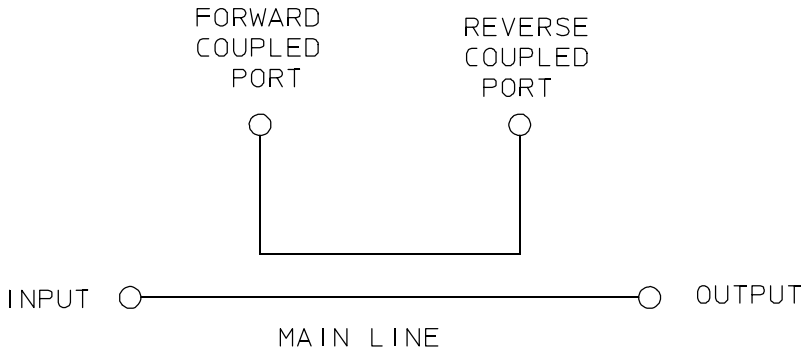


# CRF-A Series

# BI-DIRECTIONAL COUPLERS

5 to 1500 MHz / 4-Port / Multi-Octave / Minimal Size and Weight / Hi-Rel Hermetic Flatpack



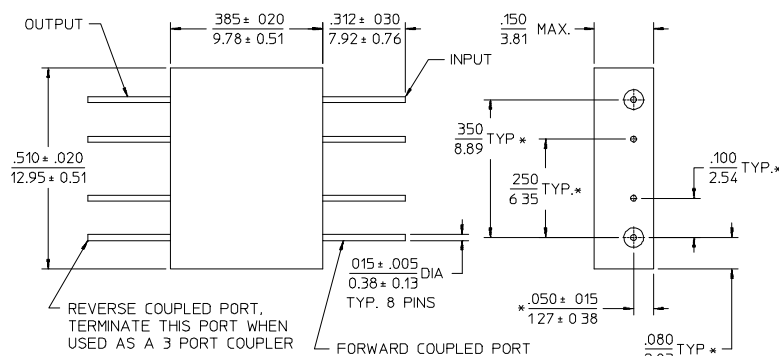
## PRINCIPAL SPECIFICATIONS

Model Number	Frequency Range, MHz	Performance Bandwidth, MHz	α Coupling Value, dB, Nom.	Frequency Sensitivity, dB, Max.	Directivity, dB, Min.	*Insertion Loss, dB, Max.	VSWR, Max.
CRF-10A-250	5 - 500	5 - 500	10 ±1.0	± 0.5	20	1.3	1.5:1
CRF- 20A-250	5 - 500	5 - 500 10 - 400	20 ±1.0 20 ±1.0	± 0.75 ± 0.5	18 20	1.0 0.6	1.5:1 1.3:1
CRF-11A-1000	100 - 1500	100 - 1500 500 - 1000	11 ±1.0 11 ±1.0	± 0.5 ± 0.5	18 20	1.5 1.2	1.7:1 1.5:1
CRF-20A-1000	100 - 1500	100 - 1500 500 - 1000	20 ±1.0 20 ±1.0	± 0.5 ± 0.5	18 20	1.5 1.2	1.7:1 1.5:1

α Coupling is Referenced to the Input

\* Insertion Loss excludes Coupling Loss

## Outline of A-Size Package



- NOTES:
1. Tolerance on 3 place decimals ±.010(.25) except as noted.
  2. Dimensions in inches over millimeters.
  3. Dimensions marked with \* apply only at body.
  4. All unmarked pins are case ground.

## GENERAL SPECIFICATIONS

Impedance: 50 Ω nom.  
 CW Input: 1 W max.  
 Weight, nominal: 0.1 oz (2.8 g)  
 Operating Temperature: -55° to +85°C

## OPTIONAL SPECIFICATIONS

Coupling Values: 5 to 30 dB  
 Frequency Bands: up to 2.5 GHz  
 Close tolerance Coupling: ± 0.5 dB  
 Three Port Equivalents: see CBF series

## General Notes:

1. Merrimac directional couplers are available in a variety of packages to suit most applications. The CRF-A series utilizes the standard flatpack which is suitable for aerospace applications where size, weight and reliability are important considerations.
2. Applications of directional couplers include monitoring of incident and reflected power, signal sampling for control loops and test signal injection devices in BITE. These Bi-Directional Couplers have both coupled ports available but they may be ordered with one coupled port terminated internally as in the CBF series of directional couplers.
3. Merrimac Couplers may be ordered with coupling values up to 30 dB covering selected frequency bands up to 65 GHz.
4. These units comply with MIL-C-15370 and can be supplied screened for compliance with additional specifications you specify for military and aerospace applications requiring higher reliability.

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