

## 20 dB, Bi Directional Coupler 1-1000MHz

Rev. V3

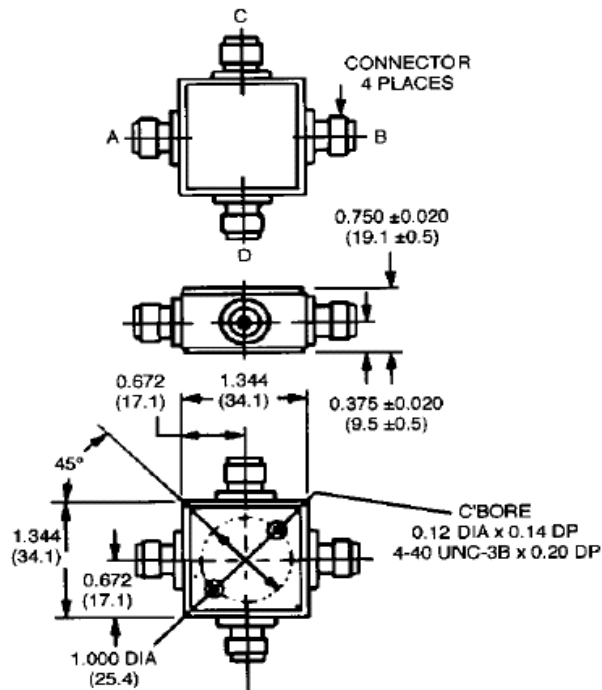
### Features

- Broad Frequency Range
- Constant Coupling—Within  $\pm 0.5$  dB Max
- VSWR: 1.3:1 Max
- 

### C-8

### Description

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



Dimensions in ( ) are in mm.  
Unless Otherwise Noted: .xxx =  $\pm 0.015$  (x =  $\pm 0.4$ )  
WEIGHT (APPROX.): 2.5 OUNCES 71 GRAMS

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

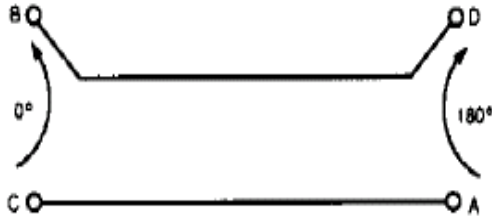
| Parameter                   | Test Conditions | Frequency    | Units | Min  | Typ  | Max        |
|-----------------------------|-----------------|--------------|-------|------|------|------------|
| Coupling                    | Input to Output | 1-1000 MHz   | dB    | 19.0 | 20.0 | 21.0       |
| Coupling Flatness           | —               | 10 - 500 MHz | dB    | —    | —    | $\pm 0.25$ |
|                             |                 | 1 - 1000 MHz | dB    | —    | —    | $\pm 0.5$  |
| VSWR                        | All Ports       | 10 - 500 MHz | Ratio | —    | —    | 1.2:1      |
|                             |                 | 1 - 1000 MHz | Ratio | —    | —    | 1.3:1      |
| Directivity                 | Both Directions | 10 - 500 MHz | dB    | 25   | —    | —          |
|                             |                 | 1 - 1000 MHz | dB    | 20   | —    | —          |
| Main Line Loss <sup>2</sup> | —               | 10 - 500 MHz | dB    | —    | —    | 0.5        |
|                             |                 | 1 - 1000 MHz | dB    | —    | —    | 0.7        |

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.

