PMI

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

Customer: _____

SO No: _____

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

Serial No: PL48060/2444

Tested By: Anton L. _____

Temperature: -40°C TO +70°C _____

Date 10/30/2024 _____

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	1.81 :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	- 71.8 dBm	
5	VIDEO OUT Dynamic Range:	-65 to 0 dBm	-65 to 0 dBm	
6	VIDEO OUT Log Slope Fixed:	70 ± 3mV/dB	70.0 mV/dB 68.8 mV/dB	
7	VIDEO OUT Log Linearity:	±1.0 dB MAX @25C	0.58 dB -0.38 dB	
8	VIDEO OUT Log Accuracy:	±2.3 dB MAX @25C	0.77 dB -0.86 dB	
9	VIDEO OUT Absolute Log Accuracy:	±2.9 dB MAX Over Freq & temp	1.22 dB -1.08 dB	
10	VIDEO OUT DC Offset:	0 ±70 mV (RF Input Terminated & DC Power On) @25C	43 mV	
11	VIDEO OUT Rise Time (10% to 90%):	28 ns MAX	23.3 ns	
12	VIDEO OUT Fall Time (90% to 10%):	300 ns MAX	166.3 ns	

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13	VIDEO OUT Settling Time:	50 ns With in ±70 mV of final value @-10 dBm	23.8 ns	PMI QA3
14	VIDEO OUT Recovery Time:	1 us MAX to within 1 dB of baseline for PW <10us & Power = -10dBm	0.43 us	
15	VIDEO OUT Video Frequency Flatness:	±2.0 dB MAX @25C	± 0.77 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	1.49 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	75Ω	
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	116.8 mV	PMI QAS
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. Klumnn_   Date: _11.1.24_

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

LOG TRANSFER WITH FREQUENCY

TESTED BY: Anton L.
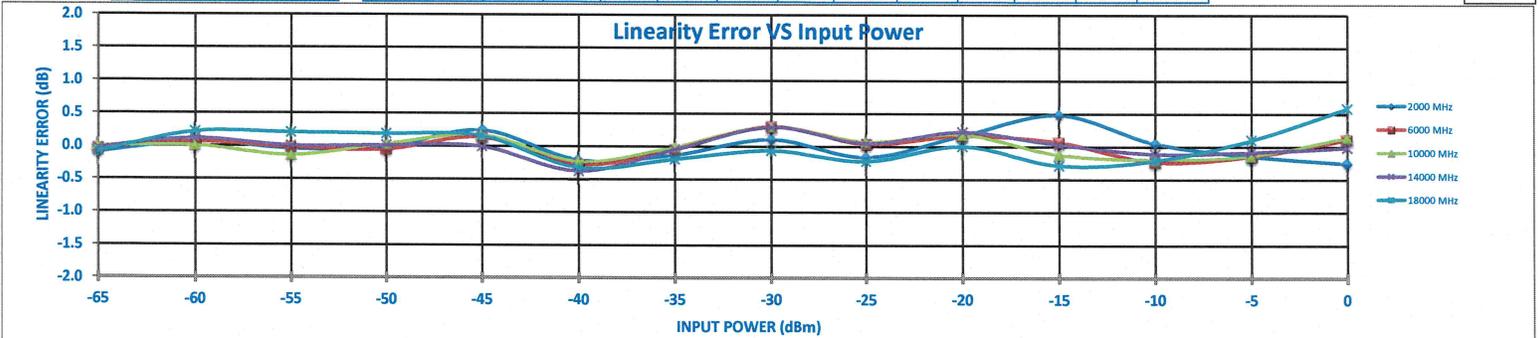MODEL: ERDLVA-2G18G-65-70MV-70C
SERIAL NO: PL48060/2444
DATE: 10/30/2024

