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

Customer: [redacted]
SO No: [redacted]
Model No: ERDLVA-2G18G-65-70MV-70C
Serial No: PL35850/2213

Tested By: Jim Hopson
Temperature: -40C TO +70C
Date 8/8/2024
Drawing No: 27642040 **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	**2.09:1 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	**71.3/68.2 mV/dB**	
7	VIDEO OUT Log Linearity:	±1.0 dB MAX @25C	**.69/-.69 dB MAX @25C**	
8	VIDEO OUT Log Accuracy:	±2.3 dB MAX @25C	**1.34/-1.32 dB MAX @25C**	
9	VIDEO OUT Absolute Log Accuracy:	±2.6 dB MAX Over Freq & temp	**1.76/-1.70 dB MAX Over Freq & temp**	
10	VIDEO OUT DC Offset:	0 ±70 mV (RF Input Terminated & DC Power On) @25C	**+44 mV**	
11	VIDEO OUT Rise Time (10% to 90%):	28 ns MAX	**23 ns**	
12	VIDEO OUT Fall Time (90% to 10%):	300 ns MAX	**108.1 ns**	
13	VIDEO OUT Settling Time:	50 ns With in ±70 mV of final value @-10 dBm	**< 50 ns**	

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Phone: (301)662-5019 Fax: (301)662-1731
Website: www.pmi-rf.com Email: sales@pmi-rf.com

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14	VIDEO OUT Recovery Time:	1 us MAX to within 1 dB of baseline for PW <10us & Power = -10dBm	**0.8 us**	PMI QA3
15	VIDEO OUT Video Frequency Flatness:	±2.0 dB MAX @25C	**1.21 MAX @25C**	
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	**Pass**	
		CW Immunity Time at CW = -40 dBm, ≤ 4 ms	**1.5 ms**	
		CW Recovery Time at CW = -40 dBm, ≤ 20 us	**< 20 us**	
17	Pulse droop	1dB Max for 300us pulse at or above -65dBm	**< 1 dB**	
18	VIDEO OUT Pulse Response, input Signal:	100 ns to 300 us	**100 ns to 300 us**	
19	VIDEO LOAD Impedance:	75 ±1 Ω	**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	**< 1 dB**	

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21	VIDEO OUT Noise Level (Vp-p):	160 mV max	**140 mV**	PMI QA3
22	VIDEO OUT Propagation Delay:	50 ns MAX from RF 50% to 10% video (excluding cable)	**35 ns typ**	
23	Power Supply	+15 V @ 500 mA MAX -15 V @ 100 mA MAX	**+15 V @ 320 mA** **-15 V @ 80 mA**	
24	Power Supply Ripple From DC to 10 MHz	100 mV MAX	**Pass**	

QA/QC Approval: K. Lutz Date: 4-13-24

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LOG TRANSFER VS. FREQUENCY
Model: ERDLVA-218-65-70MV-70
Tested By: Jim Hopson
Date: 08-8-24
Serial Number: PL35850
Test Temp: +25°C

