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

Customer: [redacted]
SO No: [redacted]
Model No: ERDLVA-2G18G-65-70MV-70C
Serial No: PL40179/2317

Tested By: Jim Hopson
Temperature: -40C TO +70C
Date 8/8/2024
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	**2.04:1 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	**71.8/68.6 mv/db**	
7	VIDEO OUT Log Linearity:	±1.0 dB MAX @25C	**.62/-.90 db**	
8	VIDEO OUT Log Accuracy:	±2.3 dB MAX @25C	**1.20/-1.07 db**	
9	VIDEO OUT Absolute Log Accuracy:	±2.9 dB MAX Over Freq & temp	**±1.94 dB MAX Over Freq & temp**	
10	VIDEO OUT DC Offset:	0 ±70 mV (RF Input Terminated & DC Power On) @25C	**25 mV**	
11	VIDEO OUT Rise Time (10% to 90%):	28 ns MAX	**26.8 ns**	
12	VIDEO OUT Fall Time (90% to 10%):	300 ns MAX	**131 ns**	
13	VIDEO OUT Settling Time:	50 ns With in ±70 mV of final value @-10 dBm	**< 50ns**	

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

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14	VIDEO OUT Recovery Time:	1 us MAX to within 1 dB of baseline for PW <10us & Power = -10dBm	**< 1us**	PMI QA3
15	VIDEO OUT Video Frequency Flatness:	±2.0 dB MAX @25C	**±1.07 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	**1.3ms**	
		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	**147 mV**	

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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. Lutz **Date:** 8-13-24

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LOG TRANSFER VS. FREQUENCY
Model: ERDLVA-218-65-70MV-70
Tested By: Jim Hopson
Date: 08-8-24
Serial Number: PL40179
Test Temp: +25°C

