MACOM

Quadrature Hybrid, 20 - 40 MHz

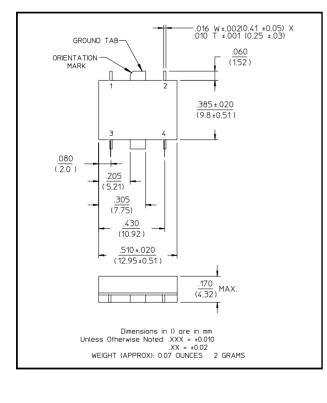
Features

- 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

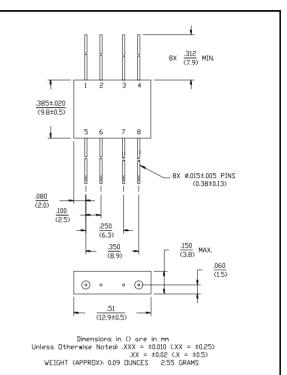
Description

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.

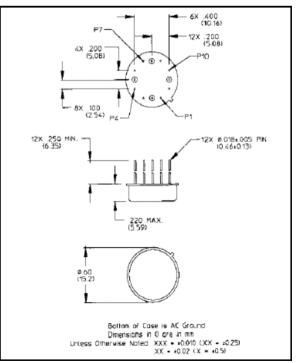
SF-1 (JHS-114)



FP-2 (JH-114)



TO-8-2 (JH-133)



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1

Rev. V3



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Rev. V3

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

Parameter	Test Conditions	Frequency	Units	Min	Тур	Мах
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.

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	\mathbf{X}

All other pins and case are ground.

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

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

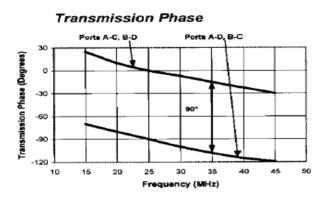
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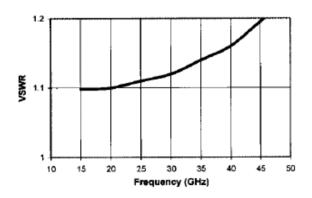
Rev. V3

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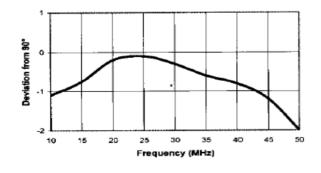
Typical Performance Curves



VSWR



Deviation from Quadrature

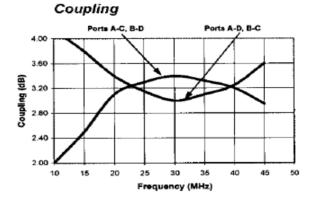


Ordering Information

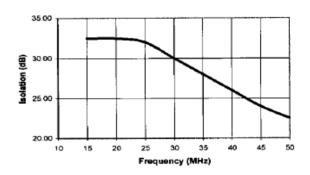
Part Number	Package
JH-114 PIN	FP-2
JHS-114 PIN	SF-1
JH-133 PIN	TO-8-2

3

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Isolation





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Rev. V3

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