



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: PL51099/2509

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	1.78 :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	70.8 mV/dB 68.4 mV/dB	
7	VIDEO OUT Log Linearity:	±1.0 dB MAX @25C	0.75 dB -0.66 dB	
8	VIDEO OUT Log Accuracy:	±2.3 dB MAX @25C	0.92 dB -1.12 dB	
9	VIDEO OUT Absolute Log Accuracy:	±2.9 dB MAX Over Freq & temp	1.02 dB -1.32 dB	
10	VIDEO OUT DC Offset:	0 ±70 mV (RF Input Terminated & DC Power On) @25C	-7 mV	
11	VIDEO OUT Rise Time (10% to 90%):	28 ns MAX	21.8 ns	
12	VIDEO OUT Fall Time (90% to 10%):	300 ns MAX	147.8 ns	



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

13	VIDEO OUT Settling Time:	50 ns With in ± 70 mV of final value @-10 dBm	20.5 ns	PMI QA3
14	VIDEO OUT Recovery Time:	1 us MAX to within 1 dB of baseline for PW <10us & Power = -10dBm	0.45 us	
15	VIDEO OUT Video Frequency Flatness:	± 2.0 dB MAX @25C	± 0.85 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	1.61 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:	$75 \pm 1 \Omega$	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	



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

22	VIDEO OUT Noise Level (Vp-p):	160 mV max	124.9 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 @ 330 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: PL51099/2509
DATE: 2/27/2025

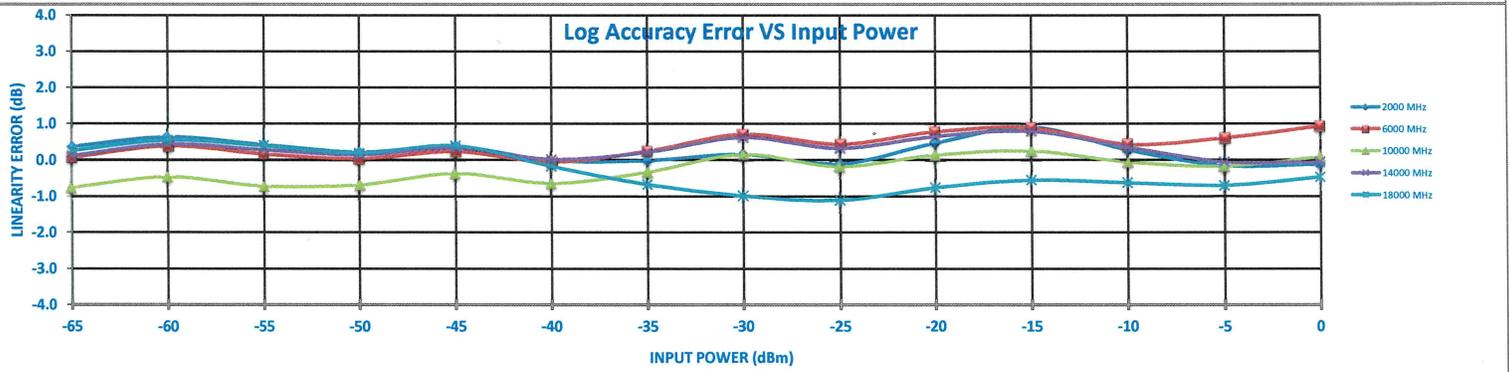
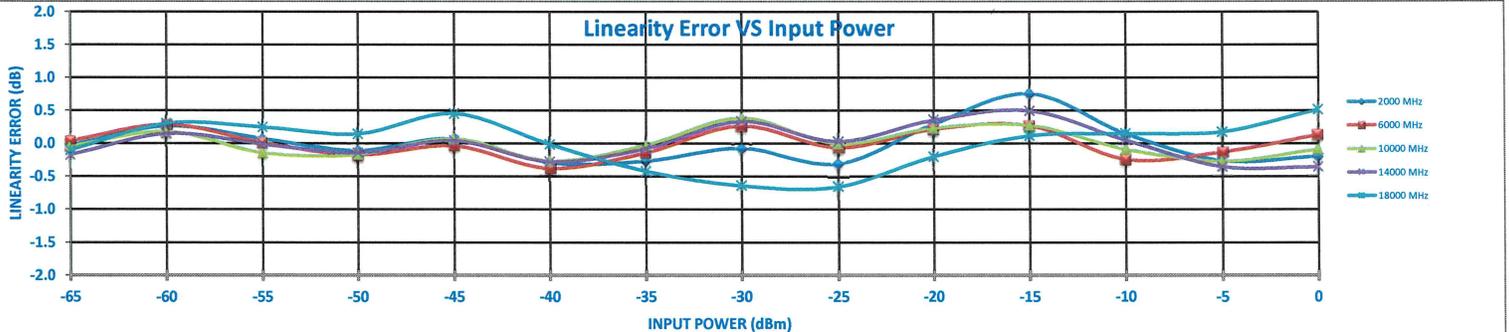
Test Temp: 25 °C
Video Offset: -7 mV

