

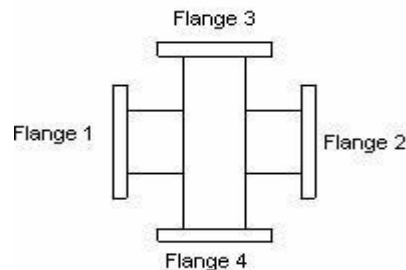
8 Waveguide Coupler

8.1 Crossguide Directional Coupler



Vector Telecom manufactures Crossguide Directional Couplers covering a wide frequency range. Couplers are available in 3 or 4 port configuration. Standard coupling values are 20, 30, 40, 50 and 60 dB, with minimum Directivity of 18 dB. The compactness of crossguide coupler suits many applications where space is at a premium and directivity is not the prime consideration. Models are available with combinations of waveguide and coaxial ports. Special multi-port crossguide couplers can be manufactured to suit customer' s special requirements.

Style 1 — 4 Waveguide Ports



【Specifications】

Model No*	Freq Range (GHz)	Operating Bandwidth (%)**	VSWR (Max)		Coupling *** (dB)	Directivity (Min) (dB)	WG Type		Flange	Material
			Main Line	Sec. Line			IEC	EIA		
VT22W+C...	1.72-2.61	10-20	1.10	1.15	18~60	18	R22	WR430	FDP/FDM	Al/Cu
VT26W+C...	2.17-3.30	10-20	1.10	1.15	18~60	18	R26	WR340	FDP/FDM	Al/Cu
VT32W+C...	2.60-3.95	10-20	1.10	1.15	18~60	18	R32	WR284	FDP/FDM	Al/Cu
VT40W+C...	3.22-4.90	10-20	1.10	1.15	18~60	18	R40	WR229	FDP/FDM	Al/Cu
VT48W+C...	3.94-5.99	10-20	1.10	1.15	18~60	18	R48	WR187	FDP/FDM	Al/Cu
VT58W+C...	4.64-7.05	10-20	1.10	1.15	18~60	18	R58	WR159	FDP/FDM	Al/Cu
VT70W+C...	5.38-8.17	10-20	1.10	1.15	18~60	18	R70	WR137	FDP/FDM	Al/Cu
VT84W+C...	6.57-9.99	10-20	1.10	1.15	18~60	18	R84	WR112	FBP/FBM /FBE	Al/Cu

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Waveguide Coupler



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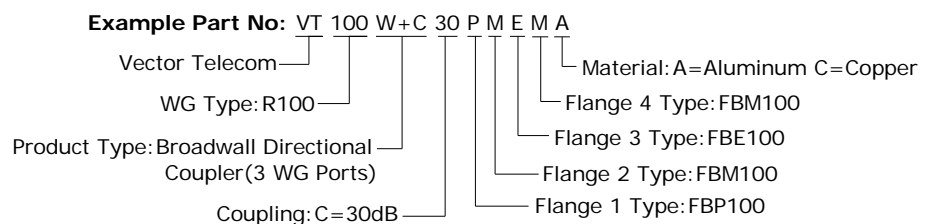
Model No*	Freq Range (GHz)	Operating Bandwidth (%)**	VSWR (Max)		Coupling *** (dB)	Directivity (Min) (dB)	WG Type		Flange	Material
			Main Line	Sec. Line			IEC	EIA		
VT100W+C...	8.20-12.40	10-20	1.10	1.15	18~60	18	R100	WR90	FBP/FBM /FBE	Al/Cu
VT120W+C...	9.84-15.0	10-20	1.10	1.15	18~60	18	R120	WR75	FBP/FBM /FBE	Al/Cu
VT140W+C...	11.9-18.0	10-20	1.10	1.15	18~60	18	R140	WR62	FBP/FBM /FBE	Al/Cu
VT180W+C...	14.5-22.0	10-20	1.10	1.15	18~60	18	R180	WR51	FBP/FBM /FBE	Al/Cu
VT220W+C...	17.6-26.7	10-20	1.10	1.15	18~60	18	R220	WR42	FBP/FBM /FBE	Al/Cu
VT260W+C...	21.7-33.0	10-20	1.10	1.15	18~60	18	R260	WR34	FBP/FBM /FBE	Al/Cu
VT320W+C...	26.3-40.0	10-20	1.15	1.15	18~60	18	R320	WR28	FBP/FBM /FBE	Al/Cu

