

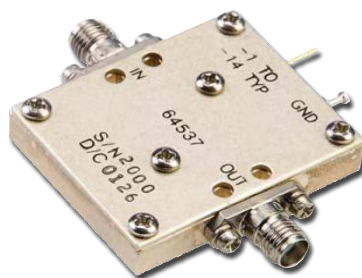
# PQ-73

## Analog Diode Phase Shifters



### Features

- Octave bands up to 18GHz
- Fast Phase response as low as 10nS
- RF power operation 10mW peak/CW, RF power survival 100mW peak/CW
- Bias connection using pin or connector options
- Custom configurations available



### Specifications:

Parameter	Specification	Units
Frequency Range (min)	8.0 – 10.0	GHz
Phase Shift	180	Degrees
Insertion Loss (Max)	6	dB
Amplitude Ripple (Max)	1	±dB
VSWR (Max)	2.0:1	Ratio

Outline	A'	B'	C'	D'	E'	F'	G'
7	3.00	2.50	N/A	1.80	2.50	0.25	4PLCS

### Screening:

Internal Visual per MIL-STD-883, Method 2017  
 Temperature Cycle: -65 °C to +100 °C, 10 cycles

Hermetically-sealed switches are fine and gross leak checked per MIL-STD-883, Method 1014.

Optional High-Rel screening available upon request. Contact the factory to discuss your screening requirements.

### Environmental Specifications:

Designed to meet:

MIL-E-5400, MIL-STD-202, MIL-E-16400

Operating Temp: -55°C to +125°C

Storage Temp: -65°C to +150°C

Humidity: MIL-STD-202F, M103, Cond B

Shock: MIL-STD-202F, M213, Cond B

Altitude: MIL-STD-202F, M105, Cond B

Vibration: MIL-STD-202F, M204, Cond B

Thermal Shock: MIL-STD-202F, M107, Cond A

Temperature Cycle: MIL-STD-202F, M105C, Cond D

### Additional Electrical Specifications:

DC Supply: +5V ±0.5V @ +275mA  
 -5V ±0.5V @ -50mA

Control: 8 Bits command  
 1 Strobe line  
 Positive edge latched

Logic Levels: TTL/HMOS

Attenuation Accuracy: +/-0.15 dB or +/-1.5% whichever is greater

Attenuation Stability over Temperature: +/-0.025 dB/°C

### Mechanical Specifications:

Case Style: PQ Outline

Connectors: SMA Female per MIL-C-39012

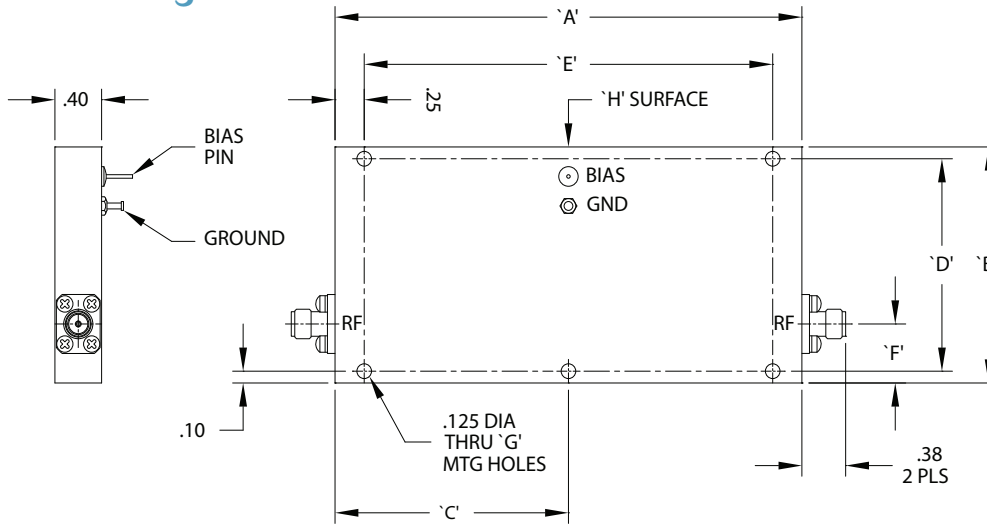
Connector Control: Micro-D 21 Pin

Bias & Control Pins: ø0.02" x 0.15" long

Mounting: ø0.10" through holes  
 (4) places



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OUTLINE CASE STYLE PQ

## Notes:

1. Monotonicity is Guaranteed.
2. The Phase shift varies with frequency at any voltage setting. This variation, referenced to 0° at logic 0 for each frequency, is approximately ±15% for octave models, 10% for models with 25% bandwidth, and ±7.5% for models with 10% bandwidth. Phase flatness of the QQ-65 & QQ-74 is ±25%.
3. A Connector, (SMA Female) is available in place of the bias pin at no extra charge. This will be placed at the center of the surface marked "H" on the drawing. This is the .38 x "A" surface. If a SMA Female is desired, add the suffix "C" to the model number (e.g., PQ-45C)
4. Linearization models available, call for outline and details.

## Custom Options – Contact the Factory

- Gray epoxy paint per MIL-C-22750
- Video transient suppression
- GPO connectors
- ECL logic input
- Phase and amplitude tracking
- Other frequency ranges available from 1MHz to 26GHz
- Reversed logic
- Available without SMA connectors for drop-in applications
- High rel screening

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Our passion for performance is defined by three attributes represented by these three icons: solution-minded, performance-driven and customer-focused.