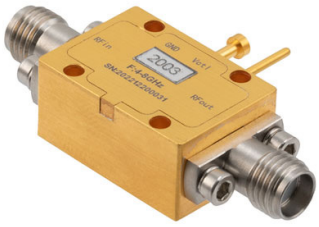
Analog Phase Shifter, 4 GHz to 8 GHz, 360 degree Phase Range, 0V to +10V Control Voltage, Max Pin +27 dBm, SMA



PE82P2003

Features

- Analog Phase Shifter
- 4 GHz to 8 GHz
- Phase Shift 0° to 360° typ
- Insertion Loss 5.5 dB typ
- Phase Flatness +/- 15° typ
- P0.1dB +25 dBm typ
- Maximum RF Input Power +27 dBm
- 50 Ohm Design
- Single Positive Voltage Control 0 to +10Vdc
- Solder Pins for DC Control Voltage and Ground
- Field Replaceable Female SMA RF Connectors
- Operational Temperature Range -40°C to +85°C
- Rugged and Compact Aluminum Gold Plated Package Design
- Guaranteed Environmental Test Conditions Altitude, Vibration, Humidity, Shock
- Single DC Control Operation
- Low Phase Error

Applications

- Test & Measurement
- Military & Commercial Communications
- Military Electronic Systems
- Research & Development

Description

The PE82P2003 is an Analog Phase Shifter module that operates across a broadband frequency from 4 GHz to 8 GHz and supports a single positive voltage control of 0 to +10 Vdc. The design offers a continuously variable monotonic phase shift response that ranges from 0° to 360° while maintaining consistent insertion loss versus phase shift characteristics. The 50 Ohm design exhibits impressive typcial performance which includes 5.5 dB insertion loss, +/-15° phase flatness, a 0.1 dB compression point (P0.1dB) of +25 dBm, and a maximum RF input power level of +27 dBm. The low profile pin package is aluminum with gold plating and supports field replaceable SMA RF connectors and solder pins for DC control. With the connectors removed, the package can be drop mounted onto a PWB. The module has an operational temperature range from -40°C to +85°C and is guaranteed to meet a series of environmental test conditions for Altitude, Vibration, Humidity, and Shock.

Electrical Specifications (Values at +25° C, Sea Level)

Description	Min	Typ	Max	Units
Frequency Range	4		8	GHz
Impedance		50		Ohms
Control Voltage	0	10		Volts
Input VSWR		2:1	2.5:1	
Insertion Loss		5.5	6	dB
Phase Flatness		±8	±15	Degrees
Phase Shift		360		Degrees
Insertion Loss Temperature Coefficient		0.11		dB/deg C
0.1 dB Compression Power (P0.1 dB)		25		dBm
DC Current		5		mA

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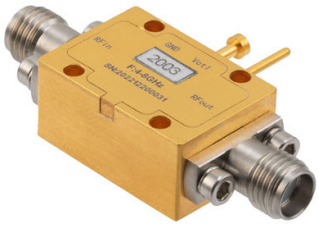

PE82P2003

Electrical Specifications (Values at +25° C, Sea Level)

Description	Min	Typ	Max	Units
Input Power, CW			27	dBm

Absolute Maximum Rating

Parameter	Rating
Control Voltage	0V to +15V
RF Input power	+27dBm

Mechanical Specifications

Size

Length	0.787 in [19.99 mm]
Width/Diameter	0.551 in [14 mm]
Height	0.374 in [9.5 mm]
Weight	0.02 lbs [9.07 g]
Body Material and Plating	Aluminum, Gold

Configuration

Input Connector	SMA Female
Input Connector Spec.	Field Replaceable
Output Connector	SMA Female
Output Connector Spec.	Field Replaceable

Environmental Specifications

Temperature

Operating Range	-40 to 85 deg C
Storage Range	-50 to 105 deg C
Humidity	100% RH at 35°C, 95% RH at 40°C
Shock	20G for 11 msec half sine wave, 3 axis both directions
Vibration	25g RMS (15 degrees 2KHz) endurance, 1 hour per axis
Altitude	30,000 Feet

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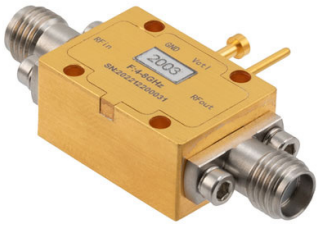

