



**TYPICAL CHARACTERISTICS
ON
BPM-26D5G40G-180-292FF**

PMI MODEL: BPM-26D5G40G-180-292FF IS A BI-PHASE MODULATOR OPERATING OVER THE 26.5 TO 40.0 GHz FREQUENCY RANGE. THIS MODEL OFFERS INSERTION LOSS OF 5.5 dB TYPICAL WHILE MAINTAINING A MAXIMUM AMPLITUDE BALANCE OF ± 2.0 dB. THIS COMPACT HOUSING MEASURES 1.0" x 1.0" x 0.5" AND IS OUTFITTED WITH 2.92mm FEMALE CONNECTORS.



March 27, 2018

Designed By: PMI Engineering

Tested & Reported By:
Sebastian Palacio

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DESCRIPTION

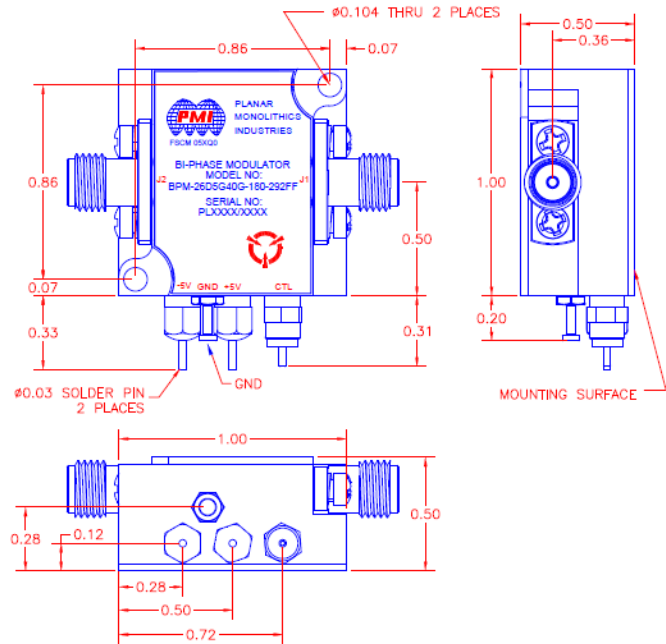
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SPECIFICATIONS

- FREQUENCY RANGE: 26.5 TO 40.0 GHz
- INSERTION LOSS: 5.5 dB TYP.
- PHASE SHIFT: $\pm 30^\circ$ TYP
- AMPLITUDE BALANCE: ± 2.0 dB TYP
- PHASE SHIFT CONTROL INPUT: TTL "0" = 0°
TTL "1" = 180°
- VSWR: 2.0:1 GOAL
3.0:1 MAX
- SWITCHING SPEED: 100 ns MAXIMUM
- IMPEDANCE: 50 Ω
- POWER SUPPLY: +5 VDC @ 75 mA MAXIMUM
-5 VDC @ 20 mA MAXIMUM
- CONNECTORS: 2.92 mm FEMALE
- SIZE: 1.0" x 1.0" x 0.5"
- FINISH: PAINTED BLUE

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	11/14/18	
	A2	ECN # 19-0098	04/02/19	

MECHANICAL OUTLINE



ENVIRONMENTAL RATINGS

- TEMPERATURE: -55 $^\circ$ C TO +85 $^\circ$ C (OPERATING)
-65 $^\circ$ C TO +125 $^\circ$ C (STORAGE)
- HUMIDITY: UP TO 90%, NON-CONDENSING
- 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

PMI CONFIDENTIAL AND PROPRIETARY

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

PLANAR MONOLITHICS INDUSTRIES, INC.

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ISO 9001 CERTIFIED



APPROVALS		DATE	TITLE			REV.
DRAWN	<i>JPH</i>	5/29/18	PRODUCT FEATURE			
REDRAWN	<i>JPU</i>	11/18/18	BPM-26D5G40G-180-292FF			
ISSUED			SIZE	FORM NO.	DWG NO.	
			A	05XQ0	27035380	A2
			SCALE	N:S	SHEET	1 OF 1

