



Summary Data
For
ERDLVA-2G18G-65-70MV-70C

Customer: Raytheon

Tested By: Anton L.

SO No: 115400

Temperature: -40°C TO +70°C

Model No: ERDLVA-2G18G-65-70MV-70C

Date 9/24/2024

Serial No: PL47176/2440

Drawing No: 27642020 Rev: A1

TEST ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
1	Frequency Range:	2 to 18 GHz	2 to 18 GHz	PMI QA3
2	VSWR:	2.2:1 MAX @ 50 Ω	1.96 :1 MAX	
3	Input Power:	(1) 1 W CW, Max. (2) 100 W Peak @ PW = 1 us & Duty Cycle = 1%, Max.	Pass	
4	VIDEO OUT TSS:	-71 dBm MAX	- 71.4 dBm	
5	VIDEO OUT Dynamic Range:	-65 to 0 dBm	-65 to 0 dBm	
6	VIDEO OUT Log Slope Fixed:	70 ± 3mV/dB	70.9 mV/dB	
			68.7 mV/dB	
7	VIDEO OUT Log Linearity:	±1.0 dB MAX @25C	0.55 dB	
			-0.52 dB	
8	VIDEO OUT Log Accuracy:	±2.3 dB MAX @25C	1.08 dB	
			-1.08 dB	
9	VIDEO OUT Absolute Log Accuracy:	±2.9 dB MAX Over Freq & temp	1.97 dB	
			-1.70 dB	
10	VIDEO OUT DC Offset:	0 ±70 mV (RF Input Terminated & DC Power On) @25C	35 mV	
11	VIDEO OUT Rise Time (10% to 90%):	28 ns MAX	21.5 ns	
12	VIDEO OUT Fall Time (90% to 10%):	300 ns MAX	179.1 ns	



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13	VIDEO OUT Settling Time:	50 ns With in ± 70 mV of final value @-10 dBm	21.3 ns	PMI QA3
14	VIDEO OUT Recovery Time:	1 us MAX to within 1 dB of baseline for PW <10us & Power = -10dBm	0.3 us	
15	VIDEO OUT Video Frequency Flatness:	± 2.0 dB MAX @25C	± 1.00 dB	
16	VIDEO OUT CW Immunity:	CW Immune Power TSS to -40 dBm	Pass	
		Pulse Peak Amplitude Loss; 2 dB MAX @ -40dBm CW	< 2 dB	
		Baseline shift 200mV @-40dBm CW	< 200 mV	
		CW Immunity Time at CW = -40 dBm, ≤ 4 ms	1.41 ms	
		CW Recovery Time at CW = -40 dBm, ≤ 20 us	<20 us	
17	Pulse droop	1dB Max for 300us pulse at or above -65dBm	<1dB	
18	VIDEO OUT Pulse Response, input Signal:	100 ns to 300 us	100 ns to 300 us	
19	VIDEO LOAD Impedance:	75 ± 1 Ω	75 Ω	
20	VIDEO driver capability	100 ft RG11 into 75 ohm load	Pass	
21	Pulse density capability	10% duty cycle 100 ns, 70% duty cycle 300 us at peak power -10 dBm with 1 dB variable for pulse amplitude and baseline	Pass	



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22	VIDEO OUT Noise Level (Vp-p):	160 mV max	154.6 mV	PMI QA,3
23	VIDEO OUT Propagation Delay:	50 ns MAX from RF 50% to 10% video (excluding cable)	< 50 ns	
24	Power Supply	+15 V @ 500 mA MAX -15 V @ 100 mA MAX	+15 V @ 310 mA -15 V @ 80 mA	
25	Power Supply Ripple From DC to 10 MHz	100 mV MAX	Pass	

QA/QC Approval: K. Klauzy

Date: 10-2-24



Summary Data For ERDLVA-2G18G-65-70MV-70C

LOG TRANSFER WITH FREQUENCY

TESTED BY: Anton L.
MODEL: ERDLVA-2G18G-65-70MV-70C
SERIAL NO: PL47176/2440
DATE: 9/24/2024

Test Temp: 25 °C
Video Offset: 35 mV

Frequency		
2000 MHz	INTERCEPT (mV)	4915
	SLOPE (mV/dB)	70.2

	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
333	692	1047	1405	1781	2108	2463	2824	3146	3514	3901	4221	4553	4879	
-18	-10	-6	0	25	1	5	15	-14	3	39	8	-11	-36	
-0.26	-0.15	-0.09	0.01	0.36	0.02	0.07	0.21	-0.20	0.04	0.55	0.11	-0.16	-0.52	
0.04	0.18	0.25	0.37	0.75	0.43	0.51	0.67	0.28	0.54	1.08	0.65	0.40	0.07	

RF Input Power (dBm)	
Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	0.55
ACCURACY ERROR (dB)	1.08

6000 MHz	INTERCEPT (mV)	4932
	SLOPE (mV/dB)	70.6

	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
329	688	1045	1403	1777	2106	2474	2842	3165	3523	3887	4214	4567	4922	
-16	-10	-6	-1	20	-3	12	27	-3	2	13	-13	-13	-10	
-0.23	-0.14	-0.08	-0.01	0.29	-0.05	0.17	0.38	-0.04	0.03	0.19	-0.18	-0.18	-0.15	
-0.02	0.12	0.22	0.35	0.70	0.40	0.67	0.93	0.55	0.67	0.88	0.55	0.60	0.68	

Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	0.38
ACCURACY ERROR (dB)	0.93

10000 MHz	INTERCEPT (mV)	4873
	SLOPE (mV/dB)	70.9

	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
263	605	954	1326	1694	2032	2409	2783	3105	3465	3815	4158	4507	4851	
-2	-15	-20	-3	15	-5	17	-17	4	10	8	-8	-12	-22	
-0.03	-0.21	-0.28	-0.04	0.16	-0.08	0.24	0.52	0.06	0.14	0.08	-0.09	-0.16	-0.31	
-0.96	-1.07	-1.08	-0.76	-0.49	-0.66	-0.26	0.09	-0.31	-0.16	-0.15	-0.25	-0.25	-0.33	

Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	0.52
ACCURACY ERROR (dB)	-1.08

