MODEL: GMDA-D1003 **S/N: PL30304** **DATE: 10/9/2020**

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

1. TSS

Specification: -75dBm Maximum
Measurement @ 18GHz, 2uS PW, 100KHz PRF

TSS -75.8 dBm Pass ___X___ Fail _____

2. LOG SLOPE AND LINEARITY

Specification: Log slope 25 +/- 1mV / dB

Log Linearity +/-1.0 dB Max. @ 25 deg C
+/-1.2 dB Over Temperature

Measurement: Logging Range = -70dBm to +5dBm

@ 25 deg C (See attached Plot)

Frequency (GHz)	Log Slope (mV / dB)	Log linearity (dB)	Pass	Fail
7	24.9	-0.64	X	
13	25.1	-0.35	X	
18	24.9	0.50	X	

@ -25 deg C (See attached Plot)

Frequency (GHz)	Log Slope (mV / dB)	Log linearity (dB)	Pass	Fail
7	25.4	-1.11	X	
13	25.7	0.80	X	
18	25.4	0.85	X	

@ +85 deg C (See attached Plot)

Frequency (GHz)	Log Slope (mV / dB)	Log linearity (dB)	Pass	Fail
7	23.9	-1.07	X	
13	24.1	1.11	X	
18	24.3	-1.03	X	

MODEL: GMDA-D1003 **S/N: PL30304** **DATE: 10/9/2020**

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3. FLATNESS

Specification: 100mV Max
Measurement: @-35dBm Input

System Flatness = 0.38 dB (See attached plot)
Vp-p = 27 mV (See attached plot)
Flatness = Vp-p – (System Flatness x 25)
Flatness = 17.5 mV Pass ___X___ Fail _____

4. MAXIMUM OUTPUT VOLTAGE

Specification: +2.5v Max
Measurement: 1.989v Pass ___X___ Fail _____

5. INPUT VSWR

Specification: 2.5:1 Max
Measurement @-20dBm input (See attached plot)
VSWR: 1.742:1 Pass ___X___ Fail _____

6. VIDEO RISE TIME

Specification: 30ns Max
Measurement: Freq = 13.0 GHz, RF Input –35dBm, PW = 1us, PRF 100KHz

