



8 Bit Programmable Phase Shifter, 6 GHz to 18 GHz, 360 Deg Phase Shift, 256 Steps and SMA

TECHNICAL DATA SHEET

PE82P5002

The PE82P5002 is an 8 Bit Digital Controlled Phase Shifter with 360 Deg Phase Range with a switching speed of 500 ns Max over the Operating Frequency Range from 6 GHz to 18 GHz. The Module is offered in a slim line housing measuring only 0.5" Height.

Features

- 8 Bit Digital Controlled Phase Shifter
- 6 GHz to 18 GHz Frequency Range
- +/-15 Deg Max Accuracy
- 360 Deg Phase Shift in 256 Steps
- 500 ns Max Switching Speed
- +20 dBm Max Input Power
- Insertion Loss 10 dB Typ

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	6		18	GHz
Insertion Loss		10	12	dB
Input VSWR			2:1	
PM / AM			±2.5	dB
Translation Rate	0		500	kHz
Carrier Suppression		18		dB
Side Band Suppression		15		dB
Phase Shift				
Range		360° in 256 Steps		
Control Input		8 Bit TTL		
Error			±15°	
Switching Speed @50% TTL to within (10% of Final Phase Value)			500	ns
Harmonics		-25		dBc
Power Handling Capability				
Without Degradation			0.1	Watts
Survival Power			20	dBm
DC Power Supply				
@5 Volts			115	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, 6 GHz to 18 GHz, 360 Deg Phase Shift, 256 Steps and SMA PE82P5002](#)



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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 +125 deg C

Humidity	MIL-STD-202G, METHOD 103B COND. B
Shock	MIL-STD-202G, METHOD 213B COND. B
Vibration	MIL-STD-202G, METHOD 204D COND. B
Altitude	MIL-STD-202G, METHOD 105C COND. B
Temperature Cycle	MIL-STD-202G, METHOD 107D 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.

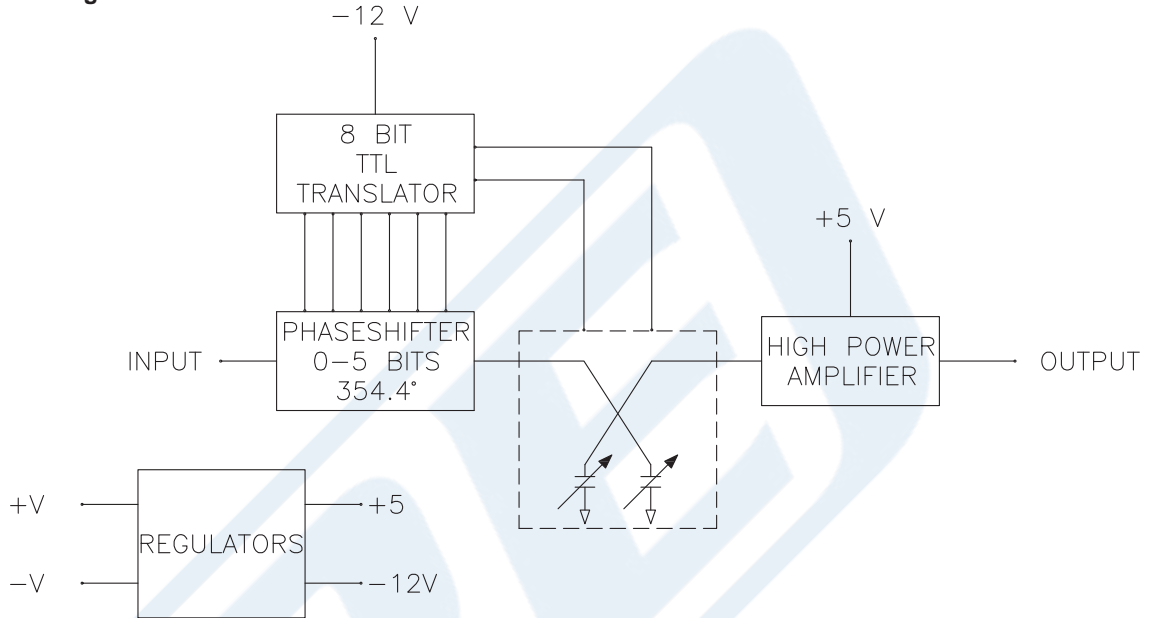
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Block Diagram



