



**Typical Characteristics
For
DTA-13G14G-40-8-CD-1-20DBM**

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Typical Characteristics For DTA-13G14G-40-8-CD-1-20DBM

DESCRIPTION:
 PMI MODEL NUMBER DTA-13G14G-40-8-CD-1-20DBM IS AN 8-BIT PROGRAMMABLE 40 dB PIN DIODE ATTENUATOR OVER THE FREQUENCY RANGE OF 13.0 TO 14.0 GHz. THIS MODEL IS OFFERED IN A SLIM LINE HOUSING MEASURING ONLY 0.5" IN HEIGHT.

REVISIONS

ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A1	INITIAL RELEASE	5/18/2019	

SPECIFICATIONS:

- FREQUENCY RANGE: 13.0 TO 14.0 GHz
- ATTENUATION RANGE: 40 dB MIN
- INSERTION LOSS: 5 dB MAX
- STEP SIZE: 0.25 dB (LSB)
- ADJUSTMENT STEP SIZE ACCURACY: ±0.125 dB
- PHASE VARIATION VS ATTENUATOR STEP SIZE: 1.5°/dB TYP
2°/dB MAX 0 TO 40 dB ATTENUATION
- INPUT 0.1 dB COMPRESSION POINT: +20 dBm MIN
- MONOTONICITY: GUARANTEED
- VSWR: 2.0:1 MAX
- SWITCHING TIME:
 - ON TIME: 1.0 us MAX
 - OFF TIME: 0.5 us MAX
- LOGIC INPUT:
 - LOGIC "0" (BIT OFF): -0.3 TO +0.8 V
 - LOGIC "1" (BIT ON): +2.0 TO +5.0 V
- DC POWER SUPPLY: +12 V @ 150 mA MAX
- CONNECTORS: 2 SMA & 15 PIN MICRO-D FEMALE
- FINISH: PAINTED BLUE

ENVIRONMENTAL RATINGS:

- TEMPERATURE: -40°C TO +85°C (OPERATING)
-65°C TO +125°C (STORAGE)
- HUMIDITY: MIL-STD-202F, METHOD 103B COND. B
- SHOCK: MIL-STD-202F, METHOD 213B COND. B
- VIBRATION: MIL-STD-202F, METHOD 204D COND. B
- ALTITUDE: MIL-STD-202F, METHOD 105C COND. B
- TEMPERATURE CYCLE: MIL-STD-202F, METHOD 107

NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

PIN NO: J3 PIN FUNCTIONS

PIN NO.	J3 PIN FUNCTIONS
1	2 dB
2	1 dB
3	0.5 dB
4	0.25 dB (LSB)
5	GND
6	NC
7	NC
8	GND
9	NC
10	NC
11	+12 VDC
12	32 dB (MSB)
13	16 dB
14	8 dB
15	4 dB

MECHANICAL DIMENSIONS

PHYSICAL LABEL

PMI CONFIDENTIAL AND PROPRIETARY

PLANAR MONOLITHICS INDUSTRIES, INC.
 7311-F GROVE ROAD
 FREDERICK, MARYLAND 21704 USA
 TEL: 301-662-5019 FAX: 301-662-1731
 WEBSITE: www.pmi-rf.com
 E-MAIL: sales@pmi-rf.com
 ISO 9001 CERTIFIED

PRODUCT FEATURE
 DTA-13G14G-40-8-CD-1-20DBM

APPROVALS	DATE	REV	FROM NO.	DWG NO.	REV.
DESIGN: <i>afk</i>	10/15/11	A	05XQ0	27036480	A1
DESIGNED: <i>SW</i>	2/2/10				
REVISED: <i>SJR</i>	3/18/10				

