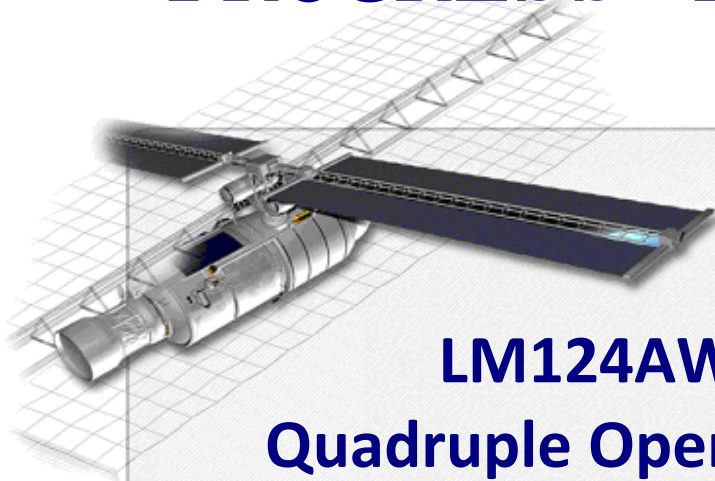




# TOTAL IONIZING DOSE PROGRESS TEST REPORT



## LM124AWG-R-QMLV Quadruple Operational Amplifier DC1136A From National Semiconductor

TRAD/TE/LM124AWG-R-QMLV/1136A/ESA/MV/1410		Labège, May 22 <sup>nd</sup> , 2015
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Revision: 0	Creation of the document	
Revision: 1	Addition of table of test parameters	
To: <b>ESA</b> <b>Mr Christian POIVEY</b>	Project/Program: Ref:	

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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 16<sup>th</sup>, 2015 and ended on April 07<sup>th</sup>, 2015.

## 2. PART INFORMATION

### 2.1. Identification

<b>Part designation</b>	LM124AWG-R-QMLV
<b>Manufacturer</b>	National Semiconductor
<b>Part function</b>	Quadruple Operational Amplifier

### 2.2. Procurement information

<b>Package</b>	SOIC-14
<b>Date Code</b>	1136A
<b>Charge No</b>	94537
<b>Number of tested parts</b>	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
<b>Ta=25°C, unless otherwise specified</b>		
Input Offset Voltage	<b>VIO1</b>	+VCC=30V; -VCC=GND; VCM=+15V
	<b>VIO2</b>	+VCC=2V; -VCC=-28V; VCM=-13V
	<b>VIO3</b>	+VCC=5V; -VCC=GND; VCM=+1.4V
	<b>VIO4</b>	+VCC=2.5V; -VCC=-2.5V; VCM=-1.1V
Positive Input Bias Current	<b>+IIB1</b>	+VCC=30V; -VCC=GND; VCM=+15V
	<b>+IIB2</b>	+VCC=2V; -VCC=-28V; VCM=-13V
	<b>+IIB3</b>	+VCC=5V; -VCC=GND; VCM=+1.4V
	<b>+IIB4</b>	+VCC=2.5V; -VCC=-2.5V; VCM=-1.1V
Negative Input Bias Current	<b>-IIB1</b>	+VCC=30V; -VCC=GND; VCM=+15V
	<b>-IIB2</b>	+VCC=2V; -VCC=-28V; VCM=-13V
	<b>-IIB3</b>	+VCC=5V; -VCC=GND; VCM=+1.4V
	<b>-IIB4</b>	+VCC=2.5V; -VCC=-2.5V; VCM=-1.1V
Input Offset Current	<b>IIO1</b>	+VCC=30V; -VCC=GND; VCM=+15V
	<b>IIO2</b>	+VCC=2V; -VCC=-28V; VCM=-13V
	<b>IIO3</b>	+VCC=5V; -VCC=GND; VCM=+1.4V
	<b>IIO4</b>	+VCC=2.5V; -VCC=-2.5V; VCM=-1.1V
Voltage Gain	<b>AVS1</b>	+VCC=30V; -VCC=GND; 1V<Vout<26V; RL=10kΩ
	<b>AVS2</b>	+VCC=30V; -VCC=GND; 5V<Vout<20V; RL=2kΩ
	<b>AVS3</b>	+VCC=5V; -VCC=GND; 1V<Vout<2.5V; RL=10kΩ
	<b>AVS4</b>	+VCC=5V; -VCC=GND; 1V<Vout<2.5V; RL=2kΩ
Power Supply Current	<b>ICC</b>	+VCC=30V; -VCC=GND
Power Supply Rejection Ratio	<b>PSRR</b>	-VCC=GND; VCM=+1.4V; 5V<+VCC<30V
Common Mode Rejection Ratio	<b>CMRR</b>	
Low Level Output Voltage	<b>VOL1</b>	+VCC=30V; -VCC=GND; RL=10kΩ
	<b>VOL2</b>	+VCC=30V; -VCC=GND; IOL=5mA
	<b>VOL3</b>	+VCC=4.5V; -VCC=GND; IOL=2μA
High Level Output Voltage	<b>VOH1</b>	+VCC=30V; -VCC=GND; IOH=-10mA
	<b>VOH2</b>	+VCC=4.5V; -VCC=GND; IOH=-10mA
Maximum Output Voltage Swing	<b>+VOP1</b>	+VCC=30V; -VCC=GND; VO=+30V; RL=10kΩ
	<b>+VOP2</b>	+VCC=30V; -VCC=GND; VO=+30V; RL=2kΩ
Slew Rate	<b>SR+</b>	+VCC=30V; -VCC=GND
	<b>SR-</b>	+VCC=30V; -VCC=GND

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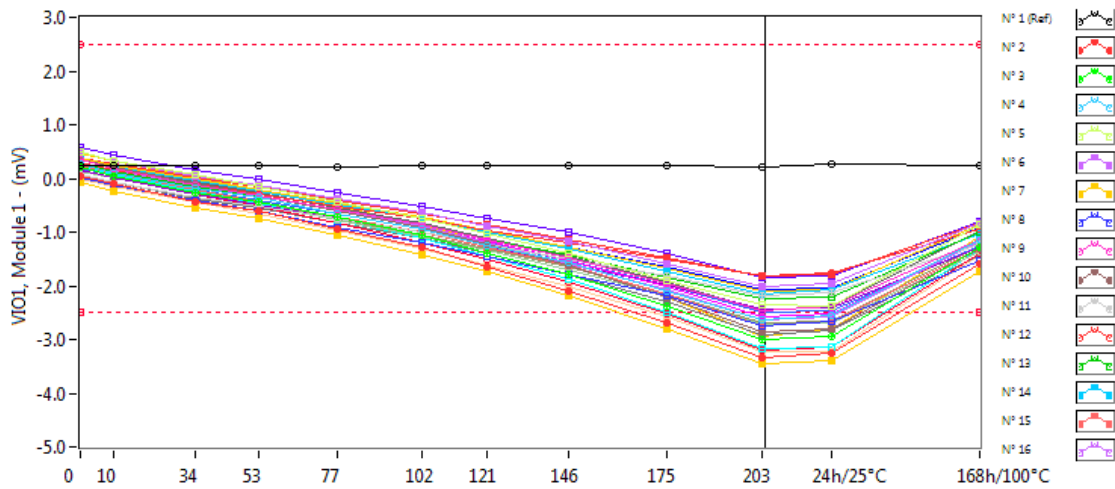
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# 1. VIO1, Module 1

Ta=25°C; +VCC=30V; -VCC=GND; VCM=+15V



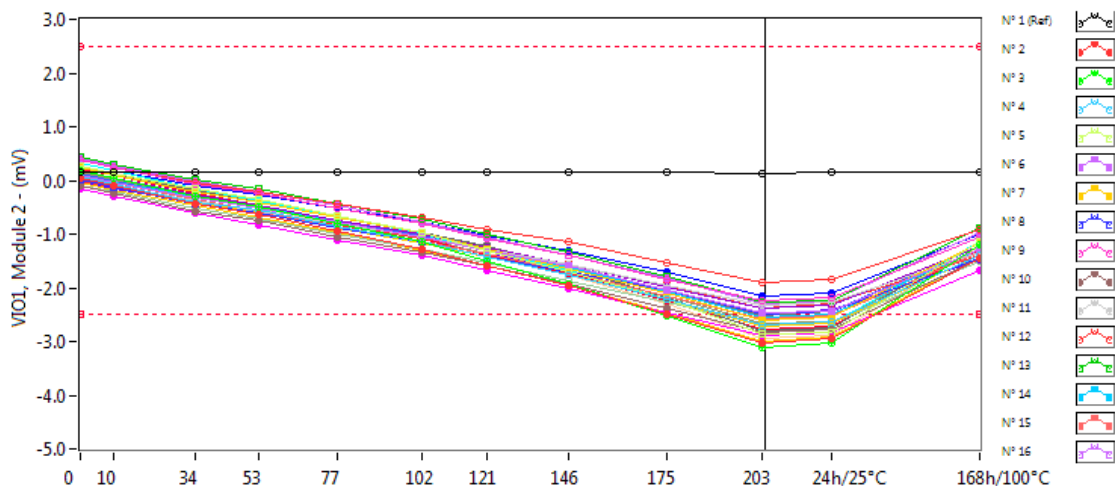
VIO1, Module 1 . (mV)

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)	0.229	0.243	0.235	0.247	0.225	0.233	0.233	0.229	0.240	0.223	0.257	0.244
N° 2	0.055	-0.092	-0.435	-0.619	-0.952	-1.295	-1.644	-2.097	-2.686	-3.324	-3.262	-1.597
N° 3	0.199	0.044	-0.261	-0.449	-0.726	-1.059	-1.393	-1.786	-2.388	-3.006	-2.943	-1.270
N° 4	0.257	0.105	-0.194	-0.354	-0.655	-0.952	-1.240	-1.568	-2.093	-2.622	-2.552	-1.150
N° 5	0.486	0.337	0.061	-0.154	-0.450	-0.755	-1.029	-1.405	-1.894	-2.355	-2.369	-0.869
N° 6	0.482	0.337	0.048	-0.136	-0.376	-0.636	-0.880	-1.164	-1.597	-2.022	-1.968	-0.843
N° 7	-0.073	-0.233	-0.540	-0.752	-1.052	-1.415	-1.739	-2.187	-2.791	-3.458	-3.400	-1.721
N° 8	0.028	-0.133	-0.422	-0.607	-0.907	-1.192	-1.460	-1.775	-2.183	-2.744	-2.672	-1.542
N° 9	0.344	0.186	-0.122	-0.322	-0.578	-0.860	-1.142	-1.466	-1.960	-2.456	-2.385	-1.145
N° 10	0.353	0.215	-0.098	-0.310	-0.595	-0.914	-1.219	-1.618	-2.209	-2.869	-2.802	-1.298
N° 11	0.074	-0.065	-0.342	-0.523	-0.754	-1.008	-1.233	-1.495	-1.827	-2.184	-2.136	-1.222
N° 12	0.293	0.150	-0.111	-0.294	-0.523	-0.760	-0.961	-1.193	-1.501	-1.830	-1.765	-0.947
N° 13	0.270	0.131	-0.141	-0.332	-0.584	-0.865	-1.130	-1.425	-1.835	-2.240	-2.212	-1.009
N° 14	0.352	0.221	-0.044	-0.244	-0.503	-0.749	-1.006	-1.323	-1.734	-2.150	-2.061	-1.032
N° 15	0.241	0.103	-0.218	-0.435	-0.711	-0.988	-1.271	-1.617	-2.159	-2.733	-2.667	-1.305
N° 16	0.292	0.149	-0.140	-0.335	-0.593	-0.899	-1.190	-1.586	-2.059	-2.640	-2.587	-1.181
N° 17	0.380	0.253	-0.011	-0.208	-0.465	-0.731	-0.974	-1.290	-1.681	-2.108	-2.071	-0.859
N° 18	0.344	0.190	-0.102	-0.329	-0.610	-0.914	-1.173	-1.533	-2.018	-2.578	-2.525	-1.164
N° 19	0.144	0.003	-0.291	-0.485	-0.754	-1.009	-1.278	-1.593	-1.997	-2.444	-2.410	-1.290
N° 20	0.137	0.017	-0.305	-0.505	-0.771	-1.073	-1.331	-1.709	-2.173	-2.721	-2.682	-1.355
N° 21	0.221	0.065	-0.247	-0.476	-0.788	-1.121	-1.458	-1.886	-2.490	-3.183	-3.132	-1.296
N° 22	0.376	0.263	0.014	-0.143	-0.415	-0.654	-0.866	-1.131	-1.471	-1.829	-1.790	-0.825
N° 23	0.352	0.216	-0.063	-0.266	-0.539	-0.839	-1.110	-1.454	-1.925	-2.452	-2.387	-0.984
N° 24	0.196	0.058	-0.219	-0.408	-0.668	-0.948	-1.206	-1.546	-1.993	-2.502	-2.451	-1.250
N° 25	0.155	0.017	-0.293	-0.520	-0.836	-1.187	-1.502	-1.930	-2.535	-3.189	-3.151	-1.401
N° 26	0.370	0.266	-0.020	-0.216	-0.476	-0.731	-0.971	-1.273	-1.649	-2.074	-2.047	-0.909
N° 27	0.137	0.006	-0.284	-0.463	-0.760	-1.047	-1.307	-1.647	-2.148	-2.681	-2.649	-1.266
N° 28	0.082	-0.059	-0.370	-0.556	-0.824	-1.114	-1.393	-1.784	-2.287	-2.911	-2.845	-1.427
N° 29	0.565	0.429	0.167	-0.005	-0.264	-0.510	-0.733	-1.012	-1.406	-1.832	-1.809	-0.791
N° 30	0.462	0.322	0.003	-0.220	-0.532	-0.862	-1.195	-1.623	-2.213	-2.936	-2.802	-1.077
N° 31	-0.021	-0.151	-0.445	-0.669	-0.971	-1.305	-1.611	-2.010	-2.586	-3.238	-3.228	-1.420

## 2. VIO1, Module 2

Ta=25°C; +VCC=30V; -VCC=GND; VCM=+15V



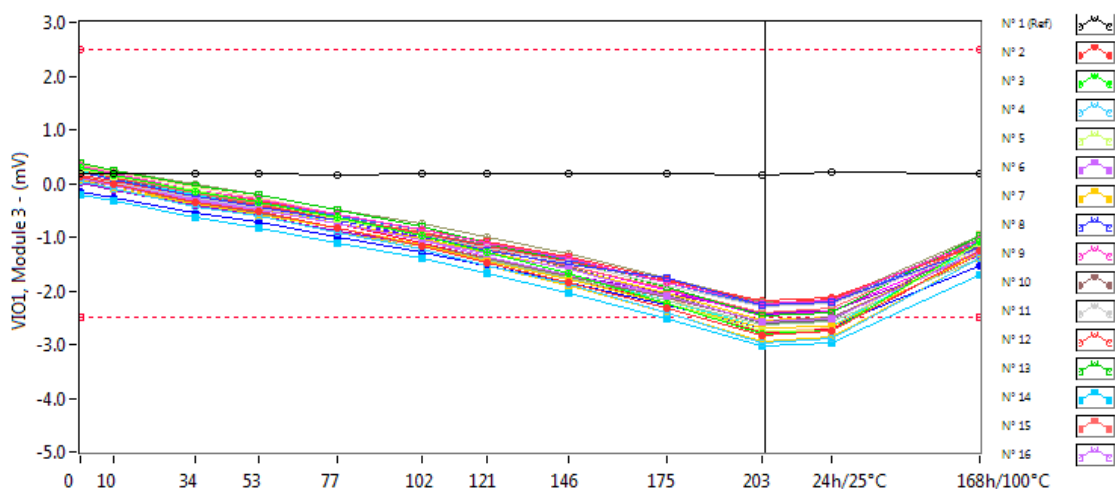
VIO1, Module 2 . (mV)

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)	0.147	0.161	0.156	0.159	0.144	0.156	0.157	0.163	0.155	0.135	0.169	0.164
N° 2	0.033	-0.103	-0.436	-0.643	-0.945	-1.280	-1.587	-1.962	-2.503	-3.024	-2.954	-1.442
N° 3	0.171	0.039	-0.298	-0.485	-0.794	-1.150	-1.500	-1.927	-2.525	-3.106	-3.032	-1.203
N° 4	0.067	-0.083	-0.398	-0.555	-0.862	-1.148	-1.428	-1.752	-2.224	-2.696	-2.632	-1.401
N° 5	0.264	0.125	-0.155	-0.362	-0.674	-0.981	-1.299	-1.700	-2.203	-2.851	-2.842	-1.137
N° 6	0.099	-0.044	-0.335	-0.515	-0.782	-1.047	-1.300	-1.595	-2.038	-2.478	-2.433	-1.271
N° 7	0.244	0.103	-0.209	-0.397	-0.678	-0.984	-1.283	-1.635	-2.112	-2.615	-2.554	-1.183
N° 8	0.020	-0.125	-0.432	-0.612	-0.885	-1.154	-1.411	-1.714	-2.053	-2.479	-2.423	-1.443
N° 9	0.393	0.244	-0.066	-0.235	-0.516	-0.798	-1.082	-1.403	-1.840	-2.234	-2.177	-1.060
N° 10	-0.107	-0.252	-0.574	-0.758	-1.049	-1.344	-1.597	-1.930	-2.385	-2.841	-2.776	-1.446
N° 11	0.019	-0.101	-0.383	-0.568	-0.796	-1.054	-1.276	-1.575	-1.951	-2.311	-2.266	-1.334
N° 12	0.373	0.245	-0.048	-0.213	-0.447	-0.702	-0.920	-1.154	-1.537	-1.899	-1.841	-0.911
N° 13	0.426	0.299	0.015	-0.169	-0.440	-0.728	-0.998	-1.324	-1.795	-2.280	-2.243	-0.894
N° 14	0.100	-0.030	-0.309	-0.507	-0.776	-1.051	-1.311	-1.631	-2.061	-2.556	-2.506	-1.291
N° 15	0.091	-0.043	-0.363	-0.565	-0.858	-1.130	-1.374	-1.710	-2.159	-2.577	-2.534	-1.324
N° 16	0.419	0.279	-0.003	-0.200	-0.460	-0.776	-1.064	-1.405	-1.824	-2.301	-2.244	-0.975
N° 17	0.004	-0.114	-0.418	-0.614	-0.884	-1.172	-1.436	-1.751	-2.202	-2.711	-2.661	-1.394
N° 18	-0.159	-0.305	-0.617	-0.829	-1.117	-1.407	-1.674	-2.013	-2.451	-2.893	-2.829	-1.668
N° 19	0.171	0.036	-0.270	-0.468	-0.751	-1.012	-1.262	-1.551	-1.981	-2.379	-2.335	-1.224
N° 20	-0.093	-0.217	-0.529	-0.726	-1.010	-1.280	-1.522	-1.869	-2.276	-2.698	-2.658	-1.507
N° 21	0.318	0.175	-0.163	-0.380	-0.676	-0.993	-1.300	-1.683	-2.203	-2.707	-2.662	-1.153
N° 22	-0.012	-0.126	-0.409	-0.579	-0.831	-1.073	-1.292	-1.576	-1.967	-2.377	-2.307	-1.386
N° 23	0.239	0.103	-0.174	-0.381	-0.673	-0.968	-1.226	-1.612	-2.182	-2.800	-2.743	-1.149
N° 24	0.114	-0.022	-0.292	-0.461	-0.751	-1.030	-1.285	-1.610	-2.052	-2.498	-2.429	-1.236
N° 25	0.223	0.089	-0.230	-0.451	-0.759	-1.097	-1.384	-1.735	-2.228	-2.764	-2.717	-1.273
N° 26	0.318	0.197	-0.089	-0.279	-0.519	-0.773	-1.016	-1.322	-1.708	-2.158	-2.107	-0.986
N° 27	0.141	0.022	-0.293	-0.487	-0.782	-1.087	-1.362	-1.693	-2.167	-2.657	-2.624	-1.286
N° 28	0.131	0.003	-0.280	-0.480	-0.755	-1.039	-1.277	-1.626	-2.046	-2.531	-2.448	-1.213
N° 29	-0.012	-0.154	-0.418	-0.607	-0.870	-1.130	-1.363	-1.645	-2.035	-2.482	-2.421	-1.466
N° 30	-0.033	-0.170	-0.475	-0.694	-0.984	-1.309	-1.596	-1.957	-2.461	-2.990	-2.912	-1.412
N° 31	0.106	-0.040	-0.318	-0.525	-0.803	-1.092	-1.399	-1.768	-2.303	-2.942	-2.889	-1.232

### 3. VIO1, Module 3

Ta=25°C; +VCC=30V; -VCC=GND; VCM=+15V



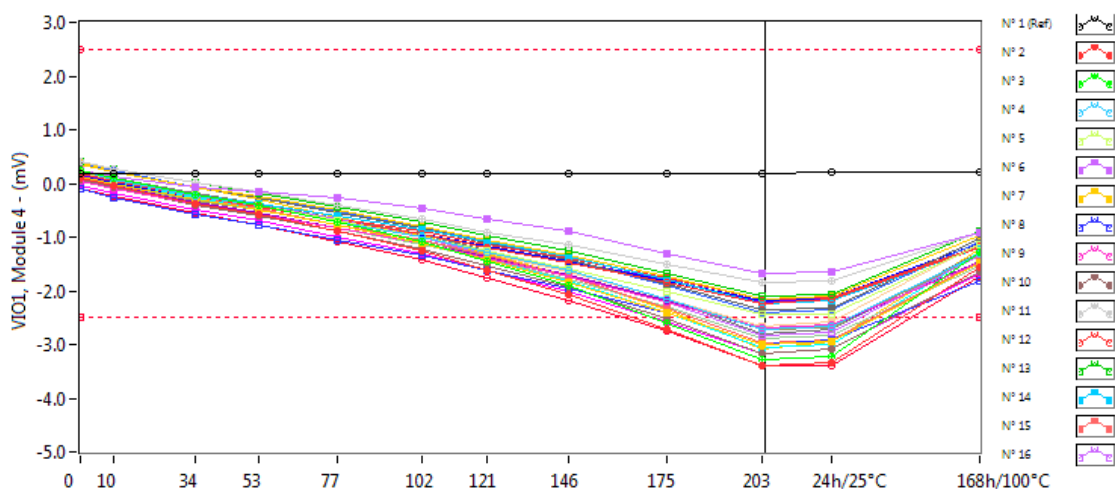
VIO1, Module 3 . (mV)

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)	0.174	0.185	0.175	0.181	0.168	0.173	0.173	0.179	0.191	0.166	0.198	0.189
N° 2	0.113	-0.026	-0.352	-0.534	-0.844	-1.163	-1.478	-1.832	-2.324	-2.825	-2.747	-1.249
N° 3	0.304	0.166	-0.165	-0.353	-0.643	-0.980	-1.290	-1.682	-2.236	-2.790	-2.743	-1.089
N° 4	0.033	-0.108	-0.424	-0.598	-0.916	-1.233	-1.543	-1.878	-2.416	-2.960	-2.901	-1.400
N° 5	0.267	0.136	-0.137	-0.349	-0.648	-0.976	-1.273	-1.677	-2.228	-2.742	-2.749	-1.112
N° 6	0.106	-0.034	-0.315	-0.488	-0.754	-1.046	-1.320	-1.596	-2.112	-2.591	-2.524	-1.272
N° 7	0.059	-0.093	-0.370	-0.564	-0.837	-1.144	-1.442	-1.781	-2.249	-2.695	-2.650	-1.305
N° 8	0.219	0.062	-0.238	-0.426	-0.703	-0.981	-1.249	-1.501	-1.770	-2.268	-2.211	-1.202
N° 9	0.319	0.175	-0.120	-0.307	-0.571	-0.852	-1.118	-1.407	-1.833	-2.249	-2.191	-1.062
N° 10	0.079	-0.056	-0.359	-0.548	-0.827	-1.128	-1.400	-1.722	-2.134	-2.568	-2.503	-1.274
N° 11	0.125	0.003	-0.267	-0.454	-0.702	-0.960	-1.196	-1.490	-1.901	-2.300	-2.245	-1.235
N° 12	0.160	0.035	-0.235	-0.413	-0.656	-0.917	-1.157	-1.439	-1.817	-2.197	-2.139	-1.149
N° 13	0.376	0.246	-0.040	-0.223	-0.506	-0.813	-1.101	-1.448	-1.935	-2.470	-2.419	-0.980
N° 14	-0.216	-0.337	-0.630	-0.830	-1.114	-1.402	-1.682	-2.041	-2.530	-3.040	-2.981	-1.717
N° 15	0.272	0.135	-0.174	-0.385	-0.679	-0.957	-1.230	-1.535	-1.955	-2.395	-2.329	-1.126
N° 16	0.125	-0.005	-0.309	-0.484	-0.759	-1.063	-1.364	-1.714	-2.102	-2.576	-2.532	-1.267
N° 17	0.109	-0.025	-0.292	-0.472	-0.742	-1.015	-1.285	-1.600	-2.042	-2.540	-2.487	-1.250
N° 18	0.274	0.130	-0.169	-0.379	-0.658	-0.964	-1.232	-1.542	-1.987	-2.478	-2.390	-1.184
N° 19	0.010	-0.132	-0.412	-0.605	-0.891	-1.153	-1.403	-1.691	-2.036	-2.404	-2.375	-1.349
N° 20	0.053	-0.094	-0.398	-0.602	-0.878	-1.178	-1.420	-1.757	-2.179	-2.631	-2.588	-1.390
N° 21	0.233	0.083	-0.217	-0.446	-0.739	-1.066	-1.360	-1.714	-2.186	-2.692	-2.659	-1.168
N° 22	0.230	0.100	-0.155	-0.319	-0.583	-0.847	-1.089	-1.380	-1.777	-2.231	-2.162	-1.119
N° 23	0.203	0.079	-0.196	-0.391	-0.647	-0.936	-1.201	-1.561	-2.066	-2.610	-2.537	-1.129
N° 24	0.266	0.130	-0.152	-0.344	-0.595	-0.859	-1.114	-1.425	-1.834	-2.297	-2.245	-1.074
N° 25	0.205	0.073	-0.238	-0.466	-0.758	-1.104	-1.398	-1.764	-2.246	-2.764	-2.710	-1.304
N° 26	-0.142	-0.267	-0.547	-0.731	-0.987	-1.269	-1.529	-1.840	-2.255	-2.700	-2.660	-1.524
N° 27	0.376	0.249	-0.021	-0.206	-0.483	-0.745	-1.000	-1.303	-1.752	-2.198	-2.178	-0.976
N° 28	0.198	0.075	-0.202	-0.389	-0.638	-0.910	-1.141	-1.458	-1.846	-2.267	-2.211	-1.017
N° 29	0.078	-0.056	-0.321	-0.490	-0.739	-0.995	-1.238	-1.531	-1.954	-2.430	-2.369	-1.334
N° 30	0.083	-0.055	-0.382	-0.596	-0.898	-1.235	-1.545	-1.907	-2.402	-2.946	-2.856	-1.401
N° 31	0.349	0.219	-0.063	-0.260	-0.564	-0.879	-1.193	-1.576	-2.122	-2.779	-2.684	-0.955

## 4. VIO1, Module 4

Ta=25°C; +VCC=30V; -VCC=GND; VCM=+15V



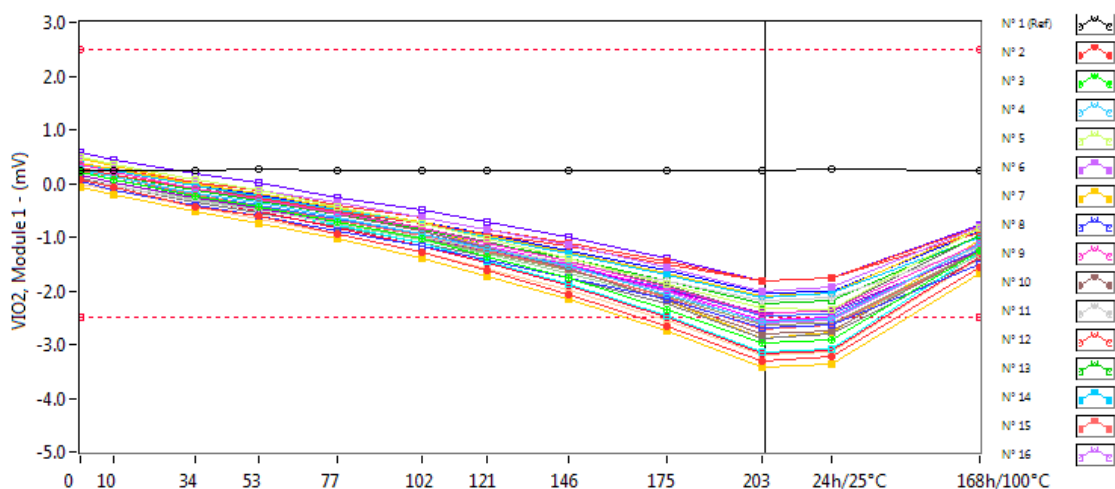
VIO1, Module 4 . (mV)

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)	0.181	0.192	0.186	0.196	0.179	0.187	0.185	0.196	0.192	0.177	0.208	0.199
N° 2	0.103	-0.046	-0.378	-0.578	-0.887	-1.254	-1.609	-2.067	-2.720	-3.392	-3.343	-1.566
N° 3	0.247	0.104	-0.223	-0.419	-0.732	-1.094	-1.456	-1.907	-2.607	-3.278	-3.230	-1.277
N° 4	0.234	0.083	-0.231	-0.397	-0.706	-1.003	-1.295	-1.631	-2.166	-2.732	-2.658	-1.310
N° 5	0.215	0.068	-0.214	-0.409	-0.681	-0.996	-1.264	-1.587	-2.019	-2.444	-2.439	-1.141
N° 6	0.250	0.124	-0.081	-0.156	-0.273	-0.459	-0.656	-0.897	-1.297	-1.687	-1.640	-0.909
N° 7	0.137	-0.004	-0.303	-0.500	-0.774	-1.104	-1.433	-1.835	-2.397	-3.007	-2.933	-1.473
N° 8	-0.099	-0.256	-0.590	-0.773	-1.055	-1.338	-1.624	-1.964	-2.408	-2.988	-2.916	-1.809
N° 9	0.052	-0.090	-0.386	-0.565	-0.822	-1.110	-1.393	-1.725	-2.200	-2.704	-2.639	-1.486
N° 10	0.066	-0.080	-0.395	-0.603	-0.892	-1.221	-1.540	-1.939	-2.518	-3.155	-3.084	-1.638
N° 11	0.403	0.276	0.017	-0.162	-0.404	-0.661	-0.903	-1.152	-1.514	-1.856	-1.819	-0.909
N° 12	0.176	0.041	-0.236	-0.430	-0.682	-0.943	-1.184	-1.471	-1.856	-2.226	-2.168	-1.197
N° 13	0.405	0.262	0.014	-0.175	-0.438	-0.713	-0.974	-1.257	-1.672	-2.092	-2.065	-0.900
N° 14	0.174	0.052	-0.211	-0.373	-0.604	-0.851	-1.087	-1.380	-1.791	-2.227	-2.183	-1.195
N° 15	0.214	0.071	-0.249	-0.461	-0.769	-1.064	-1.349	-1.731	-2.331	-2.968	-2.906	-1.458
N° 16	0.245	0.092	-0.218	-0.409	-0.664	-1.003	-1.336	-1.721	-2.224	-2.831	-2.772	-1.331
N° 17	0.353	0.225	-0.068	-0.241	-0.500	-0.796	-1.045	-1.337	-1.739	-2.157	-2.107	-0.962
N° 18	-0.033	-0.179	-0.486	-0.703	-1.007	-1.322	-1.631	-2.012	-2.576	-3.161	-3.085	-1.678
N° 19	0.103	-0.039	-0.352	-0.554	-0.824	-1.112	-1.380	-1.715	-2.193	-2.721	-2.670	-1.450
N° 20	0.140	-0.021	-0.339	-0.542	-0.820	-1.130	-1.402	-1.794	-2.305	-2.875	-2.820	-1.545
N° 21	0.180	0.036	-0.268	-0.490	-0.783	-1.115	-1.434	-1.825	-2.419	-3.057	-2.993	-1.292
N° 22	0.175	0.045	-0.228	-0.404	-0.654	-0.901	-1.132	-1.400	-1.766	-2.168	-2.134	-1.166
N° 23	0.348	0.215	-0.071	-0.273	-0.545	-0.819	-1.100	-1.409	-1.884	-2.340	-2.310	-1.034
N° 24	0.351	0.229	-0.072	-0.268	-0.535	-0.824	-1.084	-1.418	-1.907	-2.418	-2.349	-1.084
N° 25	-0.093	-0.233	-0.562	-0.785	-1.088	-1.435	-1.770	-2.178	-2.758	-3.405	-3.387	-1.723
N° 26	0.132	0.008	-0.255	-0.437	-0.680	-0.932	-1.175	-1.445	-1.808	-2.175	-2.123	-1.116
N° 27	0.101	-0.024	-0.320	-0.492	-0.774	-1.065	-1.353	-1.697	-2.170	-2.721	-2.677	-1.351
N° 28	0.243	0.109	-0.187	-0.377	-0.656	-0.957	-1.241	-1.631	-2.153	-2.792	-2.709	-1.280
N° 29	0.163	0.030	-0.239	-0.421	-0.670	-0.938	-1.173	-1.439	-1.798	-2.216	-2.168	-1.179
N° 30	0.369	0.227	-0.082	-0.305	-0.623	-0.968	-1.309	-1.746	-2.359	-3.073	-2.939	-1.225
N° 31	0.232	0.090	-0.198	-0.399	-0.680	-0.999	-1.321	-1.657	-2.143	-2.660	-2.580	-1.111

## 5. VIO2, Module 1

Ta=25°C; +VCC=2V; -VCC=-28V; VCM=-13V

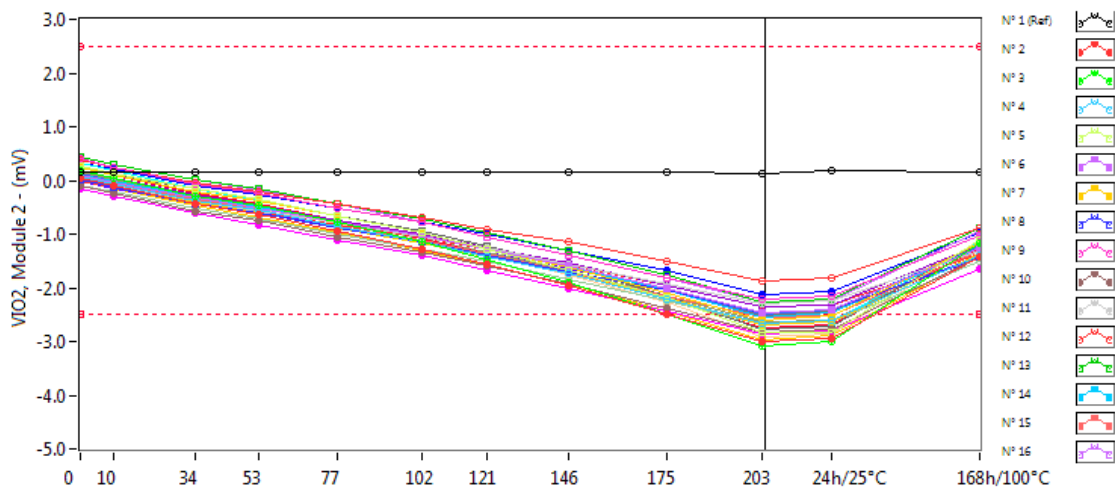


VIO2, Module 1 . (mV) Min = -2.5 Max = 2.5

	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)	0.238	0.253	0.245	0.257	0.236	0.242	0.242	0.241	0.249	0.232	0.267	0.253
N° 2	0.066	-0.080	-0.425	-0.608	-0.938	-1.277	-1.625	-2.072	-2.656	-3.296	-3.227	-1.567
N° 3	0.209	0.057	-0.250	-0.432	-0.715	-1.039	-1.367	-1.764	-2.356	-2.971	-2.903	-1.240
N° 4	0.265	0.114	-0.185	-0.339	-0.637	-0.935	-1.213	-1.541	-2.070	-2.584	-2.515	-1.129
N° 5	0.493	0.353	0.069	-0.139	-0.435	-0.735	-1.015	-1.383	-1.875	-2.331	-2.343	-0.841
N° 6	0.492	0.344	0.065	-0.123	-0.360	-0.625	-0.862	-1.144	-1.577	-2.010	-1.939	-0.808
N° 7	-0.067	-0.223	-0.529	-0.747	-1.038	-1.405	-1.721	-2.155	-2.753	-3.420	-3.356	-1.688
N° 8	0.036	-0.122	-0.418	-0.602	-0.901	-1.173	-1.436	-1.751	-2.152	-2.701	-2.626	-1.514
N° 9	0.353	0.198	-0.110	-0.302	-0.559	-0.845	-1.116	-1.442	-1.937	-2.427	-2.348	-1.119
N° 10	0.361	0.223	-0.086	-0.292	-0.581	-0.893	-1.198	-1.593	-2.179	-2.813	-2.743	-1.263
N° 11	0.083	-0.055	-0.327	-0.493	-0.746	-0.993	-1.219	-1.479	-1.823	-2.171	-2.124	-1.199
N° 12	0.301	0.161	-0.102	-0.278	-0.511	-0.745	-0.943	-1.181	-1.498	-1.818	-1.750	-0.929
N° 13	0.280	0.141	-0.129	-0.323	-0.571	-0.849	-1.109	-1.404	-1.814	-2.228	-2.188	-0.984
N° 14	0.362	0.236	-0.033	-0.234	-0.490	-0.734	-0.991	-1.308	-1.716	-2.139	-2.038	-1.000
N° 15	0.251	0.114	-0.209	-0.424	-0.698	-0.970	-1.251	-1.590	-2.132	-2.706	-2.633	-1.279
N° 16	0.302	0.163	-0.127	-0.325	-0.581	-0.879	-1.175	-1.558	-2.024	-2.600	-2.547	-1.151
N° 17	0.389	0.267	-0.005	-0.190	-0.457	-0.712	-0.958	-1.272	-1.670	-2.094	-2.056	-0.836
N° 18	0.355	0.201	-0.091	-0.313	-0.590	-0.891	-1.160	-1.515	-1.997	-2.547	-2.490	-1.136
N° 19	0.155	0.018	-0.279	-0.475	-0.741	-0.992	-1.256	-1.572	-1.972	-2.420	-2.371	-1.261
N° 20	0.147	0.023	-0.291	-0.498	-0.757	-1.054	-1.313	-1.682	-2.141	-2.683	-2.636	-1.328
N° 21	0.229	0.076	-0.237	-0.459	-0.775	-1.104	-1.439	-1.864	-2.453	-3.141	-3.097	-1.276
N° 22	0.382	0.269	0.024	-0.136	-0.408	-0.645	-0.859	-1.117	-1.450	-1.811	-1.764	-0.803
N° 23	0.363	0.229	-0.052	-0.257	-0.526	-0.826	-1.094	-1.438	-1.901	-2.431	-2.364	-0.960
N° 24	0.206	0.065	-0.207	-0.396	-0.659	-0.936	-1.188	-1.524	-1.969	-2.477	-2.423	-1.226
N° 25	0.165	0.023	-0.282	-0.510	-0.826	-1.170	-1.481	-1.908	-2.497	-3.158	-3.108	-1.378
N° 26	0.381	0.275	-0.008	-0.203	-0.465	-0.720	-0.957	-1.250	-1.628	-2.049	-2.019	-0.880
N° 27	0.146	0.015	-0.274	-0.452	-0.742	-1.025	-1.283	-1.620	-2.111	-2.645	-2.609	-1.243
N° 28	0.088	-0.052	-0.358	-0.548	-0.813	-1.103	-1.372	-1.760	-2.251	-2.876	-2.803	-1.400
N° 29	0.574	0.439	0.176	0.004	-0.259	-0.494	-0.719	-0.992	-1.391	-1.808	-1.771	-0.767
N° 30	0.473	0.333	0.014	-0.206	-0.515	-0.841	-1.174	-1.591	-2.177	-2.889	-2.766	-1.052
N° 31	-0.012	-0.140	-0.435	-0.658	-0.957	-1.291	-1.595	-1.998	-2.561	-3.209	-3.153	-1.390

## 6. VIO2, Module 2

Ta=25°C; +VCC=2V; -VCC=-28V; VCM=-13V



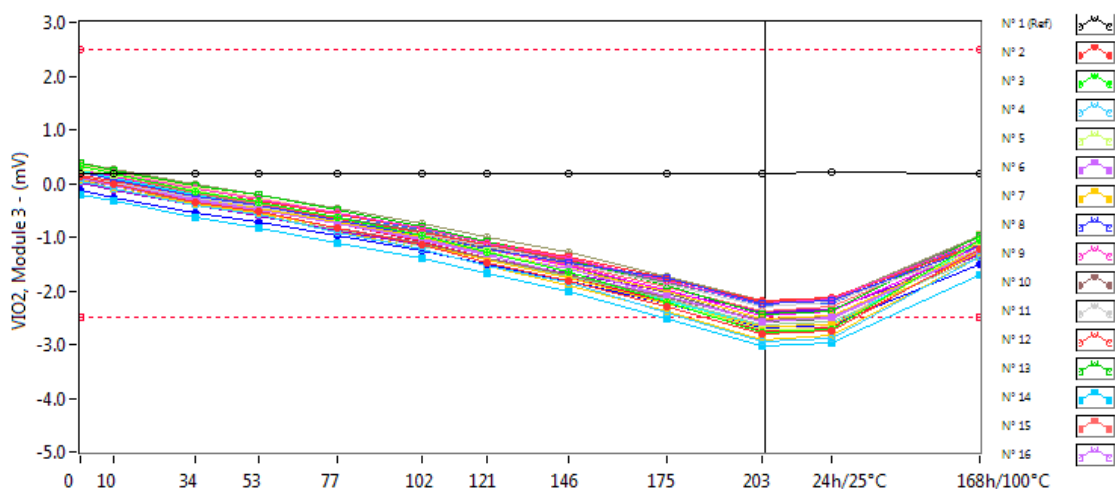
VIO2, Module 2 . (mV)

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)	0.153	0.166	0.161	0.164	0.150	0.161	0.162	0.166	0.159	0.139	0.174	0.168
N° 2	0.038	-0.102	-0.431	-0.635	-0.933	-1.269	-1.573	-1.950	-2.482	-3.007	-2.933	-1.418
N° 3	0.177	0.045	-0.290	-0.477	-0.785	-1.138	-1.482	-1.908	-2.501	-3.079	-3.007	-1.177
N° 4	0.071	-0.077	-0.392	-0.552	-0.857	-1.136	-1.416	-1.737	-2.210	-2.676	-2.612	-1.381
N° 5	0.270	0.130	-0.146	-0.351	-0.659	-0.965	-1.282	-1.682	-2.172	-2.819	-2.821	-1.116
N° 6	0.104	-0.038	-0.332	-0.508	-0.776	-1.034	-1.289	-1.578	-2.019	-2.454	-2.411	-1.253
N° 7	0.249	0.106	-0.202	-0.388	-0.668	-0.974	-1.269	-1.623	-2.098	-2.599	-2.533	-1.163
N° 8	0.025	-0.123	-0.428	-0.607	-0.876	-1.143	-1.401	-1.706	-2.041	-2.469	-2.406	-1.421
N° 9	0.398	0.250	-0.059	-0.230	-0.509	-0.786	-1.069	-1.384	-1.824	-2.222	-2.158	-1.041
N° 10	-0.103	-0.251	-0.568	-0.754	-1.044	-1.330	-1.586	-1.922	-2.375	-2.822	-2.761	-1.428
N° 11	0.023	-0.100	-0.380	-0.566	-0.785	-1.043	-1.262	-1.564	-1.933	-2.287	-2.241	-1.317
N° 12	0.377	0.249	-0.047	-0.207	-0.439	-0.694	-0.909	-1.144	-1.521	-1.879	-1.825	-0.898
N° 13	0.432	0.303	0.020	-0.164	-0.429	-0.714	-0.978	-1.306	-1.768	-2.257	-2.211	-0.877
N° 14	0.108	-0.024	-0.304	-0.496	-0.767	-1.042	-1.295	-1.619	-2.042	-2.536	-2.476	-1.266
N° 15	0.096	-0.040	-0.353	-0.557	-0.847	-1.119	-1.363	-1.699	-2.148	-2.559	-2.512	-1.300
N° 16	0.425	0.284	0.002	-0.193	-0.449	-0.764	-1.051	-1.392	-1.808	-2.278	-2.230	-0.957
N° 17	0.009	-0.110	-0.413	-0.608	-0.877	-1.159	-1.424	-1.732	-2.180	-2.686	-2.633	-1.379
N° 18	-0.154	-0.301	-0.610	-0.822	-1.106	-1.396	-1.665	-2.000	-2.435	-2.873	-2.805	-1.650
N° 19	0.177	0.039	-0.262	-0.462	-0.741	-1.002	-1.253	-1.534	-1.968	-2.365	-2.314	-1.209
N° 20	-0.089	-0.214	-0.521	-0.728	-1.005	-1.270	-1.513	-1.859	-2.253	-2.688	-2.641	-1.493
N° 21	0.325	0.178	-0.157	-0.371	-0.668	-0.983	-1.281	-1.671	-2.180	-2.691	-2.634	-1.137
N° 22	-0.007	-0.122	-0.404	-0.572	-0.824	-1.067	-1.284	-1.567	-1.948	-2.358	-2.312	-1.365
N° 23	0.245	0.106	-0.168	-0.375	-0.660	-0.957	-1.215	-1.595	-2.163	-2.769	-2.715	-1.128
N° 24	0.119	-0.015	-0.287	-0.461	-0.744	-1.018	-1.273	-1.591	-2.041	-2.482	-2.409	-1.219
N° 25	0.228	0.094	-0.226	-0.446	-0.747	-1.085	-1.375	-1.720	-2.215	-2.747	-2.700	-1.255
N° 26	0.323	0.201	-0.085	-0.268	-0.513	-0.764	-1.002	-1.307	-1.687	-2.134	-2.083	-0.970
N° 27	0.147	0.026	-0.287	-0.480	-0.774	-1.078	-1.345	-1.680	-2.147	-2.637	-2.602	-1.271
N° 28	0.137	0.007	-0.274	-0.472	-0.745	-1.030	-1.266	-1.610	-2.030	-2.513	-2.427	-1.196
N° 29	-0.005	-0.148	-0.412	-0.600	-0.861	-1.115	-1.348	-1.635	-2.019	-2.460	-2.398	-1.447
N° 30	-0.028	-0.168	-0.472	-0.690	-0.976	-1.298	-1.580	-1.943	-2.440	-2.970	-2.901	-1.395
N° 31	0.112	-0.035	-0.316	-0.517	-0.790	-1.081	-1.379	-1.748	-2.281	-2.911	-2.859	-1.204

## 7. VIO2, Module 3

Ta=25°C; +VCC=2V; -VCC=-28V; VCM=-13V



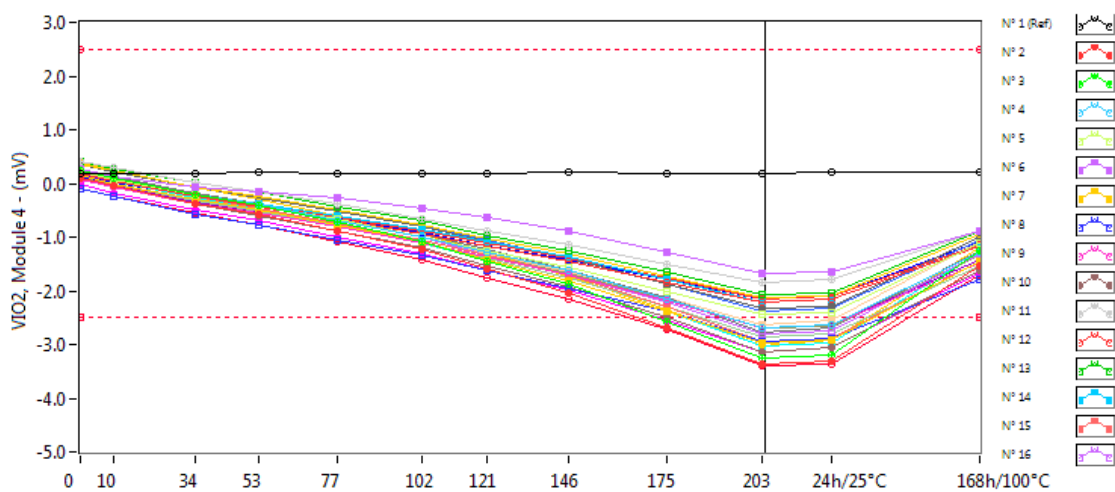
VIO2, Module 3 . (mV)

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)	0.181	0.191	0.181	0.186	0.174	0.179	0.178	0.185	0.196	0.171	0.203	0.194
N° 2	0.118	-0.023	-0.343	-0.529	-0.834	-1.151	-1.466	-1.821	-2.305	-2.811	-2.736	-1.228
N° 3	0.310	0.171	-0.162	-0.343	-0.627	-0.973	-1.276	-1.657	-2.211	-2.768	-2.717	-1.069
N° 4	0.037	-0.105	-0.419	-0.589	-0.905	-1.224	-1.525	-1.858	-2.399	-2.943	-2.876	-1.378
N° 5	0.273	0.141	-0.129	-0.341	-0.637	-0.964	-1.257	-1.657	-2.206	-2.719	-2.728	-1.090
N° 6	0.111	-0.030	-0.312	-0.481	-0.743	-1.035	-1.307	-1.580	-2.091	-2.572	-2.504	-1.254
N° 7	0.064	-0.089	-0.368	-0.556	-0.830	-1.133	-1.428	-1.771	-2.228	-2.676	-2.632	-1.291
N° 8	0.225	0.068	-0.230	-0.420	-0.696	-0.972	-1.236	-1.487	-1.757	-2.252	-2.189	-1.179
N° 9	0.324	0.180	-0.112	-0.300	-0.560	-0.841	-1.109	-1.392	-1.818	-2.230	-2.169	-1.044
N° 10	0.084	-0.051	-0.355	-0.542	-0.817	-1.118	-1.390	-1.713	-2.122	-2.547	-2.485	-1.258
N° 11	0.130	0.006	-0.262	-0.445	-0.694	-0.948	-1.181	-1.473	-1.881	-2.282	-2.225	-1.216
N° 12	0.163	0.038	-0.229	-0.411	-0.650	-0.908	-1.147	-1.428	-1.801	-2.175	-2.117	-1.136
N° 13	0.382	0.252	-0.029	-0.219	-0.495	-0.802	-1.087	-1.427	-1.915	-2.443	-2.388	-0.961
N° 14	-0.213	-0.333	-0.625	-0.825	-1.107	-1.390	-1.671	-2.024	-2.512	-3.025	-2.961	-1.702
N° 15	0.278	0.141	-0.171	-0.379	-0.668	-0.945	-1.218	-1.520	-1.939	-2.378	-2.308	-1.110
N° 16	0.130	0.000	-0.308	-0.481	-0.752	-1.053	-1.350	-1.698	-2.085	-2.560	-2.516	-1.251
N° 17	0.114	-0.022	-0.287	-0.469	-0.731	-1.002	-1.269	-1.586	-2.024	-2.524	-2.460	-1.227
N° 18	0.279	0.135	-0.166	-0.372	-0.650	-0.952	-1.219	-1.532	-1.974	-2.458	-2.371	-1.165
N° 19	0.014	-0.128	-0.409	-0.602	-0.879	-1.143	-1.393	-1.677	-2.020	-2.390	-2.355	-1.331
N° 20	0.059	-0.090	-0.391	-0.598	-0.869	-1.169	-1.407	-1.741	-2.159	-2.620	-2.569	-1.371
N° 21	0.239	0.088	-0.212	-0.436	-0.733	-1.053	-1.348	-1.701	-2.172	-2.675	-2.643	-1.148
N° 22	0.235	0.107	-0.150	-0.310	-0.574	-0.839	-1.078	-1.371	-1.760	-2.204	-2.141	-1.102
N° 23	0.208	0.082	-0.190	-0.386	-0.638	-0.920	-1.189	-1.544	-2.046	-2.588	-2.516	-1.110
N° 24	0.271	0.134	-0.146	-0.337	-0.586	-0.852	-1.098	-1.409	-1.819	-2.275	-2.226	-1.053
N° 25	0.211	0.079	-0.231	-0.460	-0.750	-1.089	-1.387	-1.746	-2.223	-2.743	-2.691	-1.284
N° 26	-0.138	-0.262	-0.541	-0.728	-0.981	-1.254	-1.517	-1.825	-2.238	-2.678	-2.638	-1.509
N° 27	0.382	0.257	-0.015	-0.199	-0.469	-0.737	-0.987	-1.285	-1.731	-2.184	-2.152	-0.959
N° 28	0.202	0.077	-0.200	-0.382	-0.629	-0.901	-1.129	-1.447	-1.835	-2.252	-2.196	-1.004
N° 29	0.083	-0.052	-0.315	-0.487	-0.732	-0.986	-1.228	-1.519	-1.935	-2.409	-2.347	-1.319
N° 30	0.087	-0.048	-0.378	-0.588	-0.888	-1.227	-1.536	-1.889	-2.388	-2.922	-2.841	-1.380
N° 31	0.355	0.225	-0.057	-0.255	-0.551	-0.868	-1.175	-1.554	-2.098	-2.750	-2.662	-0.935

## 8. VIO2, Module 4

Ta=25°C; +VCC=2V; -VCC=-28V; VCM=-13V



VIO2, Module 4 . (mV)

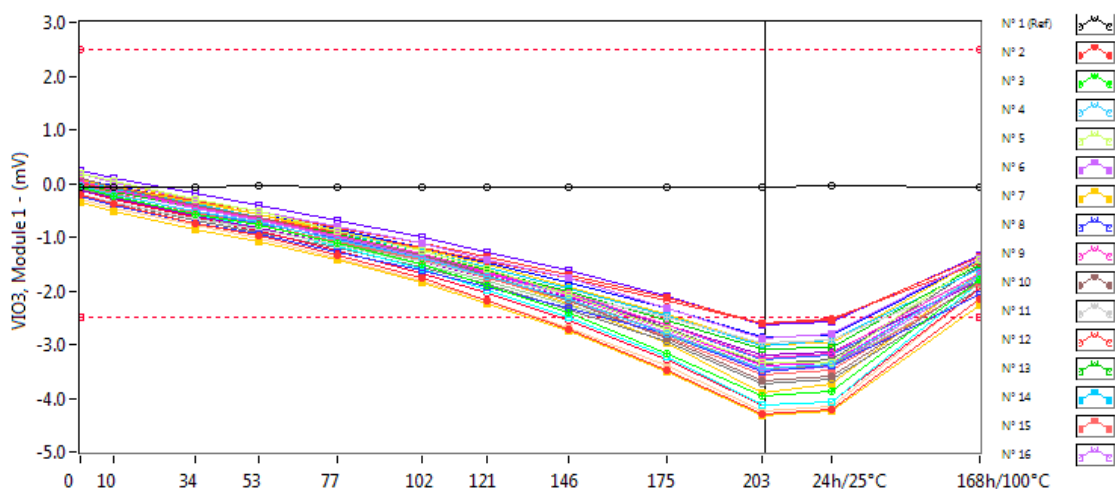
Min = -2.5 Max = 2.5

	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)	0.186	0.196	0.192	0.201	0.185	0.192	0.190	0.201	0.197	0.181	0.214	0.204
N° 2	0.110	-0.043	-0.371	-0.569	-0.875	-1.239	-1.594	-2.048	-2.695	-3.364	-3.315	-1.540
N° 3	0.253	0.107	-0.215	-0.408	-0.722	-1.080	-1.438	-1.882	-2.580	-3.241	-3.195	-1.260
N° 4	0.240	0.086	-0.224	-0.389	-0.693	-0.989	-1.278	-1.609	-2.141	-2.704	-2.634	-1.292
N° 5	0.221	0.072	-0.206	-0.403	-0.666	-0.987	-1.250	-1.571	-2.002	-2.423	-2.420	-1.123
N° 6	0.256	0.129	-0.075	-0.154	-0.272	-0.452	-0.647	-0.891	-1.295	-1.687	-1.638	-0.888
N° 7	0.144	0.000	-0.296	-0.491	-0.765	-1.094	-1.418	-1.817	-2.374	-2.976	-2.912	-1.453
N° 8	-0.092	-0.251	-0.586	-0.768	-1.045	-1.326	-1.609	-1.946	-2.387	-2.957	-2.891	-1.789
N° 9	0.059	-0.084	-0.379	-0.556	-0.814	-1.099	-1.379	-1.709	-2.178	-2.681	-2.620	-1.466
N° 10	0.071	-0.077	-0.389	-0.595	-0.881	-1.208	-1.527	-1.921	-2.493	-3.131	-3.052	-1.619
N° 11	0.411	0.282	0.022	-0.153	-0.393	-0.649	-0.885	-1.135	-1.495	-1.840	-1.797	-0.890
N° 12	0.182	0.046	-0.229	-0.424	-0.673	-0.933	-1.174	-1.455	-1.842	-2.211	-2.146	-1.182
N° 13	0.412	0.267	0.019	-0.169	-0.427	-0.702	-0.961	-1.244	-1.654	-2.067	-2.043	-0.882
N° 14	0.180	0.055	-0.207	-0.367	-0.595	-0.846	-1.074	-1.366	-1.776	-2.209	-2.167	-1.175
N° 15	0.220	0.076	-0.244	-0.451	-0.758	-1.051	-1.330	-1.714	-2.304	-2.934	-2.883	-1.439
N° 16	0.252	0.098	-0.212	-0.401	-0.653	-0.990	-1.325	-1.706	-2.202	-2.809	-2.738	-1.307
N° 17	0.360	0.228	-0.061	-0.233	-0.493	-0.782	-1.037	-1.323	-1.719	-2.137	-2.091	-0.941
N° 18	-0.027	-0.175	-0.482	-0.696	-0.995	-1.313	-1.618	-1.994	-2.556	-3.132	-3.059	-1.665
N° 19	0.109	-0.034	-0.346	-0.544	-0.816	-1.099	-1.369	-1.700	-2.173	-2.691	-2.646	-1.432
N° 20	0.146	-0.014	-0.334	-0.533	-0.815	-1.116	-1.386	-1.773	-2.285	-2.849	-2.798	-1.526
N° 21	0.186	0.043	-0.262	-0.482	-0.775	-1.100	-1.419	-1.807	-2.393	-3.032	-2.966	-1.269
N° 22	0.182	0.050	-0.221	-0.396	-0.647	-0.892	-1.121	-1.386	-1.748	-2.146	-2.111	-1.144
N° 23	0.354	0.220	-0.066	-0.261	-0.535	-0.810	-1.087	-1.393	-1.868	-2.319	-2.293	-1.013
N° 24	0.357	0.234	-0.065	-0.258	-0.524	-0.808	-1.066	-1.399	-1.880	-2.394	-2.315	-1.069
N° 25	-0.087	-0.228	-0.558	-0.776	-1.078	-1.426	-1.761	-2.158	-2.730	-3.383	-3.362	-1.708
N° 26	0.138	0.012	-0.250	-0.429	-0.666	-0.918	-1.161	-1.433	-1.792	-2.159	-2.104	-1.097
N° 27	0.107	-0.020	-0.314	-0.487	-0.766	-1.054	-1.336	-1.677	-2.145	-2.697	-2.648	-1.332
N° 28	0.249	0.115	-0.180	-0.372	-0.645	-0.948	-1.229	-1.615	-2.129	-2.765	-2.678	-1.265
N° 29	0.168	0.034	-0.231	-0.415	-0.664	-0.927	-1.161	-1.424	-1.789	-2.202	-2.151	-1.162
N° 30	0.375	0.233	-0.075	-0.296	-0.615	-0.955	-1.288	-1.722	-2.343	-3.042	-2.916	-1.208
N° 31	0.239	0.095	-0.193	-0.392	-0.667	-0.987	-1.301	-1.645	-2.124	-2.639	-2.561	-1.095



## 9. VIO3, Module 1

Ta=25°C; +VCC=5V; -VCC=GND; VCM=+1.4V



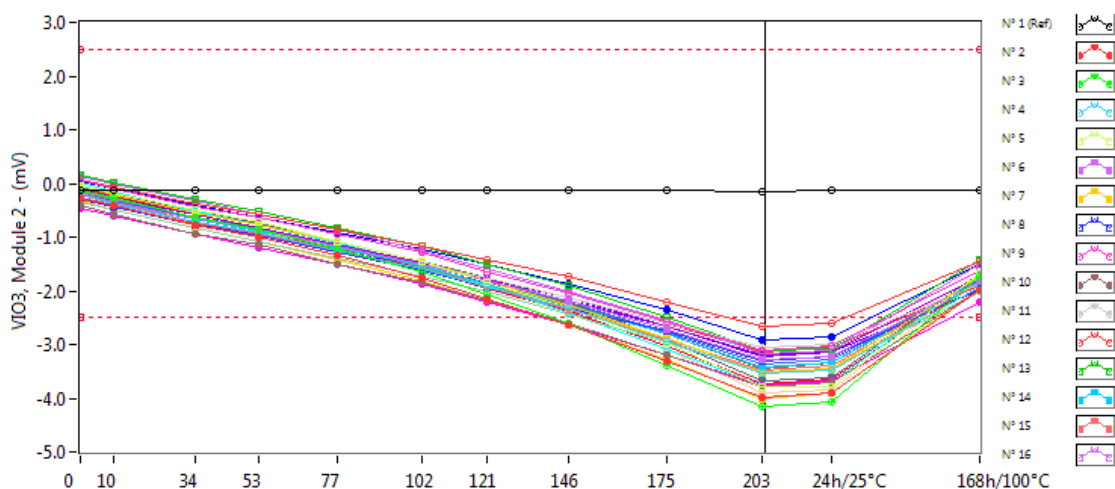
VIO3, Module 1 . (mV)

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)	-0.071	-0.061	-0.065	-0.055	-0.070	-0.069	-0.067	-0.070	-0.063	-0.074	-0.047	-0.059
N° 2	-0.210	-0.374	-0.747	-0.962	-1.339	-1.754	-2.177	-2.721	-3.472	-4.293	-4.220	-2.147
N° 3	-0.065	-0.233	-0.573	-0.788	-1.115	-1.508	-1.910	-2.406	-3.162	-3.971	-3.887	-1.795
N° 4	-0.032	-0.200	-0.521	-0.709	-1.043	-1.403	-1.739	-2.146	-2.799	-3.459	-3.379	-1.698
N° 5	0.188	0.029	-0.288	-0.532	-0.875	-1.252	-1.598	-2.069	-2.715	-3.326	-3.340	-1.417
N° 6	0.181	0.015	-0.292	-0.511	-0.793	-1.120	-1.413	-1.773	-2.325	-2.884	-2.796	-1.386
N° 7	-0.342	-0.517	-0.847	-1.092	-1.423	-1.856	-2.239	-2.759	-3.495	-4.338	-4.250	-2.255
N° 8	-0.239	-0.412	-0.736	-0.948	-1.287	-1.616	-1.931	-2.313	-2.806	-3.494	-3.407	-2.067
N° 9	0.056	-0.116	-0.450	-0.672	-0.971	-1.311	-1.637	-2.033	-2.642	-3.256	-3.163	-1.686
N° 10	0.088	-0.072	-0.405	-0.640	-0.969	-1.344	-1.706	-2.174	-2.890	-3.674	-3.586	-1.823
N° 11	-0.208	-0.364	-0.662	-0.855	-1.150	-1.456	-1.734	-2.066	-2.507	-2.964	-2.903	-1.748
N° 12	0.018	-0.138	-0.431	-0.639	-0.913	-1.204	-1.458	-1.764	-2.189	-2.608	-2.528	-1.469
N° 13	0.009	-0.145	-0.448	-0.668	-0.957	-1.303	-1.631	-2.010	-2.543	-3.093	-3.049	-1.516
N° 14	0.047	-0.096	-0.394	-0.630	-0.924	-1.241	-1.550	-1.949	-2.471	-3.023	-2.906	-1.583
N° 15	-0.021	-0.180	-0.536	-0.782	-1.097	-1.425	-1.762	-2.178	-2.847	-3.567	-3.487	-1.848
N° 16	0.001	-0.154	-0.478	-0.702	-0.991	-1.356	-1.717	-2.188	-2.767	-3.492	-3.426	-1.725
N° 17	0.077	-0.061	-0.364	-0.579	-0.888	-1.212	-1.519	-1.916	-2.440	-3.009	-2.961	-1.405
N° 18	0.084	-0.089	-0.416	-0.667	-0.981	-1.353	-1.677	-2.107	-2.709	-3.406	-3.337	-1.693
N° 19	-0.124	-0.279	-0.601	-0.824	-1.128	-1.437	-1.755	-2.135	-2.638	-3.199	-3.140	-1.807
N° 20	-0.127	-0.270	-0.610	-0.850	-1.139	-1.498	-1.804	-2.254	-2.819	-3.486	-3.431	-1.869
N° 21	-0.057	-0.229	-0.567	-0.820	-1.181	-1.578	-1.984	-2.495	-3.237	-4.121	-4.065	-1.838
N° 22	0.066	-0.063	-0.331	-0.519	-0.824	-1.124	-1.380	-1.705	-2.138	-2.606	-2.548	-1.354
N° 23	0.047	-0.100	-0.410	-0.649	-0.959	-1.329	-1.664	-2.098	-2.689	-3.373	-3.287	-1.533
N° 24	-0.068	-0.224	-0.529	-0.740	-1.037	-1.375	-1.679	-2.084	-2.635	-3.282	-3.208	-1.764
N° 25	-0.131	-0.294	-0.631	-0.891	-1.241	-1.663	-2.037	-2.555	-3.293	-4.128	-4.071	-1.970
N° 26	0.082	-0.043	-0.348	-0.577	-0.870	-1.186	-1.476	-1.841	-2.325	-2.868	-2.825	-1.424
N° 27	-0.108	-0.255	-0.576	-0.779	-1.104	-1.451	-1.760	-2.165	-2.776	-3.443	-3.404	-1.759
N° 28	-0.200	-0.357	-0.693	-0.915	-1.206	-1.560	-1.876	-2.339	-2.956	-3.745	-3.650	-1.967
N° 29	0.248	0.095	-0.195	-0.398	-0.699	-0.994	-1.275	-1.610	-2.107	-2.636	-2.585	-1.351
N° 30	0.187	0.023	-0.325	-0.576	-0.933	-1.337	-1.741	-2.249	-2.981	-3.908	-3.740	-1.635
N° 31	-0.306	-0.453	-0.780	-1.035	-1.385	-1.804	-2.181	-2.689	-3.404	-4.243	-4.164	-1.956

## 10. VIO3, Module 2

Ta=25°C; +VCC=5V; -VCC=GND; VCM=+1.4V



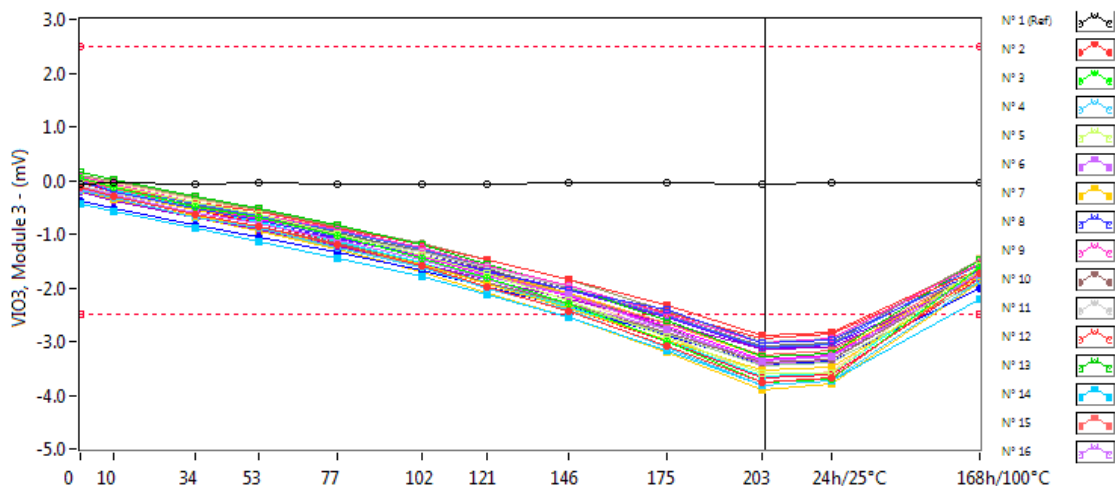
VIO3, Module 2 . (mV)

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)	-0.135	-0.125	-0.127	-0.120	-0.132	-0.128	-0.125	-0.122	-0.130	-0.145	-0.117	-0.122
N° 2	-0.255	-0.411	-0.769	-1.009	-1.352	-1.768	-2.152	-2.633	-3.312	-3.998	-3.914	-1.976
N° 3	-0.116	-0.269	-0.635	-0.858	-1.212	-1.645	-2.071	-2.609	-3.392	-4.162	-4.079	-1.737
N° 4	-0.205	-0.371	-0.714	-0.902	-1.246	-1.592	-1.929	-2.331	-2.943	-3.546	-3.471	-1.920
N° 5	-0.036	-0.192	-0.496	-0.731	-1.086	-1.459	-1.844	-2.330	-2.981	-3.779	-3.776	-1.679
N° 6	-0.185	-0.343	-0.668	-0.871	-1.178	-1.500	-1.809	-2.171	-2.730	-3.290	-3.230	-1.813
N° 7	-0.054	-0.209	-0.548	-0.765	-1.090	-1.461	-1.825	-2.273	-2.882	-3.527	-3.455	-1.732
N° 8	-0.271	-0.433	-0.770	-0.974	-1.283	-1.615	-1.929	-2.310	-2.741	-3.297	-3.221	-1.968
N° 9	0.071	-0.095	-0.433	-0.630	-0.944	-1.290	-1.635	-2.034	-2.591	-3.111	-3.034	-1.627
N° 10	-0.417	-0.583	-0.936	-1.153	-1.493	-1.853	-2.182	-2.607	-3.196	-3.792	-3.712	-1.996
N° 11	-0.265	-0.407	-0.714	-0.928	-1.181	-1.497	-1.766	-2.137	-2.608	-3.062	-2.999	-1.870
N° 12	0.083	-0.060	-0.388	-0.571	-0.847	-1.161	-1.425	-1.727	-2.199	-2.660	-2.594	-1.446
N° 13	0.146	0.004	-0.309	-0.526	-0.826	-1.176	-1.498	-1.905	-2.499	-3.118	-3.074	-1.416
N° 14	-0.207	-0.353	-0.658	-0.889	-1.199	-1.548	-1.864	-2.262	-2.797	-3.422	-3.350	-1.849
N° 15	-0.208	-0.359	-0.706	-0.942	-1.279	-1.614	-1.918	-2.341	-2.918	-3.467	-3.400	-1.858
N° 16	0.131	-0.028	-0.337	-0.565	-0.855	-1.244	-1.595	-2.027	-2.561	-3.173	-3.116	-1.501
N° 17	-0.257	-0.393	-0.725	-0.949	-1.257	-1.606	-1.925	-2.312	-2.876	-3.517	-3.461	-1.916
N° 18	-0.451	-0.617	-0.955	-1.198	-1.521	-1.883	-2.217	-2.638	-3.187	-3.759	-3.677	-2.217
N° 19	-0.104	-0.257	-0.590	-0.821	-1.141	-1.465	-1.776	-2.128	-2.671	-3.191	-3.130	-1.737
N° 20	-0.362	-0.504	-0.844	-1.078	-1.392	-1.726	-2.024	-2.449	-2.962	-3.521	-3.456	-2.019
N° 21	0.012	-0.151	-0.524	-0.774	-1.118	-1.518	-1.893	-2.395	-3.075	-3.764	-3.698	-1.718
N° 22	-0.293	-0.422	-0.733	-0.929	-1.219	-1.518	-1.776	-2.123	-2.605	-3.128	-3.066	-1.915
N° 23	-0.057	-0.210	-0.514	-0.747	-1.076	-1.438	-1.751	-2.216	-2.912	-3.677	-3.606	-1.685
N° 24	-0.185	-0.338	-0.636	-0.837	-1.158	-1.499	-1.809	-2.207	-2.787	-3.364	-3.282	-1.791
N° 25	-0.076	-0.229	-0.582	-0.831	-1.176	-1.596	-1.950	-2.387	-3.023	-3.721	-3.660	-1.815
N° 26	0.034	-0.105	-0.419	-0.635	-0.908	-1.221	-1.507	-1.881	-2.359	-2.915	-2.857	-1.513
N° 27	-0.160	-0.301	-0.645	-0.867	-1.196	-1.564	-1.891	-2.299	-2.891	-3.528	-3.485	-1.832
N° 28	-0.165	-0.309	-0.620	-0.848	-1.160	-1.517	-1.813	-2.251	-2.796	-3.444	-3.336	-1.748
N° 29	-0.285	-0.442	-0.733	-0.946	-1.245	-1.565	-1.849	-2.196	-2.675	-3.224	-3.149	-1.988
N° 30	-0.331	-0.487	-0.824	-1.078	-1.413	-1.818	-2.177	-2.642	-3.293	-4.002	-3.908	-1.960
N° 31	-0.166	-0.332	-0.642	-0.883	-1.201	-1.568	-1.939	-2.399	-3.087	-3.915	-3.847	-1.749

## 11. VIO3, Module 3

Ta=25°C; +VCC=5V; -VCC=GND; VCM=+1.4V



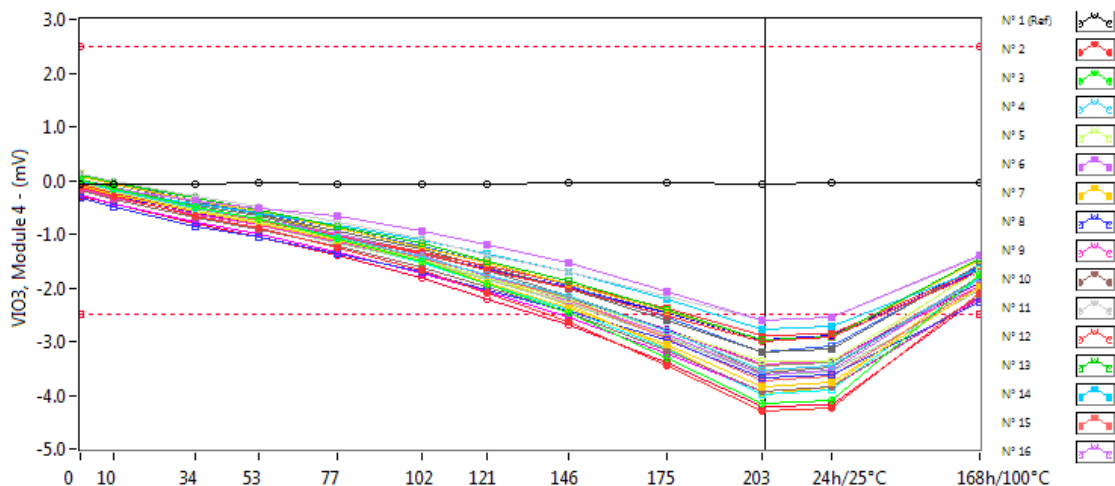
VIO3, Module 3 . (mV)

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)	-0.059	-0.052	-0.058	-0.054	-0.064	-0.061	-0.060	-0.055	-0.043	-0.065	-0.039	-0.047
N° 2	-0.125	-0.284	-0.634	-0.856	-1.209	-1.603	-1.995	-2.448	-3.083	-3.753	-3.668	-1.734
N° 3	0.033	-0.121	-0.486	-0.699	-1.031	-1.449	-1.819	-2.303	-3.012	-3.756	-3.697	-1.611
N° 4	-0.176	-0.334	-0.681	-0.882	-1.242	-1.633	-2.004	-2.420	-3.108	-3.808	-3.741	-1.861
N° 5	0.046	-0.100	-0.406	-0.646	-0.986	-1.386	-1.740	-2.234	-2.925	-3.597	-3.604	-1.601
N° 6	-0.144	-0.297	-0.608	-0.808	-1.112	-1.465	-1.790	-2.130	-2.761	-3.376	-3.291	-1.766
N° 7	-0.187	-0.354	-0.663	-0.880	-1.196	-1.570	-1.936	-2.367	-2.960	-3.546	-3.488	-1.797
N° 8	-0.026	-0.199	-0.528	-0.743	-1.061	-1.397	-1.717	-2.041	-2.410	-3.037	-2.959	-1.672
N° 9	0.075	-0.084	-0.403	-0.620	-0.919	-1.263	-1.586	-1.946	-2.488	-3.026	-2.954	-1.535
N° 10	-0.155	-0.307	-0.638	-0.862	-1.182	-1.553	-1.892	-2.306	-2.841	-3.407	-3.329	-1.748
N° 11	-0.092	-0.231	-0.531	-0.741	-1.033	-1.340	-1.622	-1.984	-2.489	-2.998	-2.934	-1.700
N° 12	-0.091	-0.234	-0.531	-0.743	-1.020	-1.333	-1.624	-1.975	-2.454	-2.935	-2.873	-1.656
N° 13	0.151	0.005	-0.304	-0.522	-0.837	-1.211	-1.553	-1.975	-2.595	-3.275	-3.213	-1.477
N° 14	-0.437	-0.570	-0.896	-1.128	-1.453	-1.798	-2.132	-2.563	-3.181	-3.823	-3.743	-2.199
N° 15	0.013	-0.145	-0.490	-0.733	-1.064	-1.407	-1.738	-2.127	-2.676	-3.246	-3.171	-1.642
N° 16	-0.114	-0.257	-0.596	-0.798	-1.110	-1.478	-1.844	-2.285	-2.787	-3.411	-3.346	-1.741
N° 17	-0.094	-0.246	-0.542	-0.751	-1.059	-1.384	-1.708	-2.099	-2.651	-3.289	-3.217	-1.709
N° 18	-0.001	-0.163	-0.495	-0.731	-1.053	-1.421	-1.753	-2.151	-2.720	-3.344	-3.240	-1.703
N° 19	-0.213	-0.372	-0.680	-0.906	-1.230	-1.553	-1.857	-2.216	-2.668	-3.148	-3.109	-1.809
N° 20	-0.196	-0.362	-0.697	-0.928	-1.241	-1.602	-1.897	-2.312	-2.849	-3.439	-3.386	-1.880
N° 21	-0.022	-0.192	-0.524	-0.783	-1.131	-1.528	-1.896	-2.351	-2.977	-3.643	-3.603	-1.684
N° 22	0.021	-0.121	-0.402	-0.591	-0.888	-1.205	-1.491	-1.845	-2.335	-2.899	-2.824	-1.567
N° 23	-0.034	-0.170	-0.476	-0.696	-0.983	-1.331	-1.656	-2.099	-2.734	-3.425	-3.335	-1.606
N° 24	0.020	-0.134	-0.445	-0.667	-0.956	-1.281	-1.585	-1.980	-2.509	-3.105	-3.047	-1.574
N° 25	-0.047	-0.198	-0.540	-0.800	-1.136	-1.549	-1.917	-2.376	-2.997	-3.668	-3.609	-1.805
N° 26	-0.381	-0.524	-0.830	-1.046	-1.336	-1.670	-1.978	-2.356	-2.877	-3.432	-3.380	-2.021
N° 27	0.112	-0.028	-0.328	-0.540	-0.849	-1.176	-1.482	-1.856	-2.427	-3.012	-2.974	-1.476
N° 28	-0.042	-0.179	-0.488	-0.700	-0.986	-1.323	-1.604	-2.012	-2.528	-3.094	-3.023	-1.488
N° 29	-0.157	-0.306	-0.599	-0.794	-1.076	-1.387	-1.680	-2.037	-2.555	-3.142	-3.061	-1.818
N° 30	-0.177	-0.329	-0.699	-0.944	-1.292	-1.707	-2.088	-2.545	-3.191	-3.901	-3.793	-1.915
N° 31	0.096	-0.049	-0.360	-0.591	-0.926	-1.316	-1.687	-2.157	-2.849	-3.681	-3.573	-1.451

## 12. VIO3, Module 4

Ta=25°C; +VCC=5V; -VCC=GND; VCM=+1.4V

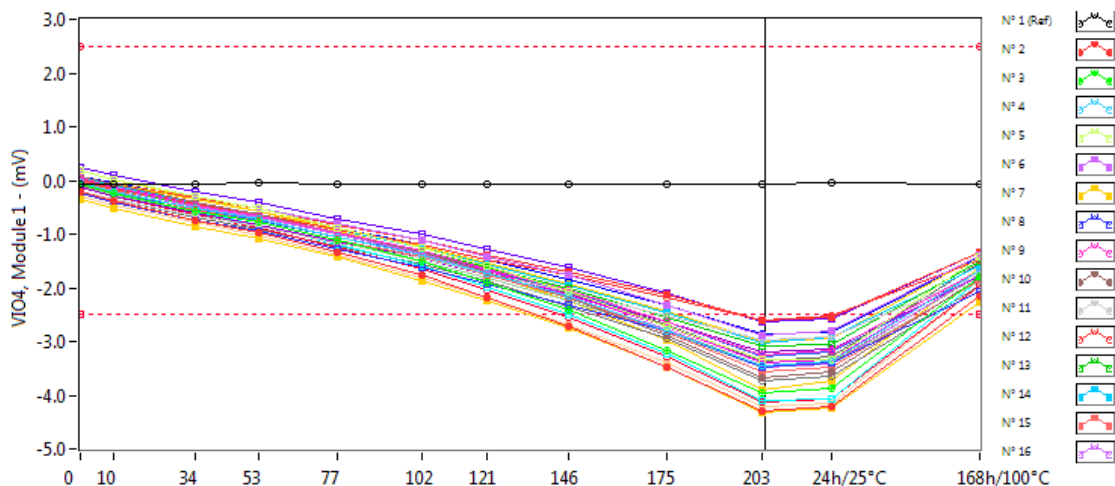


VIO3, Module 4 . (mV) Min = -2.5 Max = 2.5

	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)	-0.064	-0.058	-0.060	-0.051	-0.062	-0.060	-0.061	-0.051	-0.054	-0.066	-0.040	-0.049
N° 2	-0.139	-0.309	-0.664	-0.895	-1.241	-1.677	-2.089	-2.645	-3.438	-4.289	-4.230	-2.086
N° 3	0.012	-0.147	-0.498	-0.723	-1.078	-1.503	-1.923	-2.455	-3.315	-4.162	-4.099	-1.765
N° 4	-0.008	-0.178	-0.511	-0.710	-1.054	-1.410	-1.758	-2.160	-2.812	-3.525	-3.437	-1.817
N° 5	-0.054	-0.221	-0.536	-0.765	-1.073	-1.473	-1.805	-2.223	-2.805	-3.374	-3.373	-1.678
N° 6	-0.010	-0.155	-0.392	-0.508	-0.674	-0.933	-1.195	-1.539	-2.083	-2.619	-2.559	-1.407
N° 7	-0.103	-0.261	-0.585	-0.808	-1.117	-1.511	-1.895	-2.378	-3.065	-3.838	-3.759	-1.985
N° 8	-0.313	-0.487	-0.852	-1.060	-1.374	-1.709	-2.040	-2.442	-2.977	-3.681	-3.606	-2.274
N° 9	-0.155	-0.315	-0.638	-0.839	-1.135	-1.479	-1.815	-2.217	-2.789	-3.422	-3.354	-1.944
N° 10	-0.180	-0.344	-0.678	-0.913	-1.237	-1.627	-1.994	-2.469	-3.163	-3.935	-3.849	-2.143
N° 11	0.132	-0.014	-0.299	-0.503	-0.780	-1.096	-1.382	-1.701	-2.158	-2.603	-2.551	-1.413
N° 12	-0.084	-0.237	-0.543	-0.767	-1.057	-1.375	-1.672	-2.025	-2.520	-3.010	-2.929	-1.701
N° 13	0.107	-0.051	-0.329	-0.546	-0.846	-1.182	-1.503	-1.877	-2.408	-2.961	-2.929	-1.445
N° 14	-0.062	-0.199	-0.450	-0.595	-0.817	-1.104	-1.366	-1.713	-2.221	-2.774	-2.728	-1.658
N° 15	-0.003	-0.161	-0.510	-0.743	-1.093	-1.443	-1.769	-2.225	-2.943	-3.727	-3.659	-1.946
N° 16	0.016	-0.155	-0.493	-0.708	-0.993	-1.393	-1.785	-2.249	-2.856	-3.614	-3.539	-1.815
N° 17	0.081	-0.065	-0.388	-0.588	-0.888	-1.244	-1.549	-1.924	-2.437	-2.984	-2.925	-1.485
N° 18	-0.263	-0.427	-0.763	-1.003	-1.343	-1.725	-2.083	-2.537	-3.212	-3.938	-3.844	-2.180
N° 19	-0.117	-0.276	-0.617	-0.842	-1.148	-1.491	-1.808	-2.199	-2.777	-3.418	-3.368	-1.913
N° 20	-0.087	-0.266	-0.616	-0.845	-1.159	-1.513	-1.834	-2.299	-2.919	-3.624	-3.565	-2.036
N° 21	-0.073	-0.234	-0.567	-0.817	-1.152	-1.547	-1.926	-2.404	-3.140	-3.972	-3.896	-1.813
N° 22	-0.089	-0.238	-0.534	-0.738	-1.020	-1.325	-1.599	-1.927	-2.390	-2.901	-2.856	-1.660
N° 23	0.066	-0.081	-0.395	-0.623	-0.939	-1.278	-1.612	-2.002	-2.602	-3.195	-3.154	-1.558
N° 24	0.096	-0.044	-0.369	-0.593	-0.891	-1.238	-1.543	-1.951	-2.537	-3.194	-3.096	-1.594
N° 25	-0.282	-0.439	-0.800	-1.047	-1.394	-1.810	-2.205	-2.684	-3.395	-4.217	-4.188	-2.186
N° 26	-0.141	-0.283	-0.575	-0.780	-1.061	-1.373	-1.666	-2.009	-2.477	-2.966	-2.897	-1.622
N° 27	-0.111	-0.256	-0.577	-0.778	-1.092	-1.432	-1.769	-2.184	-2.770	-3.460	-3.398	-1.819
N° 28	0.010	-0.135	-0.459	-0.672	-0.987	-1.350	-1.680	-2.146	-2.775	-3.581	-3.483	-1.776
N° 29	-0.104	-0.252	-0.546	-0.755	-1.044	-1.370	-1.654	-1.991	-2.454	-2.977	-2.920	-1.680
N° 30	0.126	-0.034	-0.373	-0.624	-0.990	-1.399	-1.798	-2.327	-3.104	-3.995	-3.841	-1.750
N° 31	-0.026	-0.186	-0.505	-0.734	-1.056	-1.445	-1.831	-2.272	-2.893	-3.576	-3.481	-1.624

### 13. VIO4, Module 1

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

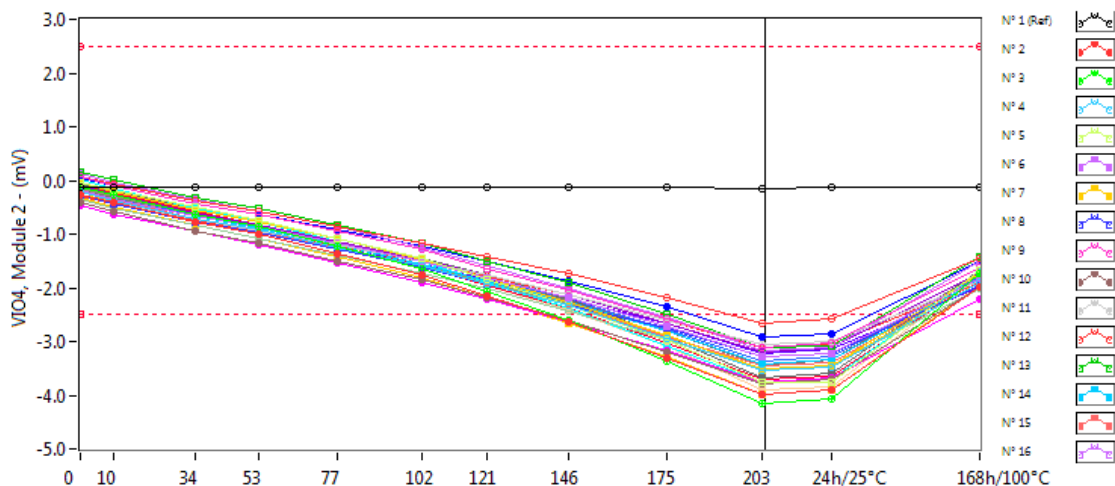


VIO4, Module 1 . (mV) Min = -2.5 Max = 2.5

	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)	-0.073	-0.061	-0.066	-0.055	-0.074	-0.071	-0.069	-0.071	-0.064	-0.075	-0.048	-0.060
N° 2	-0.212	-0.378	-0.754	-0.966	-1.342	-1.756	-2.175	-2.715	-3.470	-4.294	-4.209	-2.142
N° 3	-0.068	-0.234	-0.573	-0.788	-1.121	-1.511	-1.910	-2.406	-3.156	-3.967	-3.874	-1.792
N° 4	-0.034	-0.201	-0.523	-0.712	-1.052	-1.404	-1.738	-2.144	-2.803	-3.451	-3.370	-1.689
N° 5	0.185	0.025	-0.292	-0.534	-0.883	-1.253	-1.602	-2.071	-2.713	-3.326	-3.340	-1.411
N° 6	0.178	0.014	-0.300	-0.515	-0.797	-1.124	-1.414	-1.773	-2.320	-2.876	-2.798	-1.381
N° 7	-0.345	-0.517	-0.853	-1.097	-1.431	-1.860	-2.241	-2.757	-3.490	-4.321	-4.240	-2.254
N° 8	-0.241	-0.414	-0.737	-0.954	-1.290	-1.619	-1.932	-2.317	-2.801	-3.485	-3.405	-2.058
N° 9	0.053	-0.118	-0.455	-0.674	-0.973	-1.308	-1.641	-2.034	-2.639	-3.250	-3.157	-1.683
N° 10	0.083	-0.073	-0.412	-0.641	-0.974	-1.348	-1.708	-2.175	-2.881	-3.666	-3.574	-1.819
N° 11	-0.210	-0.366	-0.668	-0.861	-1.156	-1.462	-1.735	-2.064	-2.510	-2.961	-2.902	-1.748
N° 12	0.015	-0.142	-0.437	-0.642	-0.919	-1.211	-1.467	-1.767	-2.190	-2.609	-2.529	-1.470
N° 13	0.006	-0.145	-0.451	-0.670	-0.963	-1.303	-1.629	-2.010	-2.536	-3.086	-3.047	-1.512
N° 14	0.044	-0.097	-0.399	-0.635	-0.929	-1.240	-1.551	-1.945	-2.471	-3.019	-2.909	-1.578
N° 15	-0.024	-0.184	-0.536	-0.781	-1.099	-1.433	-1.763	-2.178	-2.843	-3.564	-3.484	-1.843
N° 16	-0.001	-0.157	-0.487	-0.703	-0.994	-1.358	-1.720	-2.186	-2.768	-3.492	-3.421	-1.724
N° 17	0.075	-0.063	-0.366	-0.579	-0.897	-1.214	-1.524	-1.921	-2.439	-3.001	-2.956	-1.404
N° 18	0.081	-0.090	-0.423	-0.667	-0.989	-1.353	-1.676	-2.113	-2.709	-3.404	-3.329	-1.689
N° 19	-0.127	-0.284	-0.607	-0.828	-1.131	-1.444	-1.759	-2.138	-2.633	-3.196	-3.138	-1.802
N° 20	-0.129	-0.269	-0.614	-0.849	-1.146	-1.500	-1.807	-2.246	-2.818	-3.481	-3.428	-1.864
N° 21	-0.059	-0.230	-0.568	-0.830	-1.189	-1.579	-1.989	-2.492	-3.235	-4.109	-4.057	-1.835
N° 22	0.063	-0.064	-0.332	-0.519	-0.828	-1.122	-1.383	-1.712	-2.136	-2.603	-2.551	-1.351
N° 23	0.045	-0.103	-0.415	-0.649	-0.964	-1.334	-1.663	-2.091	-2.689	-3.368	-3.283	-1.533
N° 24	-0.073	-0.228	-0.531	-0.742	-1.044	-1.373	-1.678	-2.074	-2.628	-3.273	-3.195	-1.762
N° 25	-0.133	-0.298	-0.629	-0.899	-1.249	-1.661	-2.041	-2.554	-3.292	-4.122	-4.061	-1.970
N° 26	0.079	-0.046	-0.352	-0.587	-0.880	-1.195	-1.475	-1.843	-2.326	-2.865	-2.823	-1.419
N° 27	-0.110	-0.256	-0.580	-0.780	-1.105	-1.458	-1.760	-2.170	-2.769	-3.440	-3.396	-1.753
N° 28	-0.202	-0.359	-0.698	-0.916	-1.215	-1.563	-1.879	-2.344	-2.948	-3.732	-3.646	-1.967
N° 29	0.245	0.095	-0.199	-0.397	-0.705	-0.996	-1.282	-1.613	-2.107	-2.628	-2.585	-1.346
N° 30	0.184	0.022	-0.335	-0.582	-0.940	-1.342	-1.739	-2.250	-2.982	-3.900	-3.741	-1.631
N° 31	-0.308	-0.452	-0.781	-1.038	-1.389	-1.812	-2.185	-2.686	-3.393	-4.221	-4.154	-1.951

