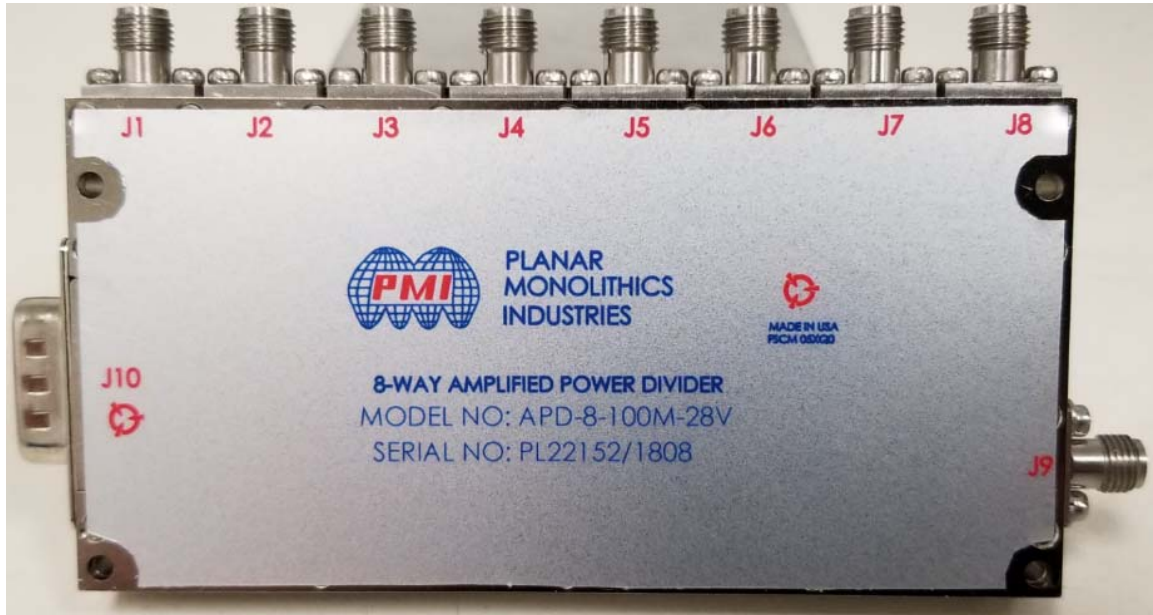




**TYPICAL CHARACTERISTICS  
ON  
APD-8-100M-28V**

**PMI MODEL NUMBER APD-8-100M-28V IS AN 8-WAY AMPLIFIED POWER DIVIDER MODULE TO PROVIDE A 100 MHz SIGNAL TO 8 OUTPUTS WITH LESS THAN 4 dB OF LOSS. THIS MODULE BALANCES A LOW NOISE FIGURE WITH HIGH OUTPUT POWER.**



**February 21, 2018**

**Designed By: Dave Durbin  
Drafting By: Michael Hanken  
Tested and Reported By:  
Michael Hanken and Dave Durbin**



# TYPICAL CHARACTERISTICS ON APD-8-100M-28V

## Outline Drawing

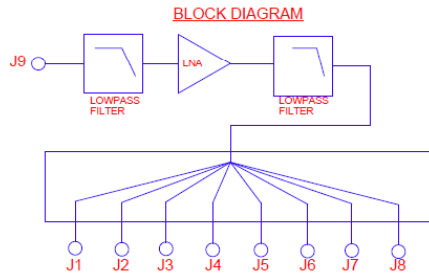
**DESCRIPTION:**

PLANAR MONOLITHICS INDUSTRIES MODEL NUMBER APD-8-100M-28V IS AN 8-WAY AMPLIFIED POWER DIVIDER MODULE TO PROVIDE A 100MHz SIGNAL TO 8 OUTPUTS WITH 4 dB OF LOSS. THIS MODULE BALANCES A LOW NOISE FIGURE WITH HIGH OUTPUT POWER.

