



**Summary Data**  
**For**  
**ERDLVA-2G18G-65-70MV-85C**

Customer: \_\_\_\_\_ Tested By: Anton L.  
 SO No: \_\_\_\_\_ Temperature: -10°C TO +85°C  
 Model No: ERDLVA-2G18G-65-70MV-85C Date 9/18/2024  
 Serial No: PL45184/2418 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	- 72.1 dBm	
5	VIDEO OUT Dynamic Range:	-65 to 0 dBm	-65 to 0 dBm	
6	VIDEO OUT Log Slope Fixed:	70 ± 3mV/dB	70.8 mV/dB	
			69.0 mV/dB	
7	VIDEO OUT Log Linearity:	±1.0 dB MAX @25C	0.48 dB	
			-0.53 dB	
8	VIDEO OUT Log Accuracy:	±2.3 dB MAX @25C	1.07 dB	
			-0.81 dB	
9	VIDEO OUT Absolute Log Accuracy:	±2.9 dB MAX Over Freq & temp	1.55 dB	
			-1.26 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	23.8 ns	
12	VIDEO OUT Fall Time (90% to 10%):	300 ns MAX	190.9 ns	



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13	VIDEO OUT Settling Time:	50 ns With in $\pm 70$ mV of final value @-10 dBm	<b>21.5 ns</b>	PMI QA3
14	VIDEO OUT Recovery Time:	1 us MAX to within 1 dB of baseline for PW <10us & Power = -10dBm	<b>0.29 us</b>	
15	VIDEO OUT Video Frequency Flatness:	$\pm 2.0$ dB MAX @25C	<b><math>\pm 0.86</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>1.58 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	155.8 mV	PMI QA3
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. Klaus

Date: 10-2-24



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### LOG TRANSFER WITH FREQUENCY

TESTED BY: Anton L.  
 MODEL: ERDLVA-2G18G-65-70MV-85C  
 SERIAL NO: PL45184/2418  
 DATE: 9/18/2024

Test Temp: 25 °C  
 Video Offset: 35 mV

**Frequency**

2000 MHz	INTERCEPT (mV)	4879
	SLOPE (mV/dB)	70.1

6000 MHz	INTERCEPT (mV)	4916
	SLOPE (mV/dB)	70.8

10000 MHz	INTERCEPT (mV)	4889
	SLOPE (mV/dB)	70.5

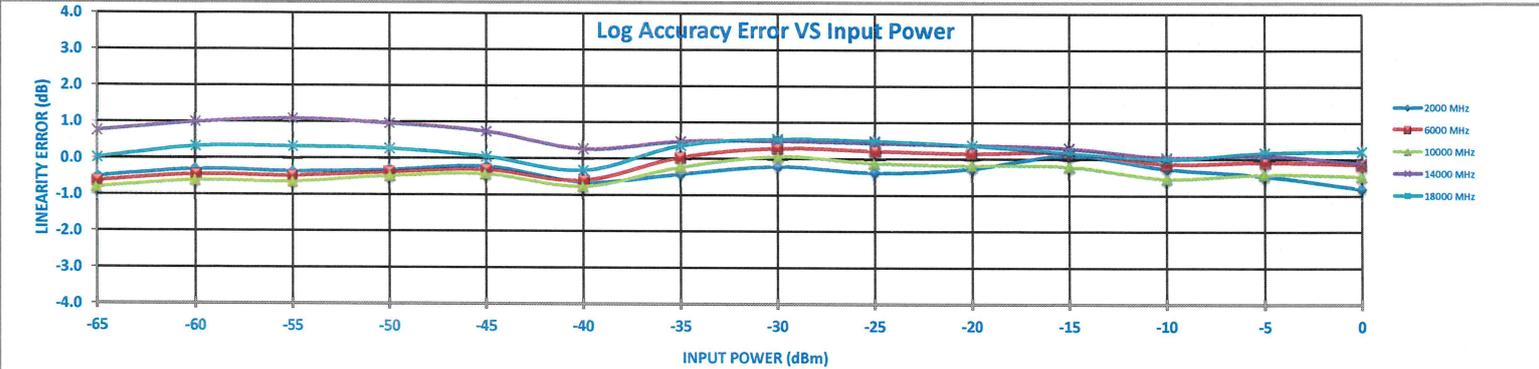
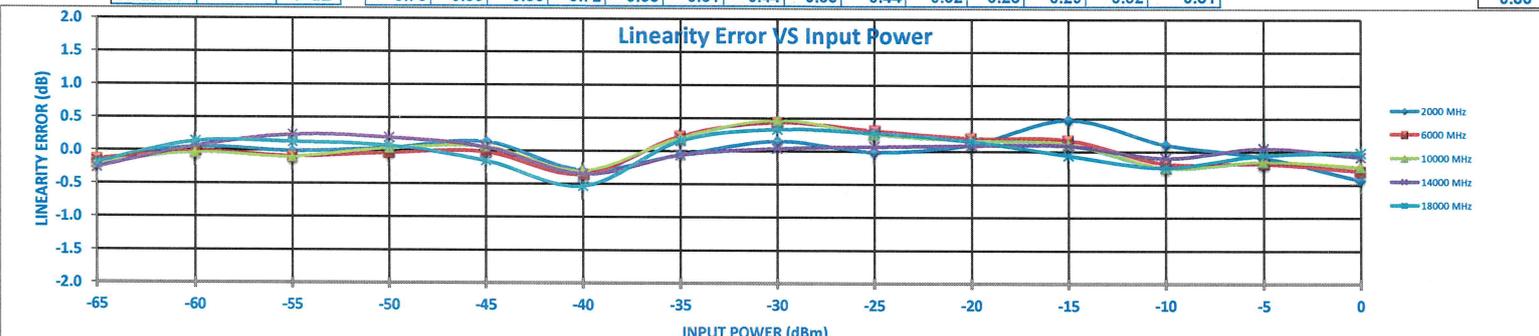
14000 MHz	INTERCEPT (mV)	4904
	SLOPE (mV/dB)	69.0

