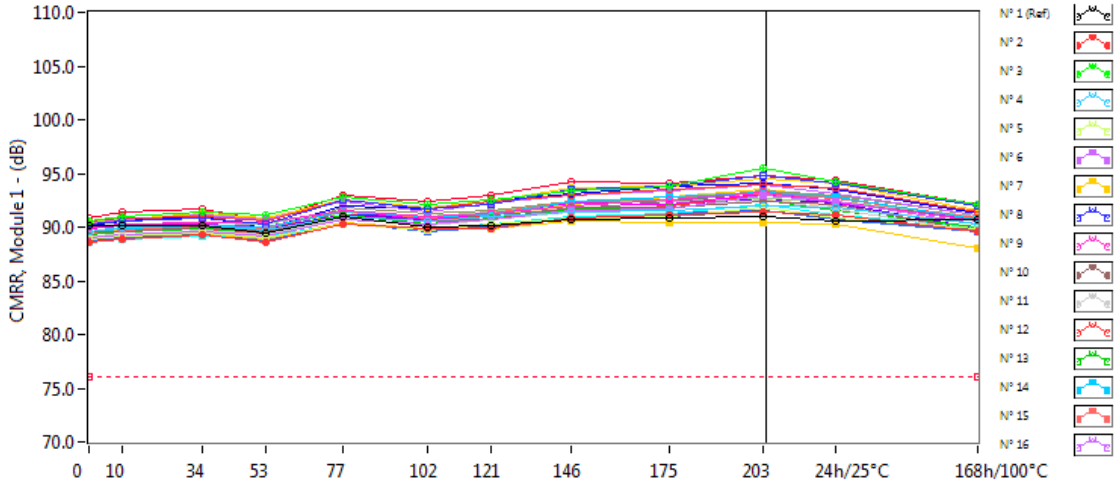



**PSRR, Module 4 . (µV/V)** **Min = -100.0 Max = 100.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 0.471 | 0.525 | 0.517 | 0.402 | 0.401 | 0.540 | 0.532 | 0.501 | 0.486 | 0.518 | 0.491 | 0.501 |
| N° 2 | 1.381 | 0.988 | 0.144 | 1.000 | 2.719 | 4.722 | 6.616 | 8.875 | 12.224 | 16.334 | 15.792 | 3.756 |
| N° 3 | 0.802 | 0.399 | 0.783 | 1.931 | 3.559 | 5.788 | 7.952 | 10.290 | 14.256 | 18.733 | 17.985 | 4.979 |
| N° 4 | 1.129 | 0.681 | 0.591 | 1.414 | 3.159 | 5.165 | 7.173 | 9.518 | 12.900 | 17.599 | 16.961 | 4.247 |
| N° 5 | 0.659 | 1.129 | 2.195 | 3.168 | 4.734 | 6.868 | 8.980 | 11.385 | 14.978 | 19.094 | 18.589 | 5.806 |
| N° 6 | 0.541 | 0.770 | 1.860 | 2.806 | 4.460 | 6.393 | 8.414 | 10.673 | 14.195 | 18.632 | 18.093 | 5.412 |
| N° 7 | 0.383 | 0.805 | 1.799 | 2.895 | 4.392 | 6.587 | 8.802 | 11.486 | 15.454 | 20.249 | 19.606 | 5.662 |
| N° 8 | 1.388 | 0.962 | 0.197 | 1.151 | 2.658 | 4.477 | 6.460 | 8.878 | 12.002 | 16.209 | 15.834 | 3.687 |
| N° 9 | 0.100 | 0.359 | 1.610 | 2.558 | 4.044 | 6.365 | 8.463 | 11.297 | 14.949 | 19.398 | 18.902 | 5.416 |
| N° 10 | 0.352 | 0.794 | 2.012 | 3.020 | 4.572 | 6.725 | 8.926 | 11.772 | 15.622 | 20.571 | 20.156 | 6.083 |
| N° 11 | 1.224 | 0.590 | 0.487 | 1.369 | 3.156 | 5.418 | 7.645 | 10.347 | 14.588 | 19.244 | 18.503 | 4.288 |
| N° 12 | 1.334 | 0.846 | 0.284 | 1.161 | 2.781 | 4.881 | 6.900 | 9.225 | 12.778 | 17.149 | 16.678 | 4.076 |
| N° 13 | 0.441 | 0.100 | 1.204 | 1.986 | 3.546 | 5.613 | 7.777 | 9.988 | 13.420 | 17.537 | 16.721 | 4.661 |
| N° 14 | 0.285 | 0.137 | 1.351 | 2.419 | 3.979 | 6.159 | 8.082 | 10.718 | 14.371 | 18.625 | 18.214 | 4.909 |
| N° 15 | 0.238 | 0.203 | 1.474 | 2.392 | 3.920 | 6.058 | 8.105 | 10.659 | 14.132 | 18.998 | 18.552 | 5.071 |
| N° 16 | 0.440 | 0.100 | 1.342 | 2.336 | 3.940 | 5.830 | 8.180 | 10.607 | 14.186 | 18.548 | 17.925 | 5.049 |
| N° 17 | 0.100 | 0.499 | 1.437 | 2.329 | 3.532 | 5.150 | 6.876 | 8.852 | 11.472 | 14.796 | 14.380 | 4.747 |
| N° 18 | 0.424 | 0.851 | 2.050 | 3.035 | 4.770 | 6.922 | 9.200 | 11.930 | 15.350 | 19.645 | 18.974 | 5.704 |
| N° 19 | 0.166 | 0.630 | 1.734 | 2.743 | 4.455 | 6.822 | 9.127 | 11.679 | 15.336 | 20.128 | 19.634 | 5.792 |
| N° 20 | 0.796 | 0.267 | 0.892 | 1.951 | 3.449 | 5.689 | 7.764 | 10.463 | 14.286 | 18.952 | 17.707 | 4.574 |
| N° 21 | 0.183 | 0.552 | 1.305 | 2.299 | 3.621 | 5.242 | 6.841 | 8.926 | 11.657 | 15.047 | 14.333 | 4.874 |
| N° 22 | 0.772 | 0.317 | 0.674 | 1.670 | 3.216 | 5.395 | 7.488 | 9.598 | 12.963 | 17.207 | 16.615 | 4.361 |
| N° 23 | 0.224 | 0.701 | 1.765 | 2.620 | 4.250 | 6.468 | 8.613 | 11.188 | 14.456 | 18.220 | 17.791 | 5.479 |
| N° 24 | 0.151 | 0.299 | 1.332 | 2.303 | 4.054 | 6.371 | 8.643 | 11.479 | 15.186 | 19.827 | 19.476 | 5.283 |
| N° 25 | 0.709 | 0.205 | 0.985 | 1.875 | 3.776 | 6.023 | 8.208 | 10.784 | 14.550 | 19.224 | 18.199 | 4.880 |
| N° 26 | 0.100 | 0.521 | 1.578 | 2.420 | 4.404 | 6.662 | 8.991 | 11.460 | 15.494 | 19.724 | 18.856 | 5.208 |
| N° 27 | 0.458 | 0.100 | 1.177 | 1.994 | 3.751 | 5.671 | 7.516 | 9.985 | 13.594 | 17.972 | 17.100 | 5.003 |
| N° 28 | 0.246 | 0.171 | 1.140 | 1.908 | 3.429 | 5.329 | 7.471 | 9.970 | 13.701 | 18.145 | 17.662 | 4.942 |
| N° 29 | 0.953 | 1.445 | 2.698 | 3.692 | 5.410 | 7.652 | 9.959 | 12.666 | 16.183 | 19.941 | 19.463 | 6.442 |
| N° 30 | 0.100 | 0.472 | 1.668 | 2.416 | 4.550 | 6.535 | 8.728 | 11.606 | 15.743 | 20.838 | 20.207 | 6.103 |
| N° 31 | 0.434 | 0.100 | 1.204 | 2.173 | 3.926 | 6.167 | 8.486 | 11.317 | 15.172 | 19.763 | 19.096 | 5.260 |

# 86. CMRR, Module 1

**Ta=25°C; +VCC=5V; -VCC=GND**

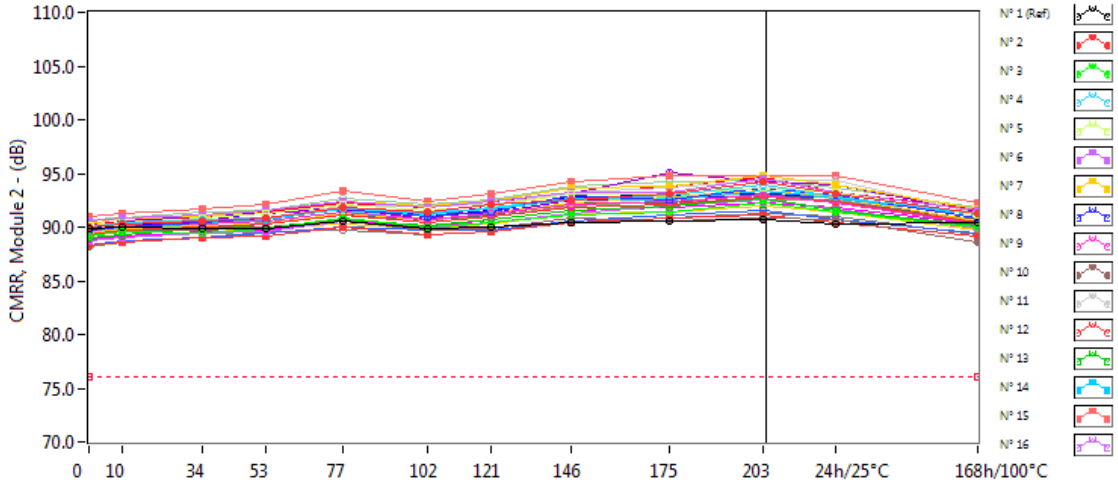



**CMRR, Module 1 . (dB)** **Min = 76.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 90.17 | 90.13 | 90.12 | 89.37 | 90.92 | 90.05 | 90.15 | 90.67 | 90.88 | 90.94 | 90.60 | 90.71 |
| N° 2 | 88.61 | 88.84 | 89.28 | 88.60 | 90.26 | 89.84 | 89.91 | 90.86 | 91.11 | 91.37 | 91.08 | 89.51 |
| N° 3 | 90.56 | 90.98 | 91.41 | 91.06 | 92.80 | 92.16 | 92.52 | 93.35 | 93.75 | 95.45 | 94.27 | 92.05 |
| N° 4 | 89.61 | 90.01 | 90.14 | 89.71 | 90.96 | 90.55 | 90.99 | 91.36 | 91.51 | 91.97 | 91.84 | 90.22 |
| N° 5 | 88.90 | 89.17 | 89.47 | 89.05 | 90.33 | 89.75 | 90.35 | 90.82 | 90.94 | 91.89 | 90.85 | 89.81 |
| N° 6 | 89.01 | 89.32 | 89.59 | 89.16 | 90.67 | 90.31 | 90.64 | 91.60 | 91.70 | 92.90 | 92.41 | 90.26 |
| N° 7 | 89.03 | 89.22 | 89.49 | 88.85 | 90.41 | 89.83 | 89.83 | 90.56 | 90.44 | 90.48 | 90.24 | 87.97 |
| N° 8 | 90.21 | 90.50 | 90.90 | 90.34 | 92.53 | 91.63 | 92.15 | 93.53 | 93.78 | 94.76 | 94.06 | 92.02 |
| N° 9 | 90.05 | 90.22 | 90.37 | 90.38 | 91.62 | 91.02 | 91.32 | 92.03 | 92.52 | 93.23 | 92.42 | 90.59 |
| N° 10 | 89.60 | 89.62 | 90.05 | 89.65 | 91.03 | 90.61 | 90.72 | 91.90 | 91.83 | 92.41 | 92.09 | 89.53 |
| N° 11 | 89.10 | 89.36 | 89.68 | 89.28 | 90.79 | 90.15 | 90.65 | 91.36 | 91.81 | 92.60 | 91.71 | 89.55 |
| N° 12 | 90.56 | 90.87 | 91.00 | 90.61 | 92.49 | 91.73 | 92.46 | 92.92 | 93.51 | 93.90 | 93.61 | 91.36 |
| N° 13 | 89.23 | 89.54 | 89.91 | 89.57 | 91.14 | 90.22 | 90.80 | 91.63 | 91.86 | 92.58 | 91.54 | 90.03 |
| N° 14 | 89.57 | 89.84 | 90.08 | 89.97 | 91.35 | 90.97 | 91.13 | 92.41 | 92.77 | 93.26 | 92.86 | 90.76 |
| N° 15 | 89.34 | 89.76 | 90.15 | 89.86 | 91.52 | 90.78 | 91.26 | 92.41 | 92.89 | 93.03 | 92.66 | 90.79 |
| N° 16 | 90.31 | 90.74 | 91.12 | 90.76 | 92.43 | 91.45 | 92.19 | 92.97 | 93.40 | 93.95 | 93.05 | 91.11 |
| N° 17 | 90.37 | 90.75 | 91.23 | 90.83 | 92.55 | 91.84 | 92.42 | 93.72 | 93.82 | 94.50 | 94.04 | 91.50 |
| N° 18 | 89.84 | 90.18 | 90.28 | 89.97 | 91.50 | 90.74 | 91.29 | 92.22 | 92.07 | 93.05 | 92.26 | 90.75 |
| N° 19 | 89.64 | 89.88 | 90.11 | 89.89 | 91.12 | 90.73 | 91.25 | 92.29 | 92.17 | 93.16 | 92.75 | 90.64 |
| N° 20 | 89.98 | 90.30 | 90.49 | 90.26 | 91.50 | 91.05 | 91.35 | 92.23 | 92.46 | 92.74 | 92.33 | 91.01 |
| N° 21 | 88.64 | 88.87 | 89.11 | 89.21 | 90.30 | 89.86 | 90.33 | 90.97 | 91.22 | 92.12 | 91.13 | 90.00 |
| N° 22 | 89.25 | 89.54 | 89.85 | 89.40 | 91.14 | 90.65 | 90.97 | 91.46 | 92.04 | 92.95 | 92.37 | 90.54 |
| N° 23 | 88.77 | 89.12 | 89.35 | 88.86 | 90.23 | 89.69 | 90.15 | 90.94 | 91.00 | 91.55 | 90.87 | 89.66 |
| N° 24 | 88.77 | 88.98 | 89.37 | 88.78 | 90.35 | 89.62 | 90.01 | 90.86 | 91.22 | 91.49 | 90.71 | 89.59 |
| N° 25 | 90.82 | 91.42 | 91.76 | 90.63 | 92.99 | 92.37 | 92.89 | 94.19 | 94.12 | 94.74 | 94.42 | 92.13 |
| N° 26 | 90.19 | 90.49 | 90.98 | 89.89 | 92.04 | 91.72 | 92.38 | 93.11 | 93.87 | 94.08 | 93.50 | 91.33 |
| N° 27 | 89.84 | 90.08 | 90.35 | 89.28 | 91.82 | 91.24 | 91.60 | 92.45 | 92.59 | 93.41 | 92.93 | 91.17 |
| N° 28 | 89.52 | 89.84 | 90.11 | 89.07 | 91.49 | 90.83 | 91.16 | 91.69 | 92.38 | 93.25 | 92.33 | 90.81 |
| N° 29 | 89.56 | 89.89 | 90.10 | 89.23 | 91.15 | 91.00 | 91.25 | 92.25 | 92.11 | 92.63 | 92.26 | 89.89 |
| N° 30 | 89.45 | 89.70 | 90.23 | 89.48 | 91.44 | 90.74 | 91.17 | 92.09 | 92.87 | 93.47 | 92.86 | 90.76 |
| N° 31 | 89.49 | 89.78 | 90.11 | 89.22 | 91.14 | 90.59 | 91.06 | 91.85 | 91.81 | 92.48 | 91.92 | 90.30 |

# 87. CMRR, Module 2

**Ta=25°C; +VCC=5V; -VCC=GND**

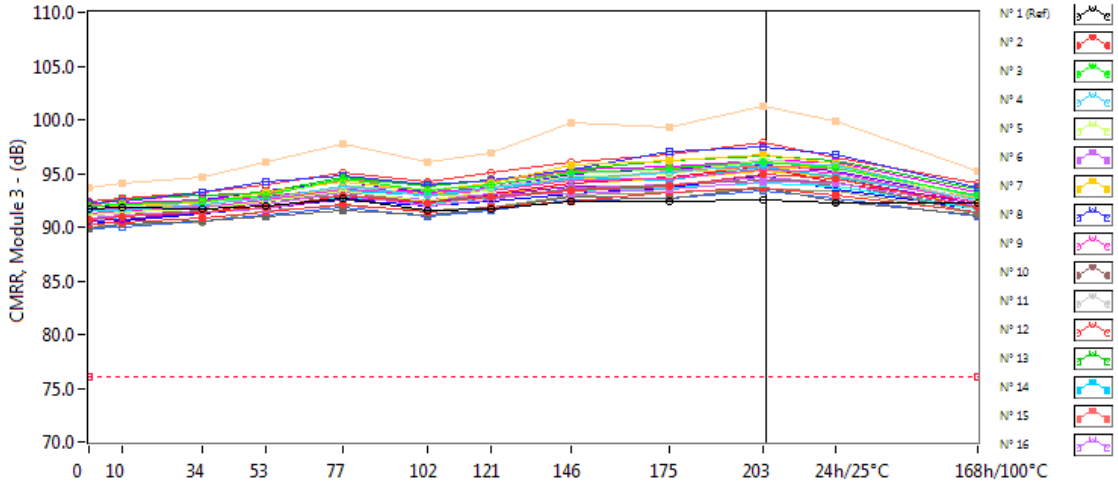



**CMRR, Module 2 . (dB)** **Min = 76.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 89.84 | 89.93 | 89.92 | 89.86 | 90.58 | 89.80 | 89.98 | 90.47 | 90.50 | 90.72 | 90.24 | 90.37 |
| N° 2 | 89.96 | 90.22 | 90.63 | 90.91 | 91.77 | 91.39 | 92.12 | 92.53 | 93.12 | 94.28 | 93.12 | 91.32 |
| N° 3 | 89.13 | 89.51 | 89.51 | 89.86 | 90.78 | 90.06 | 90.36 | 91.16 | 91.44 | 92.19 | 91.35 | 89.94 |
| N° 4 | 90.03 | 90.45 | 90.76 | 90.85 | 91.72 | 91.41 | 91.65 | 92.50 | 92.97 | 93.96 | 92.89 | 91.28 |
| N° 5 | 90.13 | 90.43 | 90.89 | 91.32 | 92.11 | 91.48 | 91.94 | 93.13 | 93.07 | 93.64 | 93.29 | 91.18 |
| N° 6 | 90.61 | 90.79 | 91.08 | 91.49 | 92.36 | 91.79 | 92.33 | 93.28 | 93.18 | 94.50 | 93.23 | 91.60 |
| N° 7 | 90.31 | 90.82 | 91.05 | 91.58 | 92.38 | 91.98 | 92.38 | 93.69 | 93.77 | 94.77 | 93.95 | 91.67 |
| N° 8 | 89.67 | 89.99 | 90.42 | 90.78 | 91.74 | 91.04 | 91.45 | 92.90 | 92.48 | 93.70 | 93.00 | 90.85 |
| N° 9 | 89.53 | 90.10 | 90.23 | 90.54 | 91.47 | 90.77 | 91.33 | 92.11 | 92.33 | 93.00 | 92.22 | 90.31 |
| N° 10 | 89.17 | 89.53 | 89.66 | 89.98 | 90.56 | 89.75 | 89.87 | 90.91 | 90.62 | 90.85 | 90.70 | 88.61 |
| N° 11 | 89.76 | 90.29 | 90.50 | 90.89 | 91.94 | 91.93 | 92.10 | 93.17 | 93.64 | 94.33 | 94.39 | 91.28 |
| N° 12 | 89.34 | 89.69 | 90.03 | 90.30 | 91.06 | 90.43 | 91.00 | 91.84 | 92.17 | 92.87 | 92.34 | 90.41 |
| N° 13 | 89.06 | 89.36 | 89.82 | 89.97 | 90.75 | 90.20 | 90.74 | 91.57 | 92.00 | 92.64 | 91.59 | 90.15 |
| N° 14 | 89.65 | 90.03 | 90.33 | 90.77 | 91.73 | 91.25 | 91.66 | 92.72 | 92.48 | 93.34 | 92.69 | 91.15 |
| N° 15 | 90.97 | 91.32 | 91.69 | 92.12 | 93.40 | 92.46 | 93.15 | 94.27 | 94.77 | 94.82 | 94.79 | 92.27 |
| N° 16 | 88.78 | 88.99 | 89.40 | 89.62 | 90.54 | 89.88 | 90.40 | 91.27 | 92.04 | 92.53 | 91.75 | 89.80 |
| N° 17 | 89.48 | 89.86 | 90.10 | 90.26 | 91.30 | 90.64 | 91.27 | 92.23 | 92.88 | 93.36 | 92.81 | 90.59 |
| N° 18 | 88.82 | 89.11 | 89.57 | 89.75 | 90.52 | 89.97 | 90.67 | 91.58 | 91.83 | 92.27 | 91.80 | 90.31 |
| N° 19 | 90.15 | 90.47 | 91.08 | 91.27 | 91.83 | 90.72 | 92.04 | 93.16 | 95.10 | 94.29 | 93.99 | 91.40 |
| N° 20 | 90.77 | 90.88 | 91.43 | 91.52 | 92.65 | 92.16 | 92.56 | 93.77 | 94.25 | 94.41 | 93.59 | 91.86 |
| N° 21 | 89.58 | 89.87 | 90.39 | 90.56 | 91.36 | 91.07 | 91.78 | 92.65 | 92.71 | 93.71 | 92.75 | 91.15 |
| N° 22 | 88.30 | 88.63 | 88.97 | 89.14 | 89.97 | 89.36 | 89.62 | 90.37 | 90.86 | 91.10 | 90.39 | 89.18 |
| N° 23 | 89.16 | 89.58 | 89.81 | 90.30 | 91.10 | 90.73 | 91.14 | 92.30 | 92.18 | 93.08 | 92.35 | 90.71 |
| N° 24 | 88.33 | 88.71 | 89.02 | 89.38 | 89.94 | 89.65 | 89.70 | 90.61 | 91.10 | 91.59 | 90.66 | 89.43 |
| N° 25 | 90.18 | 90.59 | 90.94 | 91.42 | 92.26 | 91.82 | 92.34 | 93.04 | 93.87 | 94.58 | 93.17 | 91.73 |
| N° 26 | 90.02 | 90.18 | 90.73 | 90.85 | 91.89 | 91.04 | 91.53 | 92.80 | 92.90 | 93.06 | 92.85 | 91.21 |
| N° 27 | 89.34 | 89.66 | 90.02 | 90.39 | 91.07 | 90.70 | 91.04 | 92.04 | 92.45 | 92.60 | 92.47 | 90.51 |
| N° 28 | 88.19 | 88.59 | 88.99 | 89.62 | 89.73 | 89.33 | 89.64 | 90.40 | 90.79 | 91.22 | 90.95 | 89.33 |
| N° 29 | 89.78 | 90.07 | 90.54 | 91.47 | 91.60 | 91.29 | 91.32 | 92.54 | 92.74 | 92.97 | 92.84 | 90.57 |
| N° 30 | 88.83 | 89.15 | 89.39 | 90.04 | 90.28 | 89.80 | 90.23 | 91.29 | 91.44 | 91.99 | 91.44 | 89.74 |
| N° 31 | 89.27 | 89.67 | 90.05 | 90.44 | 91.12 | 90.53 | 91.20 | 92.01 | 92.72 | 93.15 | 92.72 | 90.41 |

# 88. CMRR, Module 3

**Ta=25°C; +VCC=5V; -VCC=GND**

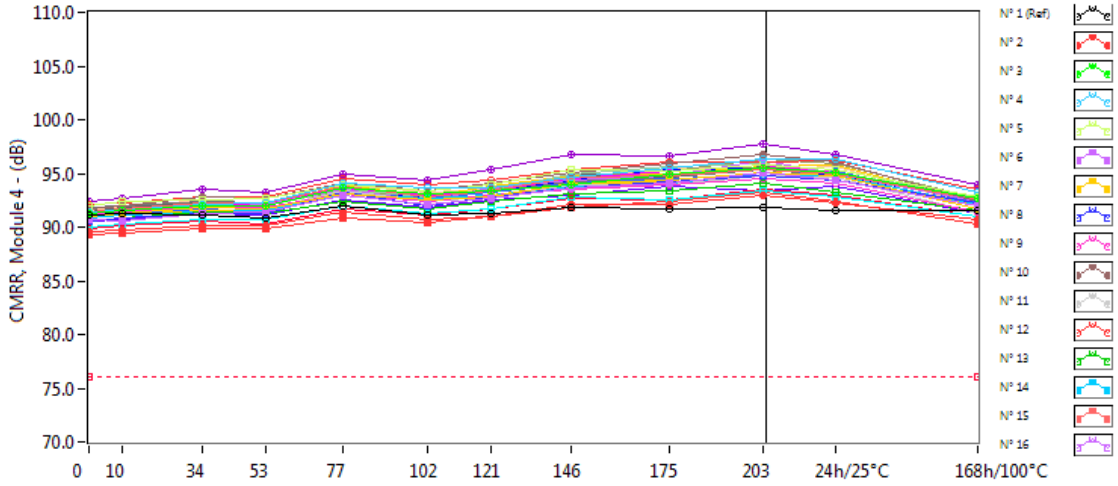



**CMRR, Module 3 . (dB)** **Min = 76.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 91.66 | 91.77 | 91.71 | 92.00 | 92.64 | 91.59 | 91.73 | 92.46 | 92.36 | 92.48 | 92.30 | 92.32 |
| N° 2 | 90.69 | 90.96 | 91.37 | 91.84 | 92.99 | 92.24 | 92.79 | 93.43 | 93.86 | 94.99 | 94.52 | 91.82 |
| N° 3 | 91.93 | 92.09 | 92.36 | 92.93 | 94.47 | 93.39 | 94.00 | 95.02 | 95.49 | 96.12 | 95.49 | 92.95 |
| N° 4 | 91.48 | 91.55 | 92.14 | 92.72 | 93.78 | 92.95 | 93.62 | 94.57 | 95.03 | 95.93 | 95.72 | 92.83 |
| N° 5 | 91.15 | 91.39 | 91.63 | 92.34 | 93.41 | 92.39 | 93.53 | 94.72 | 94.94 | 96.17 | 95.56 | 92.89 |
| N° 6 | 91.50 | 91.72 | 91.94 | 92.15 | 93.25 | 92.55 | 93.03 | 93.08 | 93.53 | 94.29 | 94.09 | 91.94 |
| N° 7 | 91.57 | 92.06 | 92.32 | 93.23 | 94.24 | 93.43 | 94.12 | 95.73 | 96.23 | 96.76 | 95.88 | 92.65 |
| N° 8 | 92.27 | 92.46 | 93.19 | 94.22 | 94.77 | 93.99 | 94.35 | 95.40 | 96.98 | 97.53 | 96.72 | 93.60 |
| N° 9 | 91.33 | 91.56 | 91.90 | 92.52 | 93.55 | 93.12 | 93.39 | 94.33 | 94.44 | 95.32 | 95.11 | 92.29 |
| N° 10 | 91.31 | 91.53 | 91.83 | 92.45 | 92.96 | 92.48 | 92.83 | 93.54 | 93.97 | 94.34 | 94.27 | 91.30 |
| N° 11 | 91.19 | 91.32 | 92.00 | 92.36 | 93.72 | 92.95 | 93.61 | 95.01 | 94.92 | 96.36 | 95.60 | 92.36 |
| N° 12 | 92.46 | 92.63 | 93.26 | 93.91 | 95.07 | 94.17 | 95.04 | 96.08 | 96.77 | 97.83 | 96.46 | 94.12 |
| N° 13 | 92.12 | 92.64 | 92.98 | 93.29 | 94.58 | 93.84 | 94.32 | 95.38 | 96.13 | 96.64 | 96.23 | 93.51 |
| N° 14 | 91.11 | 91.48 | 91.70 | 92.52 | 93.39 | 93.01 | 93.33 | 94.58 | 94.33 | 95.59 | 94.60 | 92.57 |
| N° 15 | 92.04 | 92.51 | 92.92 | 93.05 | 94.36 | 94.11 | 94.21 | 95.19 | 95.30 | 95.64 | 95.44 | 93.03 |
| N° 16 | 90.87 | 91.15 | 91.44 | 91.73 | 92.90 | 91.94 | 92.47 | 93.73 | 93.93 | 94.59 | 94.08 | 91.95 |
| N° 17 | 91.19 | 91.75 | 92.08 | 92.62 | 93.61 | 93.06 | 93.49 | 94.40 | 95.02 | 95.46 | 95.62 | 92.80 |
| N° 18 | 91.89 | 92.24 | 92.47 | 92.80 | 93.70 | 93.22 | 93.67 | 95.34 | 95.60 | 96.27 | 95.99 | 93.23 |
| N° 19 | 90.52 | 90.76 | 91.47 | 91.70 | 92.64 | 92.20 | 92.94 | 93.83 | 93.80 | 94.87 | 94.52 | 92.17 |
| N° 20 | 91.62 | 91.73 | 92.38 | 92.64 | 93.84 | 93.47 | 93.87 | 94.44 | 95.23 | 95.42 | 94.77 | 92.69 |
| N° 21 | 90.57 | 90.99 | 91.36 | 91.81 | 92.86 | 92.06 | 92.78 | 93.33 | 93.60 | 94.15 | 93.86 | 91.68 |
| N° 22 | 90.32 | 90.46 | 90.87 | 91.38 | 92.08 | 91.39 | 91.81 | 92.41 | 93.23 | 93.73 | 92.97 | 91.41 |
| N° 23 | 89.88 | 90.35 | 90.55 | 91.05 | 91.57 | 91.19 | 91.76 | 92.79 | 92.68 | 93.67 | 92.45 | 91.14 |
| N° 24 | 89.81 | 90.00 | 90.54 | 91.12 | 91.84 | 91.00 | 91.52 | 92.52 | 92.70 | 93.36 | 92.67 | 91.02 |
| N° 25 | 90.58 | 91.08 | 91.31 | 92.43 | 92.98 | 92.36 | 93.09 | 94.09 | 94.66 | 95.69 | 94.10 | 92.43 |
| N° 26 | 90.28 | 90.62 | 91.22 | 91.85 | 92.54 | 91.98 | 92.38 | 93.06 | 93.72 | 94.73 | 93.47 | 91.70 |
| N° 27 | 89.97 | 90.26 | 90.47 | 91.55 | 91.91 | 91.50 | 91.83 | 92.95 | 93.19 | 93.53 | 93.31 | 91.28 |
| N° 28 | 90.79 | 91.13 | 91.56 | 92.43 | 93.21 | 92.45 | 92.62 | 93.31 | 93.83 | 94.70 | 93.85 | 91.82 |
| N° 29 | 91.82 | 92.14 | 92.50 | 93.37 | 94.21 | 93.30 | 93.54 | 94.92 | 95.54 | 95.75 | 95.21 | 92.58 |
| N° 30 | 91.21 | 91.47 | 92.04 | 92.93 | 93.49 | 92.90 | 92.94 | 94.11 | 94.52 | 95.14 | 94.65 | 91.77 |
| N° 31 | 93.64 | 94.06 | 94.70 | 96.05 | 97.69 | 95.99 | 96.92 | 99.67 | 99.27 | 101.26 | 99.82 | 95.16 |

# 89. CMRR, Module 4

**Ta=25°C; +VCC=5V; -VCC=GND**

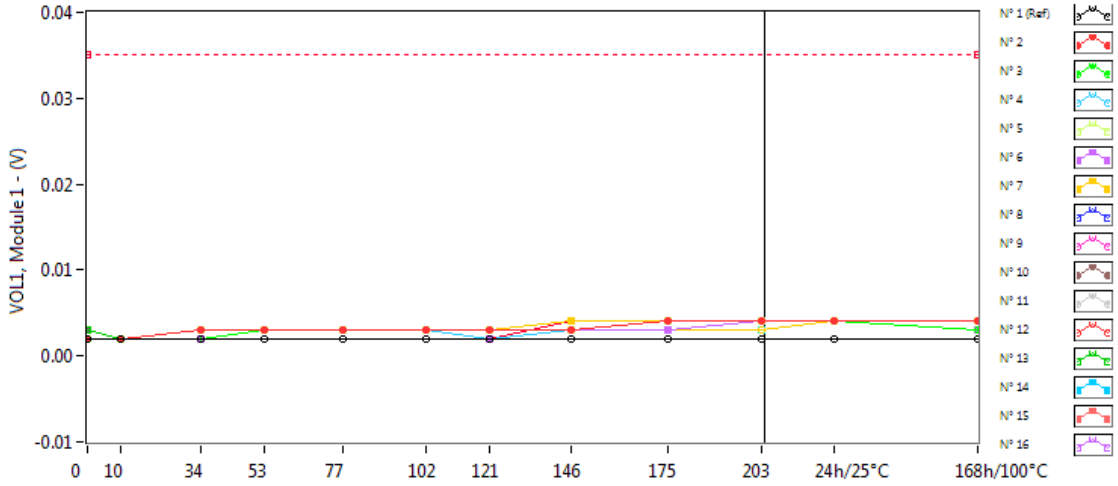



**CMRR, Module 4 . (dB)** **Min = 76.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 91.08 | 91.23 | 91.13 | 90.85 | 91.92 | 91.12 | 91.24 | 91.78 | 91.73 | 91.85 | 91.55 | 91.55 |
| N° 2 | 89.64 | 89.75 | 90.09 | 90.16 | 91.43 | 90.74 | 91.05 | 92.08 | 92.08 | 92.98 | 92.31 | 90.64 |
| N° 3 | 91.32 | 91.59 | 92.00 | 92.03 | 93.65 | 93.04 | 93.44 | 93.97 | 94.94 | 95.54 | 95.02 | 92.70 |
| N° 4 | 91.44 | 91.58 | 92.08 | 92.32 | 94.02 | 93.61 | 93.69 | 94.72 | 95.53 | 96.37 | 96.32 | 93.20 |
| N° 5 | 91.93 | 92.39 | 92.58 | 92.64 | 93.93 | 93.37 | 93.91 | 95.30 | 95.23 | 95.74 | 95.38 | 92.87 |
| N° 6 | 90.72 | 90.58 | 91.31 | 91.38 | 92.97 | 92.18 | 92.67 | 93.68 | 94.11 | 95.02 | 94.33 | 92.01 |
| N° 7 | 91.00 | 91.25 | 91.84 | 91.72 | 93.11 | 92.55 | 92.80 | 94.07 | 94.37 | 95.11 | 94.80 | 91.62 |
| N° 8 | 90.56 | 90.87 | 91.33 | 91.28 | 93.20 | 91.91 | 92.76 | 93.64 | 94.24 | 94.81 | 94.30 | 92.19 |
| N° 9 | 91.27 | 91.43 | 91.86 | 91.84 | 93.12 | 92.40 | 92.91 | 93.48 | 93.93 | 94.53 | 94.11 | 91.44 |
| N° 10 | 91.74 | 92.03 | 92.77 | 92.67 | 94.08 | 93.35 | 94.02 | 95.12 | 95.87 | 96.74 | 96.01 | 92.41 |
| N° 11 | 91.10 | 91.34 | 91.78 | 91.64 | 93.35 | 92.39 | 92.81 | 93.93 | 93.88 | 94.72 | 94.65 | 91.28 |
| N° 12 | 92.06 | 92.20 | 92.87 | 92.82 | 94.44 | 93.90 | 94.31 | 95.30 | 96.09 | 96.05 | 96.20 | 93.47 |
| N° 13 | 90.59 | 90.84 | 91.42 | 91.21 | 92.41 | 91.73 | 92.36 | 93.06 | 93.42 | 94.13 | 93.29 | 91.52 |
| N° 14 | 90.81 | 91.18 | 91.47 | 91.52 | 93.03 | 92.65 | 92.92 | 93.86 | 94.08 | 94.74 | 94.75 | 92.05 |
| N° 15 | 91.41 | 91.75 | 92.24 | 92.32 | 93.77 | 92.77 | 93.34 | 94.65 | 94.78 | 95.40 | 94.93 | 92.48 |
| N° 16 | 91.13 | 91.50 | 91.84 | 92.17 | 93.45 | 92.45 | 93.71 | 94.34 | 94.83 | 96.17 | 94.88 | 92.42 |
| N° 17 | 90.86 | 91.13 | 91.51 | 91.61 | 93.34 | 92.45 | 92.97 | 93.89 | 94.29 | 94.73 | 94.42 | 92.08 |
| N° 18 | 91.30 | 91.34 | 91.97 | 92.30 | 93.68 | 92.92 | 93.39 | 94.53 | 95.27 | 95.75 | 95.12 | 92.58 |
| N° 19 | 92.38 | 92.71 | 93.59 | 93.22 | 94.93 | 94.31 | 95.34 | 96.74 | 96.59 | 97.77 | 96.82 | 93.95 |
| N° 20 | 91.34 | 91.75 | 92.22 | 91.94 | 93.56 | 92.78 | 93.40 | 94.91 | 95.69 | 95.89 | 95.08 | 92.78 |
| N° 21 | 90.06 | 90.31 | 90.76 | 90.68 | 91.96 | 91.31 | 91.65 | 92.75 | 92.54 | 93.31 | 92.81 | 90.99 |
| N° 22 | 89.28 | 89.40 | 89.92 | 89.82 | 90.86 | 90.49 | 90.95 | 91.81 | 92.44 | 93.20 | 92.44 | 90.33 |
| N° 23 | 91.47 | 91.79 | 92.25 | 92.19 | 93.62 | 92.78 | 93.40 | 94.86 | 94.63 | 95.58 | 95.03 | 92.64 |
| N° 24 | 90.93 | 91.17 | 91.71 | 91.47 | 93.23 | 92.68 | 93.27 | 94.12 | 94.57 | 94.73 | 95.17 | 92.22 |
| N° 25 | 89.83 | 90.11 | 90.52 | 90.22 | 91.72 | 91.18 | 91.64 | 92.63 | 92.53 | 93.53 | 92.98 | 91.05 |
| N° 26 | 91.30 | 91.52 | 92.02 | 91.94 | 93.63 | 92.71 | 93.41 | 94.36 | 95.33 | 95.53 | 94.77 | 92.50 |
| N° 27 | 91.27 | 91.47 | 92.25 | 92.05 | 93.44 | 92.87 | 93.46 | 94.68 | 95.17 | 96.30 | 95.86 | 92.68 |
| N° 28 | 91.84 | 91.98 | 92.36 | 92.25 | 93.64 | 92.65 | 93.33 | 94.18 | 94.66 | 95.41 | 94.84 | 92.54 |
| N° 29 | 90.60 | 90.69 | 91.20 | 91.06 | 92.49 | 91.90 | 92.60 | 93.03 | 93.83 | 93.42 | 93.83 | 91.29 |
| N° 30 | 91.37 | 91.50 | 92.19 | 91.95 | 93.89 | 92.84 | 93.76 | 94.73 | 94.92 | 95.63 | 95.80 | 92.30 |
| N° 31 | 91.49 | 91.80 | 92.60 | 92.71 | 93.94 | 93.19 | 93.49 | 94.40 | 95.56 | 95.36 | 95.58 | 91.95 |

