CSM-M-G SERIES - DIRECTIONAL COUPLERS

TECHNICAL FEATURE

FEATURES

- 0.5 to 18 GHz
- Octave Bands
- 50 W
- 6, 10, 20 & 30 dB Coupling
- Low Cost Stripline
- SMA

PRINCIPAL SPECIFICATIONS

Model Number	Frequency Range, GHz	Coupling¤, dB, Nom.	Frequency Sensitivity, dB, Max.	Directivity, dB, Min.	*Insertion Loss, dB, Max.	VSWR, Max., Main Line	VSWR, Max., Coupled Line	Outline Ref. Dim.
CSM-6M-.75G	0.5 - 1.0	6 ±1.0	±0.60	25	0.20	1.15:1	1.15:1	1
CSM-10M-.75G		10 ±1.25	±0.75	25	0.20	1.10:1	1.10:1	1
CSM-20M-.75G		20 ±1.25	±0.75	25	0.15	1.10:1	1.10:1	1
CSM-30M-.75G		30 ±1.25	±0.75	25	0.15	1.10:1	1.10:1	2
CSM-6M-1.5G	1.0 - 2.0	6 ±1.0	±0.60	25	0.20	1.15:1	1.15:1	3
CSM-10M-1.5G		10 ±1.25	±0.75	25	0.20	1.10:1	1.10:1	3
CSM-20M-1.5G		20 ±1.25	±0.75	25	0.20	1.10:1	1.10:1	3
CSM-30M-1.5G		30 ±1.25	±0.75	25	0.20	1.10:1	1.10:1	4
CSM-6M-3G	2.0 - 4.0	6 ±1.0	±0.60	22	0.20	1.15:1	1.15:1	5
CSM-10M-3G		10 ±1.25	±0.75	22	0.20	1.15:1	1.15:1	5
CSM-20M-3G		20 ±1.25	±0.75	22	0.20	1.15:1	1.15:1	5
CSM-30M-3G		30 ±1.25	±0.75	22	0.20	1.15:1	1.15:1	6
CSM-6M-4G	2.6 - 5.2	6 ±1.0	±0.60	20	0.25	1.25:1	1.25:1	7
CSM-10M-4G		10 ±1.25	±0.75	20	0.25	1.25:1	1.25:1	7
CSM-20M-4G		20 ±1.25	±0.75	20	0.25	1.25:1	1.25:1	7
CSM-6M-6G	4.0 - 8.0	6 ±1.0	±0.60	20	0.25	1.25:1	1.25:1	7
CSM-10M-6G		10 ±1.25	±0.75	20	0.25	1.25:1	1.25:1	7
CSM-20M-6G		20 ±1.25	±0.75	20	0.25	1.25:1	1.25:1	7
CSM-6M-10G	7 - 12.4	6 ±1.0	±0.50	17	0.30	1.30:1	1.30:1	7
CSM-10M-10G		10 ±1.0	±0.50	17	0.30	1.30:1	1.30:1	7
CSM-20M-10G		20 ±1.0	±0.50	17	0.30	1.30:1	1.30:1	7
CSM-30M-10G		30 ±1.0	±0.50	17	0.30	1.30:1	1.30:1	8
CSM-6M-12G	7.5 - 16	6 ±1.0	±0.60	12	0.60	1.35:1	1.40:1	7
CSM-10M-12G		10 ±1.25	±0.75	12	0.60	1.35:1	1.40:1	7
CSM-20M-12G		20 ±1.25	±0.75	15	0.50	1.35:1	1.40:1	9
CSM-30M-12G		30 ±1.25	±0.75	15	0.50	1.35:1	1.40:1	9
CSM-6M-15G	12.4 - 18	6 ±1.0	±0.50	15	0.60	1.30:1	1.40:1	7
CSM-10M-15G		10 ±1.0	±0.50	15	0.60	1.30:1	1.40:1	7
CSM-20M-15G		20 ±1.0	±0.50	15	0.50	1.30:1	1.40:1	9
CSM-30M-15G		30 ±1.0	±0.50	15	0.50	1.30:1	1.40:1	9

¤Coupling is referenced to the **input**

*Insertion loss is over and above coupling "loss"

