SUMMARY TEST DATA
ON
ERDLVA-218-CW-75MV-93

PL46224/2422

Customer:		**Tested By:**	Jim Hopson
SO No:		**Temperature:**	-25°C +25C +85C
Model No:	ERDLVA-218-CW-75MV-93	**Date:**	5/28/2024
Serial No:	PL46224/2422	**Drawing No:**	2764240 **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:	2.5:1 MAX @ -20 dBm	**1.70:1 MAX**	
3	Input Power:	23 dBm Max.	**Pass**	
4	VIDEO OUT TSS:	-42 dBm MAX	**-43dBm**	
5	VIDEO OUT Dynamic Range:	-40 to +20 dBm	**-40 to +20 dBm**	
6	VIDEO OUT Log Slope Fixed:	75 ± 10mV/dB	**73.2-7.9mV/dB**	
7	VIDEO OUT Log Linearity:	±1.0 dB MAX @25C ±1.5 dB MAX @ Over Temperature	**See attached Graphs**	
8	VIDEO OUT DC Offset:	0 to 125 mV @25C	**42mV**	
9	VIDEO OUT Rise Time (10% to 90%):	25 ns MAX	**15.0ns**	
10	VIDEO OUT Settling Time:	±0.5dB within 25ns from 90%	**<0.5dB**	

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11	VIDEO OUT Recovery	500ns MAX	**400ns**	PMI QA3
12	Video Frequency Flatness:	3.0 dB p-p MAX @ -20dBm	1.60dB p-p MAX @ -20dBm	
13	VIDEO OUT CW Immunity:	CW Immune Power -50 to -10 dBm	**Pass**	
		CW Attack Time 1500us	**1200us**	
		CW Release Time 250us	**<100us**	
17	Pulse droop	1dB Max for 250us pulses	**<1dB**	
18	VIDEO OUT Pulse Response, input Signal:	100 ns to 300 us	**100 ns to 300 us**	
19	VIDEO LOAD Impedance:	93 ±1 Ω	**93Ω**	
21	VIDEO OUT Noise Level (RMS):	102 mV max	**31.0mV**	
22	VIDEO OUT Propagation Delay:	35 ns MAX from RF 10% to 10% video (excluding cable)	**<35ns**	
23	Power Supply	+12 V @ 250 mA MAX -12 V @ 250 mA MAX	**+12 V @ 170 mA** **-12 V @ 70 mA**	5.30.24

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LOG TRANSFER WITH FREQUENCY
MODEL: ERDLVA-218-CW-75MV-93
TESTED BY: Jim Hopson
DATE: 5-29-24
SERIAL NO: PL46224
Test Temp: +85C

