



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

Customer: Raytheon

Tested By: Anton L.

SO No: 27642020

Temperature: -40°C TO +70°C

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

Date 2/27/2025

Serial No: PL51097/2509

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	1.68 :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	- 72.3 dBm	
5	VIDEO OUT Dynamic Range:	-65 to 0 dBm	-65 to 0 dBm	
6	VIDEO OUT Log Slope Fixed:	70 ± 3mV/dB	70.4 mV/dB	
			67.9 mV/dB	
7	VIDEO OUT Log Linearity:	±1.0 dB MAX @25C	0.69 dB	
			-0.52 dB	
8	VIDEO OUT Log Accuracy:	±2.3 dB MAX @25C	1.37 dB	
			-0.95 dB	
9	VIDEO OUT Absolute Log Accuracy:	±2.9 dB MAX Over Freq & temp	1.42 dB	
			-1.56 dB	
10	VIDEO OUT DC Offset:	0 ±70 mV (RF Input Terminated & DC Power On) @25C	-9 mV	
11	VIDEO OUT Rise Time (10% to 90%):	28 ns MAX	21.3 ns	
12	VIDEO OUT Fall Time (90% to 10%):	300 ns MAX	148.4 ns	



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13	VIDEO OUT Settling Time:	50 ns With in $\pm 70$ mV of final value @-10 dBm	<b>29 ns</b>	PMI QA3
14	VIDEO OUT Recovery Time:	1 us MAX to within 1 dB of baseline for PW <10us & Power = -10dBm	<b>0.445 us</b>	
15	VIDEO OUT Video Frequency Flatness:	$\pm 2.0$ dB MAX @25C	<b><math>\pm 1.04</math> dB</b>	
16	VIDEO OUT CW Immunity:	CW Immune Power TSS to -40 dBm	<b>Pass</b>	
		Pulse Peak Amplitude Loss; 2 dB MAX @ -40dBm CW	<b>&lt; 2 dB</b>	
		Baseline shift 200mV @-40dBm CW	<b>&lt; 200 mV</b>	
		CW Immunity Time at CW = -40 dBm, $\leq 4$ ms	<b>1.56 ms</b>	
		CW Recovery Time at CW = -40 dBm, $\leq 20$ us	<b>&lt;20 us</b>	
17	Pulse droop	1dB Max for 300us pulse at or above -65dBm	<b>&lt;1dB</b>	
18	VIDEO OUT Pulse Response, input Signal:	100 ns to 300 us	<b>100 ns to 300 us</b>	
19	VIDEO LOAD Impedance:	$75 \pm 1 \Omega$	<b>75<math>\Omega</math></b>	
20	VIDEO driver capability	100 ft RG11 into 75 ohm load	<b>Pass</b>	
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	<b>Pass</b>	



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22	VIDEO OUT Noise Level (Vp-p):	160 mV max	135.3 mV	PMI Q.A.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 @ 320 mA -15 V @ 80 mA	
25	Power Supply Ripple From DC to 10 MHz	100 mV MAX	Pass	

QA/QC Approval: K Klamm Date: 2-28-25



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

## LOG TRANSFER WITH FREQUENCY

TESTED BY: Anton L.  
 MODEL: ERDLVA-2G18G-65-70MV-70C  
 SERIAL NO: PL51097/2509  
 DATE: 2/27/2025

Test Temp: 25 °C  
 Video Offset: -9 mV

### Frequency

Frequency	INTERCEPT (mV)	SLOPE (mV/dB)	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
2000 MHz	4846	68.7	345	727	1067	1415	1772	2088	2439	2799	3120	3496	3854	4155	4476	4819
			-34	5	1	5	19	-9	-1	15	-8	25	39	-4	-26	-27
			-0.49	0.07	0.01	0.08	0.27	-0.13	-0.02	0.22	-0.11	0.36	0.57	-0.05	-0.38	-0.39
			0.19	0.71	0.63	0.66	0.82	0.39	0.47	0.67	0.32	0.75	0.93	0.28	-0.08	-0.12
6000 MHz	4883	69.9	317	696	1033	1388	1748	2071	2445	2824	3147	3510	3846	4158	4510	4874
			-24	5	-7	-1	9	-17	8	37	11	25	11	-26	-23	-9
			-0.35	0.08	-0.10	-0.02	0.13	-0.24	0.11	0.54	0.16	0.35	0.16	-0.37	-0.33	-0.12
			-0.22	0.26	0.14	0.27	0.48	0.15	0.55	1.04	0.71	0.95	0.81	0.33	0.42	0.68
10000 MHz	4860	70.4	266	635	973	1337	1703	2030	2407	2797	3118	3482	3820	4137	4480	4835
			-20	-3	-18	-4	10	-15	10	48	17	39	10	19	-28	-25
			-0.28	-0.04	-0.23	-0.06	0.14	-0.21	0.14	0.69	0.25	0.42	0.22	-0.27	-0.40	-0.35
			-0.95	-0.62	-0.73	-0.47	-0.17	-0.45	0.01	0.64	0.29	0.55	0.44	0.02	-0.02	0.11
14000 MHz	4840	68.9	331	708	1052	1401	1758	2072	2429	2795	3117	3479	3815	4135	4478	4835
			-30	3	2	7	19	-12	1	22	0	17	9	-16	-17	-5
			-0.43	0.04	0.03	0.10	0.28	-0.17	0.01	0.32	0.00	0.25	0.13	-0.23	-0.25	-0.07
			-0.01	0.44	0.41	0.46	0.62	0.16	0.32	0.62	0.27	0.51	0.37	-0.01	-0.05	0.11
18000 MHz	4833	67.9	401	769	1117	1455	1810	2114	2435	2777	3100	3464	3808	4134	4505	4877
			-18	10	19	17	33	-3	-21	-19	-35	-11	-6	-20	12	44
			-0.27	0.15	0.27	0.25	0.48	-0.04	-0.31	-0.28	-0.52	-0.16	-0.09	-0.29	0.17	0.65
			1.00	1.32	1.35	1.24	1.37	0.77	0.41	0.36	0.03	0.29	0.26	-0.02	0.34	0.72

