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

REVISION STATUS	SHT NO. LETTER	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

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

TEST DATA SHEET

CONTRACT NO.

DRAWN: JOHNM

CHECKED: JOHNM

PROJ ENGR: JOHNM

PROG MGR:

MFG.ENGR:

QA ENGR:

RELIABILITY:

CUSTOMER:

DETECTOR LOG VIDEO AMPLIFIER
PMI P/N GMDA-D1005-08R11R44

PMI	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	25.3	0.35	X	
1.125	25.1	0.30	X	
1.44	25.2	0.40	X	

Test Temp: -54°C (See attached Plot)

Frequency (GHz)	Log Slope (mV / dB)	Log linearity (dB)	Pass	Fail
0.81	24.8	0.93	X	
1.125	24.5	0.93	X	
1.44	24.4	0.78	X	

Test Temp: +85°C (See attached Plot)

Frequency (GHz)	Log Slope (mV / dB)	Log linearity (dB)	Pass	Fail
0.81	25.8	1.42	X	
1.125	25.5	1.20	X	
1.44	25.6	1.22	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 = 6 mV (See attached plot)
Flatness = Vp-p – (System Flatness x 25)

Flatness = 3 mV Pass ___X___ Fail _____

4. MAXIMUM OUTPUT VOLTAGE

Specification: +2.5 V Max
Measurement: 1858 mV Pass ___X___ Fail _____

5. INPUT VSWR

Specification: 2.0:1 Max
Measurement: -20 dBm input (See attached plot)
VSWR: 1.59:1 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: 12.1 ns Pass ___X___ Fail _____

7. LEADING AND TRAILINGE 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: 141 ns Pass ___X___ Fail _____

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: 12.4 ns Pass X Fail _____

11. OFFSET VOLTAGE

Specification: ±50 mV Max
+25°C Measurement: -11 mV Pass X Fail _____
-54°C Measurement: +3 mV Pass X Fail _____
+85°C Measurement: +6 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 _____

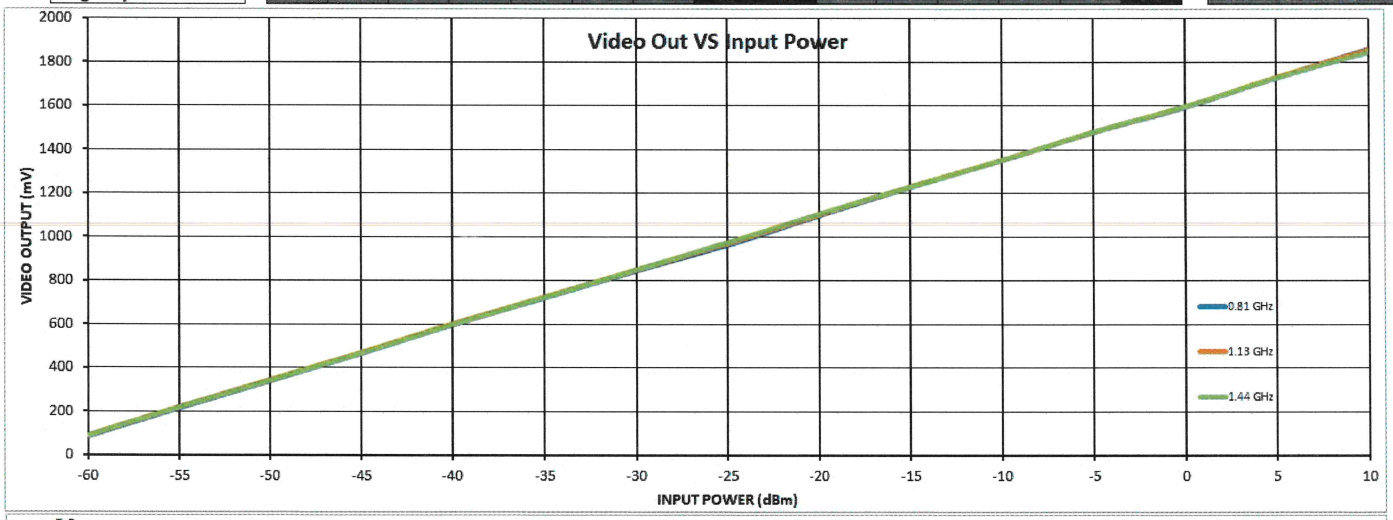
Tested by: Joshua Monley Date: 10/23/2024