PMI

Frequency			-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	RF Input Power (dBm)
2 GHz	Intercept (mV)	4799	301	670	1016	1377	1728	2031	2357	2694	3019	3399	3752	4134	4502	4809	Measured Value (mV)
	Slope (mV/dB)	68.97	-15	9	10	27	33	-9	-28	-36	-56	-21	-12	25	48	10	Error (mV)
			-0.22	0.13	0.15	0.38	0.47	-0.13	-0.41	-0.52	-0.81	-0.30	-0.18	0.36	0.69	0.15	0.81 Linearity Error (dB)
			-0.20	0.10	0.06	0.24	0.28	-0.37	-0.69	-0.85	-1.19	-0.73	-0.66	-0.18	0.10	-0.49	1.19 Accuracy Error (dB)
3 GHz	Intercept (mV)	4753	277	645	985	1344	1699	2007	2343	2700	3025	3385	3716	4079	4425	4751	Measured Value (mV)
	Slope (mV/dB)	68.42	-29	-3	-5	12	25	-9	-15	0	-17	0	-11	10	14	-2	Error (mV)
			-0.42	-0.04	-0.07	0.18	0.37	-0.13	-0.22	0.00	-0.25	0.01	-0.16	0.15	0.21	-0.03	0.42 Linearity Error (dB)
			-0.55	-0.26	-0.38	-0.23	-0.13	-0.13	-0.89	-0.77	-1.10	-0.93	-1.18	-0.97	-1.00	-1.32	1.32 Accuracy Error (dB)
4 GHz	Intercept (mV)	4814	274	631	974	1343	1695	2011	2355	2722	3049	3423	3774	4138	4496	4779	Measured Value (mV)
	Slope (mV/dB)	69.71	-9	0	-6	15	18	-14	-19	0	-22	4	6	22	31	-35	Error (mV)
			-0.12	0.00	-0.08	0.21	0.26	-0.20	-0.27	0.00	-0.31	0.05	0.09	0.31	0.45	-0.50	0.50 Linearity Error (dB)
			-0.59	-0.46	-0.54	-0.24	-0.19	-0.66	-0.72	-0.45	-0.76	-0.39	-0.35	-0.12	0.02	-0.92	0.92 Accuracy Error (dB)
5 GHz	Intercept (mV)	4780	293	657	1000	1366	1719	2027	2360	2707	3029	3399	3738	4101	4454	4794	Measured Value (mV)
	Slope (mV/dB)	68.68	-22	-2	-2	20	30	-5	-16	-12	-34	-7	-12	8	18	14	Error (mV)
			-0.33	-0.03	-0.03	0.30	0.44	-0.08	-0.23	-0.18	-0.49	-0.10	-0.17	0.12	0.26	0.21	0.49 Linearity Error (dB)
			-0.32	-0.09	-0.17	0.09	0.15	-0.43	-0.65	-0.66	-1.04	-0.73	-0.87	-0.65	-0.59	-0.71	1.04 Accuracy Error (dB)
6 GHz	Intercept (mV)	4814	340	715	1062	1419	1772	2072	2402	2738	3058	3433	3780	4142	4503	4830	Measured Value (mV)
	Slope (mV/dB)	68.34	-32	2	7	22	34	-8	-20	-26	-47	-14	-9	12	31	16	Error (mV)
			-0.46	0.02	0.10	0.33	0.49	-0.12	-0.29	-0.37	-0.69	-0.20	-0.13	0.17	0.45	0.24	0.69 Linearity Error (dB)
			0.36	0.74	0.72	0.85	0.91	0.22	-0.04	-0.22	-0.63	-0.24	-0.26	-0.07	0.12	-0.19	0.91 Accuracy Error (dB)
7 GHz	Intercept (mV)	4800	310	678	1020	1386	1738	2046	2379	2723	3043	3414	3755	4123	4490	4809	Measured Value (mV)
	Slope (mV/dB)	68.72	-24	1	-1	22	30	-6	-16	-16	-39	-12	-15	10	33	9	Error (mV)
			-0.34	0.01	-0.01	0.31	0.44	-0.08	-0.24	-0.23	-0.57	-0.17	-0.21	0.14	0.48	0.13	0.57 Linearity Error (dB)
			-0.07	0.21	0.12	0.37	0.43	-0.15	-0.37	-0.44	-0.84	-0.52	-0.62	-0.34	-0.07	-0.49	0.84 Accuracy Error (dB)
8 GHz	Intercept (mV)	4797	285	650	989	1361	1713	2026	2363	2710	3030	3404	3751	4109	4466	4821	Measured Value (mV)
	Slope (mV/dB)	69.16	-17	2	-4	22	28	-5	-14	-13	-38	-10	-9	3	14	24	Error (mV)
			-0.24	0.03	-0.06	0.31	0.40	-0.07	-0.20	-0.18	-0.55	-0.15	-0.13	0.05	0.21	0.34	0.55 Linearity Error (dB)
			-0.43	-0.19	-0.33	0.01	0.07	-0.44	-0.60	-0.62	-1.03	-0.66	-0.68	-0.54	-0.42	-0.32	1.03 Accuracy Error (dB)
9 GHz	Intercept (mV)	4860	284	645	988	1358	1713	2034	2391	2762	3084	3449	3799	4163	4528	4855	Measured Value (mV)
	Slope (mV/dB)	70.29	-7	2	-6	12	16	-15	-9	11	-19	-5	-7	6	19	-5	Error (mV)
			-0.11	0.03	-0.09	0.17	0.23	-0.21	-0.13	0.15	-0.27	-0.08	-0.10	0.08	0.28	-0.07	0.28 Linearity Error (dB)
			-0.44	-0.26	-0.34	-0.03	0.07	-0.33	-0.20	0.12	-0.25	-0.01	0.01	0.24	0.47	0.17	0.47 Accuracy Error (dB)
10 GHz	Intercept (mV)	4876	278	638	982	1350	1708	2035	2399	2781	3104	3466	3817	4172	4533	4860	Measured Value (mV)
