

**Hybrid Junction, 10 - 500 MHz**

**HH-/HHS-110/HH-127  
V3**

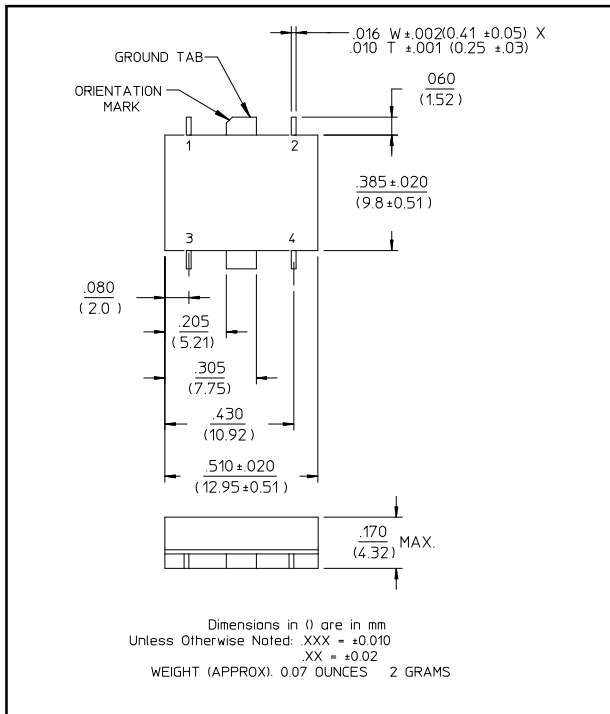
**Features**

- Broad Frequency Range
- Fully Hermetic Package (HHS-110)
- High Isolation: Typically 30 dB
- Impedance: 50 Ohms Nominal
- Input Power: 1 Watt Maximum
- MIL-STD-202 Screening Available

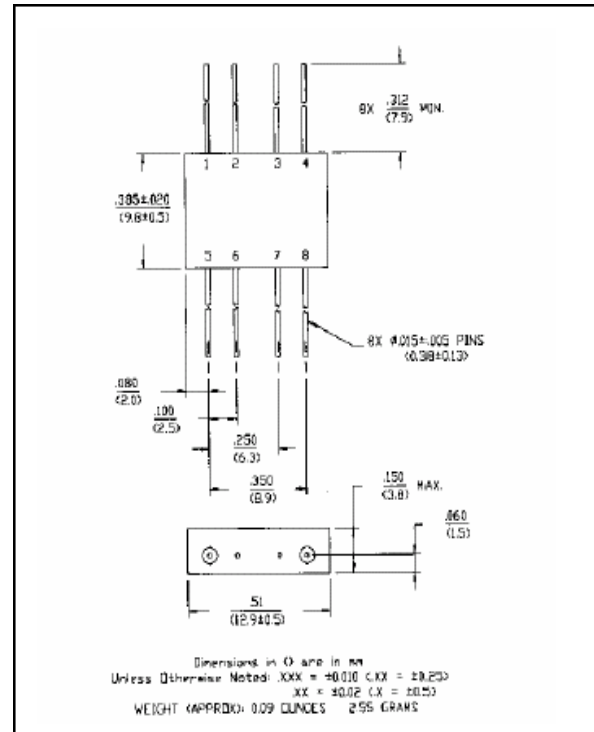
**Description**

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.

