

# ***RADIATION TEST REPORT***

PRODUCT: PM108AJQLR

MASK:

FILE:

DATE CODE:

GAMMA: 0, 100K,24Hr,

GAMMA SOURCE: Co60

DOSE RATE: 41.29 rad/sec	8/16/2004
40.11 rad/sec	11/4/2004

FACILITIES: National Semiconductor  
Sunnyvale, Ca.

TESTED: 8/16/04 & 11/04/04

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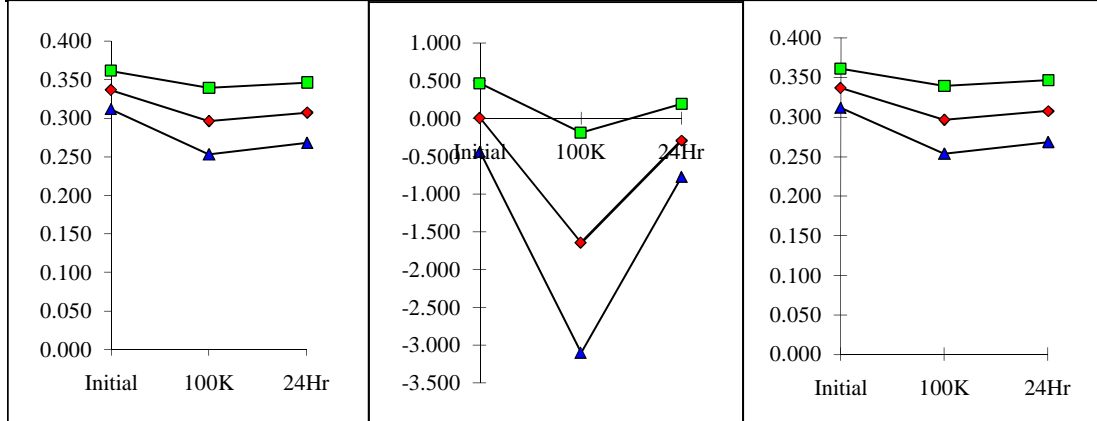
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**WARNING:**

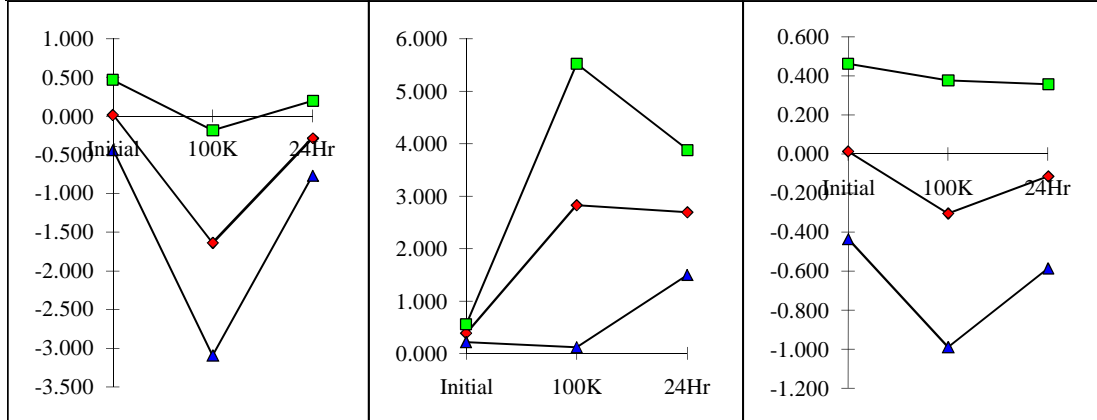
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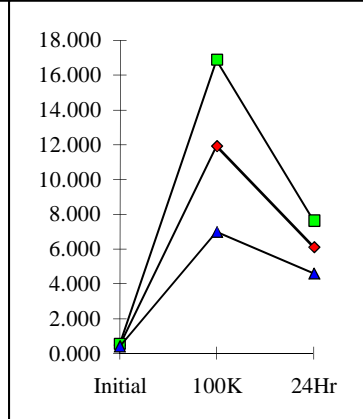
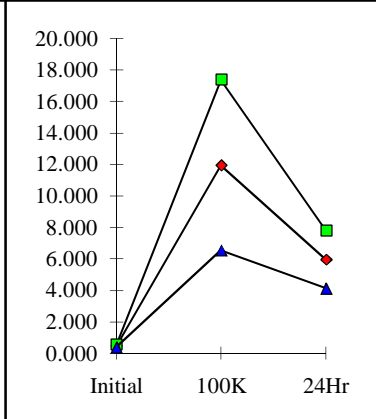
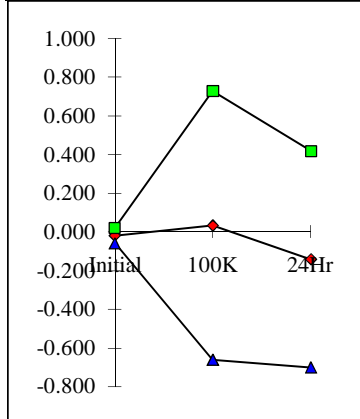
1.0 ICC, VCC=+-15V mA				2.0 VIO, VCM=-15V mV				3.0 IIO, VCM=-15V nA			
SN	Initial	100K	24Hr	SN	Initial	100K	24Hr	SN	Initial	100K	24Hr
1	0.329	0.331	0.328	1	0.090	0.086	0.093	1	0.035	0.034	0.038
37	0.348	0.348	0.347	37	0.254	0.249	0.247	37	0.073	0.069	0.071
9	0.325	0.276	0.289	9	-0.004	-2.244	-0.322	9	-0.072	-1.288	-0.112
10	0.329	0.284	0.296	10	-0.006	-2.083	-0.373	10	0.003	-1.235	-0.048
11	0.329	0.285	0.296	11	0.076	-2.025	-0.252	11	0.025	-1.157	-0.088
38	0.343	0.308	0.318	38	0.152	-1.074	-0.080	38	0.060	-0.445	0.223
39	0.344	0.308	0.319	39	-0.286	-1.477	-0.562	39	-0.049	-0.874	-0.144
40	0.340	0.300	0.311	40	-0.020	-1.545	-0.318	40	0.017	-0.930	-0.157
41	0.344	0.312	0.320	41	0.166	-1.047	-0.121	41	0.066	-0.371	0.320
min	0.325	0.276	0.289	min	-0.286	-2.244	-0.562	min	-0.072	-1.288	-0.157
max	0.344	0.312	0.320	max	0.166	-1.047	-0.080	max	0.066	-0.371	0.320
stdev	0.008	0.014	0.013	stdev	0.152	0.486	0.162	stdev	0.052	0.369	0.192
average	0.336	0.296	0.307	average	0.011	-1.642	-0.290	average	0.007	-0.900	-0.001
+3S	0.361	0.339	0.346	+3S	0.466	-0.184	0.195	+3S	0.163	0.207	0.574
-3S	0.311	0.253	0.268	-3S	-0.444	-3.100	-0.775	-3S	-0.148	-2.007	-0.575