Frequency

Frequency	INTERCEPT (mV)	SLOPE (mV/dB)	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
2000 MHz	4870	69.5	351	719	1053	1388	1748	2070	2419	2780	3111	3500	3880	4185	4504	4856
			-2	18	5	-8	5	-21	-19	-5	-22	20	52	10	-19	-14
			-0.04	0.26	0.07	-0.11	0.07	-0.30	-0.27	-0.08	-0.31	0.28	0.75	0.14	-0.27	-0.20
			0.36	0.63	0.41	0.21	0.37	-0.02	-0.03	0.14	-0.12	0.45	0.90	0.26	-0.17	-0.13
6000 MHz	4920	70.6	330	701	1035	1375	1738	2067	2437	2819	3149	3522	3879	4196	4557	4929
			2	20	1	-12	-3	-27	-10	19	-5	15	19	-17	-10	9
			0.03	0.28	0.01	-0.18	-0.04	-0.38	-0.14	0.26	-0.07	0.21	0.27	-0.25	-0.14	0.13
			0.06	0.37	0.16	0.02	0.22	-0.07	0.23	0.70	0.43	0.77	0.88	0.42	0.59	0.92
10000 MHz	4876	70.8	272	642	973	1325	1696	2026	2397	2780	3106	3477	3834	4162	4503	4870
			3	13	-10	-12	5	-19	-2	27	-1	18	19	7	-20	6
			-0.05	0.18	-0.14	-0.17	0.07	-0.27	-0.03	0.38	-0.01	0.23	0.27	-0.09	-0.28	-0.09
			-0.77	-0.47	-0.73	-0.69	-0.38	-0.65	-0.34	0.14	-0.19	0.13	0.24	-0.07	-0.18	0.07
14000 MHz	4885	69.8	333	705	1043	1383	1745	2072	2435	2813	3141	3513	3872	4190	4511	4860
			-13	10	-1	-10	3	-20	-6	23	2	25	34	3	-25	-25
			-0.18	0.15	-0.01	-0.15	0.04	-0.28	-0.08	0.33	0.03	0.35	0.49	0.05	-0.36	-0.36
			0.10	0.43	0.27	0.14	0.32	0.01	0.20	0.62	0.31	0.64	0.78	0.34	-0.07	-0.07
18000 MHz	4796	68.4	343	713	1051	1386	1749	2059	2373	2700	3041	3414	3778	4122	4466	4831
			-7	21	17	10	31	-1	-29	-44	-45	-14	8	10	12	35
			-0.11	0.30	0.24	0.14	0.45	-0.02	-0.43	-0.65	-0.66	-0.21	0.11	0.14	0.17	0.51
			0.25	0.54	0.38	0.18	0.38	-0.18	-0.68	-1.00	-1.12	-0.78	-0.56	-0.64	-0.71	-0.49

RF Input Power (dBm)	
Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	0.75
ACCURACY ERROR (dB)	0.90
Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	-0.38
ACCURACY ERROR (dB)	0.92
Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	0.38
ACCURACY ERROR (dB)	-0.77
Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	0.49
ACCURACY ERROR (dB)	0.78
Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	-0.66
ACCURACY ERROR (dB)	-1.12

Flatness	+/- dB	0.57	0.55	0.57	0.45	0.38	0.33	0.46	0.85	0.77	0.77	0.73	0.53	0.65	0.70
															0.85





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

LOG TRANSFER WITH FREQUENCY

TESTED BY: Anton L.
 MODEL: ERDLVA-2G18G-65-70MV-70C
 SERIAL NO: PL51099/2509
 DATE: 2/27/2025

Test Temp: -40 °C
 Video Offset: 14 mV

Frequency

2000 MHz	INTERCEPT (mV)	4889
	SLOPE (mV/dB)	70.3

6000 MHz	INTERCEPT (mV)	4959
	SLOPE (mV/dB)	71.3

10000 MHz	INTERCEPT (mV)	4937
	SLOPE (mV/dB)	71.5

14000 MHz	INTERCEPT (mV)	4956
	SLOPE (mV/dB)	70.8

18000 MHz	INTERCEPT (mV)	4859
	SLOPE (mV/dB)	69.3

	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
340	693	1015	1354	1721	2051	2400	2779	3115	3504	3892	4198	4524	4873	
21	22	-7	-20	-4	-26	-28	-1	-17	21	57	12	-14	-16	
0.30	0.32	-0.10	-0.28	-0.06	-0.37	-0.40	-0.01	-0.24	0.30	0.81	0.17	-0.20	-0.23	
-0.13	-0.13	-0.57	-0.77	-0.58	-0.90	-0.86	-0.60	-0.84	-0.33	0.16	-0.51	-0.89	-0.95	

	349	699	1030	1367	1737	2076	2446	2842	3177	3549	3915	4226	4591	4971
26	19	-6	-26	-13	-30	-17	23	1	16	26	-20	-11	12	
0.36	0.27	-0.09	-0.36	-0.18	-0.42	-0.24	0.32	0.01	0.23	0.36	-0.28	-0.16	0.17	
0.00	-0.05	-0.36	-0.59	-0.35	-0.55	-0.31	0.29	0.04	0.30	0.48	-0.11	0.05	0.43	

	309	660	983	1331	1711	2052	2430	2827	3156	3529	3896	4211	4558	4925
20	14	-21	-38	8	-24	-4	-38	7	22	32	-11	-21	-12	
0.29	0.19	-0.29	-0.42	-0.11	-0.34	-0.05	0.50	0.10	0.31	0.44	-0.15	-0.30	-0.17	
-0.57	-0.60	-1.02	-1.10	-0.72	-0.89	-0.54	0.08	-0.26	0.02	0.21	-0.33	-0.41	-0.22	

	371	718	1057	1393	1761	2100	2466	2863	3199	3569	3938	4251	4587	4919
14	7	-7	-25	-11	-26	-14	30	12	28	43	2	-15	-37	
0.20	0.10	-0.11	-0.36	-0.16	-0.37	-0.19	0.42	0.17	0.39	0.61	0.03	-0.22	-0.53	
0.31	0.22	0.02	-0.22	-0.01	-0.21	-0.03	0.59	0.35	0.59	0.81	0.24	0.00	-0.30	

	376	723	1058	1392	1760	2082	2394	2746	3086	3462	3834	4173	4533	4890
20	20	9	-4	18	-6	-41	-35	-41	-12	14	7	20	31	
0.28	0.29	0.13	-0.05	0.26	-0.09	-0.59	-0.50	-0.60	-0.17	0.20	0.10	0.29	0.45	
0.38	0.29	0.04	-0.23	-0.02	-0.47	-1.05	-1.07	-1.25	-0.93	-0.66	-0.86	-0.77	-0.71	

RF Input Power (dBm)	
Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	0.81
ACCURACY ERROR (dB)	-0.96

