Typical Characteristics on PDVAN-5010-60-8

PMI MODEL NUMBER PDVAN-5010-60-8 IS AN 8 BIT PROGRAMMABLE 60 dB PIN DIODE ATTENUATOR WITH STEP RESOLUTION AS LOW AS 0.25 dB OVER THE FREQUENCY RANGE OF 5.0 GHz TO 10.0 GHz.

February 5, 2015

Reported By: Kevin Mansfield

7311-F Grove Road Frederick, MD 21704 USA Phone: (301)662-5019 Fax: (301)662-1731
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Typical Characteristics on PDVAN-5010-60-8

DESCRIPTION:

PMI MODEL NUMBER PDVAN-5010-60-8 IS AN 8 BIT PROGRAMMABLE 60 DB PIN DIODE ATTENUATOR WITH STEP RESOLUTION AS LOW AS 0.25 DB OVER THE FREQUENCY RANGE OF 5.0 GHz TO 10.0 GHz.

SPECIFICATIONS:

- FREQUENCY: 5.0 GHz TO 10.0 GHz
- MEAN ATTENUATION RANGE: 60 dB
- INSERTION LOSS: 2.7 dB MAX
- VSWR: 2.0:1 MAX
- POWER RATING: +20dBm (Operating)
  +30dBm (Survival)
- ATTENUATION FLATNESS:
  - @ 10dB ±0.60 dB
  - @ 20dB ±0.90 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 [AW MIL-C-22750, TYPE I OVER EPOXY POLIMIDE PRIMER
- SIZE: [AW MIL-P-23377, TYPE I, CLASS 1 OR 3.
  (L) 2.00" X (W) 1.80" X(H) 0.50"
- LOGIC INPUT
  LOGIC "0" (BIT OFF) .....-0.3 to +0.8V
  LOGIC "1" (BIT ON) ..... +2.0 to +5.0V

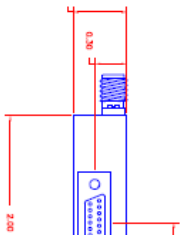
PIN NO:	J3 PIN FUNCTIONS
1	N/C
2	N/C or Latching Strobe Input *
3	N/C
4	GND
5	0.25dB (LSB)
6	0.5dB
7	1.0dB
8	2.0dB
9	4.0dB
10	8.0dB
11	16.0dB
12	32dB (MSB)
13	+VDC
14	+VDC
15	N/C

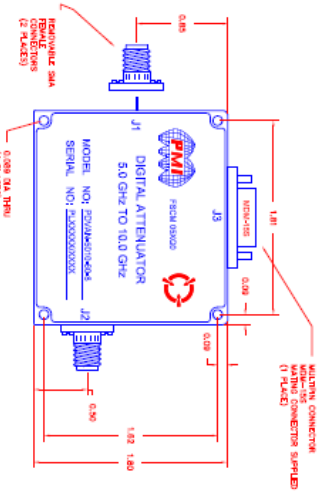
* OPTIONAL

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

NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION





PMI CONFIDENTIAL AND PROPRIETARY

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	11/12/14	
A2		ECN # 22-0067	07/12/22	

ALL DIMENSIONS ARE IN INCHES
TOLERANCES:
X.XX ±0.020
X.XXX ±0.010

PLANAR MONOLITHICS INDUSTRIES, INC.

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ISO 9001 CERTIFIED

	APPROVALS	DATE
DRAWN	JSR	11/12/14
CHECKED		
ISSUED		

TITLE: PRODUCT FEATURE
PDVAN-5010-60-8

SIZE	PGM NO.	DWG NO.	REV
A	05XQ0	27023765	A2

SCALE: N.S SHEET 1 OF 1

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Typical Characteristics on PDVAN-5010-60-8

