

RADIATION TEST REPORT

PRODUCT: OP207R903Y

MASK:

FILE:

DATE CODE:

GAMMA: 0, 100K, 24Hr

GAMMA SOURCE: Co60

DOSE RATE: 47.87 rad/sec

FACILITIES: National Semiconductor
Sunnyvale, Ca.

TESTED: July 03, 2003

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It is the responsibility of the Procuring Activity to screen products from Analog Devices, Inc. for compliance to Nuclear Hardness Critical Items (HCI) specifications.

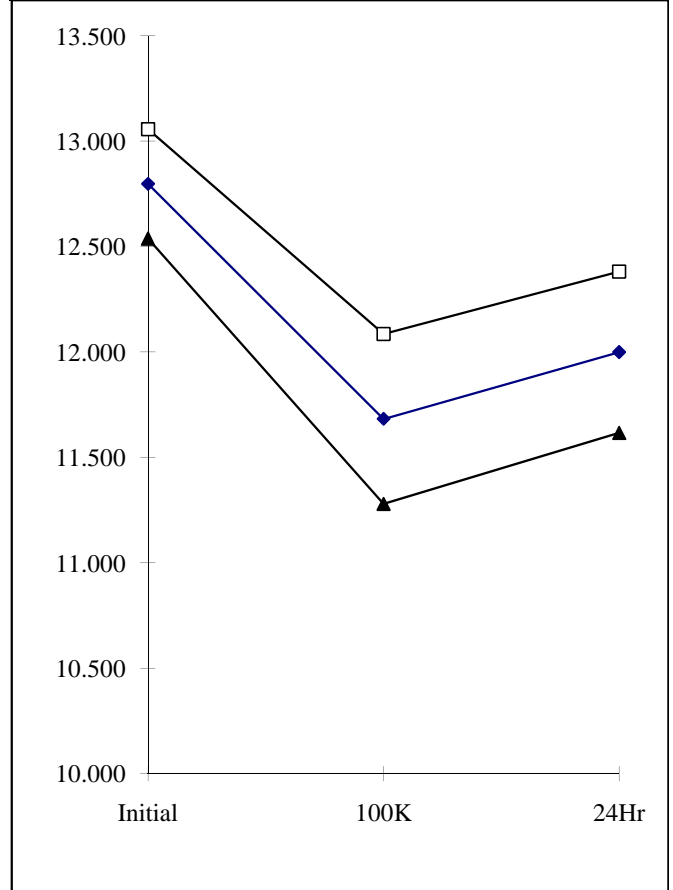
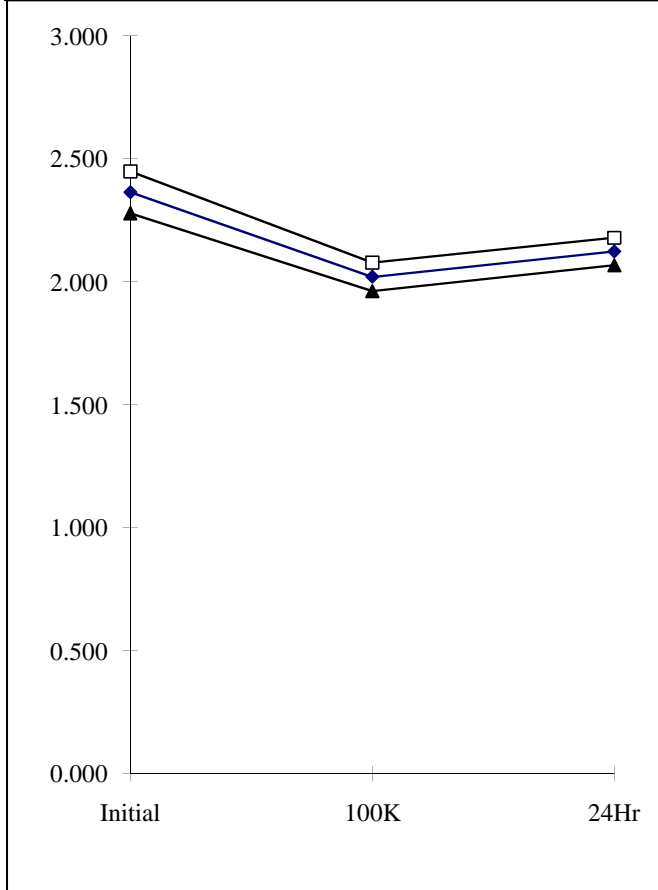
WARNING:

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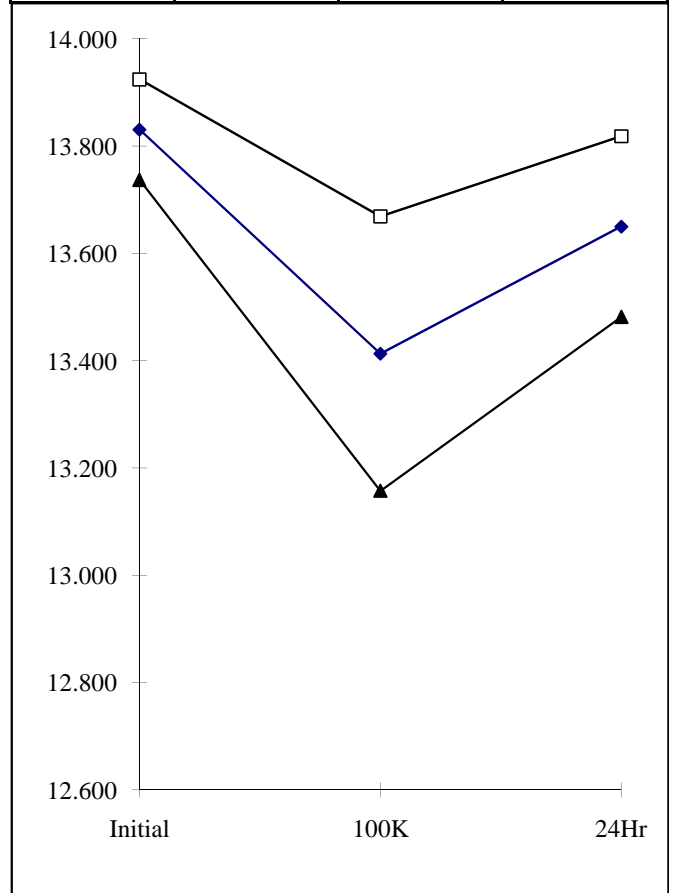
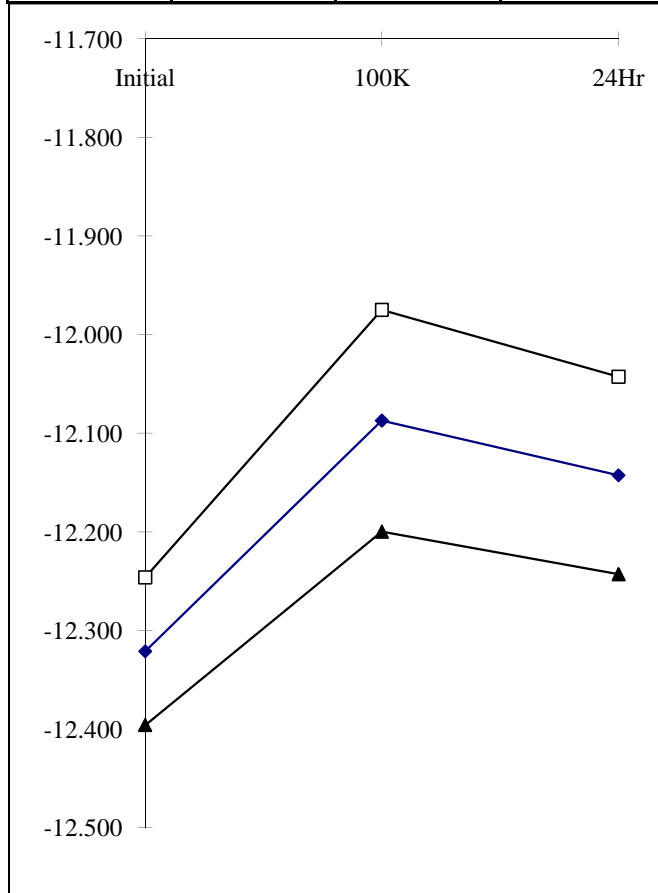
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SN	Initial	100K	24Hr
1	2.355	2.352	2.357
2	2.349	2.002	2.111
3	2.366	2.018	2.131
4	2.339	1.999	2.100
26	2.327	2.054	2.131
27	2.313	1.993	2.091
28	2.338	2.012	2.100
51	2.384	2.009	2.121
52	2.396	2.022	2.134
76	2.335	1.990	2.096
77	2.336	1.995	2.100
101	2.372	2.030	2.133
102	2.364	2.026	2.113
126	2.381	2.036	2.145
127	2.359	2.007	2.118
151	2.343	2.021	2.115
152	2.340	2.064	2.143
176	2.386	2.032	2.133
177	2.371	2.024	2.123
201	2.383	2.007	2.128
202	2.395	2.020	2.136
226	2.422	2.041	2.159
227	2.407	2.037	2.151
min	2.313	1.990	2.091
max	2.422	2.064	2.159
stdev	0.028	0.019	0.019
average	2.364	2.020	2.123
+3S	2.449	2.078	2.179
-3S	2.279	1.962	2.067