18000 MHz	INTERCEPT (mV)	4922
	SLOPE (mV/dB)	70.1

	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
2000 MHz	314	679	1025	1379	1736	2056	2423	2788	3127	3485	3862	4186	4523	4849
6000 MHz	-11	3	-1	3	9	-21	-4	11	-1	7	34	7	-6	-30
10000 MHz	-0.16	0.05	-0.01	0.04	0.14	-0.30	-0.06	0.15	-0.01	0.10	0.48	0.10	-0.09	-0.43
14000 MHz	-0.51	-0.31	-0.37	-0.32	-0.23	-0.66	-0.43	-0.22	-0.38	-0.27	0.10	-0.27	-0.47	-0.81
18000 MHz	305	668	1016	1374	1729	2059	2454	2823	3168	3514	3866	4195	4549	4895
6000 MHz	-10	-1	-7	-3	-2	-25	16	31	22	14	12	-13	-13	-21
10000 MHz	-0.14	-0.01	-0.09	-0.04	-0.02	-0.36	0.22	0.43	0.31	0.20	0.17	-0.18	-0.18	-0.30
14000 MHz	-0.64	-0.46	-0.50	-0.39	-0.33	-0.62	0.02	0.28	0.20	0.14	0.16	-0.15	-0.09	-0.16
18000 MHz	293	657	1005	1367	1721	2048	2436	2807	3145	3491	3840	4167	4526	4873
6000 MHz	-13	-5	-7	-2	8	-22	14	32	19	12	8	-17	-11	-16
10000 MHz	-0.20	-0.04	-0.10	0.03	0.06	-0.31	0.20	0.46	0.26	0.16	0.11	-0.25	-0.16	-0.23
14000 MHz	-0.81	-0.62	-0.66	-0.49	-0.44	-0.78	-0.24	0.05	-0.13	-0.19	-0.21	-0.54	-0.42	-0.47
18000 MHz	402	769	1126	1468	1803	2120	2485	2837	3184	3530	3875	4207	4562	4898
6000 MHz	-18	4	16	13	3	-25	-4	3	5	6	6	-7	3	-6
10000 MHz	-0.26	0.06	0.23	0.19	0.05	-0.36	-0.06	0.04	0.07	0.09	0.09	-0.10	0.05	-0.08
14000 MHz	0.74	0.98	1.07	0.95	0.73	0.25	0.46	0.48	0.43	0.37	0.29	0.03	0.09	-0.12
18000 MHz	350	723	1073	1420	1755	2079	2478	2841	3188	3530	3866	4204	4568	4921
6000 MHz	-13	9	9	5	-11	-37	11	23	19	11	-4	-17	-4	-1
10000 MHz	-0.18	0.13	0.12	0.07	-0.15	-0.53	0.15	0.33	0.28	0.15	-0.06	-0.24	-0.05	-0.02
14000 MHz	0.00	0.32	0.31	0.27	0.04	-0.33	0.36	0.54	0.49	0.37	0.16	-0.02	0.18	0.21

RF Input Power (dBm)	
Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	0.48
ACCURACY ERROR (dB)	-0.81
Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	0.43
ACCURACY ERROR (dB)	-0.64
Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	0.46
ACCURACY ERROR (dB)	-0.81
Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	-0.36
ACCURACY ERROR (dB)	1.07
Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	-0.53
ACCURACY ERROR (dB)	0.54

Flatness	+/- dB	0.78	0.80	0.86	0.72	0.58	0.51	0.44	0.38	0.44	0.32	0.25	0.29	0.32	0.51	0.86
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## Summary Data For ERDLVA-2G18G-65-70MV-85C

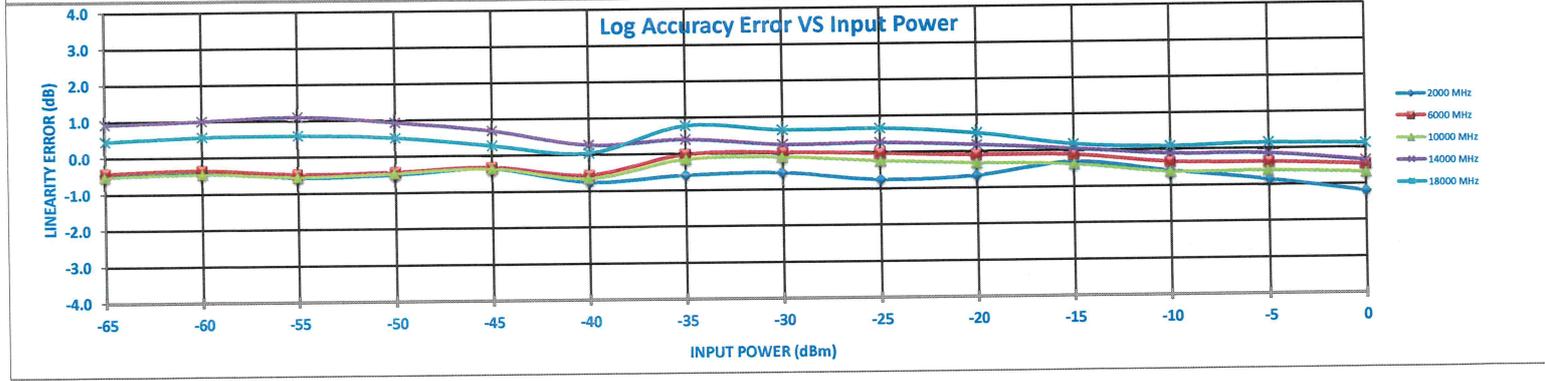
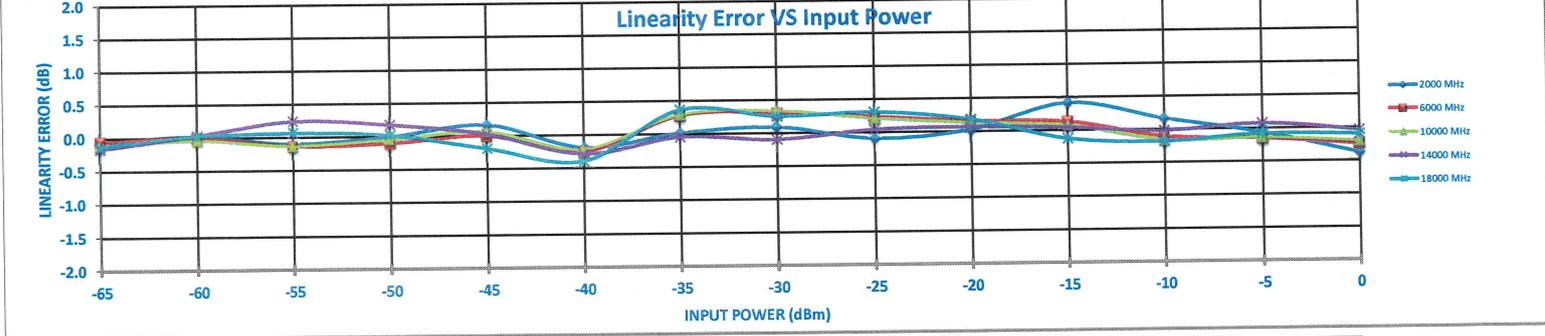
### LOG TRANSFER WITH FREQUENCY

