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** 8/8/2024

Serial No: PL34353/2141 **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	**2.01:1 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	**71.9/68.3 mV/dB**	
7	VIDEO OUT Log Linearity:	±1.0 dB MAX @25C	**.63/-.88 dB MAX @25C**	
8	VIDEO OUT Log Accuracy:	±2.3 dB MAX @25C	**1.43/-1.25 dB MAX @25C**	
9	VIDEO OUT Absolute Log Accuracy:	±2. 6dB MAX Over Freq & temp	**1.80/-1.82 dB MAX Over Freq & temp**	
10	VIDEO OUT DC Offset:	0 ±70 mV (RF Input Terminated & DC Power On) @25C	**+59 mV**	
11	VIDEO OUT Rise Time (10% to 90%):	28 ns MAX	**26.0 ns**	
12	VIDEO OUT Fall Time (90% to 10%):	300 ns MAX	**146.9 ns**	
13	VIDEO OUT Settling Time:	50 ns With in ±70 mV of final value @-10 dBm	**< 50 ns**	

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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	**1.27 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	**1.4 ms**	
		CW Recovery Time at CW = -40 dBm, ≤ 20 us	**< 20 us**	
17	Pulse droop	1dB Max for 300us pulse at or above -65dBm	**< 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. Lutes **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: PL34353
Test Temp: +25°C

