



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

Customer: _____

Tested By: Jim Hopson

SO No: _____

Temperature: -40C TO +70C

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

Date 10/18/2024

Serial No: PL47847/2443

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	1.82:1 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 dBm	
5	VIDEO OUT Dynamic Range:	-65 to 0 dBm	-65 to 0 dBm	
6	VIDEO OUT Log Slope Fixed:	70 ± 3mV/dB	70.6/67.5 mv/db	
7	VIDEO OUT Log Linearity:	±1.0 dB MAX @25C	.67/-50 db	
8	VIDEO OUT Log Accuracy:	±2.3 dB MAX @25C	1.17/-1.10 db	
9	VIDEO OUT Absolute Log Accuracy:	±2.9 dB MAX Over Freq & temp	1.48/-1.20 db	
10	VIDEO OUT DC Offset:	0 ±70 mV (RF Input Terminated & DC Power On) @25C	50 mV	
11	VIDEO OUT Rise Time (10% to 90%):	28 ns MAX	19.3 ns	
12	VIDEO OUT Fall Time (90% to 10%):	300 ns MAX	127.5 ns	
13	VIDEO OUT Settling Time:	50 ns With in ±70 mV of final value @-10 dBm	40 ns	

7311-F Grove Road Frederick, MD 21704 USA

Phone: (301)662-5019 Fax: (301)662-1731

Website: www.pmi-rf.com Email: sales@pmi-rf.com



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

14	VIDEO OUT Recovery Time:	1 us MAX to within 1 dB of baseline for PW <10us & Power = -10dBm	600 ns	PMI QA3
15	VIDEO OUT Video Frequency Flatness:	±2.0 dB MAX @25C	±0.97 dB MAX @25C	
16	VIDEO OUT CW Immunity:	CW Immune Power TSS to -40 dBm	Pass	
		Pulse Peak Amplitude Loss; 2 dB MAX @ -40dBm CW	<2dB	
		Baseline shift 200mV @-40dBm CW	< 200mV	
		CW Immunity Time at CW = -40 dBm, ≤ 4 ms	1.4 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	
22	VIDEO OUT Noise Level (Vp-p):	160 mV max	127 mV	



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

23	VIDEO OUT Propagation Delay:	50 ns MAX from RF 50% to 10% video (excluding cable)	< 50 ns	PMI QA3
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. Klauing* Date: 10.23.24



LOG TRANSFER VS. FREQUENCY
 Model: ERLVA-Z18-65-70MV-70
 Tested By: Jim Hopson
 Date: 10-18-24
 Serial Number: PL47847
 Test Temp: +25°C

Frequency	Intercept (mV)	Slope (mV/dB)	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	Measured Value (mV)	Linearity Error (dB)	Accuracy Error (dB)
2 GHz	Intercept (mV)	4895	374	790	1076	1425	1784	2119	2468	2829	3160	3517	3880	4205	4541	4872	3160	0.35	0.35
	Slope (mV/dB)	69.31	-16	-7	-7	-5	8	-4	-1	13	-2	8	24	3	-8	-23	-0.23	-0.09	-0.10
3 GHz	Intercept (mV)	4851	311	665	1000	1352	1711	2052	2414	2794	3118	3469	3789	4135	4499	4849	3118	0.52	0.51
	Slope (mV/dB)	69.79	-4	2	-13	-10	0	-8	5	36	5	0	-3	-21	-3	-2	-0.06	-0.19	-0.18
4 GHz	Intercept (mV)	4928	334	688	1028	1380	1743	2091	2454	2854	3191	3529	3877	4211	4570	4893	3191	0.62	0.62
	Slope (mV/dB)	70.61	-5	-4	-17	-18	-8	-13	-18	44	26	13	8	-11	-5	-35	-0.06	-0.05	-0.24
5 GHz	Intercept (mV)	4906	343	697	1054	1399	1753	2094	2461	2851	3182	3503	3850	4183	4546	4912	3182	0.84	0.84
	Slope (mV/dB)	70.15	-3	0	-13	-9	4	-6	0	43	0	-3	0	-3	-21	6	-0.04	-0.19	-0.14
6 GHz	Intercept (mV)	4886	332	681	1019	1373	1736	2076	2444	2816	3145	3491	3855	4166	4527	4884	3145	0.65	0.62
	Slope (mV/dB)	70.07	0	-1	-13	-10	3	-8	10	32	10	6	0	-18	-3	-2	0.00	-0.02	-0.14
7 GHz	Intercept (mV)	4876	311	662	993	1351	1715	2057	2427	2801	3128	3474	3818	4152	4527	4871	3128	0.48	0.61
	Slope (mV/dB)	70.30	4	4	-12	-14	-14	0	0	11	11	34	9	4	-4	-2	-0.42	-0.29	-0.22
8 GHz	Intercept (mV)	4872	322	668	1001	1361	1724	2064	2439	2800	3126	3479	3824	4152	4502	4881	3126	0.45	0.45
	Slope (mV/dB)	70.07	5	0	-17	-7	5	-5	10	30	6	5	3	-19	-20	9	0.07	0.01	-0.24
9 GHz	Intercept (mV)	4879	320	669	1002	1360	1724	2065	2435	2805	3133	3479	3823	4160	4524	4876	3133	0.45	0.48
	Slope (mV/dB)	70.19	5	0	-2	-24	-14	0	0	18	14	4	4	-3	-17	-4	-0.29	-0.02	-0.18
10 GHz	Intercept (mV)	4841	285	627	961	1321	1682	2023	2394	2772	3099	3444	3794	4119	4481	4836	3099	0.64	0.54
	Slope (mV/dB)	70.22	9	0	-18	-9	1	-9	11	38	13	8	-3	-19	-20	9	0.12	-0.01	-0.25
11 GHz	Intercept (mV)	4827	324	680	1015	1363	1723	2056	2402	2774	3101	3451	3794	4121	4473	4831	3101	0.31	0.61
	Slope (mV/dB)	69.18	-6	-2	8	-5	8	-5	21	3	4	7	4	-15	-8	4	-0.32	-0.03	-0.13
12 GHz	Intercept (mV)	4810	327	679	1013	1370	1731	2055	2388	2741	3068	3419	3757	4098	4470	4854	3068	0.64	0.94
	Slope (mV/dB)	68.94	-2	5	-5	7	23	3	-9	-1	-20	2	20	14	-4	44	-0.03	0.08	-0.10
13 GHz	Intercept (mV)	4778	382	727	1070	1422	1773	2093	2396	2733	3056	3419	3755	4087	4453	4819	3056	0.61	1.10
	Slope (mV/dB)	67.48	-16	-6	2	17	31	13	-21	-21	-35	-10	-11	-16	13	41	-0.16	-0.05	-0.23
14 GHz	Intercept (mV)	4820	368	718	1056	1402	1759	2088	2412	2763	3085	3438	3781	4131	4492	4841	3085	0.31	0.50
	Slope (mV/dB)	69.42	-4	4	2	3	18	5	-13	-4	-4	-20	14	-4	-11	-26	-0.06	-0.04	-0.25
15 GHz	Intercept (mV)	4830	322	671	1006	1361	1723	2055	2398	2757	3081	3438	3778	4110	4481	4864	3081	0.50	0.78
	Slope (mV/dB)	69.39	5	5	-7	1	16	-1	-3	9	-14	-4	-11	-25	-2	34	-0.04	-0.07	-0.20
16 GHz	Intercept (mV)	4881	348	700	1040	1390	1752	2084	2428	2792	3119	3464	3811	4161	4544	4923	3119	0.60	0.93
	Slope (mV/dB)	69.86	8	10	1	2	15	0	0	11	10	-22	-22	-21	12	42	0.11	-0.15	-0.03
17 GHz	Intercept (mV)	4884	362	715	1055	1401	1761	2090	2432	2803	3134	3476	3825	4171	4544	4914	3134	0.60	0.80
	Slope (mV/dB)	69.65	0	0	0	12	-7	-14	9	-8	-14	-14	-14	-16	9	30	0.09	-0.15	-0.03
18 GHz	Intercept (mV)	4817	392	738	1083	1428	1776	2086	2401	2767	3093	3434	3779	4122	4494	4863	3093	0.67	0.75
	Slope (mV/dB)	68.11	2	7	12	16	19	23	24	22	-21	-17	-14	17	46	46	0.02	-0.10	-0.07

