

# MH-33

## 3dB 180 Degree Hybrid Couplers



### Specifications:

Parameter	Specification	Units
Frequency Range (Min)	1.0 – 2.0	GHz
Nominal Coupling	3.0 +.30/-0	dB
Deviation from Nominal Coupling (Max)	±.50	dB
Insertion Loss (Max)	0.30	dB
Isolation (Min)	18	dB
VSWR (Max)	1.30:1	Ratio
Phase Balance	±4.0	Degrees

"A" in.	"B" in.	"C" in.	"D" in.	"E" in.	"F" in.	"G" in.
2.00	1.70	0.20	1.30	1.80	0.38	0.25

### 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: MH 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

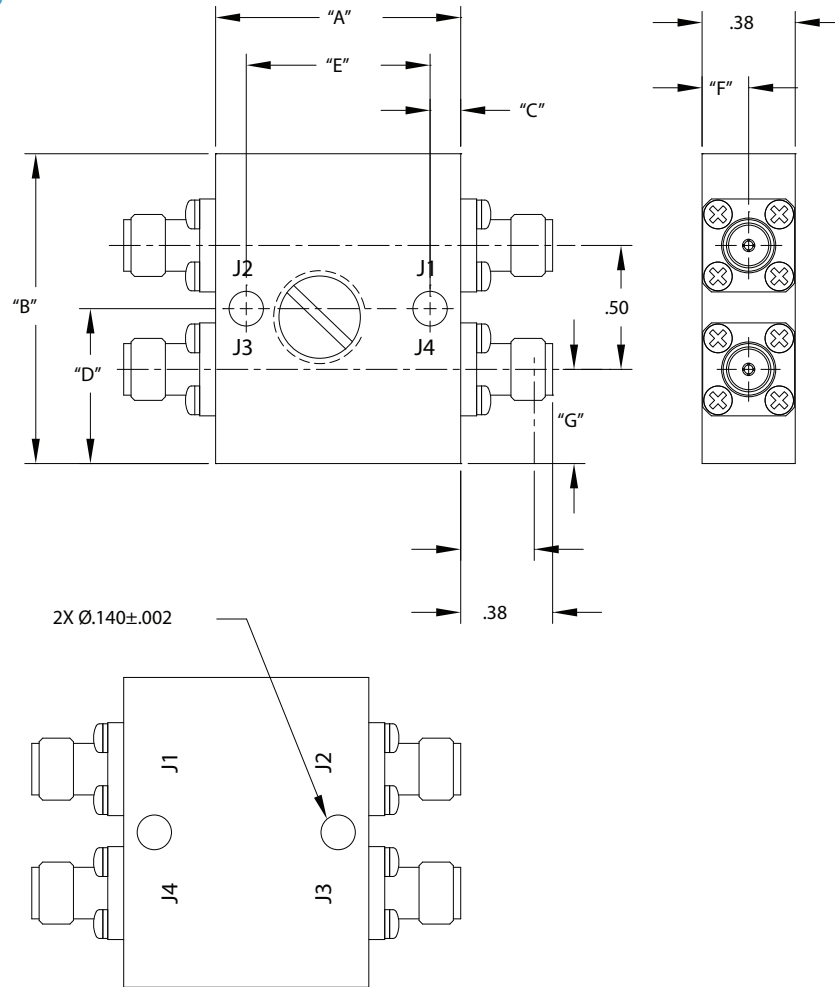
Temperature Cycle: MIL-STD-202F, M105C, Cond D

### 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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OUTLINE CASE STYLE MH

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ISO 9001:2008 certified



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