

HIGH DOSE RADIATION TEST REPORT ADRF5048-CSL

July 2025
Generic

Radiation Test Report	
Product:	ADRF5048-CSL
Gamma:	0,100k
Gamma Source:	Co60/TM1019 Condition A
Dose Rate:	152 Rad/s
Facilities:	VPT RAD
Tested:	July 9th, 2025

The RADTEST® DATA SERVICE is a compilation of radiation test results on Analog Devices' Space grade products. It is designed to assist customers in selecting the right product for applications where radiation is a consideration. Many products manufactured by Analog Devices, Inc. have been shown to be radiation tolerant to most tactical radiation environments. Analog Devices, Inc. does not make any claim to maintain or guarantee these levels of radiation tolerance without lot qualification test.

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:

Analog Devices, Inc. does not recommend use of this data to qualify other product grades or process levels. Analog Devices, Inc. is not responsible and has no liability for any consequences, and all applicable Warranties are null and void if any Analog Devices product is modified in any way or used outside of normal environmental and operating conditions, including the parameters specified in the corresponding data sheet. Analog Devices, Inc. does not guarantee that wafer manufacturing is the same for all process levels.

	SN	Idd_LO (uA)		Iss_LO (uA)		Idd_HI (uA)	
		PRE	100k	PRE	100k	PRE	100k
Biased	CTRL 25	154.00	154.00	-525.00	-525.00	154.00	154.00
	1	155.00	221.00	-528.00	-645.00	155.00	237.00
	2	156.00	233.00	-527.00	-665.00	156.00	250.00
	4	156.00	209.00	-524.00	-621.00	156.00	219.00
	5	155.00	225.00	-525.00	-646.00	155.00	243.00
	6	155.00	254.00	-524.00	-666.00	155.00	251.00
	7	156.00	253.00	-529.00	-676.00	156.00	253.00
	8	156.00	247.00	-528.00	-664.00	156.00	247.00
	9	155.00	243.00	-524.00	-660.00	155.00	244.00
	10	155.00	222.00	-525.00	-641.00	155.00	241.00
	11	154.00	228.00	-522.00	-650.00	154.00	249.00
	12	153.00	225.00	-522.00	-648.00	153.00	245.00
	13	152.00	205.00	-519.00	-614.00	152.00	217.00
	14	154.00	250.00	-524.00	-667.00	154.00	248.00
	15	155.00	259.00	-525.00	-672.00	155.00	255.00
	16	153.00	249.00	-519.00	-658.00	153.00	248.00
	17	154.00	233.00	-525.00	-643.00	154.00	231.00
	18	155.00	226.00	-524.00	-646.00	155.00	244.00
	19	156.00	230.00	-529.00	-657.00	156.00	249.00
	20	155.00	215.00	-525.00	-632.00	155.00	234.00
	21	155.00	229.00	-526.00	-653.00	155.00	247.00
	22	154.00	231.00	-523.00	-640.00	154.00	231.00
	23	155.00	250.00	-527.00	-666.00	155.00	250.00
	24	155.00	252.00	-528.00	-672.00	155.00	251.00
	Min		152.00	205.00	-529.00	-676.00	152.00
Max		156.00	259.00	-519.00	-614.00	156.00	255.00
Mean		154.74	234.30	-524.87	-652.26	154.74	242.78
Std. Dev		1.0539	15.2984	2.7519	16.1279	1.0539	10.2023
Mean - 3 Sigma		151.58	188.41	-533.13	-700.64	151.58	212.18
Mean + 3 Sigma		157.90	280.20	-516.61	-603.88	157.90	273.39

