

CH- / CHS-137

19.5 dB Bi-Directional Couplers,
0.5 - 400 MHz

Rev. V4

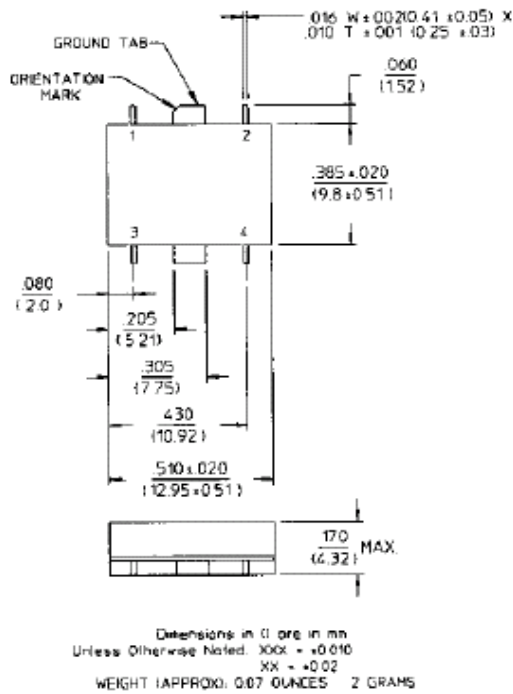
Features

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

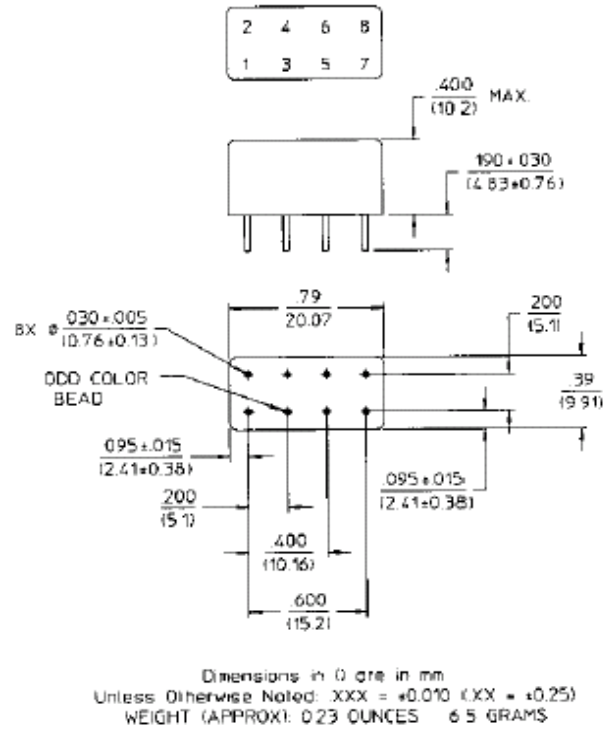
Description

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)

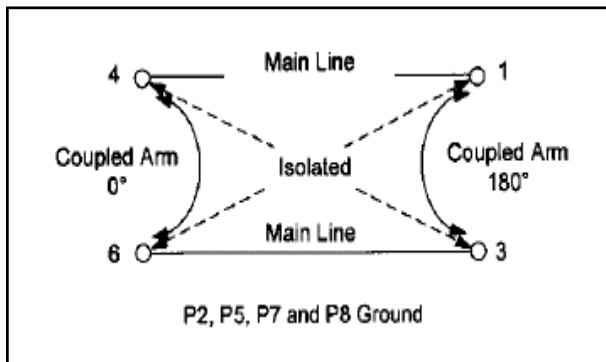
| Pin No. | Function | Pin No. | Function |
|---------|----------|---------|----------|
| 1 | C | 3 | A |
| 2 | B | 4 | D |

Electrical Specifications¹: $T_A = -55^{\circ}\text{C}$ to $+85^{\circ}\text{C}$

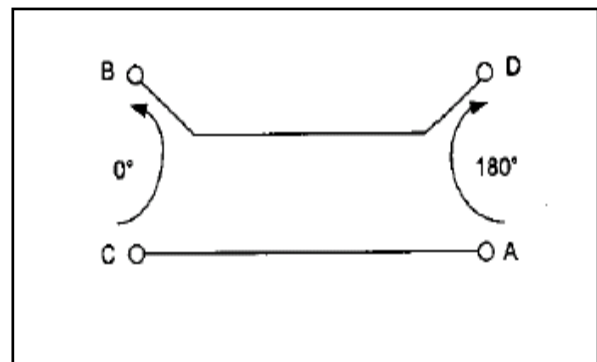
| Parameter | Test Conditions | Frequency | Units | Min | Typ | Max |
|-----------------------------|-----------------|------------------------------|----------------|--------|--------|----------------|
| Coupling | Input to Output | 0.5 - 200 MHz | dB | 19.0 | 19.5 | 20.0 |
| | | 200 - 400 MHz | dB | 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 ² | — | 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)

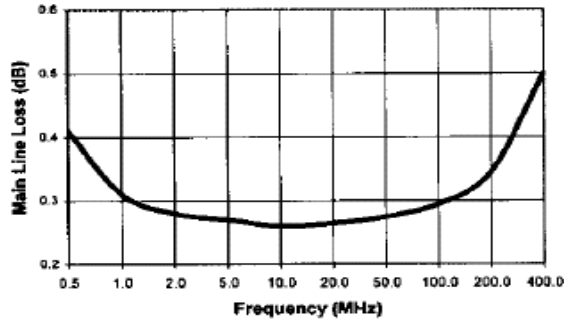


Functional Diagram (CHS-137)

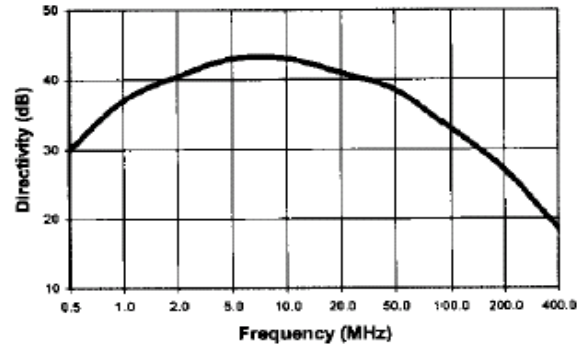


Typical Performance Curves

Main Line Loss



Directivity



Ordering Information

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

Coupling

