



AHEAD OF WHAT'S POSSIBLE™

DISPLACEMENT DAMAGE TEST REPORT OP215S

January 2023



Radiation Test Report	
Product:	OP215S
Die:	1466W-6A1
Fluence:	2e12 n/cm ²
Test Method:	MIL-STD-883 TM1017
Facilities:	UMass Lowell
Tested:	January 3, 2023

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Wafer #	SN	ISY (A)			ISY- (A)			VOS Chan A (V)		
		Pre	1.00E+12	2.00E+12	Pre	1.00E+12	2.00E+12	Pre	1.00E+12	2.00E+12
CTRL	20	0.00600	0.00602	0.00599	-0.00600	-0.00602	-0.00599	-5.52E-04	-5.45E-04	-5.41E-04
	10	0.00604	0.00587	0.00580	-0.00603	-0.00587	-0.00580	-4.98E-05	1.05E-04	-1.13E-04
	11	0.00596	0.00585	0.00578	-0.00595	-0.00585	-0.00577	-6.23E-04	-5.21E-04	-3.26E-04
	12	0.00603	0.00589	0.00580	-0.00603	-0.00589	-0.00580	-2.61E-04	-3.48E-04	-2.44E-04
	13	0.00602	0.00587	0.00575	-0.00602	-0.00587	-0.00575	1.93E-04	1.94E-04	-6.15E-07
	14	0.00601	0.00587	0.00578	-0.00601	-0.00586	-0.00577	6.47E-04	9.88E-04	7.60E-04
	15	0.00562	0.00549	0.00541	-0.00562	-0.00549	-0.00541	-3.00E-04	-6.41E-04	-7.25E-04
	16	0.00586	0.00573	0.00564	-0.00586	-0.00573	-0.00563	-1.50E-05	-3.39E-04	-3.28E-04
	17	0.00590	0.00576	0.00567	-0.00589	-0.00576	-0.00567	-4.88E-05	8.66E-05	7.17E-05
	18	0.00605	0.00589	0.00567	-0.00605	-0.00589	-0.00567	-4.85E-05	1.06E-04	-7.17E-05
	19	0.00581	0.00568	0.00555	-0.00581	-0.00568	-0.00555	-7.88E-05	-3.41E-04	-6.59E-05
	Min	0.00562	0.00549	0.00541	-0.00605	-0.00589	-0.00580	-6.23E-04	-6.41E-04	-7.25E-04
	Max	0.00605	0.00589	0.00580	-0.00562	-0.00549	-0.00541	6.47E-04	9.88E-04	7.60E-04
	Mean	0.00593	0.00579	0.00568	-0.00593	-0.00579	-0.00568	-5.85E-05	-7.10E-05	-1.04E-04
	St Dev	0.00014	0.00013	0.00013	0.00014	0.00013	0.00013	3.30E-04	4.75E-04	3.80E-04
	+3S	0.00634	0.00618	0.00606	-0.00552	-0.00540	-0.00531	9.32E-04	1.35E-03	1.03E-03
	-3S	0.00552	0.00540	0.00531	-0.00634	-0.00618	-0.00606	-1.05E-03	-1.49E-03	-1.24E-03