	SN	Iss_HI (uA)		EN_HI (uA)		LS_HI (uA)	
		PRE	100k	PRE	100k	PRE	100k
Biased	CTRL 25	-525.00	-525.00	32.40	32.40	32.30	32.30
	1	-528.00	-651.00	32.80	32.80	32.60	32.60
	2	-527.00	-667.00	32.70	32.70	32.40	32.40
	4	-524.00	-624.00	32.50	32.50	32.80	32.80
	5	-525.00	-651.00	32.30	32.30	32.20	32.20
	6	-524.00	-661.00	32.50	32.50	32.20	32.20
	7	-529.00	-671.00	32.70	32.70	32.50	32.50
	8	-528.00	-660.00	32.60	32.60	32.30	32.30
	9	-524.00	-658.00	32.40	32.50	32.10	32.20
	10	-525.00	-647.00	32.60	32.70	32.40	32.30
	11	-522.00	-656.00	32.20	32.20	32.40	32.40
	12	-522.00	-655.00	32.20	32.20	32.20	32.20
	13	-519.00	-619.00	31.50	31.60	31.50	31.50
	14	-524.00	-661.00	32.30	32.30	32.20	32.20
	15	-525.00	-666.00	32.40	32.40	32.40	32.40
	16	-519.00	-654.00	32.50	32.50	32.10	32.10
	17	-525.00	-639.00	32.20	32.20	32.30	32.30
	18	-524.00	-650.00	32.50	32.60	32.40	32.40
	19	-529.00	-662.00	32.80	32.90	32.70	32.70
	20	-525.00	-638.00	31.90	32.00	32.20	32.20
	21	-526.00	-657.00	32.60	32.60	32.60	32.50
	22	-523.00	-638.00	32.20	32.20	32.20	32.20
	23	-527.00	-663.00	32.60	32.60	32.20	32.20
	24	-528.00	-668.00	32.50	32.50	32.60	32.60
	Min		-529.00	-671.00	31.50	31.60	31.50
Max		-519.00	-619.00	32.80	32.90	32.80	32.80
Mean		-524.87	-652.87	32.41	32.44	32.33	32.32
Std. Dev		2.7519	13.5221	0.2974	0.2888	0.2649	0.2575
Mean - 3 Sigma		-533.13	-693.44	31.52	31.57	31.53	31.55
Mean + 3 Sigma		-516.61	-612.30	33.31	33.31	33.12	33.09

	SN	RF1_IL_650MHz (dB)		RF1_ISOL_650MHz (dB)		RF1_IL_15GHz (dB)	
		PRE	100k	PRE	100k	PRE	100k
Biased	CTRL 25	-0.93	-1.00	74.20	73.60	-1.42	-1.61
	1	-0.91	-0.97	74.20	73.50	-1.36	-1.56
	2	-0.90	-0.99	74.10	73.80	-1.35	-1.59
	4	-0.93	-0.98	74.40	73.70	-1.41	-1.57
	5	-0.93	-1.00	74.00	74.30	-1.45	-1.69
	6	-0.92	-1.00	74.30	74.10	-1.38	-1.67
	7	-0.89	-0.95	74.30	73.70	-1.31	-1.58
	8	-0.92	-0.95	74.00	73.70	-1.45	-1.61
	9	-0.93	-0.96	74.00	73.70	-1.42	-1.57
	10	-0.92	-0.97	74.30	73.50	-1.37	-1.63
	11	-0.90	-0.98	74.20	73.90	-1.37	-1.71
	12	-0.92	-0.99	74.30	73.80	-1.41	-1.69
	13	-0.92	-0.98	74.50	73.60	-1.39	-1.71
	14	-0.91	-0.96	74.10	73.70	-1.39	-1.62
	15	-0.92	-0.96	74.40	73.90	-1.40	-1.57
	16	-0.92	-0.97	73.80	73.80	-1.38	-1.71
	17	-0.93	-0.97	74.30	73.70	-1.39	-1.63
	18	-0.94	-0.98	74.20	74.00	-1.47	-1.69
	19	-0.94	-0.96	74.10	73.70	-1.45	-1.57
	20	-0.93	-0.96	74.40	73.80	-1.42	-1.58
	21	-0.91	-0.95	74.10	73.80	-1.40	-1.53
	22	-0.92	-0.96	73.50	73.80	-1.41	-1.63
	23	-0.92	-0.97	73.80	74.10	-1.43	-1.63
	24	-0.94	-0.97	73.90	74.10	-1.43	-1.61
	Min		-0.94	-1.00	73.50	73.50	-1.47
Max		-0.89	-0.95	74.50	74.30	-1.31	-1.53
Mean		-0.92	-0.97	74.14	73.81	-1.40	-1.62
Std. Dev		0.0125	0.0153	0.2369	0.1984	0.0371	0.0554
Mean - 3 Sigma		-0.96	-1.02	73.43	73.22	-1.51	-1.79
Mean + 3 Sigma		-0.88	-0.92	74.85	74.41	-1.29	-1.46

