JH-/JHS-114/JH-133



Quadrature Hybrid, 20 - 40 MHz

Rev. V3

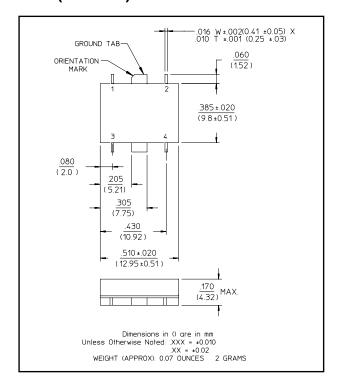
Features

- Octave Bandwidth
- 3° Maximum Phase Deviation from 90°
- Low Loss: 0.5 dB Max.
- Impedance: 50 Ohms Nominal
- Input Power: 5 Watts Max.@ 25°C, Derated to 1 Watt @ 100°C
- Typical Phase Linearity: 3° from Straight Line
- MIL-STD-202 Screening Available

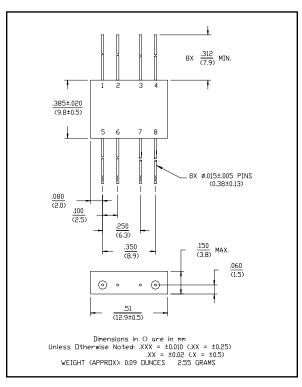
Description

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

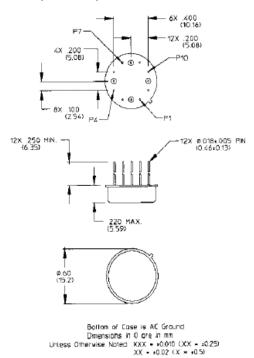
SF-1 (JHS-114)



FP-2 (JH-114)



TO-8-2 (JH-133)



ADVANCED: Data Sheets contain information regarding a product M/A-COM Technology Solutions

• North America Tel: 800.366.2266 • Europe Tel: +353.21.244.6400

• India Tel: +91.80.4155721 Visit www.macomtech.com for additional data sheets and product information.

• China Tel: +86.21.2407.1588

JH-/JHS-114/JH-133



Quadrature Hybrid, 20 - 40 MHz

Rev. V3

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

| Parameter | Test Conditions | Frequency | Units | Min | Тур | Max |
|------------------------------|-----------------|-------------|-------|-----|-----|-------|
| Insertion Loss ² | Less Coupling | 20 - 40 MHz | dB | _ | _ | 0.5 |
| Isolation | _ | 20 - 40 MHz | dB | 20 | _ | _ |
| Amplitude Balance | _ | 20 - 40 MHz | dB | _ | _ | 0.75 |
| VSWR | _ | 20 - 40 MHz | Ratio | _ | _ | 1.2:1 |
| Deviation from Quadrature | _ | 20 - 40 MHz | 0 | _ | _ | 3 |

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

Phasing Diagram

| J S S | A | В | С | D |
|-------------|----------|----------|----------|----------|
| А | \times | ISO | 0° | -90° |
| В | ISO | \times | -90° | 0° |
| С | 0° | 90° | \times | ISO |
| D | -90° | 0° | ISO | \times |

All other pins and case are ground.

Pin Configuration (JH-133)

| Pin No. | Function | Pin No. | Function |
|---------|----------|---------|----------|
| 1 | GND | 7 | GND |
| 2 | В | 8 | D |
| 3 | GND | 9 | GND |
| 4 | GND | 10 | GND |
| 5 | А | 11 | С |
| 6 | GND | 12 | GND |

Pin Configuration (JH-114)

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

Pin Configuration (JHS-114)

| Pin No. | Function | Pin No. | Function |
|---------|----------|---------|----------|
| 1 | Α | 3 | D |
| 2 | В | 4 | С |

^{2.} Average of coupled output less 3 dB.

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

India Tel: +91.80.4155721
China Tel: +86.21.2407.1588
Visit www.macomtech.com for additional data sheets and product information.

JH-/JHS-114/JH-133

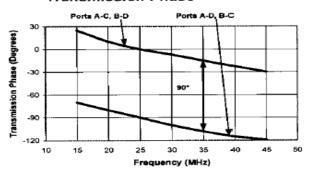


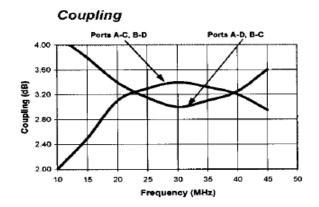
Quadrature Hybrid, 20 - 40 MHz

Rev. V3

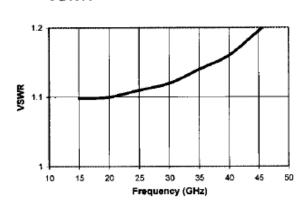
Typical Performance Curves

Transmission Phase

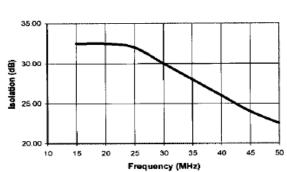




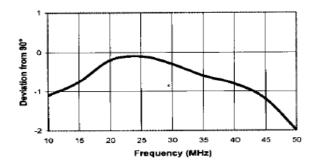
VSWR







Deviation from Quadrature



Ordering Information

| Part Number | Package |
|-------------|---------|
| JH-114 PIN | FP-2 |
| JHS-114 PIN | SF-1 |
| JH-133 PIN | TO-8-2 |

Commitment to produce in volume is not guaranteed.

- North America Tel: 800.366.2266 Europe Tel: +353.21.244.6400
- India Tel: +91.80.4155721
- China Tel: +86.21.2407.1588