



Typical Characteristics on PDVAN-4080-60-8

PMI MODEL NUMBER PDVAN-4080-60-8 IS AN 8 BIT PROGRAMMABLE 60 dB PIN DIODE ATTENUATOR WITH STEP RESOLUTION AS LOW AS 0.25 dB OVER THE FREQUENCY RANGE OF 4.0 GHz TO 8.0 GHz.



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Reported By: E. Kretz



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Typical Characteristics on PDVAN-4080-60-8

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	05/09/18	
	A2	ECN # 22-0067	07/18/22	

DESCRIPTION

PMI MODEL: PDVAN-4080-60-8 IS AN 8-BIT PROGRAMMABLE 60 dB PIN DIODE ATTENUATOR WITH STEP RESOLUTION AS LOW AS 0.25 dB OVER THE FREQUENCY RANGE OF 4.0 GHz TO 8.0 GHz.

SPECIFICATIONS

- FREQUENCY RANGE: 4.0 TO 8.0 GHz
- MEAN ATTENUATION RANGE: 60 dB
- INSERTION LOSS: 2.5 dB MAXIMUM
- VSWR: 2.0:1 MAXIMUM
- POWER RATING: +20 dBm CW MINIMUM (OPERATING)
+30 dBm CW MAXIMUM (SURVIVAL)
- ATTENUATION FLATNESS: ±0.5 dB @ 10 dB ATTENUATION
±0.87 dB @ 20 dB ATTENUATION
±1.5 dB @ 40 dB ATTENUATION
±1.6 dB @ 60 dB ATTENUATION
- SWITCHING TIME: 500 ns MAXIMUM
- DIGITAL CONTROL: 8 BIT BINARY TTL
- INPUT TRACKING: MONOTONIC
- POWER SUPPLY: +12 V TO +15 V @ 150 mA MAXIMUM
-12 V TO -15 V @ 75 mA MAXIMUM
- CONNECTORS: RF: FIELD REPLACEABLE SMA FEMALE
VDD/CTL: 15 PIN MICRO-D FEMALE
- SIZE: 2.00" x 1.80" x 0.50"
- FINISH: PAINTED BLUE

MECHANICAL OUTLINE

Dimensions: 2.00" (total width), 1.80" (total height), 0.50" (thickness). Connector J1 and J2 are 0.95" from the left edge. Connector J3 is 0.095" from the top edge. Pin 1 is 1.00" from the right edge. A 0.125" dimension is shown for the right edge offset.

J3 PIN FUNCTIONS

PIN	FUNCTION
1	NC
2	NC
3	NC
4	GND
5	0.25 dB (LSB)
6	0.5 dB
7	1.0 dB
8	2.0 dB
9	4.0 dB
10	8.0 dB
11	16 dB
12	32 dB (MSB)
13	+VDC
14	-VDC
15	GND

*LATCHING STROBE INPUT OPTION ALSO AVAILABLE

ENVIRONMENTAL RATINGS

- TEMPERATURE: -55 °C TO +85 °C (OPERATING)
-65 °C TO +125 °C (STORAGE)
- HUMIDITY: MIL-STD-202, METHOD 103B COND. B
- SHOCK: MIL-STD-202, METHOD 213B COND. B
- VIBRATION: MIL-STD-202, METHOD 204D COND. B
- ALTITUDE: MIL-STD-202, METHOD 105C COND. B
- TEMPERATURE CYCLE: MIL-STD-202, METHOD 107D COND. A

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APPROVALS		DATE		TITLE	
DESIGN	<i>jh</i>	05/18/18		PRODUCT FEATURE	
CHECKED	<i>M. Berry</i>	05/08/18		PDVAN-4080-60-8	
DESIGNED				4.0 to 8.0 GHz Digital Attenuator	