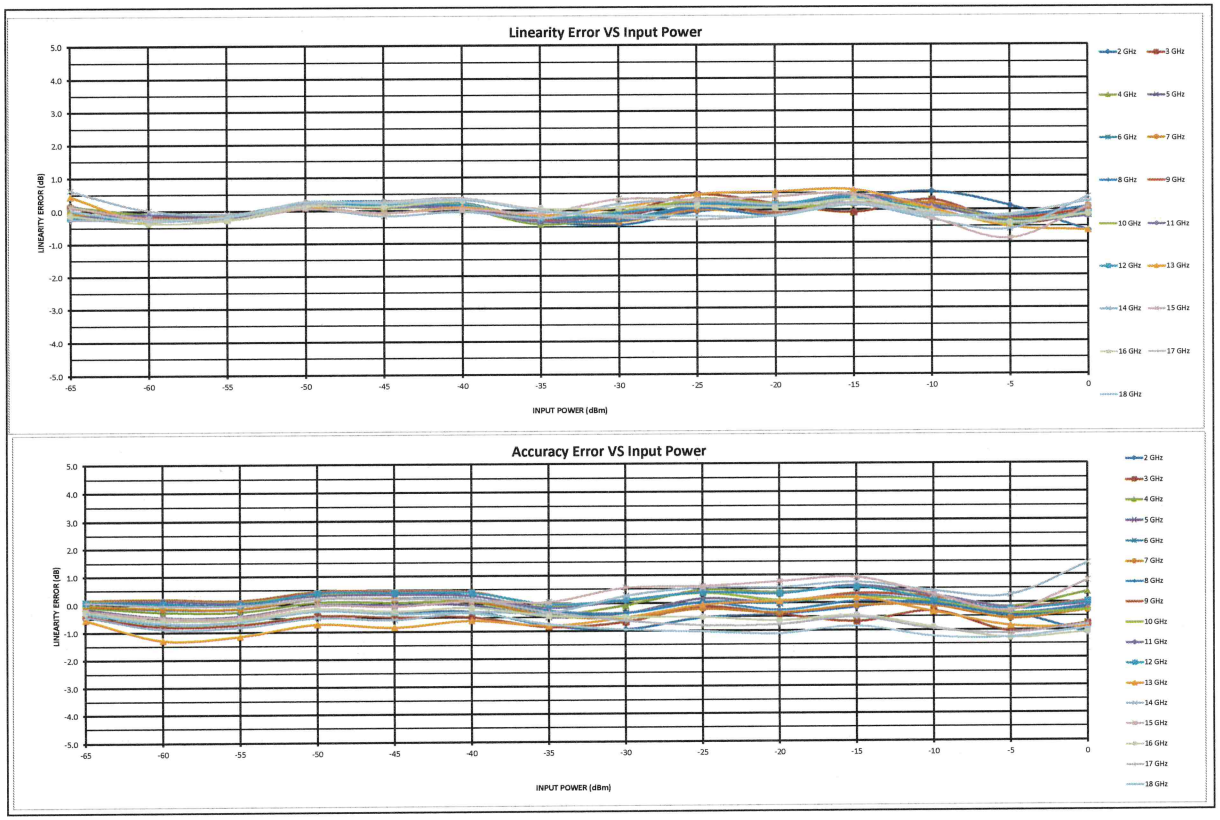
Frequency			-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	RF Input Power (dBm)
2 GHz	Intercept (mV)	4757	239	561	914	1291	1633	1984	2296	2635	3012	3368	3734	4098	4417	4713	Measured Value (mV)
	Slope (mV/dB)	69.72	13	-13	-9	19	13	15	-21	-31	-2	5	22	38	8	-44	Error (mV)
			0.19	-0.19	-0.13	0.28	0.19	0.22	-0.31	-0.44	-0.03	0.07	0.32	0.54	0.12	-0.64	0.64 Linearity Error (dB)
			-0.30	-0.68	-0.62	-0.21	-0.30	-0.27	-0.79	-0.93	-0.52	-0.41	-0.16	0.06	-0.36	-1.11	1.11 Accuracy Error (dB)
3 GHz	Intercept (mV)	4748	232	554	907	1277	1621	1976	2293	2653	3039	3368	3698	4072	4370	4738	Measured Value (mV)
	Slope (mV/dB)	69.63	10	-16	-11	11	6	13	-18	-6	32	13	-5	21	-30	-10	Error (mV)
			0.14	-0.23	-0.16	0.15	0.09	0.19	-0.26	-0.09	0.46	0.18	-0.08	0.30	-0.42	-0.14	0.46 Linearity Error (dB)
			-0.40	-0.78	-0.72	-0.41	-0.47	-0.47	-0.83	-0.67	-0.13	-0.41	-0.67	-0.31	-1.03	-0.75	1.03 Accuracy Error (dB)
4 GHz	Intercept (mV)	4815	255	590	938	1311	1658	2007	2324	2694	3080	3422	3784	4112	4431	4816	Measured Value (mV)
	Slope (mV/dB)	70.32	11	-6	-9	12	8	5	-30	-11	23	14	24	0	-32	1	Error (mV)
			0.16	-0.08	-0.13	0.17	0.11	0.07	-0.42	-0.16	0.33	0.19	0.34	0.01	-0.46	0.02	0.46 Linearity Error (dB)
			-0.07	-0.27	-0.27	0.08	0.06	0.06	-0.39	-0.08	0.46	0.37	0.56	0.27	-0.16	0.37	0.56 Accuracy Error (dB)
5 GHz	Intercept (mV)	4791	250	577	928	1304	1652	2000	2317	2675	3059	3397	3768	4102	4413	4779	Measured Value (mV)
	Slope (mV/dB)	70.01	10	-13	-12	14	12	10	-23	-15	19	7	28	12	-27	-12	Error (mV)
			0.15	-0.18	-0.17	0.20	0.17	0.14	-0.33	-0.22	0.27	0.10	0.40	0.17	-0.39	-0.16	0.40 Linearity Error (dB)
			-0.14	-0.45	-0.42	-0.02	-0.03	-0.04	-0.49	-0.35	0.16	0.01	0.33	0.12	-0.42	-0.16	0.49 Accuracy Error (dB)
6 GHz	Intercept (mV)	4780	260	597	946	1319	1668	2015	2327	2676	3051	3395	3762	4094	4408	4774	Measured Value (mV)
	Slope (mV/dB)	69.49	-3	-13	-11	14	16	15	-20	-19	9	5	25	9	-24	-6	Error (mV)
			-0.04	-0.19	-0.16	0.20	0.22	0.22	-0.29	-0.27	0.13	0.08	0.36	0.14	-0.35	-0.08	0.36 Linearity Error (dB)
			0.00	-0.16	-0.16	0.19	0.20	0.18	-0.34	-0.34	0.04	-0.02	0.24	0.01	-0.49	-0.24	0.49 Accuracy Error (dB)
7 GHz	Intercept (mV)	4765	259	599	947	1320	1667	2011	2322	2663	3034	3372	3738	4086	4402	4771	Measured Value (mV)
	Slope (mV/dB)	69.25	-4	-11	-9	18	19	16	-19	-24	1	-8	12	14	-16	6	Error (mV)
