



DOUBLE RIDGE WAVEGUIDE DIRECTIONAL COUPLERS

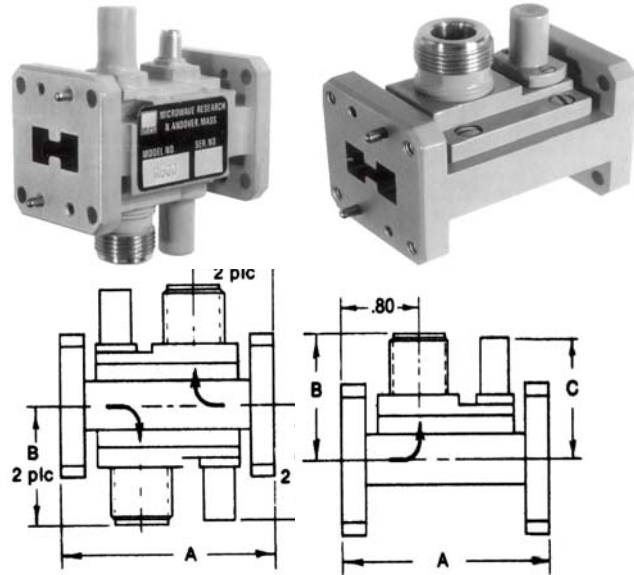
R600 SERIES R620 SERIES

**DATA
SHEET
No. T68C**

- SUPERIOR TRACKING
- OUT-OF-BAND REJECTION
- SUPER-FLAT COUPLING

DESCRIPTION

MEC Ultra-Flat Directional Couplers are compact, in-line devices with extremely flat coupling over octave bands or up to the full waveguide range. Another significant feature is that coupling falls off sharply above the fundamental frequency band, making them more suited to power sampling in systems where harmonic energy is non-negligible such as in wideband TWT outputs. By discriminating against harmonic power, they result in greater sampling accuracy compared to cross-guides and other coupler types. The coupling response can be finely tailored to yield best flatness, directivity, unit-to-unit tracking or even exhibit a tilt across the band, making these versatile couplers useful for system and laboratory applications. Standard flanges are cover with tapped holes. Material is aluminum. Finish is chromate conversion per MIL-C-5541, Class 3 gray epoxy enamel.



SPECIFICATIONS

Bandwidth:	Octave Band Standard >Octave Band Optional	Directivity:	15dB min., center of Octave Band
Coupling:	30 to 50dB	VSWR:	Main Line 1.06 typical Coaxial Secondary 1.4 typical
Coupling Mean:	±0.5 dB	Insertion Loss:	0.1 dB max.
Flatness:	±0.4 dB max., ±0.2dB Optional	Models:	Single Coupling R600 Series; Dual R620 Series
Tracking:	±0.4 dB max.	Flange:	Cover all tapped standard

MODEL NO.	FREQUENCY RANGE (GHz)	WAVEGUIDE SIZE	VSWR		COUPLING MEAN	FLATNESS	DIRECT.	DIMENSIONS			
			PRIMARY	SECOND.				A	B(TYPE N)	B (3MM)	C max.
R600, R620	7.5 – 18.0	WRD750D24	1.06	1.4				2.1	1.14	.95	1.3
R607, R627	6.5 – 18.0	WRD650D28	1.06	1.4	30 – 50dB			2.1	1.14	.95	1.3
R608, R628	5.8 – 16.0	WRD580D28	1.06	1.4			11dB	2.4	1.16	.97	1.3
R601, R621	4.75 – 11.0	WRD475D24	1.06	1.4	±0.5 dB	±0.4	min.	2.5	1.23	1.04	1.3
R609, R629	4.75 – 11.0	DR-19	1.06	1.4	nominal			2.5	1.23	1.04	1.3
R602, R622	3.5 – 8.2	WRD350D24	1.06	1.4				3.0	1.32	1.13	1.3
R603, R623	2.0 – 4.8	WRD200D24	1.06	1.4				4.5	1.58	1.39	1.6
R605, R625	18.0 – 40.0	WRD180D22	1.15	1.6	30 – 50 dB ±0.8dB nom.	±0.7	10 dB	2.0	N/A	.65*	1.0

*R605, R625 only available with 1.7mm or "K" coax couple output.

ORDERING INFORMATION

- (1) Add the following suffixes to the model number to specify coupling level, connector and frequency range:
 - (a) COUPLING LEVEL: Specify coupling desired between 30 & 50 dB.
 - (b) COAXIAL OUTPUT: -N for type N female coax up to 18 GHz. -17 for 1.7mm female coax. -3 for 3mm female coax. -K for "K" connector.
 - (c) Frequency: Specify frequency band numerically in GHz
- (2) Pressurizable units up to 30 PSIG available.
- (3) Other flanges, connectors, shorter lengths and direction of coupling available on request.

