



High Frequency Quadrature Hybrid, 500 - 1000 MHz

JH-140 V3

Features

· Octave Bandwidth

• Low VSWR: 1.2:1 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

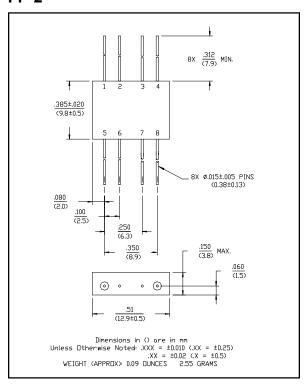
Description

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

| OUT / | A | В | С | D |
|-------|----------|----------|----------|----------|
| А | \times | ISO | -90° | 0° |
| В | ISO | \times | 0° | -90° |
| С | -90° | 0° | \times | ISO |
| D | 0° | -90° | ISO | \times |

FP-2



Pin Configuration

| Pin No. | Function | Pin No. | Function |
|---------|----------|---------|----------|
| 1 | Α | 5 | D |
| 2 | GND | 6 | GND |
| 3 | GND | 7 | GND |
| 4 | В | 8 | С |

Electrical Specifications¹: $T_A = -55$ °C to +85°C

| Parameter | Test Conditions | Frequency | Units | Min | Тур | Max |
|------------------------------|-----------------|----------------|-------|-----|-----|-------|
| Insertion Loss ² | Less Coupling | 500 - 1000 MHz | dB | 1 | _ | 0.3 |
| Isolation | _ | 500 - 1000 MHz | dB | 18 | _ | _ |
| Amplitude Balance | _ | 500 - 1000 MHz | dB | _ | _ | 1.0 |
| VSWR | _ | 500 - 1000 MHz | Ratio | _ | _ | 1.3:1 |
| Deviation from Quadrature | _ | 500 - 1000 MHz | o | _ | _ | 3 |

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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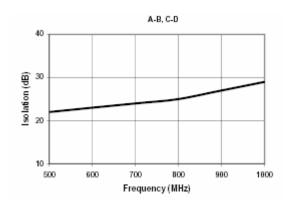


High Frequency Quadrature Hybrid, 500 - 1000 MHz

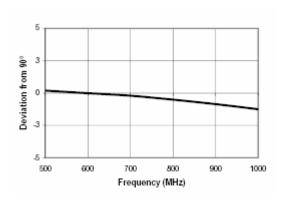
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Typical Performance Curves

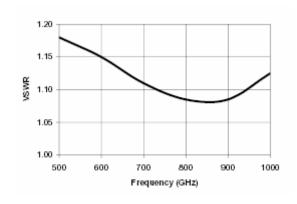
Isolation



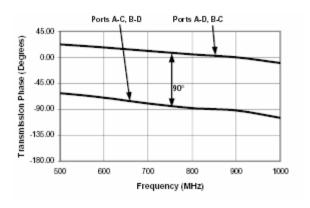
Deviation from Quadrature



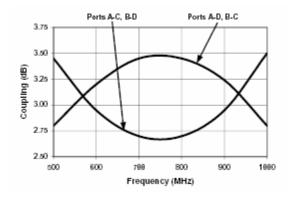
VSWR



Transmission Phase



Coupling



Ordering Information

| Part Number | Package |
|-------------|---------|
| JH-140 PIN | FP-2 |

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