TESTED BY: Anton L.  
MODEL: ERDLVA-2G18G-65-70MV-85C  
SERIAL NO: PL45184/2418  
DATE: 9/18/2024

Test Temp: -10 °C  
Video Offset: -17 mV

Frequency	INTERCEPT (mV)	SLOPE (mV/dB)	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	RF Input Power (dBm)
2000 MHz	4822	69.5	297	651	990	1345	1704	2027	2389	2742	3077	3433	3808	4138	4470	4796	Measured Value (mV)
	Error (mV)																Measured Value (mV)
	LINEARITY ERROR (dB)																0.42
ACCURACY ERROR (dB)																-1.20	
6000 MHz	4865	70.2	300	655	996	1349	1707	2040	2428	2781	3127	3472	3821	4155	4503	4847	Measured Value (mV)
	Error (mV)																Measured Value (mV)
	LINEARITY ERROR (dB)																0.30
ACCURACY ERROR (dB)																-0.57	
10000 MHz	4847	69.9	293	648	991	1347	1704	2034	2419	2772	3113	3457	3803	4136	4487	4832	Measured Value (mV)
	Error (mV)																Measured Value (mV)
	LINEARITY ERROR (dB)																0.33
ACCURACY ERROR (dB)																-0.69	
14000 MHz	4858	68.5	394	750	1107	1445	1777	2098	2457	2796	3148	3492	3833	4171	4520	4855	Measured Value (mV)
	Error (mV)																Measured Value (mV)
	LINEARITY ERROR (dB)																-0.29
ACCURACY ERROR (dB)																1.10	
18000 MHz	4895	69.6	361	720	1071	1416	1749	2083	2484	2824	3176	3515	3842	4186	4541	4888	Measured Value (mV)
	Error (mV)																Measured Value (mV)
	LINEARITY ERROR (dB)																-0.40
ACCURACY ERROR (dB)																0.77	

Flatness	+/- dB	0.72	0.73	0.84	0.71	0.52	0.51	0.68	0.59	0.71	0.59	0.28	0.36	0.51	0.66	0.84
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### LOG TRANSFER WITH FREQUENCY

TESTED BY: Anton L.  
MODEL: ERDLVA-2G18G-65-70MV-85C  
SERIAL NO: PL45184/2418  
DATE: 9/18/2024

Test Temp: 85 °C  
Video Offset: 37 mV

Frequency

2000 MHz	INTERCEPT (mV)	4896
	SLOPE (mV/dB)	70.3

6000 MHz	INTERCEPT (mV)	4923
	SLOPE (mV/dB)	71.1

10000 MHz	INTERCEPT (mV)	4877
	SLOPE (mV/dB)	70.8

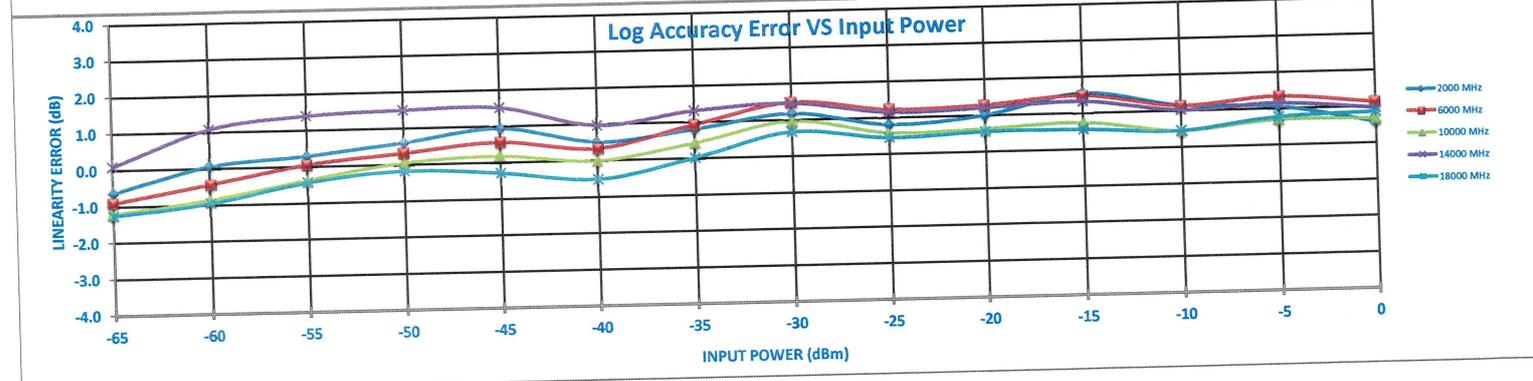
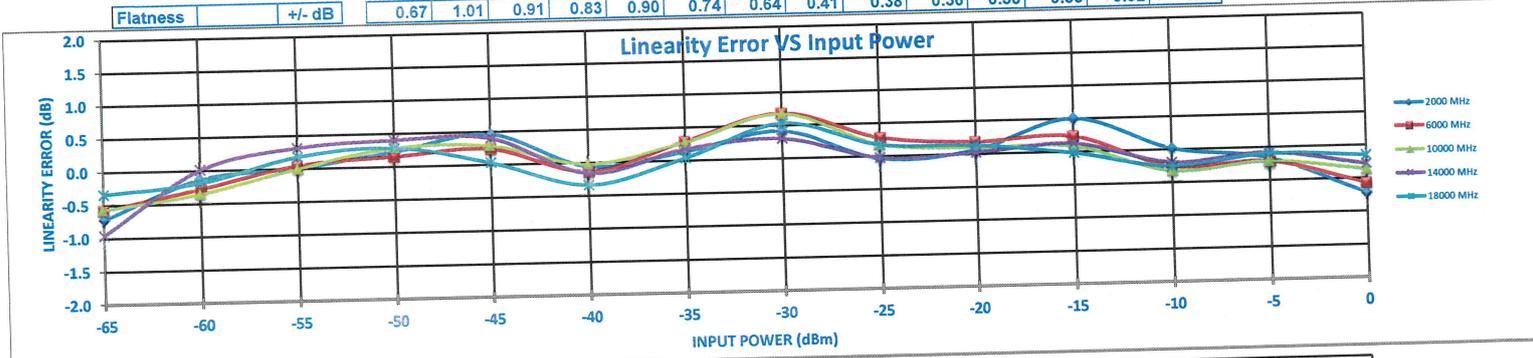
14000 MHz	INTERCEPT (mV)	4891
	SLOPE (mV/dB)	69.2

