MODEL: GMDA-D1003 **S/N: PL30303** **DATE: 11/23/2020**

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

1. TSS

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

TSS -75.3 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	24.5	-0.47	X	
13	25.1	-0.34	X	
18	25.1	-0.43	X	

@ -25 deg C (See attached Plot)

Frequency (GHz)	Log Slope (mV / dB)	Log linearity (dB)	Pass	Fail
7	24.6	-0.91	X	
13	25.5	-0.66	X	
18	25.2	-0.77	X	

@ +85 deg C (See attached Plot)

Frequency (GHz)	Log Slope (mV / dB)	Log linearity (dB)	Pass	Fail
7	24.4	-0.81	X	
13	24.7	-0.84	X	
18	25.3	-0.67	X	

MODEL: GMDA-D1003 **S/N: PL30303** **DATE: 11/23/2020**

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

3. FLATNESS

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

System Flatness = 0.38 dB (See attached plot)
Vp-p = 94 mV (See attached plot)
Flatness = Vp-p – (System Flatness x 25)
Flatness = 84.5 mV Pass ___X___ Fail _____

4. MAXIMUM OUTPUT VOLTAGE

Specification: +2.5v Max
Measurement: 2.005v Pass ___X___ Fail _____

5. INPUT VSWR

Specification: 2.5:1 Max
Measurement @-20dBm input (See attached plot)
VSWR: 1.548:1 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: 0.43us Pass ___X___ Fail _____

MODEL: GMDA-D1003 **S/N: PL30303** **DATE: 11/23/2020**

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

10. THROUGHPUT TIME

Specification: 30ns Max

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

-35dBm Input: 23ns 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 @ 189 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: 11/23/2020

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

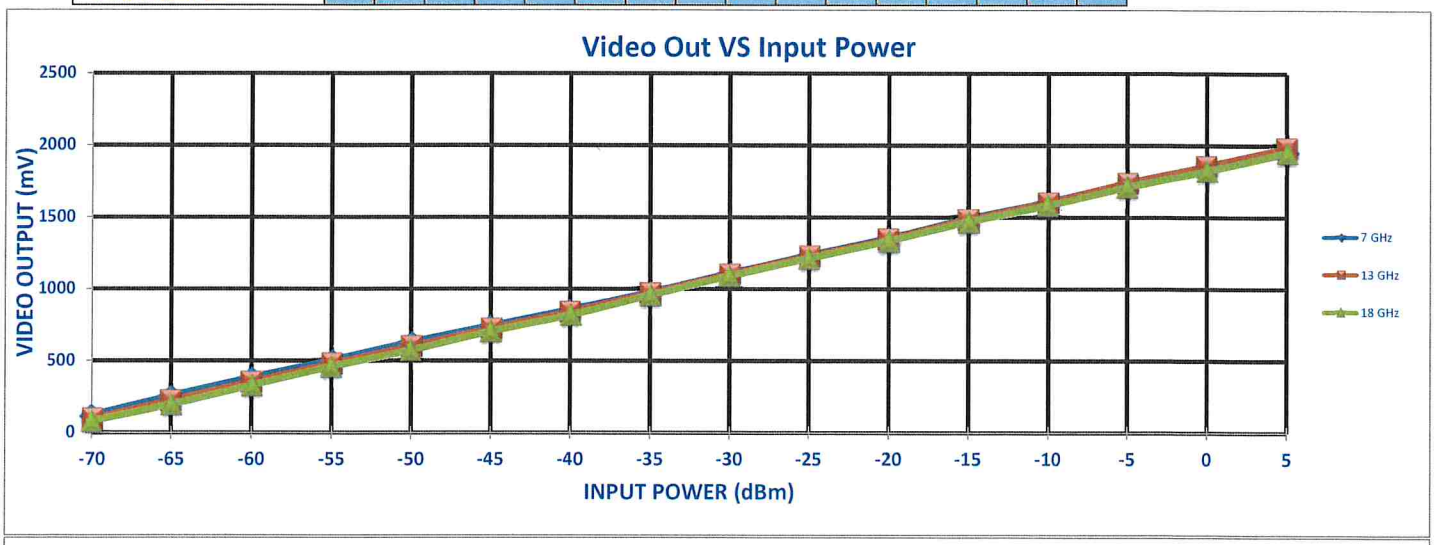
PMI	SIZE A	CAGE CODE 71A34	DWG. NO. ETD000006	REVISION B1
	SCALE			SHEET 4 OF 10

