

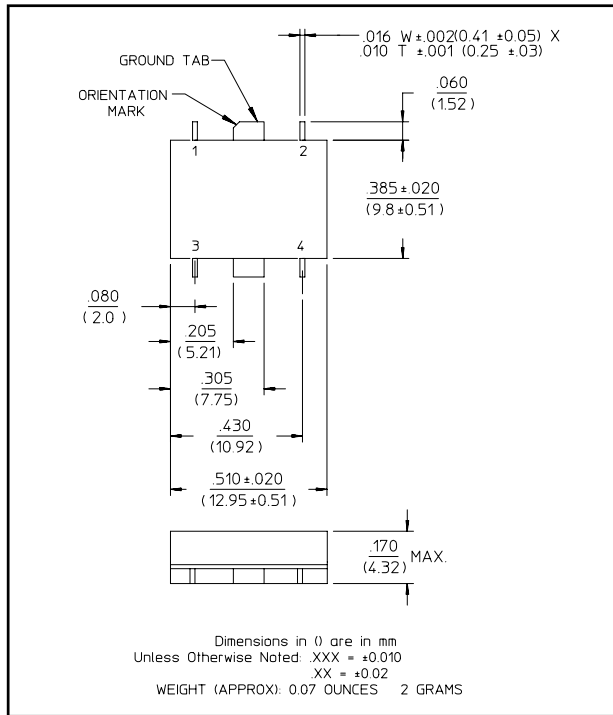
## Features

- Fully Hermetic Package
- Octave Bandwidth
- Low VSWR: 1.3:1
- 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.

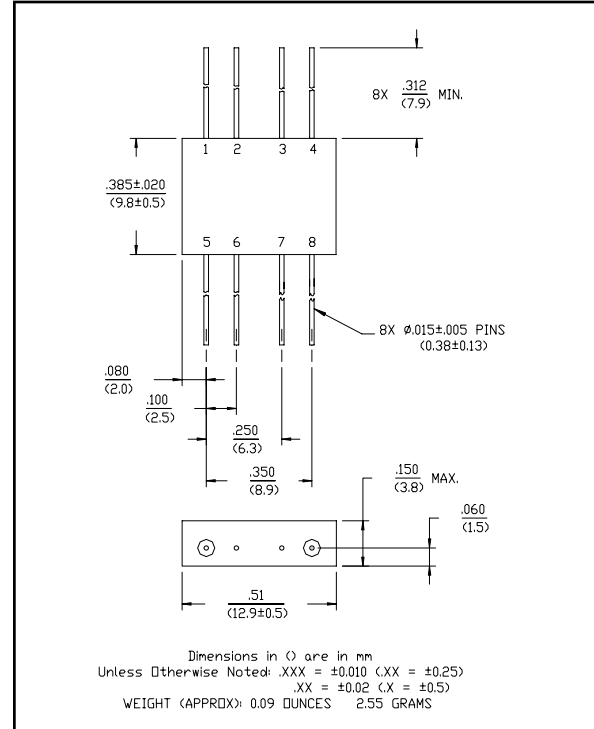
## SF-1 (JHS-119)



## Pin Configuration (JHS-119)

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

## FP-2 (JH-119)



## Pin Configuration (JH-119)

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

## Electrical Specifications<sup>1</sup>: $T_A = -55^\circ\text{C}$ to $+85^\circ\text{C}$

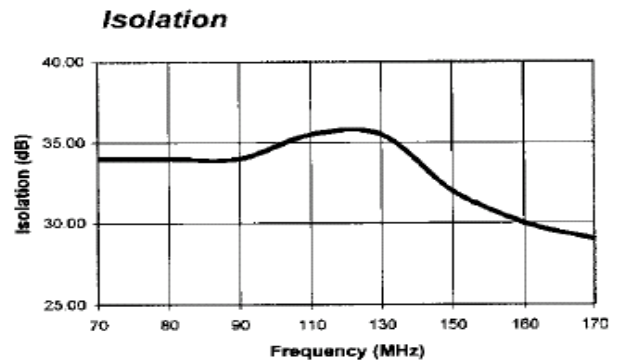
Parameter	Test Conditions	Frequency	Units	Min	Typ	Max
Insertion Loss <sup>2</sup>	Less Coupling	80 - 160 MHz	dB	—	—	0.75
Isolation	—	80 - 160 MHz	dB	20	—	—
Amplitude Balance	—	80 - 160 MHz	dB	—	—	1.0
VSWR	—	80 - 160 MHz	Ratio	—	—	1.3:1
Deviation from Quadrature	—	80 - 160 MHz	°	—	—	3

