

**Surface Mount Quadrature Hybrid,
200 - 400 MHz**

**JHS-142
V3**

Features

- Fully Hermetic
- Octave Bandwidth
- Low VSWR: 1.1:1 Typical
- Impedance: 50 Ohms Nominal
- Input Power: 5 Watts Max @ +25°C, Derated to 1 Watt @ +85°C
- Typical Phase Linearity: 3° from straight line
- MIL-STD-202 Screening Available

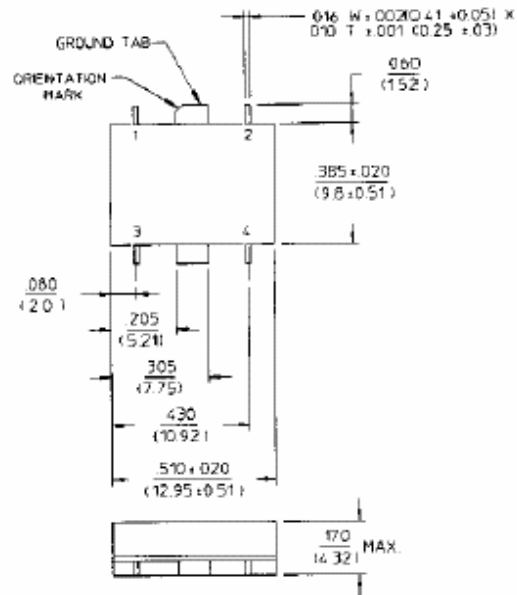
Description

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.

Phasing Diagram

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

SF-1



Dimensions in 0 are in mm
Unless Otherwise Noted: XXX = +0.010
XX = +0.02
WEIGHT (APPROX) 0.07 OUNCES 2 GRAMS

Pin Configuration

Pin No.	Function	Pin No.	Function
1	A	3	D
2	B	4	C

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

Parameter	Test Conditions	Frequency	Units	Min	Typ	Max
Insertion Loss ²	Less Coupling	200– 400 MHz	dB	—	—	0.5
Isolation	—	200– 400 MHz	dB	18	—	—
Amplitude Balance	—	200– 400 MHz	dB	—	—	1.0
VSWR	—	200– 400 MHz	Ratio	—	—	1.3:1
Deviation from Quadrature	—	200– 400 MHz	°	—	—	4

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

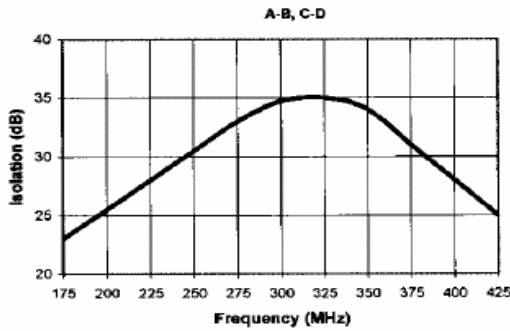
This product contains elements protected by United States Patent Number 3,484,724.

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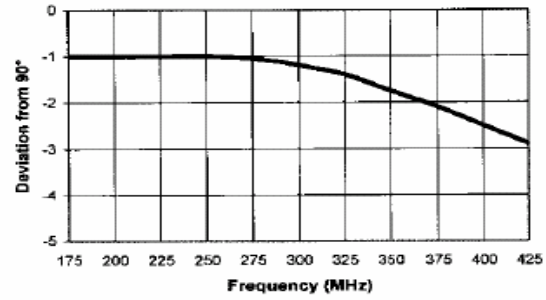
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Typical Performance Curves

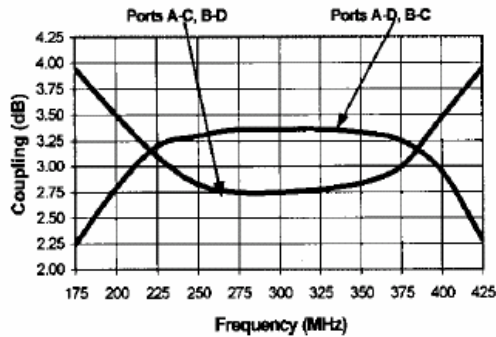
Isolation



Deviation from Quadrature



Coupling



Ordering Information

Part Number	Package
JHS-142 PIN	SF-1