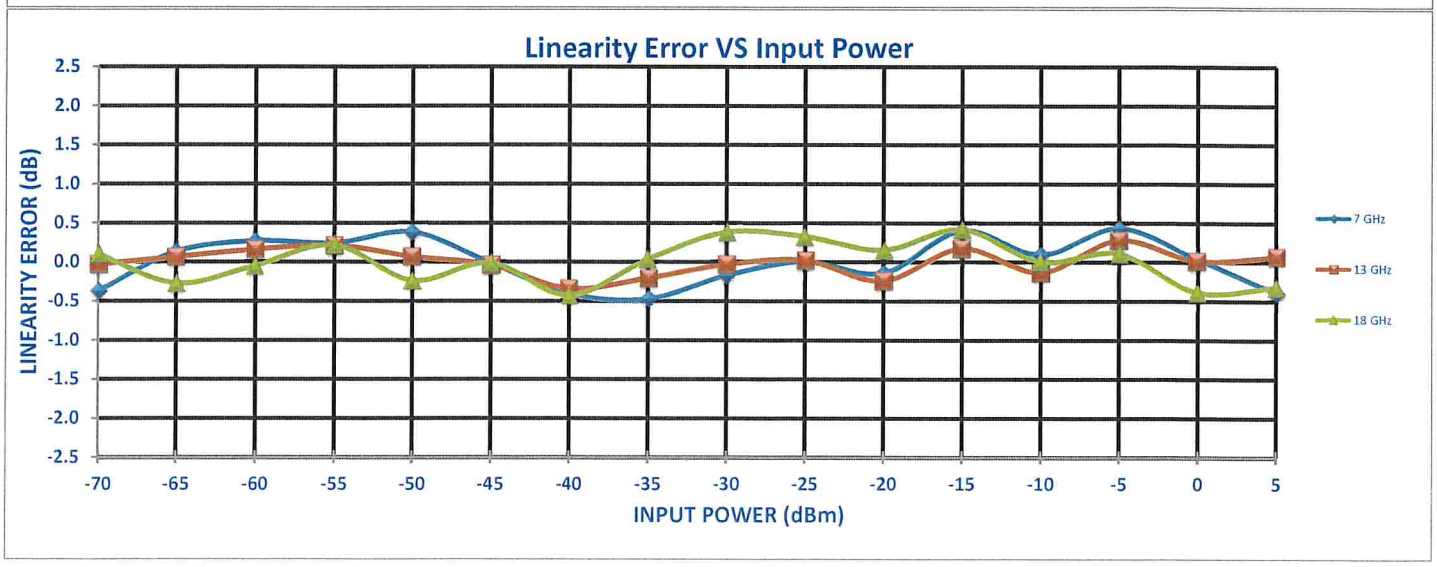
LOG TRANSFER WITH FREQUENCY
MODEL: GMDA-D1003
TESTED BY: J.Emperador
TEST DATE: 11/24/2020
SERIAL NO: PL30303
TEST TEMP: +25C

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= 0.008

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)	1838	112	247	373	495	621	734	847	968	1098	1225	1344	1480	1595	1726	1839	1951	Measured Value (mV)
	SLOPE (mV/dB)	24.5	-9	3	7	6	9	0	-10	-12	-4	0	-4	10	2	11	1	-10	Error (mV)
			-0.37	0.13	0.27	0.24	0.38	-0.01	-0.41	-0.47	-0.17	0.00	-0.14	0.40	0.09	0.43	0.04	-0.40	LINEARITY ERROR (dB)
13 GHz	INTERCEPT (mV)	1855	95	223	351	478	600	723	841	970	1100	1227	1346	1482	1600	1736	1855	1982	Measured Value (mV)
	SLOPE (mV/dB)	25.1	-1	2	4	5	2	-1	-9	-5	-1	0	-6	4	-3	7	0	2	Error (mV)
			-0.03	0.06	0.16	0.21	0.07	-0.04	-0.34	-0.21	-0.03	0.02	-0.24	0.17	-0.14	0.28	0.01	0.07	LINEARITY ERROR (dB)
18 GHz	INTERCEPT (mV)	1831	78	194	325	457	571	702	817	954	1088	1212	1333	1465	1580	1708	1821	1948	Measured Value (mV)
	SLOPE (mV/dB)	25.1	2	-7	-1	5	-6	0	-11	1	10	8	4	10	0	3	-10	-8	Error (mV)
			0.10	-0.27	-0.05	0.21	-0.24	-0.02	-0.43	0.03	0.38	0.32	0.15	0.41	0.00	0.11	-0.39	-0.32	LINEARITY ERROR (dB)
	Flatness +/-dB		0.7	1.1	1	0.8	1	0.6	0.6	0.3	0.2	0.3	0.3	0.3	0.4	0.6	0.7	0.7	