	Slope (mV/dB)	70.63	-7	-1	-10	5	10	-16	-5	24	-6	2	0	2	10	-16	Error (mV)
			-0.11	-0.01	-0.14	0.07	0.14	-0.23	-0.07	0.34	-0.09	0.03	0.00	0.03	0.14	-0.23	0.34 Linearity Error (dB)
			-0.53	-0.36	-0.43	-0.14	0.00	-0.31	-0.09	0.40	0.03	0.23	0.27	0.36	0.55	0.24	0.55 Accuracy Error (dB)
11 GHz	Intercept (mV)	4895	299	676	1017	1377	1737	2059	2424	2806	3133	3492	3849	4196	4549	4874	Measured Value (mV)
	Slope (mV/dB)	70.37	-22	3	-8	1	9	-21	-8	22	-3	5	10	5	6	-21	Error (mV)
			-0.31	0.05	-0.11	0.01	0.12	-0.30	-0.11	0.32	-0.04	0.06	0.14	0.07	0.09	-0.30	0.32 Linearity Error (dB)
			-0.23	0.18	0.08	0.24	0.41	0.03	0.27	0.76	0.45	0.60	0.73	0.71	0.78	0.44	0.78 Accuracy Error (dB)
12 GHz	Intercept (mV)	4927	291	652	995	1370	1730	2058	2433	2812	3139	3497	3858	4210	4579	4919	Measured Value (mV)
	Slope (mV/dB)	71.26	-3	1	-12	7	10	-18	1	23	-6	-4	0	-4	9	-8	Error (mV)
			-0.05	0.02	-0.17	0.09	0.15	-0.25	0.01	0.33	-0.08	-0.06	0.01	-0.05	0.12	-0.11	0.33 Linearity Error (dB)
			-0.34	-0.16	-0.24	0.14	0.31	0.02	0.40	0.84	0.54	0.68	0.86	0.91	1.21	1.09	1.21 Accuracy Error (dB)
13 GHz	Intercept (mV)	4896	329	701	1047	1412	1770	2090	2453	2806	3128	3494	3851	4196	4560	4891	Measured Value (mV)
	Slope (mV/dB)	69.85	-26	-3	-7	9	18	-11	2	6	-21	-4	3	-1	14	-5	Error (mV)
			-0.37	-0.05	-0.09	0.13	0.26	-0.16	0.03	0.09	-0.30	-0.06	0.05	-0.01	0.20	-0.06	0.37 Linearity Error (dB)
			0.20	0.54	0.51	0.75	0.89	0.48	0.69	0.76	0.38	0.63	0.76	0.71	0.93	0.68	0.93 Accuracy Error (dB)
14 GHz	Intercept (mV)	4906	306	673	1015	1379	1737	2068	2438	2807	3132	3485	3845	4210	4565	4893	Measured Value (mV)
	Slope (mV/dB)	70.60	-11	3	-8	3	8	-14	3	19	-9	-9	-2	10	12	-13	Error (mV)
			-0.16	0.04	-0.12	0.04	0.11	-0.20	0.04	0.27	-0.13	-0.13	-0.03	0.14	0.17	-0.19	0.27 Linearity Error (dB)
			-0.13	0.14	0.05	0.27	0.41	0.16	0.47	0.77	0.44	0.50	0.67	0.91	1.01	0.71	1.01 Accuracy Error (dB)
15 GHz	Intercept (mV)	4825	251	601	943	1319	1668	1995	2341	2710	3030	3405	3751	4109	4485	4859	Measured Value (mV)
	Slope (mV/dB)	70.52	10	8	-3	21	17	-9	-15	1	-32	-9	-16	-10	13	34	Error (mV)
			0.15	0.11	-0.04	0.29	0.24	-0.12	-0.22	0.02	-0.45	-0.13	-0.22	-0.15	0.18	0.49	0.49 Linearity Error (dB)
			-0.92	-0.89	-0.99	-0.59	-0.58	-0.88	-0.92	-0.62	-1.03	-0.65	-0.68	-0.54	-0.14	0.23	1.03 Accuracy Error (dB)
16 GHz	Intercept (mV)	4922	303	669	1014	1380	1738	2071	2452	2830	3158	3508	3871	4222	4568	4890	Measured Value (mV)
	Slope (mV/dB)	70.82	-16	-4	-13	-1	2	-19	8	32	6	2	11	8	0	-32	Error (mV)
			-0.23	-0.06	-0.19	-0.02	0.03	-0.26	0.12	0.46	0.09	0.03	0.16	0.11	0.00	-0.46	0.46 Linearity Error (dB)
			-0.17	0.08	0.03	0.29	0.43	0.21	0.67	1.10	0.81	0.83	1.04	1.08	1.05	0.67	1.10 Accuracy Error (dB)
17 GHz	Intercept (mV)	4846	294	657	998	1365	1719	2043	2401	2768	3093	3449	3800	4148	4504	4839	Measured Value (mV)
	Slope (mV/dB)	69.78	-16	-2	-10	8	13	-12	-3	15	-9	-1	1	0	7	-7	Error (mV)
			-0.23	-0.03	-0.14	0.11	0.19	-0.17	-0.04	0.22	-0.12	-0.02	0.01	0.00	0.10	-0.10	0.23 Linearity Error (dB)
			-0.30	-0.09	-0.20	0.07	0.15	-0.20	-0.06	0.21	-0.12	-0.01	0.02	0.02	0.13	-0.06	0.30 Accuracy Error (dB)
18 GHz	Intercept (mV)	4836	372	744	1097	1450	1802	2104	2422	2765	3088	3444	3810	4159	4522	4865	Measured Value (mV)
	Slope (mV/dB)	68.19	-31	0	12	24	35	-4	-27	-25	-43	-28	-3	5	27	29	Error (mV)
			-0.46	0.00	0.17	0.35	0.51	-0.06	-0.40	-0.37	-0.63	-0.41	-0.05	0.07	0.40	0.43	0.63 Linearity Error (dB)
			0.82	1.16	1.23	1.29	1.34	0.68	0.24	0.17	-0.20	-0.09	0.17	0.18	0.39	0.31	1.34 Accuracy Error (dB)