Rise Time: 23ns Pass ___X___ Fail _____

7. LEADING AND TRAILINGE EDGE

Specification: Per figure 5 on product feature DWG000004

Pass___X___ Fail_____

8. REVERSE SHOOT AND SLOPE REVERSE

Specification: Per figure 6 on product feature DWG000004

9. RECOVERY TIME

Specification: 1us
Measurement: 0.239us Pass ___X___ Fail _____

MODEL: GMDA-D1003 **S/N: PL30304** **DATE: 10/9/2020**

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10. THROUGHPUT TIME

Specification: 30ns Max

Measurement: Freq 13GHz, PW = 100ns, PRF = 100KHz

-35dBm Input: 22ns Pass ___X___ Fail _____

11. OFFSET VOLTAGE

Specification: +/- 50mV Max

Measurement: -37 mV Pass ___X___ Fail _____

12. DC POWER

Specification: +12V +/- 5%, 300mA Max

-12V +/- 5%, 150mA Max

Measurement: +12V @ 198 mA Pass __X__ Fail _____

-12V @ 68 mA Pass __X__ Fail _____

13. VISUAL AND MECHANICAL INSPECTION

Specification: Per PMI product feature DWG000004

Finish: Pass___X___ Fail_____

Dimensions: Pass___X___ Fail_____

Marking and Identification: Pass___X___ Fail_____

Tested by: J.Emperador Date: 10/9/2020

QA: PMI QA3 azimmerman Date: 12-1-2020

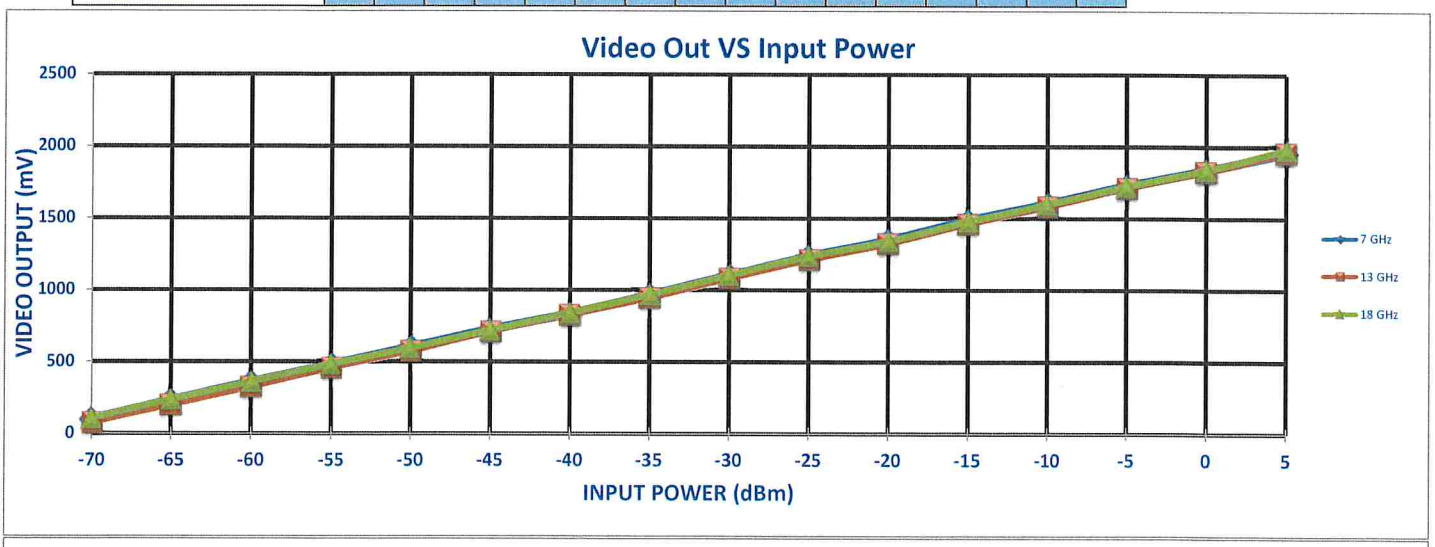
PMI	SIZE A	CAGE CODE 71A34	DWG. NO. ETD000006	REVISION B1
	SCALE			SHEET 4 OF 10

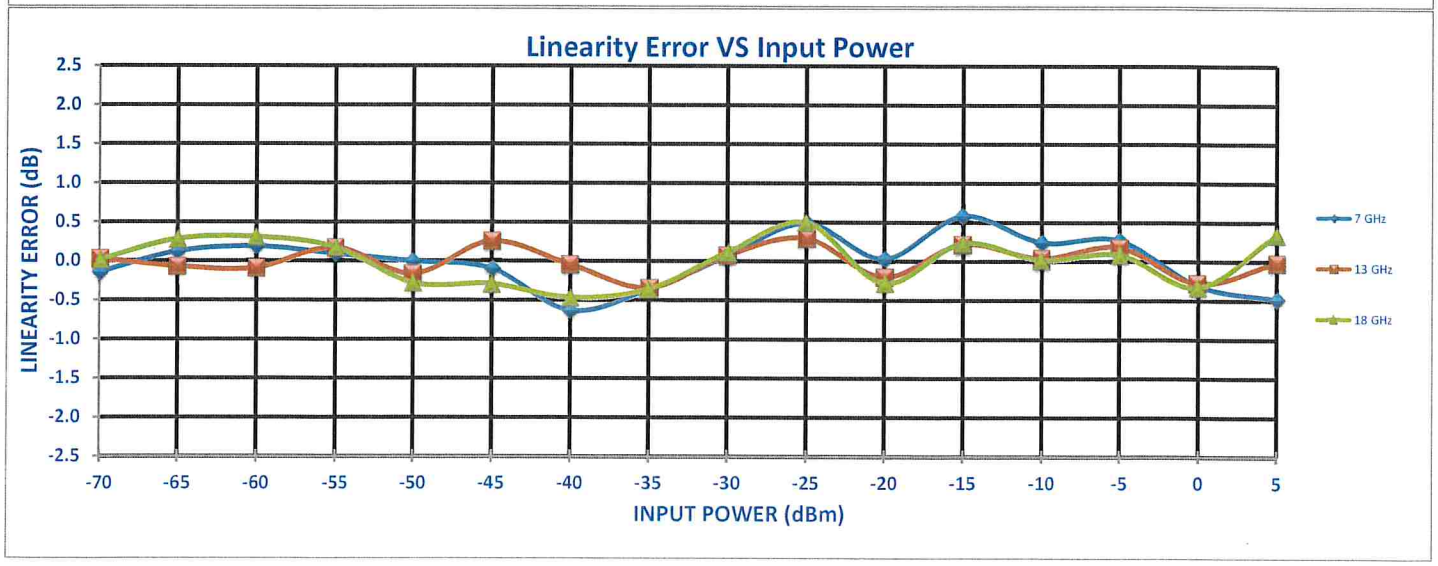
LOG TRANSFER WITH FREQUENCY
MODEL: GMDA-D1003
TESTED BY: J.Emperador
TEST DATE: 11/24/2020
SERIAL NO: PL30304
TEST TEMP: +25C

PLANAR MONOLITHICS INDUSTRIES
4921 Robert J. Mathews Parkway, Suite 1
El Dorado Hills, CA 95762
Phone: 916-542-1401 Fax: 301-662-1731
Email: sales@pmi-rf.com | www.pmi-rf.com