Output Vos: 50.0 mV
 Max Slope: 69.5 mV/dB
 Min Slope: 67.5 mV/dB



LOG TRANSFER VS. FREQUENCY
 Model: ERLVA-Z18-65-70MV-70
 Tested By: Jim Hobson
 Date: 10-18-24 PL47847
 Serial Number: PL47847
 Test Temp: -40°C

Frequency	Intercept (mV)	Slope (mV/dB)	65	60	55	50	45	40	35	30	25	20	15	10	-5	0
2 GHz	Intercept (mV) 4829	Slope (mV/dB) 69.21	339	670	1011	1364	1727	2066	2410	2760	3091	3447	3813	4148	4475	4807
			-1	-7	-12	-5	12	5	3	7	-8	2	22	11	-8	-22
			-0.01	-0.10	-0.17	-0.07	0.18	0.07	0.04	0.10	-0.12	0.03	0.32	0.16	-0.12	-0.32
			0.17	0.07	-0.01	0.07	0.30	0.19	0.15	0.19	-0.04	0.09	0.36	0.19	-0.10	-0.31
3 GHz	Intercept (mV) 4780	Slope (mV/dB) 69.34	281	620	950	1300	1668	2006	2362	2728	3053	3391	3766	4077	4431	4773
			8	0	-16	-13	6	0	0	13	24	41	10	-0.63	-0.13	-0.03
			0.12	0.01	-0.06	-0.03	0.24	0.11	0.10	-0.03	-0.27	-0.59	-0.72	-0.75	-0.83	-0.80
			-0.53	-0.65	-0.82	-0.85	-0.55	-0.55	-0.55	-0.27	-0.59	-0.72	-0.75	-0.83	-0.73	-0.80
4 GHz	Intercept (mV) 4874	Slope (mV/dB) 70.39	309	647	982	1333	1703	2054	2434	2796	3137	3473	3895	4167	4514	4839
			11	-3	-20	-21	-3	-4	24	34	23	7	7	-3	-8	-35
			0.15	-0.04	-0.29	-0.30	-0.04	-0.06	0.34	0.49	0.33	0.10	0.10	-0.04	-0.11	-0.49
			-0.13	-0.26	-0.43	-0.37	-0.04	0.02	-0.49	0.71	0.62	0.46	0.54	0.47	0.47	0.15
5 GHz	Intercept (mV) 4851	Slope (mV/dB) 70.01	314	649	985	1338	1707	2055	2417	2774	3108	3446	3796	4138	4489	4857
			14	-1	-12	-12	-18	0	0	6	23	7	-5	-5	-13	-12
			0.16	-0.02	-0.22	-0.18	0.09	0.06	0.23	0.39	0.10	-0.07	-0.07	-0.18	-0.17	0.09
			-0.08	-0.23	-0.39	-0.30	0.02	0.03	0.25	0.39	0.20	0.08	0.12	0.05	0.11	0.41
6 GHz	Intercept (mV) 4834	Slope (mV/dB) 69.82	306	646	978	1329	1697	2044	2406	2764	3096	3437	3766	4127	4475	4832
			10	1	-16	-14	5	2	15	24	7	-1	-1	-3	-10	-6
			0.14	0.01	-0.23	-0.21	0.06	0.03	0.22	0.35	0.10	-0.04	-0.02	-0.13	-0.15	0.03
			-0.17	-0.27	-0.49	-0.43	-0.13	-0.13	0.09	0.25	0.03	-0.05	-0.02	-0.11	-0.10	0.05
7 GHz	Intercept (mV) 4827	Slope (mV/dB) 70.11	286	622	949	1310	1677	2025	2389	2751	3079	3421	3771	4114	4474	4821
			0.24	0.03	-0.21	-0.16	0.08	0.04	0.23	0.39	0.07	-0.05	-0.06	-0.16	-0.03	-0.08
			-0.46	-0.62	-0.91	-0.70	-0.42	-0.40	-0.16	0.06	-0.21	-0.28	-0.24	-0.30	-0.11	-0.11
8 GHz	Intercept (mV) 4824	Slope (mV/dB) 69.89	295	631	961	1317	1687	2033	2393	2752	3092	3425	3778	4117	4456	4827
			13	0	-19	-13	8	4	15	24	5	-1	2	-5	-9	-8
			0.19	0.00	-0.28	-0.18	0.11	0.06	0.21	0.35	0.07	-0.04	-0.01	-0.02	-0.13	-0.15
			-0.33	-0.49	-0.73	-0.60	-0.27	-0.29	-0.10	0.07	-0.17	-0.23	-0.14	-0.26	-0.37	-0.02
9 GHz	Intercept (mV) 4838	Slope (mV/dB) 70.09	299	634	964	1324	1690	2037	2401	2762	3094	3432	3780	4127	4482	4837
			17	5	-19	-13	6	2	16	27	8	-4	-4	-7	-10	-6
			0.24	0.02	-0.27	-0.18	0.06	0.04	0.23	0.38	0.12	-0.06	-0.10	-0.15	-0.08	-0.02
			-0.27	-0.45	-0.69	-0.55	-0.23	-0.23	-0.03	0.22	0.00	-0.13	-0.11	-0.11	-0.09	0.12
10 GHz	Intercept (mV) 4807	Slope (mV/dB) 69.98	272	606	936	1293	1662	2008	2376	2740	3068	3407	3755	4097	4446	4796
			14	-2	-21	-14	5	1	19	33	11	2	2	-5	-9	-8
			0.20	-0.02	-0.31	-0.21	0.07	0.01	0.27	0.47	0.16	0	0	-0.73	-0.14	-0.12
			-0.66	-0.85	-1.09	-0.95	-0.63	-0.66	-0.34	-0.10	-0.37	-0.49	-0.47	-0.54	-0.69	-0.47
11 GHz	Intercept (mV) 4893	Slope (mV/dB) 69.36	303	646	978	1324	1690	2037	2401	2762	3094	3432	3780	4127	4482	4837
			9	5	-10	-11	8	3	-2	15	0	-2	3	-3	-4	-2
			0.13	0.07	-0.14	-0.15	0.11	0.04	0.03	0.22	0.01	-0.04	0.04	0.04	-0.04	-0.05
			-0.22	-0.27	-0.49	-0.50	-0.24	-0.32	-0.39	-0.14	-0.36	-0.40	-0.33	-0.41	-0.43	-0.40
12 GHz	Intercept (mV) 4772	Slope (mV/dB) 69.76	310	647	981	1340	1702	2036	2392	2750	3093	3436	3783	4097	4441	4813
			7	0	-9	6	24	14	4	15	33	11	2	2	-5	-9
			0.10	0.01	-0.14	0.09	0.36	0.20	0.05	0.11	-0.29	-0.30	-0.26	-0.25	0.04	0.80
			-0.12	-0.26	-0.45	-0.27	-0.08	-0.24	-0.55	-0.53	-0.88	-0.93	-0.93	-0.98	-0.73	-0.23
13 GHz	Intercept (mV) 4754	Slope (mV/dB) 67.54	386	688	1043	1391	1744	2071	2399	2708	3031	3385	3732	4070	4430	4791
			2	-4	-4	14	29	18	-21	-20	-35	-18	-9	-9	14	37
			0.03	-0.05	0.05	0.21	0.43	0.27	-0.31	-0.29	-0.51	-0.27	-0.13	-0.13	0.20	0.55
			0.69	0.48	0.45	0.46	0.55	0.26	-0.44	-0.56	-0.90	-0.80	-0.90	-0.93	-0.74	-0.54
14 GHz	Intercept (mV) 4793	Slope (mV/dB) 68.52	352	693	1028	1368	1729	2066	2392	2734	3069	3402	3753	4113	4467	4808
			13	1	0	0	1	0	26	20	19	-0.06	-0.30	-0.31	-0.18	0.07
			0.18	0.51	0.32	0.11	0.26	0.20	0.19	-0.26	-0.18	-0.49	-0.56	-0.50	-0.31	-0.21
			-0.49	0.26	0.20	0.13	0.33	0.19	-0.26	-0.28	-0.48	-0.49	-0.56	-0.50	-0.31	-0.21
15 GHz	Intercept (mV) 4802	Slope (mV/dB) 69.42	302	638	971	1325	1691	2034	2377	2733	3069	3404	3753	4092	4449	4822
			13	1	-13	-6	13	9	5	14	7	9	-7	-15	-6	20
			0.18	0.02	-0.18	-0.08	0.19	0.13	0.07	0.20	-0.10	-0.13	-0.11	-0.22	-0.09	0.43
			-0.23	-0.39	-0.59	-0.49	-0.21	-0.27	-0.33	-0.20	-0.50	-0.53	-0.50	-0.62	-0.47	-0.10
16 GHz	Intercept (mV) 4839	Slope (mV/dB) 69.70	329	667	1007	1354	1718	2057	2394	2749	3080	3419	3768	4127	4502	4863
			26	0	0	0	0	0	6	6	1	-17	-26	-25	-15	11
			0.44	0.01	0.02	0.06	0.22	0.08	-0.08	0.01	-0.24	-0.38	-0.35	-0.22	0.16	0.63
			-0.16	0.03	-0.07	-0.07	0.17	0.06	-0.08	0.03	-0.20	-0.31	-0.27	-0.11	0.29	0.78
17 GHz	Intercept (mV) 4868	Slope (mV/dB) 69.58	363	700	1047	1390	1747	2086	2422	2780	3119	3452	3808	4169	4530	4896
			18	7	6	1	10	1	-10	0	-10	-24	-16	-3	0	28
			0.26	0.10	0.09	0.02	-0.15	0.02	-0.15	-0.01	-0.18	-0.35	-0.23	-0.34	-0.14	0.44
			0.65	0.50	0.51	0.43	0.59	0.48	0.32	0.46	0.35	0.16	0.28	0.49	0.70	0.97
18 GHz	Intercept (mV) 4799	Slope (mV/dB) 68.00	369	720	1068	1413	1761	2092	2392	2752	3092	3410	3760	4112	4475	4837
			4	9	14	22	3	-27	-7	-17	-29	-19	-7	-7	16	38
			0.15	0.02	0.13	0.21	0.33	0.05	-0.39	-0.10	-0.25	-0.42	-0.28	-0.10	0.24	0.56
			-1.02	0.79	0.81	0.78	0.79	0.42	-0.11	0.07	-0.17	-0.44	-0.40	-0.33	-0.10	0.12
Output Vocs:	18.0 mV															
Avg Slope:	69.4 mV/dB															
Max Slope:	70.4 mV/dB															
Min Slope:	67.5 mV/dB															
Max Measured (mV)	4896															
Min Measured (mV)	4430															
Flatness Error (mV-dB)	0.73															

