

Rectangular Waveguide Cross Guide Couplers

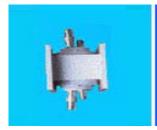
LOWEST VSWR LOW INSERTION LOSS NARROW AND BROAD BANDWIDTHS

CMI's Cross Guide Couplers have specially-designed coupling apertures that produce flat coupling over the full waveguide frequency band. The couplers are symmetrical four-port devices; either arm may be used as the main line. They are also available with built-in terminations, integral coaxial adapters, and terminated dual secondary arms (dual directional couplers). These rugged, moderate-directivity couplers are ideal where the high directivity of the longer broad-wall multi-hole couplers is not required. The units are well-suited for many microwave applications including injection, reflection measurement, attenuation, and isolation. And because of their compactness and simplicity of construction, they have found wide acceptance in production applications. Assemblies are furnished with an aluminum or brass housing. Finish is chromate conversion per MIL-C-5541. Class 3, painted with gray epoxy enamel.

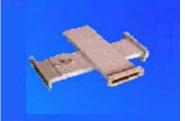














Coupling: 20, 30, 40, 50 dB

Coupling Mean: ±4.0 dB

Frequency Sensitivity:

 $20 = \pm 1.2 \text{ dB max}.$

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 $30 = \pm 1.0 \text{ dB max}.$

 $40 = \pm 0.8 \text{ dB max}.$

 $50 = \pm 0.6 \text{ dB max}.$

Directivity: typically 18 dB min

VSWR:

Waveguide Ports 1.05 max.

Coaxial Ports std.; 1.25, 1.10, 1.15 avail.

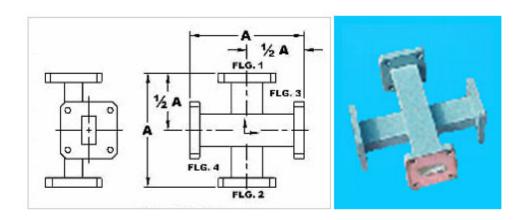
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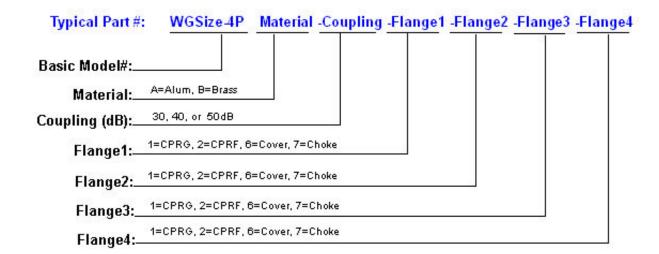
Corry Micronics, Inc. One Plastics Rd. - Corry, PA 16407 (814) 664-7728 Fax (814) 664-4582 www.cormic.com

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The Model numbers listed below are the most common model numbers for size, material, coupling, and flanges however; these models can easily be altered to accommodate customer needs by following the Model # code system. In addition the customer must choose the coupling value appropriate for application (20,30dB, 40dB, or 50dB) and insert it in the model number where dB is listed.

Crossguide Directional Coupler- 4 Waveguide Ports





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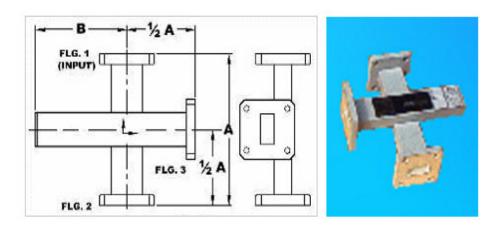
Standard Models						
WG Size	Freq GHz	Standard Model No.*	Dim A (Inches) Dim	B (Inches)		
WR430	1.70 - 2.60	CMI430-3PA-dB-2-2-2	7.50	8.00		
WR284	2.60 - 3.95	CMI284-3PA-dB-6-6-6	7.50	5.00		
WR229	3.30 - 4.90	CMI229-3PB-dB-2-2-2	7.00	4.75		
WR187	3.95 - 5.85	CMI187-3PA-dB-6-6-6	6.50	4.50		
WR159	4.90 - 7.05	CMI159-3PB-dB-2-2-2	6.00	4.00		
WR137	5.85 - 8.20	CMI137-3PB-dB-2-2-2	6.00	4.00		
WR112	7.05 - 10.0	CMI112-3PB-dB-6-6-6	4.20	3.00		
WR90	8.20 - 12.4	CMI90-3PA-dB-6-6-6	4.00	2.75		
WR75	10.0 - 15.0	CMI75-3PB-dB-6-6-6	3.75	2.50		
WR62	12.4 - 18.0	CMI62-3PB-dB-6-6-6	3.50	2.37		
WR51	15.0 - 22.0	CMI51-3PB-dB-6-6-6	3.10	2.25		
WR42	18.0 - 26.5	CMI42-3PB-dB-6-6-6	2.20	1.50		
WR34	22.0 - 33.0	CMI34-3PB-dB-6-6-6	2.20	1.50		
WR28	26.5 - 40.0	CMI28-3PB-dB-6-6-6	2.00	1.50		