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

**Typical operating bandwidth of the crossguide coupler is up to 20% of waveguide bandwidth.

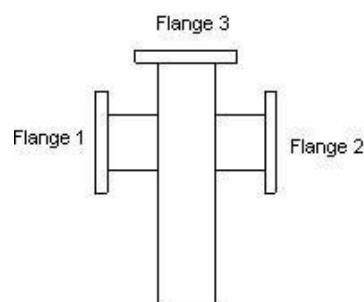
***Nominal Accuracy: $\pm 0.7\text{dB}$ Frequency Sensitivity: $\pm 1\text{dB}$

【Ordering Information】



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

Style 2 — 3 Waveguide Ports





Section 1

Waveguide Components

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Waveguide Coupler



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【Specifications】

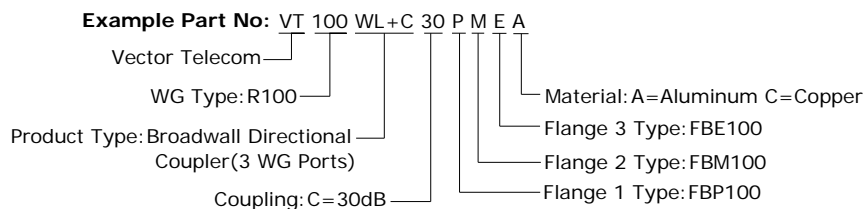
Model No*	Freq Range (GHz)	Operating Bandwidth (%)**	VSWR (Max)		Coupling *** (dB)	Directivity (Min) (dB)	WG Type		Flange	Material
			Main Line	Sec. Line			IEC	EIA		
VT22WL+C...	1.72-2.61	10-20	1.10	1.15	18~60	18	R22	WR430	FDP/FDM	Al/Cu
VT26WL+C...	2.17-3.30	10-20	1.10	1.15	18~60	18	R26	WR340	FDP/FDM	Al/Cu
VT32WL+C...	2.60-3.95	10-20	1.10	1.15	18~60	18	R32	WR284	FDP/FDM	Al/Cu
VT40WL+C...	3.22-4.90	10-20	1.10	1.15	18~60	18	R40	WR229	FDP/FDM	Al/Cu
VT48WL+C...	3.94-5.99	10-20	1.10	1.15	18~60	18	R48	WR187	FDP/FDM	Al/Cu
VT58WL+C...	4.64-7.05	10-20	1.10	1.15	18~60	18	R58	WR159	FDP/FDM	Al/Cu
VT70WL+C...	5.38-8.17	10-20	1.10	1.15	18~60	18	R70	WR137	FDP/FDM	Al/Cu
VT84WL+C...	6.57-9.99	10-20	1.10	1.15	18~60	18	R84	WR112	FDP/FDM	Al/Cu
VT100WL+C...	8.20-12.40	10-20	1.10	1.15	18~60	18	R100	WR90	FDP/FDM	Al/Cu
VT120WL+C...	9.84-15.0	10-20	1.10	1.15	18~60	18	R120	WR75	FDP/FDM	Al/Cu
VT140WL+C...	11.9-18.0	10-20	1.10	1.15	18~60	18	R140	WR62	FDP/FDM	Al/Cu
VT180WL+C...	14.5-22.0	10-20	1.10	1.15	18~60	18	R180	WR51	FDP/FDM	Al/Cu
VT220WL+C...	17.6-26.7	10-20	1.10	1.15	18~60	18	R220	WR42	FDP/FDM	Al/Cu
VT260WL+C...	21.7-33.0	10-20	1.10	1.15	18~60	18	R260	WR34	FDP/FDM	Al/Cu
VT320WL+C...	26.3-40.0	10-20	1.15	1.15	18~60	18	R320	WR28	FDP/FDM	Al/Cu
VT400WL+C...	33.0-50.0	10-20	1.15	1.15	18~60	15	R320	WR28	FUGP	Al/Cu
VT500WL+C...	40.0-60.0	10-20	1.15	1.15	18~60	15	R320	WR28	FUGP	Al/Cu
VT620WL+C...	50.0-75.0	10-20	1.15	1.15	18~60	15	R320	WR28	FUGP	Al/Cu
VT740WL+C...	60.0-90.0	10-20	1.15	1.15	18~60	15	R320	WR28	FUGP	Al/Cu
VT900WL+C...	75.0-110.0	10-20	1.15	1.15	18~60	15	R320	WR28	FUGP	Al/Cu