Wafer #	SN	VOSChan B (V)			+IB Chan A (A)			+IB Chan B (A)		
		Pre	1.00E+12	2.00E+12	Pre	1.00E+12	2.00E+12	Pre	1.00E+12	2.00E+12
CTRL	20	-3.25E-04	-3.15E-04	-3.17E-04	1.50E-12	2.10E-12	-8.99E-13	6.61E-13	-3.01E-12	-2.73E-13
	10	1.96E-05	1.52E-04	2.91E-04	-2.13E-12	2.81E-12	9.55E-13	-7.98E-12	-2.55E-12	-6.68E-12
	11	-7.82E-05	-4.30E-04	-6.42E-04	1.91E-13	4.60E-12	1.30E-13	-2.20E-12	-1.13E-13	3.99E-12
	12	-1.32E-04	-1.28E-04	-2.82E-04	-5.85E-12	-1.02E-12	-2.62E-12	-3.58E-12	1.05E-12	2.17E-12
	13	1.98E-04	3.16E-04	-1.12E-04	-3.01E-12	-2.14E-12	-4.88E-12	2.42E-13	-6.14E-13	2.87E-13
	14	2.43E-04	6.20E-04	5.06E-04	-2.65E-12	-2.86E-12	-3.41E-12	3.15E-12	1.80E-12	-3.66E-12
	15	3.38E-04	3.02E-04	1.83E-04	-5.99E-12	-9.77E-13	-5.70E-12	-1.90E-12	4.83E-12	-6.86E-13
	16	-1.17E-04	4.55E-05	6.19E-05	-1.69E-12	-2.52E-12	4.47E-13	-1.58E-12	2.56E-12	3.82E-12
	17	3.49E-04	3.31E-04	3.62E-04	7.42E-12	1.06E-12	5.88E-12	-3.83E-12	3.66E-12	-7.42E-12
	18	-7.43E-05	-1.88E-04	-2.23E-04	1.53E-12	-4.09E-12	1.05E-11	-6.84E-13	1.69E-12	-1.03E-12
	19	-2.82E-04	3.49E-05	-1.11E-04	-2.68E-12	1.44E-12	7.97E-13	-6.88E-12	-7.33E-13	3.92E-12
	Min	-2.82E-04	-4.30E-04	-6.42E-04	-5.99E-12	-4.09E-12	-5.70E-12	-7.98E-12	-2.55E-12	-7.42E-12
	Max	3.49E-04	6.20E-04	5.06E-04	7.42E-12	4.60E-12	1.05E-11	3.15E-12	4.83E-12	3.99E-12
	Mean	4.63E-05	1.06E-04	3.47E-06	-1.49E-12	-3.68E-13	2.09E-13	-2.52E-12	1.16E-12	-5.29E-13
	St Dev	2.20E-04	3.05E-04	3.46E-04	3.89E-12	2.76E-12	4.95E-12	3.27E-12	2.22E-12	4.25E-12
	+3S	7.06E-04	1.02E-03	1.04E-03	1.02E-11	7.92E-12	1.51E-11	7.28E-12	7.83E-12	1.22E-11
	-3S	-6.13E-04	-8.09E-04	-1.03E-03	-1.32E-11	-8.66E-12	-1.47E-11	-1.23E-11	-5.51E-12	-1.33E-11

Wafer #	SN	-IB Chan A (A)			-IB Chan B (A)			IOS Chan A (A)		
		Pre	1.00E+12	2.00E+12	Pre	1.00E+12	2.00E+12	Pre	1.00E+12	2.00E+12
CTRL	20	-1.93E-12	-9.38E-13	4.50E-13	1.01E-12	3.86E-12	-9.62E-14	3.44E-12	3.04E-12	-1.35E-12
	10	1.88E-12	-1.78E-12	-2.72E-13	8.56E-12	3.09E-12	9.69E-12	-4.01E-12	4.60E-12	1.23E-12
	11	2.14E-12	-2.95E-12	3.18E-12	1.30E-12	4.01E-13	6.88E-13	-1.95E-12	7.55E-12	-3.05E-12
	12	6.71E-12	2.52E-12	3.68E-12	5.05E-12	-1.13E-12	-9.59E-13	-1.26E-11	-3.54E-12	-6.30E-12
	13	2.65E-12	5.09E-12	9.59E-12	7.26E-14	2.18E-12	2.41E-12	-5.66E-12	-7.23E-12	-1.45E-11
	14	3.22E-12	6.55E-12	5.64E-12	-4.06E-12	-2.43E-12	7.14E-12	-5.87E-12	-9.40E-12	-9.04E-12
	15	8.56E-12	2.67E-12	7.61E-12	3.08E-12	-2.17E-12	2.38E-12	-1.46E-11	-4.78E-12	-1.33E-11
	16	3.15E-12	2.27E-12	1.53E-12	1.74E-12	-4.58E-14	1.44E-12	-4.84E-12	-6.78E-12	-1.08E-12
	17	-5.48E-12	-9.07E-13	-3.64E-12	3.21E-12	-6.10E-12	1.06E-11	1.29E-11	1.97E-12	9.53E-12
	18	-2.68E-12	7.57E-12	-7.62E-12	-1.39E-13	-4.32E-12	2.63E-12	4.20E-12	-1.17E-11	1.81E-11
	19	3.98E-12	1.90E-12	3.61E-12	7.22E-12	3.71E-12	-2.36E-13	-6.66E-12	-4.57E-13	-2.82E-12
	Min	-5.48E-12	-2.95E-12	-7.62E-12	-4.06E-12	-6.10E-12	-9.59E-13	-1.46E-11	-1.17E-11	-1.45E-11
	Max	8.56E-12	7.57E-12	9.59E-12	8.56E-12	3.71E-12	1.06E-11	1.29E-11	7.55E-12	1.81E-11
	Mean	2.41E-12	2.29E-12	2.33E-12	2.60E-12	-6.81E-13	3.58E-12	-3.90E-12	-2.66E-12	-2.12E-12
	St Dev	4.06E-12	3.47E-12	5.14E-12	3.71E-12	3.19E-12	4.09E-12	7.86E-12	6.12E-12	1.00E-11
	+3S	1.46E-11	1.27E-11	1.78E-11	1.37E-11	8.88E-12	1.59E-11	1.97E-11	1.57E-11	2.79E-11
	-3S	-9.77E-12	-8.13E-12	-1.31E-11	-8.54E-12	-1.02E-11	-8.71E-12	-2.75E-11	-2.10E-11	-3.21E-11