Vos= -0.010

Frequency			-70	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5	RF Input Power (dBm)
7 GHz	INTERCEPT (mV)	1843	98	229	355	477	599	721	832	963	1098	1233	1346	1484	1600	1725	1835	1955	Measured Value (mV)
	SLOPE (mV/dB)	24.9	-4	3	5	2	0	-2	-16	-9	1	12	1	14	6	7	-8	-12	Error (mV)
			-0.15	0.12	0.19	0.09	0.00	-0.10	-0.64	-0.37	0.06	0.49	0.03	0.58	0.24	0.27	-0.31	-0.49	LINEARITY ERROR (dB)
13 GHz	INTERCEPT (mV)	1832	76	199	324	456	573	709	827	945	1081	1212	1325	1461	1582	1711	1825	1957	Measured Value (mV)
	SLOPE (mV/dB)	25.1	1	-2	-2	4	-4	6	-1	-9	2	7	-5	5	1	4	-7	-1	Error (mV)
			0.03	-0.07	-0.09	0.17	-0.17	0.25	-0.05	-0.35	0.07	0.29	-0.21	0.21	0.03	0.17	-0.28	-0.02	LINEARITY ERROR (dB)
18 GHz	INTERCEPT (mV)	1843	103	234	359	480	593	717	837	964	1100	1234	1339	1476	1595	1721	1835	1976	Measured Value (mV)
	SLOPE (mV/dB)	24.9	0	7	8	4	-7	-7	-12	-9	3	12	-7	6	0	2	-8	8	Error (mV)
			0.01	0.28	0.31	0.17	-0.28	-0.30	-0.47	-0.36	0.11	0.50	-0.28	0.23	0.01	0.08	-0.33	0.34	LINEARITY ERROR (dB)
	Flatness +/-dB		0.5	0.7	0.7	0.5	0.5	0.2	0.2	0.4	0.4	0.4	0.4	0.5	0.4	0.3	0.2	0.4	





	SIZE	CAGE CODE	DWG. NO.	REVISION B1
PMI	A	71A34	ETD000006	
	SCALE			SHEET 5 OF 10

LOG TRANSFER WITH FREQUENCY
MODEL: GMDA-D1003
TESTED BY: J.Emperador
TEST DATE: 11/24/2020
SERIAL NO: PL30304
TEST TEMP: -25C