		RF1_ISOL 15GHz (dB)		RF1_IL_25d5GHz (dB)		RF1_ISOL 25d5GHz (dB)		
		PRE	100k	PRE	100k	PRE	100k	
Biased	CTRL	25	51.50	51.80	-2.62	-3.03	46.20	46.40
	1	51.60	51.70	-2.67	-2.94	46.60	46.70	
	2	51.60	51.70	-2.60	-2.94	46.40	46.60	
	4	51.60	51.70	-2.75	-2.94	46.60	46.70	
	5	51.50	51.80	-2.59	-2.91	46.30	46.40	
	6	51.40	51.60	-2.52	-3.06	46.10	46.30	
	7	51.60	52.20	-2.65	-3.02	46.60	46.90	
	8	51.50	51.70	-2.46	-2.82	46.00	46.30	
	9	51.60	51.70	-2.60	-2.88	46.40	46.50	
	10	51.50	51.80	-2.63	-2.93	46.40	46.60	
	11	51.30	51.70	-2.51	-2.86	46.10	46.40	
	12	51.40	51.70	-2.57	-2.85	46.30	46.50	
	13	51.70	52.10	-2.71	-3.09	46.70	47.10	
	14	51.40	51.60	-2.59	-2.84	46.30	46.60	
	15	51.50	51.70	-2.59	-2.91	46.40	46.70	
	16	51.50	51.80	-2.64	-2.85	46.40	46.60	
	17	51.70	51.70	-2.75	-2.97	46.60	46.60	
	18	51.80	51.80	-2.66	-2.85	46.60	46.60	
	19	51.80	51.80	-2.64	-2.84	46.70	46.70	
	20	51.80	51.70	-2.67	-2.85	46.60	46.60	
	21	51.50	51.60	-2.55	-2.74	46.30	46.40	
	22	51.80	51.80	-2.65	-2.86	46.50	46.70	
	23	51.50	51.60	-2.49	-2.73	46.20	46.20	
	24	51.80	51.80	-2.73	-2.95	46.70	46.90	
Min		51.30	51.60	-2.75	-3.09	46.00	46.20	
Max		51.80	52.20	-2.46	-2.73	46.70	47.10	
Mean		51.58	51.75	-2.62	-2.90	46.43	46.59	
Std. Dev		0.1497	0.1442	0.0794	0.0881	0.2050	0.2087	
Mean - 3 Sigma		51.13	51.32	-2.86	-3.16	45.81	45.97	
Mean + 3 Sigma		52.03	52.18	-2.38	-2.63	47.04	47.22	

		RF1_IL_33GHz (dB)		RF1_ISOL 33GHz (dB)		RF2_IL_650MHz (dB)		
		PRE	100k	PRE	100k	PRE	100k	
Biased	CTRL	25	-2.43	-2.56	47.30	48.00	-0.99	-1.08
	1	-2.42	-2.86	48.30	49.50	-0.96	-1.04	
	2	-2.37	-2.62	47.40	48.80	-0.96	-1.05	
	4	-2.49	-2.52	47.70	48.50	-1.00	-1.05	
	5	-2.37	-2.70	47.30	47.70	-1.00	-1.07	
	6	-2.36	-2.53	47.30	47.40	-1.01	-1.06	
	7	-2.43	-2.62	48.20	48.40	-0.98	-1.14	
	8	-2.36	-2.85	46.80	47.50	-1.00	-1.05	
	9	-2.41	-2.81	47.90	48.20	-1.01	-1.06	
	10	-2.43	-2.63	47.20	48.20	-0.99	-1.06	
	11	-2.31	-2.56	47.00	47.90	-0.98	-1.08	
	12	-2.39	-2.67	47.20	47.20	-0.99	-1.09	
	13	-2.48	-2.57	48.40	49.20	-0.99	-1.08	
	14	-2.40	-2.63	47.10	48.20	-0.97	-1.06	
	15	-2.39	-2.53	47.70	47.80	-0.97	-1.06	
	16	-2.50	-2.61	47.70	47.30	-0.99	-1.07	
	17	-2.53	-2.69	47.60	47.80	-1.00	-1.06	
	18	-2.40	-2.71	47.60	48.60	-1.02	-1.07	
	19	-2.39	-2.66	47.90	48.60	-1.01	-1.04	
	20	-2.40	-2.69	47.40	48.30	-1.00	-1.04	
	21	-2.32	-2.54	46.60	48.10	-0.98	-1.03	
	22	-2.41	-2.66	48.10	49.00	-0.98	-1.05	
	23	-2.34	-2.51	46.50	47.20	-0.99	-1.05	
	24	-2.46	-2.75	48.30	49.30	-1.00	-1.06	
Min		-2.53	-2.86	46.50	47.20	-1.02	-1.14	
Max		-2.31	-2.51	48.40	49.50	-0.96	-1.03	
Mean		-2.41	-2.65	47.53	48.20	-0.99	-1.06	
Std. Dev		0.0563	0.1013	0.5380	0.6732	0.0167	0.0223	
Mean - 3 Sigma		-2.58	-2.95	45.92	46.18	-1.04	-1.13	
Mean + 3 Sigma		-2.24	-2.34	49.14	50.22	-0.94	-0.99	