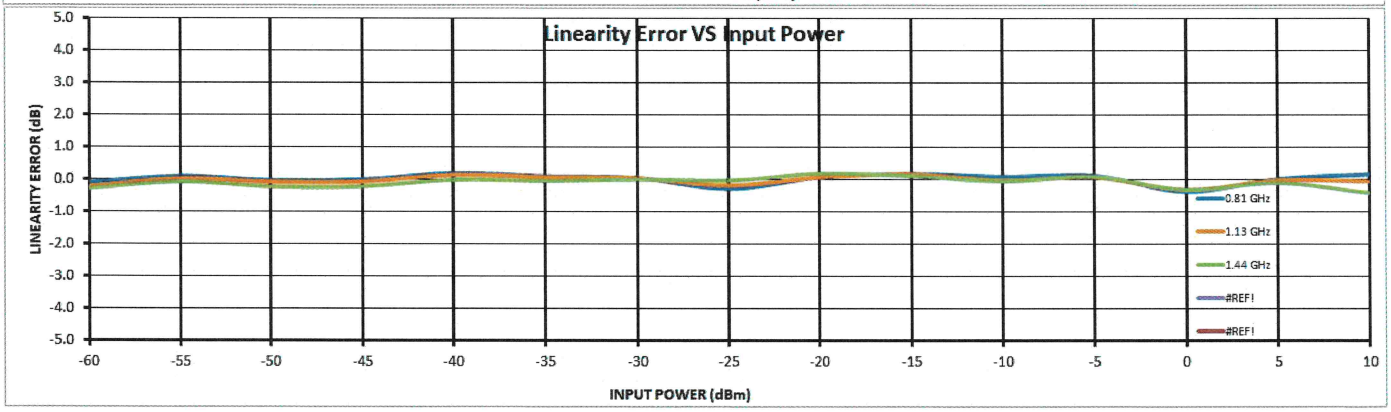
QA: PMI QA3 K.Klumpp Date: 10.24.24

Transfer Response at +25°C

Model: GMDA-D1005-08R11R44
Serial No.: PL49349
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)	1601	84	215	338	465	596	720	845	963	1098	1227	1351	1478	1592	1728	1858	Measured Value (mV)
	SLOPE (mV/dB)	25.3	-2	3	0	0	5	3	2	-7	2	5	3	3	-9	1	5	ERROR (mV)
	LIN. ERR. (dB)	0.35	-0.07	0.12	-0.01	0.02	0.20	0.12	0.07	-0.26	0.09	0.19	0.11	0.13	-0.35	0.04	0.18	LINEARITY ERROR (dB)
1.13 GHz	INTERCEPT (mV)	1602	89	221	344	470	601	725	850	970	1102	1230	1351	1479	1595	1728	1853	Measured Value (mV)
	SLOPE (mV/dB)	25.1	-5	1	-2	-1	4	2	2	-4	2	5	0	2	-7	0	-1	ERROR (mV)
	LIN. ERR. (dB)	0.3	-0.21	0.04	-0.06	-0.05	0.16	0.09	0.07	-0.16	0.09	0.18	0.00	0.09	-0.30	-0.01	-0.03	LINEARITY ERROR (dB)
1.44 GHz	INTERCEPT (mV)	1605	88	219	341	467	598	723	850	975	1106	1230	1352	1481	1597	1728	1846	Measured Value (mV)
	SLOPE (mV/dB)	25.2	-7	-2	-5	-5	0	-1	0	0	5	3	-1	2	-8	-2	-10	ERROR (mV)
	LIN. ERR. (dB)	0.4	-0.27	-0.06	-0.21	-0.21	0.00	-0.03	0.01	-0.02	0.19	0.12	-0.04	0.09	-0.30	-0.09	-0.40	LINEARITY ERROR (dB)
Avg. Slope: 25.2 mV/dB			0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0	0.1	0.1	0	0.2	Flatness dB: ±0.2 dB

