



8 Bit Programmable Phase Shifter, 500 MHz to 2 GHz, 360 Deg Phase Shift, 256 Steps and SMA

TECHNICAL DATA SHEET

PE82P5000

The PE82P5000 is a Digitally Controlled Analog Phase Shifter that operates from 0.5 GHz to 2 GHz. The unit has the capability for Phase Shifting from 0° to 360°. The unit consist of an Analog Phase Shifter and a Digital-To-Analog converter with 8 bits of logic input lines that allow 256 discrete values of Phase.

Features

- Analog Phase Shifter
- 0.5 GHz to 2 GHz Frequency Range
- 360 Deg Typ Phase Shift
- 0 - 10 VDC Control Voltage Range
- 1 Watt CW Max Input Power
- Insertion Loss 13 dB Max

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 | 0.5 | | 2 | GHz |
| Insertion Loss | | | 13 | dB |
| Amplitude Error | | | ±1 | dB |
| Phase Shift Error | | | ±10° | |
| Phase Shift | | | | |
| Range | | 360° in 256 Steps | | |
| Control Input | | 8 Bit TTL | | |
| Switching Speed @50% TTL to within (10% of Final Phase Value) | | | 500 | ns |
| DC Power Supply | | | 15 -15 | Volts |

Mechanical Specifications

Size

| | |
|--------|---------------------|
| Length | 4.95 in [125.73 mm] |
| Width | 3.38 in [85.85 mm] |
| Height | 1 in [25.4 mm] |

Environmental Specifications

Temperature

| | |
|-----------------|-----------------------------------|
| Operating Range | 0 to +50 deg C |
| Humidity | MIL-STD-202F, METHOD 103B COND. B |
| Shock | MIL-STD-202F, METHOD 213B COND. B |

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, 500 MHz to 2 GHz, 360 Deg Phase Shift, 256 Steps and SMA PE82P5000](#)



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Vibration
Altitude
Temperature Cycle

MIL-STD-202F, METHOD 204D COND. B
MIL-STD-202F, METHOD 105C COND. B
MIL-STD-202F, METHOD 107

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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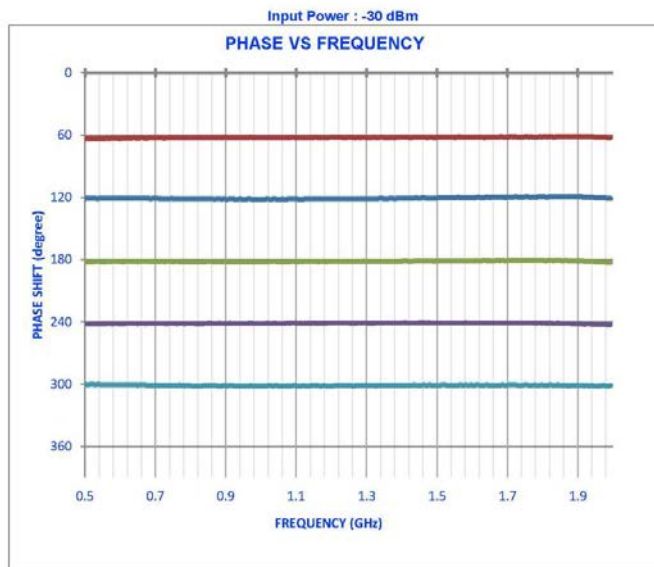
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Performance Data

[Phase Plot at 25° C](#)



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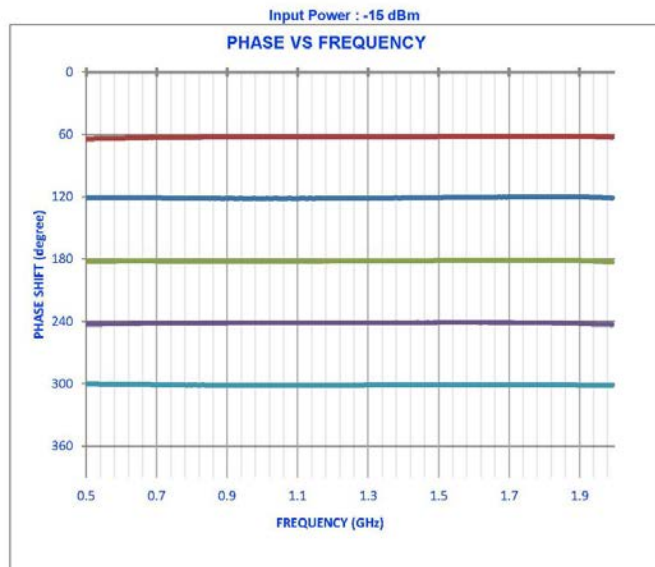


