



**TYPICAL CHARACTERISTICS
ON
PDVAN-6012-60-8**

**PMI MODEL NUMBER PDVAN-6012-60-8 IS AN 8 BIT PROGRAMMABLE 60 dB PIN
DIODE ATTENUATOR WITH STEP RESOLUTION AS LOW AS 0.25 dB OVER THE
FREQUENCY RANGE OF 6.0 GHz TO 12.0 GHz.**



September 10, 2015

Designed By: PMI Engineering

**Tested & Reported By:
Kevin Mansfield**



**TYPICAL CHARACTERISTICS
ON
PDVAN-6012-60-8**

Table of Contents

1. Outline Drawing	Page 3
2. Test Data	Page 4
3. Insertion Loss	Page 5
4. Attenuation Flatness	Page 5
5. Switching Time	Page 6 - 7



TYPICAL CHARACTERISTICS ON PDVAN-6012-60-8

DESCRIPTION:

PMI MODEL NUMBER PDVAN-6012-60-8 IS AN 8 BIT PROGRAMMABLE 60 DB PIN DIODE ATTENUATOR WITH STEP RESOLUTION AS LOW AS 0,25 DB OVER THE FREQUENCY RANGE OF 6.0 GHz TO 12.0 GHz.

SPECIFICATIONS:

- FREQUENCY: _____ 6.0 GHz TO 12.0 GHz
- MEAN ATTENUATION RANGE: _____ 60dB
- INSERTION LOSS: _____ 2,8 dB MAX
- VSWR: _____ 2,0:1 MAX
- POWER RATING: _____ +20dBm (Operating)
_____ +30dBm (Survival)

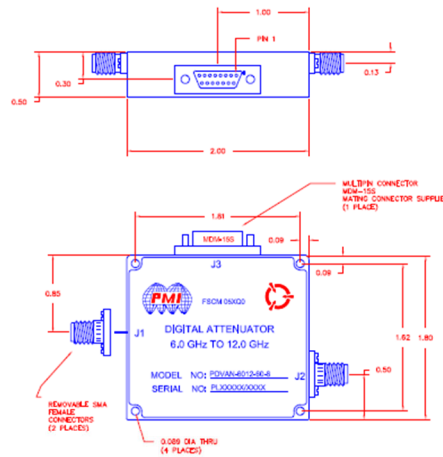
- ATTENUATION FLATNESS:
 - @ 10dB _____ ±0,7 dB
 - @ 20dB _____ ±1,0 dB
 - @ 40dB _____ ±1,5 dB
 - @ 60dB _____ ±1,6 dB

- SWITCHING TIME: _____ 500 nsec MAX
- DIGITAL CONTROL: _____ 8 BIT Positive True, Binary TTL
- MONOTONICITY: _____ GUARANTEED
- POWER SUPPLY: _____ +12V to +15V @ 150mA MAX
_____ -12V to -15V @ 75mA MAX
- PWR/CTL CONNECTORS: _____ 15 PIN Micro-D-Female (MATING CONNECTOR SUPPLIED)
- RF CONNECTORS: _____ SMA - Female
- FINISH: _____ GRAY EPOXY POLIMIDE COATING IAW MIL-C-22750,
TYPE I OVER EPOXY POLIMIDE PRIMER
IAW MIL-P-23377, TYPE I, CLASS 1 OR 3.
- SIZE: _____ (L) 2.00" X (W) 1.80" X(H) 0.50"

PIN NO:	J3 PIN FUNCTIONS
1	N/C
2	N/C
3	N/C or Latching Strobe Input *
4	GN/D
5	0,25dB (LSB)
6	0,5dB
7	1,0dB
8	2,0dB
9	4,0dB
10	8,0dB
11	16,0dB
12	32dB (MSB)
13	+VDDC
14	-VDDC
15	N/C

*OPTIONAL

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	7/27/15	
	A2	ECN # 22-0067	7/13/22	



PMI CONFIDENTIAL AND PROPRIETARY

ENVIRONMENTAL RATINGS:

- TEMPERATURE: _____ -55°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

- LOGIC INPUT
LOGIC *0* (BIT OFF) -0.3 to +0.8V
LOGIC *1* (BIT ON) +2.0 to +5.0V

ALL DIMENSIONS ARE IN INCHES
TOLERANCES:
XXX ±0,020
X,XXX ±0,010

NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

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



APPROVALS		DATE	TITLE		REV.
DESIGN	<i>B. Thomas</i>	7/27/15	PRODUCT FEATURE		
CHECKED			PDVAN-6012-60-8		A2
DESIGNED			SIZE	PCOM NO.	DWG NO.
			A	05XQ0	27027821
			SCALE	N:S	SHEET 1 OF 1



**TYPICAL CHARACTERISTICS
ON
PDVAN-6012-60-8**

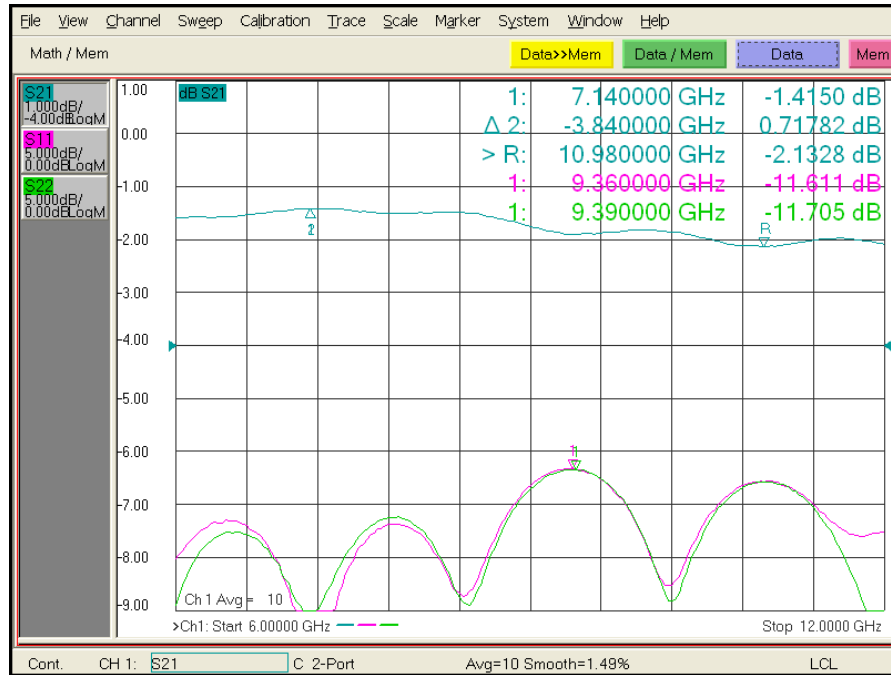
TEST. ITEM NO	PARAMETERS	SPECIFIED VALUE	PASS/FAIL	QA QC
1	Frequency Range:	6 GHz – 12 GHz	6 GHz – 12 GHz	
2	Insertion Loss:	2.8 dB Max.	2.13 dB	
3	VSWR:	2.0 :1 Max.	1.7 :1	
4	Flatness @ 10dB:	± 0.7 dB Typ.	± 0.13 dB	
5	Flatness @ 20dB:	± 1.0 dB Typ.	± 0.42 dB	
6	Flatness @ 40dB:	± 1.5 dB Typ.	± 0.88 dB	
7	Flatness @ 60dB:	± 1.6 dB Typ.	± 1.41 dB	
8	Accuracy of Attenuation 0 to 30 dB:		± 0.77 dB	
9	Accuracy of Attenuation 30 to 60 dB:		± 0.32 dB	
10	Switching Speed:	500 nsec Max.	260 nsec	
11	DC Supply:	+12VDC @ 150 mA -12VDC @ 75 mA	+12 VDC @ 38 mA -12 VDC @ 0 mA	