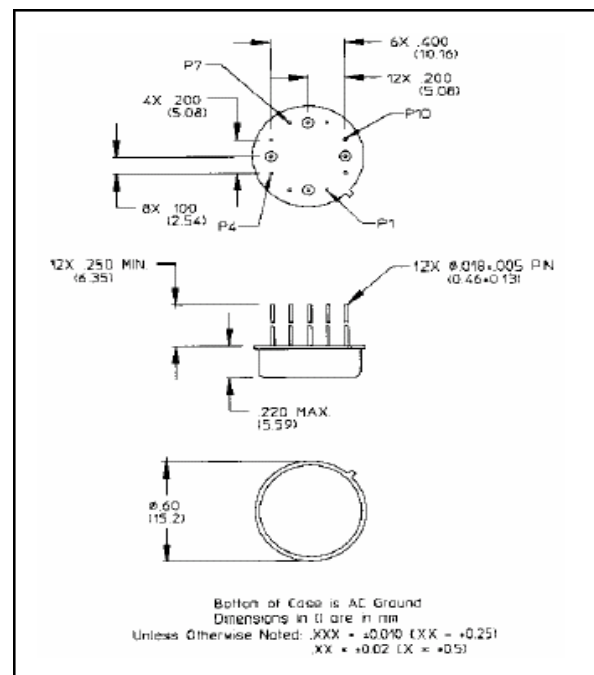
**SF-1 (HHS-110)**



**FP-2 (HH-110)**



**TO-8-2 (HH-127)**



**Pin Configuration (HH-110)**

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

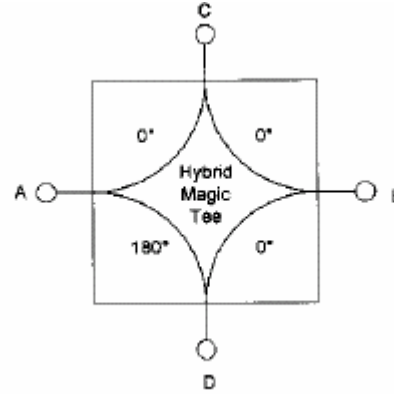
**Pin Configuration (HHS-110)**

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

**Pin Configuration (HH-127)**

Pin No.	Function	Pin No.	Function
1	GND	7	GND
2	C	8	B
3	GND	9	GND
4	GND	10	GND
5	A	11	D
6	GND	12	GND

**Functional Diagram**



**Hybrid Junction, 10 - 500 MHz**

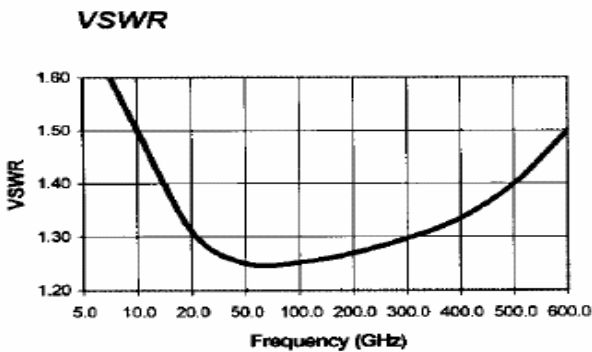
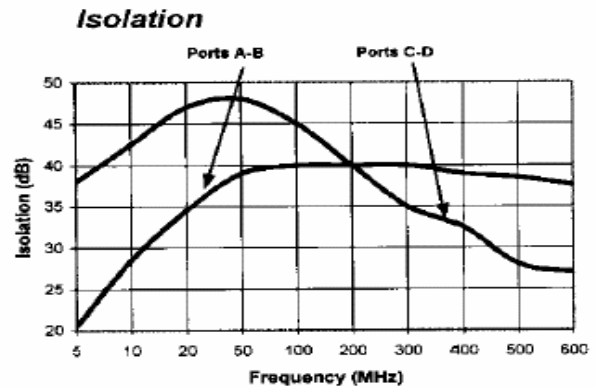
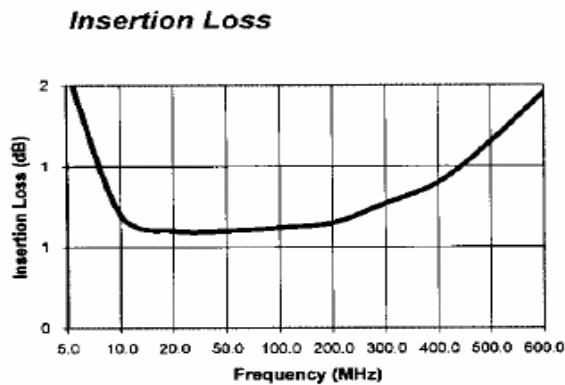
**HH-/HHS-110/HH-127  
V3**

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

Parameter	Test Conditions	Frequency	Units	Min	Typ	Max
Insertion Loss	Less Coupling	10 - 500 MHz	dB	—	—	1.4
		25 - 200 MHz	dB	—	—	1.0
Isolation		10 - 500 MHz	dB	20	—	—
		25 - 200 MHz	dB	30	—	—
Amplitude Balance	—	10 - 500 MHz	dB	—	—	0.6
		25 - 200 MHz	dB	—	—	0.4
VSWR	—	10 - 500 MHz	Ratio	—	—	2.0:1
		25 - 200 MHz	Ratio	—	—	1.6:1
Phase Balance	—	10 - 500 MHz	°	—	—	7
		25 - 200 MHz	°	—	—	5

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

**Typical Performance Curves**



**Ordering Information**

Part Number	Package
HH-110 PIN	FP-2
HHS-110	SF-1
HH-127 PIN	TO-8-2