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

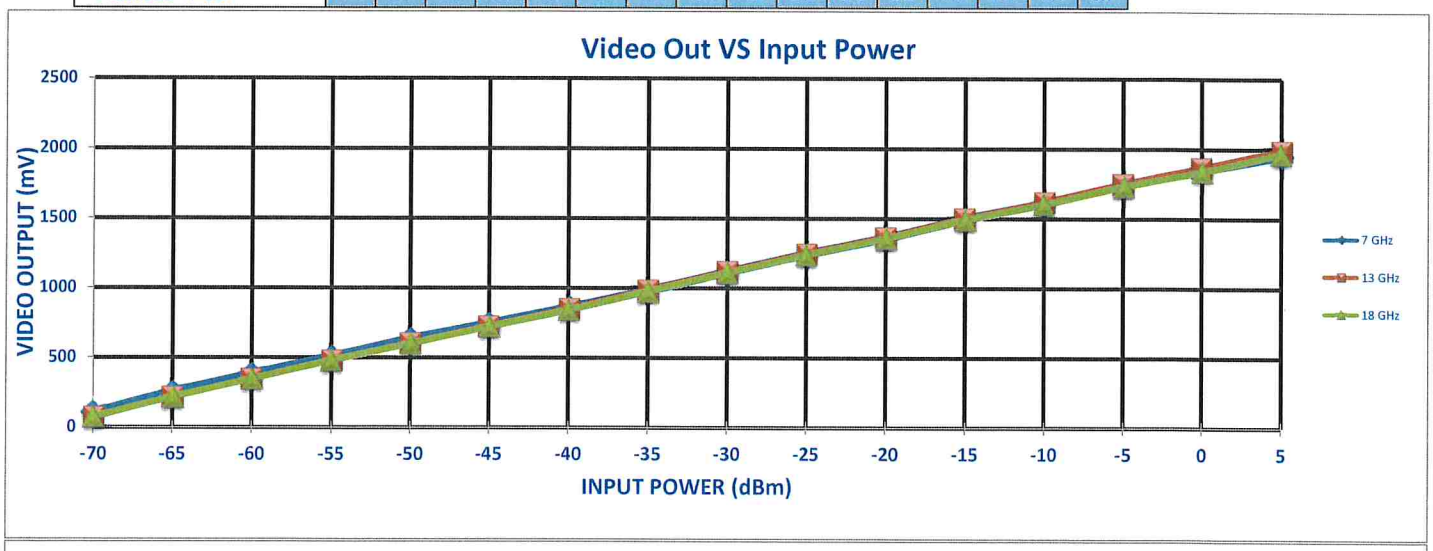
LOG TRANSFER WITH FREQUENCY
MODEL: GMDA-D1003
TESTED BY: J.Emperador
TEST DATE: 11/24/2020
SERIAL NO: PL30303
TEST TEMP: -25C

