Fairview Microwave
an INFINITE brand

FM82P2007
DATA SHEET

Analog Phase Shifter, 0.5 GHz to 1 GHz, 360 degree Phase Range, 0V to +20V Control Voltage, Max Pin +23 dBm, SMA

The FM82P2007 is an Analog Phase Shifter module that operates across a frequency range from 0.5 GHz to 1 GHz and supports a single positive voltage control of 0 to +20 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 6 dB insertion loss, +/-20° phase error, a 0.1 dB compression point P(0.1 dB) of +23 dBm, and a maximum RF input power level of +23 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.

Features:

- Analog Phase Shifter
- 0.5 GHz to 1 GHz
- Phase Shift 0° to 360° typ
- Insertion Loss 6 dB typ
- Phase Flatness +/- 20° typ
- P0.1dB +23 dBm typ
- Maximum RF Input Power +23 dBm
- 50 Ohm Design
- Single Positive Voltage Control 0 to +20Vdc
- 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

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

Description	Min	Typ	Max	Units
Frequency Range	500		1,000	MHz
Impedance		50		Ohms
Phase Shift		360		Degrees
Control Voltage	0	20		Volts
Input VSWR		1.5:1	2:1	
Output VSWR				
Insertion Loss*		3.5	4	dB
Phase Error		±20		Degrees
IL Temperature Coefficient		0.01		dB/deg C
0.1 dB Compression Power		23		dBm
DC Current			15	mA
Input Power, CW			23	dBm

*at 0V DC Control

Absolute Maximum Rating

Parameter	Rating
Control Voltage	0V to +20V
RF Input power	23dBm

ESD Sensitive Material, Transport material in Approved ESD bags. Handle only in approved ESD Workstation.

Mechanical Specifications

Size

Length	3.11 in [78.99 mm]
Width/Diameter	1.2 in [30.48 mm]
Height	0.39 in [9.91 mm]

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Weight	0.064 lbs [29.03 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

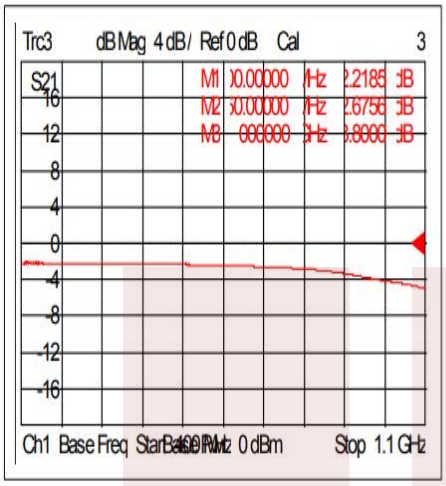
Compliance Certifications (see product page for current document)

Plotted and Other Data

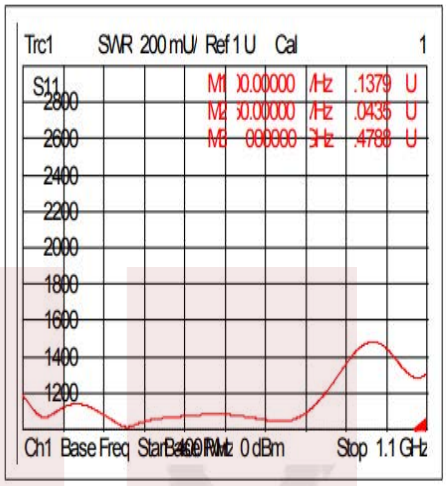
Notes:

Typical Performance Data

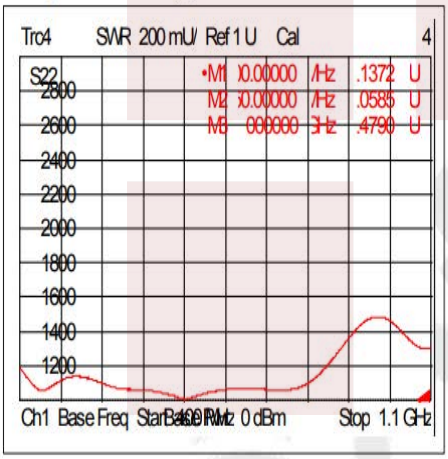
Insertion Loss @ +25°C



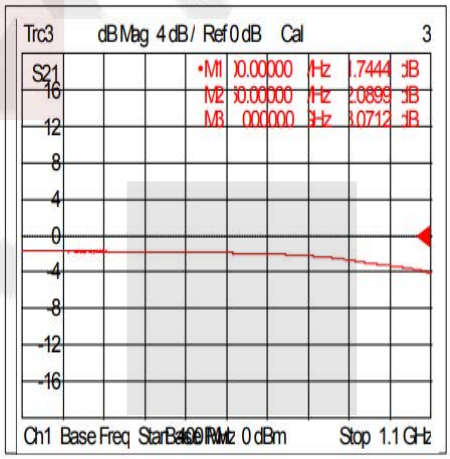
Input VSWR @ +25°C



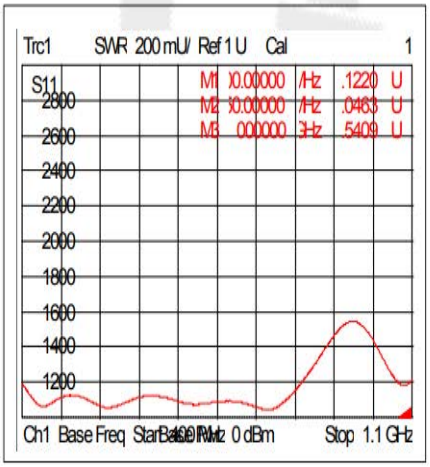
Output VSWR @ +25°C



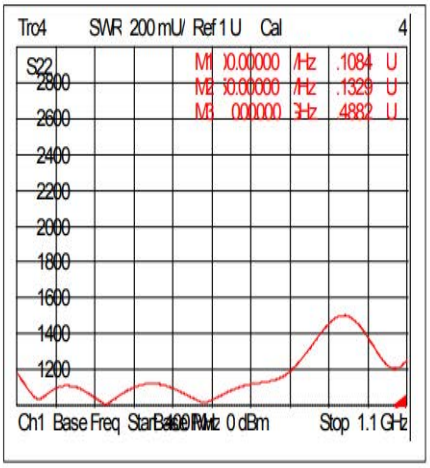
Insertion Loss @ -40°C



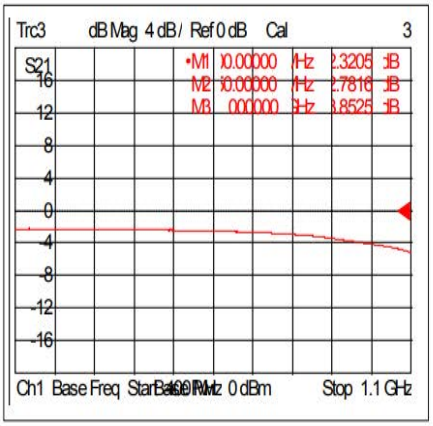
Input VSWR @ -40°C



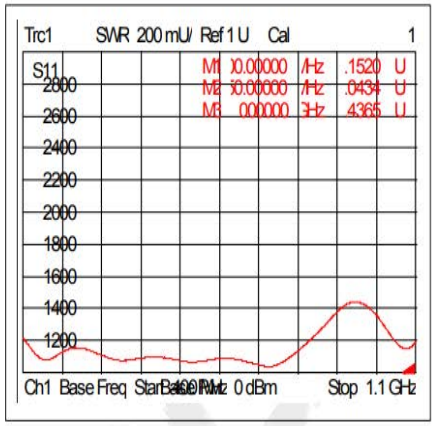
Output VSWR @ -40°C



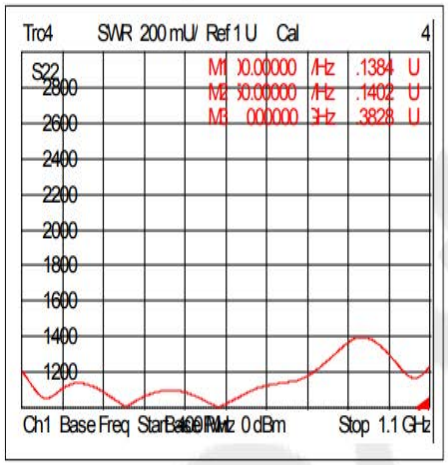
Insertion Loss @ +85°C



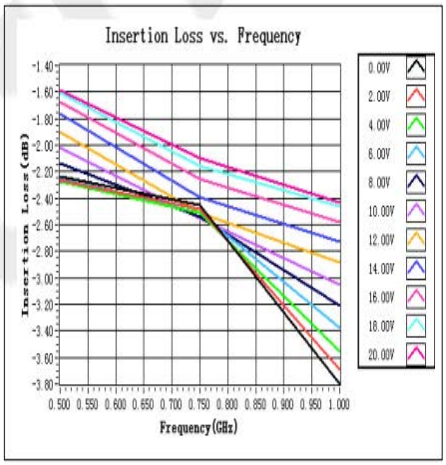
Input VSWR @ +85°C



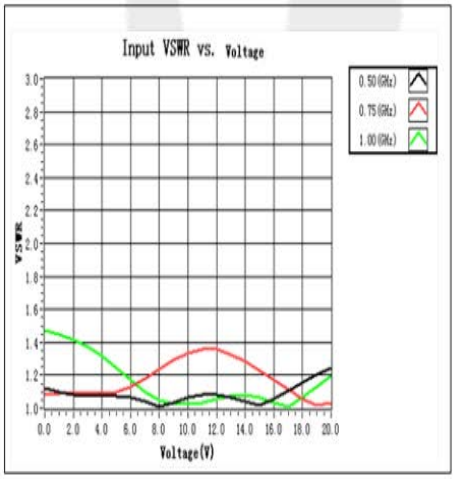
Output VSWR @ +85°C



