

Rectangular Waveguide Broad-Wall Multi-Hole Directional Couplers

HIGH DIRECTIVITY
FLAT COUPLING
WAVEGUIDE OR COAXIAL PORTS

These directional couplers consist of rectangular waveguide primary and secondary lines with a common broad wall where high directivity coupling is achieved over the full waveguide band by a Tchebyscheff multi-hole coupling structure and a precision termination in the secondary arm. Waveguide cover flanges are provided on the main line while secondary lines are available with either cover flanges or coaxial connectors. Both single directional (160 Series) and dual directional (200 Series) couplers have minimum size consistent with electrical performance. These couplers are ideal in reflectometer set-ups to measure VSWR's as low as 1.04:1 over full waveguide bands. They are also well suited as samplers in leveling loops or as power dividers and combiners. Finish is chromate conversion per MIL-C-5541, Class 3 for aluminum, and corrosion-resistant coatings for all others when specified, painted with gray epoxy enamel.



CALL OUR SALES DEPARTMENT FOR MORE INFORMATION OR VARIATIONS OF THIS PRODUCT.

Corry Micronics, Inc. One Plastics Rd. - Corry, PA 16407
(814) 664-7728 Fax (814) 664-4582 www.cormic.com

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Specifications:

Directivity: 35dB Min

VSWR: 1.05 Max. Main Line

Coupling: 10, 20, 30, 40, 50 dB

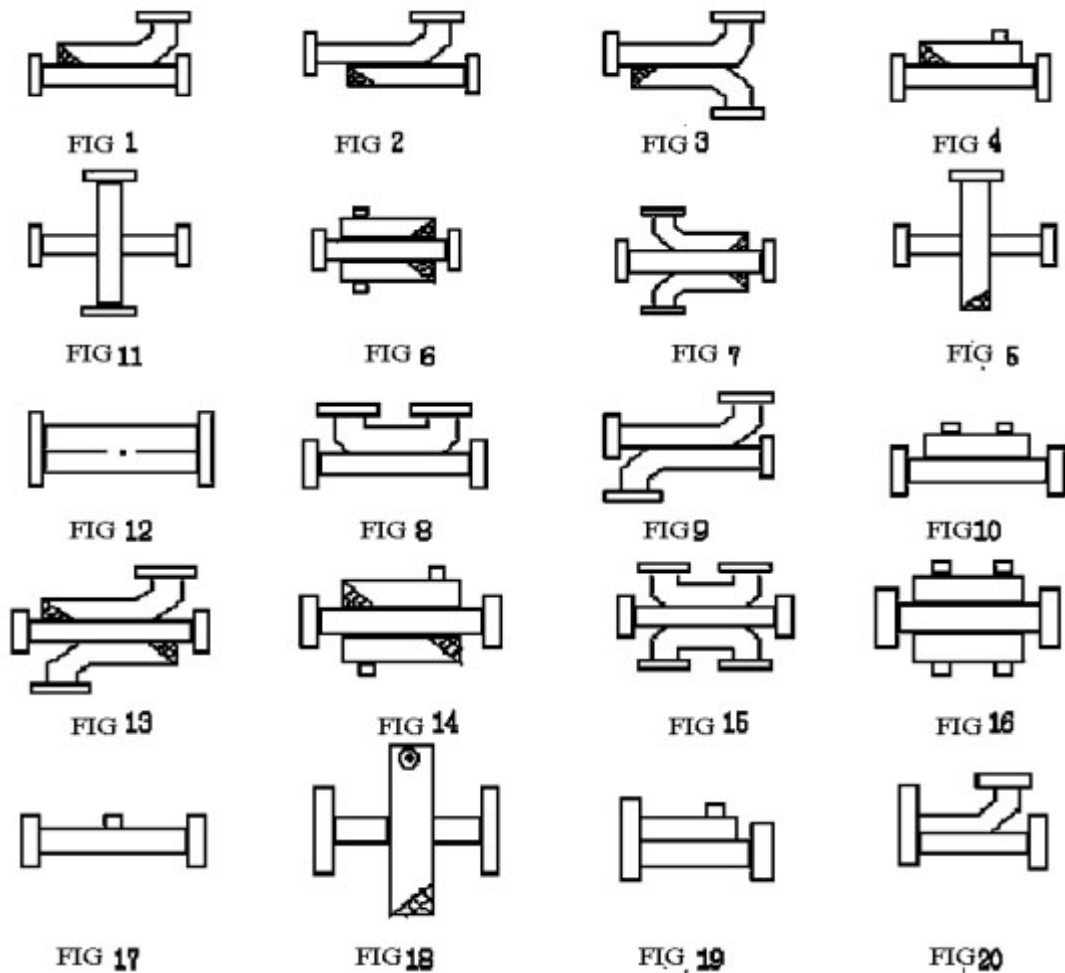
1.10 Max, Waveguide Secondary

Coupling: ± 0.4 dB

1.35 Max, Coaxial Secondary

Frequency Sensitivity: ± 0.5 dB Max.