- 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

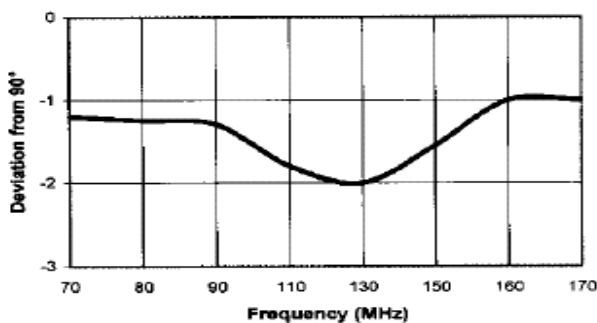
## Phasing Diagram

IN \ OUT	A	B	C	D
A	X	ISO	$0^\circ$	$-90^\circ$
B	ISO	X	$-90^\circ$	$0^\circ$
C	$0^\circ$	$90^\circ$	X	ISO
D	$-90^\circ$	$0^\circ$	ISO	X

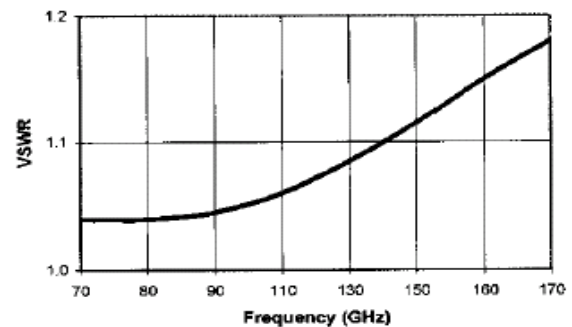
## Typical Performance Curves



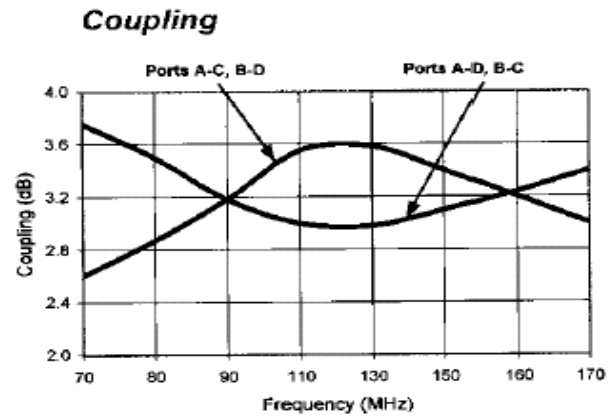
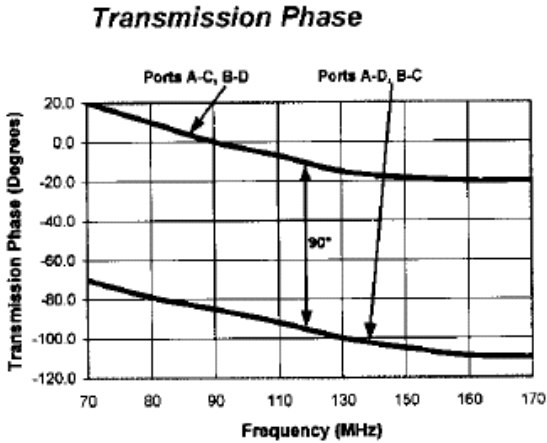
### Deviation from Quadrature



### VSWR



## Typical Performance Curves



## Ordering Information

Part Number	Package
JH-119 PIN	FP-2
JHS-119 PIN	SF-1