RF Input Power (dBm)
Measured Value (mV)
Error (mV)
LINEARITY ERROR (dB) <b>0.57</b>
ACCURACY ERROR (dB) <b>0.93</b>

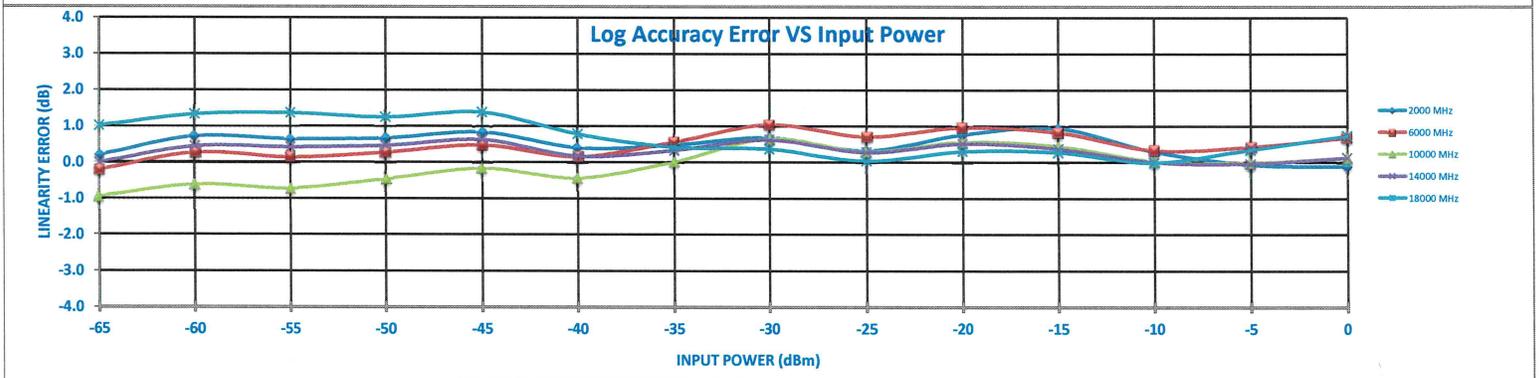
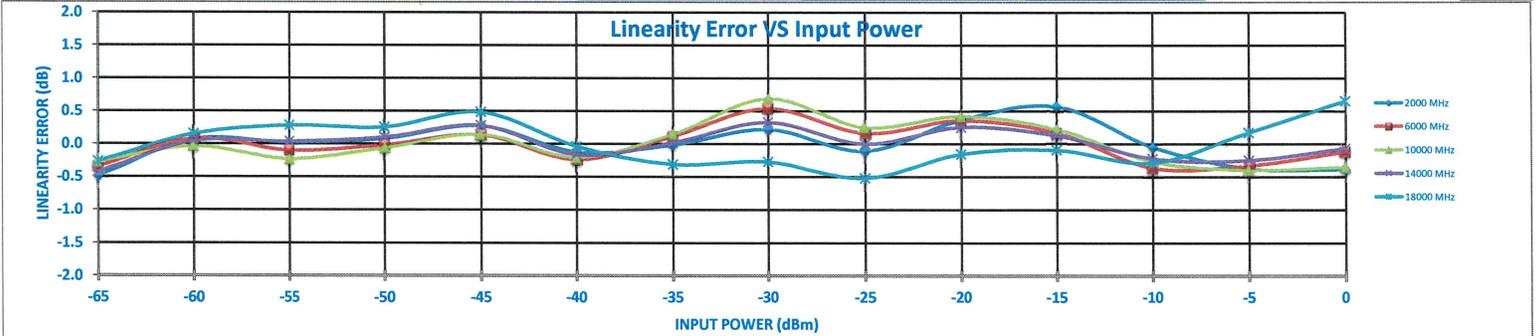
Measured Value (mV)
Error (mV)
LINEARITY ERROR (dB) <b>0.54</b>
ACCURACY ERROR (dB) <b>1.04</b>

Measured Value (mV)
Error (mV)
LINEARITY ERROR (dB) <b>0.69</b>
ACCURACY ERROR (dB) <b>-0.95</b>

Measured Value (mV)
Error (mV)
LINEARITY ERROR (dB) <b>-0.43</b>
ACCURACY ERROR (dB) <b>0.62</b>

Measured Value (mV)
Error (mV)
LINEARITY ERROR (dB) <b>0.65</b>
ACCURACY ERROR (dB) <b>1.37</b>

Flatness	+/- dB	0.98	0.97	1.04	0.85	0.77	0.61	0.27	0.34	0.34	0.33	0.33	0.17	0.25	0.42
															<b>1.04</b>





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

## LOG TRANSFER WITH FREQUENCY

TESTED BY: Anton L.  
 MODEL: ERDLVA-2G18G-65-70MV-70C  
 SERIAL NO: PL51097/2509  
 DATE: 2/27/2025

Test Temp: -40 °C  
 Video Offset: -41 mV

**Frequency**

<b>2000 MHz</b>	INTERCEPT (mV)	4910
	SLOPE (mV/dB)	71.2

<b>6000 MHz</b>	INTERCEPT (mV)	4974
	SLOPE (mV/dB)	72.2

<b>10000 MHz</b>	INTERCEPT (mV)	4978
	SLOPE (mV/dB)	72.8

<b>14000 MHz</b>	INTERCEPT (mV)	4967
	SLOPE (mV/dB)	71.8

<b>18000 MHz</b>	INTERCEPT (mV)	5003
	SLOPE (mV/dB)	70.9

	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
293	648	981	1329	1696	2023	2385	2794	3145	3528	3896	4201	4529	4870	
14	13	-10	-18	-8	-37	-31	22	17	43	55	4	-24	-40	
0.20	0.18	-0.14	-0.26	-0.11	-0.52	-0.44	0.31	0.23	0.61	0.77	0.05	-0.34	-0.55	
-0.32	-0.37	-0.73	-0.89	-0.77	-1.22	-1.17	-0.48	-0.59	-0.25	-0.12	-0.88	-1.31	-1.56	