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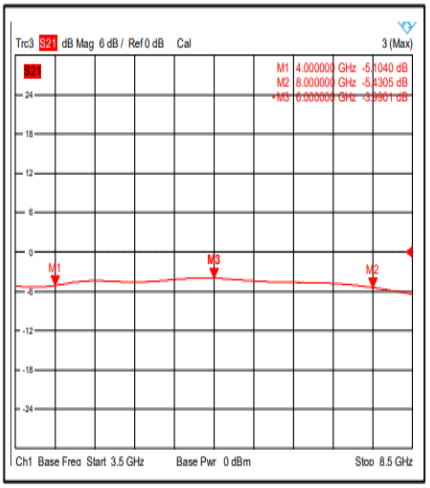
Compliance Certifications (see product page for current document)

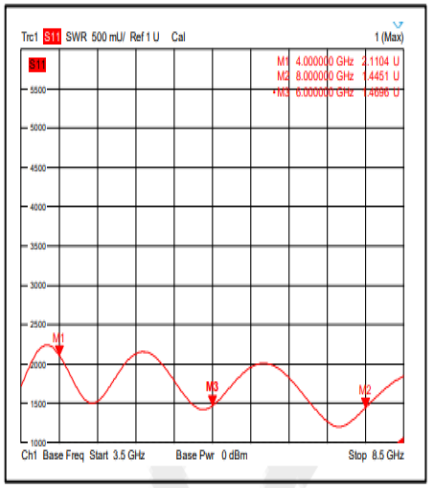
Plotted and Other Data

Typical Performance Data

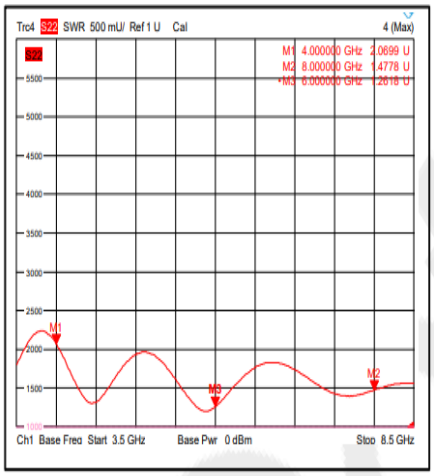
Insertion Loss @ +25℃



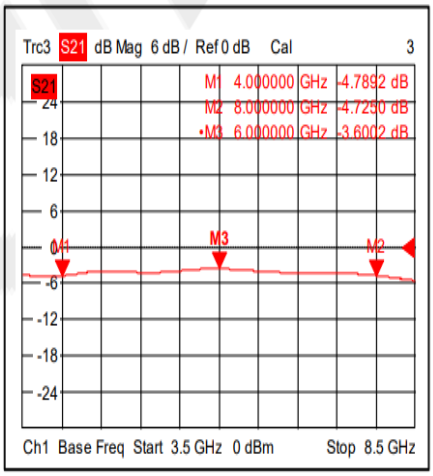
Input VSWR @ +25℃



Output VSWR @ +25℃



Insertion Loss @ -40℃



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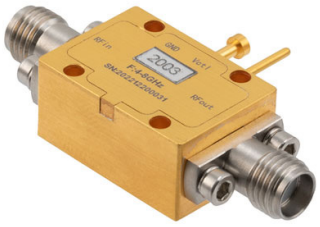
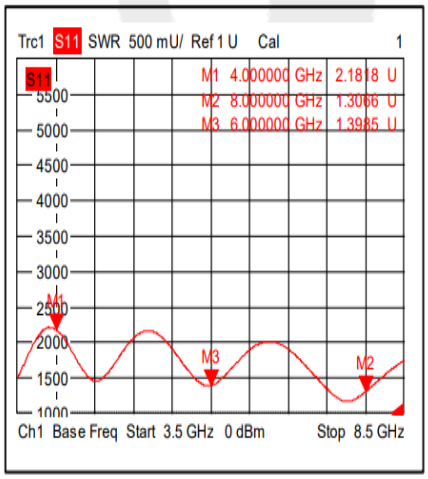
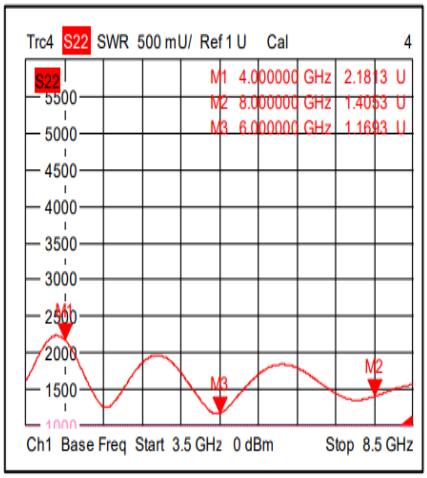


