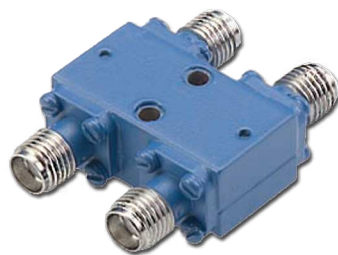


# QH-33

## 3dB 90 Degree Hybrid Couplers



### Specifications:

Parameter	Specification	Units
Frequency Range (Min)	1.5 – 3.0	GHz
Nominal Coupling	3.0 +.20/-0	dB
Deviation from Nominal Coupling (Max)	±.40	dB
Insertion Loss (Max)	0.20	dB
Isolation (Min)	22	dB
VSWR (Max)	1.20:1	Ratio
Phase Balance	±2.5	Degrees

"A" in.	"B" in.	"C" in.	"D" in.	"E" in.	"F" in.	"G" in.
1.25	0.50	0.82	-	0.30	0.20	-

### 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.

### Mechanical Specifications:

Case Style: QH 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

### 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

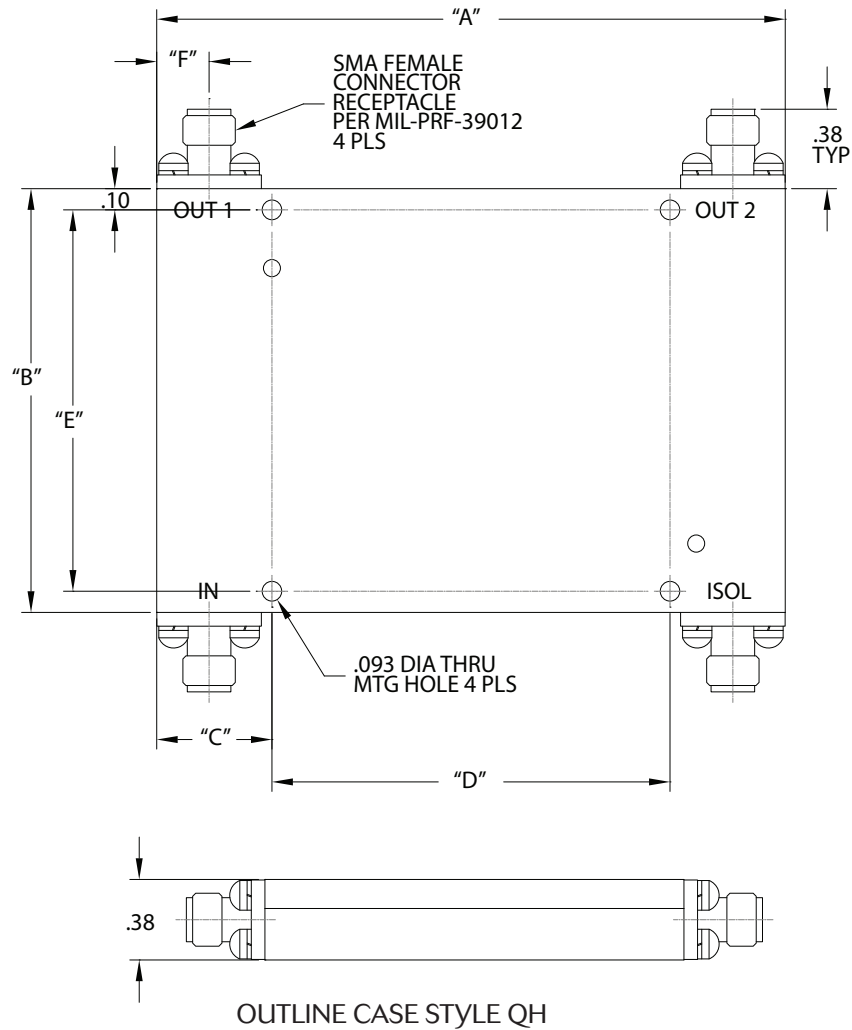
Temperature Cycle: MIL-STD-202F, M105C, Cond D

### 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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