

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	
	DETECTOR LOG VIDEO AMPLIFIER	
	PMI P/N GMDA-D1005-08R11R44	
	REVISION A1	
	SHEET 1 OF 9	
	CONTRACT NO.	
	DRAWN:	JOHNM
	CHECKED:	JOHNM
	PROJ ENGR:	JOHNM
	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: -65.9 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	0.40	X	
1.125	25.0	0.33	X	
1.44	25.0	0.25	X	

Test Temp: -54°C (See attached Plot)

Frequency (GHz)	Log Slope (mV / dB)	Log linearity (dB)	Pass	Fail
0.81	24.8	0.83	X	
1.125	24.5	0.81	X	
1.44	24.4	0.81	X	

Test Temp: +85°C (See attached Plot)

Frequency (GHz)	Log Slope (mV / dB)	Log linearity (dB)	Pass	Fail
0.81	25.7	0.46	X	
1.125	25.5	0.36	X	
1.44	25.5	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 = 9 mV (See attached plot)
 Flatness = Vp-p - (System Flatness x 25)

Flatness = 6 mV Pass X Fail _____

4. MAXIMUM OUTPUT VOLTAGE

Specification: +2.5 V Max
 Measurement: 1923 mV

Pass X Fail _____

5. INPUT VSWR

Specification: 2.0:1 Max
 Measurement: -20 dBm input (See attached plot)
 VSWR: 1.63:1

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: 11.6 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: 89 ns

Pass X Fail _____

	SIZE A	CAGE CODE 71A34	DWG. NO. 27641800	REVISION A1
	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: 12.0 ns Pass X Fail _____

11. OFFSET VOLTAGE

Specification: ±50 mV Max
 +25°C Measurement: -10 mV Pass X Fail _____
 -54°C Measurement: -22 mV Pass X Fail _____
 +85°C Measurement: +29 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 *H. Klamm*