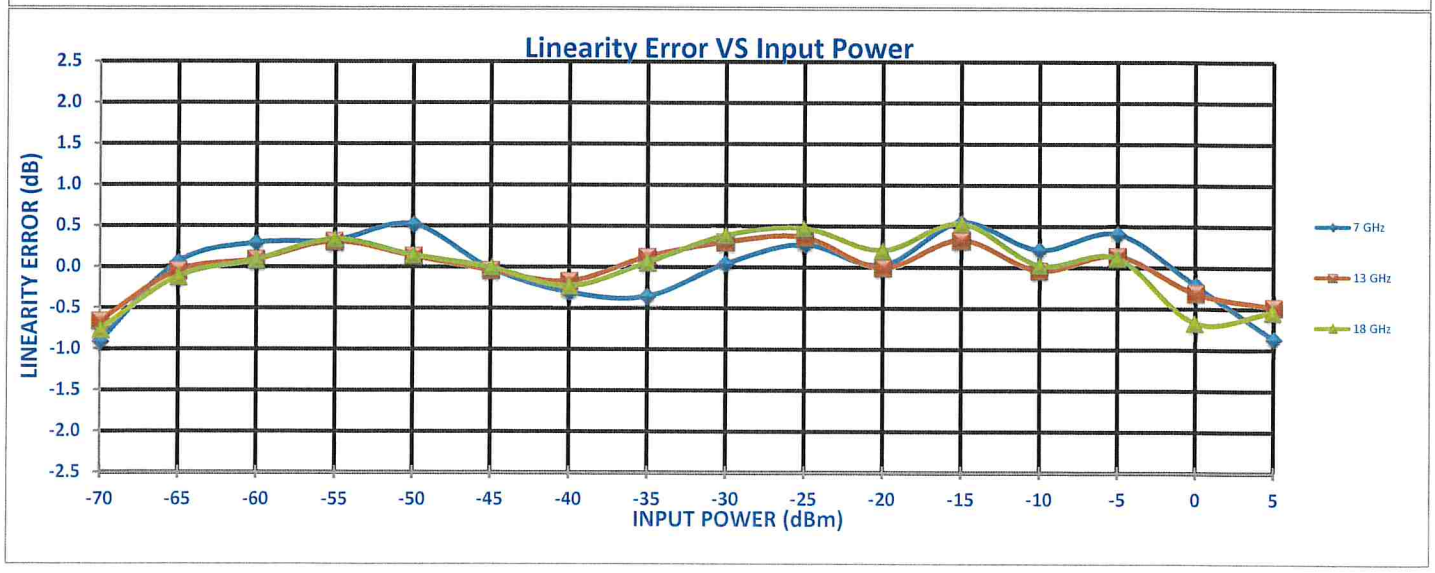
PLANAR MONOLITHICS INDUSTRIES
4921 Robert J. Mathews Parkway, Suite 1
El Dorado Hills, CA 95762
Phone: 916-542-1401 Fax: 301-662-1731
Email: sales@pmi-rf.com | www.pmi-rf.com

Vos= -0.020

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)	1850	103	250	379	503	631	741	857	979	1112	1241	1358	1494	1609	1737	1845	1952	Measured Value (mV)
	SLOPE (mV/dB)	24.6	-22	1	7	8	13	0	-8	-9	1	7	1	13	5	10	-5	-21	Error (mV)
			-0.91	0.05	0.29	0.32	0.52	-0.02	-0.31	-0.36	0.04	0.27	0.02	0.54	0.21	0.41	-0.21	-0.87	LINEARITY ERROR (dB)
13 GHz	INTERCEPT (mV)	1872	71	214	345	478	601	724	848	983	1115	1244	1362	1498	1616	1748	1864	1987	Measured Value (mV)
	SLOPE (mV/dB)	25.5	-17	-1	2	8	3	-1	-4	3	8	9	0	8	-1	3	-8	-12	Error (mV)
			-0.66	-0.05	0.09	0.31	0.13	-0.04	-0.18	0.12	0.30	0.36	-0.01	0.33	-0.04	0.14	-0.31	-0.49	LINEARITY ERROR (dB)
18 GHz	INTERCEPT (mV)	1852	72	214	345	477	598	720	840	973	1107	1235	1354	1488	1601	1729	1835	1964	Measured Value (mV)
	SLOPE (mV/dB)	25.2	-19	-3	2	8	4	0	-6	1	10	12	5	13	1	3	-17	-14	Error (mV)
			-0.77	-0.12	0.09	0.33	0.14	0.00	-0.23	0.05	0.38	0.47	0.20	0.53	0.02	0.11	-0.67	-0.54	LINEARITY ERROR (dB)
	Flatness +/-dB		0.6	0.7	0.7	0.5	0.7	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.6	0.7	