Test Temp: 25 ºC
Video Offset: 43 mV

Frequency			-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	RF Input Power (dBm)	
2000 MHz	INTERCEPT (mV)	4885	347	707	1048	1398	1765	2082	2436	2801	3131	3502	3873	4191	4526	4867	Measured Value (mV)	
	SLOPE (mV/dB)	69.7	-7	4	-3	-2	17	-15	-9	7	-11	11	34	3	-10	-18	Error (mV)	
			-0.10	0.06	-0.05	-0.02	0.24	-0.21	-0.13	0.10	-0.16	0.16	0.48	0.04	-0.15	-0.26	LINEARITY ERROR (dB)	0.48
			0.16	0.33	0.22	0.25	0.51	0.06	0.14	0.38	0.12	0.44	0.77	0.33	0.14	0.03	ACCURACY ERROR (dB)	0.77
6000 MHz	INTERCEPT (mV)	4895	342	699	1043	1391	1754	2075	2441	2816	3147	3506	3849	4178	4534	4902	Measured Value (mV)	
	SLOPE (mV/dB)	70.0	-3	4	-2	-4	9	-20	-4	21	2	11	4	-17	-11	7	Error (mV)	
			-0.04	0.06	-0.03	-0.06	0.13	-0.28	-0.05	0.30	0.03	0.16	0.06	-0.24	-0.15	0.11	LINEARITY ERROR (dB)	0.30
			0.09	0.21	0.15	0.14	0.35	-0.04	0.21	0.60	0.35	0.50	0.42	0.15	0.25	0.54	ACCURACY ERROR (dB)	0.60
10000 MHz	INTERCEPT (mV)	4836	283	634	974	1336	1696	2018	2384	2756	3090	3448	3777	4122	4476	4846	Measured Value (mV)	
	SLOPE (mV/dB)	70.0	-1	0	-10	2	12	-17	-1	21	5	12	-9	-14	-10	10	Error (mV)	
			-0.01	0.00	-0.14	0.03	0.16	-0.24	-0.01	0.30	0.07	0.18	-0.12	-0.20	-0.15	0.14	LINEARITY ERROR (dB)	0.30
			-0.76	-0.72	-0.84	-0.64	-0.48	-0.86	-0.60	-0.26	-0.47	-0.33	-0.61	-0.66	-0.58	-0.27	ACCURACY ERROR (dB)	-0.86
14000 MHz	INTERCEPT (mV)	4874	334	693	1034	1384	1732	2055	2427	2800	3132	3493	3829	4168	4519	4873	Measured Value (mV)	
	SLOPE (mV/dB)	69.8	-2	8	0	1	-1	-27	-4	20	3	15	2	-8	-6	-1	Error (mV)	
			-0.03	0.11	-0.01	0.01	-0.01	-0.38	-0.05	0.29	0.05	0.22	0.03	-0.11	-0.09	-0.02	LINEARITY ERROR (dB)	-0.38
			-0.03	0.13	0.02	0.04	0.04	-0.33	0.01	0.37	0.13	0.31	0.14	0.00	0.04	0.12	ACCURACY ERROR (dB)	0.37
18000 MHz	INTERCEPT (mV)	4852	373	738	1081	1424	1766	2077	2430	2783	3116	3476	3800	4149	4515	4892	Measured Value (mV)	
	SLOPE (mV/dB)	68.8	-6	15	14	13	10	-23	-14	-5	-16	0	-20	-15	7	40	Error (mV)	
			-0.09	0.21	0.20	0.18	0.15	-0.33	-0.20	-0.07	-0.23	0.00	-0.29	-0.22	0.10	0.58	LINEARITY ERROR (dB)	0.58
			0.53	0.77	0.70	0.62	0.53	-0.01	0.06	0.12	-0.10	0.07	-0.28	-0.27	-0.02	0.39	ACCURACY ERROR (dB)	0.77
Flatness	+/- dB		0.65	0.75	0.77	0.63	0.50	0.46	0.41	0.43	0.41	0.42	0.69	0.50	0.42	0.40		0.77
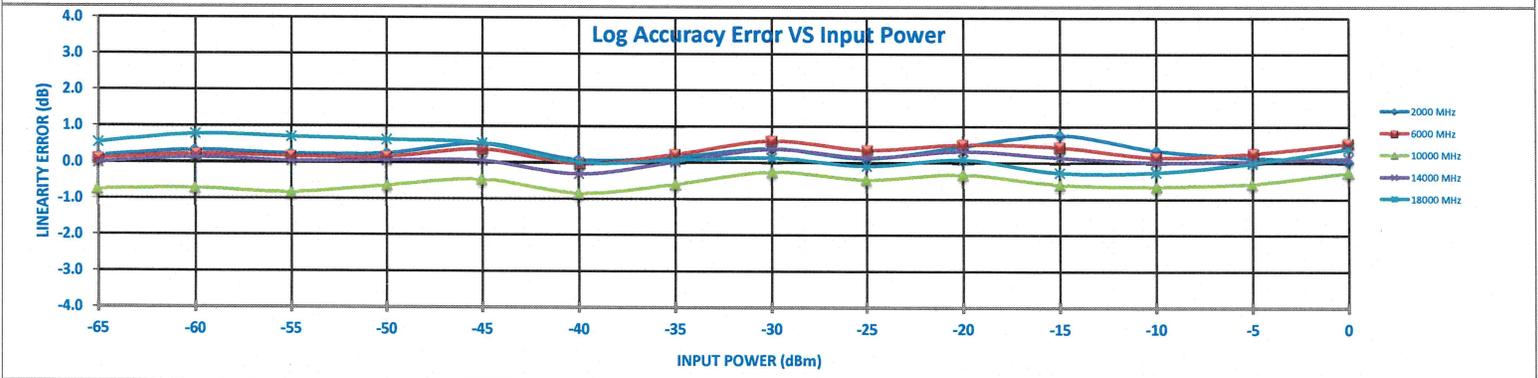
Linearity Error VS Input Power

Log Accuracy Error VS Input Power

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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: PL48060/2444
DATE: 10/30/2024

