PASTERNACK®
THE ENGINEER'S RF SOURCE

8 Bit Programmable Phase Shifter, 8.5 GHz to 11 GHz, 360 Deg Phase Shift, 256 Steps and SMA

TECHNICAL DATA SHEET PE82P5001

The PE82P5001 is an 8 Bit Digitally Controlled Phase Shifter with 0° to 360° Phase Range and a resolution as fine as 1.41°, with a switching speed of 100 nsec typical over the Operating Frequency Range from 8.5 GHz to 11 GHz. The module is offered in a slim line package measuring only 0.5" Height. The Input/Output RF Connectors are SMA Female. The Control Connector is a 15 PIN Micro D Connector.

Features

- 8 Bit Digital Controlled Phase Shifter
- 8.5 GHz to 11 GHz Frequency Range
- 360 Deg Phase Shift
- 100 ns Typ Switching Speed
- +13 dBm Max Input Power
- Insertion Loss 10 dB Typ
- SMA Female RF Connectors
- 15 PIN Micro D Control Connector

Applications

- Electronic Warfare
- Test & Measurement
- Military & Space
- Radar
- Military Communications Systems

Electrical Specifications (Values at +25°C, sea level)

Description	Minimum	Typical	Maximum	Units
Frequency Range	8.5		11	GHz
Insertion Loss		10	12	dB
Passband Phase Accuracy		±9	±12	Deg
Phase Flatness "Over Any 1GHz Passband"		±8	±12	Deg
Input VSWR		1.8:1	2:1	
Output VSWR		1.8:1	2:1	
PM / AM		±1	±2	dB
Phase Shift				
Range		360° in 256 Steps		
Control Input		8 Bit TTL		
Phase LSB Step			1.41	Deg
Error			±2°	
Switching Speed @50% TTL to within		100	500	ns
Spurious (No RF Input or Control Updates)			-130	dBm
Power Handling Capability				
Without Degradation			13	Watts
Survival Power			30	dBm
DC Power Supply				
@15 Volts			250	mA
@-15 Volts			20	mA

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: 8 Bit Programmable Phase Shifter, 8.5 GHz to 11 GHz, 360 Deg Phase Shift, 256 Steps and SMA PE82P5001

Pasternack Enterprises, Inc. • P.O. Box 16759, Irvine, CA 92623
Phone: (866) 727-8376 or (949) 261-1920 • **Fax:** (949) 261-7451
Sales@Pasternack.com • Techsupport@Pasternack.com

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Mechanical Specifications

Size

Length	1.6 in [40.64 mm]
Width	1.75 in [44.45 mm]
Height	0.5 in [12.7 mm]

Environmental Specifications

Temperature

Operating Range	-55 to +85 deg C
Storage Range	-65 to +150 deg C
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 COND. A

Compliance Certifications (visit www.Pasternack.com for current document)

Not RoHS Compliant

Plotted and Other Data

Notes:

- Values at +25 °C, sea level
- ESD Sensitive Material, Transport material in Approved ESD bags. Handle only in approved ESD Workstation.