## 14. VIO4, Module 2

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



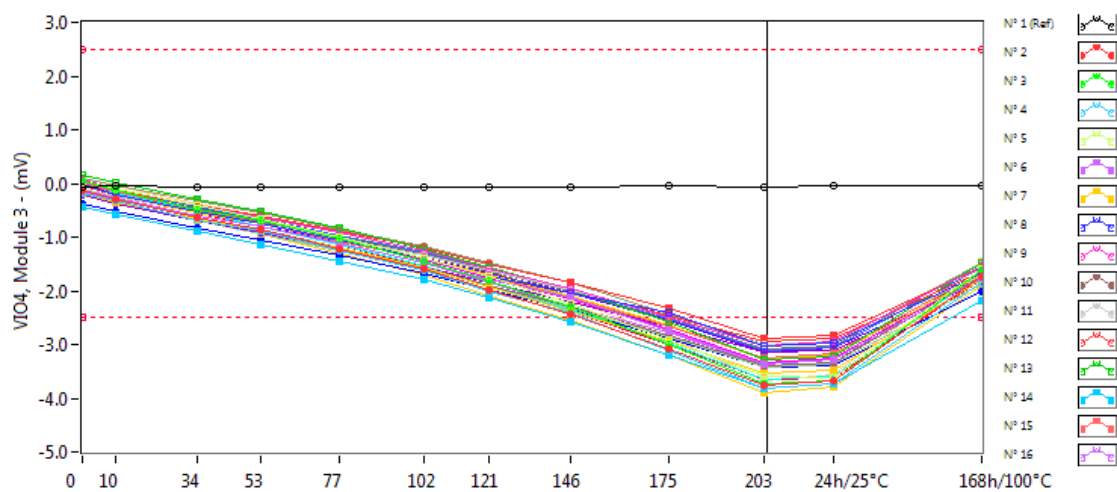
VIO4, Module 2 . (mV)

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)	-0.137	-0.125	-0.129	-0.123	-0.136	-0.130	-0.126	-0.124	-0.131	-0.146	-0.118	-0.123
N° 2	-0.257	-0.412	-0.770	-1.012	-1.358	-1.771	-2.155	-2.630	-3.310	-3.990	-3.910	-1.972
N° 3	-0.119	-0.268	-0.635	-0.859	-1.217	-1.648	-2.072	-2.607	-3.379	-4.152	-4.075	-1.730
N° 4	-0.207	-0.372	-0.719	-0.907	-1.251	-1.594	-1.928	-2.336	-2.943	-3.543	-3.467	-1.913
N° 5	-0.039	-0.193	-0.501	-0.733	-1.086	-1.458	-1.843	-2.330	-2.977	-3.770	-3.773	-1.675
N° 6	-0.186	-0.343	-0.672	-0.873	-1.183	-1.501	-1.810	-2.175	-2.732	-3.284	-3.228	-1.807
N° 7	-0.056	-0.212	-0.554	-0.769	-1.097	-1.466	-1.826	-2.271	-2.882	-3.523	-3.452	-1.729
N° 8	-0.272	-0.434	-0.771	-0.975	-1.283	-1.619	-1.929	-2.311	-2.739	-3.293	-3.214	-1.963
N° 9	0.069	-0.098	-0.436	-0.639	-0.954	-1.291	-1.636	-2.032	-2.586	-3.107	-3.035	-1.621
N° 10	-0.418	-0.584	-0.939	-1.156	-1.496	-1.855	-2.180	-2.609	-3.196	-3.778	-3.703	-1.992
N° 11	-0.266	-0.408	-0.718	-0.930	-1.187	-1.500	-1.771	-2.133	-2.603	-3.056	-3.000	-1.866
N° 12	0.081	-0.063	-0.391	-0.574	-0.854	-1.168	-1.430	-1.732	-2.192	-2.654	-2.586	-1.446
N° 13	0.143	0.005	-0.313	-0.532	-0.829	-1.175	-1.504	-1.904	-2.485	-3.112	-3.074	-1.413
N° 14	-0.214	-0.356	-0.666	-0.893	-1.208	-1.554	-1.864	-2.263	-2.792	-3.422	-3.348	-1.843
N° 15	-0.210	-0.361	-0.709	-0.950	-1.281	-1.619	-1.921	-2.337	-2.922	-3.463	-3.400	-1.851
N° 16	0.129	-0.029	-0.341	-0.570	-0.862	-1.245	-1.597	-2.026	-2.558	-3.168	-3.115	-1.503
N° 17	-0.259	-0.392	-0.730	-0.952	-1.262	-1.613	-1.929	-2.310	-2.880	-3.517	-3.454	-1.912
N° 18	-0.452	-0.620	-0.956	-1.200	-1.528	-1.890	-2.216	-2.634	-3.182	-3.752	-3.672	-2.212
N° 19	-0.107	-0.258	-0.594	-0.828	-1.145	-1.467	-1.774	-2.122	-2.669	-3.186	-3.120	-1.732
N° 20	-0.364	-0.509	-0.845	-1.079	-1.397	-1.728	-2.025	-2.447	-2.962	-3.521	-3.456	-2.012
N° 21	0.009	-0.151	-0.529	-0.777	-1.128	-1.520	-1.897	-2.393	-3.072	-3.753	-3.699	-1.716
N° 22	-0.294	-0.423	-0.735	-0.932	-1.220	-1.518	-1.778	-2.126	-2.603	-3.124	-3.070	-1.910
N° 23	-0.059	-0.210	-0.521	-0.752	-1.080	-1.440	-1.750	-2.212	-2.914	-3.677	-3.596	-1.684
N° 24	-0.186	-0.339	-0.638	-0.843	-1.163	-1.506	-1.812	-2.208	-2.776	-3.353	-3.282	-1.782
N° 25	-0.077	-0.231	-0.589	-0.834	-1.183	-1.596	-1.951	-2.389	-3.020	-3.712	-3.655	-1.812
N° 26	0.031	-0.109	-0.426	-0.640	-0.912	-1.227	-1.512	-1.880	-2.359	-2.913	-2.857	-1.509
N° 27	-0.162	-0.302	-0.646	-0.870	-1.206	-1.565	-1.894	-2.300	-2.889	-3.523	-3.486	-1.830
N° 28	-0.167	-0.311	-0.624	-0.853	-1.166	-1.519	-1.811	-2.251	-2.802	-3.439	-3.338	-1.741
N° 29	-0.288	-0.445	-0.736	-0.952	-1.257	-1.568	-1.854	-2.198	-2.673	-3.227	-3.153	-1.985
N° 30	-0.332	-0.488	-0.825	-1.079	-1.419	-1.822	-2.178	-2.648	-3.288	-3.996	-3.907	-1.955
N° 31	-0.168	-0.331	-0.649	-0.884	-1.204	-1.569	-1.947	-2.399	-3.086	-3.909	-3.848	-1.746

## 15. VIO4, Module 3

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



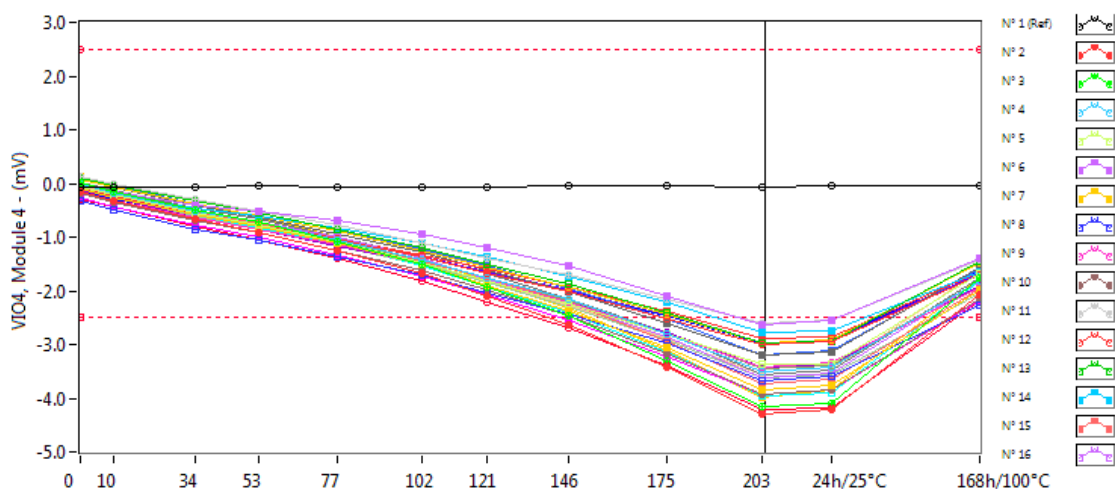
VIO4, Module 3 . (mV)

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)	-0.062	-0.052	-0.061	-0.057	-0.068	-0.064	-0.064	-0.058	-0.046	-0.066	-0.041	-0.049
N° 2	-0.127	-0.286	-0.640	-0.858	-1.213	-1.604	-1.996	-2.450	-3.078	-3.750	-3.663	-1.732
N° 3	0.030	-0.123	-0.488	-0.702	-1.037	-1.451	-1.826	-2.305	-3.013	-3.746	-3.687	-1.611
N° 4	-0.179	-0.336	-0.684	-0.884	-1.247	-1.633	-2.001	-2.421	-3.101	-3.809	-3.742	-1.857
N° 5	0.042	-0.102	-0.410	-0.649	-0.991	-1.388	-1.742	-2.232	-2.922	-3.594	-3.606	-1.599
N° 6	-0.146	-0.299	-0.611	-0.811	-1.119	-1.468	-1.794	-2.132	-2.758	-3.372	-3.286	-1.765
N° 7	-0.189	-0.354	-0.665	-0.883	-1.202	-1.571	-1.933	-2.369	-2.957	-3.544	-3.483	-1.796
N° 8	-0.028	-0.201	-0.532	-0.748	-1.066	-1.399	-1.720	-2.043	-2.413	-3.033	-2.961	-1.671
N° 9	0.073	-0.086	-0.409	-0.621	-0.923	-1.263	-1.587	-1.947	-2.489	-3.025	-2.949	-1.532
N° 10	-0.157	-0.308	-0.646	-0.866	-1.187	-1.559	-1.893	-2.307	-2.837	-3.406	-3.324	-1.746
N° 11	-0.094	-0.233	-0.532	-0.746	-1.037	-1.346	-1.622	-1.988	-2.490	-2.997	-2.930	-1.699
N° 12	-0.093	-0.235	-0.534	-0.743	-1.023	-1.337	-1.630	-1.976	-2.458	-2.937	-2.878	-1.655
N° 13	0.148	0.002	-0.309	-0.526	-0.844	-1.216	-1.560	-1.974	-2.590	-3.280	-3.212	-1.476
N° 14	-0.439	-0.570	-0.899	-1.128	-1.458	-1.799	-2.136	-2.564	-3.186	-3.819	-3.744	-2.196
N° 15	0.010	-0.149	-0.497	-0.735	-1.072	-1.407	-1.740	-2.125	-2.669	-3.241	-3.162	-1.639
N° 16	-0.116	-0.258	-0.603	-0.804	-1.112	-1.480	-1.847	-2.287	-2.783	-3.405	-3.342	-1.741
N° 17	-0.096	-0.249	-0.546	-0.753	-1.061	-1.388	-1.712	-2.100	-2.645	-3.286	-3.210	-1.708
N° 18	-0.003	-0.165	-0.500	-0.737	-1.058	-1.428	-1.756	-2.151	-2.722	-3.337	-3.243	-1.700
N° 19	-0.214	-0.374	-0.684	-0.908	-1.232	-1.561	-1.857	-2.219	-2.665	-3.154	-3.109	-1.805
N° 20	-0.198	-0.364	-0.699	-0.933	-1.246	-1.603	-1.900	-2.318	-2.846	-3.434	-3.380	-1.880
N° 21	-0.024	-0.193	-0.530	-0.791	-1.136	-1.529	-1.896	-2.350	-2.970	-3.645	-3.591	-1.681
N° 22	0.018	-0.122	-0.404	-0.594	-0.892	-1.207	-1.493	-1.849	-2.338	-2.901	-2.826	-1.563
N° 23	-0.035	-0.172	-0.478	-0.701	-0.990	-1.333	-1.658	-2.096	-2.732	-3.425	-3.336	-1.607
N° 24	0.018	-0.138	-0.449	-0.671	-0.962	-1.283	-1.589	-1.978	-2.508	-3.106	-3.045	-1.570
N° 25	-0.050	-0.200	-0.548	-0.802	-1.133	-1.554	-1.917	-2.373	-2.993	-3.661	-3.609	-1.801
N° 26	-0.383	-0.523	-0.833	-1.049	-1.338	-1.674	-1.978	-2.360	-2.876	-3.436	-3.384	-2.020
N° 27	0.110	-0.031	-0.329	-0.545	-0.852	-1.182	-1.484	-1.859	-2.424	-3.008	-2.975	-1.474
N° 28	-0.044	-0.179	-0.490	-0.707	-0.991	-1.323	-1.607	-2.011	-2.530	-3.083	-3.026	-1.488
N° 29	-0.159	-0.308	-0.604	-0.798	-1.083	-1.391	-1.680	-2.043	-2.555	-3.144	-3.067	-1.820
N° 30	-0.180	-0.333	-0.701	-0.946	-1.297	-1.713	-2.091	-2.551	-3.192	-3.892	-3.797	-1.910
N° 31	0.093	-0.051	-0.367	-0.593	-0.929	-1.323	-1.686	-2.158	-2.856	-3.679	-3.571	-1.451

## 16. VIO4, Module 4

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



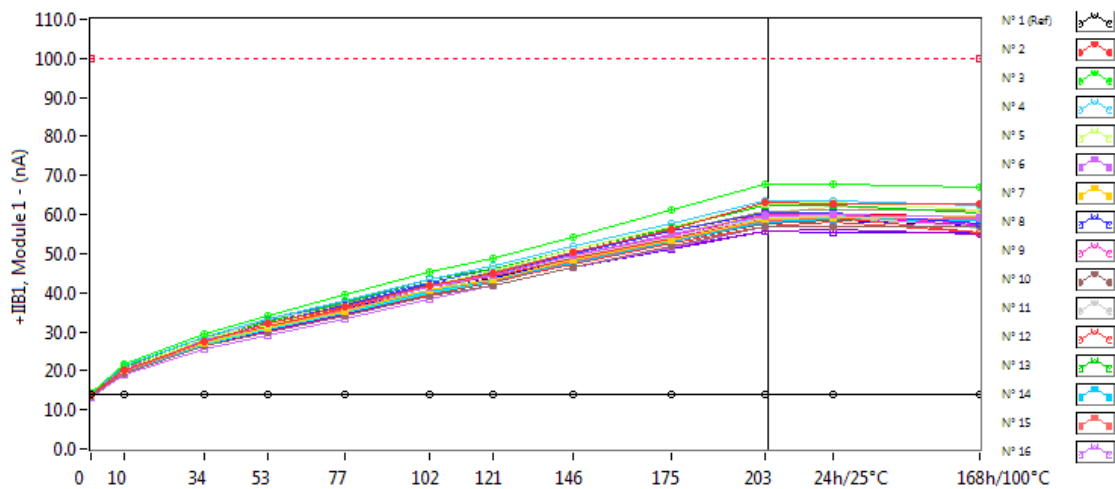
**VIO4, Module 4 . (mV) Min = -2.5 Max = 2.5**

	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)	-0.067	-0.057	-0.062	-0.053	-0.066	-0.062	-0.063	-0.053	-0.056	-0.069	-0.043	-0.051
N° 2	-0.141	-0.312	-0.669	-0.902	-1.247	-1.679	-2.093	-2.645	-3.430	-4.289	-4.219	-2.079
N° 3	0.008	-0.149	-0.499	-0.723	-1.084	-1.507	-1.920	-2.454	-3.308	-4.157	-4.094	-1.763
N° 4	-0.012	-0.181	-0.514	-0.713	-1.062	-1.412	-1.760	-2.164	-2.811	-3.517	-3.432	-1.817
N° 5	-0.058	-0.222	-0.539	-0.767	-1.080	-1.476	-1.804	-2.228	-2.809	-3.366	-3.373	-1.675
N° 6	-0.014	-0.158	-0.399	-0.512	-0.681	-0.944	-1.207	-1.549	-2.092	-2.625	-2.563	-1.407
N° 7	-0.106	-0.264	-0.589	-0.811	-1.123	-1.517	-1.899	-2.381	-3.065	-3.832	-3.751	-1.983
N° 8	-0.316	-0.488	-0.853	-1.063	-1.378	-1.712	-2.039	-2.442	-2.982	-3.680	-3.602	-2.273
N° 9	-0.158	-0.316	-0.644	-0.846	-1.141	-1.485	-1.815	-2.220	-2.796	-3.423	-3.346	-1.939
N° 10	-0.183	-0.345	-0.682	-0.916	-1.244	-1.627	-1.998	-2.470	-3.168	-3.937	-3.851	-2.141
N° 11	0.128	-0.015	-0.305	-0.508	-0.787	-1.103	-1.386	-1.702	-2.159	-2.608	-2.555	-1.411
N° 12	-0.087	-0.239	-0.548	-0.770	-1.061	-1.378	-1.676	-2.026	-2.522	-3.007	-2.930	-1.706
N° 13	0.104	-0.054	-0.333	-0.547	-0.852	-1.187	-1.505	-1.883	-2.412	-2.961	-2.930	-1.443
N° 14	-0.064	-0.199	-0.457	-0.599	-0.824	-1.109	-1.368	-1.719	-2.224	-2.774	-2.734	-1.657
N° 15	-0.006	-0.162	-0.512	-0.749	-1.103	-1.444	-1.771	-2.224	-2.942	-3.721	-3.653	-1.945
N° 16	0.012	-0.156	-0.496	-0.712	-0.996	-1.402	-1.787	-2.250	-2.856	-3.619	-3.540	-1.818
N° 17	0.075	-0.066	-0.391	-0.594	-0.891	-1.249	-1.555	-1.926	-2.436	-2.979	-2.922	-1.484
N° 18	-0.265	-0.431	-0.764	-1.010	-1.348	-1.724	-2.081	-2.546	-3.213	-3.939	-3.843	-2.181
N° 19	-0.121	-0.277	-0.620	-0.847	-1.156	-1.492	-1.810	-2.199	-2.775	-3.423	-3.368	-1.911
N° 20	-0.092	-0.269	-0.619	-0.847	-1.158	-1.514	-1.838	-2.299	-2.918	-3.625	-3.559	-2.034
N° 21	-0.076	-0.235	-0.570	-0.820	-1.154	-1.548	-1.933	-2.411	-3.137	-3.965	-3.896	-1.812
N° 22	-0.092	-0.239	-0.536	-0.741	-1.025	-1.324	-1.600	-1.926	-2.390	-2.901	-2.858	-1.659
N° 23	0.064	-0.084	-0.400	-0.630	-0.942	-1.282	-1.614	-2.006	-2.600	-3.186	-3.152	-1.557
N° 24	0.094	-0.046	-0.375	-0.597	-0.892	-1.237	-1.544	-1.953	-2.533	-3.190	-3.100	-1.590
N° 25	-0.285	-0.439	-0.806	-1.051	-1.396	-1.816	-2.201	-2.680	-3.393	-4.214	-4.187	-2.179
N° 26	-0.143	-0.286	-0.573	-0.782	-1.064	-1.378	-1.667	-2.011	-2.478	-2.962	-2.902	-1.619
N° 27	-0.114	-0.257	-0.580	-0.781	-1.096	-1.436	-1.770	-2.187	-2.772	-3.454	-3.400	-1.814
N° 28	0.006	-0.134	-0.466	-0.676	-0.995	-1.355	-1.685	-2.146	-2.776	-3.575	-3.484	-1.774
N° 29	-0.105	-0.255	-0.550	-0.758	-1.045	-1.374	-1.660	-1.993	-2.452	-2.982	-2.917	-1.684
N° 30	0.123	-0.034	-0.376	-0.625	-0.996	-1.402	-1.804	-2.325	-3.102	-3.993	-3.849	-1.750
N° 31	-0.029	-0.189	-0.510	-0.735	-1.063	-1.450	-1.832	-2.270	-2.891	-3.569	-3.485	-1.623



## 17. +IB1, Module 1

Ta=25°C; +VCC=30V; -VCC=GND; VCM=+15V



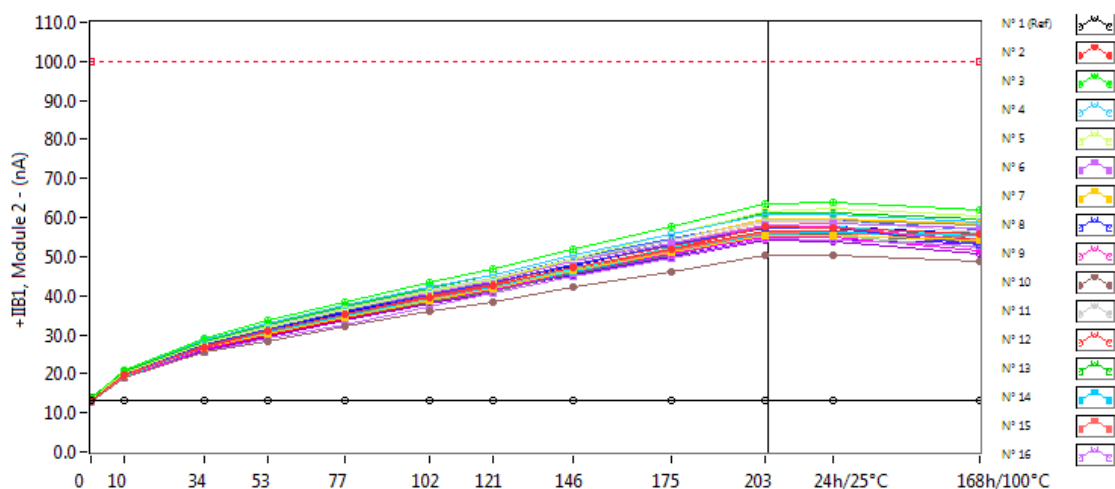
**+IB1, Module 1 . (nA)**

**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)	14.016	13.975	13.881	13.908	13.978	13.820	13.824	14.032	14.048	13.925	14.094	14.096
N° 2	13.886	20.320	27.508	32.303	36.468	41.968	45.096	50.209	56.148	62.963	62.736	62.677
N° 3	14.425	21.650	29.410	34.266	39.539	45.372	48.965	54.374	61.010	67.950	67.949	67.028
N° 4	14.249	21.145	28.502	33.257	38.061	43.472	46.758	52.068	57.772	63.687	63.669	62.411
N° 5	13.795	20.317	28.372	31.823	36.408	41.782	45.717	51.171	56.804	62.824	63.253	61.188
N° 6	14.062	20.368	27.723	31.787	36.358	41.601	44.595	49.635	54.913	59.828	60.158	59.264
N° 7	13.917	20.348	27.121	30.813	35.290	40.516	43.496	48.550	53.644	58.819	59.082	59.512
N° 8	14.070	20.595	28.027	32.139	36.751	42.085	44.932	49.940	55.821	60.528	60.616	57.624
N° 9	13.805	20.425	27.709	31.998	36.566	41.816	44.633	49.599	54.678	59.863	59.971	57.629
N° 10	13.491	19.349	26.173	29.771	34.056	39.069	41.982	46.588	51.852	57.002	57.083	56.775
N° 11	13.983	20.495	27.861	33.487	36.474	41.728	44.658	49.280	54.323	59.367	59.547	56.534
N° 12	13.693	20.184	27.738	31.515	36.188	41.350	44.122	48.948	53.984	59.444	59.238	55.537
N° 13	14.189	20.903	28.545	32.651	37.482	43.267	46.084	51.240	56.667	62.374	62.391	60.375
N° 14	14.405	20.353	27.205	30.971	35.411	40.399	43.188	47.605	52.897	58.093	58.796	58.586
N° 15	13.474	19.648	27.055	31.129	35.639	40.580	43.185	47.845	53.414	58.629	58.851	58.793
N° 16	13.139	18.956	25.750	29.038	33.147	38.494	41.653	46.523	51.361	57.007	57.088	57.128
N° 17	13.744	20.178	27.706	31.659	36.282	41.697	44.587	49.364	54.947	59.964	60.052	59.404
N° 18	13.451	19.704	26.947	30.884	35.491	40.622	43.558	48.436	53.971	59.020	59.211	57.489
N° 19	13.349	19.478	26.410	30.117	34.581	39.146	41.864	46.471	51.479	55.908	56.262	54.854
N° 20	13.790	20.002	27.371	31.157	36.567	40.828	44.488	48.507	53.756	58.594	58.769	57.200
N° 21	13.569	19.741	26.736	30.595	34.958	40.021	43.081	48.000	53.747	59.464	59.536	59.670
N° 22	13.751	20.294	27.430	31.685	35.238	39.649	42.879	47.433	52.509	57.015	58.039	55.411
N° 23	13.926	19.879	26.930	30.513	34.820	39.160	42.899	47.202	52.871	57.846	58.315	58.492
N° 24	14.322	21.027	28.647	32.917	37.557	42.707	46.187	51.280	56.883	62.177	62.240	60.541
N° 25	13.438	19.491	26.715	30.450	35.085	39.877	43.378	48.337	53.823	60.280	59.914	59.721
N° 26	13.875	20.397	27.433	31.333	35.878	40.406	43.625	48.280	53.531	58.385	58.576	57.265
N° 27	14.212	20.961	28.607	32.806	37.307	41.928	45.407	50.195	55.823	60.874	61.121	61.213
N° 28	13.942	19.971	27.059	30.671	34.854	39.489	42.694	47.591	52.878	58.373	58.600	59.086
N° 29	14.333	20.019	26.918	30.658	34.794	39.022	42.021	46.438	51.225	55.861	55.447	55.280
N° 30	13.527	19.543	26.563	30.428	34.769	39.472	42.956	47.940	53.716	59.405	59.932	59.385
N° 31	13.977	20.092	27.234	31.096	35.619	40.332	43.665	48.676	54.666	60.287	62.152	60.844

## 18. +IB1, Module 2

Ta=25°C; +VCC=30V; -VCC=GND; VCM=+15V



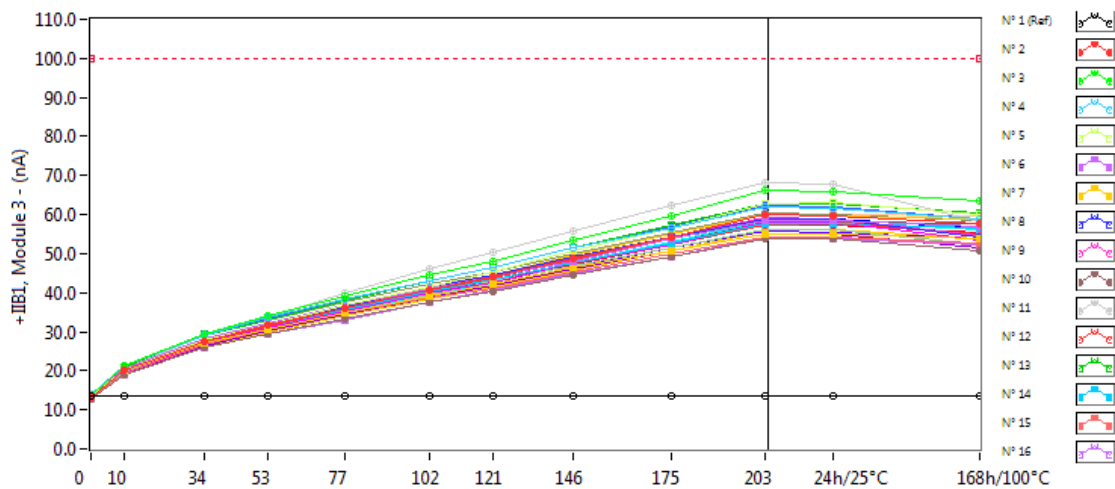
**+IB1, Module 2 . (nA)**

**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)	13.209	13.150	13.106	13.203	13.208	13.077	13.052	13.235	13.229	13.133	13.301	13.258
N° 2	13.102	19.577	26.715	30.847	35.077	39.541	42.661	47.152	52.020	57.706	57.242	55.727
N° 3	13.632	20.912	29.113	33.520	38.329	43.268	46.798	51.851	57.586	63.667	63.729	62.077
N° 4	13.724	20.759	28.503	32.896	37.392	42.311	45.330	50.493	55.726	60.968	60.869	58.724
N° 5	13.472	20.029	27.732	31.675	36.411	41.206	44.345	49.746	55.683	61.659	62.213	60.277
N° 6	13.617	20.089	27.737	31.643	36.222	40.713	43.810	48.711	53.558	58.291	58.389	57.485
N° 7	13.364	19.773	26.542	30.112	34.492	38.890	42.009	46.513	50.953	55.484	55.404	54.213
N° 8	13.410	20.126	27.552	31.370	35.867	40.461	43.470	48.179	53.249	57.499	57.473	53.083
N° 9	13.234	19.914	27.589	31.514	35.838	40.507	43.493	48.199	53.082	57.839	57.889	53.859
N° 10	12.868	18.821	25.379	28.411	32.143	36.106	38.354	42.164	46.274	50.334	50.178	48.929
N° 11	13.617	20.304	28.051	32.252	36.909	41.515	44.574	49.189	54.190	59.267	59.165	56.195
N° 12	13.067	19.633	27.207	30.868	35.351	40.073	43.180	47.881	52.814	57.478	57.439	54.206
N° 13	13.861	20.621	28.361	32.417	37.212	42.019	45.227	50.361	55.784	61.290	61.083	59.522
N° 14	13.863	19.900	27.044	30.758	34.965	39.332	42.089	46.261	51.200	55.835	55.988	55.528
N° 15	13.130	19.396	27.016	30.596	35.078	39.459	41.917	46.379	51.454	56.062	56.121	54.498
N° 16	12.861	18.869	25.673	28.919	32.684	37.340	40.477	45.106	49.431	54.474	54.269	52.546
N° 17	13.346	20.055	27.821	31.553	36.188	41.065	44.208	49.089	54.403	59.643	59.540	58.532
N° 18	12.855	19.154	26.530	30.149	34.363	38.757	41.578	45.971	50.731	55.127	55.001	51.694
N° 19	12.715	19.000	26.048	29.509	33.709	38.098	40.717	45.064	49.727	54.096	54.014	50.698
N° 20	13.248	19.638	27.047	30.601	35.259	39.179	42.338	46.356	51.248	55.545	55.475	52.383
N° 21	12.981	19.242	26.696	30.252	34.628	39.253	42.184	46.913	52.449	57.769	57.709	55.567
N° 22	13.174	19.434	26.600	30.760	34.880	39.179	42.404	46.767	51.709	56.419	56.462	54.724
N° 23	13.536	19.546	26.958	30.360	34.408	38.507	41.566	45.825	50.909	55.363	55.691	56.142
N° 24	13.683	20.638	28.462	32.246	36.747	41.499	44.712	49.583	54.695	59.430	59.445	56.888
N° 25	12.888	19.101	26.437	29.902	33.963	38.485	41.630	46.203	51.237	56.570	56.413	54.692
N° 26	13.488	19.836	27.301	31.080	35.670	40.169	43.300	47.713	53.027	57.552	57.607	55.896
N° 27	13.665	20.281	28.175	32.097	36.445	41.021	44.193	48.872	54.249	59.254	59.239	57.962
N° 28	13.433	19.495	26.603	30.038	34.250	38.505	41.223	45.786	50.471	55.336	55.341	54.003
N° 29	13.541	19.209	26.379	29.926	34.112	38.337	41.278	45.463	50.121	54.424	54.347	53.521
N° 30	12.928	18.829	25.954	29.596	33.956	38.381	41.352	45.831	50.788	55.537	55.461	53.844
N° 31	13.356	19.651	27.044	30.889	35.325	39.944	43.028	47.807	53.582	58.923	58.874	58.884

### 19. +IB1, Module 3

Ta=25°C; +VCC=30V; -VCC=GND; VCM=+15V



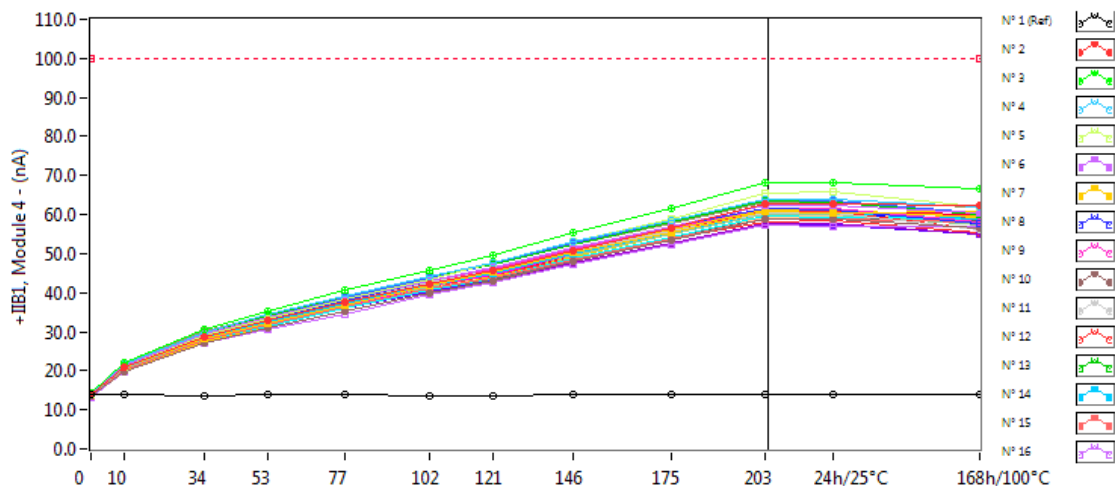
**+IB1, Module 3 . (nA)**

**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)	13.620	13.561	13.504	13.565	13.606	13.481	13.455	13.640	13.638	13.538	13.690	13.656
N° 2	13.356	19.966	27.540	31.670	36.172	40.754	44.052	48.736	54.103	59.884	59.593	57.627
N° 3	13.725	21.113	29.588	34.063	39.283	44.428	47.911	53.302	59.673	66.042	66.012	63.342
N° 4	13.982	21.117	29.189	33.599	38.169	43.138	46.395	51.528	56.729	61.808	61.658	58.981
N° 5	13.455	20.129	28.031	31.889	36.769	41.507	45.400	50.644	56.471	62.682	62.987	60.112
N° 6	13.777	20.501	28.154	32.046	36.606	41.139	44.143	48.211	53.958	58.496	58.572	56.865
N° 7	13.562	20.002	27.017	30.612	34.738	39.036	42.037	46.373	50.621	55.159	55.087	53.908
N° 8	13.571	20.364	28.051	31.951	36.593	41.374	44.435	49.211	54.392	59.066	59.033	54.121
N° 9	13.455	20.287	28.046	32.048	36.520	41.202	44.257	48.947	54.055	59.072	59.001	54.479
N° 10	12.825	18.936	25.793	29.286	33.494	37.602	40.377	44.507	49.295	53.700	53.658	50.592
N° 11	13.382	20.357	28.932	33.852	39.958	46.188	50.254	55.947	62.226	68.151	67.959	58.250
N° 12	13.310	20.019	27.618	31.450	36.137	40.661	43.923	48.547	53.922	58.590	58.388	54.611
N° 13	13.811	20.909	28.961	33.030	37.885	43.133	46.334	51.471	57.240	62.877	62.690	60.286
N° 14	13.848	20.143	27.507	31.283	35.744	40.229	43.223	47.652	52.859	57.674	57.868	56.559
N° 15	13.148	19.452	26.788	30.452	34.747	38.697	41.034	45.250	49.980	54.353	54.293	52.707
N° 16	12.820	18.953	26.000	29.310	33.012	37.492	40.590	45.114	49.377	54.047	53.971	52.217
N° 17	13.417	20.422	28.410	32.232	36.858	41.518	44.610	49.423	54.828	59.857	59.739	58.713
N° 18	13.038	19.527	27.100	30.807	35.379	39.840	42.786	47.735	52.284	58.106	57.929	53.595
N° 19	12.777	19.137	26.526	30.084	34.417	38.791	41.725	46.155	50.788	55.144	55.125	51.459
N° 20	13.262	19.758	27.335	30.823	35.483	39.596	42.892	46.863	51.687	56.206	56.139	52.144
N° 21	13.125	19.653	26.815	30.601	35.034	39.618	42.720	47.694	53.047	58.342	58.231	56.212
N° 22	13.538	19.972	27.589	31.747	35.786	40.285	43.269	47.645	52.690	57.365	57.879	55.175
N° 23	13.725	19.918	27.585	31.225	35.436	39.852	42.871	47.591	53.168	58.029	58.264	57.827
N° 24	13.920	20.895	29.364	33.224	37.852	42.865	46.380	51.343	57.008	62.238	62.085	58.696
N° 25	13.226	19.524	27.188	30.588	34.919	39.347	42.687	47.311	52.361	57.645	57.362	55.491
N° 26	13.600	20.187	28.240	32.072	36.635	41.306	44.414	48.838	54.216	58.920	58.910	56.410
N° 27	13.920	20.861	28.864	32.937	37.546	42.182	45.271	50.101	55.413	60.328	60.169	58.498
N° 28	13.630	19.759	27.261	30.622	35.256	39.686	42.743	47.460	52.423	57.367	57.392	55.386
N° 29	13.852	19.529	26.780	30.371	34.580	39.141	42.031	46.487	51.373	55.622	55.535	53.917
N° 30	12.911	19.076	26.335	29.818	34.159	38.485	41.384	45.852	50.882	55.660	55.988	53.683
N° 31	13.428	19.846	27.522	31.310	35.943	40.489	43.736	48.688	54.350	60.074	59.959	59.586

## 20. +IB1, Module 4

Ta=25°C; +VCC=30V; -VCC=GND; VCM=+15V



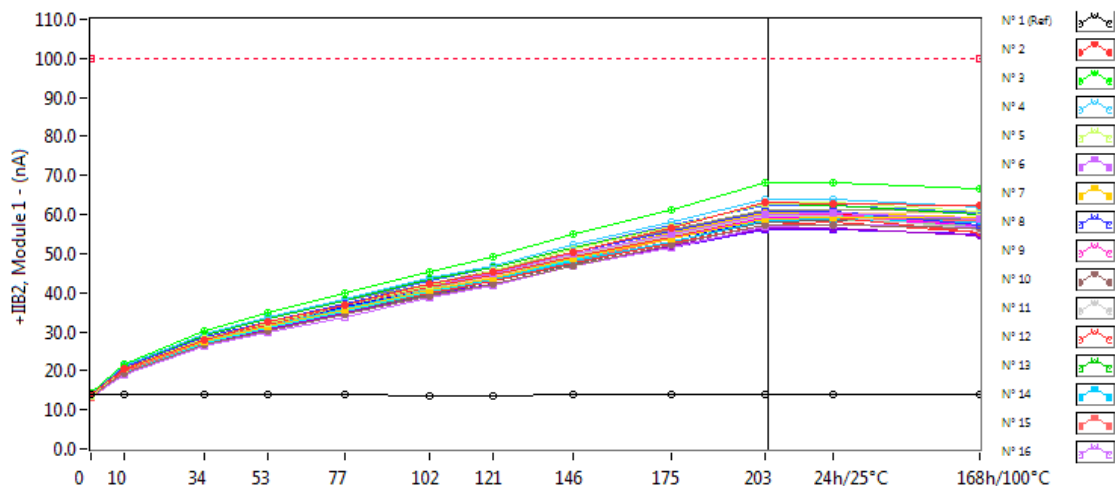
**+IB1, Module 4 . (nA)**

**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)	13.810	13.772	13.711	13.753	13.810	13.699	13.660	13.850	13.848	13.751	13.911	13.888
N° 2	13.768	20.815	28.691	32.898	37.412	42.402	45.739	50.884	56.624	62.933	62.759	62.408
N° 3	14.204	21.936	30.593	35.185	40.547	45.774	49.653	55.351	61.644	68.060	68.228	66.791
N° 4	14.195	21.596	29.798	34.360	39.167	44.312	47.606	52.941	58.563	64.058	64.094	61.878
N° 5	14.046	21.068	29.192	33.215	38.372	43.505	47.542	53.039	59.007	65.364	65.800	62.115
N° 6	14.239	21.313	29.324	33.600	38.398	43.112	46.430	51.596	57.121	62.317	62.218	60.261
N° 7	14.046	20.825	28.434	32.288	36.853	41.825	45.207	50.331	55.417	60.819	60.614	60.753
N° 8	13.876	21.092	29.296	33.492	38.099	43.002	46.303	51.536	56.787	61.442	61.349	57.670
N° 9	13.875	20.981	29.109	33.240	37.965	42.809	46.102	51.206	56.553	61.715	61.692	57.987
N° 10	13.444	19.774	27.039	30.814	35.312	39.830	43.083	47.860	53.463	58.793	58.743	56.406
N° 11	13.919	20.814	28.985	33.152	37.890	42.597	45.787	50.595	55.909	60.593	60.415	56.254
N° 12	13.834	20.750	28.835	32.843	37.519	42.306	45.518	50.485	55.797	60.720	60.678	55.970
N° 13	14.274	21.486	29.979	34.152	38.998	44.049	47.338	52.439	57.987	63.441	63.321	59.942
N° 14	14.471	21.085	28.854	32.646	37.287	41.987	44.922	49.813	55.292	60.408	60.611	58.955
N° 15	13.470	20.042	27.945	31.949	36.547	40.972	43.751	48.352	53.748	58.798	58.707	58.231
N° 16	13.308	19.727	27.155	30.585	34.631	39.449	42.747	47.416	52.199	57.160	56.979	56.991
N° 17	13.807	20.857	29.171	32.917	37.719	42.384	45.621	50.794	56.223	61.179	61.131	59.376
N° 18	13.241	20.047	27.960	32.050	36.422	41.946	44.475	49.973	55.689	61.116	61.550	57.576
N° 19	13.087	19.579	27.243	30.947	35.326	39.752	42.922	47.720	52.788	57.548	57.536	54.825
N° 20	13.650	20.431	28.401	32.220	37.041	41.568	45.142	49.753	55.137	60.147	60.042	57.358
N° 21	13.503	20.194	27.890	31.562	36.032	40.566	43.786	48.720	54.238	59.519	59.388	58.826
N° 22	13.852	20.588	28.133	32.410	36.820	41.303	44.354	48.916	53.803	58.103	58.559	55.382
N° 23	14.219	20.617	28.488	32.226	36.245	40.514	43.565	48.685	54.164	58.684	58.743	58.379
N° 24	14.263	21.634	29.924	34.081	38.889	43.905	47.235	52.546	58.258	63.570	63.527	60.421
N° 25	13.567	20.178	28.219	31.834	36.610	41.466	44.733	49.677	55.424	61.031	60.850	60.059
N° 26	14.009	20.830	29.018	33.019	37.632	42.478	45.681	50.389	55.727	60.553	60.452	57.763
N° 27	14.330	21.512	30.035	34.258	38.925	43.903	47.203	52.320	57.792	63.183	63.137	62.151
N° 28	14.095	20.464	27.843	31.564	36.080	40.751	43.524	48.478	53.494	58.683	58.707	59.187
N° 29	14.212	20.358	27.805	31.458	35.856	40.303	43.224	47.803	52.754	57.346	57.319	55.060
N° 30	13.534	19.831	27.535	31.327	35.994	40.786	44.165	49.141	54.879	60.509	60.734	59.508
N° 31	13.986	20.486	28.157	31.855	36.454	41.023	44.130	48.885	54.385	59.414	59.455	59.254

## 21. +IB2, Module 1

Ta=25°C; +VCC=2V; -VCC=-28V; VCM=-13V



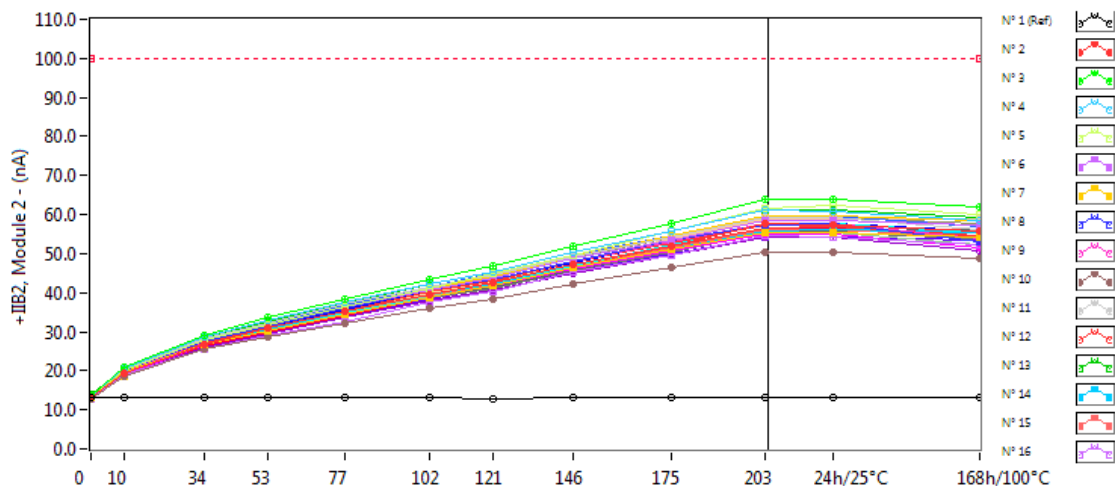
**+IB2, Module 1 . (nA)**

**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)	13.909	13.812	13.775	13.799	13.887	13.746	13.711	13.913	13.902	13.783	13.958	13.939
N° 2	13.765	20.482	27.906	32.384	36.822	42.031	45.356	50.481	56.445	63.106	62.759	62.379
N° 3	14.311	21.766	30.194	34.727	40.074	45.503	49.274	54.838	61.212	67.991	68.065	66.729
N° 4	14.169	21.234	29.440	33.765	38.501	43.637	47.056	52.386	57.963	63.852	63.889	62.162
N° 5	13.720	20.377	28.409	32.151	36.875	41.931	45.788	51.199	56.839	62.823	63.287	60.894
N° 6	13.941	20.445	28.158	32.148	36.784	41.800	44.903	49.921	55.152	60.189	60.317	59.011
N° 7	13.851	20.431	27.496	31.200	35.738	40.691	43.790	48.827	53.861	59.017	59.158	59.184
N° 8	13.952	20.723	28.499	32.591	37.205	42.215	45.321	50.218	55.913	60.672	60.763	57.365
N° 9	13.684	20.522	28.173	32.404	36.985	42.011	44.934	49.903	55.017	60.134	60.116	57.388
N° 10	13.431	19.423	26.619	30.255	34.529	39.251	42.333	46.943	52.154	57.152	57.208	56.498
N° 11	13.868	20.598	28.311	32.198	36.903	41.879	44.951	49.615	54.689	59.711	59.702	56.287
N° 12	13.630	20.324	28.168	31.907	36.702	41.500	44.437	49.271	54.387	59.537	59.377	55.435
N° 13	14.084	21.007	28.986	33.146	37.992	43.385	46.371	51.565	57.082	62.621	62.528	60.088
N° 14	14.302	20.463	27.578	31.387	35.873	40.546	43.467	47.943	53.203	58.333	58.849	58.290
N° 15	13.353	19.820	27.471	31.477	36.124	40.681	43.505	48.146	53.720	58.858	58.909	58.501
N° 16	13.035	19.114	26.171	29.664	33.530	38.565	41.897	46.780	51.589	57.059	57.147	56.835
N° 17	13.641	20.269	28.282	32.157	36.835	41.843	44.932	49.760	55.240	60.270	60.236	59.122
N° 18	13.310	19.788	27.419	31.329	35.928	40.807	43.920	48.741	54.159	59.186	59.270	57.190
N° 19	13.202	19.544	26.867	30.592	35.012	39.289	42.249	46.790	51.771	56.390	56.418	54.799
N° 20	13.664	20.097	27.863	31.556	36.681	40.919	44.511	48.811	54.017	58.737	58.907	56.926
N° 21	13.435	19.792	27.167	30.945	35.298	40.147	43.347	48.251	53.889	59.530	59.585	59.352
N° 22	13.680	20.231	27.548	31.795	35.689	40.033	43.137	47.785	52.767	57.348	58.082	55.329
N° 23	13.790	19.946	27.391	30.965	35.153	39.552	42.985	47.395	53.024	57.962	58.347	58.156
N° 24	14.206	21.203	29.164	33.343	38.065	43.123	46.552	51.645	57.151	62.438	62.422	60.278
N° 25	13.307	19.573	27.177	30.864	35.503	40.265	43.673	48.690	54.163	60.291	59.927	59.425
N° 26	13.747	20.332	27.819	31.760	36.291	40.857	43.943	48.679	53.900	58.612	58.707	57.029
N° 27	14.079	20.885	29.031	33.197	37.774	42.393	45.748	50.534	56.056	61.149	61.212	60.932
N° 28	13.866	19.934	27.464	30.998	35.265	39.904	42.984	47.873	53.127	58.525	58.682	58.800
N° 29	14.198	20.077	27.278	31.009	35.136	39.432	42.397	46.749	51.599	56.094	56.092	55.019
N° 30	13.389	19.583	26.960	30.782	35.224	39.858	43.234	48.161	53.930	59.443	59.945	59.078
N° 31	13.836	20.195	27.656	31.547	36.084	40.677	43.963	48.985	54.939	60.446	60.361	60.517

## 22. +IB2, Module 2

Ta=25°C; +VCC=2V; -VCC=-28V; VCM=-13V



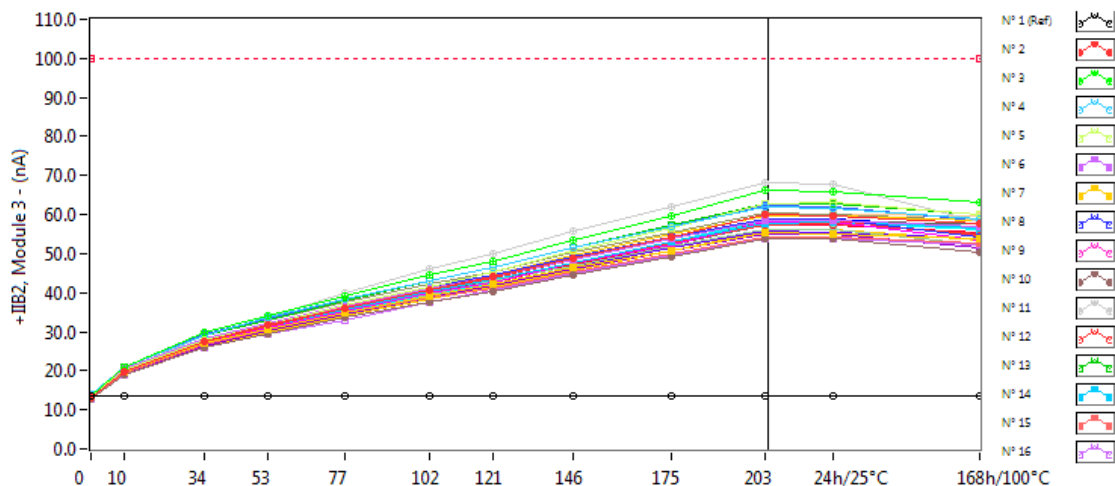
**+IB2, Module 2 . (nA)**

**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)	13.145	13.051	13.031	13.186	13.129	13.020	12.966	13.152	13.153	13.059	13.192	13.185
N° 2	13.045	19.491	26.748	30.813	35.070	39.557	42.674	47.167	52.028	57.714	57.257	55.627
N° 3	13.573	20.877	29.123	33.582	38.405	43.338	46.851	51.887	57.619	63.725	63.767	62.006
N° 4	13.656	20.692	28.549	32.972	37.418	42.340	45.383	50.483	55.700	61.064	60.931	58.633
N° 5	13.404	19.978	27.724	31.712	36.421	41.180	44.968	49.728	55.785	61.609	62.231	60.206
N° 6	13.543	20.019	27.774	31.681	36.249	40.749	43.864	48.715	53.564	58.387	58.429	57.393
N° 7	13.299	19.691	26.583	30.106	34.483	38.907	41.975	46.589	50.994	55.577	55.442	54.112
N° 8	13.324	20.051	27.574	31.427	35.938	40.489	43.453	48.165	53.315	57.514	57.534	52.983
N° 9	13.170	19.858	27.567	31.564	35.875	40.539	43.572	48.203	53.134	57.827	57.828	53.756
N° 10	12.791	18.778	25.460	28.473	32.289	36.198	38.507	42.355	46.502	50.524	50.452	48.860
N° 11	13.565	20.287	28.112	32.294	36.999	41.553	44.604	49.173	54.268	59.267	59.209	56.105
N° 12	13.019	19.573	27.254	30.911	35.405	40.097	43.179	47.883	52.828	57.478	57.449	54.161
N° 13	13.802	20.572	28.419	32.456	37.206	42.035	45.264	50.346	55.785	61.314	61.113	59.434
N° 14	13.783	19.827	27.085	30.762	35.058	39.385	42.110	46.311	51.279	55.861	56.019	55.423
N° 15	13.042	19.350	27.008	30.621	35.065	39.436	41.972	46.392	51.447	56.111	56.074	54.381
N° 16	12.799	18.817	25.698	28.961	32.709	37.379	40.461	45.128	49.481	54.439	54.288	52.438
N° 17	13.278	19.995	27.867	31.643	36.262	41.073	44.213	49.087	54.444	59.711	59.520	58.484
N° 18	12.792	19.104	26.559	30.204	34.382	38.781	41.676	46.001	50.825	55.184	54.992	51.628
N° 19	12.631	18.897	26.037	29.560	33.824	38.114	40.740	45.053	49.729	54.157	54.034	50.682
N° 20	13.175	19.569	27.057	30.662	35.262	39.202	42.341	46.329	51.252	55.640	55.491	52.291
N° 21	12.913	19.153	26.681	30.282	34.682	39.236	42.176	46.938	52.378	57.783	57.740	55.479
N° 22	13.088	19.376	26.614	30.717	34.890	39.246	42.405	46.786	51.718	56.460	57.058	54.696
N° 23	13.465	19.496	26.989	30.415	34.463	38.602	41.610	45.868	50.983	55.428	55.723	56.044
N° 24	13.620	20.535	28.493	32.307	36.868	41.540	44.812	49.614	54.758	59.477	59.496	56.795
N° 25	12.827	19.058	26.458	29.951	33.994	38.588	41.660	46.226	51.244	56.584	56.418	54.617
N° 26	13.413	19.770	27.343	31.131	35.725	40.260	43.312	47.719	52.978	57.583	57.603	55.793
N° 27	13.590	20.228	28.163	32.141	36.538	41.064	44.219	48.945	54.210	59.237	59.225	57.888
N° 28	13.376	19.412	26.601	30.094	34.325	38.557	41.233	45.801	50.430	55.364	55.280	53.924
N° 29	13.430	19.167	26.386	29.972	34.188	38.408	41.305	45.479	50.157	54.375	54.356	53.443
N° 30	12.857	18.771	25.964	29.629	34.014	38.394	41.392	45.858	50.809	55.580	55.498	53.770
N° 31	13.292	19.568	27.106	30.973	35.404	39.944	43.100	47.806	53.652	58.908	58.860	58.763

### 23. +IB2, Module 3

Ta=25°C; +VCC=2V; -VCC=-28V; VCM=-13V



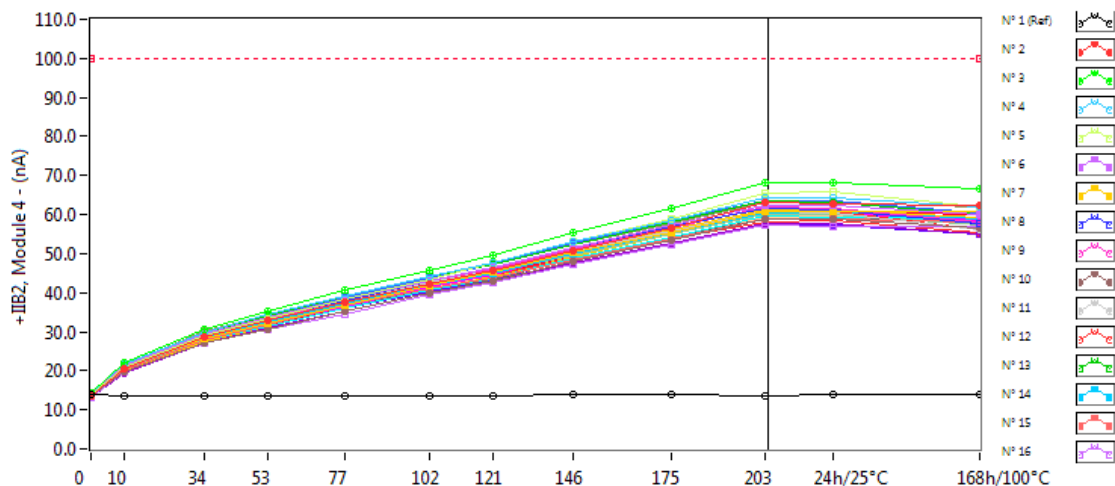
**+IB2, Module 3 . (nA)**

**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)	13.563	13.484	13.448	13.517	13.539	13.430	13.392	13.568	13.583	13.468	13.619	13.610
N° 2	13.303	19.931	27.536	31.704	36.190	40.745	44.036	48.739	54.110	59.922	59.617	57.565
N° 3	13.666	21.058	29.644	34.059	39.280	44.477	47.877	53.356	59.639	66.183	66.027	63.302
N° 4	13.929	21.038	29.239	33.564	38.217	43.133	46.418	51.546	56.795	61.887	61.733	58.969
N° 5	13.406	20.072	28.009	31.880	36.762	41.537	45.419	50.668	56.503	62.630	63.037	60.022
N° 6	13.719	20.471	28.168	32.079	36.675	41.135	44.168	48.421	53.973	58.587	58.614	56.836
N° 7	13.508	19.930	27.019	30.614	34.787	39.067	42.026	46.439	50.624	55.218	55.156	53.866
N° 8	13.516	20.292	28.030	31.931	36.635	41.363	44.474	49.220	54.380	59.045	58.989	54.035
N° 9	13.402	20.204	28.047	32.056	36.551	41.198	44.273	48.963	54.033	59.061	59.023	54.392
N° 10	12.767	18.864	25.804	29.316	33.522	37.564	40.396	44.459	49.327	53.727	53.658	50.499
N° 11	13.328	20.322	28.907	33.854	39.878	46.072	50.143	55.816	62.108	68.007	67.834	58.148
N° 12	13.265	19.920	27.655	31.478	36.176	40.675	43.923	48.571	53.945	58.655	58.413	54.628
N° 13	13.752	20.820	28.958	33.065	37.923	43.132	46.336	51.502	57.291	62.919	62.751	60.226
N° 14	13.788	20.072	27.496	31.288	35.771	40.289	43.263	47.639	52.877	57.734	57.931	56.536
N° 15	13.081	19.387	26.787	30.448	34.760	38.704	41.059	45.208	50.022	54.379	54.337	52.705
N° 16	12.762	18.912	26.031	29.317	33.023	37.484	40.598	45.102	49.403	54.023	53.952	52.145
N° 17	13.370	20.395	28.405	32.292	36.876	41.547	44.645	49.432	54.851	59.830	59.757	58.646
N° 18	12.972	19.467	27.102	30.840	35.386	39.842	42.761	47.784	52.346	58.116	57.959	53.511
N° 19	12.723	19.083	26.490	30.140	34.426	38.808	41.720	46.097	50.759	55.179	55.183	51.501
N° 20	13.193	19.702	27.338	30.842	35.505	39.603	42.884	46.855	51.739	56.296	56.098	52.099
N° 21	13.063	19.568	26.797	30.590	35.066	39.630	42.760	47.669	53.061	58.323	58.234	56.189
N° 22	13.483	19.918	27.587	31.767	35.863	40.311	43.256	47.707	52.706	57.335	57.875	55.161
N° 23	13.678	19.873	27.594	31.233	35.457	39.831	42.889	47.624	53.196	58.059	58.239	57.784
N° 24	13.868	20.850	29.397	33.284	37.862	42.881	46.392	51.336	56.976	62.209	62.084	58.647
N° 25	13.176	19.451	27.152	30.602	34.962	39.375	42.698	47.322	52.371	57.658	57.408	55.426
N° 26	13.550	20.143	28.223	32.069	36.657	41.331	44.450	48.864	54.268	58.948	58.901	56.387
N° 27	13.863	20.790	28.866	32.979	37.559	42.204	45.281	50.166	55.449	60.322	60.199	58.462
N° 28	13.565	19.713	27.243	30.624	35.266	39.714	42.747	47.439	52.376	57.406	57.423	55.312
N° 29	13.783	19.460	26.779	30.339	34.649	39.158	42.015	46.517	51.355	55.596	55.551	53.869
N° 30	12.858	19.002	26.345	29.842	34.200	38.487	41.424	45.843	50.897	55.691	56.095	53.602
N° 31	13.373	19.777	27.487	31.295	35.958	40.511	43.766	48.680	54.341	60.045	59.946	59.539

## 24. +IB2, Module 4

Ta=25°C; +VCC=2V; -VCC=-28V; VCM=-13V



**+IB2, Module 4 . (nA)**

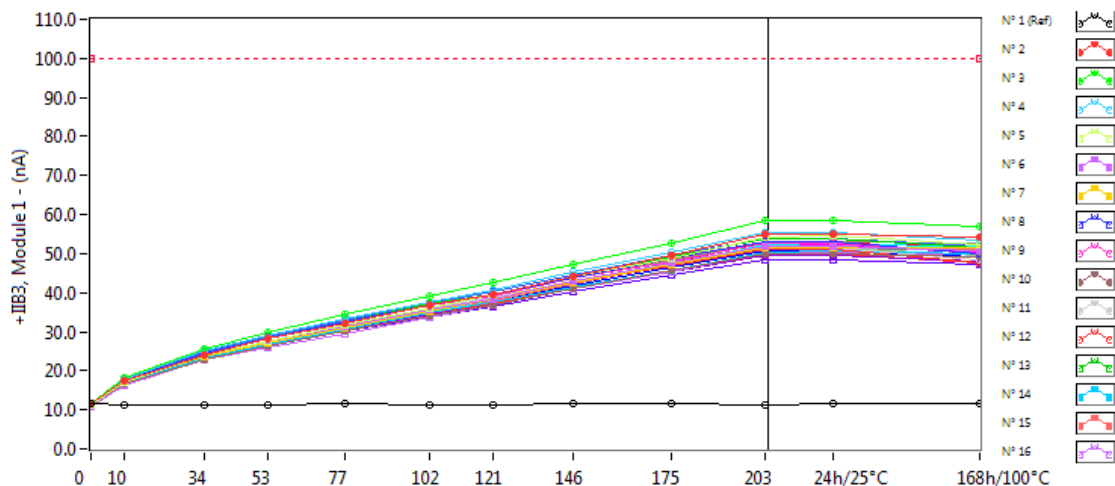
**Max = 100.0**

	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)	13.761	13.682	13.656	13.699	13.745	13.638	13.604	13.799	13.794	13.688	13.839	13.818
N° 2	13.704	20.718	28.706	32.893	37.416	42.394	45.789	50.916	56.647	62.970	62.807	62.373
N° 3	14.138	21.887	30.602	35.182	40.558	45.785	49.633	55.285	61.597	68.182	68.292	66.735
N° 4	14.152	21.516	29.790	34.362	39.169	44.307	47.633	52.932	58.593	64.125	64.149	61.891
N° 5	14.003	21.009	29.192	33.208	38.350	43.539	47.568	53.004	59.007	65.403	65.817	62.037
N° 6	14.180	21.264	29.312	33.579	38.425	43.147	46.456	51.607	57.173	62.358	62.249	60.206
N° 7	13.990	20.791	28.385	32.277	36.855	41.823	45.226	50.333	55.427	60.774	60.677	60.699
N° 8	13.822	21.020	29.256	33.533	38.103	42.979	46.364	51.499	56.762	61.482	61.376	57.616
N° 9	13.816	20.893	29.092	33.277	37.947	42.829	46.126	51.208	56.582	61.779	61.755	57.936
N° 10	13.396	19.677	27.011	30.774	35.348	39.858	43.041	47.894	53.441	58.754	58.735	56.381
N° 11	13.861	20.773	28.981	33.181	37.872	42.601	45.748	50.573	55.904	60.620	60.471	56.203
N° 12	13.777	20.700	28.783	32.876	37.530	42.320	45.540	50.495	55.806	60.750	60.717	56.011
N° 13	14.217	21.431	29.981	34.118	38.984	44.078	47.287	52.416	57.995	63.487	63.268	59.949
N° 14	14.427	21.014	28.844	32.664	37.286	41.967	44.952	49.796	55.289	60.388	60.754	58.915
N° 15	13.407	19.987	27.939	31.927	36.616	40.961	43.744	48.337	53.782	58.835	58.747	58.180
N° 16	13.250	19.670	27.142	30.563	34.646	39.430	42.773	47.415	52.214	57.228	56.974	56.961
N° 17	13.751	20.786	29.188	32.947	37.696	42.404	45.633	50.757	56.219	61.222	61.170	59.351
N° 18	13.183	20.000	27.909	32.047	36.440	41.633	44.489	50.362	55.451	60.790	60.454	58.426
N° 19	13.014	19.534	27.257	30.933	35.324	39.801	42.937	47.718	52.763	57.608	57.594	54.860
N° 20	13.603	20.373	28.376	32.198	37.056	41.563	45.150	49.743	55.156	60.191	60.086	57.277
N° 21	13.441	20.123	27.842	31.545	36.026	40.584	43.791	48.721	54.288	59.499	59.402	58.773
N° 22	13.791	20.500	28.150	32.375	36.794	41.315	44.353	48.918	53.834	58.175	58.567	55.413
N° 23	14.168	20.559	28.487	32.239	36.245	40.503	43.559	48.748	54.167	58.704	58.792	58.347
N° 24	14.212	21.571	29.942	34.053	38.905	43.941	47.247	52.584	58.332	63.615	63.534	60.410
N° 25	13.512	20.105	28.193	31.817	36.593	41.422	44.707	49.657	55.381	61.120	60.868	60.036
N° 26	13.954	20.753	29.026	33.054	37.642	42.515	45.678	50.372	55.736	60.581	60.440	57.698
N° 27	14.282	21.434	30.068	34.240	38.986	43.885	47.227	52.322	57.852	63.246	63.170	62.118
N° 28	14.039	20.404	27.827	31.584	36.137	40.817	43.624	48.618	53.685	58.846	58.880	59.209
N° 29	14.156	20.291	27.776	31.430	35.853	40.331	43.207	47.797	52.786	57.398	57.350	55.001
N° 30	13.470	19.755	27.474	31.325	35.943	40.784	44.171	49.081	54.844	60.516	60.794	59.450
N° 31	13.947	20.444	28.150	31.867	36.433	41.052	44.129	48.874	54.401	59.435	59.485	59.234



## 25. +IIB3, Module 1

Ta=25°C; +VCC=5V; -VCC=GND; VCM=+1.4V



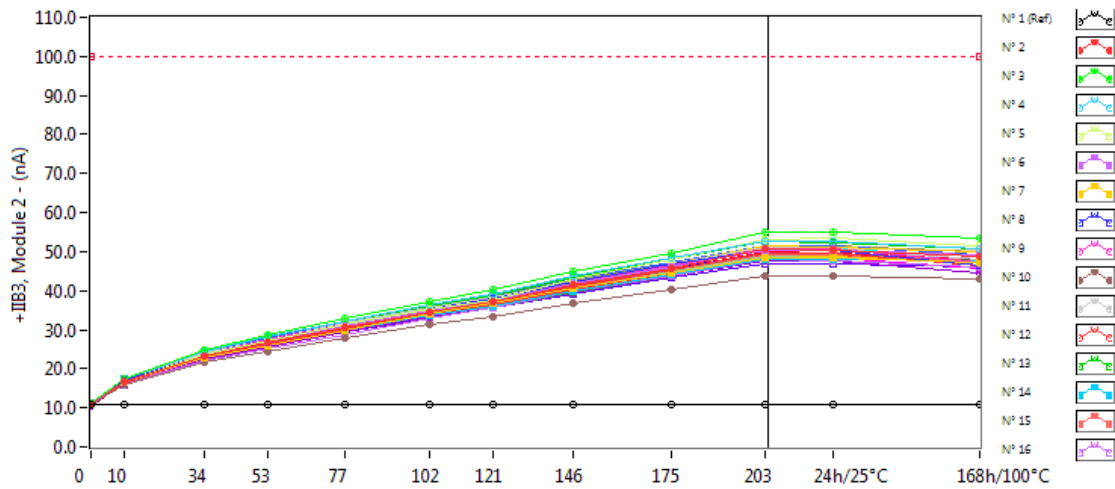
**+IIB3, Module 1 . (nA)**

**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)	11.437	11.375	11.319	11.358	11.427	11.288	11.282	11.462	11.471	11.360	11.515	11.479
N° 2	11.527	17.515	24.129	28.094	32.099	36.700	39.646	44.213	49.427	55.131	54.876	54.342
N° 3	11.789	18.348	25.716	29.696	34.379	39.137	42.421	47.312	52.783	58.475	58.514	57.105
N° 4	11.747	17.968	25.145	29.020	33.252	37.750	40.726	45.411	50.266	55.293	55.289	53.623
N° 5	11.276	17.096	24.090	27.429	31.603	35.977	39.348	44.095	48.950	54.127	54.483	52.215
N° 6	11.442	17.131	23.837	27.339	31.484	35.798	38.537	42.958	47.480	51.760	51.898	50.593
N° 7	11.613	17.438	23.704	27.028	31.088	35.429	38.228	42.681	47.112	51.576	51.659	51.551
N° 8	11.667	17.644	24.545	28.246	32.419	36.791	39.533	43.894	48.883	52.990	53.095	50.091
N° 9	11.466	17.508	24.344	28.121	32.241	36.606	39.275	43.641	48.105	52.515	52.558	50.097
N° 10	11.234	16.561	22.954	26.242	30.095	34.218	36.965	41.117	45.624	49.989	49.999	49.338
N° 11	11.374	17.265	24.070	27.444	31.582	35.917	38.660	42.761	47.146	51.450	51.415	48.450
N° 12	11.195	17.004	23.916	27.215	31.461	35.624	38.233	42.439	46.921	51.271	51.204	47.750
N° 13	11.508	17.517	24.433	28.084	32.425	37.075	39.691	44.254	49.042	53.748	53.651	51.347
N° 14	11.757	17.130	23.378	26.716	30.734	34.816	37.425	41.350	45.855	50.323	50.699	50.067
N° 15	11.232	16.933	23.779	27.392	31.577	35.580	38.130	42.248	47.147	51.604	51.657	51.099
N° 16	10.953	16.375	22.671	25.829	29.364	33.817	36.804	41.222	45.507	50.277	50.334	49.845
N° 17	11.184	16.976	23.996	27.423	31.519	35.865	38.585	42.835	47.555	51.882	51.876	50.704
N° 18	11.206	16.956	23.828	27.299	31.498	35.853	38.575	42.828	47.681	52.085	52.131	50.210
N° 19	11.094	16.735	23.240	26.610	30.597	34.374	36.983	41.097	45.466	49.474	49.510	48.042
N° 20	11.443	17.186	24.069	27.345	31.928	35.696	38.859	42.708	47.304	51.401	51.470	49.725
N° 21	11.315	16.994	23.581	26.980	30.962	35.169	38.100	42.477	47.437	52.273	52.341	51.950
N° 22	11.244	16.957	23.365	27.064	30.582	34.380	37.102	41.137	45.492	49.408	49.976	47.570
N° 23	11.339	16.705	23.253	26.423	30.182	34.003	37.019	40.944	45.801	50.028	50.339	49.997
N° 24	11.732	17.888	24.869	28.596	32.756	37.156	40.154	44.661	49.440	53.936	53.906	51.951
N° 25	11.221	16.806	23.553	26.933	31.113	35.362	38.389	42.835	47.688	53.019	52.711	52.065
N° 26	11.274	17.023	23.574	27.038	31.088	35.108	37.798	41.958	46.488	50.583	50.614	49.078
N° 27	11.689	17.654	24.795	28.516	32.605	36.654	39.525	43.811	48.572	52.919	52.951	52.522
N° 28	11.584	16.965	23.604	26.801	30.606	34.721	37.435	41.789	46.349	51.081	51.135	51.098
N° 29	11.665	16.814	23.109	26.395	30.104	33.864	36.456	40.305	44.514	48.399	48.317	47.345
N° 30	11.231	16.766	23.352	26.761	30.831	34.926	37.935	42.278	47.379	52.225	52.619	51.654
N° 31	11.383	16.954	23.529	26.887	30.941	34.998	37.897	42.267	47.451	52.076	52.119	51.928

## 26. +IIB3, Module 2

Ta=25°C; +VCC=5V; -VCC=GND; VCM=+1.4V



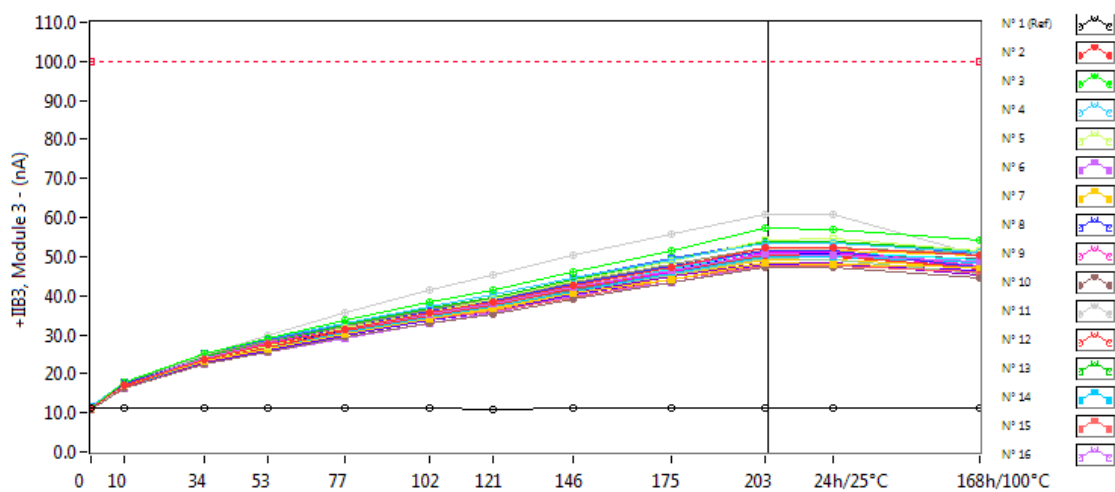
**+IIB3, Module 2 . (nA)**

**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)	10.855	10.790	10.752	10.964	10.847	10.726	10.685	10.871	10.872	10.780	10.935	10.893
N° 2	10.948	16.659	23.092	26.720	30.603	34.519	37.342	41.297	45.663	50.547	50.159	48.667
N° 3	11.210	17.618	24.834	28.761	33.019	37.324	40.388	44.778	49.748	54.859	54.950	53.292
N° 4	11.340	17.504	24.413	28.350	32.286	36.576	39.296	43.767	48.310	52.836	52.715	50.708
N° 5	11.015	16.752	23.553	27.034	31.229	35.393	37.428	42.852	48.116	53.187	53.618	51.539
N° 6	11.124	16.746	23.508	26.919	30.992	34.943	37.645	41.889	46.097	50.216	50.279	49.185
N° 7	11.157	16.816	22.916	26.101	30.013	33.913	36.669	40.765	44.608	48.568	48.469	47.285
N° 8	11.169	17.126	23.819	27.232	31.281	35.327	38.020	42.202	46.682	50.323	50.319	46.429
N° 9	11.050	16.974	23.800	27.375	31.300	35.439	38.114	42.243	46.537	50.621	50.647	47.121
N° 10	10.715	16.015	21.868	24.498	27.952	31.345	33.338	36.743	40.350	43.777	43.706	42.850
N° 11	11.152	17.022	23.822	27.499	31.662	35.598	38.309	42.339	46.701	50.974	50.910	48.217
N° 12	10.695	16.441	23.104	26.374	30.303	34.426	37.079	41.239	45.482	49.501	49.456	46.588
N° 13	11.292	17.168	24.031	27.593	31.799	35.932	38.780	43.209	47.885	52.535	52.356	50.741
N° 14	11.360	16.649	23.021	26.250	30.010	33.781	36.168	39.818	44.116	48.040	48.157	47.616
N° 15	10.976	16.564	23.374	26.570	30.629	34.480	36.745	40.689	45.221	49.216	49.206	47.702
N° 16	10.779	16.143	22.263	25.213	28.609	32.795	35.565	39.716	43.581	47.986	47.826	46.199
N° 17	10.910	16.785	23.649	26.962	31.046	35.242	37.987	42.292	46.817	51.379	51.239	50.089
N° 18	10.794	16.409	23.006	26.313	30.121	34.032	36.604	40.476	44.684	48.536	48.382	45.547
N° 19	10.639	16.225	22.561	25.743	29.598	33.399	35.748	39.706	43.763	47.660	47.527	44.615
N° 20	11.062	16.729	23.393	26.593	30.747	34.255	37.046	40.584	44.945	48.719	48.588	45.843
N° 21	10.876	16.445	23.095	26.384	30.349	34.446	37.082	41.341	46.193	50.955	50.873	48.744
N° 22	10.790	16.288	22.571	26.217	29.942	33.701	36.487	40.334	44.641	48.653	49.206	47.063
N° 23	11.100	16.345	22.912	25.948	29.486	33.130	35.706	39.486	43.866	47.674	47.945	48.051
N° 24	11.282	17.361	24.320	27.710	31.763	35.850	38.737	42.937	47.425	51.482	51.426	49.108
N° 25	10.835	16.362	22.981	26.164	29.851	33.912	36.679	40.802	45.243	49.952	49.750	48.112
N° 26	11.043	16.585	23.180	26.568	30.597	34.599	37.310	41.211	45.769	49.728	49.685	47.983
N° 27	11.284	17.105	24.093	27.592	31.502	35.500	38.275	42.439	47.004	51.354	51.327	50.037
N° 28	11.194	16.551	22.895	26.012	29.774	33.588	35.979	40.018	44.120	48.384	48.344	47.097
N° 29	11.076	16.063	22.367	25.529	29.279	32.998	35.510	39.223	43.298	46.921	46.852	45.930
N° 30	10.811	16.066	22.465	25.757	29.700	33.687	36.285	40.307	44.646	48.862	48.801	47.188
N° 31	10.959	16.414	23.054	26.444	30.373	34.335	37.071	41.199	46.238	50.710	50.670	50.357

## 27. +IIB3, Module 3

Ta=25°C; +VCC=5V; -VCC=GND; VCM=+1.4V



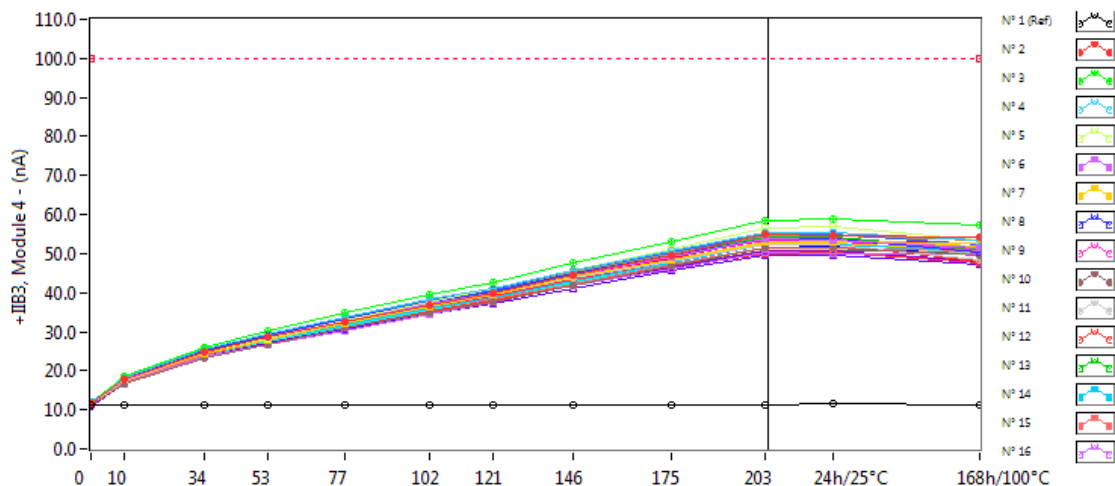
**+IIB3, Module 3 . (nA)**

**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)	11.183	11.114	11.073	11.142	11.177	11.065	11.020	11.206	11.205	11.113	11.266	11.232
N° 2	11.154	17.011	23.778	27.494	31.549	35.580	38.520	42.669	47.343	52.481	52.200	50.310
N° 3	11.288	17.761	25.215	29.155	33.778	38.337	41.331	46.112	51.549	57.137	57.064	54.386
N° 4	11.563	17.837	25.001	28.903	32.991	37.293	40.200	44.725	49.278	53.639	53.521	51.057
N° 5	11.049	16.857	23.811	27.257	31.572	35.814	39.164	43.756	48.791	54.111	54.435	51.549
N° 6	11.327	17.145	23.879	27.339	31.368	35.275	37.936	42.218	46.476	50.574	50.537	48.754
N° 7	11.337	16.984	23.241	26.486	30.224	34.020	36.635	40.626	44.303	48.269	48.186	47.103
N° 8	11.328	17.314	24.173	27.687	31.865	36.079	38.833	43.120	47.634	51.643	51.644	47.362
N° 9	11.232	17.242	24.188	27.776	31.834	35.919	38.647	42.811	47.257	51.667	51.583	47.613
N° 10	10.717	16.121	22.278	25.449	29.254	32.878	35.390	39.053	43.342	47.198	47.127	44.461
N° 11	10.986	17.105	24.921	29.745	35.557	41.291	45.126	50.164	55.797	60.906	60.713	50.327
N° 12	10.923	16.716	23.436	26.825	30.956	34.882	37.731	41.801	46.424	50.469	50.303	46.966
N° 13	11.259	17.407	24.479	28.072	32.382	36.889	39.680	44.205	49.154	53.935	53.792	51.431
N° 14	11.364	16.818	23.343	26.683	30.613	34.584	37.163	41.027	45.573	49.773	49.905	48.497
N° 15	11.023	16.598	23.201	26.525	30.408	33.909	35.991	39.697	43.974	47.755	47.717	46.258
N° 16	10.750	16.210	22.552	25.543	28.889	32.855	35.660	39.722	43.548	47.596	47.536	45.958
N° 17	10.973	17.088	24.047	27.458	31.537	35.588	38.290	42.506	47.174	51.421	51.347	50.245
N° 18	10.940	16.699	23.488	26.879	30.959	34.956	37.573	41.999	46.087	51.062	50.950	47.153
N° 19	10.710	16.365	22.991	26.292	30.136	34.033	36.653	40.584	44.737	48.565	48.536	45.409
N° 20	11.100	16.842	23.641	26.781	30.971	34.678	37.541	41.112	45.408	49.419	49.273	45.779
N° 21	10.998	16.760	23.226	26.659	30.658	34.755	37.524	41.981	46.713	51.354	51.249	49.293
N° 22	11.113	16.724	23.409	27.072	30.722	34.581	37.198	41.127	45.417	49.438	49.855	47.438
N° 23	11.261	16.650	23.444	26.630	30.363	34.202	36.862	40.995	45.818	50.018	50.170	49.494
N° 24	11.499	17.634	25.089	28.563	32.609	37.023	40.120	44.521	49.401	53.901	53.777	50.671
N° 25	11.113	16.710	23.542	26.686	30.615	34.560	37.518	41.707	46.143	50.772	50.513	48.741
N° 26	11.113	16.835	23.877	27.303	31.323	35.429	38.189	42.018	46.696	50.711	50.670	48.375
N° 27	11.485	17.557	24.625	28.314	32.312	36.465	39.146	43.471	48.047	52.281	52.119	50.553
N° 28	11.350	16.773	23.444	26.463	30.601	34.608	37.288	41.470	45.844	50.264	50.274	48.264
N° 29	11.372	16.315	22.713	25.887	29.659	33.650	36.169	40.108	44.315	47.968	47.870	46.326
N° 30	10.810	16.272	22.799	25.982	29.882	33.745	36.362	40.320	44.793	49.019	49.267	47.116
N° 31	11.024	16.605	23.334	26.719	30.867	34.792	37.654	42.027	46.903	51.805	51.745	51.024

## 28. +IIB3, Module 4

Ta=25°C; +VCC=5V; -VCC=GND; VCM=+1.4V



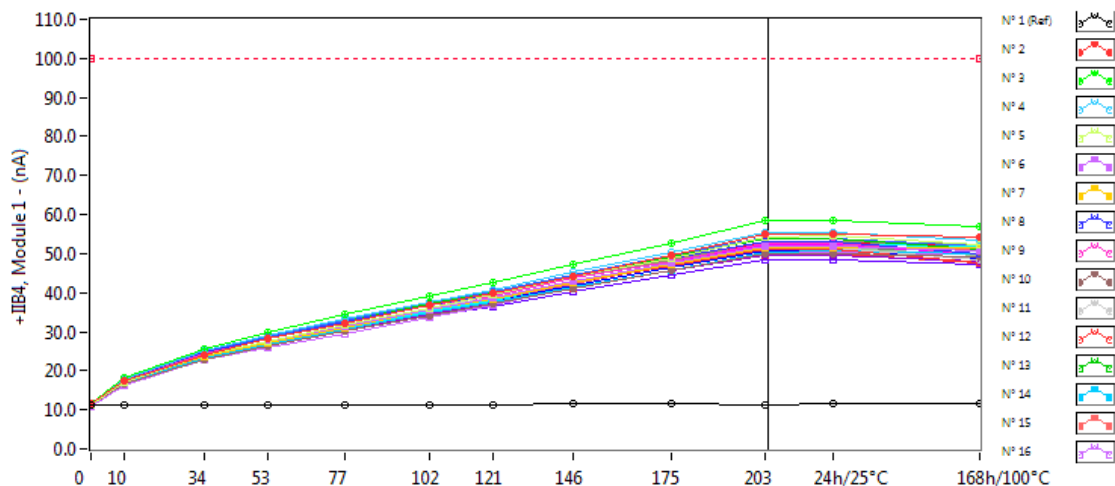
**+IIB3, Module 4 . (nA)**

**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)	11.334	11.276	11.245	11.292	11.326	11.241	11.188	11.363	11.379	11.268	11.427	11.403
N° 2	11.486	17.718	24.724	28.469	32.535	36.934	39.916	44.443	49.504	54.855	54.740	54.298
N° 3	11.683	18.445	26.057	30.119	34.825	39.410	42.761	47.689	53.160	58.635	58.742	57.205
N° 4	11.741	18.189	25.476	29.545	33.793	38.298	41.227	45.882	50.769	55.521	55.488	53.449
N° 5	11.514	17.624	24.777	28.364	32.910	37.398	40.960	45.743	50.984	56.502	56.837	53.258
N° 6	11.660	17.789	24.842	28.615	32.885	37.021	39.909	44.453	49.206	53.661	53.635	51.698
N° 7	11.740	17.747	24.486	27.955	32.038	36.424	39.441	43.996	48.425	53.051	53.018	52.849
N° 8	11.582	17.976	25.254	29.099	33.211	37.475	40.475	45.071	49.725	53.763	53.740	50.370
N° 9	11.579	17.801	25.049	28.810	32.992	37.302	40.200	44.728	49.410	53.909	53.889	50.570
N° 10	11.258	16.841	23.327	26.731	30.843	34.878	37.707	42.009	46.908	51.631	51.567	49.403
N° 11	11.424	17.391	24.594	28.271	32.485	36.591	39.319	43.583	48.205	52.253	52.107	48.453
N° 12	11.336	17.334	24.382	27.999	32.100	36.324	39.109	43.449	48.066	52.277	52.221	48.179
N° 13	11.619	17.837	25.318	28.954	33.255	37.639	40.469	44.918	49.714	54.413	54.232	51.188
N° 14	11.872	17.617	24.457	27.859	31.936	36.016	38.632	42.908	47.657	52.104	52.320	50.596
N° 15	11.275	17.101	24.157	27.751	31.996	35.844	38.314	42.396	47.189	51.593	51.478	50.841
N° 16	11.151	16.839	23.501	26.577	30.301	34.519	37.523	41.660	45.931	50.298	50.089	49.955
N° 17	11.273	17.387	24.697	28.015	32.228	36.365	39.170	43.611	48.394	52.659	52.557	50.919
N° 18	11.122	17.166	24.223	27.938	31.901	36.547	39.007	44.200	49.289	53.587	53.190	51.392
N° 19	10.985	16.789	23.641	26.951	30.869	34.891	37.660	41.954	46.419	50.566	50.587	48.182
N° 20	11.409	17.392	24.509	27.948	32.280	36.325	39.510	43.551	48.311	52.716	52.619	50.082
N° 21	11.321	17.230	24.130	27.465	31.480	35.525	38.400	42.763	47.696	52.255	52.218	51.470
N° 22	11.339	17.170	23.805	27.517	31.460	35.410	38.048	42.069	46.352	50.057	50.379	47.597
N° 23	11.644	17.227	24.170	27.491	31.062	34.753	37.466	41.995	46.747	50.667	50.723	50.163
N° 24	11.771	18.184	25.588	29.258	33.522	37.971	40.844	45.558	50.512	55.051	54.982	52.127
N° 25	11.395	17.289	24.451	27.701	32.059	36.366	39.287	43.738	48.827	53.798	53.573	52.646
N° 26	11.454	17.363	24.571	28.107	32.182	36.420	39.237	43.319	48.060	52.151	52.078	49.611
N° 27	11.853	18.127	25.688	29.421	33.575	37.929	40.786	45.317	50.029	54.678	54.635	53.594
N° 28	11.744	17.372	23.881	27.145	31.198	35.301	37.715	42.064	46.413	50.879	50.900	51.397
N° 29	11.656	16.998	23.546	26.808	30.725	34.661	37.150	41.212	45.583	49.558	49.469	47.382
N° 30	11.341	16.915	23.798	27.254	31.425	35.749	38.738	43.160	48.251	53.166	53.436	52.061
N° 31	11.481	17.137	23.869	27.157	31.256	35.232	37.998	42.148	46.915	51.282	51.314	50.842