PLANAR MONOLITHICS INDUSTRIES
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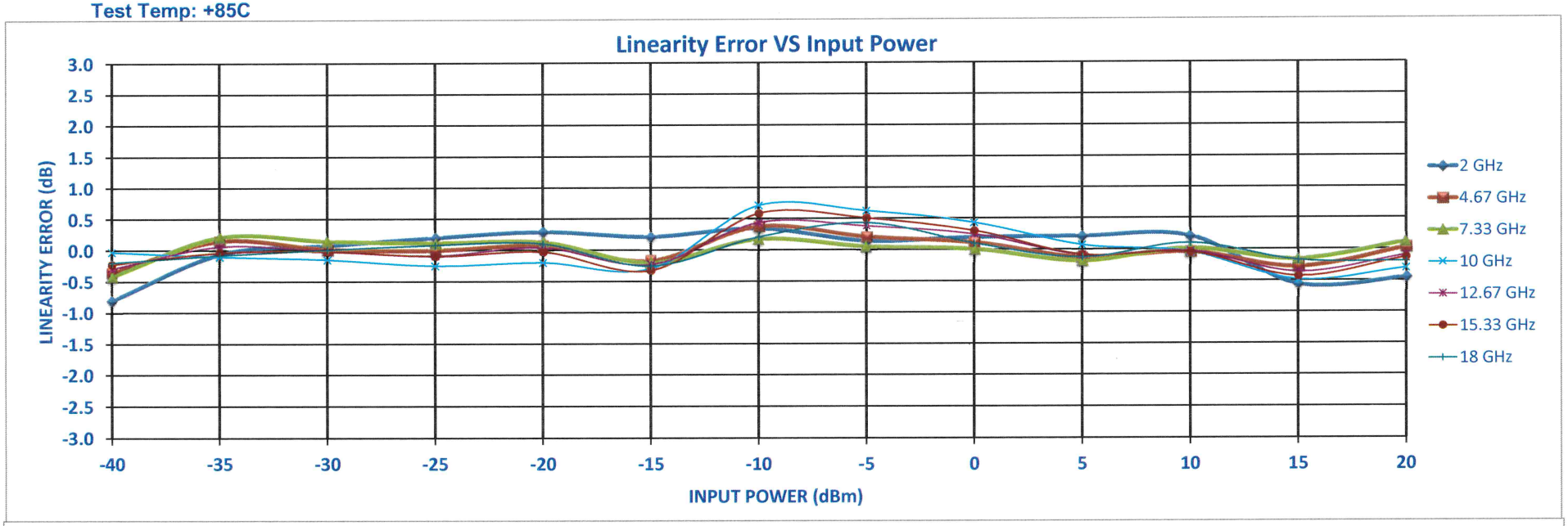
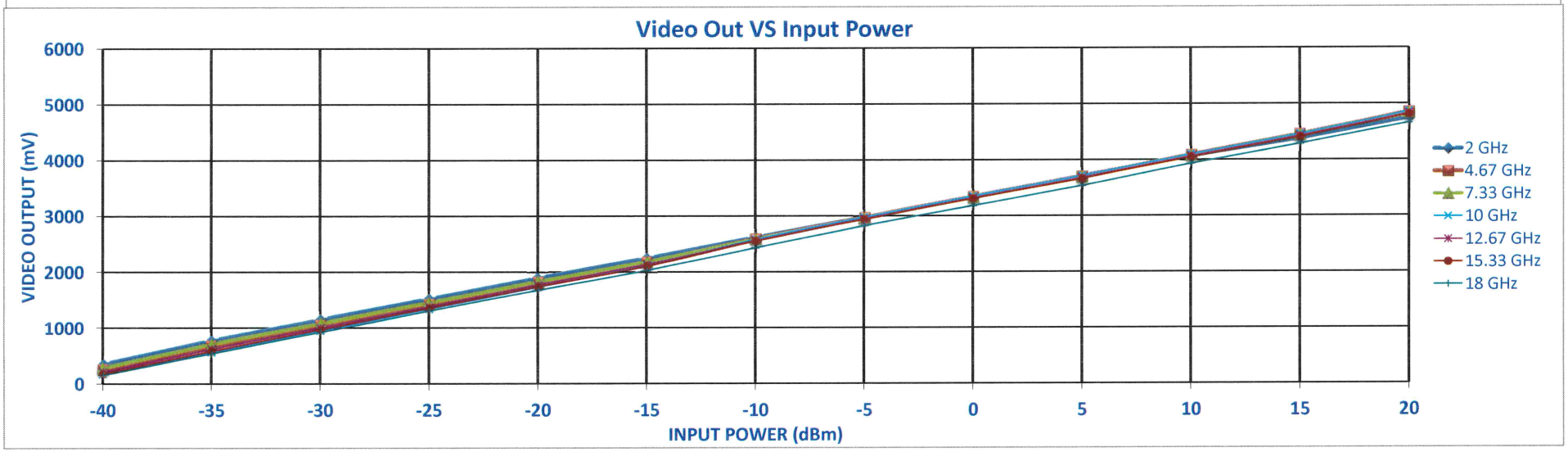
Frequency			-40	-35	-30	-25	-20	-15	-10	-5	0	5	10	15	20	RF Input Power (dBm)
2 GHz	INTERCEPT (mV)	3327	356	774	1148	1521	1892	2250	2624	2973	3341	3706	4070	4378	4750	Measured Value (mV)
	SLOPE (mV/dB)	72.8	-59	-5	5	14	21	15	25	10	14	15	15	-41	-33	Error (mV)
			-0.81	-0.06	0.07	0.20	0.29	0.21	0.35	0.14	0.20	0.21	0.21	-0.56	-0.45	LINEARITY ERROR (dB)
4.67 GHz	INTERCEPT (mV)	3331	262	680	1050	1429	1815	2177	2599	2966	3339	3701	4088	4450	4854	Measured Value (mV)
	SLOPE (mV/dB)	76.1	-26	11	1	0	6	-13	29	16	8	-10	-3	-21	2	Error (mV)
			-0.35	0.15	0.01	0.00	0.07	-0.17	0.38	0.21	0.11	-0.13	-0.04	-0.28	0.03	LINEARITY ERROR (dB)
7.33 GHz	INTERCEPT (mV)	3329	297	719	1089	1462	1838	2189	2592	2958	3330	3691	4081	4443	4839	Measured Value (mV)
	SLOPE (mV/dB)	75.0	-31	16	11	8	9	-15	13	4	1	-14	1	-12	9	Error (mV)
			-0.41	0.21	0.14	0.11	0.12	-0.20	0.17	0.05	0.01	-0.18	0.02	-0.16	0.12	LINEARITY ERROR (dB)
10 GHz	INTERCEPT (mV)	3318	181	567	955	1339	1735	2119	2590	2975	3352	3715	4098	4455	4861	Measured Value (mV)
	SLOPE (mV/dB)	78.4	-2	-8	-12	-20	-15	-23	56	49	34	6	-3	-38	-24	Error (mV)