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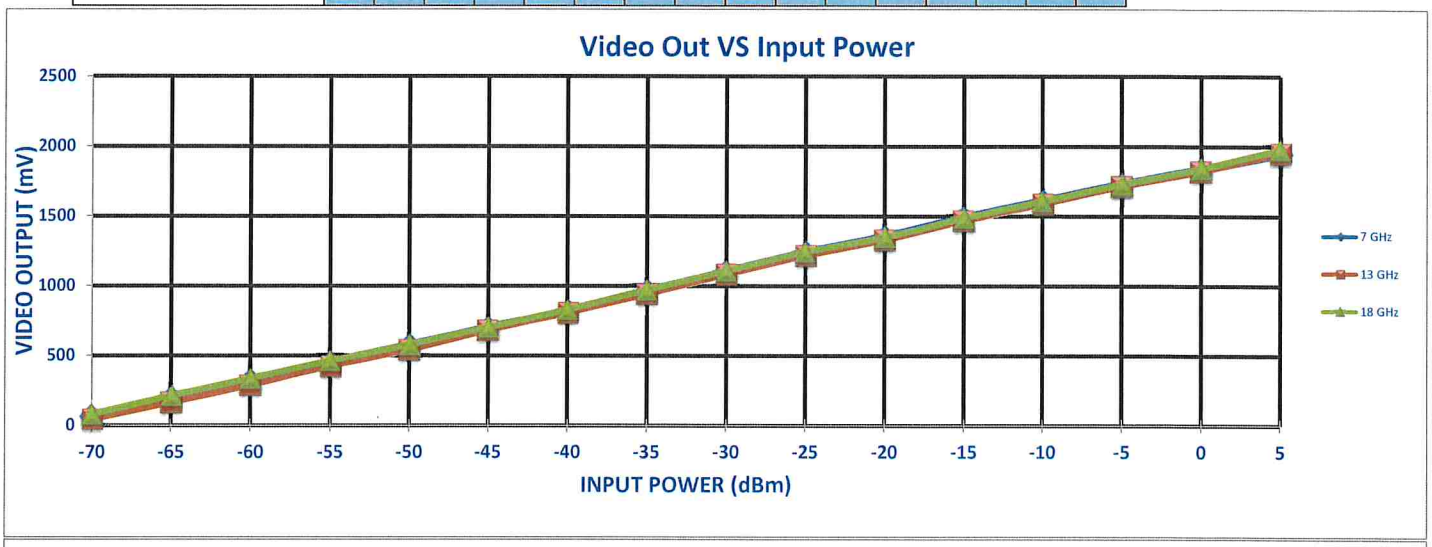
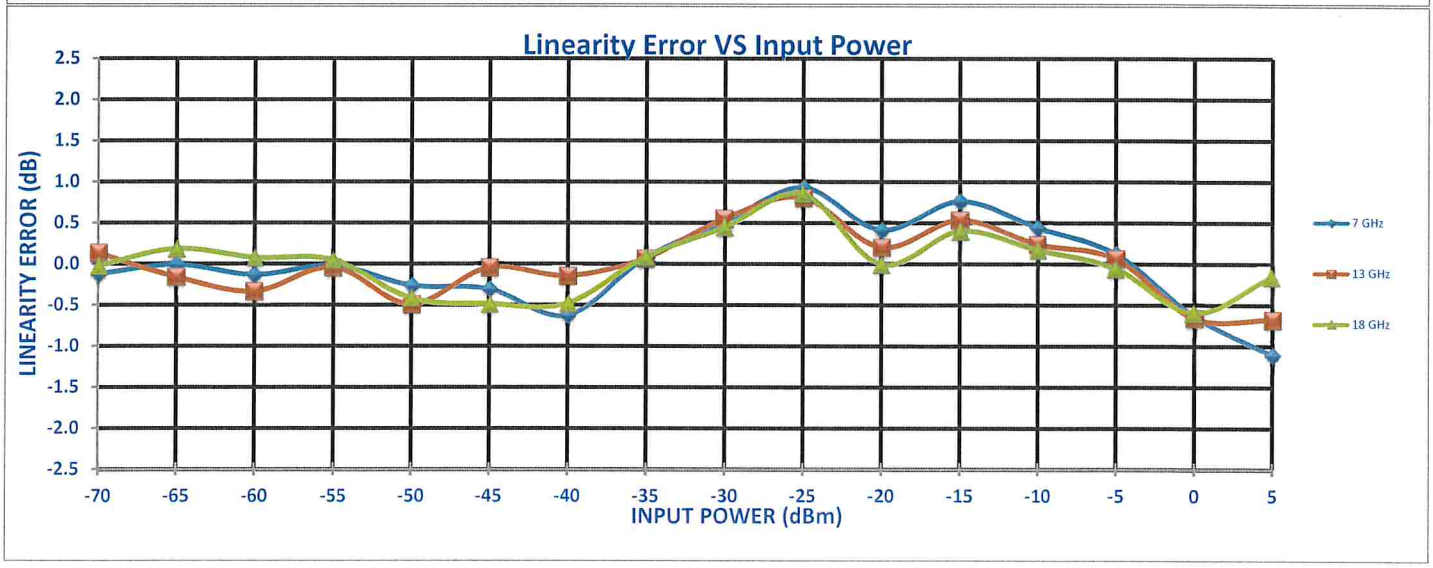
Vos= -0.037

Frequency			-70	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5	RF Input Power (dBm)
7 GHz	INTERCEPT (mV)	1848	65	195	319	449	570	696	815	960	1098	1236	1350	1486	1605	1724	1832	1947	Measured Value (mV)
	SLOPE (mV/dB)	25.4	-3	0	-3	-1	-7	-8	-16	2	13	24	10	19	11	3	-16	-28	Error (mV)
			-0.12	-0.01	-0.14	-0.02	-0.26	-0.31	-0.63	0.07	0.50	0.93	0.41	0.76	0.44	0.12	-0.63	-1.11	LINEARITY ERROR (dB)
13 GHz	INTERCEPT (mV)	1838	42	163	287	423	540	680	806	940	1081	1216	1329	1466	1587	1711	1821	1949	Measured Value (mV)
	SLOPE (mV/dB)	25.7	3	-4	-9	-1	-13	-1	-4	2	14	21	5	14	6	2	-17	-18	Error (mV)
			0.13	-0.16	-0.34	-0.05	-0.50	-0.05	-0.15	0.07	0.55	0.80	0.20	0.53	0.24	0.06	-0.66	-0.68	LINEARITY ERROR (dB)
18 GHz	INTERCEPT (mV)	1853	78	210	334	460	575	700	827	968	1104	1241	1346	1483	1604	1725	1838	1976	Measured Value (mV)
	SLOPE (mV/dB)	25.4	-1	5	2	1	-11	-12	-12	2	11	22	0	10	4	-1	-15	-4	Error (mV)
			-0.02	0.18	0.07	0.04	-0.42	-0.49	-0.48	0.08	0.45	0.85	-0.01	0.40	0.17	-0.06	-0.60	-0.16	LINEARITY ERROR (dB)
	Flatness +/-dB		0.7	0.9	0.9	0.7	0.7	0.4	0.4	0.6	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.6	