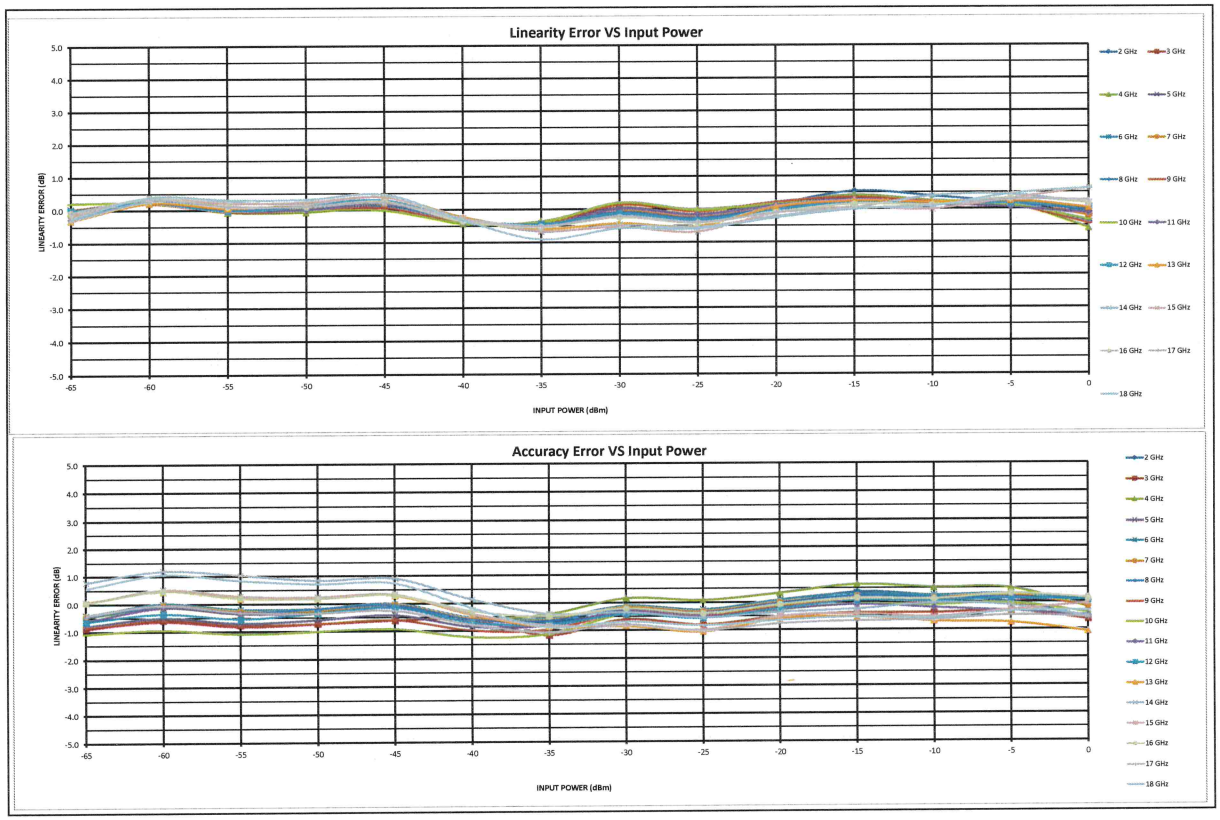
Frequency			-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	RF Input Power (dBm)
2 GHz	Intercept (mV)	4888	284	669	1004	1360	1726	2038	2381	2758	3099	3485	3867	4209	4545	4859	Measured Value (mV)
	Slope (mV/dB)	70.63	-13	19	1	3	16	-25	-35	-11	-23	9	38	27	10	-29	Error (mV)
			-0.19	0.27	0.01	0.05	0.23	-0.35	-0.50	-0.16	-0.33	0.13	0.54	0.38	0.14	-0.41	0.54 Linearity Error (dB)
			-0.44	0.02	-0.23	-0.18	0.01	-0.56	-0.70	-0.35	-0.52	-0.04	0.37	0.22	-0.01	-0.56	0.70 Accuracy Error (dB)
3 GHz	Intercept (mV)	4865	253	627	967	1322	1683	2004	2349	2741	3079	3453	3814	4166	4524	4854	Measured Value (mV)
	Slope (mV/dB)	70.93	-2	18	3	3	10	-24	-34	4	-13	7	13	10	14	-11	Error (mV)
			-0.02	0.25	0.04	0.05	0.14	-0.34	-0.47	0.05	-0.18	0.09	0.18	0.15	0.19	-0.15	0.47 Linearity Error (dB)
			-0.88	-0.58	-0.75	-0.72	-0.60	-0.60	-1.15	-0.59	-0.80	-0.50	-0.38	-0.38	-0.31	-0.63	1.15 Accuracy Error (dB)
4 GHz	Intercept (mV)	4927	282	659	995	1352	1719	2040	2402	2795	3142	3512	3886	4230	4581	4885	Measured Value (mV)
	Slope (mV/dB)	71.41	-3	17	-4	-4	6	-30	-25	11	0	13	30	17	11	-42	Error (mV)
			-0.04	0.24	-0.06	-0.06	0.08	-0.43	-0.36	0.15	0.01	0.19	0.43	0.24	0.16	-0.58	0.58 Linearity Error (dB)
			-0.47	-0.12	-0.36	-0.29	-0.09	-0.54	-0.40	0.17	0.09	0.34	0.64	0.52	0.50	-0.19	0.64 Accuracy Error (dB)
5 GHz	Intercept (mV)	4906	259	633	971	1332	1696	2018	2373	2764	3107	3485	3855	4199	4554	4893	Measured Value (mV)
	Slope (mV/dB)	71.53	2	19	-1	3	9	-27	-29	4	-11	10	22	8	6	-13	Error (mV)
			0.03	0.26	-0.01	0.04	0.12	-0.37	-0.41	0.06	-0.15	0.14	0.31	0.12	0.08	-0.18	0.41 Linearity Error (dB)
			-0.79	-0.49	-0.70	-0.58	-0.41	-0.85	-0.81	-0.27	-0.40	-0.04	0.20	0.08	0.12	-0.07	0.85 Accuracy Error (dB)
6 GHz	Intercept (mV)	4912	287	667	1006	1360	1724	2042	2391	2775	3117	3495	3864	4211	4567	4906	Measured Value (mV)
	Slope (mV/dB)	71.09	-4	21	4	3	12	-26	-32	-4	-17	5	19	10	11	-6	Error (mV)
			-0.05	0.29	0.06	0.04	0.16	-0.36	-0.46	-0.05	-0.24	0.07	0.26	0.14	0.15	-0.08	0.46 Linearity Error (dB)
			-0.40	-0.01	-0.20	-0.18	-0.02	-0.51	-0.56	-0.11	-0.26	0.10	0.33	0.25	0.30	0.11	0.56 Accuracy Error (dB)
7 GHz	Intercept (mV)	4903	284	665	1002	1357	1723	2039	2388	2772	3113	3489	3857	4205	4565	4888	Measured Value (mV)
	Slope (mV/dB)	70.96	-7	20	2	2	13	-25	-31	-2	-16	5	19	12	17	-15	Error (mV)