	296	655	994	1340	1710	2047	2432	2858	3207	3571	3918	4228	4586	4957
13	11	-11	-25	-16	-40	-16	49	37	40	26	26	-24	-27	-17
0.18	0.16	-0.15	-0.35	-0.23	-0.56	-0.22	0.68	0.52	0.56	0.37	-0.34	-0.38	-0.24	
-0.28	-0.27	-0.55	-0.73	-0.58	-0.88	-0.52	0.42	0.28	0.35	0.18	-0.50	-0.51	-0.34	

	256	615	948	1303	1683	2023	2424	2860	3203	3569	3922	4231	4578	4936
13	7	-24	-33	-17	-31	-5	37	46	48	38	-19	-18	-43	
0.17	0.10	-0.33	-0.45	-0.24	-0.57	-0.06	0.92	0.63	0.65	0.50	-0.26	-0.49	-0.58	
-0.83	-0.83	-1.19	-1.25	-0.95	-1.22	-0.63	0.44	0.22	0.32	0.24	-0.46	-0.62	-0.64	

	316	672	1017	1358	1724	2056	2430	2857	3206	3570	3919	4236	4591	4941
13	10	-4	-22	-14	-41	-26	42	33	38	28	28	-14	-17	-26
0.18	0.14	-0.05	-0.30	-0.20	-0.57	-0.36	0.59	0.45	0.53	0.39	-0.19	-0.24	-0.37	
0.00	-0.04	-0.23	-0.48	-0.38	-0.76	-0.55	0.40	0.26	0.33	0.20	-0.39	-0.44	-0.57	

	418	762	1114	1457	1807	2137	2474	2886	3230	3590	3947	4275	4655	5032
23	13	10	-1	-6	-30	-48	10	-1	5	7	-19	6	29	
0.33	0.18	0.15	-0.02	-0.08	-0.43	-0.67	0.14	-0.01	0.07	0.11	-0.27	0.09	0.41	
1.42	1.22	1.12	0.90	0.77	0.37	0.07	0.81	0.60	0.61	0.59	0.16	0.45	0.70	

<b>RF Input Power (dBm)</b>	
Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	0.77
ACCURACY ERROR (dB)	-1.56

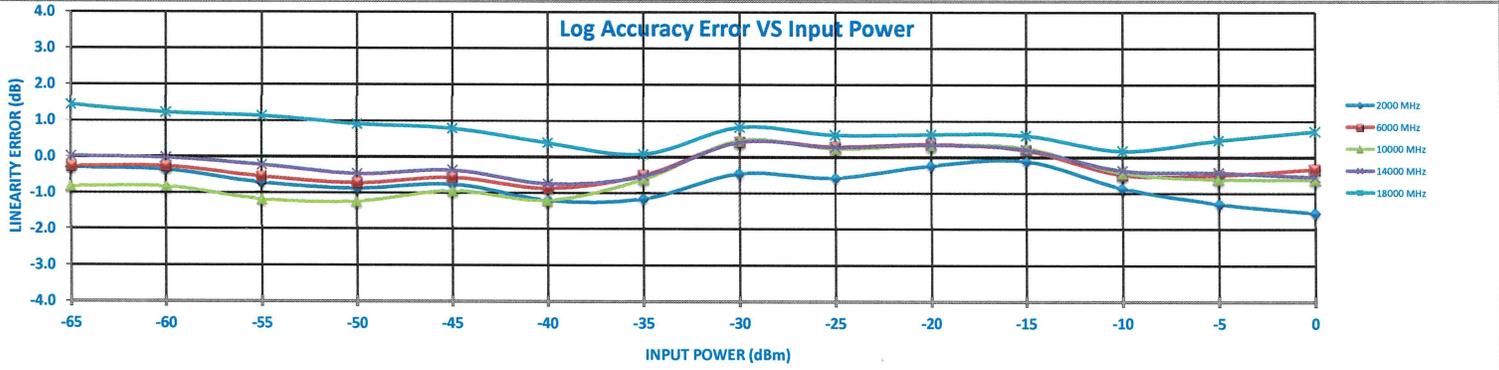
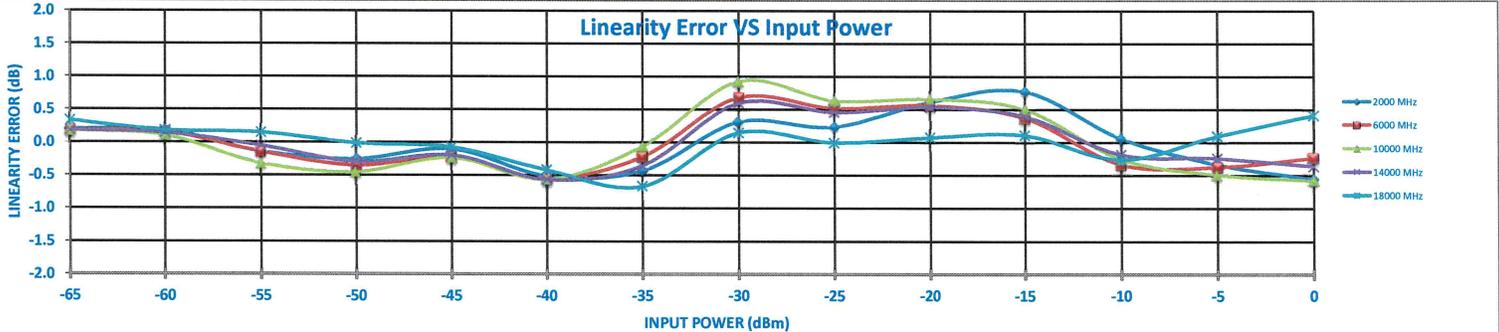
Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	0.68
ACCURACY ERROR (dB)	-0.88

Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	0.92
ACCURACY ERROR (dB)	-1.25

Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	0.59
ACCURACY ERROR (dB)	-0.76

Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	-0.67
ACCURACY ERROR (dB)	1.42

<b>Flatness</b>	<b>+/- dB</b>	1.13	1.02	1.16	1.07	0.86	0.79	0.62	0.64	0.59	0.43	0.36	0.52	0.88	1.13	1.16
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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: PL51097/2509  
 DATE: 2/27/2025