T# 2.0	+VOM RI=1K A		V
SN	Initial	100K	24Hr
1	12.671	12.661	12.661
2	12.671	11.459	11.765
3	12.691	11.490	11.815
4	12.651	11.428	11.765
26	12.824	11.938	12.182
27	12.844	11.775	12.070
28	12.854	11.805	12.080
51	12.885	11.775	12.121
52	12.895	11.805	12.141
76	12.722	11.520	11.877
77	12.732	11.551	11.897
101	12.854	11.734	12.060
102	12.865	11.775	12.060
126	12.885	11.754	12.090
127	12.844	11.714	12.050
151	12.732	11.612	11.907
152	12.712	11.744	11.999
176	12.865	11.744	12.070
177	12.671	11.561	11.846
201	12.895	11.754	12.101
202	12.895	11.775	12.131
226	12.732	11.581	11.917
227	12.844	11.724	12.050
min	12.651	11.428	11.765
max	12.895	11.938	12.182
stdev	0.087	0.134	0.127
average	12.798	11.683	12.000
+3S	13.058	12.085	12.382
-3S	12.539	11.280	11.617



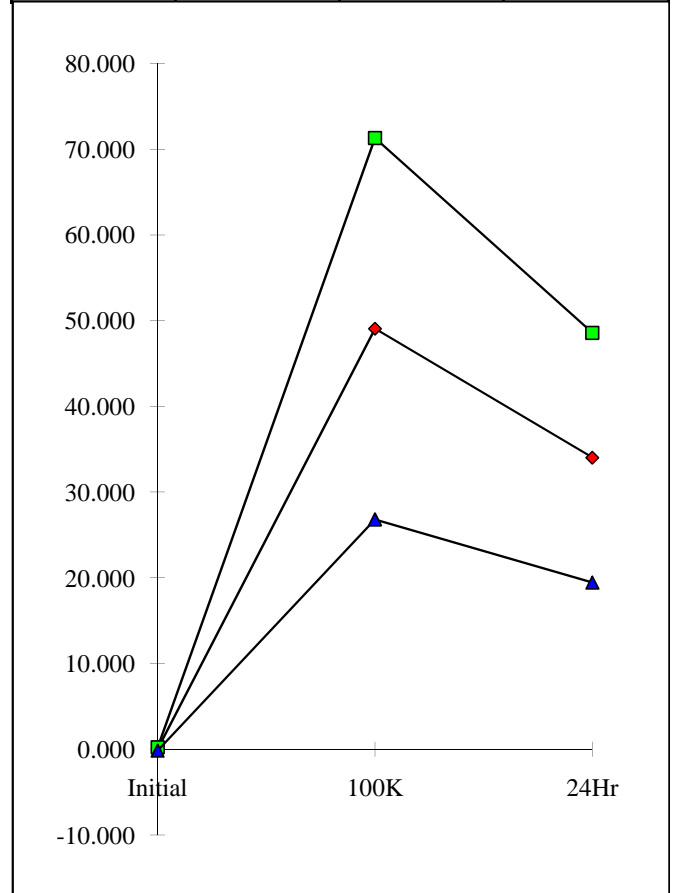
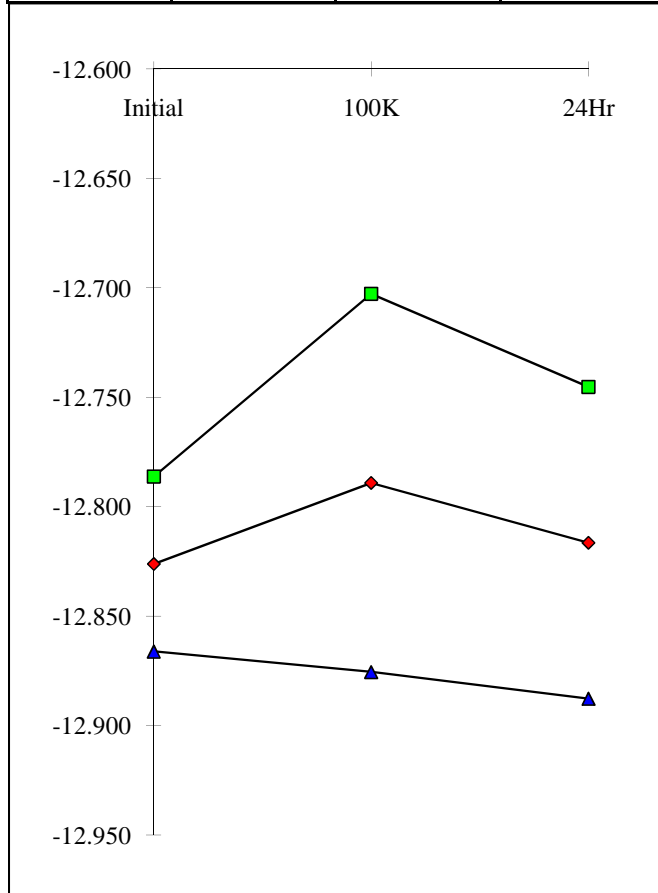
T# 3.0	-VOM RI=1K A		V
SN	Initial	100K	24Hr
1	-12.284	-12.284	-12.284
2	-12.294	-12.040	-12.101
3	-12.294	-12.050	-12.111
4	-12.284	-12.029	-12.090
26	-12.325	-12.141	-12.182
27	-12.325	-12.111	-12.162
28	-12.325	-12.111	-12.162
51	-12.355	-12.111	-12.172
52	-12.355	-12.121	-12.172
76	-12.315	-12.060	-12.121
77	-12.315	-12.070	-12.131
101	-12.335	-12.101	-12.162
102	-12.335	-12.111	-12.162
126	-12.345	-12.121	-12.172
127	-12.315	-12.080	-12.141
151	-12.315	-12.090	-12.141
152	-12.315	-12.121	-12.162
176	-12.355	-12.121	-12.172
177	-12.274	-12.019	-12.080
201	-12.345	-12.101	-12.162
202	-12.345	-12.111	-12.172
226	-12.274	-12.009	-12.070
227	-12.325	-12.090	-12.141
min	-12.355	-12.141	-12.182
max	-12.274	-12.009	-12.070
stdev	0.025	0.038	0.033
average	-12.321	-12.087	-12.143
+3S	-12.246	-11.975	-12.043
-3S	-12.396	-12.200	-12.243