Date: 10.24.24

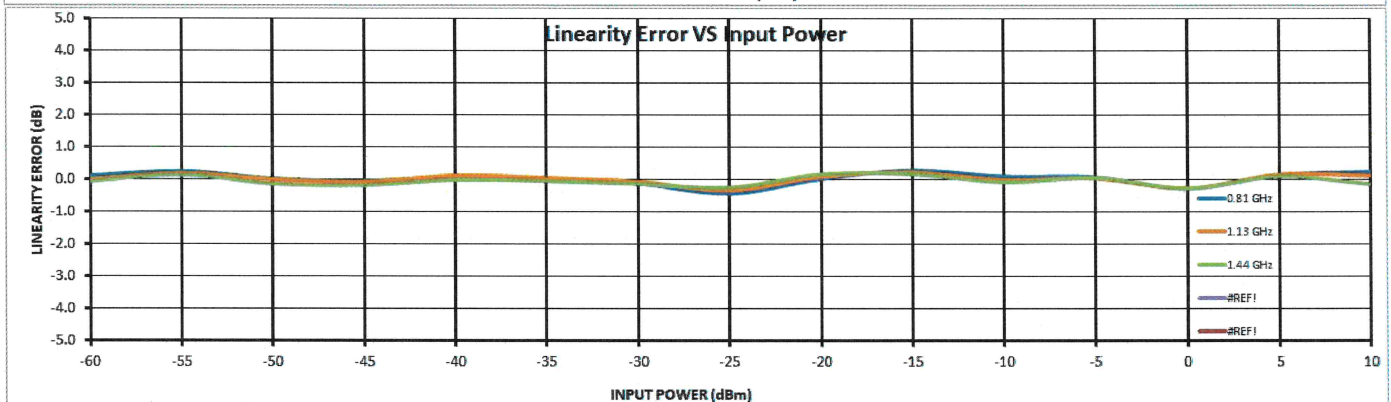
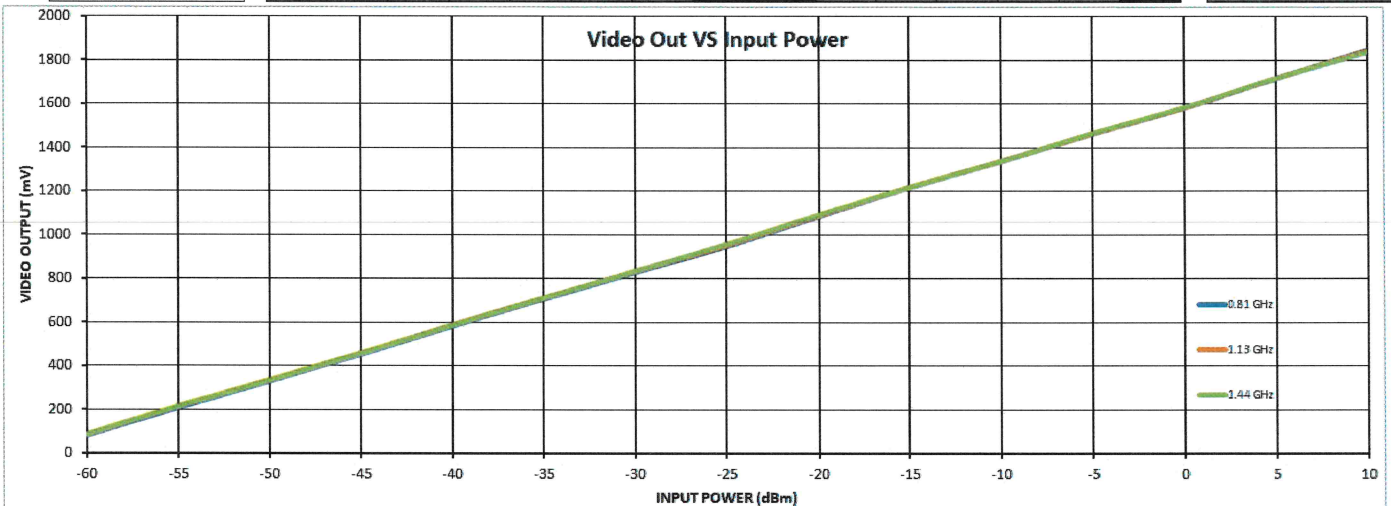
	SIZE A	CAGE CODE 71A34	DWG. NO. 27641800	REVISION A1
	SCALE			SHEET 4 OF 9

Transfer Response at +25°C

Model: GMDA-D1005-08R11R44
 Serial No.: PL49352
 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)	81	210	330	454	583	707	829	947	1084	1216	1337	1462	1679	1715	1843	Measured Value (mV)
	SLOPE (mV/dB)	3	7	1	-1	3	1	-3	-10	1	8	3	2	-6	4	6	ERROR (mV)
	LIN. ERR. (dB)	0.13	0.26	0.04	-0.03	0.11	0.04	-0.10	-0.40	0.05	0.30	0.12	0.09	-0.25	0.16	0.26	LINEARITY ERROR (dB)
1.13 GHz	INTERCEPT (mV)	87	217	337	460	590	713	835	953	1089	1217	1336	1462	1579	1715	1839	Measured Value (mV)
	SLOPE (mV/dB)	0	5	0	-2	3	2	-1	-8	3	6	0	1	-7	4	4	ERROR (mV)
	LIN. ERR. (dB)	0.00	0.21	0.01	-0.07	0.14	0.06	-0.05	-0.33	0.12	0.24	0.00	0.05	-0.27	0.18	0.14	LINEARITY ERROR (dB)
1.44 GHz	INTERCEPT (mV)	87	217	335	459	588	712	835	957	1092	1217	1336	1464	1581	1715	1834	Measured Value (mV)
	SLOPE (mV/dB)	-1	4	-3	-4	0	-1	-3	-6	5	5	-1	2	-6	3	-3	ERROR (mV)
	LIN. ERR. (dB)	-0.04	0.16	-0.12	-0.15	0.01	-0.03	-0.10	-0.22	0.18	0.18	-0.05	0.07	-0.25	0.12	-0.12	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	0	0	0	0	0.2	Flatness dB: ±0.2 dB