## 29. +IIB4, Module 1

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



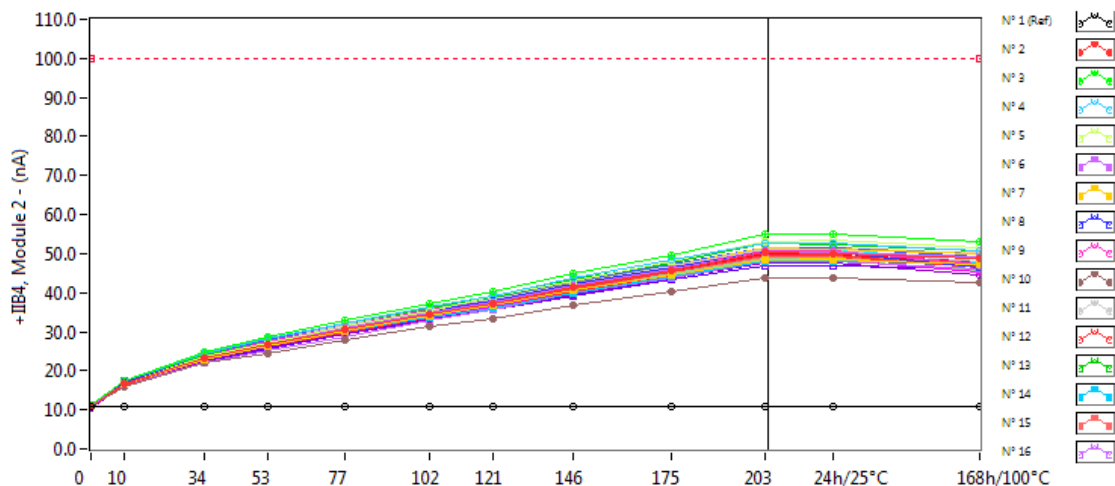
**+IIB4, Module 1 . (nA)**

**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)	11.422	11.367	11.334	11.358	11.423	11.290	11.249	11.461	11.459	11.340	11.516	11.484
N° 2	11.524	17.539	24.167	28.095	32.137	36.703	39.711	44.197	49.509	55.086	54.865	54.272
N° 3	11.781	18.314	25.740	29.771	34.423	39.168	42.498	47.335	52.800	58.495	58.516	57.070
N° 4	11.749	18.001	25.153	29.098	33.300	37.723	40.741	45.462	50.306	55.282	55.309	53.592
N° 5	11.272	17.118	24.082	27.495	31.677	35.970	39.338	44.079	48.943	54.098	54.479	52.128
N° 6	11.424	17.141	23.857	27.397	31.521	35.807	38.545	43.016	47.533	51.785	51.896	50.583
N° 7	11.604	17.447	23.738	27.122	31.154	35.492	38.292	42.724	47.092	51.578	51.658	51.529
N° 8	11.657	17.700	24.630	28.328	32.495	36.797	39.583	43.971	48.924	53.030	53.070	50.026
N° 9	11.459	17.528	24.377	28.219	32.249	36.615	39.303	43.732	48.123	52.560	52.642	50.043
N° 10	11.248	16.602	23.021	26.294	30.128	34.238	36.992	41.145	45.679	50.064	50.052	49.256
N° 11	11.365	17.278	24.111	27.486	31.647	35.964	38.682	42.798	47.196	51.438	51.471	48.413
N° 12	11.198	17.023	24.015	27.253	31.528	35.669	38.275	42.489	46.984	51.309	51.218	47.695
N° 13	11.488	17.524	24.517	28.172	32.480	37.112	39.729	44.323	49.046	53.793	53.675	51.283
N° 14	11.757	17.151	23.430	26.796	30.753	34.820	37.475	41.403	45.852	50.338	50.697	49.993
N° 15	11.214	16.997	23.813	27.457	31.614	35.622	38.181	42.326	47.185	51.627	51.648	51.048
N° 16	10.954	16.390	22.749	25.871	29.399	33.839	36.857	41.251	45.537	50.372	50.342	49.822
N° 17	11.172	16.993	24.023	27.456	31.588	35.908	38.640	42.885	47.644	51.902	51.919	50.624
N° 18	11.188	16.960	23.850	27.339	31.546	35.857	38.594	42.925	47.781	52.129	52.164	50.153
N° 19	11.083	16.742	23.293	26.657	30.660	34.375	37.069	41.129	45.543	49.570	49.504	47.994
N° 20	11.424	17.215	24.088	27.461	31.938	35.679	38.859	42.715	47.355	51.452	51.561	49.642
N° 21	11.309	17.011	23.611	26.989	31.009	35.242	38.110	42.465	47.435	52.340	52.339	51.903
N° 22	11.247	16.964	23.379	27.051	30.635	34.436	37.165	41.209	45.542	49.447	49.968	47.544
N° 23	11.341	16.771	23.340	26.494	30.231	34.095	37.003	40.944	45.847	50.004	50.353	49.949
N° 24	11.716	17.879	24.927	28.600	32.777	37.231	40.189	44.650	49.510	54.076	53.933	51.880
N° 25	11.190	16.805	23.652	26.982	31.168	35.417	38.435	42.892	47.764	53.019	52.745	52.022
N° 26	11.257	17.045	23.621	27.141	31.142	35.187	37.879	41.989	46.545	50.684	50.698	48.986
N° 27	11.649	17.662	24.822	28.562	32.638	36.711	39.575	43.830	48.593	52.925	53.001	52.467
N° 28	11.594	16.965	23.642	26.838	30.678	34.770	37.457	41.869	46.379	51.090	51.176	51.070
N° 29	11.647	16.832	23.163	26.425	30.156	33.935	36.528	40.321	44.573	48.388	48.347	47.302
N° 30	11.228	16.753	23.425	26.828	30.899	35.022	37.975	42.338	47.419	52.300	52.653	51.614
N° 31	11.378	16.930	23.510	26.970	31.017	35.061	37.897	42.373	47.429	52.131	52.140	51.870

### 30. +IIB4, Module 2

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



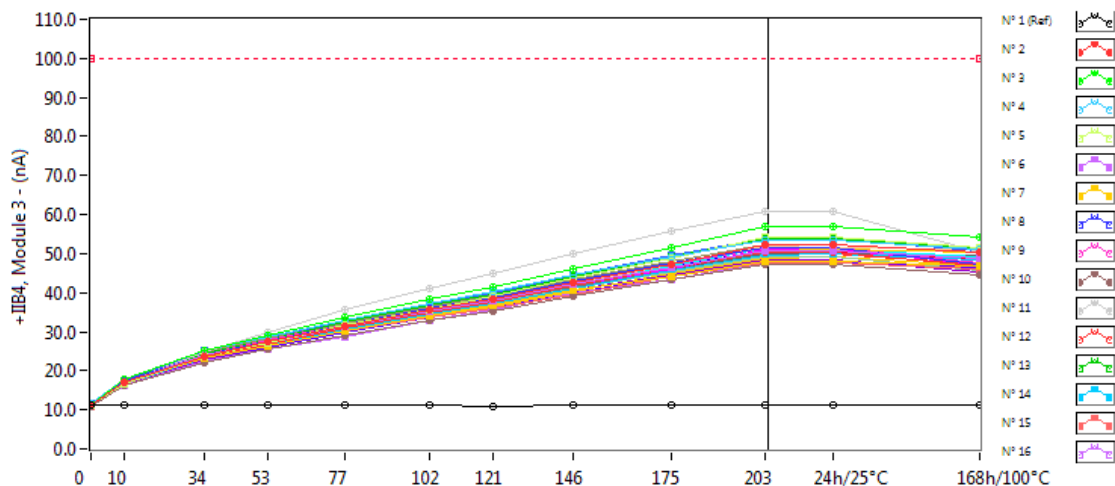
**+IIB4, Module 2 . (nA)**

**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)	10.840	10.795	10.737	10.888	10.840	10.720	10.679	10.881	10.866	10.781	10.932	10.890
N° 2	10.939	16.660	23.116	26.719	30.633	34.588	37.329	41.325	45.712	50.539	50.136	48.617
N° 3	11.201	17.599	24.783	28.795	33.005	37.323	40.442	44.828	49.713	54.832	54.877	53.224
N° 4	11.319	17.499	24.394	28.331	32.306	36.564	39.287	43.779	48.337	52.826	52.672	50.669
N° 5	11.020	16.759	23.527	27.036	31.249	35.375	39.202	42.841	48.089	53.136	53.588	51.494
N° 6	11.115	16.763	23.518	26.922	30.990	34.943	37.623	41.912	46.130	50.210	50.289	49.116
N° 7	11.151	16.795	22.927	26.153	30.045	33.925	36.660	40.757	44.609	48.582	48.526	47.233
N° 8	11.154	17.122	23.815	27.246	31.306	35.363	37.986	42.191	46.644	50.334	50.296	46.375
N° 9	11.054	16.975	23.802	27.376	31.270	35.448	38.101	42.210	46.523	50.662	50.662	47.095
N° 10	10.730	16.015	21.893	24.551	27.973	31.346	33.376	36.731	40.347	43.781	43.689	42.796
N° 11	11.146	17.023	23.777	27.565	31.640	35.664	38.337	42.356	46.697	50.977	50.924	48.149
N° 12	10.703	16.452	23.123	26.357	30.327	34.476	37.122	41.245	45.504	49.509	49.450	46.578
N° 13	11.286	17.177	24.002	27.590	31.754	35.927	38.778	43.194	47.820	52.561	52.333	50.689
N° 14	11.361	16.623	22.990	26.243	30.033	33.743	36.157	39.838	44.075	48.031	48.158	47.533
N° 15	10.969	16.553	23.407	26.627	30.612	34.485	36.758	40.751	45.204	49.216	49.194	47.623
N° 16	10.761	16.148	22.264	25.249	28.654	32.764	35.563	39.743	43.590	47.970	47.840	46.138
N° 17	10.912	16.788	23.649	26.948	31.038	35.225	37.967	42.316	46.801	51.323	51.218	50.089
N° 18	10.777	16.387	23.015	26.319	30.137	34.009	36.594	40.508	44.728	48.448	48.401	45.448
N° 19	10.645	16.186	22.552	25.781	29.620	33.421	35.751	39.675	43.848	47.605	47.524	44.624
N° 20	11.064	16.751	23.398	26.607	30.698	34.267	37.029	40.582	44.925	48.707	48.560	45.829
N° 21	10.853	16.439	23.102	26.375	30.349	34.471	37.051	41.405	46.204	50.939	50.845	48.689
N° 22	10.783	16.279	22.560	26.223	29.925	33.727	36.464	40.363	44.664	48.648	49.203	47.016
N° 23	11.095	16.366	22.882	25.982	29.479	33.145	35.732	39.521	43.900	47.654	47.954	48.007
N° 24	11.271	17.335	24.317	27.745	31.782	35.879	38.745	42.967	47.412	51.449	51.408	49.069
N° 25	10.804	16.383	23.026	26.185	29.876	33.929	36.696	40.825	45.287	49.930	49.697	48.050
N° 26	11.041	16.594	23.177	26.569	30.601	34.641	37.292	41.224	45.792	49.708	49.692	47.955
N° 27	11.267	17.113	24.068	27.586	31.488	35.477	38.241	42.432	47.012	51.341	51.341	49.966
N° 28	11.186	16.555	22.870	26.016	29.805	33.589	36.004	40.004	44.116	48.394	48.310	47.055
N° 29	11.066	16.076	22.340	25.526	29.343	33.023	35.532	39.257	43.300	46.907	46.818	45.912
N° 30	10.790	16.107	22.461	25.770	29.747	33.691	36.305	40.278	44.654	48.820	48.781	47.108
N° 31	10.952	16.405	23.046	26.412	30.377	34.376	37.053	41.218	46.239	50.691	50.632	50.349

### 31. +IIB4, Module 3

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



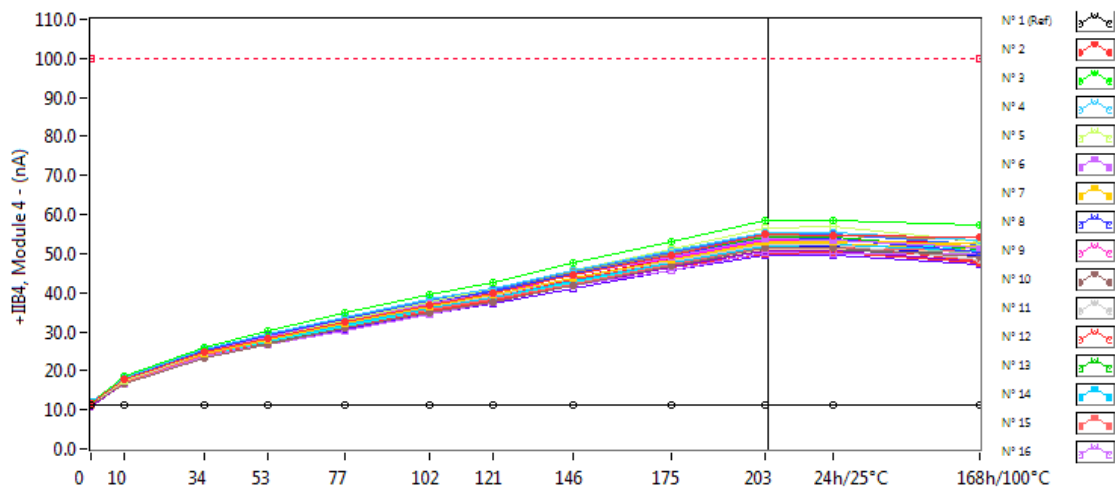
**+IIB4, Module 3 . (nA)**

**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)	11.177	11.125	11.059	11.117	11.164	11.057	11.012	11.208	11.204	11.106	11.258	11.230
N° 2	11.154	17.003	23.789	27.472	31.534	35.568	38.500	42.660	47.391	52.436	52.141	50.251
N° 3	11.267	17.772	25.196	29.136	33.766	38.303	41.341	46.145	51.541	57.051	57.012	54.342
N° 4	11.562	17.813	25.018	28.808	32.925	37.283	40.183	44.716	49.239	53.626	53.487	51.027
N° 5	11.042	16.848	23.804	27.274	31.577	35.773	39.078	43.685	48.771	54.094	54.417	51.492
N° 6	11.325	17.112	23.857	27.283	31.309	35.267	37.932	42.208	46.497	50.554	50.558	48.697
N° 7	11.316	16.971	23.229	26.499	30.236	34.024	36.630	40.630	44.311	48.196	48.191	47.033
N° 8	11.336	17.331	24.145	27.678	31.874	36.046	38.857	43.056	47.666	51.655	51.612	47.326
N° 9	11.212	17.239	24.153	27.748	31.818	35.938	38.640	42.776	47.289	51.618	51.560	47.576
N° 10	10.707	16.115	22.258	25.436	29.225	32.842	35.384	39.094	43.318	47.200	47.144	44.395
N° 11	10.976	17.071	24.851	29.717	35.543	41.207	45.069	50.108	55.686	60.805	60.648	50.277
N° 12	10.898	16.689	23.445	26.817	30.961	34.867	37.698	41.786	46.406	50.472	50.262	46.944
N° 13	11.247	17.377	24.467	28.043	32.351	36.846	39.650	44.155	49.151	53.938	53.791	51.356
N° 14	11.347	16.809	23.323	26.671	30.639	34.572	37.203	41.009	45.585	49.696	49.856	48.421
N° 15	11.003	16.591	23.190	26.507	30.393	33.886	35.957	39.687	43.983	47.736	47.689	46.206
N° 16	10.742	16.191	22.559	25.502	28.854	32.832	35.651	39.743	43.493	47.578	47.523	45.909
N° 17	10.969	17.073	24.013	27.453	31.539	35.600	38.258	42.475	47.179	51.448	51.283	50.174
N° 18	10.932	16.699	23.494	26.898	30.930	34.921	37.554	41.938	46.058	51.055	50.951	47.123
N° 19	10.707	16.346	22.959	26.259	30.125	34.002	36.640	40.570	44.712	48.574	48.576	45.350
N° 20	11.068	16.823	23.642	26.788	30.938	34.666	37.496	41.135	45.427	49.318	49.240	45.716
N° 21	10.992	16.760	23.187	26.654	30.643	34.710	37.529	41.979	46.689	51.348	51.219	49.242
N° 22	11.096	16.716	23.367	27.042	30.678	34.569	37.164	41.085	45.430	49.436	49.828	47.398
N° 23	11.267	16.673	23.375	26.628	30.336	34.165	36.851	40.958	45.758	49.984	50.147	49.460
N° 24	11.478	17.609	25.043	28.528	32.666	37.057	40.071	44.516	49.391	53.867	53.777	50.648
N° 25	11.106	16.722	23.550	26.680	30.572	34.573	37.490	41.695	46.116	50.799	50.526	48.684
N° 26	11.101	16.815	23.869	27.273	31.278	35.415	38.139	42.006	46.685	50.701	50.685	48.325
N° 27	11.478	17.553	24.639	28.283	32.337	36.422	39.141	43.416	48.026	52.183	52.109	50.476
N° 28	11.362	16.757	23.424	26.487	30.618	34.586	37.231	41.411	45.830	50.198	50.187	48.235
N° 29	11.360	16.305	22.674	25.839	29.649	33.606	36.088	40.071	44.338	47.969	47.919	46.289
N° 30	10.808	16.248	22.761	26.000	29.866	33.708	36.382	40.338	44.788	48.966	49.281	47.045
N° 31	11.005	16.591	23.302	26.721	30.820	34.809	37.649	42.045	46.892	51.753	51.705	50.953

### 32. +IB4, Module 4

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



**+IB4, Module 4 . (nA)**

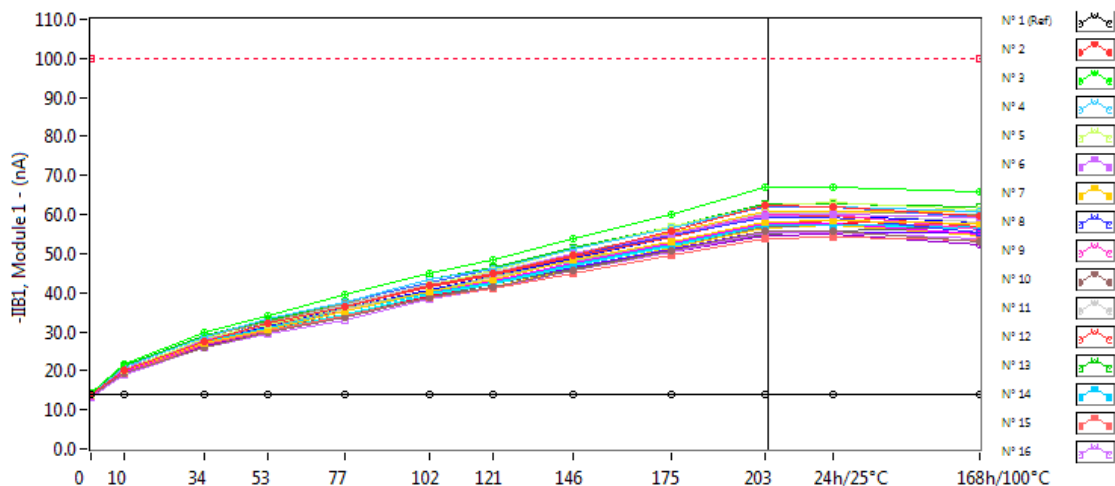
**Max = 100.0**

	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)	11.323	11.278	11.234	11.279	11.327	11.214	11.175	11.354	11.375	11.271	11.416	11.386
N° 2	11.477	17.695	24.696	28.440	32.512	36.887	39.888	44.417	49.469	54.854	54.685	54.233
N° 3	11.668	18.432	26.023	30.134	34.795	39.414	42.689	47.661	53.134	58.633	58.676	57.156
N° 4	11.731	18.228	25.453	29.495	33.773	38.311	41.213	45.848	50.719	55.472	55.525	53.433
N° 5	11.499	17.613	24.732	28.344	32.889	37.401	40.955	45.739	50.953	56.457	56.821	53.212
N° 6	11.649	17.784	24.792	28.572	32.850	37.020	39.885	44.452	49.186	53.660	53.563	51.667
N° 7	11.730	17.736	24.420	27.959	32.041	36.431	39.446	43.959	48.416	52.980	52.945	52.787
N° 8	11.571	17.958	25.218	29.048	33.159	37.487	40.442	45.056	49.716	53.756	53.655	50.361
N° 9	11.552	17.824	25.020	28.767	32.994	37.317	40.206	44.680	49.340	53.873	53.843	50.484
N° 10	11.243	16.802	23.343	26.703	30.804	34.842	37.689	41.988	46.903	51.598	51.536	49.341
N° 11	11.388	17.387	24.572	28.239	32.471	36.589	39.303	43.576	48.158	52.206	52.123	48.385
N° 12	11.303	17.339	24.364	27.979	32.125	36.313	39.053	43.433	48.040	52.300	52.233	48.151
N° 13	11.601	17.861	25.245	28.938	33.214	37.600	40.446	44.913	49.680	54.369	54.204	51.161
N° 14	11.867	17.599	24.432	27.820	31.926	36.010	38.582	42.912	47.609	52.083	52.318	50.546
N° 15	11.266	17.094	24.144	27.760	31.959	35.785	38.281	42.384	47.161	51.552	51.486	50.837
N° 16	11.141	16.835	23.483	26.579	30.245	34.545	37.479	41.654	45.866	50.212	50.031	49.930
N° 17	11.256	17.372	24.689	27.987	32.227	36.325	39.153	43.642	48.362	52.619	52.565	50.862
N° 18	11.106	17.155	24.201	27.944	31.913	36.719	39.033	44.961	48.773	53.458	53.494	51.352
N° 19	10.973	16.779	23.587	26.918	30.881	34.898	37.668	41.944	46.407	50.605	50.583	48.164
N° 20	11.417	17.413	24.494	27.919	32.259	36.312	39.473	43.568	48.310	52.619	52.620	50.077
N° 21	11.308	17.227	24.130	27.442	31.464	35.483	38.368	42.771	47.678	52.251	52.175	51.408
N° 22	11.330	17.146	23.772	27.484	31.445	35.364	38.015	42.040	46.286	49.972	50.351	47.607
N° 23	11.627	17.208	24.123	27.429	31.049	34.766	37.448	41.959	46.714	50.677	50.721	50.092
N° 24	11.768	18.188	25.532	29.190	33.546	37.928	40.807	45.525	50.470	55.044	54.967	52.108
N° 25	11.377	17.292	24.417	27.701	32.051	36.364	39.271	43.713	48.822	53.775	53.594	52.597
N° 26	11.433	17.371	24.501	28.057	32.140	36.395	39.206	43.297	48.016	52.112	52.038	49.545
N° 27	11.845	18.109	25.639	29.383	33.585	37.896	40.768	45.298	50.024	54.656	54.581	53.539
N° 28	11.726	17.362	23.844	27.135	31.164	35.267	37.698	42.025	46.419	50.855	50.896	51.393
N° 29	11.635	16.976	23.529	26.754	30.721	34.657	37.164	41.193	45.568	49.480	49.442	47.325
N° 30	11.342	16.914	23.793	27.278	31.414	35.712	38.690	43.149	48.226	53.113	53.430	52.017
N° 31	11.466	17.126	23.868	27.149	31.214	35.233	37.950	42.162	46.861	51.192	51.272	50.812



### 33. -IIB1, Module 1

Ta=25°C; +VCC=30V; -VCC=GND; VCM=+15V



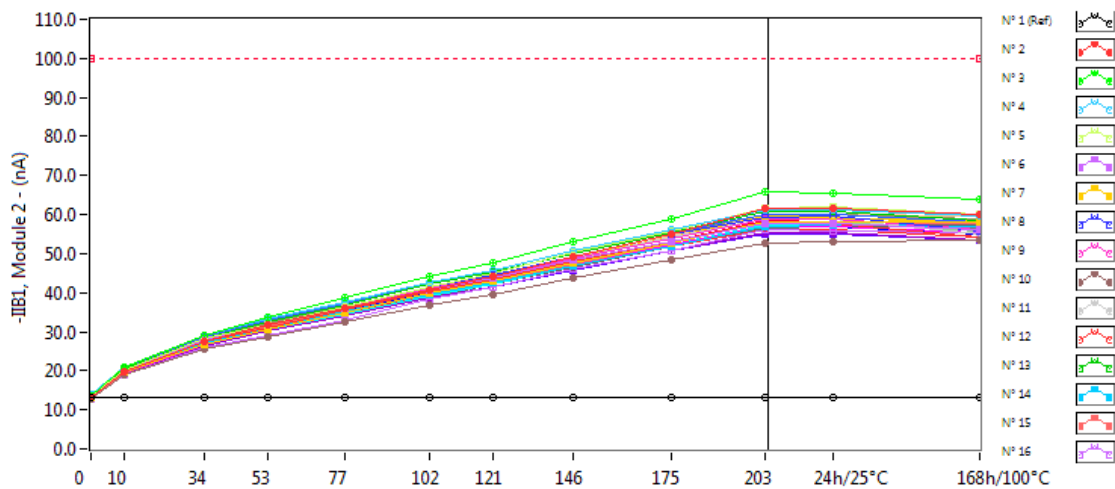
**-IIB1, Module 1 . (nA)**

**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)	13.969	13.972	13.923	14.033	13.907	13.860	13.864	13.976	13.971	13.847	14.015	13.990
N° 2	13.789	20.276	27.419	32.128	36.248	41.701	44.825	49.649	55.650	62.364	62.002	59.795
N° 3	14.313	21.607	29.675	34.180	39.338	45.060	48.513	53.888	60.151	67.068	67.008	65.742
N° 4	14.109	21.076	28.824	33.133	37.762	43.236	46.228	51.241	56.740	62.255	62.008	60.636
N° 5	13.792	20.332	28.364	31.734	36.284	41.673	45.691	51.000	56.785	62.436	62.965	61.316
N° 6	14.063	20.511	27.890	31.948	36.287	41.697	44.794	49.789	54.882	59.654	59.915	59.407
N° 7	13.773	20.195	26.975	30.779	35.162	40.406	43.349	48.224	53.142	58.260	58.432	57.727
N° 8	13.969	20.587	27.944	32.030	36.254	41.741	44.786	49.536	54.757	59.321	59.441	55.434
N° 9	13.747	20.468	28.033	32.017	36.598	42.007	44.973	49.866	54.857	59.927	59.984	56.130
N° 10	13.382	19.284	26.122	29.660	33.697	38.678	41.368	45.649	50.828	55.804	55.830	52.974
N° 11	13.833	20.432	28.069	32.132	36.887	42.311	45.195	49.818	55.138	60.258	60.396	58.111
N° 12	13.584	20.146	27.910	31.751	36.310	41.380	44.397	49.119	54.295	59.797	59.646	56.812
N° 13	14.287	21.159	28.873	32.839	37.477	43.395	46.404	51.394	57.081	62.856	62.823	61.868
N° 14	14.330	20.318	27.314	31.020	35.113	40.002	42.782	47.269	52.294	57.147	57.235	57.061
N° 15	13.456	19.516	26.571	30.185	34.055	38.636	40.885	44.853	49.524	54.011	54.103	53.363
N° 16	13.181	19.169	25.947	29.249	32.930	38.267	41.243	45.737	50.273	55.404	55.325	53.874
N° 17	13.643	20.303	28.060	32.066	36.604	41.957	45.070	49.767	55.261	60.929	61.001	60.742
N° 18	13.270	19.641	26.879	30.753	35.133	40.256	43.066	47.535	52.653	57.604	57.601	54.855
N° 19	13.306	19.372	26.495	30.103	34.216	38.845	41.453	45.722	50.430	54.775	54.953	52.430
N° 20	13.743	20.101	27.294	31.097	36.034	40.385	43.976	47.876	52.931	57.527	57.586	54.891
N° 21	13.424	19.468	26.706	30.311	34.501	39.583	42.272	46.850	51.999	57.231	57.365	56.537
N° 22	13.732	20.334	27.599	31.865	35.404	39.787	43.103	47.648	52.674	57.360	58.483	56.606
N° 23	13.930	19.786	26.962	30.452	34.463	38.603	42.106	45.935	50.724	55.045	55.604	56.777
N° 24	14.369	21.302	29.051	32.985	37.617	42.712	46.071	51.022	56.597	61.789	61.827	59.388
N° 25	13.266	19.450	26.711	30.166	34.514	39.240	42.496	47.141	52.341	58.223	57.819	56.573
N° 26	13.964	20.403	27.729	31.473	36.053	40.811	44.218	48.955	54.258	59.511	59.631	58.194
N° 27	14.192	21.011	28.590	32.695	37.037	41.968	45.238	50.006	55.383	60.576	60.778	60.217
N° 28	13.763	19.948	26.803	30.404	34.514	39.075	42.213	46.951	51.911	56.875	57.285	56.438
N° 29	14.208	20.012	26.930	30.619	34.599	39.156	42.215	46.469	51.189	55.795	55.448	55.256
N° 30	13.305	19.183	26.131	29.693	34.043	38.549	41.592	46.103	51.518	56.625	57.298	54.602
N° 31	13.826	20.088	27.338	31.042	35.626	40.368	43.634	48.566	54.458	60.080	60.245	60.913

### 34. -IIB1, Module 2

Ta=25°C; +VCC=30V; -VCC=GND; VCM=+15V



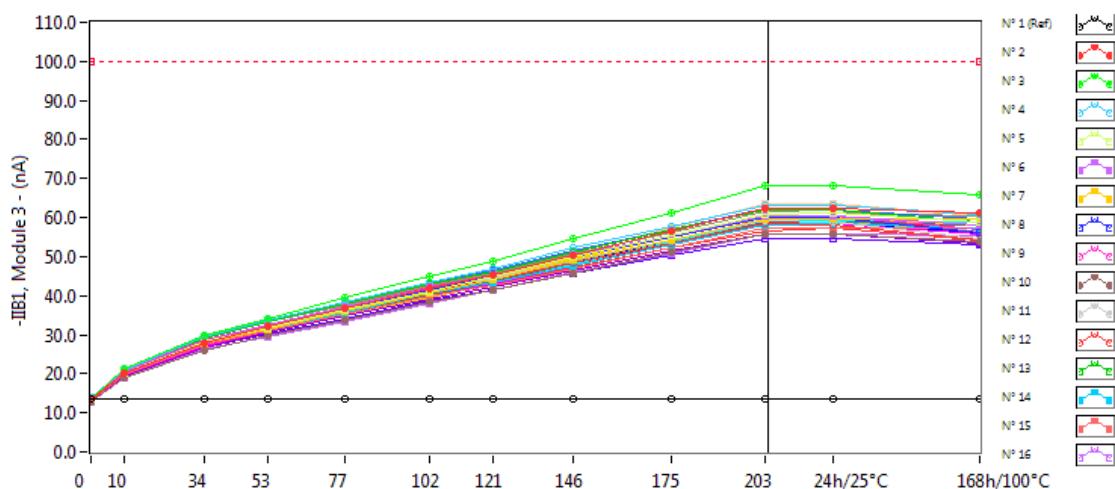
**-IIB1, Module 2 . (nA)**

**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)	13.223	13.244	13.185	13.238	13.154	13.145	13.137	13.255	13.253	13.133	13.310	13.293
N° 2	13.186	19.867	27.380	31.601	35.972	40.778	44.077	49.263	55.141	61.644	61.414	60.213
N° 3	13.678	21.067	29.211	33.719	38.707	44.067	47.561	52.920	59.060	65.817	65.625	64.032
N° 4	13.834	20.997	29.032	33.117	37.624	42.590	45.818	50.734	56.006	61.196	61.157	59.460
N° 5	13.598	20.242	28.081	31.783	36.328	41.293	45.080	50.222	55.770	61.400	61.947	60.091
N° 6	13.667	20.291	27.746	31.670	36.005	40.570	43.591	48.418	53.226	57.823	57.852	56.096
N° 7	13.337	19.793	26.906	30.496	34.825	39.738	42.996	47.764	52.825	58.069	58.046	58.121
N° 8	13.432	20.202	27.971	31.857	36.319	41.352	44.544	49.320	54.828	59.450	59.522	55.760
N° 9	13.373	20.254	27.894	31.765	36.105	41.038	44.057	48.760	53.857	58.893	58.892	55.979
N° 10	12.914	18.903	25.443	28.730	32.658	36.909	39.558	43.748	48.395	52.856	52.890	53.519
N° 11	13.410	20.160	27.857	31.807	36.503	41.192	44.180	48.769	54.042	58.919	58.850	54.887
N° 12	13.123	19.658	27.323	31.065	35.620	40.453	43.416	47.946	53.033	57.955	57.817	54.411
N° 13	13.812	20.532	28.465	32.469	36.953	42.080	45.124	49.888	55.359	60.807	60.630	58.656
N° 14	13.809	20.022	27.304	30.890	35.070	39.575	42.507	46.897	51.906	56.940	57.202	56.840
N° 15	13.048	19.538	27.289	31.217	35.515	40.097	42.822	47.275	52.797	58.036	58.033	57.671
N° 16	12.866	19.090	25.942	29.193	33.102	38.177	41.429	46.155	50.791	56.170	55.946	55.556
N° 17	13.377	20.084	27.817	31.794	36.236	41.153	44.374	49.114	54.417	59.537	59.381	57.793
N° 18	12.875	19.389	26.913	30.733	34.953	39.719	42.735	47.122	52.261	56.915	56.914	55.274
N° 19	12.832	19.157	26.479	30.097	34.177	38.636	41.526	45.898	50.737	55.378	55.291	53.333
N° 20	13.207	19.720	27.373	30.944	35.916	40.233	43.700	47.821	53.050	58.029	57.974	55.712
N° 21	13.260	19.457	26.667	30.124	34.279	38.984	42.087	46.676	52.102	57.455	57.330	56.862
N° 22	13.288	19.684	26.944	31.114	34.992	39.466	42.502	46.805	51.716	56.159	56.133	54.247
N° 23	13.420	19.640	27.053	30.491	34.492	38.889	42.046	46.540	51.829	56.617	56.893	57.202
N° 24	13.664	20.651	28.665	32.776	37.194	42.143	45.314	50.018	55.304	60.228	60.176	58.187
N° 25	13.003	19.431	26.750	30.520	34.601	39.454	42.762	47.386	52.885	58.523	58.241	57.829
N° 26	13.418	19.848	27.452	31.229	35.509	40.045	42.980	47.159	52.041	56.965	56.772	54.972
N° 27	13.669	20.409	28.270	32.267	36.551	41.304	44.658	49.318	54.880	59.964	60.021	58.877
N° 28	13.371	19.536	26.707	30.367	34.543	39.052	42.067	46.762	51.784	57.203	57.162	56.706
N° 29	13.753	19.701	26.756	30.199	34.293	38.614	41.438	45.853	50.621	55.085	54.938	53.329
N° 30	13.087	19.361	26.650	30.338	34.607	39.327	42.514	47.347	52.941	58.433	58.951	58.340
N° 31	13.447	19.736	27.195	31.007	35.491	40.248	43.677	48.548	54.502	60.181	60.190	59.588

### 35. -IIB1, Module 3

Ta=25°C; +VCC=30V; -VCC=GND; VCM=+15V



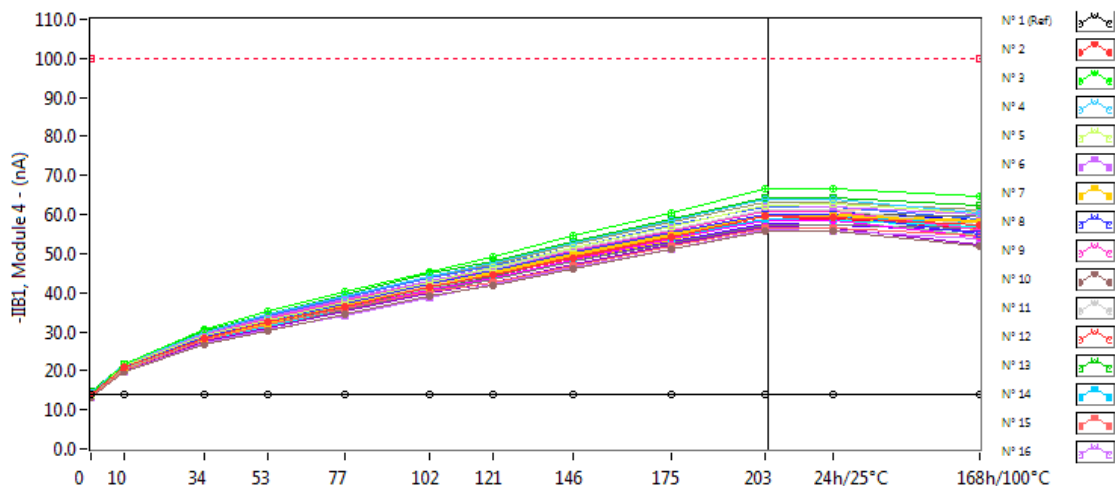
**-IIB1, Module 3 . (nA)**

**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)	13.555	13.558	13.523	13.552	13.491	13.502	13.467	13.588	13.592	13.474	13.639	13.610
N° 2	13.482	20.282	28.009	32.137	36.742	41.813	45.200	50.303	56.358	62.468	62.325	61.171
N° 3	13.673	21.213	29.701	34.186	39.382	44.879	48.673	54.577	61.182	68.030	68.005	65.692
N° 4	13.936	21.037	29.267	33.762	38.415	43.509	46.837	52.124	57.573	63.088	63.036	60.849
N° 5	13.411	20.325	28.227	31.896	36.354	41.137	44.986	49.977	55.247	60.818	61.279	58.807
N° 6	13.757	20.479	28.333	32.482	37.011	41.942	45.235	50.201	55.296	60.274	60.312	58.266
N° 7	13.589	20.406	27.782	31.542	35.871	40.799	44.223	49.205	54.346	59.817	59.679	59.668
N° 8	13.438	20.448	28.269	32.340	36.747	41.607	44.955	49.994	55.119	60.121	60.002	56.199
N° 9	13.682	20.724	28.491	32.656	37.034	42.071	45.185	50.116	55.532	60.617	60.537	57.049
N° 10	12.945	19.048	26.110	29.750	33.871	38.386	41.419	45.889	51.030	55.880	55.871	53.995
N° 11	13.372	20.303	28.277	32.286	36.892	41.459	44.584	49.247	54.375	59.166	59.057	54.583
N° 12	13.301	20.096	27.788	31.647	36.216	40.931	44.133	48.606	53.540	58.416	58.241	54.419
N° 13	14.000	20.924	29.040	33.239	37.893	43.186	46.224	51.163	56.811	62.047	61.870	59.003
N° 14	13.923	20.272	27.726	31.538	35.768	40.501	43.441	47.825	53.245	58.212	58.490	57.500
N° 15	13.187	19.667	27.372	31.142	35.403	39.735	42.472	47.035	52.263	57.458	57.331	57.344
N° 16	12.937	19.117	26.188	29.565	33.347	38.100	41.332	45.908	50.687	55.755	55.602	55.250
N° 17	13.676	20.491	28.522	32.347	36.680	41.597	44.841	49.449	54.898	59.954	59.849	58.147
N° 18	12.953	19.601	27.196	31.025	35.103	39.925	43.111	47.812	53.129	58.369	58.297	55.607
N° 19	12.818	19.323	26.789	30.520	34.670	39.156	42.119	46.636	51.332	55.935	55.644	53.504
N° 20	13.408	20.046	27.909	31.700	36.427	40.865	44.450	48.815	54.126	59.103	58.979	56.472
N° 21	13.220	19.664	27.185	30.851	35.304	39.968	43.011	48.014	53.816	59.343	59.366	58.808
N° 22	13.341	19.907	27.448	31.412	35.360	39.896	42.978	47.325	52.349	56.636	57.164	54.089
N° 23	13.729	20.019	27.726	31.410	35.551	40.110	43.263	48.029	53.741	58.865	58.947	57.935
N° 24	13.975	21.063	29.327	33.223	37.949	43.145	46.353	51.418	57.048	62.395	62.161	59.582
N° 25	13.033	19.565	27.215	30.837	35.312	40.064	43.229	47.839	53.119	58.704	58.354	58.055
N° 26	13.653	20.361	28.144	31.962	36.262	41.058	44.097	48.682	53.936	58.656	58.579	56.092
N° 27	13.950	20.867	29.073	33.271	37.718	42.699	45.835	50.746	56.133	61.453	61.226	60.502
N° 28	13.665	19.858	27.550	31.097	35.463	40.272	43.578	48.357	53.553	59.241	59.302	58.215
N° 29	13.703	19.707	26.687	30.144	34.178	38.560	41.371	45.734	50.264	54.651	54.561	52.931
N° 30	13.019	19.412	26.824	30.407	34.852	39.638	42.980	47.810	53.502	58.954	59.359	58.050
N° 31	13.617	20.043	27.832	31.704	36.517	41.958	45.704	51.155	57.387	63.405	63.378	60.500

### 36. -IIB1, Module 4

Ta=25°C; +VCC=30V; -VCC=GND; VCM=+15V



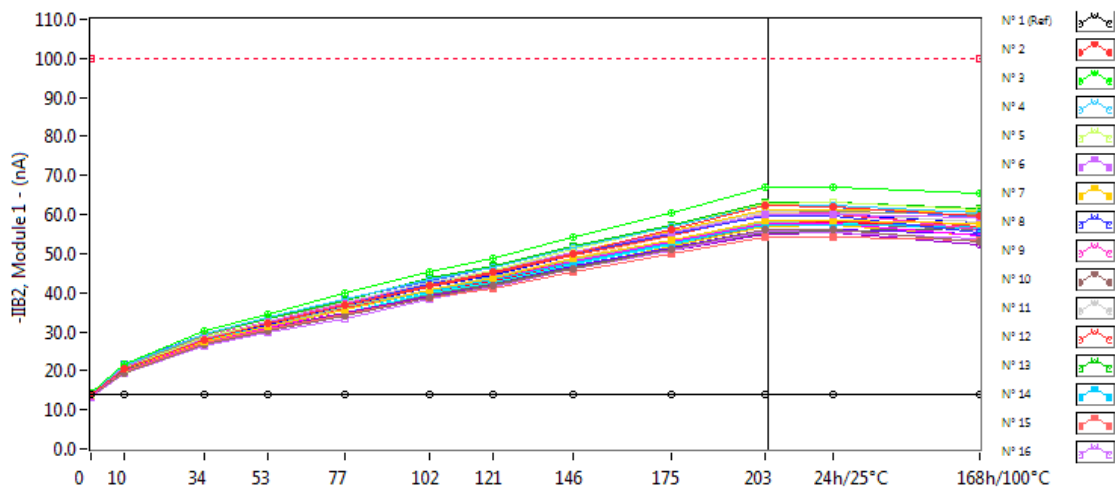
**-IIB1, Module 4 . (nA)**

**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)	14.045	14.065	14.026	14.049	14.006	13.991	13.978	14.078	14.087	13.957	14.121	14.102
N° 2	13.763	20.815	28.468	32.419	36.558	41.350	44.495	48.965	54.100	59.573	59.365	57.484
N° 3	14.096	21.874	30.516	35.159	40.347	45.417	49.068	54.512	60.316	66.469	66.441	64.853
N° 4	14.189	21.656	29.965	34.547	39.090	44.139	47.583	52.643	58.329	63.823	63.727	60.607
N° 5	14.065	21.133	29.156	32.972	37.612	42.437	46.376	51.323	56.765	62.254	62.665	60.380
N° 6	14.155	21.253	29.439	33.633	38.205	43.160	46.430	51.632	57.039	62.254	62.101	60.027
N° 7	14.002	20.928	28.460	32.308	36.711	41.518	44.834	49.572	54.491	59.513	59.467	58.085
N° 8	13.805	20.902	28.852	32.751	37.315	42.322	45.542	50.290	55.495	60.077	59.978	55.079
N° 9	13.867	20.990	29.057	33.325	37.857	42.699	45.881	50.662	55.899	60.899	60.839	55.997
N° 10	13.281	19.633	26.757	30.368	34.549	39.002	41.860	46.133	51.186	55.806	55.799	51.876
N° 11	13.880	21.167	29.300	33.413	38.118	42.892	46.138	50.957	56.330	61.201	61.144	57.194
N° 12	13.886	20.976	29.055	33.147	37.827	42.749	45.978	50.762	56.129	61.345	61.226	57.323
N° 13	14.543	21.769	30.108	34.449	39.405	44.787	47.948	53.024	58.878	64.440	64.268	62.244
N° 14	14.460	20.935	28.643	32.404	36.843	41.487	44.357	48.934	54.152	58.939	59.145	57.921
N° 15	13.507	19.951	27.703	31.707	35.925	40.109	42.767	46.995	52.065	56.686	56.635	54.430
N° 16	13.260	19.735	27.080	30.485	34.132	38.842	42.195	46.600	51.123	55.998	55.820	53.752
N° 17	13.954	20.869	28.997	32.920	37.465	42.107	45.220	49.913	55.099	59.985	59.948	58.654
N° 18	13.310	20.035	27.993	31.670	36.046	40.824	43.850	48.564	53.684	58.568	58.495	54.392
N° 19	13.080	19.692	27.333	31.048	35.439	39.839	42.712	47.270	52.268	56.766	56.687	52.399
N° 20	13.613	20.517	28.333	32.136	36.906	41.246	44.584	48.955	54.032	58.605	58.565	54.519
N° 21	13.565	20.210	27.937	31.536	35.919	40.580	43.663	48.377	53.723	58.828	58.664	56.960
N° 22	13.866	20.688	28.410	32.691	36.801	41.551	44.823	49.359	54.465	58.928	59.545	56.483
N° 23	14.174	20.587	28.448	32.237	36.431	41.102	44.245	49.082	54.855	59.913	60.162	59.666
N° 24	14.252	21.667	29.939	33.969	38.668	43.657	46.810	51.613	57.135	62.070	61.973	58.748
N° 25	13.525	20.146	27.998	31.666	36.089	40.765	43.860	48.452	53.900	59.005	58.760	56.709
N° 26	14.171	20.919	29.148	33.022	37.563	42.417	45.752	50.502	55.953	60.672	60.767	58.390
N° 27	14.281	21.529	30.037	34.091	38.937	44.059	47.363	52.424	58.030	63.254	63.155	61.240
N° 28	14.014	20.488	27.962	31.394	35.655	40.405	43.216	47.886	52.534	57.433	57.429	56.668
N° 29	14.235	20.468	28.073	31.915	36.039	40.620	43.614	48.014	53.154	57.649	57.473	55.740
N° 30	13.340	19.626	27.232	30.994	35.393	40.143	43.192	47.941	53.491	58.903	59.286	56.061
N° 31	13.968	20.537	28.399	32.426	36.867	41.662	44.887	49.928	55.813	61.199	61.119	60.622

### 37. -IIB2, Module 1

Ta=25°C; +VCC=2V; -VCC=-28V; VCM=-13V



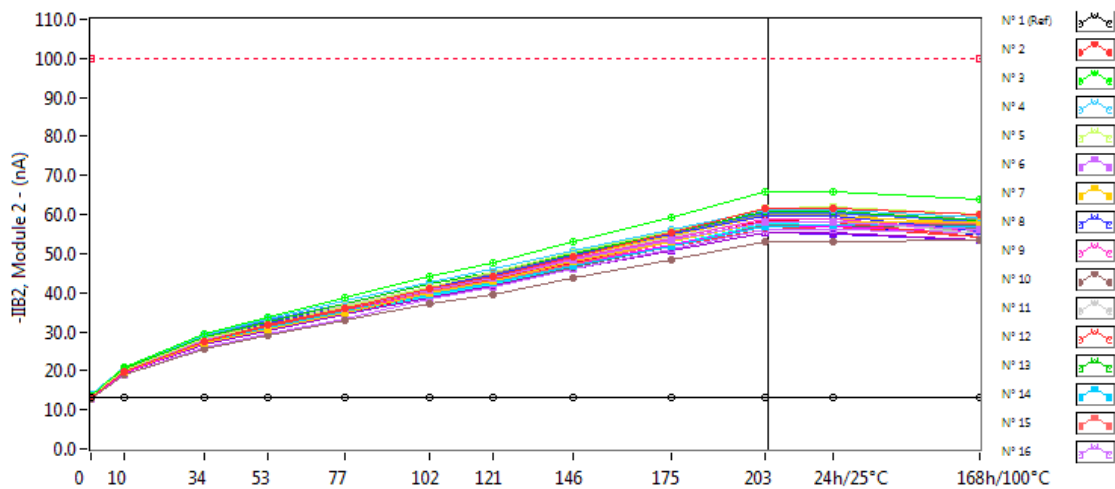
**-IIB2, Module 1 . (nA)**

**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)	13.945	13.947	13.911	14.023	13.896	13.868	13.879	13.951	13.955	13.842	13.992	13.987
N° 2	13.762	20.479	27.983	32.325	36.703	41.889	45.203	50.079	56.025	62.496	62.164	59.708
N° 3	14.299	21.878	30.162	34.640	39.925	45.317	48.858	54.319	60.453	67.198	67.126	65.612
N° 4	14.127	21.358	29.371	33.630	38.212	43.430	46.625	51.625	57.061	62.489	62.442	60.499
N° 5	13.816	20.517	28.501	32.128	36.745	41.865	45.773	51.085	56.924	62.572	63.030	61.213
N° 6	14.045	20.745	28.355	32.415	36.752	41.913	45.168	50.250	55.303	59.973	60.106	59.275
N° 7	13.793	20.394	27.457	31.198	35.626	40.612	43.774	48.630	53.556	58.560	58.616	57.607
N° 8	13.933	20.801	28.383	32.442	36.759	42.025	45.130	49.966	55.069	59.710	59.721	55.357
N° 9	13.736	20.687	28.576	32.486	37.138	42.241	45.413	50.189	55.356	60.223	60.257	56.045
N° 10	13.417	19.497	26.571	30.090	34.190	38.847	41.690	46.009	51.151	56.158	56.129	52.879
N° 11	13.832	20.597	28.573	32.654	37.402	42.515	45.580	50.209	55.501	60.632	60.536	58.018
N° 12	13.597	20.366	28.370	32.201	36.829	41.577	44.751	49.494	54.673	59.975	59.863	56.776
N° 13	14.251	21.369	29.297	33.293	37.948	43.607	46.798	51.844	57.431	63.100	63.026	61.708
N° 14	14.318	20.457	27.827	31.432	35.651	40.203	43.218	47.657	52.721	57.475	57.440	56.967
N° 15	13.439	19.729	27.084	30.684	34.524	38.863	41.201	45.283	49.954	54.378	54.404	53.318
N° 16	13.168	19.348	26.373	29.719	33.424	38.468	41.625	46.117	50.679	55.736	55.552	53.797
N° 17	13.604	20.466	28.537	32.550	37.156	42.198	45.472	50.170	55.687	61.276	61.170	60.619
N° 18	13.252	19.843	27.346	31.177	35.571	40.516	43.487	47.937	52.966	57.823	57.821	54.789
N° 19	13.292	19.602	26.958	30.511	34.714	39.064	41.818	46.134	50.823	55.191	55.221	52.409
N° 20	13.723	20.336	27.768	31.522	36.273	40.623	44.077	48.256	53.338	57.918	57.891	54.782
N° 21	13.394	19.689	27.192	30.697	34.996	39.738	42.571	47.191	52.369	57.525	57.522	56.386
N° 22	13.756	20.397	27.813	32.059	35.829	40.293	43.580	48.081	53.151	57.767	58.583	56.576
N° 23	13.900	19.976	27.351	30.956	34.899	39.051	42.248	46.307	51.136	55.350	55.739	56.674
N° 24	14.350	21.500	29.500	33.509	38.156	43.184	46.499	51.436	56.967	62.170	62.092	59.324
N° 25	13.232	19.609	27.158	30.652	34.990	39.718	42.931	47.533	52.780	58.369	58.029	56.452
N° 26	13.938	20.451	28.195	31.929	36.546	41.295	44.607	49.413	54.731	59.856	59.845	58.114
N° 27	14.175	21.085	29.090	33.212	37.533	42.397	45.680	50.394	55.783	60.972	60.963	60.089
N° 28	13.785	19.992	27.201	30.819	35.001	39.544	42.620	47.374	52.357	57.211	57.554	56.292
N° 29	14.179	20.155	27.333	31.080	35.002	39.581	42.582	46.861	51.599	56.213	56.150	55.155
N° 30	13.265	19.348	26.587	30.180	34.464	38.950	41.959	46.489	51.864	56.924	57.414	54.516
N° 31	13.784	20.241	27.784	31.526	36.035	40.806	44.043	48.885	54.799	60.333	60.279	60.742

### 38. -IIB2, Module 2

Ta=25°C; +VCC=2V; -VCC=-28V; VCM=-13V



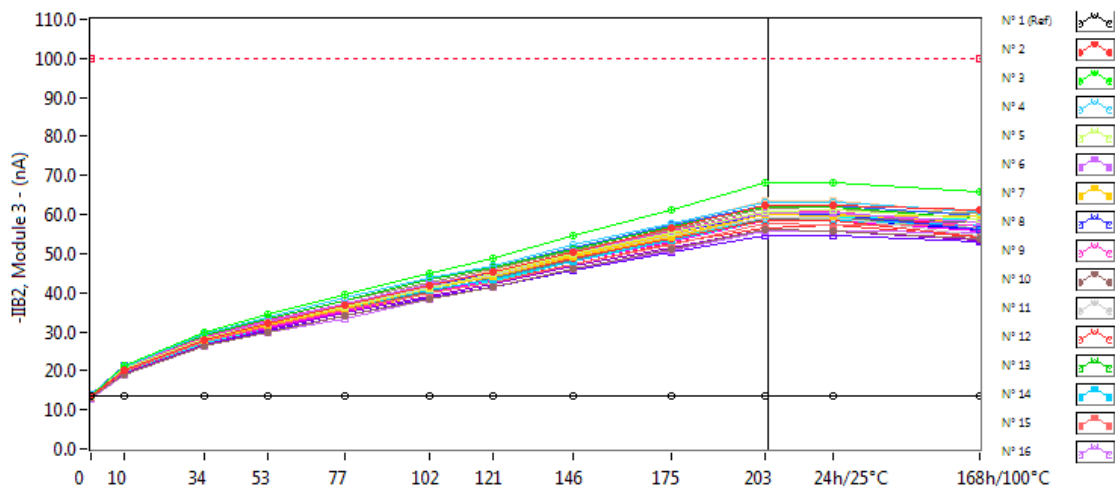
**-IIB2, Module 2 . (nA)**

**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)	13.245	13.244	13.207	13.268	13.178	13.169	13.165	13.257	13.272	13.142	13.319	13.288
N° 2	13.205	19.901	27.510	31.704	36.091	40.900	44.242	49.343	55.268	61.719	61.475	60.202
N° 3	13.685	21.100	29.326	33.845	38.882	44.161	47.733	53.061	59.165	65.859	65.665	64.008
N° 4	13.847	21.044	29.150	33.259	37.769	42.695	45.927	50.872	56.113	61.304	61.207	59.438
N° 5	13.624	20.307	28.152	31.907	36.493	41.400	45.252	50.296	55.861	61.439	61.944	60.062
N° 6	13.673	20.322	27.875	31.815	36.101	40.682	43.695	48.490	53.341	57.912	58.005	56.066
N° 7	13.369	19.827	27.006	30.593	34.955	39.814	43.074	47.863	53.018	58.128	58.147	58.101
N° 8	13.444	20.227	28.068	32.035	36.437	41.451	44.659	49.457	54.935	59.521	59.611	55.770
N° 9	13.389	20.313	27.990	31.881	36.265	41.137	44.216	48.895	53.965	58.998	59.012	55.919
N° 10	12.950	18.932	25.546	28.879	32.841	37.004	39.670	43.893	48.459	52.970	53.008	53.475
N° 11	13.422	20.201	27.995	31.994	36.644	41.300	44.338	48.914	54.199	59.032	58.975	54.854
N° 12	13.145	19.693	27.427	31.193	35.759	40.529	43.529	48.094	53.176	58.075	57.939	54.382
N° 13	13.831	20.586	28.575	32.592	37.120	42.084	45.246	49.991	55.527	60.965	60.734	58.606
N° 14	13.838	20.080	27.454	31.004	35.199	39.578	42.664	47.040	52.037	57.077	57.279	56.845
N° 15	13.070	19.580	27.407	31.355	35.628	40.188	42.922	47.410	52.895	58.167	58.074	57.658
N° 16	12.881	19.117	26.056	29.305	33.241	38.209	41.512	46.240	50.947	56.272	55.987	55.533
N° 17	13.376	20.129	27.989	31.923	36.351	41.283	44.493	49.282	54.498	59.659	59.488	57.758
N° 18	12.879	19.441	27.013	30.853	35.155	39.805	42.837	47.225	52.411	57.050	57.020	55.239
N° 19	12.853	19.220	26.617	30.214	34.341	38.740	41.655	46.015	50.876	55.475	55.374	53.342
N° 20	13.235	19.832	27.453	31.124	35.972	40.303	43.739	47.894	53.128	58.108	58.021	55.673
N° 21	13.283	19.544	26.763	30.260	34.451	39.062	42.174	46.776	52.214	57.557	57.371	56.834
N° 22	13.320	19.733	27.029	31.183	35.129	39.570	42.646	46.922	51.843	56.255	56.830	54.252
N° 23	13.432	19.690	27.145	30.627	34.644	39.030	42.202	46.645	51.943	56.745	56.995	57.155
N° 24	13.688	20.683	28.793	32.909	37.354	42.258	45.427	50.166	55.457	60.338	60.258	58.193
N° 25	13.012	19.476	26.902	30.664	34.791	39.586	42.879	47.560	53.029	58.592	58.281	57.792
N° 26	13.434	19.883	27.602	31.374	35.614	40.231	43.073	47.299	52.253	57.109	56.957	54.956
N° 27	13.683	20.451	28.406	32.393	36.701	41.459	44.768	49.442	55.031	60.096	60.083	58.861
N° 28	13.379	19.550	26.889	30.511	34.698	39.186	42.179	46.903	51.899	57.279	57.274	56.645
N° 29	13.775	19.754	26.862	30.329	34.449	38.753	41.593	45.939	50.768	55.236	55.035	53.318
N° 30	13.117	19.384	26.782	30.495	34.798	39.412	42.669	47.422	53.027	58.522	58.994	58.342
N° 31	13.464	19.776	27.307	31.152	35.653	40.388	43.831	48.647	54.654	60.260	60.324	59.543

### 39. -IIB2, Module 3

Ta=25°C; +VCC=2V; -VCC=-28V; VCM=-13V



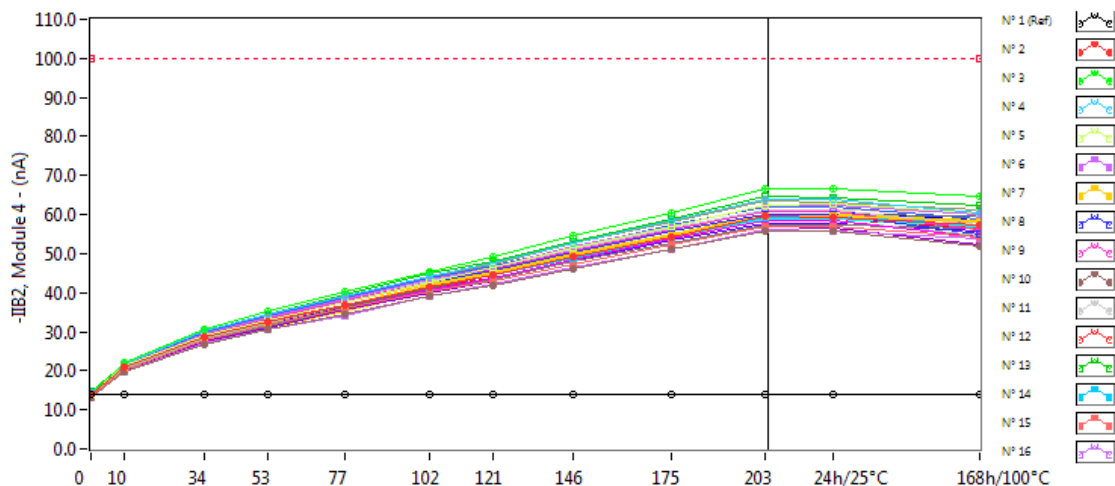
**-IIB2, Module 3 . (nA)**

**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)	13.579	13.566	13.538	13.588	13.538	13.528	13.530	13.591	13.596	13.468	13.645	13.619
N° 2	13.518	20.331	28.079	32.213	36.806	41.904	45.323	50.395	56.470	62.491	62.287	61.153
N° 3	13.690	21.223	29.795	34.311	39.523	44.990	48.792	54.693	61.294	68.112	68.041	65.675
N° 4	13.964	21.072	29.349	33.844	38.567	43.603	46.933	52.224	57.654	63.114	63.146	60.821
N° 5	13.437	20.389	28.254	32.003	36.431	41.217	45.036	50.031	55.297	60.844	61.299	58.811
N° 6	13.781	20.516	28.429	32.584	37.136	42.034	45.360	50.308	55.489	60.366	60.372	58.264
N° 7	13.623	20.413	27.895	31.646	35.935	40.872	44.264	49.269	54.407	59.869	59.778	59.644
N° 8	13.456	20.502	28.357	32.444	36.905	41.655	45.063	50.136	55.238	60.208	60.052	56.184
N° 9	13.708	20.807	28.600	32.747	37.149	42.115	45.258	50.189	55.587	60.715	60.641	57.037
N° 10	12.983	19.112	26.189	29.871	34.009	38.491	41.511	45.987	51.114	56.012	55.898	54.008
N° 11	13.406	20.374	28.388	32.367	36.964	41.563	44.711	49.322	54.467	59.298	59.127	54.571
N° 12	13.331	20.088	27.904	31.771	36.348	41.022	44.236	48.739	53.656	58.520	58.323	54.410
N° 13	14.031	20.945	29.183	33.327	38.029	43.254	46.363	51.272	56.927	62.125	61.997	58.997
N° 14	13.955	20.303	27.842	31.645	35.885	40.627	43.540	47.966	53.319	58.371	58.566	57.489
N° 15	13.227	19.741	27.475	31.241	35.517	39.840	42.621	47.137	52.394	57.539	57.385	57.288
N° 16	12.973	19.138	26.282	29.635	33.427	38.158	41.385	46.014	50.753	55.866	55.697	55.260
N° 17	13.693	20.568	28.565	32.447	36.779	41.675	44.944	49.559	54.979	60.084	59.919	58.117
N° 18	12.988	19.634	27.317	31.103	35.238	40.034	43.253	47.953	53.209	58.459	58.368	55.594
N° 19	12.854	19.354	26.879	30.593	34.822	39.256	42.244	46.742	51.442	55.976	55.773	53.523
N° 20	13.430	20.131	27.977	31.758	36.550	40.995	44.550	48.951	54.212	59.097	59.052	56.456
N° 21	13.249	19.687	27.266	30.962	35.401	40.086	43.127	48.099	53.859	59.422	59.379	58.802
N° 22	13.373	19.940	27.535	31.488	35.450	39.984	43.102	47.406	52.494	56.722	57.280	54.071
N° 23	13.751	20.105	27.853	31.497	35.682	40.231	43.355	48.156	53.795	58.902	59.010	57.934
N° 24	14.002	21.130	29.423	33.319	38.027	43.250	46.504	51.517	57.172	62.546	62.276	59.543
N° 25	13.052	19.583	27.329	30.890	35.424	40.157	43.357	47.976	53.152	58.777	58.454	58.007
N° 26	13.675	20.354	28.238	32.046	36.383	41.214	44.187	48.833	54.077	58.773	58.654	56.097
N° 27	13.972	20.897	29.208	33.390	37.845	42.792	45.919	50.816	56.266	61.486	61.355	60.482
N° 28	13.696	19.882	27.623	31.168	35.597	40.422	43.661	48.434	53.670	59.271	59.391	58.199
N° 29	13.721	19.746	26.802	30.269	34.272	38.675	41.515	45.895	50.379	54.747	54.653	52.900
N° 30	13.047	19.468	26.978	30.512	34.973	39.781	43.115	47.915	53.604	59.019	59.423	58.044
N° 31	13.637	20.052	27.903	31.842	36.619	42.023	45.826	51.270	57.475	63.421	63.447	60.487

### 40. -IIB2, Module 4

Ta=25°C; +VCC=2V; -VCC=-28V; VCM=-13V



**-IIB2, Module 4 . (nA)**

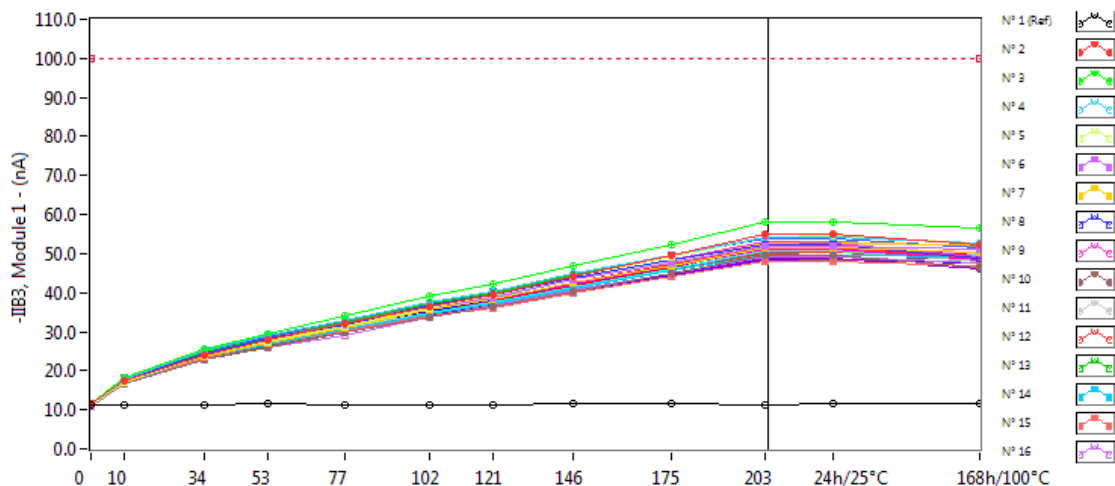
**Max = 100.0**

	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)	14.070	14.067	14.057	14.080	14.029	14.015	14.002	14.089	14.114	13.983	14.130	14.116
N° 2	13.802	20.861	28.522	32.510	36.647	41.402	44.571	49.045	54.188	59.597	59.393	57.483
N° 3	14.111	21.919	30.601	35.180	40.443	45.454	49.107	54.557	60.483	66.518	66.517	64.846
N° 4	14.208	21.725	30.088	34.622	39.214	44.193	47.695	52.688	58.397	63.989	63.783	60.604
N° 5	14.081	21.149	29.223	33.018	37.708	42.519	46.440	51.355	56.816	62.300	62.651	60.385
N° 6	14.196	21.280	29.468	33.701	38.325	43.204	46.568	51.708	57.080	62.290	62.170	60.033
N° 7	14.027	20.961	28.535	32.423	36.782	41.643	44.970	49.648	54.519	59.611	59.535	58.110
N° 8	13.830	20.970	28.925	32.849	37.379	42.430	45.600	50.335	55.632	60.151	59.981	55.078
N° 9	13.895	20.989	29.113	33.401	37.906	42.732	45.967	50.715	56.040	60.913	60.928	55.995
N° 10	13.306	19.659	26.853	30.415	34.627	39.075	41.912	46.223	51.260	55.914	55.861	51.905
N° 11	13.911	21.181	29.329	33.511	38.206	42.996	46.199	51.019	56.393	61.205	61.219	57.224
N° 12	13.912	21.016	29.122	33.246	37.922	42.836	46.074	50.821	56.185	61.385	61.269	57.339
N° 13	14.561	21.795	30.187	34.560	39.521	44.873	48.055	53.115	58.938	64.544	64.312	62.232
N° 14	14.486	20.953	28.749	32.501	36.905	41.588	44.436	48.996	54.213	59.070	59.131	57.909
N° 15	13.532	19.974	27.757	31.762	36.054	40.173	42.841	47.088	52.165	56.749	56.743	54.385
N° 16	13.287	19.766	27.168	30.532	34.187	38.941	42.210	46.618	51.201	56.079	55.932	53.793
N° 17	13.982	20.900	29.061	32.956	37.538	42.258	45.312	50.046	55.150	60.109	60.027	58.651
N° 18	13.329	20.053	28.078	31.733	36.156	40.836	43.937	48.603	53.781	58.658	58.571	54.387
N° 19	13.107	19.753	27.401	31.088	35.531	39.903	42.800	47.369	52.324	56.848	56.721	52.407
N° 20	13.629	20.538	28.397	32.223	36.965	41.322	44.659	49.015	54.130	58.637	58.652	54.532
N° 21	13.587	20.228	28.009	31.627	36.034	40.665	43.715	48.424	53.813	58.890	58.735	56.964
N° 22	13.897	20.713	28.511	32.779	36.877	41.626	44.898	49.472	54.579	58.994	59.545	56.464
N° 23	14.195	20.629	28.513	32.369	36.539	41.187	44.352	49.118	54.906	60.006	60.131	59.638
N° 24	14.288	21.699	30.011	34.049	38.737	43.750	46.898	51.696	57.185	62.145	62.042	58.764
N° 25	13.548	20.168	28.096	31.734	36.182	40.863	43.905	48.554	53.983	59.064	58.792	56.702
N° 26	14.199	20.974	29.186	33.106	37.655	42.469	45.823	50.610	55.998	60.753	60.864	58.374
N° 27	14.309	21.578	30.094	34.195	39.026	44.132	47.444	52.497	58.125	63.331	63.214	61.216
N° 28	14.050	20.498	28.008	31.502	35.781	40.489	43.350	47.911	52.628	57.494	57.492	56.656
N° 29	14.250	20.496	28.146	31.981	36.148	40.689	43.695	48.119	53.274	57.774	57.600	55.754
N° 30	13.359	19.654	27.305	31.075	35.431	40.201	43.281	48.027	53.565	58.998	59.347	56.062
N° 31	14.009	20.590	28.516	32.545	36.932	41.715	45.014	49.991	55.917	61.216	61.166	60.603



### 41. -IIB3, Module 1

Ta=25°C; +VCC=5V; -VCC=GND; VCM=+1.4V



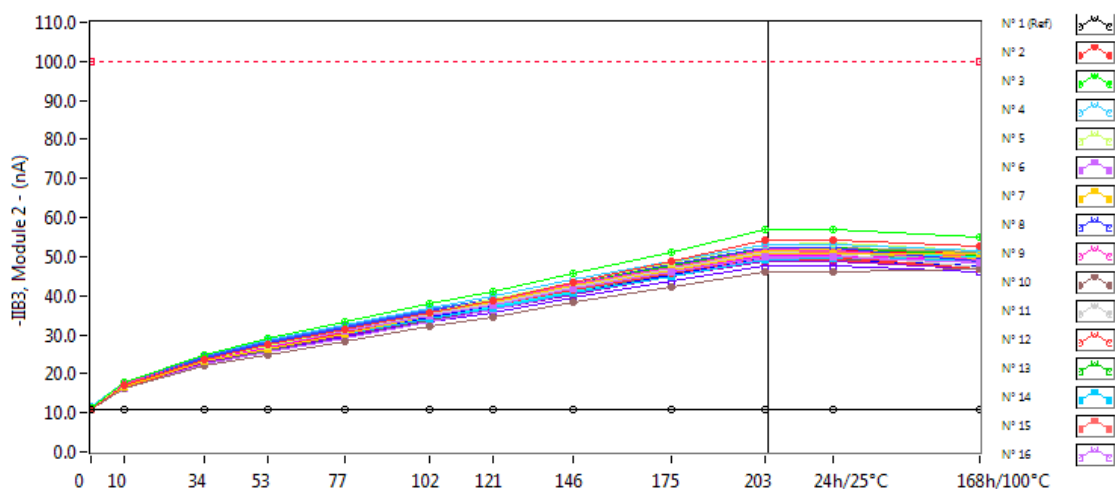
**-IIB3, Module 1 . (nA)**

**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)	11.415	11.418	11.398	11.511	11.383	11.351	11.350	11.442	11.448	11.343	11.476	11.479
N° 2	11.470	17.386	24.095	27.966	31.982	36.600	39.604	44.022	49.418	55.073	54.818	52.390
N° 3	11.712	18.336	25.632	29.630	34.229	39.001	42.179	46.913	52.343	58.127	58.011	56.567
N° 4	11.664	18.001	25.094	28.896	33.004	37.560	40.405	44.873	49.681	54.400	54.277	52.580
N° 5	11.307	17.159	24.123	27.358	31.441	35.960	39.397	44.084	49.213	54.142	54.508	52.690
N° 6	11.452	17.277	23.957	27.530	31.400	35.916	38.799	43.238	47.656	51.776	51.867	50.982
N° 7	11.495	17.315	23.627	27.014	30.951	35.451	38.244	42.622	46.983	51.400	51.444	50.507
N° 8	11.605	17.685	24.450	28.093	31.936	36.629	39.481	43.796	48.288	52.413	52.406	48.638
N° 9	11.457	17.562	24.587	28.175	32.293	36.847	39.684	43.957	48.523	52.873	52.826	49.262
N° 10	11.157	16.525	22.835	26.055	29.739	33.871	36.460	40.422	44.976	49.442	49.385	46.556
N° 11	11.307	17.214	24.179	27.809	32.003	36.487	39.189	43.314	47.909	52.283	52.254	50.031
N° 12	11.122	16.978	23.989	27.365	31.469	35.663	38.433	42.649	47.123	51.713	51.631	48.891
N° 13	11.604	17.797	24.680	28.218	32.354	37.241	40.016	44.513	49.332	54.231	54.130	52.845
N° 14	11.733	17.062	23.524	26.726	30.489	34.533	37.192	41.120	45.516	49.696	49.674	49.100
N° 15	11.232	16.823	23.391	26.635	30.178	34.032	36.146	39.807	44.006	48.009	47.972	47.001
N° 16	11.014	16.543	22.809	25.847	29.210	33.752	36.637	40.679	44.779	49.297	49.130	47.554
N° 17	11.093	17.089	24.163	27.682	31.798	36.226	39.089	43.271	47.987	52.868	52.802	52.166
N° 18	11.110	16.963	23.722	27.176	31.170	35.563	38.279	42.313	46.793	51.125	51.099	48.443
N° 19	11.119	16.685	23.296	26.555	30.336	34.199	36.734	40.577	44.783	48.658	48.662	46.267
N° 20	11.444	17.248	23.925	27.292	31.541	35.449	38.540	42.294	46.806	50.899	50.889	48.166
N° 21	11.214	16.791	23.525	26.743	30.622	34.841	37.460	41.570	46.258	50.782	50.779	49.761
N° 22	11.257	17.003	23.509	27.265	30.640	34.568	37.466	41.450	45.887	49.864	50.527	48.761
N° 23	11.391	16.693	23.191	26.375	29.929	33.593	36.380	40.018	44.271	47.958	48.273	48.870
N° 24	11.792	18.037	25.141	28.732	32.817	37.315	40.174	44.554	49.408	53.974	53.940	51.425
N° 25	11.073	16.764	23.541	26.665	30.657	34.919	37.769	41.988	46.636	51.634	51.319	49.855
N° 26	11.379	17.037	23.839	27.131	31.208	35.405	38.327	42.572	47.237	51.698	51.651	50.049
N° 27	11.655	17.730	24.783	28.426	32.305	36.613	39.509	43.704	48.424	52.983	52.963	52.069
N° 28	11.481	16.940	23.347	26.614	30.392	34.433	37.161	41.493	45.795	50.195	50.456	49.305
N° 29	11.605	16.833	23.093	26.459	29.950	34.027	36.667	40.430	44.663	48.590	48.503	47.615
N° 30	11.092	16.503	22.975	26.204	30.136	34.174	36.915	41.036	45.854	50.425	50.831	48.127
N° 31	11.296	16.912	23.510	26.836	30.808	35.069	37.897	42.197	47.359	52.176	52.147	52.278

## 42. -IIB3, Module 2

Ta=25°C; +VCC=5V; -VCC=GND; VCM=+1.4V



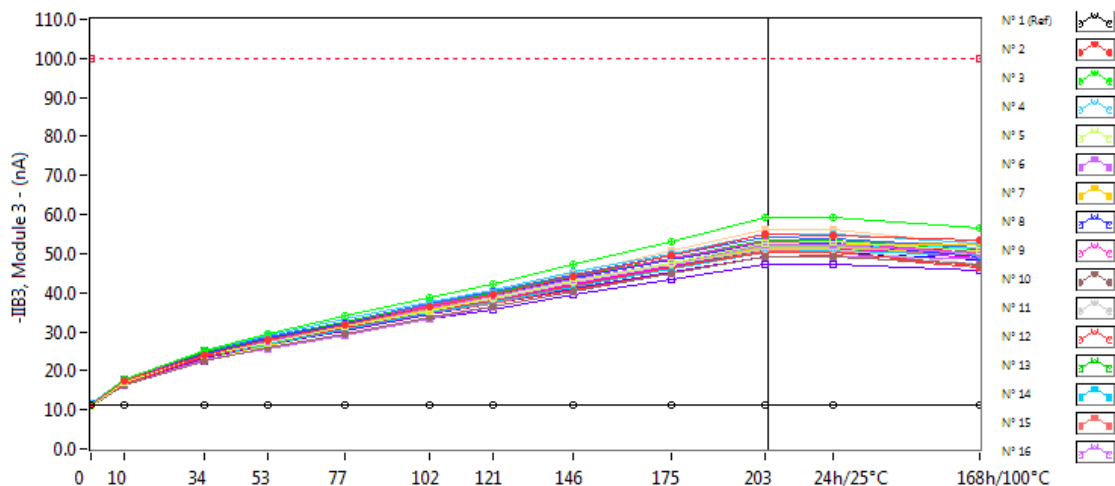
**-IIB3, Module 2 . (nA)**

**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)	10.868	10.879	10.856	10.910	10.823	10.816	10.820	10.919	10.932	10.826	10.942	10.941
N° 2	11.027	16.971	23.693	27.502	31.470	35.757	38.698	43.347	48.638	54.367	54.131	52.689
N° 3	11.262	17.707	24.935	28.919	33.407	38.063	41.178	45.897	51.195	57.011	56.811	55.168
N° 4	11.447	17.759	24.869	28.557	32.547	36.883	39.727	44.103	48.662	53.185	53.115	51.547
N° 5	11.165	16.944	23.801	27.114	31.223	35.525	38.990	43.366	48.252	53.228	53.610	51.679
N° 6	11.172	16.952	23.545	26.985	30.797	34.860	37.534	41.753	45.954	49.994	50.044	48.319
N° 7	11.149	16.847	23.264	26.473	30.362	34.672	37.590	41.874	46.413	50.906	50.924	50.772
N° 8	11.206	17.191	24.141	27.706	31.659	36.119	39.023	43.260	48.173	52.205	52.207	48.854
N° 9	11.179	17.310	24.145	27.645	31.554	35.877	38.640	42.840	47.270	51.745	51.652	49.097
N° 10	10.795	16.099	21.945	24.881	28.385	32.140	34.491	38.184	42.241	46.117	46.163	46.833
N° 11	10.976	16.864	23.685	27.210	31.298	35.426	38.095	42.115	46.769	50.980	50.903	47.395
N° 12	10.746	16.419	23.167	26.498	30.540	34.743	37.429	41.380	45.838	50.101	49.977	46.917
N° 13	11.273	17.137	24.130	27.661	31.627	36.044	38.793	42.996	47.747	52.480	52.217	50.336
N° 14	11.345	16.776	23.250	26.409	30.126	33.982	36.698	40.506	44.857	49.233	49.396	48.999
N° 15	10.914	16.676	23.631	27.185	31.053	35.136	37.557	41.580	46.525	51.155	51.117	50.542
N° 16	10.770	16.295	22.510	25.477	28.981	33.490	36.473	40.713	44.910	49.678	49.438	48.875
N° 17	10.922	16.781	23.651	27.113	31.068	35.346	38.232	42.421	47.007	51.474	51.308	49.757
N° 18	10.793	16.593	23.447	26.857	30.737	34.921	37.657	41.565	46.194	50.301	50.249	48.659
N° 19	10.760	16.389	23.017	26.270	29.974	33.918	36.535	40.419	44.809	48.850	48.764	47.007
N° 20	11.022	16.864	23.670	26.968	31.311	35.194	38.303	42.037	46.654	51.049	50.947	48.871
N° 21	11.121	16.676	23.106	26.300	30.090	34.253	37.078	41.240	46.181	50.919	50.804	50.031
N° 22	10.904	16.457	22.888	26.522	30.051	33.994	36.721	40.514	44.818	48.689	49.148	46.871
N° 23	11.002	16.443	22.937	26.045	29.652	33.522	36.301	40.282	44.941	49.110	49.286	49.316
N° 24	11.277	17.418	24.547	28.185	32.134	36.470	39.280	43.416	48.087	52.303	52.259	50.360
N° 25	10.913	16.665	23.297	26.710	30.470	34.735	37.702	41.957	46.857	51.739	51.473	50.881
N° 26	10.997	16.598	23.352	26.682	30.489	34.567	37.105	40.840	45.186	49.415	49.243	47.468
N° 27	11.299	17.219	24.220	27.769	31.610	35.812	38.757	42.928	47.810	52.230	52.187	51.027
N° 28	11.161	16.597	23.111	26.353	30.112	34.062	36.798	40.998	45.408	50.165	50.121	49.493
N° 29	11.289	16.467	22.718	25.777	29.460	33.272	35.756	39.621	43.884	47.759	47.599	46.068
N° 30	10.939	16.502	23.114	26.458	30.306	34.457	37.369	41.695	46.658	51.615	51.928	51.118
N° 31	11.046	16.540	23.121	26.517	30.559	34.754	37.800	42.082	47.389	52.325	52.314	51.323

### 43. -IIB3, Module 3

Ta=25°C; +VCC=5V; -VCC=GND; VCM=+1.4V



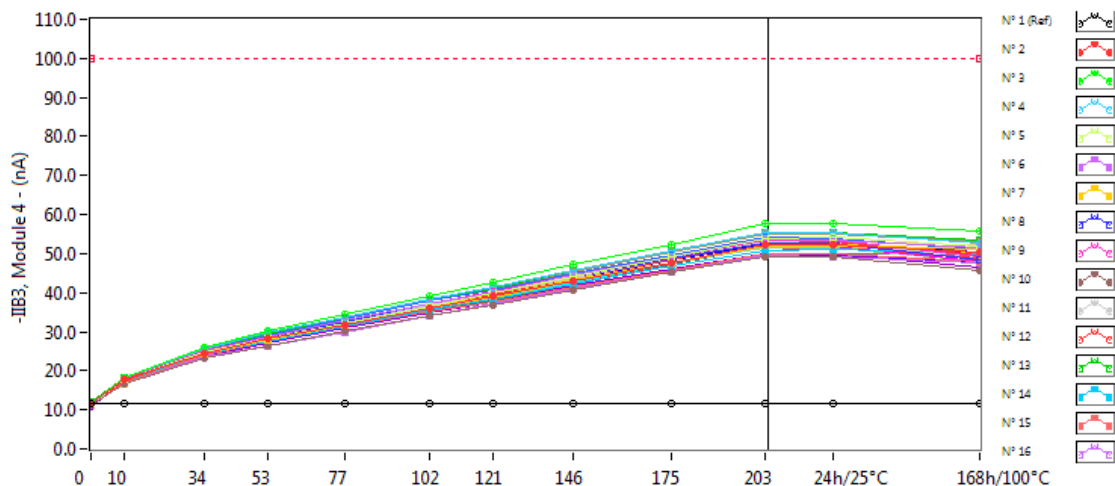
**-IIB3, Module 3 . (nA)**

**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)	11.125	11.141	11.087	11.131	11.082	11.075	11.078	11.146	11.181	11.057	11.180	11.183
N° 2	11.265	17.288	24.165	27.867	31.939	36.525	39.571	44.103	49.508	54.860	54.631	53.432
N° 3	11.253	17.803	25.319	29.354	33.953	38.749	42.156	47.388	53.242	59.204	59.098	56.615
N° 4	11.534	17.758	25.049	29.027	33.185	37.635	40.621	45.292	50.075	54.903	54.827	52.687
N° 5	11.006	17.017	23.956	27.276	31.188	35.422	38.775	43.170	47.763	52.644	53.011	50.687
N° 6	11.263	17.084	24.044	27.682	31.718	36.021	38.955	43.327	47.819	52.105	52.096	50.112
N° 7	11.352	17.336	23.967	27.335	31.190	35.582	38.641	43.102	47.660	52.436	52.424	52.108
N° 8	11.215	17.422	24.385	28.101	32.054	36.313	39.355	43.854	48.427	52.775	52.672	49.250
N° 9	11.414	17.646	24.576	28.291	32.272	36.714	39.475	43.819	48.652	53.144	53.027	49.903
N° 10	10.812	16.249	22.553	25.873	29.548	33.535	36.309	40.303	44.844	49.259	49.152	47.398
N° 11	10.960	17.018	24.013	27.601	31.651	35.649	38.475	42.543	47.088	51.262	51.117	47.225
N° 12	10.892	16.780	23.596	27.054	31.067	35.192	38.027	42.010	46.296	50.543	50.351	47.032
N° 13	11.419	17.418	24.598	28.247	32.404	36.954	39.702	44.029	48.955	53.521	53.288	50.614
N° 14	11.419	16.953	23.549	26.919	30.668	34.861	37.456	41.322	46.006	50.358	50.564	49.488
N° 15	11.060	16.829	23.695	27.108	30.956	34.817	37.325	41.372	46.069	50.682	50.518	50.311
N° 16	10.859	16.334	22.711	25.751	29.164	33.421	36.343	40.471	44.747	49.278	49.123	48.636
N° 17	11.179	17.107	24.125	27.537	31.339	35.692	38.553	42.587	47.330	51.705	51.591	49.933
N° 18	10.888	16.789	23.630	27.055	30.827	35.082	37.980	42.165	46.863	51.479	51.455	48.990
N° 19	10.755	16.531	23.200	26.573	30.385	34.375	37.068	41.125	45.304	49.337	49.148	47.140
N° 20	11.198	17.136	24.100	27.496	31.792	35.774	38.933	42.906	47.600	51.919	51.892	49.546
N° 21	11.094	16.782	23.548	26.930	30.917	35.107	37.818	42.298	47.489	52.400	52.417	51.631
N° 22	10.933	16.637	23.263	26.750	30.264	34.294	36.999	40.772	45.282	49.018	49.413	46.671
N° 23	11.264	16.766	23.552	26.798	30.505	34.553	37.288	41.559	46.545	51.026	51.104	49.885
N° 24	11.526	17.744	25.060	28.483	32.714	37.262	40.142	44.594	49.572	54.275	54.019	51.521
N° 25	10.954	16.735	23.610	26.896	30.939	35.200	38.113	42.195	46.907	51.879	51.544	51.083
N° 26	11.150	16.951	23.856	27.208	31.057	35.237	37.921	42.000	46.605	50.672	50.542	48.287
N° 27	11.534	17.586	24.867	28.559	32.523	36.950	39.727	44.026	48.826	53.365	53.203	52.363
N° 28	11.383	16.858	23.697	26.897	30.870	35.099	38.052	42.338	47.000	51.958	52.019	50.802
N° 29	11.234	16.454	22.650	25.765	29.281	33.165	35.680	39.544	43.489	47.278	47.222	45.684
N° 30	10.908	16.583	23.284	26.516	30.532	34.847	37.834	42.150	47.237	52.061	52.400	51.003
N° 31	11.170	16.750	23.670	27.240	31.671	36.689	40.149	45.089	50.760	56.019	55.994	52.275

### 44. -IIB3, Module 4

Ta=25°C; +VCC=5V; -VCC=GND; VCM=+1.4V



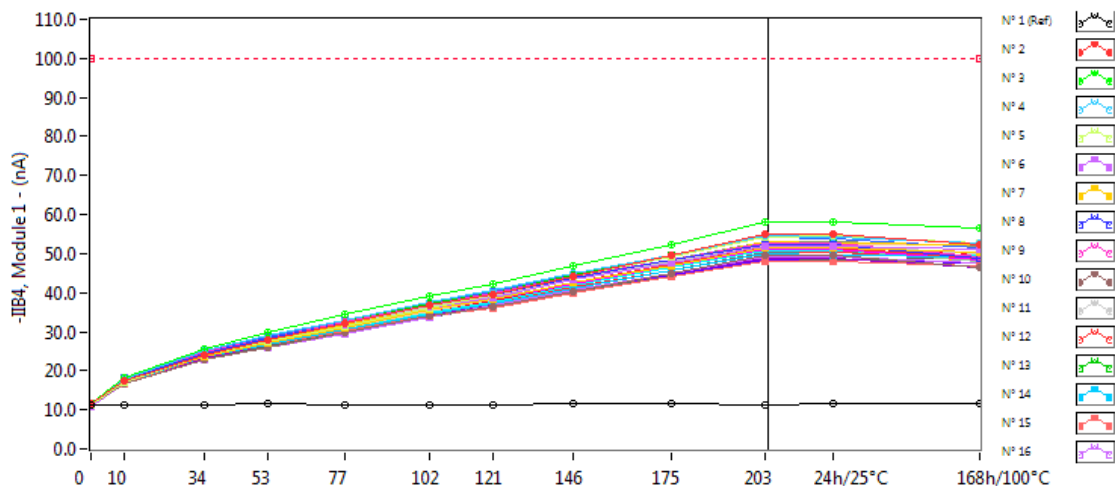
**-IIB3, Module 4 . (nA)**

**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)	11.530	11.539	11.507	11.528	11.499	11.472	11.488	11.565	11.567	11.473	11.602	11.582
N° 2	11.500	17.700	24.555	28.135	31.814	36.094	38.941	42.950	47.569	52.343	52.128	50.453
N° 3	11.585	18.395	26.008	30.075	34.663	39.130	42.416	47.190	52.359	57.602	57.577	55.965
N° 4	11.734	18.318	25.678	29.717	33.798	38.211	41.327	45.781	50.773	55.561	55.430	52.633
N° 5	11.542	17.659	24.737	28.131	32.253	36.536	39.920	44.272	49.042	53.813	54.134	51.985
N° 6	11.619	17.750	24.931	28.687	32.736	37.098	39.983	44.509	49.264	53.849	53.628	51.650
N° 7	11.696	17.806	24.525	28.041	31.932	36.261	39.259	43.453	47.753	52.250	52.233	50.963
N° 8	11.536	17.807	24.879	28.425	32.473	37.017	39.827	44.099	48.769	52.786	52.620	48.442
N° 9	11.553	17.831	25.039	28.843	32.925	37.265	40.109	44.360	49.024	53.373	53.392	49.134
N° 10	11.095	16.751	23.158	26.394	30.189	34.170	36.755	40.631	45.185	49.339	49.305	45.827
N° 11	11.382	17.737	24.827	28.546	32.693	36.903	39.750	43.947	48.648	52.870	52.812	49.362
N° 12	11.349	17.508	24.623	28.302	32.414	36.717	39.564	43.778	48.489	52.955	52.893	49.444
N° 13	11.852	18.130	25.394	29.268	33.649	38.334	41.131	45.548	50.635	55.480	55.253	53.298
N° 14	11.858	17.490	24.285	27.631	31.512	35.633	38.203	42.217	46.760	50.924	50.990	49.889
N° 15	11.310	17.016	23.964	27.557	31.408	35.085	37.472	41.284	45.802	49.894	49.835	47.913
N° 16	11.120	16.861	23.470	26.512	29.841	34.106	37.076	41.064	45.131	49.528	49.369	47.502
N° 17	11.428	17.414	24.523	27.989	32.040	36.125	38.880	43.021	47.479	51.804	51.710	50.445
N° 18	11.178	17.161	24.253	27.658	31.625	35.815	38.595	42.866	47.453	51.863	51.721	48.117
N° 19	10.975	16.856	23.682	27.002	31.016	34.980	37.578	41.652	46.110	50.106	49.987	46.348
N° 20	11.371	17.491	24.478	27.901	32.194	36.117	39.098	43.050	47.620	51.579	51.601	48.036
N° 21	11.371	17.274	24.222	27.451	31.442	35.584	38.402	42.646	47.458	51.957	51.792	50.173
N° 22	11.360	17.267	24.116	27.865	31.498	35.695	38.535	42.546	47.046	50.906	51.362	48.728
N° 23	11.621	17.215	24.097	27.523	31.246	35.288	38.097	42.326	47.445	51.901	52.056	51.320
N° 24	11.774	18.244	25.565	29.189	33.356	37.792	40.590	44.836	49.692	54.034	53.956	50.986
N° 25	11.366	17.254	24.310	27.619	31.626	35.850	38.571	42.703	47.638	52.154	51.884	50.048
N° 26	11.592	17.503	24.640	28.120	32.174	36.367	39.342	43.554	48.268	52.470	52.491	50.231
N° 27	11.805	18.136	25.665	29.245	33.546	38.106	41.000	45.450	50.430	54.998	54.927	53.091
N° 28	11.675	17.369	23.988	27.073	30.879	35.007	37.511	41.603	45.783	50.084	50.047	49.479
N° 29	11.676	17.086	23.782	27.171	30.886	34.899	37.521	41.443	45.991	49.931	49.701	48.078
N° 30	11.174	16.768	23.597	26.996	30.928	35.267	38.033	42.330	47.329	52.256	52.562	49.485
N° 31	11.487	17.191	24.119	27.690	31.600	35.796	38.746	43.095	48.287	52.940	52.922	52.143