T# 4.0	+VOM RI=2K A		V
SN	Initial	100K	24Hr
1	13.781	13.781	13.771
2	13.781	13.272	13.547
3	13.792	13.292	13.567
4	13.771	13.262	13.547
26	13.853	13.618	13.720
27	13.853	13.466	13.690
28	13.853	13.496	13.690
51	13.853	13.445	13.700
52	13.863	13.476	13.700
76	13.802	13.323	13.598
77	13.802	13.354	13.608
101	13.853	13.435	13.679
102	13.853	13.466	13.679
126	13.863	13.435	13.700
127	13.853	13.415	13.669
151	13.812	13.394	13.618
152	13.802	13.516	13.659
176	13.853	13.445	13.690
177	13.792	13.343	13.578
201	13.863	13.425	13.700
202	13.863	13.445	13.700
226	13.812	13.343	13.598
227	13.842	13.425	13.669
min	13.771	13.262	13.547
max	13.863	13.618	13.720
stdev	0.031	0.085	0.056
average	13.831	13.413	13.650
+3S	13.925	13.669	13.819
-3S	13.737	13.158	13.482



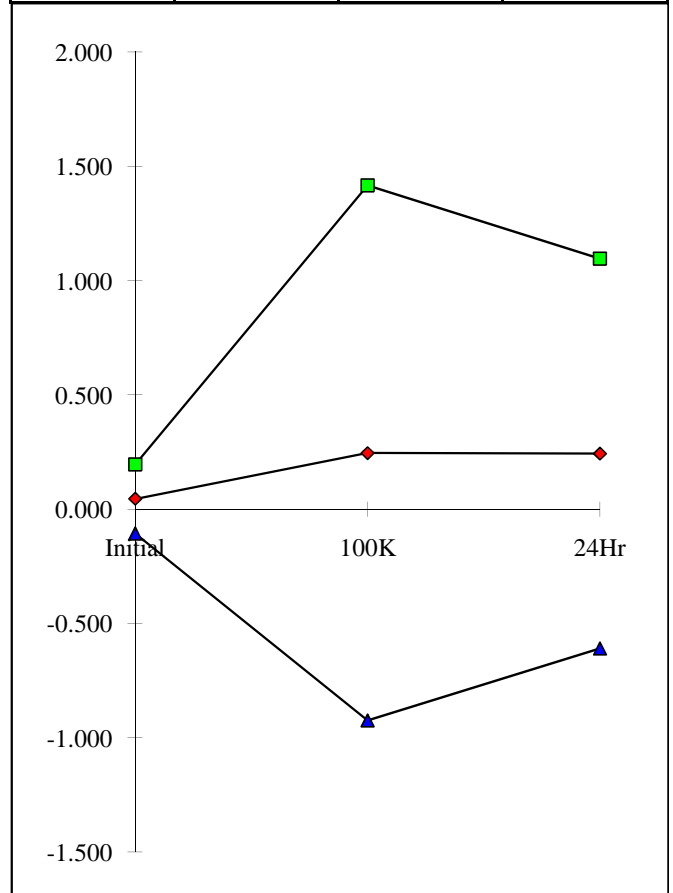
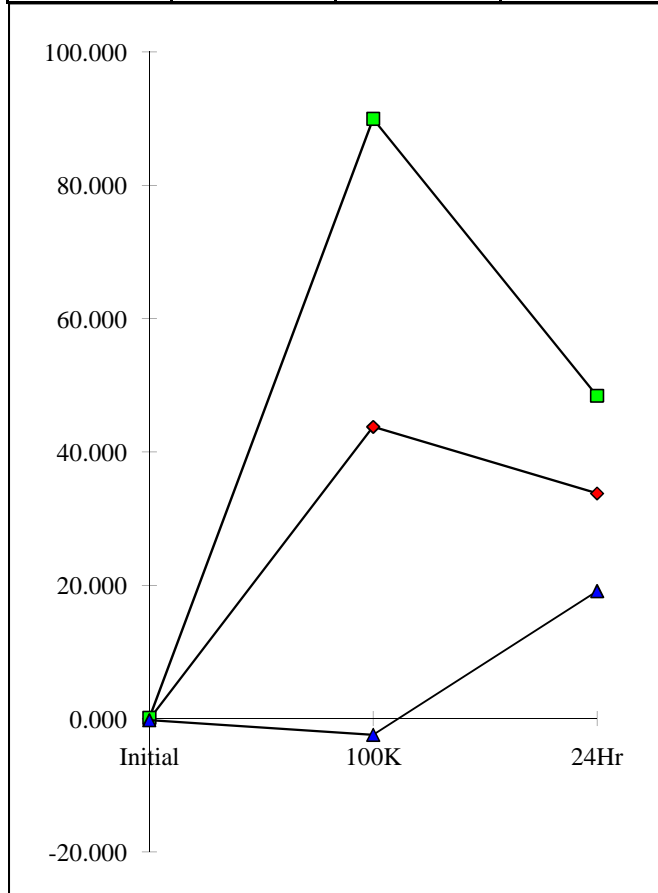
T# 5.0	-VOM RI=2K A		V
SN	Initial	100K	24Hr
1	-12.803	-12.803	-12.803
2	-12.803	-12.753	-12.793
3	-12.803	-12.753	-12.793
4	-12.803	-12.742	-12.783
26	-12.844	-12.824	-12.834
27	-12.844	-12.803	-12.834
28	-12.834	-12.814	-12.834
51	-12.844	-12.814	-12.844
52	-12.834	-12.824	-12.844
76	-12.814	-12.773	-12.803
77	-12.824	-12.773	-12.814
101	-12.834	-12.803	-12.824
102	-12.834	-12.803	-12.834
126	-12.824	-12.814	-12.824
127	-12.824	-12.783	-12.824
151	-12.824	-12.783	-12.814
152	-12.824	-12.803	-12.824
176	-12.834	-12.814	-12.824
177	-12.814	-12.742	-12.763
201	-12.844	-12.803	-12.834
202	-12.834	-12.814	-12.834
226	-12.814	-12.732	-12.763
227	-12.824	-12.793	-12.824
min	-12.844	-12.824	-12.844
max	-12.803	-12.732	-12.763
stdev	0.013	0.029	0.024
average	-12.826	-12.789	-12.816
+3S	-12.786	-12.703	-12.745
-3S	-12.866	-12.875	-12.888

