



Quadrature Hybrid, 20 - 40 MHz

JH-/JHS-114/JH-133

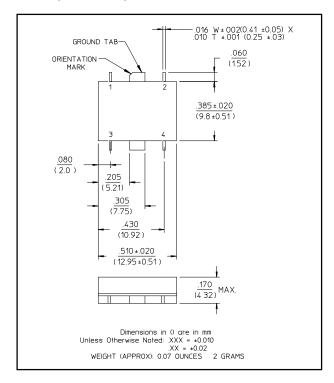
Features

- 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

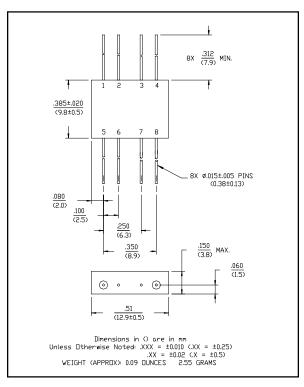
Description

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.

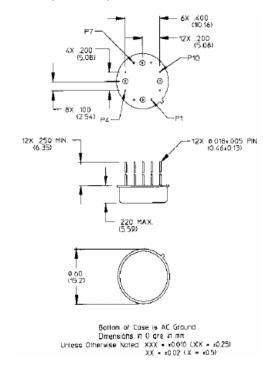
SF-1 (JHS-114)



FP-2 (JH-114)



TO-8-2 (JH-133)



- M/A-COM Inc. and its affiliates reserve the right to make changes to the product(s) or information contained herein without notice. M/A-COM makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does M/A-COM assume any liability whatsoever arising out of the use or application of any product(s) or information.
- North America Tel: 800.366.2266 / Fax: 978.366.2266
- Europe Tel: 44.1908.574.200 / Fax: 44.1908.574.300
- Asia/Pacific Tel: 81.44.844.8296 / Fax: 81.44.844.8298





Quadrature Hybrid, 20 - 40 MHz

JH-/JHS-114/JH-133

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	o	_	_	3

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

Phasing Diagram

OUT N	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	Α	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.

[•] Europe Tel: 44.1908.574.200 / Fax: 44.1908.574.300

Asia/Pacific Tel: 81.44.844.8296 / Fax: 81.44.844.8298

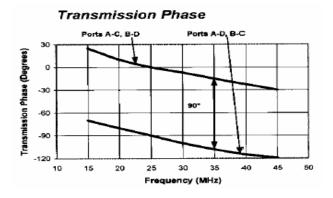


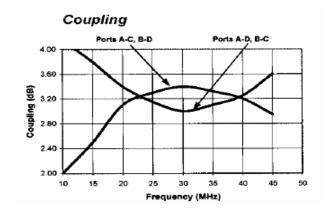


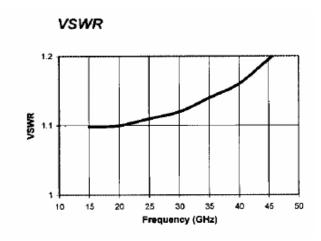
Quadrature Hybrid, 20 - 40 MHz

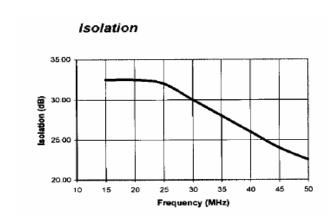
JH-/JHS-114/JH-133

Typical Performance Curves

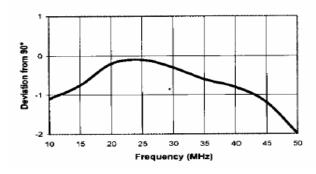








Deviation from Quadrature



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 / Fax: 978.366.2266
- Europe Tel: 44.1908.574.200 / Fax: 44.1908.574.300
- Asia/Pacific Tel: 81.44.844.8296 / Fax: 81.44.844.8298