			-0.06	-0.15	-0.13	0.26	0.27	0.24	-0.27	-0.35	0.01	-0.11	0.18	0.20	-0.24	0.09	0.35 Linearity Error (dB)
			-0.01	-0.14	-0.14	0.21	0.19	0.12	-0.42	-0.52	-0.20	-0.35	-0.10	-0.11	-0.57	-0.28	0.57 Accuracy Error (dB)
8 GHz	Intercept (mV)	4775	267	610	956	1331	1681	2023	2334	2676	3049	3379	3749	4090	4415	4781	Measured Value (mV)
	Slope (mV/dB)	69.22	-8	-11	-12	17	21	17	-18	-22	5	-11	13	8	-13	6	Error (mV)
			-0.12	-0.17	-0.17	0.25	0.31	0.25	-0.26	-0.32	0.07	-0.16	0.18	0.11	-0.19	0.09	0.32 Linearity Error (dB)
			0.10	0.02	-0.01	0.37	0.39	0.29	-0.24	-0.34	0.01	-0.25	0.06	-0.05	-0.39	-0.14	0.39 Accuracy Error (dB)
9 GHz	Intercept (mV)	4795	272	623	967	1337	1687	2032	2347	2704	3075	3401	3768	4108	4430	4794	Measured Value (mV)
	Slope (mV/dB)	69.38	-13	-9	-12	11	14	12	-19	-9	15	-6	14	7	-18	-1	Error (mV)
			-0.19	-0.13	-0.17	0.16	0.21	0.18	-0.28	-0.13	0.21	-0.09	0.20	0.10	-0.26	-0.01	0.28 Linearity Error (dB)
			0.17	0.21	0.14	0.45	0.47	0.42	-0.06	0.06	0.39	0.06	0.33	0.21	-0.17	0.05	0.47 Accuracy Error (dB)
10 GHz	Intercept (mV)	4782	270	619	964	1331	1683	2030	2347	2705	3073	3403	3758	4097	4416	4772	Measured Value (mV)
	Slope (mV/dB)	69.16	-17	-14	-14	7	13	14	-15	-3	20	4	13	6	-21	-10	Error (mV)
			-0.24	-0.20	-0.21	0.10	0.19	0.20	-0.21	-0.04	0.28	0.06	0.19	0.09	-0.30	-0.15	0.30 Linearity Error (dB)
			0.14	0.15	0.10	0.37	0.42	0.39	-0.06	0.08	0.36	0.09	0.19	0.05	-0.37	-0.27	0.42 Accuracy Error (dB)
11 GHz	Intercept (mV)	4801	266	618	961	1327	1677	2022	2341	2707	3075	3419	3788	4112	4429	4787	Measured Value (mV)
	Slope (mV/dB)	69.62	-10	-6	-11	7	9	6	-23	-6	14	10	31	7	-24	-14	Error (mV)
			-0.14	-0.08	-0.16	0.10	0.13	0.08	-0.34	-0.08	0.21	0.15	0.45	0.10	-0.35	-0.20	0.45 Linearity Error (dB)
			0.09	0.14	0.06	0.31	0.33	0.28	-0.14	0.11	0.39	0.32	0.62	0.27	-0.19	-0.05	0.62 Accuracy Error (dB)
12 GHz	Intercept (mV)	4800	266	612	957	1334	1683	2030	2350	2708	3074	3420	3784	4101	4425	4792	Measured Value (mV)
	Slope (mV/dB)	69.55	-13	-14	-17	12	13	12	-15	-5	13	11	28	-3	-27	-8	Error (mV)
			-0.18	-0.21	-0.25	0.17	0.19	0.18	-0.22	-0.07	0.19	0.16	0.40	-0.05	-0.39	-0.11	0.40 Linearity Error (dB)
			0.09	0.05	0.00	0.41	0.42	0.39	-0.01	0.12	0.37	0.34	0.56	0.11	-0.24	0.02	0.56 Accuracy Error (dB)
13 GHz	Intercept (mV)	4773	223	520	878	1256	1596	1961	2296	2664	3044	3401	3758	4071	4384	4729	Measured Value (mV)
