

DASH NO.	APPLICATION		REVISIONS			
	NEXT ASSY	USED ON	REV	DESCRIPTION	DATE	APPROVED
			A1	Revised	04/26/21	

REVISION	SHT NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20			
STATUS	LETTER																							
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70

<p><b>COMPANY CONFIDENTIAL:</b> The information contained herein is the property of PMI . Its use or reproductions is prohibited except as provided for by prior written authorization.</p>	<b>TEST DATA SHEET</b>		
	<p><b>DETECTOR LOG VIDEO AMPLIFIER</b>  <b>PMI P/N GMDA-D1005-08R11R44</b></p>		
			CONTRACT NO.
			DRAWN:           JOHNM
			CHECKED:        JOHNM
			PROJ ENGR:     JOHNM
			PROG MGR:
			MFG.ENGR:
			QA ENGR:
			RELIABILITY:
CUSTOMER:			

	SIZE <b>A</b>	CAGE CODE <b>71A34</b>	DWG. NO. <b>27641800</b>	REVISION <b>A1</b>
	SCALE			SHEET 1 OF 9

**NOTE: ALL VIDEO OUTPUT MEASUREMENTS ARE MADE WITH 75 OHMS VIDEO LOAD**

**1. TSS**

Specification: -65 dBm Maximum  
 Measurement: 1.44 GHz, 2us PW, 100 kHz PRF

TSS: -65.0 dBm Pass X Fail \_\_\_\_\_

**2. LOG SLOPE AND LINEARITY**

Specification:  
 Log slope: 25 ±1 mV/dB  
 Log Linearity: ±1.0 dB Max. @ 25°C  
 ±1.5 dB Over Temperature

Measurement:  
 Logging Range: -60 dBm to +10 dBm

Test Temp: 25°C (See attached Plot)

Frequency (GHz)	Log Slope (mV / dB)	Log linearity (dB)	Pass	Fail
0.81	24.8	0.25	X	
1.125	24.7	0.37	X	
1.44	24.7	0.35	X	

Test Temp: -54°C (See attached Plot)

Frequency (GHz)	Log Slope (mV / dB)	Log linearity (dB)	Pass	Fail
0.81	24.7	0.79	X	
1.125	24.3	0.88	X	
1.44	24.2	0.95	X	

Test Temp: +85°C (See attached Plot)

Frequency (GHz)	Log Slope (mV / dB)	Log linearity (dB)	Pass	Fail
0.81	25.7	0.44	X	
1.125	25.5	0.58	X	
1.44	25.6	0.56	X	

**NOTE: ALL VIDEO OUTPUT MEASUREMENTS ARE MADE WITH 75 OHMS VIDEO LOAD**

**3. FLATNESS**

Specification: 50 mV Max  
Measurement: @ -35 dBm Input

System Flatness = 0.13 dB (See attached plot)  
Vp-p = 11 mV (See attached plot)  
Flatness = Vp-p – (System Flatness x 25)

Flatness = 8 mV Pass X Fail \_\_\_\_\_

**4. MAXIMUM OUTPUT VOLTAGE**

Specification: +2.5 V Max  
Measurement: 1924 mV

Pass X Fail \_\_\_\_\_

**5. INPUT VSWR**

Specification: 2.0:1 Max  
Measurement: -20 dBm input (See attached plot)  
VSWR: 1.71:1

Pass X Fail \_\_\_\_\_

**6. VIDEO RISE TIME**

Specification: 30ns Max  
Measurement: Freq = 1.125 GHz, RF Input -35 dBm, PW = 1us, PRF 100 kHz  
Rise Time: 12.3 ns

Pass X Fail \_\_\_\_\_

**7. LEADING AND TRAILING EDGE**

Specification: Per figure 5 on product feature 27041580

Pass X Fail \_\_\_\_\_

**8. REVERSE SHOOT AND SLOPE REVERSE**


Specification: Per figure 6 on product feature 27041580

Pass X Fail \_\_\_\_\_

**9. RECOVERY TIME**

Specification: 500 ns  
Measurement: 85 ns

Pass X Fail \_\_\_\_\_

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NOTE: ALL VIDEO OUTPUT MEASUREMENTS ARE MADE WITH 75 OHMS VIDEO LOAD