Wafer #	SN	IOSChan B (A)			AVO Chan A (V/mV)			AVO Chan B (V/mV)		
		Pre	1.00E+12	2.00E+12	Pre	1.00E+12	2.00E+12	Pre	1.00E+12	2.00E+12
CTRL	20	-3.47E-13	-6.88E-12	-1.76E-13	248.95	249.93	245.52	228.22	227.82	222.49
	10	-1.65E-11	-5.64E-12	-1.64E-11	220.96	216.77	234.88	201.47	201.43	188.20
	11	-3.51E-12	-5.14E-13	3.31E-12	233.41	225.22	225.30	224.40	230.31	224.87
	12	-8.63E-12	2.18E-12	3.13E-12	218.29	224.34	210.19	219.22	217.24	214.59
	13	1.70E-13	-2.80E-12	-2.13E-12	212.78	208.57	192.70	233.75	232.78	213.13
	14	7.21E-12	4.23E-12	-1.08E-11	226.13	218.08	212.67	228.92	210.25	231.18
	15	-4.98E-12	7.00E-12	-3.07E-12	246.29	243.78	262.77	242.14	238.80	227.12
	16	-3.32E-12	2.60E-12	2.38E-12	255.39	237.23	230.92	248.26	235.14	231.17
	17	-7.04E-12	9.76E-12	-1.80E-11	225.39	229.76	224.07	219.05	218.83	213.32
	18	-5.45E-13	6.02E-12	-3.66E-12	234.59	218.59	207.50	237.03	227.39	222.27
	19	-1.41E-11	-4.44E-12	4.16E-12	214.29	206.49	204.59	229.37	205.46	200.06
	Min	-1.65E-11	-5.64E-12	-1.80E-11	212.78	206.49	192.70	201.47	201.43	188.20
	Max	7.21E-12	9.76E-12	4.16E-12	255.39	243.78	262.77	248.26	238.80	231.18
	Mean	-5.13E-12	1.84E-12	-4.11E-12	228.75	222.88	220.56	228.36	221.76	216.59
	St Dev	6.94E-12	5.12E-12	8.24E-12	13.85	11.78	19.72	13.33	13.06	13.92
	+3S	1.57E-11	1.72E-11	2.06E-11	270.29	258.23	279.73	268.37	260.95	258.34
	-3S	-2.60E-11	-1.35E-11	-2.88E-11	187.21	187.53	161.39	188.36	182.57	174.84



