

RADIATION TEST REPORT

PRODUCT: OP07R000C

MASK:

FILE:

DATE CODE:

GAMMA: 0, 100k, 24Hr

GAMMA SOURCE: Co60

DOSE RATE: 36.48 rad/sec

FACILITIES: National Semiconductor
Sunnyvale, Ca.

TESTED: July 25,2005

Many products manufactured by Analog Devices, Inc. have been shown to be radiation tolerant to most tactical radiation environments, Analog Devices, Inc. does not make any claim to maintain or guarantee these levels of radiation tolerance without lot qualification test.

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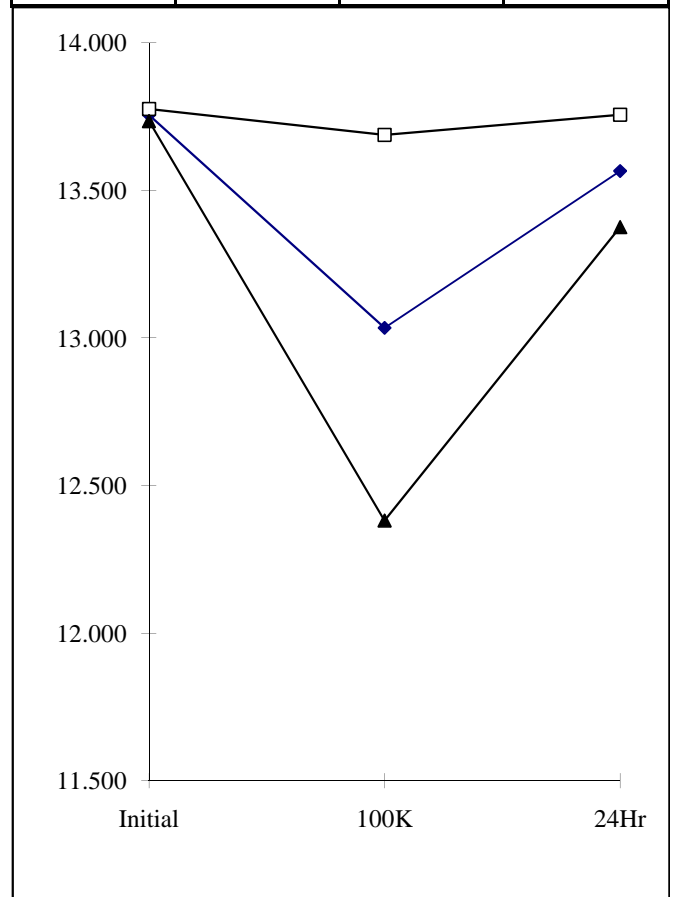
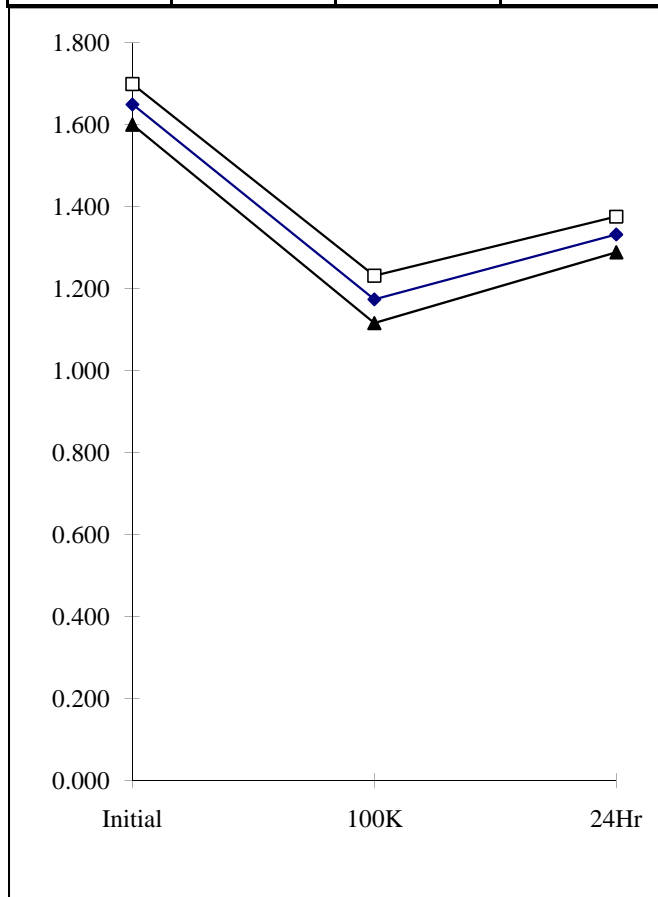
WARNING:

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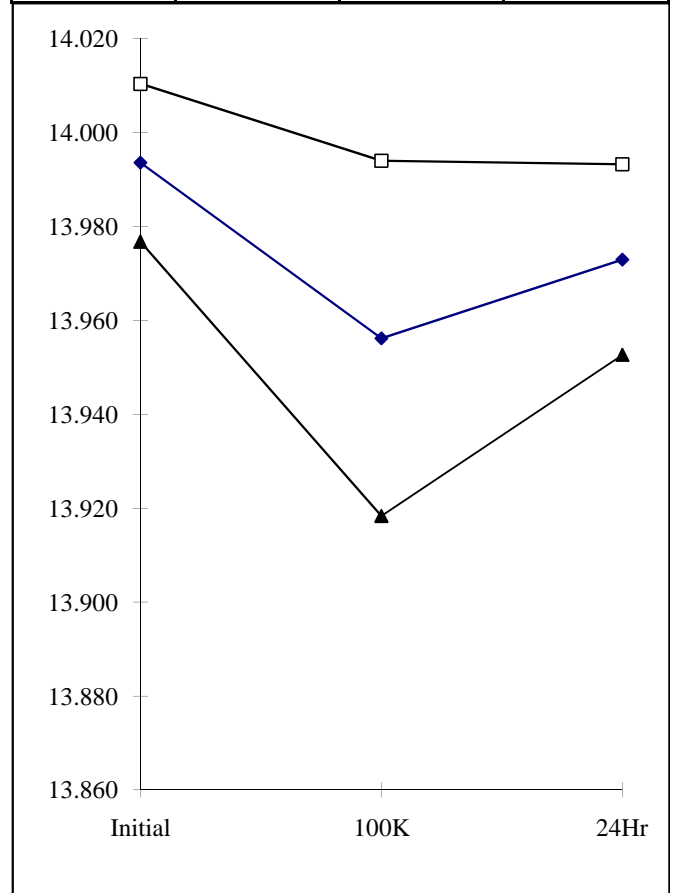
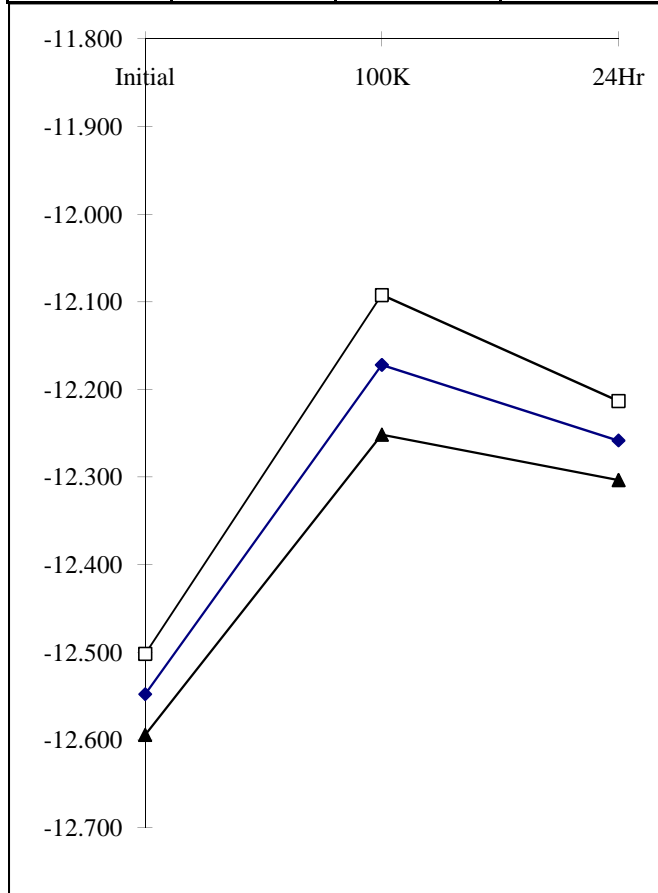
T# 1.0	ISY		mA
SN	Initial	100K	24Hr
1	1.645	1.648	1.645
2	1.662	1.197	1.352
3	1.662	1.188	1.344
17	1.666	1.192	
18	1.661	1.183	
31	1.648	1.183	1.329
32	1.644	1.186	1.333
41	1.655	1.178	1.341
42	1.648	1.185	1.341
60	1.660	1.188	1.347
61	1.661	1.212	
76	1.658	1.175	
77	1.672	1.184	
92	1.665	1.173	1.345
93	1.628	1.146	1.306
105	1.608	1.142	
106	1.643	1.180	
116	1.651	1.168	1.333
117	1.634	1.151	1.320
128	1.628	1.142	1.309
129	1.624	1.143	1.312
148	1.659	1.165	1.337
149	1.663	1.168	1.338
min	1.608	1.142	1.306
max	1.672	1.212	1.352
stdev	0.016	0.019	0.014
average	1.650	1.174	1.332
+3S	1.699	1.232	1.376
-3S	1.601	1.116	1.289