		RF2_ISOL 650MHz (dB)		RF2_IL_15GHz (dB)		RF2_ISOL 15GHz (dB)		
		PRE	Post	PRE	Post	PRE	Post	
Biased	CTRL	25	78.20	77.00	-1.42	-1.71	48.60	48.70
	1	78.40	78.40	-1.33	-1.62	48.50	48.50	
	2	79.10	77.80	-1.33	-1.64	48.60	48.60	
	4	79.70	80.20	-1.42	-1.64	48.50	48.40	
	5	77.60	78.00	-1.46	-1.71	48.60	48.60	
	6	78.30	79.30	-1.45	-1.72	48.50	48.60	
	7	79.70	78.30	-1.37	-1.88	48.60	48.70	
	8	79.80	77.40	-1.49	-1.77	48.70	48.60	
	9	79.50	77.70	-1.47	-1.75	48.60	48.50	
	10	78.60	77.60	-1.40	-1.76	48.60	48.60	
	11	80.10	78.60	-1.41	-1.83	48.50	48.60	
	12	80.70	78.20	-1.43	-1.83	48.50	48.50	
	13	79.40	77.90	-1.41	-1.77	48.60	48.60	
	14	79.30	78.00	-1.39	-1.71	48.50	48.50	
	15	81.60	78.20	-1.40	-1.71	48.50	48.50	
	16	79.10	77.80	-1.38	-1.78	48.40	48.60	
	17	80.00	78.80	-1.44	-1.71	48.50	48.50	
	18	79.00	78.50	-1.49	-1.76	48.60	48.60	
	19	79.00	77.80	-1.48	-1.64	48.70	48.60	
	20	78.30	78.10	-1.47	-1.65	48.70	48.60	
	21	79.40	77.90	-1.42	-1.59	48.60	48.50	
	22	78.00	78.20	-1.42	-1.75	48.60	48.60	
	23	77.40	78.90	-1.46	-1.72	48.60	48.60	
	24	78.20	79.80	-1.43	-1.73	48.60	48.60	
Min		77.40	77.40	-1.49	-1.88	48.40	48.40	
Max		81.60	80.20	-1.33	-1.59	48.70	48.70	
Mean		79.14	78.32	-1.42	-1.72	48.57	48.57	
Std. Dev		0.9857	0.6934	0.0452	0.0721	0.0765	0.0647	
Mean - 3 Sigma		76.18	76.24	-1.56	-1.94	48.34	48.37	
Mean + 3 Sigma		82.10	80.40	-1.29	-1.51	48.80	48.76	