			-0.09	0.28	0.03	0.03	0.19	-0.36	-0.44	-0.03	-0.22	0.08	0.26	0.17	0.24	-0.21	0.44 Linearity Error (dB)
			-0.44	-0.04	-0.26	-0.22	-0.03	-0.55	-0.60	-0.15	-0.32	0.01	0.23	0.17	0.27	-0.15	0.60 Accuracy Error (dB)
8 GHz	Intercept (mV)	4905	284	662	999	1360	1722	2037	2386	2768	3110	3487	3858	4205	4559	4903	Measured Value (mV)
	Slope (mV/dB)	71.05	-3	20	2	8	14	-26	-32	-6	-19	3	19	10	9	-2	Error (mV)
			-0.04	0.28	0.03	0.11	0.20	-0.37	-0.45	-0.08	-0.26	0.04	0.26	0.15	0.13	-0.03	0.45 Linearity Error (dB)
			-0.44	-0.08	-0.30	-0.18	-0.05	-0.58	-0.63	-0.21	-0.36	-0.01	0.25	0.17	0.19	0.07	0.63 Accuracy Error (dB)
9 GHz	Intercept (mV)	4889	255	624	963	1322	1684	2009	2363	2759	3101	3478	3845	4191	4540	4857	Measured Value (mV)
	Slope (mV/dB)	71.34	3	15	-2	0	5	-27	-29	10	-5	16	26	15	8	-32	Error (mV)
			0.04	0.21	-0.03	0.00	0.07	-0.37	-0.41	0.14	-0.06	0.22	0.36	0.21	0.11	-0.45	0.45 Linearity Error (dB)
			-0.85	-0.62	-0.81	-0.72	-0.58	-0.98	-0.96	-0.34	-0.49	-0.14	0.06	-0.03	-0.08	-0.59	0.98 Accuracy Error (dB)
10 GHz	Intercept (mV)	4894	240	601	944	1302	1661	1992	2352	2754	3097	3469	3836	4186	4544	4870	Measured Value (mV)
	Slope (mV/dB)	71.84	15	17	1	0	0	-29	-28	15	-1	12	19	10	9	-24	Error (mV)
			0.21	0.24	0.01	0.00	-0.01	-0.40	-0.39	0.21	-0.02	0.16	0.27	0.14	0.12	-0.34	0.40 Linearity Error (dB)
			-1.06	-0.94	-1.08	-1.00	-0.91	-1.22	-1.11	-0.41	-0.55	-0.27	-0.07	-0.10	-0.02	-0.40	1.22 Accuracy Error (dB)
11 GHz	Intercept (mV)	4873	272	659	996	1349	1715	2029	2372	2759	3099	3471	3835	4179	4523	4864	Measured Value (mV)
	Slope (mV/dB)	70.50	-18	16	1	1	15	-24	-33	1	-11	8	20	11	3	-9	Error (mV)
			-0.26	0.23	0.01	0.02	0.21	-0.34	-0.47	0.02	-0.16	0.12	0.28	0.16	0.04	-0.12	0.47 Linearity Error (dB)
			-0.61	-0.12	-0.34	-0.34	-0.15	-0.69	-0.83	-0.34	-0.52	-0.24	-0.08	-0.20	-0.32	-0.49	0.83 Accuracy Error (dB)
12 GHz	Intercept (mV)	4900	271	643	982	1349	1716	2030	2376	2754	3096	3474	3845	4196	4556	4903	Measured Value (mV)
	Slope (mV/dB)	71.22	1	17	-1	10	21	-21	-31	-9	-23	-1	14	8	12	3	Error (mV)
			0.01	0.23	-0.01	0.15	0.30	-0.29	-0.43	-0.13	-0.33	-0.02	0.19	0.12	0.17	0.05	0.43 Linearity Error (dB)
			-0.62	-0.35	-0.54	-0.34	-0.13	-0.68	-0.77	-0.41	-0.56	-0.20	0.06	0.04	0.15	0.07	0.77 Accuracy Error (dB)
13 GHz	Intercept (mV)	4821	320	701	1035	1387	1747	2049	2369	2724	3062	3447	3804	4145	4494	4823	Measured Value (mV)
