



## CWM-M-G Series

## DIRECTIONAL COUPLERS

0.6 to 18 GHz / Ultra-Broadband / 6, 10, 16, 20 dB Coupling / Low Cost Stripline / 50 W / SMA



### PRINCIPAL SPECIFICATIONS

Model Number	Frequency Range, GHz	Nominal Coupling, dB, (ref input)	Frequency Sensitivity, dB, Nom.	Directivity, dB, Min.		Insertion Loss, dB, Max.	VSWR max.		Outline Ref.
				<12.4	>12.4 GHz		Main Line	Coupled Line	
CWM-10M-2.3G	0.6 - 4.0	10 ±1.0	±0.75	18	NA	0.40	1.25:1	1.30:1	10
CWM-10M-9.5G	1.0 - 18.0	10* ±1.0	±0.50	15	12	0.90	1.40:1	1.50:1	11
CWM-16M-9.5G		16* ±1.0	±0.50	15	12	0.80	1.40:1	1.50:1	12
CWM-20M-9.5G		20* ±1.0	±0.50	15	12	0.85	1.40:1	1.50:1	12
CWM-6M-10G	2.0 - 18.0	6* ±1.0	±0.50	15	12	0.90	1.35:1	1.50:1	13
CWM-10M-10G		10* ±1.0	±0.50	15	12	0.60	1.35:1	1.50:1	13
CWM-16M-10G		16* ±1.0	±0.50	15	12	0.80	1.35:1	1.40:1	14
CWM-20M-10G		20* ±1.0	±0.50	15	12	0.80	1.35:1	1.40:1	14
CWM-6M-11G	4.0 - 18.0	6 ±1.0	±0.50	15	12	0.90	1.35:1	1.40:1	15
CWM-10M-11G		10 ±1.0	±0.50	15	12	0.60	1.35:1	1.40:1	15
CWM-20M-11G		20 ±1.0	±0.50	15	12	0.80	1.40:1	1.40:1	16

\* Coupling is referenced to the output.

§ Coupling includes Frequency Sensitivity

<sup>†</sup> Insertion Loss above Coupling Loss

### POWER SPECIFICATIONS

Coupled Power "Loss":

6 dB units:	1.25 dB
10 dB units:	0.46 dB
20 dB units:	0.044 dB
30 dB units:	0.004 dB

Peak Power:

3 kW max.

CW Input Power (Forward):

CWM-10M-2.3G:	50 Watts max.
All others:	25 Watts max.

CW Reflected Power:

6 dB units:	2 Watts max.
10 dB units:	5 Watts max.
20 dB units:	50 Watts max.

### GENERAL SPECIFICATIONS

Impedance:	50 Ω nom.
Operating Temp:	- 55° to +85°C
SMA Connectors:	Female, to meet interface requirements of MIL-C-39012
Other connectors:	TNC and N type available. Check with factory.
Other frequencies:	Optional

#### General Notes:

1. The CWM-M-G series of directional couplers are miniature three port devices utilizing stripline technology in a connectorized package. Each unit is a multi-section quarter wave coupler designed to cover a very broad band of frequencies. They are ideally suited for monitoring forward or reflected power in EW and similar wideband systems with minimal perturbation to the main line signal. A variety of performance and frequency coverage options are available.