T# 6.0	+IB A		nA
SN	Initial	100K	24Hr
1	0.151	0.157	0.163
2	0.127	60.751	41.503
3	0.175	58.946	39.699
4	0.103	59.548	40.300
26	0.145	28.270	19.849
27	0.115	45.714	31.879
28	0.060	41.503	29.473
51	0.024	44.511	30.676
52	0.030	45.714	31.278
76	0.036	55.338	37.894
77	0.048	53.533	36.691
101	0.024	50.526	35.488
102	0.073	46.488	33.684
126	0.054	55.338	38.496
127	0.048	52.330	34.887
151	0.054	51.127	33.684
152	0.036	38.496	25.864
176	0.018	49.323	35.488
177	0.042	42.706	31.879
201	-0.024	50.526	35.488
202	-0.012	49.323	34.887
226	-0.139	49.323	34.285
227	0.006	49.924	34.887
min	-0.139	28.270	19.849
max	0.175	60.751	41.503
stdev	0.065	7.414	4.854
average	0.047	49.057	34.012
+3S	0.242	71.301	48.573
-3S	-0.147	26.814	19.450



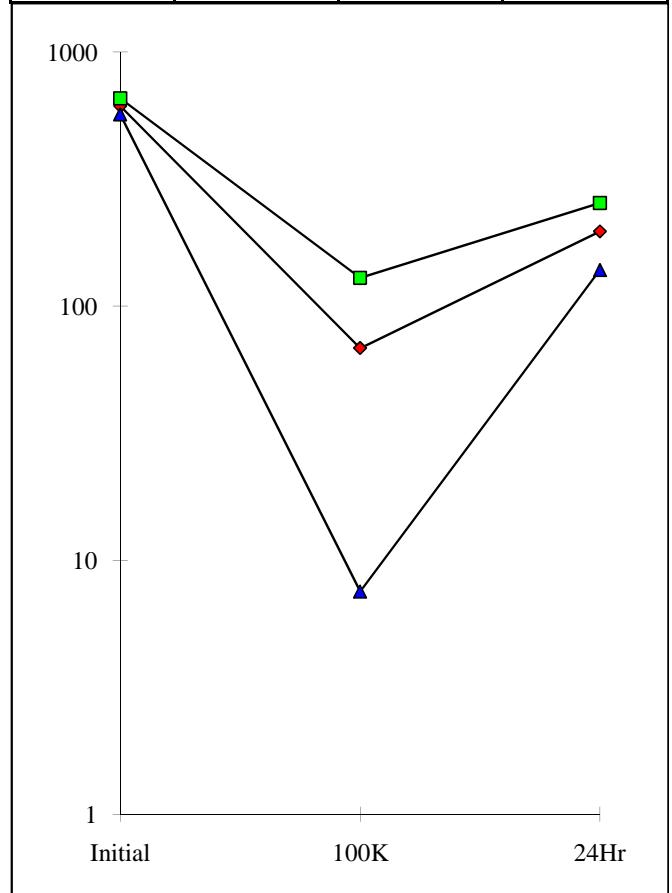
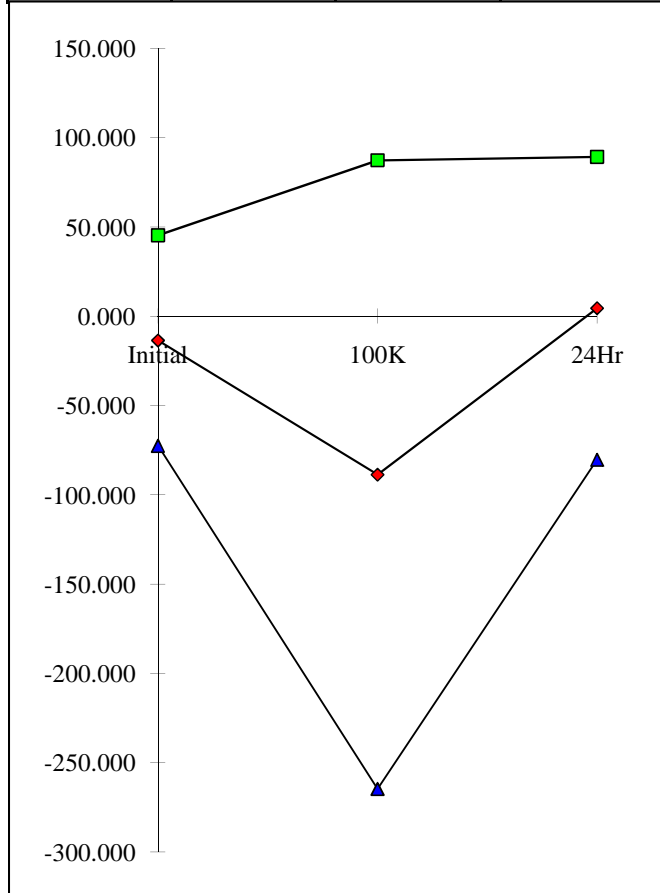
T# 7.0	-IB A		nA
SN	Initial	100K	24Hr
1	0.054	0.054	0.048
2	-0.006	60.751	40.902
3	0.060	58.946	39.699
4	-0.085	60.149	39.699
26	0.042	27.669	19.248
27	0.006	46.315	31.879
28	0.006	41.503	29.473
51	-0.103	44.511	31.278
52	-0.042	10.820	31.278
76	0.000	55.939	37.293
77	-0.091	53.533	36.691
101	-0.073	50.526	35.488
102	-0.048	46.366	33.082
126	0.036	55.338	37.894
127	-0.127	10.578	36.090
151	-0.036	49.924	33.082
152	-0.091	37.894	25.263
176	-0.018	10.808	35.488
177	-0.036	42.706	31.278
201	-0.073	50.526	34.887
202	-0.085	49.323	34.285
226	-0.103	49.924	33.684
227	-0.097	49.323	35.488
min	-0.127	10.578	19.248
max	0.060	60.751	40.902
stdev	0.053	15.400	4.878
average	-0.044	43.790	33.793
+3S	0.116	89.991	48.428
-3S	-0.204	-2.411	19.158

T# 8.0	IOS A		nA
SN	Initial	100K	24Hr
1	0.073	0.060	0.073
2	0.085	0.308	0.339
3	0.036	-0.036	0.006
4	0.127	0.085	0.387
26	0.079	1.216	0.847
27	0.067	0.429	0.429
28	-0.006	0.381	0.405
51	0.079	-0.254	-0.115
52	0.030	-0.079	-0.145
76	0.012	0.302	0.284
77	0.109	0.720	0.460
101	0.060	-0.194	-0.139
102	0.085	0.308	0.248
126	-0.036	0.067	0.224
127	0.133	0.006	0.248
151	0.042	1.004	0.804
152	0.054	0.774	0.629
176	0.000	-0.036	0.079
177	0.012	-0.169	-0.048
201	0.018	-0.067	-0.054
202	0.042	0.278	0.242
226	-0.073	0.103	0.200
227	0.042	0.266	0.030
min	-0.073	-0.254	-0.145
max	0.133	1.216	0.847
stdev	0.050	0.390	0.284
average	0.045	0.246	0.244
+3S	0.196	1.417	1.096
-3S	-0.106	-0.925	-0.609