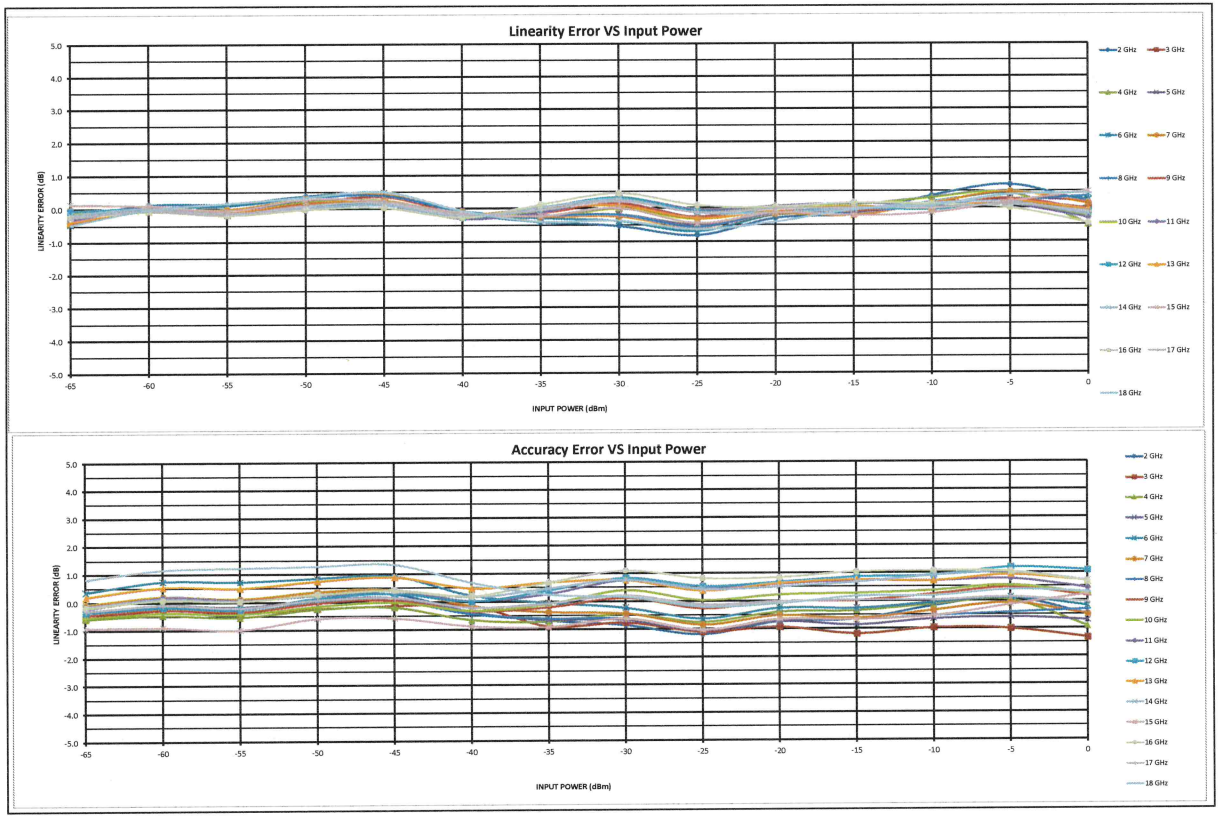
Output Vos: 44.0 mV

Avg Slope:	69.7 mV/dB
Max Slope:	71.3 mv/dB
Min Slope:	68.2 mv/dB

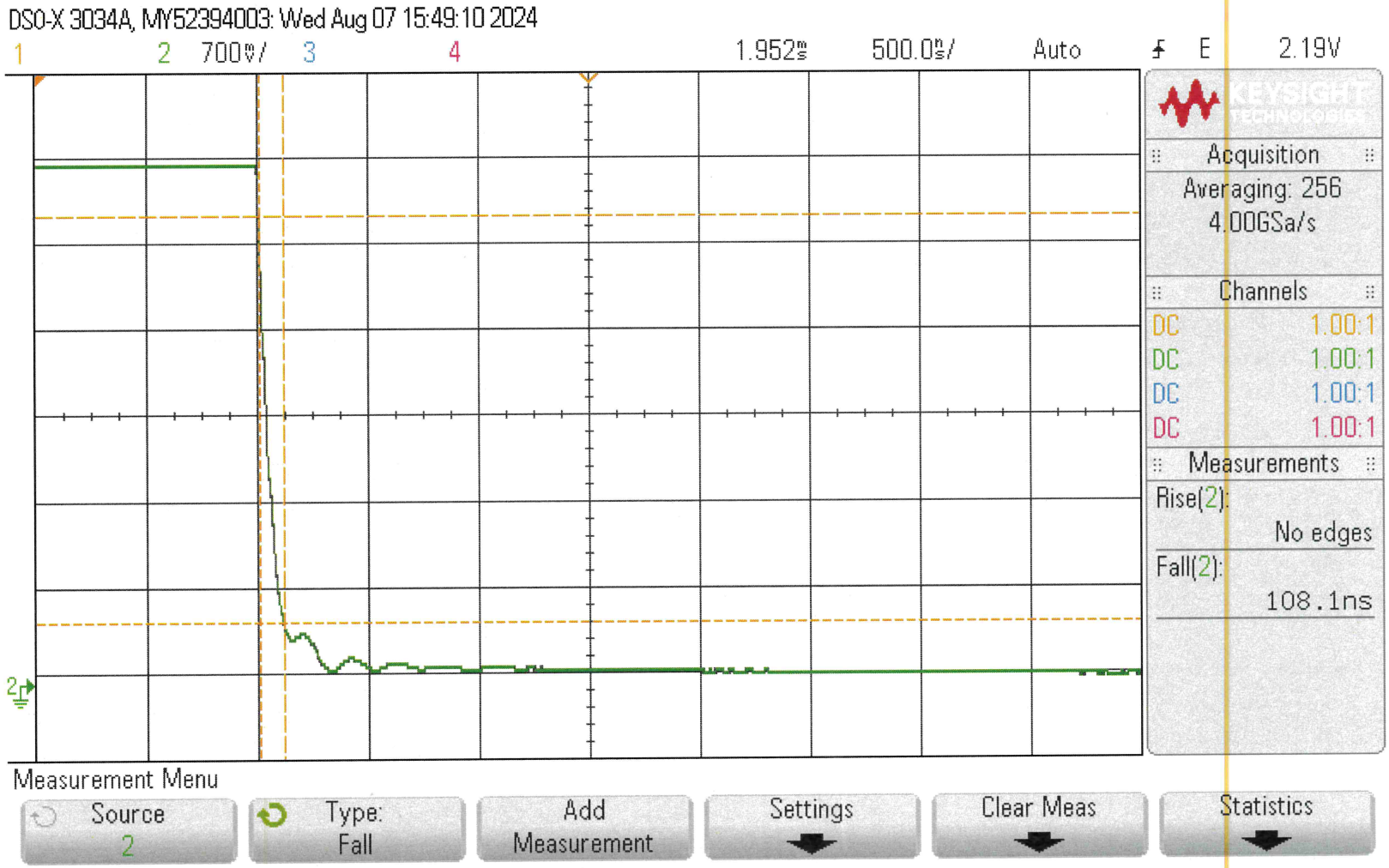
372	744	1097	1450	1802	2104	2453	2830	3158	3508	3871	4222	4579	4919	Max Measured (mV)
251	601	943	1319	1668	1995	2341	2694	3019	3385	3716	4079	4425	4751	Min Measured (mV)
0.87	1.03	1.11	0.94	0.96	0.78	0.80	0.98	1.00	0.88	1.11	1.03	1.11	1.21	Flatness Error (+/-dB)

PL35850

25°C


Linearity Error VS Input Power
LINEARITY ERROR (dB)
INPUT POWER (dBm)
2 GHz
3 GHz
4 GHz
5 GHz
6 GHz
7 GHz
8 GHz
9 GHz
10 GHz
11 GHz
12 GHz
13 GHz
14 GHz
15 GHz
16 GHz
17 GHz
18 GHz
Accuracy Error VS Input Power
LINEARITY ERROR (dB)
INPUT POWER (dBm)