14000 MHz	INTERCEPT (mV)	4865
	SLOPE (mV/dB)	69.1

	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
351	709	1074	1424	1780	2100	2443	2791	3117	3481	3835	4177	4528	4853	
-21	-9	10	15	25	0	-3	-1	-20	-2	7	3	8	-12	
-0.31	-0.13	0.15	0.21	0.36	-0.01	-0.04	-0.01	-0.29	-0.03	0.10	0.04	0.12	-0.18	
0.30	0.42	0.64	0.65	0.74	0.32	0.22	0.20	-0.14	0.07	0.13	0.02	0.05	-0.31	

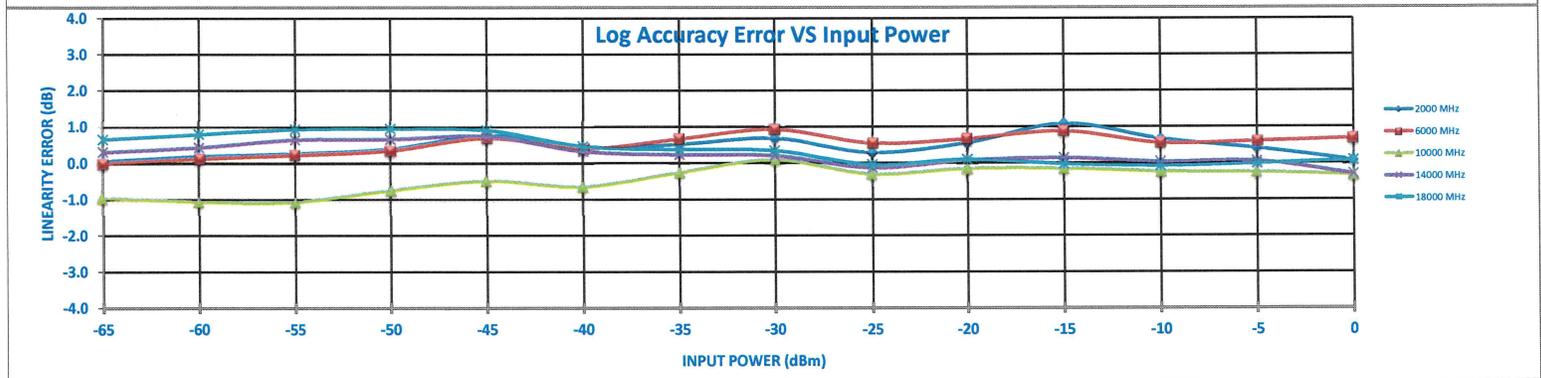
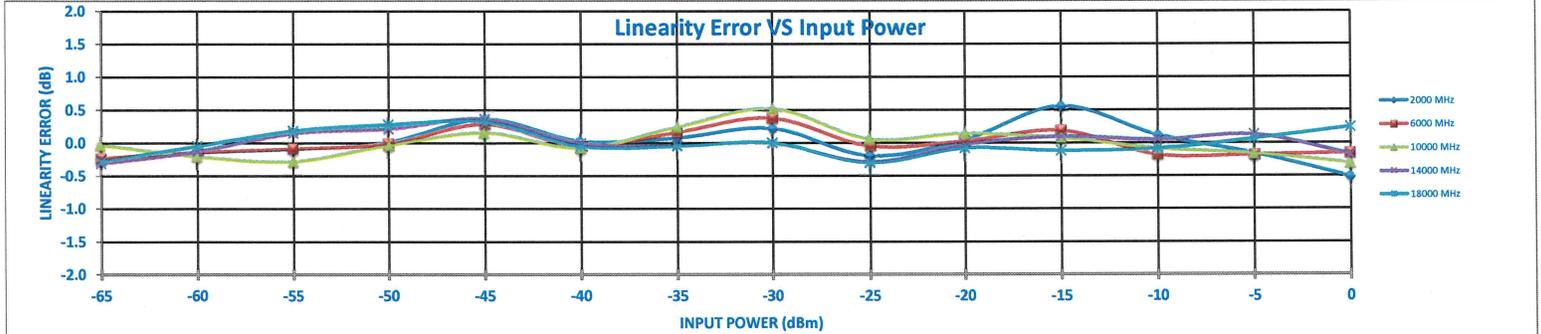
Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	0.36
ACCURACY ERROR (dB)	0.74

18000 MHz	INTERCEPT (mV)	4863
	SLOPE (mV/dB)	68.7

	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
375	734	1094	1444	1791	2109	2453	2800	3123	3482	3823	4169	4523	4879	
-19	-4	12	19	22	-4	-4	0	-21	-6	-9	-6	4	16	
-0.28	-0.06	0.18	0.27	0.32	-0.06	-0.05	-0.01	-0.31	-0.09	-0.13	-0.09	0.06	0.24	
0.64	0.78	0.93	0.93	0.90	0.44	0.36	0.33	-0.05	0.08	-0.04	-0.09	-0.03	0.07	

Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	0.32
ACCURACY ERROR (dB)	0.93

Flatness	+/- dB	0.80	0.92	1.00	0.84	0.69	0.55	0.46	0.42	0.43	0.41	0.62	0.45	0.43	0.51
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Summary Data For ERDLVA-2G18G-65-70MV-70C