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Phase Plot at 25° C



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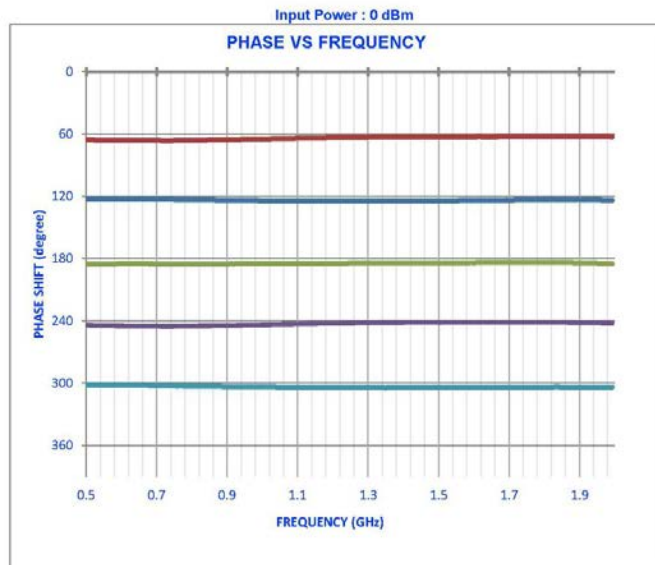


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Phase Plot at 25° C



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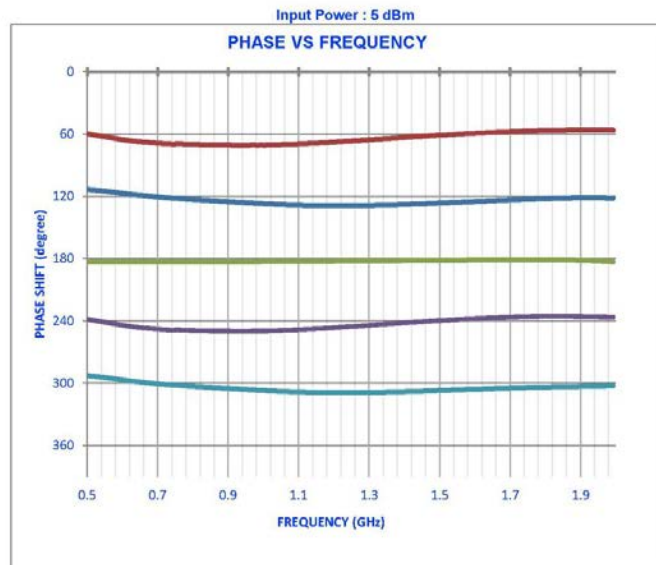


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Phase Plot at 25° C



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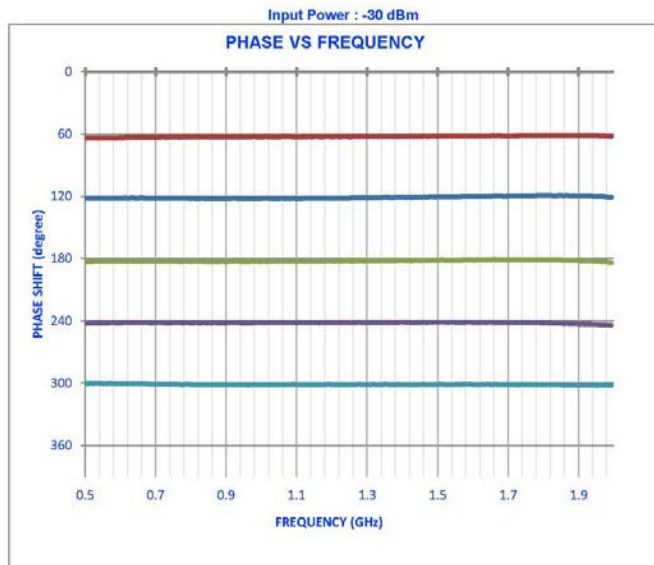