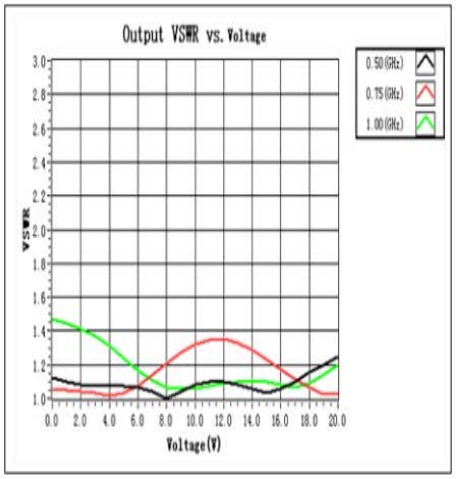
Insertion Loss vs. Frequency



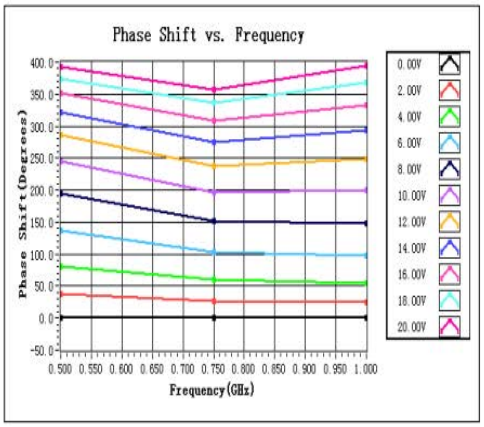
Input VSWR vs. Voltage



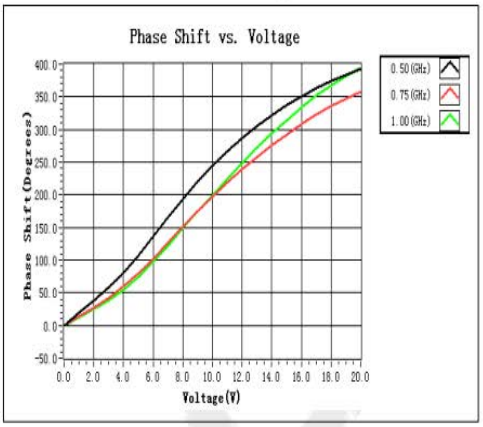
Output VSWR vs. Voltage



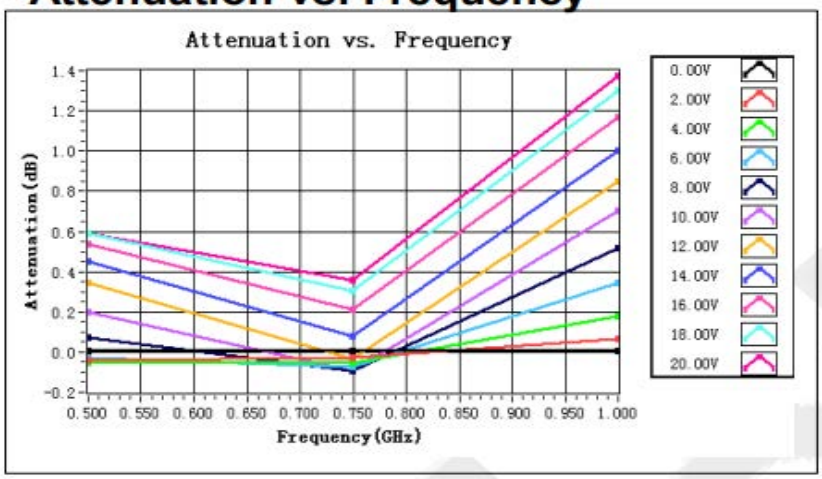
Phase Shift vs. Frequency



Phase Shift vs. Voltage



Attenuation vs. Frequency



Analog Phase Shifter, 0.5 GHz to 1 GHz, 360 degree Phase Range, 0V to +20V Control Voltage, Max Pin +23 dBm, SMA from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: Analog Phase Shifter, 0.5 GHz to 1 GHz, 360 degree Phase Range, 0V to +20V Control Voltage, Max Pin +23 dBm, SMA FM82P2007