T# 2.0	+VOM RI=1K		V
SN	Initial	100K	24Hr
1	13.741	13.751	13.751
2	13.741	12.905	13.567
3	13.751	12.936	13.557
17	13.761	13.262	
18	13.761	13.241	
31	13.751	13.058	13.629
32	13.751	13.058	13.608
41	13.751	13.007	13.608
42	13.751	13.028	13.588
60	13.751	13.068	13.618
61	13.761	13.374	
76	13.761	13.191	
77	13.771	13.394	
92	13.761	12.885	13.547
93	13.751	12.712	13.455
105	13.751	13.058	
106	13.751	13.201	
116	13.761	13.038	13.567
117	13.761	13.058	13.578
128	13.751	12.549	13.455
129	13.751	12.579	13.455
148	13.761	13.079	13.629
149	13.761	13.079	13.629
min	13.741	12.549	13.455
max	13.771	13.394	13.629
stdev	0.007	0.218	0.063
average	13.756	13.035	13.566
+3S	13.776	13.688	13.756
-3S	13.735	12.381	13.376



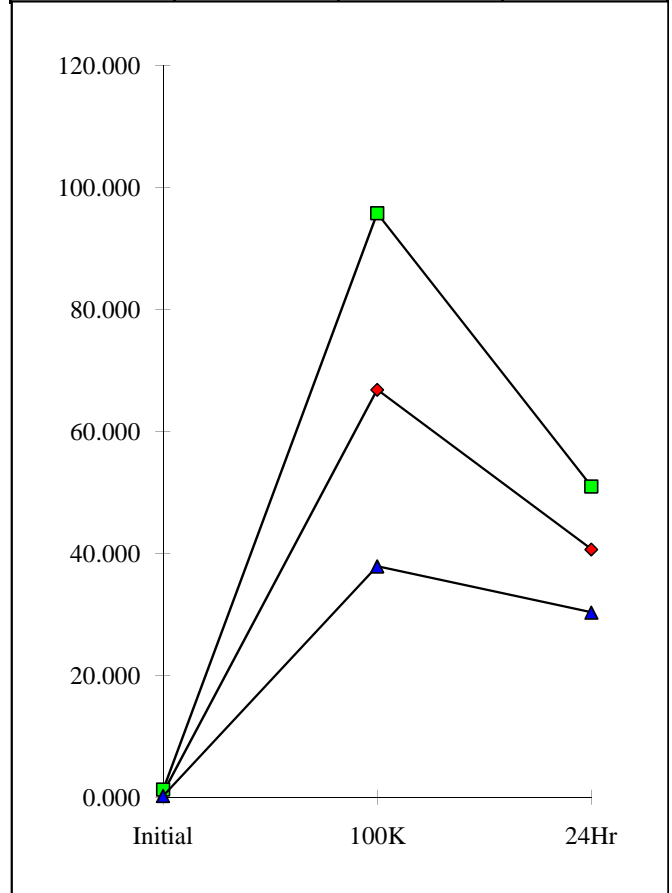
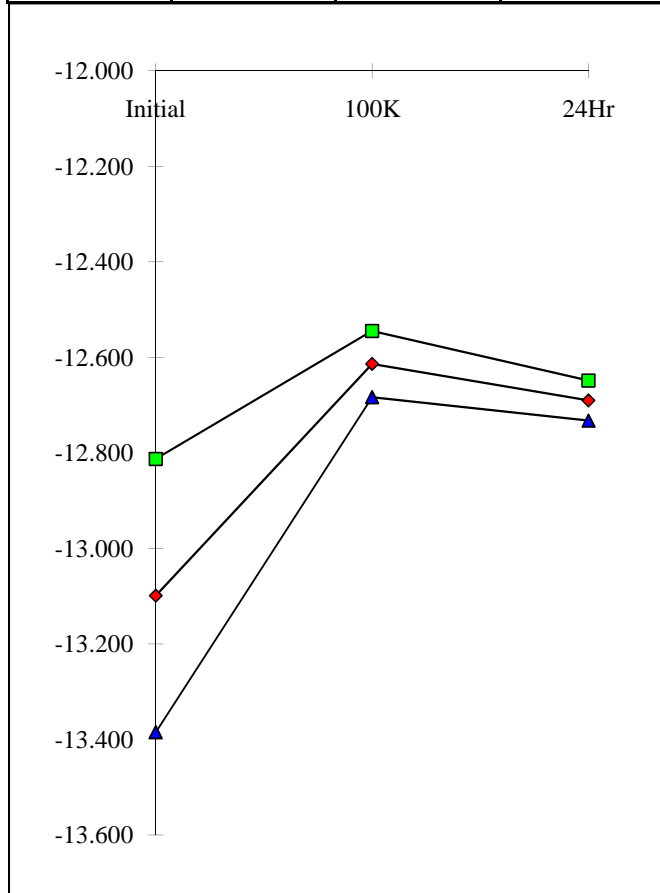
T# 3.0	-VOM RI=1K		V
SN	Initial	100K	24Hr
1	-12.549	-12.549	-12.549
2	-12.539	-12.172	-12.264
3	-12.528	-12.162	-12.264
17	-12.569	-12.213	
18	-12.559	-12.192	
31	-12.549	-12.182	-12.274
32	-12.539	-12.172	-12.264
41	-12.559	-12.182	-12.274
42	-12.549	-12.172	-12.264
60	-12.559	-12.182	-12.274
61	-12.569	-12.223	
76	-12.559	-12.192	
77	-12.579	-12.223	
92	-12.549	-12.172	-12.264
93	-12.539	-12.141	-12.243
105	-12.528	-12.141	
106	-12.539	-12.172	
116	-12.539	-12.141	-12.243
117	-12.528	-12.152	-12.243
128	-12.528	-12.131	-12.233
129	-12.528	-12.131	-12.233
148	-12.559	-12.172	-12.274
149	-12.559	-12.162	-12.264
min	-12.579	-12.223	-12.274
max	-12.528	-12.131	-12.233
stdev	0.015	0.027	0.015
average	-12.548	-12.172	-12.258
+3S	-12.502	-12.092	-12.213
-3S	-12.594	-12.252	-12.303

