

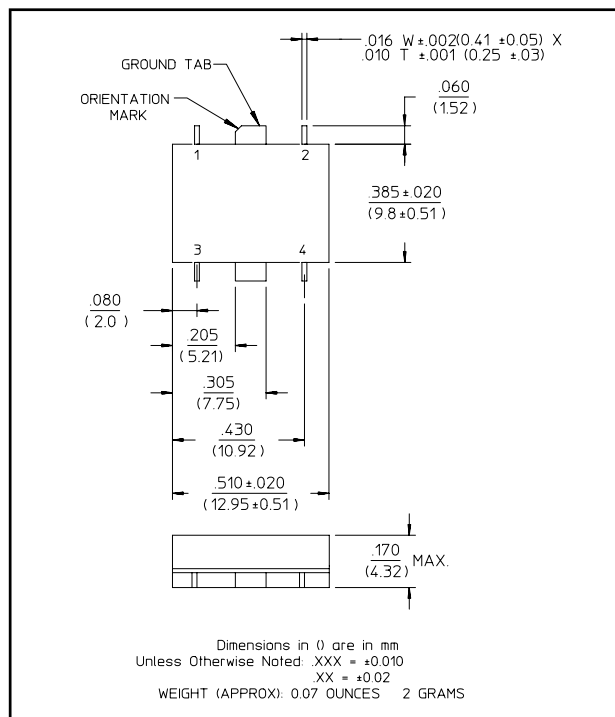
Features

- Fully Hermetic Package
- Octave Bandwidth
- Low VSWR: 1.3:1
- Impedance: 50 Ohms Nominal
- Input Power: 4 Watts Max. @ 25°C, Derated to 1 Watt @ 85°C
- MIL-STD-202 Screening Available

Description

3 dB Hybrids are ideal for dividing a signal into two signals of equal amplitude and a constant 90° or 180° phase differential and for Quadrature combining or performing summation/differential combining.

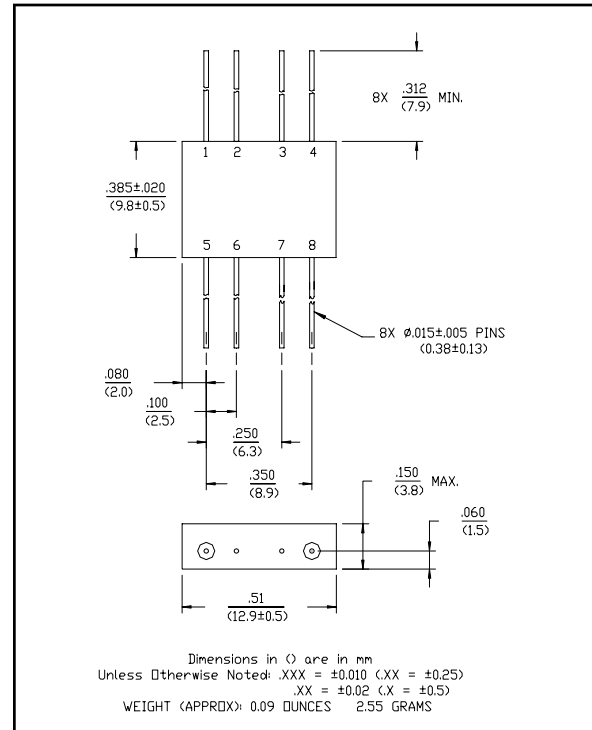
SF-1 (JHS-119)



Pin Configuration (JHS-119)

| Pin No. | Function | Pin No. | Function |
|---------|----------|---------|----------|
| 1 | A | 3 | D |
| 2 | B | 4 | C |

FP-2 (JH-119)



Pin Configuration (JH-119)

| Pin No. | Function | Pin No. | Function |
|---------|----------|---------|----------|
| 1 | A | 5 | D |
| 2 | GND | 6 | GND |
| 3 | GND | 7 | GND |
| 4 | B | 8 | C |