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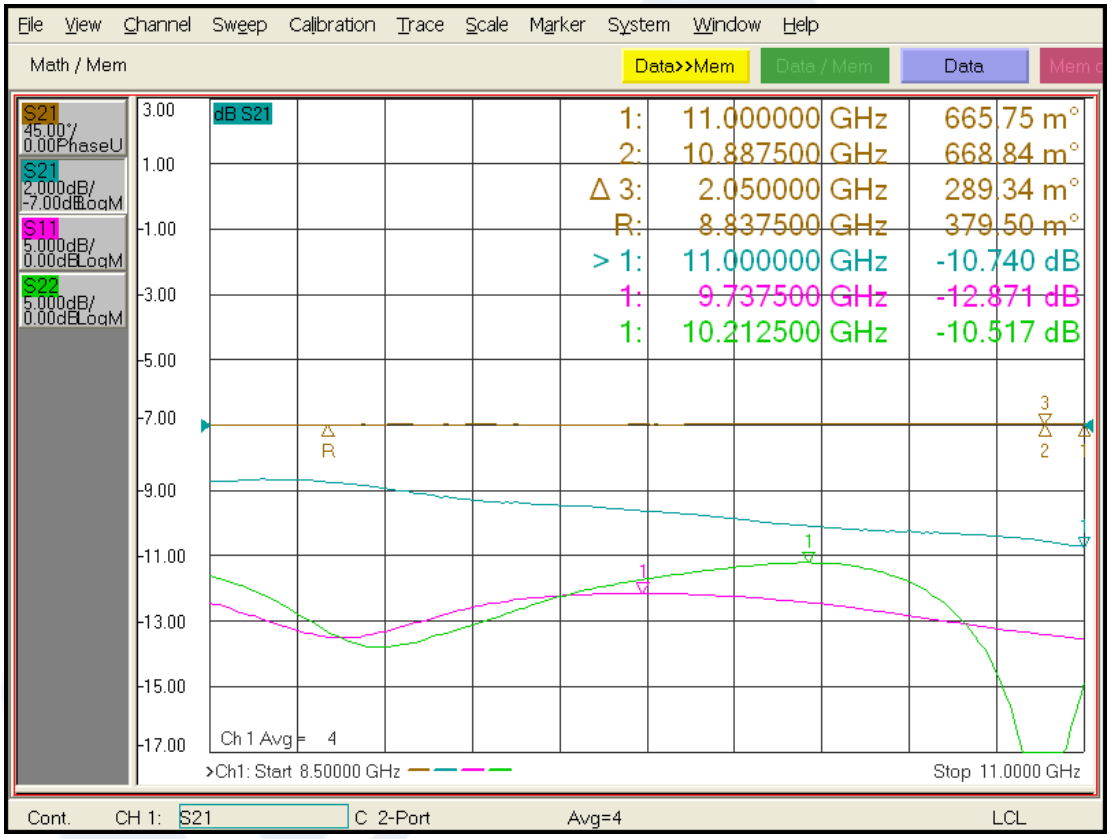
Performance Data