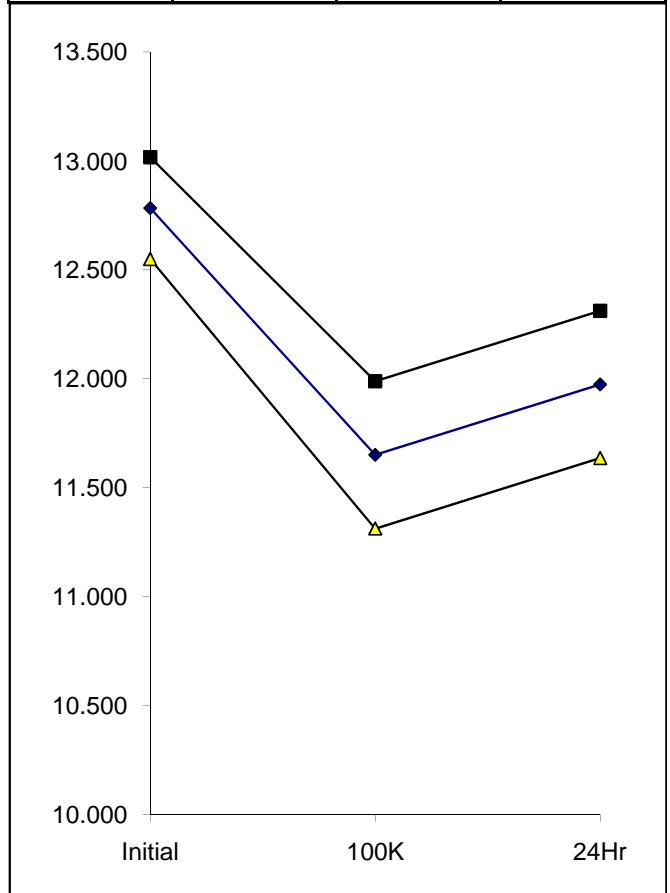
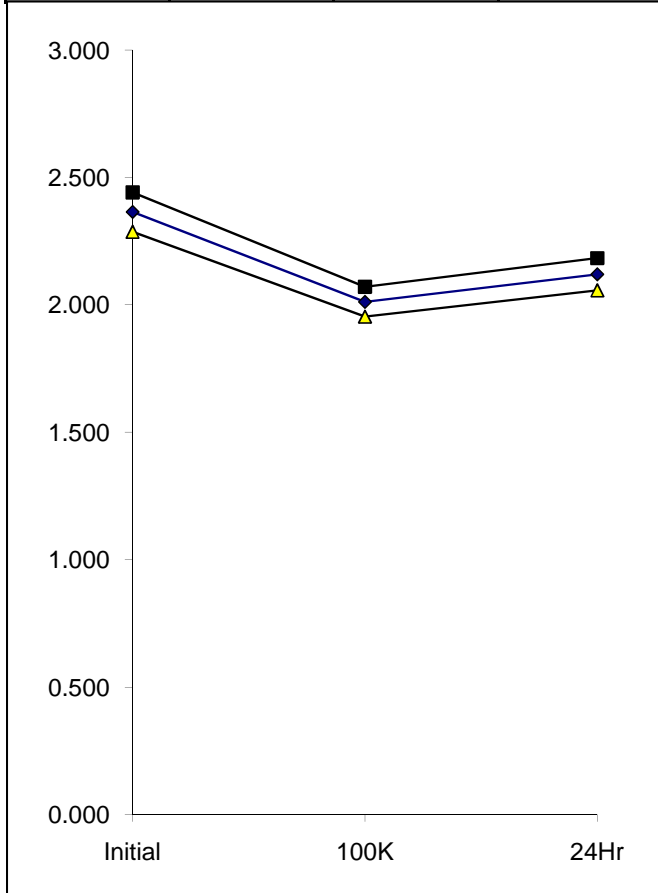
T# 9.0	VOS A		uV
	Initial	100K	24Hr
1	-31.143	-30.662	-30.782
2	-34.389	-140.683	-17.435
3	-6.734	-69.740	23.327
4	-51.343	-113.388	-17.796
26	0.361	35.471	33.307
27	-23.327	-108.218	-15.992
28	3.968	-36.313	22.966
51	-28.497	-81.885	18.637
52	-10.221	-157.156	-14.189
76	20.321	-40.401	51.945
77	-0.240	-55.792	20.201
101	-20.441	-127.697	-6.854
102	-11.904	-128.899	-16.954
126	-32.225	-150.182	-26.092
127	-56.393	-182.167	-55.311
151	-2.044	-7.335	42.926
152	13.708	16.954	30.902
176	-14.910	-161.605	-40.642
177	-13.828	-61.925	0.842
201	0.842	-128.779	16.473
202	-3.848	-83.207	27.656
226	-31.383	-103.889	-8.778
227	3.487	-64.209	29.459
min	-56.393	-182.167	-55.311
max	20.321	35.471	51.945
stdev	19.622	58.675	28.264
average	-13.593	-88.684	4.482
+3S	45.272	87.342	89.274
-3S	-72.458	-264.709	-80.311

T# 10.0	AVO RI=2K VO=+/-10V A		V/mV
	Initial	100K	24Hr
1	583	606	596
2	605	55	179
3	584	57	183
4	607	57	181
26	632	136	262
27	612	69	190
28	621	75	195
51	624	59	201
52	633	58	199
76	614	61	187
77	597	64	190
101	593	62	191
102	624	67	189
126	609	54	178
127	600	59	194
151	623	81	208
152	604	114	231
176	614	61	181
177	637	81	208
201	597	52	182
202	605	56	192
226	636	66	211
227	621	63	198
min	584	52	178
max	637	136	262
stdev	15	20	19
average	613	68	197
+3S	657	129	255
-3S	569	8	139