18000 MHz	INTERCEPT (mV)	4875
	SLOPE (mV/dB)	71.0

	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
2000 MHz	276	669	1030	1397	1765	2080	2445	2816	3136	3494	3877	4194	4533	4845
6000 MHz	-51	-9	0	16	32	-4	10	29	-2	4	36	1	-11	-51
10000 MHz	-0.72	-0.13	0.01	0.23	0.46	-0.06	0.14	0.41	-0.03	0.06	0.51	0.02	-0.16	-0.72
14000 MHz	-0.64	0.06	0.29	0.61	0.94	0.51	0.80	1.17	0.81	1.00	1.55	1.14	1.06	0.58
18000 MHz	257	634	1013	1376	1738	2067	2453	2837	3164	3513	3872	4193	4552	4882
6000 MHz	-41	-20	3	10	17	-10	20	48	20	13	16	-19	-15	-41
10000 MHz	-0.58	-0.28	0.04	0.15	0.23	-0.14	0.28	0.68	0.28	0.18	0.23	-0.26	-0.22	-0.58
14000 MHz	-0.91	-0.45	0.04	0.30	0.55	0.32	0.91	1.48	1.22	1.28	1.48	1.13	1.33	1.12
18000 MHz	236	605	984	1358	1712	2044	2419	2801	3120	3468	3821	4146	4508	4851
6000 MHz	-43	-25	0	20	20	-2	19	47	13	7	10	-23	-35	-43
10000 MHz	-0.57	-0.36	0.00	0.28	0.28	-0.03	0.27	0.67	0.18	0.09	0.08	-0.33	-0.21	-0.37
14000 MHz	-1.22	-0.87	-0.38	0.04	0.17	-0.01	0.42	0.96	0.58	0.62	0.74	0.45	0.70	0.67
18000 MHz	326	739	1106	1458	1804	2111	2480	2835	3159	3508	3861	4185	4539	4871
6000 MHz	-66	1	21	27	27	-12	11	20	-2	1	8	-14	-6	-20
10000 MHz	-0.96	0.01	0.31	0.40	0.40	-0.17	0.17	0.30	-0.02	0.02	0.12	-0.20	-0.08	-0.28
14000 MHz	0.09	1.07	1.39	1.49	1.51	0.96	1.30	1.45	1.14	1.20	1.32	1.01	1.14	0.96
18000 MHz	233	599	980	1343	1680	2009	2391	2781	3111	3463	3808	4146	4513	4864
6000 MHz	-24	-13	13	20	2	-24	3	38	12	9	-1	-18	-6	-11
10000 MHz	-0.34	-0.19	0.18	0.29	0.03	-0.34	0.04	0.53	0.17	0.13	-0.01	-0.26	-0.09	-0.15
14000 MHz	-1.26	-0.96	-0.43	-0.17	-0.29	-0.52	0.01	0.67	0.45	0.55	0.55	0.45	0.77	0.86

RF Input Power (dBm)	
Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	-0.72
ACCURACY ERROR (dB)	1.55
Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	0.68
ACCURACY ERROR (dB)	1.48
Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	0.67
ACCURACY ERROR (dB)	-1.22
Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	-0.96
ACCURACY ERROR (dB)	1.51
Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	0.53
ACCURACY ERROR (dB)	-1.26