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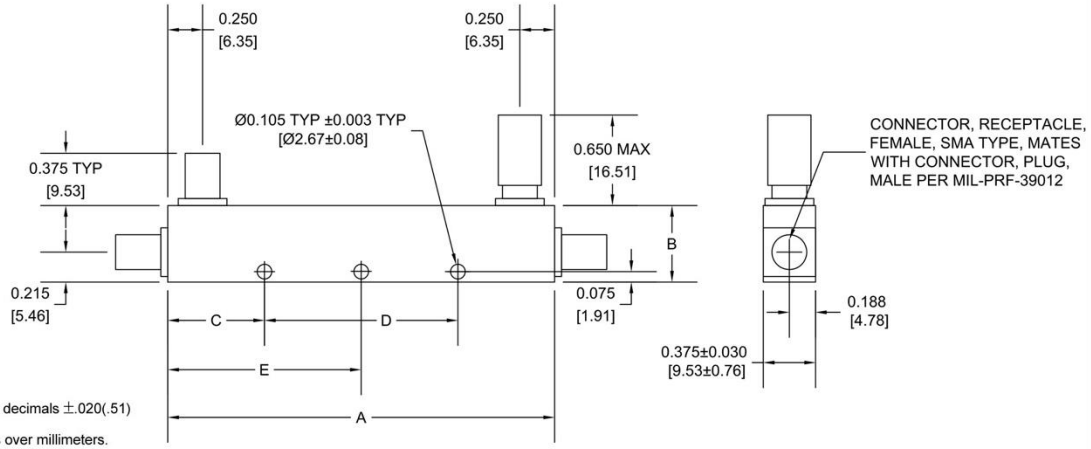
CSM-M-G SERIES - DIRECTIONAL COUPLERS

PACKAGE OUTLINE

Package Outline



NOTES:
1. Tolerance on 3 place decimals ±.020(.51) except as noted.
2. Dimensions in inches over millimeters.
3. Weights are nominal on all outlines.
4. Outline 2A differs from 2 in dimension A=5.88"

OUTLINE	A	B	C	D	E	WT. OZ. (G)
1	3.100 / 78.74	.500 / 12.70	.800 / 20.32	1.500 / 38.10	—	1.20 (34)
2	3.100 / 78.74	.550 / 13.97	.800 / 20.32	1.500 / 38.10	—	1.31 (37)
3	1.780 / 45.21	.500 / 12.70	.420 / 10.67	.940 / 23.88	—	.88 (25)
4	1.780 / 45.21	.550 / 13.97	.420 / 10.67	.940 / 23.88	—	.95 (27)
5	1.160 / 29.46	.500 / 12.70	.410 / 10.41	.340 / 8.64	—	.71 (20)
6	1.160 / 29.46	.550 / 13.97	.410 / 10.41	.340 / 8.64	—	.74 (21)
7	1.000 / 25.40	.500 / 12.70	—	—	.500 / 12.70	.67 (19)
8	1.000 / 25.40	.550 / 13.97	—	—	.500 / 12.70	.71 (20)
9	1.000 / 25.40	.600 / 15.24	—	—	.500 / 12.70	.74 (21)

POWER SPECIFICATIONS

Coupled "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:	CSM-M-15G:	1 kW max.
	CSM-M-12G:	2 kW max.
	All others:	3 kW max.
Input Power (Forward):		50 Watts max.
Reflected Power:	6 dB units:	2 Watts max.
	10 dB units:	5 Watts max.
	20 dB units:	50 Watts max.
	30 dB units:	50 Watts max.

GENERAL SPECIFICATIONS

Impedance:	50 Ω nom.
SMA Connectors:	Female, to meet the interface rqts of MIL-C-39012
Operating Temp:	– 55° to +85°C
Other connectors:	TNC and N type available

General Notes:

1. The CSM series directional couplers are miniature three port devices utilizing stripline technology in a connectorized package. Each is a quarter wave coupler operating across an octave band of frequencies. They are ideally suited to monitor forward or reflected power with minimal perturbation to the main line signal, signal sampling, control loops and for test signal injection devices in BITE.
2. These devices 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.