



AHEAD OF WHAT'S POSSIBLE™

DISPLACEMENT DAMAGE TEST REPORT ADH8412S

September 2025

Radiation Test Report

Product:	ADH8412S
Die:	N7601
Fluence:	2e12 n/cm ²
Test Method:	MIL-STD-883 TM1017
Facilities:	UMass Lowell
Tested:	July 29, 2025

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		RBIAS Supply Current (A)		Amplifier Drain Supply Current (A)		Total Supply Current (A)	
		PRE	Post	PRE	Post	PRE	Post
CTRL	38	1.92E-03	1.96E-03	5.25E-02	5.52E-02	5.44E-02	5.71E-02
	26	1.90E-03	1.96E-03	5.28E-02	5.60E-02	5.47E-02	5.79E-02
	27	1.91E-03	1.95E-03	5.35E-02	5.57E-02	5.54E-02	5.76E-02
	28	1.90E-03	1.99E-03	5.52E-02	5.58E-02	5.71E-02	5.78E-02
	29	1.92E-03	1.96E-03	5.28E-02	5.65E-02	5.47E-02	5.85E-02
	30	1.91E-03	1.96E-03	5.24E-02	5.49E-02	5.43E-02	5.68E-02
	31	1.91E-03	1.96E-03	5.12E-02	5.52E-02	5.31E-02	5.72E-02
	Min	1.90E-03	1.95E-03	5.12E-02	5.49E-02	5.31E-02	5.68E-02
	Max	1.92E-03	1.99E-03	5.52E-02	5.65E-02	5.71E-02	5.85E-02
	Mean	1.91E-03	1.96E-03	5.30E-02	5.57E-02	5.49E-02	5.76E-02
	Std. Dev	7.53E-06	1.32E-05	1.32E-03	5.91E-04	1.32E-03	5.91E-04
	Mean - 3 Sigma	1.89E-03	1.92E-03	4.90E-02	5.39E-02	5.09E-02	5.59E-02
	Mean + 3 Sigma	1.93E-03	2.00E-03	5.70E-02	5.75E-02	5.89E-02	5.94E-02
1.00E+12	32	1.91E-03	1.96E-03	5.26E-02	5.58E-02	5.45E-02	5.78E-02
	33	1.90E-03	1.99E-03	5.22E-02	5.46E-02	5.41E-02	5.65E-02
	34	1.91E-03	1.97E-03	5.26E-02	5.39E-02	5.45E-02	5.59E-02
	35	1.91E-03	1.95E-03	5.17E-02	5.55E-02	5.36E-02	5.75E-02
	36	1.91E-03	1.96E-03	5.38E-02	5.55E-02	5.57E-02	5.75E-02
	37	1.90E-03	1.96E-03	5.35E-02	5.56E-02	5.54E-02	5.76E-02
	Min	1.90E-03	1.95E-03	5.17E-02	5.39E-02	5.36E-02	5.59E-02
	Max	1.91E-03	1.99E-03	5.38E-02	5.58E-02	5.57E-02	5.78E-02
	Mean	1.91E-03	1.96E-03	5.27E-02	5.52E-02	5.46E-02	5.71E-02
	Std. Dev	5.16E-06	1.22E-05	7.89E-04	7.55E-04	7.89E-04	7.48E-04
	Mean - 3 Sigma	1.89E-03	1.93E-03	5.04E-02	5.29E-02	5.23E-02	5.49E-02
	Mean + 3 Sigma	1.92E-03	2.00E-03	5.51E-02	5.74E-02	5.70E-02	5.94E-02
			(A)		(A)		(A)

		1GHz Small Signal Gain (dB)		3GHz Small Signal Gain (dB)		6GHz Small Signal Gain (dB)	
		PRE	Post	PRE	Post	PRE	Post
CTRL	38	15.80	15.82	14.80	14.87	14.80	14.87
	26	15.80	15.79	14.80	14.84	14.80	14.84
	27	15.80	15.74	14.80	14.80	14.80	14.79
	28	15.80	15.70	14.90	14.74	14.80	14.78
	29	15.80	15.76	14.90	14.82	14.80	14.83
	30	15.80	15.70	14.90	14.74	14.80	14.72
	31	15.70	15.74	14.80	14.79	14.70	14.81
	Min	15.70	15.70	14.80	14.74	14.70	14.72
	Max	15.80	15.79	14.90	14.84	14.80	14.84
	Mean	15.78	15.74	14.87	14.79	14.78	14.80
	Std. Dev	0.04	0.04	0.052	0.041	0.04	0.04
	Mean - 3 Sigma	15.66	15.63	14.71	14.67	14.66	14.66
	Mean + 3 Sigma	15.91	15.84	15.02	14.91	14.91	14.93
1.00E+12	32	15.80	15.75	14.80	14.80	14.70	14.80
	33	15.70	15.66	14.80	14.70	14.60	14.72
	34	15.70	15.62	14.80	14.58	14.80	14.65
	35	15.80	15.71	14.80	14.75	14.80	14.75
	36	15.80	15.71	14.90	14.75	14.80	14.76
	37	15.80	15.71	14.80	14.76	14.70	14.77
	Min	15.70	15.62	14.80	14.58	14.60	14.65
	Max	15.80	15.75	14.90	14.80	14.80	14.80
	Mean	15.77	15.69	14.82	14.72	14.73	14.74
	Std. Dev	0.05	0.05	0.041	0.077	0.08	0.05
	Mean - 3 Sigma	15.61	15.56	14.69	14.49	14.49	14.58
	Mean + 3 Sigma	15.92	15.83	14.94	14.95	14.98	14.90
			(dB)		(dB)		(dB)