			-0.03	-0.10	-0.15	-0.25	-0.20	-0.30	0.71	0.63	0.44	0.07	-0.04	-0.49	-0.30	LINEARITY ERROR (dB)
12.67 GH	INTERCEPT (mV)	3302	220	629	1006	1383	1775	2137	2571	2949	3321	3678	4065	4422	4825	Measured Value (mV)
	SLOPE (mV/dB)	76.5	-22	5	-1	-6	3	-17	34	29	19	-7	-2	-28	-7	Error (mV)
			-0.29	0.06	-0.01	-0.08	0.04	-0.23	0.44	0.39	0.25	-0.09	-0.03	-0.36	-0.09	LINEARITY ERROR (dB)
15.33 GH	INTERCEPT (mV)	3286	190	589	975	1354	1744	2106	2561	2940	3309	3664	4052	4407	4815	Measured Value (mV)
	SLOPE (mV/dB)	77.0	-17	-3	-1	-7	-2	-25	45	39	23	-6	-3	-33	-10	Error (mV)
			-0.22	-0.03	-0.02	-0.09	-0.03	-0.32	0.59	0.51	0.30	-0.08	-0.04	-0.43	-0.13	LINEARITY ERROR (dB)
18 GHz	INTERCEPT (mV)	3171	160	543	924	1304	1680	2028	2437	2829	3178	3536	3927	4281	4654	Measured Value (mV)
	SLOPE (mV/dB)	74.9	-15	-6	0	6	7	-19	15	33	7	-9	7	-13	-15	Error (mV)
			-0.20	-0.08	0.01	0.08	0.10	-0.26	0.21	0.44	0.10	-0.12	0.10	-0.18	-0.20	LINEARITY ERROR (dB)
	Flatness P-P		2.6	3.0	3.0	2.8	2.8	3.0	2.4	2.0	2.2	2.4	2.2	2.2	2.8	

Slope Avg(mv/dB)	75.8

LOG TRANSFER WITH FREQUENCY
MODEL: ERDLVA-218-CW-75MV-93
SERIAL NO: PL46224
Test Temp: +85C





LOG TRANSFER WITH FREQUENCY
MODEL: ERDLVA-218-CW-75MV-93
TESTED BY: Jim Hopson
DATE: 5-29-24
SERIAL NO: PL46224
Test Temp: +25C