SIZE	PAGE NO.	DWG. NO.	REV.
A	05XQ0	27034940	A2
SCALE	N/S	SHEET	1 OF 1

ALL DIMENSIONS ARE IN INCHES
TOLERANCES:
XXX .0050
XXXX .0010
XXXXX .0005

PMI CONFIDENTIAL AND PROPRIETARY

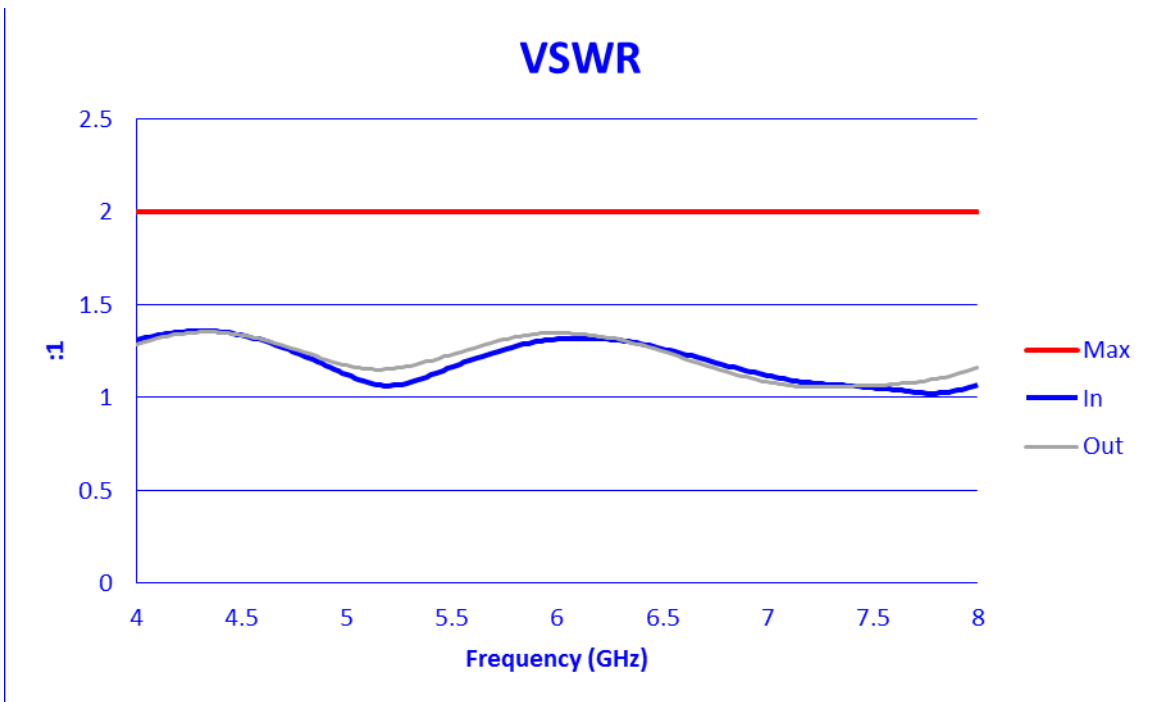
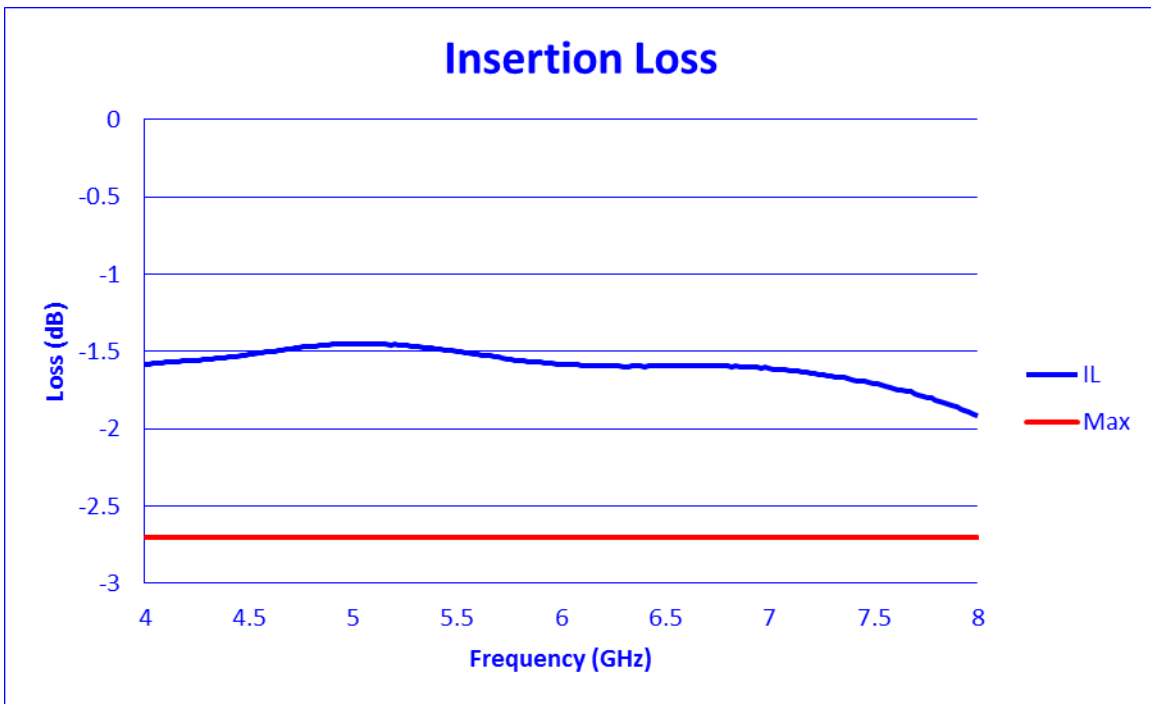