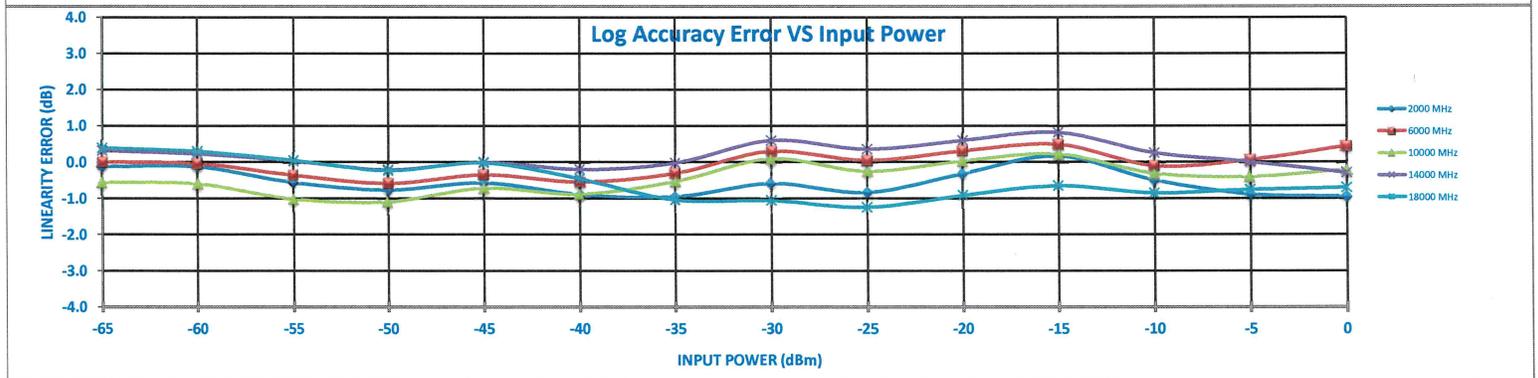
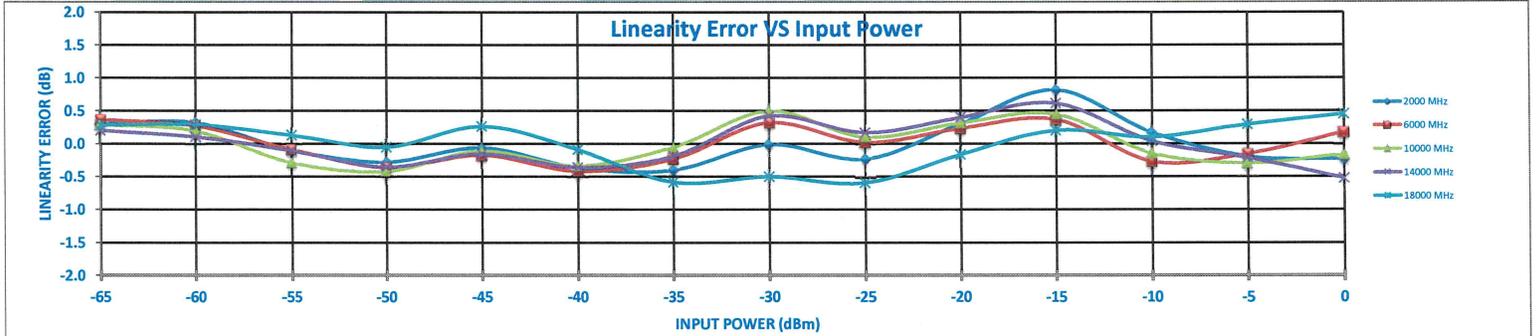
Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	-0.42
ACCURACY ERROR (dB)	-0.59

Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	0.50
ACCURACY ERROR (dB)	-1.10

Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	0.61
ACCURACY ERROR (dB)	0.81

Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	-0.60
ACCURACY ERROR (dB)	-1.25

Flatness	+/- dB	0.47	0.45	0.53	0.44	0.35	0.35	0.51	0.83	0.80	0.76	0.74	0.55	0.47	0.69
															0.83





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

LOG TRANSFER WITH FREQUENCY

TESTED BY: Anton L.
 MODEL: ERDLVA-2G18G-65-70MV-70C
 SERIAL NO: PL51099/2509
 DATE: 2/27/2025

Test Temp: 70 °C
 Video Offset: -13 mV

Frequency

2000 MHz	INTERCEPT (mV)	4898
	SLOPE (mV/dB)	69.9

6000 MHz	INTERCEPT (mV)	4942
	SLOPE (mV/dB)	70.9

10000 MHz	INTERCEPT (mV)	4884
	SLOPE (mV/dB)	70.9

14000 MHz	INTERCEPT (mV)	4878
	SLOPE (mV/dB)	69.6

18000 MHz	INTERCEPT (mV)	4796
	SLOPE (mV/dB)	69.0

	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
339	725	1061	1402	1759	2081	2433	2803	3139	3527	3904	4210	4525	4871	
-17	19	6	-2	5	-22	-19	1	-12	27	54	11	-24	-27	
-0.25	0.28	0.09	-0.03	0.08	-0.32	-0.28	0.02	-0.17	0.38	0.78	0.16	-0.34	-0.38	
0.13	0.64	0.43	0.30	0.40	-0.01	0.02	0.30	0.10	0.63	1.02	0.38	-0.12	-0.18	

	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
313	706	1046	1387	1748	2079	2451	2839	3171	3542	3897	4219	4573	4936	
-18	21	6	-8	-1	-25	-8	25	3	19	19	-13	-14	-6	
-0.25	0.29	0.08	-0.11	-0.02	-0.35	-0.11	0.36	0.04	0.27	0.27	-0.19	-0.20	-0.08	
-0.24	0.37	0.22	0.09	0.24	-0.03	0.28	0.81	0.55	0.85	0.92	0.51	0.56	0.75	