Test Temp: -40 °C
Video Offset: -57 mV

Frequency			-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	RF Input Power (dBm)	
2000 MHz	INTERCEPT (mV)	4746	202	548	874	1228	1599	1926	2281	2650	2982	3351	3728	4055	4392	4725	Measured Value (mV)	
	SLOPE (mV/dB)	70.1	13	9	-16	-12	8	-15	-11	8	-11	7	34	10	-3	-21	Error (mV)	
			0.19	0.13	-0.22	-0.17	0.12	-0.22	-0.16	0.11	-0.16	0.11	0.48	0.15	-0.05	-0.30	LINEARITY ERROR (dB)	0.48
			-0.64	-0.69	-1.02	-0.94	-0.63	-0.95	-0.86	-0.57	-0.82	-0.53	-0.13	-0.45	-0.62	-0.85	ACCURACY ERROR (dB)	-1.02
6000 MHz	INTERCEPT (mV)	4777	238	577	913	1260	1626	1955	2318	2695	3027	3384	3737	4064	4420	4780	Measured Value (mV)	
	SLOPE (mV/dB)	70.1	16	4	-10	-13	2	-19	-6	20	2	9	11	-12	-6	3	Error (mV)	
			0.22	0.06	-0.14	-0.19	0.03	-0.27	-0.09	0.29	0.03	0.12	0.16	-0.17	-0.09	0.05	LINEARITY ERROR (dB)	0.29
			-0.13	-0.27	-0.46	-0.49	-0.24	-0.53	-0.33	0.07	-0.17	-0.06	0.00	-0.32	-0.22	-0.06	ACCURACY ERROR (dB)	-0.53
10000 MHz	INTERCEPT (mV)	4745	208	551	885	1239	1608	1935	2295	2668	2997	3355	3699	4035	4393	4745	Measured Value (mV)	
	SLOPE (mV/dB)	69.9	9	2	-14	-9	10	-13	-3	21	0	8	3	-11	-3	0	Error (mV)	
			0.12	0.03	-0.20	-0.14	0.14	-0.18	-0.04	0.30	0.00	0.12	0.04	-0.16	-0.04	0.00	LINEARITY ERROR (dB)	0.30
			-0.56	-0.64	-0.86	-0.79	-0.50	-0.82	-0.66	-0.32	-0.60	-0.48	-0.55	-0.73	-0.61	-0.56	ACCURACY ERROR (dB)	-0.86
14000 MHz	INTERCEPT (mV)	4792	254	598	942	1284	1636	1967	2334	2712	3046	3402	3753	4087	4445	4783	Measured Value (mV)	
	SLOPE (mV/dB)	70.0	11	5	-1	-9	-6	-25	-8	20	4	10	11	-5	3	-9	Error (mV)	
			0.16	0.08	-0.01	-0.12	-0.09	-0.36	-0.12	0.28	0.05	0.14	0.15	-0.07	0.04	-0.13	LINEARITY ERROR (dB)	-0.36
			0.10	0.03	-0.04	-0.14	-0.10	-0.36	-0.10	0.31	0.10	0.20	0.23	0.01	0.14	-0.02	ACCURACY ERROR (dB)	-0.36
18000 MHz	INTERCEPT (mV)	4798	332	666	1019	1365	1695	2019	2360	2730	3061	3413	3754	4094	4468	4834	Measured Value (mV)	
	SLOPE (mV/dB)	68.9	15	4	12	14	-1	-22	-26	0	-14	-7	-10	-15	14	36	Error (mV)	
			0.21	0.06	0.18	0.20	-0.02	-0.32	-0.37	0.00	-0.20	-0.10	-0.15	-0.22	0.21	0.52	LINEARITY ERROR (dB)	0.52
			1.22	1.00	1.06	1.02	0.75	0.39	0.27	0.57	0.31	0.36	0.24	0.11	0.47	0.71	ACCURACY ERROR (dB)	1.22
Flatness	+/- dB		0.93	0.85	1.04	0.98	0.69	0.67	0.57	0.57	0.57	0.44	0.39	0.42	0.54	0.78		1.04
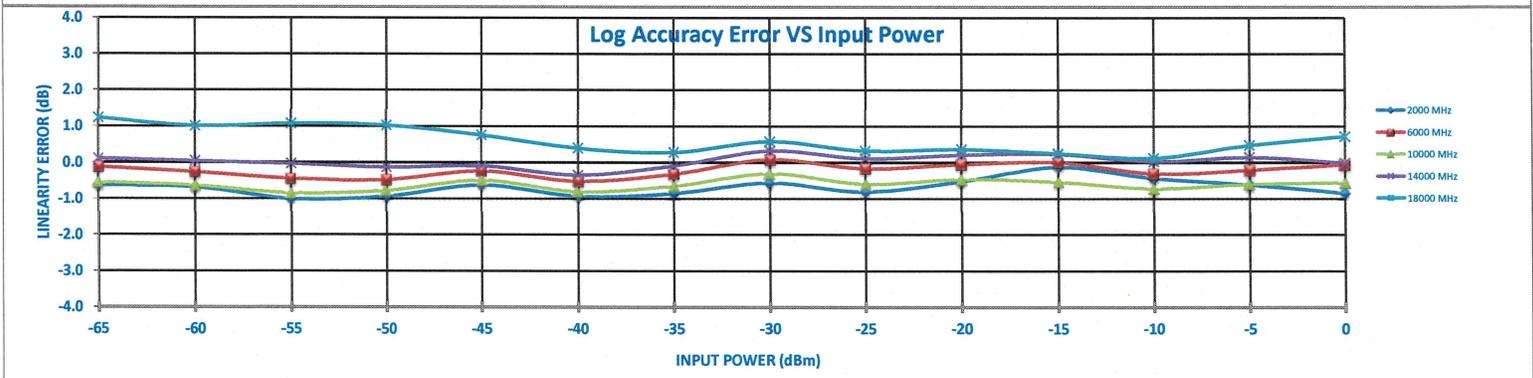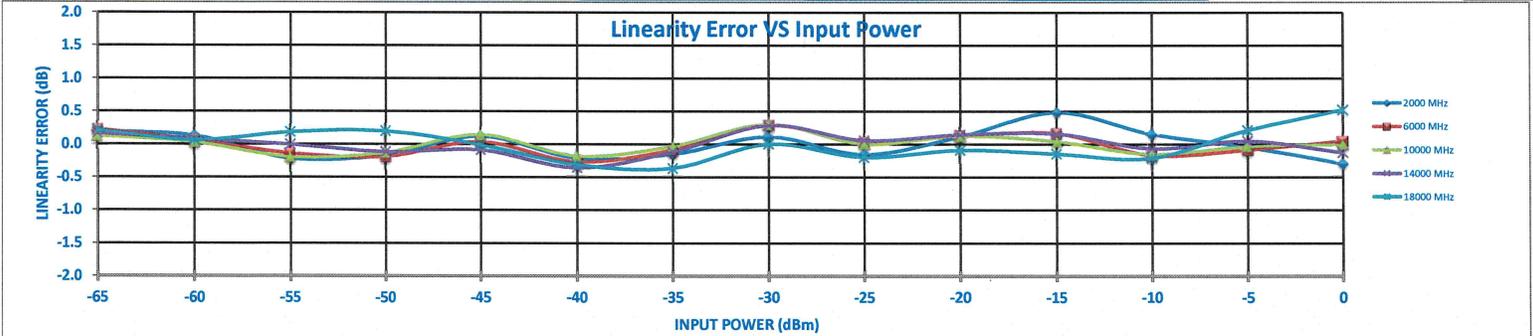
Linearity Error VS Input Power

