

## 19.5 dB Bi-Directional Couplers 0.5-400 MHz

Rev. V4

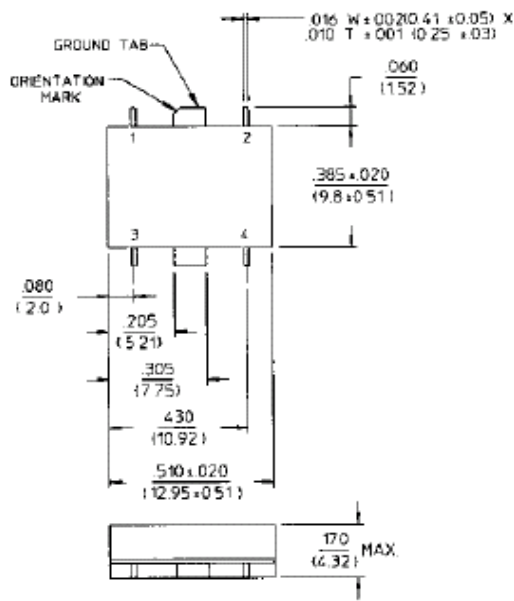
### Features

- Low Cost
- Convenient Plug-In Mounting
- Fully Hermetic Package (CHS-137)
- MIL-STD-202 Screening Available

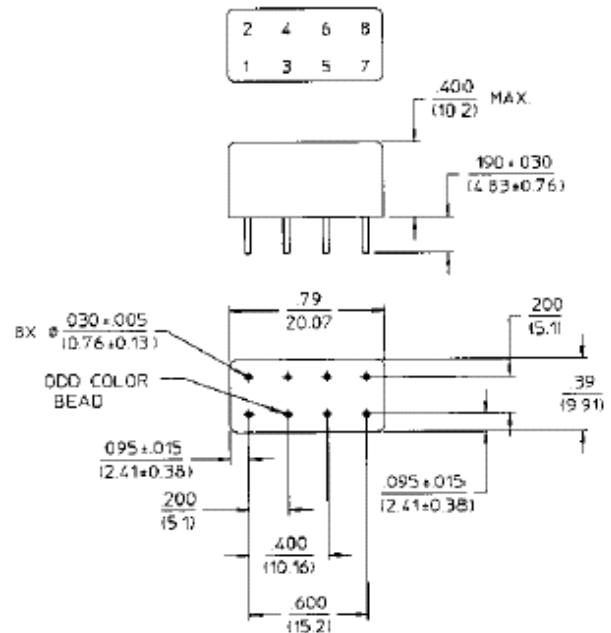
### Description

Bi-Directional Couplers offer the ability to couple the power in two directions while maintaining directivity.

### SF-1 (CHS-137)



### RH-1 (CH-137)



### Pin Configuration (CH-137)

Pin No.	Function	Pin No.	Function
1		5	GND
2	GND	6	
3		7	GND
4		8	GND

### Pin Configuration (CHS-137)

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

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

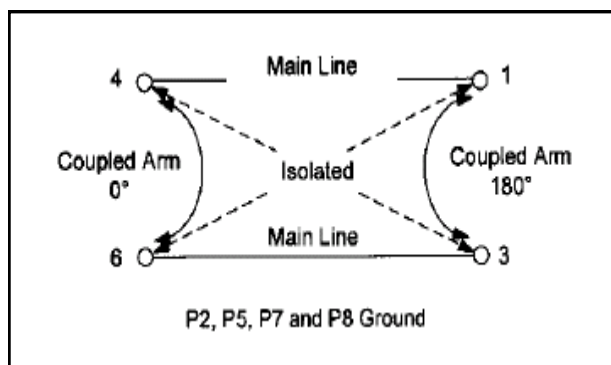
Parameter	Test Conditions	Frequency	Units	Min	Typ	Max
Coupling	Input to Output	0.5 - 200 MHz	dB	19.0	19.5	20.0
		200 - 400 MHz	dB	19.0	20.0	21.0
VSWR	All Ports	5 - 200 MHz 0.5 - 400 MHz	Ratio Ratio	— —	— —	1.2:1 1.5:1
Directivity	Both Directions	0.5 - 50 MHz	dB	30	—	—
		50 - 200 MHz	dB	20	—	—
		200 - 400 MHz	dB	15	—	—
Main Line Loss <sup>2</sup>	—	0.5 - 50 MHz	dB	—	—	0.5
		50 - 200 MHz	dB	—	—	0.4
		200 - 400 MHz	dB	—	—	0.6
Input Power	—	—	Watt	—	—	3.0