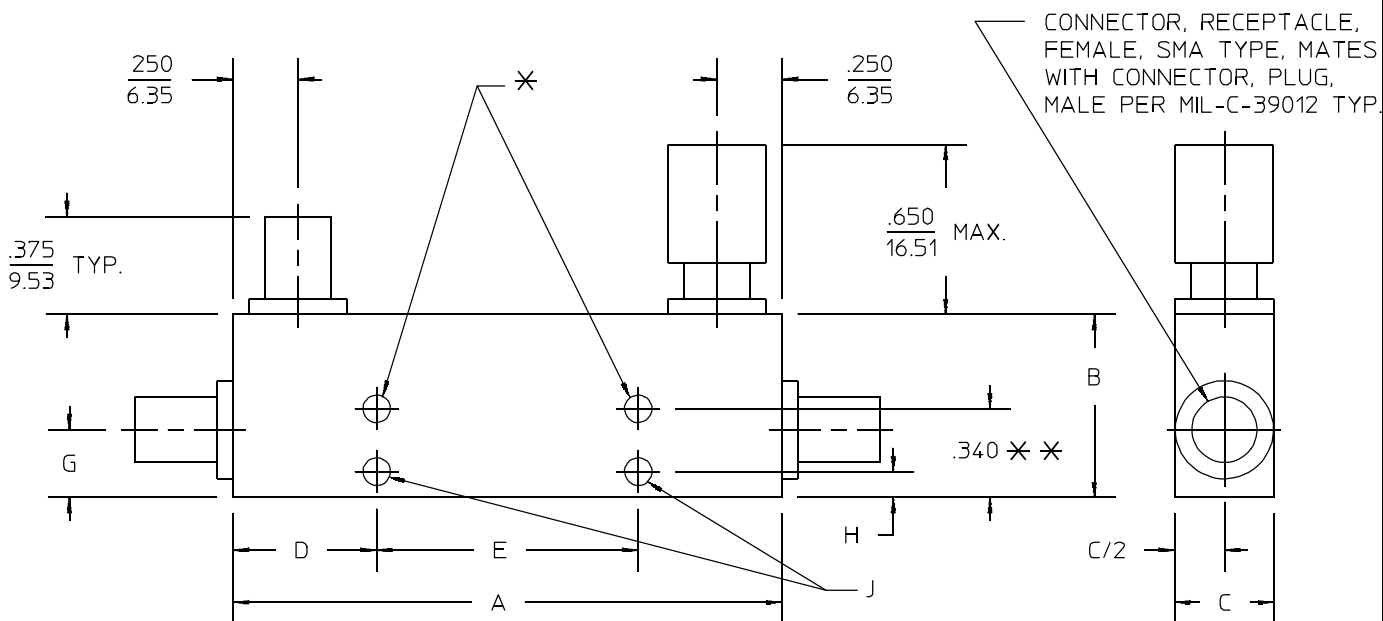
2. These units comply with MIL-C-15370 and may be supplied screened for compliance with additional specifications you designate for military and aerospace applications requiring the highest reliability.

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For further information contact **MERRIMAC / 41 Fairfield Pl., West Caldwell, NJ, 07006 / 973.575.1300 / FAX: 973.575.0531**



Package Outline



OUTLINE	A	B	C	D	E	G	H	J	WT. OZ. (G)
10	$\frac{4.400}{111.76}$	$\frac{.600}{15.24}$	$\frac{.380}{9.65}$	$\frac{.500}{12.70}$	$\frac{3.400}{86.36}$	$\frac{.240}{6.10}$	$\frac{.075}{1.91}$	$\frac{.105}{2.67}$	1.83 (52)
11	$\frac{3.470}{88.14}$	$\frac{.700}{17.78}$	$\frac{.380}{9.65}$	$\frac{.740}{18.80}$	$\frac{2.000}{50.80}$	$\frac{.260}{6.60}$	$\frac{.100}{2.54}$	$\frac{.105}{2.67}$	1.69 (48)
12	$\frac{3.470}{88.14}$	$\frac{.700}{17.78}$	$\frac{.500}{12.70}$	$\frac{.740}{18.80}$	$\frac{2.000}{50.80}$	$\frac{.260}{6.60}$	$\frac{.100}{2.54}$	$\frac{.105}{2.67}$	2.19 (62)
13	$\frac{2.100}{53.34}$	$\frac{.700}{17.78}$	$\frac{.380}{9.65}$	$\frac{.550}{13.97}$	$\frac{1.000}{25.40}$	$\frac{.260}{6.60}$	$\frac{.100}{2.54}$	$\frac{.105}{2.67}$	1.20 (34)
14	$\frac{2.090}{53.09}$	$\frac{.700}{17.78}$	$\frac{.500}{12.70}$	$\frac{.550}{13.97}$	$\frac{1.000}{25.40}$	$\frac{.260}{6.60}$	$\frac{.100}{2.54}$	$\frac{.105}{2.67}$	1.55 (44)
15	$\frac{1.360}{34.54}$	$\frac{.600}{15.24}$	$\frac{.380}{9.65}$	$\frac{.430}{10.92}$	$\frac{.500}{12.70}$	$\frac{.260}{6.60}$	$\frac{.090}{2.29}$	$\frac{.105}{2.67}$	.85 (24)
16	$\frac{1.360}{34.54}$	$\frac{.660}{16.76}$	$\frac{.380}{9.65}$	$\frac{.430}{10.92}$	$\frac{.500}{12.70}$	$\frac{.260}{6.60}$	$\frac{.090}{2.29}$	$\frac{.105}{2.67}$	.88 (25)

\* 2-56NC-2B X .120 (3.05) DEEP  
 \*\* FOR OUTLINE 12 & 14 ONLY

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.