



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

Phase Shifters and Trimmers Technical Data Sheet

PE82P5000

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

Description

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.

Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	0.5		2	GHz
Insertion Loss			13	dB
Phase Error			±10	dB
Amplitude Error			±1	dB
Switching Speed			500	ns
Voltage Supply 1			15	Vdc
Voltage Supply 2	-15			Vdc

Mechanical Specifications

Size

Length	4.95 in [125.73 mm]
Width/Diameter	3.38 in [85.85 mm]
Height	1 in [25.4 mm]
Weight	0.859 lbs [389.64 g]

Configuration

Input Connector	SMA Female
Output Connector	SMA Female
Control Connector	15 Pin D-Sub Male

Environmental Specifications

Temperature

Operating Range	0 to 50 deg C
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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: [8 Bit Programmable Phase Shifter, 500 MHz to 2 GHz, 360 Deg Phase Shift, 256 Steps and SMA PE82P5000](#)



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Humidity
Shock
Vibration
Altitude
Temperature Cycle

MIL-STD-202F, METHOD 103B COND. B
MIL-STD-202F, METHOD 213B COND. B
MIL-STD-202F, METHOD 204D COND. B
MIL-STD-202F, METHOD 105C COND. B
MIL-STD-202F, METHOD 107

Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

Notes:

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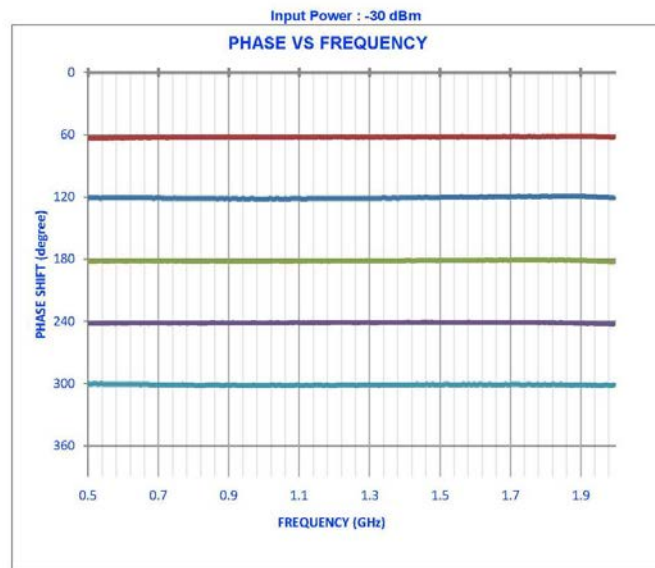
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Typical Performance Data

[Phase Plot at 25° C](#)



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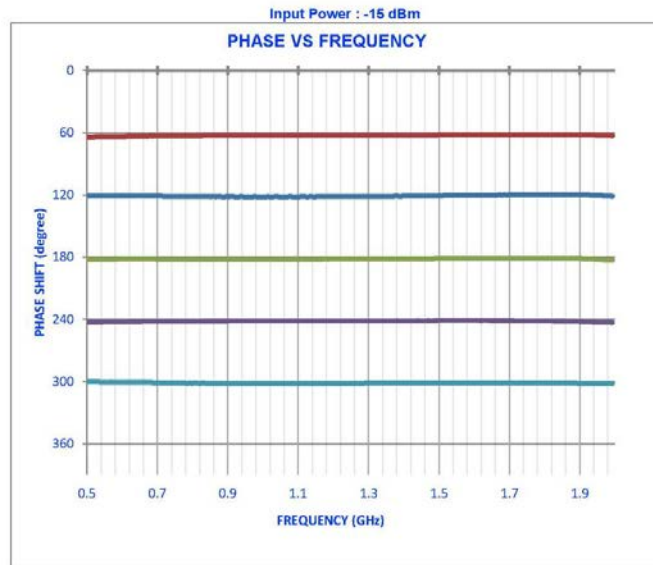


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Phase Plot at 25° C



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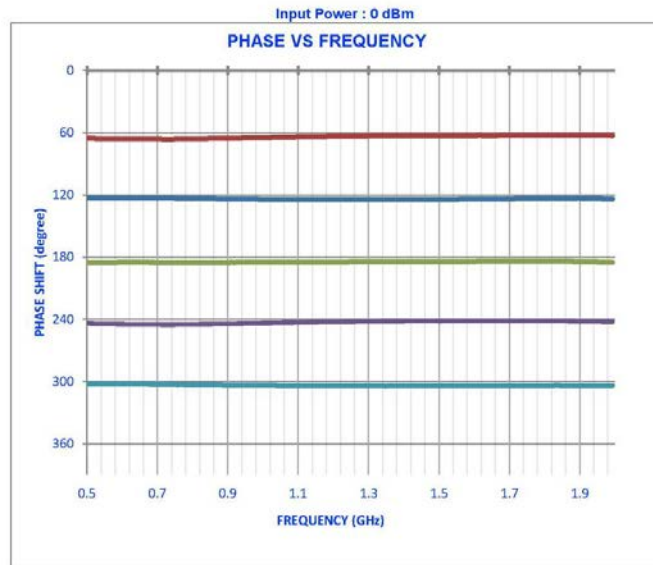


