# Bi-Directional Couplers, 10 - 500 MHz

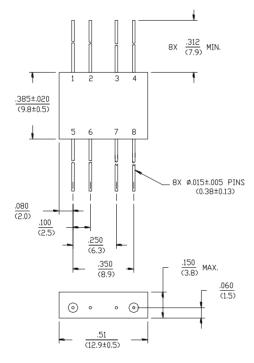
#### Features

- Constant Coupling within ±0.5 dB max.
- MIL-STD-202 Screening Available

#### Description

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

### FP-2 (CH-134)

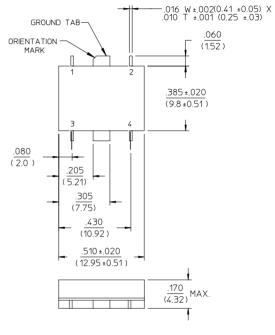


Dimensions in () are in mm Unless Otherwise Noted: .XXX = ±0.010 (.XX = ±0.25) .XX = ±0.02 (.X = ±0.5) WEIGHT (APPROX): 0.09 DUNCES 2.55 GRAMS

### **Pin Configuration**

Pin No.	Function	Pin No.	Function	
1	С	5	А	
2	GND	6	GND	
3	GND	7	GND	
4	В	8	D	

### SF-1 (CHS-134)



Dimensions in () are in mm Unless Otherwise Noted: XXX = ±0.010 XX = ±0.02 WEIGHT (APPROX): 0.07 OUNCES 2 GRAMS

### **Pin Configuration**

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

### **Ordering Information**

Part Number	Package		
CH-134-PIN	FP-2 (flat pack)		
CHS-134-PIN	SF-1 (surface mount)		

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

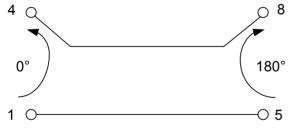
Parameter	Test Conditions	Units	Min.	Тур.	Max.
Coupling	Input to Output	dB	10.1	10.8	11.5
Coupling Flatness	_	dB		_	±0.5
VSWR	All Ports 10 - 500 MHz 25 - 200 MHz	Ratio			1.8:1 1.5:1
Directivity	Both Directions	dB	20	_	—
Main Line Loss <sup>2</sup>		dB	_	_	1.6
Input Power	_	W	_	_	1.0

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

2. Includes theoretical power split.

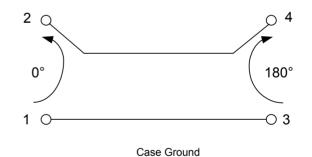
This product contains elements protected by United States Patent umber 3,426,298.

#### **Functional Diagram (CH-134)**



Case P2, P3, P6 and P7 Ground

#### **Functional Diagram (CHS-134)**



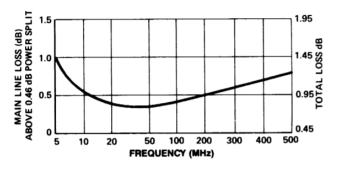
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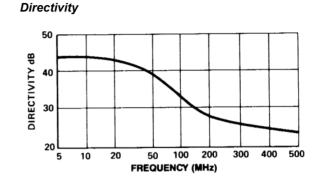
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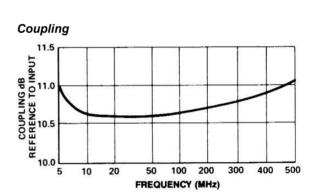
#### **Typical Performance Curves**

Main Line Loss

VSWR







 $1.8 \\ 1.6 \\ 1.4 \\ 1.2 \\ 1.0 \\ 5 \\ 10 \\ 20 \\ 50 \\ 100 \\ 200 \\ 300 \\ 400 \\ 500 \\ FREQUENCY (MHz)$ 

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