



**SUMMARY TEST DATA
ON
HADA-D2002**

Customer: _____	Tested By: <u>D. Weinrob</u>
SO No: _____	Temperature: <u>+25°C</u>
Model No: <u>HADA-D2002</u>	Date: <u>09/27/24</u>
Serial No: <u>PL47859/2439</u>	Drawing No: <u>276 202 22</u> Rev: <u>A1</u>

TEST. ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
1	Frequency Range:	2.0 GHz – 18.0 GHz	2.0 GHz – 18.0 GHz See Plot	
2	TSS:	-40 dBm Min @ -40°C to +85°	-41.8 dBm See Plot	
3	Frequency Flatness:	±1.65 dB Max	0.59 dB See Plot	
4	Input / Output Characteristics: (93 Ω)	Y = 2150 + 50X [X: Input (dBm), Y: Output (mv)]	Pass	
5	Logging Accuracy	±1.5 dB Max (@ +25°C, 10 GHz)* [-36 dBm ≤ INPUT ≤ +4 dBm] ±3.1 dB Max (Note)	0.66 dB / -0.22 dB 1.82 dB / -1.38 dB See Plot	
6	Log Linearity:	±0.5 dB Max @ +25°C ±0.75 dB Max @ -40°C to +85°C	0.24 dB / -0.34 dB 0.42 dB / -0.46 dB See Plot	
7	Maximum Input Power (CW):	+23 dBm	Pass	
8	Duty Cycle:	100%	Pass	
9	Rise Time:	30 ns Max (10% to 90%)	21 ns See Plot	
10	Fall Time:	500 ns Max (@ Pulse width 100usec input) (90% to 10%)	145 ns See Plot	
11	DC Offset: (Input 50 Ω terminated):	+95 mV +55/-100 mV (@ -40°C to +85°C)	120 mV @ +25°C 103 mV @ -40°C 88 mV @ +85°C See Plot	



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12	Input VSWR:	3.0:1 Max @ +23 dBm	1.70:1 See Plot	PMI QA3
13	Propagation Delay:	60 ns Max	45 ns	
14	Power Supply:	+12 ± 1VDC @ 125 mA Max -12 ± 1VDC @ 75 mA Max	+12 ± 1VDC @ 100mA -12 ± 1VDC @ 40mA	
15	Warm Up Time:	2 Minutes Max	2 Minutes	

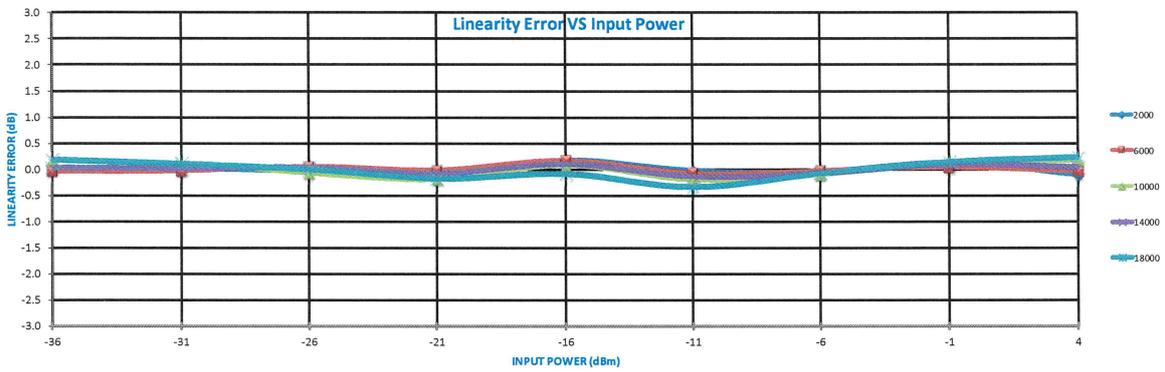
*Notes: Includes Frequency Flatness. Input Power, Temperature Deviation and Deviation for DC Offset. The test shall be performed using RG-62 (or equivalent), 5 meter, 93±0.5 Ohms terminated.

