QQ-66
Digitally Controlled Analog Phase Shifters

AEROFLEX
A passion for performance.

Features

- 8 bit Digital logic standard
- Octave bands up to 18 GHz
- RF power operation 10mW peak/CW, RF power survival 100 mW peak/CW
- Custom configurations available

Specifications:

Parameter	Specification	Units
Frequency Range (min)	7.0 – 12.0	GHz
Phase Shift	360	Degrees
Insertion Loss (Max)	14	dB
Amplitude Ripple (Max)	2.0	±dB
VSWR (Max)	2.5:1	Ratio

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: -0 °C to +60°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:	+15 V ± 0.5 V @ +50 mA -15 V ± 0.5 V @ -50 mA
Control:	8 Bits command
Logic Levels:	TTL/HMOS

Mechanical Specifications:

Case Style:	QQ Outline
Connectors:	SMA Female per MIL-C-39012
Connector Control:	15 Pin D
Mounting:	ø0.10″ through holes (4) places

AEROFLEX
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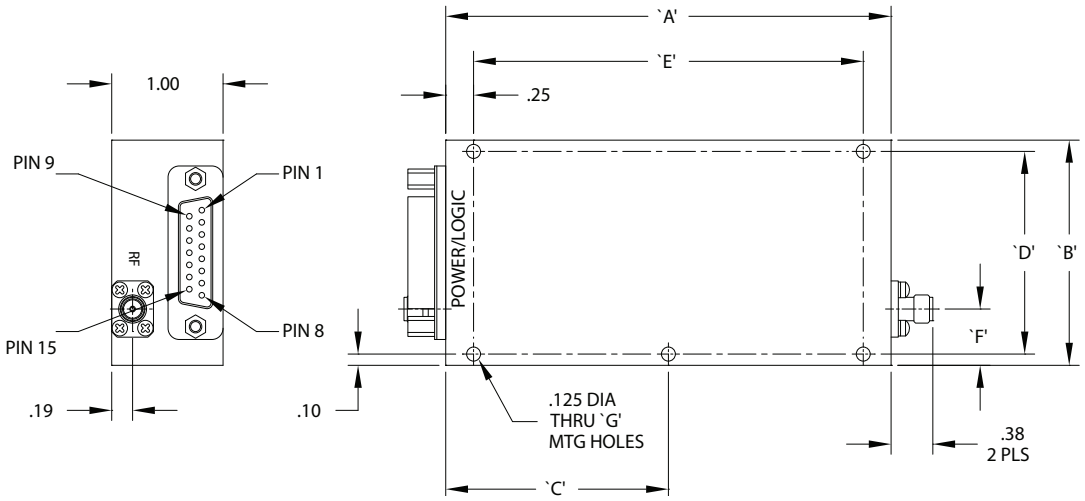
PQ-66, Digitally Controlled Analog Phase Shifters

Outline Drawing:



Outline	A'	B'	C'	D'	E'	F'	G'
1	5.00	2.00	N/A	1.80	4.50	0.50	4 PLCS

OUTLINE CASE STYLE QQ

Notes:

1. The voltages required are ±15V @ 50mA.
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. Switching speed on all models is 200 nS.
4. Monotonicity is Guaranteed.
5. Least Significant BIT = Total Phase Shift divided by the number of steps. 8 BITS = 256 steps.

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 1 MHz to 26 GHz
- Reversed logic
- Available without SMA connectors for drop-in applications
- High rel screening

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ISO 9001:2008 certified

A passion for performance.

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

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