		RF2_IL_25d5GHz (dB)		RF2_ISOL 25d5GHz (dB)		RF2_IL_33GHz (dB)		
		PRE	Post	PRE	Post	PRE	Post	
CTRL	25	-2.39	-2.59	43.60	43.50	-2.49	-2.61	
	1	-2.44	-2.65	43.60	43.30	-2.50	-2.64	
Biased	2	-2.38	-2.59	43.70	43.30	-2.44	-2.61	
	4	-2.51	-2.66	43.70	43.50	-2.61	-2.69	
	5	-2.38	-2.57	43.70	43.50	-2.48	-2.64	
	6	-2.37	-2.54	43.70	43.60	-2.50	-2.61	
	7	-2.47	-2.91	43.70	43.60	-2.56	-2.79	
	8	-2.30	-2.71	43.60	43.60	-2.45	-2.76	
	9	-2.42	-2.64	43.70	43.50	-2.52	-2.59	
	10	-2.44	-2.70	43.80	43.60	-2.57	-2.65	
	11	-2.33	-2.64	43.70	43.70	-2.43	-2.57	
	12	-2.37	-2.66	43.70	43.70	-2.52	-2.60	
	13	-2.50	-2.76	43.70	43.60	-2.59	-2.68	
	14	-2.39	-2.63	43.70	43.60	-2.53	-2.57	
	15	-2.38	-2.65	43.50	43.60	-2.52	-2.58	
	16	-2.42	-2.62	43.80	43.50	-2.61	-2.64	
	17	-2.52	-2.68	43.80	43.40	-2.64	-2.67	
	18	-2.45	-2.63	43.60	43.60	-2.53	-2.65	
	19	-2.44	-2.60	43.70	43.40	-2.50	-2.62	
	20	-2.47	-2.62	43.60	43.50	-2.51	-2.62	
	21	-2.35	-2.49	43.60	43.40	-2.47	-2.54	
	22	-2.45	-2.63	43.60	43.50	-2.52	-2.61	
	23	-2.31	-2.51	43.60	43.40	-2.45	-2.56	
	24	-2.49	-2.67	43.60	43.40	-2.54	-2.64	
		Min	-2.52	-2.91	43.50	43.30	-2.64	-2.79
		Max	-2.30	-2.49	43.80	43.70	-2.43	-2.54
	Mean	-2.42	-2.64	43.67	43.51	-2.52	-2.63	
	Std. Dev	0.0630	0.0849	0.0765	0.1140	0.0564	0.0595	
	Mean - 3 Sigma	-2.61	-2.90	43.44	43.17	-2.69	-2.81	
	Mean + 3 Sigma	-2.23	-2.39	43.90	43.86	-2.35	-2.45	

		RF2_ISOL 33GHz (dB)		RF3_IL_650MHz (dB)		RF3_ISOL 650MHz (dB)		
		PRE	Post	PRE	Post	PRE	Post	
CTRL	25	58.30	55.00	-0.99	-1.02	74.20	73.70	
	1	59.40	57.20	-0.97	-0.99	74.30	73.60	
Biased	2	58.00	55.70	-0.97	-1.00	74.20	73.70	
	4	55.90	56.50	-1.00	-1.00	74.10	73.80	
	5	55.80	55.80	-1.00	-1.02	74.30	73.90	
	6	57.70	55.80	-0.98	-1.03	74.40	73.60	
	7	56.40	54.80	-0.97	-0.97	74.40	73.80	
	8	59.70	56.50	-0.99	-0.97	74.60	73.80	
	9	59.50	56.10	-1.00	-0.98	74.10	73.40	
	10	55.80	55.60	-0.99	-0.99	74.40	73.70	
	11	59.40	56.90	-0.98	-1.00	74.70	73.40	
	12	57.10	55.30	-0.99	-1.00	74.00	73.80	
	13	58.60	57.00	-0.99	-1.00	74.30	73.40	
	14	57.10	55.60	-0.98	-0.99	74.40	73.50	
	15	58.60	56.60	-0.99	-0.99	74.30	73.40	
	16	56.50	56.00	-0.97	-1.00	74.70	73.70	
	17	57.50	56.00	-0.98	-1.00	74.50	74.00	
	18	56.90	55.70	-1.01	-1.01	74.30	74.10	
	19	57.80	56.20	-1.01	-0.99	74.20	73.80	
	20	56.30	55.60	-1.01	-0.99	74.30	73.30	
	21	58.30	56.10	-0.99	-0.98	73.80	73.80	
	22	55.30	55.50	-0.98	-1.00	73.70	73.90	
	23	56.70	56.80	-0.99	-1.01	73.90	74.10	
	24	56.90	55.90	-0.99	-1.01	74.00	73.80	
		Min	55.30	54.80	-1.01	-1.03	73.70	73.30
		Max	59.70	57.20	-0.97	-0.97	74.70	74.10
	Mean	57.44	56.05	-0.99	-1.00	74.26	73.71	
	Std. Dev	1.3132	0.5907	0.0137	0.0143	0.2608	0.2275	
	Mean - 3 Sigma	53.50	54.28	-1.03	-1.04	73.47	73.03	
	Mean + 3 Sigma	61.38	57.82	-0.95	-0.95	75.04	74.39	