# 90. VOL1, Module 1

**Ta=25°C; +VCC=30V; -VCC=GND; RL=10kOhms**

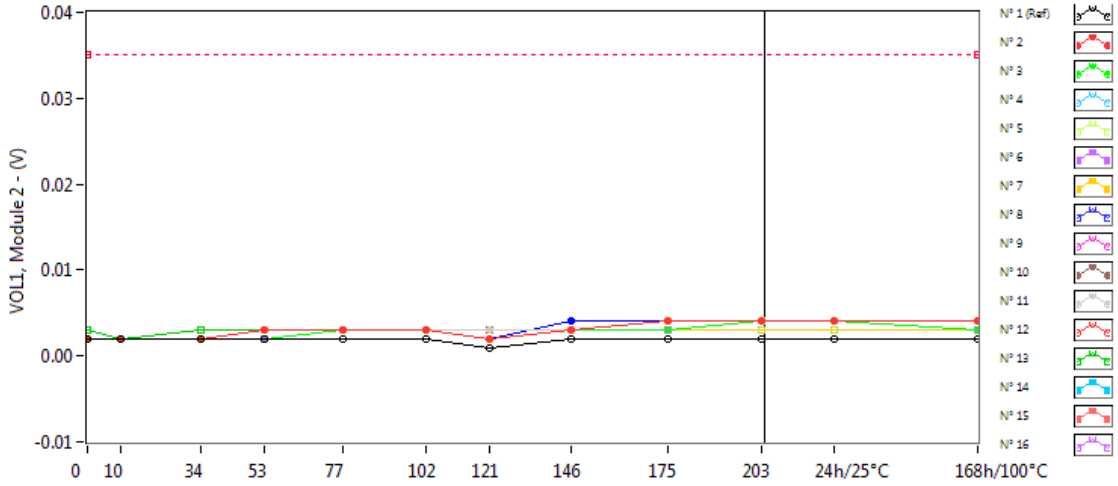



**VOL1, Module 1 . (V)** **Max = 0.035**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 |
| N° 2 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.004 | 0.004 | 0.004 | 0.004 |
| N° 3 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.004 | 0.004 | 0.004 | 0.003 |
| N° 4 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.002 | 0.003 | 0.004 | 0.004 | 0.004 | 0.003 |
| N° 5 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.004 | 0.004 | 0.004 | 0.004 |
| N° 6 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.002 | 0.003 | 0.003 | 0.004 | 0.004 | 0.003 |
| N° 7 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 |
| N° 8 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.002 | 0.003 | 0.003 | 0.004 | 0.004 | 0.003 |
| N° 9 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.004 | 0.004 | 0.004 | 0.003 |
| N° 10 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.004 | 0.004 | 0.004 | 0.004 |
| N° 11 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 |
| N° 12 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.002 | 0.003 | 0.004 | 0.004 | 0.004 | 0.003 |
| N° 13 | 0.003 | 0.002 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.004 | 0.004 | 0.004 | 0.003 |
| N° 14 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.003 | 0.002 | 0.003 | 0.004 | 0.004 | 0.004 | 0.003 |
| N° 15 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.004 | 0.004 | 0.004 | 0.003 |
| N° 16 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.004 | 0.004 | 0.004 | 0.003 |
| N° 17 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.002 | 0.003 | 0.003 | 0.003 | 0.004 | 0.003 |
| N° 18 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.004 | 0.004 | 0.004 | 0.003 |
| N° 19 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.004 | 0.004 | 0.004 | 0.003 |
| N° 20 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.002 | 0.003 | 0.004 | 0.004 | 0.004 | 0.003 |
| N° 21 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.003 | 0.002 | 0.003 | 0.003 | 0.003 | 0.004 | 0.003 |
| N° 22 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.003 | 0.002 | 0.003 | 0.004 | 0.004 | 0.004 | 0.003 |
| N° 23 | 0.003 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.002 | 0.003 | 0.003 | 0.004 | 0.004 | 0.003 |
| N° 24 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.004 | 0.004 | 0.004 | 0.003 |
| N° 25 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.002 | 0.004 | 0.004 | 0.004 | 0.004 | 0.003 |
| N° 26 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.004 | 0.004 | 0.004 | 0.004 | 0.003 |
| N° 27 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.004 | 0.004 | 0.004 | 0.003 |
| N° 28 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.004 | 0.004 | 0.004 | 0.003 |
| N° 29 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.004 | 0.004 | 0.004 | 0.003 |
| N° 30 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.004 | 0.004 | 0.004 | 0.003 |
| N° 31 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.004 | 0.004 | 0.004 | 0.004 |

# 91. VOL1, Module 2

**Ta=25°C; +VCC=30V; -VCC=GND; RL=10kOhms**

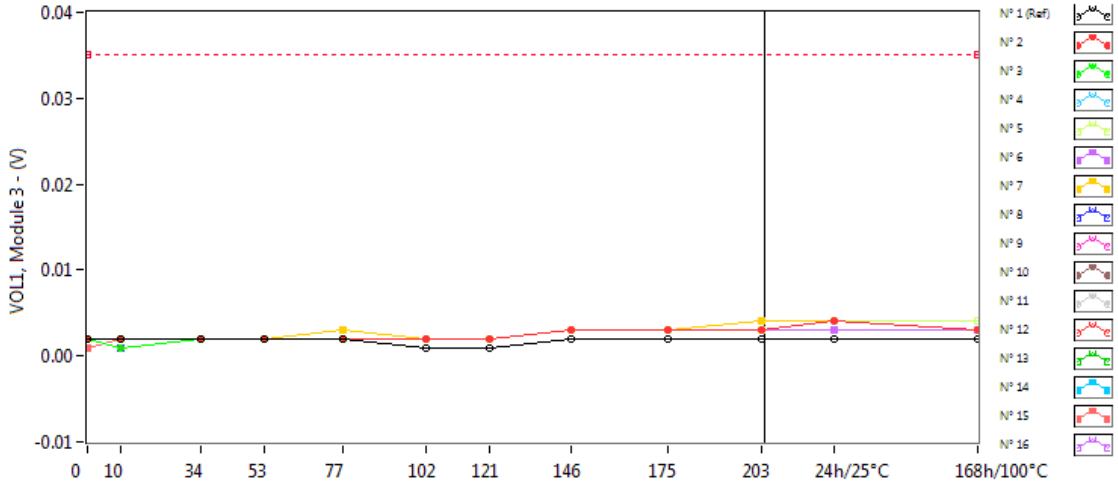



**VOL1, Module 2 . (V)** **Max = 0.035**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.001 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 |
| N° 2 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.002 | 0.003 | 0.004 | 0.004 | 0.004 | 0.004 |
| N° 3 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.002 | 0.003 | 0.003 | 0.004 | 0.004 | 0.003 |
| N° 4 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.002 | 0.003 | 0.004 | 0.004 | 0.004 | 0.003 |
| N° 5 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.002 | 0.003 | 0.004 | 0.004 | 0.004 | 0.004 |
| N° 6 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.002 | 0.003 | 0.003 | 0.004 | 0.004 | 0.003 |
| N° 7 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.002 | 0.003 | 0.004 | 0.004 | 0.004 | 0.004 |
| N° 8 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.002 | 0.003 | 0.003 | 0.004 | 0.004 | 0.003 |
| N° 9 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.002 | 0.003 | 0.004 | 0.004 | 0.004 | 0.003 |
| N° 10 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.002 | 0.003 | 0.004 | 0.004 | 0.004 | 0.004 |
| N° 11 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.004 | 0.004 | 0.004 | 0.004 |
| N° 12 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.002 | 0.003 | 0.003 | 0.004 | 0.004 | 0.003 |
| N° 13 | 0.003 | 0.002 | 0.003 | 0.003 | 0.003 | 0.003 | 0.002 | 0.003 | 0.004 | 0.004 | 0.004 | 0.003 |
| N° 14 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.002 | 0.003 | 0.004 | 0.004 | 0.004 | 0.003 |
| N° 15 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.002 | 0.003 | 0.004 | 0.004 | 0.004 | 0.003 |
| N° 16 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.002 | 0.003 | 0.004 | 0.004 | 0.004 | 0.003 |
| N° 17 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.002 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| N° 18 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.002 | 0.003 | 0.004 | 0.004 | 0.004 | 0.003 |
| N° 19 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.002 | 0.003 | 0.004 | 0.004 | 0.004 | 0.003 |
| N° 20 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.002 | 0.003 | 0.004 | 0.004 | 0.004 | 0.003 |
| N° 21 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.002 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| N° 22 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.002 | 0.003 | 0.004 | 0.004 | 0.004 | 0.003 |
| N° 23 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.002 | 0.003 | 0.003 | 0.004 | 0.004 | 0.003 |
| N° 24 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.004 | 0.004 | 0.004 | 0.003 |
| N° 25 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.002 | 0.003 | 0.004 | 0.004 | 0.004 | 0.003 |
| N° 26 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.002 | 0.004 | 0.004 | 0.004 | 0.004 | 0.003 |
| N° 27 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.002 | 0.003 | 0.004 | 0.004 | 0.004 | 0.003 |
| N° 28 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.002 | 0.003 | 0.004 | 0.004 | 0.004 | 0.003 |
| N° 29 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.002 | 0.003 | 0.004 | 0.004 | 0.004 | 0.003 |
| N° 30 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.004 | 0.004 | 0.004 | 0.003 |
| N° 31 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.002 | 0.003 | 0.004 | 0.004 | 0.004 | 0.004 |

# 92. VOL1, Module 3

**Ta=25°C; +VCC=30V; -VCC=GND; RL=10kOhms**

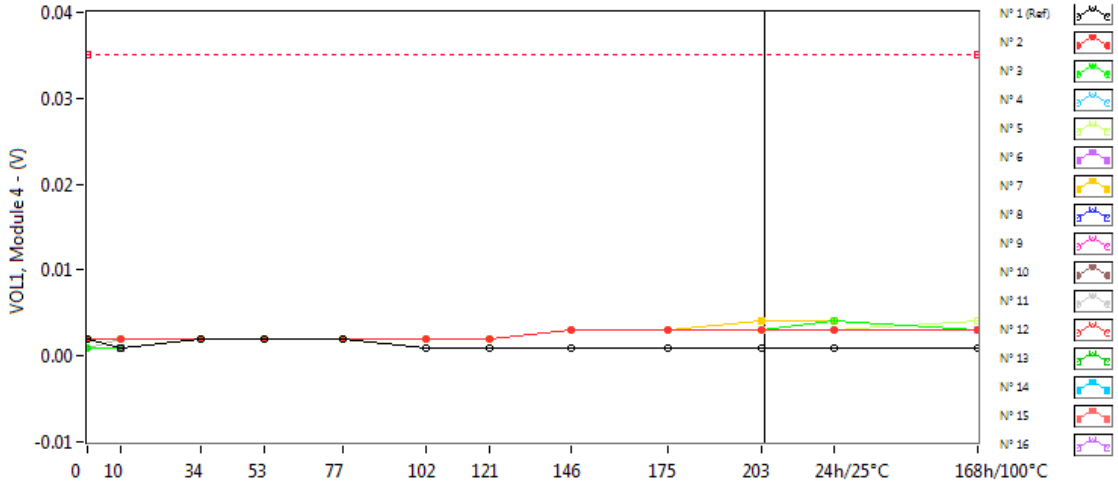



**VOL1, Module 3 . (V)** **Max = 0.035**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.001 | 0.001 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 |
| N° 2 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.004 | 0.003 |
| N° 3 | 0.002 | 0.001 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.004 | 0.003 |
| N° 4 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.004 | 0.003 |
| N° 5 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.004 | 0.004 |
| N° 6 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| N° 7 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.002 | 0.002 | 0.003 | 0.003 | 0.004 | 0.004 | 0.003 |
| N° 8 | 0.002 | 0.001 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| N° 9 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.004 | 0.004 | 0.003 |
| N° 10 | 0.002 | 0.001 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.004 | 0.004 | 0.003 |
| N° 11 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.002 | 0.002 | 0.003 | 0.003 | 0.004 | 0.004 | 0.003 |
| N° 12 | 0.002 | 0.001 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.004 | 0.004 | 0.003 |
| N° 13 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.004 | 0.004 | 0.003 |
| N° 14 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.004 | 0.003 |
| N° 15 | 0.001 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.004 | 0.004 | 0.003 |
| N° 16 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.004 | 0.004 | 0.003 |
| N° 17 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| N° 18 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.004 | 0.003 |
| N° 19 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.004 | 0.004 | 0.003 |
| N° 20 | 0.001 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.004 | 0.004 | 0.003 |
| N° 21 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| N° 22 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.004 | 0.003 |
| N° 23 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| N° 24 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.004 | 0.004 | 0.003 |
| N° 25 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.004 | 0.004 | 0.003 |
| N° 26 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.004 | 0.003 |
| N° 27 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.004 | 0.004 | 0.003 |
| N° 28 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.004 | 0.004 | 0.003 |
| N° 29 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.004 | 0.004 | 0.003 |
| N° 30 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.004 | 0.004 | 0.003 |
| N° 31 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.004 | 0.004 | 0.003 |

# 93. VOL1, Module 4

**Ta=25°C; +VCC=30V; -VCC=GND; RL=10kOhms**

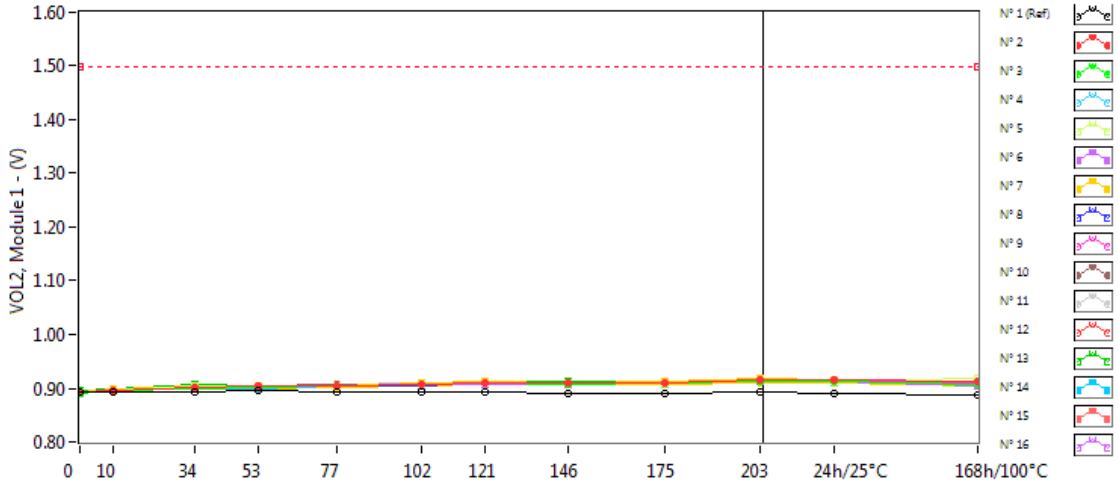



**VOL1, Module 4 . (V)** **Max = 0.035**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 0.002 | 0.001 | 0.002 | 0.002 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| N° 2 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| N° 3 | 0.001 | 0.001 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.004 | 0.003 |
| N° 4 | 0.001 | 0.001 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| N° 5 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.003 | 0.004 |
| N° 6 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| N° 7 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.004 | 0.004 | 0.003 |
| N° 8 | 0.002 | 0.001 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| N° 9 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.004 | 0.004 | 0.003 |
| N° 10 | 0.001 | 0.001 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.004 | 0.004 | 0.003 |
| N° 11 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.004 | 0.004 | 0.003 |
| N° 12 | 0.001 | 0.001 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.004 | 0.003 |
| N° 13 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.004 | 0.003 |
| N° 14 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| N° 15 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.004 | 0.004 | 0.003 |
| N° 16 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.004 | 0.003 |
| N° 17 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| N° 18 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| N° 19 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.004 | 0.004 | 0.003 |
| N° 20 | 0.001 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.004 | 0.003 |
| N° 21 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| N° 22 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| N° 23 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| N° 24 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.004 | 0.003 |
| N° 25 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.004 | 0.004 | 0.003 |
| N° 26 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| N° 27 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| N° 28 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.004 | 0.003 |
| N° 29 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.004 | 0.003 |
| N° 30 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.004 | 0.004 | 0.003 |
| N° 31 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.003 | 0.004 | 0.004 | 0.003 |

# 94. VOL2, Module 1

**Ta=25°C; +VCC=30V; -VCC=GND; IOL=5mA**

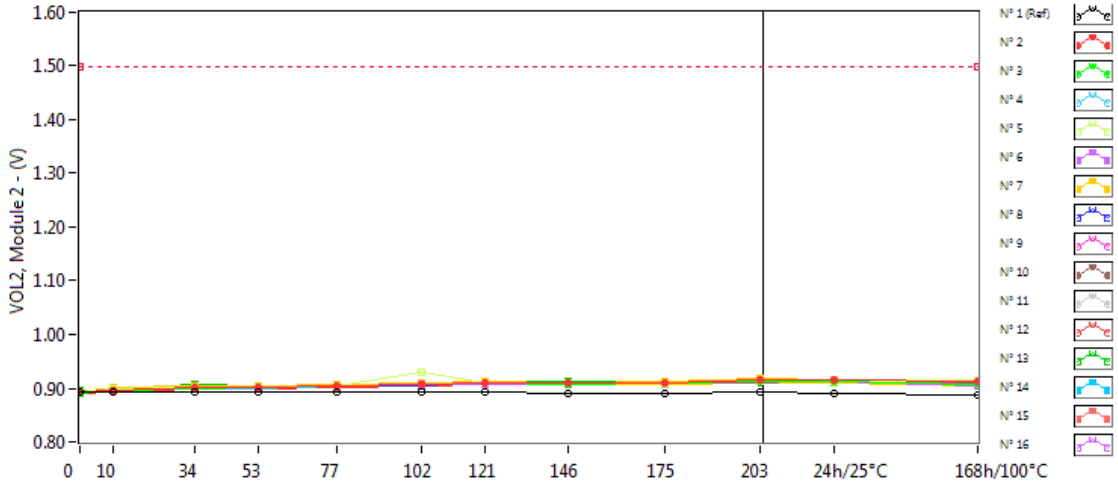



**VOL2, Module 1 . (V)** **Max = 1.5**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 0.892 | 0.893 | 0.893 | 0.895 | 0.892 | 0.892 | 0.893 | 0.890 | 0.890 | 0.892 | 0.890 | 0.888 |
| N° 2 | 0.893 | 0.897 | 0.901 | 0.903 | 0.904 | 0.908 | 0.911 | 0.910 | 0.911 | 0.915 | 0.915 | 0.912 |
| N° 3 | 0.891 | 0.896 | 0.900 | 0.901 | 0.903 | 0.907 | 0.909 | 0.908 | 0.910 | 0.914 | 0.913 | 0.906 |
| N° 4 | 0.891 | 0.896 | 0.900 | 0.900 | 0.903 | 0.906 | 0.909 | 0.908 | 0.909 | 0.914 | 0.913 | 0.907 |
| N° 5 | 0.892 | 0.896 | 0.903 | 0.902 | 0.904 | 0.907 | 0.910 | 0.909 | 0.910 | 0.915 | 0.914 | 0.918 |
| N° 6 | 0.891 | 0.895 | 0.900 | 0.902 | 0.903 | 0.906 | 0.908 | 0.907 | 0.909 | 0.913 | 0.912 | 0.905 |
| N° 7 | 0.894 | 0.898 | 0.903 | 0.904 | 0.905 | 0.909 | 0.912 | 0.911 | 0.912 | 0.917 | 0.916 | 0.912 |
| N° 8 | 0.891 | 0.895 | 0.900 | 0.901 | 0.903 | 0.905 | 0.909 | 0.908 | 0.909 | 0.913 | 0.913 | 0.906 |
| N° 9 | 0.893 | 0.897 | 0.902 | 0.903 | 0.905 | 0.908 | 0.911 | 0.911 | 0.912 | 0.916 | 0.916 | 0.909 |
| N° 10 | 0.891 | 0.895 | 0.900 | 0.904 | 0.908 | 0.906 | 0.910 | 0.910 | 0.911 | 0.918 | 0.915 | 0.910 |
| N° 11 | 0.893 | 0.898 | 0.903 | 0.904 | 0.906 | 0.910 | 0.912 | 0.911 | 0.914 | 0.917 | 0.916 | 0.910 |
| N° 12 | 0.891 | 0.897 | 0.901 | 0.901 | 0.903 | 0.906 | 0.908 | 0.908 | 0.910 | 0.914 | 0.914 | 0.906 |
| N° 13 | 0.897 | 0.898 | 0.907 | 0.903 | 0.905 | 0.908 | 0.911 | 0.914 | 0.912 | 0.916 | 0.914 | 0.908 |
| N° 14 | 0.891 | 0.895 | 0.899 | 0.902 | 0.903 | 0.906 | 0.909 | 0.910 | 0.910 | 0.914 | 0.913 | 0.905 |
| N° 15 | 0.890 | 0.896 | 0.900 | 0.902 | 0.904 | 0.908 | 0.910 | 0.910 | 0.910 | 0.915 | 0.914 | 0.908 |
| N° 16 | 0.892 | 0.896 | 0.901 | 0.903 | 0.903 | 0.905 | 0.909 | 0.909 | 0.910 | 0.915 | 0.914 | 0.907 |
| N° 17 | 0.892 | 0.895 | 0.900 | 0.900 | 0.901 | 0.904 | 0.907 | 0.908 | 0.908 | 0.911 | 0.911 | 0.905 |
| N° 18 | 0.892 | 0.896 | 0.902 | 0.902 | 0.904 | 0.905 | 0.910 | 0.910 | 0.911 | 0.915 | 0.914 | 0.907 |
| N° 19 | 0.892 | 0.895 | 0.901 | 0.902 | 0.904 | 0.907 | 0.910 | 0.909 | 0.910 | 0.915 | 0.914 | 0.909 |
| N° 20 | 0.891 | 0.896 | 0.901 | 0.901 | 0.903 | 0.907 | 0.910 | 0.909 | 0.911 | 0.915 | 0.912 | 0.909 |
| N° 21 | 0.893 | 0.897 | 0.901 | 0.901 | 0.902 | 0.906 | 0.908 | 0.907 | 0.908 | 0.912 | 0.910 | 0.907 |
| N° 22 | 0.891 | 0.896 | 0.900 | 0.901 | 0.903 | 0.906 | 0.909 | 0.908 | 0.910 | 0.914 | 0.913 | 0.906 |
| N° 23 | 0.895 | 0.896 | 0.901 | 0.902 | 0.903 | 0.906 | 0.909 | 0.909 | 0.906 | 0.914 | 0.913 | 0.907 |
| N° 24 | 0.893 | 0.897 | 0.902 | 0.903 | 0.905 | 0.908 | 0.913 | 0.910 | 0.912 | 0.916 | 0.915 | 0.909 |
| N° 25 | 0.891 | 0.895 | 0.901 | 0.901 | 0.903 | 0.906 | 0.909 | 0.911 | 0.910 | 0.915 | 0.912 | 0.906 |
| N° 26 | 0.892 | 0.896 | 0.902 | 0.902 | 0.904 | 0.906 | 0.910 | 0.911 | 0.912 | 0.915 | 0.914 | 0.907 |
| N° 27 | 0.893 | 0.897 | 0.902 | 0.903 | 0.904 | 0.908 | 0.910 | 0.910 | 0.911 | 0.915 | 0.914 | 0.908 |
| N° 28 | 0.894 | 0.897 | 0.903 | 0.903 | 0.905 | 0.908 | 0.911 | 0.910 | 0.912 | 0.916 | 0.915 | 0.909 |
| N° 29 | 0.892 | 0.896 | 0.901 | 0.902 | 0.904 | 0.908 | 0.911 | 0.910 | 0.912 | 0.916 | 0.915 | 0.909 |
| N° 30 | 0.892 | 0.897 | 0.902 | 0.903 | 0.905 | 0.908 | 0.910 | 0.910 | 0.912 | 0.917 | 0.916 | 0.909 |
| N° 31 | 0.893 | 0.898 | 0.903 | 0.904 | 0.906 | 0.908 | 0.912 | 0.912 | 0.913 | 0.917 | 0.916 | 0.910 |

# 95. VOL2, Module 2

**Ta=25°C; +VCC=30V; -VCC=GND; IOL=5mA**

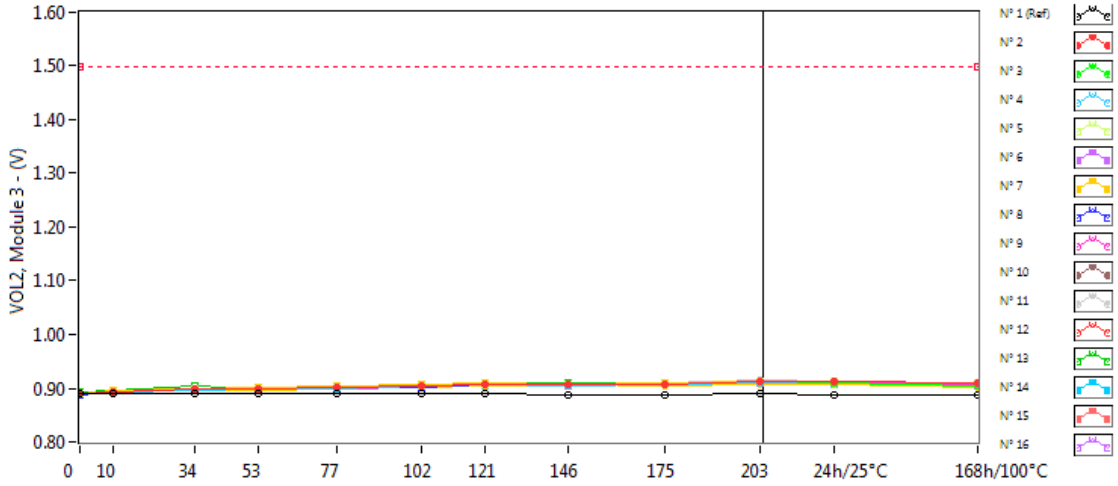



**VOL2, Module 2 . (V)** **Max = 1.5**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 0.892 | 0.893 | 0.893 | 0.893 | 0.892 | 0.892 | 0.893 | 0.890 | 0.890 | 0.892 | 0.890 | 0.888 |
| N° 2 | 0.893 | 0.897 | 0.901 | 0.902 | 0.904 | 0.908 | 0.911 | 0.910 | 0.911 | 0.915 | 0.915 | 0.912 |
| N° 3 | 0.891 | 0.895 | 0.900 | 0.901 | 0.903 | 0.907 | 0.909 | 0.908 | 0.910 | 0.914 | 0.913 | 0.906 |
| N° 4 | 0.891 | 0.895 | 0.900 | 0.900 | 0.903 | 0.906 | 0.909 | 0.908 | 0.909 | 0.914 | 0.913 | 0.907 |
| N° 5 | 0.893 | 0.899 | 0.902 | 0.902 | 0.904 | 0.929 | 0.910 | 0.909 | 0.910 | 0.914 | 0.914 | 0.915 |
| N° 6 | 0.891 | 0.895 | 0.900 | 0.901 | 0.903 | 0.906 | 0.908 | 0.908 | 0.909 | 0.913 | 0.913 | 0.905 |
| N° 7 | 0.894 | 0.901 | 0.903 | 0.904 | 0.906 | 0.909 | 0.912 | 0.911 | 0.913 | 0.917 | 0.916 | 0.912 |
| N° 8 | 0.891 | 0.895 | 0.900 | 0.901 | 0.903 | 0.905 | 0.909 | 0.909 | 0.910 | 0.914 | 0.914 | 0.906 |
| N° 9 | 0.892 | 0.896 | 0.901 | 0.904 | 0.904 | 0.907 | 0.911 | 0.910 | 0.914 | 0.916 | 0.915 | 0.908 |
| N° 10 | 0.890 | 0.895 | 0.900 | 0.903 | 0.903 | 0.905 | 0.909 | 0.909 | 0.911 | 0.911 | 0.915 | 0.909 |
| N° 11 | 0.893 | 0.898 | 0.903 | 0.903 | 0.905 | 0.909 | 0.911 | 0.911 | 0.913 | 0.917 | 0.916 | 0.910 |
| N° 12 | 0.890 | 0.894 | 0.900 | 0.900 | 0.902 | 0.905 | 0.908 | 0.907 | 0.910 | 0.914 | 0.913 | 0.906 |
| N° 13 | 0.897 | 0.898 | 0.907 | 0.903 | 0.905 | 0.907 | 0.910 | 0.913 | 0.912 | 0.915 | 0.914 | 0.908 |
| N° 14 | 0.890 | 0.895 | 0.900 | 0.902 | 0.903 | 0.906 | 0.909 | 0.909 | 0.911 | 0.914 | 0.913 | 0.905 |
| N° 15 | 0.890 | 0.896 | 0.900 | 0.902 | 0.903 | 0.908 | 0.909 | 0.909 | 0.910 | 0.914 | 0.914 | 0.907 |
| N° 16 | 0.892 | 0.896 | 0.901 | 0.902 | 0.903 | 0.905 | 0.909 | 0.909 | 0.910 | 0.915 | 0.913 | 0.907 |
| N° 17 | 0.892 | 0.895 | 0.900 | 0.900 | 0.901 | 0.904 | 0.907 | 0.908 | 0.907 | 0.911 | 0.911 | 0.905 |
| N° 18 | 0.892 | 0.896 | 0.901 | 0.902 | 0.904 | 0.905 | 0.910 | 0.909 | 0.911 | 0.915 | 0.914 | 0.907 |
| N° 19 | 0.891 | 0.895 | 0.900 | 0.901 | 0.903 | 0.907 | 0.910 | 0.909 | 0.910 | 0.915 | 0.914 | 0.908 |
| N° 20 | 0.891 | 0.896 | 0.900 | 0.900 | 0.902 | 0.906 | 0.909 | 0.909 | 0.911 | 0.914 | 0.912 | 0.908 |
| N° 21 | 0.893 | 0.896 | 0.901 | 0.901 | 0.902 | 0.905 | 0.908 | 0.907 | 0.908 | 0.912 | 0.910 | 0.906 |
| N° 22 | 0.891 | 0.895 | 0.900 | 0.901 | 0.902 | 0.906 | 0.909 | 0.908 | 0.910 | 0.914 | 0.913 | 0.906 |
| N° 23 | 0.896 | 0.896 | 0.901 | 0.902 | 0.903 | 0.906 | 0.909 | 0.909 | 0.910 | 0.914 | 0.913 | 0.907 |
| N° 24 | 0.893 | 0.896 | 0.902 | 0.902 | 0.904 | 0.907 | 0.912 | 0.910 | 0.911 | 0.915 | 0.915 | 0.908 |
| N° 25 | 0.891 | 0.895 | 0.900 | 0.901 | 0.902 | 0.906 | 0.909 | 0.910 | 0.909 | 0.914 | 0.912 | 0.906 |
| N° 26 | 0.892 | 0.897 | 0.903 | 0.902 | 0.904 | 0.907 | 0.910 | 0.912 | 0.912 | 0.915 | 0.914 | 0.907 |
| N° 27 | 0.892 | 0.897 | 0.902 | 0.902 | 0.904 | 0.908 | 0.910 | 0.909 | 0.911 | 0.915 | 0.914 | 0.908 |
| N° 28 | 0.893 | 0.897 | 0.902 | 0.903 | 0.904 | 0.908 | 0.911 | 0.910 | 0.912 | 0.916 | 0.915 | 0.908 |
| N° 29 | 0.892 | 0.896 | 0.901 | 0.902 | 0.904 | 0.908 | 0.911 | 0.910 | 0.912 | 0.916 | 0.915 | 0.908 |
| N° 30 | 0.891 | 0.895 | 0.901 | 0.901 | 0.903 | 0.906 | 0.909 | 0.909 | 0.911 | 0.915 | 0.914 | 0.908 |
| N° 31 | 0.893 | 0.897 | 0.903 | 0.903 | 0.905 | 0.907 | 0.911 | 0.911 | 0.913 | 0.917 | 0.916 | 0.910 |