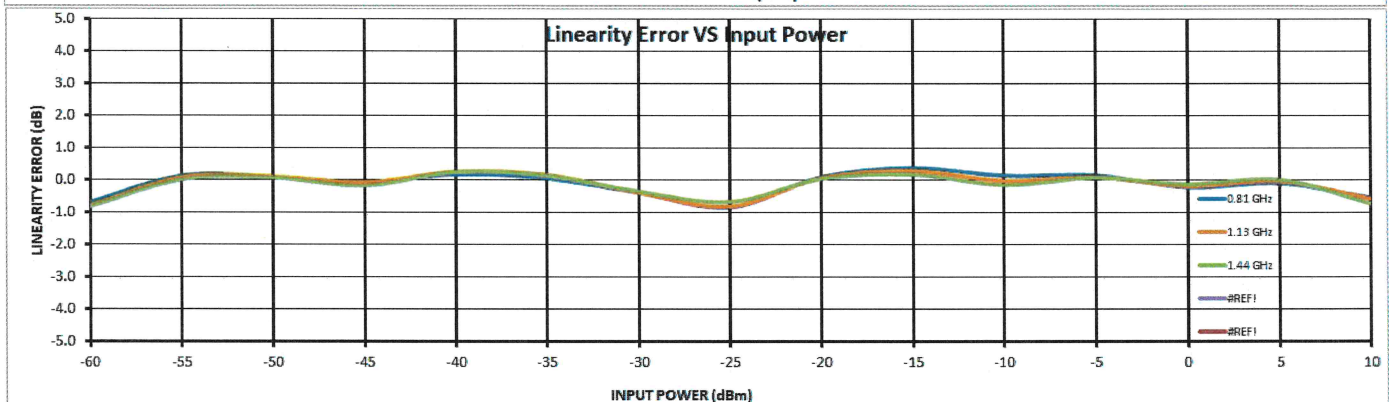
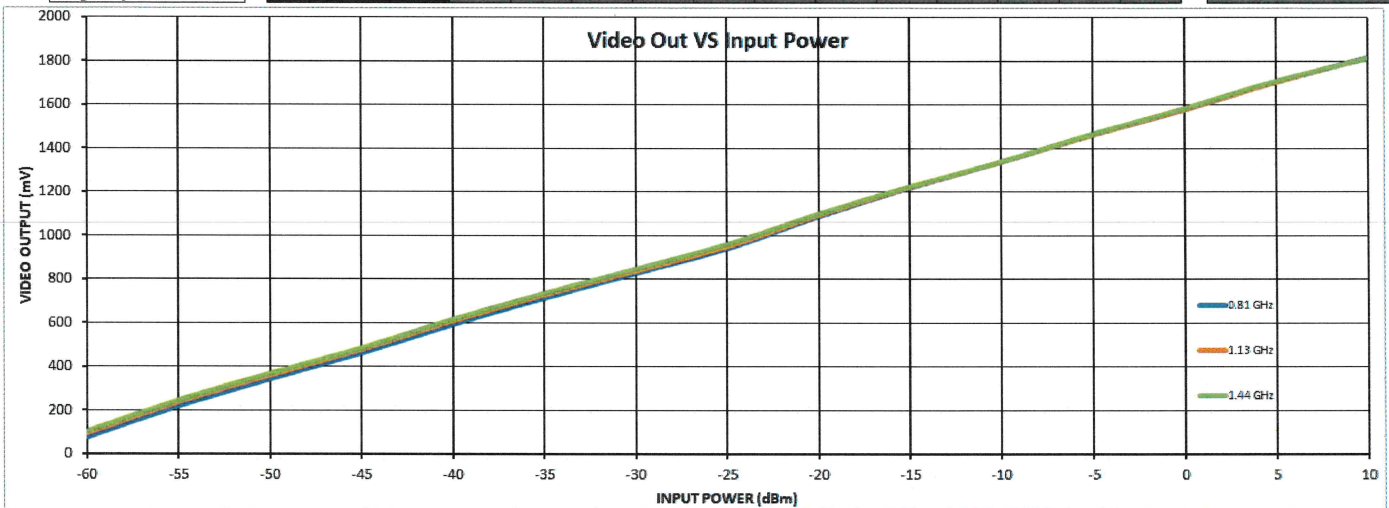