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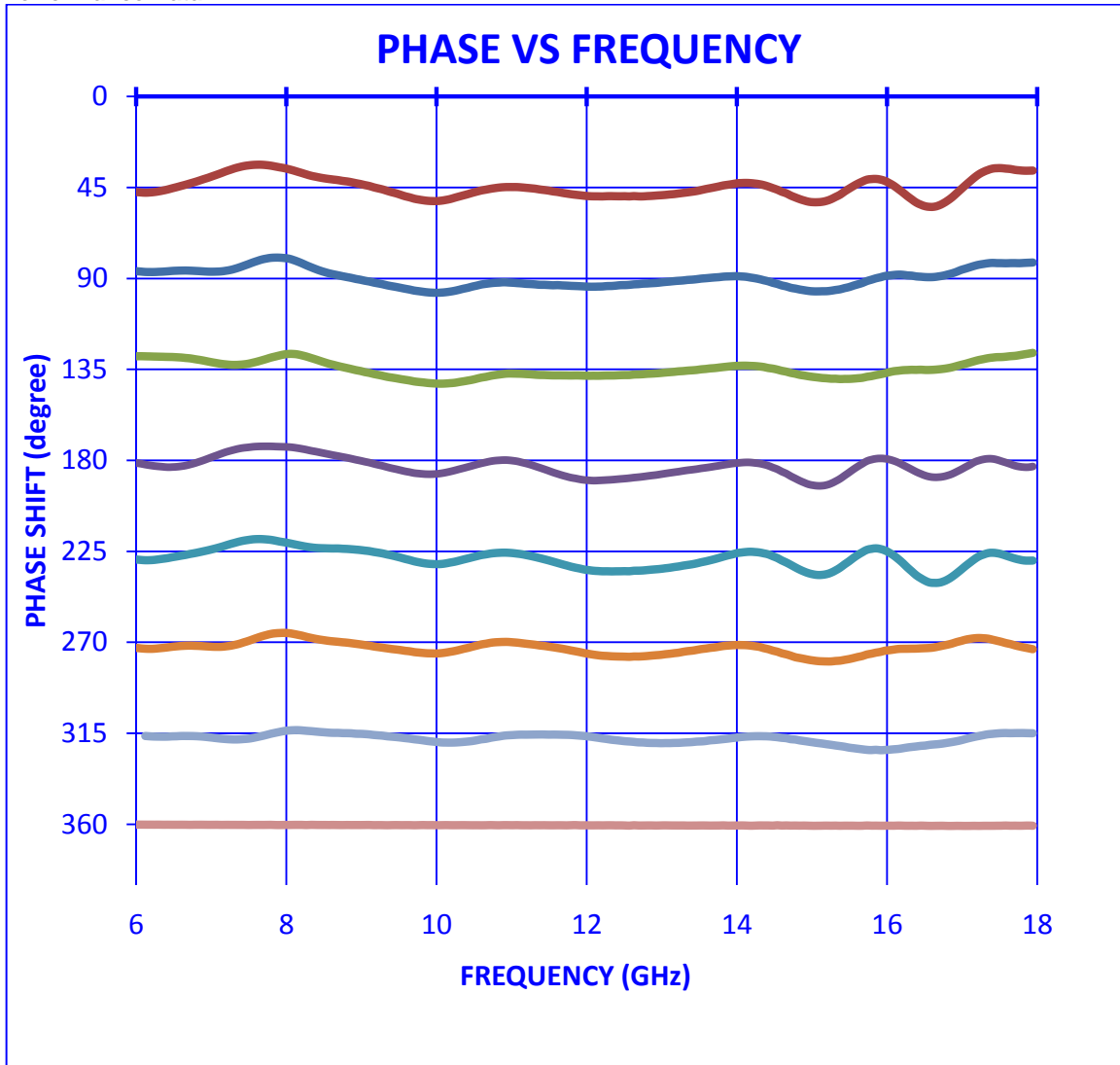




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Performance Data



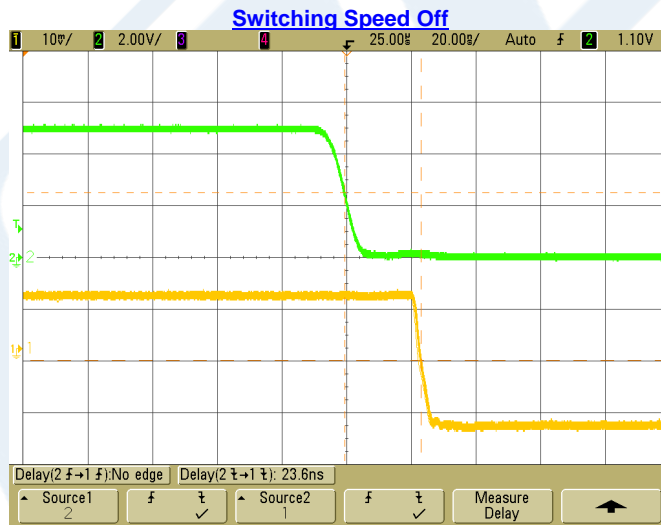
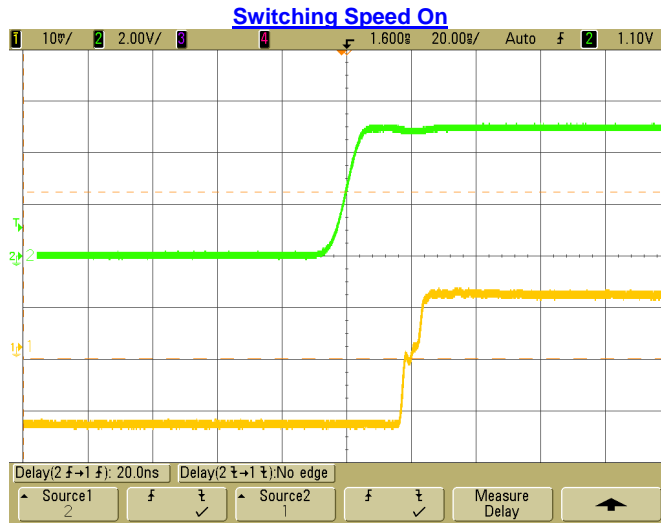
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Green Trace: Waveform Generator TTL Levels
Yellow Trace: RF Output through mixer IF Port

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8 Bit Programmable Phase Shifter, 6 GHz to 18 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.