LOG TRANSFER WITH FREQUENCY

TESTED BY: Anton L.
MODEL: ERDLVA-2G18G-65-70MV-70C
SERIAL NO: PL47176/2440
DATE: 9/24/2024

Test Temp: -40 °C
Video Offset: 15 mV

Frequency

2000 MHz	INTERCEPT (mV)	4874
	SLOPE (mV/dB)	70.0

6000 MHz	INTERCEPT (mV)	4914
	SLOPE (mV/dB)	70.2

10000 MHz	INTERCEPT (mV)	4880
	SLOPE (mV/dB)	70.4

14000 MHz	INTERCEPT (mV)	4868
	SLOPE (mV/dB)	68.6

18000 MHz	INTERCEPT (mV)	4885
	SLOPE (mV/dB)	67.9

	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
2000 MHz	322	661	1005	1363	1747	2086	2433	2787	3106	3470	3864	4187	4512	4840
6000 MHz	-2	-13	-19	-11	23	12	9	13	-18	-4	40	13	-12	-34
10000 MHz	-0.02	-0.18	-0.27	-0.15	0.33	0.18	0.13	0.19	-0.25	-0.06	0.57	0.19	-0.17	-0.49
14000 MHz	-0.11	-0.27	-0.36	-0.24	0.24	0.09	0.04	0.10	-0.34	-0.14	0.49	0.10	-0.26	-0.57
18000 MHz	345	689	1043	1395	1774	2116	2476	2830	3155	3507	3880	4203	4545	4905
6000 MHz	-7	-14	-11	-10	18	9	18	21	-4	-3	19	-9	-18	-9
10000 MHz	-0.10	-0.20	-0.16	-0.14	0.26	0.13	0.26	0.31	-0.06	-0.05	0.27	-0.13	-0.26	-0.13
14000 MHz	0.21	0.13	0.19	0.21	0.63	0.51	0.66	0.71	0.36	0.39	0.71	0.33	0.21	0.36
18000 MHz	303	640	987	1346	1726	2071	2442	2802	3121	3476	3840	4170	4514	4852
6000 MHz	-2	-17	-22	-14	14	7	28	34	1	4	16	-5	-14	-23
10000 MHz	-0.03	-0.24	-0.31	-0.21	0.19	0.10	0.37	0.48	0.01	0.06	0.23	-0.08	-0.19	-0.39
14000 MHz	-0.39	-0.57	-0.61	-0.49	-0.06	-0.13	0.17	0.31	-0.13	-0.06	0.14	-0.14	-0.23	-0.40
18000 MHz	393	735	1101	1447	1800	2133	2461	2807	3129	3489	3855	4184	4531	4855
6000 MHz	-14	-15	8	11	21	11	-5	-2	-23	-6	17	3	6	-13
10000 MHz	-0.20	-0.21	0.12	0.16	0.30	0.15	-0.07	-0.03	-0.33	-0.09	0.24	0.04	0.09	-0.19
14000 MHz	0.90	0.79	1.01	0.96	1.00	0.76	0.44	0.39	-0.01	0.13	0.36	0.06	0.01	-0.36
18000 MHz	461	796	1168	1516	1850	2179	2499	2843	3167	3517	3872	4200	4547	4900
6000 MHz	-13	-17	15	24	19	8	-11	-6	-22	-11	5	-7	1	15
10000 MHz	-0.19	-0.26	0.23	0.35	0.27	0.12	-0.16	-0.09	-0.32	-0.16	0.07	-0.10	0.02	0.22
14000 MHz	1.87	1.66	1.97	1.94	1.71	1.41	0.99	0.90	0.53	0.53	0.60	0.29	0.24	0.29

RF Input Power (dBm)	
Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	0.57
ACCURACY ERROR (dB)	-0.57

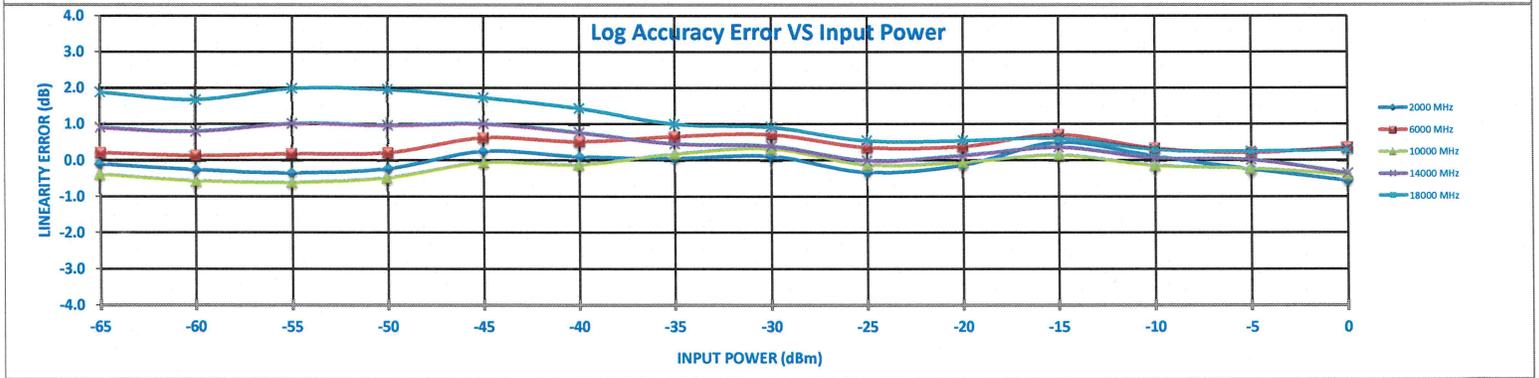
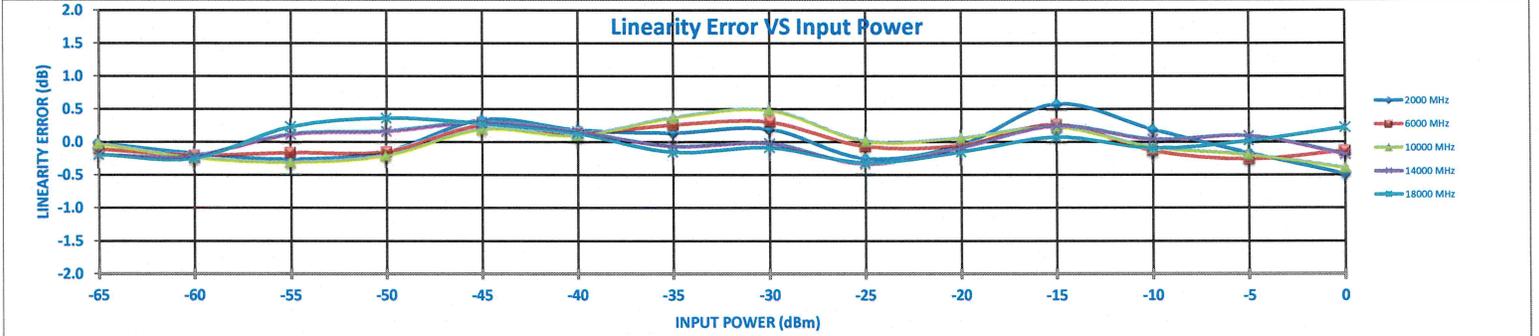
Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	0.31
ACCURACY ERROR (dB)	0.71

Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	0.48
ACCURACY ERROR (dB)	-0.61

Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	-0.33
ACCURACY ERROR (dB)	1.01

Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	0.35
ACCURACY ERROR (dB)	1.97

Flatness	+/- dB	1.13	1.11	1.29	1.21	0.89	0.77	0.47	0.40	0.44	0.34	0.29	0.24	0.25	0.46
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Summary Data For ERDLVA-2G18G-65-70MV-70C