## 45. -IIB4, Module 1

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



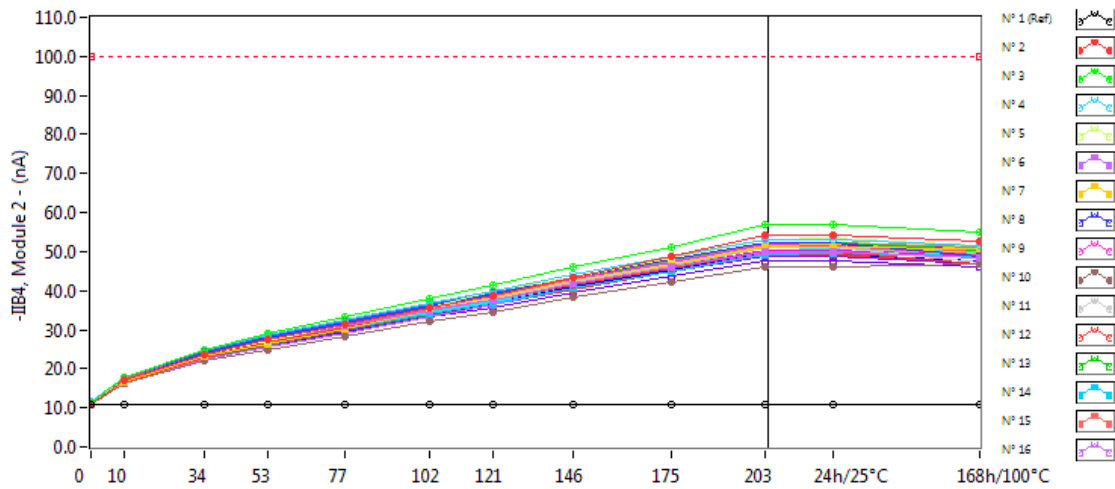
**-IIB4, Module 1 . (nA)**

**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)	11.401	11.411	11.371	11.538	11.361	11.346	11.338	11.435	11.437	11.336	11.473	11.457
N° 2	11.461	17.392	24.137	28.017	32.033	36.626	39.636	44.050	49.451	55.085	54.853	52.341
N° 3	11.706	18.335	25.702	29.665	34.301	39.036	42.276	46.985	52.421	58.091	58.136	56.525
N° 4	11.650	18.003	25.137	28.965	33.074	37.570	40.530	44.966	49.713	54.460	54.353	52.537
N° 5	11.311	17.184	24.123	27.389	31.503	35.992	39.392	44.103	49.183	54.127	54.475	52.677
N° 6	11.456	17.295	23.997	27.590	31.482	35.967	38.894	43.316	47.723	51.872	51.897	50.956
N° 7	11.475	17.334	23.679	27.092	31.009	35.450	38.296	42.674	47.025	51.458	51.500	50.462
N° 8	11.597	17.687	24.495	28.164	32.005	36.635	39.537	43.803	48.366	52.439	52.418	48.651
N° 9	11.430	17.602	24.656	28.213	32.391	36.897	39.728	44.084	48.591	52.866	52.835	49.250
N° 10	11.151	16.528	22.857	26.060	29.773	33.906	36.487	40.435	45.095	49.495	49.457	46.566
N° 11	11.275	17.235	24.216	27.885	32.115	36.524	39.268	43.332	47.883	52.361	52.333	50.010
N° 12	11.108	16.989	24.038	27.441	31.546	35.674	38.516	42.676	47.224	51.764	51.678	48.889
N° 13	11.578	17.797	24.727	28.336	32.416	37.257	40.052	44.565	49.419	54.370	54.161	52.809
N° 14	11.702	17.058	23.601	26.781	30.540	34.564	37.246	41.199	45.627	49.787	49.700	49.123
N° 15	11.227	16.839	23.449	26.689	30.259	34.060	36.206	39.853	44.073	48.079	48.021	46.995
N° 16	10.999	16.560	22.868	25.939	29.287	33.800	36.662	40.742	44.809	49.337	49.124	47.532
N° 17	11.095	17.093	24.209	27.744	31.872	36.220	39.130	43.296	48.075	52.953	52.810	52.150
N° 18	11.089	16.986	23.763	27.237	31.201	35.558	38.316	42.357	46.912	51.184	51.140	48.402
N° 19	11.102	16.719	23.366	26.642	30.343	34.228	36.792	40.659	44.885	48.733	48.752	46.312
N° 20	11.432	17.292	23.983	27.326	31.565	35.464	38.548	42.347	46.835	50.981	50.974	48.172
N° 21	11.197	16.819	23.591	26.820	30.681	34.879	37.470	41.643	46.334	50.892	50.869	49.747
N° 22	11.250	17.038	23.555	27.251	30.684	34.648	37.507	41.522	45.891	49.951	50.533	48.714
N° 23	11.364	16.695	23.235	26.401	29.991	33.666	36.383	40.115	44.332	47.981	48.287	48.846
N° 24	11.780	18.054	25.185	28.829	32.874	37.373	40.236	44.675	49.496	54.075	54.018	51.413
N° 25	11.075	16.790	23.599	26.734	30.723	35.008	37.814	42.149	46.706	51.680	51.351	49.847
N° 26	11.378	17.029	23.893	27.190	31.222	35.496	38.377	42.647	47.268	51.758	51.695	50.023
N° 27	11.659	17.741	24.892	28.536	32.387	36.673	39.589	43.782	48.470	53.023	52.961	52.053
N° 28	11.456	16.947	23.361	26.675	30.402	34.486	37.201	41.490	45.873	50.241	50.463	49.308
N° 29	11.600	16.809	23.152	26.507	30.014	34.051	36.741	40.490	44.670	48.594	48.567	47.603
N° 30	11.065	16.534	22.996	26.258	30.193	34.333	36.975	41.117	45.879	50.442	50.813	48.100
N° 31	11.277	16.916	23.623	26.920	30.898	35.130	37.961	42.264	47.392	52.214	52.173	52.227

## 46. -IIB4, Module 2

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



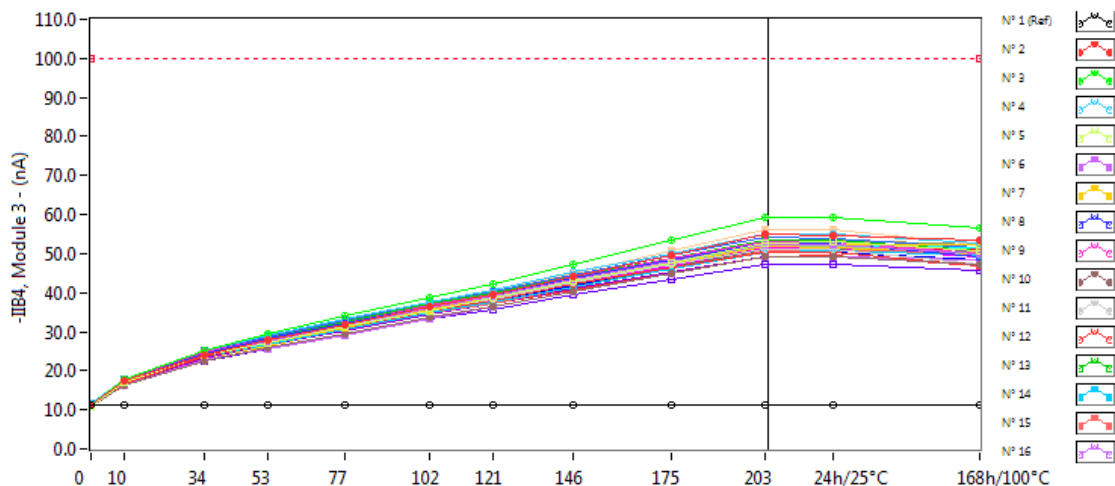
**-IIB4, Module 2 . (nA)**

**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)	10.860	10.871	10.845	10.893	10.808	10.794	10.814	10.900	10.923	10.815	10.940	10.932
N° 2	11.014	16.983	23.708	27.492	31.509	35.778	38.748	43.378	48.661	54.347	54.102	52.687
N° 3	11.246	17.710	24.953	28.939	33.438	38.054	41.325	45.953	51.268	56.999	56.823	55.185
N° 4	11.436	17.734	24.881	28.577	32.578	36.847	39.719	44.111	48.684	53.196	53.143	51.537
N° 5	11.151	16.954	23.795	27.153	31.201	35.562	39.894	43.349	48.287	53.168	53.558	51.692
N° 6	11.149	16.906	23.562	27.008	30.804	34.870	37.543	41.759	46.006	50.019	50.046	48.352
N° 7	11.146	16.836	23.239	26.480	30.379	34.681	37.601	41.884	46.402	50.945	50.942	50.787
N° 8	11.193	17.210	24.162	27.702	31.661	36.112	39.027	43.259	48.152	52.204	52.192	48.865
N° 9	11.155	17.302	24.145	27.640	31.599	35.898	38.625	42.826	47.340	51.757	51.683	49.077
N° 10	10.782	16.086	21.947	24.918	28.410	32.134	34.476	38.210	42.261	46.220	46.228	46.839
N° 11	10.957	16.875	23.703	27.210	31.341	35.455	38.140	42.186	46.808	51.011	50.969	47.411
N° 12	10.740	16.428	23.180	26.546	30.568	34.762	37.451	41.390	45.867	50.133	50.008	46.940
N° 13	11.270	17.157	24.079	27.630	31.666	36.038	38.811	43.029	47.851	52.479	52.280	50.299
N° 14	11.337	16.756	23.275	26.390	30.149	33.981	36.686	40.571	44.876	49.273	49.401	48.994
N° 15	10.902	16.657	23.645	27.219	31.063	35.167	37.592	41.594	46.567	51.152	51.096	50.541
N° 16	10.770	16.276	22.497	25.481	29.004	33.473	36.492	40.741	44.928	49.683	49.487	48.876
N° 17	10.895	16.788	23.678	27.089	31.053	35.383	38.219	42.414	47.058	51.526	51.369	49.759
N° 18	10.782	16.619	23.405	26.834	30.763	34.934	37.623	41.600	46.215	50.303	50.321	48.663
N° 19	10.740	16.390	23.051	26.286	30.018	33.901	36.537	40.489	44.800	48.876	48.801	46.959
N° 20	11.014	16.884	23.660	26.972	31.323	35.224	38.276	42.026	46.671	51.089	50.979	48.856
N° 21	11.117	16.640	23.121	26.324	30.062	34.279	37.087	41.264	46.182	50.945	50.783	50.002
N° 22	10.892	16.484	22.887	26.538	30.079	33.971	36.753	40.444	44.853	48.691	49.131	46.886
N° 23	10.972	16.443	22.948	26.066	29.648	33.570	36.326	40.291	44.952	49.127	49.305	49.305
N° 24	11.254	17.384	24.566	28.211	32.150	36.496	39.316	43.494	48.075	52.326	52.236	50.377
N° 25	10.915	16.666	23.308	26.734	30.495	34.756	37.746	41.955	46.871	51.781	51.512	50.878
N° 26	10.991	16.590	23.373	26.687	30.494	34.570	37.160	40.866	45.243	49.441	49.286	47.451
N° 27	11.281	17.198	24.241	27.792	31.651	35.840	38.771	42.944	47.813	52.270	52.226	51.009
N° 28	11.140	16.585	23.097	26.389	30.130	34.129	36.808	41.018	45.453	50.161	50.136	49.440
N° 29	11.276	16.451	22.740	25.808	29.461	33.308	35.769	39.643	43.943	47.792	47.665	46.079
N° 30	10.941	16.497	23.108	26.467	30.287	34.515	37.393	41.694	46.739	51.612	51.951	51.122
N° 31	11.019	16.541	23.124	26.585	30.555	34.809	37.803	42.103	47.413	52.306	52.330	51.333

### 47. -IIB4, Module 3

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



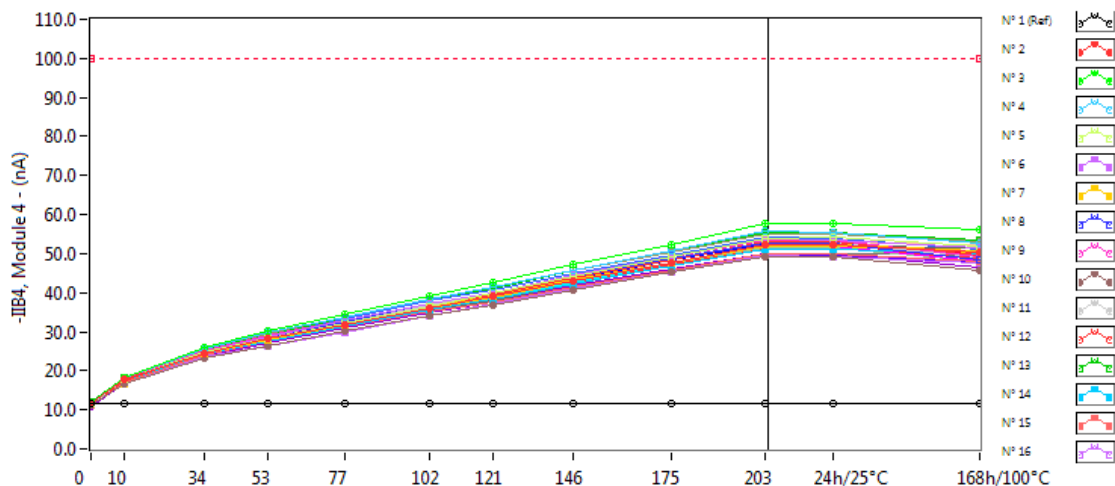
**-IIB4, Module 3 . (nA)**

**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)	11.118	11.117	11.094	11.138	11.075	11.068	11.069	11.148	11.152	11.059	11.187	11.172
N° 2	11.257	17.279	24.166	27.856	31.944	36.527	39.576	44.140	49.555	54.840	54.621	53.470
N° 3	11.244	17.798	25.348	29.350	33.943	38.747	42.170	47.420	53.287	59.246	59.146	56.599
N° 4	11.528	17.756	25.041	29.056	33.181	37.653	40.638	45.322	50.101	54.893	54.819	52.710
N° 5	11.004	16.998	23.901	27.261	31.182	35.413	38.793	43.186	47.831	52.699	53.009	50.668
N° 6	11.248	17.086	24.018	27.672	31.704	36.040	38.941	43.339	47.835	52.160	52.115	50.130
N° 7	11.334	17.340	23.963	27.298	31.171	35.579	38.644	43.137	47.702	52.496	52.440	52.125
N° 8	11.196	17.406	24.367	28.081	32.063	36.338	39.381	43.889	48.410	52.780	52.638	49.243
N° 9	11.411	17.631	24.600	28.263	32.272	36.666	39.535	43.876	48.683	53.111	53.038	49.914
N° 10	10.824	16.224	22.549	25.850	29.556	33.558	36.309	40.317	44.891	49.257	49.187	47.393
N° 11	10.951	16.994	23.994	27.579	31.675	35.652	38.469	42.578	47.114	51.283	51.190	47.233
N° 12	10.886	16.770	23.599	27.042	31.104	35.207	38.017	42.027	46.316	50.523	50.380	47.017
N° 13	11.397	17.399	24.580	28.265	32.391	36.992	39.706	44.020	48.981	53.494	53.329	50.641
N° 14	11.411	16.938	23.518	26.910	30.687	34.835	37.455	41.362	46.067	50.397	50.608	49.498
N° 15	11.054	16.798	23.752	27.126	30.979	34.842	37.341	41.392	46.110	50.677	50.550	50.259
N° 16	10.847	16.339	22.684	25.734	29.138	33.437	36.323	40.473	44.795	49.267	49.120	48.602
N° 17	11.176	17.086	24.128	27.544	31.378	35.695	38.524	42.613	47.363	51.712	51.634	49.961
N° 18	10.874	16.773	23.617	27.056	30.802	35.098	37.981	42.221	46.900	51.543	51.474	49.027
N° 19	10.750	16.523	23.187	26.572	30.395	34.401	37.104	41.138	45.286	49.364	49.132	47.137
N° 20	11.196	17.114	24.113	27.539	31.786	35.772	38.945	42.914	47.657	51.959	51.883	49.541
N° 21	11.091	16.786	23.540	26.915	30.887	35.083	37.856	42.333	47.514	52.407	52.391	51.642
N° 22	10.911	16.624	23.278	26.724	30.258	34.302	37.035	40.813	45.307	49.016	49.442	46.683
N° 23	11.253	16.763	23.532	26.814	30.481	34.582	37.278	41.520	46.564	51.045	51.096	49.917
N° 24	11.522	17.720	25.050	28.495	32.750	37.291	40.151	44.570	49.611	54.275	54.030	51.553
N° 25	10.927	16.733	23.608	26.888	30.925	35.207	38.089	42.231	46.934	51.874	51.559	51.050
N° 26	11.136	16.946	23.837	27.230	31.030	35.257	37.908	41.990	46.639	50.698	50.515	48.282
N° 27	11.518	17.567	24.837	28.566	32.558	36.945	39.728	44.043	48.827	53.381	53.265	52.381
N° 28	11.376	16.858	23.704	26.868	30.822	35.191	38.079	42.353	47.010	51.975	52.059	50.764
N° 29	11.232	16.477	22.653	25.752	29.317	33.183	35.700	39.570	43.502	47.348	47.231	45.664
N° 30	10.878	16.576	23.313	26.487	30.499	34.884	37.857	42.145	47.279	52.105	52.374	50.975
N° 31	11.156	16.734	23.649	27.211	31.662	36.642	40.123	45.078	50.720	56.016	56.029	52.238

## 48. -IIB4, Module 4

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



**-IIB4, Module 4 . (nA)**

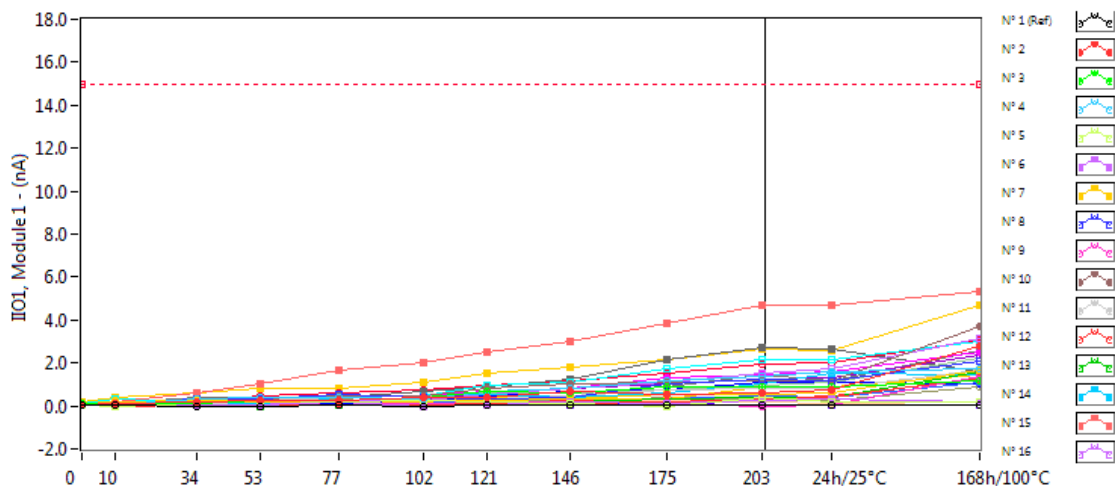
**Max = 100.0**

	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)	11.527	11.542	11.514	11.540	11.484	11.485	11.477	11.558	11.561	11.433	11.591	11.568
N° 2	11.490	17.719	24.551	28.119	31.855	36.094	38.972	42.961	47.558	52.364	52.107	50.441
N° 3	11.587	18.373	25.978	30.125	34.663	39.135	42.426	47.194	52.365	57.585	57.567	55.975
N° 4	11.729	18.286	25.623	29.677	33.779	38.213	41.273	45.744	50.780	55.606	55.442	52.632
N° 5	11.523	17.635	24.733	28.145	32.248	36.524	39.900	44.273	49.033	53.885	54.134	52.010
N° 6	11.597	17.742	24.925	28.677	32.740	37.058	39.956	44.498	49.268	53.796	53.638	51.657
N° 7	11.691	17.798	24.530	28.016	31.905	36.252	39.216	43.471	47.804	52.298	52.227	50.932
N° 8	11.537	17.822	24.865	28.399	32.488	37.057	39.815	44.126	48.804	52.759	52.601	48.432
N° 9	11.558	17.825	25.006	28.870	32.966	37.252	40.084	44.346	49.032	53.396	53.406	49.183
N° 10	11.107	16.732	23.153	26.402	30.183	34.141	36.763	40.653	45.147	49.353	49.297	45.843
N° 11	11.383	17.721	24.852	28.538	32.673	36.894	39.726	43.963	48.706	52.863	52.814	49.352
N° 12	11.356	17.528	24.623	28.304	32.415	36.700	39.578	43.793	48.500	52.990	52.934	49.443
N° 13	11.851	18.103	25.379	29.228	33.651	38.297	41.133	45.576	50.673	55.447	55.268	53.272
N° 14	11.841	17.473	24.297	27.627	31.496	35.630	38.167	42.221	46.767	51.058	51.030	49.875
N° 15	11.322	17.020	23.977	27.578	31.418	35.066	37.457	41.306	45.874	49.850	49.866	47.887
N° 16	11.118	16.850	23.488	26.517	29.864	34.108	37.065	41.066	45.188	49.566	49.351	47.505
N° 17	11.402	17.401	24.517	27.965	32.029	36.167	38.846	43.012	47.495	51.824	51.716	50.445
N° 18	11.170	17.123	24.299	27.661	31.612	35.828	38.617	42.864	47.468	51.810	51.750	48.125
N° 19	10.950	16.826	23.658	27.035	30.986	34.980	37.526	41.641	46.142	50.139	50.045	46.319
N° 20	11.362	17.477	24.449	27.931	32.171	36.119	39.139	43.041	47.613	51.608	51.577	48.027
N° 21	11.368	17.258	24.208	27.451	31.441	35.619	38.395	42.636	47.476	52.000	51.791	50.198
N° 22	11.345	17.260	24.070	27.845	31.453	35.672	38.497	42.553	47.068	50.956	51.389	48.727
N° 23	11.609	17.219	24.097	27.510	31.220	35.289	38.109	42.343	47.473	51.892	52.039	51.332
N° 24	11.783	18.215	25.556	29.203	33.355	37.803	40.547	44.884	49.702	54.035	53.930	51.009
N° 25	11.357	17.248	24.309	27.597	31.587	35.877	38.541	42.751	47.658	52.129	51.892	50.039
N° 26	11.586	17.447	24.644	28.095	32.183	36.362	39.341	43.528	48.259	52.464	52.474	50.263
N° 27	11.787	18.137	25.622	29.300	33.560	38.109	41.032	45.530	50.441	55.049	54.937	53.108
N° 28	11.672	17.375	23.967	27.079	30.892	35.016	37.521	41.660	45.769	50.097	50.020	49.521
N° 29	11.667	17.090	23.785	27.208	30.881	34.935	37.537	41.465	46.029	49.857	49.740	48.094
N° 30	11.169	16.746	23.597	26.931	30.954	35.271	38.041	42.358	47.363	52.266	52.553	49.471
N° 31	11.475	17.170	24.107	27.707	31.586	35.776	38.747	43.121	48.272	52.955	52.870	52.128



## 49. IIO1, Module 1

Ta=25°C; +VCC=30V; -VCC=GND; VCM=+15V



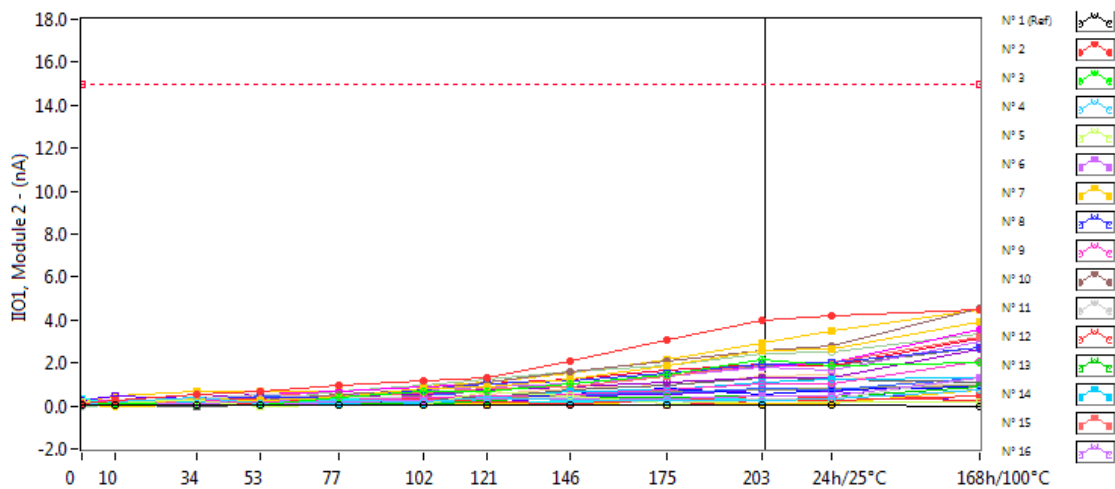
IIO1, Module 1 . (nA)

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)	0.025	0.028	0.006	0.006	0.025	0.007	0.021	0.045	0.046	0.034	0.055	0.072
N° 2	0.068	0.128	0.213	0.280	0.279	0.370	0.411	0.656	0.548	0.597	0.749	2.802
N° 3	0.084	0.123	0.143	0.275	0.273	0.385	0.682	0.608	0.919	0.878	0.900	1.184
N° 4	0.128	0.071	0.330	0.379	0.386	0.323	0.708	0.837	1.139	1.356	1.615	1.733
N° 5	0.019	0.007	0.098	0.225	0.199	0.248	0.156	0.146	0.001	0.404	0.195	0.207
N° 6	0.038	0.066	0.014	0.023	0.152	0.005	0.008	0.149	0.080	0.264	0.301	0.182
N° 7	0.131	0.172	0.272	0.167	0.194	0.233	0.270	0.348	0.551	0.560	0.588	1.688
N° 8	0.083	0.090	0.300	0.316	0.567	0.411	0.312	0.423	1.038	1.228	1.135	2.109
N° 9	0.016	0.001	0.209	0.155	0.037	0.091	0.171	0.170	0.135	0.005	0.034	1.404
N° 10	0.098	0.119	0.233	0.314	0.452	0.498	0.801	1.000	1.089	1.172	1.171	3.725
N° 11	0.101	0.092	0.032	0.264	0.384	0.437	0.359	0.491	0.735	0.808	0.793	1.627
N° 12	0.081	0.101	0.004	0.054	0.013	0.076	0.090	0.143	0.172	0.328	0.423	1.333
N° 13	0.135	0.186	0.125	0.004	0.061	0.063	0.140	0.153	0.326	0.408	0.410	1.574
N° 14	0.038	0.077	0.022	0.145	0.367	0.480	0.564	0.410	0.581	1.020	1.522	1.427
N° 15	0.029	0.175	0.604	1.015	1.675	1.992	2.478	3.013	3.859	4.679	4.707	5.310
N° 16	0.089	0.120	0.041	0.104	0.231	0.262	0.511	0.810	1.117	1.532	1.717	3.128
N° 17	0.075	0.061	0.154	0.224	0.231	0.211	0.361	0.316	0.296	0.856	0.881	1.431
N° 18	0.116	0.168	0.254	0.276	0.411	0.468	0.641	0.849	1.285	1.426	1.589	2.518
N° 19	0.035	0.129	0.097	0.233	0.393	0.357	0.557	0.811	1.020	1.207	1.277	2.388
N° 20	0.030	0.062	0.276	0.157	0.451	0.479	0.600	0.634	0.781	0.959	1.093	2.236
N° 21	0.099	0.334	0.169	0.358	0.479	0.485	0.923	1.108	1.740	2.139	2.139	3.007
N° 22	0.024	0.007	0.052	0.122	0.073	0.078	0.128	0.244	0.184	0.316	0.452	1.252
N° 23	0.054	0.150	0.108	0.141	0.387	0.687	0.922	1.219	2.133	2.706	2.614	1.574
N° 24	0.098	0.155	0.251	0.073	0.049	0.107	0.308	0.314	0.320	0.430	0.398	1.074
N° 25	0.119	0.103	0.171	0.446	0.588	0.751	0.946	1.202	1.516	1.956	1.999	3.046
N° 26	0.145	0.033	0.141	0.017	0.141	0.267	0.464	0.644	0.753	1.085	1.080	0.994
N° 27	0.042	0.034	0.183	0.203	0.313	0.129	0.310	0.186	0.392	0.280	0.262	0.901
N° 28	0.147	0.079	0.422	0.405	0.405	0.499	0.604	0.593	0.911	1.429	1.192	2.562
N° 29	0.082	0.077	0.125	0.162	0.263	0.081	0.050	0.008	0.123	0.028	0.027	0.064
N° 30	0.181	0.389	0.580	0.783	0.821	1.111	1.512	1.782	2.179	2.661	2.546	4.657
N° 31	0.102	0.112	0.027	0.159	0.111	0.087	0.171	0.163	0.261	0.175	0.136	0.158

## 50. IIO1, Module 2

Ta=25°C; +VCC=30V; -VCC=GND; VCM=+15V



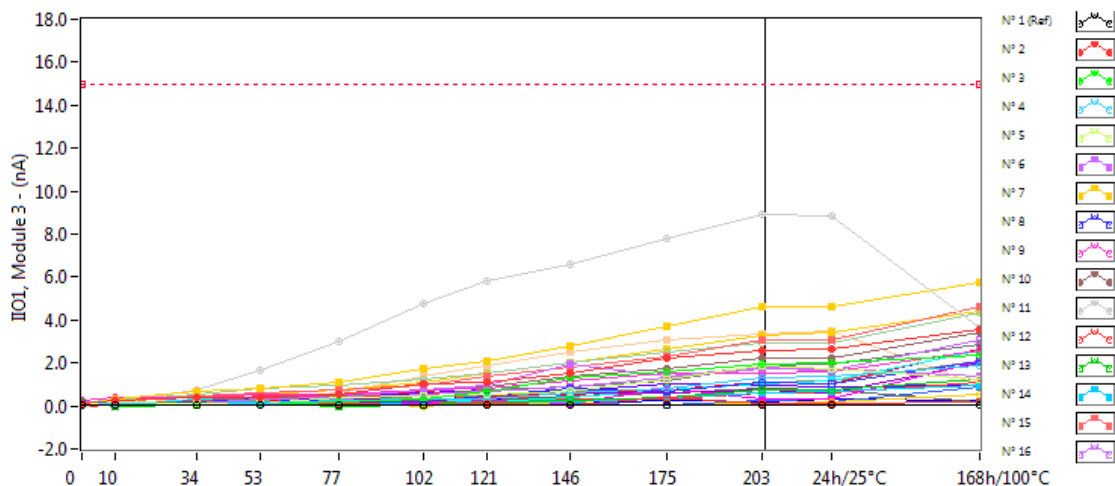
IIO1, Module 2 . (nA)

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)	0.018	0.032	0.017	0.019	0.010	0.032	0.039	0.028	0.025	0.022	0.027	0.007
N° 2	0.095	0.222	0.546	0.711	0.925	1.164	1.308	2.074	3.091	3.982	4.173	4.510
N° 3	0.045	0.120	0.017	0.075	0.386	0.704	0.685	1.052	1.453	2.120	1.883	1.998
N° 4	0.123	0.183	0.398	0.130	0.236	0.178	0.382	0.237	0.263	0.246	0.302	0.767
N° 5	0.155	0.187	0.268	0.006	0.042	0.010	0.709	0.471	0.131	0.278	0.208	0.190
N° 6	0.060	0.178	0.088	0.048	0.180	0.241	0.332	0.293	0.359	0.430	0.490	1.327
N° 7	0.011	0.015	0.308	0.278	0.393	0.798	0.891	1.259	1.889	2.559	2.637	3.946
N° 8	0.044	0.018	0.320	0.385	0.418	0.775	1.029	1.175	1.544	1.965	2.049	2.725
N° 9	0.151	0.252	0.261	0.167	0.282	0.425	0.476	0.564	0.775	1.057	1.017	2.100
N° 10	0.083	0.013	0.021	0.251	0.540	0.748	1.131	1.570	2.097	2.550	2.760	4.584
N° 11	0.206	0.194	0.302	0.505	0.395	0.404	0.475	0.416	0.131	0.322	0.310	1.280
N° 12	0.068	0.041	0.028	0.117	0.265	0.291	0.160	0.105	0.256	0.474	0.412	0.250
N° 13	0.027	0.128	0.011	0.009	0.217	0.038	0.233	0.386	0.388	0.439	0.414	0.878
N° 14	0.008	0.066	0.218	0.027	0.096	0.137	0.351	0.656	0.731	1.113	1.267	1.325
N° 15	0.050	0.082	0.228	0.558	0.475	0.604	0.826	0.912	1.387	1.960	1.979	3.208
N° 16	0.036	0.156	0.176	0.193	0.463	0.750	0.856	1.060	1.399	1.795	1.677	3.035
N° 17	0.061	0.003	0.034	0.204	0.083	0.066	0.093	0.097	0.042	0.087	0.130	0.723
N° 18	0.053	0.189	0.333	0.510	0.677	0.916	1.033	1.162	1.521	1.803	1.983	3.582
N° 19	0.157	0.146	0.369	0.528	0.494	0.537	0.728	0.882	1.094	1.321	1.287	2.644
N° 20	0.006	0.047	0.256	0.285	0.681	0.964	1.252	1.564	1.867	2.422	2.533	3.343
N° 21	0.318	0.197	0.085	0.141	0.341	0.307	0.146	0.190	0.294	0.337	0.312	1.331
N° 22	0.164	0.225	0.275	0.297	0.151	0.238	0.055	0.111	0.037	0.254	0.226	0.438
N° 23	0.084	0.050	0.004	0.059	0.155	0.318	0.373	0.758	0.925	1.319	1.260	1.110
N° 24	0.008	0.015	0.136	0.456	0.468	0.559	0.496	0.512	0.585	0.825	0.778	1.329
N° 25	0.145	0.267	0.233	0.565	0.691	0.909	1.039	1.266	1.687	1.977	1.904	3.168
N° 26	0.033	0.050	0.079	0.067	0.153	0.202	0.392	0.544	0.844	0.506	0.725	0.892
N° 27	0.042	0.082	0.020	0.115	0.151	0.232	0.368	0.480	0.710	0.766	0.808	0.923
N° 28	0.044	0.006	0.064	0.264	0.356	0.493	0.774	1.013	1.353	1.858	1.872	2.685
N° 29	0.267	0.464	0.336	0.194	0.218	0.207	0.113	0.452	0.530	0.743	0.656	0.183
N° 30	0.201	0.483	0.674	0.652	0.665	0.909	1.129	1.544	2.182	2.926	3.491	4.510
N° 31	0.109	0.072	0.059	0.030	0.194	0.259	0.553	0.805	0.936	1.365	1.418	0.762

## 51. IIO1, Module 3

Ta=25°C; +VCC=30V; -VCC=GND; VCM=+15V



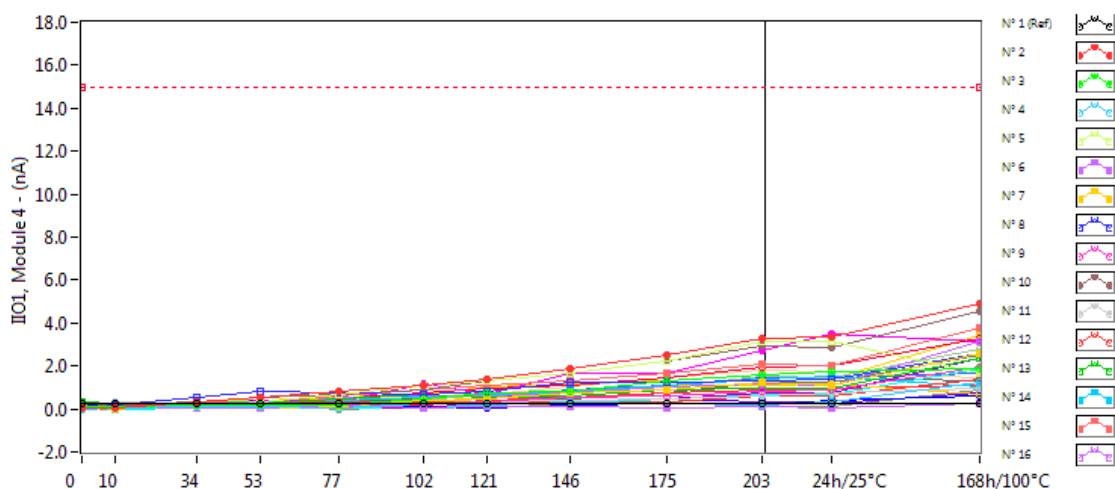
IIO1, Module 3 . (nA)

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)	0.059	0.042	0.041	0.045	0.046	0.036	0.041	0.053	0.044	0.060	0.045	0.049
N° 2	0.116	0.250	0.397	0.383	0.557	1.013	1.088	1.513	2.235	2.589	2.662	3.566
N° 3	0.050	0.031	0.024	0.027	0.163	0.345	0.692	1.286	1.571	1.967	2.038	2.380
N° 4	0.038	0.132	0.021	0.102	0.234	0.313	0.347	0.599	0.826	1.327	1.381	1.848
N° 5	0.026	0.163	0.110	0.118	0.424	0.478	0.523	0.689	1.263	1.843	1.714	1.257
N° 6	0.024	0.066	0.096	0.301	0.372	0.737	0.962	1.947	1.364	1.774	1.731	1.408
N° 7	0.037	0.337	0.683	0.824	1.131	1.700	2.099	2.821	3.730	4.587	4.634	5.759
N° 8	0.128	0.043	0.168	0.335	0.169	0.160	0.459	0.793	0.696	1.089	1.016	2.100
N° 9	0.241	0.412	0.388	0.534	0.548	0.768	0.802	1.189	1.490	1.528	1.584	2.552
N° 10	0.139	0.077	0.234	0.421	0.447	0.732	0.909	1.413	1.719	2.205	2.231	3.419
N° 11	0.003	0.091	0.712	1.656	3.031	4.783	5.795	6.622	7.789	8.883	8.833	3.610
N° 12	0.002	0.048	0.081	0.137	0.102	0.176	0.110	0.072	0.369	0.147	0.119	0.160
N° 13	0.206	0.005	0.031	0.120	0.004	0.022	0.188	0.279	0.406	0.764	0.773	1.271
N° 14	0.101	0.100	0.144	0.202	0.077	0.187	0.163	0.214	0.371	0.588	0.696	0.934
N° 15	0.065	0.189	0.488	0.621	0.715	0.972	1.387	1.835	2.326	3.082	3.058	4.603
N° 16	0.154	0.116	0.115	0.203	0.352	0.549	0.645	0.867	1.323	1.732	1.644	3.060
N° 17	0.277	0.022	0.068	0.012	0.165	0.006	0.166	0.057	0.066	0.146	0.192	0.540
N° 18	0.050	0.046	0.022	0.172	0.218	0.098	0.278	0.146	0.814	0.299	0.321	2.094
N° 19	0.072	0.153	0.206	0.357	0.337	0.317	0.341	0.571	0.584	0.774	0.576	2.030
N° 20	0.175	0.267	0.510	0.798	0.978	1.228	1.502	2.033	2.497	2.895	2.898	4.312
N° 21	0.124	0.025	0.290	0.171	0.272	0.303	0.186	0.360	0.741	1.026	1.143	2.563
N° 22	0.175	0.106	0.205	0.438	0.446	0.432	0.374	0.330	0.291	0.619	0.630	1.064
N° 23	0.031	0.078	0.092	0.084	0.145	0.232	0.267	0.496	0.618	0.825	0.761	0.150
N° 24	0.073	0.141	0.124	0.090	0.132	0.192	0.114	0.095	0.076	0.240	0.169	0.893
N° 25	0.176	0.012	0.045	0.177	0.430	0.657	0.430	0.535	0.749	1.115	1.036	2.634
N° 26	0.074	0.120	0.157	0.191	0.359	0.334	0.416	0.094	0.242	0.210	0.291	0.287
N° 27	0.063	0.011	0.137	0.230	0.211	0.470	0.490	0.668	0.772	1.132	1.143	2.050
N° 28	0.059	0.055	0.225	0.418	0.252	0.518	0.730	0.922	1.162	1.864	1.945	2.865
N° 29	0.123	0.144	0.153	0.274	0.372	0.592	0.723	0.710	1.055	0.936	0.913	0.976
N° 30	0.122	0.314	0.450	0.514	0.742	1.112	1.526	2.026	2.635	3.289	3.404	4.376
N° 31	0.182	0.198	0.225	0.359	0.597	1.406	1.877	2.520	3.104	3.347	3.494	0.989

## 52. IIO1, Module 4

Ta=25°C; +VCC=30V; -VCC=GND; VCM=+15V



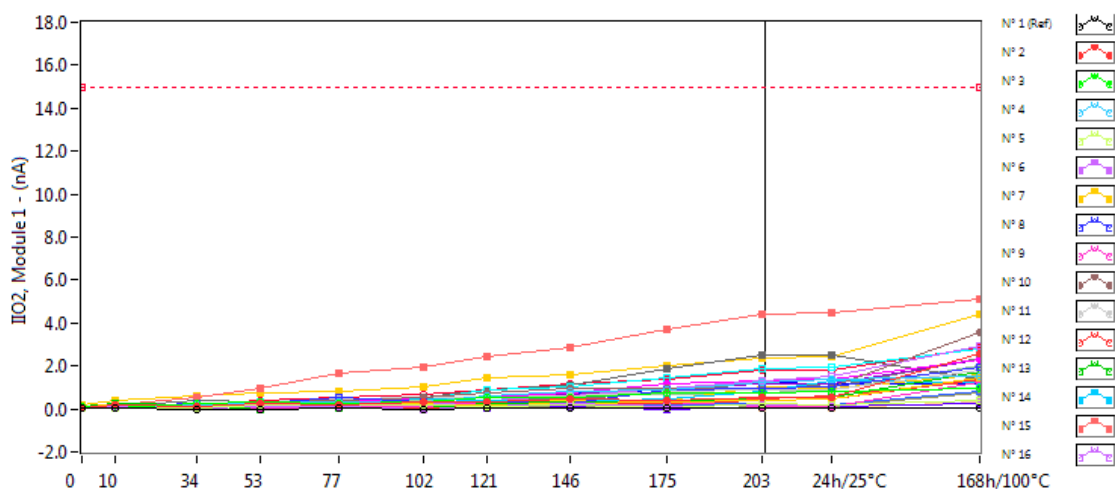
IIO1, Module 4 . (nA)

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)	0.234	0.242	0.253	0.246	0.236	0.242	0.238	0.221	0.232	0.224	0.230	0.219
N° 2	0.014	0.046	0.301	0.543	0.805	1.128	1.348	1.904	2.505	3.299	3.379	4.881
N° 3	0.110	0.107	0.158	0.154	0.204	0.462	0.729	0.811	1.295	1.578	1.736	1.887
N° 4	0.003	0.046	0.089	0.096	0.075	0.255	0.148	0.293	0.260	0.176	0.323	1.269
N° 5	0.022	0.041	0.123	0.337	0.709	1.117	1.311	1.682	2.217	3.108	3.127	1.672
N° 6	0.070	0.078	0.033	0.050	0.166	0.029	0.122	0.081	0.077	0.081	0.064	0.221
N° 7	0.036	0.048	0.020	0.027	0.111	0.373	0.439	0.737	0.917	1.245	1.126	2.607
N° 8	0.052	0.206	0.523	0.846	0.741	0.684	0.833	1.223	1.255	1.329	1.385	2.546
N° 9	0.010	0.024	0.124	0.012	0.084	0.226	0.324	0.543	0.587	0.845	0.861	1.971
N° 10	0.144	0.166	0.338	0.510	0.697	0.901	1.306	1.695	2.223	2.942	2.857	4.530
N° 11	0.001	0.313	0.259	0.184	0.252	0.249	0.298	0.420	0.441	0.634	0.750	0.967
N° 12	0.071	0.202	0.184	0.221	0.349	0.359	0.357	0.319	0.320	0.606	0.576	1.414
N° 13	0.294	0.232	0.054	0.256	0.460	0.691	0.539	0.623	0.854	0.978	0.979	2.338
N° 14	0.008	0.189	0.226	0.307	0.392	0.539	0.644	0.796	1.080	1.388	1.515	0.998
N° 15	0.063	0.137	0.314	0.294	0.620	0.895	1.076	1.296	1.646	2.056	2.036	3.766
N° 16	0.017	0.038	0.113	0.140	0.506	0.598	0.640	0.734	1.044	1.151	1.069	3.173
N° 17	0.180	0.004	0.242	0.080	0.220	0.321	0.493	0.813	1.076	1.097	1.139	0.688
N° 18	0.104	0.058	0.025	0.425	0.356	1.186	0.656	1.674	1.689	2.706	3.490	3.157
N° 19	0.031	0.062	0.011	0.044	0.140	0.015	0.297	0.383	0.485	0.746	0.776	2.399
N° 20	0.011	0.049	0.133	0.133	0.099	0.377	0.647	0.725	1.014	1.521	1.429	2.774
N° 21	0.093	0.001	0.016	0.077	0.056	0.017	0.252	0.276	0.438	0.677	0.655	1.842
N° 22	0.058	0.086	0.254	0.241	0.029	0.160	0.371	0.514	0.722	0.862	0.983	1.119
N° 23	0.011	0.031	0.074	0.055	0.229	0.526	0.585	0.444	0.722	1.260	1.433	1.322
N° 24	0.023	0.011	0.080	0.123	0.194	0.296	0.511	0.889	1.105	1.436	1.465	1.627
N° 25	0.002	0.060	0.260	0.188	0.491	0.733	0.966	1.131	1.450	1.961	2.031	3.312
N° 26	0.194	0.078	0.021	0.051	0.061	0.146	0.034	0.207	0.257	0.196	0.378	0.640
N° 27	0.025	0.003	0.111	0.227	0.004	0.081	0.078	0.181	0.294	0.112	0.097	0.875
N° 28	0.054	0.009	0.041	0.190	0.365	0.396	0.358	0.587	0.901	1.206	1.249	2.516
N° 29	0.047	0.070	0.182	0.397	0.186	0.243	0.312	0.258	0.432	0.296	0.249	0.730
N° 30	0.174	0.210	0.345	0.407	0.567	0.704	1.020	1.151	1.337	1.572	1.401	3.433
N° 31	0.001	0.052	0.159	0.507	0.425	0.618	0.670	1.043	1.468	1.814	1.712	1.416

### 53. IIO2, Module 1

Ta=25°C; +VCC=2V; -VCC=-28V; VCM=-13V



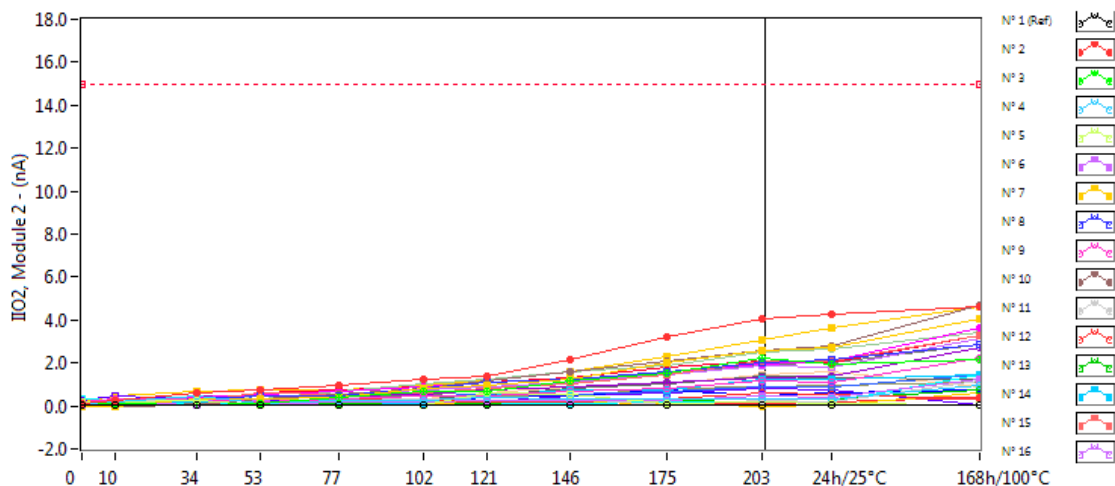
IIO2, Module 1 . (nA)

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)	0.033	0.014	0.002	0.003	0.028	0.004	0.012	0.042	0.048	0.032	0.049	0.054
N° 2	0.065	0.198	0.123	0.250	0.182	0.296	0.295	0.461	0.411	0.514	0.551	2.580
N° 3	0.081	0.072	0.233	0.302	0.231	0.345	0.555	0.546	0.762	0.720	0.790	0.991
N° 4	0.115	0.046	0.210	0.324	0.339	0.354	0.592	0.783	0.885	1.260	1.393	1.544
N° 5	0.020	0.014	0.070	0.205	0.209	0.167	0.134	0.161	0.060	0.231	0.163	0.424
N° 6	0.043	0.115	0.026	0.084	0.113	0.004	0.096	0.275	0.104	0.150	0.159	0.375
N° 7	0.133	0.185	0.207	0.148	0.217	0.190	0.186	0.222	0.321	0.400	0.463	1.478
N° 8	0.091	0.080	0.275	0.287	0.524	0.342	0.324	0.259	0.895	0.966	1.056	1.952
N° 9	0.012	0.024	0.219	0.065	0.085	0.109	0.308	0.244	0.336	0.105	0.097	1.256
N° 10	0.098	0.101	0.232	0.292	0.395	0.508	0.773	0.927	0.967	0.975	1.020	3.534
N° 11	0.105	0.158	0.049	0.299	0.432	0.559	0.508	0.606	0.786	0.896	0.875	1.825
N° 12	0.084	0.071	0.012	0.120	0.076	0.036	0.131	0.203	0.277	0.418	0.500	1.388
N° 13	0.127	0.220	0.162	0.001	0.077	0.075	0.279	0.293	0.299	0.567	0.544	1.738
N° 14	0.040	0.145	0.067	0.137	0.235	0.437	0.403	0.310	0.479	0.841	1.318	1.233
N° 15	0.035	0.217	0.543	0.926	1.631	1.913	2.424	2.859	3.739	4.402	4.484	5.079
N° 16	0.085	0.090	0.051	0.082	0.138	0.183	0.428	0.635	0.986	1.317	1.502	2.915
N° 17	0.081	0.069	0.144	0.256	0.292	0.248	0.396	0.401	0.421	1.038	0.960	1.615
N° 18	0.110	0.096	0.242	0.248	0.387	0.462	0.548	0.743	1.188	1.298	1.371	2.298
N° 19	0.040	0.069	0.048	0.152	0.325	0.344	0.519	0.663	0.960	1.168	1.136	2.309
N° 20	0.030	0.069	0.226	0.150	0.428	0.421	0.564	0.575	0.665	0.776	0.907	2.039
N° 21	0.083	0.253	0.126	0.313	0.363	0.484	0.889	1.023	1.457	1.842	1.909	2.810
N° 22	0.025	0.035	0.095	0.175	0.091	0.160	0.294	0.313	0.364	0.476	0.580	1.305
N° 23	0.056	0.123	0.182	0.170	0.321	0.570	0.879	1.075	1.884	2.505	2.474	1.391
N° 24	0.102	0.162	0.190	0.075	0.046	0.049	0.201	0.230	0.161	0.226	0.177	0.849
N° 25	0.117	0.126	0.161	0.362	0.547	0.669	0.878	1.183	1.397	1.814	1.798	2.853
N° 26	0.144	0.044	0.226	0.068	0.212	0.330	0.527	0.734	0.853	1.235	1.197	1.180
N° 27	0.043	0.059	0.102	0.161	0.302	0.100	0.154	0.073	0.265	0.131	0.114	0.748
N° 28	0.139	0.083	0.397	0.347	0.300	0.456	0.505	0.470	0.733	1.274	1.010	2.367
N° 29	0.083	0.087	0.122	0.051	0.217	0.008	0.060	0.088	0.003	0.078	0.123	0.233
N° 30	0.179	0.374	0.588	0.737	0.807	1.008	1.419	1.594	1.988	2.380	2.403	4.435
N° 31	0.098	0.093	0.041	0.133	0.097	0.031	0.063	0.100	0.145	0.018	0.046	0.329

## 54. IIO2, Module 2

Ta=25°C; +VCC=2V; -VCC=-28V; VCM=-13V



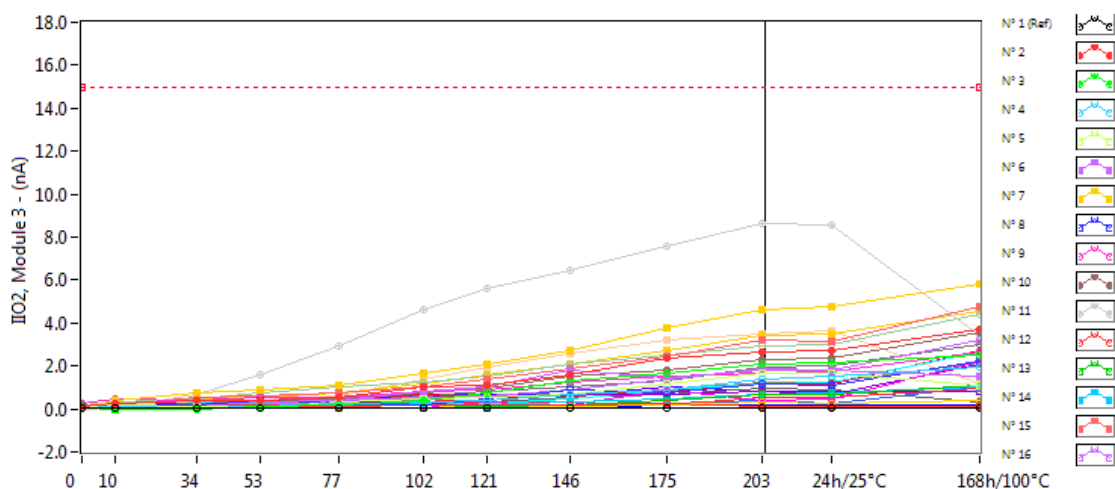
IIO2, Module 2 . (nA)

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)	0.026	0.026	0.025	0.016	0.010	0.026	0.034	0.012	0.020	0.016	0.021	0.011
N° 2	0.088	0.252	0.595	0.754	0.970	1.230	1.369	2.165	3.202	4.029	4.236	4.631
N° 3	0.045	0.078	0.039	0.099	0.427	0.703	0.709	1.163	1.539	2.231	1.974	2.121
N° 4	0.121	0.215	0.447	0.126	0.275	0.243	0.374	0.311	0.353	0.315	0.350	0.923
N° 5	0.167	0.153	0.254	0.043	0.013	0.071	0.600	0.539	0.135	0.149	0.146	0.056
N° 6	0.056	0.162	0.075	0.015	0.194	0.194	0.271	0.232	0.277	0.458	0.406	1.232
N° 7	0.006	0.003	0.294	0.302	0.407	0.798	0.924	1.247	2.001	2.579	2.727	4.057
N° 8	0.048	0.025	0.313	0.487	0.435	0.820	1.064	1.212	1.594	2.010	2.130	2.884
N° 9	0.148	0.306	0.312	0.184	0.322	0.466	0.497	0.664	0.812	1.180	1.111	2.212
N° 10	0.088	0.003	0.012	0.323	0.542	0.797	1.191	1.618	2.081	2.605	2.789	4.693
N° 11	0.204	0.227	0.266	0.461	0.363	0.356	0.392	0.319	0.067	0.232	0.214	1.143
N° 12	0.083	0.070	0.058	0.139	0.312	0.284	0.203	0.160	0.327	0.573	0.520	0.295
N° 13	0.026	0.114	0.009	0.043	0.146	0.038	0.142	0.351	0.239	0.339	0.308	0.748
N° 14	0.008	0.107	0.195	0.087	0.160	0.101	0.434	0.714	0.765	1.226	1.270	1.484
N° 15	0.044	0.084	0.232	0.607	0.521	0.635	0.846	0.999	1.459	2.055	2.075	3.314
N° 16	0.039	0.130	0.237	0.220	0.516	0.715	0.921	1.121	1.428	1.883	1.770	3.159
N° 17	0.055	0.014	0.044	0.124	0.086	0.082	0.155	0.187	0.118	0.007	0.016	0.591
N° 18	0.052	0.165	0.363	0.502	0.703	0.910	1.069	1.243	1.620	1.930	2.072	3.665
N° 19	0.169	0.176	0.440	0.500	0.467	0.510	0.757	0.903	1.121	1.324	1.378	2.702
N° 20	0.002	0.114	0.256	0.340	0.704	1.030	1.246	1.600	1.854	2.541	2.664	3.451
N° 21	0.318	0.221	0.030	0.157	0.283	0.269	0.106	0.123	0.162	0.162	0.213	1.452
N° 22	0.168	0.209	0.273	0.318	0.184	0.259	0.124	0.156	0.160	0.138	0.175	0.390
N° 23	0.079	0.051	0.013	0.060	0.183	0.335	0.455	0.792	1.038	1.374	1.307	1.225
N° 24	0.025	0.010	0.162	0.461	0.473	0.579	0.504	0.563	0.672	0.889	0.870	1.460
N° 25	0.145	0.259	0.283	0.577	0.767	0.883	1.090	1.313	1.799	2.063	1.984	3.282
N° 26	0.028	0.029	0.150	0.092	0.115	0.150	0.385	0.443	0.713	0.450	0.590	0.775
N° 27	0.046	0.086	0.067	0.098	0.167	0.308	0.439	0.494	0.827	0.888	0.940	1.080
N° 28	0.044	0.023	0.132	0.296	0.399	0.496	0.800	1.093	1.461	1.943	1.988	2.836
N° 29	0.273	0.452	0.353	0.258	0.207	0.249	0.161	0.453	0.579	0.837	0.720	0.011
N° 30	0.206	0.484	0.702	0.715	0.771	0.946	1.191	1.568	2.272	3.071	3.606	4.651
N° 31	0.105	0.089	0.034	0.008	0.254	0.351	0.605	0.880	1.006	1.460	1.564	0.910

## 55. IIO2, Module 3

Ta=25°C; +VCC=2V; -VCC=-28V; VCM=-13V



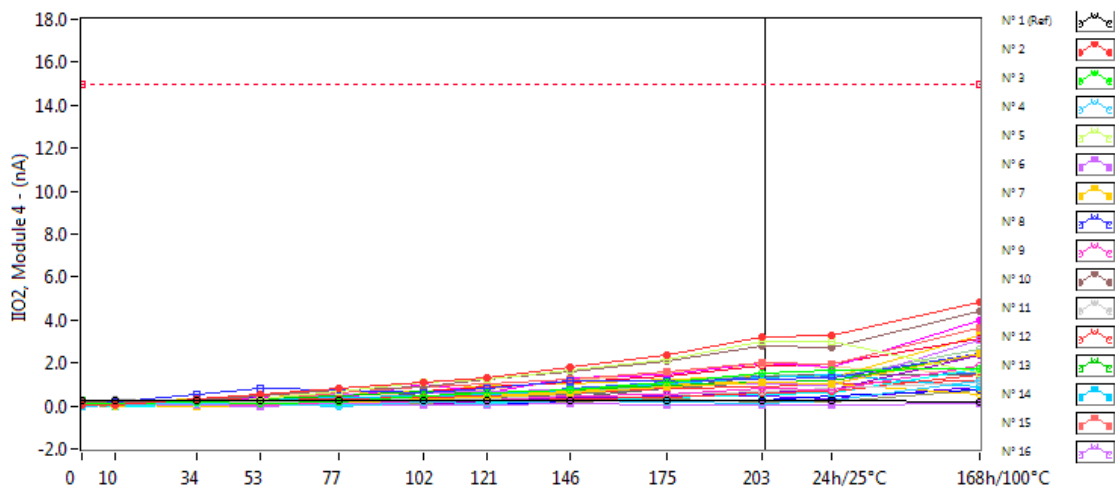
IIO2, Module 3 . (nA)

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)	0.056	0.054	0.042	0.046	0.040	0.046	0.033	0.058	0.056	0.063	0.054	0.062
N° 2	0.131	0.280	0.389	0.374	0.532	1.004	1.116	1.588	2.360	2.651	2.731	3.693
N° 3	0.052	0.006	0.004	0.099	0.166	0.391	0.767	1.302	1.690	2.094	2.186	2.517
N° 4	0.034	0.094	0.021	0.105	0.268	0.307	0.368	0.669	0.890	1.357	1.504	1.968
N° 5	0.025	0.161	0.083	0.028	0.354	0.470	0.531	0.675	1.202	1.677	1.650	1.109
N° 6	0.019	0.091	0.100	0.344	0.426	0.797	1.053	1.806	1.477	1.810	1.826	1.528
N° 7	0.032	0.362	0.725	0.865	1.117	1.687	2.104	2.750	3.749	4.648	4.738	5.851
N° 8	0.128	0.082	0.157	0.399	0.220	0.203	0.460	0.871	0.755	1.198	1.082	2.250
N° 9	0.243	0.437	0.425	0.520	0.542	0.795	0.882	1.212	1.552	1.635	1.700	2.664
N° 10	0.143	0.111	0.262	0.410	0.430	0.769	0.965	1.502	1.800	2.327	2.336	3.566
N° 11	0.002	0.072	0.652	1.610	2.936	4.641	5.594	6.435	7.587	8.639	8.585	3.453
N° 12	0.004	0.024	0.129	0.154	0.146	0.212	0.176	0.177	0.282	0.098	0.093	0.117
N° 13	0.213	0.004	0.073	0.141	0.077	0.018	0.098	0.181	0.364	0.701	0.678	1.111
N° 14	0.104	0.104	0.184	0.223	0.039	0.219	0.204	0.320	0.459	0.651	0.713	1.055
N° 15	0.074	0.196	0.527	0.640	0.741	1.002	1.414	1.901	2.404	3.193	3.141	4.731
N° 16	0.155	0.116	0.119	0.177	0.389	0.559	0.612	0.903	1.352	1.870	1.778	3.181
N° 17	0.276	0.024	0.061	0.049	0.131	0.055	0.156	0.117	0.172	0.301	0.235	0.393
N° 18	0.045	0.029	0.069	0.139	0.132	0.071	0.313	0.188	0.894	0.428	0.450	2.193
N° 19	0.066	0.183	0.233	0.337	0.335	0.335	0.411	0.652	0.688	0.823	0.677	2.057
N° 20	0.173	0.301	0.468	0.761	1.039	1.220	1.506	2.095	2.486	2.913	2.994	4.432
N° 21	0.128	0.009	0.320	0.233	0.334	0.343	0.254	0.448	0.869	1.155	1.225	2.681
N° 22	0.174	0.088	0.205	0.393	0.437	0.448	0.284	0.296	0.203	0.510	0.552	0.988
N° 23	0.025	0.089	0.122	0.142	0.223	0.298	0.294	0.555	0.674	0.954	0.865	0.305
N° 24	0.075	0.129	0.095	0.080	0.168	0.229	0.009	0.173	0.226	0.414	0.251	1.037
N° 25	0.170	0.009	0.013	0.151	0.447	0.668	0.507	0.594	0.815	1.196	1.143	2.724
N° 26	0.078	0.086	0.105	0.138	0.270	0.256	0.418	0.016	0.165	0.187	0.194	0.185
N° 27	0.067	0.026	0.182	0.263	0.287	0.496	0.602	0.683	0.872	1.262	1.270	2.164
N° 28	0.050	0.046	0.244	0.420	0.325	0.606	0.782	0.999	1.329	1.919	2.023	2.979
N° 29	0.117	0.147	0.141	0.221	0.366	0.607	0.642	0.609	1.010	0.829	0.782	0.850
N° 30	0.125	0.359	0.473	0.529	0.762	1.175	1.581	2.077	2.743	3.433	3.463	4.526
N° 31	0.197	0.166	0.296	0.370	0.608	1.397	1.947	2.611	3.183	3.472	3.637	1.137

## 56. IIO2, Module 4

Ta=25°C; +VCC=2V; -VCC=-28V; VCM=-13V



IIO2, Module 4 . (nA)

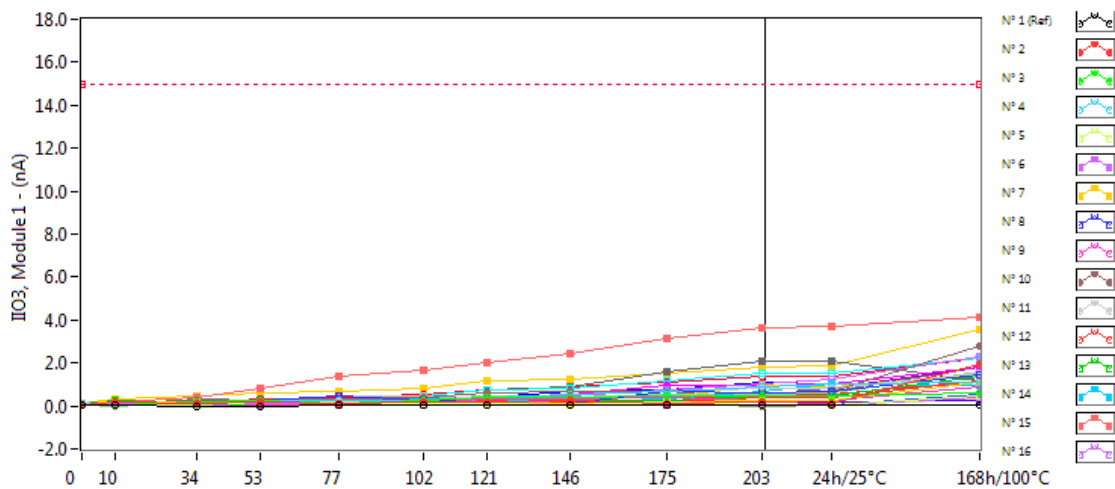
Max = 15.0

	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)	0.234	0.234	0.254	0.243	0.236	0.247	0.240	0.219	0.232	0.226	0.224	0.213
N° 2	0.022	0.020	0.315	0.535	0.815	1.107	1.301	1.828	2.391	3.205	3.271	4.797
N° 3	0.102	0.105	0.150	0.135	0.188	0.449	0.607	0.714	1.111	1.491	1.631	1.760
N° 4	0.001	0.061	0.127	0.107	0.006	0.216	0.095	0.226	0.149	0.092	0.222	1.153
N° 5	0.029	0.025	0.118	0.322	0.689	1.094	1.274	1.661	2.190	3.015	3.018	1.541
N° 6	0.065	0.135	0.024	0.001	0.128	0.044	0.020	0.086	0.029	0.009	0.010	0.095
N° 7	0.027	0.060	0.001	0.001	0.108	0.299	0.369	0.609	0.899	1.124	1.018	2.459
N° 8	0.060	0.178	0.502	0.818	0.755	0.634	0.824	1.139	1.172	1.214	1.297	2.416
N° 9	0.013	0.017	0.111	0.010	0.085	0.206	0.272	0.484	0.519	0.787	0.774	1.849
N° 10	0.151	0.165	0.286	0.455	0.734	0.901	1.245	1.620	2.117	2.808	2.739	4.410
N° 11	0.003	0.335	0.196	0.215	0.279	0.318	0.347	0.481	0.556	0.663	0.829	1.119
N° 12	0.068	0.177	0.229	0.237	0.327	0.360	0.440	0.339	0.395	0.636	0.670	1.439
N° 13	0.286	0.261	0.075	0.318	0.468	0.711	0.635	0.743	0.972	1.078	1.158	2.443
N° 14	0.003	0.186	0.231	0.275	0.389	0.478	0.543	0.749	0.999	1.286	1.459	0.886
N° 15	0.072	0.143	0.285	0.288	0.578	0.864	1.049	1.268	1.575	1.990	1.936	3.651
N° 16	0.009	0.010	0.107	0.148	0.524	0.612	0.663	0.750	0.932	1.029	0.967	3.049
N° 17	0.184	0.000	0.219	0.092	0.176	0.258	0.452	0.704	1.033	1.076	1.036	0.555
N° 18	0.100	0.053	0.017	0.413	0.298	1.060	0.611	1.329	1.456	2.044	1.818	3.999
N° 19	0.033	0.073	0.043	0.069	0.181	0.035	0.254	0.361	0.378	0.694	0.780	2.337
N° 20	0.015	0.061	0.113	0.110	0.082	0.334	0.600	0.669	0.928	1.486	1.343	2.634
N° 21	0.095	0.000	0.030	0.071	0.041	0.015	0.195	0.225	0.394	0.520	0.590	1.721
N° 22	0.053	0.078	0.220	0.298	0.042	0.195	0.441	0.592	0.819	0.917	0.996	1.169
N° 23	0.014	0.051	0.083	0.007	0.270	0.575	0.628	0.421	0.806	1.371	1.460	1.439
N° 24	0.031	0.034	0.083	0.136	0.194	0.295	0.472	0.832	1.064	1.386	1.355	1.501
N° 25	0.007	0.088	0.221	0.184	0.495	0.656	0.904	1.077	1.373	1.900	1.937	3.149
N° 26	0.200	0.072	0.039	0.068	0.053	0.150	0.036	0.240	0.274	0.253	0.481	0.761
N° 27	0.023	0.002	0.088	0.210	0.023	0.136	0.139	0.217	0.339	0.182	0.173	0.766
N° 28	0.051	0.021	0.068	0.134	0.336	0.348	0.304	0.535	0.841	1.117	1.160	2.398
N° 29	0.044	0.072	0.215	0.384	0.231	0.246	0.340	0.327	0.494	0.465	0.347	0.859
N° 30	0.174	0.209	0.310	0.378	0.566	0.679	0.989	1.032	1.219	1.396	1.333	3.256
N° 31	0.010	0.039	0.225	0.565	0.464	0.593	0.759	1.167	1.556	1.910	1.828	1.509



## 57. IIO3, Module 1

Ta=25°C; +VCC=5V; -VCC=GND; VCM=+1.4V



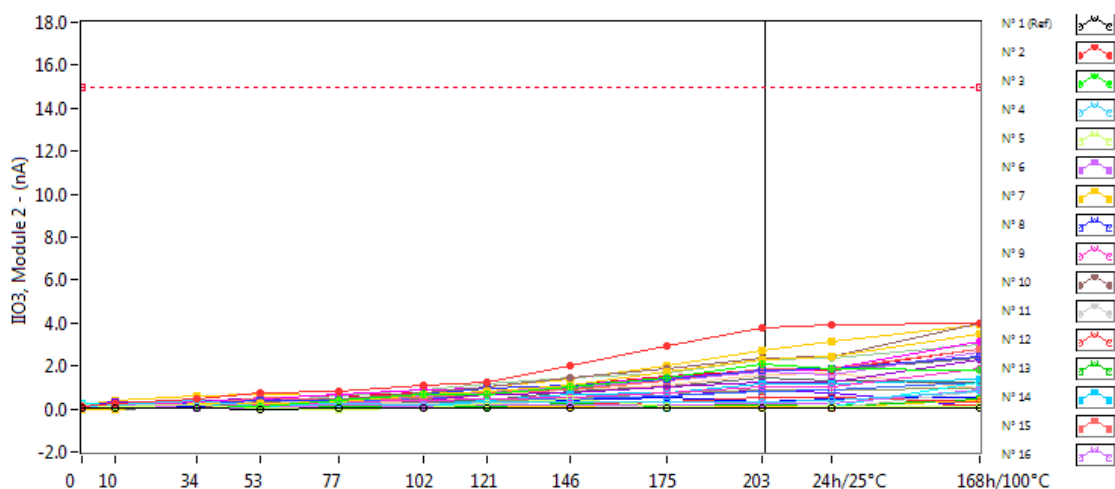
IIO3, Module 1 . (nA)

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)	0.031	0.013	0.006	0.000	0.023	0.009	0.012	0.034	0.042	0.029	0.038	0.044
N° 2	0.063	0.201	0.079	0.202	0.130	0.190	0.162	0.228	0.092	0.158	1.018	1.976
N° 3	0.067	0.062	0.152	0.229	0.147	0.233	0.410	0.407	0.491	0.471	0.477	0.624
N° 4	0.100	0.019	0.166	0.238	0.249	0.267	0.423	0.520	0.653	0.900	1.011	1.098
N° 5	0.034	0.008	0.058	0.183	0.159	0.089	0.086	0.076	0.176	0.058	0.021	0.443
N° 6	0.026	0.109	0.029	0.078	0.052	0.021	0.118	0.274	0.127	0.008	0.049	0.363
N° 7	0.124	0.153	0.168	0.150	0.166	0.103	0.102	0.102	0.165	0.226	0.221	1.082
N° 8	0.078	0.041	0.175	0.224	0.430	0.227	0.186	0.124	0.648	0.620	0.706	1.476
N° 9	0.021	0.020	0.188	0.035	0.079	0.162	0.290	0.290	0.363	0.235	0.231	0.886
N° 10	0.091	0.079	0.233	0.280	0.321	0.417	0.636	0.708	0.662	0.617	0.647	2.798
N° 11	0.077	0.094	0.036	0.277	0.452	0.493	0.427	0.524	0.697	0.817	0.821	1.535
N° 12	0.076	0.102	0.020	0.091	0.041	0.055	0.116	0.184	0.213	0.381	0.410	1.142
N° 13	0.095	0.225	0.135	0.015	0.040	0.073	0.213	0.235	0.271	0.484	0.482	1.411
N° 14	0.029	0.104	0.083	0.050	0.237	0.342	0.353	0.179	0.340	0.658	1.050	0.970
N° 15	0.017	0.188	0.424	0.834	1.373	1.637	2.043	2.439	3.138	3.650	3.738	4.154
N° 16	0.059	0.083	0.077	0.049	0.095	0.117	0.324	0.484	0.752	1.011	1.219	2.325
N° 17	0.066	0.045	0.119	0.185	0.308	0.226	0.419	0.416	0.417	0.961	0.899	1.428
N° 18	0.092	0.043	0.188	0.176	0.304	0.322	0.397	0.550	0.962	0.968	1.057	1.783
N° 19	0.036	0.066	0.004	0.139	0.181	0.254	0.361	0.507	0.734	0.848	0.844	1.779
N° 20	0.017	0.003	0.204	0.105	0.327	0.332	0.447	0.375	0.501	0.514	0.625	1.577
N° 21	0.085	0.231	0.108	0.285	0.306	0.432	0.741	0.834	1.158	1.513	1.544	2.212
N° 22	0.020	0.034	0.098	0.159	0.084	0.152	0.266	0.324	0.369	0.436	0.549	1.147
N° 23	0.054	0.086	0.157	0.137	0.250	0.495	0.778	0.912	1.577	2.113	2.065	1.142
N° 24	0.073	0.110	0.195	0.099	0.093	0.069	0.099	0.031	0.018	0.020	0.011	0.519
N° 25	0.097	0.102	0.081	0.302	0.414	0.503	0.721	0.871	1.094	1.411	1.365	2.224
N° 26	0.123	0.041	0.196	0.030	0.122	0.231	0.420	0.650	0.737	1.067	1.053	0.988
N° 27	0.022	0.040	0.091	0.127	0.255	0.069	0.091	0.065	0.125	0.004	0.023	0.475
N° 28	0.113	0.060	0.346	0.264	0.204	0.370	0.363	0.340	0.547	0.898	0.690	1.822
N° 29	0.045	0.035	0.087	0.025	0.141	0.032	0.141	0.170	0.076	0.180	0.177	0.266
N° 30	0.147	0.293	0.452	0.619	0.675	0.842	1.136	1.254	1.555	1.826	1.843	3.557
N° 31	0.078	0.062	0.016	0.086	0.096	0.027	0.068	0.024	0.105	0.053	0.043	0.321

## 58. IIO3, Module 2

Ta=25°C; +VCC=5V; -VCC=GND; VCM=+1.4V



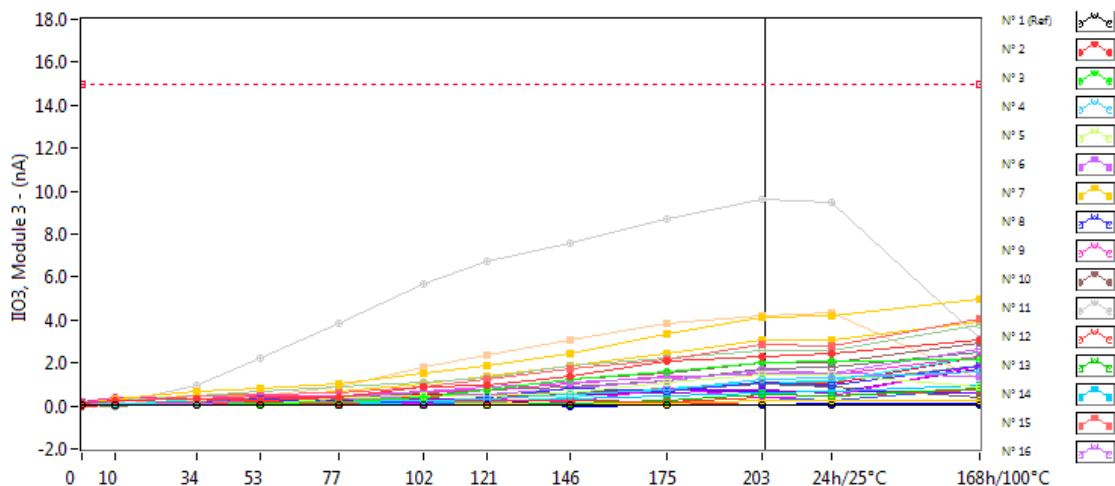
IIO3, Module 2 . (nA)

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)	0.021	0.028	0.023	0.006	0.011	0.024	0.034	0.015	0.015	0.019	0.022	0.011
N° 2	0.082	0.227	0.496	0.712	0.847	1.118	1.269	2.002	2.940	3.755	3.928	4.000
N° 3	0.038	0.065	0.042	0.079	0.427	0.657	0.645	1.062	1.454	2.061	1.868	1.830
N° 4	0.107	0.181	0.386	0.126	0.250	0.207	0.339	0.330	0.332	0.302	0.367	0.788
N° 5	0.141	0.143	0.195	0.012	0.002	0.062	0.236	0.456	0.106	0.040	0.081	0.104
N° 6	0.036	0.153	0.067	0.015	0.198	0.146	0.192	0.160	0.176	0.287	0.268	0.858
N° 7	0.003	0.001	0.258	0.280	0.328	0.693	0.827	1.092	1.753	2.314	2.427	3.471
N° 8	0.037	0.035	0.240	0.394	0.404	0.683	0.931	1.066	1.397	1.823	1.883	2.414
N° 9	0.130	0.260	0.247	0.171	0.295	0.379	0.432	0.555	0.739	1.041	1.007	1.906
N° 10	0.088	0.022	0.009	0.296	0.478	0.714	1.026	1.424	1.861	2.366	2.427	3.994
N° 11	0.175	0.211	0.186	0.380	0.280	0.288	0.282	0.179	0.033	0.048	0.028	0.785
N° 12	0.059	0.045	0.027	0.087	0.260	0.251	0.203	0.171	0.343	0.558	0.503	0.328
N° 13	0.017	0.088	0.020	0.058	0.092	0.011	0.078	0.224	0.114	0.151	0.146	0.465
N° 14	0.005	0.084	0.216	0.086	0.095	0.156	0.408	0.676	0.718	1.173	1.163	1.374
N° 15	0.038	0.054	0.202	0.533	0.423	0.570	0.720	0.881	1.289	1.873	1.889	2.822
N° 16	0.011	0.094	0.170	0.167	0.397	0.615	0.800	0.995	1.304	1.714	1.601	2.667
N° 17	0.032	0.026	0.055	0.080	0.059	0.084	0.134	0.125	0.169	0.115	0.083	0.361
N° 18	0.051	0.146	0.355	0.467	0.648	0.853	0.958	1.075	1.449	1.763	1.901	3.124
N° 19	0.134	0.116	0.391	0.456	0.430	0.425	0.669	0.747	1.017	1.218	1.273	2.299
N° 20	0.007	0.110	0.236	0.307	0.638	0.889	1.151	1.446	1.673	2.325	2.395	2.985
N° 21	0.279	0.202	0.049	0.162	0.255	0.274	0.107	0.106	0.061	0.011	0.086	1.257
N° 22	0.131	0.146	0.215	0.254	0.141	0.191	0.169	0.131	0.196	0.020	0.065	0.193
N° 23	0.074	0.035	0.013	0.069	0.199	0.330	0.418	0.787	1.048	1.425	1.299	1.232
N° 24	0.021	0.020	0.182	0.391	0.359	0.546	0.475	0.494	0.635	0.850	0.857	1.251
N° 25	0.129	0.236	0.200	0.502	0.631	0.776	0.938	1.131	1.549	1.795	1.768	2.767
N° 26	0.031	0.043	0.090	0.074	0.088	0.104	0.262	0.366	0.539	0.325	0.435	0.528
N° 27	0.042	0.073	0.093	0.139	0.158	0.274	0.402	0.471	0.767	0.864	0.892	0.956
N° 28	0.036	0.003	0.147	0.288	0.368	0.437	0.719	0.984	1.302	1.778	1.804	2.387
N° 29	0.217	0.347	0.314	0.175	0.186	0.214	0.155	0.449	0.593	0.857	0.746	0.122
N° 30	0.160	0.398	0.578	0.653	0.607	0.758	1.018	1.387	2.005	2.725	3.129	3.918
N° 31	0.086	0.074	0.020	0.048	0.220	0.326	0.649	0.922	1.122	1.594	1.631	0.949

### 59. IIO3, Module 3

Ta=25°C; +VCC=5V; -VCC=GND; VCM=+1.4V



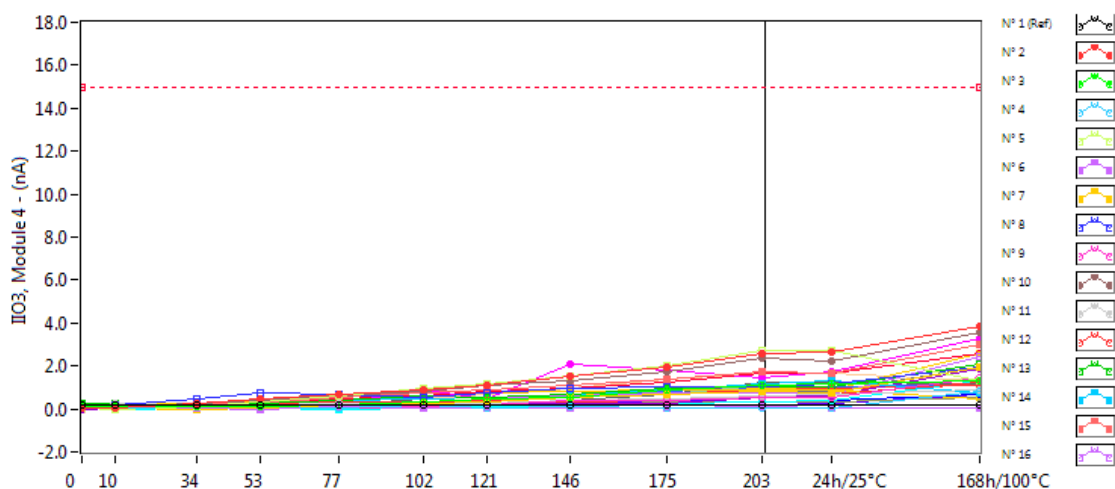
IIO3, Module 3 . (nA)

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)	0.067	0.059	0.052	0.058	0.056	0.049	0.046	0.066	0.064	0.062	0.059	0.061
N° 2	0.104	0.228	0.313	0.287	0.421	0.864	0.962	1.410	2.065	2.321	2.444	3.103
N° 3	0.039	0.009	0.029	0.103	0.184	0.360	0.737	1.236	1.604	2.015	2.089	2.179
N° 4	0.036	0.110	0.045	0.101	0.203	0.267	0.293	0.564	0.766	1.208	1.303	1.588
N° 5	0.053	0.127	0.038	0.066	0.362	0.437	0.476	0.620	1.068	1.479	1.427	0.900
N° 6	0.082	0.103	0.101	0.272	0.382	0.676	0.885	1.104	1.289	1.497	1.510	1.369
N° 7	0.020	0.331	0.665	0.784	1.018	1.495	1.894	2.468	3.335	4.120	4.224	4.956
N° 8	0.116	0.053	0.139	0.349	0.200	0.173	0.378	0.788	0.694	1.068	0.988	1.881
N° 9	0.196	0.367	0.337	0.434	0.446	0.685	0.757	1.050	1.361	1.442	1.451	2.261
N° 10	0.115	0.078	0.191	0.359	0.341	0.627	0.771	1.247	1.507	2.014	1.987	2.906
N° 11	0.021	0.113	0.942	2.216	3.868	5.659	6.702	7.551	8.728	9.630	9.497	3.129
N° 12	0.001	0.047	0.128	0.156	0.143	0.253	0.223	0.252	0.155	0.040	0.068	0.045
N° 13	0.160	0.022	0.067	0.111	0.072	0.021	0.067	0.142	0.244	0.501	0.494	0.812
N° 14	0.076	0.064	0.130	0.181	0.070	0.195	0.206	0.306	0.453	0.631	0.668	0.989
N° 15	0.057	0.167	0.454	0.561	0.610	0.856	1.270	1.707	2.140	2.869	2.807	4.044
N° 16	0.128	0.077	0.076	0.146	0.328	0.486	0.549	0.786	1.199	1.663	1.547	2.657
N° 17	0.213	0.021	0.021	0.012	0.129	0.044	0.129	0.118	0.131	0.263	0.241	0.282
N° 18	0.027	0.021	0.049	0.109	0.149	0.083	0.297	0.186	0.787	0.426	0.499	1.868
N° 19	0.054	0.119	0.148	0.287	0.286	0.299	0.338	0.540	0.599	0.745	0.611	1.716
N° 20	0.137	0.251	0.434	0.669	0.873	1.068	1.305	1.839	2.222	2.571	2.601	3.771
N° 21	0.113	0.023	0.289	0.194	0.285	0.335	0.196	0.387	0.793	1.082	1.150	2.322
N° 22	0.165	0.107	0.192	0.369	0.399	0.364	0.256	0.277	0.165	0.427	0.485	0.769
N° 23	0.010	0.065	0.068	0.118	0.168	0.318	0.313	0.587	0.728	1.013	0.913	0.376
N° 24	0.054	0.077	0.103	0.099	0.127	0.146	0.052	0.127	0.167	0.402	0.245	0.849
N° 25	0.153	0.044	0.039	0.179	0.377	0.562	0.475	0.541	0.760	1.046	1.020	2.328
N° 26	0.057	0.067	0.095	0.155	0.231	0.231	0.323	0.001	0.069	0.064	0.136	0.084
N° 27	0.055	0.005	0.165	0.201	0.246	0.458	0.503	0.604	0.792	1.059	1.104	1.842
N° 28	0.037	0.039	0.188	0.374	0.275	0.486	0.723	0.868	1.151	1.710	1.816	2.472
N° 29	0.121	0.114	0.113	0.167	0.323	0.525	0.538	0.534	0.813	0.694	0.657	0.633
N° 30	0.095	0.295	0.436	0.482	0.678	1.056	1.382	1.843	2.442	3.064	3.093	3.884
N° 31	0.151	0.113	0.284	0.466	0.860	1.794	2.377	3.097	3.814	4.185	4.303	1.258

## 60. IIO3, Module 4

Ta=25°C; +VCC=5V; -VCC=GND; VCM=+1.4V



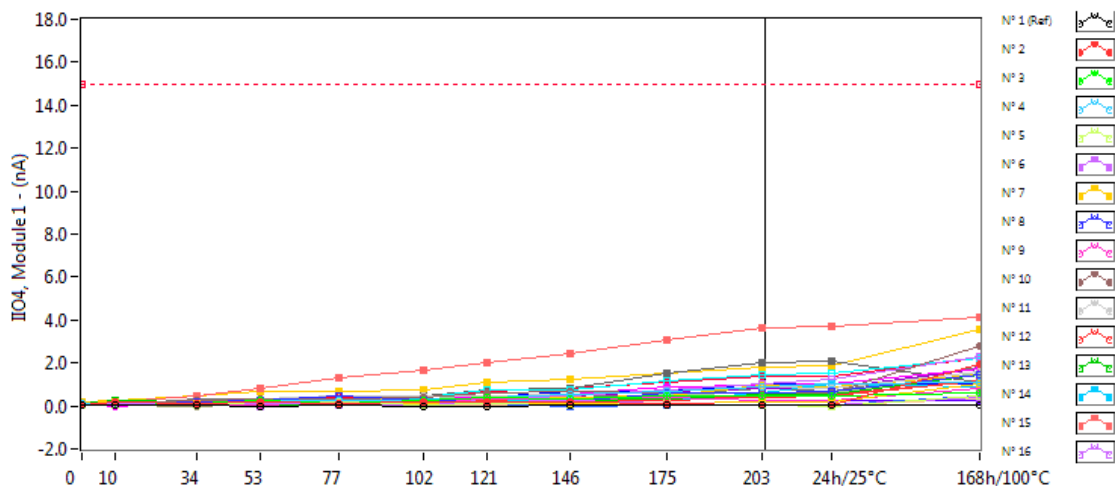
IIO3, Module 4 . (nA)

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)	0.192	0.195	0.200	0.200	0.193	0.206	0.195	0.191	0.195	0.187	0.182	0.175
N° 2	0.010	0.037	0.270	0.439	0.684	0.916	1.084	1.492	1.975	2.578	2.650	3.858
N° 3	0.087	0.101	0.137	0.090	0.156	0.351	0.468	0.526	0.858	1.084	1.193	1.292
N° 4	0.012	0.063	0.114	0.083	0.025	0.166	0.028	0.142	0.063	0.052	0.074	0.846
N° 5	0.014	0.002	0.114	0.301	0.629	0.975	1.161	1.533	1.979	2.703	2.719	1.301
N° 6	0.052	0.073	0.008	0.002	0.092	0.044	0.019	0.045	0.038	0.089	0.035	0.064
N° 7	0.048	0.031	0.007	0.021	0.089	0.281	0.295	0.513	0.687	0.810	0.764	1.918
N° 8	0.060	0.169	0.442	0.729	0.701	0.560	0.756	0.942	0.994	1.025	1.140	1.962
N° 9	0.009	0.027	0.099	0.008	0.035	0.141	0.211	0.376	0.418	0.554	0.540	1.431
N° 10	0.140	0.121	0.235	0.413	0.631	0.790	1.071	1.338	1.740	2.339	2.253	3.556
N° 11	0.014	0.288	0.185	0.190	0.252	0.231	0.284	0.377	0.484	0.595	0.671	0.888
N° 12	0.055	0.154	0.155	0.215	0.322	0.336	0.392	0.353	0.390	0.615	0.643	1.239
N° 13	0.251	0.239	0.037	0.245	0.407	0.597	0.557	0.664	0.925	1.043	1.044	2.060
N° 14	0.018	0.164	0.190	0.264	0.396	0.454	0.538	0.684	0.914	1.177	1.310	0.747
N° 15	0.053	0.132	0.243	0.271	0.560	0.775	0.913	1.090	1.367	1.710	1.637	3.024
N° 16	0.026	0.035	0.100	0.116	0.373	0.442	0.534	0.571	0.749	0.765	0.693	2.458
N° 17	0.151	0.010	0.215	0.071	0.147	0.273	0.389	0.622	0.895	0.885	0.879	0.477
N° 18	0.071	0.064	0.010	0.343	0.260	0.921	0.482	2.064	1.818	1.458	1.710	3.247
N° 19	0.002	0.041	0.010	0.057	0.177	0.046	0.192	0.258	0.251	0.519	0.592	1.861
N° 20	0.021	0.047	0.105	0.086	0.047	0.284	0.479	0.528	0.695	1.085	1.005	2.083
N° 21	0.071	0.007	0.015	0.059	0.003	0.008	0.141	0.111	0.260	0.321	0.390	1.305
N° 22	0.035	0.089	0.207	0.272	0.028	0.220	0.391	0.543	0.730	0.908	0.983	1.081
N° 23	0.014	0.035	0.086	0.036	0.200	0.464	0.519	0.369	0.704	1.231	1.242	1.180
N° 24	0.023	0.003	0.036	0.111	0.128	0.254	0.369	0.677	0.819	1.037	1.025	1.140
N° 25	0.014	0.069	0.186	0.148	0.431	0.592	0.824	0.986	1.209	1.664	1.695	2.585
N° 26	0.164	0.069	0.012	0.041	0.021	0.116	0.056	0.235	0.243	0.300	0.415	0.677
N° 27	0.032	0.018	0.079	0.188	0.002	0.110	0.125	0.190	0.359	0.293	0.324	0.503
N° 28	0.055	0.031	0.075	0.129	0.299	0.311	0.273	0.425	0.658	0.814	0.850	1.922
N° 29	0.036	0.058	0.147	0.358	0.183	0.230	0.270	0.260	0.407	0.351	0.288	0.709
N° 30	0.158	0.187	0.275	0.320	0.463	0.529	0.776	0.795	0.920	0.956	0.896	2.576
N° 31	0.004	0.008	0.163	0.475	0.399	0.483	0.650	0.992	1.374	1.689	1.640	1.299