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TEST. ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC	
1	Frequency Range:	4.0 GHz to 8.0 GHz	4.0 GHz to 8.0 GHz See Plots		
2	Mean Attenuation Range:	60dB	61dB See Plots		
3	Insertion Loss:	2.5dB Max	1.9 dB See Plot		
4	VSWR:	2.0:1 Max	1.6:1 See Plots		
5	Power Rating:	+20dBm (Operating) +30dBm (Survival)	Pass		
6	Attenuation Flatness:	@ 10dB	±0.5dB TYP	@ 10dB	±0.28dB
		@ 20dB	±0.87dB TYP	@ 20dB	±0.6dB
		@ 40dB	±1.5dB TYP	@ 40dB	±1.21dB
		@ 60dB	±1.6dB TYP	@ 60dB	±1.8dB
				See Plots	
7	Switching Time:	500ns Max	78ns See Plot		
8	Digital Control:	8 BIT Positive True, Binary TTL	Pass		
9	Power Supply:	+12V to +15V @ 125mA Max -12V to -15V @ 50mA Max	40mA 0mA		

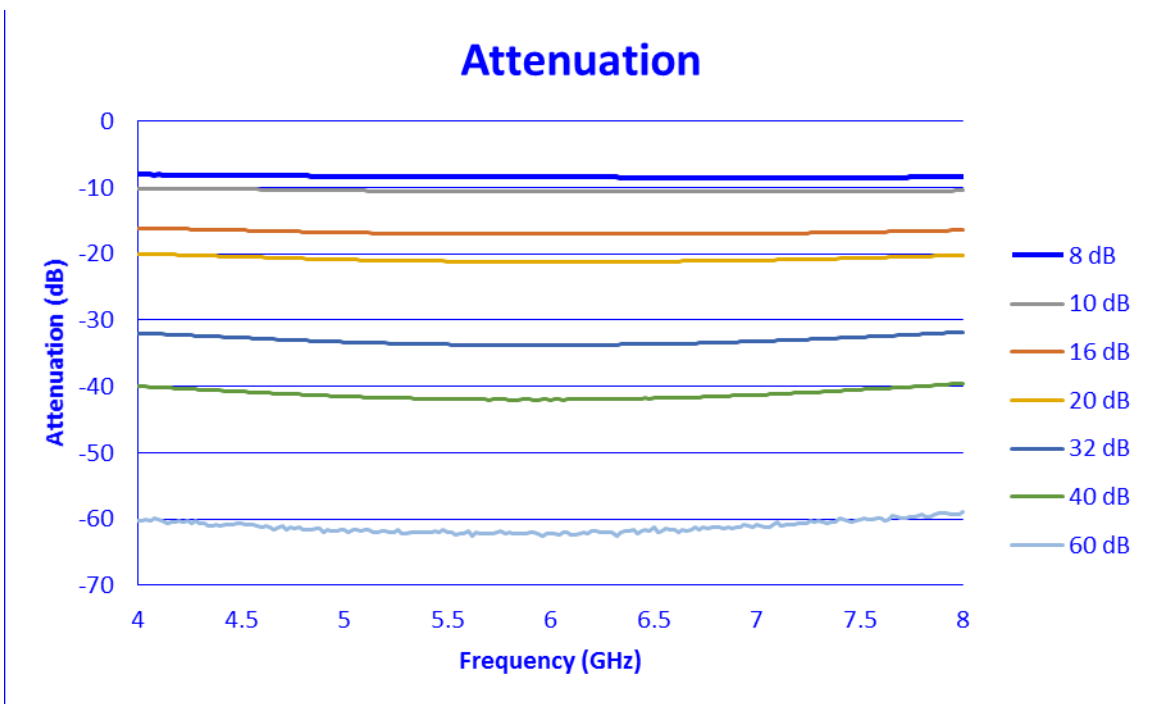
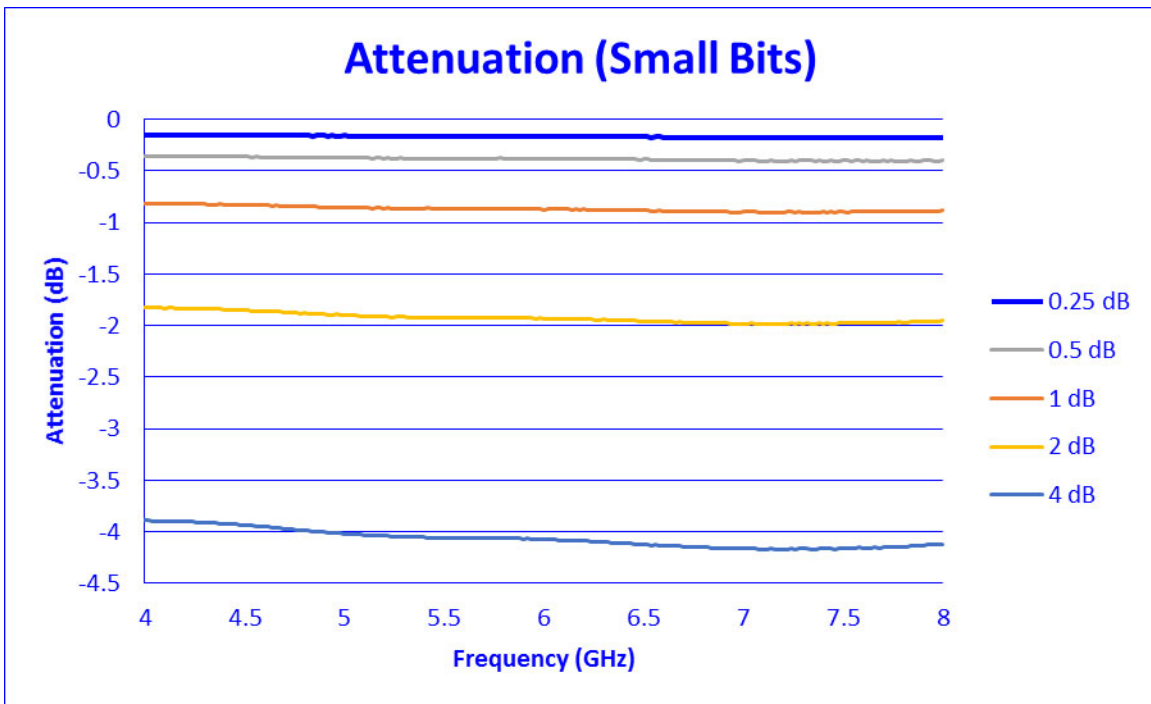