	Slope (mV/dB)	68.92	-21	16	5	13	28	-15	-39	-29	-35	5	17	14	18	2	Error (mV)
			-0.30	0.23	0.08	0.18	0.41	-0.21	-0.57	-0.42	-0.51	0.07	0.25	0.20	0.26	0.04	0.57 Linearity Error (dB)
			0.07	0.47	0.21	0.20	0.31	-0.41	-0.87	-0.84	-1.04	-0.58	-0.52	-0.68	-0.73	-1.07	1.07 Accuracy Error (dB)
14 GHz	Intercept (mV)	4850	370	752	1093	1432	1789	2088	2402	2759	3097	3463	3823	4191	4537	4861	Measured Value (mV)
	Slope (mV/dB)	68.63	-19	20	18	13	27	-17	-46	-32	-37	-15	2	27	30	11	Error (mV)
			-0.28	0.29	0.26	0.19	0.40	-0.25	-0.67	-0.47	-0.55	-0.21	0.03	0.39	0.43	0.16	0.67 Linearity Error (dB)
			0.78	1.20	1.03	0.84	0.90	0.14	-0.40	-0.34	-0.55	-0.35	-0.25	-0.03	-0.12	-0.53	1.20 Accuracy Error (dB)
15 GHz	Intercept (mV)	4852	319	705	1041	1391	1749	2051	2373	2728	3066	3453	3812	4156	4526	4895	Measured Value (mV)
	Slope (mV/dB)	69.57	-11	27	15	17	28	-18	-44	-37	-47	-8	3	-1	22	43	Error (mV)
			-0.16	0.39	0.22	0.25	0.40	-0.26	-0.64	-0.53	-0.67	-0.11	0.05	-0.01	0.31	0.61	0.67 Linearity Error (dB)
			0.06	0.53	0.30	0.26	0.34	-0.38	-0.81	-0.78	-0.99	-0.50	-0.41	-0.53	-0.28	-0.05	0.99 Accuracy Error (dB)
16 GHz	Intercept (mV)	4897	318	701	1036	1386	1748	2058	2397	2769	3108	3483	3852	4202	4568	4909	Measured Value (mV)
	Slope (mV/dB)	70.38	-5	26	10	8	18	-24	-37	-17	-30	-7	10	8	23	12	Error (mV)
			-0.07	0.38	0.14	0.11	0.25	-0.34	-0.53	-0.24	-0.42	-0.10	0.15	0.12	0.32	0.17	0.53 Linearity Error (dB)
			0.04	0.47	0.23	0.19	0.32	-0.28	-0.47	-0.20	-0.39	-0.07	0.16	0.13	0.32	0.15	0.47 Accuracy Error (dB)
17 GHz	Intercept (mV)	4842	286	665	999	1349	1707	2023	2356	2727	3064	3434	3793	4148	4512	4860	Measured Value (mV)
	Slope (mV/dB)	70.02	-5	24	8	8	16	-18	-35	-14	-27	-8	1	6	20	18	Error (mV)
			-0.07	0.35	0.12	0.12	0.23	-0.26	-0.50	-0.20	-0.39	-0.11	0.02	0.09	0.29	0.26	0.50 Linearity Error (dB)
			-0.41	-0.04	-0.30	-0.34	-0.26	-0.78	-1.05	-0.79	-1.01	-0.77	-0.67	-0.64	-0.48	-0.54	1.05 Accuracy Error (dB)
18 GHz	Intercept (mV)	4834	355	742	1079	1423	1777	2066	2369	2735	3077	3443	3804	4153	4522	4877	Measured Value (mV)
	Slope (mV/dB)	68.67	-16	28	21	22	33	-22	-62	-39	-41	-18	0	5	31	43	Error (mV)
			-0.23	0.40	0.31	0.32	0.48	-0.32	-0.90	-0.57	-0.59	-0.26	-0.01	0.08	0.45	0.62	0.90 Linearity Error (dB)
			0.57	1.06	0.84	0.71	0.73	-0.17	-0.87	-0.68	-0.83	-0.64	-0.52	-0.57	-0.34	-0.30	1.06 Accuracy Error (dB)