	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
252	637	980	1339	1705	2037	2401	2785	3115	3481	3836	4173	4508	4866	
-24	7	-5	0	11	-11	-1	-28	4	15	18	-2	-21	-19	
-0.33	0.10	-0.06	0.00	0.16	-0.15	-0.02	0.40	0.05	0.21	0.22	-0.02	-0.30	-0.25	
-1.11	-0.62	-0.72	-0.60	-0.37	-0.63	-0.44	0.04	-0.25	-0.02	0.04	-0.15	-0.36	-0.25	

	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
312	714	1061	1404	1764	2087	2445	2812	3139	3506	3861	4185	4498	4856	
-45	9	9	4	16	-9	1	21	0	19	26	3	-32	-22	
-0.64	0.14	0.12	0.06	0.23	-0.13	0.02	0.30	0.00	0.27	0.38	0.04	-0.46	-0.32	
-0.26	0.48	0.43	0.33	0.47	0.08	0.19	0.43	0.10	0.33	0.40	0.03	-0.51	-0.40	

	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
276	676	1017	1364	1722	2038	2359	2693	3040	3406	3767	4115	4452	4817	
-34	21	17	19	32	3	-21	-33	-31	-10	6	9	1	21	
-0.49	0.31	0.25	0.27	0.46	0.04	-0.31	-0.47	-0.44	-0.14	0.09	0.13	0.01	0.30	
-0.77	-0.06	-0.19	-0.24	-0.13	-0.62	-1.04	-1.27	-1.32	-1.09	-0.94	-0.97	-1.16	-0.95	

RF Input Power (dBm)	
Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	0.78
ACCURACY ERROR (dB)	1.02

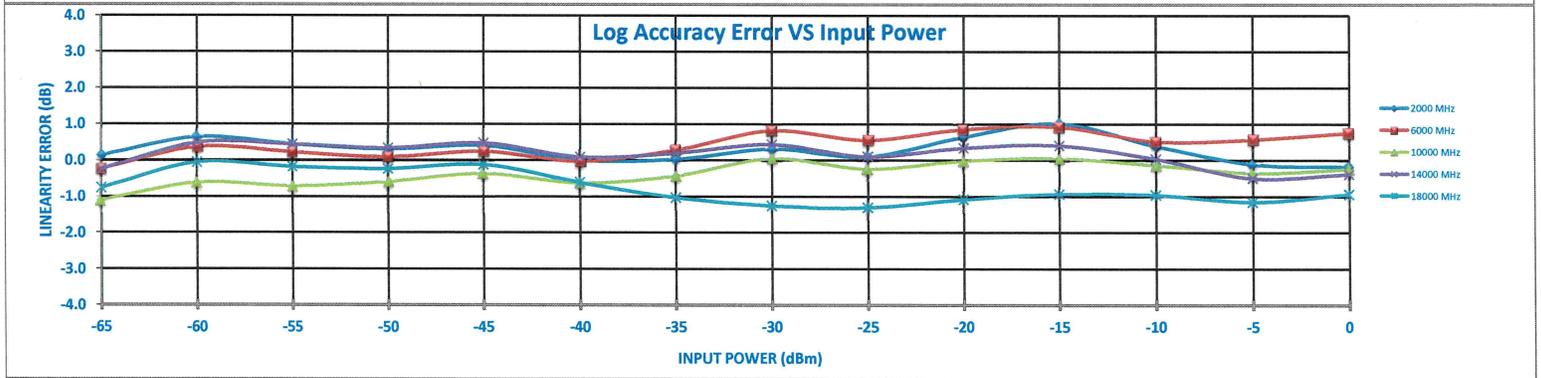
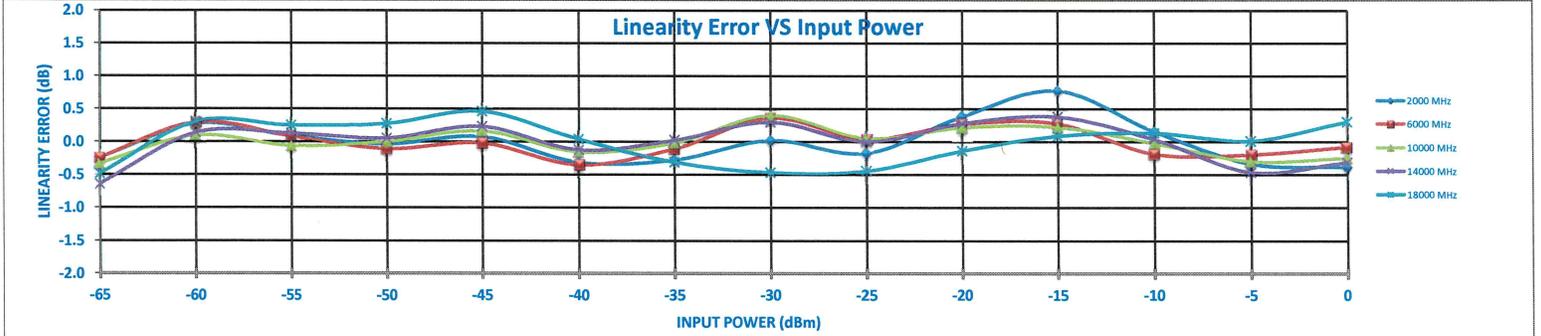
Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	0.36
ACCURACY ERROR (dB)	0.92

Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	0.40
ACCURACY ERROR (dB)	-1.11

Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	-0.64
ACCURACY ERROR (dB)	-0.51

Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	-0.49
ACCURACY ERROR (dB)	-1.32

Flatness	+/- dB	0.62	0.63	0.58	0.46	0.42	0.36	0.66	1.04	0.93	0.97	0.98	0.74	0.86	0.85
															1.04