## 61. IIO4, Module 1

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



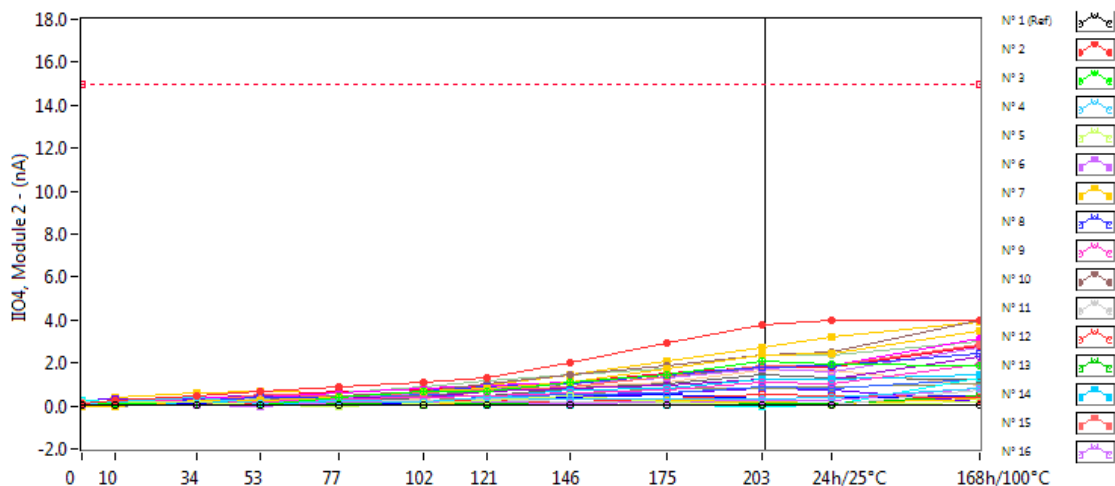
IIO4, Module 1 . (nA)

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)	0.034	0.010	0.009	0.000	0.020	0.005	0.005	0.032	0.034	0.028	0.041	0.039
N° 2	0.075	0.212	0.108	0.179	0.127	0.185	0.212	0.189	0.096	0.036	0.064	1.934
N° 3	0.071	0.020	0.123	0.231	0.140	0.219	0.371	0.354	0.459	0.469	0.459	0.583
N° 4	0.097	0.038	0.107	0.254	0.230	0.266	0.395	0.539	0.647	0.886	0.997	1.093
N° 5	0.030	0.009	0.062	0.197	0.173	0.061	0.099	0.070	0.140	0.074	0.007	0.472
N° 6	0.029	0.124	0.030	0.095	0.043	0.057	0.178	0.263	0.141	0.018	0.051	0.389
N° 7	0.124	0.162	0.133	0.123	0.143	0.133	0.113	0.080	0.142	0.197	0.207	1.052
N° 8	0.074	0.068	0.200	0.220	0.477	0.232	0.156	0.163	0.596	0.590	0.705	1.422
N° 9	0.020	0.071	0.146	0.037	0.152	0.153	0.310	0.303	0.409	0.243	0.224	0.843
N° 10	0.091	0.115	0.242	0.311	0.318	0.389	0.622	0.699	0.625	0.626	0.613	2.759
N° 11	0.079	0.078	0.073	0.322	0.464	0.471	0.445	0.523	0.677	0.877	0.800	1.566
N° 12	0.082	0.096	0.051	0.124	0.027	0.043	0.149	0.201	0.224	0.384	0.448	1.155
N° 13	0.104	0.231	0.161	0.076	0.043	0.036	0.211	0.225	0.318	0.543	0.515	1.465
N° 14	0.021	0.127	0.096	0.078	0.205	0.325	0.341	0.191	0.283	0.628	1.010	0.916
N° 15	0.008	0.192	0.444	0.832	1.341	1.650	2.049	2.407	3.068	3.616	3.672	4.107
N° 16	0.065	0.135	0.046	0.003	0.106	0.123	0.295	0.471	0.726	1.002	1.212	2.306
N° 17	0.073	0.071	0.086	0.239	0.312	0.261	0.403	0.421	0.445	0.970	0.889	1.461
N° 18	0.087	0.002	0.169	0.157	0.312	0.327	0.411	0.545	0.867	0.986	1.002	1.761
N° 19	0.028	0.053	0.011	0.097	0.214	0.243	0.401	0.473	0.673	0.812	0.798	1.731
N° 20	0.019	0.039	0.158	0.165	0.330	0.299	0.450	0.341	0.547	0.485	0.575	1.552
N° 21	0.083	0.238	0.088	0.258	0.347	0.411	0.733	0.759	1.146	1.472	1.515	2.191
N° 22	0.026	0.046	0.096	0.148	0.079	0.129	0.254	0.344	0.349	0.467	0.564	1.147
N° 23	0.056	0.078	0.197	0.144	0.223	0.493	0.766	0.841	1.539	2.037	2.060	1.089
N° 24	0.070	0.132	0.205	0.175	0.121	0.099	0.083	0.001	0.073	0.012	0.038	0.497
N° 25	0.098	0.074	0.140	0.270	0.404	0.498	0.694	0.846	1.075	1.375	1.372	2.191
N° 26	0.128	0.037	0.187	0.009	0.141	0.254	0.396	0.651	0.704	1.057	1.020	1.020
N° 27	0.026	0.052	0.007	0.113	0.219	0.072	0.083	0.031	0.097	0.041	0.002	0.461
N° 28	0.120	0.028	0.316	0.245	0.202	0.358	0.331	0.366	0.502	0.838	0.711	1.772
N° 29	0.037	0.066	0.098	0.006	0.099	0.024	0.134	0.170	0.102	0.186	0.238	0.286
N° 30	0.154	0.259	0.487	0.641	0.651	0.765	1.096	1.234	1.493	1.835	1.850	3.529
N° 31	0.079	0.050	0.023	0.103	0.078	0.012	0.010	0.045	0.082	0.045	0.052	0.349

## 62. IIO4, Module 2

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



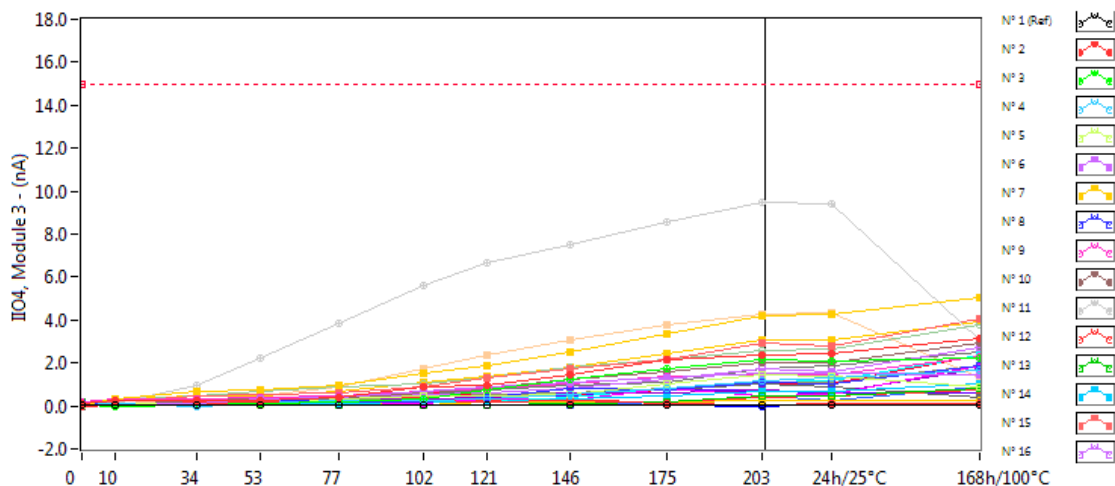
**IIO4, Module 2 . (nA)**

**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)	0.020	0.022	0.022	0.013	0.009	0.025	0.031	0.013	0.022	0.010	0.022	0.016
N° 2	0.085	0.252	0.457	0.691	0.892	1.129	1.293	2.022	2.915	3.771	3.957	4.008
N° 3	0.041	0.083	0.065	0.060	0.426	0.648	0.680	1.080	1.470	2.096	1.911	1.848
N° 4	0.109	0.189	0.369	0.143	0.261	0.210	0.362	0.313	0.354	0.331	0.421	0.825
N° 5	0.141	0.171	0.168	0.041	0.001	0.099	0.274	0.495	0.152	0.029	0.029	0.150
N° 6	0.038	0.114	0.044	0.004	0.194	0.162	0.201	0.128	0.178	0.264	0.260	0.836
N° 7	0.004	0.004	0.251	0.277	0.367	0.692	0.827	1.121	1.733	2.345	2.408	3.492
N° 8	0.038	0.048	0.271	0.406	0.397	0.684	0.912	1.058	1.450	1.816	1.888	2.451
N° 9	0.130	0.267	0.252	0.182	0.356	0.370	0.439	0.604	0.754	1.094	0.998	1.971
N° 10	0.085	0.025	0.008	0.274	0.482	0.693	1.033	1.444	1.887	2.382	2.496	4.005
N° 11	0.175	0.168	0.180	0.388	0.273	0.272	0.300	0.154	0.083	0.011	0.011	0.769
N° 12	0.055	0.053	0.010	0.111	0.297	0.237	0.234	0.163	0.333	0.530	0.500	0.362
N° 13	0.020	0.086	0.026	0.051	0.089	0.047	0.083	0.192	0.084	0.127	0.091	0.446
N° 14	0.003	0.072	0.215	0.079	0.153	0.182	0.406	0.730	0.806	1.209	1.221	1.418
N° 15	0.040	0.068	0.168	0.561	0.459	0.606	0.753	0.880	1.349	1.890	1.883	2.865
N° 16	0.015	0.092	0.148	0.164	0.393	0.633	0.807	1.030	1.291	1.732	1.602	2.687
N° 17	0.028	0.044	0.019	0.055	0.056	0.064	0.161	0.133	0.236	0.206	0.104	0.326
N° 18	0.045	0.174	0.361	0.426	0.626	0.829	0.966	1.118	1.478	1.772	1.894	3.176
N° 19	0.141	0.156	0.427	0.431	0.415	0.428	0.694	0.820	0.991	1.242	1.256	2.326
N° 20	0.004	0.116	0.175	0.304	0.625	0.868	1.159	1.430	1.733	2.363	2.398	3.019
N° 21	0.278	0.177	0.052	0.136	0.244	0.279	0.066	0.051	0.035	0.002	0.063	1.302
N° 22	0.129	0.176	0.229	0.272	0.159	0.177	0.160	0.135	0.177	0.015	0.034	0.190
N° 23	0.077	0.026	0.019	0.039	0.175	0.369	0.477	0.799	1.033	1.465	1.336	1.270
N° 24	0.019	0.016	0.177	0.386	0.411	0.568	0.429	0.520	0.634	0.862	0.804	1.263
N° 25	0.124	0.235	0.217	0.472	0.685	0.777	0.942	1.130	1.552	1.814	1.797	2.810
N° 26	0.032	0.048	0.116	0.052	0.063	0.107	0.225	0.372	0.516	0.306	0.400	0.485
N° 27	0.035	0.065	0.085	0.131	0.164	0.272	0.407	0.518	0.818	0.845	0.908	0.993
N° 28	0.039	0.006	0.148	0.321	0.343	0.476	0.740	1.002	1.297	1.776	1.841	2.402
N° 29	0.219	0.338	0.336	0.214	0.151	0.213	0.155	0.431	0.583	0.839	0.759	0.162
N° 30	0.157	0.374	0.585	0.648	0.627	0.801	0.971	1.453	2.057	2.704	3.186	3.940
N° 31	0.090	0.075	0.026	0.081	0.204	0.359	0.660	0.898	1.133	1.645	1.651	0.988

### 63. IIO4, Module 3

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



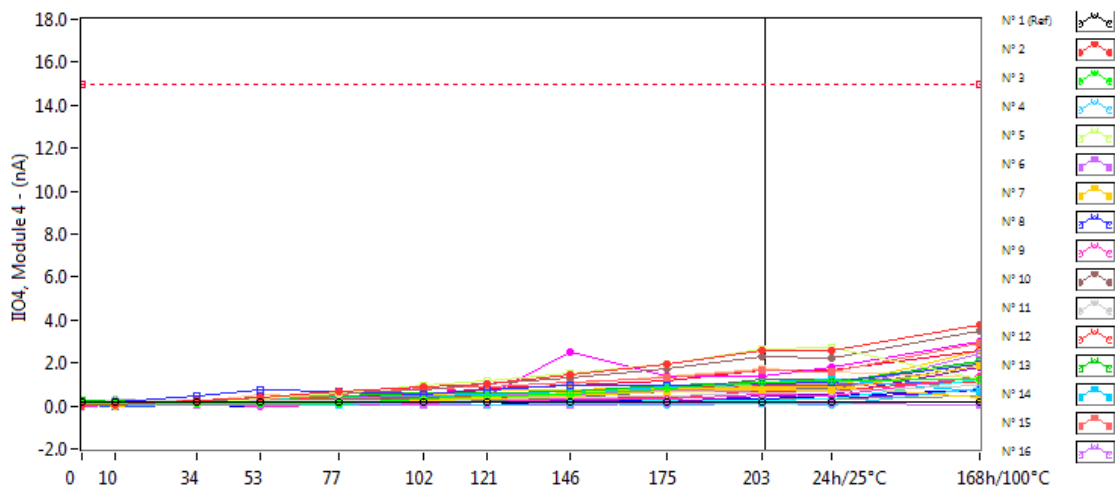
**IIO4, Module 3 . (nA)**

**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)	0.063	0.057	0.046	0.057	0.050	0.051	0.047	0.063	0.059	0.058	0.057	0.064
N° 2	0.106	0.245	0.270	0.275	0.418	0.887	0.973	1.445	2.132	2.338	2.455	3.135
N° 3	0.036	0.007	0.064	0.122	0.208	0.357	0.743	1.239	1.706	2.121	2.066	2.197
N° 4	0.041	0.091	0.007	0.101	0.235	0.270	0.338	0.566	0.845	1.179	1.324	1.641
N° 5	0.047	0.110	0.028	0.072	0.356	0.443	0.468	0.557	1.039	1.434	1.403	0.880
N° 6	0.070	0.052	0.110	0.312	0.412	0.667	0.896	1.110	1.296	1.531	1.547	1.417
N° 7	0.024	0.314	0.676	0.756	0.990	1.489	1.890	2.484	3.332	4.172	4.260	5.036
N° 8	0.115	0.048	0.140	0.321	0.186	0.175	0.427	0.824	0.727	1.100	1.020	1.897
N° 9	0.201	0.357	0.359	0.429	0.476	0.683	0.799	1.041	1.377	1.452	1.474	2.284
N° 10	0.117	0.072	0.219	0.338	0.340	0.629	0.833	1.224	1.558	2.036	2.029	2.940
N° 11	0.021	0.119	0.947	2.220	3.818	5.578	6.693	7.529	8.568	9.455	9.405	3.067
N° 12	0.002	0.043	0.113	0.153	0.158	0.262	0.206	0.229	0.109	0.033	0.098	0.096
N° 13	0.157	0.020	0.057	0.108	0.062	0.049	0.071	0.131	0.190	0.457	0.486	0.794
N° 14	0.076	0.063	0.138	0.177	0.084	0.163	0.158	0.306	0.444	0.686	0.694	1.026
N° 15	0.060	0.173	0.483	0.543	0.638	0.876	1.314	1.719	2.164	2.904	2.798	4.062
N° 16	0.132	0.098	0.067	0.151	0.305	0.513	0.593	0.805	1.250	1.699	1.583	2.697
N° 17	0.210	0.032	0.046	0.030	0.121	0.032	0.177	0.148	0.180	0.240	0.264	0.258
N° 18	0.027	0.037	0.074	0.110	0.110	0.132	0.334	0.219	0.803	0.444	0.537	1.876
N° 19	0.060	0.132	0.136	0.282	0.268	0.318	0.373	0.580	0.576	0.759	0.615	1.754
N° 20	0.136	0.256	0.448	0.709	0.889	1.063	1.318	1.825	2.182	2.579	2.633	3.795
N° 21	0.119	0.022	0.265	0.188	0.277	0.320	0.218	0.390	0.829	1.089	1.161	2.369
N° 22	0.159	0.121	0.170	0.369	0.413	0.415	0.225	0.230	0.179	0.396	0.451	0.753
N° 23	0.005	0.062	0.087	0.133	0.162	0.318	0.311	0.596	0.767	1.042	0.918	0.414
N° 24	0.062	0.083	0.084	0.104	0.106	0.171	0.026	0.067	0.195	0.447	0.268	0.880
N° 25	0.158	0.024	0.010	0.178	0.365	0.594	0.456	0.568	0.753	1.041	1.051	2.343
N° 26	0.061	0.073	0.083	0.122	0.230	0.196	0.303	0.010	0.056	0.002	0.091	0.039
N° 27	0.058	0.008	0.140	0.202	0.240	0.453	0.545	0.589	0.830	1.126	1.126	1.873
N° 28	0.035	0.061	0.186	0.343	0.237	0.549	0.725	0.940	1.132	1.743	1.870	2.523
N° 29	0.116	0.109	0.099	0.169	0.317	0.494	0.504	0.488	0.797	0.643	0.636	0.617
N° 30	0.089	0.296	0.460	0.458	0.665	1.109	1.396	1.833	2.448	3.082	3.072	3.915
N° 31	0.154	0.102	0.284	0.439	0.894	1.767	2.386	3.078	3.807	4.241	4.304	1.285

## 64. IIO4, Module 4

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



IIO4, Module 4 . (nA)

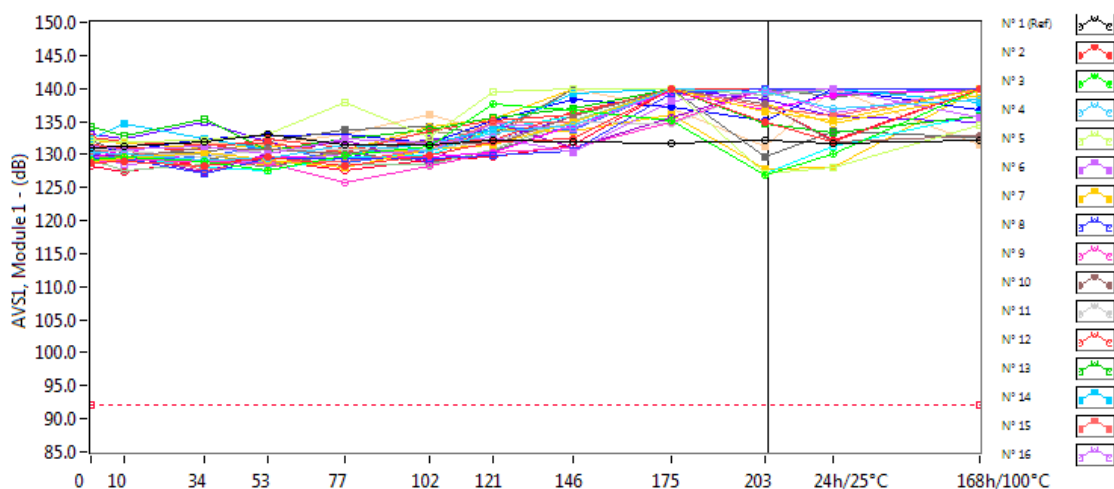
Max = 15.0

	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)	0.196	0.199	0.207	0.211	0.190	0.204	0.199	0.181	0.194	0.196	0.187	0.176
N° 2	0.014	0.038	0.240	0.412	0.668	0.901	1.031	1.457	1.943	2.564	2.602	3.805
N° 3	0.090	0.095	0.101	0.115	0.134	0.341	0.454	0.508	0.801	1.066	1.183	1.247
N° 4	0.011	0.024	0.095	0.112	0.011	0.164	0.032	0.128	0.019	0.086	0.042	0.818
N° 5	0.016	0.016	0.093	0.300	0.611	0.985	1.161	1.487	1.965	2.668	2.693	1.244
N° 6	0.052	0.107	0.042	0.017	0.118	0.028	0.028	0.033	0.079	0.108	0.086	0.048
N° 7	0.052	0.019	0.018	0.008	0.100	0.276	0.308	0.481	0.646	0.765	0.726	1.889
N° 8	0.057	0.177	0.437	0.741	0.659	0.553	0.733	0.936	0.983	1.050	1.096	1.946
N° 9	0.002	0.031	0.102	0.004	0.030	0.128	0.208	0.359	0.353	0.535	0.490	1.372
N° 10	0.142	0.106	0.214	0.382	0.604	0.728	1.049	1.340	1.719	2.318	2.253	3.527
N° 11	0.004	0.295	0.212	0.220	0.261	0.213	0.330	0.395	0.487	0.614	0.683	0.929
N° 12	0.057	0.151	0.204	0.238	0.339	0.360	0.438	0.382	0.393	0.652	0.684	1.277
N° 13	0.253	0.226	0.058	0.209	0.450	0.630	0.587	0.708	0.979	1.077	1.068	2.081
N° 14	0.014	0.168	0.215	0.262	0.419	0.436	0.514	0.654	0.884	1.106	1.258	0.694
N° 15	0.059	0.131	0.241	0.275	0.526	0.820	0.918	1.071	1.324	1.697	1.600	2.962
N° 16	0.021	0.047	0.040	0.111	0.380	0.450	0.505	0.563	0.719	0.659	0.672	2.414
N° 17	0.153	0.007	0.247	0.110	0.155	0.238	0.402	0.603	0.832	0.836	0.870	0.427
N° 18	0.075	0.041	0.033	0.312	0.279	0.940	0.489	2.476	1.385	1.354	1.803	3.032
N° 19	0.001	0.049	0.022	0.085	0.160	0.030	0.213	0.270	0.212	0.466	0.570	1.831
N° 20	0.024	0.053	0.094	0.049	0.077	0.271	0.478	0.494	0.680	1.038	1.010	2.041
N° 21	0.072	0.010	0.063	0.029	0.024	0.063	0.068	0.135	0.220	0.273	0.354	1.268
N° 22	0.042	0.084	0.188	0.285	0.047	0.223	0.389	0.549	0.807	0.976	0.992	1.110
N° 23	0.010	0.049	0.110	0.019	0.176	0.458	0.517	0.406	0.717	1.205	1.273	1.211
N° 24	0.018	0.004	0.042	0.077	0.131	0.228	0.388	0.618	0.789	1.020	1.031	1.107
N° 25	0.018	0.068	0.204	0.175	0.437	0.563	0.815	0.962	1.183	1.643	1.694	2.564
N° 26	0.167	0.044	0.060	0.004	0.035	0.085	0.055	0.236	0.253	0.290	0.474	0.713
N° 27	0.038	0.003	0.070	0.172	0.014	0.167	0.152	0.237	0.364	0.342	0.347	0.450
N° 28	0.056	0.021	0.054	0.162	0.254	0.317	0.265	0.380	0.651	0.778	0.835	1.874
N° 29	0.037	0.061	0.164	0.375	0.180	0.211	0.299	0.282	0.424	0.321	0.317	0.722
N° 30	0.164	0.196	0.258	0.365	0.416	0.484	0.721	0.774	0.887	0.886	0.894	2.547
N° 31	0.006	0.013	0.169	0.504	0.400	0.473	0.681	1.050	1.403	1.710	1.616	1.309



## 65. AVS1, Module 1

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



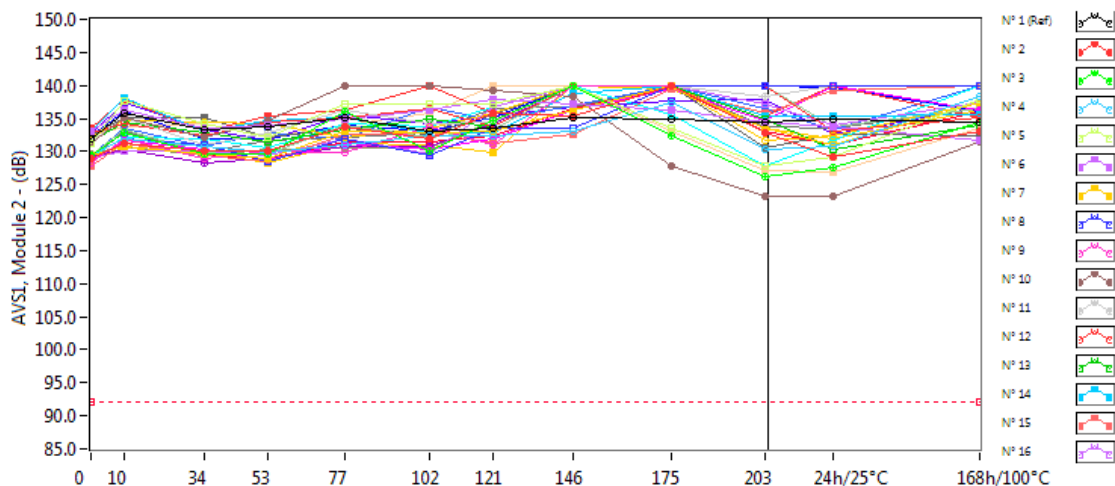
AVS1, Module 1 . (dB)

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)	131.10	131.29	131.98	133.08	131.52	131.47	132.23	131.81	131.65	132.11	131.70	132.16
N° 2	128.80	128.87	128.31	129.59	128.15	129.75	132.00	132.44	140.00	134.84	132.02	140.00
N° 3	129.08	129.57	128.98	127.47	129.94	131.22	137.65	136.76	135.15	126.94	130.10	139.85
N° 4	130.42	130.03	129.24	129.44	131.41	130.54	133.25	134.53	140.00	139.50	137.04	138.26
N° 5	132.24	131.96	132.24	133.03	137.91	132.71	139.41	140.00	140.00	127.14	128.06	134.51
N° 6	131.12	130.68	131.14	130.00	132.41	131.76	132.67	130.31	138.19	139.43	140.00	135.67
N° 7	129.03	129.35	130.29	129.11	127.96	130.70	131.42	134.93	140.00	136.40	135.22	140.00
N° 8	129.36	129.38	127.22	129.41	129.32	129.43	129.81	130.63	139.29	140.00	140.00	140.00
N° 9	128.78	129.10	129.02	128.75	125.85	128.20	130.37	131.07	135.00	140.00	140.00	140.00
N° 10	130.69	129.62	130.95	130.69	130.20	132.06	131.51	135.73	140.00	137.56	131.84	132.88
N° 11	130.82	130.65	129.65	130.87	130.68	130.66	132.12	134.84	134.64	140.00	140.00	140.00
N° 12	132.56	132.02	131.38	131.70	130.41	133.56	135.15	136.03	140.00	140.00	140.00	140.00
N° 13	134.29	132.82	135.36	130.61	132.37	133.75	135.60	136.95	140.00	134.59	133.25	135.71
N° 14	132.30	134.56	132.27	130.83	130.12	131.69	133.68	139.35	140.00	140.00	140.00	137.76
N° 15	130.36	130.68	127.49	128.89	128.89	130.84	134.94	135.00	140.00	137.12	135.84	140.00
N° 16	129.76	128.59	129.12	128.73	130.10	130.44	134.56	133.88	140.00	140.00	136.28	140.00
N° 17	132.05	131.65	131.02	131.18	130.57	134.17	135.42	140.00	140.00	137.62	134.64	138.91
N° 18	129.46	130.76	129.04	129.56	129.45	129.64	130.41	134.39	139.50	136.79	138.99	140.00
N° 19	129.84	129.76	127.39	130.01	132.22	128.68	134.83	130.98	135.57	140.00	140.00	140.00
N° 20	129.25	127.58	128.38	128.88	128.39	128.56	130.78	135.09	140.00	139.02	140.00	140.00
N° 21	129.25	129.61	127.95	127.59	129.62	129.97	133.79	135.71	140.00	127.22	131.29	135.99
N° 22	131.56	131.04	130.71	132.48	131.11	131.87	132.07	136.39	139.52	140.00	140.00	140.00
N° 23	132.21	129.99	130.23	131.94	133.75	134.18	133.09	140.00	140.00	129.68	133.60	132.54
N° 24	130.43	129.28	129.63	131.49	128.67	130.53	134.21	133.67	140.00	140.00	139.34	140.00
N° 25	128.35	127.31	129.18	129.10	127.53	129.23	129.55	131.56	140.00	137.72	132.12	140.00
N° 26	131.12	130.54	132.29	132.88	133.15	131.76	135.07	138.22	137.30	135.18	140.00	136.69
N° 27	129.67	129.56	129.99	128.49	130.55	133.49	132.60	140.00	140.00	140.00	140.00	140.00
N° 28	129.30	128.94	129.74	127.96	130.28	128.67	130.53	134.52	140.00	140.00	138.72	140.00
N° 29	133.11	132.45	134.91	131.91	129.37	132.47	132.02	135.79	140.00	138.24	135.70	134.96
N° 30	129.86	129.30	130.10	128.20	130.30	130.51	133.74	133.62	136.12	127.78	127.93	140.00
N° 31	132.46	131.68	131.67	131.57	133.07	136.11	133.32	140.00	136.86	131.20	140.00	131.53

## 66. AVS1, Module 2

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



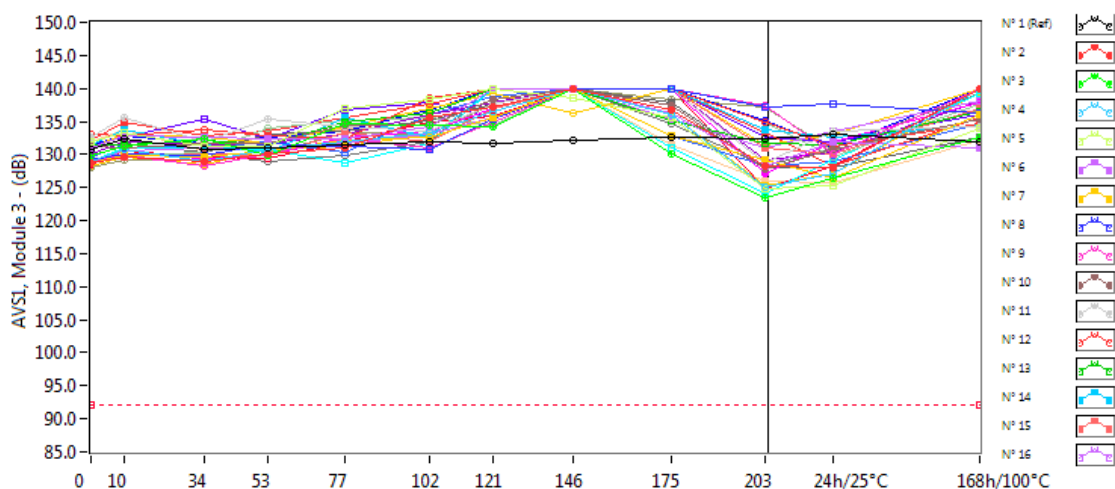
AVS1, Module 2 . (dB)

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)	131.86	135.82	133.22	133.69	135.12	133.14	133.55	135.16	134.93	134.51	134.83	134.53
N° 2	128.91	131.19	130.14	130.12	133.68	131.99	135.76	135.32	140.00	132.75	129.09	133.06
N° 3	129.36	132.83	129.74	129.68	136.04	130.05	134.67	140.00	132.48	126.09	127.49	134.42
N° 4	129.51	131.91	130.87	129.88	130.90	132.42	132.48	132.96	137.43	130.37	130.78	138.31
N° 5	131.31	137.75	134.12	132.11	137.12	137.17	137.19	140.00	133.45	127.70	129.17	137.82
N° 6	133.12	136.28	133.62	133.97	134.93	136.22	137.94	137.12	136.28	134.43	133.71	131.72
N° 7	129.43	130.83	129.56	128.93	133.07	132.80	132.98	136.35	140.00	133.63	131.07	137.31
N° 8	129.29	131.81	131.04	128.55	131.96	129.35	133.46	133.52	140.00	140.00	139.91	140.00
N° 9	128.23	131.87	129.03	130.11	129.91	133.77	130.94	140.00	140.00	140.00	140.00	140.00
N° 10	131.26	135.21	132.08	134.64	140.00	140.00	139.22	138.22	127.75	123.15	123.33	131.36
N° 11	131.47	135.11	130.92	132.79	136.35	134.28	134.47	140.00	140.00	138.29	140.00	140.00
N° 12	132.76	134.18	132.32	134.54	135.06	136.48	133.72	140.00	140.00	140.00	133.04	135.06
N° 13	131.51	134.43	132.79	131.39	133.37	134.90	133.83	140.00	140.00	134.94	130.22	134.01
N° 14	132.98	138.20	133.11	134.60	135.20	132.84	132.94	138.82	140.00	135.25	135.26	135.49
N° 15	127.90	131.20	129.41	128.57	132.65	132.85	131.16	132.68	139.45	135.92	139.21	140.00
N° 16	128.88	130.20	130.11	129.40	131.88	129.58	136.65	140.00	140.00	137.19	134.01	137.39
N° 17	132.18	134.77	134.34	134.10	132.26	133.53	135.82	140.00	140.00	131.62	132.27	137.31
N° 18	128.52	131.71	130.28	128.70	131.12	130.32	131.82	136.21	139.40	134.60	140.00	136.26
N° 19	129.11	130.35	128.31	129.04	130.87	130.78	134.28	140.00	140.00	140.00	140.00	140.00
N° 20	129.34	133.31	129.78	129.57	133.93	132.16	133.40	140.00	140.00	140.00	133.69	136.45
N° 21	129.21	132.22	131.95	130.59	134.19	133.78	136.81	140.00	135.49	127.80	131.65	140.00
N° 22	133.58	137.91	133.08	135.28	136.20	140.00	135.92	140.00	140.00	135.28	140.00	135.06
N° 23	132.37	135.11	135.14	132.14	133.62	132.61	135.64	140.00	140.00	130.47	132.72	132.28
N° 24	129.41	133.51	130.71	132.86	131.85	136.69	134.56	136.93	140.00	136.48	133.29	140.00
N° 25	128.89	131.28	129.30	128.87	131.55	131.52	132.31	136.51	139.62	133.04	131.09	136.00
N° 26	132.41	136.11	132.01	131.83	134.00	132.97	135.23	140.00	140.00	140.00	139.62	136.05
N° 27	129.58	130.81	129.30	130.34	130.46	130.48	134.61	140.00	140.00	140.00	140.00	140.00
N° 28	128.91	133.06	129.87	131.71	132.06	132.88	136.59	136.83	140.00	133.78	133.51	136.61
N° 29	132.58	137.45	133.31	131.75	135.52	134.29	135.27	136.75	137.61	137.94	132.71	136.83
N° 30	128.80	130.54	129.81	128.36	131.26	130.90	129.91	140.00	139.56	133.52	131.88	136.30
N° 31	132.34	133.65	134.25	132.05	133.92	135.87	140.00	140.00	133.13	127.21	126.79	133.44

## 67. AVS1, Module 3

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



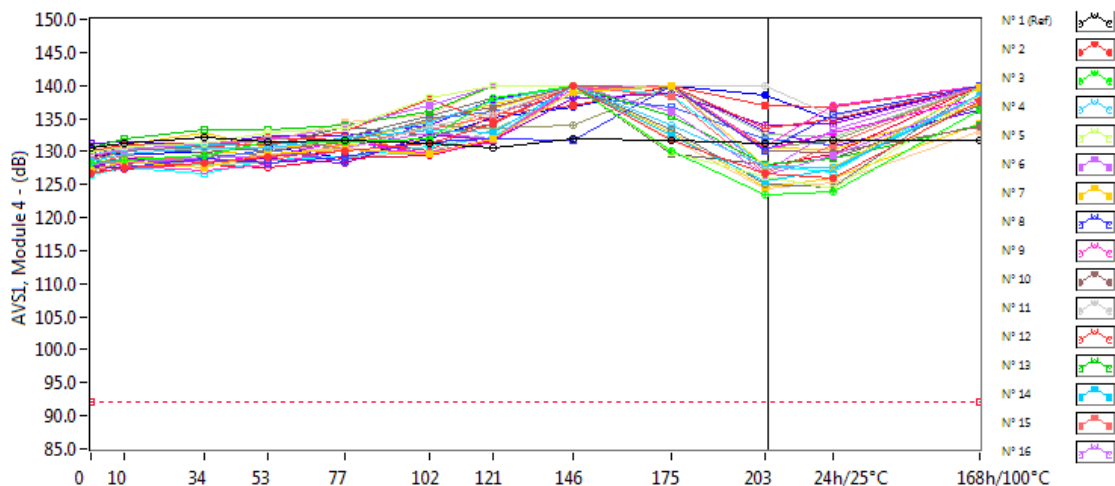
AVS1, Module 3 . (dB)

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)	130.70	132.47	130.84	131.06	131.38	132.01	131.63	132.20	132.50	132.43	133.10	131.99
N° 2	128.66	129.55	129.01	130.02	131.09	135.59	137.28	140.00	136.82	128.18	128.10	140.00
N° 3	129.91	131.18	132.46	129.88	134.75	134.54	134.23	139.97	130.10	123.54	126.33	132.67
N° 4	129.03	130.76	128.87	130.71	131.98	133.27	136.48	140.00	136.00	124.97	127.09	139.85
N° 5	131.94	133.25	131.12	131.28	137.00	138.34	140.00	138.54	135.54	124.86	125.18	134.04
N° 6	131.04	132.82	132.54	132.41	132.37	134.12	140.00	140.00	136.24	128.19	131.86	130.98
N° 7	128.81	129.94	129.71	130.57	132.14	132.56	135.54	140.00	132.80	129.13	126.52	136.06
N° 8	129.15	130.02	129.94	131.60	131.15	130.77	135.30	140.00	140.00	137.17	137.72	136.23
N° 9	128.84	129.87	128.36	130.16	132.32	131.09	134.87	140.00	140.00	137.42	130.17	140.00
N° 10	131.30	130.93	131.74	131.74	134.33	134.46	138.42	140.00	137.35	127.81	130.79	135.28
N° 11	132.54	135.67	131.88	135.38	134.28	133.55	137.74	140.00	140.00	128.82	133.47	134.30
N° 12	132.97	132.79	133.73	132.72	132.48	138.50	140.00	140.00	140.00	134.97	131.21	134.56
N° 13	131.52	131.42	132.23	131.54	134.80	136.24	140.00	140.00	135.10	131.71	131.47	136.49
N° 14	131.51	133.65	131.57	130.36	135.47	132.52	140.00	140.00	140.00	133.85	132.54	134.49
N° 15	128.85	129.67	130.16	129.93	133.19	131.94	137.04	140.00	140.00	131.08	130.04	136.98
N° 16	128.62	130.47	130.97	131.09	131.69	133.02	135.54	140.00	135.35	131.03	133.52	138.10
N° 17	131.06	133.17	132.56	131.72	134.14	137.00	139.20	136.23	140.00	131.49	133.12	140.00
N° 18	128.73	130.18	129.33	129.92	132.64	133.60	136.94	140.00	140.00	127.09	132.00	137.91
N° 19	130.10	131.81	131.53	131.62	133.01	136.15	137.98	140.00	140.00	129.26	130.33	138.21
N° 20	129.07	129.87	130.39	133.93	135.24	135.54	134.55	140.00	140.00	134.99	129.68	137.57
N° 21	128.90	131.08	130.93	130.68	128.67	131.71	140.00	140.00	131.10	124.06	129.28	139.26
N° 22	132.20	134.96	132.76	133.63	135.66	137.69	140.00	140.00	140.00	133.33	128.17	135.52
N° 23	131.01	131.71	130.23	133.10	133.50	135.09	137.60	140.00	137.80	128.12	128.13	132.61
N° 24	129.68	131.50	130.98	132.00	130.25	136.06	138.71	140.00	132.80	128.19	128.85	134.58
N° 25	128.39	130.58	129.65	129.33	132.00	134.93	135.78	140.00	140.00	124.72	128.31	140.00
N° 26	131.37	132.77	131.76	132.69	133.46	136.66	140.00	140.00	139.95	135.16	130.90	140.00
N° 27	127.97	129.21	129.20	130.13	133.19	133.12	137.57	140.00	138.35	137.23	130.49	136.81
N° 28	128.80	130.16	130.09	128.85	129.82	131.92	140.00	140.00	134.75	128.30	130.95	139.32
N° 29	131.42	132.57	135.33	132.32	136.64	137.97	135.47	140.00	140.00	132.65	131.91	136.06
N° 30	128.21	129.59	128.38	130.87	131.29	133.09	137.61	140.00	136.00	125.28	127.17	139.38
N° 31	131.94	133.75	130.50	132.81	133.86	136.72	140.00	140.00	131.42	125.89	125.72	132.19

## 68. AVS1, Module 4

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



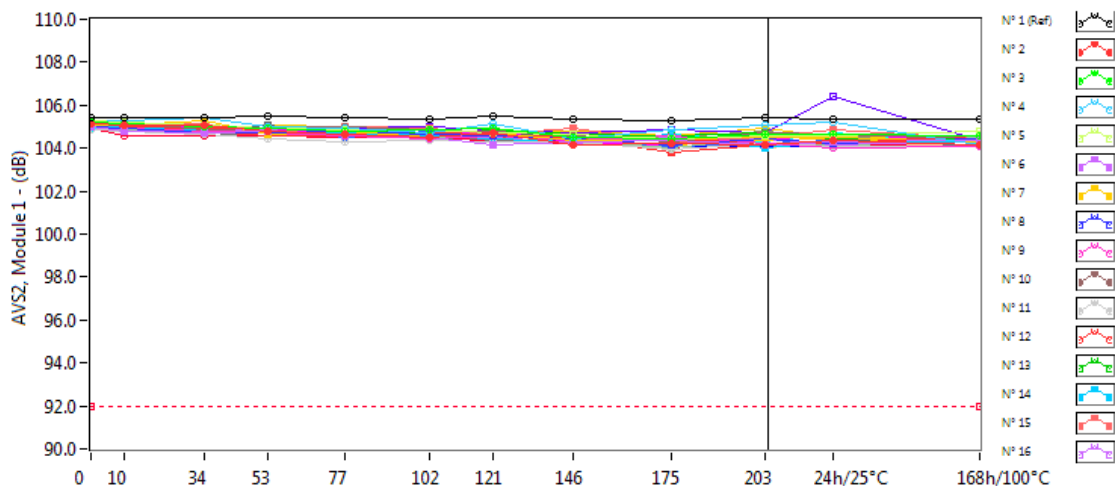
**AVS1, Module 4 . (dB)**

**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)	130.60	131.26	132.20	131.39	131.60	131.31	130.61	132.00	131.61	131.25	131.58	131.78
N° 2	126.76	127.51	128.28	129.28	130.19	131.34	134.10	140.00	131.79	126.74	125.90	137.73
N° 3	128.35	128.75	129.32	131.45	131.39	131.87	138.09	140.00	130.15	123.54	123.91	136.20
N° 4	128.39	129.54	130.51	130.52	131.91	134.51	137.68	140.00	134.00	127.72	127.53	138.46
N° 5	129.78	130.88	131.26	132.73	133.50	138.03	140.00	140.00	129.86	126.14	124.46	138.60
N° 6	129.39	130.42	131.22	131.63	133.80	137.02	140.00	140.00	136.07	126.52	129.47	137.78
N° 7	127.16	128.58	127.68	129.71	130.43	129.69	132.01	138.93	140.00	127.73	127.47	139.69
N° 8	127.58	127.62	128.87	128.34	129.20	131.54	131.99	131.58	140.00	130.15	135.57	140.00
N° 9	127.14	127.75	127.08	128.10	130.33	129.87	131.85	139.51	140.00	130.73	136.89	140.00
N° 10	128.67	130.11	130.81	130.01	131.37	134.80	136.78	140.00	139.67	130.19	129.90	133.65
N° 11	129.47	130.60	130.37	130.61	130.42	133.65	135.90	140.00	140.00	140.00	135.41	140.00
N° 12	130.03	131.10	131.27	131.07	132.98	137.93	134.48	140.00	140.00	133.46	134.83	140.00
N° 13	130.48	131.87	133.40	133.31	133.96	136.14	140.00	140.00	135.26	127.94	128.97	133.88
N° 14	129.67	130.04	131.09	130.93	131.87	133.24	132.86	140.00	132.39	125.48	127.42	138.42
N° 15	127.99	129.44	128.45	128.46	131.25	133.21	135.26	140.00	138.30	126.69	130.97	140.00
N° 16	127.97	128.47	128.92	129.39	130.53	132.91	131.86	140.00	140.00	126.92	133.19	140.00
N° 17	130.09	130.93	132.78	130.47	131.25	134.65	137.17	139.63	140.00	130.55	130.36	137.15
N° 18	127.45	128.29	128.38	129.07	131.70	129.68	131.54	140.00	140.00	130.23	132.94	138.08
N° 19	127.65	129.03	128.32	128.94	128.19	132.61	131.72	138.06	138.72	134.01	134.22	140.00
N° 20	126.92	128.57	127.92	128.36	129.19	129.97	133.20	138.75	140.00	132.61	132.19	140.00
N° 21	126.39	127.63	126.70	128.60	129.27	130.88	132.22	140.00	138.58	127.70	126.87	140.00
N° 22	128.97	130.58	130.43	132.04	131.59	130.01	135.52	137.00	140.00	136.90	136.82	140.00
N° 23	129.85	130.51	129.93	130.74	133.80	132.27	134.23	140.00	129.52	128.05	128.86	136.90
N° 24	128.21	128.86	128.68	130.37	128.42	134.83	136.03	138.39	136.74	131.91	131.07	140.00
N° 25	126.89	127.27	128.03	127.54	128.91	129.43	131.60	140.00	140.00	127.88	129.71	140.00
N° 26	129.40	129.74	129.89	130.80	128.83	131.98	135.09	136.61	140.00	138.59	134.57	140.00
N° 27	128.00	129.03	128.95	132.46	130.27	133.88	133.63	134.01	140.00	130.53	131.61	140.00
N° 28	127.63	128.00	129.17	129.75	132.24	135.37	138.01	140.00	133.39	125.13	124.55	140.00
N° 29	131.15	131.52	130.97	132.34	132.40	133.91	137.84	140.00	140.00	132.97	130.71	136.29
N° 30	128.11	130.36	130.26	129.19	131.06	131.69	136.41	140.00	132.82	124.65	125.89	134.30
N° 31	130.83	130.67	131.20	131.39	134.42	135.62	140.00	140.00	131.96	124.47	125.18	133.12

## 69. AVS2, Module 1

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



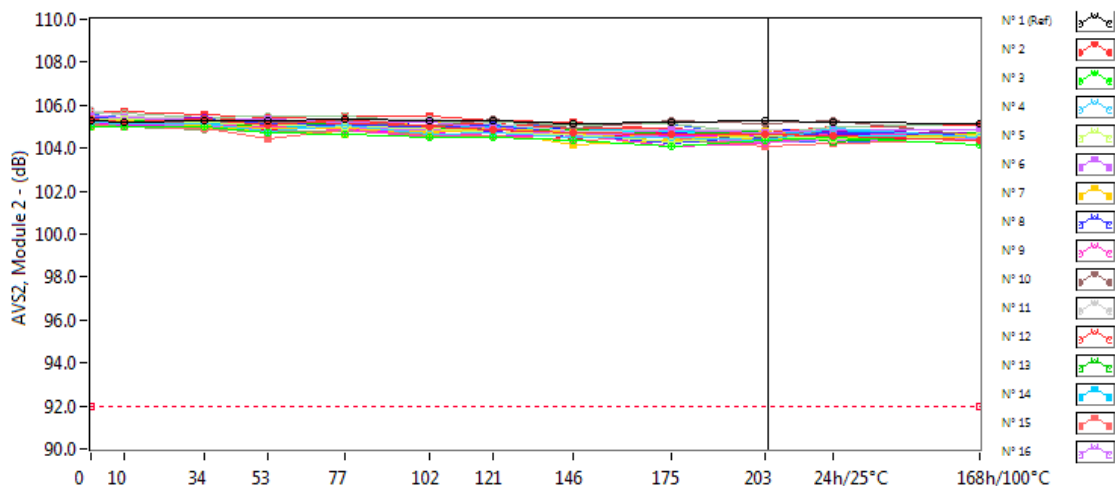
AVS2, Module 1 . (dB)

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)	105.39	105.39	105.42	105.46	105.43	105.38	105.47	105.36	105.30	105.45	105.33	105.33
N° 2	105.11	105.11	105.04	104.79	104.66	104.51	104.70	104.17	104.22	104.18	104.40	104.13
N° 3	105.22	105.15	105.02	104.91	104.79	104.82	104.92	104.52	104.41	104.68	104.66	104.55
N° 4	105.23	105.25	105.44	104.97	104.92	104.74	105.13	104.44	104.83	105.10	105.23	104.16
N° 5	105.25	105.22	105.04	104.95	104.85	104.88	104.74	104.61	104.46	104.58	104.58	104.76
N° 6	105.02	104.77	104.72	104.82	104.65	104.50	104.18	104.30	104.34	104.13	104.30	104.35
N° 7	105.05	105.09	105.27	104.62	104.80	104.50	104.74	104.40	104.43	104.53	104.51	104.29
N° 8	105.01	104.90	104.75	104.71	104.81	104.65	104.59	104.40	104.15	104.43	104.22	104.46
N° 9	105.00	104.94	104.75	104.69	104.55	104.47	104.58	104.39	104.58	104.21	104.00	104.08
N° 10	105.25	105.19	104.83	104.93	104.99	104.85	104.81	104.60	104.26	104.73	104.64	104.42
N° 11	104.84	104.77	104.63	104.42	104.32	104.39	104.31	104.31	103.94	104.23	104.07	104.11
N° 12	105.20	105.01	104.93	104.91	104.94	104.71	104.67	104.54	104.46	104.22	104.21	104.55
N° 13	105.21	105.20	105.06	104.91	104.94	104.62	104.88	104.63	104.55	104.70	104.46	104.43
N° 14	105.09	104.97	104.89	104.69	104.73	104.56	104.42	104.33	104.62	104.03	104.31	104.31
N° 15	105.25	105.14	105.11	104.75	104.99	104.94	104.62	104.91	104.31	104.50	104.86	104.42
N° 16	105.05	104.93	104.88	104.85	104.59	104.59	104.51	104.25	104.53	104.46	104.16	104.35
N° 17	105.08	105.02	104.78	104.75	104.54	104.63	104.59	104.43	104.14	104.35	104.44	104.32
N° 18	105.09	104.92	105.06	104.83	104.74	104.68	104.76	104.28	104.13	104.36	104.65	104.39
N° 19	105.17	105.00	104.90	104.90	104.76	104.84	104.73	104.23	104.19	104.68	104.42	104.39
N° 20	104.97	104.83	104.82	104.74	104.75	104.45	104.63	104.36	104.03	104.48	104.10	104.50
N° 21	104.94	104.85	105.04	104.78	104.75	104.47	104.15	104.31	104.63	104.29	104.69	104.22
N° 22	104.92	104.88	104.78	104.55	104.56	104.53	104.52	104.50	103.83	104.17	104.28	104.27
N° 23	105.07	105.08	104.77	105.05	104.62	104.69	104.63	104.58	104.27	104.69	104.34	104.26
N° 24	105.05	104.93	104.88	104.95	104.53	104.81	104.51	104.47	104.10	104.21	104.35	104.17
N° 25	104.96	104.57	104.58	104.61	104.50	104.56	104.32	104.22	104.02	104.43	104.15	104.05
N° 26	105.07	104.97	104.88	104.92	104.79	104.44	104.61	104.29	104.11	104.06	104.13	104.38
N° 27	105.18	105.04	104.83	104.71	104.79	104.65	104.59	104.44	104.53	104.80	104.52	104.37
N° 28	104.96	104.81	104.75	104.59	104.54	104.53	104.39	104.35	104.39	104.52	104.02	104.14
N° 29	105.25	105.06	105.00	104.96	104.90	105.00	104.89	104.73	104.89	104.70	106.41	104.38
N° 30	105.30	105.05	104.96	105.04	104.97	104.64	104.63	104.75	104.60	104.91	104.47	104.47
N° 31	105.21	105.16	105.06	104.91	104.91	104.60	104.67	104.21	104.58	104.04	104.24	104.18

## 70. AVS2, Module 2

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

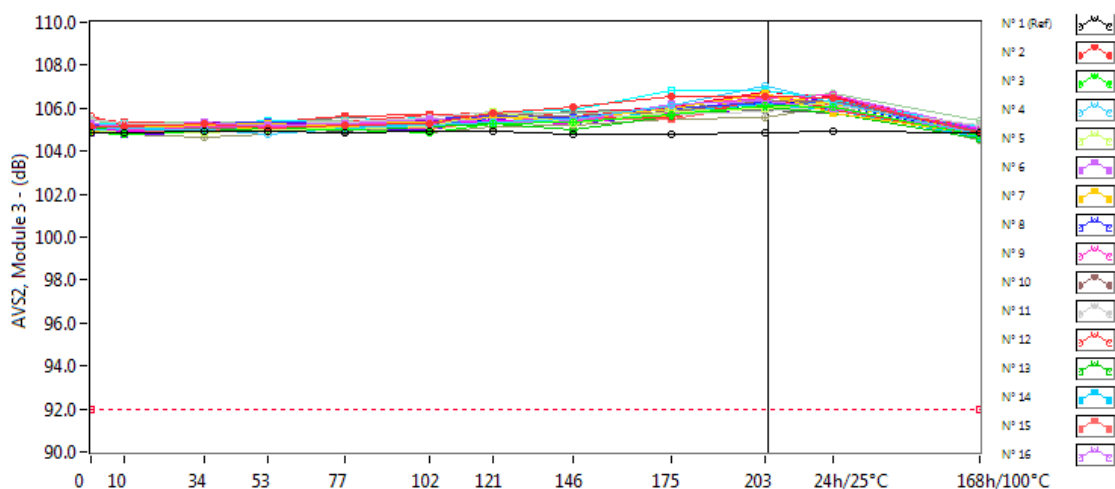


AVS2, Module 2 . (dB) Min = 92.0

	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)	105.29	105.23	105.27	105.27	105.37	105.28	105.30	105.14	105.19	105.30	105.24	105.17
N° 2	105.37	105.19	105.34	105.05	105.32	104.99	104.86	104.70	104.68	104.66	104.55	104.37
N° 3	105.01	104.99	104.98	104.74	104.67	104.53	104.54	104.39	104.06	104.37	104.49	104.16
N° 4	105.22	105.16	105.12	104.82	105.09	104.64	104.75	104.49	104.51	104.38	104.93	104.52
N° 5	105.35	105.37	105.18	105.05	104.98	104.95	104.72	104.62	104.31	104.55	104.46	104.59
N° 6	105.48	105.42	105.30	105.34	105.21	105.19	104.94	104.61	104.85	104.72	104.86	104.83
N° 7	105.22	105.20	105.07	104.94	104.90	104.74	104.93	104.69	104.31	104.81	104.44	104.68
N° 8	105.42	105.34	105.34	105.15	105.04	104.98	105.07	104.61	104.20	104.60	104.75	104.67
N° 9	105.25	105.18	105.04	104.99	104.84	104.53	104.74	104.65	104.09	104.20	104.70	104.58
N° 10	105.26	105.14	105.21	105.22	105.26	105.00	105.36	104.96	105.28	105.11	105.28	104.58
N° 11	105.74	105.52	105.35	105.21	105.30	105.32	105.11	104.81	104.83	104.83	104.74	104.62
N° 12	105.48	105.39	105.34	105.29	105.16	105.06	105.17	104.93	104.96	104.68	104.41	104.67
N° 13	105.34	105.33	105.05	105.04	105.11	104.95	104.88	104.86	104.63	104.80	104.27	104.72
N° 14	105.33	105.36	105.11	105.01	105.04	104.95	104.99	104.83	104.84	104.63	104.88	104.50
N° 15	105.05	105.01	104.95	104.47	104.87	104.59	104.57	104.39	104.53	104.08	104.20	104.34
N° 16	105.25	105.22	105.01	104.95	104.94	104.86	104.97	104.76	104.50	104.30	104.38	104.45
N° 17	105.44	105.30	105.18	105.20	105.08	105.22	104.99	104.85	104.47	104.64	104.51	104.50
N° 18	105.24	105.10	105.00	105.00	104.86	104.69	104.55	104.63	104.58	104.56	104.44	104.60
N° 19	105.43	105.35	105.42	105.13	105.36	104.93	105.02	104.82	104.54	104.74	104.77	104.69
N° 20	105.65	105.65	105.46	105.50	105.47	105.22	105.24	105.06	105.13	104.65	104.97	105.11
N° 21	105.39	105.37	105.23	105.24	105.14	105.05	105.04	104.78	104.80	104.55	104.59	104.62
N° 22	105.69	105.67	105.56	105.45	105.48	105.46	105.30	105.18	104.89	104.70	105.01	105.06
N° 23	105.33	105.35	105.18	105.12	105.12	104.97	104.95	104.72	104.56	104.50	104.61	104.60
N° 24	105.53	105.44	105.45	105.17	105.24	104.99	105.06	105.06	105.14	104.40	104.26	104.58
N° 25	105.20	105.10	105.06	104.84	105.05	104.88	104.96	104.41	104.77	104.54	104.40	104.52
N° 26	105.43	105.36	105.34	105.15	105.23	105.05	105.29	104.84	104.76	104.84	104.82	104.66
N° 27	105.11	104.99	104.85	104.79	104.79	104.64	104.58	104.61	104.30	104.29	104.46	104.47
N° 28	105.43	105.30	105.32	105.22	105.06	104.94	105.00	104.73	104.58	104.58	104.77	104.48
N° 29	105.21	105.21	105.14	105.08	104.88	105.01	104.78	104.49	104.75	104.67	104.66	104.66
N° 30	105.02	105.06	104.91	104.86	104.66	104.78	104.80	104.18	104.34	104.44	104.37	104.45
N° 31	105.33	105.17	105.11	105.14	105.09	105.00	104.84	104.64	104.64	104.61	104.91	104.44

## 71. AVS2, Module 3

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

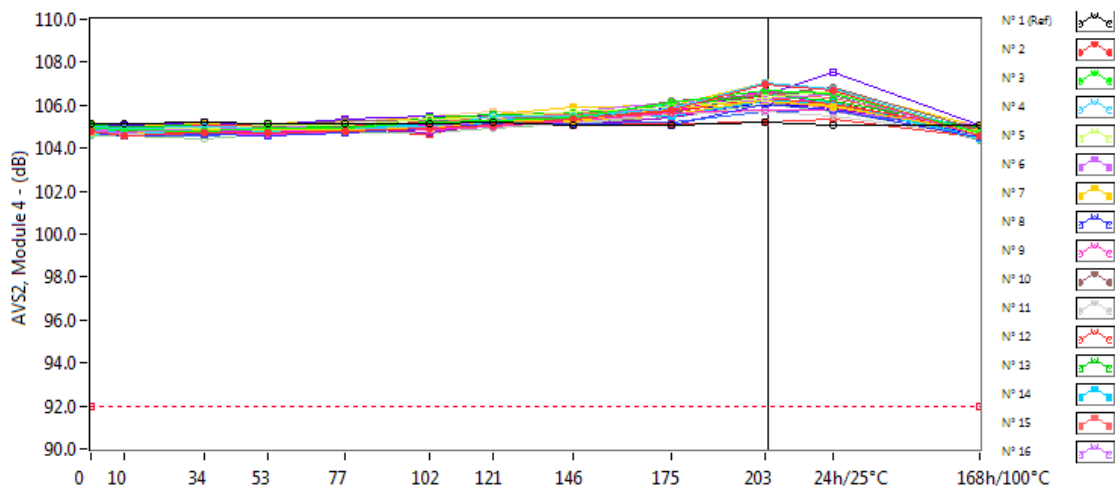


AVS2, Module 3 . (dB) Min = 92.0

	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)	104.86	104.84	104.91	104.90	104.86	104.89	104.93	104.82	104.81	104.85	104.94	104.83
N° 2	105.16	105.17	105.25	105.07	105.25	105.28	105.78	106.03	106.58	106.55	106.51	104.85
N° 3	104.89	104.76	104.93	104.93	105.00	104.87	105.28	105.35	105.71	106.14	106.03	104.73
N° 4	105.03	105.07	105.02	104.81	105.07	105.20	105.36	105.51	106.10	107.06	106.27	104.80
N° 5	105.00	104.88	104.84	104.98	105.04	105.14	105.83	105.31	105.84	106.02	106.26	104.77
N° 6	105.27	105.15	105.27	105.23	105.27	105.51	105.35	105.43	106.21	106.31	105.96	104.82
N° 7	105.02	105.05	105.21	105.28	105.16	105.36	105.54	105.50	105.99	106.68	105.79	104.77
N° 8	105.20	105.16	105.31	105.35	105.28	105.52	105.65	105.56	106.00	106.28	105.96	104.85
N° 9	105.21	105.02	105.12	105.13	105.28	105.30	105.63	105.36	106.12	106.47	106.58	104.79
N° 10	105.11	105.04	105.06	105.11	105.30	105.25	105.69	105.64	105.88	106.32	106.32	104.92
N° 11	105.50	105.31	105.29	105.35	105.32	105.59	105.83	105.54	105.74	105.87	106.13	105.21
N° 12	105.61	105.23	105.21	105.37	105.32	105.68	105.57	105.53	105.58	106.39	105.93	104.80
N° 13	105.02	105.18	104.95	105.10	105.00	105.12	105.28	105.02	105.62	106.06	105.74	104.58
N° 14	105.14	105.02	105.09	105.02	105.17	105.19	105.27	105.45	105.83	106.20	105.93	104.65
N° 15	105.00	104.87	105.00	104.99	105.18	105.10	105.32	105.48	105.48	106.17	105.92	104.75
N° 16	105.20	105.21	105.35	105.08	105.17	105.31	105.72	105.55	105.69	106.47	106.64	105.06
N° 17	105.18	104.98	105.17	105.08	105.30	105.32	105.57	105.47	105.62	106.63	106.18	104.85
N° 18	105.10	104.89	105.08	105.10	105.19	105.23	105.43	105.31	105.80	106.56	106.24	104.99
N° 19	105.22	105.18	105.32	105.20	105.38	105.43	105.68	105.57	105.69	106.36	106.33	104.88
N° 20	105.42	105.28	105.37	105.34	105.42	105.43	105.75	105.77	105.93	106.41	106.69	105.41
N° 21	105.25	105.28	105.20	105.43	105.42	105.60	105.87	105.95	106.81	106.83	106.41	105.17
N° 22	105.52	105.36	105.36	105.34	105.60	105.69	105.78	105.63	106.00	105.99	106.21	105.14
N° 23	105.05	104.94	105.03	105.07	104.92	105.26	105.30	105.42	105.86	105.94	105.77	104.57
N° 24	105.29	105.22	105.33	105.37	105.39	105.23	105.60	105.47	105.79	106.05	106.33	105.04
N° 25	105.25	105.14	105.16	105.06	105.37	105.40	105.71	105.78	106.09	106.75	106.55	105.03
N° 26	105.22	105.05	105.11	105.05	105.12	105.32	105.40	105.42	105.66	106.25	106.20	104.81
N° 27	104.84	104.80	104.63	104.82	105.08	104.86	105.14	105.21	105.46	105.56	106.15	104.50
N° 28	105.26	105.14	105.06	105.36	105.56	105.43	105.66	105.87	105.99	106.34	106.24	104.84
N° 29	104.84	104.81	104.84	104.97	105.09	105.01	105.49	105.29	105.68	105.97	106.58	104.72
N° 30	104.94	104.87	104.85	104.98	105.21	104.97	105.43	105.54	105.67	106.54	106.03	104.72
N° 31	105.12	105.07	105.11	104.99	105.15	105.19	105.41	105.51	105.66	106.36	106.27	104.94

## 72. AVS2, Module 4

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



**AVS2, Module 4 . (dB)**

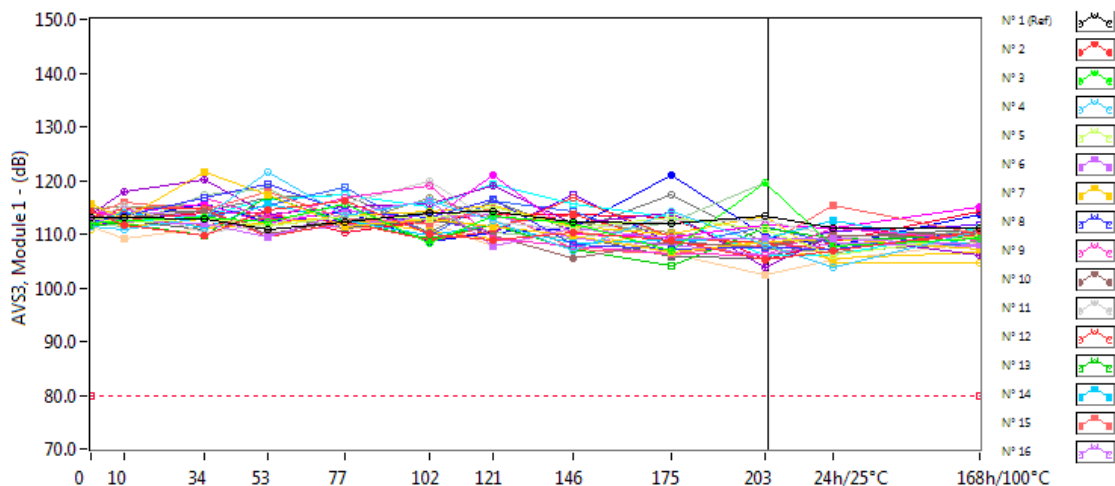
**Min = 92.0**

	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)	105.16	105.17	105.22	105.15	105.14	105.15	105.21	105.08	105.10	105.20	105.07	105.08
N° 2	104.76	104.59	104.72	104.70	104.79	104.91	105.05	105.37	105.79	106.95	106.66	104.57
N° 3	104.94	104.84	104.78	104.91	104.93	105.19	105.29	105.41	106.14	106.66	106.54	104.71
N° 4	104.98	104.93	104.99	104.95	104.94	105.00	105.49	105.46	105.83	107.02	106.73	104.73
N° 5	105.03	104.96	104.90	105.11	105.06	105.36	105.45	105.71	105.88	106.37	106.67	104.68
N° 6	104.77	104.71	104.93	104.90	104.96	104.98	105.27	105.44	105.97	106.25	106.57	104.55
N° 7	104.73	104.74	104.86	104.83	104.86	104.92	105.25	105.30	105.87	106.20	105.92	104.76
N° 8	104.69	104.61	104.67	104.57	104.72	104.91	105.12	105.15	105.04	106.03	105.77	104.50
N° 9	104.70	104.59	104.72	104.64	104.77	104.89	105.01	105.27	105.61	105.81	105.80	104.52
N° 10	105.01	104.77	104.97	104.97	105.25	105.29	105.47	105.36	106.21	106.45	106.83	104.83
N° 11	104.70	104.66	104.65	104.73	104.79	104.97	104.99	105.17	105.60	105.71	105.47	104.61
N° 12	105.02	104.85	105.10	105.05	105.05	105.19	105.29	105.30	105.67	106.37	106.08	104.85
N° 13	105.07	104.98	105.05	105.15	104.92	105.39	105.55	105.64	105.98	106.49	106.20	104.90
N° 14	104.84	104.71	104.85	104.85	104.84	105.16	105.28	105.52	105.51	106.19	106.15	104.47
N° 15	105.07	104.89	104.93	105.09	105.13	105.17	105.50	105.57	106.00	106.52	106.37	104.87
N° 16	104.85	104.84	104.82	104.90	105.10	104.89	105.37	105.68	106.11	106.52	105.72	105.04
N° 17	104.98	104.85	104.81	104.92	105.06	105.01	105.36	105.24	105.56	106.28	106.01	104.73
N° 18	104.79	104.78	104.89	104.69	104.93	105.08	105.29	105.28	105.72	106.67	105.90	104.77
N° 19	104.85	104.83	104.88	104.88	104.96	104.69	105.14	105.10	105.39	106.17	105.84	104.77
N° 20	104.61	104.59	104.47	104.65	104.70	104.68	104.94	105.15	105.43	106.08	105.73	104.55
N° 21	104.67	104.70	104.62	104.80	104.87	105.11	105.15	105.16	106.12	106.57	106.15	104.45
N° 22	104.70	104.63	104.73	104.55	104.78	104.66	105.19	105.09	105.17	105.23	105.33	104.53
N° 23	104.85	104.87	104.92	104.98	105.03	105.19	105.45	105.54	105.62	106.57	106.03	104.64
N° 24	104.79	104.67	104.56	104.72	104.86	104.83	105.27	105.25	105.23	105.70	105.79	104.70
N° 25	104.65	104.56	104.67	104.69	104.93	105.00	105.36	105.26	105.65	106.46	106.10	104.70
N° 26	104.97	104.79	104.87	104.95	105.09	104.86	105.55	105.36	105.83	105.98	106.07	104.58
N° 27	104.72	104.72	104.77	104.69	104.77	104.99	105.29	105.21	105.44	106.04	106.16	104.40
N° 28	104.70	104.63	104.65	104.76	104.91	104.90	105.21	105.23	105.87	106.62	106.46	104.38
N° 29	105.10	105.09	105.21	105.05	105.32	105.46	105.51	105.58	105.87	106.45	107.51	105.10
N° 30	105.11	105.09	105.14	105.11	105.28	105.38	105.53	105.89	106.02	107.03	106.75	105.02
N° 31	105.04	105.00	105.08	105.04	105.20	105.46	105.73	105.57	105.85	106.47	106.61	104.76



### 73. AVS3, Module 1

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

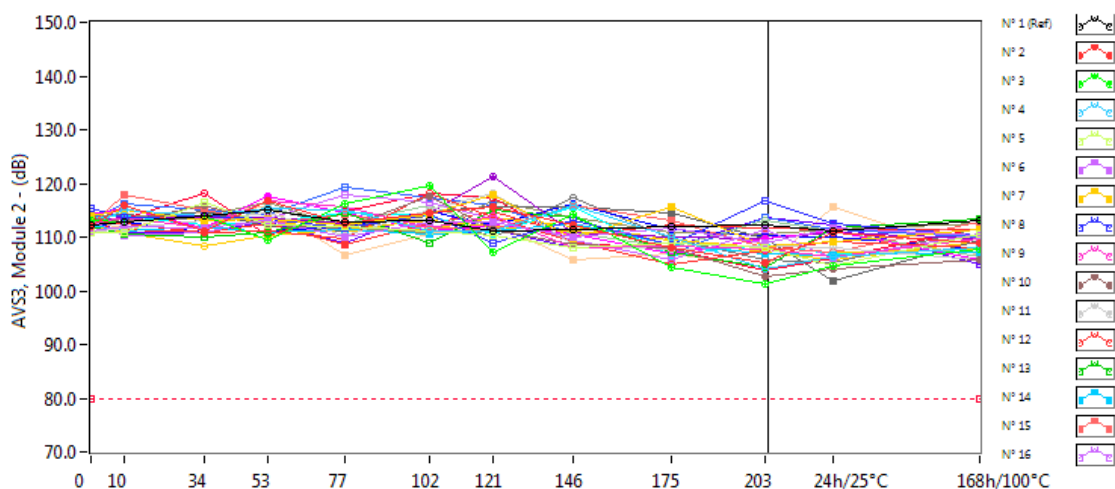


**AVS3, Module 1 . (dB) Min = 80.0**

	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)	113.19	113.06	112.93	110.85	112.23	113.98	114.20	112.23	111.83	113.36	111.12	111.01
N° 2	114.27	111.64	109.65	114.52	116.31	109.91	108.97	110.17	108.84	105.31	106.78	110.55
N° 3	112.06	112.64	113.05	112.15	115.52	108.28	113.41	112.11	106.80	119.58	107.84	109.14
N° 4	111.30	110.98	112.99	121.55	113.48	116.26	112.66	106.98	114.27	107.96	103.78	110.69
N° 5	113.20	111.93	113.24	111.42	113.31	112.69	115.09	111.20	113.03	110.74	106.09	109.80
N° 6	112.87	112.37	111.92	109.51	113.89	116.15	107.88	111.00	109.15	109.29	109.29	107.91
N° 7	115.56	112.89	121.53	117.43	111.49	112.80	111.44	109.79	106.69	108.49	109.10	107.07
N° 8	112.31	113.45	116.74	119.32	114.27	113.14	116.59	108.12	107.29	107.53	107.06	110.52
N° 9	113.96	113.49	116.87	113.17	116.85	118.88	109.13	107.71	106.30	106.14	111.02	108.98
N° 10	112.30	113.14	114.34	110.04	112.45	113.80	109.58	105.61	108.54	107.51	109.82	109.90
N° 11	112.29	115.33	110.26	111.57	115.68	119.76	112.23	110.94	112.43	112.67	109.65	107.05
N° 12	113.02	114.79	114.73	109.53	112.23	108.86	110.55	116.79	109.54	108.39	107.32	110.02
N° 13	111.59	111.96	109.71	117.05	112.39	109.08	111.65	107.05	103.97	111.21	109.06	109.47
N° 14	111.66	114.36	111.07	115.71	112.65	109.61	111.67	108.24	108.88	109.07	112.67	107.85
N° 15	113.73	115.81	114.52	117.84	112.90	112.04	114.73	107.13	106.23	107.89	115.39	109.90
N° 16	113.85	114.40	113.12	109.95	111.72	113.21	113.57	109.19	108.11	106.17	108.40	107.80
N° 17	110.98	114.77	111.02	112.09	113.26	114.30	115.44	111.39	110.11	113.44	104.69	104.73
N° 18	113.87	113.86	115.63	112.03	114.50	112.42	120.85	110.14	109.39	111.64	111.18	115.17
N° 19	113.69	117.77	120.13	113.73	115.07	115.61	119.01	112.01	113.84	103.67	109.58	105.97
N° 20	112.09	111.50	117.31	118.50	111.91	114.33	110.20	109.21	112.16	119.48	107.82	110.88
N° 21	113.49	112.15	113.26	116.42	117.36	115.15	119.16	115.53	113.09	106.14	106.06	111.02
N° 22	112.71	113.20	111.63	112.95	112.29	108.88	111.56	113.53	108.37	107.76	109.62	109.75
N° 23	112.84	112.54	110.72	113.13	111.09	112.64	111.30	109.63	105.76	105.43	109.55	110.73
N° 24	113.53	112.33	113.15	115.33	118.67	109.65	116.30	114.28	107.61	111.36	108.25	108.15
N° 25	113.02	112.66	114.06	114.03	110.33	112.53	113.68	113.61	112.97	105.27	108.56	114.12
N° 26	112.69	112.78	115.58	112.15	114.15	108.47	110.31	111.21	120.93	109.62	107.67	113.67
N° 27	114.80	114.98	115.23	112.89	111.67	116.62	113.15	112.36	110.31	107.28	106.68	108.65
N° 28	112.47	113.86	114.32	116.71	117.32	110.20	116.09	110.52	117.20	108.22	108.86	110.10
N° 29	111.56	112.39	114.50	113.08	112.48	112.86	110.20	117.28	108.21	107.33	110.61	111.70
N° 30	113.56	111.36	112.78	111.76	112.69	110.52	109.23	107.69	110.40	107.43	105.55	106.61
N° 31	111.49	109.20	111.10	113.96	110.98	112.27	107.86	110.78	106.30	102.30	105.14	108.17

## 74. AVS3, Module 2

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



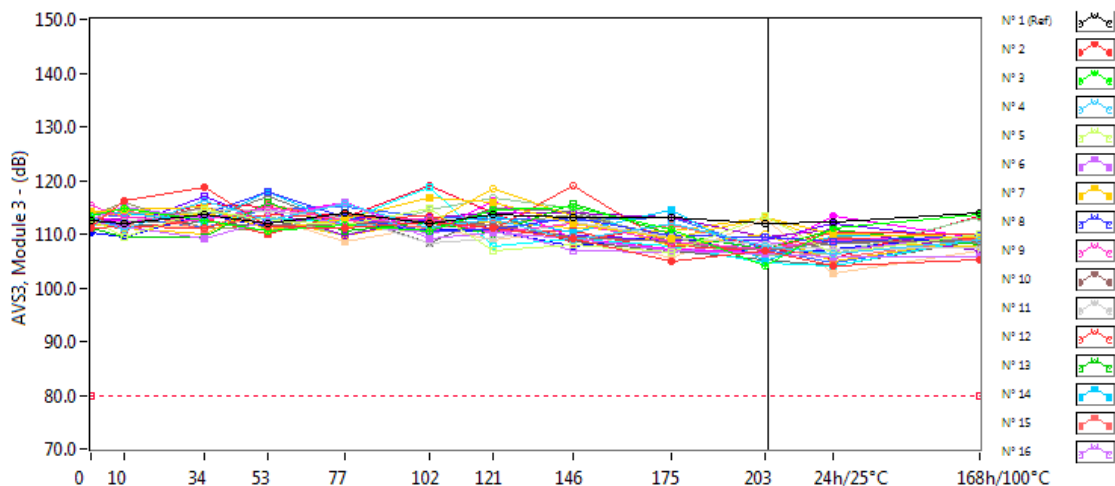
**AVS3, Module 2 . (dB)**

**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)	112.23	112.70	113.95	115.17	112.73	113.14	111.23	111.55	111.95	112.34	111.17	113.06
N° 2	112.08	115.84	111.19	116.69	112.54	114.38	115.61	112.19	108.16	105.15	110.75	108.99
N° 3	112.96	112.80	113.90	109.48	116.14	119.60	107.32	114.30	104.28	101.34	104.78	107.66
N° 4	112.16	114.94	113.82	115.23	115.02	111.25	111.02	116.06	110.03	104.16	106.22	108.12
N° 5	110.80	110.84	116.39	112.28	112.07	111.02	110.35	107.93	108.84	107.93	104.52	110.43
N° 6	111.25	111.97	111.60	113.07	110.03	112.75	112.74	109.97	111.81	108.98	111.59	110.30
N° 7	113.89	115.19	113.15	113.52	112.13	114.18	117.83	109.70	115.56	108.44	109.10	111.36
N° 8	115.23	113.67	113.86	113.49	111.62	114.36	108.86	112.96	108.57	116.73	112.65	110.20
N° 9	112.64	113.64	111.79	116.73	115.57	111.57	114.02	108.16	108.24	107.75	106.43	109.75
N° 10	113.72	112.77	115.90	112.31	111.64	117.66	111.35	108.68	107.91	102.56	104.09	105.91
N° 11	110.78	111.57	113.14	114.53	110.27	115.16	118.08	108.60	107.65	108.30	107.90	105.67
N° 12	112.95	112.46	110.72	111.02	109.85	118.30	113.63	109.03	104.91	107.42	109.10	108.15
N° 13	112.02	110.55	109.95	110.78	114.45	108.88	115.19	113.53	107.17	104.40	111.60	113.45
N° 14	112.21	111.11	112.07	110.87	111.40	110.44	111.19	112.44	108.47	106.86	106.60	107.19
N° 15	112.29	117.89	114.94	112.61	114.15	111.66	111.37	115.96	113.24	107.92	107.07	112.74
N° 16	113.21	110.40	110.74	113.29	117.92	116.34	113.42	109.47	105.72	111.49	106.02	110.66
N° 17	111.94	110.73	108.24	110.36	111.52	113.00	112.00	111.17	109.46	108.16	107.23	107.83
N° 18	114.23	115.22	111.82	117.50	114.63	111.06	112.39	110.67	106.91	109.62	111.22	105.64
N° 19	113.11	113.62	113.73	113.66	112.53	114.38	121.28	110.72	110.08	109.83	110.70	109.67
N° 20	111.94	113.80	111.73	115.41	112.42	116.00	111.28	110.83	108.14	113.20	111.12	106.30
N° 21	113.54	114.06	112.25	112.83	114.51	113.81	110.55	115.50	106.69	108.54	106.77	107.83
N° 22	112.23	111.47	110.80	112.61	108.57	112.47	114.72	110.36	112.15	111.76	111.52	111.47
N° 23	112.51	113.45	114.87	112.00	111.13	114.80	115.59	115.70	114.41	109.73	101.97	109.51
N° 24	113.43	116.11	115.04	114.11	119.39	117.44	115.82	110.48	106.96	113.57	111.38	110.05
N° 25	113.45	113.24	118.08	110.30	114.68	118.17	117.30	108.99	107.64	103.81	106.18	111.58
N° 26	112.03	112.83	110.93	111.20	111.87	114.68	112.30	116.27	111.34	110.19	109.98	107.78
N° 27	112.20	114.00	113.91	116.37	111.71	110.76	116.87	113.53	110.73	110.68	111.34	112.60
N° 28	114.06	114.10	112.99	115.35	112.03	113.86	109.98	117.29	109.67	105.67	105.31	111.70
N° 29	113.08	110.82	110.98	112.88	109.00	115.10	111.31	107.97	107.97	113.55	112.37	104.97
N° 30	112.25	113.74	113.47	113.04	111.22	111.51	113.75	112.07	109.60	107.16	105.76	109.08
N° 31	112.83	111.76	114.75	115.64	106.63	110.59	112.50	105.73	107.02	104.23	115.59	106.70

## 75. AVS3, Module 3

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



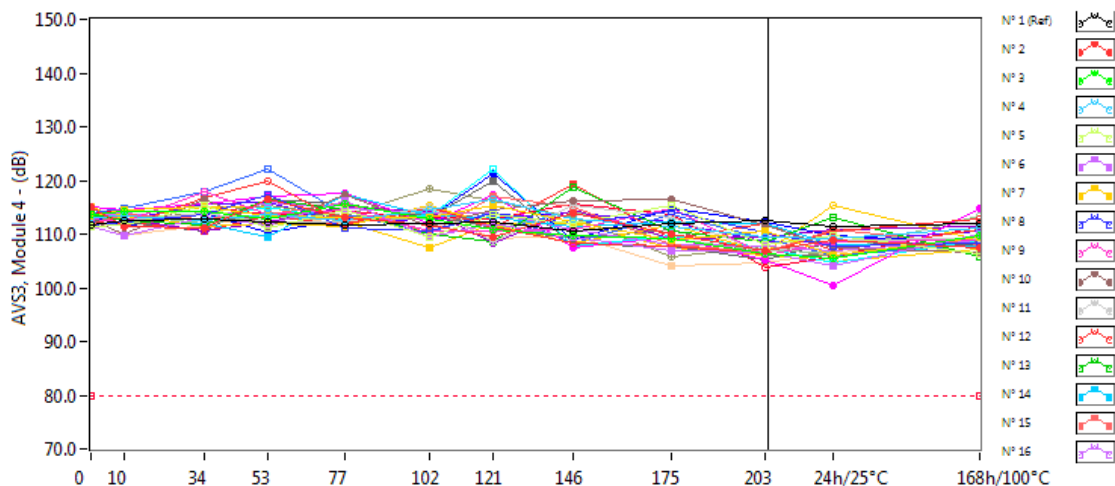
**AVS3, Module 3 . (dB)**

**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)	112.43	111.93	113.67	111.97	113.92	111.85	113.70	113.06	113.01	111.98	112.13	113.85
N° 2	111.54	116.22	118.69	111.28	111.12	112.22	111.24	109.21	105.02	106.77	103.98	105.15
N° 3	113.30	114.87	112.60	110.60	111.58	110.47	114.51	114.97	110.81	104.04	111.02	113.63
N° 4	113.20	110.97	116.09	112.52	115.75	111.01	112.86	108.74	111.94	107.82	106.21	108.75
N° 5	112.80	109.56	114.37	112.63	111.80	114.92	106.98	108.17	106.72	113.42	106.41	109.89
N° 6	112.22	111.31	109.11	112.58	115.98	109.18	110.33	109.03	106.92	106.23	105.88	105.88
N° 7	114.28	114.37	115.08	110.89	112.73	116.66	115.95	111.93	109.17	113.23	109.92	109.42
N° 8	112.13	112.05	113.72	111.97	113.05	110.45	110.78	113.06	109.70	109.34	108.64	109.72
N° 9	115.38	113.02	112.49	115.13	112.60	112.95	110.18	111.83	108.55	107.28	108.77	109.44
N° 10	112.79	111.73	115.00	111.67	111.61	112.92	111.70	109.44	108.63	106.86	108.62	108.64
N° 11	112.02	112.35	114.79	114.31	113.12	108.39	109.02	112.18	109.54	108.03	107.28	107.41
N° 12	111.03	111.37	111.00	113.70	112.88	113.50	110.82	119.15	107.83	107.32	110.35	110.08
N° 13	111.10	109.36	109.47	115.90	110.67	112.20	109.88	115.55	109.99	107.30	110.77	108.02
N° 14	114.34	113.99	112.17	117.78	111.82	112.06	113.40	110.25	114.38	105.05	109.76	109.95
N° 15	112.52	114.64	110.98	115.57	112.66	111.26	112.82	108.88	111.75	107.77	105.53	109.09
N° 16	112.68	115.01	112.75	114.71	111.70	110.22	111.22	106.93	106.59	108.47	106.89	109.63
N° 17	112.10	111.11	110.11	115.73	111.43	111.84	118.54	113.40	107.82	109.97	105.03	109.02
N° 18	113.33	112.25	113.36	113.25	116.04	110.10	116.32	109.04	107.26	106.58	113.30	109.13
N° 19	112.10	113.18	113.10	114.41	109.61	113.23	113.99	114.00	113.08	109.52	110.89	106.87
N° 20	113.76	113.83	113.95	113.37	109.63	114.53	116.76	114.72	108.33	106.09	106.42	113.19
N° 21	111.49	113.11	113.42	112.74	112.55	118.70	107.77	109.24	107.63	104.63	104.05	109.18
N° 22	112.12	110.95	112.80	110.09	113.64	112.03	110.57	110.57	106.90	107.27	109.15	109.07
N° 23	111.80	111.40	112.16	111.34	113.61	108.43	113.55	108.73	106.90	105.28	104.07	108.75
N° 24	113.69	113.36	111.06	114.68	115.18	113.09	112.75	112.48	113.15	107.22	104.60	109.11
N° 25	113.27	111.77	115.57	115.17	112.96	119.11	113.90	108.31	111.98	107.58	105.45	113.27
N° 26	110.35	109.48	113.80	111.39	111.65	110.83	110.57	107.66	109.86	105.97	107.13	110.06
N° 27	113.51	115.83	111.10	110.78	111.70	111.53	111.56	113.66	109.45	105.73	109.57	108.24
N° 28	112.38	112.22	112.42	116.93	111.80	110.76	114.90	114.22	108.51	106.14	108.37	108.81
N° 29	113.03	111.48	116.91	112.39	113.11	112.48	111.02	109.68	108.96	108.99	112.07	108.84
N° 30	113.98	113.74	113.70	112.87	109.67	112.65	112.22	111.02	110.61	113.06	108.37	107.71
N° 31	112.15	111.61	111.35	112.99	108.55	111.53	108.98	110.83	105.58	112.72	102.74	107.01

## 76. AVS3, Module 4

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



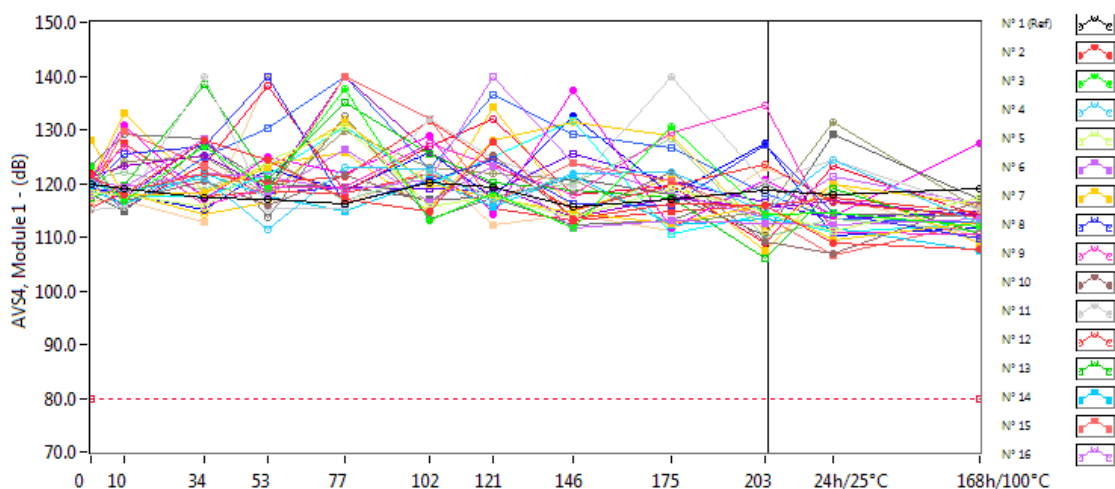
**AVS3, Module 4 . (dB)**

**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)	111.61	112.40	112.87	112.38	111.74	111.87	112.26	110.68	111.83	112.41	111.50	112.02
N° 2	115.08	111.53	111.11	116.39	113.03	111.71	109.50	113.84	109.91	106.98	108.77	107.41
N° 3	113.55	114.26	114.26	112.81	115.68	112.93	110.76	109.82	109.22	106.20	105.50	109.69
N° 4	113.13	113.26	112.45	113.66	112.52	114.52	116.57	112.69	111.49	109.48	109.08	111.15
N° 5	111.40	111.56	115.38	111.01	114.57	109.47	113.58	112.04	115.38	108.16	109.75	106.42
N° 6	111.47	109.70	113.23	111.64	116.19	109.36	112.07	109.32	106.88	106.67	104.09	109.92
N° 7	113.24	114.50	115.17	113.46	113.01	113.18	115.41	112.20	108.88	110.54	106.00	109.44
N° 8	111.56	112.21	113.79	117.32	111.07	110.53	113.98	112.00	114.23	110.42	107.69	108.30
N° 9	112.91	112.30	118.02	113.59	114.44	110.64	110.47	110.97	114.74	106.16	108.57	108.86
N° 10	112.48	110.09	116.60	111.32	117.28	111.41	114.39	116.27	116.58	111.68	107.37	106.65
N° 11	111.83	112.41	113.99	112.36	112.13	115.10	108.58	115.46	113.01	106.70	108.78	109.03
N° 12	112.43	111.29	116.63	119.77	112.08	115.05	111.50	108.35	107.65	106.48	110.66	112.85
N° 13	113.75	112.40	111.74	116.56	114.44	109.98	108.49	118.81	110.56	108.55	113.07	105.83
N° 14	112.69	112.30	112.04	109.44	117.29	113.42	113.22	111.54	112.20	111.84	108.07	107.62
N° 15	111.72	113.64	112.86	113.59	116.01	110.12	117.06	115.05	107.98	106.58	110.76	108.04
N° 16	113.27	114.02	112.62	115.84	114.65	114.04	113.99	110.82	107.95	107.82	106.91	108.87
N° 17	113.64	113.54	111.35	111.89	111.37	115.22	111.78	108.34	111.69	106.48	115.33	108.80
N° 18	115.00	114.47	115.66	117.09	117.51	111.99	117.43	107.40	109.47	105.33	100.47	114.92
N° 19	113.20	112.82	110.55	112.23	114.98	114.16	108.23	114.53	109.03	109.30	110.80	111.35
N° 20	112.91	113.53	112.08	113.27	112.58	112.74	110.91	114.23	109.14	106.87	106.74	113.24
N° 21	112.99	112.79	112.91	115.18	112.55	113.42	122.10	107.67	109.70	107.37	104.69	108.90
N° 22	114.05	112.53	110.61	113.30	111.64	114.85	111.05	119.33	109.14	111.97	106.92	110.80
N° 23	112.61	112.31	110.61	116.41	115.64	113.07	119.72	107.98	107.82	105.13	108.48	108.10
N° 24	113.93	114.92	117.99	122.06	113.58	110.18	114.27	108.41	113.69	109.05	106.11	108.08
N° 25	113.93	114.53	114.94	113.66	114.16	113.08	112.93	115.53	113.79	103.66	105.88	111.30
N° 26	113.25	111.30	113.85	110.21	112.80	112.97	121.17	108.79	114.76	112.28	109.84	108.28
N° 27	112.70	112.69	113.97	115.26	113.47	118.52	116.31	113.11	105.87	107.69	105.86	109.32
N° 28	114.65	112.18	112.06	113.87	113.42	113.73	111.17	109.28	110.94	105.93	105.99	108.73
N° 29	111.72	112.55	115.75	115.86	112.30	112.81	113.15	113.86	112.21	108.54	108.73	110.50
N° 30	115.04	112.80	115.08	114.93	112.12	107.59	112.03	112.07	107.57	105.98	104.95	107.09
N° 31	112.69	109.85	111.66	113.30	112.11	114.50	109.23	109.74	103.95	104.69	106.64	108.00