# 96. VOL2, Module 3

**Ta=25°C; +VCC=30V; -VCC=GND; IOL=5mA**

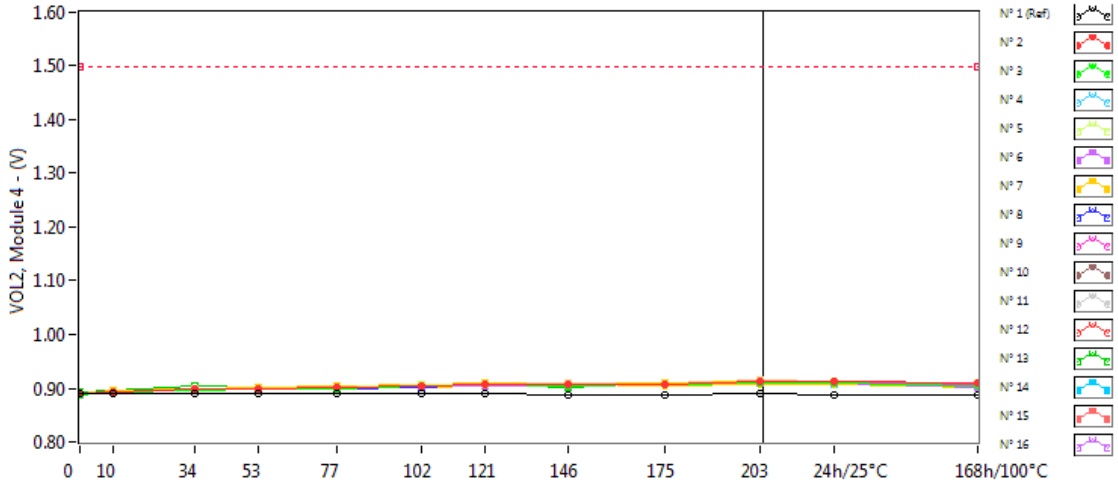



**VOL2, Module 3 . (V)** **Max = 1.5**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 0.889 | 0.890 | 0.890 | 0.890 | 0.889 | 0.890 | 0.890 | 0.888 | 0.888 | 0.890 | 0.888 | 0.886 |
| N° 2 | 0.890 | 0.894 | 0.899 | 0.900 | 0.901 | 0.905 | 0.908 | 0.907 | 0.908 | 0.912 | 0.912 | 0.909 |
| N° 3 | 0.889 | 0.893 | 0.898 | 0.898 | 0.901 | 0.904 | 0.907 | 0.906 | 0.908 | 0.912 | 0.911 | 0.904 |
| N° 4 | 0.889 | 0.893 | 0.897 | 0.898 | 0.900 | 0.903 | 0.907 | 0.905 | 0.907 | 0.911 | 0.911 | 0.904 |
| N° 5 | 0.890 | 0.894 | 0.900 | 0.900 | 0.901 | 0.904 | 0.908 | 0.907 | 0.908 | 0.912 | 0.912 | 0.911 |
| N° 6 | 0.889 | 0.893 | 0.898 | 0.899 | 0.901 | 0.905 | 0.907 | 0.905 | 0.907 | 0.911 | 0.910 | 0.903 |
| N° 7 | 0.891 | 0.895 | 0.900 | 0.901 | 0.903 | 0.906 | 0.909 | 0.908 | 0.910 | 0.914 | 0.913 | 0.909 |
| N° 8 | 0.888 | 0.892 | 0.898 | 0.898 | 0.901 | 0.902 | 0.906 | 0.906 | 0.907 | 0.911 | 0.911 | 0.903 |
| N° 9 | 0.890 | 0.894 | 0.899 | 0.900 | 0.902 | 0.905 | 0.908 | 0.904 | 0.909 | 0.913 | 0.913 | 0.906 |
| N° 10 | 0.888 | 0.892 | 0.897 | 0.902 | 0.900 | 0.903 | 0.909 | 0.907 | 0.909 | 0.913 | 0.912 | 0.907 |
| N° 11 | 0.891 | 0.895 | 0.900 | 0.901 | 0.903 | 0.906 | 0.909 | 0.908 | 0.911 | 0.915 | 0.913 | 0.907 |
| N° 12 | 0.889 | 0.892 | 0.897 | 0.898 | 0.900 | 0.903 | 0.906 | 0.905 | 0.908 | 0.912 | 0.911 | 0.903 |
| N° 13 | 0.894 | 0.895 | 0.904 | 0.900 | 0.902 | 0.904 | 0.908 | 0.909 | 0.909 | 0.912 | 0.911 | 0.905 |
| N° 14 | 0.888 | 0.892 | 0.896 | 0.899 | 0.900 | 0.904 | 0.906 | 0.906 | 0.908 | 0.911 | 0.910 | 0.903 |
| N° 15 | 0.887 | 0.893 | 0.897 | 0.899 | 0.900 | 0.908 | 0.910 | 0.907 | 0.907 | 0.912 | 0.911 | 0.905 |
| N° 16 | 0.889 | 0.893 | 0.898 | 0.899 | 0.900 | 0.902 | 0.906 | 0.906 | 0.907 | 0.911 | 0.911 | 0.904 |
| N° 17 | 0.889 | 0.893 | 0.897 | 0.897 | 0.898 | 0.902 | 0.904 | 0.906 | 0.905 | 0.908 | 0.908 | 0.902 |
| N° 18 | 0.889 | 0.893 | 0.898 | 0.899 | 0.901 | 0.903 | 0.907 | 0.906 | 0.908 | 0.912 | 0.911 | 0.904 |
| N° 19 | 0.889 | 0.893 | 0.898 | 0.900 | 0.902 | 0.905 | 0.908 | 0.907 | 0.908 | 0.913 | 0.912 | 0.906 |
| N° 20 | 0.889 | 0.893 | 0.898 | 0.898 | 0.900 | 0.904 | 0.907 | 0.907 | 0.909 | 0.912 | 0.909 | 0.906 |
| N° 21 | 0.890 | 0.894 | 0.898 | 0.899 | 0.900 | 0.903 | 0.905 | 0.904 | 0.906 | 0.910 | 0.908 | 0.904 |
| N° 22 | 0.889 | 0.893 | 0.898 | 0.898 | 0.900 | 0.904 | 0.908 | 0.905 | 0.907 | 0.911 | 0.910 | 0.903 |
| N° 23 | 0.893 | 0.894 | 0.899 | 0.900 | 0.901 | 0.904 | 0.908 | 0.907 | 0.908 | 0.912 | 0.911 | 0.904 |
| N° 24 | 0.890 | 0.894 | 0.899 | 0.900 | 0.902 | 0.905 | 0.910 | 0.908 | 0.909 | 0.913 | 0.913 | 0.906 |
| N° 25 | 0.888 | 0.893 | 0.898 | 0.898 | 0.900 | 0.904 | 0.907 | 0.907 | 0.907 | 0.912 | 0.910 | 0.904 |
| N° 26 | 0.890 | 0.894 | 0.899 | 0.899 | 0.901 | 0.906 | 0.908 | 0.909 | 0.909 | 0.913 | 0.911 | 0.904 |
| N° 27 | 0.889 | 0.893 | 0.899 | 0.899 | 0.901 | 0.904 | 0.907 | 0.906 | 0.908 | 0.912 | 0.911 | 0.904 |
| N° 28 | 0.891 | 0.894 | 0.900 | 0.900 | 0.902 | 0.905 | 0.908 | 0.907 | 0.909 | 0.913 | 0.912 | 0.906 |
| N° 29 | 0.889 | 0.894 | 0.899 | 0.899 | 0.901 | 0.905 | 0.908 | 0.907 | 0.909 | 0.913 | 0.912 | 0.906 |
| N° 30 | 0.888 | 0.892 | 0.898 | 0.899 | 0.900 | 0.903 | 0.906 | 0.906 | 0.908 | 0.912 | 0.911 | 0.905 |
| N° 31 | 0.891 | 0.895 | 0.900 | 0.901 | 0.903 | 0.905 | 0.909 | 0.909 | 0.910 | 0.914 | 0.913 | 0.907 |

# 97. VOL2, Module 4

**Ta=25°C; +VCC=30V; -VCC=GND; IOL=5mA**

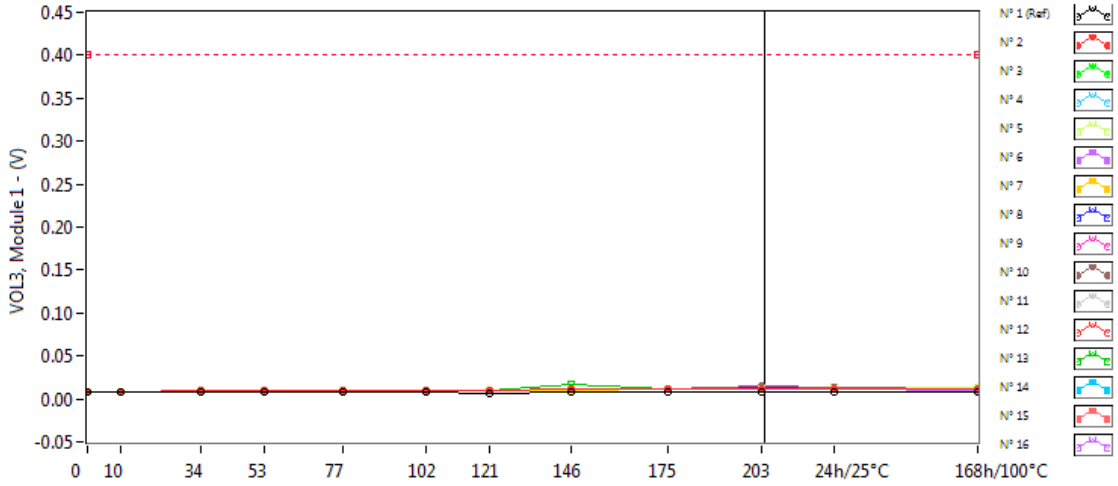



**VOL2, Module 4 . (V)** **Max = 1.5**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 0.889 | 0.890 | 0.890 | 0.890 | 0.889 | 0.889 | 0.890 | 0.887 | 0.887 | 0.889 | 0.887 | 0.886 |
| N° 2 | 0.890 | 0.894 | 0.898 | 0.900 | 0.901 | 0.905 | 0.907 | 0.907 | 0.908 | 0.912 | 0.912 | 0.909 |
| N° 3 | 0.888 | 0.893 | 0.897 | 0.898 | 0.900 | 0.904 | 0.906 | 0.905 | 0.907 | 0.911 | 0.910 | 0.903 |
| N° 4 | 0.888 | 0.893 | 0.897 | 0.898 | 0.900 | 0.903 | 0.906 | 0.905 | 0.907 | 0.911 | 0.911 | 0.904 |
| N° 5 | 0.890 | 0.894 | 0.900 | 0.900 | 0.902 | 0.906 | 0.907 | 0.907 | 0.908 | 0.912 | 0.912 | 0.909 |
| N° 6 | 0.888 | 0.892 | 0.897 | 0.898 | 0.900 | 0.903 | 0.905 | 0.905 | 0.906 | 0.910 | 0.910 | 0.902 |
| N° 7 | 0.891 | 0.895 | 0.900 | 0.901 | 0.903 | 0.906 | 0.909 | 0.908 | 0.909 | 0.914 | 0.913 | 0.909 |
| N° 8 | 0.888 | 0.892 | 0.897 | 0.898 | 0.900 | 0.902 | 0.906 | 0.906 | 0.907 | 0.911 | 0.910 | 0.903 |
| N° 9 | 0.889 | 0.894 | 0.899 | 0.900 | 0.902 | 0.905 | 0.908 | 0.904 | 0.909 | 0.913 | 0.913 | 0.906 |
| N° 10 | 0.888 | 0.892 | 0.897 | 0.901 | 0.901 | 0.903 | 0.907 | 0.907 | 0.909 | 0.914 | 0.912 | 0.907 |
| N° 11 | 0.890 | 0.895 | 0.900 | 0.901 | 0.903 | 0.906 | 0.909 | 0.908 | 0.910 | 0.914 | 0.913 | 0.907 |
| N° 12 | 0.888 | 0.892 | 0.898 | 0.898 | 0.900 | 0.904 | 0.906 | 0.905 | 0.908 | 0.912 | 0.911 | 0.903 |
| N° 13 | 0.894 | 0.895 | 0.904 | 0.901 | 0.902 | 0.904 | 0.908 | 0.902 | 0.909 | 0.913 | 0.911 | 0.905 |
| N° 14 | 0.887 | 0.892 | 0.896 | 0.898 | 0.899 | 0.903 | 0.905 | 0.905 | 0.907 | 0.910 | 0.910 | 0.902 |
| N° 15 | 0.888 | 0.893 | 0.898 | 0.899 | 0.901 | 0.905 | 0.907 | 0.907 | 0.908 | 0.912 | 0.912 | 0.905 |
| N° 16 | 0.889 | 0.894 | 0.898 | 0.900 | 0.901 | 0.903 | 0.907 | 0.907 | 0.908 | 0.912 | 0.911 | 0.904 |
| N° 17 | 0.889 | 0.892 | 0.897 | 0.898 | 0.898 | 0.902 | 0.904 | 0.906 | 0.905 | 0.908 | 0.908 | 0.902 |
| N° 18 | 0.890 | 0.894 | 0.899 | 0.900 | 0.901 | 0.903 | 0.907 | 0.907 | 0.908 | 0.913 | 0.912 | 0.904 |
| N° 19 | 0.889 | 0.893 | 0.898 | 0.899 | 0.901 | 0.904 | 0.907 | 0.907 | 0.907 | 0.913 | 0.912 | 0.906 |
| N° 20 | 0.889 | 0.893 | 0.898 | 0.898 | 0.900 | 0.904 | 0.907 | 0.907 | 0.909 | 0.912 | 0.909 | 0.905 |
| N° 21 | 0.890 | 0.894 | 0.898 | 0.899 | 0.900 | 0.903 | 0.905 | 0.904 | 0.906 | 0.909 | 0.908 | 0.904 |
| N° 22 | 0.889 | 0.893 | 0.898 | 0.898 | 0.900 | 0.904 | 0.906 | 0.905 | 0.907 | 0.911 | 0.910 | 0.903 |
| N° 23 | 0.892 | 0.893 | 0.898 | 0.899 | 0.900 | 0.904 | 0.906 | 0.906 | 0.907 | 0.911 | 0.910 | 0.904 |
| N° 24 | 0.890 | 0.894 | 0.899 | 0.900 | 0.902 | 0.905 | 0.910 | 0.908 | 0.909 | 0.913 | 0.913 | 0.906 |
| N° 25 | 0.888 | 0.892 | 0.898 | 0.898 | 0.900 | 0.903 | 0.906 | 0.907 | 0.907 | 0.912 | 0.910 | 0.904 |
| N° 26 | 0.889 | 0.893 | 0.898 | 0.899 | 0.900 | 0.903 | 0.907 | 0.908 | 0.908 | 0.912 | 0.911 | 0.904 |
| N° 27 | 0.889 | 0.894 | 0.899 | 0.899 | 0.901 | 0.904 | 0.907 | 0.906 | 0.908 | 0.912 | 0.911 | 0.905 |
| N° 28 | 0.890 | 0.894 | 0.899 | 0.900 | 0.901 | 0.905 | 0.907 | 0.907 | 0.909 | 0.913 | 0.912 | 0.905 |
| N° 29 | 0.889 | 0.893 | 0.898 | 0.899 | 0.901 | 0.905 | 0.908 | 0.907 | 0.909 | 0.913 | 0.912 | 0.906 |
| N° 30 | 0.888 | 0.893 | 0.898 | 0.899 | 0.901 | 0.904 | 0.906 | 0.907 | 0.908 | 0.913 | 0.912 | 0.905 |
| N° 31 | 0.891 | 0.895 | 0.900 | 0.901 | 0.903 | 0.905 | 0.909 | 0.909 | 0.911 | 0.915 | 0.913 | 0.907 |

# 98. VOL3, Module 1

**Ta=25°C; +VCC=4.5V; -VCC=GND; IOL=2µA**

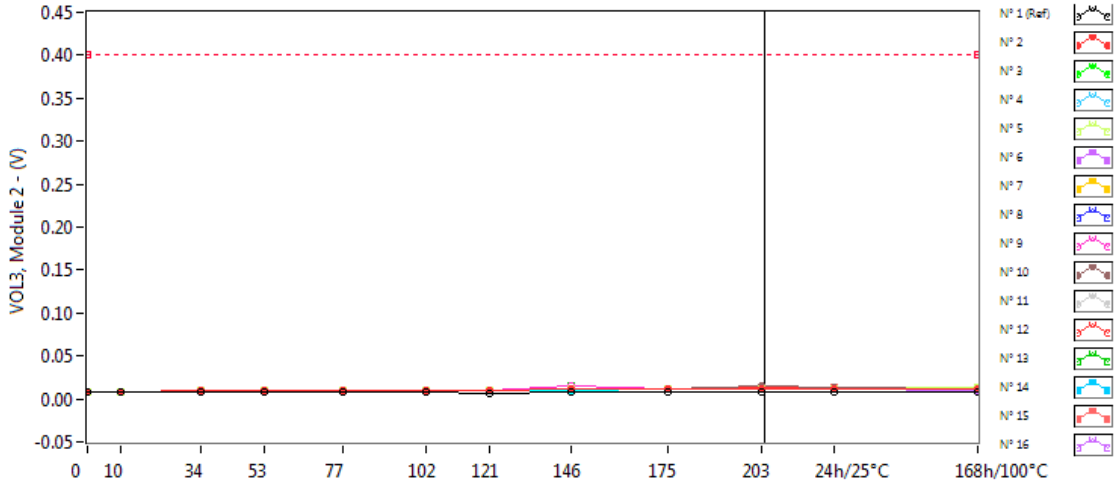



**VOL3, Module 1 . (V)** **Max = 0.4**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 0.008 | 0.008 | 0.008 | 0.008 | 0.008 | 0.008 | 0.007 | 0.008 | 0.008 | 0.008 | 0.008 | 0.008 |
| N° 2 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.011 |
| N° 3 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.011 |
| N° 4 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.011 |
| N° 5 | 0.008 | 0.008 | 0.009 | 0.009 | 0.009 | 0.009 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.014 |
| N° 6 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.010 |
| N° 7 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.011 |
| N° 8 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.010 | 0.011 | 0.012 | 0.012 | 0.012 | 0.011 |
| N° 9 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.009 | 0.012 | 0.011 | 0.012 | 0.012 | 0.011 |
| N° 10 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.010 | 0.011 | 0.012 | 0.015 | 0.013 | 0.011 |
| N° 11 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.010 | 0.011 | 0.012 | 0.012 | 0.012 | 0.011 |
| N° 12 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.010 | 0.011 | 0.012 | 0.012 | 0.012 | 0.011 |
| N° 13 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.009 | 0.017 | 0.011 | 0.012 | 0.012 | 0.011 |
| N° 14 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.010 |
| N° 15 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.010 | 0.011 | 0.012 | 0.012 | 0.012 | 0.011 |
| N° 16 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.011 |
| N° 17 | 0.008 | 0.008 | 0.009 | 0.009 | 0.009 | 0.009 | 0.009 | 0.010 | 0.011 | 0.011 | 0.011 | 0.010 |
| N° 18 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.010 |
| N° 19 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.010 | 0.011 | 0.012 | 0.013 | 0.013 | 0.011 |
| N° 20 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.009 | 0.011 | 0.012 | 0.012 | 0.012 | 0.011 |
| N° 21 | 0.008 | 0.008 | 0.009 | 0.009 | 0.009 | 0.009 | 0.009 | 0.010 | 0.011 | 0.011 | 0.011 | 0.010 |
| N° 22 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.010 |
| N° 23 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.009 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.010 |
| N° 24 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.010 | 0.011 | 0.011 | 0.012 | 0.012 | 0.011 |
| N° 25 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.009 | 0.011 | 0.012 | 0.012 | 0.012 | 0.011 |
| N° 26 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.011 |
| N° 27 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.011 |
| N° 28 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.011 |
| N° 29 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.011 |
| N° 30 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.010 | 0.011 | 0.012 | 0.013 | 0.013 | 0.011 |
| N° 31 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.009 | 0.011 | 0.012 | 0.012 | 0.012 | 0.011 |

# 99. VOL3, Module 2

**Ta=25°C; +VCC=4.5V; -VCC=GND; IOL=2µA**

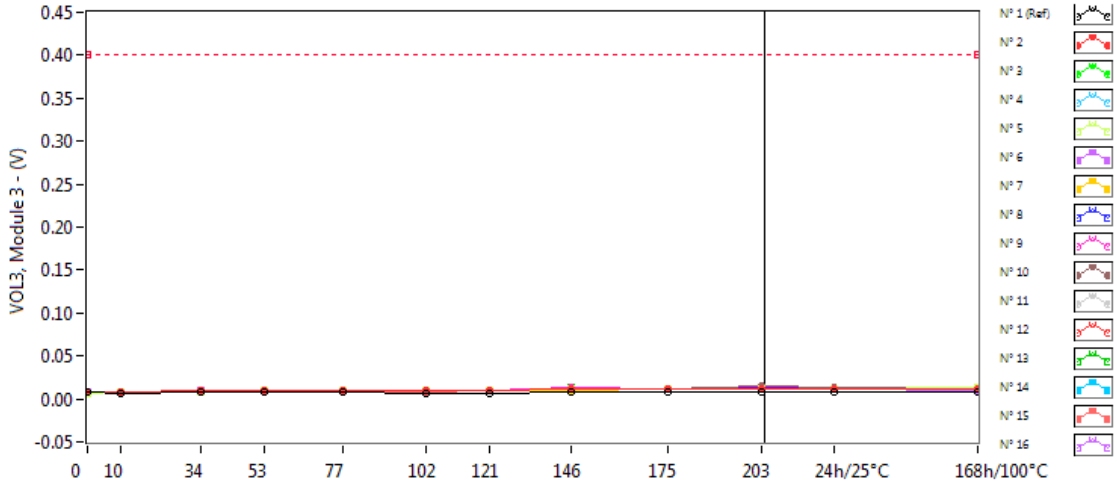



**VOL3, Module 2 . (V)** **Max = 0.4**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 0.008 | 0.008 | 0.008 | 0.008 | 0.008 | 0.008 | 0.007 | 0.008 | 0.008 | 0.008 | 0.008 | 0.008 |
| N° 2 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.010 | 0.011 | 0.011 | 0.012 | 0.012 | 0.011 |
| N° 3 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.010 | 0.011 | 0.012 | 0.012 | 0.012 | 0.011 |
| N° 4 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.010 | 0.011 | 0.012 | 0.012 | 0.012 | 0.011 |
| N° 5 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.009 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.014 |
| N° 6 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.010 |
| N° 7 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.010 | 0.011 | 0.012 | 0.012 | 0.012 | 0.011 |
| N° 8 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.010 | 0.011 | 0.012 | 0.012 | 0.012 | 0.011 |
| N° 9 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.009 | 0.015 | 0.012 | 0.012 | 0.012 | 0.011 |
| N° 10 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.010 | 0.011 | 0.012 | 0.016 | 0.013 | 0.011 |
| N° 11 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.010 | 0.011 | 0.012 | 0.012 | 0.012 | 0.011 |
| N° 12 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.010 | 0.011 | 0.012 | 0.013 | 0.013 | 0.011 |
| N° 13 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.009 | 0.016 | 0.011 | 0.012 | 0.012 | 0.011 |
| N° 14 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.011 |
| N° 15 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.010 | 0.011 | 0.012 | 0.013 | 0.013 | 0.011 |
| N° 16 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.011 |
| N° 17 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.009 | 0.009 | 0.011 | 0.011 | 0.011 | 0.011 | 0.010 |
| N° 18 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.011 |
| N° 19 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.010 | 0.011 | 0.012 | 0.013 | 0.013 | 0.011 |
| N° 20 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.010 | 0.011 | 0.012 | 0.012 | 0.013 | 0.011 |
| N° 21 | 0.008 | 0.008 | 0.009 | 0.009 | 0.009 | 0.009 | 0.009 | 0.010 | 0.011 | 0.011 | 0.011 | 0.010 |
| N° 22 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.011 |
| N° 23 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.011 |
| N° 24 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.010 | 0.011 | 0.012 | 0.012 | 0.012 | 0.011 |
| N° 25 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.010 | 0.011 | 0.012 | 0.013 | 0.013 | 0.011 |
| N° 26 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.010 | 0.011 | 0.012 | 0.012 | 0.012 | 0.011 |
| N° 27 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.011 |
| N° 28 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.011 |
| N° 29 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.009 | 0.011 | 0.012 | 0.012 | 0.012 | 0.011 |
| N° 30 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.010 | 0.011 | 0.012 | 0.013 | 0.013 | 0.011 |
| N° 31 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.010 | 0.011 | 0.012 | 0.012 | 0.012 | 0.011 |

# 100. VOL3, Module 3

**Ta=25°C; +VCC=4.5V; -VCC=GND; IOL=2µA**

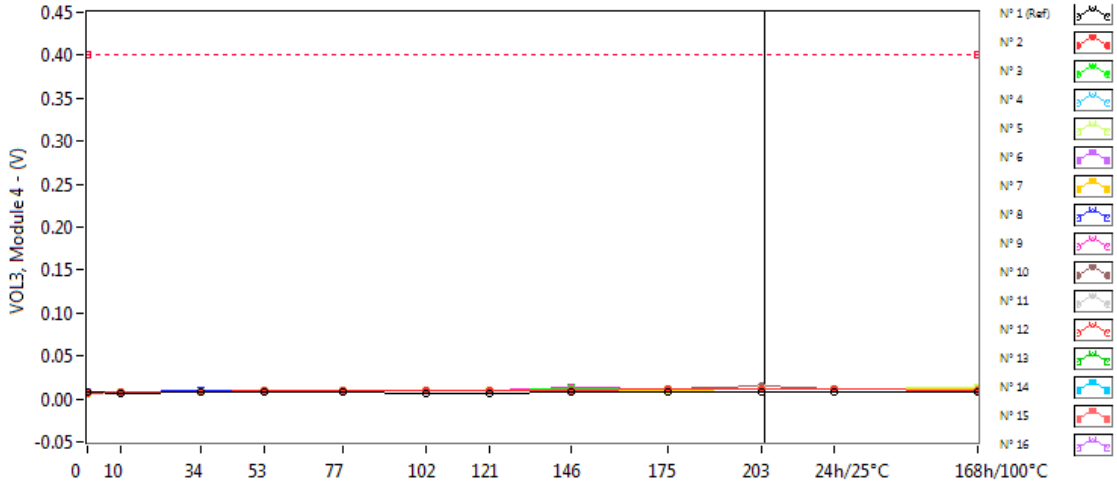



**VOL3, Module 3 . (V)** **Max = 0.4**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 0.008 | 0.007 | 0.008 | 0.008 | 0.008 | 0.007 | 0.007 | 0.008 | 0.008 | 0.008 | 0.008 | 0.008 |
| N° 2 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.009 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.011 |
| N° 3 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.009 | 0.011 | 0.012 | 0.012 | 0.012 | 0.011 |
| N° 4 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.011 |
| N° 5 | 0.007 | 0.008 | 0.008 | 0.009 | 0.009 | 0.009 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.014 |
| N° 6 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.009 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.010 |
| N° 7 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.011 |
| N° 8 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.011 |
| N° 9 | 0.008 | 0.008 | 0.008 | 0.009 | 0.009 | 0.009 | 0.009 | 0.014 | 0.011 | 0.012 | 0.012 | 0.011 |
| N° 10 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.010 | 0.011 | 0.012 | 0.016 | 0.013 | 0.011 |
| N° 11 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.009 | 0.011 | 0.012 | 0.012 | 0.012 | 0.011 |
| N° 12 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.010 | 0.011 | 0.012 | 0.012 | 0.012 | 0.011 |
| N° 13 | 0.008 | 0.008 | 0.009 | 0.009 | 0.009 | 0.009 | 0.009 | 0.014 | 0.011 | 0.012 | 0.012 | 0.010 |
| N° 14 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.009 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.010 |
| N° 15 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.008 | 0.010 | 0.011 | 0.012 | 0.012 | 0.012 | 0.011 |
| N° 16 | 0.008 | 0.008 | 0.009 | 0.009 | 0.009 | 0.009 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.010 |
| N° 17 | 0.008 | 0.008 | 0.008 | 0.009 | 0.009 | 0.009 | 0.009 | 0.010 | 0.011 | 0.011 | 0.011 | 0.010 |
| N° 18 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.009 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.010 |
| N° 19 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.010 | 0.011 | 0.012 | 0.013 | 0.013 | 0.011 |
| N° 20 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.009 | 0.011 | 0.012 | 0.012 | 0.012 | 0.011 |
| N° 21 | 0.008 | 0.008 | 0.008 | 0.009 | 0.009 | 0.009 | 0.009 | 0.010 | 0.011 | 0.011 | 0.011 | 0.010 |
| N° 22 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.009 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.010 |
| N° 23 | 0.008 | 0.008 | 0.009 | 0.009 | 0.009 | 0.009 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.010 |
| N° 24 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.011 |
| N° 25 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.009 | 0.011 | 0.012 | 0.012 | 0.012 | 0.011 |
| N° 26 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.010 |
| N° 27 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.009 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.010 |
| N° 28 | 0.008 | 0.008 | 0.009 | 0.009 | 0.009 | 0.009 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.010 |
| N° 29 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.009 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.010 |
| N° 30 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.010 | 0.011 | 0.012 | 0.012 | 0.012 | 0.011 |
| N° 31 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.009 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.011 |

# 101. VOL3, Module 4

**Ta=25°C; +VCC=4.5V; -VCC=GND; IOL=2µA**

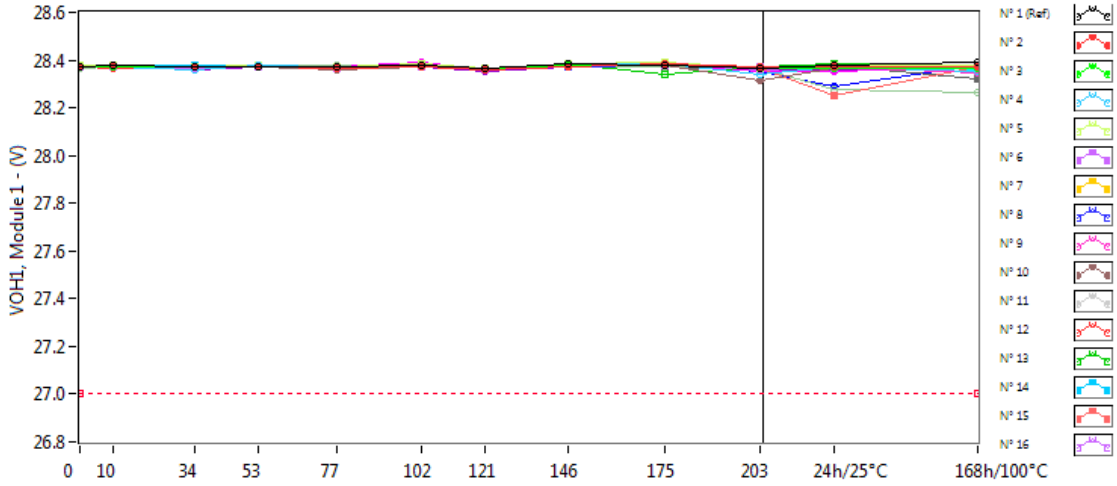



**VOL3, Module 4 . (V)** **Max = 0.4**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 0.008 | 0.007 | 0.008 | 0.008 | 0.008 | 0.007 | 0.007 | 0.008 | 0.008 | 0.008 | 0.008 | 0.008 |
| N° 2 | 0.007 | 0.008 | 0.008 | 0.009 | 0.009 | 0.009 | 0.009 | 0.010 | 0.011 | 0.011 | 0.012 | 0.010 |
| N° 3 | 0.008 | 0.008 | 0.008 | 0.009 | 0.009 | 0.009 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.010 |
| N° 4 | 0.008 | 0.008 | 0.008 | 0.009 | 0.009 | 0.009 | 0.009 | 0.010 | 0.011 | 0.012 | 0.012 | 0.010 |
| N° 5 | 0.007 | 0.008 | 0.008 | 0.009 | 0.009 | 0.009 | 0.009 | 0.010 | 0.011 | 0.012 | 0.012 | 0.014 |
| N° 6 | 0.008 | 0.008 | 0.008 | 0.009 | 0.009 | 0.009 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.010 |
| N° 7 | 0.008 | 0.008 | 0.008 | 0.009 | 0.009 | 0.009 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.011 |
| N° 8 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.009 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.010 |
| N° 9 | 0.007 | 0.008 | 0.008 | 0.009 | 0.009 | 0.009 | 0.009 | 0.013 | 0.011 | 0.012 | 0.012 | 0.010 |
| N° 10 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.009 | 0.011 | 0.011 | 0.016 | 0.012 | 0.011 |
| N° 11 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.009 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.011 |
| N° 12 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.011 |
| N° 13 | 0.008 | 0.008 | 0.009 | 0.009 | 0.009 | 0.009 | 0.009 | 0.014 | 0.011 | 0.012 | 0.012 | 0.010 |
| N° 14 | 0.007 | 0.008 | 0.008 | 0.009 | 0.009 | 0.009 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.010 |
| N° 15 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.011 |
| N° 16 | 0.008 | 0.008 | 0.008 | 0.009 | 0.009 | 0.009 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.010 |
| N° 17 | 0.008 | 0.008 | 0.008 | 0.009 | 0.009 | 0.009 | 0.009 | 0.010 | 0.010 | 0.011 | 0.011 | 0.010 |
| N° 18 | 0.008 | 0.008 | 0.008 | 0.009 | 0.009 | 0.009 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.010 |
| N° 19 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.010 | 0.011 | 0.011 | 0.012 | 0.012 | 0.011 |
| N° 20 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.009 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.010 |
| N° 21 | 0.008 | 0.008 | 0.008 | 0.009 | 0.009 | 0.009 | 0.009 | 0.010 | 0.010 | 0.011 | 0.011 | 0.010 |
| N° 22 | 0.008 | 0.008 | 0.008 | 0.009 | 0.009 | 0.009 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.010 |
| N° 23 | 0.008 | 0.008 | 0.008 | 0.009 | 0.009 | 0.009 | 0.009 | 0.010 | 0.011 | 0.011 | 0.012 | 0.010 |
| N° 24 | 0.008 | 0.008 | 0.009 | 0.009 | 0.009 | 0.009 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.010 |
| N° 25 | 0.008 | 0.008 | 0.009 | 0.009 | 0.009 | 0.009 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.010 |
| N° 26 | 0.008 | 0.008 | 0.008 | 0.009 | 0.009 | 0.009 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.010 |
| N° 27 | 0.008 | 0.008 | 0.008 | 0.009 | 0.009 | 0.009 | 0.009 | 0.010 | 0.011 | 0.012 | 0.012 | 0.010 |
| N° 28 | 0.007 | 0.008 | 0.008 | 0.009 | 0.009 | 0.009 | 0.009 | 0.010 | 0.011 | 0.012 | 0.012 | 0.010 |
| N° 29 | 0.007 | 0.008 | 0.008 | 0.009 | 0.009 | 0.009 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.010 |
| N° 30 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.010 | 0.010 | 0.011 | 0.012 | 0.012 | 0.012 | 0.011 |
| N° 31 | 0.008 | 0.008 | 0.009 | 0.009 | 0.010 | 0.009 | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.011 |