TEST. ITEM NO	PARAMETERS	SPECIFIED VALUE		TEST RESULTS	QA QC
1	Frequency:	5.0 GHz to 10.0 GHz		**5.0 GHz to 10.0 GHz See Plot**	
2	Mean Attenuation Range:	60 dB		**66.8 dB See Plot**	
3	Insertion Loss:	2.7 dB Max		**2.0 dB See Plot**	
4	VSWR:	2.0:1 Max		**1.9:1 See Plot**	
5	Power Rating:	+20 dBm (Operating) +30 dBm (Survival)		**+20 dBm (Operating) +30 dBm (Survival)**	
6	Attenuation Flatness	@ 10 dB	±0.60 dB	**±0.17dB ±0.60dB ±1.12dB ±1.31dB See Plot**	
		@ 20 dB	±0.90 dB		
		@ 40 dB	±1.5 dB		
		@ 60 dB	±1.6 dB		
7	Switching Time:	500 nsec Max		**200 nsec See Plot**	
8	Digital Control:	8 BIT Positive True, Binary TTL		**Pass**	
9	Monotonicity:	Guaranteed		**Pass**	
10	DC Supply	+12V to +15V @ 150mA Max -12V to -15V @ 75mA Max		**+12V to +15V @ 41mA -12V to -15V @ 0mA**	

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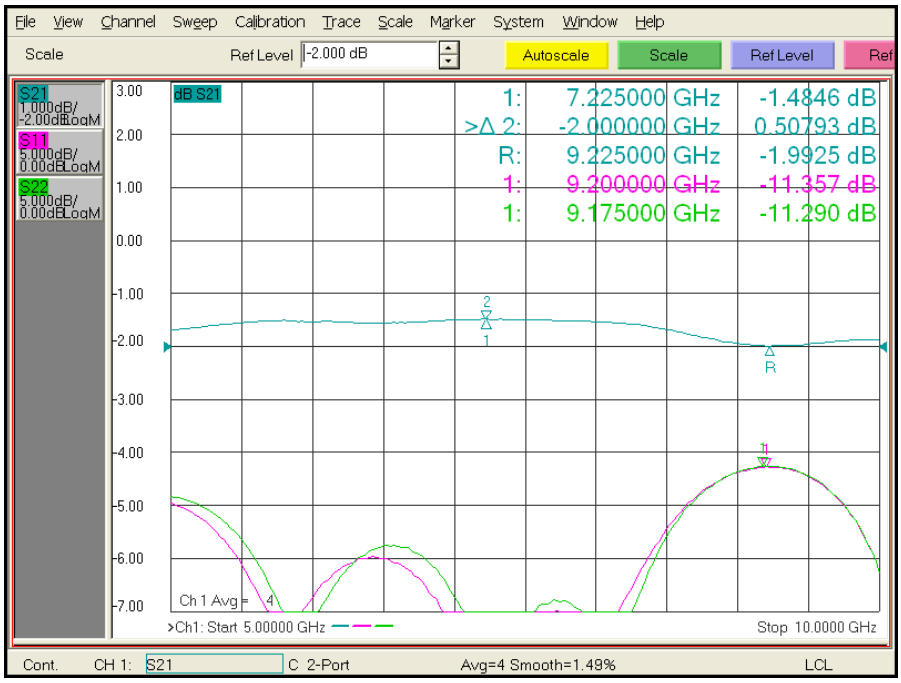
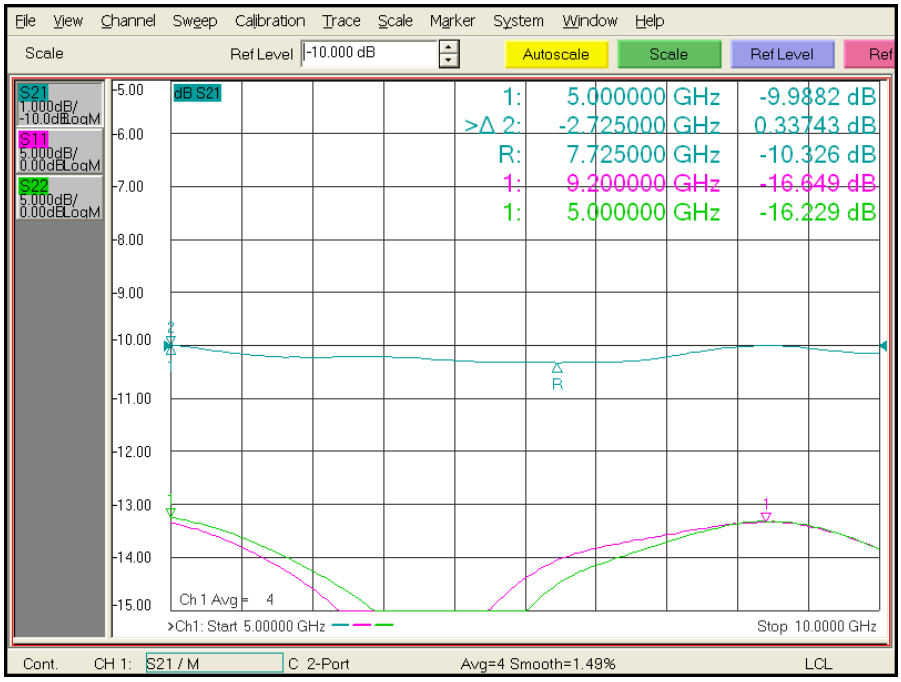
Typical Characteristics on PDVAN-5010-60-8