T# 4.0	+VOM RI=2K		V
SN	Initial	100K	24Hr
1	13.985	13.985	13.985
2	13.985	13.944	13.965
3	13.985	13.944	13.965
17	13.995	13.975	
18	13.995	13.965	
31	13.985	13.954	13.975
32	13.995	13.954	13.975
41	13.995	13.954	13.975
42	13.995	13.954	13.975
60	13.995	13.954	13.975
61	14.005	13.975	
76	13.995	13.965	
77	14.005	13.975	
92	13.995	13.954	13.975
93	13.985	13.934	13.965
105	13.995	13.965	
106	13.995	13.965	
116	13.995	13.954	13.975
117	13.995	13.965	13.975
128	13.995	13.934	13.965
129	13.985	13.934	13.965
148	13.995	13.954	13.985
149	13.995	13.965	13.985
min	13.985	13.934	13.965
max	14.005	13.975	13.985
stdev	0.006	0.013	0.007
average	13.994	13.956	13.973
+3S	14.010	13.994	13.993
-3S	13.977	13.918	13.953



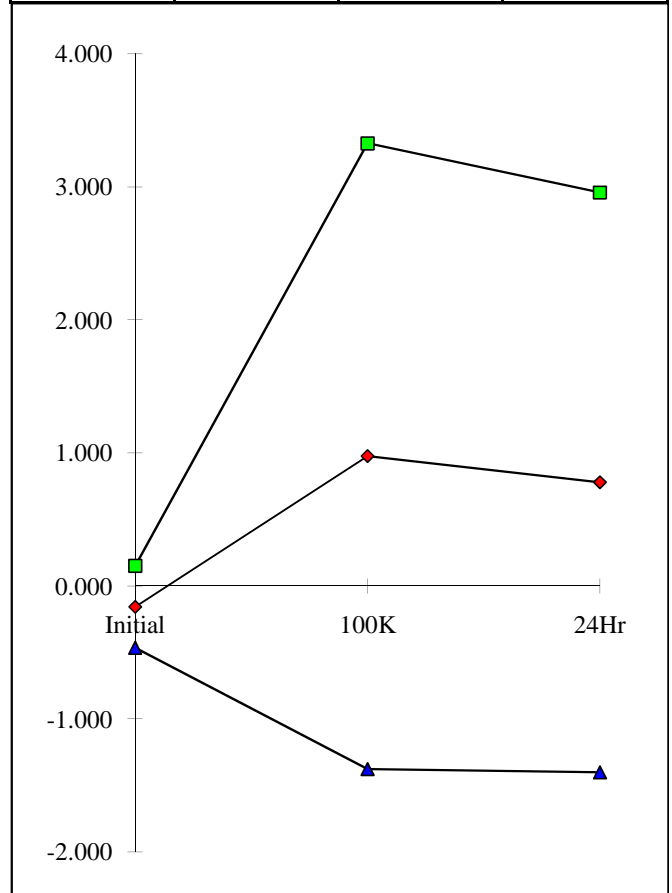
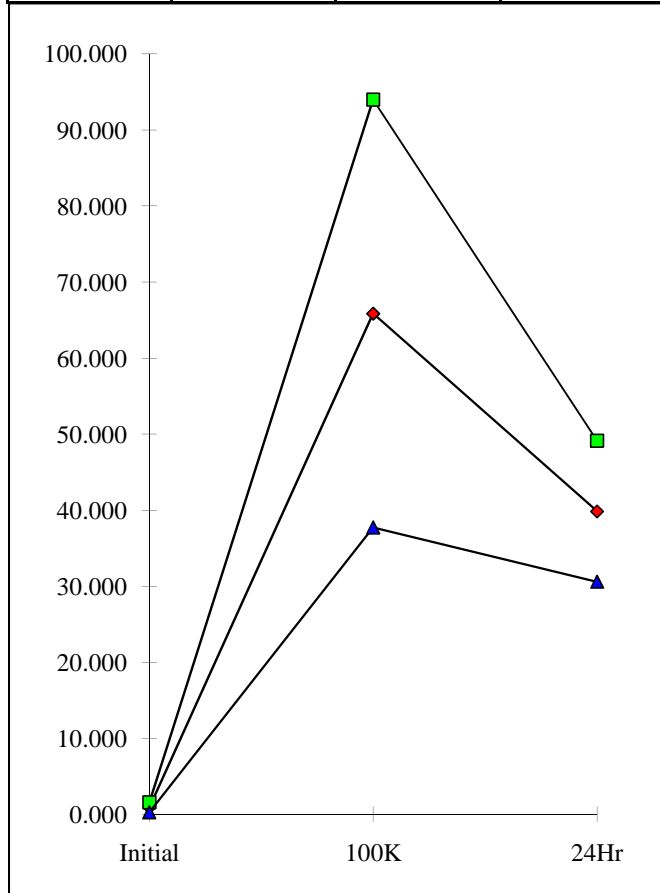
T# 5.0	-VOM RI=2K		V
SN	Initial	100K	24Hr
1	-13.231	-13.231	-13.231
2	-13.160	-12.610	-12.691
3	-13.048	-12.600	-12.691
17	-13.221	-12.651	
18	-13.068	-12.620	
31	-13.150	-12.620	-12.702
32	-13.048	-12.620	-12.691
41	-13.211	-12.620	-12.702
42	-13.058	-12.610	-12.702
60	-13.201	-12.620	-12.702
61	-13.170	-12.661	
76	-13.068	-12.630	