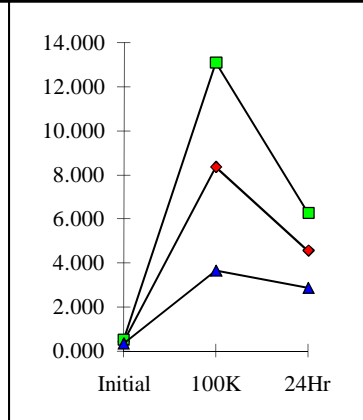
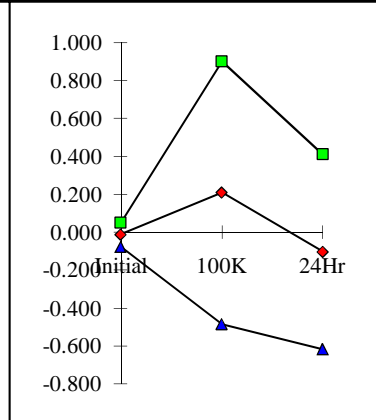
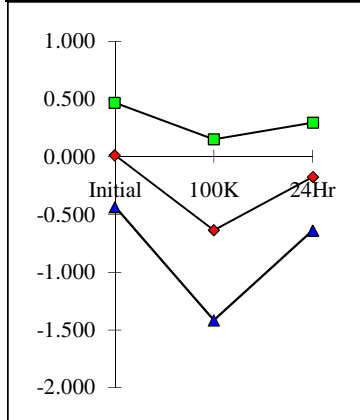
4.0 +IIB, VCM=-15V nA				5.0 -IIB, VCM=-15V nA				6.0 VIO, VCM=+15V mV			
SN	Initial	100K	24Hr	SN	Initial	100K	24Hr	SN	Initial	100K	24Hr
1	0.385	0.380	0.381	1	0.436	0.432	0.436	1	0.093	0.090	0.096
37	0.371	0.376	0.383	37	0.500	0.499	0.507	37	0.253	0.247	0.244
9	0.380	5.198	3.188	9	0.310	3.508	3.013	9	0.001	-0.409	-0.124
10	0.436	5.766	3.539	10	0.441	4.185	3.422	10	-0.001	-0.534	-0.172
11	0.359	4.731	2.791	11	0.403	3.216	2.649	11	0.079	-0.457	-0.063
38	0.362	2.666	2.321	38	0.446	2.040	2.539	38	0.154	-0.053	0.062
39	0.458	3.446	2.812	39	0.342	2.325	2.563	39	-0.281	-0.528	-0.408
40	0.345	4.108	2.556	40	0.355	2.905	2.347	40	-0.017	-0.140	-0.134
41	0.353	2.152	2.004	41	0.455	1.592	2.300	41	0.165	-0.014	0.042
min	0.345	2.152	2.004	min	0.310	1.592	2.300	min	-0.281	-0.534	-0.408
max	0.458	5.766	3.539	max	0.455	4.185	3.422	max	0.165	-0.014	0.062
stdev	0.044	1.329	0.516	stdev	0.058	0.900	0.398	stdev	0.150	0.228	0.157
average	0.385	4.010	2.744	average	0.393	2.824	2.690	average	0.014	-0.305	-0.114
+3S	0.518	7.997	4.293	+3S	0.566	5.525	3.884	+3S	0.464	0.379	0.358
-3S	0.252	0.022	1.196	-3S	0.220	0.124	1.496	-3S	-0.436	-0.989	-0.585



