DISPLACEMENT DAMAGE TEST REPORT OP07S

January 2023

Radiation Test Report	
Product:	OP07S
Die:	1415Y-6A3
Fluence:	2e12 n/cm^2
Test Method:	MIL-STD-883 TM1017
Facilities:	UMass Lowell
Tested:	January 5, 2023

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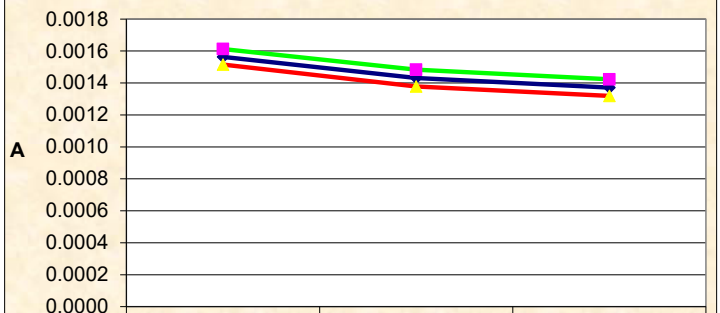
Wafer #	SN	ISY (A)			ISY- (A)			+IB (A)		
		Pre	1.00E+12	2.00E+12	Pre	1.00E+12	2.00E+12	Pre	1.00E+12	2.00E+12
CTRL	70	0.00152	0.00152	0.00152	-0.00152	-0.00152	-0.00152	6.08E-10	5.91E-10	6.00E-10
	52	0.00158	0.00145	0.00139	-0.00158	-0.00145	-0.00139	5.22E-10	9.47E-09	1.34E-08
	53	0.00157	0.00144	0.00138	-0.00157	-0.00144	-0.00138	5.78E-10	1.13E-08	1.65E-08
	54	0.00156	0.00143	0.00137	-0.00156	-0.00143	-0.00137	6.19E-10	1.01E-08	1.39E-08
	55	0.00157	0.00144	0.00138	-0.00157	-0.00144	-0.00138	8.20E-10	9.70E-09	1.48E-08
	56	0.00156	0.00143	0.00137	-0.00156	-0.00143	-0.00137	9.62E-10	1.05E-08	1.68E-08
	57	0.00158	0.00145	0.00139	-0.00158	-0.00145	-0.00139	7.02E-10	1.19E-08	1.66E-08
	64	0.00156	0.00143	0.00137	-0.00156	-0.00143	-0.00137	5.26E-10	9.25E-09	1.34E-08
	65	0.00153	0.00141	0.00135	-0.00153	-0.00141	-0.00135	6.11E-10	8.18E-09	1.37E-08
	67	0.00154	0.00145	0.00139	-0.00154	-0.00145	-0.00139	6.38E-10	9.10E-09	1.42E-08
	71	0.00157	0.00140	0.00134	-0.00157	-0.00140	-0.00134	7.40E-10	9.48E-09	1.50E-08
	Min	0.00153	0.00140	0.00134	-0.00158	-0.00145	-0.00139	5.22E-10	8.18E-09	1.34E-08
	Max	0.00158	0.00145	0.00139	-0.00153	-0.00140	-0.00134	9.62E-10	1.19E-08	1.68E-08
	Mean	0.00156	0.00143	0.00137	-0.00156	-0.00143	-0.00137	6.72E-10	9.90E-09	1.48E-08
	St Dev	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	1.38E-10	1.09E-09	1.34E-09
	+3S	0.00161	0.00148	0.00142	-0.00152	-0.00138	-0.00132	1.09E-09	1.32E-08	1.89E-08
	-3S	0.00152	0.00138	0.00132	-0.00161	-0.00148	-0.00142	2.57E-10	6.61E-09	1.08E-08