PL35850
Recovery



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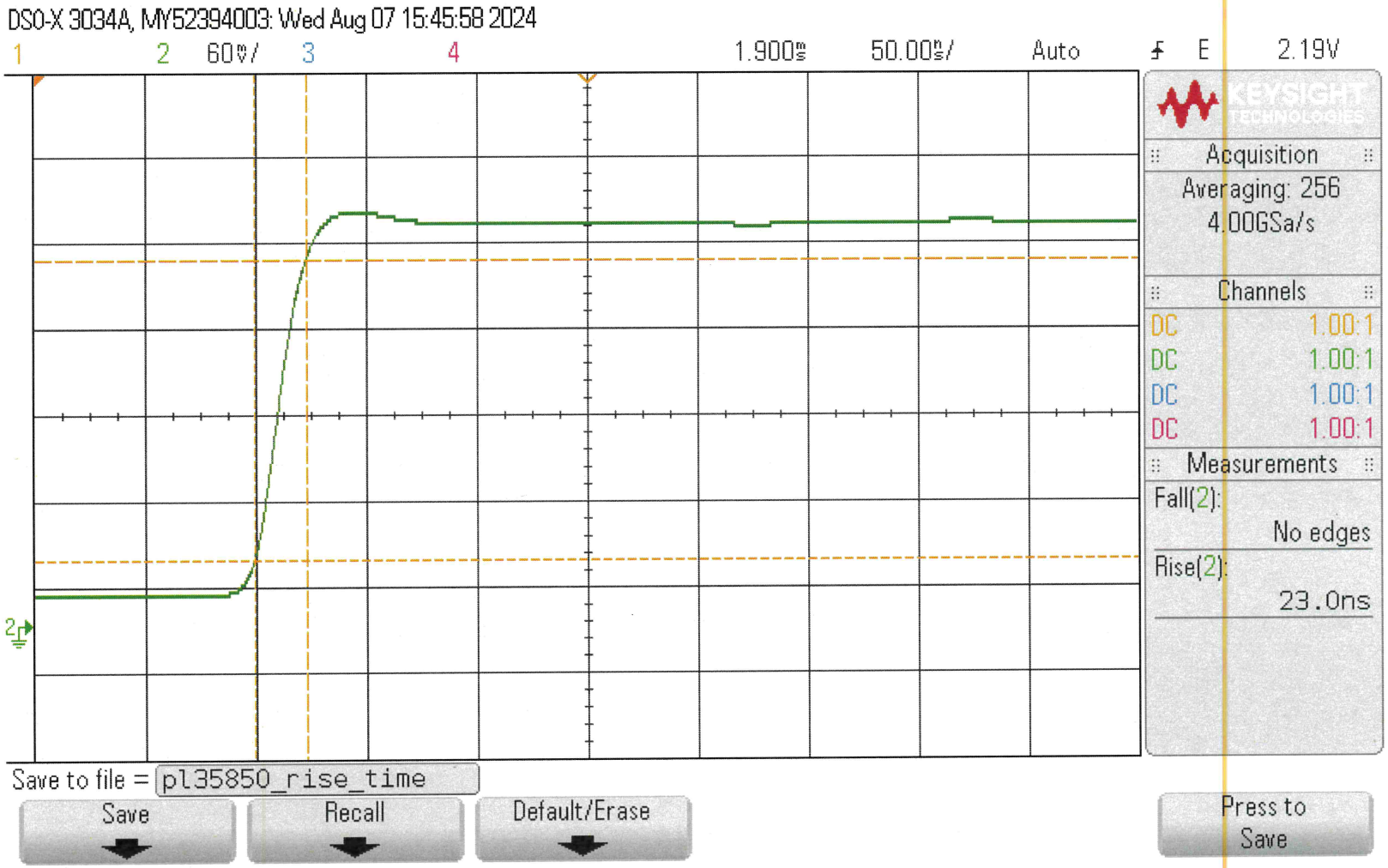
Rise Time



