

## Analog Phase Shifter, 18 GHz to 26 GHz, 360 degree Phase Range, 0V to +13V Control Voltage, Max Pin +26 dBm, SMA

The FM82P2006 is an Analog Phase Shifter module that operates across a broadband frequency from 18 GHz to 26 GHz and supports a single positive voltage control of 0 to +13Vdc. 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 typical performance which includes 11 dB insertion loss, +/-5° phase flatness, a 0.1 dB compression point (P0.1dB) of +23 dBm, and a maximum RF input power level of +26 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
- 18 GHz to 26 GHz
- Phase Shift 0° to 360° typ
- Insertion Loss 11 dB typ
- Phase Flatness +/- 5° typ
- P0.1dB +23 dBm typ
- Maximum RF Input Power +26 dBm
- 50 Ohm Design
- Single Positive Voltage Control 0 to +13Vdc
- 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

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

Description	Min	Typ	Max	Units
Frequency Range	18		26	GHz
Impedance		50		Ohms
Phase Shift		360		Degrees
Control Voltage	0	13		Volts
Input VSWR		2.5:1	3.5:1	
Output VSWR				
Insertion Loss*		11	15	dB
Phase Flatness		±5	±25	Degrees
IL Temperature Coefficient		0.008		dB/deg C
0.1 dB Compression Power		23		dBm
DC Current		5		mA
Input Power, CW			26	dBm

\*at 0V DC Control

### Absolute Maximum Rating

Parameter	Rating
Control Voltage	0V to +15V
RF Input power	+26dBm



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

### Mechanical Specifications

#### Size

Length	0.8 in [20.32 mm]
Width/Diameter	0.56 in [14.22 mm]
Height	0.38 in [9.65 mm]

### Applications:

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

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[sales@fairviewmicrowave.com](mailto:sales@fairviewmicrowave.com)

Weight 0.018 lbs [8.16 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**

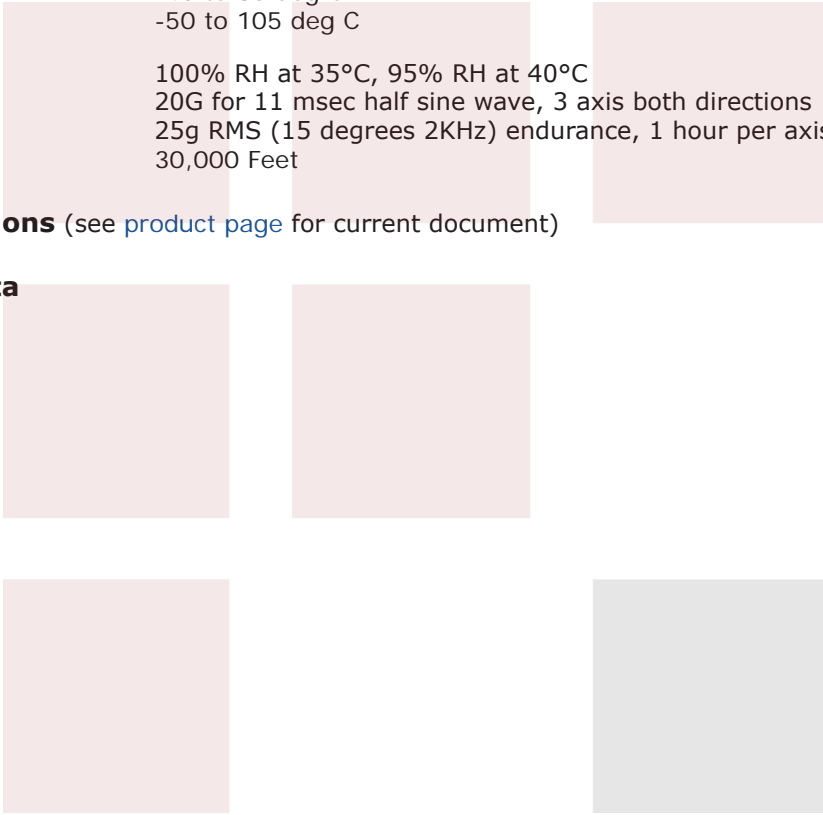
Operating Range -40 to 85 deg C  
Storage Range -50 to 105 deg C

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)