Except the standard couplers, customer can select any one of the configurations as following:

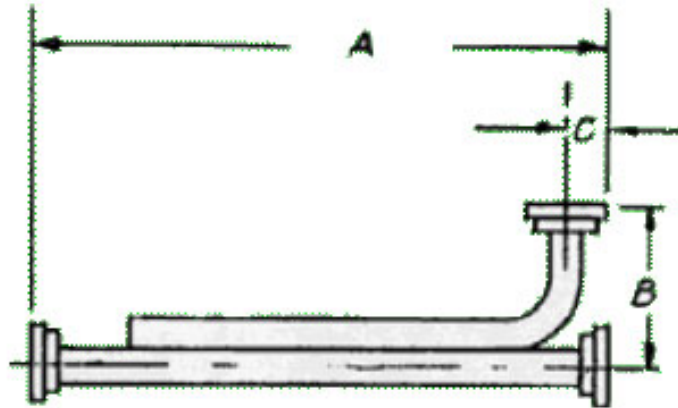


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Standard Waveguide Multi-Hole Directional Couplers



Code system

Typical part:

112-BW-A-20-2-2-2

WAVEGUIDE SIZE:						
BASIC MODEL#:						
MATERIAL:	A=ALUMINUM	B=COPPER/BRASS				
COUPLING: (dB)	3, 6, 10, 20, 30, 40	STD.				
FLANGE 1:	1=CPRG	2=CPRF	6=COVER	7=CHOKE		
FLANGE 2:	1=CPRG	2=CPRF	6=COVER	7=CHOKE		
FLANGE 3:	1=CPRG	2=CPRF	6=COVER	7=CHOKE		

Example: P/N CMI112-BW-20-2-2-2 is WR112 Coupler, Aluminum material, 20dB coupling, CPRF flanges

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Multi-Hole Directional Coupler - 3 Waveguide Port

WG Size	Freq GHz	Model No.*	Dimensions		
			A	B	C
WR284	2.60 - 3.95	CMI284-BW-dB-6-6-6	50.25	9.18	2.66
WR229	3.30 - 4.90	CMI229-BW-dB-2-2-2	42.00	6.81	1.84
WR187	3.95 - 5.85	CMI187-BW-dB-6-6-6	34.62	6.44	1.81
WR159	4.90 - 7.05	CMI159-BW-dB-2-2-2	32.50	5.25	1.56
WR137	5.85 - 8.20	CMI137-BW-dB-2-2-2	26.50	3.06	1.56
WR112	7.05 - 10.0	CMI112-BW-dB-6-6-6	18.62	3.06	1.56
WR90	8.20 - 12.4	CMI90-BW-dB-6-6-6	16.68	1.94	1.50
WR75	10.0 - 15.0	CMI75-BW-dB-6-6-6	15.00	2.50	1.25
WR62	12.4 - 18.0	CMI62-BW-dB-6-6-6	13.75	2.18	0.66
WR51	15.0 - 22.0	CMI51-BW-dB-6-6-6	11.50	1.25	0.66
WR42	18.0 - 26.5	CMI42-BW-dB-6-6-6	9.50	1.25	0.75
WR34	22.0 - 33.0	CMI34-BW-dB-6-6-6	9.00	1.25	0.75
WR28	26.5 - 40.0	CMI28-BW-dB-6-6-6	8.00	1.12	0.75

Insert desired coupling value (30, 40, or 50dB) where dB is listed in the model number.