		RF3_IL_15GHz (dB)		RF3_ISOL 15GHz (dB)		RF3_IL_25d5GHz (dB)		
		PRE	Post	PRE	Post	PRE	Post	
CTRL	25	-1.53	-1.57	49.50	49.50	-2.39	-2.56	
	1	-1.46	-1.55	49.40	49.40	-2.44	-2.64	
Biased	2	-1.44	-1.57	49.30	49.30	-2.38	-2.58	
	4	-1.52	-1.58	49.60	49.50	-2.50	-2.65	
	5	-1.57	-1.64	49.50	49.40	-2.37	-2.56	
	6	-1.49	-1.68	49.40	49.40	-2.36	-2.53	
	7	-1.44	-1.44	49.30	49.20	-2.47	-2.88	
	8	-1.59	-1.57	49.30	49.10	-2.29	-2.67	
	9	-1.56	-1.54	49.50	49.30	-2.41	-2.64	
	10	-1.51	-1.58	49.40	49.40	-2.43	-2.70	
	11	-1.51	-1.63	49.30	49.40	-2.32	-2.64	
	12	-1.53	-1.64	49.30	49.40	-2.37	-2.66	
	13	-1.53	-1.57	49.50	49.50	-2.50	-2.75	
	14	-1.52	-1.58	49.30	49.30	-2.38	-2.62	
	15	-1.54	-1.54	49.40	49.40	-2.38	-2.64	
	16	-1.39	-1.60	49.40	49.40	-2.41	-2.61	
	17	-1.42	-1.59	49.60	49.50	-2.51	-2.68	
	18	-1.55	-1.64	49.60	49.40	-2.44	-2.62	
	19	-1.57	-1.55	49.60	49.50	-2.43	-2.59	
	20	-1.56	-1.54	49.60	49.50	-2.46	-2.61	
	21	-1.53	-1.51	49.50	49.30	-2.35	-2.48	
	22	-1.50	-1.60	49.50	49.40	-2.44	-2.62	
	23	-1.56	-1.62	49.40	49.30	-2.30	-2.50	
	24	-1.51	-1.61	49.50	49.40	-2.49	-2.67	
		Min	-1.59	-1.68	49.30	49.10	-2.51	-2.88
		Max	-1.39	-1.44	49.60	49.50	-2.29	-2.48
	Mean	-1.51	-1.58	49.44	49.38	-2.41	-2.63	
	Std. Dev	0.0523	0.0514	0.1121	0.0998	0.0635	0.0822	
	Mean - 3 Sigma	-1.67	-1.74	49.11	49.08	-2.60	-2.88	
	Mean + 3 Sigma	-1.36	-1.43	49.78	49.68	-2.22	-2.39	

