

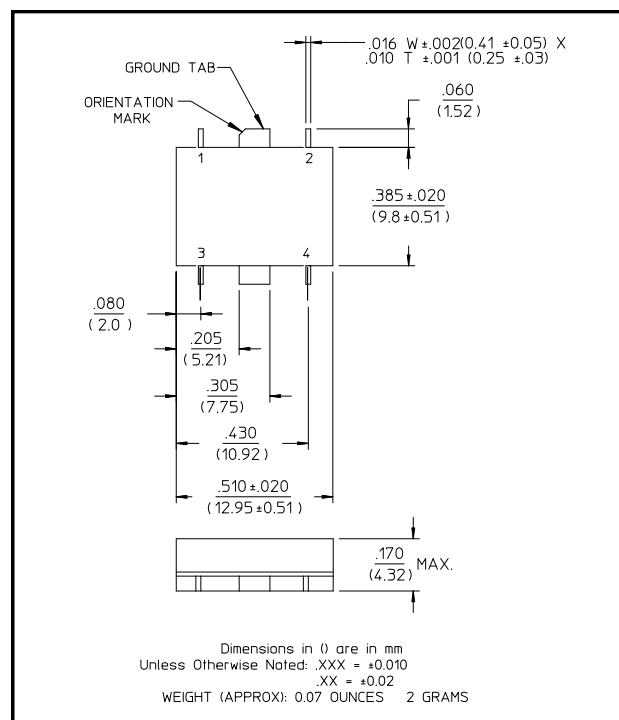
## Features

- Octave Bandwidth
- Low VSWR: 1.1:1 Typical
- High Isolation: 30 dB Typical
- Impedance: 50 Ohms Nominal
- Input Power: 4 Watts Max. @ 25°C, Derated to 1 Watt @ 85°C
- MIL-STD-202 Screening Available

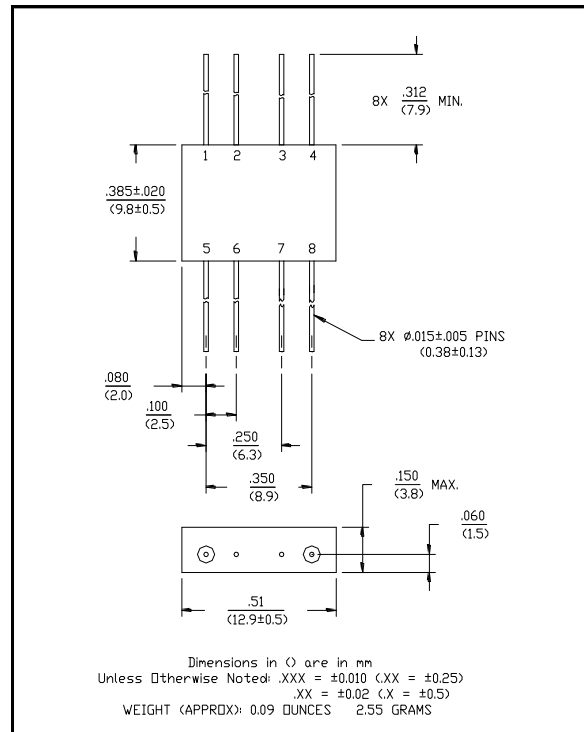
## Description

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.