## 77. AVS4, Module 1

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



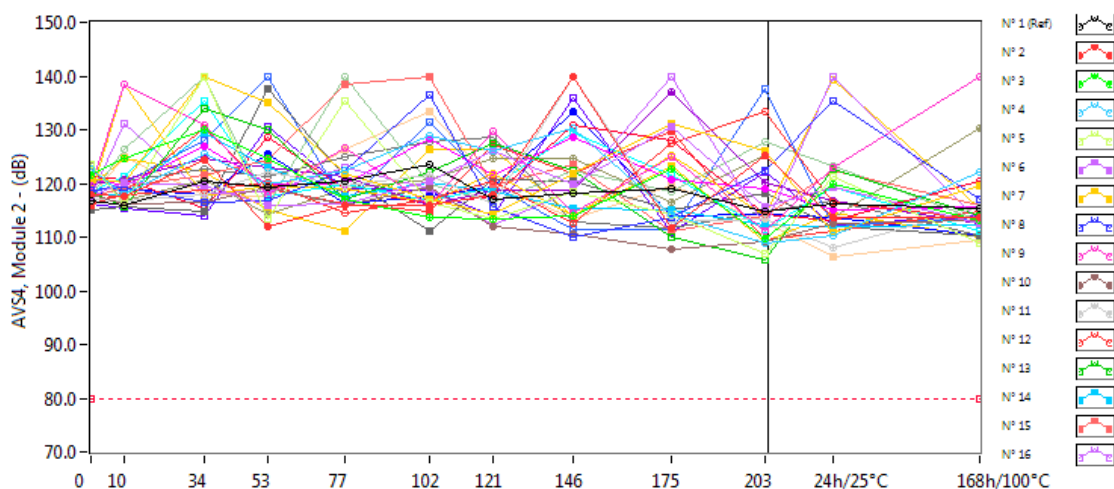
AVS4, Module 1 . (dB)

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)	119.82	118.98	117.21	117.12	116.14	120.28	119.23	115.55	117.05	118.73	117.98	119.00
N° 2	121.51	117.95	128.13	124.24	117.10	114.65	127.78	113.40	116.24	115.98	109.00	107.78
N° 3	123.37	116.69	126.79	118.98	137.69	113.17	118.13	111.63	130.67	114.20	114.54	111.99
N° 4	120.02	118.31	121.09	111.50	122.97	122.81	116.35	121.83	122.23	114.89	124.49	112.66
N° 5	118.10	117.81	115.56	124.06	130.43	115.75	117.71	113.57	119.13	114.90	111.15	117.33
N° 6	117.85	119.43	128.28	117.99	126.45	116.47	123.30	111.82	113.22	112.50	112.16	113.42
N° 7	128.08	117.94	118.12	122.92	131.32	119.99	117.41	114.39	112.51	115.95	109.47	112.90
N° 8	119.36	125.36	126.86	140.00	116.08	120.34	124.28	116.30	115.92	127.19	114.38	109.67
N° 9	121.40	126.67	115.92	119.16	119.35	127.34	123.19	117.92	129.40	134.55	110.73	110.46
N° 10	121.19	116.86	120.51	115.89	121.66	116.45	125.34	113.79	121.98	109.23	106.86	116.64
N° 11	115.20	115.53	140.00	115.27	115.33	131.97	124.77	119.38	140.00	120.14	124.48	115.18
N° 12	115.45	118.40	121.85	120.06	121.28	131.57	123.90	115.20	119.68	123.62	116.37	113.67
N° 13	117.22	119.66	138.50	120.83	134.94	125.36	120.08	118.61	117.40	106.06	118.97	110.55
N° 14	118.78	116.24	121.96	117.66	114.81	120.79	115.61	121.56	112.18	113.34	111.67	107.40
N° 15	118.97	129.77	123.22	117.71	139.79	131.86	116.61	123.91	120.38	113.90	106.57	112.76
N° 16	120.67	119.28	121.75	121.21	118.69	120.81	140.00	123.89	118.31	113.55	121.28	116.19
N° 17	118.83	118.23	114.25	116.59	131.92	115.70	128.08	131.50	128.82	111.25	119.76	115.97
N° 18	120.46	130.94	117.07	125.04	121.90	128.87	114.21	137.23	111.57	120.72	113.85	127.41
N° 19	121.40	123.23	125.30	118.88	140.00	125.73	119.70	113.69	117.41	115.36	116.69	113.92
N° 20	120.75	122.23	118.77	125.01	116.63	121.88	117.61	120.12	128.43	110.10	113.41	111.10
N° 21	120.08	117.71	117.56	121.52	130.45	119.89	124.85	131.62	110.47	114.33	110.91	112.45
N° 22	119.28	127.40	117.70	118.38	118.28	121.69	115.33	113.24	114.91	115.92	117.36	114.52
N° 23	117.80	114.72	127.47	119.92	119.36	116.92	117.46	121.08	117.88	110.40	129.06	117.08
N° 24	120.18	115.09	125.04	130.38	140.00	122.57	136.37	129.03	126.49	118.17	113.51	112.71
N° 25	121.89	115.41	123.62	138.11	118.37	126.87	132.03	118.01	119.55	108.77	123.30	113.92
N° 26	119.08	118.11	114.99	122.55	118.68	125.79	117.20	132.57	117.90	127.57	110.37	111.80
N° 27	118.81	124.19	124.83	117.94	129.71	123.07	121.89	120.72	112.51	114.91	131.37	115.16
N° 28	123.28	129.13	128.21	113.59	132.47	113.50	117.37	112.30	113.19	119.75	114.19	113.87
N° 29	119.05	117.32	128.13	118.19	119.39	119.04	118.33	125.57	120.42	116.39	113.48	114.89
N° 30	120.34	133.08	118.53	123.57	125.75	114.84	134.20	114.84	120.85	107.49	120.07	108.84
N° 31	116.78	116.78	112.68	140.00	115.83	122.84	112.19	114.24	111.16	122.95	117.47	109.87

## 78. AVS4, Module 2

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



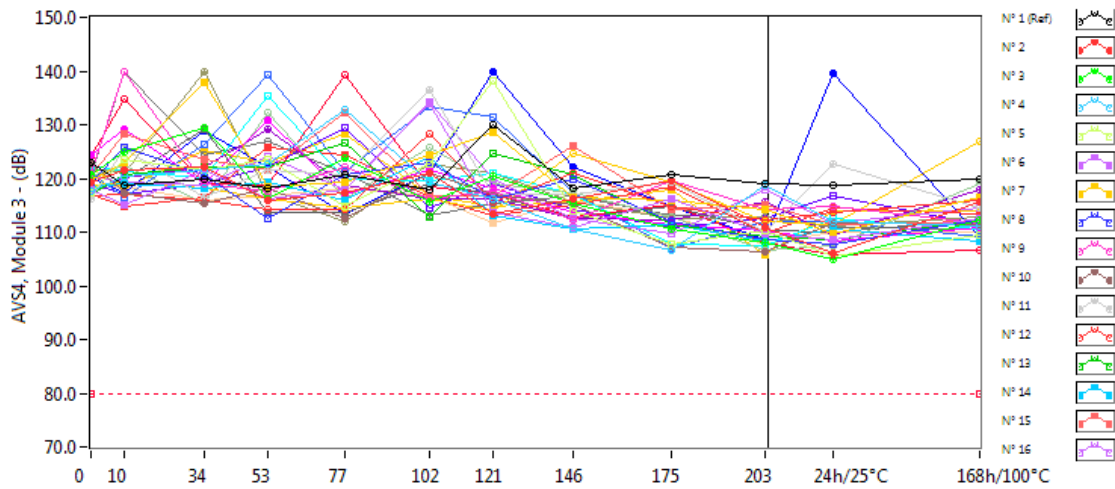
**AVS4, Module 2 . (dB)**

**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)	116.68	115.83	120.46	119.35	120.43	123.56	117.02	118.25	118.94	114.87	116.13	115.24
N° 2	117.97	117.49	124.36	111.99	115.90	115.83	118.00	140.00	111.66	125.35	113.60	113.72
N° 3	121.64	124.61	130.13	124.53	116.96	113.62	113.42	113.97	122.69	109.86	119.78	113.18
N° 4	122.63	117.91	125.53	119.99	122.30	128.88	125.92	130.25	114.25	108.89	110.15	122.19
N° 5	123.60	116.12	140.00	113.41	135.47	116.55	113.31	118.52	114.35	106.80	121.37	108.78
N° 6	117.72	120.25	119.65	116.02	116.26	120.34	126.16	119.84	130.67	115.56	119.35	112.59
N° 7	121.01	120.20	140.00	134.98	121.94	117.01	114.28	121.76	131.10	126.09	110.92	119.61
N° 8	118.83	119.28	116.56	116.69	122.45	136.40	115.57	110.04	113.71	122.28	135.36	117.01
N° 9	119.50	138.44	130.97	117.89	126.53	115.78	129.82	114.58	124.97	111.14	122.85	140.00
N° 10	117.90	116.10	116.39	119.36	115.97	119.39	112.06	110.68	107.75	109.12	112.53	113.23
N° 11	117.00	116.71	117.79	122.08	119.63	121.69	116.24	140.00	112.77	113.43	108.17	115.76
N° 12	116.18	117.81	118.60	120.17	114.50	117.07	120.36	112.66	127.51	133.29	116.46	113.25
N° 13	118.33	115.69	133.84	129.97	117.06	122.18	127.37	122.36	110.10	105.70	122.55	113.98
N° 14	118.02	117.78	129.52	122.83	117.64	120.03	118.57	115.26	115.12	112.27	112.03	112.29
N° 15	117.44	119.20	121.56	124.25	138.42	140.00	119.66	123.41	111.06	113.98	122.29	116.00
N° 16	117.61	131.24	118.12	118.38	123.08	118.95	112.13	118.74	140.00	112.00	140.00	112.80
N° 17	117.90	138.44	117.61	119.64	119.08	116.37	121.83	114.08	125.15	113.89	139.21	115.31
N° 18	120.97	119.58	126.77	119.97	119.85	128.30	121.53	128.64	120.64	119.12	114.94	115.52
N° 19	120.00	120.66	124.53	122.98	121.36	115.80	118.69	118.72	137.01	120.19	116.76	112.60
N° 20	117.60	126.41	140.00	115.85	139.73	119.99	116.50	122.37	118.55	127.75	123.32	113.12
N° 21	118.57	121.16	135.38	117.54	119.77	116.67	119.37	129.40	121.56	111.52	119.29	111.21
N° 22	115.81	118.34	130.38	119.07	116.17	114.73	127.27	121.74	129.82	109.41	111.20	114.86
N° 23	115.03	115.52	114.89	137.64	121.18	111.06	120.80	120.43	115.02	118.22	111.91	110.19
N° 24	118.12	120.03	128.10	140.00	116.14	131.47	119.48	111.38	111.54	137.73	111.83	113.59
N° 25	121.24	120.71	115.41	128.63	119.10	116.11	117.60	130.78	128.10	114.29	113.24	120.33
N° 26	117.56	119.02	117.75	125.41	116.33	117.68	119.40	133.39	113.98	114.25	113.79	110.27
N° 27	123.26	116.63	120.77	114.31	118.92	120.77	124.56	124.78	116.49	125.31	113.69	130.29
N° 28	120.56	120.40	122.74	121.38	124.94	127.84	128.54	112.80	111.66	114.82	116.75	110.16
N° 29	116.11	115.49	114.06	130.54	118.88	118.72	113.98	135.88	110.74	122.05	112.27	113.96
N° 30	119.51	124.75	122.02	114.95	111.24	126.31	126.24	113.93	123.27	109.28	114.49	110.10
N° 31	117.36	124.88	117.95	117.74	126.26	133.24	120.06	113.34	119.69	112.70	106.40	109.40

## 79. AVS4, Module 3

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



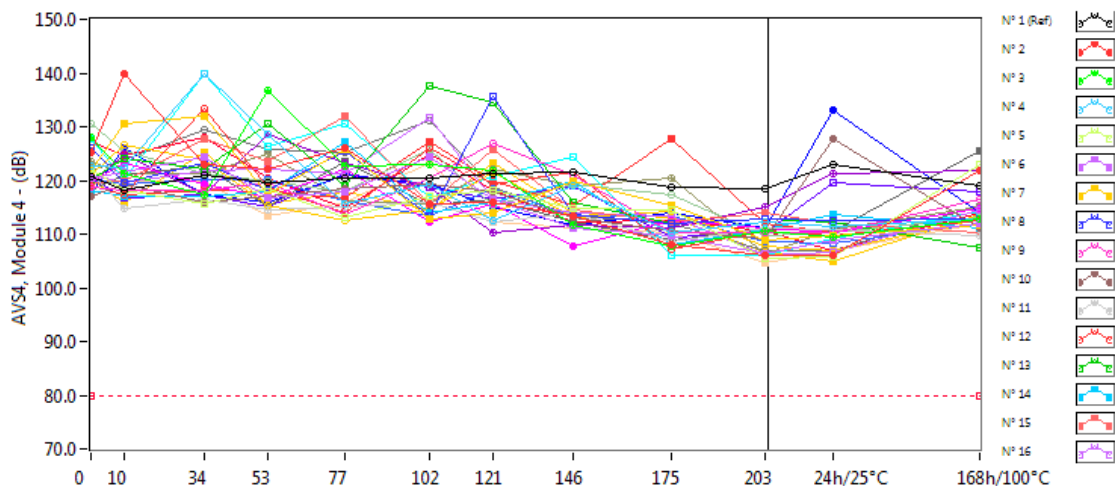
**AVS4, Module 3 . (dB)**

**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)	123.06	118.63	119.97	118.04	120.76	117.83	129.90	118.27	120.83	118.99	118.75	119.93
N° 2	119.27	121.48	122.23	115.80	117.19	121.06	113.27	116.09	119.54	110.91	106.13	115.64
N° 3	120.65	124.84	129.31	116.19	123.69	115.61	120.44	115.25	110.68	107.95	105.05	112.34
N° 4	117.69	120.49	121.50	122.68	132.87	119.17	116.13	110.61	106.71	118.71	111.91	111.02
N° 5	117.36	123.55	121.47	123.66	114.74	122.60	138.04	113.89	107.80	110.20	105.59	109.55
N° 6	117.98	114.94	121.43	116.12	117.96	133.98	113.55	110.90	116.13	109.70	108.56	112.47
N° 7	119.45	122.99	137.82	118.37	119.22	124.29	128.72	116.43	115.98	114.24	109.85	116.58
N° 8	119.40	125.90	120.73	112.48	120.62	122.99	116.25	119.94	112.02	108.53	107.73	112.34
N° 9	121.07	140.00	118.92	117.70	122.14	116.21	117.74	112.18	119.53	114.18	114.70	111.55
N° 10	122.97	117.36	115.33	118.25	112.50	120.89	117.11	115.06	107.23	106.30	111.64	111.37
N° 11	116.07	125.48	116.60	121.47	120.67	136.47	116.93	117.12	119.29	109.91	122.63	114.61
N° 12	116.68	116.95	115.79	114.28	114.18	128.19	115.70	120.98	114.86	112.28	113.60	115.92
N° 13	116.91	120.66	121.98	122.24	126.63	112.93	124.57	120.69	111.30	109.08	108.70	112.36
N° 14	118.45	118.90	118.10	119.40	115.83	123.97	113.16	110.45	111.41	108.19	110.49	108.22
N° 15	120.39	128.29	123.64	121.55	132.22	116.75	116.72	125.99	114.36	115.15	111.29	112.10
N° 16	120.55	119.18	118.65	124.19	117.92	134.27	119.90	112.41	109.59	117.87	111.66	114.58
N° 17	118.76	119.30	118.11	116.11	114.42	116.27	113.97	124.76	119.22	111.85	111.52	126.86
N° 18	124.36	129.16	119.08	130.95	117.06	121.66	118.18	113.77	111.34	110.23	108.35	110.89
N° 19	117.69	120.03	122.20	129.27	118.61	116.09	116.23	112.51	112.24	115.75	109.35	117.89
N° 20	120.34	122.45	115.27	132.22	116.33	125.89	118.92	117.28	112.85	106.67	107.57	118.89
N° 21	122.29	121.38	120.26	135.42	119.93	119.58	121.09	116.97	107.83	107.59	112.59	110.61
N° 22	117.07	114.73	116.47	125.66	124.44	116.40	113.23	115.20	118.32	109.86	114.55	113.31
N° 23	117.44	119.73	129.15	113.70	113.64	118.99	116.94	112.43	114.79	110.21	110.14	112.37
N° 24	121.00	116.57	126.37	139.27	121.31	133.30	131.51	117.40	106.90	111.94	112.06	109.19
N° 25	124.14	134.82	118.99	118.62	139.32	118.52	117.14	112.84	115.07	108.03	105.76	106.68
N° 26	120.20	117.44	128.94	122.04	113.30	121.11	140.00	122.15	114.72	108.47	139.50	109.18
N° 27	121.83	121.05	140.00	116.93	112.08	122.78	120.98	115.61	112.56	112.68	111.04	112.81
N° 28	120.67	140.00	124.29	126.81	121.04	113.20	115.48	116.78	113.19	112.83	110.98	110.45
N° 29	119.09	116.94	119.02	122.04	129.56	114.50	118.91	114.27	110.73	112.43	116.82	111.51
N° 30	121.72	118.23	125.08	123.02	128.28	116.76	114.68	115.56	117.89	105.90	114.07	113.88
N° 31	118.66	118.31	115.78	116.66	118.19	116.76	111.78	115.87	112.84	107.81	110.14	109.96

## 80. AVS4, Module 4

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



AVS4, Module 4 . (dB)

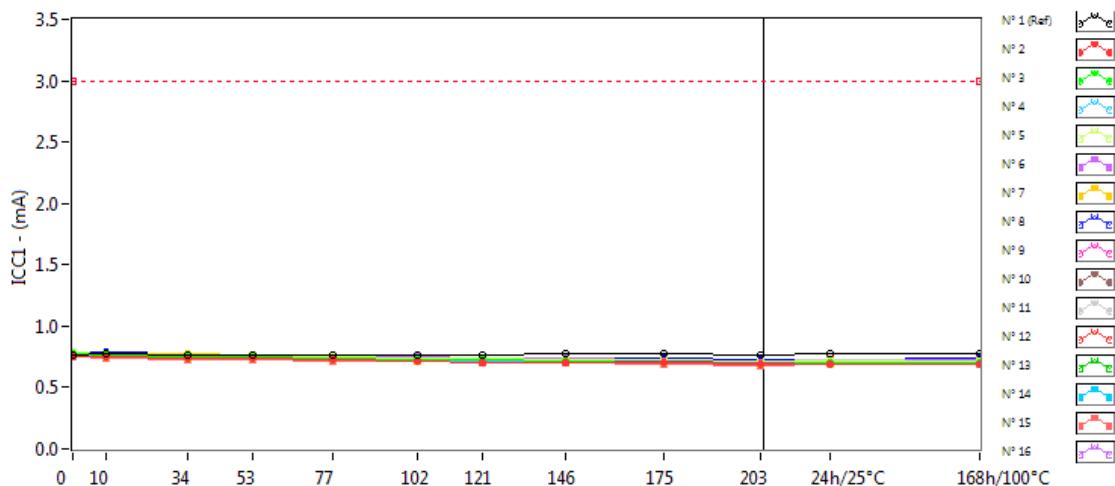
Min = 80.0

	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)	120.72	118.22	120.89	119.70	120.36	120.35	121.27	121.59	118.77	118.48	122.96	119.13
N° 2	125.15	140.00	123.01	122.20	126.16	115.56	116.00	113.32	108.14	106.00	106.17	121.73
N° 3	127.91	121.13	117.40	136.65	122.68	123.06	121.77	111.67	107.68	110.58	109.33	112.95
N° 4	122.79	122.28	140.00	128.69	115.59	119.32	112.55	118.94	110.14	112.30	111.35	112.79
N° 5	122.02	118.14	115.75	118.49	113.08	116.94	118.25	114.73	114.44	105.63	105.79	122.94
N° 6	120.33	121.58	124.47	116.73	117.86	124.39	116.59	111.12	109.86	106.40	108.97	112.03
N° 7	121.82	130.44	131.97	117.21	125.83	112.69	113.98	119.93	115.30	108.99	109.77	111.58
N° 8	126.04	119.48	123.21	118.20	125.48	113.42	135.65	113.74	111.89	112.84	112.55	112.86
N° 9	118.62	118.29	118.23	119.69	113.66	120.34	126.91	120.86	110.27	110.31	110.35	116.57
N° 10	117.02	119.34	115.90	117.11	118.52	119.25	117.85	113.12	110.70	109.10	127.75	111.04
N° 11	121.67	114.82	116.52	114.54	115.04	115.98	112.31	113.92	108.48	111.08	110.94	109.83
N° 12	119.03	117.34	133.34	118.83	113.89	126.06	119.18	121.56	107.23	110.43	109.72	112.54
N° 13	120.17	124.21	122.00	130.60	119.00	137.71	134.63	115.82	112.03	112.94	112.22	107.57
N° 14	118.20	117.16	116.95	117.79	127.13	113.82	115.98	119.92	107.94	110.77	113.58	111.16
N° 15	119.58	119.80	127.86	123.53	132.07	115.77	125.74	114.55	112.31	113.90	111.97	110.22
N° 16	120.87	119.55	121.73	121.98	121.33	131.77	116.45	113.90	113.41	105.96	106.49	114.54
N° 17	120.97	126.75	123.84	115.29	112.57	114.37	121.57	113.04	114.10	107.76	107.00	112.83
N° 18	119.59	123.15	119.24	116.79	122.24	112.33	115.52	107.67	112.44	111.18	110.39	114.75
N° 19	119.38	125.02	117.40	128.66	123.29	118.71	110.30	111.72	111.06	114.96	121.30	121.79
N° 20	130.42	125.52	121.41	119.75	117.85	125.74	115.47	119.29	117.23	109.72	110.19	113.04
N° 21	127.77	120.21	140.00	126.21	130.53	116.66	120.61	124.33	105.97	105.94	109.10	114.26
N° 22	119.14	117.45	118.07	117.90	116.89	127.10	119.99	115.44	127.69	111.96	110.16	113.13
N° 23	118.23	121.00	122.68	115.20	123.59	115.29	116.36	112.23	109.01	110.87	110.57	125.39
N° 24	120.01	119.19	120.17	120.14	116.22	113.30	118.33	113.50	113.30	108.73	108.44	112.06
N° 25	127.29	124.75	128.06	120.47	114.92	124.81	118.13	112.36	112.46	110.67	107.04	113.89
N° 26	117.68	126.14	117.35	115.88	121.01	119.30	115.06	111.76	113.83	111.14	133.14	113.87
N° 27	123.54	121.37	121.23	124.99	116.06	115.64	121.99	118.91	120.30	106.40	110.96	115.04
N° 28	121.92	123.85	129.40	125.70	125.17	131.20	118.72	113.34	111.93	107.01	106.80	115.23
N° 29	120.38	116.82	117.38	115.15	121.16	118.84	116.42	119.10	109.32	110.21	119.56	117.93
N° 30	120.06	115.91	125.24	115.61	117.81	114.43	123.33	114.08	113.07	106.56	105.04	113.76
N° 31	119.28	119.82	119.77	113.39	116.03	123.22	112.37	111.18	110.41	104.70	107.04	112.05



# 81. ICC1

Ta=25°C; +VCC=30V; -VCC=GND

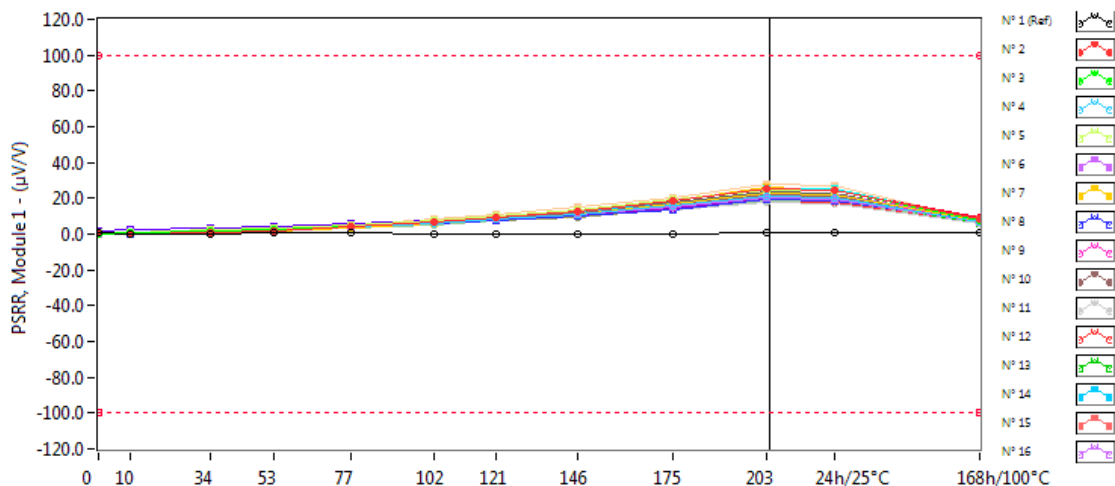


**ICC1 . (mA) Max = 3.0**

	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)	0.769	0.771	0.767	0.770	0.768	0.769	0.766	0.772	0.772	0.765	0.775	0.774
N° 2	0.757	0.751	0.735	0.735	0.725	0.718	0.708	0.705	0.697	0.686	0.689	0.694
N° 3	0.775	0.768	0.751	0.748	0.740	0.732	0.721	0.717	0.705	0.693	0.697	0.708
N° 4	0.766	0.758	0.742	0.745	0.732	0.724	0.715	0.715	0.702	0.692	0.695	0.701
N° 5	0.783	0.775	0.767	0.758	0.750	0.742	0.734	0.730	0.721	0.714	0.712	0.719
N° 6	0.787	0.779	0.766	0.763	0.755	0.748	0.739	0.741	0.727	0.717	0.720	0.725
N° 7	0.761	0.752	0.740	0.736	0.728	0.720	0.710	0.709	0.697	0.686	0.689	0.697
N° 8	0.759	0.750	0.738	0.736	0.726	0.721	0.711	0.712	0.707	0.691	0.695	0.699
N° 9	0.760	0.753	0.741	0.738	0.730	0.723	0.713	0.712	0.702	0.692	0.695	0.700
N° 10	0.771	0.764	0.751	0.745	0.735	0.729	0.720	0.717	0.708	0.697	0.701	0.712
N° 11	0.784	0.778	0.766	0.762	0.754	0.747	0.738	0.736	0.727	0.718	0.721	0.726
N° 12	0.782	0.776	0.765	0.758	0.752	0.745	0.737	0.735	0.726	0.717	0.721	0.725
N° 13	0.788	0.780	0.768	0.763	0.754	0.747	0.738	0.736	0.727	0.716	0.716	0.725
N° 14	0.779	0.773	0.763	0.758	0.747	0.742	0.733	0.730	0.721	0.711	0.715	0.718
N° 15	0.748	0.742	0.731	0.726	0.716	0.711	0.703	0.700	0.691	0.680	0.684	0.689
N° 16	0.763	0.756	0.746	0.741	0.732	0.725	0.717	0.714	0.706	0.697	0.698	0.704
N° 17	0.789	0.782	0.773	0.766	0.757	0.750	0.741	0.739	0.731	0.719	0.721	0.728
N° 18	0.751	0.745	0.736	0.730	0.720	0.714	0.706	0.704	0.695	0.684	0.687	0.692
N° 19	0.750	0.744	0.734	0.729	0.720	0.715	0.706	0.705	0.697	0.687	0.689	0.694
N° 20	0.752	0.746	0.735	0.729	0.721	0.715	0.707	0.704	0.696	0.686	0.688	0.695
N° 21	0.758	0.750	0.740	0.734	0.724	0.718	0.709	0.708	0.696	0.685	0.686	0.695
N° 22	0.783	0.777	0.765	0.764	0.751	0.746	0.738	0.737	0.729	0.717	0.721	0.726
N° 23	0.779	0.771	0.762	0.756	0.746	0.740	0.730	0.729	0.719	0.706	0.711	0.719
N° 24	0.766	0.760	0.750	0.743	0.733	0.728	0.718	0.716	0.707	0.695	0.698	0.706
N° 25	0.757	0.753	0.743	0.735	0.725	0.719	0.709	0.707	0.700	0.688	0.688	0.698
N° 26	0.791	0.786	0.775	0.770	0.759	0.755	0.745	0.743	0.736	0.724	0.727	0.735
N° 27	0.767	0.761	0.750	0.747	0.734	0.728	0.718	0.716	0.706	0.698	0.699	0.705
N° 28	0.758	0.752	0.740	0.734	0.724	0.718	0.709	0.706	0.697	0.684	0.687	0.698
N° 29	0.779	0.770	0.760	0.755	0.745	0.741	0.732	0.731	0.722	0.710	0.712	0.718
N° 30	0.764	0.757	0.746	0.740	0.731	0.725	0.715	0.712	0.704	0.690	0.698	0.703
N° 31	0.776	0.769	0.759	0.753	0.744	0.737	0.728	0.725	0.717	0.702	0.704	0.716

## 82. PSRR, Module 1

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

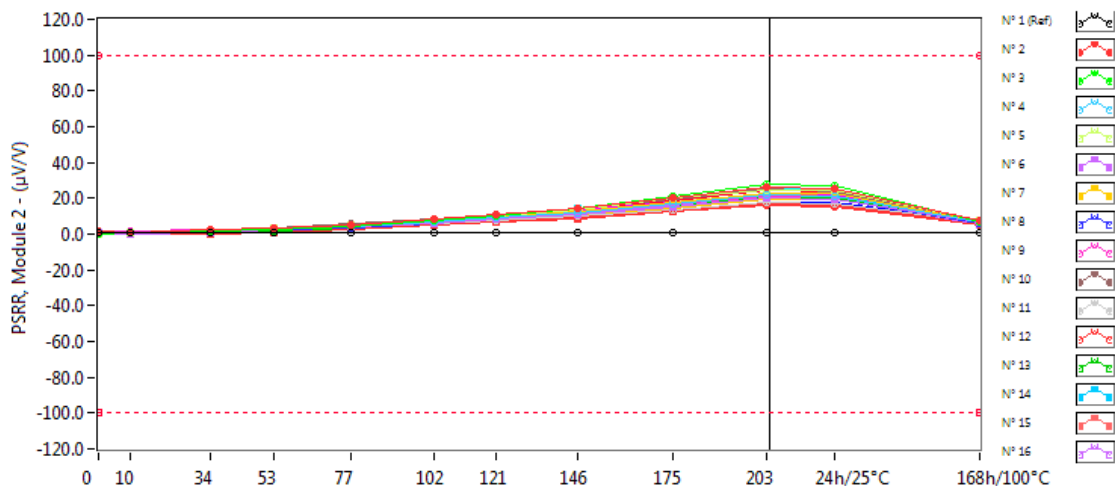


**PSRR, Module 1 . (µV/V) Min = -100.0 Max = 100.0**

	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)	0.430	0.299	0.372	0.431	0.539	0.357	0.349	0.396	0.397	0.431	0.506	0.448
N° 2	0.651	0.154	1.082	1.921	3.826	6.456	9.338	12.736	18.555	25.401	24.851	8.353
N° 3	0.188	0.693	1.751	2.749	4.351	6.737	9.320	12.503	18.425	25.389	24.465	7.682
N° 4	0.100	0.670	1.492	2.363	3.849	6.150	8.179	10.864	15.646	21.101	20.177	7.151
N° 5	0.459	1.023	2.136	3.256	5.059	7.910	10.452	13.932	19.442	24.612	24.550	7.444
N° 6	0.100	0.566	1.476	2.622	4.134	6.494	8.673	11.280	15.569	20.049	19.362	6.918
N° 7	0.945	0.436	0.611	1.643	3.169	5.741	8.218	11.034	16.480	23.121	22.113	7.851
N° 8	0.272	0.265	1.314	2.254	3.880	6.083	7.997	10.267	13.769	19.143	18.216	7.464
N° 9	0.341	0.829	1.892	2.908	4.372	6.492	8.779	11.194	15.624	20.561	19.622	8.046
N° 10	0.344	0.148	1.269	2.417	3.947	6.363	8.657	11.660	16.493	22.346	21.385	8.505
N° 11	0.502	0.100	0.920	1.818	3.357	5.569	7.781	10.127	13.685	17.602	16.829	5.616
N° 12	0.892	0.361	0.707	1.737	3.355	5.622	7.685	10.042	13.772	17.679	16.751	5.578
N° 13	0.609	0.153	0.914	1.974	3.395	5.836	8.161	10.898	15.451	20.335	19.861	5.786
N° 14	0.442	0.871	1.905	3.273	4.884	7.338	9.547	12.425	16.676	21.318	20.434	7.978
N° 15	0.124	0.481	1.841	2.882	4.376	6.633	8.780	11.487	16.429	22.266	21.279	8.829
N° 16	0.588	1.064	2.160	3.168	4.628	7.049	9.472	12.575	16.804	22.416	21.780	8.560
N° 17	0.796	1.239	2.330	3.270	4.924	7.350	9.722	12.511	17.071	22.179	21.722	7.079
N° 18	0.250	0.338	1.285	2.468	4.081	6.661	8.927	11.659	16.423	21.895	21.031	7.865
N° 19	0.362	0.862	1.895	2.946	4.411	6.556	8.748	11.045	14.706	19.134	18.446	7.919
N° 20	1.021	0.528	0.633	1.791	2.991	5.243	7.208	10.014	14.043	18.961	18.457	6.755
N° 21	0.196	0.355	1.409	2.588	4.353	6.745	9.549	12.800	18.418	25.524	24.986	7.995
N° 22	0.628	1.014	1.837	2.721	4.232	6.540	8.308	10.601	14.222	18.306	17.675	6.681
N° 23	0.535	0.906	1.975	3.252	4.760	7.366	9.887	12.930	17.681	23.445	22.693	7.746
N° 24	0.100	0.494	1.515	2.386	3.717	5.890	7.851	10.134	14.233	19.668	18.627	6.925
N° 25	0.306	0.818	1.893	3.105	4.723	7.492	9.842	13.190	18.410	25.050	24.709	8.998
N° 26	0.464	0.806	1.714	2.952	4.190	6.510	8.658	11.229	15.295	20.126	19.340	6.465
N° 27	0.762	0.281	0.770	1.633	3.118	5.320	7.364	9.691	14.083	19.382	18.963	6.262
N° 28	0.100	0.443	1.589	2.658	3.836	6.136	7.940	10.819	15.136	21.543	20.474	8.157
N° 29	1.679	2.148	3.135	4.136	5.772	7.954	10.073	12.256	16.101	20.324	19.827	8.737
N° 30	0.366	0.128	1.366	2.475	4.376	6.979	9.724	12.951	18.452	26.107	24.328	8.485
N° 31	0.451	1.012	1.996	3.315	5.287	8.432	11.181	14.846	20.659	27.880	26.884	7.865

### 83. PSRR, Module 2

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

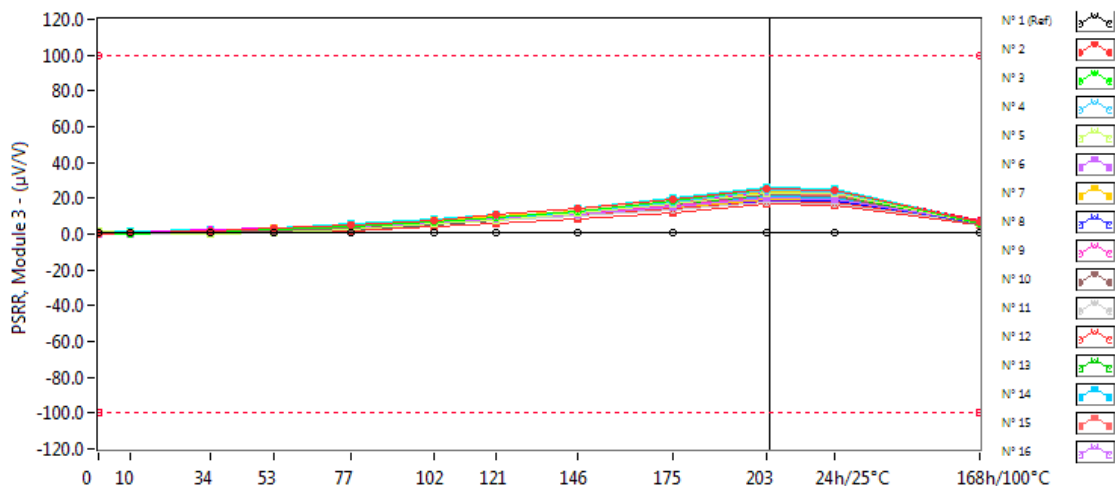


**PSRR, Module 2 . (µV/V) Min = -100.0 Max = 100.0**

	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)	0.760	0.690	0.730	0.884	0.917	0.735	0.733	0.828	0.733	0.733	0.855	0.812
N° 2	0.521	1.007	2.174	3.455	5.087	8.082	11.079	14.689	20.382	25.930	25.445	7.697
N° 3	0.114	0.568	1.763	2.938	4.529	7.388	10.423	14.419	21.279	27.826	27.155	6.724
N° 4	0.100	0.581	1.778	2.564	4.217	6.592	8.933	11.621	17.080	22.284	21.389	7.040
N° 5	0.294	0.797	1.825	2.985	4.825	7.405	9.977	13.140	20.244	24.300	24.406	7.918
N° 6	0.485	0.100	1.216	2.128	3.873	6.060	8.453	10.778	15.265	19.911	19.360	7.105
N° 7	0.100	0.432	1.600	2.621	4.188	6.800	9.408	12.671	17.822	23.147	22.501	6.693
N° 8	0.260	0.205	1.395	2.262	3.771	6.166	8.551	11.299	14.907	20.026	19.158	6.062
N° 9	0.842	1.321	2.376	3.243	4.715	7.153	9.594	12.435	17.130	21.483	20.780	7.150
N° 10	0.654	1.186	2.574	3.690	5.662	8.453	11.181	14.694	19.622	24.946	24.082	7.100
N° 11	0.422	0.100	1.150	2.158	3.334	5.540	7.499	9.995	13.726	17.342	16.819	6.607
N° 12	1.349	0.944	0.239	1.084	2.673	4.960	6.792	8.911	12.557	16.344	15.626	5.346
N° 13	0.651	0.237	0.961	1.948	3.412	5.834	8.128	11.055	15.438	20.709	20.277	6.887
N° 14	0.444	0.903	1.999	3.206	4.909	7.525	9.966	12.669	16.755	21.787	20.927	7.966
N° 15	0.428	0.812	2.016	3.112	4.819	7.079	9.473	12.618	17.406	22.478	21.387	6.504
N° 16	0.922	0.447	0.502	1.688	3.034	5.649	8.204	11.268	15.707	20.840	20.214	5.237
N° 17	1.271	0.905	0.328	1.374	2.802	5.339	7.595	10.194	14.491	19.779	19.070	6.561
N° 18	1.000	1.596	2.553	3.784	5.339	8.017	10.483	13.563	18.009	22.851	22.072	7.997
N° 19	0.356	0.105	1.137	2.358	3.945	6.339	8.551	11.071	15.336	19.850	19.211	5.964
N° 20	0.486	0.100	1.075	2.188	3.652	5.963	8.166	11.126	15.309	20.274	19.373	5.679
N° 21	0.157	0.324	1.687	2.789	4.592	7.473	10.268	13.983	19.622	25.521	24.675	6.552
N° 22	1.206	0.854	0.253	1.187	2.673	4.770	6.479	8.831	12.472	16.757	16.010	6.133
N° 23	0.407	0.100	1.104	2.104	3.868	6.324	8.570	11.350	16.239	22.078	21.313	6.964
N° 24	0.100	0.509	1.393	2.413	3.886	6.138	8.270	11.046	15.959	21.169	20.119	6.744
N° 25	0.327	0.759	2.002	3.090	4.836	7.843	10.304	13.553	18.808	24.660	23.986	6.786
N° 26	0.493	0.100	1.080	2.075	3.420	5.553	7.656	10.144	13.863	18.045	17.717	6.474
N° 27	0.211	0.630	1.757	2.818	4.390	6.707	9.057	11.781	16.396	21.637	21.193	6.944
N° 28	0.852	1.279	2.331	3.228	4.909	7.337	9.419	12.543	17.181	22.801	21.880	6.794
N° 29	1.220	0.637	0.378	1.361	2.955	5.291	7.447	9.571	12.969	17.304	16.485	6.428
N° 30	0.376	0.100	1.204	2.466	4.227	7.170	9.920	13.394	18.808	25.035	23.499	6.140
N° 31	0.158	0.441	1.450	2.670	4.441	7.137	9.716	12.704	18.078	24.969	24.157	7.053

### 84. PSRR, Module 3

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

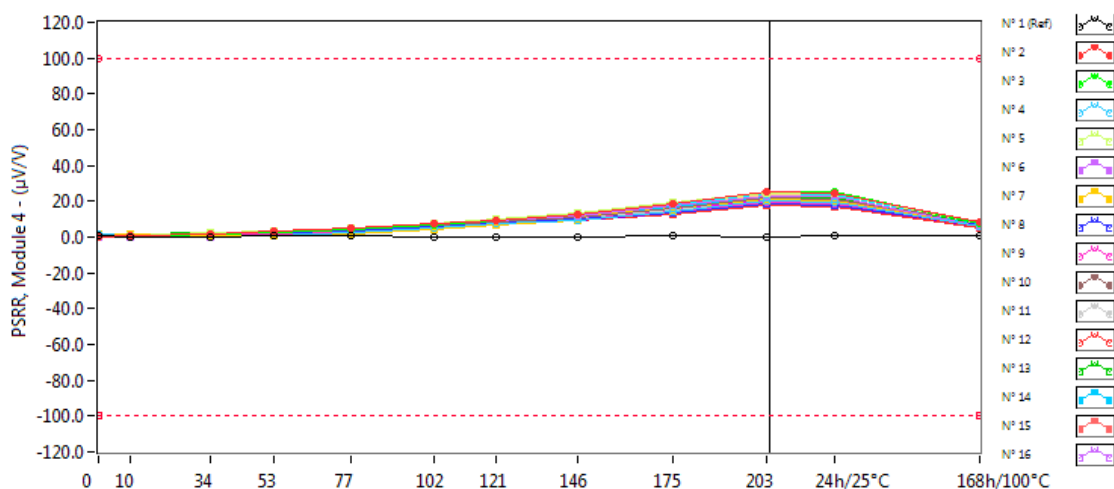


PSRR, Module 3 . (µV/V) Min = -100.0 Max = 100.0

	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)	0.568	0.537	0.508	0.502	0.550	0.525	0.516	0.617	0.577	0.572	0.614	0.611
N° 2	0.211	0.747	1.837	3.067	4.872	7.531	10.650	14.238	19.761	25.548	24.874	6.631
N° 3	0.192	0.100	1.499	2.500	4.067	6.731	9.237	12.665	18.399	25.021	24.353	6.281
N° 4	0.377	0.100	1.280	2.322	4.237	6.715	9.253	12.279	17.931	24.113	23.332	6.492
N° 5	1.574	1.170	0.100	1.126	2.930	5.583	8.018	11.412	16.831	22.615	22.428	6.053
N° 6	0.282	0.129	1.291	2.317	3.972	6.296	8.522	10.784	15.321	20.535	19.736	6.522
N° 7	0.471	0.871	2.007	3.028	4.632	7.190	9.837	13.017	18.247	23.423	22.683	6.853
N° 8	0.227	0.655	1.874	2.831	4.515	6.702	8.848	11.374	14.930	20.377	19.631	6.109
N° 9	0.169	0.496	1.641	2.624	4.141	6.277	8.602	11.329	15.853	20.497	19.822	5.939
N° 10	0.838	0.431	0.769	1.874	3.699	6.316	8.954	12.286	17.041	21.855	21.115	4.824
N° 11	0.397	0.100	1.019	2.005	3.734	5.710	7.403	10.028	13.703	17.662	17.268	6.153
N° 12	0.480	0.100	1.069	2.129	3.601	5.713	7.787	10.273	14.064	18.124	17.500	6.229
N° 13	0.849	0.497	0.596	1.597	3.228	5.789	7.986	10.919	15.738	21.582	20.888	6.792
N° 14	0.522	0.241	0.998	2.206	4.019	6.214	8.494	11.422	16.023	21.254	20.401	6.883
N° 15	0.294	0.766	2.003	3.166	4.966	7.190	9.641	12.688	17.543	22.200	21.667	6.565
N° 16	0.133	0.463	1.614	2.685	4.195	6.607	9.154	12.642	16.873	22.126	21.592	5.798
N° 17	0.861	0.423	0.588	1.643	3.315	5.523	7.704	10.404	14.618	19.829	19.373	6.376
N° 18	0.561	0.990	2.115	3.193	4.932	7.371	9.779	12.731	17.630	22.746	21.943	6.899
N° 19	0.243	0.808	1.781	2.856	4.710	6.860	9.012	11.852	15.796	19.962	19.625	6.190
N° 20	0.290	0.184	1.305	2.317	3.982	6.296	8.428	11.368	15.889	20.874	20.263	5.888
N° 21	0.881	1.360	2.530	3.741	5.623	8.363	11.256	14.733	20.279	26.011	25.722	7.144
N° 22	1.768	1.366	0.291	0.532	2.031	3.952	5.796	8.098	12.007	16.765	16.090	4.845
N° 23	1.374	1.060	0.100	1.137	2.659	4.858	7.216	10.241	15.151	20.680	19.996	5.162
N° 24	0.297	0.208	1.314	2.262	3.729	5.845	7.871	10.782	15.155	20.406	19.831	6.266
N° 25	0.673	1.085	2.269	3.389	5.137	7.935	10.714	14.296	19.311	25.119	24.601	7.245
N° 26	0.557	0.110	0.953	2.126	3.703	5.854	7.890	10.462	14.481	19.015	18.685	6.879
N° 27	0.106	0.197	1.236	2.158	3.865	5.972	8.140	10.928	15.490	20.697	20.156	6.238
N° 28	0.318	0.601	1.696	2.713	4.237	6.428	8.494	11.574	16.114	21.508	20.756	5.595
N° 29	0.263	0.151	1.254	2.203	3.640	5.734	7.682	10.180	13.734	18.172	17.480	6.618
N° 30	0.308	0.673	2.058	3.204	4.987	7.805	10.628	14.227	19.389	25.716	24.578	6.714
N° 31	0.100	0.533	1.622	2.780	4.413	7.093	9.616	13.130	18.542	25.357	24.666	7.050

## 85. PSRR, Module 4

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

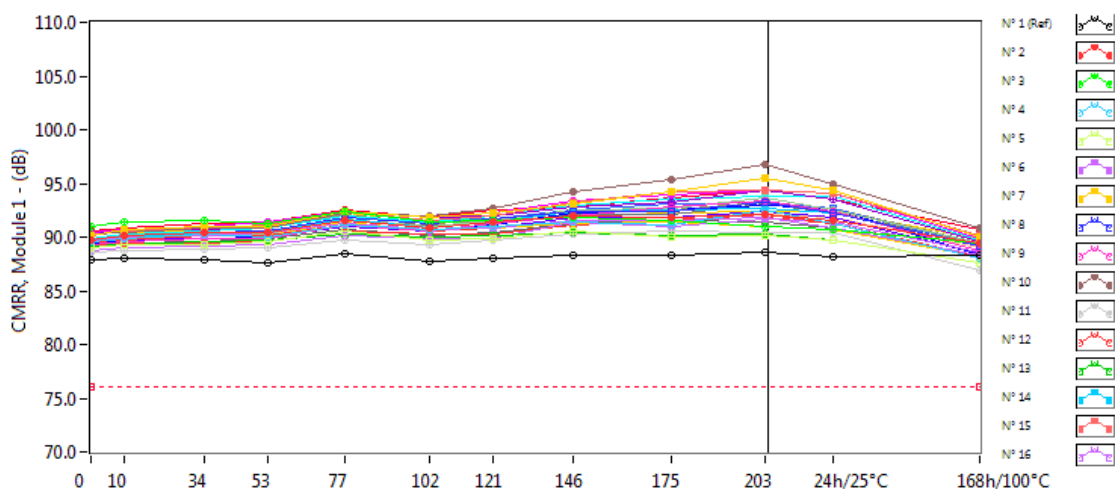


**PSRR, Module 4 . (µV/V) Min = -100.0 Max = 100.0**

	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)	0.461	0.367	0.400	0.470	0.509	0.393	0.395	0.354	0.448	0.409	0.443	0.460
N° 2	0.374	0.854	2.070	3.100	4.756	7.223	9.701	13.089	18.642	25.509	24.843	8.510
N° 3	0.100	0.413	1.570	2.573	4.111	6.638	9.058	12.549	18.621	25.731	25.252	7.464
N° 4	1.341	0.838	0.240	1.160	2.852	5.120	7.365	9.694	14.163	20.022	19.233	6.302
N° 5	0.436	0.986	2.223	3.292	5.063	7.823	10.399	13.737	19.103	24.130	24.155	7.269
N° 6	0.113	0.280	1.386	2.388	3.878	6.490	9.058	12.250	17.754	23.185	22.641	5.856
N° 7	1.829	1.463	0.424	0.505	1.913	4.192	6.594	9.424	14.385	20.583	19.983	6.109
N° 8	0.333	0.100	1.313	2.305	3.658	5.556	7.560	9.963	13.446	18.769	18.157	7.107
N° 9	0.750	0.296	0.840	1.708	3.144	5.164	7.321	9.990	14.122	19.136	18.376	6.443
N° 10	0.661	0.194	1.001	2.024	3.686	6.035	8.370	11.346	16.214	22.014	21.184	8.086
N° 11	0.628	1.120	1.883	2.985	4.333	6.702	8.765	11.174	14.902	19.022	18.389	6.653
N° 12	0.100	0.331	1.428	2.538	4.026	6.182	8.344	11.015	15.073	19.447	18.759	5.940
N° 13	1.287	1.730	2.672	3.732	5.218	7.460	9.941	13.128	17.626	22.796	22.215	7.454
N° 14	1.014	0.596	0.613	1.981	3.787	6.688	9.141	12.451	17.320	22.436	21.745	6.886
N° 15	1.105	0.740	0.460	1.318	3.035	5.114	7.083	9.691	14.632	20.493	19.930	7.443
N° 16	1.791	1.291	0.305	0.816	2.158	4.488	6.977	9.829	14.181	20.284	19.582	6.219
N° 17	0.100	0.414	1.621	2.674	4.217	6.618	8.903	11.937	16.280	21.230	20.754	6.466
N° 18	1.317	0.900	0.158	1.198	2.866	5.192	7.311	10.123	14.823	20.455	19.582	6.736
N° 19	1.098	0.750	0.418	1.508	2.999	5.130	6.969	9.353	13.239	18.372	17.756	6.265
N° 20	1.590	1.015	0.122	1.116	2.491	4.492	6.397	9.194	13.426	18.789	18.109	6.471
N° 21	0.412	0.100	1.062	2.228	3.878	6.364	8.742	11.933	17.537	24.587	23.906	7.540
N° 22	0.590	0.107	0.854	1.694	3.197	5.137	7.043	9.186	12.921	17.342	16.644	5.076
N° 23	0.307	0.114	1.138	2.314	4.020	6.397	8.772	11.817	16.466	21.752	21.115	6.247
N° 24	0.488	0.100	0.944	2.053	3.473	5.459	7.338	9.838	14.035	19.171	18.340	6.650
N° 25	1.463	1.041	0.198	1.257	3.011	5.607	7.914	10.938	15.677	22.336	22.009	7.013
N° 26	0.471	0.100	0.948	1.933	3.435	5.568	7.721	10.266	14.130	18.627	18.032	5.111
N° 27	0.731	0.269	0.753	1.639	3.251	5.189	7.233	9.820	14.027	19.286	18.956	6.715
N° 28	0.919	0.660	0.489	1.381	2.830	5.038	7.053	9.919	14.347	20.807	19.937	6.782
N° 29	0.100	0.449	1.405	2.490	4.047	6.409	8.506	10.873	14.749	18.934	18.387	6.268
N° 30	0.989	0.555	0.554	1.641	3.457	5.933	8.488	11.794	17.579	24.652	23.348	7.344
N° 31	1.088	0.666	0.403	1.606	3.372	5.888	8.708	12.084	17.306	23.564	22.589	5.471

## 86. CMRR, Module 1

Ta=25°C; +VCC=5V; -VCC=GND



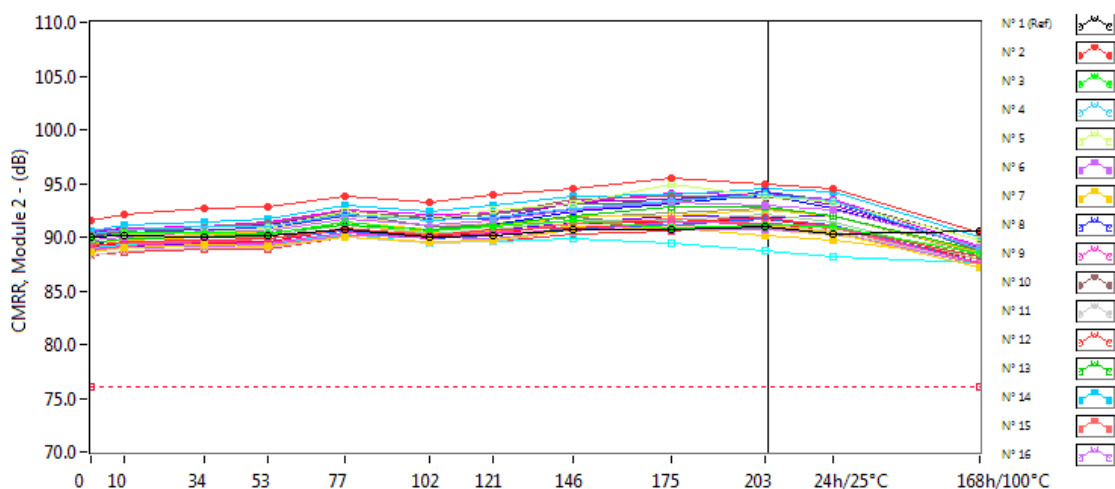
CMRR, Module 1 . (dB)

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)	87.90	88.02	87.87	87.63	88.52	87.81	88.02	88.34	88.38	88.54	88.10	88.31
N° 2	89.78	90.16	90.46	90.42	91.61	90.84	91.44	92.01	91.81	92.13	91.53	89.45
N° 3	91.04	91.42	91.50	91.30	92.45	91.48	91.51	91.89	91.50	90.97	90.72	89.41
N° 4	89.54	89.87	90.25	89.93	91.08	90.74	90.98	91.38	91.09	92.55	91.20	88.02
N° 5	88.96	89.28	89.29	89.60	90.56	89.74	89.86	90.56	89.93	90.07	89.65	87.62
N° 6	89.59	89.94	90.11	90.36	91.32	90.75	90.90	91.50	91.50	91.88	90.88	88.37
N° 7	90.17	90.66	90.98	91.00	92.36	91.80	92.23	93.12	94.16	95.50	94.34	90.00
N° 8	89.67	90.15	90.37	90.56	91.80	91.29	91.72	92.40	92.34	93.23	92.22	89.12
N° 9	89.35	89.62	89.83	89.93	91.19	90.57	91.22	91.93	92.75	93.39	92.38	88.77
N° 10	90.32	90.40	90.79	90.79	92.31	92.03	92.61	94.16	95.35	96.77	94.87	90.87
N° 11	88.54	88.80	88.94	89.02	89.71	89.30	89.73	90.25	90.58	90.43	90.42	86.93
N° 12	89.54	89.72	90.17	90.17	91.07	90.62	90.90	91.55	91.59	92.13	91.34	88.11
N° 13	89.09	89.36	89.58	89.71	90.27	89.93	90.18	90.48	90.08	90.33	89.77	87.63
N° 14	89.83	89.99	90.30	90.43	91.69	90.80	91.37	92.34	92.49	92.63	92.21	89.15
N° 15	90.17	90.56	90.86	91.19	92.43	91.61	92.02	93.23	94.27	94.43	94.12	90.16
N° 16	88.68	89.00	89.13	89.32	90.17	89.90	89.92	91.36	90.98	91.76	91.40	88.54
N° 17	89.71	90.04	90.20	90.09	91.38	90.52	90.86	91.27	91.41	91.04	90.71	88.16
N° 18	90.41	90.77	91.03	91.40	92.45	91.83	92.25	93.32	93.92	94.39	94.12	89.92
N° 19	90.23	90.61	90.74	91.06	92.36	91.86	92.01	92.87	93.29	94.32	93.53	89.56
N° 20	89.57	89.91	90.22	90.29	91.62	91.02	91.52	92.57	92.73	93.61	92.58	89.37
N° 21	89.86	90.33	90.59	90.80	92.02	91.40	92.03	92.93	93.48	93.83	93.85	89.66
N° 22	89.14	89.39	89.44	89.64	90.60	90.28	90.30	91.17	91.61	91.80	91.25	88.13
N° 23	89.00	89.39	89.56	89.80	90.65	90.10	90.36	91.27	91.51	91.45	90.80	88.28
N° 24	90.35	90.66	90.67	90.85	92.36	91.62	91.69	92.53	93.08	93.25	92.68	89.13
N° 25	90.55	90.84	91.22	91.37	92.57	91.77	92.56	92.79	93.61	94.39	93.51	90.67
N° 26	89.44	89.60	89.87	90.06	91.18	90.57	91.16	92.29	92.59	93.03	92.68	88.27
N° 27	90.34	90.60	90.89	91.05	92.05	91.32	91.60	92.35	92.59	93.29	92.73	89.39
N° 28	89.79	90.10	90.30	90.48	91.54	91.06	91.22	92.11	92.08	93.14	92.29	89.42
N° 29	89.36	89.68	89.91	89.95	91.06	90.57	90.91	91.86	91.77	92.46	91.85	88.50
N° 30	90.28	90.48	90.73	90.84	92.23	91.59	91.53	92.56	92.21	92.41	92.43	89.91
N° 31	89.65	90.00	90.14	90.23	91.50	91.02	91.55	91.97	92.29	92.18	91.85	89.03

## 87. CMRR, Module 2

Ta=25°C; +VCC=5V; -VCC=GND



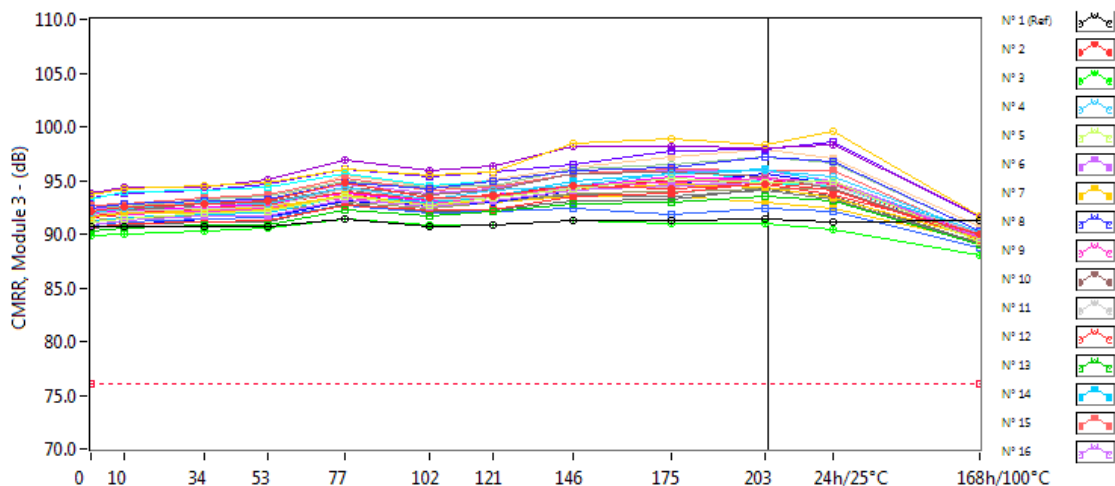
CMRR, Module 2 . (dB)

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)	89.97	90.13	90.02	90.08	90.66	90.01	90.18	90.68	90.75	90.92	90.26	90.60
N° 2	91.50	92.05	92.64	92.76	93.81	93.24	93.89	94.45	95.47	94.96	94.49	90.47
N° 3	89.88	90.36	90.45	90.33	91.39	90.61	91.03	91.49	90.88	91.13	90.96	88.50
N° 4	90.28	90.72	90.94	90.94	92.17	91.49	91.79	92.63	93.36	93.88	93.35	88.93
N° 5	89.92	90.31	90.37	90.79	92.33	91.61	92.58	93.16	94.87	93.81	93.27	89.78
N° 6	89.65	90.04	90.54	90.52	91.67	91.11	91.61	92.47	93.18	92.97	92.60	89.19
N° 7	88.59	88.99	89.28	89.17	89.95	89.54	89.77	90.72	90.79	91.17	90.35	87.18
N° 8	89.97	90.43	90.68	90.83	91.96	91.65	91.69	92.56	93.32	94.24	93.28	88.92
N° 9	88.85	89.11	89.53	89.49	90.44	89.88	90.44	90.59	91.43	91.22	91.01	87.54
N° 10	90.16	90.55	90.92	91.21	92.44	91.77	92.09	93.56	93.75	93.68	93.45	88.71
N° 11	88.34	88.69	88.95	89.06	89.97	89.42	89.64	90.68	90.91	91.19	90.57	87.67
N° 12	89.16	89.56	89.72	89.83	90.83	90.19	90.66	90.88	91.39	91.78	90.95	88.21
N° 13	89.41	89.80	90.03	90.36	91.14	90.72	91.19	92.00	92.79	92.78	92.01	88.74
N° 14	90.56	91.06	91.37	91.63	92.98	92.34	92.95	93.86	93.88	94.55	94.22	89.98
N° 15	89.26	89.45	89.58	89.87	90.75	90.23	90.38	91.27	91.63	91.26	90.90	87.44
N° 16	88.78	89.06	89.11	89.31	90.09	89.94	89.92	90.76	90.72	90.72	90.40	87.53
N° 17	89.44	89.72	90.02	90.22	91.46	90.77	90.92	91.97	91.98	92.50	91.94	88.60
N° 18	90.55	90.89	91.02	91.44	92.58	92.09	92.31	93.24	94.05	94.01	93.53	89.21
N° 19	90.37	90.84	91.00	91.08	92.38	91.82	91.70	93.25	93.54	94.18	92.93	89.00
N° 20	89.43	89.84	90.10	90.15	91.17	90.31	90.77	91.54	91.55	92.18	91.41	87.82
N° 21	88.98	89.34	89.53	89.48	90.34	89.50	89.64	89.87	89.46	88.74	88.19	87.54
N° 22	88.27	88.53	88.81	88.94	89.95	89.38	89.64	90.26	90.59	91.23	90.50	87.65
N° 23	90.05	90.38	90.48	90.85	92.33	91.74	92.10	93.16	93.23	94.16	93.36	89.65
N° 24	89.02	89.25	89.54	89.80	90.56	89.86	90.18	90.80	91.13	91.69	91.19	87.64
N° 25	89.11	89.27	89.46	89.56	90.65	90.15	90.35	91.27	91.34	91.71	90.84	87.89
N° 26	89.32	89.79	90.02	90.11	91.13	90.75	91.15	92.37	93.03	93.89	92.71	88.97
N° 27	89.56	89.72	90.05	90.05	91.37	90.61	91.27	91.87	92.19	92.74	92.01	88.41
N° 28	90.21	90.69	90.75	90.88	92.24	91.00	91.07	91.90	91.17	90.88	90.33	88.33
N° 29	88.67	89.16	89.28	89.46	90.44	90.10	90.76	91.28	92.03	91.85	91.94	88.67
N° 30	89.70	90.06	90.26	90.39	91.10	90.48	90.59	90.95	90.84	90.14	89.67	88.03
N° 31	90.10	90.47	90.76	90.77	91.91	90.93	91.21	91.35	90.96	90.67	90.12	88.96

### 88. CMRR, Module 3

Ta=25°C; +VCC=5V; -VCC=GND



CMRR, Module 3 . (dB)

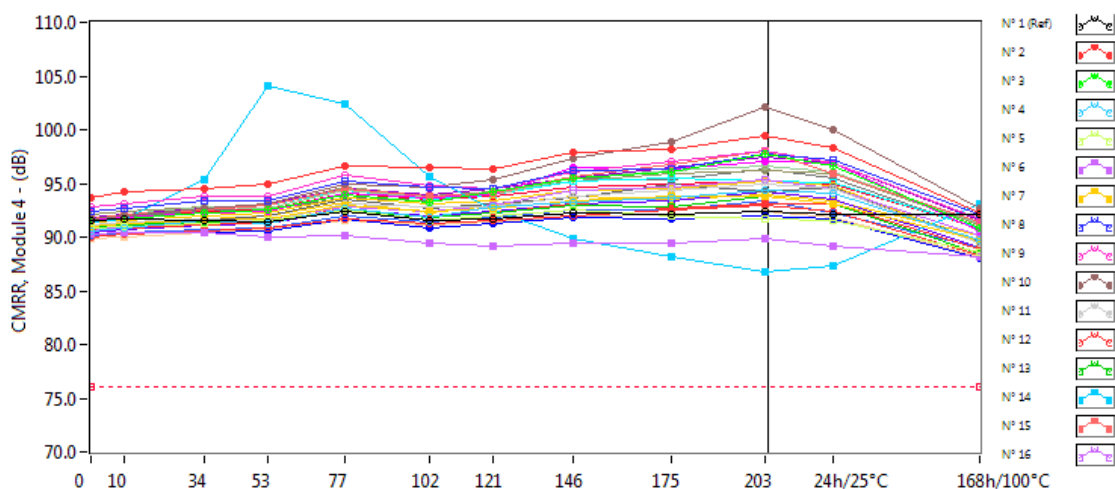
Min = 76.0

	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)	90.70	90.65	90.70	90.73	91.43	90.69	90.84	91.26	91.22	91.41	91.09	91.26
N° 2	92.09	92.47	92.86	93.06	94.78	93.45	93.52	94.49	94.17	94.66	93.62	89.94
N° 3	89.87	89.97	90.35	90.54	91.46	90.80	90.78	91.27	90.98	90.92	90.38	88.02
N° 4	92.01	92.37	92.90	92.81	94.39	93.29	94.13	94.55	95.62	95.92	95.42	90.08
N° 5	91.11	91.38	91.90	92.09	93.46	92.73	93.37	94.22	95.27	94.81	94.90	89.34
N° 6	90.86	91.20	91.65	91.73	93.31	92.53	93.04	94.09	94.52	94.78	94.92	89.74
N° 7	91.58	92.00	92.00	92.32	93.60	92.70	93.09	94.13	94.62	94.32	93.38	89.52
N° 8	92.46	92.77	93.14	93.30	94.81	94.20	94.98	95.89	96.20	97.19	96.78	90.23
N° 9	91.63	91.80	92.12	92.35	93.43	92.79	93.37	94.47	94.75	95.15	94.84	89.52
N° 10	92.10	92.21	92.77	92.99	94.35	93.68	94.03	95.60	95.71	95.40	94.28	89.52
N° 11	91.89	92.18	92.41	92.58	94.16	93.31	93.33	94.34	94.39	95.20	94.55	90.11
N° 12	91.71	92.03	92.40	92.63	94.00	93.26	93.67	94.06	95.00	94.83	94.62	89.87
N° 13	90.25	90.60	90.90	90.90	92.22	91.67	92.15	92.81	92.94	93.54	93.13	89.02
N° 14	91.17	91.48	91.81	91.99	93.50	93.01	93.52	94.86	95.69	96.10	94.78	90.11
N° 15	92.72	92.77	93.42	93.61	95.17	94.12	94.39	95.70	96.01	95.89	95.87	89.91
N° 16	92.43	92.46	92.99	93.23	94.69	93.79	94.22	95.60	95.88	95.87	94.94	89.96
N° 17	93.62	94.26	94.47	94.73	96.01	95.49	95.84	98.49	98.81	98.31	99.57	91.71
N° 18	92.01	92.17	92.53	92.85	93.78	93.13	93.62	94.42	95.41	95.13	94.83	89.94
N° 19	93.74	94.33	94.40	95.08	96.86	95.87	96.34	98.21	98.20	98.01	98.25	91.70
N° 20	92.45	92.56	93.31	93.53	94.99	94.37	94.44	96.03	96.41	97.12	96.64	90.34
N° 21	93.26	94.01	94.03	94.43	95.59	94.56	94.89	95.88	96.21	94.81	94.52	90.07
N° 22	90.58	90.96	91.10	91.28	92.61	92.22	92.25	93.47	93.73	94.86	94.09	89.40
N° 23	90.52	90.90	91.07	91.16	92.77	92.14	92.32	93.15	93.29	94.19	93.48	89.18
N° 24	90.91	91.14	91.44	91.53	92.62	91.96	92.05	92.40	91.78	92.33	92.14	88.78
N° 25	91.58	91.84	92.12	92.14	93.64	92.83	93.63	94.55	94.87	95.07	94.46	89.80
N° 26	90.60	90.88	91.41	91.53	93.10	92.63	93.02	94.15	94.61	95.67	94.69	89.63
N° 27	91.33	91.52	91.69	92.12	93.01	92.37	92.98	93.81	93.89	94.21	94.16	89.67
N° 28	92.10	92.29	92.55	92.72	94.17	92.68	93.08	93.70	93.51	94.14	93.23	89.14
N° 29	93.33	93.85	94.06	94.58	96.12	95.31	95.81	96.52	97.76	97.90	98.58	91.51
N° 30	91.53	91.82	92.26	92.54	93.54	92.56	92.92	93.57	93.49	93.00	92.38	89.24
N° 31	92.09	92.64	93.00	93.16	95.45	94.30	95.08	96.13	97.14	97.83	97.08	90.77



## 89. CMRR, Module 4

Ta=25°C; +VCC=5V; -VCC=GND



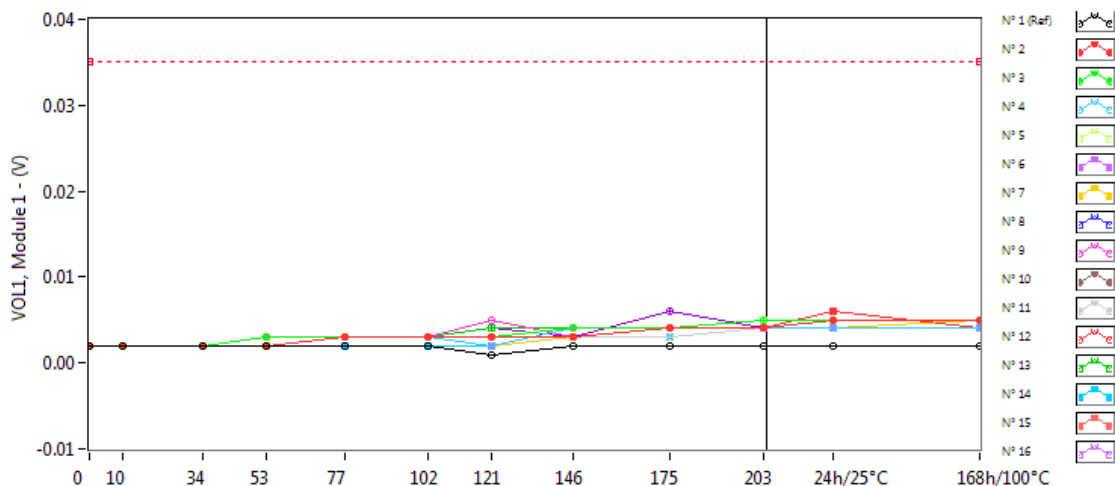
**CMRR, Module 4 . (dB)**

**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)	91.55	91.71	91.59	91.45	92.45	91.58	91.69	92.25	92.17	92.41	92.09	92.17
N° 2	93.60	94.16	94.46	94.94	96.69	96.52	96.40	97.95	98.20	99.41	98.38	92.22
N° 3	91.51	91.67	92.31	92.57	93.91	93.23	94.19	95.56	96.07	97.73	96.59	90.84
N° 4	90.56	90.89	91.51	91.33	92.67	91.87	92.85	93.21	93.67	94.42	94.13	89.67
N° 5	90.80	91.02	91.33	91.49	92.55	91.56	91.93	92.55	91.92	91.68	91.58	88.66
N° 6	90.25	90.36	90.37	90.05	90.20	89.40	89.16	89.47	89.44	89.87	89.20	88.22
N° 7	90.99	91.27	91.52	91.72	92.94	92.41	92.62	93.39	93.82	93.83	93.04	89.70
N° 8	92.43	92.74	93.32	93.38	95.21	94.61	94.49	96.25	96.34	97.73	97.17	92.10
N° 9	92.87	93.10	93.80	93.79	95.76	94.74	94.56	96.12	97.07	97.97	96.90	91.72
N° 10	91.72	91.92	92.69	93.16	94.92	94.68	95.28	97.34	98.89	102.13	99.96	92.65
N° 11	91.14	91.37	91.66	91.44	93.10	92.76	92.84	93.87	94.43	94.96	94.45	89.51
N° 12	90.06	90.25	90.57	90.86	91.71	91.33	91.57	92.01	92.49	92.92	92.36	88.36
N° 13	90.83	91.11	91.44	91.60	92.47	91.81	92.25	93.01	92.84	93.84	93.09	88.44
N° 14	91.37	91.71	95.28	104.14	102.44	95.59	92.48	89.88	88.21	86.72	87.35	93.11
N° 15	91.75	92.16	92.50	92.94	94.48	93.83	94.14	95.68	96.77	98.03	95.86	91.36
N° 16	90.63	90.98	91.44	91.64	92.87	92.44	92.93	94.42	94.71	95.40	94.54	90.19
N° 17	91.38	91.51	92.00	92.25	93.70	93.07	93.37	94.39	94.45	95.20	94.76	89.40
N° 18	91.52	91.81	92.30	92.46	94.05	93.64	93.94	96.54	96.27	97.09	96.85	90.54
N° 19	91.79	92.05	92.63	93.15	94.44	93.97	94.48	95.43	96.54	97.51	96.91	91.61
N° 20	91.72	92.10	92.77	92.73	94.36	93.68	94.01	95.52	96.26	96.64	96.10	91.32
N° 21	91.86	92.14	92.57	92.99	94.30	93.51	93.94	95.18	95.50	95.22	95.02	90.84
N° 22	90.69	90.90	91.18	91.40	92.64	91.89	92.31	93.07	92.63	93.13	93.12	88.88
N° 23	90.96	91.10	91.61	92.01	93.52	92.66	93.05	93.60	94.89	94.23	94.67	89.64
N° 24	90.20	90.47	90.66	90.82	91.92	91.45	91.81	92.58	92.55	93.33	92.21	88.94
N° 25	91.51	91.74	92.41	92.51	94.12	93.50	93.79	94.68	94.93	95.16	94.98	90.88
N° 26	90.20	90.42	90.38	90.54	91.72	90.81	91.28	91.79	91.76	91.99	91.72	88.05
N° 27	92.09	92.41	92.81	92.95	94.68	93.81	94.25	95.27	95.98	96.22	95.91	91.17
N° 28	91.61	91.86	92.48	92.54	93.71	93.37	93.95	95.43	95.30	96.33	95.54	90.67
N° 29	90.42	90.76	91.06	91.31	92.51	91.91	92.34	93.03	93.41	94.18	93.55	88.95
N° 30	91.11	91.30	91.66	91.91	93.28	92.32	92.99	93.74	93.52	93.99	93.33	90.08
N° 31	89.91	89.99	90.45	90.76	91.59	91.17	91.44	92.03	92.16	92.35	91.83	88.23

## 90. VOL1, Module 1

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



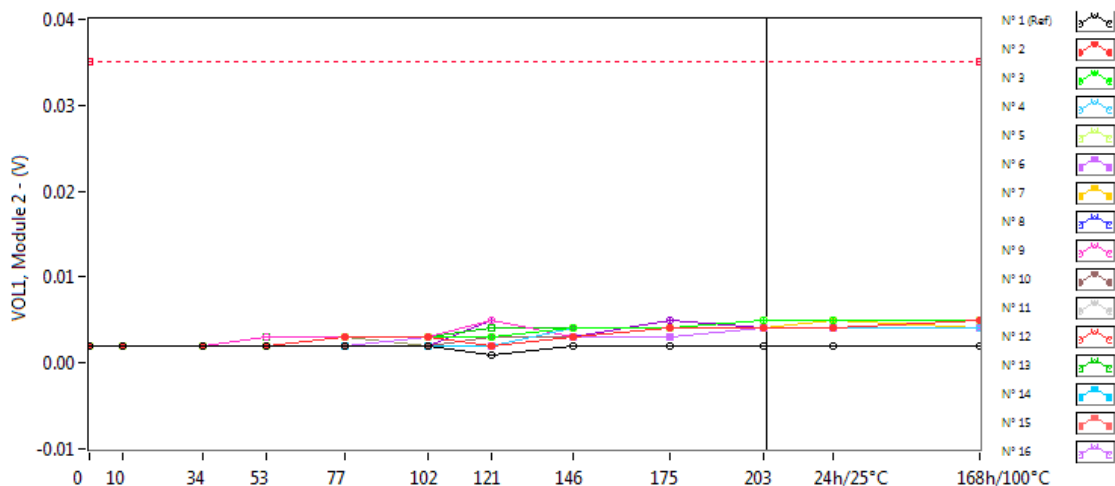
**VOL1, Module 1 . (V)**

**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	0.001	0.002	0.002	0.002	0.002	0.002
N° 2	0.002	0.002	0.002	0.002	0.003	0.003	0.003	0.003	0.004	0.004	0.005	0.005
N° 3	0.002	0.002	0.002	0.003	0.003	0.003	0.003	0.004	0.004	0.005	0.005	0.005
N° 4	0.002	0.002	0.002	0.002	0.003	0.003	0.002	0.004	0.004	0.004	0.004	0.004
N° 5	0.002	0.002	0.002	0.003	0.003	0.003	0.003	0.004	0.004	0.005	0.005	0.005
N° 6	0.002	0.002	0.002	0.003	0.003	0.003	0.002	0.004	0.004	0.004	0.004	0.004
N° 7	0.002	0.002	0.002	0.002	0.003	0.003	0.002	0.003	0.004	0.004	0.004	0.005
N° 8	0.002	0.002	0.002	0.002	0.003	0.003	0.002	0.003	0.004	0.004	0.004	0.004
N° 9	0.002	0.002	0.002	0.003	0.003	0.003	0.005	0.003	0.004	0.004	0.004	0.005
N° 10	0.002	0.002	0.002	0.002	0.003	0.003	0.003	0.004	0.004	0.004	0.004	0.004
N° 11	0.002	0.002	0.002	0.003	0.003	0.003	0.002	0.003	0.003	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	0.004
N° 13	0.002	0.002	0.002	0.003	0.003	0.003	0.004	0.004	0.004	0.004	0.004	0.005
N° 14	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.004
N° 15	0.002	0.002	0.002	0.002	0.003	0.003	0.002	0.003	0.004	0.004	0.004	0.005
N° 16	0.002	0.002	0.002	0.002	0.003	0.003	0.002	0.003	0.004	0.004	0.004	0.004
N° 17	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° 18	0.002	0.002	0.002	0.002	0.003	0.003	0.002	0.003	0.004	0.004	0.004	0.004
N° 19	0.002	0.002	0.002	0.002	0.003	0.003	0.004	0.003	0.006	0.004	0.004	0.004
N° 20	0.002	0.002	0.002	0.002	0.003	0.003	0.002	0.003	0.004	0.004	0.004	0.004
N° 21	0.002	0.002	0.002	0.002	0.003	0.003	0.003	0.003	0.004	0.004	0.004	0.005
N° 22	0.002	0.002	0.002	0.003	0.003	0.003	0.003	0.003	0.004	0.004	0.006	0.004
N° 23	0.002	0.002	0.002	0.002	0.003	0.003	0.002	0.004	0.004	0.004	0.004	0.004
N° 24	0.002	0.002	0.002	0.002	0.003	0.003	0.002	0.003	0.004	0.004	0.004	0.004
N° 25	0.002	0.002	0.002	0.002	0.003	0.003	0.002	0.003	0.004	0.004	0.004	0.005
N° 26	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° 27	0.002	0.002	0.002	0.002	0.003	0.003	0.002	0.003	0.004	0.004	0.004	0.004
N° 28	0.002	0.002	0.002	0.002	0.003	0.003	0.002	0.003	0.004	0.004	0.004	0.005
N° 29	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.004
N° 30	0.002	0.002	0.002	0.002	0.003	0.003	0.003	0.003	0.004	0.004	0.005	0.005
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

## 91. VOL1, Module 2

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



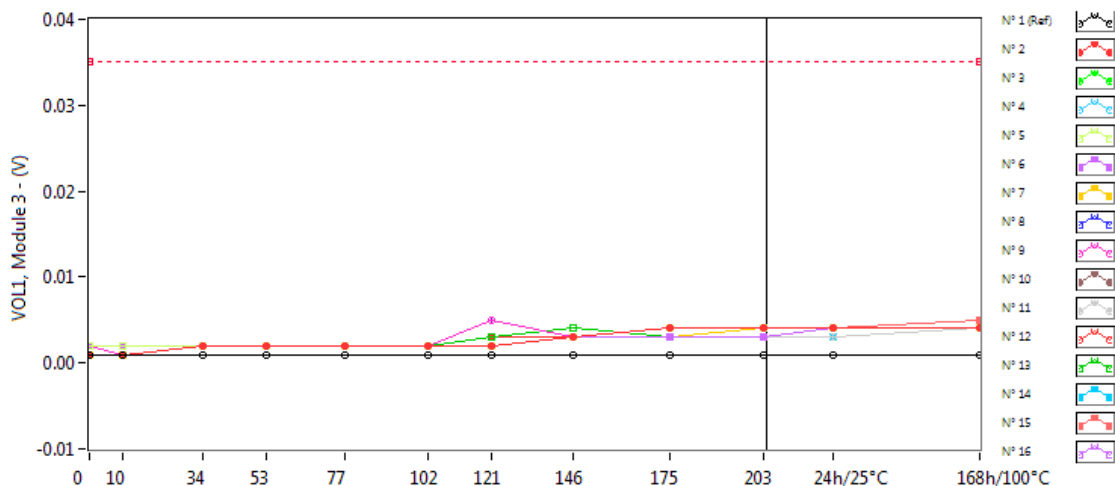
**VOL1, Module 2 . (V)**

**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	0.002	0.003	0.003	0.002	0.003	0.004	0.004	0.004	0.005
N° 3	0.002	0.002	0.002	0.002	0.003	0.003	0.003	0.004	0.004	0.005	0.005	0.005
N° 4	0.002	0.002	0.002	0.002	0.003	0.003	0.002	0.004	0.004	0.004	0.004	0.004
N° 5	0.002	0.002	0.002	0.002	0.003	0.003	0.003	0.004	0.004	0.005	0.005	0.005
N° 6	0.002	0.002	0.002	0.002	0.003	0.003	0.002	0.003	0.003	0.004	0.004	0.004
N° 7	0.002	0.002	0.002	0.002	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	0.004	0.004	0.004	0.004
N° 9	0.002	0.002	0.002	0.003	0.003	0.003	0.005	0.003	0.003	0.004	0.004	0.004
N° 10	0.002	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.004	0.004
N° 11	0.002	0.002	0.002	0.002	0.003	0.003	0.002	0.003	0.003	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	0.004
N° 13	0.002	0.002	0.002	0.003	0.003	0.003	0.004	0.004	0.004	0.004	0.004	0.004
N° 14	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.004
N° 15	0.002	0.002	0.002	0.002	0.003	0.003	0.002	0.003	0.004	0.004	0.004	0.005
N° 16	0.002	0.002	0.002	0.002	0.002	0.003	0.002	0.003	0.004	0.004	0.004	0.004
N° 17	0.002	0.002	0.002	0.002	0.003	0.003	0.002	0.003	0.004	0.004	0.004	0.004
N° 18	0.002	0.002	0.002	0.002	0.003	0.003	0.002	0.003	0.004	0.004	0.004	0.004
N° 19	0.002	0.002	0.002	0.002	0.002	0.002	0.005	0.003	0.005	0.004	0.004	0.004
N° 20	0.002	0.002	0.002	0.002	0.003	0.003	0.002	0.003	0.003	0.004	0.004	0.004
N° 21	0.002	0.002	0.002	0.002	0.003	0.003	0.002	0.003	0.004	0.004	0.004	0.004
N° 22	0.002	0.002	0.002	0.002	0.003	0.003	0.003	0.003	0.004	0.004	0.004	0.004
N° 23	0.002	0.002	0.002	0.002	0.003	0.003	0.002	0.004	0.004	0.004	0.004	0.004
N° 24	0.002	0.002	0.002	0.002	0.003	0.003	0.002	0.003	0.004	0.004	0.004	0.004
N° 25	0.002	0.002	0.002	0.002	0.003	0.003	0.002	0.003	0.004	0.004	0.004	0.004
N° 26	0.002	0.002	0.002	0.002	0.003	0.003	0.002	0.003	0.004	0.004	0.004	0.004
N° 27	0.002	0.002	0.002	0.002	0.003	0.002	0.002	0.003	0.004	0.004	0.004	0.004
N° 28	0.002	0.002	0.002	0.002	0.003	0.002	0.002	0.003	0.004	0.004	0.004	0.004
N° 29	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.004
N° 30	0.002	0.002	0.002	0.002	0.003	0.003	0.002	0.003	0.004	0.004	0.005	0.004
N° 31	0.002	0.002	0.002	0.002	0.003	0.003	0.002	0.004	0.004	0.004	0.004	0.004

## 92. VOL1, Module 3

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



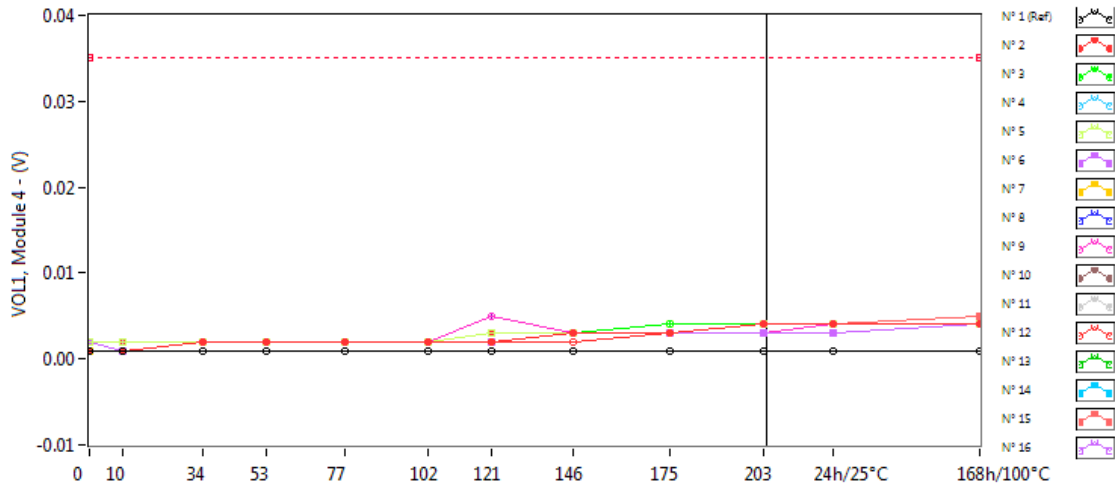
**VOL1, Module 3 . (V)**

**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)	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
N° 2	0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.003	0.004	0.004	0.004	0.004
N° 3	0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.003	0.004	0.004	0.004	0.004
N° 4	0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.003	0.004	0.004	0.004	0.004
N° 5	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.003	0.004	0.004	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	0.004	0.004
N° 7	0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.004
N° 8	0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.004
N° 9	0.002	0.001	0.002	0.002	0.002	0.002	0.005	0.003	0.003	0.004	0.004	0.004
N° 10	0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.004
N° 11	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° 12	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° 13	0.002	0.002	0.002	0.002	0.002	0.002	0.003	0.004	0.003	0.004	0.004	0.004
N° 14	0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.003	0.003	0.004
N° 15	0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.005
N° 16	0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.004
N° 17	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.004
N° 18	0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.004
N° 19	0.001	0.001	0.002	0.002	0.002	0.002	0.005	0.003	0.004	0.004	0.004	0.004
N° 20	0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.004
N° 21	0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.004
N° 22	0.002	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.004	0.004
N° 23	0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.004
N° 24	0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.004
N° 25	0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.003	0.004	0.004	0.004	0.004
N° 26	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.004
N° 27	0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.004
N° 28	0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.004
N° 29	0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.003	0.003	0.004
N° 30	0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.003	0.004	0.004	0.004	0.004
N° 31	0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.004

### 93. VOL1, Module 4

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



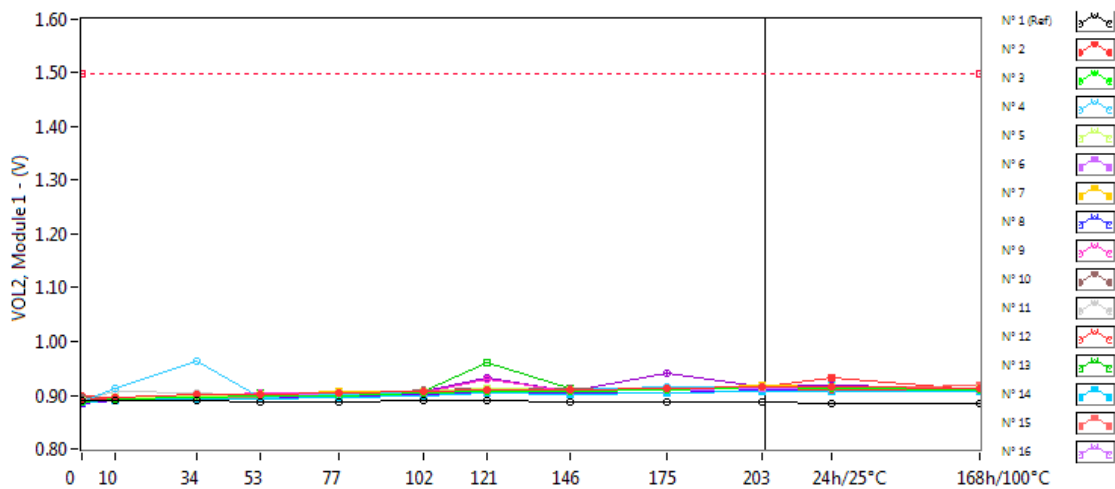
**VOL1, Module 4 . (V)**

**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)	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
N° 2	0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.004
N° 3	0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.003	0.004	0.004	0.004	0.004
N° 4	0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.003	0.004	0.004	0.004	0.004
N° 5	0.002	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.004	0.004
N° 6	0.002	0.001	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.003	0.003	0.004
N° 7	0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.004
N° 8	0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.003	0.003	0.004
N° 9	0.002	0.001	0.002	0.002	0.002	0.002	0.005	0.003	0.003	0.003	0.004	0.004
N° 10	0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.004
N° 11	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° 12	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.003	0.004
N° 13	0.002	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.003	0.004	0.004	0.004
N° 14	0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.003	0.003	0.004
N° 15	0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.005
N° 16	0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.004
N° 17	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° 18	0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.004
N° 19	0.001	0.001	0.002	0.002	0.002	0.002	0.005	0.003	0.003	0.003	0.004	0.004
N° 20	0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.004
N° 21	0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.004
N° 22	0.002	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.003	0.004	0.004	0.004
N° 23	0.002	0.001	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.004
N° 24	0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.004
N° 25	0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.004
N° 26	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.004
N° 27	0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.004
N° 28	0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.004
N° 29	0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.003	0.003	0.004
N° 30	0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.004
N° 31	0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.004

