

## Surface Mount Quadrature Hybrid, 40 - 80 MHz

Rev. V3

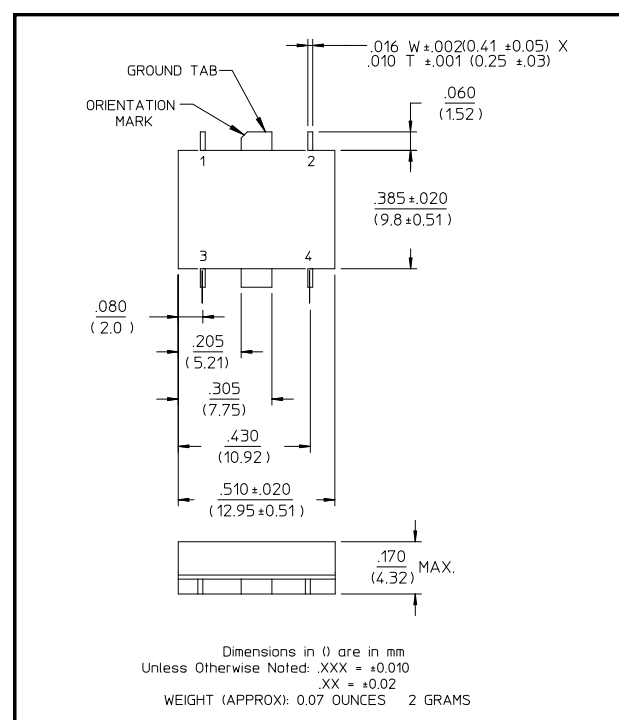
### Features

- Fully Hermetic Package
- 3° Maximum Phase Deviation from 90°
- Low Loss: 0.5 dB Max.
- Impedance: 50 Ohms Nominal
- Input Power: Watts Max. Derated to 1 Watt @ 100°C
- Typical Phase Linearity: 3° from Straight Line
- MIL-STD-202 Screening Available

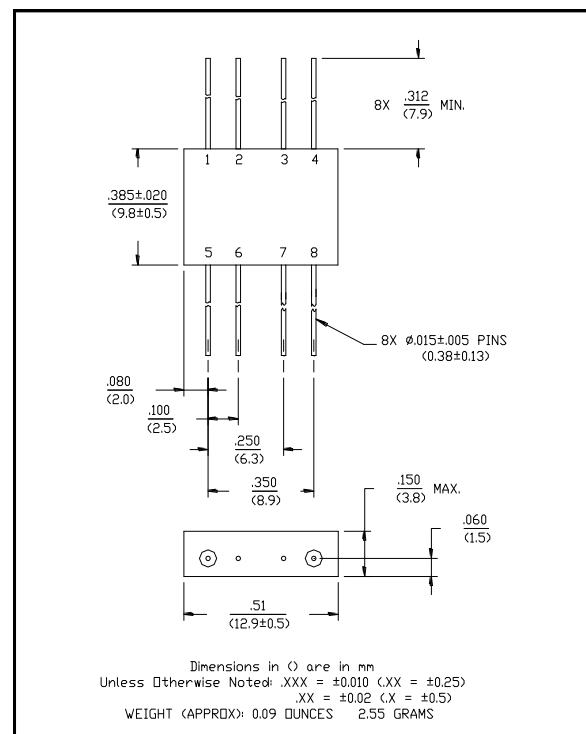
### Description

Ideally suited for Quadrature Combining or performing Summation/Differential Combining.

### SF-1 (JHS-115)



### FP-2 (JH-115)



### Pin Configuration (JH-115)

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

### Pin Configuration (JHS-115)

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

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### Electrical Specifications<sup>1</sup>: $T_A = -55^{\circ}\text{C}$ to $+85^{\circ}\text{C}$

| Parameter                   | Test Conditions | Frequency   | Units | Min | Typ | Max   |
|-----------------------------|-----------------|-------------|-------|-----|-----|-------|
| Insertion Loss <sup>2</sup> | Less Coupling   | 40 - 80 MHz | dB    | —   | —   | 0.5   |
| Isolation                   | —               | 40 - 80 MHz | dB    | 20  | —   | —     |
| Amplitude Balance           | —               | 40 - 80 MHz | dB    | —   | —   | 0.8   |
| VSWR                        | —               | 40 - 80 MHz | Ratio | —   | —   | 1.2:1 |
| Deviation from Quadrature   | —               | 40 - 80 MHz | °     | —   | —   | 3     |