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

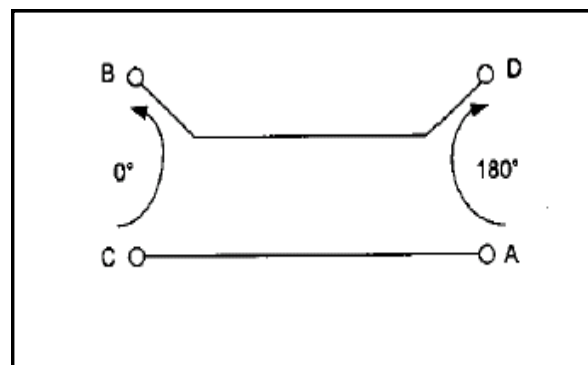
2. Includes theoretical power split.

This product contains elements protected by United States Patent number 3,426,298.

### Functional Diagram (CH-137)

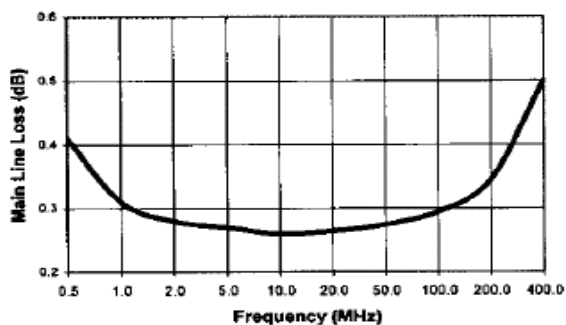


### Functional Diagram (CHS-137)

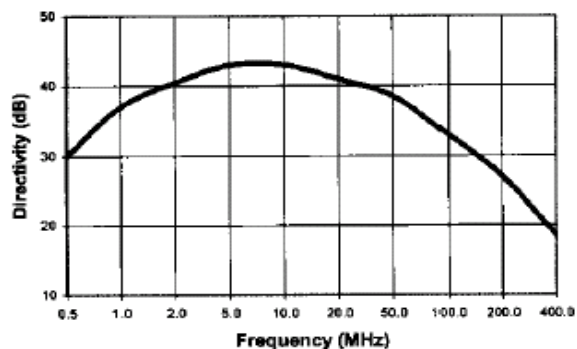


## Typical Performance Curves

**Main Line Loss**



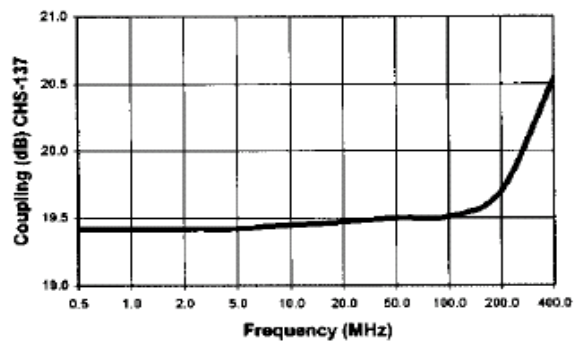
**Directivity**



## Ordering Information

Part Number	Package
CH-137 PIN	RH-1
CHS-137 PIN	SF-1

**Coupling**



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