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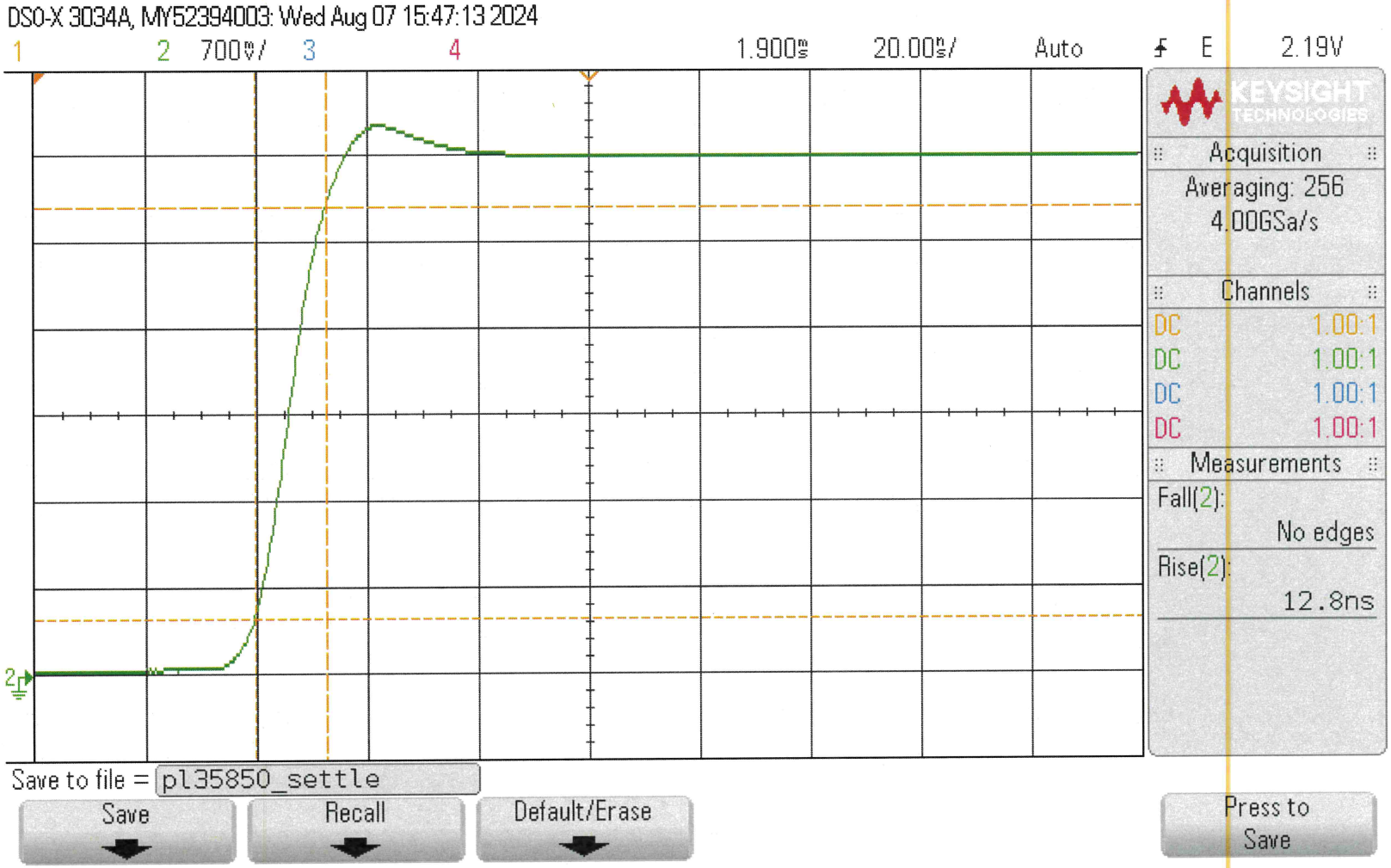