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Phase Plot at 0° C



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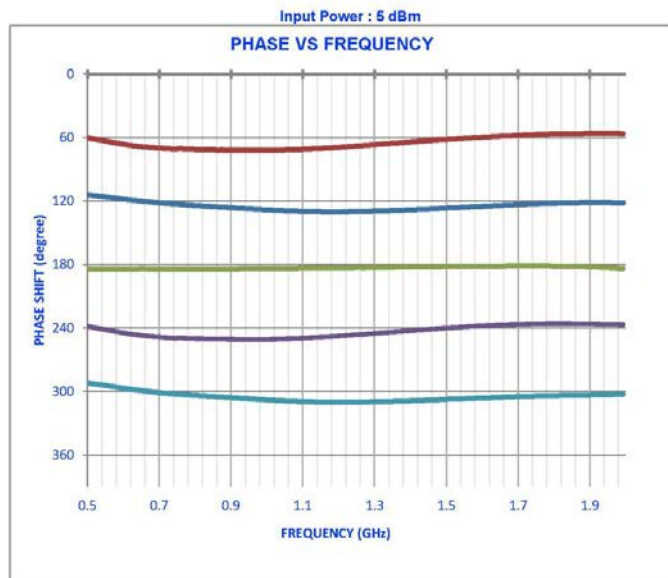


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Phase Plot Taken at 0° C



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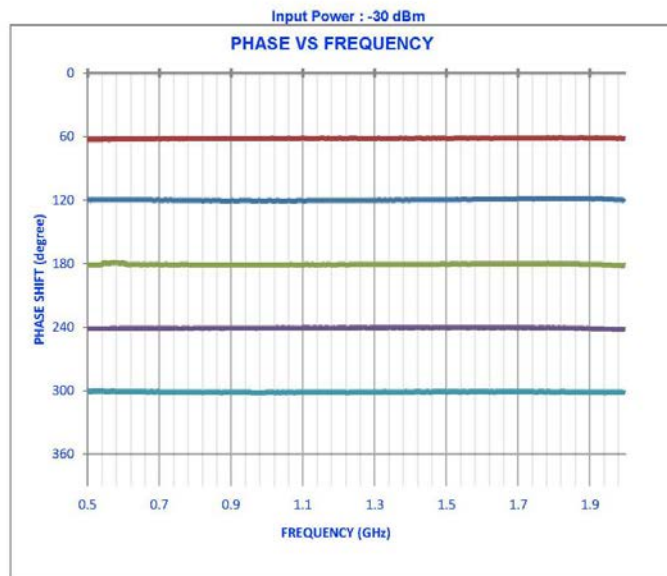


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[Phase Plot Taken at 50° C](#)



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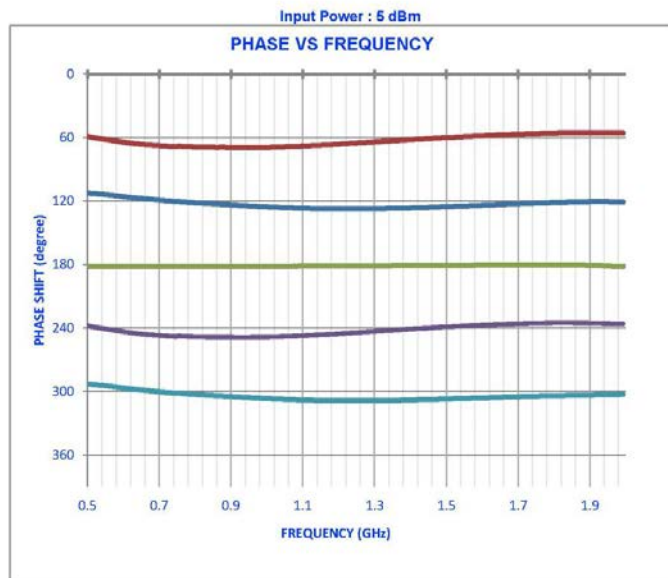