PE82P2003

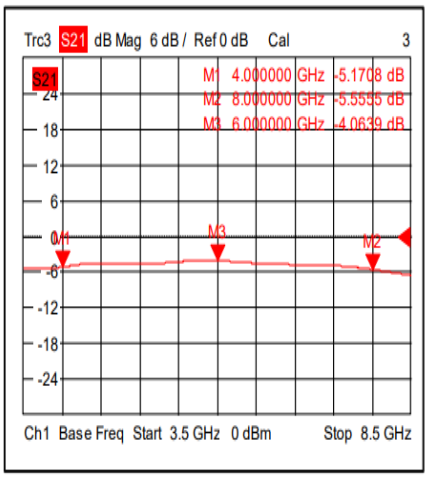
Input VSWR @ -40℃



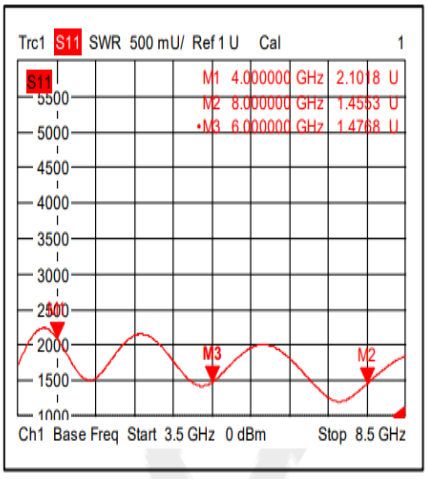
Output VSWR @ -40℃



Insertion Loss @ +85℃



Input VSWR @ +85℃



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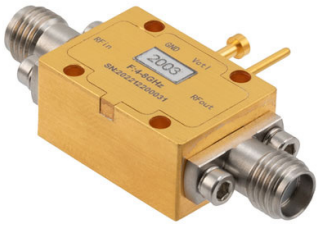
Analog Phase Shifter, 4 GHz to 8 GHz, 360 degree Phase Range, 0V to +10V Control Voltage, Max Pin +27 dBm, SMA



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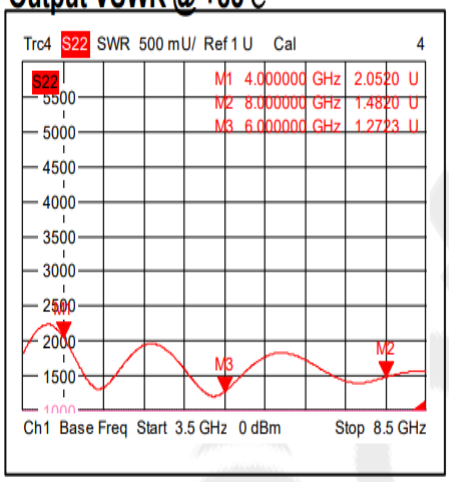
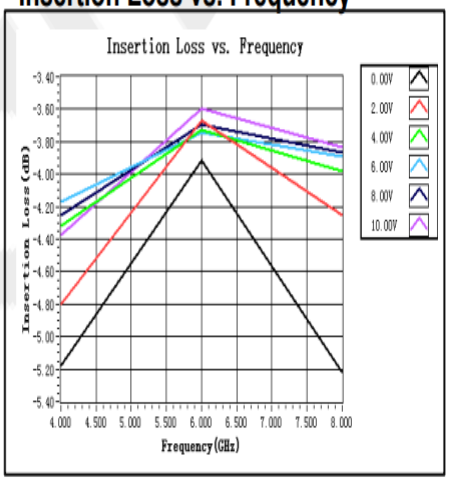
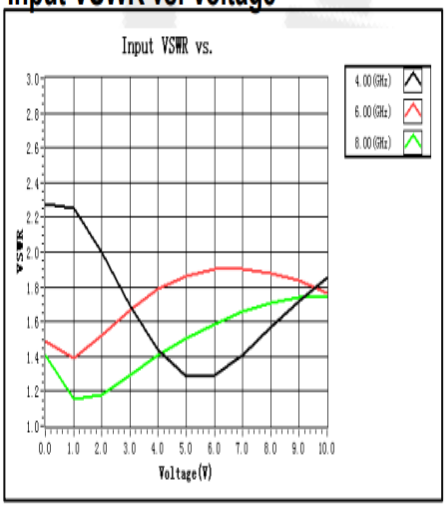
Output VSWR @ +85℃



