

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

	SIZE A	CAGE CODE 71A34	DWG. NO. 27641800	REVISION A1
	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: -65.8 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	25.1	0.41	X	
1.125	25.0	0.42	X	
1.44	24.9	0.52	X	

Test Temp: -54°C (See attached Plot)

Frequency (GHz)	Log Slope (mV / dB)	Log linearity (dB)	Pass	Fail
0.81	24.8	0.61	X	
1.125	24.6	0.61	X	
1.44	24.5	0.58	X	

Test Temp: +85°C (See attached Plot)

Frequency (GHz)	Log Slope (mV / dB)	Log linearity (dB)	Pass	Fail
0.81	25.3	0.47	X	
1.125	25.1	0.44	X	
1.44	25.1	0.37	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 = 8 mV (See attached plot)
Flatness = Vp-p – (System Flatness x 25)

Flatness = 5 mV Pass X Fail _____

4. MAXIMUM OUTPUT VOLTAGE

Specification: +2.5 V Max
Measurement: 1896 mV

Pass X Fail _____

5. INPUT VSWR

Specification: 2.0:1 Max
Measurement: -20 dBm input (See attached plot)
VSWR: 1.53:1

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: 11.0 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: 149 ns

Pass X Fail _____

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	SCALE			SHEET 3 OF 9

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: 11.4 ns Pass X Fail _____

11. OFFSET VOLTAGE

Specification: ±50 mV Max
 +25°C Measurement: -25 mV Pass X Fail _____
 -54°C Measurement: +2 mV Pass X Fail _____
 +85°C Measurement: +28 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

QA: ^{PMI} QAS *K. Klumpp*

Date: 10-24-24

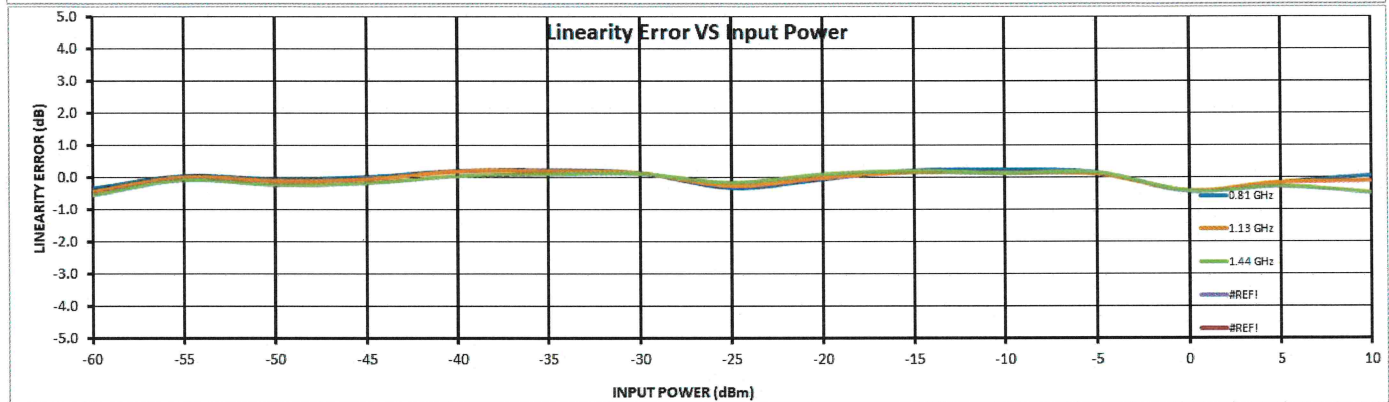
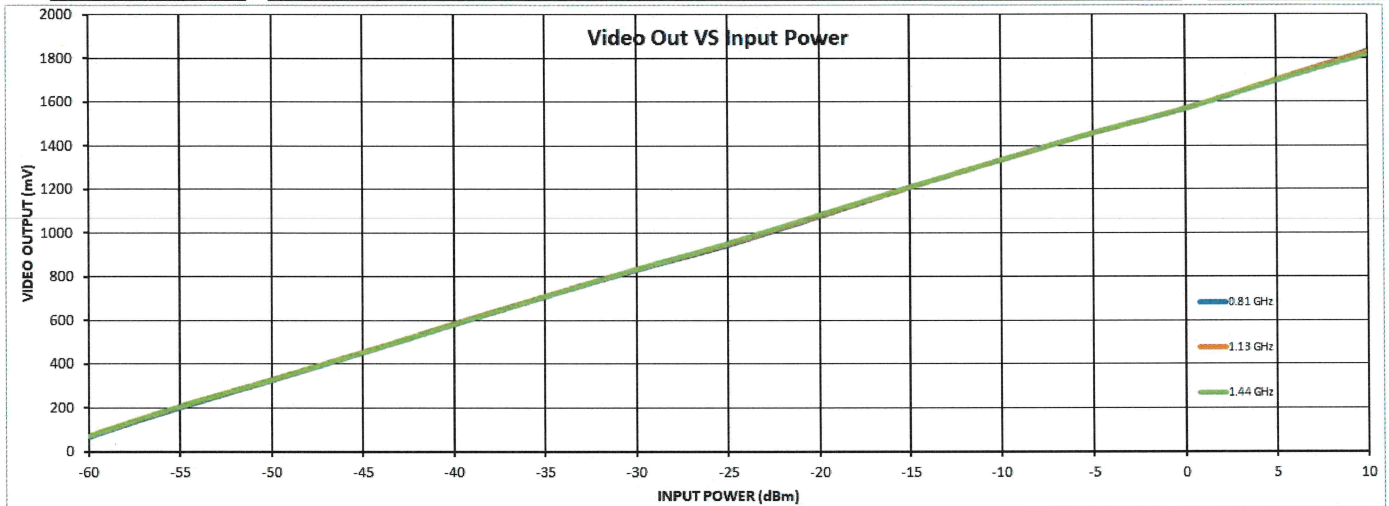
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	SCALE			SHEET 4 OF 9