Output Vos: 25.0 mV

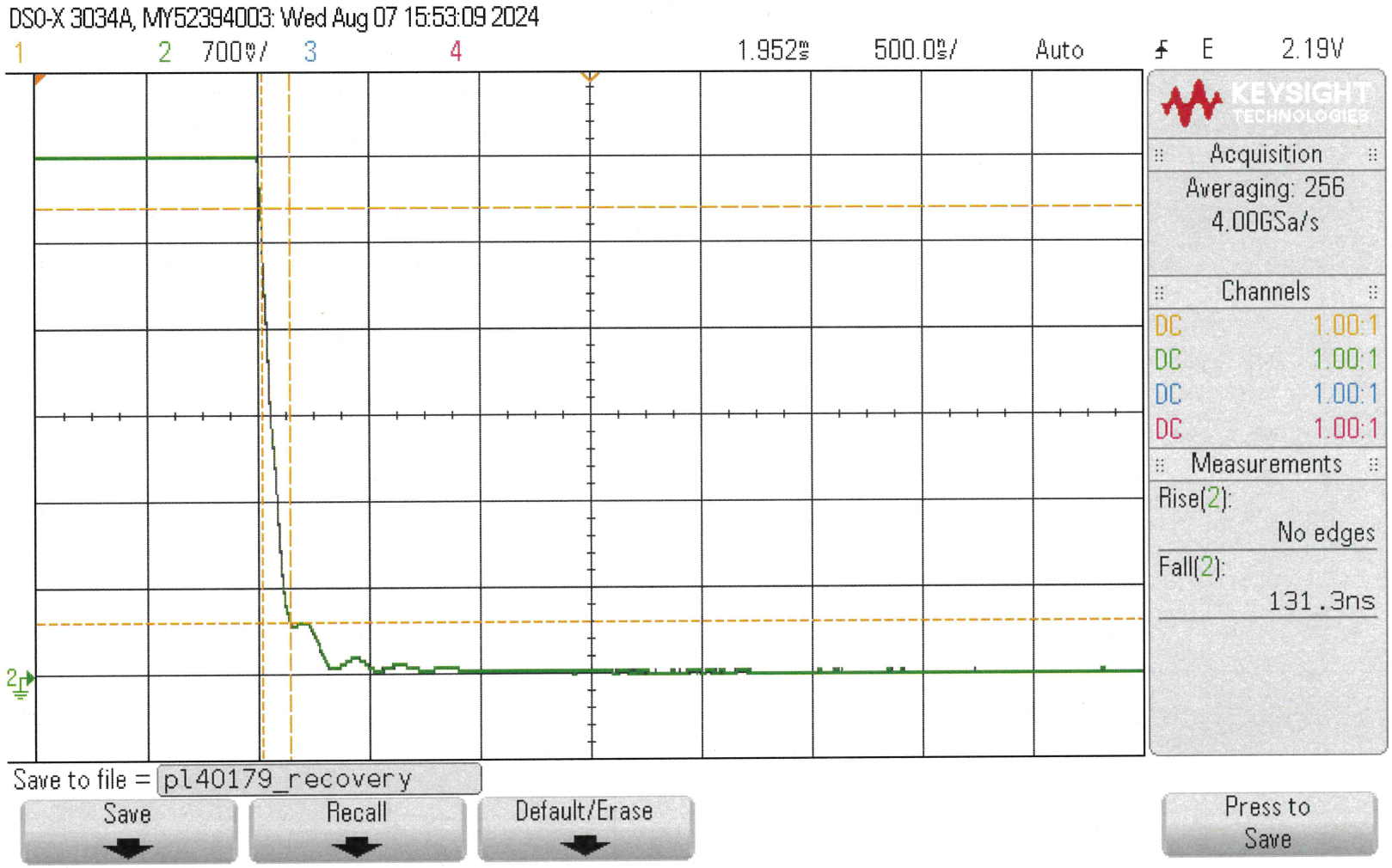
Avg Slope:	70.5 mV/dB	370	752	1093	1432	1789	2088	2402	2795	3142	3512	3886	4230	4581	4909	Max Measured (mV)
Max Slope:	71.8 mv/dB	240	601	944	1302	1661	1992	2349	2724	3062	3434	3793	4145	4494	4823	Min Measured (mV)
Min Slope:	68.6 mv/dB	0.92	1.07	1.06	0.92	0.91	0.68	0.38	0.50	0.57	0.55	0.66	0.60	0.62	0.61	Flatness Error (+/-dB)