**SPECIFICATIONS:**

- FREQUENCY:.....100 MHz
- INSERTION LOSS:.....4 dB, ± 1.5dB MAX
- VSWR:.....2 : 1 MAX
- NOISE FIGURE:.....9 dB MAX
- INPUT POWER P1dB:.....6 dB GOAL
- INPUT POWER:.....+13 dBm TYP
- INPUT POWER:.....+20 dBm MAX (SURVIVAL)
- OUTPUT PORT TO PORT ISOLATION:.....25 dB TYP
- POWER SUPPLY:.....+28V @ +750mA MAX
- SIZE:.....4.00" X 2.00" X 0.55"
- WEIGHT:.....140 GRAMS MAX
- FINISH:.....NICKEL PLATED

9-PIN CONNECTOR PIN-OUT	
PIN	FUNCTION
1	GND
2	GND
3	+28 VDC
4	+28 VDC
5	GND
6	GND
7	GND
8	GND
9	GND

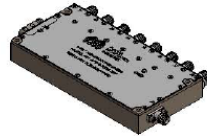
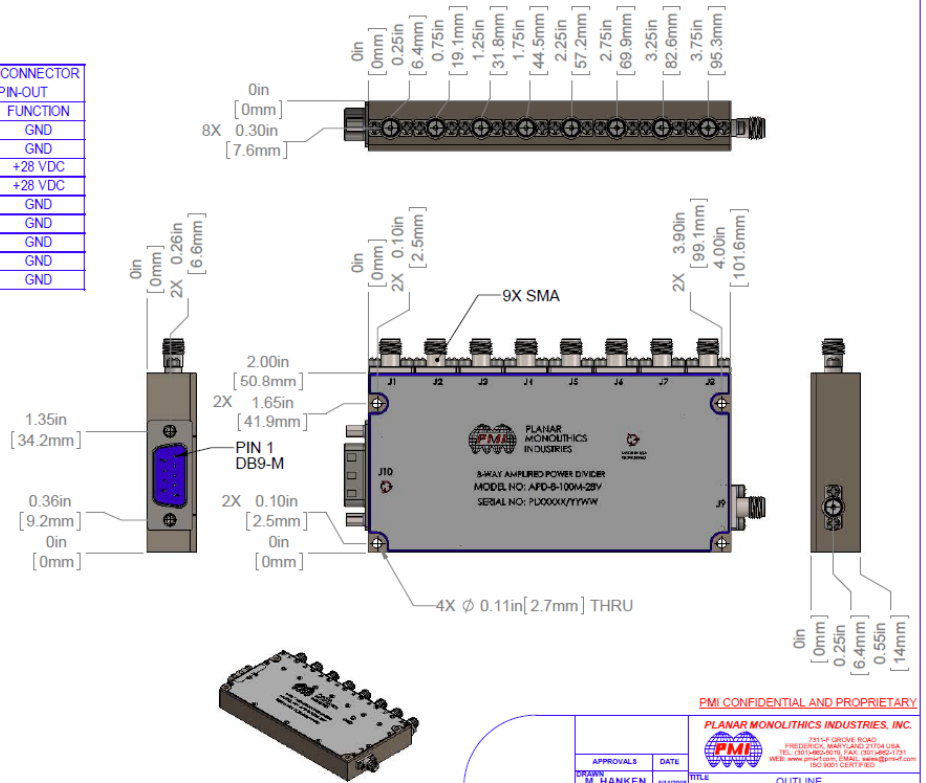


**ENVIRONMENTAL RATINGS:**

- TEMPERATURE:.....-40°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

NOTE: SPECIFICATIONS WILL VARY OVER OPERATING TEMPERATURE.  
NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION.

ZONE	REV	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	9/19/98	



PMI CONFIDENTIAL AND PROPRIETARY

APPROVALS		DATE	TITLE	
DESIGN	W. HANKEN	9/19/98	OUTLINE	
RELEASED			APD-8-100M-28V	
REVISED			SIZE	FORM NO.
			B	D5XQ0
			DWG NO.	REV.
			27033800	A1
SCALE: 1:1			SHEET 1 OF 1	