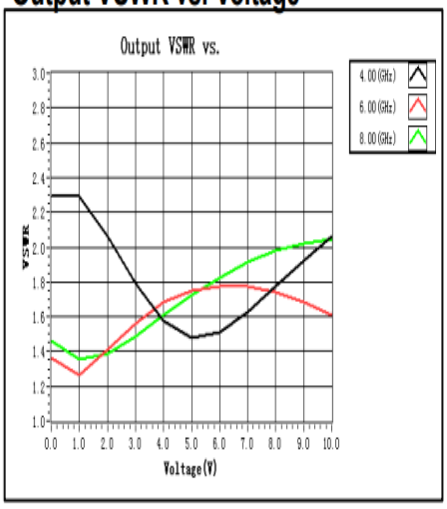
Insertion Loss vs. Frequency



Input VSWR vs. Voltage



Output VSWR vs. Voltage



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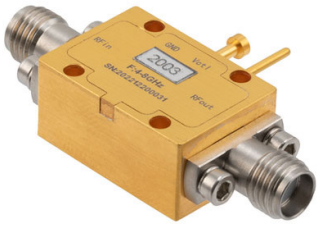

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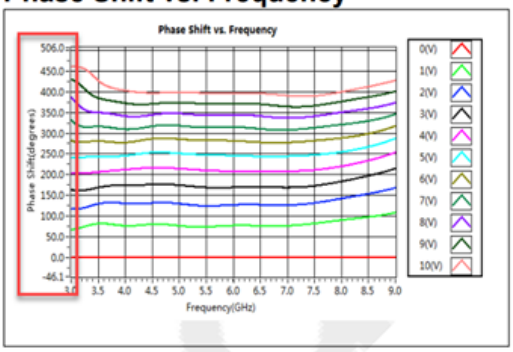
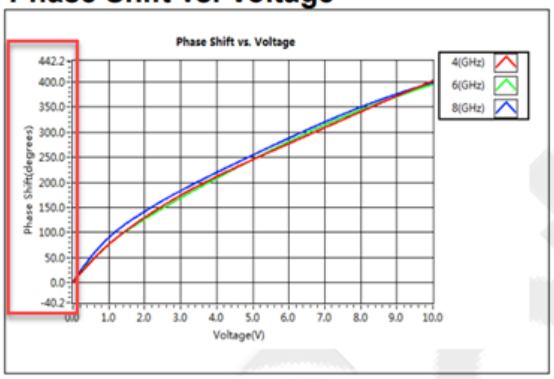
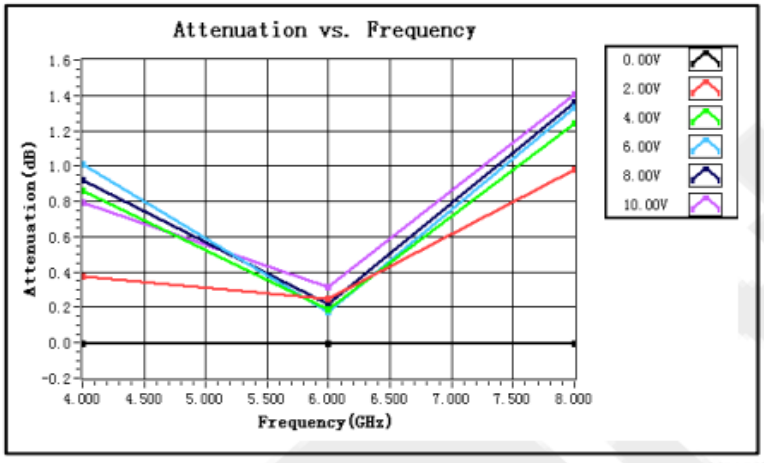
Phase Shift vs. Frequency



Phase Shift vs. Voltage



Attenuation vs. Frequency



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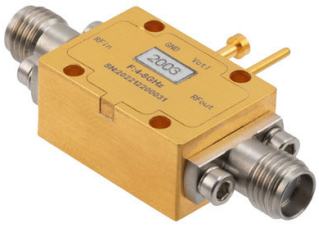