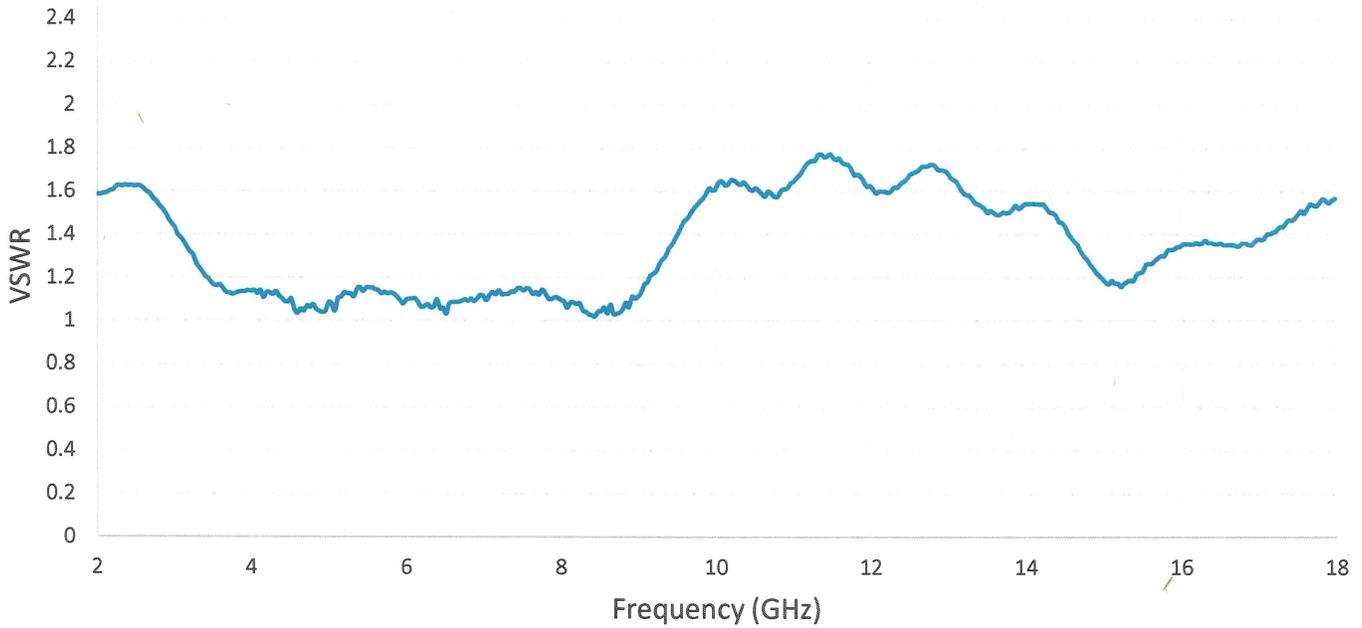




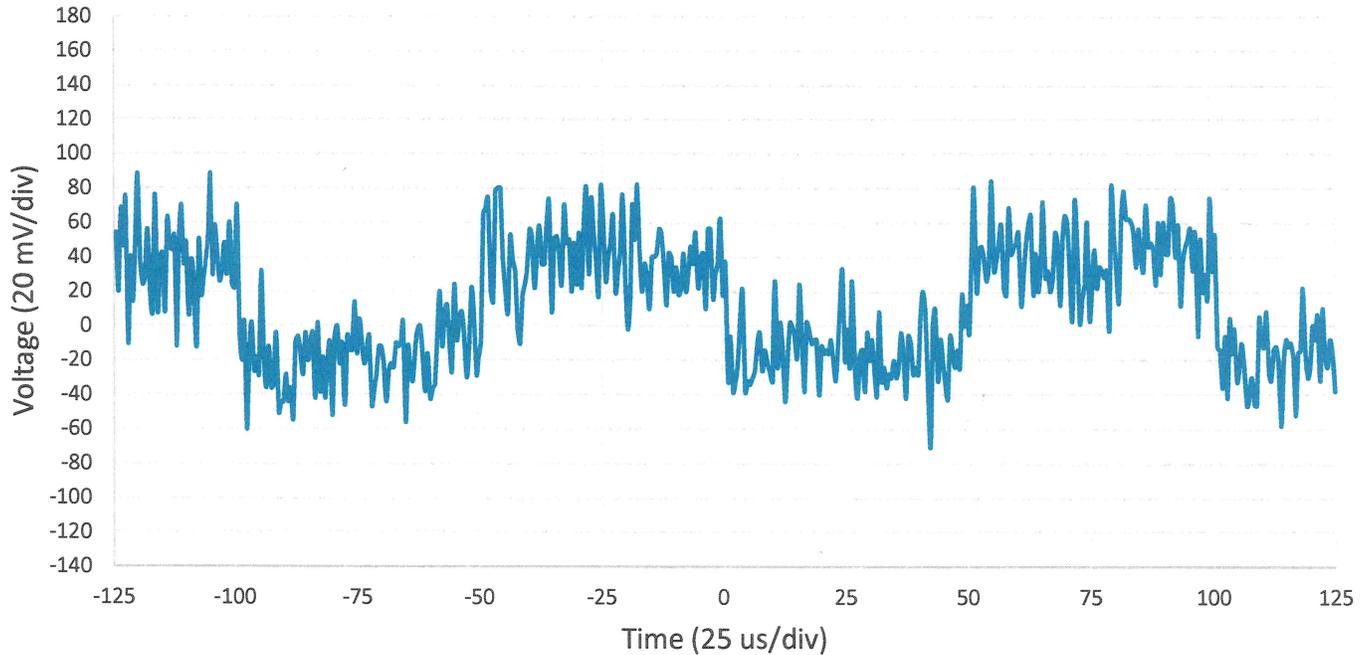
Summary Data
For
ERDLVA-2G18G-65-70MV-70C