	SIZE	CAGE CODE	DWG. NO.	REVISION B1
PMI	A	71A34	ETD000006	
	SCALE			SHEET 6 OF 10

LOG TRANSFER WITH FREQUENCY
MODEL: GMDA-D1003
TESTED BY: J.Emperador
TEST DATE: 11/24/2020
SERIAL NO: PL30304
TEST TEMP: +85C

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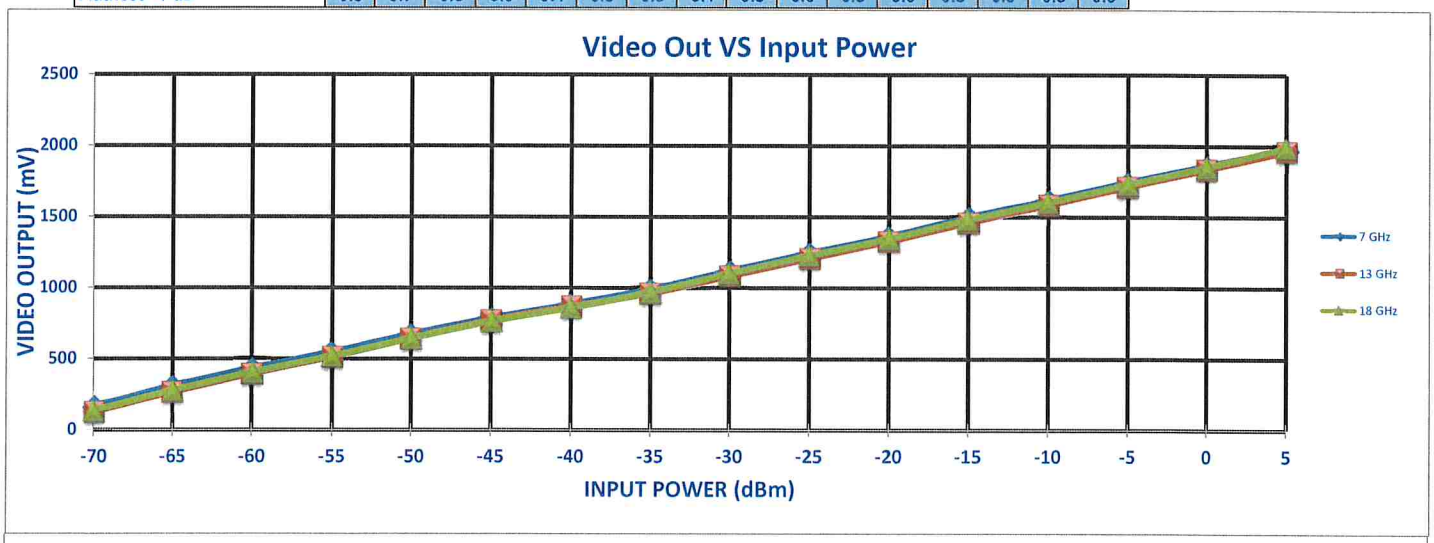
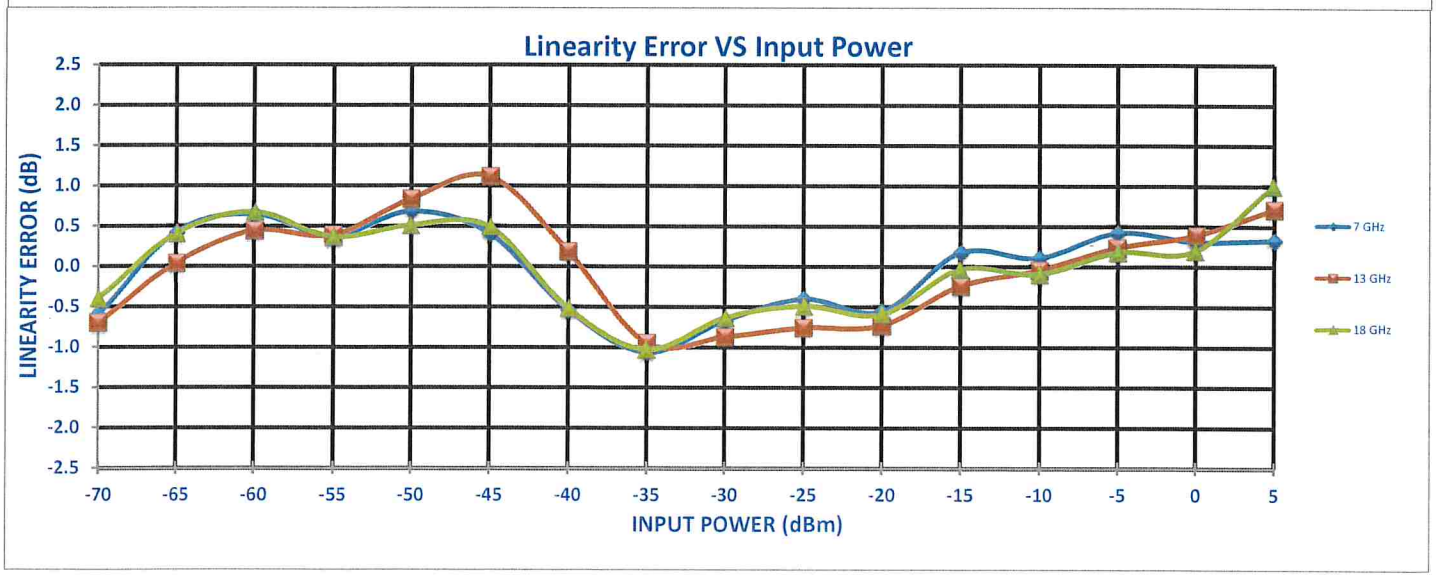
Vos= 0.026