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SUMMARY DATA

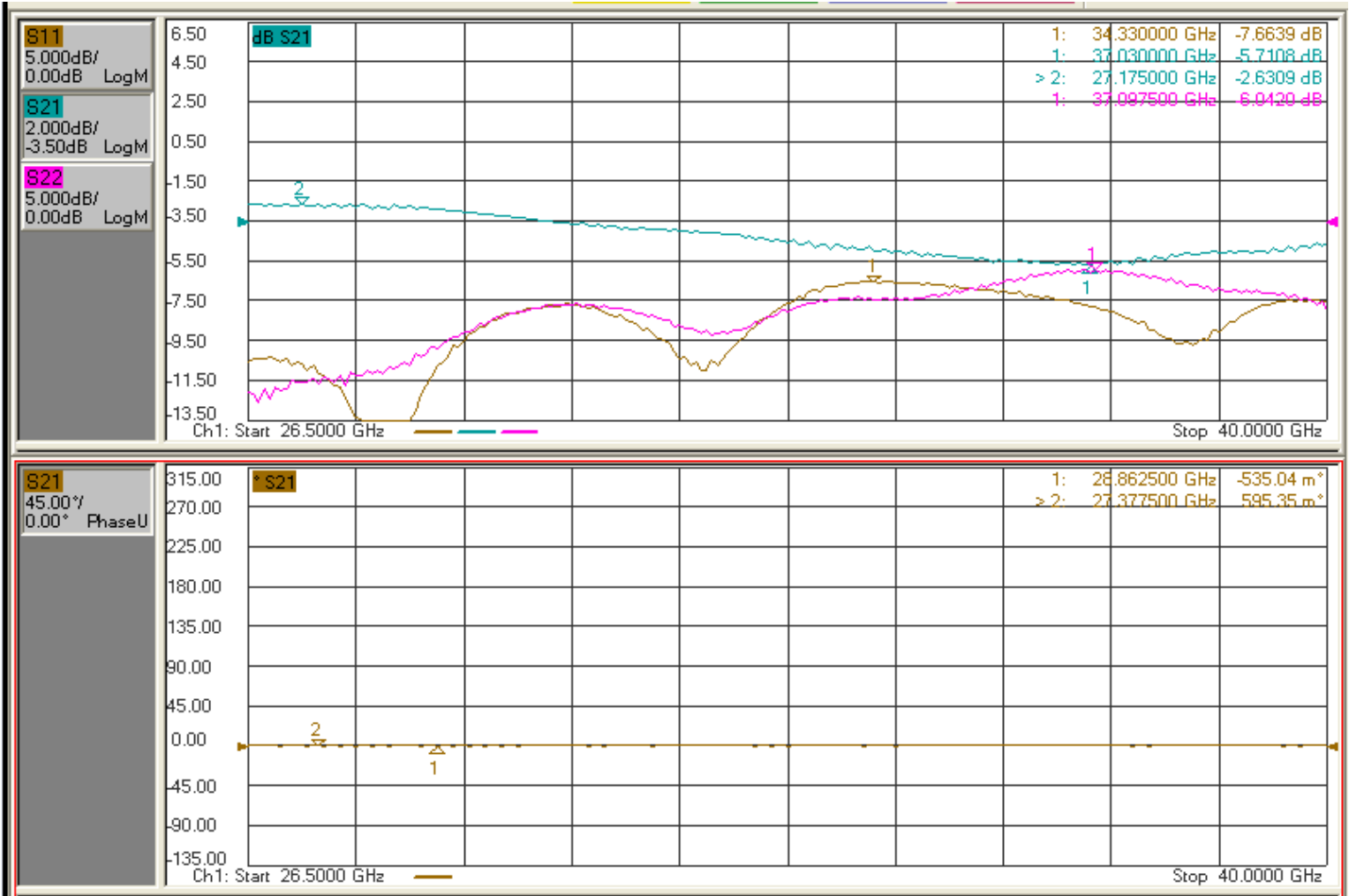
TEST ITEM NO.	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
1	Frequency Range:	26.5 to 40.0 GHz	26.5 to 40.0 GHz	
2	Insertion Loss:	5.5 dB Typ.	5.71 dB See Plot	
3	VSWR Input:	2.0:1 Typ. 3.0:1 Max.	2.99:1 See Plot"	
5	Speed:	100 ns Max On/Off	50 ns	
6	Phase Shift	±30° Typ	+31.81°/-32.67°	
7	Amplitude Balance:	±2.0 dB Typ	±1.44 dB	
8	Phase Shift Control Input	TTL "0" = 0° TTL "1" = 180°	PASS	
9	DC Supply:	+5 VDC @ 70 mA Max. -5 VDC @ 30 mA Max.	+5 VDC @ 40mA -5VDC @ 7mA	

