

RADIATION TEST REPORT

PRODUCT: OP215R000C

MASK:

FILE:

DATE CODE:

GAMMA: 0, 100K,24Hr.

GAMMA SOURCE: Co60

DOSE RATE: 39.22 rad/sec

FACILITIES: National Semiconductor
Sunnyvale, Ca.

TESTED: January 05,2005

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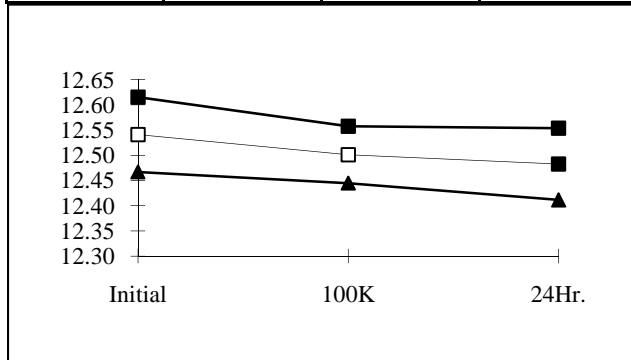
It is the responsibility of the Procuring Activity to screen products from Analog Devices, Inc. for compliance to Nuclear Hardness Critical Items (HCI) specifications.

WARNING:

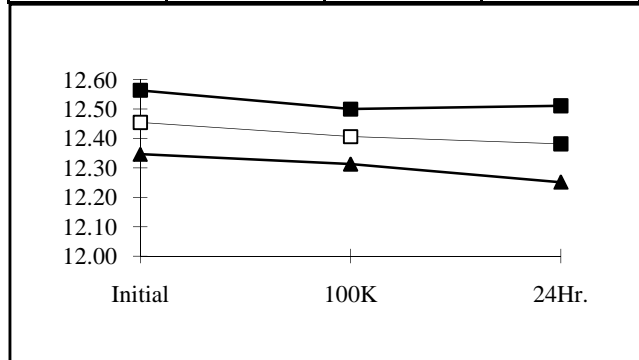
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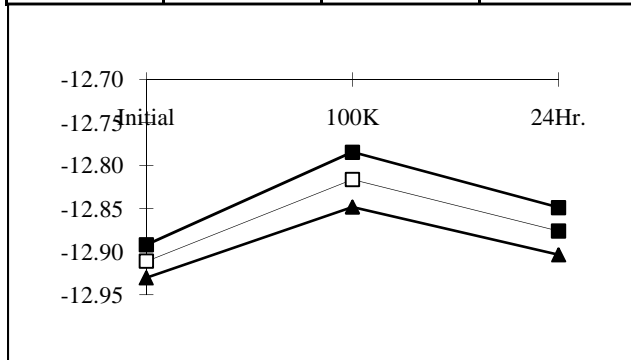
1.0	+VO @ RL=2K		V
SN	Initial	100K	24Hr.
1	12.52	12.52	12.51
2	12.52	12.48	12.46
3	12.52	12.49	12.47
4	12.52	12.49	12.46
5	12.52	12.49	12.46
16	12.55	12.50	12.49
17	12.55	12.50	12.49
18	12.58	12.53	12.51
19	12.57	12.53	12.52
min	12.52	12.48	12.46
max	12.58	12.53	12.52
stdev	0.02	0.02	0.02
average	12.54	12.50	12.48
+3S	12.62	12.56	12.55
-3S	12.47	12.44	12.41



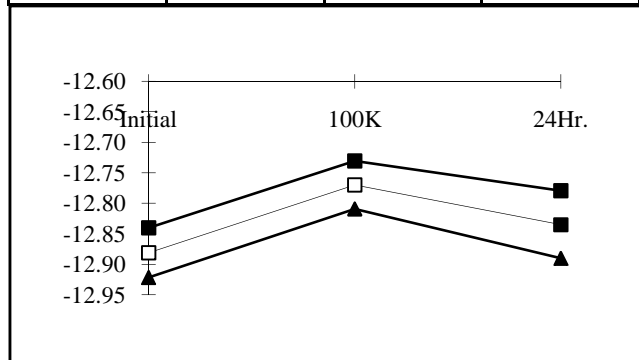
1.1	+VO @ RL=2K		V
SN	Initial	100K	24Hr.
1	12.41	12.40	12.40
2	12.43	12.38	12.35
3	12.42	12.38	12.34
4	12.42	12.38	12.34
5	12.42	12.38	12.34
16	12.47	12.41	12.40
17	12.48	12.42	12.41
18	12.50	12.45	12.43
19	12.50	12.45	12.44
min	12.42	12.38	12.34
max	12.50	12.45	12.44
stdev	0.04	0.03	0.04
average	12.46	12.41	12.38
+3S	12.56	12.50	12.51
-3S	12.35	12.31	12.25