PL51099/2509

VSWR 1.78:1



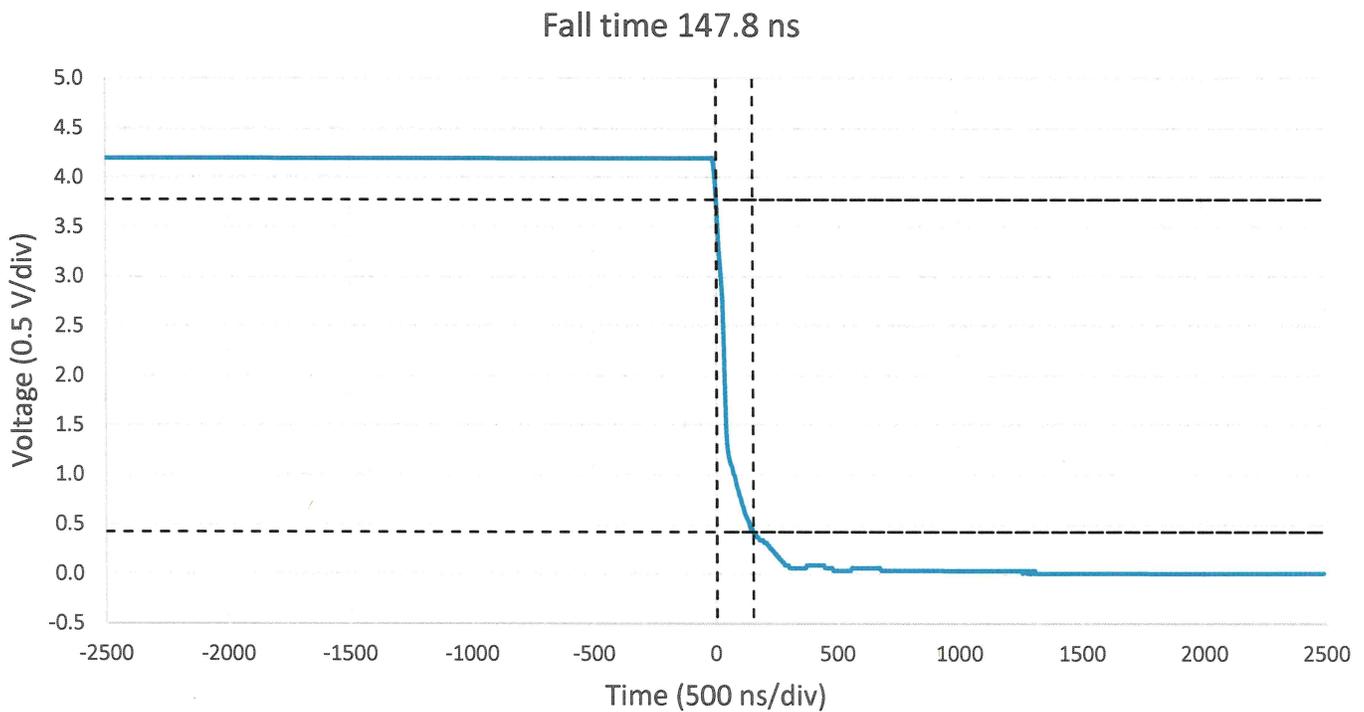
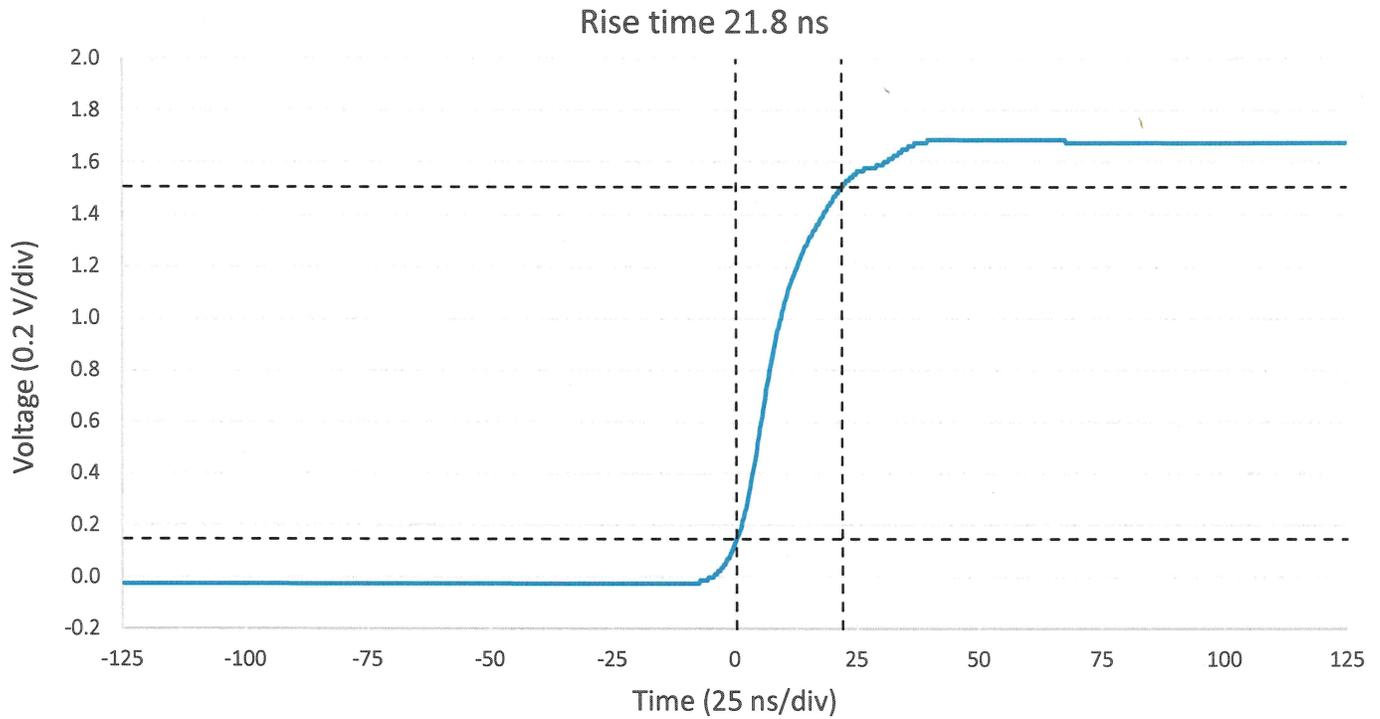
TSS @ -72.3 dBm





