

High Frequency Quadrature Hybrid, 1 - 2 GHz

**JH-141
V3**

Features

- Octave Bandwidth
- Low VSWR: 1.25:1 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

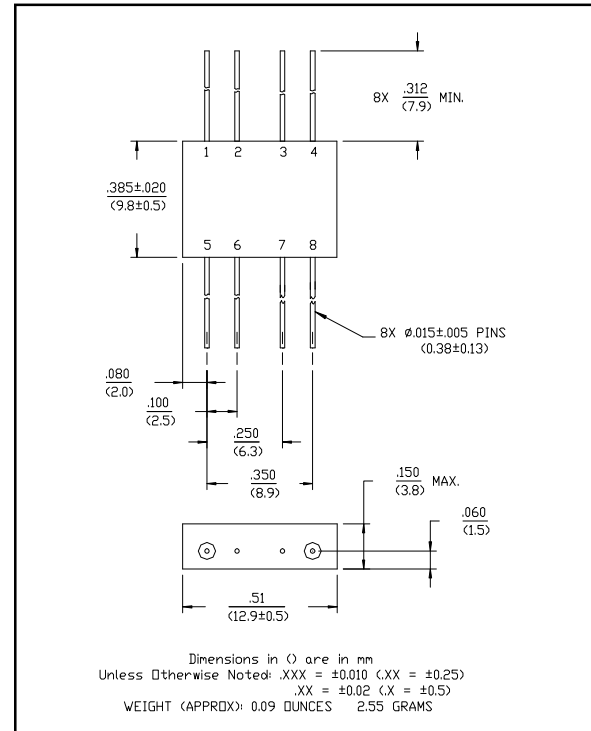
Description

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

IN	OUT	A	B	C	D
A			ISO	-90°	0°
B		ISO		0°	-90°
C		-90°	0°		ISO
D		0°	-90°	ISO	

FP-2



Pin Configuration

Pin No.	Function	Pin No.	Function
1	A	5	D
2	GND	6	GND
3	GND	7	GND
4	B	8	C

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

Parameter	Test Conditions	Frequency	Units	Min	Typ	Max
Insertion Loss ²	Less Coupling	1- 2 GHz	dB	—	—	0.3
Isolation	—	1- 2 GHz	dB	18	—	—
Amplitude Balance	—	1- 2 GHz	dB	—	—	1.0
VSWR	—	1- 2 GHz	Ratio	—	—	1.5:1
Deviation from Quadrature	—	1- 2 GHz	°	—	—	5

1. All specifications apply with 50 ohm source and load impedance.
2. Average of coupled output less 3 dB.

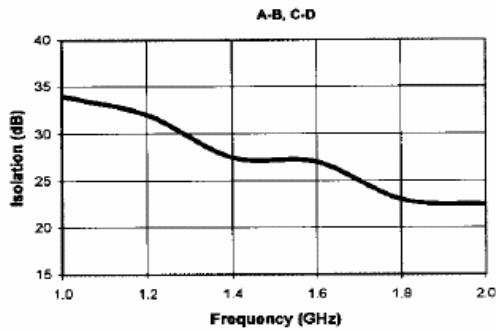
This product contains elements protected by United States Patent Number 3,484,724.

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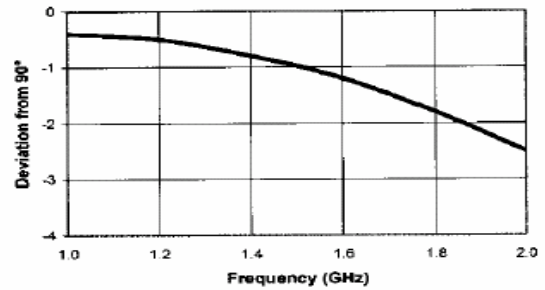
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Typical Performance Curves

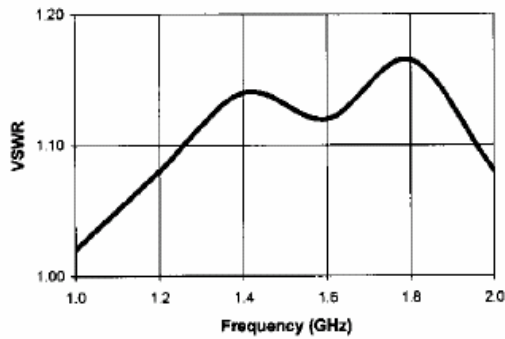
Isolation



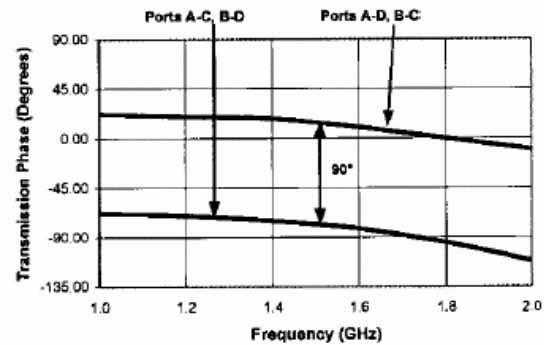
Deviation from Quadrature



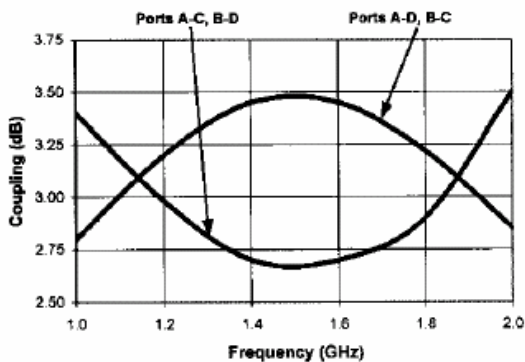
VSWR



Transmission Phase



Coupling



Ordering Information

Part Number	Package
JH-141 PIN	FP-2