

**PRINCIPAL SPECIFICATIONS**

Model Number	Frequency Range, GHz	Nominal Coupling, ^a dB	Frequency Sensitivity, dB, Max.	Directivity dB, Min.	*Insertion Loss, dB, Max.	VSWR, Max. Main Line	VSWR, Max. Coupled Lines	Outline Ref.
CDM-10M-.75G	0.5 - 1.0	10 ±1.25	± 0.8	22	1.50	1.15:1	1.10:1	1
CDM-20M-.75G		20 ±1.25			0.50			1
CDM-30M-.75G		30 ±1.25			0.40			2
CDM-10M-1.5G	1.0 - 2.0	10 ±1.25	± 0.8	22	1.50	1.15:1	1.10:1	3
CDM-20M-1.5G		20 ±1.25			0.50			3
CDM-30M-1.5G		30 ±1.25			0.40			4
CDM-10M-3G	2.0 - 4.0	10 ±1.25	± 0.8	20	1.50	1.20:1	1.15:1	5
CDM-20M-3G		20 ±1.25			0.50			5
CDM-30M-3G		30 ±1.25			0.40			6
CDM-10M-4G	2.6 - 5.2	10 ±1.25	± 0.8	18	1.50	1.30:1	1.25:1	7
CDM-20M-4G		20 ±1.25			0.50			7
CDM-30M-4G		30 ±1.25			0.40			8
CDM-10M-6G	4.0 - 8.0	10 ±1.25	± 0.8	18	1.70	1.35:1	1.25:1	7
CDM-20M-6G		20 ±1.25			0.50			7
CDM-30M-6G		30 ±1.25			0.40			8
CDM-10M-10G	7.0 - 12.4	10 ±1.25	± 0.6	16	1.90	1.35:1	1.30:1	7
CDM-20M-10G		20 ±1.25			0.70			7
CDM-30M-10G		30 ±1.25			0.60			8
CDM-10M-12G	8.0 - 16.0	10 ±1.25	± 0.8	15	2.20	1.40:1	1.40:1	7
CDM-20M-12G		20 ±1.25			1.00			9
CDM-30M-12G		30 ±1.25			1.00			9
CDM-20M-15G	12.4 - 18.0	20 ±1.25	± 0.6	15	1.00	1.40:1	1.40:1	9
CDM-30M-15G		30 ±1.25			1.00			9

^aCoupling is referenced to the input and includes frequency sensitivity

* Insertion Loss including Coupling Loss

21Feb96

POWER SPECIFICATIONS

Coupled Power "Loss":

10 dB section: 0.46 dB

20 dB section: 0.044 dB

30 dB section: 0.004 dB

Peak Power:

CDM-M-12G: 2 kW max.

CDM-M-15G: 1 kW max.

All Others: 3 kW max.

Input Power (Forward):

50 Watts max.

GENERAL SPECIFICATIONS

Impedance: 50 Ω nom.

Operating Temperature: - 55° to +85°C

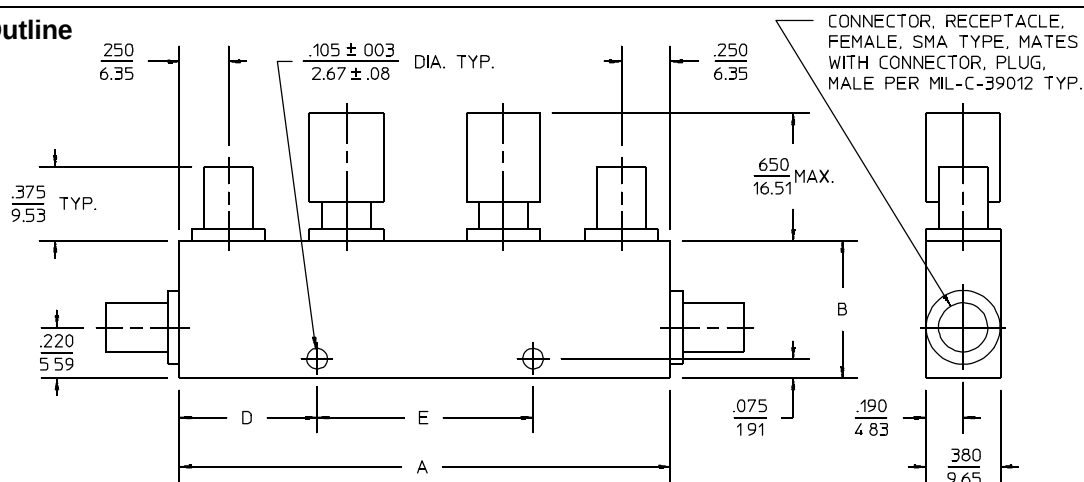
SMA Connectors: Female, to meet the interface rqts. of MIL-C-39012.

N type connectors: see CDN-M series

Other frequency bands: Available option



Package Outline



OUTLINE	A	B	D	E	WT. OZ. (G)
1	$\frac{6.300}{160.02}$	$\frac{.500}{12.70}$	$\frac{.800}{20.32}$	$\frac{4.700}{119.38}$	2.29 (65)
2	$\frac{6.300}{160.02}$	$\frac{.550}{13.97}$	$\frac{.800}{20.32}$	$\frac{4.700}{119.38}$	2.47 (70)
3	$\frac{3.680}{93.47}$	$\frac{.500}{12.70}$	$\frac{.420}{10.67}$	$\frac{2.820}{71.63}$	1.59 (45)
4	$\frac{3.680}{93.47}$	$\frac{.550}{13.97}$	$\frac{.420}{10.67}$	$\frac{2.820}{71.63}$	1.73 (49)
5	$\frac{2.420}{61.47}$	$\frac{.500}{12.70}$	$\frac{.410}{10.41}$	$\frac{1.600}{40.64}$	1.20 (34)
6	$\frac{2.420}{61.47}$	$\frac{.550}{13.97}$	$\frac{.410}{10.41}$	$\frac{1.600}{40.64}$	1.27 (36)
7	$\frac{2.100}{53.34}$	$\frac{.500}{12.70}$	$\frac{.500}{12.70}$	$\frac{1.100}{27.94}$	1.13 (32)
8	$\frac{2.100}{53.34}$	$\frac{.550}{13.97}$	$\frac{.500}{12.70}$	$\frac{1.100}{27.94}$	1.20 (34)
9	$\frac{2.100}{53.34}$	$\frac{.600}{15.24}$	$\frac{.500}{12.70}$	$\frac{1.100}{27.94}$	1.27 (36)

NOTES:

1. Tolerance on 3 place decimals $\pm .020(.51)$ except as noted.
2. Dimensions in inches over millimeters.
3. Weights are nominal on all outlines.

General Notes:

1. Units in the CDM series of dual directional couplers comprise two directional couplers back-to-back designed to monitor both forward and reflected power with minimal perturbation to the main line signal.
2. Each miniature coupler is a multi section quarter wave coupler utilizing stripline technology designed to cover an octave band of frequencies.
3. Dual directional couplers with unequal coupling values or dual in-line configuration may be custom ordered with coupling values up to 30 dB and with coverage extending over selected frequency bands up to 18 GHz.
4. Merrimac directional couplers comply with MIL-C-15370 and may be supplied screened for compliance with additional specifications you designate for military and aerospace applications requiring higher reliability

21Feb96