ALL DIMENSIONS ARE IN INCHES
 TOLERANCES:
 XXX .000
 XXXX .0010



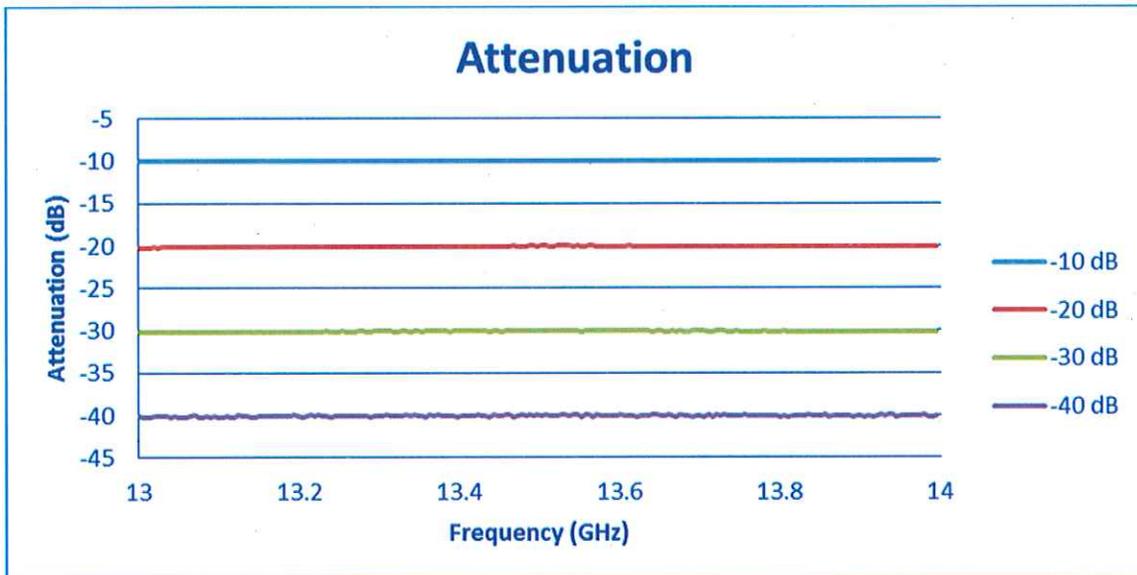
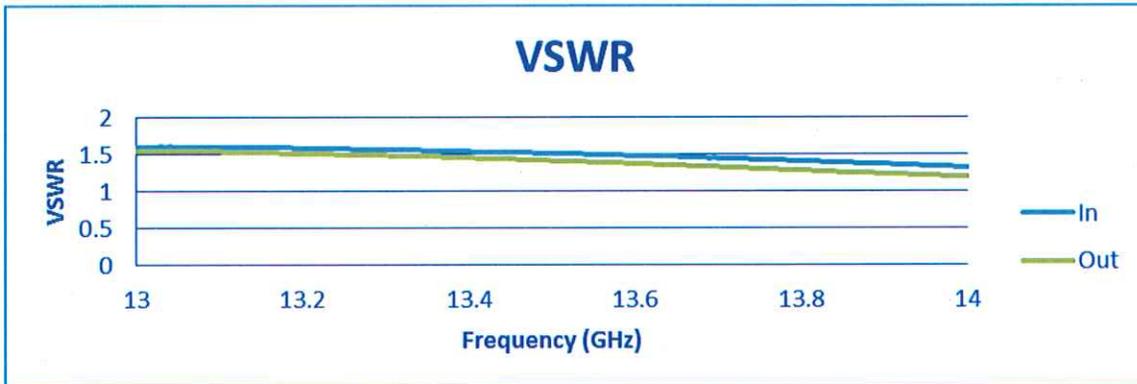
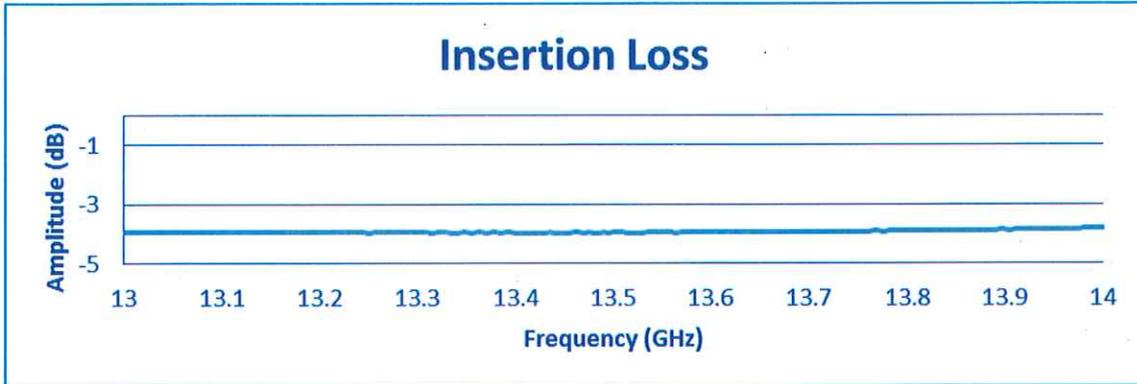
Typical Characteristics For DTA-13G14G-40-8-CD-1-20DBM