	Slope (mV/dB)	70.50	32	-23	-18	8	-5	8	-10	6	33	38	42	3	-37	-44	Error (mV)
			0.46	-0.33	-0.25	0.11	-0.07	0.11	-0.14	0.08	0.47	0.53	0.60	0.04	-0.52	-0.63	0.63 Linearity Error (dB)
			-0.53	-1.27	-1.13	-0.71	-0.83	-0.60	-0.79	-0.51	-0.06	0.06	0.19	-0.32	-0.83	-0.88	1.27 Accuracy Error (dB)
14 GHz	Intercept (mV)	4862	231	547	900	1272	1614	1983	2328	2718	3086	3435	3797	4122	4460	4890	Measured Value (mV)
	Slope (mV/dB)	71.94	45	1	-5	7	-11	-2	-16	14	22	12	14	-21	-43	28	Error (mV)
			0.63	0.02	-0.08	0.10	-0.15	-0.02	-0.23	0.19	0.31	0.16	0.19	-0.29	-0.59	0.38	0.63 Linearity Error (dB)
			-0.42	-0.88	-0.82	-0.48	-0.57	-0.28	-0.33	0.27	0.55	0.55	0.75	0.41	0.26	1.43	1.43 Accuracy Error (dB)
15 GHz	Intercept (mV)	4839	246	575	925	1303	1648	2010	2355	2738	3090	3450	3809	4113	4422	4845	Measured Value (mV)
	Slope (mV/dB)	70.82	11	-15	-19	5	-4	4	-5	24	22	28	33	-17	-62	6	Error (mV)
			0.15	-0.21	-0.26	0.07	-0.05	0.06	-0.07	0.34	0.31	0.39	0.46	-0.25	-0.88	0.09	0.88 Linearity Error (dB)
			-0.20	-0.48	-0.46	-0.04	-0.09	0.11	0.06	0.55	0.60	0.77	0.92	0.28	-0.29	0.78	0.92 Accuracy Error (dB)
16 GHz	Intercept (mV)	4725	243	569	920	1294	1636	1993	2320	2665	3013	3352	3713	4032	4353	4716	Measured Value (mV)
	Slope (mV/dB)	68.84	-7	-26	-19	11	9	22	4	5	9	4	21	-4	-28	-9	Error (mV)
			-0.11	-0.37	-0.27	0.16	0.13	0.31	0.07	0.08	0.13	0.06	0.30	-0.06	-0.40	-0.13	0.40 Linearity Error (dB)
			-0.24	-0.57	-0.53	-0.16	-0.26	-0.14	-0.44	-0.49	-0.50	-0.64	-0.46	-0.88	-1.28	-1.07	1.28 Accuracy Error (dB)
17 GHz	Intercept (mV)	4718	265	606	954	1320	1666	2014	2330	2656	2992	3342	3709	4027	4365	4736	Measured Value (mV)
	Slope (mV/dB)	68.25	-17	-17	-10	15	19	26	1	-15	-20	-11	15	-9	-12	18	Error (mV)
			-0.24	-0.25	-0.15	0.21	0.28	0.38	0.01	-0.21	-0.29	-0.16	0.21	-0.13	-0.17	0.26	0.38 Linearity Error (dB)
			0.07	-0.04	-0.04	0.21	0.17	0.16	-0.30	-0.62	-0.80	-0.78	-0.52	-0.95	-1.10	-0.78	1.10 Accuracy Error (dB)
18 GHz	Intercept (mV)	4709	240	562	914	1289	1629	1980	2300	2634	2977	3320	3687	4009	4355	4726	Measured Value (mV)
	Slope (mV/dB)	68.79	3	-19	-11	20	16	23	-1	-11	-12	-13	10	-12	-10	17	Error (mV)
			0.04	-0.28	-0.16	0.29	0.23	0.34	-0.01	-0.16	-0.17	-0.18	0.15	-0.17	-0.14	0.25	0.34 Linearity Error (dB)
			-0.29	-0.67	-0.62	-0.24	-0.36	-0.32	-0.73	-0.94	-1.02	-1.10	-0.83	-1.21	-1.25	-0.93	1.25 Accuracy Error (dB)