10. THROUGHPUT TIME

Specification: 30ns Max  
 Measurement: Freq 810 MHz, PW = 100ns, PRF = 100 kHz  
 -35 dBm Input: 13.6 ns Pass X Fail \_\_\_\_\_

11. OFFSET VOLTAGE

Specification: ±50 mV Max  
 +25°C Measurement: +12 mV Pass X Fail \_\_\_\_\_  
 -54°C Measurement: -42 mV Pass X Fail \_\_\_\_\_  
 +85°C Measurement: +25 mV Pass X Fail \_\_\_\_\_

12. DC POWER

Specification: +12 V to +15.5 V, 300 mA Max  
 -12 V to -15.5 V, 150 mA Max  
 Measurement: +15.5 V @ 140 mA Pass X Fail \_\_\_\_\_  
 -15.5 V @ 60 mA Pass X Fail \_\_\_\_\_

13. VISUAL AND MECHANICAL INSPECTION


Specification: Per PMI product Feature Drawing No. 27041580  
 Finish: Pass X Fail \_\_\_\_\_  
 Dimensions: Pass X Fail \_\_\_\_\_  
 Marking and Identification: Pass X Fail \_\_\_\_\_  
 Torque Cover Screws to 1.2 in/lb. Inspect screws per criteria in Figure 1-A. on Traveler  
 TBD: Pass X Fail \_\_\_\_\_

Tested by: Joshua Monley

Date: 10/23/2024

PMI  
 QA: QA3 K. Klauing

Date: 10-24-24

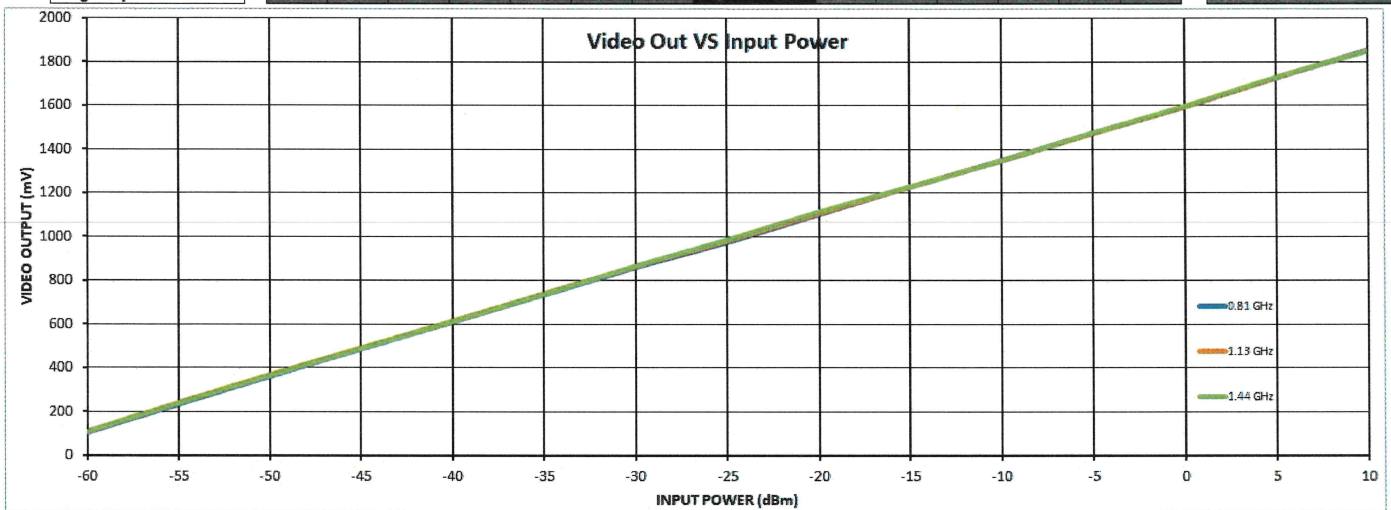
	SIZE <b>A</b>	CAGE CODE <b>71A34</b>	DWG. NO. <b>27641800</b>	REVISION <b>A1</b>
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### Transfer Response at +25°C