Flatness	+/- dB	0.67	1.01	0.91	0.83	0.90	0.74	0.64	0.41	0.38	0.36	0.50	0.35	0.32	0.27
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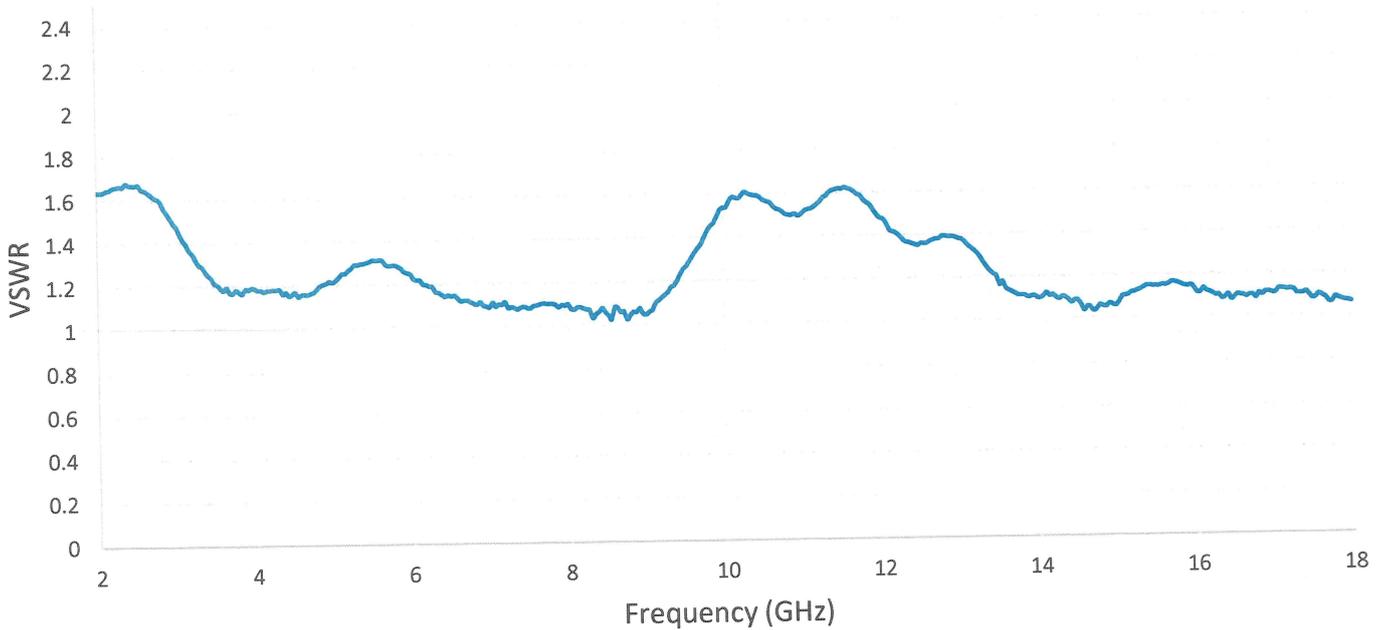




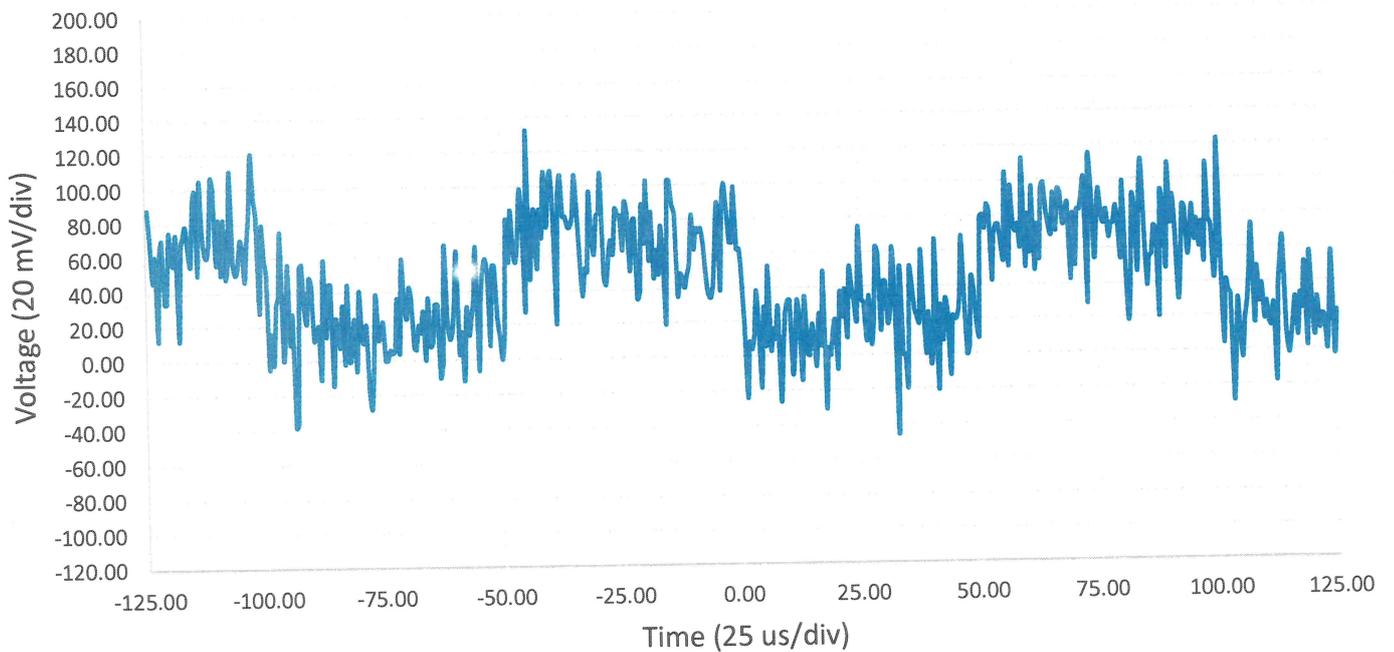
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PL45184/2418