Log Accuracy Error VS Input Power

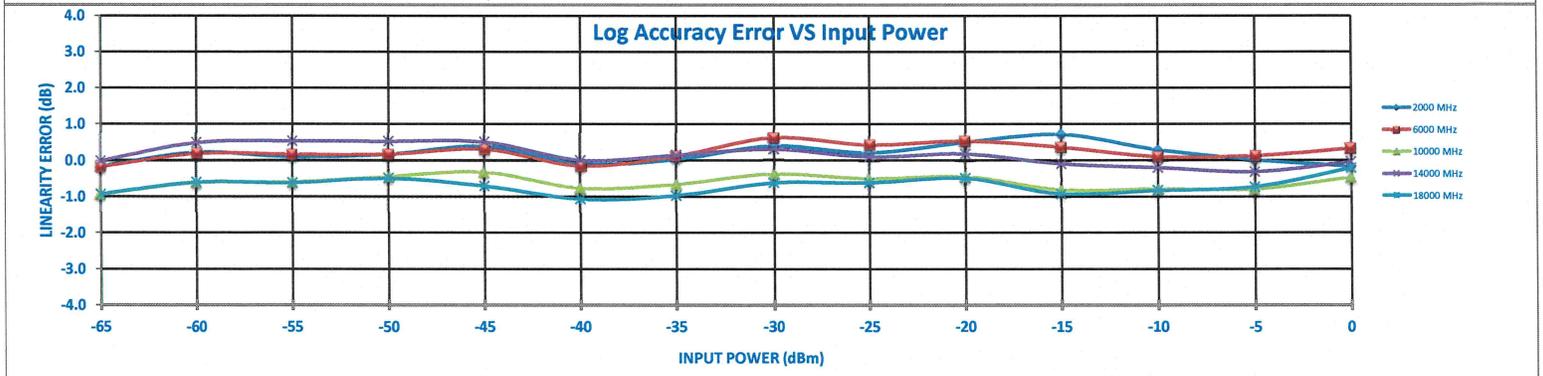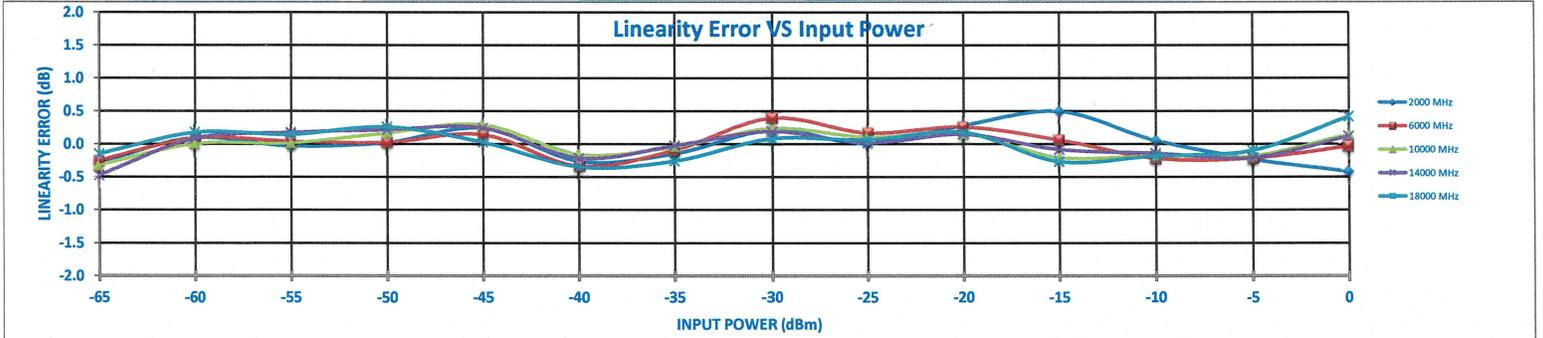# Summary Data For ERDLVA-2G18G-65-70MV-70C