Insertion Loss and VSWR



10dB Attenuation



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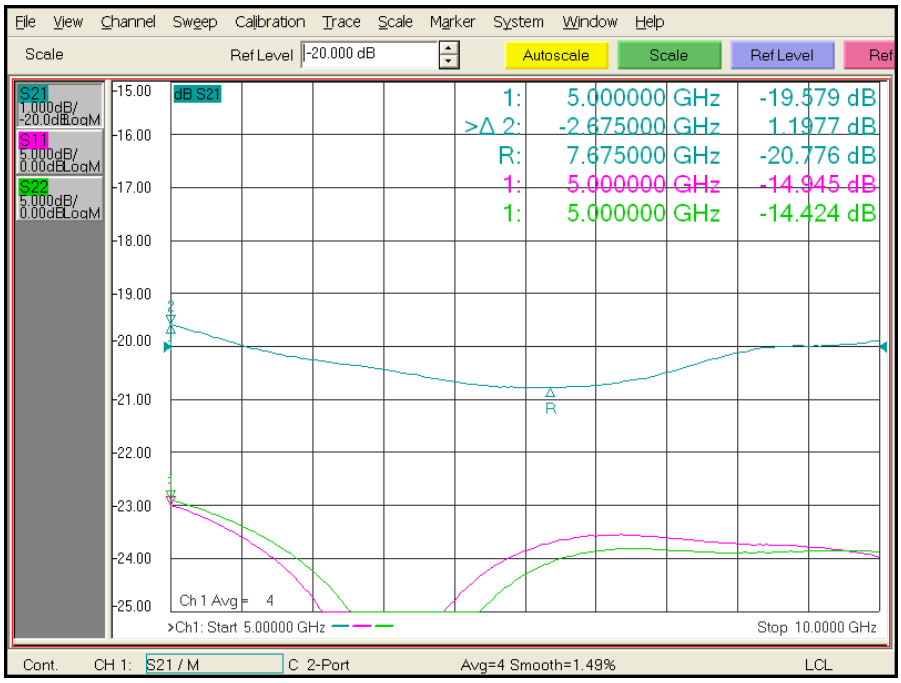
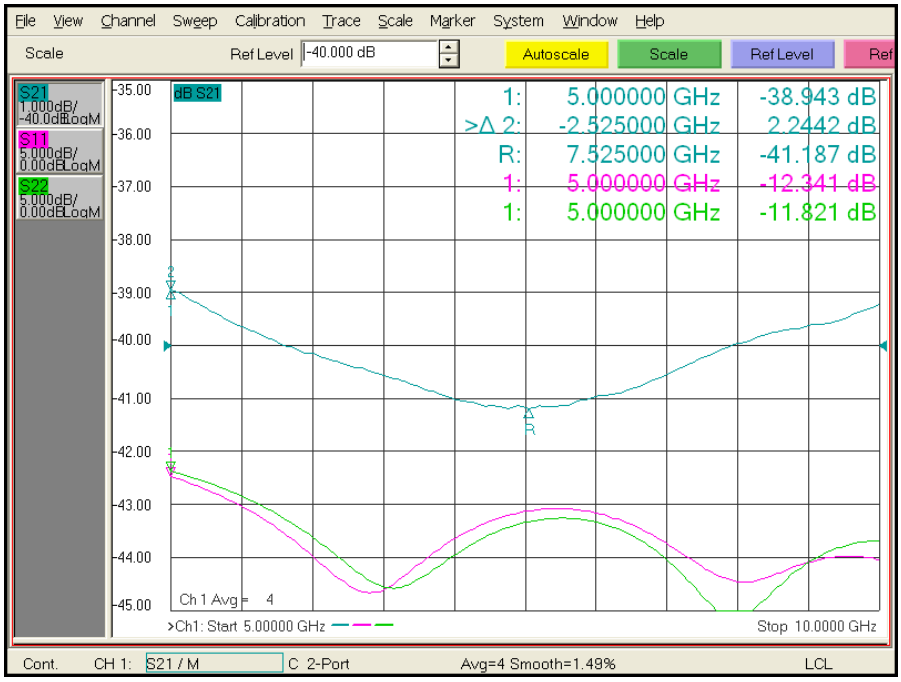
Typical Characteristics on PDVAN-5010-60-8