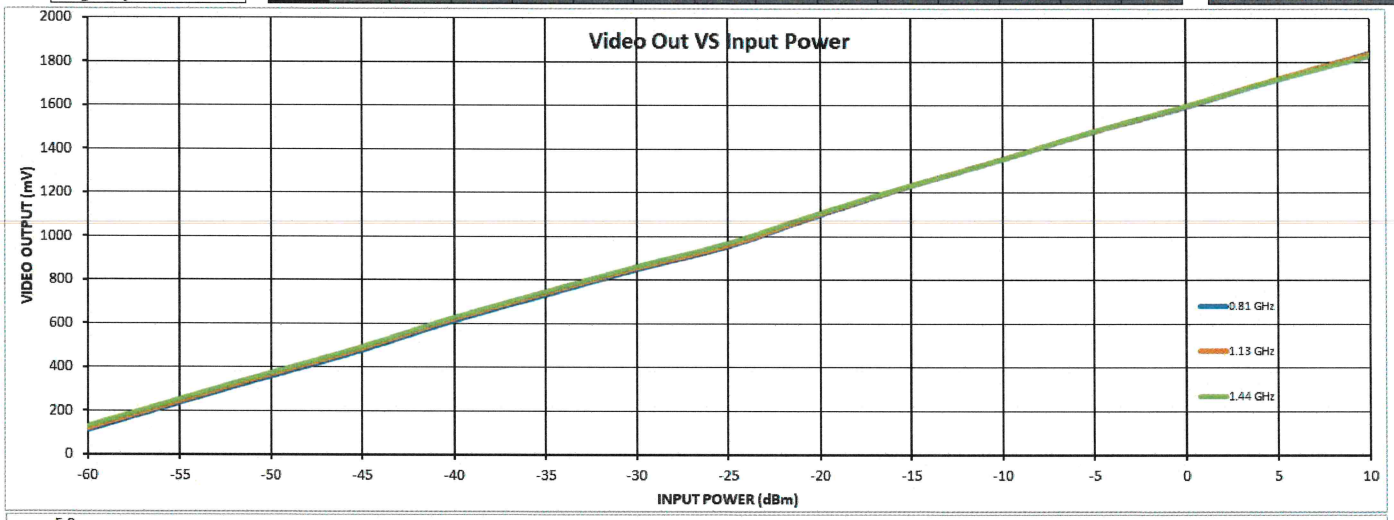


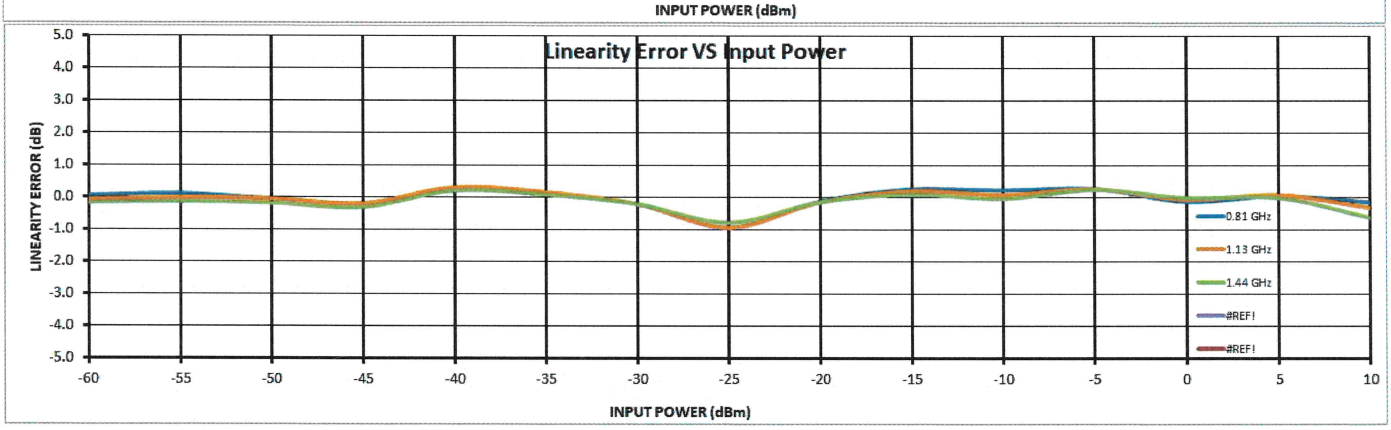


Transfer Response at -54°C

Model: GMDA-D1005-08R11R44
Serial No.: PL49349
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)	1595	111	236	356	476	611	731	847	953	1097	1230	1353	1478	1592	1720	1839	Measured Value (mV)
	SLOPE (mV/dB)	24.8	1	3	-1	-5	6	3	-5	-23	-3	6	6	7	-3	1	-4	ERROR (mV)
	LIN. ERR. (dB)	0.93	0.06	0.11	-0.04	-0.20	0.26	0.10	-0.21	-0.93	-0.12	0.26	0.22	0.27	-0.12	0.05	-0.15	LINEARITY ERROR (dB)
1.13 GHz	INTERCEPT (mV)	1598	123	247	369	488	623	742	856	961	1103	1234	1354	1481	1596	1722	1835	Measured Value (mV)
	SLOPE (mV/dB)	24.5	-2	0	-1	-5	7	4	-5	-23	-4	5	2	6	-2	2	-8	ERROR (mV)
	LIN. ERR. (dB)	0.93	-0.07	-0.02	-0.05	-0.20	0.30	0.15	-0.21	-0.93	-0.15	0.19	0.08	0.25	-0.06	0.07	-0.33	LINEARITY ERROR (dB)
1.44 GHz	INTERCEPT (mV)	1599	129	252	373	492	627	746	861	969	1107	1235	1354	1483	1599	1721	1828	Measured Value (mV)
	SLOPE (mV/dB)	24.4	-4	-3	-4	-7	5	2	-5	-19	-3	3	-1	6	0	0	-15	ERROR (mV)
	LIN. ERR. (dB)	0.78	-0.16	-0.13	-0.18	-0.31	0.22	0.09	-0.20	-0.78	-0.14	0.10	-0.03	0.25	0.00	-0.01	-0.63	LINEARITY ERROR (dB)
Avg. Slope: 24.6 mV/dB			0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.1	0	0.1	0.1	0	0.2	Flatness dB: ±0.4 dB