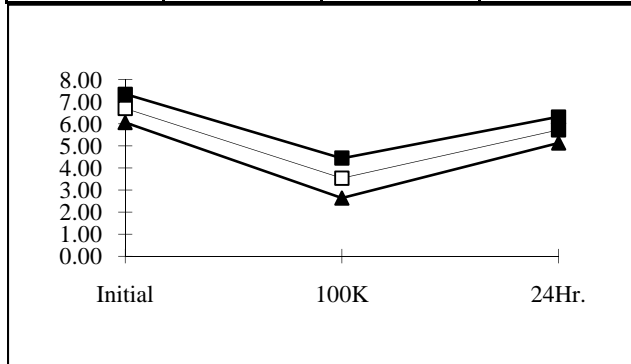
2.0	-VO @ RL=2K		V
SN	Initial	100K	24Hr.
1	-12.91	-12.92	-12.92
2	-12.91	-12.81	-12.87
3	-12.91	-12.81	-12.87
4	-12.91	-12.82	-12.87
5	-12.91	-12.82	-12.87
16	-12.90	-12.80	-12.87
17	-12.91	-12.81	-12.88
18	-12.92	-12.83	-12.89
19	-12.92	-12.83	-12.89
min	-12.92	-12.83	-12.89
max	-12.90	-12.80	-12.87
stdev	0.01	0.01	0.01
average	-12.91	-12.82	-12.88
+3S	-12.89	-12.78	-12.85
-3S	-12.93	-12.85	-12.90



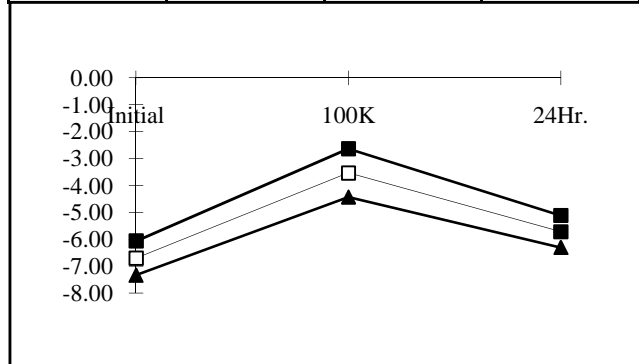
2.1	-VO @ RL=2K		V
SN	Initial	100K	24Hr.
1	-12.87	-12.87	-12.87
2	-12.87	-12.76	-12.82
3	-12.87	-12.76	-12.82
4	-12.87	-12.76	-12.82
5	-12.87	-12.76	-12.82
16	-12.88	-12.77	-12.83
17	-12.89	-12.77	-12.85
18	-12.90	-12.79	-12.86
19	-12.90	-12.79	-12.86
min	-12.90	-12.79	-12.86
max	-12.87	-12.76	-12.82
stdev	0.01	0.01	0.02
average	-12.88	-12.77	-12.84
+3S	-12.84	-12.73	-12.78
-3S	-12.92	-12.81	-12.89



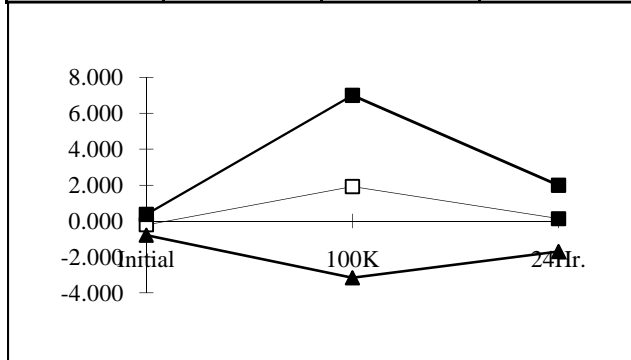
3.0	IS+		MA
SN	Initial	100K	24Hr.
1	6.62	6.61	6.60
2	6.60	3.09	5.61
3	6.80	3.43	5.80
4	6.77	3.54	5.79
5	6.72	3.57	5.73
16	6.33	3.16	5.38
17	7.09	3.94	6.08
18	6.70	3.84	5.73
19	6.62	3.71	5.66
min	6.33	3.09	5.38
max	7.09	3.94	6.08
stdev	0.21	0.30	0.20
average	6.70	3.54	5.72
+3S	7.35	4.44	6.31
-3S	6.06	2.63	5.13