Frequency			-70	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5	RF Input Power (dBm)
7 GHz	INTERCEPT (mV)	1843	154	298	423	536	663	776	873	980	1109	1235	1351	1488	1606	1733	1850	1970	Measured Value (mV)
	SLOPE (mV/dB)	23.9	-14	10	15	9	16	10	-13	-26	-16	-10	-13	4	3	10	7	8	Error (mV)
			-0.60	0.42	0.65	0.37	0.68	0.40	-0.54	-1.07	-0.67	-0.41	-0.56	0.17	0.11	0.42	0.31	0.32	LINEARITY ERROR (dB)
13 GHz	INTERCEPT (mV)	1825	124	262	392	511	642	769	867	960	1082	1205	1326	1458	1583	1710	1834	1962	Measured Value (mV)
	SLOPE (mV/dB)	24.1	-17	1	11	9	20	27	4	-23	-21	-18	-18	-6	-1	6	9	17	Error (mV)
			-0.70	0.03	0.44	0.39	0.83	1.11	0.19	-0.95	-0.88	-0.76	-0.73	-0.24	-0.05	0.23	0.39	0.71	LINEARITY ERROR (dB)
18 GHz	INTERCEPT (mV)	1843	133	274	402	516	641	762	859	968	1099	1224	1343	1478	1598	1726	1848	1989	Measured Value (mV)
	SLOPE (mV/dB)	24.3	-10	10	16	9	12	12	-13	-25	-15	-12	-14	-1	-2	4	5	24	Error (mV)
			-0.40	0.40	0.67	0.36	0.51	0.49	-0.52	-1.03	-0.64	-0.49	-0.59	-0.04	-0.10	0.17	0.20	1.00	LINEARITY ERROR (dB)
	Flatness +/-dB		0.6	0.7	0.6	0.5	0.4	0.3	0.3	0.4	0.5	0.6	0.5	0.6	0.5	0.5	0.3	0.5	