Transfer Response at +25°C

Model: GMDA-D1005-08R11R44
 Serial No.: PL49348
 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)	65	200	323	450	580	706	829	943	1075	1207	1333	1456	1567	1699	1830	Measured Value (mV)
	SLOPE (mV/dB)	-9	2	-1	1	6	6	4	-7	-1	6	6	4	-10	-4	2	ERROR (mV)
	LIN. ERR. (dB)	-0.32	0.07	-0.03	0.04	0.22	0.25	0.16	-0.30	-0.03	0.23	0.26	0.16	-0.41	-0.14	0.08	LINEARITY ERROR (dB)
1.13 GHz	INTERCEPT (mV)	71	207	329	455	586	711	834	949	1080	1209	1333	1457	1569	1700	1826	Measured Value (mV)
	SLOPE (mV/dB)	-10	1	-2	-1	5	6	4	-6	0	5	4	3	-10	-3	-2	ERROR (mV)
	LIN. ERR. (dB)	-0.42	0.03	-0.08	-0.03	0.22	0.23	0.16	-0.23	0.02	0.19	0.15	0.12	-0.39	-0.14	-0.09	LINEARITY ERROR (dB)
1.44 GHz	INTERCEPT (mV)	70	206	327	453	583	709	834	952	1083	1210	1333	1458	1569	1697	1817	Measured Value (mV)
	SLOPE (mV/dB)	-13	-2	-5	-4	1	3	3	-4	3	5	3	4	-10	-7	-11	ERROR (mV)
	LIN. ERR. (dB)	-0.52	-0.07	-0.22	-0.16	0.05	0.11	0.12	-0.15	0.11	0.20	0.13	0.15	-0.40	-0.27	-0.45	LINEARITY ERROR (dB)
Avg. Slope: 25 mV/dB		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0	0	0	0.1	0.3	Flatness dB: ±0.3 dB

