

DISPLACEMENT DAMAGE TEST REPORT ADL8140-CSL

August 2026

Radiation Test Report

Product:	ADL8140-CSL
Die:	P7901
Fluence:	2e12 n/cm ²
Test Method:	MIL-STD-883 TM1017
Facilities:	UMass Lowell
Tested:	December 15th, 2025

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	SN	RBIAS Supply Current (A)		Total Supply Current (A)		10 GHz Small Signal Gain (dB)	
		PRE	Post	PRE	Post	PRE	Post
CTRL	20	1.71E-03	1.72E-03	3.50E-02	3.50E-02	29.14	28.91
	21	1.70E-03	1.70E-03	3.32E-02	3.31E-02	28.84	28.64
	22	1.68E-03	1.68E-03	3.66E-02	3.66E-02	29.40	29.18
	23	1.72E-03	1.72E-03	3.41E-02	3.41E-02	29.50	29.31
	24	1.69E-03	1.70E-03	3.73E-02	3.74E-02	29.18	28.96
	25	1.71E-03	1.71E-03	3.66E-02	3.66E-02	29.38	29.17
	26	1.70E-03	1.71E-03	3.59E-02	3.59E-02	29.20	29.01
	27	1.71E-03	1.71E-03	3.73E-02	3.74E-02	29.25	29.05
	28	1.72E-03	1.72E-03	3.35E-02	3.34E-02	29.24	28.99
	29	1.68E-03	1.69E-03	3.58E-02	3.58E-02	29.38	29.13
	30	1.72E-03	1.73E-03	3.47E-02	3.48E-02	29.02	28.81
	Min	1.68E-03	1.68E-03	3.32E-02	3.31E-02	28.84	28.64
	Max	1.72E-03	1.73E-03	3.73E-02	3.74E-02	29.50	29.31
	Mean	1.70E-03	1.71E-03	3.55E-02	3.55E-02	29.24	29.02
	Std. Dev	1.51E-05	1.55E-05	1.55E-03	1.59E-03	0.1966	0.1948
1.00E+12	Mean - 3 Sigma	1.66E-03	1.66E-03	3.09E-02	3.07E-02	28.65	28.44
	Mean + 3 Sigma	1.75E-03	1.75E-03	4.02E-02	4.03E-02	29.83	29.61
	31	1.70E-03	1.70E-03	3.69E-02	3.69E-02	29.38	29.17
	32	1.73E-03	1.73E-03	3.39E-02	3.39E-02	29.10	28.90
	33	1.68E-03	1.69E-03	3.48E-02	3.49E-02	29.36	29.17
	34	1.71E-03	1.71E-03	3.49E-02	3.49E-02	29.23	28.99
	35	1.72E-03	1.73E-03	3.62E-02	3.62E-02	29.10	28.89
	36	1.70E-03	1.71E-03	3.58E-02	3.58E-02	28.95	28.73
	37	1.68E-03	1.69E-03	3.55E-02	3.55E-02	29.39	29.16
	38	1.70E-03	1.71E-03	3.61E-02	3.59E-02	29.19	28.95
	39	1.69E-03	1.70E-03	3.59E-02	3.60E-02	29.00	28.80
	40	1.69E-03	1.70E-03	3.40E-02	3.40E-02	29.10	28.89
	Min	1.68E-03	1.69E-03	3.39E-02	3.39E-02	28.95	28.73
	Max	1.73E-03	1.73E-03	3.69E-02	3.69E-02	29.39	29.17
	Mean	1.70E-03	1.71E-03	3.54E-02	3.54E-02	29.18	28.96
	Std. Dev	1.45E-05	1.46E-05	9.92E-04	9.71E-04	0.1570	0.1564
	Mean - 3 Sigma	1.66E-03	1.66E-03	3.24E-02	3.25E-02	28.71	28.50
	Mean + 3 Sigma	1.74E-03	1.75E-03	3.84E-02	3.83E-02	29.65	29.43