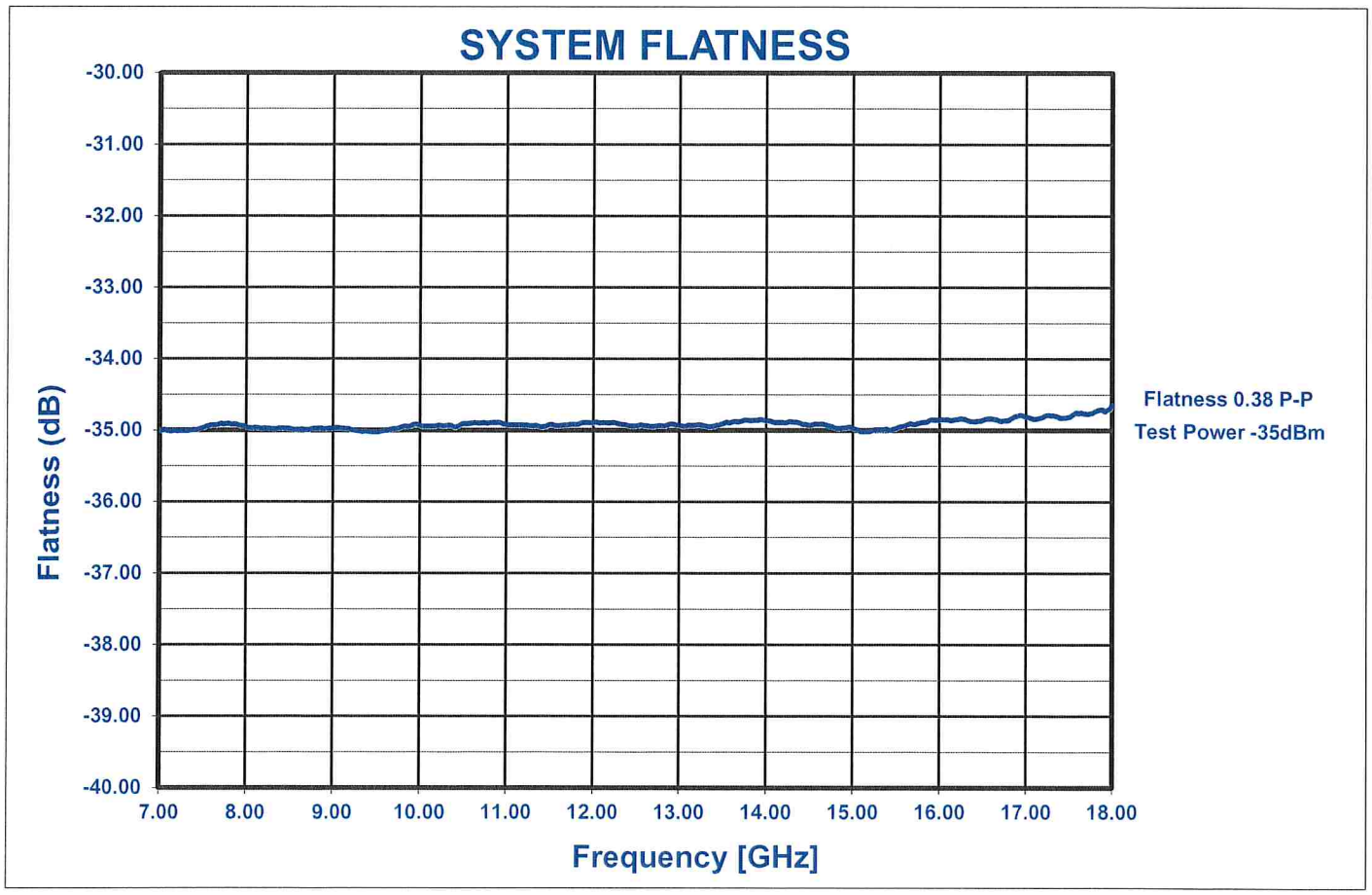




	SIZE A	CAGE CODE 71A34	DWG. NO. ETD000006	REVISION B1
	SCALE			SHEET 7 OF 10

MODEL: GMDA-D1003 **S/N: PL30304** **DATE: 10/9/2020**

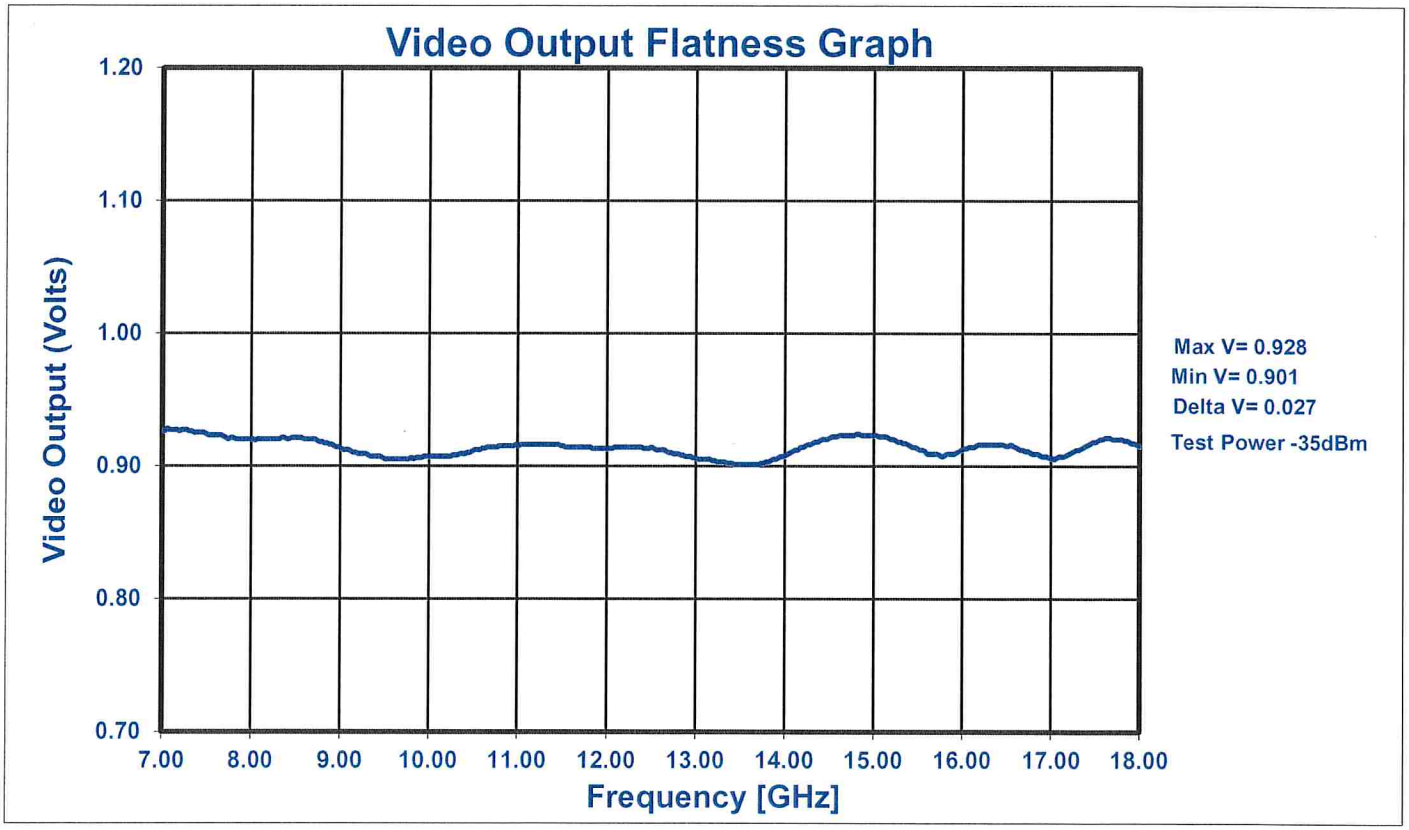
NOTE: ALL VIDEO OUTPUT MEASUREMENTS ARE MADE WITH 75 OHMS VIDEO LOAD



PMI	SIZE A	CAGE CODE 71A34	DWG. NO. ETD000006	REVISION B1
	SCALE			SHEET 8 OF 10

MODEL: GMDA-D1003 **S/N: PL30304** **DATE: 10/9/2020**