77	-13.364	-12.661	
92	-13.160	-12.610	-12.702
93	-13.028	-12.579	-12.671
105	-12.987	-12.600	
106	-13.017	-12.620	
116	-13.007	-12.590	-12.681
117	-12.997	-12.600	-12.681
128	-13.017	-12.579	-12.661
129	-13.007	-12.579	-12.671
148	-13.099	-12.610	-12.702
149	-13.079	-12.610	-12.702
min	-13.364	-12.661	-12.702
max	-12.987	-12.579	-12.661
stdev	0.095	0.023	0.014
average	-13.098	-12.614	-12.690
+3S	-12.813	-12.544	-12.648
-3S	-13.384	-12.683	-12.732

T# 6.0	+IB		nA
SN	Initial	100K	24Hr
1	0.983	0.967	0.981
2	0.842	72.416	40.612
3	1.009	70.833	39.646
17	0.580	54.915	
18	0.632	55.736	
31	0.764	67.714	40.271
32	0.933	64.894	38.557
41	0.730	69.249	39.733
42	0.946	68.388	38.686
60	0.734	68.177	39.689
61	0.536	49.428	
76	0.687	56.751	
77	0.600	54.904	
92	1.012	74.162	41.423
93	0.973	80.270	44.917
105	0.628	63.088	
106	0.638	59.907	
116	0.644	66.411	37.936
117	0.666	61.008	35.417
128	1.034	86.459	48.113
129	0.996	85.395	46.881
148	0.567	69.553	38.432
149	0.676	70.530	39.318
min	0.536	49.428	35.417
max	1.034	86.459	48.113
stdev	0.169	9.649	3.443
average	0.765	66.827	40.642
+3S	1.273	95.772	50.970
-3S	0.257	37.881	30.314