Insertion Loss, Phase, and Return Loss 0 Degrees



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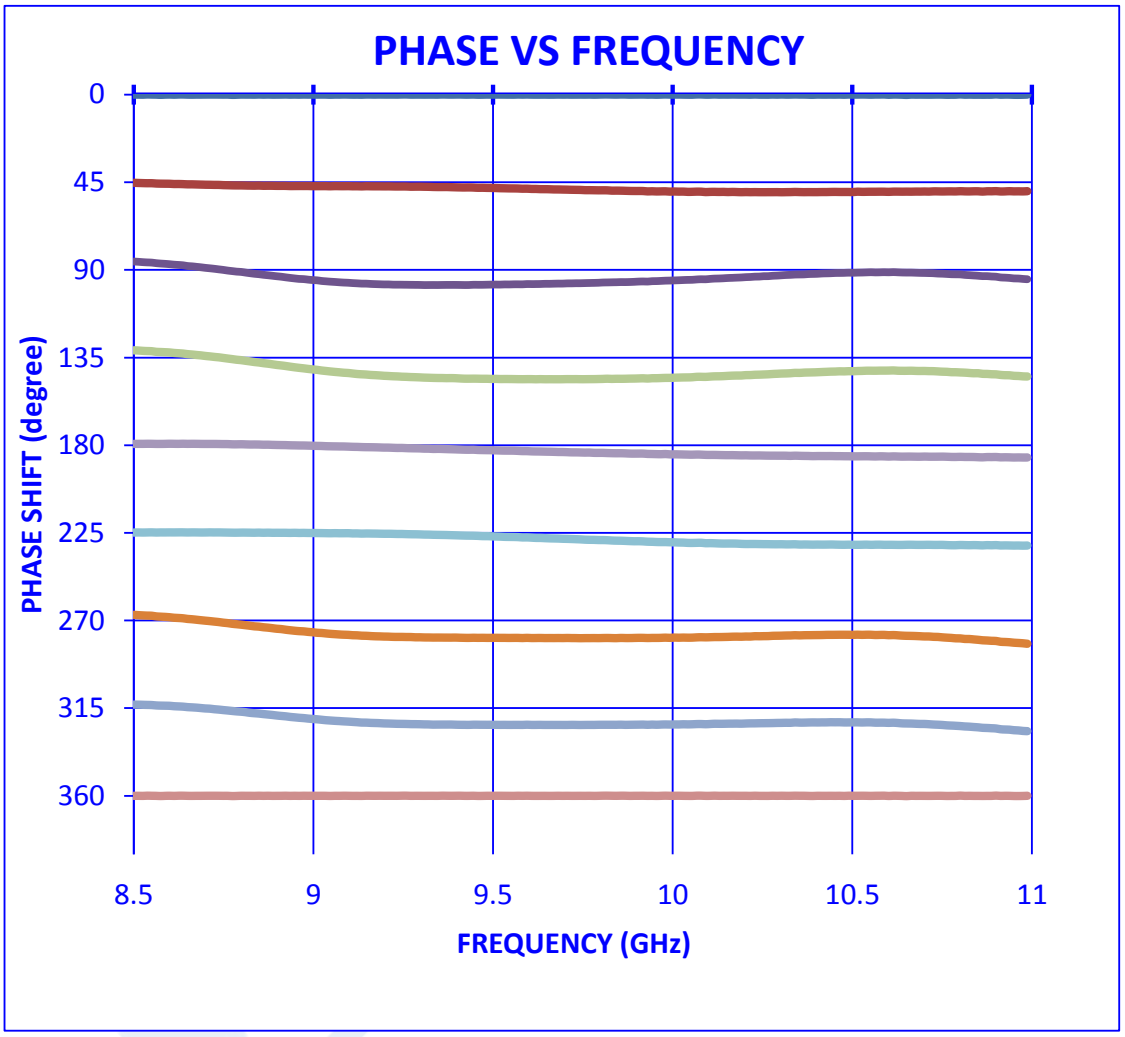

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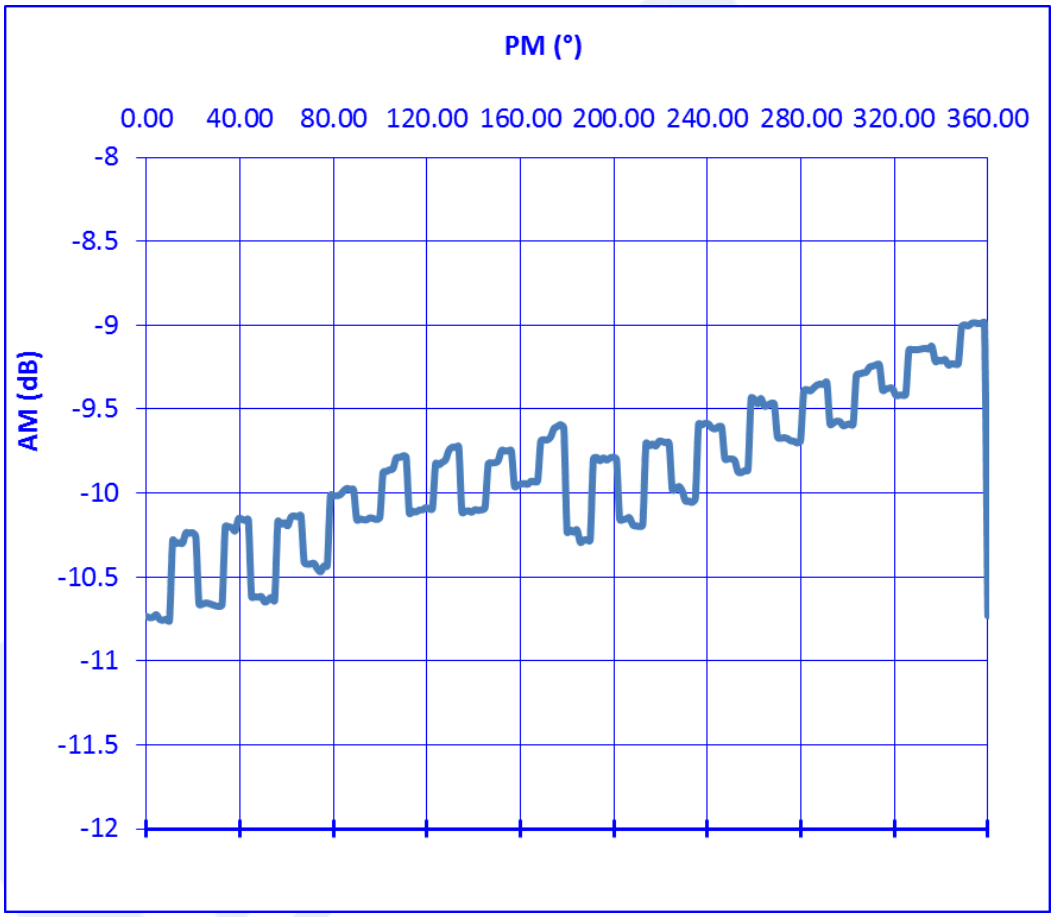
PM/AM Flatness