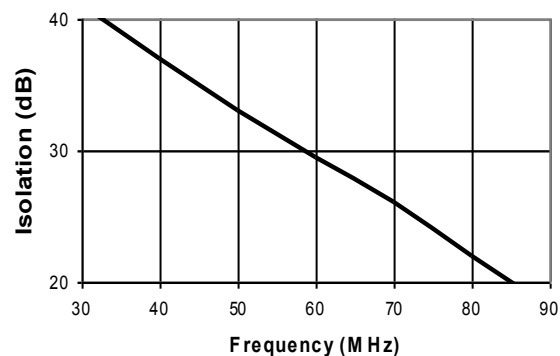
1. All specifications apply with 50 ohm source and load impedance.
2. Average of coupled output less 3 dB.

### Phasing Diagram

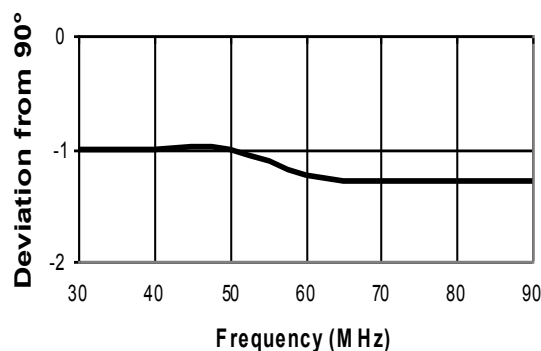
| IN \ OUT | A    | B   | C    | D    |
|----------|------|-----|------|------|
| A        |      | ISO | 0°   | -90° |
| B        | ISO  |     | -90° | 0°   |
| C        | 0°   | 90° |      | ISO  |
| D        | -90° | 0°  | ISO  |      |

### Typical Performance Curves

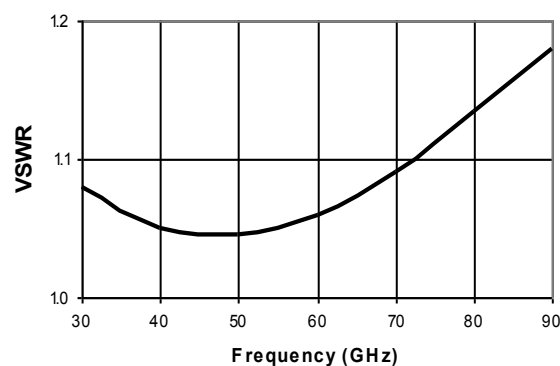
*Isolation*



*Deviation from Quadrature*

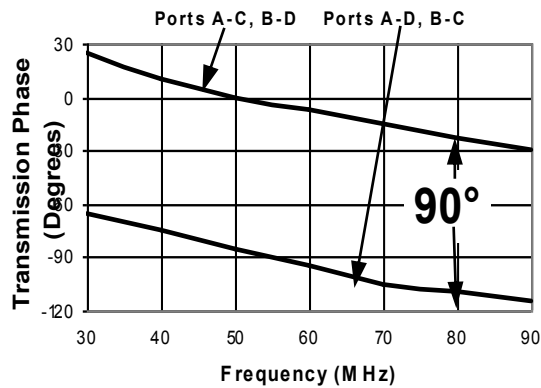


*VSWR*

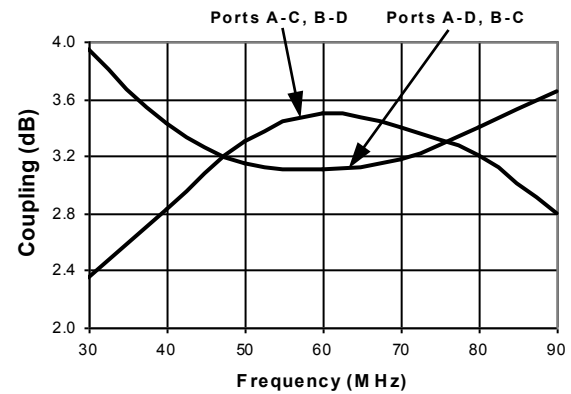


## Typical Performance Curves

*Transmission Phase*



*Coupling*



## Ordering Information

| Part Number | Package |
|-------------|---------|
| JH-115 PIN  | FP-2    |
| JHS-115 PIN | SF-1    |

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