		RF3_ISOL 25d5GHz (dB)		RF3_IL_33GHz (dB)		RF3_ISOL 33GHz (dB)	
		PRE	Post	PRE	Post	PRE	Post
CTRL	25	43.80	43.50	-2.49	-2.61	58.50	55.70
	1	43.60	43.50	-2.51	-2.63	58.30	58.10
	2	43.60	43.30	-2.44	-2.60	58.40	55.80
	4	43.70	43.40	-2.61	-2.68	56.10	56.00
	5	43.80	43.60	-2.47	-2.63	55.90	56.50
	6	43.50	43.50	-2.49	-2.60	57.40	57.20
	7	43.70	43.70	-2.56	-2.77	57.70	55.00
	8	43.60	43.70	-2.44	-2.76	58.50	56.20
	9	43.70	43.60	-2.51	-2.58	58.20	57.10
	10	43.80	43.60	-2.56	-2.65	56.70	56.00
	11	43.80	43.60	-2.42	-2.56	60.50	57.20
	12	43.60	43.60	-2.51	-2.60	59.80	55.50
	13	43.70	43.60	-2.58	-2.68	57.10	57.80
	14	43.70	43.60	-2.52	-2.56	60.40	57.20
	15	43.60	43.60	-2.51	-2.58	57.90	56.40
	16	43.60	43.70	-2.59	-2.64	57.30	56.00
	17	43.70	43.60	-2.61	-2.66	57.20	55.80
	18	43.60	43.50	-2.52	-2.65	56.00	55.90
	19	43.60	43.40	-2.50	-2.61	58.50	55.40
	20	43.60	43.60	-2.50	-2.61	56.70	55.30
	21	43.50	43.40	-2.46	-2.53	59.20	55.40
	22	43.60	43.40	-2.51	-2.60	55.50	55.50
	23	43.50	43.50	-2.45	-2.55	56.60	56.70
	24	43.60	43.50	-2.54	-2.63	56.20	56.60
	Min	43.50	43.30	-2.61	-2.77	55.50	55.00
	Max	43.80	43.70	-2.42	-2.53	60.50	58.10
	Mean	43.64	43.54	-2.51	-2.62	57.66	56.29
	Std. Dev	0.0891	0.1080	0.0536	0.0596	1.4145	0.8363
	Mean - 3 Sigma	43.37	43.22	-2.67	-2.80	53.41	53.78
	Mean + 3 Sigma	43.91	43.87	-2.35	-2.45	61.90	58.80

		RF4_IL_650MHz (dB)		RF4_ISOL 650MHz (dB)		RF4_IL_15GHz (dB)	
		PRE	Post	PRE	Post	PRE	Post
CTRL	25	-0.98	-1.01	78.90	80.70	-1.54	-1.52
	1	-0.95	-0.97	79.60	78.80	-1.41	-1.54
	2	-0.95	-0.99	78.90	79.10	-1.43	-1.58
	4	-0.99	-0.99	78.40	79.00	-1.51	-1.55
	5	-0.99	-1.01	78.50	79.10	-1.60	-1.62
	6	-1.00	-1.01	78.70	78.10	-1.50	-1.66
	7	-0.97	-0.95	79.80	79.10	-1.43	-1.54
	8	-1.00	-0.96	78.80	79.60	-1.57	-1.54
	9	-1.00	-0.97	80.70	80.80	-1.55	-1.47
	10	-0.98	-0.97	80.00	80.30	-1.50	-1.55
	11	-0.97	-0.98	80.00	80.10	-1.50	-1.59
	12	-0.97	-0.99	80.50	79.90	-1.50	-1.63
	13	-0.98	-0.98	79.60	80.30	-1.52	-1.52
	14	-0.96	-0.97	80.80	79.70	-1.50	-1.59
	15	-0.97	-0.97	79.40	79.60	-1.52	-1.55
	16	-0.98	-0.98	79.90	80.60	-1.42	-1.61
	17	-0.98	-0.98	79.90	79.40	-1.45	-1.61
	18	-1.01	-0.99	79.40	78.90	-1.58	-1.65
	19	-1.00	-0.97	77.90	79.20	-1.60	-1.55
	20	-0.99	-0.97	78.50	81.40	-1.59	-1.56
	21	-0.97	-0.96	78.10	79.80	-1.51	-1.52
	22	-0.97	-0.98	77.80	79.70	-1.50	-1.62
	23	-0.98	-0.99	77.60	79.40	-1.56	-1.66
	24	-0.99	-0.99	79.70	79.50	-1.53	-1.66
	Min	-1.01	-1.01	77.60	78.10	-1.60	-1.66
	Max	-0.95	-0.95	80.80	81.40	-1.41	-1.47
	Mean	-0.98	-0.98	79.24	79.63	-1.51	-1.58
	Std. Dev	0.0165	0.0151	0.9360	0.7319	0.0567	0.0522
	Mean - 3 Sigma	-1.03	-1.02	76.43	77.43	-1.68	-1.74
	Mean + 3 Sigma	-0.93	-0.93	82.05	81.82	-1.34	-1.42