Model: GMDA-D1005-08R11R44  
 Serial No.: PL49353  
 Date: 10/23/24  
 Tested By: J. Monley  
 Test Temp: +25°C



Frequency		-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5	10	RF Input Power (dBm)
0.81 GHz	INTERCEPT (mV)	103	234	360	486	609	734	859	974	1102	1226	1348	1473	1592	1725	1852	Measured Value (mV)
	SLOPE (mV/dB)	-8	1	3	5	4	5	6	-3	1	1	-1	-1	-6	3	6	ERROR (mV)
	LIN. ERR. (dB)	-0.23	0.05	0.13	0.21	0.16	0.20	0.24	-0.13	0.03	0.03	-0.06	-0.02	-0.22	0.13	0.25	LINEARITY ERROR (dB)
1.13 GHz	INTERCEPT (mV)	109	242	368	492	615	741	866	982	1109	1228	1347	1472	1593	1726	1850	Measured Value (mV)
	SLOPE (mV/dB)	-9	1	3	4	3	6	8	0	4	-1	-5	-3	-6	4	5	ERROR (mV)
	LIN. ERR. (dB)	-0.37	0.02	0.13	0.15	0.14	0.24	0.31	0.01	0.16	-0.02	-0.20	-0.13	-0.23	0.16	0.18	LINEARITY ERROR (dB)
1.44 GHz	INTERCEPT (mV)	109	241	366	490	614	739	867	987	1115	1229	1348	1475	1597	1729	1850	Measured Value (mV)
	SLOPE (mV/dB)	-9	0	1	1	1	3	7	3	8	-2	-7	-4	-5	3	0	ERROR (mV)
	LIN. ERR. (dB)	-0.35	-0.02	0.04	0.05	0.06	0.11	0.28	0.13	0.31	-0.08	-0.28	-0.14	-0.21	0.12	0.01	LINEARITY ERROR (dB)
Avg. Slope: 24.7 mV/dB		0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.3	0.3	0.1	0	0.1	0.1	0.1	0	Flatness dB: ±0.3 dB