Wafer #	SN	-IB (A)			IOS (A)			VOS (V)		
		Pre	1.00E+12	2.00E+12	Pre	1.00E+12	2.00E+12	Pre	1.00E+12	2.00E+12
CTRL	70	6.97E-10	7.17E-10	7.13E-10	-8.85E-11	-1.27E-10	-1.13E-10	1.07E-05	1.19E-05	1.16E-05
	52	7.84E-10	8.87E-09	1.45E-08	-2.62E-10	6.04E-10	-1.02E-09	-3.48E-06	-2.35E-06	1.90E-05
	53	8.00E-10	1.03E-08	1.50E-08	-2.21E-10	1.01E-09	1.51E-09	2.47E-06	1.38E-06	-7.20E-06
	54	7.37E-10	8.99E-09	1.31E-08	-1.18E-10	1.14E-09	7.39E-10	1.69E-05	2.74E-05	3.23E-05
	55	9.55E-10	1.14E-08	1.61E-08	-1.35E-10	-1.66E-09	-1.29E-09	1.72E-05	1.29E-05	1.68E-05
	56	1.15E-09	1.04E-08	1.59E-08	-1.86E-10	1.12E-10	8.40E-10	2.14E-05	4.86E-05	5.20E-05
	57	6.32E-10	8.83E-09	1.42E-08	7.00E-11	3.05E-09	2.37E-09	2.94E-06	4.71E-06	1.55E-05
	64	5.82E-10	8.31E-09	1.27E-08	-5.60E-11	9.39E-10	7.12E-10	2.11E-06	2.09E-06	1.32E-05
	65	6.56E-10	9.98E-09	1.41E-08	-4.52E-11	-1.80E-09	-3.65E-10	1.61E-05	4.01E-05	4.41E-05
	67	6.84E-10	8.11E-09	1.45E-08	-4.57E-11	9.88E-10	-3.27E-10	3.06E-05	-9.29E-06	-1.83E-05
	71	6.88E-10	9.24E-09	1.38E-08	5.15E-11	2.34E-10	1.24E-09	-1.84E-06	5.59E-06	1.41E-05
	Min	5.82E-10	8.11E-09	1.27E-08	-2.62E-10	-1.80E-09	-1.29E-09	-3.48E-06	-9.29E-06	-1.83E-05
	Max	1.15E-09	1.14E-08	1.61E-08	7.00E-11	3.05E-09	2.37E-09	3.06E-05	4.86E-05	5.20E-05
	Mean	7.67E-10	9.44E-09	1.44E-08	-9.47E-11	4.62E-10	4.41E-10	1.04E-05	1.31E-05	1.82E-05
	St Dev	1.71E-10	1.04E-09	1.10E-09	1.10E-10	1.41E-09	1.16E-09	1.14E-05	1.92E-05	2.12E-05
	+3S	1.28E-09	1.26E-08	1.77E-08	2.36E-10	4.68E-09	3.93E-09	4.48E-05	7.07E-05	8.17E-05
	-3S	2.55E-10	6.32E-09	1.11E-08	-4.25E-10	-3.75E-09	-3.05E-09	-2.39E-05	-4.45E-05	-4.54E-05

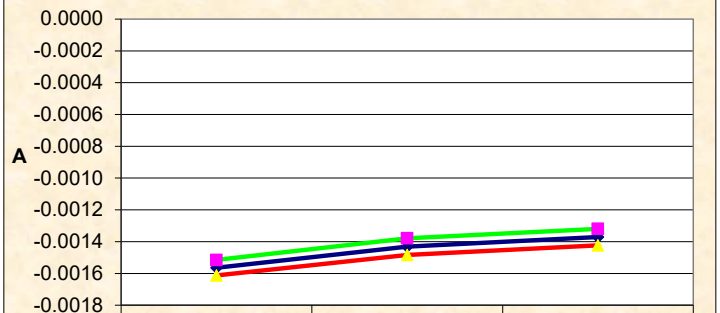
Wafer #	SN	AVO (V/mV)		
		Pre	1.00E+12	2.00E+12
CTRL	70	5067.559	5187.999	5174.838
	52	5048.620	3968.275	3307.761
	53	5167.615	4295.246	2903.852
	54	5333.858	4436.548	3232.910
	55	5077.871	3768.609	2572.222
	56	5102.845	4977.740	3392.727
	57	5078.635	4230.592	2977.332
	64	5005.100	3188.981	2651.779
	65	5387.419	4532.971	3214.604
	67	5188.304	4084.196	3244.887
	71	5091.651	4125.807	2526.470
	Min	5005.100	3188.981	2526.470
	Max	5387.419	4977.740	3392.727
	Mean	5148.192	4160.896	3002.454
	St Dev	124.327	476.945	324.449
	+3S	5521.172	5591.732	3975.801
	-3S	4775.211	2730.061	2029.108

+ISY



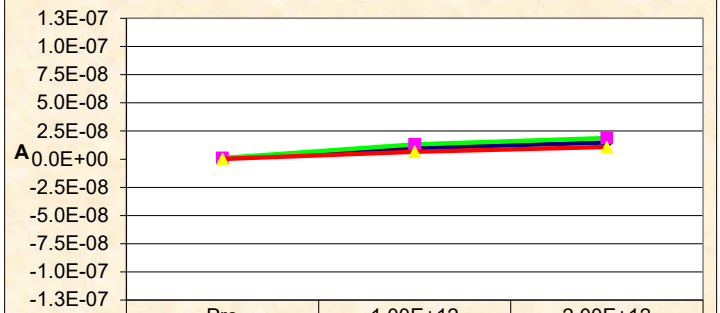
	Pre	1.00E+12	2.00E+12
Mean	0.00156	0.00143	0.00137
+3S	0.00161	0.00148	0.00142
-3S	0.00152	0.00138	0.00132