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Frequency			-40	-35	-30	-25	-20	-15	-10	-5	0	5	10	15	20	RF Input Power (dBm)
2 GHz	INTERCEPT (mV)	3407	440	829	1209	1584	1952	2323	2709	3054	3429	3801	4159	4467	4818	Measured Value (mV)
	SLOPE (mV/dB)	73.2	-40	-16	-2	7	9	14	34	13	22	28	20	-37	-52	Error (mV)
			-0.54	-0.22	-0.03	0.09	0.12	0.19	0.47	0.18	0.30	0.39	0.28	-0.51	-0.72	LINEARITY ERROR (dB)
4.67 GHz	INTERCEPT (mV)	3424	371	768	1134	1513	1893	2271	2689	3055	3438	3808	4190	4550	4938	Measured Value (mV)
	SLOPE (mV/dB)	76.1	-7	9	-6	-8	-8	-11	26	11	14	3	4	-17	-9	Error (mV)
			-0.10	0.12	-0.08	-0.10	-0.11	-0.15	0.34	0.15	0.18	0.04	0.05	-0.22	-0.12	LINEARITY ERROR (dB)
7.33 GHz	INTERCEPT (mV)	3434	426	817	1192	1565	1930	2292	2689	3053	3439	3809	4194	4554	4934	Measured Value (mV)
	SLOPE (mV/dB)	75.0	-8	8	8	6	-4	-17	5	-6	5	0	10	-5	0	Error (mV)
			-0.11	0.11	0.11	0.08	-0.06	-0.23	0.06	-0.08	0.06	0.00	0.13	-0.07	0.00	LINEARITY ERROR (dB)
10 GHz	INTERCEPT (mV)	3446	332	727	1092	1472	1868	2260	2717	3085	3476	3852	4227	4583	4977	Measured Value (mV)
	SLOPE (mV/dB)	77.9	2	7	-17	-27	-20	-17	50	29	30	17	3	-31	-26	Error (mV)
			0.02	0.09	-0.22	-0.34	-0.26	-0.22	0.64	0.37	0.39	0.22	0.03	-0.40	-0.34	LINEARITY ERROR (dB)
12.67 GH	INTERCEPT (mV)	3412	359	755	1118	1494	1881	2253	2675	3047	3433	3799	4181	4537	4922	Measured Value (mV)
	SLOPE (mV/dB)	76.2	-5	10	-8	-13	-7	-16	25	16	21	6	6	-19	-15	Error (mV)
			-0.06	0.13	-0.11	-0.17	-0.09	-0.21	0.32	0.21	0.27	0.07	0.08	-0.24	-0.19	LINEARITY ERROR (dB)
15.33 GH	INTERCEPT (mV)	3405	337	732	1100	1477	1862	2231	2672	3043	3429	3793	4176	4531	4922	Measured Value (mV)
	SLOPE (mV/dB)	76.6	-4	8	-7	-13	-11	-25	33	21	24	5	5	-23	-15	Error (mV)
			-0.05	0.11	-0.09	-0.17	-0.14	-0.32	0.43	0.28	0.32	0.07	0.07	-0.30	-0.19	LINEARITY ERROR (dB)
18 GHz	INTERCEPT (mV)	3313	344	737	1089	1462	1836	2182	2573	2952	3317	3676	4072	4425	4782	Measured Value (mV)
	SLOPE (mV/dB)	74.0	-8	15	-3	0	4	-21	0	9	4	-7	18	1	-12	Error (mV)
			-0.10	0.20	-0.04	0.00	0.05	-0.28	0.00	0.12	0.05	-0.10	0.25	0.02	-0.16	LINEARITY ERROR (dB)
	Flatness P-P		1.4	1.4	1.6	1.6	1.6	1.8	2.0	1.8	2.2	2.4	2.0	2.0	2.6	

Slope Avg(mv/dB)	75.6

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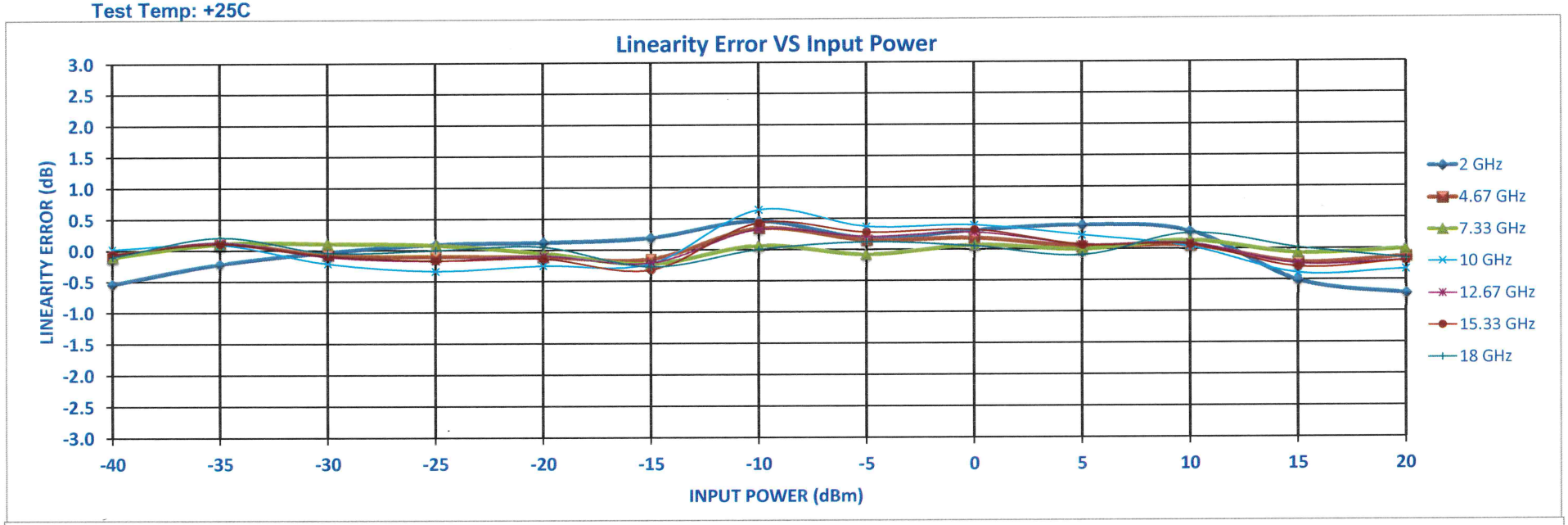
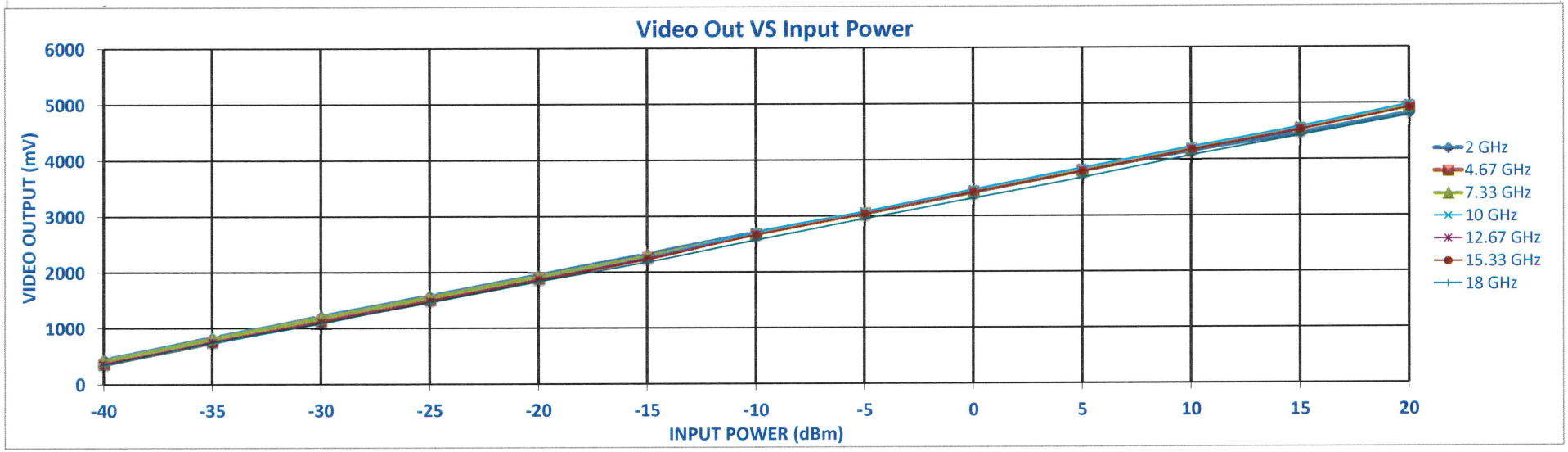
SERIAL NO: PL46224
Test Temp: +25C