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[Phase Plot at 25° C](#)



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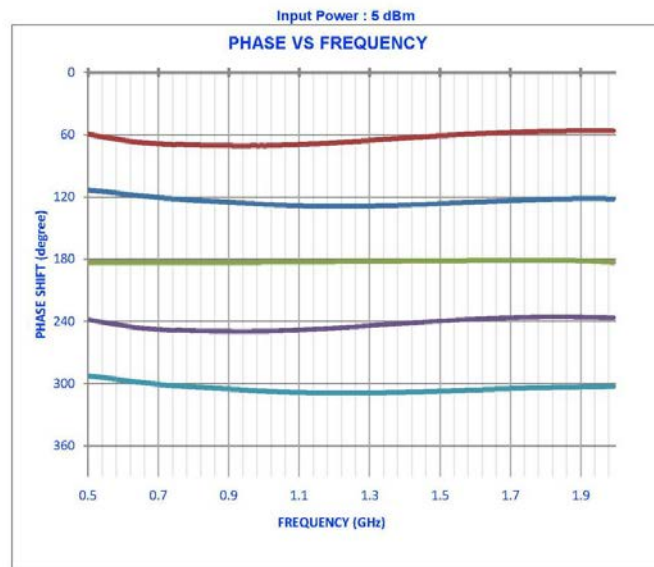


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Phase Plot at 25° C



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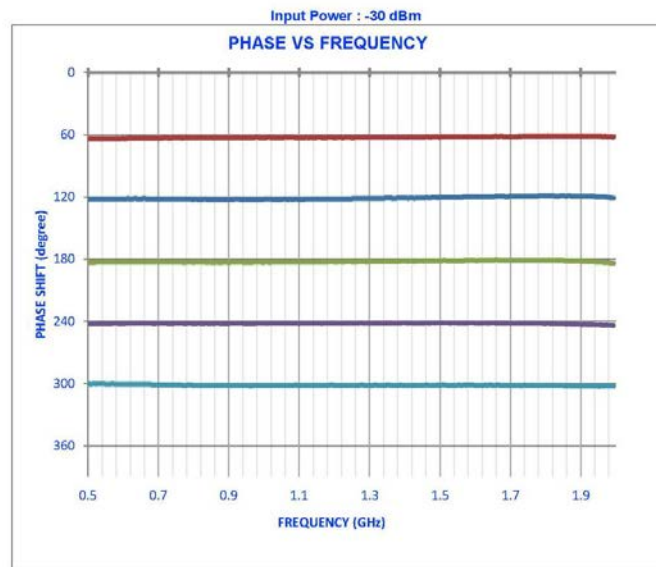


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Phase Plot at 0° C



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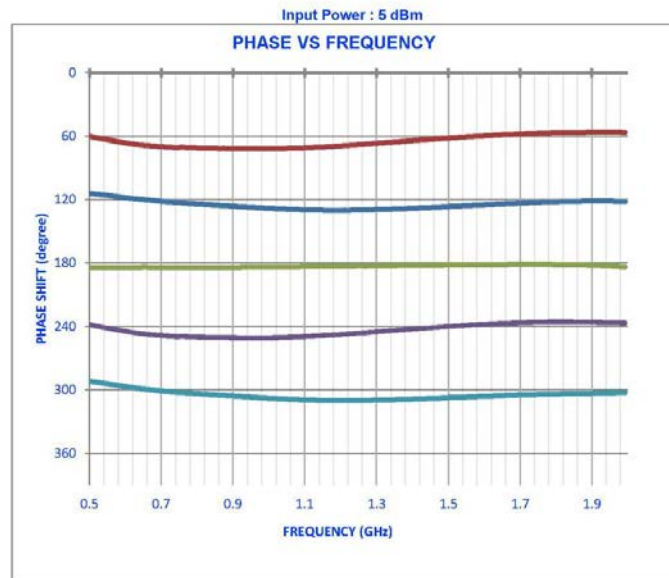