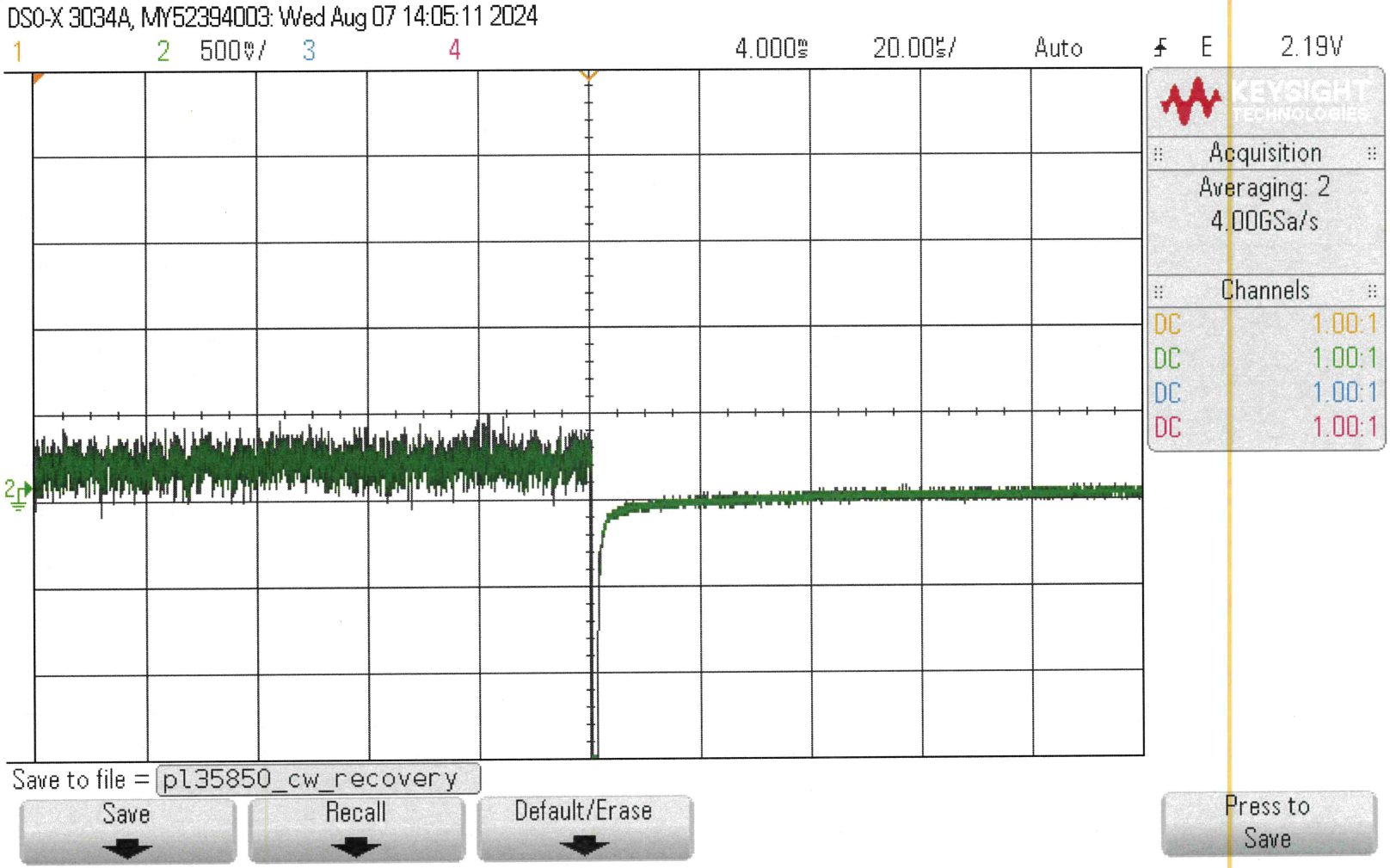
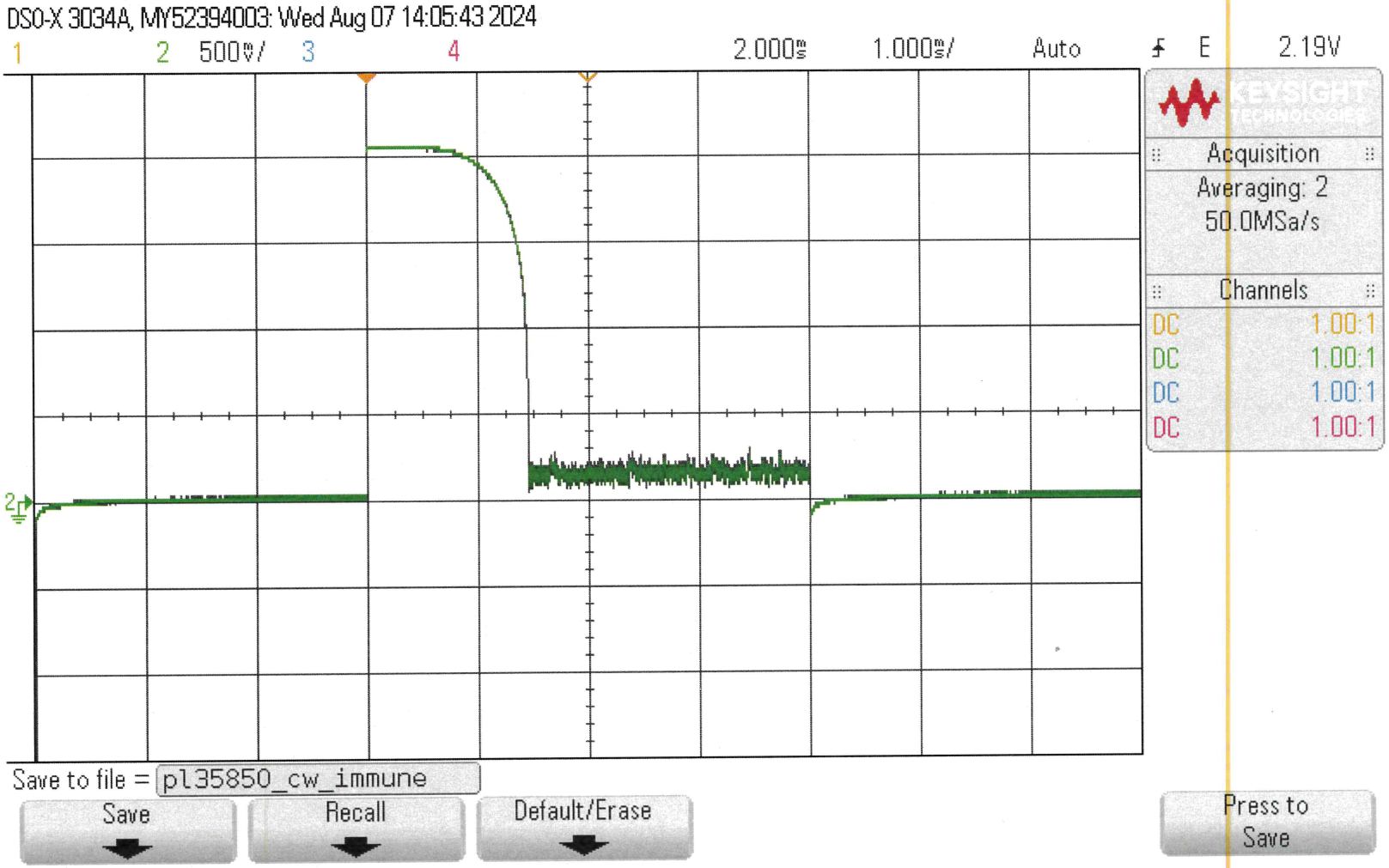
settle