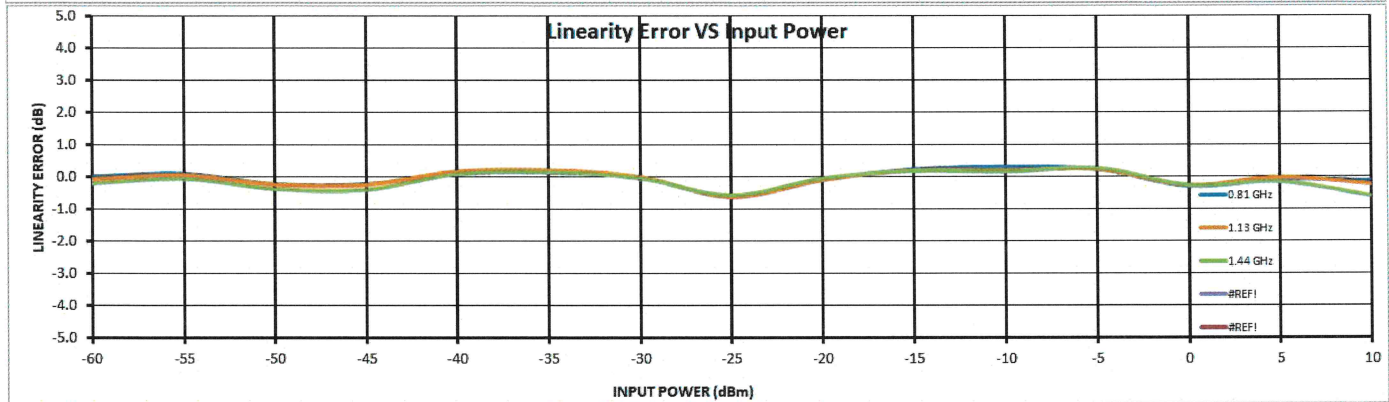
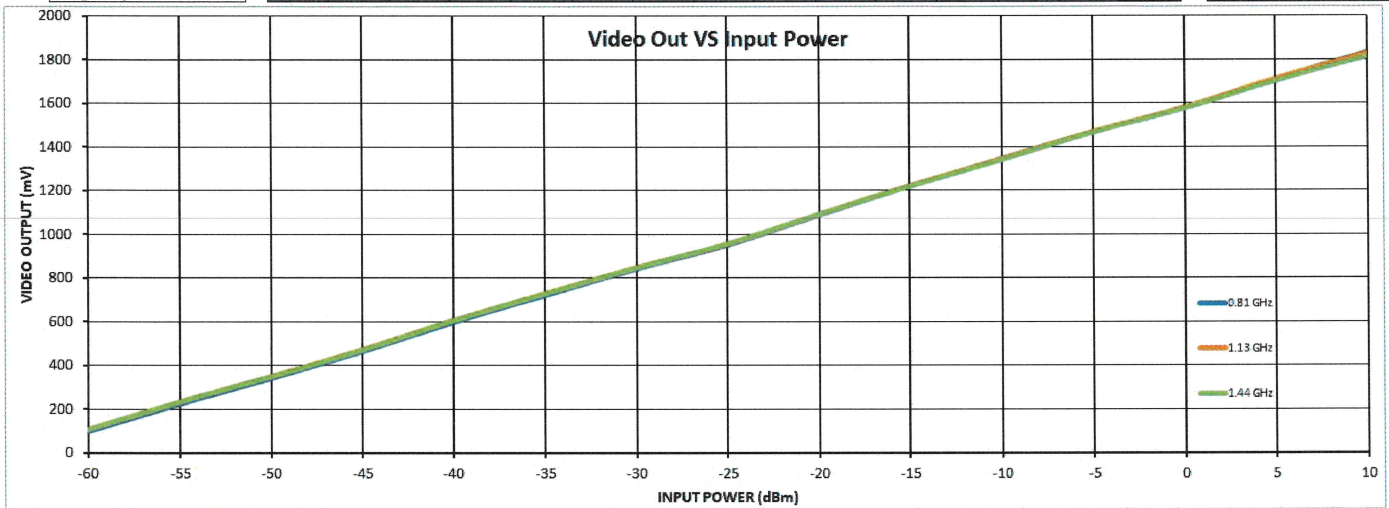