		10GHz Small Signal Gain (dB)		1GHz OP1dB (dBm)		3GHz OP1dB (dBm)	
		PRE	Post	PRE	Post	PRE	Post
CTRL	38	14.10	14.01	18.00	18.30	18.40	18.63
	26	14.20	14.09	18.00	18.40	18.50	18.70
	27	14.20	14.04	18.20	18.40	18.60	18.70
	28	14.20	13.81	18.40	18.28	18.80	18.55
	29	14.00	14.06	18.00	18.55	18.50	18.82
	30	14.10	13.75	18.00	18.24	18.40	18.60
	31	13.90	13.96	17.70	18.26	18.20	18.61
	Min	13.90	13.75	17.70	18.24	18.20	18.55
	Max	14.20	14.09	18.40	18.55	18.80	18.82
	Mean	14.10	13.93	18.05	18.35	18.50	18.67
	Std. Dev	0.13	0.14	0.235	0.117	0.20	0.10
	Mean - 3 Sigma	13.72	13.50	17.35	18.00	17.90	18.37
	Mean + 3 Sigma	14.48	14.37	18.75	18.70	19.10	18.96
1.00E+12	32	14.10	13.99	18.00	18.37	18.50	18.67
	33	13.90	13.68	17.90	18.15	18.40	18.45
	34	14.10	13.63	18.00	18.08	18.40	18.52
	35	14.20	13.94	17.80	18.35	18.30	18.67
	36	14.10	13.83	18.20	18.35	18.60	18.67
	37	14.20	13.89	18.20	18.36	18.60	18.69
	Min	13.90	13.63	17.80	18.08	18.30	18.45
	Max	14.20	13.94	18.20	18.37	18.60	18.69
	Mean	14.10	13.81	18.02	18.28	18.47	18.61
	Std. Dev	0.11	0.13	0.160	0.127	0.12	0.10
	Mean - 3 Sigma	13.77	13.43	17.54	17.90	18.10	18.31
	Mean + 3 Sigma	14.43	14.19	18.50	18.66	18.83	18.92
			(MHz)		(dB)		(MHz)

		6GHz OP1dB (dBm)		10GHz OP1dB (dBm)	
SN		PRE	Post	PRE	Post
CTRL	38	19.20	19.19	14.00	13.84
	26	19.30	19.27	14.30	13.96
	27	19.30	19.29	14.20	13.83
	28	19.40	19.01	14.40	13.13
	29	19.10	19.34	14.10	14.06
	30	19.20	19.11	13.80	13.64
	31	19.00	19.11	13.60	13.59
	Min	19.00	19.01	13.60	13.13
	Max	19.40	19.34	14.40	14.06
	Mean	19.22	19.19	14.07	13.70
	Std. Dev	0.15	0.13	0.308	0.334
	Mean - 3 Sigma	18.78	18.80	13.14	12.70
	Mean + 3 Sigma	19.66	19.58	14.99	14.70
1.00E+12	30	19.20	19.11	13.80	13.64
	31	19.00	19.11	13.60	13.59
	32	19.20	19.17	14.00	13.54
	33	19.20	18.94	13.80	13.09
	34	19.20	18.97	14.10	13.16
	35	19.20	19.18	14.10	13.71
	36	19.30	19.16	14.10	13.66
	37	19.40	19.18	14.30	13.67
	Min	19.00	18.94	13.60	13.09
	Max	19.40	19.18	14.30	13.71
	Mean	19.21	19.10	13.98	13.51
	Std. Dev	0.11	0.10	0.225	0.242
	Mean - 3 Sigma	18.87	18.82	13.30	12.78
Mean + 3 Sigma	19.55	19.39	14.65	14.23	
			(MHz)	(dB)	