Test Temp: 70 °C  
 Video Offset: 35 mV

**Frequency**

2000 MHz	INTERCEPT (mV)	4796
	SLOPE (mV/dB)	67.8

6000 MHz	INTERCEPT (mV)	4827
	SLOPE (mV/dB)	68.9

10000 MHz	INTERCEPT (mV)	4787
	SLOPE (mV/dB)	69.2

14000 MHz	INTERCEPT (mV)	4763
	SLOPE (mV/dB)	67.5

18000 MHz	INTERCEPT (mV)	4732
	SLOPE (mV/dB)	67.3

	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
354	731	1063	1409	1767	2075	2427	2778	3092	3459	3815	4118	4431	4770	
-34	4	-3	4	23	-8	4	16	-9	19	36	0	-26	-26	
-0.50	0.06	-0.04	0.06	0.34	-0.12	0.07	0.24	-0.13	0.28	0.53	0.00	-0.39	-0.39	
0.47	1.00	0.87	0.95	1.20	0.72	0.88	1.03	0.64	1.03	1.25	0.69	0.29	0.26	

	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
322	692	1029	1379	1739	2057	2427	2798	3114	3470	3801	4117	4461	4815	
-25	0	-7	-2	13	-13	12	38	10	21	8	-21	-22	-12	
-0.36	0.00	-0.11	-0.03	0.19	-0.19	0.18	0.56	0.14	0.31	0.11	-0.31	-0.32	-0.18	
0.00	0.43	0.38	0.51	0.79	0.46	0.88	1.33	0.96	1.19	1.04	0.68	0.73	0.92	

	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
266	628	965	1328	1688	2013	2376	2756	3069	3422	3755	4082	4417	4765	
-33	-7	-16	1	15	-6	11	45	12	19	5	-13	-24	-22	
-0.33	-0.10	-0.23	0.02	0.22	-0.08	0.16	0.65	0.18	0.28	0.09	-0.19	-0.34	-0.32	
-0.82	-0.51	-0.56	-0.24	0.04	-0.19	0.14	0.71	0.30	0.48	0.37	0.17	0.08	0.19	

	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
336	712	1053	1398	1752	2063	2406	2753	3067	3417	3750	4076	4407	4769	
-38	1	4	11	28	1	6	16	-8	4	0	-12	-19	6	
-0.56	0.01	0.06	0.17	0.41	0.01	0.09	0.23	-0.12	0.06	0.00	-0.18	-0.27	0.09	
0.21	0.72	0.73	0.79	0.98	0.54	0.58	0.67	0.27	0.41	0.29	0.08	-0.07	0.24	

	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
331	705	1039	1384	1736	2043	2365	2692	3016	3372	3712	4045	4402	4772	
-25	13	10	18	34	4	-11	-20	-33	-13	-10	-14	7	40	
-0.37	0.19	0.15	0.27	0.50	0.06	-0.16	-0.30	-0.49	-0.20	-0.15	-0.20	0.10	0.59	
0.13	0.62	0.52	0.58	0.75	0.25	-0.02	-0.23	-0.47	-0.25	-0.26	-0.38	-0.14	0.29	

RF Input Power (dBm)	
Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	0.53
ACCURACY ERROR (dB)	1.25

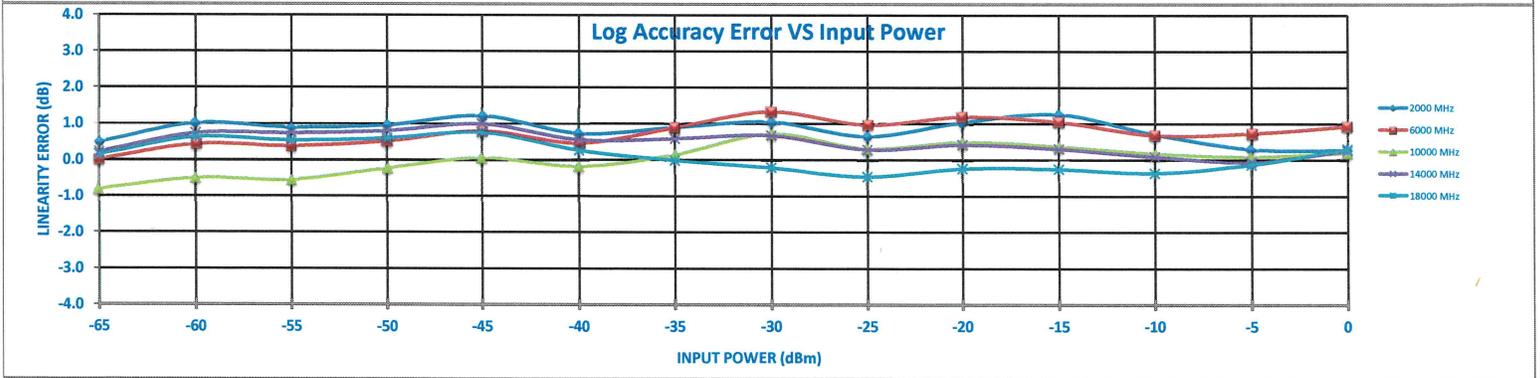
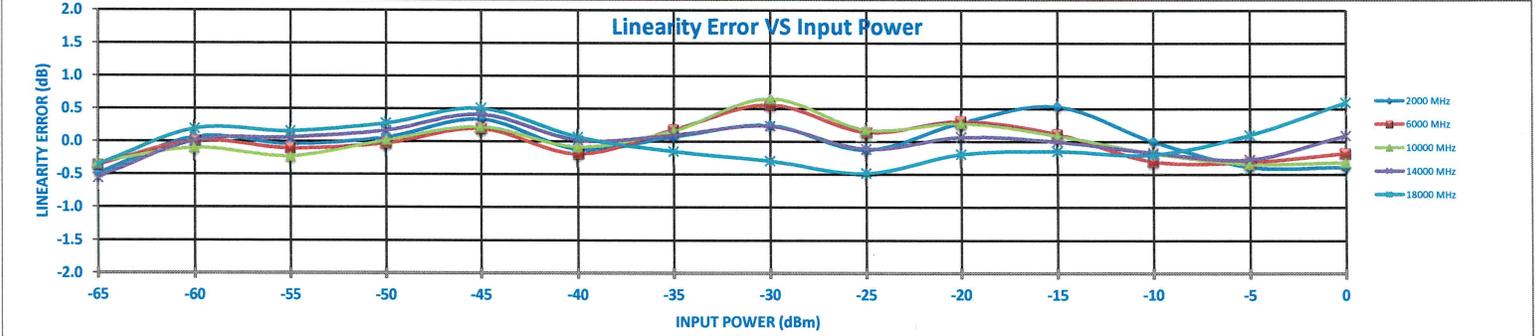
Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	0.56
ACCURACY ERROR (dB)	1.33

Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	0.65
ACCURACY ERROR (dB)	-0.82

Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	-0.56
ACCURACY ERROR (dB)	0.98

Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	0.59
ACCURACY ERROR (dB)	0.75

Flatness	+/- dB	0.65	0.76	0.72	0.59	0.58	0.45	0.45	0.78	0.72	0.72	0.76	0.54	0.43	0.37
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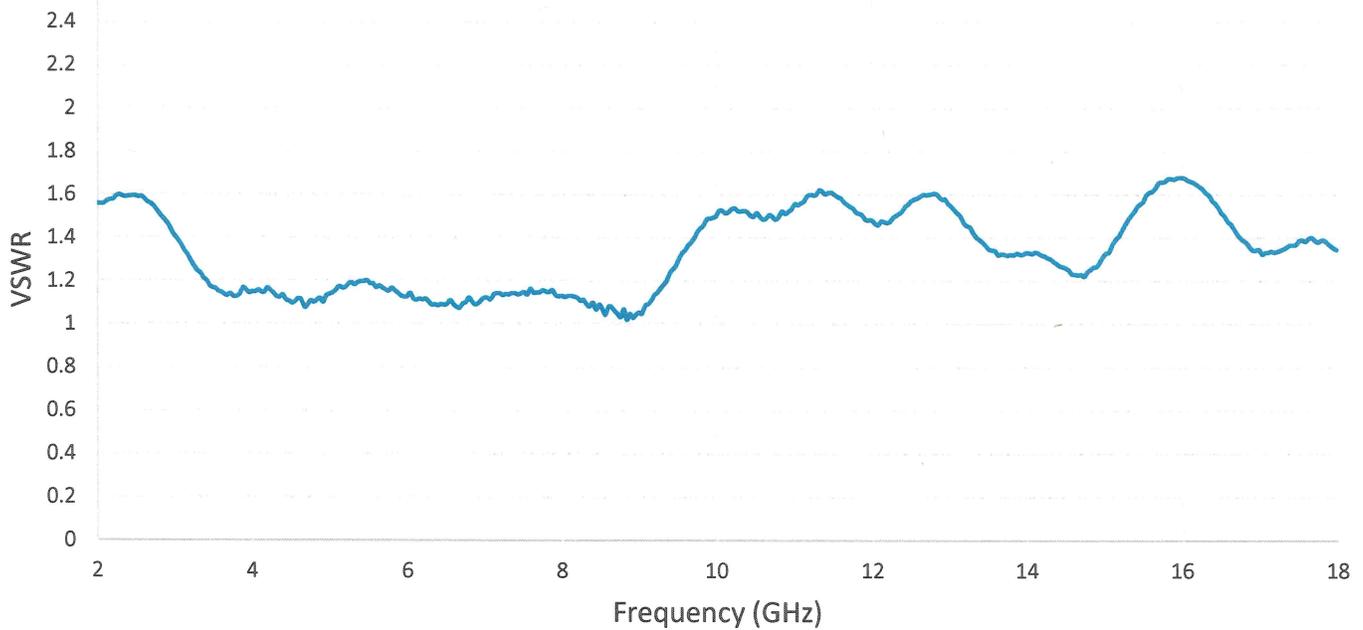




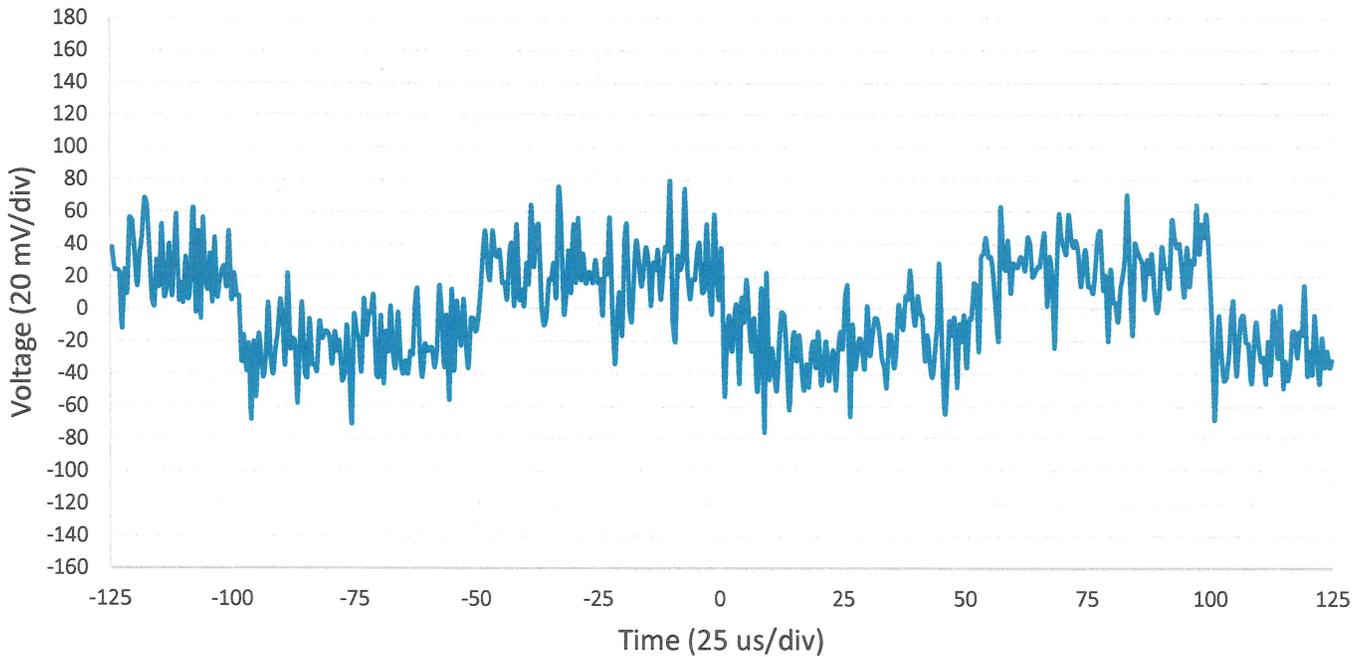
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PL51097/2509