PL40179

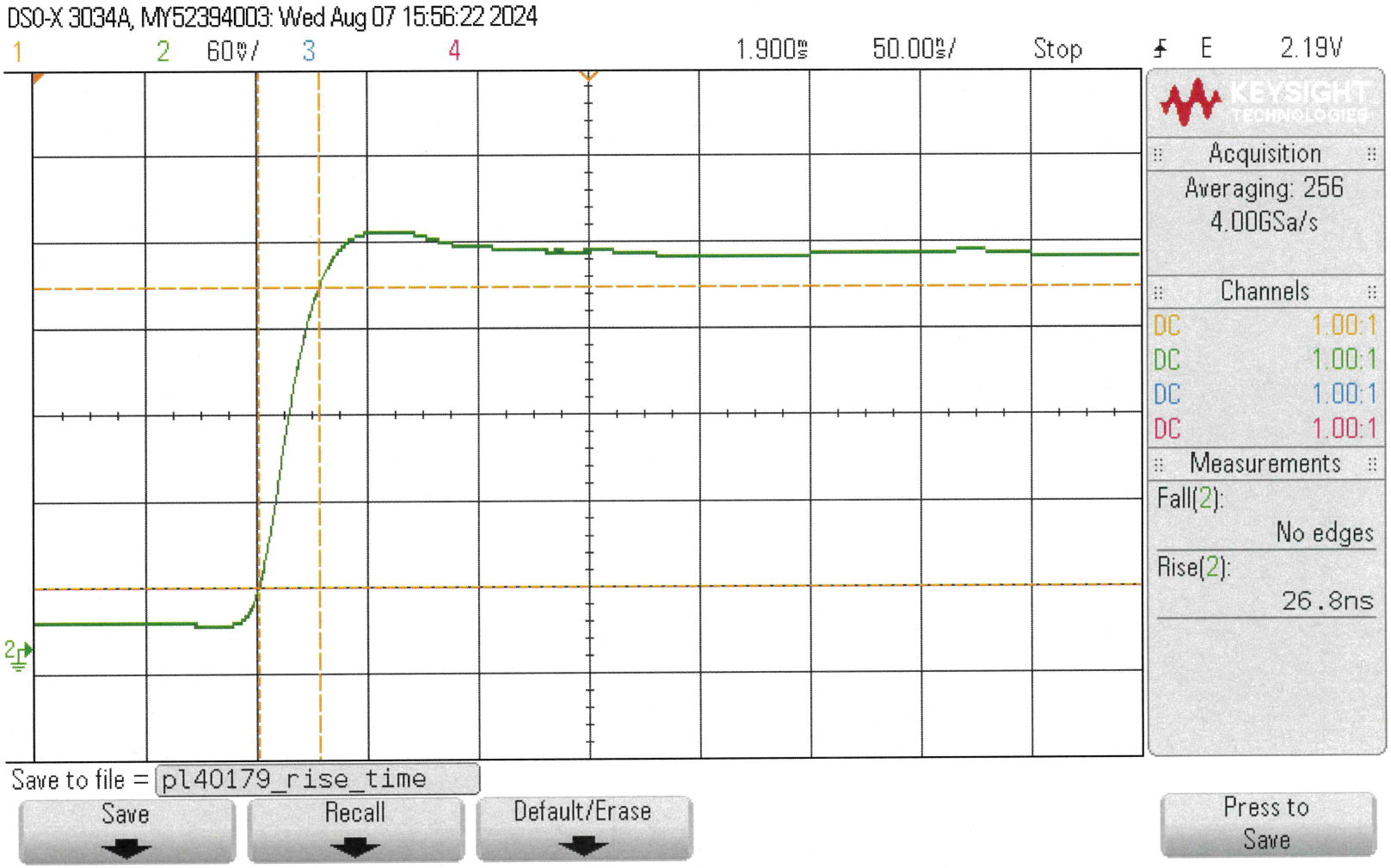
25°C


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

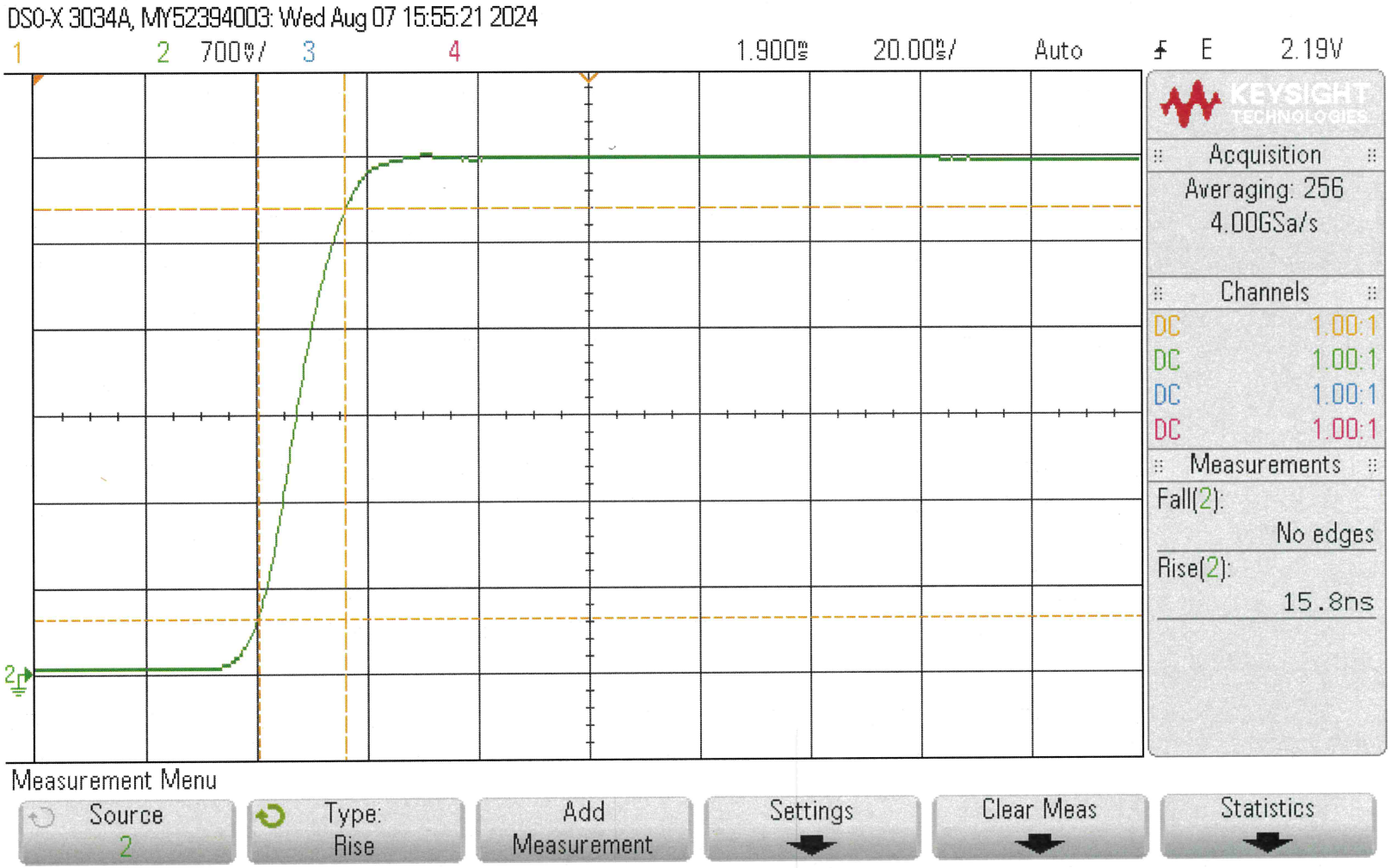
PL40179
Recovery



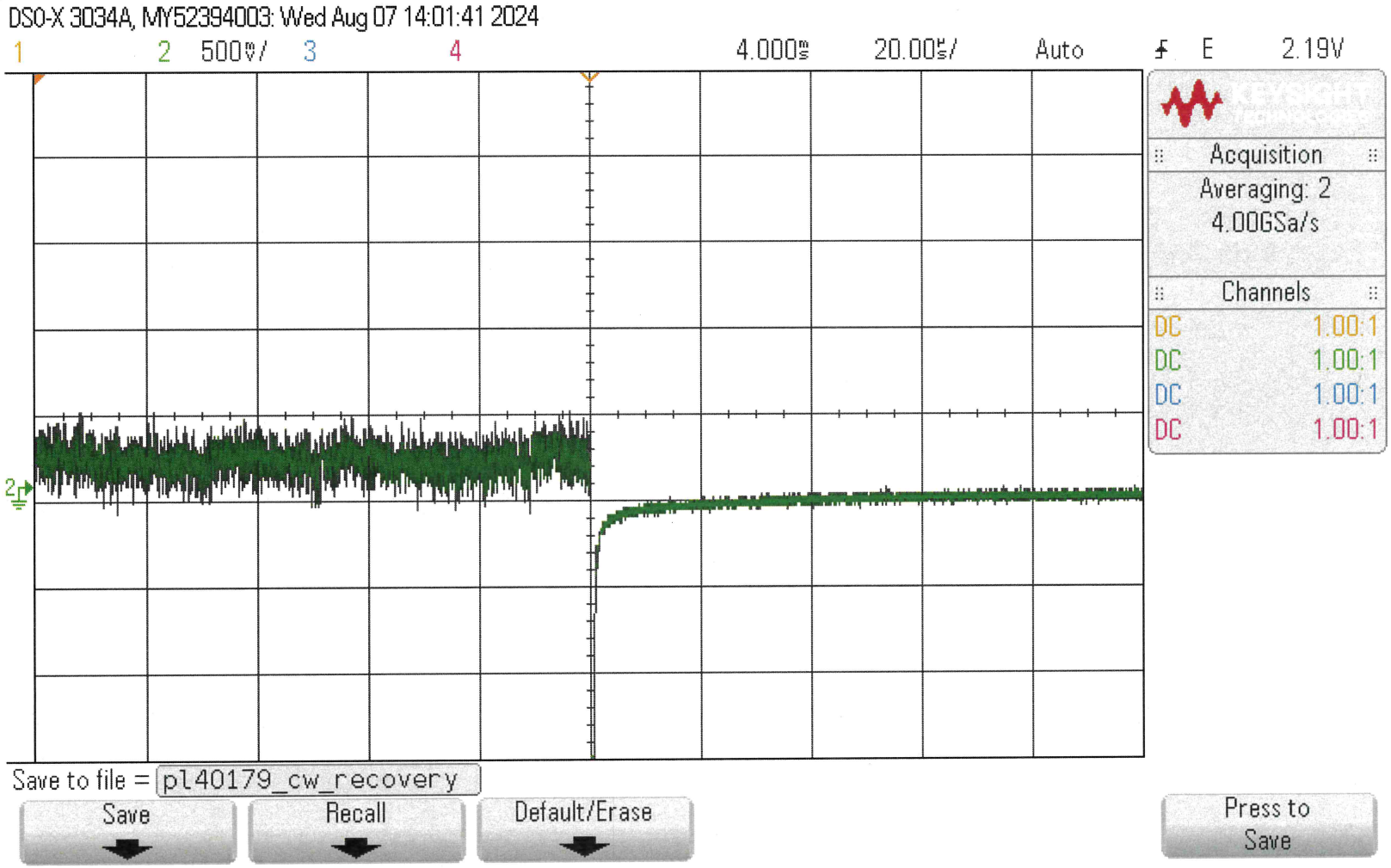