Test Item No.	Parameters	Specified Value	Test Results	QA QC
1	Frequency Range:	13 GHz – 14 GHz	13 GHz – 14 GHz	
2	Insertion Loss:	5.0 dB Max.	4 dB See Plot	
3	VSWR:	2.0:1 Max.	1.6:1 See Plot	
4	Step Size:	0.25 dB (LSB)	0.24 dB	
5	Adjustment Step Size Accuracy:	± 0.125 dB	± 0.078 dB	
6	Phase Variation Vs Attenuation Step Size:	1.5° / dB Typ. 2.0° / dB Max.	1.3° / dB	
7	Input 0.1 dB Compression Point:	+20 dBm Min.	> +20 dBm	
8	Monotonicity:	Guarenteed	Pass	
9	Switching Speed:	1.0 µs Max. On 0.5 µs Max Off	< 0.5 µs On < 0.4 µs Off See Typical Characteristics	
10	DC Power Supply:	+12 V @ 150 mA Max.	149 mA	

Programed Attenuation	Attenuation	Accuracy of Attenuation	Flatness dB	Programed Attenuation	Attenuation	Accuracy of Attenuation	Flatness dB
dB	dB	dB	±dB	dB	dB	dB	±dB
0.25	0.24	0.01	0.01	5.00	4.87	0.13	0.03
0.50	0.49	0.01	0.01	10.00	10.03	-0.03	0.04
1.00	0.99	0.01	0.01	15.00	14.99	0.01	0.07
2.00	1.99	0.01	0.02	20.00	20.10	-0.10	0.09
4.00	4.00	0.00	0.03	25.00	25.06	-0.06	0.09
8.00	8.01	-0.01	0.04	30.00	30.11	-0.11	0.10
16.00	16.07	16.07	0.07	35.00	35.06	-0.06	0.13
32.00	32.12	-0.12	0.15	40.00	40.10	-0.10	0.22



