

**11 dB, Bi-Directional Coupler,  
10 - 500 MHz**

**CH-138  
V4**

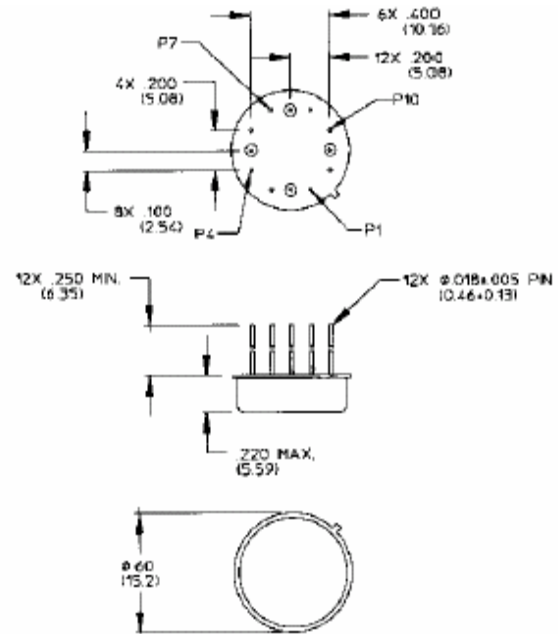
**Features**

- Constant Coupling - Within  $\pm 0.5$  dB Max
- MIL-STD-202 Screening Available

**TO-8-2**

**Description**

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



Bottom of Case is AC Ground  
Dimensions in II are in mm  
Unless Otherwise Noted: XXX = +0.010 (XX = +0.25)  
XX = +0.02 (X = +0.5)

**Pin Configuration**

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

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

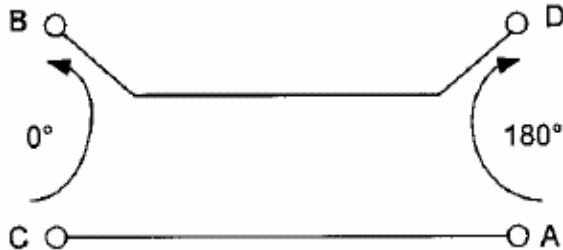
Parameter	Test Conditions	Frequency	Units	Min	Typ	Max
Coupling	Input to Output	—	dB	9.8	10.8	11.8
Coupling Flatness	—	—	dB	—	—	$\pm 0.5$
VSWR	All Ports	10 - 500 MHz 25 - 200 MHz	Ratio Ratio	— —	— —	1.8:1 1.5:1
Directivity	Both Directions	—	dB	17	—	—
Main Line Loss <sup>2</sup>	—	—	dB	—	—	1.6
Input Power	—	—	Watt	—	—	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 number 3,426,298.

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**Functional Diagram**

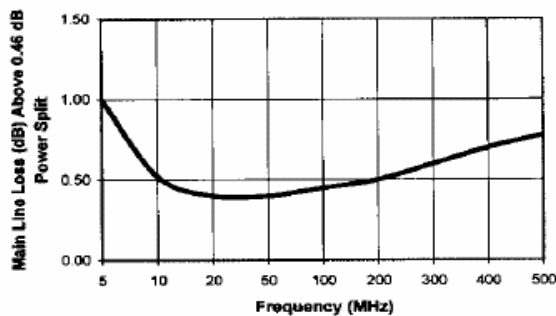


**Ordering Information**

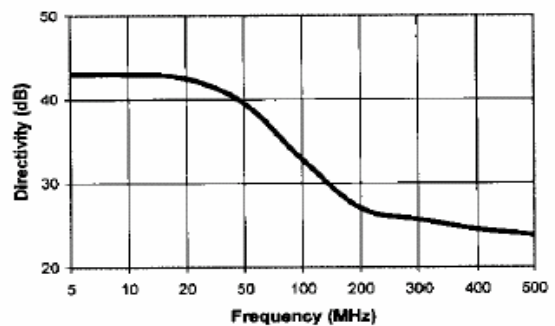
Part Number	Package
CH-138 PIN	TO-8-2

**Typical Performance Curves**

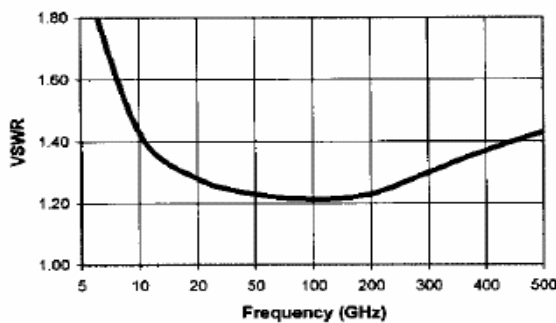
**Main Line Loss**



**Directivity**



**VSWR**



**Coupling**