Note: The standard model numbers above are the most common parts ordered for size, material and flange.

However, these models can easily be altered to accommodate your needs by using the above model # code system.

Ordering Information

Typical part:

112-BWSMA/N-A-20-2-2-2

WAVEGUIDE SIZE:	
BASIC MODEL#:	
MATERIAL:	A=ALUMINUM B=COPPER/BRASS
COUPLING: (dB)	3, 6, 10, 20, 30, 40 STD.
FLANGE 1:	1=CPRG 2=CPRF 6=COVER 7=CHOKE
FLANGE 2:	1=CPRG 2=CPRF 6=COVER 7=CHOKE
FLANGE 3:	1=CPRG 2=CPRF 6=COVER 7=CHOKE

Example: P/N CMI112-BWSMA-20-2-2 is WR112 Coupler, Aluminum material, 20dB coupling, CPRF flanges.

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Multi-Hole Directional Coupler-2 Waveguide Ports, 1 SMA Coax Port

WG Size	Freq GHz	Model No.	Dimensions		
			A	B	C
WR430	1.70 - 2.60	CMI430-BWSMA-2	60.00	3.76	5.00
WR284	2.60 - 3.95	CMI284-BWSMA-6	50.25	2.55	2.66
WR229	3.30 - 4.90	CMI229-BWSMA-2	42.00	2.22	2.25
WR187	3.95 - 5.85	CMI187-BWSMA-6	34.62	1.81	2.00
WR159	4.90 - 7.05	CMI159-BWSMA-2	32.50	1.82	1.75
WR137	5.85 - 8.20	CMI137-BWSMA-2	26.50	1.56	1.75
WR112	7.05 - 10.0	CMI112-BWSMA-6	18.62	1.38	1.75
WR90	8.20 - 12.4	CMI90-BWSMA-6	16.68	1.20	1.75
WR75	10.0 - 15.0	CMI75-BWSMA-6	15.00	1.17	1.50
WR62	12.4 - 18.0	CMI62-BWSMA-6	13.75	1.05	1.00
WR51	15.0 - 22.0	CMI51-BWSMA-6	11.50	0.97	0.75
WR42	18.0 - 26.5	CMI42-BWSMA-6	9.50	0.84	0.75
WR34	22.0 - 33.0	CMI34-BWSMA-6	9.00	0.84	0.75
WR28	26.5 - 40.0	CMI28-BWSMA-6	8.00	0.79	0.88

Multi-Hole Directional Coupler-2 Waveguide Ports, 1 Type N Port

WG Size	Freq GHz	Model No.	Dimensions		
			A	B	C
WR430	1.70 - 2.60	CMI430-BWN-2	60.00	4.12	5.00
WR284	2.60 - 3.95	CMI284-BWN-6	50.25	2.91	2.66
WR229	3.30 - 4.90	CMI229-BWN-2	42.00	2.58	2.25
WR187	3.95 - 5.85	CMI187-BWN-6	34.62	2.17	2.00
WR159	4.90 - 7.05	CMI159-BWN-2	32.50	2.18	1.75
WR137	5.85 - 8.20	CMI137-BWN-2	26.50	1.92	1.75
WR112	7.05 - 10.0	CMI112-BWN-6	18.62	1.73	1.75
WR90	8.20 - 12.4	CMI90-BWN-6	16.68	1.56	1.75
WR75	10.0 - 15.0	CMI75-BWN-6	15.00	1.52	1.50
WR62	12.4 - 18.0	CMI62-BWN-6	13.75	1.41	1.00

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