20dB Attenuation



40dB Attenuation



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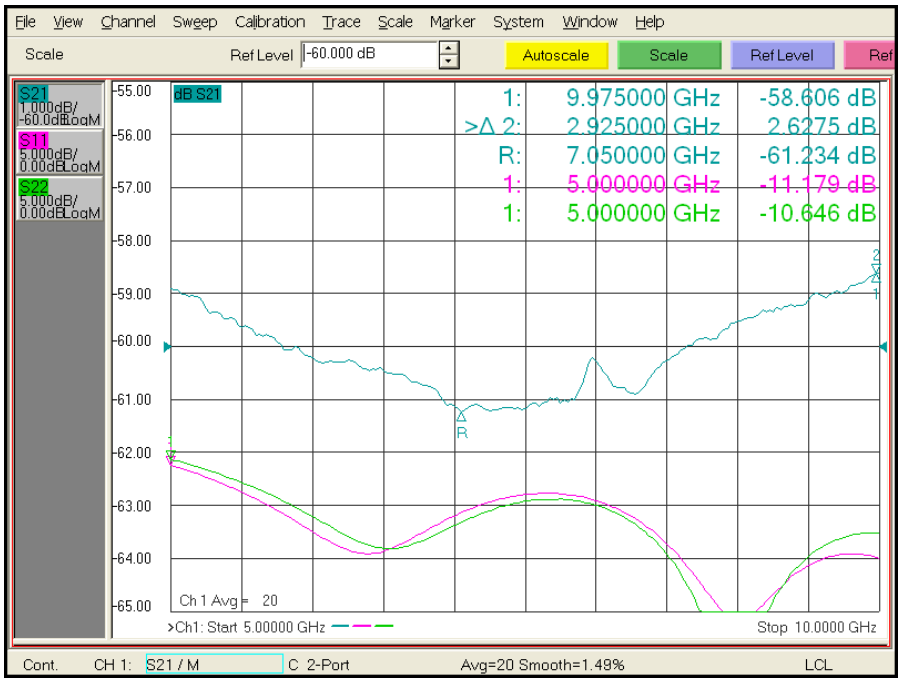
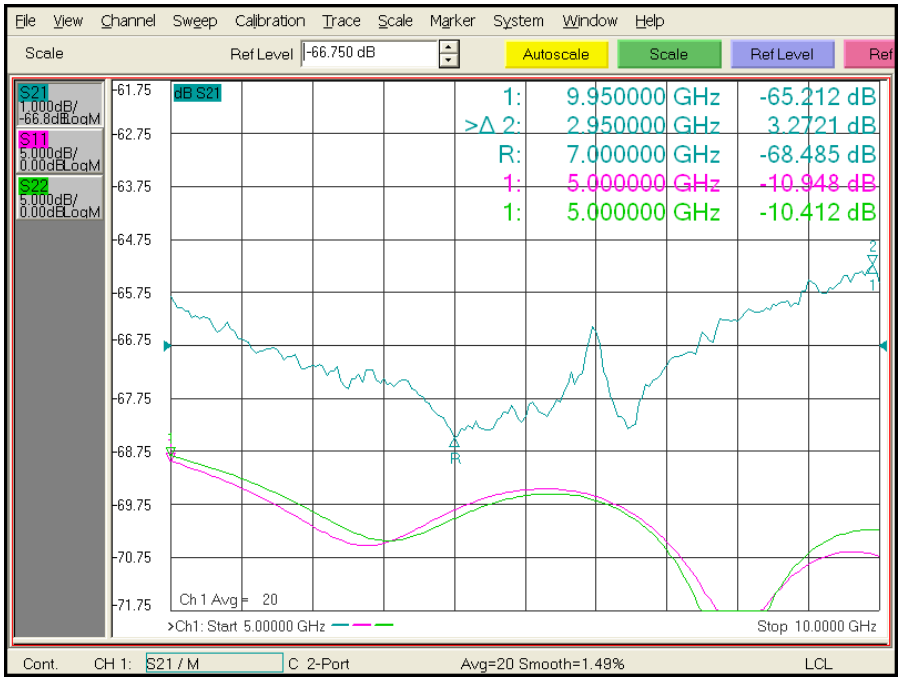
Typical Characteristics on PDVAN-5010-60-8