RF Input Power (dBm)

Measured Value (mV)
 Error (mV)
 0.32 Linearity Error (dB)
 0.36 Accuracy Error (dB)

Measured Value (mV)
 Error (mV)
 0.41 Linearity Error (dB)
 0.89 Accuracy Error (dB)

Measured Value (mV)
 Error (mV)
 0.49 Linearity Error (dB)
 0.71 Accuracy Error (dB)

Measured Value (mV)
 Error (mV)
 0.33 Linearity Error (dB)
 0.41 Accuracy Error (dB)

Measured Value (mV)
 Error (mV)
 0.36 Linearity Error (dB)
 0.48 Accuracy Error (dB)

Measured Value (mV)
 Error (mV)
 0.39 Linearity Error (dB)
 0.91 Accuracy Error (dB)

Measured Value (mV)
 Error (mV)
 0.34 Linearity Error (dB)
 0.73 Accuracy Error (dB)

Measured Value (mV)
 Error (mV)
 0.38 Linearity Error (dB)
 0.69 Accuracy Error (dB)

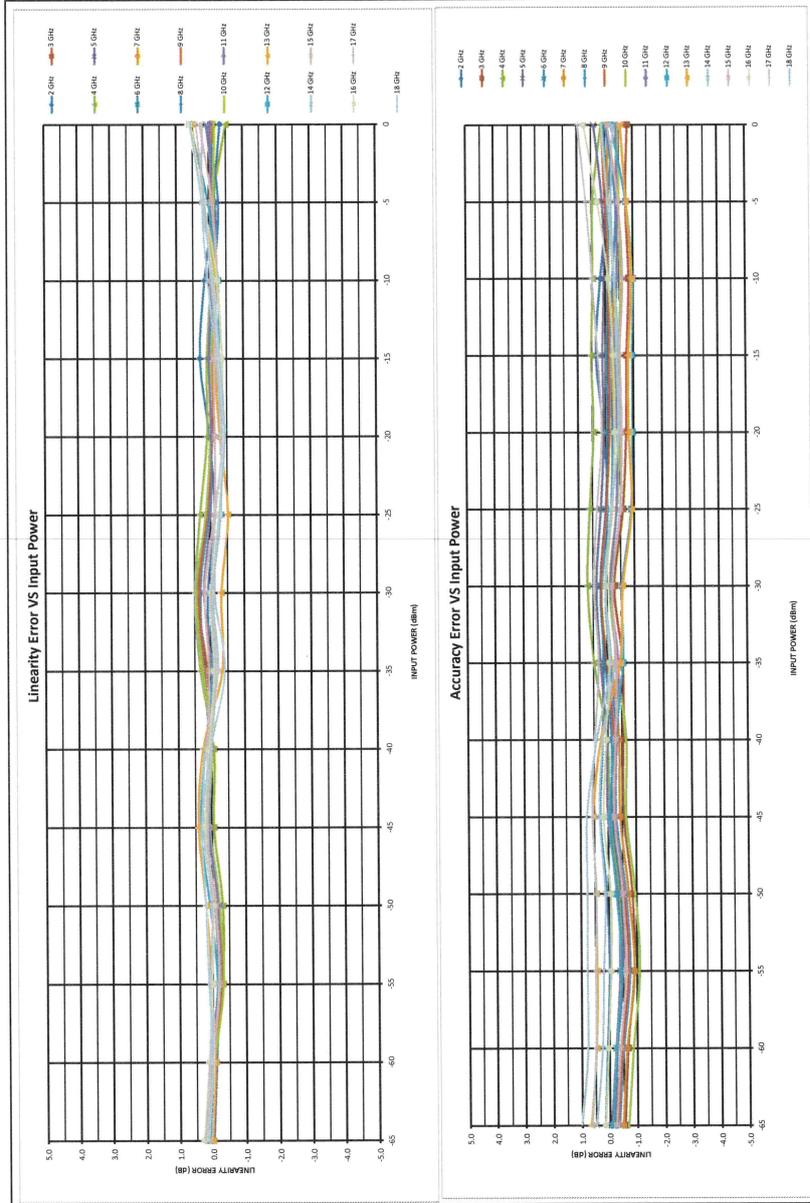
Measured Value (mV)
 Error (mV)
 0.47 Linearity Error (dB)
 1.09 Accuracy Error (dB)

Measured Value (mV)
 Error (mV)
 0.22 Linearity Error (dB)
 0.50 Accuracy Error (dB)

Measured Value (mV)
 Error (mV)
 0.60 Linearity Error (dB)
 0.98 Accuracy Error (dB)