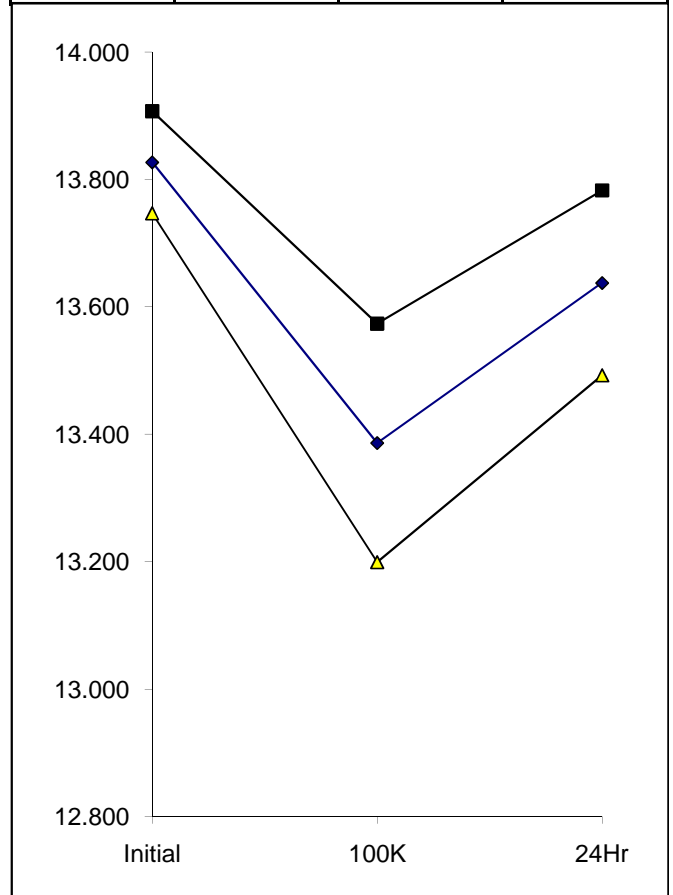
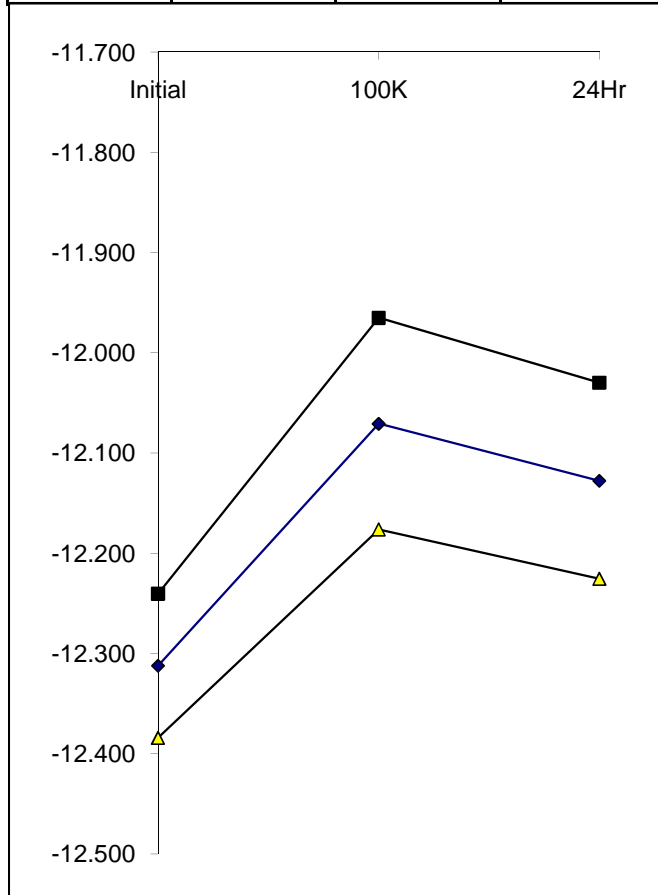
T# 11.0	ISY B		mA
SN	Initial	100K	24Hr
1	2.358	2.364	2.359
2	2.348	2.001	2.114
3	2.356	2.019	2.124
4	2.352	2.011	2.123
26	2.322	1.977	2.081
27	2.354	2.016	2.110
28	2.318	1.977	2.072
51	2.394	2.012	2.132
52	2.415	2.036	2.150
76	2.343	1.990	2.097
77	2.352	1.999	2.110
101	2.370	2.022	2.126
102	2.369	2.036	2.132
126	2.363	2.011	2.121
127	2.373	2.021	2.134
151	2.330	2.012	2.117
152	2.354	2.001	2.102
176	2.382	2.020	2.128
177	2.373	2.033	2.129
201	2.368	1.999	2.118
202	2.376	1.998	2.120
226	2.399	2.021	2.145
227	2.411	2.059	2.166
min	2.318	1.977	2.072
max	2.415	2.059	2.166
stdev	0.026	0.019	0.021
average	2.365	2.012	2.121
+3S	2.442	2.071	2.183
-3S	2.287	1.954	2.058

T# 12.0	+VOM RI=1K B		V
SN	Initial	100K	24Hr
1	12.671	12.671	12.661
2	12.661	11.449	11.775
3	12.722	11.530	11.866
4	12.671	11.469	11.805
26	12.865	11.754	12.080
27	12.753	11.663	11.948
28	12.854	11.775	12.060
51	12.875	11.765	12.121
52	12.905	11.836	12.172
76	12.732	11.551	11.897
77	12.753	11.591	11.938
101	12.824	11.714	12.029
102	12.742	11.683	11.938
126	12.865	11.724	12.070
127	12.865	11.765	12.101
151	12.671	11.479	11.815
152	12.661	11.530	11.826
176	12.753	11.612	11.928
177	12.834	11.734	12.029
201	12.773	11.622	11.948
202	12.824	11.683	12.029
226	12.773	11.622	11.968
227	12.865	11.765	12.090
min	12.661	11.449	11.775
max	12.905	11.836	12.172
stdev	0.078	0.113	0.113
average	12.784	11.651	11.974
+3S	13.017	11.989	12.312
-3S	12.550	11.312	11.636