VSWR 1.68:1



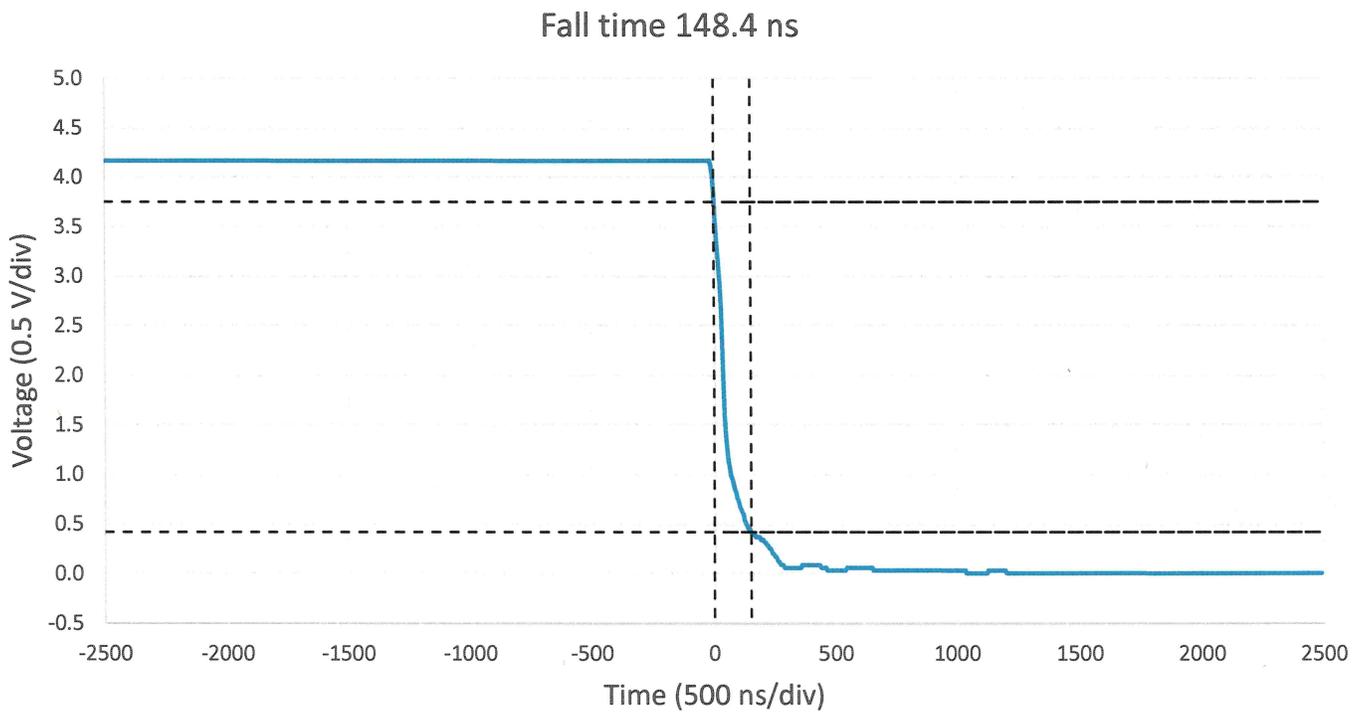
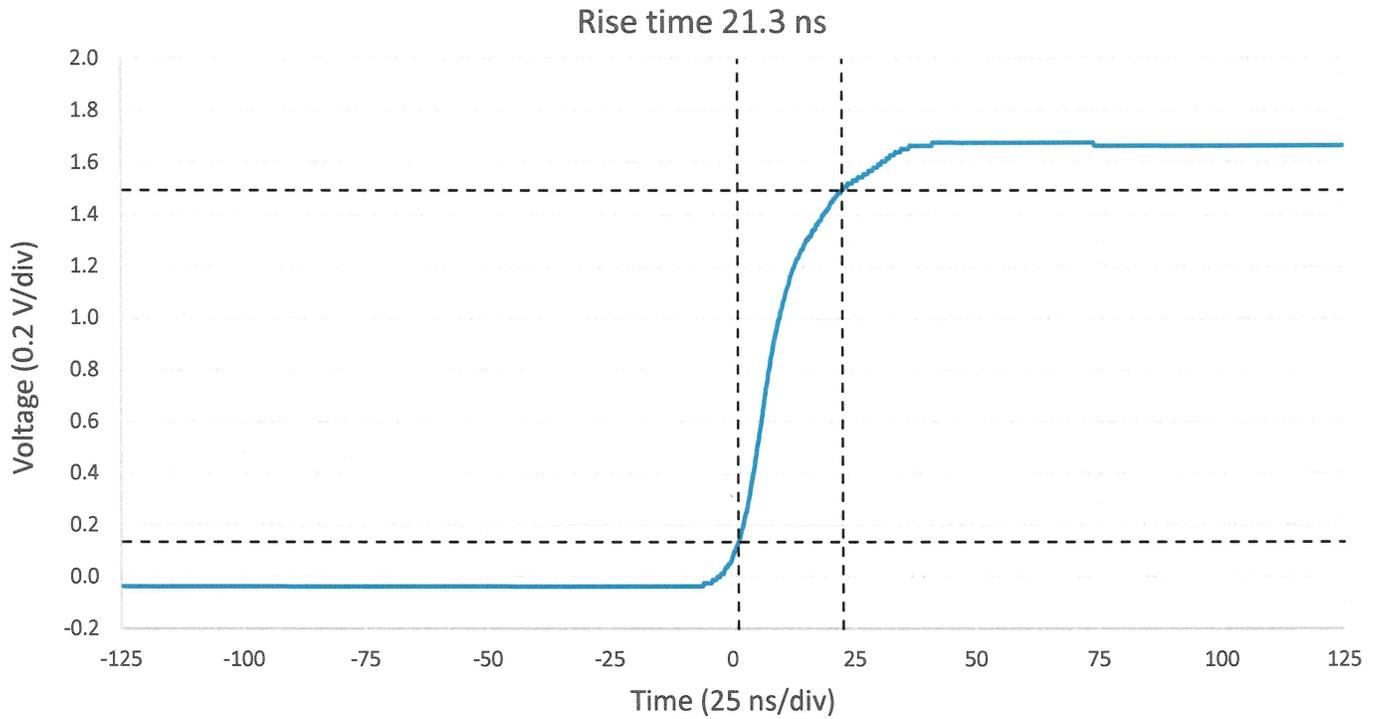
TSS @ -72.3 dBm