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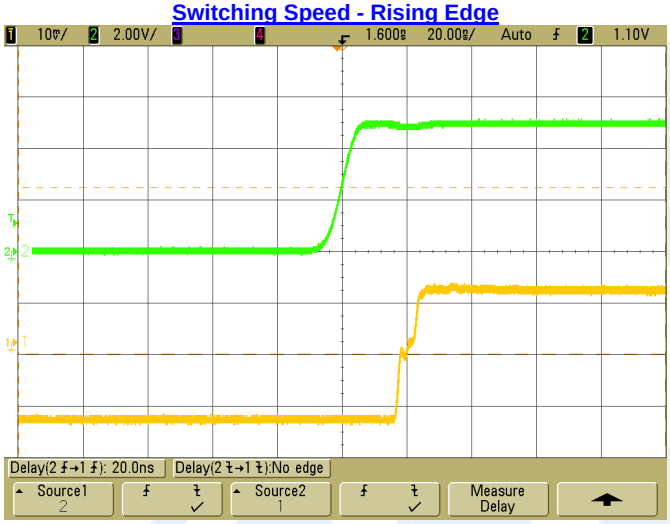
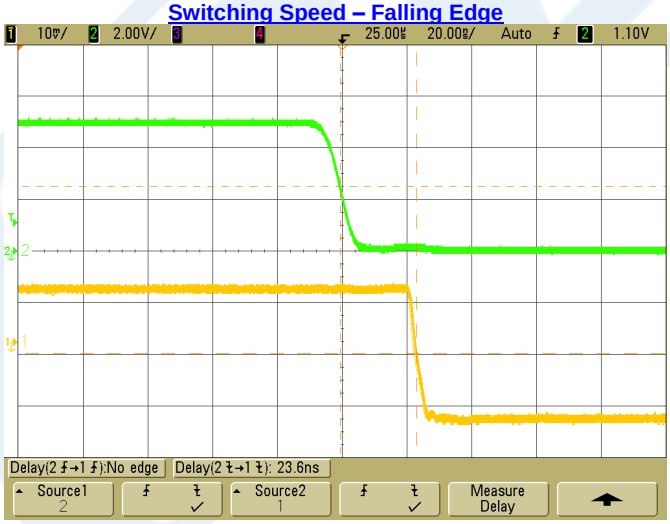
Switching Speed - Rising Edge



Switching Speed – Falling Edge



Green Trace: Waveform Generator TTL Levels
Yellow Trace: RF Output through mixer IF Port

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8 Bit Programmable Phase Shifter, 8.5 GHz to 11 GHz, 360 Deg Phase Shift, 256 Steps and SMA from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99% availability and are part of the broadest selection in the industry.

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URL: http://www.pasternack.com/8-bit-programmable-phase-shifter-11-ghz-sma-360-deg-256-steps-pe82p5001-p.aspx

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PE82P5001 CAD Drawing

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