



RECTANGULAR WAVEGUIDE CROSS GUIDE COUPLERS

90 SERIES 90L SERIES 90LC SERIES

DATA
SHEET
No.T32E
1 of 2

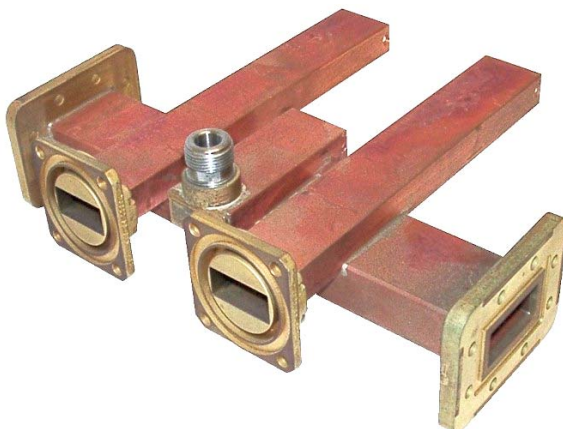
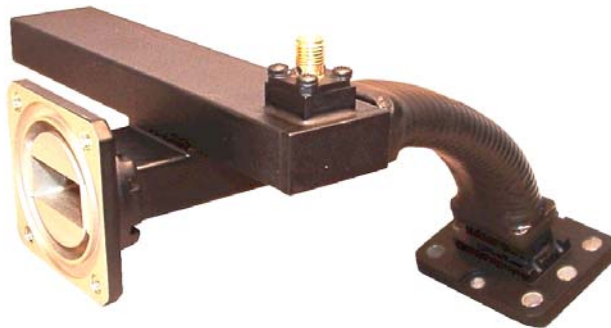
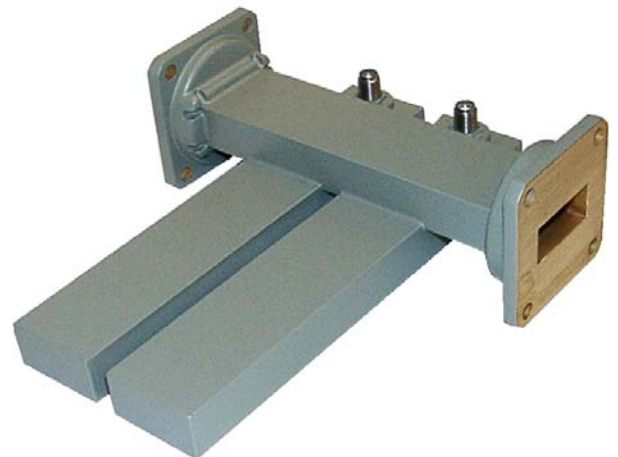
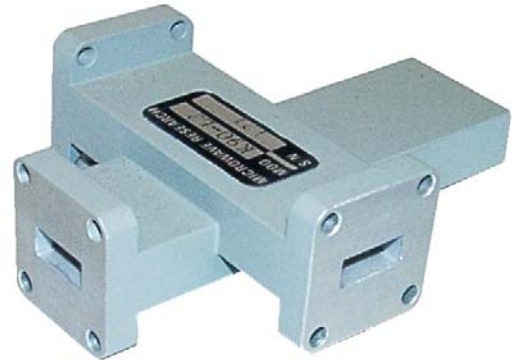
- COMPACT
- LIGHTWEIGHT
- INTERNAL TERMINATION

DESCRIPTION

MEC 90 Series 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 (160 Series) is not required. The units are well-suited for many microwave applications including injection, reflection measurement, attenuation, and isolation. Because of their compactness and simplicity of construction, they have found wide acceptance in production applications.

Assemblies are furnished with an aluminum housing. Finish is chromate conversion per MIL-C-5541, Class 3, painted with gray epoxy enamel.