LOG TRANSFER WITH FREQUENCY
MODEL: ERDLVA-218-CW-75MV-93
TESTED BY: Jim Hopson
DATE: 5-29-24
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Test Temp: -25C

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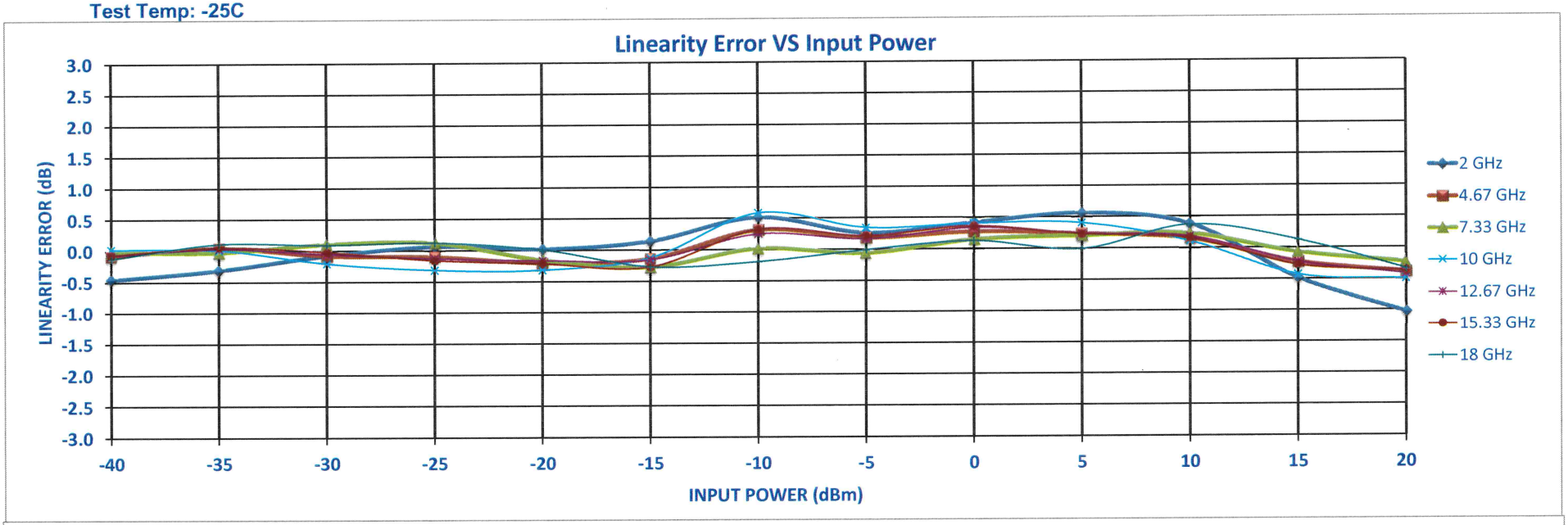
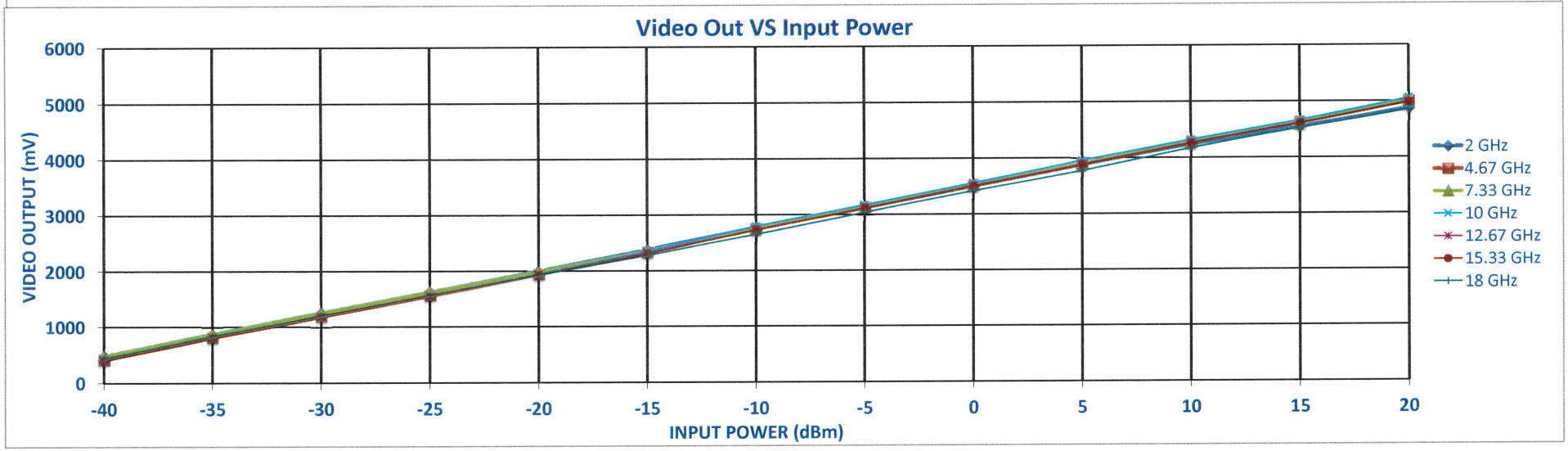
Frequency			-40	-35	-30	-25	-20	-15	-10	-5	0	5	10	15	20	RF Input Power (dBm)
2 GHz	INTERCEPT (mV)	3474	487	867	1253	1633	1999	2377	2774	3124	3505	3885	4241	4546	4875	Measured Value (mV)
	SLOPE (mV/dB)	73.8	-34	-23	-6	5	2	10	38	19	31	42	28	-36	-76	Error (mV)
			-0.46	-0.31	-0.08	0.06	0.02	0.14	0.52	0.26	0.42	0.56	0.39	-0.48	-1.03	LINEARITY ERROR (dB)
4.67 GHz	INTERCEPT (mV)	3497	426	819	1192	1574	1949	2337	2755	3128	3518	3898	4275	4629	5000	Measured Value (mV)
	SLOPE (mV/dB)	76.6	-6	4	-6	-7	-16	-11	24	14	21	18	12	-17	-29	Error (mV)
			-0.08	0.05	-0.08	-0.10	-0.20	-0.14	0.32	0.18	0.27	0.23	0.15	-0.23	-0.38	LINEARITY ERROR (dB)
7.33 GHz	INTERCEPT (mV)	3510	493	869	1256	1634	1990	2358	2757	3128	3521	3902	4281	4635	5000	Measured Value (mV)
	SLOPE (mV/dB)	75.4	-1	-2	8	9	-12	-21	1	-5	11	15	17	-6	-17	Error (mV)
			-0.01	-0.02	0.11	0.12	-0.16	-0.27	0.02	-0.06	0.15	0.20	0.23	-0.07	-0.23	LINEARITY ERROR (dB)
10 GHz	INTERCEPT (mV)	3533	414	803	1176	1558	1948	2353	2799	3170	3565	3955	4322	4670	5055	Measured Value (mV)
	SLOPE (mV/dB)	78.0	2	1	-16	-24	-25	-10	46	27	32	32	8	-34	-39	Error (mV)
			0.03	0.01	-0.21	-0.31	-0.32	-0.13	0.59	0.35	0.41	0.41	0.11	-0.43	-0.50	LINEARITY ERROR (dB)
12.67 GH	INTERCEPT (mV)	3484	425	815	1190	1566	1945	2327	2740	3115	3510	3884	4262	4612	4979	Measured Value (mV)
	SLOPE (mV/dB)	76.3	-6	3	-4	-10	-12	-12	19	13	26	18	14	-17	-32	Error (mV)
			-0.07	0.04	-0.05	-0.13	-0.16	-0.16	0.25	0.16	0.34	0.24	0.19	-0.23	-0.42	LINEARITY ERROR (dB)
15.33 GH	INTERCEPT (mV)	3480	408	801	1178	1551	1930	2309	2738	3113	3508	3881	4259	4609	4986	Measured Value (mV)
	SLOPE (mV/dB)	76.7	-5	5	-1	-12	-16	-21	25	16	28	18	12	-21	-28	Error (mV)
			-0.06	0.06	-0.02	-0.16	-0.21	-0.27	0.32	0.21	0.37	0.23	0.16	-0.28	-0.36	LINEARITY ERROR (dB)
18 GHz	INTERCEPT (mV)	3406	441	828	1196	1568	1929	2278	2653	3036	3416	3775	4173	4524	4859	Measured Value (mV)
	SLOPE (mV/dB)	73.9	-9	8	7	9	1	-20	-14	-1	10	-1	28	9	-25	Error (mV)
			-0.13	0.11	0.09	0.12	0.01	-0.27	-0.19	-0.01	0.13	-0.01	0.37	0.12	-0.34	LINEARITY ERROR (dB)
	Flatness P-P		1.2	0.8	1.0	1.0	1.0	1.4	2.0	1.8	2.0	2.4	2.0	2.0	2.6	

