Analog Phase Shifter, 5 GHz to 18 GHz, with an Adjustable Phase of 40 Deg. Per Volt and SMA

Phase Shifters and Trimmers Technical Data Sheet

PE82P2000

Features
- Analog Phase Shifter
- 5 GHz to 18 GHz Frequency Range
- 400 Deg Typ Phase Shift
- 0 - 10 VDC Control Voltage Range
- Phase Voltage Sensitivity: 40 Deg/Volt
- 1 Watt CW Max Input Power
- Insertion Loss 6 dB Typ
- 50 MHz Modulation Bandwidth
- Insertion Phase Temp Sensitivity: 0.5 Deg/Volt

Applications
- Electronic Warfare
- Test & Measurement
- Military & Space
- Radar
- Military Communications Systems
- Phased Arrays
- Tracking Systems
- Direction Finding Systems
- Antenna Test
- Noise Cancelling Systems
- Frequency Translation
- Deep Space Surveillance

Description
The PE82P2000 is an Analog Phase Shifter with 400 Deg Typ Phase Range with a Control Voltage Range of 0 to 10 VDC and a Modulation Bandwidth of 50 MHz over the Operating Frequency Range from 5 GHz to 18 GHz. The rugged, compact, and slimline pin package supports field replaceable connectors which can be removed for drop-in surface mount applications. This design operates over a temperature range of -55°C to +85°C and meets MIL-STD-202 environmental test conditions for Humidity, Shock, Altitude, and Temperature Cycle for high reliability.

Electrical Specifications

<table>
<thead>
<tr>
<th>Description</th>
<th>Minimum</th>
<th>Typical</th>
<th>Maximum</th>
<th>Units</th>
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<tr>
<td>Frequency Range</td>
<td>5</td>
<td>40</td>
<td>18</td>
<td>GHz</td>
</tr>
<tr>
<td>Phase Adjustment</td>
<td>0</td>
<td>0</td>
<td>10 Deg/GHz</td>
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<tr>
<td>Control Voltage</td>
<td>0</td>
<td>0</td>
<td>10 Volts</td>
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<tr>
<td>Phase Voltage Sensitivity</td>
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<td>40 Deg/Volt</td>
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<tr>
<td>Input Return Loss</td>
<td>8</td>
<td>8</td>
<td></td>
<td>dB</td>
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<tr>
<td>Output Return Loss</td>
<td>8</td>
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<td>dB</td>
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<tr>
<td>Insertion Loss</td>
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<td>12 dB</td>
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<td>Modulation Bandwidth</td>
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<td></td>
<td>MHz</td>
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<td>Phase Temperature Sensitivity</td>
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<td></td>
<td>Deg/Volt</td>
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<tr>
<td>Input Power, CW</td>
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<td></td>
<td>1 Watt</td>
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Click the following link (or enter part number in “SEARCH” on website) to obtain additional part information including price, inventory and certifications: Analog Phase Shifter, 5 GHz to 18 GHz, with an Adjustable Phase of 40 Deg. Per Volt and SMA PE82P2000
Analog Phase Shifter, 5 GHz to 18 GHz, with an Adjustable Phase of 40 Deg. Per Volt and SMA

### Specifications by Frequency

<table>
<thead>
<tr>
<th>Description</th>
<th>F1</th>
<th>F2</th>
<th>F3</th>
<th>F4</th>
<th>F5</th>
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<td></td>
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<td>Insertion Loss, Max</td>
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<td>7</td>
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### Absolute Maximum Rating

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<tr>
<th>Parameter</th>
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<tr>
<td>Control Voltage</td>
<td>11 Vdc</td>
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<td>Reverse Current</td>
<td>5 mA</td>
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<tr>
<td>Input Power (CW)</td>
<td>+30 dBm</td>
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Electrical Specification Notes:
Insertion Phase Temperature Sensitivity is 0.5 Deg/Volt

### Mechanical Specifications

#### Size
- Length: 1.08 in [27.43 mm]
- Width/Diameter: 0.71 in [18.03 mm]
- Height: 0.29 in [7.37 mm]
- Weight: 0.03 lbs [13.61 g]

#### Configuration
- Input Connector: SMA Female
- Output Connector: SMA Female

### 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

#### Altitude
- MIL-STD-202F, METHOD 105C COND. B

#### Temperature Cycle
- MIL-STD-202G, METHOD 107D COND. A

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Compliance Certifications (see product page for current document)

Plotted and Other Data

Notes:

Analog Phase Shifter, 5 GHz to 18 GHz, with an Adjustable Phase of 40 Deg. Per Volt and SMA from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

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