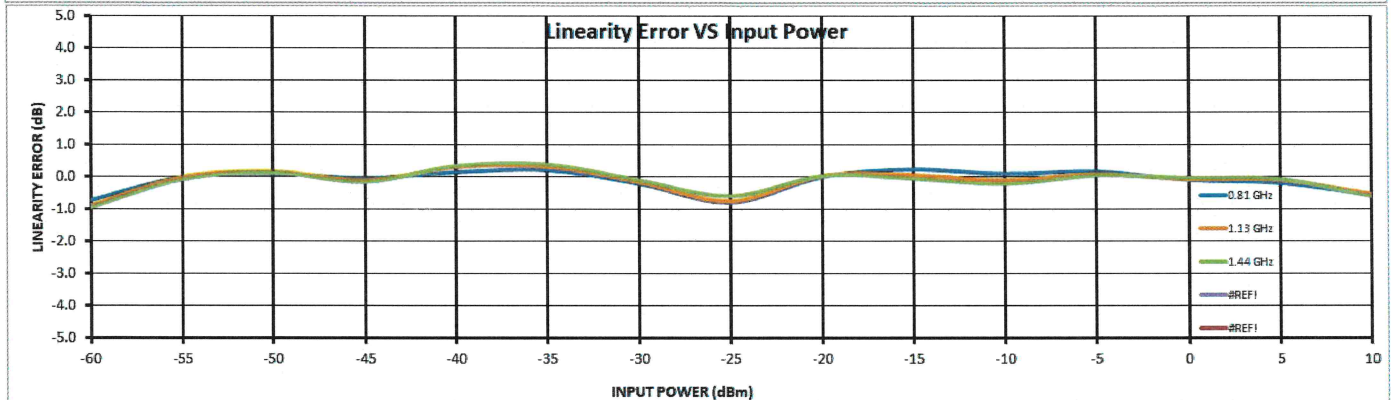
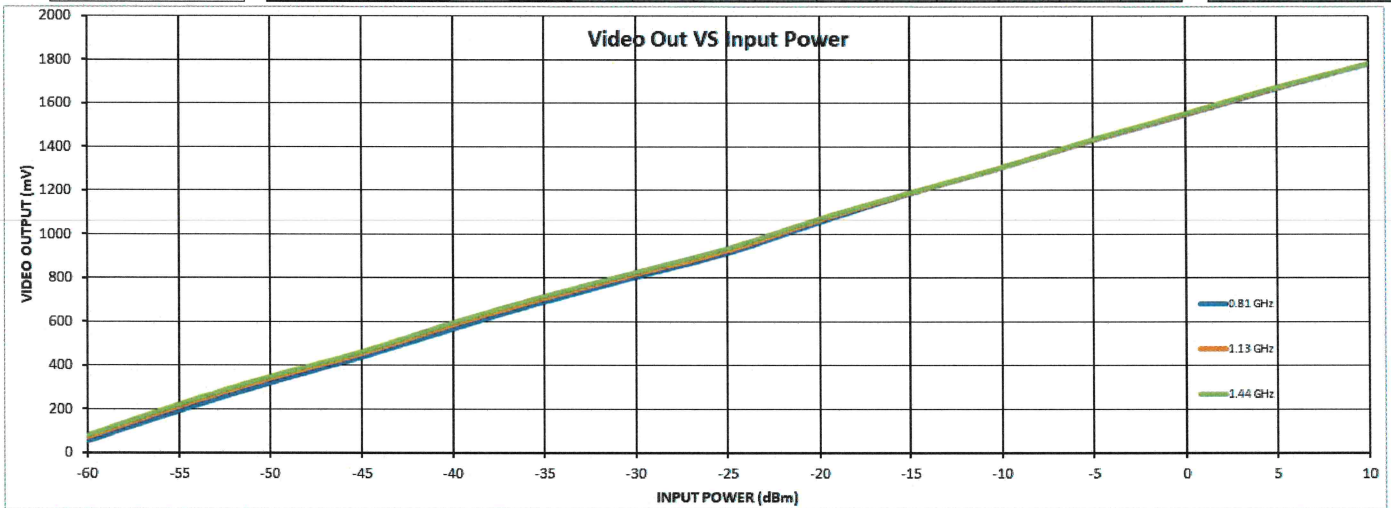


### Transfer Response at -54°C

Model: GMDA-D1005-08R11R44  
 Serial No.: PL49353  
 Date: 10/23/24  
 Tested By: J. Monley  
 Test Temp: -54°C



Frequency		-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5	10	RF Input Power (dBm)
0.81 GHz	INTERCEPT (mV)	1549	1549	1549	1549	1549	1549	1549	1549	1549	1549	1549	1549	1549	1549	1549	Measured Value (mV)
	SLOPE (mV/dB)	24.7	24.7	24.7	24.7	24.7	24.7	24.7	24.7	24.7	24.7	24.7	24.7	24.7	24.7	24.7	ERROR (mV)
	LIN. ERR. (dB)	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	LINEARITY ERROR (dB)
1.13 GHz	INTERCEPT (mV)	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	Measured Value (mV)
	SLOPE (mV/dB)	24.3	24.3	24.3	24.3	24.3	24.3	24.3	24.3	24.3	24.3	24.3	24.3	24.3	24.3	24.3	ERROR (mV)
	LIN. ERR. (dB)	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	LINEARITY ERROR (dB)
1.44 GHz	INTERCEPT (mV)	1653	1653	1653	1653	1653	1653	1653	1653	1653	1653	1653	1653	1653	1653	1653	Measured Value (mV)
	SLOPE (mV/dB)	24.2	24.2	24.2	24.2	24.2	24.2	24.2	24.2	24.2	24.2	24.2	24.2	24.2	24.2	24.2	ERROR (mV)
	LIN. ERR. (dB)	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	LINEARITY ERROR (dB)
Avg. Slope: 24.4 mV/dB		0.6	0.6	0.6	0.5	0.6	0.5	0.4	0.4	0.3	0.1	0	0.1	0.1	0.1	0	Flatness dB: ±0.6 dB