Output Vos: 59.0 mV

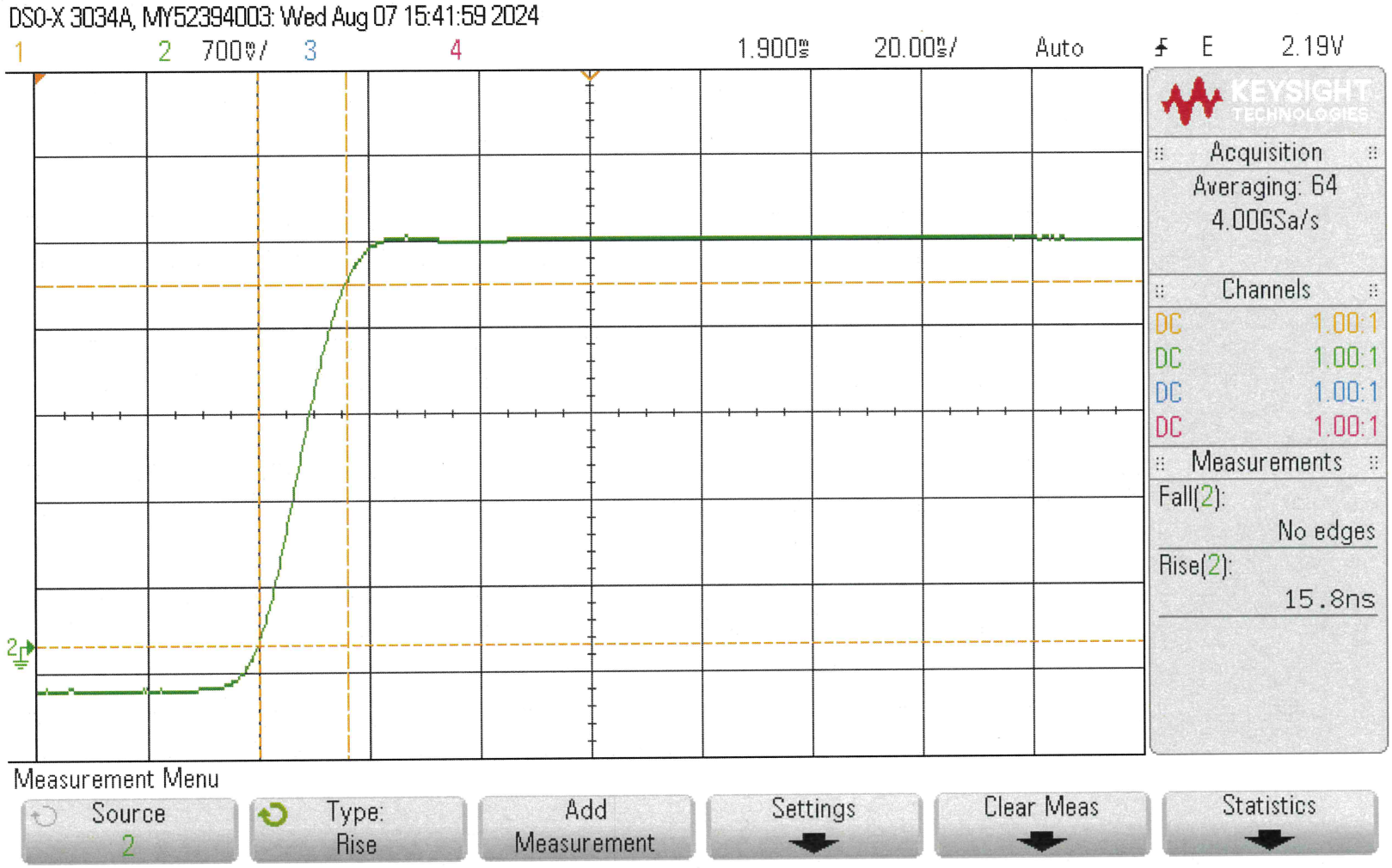
Avg Slope:	69.7 mV/dB
Max Slope:	71.9 mv/dB
Min Slope:	68.3 mv/dB