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

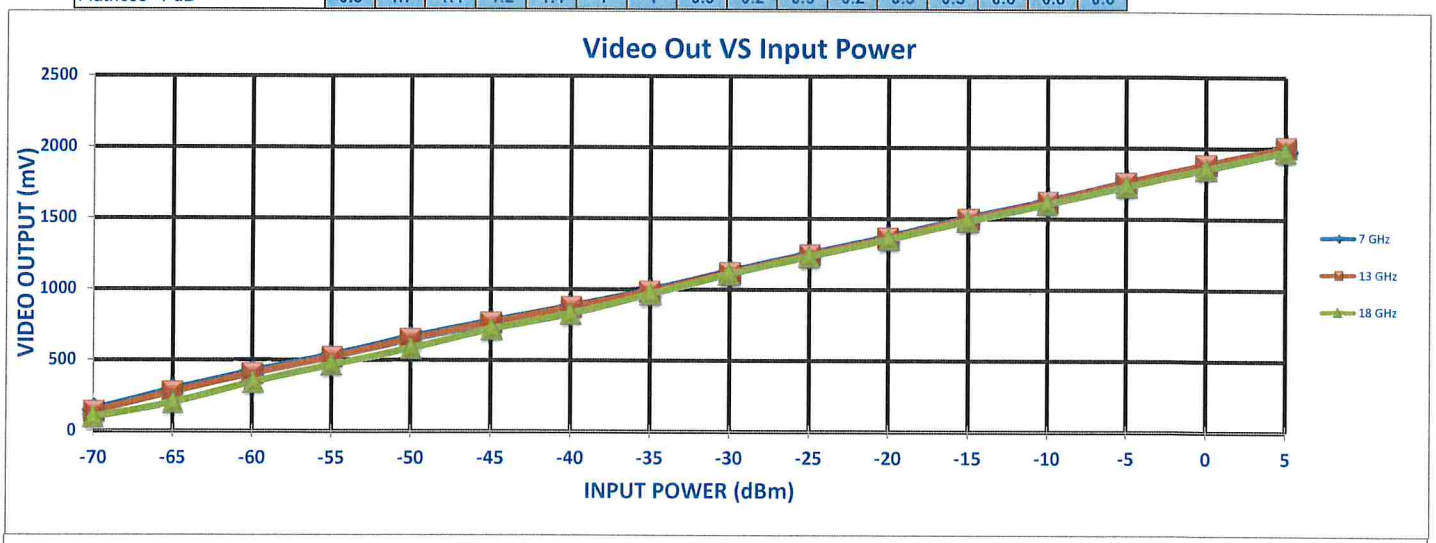
LOG TRANSFER WITH FREQUENCY
MODEL: GMDA-D1003
TESTED BY: J.Emperador
TEST DATE: 11/24/2020
SERIAL NO: PL30303
TEST TEMP: +85C

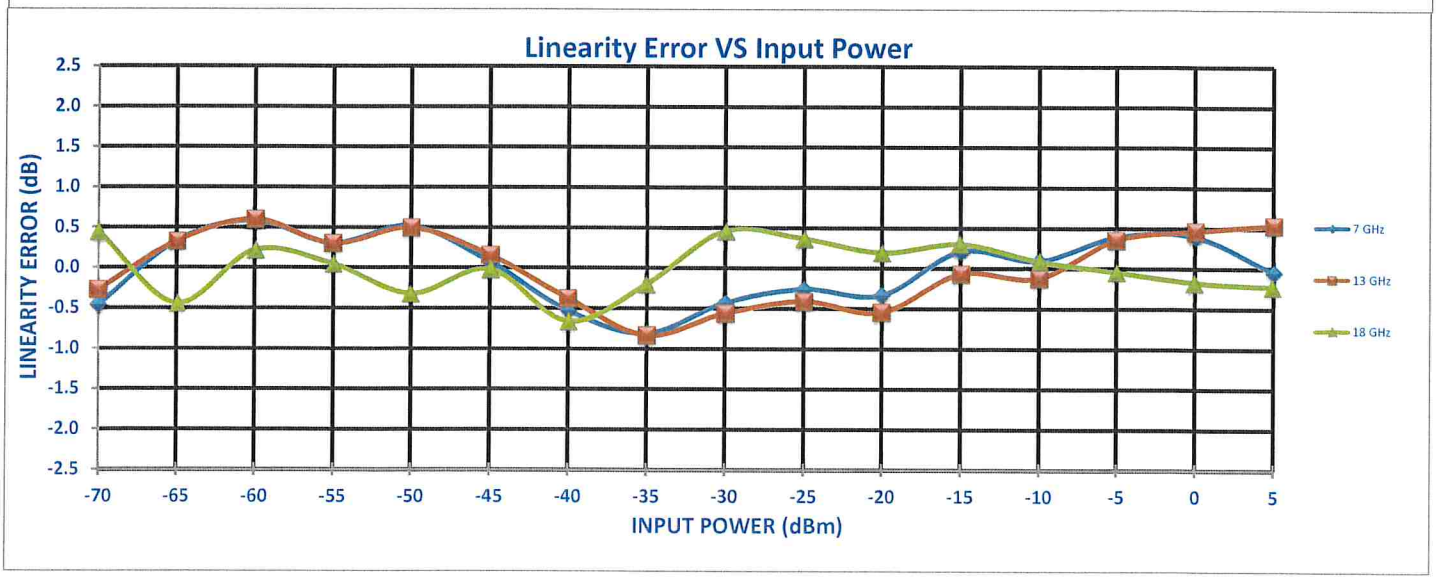
PLANAR MONOLITHICS INDUSTRIES
4921 Robert J. Mathews Parkway, Suite 1
El Dorado Hills, CA 95762
Phone: 916-542-1401 Fax: 301-662-1731
Email: sales@pmi-rf.com | www.pmi-rf.com