60dB Attenuation



Mean Attenuation



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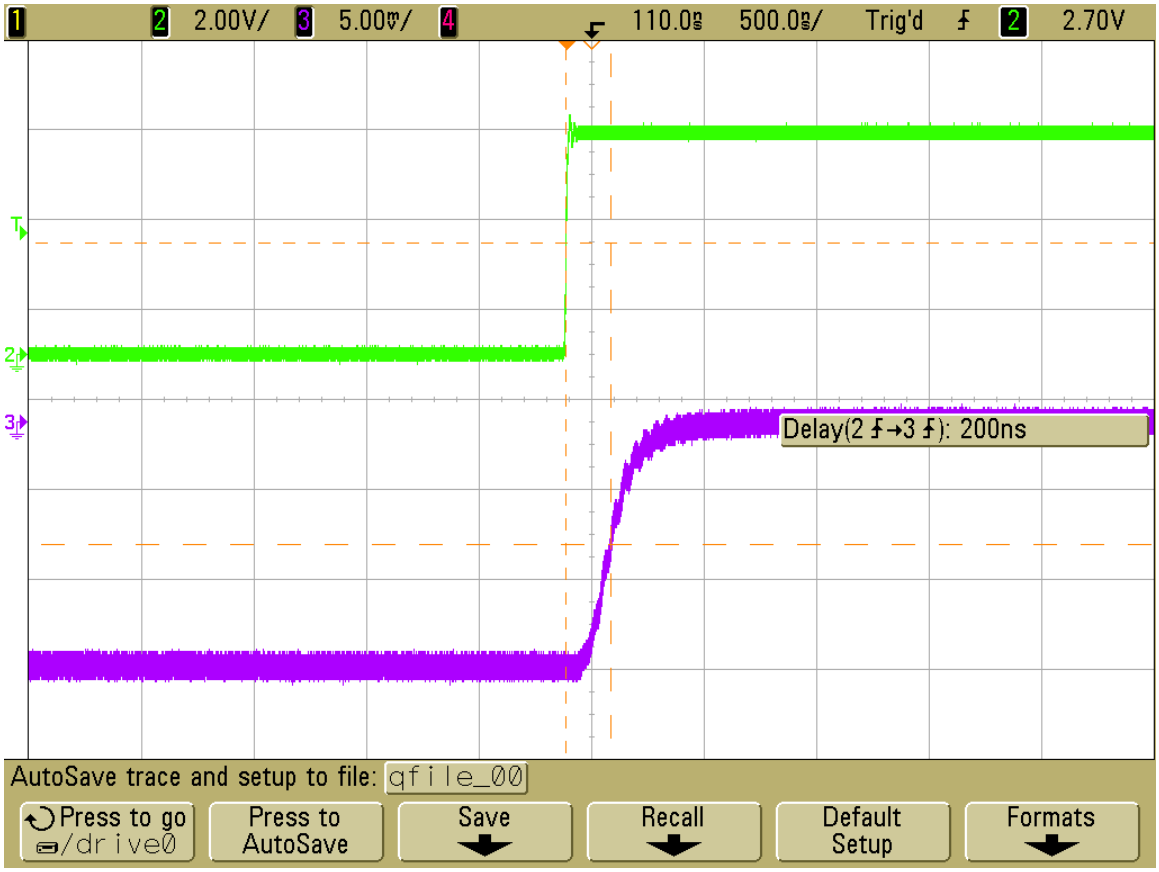
Typical Characteristics on PDVAN-5010-60-8