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Phase Plot Taken at 0° C



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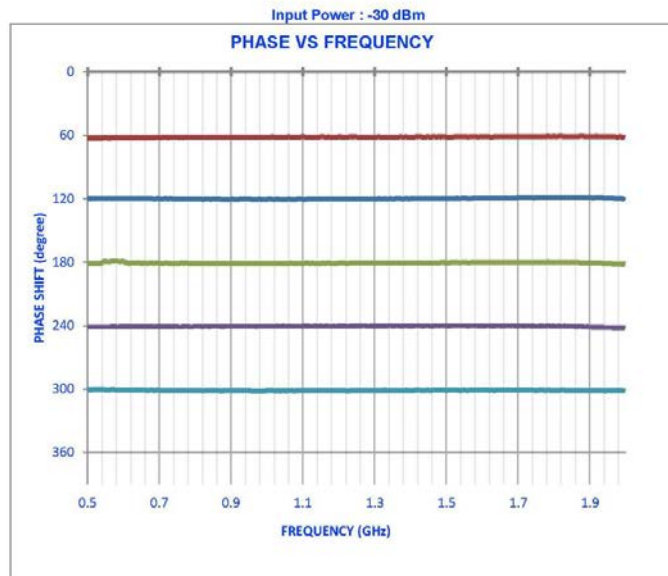


8 Bit Programmable Phase Shifter, 500 MHz to 2 GHz,
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Phase Plot Taken at 50° C



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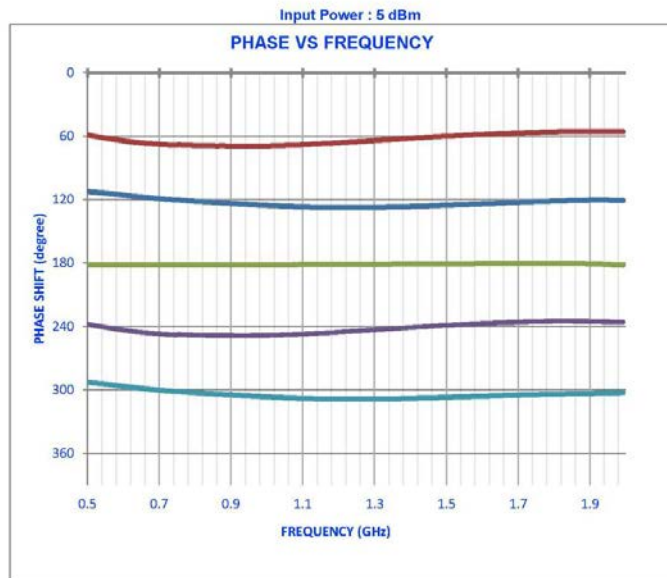