Vos= 0.037

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)	1858	142	283	411	526	653	764	871	986	1117	1243	1363	1498	1617	1746	1868	1979	Measured Value (mV)
	SLOPE (mV/dB)	24.4	-11	8	14	7	13	2	-13	-20	-11	-6	-8	5	2	9	10	-1	Error (mV)
			-0.46	0.33	0.58	0.30	0.52	0.07	-0.53	-0.81	-0.43	-0.26	-0.34	0.21	0.09	0.39	0.40	-0.05	LINEARITY ERROR (dB)
										X									
13 GHz	INTERCEPT (mV)	1869	136	274	404	520	648	763	873	985	1115	1242	1362	1497	1619	1754	1880	2005	Measured Value (mV)
	SLOPE (mV/dB)	24.7	-7	8	15	7	12	4	-9	-21	-14	-10	-14	-2	-3	9	11	13	Error (mV)
			-0.27	0.32	0.60	0.30	0.49	0.16	-0.38	-0.84	-0.57	-0.41	-0.55	-0.07	-0.12	0.35	0.46	0.53	LINEARITY ERROR (dB)
										X									
18 GHz	INTERCEPT (mV)	1852	95	199	342	464	581	715	825	963	1106	1230	1352	1481	1602	1725	1848	1973	Measured Value (mV)
	SLOPE (mV/dB)	25.3	11	-11	6	1	-8	0	-17	-5	12	9	5	8	2	-1	-4	-6	Error (mV)
			0.44	-0.44	0.22	0.05	-0.32	-0.02	-0.67	-0.20	0.46	0.36	0.19	0.30	0.09	-0.04	-0.18	-0.23	LINEARITY ERROR (dB)
									X										
	Flatness +/-dB		0.9	1.7	1.4	1.2	1.4	1	1	0.5	0.2	0.3	0.2	0.3	0.3	0.6	0.6	0.6	

