

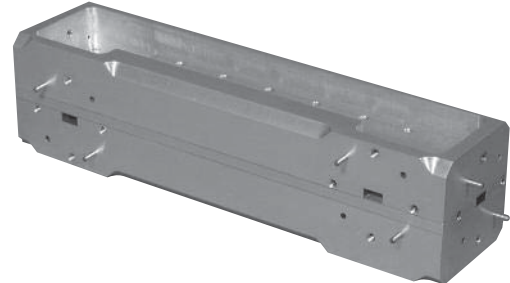


Precision Bi- and Dual-Directional Couplers

QJB/QJD

Characteristics

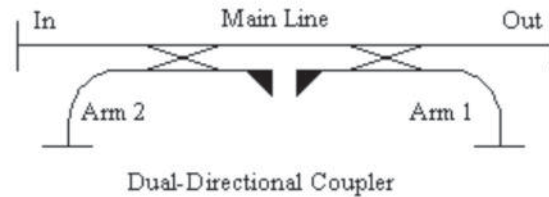
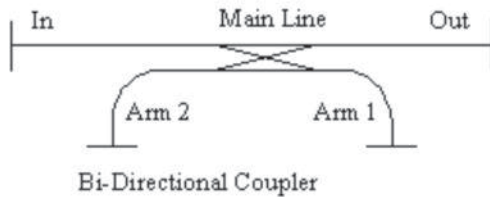
- ◆ Fullband Coverage
- ◆ High Directivity
- ◆ Excellent Coupling Flatness
- ◆ Low Return Loss



Product Description

QuinStar Technology offers **QJB** and **QJD** series **precision bi-directional and dual-directional high directivity couplers**, which cover a frequency range of 18 to 220 GHz in twelve waveguide bands. Coupling values of 10, 20, 30 and 40 dB are available. In a dual directional coupler, the forward and reverse coupling values can be made different. The units are designed with a rugged split-block mechanical structure for long-lasting durability to maintain

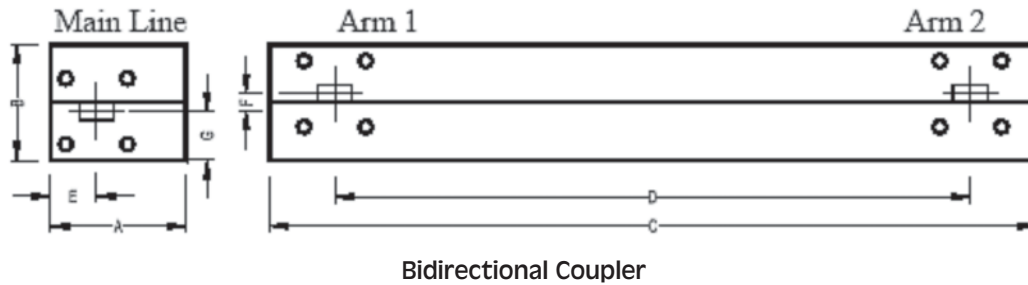
the precision coupling values. The bi- and dual-directional precision high directivity couplers are ideal devices in the applications of simultaneously testing, sampling or monitoring signals in both directions of the main arm of the coupler. Examples include instrumentation for incident and return signal measurement such as radar transmitted/reflected signal monitoring, etc.



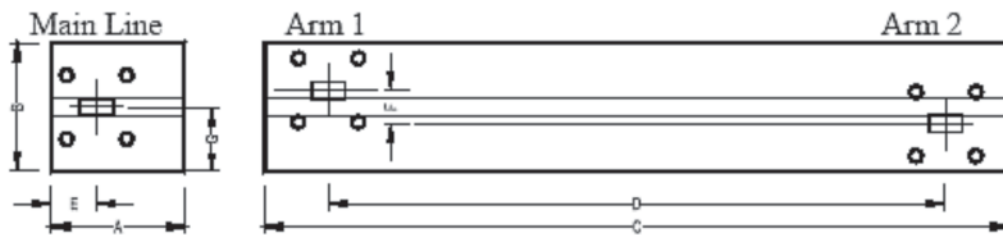
Specifications

FREQUENCY BAND	K	Ka	Q	U	V	E	W	F	D	G
Frequency Range (GHz)	18-26.5	26.5-40	33-50	40-60	50-75	60-90	75-110	90-140	110-170	140-220
Coupling Level (dB)	20, 30, 40 (+/- 1)									
Coupling Variation (dB)	+/- 0.7	+/- 0.7	+/- 0.7	+/- 0.7	+/- 0.7	+/- 0.8	+/- 0.8	+/- 1.0	+/- 1.0	+/- 1.2
Insertion Loss, (dB typ.)	1.0	1.0	1.0	1.0	1.2	1.3	1.5	2.0	2.5	3.0
Directivity (dB typ.)	37	37	37	37	35	35	35	30	28	25
Main Line VSWR (max.)	1.10:1	1.10:1	1.10:1	1.10:1	1.10:1	1.10:1	1.10:1	1.15:1	1.15:1	1.20:1
Coupled Arm VSWR (max.)	1.10:1	1.10:1	1.10:1	1.10:1	1.10:1	1.15:1	1.15:1	1.20:1	1.21:1	1.25:1

Outline Drawings/Mechanical Specifications



Bidirectional Coupler



Dual-directional Coupler

WAVEGUIDE BAND	WAVEGUIDE SIZE AND PATTERN	DIMENSIONS (INCHES/MM)									
		A		B		C		D		E	
		Bi & Dual	Bi	Dual	Bi & Dual	Bi & Dual	Bi & Dual	Bi & Dual	Bi & Dual	Bi & Dual	
K	WR-42 UG-595/U	1.40/35.6	1.10/27.9	1.24/31.4	7.75/196.9	6.87/174.5	0.44/11.1	0.350/8.9	0.475/12.1		
Ka	WR-28 UG-599-U	1.10/27.9	0.93/23.6	1.05/26.7	6.21/157.7	5.15/130.8	0.38/9.7	0.29/7.4	0.405/10.3		
Q	WR-22 UG-383/U	1.36/34.5	1.25/31.8	1.37/34.8	5.50/139.7	3.90/99.1	0.56/14.2	0.234/5.9	0.579/14.7		
U	WR-19 UG-383/UM	1.36/34.5	1.23/31.2	1.34/34.0	5.50/139.7	3.90/99.1	0.56/14.2	0.198/5.0	0.578/14.7		
V	WR-15 UG-385/U	1.20/30.5	0.83/21.1	0.91/23.1	3.84/97.5	2.64/67.1	0.38/9.7	0.153/3.9	0.383/9.7		
E	WR-12 UG-387/U	1.20/30.5	0.82/20.7	0.88/22.4	3.40/86.40	2.20/55.9	0.38/9.7	0.127/3.2	0.384/9.8		
W	WR-10 UG-387/UM	1.20/30.5	0.81/20.4	0.86/21.8	3.24/82.3	2.04/51.8	0.38/9.7	0.105/2.7	0.385/9.8		
F	WR-8 UG-387/UM	1.20/30.5	0.80/20.3	0.84/21.3	2.42/61.5	1.22/31.0	0.38/9.7	0.085/2.2	0.385/9.8		
D	WR-6 UG-387/UM	1.20/30.5	0.80/20.3	0.83/21.0	2.42/61.5	1.22/31.0	0.38/9.7	0.070/1.8	0.389/9.9		
G	WR-5 UG-383/UM	1.20/30.5	0.80/20.3	0.81/20.6	2.42/61.5	1.22/31.0	0.38/9.7	0.056/1.4	0.392/10.0		



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Ordering Information