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**TYPICAL CHARACTERISTICS
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INSERTION LOSS, RETURN LOSS AND 0 DEGREES PHASE

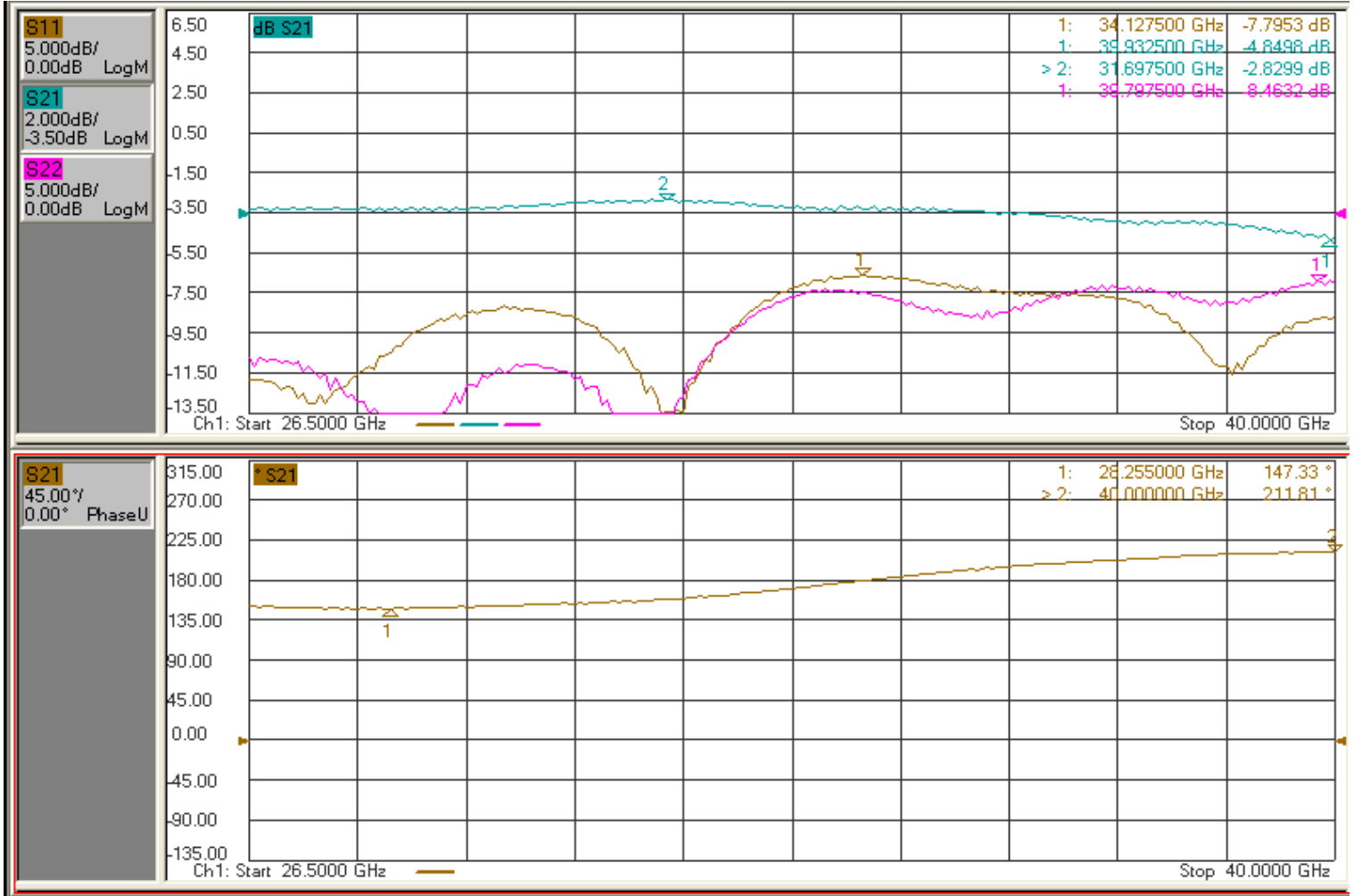


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INSERTION LOSS, RETURN LOSS AND 180 DEGREES PHASE