VSWR 1.68:1



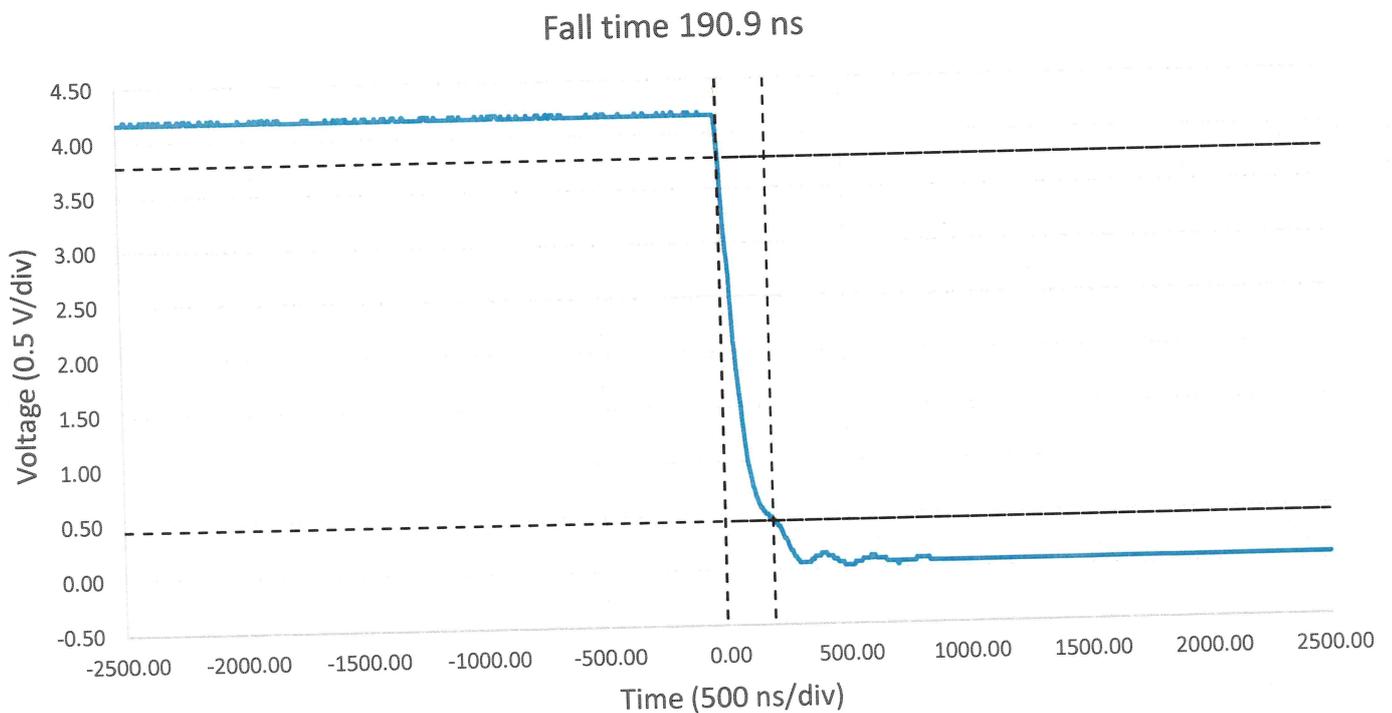
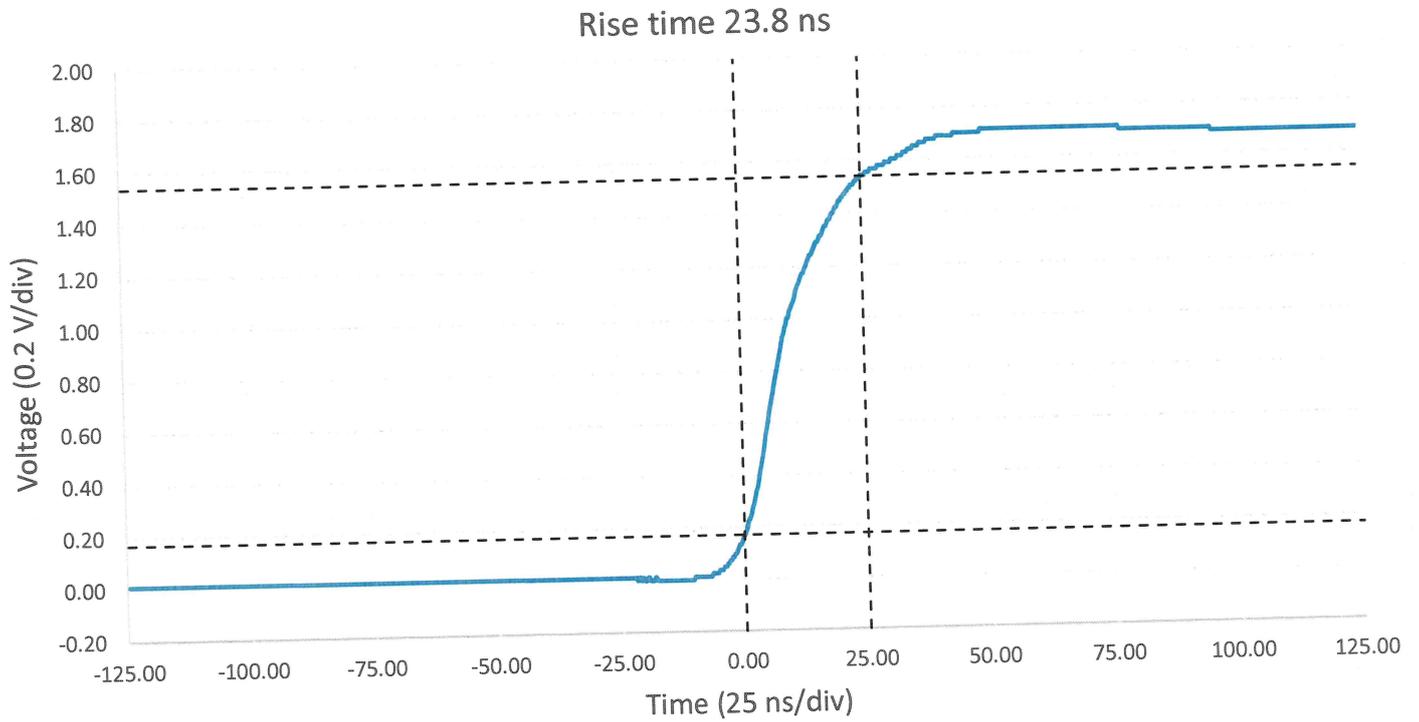
TSS @ -72.1 dBm