LOG TRANSFER WITH FREQUENCY

TESTED BY: Anton L.
MODEL: ERDLVA-2G18G-65-70MV-70C
SERIAL NO: PL48060/2444
DATE: 10/30/2024

Test Temp: 70 °C
Video Offset: 51 mV

Frequency			-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	RF Input Power (dBm)	
2000 MHz	INTERCEPT (mV)	4912	343	719	1060	1414	1779	2094	2452	2827	3163	3532	3897	4216	4546	4883	Measured Value (mV)	
	SLOPE (mV/dB)	70.0	-20	6	-3	1	16	-19	-11	15	1	20	35	4	-16	-29	Error (mV)	
			-0.28	0.09	-0.04	0.02	0.24	-0.26	-0.15	0.21	0.01	0.28	0.49	0.05	-0.24	-0.42	LINEARITY ERROR (dB)	0.49
			-0.17	0.21	0.09	0.16	0.39	-0.10	0.02	0.39	0.20	0.49	0.71	0.28	0.00	-0.17	ACCURACY ERROR (dB)	0.71
6000 MHz	INTERCEPT (mV)	4920	342	717	1064	1414	1773	2090	2458	2843	3178	3535	3872	4203	4554	4918	Measured Value (mV)	
	SLOPE (mV/dB)	70.2	-18	6	2	2	10	-24	-7	28	12	18	4	-16	-15	-2	Error (mV)	
			-0.26	0.09	0.04	0.02	0.14	-0.34	-0.10	0.39	0.17	0.26	0.06	-0.22	-0.22	-0.03	LINEARITY ERROR (dB)	0.39
			-0.19	0.18	0.15	0.16	0.30	-0.16	0.11	0.62	0.42	0.53	0.35	0.09	0.12	0.33	ACCURACY ERROR (dB)	0.62
10000 MHz	INTERCEPT (mV)	4852	289	661	1011	1371	1729	2047	2404	2773	3113	3466	3790	4141	4490	4862	Measured Value (mV)	
	SLOPE (mV/dB)	69.9	-23	0	1	12	20	-11	-3	16	7	11	-14	-13	-13	10	Error (mV)	
			-0.32	0.00	0.01	0.17	0.29	-0.16	-0.05	0.24	0.10	0.16	-0.21	-0.18	-0.19	0.14	LINEARITY ERROR (dB)	-0.32
			-0.94	-0.62	-0.61	-0.45	-0.33	-0.78	-0.66	-0.38	-0.51	-0.46	-0.82	-0.80	-0.80	-0.47	ACCURACY ERROR (dB)	-0.94
14000 MHz	INTERCEPT (mV)	4884	353	738	1090	1439	1787	2101	2460	2821	3155	3510	3840	4182	4523	4892	Measured Value (mV)	
	SLOPE (mV/dB)	69.2	-33	6	12	15	17	-15	-2	13	1	10	-6	-10	-15	8	Error (mV)	
			-0.48	0.08	0.17	0.21	0.24	-0.22	-0.03	0.19	0.01	0.14	-0.09	-0.14	-0.22	0.12	LINEARITY ERROR (dB)	-0.48
			-0.03	0.48	0.52	0.52	0.50	0.00	0.14	0.31	0.09	0.17	-0.10	-0.21	-0.33	-0.04	ACCURACY ERROR (dB)	0.52
18000 MHz	INTERCEPT (mV)	4851	289	662	1010	1368	1702	2026	2382	2756	3105	3463	3782	4138	4494	4880	Measured Value (mV)	
	SLOPE (mV/dB)	70.0	-11	12	10	18	2	-24	-18	5	4	12	-19	-13	-7	29	Error (mV)	
			-0.15	0.17	0.14	0.26	0.03	-0.35	-0.26	0.08	0.06	0.17	-0.27	-0.19	-0.10	0.41	LINEARITY ERROR (dB)	0.41
			-0.94	-0.60	-0.62	-0.50	-0.71	-1.08	-0.98	-0.62	-0.63	-0.50	-0.93	-0.84	-0.74	-0.21	ACCURACY ERROR (dB)	-1.08
Flatness	+/- dB		0.46	0.55	0.57	0.51	0.61	0.54	0.56	0.62	0.52	0.52	0.82	0.56	0.46	0.40		0.82
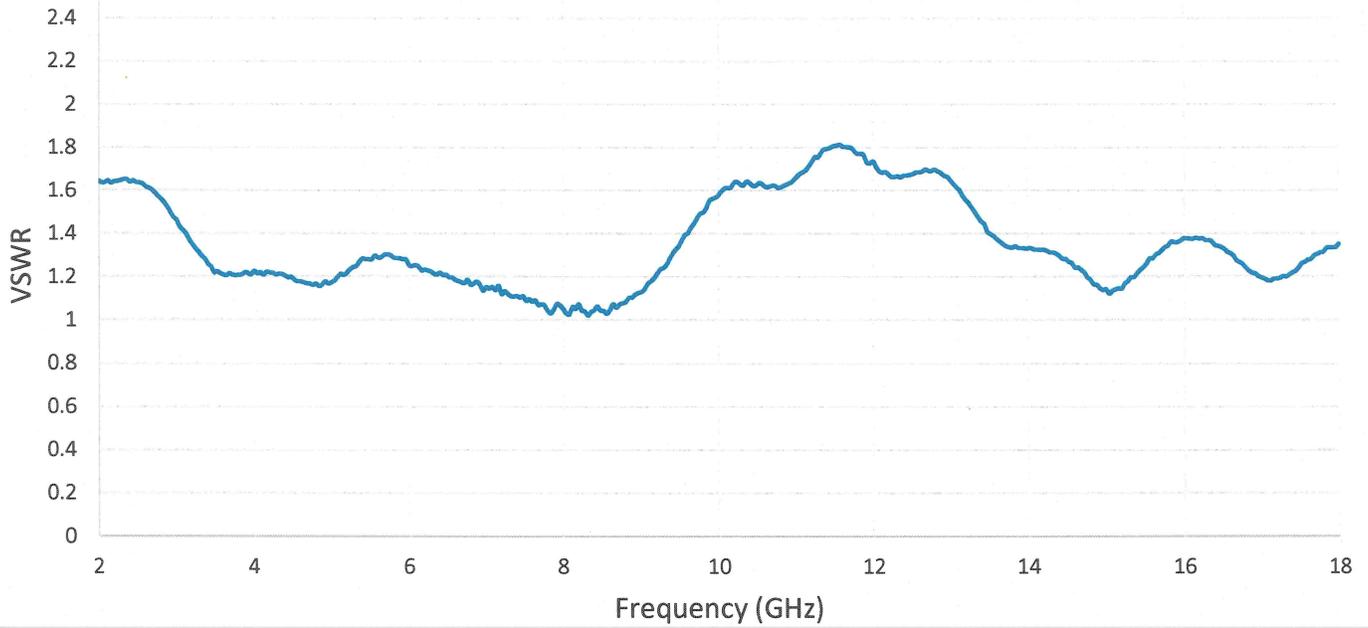
Linearity Error VS Input Power