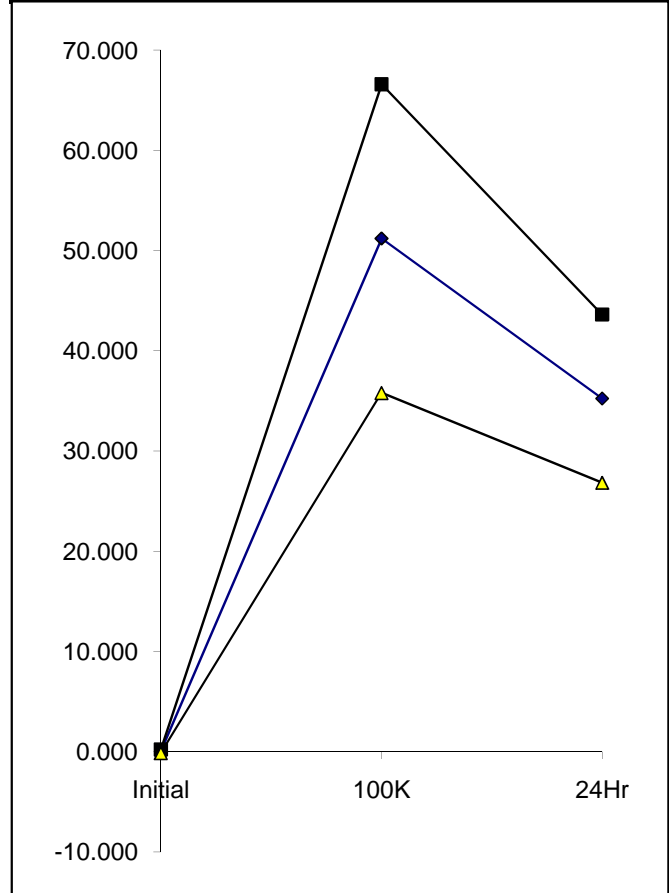
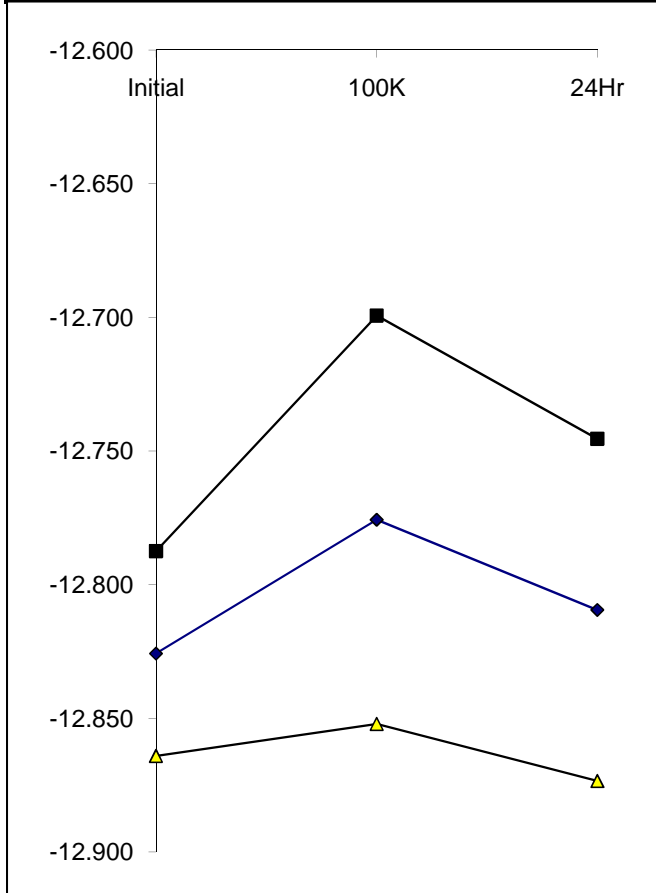
T# 13.0	-VOM RI=1K B		V
SN	Initial	100K	24Hr
1	-12.294	-12.294	-12.294
2	-12.294	-12.029	-12.090
3	-12.315	-12.060	-12.121
4	-12.294	-12.040	-12.101
26	-12.335	-12.111	-12.162
27	-12.274	-12.050	-12.101
28	-12.325	-12.111	-12.162
51	-12.335	-12.090	-12.152
52	-12.355	-12.141	-12.192
76	-12.304	-12.050	-12.111
77	-12.315	-12.080	-12.141
101	-12.325	-12.080	-12.141
102	-12.284	-12.050	-12.090
126	-12.335	-12.101	-12.152
127	-12.335	-12.111	-12.162
151	-12.284	-12.029	-12.101
152	-12.294	-12.050	-12.101
176	-12.294	-12.050	-12.101
177	-12.345	-12.111	-12.162
201	-12.284	-12.019	-12.080
202	-12.304	-12.050	-12.111
226	-12.294	-12.029	-12.101
227	-12.345	-12.111	-12.172
min	-12.355	-12.141	-12.192
max	-12.274	-12.019	-12.080
stdev	0.024	0.035	0.033
average	-12.312	-12.071	-12.128
+3S	-12.240	-11.965	-12.030
-3S	-12.384	-12.176	-12.225

T# 14.0	+VOM RI=2K B		V
SN	Initial	100K	24Hr
1	13.781	13.781	13.771
2	13.781	13.272	13.547
3	13.802	13.323	13.598
4	13.781	13.282	13.567
26	13.863	13.445	13.700
27	13.832	13.394	13.629
28	13.853	13.466	13.679
51	13.853	13.445	13.690
52	13.863	13.486	13.710
76	13.802	13.343	13.608
77	13.812	13.374	13.618
101	13.842	13.425	13.669
102	13.822	13.404	13.618
126	13.853	13.415	13.679
127	13.853	13.445	13.690
151	13.792	13.282	13.567
152	13.792	13.333	13.578
176	13.822	13.374	13.618
177	13.842	13.435	13.669
201	13.822	13.354	13.618
202	13.842	13.384	13.659
226	13.822	13.364	13.629
227	13.853	13.455	13.690
min	13.781	13.272	13.547
max	13.863	13.486	13.710
stdev	0.027	0.062	0.048
average	13.827	13.386	13.638
+3S	13.907	13.574	13.783
-3S	13.747	13.199	13.493



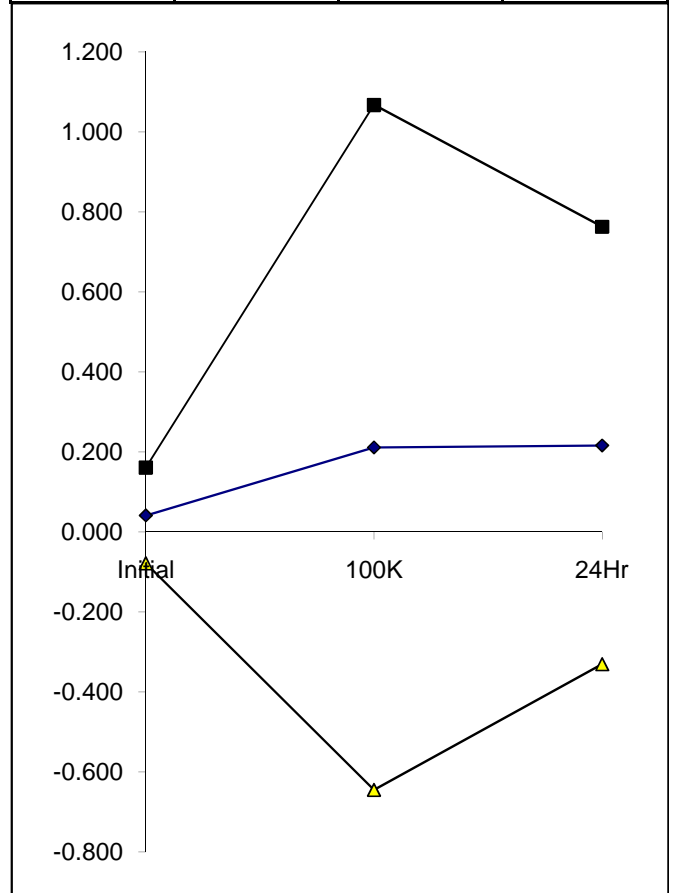
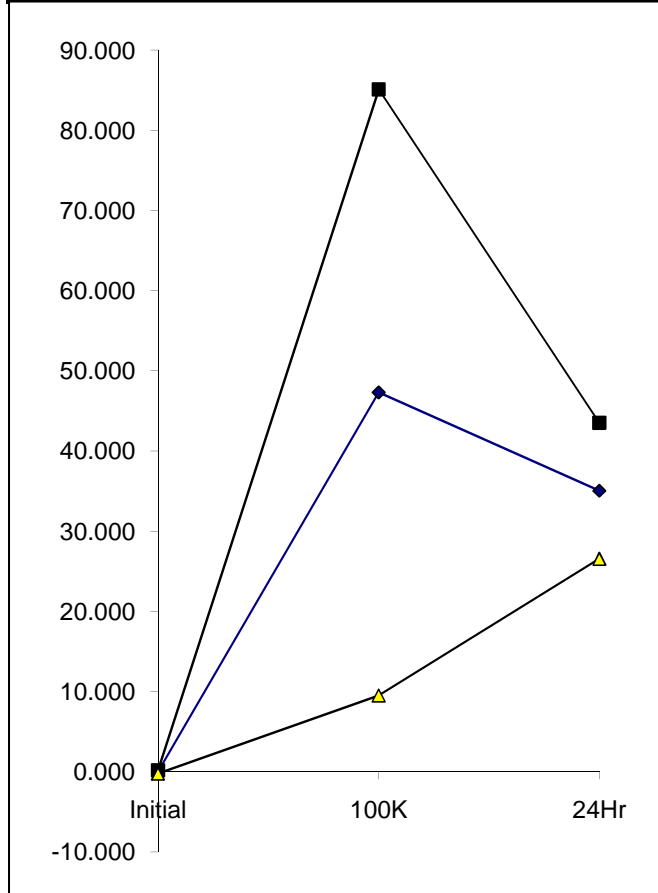
T# 15.0	-VOM RI=2K B		V
SN	Initial	100K	24Hr
1	-12.803	-12.814	-12.814
2	-12.803	-12.742	-12.793
3	-12.814	-12.773	-12.803
4	-12.803	-12.753	-12.793
26	-12.844	-12.803	-12.844
27	-12.814	-12.763	-12.793
28	-12.844	-12.803	-12.834
51	-12.834	-12.793	-12.834
52	-12.844	-12.824	-12.844
76	-12.824	-12.763	-12.814
77	-12.834	-12.783	-12.824
101	-12.834	-12.783	-12.824
102	-12.814	-12.753	-12.783
126	-12.834	-12.793	-12.824
127	-12.834	-12.803	-12.824
151	-12.814	-12.742	-12.783
152	-12.814	-12.753	-12.783
176	-12.814	-12.763	-12.793
177	-12.834	-12.803	-12.824
201	-12.834	-12.742	-12.783
202	-12.824	-12.763	-12.803
226	-12.824	-12.753	-12.783
227	-12.834	-12.814	-12.824
min	-12.844	-12.824	-12.844
max	-12.803	-12.742	-12.783
stdev	0.013	0.025	0.021
average	-12.826	-12.776	-12.809
+3S	-12.787	-12.699	-12.745
-3S	-12.864	-12.852	-12.873

