JH- / JHS-114 / JH-133

Quadrature Hybrid, 20 - 40 MHz

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 180° phase differential and for Quadrature combining or performing summation/differential combining.

SF-1 (JHS-114)

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Dimensions in 0 are in mm Unless Otherwise Noted: XXX = +0.010 (XX = ±0.25) XX = ±0.02 (X = ±0.5)

- ADVANCED: Data Sheets contain information regarding a product M/A-COM Technology Solutions is considering for development. Performance is based on target specifications, simulated results, and/or prototype measurements. Commitment to develop 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
- Visit www.macomtech.com for additional data sheets and product information.

PRELIMINARY: Data Sheets contain information regarding a product M/A-COM Technology Solutions has under development. Performance is based on engineering tests. Specifications are typical. Mechanical outline has been fixed. Engineering samples and/or test data may be available. Commitment to produce in volume is not guaranteed.

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Quadrature Hybrid, 20 - 40 MHz

Rev. V3

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

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	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.

Phasing Diagram

	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	А	3	D
2	В	4	С

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Rev. V3

Quadrature Hybrid, 20 - 40 MHz

Typical Performance Curves



VSWR



Deviation from Quadrature



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Isolation



Ordering Information

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

North America Tel: 800.366.2266
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