

## High Frequency Quadrature Hybrid, 1 - 2 GHz

Rev. V3

### Features

- Octave Bandwidth
- Low VSWR: 1.25:1 Typical
- Miniature Size: 1/2" x 3/8" Flatpack
- Impedance: 50 Ohms Nominal
- Input Power: 25 Watts Max @ +25°C, Derated to 1 Watt @ +85°C
- MIL-STD-202 Screening Available

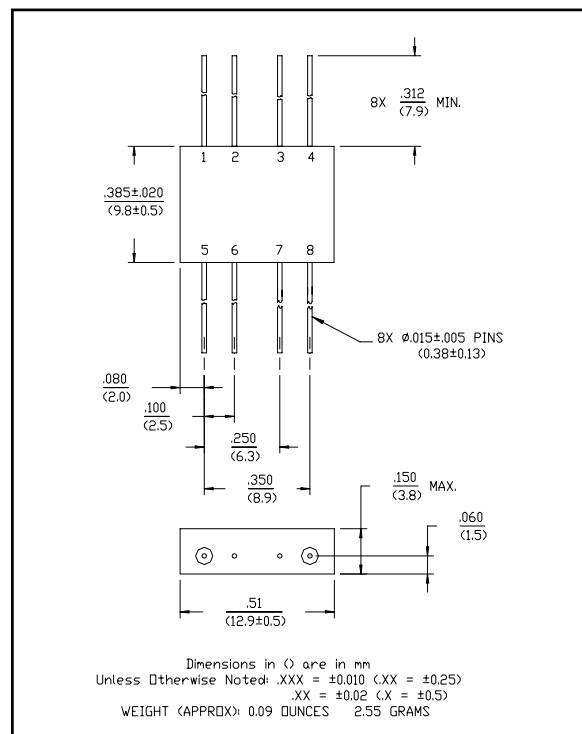
### Description

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.

### Phasing Diagram

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

### FP-2



### Pin Configuration

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

### Electrical Specifications<sup>1</sup>: T<sub>A</sub> = -55°C to +85°C

| Parameter                   | Test Conditions | Frequency | Units | Min | Typ | Max   |
|-----------------------------|-----------------|-----------|-------|-----|-----|-------|
| Insertion Loss <sup>2</sup> | Less Coupling   | 1- 2 GHz  | dB    | —   | —   | 0.3   |
| Isolation                   | —               | 1- 2 GHz  | dB    | 18  | —   | —     |
| Amplitude Balance           | —               | 1- 2 GHz  | dB    | —   | —   | 1.0   |
| VSWR                        | —               | 1- 2 GHz  | Ratio | —   | —   | 1.5:1 |
| Deviation from Quadrature   | —               | 1- 2 GHz  | °     | —   | —   | 5     |

1. All specifications apply with 50 ohm source and load impedance.

2. Average of coupled output less 3 dB.

This product contains elements protected by United States Patent Number 3,484,724.

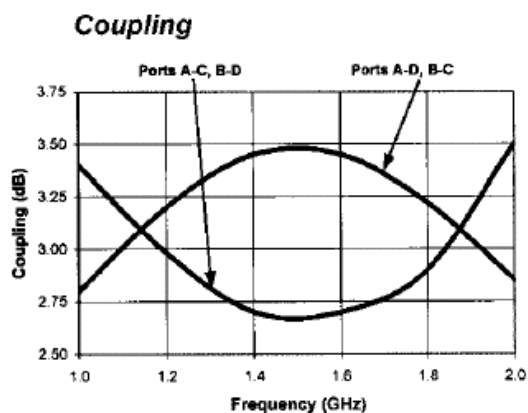
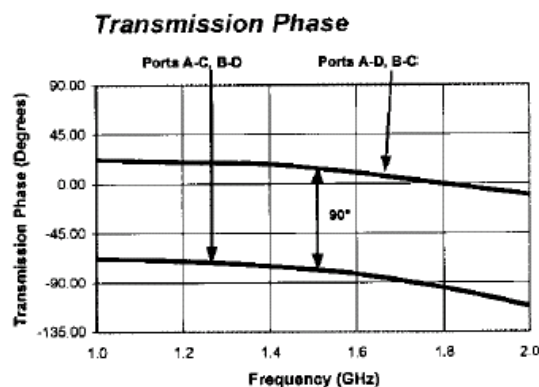
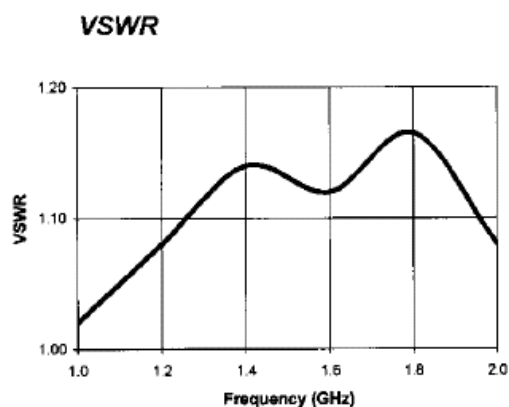
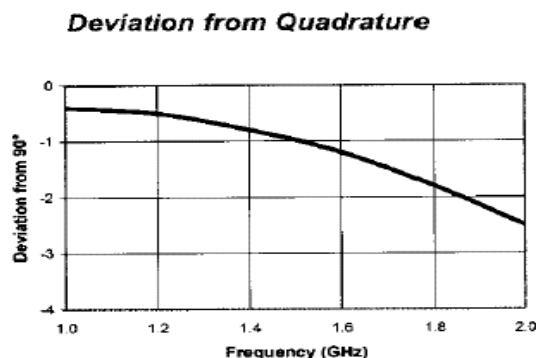
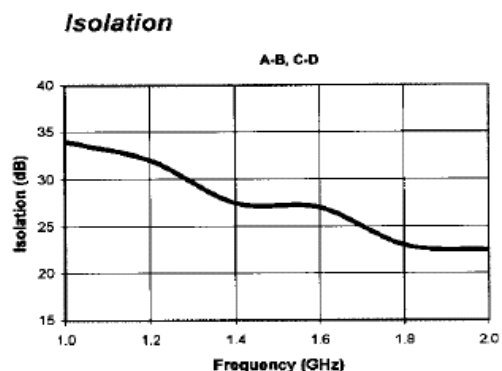
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### Typical Performance Curves



### Ordering Information

| Part Number | Package |
|-------------|---------|
| JH-141 PIN  | FP-2    |

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