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Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: Analog Phase Shifter, 4 GHz to 8 GHz, 360 degree Phase Range, 0V to +10V Control Voltage, Max Pin +27 dBm, SMA PE82P2003

URL: https://www.pasternack.com/analog-phase-shifter-8-ghz-0-180-degrees-sma-pe82p2003-p.aspx

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PE82P2003 CAD Drawing

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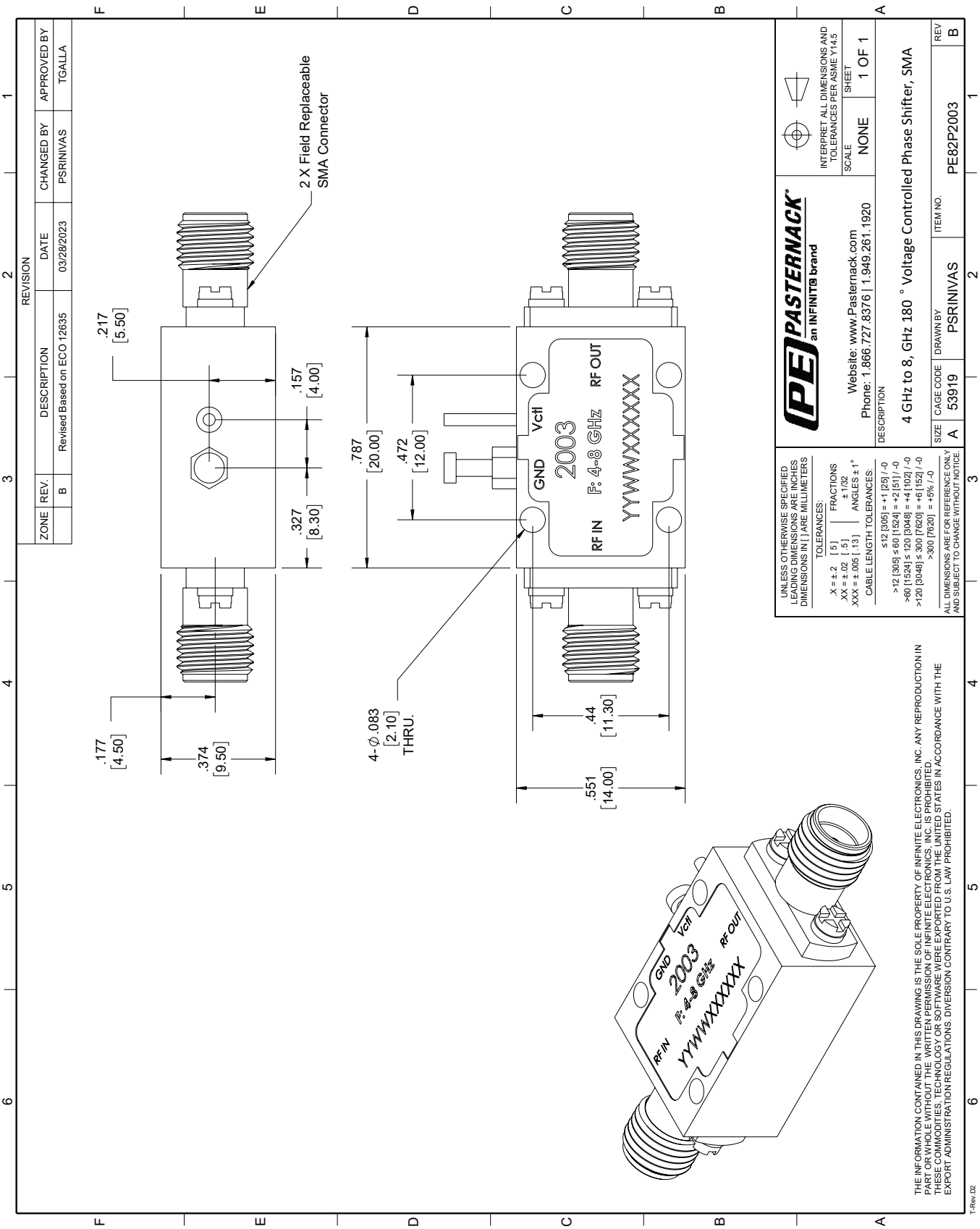

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