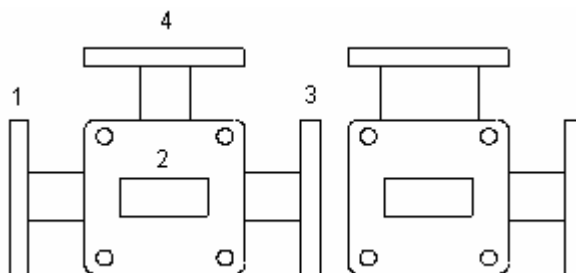
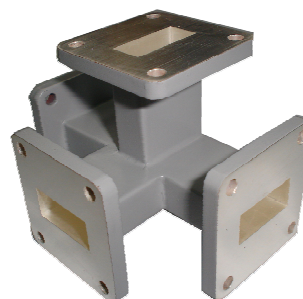




8 Waveguide Tee

8.1 Magic Hybrid Tee

HengDa Microwave's Magic Hybrid Tee is four- port coupler for matching, balance and isolation. E-plane to H-plane Isolation is a function of the symmetry which is carefully balanced on each unit. If the E-plane port 4 or the H-plane port 2 are used as inputs the split is on the output collinear ports 1 and 3. When the input is E plane port 4 the outputs are out of phase 180 deg. When the input is H plane port 2 the outputs are in phase. The in-phase and equal amplitude signals inputting into two collinear ports can result combined signals at H-plane port and cancelled signal at E-plane port. This feature is widely used in monopulse antenna feed structure and phasing testing setup.



【Specifications】

Model No*	Freq Range (GHz)	Operating Bandwidth (%)**	VSWR (Max)		Isolation (H&E Arms) (dB)	Unbalance (Max) (dB)	WG Type		Flange	Material
			H-Arm	E-Arm			IEC	EIA		
HD-3WMT...	0.32-0.49	10-15	1.30	1.50	35	±0.25	R3	WR2300	FDP/FDM	Al
HD-4WMT...	0.35-0.53	10-15	1.30	1.50	35	±0.25	R4	WR2100	FDP/FDM	Al
HD-5WMT...	0.41-0.62	10-15	1.30	1.50	35	±0.25	R5	WR1800	FDP/FDM	Al
HD-6WMT...	0.49-0.75	10-15	1.30	1.50	35	±0.25	R6	WR1500	FDP/FDM	Al
HD-8WMT...	0.64-0.98	10-15	1.30	1.50	35	±0.25	R8	WR1150	FDP/FDM	Al
HD-9WMT...	0.75-1.15	10-15	1.30	1.50	35	±0.25	R9	WR975	FDP/FDM	Al
HD-12WMT...	0.96-1.46	10-15	1.20	1.50	35	±0.25	R12	WR770	FDP/FDM	Al
HD-14WMT...	1.13-1.73	10-15	1.20	1.50	35	±0.25	R14	WR650	FDP/FDM	Al
HD-18WMT...	1.45-2.20	10-15	1.20	1.50	35	±0.25	R18	WR510	FDP/FDM	Al
HD-22WMT...	1.72-2.61	10-15	1.30	1.50	35	±0.4	R22	WR430	FDP/FDM	Al/Cu
HD-26WMT...	2.17-3.30	10-15	1.30	1.50	35	±0.4	R26	WR340	FDP/FDM	Al/Cu