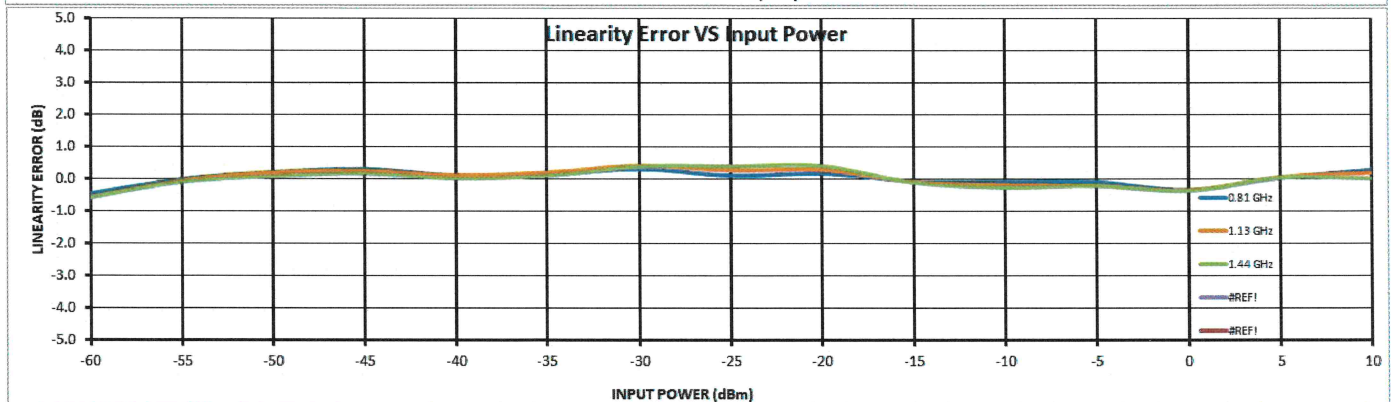
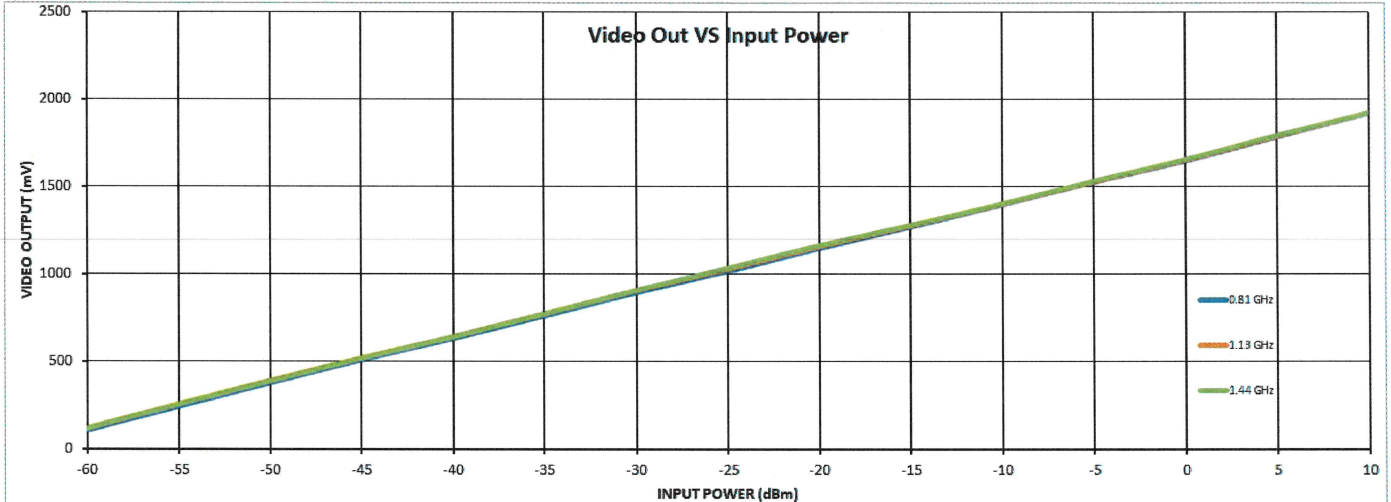