Log Accuracy Error VS Input Power

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VSWR 1.81:1

TSS @ -71.8 dBm

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Rise time 23.3 ns

Fall time 166.3 ns

Settle time 23.8 ns

Recovery time 430 ns
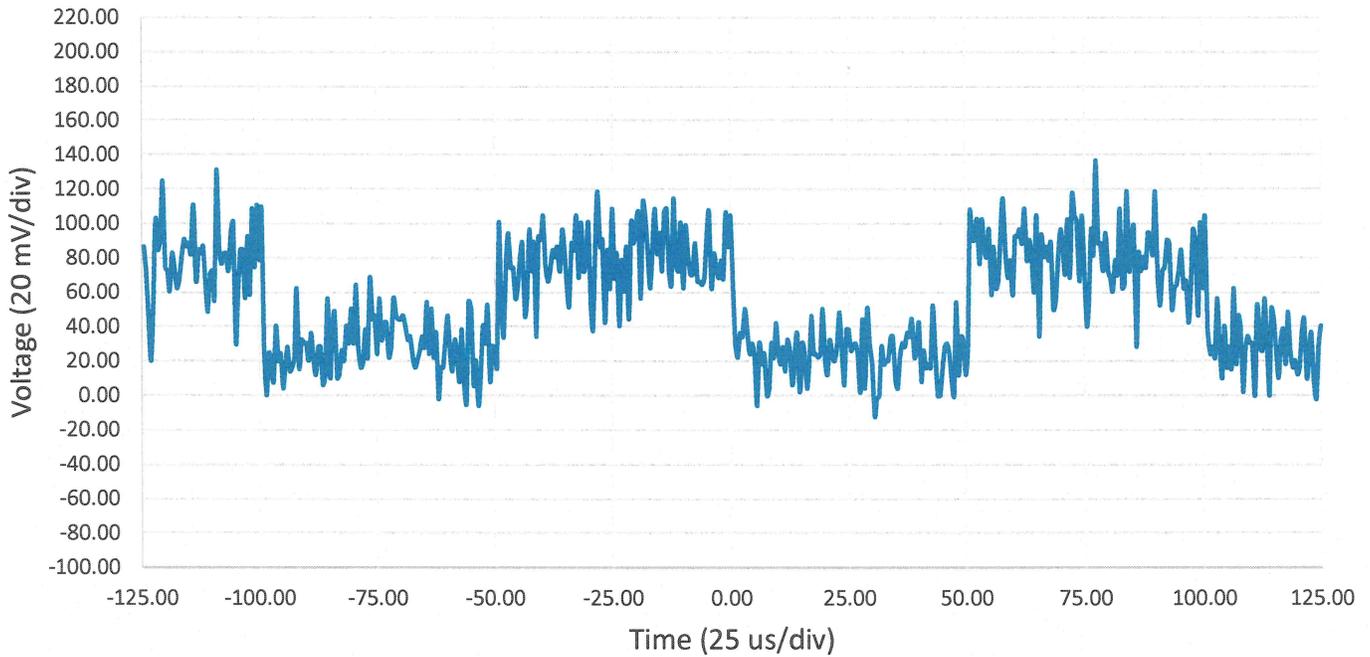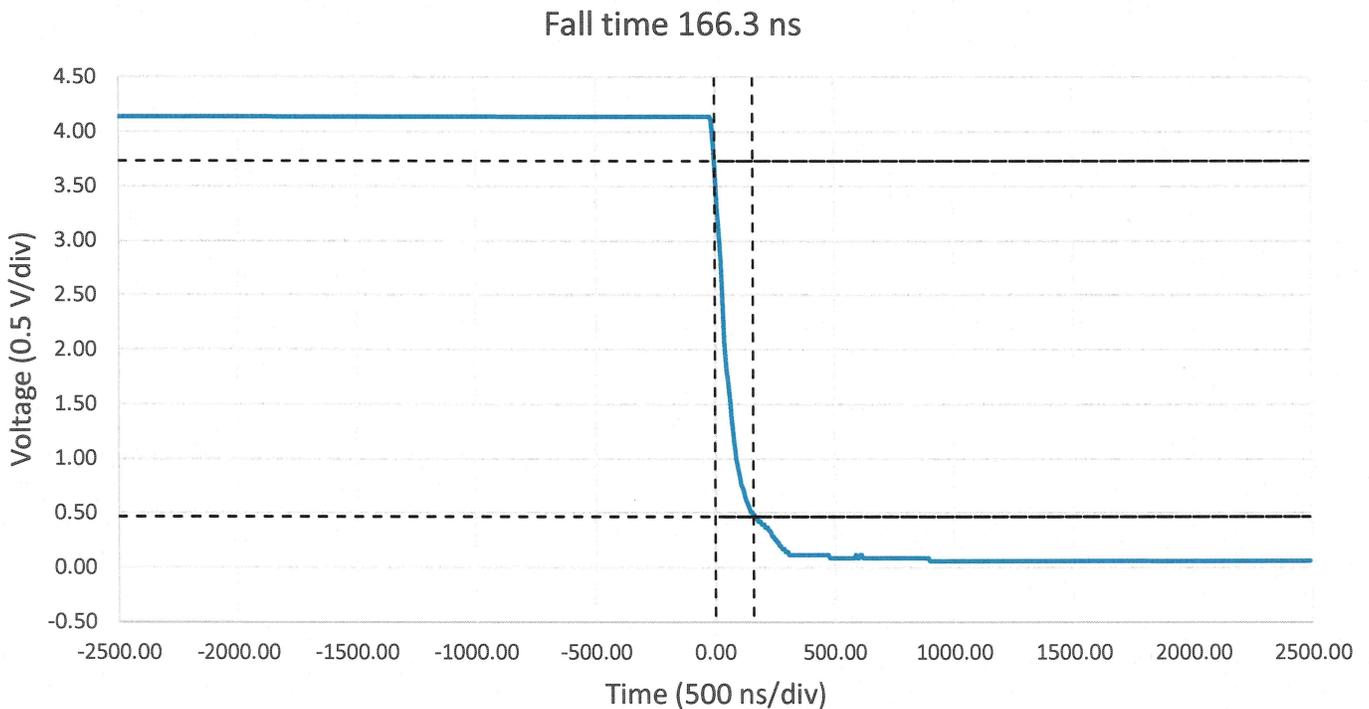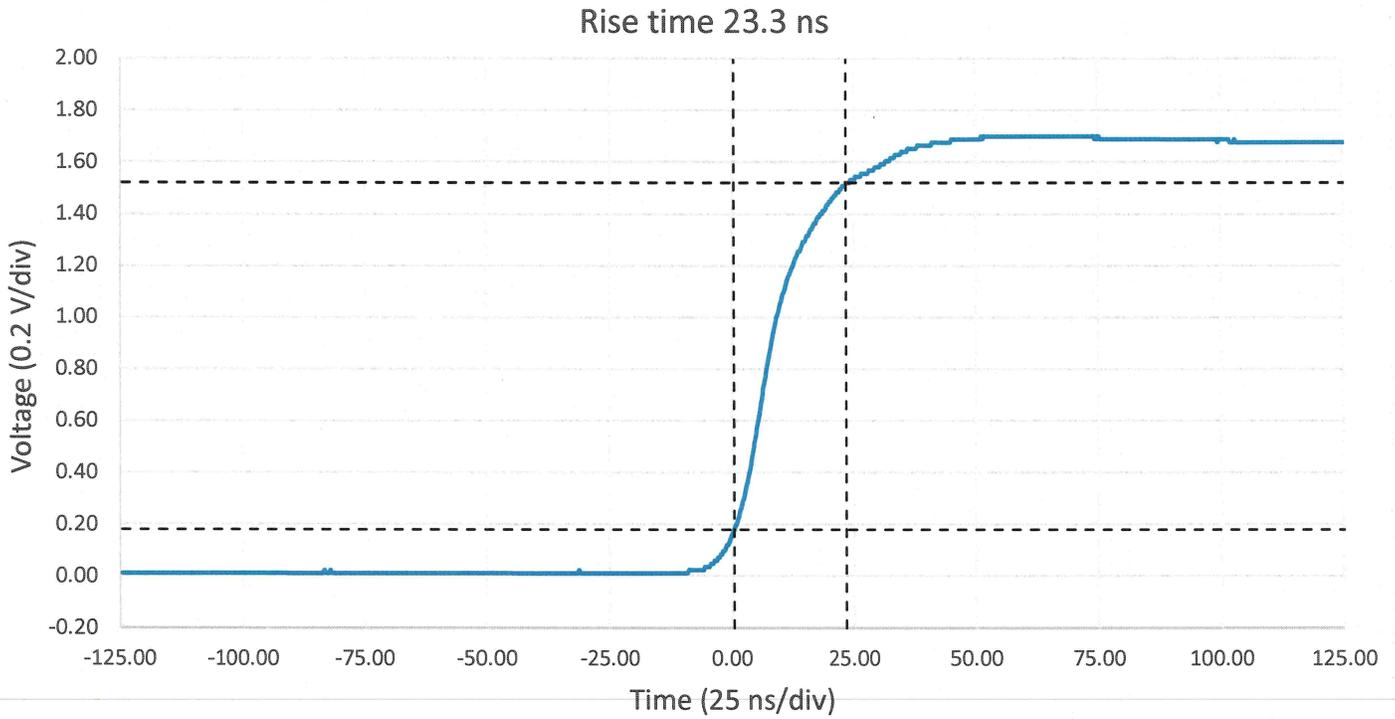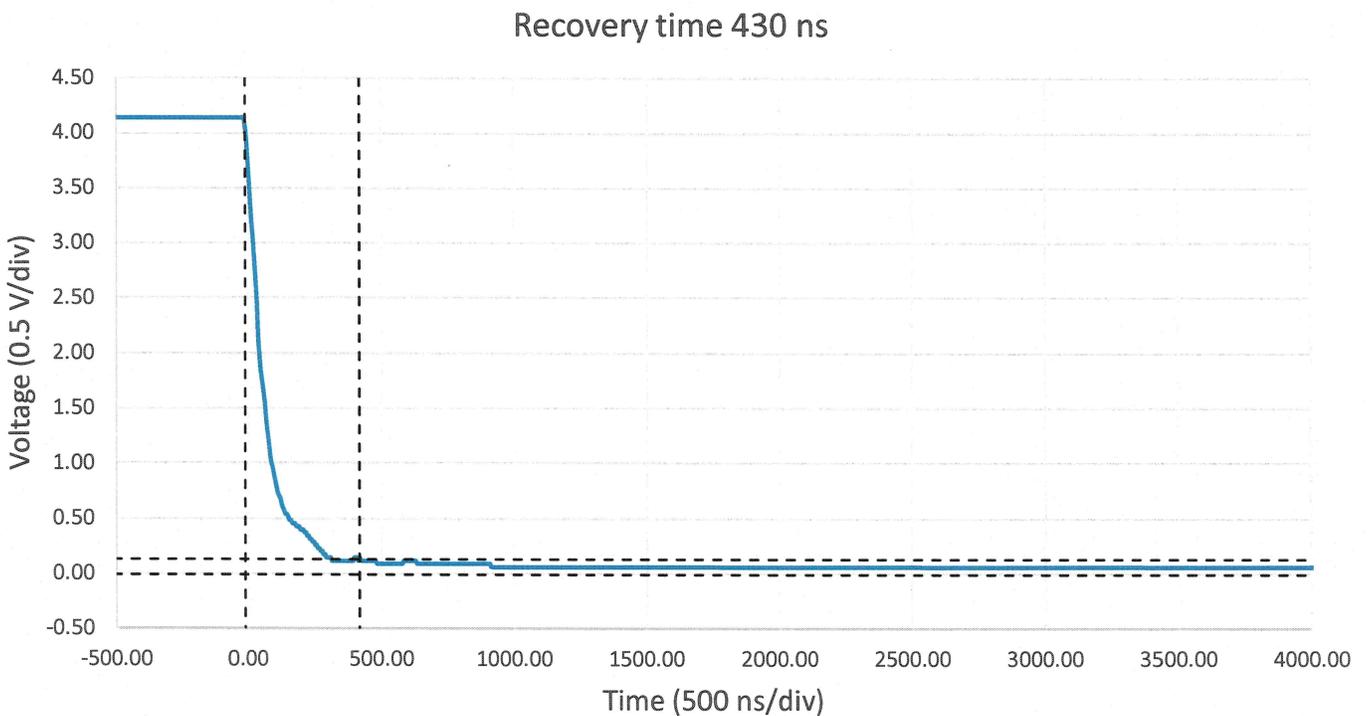