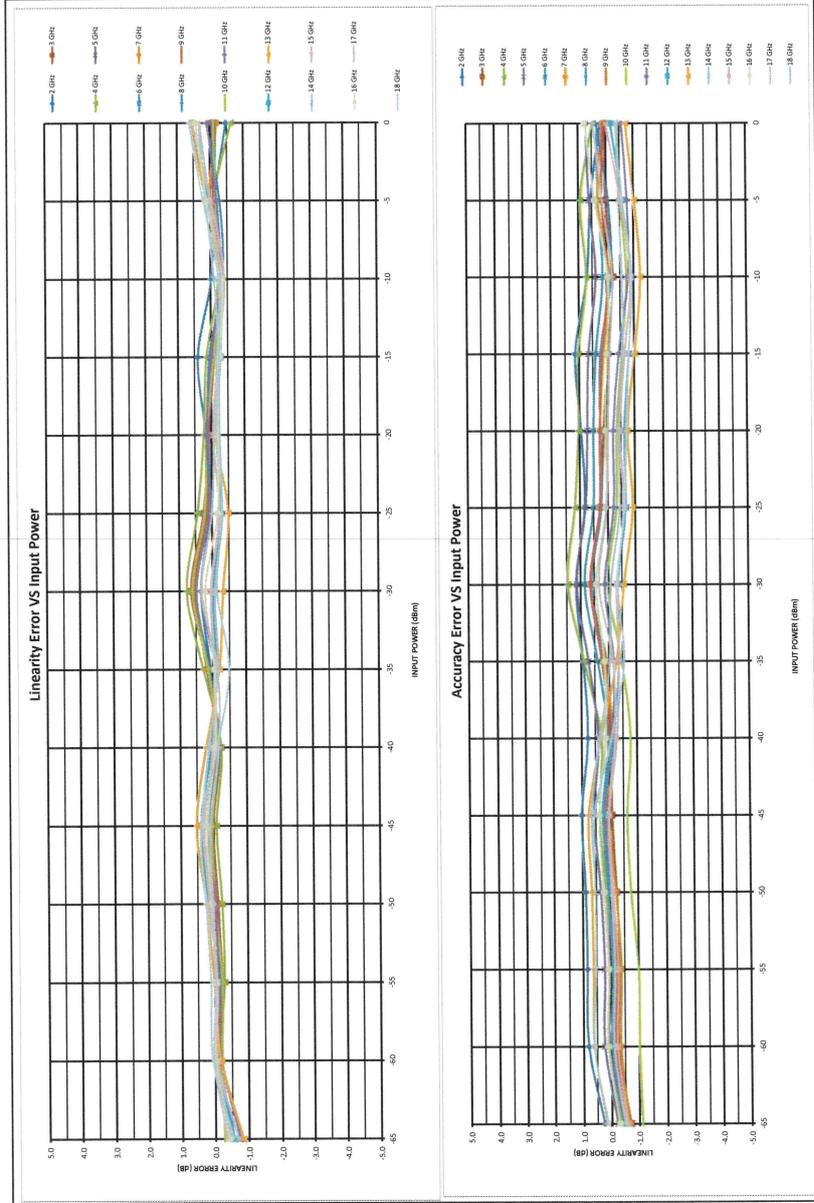
PL47847

-40°C



PL47847

+70°C



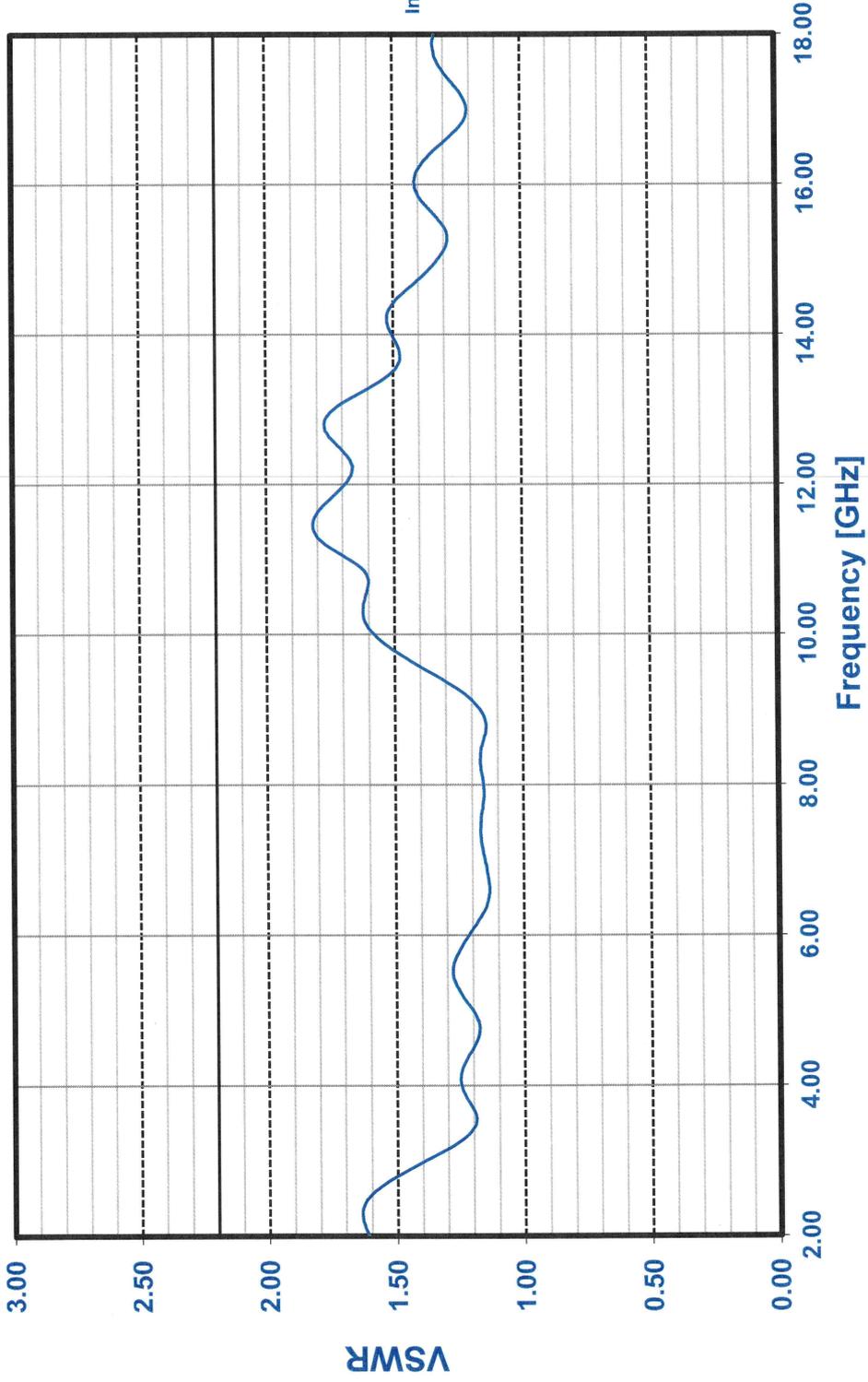
Model Number: ERDLVA-2G18G-65-70MV-70C

Serial Number: PL47847