HD-32WMT...	2.60-3.95	10-15	1.30	1.50	35	±0.4	R32	WR284	FDP/FDM	Al/Cu
HD-40WMT...	3.22-4.90	10-15	1.20	1.30	35	±0.4	R40	WR229	FDP/FDM	Al/Cu
HD-48WMT...	3.94-5.99	10-15	1.20	1.30	35	±0.4	R48	WR187	FDP/FDM	Al/Cu
HD-58WMT...	4.64-7.05	10-15	1.20	1.30	35	±0.4	R58	WR159	FDP/FDM	Al/Cu
HD-70WMT...	5.38-8.17	10-15	1.20	1.30	35	±0.4	R70	WR137	FDP/FDM	Al/Cu
HD-84WMT...	6.57-9.99	10-15	1.20	1.30	35	±0.4	R84	WR112	FBP/FBM/FBE	Al/Cu
HD-100WMT...	8.20-12.4	10-15	1.20	1.30	35	±0.4	R100	WR90	FBP/FBM/FBE	Al/Cu
HD-120WMT...	9.84-15.0	10-15	1.20	1.30	35	±0.4	R120	WR75	FBP/FBM/FBE	Al/Cu
HD-140WMT...	11.9-18.0	10-15	1.20	1.30	35	±0.4	R140	WR62	FBP/FBM/FBE	Al/Cu
HD-180WMT...	14.5-22.0	10-15	1.20	1.30	35	±0.4	R180	WR51	FBP/FBM/FBE	Al/Cu
HD-220WMT...	17.6-26.7	10-15	1.20	1.50	30	±0.4	R220	WR42	FBP/FBM/FBE	Al/Cu
HD-260WMT...	21.7-33.0	10-15	1.20	1.50	30	±0.4	R260	WR34	FBP/FBM/FBE	Al/Cu
HD-320WMT...	26.3-40.0	10-15	1.20	1.50	30	±0.4	R320	WR28	FBP/FBM/FBE	Al/Cu
HD-400WMT...	32.9-60.1	5-10	1.50	1.60	20	±0.5	R400	WR22	FUGP	Cu
HD-500WMT...	39.2-59.6	5-10	1.50	1.60	20	±0.5	R500	WR19	FUGP	Cu
HD-620WMT...	49.8-75.8	5-10	1.50	1.60	20	±0.5	R620	WR15	FUGP	Cu
HD-740WMT...	60.5-91.9	5-10	1.50	1.60	20	±0.5	R740	WR12	FUGP	Cu
HD-900WMT...	73.8-112	5-10	1.50	1.60	20	±0.5	R900	WR10	FUGP	Cu

**Indicates Model Number. See Ordering Information for complete part number.*

***Typical operating bandwidth of the hybrid tee is up to 20% of waveguide bandwidth. Performance degradation may occur while it covers wider waveguide bandwidth.*

【Ordering Information】

Example Part No: **HD - 100 WMT A**
 HengDa Microwave _____ Material: **A=Aluminum C=Coupler**
 WG Type: **R100** _____ Product Type: **Magic Hybrid Tee**

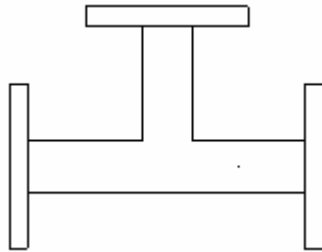
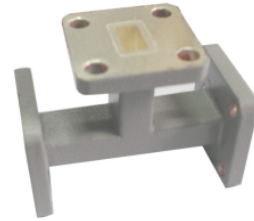
- Flange type: Multiple types available - see HengDa Microwave Flanges page
- Finish: Corrosion protection plus black top coat



8.2 E-Plane Tee

HengDa Microwave's manufactures a wide variety of E-Plane Tees.

The junction of the auxiliary arm is made on the broad wall of the main waveguide.



【Specifications】

Model No	Freq Range (GHz)	WG Type		Flange	Material
		IEC	EIA		
HD-3WET	0.32-0.49	R3	WR2300	FDP/FDM	Al
HD-4WET	0.35-0.53	R4	WR2100	FDP/FDM	Al
HD-5WET	0.41-0.62	R5	WR1800	FDP/FDM	Al
HD-6WET	0.49-0.75	R6	WR1500	FDP/FDM	Al
HD-8WET	0.64-0.98	R8	WR1150	FDP/FDM	Al
HD-9WET	0.75-1.15	R9	WR975	FDP/FDM	Al
HD-12WET	0.96-1.46	R12	WR770	FDP/FDM	Al
HD-14WET	1.13-1.73	R14	WR650	FDP/FDM	Al
HD-18WET	1.45-2.20	R18	WR510	FDP/FDM	Al
HD-22WET	1.72-2.61	R22	WR430	FDP/FDM	Al/Cu
HD-26WET	2.17-3.30	R26	WR340	FDP/FDM	Al/Cu
HD-32WET	2.60-3.95	R32	WR284	FDP/FDM	Al/Cu
HD-40WET	3.22-4.90	R40	WR229	FDP/FDM	Al/Cu
HD-48WET	3.94-5.99	R48	WR187	FDP/FDM	Al/Cu
HD-58WET	4.64-7.05	R58	WR159	FDP/FDM	Al/Cu
HD-70WET	5.38-8.17	R70	WR137	FDP/FDM	Al/Cu
HD-84WET	6.57-9.99	R84	WR112	FBP/FBM/FBE	Al/Cu
HD-100WET	8.20-12.4	R100	WR90	FBP/FBM/FBE	Al/Cu
HD-120WET	9.84-15.0	R120	WR75	FBP/FBM/FBE	Al/Cu