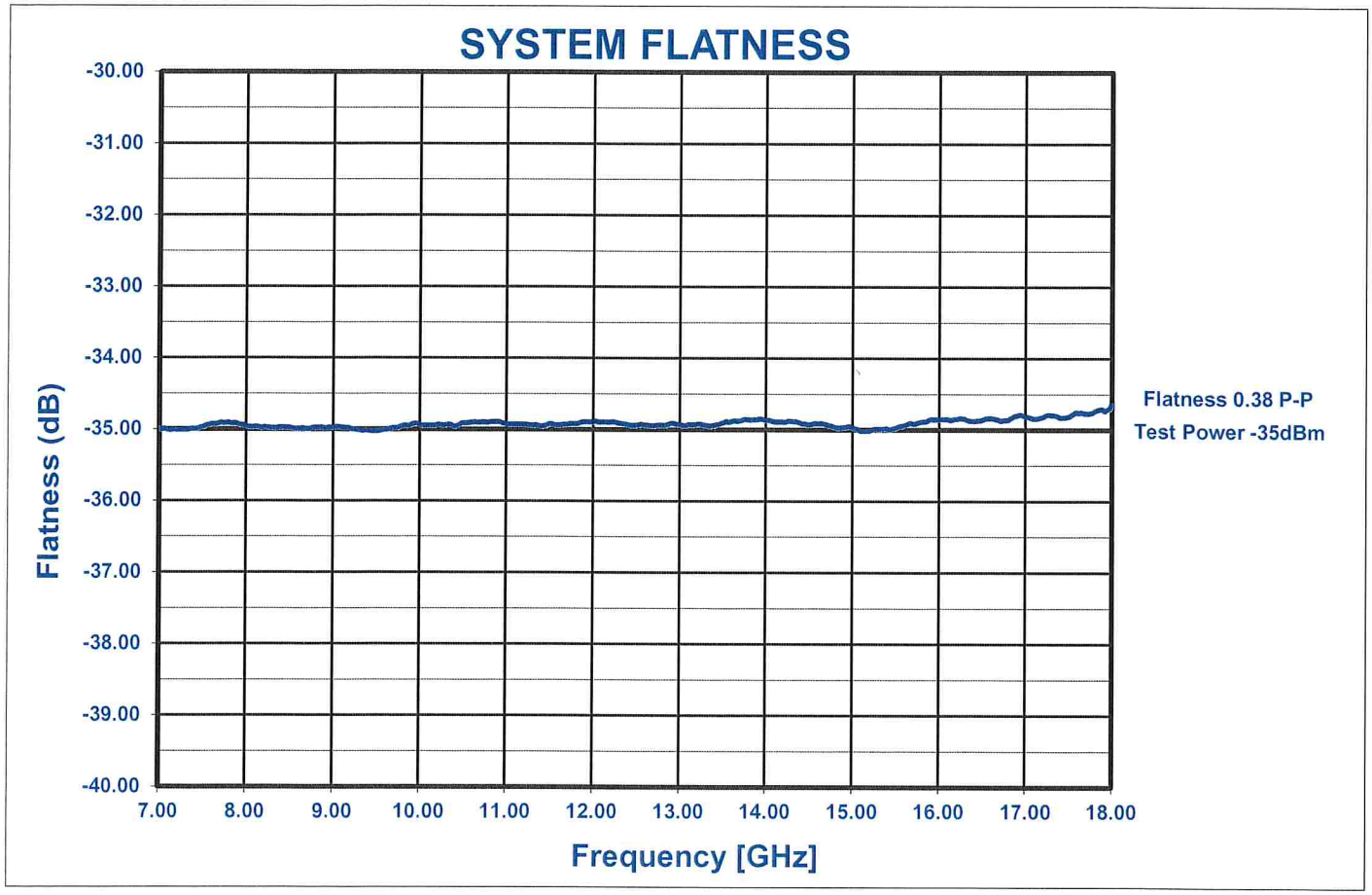




	SIZE	CAGE CODE	DWG. NO.	REVISION B1
PMI	A	71A34	ETD000006	
	SCALE			SHEET 7 OF 10

MODEL: GMDA-D1003 **S/N: PL30303** **DATE: 11/23/2020**

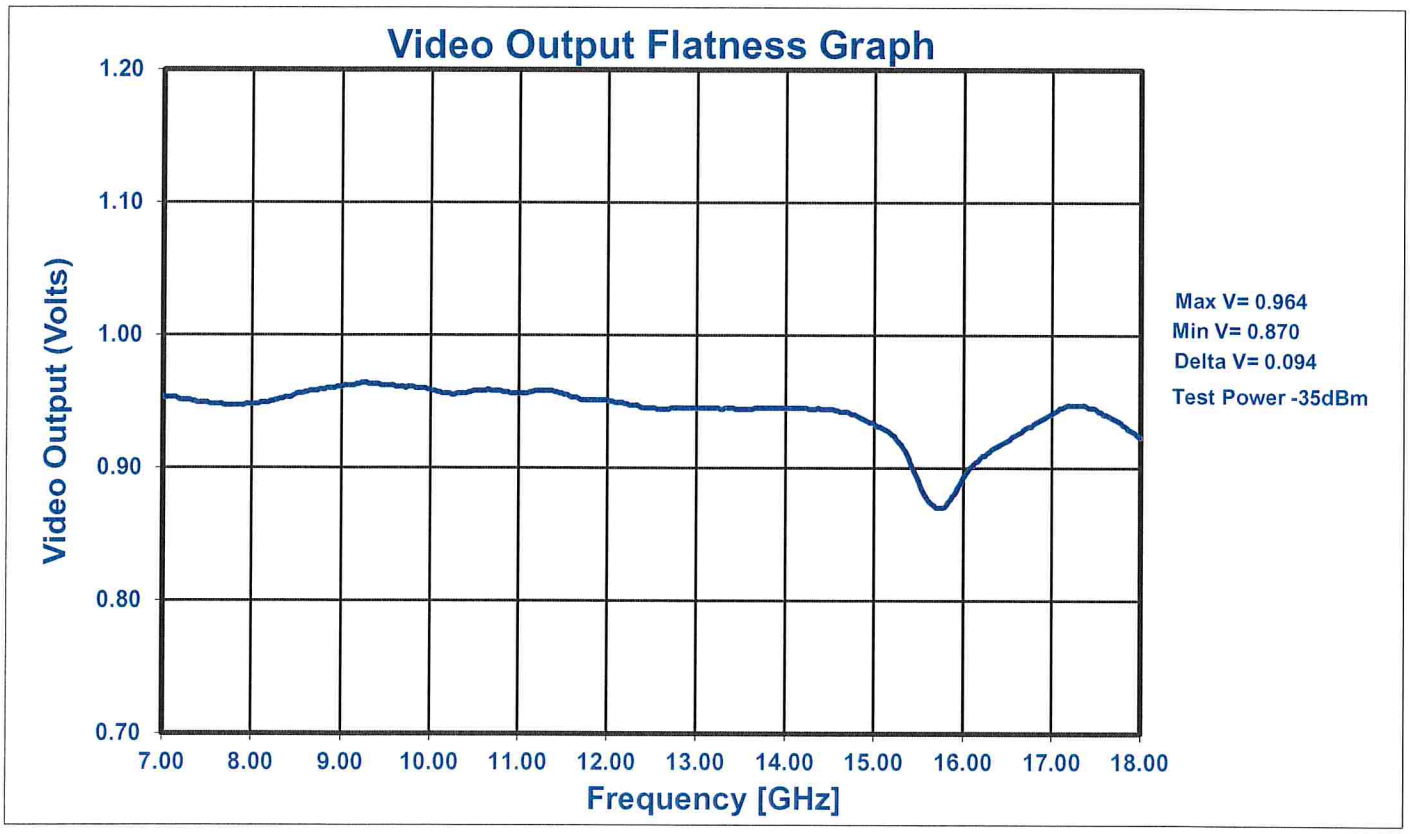
NOTE: ALL VIDEO OUTPUT MEASUREMENTS ARE MADE WITH 75 OHMS VIDEO LOAD



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