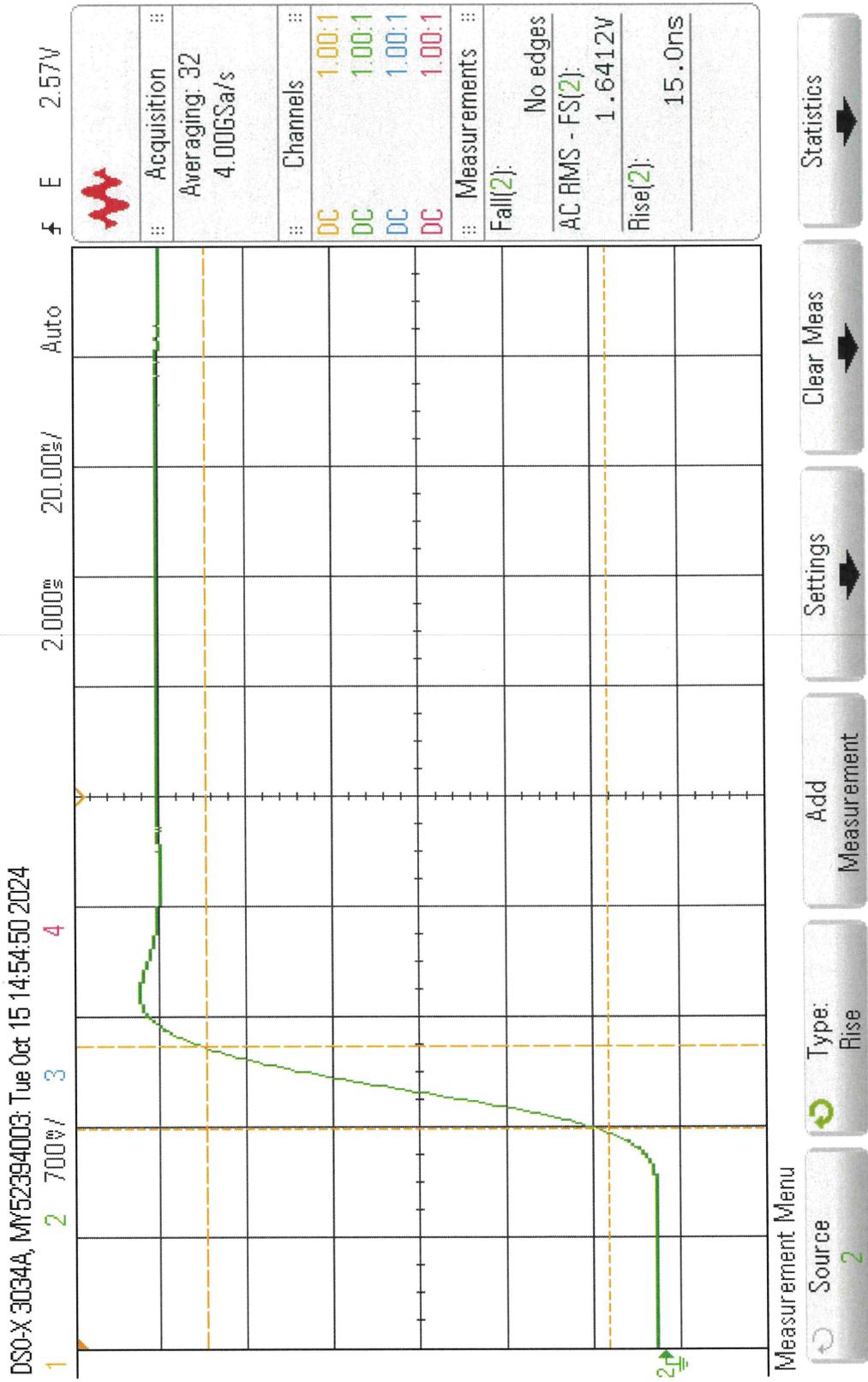
Date: 10/18/2024

Temperature: +25C

VSWR GRAPH

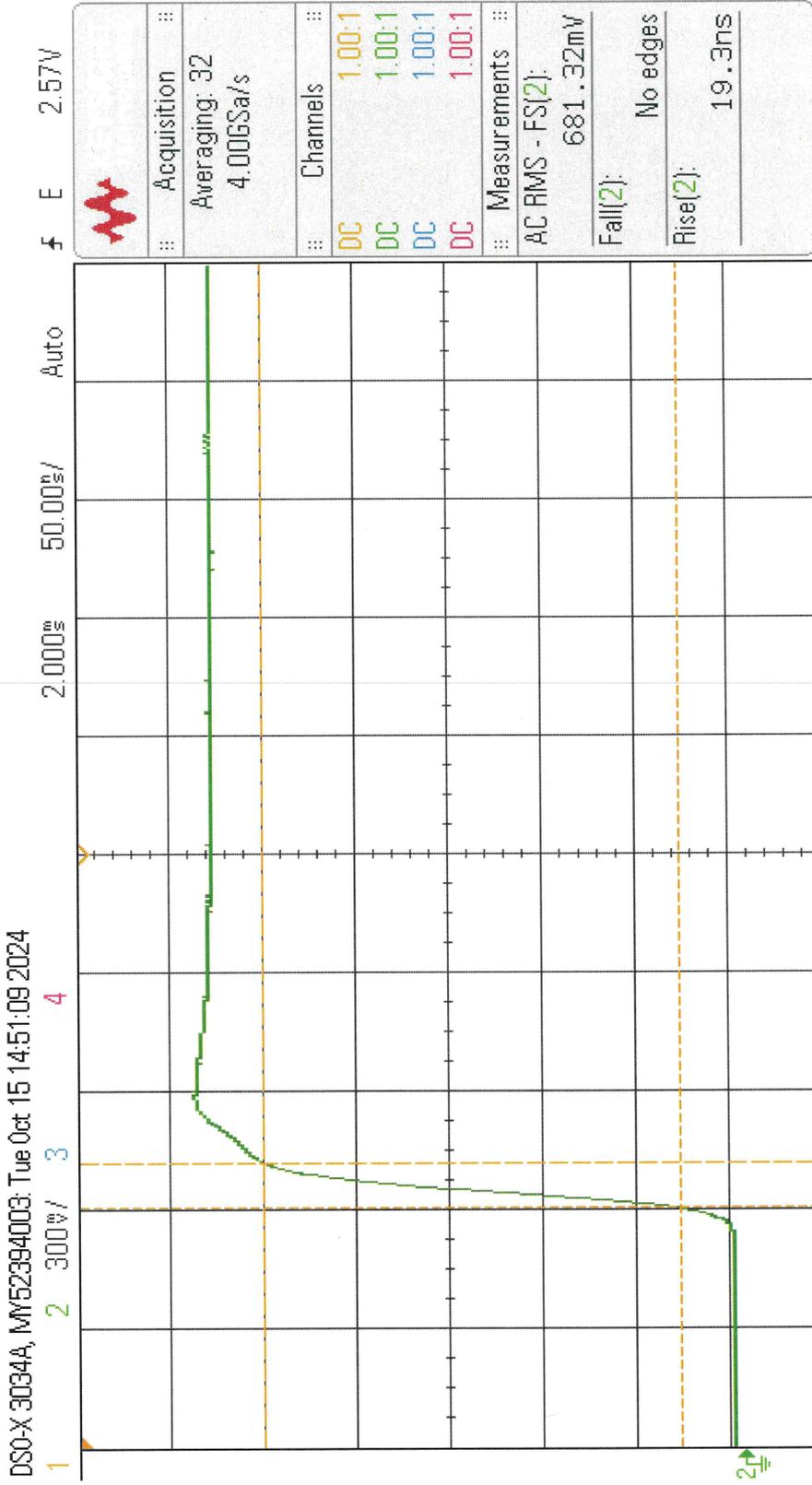


PL47847
settle



PL 47847

Rise Time - 45dbm



Measurement Menu



Source

2



Type:

Rise

Add

Measurement

Settings



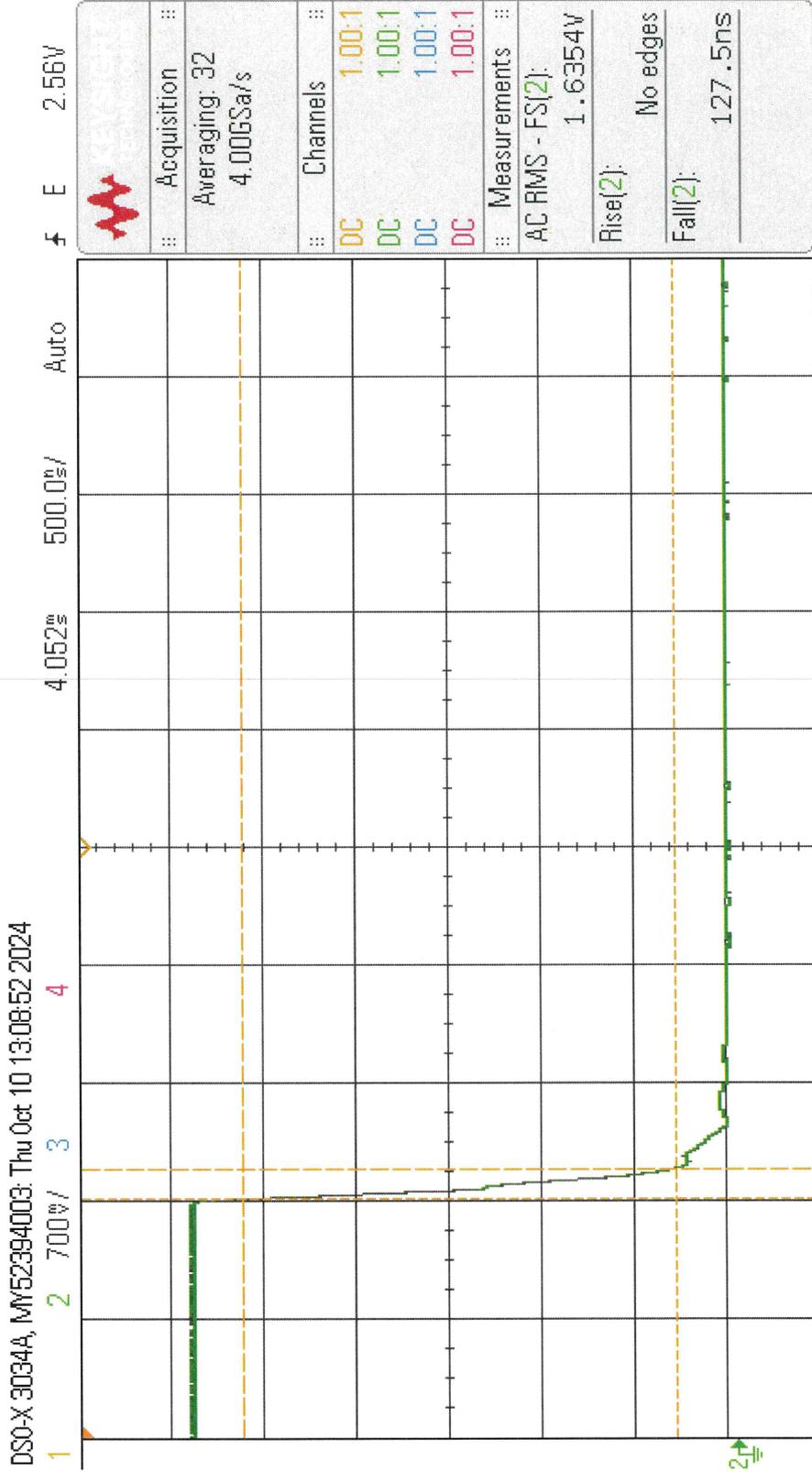
Clear Meas



Statistics



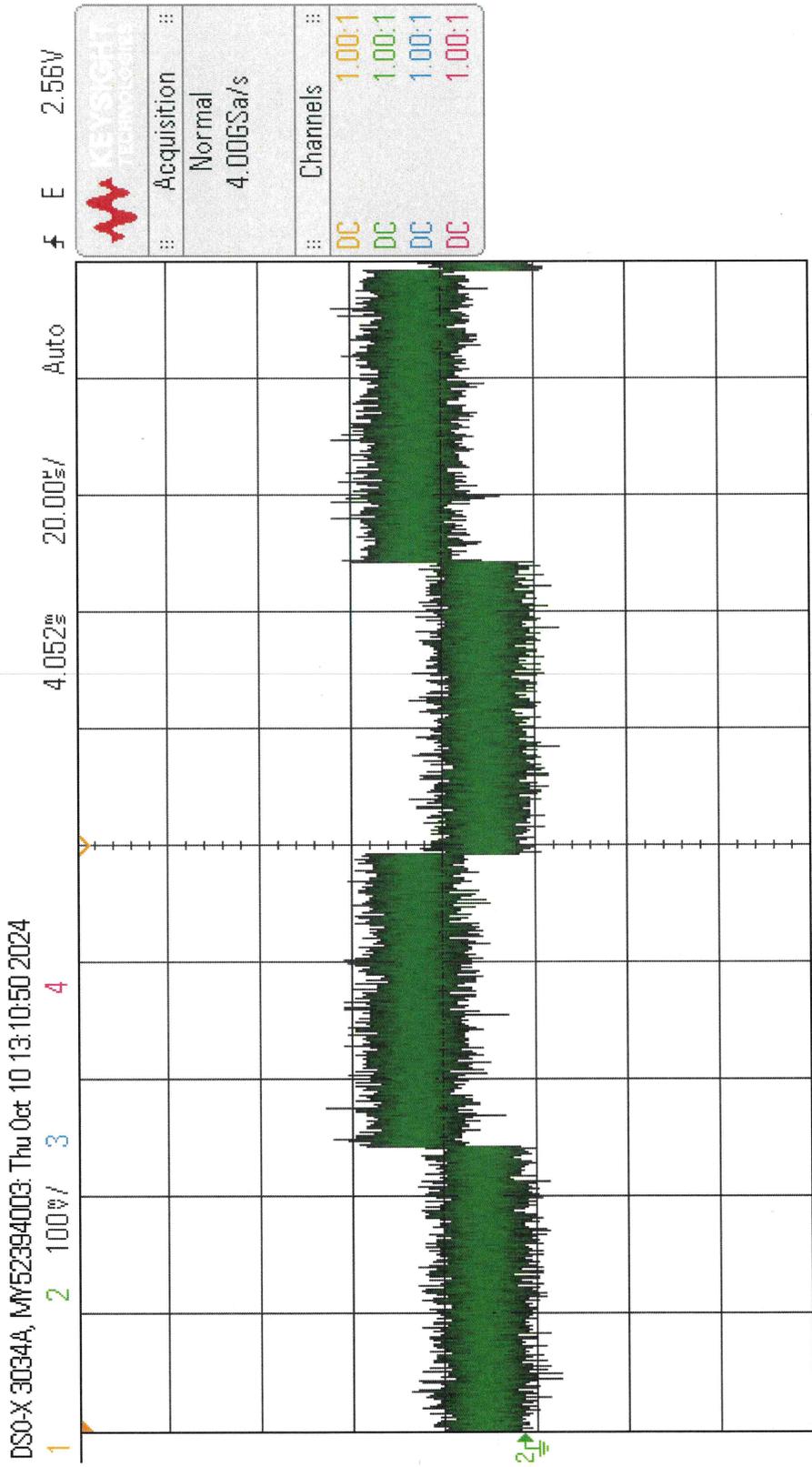
PL47847 Recovery Fall



Measurement Menu

- Source 2
- Type: Fall