# 102. VOH1, Module 1

**Ta=25°C; +VCC=30V; -VCC=GND; IOH=-10mA**

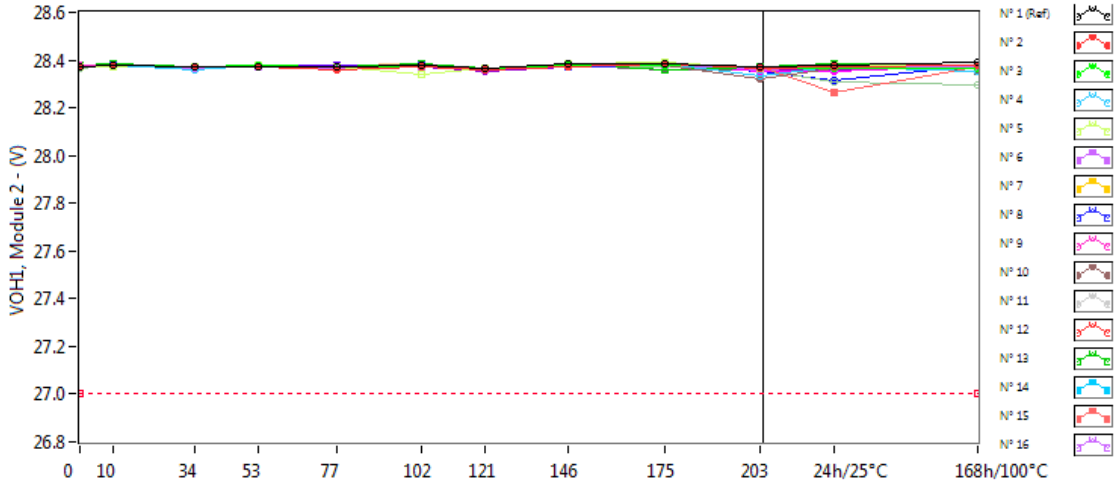



**VOH1, Module 1 . (V)** **Min = 27.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 28.372 | 28.376 | 28.372 | 28.369 | 28.371 | 28.378 | 28.366 | 28.382 | 28.380 | 28.368 | 28.380 | 28.392 |
| N° 2 | 28.375 | 28.376 | 28.372 | 28.370 | 28.363 | 28.373 | 28.359 | 28.374 | 28.382 | 28.369 | 28.371 | 28.375 |
| N° 3 | 28.373 | 28.373 | 28.369 | 28.375 | 28.369 | 28.372 | 28.359 | 28.378 | 28.381 | 28.368 | 28.363 | 28.365 |
| N° 4 | 28.372 | 28.375 | 28.358 | 28.377 | 28.370 | 28.369 | 28.359 | 28.379 | 28.384 | 28.338 | 28.371 | 28.355 |
| N° 5 | 28.376 | 28.380 | 28.370 | 28.376 | 28.374 | 28.382 | 28.363 | 28.382 | 28.389 | 28.367 | 28.376 | 28.377 |
| N° 6 | 28.374 | 28.372 | 28.367 | 28.369 | 28.368 | 28.374 | 28.359 | 28.379 | 28.381 | 28.369 | 28.368 | 28.377 |
| N° 7 | 28.374 | 28.377 | 28.369 | 28.372 | 28.370 | 28.373 | 28.360 | 28.379 | 28.384 | 28.369 | 28.372 | 28.373 |
| N° 8 | 28.374 | 28.375 | 28.366 | 28.371 | 28.366 | 28.379 | 28.358 | 28.371 | 28.378 | 28.368 | 28.368 | 28.376 |
| N° 9 | 28.377 | 28.378 | 28.370 | 28.373 | 28.370 | 28.376 | 28.361 | 28.377 | 28.381 | 28.371 | 28.372 | 28.349 |
| N° 10 | 28.375 | 28.376 | 28.365 | 28.371 | 28.361 | 28.370 | 28.363 | 28.374 | 28.379 | 28.313 | 28.367 | 28.376 |
| N° 11 | 28.378 | 28.378 | 28.369 | 28.375 | 28.370 | 28.374 | 28.363 | 28.380 | 28.379 | 28.366 | 28.375 | 28.376 |
| N° 12 | 28.374 | 28.368 | 28.367 | 28.375 | 28.369 | 28.374 | 28.362 | 28.381 | 28.379 | 28.365 | 28.371 | 28.369 |
| N° 13 | 28.379 | 28.380 | 28.370 | 28.376 | 28.374 | 28.381 | 28.364 | 28.382 | 28.343 | 28.373 | 28.384 | 28.380 |
| N° 14 | 28.380 | 28.378 | 28.377 | 28.372 | 28.375 | 28.375 | 28.363 | 28.381 | 28.379 | 28.370 | 28.374 | 28.379 |
| N° 15 | 28.377 | 28.377 | 28.367 | 28.370 | 28.372 | 28.374 | 28.360 | 28.376 | 28.387 | 28.368 | 28.252 | 28.375 |
| N° 16 | 28.376 | 28.376 | 28.367 | 28.369 | 28.373 | 28.383 | 28.362 | 28.379 | 28.383 | 28.361 | 28.371 | 28.376 |
| N° 17 | 28.375 | 28.375 | 28.368 | 28.374 | 28.374 | 28.375 | 28.360 | 28.377 | 28.383 | 28.367 | 28.371 | 28.377 |
| N° 18 | 28.374 | 28.378 | 28.370 | 28.375 | 28.372 | 28.388 | 28.362 | 28.379 | 28.384 | 28.355 | 28.355 | 28.374 |
| N° 19 | 28.372 | 28.375 | 28.361 | 28.369 | 28.367 | 28.371 | 28.353 | 28.372 | 28.384 | 28.362 | 28.356 | 28.366 |
| N° 20 | 28.367 | 28.375 | 28.368 | 28.379 | 28.376 | 28.375 | 28.359 | 28.371 | 28.374 | 28.363 | 28.275 | 28.266 |
| N° 21 | 28.376 | 28.380 | 28.371 | 28.378 | 28.375 | 28.378 | 28.363 | 28.381 | 28.385 | 28.367 | 28.383 | 28.362 |
| N° 22 | 28.373 | 28.377 | 28.367 | 28.376 | 28.371 | 28.373 | 28.362 | 28.378 | 28.377 | 28.367 | 28.374 | 28.375 |
| N° 23 | 28.376 | 28.380 | 28.371 | 28.375 | 28.374 | 28.377 | 28.362 | 28.378 | 28.370 | 28.358 | 28.378 | 28.323 |
| N° 24 | 28.374 | 28.378 | 28.368 | 28.375 | 28.372 | 28.377 | 28.361 | 28.377 | 28.386 | 28.368 | 28.373 | 28.373 |
| N° 25 | 28.376 | 28.374 | 28.367 | 28.375 | 28.374 | 28.376 | 28.359 | 28.377 | 28.383 | 28.367 | 28.378 | 28.374 |
| N° 26 | 28.375 | 28.378 | 28.367 | 28.378 | 28.373 | 28.378 | 28.360 | 28.380 | 28.378 | 28.350 | 28.291 | 28.377 |
| N° 27 | 28.376 | 28.379 | 28.368 | 28.374 | 28.374 | 28.375 | 28.361 | 28.377 | 28.382 | 28.367 | 28.372 | 28.375 |
| N° 28 | 28.377 | 28.381 | 28.368 | 28.376 | 28.372 | 28.377 | 28.362 | 28.379 | 28.382 | 28.367 | 28.376 | 28.376 |
| N° 29 | 28.379 | 28.380 | 28.373 | 28.381 | 28.375 | 28.378 | 28.364 | 28.384 | 28.379 | 28.355 | 28.370 | 28.377 |
| N° 30 | 28.375 | 28.377 | 28.366 | 28.373 | 28.370 | 28.376 | 28.365 | 28.376 | 28.379 | 28.366 | 28.374 | 28.374 |
| N° 31 | 28.377 | 28.379 | 28.368 | 28.375 | 28.373 | 28.382 | 28.362 | 28.375 | 28.382 | 28.368 | 28.377 | 28.380 |

# 103. VOH1, Module 2

**Ta=25°C; +VCC=30V; -VCC=GND; IOH=-10mA**

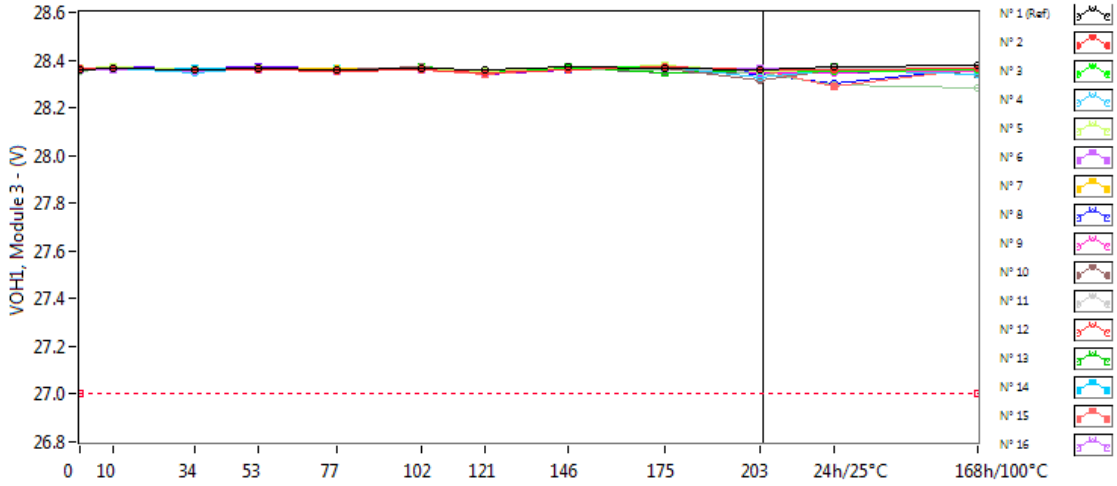



**VOH1, Module 2 . (V)** **Min = 27.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 28.373 | 28.379 | 28.373 | 28.374 | 28.373 | 28.378 | 28.368 | 28.382 | 28.382 | 28.370 | 28.381 | 28.391 |
| N° 2 | 28.374 | 28.376 | 28.371 | 28.370 | 28.361 | 28.371 | 28.359 | 28.373 | 28.383 | 28.368 | 28.372 | 28.376 |
| N° 3 | 28.373 | 28.376 | 28.370 | 28.376 | 28.370 | 28.371 | 28.359 | 28.380 | 28.381 | 28.369 | 28.363 | 28.368 |
| N° 4 | 28.373 | 28.376 | 28.358 | 28.378 | 28.371 | 28.371 | 28.359 | 28.379 | 28.382 | 28.335 | 28.372 | 28.352 |
| N° 5 | 28.375 | 28.375 | 28.371 | 28.377 | 28.374 | 28.338 | 28.363 | 28.382 | 28.389 | 28.368 | 28.376 | 28.381 |
| N° 6 | 28.373 | 28.371 | 28.367 | 28.371 | 28.366 | 28.372 | 28.357 | 28.376 | 28.378 | 28.366 | 28.367 | 28.374 |
| N° 7 | 28.375 | 28.371 | 28.369 | 28.374 | 28.371 | 28.373 | 28.360 | 28.377 | 28.384 | 28.368 | 28.371 | 28.376 |
| N° 8 | 28.374 | 28.377 | 28.365 | 28.371 | 28.367 | 28.378 | 28.357 | 28.372 | 28.380 | 28.366 | 28.368 | 28.375 |
| N° 9 | 28.378 | 28.381 | 28.371 | 28.372 | 28.371 | 28.377 | 28.363 | 28.381 | 28.377 | 28.372 | 28.372 | 28.354 |
| N° 10 | 28.375 | 28.378 | 28.364 | 28.369 | 28.374 | 28.380 | 28.363 | 28.374 | 28.379 | 28.318 | 28.368 | 28.376 |
| N° 11 | 28.377 | 28.379 | 28.369 | 28.375 | 28.370 | 28.376 | 28.363 | 28.379 | 28.379 | 28.365 | 28.376 | 28.376 |
| N° 12 | 28.374 | 28.375 | 28.366 | 28.375 | 28.370 | 28.373 | 28.362 | 28.380 | 28.378 | 28.363 | 28.370 | 28.369 |
| N° 13 | 28.380 | 28.382 | 28.371 | 28.376 | 28.374 | 28.383 | 28.364 | 28.382 | 28.357 | 28.371 | 28.382 | 28.379 |
| N° 14 | 28.378 | 28.376 | 28.372 | 28.371 | 28.370 | 28.373 | 28.361 | 28.379 | 28.379 | 28.369 | 28.370 | 28.379 |
| N° 15 | 28.376 | 28.376 | 28.366 | 28.370 | 28.371 | 28.373 | 28.358 | 28.376 | 28.386 | 28.369 | 28.267 | 28.373 |
| N° 16 | 28.376 | 28.377 | 28.367 | 28.370 | 28.374 | 28.383 | 28.361 | 28.377 | 28.383 | 28.360 | 28.371 | 28.377 |
| N° 17 | 28.375 | 28.377 | 28.367 | 28.374 | 28.373 | 28.373 | 28.360 | 28.377 | 28.380 | 28.367 | 28.372 | 28.378 |
| N° 18 | 28.374 | 28.378 | 28.368 | 28.374 | 28.372 | 28.386 | 28.361 | 28.376 | 28.384 | 28.352 | 28.355 | 28.376 |
| N° 19 | 28.373 | 28.378 | 28.364 | 28.371 | 28.370 | 28.371 | 28.354 | 28.375 | 28.384 | 28.358 | 28.359 | 28.370 |
| N° 20 | 28.367 | 28.376 | 28.368 | 28.379 | 28.374 | 28.375 | 28.361 | 28.370 | 28.374 | 28.362 | 28.306 | 28.298 |
| N° 21 | 28.378 | 28.381 | 28.370 | 28.378 | 28.375 | 28.378 | 28.363 | 28.383 | 28.387 | 28.368 | 28.384 | 28.366 |
| N° 22 | 28.374 | 28.378 | 28.368 | 28.377 | 28.374 | 28.375 | 28.361 | 28.380 | 28.379 | 28.367 | 28.374 | 28.377 |
| N° 23 | 28.375 | 28.380 | 28.370 | 28.376 | 28.372 | 28.377 | 28.361 | 28.377 | 28.356 | 28.359 | 28.378 | 28.350 |
| N° 24 | 28.375 | 28.379 | 28.369 | 28.376 | 28.373 | 28.376 | 28.361 | 28.377 | 28.386 | 28.368 | 28.374 | 28.375 |
| N° 25 | 28.375 | 28.375 | 28.367 | 28.375 | 28.372 | 28.377 | 28.359 | 28.375 | 28.384 | 28.367 | 28.378 | 28.373 |
| N° 26 | 28.375 | 28.377 | 28.366 | 28.378 | 28.373 | 28.379 | 28.361 | 28.379 | 28.380 | 28.353 | 28.314 | 28.378 |
| N° 27 | 28.377 | 28.380 | 28.370 | 28.376 | 28.375 | 28.375 | 28.362 | 28.378 | 28.382 | 28.368 | 28.376 | 28.377 |
| N° 28 | 28.377 | 28.379 | 28.370 | 28.376 | 28.374 | 28.377 | 28.362 | 28.379 | 28.384 | 28.368 | 28.376 | 28.378 |
| N° 29 | 28.379 | 28.383 | 28.374 | 28.380 | 28.376 | 28.378 | 28.364 | 28.382 | 28.380 | 28.361 | 28.374 | 28.378 |
| N° 30 | 28.375 | 28.379 | 28.367 | 28.374 | 28.370 | 28.376 | 28.364 | 28.377 | 28.380 | 28.364 | 28.373 | 28.373 |
| N° 31 | 28.378 | 28.381 | 28.367 | 28.375 | 28.376 | 28.384 | 28.362 | 28.379 | 28.383 | 28.370 | 28.379 | 28.378 |

# 104. VOH1, Module 3

**Ta=25°C; +VCC=30V; -VCC=GND; IOH=-10mA**

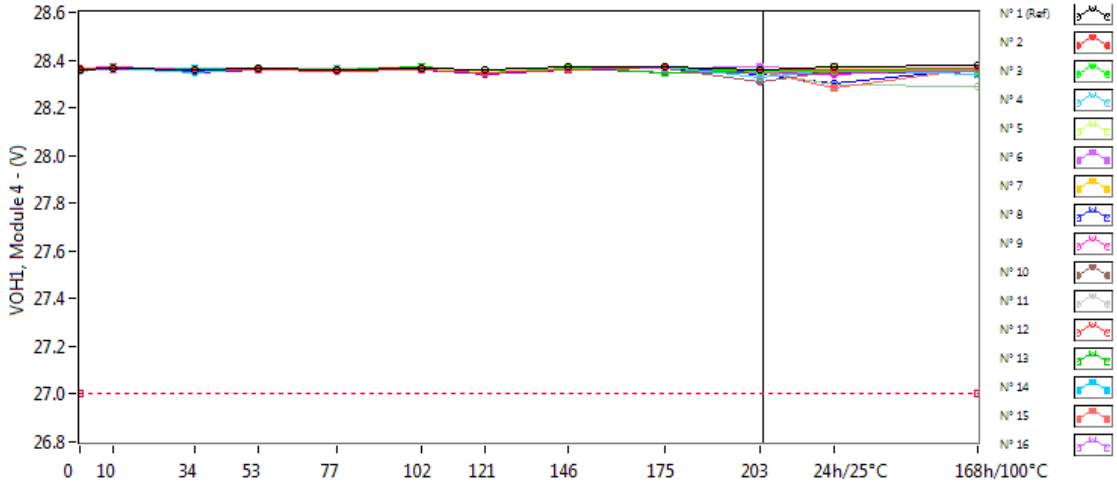



**VOH1, Module 3 . (V)** **Min = 27.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 28.361 | 28.368 | 28.361 | 28.363 | 28.360 | 28.366 | 28.356 | 28.370 | 28.368 | 28.358 | 28.369 | 28.379 |
| N° 2 | 28.363 | 28.366 | 28.359 | 28.360 | 28.351 | 28.361 | 28.349 | 28.361 | 28.370 | 28.358 | 28.358 | 28.365 |
| N° 3 | 28.363 | 28.365 | 28.357 | 28.363 | 28.357 | 28.361 | 28.348 | 28.367 | 28.369 | 28.356 | 28.354 | 28.356 |
| N° 4 | 28.361 | 28.365 | 28.349 | 28.366 | 28.359 | 28.357 | 28.347 | 28.366 | 28.371 | 28.325 | 28.361 | 28.343 |
| N° 5 | 28.364 | 28.369 | 28.359 | 28.364 | 28.362 | 28.368 | 28.350 | 28.368 | 28.376 | 28.355 | 28.362 | 28.368 |
| N° 6 | 28.361 | 28.361 | 28.354 | 28.358 | 28.355 | 28.356 | 28.344 | 28.366 | 28.364 | 28.367 | 28.354 | 28.365 |
| N° 7 | 28.362 | 28.367 | 28.357 | 28.361 | 28.357 | 28.361 | 28.347 | 28.365 | 28.371 | 28.356 | 28.360 | 28.363 |
| N° 8 | 28.362 | 28.366 | 28.354 | 28.361 | 28.355 | 28.368 | 28.348 | 28.361 | 28.370 | 28.355 | 28.355 | 28.364 |
| N° 9 | 28.365 | 28.369 | 28.359 | 28.362 | 28.358 | 28.364 | 28.351 | 28.366 | 28.372 | 28.359 | 28.360 | 28.350 |
| N° 10 | 28.365 | 28.368 | 28.355 | 28.359 | 28.361 | 28.369 | 28.349 | 28.363 | 28.368 | 28.312 | 28.357 | 28.365 |
| N° 11 | 28.366 | 28.368 | 28.357 | 28.363 | 28.359 | 28.364 | 28.352 | 28.367 | 28.368 | 28.355 | 28.364 | 28.365 |
| N° 12 | 28.361 | 28.363 | 28.355 | 28.362 | 28.356 | 28.361 | 28.349 | 28.367 | 28.365 | 28.353 | 28.357 | 28.357 |
| N° 13 | 28.368 | 28.370 | 28.359 | 28.364 | 28.361 | 28.370 | 28.353 | 28.371 | 28.348 | 28.360 | 28.370 | 28.368 |
| N° 14 | 28.366 | 28.366 | 28.365 | 28.360 | 28.361 | 28.362 | 28.351 | 28.367 | 28.368 | 28.357 | 28.360 | 28.366 |
| N° 15 | 28.364 | 28.365 | 28.356 | 28.359 | 28.359 | 28.362 | 28.340 | 28.366 | 28.374 | 28.356 | 28.288 | 28.364 |
| N° 16 | 28.365 | 28.366 | 28.356 | 28.358 | 28.360 | 28.372 | 28.350 | 28.365 | 28.372 | 28.350 | 28.359 | 28.365 |
| N° 17 | 28.364 | 28.368 | 28.358 | 28.364 | 28.363 | 28.364 | 28.351 | 28.364 | 28.371 | 28.356 | 28.362 | 28.367 |
| N° 18 | 28.364 | 28.368 | 28.358 | 28.363 | 28.361 | 28.374 | 28.351 | 28.367 | 28.373 | 28.344 | 28.344 | 28.364 |
| N° 19 | 28.361 | 28.366 | 28.352 | 28.359 | 28.356 | 28.359 | 28.341 | 28.361 | 28.372 | 28.356 | 28.349 | 28.356 |
| N° 20 | 28.351 | 28.364 | 28.355 | 28.365 | 28.363 | 28.362 | 28.348 | 28.358 | 28.362 | 28.348 | 28.294 | 28.284 |
| N° 21 | 28.366 | 28.370 | 28.360 | 28.365 | 28.364 | 28.366 | 28.353 | 28.370 | 28.374 | 28.355 | 28.372 | 28.354 |
| N° 22 | 28.363 | 28.367 | 28.357 | 28.364 | 28.363 | 28.362 | 28.346 | 28.367 | 28.367 | 28.354 | 28.360 | 28.364 |
| N° 23 | 28.365 | 28.370 | 28.358 | 28.365 | 28.362 | 28.366 | 28.351 | 28.365 | 28.347 | 28.348 | 28.366 | 28.341 |
| N° 24 | 28.362 | 28.366 | 28.355 | 28.363 | 28.360 | 28.363 | 28.350 | 28.365 | 28.371 | 28.355 | 28.360 | 28.360 |
| N° 25 | 28.363 | 28.363 | 28.355 | 28.363 | 28.363 | 28.364 | 28.348 | 28.364 | 28.372 | 28.354 | 28.365 | 28.363 |
| N° 26 | 28.363 | 28.366 | 28.356 | 28.365 | 28.361 | 28.363 | 28.347 | 28.370 | 28.366 | 28.340 | 28.303 | 28.366 |
| N° 27 | 28.366 | 28.369 | 28.358 | 28.363 | 28.363 | 28.363 | 28.351 | 28.365 | 28.371 | 28.358 | 28.363 | 28.366 |
| N° 28 | 28.366 | 28.369 | 28.359 | 28.366 | 28.363 | 28.365 | 28.351 | 28.368 | 28.371 | 28.355 | 28.364 | 28.365 |
| N° 29 | 28.368 | 28.372 | 28.363 | 28.369 | 28.366 | 28.367 | 28.353 | 28.372 | 28.369 | 28.352 | 28.362 | 28.367 |
| N° 30 | 28.363 | 28.367 | 28.356 | 28.362 | 28.359 | 28.364 | 28.354 | 28.365 | 28.366 | 28.354 | 28.363 | 28.363 |
| N° 31 | 28.366 | 28.368 | 28.356 | 28.363 | 28.362 | 28.370 | 28.351 | 28.364 | 28.371 | 28.356 | 28.364 | 28.365 |

# 105. VOH1, Module 4

**Ta=25°C; +VCC=30V; -VCC=GND; IOH=-10mA**

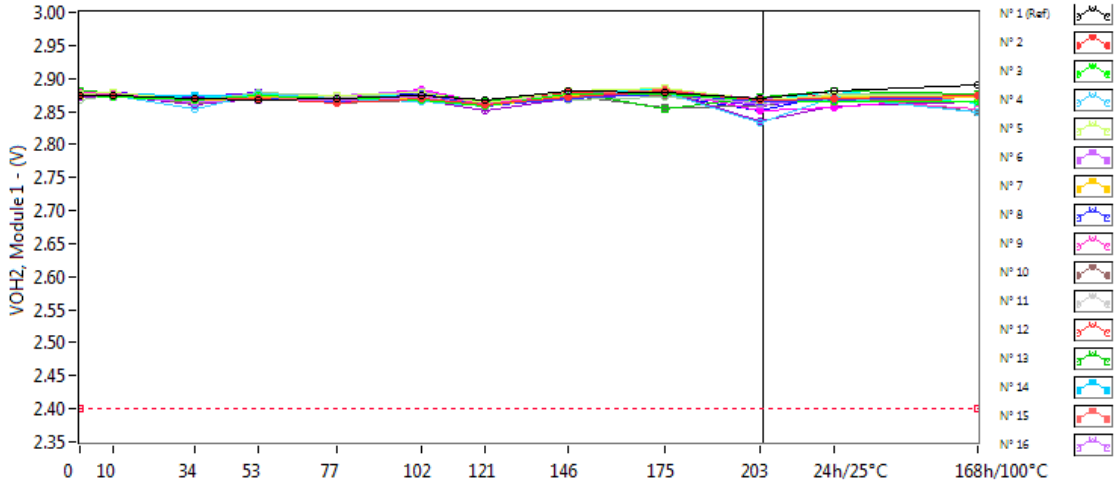



**VOH1, Module 4 . (V)** **Min = 27.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 28.361 | 28.368 | 28.362 | 28.363 | 28.361 | 28.368 | 28.356 | 28.370 | 28.370 | 28.357 | 28.369 | 28.380 |
| N° 2 | 28.363 | 28.366 | 28.360 | 28.360 | 28.351 | 28.361 | 28.349 | 28.361 | 28.370 | 28.357 | 28.360 | 28.365 |
| N° 3 | 28.362 | 28.364 | 28.358 | 28.363 | 28.358 | 28.360 | 28.348 | 28.368 | 28.371 | 28.355 | 28.353 | 28.356 |
| N° 4 | 28.361 | 28.364 | 28.348 | 28.364 | 28.359 | 28.356 | 28.348 | 28.365 | 28.372 | 28.327 | 28.361 | 28.341 |
| N° 5 | 28.363 | 28.368 | 28.358 | 28.363 | 28.360 | 28.364 | 28.350 | 28.369 | 28.373 | 28.355 | 28.363 | 28.366 |
| N° 6 | 28.363 | 28.362 | 28.357 | 28.360 | 28.357 | 28.362 | 28.347 | 28.367 | 28.363 | 28.369 | 28.358 | 28.367 |
| N° 7 | 28.364 | 28.367 | 28.357 | 28.362 | 28.358 | 28.361 | 28.349 | 28.367 | 28.372 | 28.358 | 28.360 | 28.363 |
| N° 8 | 28.362 | 28.364 | 28.355 | 28.360 | 28.356 | 28.366 | 28.346 | 28.362 | 28.367 | 28.355 | 28.358 | 28.364 |
| N° 9 | 28.366 | 28.369 | 28.359 | 28.364 | 28.360 | 28.365 | 28.351 | 28.366 | 28.372 | 28.361 | 28.360 | 28.351 |
| N° 10 | 28.362 | 28.366 | 28.352 | 28.358 | 28.356 | 28.366 | 28.348 | 28.361 | 28.364 | 28.311 | 28.353 | 28.363 |
| N° 11 | 28.365 | 28.368 | 28.356 | 28.362 | 28.357 | 28.361 | 28.351 | 28.367 | 28.366 | 28.352 | 28.363 | 28.364 |
| N° 12 | 28.362 | 28.363 | 28.355 | 28.362 | 28.358 | 28.361 | 28.350 | 28.369 | 28.365 | 28.352 | 28.360 | 28.358 |
| N° 13 | 28.366 | 28.369 | 28.359 | 28.363 | 28.360 | 28.369 | 28.352 | 28.370 | 28.349 | 28.359 | 28.369 | 28.366 |
| N° 14 | 28.367 | 28.366 | 28.363 | 28.360 | 28.359 | 28.362 | 28.350 | 28.365 | 28.367 | 28.356 | 28.360 | 28.367 |
| N° 15 | 28.366 | 28.366 | 28.355 | 28.358 | 28.358 | 28.361 | 28.348 | 28.364 | 28.374 | 28.355 | 28.282 | 28.363 |
| N° 16 | 28.364 | 28.365 | 28.355 | 28.359 | 28.361 | 28.371 | 28.349 | 28.362 | 28.369 | 28.346 | 28.358 | 28.364 |
| N° 17 | 28.363 | 28.366 | 28.356 | 28.360 | 28.361 | 28.363 | 28.350 | 28.364 | 28.370 | 28.357 | 28.360 | 28.366 |
| N° 18 | 28.363 | 28.368 | 28.357 | 28.363 | 28.360 | 28.375 | 28.350 | 28.366 | 28.374 | 28.344 | 28.342 | 28.364 |
| N° 19 | 28.357 | 28.363 | 28.349 | 28.356 | 28.351 | 28.356 | 28.338 | 28.358 | 28.367 | 28.353 | 28.346 | 28.353 |
| N° 20 | 28.354 | 28.365 | 28.357 | 28.367 | 28.365 | 28.364 | 28.349 | 28.361 | 28.363 | 28.350 | 28.296 | 28.291 |
| N° 21 | 28.364 | 28.368 | 28.359 | 28.365 | 28.364 | 28.365 | 28.352 | 28.371 | 28.373 | 28.355 | 28.370 | 28.352 |
| N° 22 | 28.362 | 28.365 | 28.356 | 28.363 | 28.359 | 28.361 | 28.350 | 28.365 | 28.366 | 28.356 | 28.360 | 28.364 |
| N° 23 | 28.365 | 28.371 | 28.360 | 28.364 | 28.362 | 28.365 | 28.350 | 28.365 | 28.345 | 28.349 | 28.365 | 28.340 |
| N° 24 | 28.362 | 28.368 | 28.357 | 28.363 | 28.362 | 28.364 | 28.350 | 28.365 | 28.372 | 28.357 | 28.363 | 28.363 |
| N° 25 | 28.363 | 28.365 | 28.355 | 28.363 | 28.361 | 28.364 | 28.349 | 28.363 | 28.373 | 28.356 | 28.367 | 28.363 |
| N° 26 | 28.365 | 28.368 | 28.357 | 28.366 | 28.362 | 28.367 | 28.351 | 28.368 | 28.367 | 28.341 | 28.304 | 28.368 |
| N° 27 | 28.365 | 28.367 | 28.357 | 28.362 | 28.362 | 28.363 | 28.350 | 28.365 | 28.369 | 28.357 | 28.361 | 28.365 |
| N° 28 | 28.364 | 28.367 | 28.356 | 28.362 | 28.360 | 28.363 | 28.350 | 28.366 | 28.367 | 28.354 | 28.360 | 28.364 |
| N° 29 | 28.367 | 28.370 | 28.362 | 28.367 | 28.363 | 28.366 | 28.353 | 28.369 | 28.367 | 28.351 | 28.360 | 28.366 |
| N° 30 | 28.363 | 28.366 | 28.355 | 28.362 | 28.358 | 28.363 | 28.353 | 28.364 | 28.365 | 28.353 | 28.359 | 28.361 |
| N° 31 | 28.366 | 28.369 | 28.357 | 28.363 | 28.363 | 28.370 | 28.351 | 28.365 | 28.371 | 28.358 | 28.366 | 28.366 |

# 106. VOH2, Module 1

**Ta=25°C; +VCC=4.5V; -VCC=GND; IOH=-10mA**

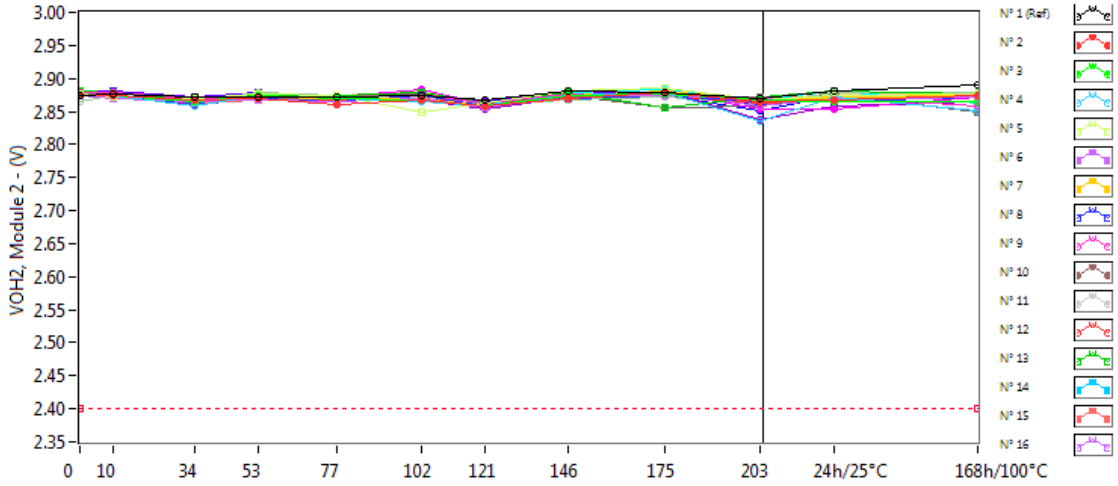



**VOH2, Module 1 . (V)** **Min = 2.4**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 2.873 | 2.874 | 2.870 | 2.867 | 2.870 | 2.875 | 2.867 | 2.881 | 2.878 | 2.869 | 2.880 | 2.889 |
| N° 2 | 2.875 | 2.874 | 2.869 | 2.870 | 2.862 | 2.870 | 2.860 | 2.871 | 2.881 | 2.867 | 2.870 | 2.874 |
| N° 3 | 2.874 | 2.872 | 2.867 | 2.874 | 2.869 | 2.868 | 2.859 | 2.876 | 2.877 | 2.867 | 2.864 | 2.865 |
| N° 4 | 2.873 | 2.873 | 2.854 | 2.876 | 2.870 | 2.866 | 2.859 | 2.876 | 2.879 | 2.834 | 2.871 | 2.848 |
| N° 5 | 2.877 | 2.878 | 2.868 | 2.875 | 2.873 | 2.878 | 2.862 | 2.880 | 2.885 | 2.867 | 2.874 | 2.875 |
| N° 6 | 2.876 | 2.871 | 2.865 | 2.868 | 2.868 | 2.872 | 2.859 | 2.876 | 2.877 | 2.870 | 2.869 | 2.875 |
| N° 7 | 2.875 | 2.875 | 2.866 | 2.871 | 2.870 | 2.870 | 2.859 | 2.875 | 2.880 | 2.867 | 2.871 | 2.872 |
| N° 8 | 2.875 | 2.873 | 2.864 | 2.870 | 2.866 | 2.876 | 2.858 | 2.869 | 2.877 | 2.866 | 2.868 | 2.872 |
| N° 9 | 2.878 | 2.877 | 2.868 | 2.872 | 2.870 | 2.873 | 2.862 | 2.875 | 2.880 | 2.870 | 2.870 | 2.853 |
| N° 10 | 2.876 | 2.873 | 2.862 | 2.869 | 2.862 | 2.867 | 2.862 | 2.871 | 2.874 | 2.868 | 2.866 | 2.873 |
| N° 11 | 2.879 | 2.876 | 2.866 | 2.874 | 2.871 | 2.871 | 2.863 | 2.877 | 2.875 | 2.865 | 2.874 | 2.874 |
| N° 12 | 2.875 | 2.879 | 2.864 | 2.874 | 2.869 | 2.871 | 2.862 | 2.878 | 2.875 | 2.864 | 2.869 | 2.866 |
| N° 13 | 2.881 | 2.878 | 2.868 | 2.875 | 2.874 | 2.879 | 2.864 | 2.880 | 2.854 | 2.871 | 2.881 | 2.877 |
| N° 14 | 2.880 | 2.877 | 2.874 | 2.871 | 2.872 | 2.871 | 2.862 | 2.877 | 2.876 | 2.868 | 2.871 | 2.876 |
| N° 15 | 2.878 | 2.875 | 2.865 | 2.869 | 2.870 | 2.870 | 2.859 | 2.874 | 2.883 | 2.867 | 2.866 | 2.872 |
| N° 16 | 2.877 | 2.875 | 2.865 | 2.868 | 2.873 | 2.880 | 2.861 | 2.875 | 2.881 | 2.860 | 2.870 | 2.874 |
| N° 17 | 2.875 | 2.874 | 2.865 | 2.872 | 2.872 | 2.871 | 2.860 | 2.874 | 2.879 | 2.866 | 2.870 | 2.874 |
| N° 18 | 2.876 | 2.877 | 2.867 | 2.874 | 2.872 | 2.884 | 2.862 | 2.875 | 2.882 | 2.851 | 2.856 | 2.873 |
| N° 19 | 2.872 | 2.874 | 2.860 | 2.869 | 2.866 | 2.867 | 2.852 | 2.870 | 2.880 | 2.836 | 2.857 | 2.864 |
| N° 20 | 2.867 | 2.873 | 2.865 | 2.878 | 2.875 | 2.872 | 2.860 | 2.868 | 2.871 | 2.862 | 2.877 | 2.877 |
| N° 21 | 2.877 | 2.877 | 2.869 | 2.876 | 2.874 | 2.875 | 2.863 | 2.879 | 2.883 | 2.866 | 2.881 | 2.862 |
| N° 22 | 2.875 | 2.875 | 2.865 | 2.875 | 2.871 | 2.870 | 2.861 | 2.875 | 2.874 | 2.866 | 2.872 | 2.872 |
| N° 23 | 2.878 | 2.878 | 2.868 | 2.875 | 2.873 | 2.875 | 2.862 | 2.875 | 2.856 | 2.859 | 2.876 | 2.848 |
| N° 24 | 2.874 | 2.876 | 2.866 | 2.874 | 2.872 | 2.873 | 2.861 | 2.874 | 2.881 | 2.867 | 2.871 | 2.872 |
| N° 25 | 2.876 | 2.872 | 2.864 | 2.874 | 2.872 | 2.873 | 2.859 | 2.873 | 2.881 | 2.866 | 2.876 | 2.871 |
| N° 26 | 2.876 | 2.875 | 2.865 | 2.877 | 2.873 | 2.876 | 2.861 | 2.876 | 2.875 | 2.851 | 2.876 | 2.876 |
| N° 27 | 2.877 | 2.876 | 2.866 | 2.874 | 2.874 | 2.871 | 2.861 | 2.874 | 2.878 | 2.867 | 2.872 | 2.873 |
| N° 28 | 2.878 | 2.878 | 2.867 | 2.875 | 2.872 | 2.874 | 2.861 | 2.877 | 2.880 | 2.866 | 2.874 | 2.874 |
| N° 29 | 2.880 | 2.879 | 2.871 | 2.879 | 2.875 | 2.875 | 2.864 | 2.881 | 2.877 | 2.858 | 2.871 | 2.875 |
| N° 30 | 2.875 | 2.875 | 2.864 | 2.873 | 2.868 | 2.872 | 2.865 | 2.873 | 2.875 | 2.864 | 2.871 | 2.871 |
| N° 31 | 2.878 | 2.878 | 2.866 | 2.875 | 2.872 | 2.880 | 2.862 | 2.874 | 2.880 | 2.867 | 2.876 | 2.875 |