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Phase Plot Taken at 50° C



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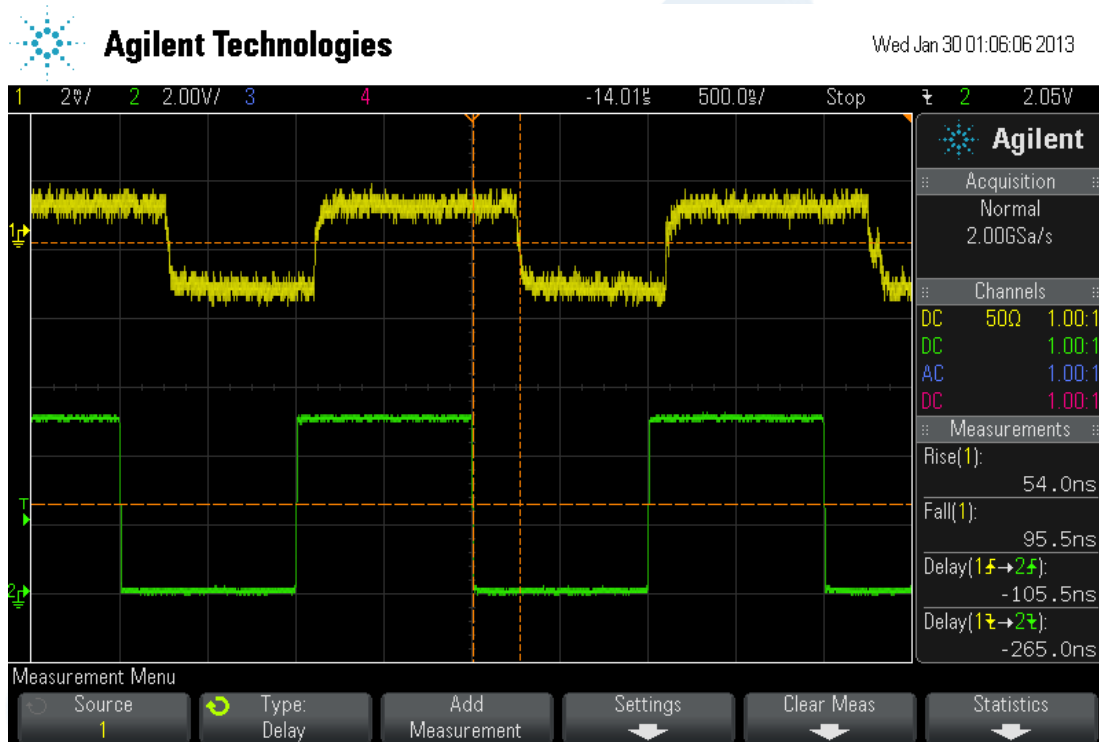


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Switching Speed



Channel 1 (Yellow Trace): RF output signal
Channel 2 (Green Trace): TTL trigger signal

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8 Bit Programmable Phase Shifter, 500 MHz to 2 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.