### SF-1 (JHS-139)



### FP-2 (JH-139)



### Pin Configuration (JH-139)

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

### Pin Configuration (JHS-139)

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

**Electrical Specifications<sup>1</sup>: T<sub>A</sub> = -55°C to +85°C**

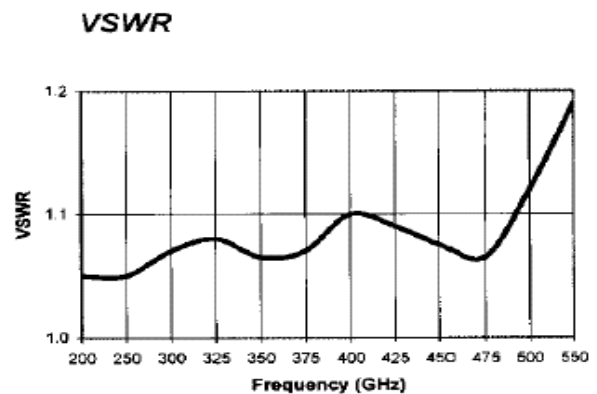
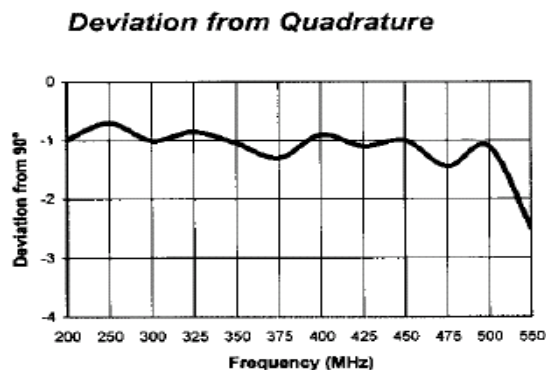
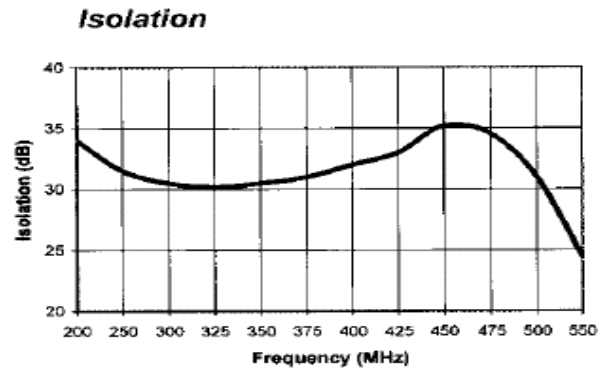
Parameter	Test Conditions	Frequency	Units	Min	Typ	Max
Insertion Loss <sup>2</sup>	Less Coupling	250 - 500 MHz	dB	—	—	0.5
Isolation	—	250 - 500 MHz	dB	15	—	—
Amplitude Balance	—	250 - 500 MHz	dB	—	—	1.0
VSWR	—	250 - 500 MHz	Ratio	—	—	1.5:1
Deviation from Quadrature	—	250 - 500 MHz	°	—	—	4

- All specifications apply with 50 ohm source and load impedance.
  - Average of coupled output less 3 dB.
- This product contains elements protected by United States Patent Number 3,484,724

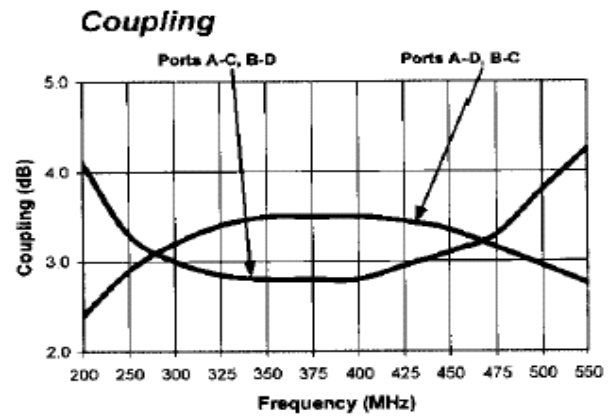
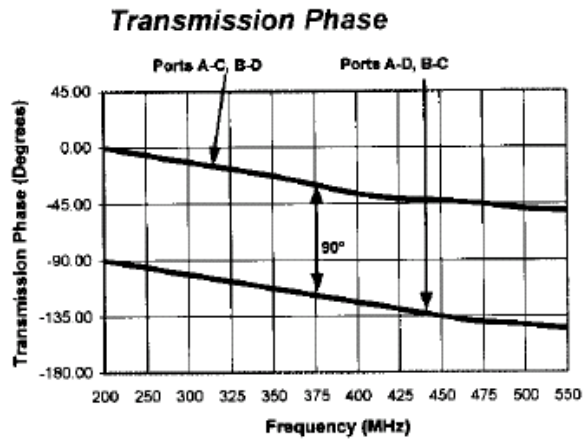
**Phasing Diagram**

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

**Typical Performance Curves**



## Typical Performance Curves



## Ordering Information

Part Number	Package
JH-139 PIN	FP-2
JHS-139 PIN	SF-1

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