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Phase Plot Taken at 50° C

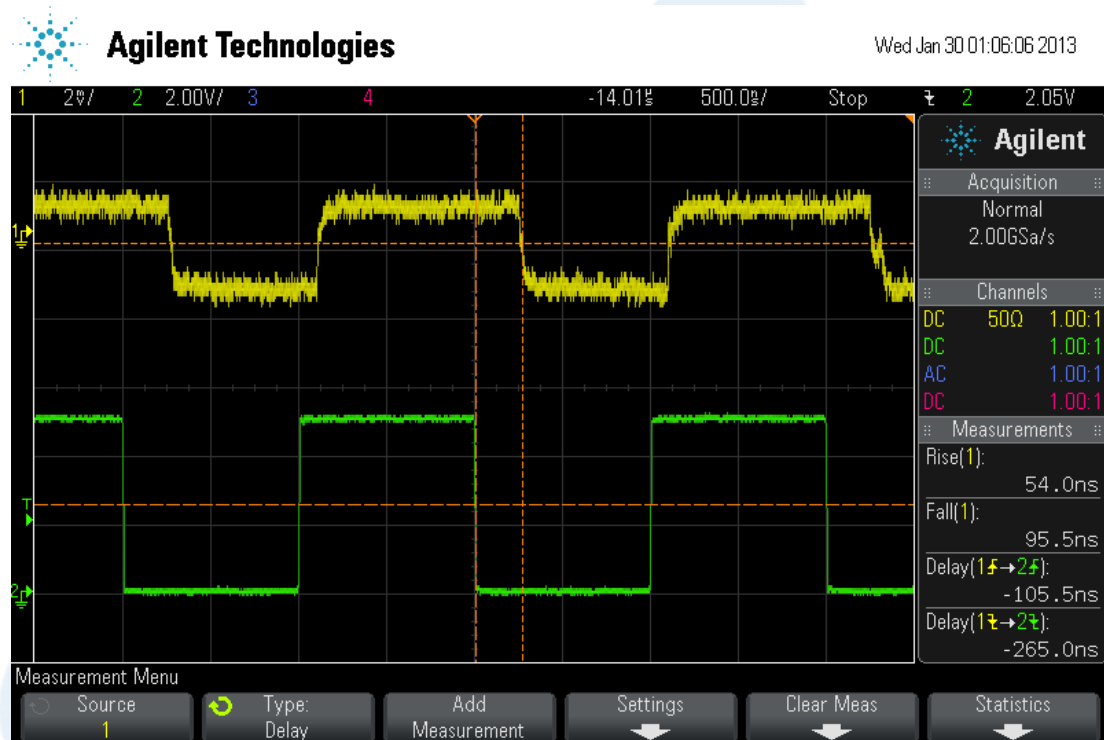


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Switching Speed



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

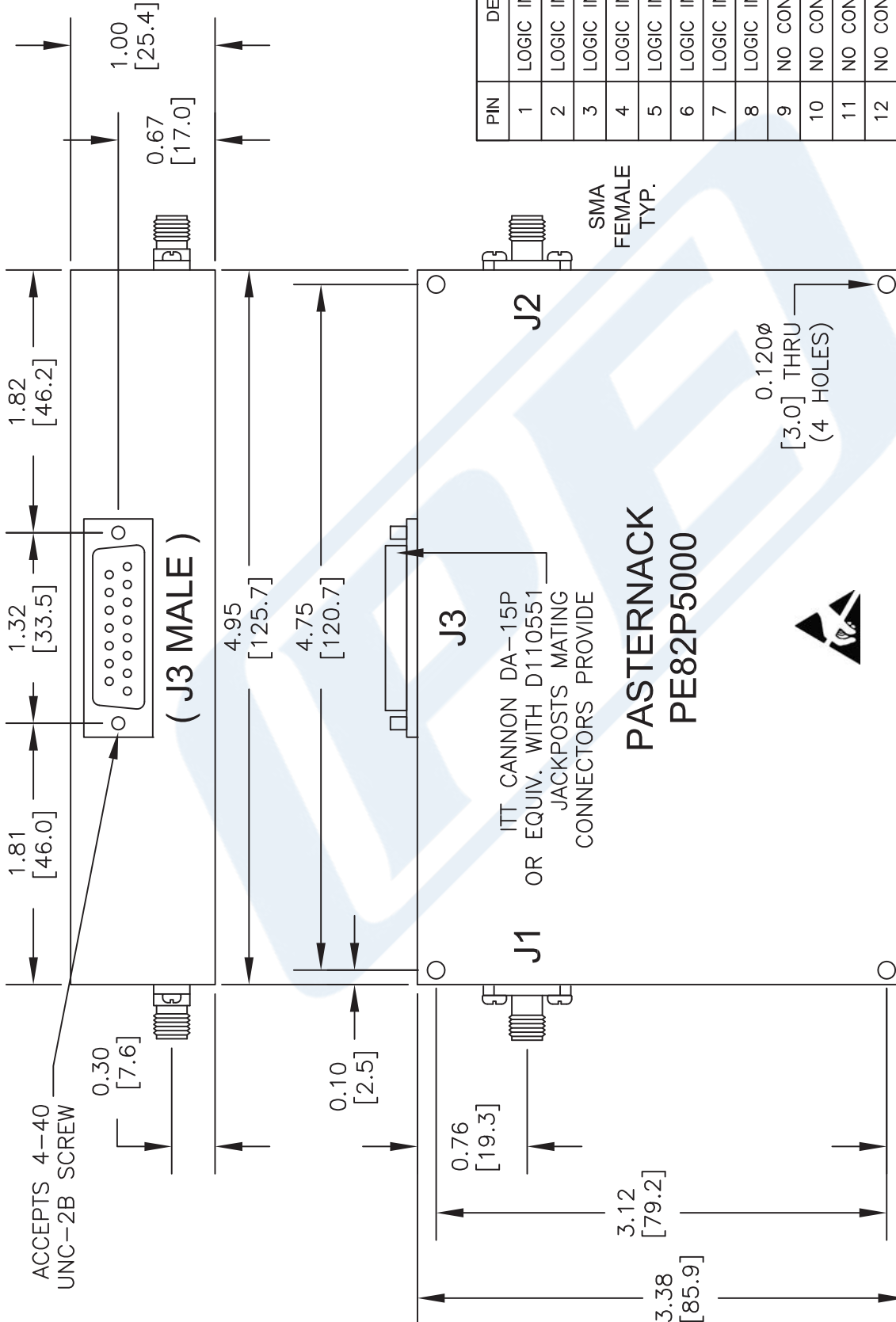
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PE82P5000 CAD Drawing

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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

FSCM NO. 53919

CAD FILE 042116

SCALE N/A

SIZE A

2233

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