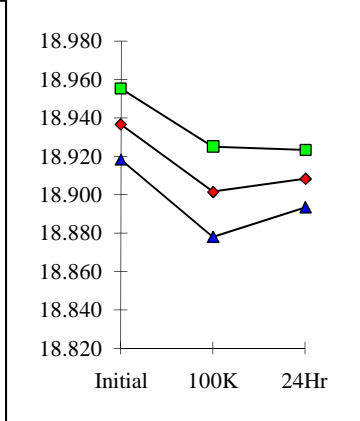
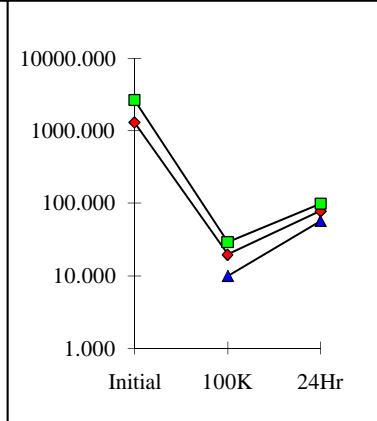
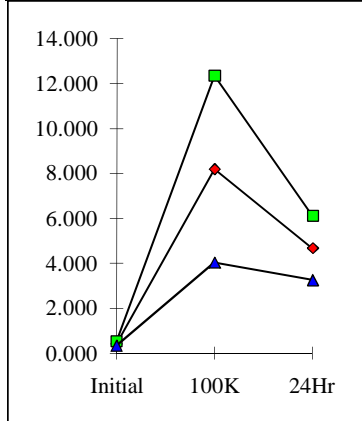
7.0 IIO, VCM=+15V nA				8.0 +IIB, VCM=+15V nA				9.0 -IIB, VCM=+15V nA			
SN	Initial	100K	24Hr	SN	Initial	100K	24Hr	SN	Initial	100K	24Hr
1	-0.028	-0.026	-0.027	1	0.472	0.462	0.465	1	0.490	0.485	0.487
37	-0.031	-0.030	-0.030	37	0.510	0.499	0.508	37	0.533	0.529	0.533
9	-0.006	0.095	-0.032	9	0.465	13.876	6.566	9	0.463	13.776	6.615
10	-0.009	0.235	-0.126	10	0.508	14.051	6.795	10	0.513	13.843	6.944
11	-0.015	0.170	-0.041	11	0.439	12.497	5.909	11	0.447	12.319	5.973
38	-0.033	-0.265	-0.341	38	0.475	10.524	5.562	38	0.494	10.767	5.932
39	-0.006	0.228	-0.026	39	0.483	11.034	5.900	39	0.478	10.818	5.947
40	-0.027	0.091	0.035	40	0.423	12.541	5.957	40	0.444	12.479	5.932
41	-0.039	-0.327	-0.463	41	0.468	9.124	4.944	41	0.506	9.452	5.415
min	-0.039	-0.327	-0.463	min	0.423	9.124	4.944	min	0.444	9.452	5.415
max	-0.006	0.235	0.035	max	0.508	14.051	6.795	max	0.513	13.843	6.944
stdev	0.014	0.232	0.187	stdev	0.028	1.809	0.614	stdev	0.028	1.646	0.507
average	-0.019	0.032	-0.142	average	0.466	11.950	5.948	average	0.478	11.922	6.108
+3S	0.022	0.729	0.419	+3S	0.550	17.376	7.789	+3S	0.561	16.859	7.629
-3S	-0.060	-0.664	-0.703	-3S	0.382	6.523	4.106	-3S	0.395	6.985	4.587