QA/QC Approval: K. Klumpp Date: 9.30.24



SUMMARY TEST DATA ON HADA-D2002

LOG TRANSFER WITH FREQUENCY @ +25C
MODEL: HADA-D2002
SERIAL NO: PL47859
TESTED BY: D. Weinrob



4921 Robert J. Mathews Pkwy Suite 1, El Dorado Hills, CA 95762 USA Phone: (916)542-1401 Fax: (916)265-2597
Email: sales@pmi-rf.com



SUMMARY TEST DATA ON HADA-D2002

LOG TRANSFER WITH FREQUENCY @ -40C
 MODEL: HADA-D2002
 SERIAL NO: PL47859
 TESTED BY: D. Weinrob
 DATE: 9/26/2024



PLANAR MONOLITHICS INDUSTRIES
 4921 Robert J. Mathews Parkway Suit 1
 El Dorado Hills, CA 95762
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GRAPH #2

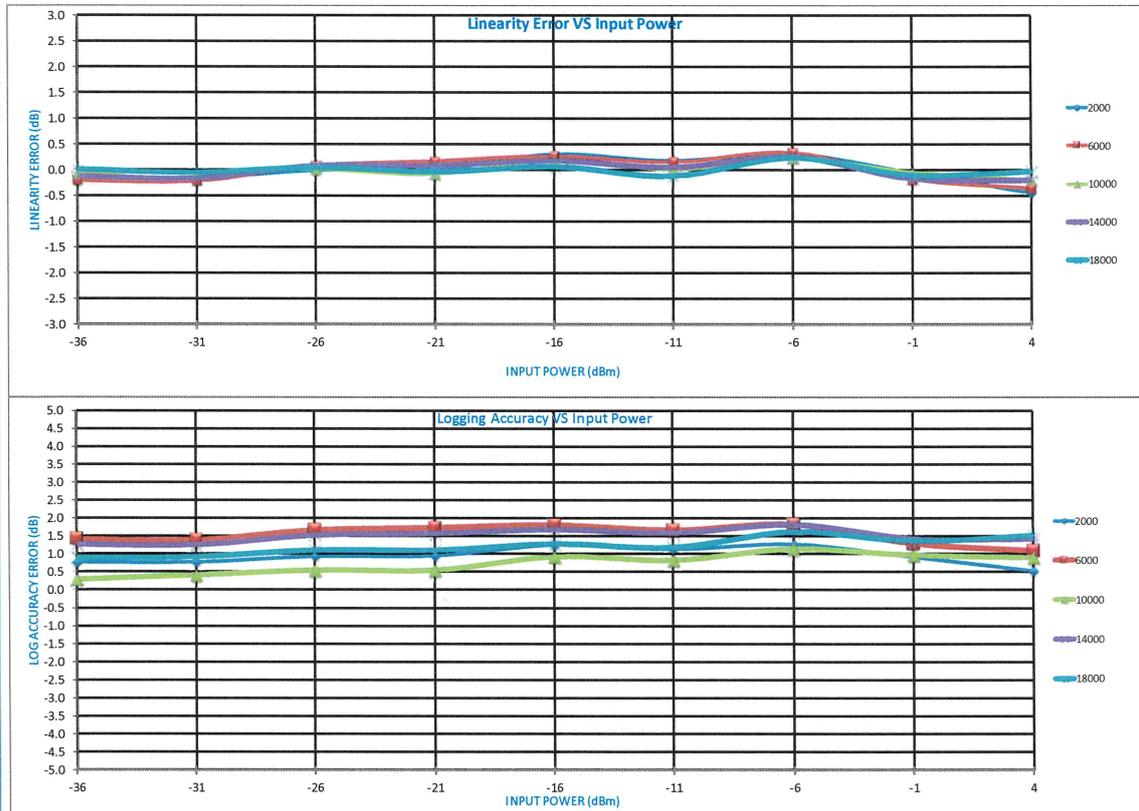
Output Voltage Offset= 0.103 Volts

Frequency	INTERCEPT (m)	SLOPE (mV/dB)	-36	-31	-26	-21	-16	-11	-6	-1	4	RF Input Power (dBm)	Measured Value (mV)	Error(dB)	
2 GHz	2198	50.1	388	638	896	1147	1412	1656	1913	2145	2376				
			-8	-8	0	0	15	9	16	-3	-22		MAX	MIN	
			-0.15	-0.16	0.00	0.01	0.30	0.18	0.31	-0.05	-0.44		0.33	-0.44	
			0.76	0.76	0.92	0.94	1.24	1.12	1.26	0.90	0.52		1.26	0.52	
6 GHz	2223	49.8	421	669	933	1186	1440	1683	1941	2164	2404				
			-10	-11	4	8	13	7	17	-9	-18		MAX	MIN	
			-0.21	-0.23	0.08	0.16	0.27	0.15	0.33	-0.19	-0.36		0.33	-0.36	
			1.42	1.38	1.66	1.72	1.80	1.66	1.82	1.28	1.08		1.82	1.08	
10 GHz	2201	50.9	364	620	877	1127	1396	1641	1907	2148	2395				
