

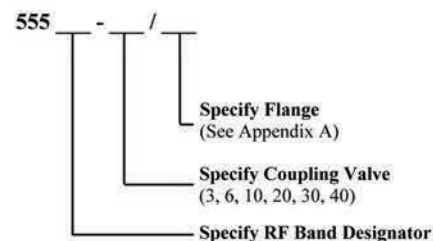
555 Series Bidirectional Couplers



Features

- High Directivity
- Accurate Coupling
- Full Waveguide Bandwidth

Ordering Information

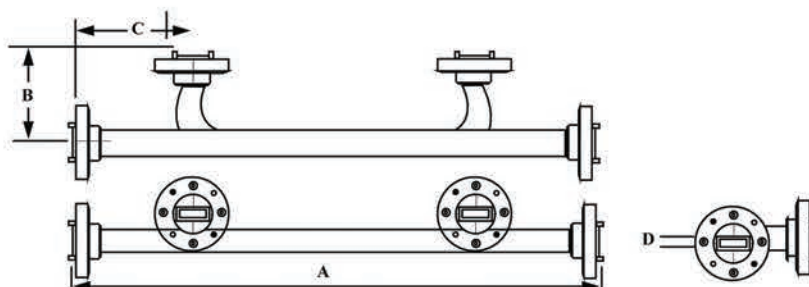


Description

Mi-Wave's 555 series bidirectional couplers are broadband, broadwall components with a multi-hole directivity. The 555 series couplers are available in 3, 6, 10, 20, 30, and 40 dB coupling values for standard waveguide bands from 26.5 to 110.0 GHz.

Applications

The 555 series bidirectional couplers are used in applications that require precise sampling of both incident and reflected energy. The 3 dB couplers are especially useful in balanced mixer work where broadband power division of RF and LO signals is required to supply both sides of a balanced mixer unit. The 3 dB bidirectional couplers can provide full bandwidth power division.



Dimensional Specifications

Model No	A		B		C		D	
	in	mm	in	mm	in	mm	in	mm
555A/10, 20, 30, 40	9.62	244.0	1.75	445	1.38	35.1	.16	4.06
555A/3, 6 dB	12.0	304.8	1.75	445	1.38	35.1	.16	4.06
555B/10, 20, 30, 40	8.40	213.0	1.64	41.7	1.30	33.0	.13	3.30
555B/3, 6 dB	10.25	259.1	1.64	41.7	1.30	33.0	.13	3.30
555U/10, 20, 30, 40	7.38	187.4	1.38	35.1	1.12	28.5	.11	2.80
555U/3, 6 dB	9.12	231.6	1.38	35.1	1.12	28.5	.11	2.80
555V/10, 20, 30, 40	6.25	159.0	1.13	28.6	0.88	22.4	.08	2.03
555V/3, 6 dB	7.25	184.1	1.13	28.7	0.88	22.4	.08	2.03
555E/10, 20, 30, 40	5.50	140.0	1.13	28.5	0.88	22.4	.07	1.78
555E/3, 6 dB	6.62	168.1	1.13	28.7	0.88	22.4	.07	1.78
555W/10, 20, 30, 40	4.50	114.0	1.00	25.4	0.81	20.6	.06	1.52
555W/3, 6 dB	5.50	139.7	1.00	25.4	0.81	20.6	.06	1.52

Other Waveguide Bands Available:

WR-90

WR-75

WR-62

WR-51

WR-34

Technical Specifications (typical)

Model Number	555A	555B	555U	555V	555E	555W
Frequency Band (GHz)	26.5-40.0	33.0-50.0	40.0-60.0	50.0-75.0	60.0-90.0	75.0-110.0
Coupling (dB)	3, 6, 10, 20, 30, 40					
Coupling Variation (dB)	± 0.7	± 0.7	± 0.8	± 1.0	± 1.0	± 1.0
Coupling Accuracy (dB)	± 1.0	± 1.0	± 1.2	± 1.5	± 1.5	± 1.5
Directivity (dB) Typical	30	30	30	30	30	30
Main Line VSWR	1.05	1.05	1.10	1.10	1.10	1.10
Auxiliary Line VSWR	1.15	1.15	1.20	1.20	1.20	1.20
Weight (oz)	6.0	5.0	4.0	3.0	2.5	2.0