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PL51097/2509

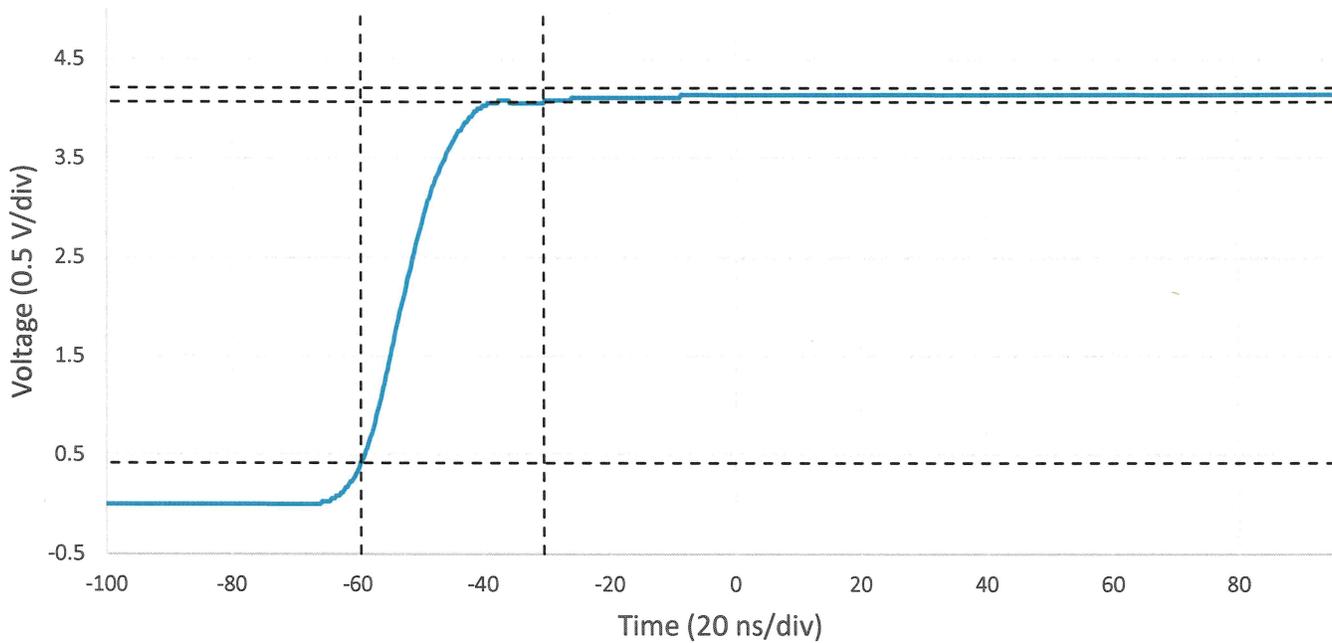




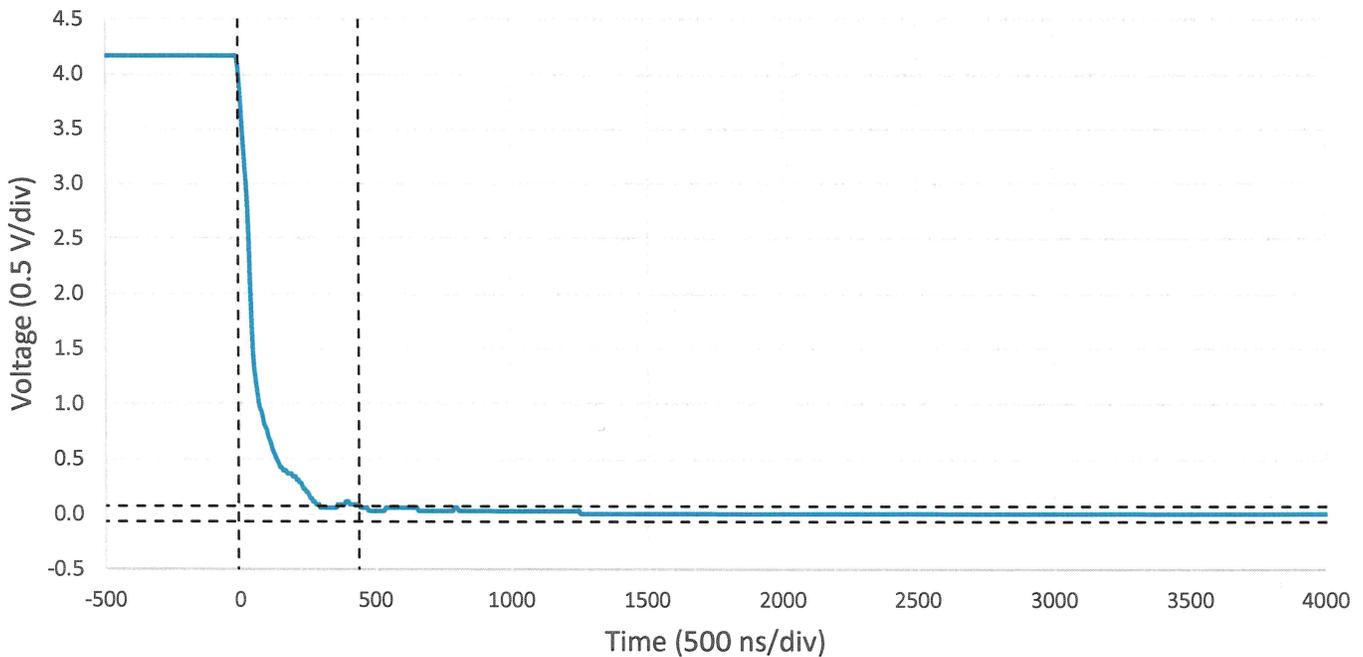
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Settle time 29 ns