LOG TRANSFER WITH FREQUENCY

TESTED BY: Anton L.
MODEL: ERDLVA-2G18G-65-70MV-70C
SERIAL NO: PL47176/2440
DATE: 9/24/2024

Test Temp: 70 °C
Video Offset: 33 mV

Frequency

2000 MHz	INTERCEPT (mV)	4945
	SLOPE (mV/dB)	70.7

6000 MHz	INTERCEPT (mV)	4959
	SLOPE (mV/dB)	71.0

10000 MHz	INTERCEPT (mV)	4884
	SLOPE (mV/dB)	71.4

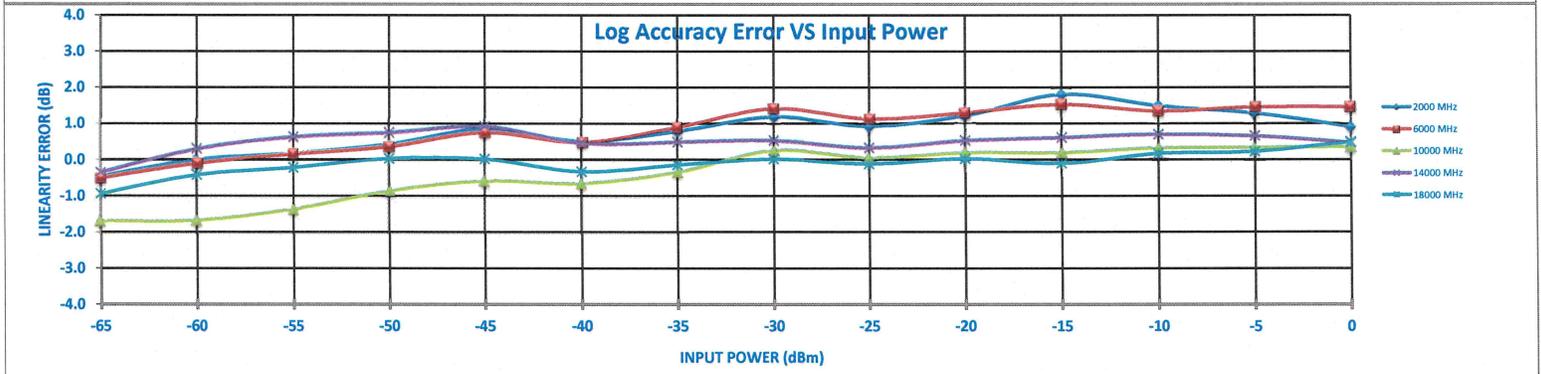
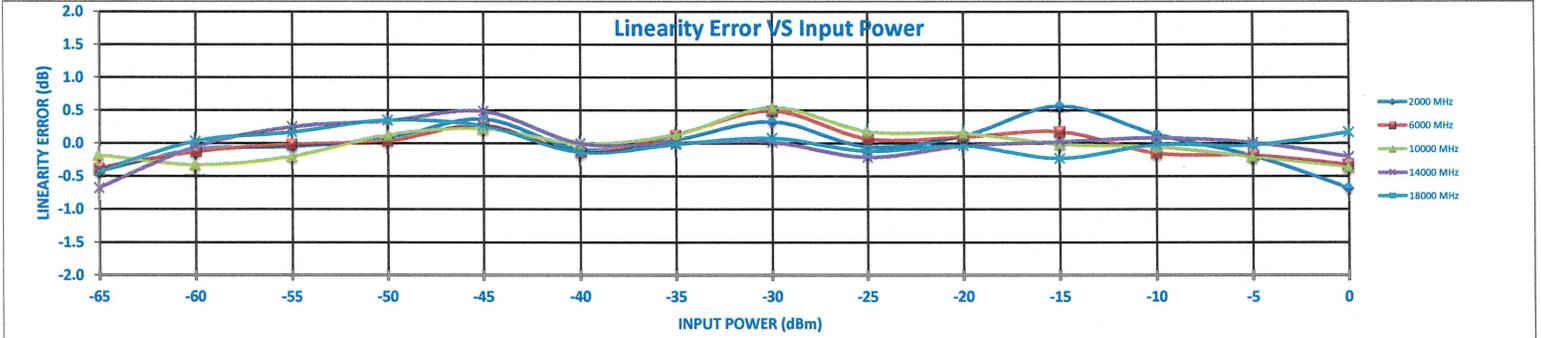
14000 MHz	INTERCEPT (mV)	4881
	SLOPE (mV/dB)	69.4

18000 MHz	INTERCEPT (mV)	4857
	SLOPE (mV/dB)	69.9

	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
2000 MHz	317	694	1051	1413	1788	2109	2473	2846	3173	3538	3924	4247	4578	4897
6000 MHz	-30	-7	-4	5	26	-7	4	23	-4	8	40	9	-13	-48
10000 MHz	-0.43	-0.10	-0.05	0.06	0.37	-0.10	0.05	0.32	-0.05	0.11	0.56	0.13	-0.19	-0.68
14000 MHz	-0.48	-0.01	0.16	0.41	0.84	0.49	0.77	1.17	0.91	1.20	1.80	1.48	1.28	0.90
18000 MHz	315	688	1051	1410	1782	2108	2482	2863	3188	3545	3906	4238	4591	4936
6000 MHz	-27	-9	-1	3	20	-9	9	35	5	7	13	-10	-13	-23
10000 MHz	-0.38	-0.12	-0.01	0.04	0.28	-0.13	0.13	0.50	0.07	0.10	0.18	-0.15	-0.18	-0.32
14000 MHz	-0.51	-0.10	0.16	0.36	0.75	0.48	0.90	1.42	1.13	1.30	1.54	1.35	1.46	1.46
18000 MHz	233	579	945	1325	1689	2029	2396	2782	3113	3468	3813	4167	4513	4859
6000 MHz	-13	-23	-14	9	18	-1	9	39	13	11	-1	-4	-15	-25
10000 MHz	-0.18	-0.33	-0.20	0.12	0.22	-0.01	0.13	0.54	0.18	0.15	-0.01	-0.05	-0.21	-0.36
14000 MHz	-1.70	-1.68	-1.38	-0.87	-0.59	-0.67	-0.35	0.25	0.04	0.19	0.19	0.32	0.33	0.35
18000 MHz	325	715	1083	1436	1793	2106	2453	2801	3132	3491	3842	4193	4535	4867
6000 MHz	-47	-4	17	23	34	0	0	1	-15	-3	1	6	1	-14
10000 MHz	-0.68	-0.06	0.25	0.34	0.48	0.00	0.00	0.01	-0.21	-0.04	0.02	0.08	0.01	-0.20
14000 MHz	-0.36	0.29	0.62	0.74	0.91	0.45	0.48	0.52	0.32	0.52	0.61	0.70	0.65	0.46
18000 MHz	284	665	1024	1386	1730	2051	2409	2765	3101	3456	3792	4156	4505	4868
6000 MHz	-30	2	11	24	18	-10	-1	5	-8	-3	-16	-2	-2	11
10000 MHz	-0.43	0.03	0.16	0.34	0.26	-0.14	-0.02	0.07	-0.12	-0.04	-0.23	-0.02	-0.03	0.16
14000 MHz	-0.96	-0.43	-0.23	0.01	0.00	-0.35	-0.16	0.00	-0.13	0.01	-0.12	0.16	0.22	0.48

