

### **Rectangular Waveguide Well-Matched Tees and Hybrids**

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

CMI offers a superior line of well-matched, broadband 4-port Hybrid magic tees 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: Lower VSWR can be supplied over reduced bandwidths -e.g. 1.1 over 5%, 1.15 over 10% 1.20 over 20% frequency bandwidths.

Power Split:  $3.2 \pm 0.2$  dB (typ. tracking  $< 0.3$  dB = Phase Balance: within  $\pm 5^\circ$  Hybrid

Isolation: 30dB to H are, 15 dB collinear arms.

**Ordering Information:**

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



**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](http://www.cormic.com)**

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### Code system

TYPICAL PART	650	T/MT	A	2	2	2	2
WAVEGUIDE SIZE:							
BASIC MODEL#:							
MATERIAL:	A=ALUMINUM*						
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						
FLANGE 4:	1=CPRG 2=CPRF 6=COVER 7=CHOKE						

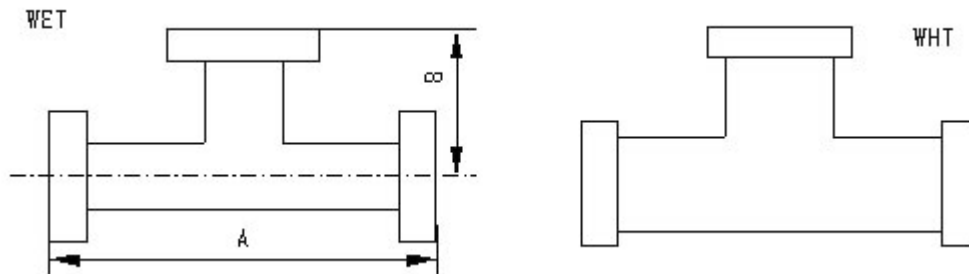
**Example:** P/N CMI284-THA-6-6-6 is WR284 series H Tee Aluminum Material–Cover Flange–Cover Flange–Cover Flange

Waveguide Magic Tees						
WG Size	Optimum Freq Range (GHz)	Bandwidth%	VSWR Max E H	Max Unbalanced +/- dB	Standard Model No.	Dimension(MM)
WR430	1.90 - 2.30	10 ~ 20	1.2 , 1.5	0.25	CMI430-MTA-2-2-2-2	200x100x100
WR340	2.30 - 2.60	10 ~ 20	1.2 , 1.5	0.25	CMI340-MTA-2-2-2-2	185x92.5x73
WR284	2.90 - 3.20	10 ~ 20	1.2 , 1.5	0.25	CMI284-MTA-6-6-6-6	185x92.5x73
WR229	3.70 - 4.20	10 ~ 20	1.2 , 1.3	0.25	CMI229-MTA-2-2-2-2	120x 60x 60
WR187	4.40 - 5.00	10 ~ 20	1.2 , 1.3	0.25	CMI187-MTA-6-6-6-6	110x 55x 55
WR159	5.90 - 6.40	10 ~ 20	1.2 , 1.3	0.25	CMI159-MTA-2-2-2-2	120x 60x 55
WR137	5.90 - 6.40	10 ~ 20	1.2 , 1.3	0.25	CMI137-MTA-2-2-2-2	100x 50x 40
WR112	7.90 - 8.40	10 ~ 20	1.2 , 1.3	0.25	CMI112-MTA-6-6-6-6	100x50x40
WR102	8.50 - 9.80	10 ~ 20	1.2 , 1.3	0.25	CMI102-MTA-6-6-6-6	100x50x50
WR90	9.00 - 10.0	10 ~ 20	1.2 , 1.3	0.25	CMI90-MTA-6-6-6-6	80x40x40
WR75	13.5 - 14.5	10 ~ 20	1.2 , 1.5	0.25	CMI75-MTA-6-6-6-6	70x35x35
WR62	14.0 - 15.0	10 ~ 20	1.2 , 1.5	0.25	CMI62-MTA-6-6-6-6	70x35x35
WR42	20.0 - 23.0	10 ~ 20	1.2 , 1.5	0.25	CMI42-MTA-6-6-6-6	45x23x23
WR28	34.0 - 37.0	10 ~ 20	1.2 , 1.5	0.25	CMI28-MTA-6-6-6-6	32x20x20

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Hybrid Tees				
WG Size	Optimum Freq Range (GHz)	Standard Model No. Series Tees(E)	Standard Model No. Shunt Tees(H)	Dimension A(mm)
WR650	1.12 - 1.70	CMI650-TEA-2-2-2	CMI650-THA-2-2-2	267
WR430	1.70 - 2.60	CMI430-TEA-2-2-2	CMI430-THA-2-2-2	229
WR340	2.20 - 3.30	CMI340-TEA-2-2-2	CMI340-THA-2-2-2	210
WR284	2.60 - 3.95	CMI284-TEA-6-6-6	CMI284-THA-6-6-6	7.50
WR229	3.30 - 4.90	CMI229-TEA-2-2-2	CMI229-THA-2-2-2	190
WR187	3.95 - 5.85	CMI187-TEA-6-6-6	CMI187-THA-6-6-6	146
WR159	4.90 - 7.05	CMI159-TEA-2-2-2	CMI159-THA-2-2-2	140
WR137	5.85 - 8.20	CMI137-TEA-2-2-2	CMI137-THA-2-2-2	130
WR112	7.05 - 10.0	CMI112-TEA-6-6-6	CMI112-THA-6-6-6	83
WR102	7.00 - 11.0	CMI102-TEA-6-6-6	CMI102-THA-6-6-6	81
WR90	8.20 - 12.4	CMI90-TEA-6-6-6	CMI90-TAH-6-6-6	79
WR75	10.0 - 15.0	CMI75-TEA-6-6-6	CMI75-THA-6-6-6	76
WR62	12.4 - 18.0	CMI62-TEA-6-6-6	CMI62-THA-6-6-6	67
WR42	18.0 - 26.5	CMI42-TEA-6-6-6	CMI42-THA-6-6-6	64
WR34	22.0 - 33.0	CMI34-TEA-6-6-6	CMI34-THA-6-6-6	61
WR28	26.5 - 40.0	CMI28-TEA-6-6-6	CMI28-THA-6-6-6	60

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