Recovery time 445 ns

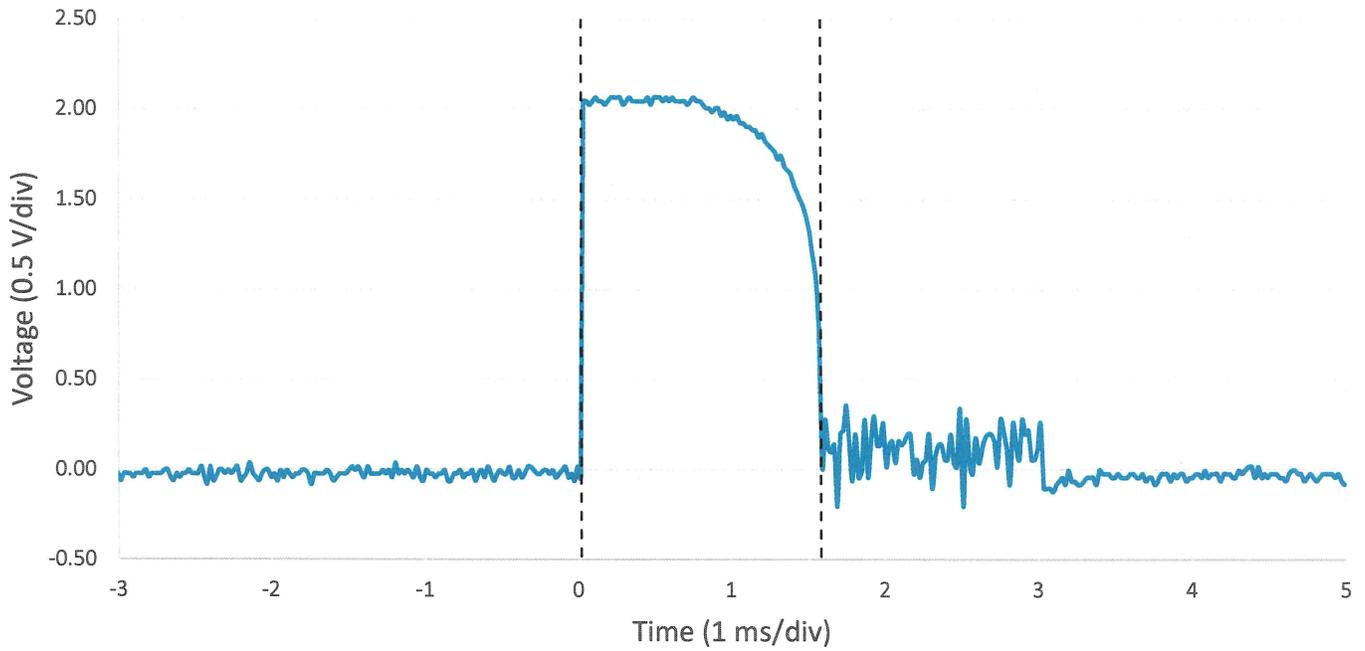




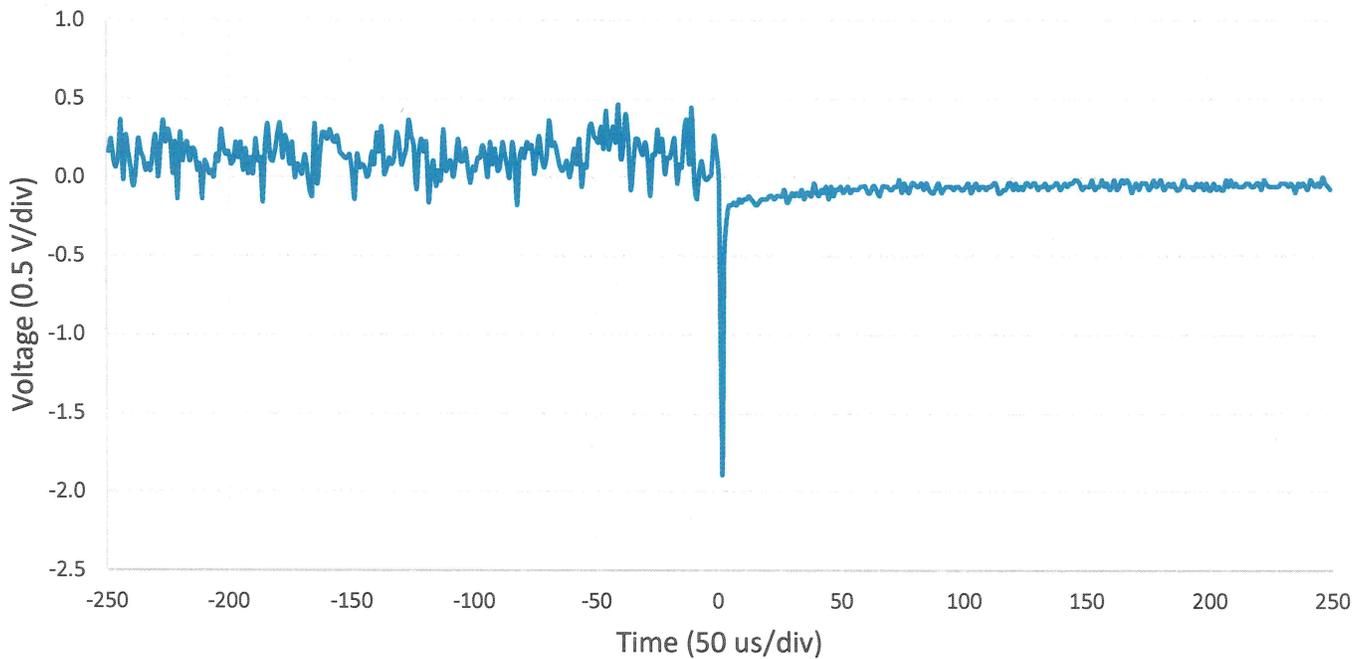
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PL51097/2509

CW Immunity 1.56 ms



CW Recovery Plot





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RMS Noise 20.5 mV