RF Input Power (dBm)	
Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	-0.68
ACCURACY ERROR (dB)	1.80
Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	0.50
ACCURACY ERROR (dB)	1.54
Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	0.54
ACCURACY ERROR (dB)	-1.70
Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	-0.68
ACCURACY ERROR (dB)	0.91
Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	-0.43
ACCURACY ERROR (dB)	-0.96

Flatness	+/- dB	0.67	0.99	1.00	0.80	0.75	0.58	0.62	0.71	0.63	0.64	0.96	0.66	0.62	0.56	1.00
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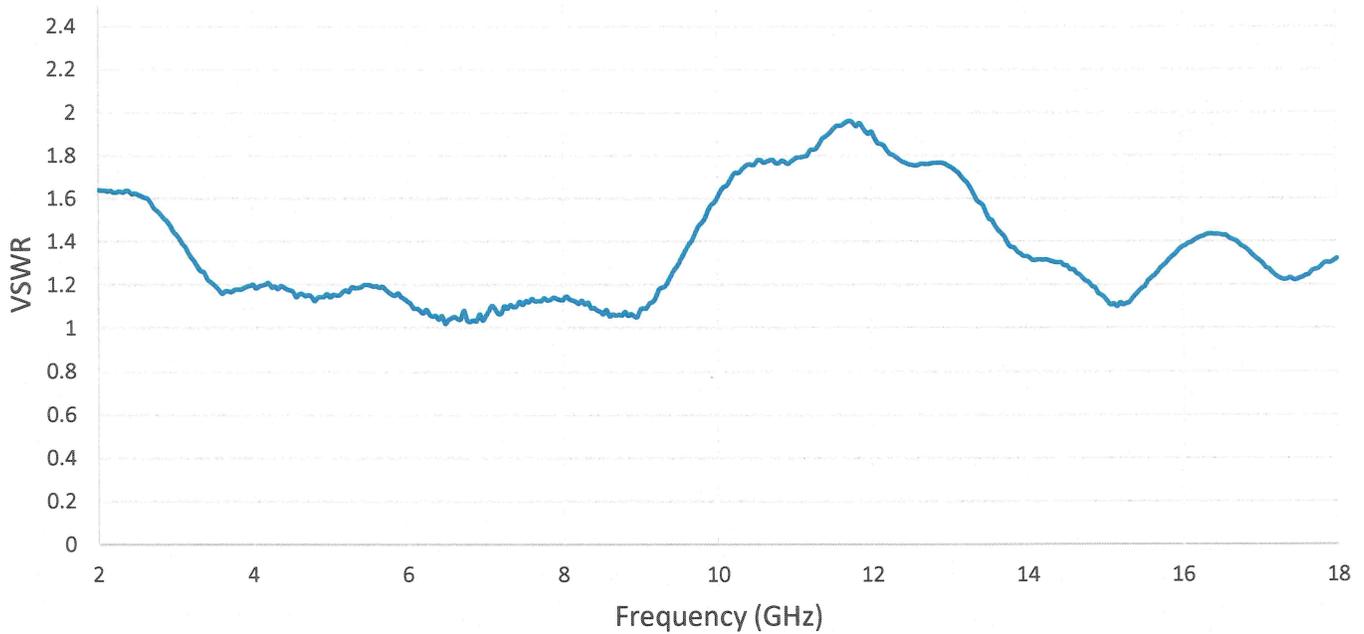




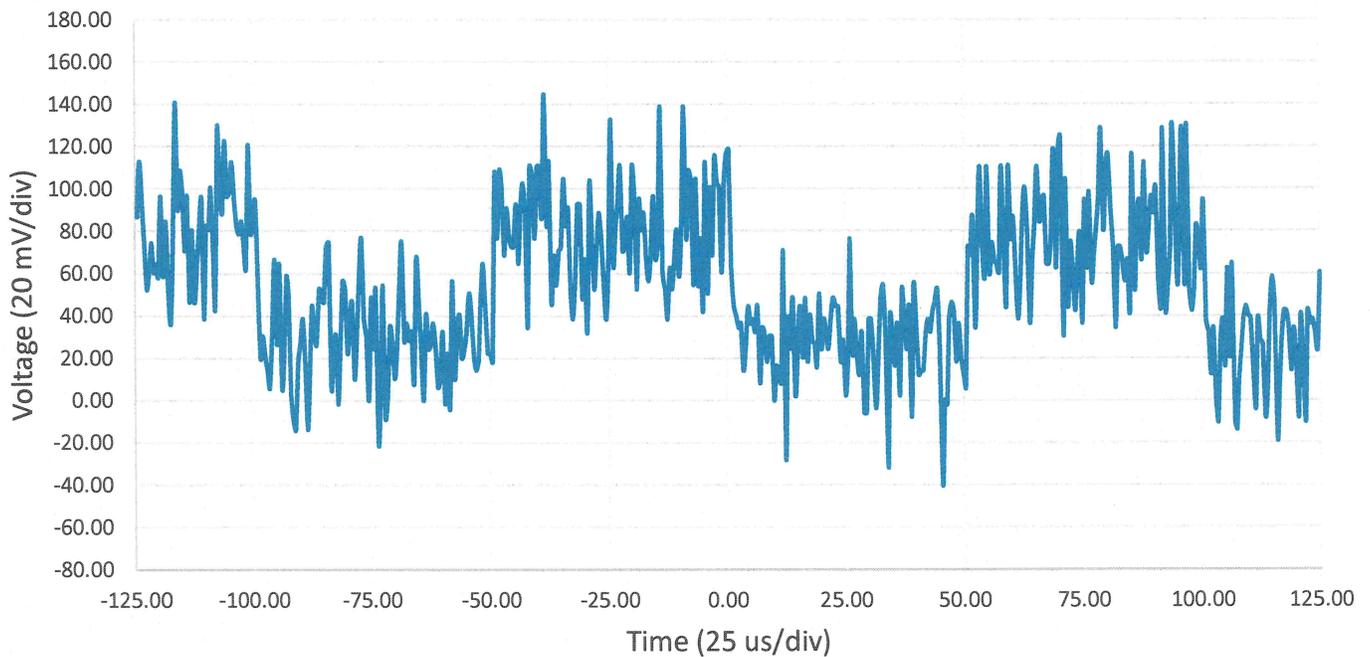
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PL47176/2440