- Add Measurement
- Settings
- Clear Meas
- Statistics

PL47847
TSS - 71dbm

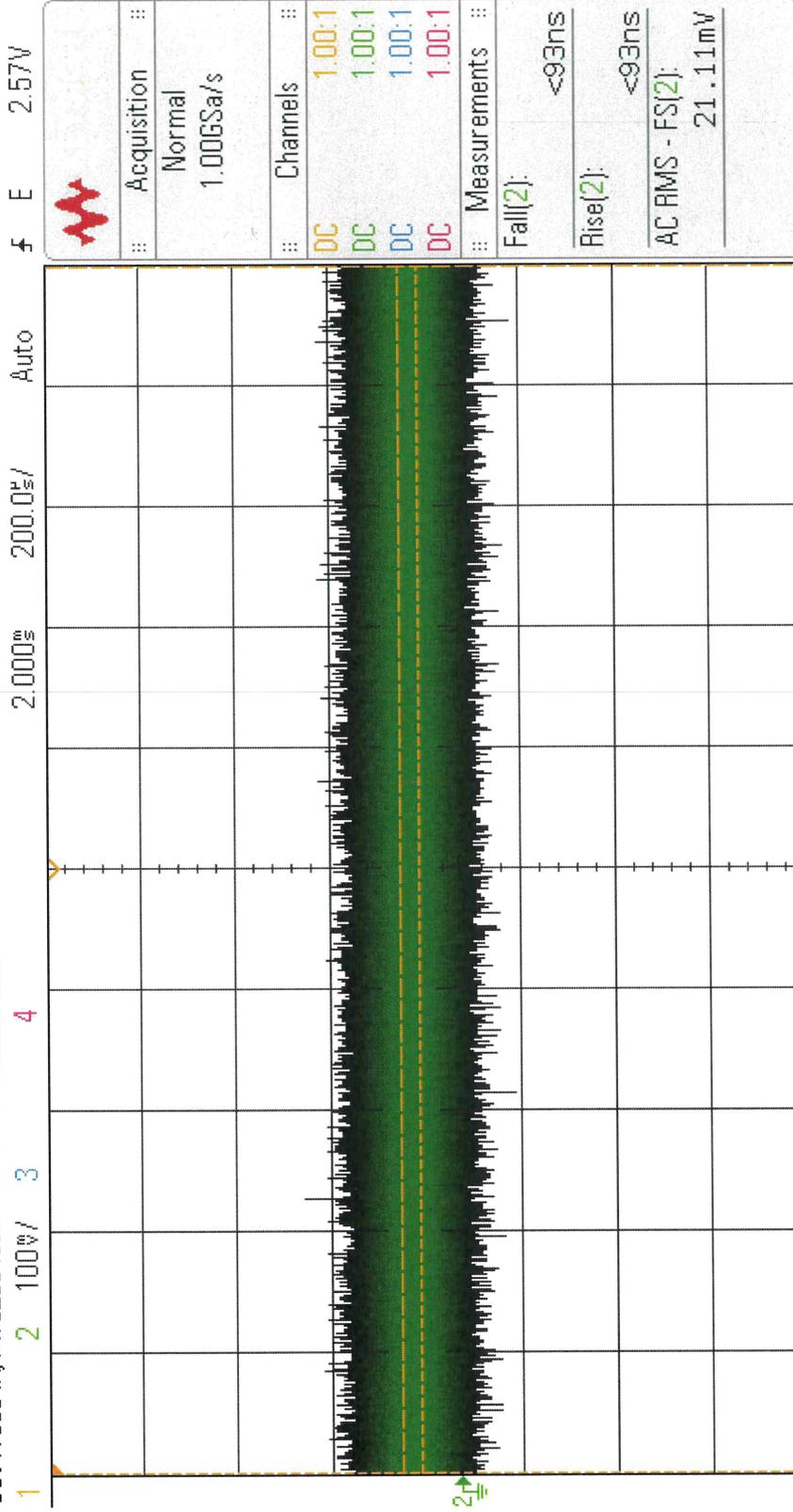


Cursors Menu
Mode Off

To turn on cursors, press the [Cursors] key on the front panel.