	SN	14 GHz Small Signal Gain (dB)		18 GHz Small Signal Gain (dB)		10 GHz OP1dB (dBm)	
		PRE	Post	PRE	Post	PRE	Post
CTRL	20	29.04	28.69	28.98	28.25	7.78	7.65
	21	28.66	28.31	28.70	28.08	8.12	8.12
	22	29.21	28.84	29.05	28.37	7.60	7.52
	23	29.30	28.88	29.21	28.60	7.87	7.77
	24	29.15	28.73	28.94	28.35	7.52	7.41
	25	29.18	28.76	28.96	28.33	7.47	7.28
	26	29.04	28.64	28.87	28.23	7.64	7.57
	27	29.10	28.74	28.86	28.23	7.44	7.28
	28	29.06	28.65	29.02	28.32	8.01	7.98
	29	29.22	28.82	29.23	28.52	7.73	7.69
	30	28.94	28.54	28.91	28.27	7.88	7.88
	Min	28.66	28.31	28.70	28.08	7.44	7.28
	Max	29.30	28.88	29.23	28.60	8.12	8.12
	Mean	29.09	28.69	28.98	28.33	7.73	7.65
	Std. Dev	0.1825	0.1683	0.1611	0.1479	0.2352	0.2883
1.00E+12	Mean - 3 Sigma	28.54	28.19	28.49	27.89	7.02	6.78
	Mean + 3 Sigma	29.63	29.20	29.46	28.77	8.43	8.51
	31	29.20	28.79	29.14	28.47	7.51	7.43
	32	28.94	28.56	28.70	28.06	7.89	7.77
	33	29.14	28.75	29.13	28.50	7.77	7.70
	34	29.03	28.63	28.88	28.19	7.74	7.63
	35	29.04	28.66	28.85	28.15	7.60	7.52
	36	28.94	28.56	28.69	28.01	7.72	7.60
	37	29.19	28.77	29.13	28.47	7.69	7.64
	38	29.11	28.67	28.92	28.30	7.58	7.48
	39	29.00	28.61	28.75	28.17	7.70	7.58
	40	28.97	28.56	28.90	28.30	8.00	7.98
	Min	28.94	28.56	28.69	28.01	7.51	7.43
	Max	29.20	28.79	29.14	28.50	8.00	7.98
	Mean	29.06	28.66	28.91	28.26	7.72	7.63
	Std. Dev	0.0986	0.0898	0.1745	0.1753	0.1450	0.1581
	Mean - 3 Sigma	28.76	28.39	28.39	27.74	7.28	7.16
	Mean + 3 Sigma	29.35	28.92	29.43	28.79	8.15	8.11

		14 GHz OP1dB (dBm)		18 GHz OP1dB (dBm)		
		SN	PRE	Post	PRE	Post
CTRL	20	9.13	9.26	9.69	9.79	
	21	9.02	9.14	9.69	9.60	
1.00E+12	22	9.22	9.26	9.84	9.82	
	23	9.13	9.20	9.62	9.65	
	24	9.10	9.18	9.81	9.79	
	25	9.16	9.18	9.74	9.73	
	26	9.13	9.17	9.70	9.70	
	27	9.15	9.21	9.78	9.78	
	28	9.20	9.25	9.74	9.75	
	29	9.17	9.17	9.79	9.79	
	30	9.13	9.21	9.77	9.78	
	Min	9.02	9.14	9.62	9.60	
	Max	9.22	9.26	9.84	9.82	
	Mean	9.14	9.20	9.75	9.74	
	Std. Dev	0.0549	0.0370	0.0645	0.0712	
	Mean - 3 Sigma	8.98	9.09	9.56	9.52	
	Mean + 3 Sigma	9.31	9.31	9.94	9.95	
2.00E+12	31	9.14	9.19	9.76	9.78	
	32	9.15	9.24	9.73	9.73	
	33	9.18	9.23	9.75	9.78	
	34	9.18	9.22	9.74	9.75	
	35	9.17	9.23	9.84	9.84	
	36	9.19	9.25	9.90	9.90	
	37	9.13	9.17	9.72	9.73	
	38	9.16	9.23	9.77	9.76	
	39	9.13	9.22	9.81	9.81	
	40	9.11	9.18	9.69	9.72	
	Min	9.11	9.17	9.69	9.72	
	Max	9.19	9.25	9.90	9.90	
	Mean	9.15	9.21	9.77	9.78	
	Std. Dev	0.0269	0.0270	0.0624	0.0566	
	Mean - 3 Sigma	9.07	9.13	9.58	9.61	
	Mean + 3 Sigma	9.23	9.30	9.96	9.95	



