



RECTANGULAR WAVEGUIDE SIDEWALL DIRECTIONAL COUPLERS 500 SERIES

DATA
SHEET
No. T17C

- ULTRA-FLAT COUPLING
- HIGH ISOLATION
- WIDE COUPLING VALUES

DESCRIPTION

MEC Ultra-Flat Sidewall Directional Couplers were developed for the standard communication frequency bands with weaker coupling values not previously available. The couplers are aluminum three-port devices and have been designed to minimize length as well as provide an extremely flat level of ± 0.1 dB coupling.

Directivity has been maintained at 20 dB minimum while VSWR is less than 1.06. Standard coupling values are 10, 20 and 30 dB nominal (± 2 dB). Other values or custom designs are available on request between 2.4 and 30 dB over a wide choice of frequency ranges. Finish is chromate conversion per MIL-C-5541, Class 3, painted with gray epoxy enamel.



SPECIFICATIONS

MODEL NO.	FREQUENCY (GHz)	COUPLING (dB)	WAVEGUIDE SIZE	INPUT FLANGE	DIMENSIONS (IN.)		
					A	B	C (MAX.)
B503	3.7 - 4.2	3	WR229	CMR229	9.50	2.440	1.3
B510, B520, B530	3.7 - 4.2	10, 20, 30	WR229	CMR229	9.50	2.440	1.3
D510, D520, D530	5.925 - 6.425	10, 20, 30	WR159	CMR159	5.25	1.740	1.1
J510L, J520L, J530L	5.925 - 6.425	10, 20, 30	WR137	CMR137	6.40	1.522	1.1
J510M, J520M, J530M	7.25 - 7.75	10, 20, 30	WR137	UG441/U	4.65	1.522	1.1
J510H, J520H, J530H	7.9 - 8.4	10, 20, 30	WR137	UG441/U	4.10	1.522	1.1
H510L, H520L, H530L	7.25 - 7.75	10, 20, 30	WR112	UG138/U	5.30	1.272	1.1
H510M, H520M, H530M	7.9 - 8.4	10, 20, 30	WR112	UG138/U	4.60	1.272	1.1
H5024H, H503H, H504H	9.5 - 10.0	2.4, 3, 4	WR112	UG138/U	4.60	1.272	1.1
X503L	8.5 - 9.6	3	WR90	CMR90	3.00	1.020	1.1
X503M, X5033M, X5036M	9.5 - 10.0	3, 3.3, 3.6	WR90	CMR90	3.00	1.020	1.1
X504M, X5045M	9.5 - 10.0	4, 4.5	WR90	CMR90	3.00	1.020	1.1
X503H	10.7 - 11.7	3	WR90	CMR90	3.00	1.020	1.1
X510H*, X520H, X530H	10.7 - 11.7	10, 20, 30	WR90	CMR90	3.00	1.020	1.1
M510*, M520, M530	10.7 - 11.7	10, 20, 30	WR75	M3922/53-008	3.58	.800	1.1

*VSWR 1.15 max., Directivity 15 dB typical

ORDERING INFORMATION

A. For other coupling values, specify as follows:

1. Designate the band by letter.
2. Insert "5".
3. Insert coupling value desired.

EXAMPLE: Model J517M is a 17 dB nominal (± 2 dB) coupler in WR137 waveguide with flatness ± 0.1 dB, operating over the 7.25 - 7.75 GHz band.

B. For exact coupling values, please specify.

C. Termination may be placed in opposite wall if desired.

Data subject to change without notice



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