			-3	-2	0	-4	10	0	11	-2	-10		MAX	MIN	
			-0.07	-0.04	0.01	-0.09	0.19	0.00	0.23	-0.04	-0.19		0.23	-0.19	
			0.28	0.40	0.54	0.54	0.92	0.82	1.14	0.96	0.90		1.14	0.28	
14 GHz	2230	50.3	413	662	926	1178	1434	1679	1941	2171	2421				
			-6	-9	4	4	9	2	13	-9	-10		MAX	MIN	
			-0.12	-0.17	0.08	0.09	0.18	0.05	0.26	-0.17	-0.20		0.26	-0.20	
			1.26	1.24	1.52	1.56	1.68	1.58	1.82	1.42	1.42		1.82	1.24	
18 GHz	2224	50.8	395	646	905	1155	1414	1659	1931	2168	2426				
			0	-3	2	-2	3	-6	12	-5	-1		MAX	MIN	
			0.01	-0.05	0.04	-0.04	0.06	-0.12	0.23	-0.10	-0.03		0.23	-0.12	
			0.90	0.92	1.10	1.10	1.28	1.18	1.62	1.36	1.52		1.62	0.90	
			0.566	0.486	0.556	0.586	0.437	0.417	0.337	0.258	0.496				
			0.421	0.669	0.933	1.186	1.440	1.683	1.941	2.171	2.426				
			0.364	0.620	0.877	1.127	1.396	1.641	1.907	2.145	2.376				
Flatness +/- dB															
Max Video Output V															
Min Video Output V															
												Logging Linearity vs Frequency		MAX	MIN
												LOGGING LINEARITY ERROR (dB)		0.33	-0.44
												Logging Accuracy vs Frequency		MAX	MIN
												LOGGING ACCURACY ERROR (dB)		1.82	0.28



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LOG TRANSFER WITH FREQUENCY @ -40C
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SERIAL NO: PL47859
TESTED BY: D. Weinrob