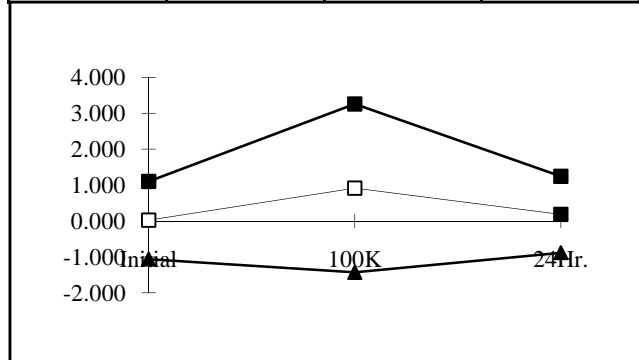
4.0	IS-		MA
SN	Initial	100K	24Hr.
1	-6.61	-6.60	-6.60
2	-6.59	-3.09	-5.60
3	-6.80	-3.43	-5.79
4	-6.77	-3.54	-5.80
5	-6.72	-3.56	-5.73
16	-6.34	-3.17	-5.37
17	-7.09	-3.94	-6.07
18	-6.70	-3.84	-5.72
19	-6.63	-3.71	-5.65
min	-7.09	-3.94	-6.07
max	-6.34	-3.09	-5.37
stdev	0.21	0.30	0.20
average	-6.71	-3.54	-5.72
+3S	-6.07	-2.63	-5.12
-3S	-7.34	-4.44	-6.31



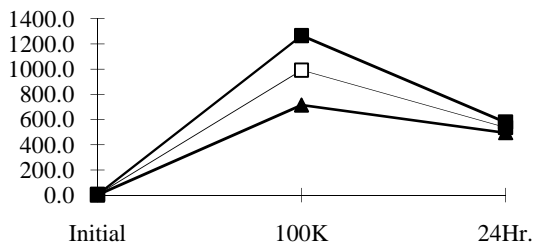
5.0	VIO		MV
SN	Initial	100K	24Hr.
1	-0.223	-0.221	-0.227
2	-0.227	5.574	1.586
3	-0.270	2.313	-0.119
4	-0.317	2.463	-0.088
5	-0.461	2.238	-0.312
16	-0.088	0.885	0.018
17	0.157	1.020	0.326
18	-0.130	0.512	-0.002
19	-0.383	0.373	-0.272
min	-0.461	0.373	-0.312
max	0.157	5.574	1.586
stdev	0.194	1.697	0.616
average	-0.215	1.922	0.142
+3S	0.368	7.013	1.989
-3S	-0.798	-3.169	-1.705



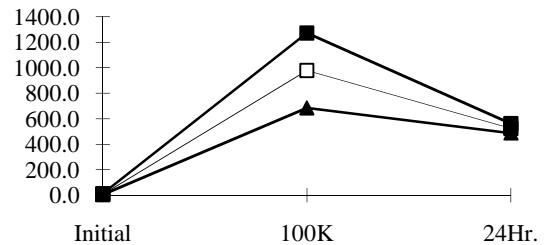
5.1	VIO		MV
SN	Initial	100K	24Hr.
1	-0.379	-0.374	-0.372
2	0.664	2.699	0.810
3	-0.171	1.071	-0.024
4	-0.199	0.494	-0.042
5	-0.328	0.262	-0.156
16	0.060	0.947	0.223
17	-0.193	0.578	-0.025
18	-0.151	0.312	0.029
19	0.485	0.941	0.644
min	-0.328	0.262	-0.156
max	0.664	2.699	0.810
stdev	0.361	0.783	0.355
average	0.021	0.913	0.182
+3S	1.104	3.261	1.248
-3S	-1.062	-1.435	-0.883