Slope Avg(mv/dB)	75.8

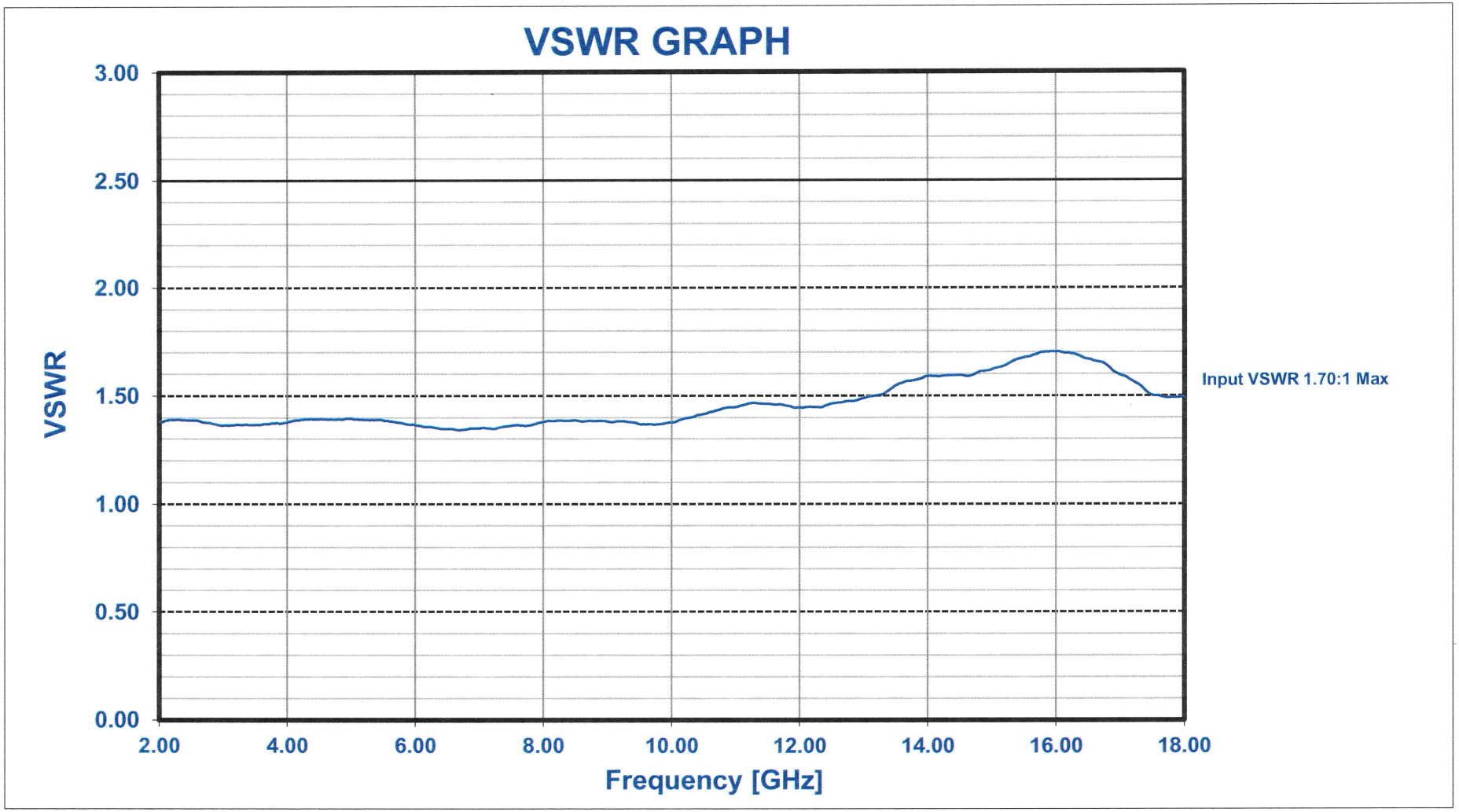
LOG TRANSFER WITH FREQUENCY
MODEL: ERDLVA-218-CW-75MV-93
SERIAL NO: PL46224
Test Temp: -25C





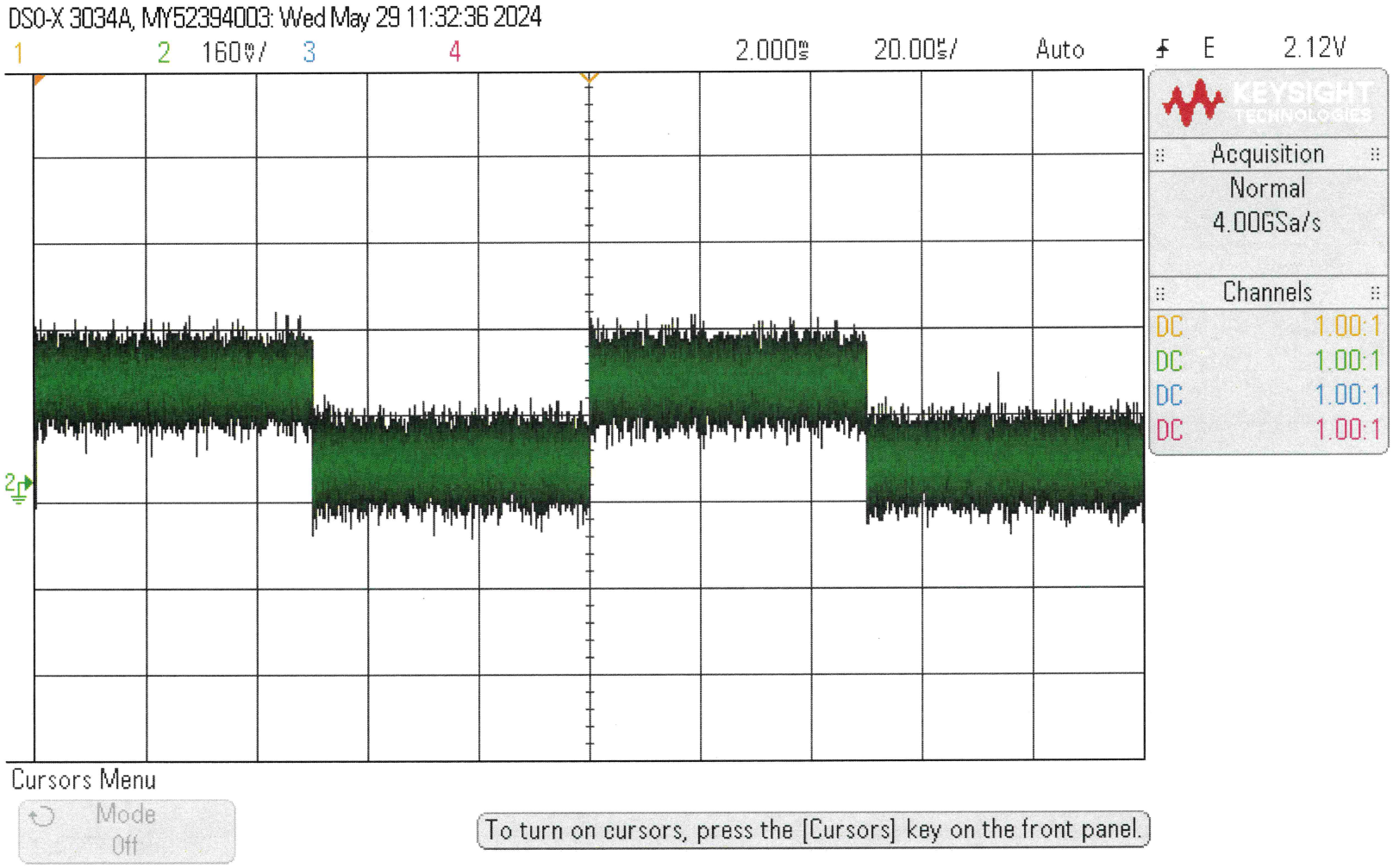
Model Number: ERDLVA-2G18G-CW-75MV
Serial Number: PL46224
Date: 5/29/2024