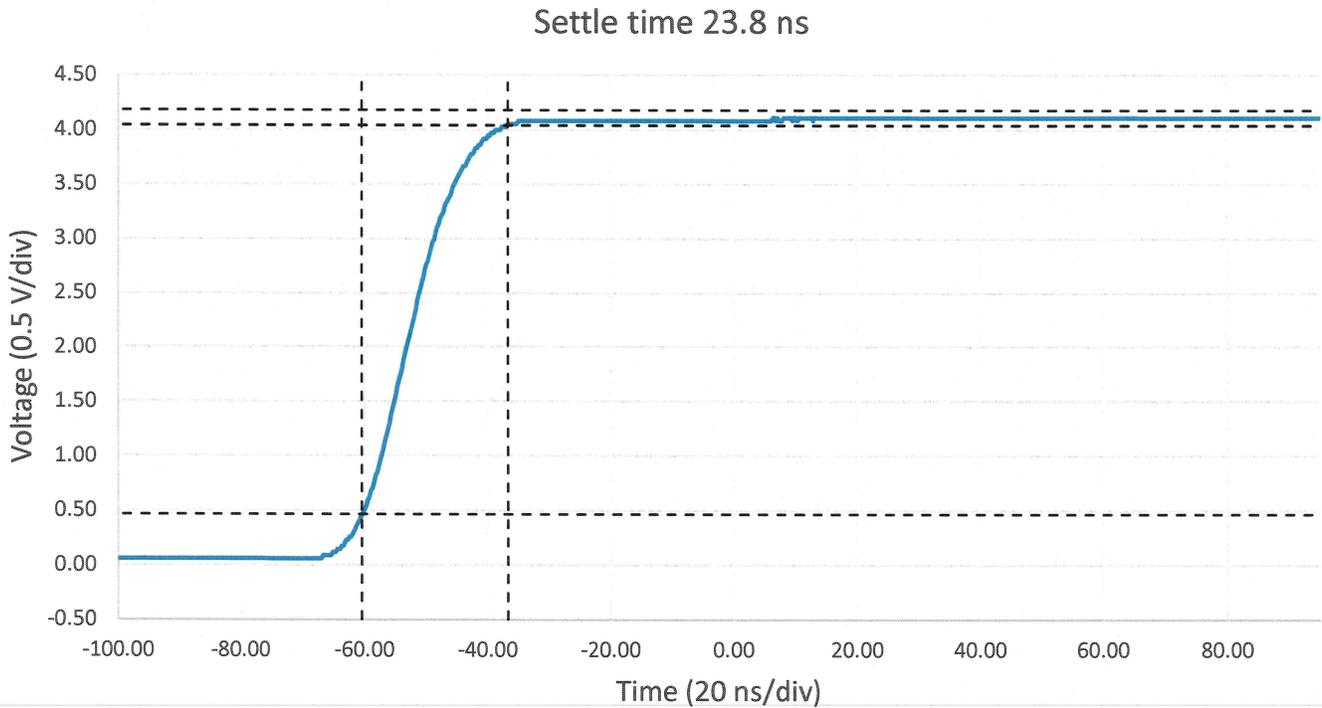
CW Immunity 1.49 ms

CW Recovery Plot

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RMS Noise 17.7 mV

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