# 107. VOH2, Module 2

**Ta=25°C; +VCC=4.5V; -VCC=GND; IOH=-10mA**

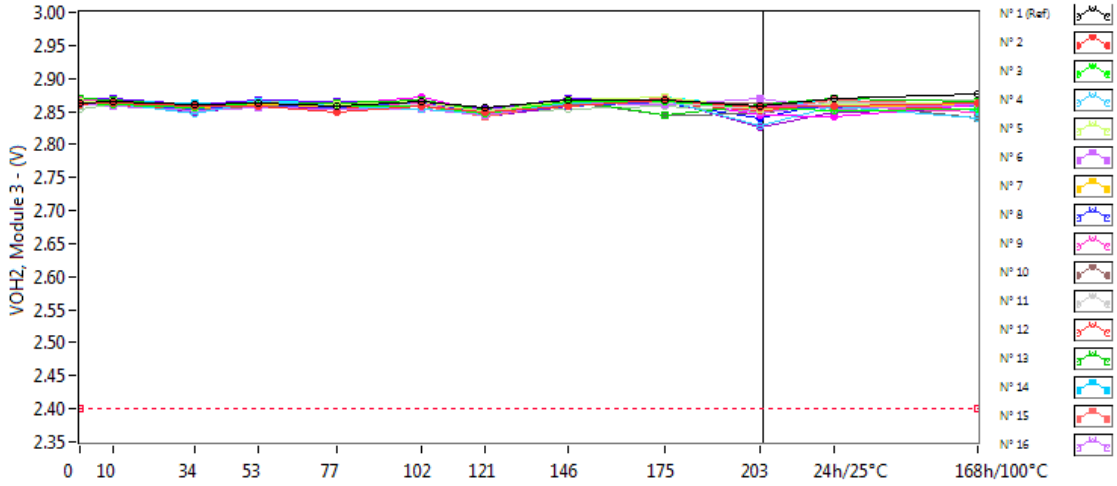



**VOH2, Module 2 . (V)** **Min = 2.4**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 2.873 | 2.876 | 2.871 | 2.872 | 2.871 | 2.875 | 2.868 | 2.880 | 2.878 | 2.869 | 2.881 | 2.889 |
| N° 2 | 2.874 | 2.873 | 2.868 | 2.869 | 2.861 | 2.868 | 2.859 | 2.870 | 2.879 | 2.866 | 2.868 | 2.873 |
| N° 3 | 2.874 | 2.873 | 2.866 | 2.874 | 2.869 | 2.868 | 2.859 | 2.875 | 2.877 | 2.867 | 2.864 | 2.865 |
| N° 4 | 2.874 | 2.873 | 2.857 | 2.875 | 2.870 | 2.866 | 2.859 | 2.875 | 2.879 | 2.836 | 2.871 | 2.851 |
| N° 5 | 2.877 | 2.872 | 2.869 | 2.876 | 2.874 | 2.850 | 2.863 | 2.880 | 2.886 | 2.867 | 2.875 | 2.877 |
| N° 6 | 2.874 | 2.869 | 2.864 | 2.868 | 2.866 | 2.869 | 2.856 | 2.874 | 2.873 | 2.870 | 2.867 | 2.872 |
| N° 7 | 2.875 | 2.870 | 2.866 | 2.872 | 2.870 | 2.870 | 2.859 | 2.875 | 2.880 | 2.867 | 2.871 | 2.873 |
| N° 8 | 2.874 | 2.872 | 2.862 | 2.870 | 2.865 | 2.875 | 2.857 | 2.869 | 2.875 | 2.865 | 2.866 | 2.871 |
| N° 9 | 2.879 | 2.878 | 2.869 | 2.871 | 2.871 | 2.874 | 2.862 | 2.876 | 2.876 | 2.870 | 2.871 | 2.858 |
| N° 10 | 2.876 | 2.875 | 2.862 | 2.869 | 2.871 | 2.876 | 2.862 | 2.872 | 2.874 | 2.872 | 2.866 | 2.873 |
| N° 11 | 2.878 | 2.876 | 2.866 | 2.873 | 2.870 | 2.871 | 2.862 | 2.876 | 2.875 | 2.864 | 2.874 | 2.873 |
| N° 12 | 2.875 | 2.871 | 2.864 | 2.872 | 2.868 | 2.870 | 2.862 | 2.877 | 2.874 | 2.863 | 2.868 | 2.866 |
| N° 13 | 2.880 | 2.878 | 2.868 | 2.875 | 2.873 | 2.878 | 2.863 | 2.879 | 2.856 | 2.871 | 2.880 | 2.876 |
| N° 14 | 2.878 | 2.875 | 2.870 | 2.869 | 2.869 | 2.870 | 2.861 | 2.875 | 2.874 | 2.867 | 2.868 | 2.874 |
| N° 15 | 2.877 | 2.874 | 2.863 | 2.868 | 2.870 | 2.870 | 2.858 | 2.873 | 2.882 | 2.865 | 2.873 | 2.871 |
| N° 16 | 2.876 | 2.874 | 2.864 | 2.868 | 2.872 | 2.879 | 2.861 | 2.874 | 2.879 | 2.859 | 2.869 | 2.873 |
| N° 17 | 2.875 | 2.874 | 2.865 | 2.872 | 2.872 | 2.870 | 2.860 | 2.873 | 2.878 | 2.866 | 2.869 | 2.873 |
| N° 18 | 2.875 | 2.876 | 2.866 | 2.873 | 2.871 | 2.883 | 2.861 | 2.874 | 2.880 | 2.853 | 2.854 | 2.872 |
| N° 19 | 2.873 | 2.875 | 2.861 | 2.870 | 2.867 | 2.868 | 2.853 | 2.871 | 2.881 | 2.838 | 2.858 | 2.865 |
| N° 20 | 2.865 | 2.874 | 2.866 | 2.878 | 2.875 | 2.872 | 2.860 | 2.868 | 2.871 | 2.862 | 2.878 | 2.879 |
| N° 21 | 2.878 | 2.878 | 2.869 | 2.876 | 2.875 | 2.875 | 2.863 | 2.879 | 2.883 | 2.867 | 2.882 | 2.863 |
| N° 22 | 2.875 | 2.875 | 2.866 | 2.875 | 2.872 | 2.871 | 2.861 | 2.875 | 2.875 | 2.866 | 2.872 | 2.873 |
| N° 23 | 2.877 | 2.877 | 2.867 | 2.874 | 2.872 | 2.874 | 2.861 | 2.875 | 2.855 | 2.858 | 2.876 | 2.849 |
| N° 24 | 2.876 | 2.877 | 2.867 | 2.875 | 2.873 | 2.874 | 2.862 | 2.875 | 2.882 | 2.868 | 2.872 | 2.873 |
| N° 25 | 2.875 | 2.872 | 2.864 | 2.874 | 2.872 | 2.873 | 2.859 | 2.873 | 2.881 | 2.865 | 2.875 | 2.871 |
| N° 26 | 2.875 | 2.874 | 2.863 | 2.875 | 2.872 | 2.874 | 2.860 | 2.876 | 2.874 | 2.852 | 2.875 | 2.875 |
| N° 27 | 2.878 | 2.878 | 2.867 | 2.874 | 2.874 | 2.872 | 2.862 | 2.875 | 2.878 | 2.868 | 2.872 | 2.874 |
| N° 28 | 2.877 | 2.877 | 2.866 | 2.875 | 2.872 | 2.874 | 2.861 | 2.876 | 2.879 | 2.865 | 2.873 | 2.873 |
| N° 29 | 2.880 | 2.880 | 2.871 | 2.879 | 2.875 | 2.875 | 2.864 | 2.881 | 2.877 | 2.861 | 2.871 | 2.875 |
| N° 30 | 2.875 | 2.875 | 2.864 | 2.872 | 2.869 | 2.872 | 2.865 | 2.873 | 2.875 | 2.864 | 2.870 | 2.871 |
| N° 31 | 2.879 | 2.878 | 2.866 | 2.875 | 2.873 | 2.880 | 2.862 | 2.875 | 2.879 | 2.868 | 2.876 | 2.875 |

# 108. VOH2, Module 3

**Ta=25°C; +VCC=4.5V; -VCC=GND; IOH=-10mA**

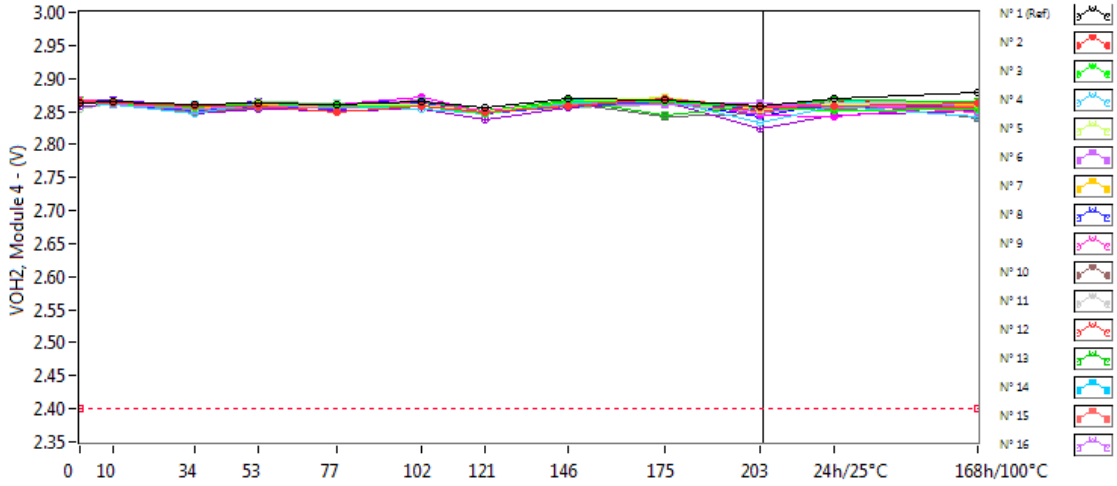



**VOH2, Module 3 . (V)** **Min = 2.4**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 2.862 | 2.864 | 2.860 | 2.862 | 2.859 | 2.864 | 2.856 | 2.868 | 2.867 | 2.858 | 2.869 | 2.877 |
| N° 2 | 2.863 | 2.863 | 2.857 | 2.858 | 2.850 | 2.857 | 2.848 | 2.859 | 2.868 | 2.855 | 2.858 | 2.862 |
| N° 3 | 2.863 | 2.861 | 2.855 | 2.862 | 2.857 | 2.857 | 2.847 | 2.864 | 2.866 | 2.855 | 2.852 | 2.854 |
| N° 4 | 2.863 | 2.862 | 2.847 | 2.864 | 2.859 | 2.854 | 2.846 | 2.863 | 2.868 | 2.828 | 2.859 | 2.840 |
| N° 5 | 2.865 | 2.866 | 2.856 | 2.862 | 2.861 | 2.865 | 2.850 | 2.867 | 2.872 | 2.854 | 2.861 | 2.863 |
| N° 6 | 2.862 | 2.858 | 2.852 | 2.856 | 2.854 | 2.853 | 2.844 | 2.862 | 2.860 | 2.869 | 2.854 | 2.860 |
| N° 7 | 2.863 | 2.863 | 2.855 | 2.860 | 2.858 | 2.858 | 2.847 | 2.863 | 2.868 | 2.855 | 2.859 | 2.860 |
| N° 8 | 2.863 | 2.862 | 2.853 | 2.860 | 2.855 | 2.864 | 2.847 | 2.859 | 2.865 | 2.855 | 2.856 | 2.861 |
| N° 9 | 2.867 | 2.866 | 2.857 | 2.861 | 2.859 | 2.862 | 2.850 | 2.863 | 2.868 | 2.858 | 2.859 | 2.849 |
| N° 10 | 2.865 | 2.864 | 2.852 | 2.857 | 2.860 | 2.865 | 2.848 | 2.861 | 2.864 | 2.863 | 2.856 | 2.862 |
| N° 11 | 2.866 | 2.865 | 2.855 | 2.862 | 2.858 | 2.860 | 2.851 | 2.864 | 2.863 | 2.853 | 2.862 | 2.862 |
| N° 12 | 2.861 | 2.860 | 2.852 | 2.860 | 2.856 | 2.859 | 2.849 | 2.865 | 2.863 | 2.852 | 2.857 | 2.854 |
| N° 13 | 2.869 | 2.867 | 2.857 | 2.863 | 2.862 | 2.867 | 2.852 | 2.867 | 2.845 | 2.860 | 2.869 | 2.865 |
| N° 14 | 2.868 | 2.864 | 2.862 | 2.859 | 2.860 | 2.859 | 2.850 | 2.863 | 2.864 | 2.856 | 2.858 | 2.864 |
| N° 15 | 2.866 | 2.863 | 2.853 | 2.857 | 2.858 | 2.858 | 2.841 | 2.862 | 2.870 | 2.854 | 2.867 | 2.860 |
| N° 16 | 2.865 | 2.863 | 2.854 | 2.857 | 2.860 | 2.868 | 2.850 | 2.862 | 2.868 | 2.848 | 2.858 | 2.862 |
| N° 17 | 2.866 | 2.864 | 2.855 | 2.862 | 2.862 | 2.861 | 2.850 | 2.863 | 2.868 | 2.856 | 2.860 | 2.864 |
| N° 18 | 2.864 | 2.866 | 2.856 | 2.862 | 2.861 | 2.871 | 2.850 | 2.863 | 2.870 | 2.845 | 2.843 | 2.861 |
| N° 19 | 2.861 | 2.863 | 2.849 | 2.858 | 2.855 | 2.857 | 2.842 | 2.859 | 2.868 | 2.826 | 2.848 | 2.853 |
| N° 20 | 2.853 | 2.861 | 2.852 | 2.864 | 2.861 | 2.859 | 2.847 | 2.854 | 2.858 | 2.848 | 2.865 | 2.868 |
| N° 21 | 2.867 | 2.867 | 2.858 | 2.865 | 2.863 | 2.864 | 2.852 | 2.868 | 2.871 | 2.856 | 2.870 | 2.852 |
| N° 22 | 2.863 | 2.863 | 2.854 | 2.863 | 2.861 | 2.859 | 2.846 | 2.863 | 2.863 | 2.854 | 2.860 | 2.861 |
| N° 23 | 2.867 | 2.867 | 2.857 | 2.863 | 2.862 | 2.863 | 2.850 | 2.864 | 2.844 | 2.847 | 2.865 | 2.840 |
| N° 24 | 2.862 | 2.864 | 2.853 | 2.861 | 2.859 | 2.860 | 2.848 | 2.861 | 2.867 | 2.854 | 2.858 | 2.859 |
| N° 25 | 2.863 | 2.860 | 2.852 | 2.862 | 2.860 | 2.861 | 2.847 | 2.861 | 2.868 | 2.854 | 2.863 | 2.859 |
| N° 26 | 2.864 | 2.864 | 2.853 | 2.864 | 2.861 | 2.860 | 2.847 | 2.864 | 2.863 | 2.839 | 2.864 | 2.863 |
| N° 27 | 2.866 | 2.865 | 2.855 | 2.862 | 2.862 | 2.860 | 2.850 | 2.863 | 2.866 | 2.856 | 2.860 | 2.862 |
| N° 28 | 2.867 | 2.866 | 2.856 | 2.864 | 2.862 | 2.863 | 2.850 | 2.865 | 2.868 | 2.855 | 2.862 | 2.863 |
| N° 29 | 2.869 | 2.869 | 2.860 | 2.868 | 2.864 | 2.864 | 2.853 | 2.870 | 2.866 | 2.851 | 2.861 | 2.865 |
| N° 30 | 2.864 | 2.863 | 2.853 | 2.861 | 2.857 | 2.861 | 2.853 | 2.861 | 2.863 | 2.853 | 2.859 | 2.860 |
| N° 31 | 2.866 | 2.866 | 2.854 | 2.862 | 2.860 | 2.867 | 2.850 | 2.862 | 2.867 | 2.855 | 2.863 | 2.863 |

# 109. VOH2, Module 4

**Ta=25°C; +VCC=4.5V; -VCC=GND; IOH=-10mA**

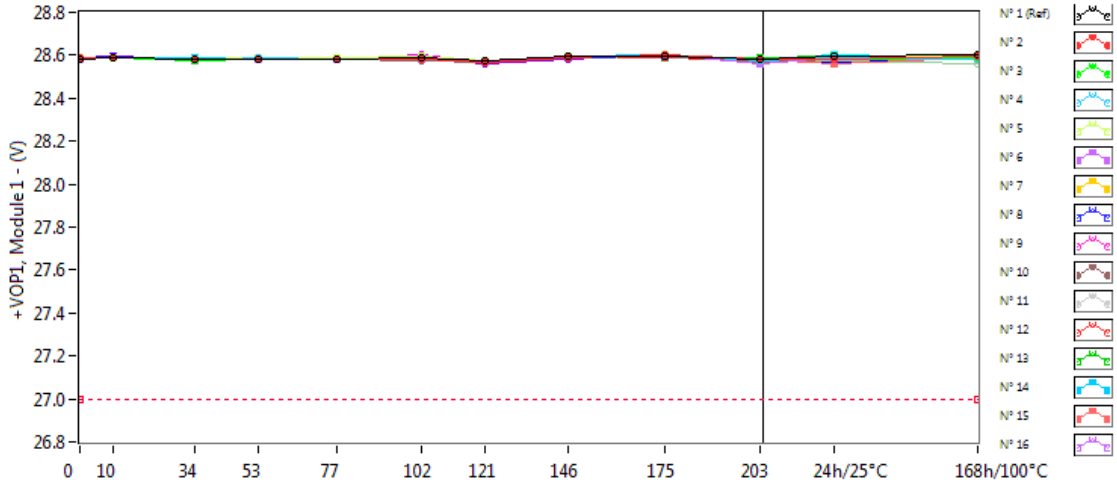



**VOH2, Module 4 . (V)** **Min = 2.4**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 2.863 | 2.866 | 2.860 | 2.863 | 2.860 | 2.864 | 2.856 | 2.869 | 2.868 | 2.858 | 2.869 | 2.878 |
| N° 2 | 2.864 | 2.863 | 2.857 | 2.859 | 2.850 | 2.858 | 2.849 | 2.859 | 2.869 | 2.856 | 2.858 | 2.862 |
| N° 3 | 2.863 | 2.862 | 2.855 | 2.862 | 2.857 | 2.857 | 2.847 | 2.864 | 2.866 | 2.855 | 2.852 | 2.854 |
| N° 4 | 2.862 | 2.861 | 2.846 | 2.862 | 2.858 | 2.853 | 2.846 | 2.863 | 2.867 | 2.832 | 2.858 | 2.842 |
| N° 5 | 2.865 | 2.865 | 2.856 | 2.862 | 2.860 | 2.861 | 2.850 | 2.866 | 2.872 | 2.854 | 2.861 | 2.863 |
| N° 6 | 2.864 | 2.860 | 2.854 | 2.858 | 2.856 | 2.859 | 2.847 | 2.863 | 2.860 | 2.862 | 2.856 | 2.862 |
| N° 7 | 2.864 | 2.864 | 2.855 | 2.860 | 2.858 | 2.858 | 2.848 | 2.864 | 2.869 | 2.856 | 2.859 | 2.861 |
| N° 8 | 2.863 | 2.861 | 2.851 | 2.858 | 2.854 | 2.863 | 2.846 | 2.858 | 2.864 | 2.853 | 2.856 | 2.860 |
| N° 9 | 2.867 | 2.866 | 2.857 | 2.862 | 2.859 | 2.862 | 2.851 | 2.863 | 2.868 | 2.858 | 2.860 | 2.850 |
| N° 10 | 2.863 | 2.862 | 2.850 | 2.856 | 2.856 | 2.863 | 2.849 | 2.858 | 2.862 | 2.862 | 2.853 | 2.860 |
| N° 11 | 2.866 | 2.864 | 2.854 | 2.861 | 2.858 | 2.859 | 2.850 | 2.864 | 2.863 | 2.853 | 2.862 | 2.861 |
| N° 12 | 2.863 | 2.860 | 2.852 | 2.860 | 2.857 | 2.858 | 2.850 | 2.865 | 2.863 | 2.852 | 2.857 | 2.855 |
| N° 13 | 2.868 | 2.866 | 2.856 | 2.862 | 2.861 | 2.866 | 2.851 | 2.867 | 2.845 | 2.859 | 2.868 | 2.865 |
| N° 14 | 2.867 | 2.864 | 2.861 | 2.859 | 2.859 | 2.859 | 2.850 | 2.863 | 2.864 | 2.856 | 2.858 | 2.863 |
| N° 15 | 2.865 | 2.862 | 2.853 | 2.857 | 2.858 | 2.858 | 2.847 | 2.861 | 2.869 | 2.854 | 2.861 | 2.859 |
| N° 16 | 2.864 | 2.862 | 2.853 | 2.857 | 2.859 | 2.867 | 2.849 | 2.861 | 2.867 | 2.848 | 2.857 | 2.861 |
| N° 17 | 2.864 | 2.863 | 2.854 | 2.860 | 2.860 | 2.859 | 2.849 | 2.862 | 2.866 | 2.855 | 2.858 | 2.862 |
| N° 18 | 2.864 | 2.865 | 2.856 | 2.861 | 2.860 | 2.871 | 2.850 | 2.863 | 2.869 | 2.844 | 2.842 | 2.861 |
| N° 19 | 2.857 | 2.860 | 2.846 | 2.854 | 2.851 | 2.853 | 2.838 | 2.855 | 2.865 | 2.823 | 2.845 | 2.851 |
| N° 20 | 2.854 | 2.863 | 2.854 | 2.865 | 2.863 | 2.861 | 2.848 | 2.856 | 2.860 | 2.850 | 2.867 | 2.863 |
| N° 21 | 2.865 | 2.866 | 2.856 | 2.863 | 2.862 | 2.862 | 2.851 | 2.867 | 2.870 | 2.854 | 2.868 | 2.851 |
| N° 22 | 2.863 | 2.863 | 2.853 | 2.862 | 2.860 | 2.858 | 2.849 | 2.862 | 2.862 | 2.854 | 2.859 | 2.860 |
| N° 23 | 2.866 | 2.866 | 2.857 | 2.863 | 2.861 | 2.862 | 2.850 | 2.863 | 2.843 | 2.846 | 2.864 | 2.840 |
| N° 24 | 2.863 | 2.865 | 2.854 | 2.862 | 2.861 | 2.861 | 2.850 | 2.863 | 2.868 | 2.856 | 2.860 | 2.861 |
| N° 25 | 2.864 | 2.861 | 2.853 | 2.862 | 2.861 | 2.861 | 2.848 | 2.862 | 2.869 | 2.855 | 2.864 | 2.860 |
| N° 26 | 2.866 | 2.865 | 2.855 | 2.864 | 2.862 | 2.864 | 2.850 | 2.866 | 2.865 | 2.842 | 2.864 | 2.865 |
| N° 27 | 2.865 | 2.865 | 2.855 | 2.862 | 2.862 | 2.860 | 2.850 | 2.863 | 2.866 | 2.856 | 2.860 | 2.862 |
| N° 28 | 2.865 | 2.865 | 2.854 | 2.862 | 2.860 | 2.861 | 2.849 | 2.863 | 2.866 | 2.854 | 2.860 | 2.861 |
| N° 29 | 2.868 | 2.867 | 2.859 | 2.866 | 2.863 | 2.863 | 2.852 | 2.868 | 2.865 | 2.851 | 2.859 | 2.864 |
| N° 30 | 2.863 | 2.863 | 2.852 | 2.860 | 2.857 | 2.860 | 2.852 | 2.861 | 2.862 | 2.852 | 2.858 | 2.859 |
| N° 31 | 2.867 | 2.866 | 2.854 | 2.862 | 2.861 | 2.867 | 2.850 | 2.863 | 2.867 | 2.856 | 2.863 | 2.863 |

# 110. +VOP1, Module 1

**Ta=25°C; +VCC=30V; -VCC=GND; VO=+30V; RL=10kOhms**

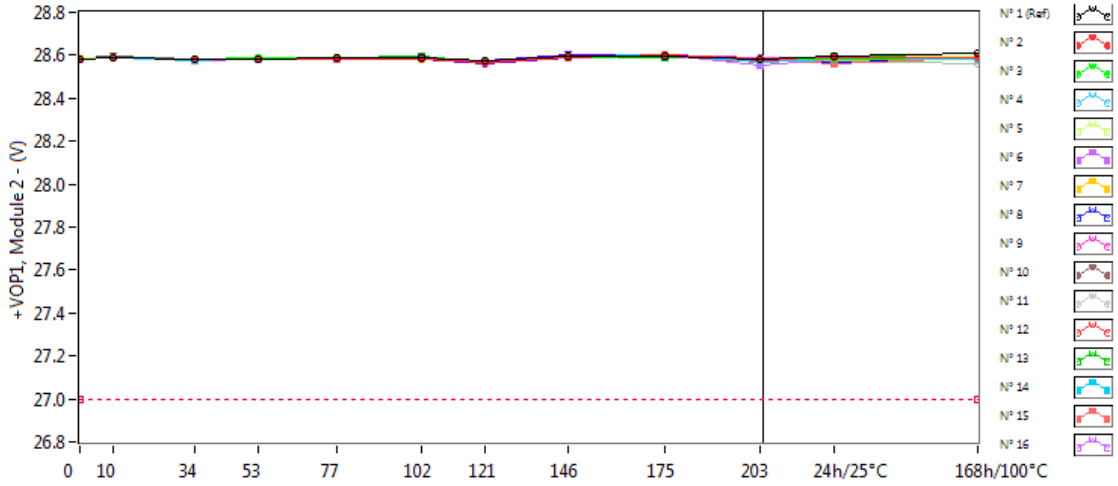



**+VOP1, Module 1 . (V)** **Min = 27.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 28.585 | 28.589 | 28.582 | 28.583 | 28.583 | 28.588 | 28.576 | 28.597 | 28.596 | 28.579 | 28.595 | 28.606 |
| N° 2 | 28.586 | 28.588 | 28.581 | 28.585 | 28.580 | 28.583 | 28.568 | 28.589 | 28.602 | 28.582 | 28.585 | 28.593 |
| N° 3 | 28.584 | 28.586 | 28.578 | 28.585 | 28.583 | 28.580 | 28.567 | 28.594 | 28.596 | 28.581 | 28.584 | 28.587 |
| N° 4 | 28.584 | 28.586 | 28.576 | 28.588 | 28.585 | 28.584 | 28.568 | 28.596 | 28.601 | 28.572 | 28.586 | 28.583 |
| N° 5 | 28.587 | 28.592 | 28.581 | 28.587 | 28.586 | 28.594 | 28.572 | 28.599 | 28.605 | 28.583 | 28.590 | 28.596 |
| N° 6 | 28.585 | 28.586 | 28.577 | 28.582 | 28.582 | 28.585 | 28.568 | 28.594 | 28.602 | 28.558 | 28.587 | 28.593 |
| N° 7 | 28.585 | 28.588 | 28.578 | 28.585 | 28.585 | 28.584 | 28.567 | 28.595 | 28.601 | 28.580 | 28.586 | 28.591 |
| N° 8 | 28.584 | 28.586 | 28.574 | 28.582 | 28.579 | 28.589 | 28.567 | 28.587 | 28.595 | 28.579 | 28.583 | 28.590 |
| N° 9 | 28.589 | 28.591 | 28.581 | 28.585 | 28.586 | 28.588 | 28.571 | 28.593 | 28.600 | 28.584 | 28.586 | 28.587 |
| N° 10 | 28.585 | 28.586 | 28.576 | 28.580 | 28.580 | 28.576 | 28.570 | 28.588 | 28.593 | 28.565 | 28.584 | 28.588 |
| N° 11 | 28.588 | 28.589 | 28.579 | 28.586 | 28.585 | 28.586 | 28.572 | 28.596 | 28.596 | 28.579 | 28.591 | 28.591 |
| N° 12 | 28.584 | 28.587 | 28.575 | 28.586 | 28.581 | 28.584 | 28.569 | 28.596 | 28.592 | 28.578 | 28.584 | 28.586 |
| N° 13 | 28.591 | 28.591 | 28.580 | 28.587 | 28.587 | 28.594 | 28.572 | 28.596 | 28.588 | 28.586 | 28.597 | 28.593 |
| N° 14 | 28.589 | 28.589 | 28.586 | 28.581 | 28.585 | 28.584 | 28.570 | 28.592 | 28.595 | 28.580 | 28.588 | 28.595 |
| N° 15 | 28.587 | 28.588 | 28.578 | 28.579 | 28.583 | 28.585 | 28.567 | 28.592 | 28.601 | 28.581 | 28.564 | 28.590 |
| N° 16 | 28.588 | 28.587 | 28.578 | 28.581 | 28.586 | 28.596 | 28.570 | 28.592 | 28.601 | 28.577 | 28.588 | 28.595 |
| N° 17 | 28.586 | 28.588 | 28.577 | 28.585 | 28.587 | 28.586 | 28.569 | 28.590 | 28.599 | 28.579 | 28.584 | 28.592 |
| N° 18 | 28.586 | 28.589 | 28.580 | 28.586 | 28.584 | 28.600 | 28.571 | 28.593 | 28.602 | 28.577 | 28.583 | 28.593 |
| N° 19 | 28.582 | 28.588 | 28.573 | 28.580 | 28.582 | 28.581 | 28.563 | 28.585 | 28.601 | 28.569 | 28.581 | 28.584 |
| N° 20 | 28.582 | 28.587 | 28.577 | 28.590 | 28.590 | 28.586 | 28.569 | 28.588 | 28.592 | 28.579 | 28.576 | 28.562 |
| N° 21 | 28.587 | 28.589 | 28.580 | 28.588 | 28.588 | 28.588 | 28.571 | 28.597 | 28.603 | 28.584 | 28.600 | 28.586 |
| N° 22 | 28.584 | 28.588 | 28.576 | 28.588 | 28.585 | 28.584 | 28.570 | 28.593 | 28.596 | 28.580 | 28.588 | 28.591 |
| N° 23 | 28.588 | 28.591 | 28.581 | 28.587 | 28.589 | 28.590 | 28.572 | 28.594 | 28.595 | 28.581 | 28.594 | 28.584 |
| N° 24 | 28.585 | 28.588 | 28.577 | 28.587 | 28.586 | 28.587 | 28.568 | 28.593 | 28.600 | 28.580 | 28.588 | 28.590 |
| N° 25 | 28.586 | 28.587 | 28.576 | 28.587 | 28.587 | 28.588 | 28.568 | 28.589 | 28.603 | 28.579 | 28.596 | 28.591 |
| N° 26 | 28.586 | 28.588 | 28.576 | 28.589 | 28.588 | 28.591 | 28.569 | 28.595 | 28.595 | 28.574 | 28.571 | 28.595 |
| N° 27 | 28.587 | 28.589 | 28.578 | 28.585 | 28.588 | 28.585 | 28.570 | 28.592 | 28.597 | 28.579 | 28.590 | 28.592 |
| N° 28 | 28.588 | 28.590 | 28.578 | 28.588 | 28.585 | 28.587 | 28.570 | 28.594 | 28.598 | 28.579 | 28.590 | 28.593 |
| N° 29 | 28.590 | 28.593 | 28.584 | 28.591 | 28.588 | 28.589 | 28.572 | 28.599 | 28.598 | 28.578 | 28.590 | 28.594 |
| N° 30 | 28.586 | 28.588 | 28.576 | 28.585 | 28.583 | 28.588 | 28.574 | 28.591 | 28.597 | 28.577 | 28.587 | 28.589 |
| N° 31 | 28.589 | 28.590 | 28.578 | 28.587 | 28.586 | 28.596 | 28.570 | 28.592 | 28.599 | 28.581 | 28.594 | 28.593 |

# 111. +VOP1, Module 2

**Ta=25°C; +VCC=30V; -VCC=GND; VO=+30V; RL=10kOhms**

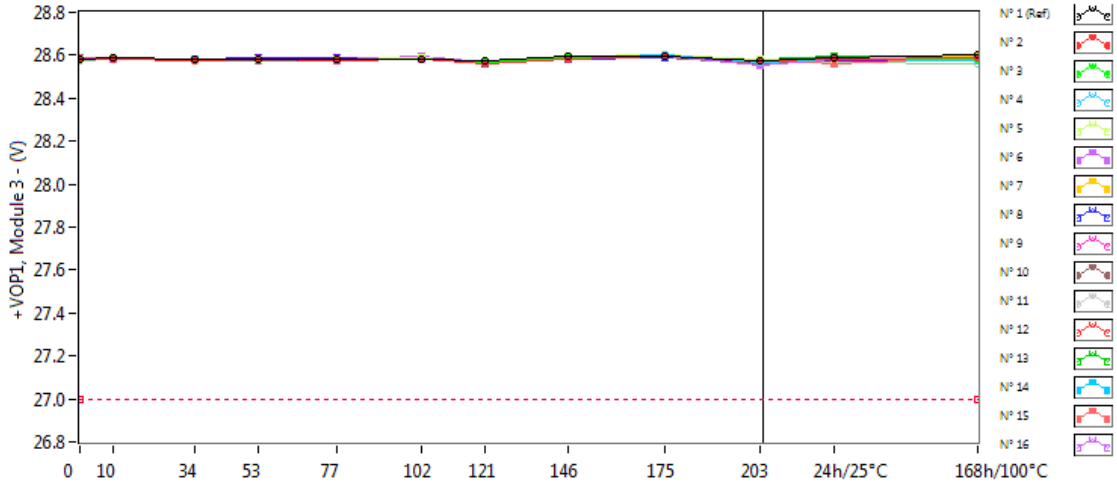



**+VOP1, Module 2 . (V)** **Min = 27.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 28.585 | 28.590 | 28.584 | 28.585 | 28.586 | 28.589 | 28.576 | 28.598 | 28.596 | 28.582 | 28.595 | 28.607 |
| N° 2 | 28.585 | 28.588 | 28.582 | 28.585 | 28.581 | 28.583 | 28.568 | 28.588 | 28.602 | 28.582 | 28.587 | 28.591 |
| N° 3 | 28.584 | 28.586 | 28.579 | 28.586 | 28.583 | 28.582 | 28.568 | 28.592 | 28.597 | 28.579 | 28.585 | 28.588 |
| N° 4 | 28.584 | 28.587 | 28.577 | 28.587 | 28.586 | 28.583 | 28.567 | 28.593 | 28.601 | 28.571 | 28.585 | 28.583 |
| N° 5 | 28.588 | 28.592 | 28.581 | 28.588 | 28.588 | 28.584 | 28.572 | 28.597 | 28.606 | 28.584 | 28.590 | 28.597 |
| N° 6 | 28.585 | 28.586 | 28.577 | 28.582 | 28.581 | 28.585 | 28.568 | 28.592 | 28.600 | 28.557 | 28.585 | 28.590 |
| N° 7 | 28.587 | 28.588 | 28.579 | 28.584 | 28.584 | 28.584 | 28.569 | 28.594 | 28.600 | 28.583 | 28.589 | 28.592 |
| N° 8 | 28.585 | 28.587 | 28.575 | 28.581 | 28.580 | 28.590 | 28.567 | 28.586 | 28.595 | 28.580 | 28.583 | 28.591 |
| N° 9 | 28.590 | 28.592 | 28.582 | 28.586 | 28.585 | 28.590 | 28.572 | 28.594 | 28.600 | 28.586 | 28.588 | 28.588 |
| N° 10 | 28.586 | 28.589 | 28.575 | 28.581 | 28.587 | 28.591 | 28.571 | 28.590 | 28.593 | 28.567 | 28.583 | 28.591 |
| N° 11 | 28.588 | 28.591 | 28.579 | 28.586 | 28.585 | 28.586 | 28.572 | 28.595 | 28.597 | 28.579 | 28.591 | 28.592 |
| N° 12 | 28.585 | 28.588 | 28.575 | 28.584 | 28.580 | 28.583 | 28.569 | 28.596 | 28.593 | 28.577 | 28.582 | 28.587 |
| N° 13 | 28.590 | 28.591 | 28.580 | 28.587 | 28.586 | 28.593 | 28.571 | 28.596 | 28.592 | 28.584 | 28.598 | 28.594 |
| N° 14 | 28.590 | 28.590 | 28.585 | 28.581 | 28.585 | 28.584 | 28.570 | 28.592 | 28.594 | 28.582 | 28.586 | 28.593 |
| N° 15 | 28.588 | 28.588 | 28.577 | 28.580 | 28.584 | 28.584 | 28.568 | 28.593 | 28.602 | 28.582 | 28.564 | 28.590 |
| N° 16 | 28.587 | 28.590 | 28.579 | 28.580 | 28.587 | 28.595 | 28.570 | 28.593 | 28.601 | 28.577 | 28.589 | 28.594 |
| N° 17 | 28.586 | 28.587 | 28.577 | 28.585 | 28.586 | 28.585 | 28.569 | 28.591 | 28.597 | 28.580 | 28.587 | 28.594 |
| N° 18 | 28.585 | 28.590 | 28.579 | 28.585 | 28.585 | 28.598 | 28.571 | 28.591 | 28.600 | 28.575 | 28.584 | 28.592 |
| N° 19 | 28.583 | 28.589 | 28.574 | 28.581 | 28.581 | 28.583 | 28.564 | 28.589 | 28.602 | 28.569 | 28.580 | 28.586 |
| N° 20 | 28.582 | 28.589 | 28.578 | 28.589 | 28.589 | 28.586 | 28.569 | 28.589 | 28.592 | 28.579 | 28.577 | 28.564 |
| N° 21 | 28.588 | 28.592 | 28.581 | 28.588 | 28.588 | 28.589 | 28.572 | 28.596 | 28.603 | 28.582 | 28.598 | 28.587 |
| N° 22 | 28.586 | 28.589 | 28.578 | 28.588 | 28.587 | 28.585 | 28.571 | 28.594 | 28.597 | 28.580 | 28.590 | 28.591 |
| N° 23 | 28.588 | 28.593 | 28.580 | 28.589 | 28.587 | 28.590 | 28.573 | 28.593 | 28.593 | 28.580 | 28.593 | 28.584 |
| N° 24 | 28.585 | 28.591 | 28.580 | 28.586 | 28.586 | 28.588 | 28.571 | 28.591 | 28.603 | 28.581 | 28.589 | 28.592 |
| N° 25 | 28.586 | 28.588 | 28.577 | 28.588 | 28.585 | 28.588 | 28.569 | 28.591 | 28.602 | 28.580 | 28.595 | 28.589 |
| N° 26 | 28.587 | 28.589 | 28.576 | 28.588 | 28.586 | 28.590 | 28.570 | 28.596 | 28.595 | 28.577 | 28.571 | 28.595 |
| N° 27 | 28.588 | 28.591 | 28.579 | 28.586 | 28.589 | 28.586 | 28.570 | 28.591 | 28.599 | 28.579 | 28.591 | 28.592 |
| N° 28 | 28.588 | 28.591 | 28.580 | 28.588 | 28.587 | 28.588 | 28.571 | 28.594 | 28.600 | 28.579 | 28.590 | 28.592 |
| N° 29 | 28.591 | 28.594 | 28.584 | 28.592 | 28.589 | 28.590 | 28.572 | 28.600 | 28.598 | 28.582 | 28.590 | 28.594 |
| N° 30 | 28.585 | 28.588 | 28.576 | 28.585 | 28.583 | 28.586 | 28.573 | 28.590 | 28.596 | 28.577 | 28.588 | 28.589 |
| N° 31 | 28.588 | 28.593 | 28.578 | 28.587 | 28.587 | 28.595 | 28.571 | 28.593 | 28.601 | 28.581 | 28.592 | 28.593 |