Transfer Response at -54°C

Model: GMDA-D1005-08R11R44
 Serial No.: PL49352
 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)	1582	1582	1582	1582	1582	1582	1582	1582	1582	1582	1582	1582	1582	1582	1582	Measured Value (mV)
	SLOPE (mV/dB)	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	ERROR (mV)
	LIN. ERR. (dB)	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	LINEARITY ERROR (dB)
1.13 GHz	INTERCEPT (mV)	1583	1583	1583	1583	1583	1583	1583	1583	1583	1583	1583	1583	1583	1583	1583	Measured Value (mV)
	SLOPE (mV/dB)	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	ERROR (mV)
	LIN. ERR. (dB)	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	LINEARITY ERROR (dB)
1.44 GHz	INTERCEPT (mV)	1585	1585	1585	1585	1585	1585	1585	1585	1585	1585	1585	1585	1585	1585	1585	Measured Value (mV)
	SLOPE (mV/dB)	24.4	24.4	24.4	24.4	24.4	24.4	24.4	24.4	24.4	24.4	24.4	24.4	24.4	24.4	24.4	ERROR (mV)
	LIN. ERR. (dB)	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	LINEARITY ERROR (dB)
Avg. Slope: 24.5 mV/dB		0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.4	0.2	0.1	0	0.1	0.1	0.1	0.1	Flatness dB: ±0.5 dB



SIZE
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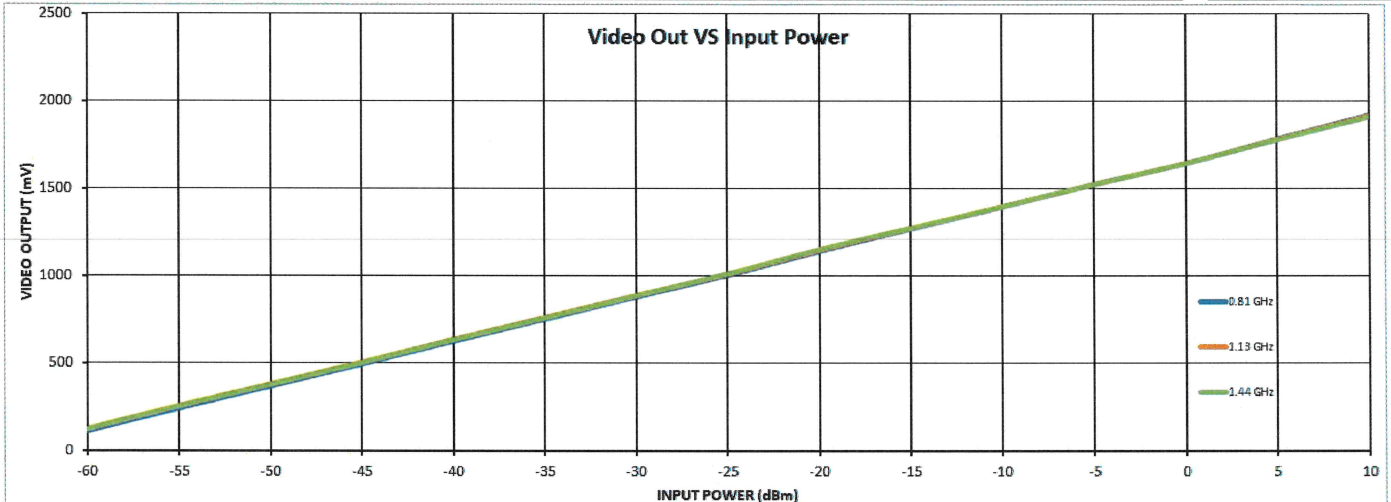
SHEET 6 OF 9