Electrical Specifications¹: $T_A = -55^\circ\text{C}$ to $+85^\circ\text{C}$

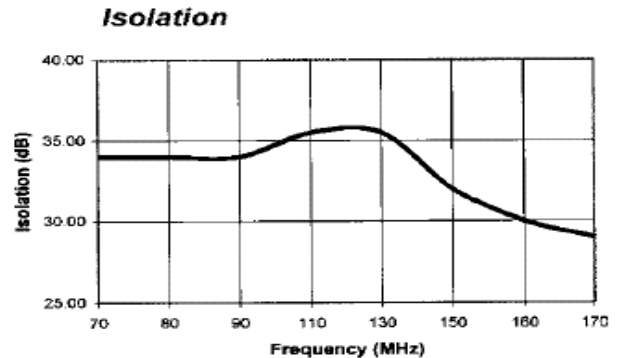
| Parameter | Test Conditions | Frequency | Units | Min | Typ | Max |
|-----------------------------|-----------------|--------------|-------|-----|-----|-------|
| Insertion Loss ² | Less Coupling | 80 - 160 MHz | dB | — | — | 0.75 |
| Isolation | — | 80 - 160 MHz | dB | 20 | — | — |
| Amplitude Balance | — | 80 - 160 MHz | dB | — | — | 1.0 |
| VSWR | — | 80 - 160 MHz | Ratio | — | — | 1.3:1 |
| Deviation from Quadrature | — | 80 - 160 MHz | ° | — | — | 3 |

- All specifications apply with 50 ohm source and load impedance.
 - Average of coupled output less 3 dB.
- This product contains elements protected by United States Patent Number 3,484,724

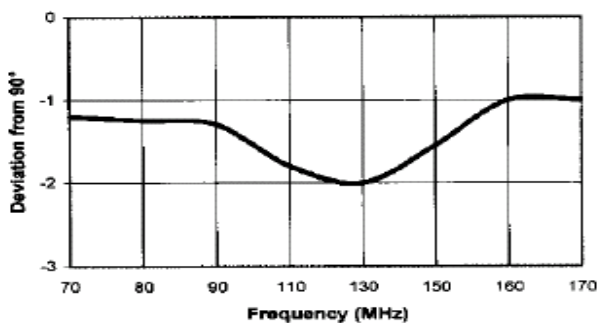
Phasing Diagram

| OUT \ IN | A | B | C | D |
|----------|------|-----|------|------|
| A | | ISO | 0° | -90° |
| B | ISO | | -90° | 0° |
| C | 0° | 90° | | ISO |
| D | -90° | 0° | ISO | |

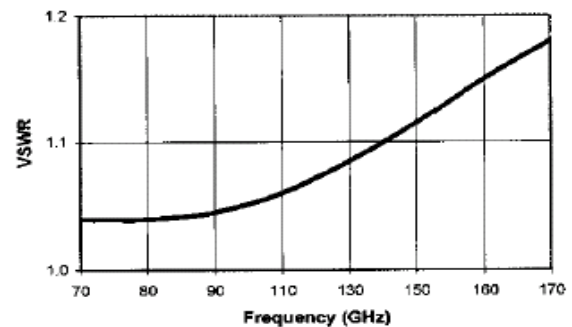
Typical Performance Curves



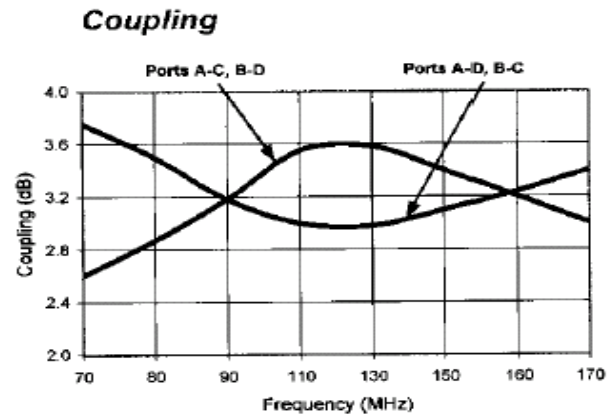
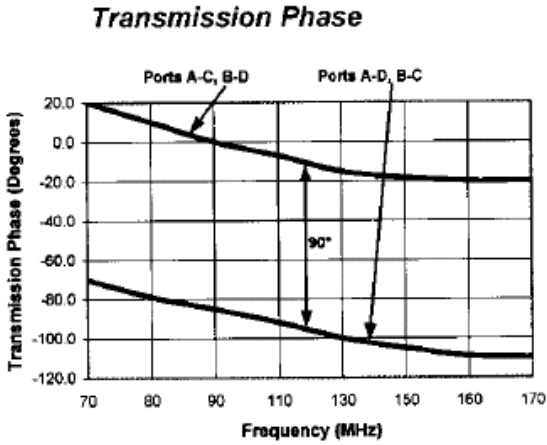
Deviation from Quadrature



VSWR



Typical Performance Curves



Ordering Information

| Part Number | Package |
|-------------|---------|
| JH-119 PIN | FP-2 |
| JHS-119 PIN | SF-1 |