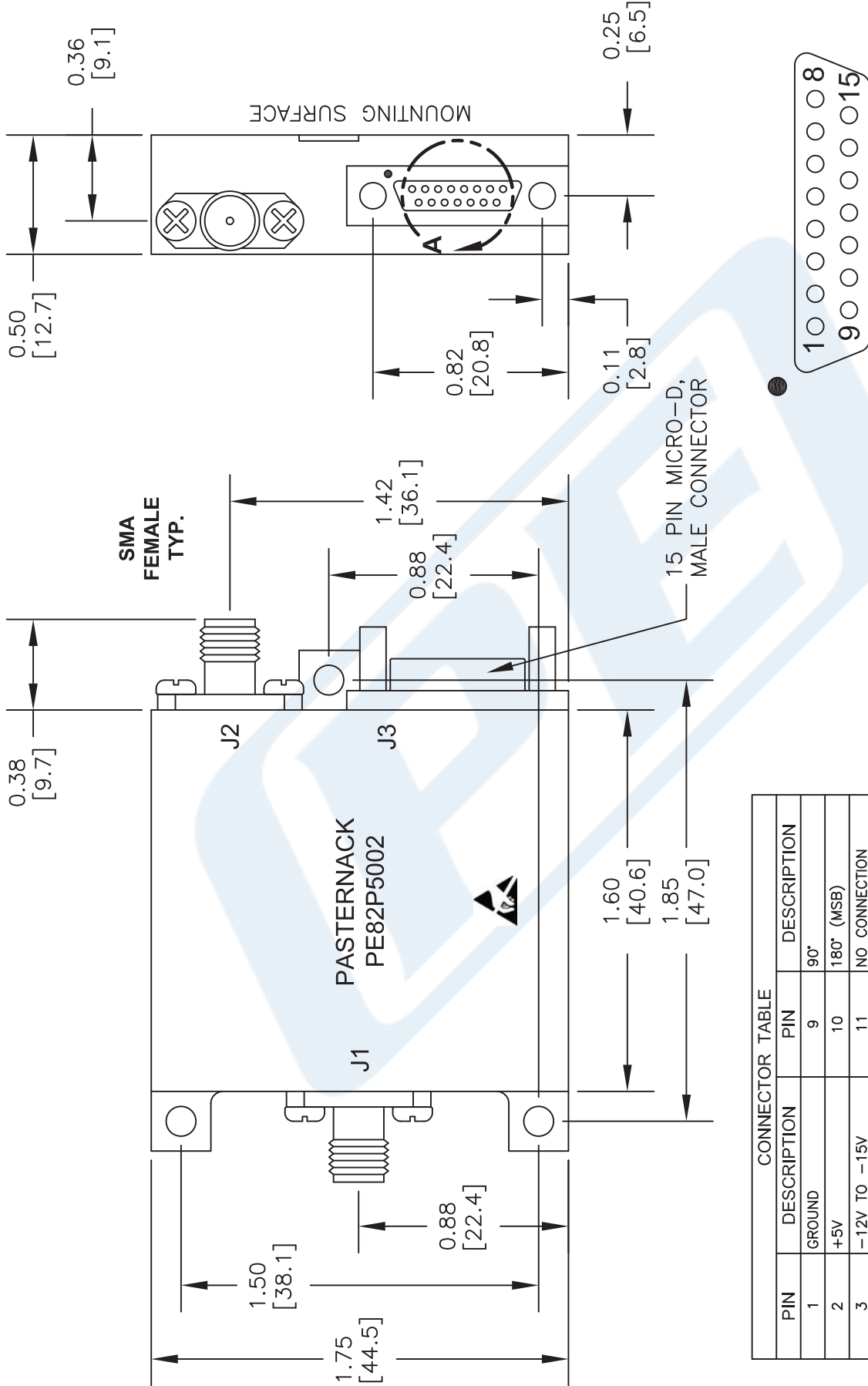
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The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. Pasternack reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Pasternack does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Pasternack does not assume any liability arising out of the use of any part or documentation.

PE82P5002 CAD Drawing

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View A

CONNECTOR TABLE		
PIN	DESCRIPTION	PIN DESCRIPTION
1	GROUND	9°
2	+5V	180° (MSB)
3	-12V TO -15V	NO CONNECTION
4	1.4° (LSB)	45°
5	2.8°	GROUND
6	5.6°	NO CONNECTION
7	22.5°	NO CONNECTION
8	11.3°	

NOTES:
1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL.
2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME.
3. DIMENSIONS ARE IN INCHES [mm].

DWG TITLE
PE82P5002

FSCM NO. 53919

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