VSWR 1.96:1



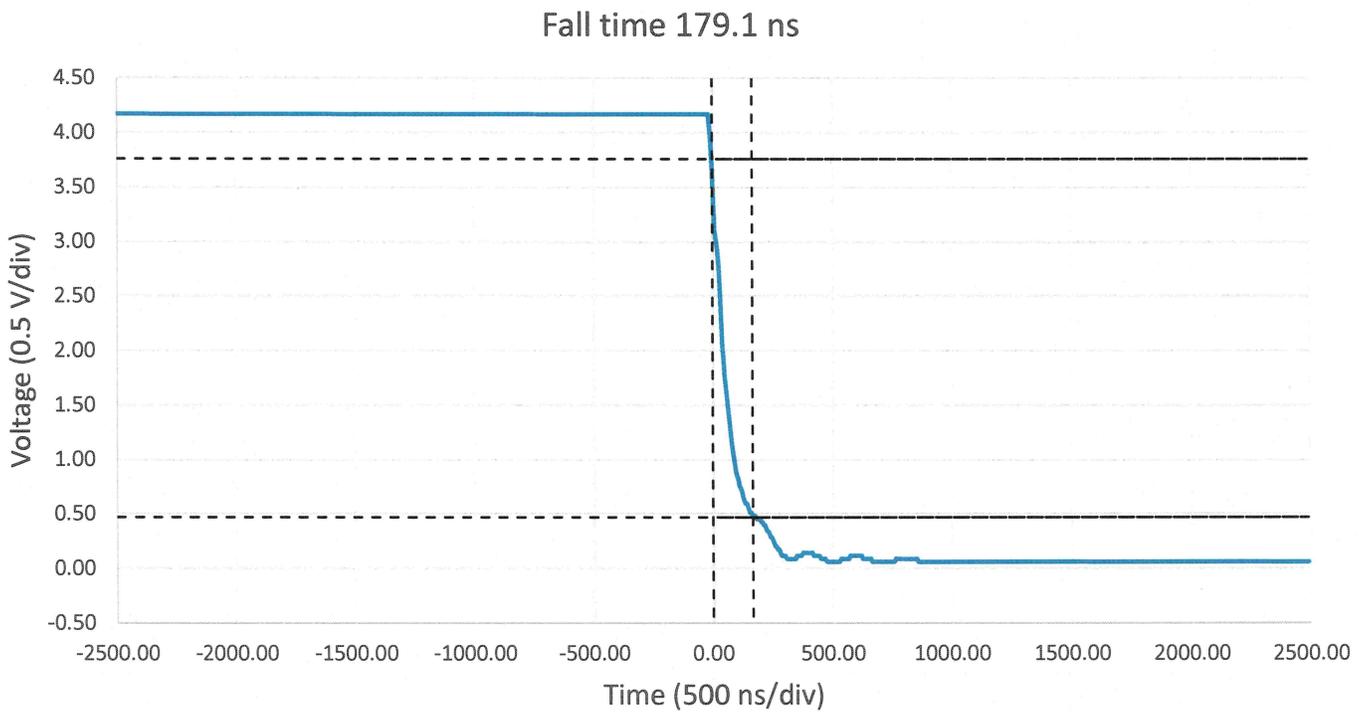
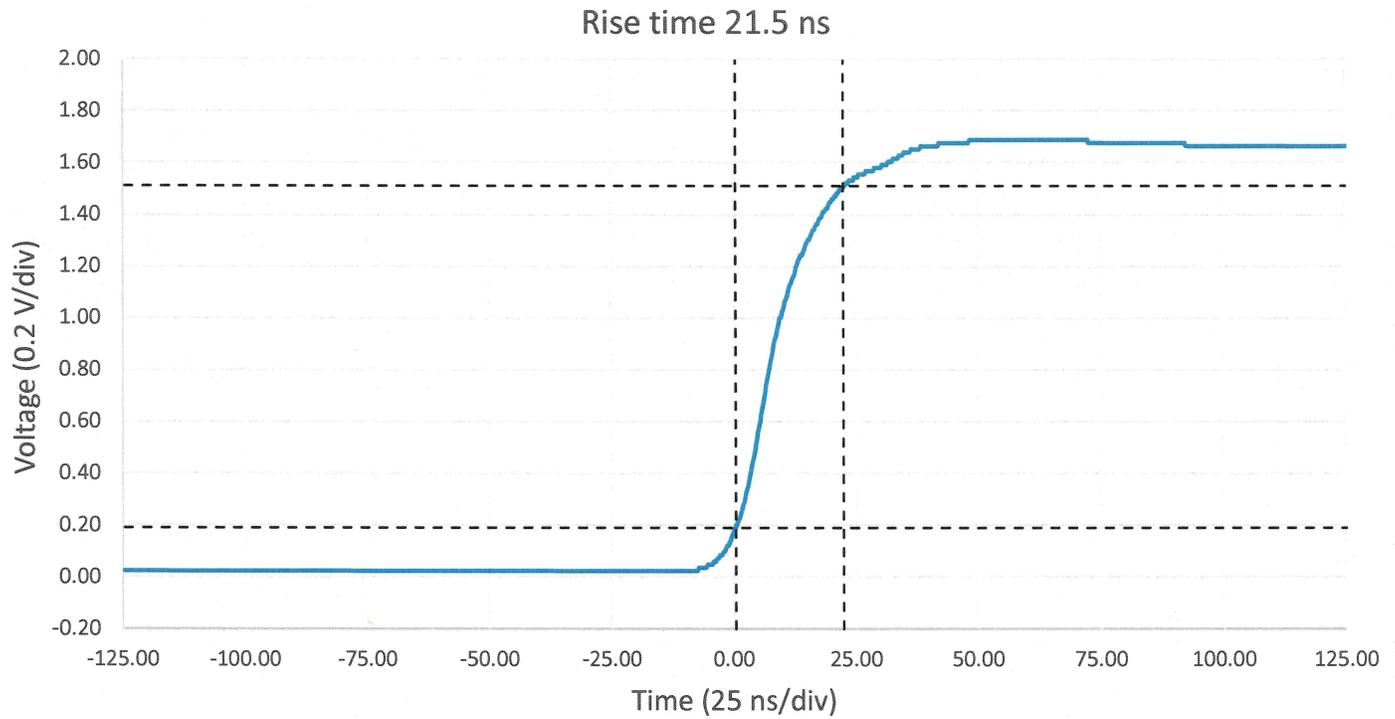
TSS @ -71.4 dBm