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PL45184/2418

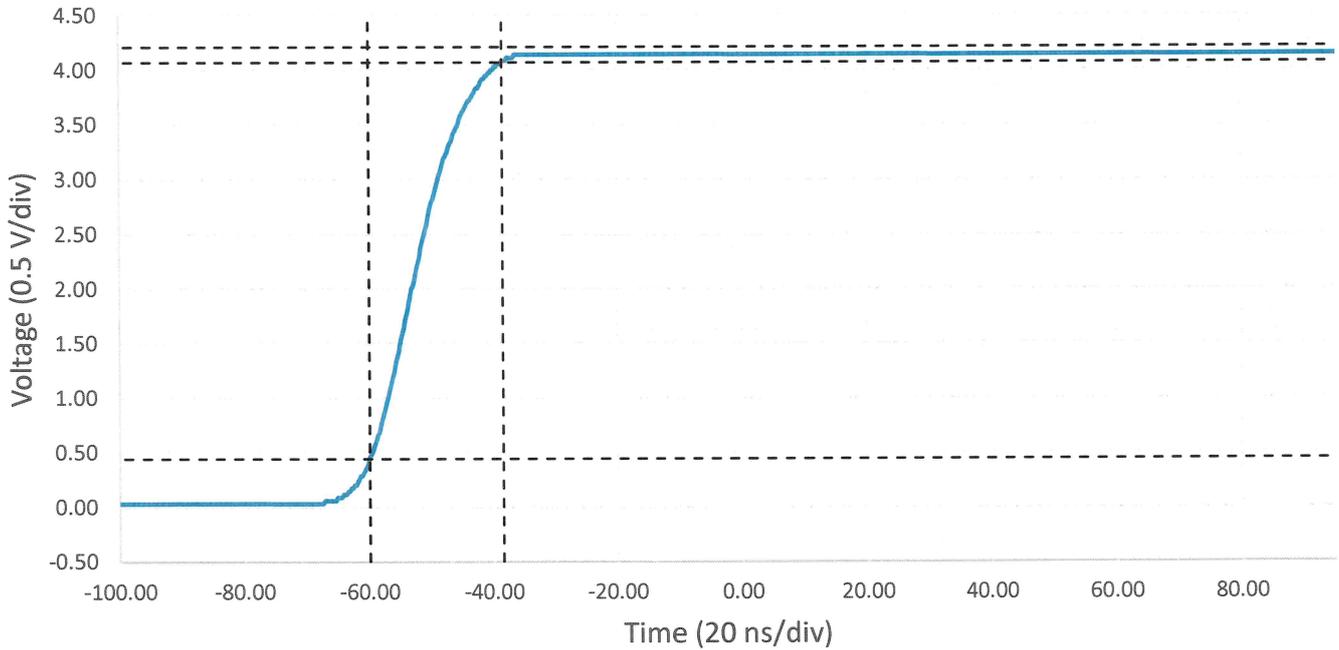




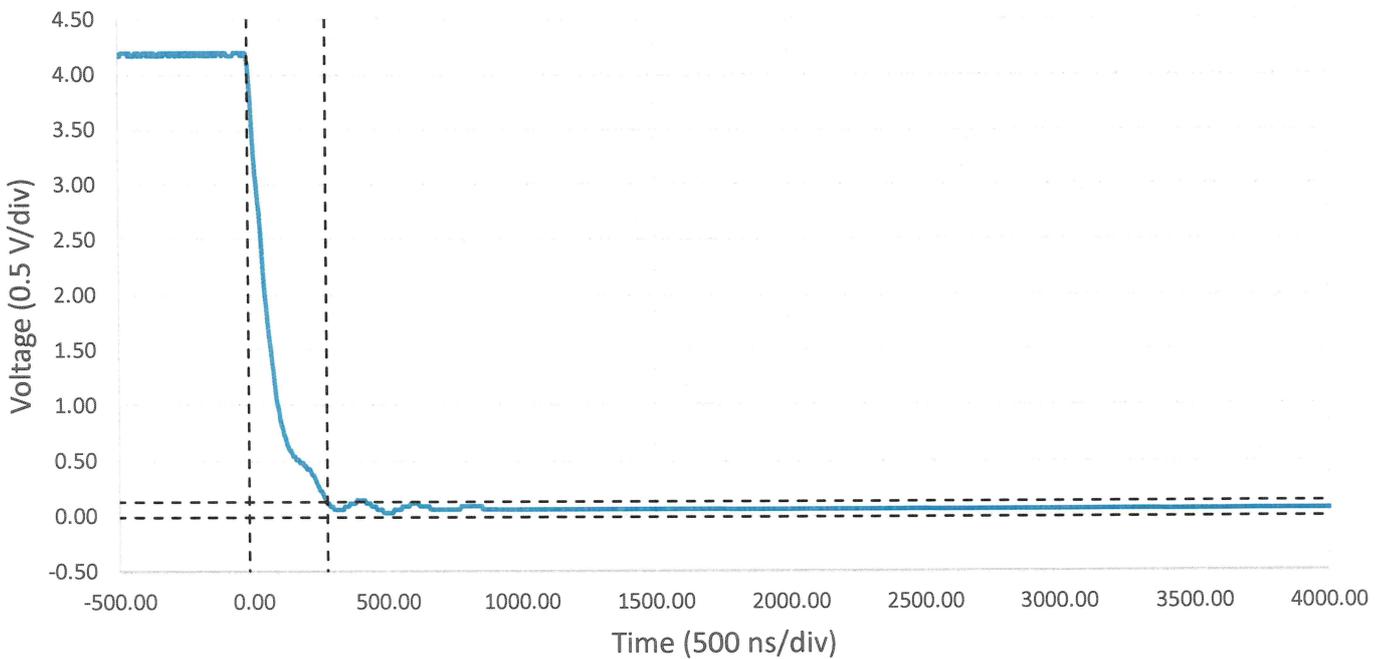
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PL45184/2418

