



RECTANGULAR WAVEGUIDE WELL-MATCHED TEES AND HYBRIDS 100 / 100-L / 100-E / 100-H SERIES

**DATA
SHEET
No.T39C**

- **LOW VSWR**
- **COMPACT**
- **FULL BANDWIDTH**



100-E Series

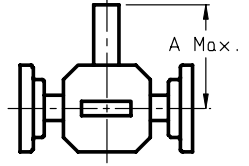
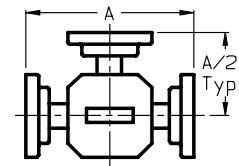
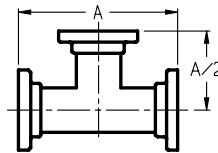
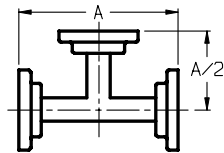
100-H series

100 Series

100-L Series

DESCRIPTION

MEC offers a superior line of well-matched, broadband 4-port hybrid magic tees (model 100) and 3-port tees (100-E for E-Plane series tee). They can also be supplied with an integral medium power termination on the E arm (100-L). The 3-port tees may be used in power dividing networks or as combiners of high power tube outputs.



The magic tee hybrid is even more suitable as it offers high isolation. Common applications of the hybrid include balanced mixer operations and connecting a transmitter and receiver to a pair of fore and aft antennas on an aircraft. All units are aluminum with chromate conversion finish. Paint is gray epoxy enamel.

SPECIFICATIONS

VSWR: 1.3:1 at midband, 1.5:1 at band edges. Lower VSWR can be supplied over reduced bandwidths – e.g. 1.05 over 5%, 1.10 over 10% 1.20 over 20% frequency bandwidths.

Power Split: 3.2 ± 0.2 dB (typ. tracking < 0.3 dB)

Phase Balance: within $\pm 5^\circ$ **Hybrid Isolation:** 30 dB E to H arm, 15 dB colinear arms

FREQUENCY RANGE (GHz)	WAVEGUIDE SIZE	EQUIVALENT FLANGE	HYBRID TEE	TERMINATED HYBRID TEE	SERIES TEE	SHUNT TEE	DIMENSION A (IN. $\pm .03$)
2.60 – 3.95	WR-284	UG-584/U	S100	S100-L	S100-E	S100-H	7.00
3.30 – 4.90	WR-229	CMR-229	B100	B100-L	B100-E	B100-H	6.00
3.95 – 5.85	WR-187	UG-407/U	G100	G100-L	G100-E	G100-H	5.00
4.90 – 7.05	WR-159	CMR-159	D100	D100-L	D100-E	D100-H	5.00
5.85 – 8.20	WR-137	UG-441/U	J100	J100-L	J100-E	J100-H	4.50
7.05 – 10.0	WR-112	UG-138/U	H100	H100-L	H100-E	H100-H	3.25
7.0 – 11.0	WR-102	M3922/70-002	W100	W100-L	W100-E	W100-H	3.00
8.2 – 12.4	WR-90	UG-135/U	X100	X100-L	X100-E	X100-H	2.50
10.0 – 15.0	WR-75	M3922/53-008	M100	M100-L	M100-E	M100-H	2.50
12.4 – 18.0	WR-62	UG-1665/U	P100	P100-L	P100-E	P100-H	2.50
15.0 – 22.0	WR-51	M3922/70-011	N100	N100-L	N100-E	N100-H	2.00
18.0 – 26.5	WR-42	UG-595/U	K100	K100-L	K100-E	K100-H	2.00
26.5 – 40.0	WR-28	UG-599/U	A100	A100-L	A100-E	A100-H	2.00

ORDERING INFORMATION

- (1) For reduced VSWR over narrow band, add suffix “N” (e.g. S100-N) and specify band and VSWR desired.
- (2) Other flanges, materials, and tees such as folded, reduced height, and unequal split available on request.
- (3) Other waveguide bands and sizes also available.



Data subject to change without notice



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