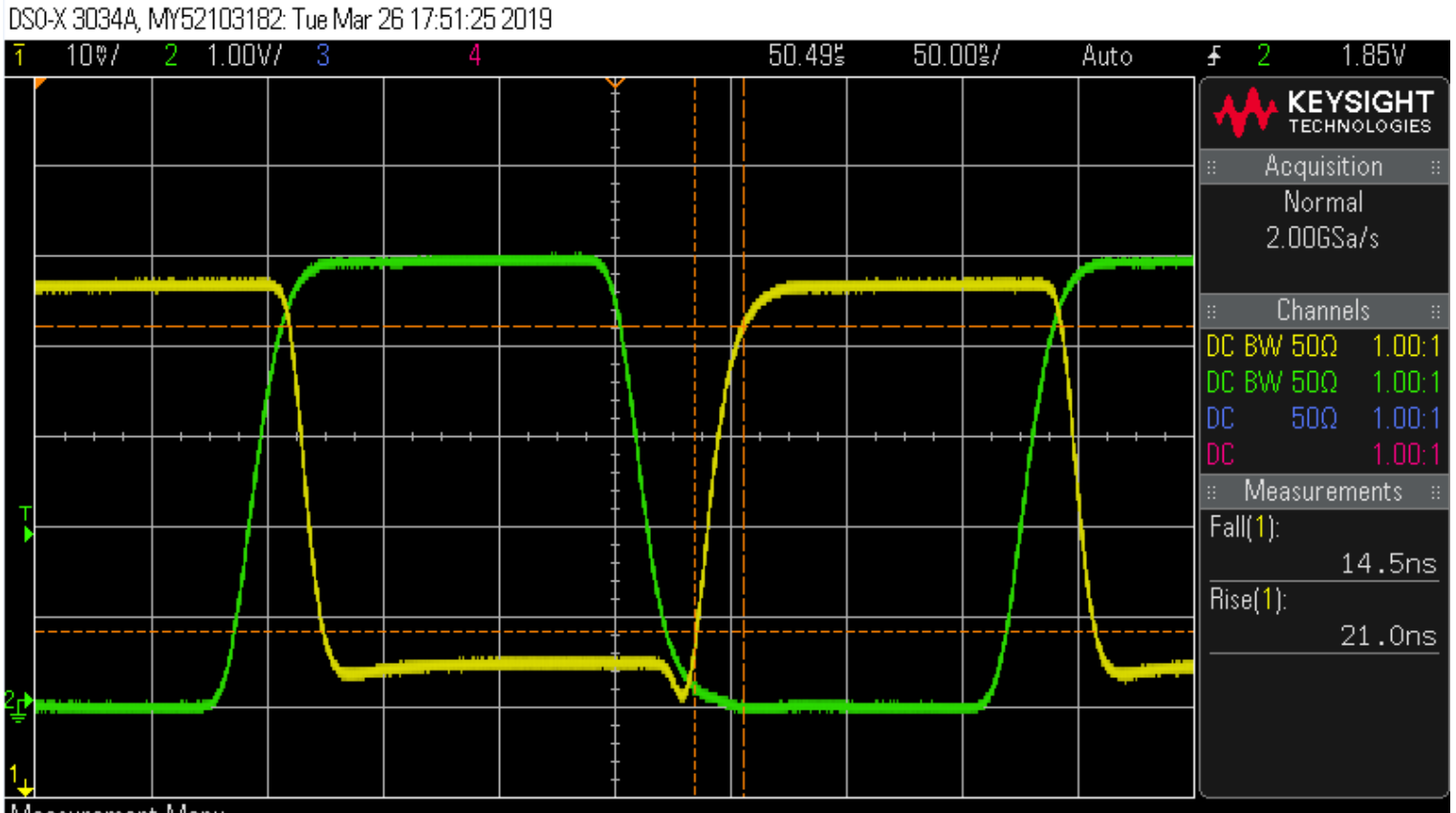


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BI-PHASE SWITCHING SPEED



GREEN TRACE – TTL SIGNAL
YELLOW TRACE – RF SIGNAL (AMPLITUDE VARIATION BETWEEN PHASES,
MEASURED WITH TUNEL DIODE DETECTOR)

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