10.0 VIO, +20V, VCM=0V mV				11.0 IIO, +20V, VCM=0V nA				12.0 +IIB, +20V, VCM=0V nA			
SN	Initial	100K	24Hr	SN	Initial	100K	24Hr	SN	Initial	100K	24Hr
1	0.091	0.088	0.094	1	-0.025	-0.023	-0.024	1	0.431	0.430	0.432
37	0.254	0.248	0.244	37	-0.028	-0.025	-0.027	37	0.460	0.462	0.470
9	-0.001	-0.851	-0.198	9	0.031	0.357	-0.004	9	0.412	9.944	5.106
10	-0.003	-0.904	-0.235	10	-0.005	0.416	-0.073	10	0.468	10.300	5.397
11	0.078	-0.814	-0.125	11	-0.011	0.346	-0.012	11	0.401	8.983	4.577
38	0.153	-0.338	0.005	38	-0.033	-0.083	-0.290	38	0.423	7.003	4.186
39	-0.285	-0.787	-0.460	39	-0.008	0.329	0.009	39	0.433	7.617	4.538
40	-0.019	-0.463	-0.194	40	-0.020	0.258	0.056	40	0.379	8.760	4.474
41	0.165	-0.291	-0.013	41	-0.031	-0.159	-0.396	41	0.429	5.981	3.672
min	-0.285	-0.904	-0.460	min	-0.033	-0.159	-0.396	min	0.379	5.981	3.672
max	0.165	-0.291	0.005	max	0.031	0.416	0.056	max	0.468	10.300	5.397
stdev	0.151	0.261	0.156	stdev	0.022	0.231	0.172	stdev	0.028	1.574	0.568
average	0.013	-0.635	-0.174	average	-0.011	0.209	-0.101	average	0.421	8.370	4.564
+3S	0.466	0.149	0.295	+3S	0.054	0.903	0.415	+3S	0.504	13.093	6.268
-3S	-0.441	-1.420	-0.644	-3S	-0.076	-0.485	-0.618	-3S	0.337	3.646	2.861



13.0 -IIB, +20V, VCM=0V				14.0			15.0				
SN	Initial	100K	24Hr	SN	Initial	100K	24Hr	SN	Initial	100K	24Hr
1	0.458	0.451	0.456	1	2231	2007	2188	1	18.931	18.934	18.934
37	0.490	0.489	0.498	37	1016	915	928	37	18.937	18.943	18.937
9	0.387	9.625	5.134	9	1303	16	73	9	18.931	18.892	18.905
10	0.471	9.944	5.494	10	2160	19	84	10	18.930	18.893	18.905
11	0.414	8.653	4.602	11	1674	18	77	11	18.934	18.897	18.906
38	0.459	7.109	4.477	38	994	22	82	38	18.939	18.905	18.908
39	0.437	7.314	4.553	39	1030	25	90	39	18.940	18.908	18.910
40	0.395	8.543	4.430	40	1110	17	70	40	18.948	18.913	18.919
41	0.454	6.148	4.068	41	929	21	73	41	18.936	18.903	18.906
min	0.387	6.148	4.068	min	929.000	15.531	69.962	min	18.930	18.892	18.905
max	0.471	9.944	5.494	max	2159.900	24.732	89.677	max	18.948	18.913	18.919
stdev	0.033	1.389	0.478	stdev	450.580	3.226	7.154	stdev	0.006	0.008	0.005
average	0.431	8.191	4.680	average	1314.329	19.719	78.349	average	18.937	18.902	18.908
+3S	0.530	12.359	6.113	+3S	2666	29	100	+3S	18.955	18.925	18.923
-3S	0.332	4.023	3.247	-3S	-37	10	57	-3S	18.918	18.878	18.893



16.0 VOP-, +20V, RL=10K			
SN	Initial	100K	24Hr
1	-19.081	-19.090	-19.084
37	-19.072	-19.079	-19.071
9	-19.082	-18.972	-19.002
10	-19.082	-18.981	-19.004
11	-19.082	-18.982	-19.006
38	-19.074	-18.977	-18.995
39	-19.076	-18.983	-19.000
40	-19.085	-18.944	-18.993
41	-19.073	-18.962	-18.988
min	-19.085	-18.983	-19.006
max	-19.073	-18.944	-18.988
stdev	0.005	0.014	0.006
average	-19.079	-18.972	-18.998
+3S	-19.065	-18.929	-18.979
-3S	-19.093	-19.014	-19.018