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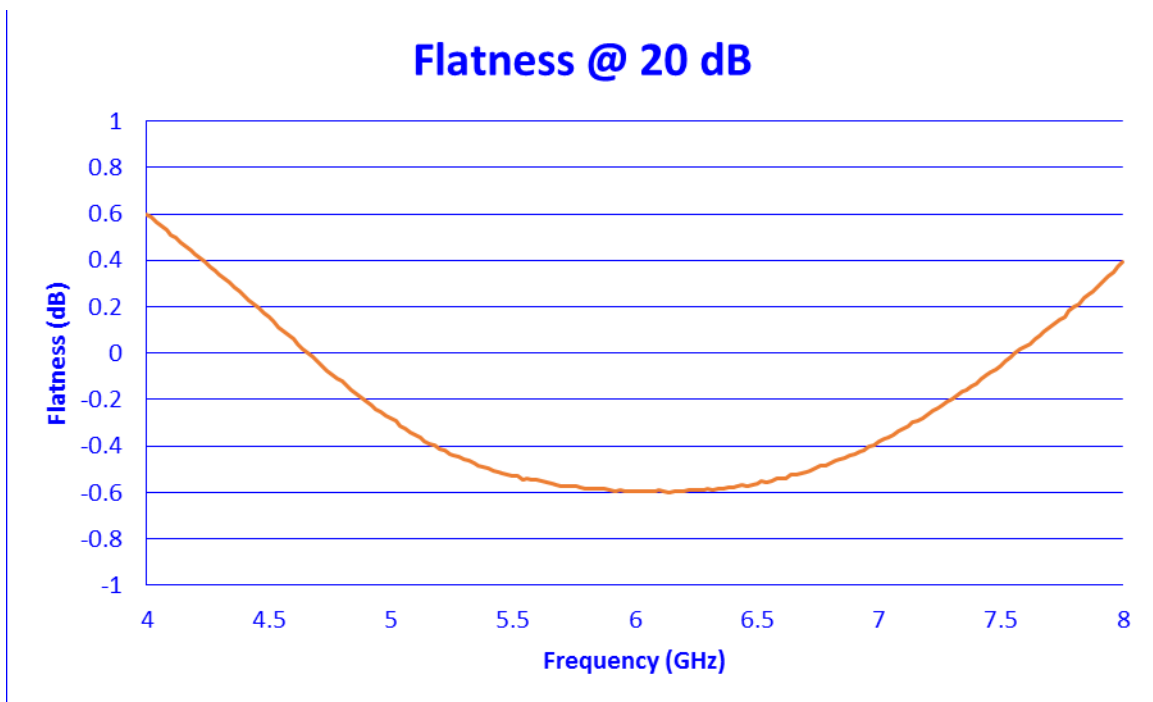
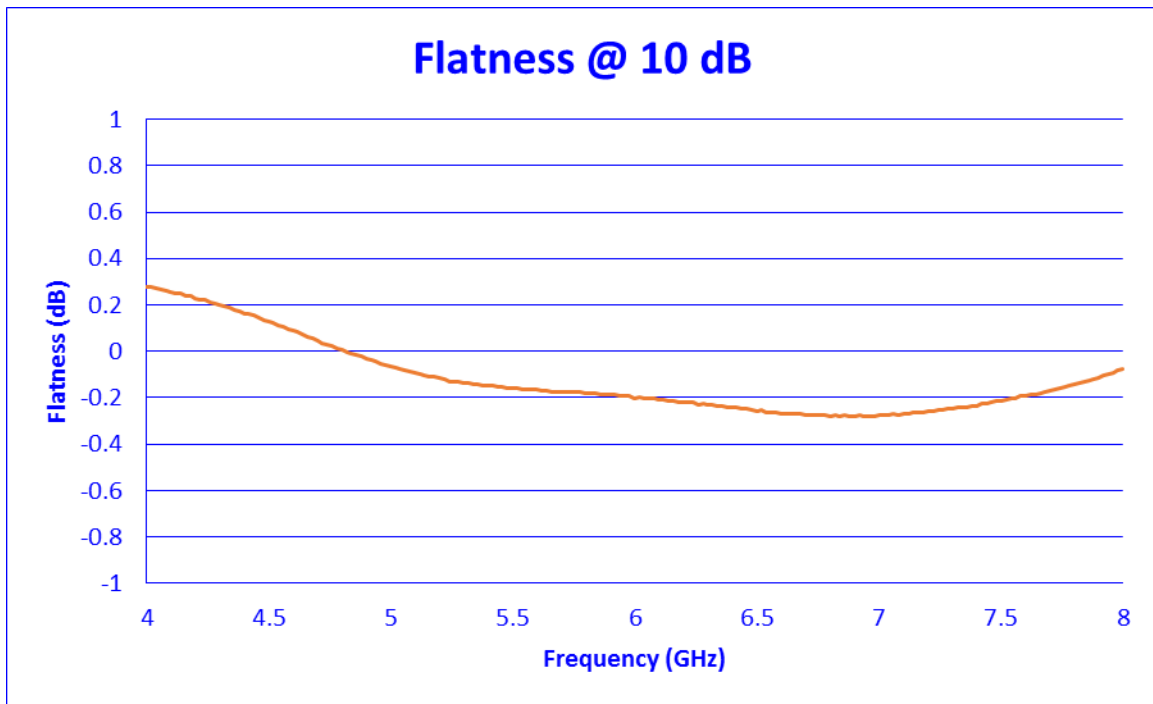