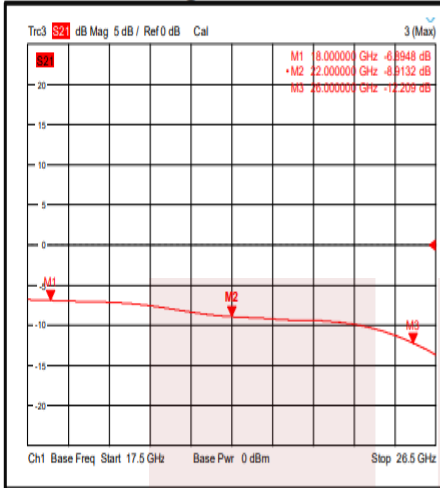
**Plotted and Other Data**

Notes:

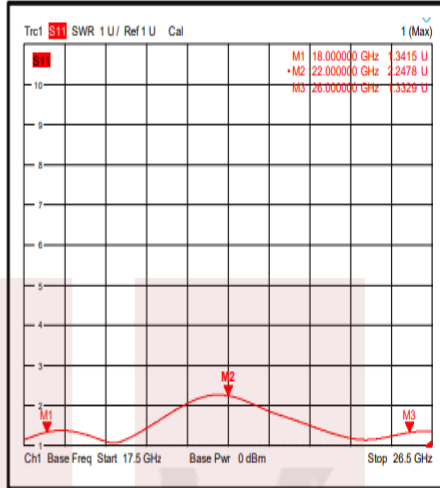


**Typical Performance Data**

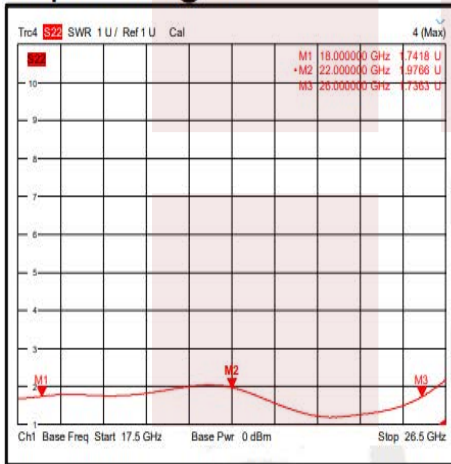
**Insertion Loss @ +25°C**



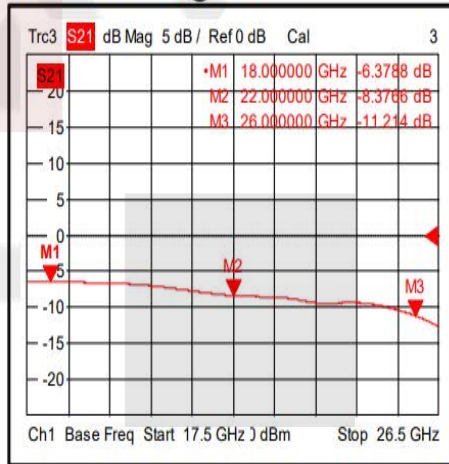
**Input VSWR @ +25°C**



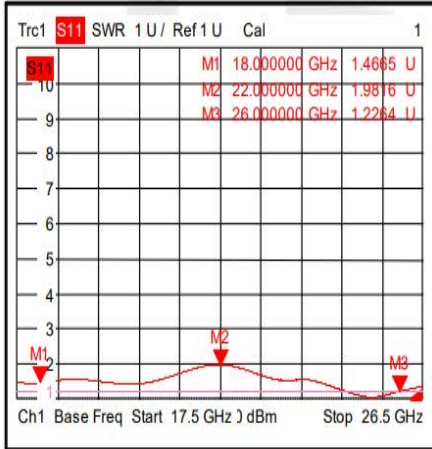
**Output VSWR @ +25°C**



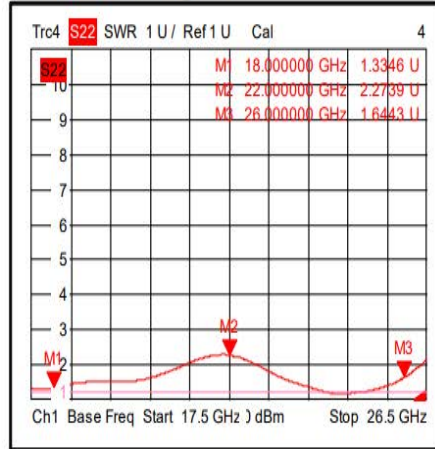
**Insertion Loss @ -40°C**



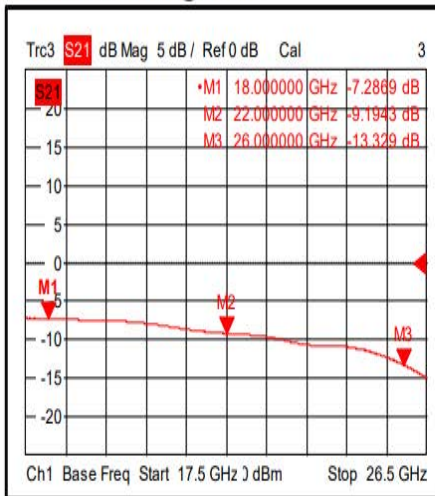
**Input VSWR @ -40°C**



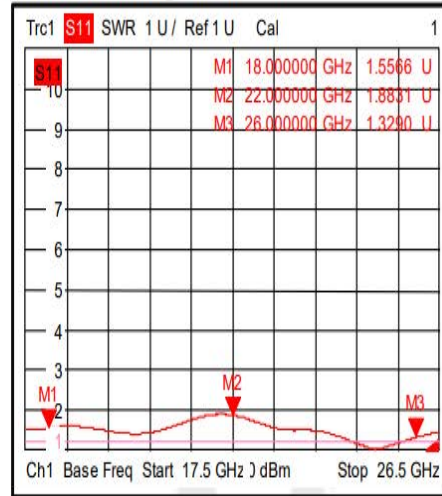
**Output VSWR @ -40°C**



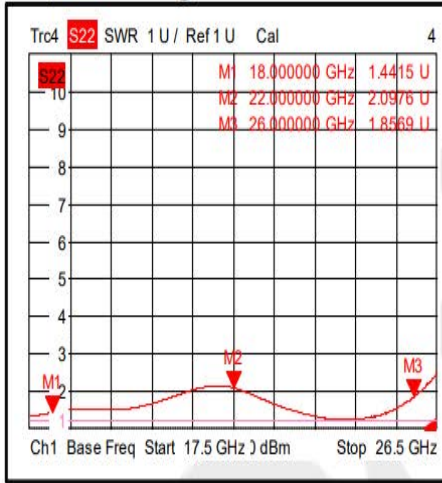
