

# HH- / HHS-109

## Hybrid Junction, 5 - 200 MHz

Rev. V3

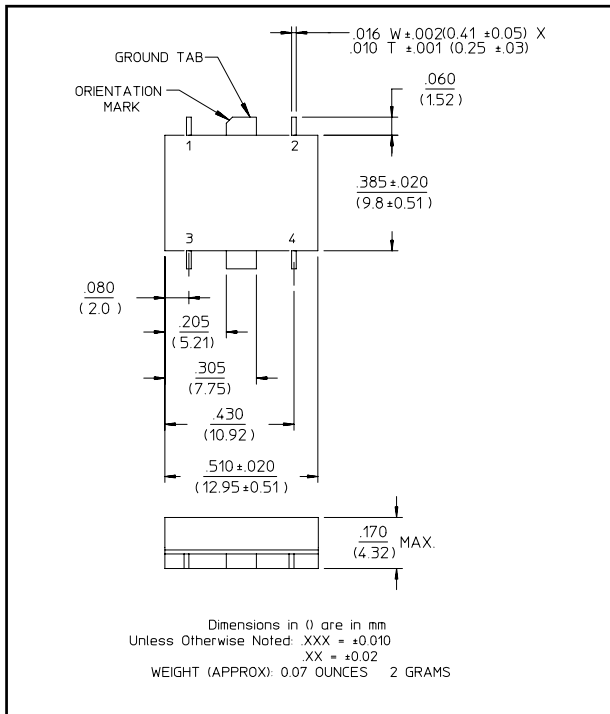
### Features

- 0° - 180° Hybrid with High Isolation
- Usable from 500 KHz - 500 MHz
- 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.

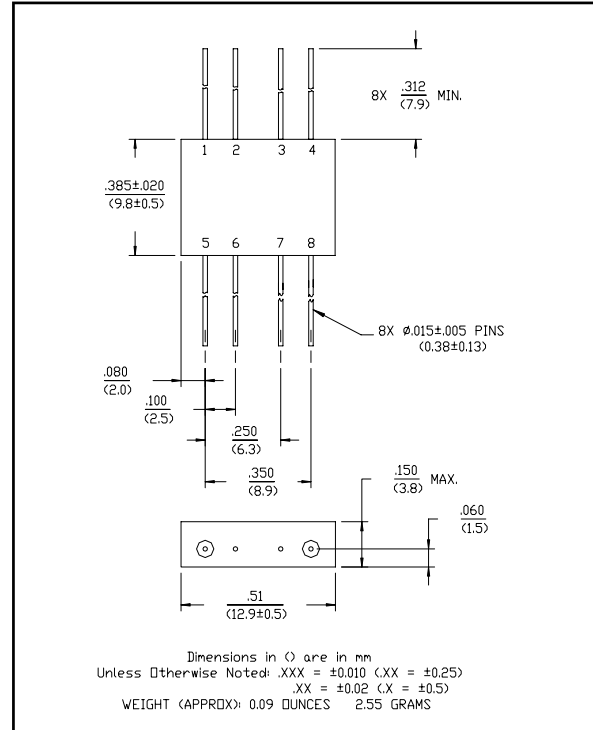
### SF-1 (HHS-109)



### Pin Configuration (HHS-109)

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

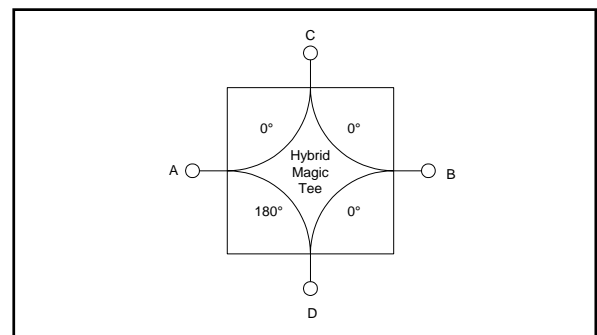
### FP-2 (HH-109)



### Pin Configuration (HH-109)

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

### Functional Diagram



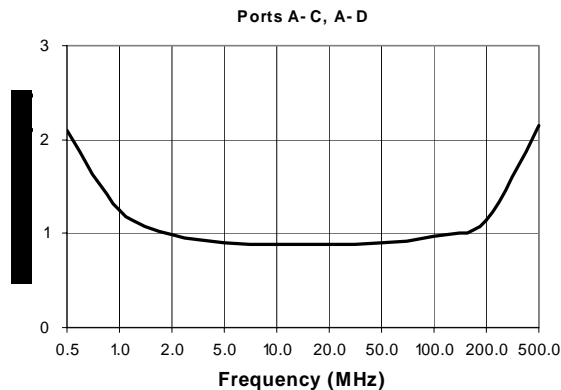
### Electrical Specifications<sup>1</sup>: $T_A = -55^\circ\text{C}$ to $+85^\circ\text{C}$

Parameter	Test Conditions	Frequency	Units	Min	Typ	Max
Insertion Loss	Less Coupling	5 - 200 MHz	dB	—	—	1.4
Isolation		5 - 100 MHz	dB	30	—	—
		100 - 200 MHz	dB	25	—	—
Amplitude Balance	—	5 - 200 MHz	dB	—	—	0.3
VSWR	—	5 - 100 MHz	Ratio	—	—	1.5:1
		100 - 200 MHz	Ratio	—	—	1.7:1
Phase Balance	—	5 - 100 MHz	°	—	—	4
		100 - 200 MHz	°	—	—	8
Impedance	—	—	Ohms	—	50	—
Input Power	—	—	Watts	—	—	0.5

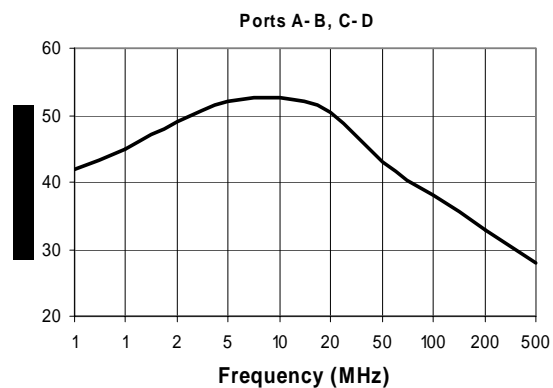
1. All specifications apply with 50 ohm source and load impedance.

### Typical Performance Curves

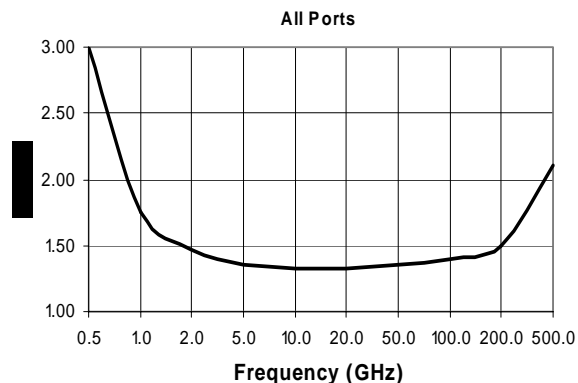
**Insertion Loss**



**Isolation**



**VSWR**



### Ordering Information

Part Number	Package
HH-109 PIN	FP-2
HHS-109 PIN	SF-1