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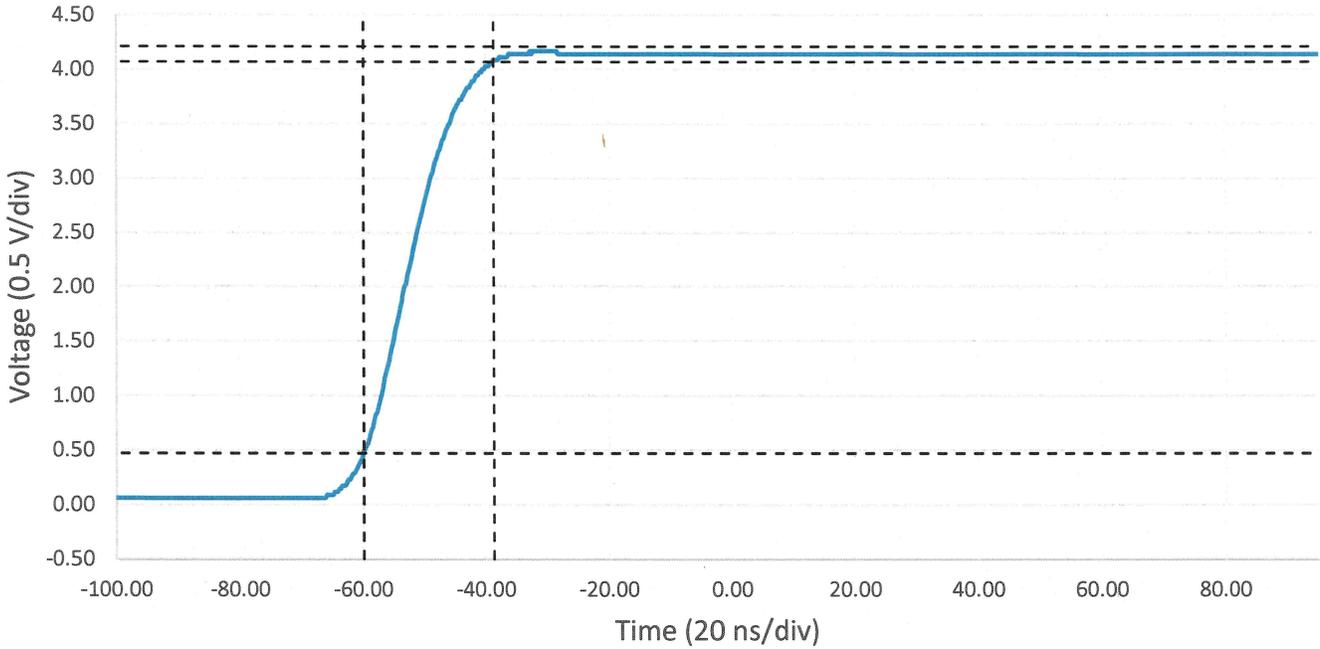




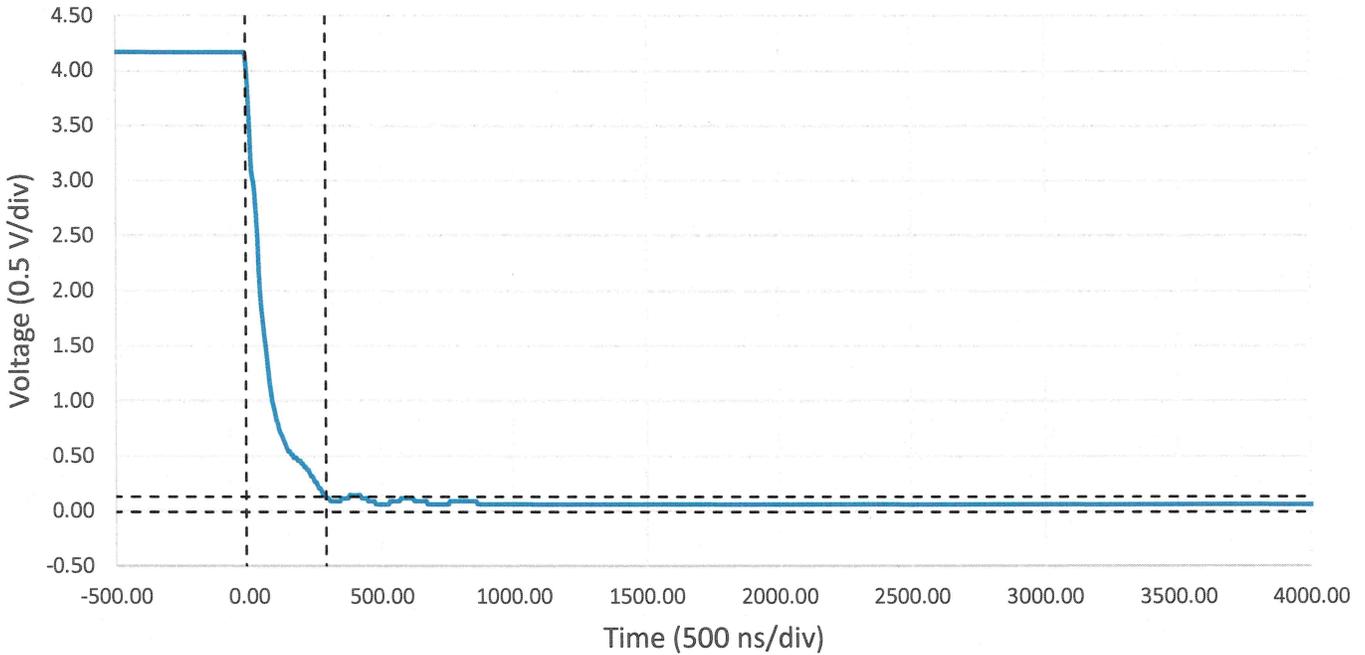
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Settle time 21.3 ns