MODEL: GMDA-D1003 **S/N: PL30303** **DATE: 11/23/2020**

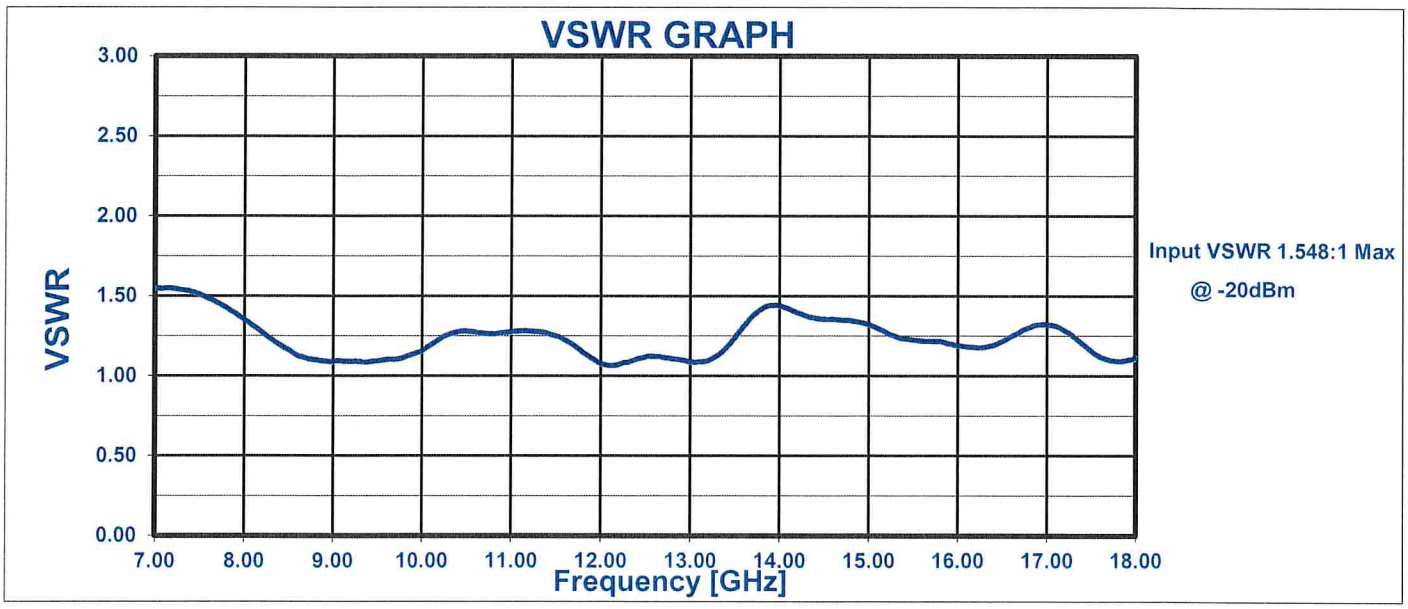
NOTE: ALL VIDEO OUTPUT MEASUREMENTS ARE MADE WITH 75 OHMS VIDEO LOAD



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

MODEL: GMDA-D1003 **S/N: PL30303** **DATE: 11/23/2020**

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