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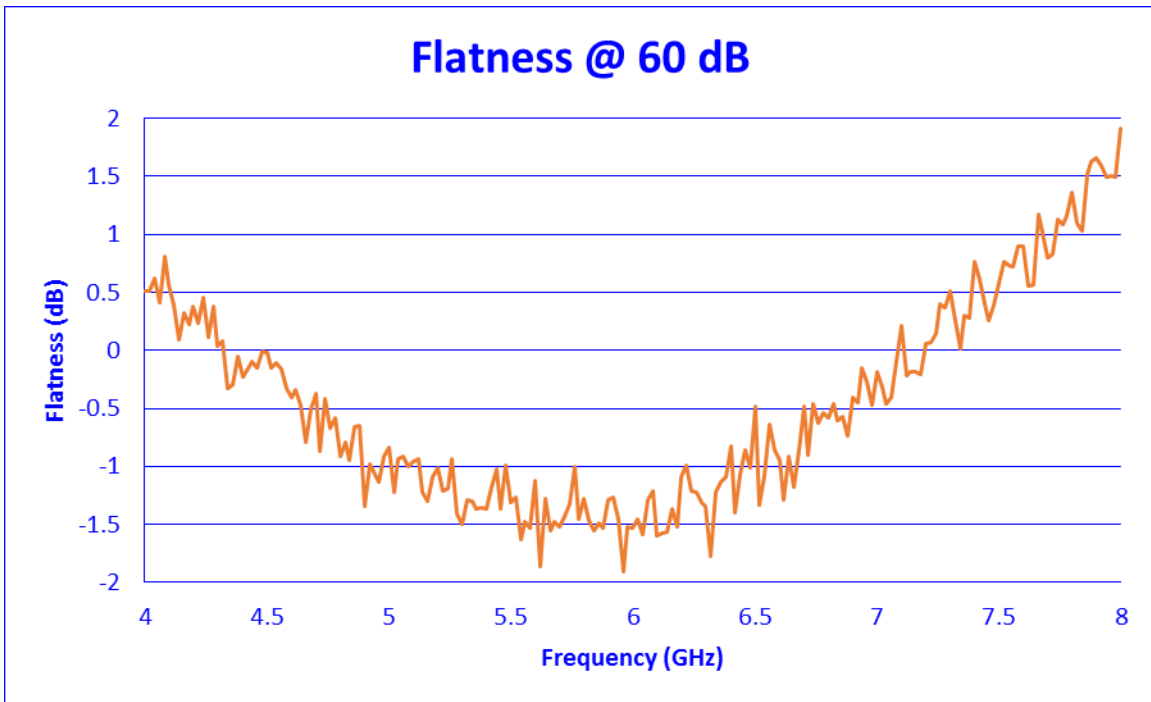
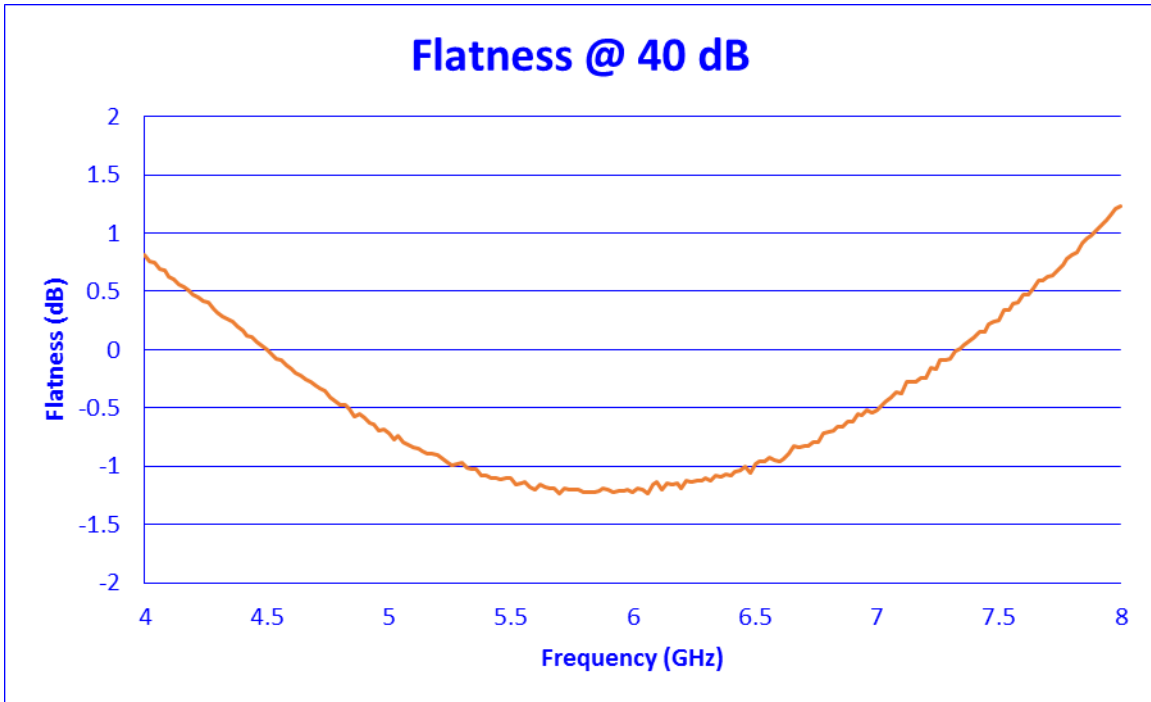