URL: https://www.fairviewmicrowave.com/sma-analog-phase-shifter-500-1000-mhz-fm82p2007-p.aspx

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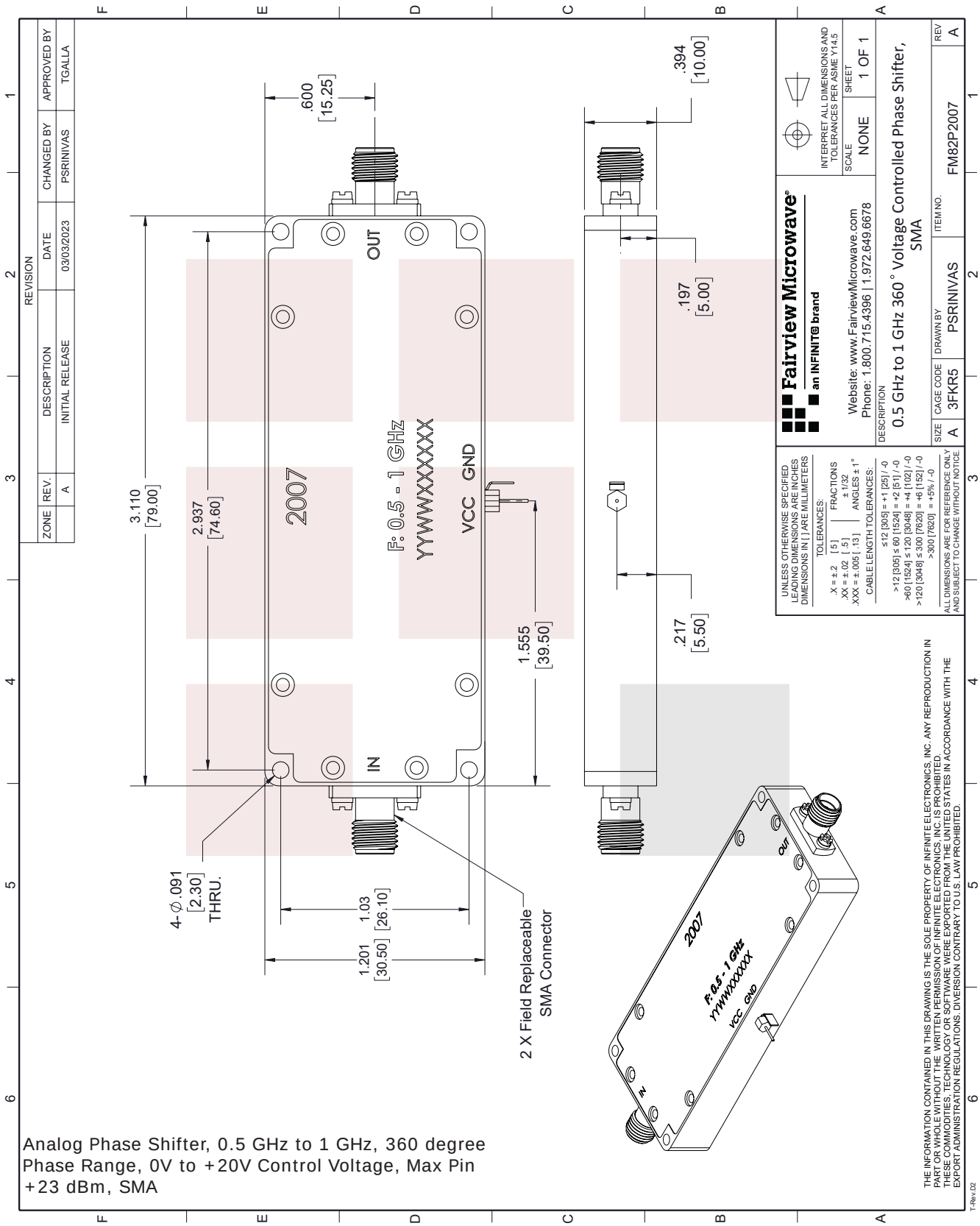

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