Transfer Response at -54°C

Model: GMDA-D1005-08R11R44
 Serial No.: PL49348
 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)	99	225	341	465	597	722	842	951	1088	1220	1346	1468	1579	1708	1831	Measured Value (mV)
	SLOPE (mV/dB)	1	3	-5	-5	3	4	0	-15	-2	6	8	6	-7	-2	-3	ERROR (mV)
	LIN. ERR. (dB)	0.03	0.11	-0.21	-0.21	0.12	0.16	0.00	-0.61	-0.08	0.24	0.32	0.24	-0.28	-0.08	-0.12	LINEARITY ERROR (dB)
1.13 GHz	INTERCEPT (mV)	106	232	348	471	604	728	846	954	1090	1220	1343	1467	1578	1707	1825	Measured Value (mV)
	SLOPE (mV/dB)	-2	1	-6	-6	4	5	0	-15	-2	5	5	6	-6	-1	-6	ERROR (mV)
	LIN. ERR. (dB)	-0.06	0.06	-0.23	-0.23	0.17	0.21	0.00	-0.61	-0.09	0.19	0.19	0.23	-0.26	-0.02	-0.23	LINEARITY ERROR (dB)
1.44 GHz	INTERCEPT (mV)	108	234	349	471	605	729	847	957	1092	1220	1342	1467	1577	1702	1814	Measured Value (mV)
	SLOPE (mV/dB)	-5	-1	-9	-9	2	4	-1	-13	-1	4	4	6	-6	-4	-14	ERROR (mV)
	LIN. ERR. (dB)	-0.19	-0.05	-0.36	-0.38	0.09	0.15	-0.04	-0.55	-0.04	0.18	0.16	0.26	-0.25	-0.15	-0.58	LINEARITY ERROR (dB)
Avg. Slope: 24.6 mV/dB		0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0	0.1	0	0	0.1	0.3	Flatness dB: ±0.3 dB

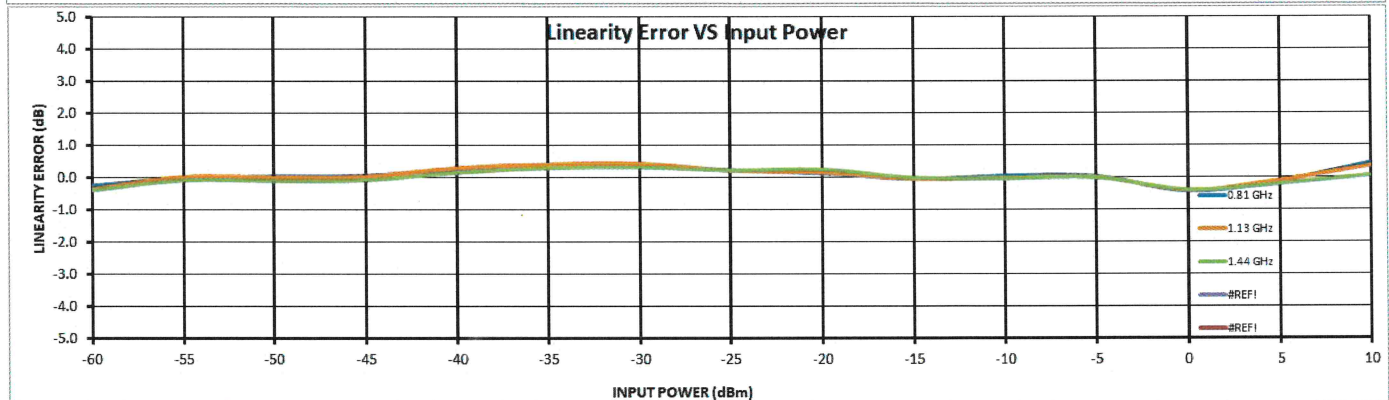
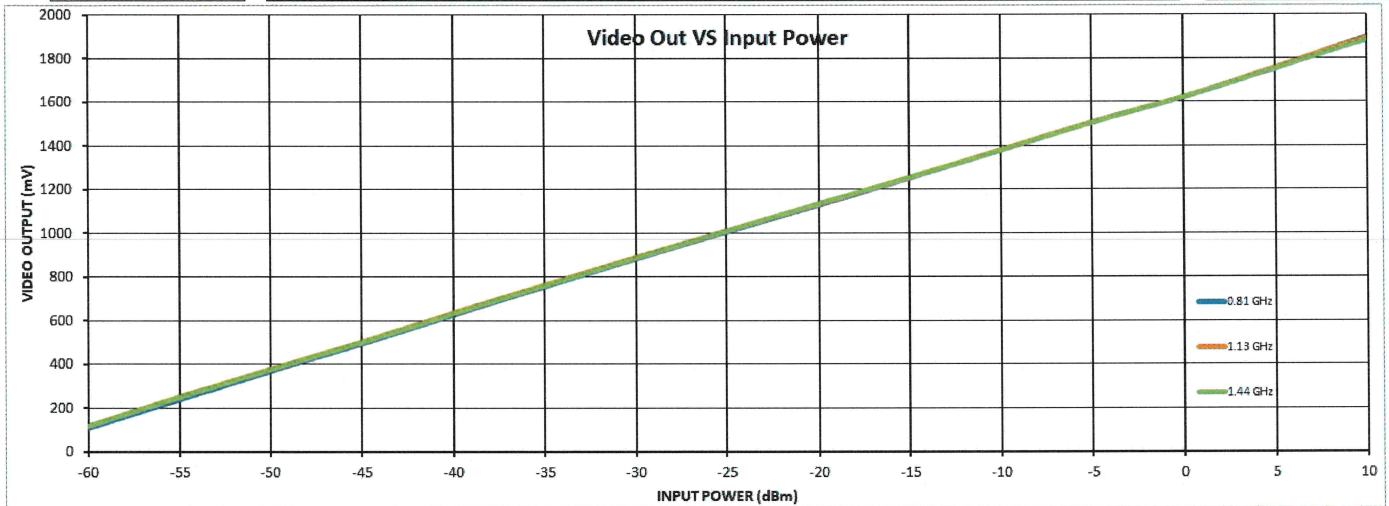