T# 16.0	+IB B		nA
SN	Initial	100K	24Hr
1	0.030	0.018	0.018
2	0.133	61.352	40.902
3	0.048	57.744	39.097
4	0.163	60.149	39.699
26	0.127	48.721	33.684
27	0.097	50.526	34.887
28	0.145	45.112	31.879
51	0.030	42.706	30.676
52	0.018	46.315	31.278
76	0.085	54.135	36.691
77	0.054	52.932	36.090
101	0.048	49.924	34.887
102	0.042	45.714	31.879
126	0.060	52.330	36.090
127	0.067	52.932	36.090
151	0.091	60.149	39.699
152	0.079	54.135	36.691
176	0.060	49.924	35.488
177	0.060	45.714	33.684
201	-0.079	49.323	34.285
202	0.048	49.323	33.684
226	-0.048	48.721	33.684
227	-0.006	48.721	34.285
min	-0.079	42.706	30.676
max	0.163	61.352	40.902
stdev	0.058	5.132	2.795
average	0.060	51.209	35.242
+3S	0.233	66.604	43.626
-3S	-0.113	35.814	26.858



T# 17.0	-IB B		nA
SN	Initial	100K	24Hr
1	0.018	0.024	0.024
2	0.024	10.759	40.902
3	0.006	57.142	37.894
4	0.036	60.751	40.300
26	0.079	48.120	33.684
27	0.115	51.729	34.285
28	0.054	45.112	31.879
51	-0.054	43.308	30.075
52	-0.085	46.315	30.676
76	-0.054	53.533	36.691
77	-0.048	52.330	35.488
101	-0.085	49.924	34.887
102	-0.006	45.714	31.879
126	0.012	51.729	35.488
127	-0.030	53.533	35.488
151	0.030	59.548	39.699
152	0.024	53.533	36.090
176	-0.006	49.924	35.488
177	0.036	10.789	34.285
201	-0.157	48.721	33.684
202	-0.054	49.924	33.684
226	-0.103	49.323	34.285
227	-0.097	49.323	34.285
min	-0.157	10.759	30.075
max	0.115	60.751	40.902
stdev	0.066	12.598	2.829
average	-0.017	47.322	35.051
+3S	0.182	85.116	43.536
-3S	-0.215	9.528	26.565

T# 18.0	IOS B		nA
SN	Initial	100K	24Hr
1	-0.018	-0.060	-0.012
2	0.079	0.042	0.284
3	0.018	0.702	0.641
4	0.073	-0.127	-0.115
26	0.012	0.187	0.151
27	-0.060	-0.151	0.042
28	0.036	-0.018	0.151
51	0.012	0.308	0.333
52	0.067	0.327	0.242
76	0.103	0.345	0.079
77	0.085	0.538	0.448
101	0.103	0.218	0.157
102	0.042	0.472	0.375
126	0.024	0.163	0.387
127	0.079	0.405	0.327
151	0.042	0.823	0.393
152	-0.024	0.157	0.127
176	0.048	-0.097	0.036
177	0.006	-0.067	0.224
201	0.048	0.460	0.369
202	0.048	-0.284	0.079
226	0.018	0.218	-0.067
227	0.054	0.036	0.103
min	-0.060	-0.284	-0.115
max	0.103	0.823	0.641
stdev	0.040	0.285	0.182
average	0.042	0.212	0.217
+3S	0.161	1.068	0.763
-3S	-0.078	-0.645	-0.330



T# 19.0	VOS B		uV
	Initial	100K	
SN	Initial	100K	24Hr
1	-4.930	-6.012	-5.050
2	-14.189	-163.769	-13.227
3	6.253	-125.172	5.050
4	1.804	-87.175	34.630
26	-39.800	-126.014	-24.169
27	-23.086	-56.273	22.485
28	23.086	-57.235	32.105
51	23.207	-47.496	46.053
52	-33.788	-132.867	-16.954
76	31.263	8.778	73.348
77	2.285	-16.954	45.451
101	-20.922	-67.456	9.619
102	-1.202	-35.111	28.137
126	-7.816	-138.519	-2.886
127	-15.992	-130.462	-4.689
151	13.587	-54.710	20.201
152	-20.201	10.221	60.241
176	-32.105	-106.655	-17.435
177	-28.858	-161.605	-34.509
201	-13.708	-103.889	13.227
202	-17.916	-111.464	6.974
226	-32.826	-112.065	-16.954
227	9.860	-108.338	15.391
min	-39.800	-163.769	-34.509
max	31.263	10.221	73.348
stdev	20.462	50.931	28.412
average	-8.685	-87.465	12.822
+3S	52.703	65.329	98.057
-3S	-70.072	-240.259	-72.412

T# 20.0	AVO RI=2K VO=+/-10V B		V/mV
	Initial	100K	
SN	Initial	100K	24Hr
1	588	612	575
2	593	51	177
3	595	56	179
4	614	55	181
26	638	57	184
27	605	63	187
28	612	64	181
51	604	57	196
52	596	56	197
76	594	60	189
77	597	63	189
101	641	64	190
102	607	75	199
126	629	54	177
127	607	56	184
151	663	58	188
152	635	69	192
176	622	67	193
177	597	64	173
201	623	54	189
202	638	52	190
226	639	62	204
227	597	59	184
min	593	51	173
max	663	75	204
stdev	20	6	8
average	616	60	187
+3S	676	77	210
-3S	556	42	164