Recovery time 300 ns

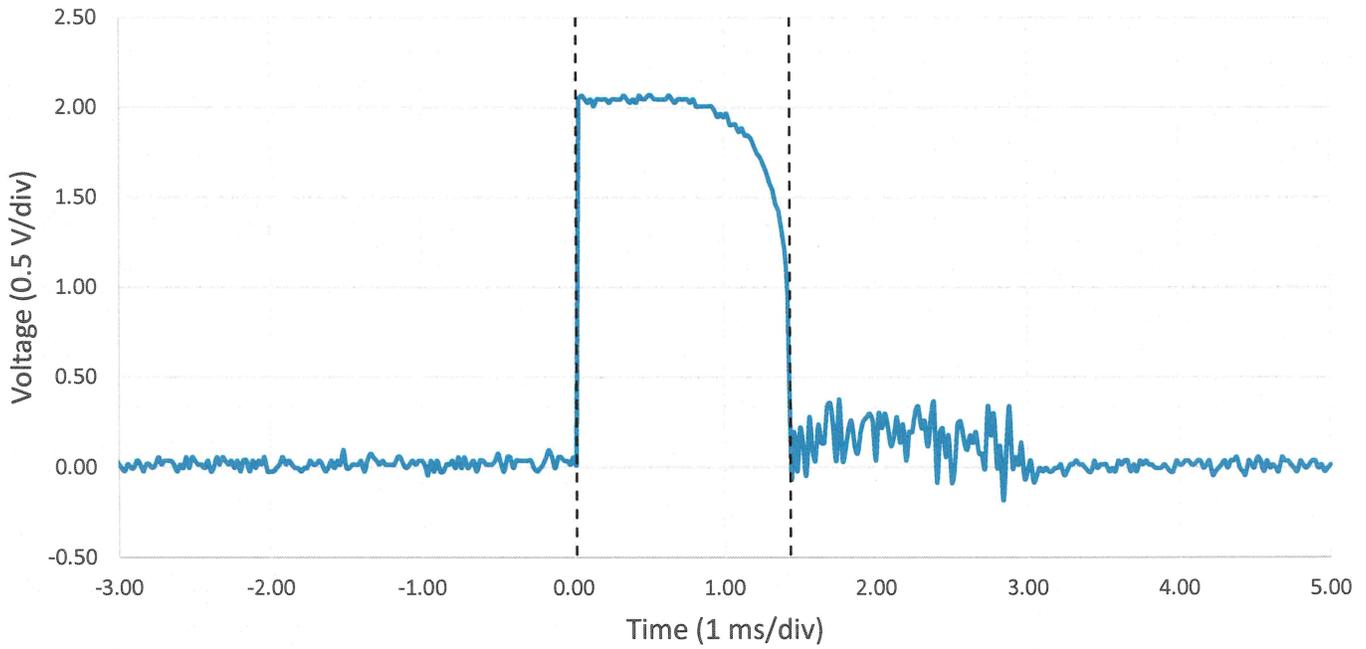




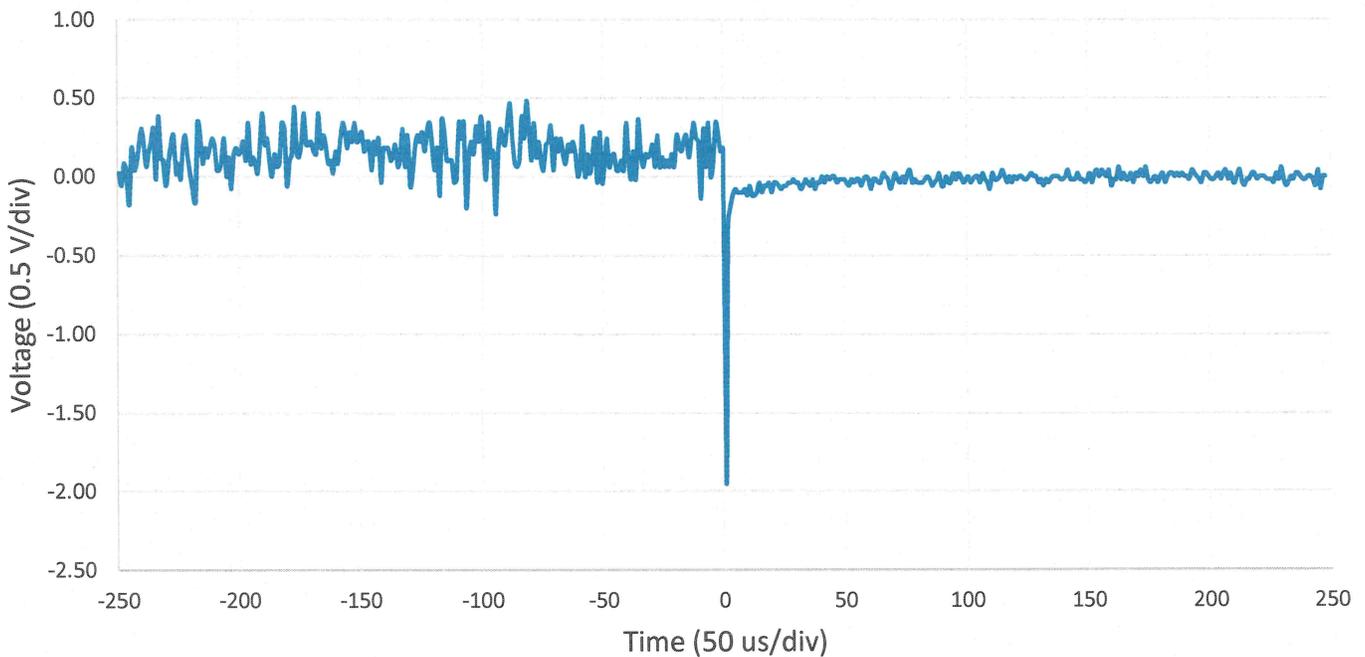
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CW Immunity 1.41 ms



CW Recovery Plot





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RMS Noise 23.4 mV