**Insertion Loss @ +85°C**



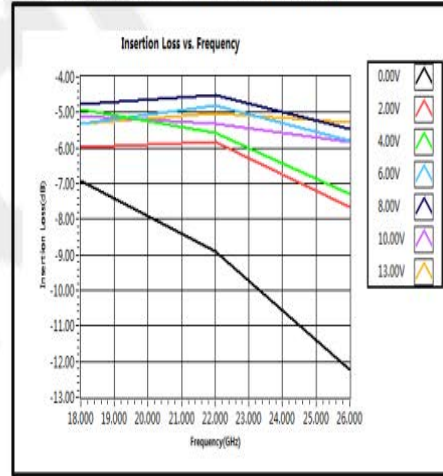
**Input VSWR @ +85°C**



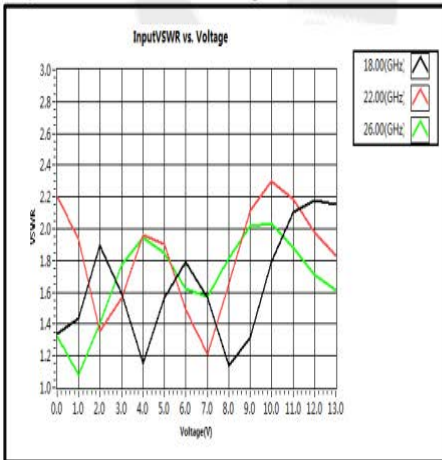
**Output VSWR @ +85°C**



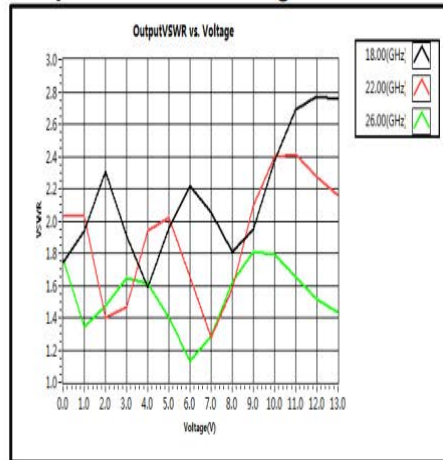
**Insertion Loss vs. Frequency**



**Input VSWR vs. Voltage**

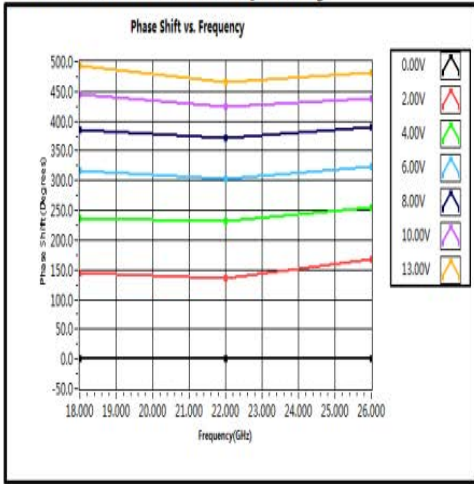


**Output VSWR vs. Voltage**

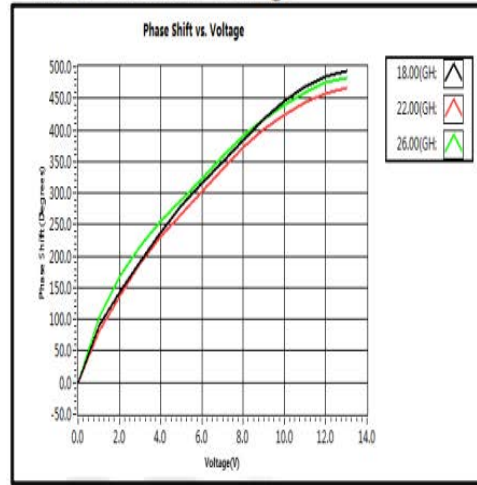




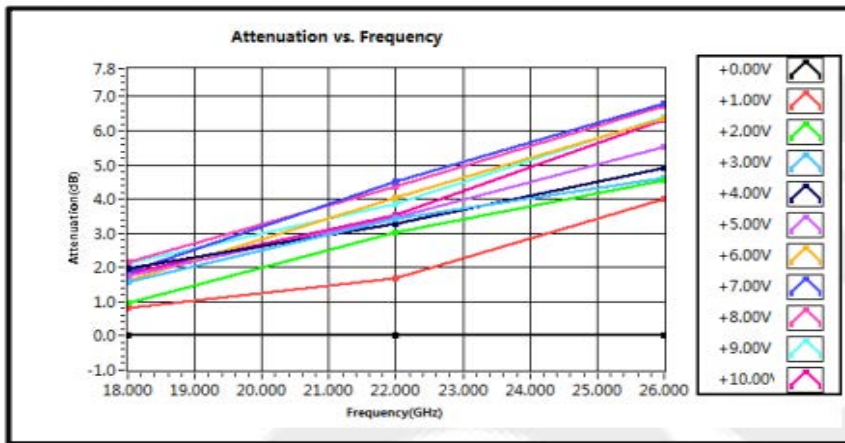
**Phase Shift vs. Frequency**



**Phase Shift vs. Voltage**



**Attenuation vs. Frequency**

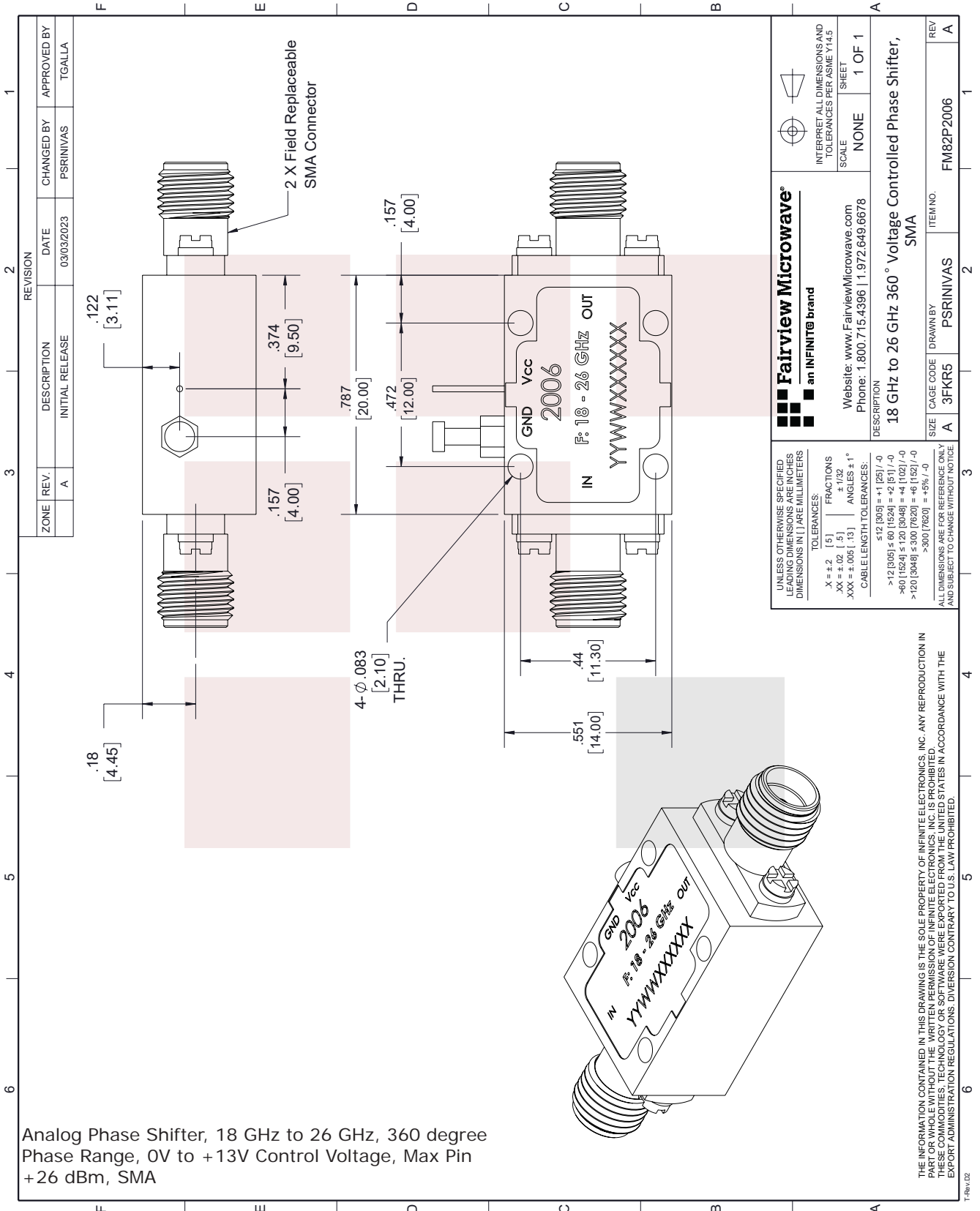