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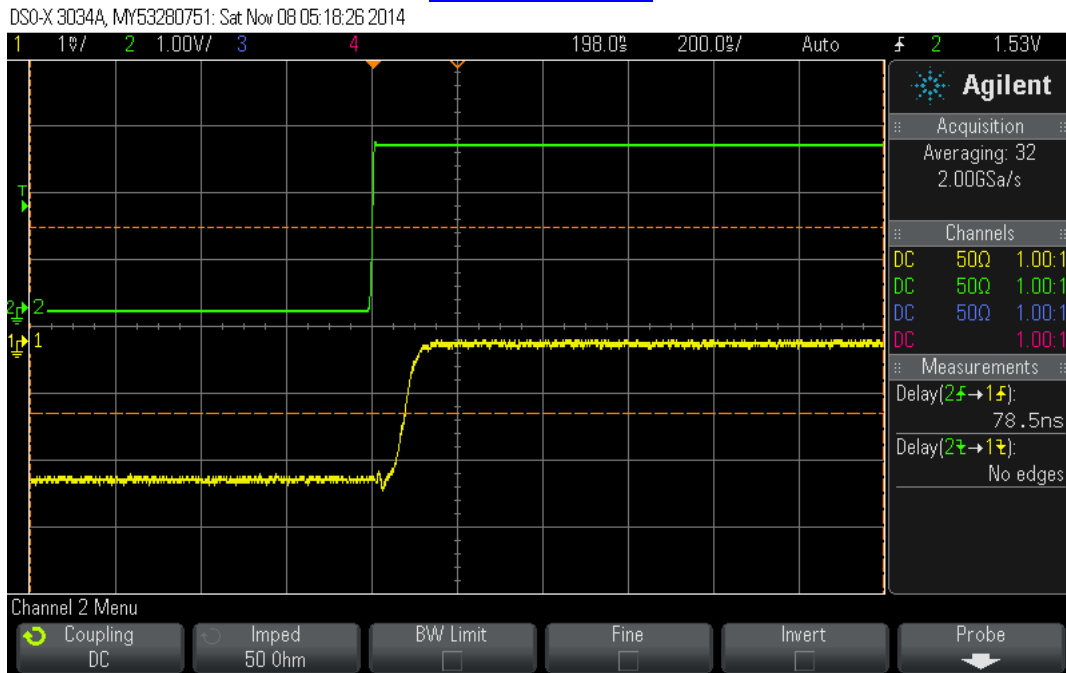
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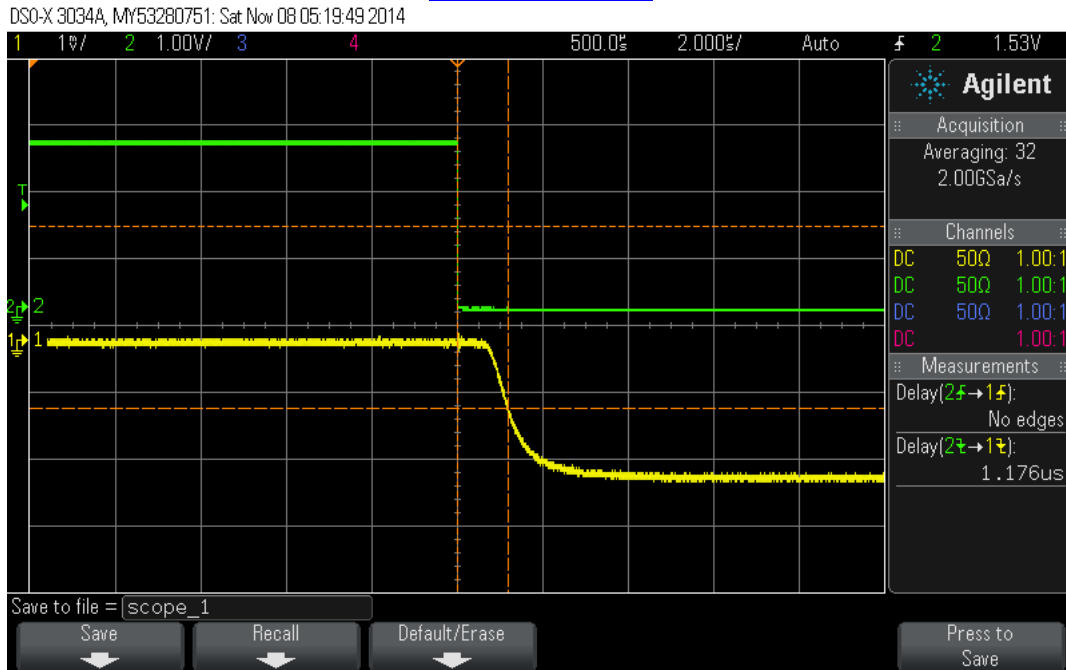


