

Quadrature Hybrid, 250 - 500 MHz

Rev. V3

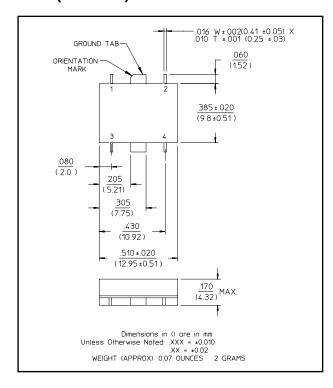
#### **Features**

- 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

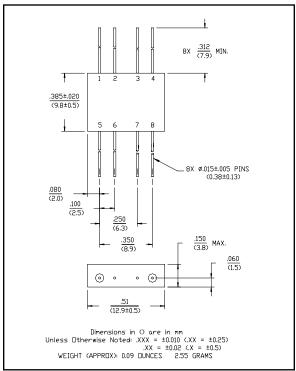
### **Description**

3 dB Hybrids are ideal for dividing a signal into two signals of equal amplitude and a constant 90° or 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	А	5	D
2	GND	6	GND
3	GND	7	GND
4	В	8	С

# **Pin Configuration (JHS-139)**

typical. Mechanical outline has been fixed. Engineering samples

Commitment to produce in volume is not du

Pin No.	Function	Pin No.	Function
1	Α	3	D
2	В	4	С

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Solutions has under development. Performance is based on engineering tests. Specifications are

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# Electrical Specifications<sup>1</sup>: $T_A = -55$ °C to +85°C

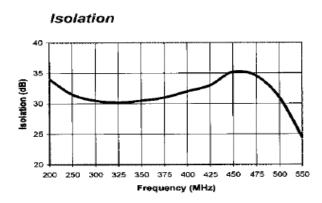
Parameter	Test Conditions	Frequency	Units	Min	Тур	Max
Insertion Loss <sup>2</sup>	Less Coupling	250 - 500 MHz	dB	_	_	0.5
Isolation	_	250 - 500 MHz	dB	15	_	_
Amplitude Balance	_	250 - 500 MHz	dB	_	_	1.0
VSWR	_	250 - 500 MHz	Ratio	_	_	1.5:1
Deviation from Quadrature	-	250 - 500 MHz	0	_	_	4

<sup>1.</sup> All specifications apply with 50 ohm source and load impedance.

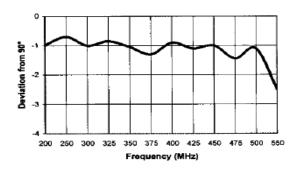
#### **Phasing Diagram**

	A	В	С	D
А	$\times$	ISO	0°	-90°
В	ISO	$\times$	-90°	0°
С	0°	90°	$\times$	ISO
D	-90°	0°	ISO	$\times$

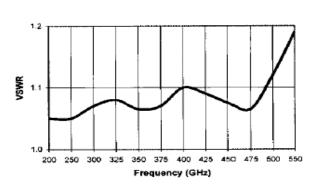
## **Typical Performance Curves**



#### Deviation from Quadrature



#### **VSWR**



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<sup>2.</sup> Average of coupled output less 3 dB.

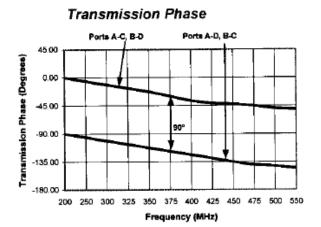
This product contains elements protected by United States Patent Number 3,484,724

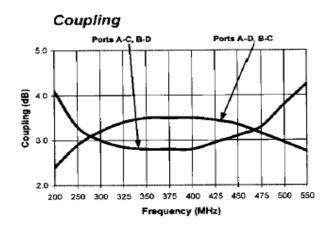


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## **Typical Performance Curves**





### **Ordering Information**

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

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