PL35850
cw Recovery



PL35850
CW Immune



Quantic PMI
PLANAR MONOLITHICS

PMI-Q-F-7008-1 Rev E
May 13, 2022

RMA REPAIR REPORT

RMA NO: 2405-085	PMI MODEL No.: ERDLVA-2G18G-65-70MV-70C Customer MODEL No.: 27342040	SERIAL No: PL35850/2313
DATE RECEIVED: 5-22-24	JOB NO: 20230583-R	WARRANTY [X] Yes [ ] No
CUSTOMER: Hi-Intelligence	CONTACT NAME: George Chang	TEL#: 916-542-1401
CUSTOMER RTV#: LJ-20008-4	RETURN P.O.: 20240307-R	
CUSTOMER COMPLAINT: CW-Recovery		Verified [X] Yes [ ] No
OBSERVATIONS: Verified Recovery out of spec.		
REPAIR ACTIONS: Replaced IC and verified all other parameters.		
SUSPECTED ROOT CAUSE: Unable to determine exact cause of component failure while unit was out in field. Possible excessive exposure to temperature, EMI or other environmental conditions.		
INTERNAL CORRECTIVE ACTION REQUIRED [ ] Yes [X] No		CAR NUMBER:
QA Inspector: Final Inspection & Document Review IAW PMI-Q-P-7008 and PMI-Q-P-7017		DATE

Quantic PMI
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