# 112. +VOP1, Module 3

**Ta=25°C; +VCC=30V; -VCC=GND; VO=+30V; RL=10kOhms**

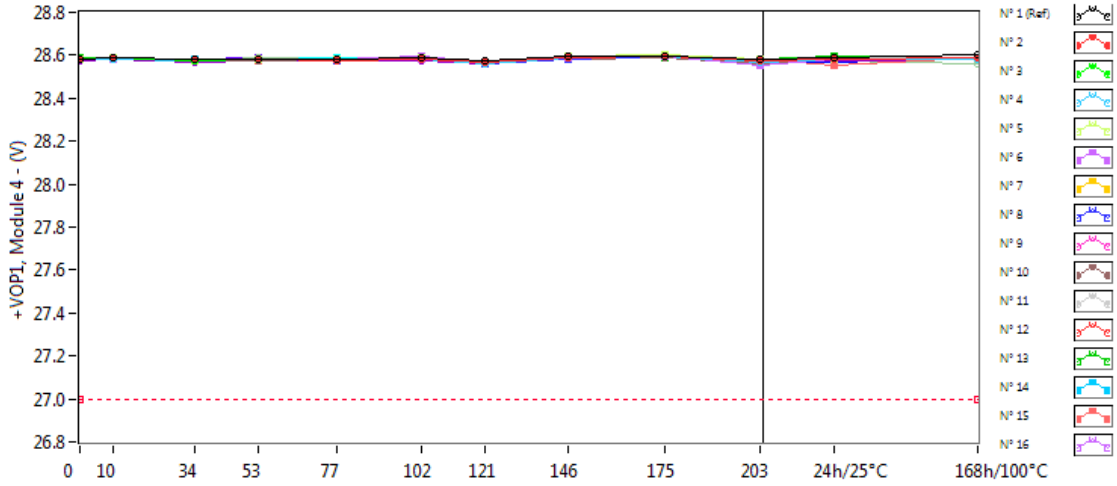



**+VOP1, Module 3 . (V)** **Min = 27.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 28.582 | 28.587 | 28.580 | 28.582 | 28.580 | 28.585 | 28.573 | 28.593 | 28.594 | 28.577 | 28.590 | 28.605 |
| N° 2 | 28.581 | 28.585 | 28.577 | 28.580 | 28.578 | 28.579 | 28.563 | 28.584 | 28.596 | 28.577 | 28.580 | 28.588 |
| N° 3 | 28.580 | 28.583 | 28.576 | 28.582 | 28.579 | 28.579 | 28.565 | 28.591 | 28.593 | 28.577 | 28.582 | 28.584 |
| N° 4 | 28.581 | 28.586 | 28.574 | 28.584 | 28.581 | 28.579 | 28.564 | 28.590 | 28.600 | 28.566 | 28.582 | 28.578 |
| N° 5 | 28.584 | 28.588 | 28.577 | 28.582 | 28.585 | 28.589 | 28.568 | 28.593 | 28.601 | 28.580 | 28.584 | 28.591 |
| N° 6 | 28.581 | 28.583 | 28.573 | 28.579 | 28.577 | 28.580 | 28.565 | 28.589 | 28.595 | 28.555 | 28.580 | 28.588 |
| N° 7 | 28.583 | 28.586 | 28.576 | 28.580 | 28.581 | 28.581 | 28.566 | 28.590 | 28.596 | 28.578 | 28.584 | 28.588 |
| N° 8 | 28.582 | 28.583 | 28.572 | 28.580 | 28.578 | 28.588 | 28.564 | 28.584 | 28.592 | 28.576 | 28.580 | 28.588 |
| N° 9 | 28.587 | 28.588 | 28.578 | 28.582 | 28.583 | 28.585 | 28.570 | 28.591 | 28.596 | 28.581 | 28.583 | 28.586 |
| N° 10 | 28.583 | 28.587 | 28.574 | 28.577 | 28.579 | 28.587 | 28.566 | 28.586 | 28.590 | 28.563 | 28.580 | 28.588 |
| N° 11 | 28.586 | 28.587 | 28.576 | 28.582 | 28.580 | 28.583 | 28.569 | 28.590 | 28.591 | 28.577 | 28.587 | 28.589 |
| N° 12 | 28.581 | 28.584 | 28.572 | 28.581 | 28.578 | 28.580 | 28.567 | 28.590 | 28.592 | 28.573 | 28.580 | 28.583 |
| N° 13 | 28.587 | 28.589 | 28.578 | 28.583 | 28.583 | 28.590 | 28.569 | 28.594 | 28.590 | 28.582 | 28.594 | 28.592 |
| N° 14 | 28.586 | 28.585 | 28.583 | 28.579 | 28.582 | 28.581 | 28.568 | 28.589 | 28.590 | 28.578 | 28.585 | 28.591 |
| N° 15 | 28.584 | 28.585 | 28.574 | 28.576 | 28.579 | 28.580 | 28.562 | 28.587 | 28.598 | 28.579 | 28.558 | 28.587 |
| N° 16 | 28.584 | 28.583 | 28.574 | 28.578 | 28.583 | 28.593 | 28.567 | 28.588 | 28.598 | 28.576 | 28.584 | 28.589 |
| N° 17 | 28.584 | 28.585 | 28.575 | 28.583 | 28.584 | 28.582 | 28.567 | 28.587 | 28.596 | 28.578 | 28.584 | 28.593 |
| N° 18 | 28.583 | 28.587 | 28.577 | 28.582 | 28.583 | 28.595 | 28.567 | 28.590 | 28.598 | 28.573 | 28.579 | 28.590 |
| N° 19 | 28.579 | 28.586 | 28.572 | 28.578 | 28.578 | 28.579 | 28.561 | 28.585 | 28.598 | 28.566 | 28.577 | 28.581 |
| N° 20 | 28.576 | 28.583 | 28.573 | 28.584 | 28.585 | 28.581 | 28.564 | 28.583 | 28.588 | 28.575 | 28.571 | 28.559 |
| N° 21 | 28.584 | 28.588 | 28.578 | 28.584 | 28.584 | 28.586 | 28.568 | 28.592 | 28.598 | 28.578 | 28.595 | 28.586 |
| N° 22 | 28.583 | 28.586 | 28.575 | 28.585 | 28.583 | 28.582 | 28.567 | 28.590 | 28.595 | 28.575 | 28.586 | 28.588 |
| N° 23 | 28.586 | 28.591 | 28.577 | 28.584 | 28.584 | 28.586 | 28.569 | 28.590 | 28.590 | 28.577 | 28.589 | 28.580 |
| N° 24 | 28.581 | 28.585 | 28.575 | 28.582 | 28.583 | 28.584 | 28.566 | 28.587 | 28.596 | 28.577 | 28.584 | 28.586 |
| N° 25 | 28.583 | 28.585 | 28.574 | 28.583 | 28.583 | 28.584 | 28.565 | 28.588 | 28.600 | 28.577 | 28.593 | 28.588 |
| N° 26 | 28.583 | 28.586 | 28.574 | 28.585 | 28.583 | 28.585 | 28.565 | 28.592 | 28.591 | 28.572 | 28.568 | 28.592 |
| N° 27 | 28.585 | 28.588 | 28.576 | 28.583 | 28.585 | 28.582 | 28.566 | 28.588 | 28.595 | 28.577 | 28.586 | 28.588 |
| N° 28 | 28.585 | 28.590 | 28.576 | 28.585 | 28.583 | 28.585 | 28.567 | 28.591 | 28.597 | 28.578 | 28.586 | 28.590 |
| N° 29 | 28.587 | 28.590 | 28.579 | 28.589 | 28.587 | 28.587 | 28.570 | 28.597 | 28.593 | 28.577 | 28.585 | 28.593 |
| N° 30 | 28.583 | 28.585 | 28.574 | 28.580 | 28.579 | 28.583 | 28.570 | 28.589 | 28.595 | 28.573 | 28.585 | 28.586 |
| N° 31 | 28.586 | 28.589 | 28.576 | 28.583 | 28.584 | 28.592 | 28.568 | 28.588 | 28.596 | 28.579 | 28.590 | 28.593 |

# 113. +VOP1, Module 4

**Ta=25°C; +VCC=30V; -VCC=GND; VO=+30V; RL=10kOhms**

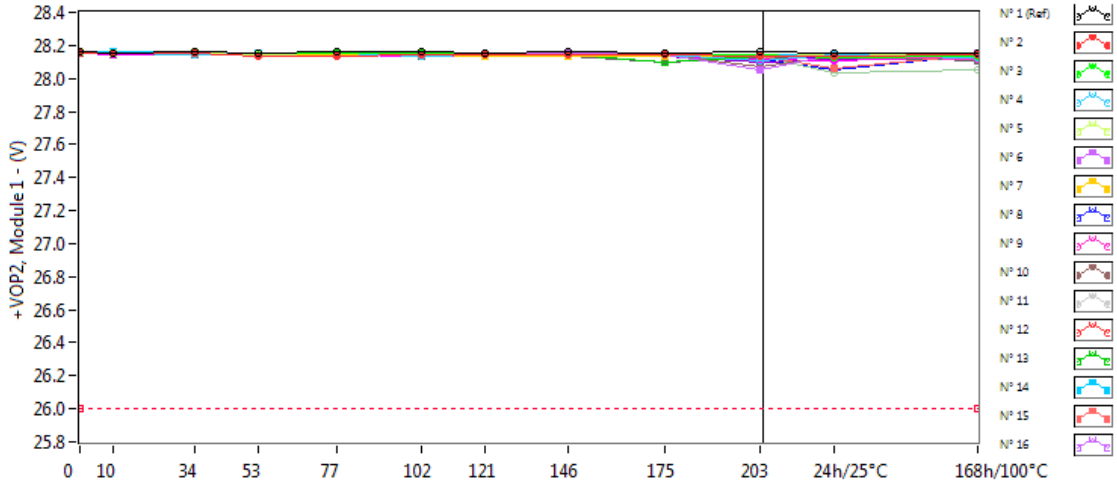



**+VOP1, Module 4 . (V)** **Min = 27.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 28.582 | 28.588 | 28.582 | 28.582 | 28.581 | 28.586 | 28.573 | 28.595 | 28.595 | 28.580 | 28.592 | 28.605 |
| N° 2 | 28.583 | 28.586 | 28.579 | 28.582 | 28.577 | 28.581 | 28.566 | 28.587 | 28.596 | 28.578 | 28.582 | 28.589 |
| N° 3 | 28.582 | 28.586 | 28.576 | 28.582 | 28.579 | 28.579 | 28.565 | 28.590 | 28.595 | 28.576 | 28.583 | 28.586 |
| N° 4 | 28.580 | 28.584 | 28.573 | 28.583 | 28.581 | 28.579 | 28.564 | 28.591 | 28.596 | 28.568 | 28.582 | 28.579 |
| N° 5 | 28.585 | 28.588 | 28.578 | 28.583 | 28.585 | 28.588 | 28.569 | 28.593 | 28.602 | 28.581 | 28.584 | 28.591 |
| N° 6 | 28.583 | 28.584 | 28.574 | 28.581 | 28.580 | 28.582 | 28.565 | 28.591 | 28.596 | 28.557 | 28.582 | 28.588 |
| N° 7 | 28.584 | 28.586 | 28.576 | 28.581 | 28.582 | 28.581 | 28.566 | 28.590 | 28.597 | 28.578 | 28.585 | 28.591 |
| N° 8 | 28.582 | 28.584 | 28.574 | 28.580 | 28.577 | 28.586 | 28.564 | 28.584 | 28.593 | 28.575 | 28.580 | 28.586 |
| N° 9 | 28.585 | 28.590 | 28.579 | 28.583 | 28.583 | 28.585 | 28.569 | 28.589 | 28.597 | 28.581 | 28.585 | 28.586 |
| N° 10 | 28.583 | 28.585 | 28.573 | 28.578 | 28.579 | 28.586 | 28.566 | 28.583 | 28.590 | 28.563 | 28.581 | 28.587 |
| N° 11 | 28.585 | 28.587 | 28.576 | 28.582 | 28.579 | 28.583 | 28.570 | 28.590 | 28.595 | 28.576 | 28.588 | 28.589 |
| N° 12 | 28.582 | 28.584 | 28.573 | 28.581 | 28.577 | 28.581 | 28.568 | 28.592 | 28.591 | 28.576 | 28.582 | 28.584 |
| N° 13 | 28.586 | 28.589 | 28.577 | 28.583 | 28.583 | 28.589 | 28.569 | 28.595 | 28.589 | 28.582 | 28.594 | 28.591 |
| N° 14 | 28.586 | 28.585 | 28.583 | 28.580 | 28.581 | 28.581 | 28.567 | 28.589 | 28.591 | 28.580 | 28.582 | 28.590 |
| N° 15 | 28.585 | 28.584 | 28.574 | 28.576 | 28.582 | 28.582 | 28.565 | 28.589 | 28.600 | 28.579 | 28.556 | 28.588 |
| N° 16 | 28.585 | 28.585 | 28.575 | 28.578 | 28.583 | 28.593 | 28.567 | 28.590 | 28.596 | 28.575 | 28.584 | 28.590 |
| N° 17 | 28.583 | 28.585 | 28.574 | 28.581 | 28.583 | 28.582 | 28.566 | 28.588 | 28.594 | 28.577 | 28.583 | 28.589 |
| N° 18 | 28.583 | 28.587 | 28.577 | 28.582 | 28.581 | 28.595 | 28.567 | 28.591 | 28.598 | 28.574 | 28.581 | 28.591 |
| N° 19 | 28.577 | 28.582 | 28.570 | 28.576 | 28.577 | 28.577 | 28.560 | 28.582 | 28.595 | 28.565 | 28.577 | 28.581 |
| N° 20 | 28.579 | 28.585 | 28.575 | 28.586 | 28.585 | 28.583 | 28.566 | 28.584 | 28.591 | 28.577 | 28.573 | 28.562 |
| N° 21 | 28.585 | 28.589 | 28.578 | 28.585 | 28.586 | 28.586 | 28.568 | 28.594 | 28.600 | 28.580 | 28.594 | 28.585 |
| N° 22 | 28.582 | 28.585 | 28.574 | 28.583 | 28.583 | 28.582 | 28.567 | 28.589 | 28.593 | 28.576 | 28.585 | 28.588 |
| N° 23 | 28.585 | 28.589 | 28.578 | 28.584 | 28.584 | 28.586 | 28.568 | 28.590 | 28.592 | 28.576 | 28.590 | 28.582 |
| N° 24 | 28.582 | 28.587 | 28.575 | 28.582 | 28.584 | 28.584 | 28.567 | 28.590 | 28.597 | 28.577 | 28.586 | 28.588 |
| N° 25 | 28.583 | 28.585 | 28.574 | 28.584 | 28.583 | 28.584 | 28.567 | 28.589 | 28.599 | 28.577 | 28.592 | 28.587 |
| N° 26 | 28.584 | 28.587 | 28.574 | 28.585 | 28.584 | 28.586 | 28.567 | 28.592 | 28.592 | 28.571 | 28.569 | 28.591 |
| N° 27 | 28.585 | 28.586 | 28.576 | 28.582 | 28.585 | 28.583 | 28.567 | 28.589 | 28.596 | 28.578 | 28.587 | 28.588 |
| N° 28 | 28.585 | 28.588 | 28.576 | 28.583 | 28.583 | 28.585 | 28.567 | 28.591 | 28.595 | 28.576 | 28.587 | 28.589 |
| N° 29 | 28.588 | 28.590 | 28.580 | 28.588 | 28.586 | 28.587 | 28.570 | 28.596 | 28.594 | 28.577 | 28.588 | 28.591 |
| N° 30 | 28.583 | 28.586 | 28.573 | 28.581 | 28.581 | 28.584 | 28.571 | 28.587 | 28.593 | 28.574 | 28.584 | 28.586 |
| N° 31 | 28.586 | 28.589 | 28.577 | 28.583 | 28.584 | 28.591 | 28.567 | 28.589 | 28.595 | 28.579 | 28.590 | 28.591 |

# 114. +VOP2, Module 1

**Ta=25°C; +VCC=30V; -VCC=GND; VO=+30V; RL=2kOhms**

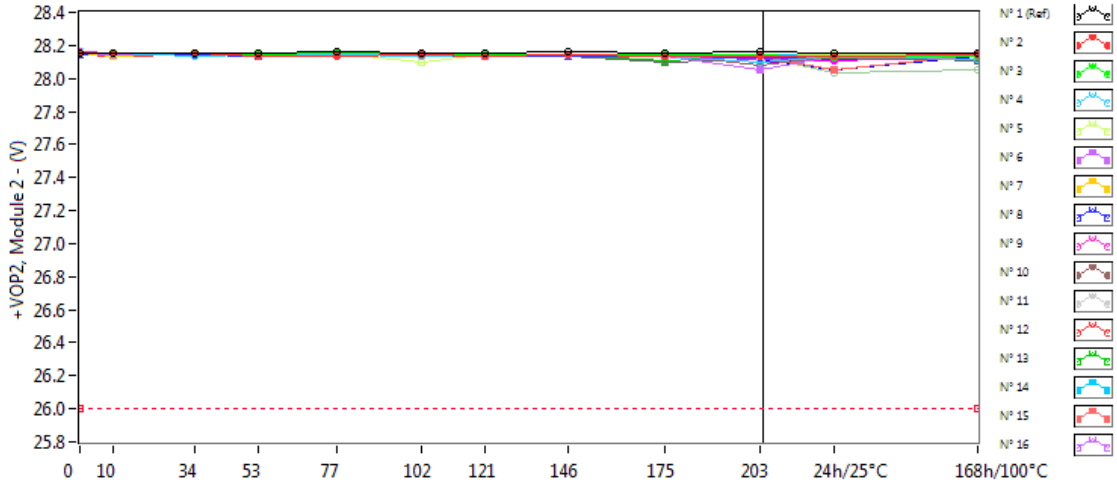



**+VOP2, Module 1 . (V)** **Min = 26.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 28.160 | 28.155 | 28.160 | 28.150 | 28.158 | 28.159 | 28.155 | 28.160 | 28.157 | 28.158 | 28.155 | 28.157 |
| N° 2 | 28.161 | 28.153 | 28.154 | 28.139 | 28.138 | 28.147 | 28.142 | 28.145 | 28.141 | 28.138 | 28.138 | 28.147 |
| N° 3 | 28.166 | 28.157 | 28.158 | 28.151 | 28.155 | 28.151 | 28.145 | 28.148 | 28.146 | 28.143 | 28.126 | 28.138 |
| N° 4 | 28.164 | 28.155 | 28.140 | 28.149 | 28.151 | 28.138 | 28.144 | 28.144 | 28.141 | 28.111 | 28.142 | 28.124 |
| N° 5 | 28.161 | 28.154 | 28.158 | 28.148 | 28.152 | 28.143 | 28.145 | 28.144 | 28.141 | 28.133 | 28.142 | 28.146 |
| N° 6 | 28.165 | 28.151 | 28.160 | 28.145 | 28.154 | 28.148 | 28.143 | 28.150 | 28.140 | 28.050 | 28.141 | 28.152 |
| N° 7 | 28.159 | 28.149 | 28.153 | 28.144 | 28.148 | 28.144 | 28.139 | 28.138 | 28.138 | 28.134 | 28.135 | 28.141 |
| N° 8 | 28.158 | 28.149 | 28.152 | 28.142 | 28.147 | 28.140 | 28.140 | 28.142 | 28.138 | 28.134 | 28.137 | 28.142 |
| N° 9 | 28.159 | 28.152 | 28.154 | 28.147 | 28.146 | 28.144 | 28.140 | 28.142 | 28.139 | 28.136 | 28.137 | 28.112 |
| N° 10 | 28.162 | 28.154 | 28.155 | 28.150 | 28.139 | 28.142 | 28.145 | 28.146 | 28.147 | 28.070 | 28.139 | 28.150 |
| N° 11 | 28.159 | 28.152 | 28.154 | 28.147 | 28.151 | 28.141 | 28.139 | 28.142 | 28.140 | 28.136 | 28.139 | 28.143 |
| N° 12 | 28.157 | 28.153 | 28.152 | 28.142 | 28.147 | 28.142 | 28.136 | 28.139 | 28.137 | 28.136 | 28.136 | 28.134 |
| N° 13 | 28.160 | 28.152 | 28.155 | 28.146 | 28.151 | 28.142 | 28.141 | 28.142 | 28.099 | 28.139 | 28.137 | 28.146 |
| N° 14 | 28.164 | 28.158 | 28.159 | 28.153 | 28.155 | 28.151 | 28.147 | 28.150 | 28.148 | 28.144 | 28.142 | 28.150 |
| N° 15 | 28.160 | 28.153 | 28.156 | 28.149 | 28.152 | 28.145 | 28.141 | 28.144 | 28.142 | 28.135 | 28.061 | 28.145 |
| N° 16 | 28.161 | 28.155 | 28.157 | 28.150 | 28.151 | 28.144 | 28.141 | 28.146 | 28.142 | 28.132 | 28.137 | 28.148 |
| N° 17 | 28.160 | 28.155 | 28.155 | 28.148 | 28.153 | 28.149 | 28.145 | 28.147 | 28.146 | 28.141 | 28.143 | 28.147 |
| N° 18 | 28.157 | 28.148 | 28.152 | 28.140 | 28.145 | 28.136 | 28.137 | 28.139 | 28.134 | 28.116 | 28.110 | 28.139 |
| N° 19 | 28.157 | 28.149 | 28.148 | 28.146 | 28.145 | 28.142 | 28.132 | 28.140 | 28.138 | 28.095 | 28.120 | 28.142 |
| N° 20 | 28.155 | 28.155 | 28.158 | 28.149 | 28.153 | 28.147 | 28.145 | 28.143 | 28.139 | 28.134 | 28.033 | 28.049 |
| N° 21 | 28.163 | 28.154 | 28.156 | 28.148 | 28.153 | 28.148 | 28.143 | 28.147 | 28.144 | 28.138 | 28.141 | 28.132 |
| N° 22 | 28.162 | 28.153 | 28.157 | 28.148 | 28.152 | 28.148 | 28.143 | 28.146 | 28.136 | 28.140 | 28.141 | 28.150 |
| N° 23 | 28.154 | 28.145 | 28.148 | 28.142 | 28.144 | 28.138 | 28.134 | 28.136 | 28.097 | 28.121 | 28.133 | 28.105 |
| N° 24 | 28.158 | 28.151 | 28.154 | 28.147 | 28.151 | 28.144 | 28.140 | 28.141 | 28.140 | 28.138 | 28.139 | 28.146 |
| N° 25 | 28.160 | 28.149 | 28.156 | 28.148 | 28.150 | 28.146 | 28.142 | 28.145 | 28.141 | 28.140 | 28.134 | 28.146 |
| N° 26 | 28.155 | 28.147 | 28.151 | 28.141 | 28.147 | 28.138 | 28.137 | 28.138 | 28.139 | 28.116 | 28.055 | 28.142 |
| N° 27 | 28.159 | 28.151 | 28.155 | 28.146 | 28.152 | 28.146 | 28.143 | 28.145 | 28.140 | 28.139 | 28.137 | 28.148 |
| N° 28 | 28.161 | 28.152 | 28.155 | 28.147 | 28.152 | 28.145 | 28.144 | 28.144 | 28.144 | 28.140 | 28.142 | 28.146 |
| N° 29 | 28.160 | 28.153 | 28.155 | 28.146 | 28.151 | 28.144 | 28.143 | 28.141 | 28.140 | 28.118 | 28.137 | 28.147 |
| N° 30 | 28.158 | 28.151 | 28.156 | 28.147 | 28.148 | 28.143 | 28.140 | 28.143 | 28.137 | 28.140 | 28.140 | 28.147 |
| N° 31 | 28.156 | 28.146 | 28.152 | 28.142 | 28.146 | 28.138 | 28.138 | 28.140 | 28.137 | 28.134 | 28.134 | 28.142 |

# 115. +VOP2, Module 2

**Ta=25°C; +VCC=30V; -VCC=GND; VO=+30V; RL=2kOhms**

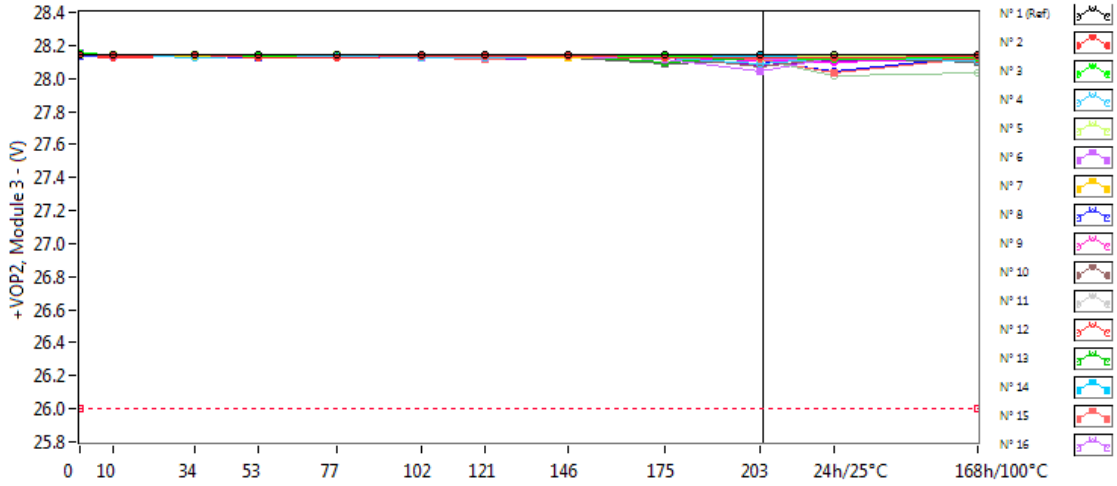



**+VOP2, Module 2 . (V)** **Min = 26.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 28.152 | 28.154 | 28.155 | 28.152 | 28.159 | 28.157 | 28.153 | 28.159 | 28.156 | 28.159 | 28.154 | 28.155 |
| N° 2 | 28.155 | 28.151 | 28.149 | 28.138 | 28.137 | 28.144 | 28.139 | 28.143 | 28.139 | 28.136 | 28.136 | 28.144 |
| N° 3 | 28.157 | 28.155 | 28.156 | 28.147 | 28.152 | 28.148 | 28.143 | 28.146 | 28.143 | 28.140 | 28.124 | 28.139 |
| N° 4 | 28.154 | 28.154 | 28.135 | 28.146 | 28.148 | 28.137 | 28.142 | 28.141 | 28.138 | 28.098 | 28.139 | 28.117 |
| N° 5 | 28.157 | 28.149 | 28.155 | 28.152 | 28.153 | 28.102 | 28.146 | 28.148 | 28.145 | 28.137 | 28.143 | 28.148 |
| N° 6 | 28.155 | 28.146 | 28.152 | 28.143 | 28.149 | 28.144 | 28.136 | 28.144 | 28.132 | 28.049 | 28.135 | 28.147 |
| N° 7 | 28.152 | 28.139 | 28.149 | 28.142 | 28.148 | 28.142 | 28.139 | 28.140 | 28.138 | 28.133 | 28.132 | 28.141 |
| N° 8 | 28.145 | 28.141 | 28.143 | 28.135 | 28.140 | 28.132 | 28.132 | 28.134 | 28.132 | 28.129 | 28.131 | 28.137 |
| N° 9 | 28.158 | 28.153 | 28.153 | 28.142 | 28.151 | 28.145 | 28.140 | 28.144 | 28.134 | 28.137 | 28.139 | 28.115 |
| N° 10 | 28.158 | 28.155 | 28.149 | 28.149 | 28.154 | 28.145 | 28.144 | 28.144 | 28.144 | 28.075 | 28.135 | 28.147 |
| N° 11 | 28.152 | 28.151 | 28.151 | 28.144 | 28.149 | 28.143 | 28.137 | 28.141 | 28.138 | 28.135 | 28.136 | 28.143 |
| N° 12 | 28.147 | 28.137 | 28.145 | 28.137 | 28.143 | 28.136 | 28.132 | 28.136 | 28.134 | 28.132 | 28.132 | 28.130 |
| N° 13 | 28.156 | 28.152 | 28.152 | 28.146 | 28.150 | 28.143 | 28.142 | 28.142 | 28.109 | 28.137 | 28.136 | 28.145 |
| N° 14 | 28.155 | 28.153 | 28.149 | 28.149 | 28.150 | 28.148 | 28.141 | 28.147 | 28.143 | 28.141 | 28.137 | 28.148 |
| N° 15 | 28.151 | 28.149 | 28.149 | 28.144 | 28.149 | 28.141 | 28.139 | 28.140 | 28.136 | 28.132 | 28.056 | 28.141 |
| N° 16 | 28.154 | 28.153 | 28.151 | 28.145 | 28.149 | 28.143 | 28.140 | 28.143 | 28.139 | 28.131 | 28.134 | 28.145 |
| N° 17 | 28.154 | 28.152 | 28.152 | 28.145 | 28.152 | 28.147 | 28.141 | 28.144 | 28.143 | 28.139 | 28.140 | 28.147 |
| N° 18 | 28.148 | 28.145 | 28.146 | 28.141 | 28.146 | 28.135 | 28.135 | 28.137 | 28.136 | 28.112 | 28.108 | 28.136 |
| N° 19 | 28.151 | 28.147 | 28.144 | 28.142 | 28.144 | 28.141 | 28.131 | 28.140 | 28.137 | 28.096 | 28.119 | 28.138 |
| N° 20 | 28.145 | 28.153 | 28.152 | 28.145 | 28.150 | 28.147 | 28.143 | 28.140 | 28.136 | 28.132 | 28.033 | 28.050 |
| N° 21 | 28.158 | 28.155 | 28.153 | 28.150 | 28.152 | 28.147 | 28.143 | 28.147 | 28.145 | 28.139 | 28.140 | 28.136 |
| N° 22 | 28.157 | 28.154 | 28.154 | 28.147 | 28.150 | 28.148 | 28.143 | 28.146 | 28.137 | 28.140 | 28.140 | 28.148 |
| N° 23 | 28.148 | 28.145 | 28.145 | 28.140 | 28.145 | 28.136 | 28.133 | 28.135 | 28.097 | 28.118 | 28.133 | 28.107 |
| N° 24 | 28.157 | 28.155 | 28.155 | 28.148 | 28.151 | 28.146 | 28.142 | 28.146 | 28.141 | 28.139 | 28.142 | 28.146 |
| N° 25 | 28.155 | 28.147 | 28.151 | 28.145 | 28.147 | 28.143 | 28.139 | 28.144 | 28.138 | 28.137 | 28.132 | 28.144 |
| N° 26 | 28.150 | 28.144 | 28.144 | 28.141 | 28.144 | 28.137 | 28.136 | 28.136 | 28.138 | 28.116 | 28.054 | 28.139 |
| N° 27 | 28.155 | 28.152 | 28.154 | 28.148 | 28.148 | 28.144 | 28.142 | 28.144 | 28.141 | 28.137 | 28.135 | 28.145 |
| N° 28 | 28.157 | 28.154 | 28.153 | 28.146 | 28.151 | 28.145 | 28.141 | 28.144 | 28.142 | 28.139 | 28.139 | 28.148 |
| N° 29 | 28.157 | 28.154 | 28.151 | 28.147 | 28.151 | 28.145 | 28.142 | 28.145 | 28.141 | 28.126 | 28.137 | 28.148 |
| N° 30 | 28.156 | 28.153 | 28.153 | 28.148 | 28.150 | 28.144 | 28.140 | 28.144 | 28.139 | 28.139 | 28.140 | 28.146 |
| N° 31 | 28.154 | 28.150 | 28.150 | 28.146 | 28.149 | 28.140 | 28.139 | 28.143 | 28.139 | 28.137 | 28.135 | 28.142 |