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

PL51099/2509

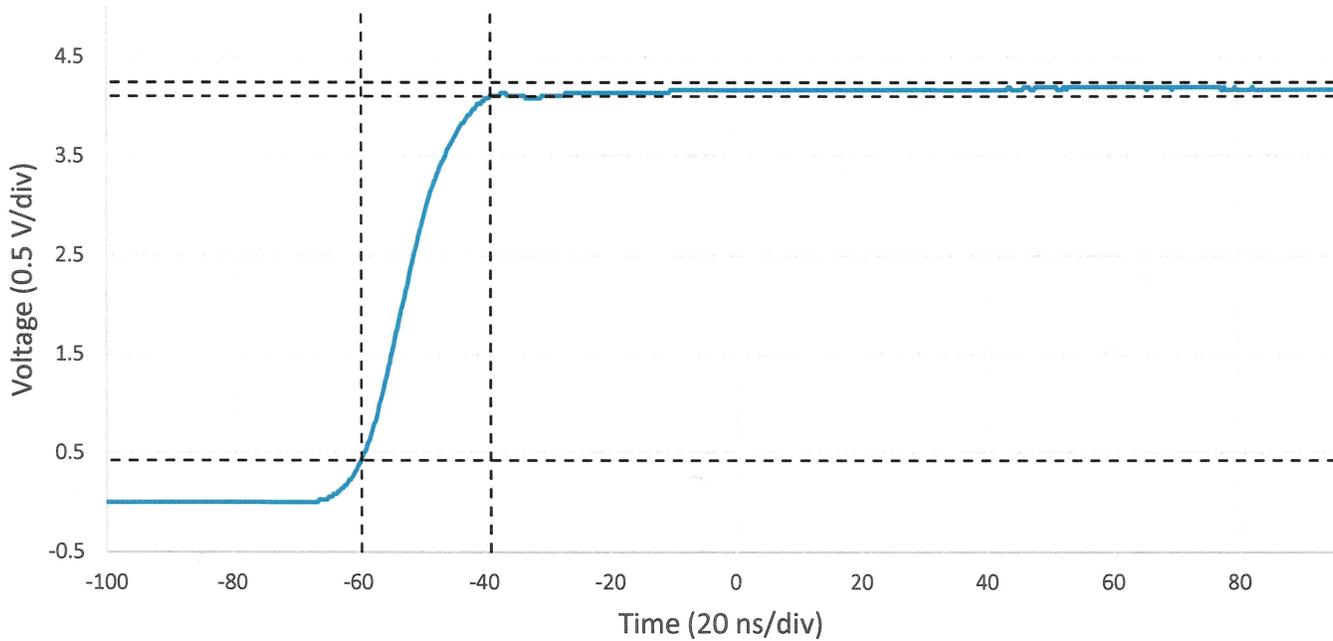




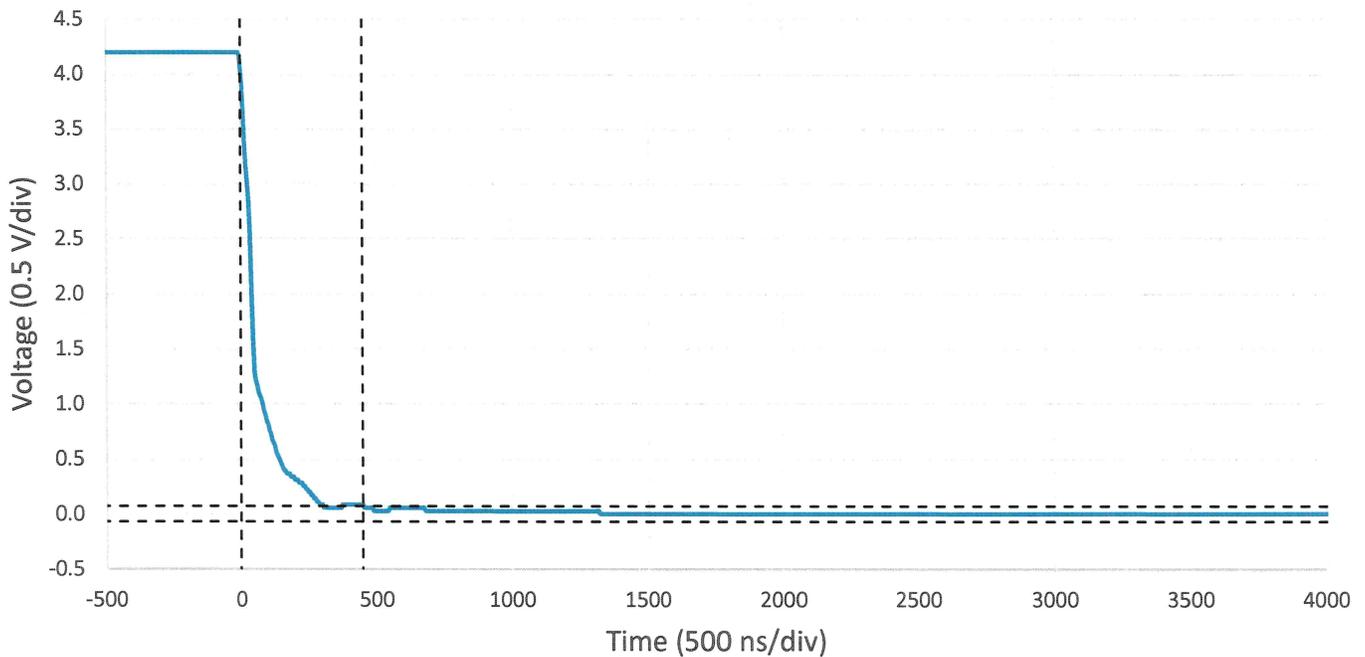
**Summary Data
For
ERDLVA-2G18G-65-70MV-70C**