T# 7.0	-IB		nA
SN	Initial	100K	24Hr
1	1.192	1.199	1.198
2	1.295	72.017	40.686
3	1.085	68.386	38.270
17	0.760	54.621	
18	0.765	55.159	
31	1.039	65.543	38.774
32	1.067	63.301	37.243
41	0.963	67.831	39.039
42	1.137	67.266	37.959
60	0.931	67.655	39.045
61	0.574	49.275	
76	0.728	56.762	
77	0.654	54.176	
92	1.104	74.191	41.840
93	1.296	79.814	44.143
105	0.736	61.802	
106	0.785	58.010	
116	0.796	65.226	37.353
117	0.667	60.959	35.465
128	1.145	84.474	45.931
129	1.193	83.518	45.229
148	0.776	69.739	38.548
149	0.828	69.387	38.357
min	0.574	49.275	35.465
max	1.296	84.474	45.931
stdev	0.217	9.380	3.091
average	0.924	65.869	39.859
+3S	1.575	94.008	49.130
-3S	0.272	37.729	30.587

T# 8.0	IOS		nA
SN	Initial	100K	24Hr
1	-0.213	-0.228	-0.209
2	-0.453	0.389	-0.110
3	-0.059	2.469	1.349
17	-0.181	0.415	
18	-0.140	0.580	
31	-0.275	2.144	1.450
32	-0.134	1.595	1.371
41	-0.224	1.420	0.721
42	-0.198	1.092	0.770
60	-0.195	0.546	0.623
61	-0.044	0.234	
76	-0.043	0.035	
77	-0.054	0.757	
92	-0.077	-0.012	-0.330
93	-0.311	0.384	0.733
105	-0.102	1.318	
106	-0.138	1.887	
116	-0.151	1.230	0.530
117	0.000	0.081	-0.064
128	-0.100	1.949	2.148
129	-0.191	1.900	1.656
148	-0.203	-0.137	-0.097
149	-0.164	1.215	0.951
min	-0.453	-0.137	-0.330
max	0.000	2.469	2.148
stdev	0.103	0.784	0.726
average	-0.156	0.977	0.780
+3S	0.152	3.329	2.959
-3S	-0.464	-1.375	-1.399



T# 9.0	VOS		uV
	Initial	100K	24Hr
1	20.844	21.387	21.268
2	5.948	118.079	59.936
3	9.342	120.862	61.209
17	8.195	68.780	
18	17.421	102.324	
31	12.084	101.230	55.394
32	-1.675	124.442	53.394
41	11.491	120.691	62.838
42	15.675	116.740	64.885
60	0.579	117.925	54.381
61	11.366	4.974	
76	16.830	95.278	
77	-10.341	71.914	
92	-13.431	97.930	41.537
93	0.093	132.528	56.613
105	9.729	153.859	
106	8.665	98.102	
116	-3.916	90.694	32.612
117	22.236	104.915	55.950
128	17.051	184.757	94.289
129	24.889	159.704	91.787
148	14.382	111.000	56.030
149	5.272	114.308	47.103
min	-13.431	4.974	32.612
max	24.889	184.757	94.289
stdev	9.858	35.415	16.052
average	8.268	109.593	59.197
+3S	37.840	215.838	107.353
-3S	-21.305	3.347	11.042

T# 10.0	AVO Rl=2K VO=+/-10V		V/mV
	Initial	100K	24Hr
1	7695	8584	8812
2	8197	84	375
3	7534	83	337
17	9025	120	
18	8344	115	
31	8287	86	366
32	8088	90	361
41	8923	89	404
42	8436	90	399
60	8571	93	414
61	8224	129	
76	9204	106	
77	8691	118	
92	9359	81	381
93	8910	70	329
105	10368	104	
106	10581	120	
116	10941	89	397
117	10793	94	395
128	7951	61	300
129	8245	63	300
148	9422	86	409
149	8633	83	371
min	7534	61	300
max	10941	129	414
stdev	956	19	37
average	8942	93	369
+3S	11812	149	482
-3S	6073	38	257