# 116. +VOP2, Module 3

**Ta=25°C; +VCC=30V; -VCC=GND; VO=+30V; RL=2kOhms**

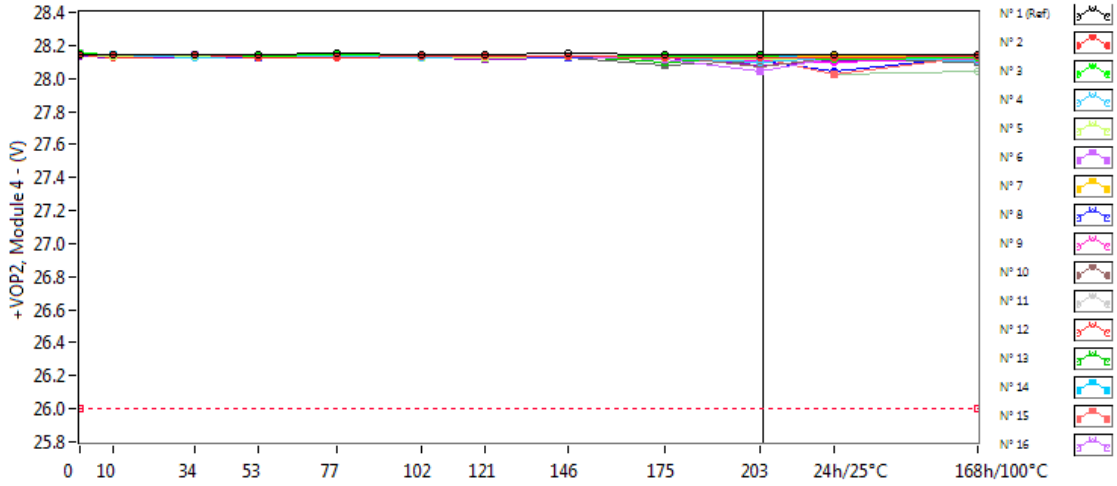



**+VOP2, Module 3 . (V)** **Min = 26.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 28.143 | 28.143 | 28.147 | 28.145 | 28.148 | 28.147 | 28.144 | 28.148 | 28.146 | 28.146 | 28.144 | 28.146 |
| N° 2 | 28.143 | 28.139 | 28.140 | 28.127 | 28.126 | 28.133 | 28.130 | 28.133 | 28.128 | 28.126 | 28.126 | 28.135 |
| N° 3 | 28.149 | 28.143 | 28.144 | 28.137 | 28.143 | 28.138 | 28.133 | 28.134 | 28.133 | 28.129 | 28.117 | 28.129 |
| N° 4 | 28.144 | 28.140 | 28.128 | 28.133 | 28.139 | 28.126 | 28.129 | 28.130 | 28.128 | 28.092 | 28.129 | 28.110 |
| N° 5 | 28.147 | 28.140 | 28.143 | 28.136 | 28.140 | 28.134 | 28.131 | 28.135 | 28.129 | 28.123 | 28.131 | 28.135 |
| N° 6 | 28.141 | 28.133 | 28.140 | 28.130 | 28.137 | 28.124 | 28.123 | 28.132 | 28.118 | 28.039 | 28.123 | 28.136 |
| N° 7 | 28.141 | 28.138 | 28.139 | 28.132 | 28.137 | 28.131 | 28.127 | 28.129 | 28.127 | 28.126 | 28.123 | 28.130 |
| N° 8 | 28.137 | 28.131 | 28.135 | 28.129 | 28.132 | 28.126 | 28.123 | 28.129 | 28.126 | 28.122 | 28.123 | 28.129 |
| N° 9 | 28.145 | 28.138 | 28.140 | 28.134 | 28.139 | 28.134 | 28.129 | 28.131 | 28.129 | 28.128 | 28.128 | 28.110 |
| N° 10 | 28.148 | 28.143 | 28.141 | 28.137 | 28.141 | 28.136 | 28.128 | 28.136 | 28.134 | 28.069 | 28.128 | 28.139 |
| N° 11 | 28.142 | 28.138 | 28.141 | 28.132 | 28.139 | 28.130 | 28.128 | 28.130 | 28.127 | 28.125 | 28.125 | 28.134 |
| N° 12 | 28.133 | 28.125 | 28.135 | 28.127 | 28.132 | 28.127 | 28.122 | 28.124 | 28.126 | 28.121 | 28.121 | 28.120 |
| N° 13 | 28.144 | 28.140 | 28.143 | 28.136 | 28.141 | 28.133 | 28.132 | 28.131 | 28.098 | 28.128 | 28.128 | 28.136 |
| N° 14 | 28.146 | 28.142 | 28.142 | 28.139 | 28.143 | 28.138 | 28.132 | 28.134 | 28.135 | 28.132 | 28.128 | 28.138 |
| N° 15 | 28.141 | 28.138 | 28.137 | 28.133 | 28.137 | 28.129 | 28.116 | 28.130 | 28.127 | 28.119 | 28.032 | 28.128 |
| N° 16 | 28.146 | 28.141 | 28.141 | 28.136 | 28.140 | 28.131 | 28.130 | 28.133 | 28.132 | 28.120 | 28.125 | 28.136 |
| N° 17 | 28.146 | 28.144 | 28.144 | 28.140 | 28.144 | 28.137 | 28.135 | 28.139 | 28.138 | 28.133 | 28.133 | 28.139 |
| N° 18 | 28.140 | 28.135 | 28.138 | 28.130 | 28.136 | 28.123 | 28.125 | 28.129 | 28.127 | 28.107 | 28.100 | 28.126 |
| N° 19 | 28.140 | 28.134 | 28.131 | 28.130 | 28.129 | 28.128 | 28.119 | 28.128 | 28.125 | 28.084 | 28.108 | 28.127 |
| N° 20 | 28.130 | 28.138 | 28.139 | 28.132 | 28.137 | 28.131 | 28.128 | 28.128 | 28.125 | 28.119 | 28.019 | 28.036 |
| N° 21 | 28.145 | 28.141 | 28.142 | 28.137 | 28.142 | 28.136 | 28.131 | 28.136 | 28.133 | 28.129 | 28.129 | 28.122 |
| N° 22 | 28.145 | 28.140 | 28.143 | 28.136 | 28.141 | 28.136 | 28.125 | 28.133 | 28.126 | 28.131 | 28.128 | 28.137 |
| N° 23 | 28.140 | 28.136 | 28.137 | 28.129 | 28.134 | 28.127 | 28.124 | 28.127 | 28.087 | 28.108 | 28.122 | 28.101 |
| N° 24 | 28.141 | 28.137 | 28.137 | 28.130 | 28.137 | 28.128 | 28.126 | 28.130 | 28.128 | 28.126 | 28.126 | 28.133 |
| N° 25 | 28.144 | 28.135 | 28.139 | 28.134 | 28.139 | 28.132 | 28.130 | 28.132 | 28.130 | 28.127 | 28.123 | 28.134 |
| N° 26 | 28.139 | 28.136 | 28.136 | 28.129 | 28.135 | 28.122 | 28.123 | 28.126 | 28.128 | 28.106 | 28.044 | 28.130 |
| N° 27 | 28.144 | 28.139 | 28.141 | 28.137 | 28.141 | 28.134 | 28.130 | 28.133 | 28.131 | 28.131 | 28.125 | 28.135 |
| N° 28 | 28.146 | 28.142 | 28.143 | 28.136 | 28.142 | 28.136 | 28.132 | 28.134 | 28.133 | 28.130 | 28.131 | 28.136 |
| N° 29 | 28.150 | 28.144 | 28.144 | 28.138 | 28.141 | 28.136 | 28.132 | 28.134 | 28.133 | 28.120 | 28.130 | 28.138 |
| N° 30 | 28.146 | 28.139 | 28.141 | 28.136 | 28.139 | 28.132 | 28.129 | 28.133 | 28.128 | 28.129 | 28.130 | 28.137 |
| N° 31 | 28.141 | 28.135 | 28.137 | 28.130 | 28.136 | 28.127 | 28.126 | 28.130 | 28.125 | 28.125 | 28.124 | 28.132 |

# 117. +VOP2, Module 4

**Ta=25°C; +VCC=30V; -VCC=GND; VO=+30V; RL=2kOhms**

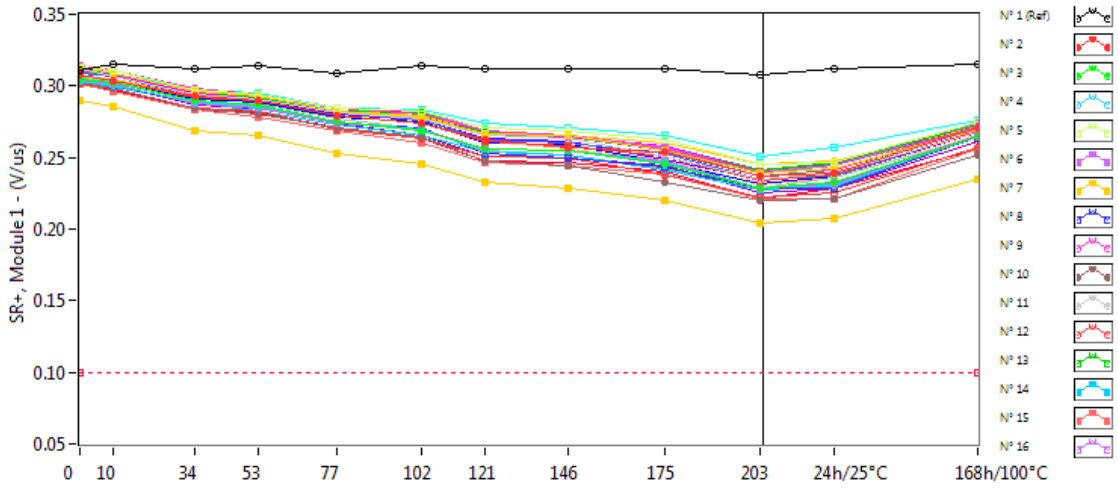



**+VOP2, Module 4 . (V)** **Min = 26.0**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 28.147 | 28.143 | 28.148 | 28.145 | 28.152 | 28.147 | 28.144 | 28.149 | 28.148 | 28.147 | 28.146 | 28.147 |
| N° 2 | 28.147 | 28.140 | 28.140 | 28.129 | 28.126 | 28.133 | 28.131 | 28.134 | 28.129 | 28.126 | 28.127 | 28.135 |
| N° 3 | 28.152 | 28.143 | 28.147 | 28.139 | 28.144 | 28.138 | 28.133 | 28.135 | 28.134 | 28.131 | 28.119 | 28.127 |
| N° 4 | 28.150 | 28.141 | 28.128 | 28.134 | 28.139 | 28.127 | 28.131 | 28.133 | 28.128 | 28.099 | 28.129 | 28.108 |
| N° 5 | 28.145 | 28.138 | 28.138 | 28.132 | 28.136 | 28.125 | 28.127 | 28.131 | 28.127 | 28.120 | 28.126 | 28.132 |
| N° 6 | 28.149 | 28.137 | 28.143 | 28.134 | 28.140 | 28.133 | 28.127 | 28.136 | 28.118 | 28.042 | 28.126 | 28.138 |
| N° 7 | 28.145 | 28.135 | 28.138 | 28.130 | 28.135 | 28.130 | 28.125 | 28.130 | 28.127 | 28.124 | 28.122 | 28.129 |
| N° 8 | 28.142 | 28.133 | 28.135 | 28.128 | 28.135 | 28.127 | 28.124 | 28.127 | 28.126 | 28.124 | 28.125 | 28.130 |
| N° 9 | 28.146 | 28.136 | 28.138 | 28.133 | 28.135 | 28.132 | 28.126 | 28.128 | 28.127 | 28.124 | 28.126 | 28.113 |
| N° 10 | 28.151 | 28.141 | 28.140 | 28.138 | 28.142 | 28.134 | 28.129 | 28.134 | 28.133 | 28.067 | 28.124 | 28.135 |
| N° 11 | 28.143 | 28.134 | 28.135 | 28.130 | 28.135 | 28.129 | 28.124 | 28.127 | 28.124 | 28.122 | 28.123 | 28.130 |
| N° 12 | 28.143 | 28.129 | 28.137 | 28.131 | 28.137 | 28.130 | 28.125 | 28.129 | 28.129 | 28.125 | 28.127 | 28.124 |
| N° 13 | 28.145 | 28.136 | 28.138 | 28.133 | 28.138 | 28.129 | 28.126 | 28.130 | 28.097 | 28.126 | 28.126 | 28.134 |
| N° 14 | 28.148 | 28.142 | 28.142 | 28.139 | 28.143 | 28.139 | 28.133 | 28.137 | 28.137 | 28.132 | 28.127 | 28.138 |
| N° 15 | 28.146 | 28.138 | 28.139 | 28.134 | 28.140 | 28.132 | 28.129 | 28.132 | 28.128 | 28.121 | 28.027 | 28.133 |
| N° 16 | 28.147 | 28.138 | 28.140 | 28.134 | 28.138 | 28.129 | 28.127 | 28.132 | 28.130 | 28.121 | 28.123 | 28.134 |
| N° 17 | 28.145 | 28.140 | 28.143 | 28.136 | 28.141 | 28.136 | 28.132 | 28.136 | 28.135 | 28.131 | 28.130 | 28.135 |
| N° 18 | 28.141 | 28.132 | 28.132 | 28.127 | 28.131 | 28.122 | 28.122 | 28.128 | 28.123 | 28.107 | 28.094 | 28.125 |
| N° 19 | 28.138 | 28.129 | 28.129 | 28.127 | 28.128 | 28.124 | 28.115 | 28.124 | 28.122 | 28.081 | 28.106 | 28.124 |
| N° 20 | 28.139 | 28.143 | 28.144 | 28.138 | 28.143 | 28.136 | 28.133 | 28.133 | 28.130 | 28.123 | 28.025 | 28.045 |
| N° 21 | 28.146 | 28.137 | 28.141 | 28.135 | 28.139 | 28.133 | 28.130 | 28.134 | 28.133 | 28.125 | 28.127 | 28.120 |
| N° 22 | 28.147 | 28.140 | 28.141 | 28.135 | 28.139 | 28.134 | 28.130 | 28.133 | 28.126 | 28.128 | 28.128 | 28.138 |
| N° 23 | 28.140 | 28.131 | 28.134 | 28.125 | 28.131 | 28.123 | 28.120 | 28.124 | 28.084 | 28.105 | 28.119 | 28.097 |
| N° 24 | 28.146 | 28.137 | 28.139 | 28.132 | 28.138 | 28.131 | 28.126 | 28.132 | 28.127 | 28.128 | 28.127 | 28.134 |
| N° 25 | 28.149 | 28.137 | 28.144 | 28.134 | 28.138 | 28.134 | 28.129 | 28.134 | 28.129 | 28.129 | 28.125 | 28.134 |
| N° 26 | 28.144 | 28.137 | 28.140 | 28.131 | 28.137 | 28.129 | 28.126 | 28.130 | 28.130 | 28.106 | 28.045 | 28.132 |
| N° 27 | 28.148 | 28.138 | 28.139 | 28.134 | 28.138 | 28.133 | 28.128 | 28.132 | 28.128 | 28.127 | 28.125 | 28.133 |
| N° 28 | 28.147 | 28.137 | 28.140 | 28.131 | 28.137 | 28.130 | 28.126 | 28.130 | 28.129 | 28.125 | 28.128 | 28.134 |
| N° 29 | 28.147 | 28.138 | 28.137 | 28.132 | 28.139 | 28.130 | 28.127 | 28.130 | 28.130 | 28.116 | 28.125 | 28.133 |
| N° 30 | 28.148 | 28.139 | 28.141 | 28.135 | 28.139 | 28.133 | 28.127 | 28.132 | 28.128 | 28.127 | 28.129 | 28.135 |
| N° 31 | 28.142 | 28.133 | 28.136 | 28.128 | 28.135 | 28.125 | 28.123 | 28.128 | 28.126 | 28.121 | 28.122 | 28.129 |

# 118. SR+, Module 1

**Ta=25°C; +VCC=30V; -VCC=GND**

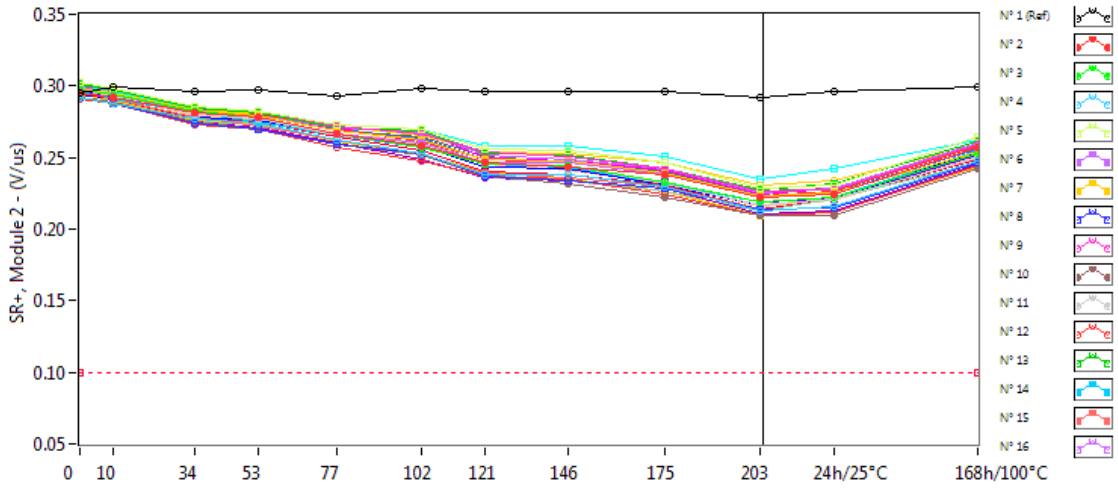



**SR+, Module 1 . (V/us)** **Min = 0.1**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 0.311 | 0.315 | 0.312 | 0.314 | 0.309 | 0.314 | 0.312 | 0.312 | 0.312 | 0.308 | 0.312 | 0.315 |
| N° 2 | 0.308 | 0.304 | 0.293 | 0.290 | 0.279 | 0.274 | 0.262 | 0.257 | 0.254 | 0.237 | 0.239 | 0.271 |
| N° 3 | 0.305 | 0.302 | 0.290 | 0.287 | 0.275 | 0.269 | 0.256 | 0.255 | 0.245 | 0.229 | 0.233 | 0.264 |
| N° 4 | 0.304 | 0.300 | 0.289 | 0.286 | 0.275 | 0.270 | 0.254 | 0.255 | 0.246 | 0.228 | 0.231 | 0.264 |
| N° 5 | 0.313 | 0.311 | 0.297 | 0.294 | 0.284 | 0.282 | 0.271 | 0.269 | 0.262 | 0.245 | 0.247 | 0.275 |
| N° 6 | 0.304 | 0.301 | 0.288 | 0.285 | 0.274 | 0.270 | 0.256 | 0.255 | 0.248 | 0.229 | 0.232 | 0.266 |
| N° 7 | 0.313 | 0.309 | 0.296 | 0.293 | 0.282 | 0.278 | 0.267 | 0.265 | 0.255 | 0.239 | 0.242 | 0.270 |
| N° 8 | 0.304 | 0.300 | 0.288 | 0.285 | 0.274 | 0.271 | 0.253 | 0.250 | 0.243 | 0.228 | 0.229 | 0.264 |
| N° 9 | 0.314 | 0.311 | 0.298 | 0.294 | 0.284 | 0.280 | 0.269 | 0.265 | 0.256 | 0.240 | 0.241 | 0.272 |
| N° 10 | 0.302 | 0.298 | 0.285 | 0.280 | 0.271 | 0.264 | 0.248 | 0.244 | 0.233 | 0.220 | 0.221 | 0.252 |
| N° 11 | 0.312 | 0.307 | 0.294 | 0.291 | 0.281 | 0.277 | 0.265 | 0.263 | 0.251 | 0.235 | 0.239 | 0.268 |
| N° 12 | 0.301 | 0.298 | 0.284 | 0.282 | 0.270 | 0.263 | 0.251 | 0.250 | 0.238 | 0.222 | 0.225 | 0.257 |
| N° 13 | 0.312 | 0.309 | 0.296 | 0.292 | 0.282 | 0.281 | 0.268 | 0.265 | 0.255 | 0.241 | 0.247 | 0.273 |
| N° 14 | 0.304 | 0.299 | 0.289 | 0.282 | 0.273 | 0.266 | 0.254 | 0.252 | 0.241 | 0.227 | 0.230 | 0.264 |
| N° 15 | 0.301 | 0.296 | 0.283 | 0.278 | 0.269 | 0.260 | 0.247 | 0.244 | 0.238 | 0.221 | 0.221 | 0.256 |
| N° 16 | 0.314 | 0.309 | 0.296 | 0.292 | 0.284 | 0.282 | 0.269 | 0.266 | 0.257 | 0.240 | 0.244 | 0.274 |
| N° 17 | 0.307 | 0.305 | 0.293 | 0.291 | 0.282 | 0.279 | 0.269 | 0.266 | 0.260 | 0.245 | 0.248 | 0.272 |
| N° 18 | 0.311 | 0.308 | 0.295 | 0.292 | 0.282 | 0.282 | 0.268 | 0.264 | 0.258 | 0.240 | 0.244 | 0.273 |
| N° 19 | 0.304 | 0.301 | 0.287 | 0.284 | 0.274 | 0.266 | 0.251 | 0.250 | 0.244 | 0.225 | 0.228 | 0.261 |
| N° 20 | 0.306 | 0.303 | 0.289 | 0.288 | 0.277 | 0.270 | 0.255 | 0.252 | 0.242 | 0.228 | 0.236 | 0.264 |
| N° 21 | 0.311 | 0.309 | 0.297 | 0.295 | 0.285 | 0.283 | 0.274 | 0.271 | 0.266 | 0.251 | 0.257 | 0.276 |
| N° 22 | 0.307 | 0.304 | 0.292 | 0.290 | 0.279 | 0.274 | 0.261 | 0.258 | 0.251 | 0.234 | 0.238 | 0.269 |
| N° 23 | 0.312 | 0.308 | 0.295 | 0.292 | 0.282 | 0.278 | 0.268 | 0.264 | 0.258 | 0.241 | 0.245 | 0.272 |
| N° 24 | 0.309 | 0.307 | 0.293 | 0.291 | 0.281 | 0.276 | 0.262 | 0.260 | 0.253 | 0.235 | 0.237 | 0.269 |
| N° 25 | 0.301 | 0.297 | 0.283 | 0.281 | 0.271 | 0.263 | 0.248 | 0.246 | 0.240 | 0.221 | 0.229 | 0.256 |
| N° 26 | 0.308 | 0.304 | 0.291 | 0.289 | 0.278 | 0.275 | 0.260 | 0.259 | 0.247 | 0.232 | 0.237 | 0.269 |
| N° 27 | 0.311 | 0.308 | 0.295 | 0.292 | 0.282 | 0.277 | 0.267 | 0.264 | 0.256 | 0.239 | 0.244 | 0.271 |
| N° 28 | 0.310 | 0.307 | 0.293 | 0.291 | 0.281 | 0.278 | 0.266 | 0.264 | 0.255 | 0.237 | 0.241 | 0.271 |
| N° 29 | 0.311 | 0.307 | 0.294 | 0.291 | 0.280 | 0.276 | 0.263 | 0.261 | 0.249 | 0.235 | 0.237 | 0.268 |
| N° 30 | 0.290 | 0.286 | 0.269 | 0.265 | 0.253 | 0.245 | 0.233 | 0.228 | 0.220 | 0.204 | 0.207 | 0.235 |
| N° 31 | 0.310 | 0.307 | 0.293 | 0.290 | 0.279 | 0.277 | 0.261 | 0.256 | 0.249 | 0.231 | 0.236 | 0.266 |

# 119. SR+, Module 2

**Ta=25°C; +VCC=30V; -VCC=GND**

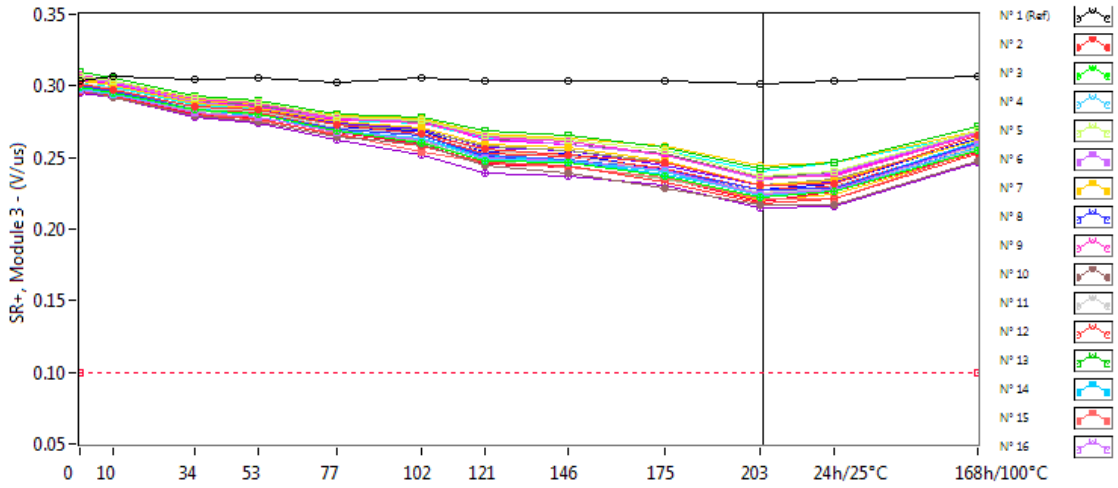



**SR+, Module 2 . (V/us)** **Min = 0.1**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 0.295 | 0.299 | 0.296 | 0.297 | 0.293 | 0.298 | 0.296 | 0.296 | 0.296 | 0.292 | 0.296 | 0.299 |
| N° 2 | 0.295 | 0.292 | 0.281 | 0.278 | 0.267 | 0.258 | 0.246 | 0.243 | 0.238 | 0.222 | 0.224 | 0.257 |
| N° 3 | 0.297 | 0.294 | 0.282 | 0.278 | 0.267 | 0.257 | 0.245 | 0.244 | 0.233 | 0.219 | 0.222 | 0.253 |
| N° 4 | 0.292 | 0.288 | 0.277 | 0.274 | 0.262 | 0.253 | 0.238 | 0.238 | 0.230 | 0.213 | 0.216 | 0.248 |
| N° 5 | 0.302 | 0.298 | 0.286 | 0.282 | 0.273 | 0.270 | 0.256 | 0.255 | 0.247 | 0.229 | 0.231 | 0.264 |
| N° 6 | 0.297 | 0.294 | 0.281 | 0.278 | 0.267 | 0.260 | 0.247 | 0.246 | 0.238 | 0.222 | 0.224 | 0.257 |
| N° 7 | 0.298 | 0.295 | 0.283 | 0.279 | 0.269 | 0.262 | 0.249 | 0.248 | 0.239 | 0.223 | 0.225 | 0.254 |
| N° 8 | 0.292 | 0.288 | 0.274 | 0.270 | 0.259 | 0.253 | 0.237 | 0.234 | 0.228 | 0.214 | 0.215 | 0.247 |
| N° 9 | 0.302 | 0.298 | 0.286 | 0.282 | 0.272 | 0.267 | 0.254 | 0.251 | 0.242 | 0.226 | 0.227 | 0.259 |
| N° 10 | 0.292 | 0.289 | 0.275 | 0.270 | 0.259 | 0.252 | 0.237 | 0.232 | 0.222 | 0.209 | 0.210 | 0.242 |
| N° 11 | 0.297 | 0.293 | 0.280 | 0.277 | 0.266 | 0.259 | 0.246 | 0.244 | 0.232 | 0.217 | 0.221 | 0.250 |
| N° 12 | 0.291 | 0.288 | 0.273 | 0.270 | 0.257 | 0.248 | 0.237 | 0.235 | 0.224 | 0.210 | 0.212 | 0.244 |
| N° 13 | 0.301 | 0.297 | 0.284 | 0.281 | 0.271 | 0.269 | 0.253 | 0.252 | 0.242 | 0.227 | 0.232 | 0.261 |
| N° 14 | 0.296 | 0.291 | 0.281 | 0.275 | 0.265 | 0.257 | 0.245 | 0.243 | 0.232 | 0.219 | 0.222 | 0.255 |
| N° 15 | 0.296 | 0.291 | 0.278 | 0.272 | 0.262 | 0.252 | 0.239 | 0.236 | 0.230 | 0.214 | 0.215 | 0.248 |
| N° 16 | 0.299 | 0.295 | 0.283 | 0.279 | 0.271 | 0.268 | 0.252 | 0.249 | 0.242 | 0.225 | 0.229 | 0.260 |
| N° 17 | 0.297 | 0.294 | 0.282 | 0.281 | 0.272 | 0.266 | 0.254 | 0.253 | 0.246 | 0.231 | 0.234 | 0.259 |
| N° 18 | 0.299 | 0.295 | 0.283 | 0.279 | 0.270 | 0.269 | 0.250 | 0.248 | 0.241 | 0.224 | 0.228 | 0.260 |
| N° 19 | 0.292 | 0.289 | 0.275 | 0.271 | 0.260 | 0.249 | 0.236 | 0.234 | 0.228 | 0.211 | 0.213 | 0.245 |
| N° 20 | 0.292 | 0.288 | 0.275 | 0.273 | 0.262 | 0.252 | 0.238 | 0.234 | 0.226 | 0.213 | 0.221 | 0.246 |
| N° 21 | 0.299 | 0.296 | 0.284 | 0.282 | 0.273 | 0.270 | 0.258 | 0.258 | 0.251 | 0.235 | 0.242 | 0.262 |
| N° 22 | 0.298 | 0.295 | 0.282 | 0.280 | 0.270 | 0.261 | 0.249 | 0.247 | 0.238 | 0.223 | 0.226 | 0.258 |
| N° 23 | 0.298 | 0.295 | 0.282 | 0.279 | 0.269 | 0.264 | 0.251 | 0.247 | 0.240 | 0.224 | 0.228 | 0.259 |
| N° 24 | 0.299 | 0.296 | 0.283 | 0.280 | 0.270 | 0.263 | 0.249 | 0.247 | 0.239 | 0.222 | 0.225 | 0.256 |
| N° 25 | 0.295 | 0.291 | 0.277 | 0.275 | 0.264 | 0.255 | 0.240 | 0.238 | 0.231 | 0.214 | 0.221 | 0.249 |
| N° 26 | 0.294 | 0.291 | 0.278 | 0.276 | 0.265 | 0.258 | 0.243 | 0.242 | 0.231 | 0.217 | 0.221 | 0.254 |
| N° 27 | 0.299 | 0.295 | 0.283 | 0.280 | 0.270 | 0.262 | 0.249 | 0.248 | 0.239 | 0.224 | 0.228 | 0.258 |
| N° 28 | 0.300 | 0.297 | 0.284 | 0.282 | 0.271 | 0.268 | 0.254 | 0.252 | 0.242 | 0.226 | 0.229 | 0.260 |
| N° 29 | 0.296 | 0.293 | 0.280 | 0.277 | 0.266 | 0.259 | 0.245 | 0.244 | 0.233 | 0.219 | 0.221 | 0.252 |
| N° 30 | 0.294 | 0.290 | 0.276 | 0.273 | 0.261 | 0.252 | 0.240 | 0.235 | 0.226 | 0.210 | 0.213 | 0.243 |
| N° 31 | 0.296 | 0.293 | 0.279 | 0.276 | 0.266 | 0.262 | 0.245 | 0.241 | 0.232 | 0.216 | 0.220 | 0.251 |

# 120. SR+, Module 3

**Ta=25°C; +VCC=30V; -VCC=GND**

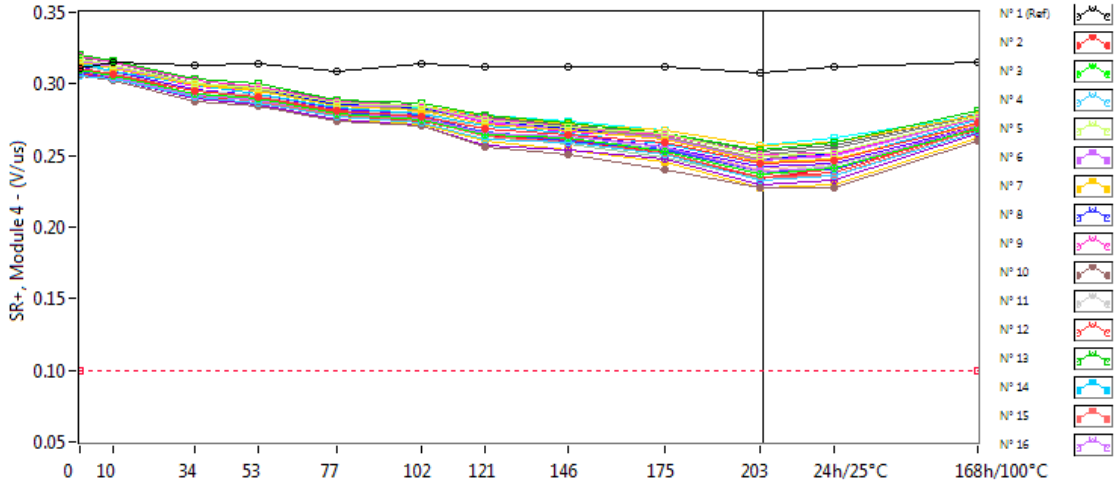



**SR+, Module 3 . (V/us)** **Min = 0.1**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 0.303 | 0.307 | 0.305 | 0.306 | 0.302 | 0.306 | 0.304 | 0.304 | 0.303 | 0.301 | 0.304 | 0.307 |
| N° 2 | 0.301 | 0.297 | 0.286 | 0.283 | 0.273 | 0.267 | 0.256 | 0.252 | 0.247 | 0.231 | 0.232 | 0.265 |
| N° 3 | 0.299 | 0.295 | 0.283 | 0.280 | 0.269 | 0.260 | 0.248 | 0.247 | 0.237 | 0.222 | 0.226 | 0.255 |
| N° 4 | 0.298 | 0.294 | 0.283 | 0.280 | 0.269 | 0.263 | 0.249 | 0.248 | 0.240 | 0.223 | 0.226 | 0.257 |
| N° 5 | 0.307 | 0.304 | 0.292 | 0.289 | 0.278 | 0.276 | 0.265 | 0.262 | 0.255 | 0.237 | 0.240 | 0.269 |
| N° 6 | 0.297 | 0.294 | 0.281 | 0.278 | 0.268 | 0.262 | 0.250 | 0.248 | 0.241 | 0.224 | 0.227 | 0.259 |
| N° 7 | 0.304 | 0.300 | 0.288 | 0.285 | 0.275 | 0.271 | 0.259 | 0.257 | 0.248 | 0.231 | 0.234 | 0.262 |
| N° 8 | 0.300 | 0.296 | 0.283 | 0.280 | 0.270 | 0.266 | 0.251 | 0.247 | 0.241 | 0.227 | 0.228 | 0.260 |
| N° 9 | 0.308 | 0.304 | 0.291 | 0.288 | 0.277 | 0.274 | 0.264 | 0.261 | 0.252 | 0.236 | 0.237 | 0.267 |
| N° 10 | 0.297 | 0.292 | 0.279 | 0.275 | 0.264 | 0.259 | 0.244 | 0.239 | 0.229 | 0.217 | 0.217 | 0.248 |
| N° 11 | 0.301 | 0.298 | 0.285 | 0.282 | 0.271 | 0.267 | 0.255 | 0.252 | 0.240 | 0.225 | 0.229 | 0.256 |
| N° 12 | 0.296 | 0.293 | 0.279 | 0.277 | 0.265 | 0.258 | 0.246 | 0.244 | 0.233 | 0.218 | 0.221 | 0.253 |
| N° 13 | 0.310 | 0.306 | 0.293 | 0.290 | 0.280 | 0.278 | 0.269 | 0.265 | 0.257 | 0.242 | 0.247 | 0.272 |
| N° 14 | 0.299 | 0.294 | 0.284 | 0.278 | 0.269 | 0.263 | 0.251 | 0.248 | 0.238 | 0.225 | 0.228 | 0.261 |
| N° 15 | 0.298 | 0.294 | 0.281 | 0.276 | 0.267 | 0.254 | 0.246 | 0.243 | 0.236 | 0.221 | 0.221 | 0.255 |
| N° 16 | 0.306 | 0.302 | 0.289 | 0.285 | 0.277 | 0.276 | 0.264 | 0.259 | 0.252 | 0.235 | 0.239 | 0.268 |
| N° 17 | 0.305 | 0.302 | 0.290 | 0.288 | 0.279 | 0.277 | 0.267 | 0.263 | 0.258 | 0.244 | 0.246 | 0.269 |
| N° 18 | 0.305 | 0.301 | 0.289 | 0.286 | 0.276 | 0.276 | 0.262 | 0.259 | 0.252 | 0.235 | 0.238 | 0.268 |
| N° 19 | 0.295 | 0.292 | 0.278 | 0.274 | 0.262 | 0.252 | 0.239 | 0.237 | 0.231 | 0.215 | 0.216 | 0.247 |
| N° 20 | 0.299 | 0.295 | 0.282 | 0.280 | 0.270 | 0.261 | 0.248 | 0.243 | 0.235 | 0.222 | 0.230 | 0.255 |
| N° 21 | 0.301 | 0.299 | 0.287 | 0.285 | 0.276 | 0.274 | 0.263 | 0.262 | 0.255 | 0.240 | 0.247 | 0.267 |
| N° 22 | 0.299 | 0.296 | 0.283 | 0.281 | 0.271 | 0.265 | 0.253 | 0.251 | 0.242 | 0.227 | 0.230 | 0.260 |
| N° 23 | 0.305 | 0.302 | 0.289 | 0.286 | 0.277 | 0.274 | 0.263 | 0.259 | 0.253 | 0.236 | 0.240 | 0.268 |
| N° 24 | 0.300 | 0.297 | 0.284 | 0.281 | 0.271 | 0.265 | 0.252 | 0.249 | 0.241 | 0.225 | 0.227 | 0.257 |
| N° 25 | 0.297 | 0.293 | 0.280 | 0.278 | 0.268 | 0.259 | 0.245 | 0.243 | 0.236 | 0.219 | 0.226 | 0.254 |
| N° 26 | 0.300 | 0.297 | 0.284 | 0.282 | 0.271 | 0.269 | 0.254 | 0.253 | 0.241 | 0.227 | 0.232 | 0.263 |
| N° 27 | 0.301 | 0.298 | 0.285 | 0.282 | 0.273 | 0.269 | 0.258 | 0.255 | 0.246 | 0.231 | 0.235 | 0.262 |
| N° 28 | 0.306 | 0.303 | 0.290 | 0.287 | 0.277 | 0.275 | 0.264 | 0.261 | 0.252 | 0.235 | 0.239 | 0.267 |
| N° 29 | 0.303 | 0.300 | 0.287 | 0.284 | 0.274 | 0.270 | 0.257 | 0.255 | 0.244 | 0.231 | 0.233 | 0.263 |
| N° 30 | 0.300 | 0.296 | 0.282 | 0.280 | 0.269 | 0.262 | 0.251 | 0.246 | 0.237 | 0.220 | 0.224 | 0.254 |
| N° 31 | 0.301 | 0.298 | 0.284 | 0.281 | 0.271 | 0.269 | 0.254 | 0.251 | 0.242 | 0.225 | 0.230 | 0.258 |