Analog Phase Shifter, 18 GHz to 26 GHz, 360 degree Phase Range, 0V to +13V Control Voltage, Max Pin +26 dBm, SMA from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [Analog Phase Shifter, 18 GHz to 26 GHz, 360 degree Phase Range, 0V to +13V Control Voltage, Max Pin +26 dBm, SMA FM82P2006](#)

URL: <https://www.fairviewmicrowave.com/sma-analog-phase-shifter-18-26-ghz-fm82p2006-p.aspx>

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Analog Phase Shifter, 18 GHz to 26 GHz, 360 degree Phase Range, 0V to +13V Control Voltage, Max Pin +26 dBm, SMA

<b>Fairview Microwave®</b> an INFINITE® brand		INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5 SCALE NONE SHEET 1 OF 1	
Website: www.FairviewMicrowave.com Phone: 1.800.715.4396   1.972.649.6678		DESCRIPTION 18 GHz to 26 GHz, 360° Voltage Controlled Phase Shifter, SMA	
UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES. DIMENSIONS IN PARENTHESES ARE IN MILLIMETERS. TOLERANCES: X = ±.2 [5] FRACTIONS ±.1/32 ANGLES ± 1° .XX = ±.02 [.5] .XXX = ±.005 [.13] CABLE LENGTH TOLERANCES: ≤ 12 [305] = ±1 [25] / -0 > 12 [305] ≤ 60 [1524] = ±2 [51] / -0 > 60 [1524] ≤ 120 [3048] = ±4 [102] / -0 > 120 [3048] ≤ 300 [7620] = ±6 [152] / -0 > 300 [7620] = ±5% / -0		SIZE CAGE CODE DRAWN BY ITEM NO. REV A 3FKR5 PSRINIVAS FM82P2006 A	

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