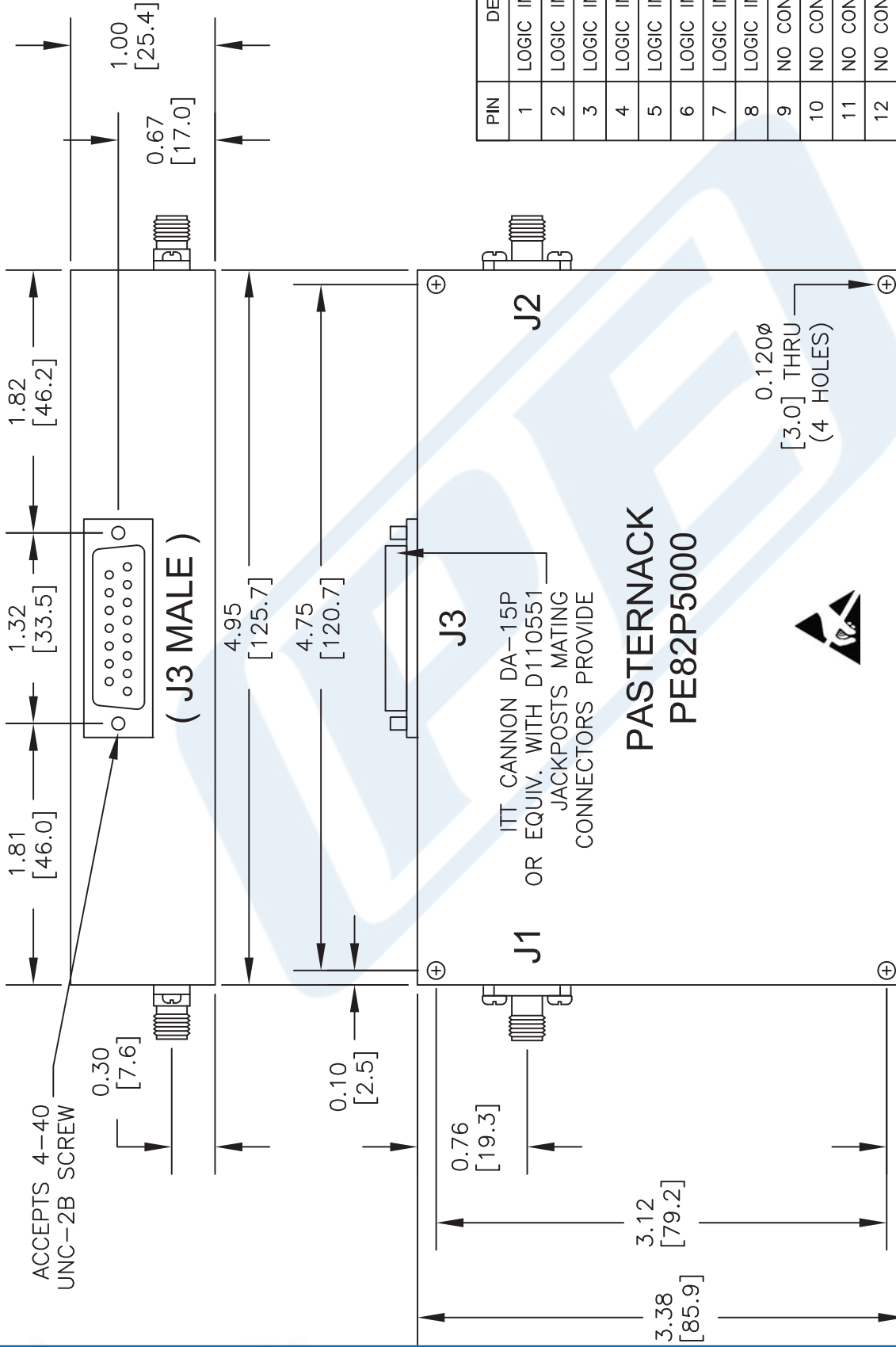
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The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements.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

PE82P5000 CAD Drawing

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| PIN | DESCRIPTION |
|-----|--------------------|
| 1 | LOGIC INPUTS (LSB) |
| 2 | LOGIC INPUTS |
| 3 | LOGIC INPUTS |
| 4 | LOGIC INPUTS |
| 5 | LOGIC INPUTS |
| 6 | LOGIC INPUTS |
| 7 | LOGIC INPUTS |
| 8 | LOGIC INPUTS (MSB) |
| 9 | NO CONNECTION |
| 10 | NO CONNECTION |
| 11 | NO CONNECTION |
| 12 | NO CONNECTION |
| 13 | +15 VDC |
| 14 | -15 VDC |
| 15 | GROUND |

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
PE82P5000

PE PASTERNAK
THE ENGINEER'S RF SOURCE
Pasternack Enterprises, Inc.
P.O. Box 16759 | Irvine | CA | 92623
Phone: (949) 261-1920 | Fax: (949) 261-7451
Website: www.pasternack.com | E-Mail: sales@pasternack.com

FSCM NO. 53919

CAD FILE 011915

SCALE N/A

SIZE A

150