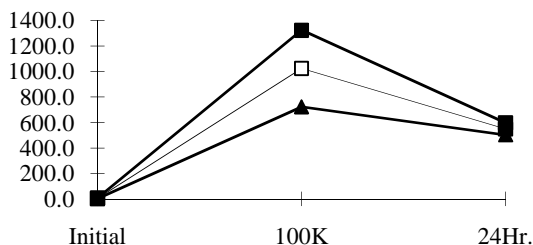
6.0	IIB+		PA
SN	Initial	100K	24Hr.
1	2.6	2.9	3.9
2	4.4	933.0	545.4
3	3.8	934.1	537.5
4	2.9	893.2	537.1
5	3.7	874.3	524.5
16	3.2	1077.0	554.8
17	4.2	1093.2	538.7
18	4.3	1087.5	551.3
19	4.1	1038.2	512.1
min	2.9	874.3	512.1
max	4.4	1093.2	554.8
stdev	0.5	91.9	14.0
average	3.8	991.3	537.7
+3S	5.4	1267.1	579.6
-3S	2.2	715.5	495.7



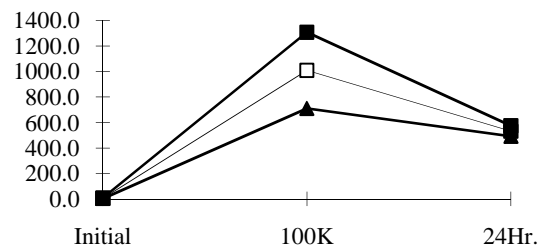
6.1	IIB+		PA
SN	Initial	100K	24Hr.
1	7.9	4.4	6.0
2	7.6	906.8	535.0
3	7.1	938.2	527.4
4	7.7	865.9	517.4
5	8.8	853.5	506.7
16	5.7	1074.7	541.4
17	7.6	1084.9	524.5
18	7.8	1064.9	532.0
19	5.2	1041.1	509.4
min	5.2	853.5	506.7
max	8.8	1084.9	541.4
stdev	1.2	97.9	12.3
average	7.2	978.8	524.2
+3S	10.7	1272.3	561.1
-3S	3.6	685.2	487.4



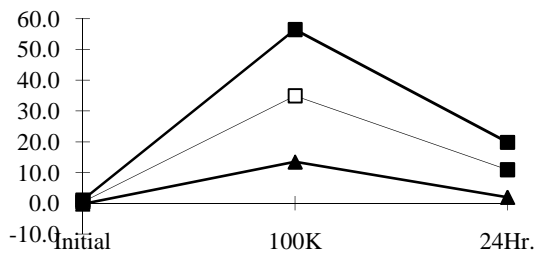
7.0	IIB-		PA
SN	Initial	100K	24Hr.
1	3.2	2.9	2.8
2	4.0	958.9	561.8
3	3.9	959.3	547.7
4	2.4	918.1	548.0
5	2.8	899.5	534.5
16	3.6	1115.0	569.0
17	4.0	1136.9	552.0
18	3.6	1131.4	565.7
19	4.4	1073.2	523.4
min	2.4	899.5	523.4
max	4.4	1136.9	569.0
stdev	0.7	100.1	15.6
average	3.6	1024.0	550.3
+3S	5.6	1324.3	597.1
-3S	1.6	723.8	503.4



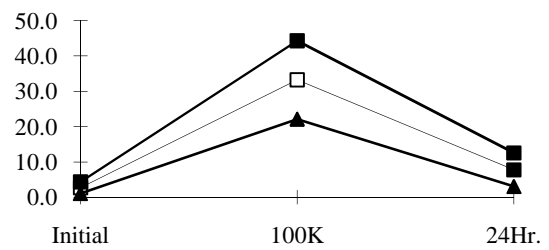
7.1	IIB-		PA
SN	Initial	100K	24Hr.
1	5.3	5.7	6.2
2	4.3	938.3	544.0
3	4.1	969.4	534.3
4	4.0	893.9	525.8
5	5.5	881.2	514.2
16	3.9	1108.5	553.4
17	5.0	1115.0	532.3
18	4.8	1098.4	542.3
19	3.8	1074.6	515.5
min	3.8	881.2	514.2
max	5.5	1115.0	553.4
stdev	0.6	99.7	13.8
average	4.4	1009.9	532.7
+3S	6.3	1309.0	574.2
-3S	2.6	710.8	491.3