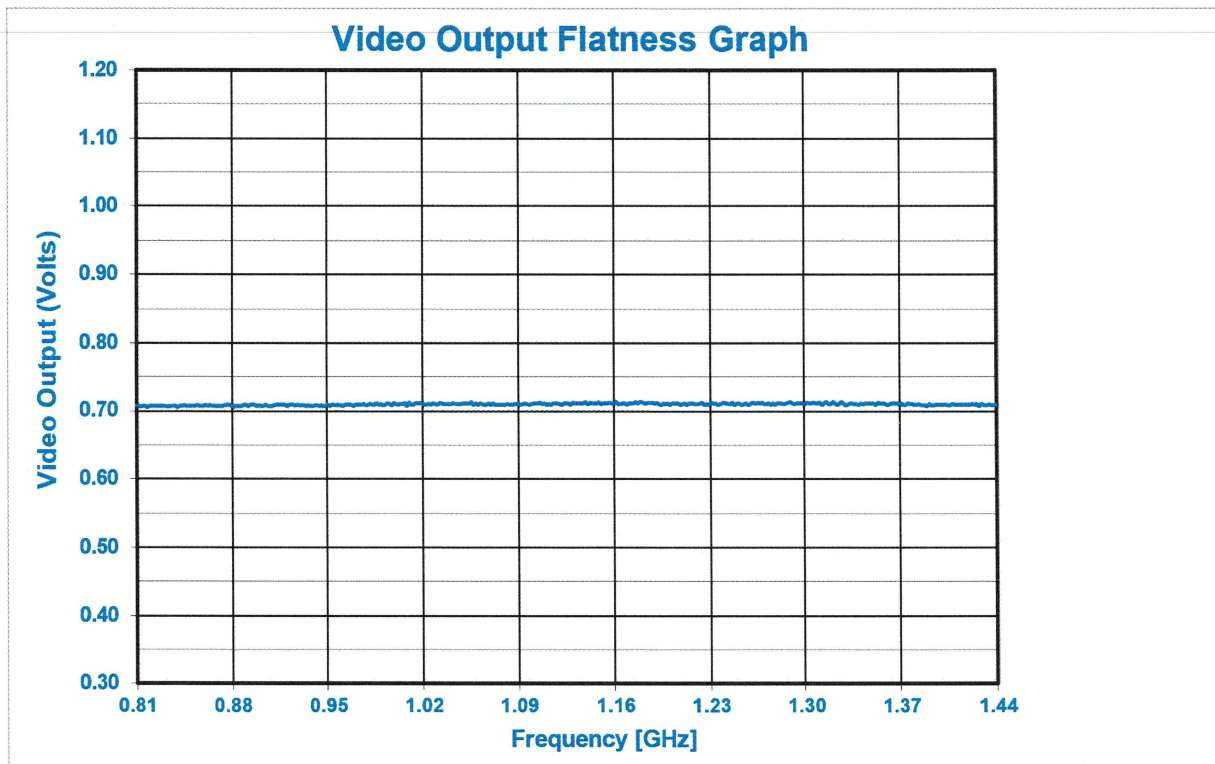
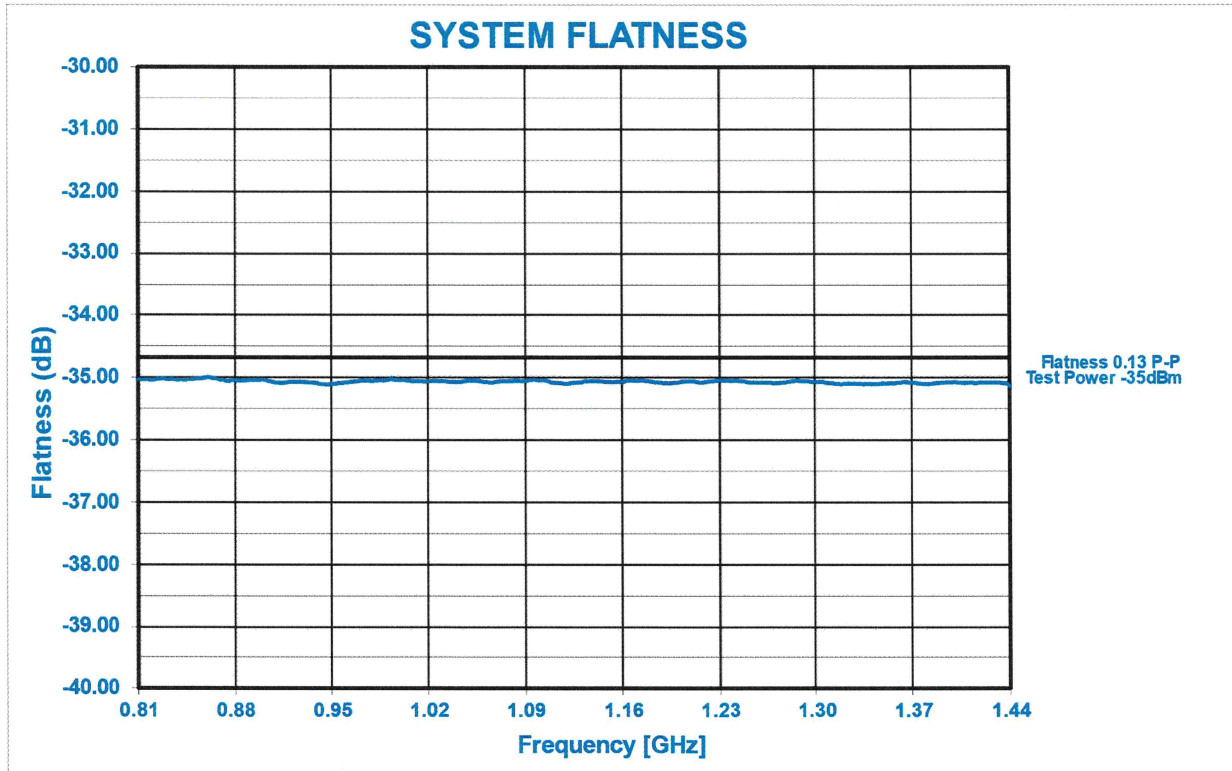
Transfer Response at +85°C