Temperature: +25C

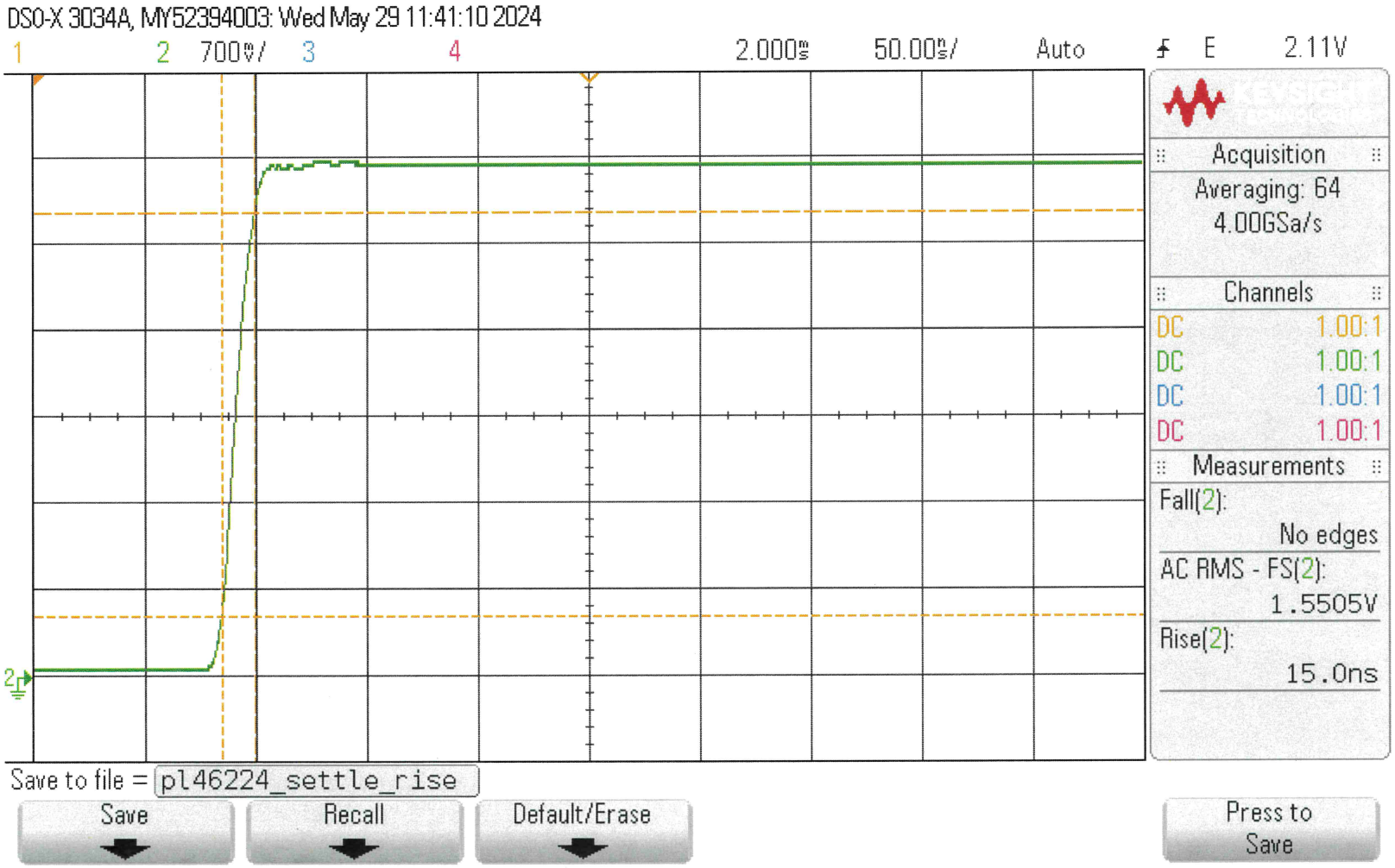


PL46224

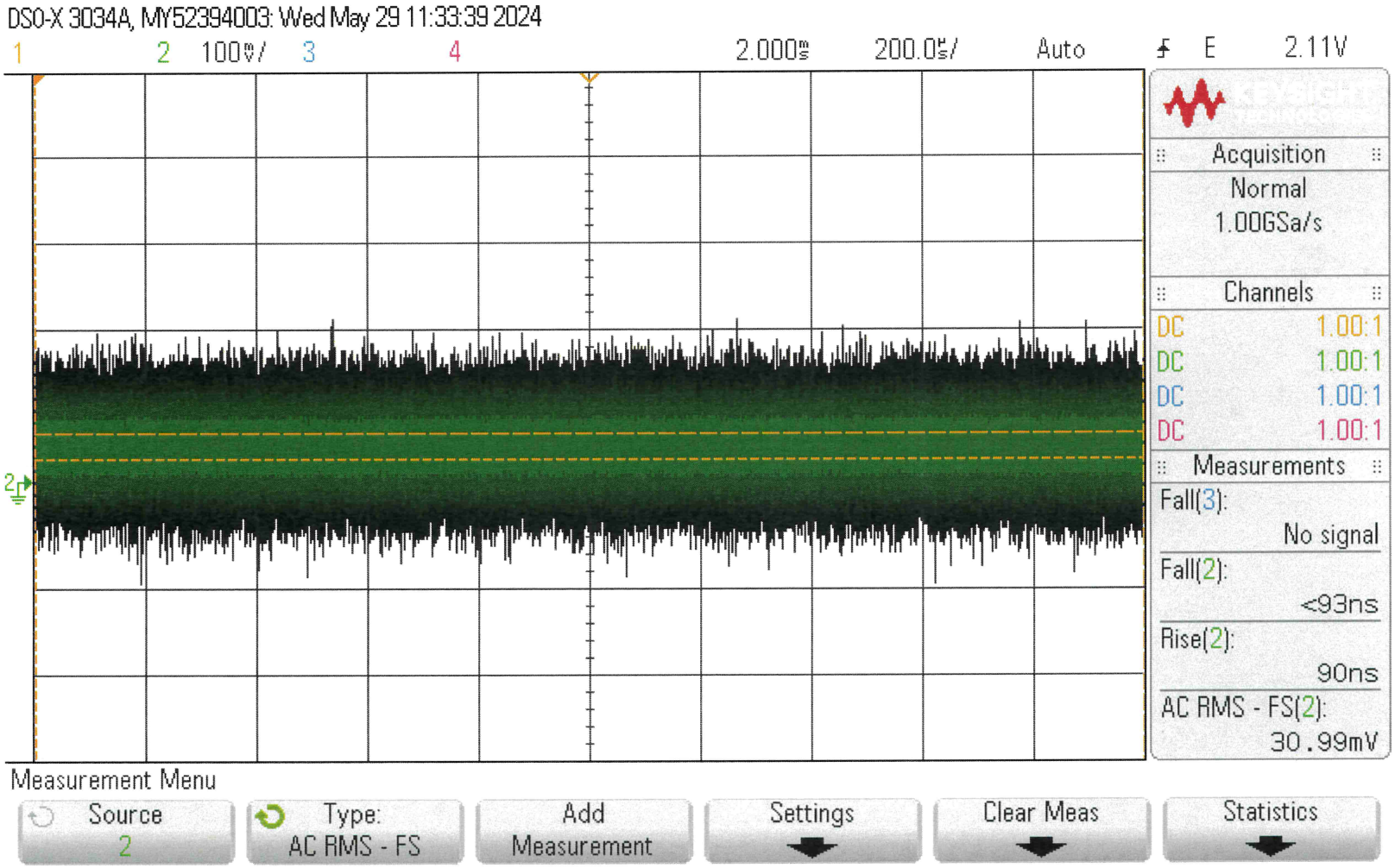
TSS – 43 dbm