		RF4_ISOL 15GHz (dB)		RF4_IL_25d5GHz (dB)		RF4_ISOL 25d5GHz (dB)	
		PRE	Post	PRE	Post	PRE	Post
CTRL	25	64.60	65.00	-2.87	-2.87	58.40	61.50
	1	65.10	64.70	-2.94	-2.98	59.20	61.30
	2	65.20	64.40	-2.83	-2.90	58.90	61.70
	4	65.80	64.90	-2.97	-2.96	59.00	60.90
	5	64.70	64.40	-2.85	-2.86	58.10	61.00
	6	64.30	64.20	-2.78	-2.87	59.00	60.90
	7	64.60	65.30	-2.92	-3.11	58.80	61.20
	8	63.90	64.30	-2.70	-2.84	58.50	60.70
	9	65.00	64.70	-2.87	-2.88	59.10	60.90
	10	65.00	64.70	-2.91	-2.96	58.00	60.80
	11	64.80	64.30	-2.76	-2.88	57.90	61.10
	12	64.60	63.90	-2.82	-2.94	58.40	60.60
	13	65.00	64.90	-2.99	-3.04	58.60	61.80
	14	64.50	64.40	-2.83	-2.92	58.30	61.60
	15	64.60	64.00	-2.85	-2.95	58.50	61.30
	16	64.00	64.90	-2.86	-2.93	59.10	60.50
	17	65.40	65.30	-2.99	-3.01	58.90	60.50
	18	65.00	64.50	-2.92	-2.95	58.60	60.60
	19	65.20	64.60	-2.90	-2.91	58.40	61.20
	20	65.30	64.70	-2.93	-2.92	58.60	60.10
	21	64.60	64.70	-2.81	-2.81	58.40	60.10
	22	65.50	64.60	-2.91	-2.97	59.80	60.30
	23	64.60	64.30	-2.74	-2.83	59.20	60.00
	24	65.50	65.10	-2.97	-3.04	59.30	60.90
	Min	63.90	63.90	-2.99	-3.11	57.90	60.00
	Max	65.80	65.30	-2.70	-2.81	59.80	61.80
	Mean	64.91	64.60	-2.87	-2.93	58.72	60.87
	Std. Dev	0.4383	0.3668	0.0805	0.0730	0.4612	0.4986
	Mean - 3 Sigma	63.60	63.50	-3.11	-3.15	57.34	59.37
	Mean + 3 Sigma	66.23	65.70	-2.63	-2.71	60.11	62.37

	SN	RF4_IL_33GGHz (dB)		RF4_ISOL 33GHz (dB)	
		PRE	Post	PRE	Post
CTRL	25	-2.55	-2.51	45.60	45.60
Biased	1	-2.58	-2.54	45.50	45.80
	2	-2.50	-2.53	45.40	45.70
	4	-2.62	-2.56	45.40	45.50
	5	-2.52	-2.54	45.50	45.80
	6	-2.52	-2.55	45.60	45.70
	7	-2.58	-2.64	45.40	45.70
	8	-2.49	-2.67	45.40	46.40
	9	-2.55	-2.47	45.50	46.00
	10	-2.57	-2.50	45.00	45.40
	11	-2.46	-2.46	45.30	45.70
	12	-2.53	-2.51	45.50	46.00
	13	-2.63	-2.62	45.20	45.30
	14	-2.55	-2.49	45.60	45.90
	15	-2.54	-2.48	45.40	45.70
	16	-2.62	-2.56	45.50	46.00
	17	-2.64	-2.59	45.40	45.60
	18	-2.55	-2.57	45.50	45.80
	19	-2.53	-2.53	45.60	45.70
	20	-2.57	-2.53	45.50	45.70
	21	-2.49	-2.46	45.40	45.90
	22	-2.54	-2.54	45.70	45.60
	23	-2.48	-2.50	45.50	45.80
	24	-2.59	-2.61	45.30	45.40
	Min	-2.64	-2.67	45.00	45.30
Max	-2.46	-2.46	45.70	46.40	
Mean	-2.55	-2.54	45.44	45.74	
Std. Dev	0.0495	0.0567	0.1469	0.2371	
Mean - 3 Sigma	-2.70	-2.71	45.00	45.03	
Mean + 3 Sigma	-2.40	-2.37	45.88	46.45	









