



## 8 Bit Programmable Phase Shifter, 32 GHz to 37 GHz, 360 Deg Phase Shift, 256 Steps and 2.92mm

### TECHNICAL DATA SHEET

PE82P5003

The PE82P5003 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 500 ns Max over the Operating Frequency Range from 32 GHz to 37 GHz. The Module is offered in a slim line package measuring only 0.5" Height. The Input/Output Connectors are 2.92mm Female. The Control Connector is a 15 PIN Micro D Connector.

#### Features

- 8 Bit Digital Controlled Phase Shifter
- 32 GHz to 37 GHz Frequency Range
- 1.41° Phase Resolution
- 360° Phase Shift
- 500 ns Max Switching Speed
- Insertion Loss 13 dB Typ
- Low Phase Shift Error  $\pm 5^\circ$  Typ
- 2.92mm Female 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	32		37	GHz
Insertion Loss		13		dB
Input VSWR		2:1	2.3:1	
Output VSWR		2.5:1	3:1	
Amplitude Error		$\pm 1.5$		dB
Phase Shift				
Range		360° in 256 Steps		
Control Input		8 Bit TTL		
Phase LSB Step			1.41	Deg
Error		$\pm 5^\circ$		
Switching Speed @50% TTL to within (10% of Final Phase Value)			500	ns
DC Power Supply				
@15 Volts			90	mA
@-15 Volts			60	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, 32 GHz to 37 GHz, 360 Deg Phase Shift, 256 Steps and 2.92mm PE82P5003](#)



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**Mechanical Specifications**

**Size**

Length	1.15 in [29.21 mm]
Width	1.8 in [45.72 mm]
Height	0.4 in [10.16 mm]

**Environmental Specifications**

**Temperature**

Operating Range	-55 to +85 deg C
Storage Range	-65 to +125 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](http://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.

**Performance Data**

8 Bit Programmable Phase Shifter, 32 GHz to 37 GHz, 360 Deg Phase Shift, 256 Steps and 2.92mm 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.

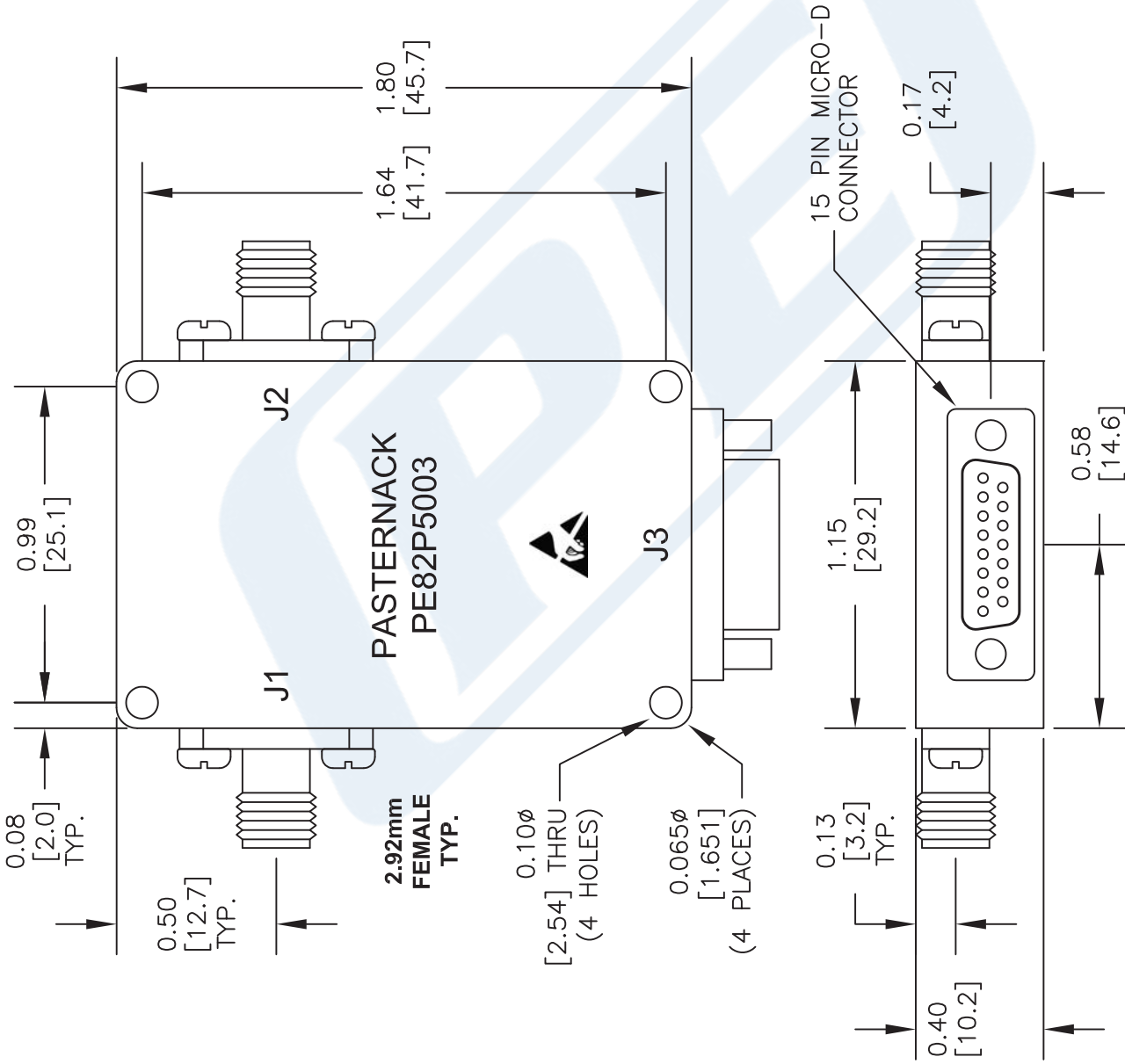
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The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. 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.

# PE82P5003 CAD Drawing

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PIN	DESCRIPTION
1	CTL1 (LSB)
2	CTL2
3	CTL3
4	CTL4
5	CTL5
6	CTL6
7	CTL7
8	CTL8 (MSB)
9	NO CONNECTION
10	NO CONNECTION
11	NO CONNECTION
12	NO CONNECTION
13	+15 VDC
14	GND
15	-15 VDC

DWG TITLE

**PE82P5003**

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].

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CAD FILE 031914

SCALE N/A

SIZE A

150