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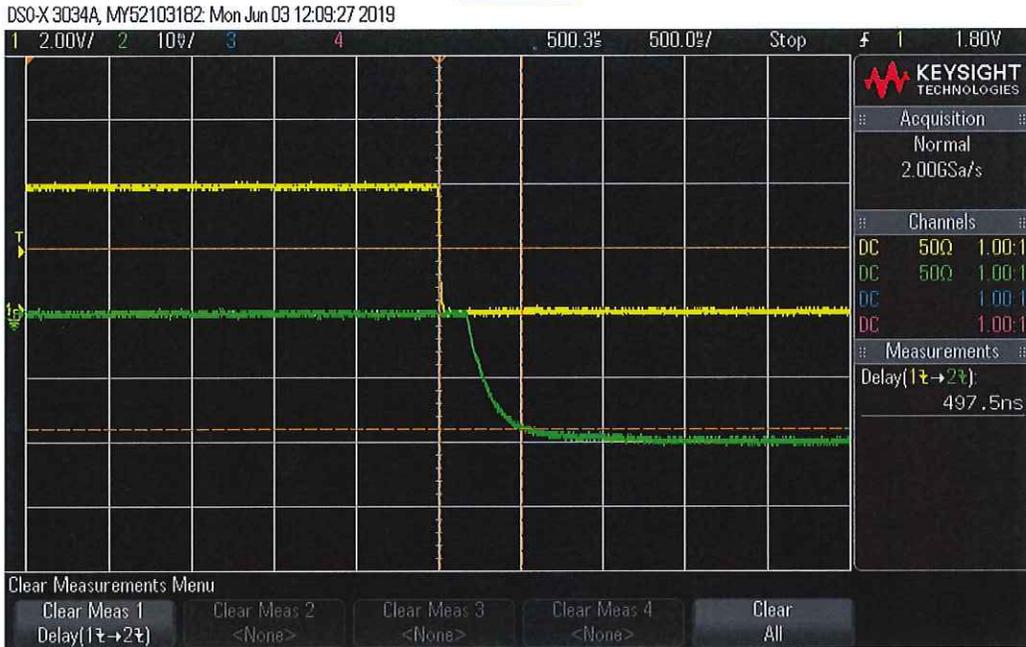




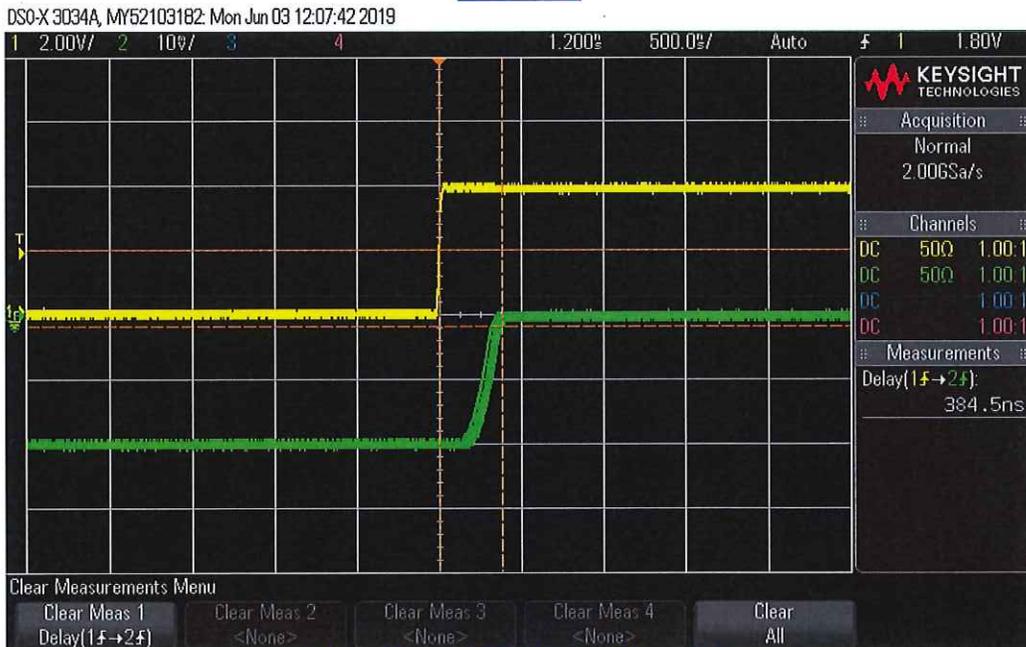
Typical Characteristics For DTA-13G14G-40-8-CD-1-20DBM

Switching Speed

On Time



Off Time



Green Trace: TTL, Yellow Trace: RF