HD-140WET	11.9-18.0	R140	WR62	FBP/FBM/FBE	Al/Cu
HD-180WET	14.5-22.0	R180	WR51	FBP/FBM/FBE	Al/Cu
HD-220WET	17.6-26.7	R220	WR42	FBP/FBM/FBE	Al/Cu
HD-260WET	21.7-33.0	R260	WR34	FBP/FBM/FBE	Al/Cu
HD-320WET	26.3-40.0	R320	WR28	FBP/FBM/FBE	Al/Cu
HD-400WET	32.9-60.1	R400	WR22	FUGP	Cu
HD-500WET	39.2-59.6	R500	WR19	FUGP	Cu
HD-620WET	49.8-75.8	R620	WR15	FUGP	Cu
HD-740WET	60.5-91.9	R740	WR12	FUGP	Cu
HD-900WET	73.8-112	R900	WR10	FUGP	Cu

【Ordering Information】

Example Part No: **HD - 100 WET A**
 HengDa Microwave _____ Material: **A=Aluminum C=Coupler**
 WG Type: **R100** _____ Product Type: **E-Plane Tee**

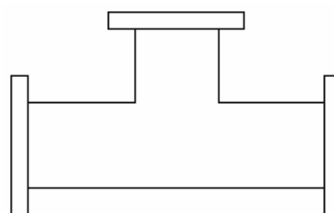
- Flange type: Multiple types available - see HengDa Microwave Flanges page
- Finish: Corrosion protection plus black top coat

8.3 H-Plane Tee

HengDa Microwave's manufactures a wide variety of H-Plane Tees. The junction of the auxiliary arm is made on the narrow wall of the main waveguide.



of





【Specifications】

Model No	Freq Range (GHz)	WG Type		Flange	Material
		IEC	EIA		
HD-3WHT	0.32-0.49	R3	WR2300	FDP/FDM	Al
HD-4WHT	0.35-0.53	R4	WR2100	FDP/FDM	Al
HD-5WHT	0.41-0.62	R5	WR1800	FDP/FDM	Al
HD-6WHT	0.49-0.75	R6	WR1500	FDP/FDM	Al
HD-8WHT	0.64-0.98	R8	WR1150	FDP/FDM	Al
HD-9WHT	0.75-1.15	R9	WR975	FDP/FDM	Al
HD-12WHT	0.96-1.46	R12	WR770	FDP/FDM	Al
HD-14WHT	1.13-1.73	R14	WR650	FDP/FDM	Al
HD-18WHT	1.45-2.20	R18	WR510	FDP/FDM	Al
HD-22WHT	1.72-2.61	R22	WR430	FDP/FDM	Al/Cu
HD-26WHT	2.17-3.30	R26	WR340	FDP/FDM	Al/Cu
HD-32WHT	2.60-3.95	R32	WR284	FDP/FDM	Al/Cu
HD-40WHT	3.22-4.90	R40	WR229	FDP/FDM	Al/Cu
HD-48WHT	3.94-5.99	R48	WR187	FDP/FDM	Al/Cu
HD-58WHT	4.64-7.05	R58	WR159	FDP/FDM	Al/Cu
HD-70WHT	5.38-8.17	R70	WR137	FDP/FDM	Al/Cu
HD-84WHT	6.57-9.99	R84	WR112	FBP/FBM/FBE	Al/Cu
HD-100WHT	8.20-12.4	R100	WR90	FBP/FBM/FBE	Al/Cu
HD-120WHT	9.84-15.0	R120	WR75	FBP/FBM/FBE	Al/Cu
HD-140WHT	11.9-18.0	R140	WR62	FBP/FBM/FBE	Al/Cu
HD-180WHT	14.5-22.0	R180	WR51	FBP/FBM/FBE	Al/Cu
HD-220WHT	17.6-26.7	R220	WR42	FBP/FBM/FBE	Al/Cu
HD-260WHT	21.7-33.0	R260	WR34	FBP/FBM/FBE	Al/Cu
HD-320WHT	26.3-40.0	R320	WR28	FBP/FBM/FBE	Al/Cu
HD-400WHT	32.9-60.1	R400	WR22	FUGP	Cu
HD-500WHT	39.2-59.6	R500	WR19	FUGP	Cu
HD-620WHT	49.8-75.8	R620	WR15	FUGP	Cu
HD-740WHT	60.5-91.9	R740	WR12	FUGP	Cu
HD-900WHT	73.8-112	R900	WR10	FUGP	Cu



【Ordering Information】

Example Part No: **HD - 100 WHT A**
HengDa Microwave _____ Material: A=Aluminum C=Coupler
WG Type: R100 _____ Product Type: H-Plane Tee

- Flange type: Multiple types available - see HengDa Microwave Flanges page
- Finish: Corrosion protection plus black top coat