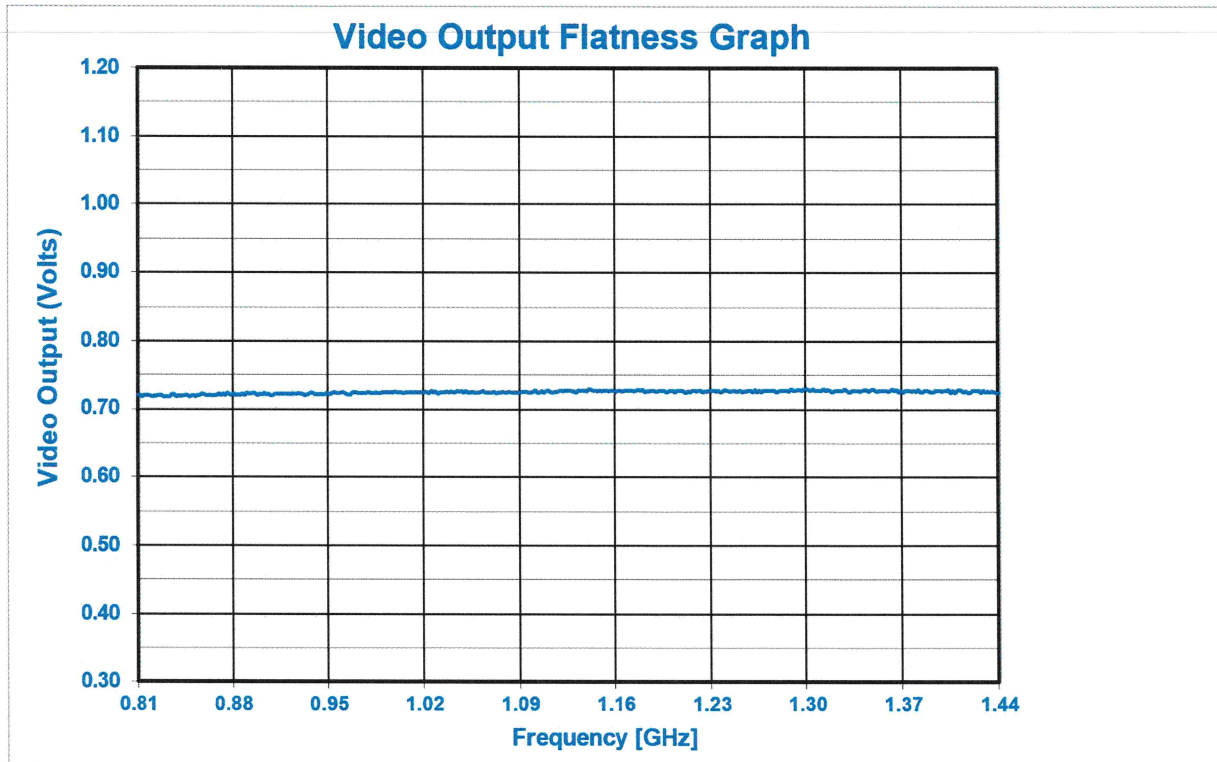
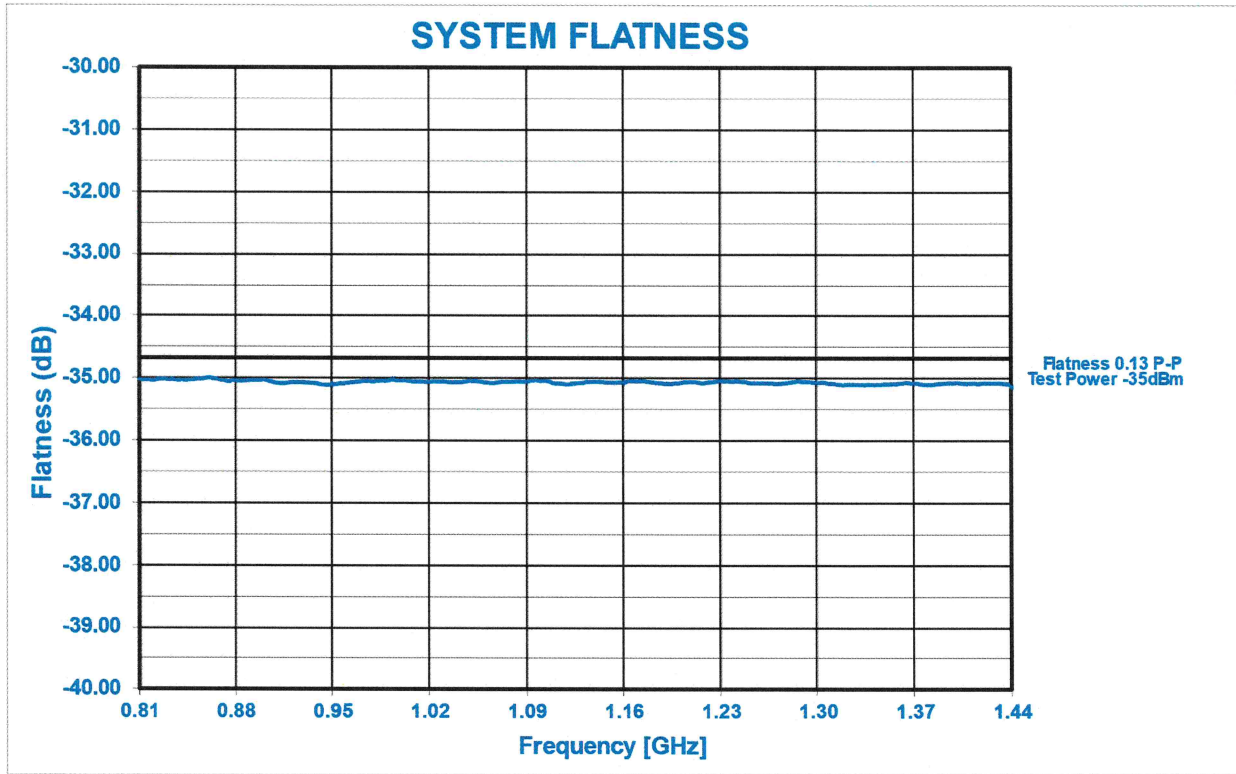
### Transfer Response at +85°C