PL47847
RMS noise

DSO-X 3034A, MY52394003: Tue Oct 15 14:52:27 2024



Measurement Menu



Source
2



Type:
AC RMS - FS

Add
Measurement

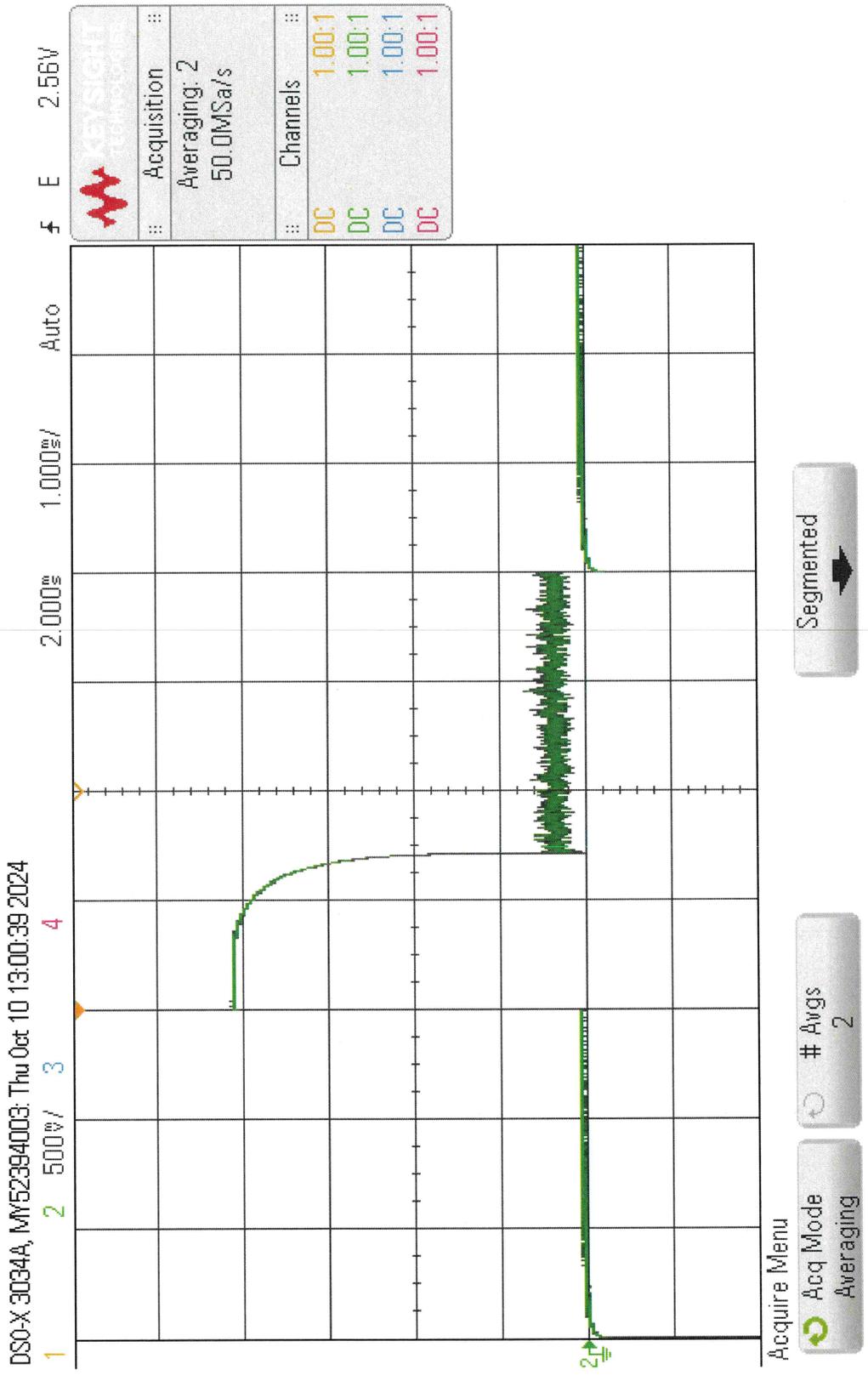
Settings

Clear Meas

Statistics

PL 47847

CW Immune



PL47847

cw Recovery

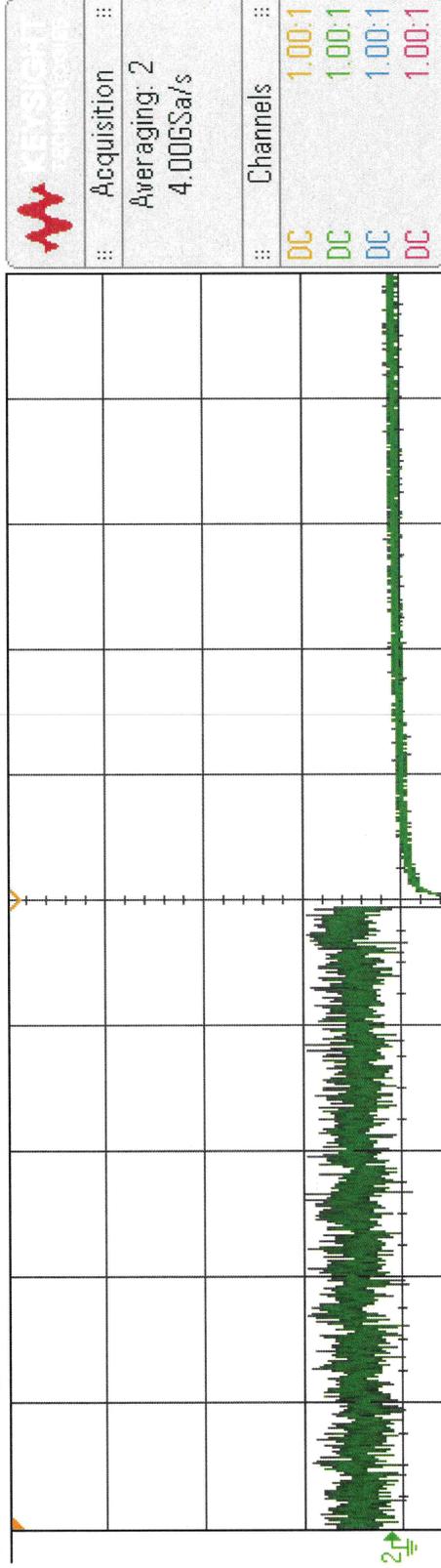
DSO-X 3034A, MY52394003: Thu Oct 10 13:01:40 2024

1 2 500V / 3

4

4.001ms 20.00ms / Auto

f E 2.56V



Save to file = pl47847_cw_recovery

Save

Recall

Default/Erase

Press to Save