Model: GMDA-D1005-08R11R44
 Serial No.: PL49348
 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)	108	240	368	495	626	756	883	1005	1129	1251	1380	1506	1621	1755	1896	Measured Value (mV)
	SLOPE (mV/dB)	-6	0	1	2	7	10	11	6	4	-1	2	1	-10	-3	12	ERROR (mV)
	LIN. ERR. (dB)	-0.22	0.00	0.06	0.08	0.26	0.40	0.42	0.24	0.14	-0.03	0.07	0.05	-0.41	-0.11	0.47	LINEARITY ERROR (dB)
1.13 GHz	INTERCEPT (mV)	118	253	378	504	636	764	890	1010	1134	1254	1380	1506	1621	1754	1891	Measured Value (mV)
	SLOPE (mV/dB)	-9	1	0	1	8	10	11	6	4	-1	0	0	-10	-2	9	ERROR (mV)
	LIN. ERR. (dB)	-0.36	0.03	0.02	0.04	0.31	0.41	0.44	0.23	0.17	-0.04	-0.01	0.01	-0.40	-0.10	0.37	LINEARITY ERROR (dB)
1.44 GHz	INTERCEPT (mV)	117	250	375	501	632	761	887	1010	1136	1255	1380	1506	1622	1752	1884	Measured Value (mV)
	SLOPE (mV/dB)	-9	-2	-2	-1	4	8	8	6	6	0	0	0	-9	-5	2	ERROR (mV)
	LIN. ERR. (dB)	-0.37	-0.07	-0.08	-0.06	0.16	0.31	0.33	0.23	0.26	0.00	-0.02	0.01	-0.37	-0.19	0.08	LINEARITY ERROR (dB)
Avg. Slope: 25.1 mV/dB		0.2	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0	0	0	0.1	0.2	Flatness dB: ±0.3 dB