Model: GMDA-D1005-08R11R44  
 Serial No.: PL49353  
 Date: 10/23/24  
 Tested By: J. Monley  
 Test Temp: +85°C



Frequency		-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5	10	RF Input Power (dBm)
0.81 GHz	INTERCEPT (mV)	1659															Measured Value (mV)
	SLOPE (mV/dB)	25.7															ERROR (mV)
	LIN. ERR. (dB)	0.44															LINEARITY ERROR (dB)
		108	248	382	513	636	765	898	1021	1151	1273	1401	1529	1651	1789	1924	
		-11	0	6	9	3	4	9	3	5	-1	-2	-2	-8	1	8	
		-0.44	0.01	0.23	0.34	0.13	0.16	0.34	0.13	0.20	-0.05	-0.06	-0.08	-0.32	0.06	0.32	
1.13 GHz	INTERCEPT (mV)	1661															Measured Value (mV)
	SLOPE (mV/dB)	25.5															ERROR (mV)
	LIN. ERR. (dB)	0.58															LINEARITY ERROR (dB)
		115	256	390	519	643	773	906	1030	1158	1276	1401	1528	1652	1790	1921	
		-15	-1	5	6	3	5	11	7	8	-2	-5	-5	-9	2	5	
		-0.58	-0.05	0.20	0.25	0.11	0.21	0.42	0.28	0.30	-0.08	-0.18	-0.20	-0.34	0.06	0.20	
1.44 GHz	INTERCEPT (mV)	1664															Measured Value (mV)
	SLOPE (mV/dB)	25.6															ERROR (mV)
	LIN. ERR. (dB)	0.56															LINEARITY ERROR (dB)
		116	256	388	518	642	772	907	1035	1163	1278	1402	1531	1655	1793	1920	
		-14	-2	2	4	0	3	10	10	10	-3	-6	-5	-9	1	0	
		-0.56	-0.08	0.08	0.17	0.02	0.10	0.38	0.39	0.40	-0.10	-0.25	-0.20	-0.35	0.05	0.02	
Avg. Slope: 25.6 mV/dB		0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.3	0.2	0.1	0	0.1	0.1	0.1	0.1	Flatness dB: ±0.3 dB