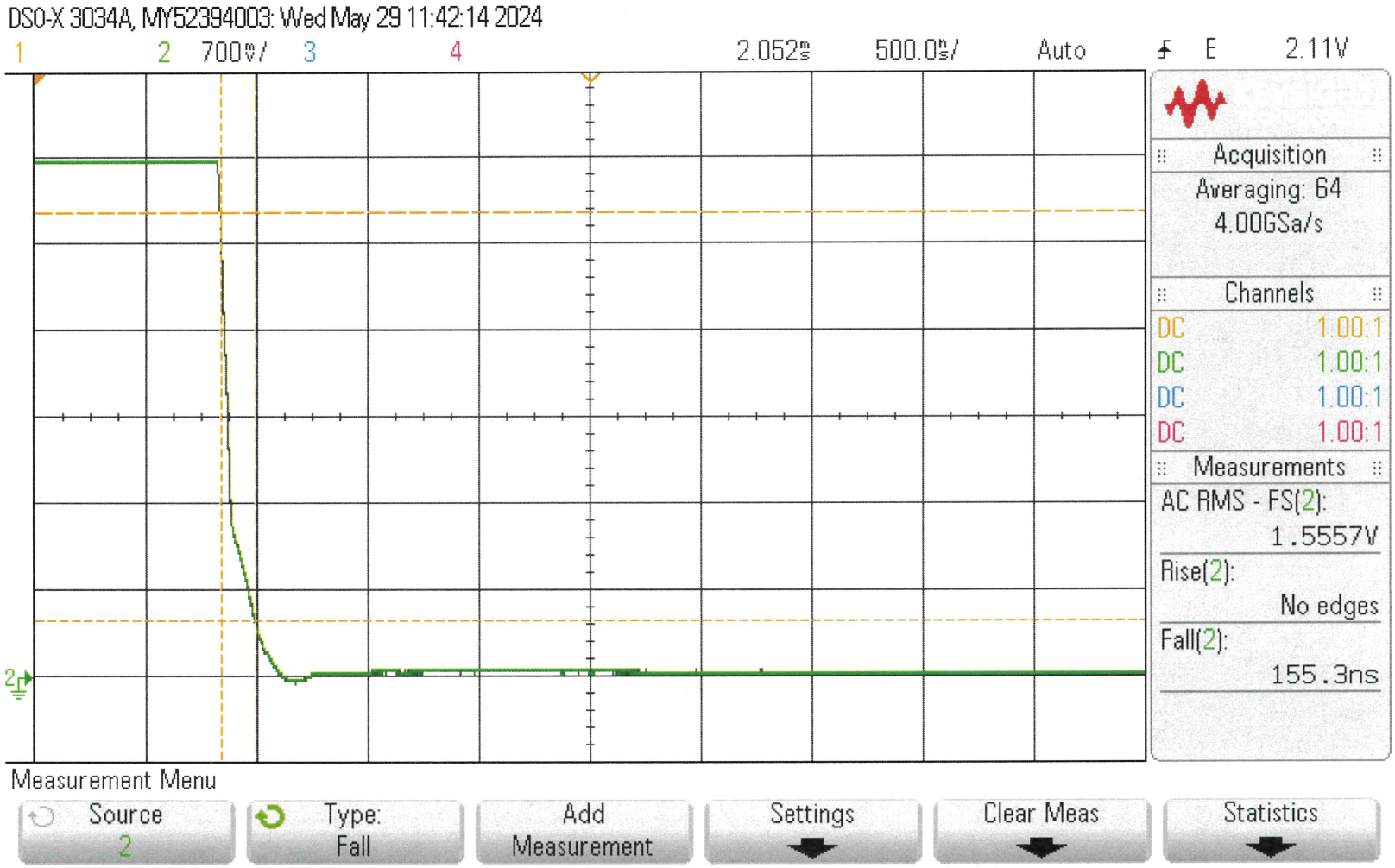
PL46224
settle / rise



PL46224
Rms noise



PL46224
Recovery



PL46224
CW Immune