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

**Typical operating bandwidth of the crossguide coupler is up to 20% of waveguide bandwidth.

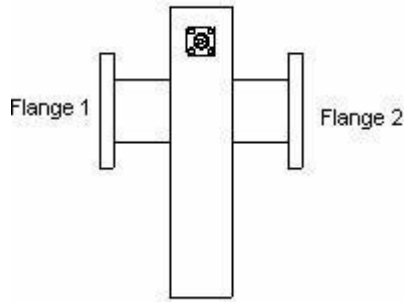
***Nominal Accuracy: ± 0.7dB Frequency Sensitivity: ± 1dB

【Ordering Information】



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

Style 3 — 2 Waveguide Ports, 1 Coax Port



【Specifications】

Model No*	Freq Range (GHz)	Operating Bandwidth (%)**	VSWR (Max)		Coupling *** (dB)	Directivity (Min) (dB)	WG Type		Flange	Coax Type	Material
			Main Line	Sec. Line			IEC	EIA			
VT22WL+C...	1.72-2.61	10-20	1.10	1.25	18~60	18	R22	WR430	FDP/FDM	N	Al/Cu
VT26WL+C...	2.17-3.30	10-20	1.10	1.25	18~60	18	R26	WR340	FDP/FDM	N	Al/Cu
VT32WL+C...	2.60-3.95	10-20	1.10	1.25	18~60	18	R32	WR284	FDP/FDM	N	Al/Cu
VT40WL+C...	3.22-4.90	10-20	1.10	1.25	18~60	18	R40	WR229	FDP/FDM	N	Al/Cu
VT48WL+C...	3.94-5.99	10-20	1.10	1.25	18~60	18	R48	WR187	FDP/FDM	N	Al/Cu
VT58WL+C...	4.64-7.05	10-20	1.10	1.25	18~60	18	R58	WR159	FDP/FDM	N	Al/Cu
VT70WL+C...	5.38-8.17	10-20	1.10	1.25	18~60	18	R70	WR137	FDP/FDM	N	Al/Cu
VT84WL+C...	6.57-9.99	10-20	1.10	1.25	18~60	18	R84	WR112	FBP/FBM/FBE	N	Al/Cu
VT100WL+C...	8.20-12.4	10-20	1.10	1.25	18~60	18	R100	WR90	FBP/FBM/FBE	N	Al/Cu
VT120WL+C...	9.84-15.0	10-20	1.10	1.25	18~60	18	R120	WR75	FBP/FBM/FBE	SMA	Al/Cu
VT140WL+C...	11.9-18.0	10-20	1.10	1.25	18~60	18	R140	WR62	FBP/FBM/FBE	SMA	Al/Cu
VT180WL+C...	14.5-22.0	10-20	1.10	1.30	18~60	18	R180	WR51	FBP/FBM/FBE	SMA	Al/Cu
VT220WL+C...	17.6-26.7	10-20	1.10	1.50	18~60	18	R220	WR42	FBP/FBM/FBE	SMA, K	Al/Cu
VT320WL+C...	26.3-40.0	10-20	1.15	1.50	18~60	18	R320	WR28	FBP/FBM/FBE	SMA, K	Al/Cu

Section 1

Waveguide Components

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

**Typical operating bandwidth of the crossguide coupler is up to 20% of waveguide bandwidth.

***Nominal Accuracy: $\pm 0.7\text{dB}$ Frequency Sensitivity: $\pm 1\text{dB}$

【Ordering Information】

Example Part No: VT 100 WL+C 30 N K P M A

Vector Telecom — VT
 WG Type: R100 — 100
 Product Type: Broadwall Directional Coupler (3 WG Ports) — WL+C
 Coupling: C=30dB — 30
 N — Coax Connector Type: N=Type N, S=SMA, 2.92=K 2.92mm, 2.4=2.4mm, TNC=TNC
 K — J=Male, K=Female
 P — Flange 1 Type: FBP100
 M — Flange 2 Type: FBM100
 A — Material: A=Aluminum, C=Copper

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