Delay 0 to 60 dB



Channel 3 (Purple): RF output

Channel 2 (Green): TTL Input from Signal Generator

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Typical Characteristics on PDVAN-5010-60-8

Delay 60 to 0 dB

Channel 3 (Purple): RF output

Channel 2 (Green): TTL Input from Signal Generator

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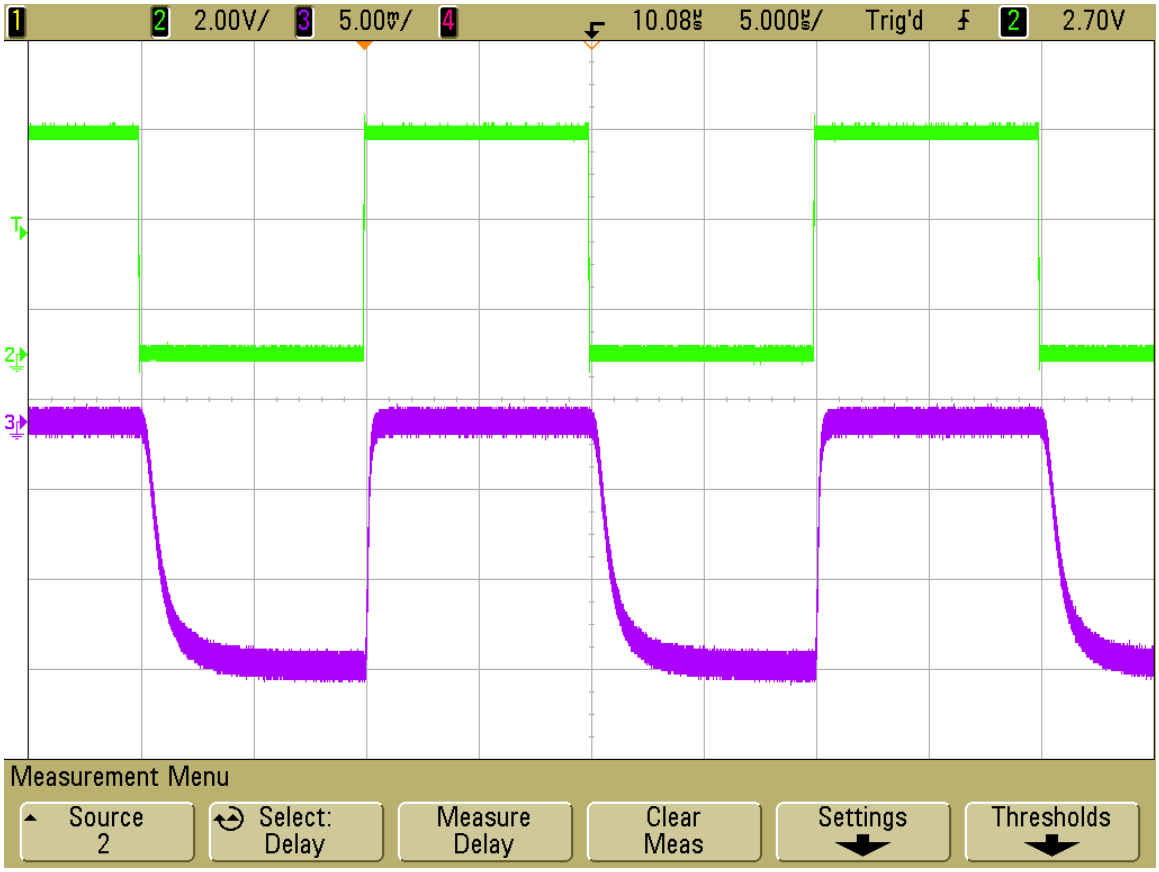
Typical Characteristics on PDVAN-5010-60-8

Full Pulse



Channel 3 (Purple): RF output

Channel 2 (Green): TTL Input from Signal Generator

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