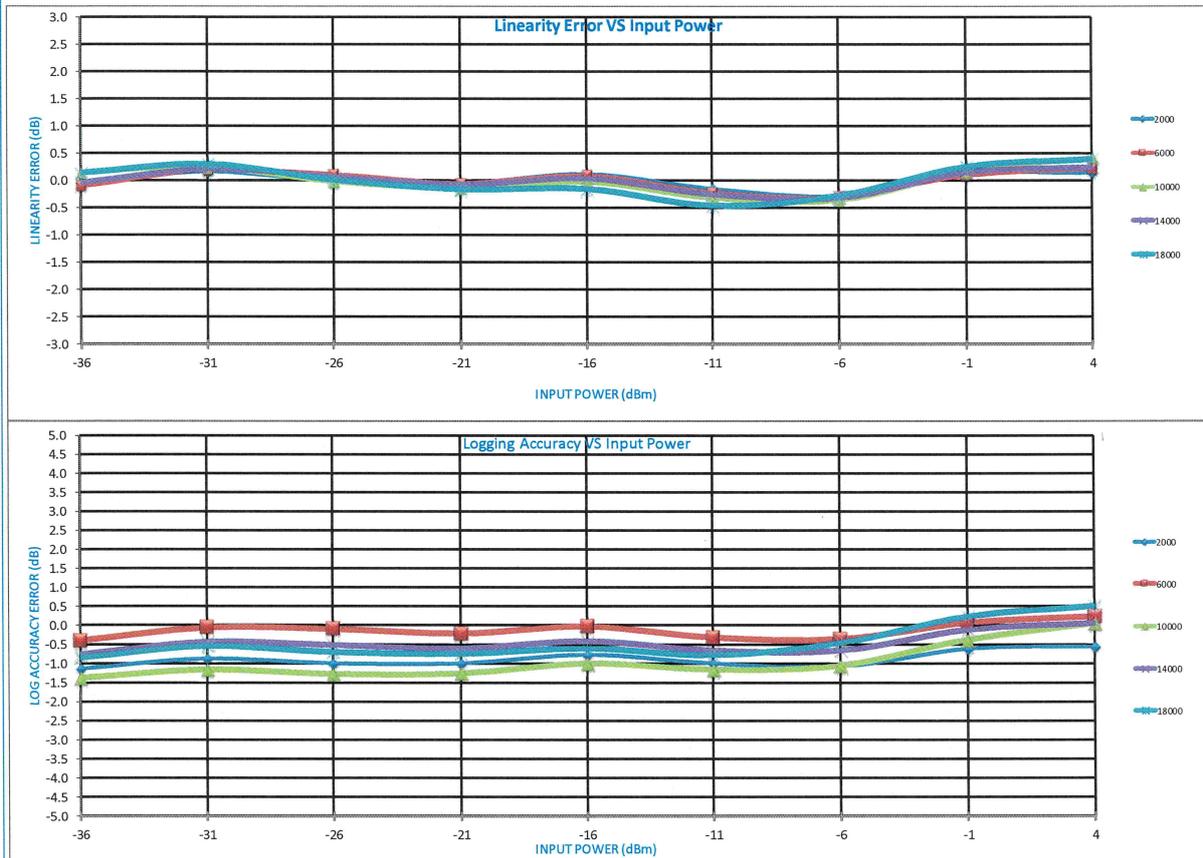


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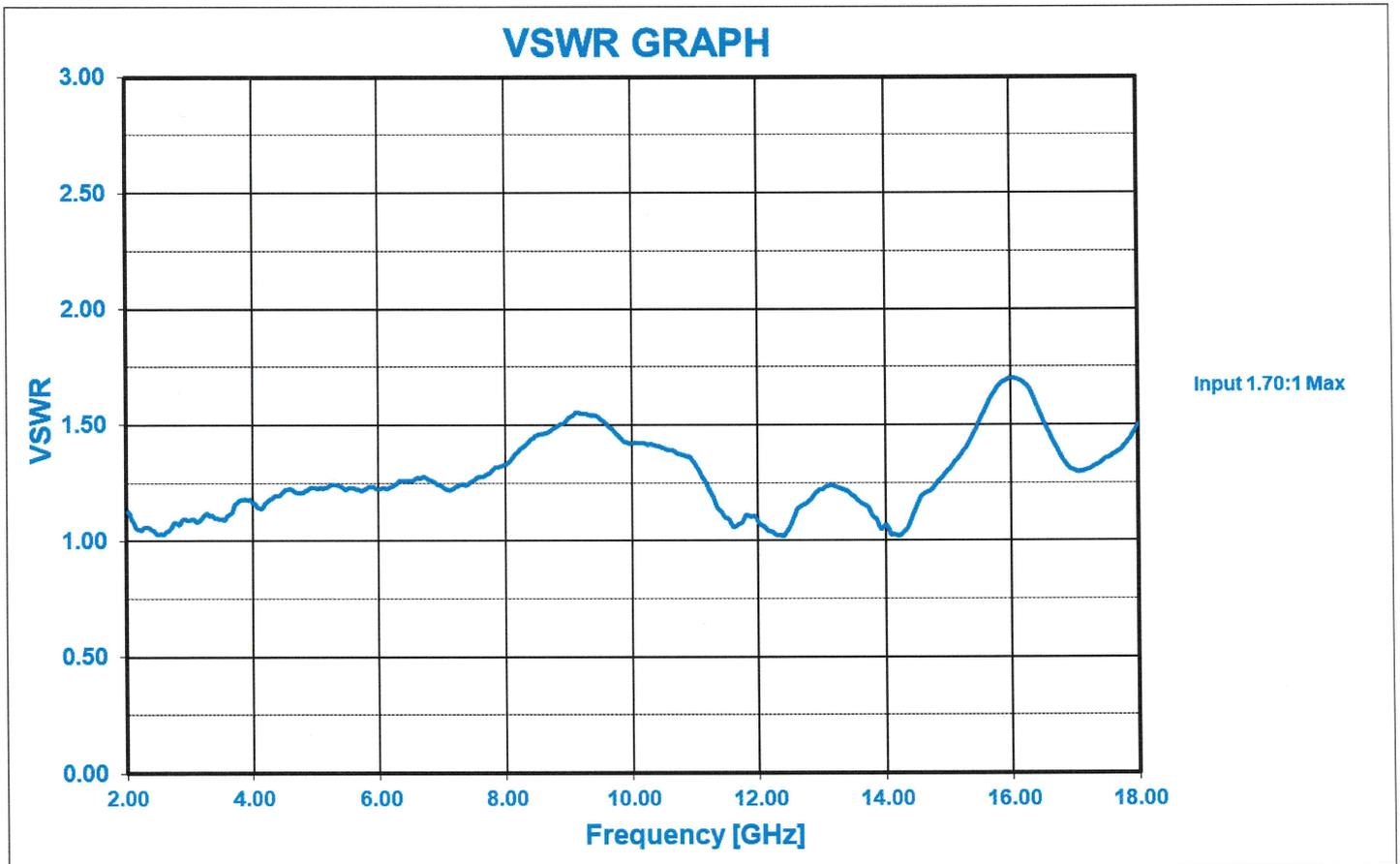
LOG TRANSFER WITH FREQUENCY @ +85C