PL40179
Rise Time



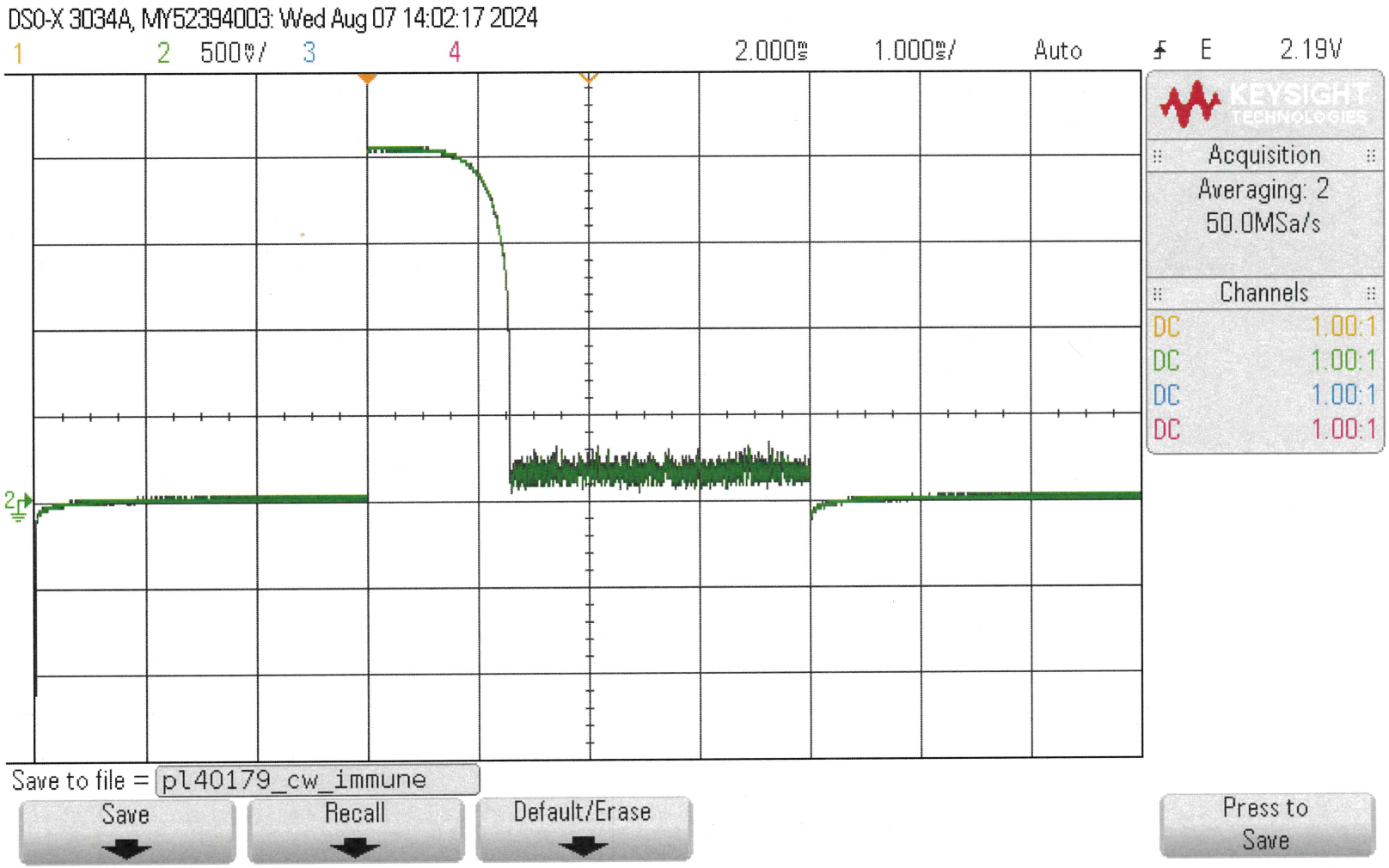
PL40179
settle



PL40179
cw Recovery



PL40179
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.: 27342040 Customer MODEL No.: NA	SERIAL No: PL40179/2317
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: CW recovery out of spec.		
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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