Settle time 21.5 ns



Recovery time 290 ns

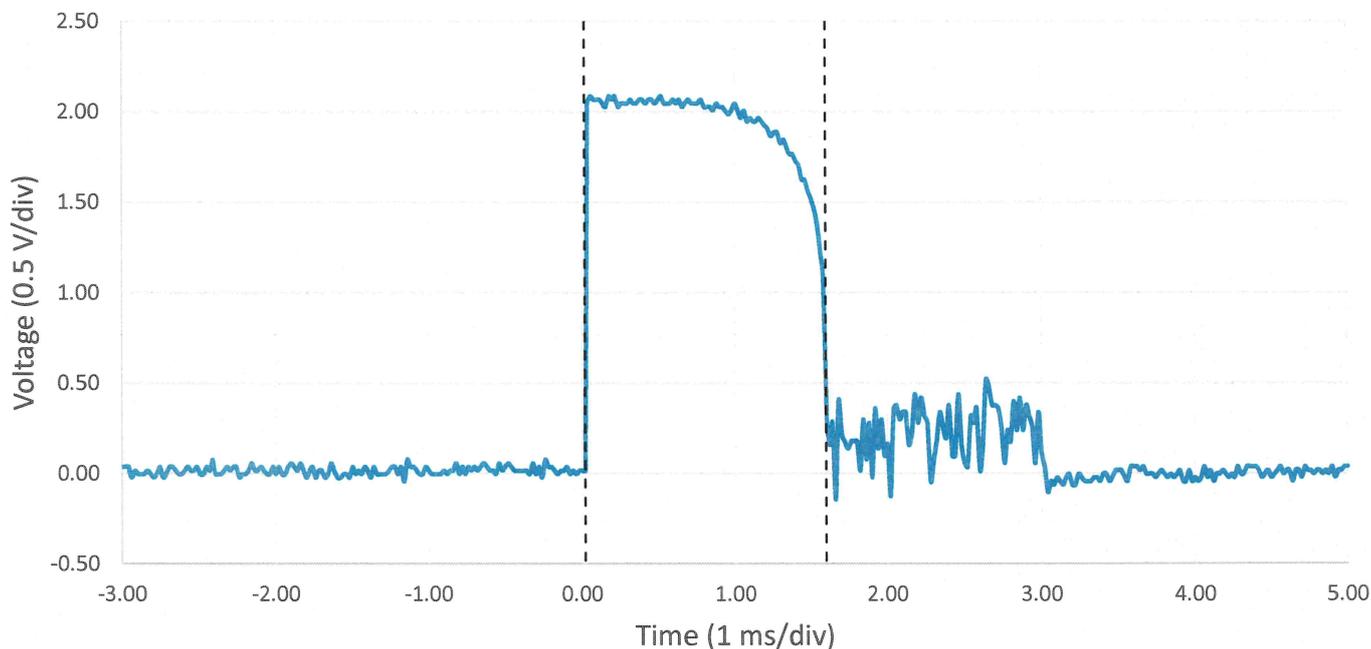




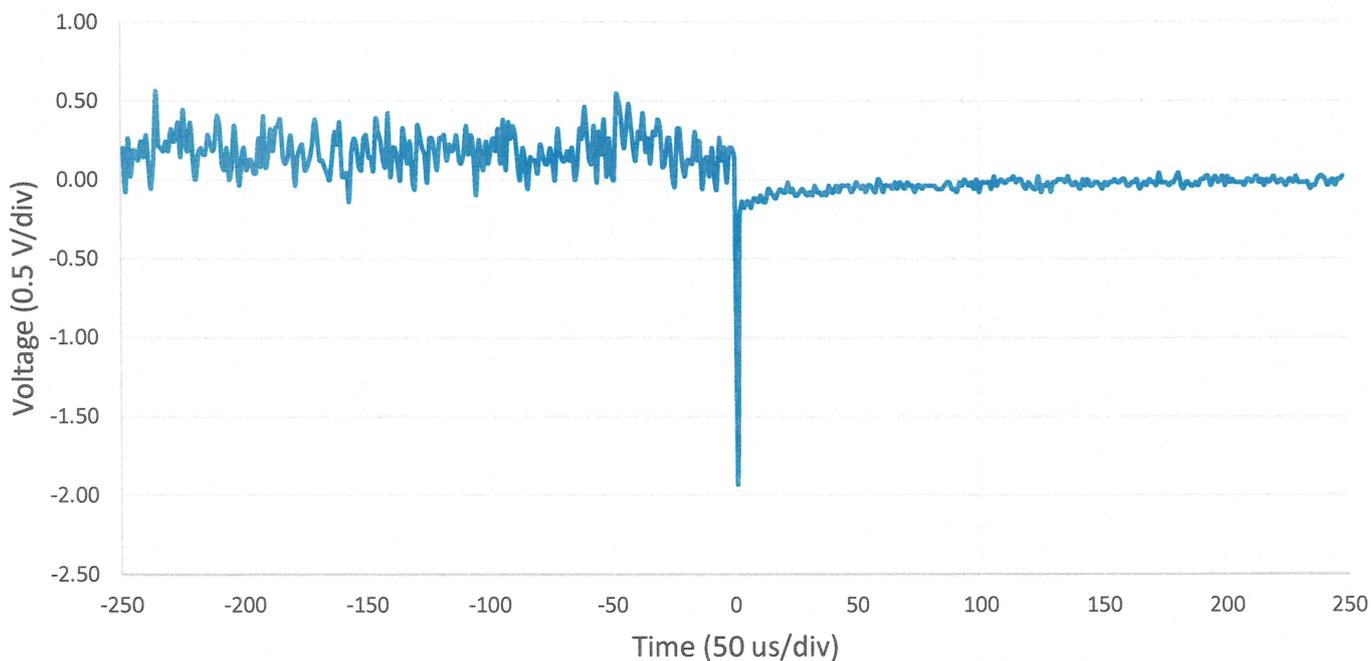
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CW Immunity 1.58 ms



CW Recovery Plot





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PL45184/2418

RMS Noise 23.6 mV