# 121. SR+, Module 4

**Ta=25°C; +VCC=30V; -VCC=GND**

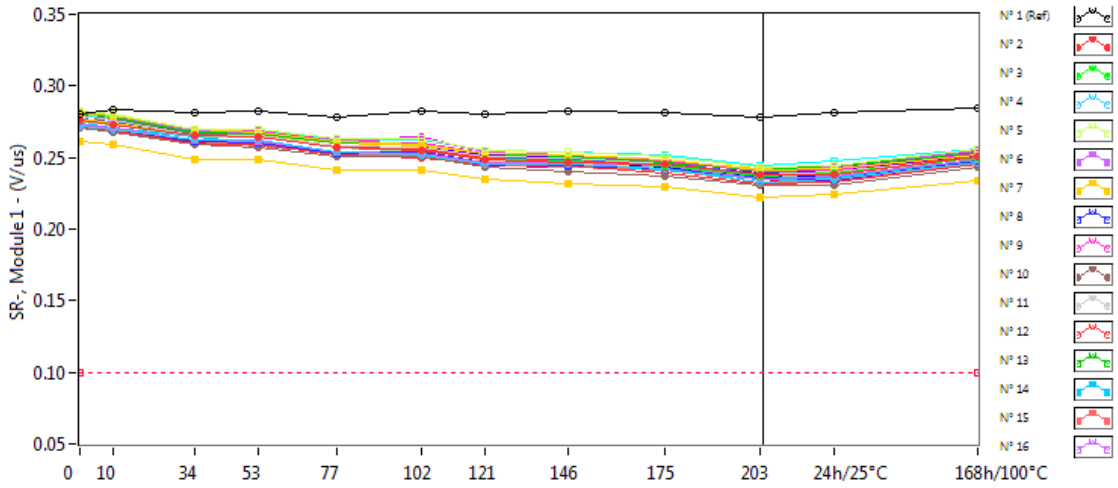



**SR+, Module 4 . (V/us)** **Min = 0.1**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 0.311 | 0.315 | 0.313 | 0.314 | 0.309 | 0.314 | 0.312 | 0.312 | 0.312 | 0.308 | 0.312 | 0.315 |
| N° 2 | 0.311 | 0.307 | 0.295 | 0.291 | 0.281 | 0.277 | 0.269 | 0.264 | 0.259 | 0.244 | 0.246 | 0.273 |
| N° 3 | 0.310 | 0.306 | 0.293 | 0.290 | 0.279 | 0.275 | 0.264 | 0.262 | 0.253 | 0.237 | 0.241 | 0.269 |
| N° 4 | 0.306 | 0.303 | 0.291 | 0.287 | 0.277 | 0.273 | 0.261 | 0.259 | 0.251 | 0.233 | 0.236 | 0.267 |
| N° 5 | 0.317 | 0.313 | 0.300 | 0.297 | 0.287 | 0.284 | 0.275 | 0.270 | 0.265 | 0.250 | 0.252 | 0.277 |
| N° 6 | 0.310 | 0.305 | 0.292 | 0.289 | 0.279 | 0.276 | 0.266 | 0.263 | 0.256 | 0.239 | 0.241 | 0.271 |
| N° 7 | 0.315 | 0.311 | 0.299 | 0.295 | 0.285 | 0.281 | 0.272 | 0.268 | 0.261 | 0.245 | 0.248 | 0.272 |
| N° 8 | 0.309 | 0.305 | 0.292 | 0.289 | 0.279 | 0.278 | 0.265 | 0.260 | 0.254 | 0.239 | 0.240 | 0.271 |
| N° 9 | 0.319 | 0.315 | 0.302 | 0.298 | 0.288 | 0.284 | 0.276 | 0.270 | 0.264 | 0.251 | 0.252 | 0.276 |
| N° 10 | 0.306 | 0.302 | 0.288 | 0.284 | 0.274 | 0.271 | 0.256 | 0.251 | 0.240 | 0.227 | 0.227 | 0.260 |
| N° 11 | 0.313 | 0.308 | 0.295 | 0.292 | 0.281 | 0.278 | 0.269 | 0.264 | 0.254 | 0.238 | 0.243 | 0.269 |
| N° 12 | 0.310 | 0.307 | 0.293 | 0.290 | 0.280 | 0.276 | 0.265 | 0.262 | 0.251 | 0.235 | 0.238 | 0.270 |
| N° 13 | 0.320 | 0.316 | 0.303 | 0.300 | 0.289 | 0.287 | 0.278 | 0.273 | 0.266 | 0.254 | 0.259 | 0.281 |
| N° 14 | 0.314 | 0.309 | 0.299 | 0.293 | 0.283 | 0.279 | 0.271 | 0.266 | 0.258 | 0.244 | 0.247 | 0.275 |
| N° 15 | 0.311 | 0.306 | 0.293 | 0.288 | 0.278 | 0.275 | 0.263 | 0.259 | 0.252 | 0.235 | 0.236 | 0.269 |
| N° 16 | 0.316 | 0.312 | 0.299 | 0.295 | 0.285 | 0.285 | 0.274 | 0.268 | 0.262 | 0.246 | 0.250 | 0.276 |
| N° 17 | 0.315 | 0.311 | 0.299 | 0.297 | 0.288 | 0.285 | 0.278 | 0.272 | 0.268 | 0.257 | 0.259 | 0.278 |
| N° 18 | 0.315 | 0.311 | 0.298 | 0.295 | 0.284 | 0.284 | 0.273 | 0.267 | 0.262 | 0.247 | 0.251 | 0.277 |
| N° 19 | 0.307 | 0.303 | 0.290 | 0.286 | 0.275 | 0.271 | 0.257 | 0.254 | 0.248 | 0.230 | 0.233 | 0.265 |
| N° 20 | 0.311 | 0.306 | 0.293 | 0.291 | 0.280 | 0.275 | 0.263 | 0.258 | 0.249 | 0.234 | 0.243 | 0.269 |
| N° 21 | 0.314 | 0.311 | 0.300 | 0.297 | 0.288 | 0.283 | 0.278 | 0.274 | 0.268 | 0.257 | 0.262 | 0.278 |
| N° 22 | 0.308 | 0.304 | 0.291 | 0.289 | 0.278 | 0.274 | 0.264 | 0.261 | 0.253 | 0.237 | 0.240 | 0.269 |
| N° 23 | 0.318 | 0.315 | 0.302 | 0.298 | 0.289 | 0.285 | 0.277 | 0.271 | 0.266 | 0.253 | 0.257 | 0.279 |
| N° 24 | 0.310 | 0.307 | 0.293 | 0.290 | 0.280 | 0.276 | 0.267 | 0.261 | 0.255 | 0.238 | 0.241 | 0.270 |
| N° 25 | 0.309 | 0.305 | 0.292 | 0.289 | 0.279 | 0.275 | 0.263 | 0.260 | 0.252 | 0.234 | 0.241 | 0.268 |
| N° 26 | 0.316 | 0.313 | 0.299 | 0.297 | 0.286 | 0.283 | 0.274 | 0.269 | 0.261 | 0.247 | 0.252 | 0.277 |
| N° 27 | 0.316 | 0.312 | 0.299 | 0.296 | 0.286 | 0.282 | 0.274 | 0.269 | 0.263 | 0.248 | 0.252 | 0.276 |
| N° 28 | 0.318 | 0.315 | 0.300 | 0.298 | 0.288 | 0.285 | 0.276 | 0.271 | 0.265 | 0.251 | 0.255 | 0.278 |
| N° 29 | 0.312 | 0.309 | 0.296 | 0.292 | 0.282 | 0.278 | 0.269 | 0.264 | 0.256 | 0.242 | 0.244 | 0.271 |
| N° 30 | 0.307 | 0.303 | 0.290 | 0.286 | 0.275 | 0.272 | 0.260 | 0.254 | 0.245 | 0.227 | 0.230 | 0.262 |
| N° 31 | 0.313 | 0.309 | 0.295 | 0.291 | 0.281 | 0.280 | 0.269 | 0.264 | 0.256 | 0.240 | 0.244 | 0.271 |

# 122. SR-, Module 1

**Ta=25°C; +VCC=30V; -VCC=GND**

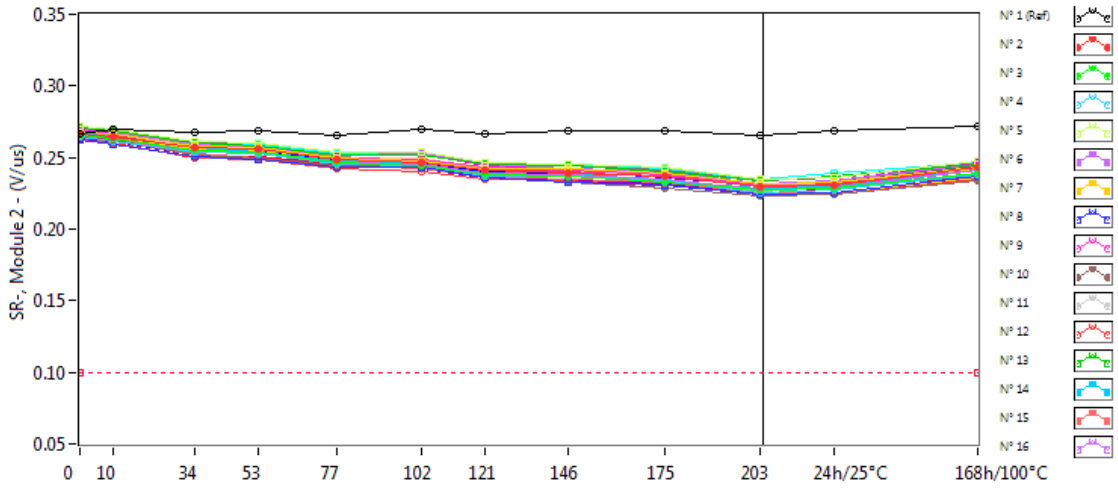



**SR-, Module 1 . (V/us)** **Min = 0.1**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 0.280 | 0.283 | 0.281 | 0.282 | 0.278 | 0.282 | 0.280 | 0.282 | 0.281 | 0.278 | 0.281 | 0.285 |
| N° 2 | 0.276 | 0.273 | 0.266 | 0.264 | 0.257 | 0.255 | 0.249 | 0.247 | 0.245 | 0.238 | 0.238 | 0.251 |
| N° 3 | 0.276 | 0.273 | 0.265 | 0.264 | 0.257 | 0.255 | 0.249 | 0.248 | 0.244 | 0.237 | 0.239 | 0.250 |
| N° 4 | 0.272 | 0.270 | 0.262 | 0.262 | 0.254 | 0.252 | 0.245 | 0.245 | 0.242 | 0.233 | 0.235 | 0.246 |
| N° 5 | 0.282 | 0.280 | 0.270 | 0.270 | 0.263 | 0.263 | 0.255 | 0.254 | 0.251 | 0.243 | 0.244 | 0.256 |
| N° 6 | 0.273 | 0.271 | 0.262 | 0.261 | 0.254 | 0.253 | 0.247 | 0.246 | 0.244 | 0.235 | 0.237 | 0.249 |
| N° 7 | 0.281 | 0.279 | 0.270 | 0.268 | 0.261 | 0.259 | 0.253 | 0.252 | 0.249 | 0.241 | 0.242 | 0.252 |
| N° 8 | 0.273 | 0.270 | 0.261 | 0.260 | 0.253 | 0.254 | 0.246 | 0.244 | 0.242 | 0.236 | 0.235 | 0.248 |
| N° 9 | 0.282 | 0.279 | 0.270 | 0.269 | 0.261 | 0.260 | 0.253 | 0.252 | 0.248 | 0.241 | 0.241 | 0.253 |
| N° 10 | 0.271 | 0.268 | 0.259 | 0.257 | 0.251 | 0.251 | 0.243 | 0.240 | 0.237 | 0.231 | 0.231 | 0.243 |
| N° 11 | 0.279 | 0.276 | 0.266 | 0.266 | 0.258 | 0.257 | 0.251 | 0.250 | 0.245 | 0.238 | 0.240 | 0.250 |
| N° 12 | 0.271 | 0.269 | 0.259 | 0.259 | 0.252 | 0.250 | 0.245 | 0.244 | 0.239 | 0.232 | 0.233 | 0.245 |
| N° 13 | 0.281 | 0.278 | 0.268 | 0.267 | 0.260 | 0.260 | 0.253 | 0.251 | 0.247 | 0.241 | 0.244 | 0.253 |
| N° 14 | 0.274 | 0.271 | 0.264 | 0.260 | 0.254 | 0.252 | 0.247 | 0.245 | 0.241 | 0.235 | 0.236 | 0.249 |
| N° 15 | 0.273 | 0.270 | 0.261 | 0.258 | 0.253 | 0.251 | 0.245 | 0.243 | 0.241 | 0.233 | 0.233 | 0.246 |
| N° 16 | 0.282 | 0.279 | 0.269 | 0.267 | 0.262 | 0.263 | 0.254 | 0.252 | 0.249 | 0.241 | 0.243 | 0.255 |
| N° 17 | 0.277 | 0.274 | 0.266 | 0.266 | 0.260 | 0.258 | 0.253 | 0.251 | 0.248 | 0.242 | 0.242 | 0.252 |
| N° 18 | 0.281 | 0.279 | 0.270 | 0.268 | 0.262 | 0.264 | 0.254 | 0.251 | 0.249 | 0.241 | 0.243 | 0.256 |
| N° 19 | 0.272 | 0.271 | 0.261 | 0.259 | 0.253 | 0.251 | 0.244 | 0.243 | 0.241 | 0.233 | 0.234 | 0.245 |
| N° 20 | 0.275 | 0.273 | 0.264 | 0.264 | 0.257 | 0.254 | 0.247 | 0.245 | 0.242 | 0.235 | 0.240 | 0.248 |
| N° 21 | 0.280 | 0.278 | 0.269 | 0.269 | 0.262 | 0.262 | 0.255 | 0.254 | 0.252 | 0.244 | 0.248 | 0.256 |
| N° 22 | 0.276 | 0.274 | 0.265 | 0.265 | 0.258 | 0.256 | 0.250 | 0.248 | 0.245 | 0.238 | 0.240 | 0.251 |
| N° 23 | 0.281 | 0.273 | 0.269 | 0.268 | 0.261 | 0.260 | 0.253 | 0.251 | 0.248 | 0.241 | 0.242 | 0.254 |
| N° 24 | 0.277 | 0.275 | 0.266 | 0.265 | 0.258 | 0.257 | 0.250 | 0.249 | 0.246 | 0.238 | 0.239 | 0.250 |
| N° 25 | 0.272 | 0.270 | 0.260 | 0.260 | 0.254 | 0.252 | 0.245 | 0.244 | 0.242 | 0.233 | 0.237 | 0.246 |
| N° 26 | 0.276 | 0.274 | 0.264 | 0.265 | 0.257 | 0.257 | 0.249 | 0.248 | 0.243 | 0.236 | 0.238 | 0.251 |
| N° 27 | 0.280 | 0.278 | 0.268 | 0.267 | 0.261 | 0.258 | 0.253 | 0.251 | 0.248 | 0.241 | 0.242 | 0.253 |
| N° 28 | 0.279 | 0.277 | 0.267 | 0.267 | 0.260 | 0.259 | 0.253 | 0.251 | 0.248 | 0.240 | 0.241 | 0.253 |
| N° 29 | 0.280 | 0.278 | 0.269 | 0.268 | 0.260 | 0.258 | 0.252 | 0.250 | 0.245 | 0.239 | 0.240 | 0.252 |
| N° 30 | 0.261 | 0.259 | 0.249 | 0.249 | 0.241 | 0.241 | 0.235 | 0.232 | 0.230 | 0.222 | 0.224 | 0.234 |
| N° 31 | 0.277 | 0.275 | 0.265 | 0.264 | 0.257 | 0.257 | 0.248 | 0.246 | 0.243 | 0.235 | 0.238 | 0.248 |

# 123. SR-, Module 2

**Ta=25°C; +VCC=30V; -VCC=GND**

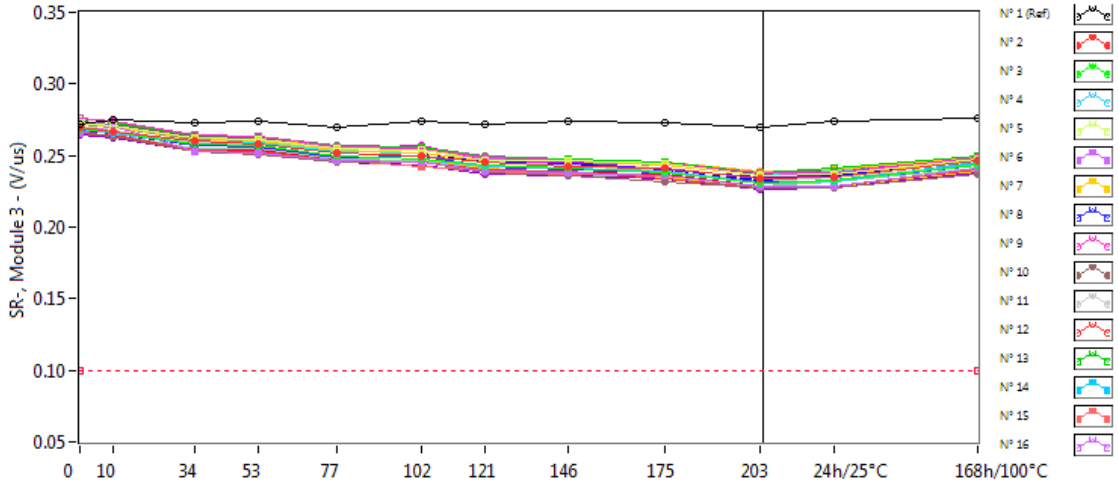



**SR-, Module 2 . (V/us)** **Min = 0.1**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 0.267 | 0.270 | 0.268 | 0.269 | 0.266 | 0.270 | 0.267 | 0.269 | 0.269 | 0.266 | 0.269 | 0.272 |
| N° 2 | 0.267 | 0.264 | 0.257 | 0.256 | 0.249 | 0.246 | 0.241 | 0.239 | 0.237 | 0.230 | 0.231 | 0.243 |
| N° 3 | 0.265 | 0.263 | 0.255 | 0.254 | 0.246 | 0.244 | 0.238 | 0.237 | 0.233 | 0.227 | 0.228 | 0.239 |
| N° 4 | 0.264 | 0.261 | 0.254 | 0.253 | 0.245 | 0.244 | 0.237 | 0.237 | 0.234 | 0.225 | 0.227 | 0.238 |
| N° 5 | 0.272 | 0.270 | 0.261 | 0.260 | 0.254 | 0.254 | 0.246 | 0.245 | 0.243 | 0.235 | 0.236 | 0.248 |
| N° 6 | 0.265 | 0.263 | 0.254 | 0.253 | 0.246 | 0.245 | 0.239 | 0.238 | 0.235 | 0.227 | 0.228 | 0.241 |
| N° 7 | 0.268 | 0.267 | 0.258 | 0.257 | 0.250 | 0.248 | 0.242 | 0.242 | 0.239 | 0.232 | 0.233 | 0.242 |
| N° 8 | 0.262 | 0.259 | 0.251 | 0.249 | 0.243 | 0.243 | 0.236 | 0.233 | 0.231 | 0.224 | 0.225 | 0.237 |
| N° 9 | 0.269 | 0.267 | 0.258 | 0.257 | 0.250 | 0.249 | 0.243 | 0.241 | 0.238 | 0.231 | 0.231 | 0.242 |
| N° 10 | 0.264 | 0.262 | 0.252 | 0.250 | 0.244 | 0.243 | 0.236 | 0.233 | 0.229 | 0.223 | 0.224 | 0.234 |
| N° 11 | 0.269 | 0.267 | 0.257 | 0.257 | 0.250 | 0.248 | 0.243 | 0.241 | 0.237 | 0.231 | 0.233 | 0.242 |
| N° 12 | 0.262 | 0.260 | 0.250 | 0.249 | 0.242 | 0.240 | 0.235 | 0.234 | 0.229 | 0.223 | 0.224 | 0.235 |
| N° 13 | 0.271 | 0.269 | 0.260 | 0.258 | 0.252 | 0.252 | 0.245 | 0.244 | 0.240 | 0.234 | 0.237 | 0.245 |
| N° 14 | 0.268 | 0.264 | 0.257 | 0.254 | 0.248 | 0.246 | 0.241 | 0.239 | 0.234 | 0.229 | 0.230 | 0.242 |
| N° 15 | 0.265 | 0.262 | 0.253 | 0.250 | 0.244 | 0.242 | 0.237 | 0.235 | 0.233 | 0.225 | 0.225 | 0.237 |
| N° 16 | 0.271 | 0.268 | 0.259 | 0.257 | 0.252 | 0.253 | 0.245 | 0.242 | 0.240 | 0.232 | 0.234 | 0.245 |
| N° 17 | 0.266 | 0.264 | 0.256 | 0.255 | 0.250 | 0.248 | 0.243 | 0.241 | 0.239 | 0.232 | 0.233 | 0.243 |
| N° 18 | 0.270 | 0.268 | 0.259 | 0.258 | 0.252 | 0.253 | 0.244 | 0.242 | 0.240 | 0.232 | 0.234 | 0.246 |
| N° 19 | 0.263 | 0.261 | 0.252 | 0.250 | 0.244 | 0.242 | 0.236 | 0.234 | 0.232 | 0.225 | 0.225 | 0.237 |
| N° 20 | 0.263 | 0.261 | 0.252 | 0.253 | 0.246 | 0.243 | 0.237 | 0.234 | 0.232 | 0.226 | 0.230 | 0.238 |
| N° 21 | 0.269 | 0.268 | 0.259 | 0.259 | 0.253 | 0.252 | 0.246 | 0.245 | 0.242 | 0.235 | 0.239 | 0.246 |
| N° 22 | 0.268 | 0.266 | 0.257 | 0.257 | 0.250 | 0.247 | 0.242 | 0.240 | 0.237 | 0.230 | 0.232 | 0.243 |
| N° 23 | 0.269 | 0.266 | 0.257 | 0.256 | 0.250 | 0.249 | 0.242 | 0.241 | 0.238 | 0.231 | 0.233 | 0.244 |
| N° 24 | 0.268 | 0.266 | 0.258 | 0.257 | 0.250 | 0.249 | 0.242 | 0.240 | 0.238 | 0.231 | 0.231 | 0.242 |
| N° 25 | 0.264 | 0.261 | 0.252 | 0.251 | 0.245 | 0.243 | 0.237 | 0.235 | 0.233 | 0.224 | 0.228 | 0.237 |
| N° 26 | 0.266 | 0.263 | 0.254 | 0.255 | 0.248 | 0.247 | 0.240 | 0.239 | 0.234 | 0.228 | 0.230 | 0.242 |
| N° 27 | 0.269 | 0.267 | 0.258 | 0.257 | 0.251 | 0.248 | 0.243 | 0.241 | 0.238 | 0.231 | 0.233 | 0.243 |
| N° 28 | 0.272 | 0.270 | 0.260 | 0.260 | 0.253 | 0.252 | 0.246 | 0.244 | 0.241 | 0.234 | 0.236 | 0.247 |
| N° 29 | 0.269 | 0.267 | 0.258 | 0.258 | 0.250 | 0.248 | 0.242 | 0.241 | 0.236 | 0.231 | 0.231 | 0.242 |
| N° 30 | 0.264 | 0.262 | 0.252 | 0.251 | 0.244 | 0.243 | 0.238 | 0.234 | 0.232 | 0.224 | 0.225 | 0.236 |
| N° 31 | 0.269 | 0.266 | 0.257 | 0.257 | 0.250 | 0.250 | 0.242 | 0.239 | 0.237 | 0.230 | 0.232 | 0.242 |

# 124. SR-, Module 3

**Ta=25°C; +VCC=30V; -VCC=GND**

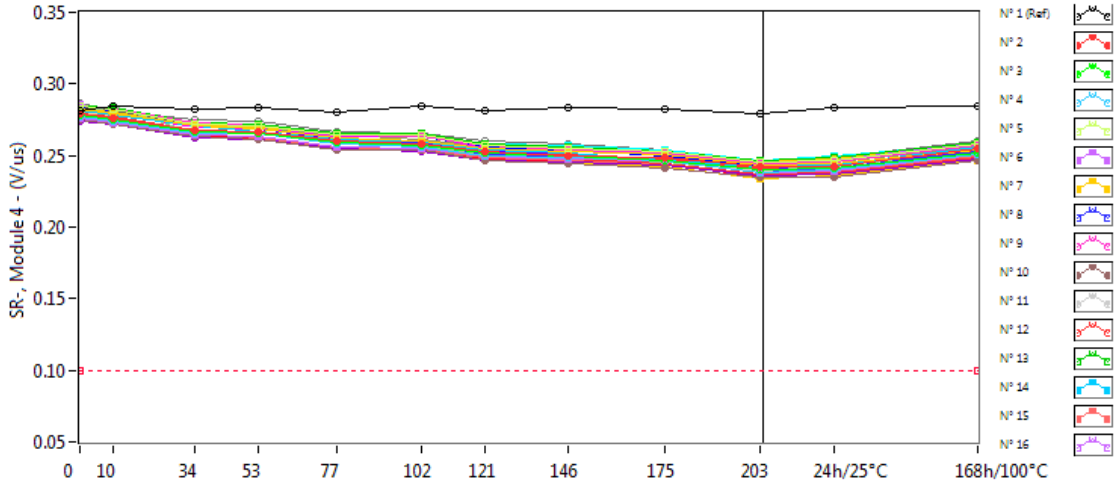



**SR-, Module 3 . (V/us)** **Min = 0.1**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 0.272 | 0.275 | 0.273 | 0.274 | 0.270 | 0.274 | 0.272 | 0.274 | 0.273 | 0.270 | 0.274 | 0.276 |
| N° 2 | 0.270 | 0.267 | 0.260 | 0.258 | 0.252 | 0.250 | 0.245 | 0.242 | 0.241 | 0.234 | 0.235 | 0.247 |
| N° 3 | 0.269 | 0.267 | 0.258 | 0.257 | 0.250 | 0.248 | 0.243 | 0.241 | 0.238 | 0.231 | 0.233 | 0.243 |
| N° 4 | 0.269 | 0.266 | 0.258 | 0.257 | 0.250 | 0.248 | 0.242 | 0.241 | 0.239 | 0.231 | 0.232 | 0.244 |
| N° 5 | 0.273 | 0.271 | 0.262 | 0.261 | 0.255 | 0.254 | 0.247 | 0.247 | 0.244 | 0.236 | 0.237 | 0.248 |
| N° 6 | 0.265 | 0.271 | 0.253 | 0.252 | 0.246 | 0.245 | 0.239 | 0.238 | 0.236 | 0.228 | 0.229 | 0.241 |
| N° 7 | 0.273 | 0.271 | 0.262 | 0.260 | 0.254 | 0.252 | 0.247 | 0.246 | 0.243 | 0.236 | 0.237 | 0.246 |
| N° 8 | 0.268 | 0.265 | 0.257 | 0.256 | 0.249 | 0.250 | 0.242 | 0.240 | 0.238 | 0.232 | 0.232 | 0.244 |
| N° 9 | 0.276 | 0.274 | 0.264 | 0.263 | 0.256 | 0.255 | 0.249 | 0.247 | 0.244 | 0.238 | 0.238 | 0.249 |
| N° 10 | 0.266 | 0.263 | 0.253 | 0.251 | 0.245 | 0.245 | 0.238 | 0.236 | 0.232 | 0.227 | 0.227 | 0.237 |
| N° 11 | 0.271 | 0.268 | 0.259 | 0.258 | 0.252 | 0.250 | 0.245 | 0.243 | 0.239 | 0.232 | 0.235 | 0.243 |
| N° 12 | 0.266 | 0.264 | 0.254 | 0.253 | 0.246 | 0.245 | 0.240 | 0.239 | 0.234 | 0.227 | 0.229 | 0.240 |
| N° 13 | 0.276 | 0.273 | 0.264 | 0.263 | 0.256 | 0.256 | 0.249 | 0.248 | 0.245 | 0.238 | 0.241 | 0.250 |
| N° 14 | 0.270 | 0.266 | 0.259 | 0.256 | 0.250 | 0.248 | 0.243 | 0.241 | 0.238 | 0.231 | 0.233 | 0.245 |
| N° 15 | 0.267 | 0.263 | 0.254 | 0.252 | 0.246 | 0.242 | 0.239 | 0.237 | 0.236 | 0.228 | 0.229 | 0.241 |
| N° 16 | 0.274 | 0.271 | 0.262 | 0.260 | 0.256 | 0.256 | 0.248 | 0.246 | 0.243 | 0.236 | 0.238 | 0.249 |
| N° 17 | 0.273 | 0.270 | 0.262 | 0.261 | 0.256 | 0.254 | 0.249 | 0.247 | 0.245 | 0.239 | 0.240 | 0.249 |
| N° 18 | 0.273 | 0.271 | 0.262 | 0.261 | 0.255 | 0.257 | 0.247 | 0.245 | 0.244 | 0.236 | 0.238 | 0.250 |
| N° 19 | 0.264 | 0.262 | 0.253 | 0.251 | 0.245 | 0.243 | 0.237 | 0.236 | 0.234 | 0.226 | 0.227 | 0.238 |
| N° 20 | 0.266 | 0.264 | 0.255 | 0.255 | 0.248 | 0.246 | 0.240 | 0.237 | 0.234 | 0.228 | 0.232 | 0.241 |
| N° 21 | 0.269 | 0.268 | 0.259 | 0.259 | 0.253 | 0.252 | 0.247 | 0.246 | 0.243 | 0.236 | 0.239 | 0.246 |
| N° 22 | 0.268 | 0.266 | 0.257 | 0.257 | 0.250 | 0.248 | 0.243 | 0.241 | 0.238 | 0.231 | 0.233 | 0.243 |
| N° 23 | 0.274 | 0.272 | 0.263 | 0.262 | 0.255 | 0.254 | 0.248 | 0.247 | 0.244 | 0.237 | 0.239 | 0.249 |
| N° 24 | 0.268 | 0.266 | 0.257 | 0.257 | 0.250 | 0.248 | 0.243 | 0.241 | 0.238 | 0.231 | 0.232 | 0.243 |
| N° 25 | 0.266 | 0.264 | 0.254 | 0.254 | 0.248 | 0.246 | 0.240 | 0.238 | 0.237 | 0.229 | 0.232 | 0.241 |
| N° 26 | 0.270 | 0.268 | 0.259 | 0.259 | 0.253 | 0.252 | 0.245 | 0.244 | 0.239 | 0.233 | 0.236 | 0.247 |
| N° 27 | 0.272 | 0.270 | 0.261 | 0.260 | 0.254 | 0.252 | 0.247 | 0.245 | 0.243 | 0.236 | 0.238 | 0.248 |
| N° 28 | 0.276 | 0.273 | 0.264 | 0.263 | 0.257 | 0.256 | 0.250 | 0.248 | 0.245 | 0.238 | 0.239 | 0.250 |
| N° 29 | 0.272 | 0.270 | 0.261 | 0.261 | 0.253 | 0.252 | 0.246 | 0.245 | 0.240 | 0.235 | 0.236 | 0.246 |
| N° 30 | 0.266 | 0.264 | 0.254 | 0.254 | 0.247 | 0.246 | 0.241 | 0.238 | 0.235 | 0.228 | 0.229 | 0.239 |
| N° 31 | 0.272 | 0.270 | 0.260 | 0.260 | 0.253 | 0.254 | 0.246 | 0.244 | 0.241 | 0.234 | 0.236 | 0.246 |

# 125. SR-, Module 4

**Ta=25°C; +VCC=30V; -VCC=GND**




**SR-, Module 4 . (V/us)** **Min = 0.1**

| | 0krad(Si) | 10krad(Si) | 34krad(Si) | 53krad(Si) | 77krad(Si) | 102krad(Si) | 121krad(Si) | 146krad(Si) | 175krad(Si) | 203krad(Si) | 24h/25°C | 168h/100°C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N° 1 (Ref) | 0.281 | 0.284 | 0.282 | 0.283 | 0.280 | 0.284 | 0.281 | 0.283 | 0.282 | 0.279 | 0.283 | 0.285 |
| N° 2 | 0.279 | 0.276 | 0.268 | 0.267 | 0.260 | 0.258 | 0.253 | 0.250 | 0.249 | 0.242 | 0.242 | 0.255 |
| N° 3 | 0.278 | 0.275 | 0.267 | 0.266 | 0.259 | 0.257 | 0.252 | 0.250 | 0.247 | 0.240 | 0.241 | 0.252 |
| N° 4 | 0.277 | 0.274 | 0.266 | 0.265 | 0.258 | 0.256 | 0.250 | 0.249 | 0.246 | 0.238 | 0.240 | 0.251 |
| N° 5 | 0.284 | 0.282 | 0.272 | 0.271 | 0.264 | 0.264 | 0.257 | 0.255 | 0.253 | 0.245 | 0.246 | 0.258 |
| N° 6 | 0.276 | 0.273 | 0.264 | 0.263 | 0.256 | 0.255 | 0.250 | 0.248 | 0.246 | 0.238 | 0.239 | 0.251 |
| N° 7 | 0.282 | 0.280 | 0.271 | 0.269 | 0.262 | 0.260 | 0.255 | 0.253 | 0.251 | 0.243 | 0.244 | 0.254 |
| N° 8 | 0.278 | 0.275 | 0.266 | 0.265 | 0.258 | 0.259 | 0.251 | 0.249 | 0.247 | 0.240 | 0.241 | 0.253 |
| N° 9 | 0.285 | 0.282 | 0.273 | 0.271 | 0.264 | 0.263 | 0.257 | 0.254 | 0.252 | 0.244 | 0.245 | 0.257 |
| N° 10 | 0.275 | 0.272 | 0.263 | 0.261 | 0.254 | 0.254 | 0.247 | 0.244 | 0.241 | 0.235 | 0.235 | 0.246 |
| N° 11 | 0.279 | 0.276 | 0.267 | 0.266 | 0.259 | 0.257 | 0.252 | 0.250 | 0.246 | 0.239 | 0.242 | 0.251 |
| N° 12 | 0.276 | 0.274 | 0.264 | 0.263 | 0.256 | 0.255 | 0.250 | 0.248 | 0.244 | 0.237 | 0.238 | 0.249 |
| N° 13 | 0.285 | 0.283 | 0.273 | 0.272 | 0.265 | 0.265 | 0.258 | 0.256 | 0.253 | 0.246 | 0.249 | 0.259 |
| N° 14 | 0.281 | 0.278 | 0.271 | 0.267 | 0.261 | 0.259 | 0.254 | 0.252 | 0.247 | 0.242 | 0.243 | 0.256 |
| N° 15 | 0.277 | 0.274 | 0.265 | 0.262 | 0.256 | 0.254 | 0.249 | 0.246 | 0.244 | 0.237 | 0.238 | 0.250 |
| N° 16 | 0.286 | 0.282 | 0.273 | 0.271 | 0.266 | 0.266 | 0.258 | 0.256 | 0.253 | 0.245 | 0.247 | 0.259 |
| N° 17 | 0.282 | 0.279 | 0.271 | 0.270 | 0.265 | 0.263 | 0.258 | 0.256 | 0.253 | 0.247 | 0.248 | 0.258 |
| N° 18 | 0.282 | 0.279 | 0.270 | 0.269 | 0.263 | 0.264 | 0.255 | 0.253 | 0.251 | 0.243 | 0.245 | 0.257 |
| N° 19 | 0.274 | 0.272 | 0.262 | 0.261 | 0.255 | 0.253 | 0.247 | 0.245 | 0.243 | 0.236 | 0.237 | 0.248 |
| N° 20 | 0.279 | 0.284 | 0.266 | 0.267 | 0.260 | 0.257 | 0.251 | 0.248 | 0.245 | 0.239 | 0.243 | 0.251 |
| N° 21 | 0.281 | 0.280 | 0.271 | 0.271 | 0.264 | 0.263 | 0.258 | 0.257 | 0.254 | 0.246 | 0.250 | 0.258 |
| N° 22 | 0.279 | 0.277 | 0.268 | 0.267 | 0.260 | 0.258 | 0.252 | 0.251 | 0.248 | 0.241 | 0.243 | 0.254 |
| N° 23 | 0.284 | 0.281 | 0.272 | 0.271 | 0.265 | 0.263 | 0.257 | 0.255 | 0.252 | 0.245 | 0.247 | 0.258 |
| N° 24 | 0.277 | 0.275 | 0.266 | 0.265 | 0.258 | 0.257 | 0.251 | 0.249 | 0.247 | 0.239 | 0.240 | 0.252 |
| N° 25 | 0.275 | 0.272 | 0.263 | 0.262 | 0.256 | 0.254 | 0.248 | 0.246 | 0.244 | 0.235 | 0.239 | 0.248 |
| N° 26 | 0.283 | 0.280 | 0.271 | 0.271 | 0.264 | 0.263 | 0.256 | 0.254 | 0.250 | 0.243 | 0.245 | 0.257 |
| N° 27 | 0.282 | 0.280 | 0.270 | 0.270 | 0.264 | 0.261 | 0.256 | 0.254 | 0.251 | 0.243 | 0.245 | 0.256 |
| N° 28 | 0.287 | 0.281 | 0.275 | 0.274 | 0.267 | 0.266 | 0.260 | 0.258 | 0.254 | 0.247 | 0.249 | 0.260 |
| N° 29 | 0.281 | 0.279 | 0.270 | 0.269 | 0.261 | 0.259 | 0.253 | 0.252 | 0.247 | 0.241 | 0.242 | 0.253 |
| N° 30 | 0.276 | 0.273 | 0.263 | 0.262 | 0.255 | 0.254 | 0.249 | 0.245 | 0.242 | 0.234 | 0.236 | 0.247 |
| N° 31 | 0.280 | 0.277 | 0.268 | 0.267 | 0.260 | 0.260 | 0.252 | 0.250 | 0.247 | 0.240 | 0.242 | 0.252 |