SIZE
A

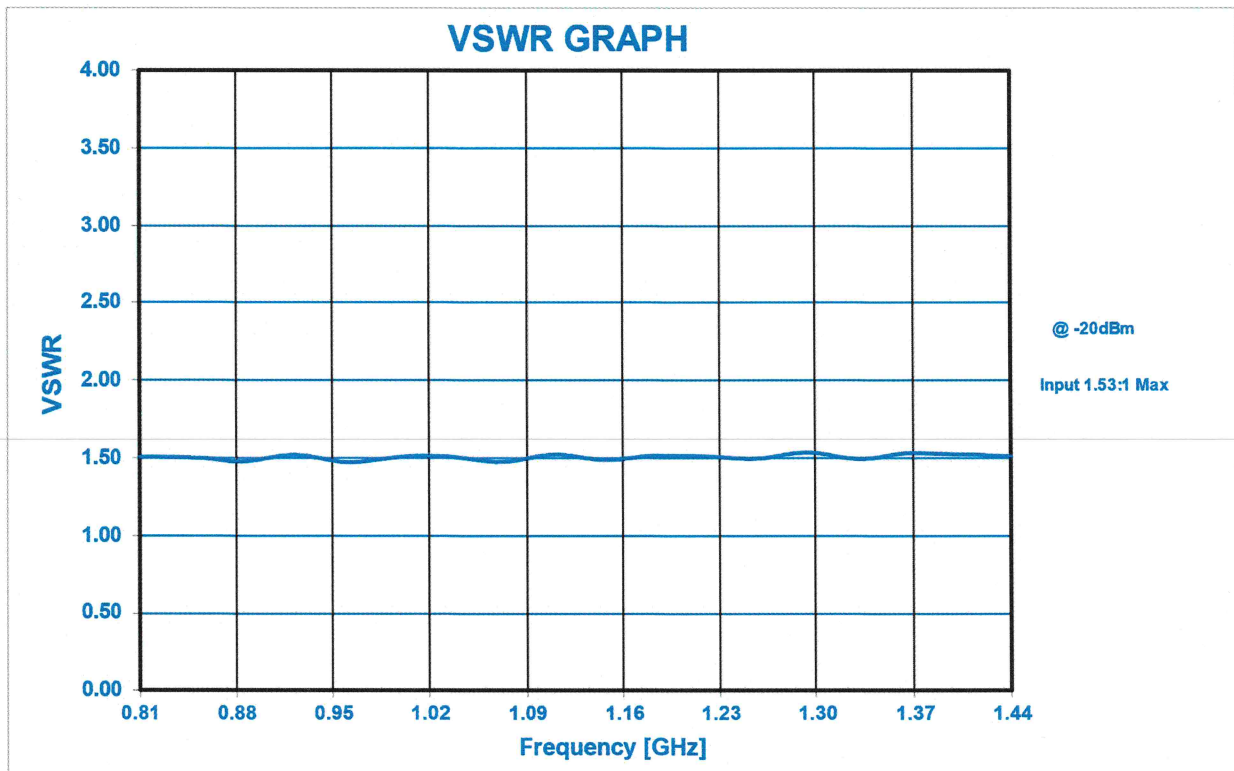
CAGE CODE
71A34

DWG. NO.
27641800

REVISION A1

SCALE

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