Data subject to change without notice

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MICROWAVE ENGINEERING CORPORATION

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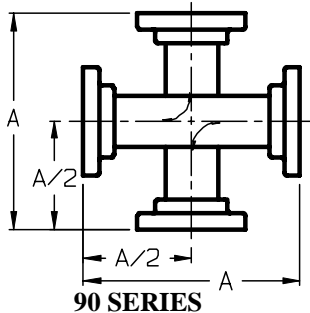


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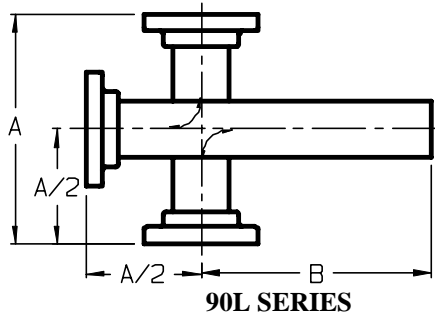
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DATA SHEET
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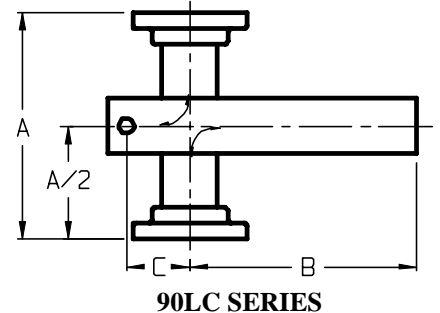
SPECIFICATIONS



90 SERIES



90L SERIES



90LC SERIES

Coupling: 20, 30, 40, 50 dB
Coupling Mean: ± 0.5 dB
Frequency Sensitivity:
20 = ± 1.2 dB max.
30 = ± 1.0 dB max.
40 = ± 0.8 dB max.
50 = ± 0.6 dB max.

Directivity: typically 18 dB min

VSWR:	Waveguide Ports*	Coaxial Ports
	1.05 max.	1.20 max. std.; 1.10, 1.05 avail.

*1.10 max for 20 dB

MODEL NO.	FREQUENCY RANGE (GHz)	WAVELENGTH SIZE	FLANGE	DIMENSIONS (INCHES)		
				A $\pm .03$	B max.	C $\pm .03$
S90	2.60 - 3.95	WR-284	UG-584/U	7.00	10.5	2.92
B90	3.7 - 4.2	WR-229	CMR-229	6.00	6.2	2.53
G90	3.95 - 5.85	WR-187	UG-407/U	4.90	5.6	2.00
D90	5.925 - 6.425	WR-159	CMR-159	5.00	4.9	2.10
J90	5.85 - 8.20	WR-137	UG-441/U	4.00	4.3	1.83
H90	7.05 - 10.00	WR-112	UG-138/U	3.50	3.7	1.35
W90	7.0 - 11.0	WR-102	M3922/70-002	3.00	3.6	1.02
X90	8.2 - 12.4	WR-90	UG-135/U	3.00	3.0	.90
M90	10.0 - 15.0	WR-75	M3922/53-008	2.75	2.5	1.04
P90	12.4 - 18.0	WR-62	UG-1665/U	2.75	2.3	.72
N90	15.0 - 22.0	WR-51	M3922/70-011	2.50	1.8	.67
K90	18.0 - 26.5	WR-42	UG-597/U	1.80	1.8	.62
Y90	22.0 - 33.0	WR-34	M3922/63-010	1.80	1.7	.58
A90	26.5 - 40.0	WR-28	UG-599/U Δ	1.80	1.7	.55

ORDERING INFORMATION

- Add the following suffixes to the model number to specify built-in termination, coaxial connector, coupling level, and connector type:
 - Built-in secondary arm termination: "-L"
 - Coupling Output Connector: "-C"
 - Coupling Level: "-20" for 20dB, "-30" for 30dB, "-40" for 40dB, "-50" for 50dB
 - Connector type:
 - "-17" for SSMA female "-N" for type N female "-T" for TNC female
 - "-3" for SMA female "-7" for precision 7mm

For a complete listing of connectors available, refer to data sheet T100.
- Other flanges, coupling values, direction of coupling, multiple coupling arms, reduced height waveguide, and custom designs available on request.

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