272	623	967	1337	1687	2032	2355	2738	3090	3450	3809	4122	4460	4890	Max Measured (mV)
223	520	878	1256	1596	1961	2293	2634	2977	3320	3687	4009	4353	4713	Min Measured (mV)
0.35	0.74	0.64	0.58	0.65	0.51	0.44	0.75	0.81	0.93	0.88	0.81	0.77	1.27	Flatness Error (+/-dB)

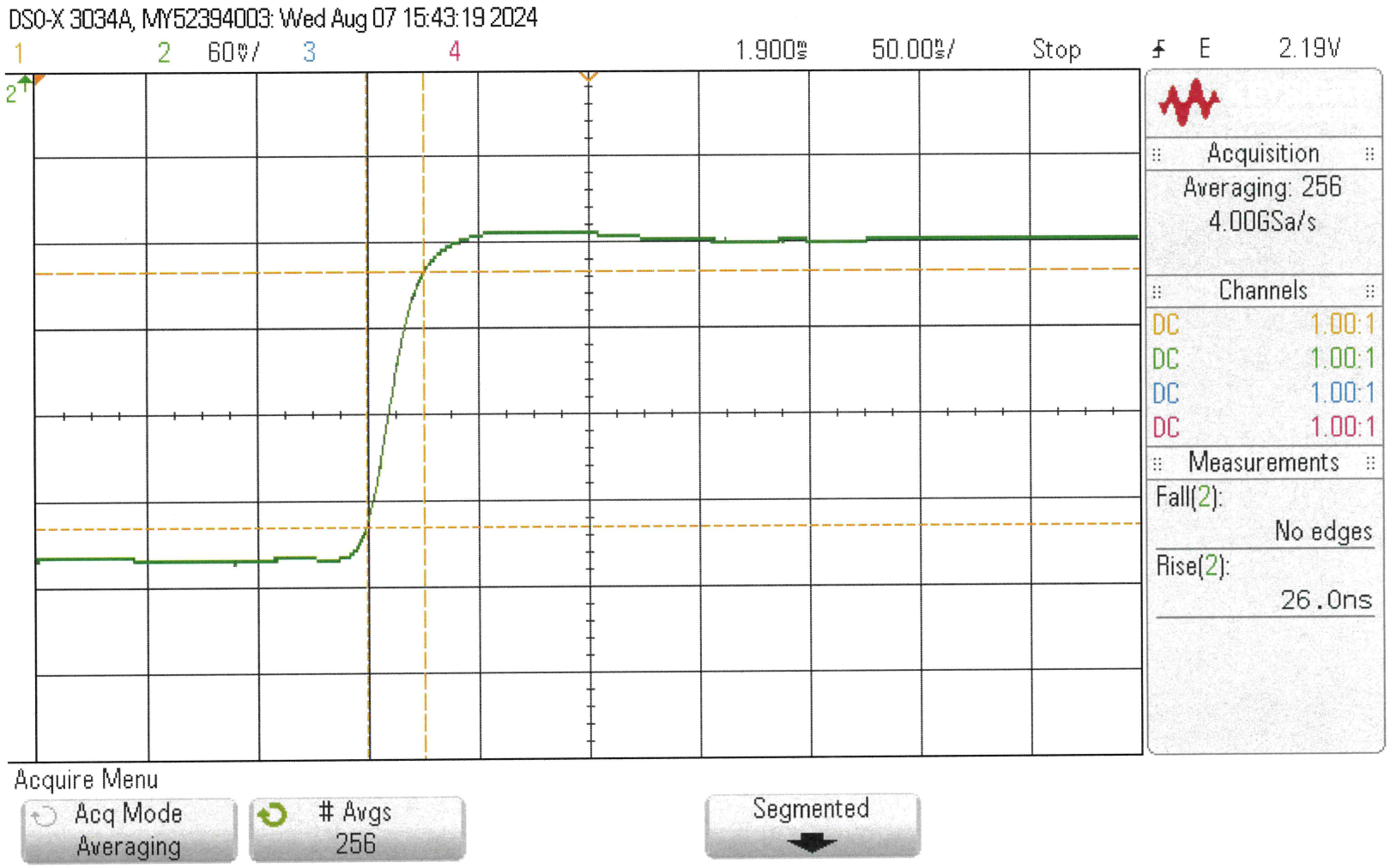
PL34353
25°C


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)
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