PL51099/2509

Settle time 20.5 ns



Recovery time 450 ns

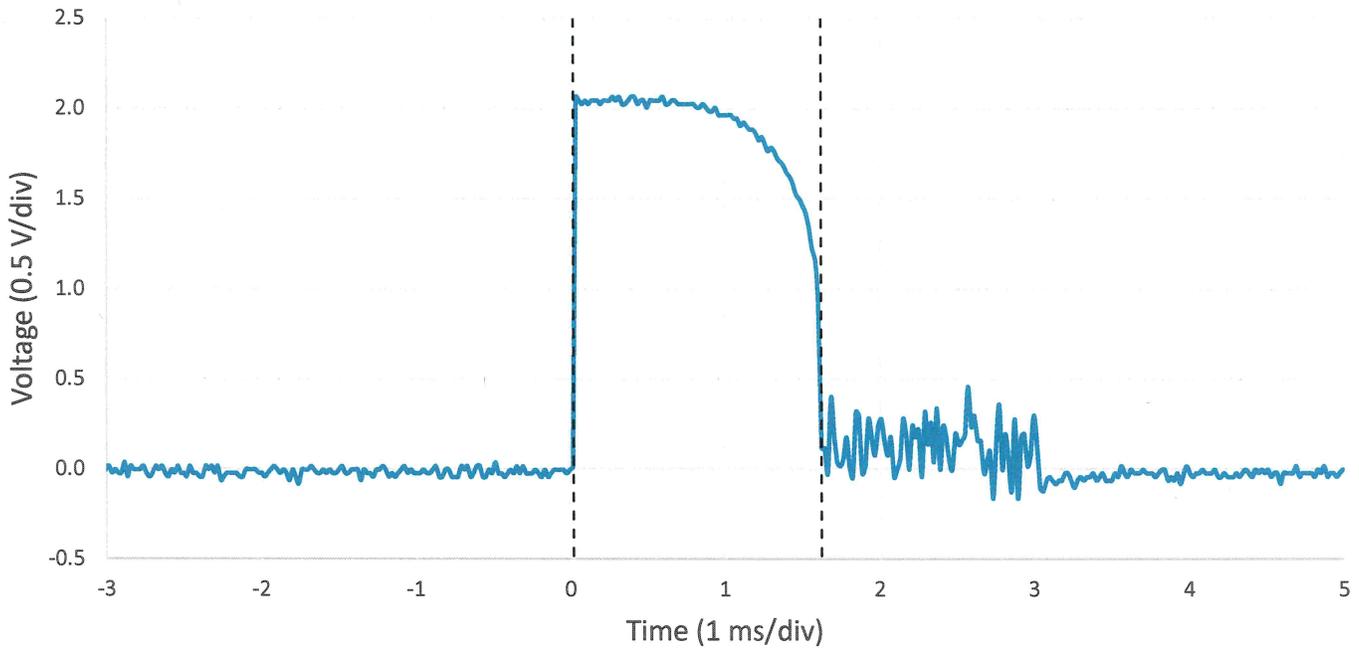




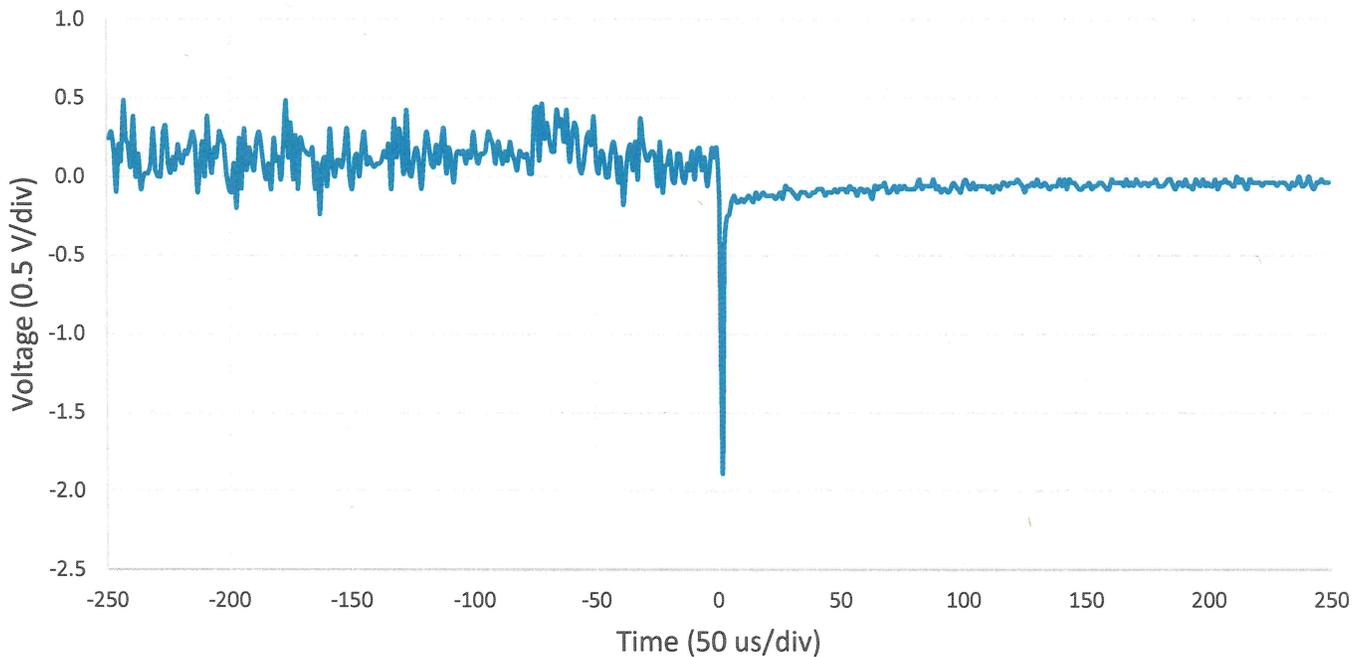
Summary Data
For
ERDLVA-2G18G-65-70MV-70C

PL51099/2509

CW Immunity 1.61 ms



CW Recovery Plot





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

PL51099/2509

RMS Noise 18.9 mV