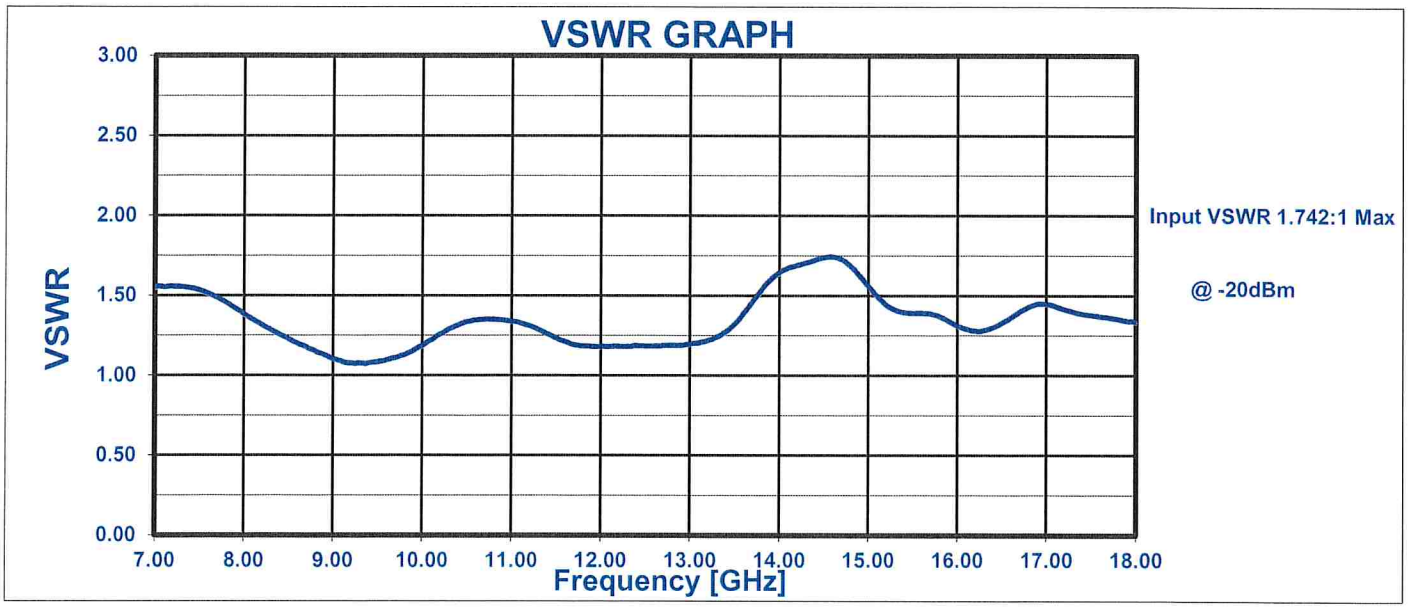
NOTE: ALL VIDEO OUTPUT MEASUREMENTS ARE MADE WITH 75 OHMS VIDEO LOAD



	SIZE	CAGE CODE	DWG. NO.	REVISION B1
PMI	A	71A34	ETD000006	
	SCALE			SHEET 9 OF 10

MODEL: GMDA-D1003 **S/N: PL30304** **DATE: 10/9/2020**

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



PMI	SIZE A	CAGE CODE 71A34	DWG. NO. ETD000006	REVISION B1
	SCALE			SHEET 10 OF 10