Program ed Attenuati on	Attenuati on	Accuracy of Attenuati on	Flatne ss	Program ed Attenuati on	Attenuati on	Accuracy of Attenuati on	Flatne ss
dB	dB	dB	±dB	dB	dB	dB	±dB
0.25	0.16	0.09	0.00	5.00	5.14	-0.14	0.06
0.50	0.38	0.12	0.01	10.00	10.41	-0.41	0.13
1.00	0.88	0.12	0.02	15.00	15.41	-0.41	0.27
2.00	1.94	0.06	0.03	20.00	20.54	-0.54	0.42
4.00	4.11	-0.11	0.06	25.00	25.64	-0.64	0.54
8.00	8.37	-0.37	0.08	30.00	30.56	-0.56	0.66
16.00	16.52	-0.52	0.30	35.00	35.66	-0.66	0.78
32.00	32.70	-0.70	0.71	40.00	40.79	-0.79	0.88
62.00	62.59	-0.59	1.46	45.00	45.61	-0.61	0.98
				50.00	50.81	-0.81	1.07
				55.00	55.71	-0.71	1.22
				60.00	60.88	-0.88	1.41

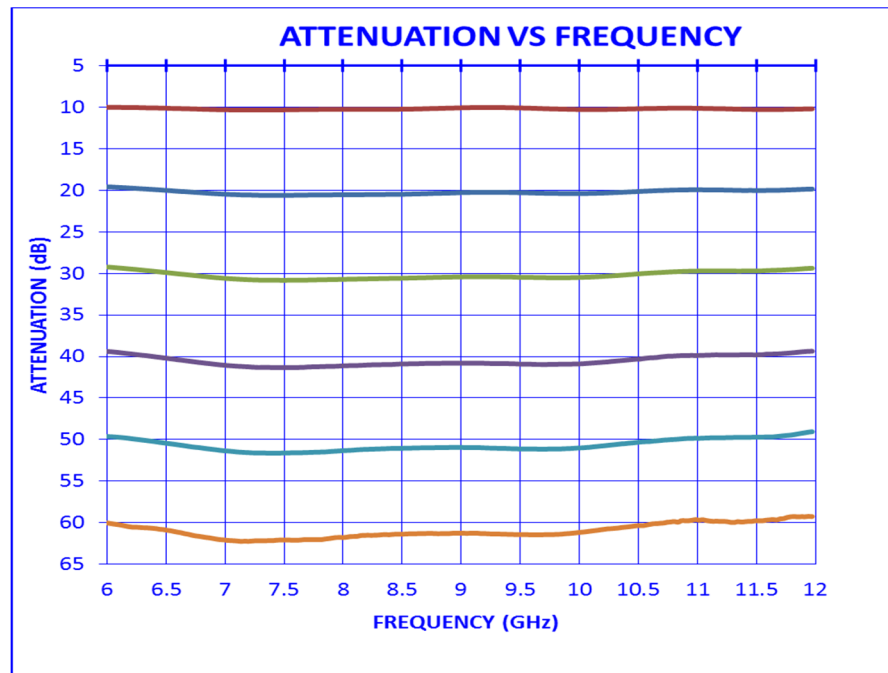


TYPICAL CHARACTERISTICS ON PDVAN-6012-60-8

Insertion Loss and Return Loss



Attenuation Flatness

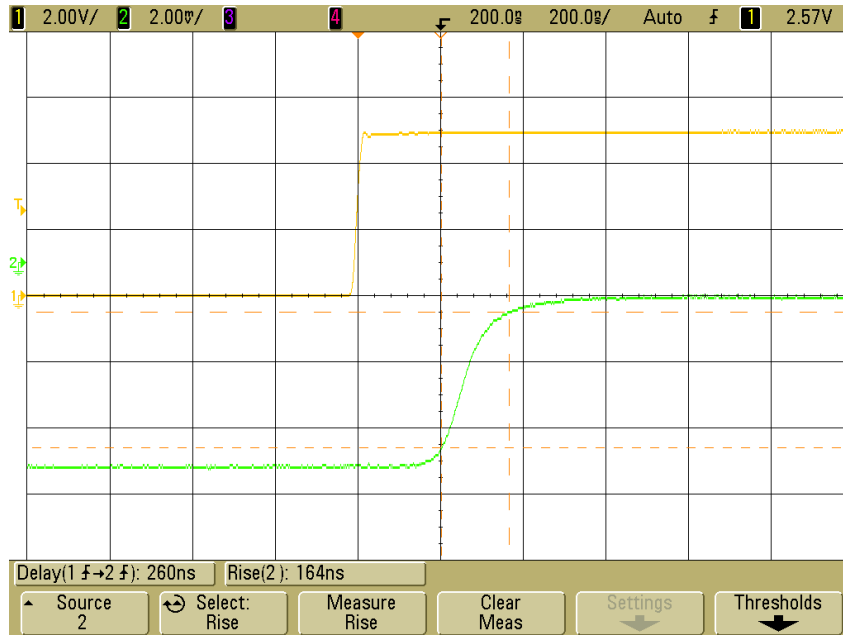




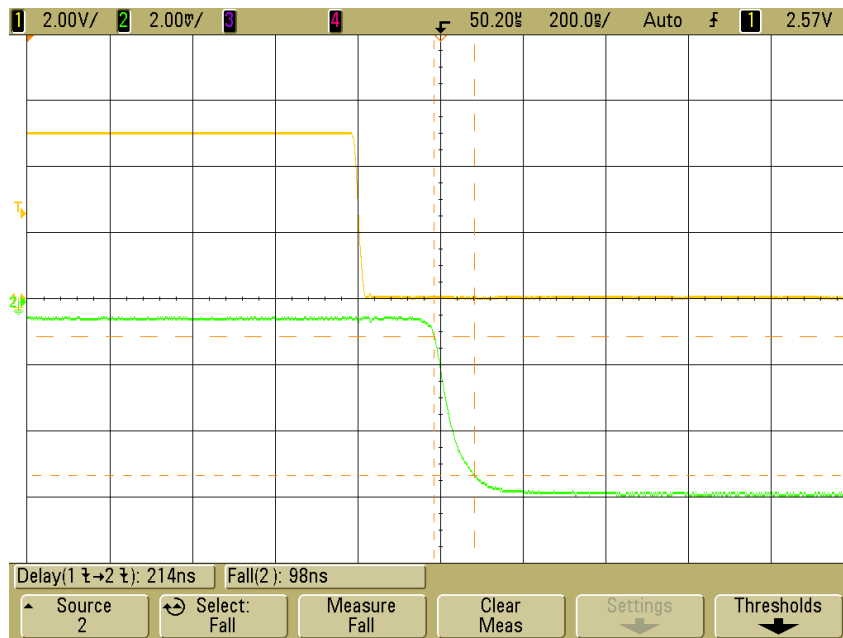
**TYPICAL CHARACTERISTICS
ON
PDVAN-6012-60-8**

Switching Time

Rise and Delay Time



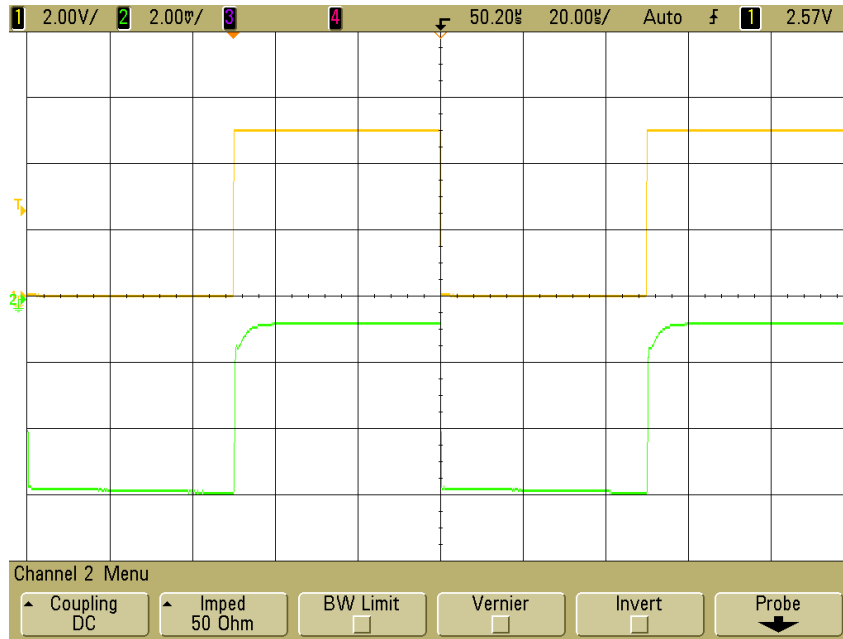
Fall and Delay Time





**TYPICAL CHARACTERISTICS
ON
PDVAN-6012-60-8**

Full Pulse



Yellow Trace = TTL Control
Green Trace = RF From Crystal Detector