## 94. VOL2, Module 1

Ta=25°C; +VCC=30V; -VCC=GND; IOL=5mA



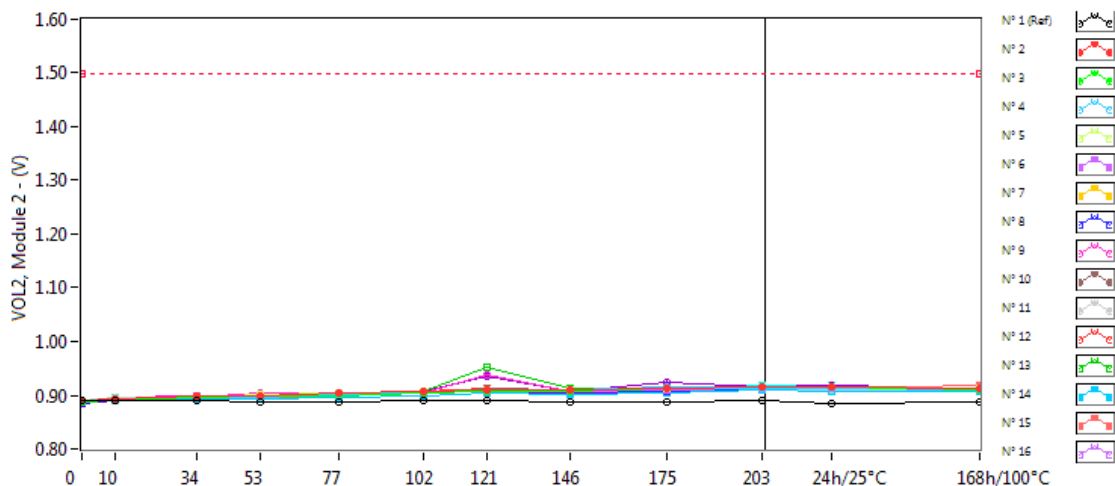
**VOL2, Module 1 . (V)**

**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)	0.889	0.889	0.889	0.888	0.887	0.889	0.890	0.886	0.886	0.888	0.885	0.885
N° 2	0.891	0.896	0.901	0.901	0.903	0.907	0.910	0.910	0.913	0.916	0.915	0.913
N° 3	0.887	0.893	0.897	0.899	0.900	0.904	0.908	0.907	0.911	0.915	0.914	0.910
N° 4	0.888	0.913	0.963	0.897	0.901	0.905	0.908	0.909	0.916	0.915	0.913	0.911
N° 5	0.891	0.895	0.898	0.901	0.903	0.907	0.912	0.910	0.913	0.915	0.916	0.914
N° 6	0.889	0.894	0.898	0.900	0.901	0.905	0.908	0.908	0.911	0.914	0.913	0.911
N° 7	0.889	0.894	0.899	0.900	0.902	0.906	0.909	0.908	0.913	0.917	0.915	0.912
N° 8	0.890	0.895	0.899	0.900	0.903	0.906	0.912	0.907	0.910	0.915	0.913	0.912
N° 9	0.891	0.894	0.898	0.904	0.901	0.905	0.930	0.907	0.911	0.915	0.914	0.913
N° 10	0.895	0.892	0.896	0.898	0.900	0.910	0.912	0.912	0.910	0.913	0.912	0.909
N° 11	0.890	0.908	0.904	0.900	0.901	0.905	0.908	0.908	0.910	0.913	0.912	0.911
N° 12	0.900	0.895	0.897	0.900	0.901	0.905	0.907	0.913	0.910	0.913	0.911	0.910
N° 13	0.889	0.895	0.898	0.903	0.902	0.906	0.961	0.913	0.911	0.915	0.914	0.911
N° 14	0.886	0.889	0.892	0.894	0.897	0.900	0.903	0.902	0.905	0.908	0.907	0.906
N° 15	0.890	0.894	0.899	0.900	0.904	0.906	0.909	0.909	0.911	0.915	0.914	0.919
N° 16	0.889	0.894	0.897	0.900	0.901	0.905	0.908	0.908	0.911	0.914	0.913	0.911
N° 17	0.890	0.893	0.897	0.899	0.901	0.905	0.908	0.907	0.910	0.914	0.913	0.911
N° 18	0.891	0.895	0.898	0.901	0.903	0.907	0.910	0.909	0.912	0.916	0.914	0.912
N° 19	0.891	0.895	0.899	0.901	0.903	0.907	0.931	0.908	0.940	0.915	0.919	0.914
N° 20	0.891	0.894	0.898	0.901	0.903	0.906	0.909	0.908	0.911	0.915	0.914	0.912
N° 21	0.891	0.895	0.899	0.901	0.904	0.907	0.910	0.910	0.913	0.917	0.917	0.913
N° 22	0.891	0.894	0.898	0.898	0.902	0.908	0.914	0.907	0.911	0.916	0.932	0.911
N° 23	0.889	0.893	0.896	0.899	0.902	0.905	0.908	0.909	0.911	0.915	0.914	0.911
N° 24	0.889	0.894	0.896	0.898	0.901	0.904	0.907	0.906	0.909	0.913	0.912	0.910
N° 25	0.891	0.894	0.898	0.902	0.903	0.907	0.910	0.909	0.912	0.916	0.916	0.913
N° 26	0.890	0.893	0.897	0.900	0.902	0.905	0.908	0.907	0.910	0.913	0.912	0.910
N° 27	0.889	0.892	0.896	0.897	0.901	0.904	0.907	0.906	0.909	0.912	0.912	0.910
N° 28	0.890	0.894	0.897	0.900	0.902	0.905	0.908	0.908	0.911	0.915	0.914	0.910
N° 29	0.885	0.890	0.894	0.895	0.898	0.901	0.904	0.903	0.905	0.909	0.908	0.907
N° 30	0.890	0.895	0.899	0.901	0.906	0.908	0.910	0.910	0.913	0.917	0.915	0.912
N° 31	0.890	0.894	0.898	0.900	0.908	0.906	0.909	0.909	0.911	0.917	0.915	0.912

## 95. VOL2, Module 2

Ta=25°C; +VCC=30V; -VCC=GND; IOL=5mA



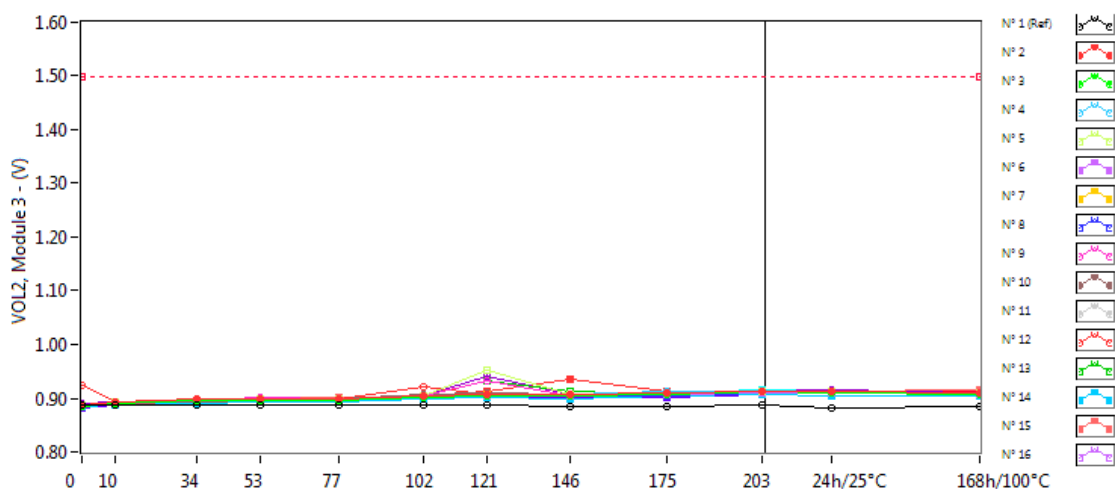
**VOL2, Module 2 . (V)**

**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)	0.889	0.889	0.889	0.888	0.888	0.889	0.890	0.886	0.886	0.889	0.885	0.886
N° 2	0.890	0.894	0.900	0.900	0.903	0.906	0.910	0.910	0.912	0.916	0.915	0.913
N° 3	0.887	0.891	0.897	0.898	0.900	0.904	0.908	0.908	0.912	0.916	0.915	0.910
N° 4	0.888	0.894	0.898	0.897	0.901	0.905	0.908	0.909	0.915	0.914	0.913	0.911
N° 5	0.890	0.894	0.897	0.901	0.903	0.907	0.911	0.909	0.913	0.915	0.916	0.913
N° 6	0.889	0.893	0.898	0.899	0.901	0.905	0.907	0.908	0.910	0.913	0.912	0.911
N° 7	0.889	0.894	0.898	0.900	0.901	0.906	0.909	0.908	0.912	0.916	0.914	0.912
N° 8	0.889	0.894	0.899	0.899	0.902	0.905	0.908	0.907	0.908	0.914	0.913	0.911
N° 9	0.890	0.894	0.897	0.903	0.901	0.905	0.939	0.906	0.911	0.914	0.913	0.913
N° 10	0.888	0.892	0.896	0.898	0.900	0.904	0.914	0.910	0.911	0.914	0.913	0.909
N° 11	0.890	0.895	0.897	0.899	0.901	0.905	0.907	0.907	0.910	0.913	0.911	0.910
N° 12	0.890	0.894	0.897	0.900	0.901	0.905	0.907	0.907	0.910	0.913	0.911	0.910
N° 13	0.889	0.894	0.898	0.900	0.902	0.906	0.952	0.913	0.911	0.914	0.914	0.911
N° 14	0.886	0.889	0.892	0.894	0.896	0.900	0.903	0.902	0.905	0.909	0.907	0.906
N° 15	0.890	0.894	0.898	0.900	0.903	0.906	0.908	0.910	0.911	0.915	0.914	0.918
N° 16	0.889	0.894	0.897	0.899	0.901	0.905	0.908	0.908	0.911	0.914	0.913	0.911
N° 17	0.889	0.893	0.896	0.899	0.900	0.905	0.907	0.907	0.909	0.913	0.912	0.910
N° 18	0.890	0.895	0.898	0.900	0.902	0.906	0.909	0.908	0.912	0.916	0.914	0.912
N° 19	0.891	0.895	0.898	0.900	0.902	0.906	0.934	0.908	0.924	0.915	0.918	0.913
N° 20	0.890	0.894	0.898	0.901	0.902	0.906	0.909	0.908	0.911	0.915	0.914	0.911
N° 21	0.890	0.895	0.898	0.901	0.903	0.907	0.910	0.910	0.913	0.917	0.917	0.913
N° 22	0.890	0.894	0.897	0.898	0.901	0.908	0.914	0.907	0.912	0.916	0.916	0.910
N° 23	0.888	0.893	0.896	0.899	0.901	0.904	0.908	0.908	0.911	0.914	0.913	0.910
N° 24	0.888	0.892	0.895	0.898	0.900	0.904	0.907	0.906	0.909	0.913	0.912	0.909
N° 25	0.890	0.894	0.897	0.901	0.903	0.907	0.910	0.909	0.912	0.917	0.916	0.913
N° 26	0.890	0.893	0.897	0.899	0.901	0.904	0.907	0.907	0.909	0.913	0.912	0.909
N° 27	0.888	0.892	0.895	0.897	0.900	0.904	0.907	0.906	0.909	0.912	0.912	0.910
N° 28	0.890	0.894	0.897	0.900	0.902	0.906	0.908	0.908	0.911	0.916	0.914	0.911
N° 29	0.885	0.890	0.893	0.895	0.897	0.900	0.903	0.903	0.905	0.909	0.908	0.906
N° 30	0.890	0.894	0.899	0.901	0.904	0.907	0.910	0.910	0.912	0.917	0.914	0.912
N° 31	0.889	0.893	0.897	0.899	0.901	0.905	0.908	0.909	0.911	0.916	0.914	0.911

## 96. VOL2, Module 3

Ta=25°C; +VCC=30V; -VCC=GND; IOL=5mA



**VOL2, Module 3 . (V)**

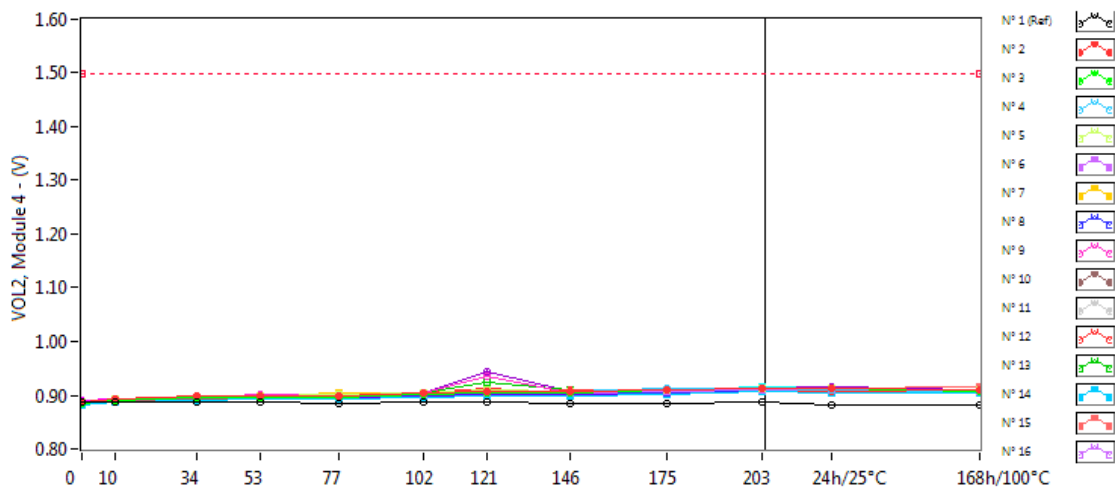
**Max = 1.5**

	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)	0.886	0.887	0.887	0.886	0.886	0.887	0.888	0.884	0.884	0.887	0.883	0.884
N° 2	0.888	0.892	0.898	0.898	0.900	0.904	0.908	0.908	0.910	0.914	0.913	0.911
N° 3	0.885	0.889	0.895	0.895	0.897	0.902	0.905	0.904	0.908	0.912	0.911	0.908
N° 4	0.886	0.890	0.896	0.895	0.898	0.902	0.905	0.906	0.912	0.912	0.910	0.908
N° 5	0.888	0.892	0.895	0.899	0.900	0.905	0.953	0.907	0.911	0.913	0.914	0.911
N° 6	0.887	0.891	0.896	0.897	0.899	0.903	0.905	0.905	0.908	0.911	0.910	0.908
N° 7	0.887	0.892	0.896	0.898	0.899	0.904	0.907	0.906	0.910	0.914	0.912	0.910
N° 8	0.887	0.891	0.896	0.900	0.899	0.903	0.906	0.905	0.905	0.911	0.910	0.908
N° 9	0.888	0.892	0.895	0.901	0.899	0.903	0.933	0.904	0.909	0.912	0.911	0.911
N° 10	0.886	0.890	0.894	0.896	0.898	0.907	0.910	0.907	0.908	0.911	0.910	0.907
N° 11	0.888	0.892	0.895	0.897	0.899	0.903	0.905	0.906	0.907	0.911	0.909	0.908
N° 12	0.925	0.893	0.895	0.897	0.899	0.921	0.906	0.905	0.907	0.910	0.909	0.907
N° 13	0.886	0.891	0.895	0.897	0.899	0.903	0.932	0.912	0.908	0.911	0.911	0.908
N° 14	0.884	0.887	0.890	0.892	0.894	0.898	0.901	0.900	0.903	0.906	0.905	0.904
N° 15	0.888	0.892	0.897	0.898	0.902	0.904	0.907	0.908	0.909	0.913	0.912	0.916
N° 16	0.887	0.891	0.895	0.897	0.899	0.903	0.906	0.905	0.908	0.911	0.911	0.909
N° 17	0.887	0.891	0.894	0.897	0.899	0.904	0.905	0.905	0.907	0.911	0.910	0.909
N° 18	0.888	0.893	0.896	0.898	0.901	0.904	0.907	0.906	0.909	0.913	0.912	0.910
N° 19	0.889	0.893	0.896	0.898	0.900	0.904	0.940	0.906	0.914	0.912	0.915	0.911
N° 20	0.888	0.892	0.896	0.898	0.900	0.905	0.907	0.908	0.909	0.912	0.912	0.909
N° 21	0.888	0.893	0.896	0.899	0.901	0.905	0.908	0.907	0.911	0.915	0.914	0.911
N° 22	0.887	0.891	0.895	0.896	0.899	0.905	0.912	0.936	0.912	0.913	0.913	0.908
N° 23	0.886	0.891	0.893	0.896	0.898	0.902	0.905	0.906	0.908	0.912	0.910	0.908
N° 24	0.886	0.890	0.893	0.896	0.898	0.902	0.905	0.904	0.907	0.911	0.910	0.907
N° 25	0.888	0.891	0.895	0.899	0.901	0.905	0.908	0.907	0.910	0.914	0.914	0.912
N° 26	0.887	0.891	0.894	0.897	0.899	0.902	0.905	0.904	0.907	0.910	0.909	0.907
N° 27	0.886	0.889	0.893	0.894	0.898	0.901	0.905	0.903	0.906	0.909	0.909	0.907
N° 28	0.887	0.891	0.895	0.897	0.899	0.903	0.906	0.905	0.909	0.913	0.912	0.908
N° 29	0.883	0.888	0.891	0.893	0.895	0.898	0.901	0.901	0.902	0.906	0.905	0.904
N° 30	0.888	0.892	0.896	0.898	0.902	0.905	0.907	0.907	0.910	0.915	0.912	0.910
N° 31	0.887	0.891	0.895	0.897	0.899	0.903	0.906	0.906	0.908	0.913	0.912	0.909



## 97. VOL2, Module 4

Ta=25°C; +VCC=30V; -VCC=GND; IOL=5mA



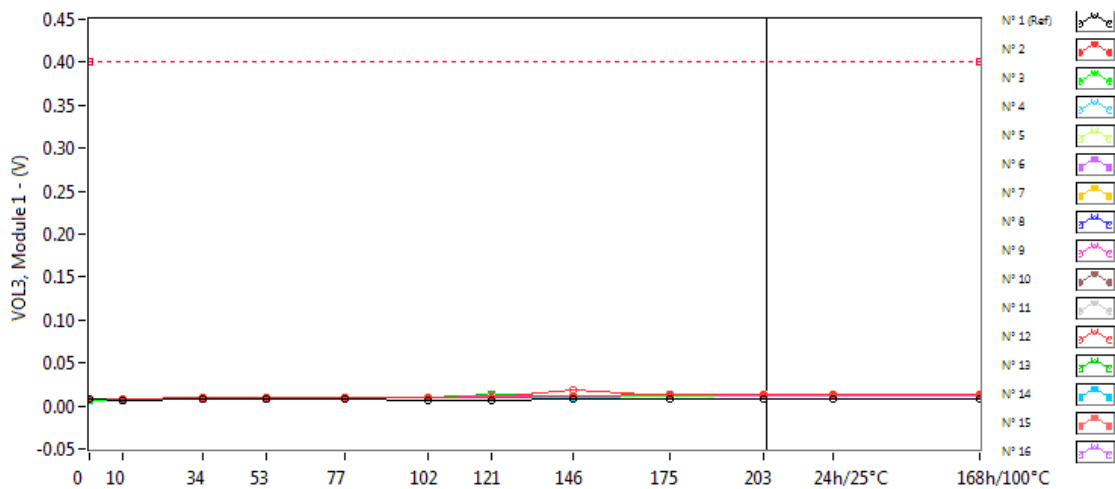
**VOL2, Module 4 . (V)**

**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)	0.886	0.887	0.887	0.886	0.885	0.887	0.888	0.884	0.884	0.886	0.883	0.883
N° 2	0.888	0.892	0.898	0.898	0.900	0.904	0.907	0.908	0.910	0.914	0.913	0.911
N° 3	0.885	0.889	0.895	0.896	0.897	0.902	0.905	0.905	0.909	0.913	0.912	0.908
N° 4	0.886	0.890	0.896	0.895	0.898	0.903	0.905	0.907	0.912	0.912	0.911	0.908
N° 5	0.888	0.892	0.895	0.899	0.901	0.905	0.909	0.907	0.911	0.913	0.914	0.911
N° 6	0.886	0.891	0.895	0.897	0.898	0.902	0.905	0.905	0.907	0.911	0.910	0.908
N° 7	0.887	0.892	0.896	0.897	0.899	0.903	0.906	0.905	0.910	0.914	0.912	0.909
N° 8	0.887	0.892	0.896	0.897	0.899	0.903	0.906	0.904	0.905	0.911	0.910	0.908
N° 9	0.888	0.892	0.896	0.901	0.899	0.903	0.934	0.905	0.909	0.912	0.912	0.910
N° 10	0.886	0.890	0.894	0.896	0.898	0.902	0.909	0.906	0.908	0.911	0.910	0.907
N° 11	0.887	0.891	0.895	0.897	0.899	0.902	0.905	0.905	0.907	0.910	0.909	0.908
N° 12	0.887	0.891	0.895	0.897	0.898	0.902	0.904	0.909	0.907	0.910	0.908	0.907
N° 13	0.886	0.891	0.895	0.897	0.899	0.903	0.925	0.910	0.908	0.911	0.911	0.908
N° 14	0.883	0.887	0.890	0.892	0.894	0.897	0.900	0.900	0.902	0.906	0.905	0.903
N° 15	0.888	0.892	0.896	0.898	0.901	0.903	0.906	0.907	0.909	0.913	0.912	0.915
N° 16	0.887	0.891	0.895	0.897	0.899	0.903	0.906	0.905	0.908	0.912	0.911	0.909
N° 17	0.887	0.891	0.894	0.897	0.898	0.902	0.905	0.904	0.907	0.911	0.910	0.908
N° 18	0.889	0.893	0.896	0.898	0.901	0.904	0.907	0.906	0.910	0.913	0.912	0.910
N° 19	0.889	0.893	0.896	0.899	0.901	0.904	0.944	0.906	0.913	0.912	0.915	0.911
N° 20	0.888	0.892	0.896	0.898	0.900	0.904	0.906	0.906	0.908	0.912	0.912	0.909
N° 21	0.888	0.893	0.896	0.899	0.901	0.905	0.908	0.907	0.911	0.915	0.914	0.911
N° 22	0.887	0.891	0.895	0.896	0.899	0.905	0.912	0.904	0.909	0.913	0.912	0.908
N° 23	0.886	0.891	0.893	0.896	0.898	0.902	0.905	0.906	0.909	0.912	0.910	0.908
N° 24	0.886	0.890	0.893	0.896	0.898	0.902	0.905	0.904	0.907	0.911	0.910	0.907
N° 25	0.888	0.891	0.895	0.899	0.900	0.904	0.907	0.907	0.909	0.914	0.914	0.910
N° 26	0.887	0.890	0.894	0.897	0.899	0.902	0.905	0.904	0.907	0.910	0.909	0.907
N° 27	0.886	0.889	0.893	0.895	0.898	0.901	0.904	0.903	0.906	0.910	0.909	0.907
N° 28	0.887	0.891	0.895	0.898	0.900	0.903	0.906	0.906	0.909	0.913	0.912	0.908
N° 29	0.883	0.888	0.891	0.893	0.895	0.898	0.901	0.901	0.903	0.907	0.905	0.904
N° 30	0.888	0.892	0.897	0.899	0.903	0.905	0.907	0.908	0.910	0.915	0.913	0.910
N° 31	0.887	0.891	0.895	0.897	0.899	0.903	0.906	0.906	0.909	0.914	0.912	0.909

## 98. VOL3, Module 1

Ta=25°C; +VCC=4.5V; -VCC=GND; IOL=2µA



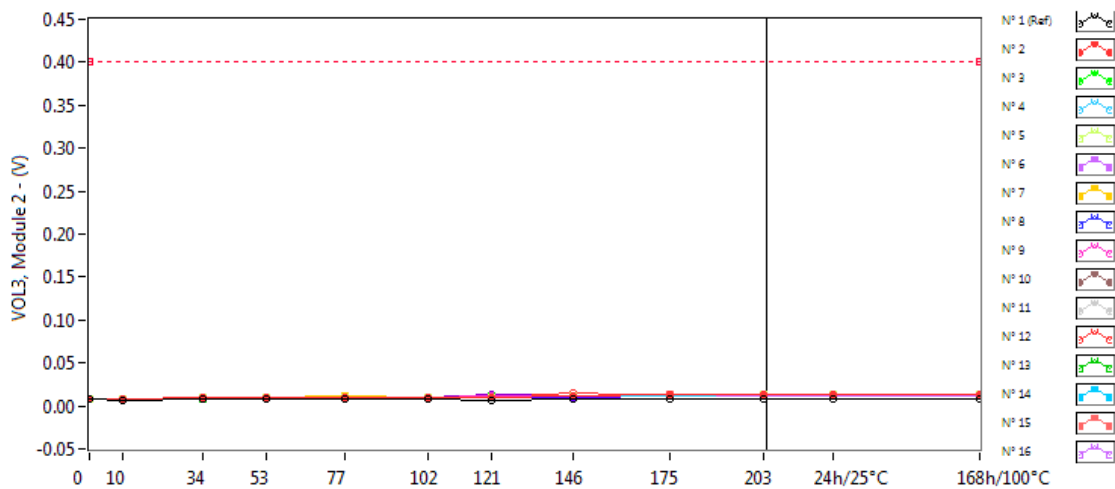
**VOL3, Module 1 . (V)**

**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	0.007	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	0.010	0.010	0.012	0.013	0.014	0.014	0.014
N° 3	0.007	0.008	0.008	0.009	0.009	0.010	0.010	0.009	0.011	0.012	0.013	0.013
N° 4	0.008	0.008	0.009	0.009	0.010	0.010	0.009	0.011	0.012	0.013	0.013	0.013
N° 5	0.008	0.008	0.009	0.009	0.010	0.010	0.010	0.011	0.012	0.013	0.013	0.013
N° 6	0.008	0.008	0.008	0.009	0.009	0.009	0.009	0.011	0.011	0.012	0.012	0.012
N° 7	0.008	0.008	0.009	0.009	0.010	0.010	0.010	0.012	0.012	0.013	0.013	0.013
N° 8	0.008	0.008	0.009	0.009	0.010	0.010	0.010	0.011	0.012	0.013	0.013	0.013
N° 9	0.008	0.008	0.009	0.010	0.010	0.010	0.012	0.011	0.012	0.013	0.013	0.013
N° 10	0.008	0.008	0.009	0.009	0.010	0.010	0.010	0.011	0.012	0.013	0.013	0.013
N° 11	0.008	0.008	0.009	0.009	0.009	0.009	0.009	0.011	0.011	0.012	0.012	0.012
N° 12	0.008	0.008	0.009	0.009	0.009	0.009	0.009	0.019	0.011	0.012	0.012	0.012
N° 13	0.008	0.008	0.008	0.009	0.009	0.009	0.013	0.011	0.011	0.012	0.012	0.012
N° 14	0.007	0.007	0.008	0.008	0.009	0.009	0.009	0.010	0.011	0.012	0.012	0.012
N° 15	0.008	0.008	0.009	0.009	0.010	0.010	0.010	0.012	0.012	0.013	0.013	0.014
N° 16	0.008	0.008	0.009	0.009	0.010	0.010	0.010	0.011	0.012	0.013	0.013	0.013
N° 17	0.008	0.008	0.008	0.009	0.009	0.009	0.009	0.011	0.011	0.012	0.012	0.012
N° 18	0.008	0.008	0.009	0.009	0.010	0.010	0.010	0.012	0.012	0.013	0.013	0.013
N° 19	0.008	0.008	0.009	0.009	0.010	0.010	0.012	0.011	0.014	0.013	0.013	0.013
N° 20	0.008	0.008	0.009	0.009	0.010	0.010	0.010	0.011	0.012	0.013	0.013	0.013
N° 21	0.008	0.008	0.009	0.009	0.010	0.010	0.010	0.012	0.013	0.014	0.014	0.014
N° 22	0.008	0.008	0.008	0.009	0.009	0.009	0.010	0.010	0.011	0.012	0.012	0.012
N° 23	0.008	0.008	0.008	0.009	0.009	0.009	0.009	0.011	0.012	0.012	0.013	0.012
N° 24	0.008	0.008	0.009	0.009	0.010	0.010	0.009	0.011	0.012	0.012	0.012	0.013
N° 25	0.008	0.008	0.009	0.009	0.010	0.010	0.010	0.012	0.013	0.014	0.014	0.014
N° 26	0.008	0.008	0.008	0.009	0.009	0.009	0.009	0.011	0.011	0.012	0.012	0.012
N° 27	0.008	0.008	0.008	0.009	0.010	0.009	0.009	0.011	0.012	0.012	0.012	0.013
N° 28	0.008	0.008	0.009	0.009	0.010	0.010	0.010	0.011	0.012	0.013	0.013	0.013
N° 29	0.008	0.008	0.008	0.009	0.009	0.009	0.009	0.010	0.011	0.012	0.012	0.012
N° 30	0.008	0.008	0.009	0.009	0.010	0.010	0.010	0.012	0.013	0.014	0.014	0.014
N° 31	0.008	0.008	0.008	0.009	0.010	0.010	0.009	0.011	0.012	0.013	0.013	0.013

## 99. VOL3, Module 2

Ta=25°C; +VCC=4.5V; -VCC=GND; IOL=2µA



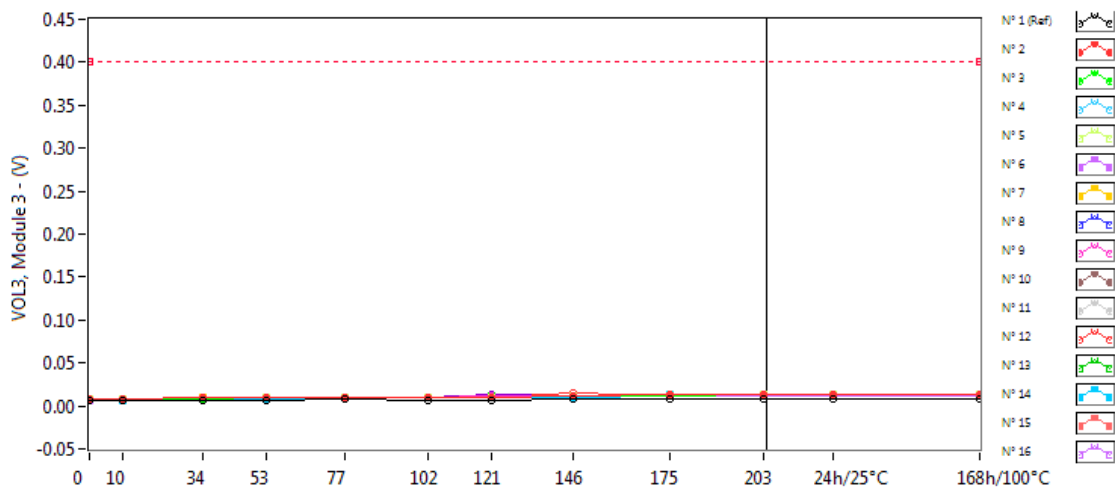
**VOL3, Module 2 . (V)**

**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	0.007	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	0.010	0.010	0.010	0.010	0.012	0.013	0.014	0.014	0.014
N° 3	0.008	0.008	0.009	0.009	0.010	0.010	0.010	0.012	0.013	0.014	0.014	0.013
N° 4	0.008	0.008	0.009	0.009	0.010	0.010	0.010	0.011	0.012	0.013	0.013	0.013
N° 5	0.008	0.008	0.009	0.009	0.010	0.010	0.010	0.011	0.012	0.013	0.013	0.013
N° 6	0.008	0.008	0.009	0.009	0.009	0.009	0.009	0.011	0.011	0.012	0.012	0.012
N° 7	0.008	0.008	0.009	0.009	0.010	0.010	0.010	0.012	0.012	0.013	0.013	0.013
N° 8	0.008	0.008	0.009	0.009	0.010	0.010	0.010	0.011	0.012	0.013	0.013	0.013
N° 9	0.008	0.008	0.009	0.010	0.010	0.010	0.012	0.011	0.012	0.013	0.013	0.013
N° 10	0.008	0.008	0.009	0.009	0.010	0.010	0.011	0.012	0.013	0.014	0.014	0.013
N° 11	0.008	0.008	0.009	0.009	0.009	0.009	0.009	0.011	0.011	0.012	0.012	0.012
N° 12	0.008	0.008	0.009	0.009	0.010	0.009	0.009	0.015	0.011	0.012	0.012	0.012
N° 13	0.008	0.008	0.008	0.009	0.009	0.010	0.012	0.011	0.011	0.012	0.012	0.012
N° 14	0.008	0.008	0.008	0.009	0.009	0.009	0.009	0.011	0.011	0.012	0.012	0.012
N° 15	0.008	0.008	0.009	0.009	0.010	0.010	0.010	0.012	0.013	0.013	0.013	0.014
N° 16	0.008	0.008	0.009	0.009	0.010	0.010	0.010	0.012	0.012	0.013	0.013	0.013
N° 17	0.008	0.008	0.009	0.009	0.009	0.010	0.009	0.011	0.011	0.012	0.012	0.013
N° 18	0.008	0.008	0.009	0.010	0.010	0.010	0.010	0.012	0.013	0.013	0.013	0.014
N° 19	0.008	0.008	0.009	0.010	0.010	0.010	0.013	0.012	0.013	0.013	0.013	0.014
N° 20	0.008	0.008	0.009	0.009	0.010	0.010	0.010	0.012	0.012	0.013	0.013	0.013
N° 21	0.008	0.008	0.009	0.010	0.010	0.010	0.010	0.012	0.013	0.014	0.014	0.014
N° 22	0.008	0.008	0.009	0.009	0.010	0.010	0.010	0.011	0.012	0.012	0.012	0.012
N° 23	0.008	0.008	0.008	0.009	0.010	0.009	0.009	0.011	0.012	0.013	0.013	0.013
N° 24	0.008	0.008	0.009	0.009	0.010	0.010	0.010	0.011	0.012	0.013	0.013	0.013
N° 25	0.008	0.008	0.009	0.010	0.010	0.010	0.010	0.012	0.013	0.014	0.014	0.014
N° 26	0.008	0.008	0.009	0.009	0.010	0.009	0.009	0.011	0.011	0.012	0.012	0.012
N° 27	0.008	0.008	0.009	0.009	0.010	0.010	0.010	0.011	0.012	0.013	0.013	0.013
N° 28	0.008	0.008	0.009	0.009	0.010	0.010	0.010	0.011	0.012	0.013	0.013	0.013
N° 29	0.008	0.008	0.008	0.009	0.009	0.009	0.009	0.010	0.011	0.012	0.012	0.012
N° 30	0.008	0.008	0.009	0.010	0.011	0.010	0.010	0.012	0.013	0.014	0.014	0.014
N° 31	0.008	0.008	0.009	0.009	0.010	0.010	0.010	0.011	0.012	0.013	0.013	0.013

### 100. VOL3, Module 3

Ta=25°C; +VCC=4.5V; -VCC=GND; IOL=2µA



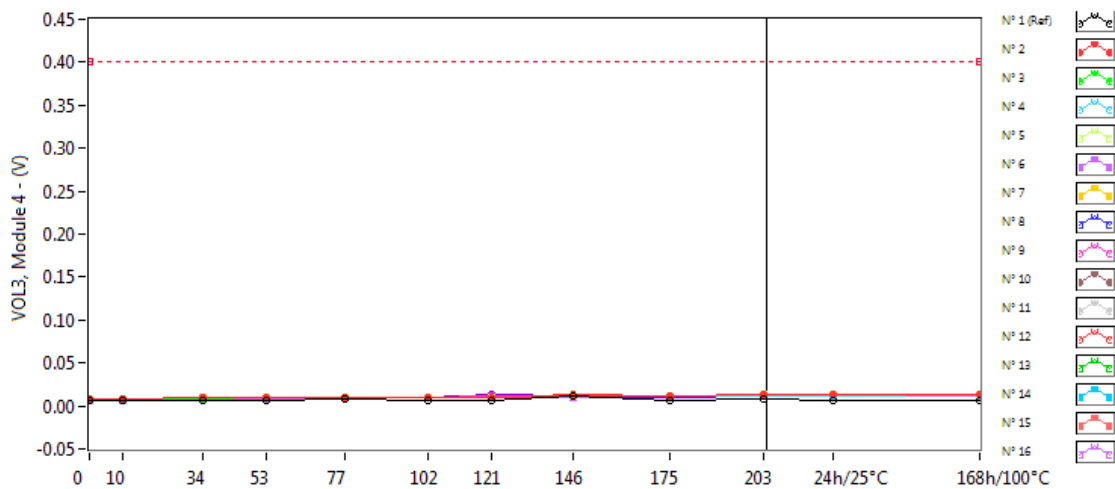
**VOL3, Module 3 . (V)**

**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)	0.007	0.007	0.007	0.007	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	0.010	0.010	0.012	0.013	0.014	0.014	0.014
N° 3	0.007	0.008	0.008	0.009	0.009	0.010	0.010	0.011	0.012	0.013	0.013	0.013
N° 4	0.008	0.008	0.008	0.009	0.009	0.010	0.009	0.011	0.012	0.013	0.013	0.013
N° 5	0.008	0.008	0.008	0.009	0.010	0.010	0.010	0.011	0.012	0.013	0.013	0.013
N° 6	0.007	0.008	0.008	0.009	0.009	0.009	0.009	0.011	0.011	0.012	0.012	0.012
N° 7	0.008	0.008	0.009	0.009	0.010	0.010	0.010	0.011	0.012	0.013	0.013	0.013
N° 8	0.008	0.008	0.009	0.009	0.010	0.010	0.010	0.011	0.012	0.013	0.013	0.013
N° 9	0.008	0.008	0.009	0.009	0.010	0.010	0.012	0.012	0.012	0.013	0.013	0.013
N° 10	0.008	0.008	0.009	0.009	0.010	0.010	0.010	0.011	0.012	0.013	0.013	0.013
N° 11	0.008	0.008	0.008	0.009	0.009	0.009	0.009	0.011	0.011	0.012	0.012	0.012
N° 12	0.008	0.008	0.008	0.009	0.009	0.009	0.009	0.015	0.011	0.012	0.012	0.012
N° 13	0.007	0.008	0.008	0.009	0.009	0.009	0.011	0.011	0.011	0.012	0.012	0.012
N° 14	0.007	0.007	0.008	0.008	0.009	0.009	0.009	0.010	0.011	0.012	0.012	0.012
N° 15	0.008	0.008	0.009	0.009	0.010	0.010	0.010	0.012	0.012	0.013	0.013	0.014
N° 16	0.008	0.008	0.009	0.009	0.010	0.010	0.010	0.012	0.012	0.013	0.013	0.013
N° 17	0.007	0.008	0.008	0.009	0.009	0.009	0.009	0.010	0.011	0.012	0.012	0.012
N° 18	0.008	0.008	0.009	0.009	0.010	0.010	0.010	0.012	0.012	0.013	0.013	0.014
N° 19	0.008	0.008	0.009	0.009	0.010	0.010	0.013	0.012	0.013	0.013	0.013	0.013
N° 20	0.008	0.008	0.009	0.009	0.010	0.010	0.010	0.011	0.012	0.013	0.013	0.013
N° 21	0.008	0.008	0.009	0.009	0.010	0.010	0.010	0.012	0.013	0.014	0.014	0.014
N° 22	0.008	0.008	0.008	0.009	0.009	0.009	0.010	0.010	0.011	0.012	0.012	0.012
N° 23	0.007	0.008	0.008	0.009	0.009	0.009	0.009	0.011	0.011	0.012	0.012	0.012
N° 24	0.008	0.008	0.008	0.009	0.010	0.010	0.009	0.011	0.012	0.012	0.012	0.013
N° 25	0.008	0.008	0.009	0.009	0.010	0.010	0.010	0.012	0.013	0.014	0.014	0.014
N° 26	0.008	0.008	0.008	0.009	0.009	0.009	0.009	0.010	0.011	0.012	0.012	0.012
N° 27	0.008	0.008	0.008	0.009	0.009	0.009	0.009	0.011	0.012	0.012	0.012	0.013
N° 28	0.008	0.008	0.009	0.009	0.010	0.010	0.010	0.011	0.012	0.013	0.013	0.013
N° 29	0.007	0.008	0.008	0.008	0.009	0.009	0.009	0.010	0.011	0.012	0.012	0.012
N° 30	0.008	0.008	0.009	0.009	0.010	0.010	0.010	0.012	0.013	0.014	0.014	0.014
N° 31	0.008	0.008	0.008	0.009	0.009	0.009	0.009	0.011	0.012	0.013	0.013	0.013

# 101. VOL3, Module 4

Ta=25°C; +VCC=4.5V; -VCC=GND; IOL=2µA



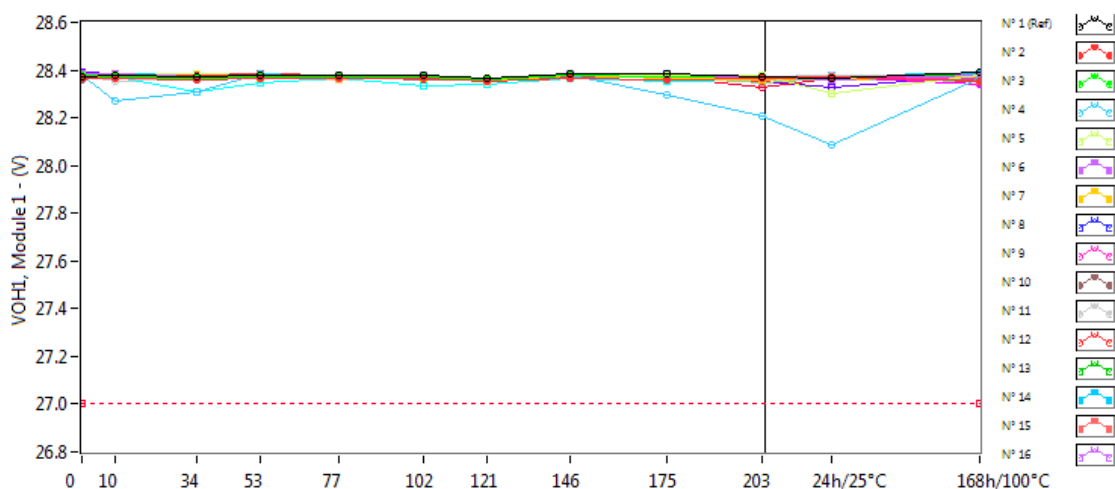
**VOL3, Module 4 . (V)**

**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)	0.007	0.007	0.007	0.007	0.008	0.007	0.007	0.011	0.007	0.008	0.007	0.007
N° 2	0.008	0.008	0.009	0.009	0.010	0.010	0.010	0.011	0.012	0.013	0.013	0.013
N° 3	0.007	0.007	0.008	0.009	0.009	0.010	0.010	0.011	0.012	0.013	0.013	0.013
N° 4	0.007	0.008	0.008	0.009	0.009	0.009	0.009	0.011	0.012	0.012	0.012	0.013
N° 5	0.008	0.008	0.008	0.009	0.009	0.009	0.010	0.011	0.012	0.013	0.013	0.013
N° 6	0.007	0.007	0.008	0.008	0.009	0.009	0.009	0.010	0.011	0.012	0.012	0.012
N° 7	0.008	0.008	0.009	0.009	0.010	0.010	0.010	0.011	0.012	0.013	0.013	0.013
N° 8	0.008	0.008	0.009	0.009	0.010	0.010	0.009	0.011	0.012	0.012	0.012	0.013
N° 9	0.008	0.008	0.009	0.009	0.010	0.010	0.012	0.011	0.012	0.012	0.013	0.013
N° 10	0.008	0.008	0.009	0.009	0.010	0.010	0.010	0.011	0.012	0.013	0.013	0.013
N° 11	0.007	0.007	0.008	0.009	0.009	0.009	0.009	0.010	0.011	0.012	0.012	0.012
N° 12	0.007	0.007	0.008	0.008	0.009	0.009	0.009	0.014	0.011	0.012	0.012	0.012
N° 13	0.007	0.007	0.008	0.008	0.009	0.009	0.010	0.011	0.011	0.012	0.012	0.012
N° 14	0.007	0.007	0.008	0.008	0.009	0.009	0.009	0.010	0.011	0.011	0.011	0.012
N° 15	0.008	0.008	0.009	0.009	0.010	0.010	0.010	0.011	0.012	0.013	0.013	0.014
N° 16	0.008	0.008	0.009	0.009	0.010	0.010	0.010	0.011	0.012	0.013	0.013	0.013
N° 17	0.007	0.007	0.008	0.008	0.009	0.009	0.009	0.010	0.011	0.012	0.012	0.012
N° 18	0.008	0.008	0.009	0.009	0.010	0.010	0.010	0.011	0.012	0.013	0.013	0.013
N° 19	0.008	0.008	0.009	0.009	0.010	0.010	0.013	0.011	0.012	0.013	0.013	0.013
N° 20	0.008	0.008	0.009	0.009	0.010	0.010	0.010	0.011	0.012	0.013	0.013	0.013
N° 21	0.008	0.008	0.009	0.009	0.010	0.010	0.010	0.012	0.012	0.013	0.014	0.013
N° 22	0.007	0.008	0.008	0.009	0.009	0.009	0.009	0.010	0.011	0.012	0.012	0.012
N° 23	0.007	0.007	0.008	0.008	0.009	0.009	0.009	0.011	0.011	0.012	0.012	0.012
N° 24	0.007	0.008	0.008	0.009	0.009	0.009	0.009	0.011	0.011	0.012	0.012	0.012
N° 25	0.008	0.008	0.009	0.009	0.010	0.010	0.010	0.011	0.012	0.013	0.013	0.013
N° 26	0.007	0.007	0.008	0.008	0.009	0.009	0.009	0.010	0.011	0.012	0.012	0.012
N° 27	0.007	0.007	0.008	0.009	0.009	0.009	0.009	0.011	0.011	0.012	0.012	0.013
N° 28	0.008	0.008	0.009	0.009	0.010	0.010	0.010	0.011	0.012	0.013	0.013	0.013
N° 29	0.007	0.007	0.008	0.008	0.009	0.009	0.009	0.010	0.010	0.011	0.011	0.012
N° 30	0.008	0.008	0.009	0.009	0.010	0.010	0.010	0.012	0.012	0.014	0.014	0.013
N° 31	0.007	0.007	0.008	0.008	0.009	0.009	0.009	0.011	0.012	0.012	0.013	0.012

## 102. VOH1, Module 1

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



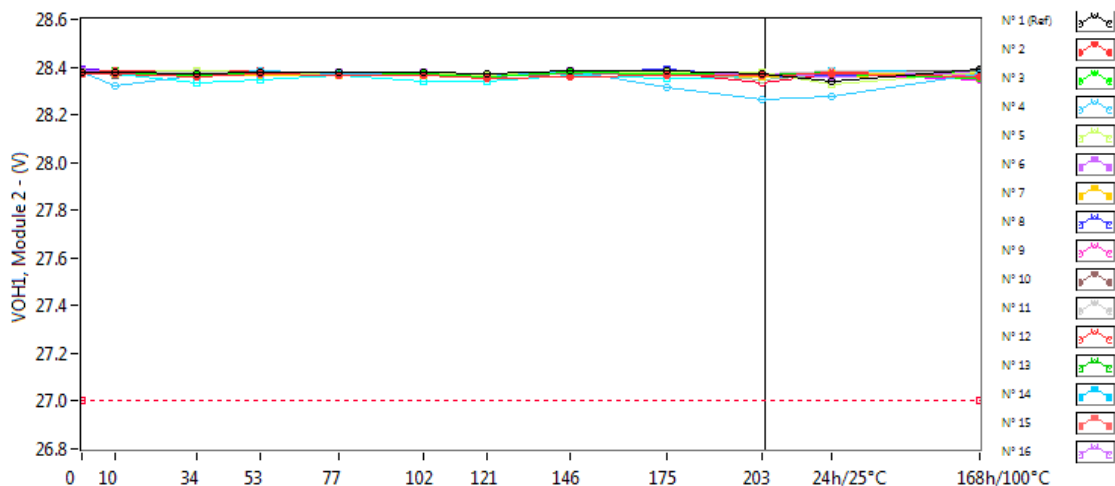
VOH1, Module 1. (V)

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)	28.375	28.381	28.374	28.378	28.378	28.378	28.367	28.387	28.387	28.369	28.368	28.390
N° 2	28.368	28.368	28.359	28.367	28.365	28.365	28.353	28.363	28.362	28.366	28.374	28.354
N° 3	28.376	28.373	28.366	28.371	28.375	28.374	28.357	28.380	28.372	28.364	28.375	28.355
N° 4	28.379	28.270	28.308	28.385	28.371	28.371	28.359	28.381	28.297	28.207	28.087	28.368
N° 5	28.380	28.380	28.385	28.377	28.375	28.374	28.366	28.380	28.377	28.379	28.300	28.378
N° 6	28.383	28.382	28.375	28.375	28.377	28.376	28.364	28.386	28.376	28.369	28.358	28.379
N° 7	28.375	28.371	28.367	28.367	28.367	28.367	28.355	28.377	28.367	28.357	28.366	28.370
N° 8	28.378	28.374	28.369	28.373	28.367	28.371	28.351	28.379	28.386	28.360	28.368	28.370
N° 9	28.372	28.376	28.369	28.373	28.371	28.372	28.356	28.377	28.371	28.362	28.370	28.364
N° 10	28.361	28.377	28.372	28.373	28.372	28.358	28.358	28.373	28.373	28.363	28.367	28.356
N° 11	28.379	28.355	28.366	28.378	28.377	28.375	28.364	28.379	28.376	28.371	28.381	28.374
N° 12	28.359	28.380	28.379	28.375	28.377	28.368	28.357	28.382	28.380	28.352	28.379	28.370
N° 13	28.385	28.381	28.380	28.373	28.376	28.378	28.364	28.380	28.379	28.372	28.375	28.380
N° 14	28.380	28.383	28.381	28.380	28.376	28.378	28.365	28.381	28.381	28.373	28.381	28.382
N° 15	28.369	28.373	28.372	28.370	28.367	28.368	28.357	28.371	28.370	28.362	28.369	28.352
N° 16	28.372	28.374	28.371	28.370	28.367	28.368	28.356	28.373	28.372	28.366	28.370	28.374
N° 17	28.381	28.383	28.383	28.379	28.377	28.377	28.364	28.383	28.383	28.373	28.356	28.372
N° 18	28.370	28.372	28.374	28.370	28.365	28.366	28.355	28.372	28.370	28.360	28.369	28.342
N° 19	28.370	28.372	28.370	28.370	28.366	28.368	28.355	28.375	28.372	28.363	28.370	28.369
N° 20	28.371	28.374	28.371	28.367	28.364	28.367	28.356	28.372	28.373	28.345	28.368	28.351
N° 21	28.370	28.370	28.307	28.349	28.363	28.335	28.343	28.364	28.351	28.357	28.363	28.368
N° 22	28.376	28.385	28.379	28.387	28.376	28.376	28.363	28.383	28.379	28.370	28.380	28.377
N° 23	28.382	28.364	28.382	28.378	28.372	28.375	28.362	28.380	28.380	28.368	28.378	28.382
N° 24	28.377	28.375	28.380	28.376	28.371	28.372	28.361	28.379	28.376	28.363	28.376	28.377
N° 25	28.370	28.377	28.377	28.366	28.364	28.367	28.354	28.372	28.375	28.325	28.366	28.357
N° 26	28.379	28.382	28.379	28.378	28.373	28.376	28.362	28.381	28.380	28.371	28.377	28.386
N° 27	28.374	28.373	28.377	28.383	28.371	28.372	28.360	28.377	28.377	28.368	28.374	28.371
N° 28	28.374	28.375	28.373	28.369	28.367	28.370	28.359	28.375	28.374	28.360	28.371	28.380
N° 29	28.389	28.382	28.381	28.380	28.377	28.378	28.365	28.383	28.384	28.355	28.329	28.380
N° 30	28.372	28.372	28.370	28.369	28.368	28.368	28.356	28.371	28.376	28.360	28.381	28.375
N° 31	28.378	28.379	28.375	28.375	28.359	28.374	28.361	28.378	28.380	28.365	28.378	28.374

### 103. VOH1, Module 2

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



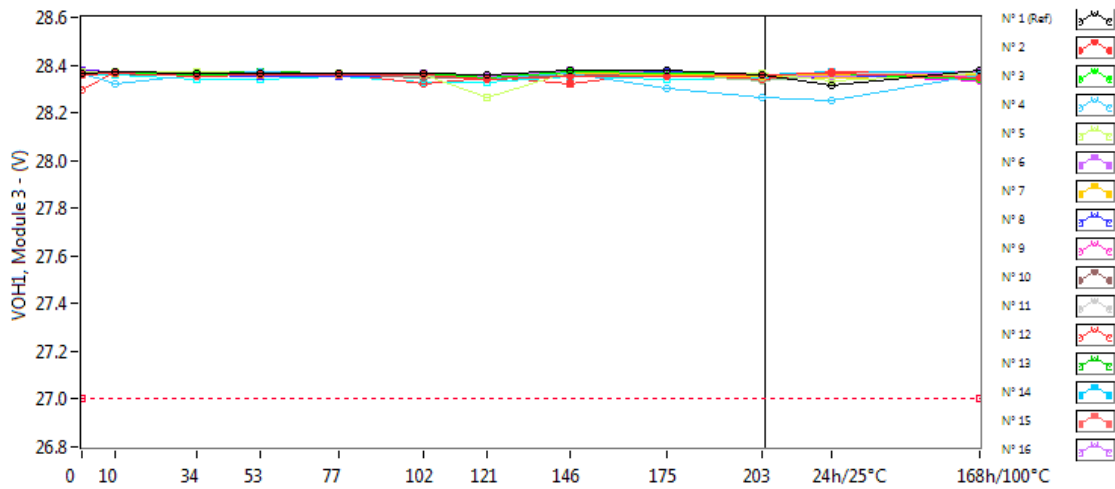
**VOH1, Module 2 . (V)**

**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)	28.376	28.380	28.375	28.378	28.378	28.378	28.369	28.386	28.387	28.372	28.342	28.388
N° 2	28.369	28.373	28.360	28.369	28.365	28.365	28.354	28.362	28.367	28.367	28.375	28.359
N° 3	28.376	28.379	28.365	28.373	28.376	28.374	28.357	28.379	28.374	28.367	28.373	28.353
N° 4	28.380	28.323	28.367	28.386	28.373	28.373	28.359	28.382	28.314	28.266	28.276	28.369
N° 5	28.380	28.380	28.384	28.376	28.374	28.372	28.363	28.380	28.377	28.378	28.325	28.376
N° 6	28.382	28.381	28.375	28.375	28.377	28.376	28.364	28.387	28.377	28.370	28.361	28.379
N° 7	28.376	28.373	28.368	28.370	28.368	28.368	28.356	28.376	28.370	28.360	28.369	28.373
N° 8	28.377	28.375	28.368	28.372	28.369	28.370	28.356	28.376	28.389	28.361	28.367	28.370
N° 9	28.374	28.377	28.371	28.375	28.374	28.372	28.358	28.378	28.371	28.361	28.372	28.368
N° 10	28.375	28.379	28.371	28.372	28.371	28.370	28.356	28.373	28.372	28.363	28.368	28.357
N° 11	28.379	28.381	28.379	28.380	28.378	28.378	28.364	28.381	28.376	28.371	28.382	28.374
N° 12	28.381	28.384	28.381	28.375	28.378	28.370	28.358	28.381	28.380	28.356	28.381	28.372
N° 13	28.385	28.384	28.381	28.379	28.377	28.378	28.364	28.378	28.378	28.373	28.376	28.380
N° 14	28.379	28.383	28.381	28.380	28.376	28.377	28.363	28.380	28.379	28.372	28.382	28.381
N° 15	28.370	28.374	28.373	28.371	28.369	28.369	28.357	28.373	28.372	28.363	28.370	28.354
N° 16	28.374	28.377	28.375	28.373	28.371	28.369	28.359	28.374	28.374	28.366	28.373	28.373
N° 17	28.381	28.383	28.383	28.380	28.376	28.375	28.363	28.380	28.385	28.373	28.361	28.369
N° 18	28.372	28.373	28.375	28.371	28.368	28.367	28.358	28.374	28.372	28.360	28.370	28.345
N° 19	28.372	28.374	28.372	28.372	28.368	28.370	28.357	28.375	28.373	28.363	28.369	28.373
N° 20	28.373	28.377	28.373	28.369	28.370	28.369	28.358	28.373	28.376	28.349	28.370	28.356
N° 21	28.372	28.372	28.333	28.348	28.366	28.341	28.343	28.367	28.354	28.358	28.367	28.370
N° 22	28.377	28.384	28.380	28.387	28.374	28.375	28.364	28.381	28.381	28.369	28.379	28.381
N° 23	28.384	28.367	28.383	28.381	28.375	28.376	28.364	28.381	28.381	28.367	28.378	28.382
N° 24	28.377	28.380	28.380	28.377	28.372	28.373	28.363	28.380	28.380	28.362	28.377	28.378
N° 25	28.371	28.380	28.380	28.372	28.369	28.369	28.357	28.374	28.378	28.335	28.369	28.359
N° 26	28.380	28.385	28.381	28.379	28.376	28.377	28.363	28.379	28.384	28.372	28.379	28.384
N° 27	28.377	28.374	28.379	28.383	28.370	28.373	28.361	28.376	28.377	28.369	28.377	28.372
N° 28	28.373	28.376	28.372	28.369	28.367	28.370	28.359	28.374	28.374	28.361	28.371	28.378
N° 29	28.388	28.382	28.380	28.380	28.376	28.377	28.364	28.383	28.382	28.363	28.371	28.380
N° 30	28.372	28.374	28.370	28.368	28.368	28.368	28.356	28.373	28.375	28.358	28.380	28.372
N° 31	28.381	28.382	28.378	28.378	28.376	28.376	28.365	28.383	28.383	28.372	28.379	28.378

## 104. VOH1, Module 3

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



**VOH1, Module 3 . (V)**

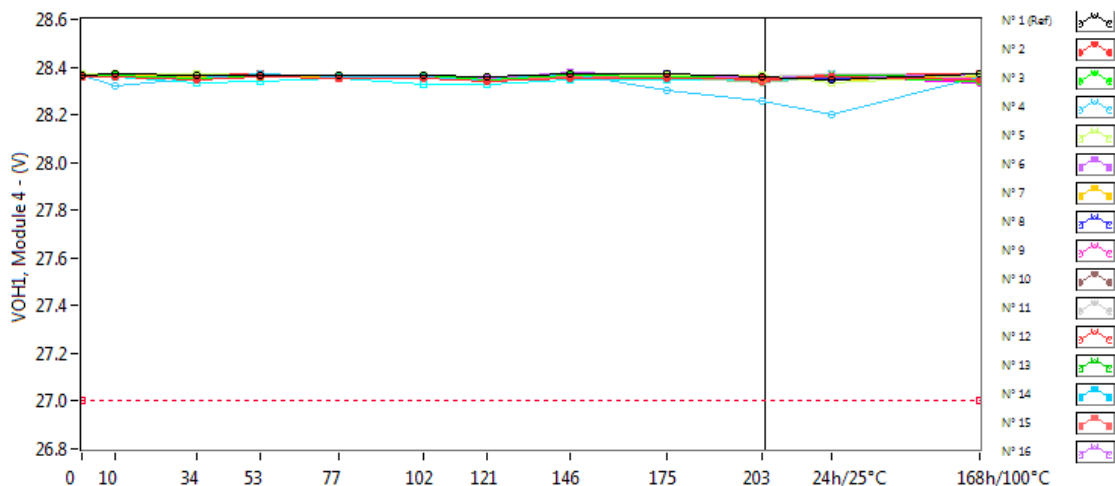
**Min = 27.0**

	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)	28.366	28.372	28.364	28.368	28.367	28.367	28.358	28.377	28.377	28.361	28.315	28.379
N° 2	28.358	28.363	28.350	28.359	28.357	28.356	28.343	28.353	28.355	28.356	28.364	28.348
N° 3	28.365	28.369	28.356	28.364	28.365	28.364	28.347	28.371	28.364	28.356	28.364	28.342
N° 4	28.368	28.318	28.356	28.374	28.361	28.361	28.348	28.368	28.303	28.266	28.250	28.356
N° 5	28.369	28.370	28.374	28.365	28.365	28.362	28.266	28.371	28.366	28.368	28.334	28.365
N° 6	28.373	28.374	28.365	28.366	28.367	28.366	28.355	28.378	28.366	28.360	28.355	28.369
N° 7	28.365	28.363	28.357	28.358	28.358	28.358	28.344	28.366	28.357	28.350	28.358	28.360
N° 8	28.365	28.364	28.357	28.355	28.355	28.358	28.344	28.364	28.375	28.351	28.355	28.359
N° 9	28.362	28.365	28.358	28.361	28.360	28.360	28.346	28.366	28.358	28.351	28.359	28.353
N° 10	28.364	28.368	28.360	28.362	28.360	28.349	28.346	28.361	28.362	28.351	28.358	28.346
N° 11	28.369	28.371	28.367	28.368	28.366	28.366	28.353	28.369	28.367	28.359	28.367	28.365
N° 12	28.293	28.370	28.369	28.365	28.366	28.322	28.345	28.353	28.367	28.337	28.370	28.359
N° 13	28.373	28.372	28.367	28.369	28.364	28.364	28.352	28.367	28.367	28.360	28.363	28.367
N° 14	28.370	28.373	28.370	28.370	28.365	28.367	28.355	28.371	28.371	28.362	28.372	28.371
N° 15	28.359	28.363	28.362	28.360	28.357	28.358	28.346	28.363	28.360	28.350	28.360	28.342
N° 16	28.363	28.365	28.364	28.361	28.358	28.359	28.347	28.362	28.362	28.356	28.361	28.361
N° 17	28.367	28.371	28.370	28.366	28.363	28.362	28.352	28.370	28.370	28.357	28.347	28.357
N° 18	28.361	28.365	28.363	28.361	28.357	28.358	28.347	28.362	28.362	28.351	28.360	28.335
N° 19	28.362	28.363	28.360	28.360	28.356	28.359	28.344	28.364	28.362	28.352	28.357	28.361
N° 20	28.361	28.365	28.360	28.356	28.356	28.353	28.346	28.358	28.362	28.335	28.357	28.346
N° 21	28.360	28.362	28.337	28.340	28.353	28.328	28.330	28.350	28.343	28.348	28.356	28.360
N° 22	28.366	28.374	28.368	28.375	28.363	28.363	28.353	28.320	28.370	28.359	28.367	28.370
N° 23	28.372	28.358	28.372	28.369	28.364	28.365	28.353	28.373	28.372	28.356	28.367	28.370
N° 24	28.365	28.368	28.368	28.365	28.362	28.360	28.351	28.368	28.369	28.352	28.365	28.367
N° 25	28.362	28.369	28.368	28.360	28.357	28.357	28.345	28.362	28.367	28.338	28.358	28.344
N° 26	28.367	28.372	28.369	28.365	28.361	28.365	28.350	28.368	28.368	28.361	28.367	28.373
N° 27	28.365	28.364	28.367	28.370	28.361	28.362	28.348	28.366	28.367	28.358	28.364	28.361
N° 28	28.363	28.365	28.362	28.357	28.356	28.358	28.347	28.361	28.363	28.349	28.359	28.368
N° 29	28.376	28.372	28.369	28.368	28.364	28.366	28.353	28.371	28.372	28.353	28.345	28.369
N° 30	28.362	28.364	28.360	28.359	28.357	28.357	28.347	28.361	28.364	28.350	28.369	28.364
N° 31	28.369	28.371	28.367	28.366	28.363	28.365	28.352	28.369	28.374	28.358	28.368	28.367



# 105. VOH1, Module 4

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



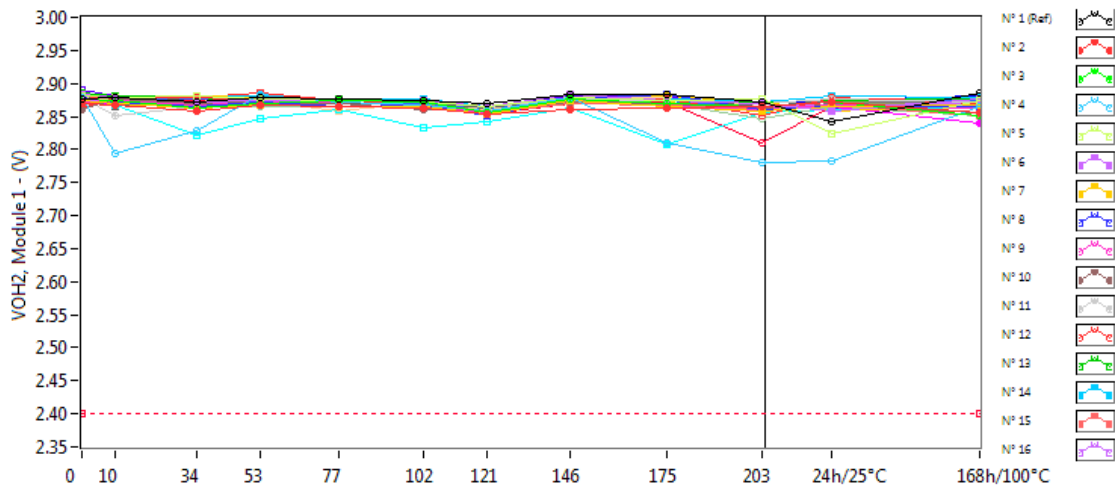
VOH1, Module 4 . (V)

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)	28.364	28.370	28.363	28.367	28.366	28.366	28.357	28.374	28.375	28.358	28.349	28.375
N° 2	28.357	28.362	28.348	28.356	28.354	28.355	28.341	28.351	28.353	28.352	28.359	28.346
N° 3	28.364	28.366	28.355	28.362	28.363	28.363	28.346	28.366	28.362	28.355	28.360	28.341
N° 4	28.367	28.319	28.355	28.373	28.362	28.361	28.348	28.369	28.302	28.259	28.203	28.356
N° 5	28.370	28.370	28.374	28.365	28.364	28.364	28.356	28.370	28.367	28.367	28.333	28.366
N° 6	28.371	28.372	28.363	28.364	28.365	28.366	28.354	28.376	28.368	28.358	28.356	28.368
N° 7	28.364	28.363	28.357	28.359	28.357	28.357	28.345	28.364	28.358	28.350	28.358	28.358
N° 8	28.366	28.364	28.358	28.362	28.357	28.359	28.344	28.365	28.375	28.351	28.354	28.357
N° 9	28.361	28.365	28.358	28.360	28.360	28.361	28.345	28.365	28.359	28.351	28.360	28.352
N° 10	28.364	28.367	28.361	28.361	28.359	28.360	28.348	28.363	28.362	28.351	28.356	28.345
N° 11	28.369	28.369	28.368	28.368	28.368	28.365	28.354	28.370	28.368	28.361	28.369	28.364
N° 12	28.369	28.372	28.369	28.364	28.367	28.357	28.347	28.370	28.370	28.337	28.369	28.363
N° 13	28.373	28.371	28.368	28.366	28.364	28.365	28.352	28.369	28.367	28.360	28.364	28.368
N° 14	28.368	28.371	28.369	28.367	28.363	28.365	28.352	28.368	28.368	28.359	28.369	28.368
N° 15	28.359	28.363	28.360	28.359	28.355	28.357	28.345	28.361	28.360	28.349	28.359	28.343
N° 16	28.361	28.363	28.361	28.359	28.357	28.357	28.345	28.361	28.359	28.352	28.357	28.360
N° 17	28.369	28.371	28.371	28.368	28.366	28.365	28.352	28.371	28.371	28.360	28.348	28.359
N° 18	28.358	28.362	28.361	28.358	28.355	28.355	28.344	28.360	28.360	28.349	28.356	28.335
N° 19	28.359	28.361	28.360	28.359	28.354	28.357	28.343	28.362	28.361	28.352	28.357	28.359
N° 20	28.361	28.365	28.360	28.357	28.357	28.356	28.346	28.361	28.361	28.334	28.356	28.347
N° 21	28.359	28.360	28.336	28.338	28.352	28.329	28.328	28.345	28.346	28.344	28.352	28.358
N° 22	28.367	28.372	28.368	28.374	28.362	28.363	28.353	28.369	28.370	28.358	28.367	28.369
N° 23	28.371	28.356	28.371	28.367	28.362	28.364	28.351	28.369	28.367	28.357	28.366	28.370
N° 24	28.364	28.368	28.368	28.364	28.360	28.360	28.350	28.367	28.367	28.350	28.362	28.365
N° 25	28.359	28.367	28.366	28.357	28.355	28.356	28.343	28.362	28.365	28.342	28.356	28.348
N° 26	28.368	28.373	28.368	28.367	28.365	28.366	28.352	28.368	28.370	28.360	28.367	28.372
N° 27	28.365	28.363	28.366	28.369	28.359	28.362	28.349	28.366	28.367	28.355	28.362	28.359
N° 28	28.363	28.364	28.361	28.357	28.355	28.358	28.347	28.363	28.362	28.349	28.359	28.367
N° 29	28.375	28.370	28.368	28.367	28.364	28.366	28.353	28.370	28.371	28.353	28.356	28.367
N° 30	28.362	28.363	28.360	28.358	28.356	28.358	28.346	28.361	28.364	28.348	28.367	28.362
N° 31	28.369	28.370	28.367	28.365	28.364	28.364	28.352	28.371	28.371	28.359	28.367	28.367

## 106. VOH2, Module 1

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



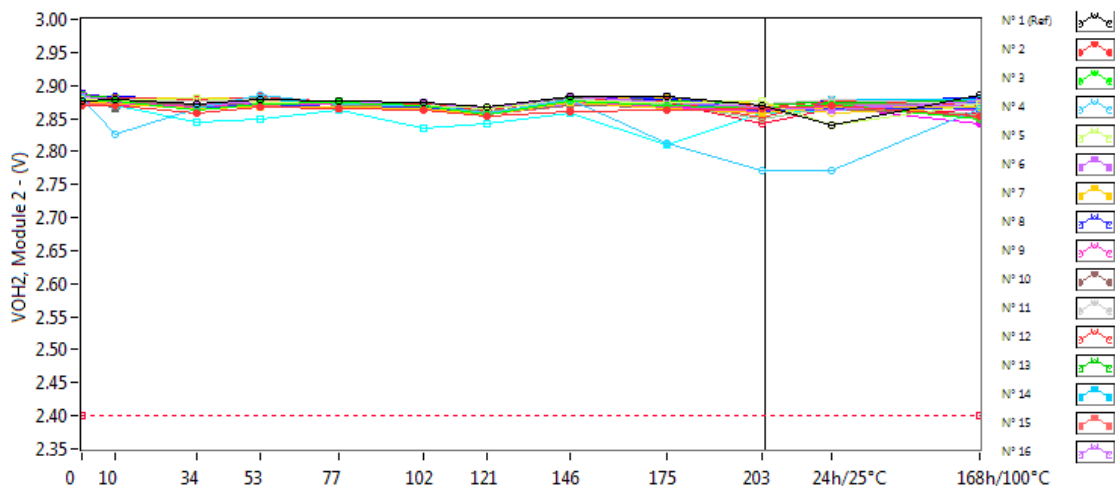
**VOH2, Module 1 . (V)**

**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)	2.876	2.879	2.872	2.878	2.877	2.875	2.869	2.884	2.884	2.871	2.843	2.886
N° 2	2.869	2.867	2.857	2.867	2.864	2.862	2.853	2.861	2.862	2.865	2.871	2.855
N° 3	2.877	2.873	2.863	2.870	2.873	2.871	2.856	2.877	2.870	2.866	2.872	2.851
N° 4	2.879	2.794	2.828	2.884	2.871	2.868	2.858	2.878	2.810	2.780	2.782	2.864
N° 5	2.880	2.878	2.882	2.876	2.874	2.871	2.865	2.878	2.874	2.877	2.824	2.873
N° 6	2.883	2.879	2.872	2.874	2.875	2.874	2.864	2.884	2.874	2.869	2.858	2.876
N° 7	2.875	2.870	2.863	2.867	2.866	2.864	2.854	2.873	2.864	2.857	2.865	2.867
N° 8	2.878	2.872	2.866	2.872	2.866	2.868	2.851	2.876	2.884	2.861	2.865	2.866
N° 9	2.872	2.873	2.867	2.871	2.871	2.868	2.856	2.873	2.866	2.860	2.868	2.862
N° 10	2.861	2.876	2.870	2.872	2.869	2.860	2.857	2.871	2.869	2.862	2.867	2.855
N° 11	2.879	2.852	2.866	2.878	2.876	2.873	2.864	2.877	2.874	2.870	2.877	2.871
N° 12	2.863	2.878	2.878	2.874	2.877	2.866	2.858	2.879	2.876	2.851	2.878	2.869
N° 13	2.885	2.880	2.878	2.872	2.876	2.875	2.864	2.877	2.875	2.871	2.874	2.876
N° 14	2.881	2.881	2.879	2.880	2.875	2.876	2.865	2.878	2.877	2.872	2.880	2.879
N° 15	2.870	2.871	2.869	2.869	2.865	2.865	2.855	2.869	2.867	2.860	2.867	2.851
N° 16	2.873	2.872	2.870	2.869	2.866	2.865	2.856	2.870	2.868	2.865	2.868	2.869
N° 17	2.881	2.881	2.880	2.879	2.876	2.874	2.864	2.879	2.880	2.871	2.859	2.868
N° 18	2.870	2.870	2.871	2.869	2.864	2.863	2.855	2.869	2.867	2.859	2.866	2.840
N° 19	2.871	2.870	2.868	2.869	2.865	2.865	2.855	2.872	2.869	2.862	2.866	2.867
N° 20	2.871	2.872	2.868	2.866	2.865	2.864	2.856	2.869	2.869	2.846	2.865	2.851
N° 21	2.871	2.868	2.822	2.846	2.861	2.832	2.842	2.862	2.807	2.856	2.861	2.865
N° 22	2.876	2.881	2.878	2.885	2.874	2.872	2.864	2.879	2.877	2.869	2.877	2.876
N° 23	2.883	2.864	2.880	2.878	2.870	2.872	2.862	2.879	2.877	2.866	2.875	2.878
N° 24	2.877	2.874	2.877	2.875	2.869	2.869	2.862	2.877	2.875	2.862	2.873	2.874
N° 25	2.870	2.875	2.874	2.866	2.864	2.864	2.853	2.869	2.871	2.809	2.864	2.855
N° 26	2.880	2.882	2.878	2.877	2.873	2.874	2.862	2.877	2.877	2.870	2.875	2.880
N° 27	2.875	2.871	2.876	2.880	2.870	2.870	2.859	2.874	2.874	2.866	2.872	2.868
N° 28	2.875	2.873	2.871	2.868	2.866	2.867	2.858	2.871	2.870	2.860	2.869	2.875
N° 29	2.889	2.881	2.879	2.880	2.875	2.875	2.865	2.881	2.880	2.863	2.863	2.877
N° 30	2.873	2.871	2.868	2.868	2.866	2.866	2.855	2.869	2.871	2.858	2.876	2.869
N° 31	2.879	2.877	2.874	2.874	2.858	2.871	2.861	2.876	2.878	2.865	2.874	2.873

## 107. VOH2, Module 2

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



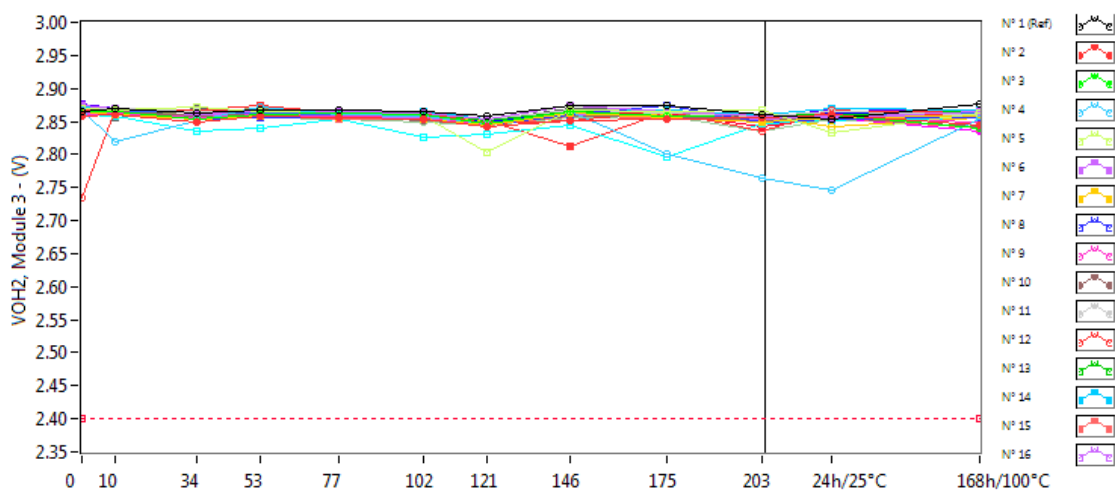
VOH2, Module 2 . (V)

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)	2.876	2.879	2.872	2.878	2.877	2.875	2.868	2.884	2.884	2.870	2.840	2.886
N° 2	2.869	2.870	2.858	2.867	2.865	2.863	2.853	2.861	2.862	2.865	2.870	2.854
N° 3	2.876	2.876	2.863	2.872	2.873	2.870	2.856	2.876	2.870	2.865	2.871	2.850
N° 4	2.880	2.826	2.864	2.885	2.872	2.870	2.859	2.878	2.812	2.771	2.771	2.865
N° 5	2.879	2.877	2.881	2.874	2.873	2.870	2.864	2.877	2.873	2.876	2.840	2.872
N° 6	2.883	2.879	2.872	2.874	2.875	2.873	2.864	2.883	2.873	2.868	2.863	2.876
N° 7	2.876	2.871	2.865	2.868	2.867	2.865	2.855	2.873	2.865	2.859	2.867	2.868
N° 8	2.877	2.872	2.865	2.871	2.867	2.867	2.855	2.874	2.884	2.861	2.865	2.866
N° 9	2.873	2.874	2.868	2.872	2.871	2.869	2.857	2.874	2.867	2.861	2.869	2.862
N° 10	2.875	2.876	2.870	2.871	2.868	2.867	2.857	2.870	2.868	2.861	2.865	2.854
N° 11	2.880	2.878	2.876	2.878	2.877	2.874	2.865	2.878	2.875	2.871	2.878	2.871
N° 12	2.881	2.881	2.878	2.875	2.877	2.867	2.859	2.879	2.877	2.852	2.878	2.870
N° 13	2.885	2.881	2.878	2.878	2.876	2.875	2.864	2.877	2.876	2.871	2.873	2.876
N° 14	2.881	2.880	2.878	2.879	2.875	2.875	2.864	2.877	2.877	2.871	2.879	2.878
N° 15	2.871	2.871	2.870	2.870	2.866	2.866	2.856	2.870	2.867	2.860	2.867	2.851
N° 16	2.875	2.874	2.872	2.871	2.868	2.867	2.858	2.872	2.870	2.866	2.870	2.870
N° 17	2.881	2.880	2.880	2.879	2.876	2.873	2.864	2.879	2.880	2.871	2.858	2.867
N° 18	2.871	2.870	2.872	2.870	2.866	2.864	2.856	2.870	2.869	2.860	2.867	2.868
N° 19	2.872	2.871	2.869	2.869	2.866	2.866	2.856	2.873	2.870	2.863	2.867	2.868
N° 20	2.873	2.874	2.870	2.867	2.867	2.865	2.859	2.870	2.871	2.848	2.867	2.855
N° 21	2.872	2.870	2.844	2.850	2.863	2.835	2.842	2.859	2.810	2.857	2.862	2.867
N° 22	2.878	2.881	2.877	2.884	2.873	2.872	2.863	2.879	2.877	2.868	2.876	2.876
N° 23	2.884	2.865	2.881	2.878	2.874	2.873	2.863	2.880	2.877	2.867	2.876	2.879
N° 24	2.877	2.878	2.878	2.875	2.871	2.870	2.862	2.878	2.875	2.862	2.873	2.874
N° 25	2.872	2.877	2.876	2.869	2.867	2.866	2.855	2.871	2.873	2.841	2.866	2.857
N° 26	2.881	2.883	2.879	2.878	2.874	2.875	2.863	2.878	2.878	2.871	2.876	2.881
N° 27	2.877	2.872	2.876	2.880	2.870	2.870	2.860	2.874	2.874	2.866	2.872	2.869
N° 28	2.874	2.873	2.870	2.867	2.866	2.866	2.858	2.871	2.869	2.859	2.868	2.874
N° 29	2.887	2.880	2.878	2.878	2.874	2.874	2.864	2.880	2.879	2.863	2.869	2.875
N° 30	2.873	2.870	2.868	2.867	2.866	2.865	2.855	2.869	2.871	2.859	2.875	2.869
N° 31	2.881	2.880	2.876	2.876	2.874	2.873	2.863	2.878	2.880	2.868	2.876	2.875

## 108. VOH2, Module 3

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



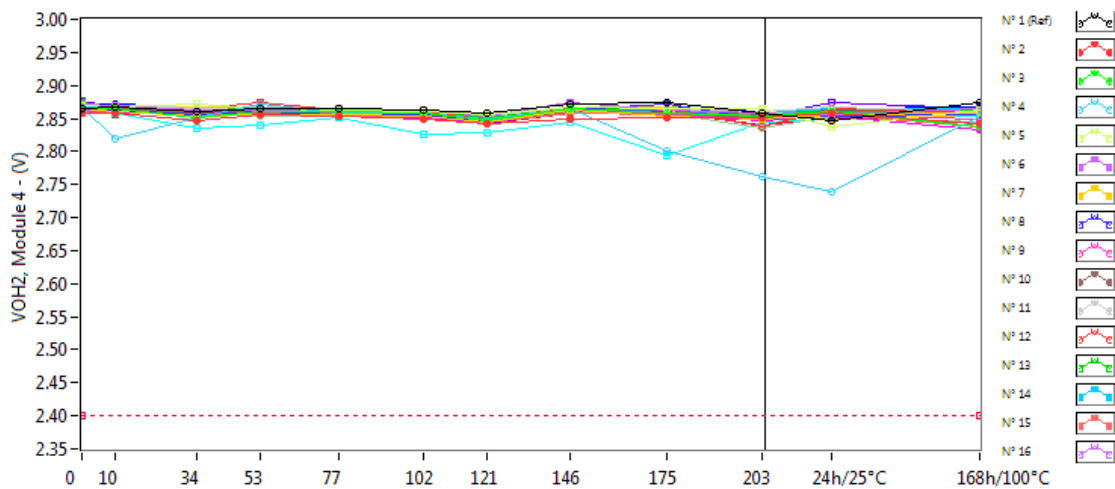
**VOH2, Module 3 . (V)**

**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)	2.866	2.869	2.863	2.868	2.867	2.864	2.859	2.873	2.874	2.861	2.853	2.876
N° 2	2.859	2.860	2.848	2.857	2.855	2.853	2.842	2.851	2.853	2.855	2.860	2.845
N° 3	2.866	2.866	2.853	2.861	2.862	2.860	2.846	2.866	2.859	2.855	2.861	2.839
N° 4	2.868	2.819	2.852	2.872	2.860	2.858	2.847	2.866	2.801	2.764	2.745	2.853
N° 5	2.870	2.867	2.871	2.864	2.863	2.859	2.804	2.868	2.864	2.867	2.834	2.862
N° 6	2.873	2.870	2.863	2.865	2.865	2.863	2.854	2.874	2.864	2.859	2.855	2.866
N° 7	2.865	2.860	2.854	2.857	2.856	2.854	2.844	2.862	2.855	2.848	2.856	2.857
N° 8	2.865	2.861	2.854	2.856	2.855	2.854	2.844	2.861	2.873	2.850	2.853	2.855
N° 9	2.861	2.862	2.856	2.860	2.859	2.857	2.845	2.862	2.855	2.849	2.856	2.850
N° 10	2.864	2.865	2.859	2.860	2.858	2.852	2.846	2.859	2.858	2.851	2.855	2.843
N° 11	2.869	2.869	2.865	2.867	2.865	2.862	2.853	2.867	2.863	2.859	2.866	2.860
N° 12	2.735	2.867	2.867	2.864	2.865	2.863	2.846	2.851	2.865	2.835	2.867	2.859
N° 13	2.873	2.869	2.866	2.866	2.864	2.862	2.852	2.865	2.864	2.859	2.861	2.864
N° 14	2.871	2.870	2.868	2.868	2.864	2.864	2.854	2.867	2.867	2.861	2.869	2.867
N° 15	2.860	2.861	2.859	2.858	2.854	2.854	2.844	2.859	2.856	2.849	2.856	2.840
N° 16	2.863	2.862	2.861	2.859	2.856	2.855	2.846	2.860	2.859	2.854	2.858	2.859
N° 17	2.869	2.868	2.868	2.866	2.863	2.858	2.851	2.866	2.867	2.858	2.843	2.855
N° 18	2.861	2.861	2.861	2.859	2.856	2.854	2.846	2.859	2.858	2.850	2.856	2.835
N° 19	2.861	2.860	2.858	2.858	2.855	2.854	2.844	2.862	2.859	2.852	2.856	2.857
N° 20	2.860	2.862	2.857	2.855	2.854	2.850	2.844	2.855	2.858	2.835	2.854	2.843
N° 21	2.861	2.859	2.835	2.839	2.853	2.827	2.830	2.844	2.797	2.846	2.852	2.856
N° 22	2.867	2.870	2.867	2.874	2.862	2.861	2.852	2.813	2.865	2.857	2.865	2.865
N° 23	2.873	2.856	2.870	2.867	2.863	2.862	2.852	2.869	2.867	2.856	2.865	2.868
N° 24	2.866	2.865	2.866	2.863	2.860	2.858	2.851	2.866	2.864	2.851	2.861	2.863
N° 25	2.861	2.866	2.865	2.858	2.856	2.854	2.844	2.860	2.862	2.843	2.855	2.843
N° 26	2.868	2.869	2.867	2.864	2.862	2.862	2.850	2.865	2.865	2.859	2.863	2.867
N° 27	2.865	2.861	2.864	2.869	2.859	2.859	2.847	2.862	2.863	2.855	2.861	2.856
N° 28	2.863	2.862	2.859	2.856	2.854	2.854	2.846	2.860	2.858	2.849	2.856	2.863
N° 29	2.877	2.869	2.867	2.867	2.863	2.863	2.853	2.868	2.868	2.852	2.870	2.865
N° 30	2.863	2.861	2.858	2.857	2.856	2.855	2.845	2.859	2.861	2.849	2.864	2.859
N° 31	2.870	2.868	2.865	2.864	2.863	2.861	2.852	2.867	2.868	2.857	2.865	2.864

## 109. VOH2, Module 4

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



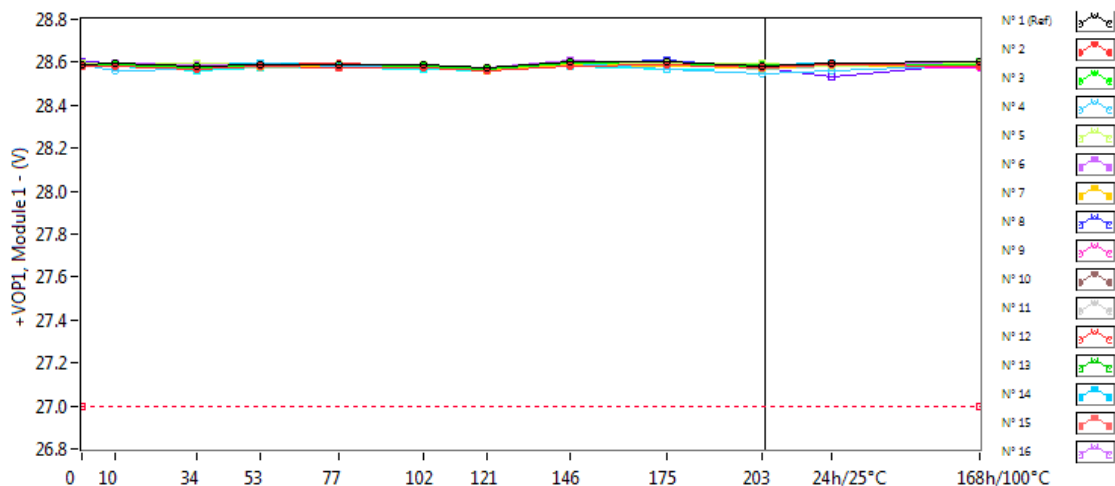
**VOH2, Module 4 . (V)**

**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)	2.865	2.867	2.861	2.866	2.865	2.863	2.857	2.872	2.873	2.859	2.846	2.874
N° 2	2.857	2.858	2.846	2.855	2.853	2.850	2.841	2.848	2.851	2.852	2.857	2.843
N° 3	2.865	2.865	2.852	2.860	2.861	2.859	2.846	2.865	2.859	2.854	2.860	2.838
N° 4	2.868	2.819	2.852	2.872	2.859	2.857	2.848	2.865	2.801	2.762	2.738	2.853
N° 5	2.870	2.868	2.871	2.864	2.863	2.860	2.855	2.867	2.864	2.866	2.837	2.862
N° 6	2.872	2.869	2.862	2.863	2.864	2.862	2.853	2.873	2.862	2.858	2.856	2.865
N° 7	2.865	2.860	2.854	2.856	2.856	2.854	2.844	2.862	2.854	2.848	2.855	2.857
N° 8	2.866	2.862	2.855	2.860	2.856	2.856	2.845	2.863	2.872	2.850	2.853	2.855
N° 9	2.861	2.862	2.856	2.859	2.858	2.857	2.845	2.862	2.855	2.849	2.856	2.850
N° 10	2.864	2.865	2.859	2.860	2.858	2.856	2.846	2.860	2.858	2.852	2.855	2.843
N° 11	2.869	2.869	2.865	2.867	2.865	2.863	2.854	2.867	2.865	2.860	2.867	2.860
N° 12	2.870	2.869	2.866	2.863	2.865	2.854	2.846	2.868	2.865	2.838	2.866	2.858
N° 13	2.873	2.868	2.866	2.865	2.863	2.862	2.852	2.865	2.864	2.859	2.861	2.863
N° 14	2.868	2.868	2.866	2.866	2.862	2.862	2.852	2.865	2.865	2.859	2.866	2.865
N° 15	2.859	2.860	2.858	2.857	2.854	2.853	2.844	2.858	2.856	2.848	2.855	2.838
N° 16	2.862	2.861	2.859	2.857	2.855	2.853	2.845	2.858	2.857	2.852	2.856	2.857
N° 17	2.870	2.869	2.868	2.866	2.864	2.862	2.853	2.867	2.868	2.859	2.848	2.856
N° 18	2.858	2.858	2.858	2.856	2.853	2.851	2.844	2.857	2.856	2.847	2.854	2.833
N° 19	2.859	2.859	2.857	2.856	2.854	2.853	2.843	2.860	2.858	2.851	2.854	2.856
N° 20	2.860	2.862	2.857	2.854	2.854	2.852	2.846	2.858	2.858	2.835	2.854	2.844
N° 21	2.859	2.858	2.835	2.839	2.851	2.826	2.828	2.845	2.794	2.844	2.850	2.854
N° 22	2.867	2.870	2.866	2.873	2.862	2.860	2.852	2.867	2.866	2.857	2.864	2.865
N° 23	2.872	2.855	2.868	2.865	2.861	2.861	2.850	2.867	2.864	2.855	2.863	2.866
N° 24	2.865	2.864	2.865	2.862	2.858	2.857	2.849	2.864	2.863	2.850	2.860	2.862
N° 25	2.859	2.864	2.863	2.855	2.854	2.852	2.842	2.858	2.860	2.840	2.852	2.844
N° 26	2.869	2.871	2.868	2.865	2.863	2.863	2.851	2.866	2.867	2.860	2.864	2.868
N° 27	2.865	2.860	2.864	2.868	2.859	2.858	2.848	2.862	2.863	2.854	2.860	2.857
N° 28	2.863	2.861	2.859	2.855	2.854	2.854	2.846	2.859	2.858	2.848	2.855	2.862
N° 29	2.876	2.868	2.866	2.866	2.862	2.862	2.852	2.868	2.867	2.853	2.874	2.864
N° 30	2.863	2.860	2.858	2.856	2.855	2.855	2.845	2.858	2.860	2.848	2.863	2.858
N° 31	2.869	2.868	2.864	2.864	2.862	2.861	2.852	2.867	2.867	2.856	2.864	2.864