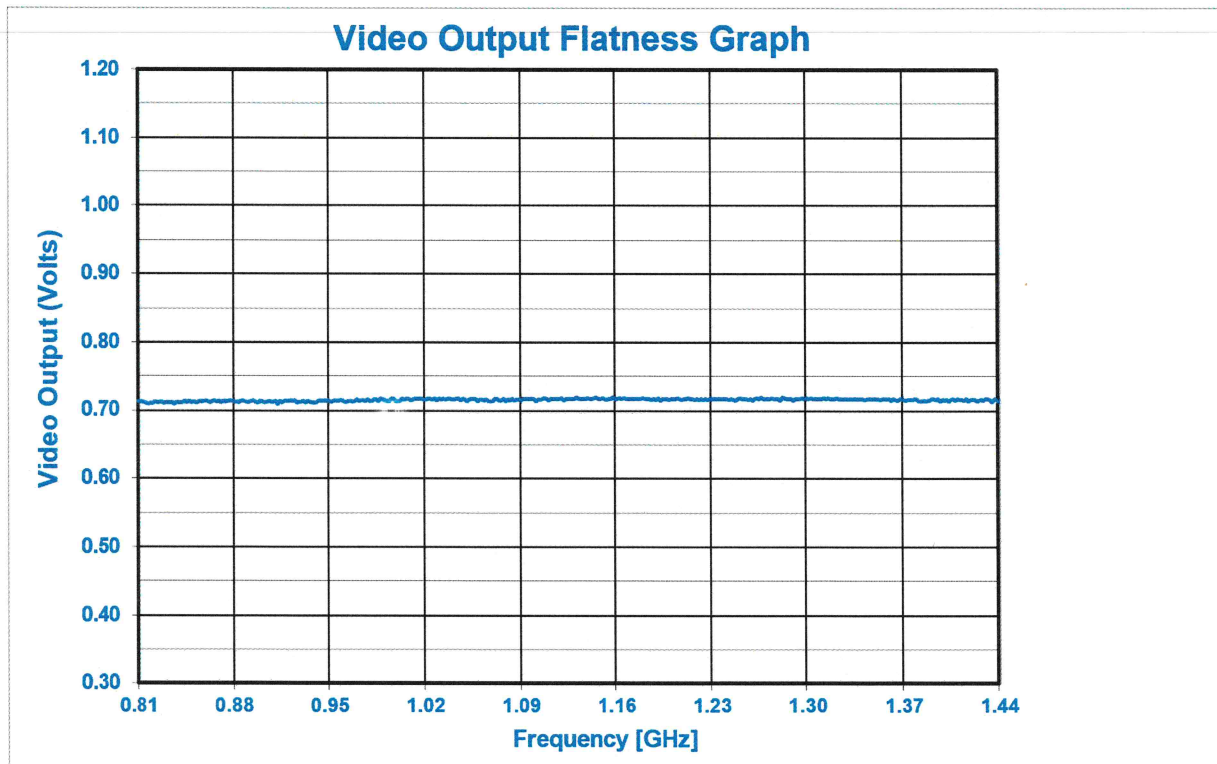
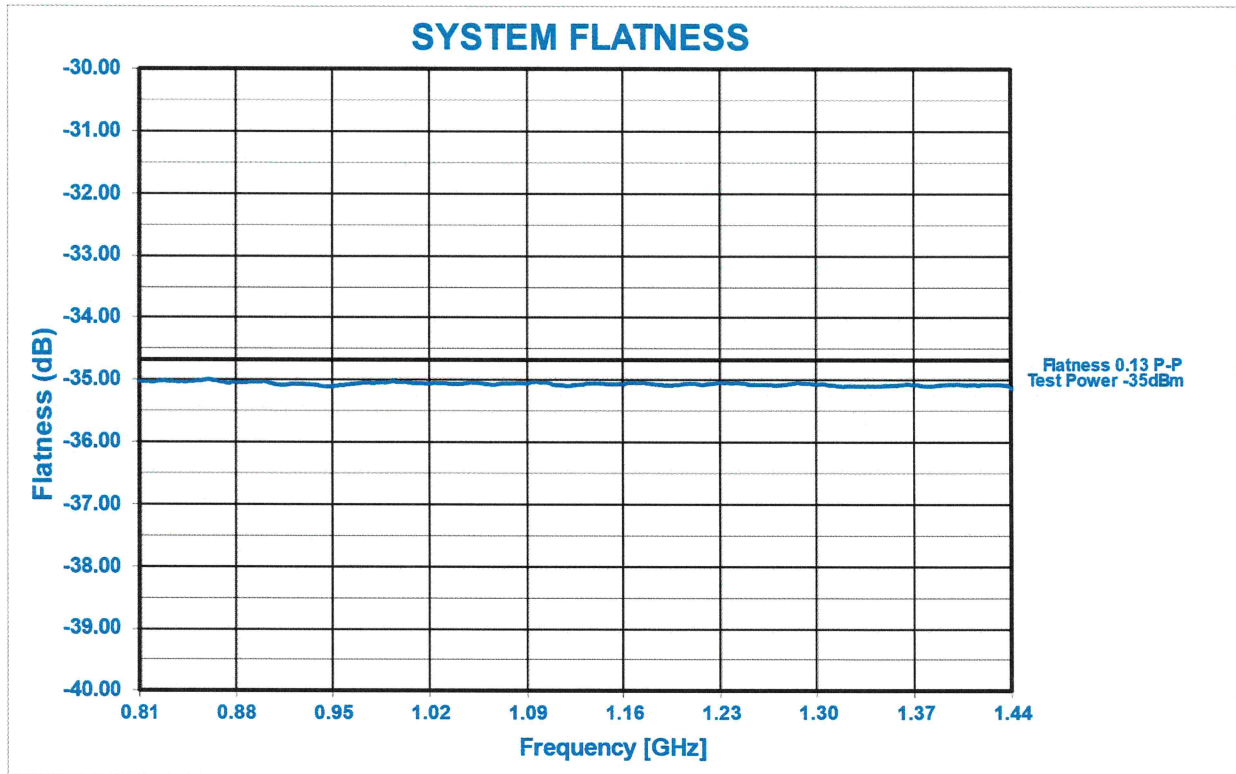
Transfer Response at +85°C