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



**TYPICAL CHARACTERISTICS  
ON  
APD-8-100M-28V**

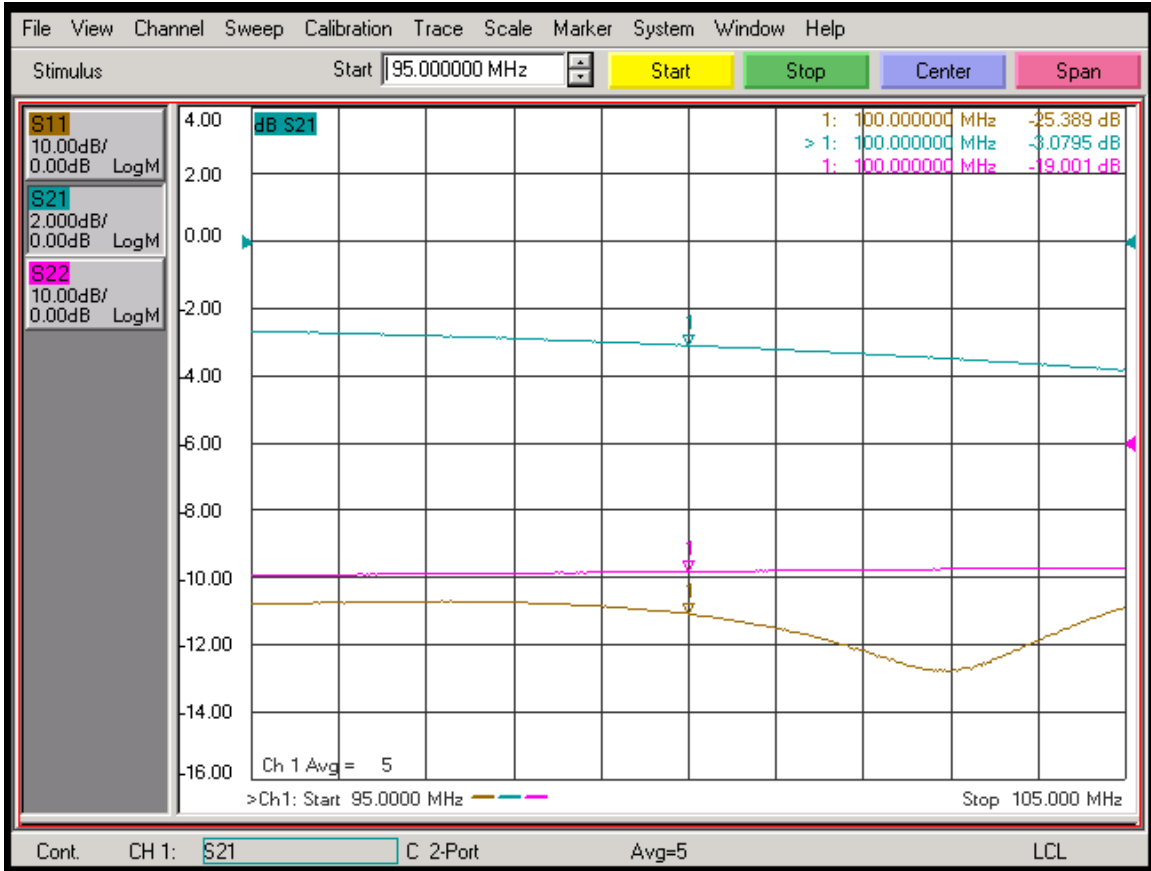
**Summary Data**

TEST ITEM NO:	PARAMETERS	SPECIFIED VALUE	MEASURED VALUE	REMARKS QA/QC
1	Frequency	100 MHz	100 MHz	
2	Insertion Loss	4 dB, $\pm 1.5$ dB MAX.	3.1 dB	
3	VSWR	2 : 1 MAX.	1.1 : 1 Input 1.25 : 1 Output	
4	NOISE FIGURE	9 dB MAX 6 dB GOAL	7.9 dB	
5	INPUT POWER P1dB	+13 dBm TYP	+14.5 dBm	
6	INPUT POWER	+20 dBm MAX (SURVIVAL)	+20 dBm	
7	OUTPUT PORT TO PORT ISOLATION	25 dB TYP	33 dB Min	
8	POWER SUPPLY	+28V @ 750mA MAX	172 mA	