# 110. +VOP1, Module 1

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



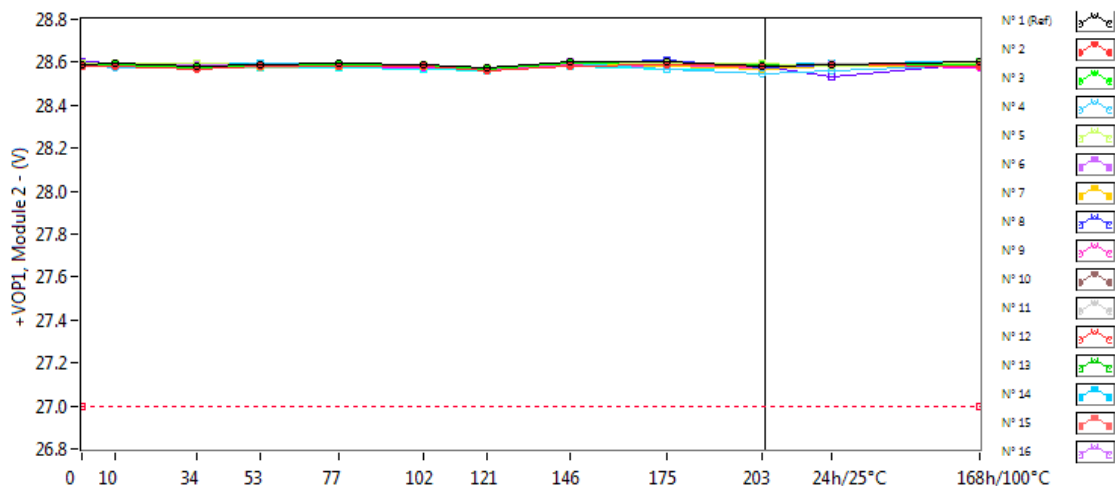
**+VOP1, Module 1 . (V)**

**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)	28.588	28.593	28.585	28.590	28.591	28.588	28.577	28.600	28.601	28.582	28.594	28.606
N° 2	28.580	28.583	28.568	28.581	28.578	28.578	28.563	28.584	28.587	28.578	28.591	28.581
N° 3	28.588	28.589	28.576	28.584	28.590	28.585	28.567	28.595	28.591	28.581	28.590	28.587
N° 4	28.591	28.558	28.567	28.597	28.585	28.583	28.567	28.598	28.565	28.546	28.560	28.589
N° 5	28.595	28.592	28.598	28.590	28.588	28.587	28.575	28.596	28.597	28.596	28.579	28.594
N° 6	28.595	28.594	28.586	28.589	28.591	28.588	28.574	28.608	28.595	28.583	28.587	28.596
N° 7	28.587	28.585	28.577	28.579	28.582	28.579	28.563	28.592	28.583	28.572	28.584	28.590
N° 8	28.589	28.586	28.579	28.584	28.580	28.582	28.563	28.594	28.607	28.575	28.588	28.586
N° 9	28.583	28.586	28.580	28.584	28.586	28.582	28.563	28.593	28.584	28.573	28.584	28.586
N° 10	28.583	28.591	28.583	28.584	28.583	28.573	28.567	28.591	28.588	28.575	28.588	28.588
N° 11	28.592	28.585	28.584	28.591	28.592	28.588	28.574	28.597	28.595	28.584	28.596	28.595
N° 12	28.587	28.593	28.590	28.587	28.593	28.585	28.572	28.599	28.597	28.579	28.599	28.596
N° 13	28.597	28.594	28.591	28.589	28.590	28.589	28.574	28.597	28.597	28.589	28.592	28.600
N° 14	28.593	28.595	28.593	28.593	28.589	28.590	28.574	28.597	28.597	28.587	28.599	28.600
N° 15	28.582	28.584	28.582	28.581	28.577	28.579	28.565	28.586	28.585	28.572	28.586	28.581
N° 16	28.583	28.585	28.584	28.581	28.579	28.579	28.564	28.587	28.587	28.580	28.586	28.590
N° 17	28.591	28.592	28.593	28.591	28.591	28.588	28.573	28.598	28.601	28.585	28.587	28.591
N° 18	28.582	28.581	28.583	28.581	28.579	28.578	28.564	28.588	28.586	28.572	28.585	28.578
N° 19	28.581	28.583	28.580	28.581	28.580	28.578	28.563	28.590	28.588	28.576	28.583	28.588
N° 20	28.583	28.585	28.583	28.578	28.579	28.578	28.566	28.586	28.590	28.567	28.581	28.581
N° 21	28.583	28.582	28.563	28.574	28.577	28.567	28.558	28.584	28.568	28.573	28.582	28.587
N° 22	28.591	28.595	28.590	28.598	28.588	28.586	28.572	28.598	28.599	28.580	28.596	28.597
N° 23	28.595	28.587	28.594	28.591	28.587	28.588	28.571	28.599	28.598	28.581	28.597	28.600
N° 24	28.587	28.589	28.590	28.587	28.584	28.584	28.570	28.594	28.594	28.577	28.592	28.593
N° 25	28.580	28.588	28.588	28.580	28.579	28.579	28.562	28.587	28.593	28.565	28.583	28.584
N° 26	28.590	28.595	28.592	28.591	28.587	28.588	28.572	28.597	28.598	28.583	28.595	28.602
N° 27	28.588	28.588	28.588	28.593	28.585	28.583	28.568	28.595	28.594	28.584	28.591	28.591
N° 28	28.585	28.587	28.584	28.582	28.580	28.581	28.568	28.590	28.590	28.573	28.588	28.595
N° 29	28.600	28.595	28.591	28.592	28.588	28.589	28.573	28.598	28.602	28.577	28.532	28.598
N° 30	28.585	28.583	28.583	28.581	28.582	28.581	28.565	28.587	28.592	28.572	28.599	28.591
N° 31	28.592	28.593	28.590	28.589	28.585	28.587	28.572	28.597	28.601	28.582	28.593	28.597

## 111. +VOP1, Module 2

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



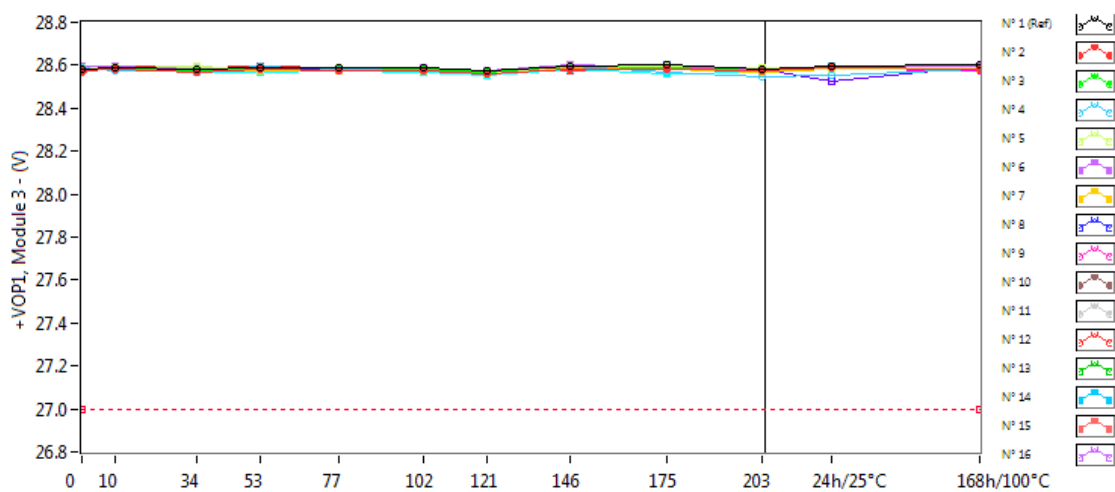
+VOP1, Module 2 . (V)

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)	28.588	28.593	28.585	28.590	28.593	28.589	28.578	28.602	28.604	28.584	28.591	28.606
N° 2	28.580	28.585	28.569	28.582	28.579	28.579	28.563	28.583	28.589	28.579	28.591	28.582
N° 3	28.588	28.590	28.577	28.585	28.588	28.585	28.569	28.594	28.589	28.582	28.591	28.588
N° 4	28.591	28.572	28.577	28.599	28.586	28.585	28.568	28.598	28.569	28.549	28.561	28.590
N° 5	28.594	28.595	28.598	28.589	28.591	28.587	28.575	28.597	28.598	28.597	28.584	28.594
N° 6	28.595	28.596	28.586	28.591	28.592	28.589	28.574	28.605	28.596	28.584	28.588	28.599
N° 7	28.588	28.585	28.577	28.581	28.583	28.580	28.565	28.595	28.584	28.571	28.585	28.588
N° 8	28.589	28.587	28.578	28.583	28.581	28.581	28.565	28.593	28.609	28.573	28.588	28.587
N° 9	28.583	28.587	28.580	28.584	28.586	28.583	28.565	28.591	28.584	28.573	28.587	28.585
N° 10	28.588	28.592	28.584	28.586	28.584	28.582	28.567	28.590	28.590	28.576	28.588	28.590
N° 11	28.591	28.594	28.589	28.591	28.591	28.588	28.573	28.595	28.594	28.584	28.595	28.595
N° 12	28.593	28.595	28.591	28.587	28.593	28.586	28.572	28.599	28.596	28.580	28.599	28.596
N° 13	28.598	28.595	28.592	28.591	28.590	28.590	28.575	28.598	28.598	28.586	28.592	28.600
N° 14	28.592	28.595	28.593	28.593	28.590	28.591	28.574	28.596	28.598	28.586	28.599	28.600
N° 15	28.583	28.586	28.583	28.582	28.580	28.580	28.565	28.587	28.586	28.574	28.586	28.582
N° 16	28.585	28.587	28.584	28.583	28.582	28.580	28.566	28.589	28.590	28.578	28.587	28.591
N° 17	28.593	28.594	28.594	28.591	28.591	28.588	28.572	28.597	28.601	28.585	28.588	28.596
N° 18	28.582	28.584	28.585	28.582	28.581	28.578	28.565	28.589	28.588	28.574	28.587	28.578
N° 19	28.582	28.584	28.583	28.582	28.581	28.579	28.563	28.590	28.590	28.578	28.585	28.587
N° 20	28.583	28.589	28.584	28.578	28.581	28.579	28.567	28.587	28.591	28.569	28.583	28.583
N° 21	28.584	28.584	28.572	28.574	28.577	28.569	28.560	28.585	28.569	28.574	28.584	28.588
N° 22	28.592	28.595	28.591	28.599	28.587	28.586	28.573	28.598	28.599	28.583	28.594	28.596
N° 23	28.597	28.590	28.594	28.592	28.587	28.588	28.573	28.599	28.600	28.582	28.597	28.600
N° 24	28.588	28.591	28.591	28.588	28.584	28.585	28.571	28.596	28.595	28.578	28.591	28.594
N° 25	28.583	28.591	28.590	28.583	28.579	28.580	28.564	28.589	28.595	28.571	28.585	28.584
N° 26	28.591	28.596	28.593	28.591	28.590	28.588	28.572	28.596	28.598	28.584	28.595	28.601
N° 27	28.587	28.590	28.589	28.594	28.585	28.584	28.569	28.592	28.595	28.585	28.589	28.592
N° 28	28.586	28.588	28.585	28.583	28.581	28.581	28.568	28.590	28.591	28.574	28.587	28.595
N° 29	28.601	28.596	28.591	28.592	28.590	28.590	28.574	28.600	28.601	28.580	28.530	28.596
N° 30	28.584	28.586	28.582	28.580	28.579	28.580	28.565	28.590	28.594	28.573	28.597	28.591
N° 31	28.593	28.595	28.591	28.591	28.591	28.588	28.574	28.599	28.602	28.584	28.597	28.601

## 112. +VOP1, Module 3

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



**+VOP1, Module 3 . (V)**

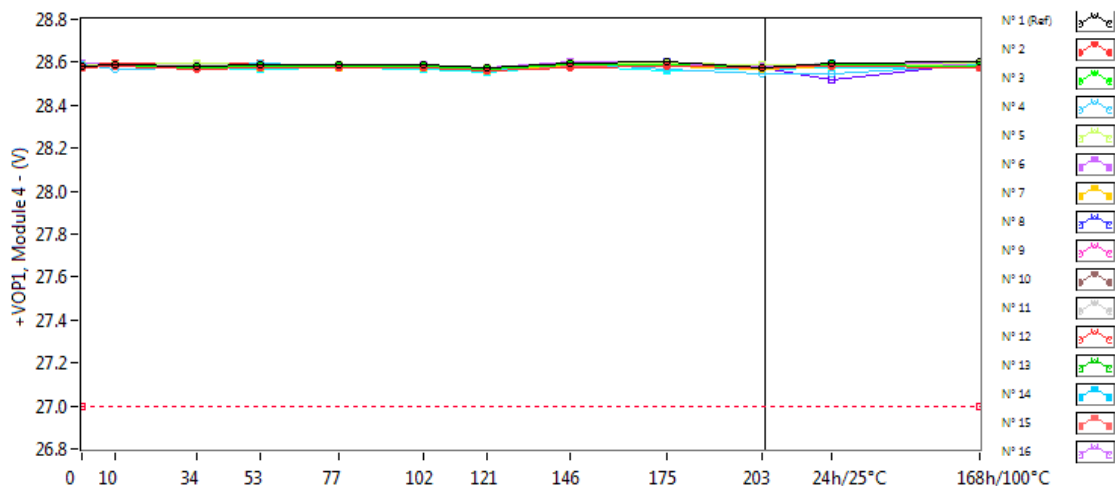
**Min = 27.0**

	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)	28.585	28.591	28.583	28.588	28.588	28.586	28.576	28.599	28.600	28.579	28.593	28.604
N° 2	28.577	28.582	28.566	28.579	28.577	28.576	28.559	28.580	28.585	28.577	28.587	28.579
N° 3	28.585	28.589	28.573	28.582	28.587	28.583	28.566	28.594	28.586	28.577	28.587	28.582
N° 4	28.588	28.572	28.573	28.595	28.582	28.580	28.565	28.593	28.566	28.546	28.552	28.585
N° 5	28.591	28.591	28.595	28.585	28.587	28.583	28.558	28.593	28.594	28.591	28.582	28.591
N° 6	28.593	28.593	28.584	28.586	28.588	28.587	28.572	28.603	28.592	28.580	28.587	28.595
N° 7	28.584	28.583	28.575	28.577	28.577	28.576	28.561	28.589	28.583	28.570	28.581	28.585
N° 8	28.585	28.583	28.575	28.579	28.579	28.578	28.561	28.590	28.602	28.571	28.584	28.583
N° 9	28.579	28.583	28.577	28.580	28.582	28.579	28.561	28.589	28.581	28.569	28.581	28.580
N° 10	28.584	28.589	28.581	28.582	28.582	28.577	28.564	28.588	28.588	28.575	28.585	28.587
N° 11	28.588	28.590	28.586	28.587	28.588	28.585	28.571	28.593	28.592	28.581	28.593	28.591
N° 12	28.566	28.592	28.587	28.585	28.589	28.573	28.569	28.591	28.593	28.574	28.595	28.593
N° 13	28.594	28.592	28.588	28.588	28.587	28.586	28.571	28.596	28.595	28.584	28.589	28.594
N° 14	28.590	28.591	28.590	28.590	28.587	28.587	28.571	28.592	28.594	28.584	28.595	28.598
N° 15	28.579	28.582	28.580	28.579	28.577	28.577	28.562	28.586	28.584	28.570	28.584	28.579
N° 16	28.581	28.583	28.581	28.579	28.580	28.577	28.564	28.587	28.584	28.575	28.585	28.586
N° 17	28.589	28.591	28.591	28.587	28.586	28.584	28.570	28.593	28.597	28.583	28.584	28.592
N° 18	28.579	28.581	28.581	28.579	28.577	28.576	28.563	28.586	28.585	28.571	28.583	28.577
N° 19	28.580	28.582	28.579	28.579	28.577	28.577	28.560	28.587	28.587	28.573	28.582	28.585
N° 20	28.580	28.584	28.580	28.574	28.577	28.573	28.562	28.582	28.587	28.567	28.582	28.580
N° 21	28.580	28.581	28.571	28.571	28.577	28.566	28.555	28.580	28.564	28.570	28.579	28.585
N° 22	28.588	28.593	28.588	28.596	28.586	28.584	28.570	28.577	28.595	28.579	28.594	28.592
N° 23	28.593	28.587	28.592	28.588	28.586	28.585	28.570	28.596	28.594	28.579	28.593	28.597
N° 24	28.584	28.587	28.588	28.584	28.581	28.581	28.567	28.592	28.593	28.573	28.589	28.590
N° 25	28.579	28.587	28.586	28.578	28.578	28.576	28.561	28.585	28.591	28.572	28.583	28.580
N° 26	28.587	28.593	28.588	28.586	28.585	28.584	28.568	28.591	28.593	28.582	28.589	28.597
N° 27	28.584	28.587	28.586	28.591	28.582	28.581	28.565	28.589	28.592	28.581	28.586	28.588
N° 28	28.583	28.584	28.581	28.579	28.576	28.577	28.564	28.586	28.588	28.572	28.584	28.593
N° 29	28.596	28.593	28.589	28.588	28.586	28.586	28.570	28.596	28.597	28.579	28.525	28.594
N° 30	28.582	28.583	28.579	28.578	28.578	28.578	28.562	28.585	28.589	28.570	28.593	28.586
N° 31	28.590	28.592	28.587	28.587	28.587	28.586	28.571	28.595	28.598	28.581	28.592	28.596



### 113. +VOP1, Module 4

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



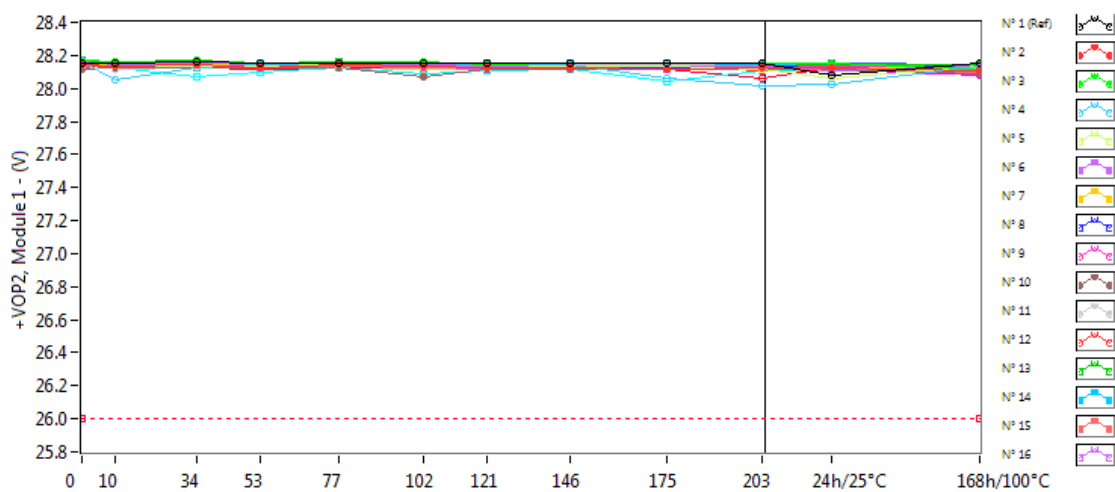
+VOP1, Module 4 . (V)

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)	28.585	28.590	28.582	28.588	28.588	28.586	28.575	28.596	28.602	28.578	28.595	28.605
N° 2	28.578	28.580	28.565	28.578	28.576	28.575	28.560	28.578	28.584	28.575	28.584	28.577
N° 3	28.584	28.588	28.573	28.582	28.585	28.583	28.566	28.592	28.586	28.577	28.588	28.583
N° 4	28.589	28.571	28.573	28.594	28.583	28.581	28.564	28.596	28.570	28.547	28.547	28.586
N° 5	28.592	28.591	28.595	28.586	28.586	28.584	28.573	28.595	28.596	28.592	28.583	28.594
N° 6	28.593	28.591	28.584	28.587	28.588	28.586	28.572	28.603	28.594	28.580	28.589	28.595
N° 7	28.584	28.583	28.575	28.578	28.577	28.576	28.562	28.590	28.582	28.571	28.584	28.585
N° 8	28.587	28.584	28.577	28.581	28.577	28.579	28.561	28.589	28.602	28.570	28.582	28.584
N° 9	28.580	28.583	28.576	28.579	28.581	28.579	28.562	28.588	28.582	28.571	28.580	28.581
N° 10	28.583	28.588	28.582	28.582	28.580	28.580	28.564	28.589	28.587	28.575	28.585	28.585
N° 11	28.589	28.591	28.587	28.587	28.587	28.585	28.571	28.594	28.590	28.583	28.594	28.594
N° 12	28.590	28.592	28.588	28.585	28.589	28.583	28.569	28.596	28.593	28.575	28.595	28.594
N° 13	28.593	28.591	28.588	28.586	28.587	28.586	28.571	28.596	28.596	28.583	28.588	28.595
N° 14	28.589	28.591	28.589	28.588	28.586	28.586	28.571	28.593	28.595	28.580	28.596	28.595
N° 15	28.578	28.582	28.579	28.578	28.577	28.576	28.561	28.585	28.583	28.570	28.581	28.578
N° 16	28.581	28.582	28.581	28.578	28.576	28.576	28.561	28.586	28.585	28.573	28.583	28.587
N° 17	28.590	28.592	28.592	28.588	28.587	28.585	28.571	28.593	28.599	28.580	28.585	28.591
N° 18	28.578	28.580	28.580	28.579	28.575	28.574	28.561	28.584	28.585	28.568	28.581	28.576
N° 19	28.579	28.581	28.578	28.578	28.577	28.576	28.560	28.588	28.587	28.572	28.582	28.584
N° 20	28.579	28.584	28.580	28.576	28.575	28.575	28.563	28.584	28.588	28.566	28.580	28.580
N° 21	28.580	28.579	28.572	28.570	28.573	28.566	28.555	28.579	28.564	28.569	28.577	28.584
N° 22	28.589	28.593	28.589	28.595	28.584	28.583	28.569	28.593	28.593	28.581	28.593	28.593
N° 23	28.594	28.586	28.591	28.588	28.587	28.585	28.569	28.596	28.596	28.579	28.591	28.596
N° 24	28.584	28.587	28.587	28.584	28.582	28.583	28.567	28.592	28.593	28.575	28.587	28.590
N° 25	28.578	28.584	28.586	28.578	28.575	28.576	28.559	28.584	28.589	28.570	28.580	28.581
N° 26	28.589	28.593	28.590	28.587	28.585	28.586	28.569	28.592	28.598	28.581	28.591	28.598
N° 27	28.585	28.586	28.585	28.590	28.582	28.582	28.567	28.592	28.591	28.581	28.588	28.590
N° 28	28.582	28.584	28.582	28.578	28.578	28.577	28.563	28.585	28.587	28.570	28.582	28.592
N° 29	28.596	28.591	28.587	28.588	28.587	28.586	28.571	28.596	28.597	28.576	28.516	28.596
N° 30	28.582	28.583	28.579	28.578	28.579	28.579	28.563	28.585	28.590	28.570	28.593	28.588
N° 31	28.590	28.593	28.588	28.586	28.586	28.585	28.570	28.596	28.597	28.578	28.592	28.595

# 114. +VOP2, Module 1

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



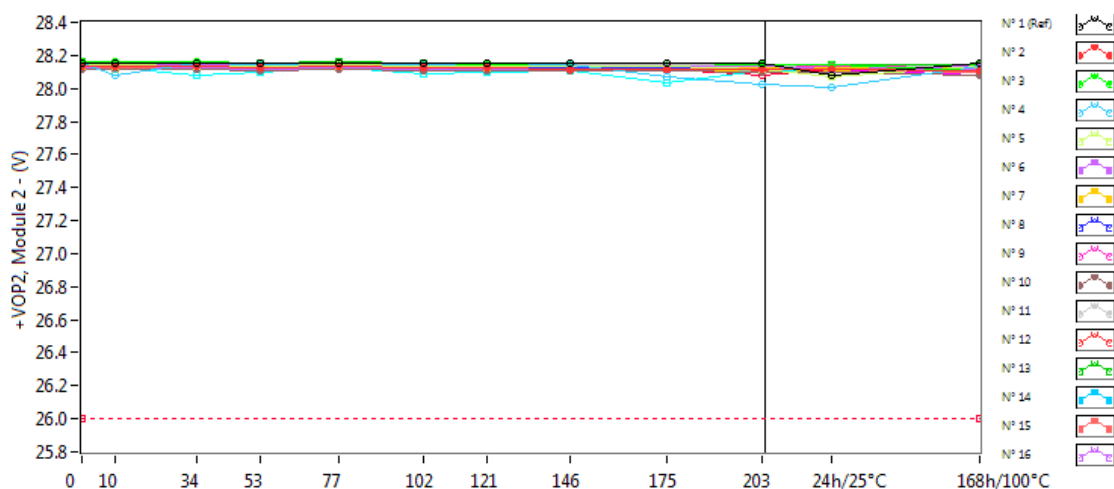
**+VOP2, Module 1 . (V)**

**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)	28.156	28.150	28.158	28.153	28.156	28.156	28.151	28.154	28.155	28.152	28.080	28.150
N° 2	28.147	28.132	28.143	28.129	28.140	28.130	28.129	28.123	28.117	28.122	28.125	28.111
N° 3	28.174	28.159	28.167	28.157	28.163	28.158	28.148	28.155	28.153	28.149	28.152	28.118
N° 4	28.161	28.050	28.121	28.147	28.154	28.150	28.146	28.142	28.065	28.013	28.021	28.133
N° 5	28.148	28.139	28.139	28.138	28.141	28.135	28.129	28.133	28.130	28.120	28.063	28.131
N° 6	28.158	28.147	28.149	28.141	28.146	28.141	28.137	28.130	28.136	28.131	28.110	28.135
N° 7	28.150	28.139	28.142	28.137	28.140	28.135	28.130	28.132	28.135	28.127	28.129	28.129
N° 8	28.152	28.142	28.144	28.140	28.141	28.139	28.126	28.136	28.128	28.131	28.125	28.131
N° 9	28.153	28.143	28.142	28.138	28.142	28.137	28.133	28.137	28.137	28.132	28.133	28.125
N° 10	28.115	28.124	28.126	28.121	28.127	28.069	28.116	28.117	28.118	28.114	28.112	28.090
N° 11	28.158	28.112	28.123	28.146	28.147	28.144	28.139	28.141	28.142	28.137	28.138	28.131
N° 12	28.129	28.144	28.147	28.143	28.145	28.130	28.128	28.138	28.139	28.109	28.129	28.122
N° 13	28.165	28.156	28.158	28.146	28.157	28.153	28.145	28.143	28.144	28.139	28.146	28.141
N° 14	28.164	28.156	28.153	28.150	28.154	28.149	28.144	28.145	28.145	28.140	28.141	28.141
N° 15	28.146	28.134	28.136	28.132	28.138	28.133	28.127	28.131	28.129	28.124	28.125	28.099
N° 16	28.135	28.126	28.125	28.121	28.131	28.122	28.119	28.121	28.120	28.113	28.116	28.115
N° 17	28.156	28.147	28.145	28.142	28.146	28.142	28.136	28.139	28.138	28.132	28.110	28.122
N° 18	28.138	28.128	28.127	28.125	28.130	28.125	28.120	28.122	28.122	28.119	28.119	28.081
N° 19	28.139	28.128	28.129	28.125	28.131	28.124	28.121	28.124	28.123	28.118	28.122	28.122
N° 20	28.151	28.137	28.137	28.135	28.139	28.135	28.130	28.133	28.134	28.106	28.130	28.104
N° 21	28.137	28.126	28.066	28.100	28.128	28.085	28.106	28.115	28.043	28.109	28.115	28.117
N° 22	28.152	28.149	28.148	28.142	28.149	28.145	28.141	28.139	28.138	28.136	28.138	28.139
N° 23	28.153	28.122	28.142	28.141	28.142	28.139	28.134	28.133	28.135	28.130	28.132	28.131
N° 24	28.167	28.155	28.158	28.156	28.158	28.152	28.150	28.150	28.151	28.141	28.149	28.148
N° 25	28.136	28.125	28.124	28.119	28.129	28.123	28.119	28.123	28.119	28.062	28.121	28.101
N° 26	28.156	28.145	28.145	28.141	28.147	28.140	28.136	28.140	28.139	28.134	28.137	28.135
N° 27	28.164	28.147	28.156	28.152	28.157	28.152	28.148	28.144	28.148	28.135	28.147	28.139
N° 28	28.154	28.142	28.145	28.137	28.146	28.140	28.134	28.137	28.136	28.132	28.134	28.132
N° 29	28.156	28.150	28.150	28.148	28.151	28.146	28.142	28.142	28.143	28.121	28.121	28.139
N° 30	28.134	28.124	28.126	28.121	28.128	28.120	28.117	28.120	28.119	28.114	28.110	28.114
N° 31	28.150	28.141	28.141	28.138	28.125	28.133	28.133	28.131	28.131	28.127	28.130	28.124

## 115. +VOP2, Module 2

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



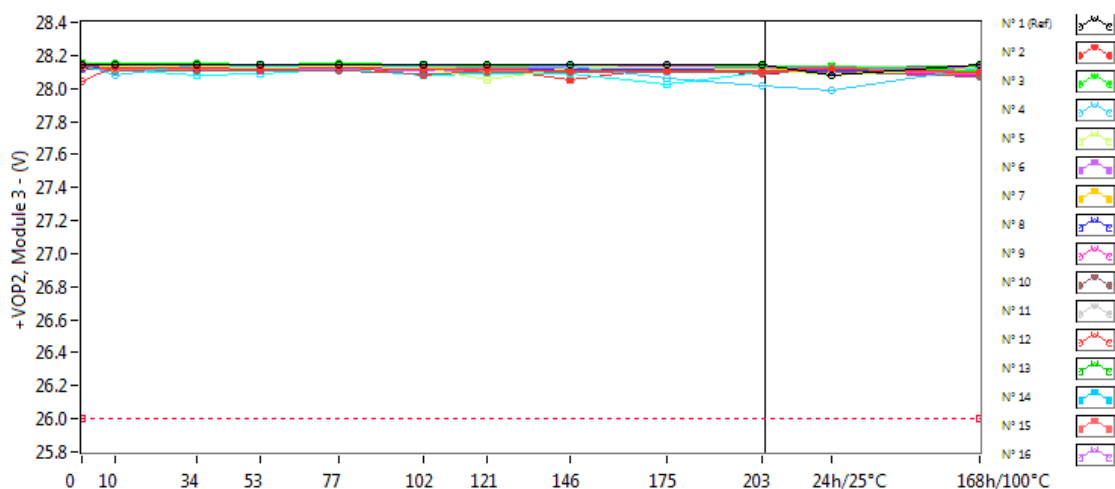
**+VOP2, Module 2 . (V)**

**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)	28.150	28.150	28.153	28.149	28.155	28.154	28.150	28.154	28.154	28.151	28.079	28.150
N° 2	28.136	28.132	28.133	28.126	28.134	28.123	28.122	28.118	28.112	28.117	28.120	28.107
N° 3	28.163	28.159	28.158	28.154	28.156	28.153	28.143	28.149	28.149	28.144	28.144	28.111
N° 4	28.156	28.084	28.156	28.147	28.154	28.148	28.143	28.143	28.068	28.023	28.002	28.132
N° 5	28.142	28.141	28.139	28.136	28.140	28.136	28.130	28.132	28.130	28.120	28.073	28.131
N° 6	28.151	28.148	28.147	28.138	28.146	28.141	28.137	28.132	28.136	28.132	28.114	28.135
N° 7	28.137	28.136	28.136	28.133	28.138	28.133	28.126	28.130	28.130	28.123	28.125	28.125
N° 8	28.140	28.137	28.137	28.133	28.139	28.133	28.129	28.129	28.126	28.125	28.120	28.127
N° 9	28.144	28.139	28.139	28.135	28.141	28.134	28.131	28.134	28.135	28.129	28.130	28.122
N° 10	28.120	28.116	28.115	28.110	28.116	28.108	28.104	28.108	28.106	28.101	28.099	28.080
N° 11	28.154	28.149	28.151	28.146	28.151	28.147	28.141	28.144	28.144	28.139	28.138	28.133
N° 12	28.151	28.145	28.147	28.145	28.146	28.131	28.128	28.138	28.141	28.109	28.132	28.123
N° 13	28.161	28.157	28.157	28.154	28.158	28.151	28.145	28.142	28.144	28.141	28.148	28.142
N° 14	28.158	28.154	28.152	28.150	28.153	28.149	28.143	28.143	28.145	28.137	28.140	28.139
N° 15	28.133	28.129	28.131	28.127	28.136	28.127	28.124	28.127	28.124	28.121	28.120	28.098
N° 16	28.129	28.124	28.123	28.120	28.127	28.120	28.115	28.119	28.119	28.112	28.114	28.114
N° 17	28.152	28.147	28.145	28.144	28.146	28.143	28.137	28.140	28.139	28.135	28.112	28.124
N° 18	28.127	28.122	28.123	28.120	28.126	28.120	28.116	28.118	28.119	28.113	28.113	28.078
N° 19	28.127	28.124	28.124	28.119	28.126	28.119	28.116	28.118	28.118	28.113	28.117	28.117
N° 20	28.139	28.134	28.133	28.131	28.138	28.131	28.126	28.130	28.129	28.103	28.127	28.104
N° 21	28.127	28.125	28.084	28.095	28.127	28.085	28.100	28.106	28.037	28.106	28.112	28.114
N° 22	28.146	28.146	28.146	28.140	28.148	28.144	28.139	28.140	28.138	28.138	28.137	28.136
N° 23	28.148	28.126	28.143	28.141	28.146	28.140	28.135	28.137	28.136	28.133	28.134	28.131
N° 24	28.158	28.157	28.154	28.152	28.156	28.146	28.148	28.147	28.148	28.139	28.145	28.143
N° 25	28.127	28.122	28.121	28.120	28.125	28.118	28.115	28.116	28.116	28.076	28.113	28.097
N° 26	28.153	28.147	28.145	28.143	28.150	28.141	28.138	28.141	28.141	28.134	28.137	28.136
N° 27	28.158	28.145	28.153	28.149	28.156	28.149	28.144	28.146	28.146	28.133	28.142	28.132
N° 28	28.140	28.136	28.136	28.130	28.137	28.133	28.128	28.129	28.132	28.127	28.128	28.124
N° 29	28.153	28.149	28.149	28.145	28.150	28.145	28.140	28.143	28.140	28.130	28.137	28.137
N° 30	28.124	28.120	28.120	28.117	28.123	28.114	28.112	28.113	28.115	28.108	28.107	28.110
N° 31	28.150	28.146	28.144	28.142	28.145	28.141	28.137	28.137	28.137	28.133	28.134	28.128

## 116. +VOP2, Module 3

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



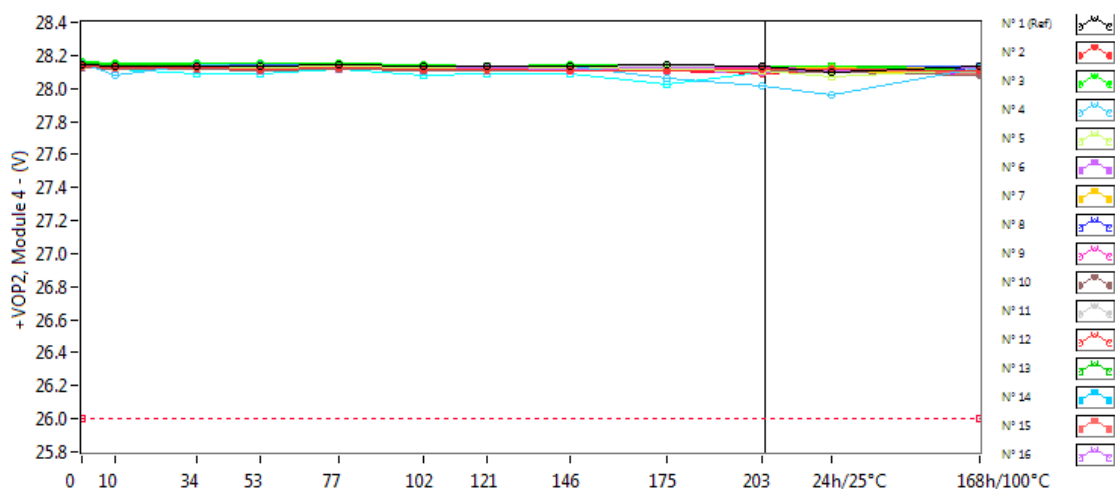
**+VOP2, Module 3 . (V)**

**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	28.141	28.144	28.141	28.147	28.144	28.141	28.144	28.147	28.144	28.083	28.142
N° 2	28.130	28.125	28.128	28.118	28.128	28.118	28.112	28.110	28.108	28.111	28.113	28.102
N° 3	28.156	28.152	28.150	28.146	28.150	28.144	28.135	28.140	28.140	28.136	28.138	28.103
N° 4	28.146	28.080	28.143	28.136	28.143	28.136	28.131	28.133	28.057	28.014	27.984	28.121
N° 5	28.136	28.130	28.130	28.128	28.134	28.126	28.053	28.126	28.123	28.113	28.078	28.122
N° 6	28.143	28.139	28.140	28.132	28.139	28.131	28.128	28.125	28.130	28.125	28.113	28.128
N° 7	28.131	28.127	28.130	28.124	28.130	28.123	28.118	28.121	28.122	28.117	28.117	28.118
N° 8	28.128	28.127	28.128	28.114	28.129	28.119	28.118	28.119	28.116	28.117	28.111	28.117
N° 9	28.133	28.128	28.130	28.124	28.131	28.124	28.120	28.123	28.124	28.119	28.121	28.111
N° 10	28.112	28.108	28.108	28.104	28.110	28.089	28.099	28.101	28.102	28.097	28.094	28.073
N° 11	28.143	28.139	28.140	28.135	28.139	28.134	28.129	28.134	28.133	28.127	28.130	28.121
N° 12	28.041	28.130	28.136	28.132	28.136	28.082	28.115	28.104	28.130	28.092	28.122	28.113
N° 13	28.152	28.146	28.146	28.142	28.145	28.140	28.134	28.132	28.133	28.131	28.136	28.132
N° 14	28.150	28.143	28.143	28.140	28.144	28.137	28.132	28.136	28.136	28.130	28.131	28.132
N° 15	28.124	28.119	28.120	28.118	28.124	28.116	28.111	28.116	28.115	28.108	28.109	28.087
N° 16	28.119	28.113	28.114	28.111	28.117	28.110	28.106	28.109	28.109	28.103	28.104	28.103
N° 17	28.141	28.135	28.134	28.132	28.137	28.126	28.127	28.130	28.127	28.123	28.101	28.110
N° 18	28.120	28.116	28.115	28.112	28.118	28.112	28.109	28.109	28.111	28.106	28.108	28.075
N° 19	28.119	28.115	28.115	28.109	28.118	28.110	28.107	28.107	28.111	28.105	28.105	28.107
N° 20	28.127	28.122	28.120	28.120	28.127	28.115	28.114	28.115	28.117	28.095	28.115	28.095
N° 21	28.118	28.114	28.083	28.088	28.117	28.075	28.089	28.091	28.025	28.098	28.103	28.106
N° 22	28.139	28.136	28.139	28.132	28.139	28.135	28.129	28.049	28.128	28.128	28.129	28.130
N° 23	28.142	28.117	28.135	28.133	28.138	28.131	28.127	28.129	28.128	28.123	28.126	28.124
N° 24	28.152	28.145	28.145	28.141	28.147	28.136	28.135	28.139	28.139	28.130	28.134	28.134
N° 25	28.119	28.113	28.111	28.111	28.118	28.110	28.107	28.111	28.106	28.085	28.106	28.084
N° 26	28.141	28.132	28.135	28.130	28.139	28.131	28.126	28.130	28.130	28.124	28.126	28.124
N° 27	28.151	28.135	28.142	28.139	28.146	28.140	28.132	28.133	28.138	28.125	28.134	28.124
N° 28	28.131	28.126	28.127	28.121	28.130	28.123	28.118	28.121	28.121	28.117	28.119	28.116
N° 29	28.143	28.138	28.138	28.136	28.140	28.135	28.130	28.131	28.133	28.122	28.121	28.129
N° 30	28.116	28.110	28.112	28.109	28.116	28.106	28.104	28.107	28.104	28.101	28.099	28.102
N° 31	28.141	28.135	28.133	28.130	28.135	28.128	28.125	28.126	28.126	28.122	28.123	28.119

## 117. +VOP2, Module 4

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



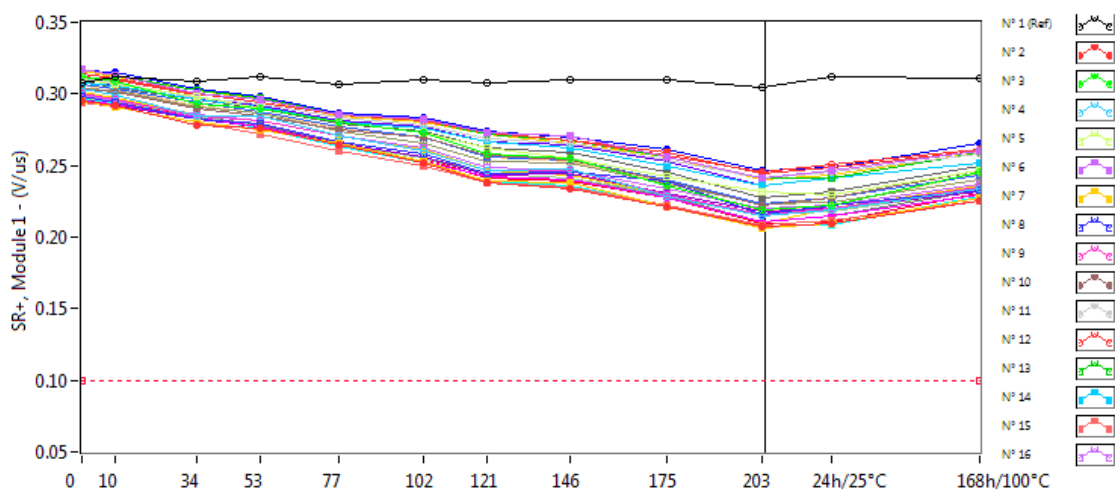
**+VOP2, Module 4 . (V)**

**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)	28.140	28.134	28.139	28.135	28.142	28.139	28.136	28.135	28.141	28.137	28.094	28.138
N° 2	28.133	28.125	28.127	28.118	28.127	28.117	28.116	28.111	28.108	28.112	28.114	28.103
N° 3	28.160	28.154	28.155	28.149	28.151	28.148	28.138	28.143	28.143	28.137	28.139	28.108
N° 4	28.151	28.082	28.145	28.137	28.145	28.139	28.135	28.134	28.061	28.019	27.957	28.124
N° 5	28.135	28.128	28.127	28.126	28.133	28.124	28.119	28.123	28.118	28.109	28.074	28.118
N° 6	28.142	28.133	28.135	28.128	28.134	28.127	28.123	28.120	28.126	28.120	28.110	28.123
N° 7	28.138	28.132	28.132	28.128	28.135	28.126	28.121	28.123	28.126	28.120	28.121	28.121
N° 8	28.136	28.131	28.131	28.127	28.132	28.124	28.121	28.122	28.119	28.117	28.115	28.119
N° 9	28.141	28.132	28.134	28.127	28.132	28.127	28.123	28.126	28.128	28.124	28.123	28.114
N° 10	28.121	28.113	28.113	28.111	28.116	28.110	28.106	28.110	28.108	28.104	28.100	28.079
N° 11	28.146	28.138	28.137	28.133	28.138	28.133	28.128	28.131	28.131	28.127	28.127	28.121
N° 12	28.139	28.132	28.130	28.129	28.133	28.116	28.115	28.124	28.127	28.091	28.118	28.107
N° 13	28.149	28.143	28.142	28.137	28.143	28.138	28.131	28.130	28.132	28.127	28.133	28.128
N° 14	28.146	28.140	28.140	28.134	28.140	28.133	28.129	28.132	28.132	28.125	28.126	28.125
N° 15	28.131	28.122	28.124	28.120	28.127	28.120	28.116	28.119	28.117	28.113	28.115	28.089
N° 16	28.122	28.115	28.114	28.111	28.117	28.110	28.106	28.109	28.109	28.102	28.104	28.104
N° 17	28.145	28.134	28.133	28.130	28.135	28.129	28.125	28.128	28.128	28.123	28.099	28.110
N° 18	28.123	28.116	28.116	28.112	28.120	28.111	28.107	28.110	28.110	28.106	28.107	28.077
N° 19	28.123	28.115	28.117	28.112	28.120	28.113	28.109	28.111	28.111	28.107	28.108	28.106
N° 20	28.134	28.124	28.123	28.122	28.127	28.121	28.116	28.119	28.120	28.095	28.118	28.097
N° 21	28.122	28.116	28.086	28.091	28.119	28.080	28.089	28.093	28.026	28.099	28.106	28.107
N° 22	28.139	28.131	28.135	28.127	28.136	28.130	28.126	28.130	28.126	28.124	28.126	28.127
N° 23	28.138	28.114	28.130	28.127	28.133	28.126	28.120	28.124	28.123	28.118	28.121	28.119
N° 24	28.152	28.146	28.144	28.142	28.145	28.137	28.135	28.138	28.138	28.128	28.135	28.134
N° 25	28.123	28.115	28.114	28.113	28.120	28.113	28.109	28.109	28.110	28.090	28.108	28.091
N° 26	28.142	28.133	28.132	28.130	28.136	28.129	28.125	28.130	28.126	28.122	28.124	28.124
N° 27	28.153	28.137	28.147	28.141	28.148	28.140	28.135	28.135	28.140	28.124	28.136	28.123
N° 28	28.137	28.128	28.132	28.123	28.132	28.124	28.119	28.123	28.123	28.117	28.119	28.120
N° 29	28.139	28.134	28.134	28.131	28.138	28.129	28.125	28.127	28.129	28.117	28.127	28.123
N° 30	28.121	28.115	28.116	28.112	28.120	28.111	28.107	28.111	28.107	28.103	28.102	28.106
N° 31	28.139	28.132	28.131	28.129	28.133	28.126	28.122	28.124	28.123	28.118	28.119	28.118

# 118. SR+, Module 1

Ta=25°C; +VCC=30V; -VCC=GND



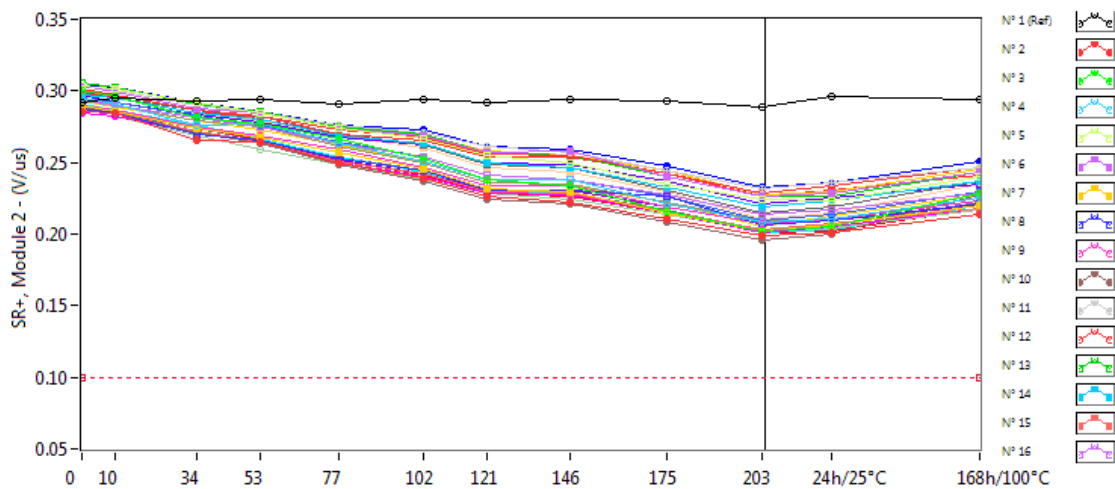
SR+, Module 1 . (V/us)

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)	0.308	0.312	0.309	0.312	0.307	0.310	0.308	0.310	0.310	0.305	0.312	0.311
N° 2	0.295	0.292	0.278	0.276	0.264	0.252	0.238	0.234	0.221	0.207	0.209	0.225
N° 3	0.312	0.309	0.293	0.290	0.280	0.273	0.258	0.255	0.236	0.219	0.222	0.245
N° 4	0.303	0.299	0.284	0.285	0.271	0.260	0.246	0.248	0.229	0.215	0.219	0.234
N° 5	0.310	0.307	0.298	0.290	0.280	0.273	0.262	0.255	0.242	0.232	0.230	0.247
N° 6	0.317	0.313	0.300	0.296	0.286	0.282	0.273	0.271	0.256	0.241	0.246	0.260
N° 7	0.295	0.291	0.280	0.275	0.265	0.253	0.239	0.238	0.221	0.206	0.210	0.227
N° 8	0.298	0.294	0.282	0.279	0.267	0.258	0.244	0.245	0.239	0.216	0.222	0.233
N° 9	0.300	0.296	0.285	0.281	0.271	0.260	0.246	0.246	0.230	0.216	0.220	0.235
N° 10	0.303	0.301	0.290	0.285	0.275	0.270	0.257	0.254	0.239	0.222	0.227	0.247
N° 11	0.311	0.308	0.297	0.293	0.283	0.278	0.269	0.265	0.254	0.241	0.245	0.258
N° 12	0.314	0.311	0.300	0.294	0.286	0.281	0.273	0.268	0.257	0.245	0.251	0.261
N° 13	0.317	0.313	0.302	0.297	0.286	0.281	0.272	0.268	0.256	0.241	0.241	0.259
N° 14	0.308	0.306	0.296	0.291	0.280	0.276	0.267	0.262	0.250	0.236	0.241	0.252
N° 15	0.294	0.291	0.280	0.272	0.260	0.250	0.238	0.235	0.222	0.208	0.212	0.225
N° 16	0.299	0.295	0.286	0.281	0.271	0.262	0.249	0.247	0.234	0.220	0.222	0.237
N° 17	0.316	0.312	0.302	0.296	0.285	0.280	0.272	0.266	0.256	0.240	0.243	0.259
N° 18	0.295	0.293	0.283	0.277	0.264	0.253	0.242	0.240	0.227	0.211	0.215	0.230
N° 19	0.296	0.292	0.282	0.277	0.266	0.256	0.243	0.244	0.231	0.218	0.220	0.232
N° 20	0.297	0.295	0.284	0.277	0.266	0.255	0.244	0.241	0.230	0.216	0.218	0.233
N° 21	0.297	0.293	0.283	0.276	0.263	0.252	0.239	0.236	0.222	0.207	0.208	0.228
N° 22	0.312	0.310	0.299	0.297	0.284	0.280	0.272	0.268	0.259	0.244	0.249	0.260
N° 23	0.309	0.305	0.296	0.290	0.279	0.274	0.262	0.259	0.245	0.227	0.232	0.250
N° 24	0.307	0.304	0.294	0.288	0.277	0.270	0.256	0.254	0.240	0.223	0.227	0.243
N° 25	0.296	0.294	0.285	0.277	0.265	0.255	0.241	0.239	0.227	0.210	0.211	0.231
N° 26	0.316	0.315	0.303	0.298	0.287	0.283	0.274	0.270	0.261	0.246	0.249	0.265
N° 27	0.304	0.302	0.291	0.287	0.274	0.266	0.253	0.252	0.237	0.223	0.224	0.240
N° 28	0.297	0.294	0.284	0.278	0.266	0.256	0.244	0.241	0.228	0.211	0.215	0.233
N° 29	0.311	0.306	0.296	0.292	0.281	0.277	0.267	0.264	0.253	0.236	0.241	0.252
N° 30	0.301	0.297	0.286	0.281	0.271	0.261	0.247	0.243	0.230	0.210	0.220	0.236
N° 31	0.306	0.303	0.292	0.287	0.276	0.270	0.256	0.253	0.238	0.218	0.222	0.244

## 119. SR+, Module 2

Ta=25°C; +VCC=30V; -VCC=GND



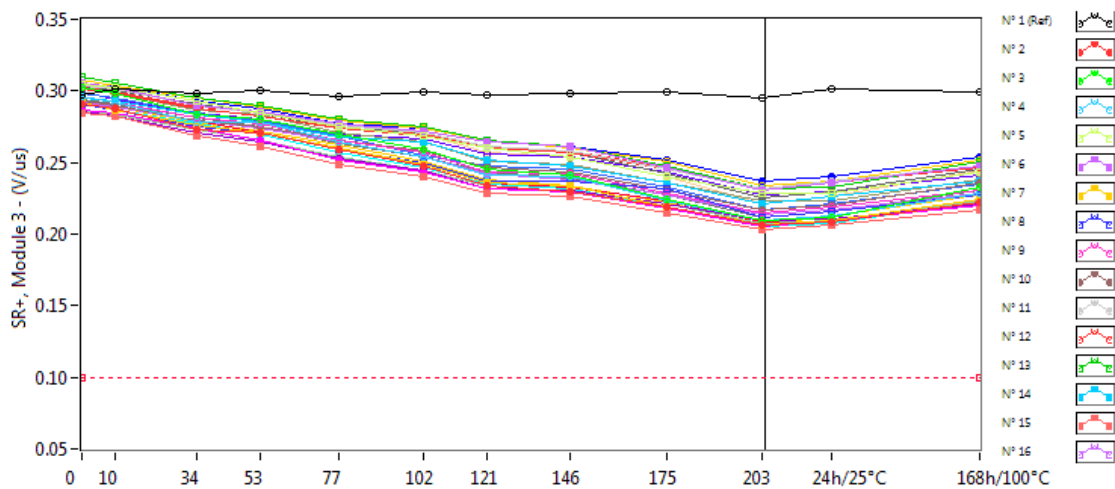
SR+, Module 2 . (V/us)

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)	0.292	0.295	0.293	0.294	0.291	0.294	0.292	0.294	0.293	0.289	0.296	0.294
N° 2	0.286	0.284	0.266	0.264	0.250	0.239	0.226	0.222	0.211	0.199	0.201	0.214
N° 3	0.300	0.296	0.281	0.277	0.267	0.253	0.238	0.234	0.216	0.202	0.205	0.228
N° 4	0.295	0.291	0.276	0.277	0.263	0.251	0.238	0.238	0.221	0.208	0.211	0.225
N° 5	0.304	0.301	0.292	0.284	0.274	0.267	0.255	0.250	0.235	0.224	0.223	0.240
N° 6	0.303	0.299	0.288	0.284	0.274	0.269	0.257	0.258	0.240	0.226	0.229	0.243
N° 7	0.290	0.286	0.274	0.268	0.257	0.245	0.232	0.230	0.215	0.202	0.206	0.220
N° 8	0.288	0.284	0.270	0.265	0.253	0.244	0.231	0.231	0.226	0.206	0.210	0.221
N° 9	0.290	0.287	0.275	0.269	0.259	0.247	0.234	0.234	0.219	0.207	0.211	0.223
N° 10	0.289	0.285	0.271	0.263	0.249	0.237	0.224	0.221	0.208	0.196	0.200	0.227
N° 11	0.303	0.300	0.290	0.285	0.276	0.271	0.261	0.257	0.244	0.232	0.236	0.247
N° 12	0.301	0.297	0.287	0.282	0.273	0.268	0.256	0.255	0.242	0.229	0.234	0.246
N° 13	0.306	0.302	0.291	0.286	0.275	0.270	0.257	0.255	0.240	0.226	0.226	0.243
N° 14	0.297	0.295	0.285	0.280	0.269	0.263	0.250	0.246	0.233	0.219	0.223	0.237
N° 15	0.287	0.284	0.272	0.264	0.251	0.242	0.230	0.228	0.216	0.203	0.207	0.218
N° 16	0.294	0.290	0.281	0.275	0.263	0.254	0.241	0.238	0.227	0.214	0.217	0.229
N° 17	0.303	0.300	0.290	0.285	0.274	0.269	0.258	0.255	0.244	0.227	0.230	0.245
N° 18	0.285	0.282	0.272	0.263	0.250	0.240	0.229	0.227	0.215	0.201	0.205	0.218
N° 19	0.285	0.282	0.271	0.264	0.252	0.242	0.231	0.231	0.219	0.207	0.209	0.220
N° 20	0.285	0.282	0.269	0.259	0.249	0.238	0.228	0.224	0.214	0.202	0.204	0.217
N° 21	0.291	0.287	0.276	0.267	0.254	0.243	0.231	0.228	0.215	0.201	0.203	0.220
N° 22	0.298	0.295	0.285	0.282	0.270	0.265	0.254	0.254	0.242	0.226	0.231	0.241
N° 23	0.299	0.295	0.287	0.280	0.270	0.262	0.249	0.247	0.231	0.215	0.219	0.237
N° 24	0.295	0.292	0.282	0.276	0.264	0.254	0.241	0.238	0.226	0.210	0.214	0.230
N° 25	0.287	0.286	0.275	0.265	0.252	0.241	0.228	0.226	0.215	0.201	0.202	0.218
N° 26	0.304	0.302	0.292	0.286	0.276	0.273	0.261	0.259	0.248	0.233	0.236	0.251
N° 27	0.293	0.290	0.279	0.275	0.261	0.250	0.236	0.235	0.222	0.209	0.210	0.225
N° 28	0.288	0.285	0.274	0.266	0.254	0.244	0.232	0.229	0.217	0.202	0.206	0.222
N° 29	0.297	0.292	0.283	0.278	0.268	0.262	0.250	0.249	0.237	0.221	0.225	0.235
N° 30	0.293	0.289	0.279	0.273	0.262	0.251	0.238	0.234	0.222	0.205	0.213	0.227
N° 31	0.298	0.295	0.284	0.279	0.269	0.260	0.246	0.243	0.230	0.211	0.215	0.235

## 120. SR+, Module 3

Ta=25°C; +VCC=30V; -VCC=GND



SR+, Module 3 . (V/us)

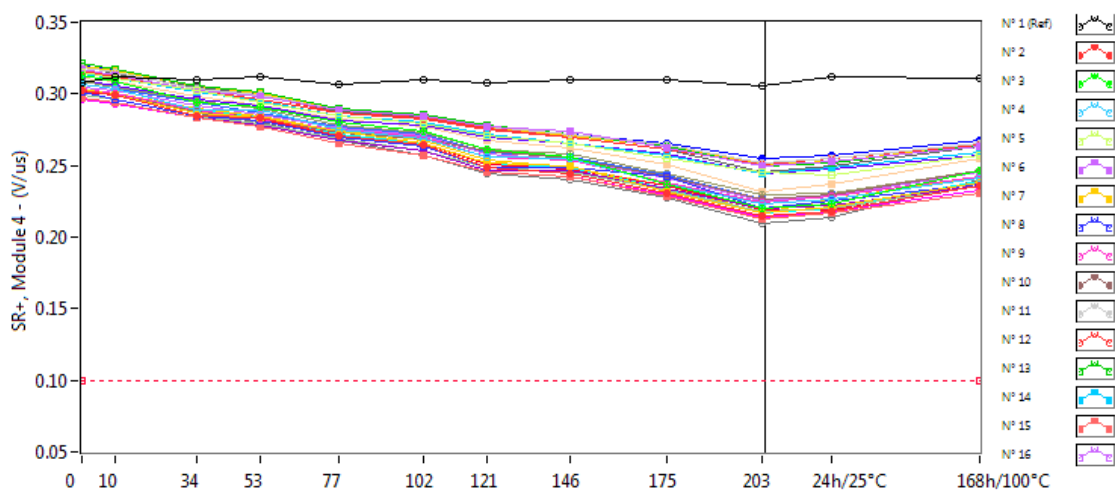
Min = 0.1

	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)	0.297	0.301	0.298	0.300	0.296	0.299	0.297	0.298	0.299	0.295	0.301	0.299
N° 2	0.291	0.288	0.273	0.271	0.259	0.248	0.234	0.230	0.219	0.206	0.208	0.222
N° 3	0.302	0.298	0.283	0.280	0.270	0.259	0.245	0.241	0.224	0.209	0.212	0.233
N° 4	0.296	0.292	0.278	0.278	0.264	0.254	0.241	0.240	0.223	0.210	0.213	0.229
N° 5	0.305	0.302	0.293	0.285	0.275	0.269	0.260	0.254	0.240	0.229	0.228	0.243
N° 6	0.306	0.302	0.290	0.286	0.277	0.272	0.264	0.261	0.247	0.231	0.236	0.248
N° 7	0.292	0.287	0.276	0.271	0.260	0.249	0.236	0.234	0.219	0.206	0.209	0.224
N° 8	0.291	0.287	0.275	0.271	0.259	0.250	0.237	0.237	0.232	0.212	0.216	0.227
N° 9	0.296	0.292	0.281	0.277	0.266	0.257	0.243	0.242	0.228	0.215	0.219	0.231
N° 10	0.293	0.290	0.279	0.275	0.265	0.258	0.246	0.243	0.231	0.217	0.220	0.236
N° 11	0.303	0.301	0.290	0.285	0.276	0.271	0.261	0.258	0.245	0.232	0.237	0.248
N° 12	0.301	0.298	0.288	0.282	0.274	0.269	0.260	0.257	0.245	0.232	0.237	0.248
N° 13	0.310	0.306	0.295	0.290	0.280	0.275	0.265	0.261	0.248	0.232	0.233	0.251
N° 14	0.295	0.293	0.283	0.278	0.268	0.264	0.252	0.248	0.236	0.221	0.226	0.237
N° 15	0.285	0.282	0.269	0.261	0.249	0.240	0.229	0.226	0.215	0.203	0.206	0.217
N° 16	0.292	0.289	0.279	0.274	0.264	0.254	0.242	0.238	0.227	0.214	0.217	0.229
N° 17	0.308	0.304	0.295	0.289	0.279	0.274	0.266	0.260	0.251	0.234	0.237	0.252
N° 18	0.287	0.284	0.274	0.265	0.252	0.243	0.232	0.230	0.218	0.205	0.209	0.220
N° 19	0.286	0.282	0.271	0.264	0.253	0.244	0.232	0.231	0.221	0.209	0.211	0.221
N° 20	0.287	0.283	0.273	0.265	0.254	0.244	0.234	0.230	0.221	0.207	0.209	0.223
N° 21	0.291	0.287	0.277	0.270	0.257	0.247	0.235	0.232	0.219	0.205	0.207	0.223
N° 22	0.302	0.299	0.289	0.286	0.274	0.270	0.260	0.258	0.247	0.231	0.236	0.247
N° 23	0.304	0.300	0.291	0.285	0.274	0.271	0.260	0.257	0.242	0.225	0.230	0.245
N° 24	0.298	0.295	0.285	0.279	0.269	0.255	0.248	0.245	0.233	0.217	0.221	0.235
N° 25	0.291	0.289	0.279	0.271	0.259	0.249	0.236	0.233	0.223	0.208	0.208	0.224
N° 26	0.305	0.303	0.293	0.288	0.277	0.274	0.265	0.261	0.252	0.237	0.240	0.254
N° 27	0.301	0.298	0.287	0.283	0.271	0.264	0.251	0.249	0.236	0.223	0.223	0.238
N° 28	0.294	0.291	0.281	0.275	0.263	0.254	0.243	0.239	0.227	0.212	0.216	0.231
N° 29	0.299	0.294	0.285	0.280	0.270	0.267	0.256	0.254	0.243	0.227	0.230	0.241
N° 30	0.292	0.289	0.278	0.272	0.262	0.251	0.238	0.234	0.222	0.206	0.213	0.227
N° 31	0.303	0.301	0.290	0.285	0.274	0.270	0.257	0.254	0.240	0.221	0.226	0.244



## 121. SR+, Module 4

Ta=25°C; +VCC=30V; -VCC=GND



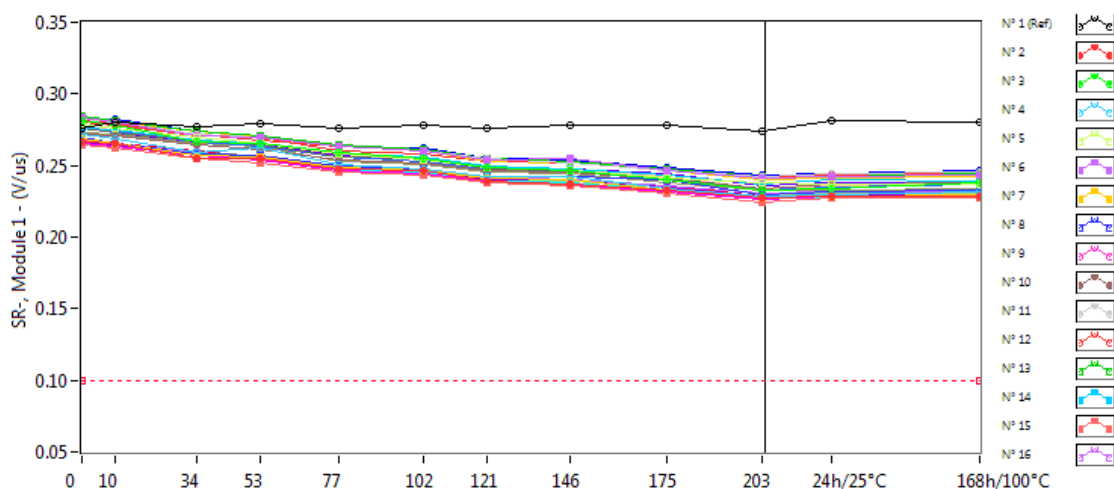
SR+, Module 4 . (V/us)

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)	0.308	0.312	0.310	0.312	0.307	0.310	0.308	0.310	0.310	0.306	0.312	0.311
N° 2	0.302	0.299	0.285	0.283	0.271	0.264	0.249	0.244	0.231	0.215	0.218	0.236
N° 3	0.313	0.309	0.294	0.291	0.280	0.274	0.261	0.256	0.237	0.220	0.223	0.247
N° 4	0.307	0.303	0.289	0.289	0.275	0.269	0.256	0.255	0.237	0.223	0.226	0.241
N° 5	0.315	0.311	0.302	0.294	0.284	0.279	0.271	0.265	0.255	0.245	0.243	0.257
N° 6	0.317	0.313	0.302	0.298	0.289	0.284	0.277	0.274	0.262	0.250	0.253	0.263
N° 7	0.304	0.299	0.287	0.283	0.274	0.266	0.252	0.250	0.232	0.217	0.221	0.238
N° 8	0.301	0.296	0.284	0.281	0.270	0.263	0.249	0.249	0.242	0.220	0.225	0.237
N° 9	0.304	0.300	0.289	0.282	0.275	0.270	0.256	0.254	0.238	0.224	0.228	0.242
N° 10	0.302	0.299	0.288	0.283	0.273	0.269	0.260	0.255	0.242	0.226	0.230	0.247
N° 11	0.318	0.315	0.304	0.299	0.289	0.285	0.277	0.272	0.264	0.252	0.255	0.265
N° 12	0.316	0.312	0.302	0.296	0.287	0.282	0.275	0.270	0.261	0.251	0.255	0.264
N° 13	0.322	0.317	0.306	0.301	0.290	0.286	0.278	0.272	0.263	0.250	0.252	0.264
N° 14	0.314	0.311	0.301	0.295	0.284	0.280	0.272	0.266	0.257	0.244	0.249	0.259
N° 15	0.297	0.294	0.283	0.277	0.265	0.257	0.245	0.242	0.229	0.213	0.217	0.231
N° 16	0.305	0.302	0.292	0.286	0.276	0.271	0.258	0.254	0.241	0.225	0.228	0.245
N° 17	0.319	0.316	0.306	0.300	0.289	0.284	0.277	0.271	0.263	0.251	0.253	0.264
N° 18	0.296	0.293	0.283	0.277	0.266	0.257	0.245	0.242	0.230	0.214	0.218	0.233
N° 19	0.297	0.294	0.283	0.278	0.268	0.260	0.247	0.247	0.234	0.220	0.222	0.236
N° 20	0.299	0.296	0.285	0.279	0.269	0.260	0.249	0.245	0.233	0.218	0.220	0.236
N° 21	0.303	0.299	0.289	0.283	0.272	0.265	0.252	0.249	0.234	0.217	0.220	0.239
N° 22	0.316	0.313	0.302	0.299	0.287	0.283	0.276	0.271	0.263	0.251	0.255	0.264
N° 23	0.319	0.314	0.305	0.299	0.288	0.284	0.276	0.270	0.261	0.245	0.250	0.263
N° 24	0.307	0.304	0.294	0.287	0.277	0.272	0.259	0.256	0.243	0.226	0.230	0.245
N° 25	0.301	0.299	0.289	0.282	0.271	0.265	0.251	0.248	0.236	0.219	0.219	0.238
N° 26	0.319	0.317	0.306	0.300	0.290	0.286	0.278	0.272	0.265	0.255	0.257	0.268
N° 27	0.309	0.305	0.295	0.290	0.278	0.273	0.261	0.258	0.244	0.230	0.231	0.247
N° 28	0.303	0.300	0.287	0.280	0.268	0.257	0.244	0.240	0.227	0.209	0.214	0.240
N° 29	0.310	0.306	0.296	0.292	0.281	0.278	0.270	0.266	0.258	0.244	0.248	0.257
N° 30	0.304	0.300	0.290	0.284	0.274	0.268	0.254	0.249	0.236	0.217	0.226	0.242
N° 31	0.311	0.309	0.298	0.292	0.282	0.277	0.268	0.262	0.251	0.232	0.237	0.255

## 122. SR-, Module 1

Ta=25°C; +VCC=30V; -VCC=GND



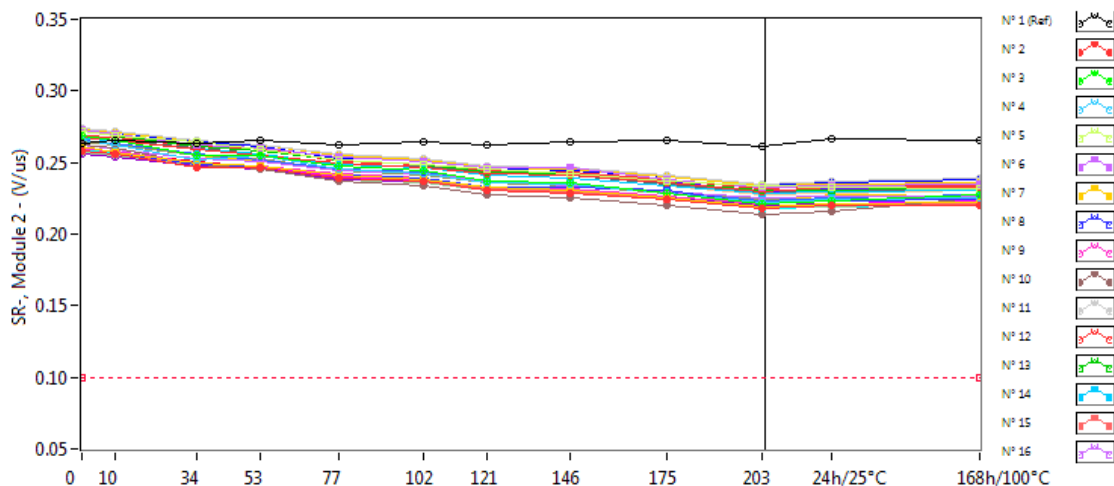
SR-, Module 1 . (V/us)

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)	0.276	0.280	0.277	0.279	0.276	0.278	0.276	0.278	0.278	0.274	0.281	0.280
N° 2	0.267	0.265	0.255	0.255	0.248	0.246	0.239	0.237	0.233	0.227	0.228	0.228
N° 3	0.281	0.278	0.267	0.266	0.259	0.255	0.249	0.247	0.240	0.233	0.234	0.238
N° 4	0.272	0.269	0.259	0.262	0.251	0.248	0.242	0.242	0.234	0.228	0.230	0.232
N° 5	0.279	0.276	0.270	0.265	0.258	0.254	0.249	0.247	0.241	0.238	0.237	0.237
N° 6	0.283	0.280	0.271	0.270	0.263	0.260	0.254	0.255	0.247	0.241	0.242	0.243
N° 7	0.269	0.265	0.257	0.256	0.249	0.246	0.241	0.240	0.233	0.227	0.229	0.230
N° 8	0.270	0.266	0.258	0.257	0.250	0.248	0.242	0.242	0.240	0.230	0.232	0.233
N° 9	0.268	0.266	0.258	0.256	0.250	0.247	0.241	0.240	0.233	0.228	0.230	0.232
N° 10	0.272	0.271	0.264	0.261	0.254	0.252	0.247	0.245	0.240	0.234	0.237	0.238
N° 11	0.282	0.280	0.272	0.270	0.263	0.260	0.255	0.252	0.247	0.242	0.244	0.245
N° 12	0.281	0.279	0.272	0.268	0.263	0.260	0.254	0.252	0.247	0.241	0.243	0.245
N° 13	0.285	0.281	0.274	0.271	0.264	0.261	0.255	0.253	0.248	0.242	0.242	0.244
N° 14	0.276	0.275	0.268	0.266	0.258	0.256	0.250	0.248	0.243	0.237	0.240	0.239
N° 15	0.264	0.262	0.255	0.252	0.245	0.243	0.238	0.236	0.231	0.224	0.227	0.227
N° 16	0.268	0.265	0.259	0.256	0.250	0.248	0.242	0.240	0.236	0.231	0.232	0.232
N° 17	0.282	0.280	0.274	0.270	0.263	0.260	0.253	0.252	0.247	0.240	0.241	0.242
N° 18	0.265	0.263	0.257	0.254	0.246	0.244	0.239	0.237	0.232	0.226	0.228	0.229
N° 19	0.266	0.264	0.257	0.255	0.248	0.246	0.240	0.240	0.235	0.229	0.230	0.230
N° 20	0.267	0.265	0.258	0.254	0.248	0.246	0.241	0.239	0.235	0.229	0.231	0.231
N° 21	0.267	0.265	0.258	0.255	0.248	0.245	0.240	0.238	0.233	0.227	0.227	0.228
N° 22	0.280	0.278	0.271	0.270	0.260	0.258	0.253	0.252	0.247	0.241	0.243	0.243
N° 23	0.276	0.273	0.268	0.264	0.256	0.255	0.248	0.247	0.241	0.234	0.237	0.238
N° 24	0.276	0.274	0.267	0.263	0.256	0.253	0.248	0.246	0.240	0.233	0.235	0.237
N° 25	0.267	0.266	0.260	0.255	0.249	0.246	0.240	0.239	0.236	0.229	0.229	0.230
N° 26	0.282	0.282	0.274	0.271	0.263	0.262	0.255	0.254	0.249	0.243	0.244	0.247
N° 27	0.273	0.272	0.265	0.263	0.253	0.251	0.245	0.244	0.238	0.233	0.233	0.234
N° 28	0.268	0.266	0.260	0.256	0.249	0.247	0.242	0.240	0.235	0.228	0.230	0.232
N° 29	0.277	0.273	0.267	0.264	0.257	0.255	0.249	0.248	0.244	0.236	0.238	0.238
N° 30	0.268	0.266	0.259	0.255	0.250	0.247	0.241	0.239	0.235	0.227	0.233	0.231
N° 31	0.277	0.275	0.268	0.265	0.257	0.255	0.249	0.247	0.242	0.234	0.236	0.238

## 123. SR-, Module 2

Ta=25°C; +VCC=30V; -VCC=GND



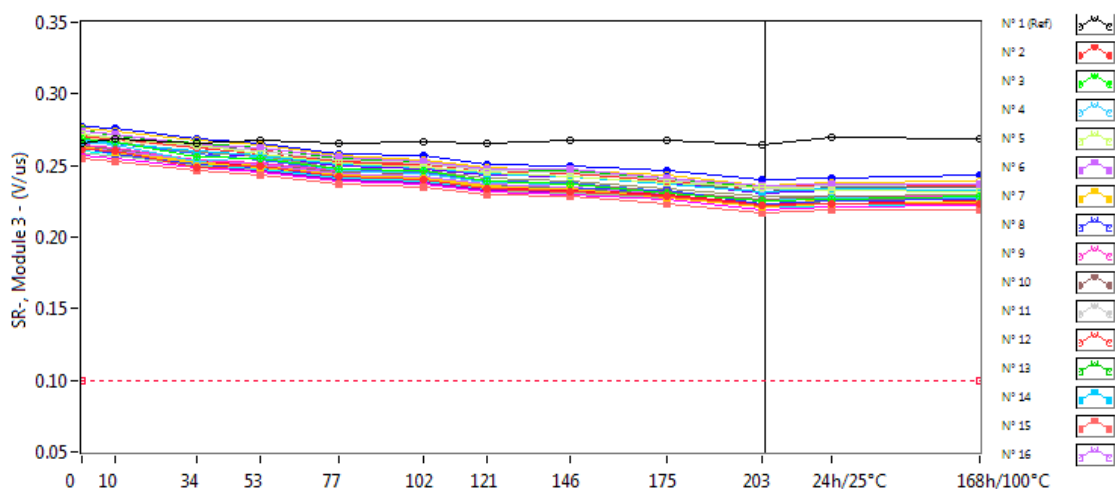
SR-, Module 2 . (V/us)

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)	0.263	0.265	0.263	0.265	0.262	0.264	0.262	0.264	0.265	0.261	0.267	0.266
N° 2	0.258	0.256	0.246	0.247	0.239	0.237	0.231	0.228	0.224	0.218	0.220	0.220
N° 3	0.269	0.266	0.255	0.255	0.248	0.244	0.237	0.236	0.228	0.221	0.223	0.227
N° 4	0.266	0.262	0.252	0.255	0.245	0.242	0.236	0.235	0.228	0.222	0.224	0.225
N° 5	0.272	0.269	0.264	0.259	0.252	0.249	0.245	0.242	0.237	0.234	0.233	0.232
N° 6	0.273	0.270	0.262	0.260	0.254	0.251	0.246	0.247	0.238	0.233	0.234	0.235
N° 7	0.261	0.257	0.250	0.248	0.241	0.238	0.233	0.231	0.225	0.219	0.221	0.222
N° 8	0.261	0.257	0.249	0.248	0.241	0.239	0.233	0.233	0.231	0.221	0.223	0.224
N° 9	0.259	0.258	0.250	0.248	0.242	0.239	0.233	0.232	0.226	0.221	0.223	0.224
N° 10	0.262	0.260	0.249	0.245	0.237	0.234	0.227	0.225	0.220	0.214	0.216	0.225
N° 11	0.274	0.272	0.265	0.262	0.256	0.253	0.248	0.246	0.241	0.235	0.237	0.239
N° 12	0.268	0.266	0.259	0.255	0.250	0.247	0.242	0.241	0.236	0.230	0.233	0.233
N° 13	0.272	0.269	0.261	0.258	0.252	0.249	0.243	0.242	0.236	0.231	0.231	0.233
N° 14	0.267	0.265	0.259	0.256	0.249	0.247	0.241	0.239	0.234	0.229	0.230	0.231
N° 15	0.258	0.256	0.249	0.246	0.239	0.237	0.232	0.230	0.224	0.219	0.221	0.221
N° 16	0.262	0.259	0.253	0.251	0.244	0.242	0.237	0.234	0.230	0.225	0.226	0.226
N° 17	0.273	0.271	0.265	0.262	0.255	0.252	0.246	0.245	0.240	0.234	0.235	0.236
N° 18	0.258	0.256	0.250	0.247	0.240	0.237	0.232	0.230	0.225	0.219	0.221	0.223
N° 19	0.256	0.254	0.248	0.245	0.238	0.237	0.231	0.231	0.226	0.220	0.221	0.222
N° 20	0.257	0.255	0.249	0.245	0.238	0.236	0.231	0.229	0.224	0.219	0.219	0.222
N° 21	0.259	0.256	0.250	0.246	0.239	0.237	0.231	0.230	0.224	0.218	0.219	0.221
N° 22	0.269	0.268	0.261	0.260	0.251	0.249	0.244	0.243	0.238	0.232	0.234	0.234
N° 23	0.269	0.266	0.260	0.256	0.249	0.248	0.242	0.241	0.235	0.229	0.231	0.232
N° 24	0.265	0.263	0.256	0.252	0.245	0.243	0.237	0.235	0.230	0.223	0.225	0.227
N° 25	0.258	0.257	0.251	0.246	0.239	0.237	0.231	0.229	0.225	0.219	0.219	0.221
N° 26	0.272	0.271	0.264	0.261	0.253	0.252	0.246	0.244	0.240	0.234	0.236	0.238
N° 27	0.264	0.262	0.255	0.253	0.244	0.241	0.236	0.234	0.229	0.224	0.224	0.225
N° 28	0.259	0.257	0.250	0.247	0.240	0.238	0.233	0.230	0.225	0.218	0.221	0.223
N° 29	0.269	0.265	0.259	0.256	0.249	0.248	0.243	0.241	0.237	0.230	0.232	0.232
N° 30	0.264	0.262	0.255	0.251	0.244	0.242	0.236	0.234	0.230	0.222	0.227	0.226
N° 31	0.268	0.266	0.259	0.256	0.249	0.247	0.241	0.239	0.234	0.227	0.229	0.231

## 124. SR-, Module 3

Ta=25°C; +VCC=30V; -VCC=GND



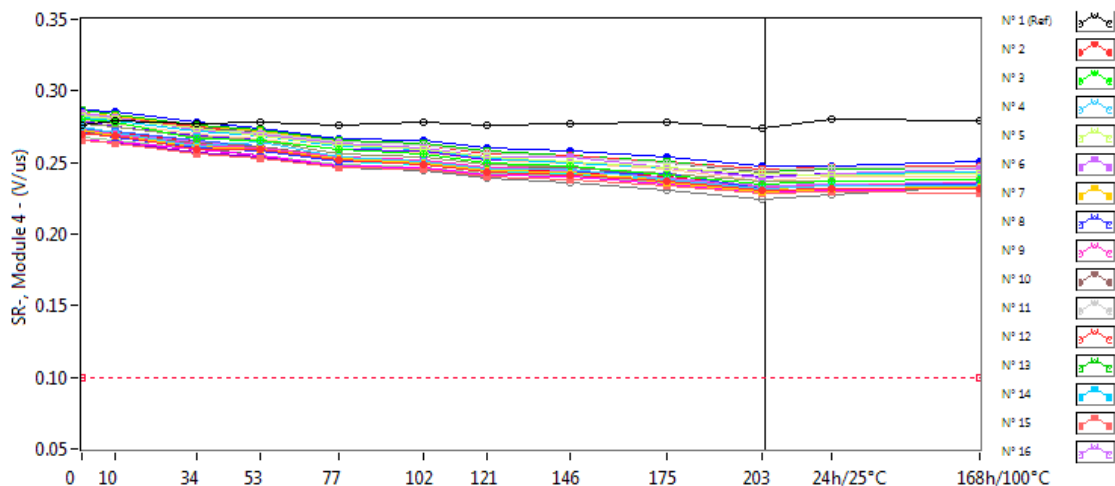
SR-, Module 3 . (V/us)

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)	0.266	0.269	0.266	0.268	0.265	0.267	0.265	0.268	0.268	0.264	0.270	0.269
N° 2	0.261	0.260	0.249	0.250	0.242	0.240	0.234	0.232	0.228	0.222	0.223	0.223
N° 3	0.269	0.267	0.256	0.255	0.248	0.246	0.239	0.237	0.231	0.225	0.226	0.228
N° 4	0.267	0.264	0.253	0.256	0.246	0.244	0.238	0.237	0.231	0.225	0.227	0.227
N° 5	0.272	0.269	0.264	0.258	0.252	0.249	0.245	0.242	0.238	0.235	0.233	0.232
N° 6	0.274	0.272	0.264	0.262	0.256	0.253	0.248	0.248	0.241	0.236	0.237	0.237
N° 7	0.263	0.259	0.252	0.249	0.243	0.241	0.235	0.234	0.227	0.221	0.223	0.224
N° 8	0.262	0.258	0.251	0.249	0.242	0.241	0.235	0.234	0.233	0.223	0.225	0.226
N° 9	0.264	0.262	0.254	0.252	0.246	0.244	0.238	0.237	0.231	0.225	0.227	0.229
N° 10	0.263	0.262	0.254	0.252	0.245	0.244	0.238	0.237	0.232	0.226	0.228	0.229
N° 11	0.272	0.270	0.263	0.260	0.254	0.252	0.247	0.245	0.240	0.234	0.236	0.237
N° 12	0.271	0.269	0.262	0.258	0.253	0.251	0.246	0.244	0.239	0.234	0.237	0.237
N° 13	0.275	0.271	0.265	0.262	0.255	0.253	0.248	0.246	0.241	0.235	0.236	0.237
N° 14	0.268	0.266	0.260	0.257	0.251	0.249	0.244	0.242	0.237	0.232	0.234	0.233
N° 15	0.255	0.253	0.247	0.243	0.237	0.235	0.230	0.228	0.223	0.217	0.219	0.219
N° 16	0.262	0.260	0.254	0.251	0.244	0.242	0.237	0.235	0.231	0.226	0.227	0.227
N° 17	0.276	0.274	0.268	0.264	0.257	0.254	0.249	0.247	0.243	0.236	0.238	0.239
N° 18	0.257	0.255	0.249	0.245	0.239	0.237	0.232	0.230	0.226	0.219	0.221	0.222
N° 19	0.257	0.255	0.249	0.246	0.240	0.238	0.233	0.232	0.228	0.222	0.223	0.224
N° 20	0.258	0.257	0.250	0.246	0.240	0.238	0.233	0.231	0.227	0.221	0.223	0.224
N° 21	0.260	0.258	0.251	0.248	0.241	0.239	0.234	0.232	0.227	0.221	0.221	0.223
N° 22	0.270	0.269	0.262	0.261	0.252	0.251	0.246	0.244	0.241	0.234	0.237	0.236
N° 23	0.272	0.269	0.264	0.260	0.253	0.251	0.246	0.244	0.239	0.232	0.235	0.235
N° 24	0.266	0.265	0.258	0.254	0.247	0.245	0.239	0.238	0.232	0.225	0.228	0.229
N° 25	0.261	0.260	0.254	0.249	0.242	0.240	0.235	0.233	0.230	0.223	0.223	0.225
N° 26	0.277	0.276	0.269	0.265	0.258	0.257	0.251	0.250	0.246	0.240	0.241	0.243
N° 27	0.268	0.267	0.259	0.257	0.248	0.246	0.241	0.239	0.234	0.229	0.229	0.230
N° 28	0.263	0.261	0.254	0.251	0.244	0.242	0.237	0.234	0.230	0.222	0.225	0.227
N° 29	0.269	0.265	0.259	0.256	0.250	0.248	0.243	0.242	0.238	0.231	0.233	0.233
N° 30	0.262	0.260	0.253	0.250	0.243	0.241	0.236	0.234	0.229	0.222	0.226	0.226
N° 31	0.270	0.268	0.262	0.258	0.252	0.250	0.244	0.242	0.238	0.231	0.233	0.233

## 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)	0.276	0.279	0.277	0.278	0.276	0.278	0.276	0.277	0.278	0.274	0.280	0.279
N° 2	0.270	0.269	0.259	0.259	0.252	0.249	0.243	0.241	0.237	0.231	0.232	0.232
N° 3	0.280	0.278	0.267	0.266	0.259	0.256	0.250	0.248	0.241	0.235	0.237	0.238
N° 4	0.275	0.271	0.261	0.264	0.254	0.251	0.245	0.245	0.238	0.232	0.234	0.234
N° 5	0.282	0.280	0.274	0.269	0.262	0.259	0.254	0.251	0.246	0.242	0.241	0.242
N° 6	0.284	0.281	0.273	0.270	0.263	0.260	0.254	0.254	0.246	0.239	0.242	0.245
N° 7	0.273	0.269	0.261	0.259	0.253	0.250	0.244	0.243	0.236	0.230	0.232	0.233
N° 8	0.271	0.268	0.260	0.258	0.251	0.250	0.244	0.243	0.242	0.232	0.234	0.235
N° 9	0.273	0.270	0.262	0.260	0.254	0.252	0.246	0.245	0.238	0.233	0.234	0.236
N° 10	0.272	0.270	0.263	0.261	0.254	0.252	0.247	0.246	0.241	0.235	0.237	0.238
N° 11	0.283	0.281	0.273	0.271	0.264	0.262	0.257	0.254	0.250	0.244	0.246	0.247
N° 12	0.283	0.281	0.274	0.270	0.264	0.262	0.256	0.255	0.250	0.245	0.247	0.248
N° 13	0.287	0.283	0.276	0.273	0.266	0.263	0.258	0.255	0.251	0.244	0.245	0.247
N° 14	0.281	0.279	0.272	0.269	0.261	0.259	0.253	0.250	0.246	0.239	0.242	0.243
N° 15	0.265	0.263	0.256	0.253	0.246	0.245	0.240	0.238	0.234	0.228	0.230	0.229
N° 16	0.272	0.270	0.264	0.260	0.253	0.251	0.246	0.244	0.239	0.234	0.235	0.236
N° 17	0.285	0.282	0.276	0.272	0.265	0.263	0.257	0.255	0.251	0.244	0.245	0.246
N° 18	0.266	0.264	0.259	0.255	0.248	0.246	0.241	0.240	0.235	0.229	0.231	0.232
N° 19	0.266	0.264	0.257	0.254	0.247	0.246	0.241	0.240	0.235	0.230	0.231	0.232
N° 20	0.268	0.266	0.259	0.255	0.249	0.247	0.242	0.240	0.236	0.230	0.231	0.233
N° 21	0.271	0.268	0.262	0.258	0.251	0.249	0.243	0.242	0.237	0.230	0.231	0.232
N° 22	0.283	0.282	0.275	0.273	0.264	0.262	0.257	0.255	0.251	0.245	0.247	0.247
N° 23	0.284	0.281	0.275	0.271	0.264	0.262	0.256	0.255	0.250	0.243	0.245	0.246
N° 24	0.273	0.272	0.265	0.261	0.253	0.252	0.246	0.244	0.239	0.233	0.235	0.236
N° 25	0.271	0.271	0.265	0.259	0.252	0.251	0.245	0.243	0.240	0.233	0.234	0.234
N° 26	0.287	0.286	0.278	0.274	0.267	0.266	0.260	0.258	0.254	0.248	0.248	0.251
N° 27	0.277	0.275	0.268	0.265	0.256	0.254	0.249	0.247	0.242	0.237	0.237	0.238
N° 28	0.271	0.269	0.260	0.255	0.247	0.244	0.239	0.236	0.231	0.224	0.227	0.234
N° 29	0.279	0.275	0.269	0.266	0.259	0.258	0.252	0.251	0.247	0.240	0.242	0.242
N° 30	0.271	0.268	0.261	0.258	0.252	0.250	0.244	0.242	0.238	0.231	0.235	0.234
N° 31	0.279	0.277	0.270	0.267	0.259	0.257	0.252	0.250	0.245	0.237	0.240	0.240