



MICROLAB/FXR

CF-C series

Loop Couplers

Dual Directional Coupler
Low Loss, High Power
200 – 3000 MHz

- ◆ Simultaneous Monitoring of both Transmitted and Reflected Power
- ◆ Cellular/GSM & PCS/DCN Radio Bands
- ◆ 750 Watt Average Main Line Power
- ◆ High Directivity
- ◆ Precise set and lock of Coupling Value
- ◆ Air Dielectric for minimal Insertion Loss
- ◆ High Reliability, Low Intermodulation
- ◆ N or 7-16 mm DIN Connectors
- ◆ See CF series for standard range



The Microlab/FXR CF-C series of Dual Directional Loop Couplers is designed to operate anywhere in the 200 to 3000 MHz frequency range. Each unit is a set and lock device enabling the setting of very precise coupling values over narrow bands such as the cellular or PCS/DCN wireless bands. For wide band applications effects of the 6 dB/octave change in coupling value must be assessed. This CF-C series data sheet is designed to cover the common use of CF couplers in the cellular/GSM and PCS/DCN wireless bands.

All units are constructed from common parts, which are maintained in stock at all times, enabling rapid delivery and low production costs. With minimal solder joints and an air dielectric, the dissipative loss has been minimized and reliability enhanced. A common application is to provide a sample of a high power transmission signal for test and monitoring. A simple bracket accessory allows easy attachment to pole or wall.

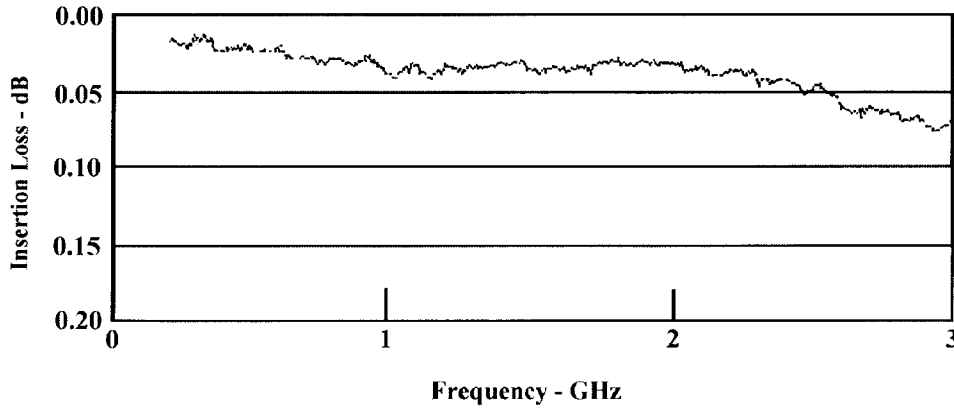
Options for different polarity or alternate connectors are available on request. (6/98)

Frequency Ranges, MHz	Cellular/GSM	PCS/DCN
Coupling:		
Standard Values	20, 30, 40 and 50 dB	
Midband Accuracy, dB	20/30/40 ± 0.25	20/30/40 ± 0.3
	50 ± 0.35 dB	50 ± 0.35 dB
Flatness (4% band)	± 0.15 dB	± 0.35 dB
Directivity:	25 dB min.	20 dB min.
Dissipative Loss:	0.05 dB max.	0.1 dB max.
VSWR:		
Main Ports	1.10:1 max.	1.25:1 max.
Coupled Ports	1.25:1 max.	1.50:1 max.
Power Handling:		
Incident	750 W avg.	500 W avg.
Reflected at 20 dB	50 W avg.	50 W avg.
Reflected at 30 dB	500 W avg.	500 W avg.
Reflected at 40/50 dB	750 W avg.	500W avg.
Peak	10 kW	
Impedance:	50Ω nominal	
Intermod. Distortion:	< -140 dBc (2 tones of +43 dBm) < -150 dBc with DIN connectors	
Temperature:	-35°C to +75°C	
Applications:	Indoor or Outdoor	
Finish, Interior:	Silverplate to QQ-S-365	
Finish, Housing:	Iridite per MIL C-5541	

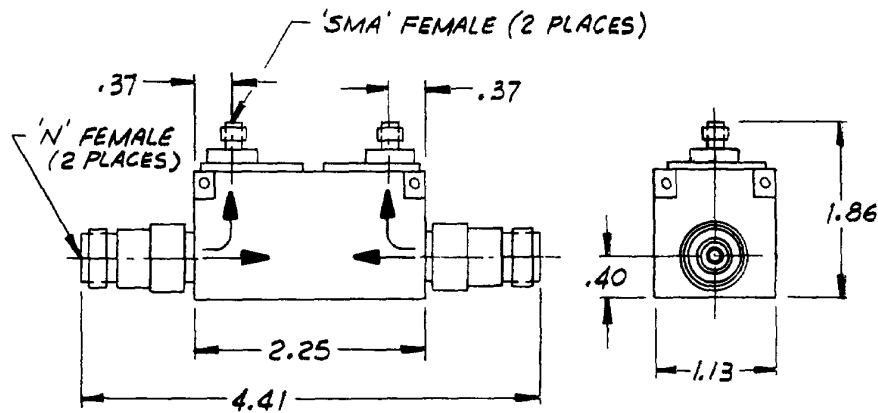
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CF-C series Loop Couplers

Typical Insertion Loss Characteristics of CF-C Loop Couplers



Outline Model CF series with N connectors



Model Selection

N- connectors

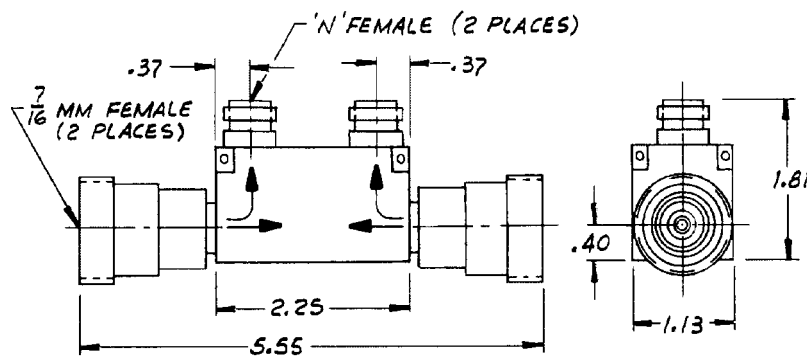
Cellular Band: 869 – 994 MHz

Coupling	Model No.
20 dB	CF-C01A
30 dB	CF-C01B
40 dB	CF-C01C
50 dB	CF-C01D

PCS Band: 1850 – 1990 MHz

Coupling	Model No.
20 dB	CF-C03A
30 dB	CF-C03B
40 dB	CF-C03C
50 dB	CF-C03D

Outline Model CF series with 9-16 mm DIN connectors



Model Selection

7-16 mm DIN connectors

Cellular Band: 869 – 994 MHz

Coupling	Model No.
20 dB	CF-C02A
30 dB	CF-C02B
40 dB	CF-C02C
50 dB	CF-C02D

PCS Band: 1850 – 1990 MHz

Coupling	Model No.
20 dB	
30 dB	
40 dB	
50 dB	

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