Model: GMDA-D1005-08R11R44
 Serial No.: PL49352
 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)	114	246	372	497	629	755	882	1007	1144	1271	1399	1527	1647	1787	1923	Measured Value (mV)
	SLOPE (mV/dB)	3	7	4	0	4	1	0	-4	4	3	2	2	-7	4	12	ERROR (mV)
	LIN. ERR. (dB)	0.13	0.26	0.16	0.02	0.15	0.05	-0.01	-0.15	0.17	0.11	0.09	0.06	-0.27	0.17	0.46	LINEARITY ERROR (dB)
1.13 GHz	INTERCEPT (mV)	123	257	381	505	638	763	889	1012	1149	1274	1398	1525	1646	1784	1917	Measured Value (mV)
	SLOPE (mV/dB)	0	6	3	-1	5	2	1	-4	6	4	0	0	-7	4	9	ERROR (mV)
	LIN. ERR. (dB)	-0.01	0.24	0.11	-0.03	0.19	0.09	0.04	-0.14	0.24	0.14	0.00	-0.01	-0.27	0.15	0.36	LINEARITY ERROR (dB)
1.44 GHz	INTERCEPT (mV)	121	254	377	502	634	759	886	1013	1152	1274	1398	1526	1646	1782	1912	Measured Value (mV)
	SLOPE (mV/dB)	-1	5	0	-3	2	-1	-1	-2	9	4	0	1	-7	1	4	ERROR (mV)
	LIN. ERR. (dB)	-0.03	0.19	0.00	-0.10	0.07	-0.03	-0.05	-0.08	0.37	0.15	0.01	0.02	-0.28	0.05	0.14	LINEARITY ERROR (dB)
Avg. Slope: 25.6 mV/dB		0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0	0	0	0.1	0.2	Flatness dB: ±0.2 dB