MODEL: HADA-D2002
SERIAL NO: PL47859
TESTED BY: D. Weinrob



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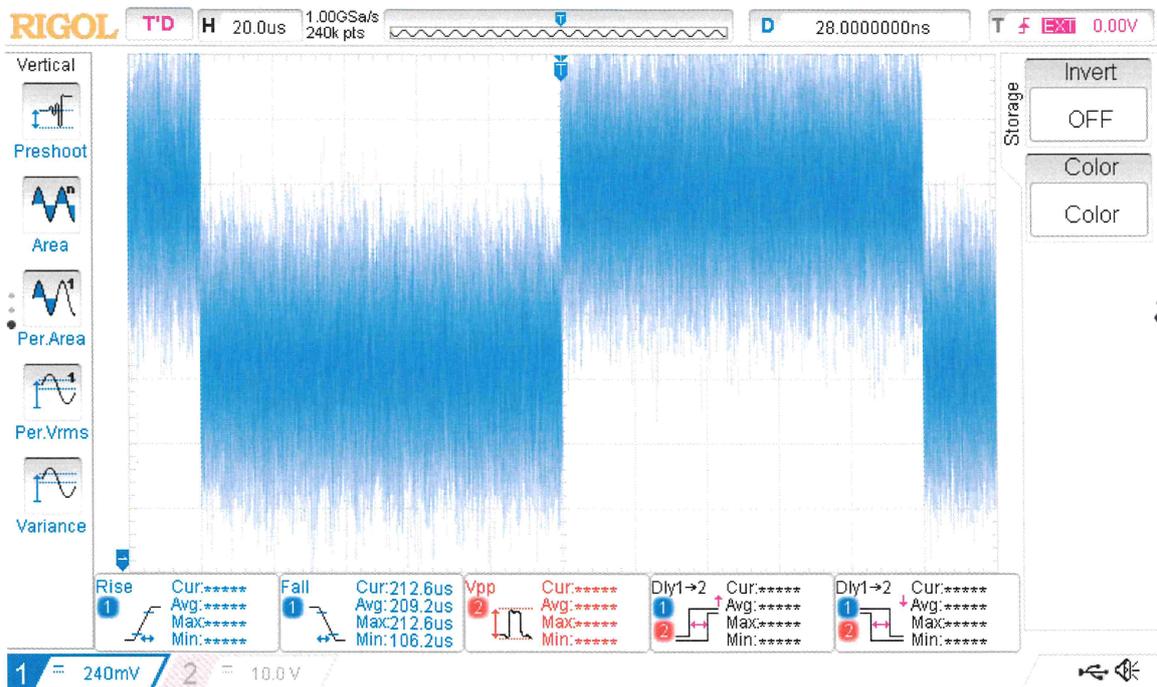