Typical Characteristics on PDVAN-4080-60-8

Delay 0 to 60 dB



Delay 60 to 0 dB



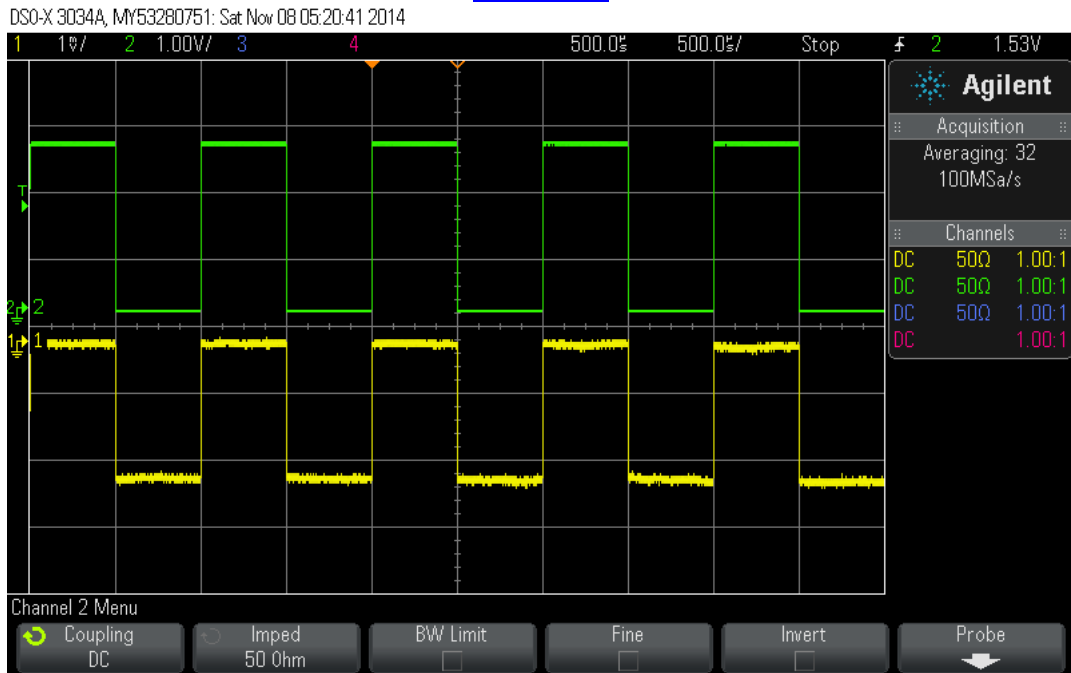
Channel 1 (Yellow): RF output

Channel 2 (Green): TTL Input from Signal Generator



Typical Characteristics on PDVAN-4080-60-8

Full Pulse



Channel 1 (Yellow): RF output

Channel 2 (Green): TTL Input from Signal Generator