SIZE
A

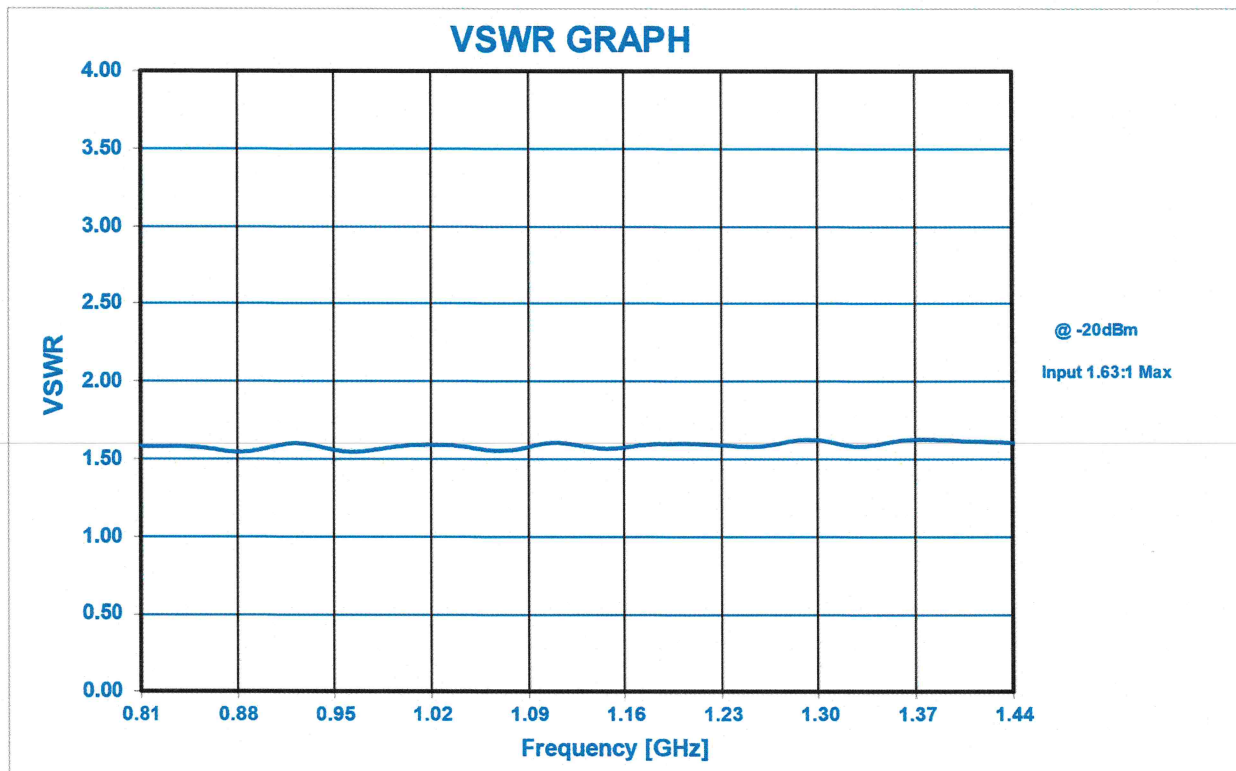
SCALE


CAGE CODE
71A34

DWG. NO.
27641800

REVISION A1

SHEET 8 OF 9



	SIZE A	CAGE CODE 71A34	DWG. NO. 27641800	REVISION A1
	SCALE			SHEET 9 OF 9