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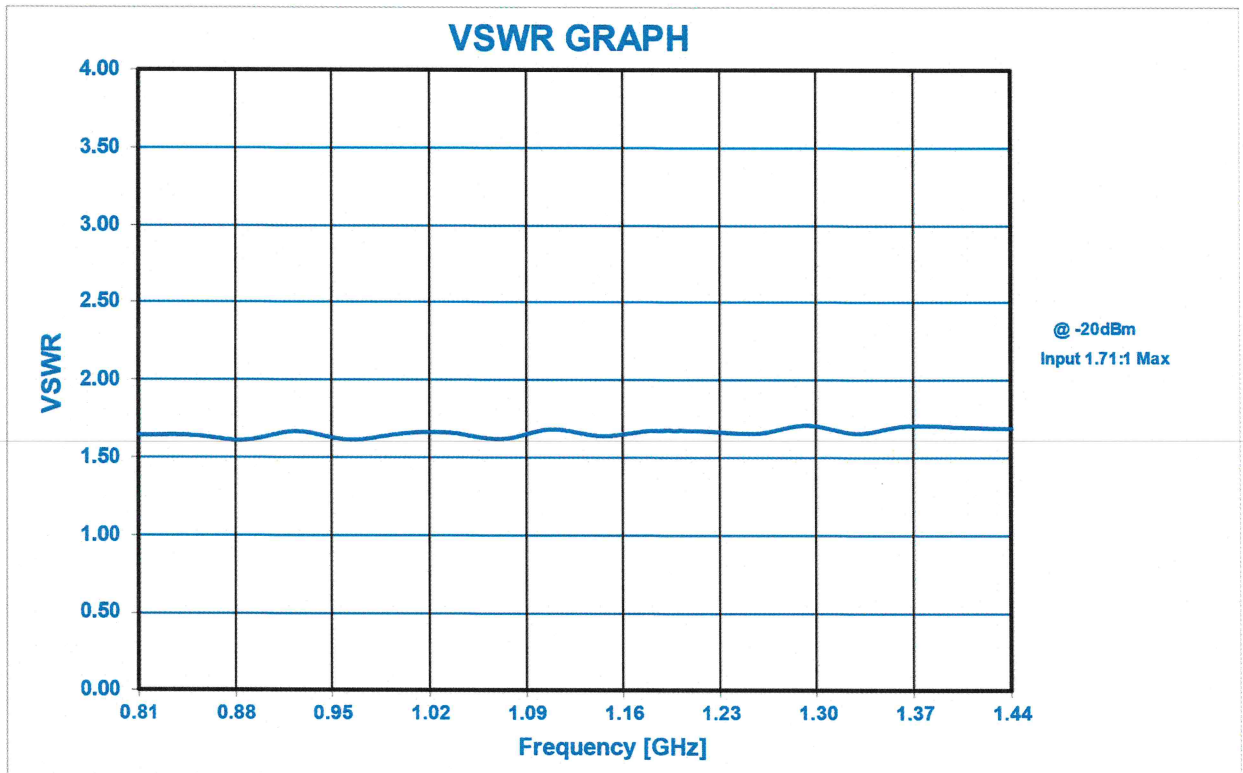
CAGE CODE  
71A34


DWG. NO.  
27641800

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	SIZE <b>A</b>	CAGE CODE <b>71A34</b>	DWG. NO. <b>27641800</b>	REVISION <b>A1</b>
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