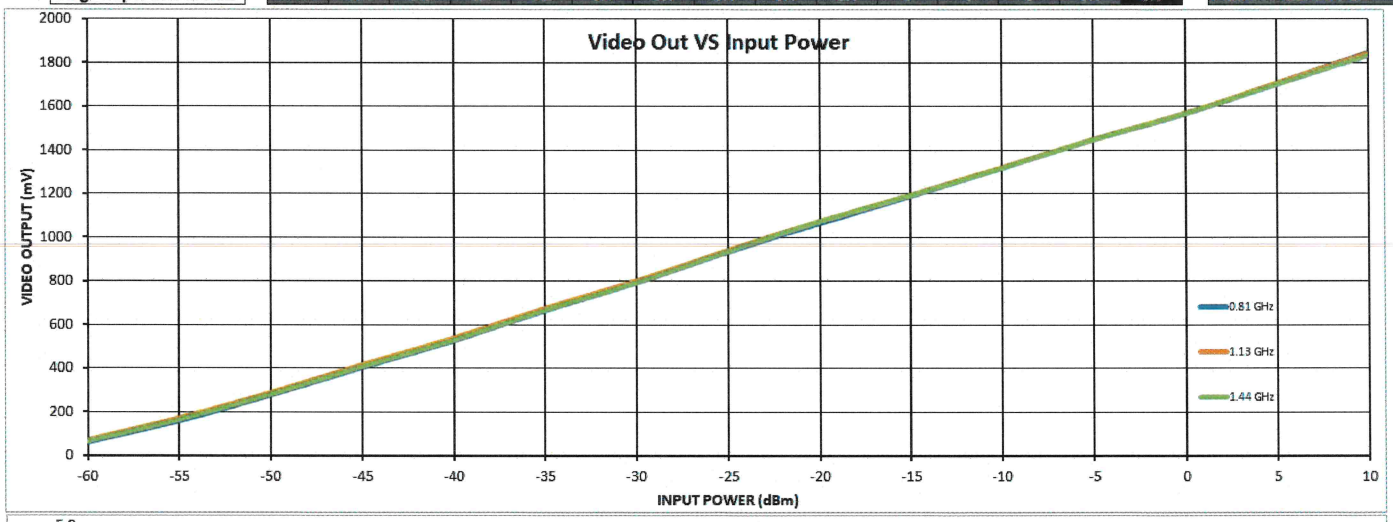


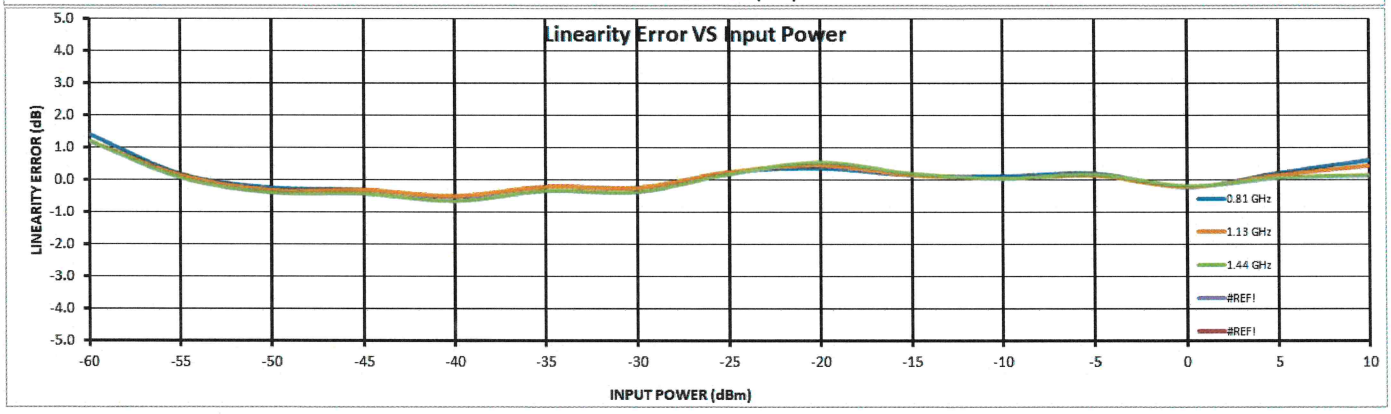
PMI	SIZE A	CAGE CODE 71A34	DWG. NO. 27641800	REVISION A1
	SCALE			SHEET 6 OF 9

Transfer Response at +85°C

Model: GMDA-D1005-08R11R44
Serial No.: PL49349
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)	1572	64	161	279	406	529	666	794	935	1067	1190	1318	1449	1567	1707	1846	Measured Value (mV)
	SLOPE (mV/dB)	25.8	37	5	-8	-8	-13	-5	-6	6	10	4	3	5	-5	6	16	ERROR (mV)
	LIN. ERR. (dB)	1.42	1.42	0.19	-0.23	-0.30	-0.52	-0.20	-0.23	0.25	0.37	0.15	0.12	0.21	-0.21	0.23	0.63	LINEARITY ERROR (dB)
1.13 GHz	INTERCEPT (mV)	1572	70	171	287	415	538	673	800	940	1073	1193	1318	1448	1567	1704	1839	Measured Value (mV)
	SLOPE (mV/dB)	25.5	31	4	-8	-7	-12	-5	-6	7	12	4	1	4	-5	4	11	ERROR (mV)
	LIN. ERR. (dB)	1.2	1.20	0.16	-0.30	-0.29	-0.48	-0.19	-0.22	0.26	0.46	0.16	0.05	0.14	-0.20	0.16	0.45	LINEARITY ERROR (dB)
1.44 GHz	INTERCEPT (mV)	1570	67	166	282	409	531	667	794	936	1073	1192	1316	1447	1566	1700	1830	Measured Value (mV)
	SLOPE (mV/dB)	25.6	31	2	-10	-10	-16	-8	-9	5	14	5	2	5	-4	2	4	ERROR (mV)
	LIN. ERR. (dB)	1.22	1.22	0.09	-0.38	-0.41	-0.64	-0.32	-0.35	0.20	0.56	0.21	0.06	0.18	-0.16	0.08	0.16	LINEARITY ERROR (dB)
	Avg. Slope: 25.6 mV/dB		0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0	0	0	0.1	0.3	Flatness dB: ±0.3 dB