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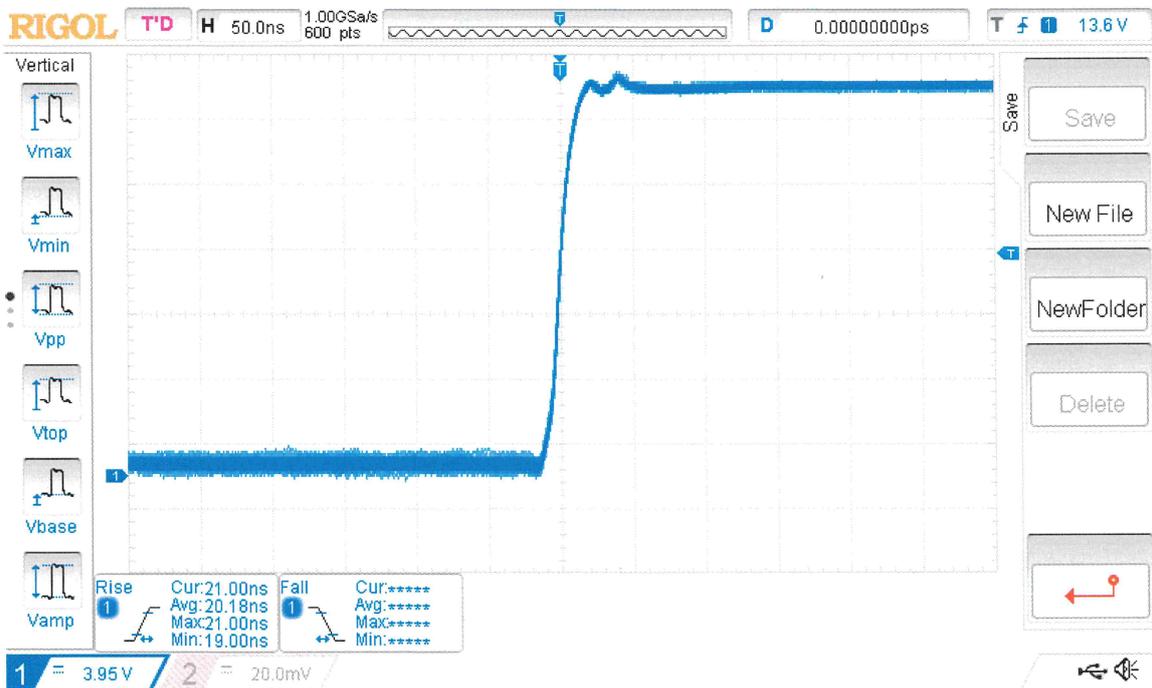
TSS = -41.8 dBm





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Rise Time = 21 ns





**SUMMARY TEST DATA
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Fall Time = 145 ns