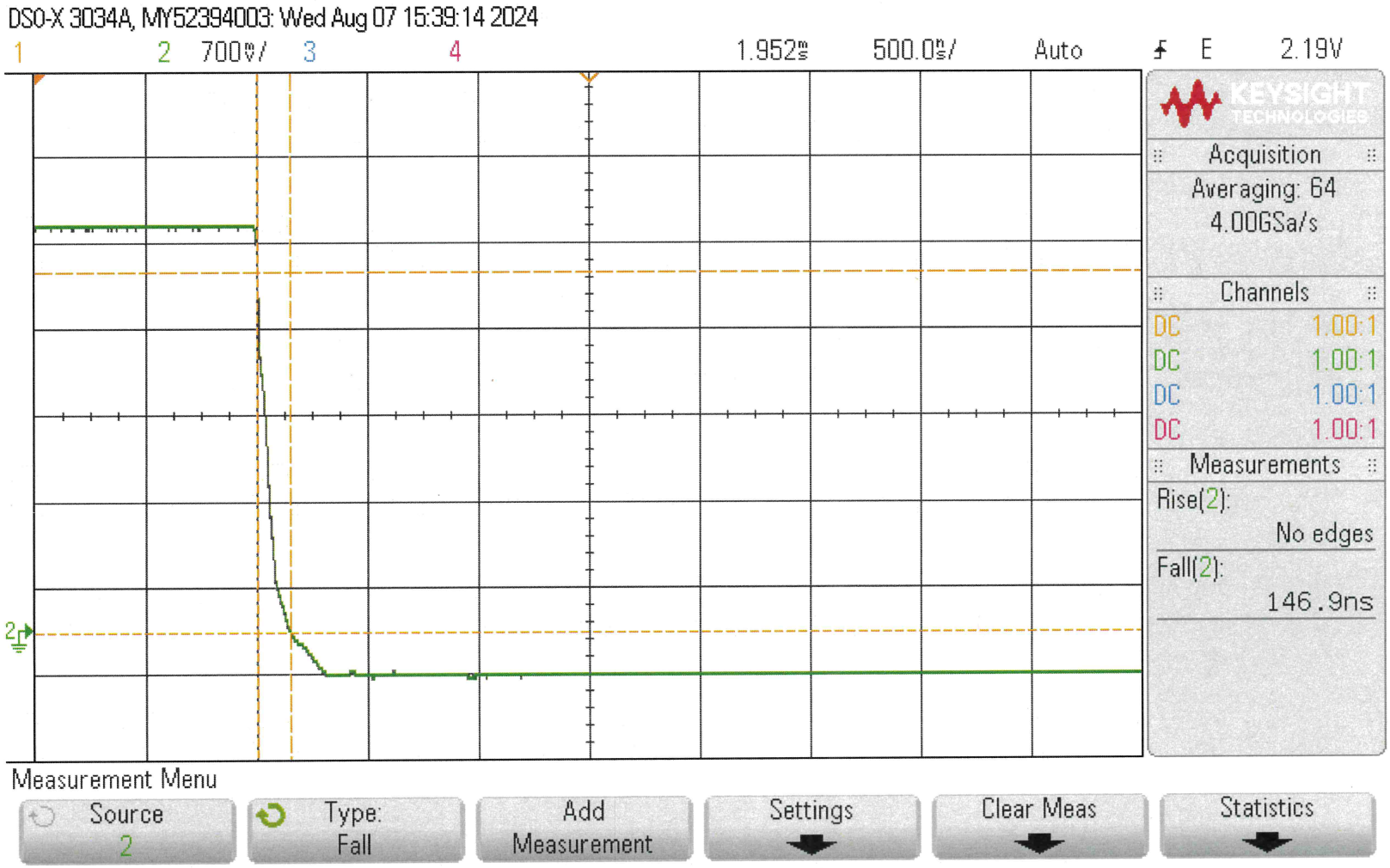
PL34353
settle



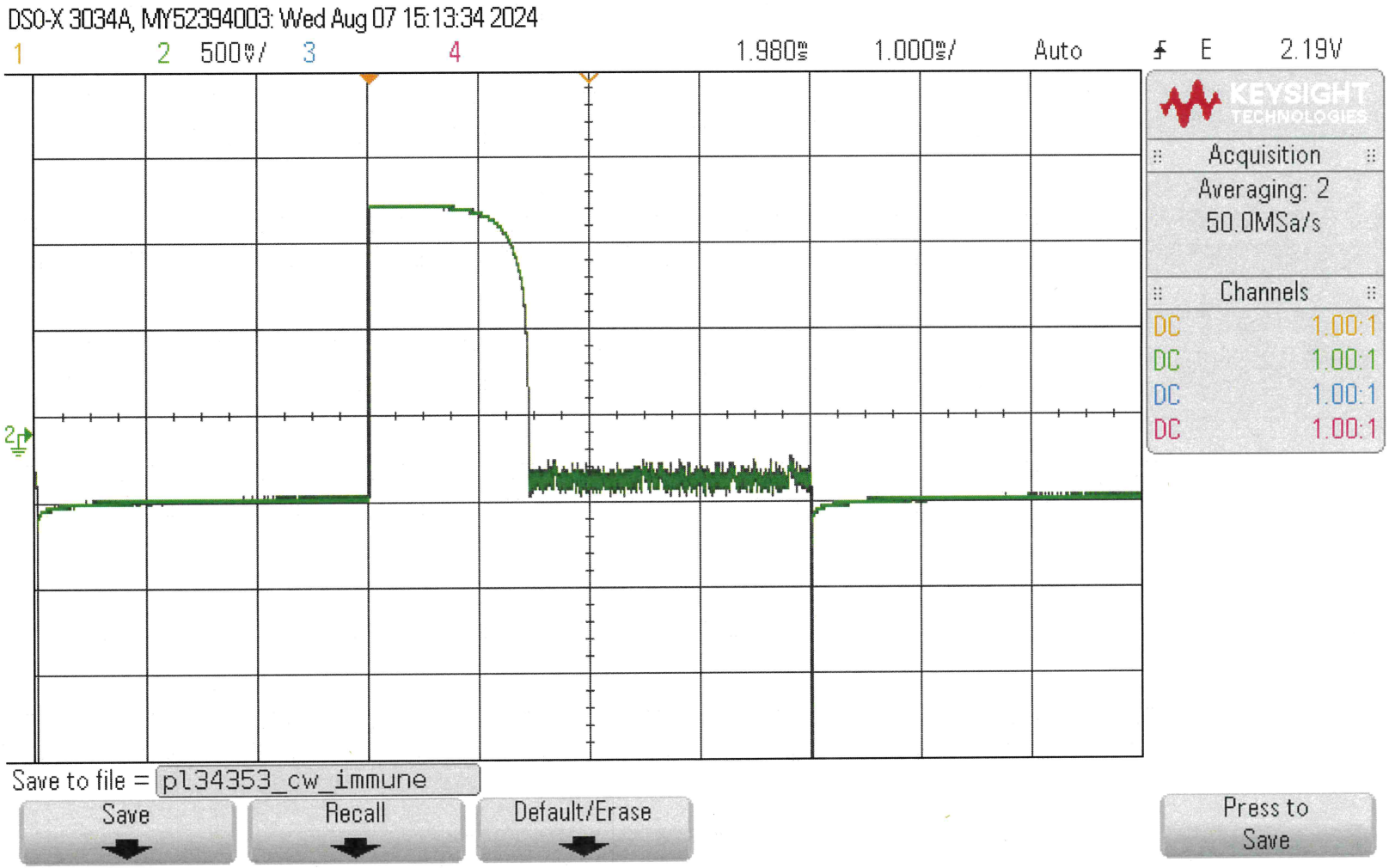
PL34353
Rise Time



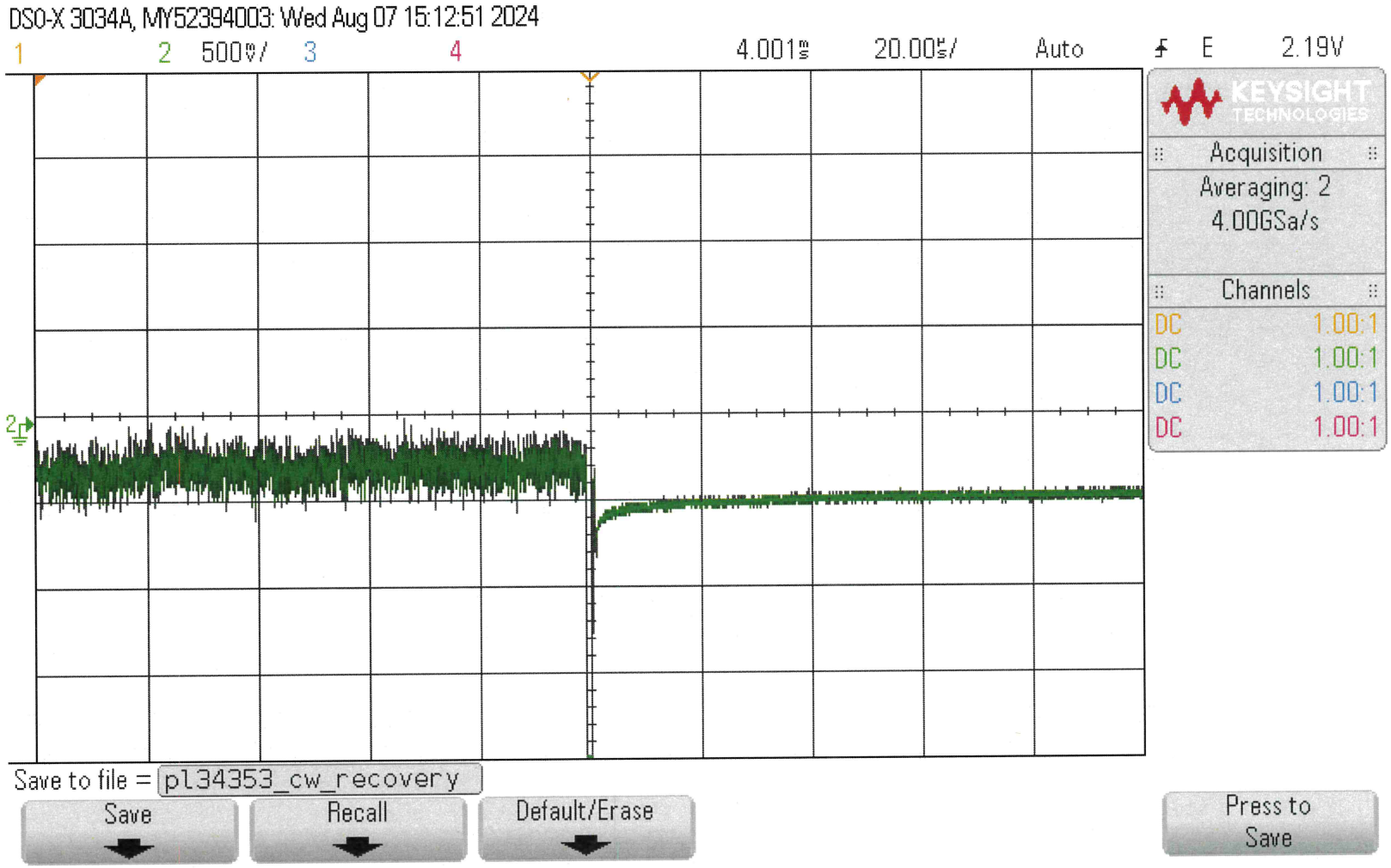
PL34353
Recovery



PL34353
cw Immune



PL34353
CW Recovery



Quantic PMI
PLANAR MONOLITHICS

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

RMA REPAIR REPORT

RMA NO: 2405-085	PMI MODEL No.: 27342040 Customer MODEL No.: NA	SERIAL No: PL34353/2141
DATE RECEIVED: 05/22/2024	JOB NO: 20240307-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	
CUSTOMER COMPLAINT: Failed CW Recovery out of Spec.		Verified [X] Yes [ ] No
OBSERVATIONS: Channel 1 was bad.		
REPAIR ACTIONS: Changed out IC that was bad. Verified all other specs passing.		
SUSPECTED ROOT CAUSE: Unknown cause resulted in IC chip failing.		
INTERNAL CORRECTIVE ACTION REQUIRED [ ] Yes [X] No		CAR NUMBER:
QA Inspector: Arthur Zimmerman Final Inspection & Document Review IAW PMI-Q-P-7008 and PMI-Q-P-7017		DATE 08/12/2024

Quantic PMI
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