**TYPICAL CHARACTERISTICS  
ON  
APD-8-100M-28V**

**Insertion Loss and Return Loss**

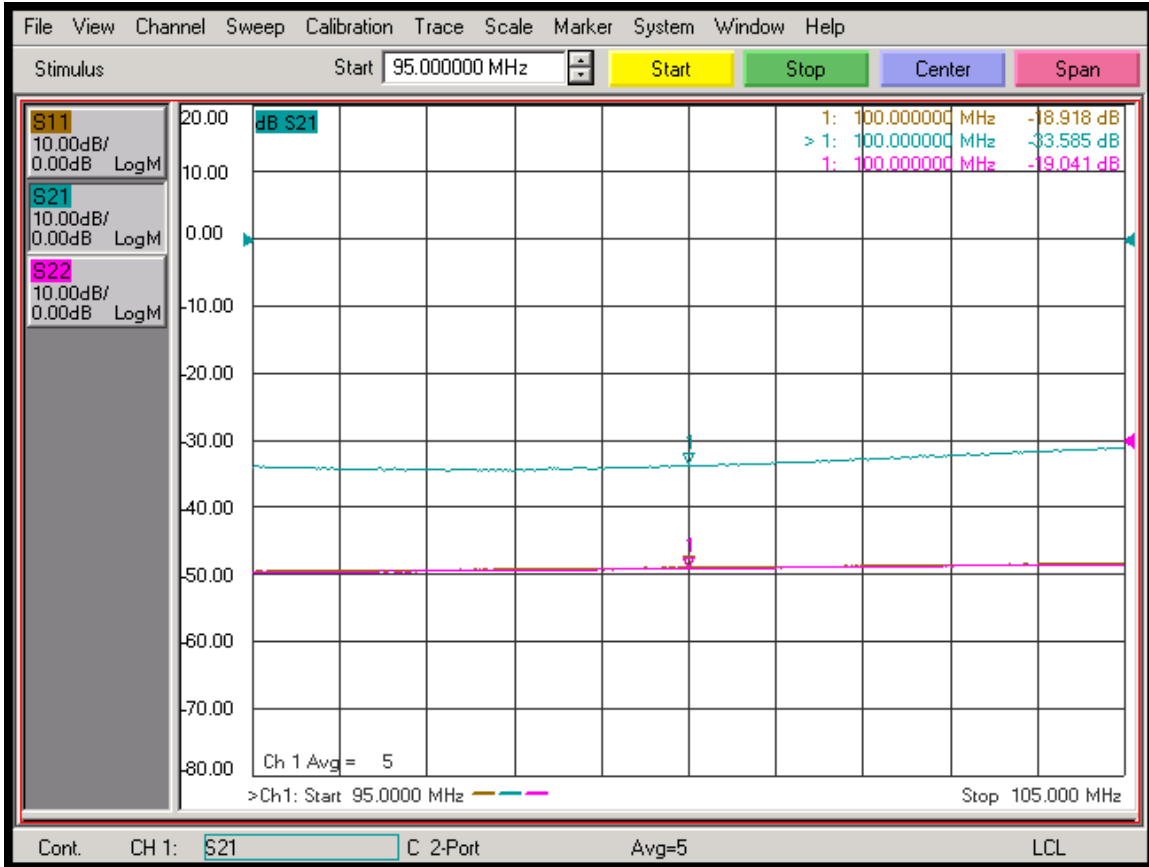


S11: -25.4 dB  
S21: -3.1 dB  
S22: -19.0 dB



**TYPICAL CHARACTERISTICS  
ON  
APD-8-100M-28V**

**Port to Port Isolation (Worst Case)**

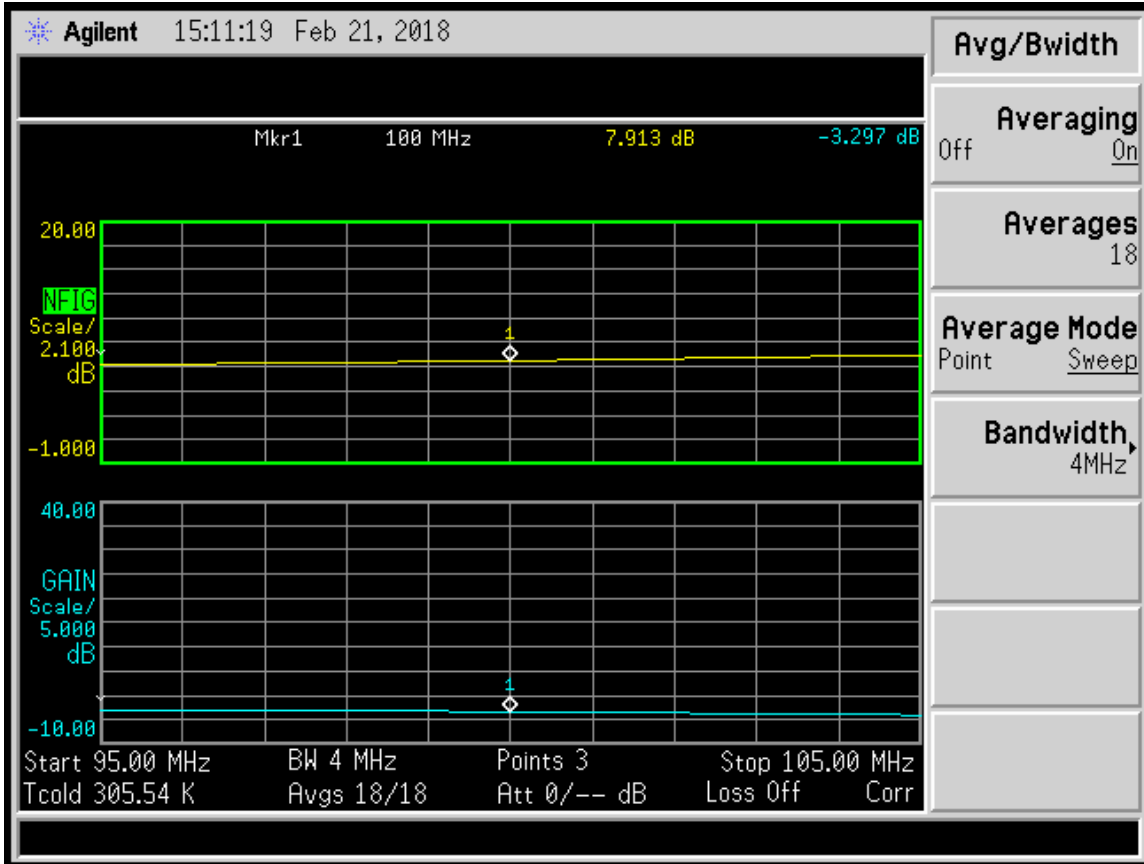