	SIZE	CAGE CODE	DWG. NO.	REVISION
PMI	A	71A34	27641800	A1
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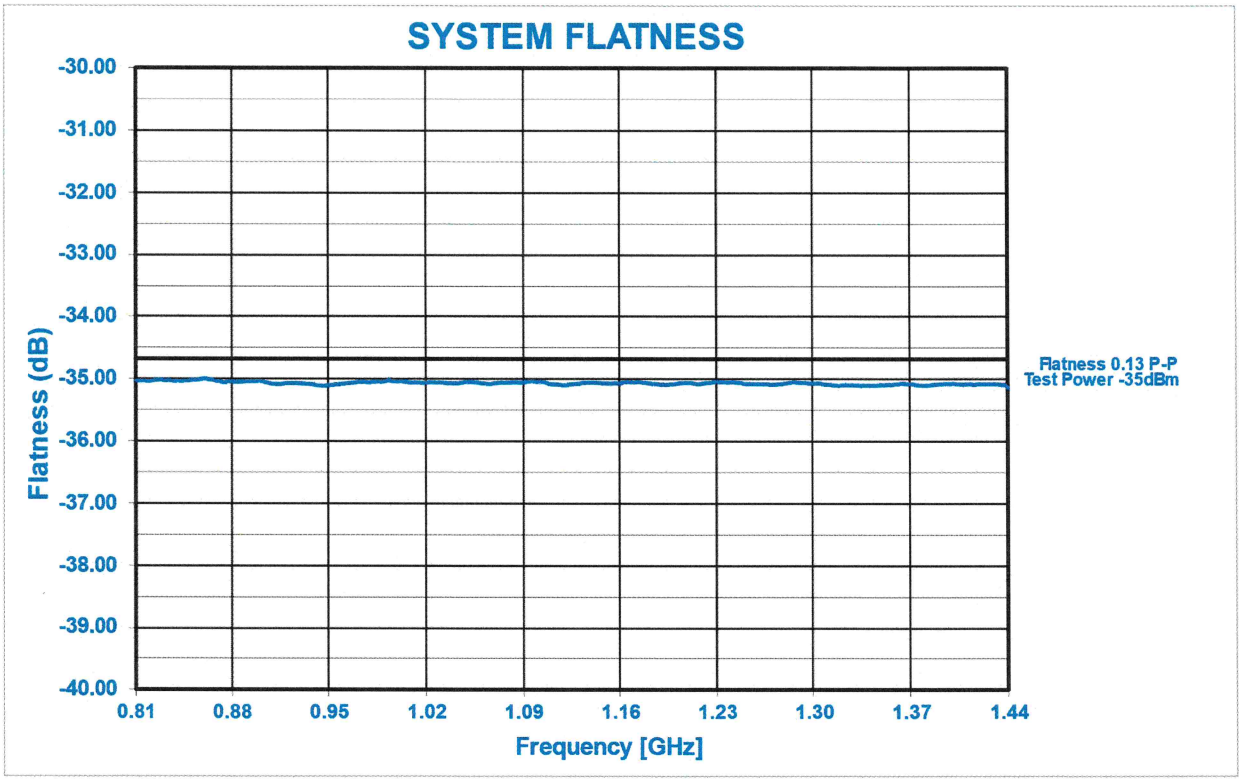
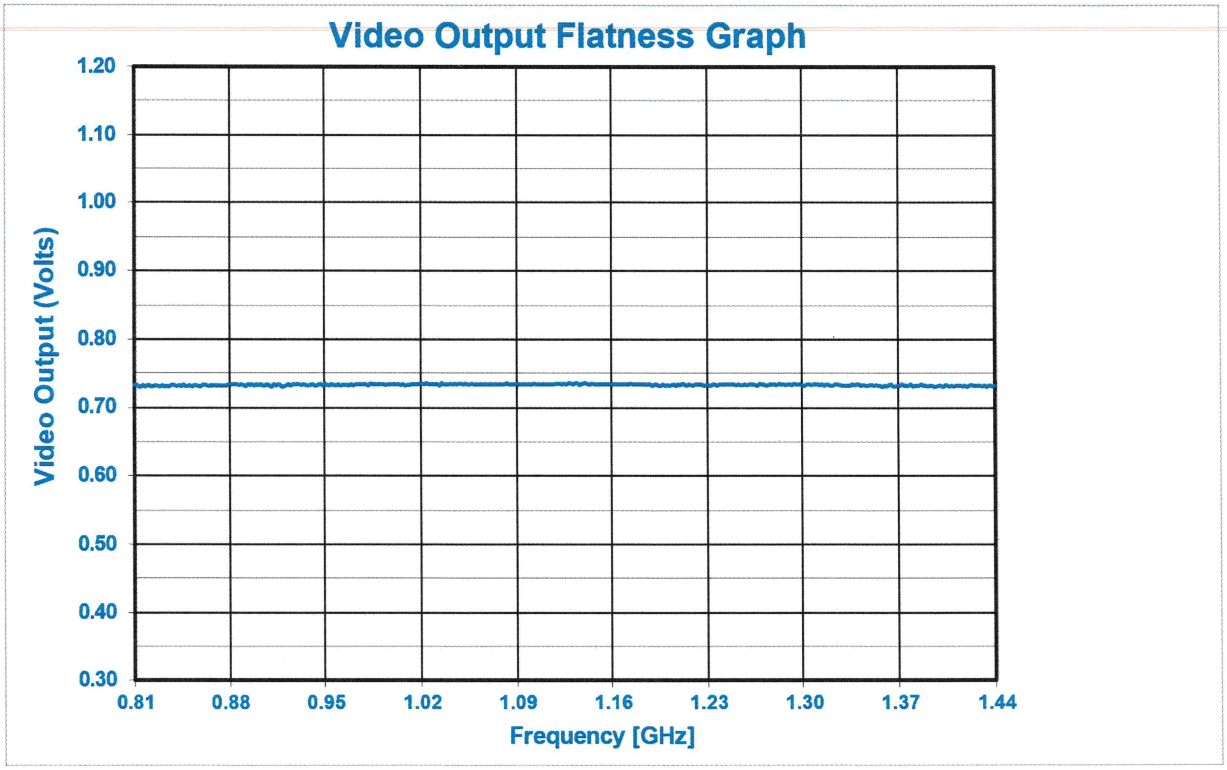
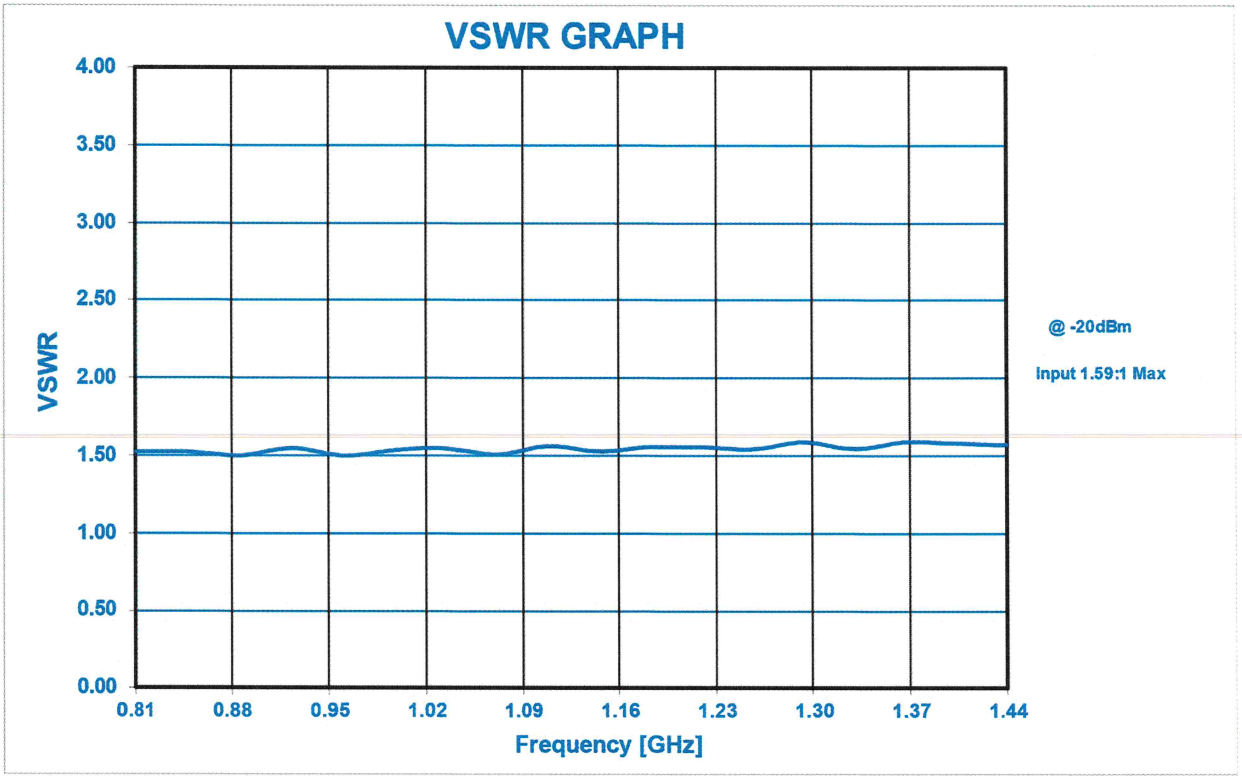




PMI	SIZE A	CAGE CODE 71A34	DWG. NO. 27641800	REVISION A1
	SCALE			SHEET 8 OF 9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3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
VSWR
0.81
0.88
0.95
1.02
1.09
1.16
1.23
1.30
1.37
1.44
Frequency [GHz]
@ -20dBm
Input 1.59:1 Max