-ISY



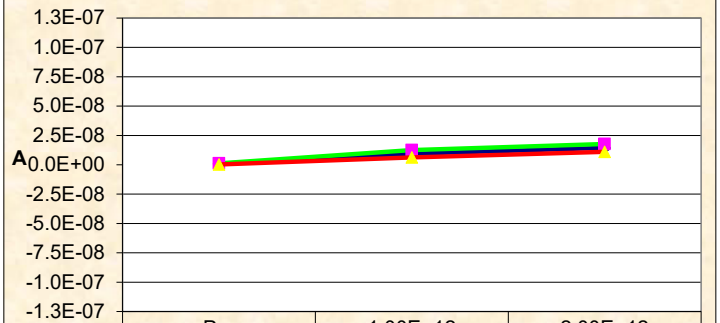
	Pre	1.00E+12	2.00E+12
Mean	-0.00156	-0.00143	-0.00137
+3S	-0.00152	-0.00138	-0.00132
-3S	-0.00161	-0.00148	-0.00142

+IB



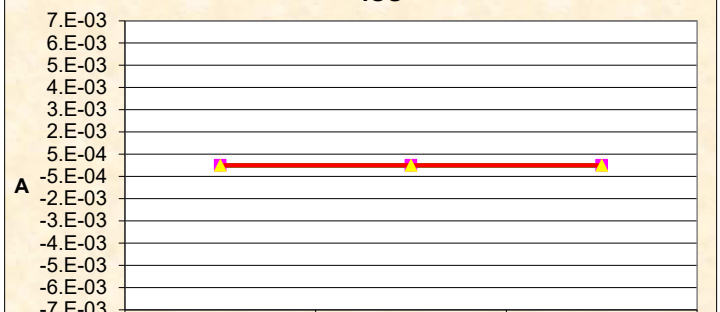
	Pre	1.00E+12	2.00E+12
Mean	6.72E-10	9.90E-09	1.48E-08
+3S	1.09E-09	1.32E-08	1.89E-08
-3S	2.57E-10	6.61E-09	1.08E-08

-IB



	Pre	1.00E+12	2.00E+12
Mean	7.67E-10	9.44E-09	1.44E-08
+3S	1.28E-09	1.26E-08	1.77E-08
-3S	2.55E-10	6.32E-09	1.11E-08

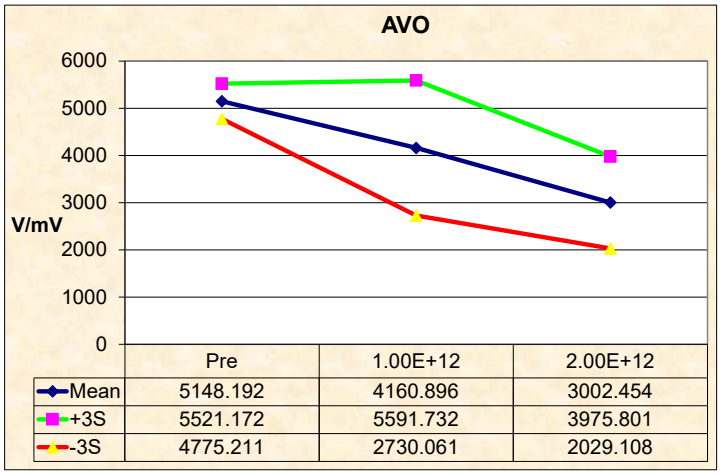
IOS



	Pre	1.00E+12	2.00E+12
Mean	-9.47E-11	4.62E-10	4.41E-10
+3S	2.36E-10	4.68E-09	3.93E-09
-3S	-4.25E-10	-3.75E-09	-3.05E-09

VOS

	Pre	1.00E+12	2.00E+12
Mean	1.04E-05	1.31E-05	1.82E-05
+3S	4.48E-05	7.07E-05	8.17E-05
-3S	-2.39E-05	-4.45E-05	-4.54E-05



	Pre	1.00E+12	2.00E+12
Mean	5148.192	4160.896	3002.454
+3S	5521.172	5591.732	3975.801
-3S	4775.211	2730.061	2029.108