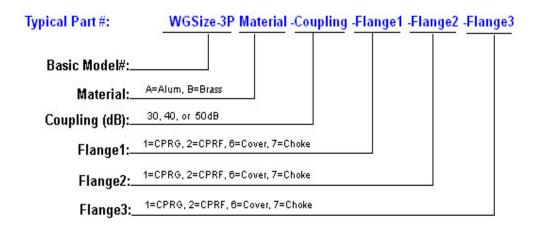
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Crossguide Directional Coupler- 3 Waveguide Ports





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	Standard Models							
WG Size	Freq GHz	Standard	Dim A	В				
		Model No.*	(Inches) Dim	(Inches)				
WR430	1.70 - 2.60	CMI430-3PA-dB-2-2-2	7.50	8.00				
WR284	2.60 - 3.95	CMI284-3PA-dB-6-6-6	7.50	5.00				
WR229	3.30 - 4.90	CMI229-3PB-dB-2-2-2	7.00	4.75				
WR187	3.95 - 5.85	CMI187-3PA-dB-6-6-6	6.50	4.50				
WR159	4.90 - 7.05	CMI159-3PB-dB-2-2-2	6.00	4.00				
WR137	5.85 - 8.20	CMI137-3PB-dB-2-2-2	6.00	4.00				
WR112	7.05 - 10.0	CMI112-3PB-dB-6-6-6	4.20	3.00				
WR90	8.20 - 12.4	CMI90-3PA-dB-6-6-6	4.00	2.75				
WR75	10.0 - 15.0	CMI75-3PB-dB-6-6-6	3.75	2.50				
WR62	12.4 - 18.0	CMI62-3PB-dB-6-6-6	3.50	2.37				
WR51	15.0 - 22.0	CMI51-3PB-dB-6-6-6	3.10	2.25				
WR42	18.0 - 26.5	CMI42-3PB-dB-6-6-6	2.20	1.50				
WR34	22.0 - 33.0	CMI34-3PB-dB-6-6-6	2.20	1.50				
WR28	26.5 - 40.0	CMI28-3PB-dB-6-6-6	2.00	1.50				

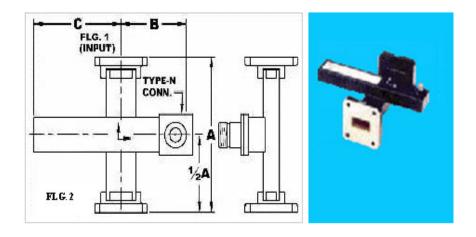
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Crossguide Directional Coupler- 2 Waveguide Ports 1 Type N/SMA (F) Coax Port



Typical Part#:	WGSize-2PN/S Material -Coupling -Flange1 -Flange2
Basic Model#:_	
Material:_	A=Alum, B=Brass
Coupling (dB):_	30, 40, or 50dB
Flange1:_	1=CPRG, 2=CPRF, 6=Cover, 7=Choke
Flange2:_	1=CPRG, 2=CPRF, 6=Cover, 7=Choke

Example:

CMI187-2PNA-40-6-6 is a WR187 -2 WG port N connector Alum mat'l -40dB -Cover Flg -Cover Flg CMI187-2PSA-40-6-6 is a WR187 -2 WG port SMA connector Alum mat'l -40dB -Cover Flg -Cover Flg

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Standard Models						
WG Size	Freq GHz	Standard	Dim A	Dim B	Dim C	
		Model No.*	(Inches)	(Inches)	(Inches)	
WR430	1.70 - 2.60	CMI430-2PN/SA-dB-2-2	7.50	5.00	8.00	
WR284	2.60 - 3.95	CMI284-2PN/SA-dB-6-6	7.50	3.75	5.00	
WR229	3.30 - 4.90	CMI229-2PN/SB-dB-2-2	7.00	3.50	4.75	
WR187	3.95 - 5.85	CMI187-2PN/SA-dB-6-6	6.50	3.25	4.50	
WR159	4.90 - 7.05	CMI159-2PN/SB-dB-2-2	6.00	3.00	4.00	
WR137	5.85 - 8.20	CMI137-2PN/SB-dB-2-2	6.00	3.00	4.00	
WR112	7.05 - 10.0	CMI112-2PN/SB-dB-6-6	4.20	2.10	3.00	
WR90	8.20 - 12.4	CMI90-2PN/SA-dB-6-6	4.00	2.00	2.75	
WR75	10.0 - 15.0	CMI75-2PN/SB-dB-6-6	3.75	1.87	2.50	
WR62	12.4 - 18.0	CMI62-2PN/SB-dB-6-6	3.50	1.75	2.37	

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