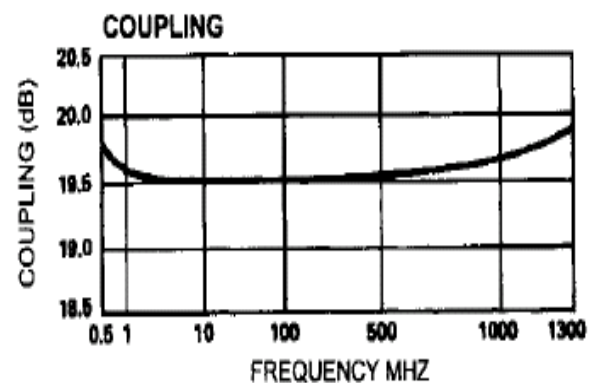
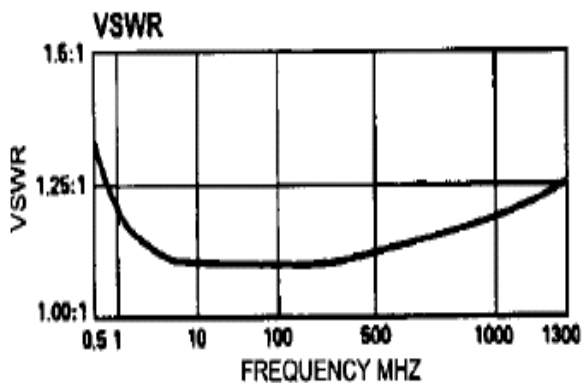
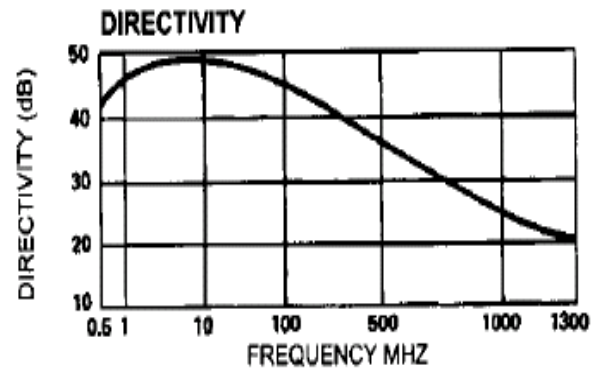
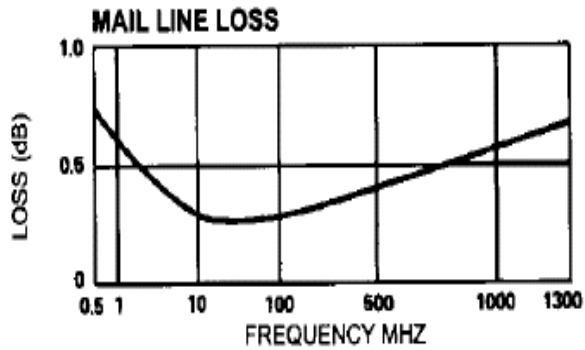
## Functional Diagram



## Ordering Information

| Part Number | Package       |
|-------------|---------------|
| CH-132 BNC  | Connectorized |
| CH-132 N    | Connectorized |
| CH-132 SMA  | Connectorized |
| CH-132 TNC  | Connectorized |

## Typical Performance Curves



M/A-COM Technology Solutions Inc. All rights reserved.

Information in this document is provided in connection with M/A-COM Technology Solutions Inc ("MACOM") products. These materials are provided by MACOM as a service to its customers and may be used for informational purposes only. Except as provided in MACOM's Terms and Conditions of Sale for such products or in any separate agreement related to this document, MACOM assumes no liability whatsoever. MACOM assumes no responsibility for errors or omissions in these materials. MACOM may make changes to specifications and product descriptions at any time, without notice. MACOM makes no commitment to update the information and shall have no responsibility whatsoever for conflicts or incompatibilities arising from future changes to its specifications and product descriptions. No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document.

THESE MATERIALS ARE PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, RELATING TO SALE AND/OR USE OF MACOM PRODUCTS INCLUDING LIABILITY OR WARRANTIES RELATING TO FITNESS FOR A PARTICULAR PURPOSE, CONSEQUENTIAL OR INCIDENTAL DAMAGES, MERCHANTABILITY, OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT. MACOM FURTHER DOES NOT WARRANT THE ACCURACY OR COMPLETENESS OF THE INFORMATION, TEXT, GRAPHICS OR OTHER ITEMS CONTAINED WITHIN THESE MATERIALS. MACOM SHALL NOT BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION, LOST REVENUES OR LOST PROFITS, WHICH MAY RESULT FROM THE USE OF THESE MATERIALS.

MACOM products are not intended for use in medical, lifesaving or life sustaining applications. MACOM customers using or selling MACOM products for use in such applications do so at their own risk and agree to fully indemnify MACOM for any damages resulting from such improper use or sale.