**S21: -33.6 dB**



**TYPICAL CHARACTERISTICS  
ON  
APD-8-100M-28V**

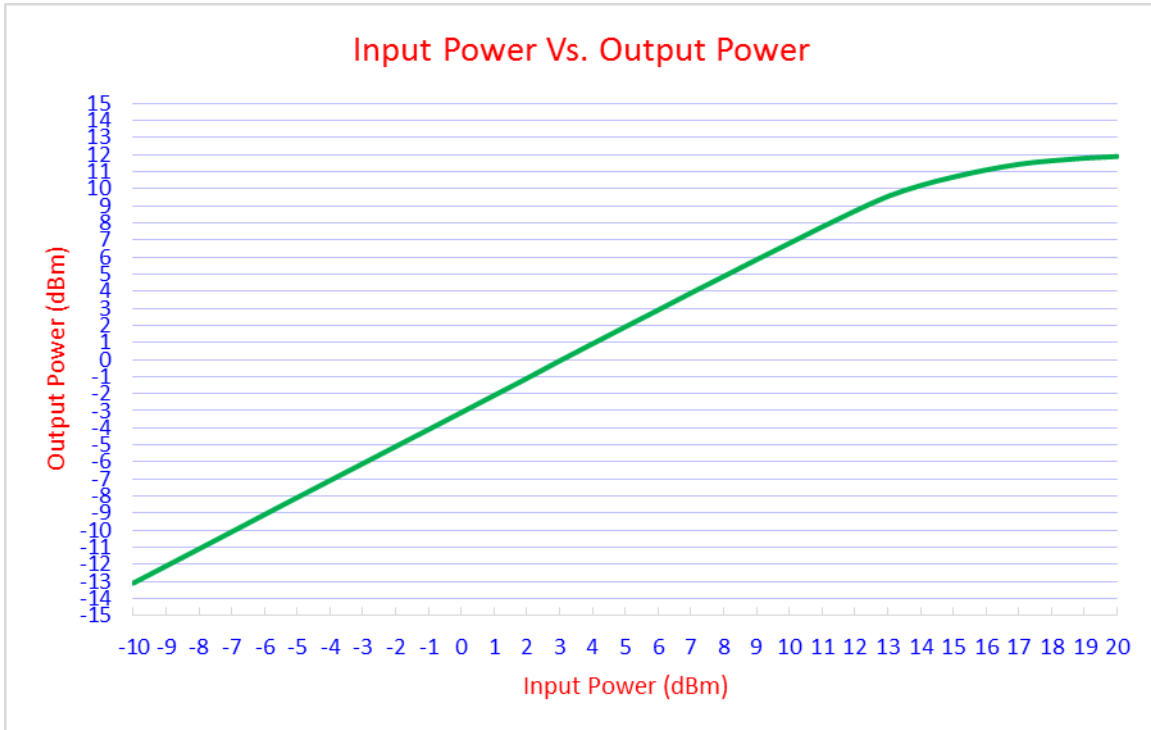
**Noise Figure**





**TYPICAL CHARACTERISTICS  
ON  
APD-8-100M-28V**

**Input P1dB**



**Input P1dB: +14.5 dBm**



**TYPICAL CHARACTERISTICS  
ON  
APD-8-100M-28V**