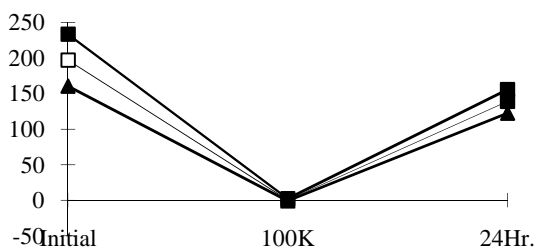
8.0	IIO		PA
SN	Initial	100K	24Hr.
1	0.6	0.4	0.1
2	0.3	30.7	16.9
3	0.3	29.3	8.8
4	0.1	29.2	10.0
5	0.5	25.2	7.9
16	0.4	42.9	12.3
17	0.4	42.7	11.5
18	0.3	42.1	11.6
19	0.8	37.7	7.9
min	0.1	25.2	7.9
max	0.8	42.9	16.9
stdev	0.2	7.2	3.0
average	0.4	35.0	10.9
+3S	1.0	56.5	19.8
-3S	-0.2	13.5	1.9



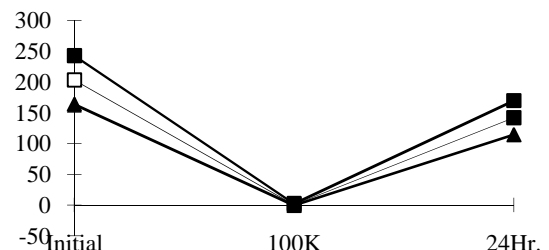
8.1	IIO		PA
SN	Initial	100K	24Hr.
1	2.9	1.6	2.0
2	3.2	33.4	6.3
3	2.9	32.8	7.7
4	3.1	31.9	9.3
5	3.3	25.8	5.2
16	2.3	39.1	9.9
17	2.4	33.9	7.4
18	2.8	34.0	9.1
19	1.7	35.0	7.5
min	1.7	25.8	5.2
max	3.3	39.1	9.9
stdev	0.5	3.7	1.6
average	2.7	33.2	7.8
+3S	4.3	44.3	12.6
-3S	1.1	22.1	3.0



9.0	AVO @ RL=2K		V/MV
SN	Initial	100K	24Hr.
1	200	198	198
2	204	0	138
3	197	0	135
4	180	0	134
5	199	0	137
16	217	0	149
17	193	1	137
18	182	1	135
19	204	1	146
min	180	0	134
max	217	1	149
stdev	12	1	6
average	197	0	139
+3S	233	2	155
-3S	161	-1	122



9.1	AVO @ RL=2K		V/MV
SN	Initial	100K	24Hr.
1	195	193	193
2	211	0	142
3	191	0	132
4	196	1	136
5	193	1	137
16	218	0	151
17	186	1	131
18	219	1	154
19	213	1	152
min	186	0	131
max	219	1	154
stdev	13	1	9
average	203	1	142
+3S	243	2	170
-3S	164	-1	114



10.0	OSC. (>1V=OSC)		V
SN	Initial	100K	24Hr.
1	0.2	0.2	0.2
2	0.2	0.2	0.2
3	0.2	0.2	0.2
4	0.2	0.2	0.2
5	0.2	0.2	0.2
16	0.2	0.2	0.2
17	0.2	0.2	0.2
18	0.2	0.2	0.2
19	0.2	0.2	0.2
min	0.2	0.2	0.2
max	0.2	0.2	0.2
stdev	0.0	0.0	0.0
average	0.2	0.2	0.2
+3S	0.2	0.2	0.2
-3S	0.2	0.2	0.2

10.1	OSC. (>1V=OSC)		V
SN	Initial	100K	24Hr.
1	0.2	0.2	0.2
2	0.2	0.2	0.2
3	0.2	0.2	0.2
4	0.2	0.2	0.2
5	0.2	0.2	0.2
16	0.2	0.2	0.2
17	0.2	0.2	0.2
18	0.2	0.2	0.2
19	0.2	0.2	0.2
min	0.2	0.2	0.2
max	0.2	0.2	0.2
stdev	0.0	0.0	0.0
average	0.2	0.2	0.2
+3S	0.2	0.2	0.2
-3S	0.2	0.2	0.2

