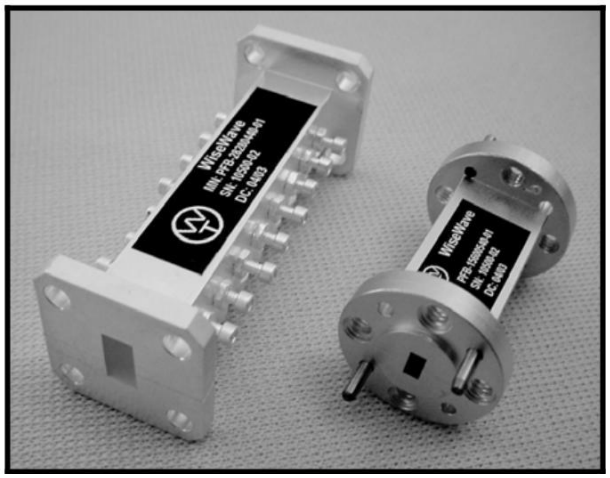
Waveguide Bandpass Filters

Bulletin No. PFB

FEATURES

- High rejection
- Low insertion loss
- Frequency up to 110 GHz
- Rugged mechanical construction



PFB Series

APPLICATIONS

- Outdoor Units
- Subsystems
- Transceivers

DESCRIPTION

PFB series waveguide bandpass filters are available in millimeterwave frequency bands up to 110 GHz and major communication frequency bands. There are two types of configurations employed in these bandpass filters. The cavity/ tunable version offers best performance and design flexibility, while E-plane version offers low cost and large volume production solution. The typical pass band bandwidth is 2 to 10% and in band ripple is 0.1 to 0.5 dB.

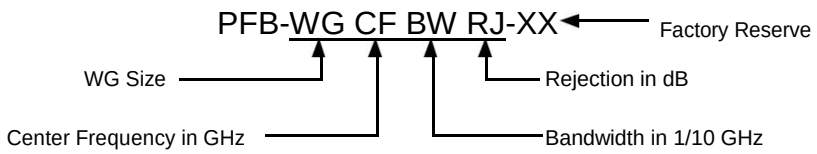
TYPICAL SPECIFICATIONS

Frequency Band	K	KA	Q	U	V	E	W
Waveguide	WR-42	WR-28	WR-22	WR-19	WR-15	WR-12	WR-10
Frequency Range (GHz)	18 to 26.5	26.5 to 40	33 to 50	40 to 60	50 to 75	60 to 90	75 to 110
Insertion Loss (dB)[1]	0.8 to 1.2	0.8 to 1.2	0.8 to 1.5	1.0 to 1.5	1.0 to 1.8	1.2 to 1.8	1.2 to 2.0
Rejection (dB)[2]	30 to 50	30 to 50	30 to 50	30 to 50	30 to 50	30 to 50	30 to 50
Ripple in Passband	0.1 to 0.5	0.1 to 0.5	0.1 to 0.5	0.1 to 0.5	0.1 to 0.5	0.1 to 0.5	0.1 to 0.5
Outline for E Plane Version	WT-E-2	WT-E-2	WT-E-2	WT-E-2	WT-E-2	WT-E-2	WT-E-2

Note: 1. The pass band insertion loss is bandwidth related;
2. The out of band rejection is offset frequency related. Consult factory for you specific bandpass filter requirement.

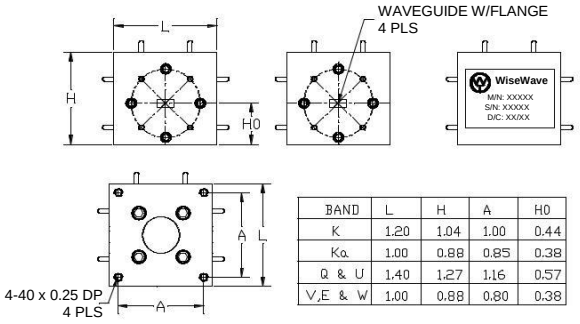
HOW TO ORDER

Specify Model Number



Example: To order a WR-28 bandpass filter with 38 GHz center frequency, 2.2GHz bandwidth and 45 dB rejection, specify PFB-28382245-XX.

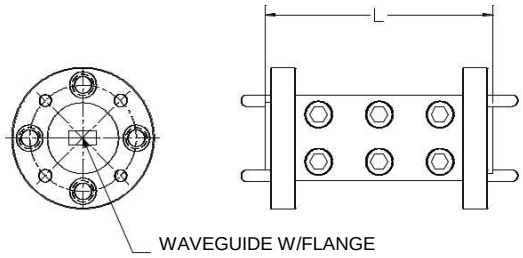
WT-E-1



BAND	L	H	A	H0
K	1.20	1.04	1.00	0.44
Ka	1.00	0.88	0.85	0.38
Q & U	1.40	1.27	1.16	0.57
V,E & W	1.00	0.88	0.80	0.38

Dimensions are in inches

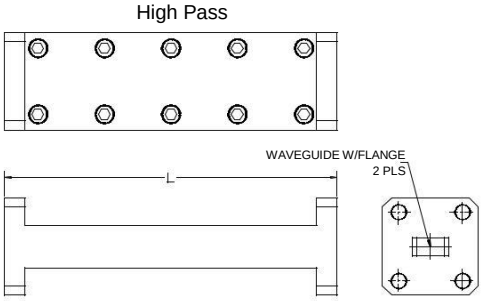
WT-E-2



BAND	K	Ka	Q & U	V,E & W
L	Vary per Specifications			

Dimensions are in inches

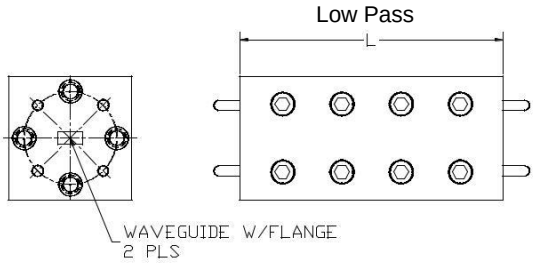
WT-E-3



BAND	K	Ka	Q & U	V,E & W
L	3.00	2.60	2.20	1.80

Dimensions are in inches

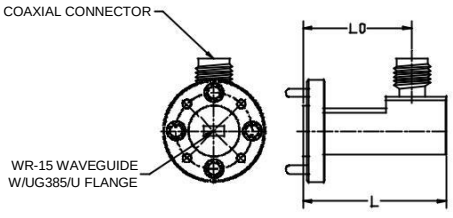
WT-E-4



BAND	K	Ka	Q & U	V,E & W
L	3.00	2.50	2.00	1.60

Dimensions are in inches

WT-E-5

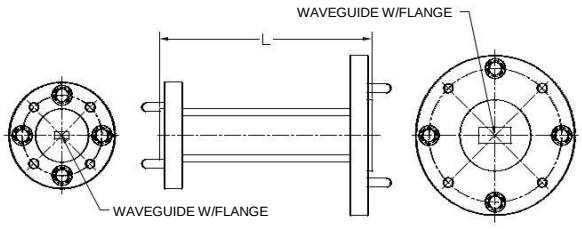


BAND	X	WR-75	WR-62	K/WR-34	Ka,Q & U	V
L	1.40	1.25	1.20	0.85	1.00	1.05
L0	1.00	0.90	0.95	0.60	0.75	0.80

NOTES:
BOTH MALE AND FEMALE COAXIAL CONNECTORS ARE AVAILABLE FOR ALL BANDS

Dimensions are in inches

WT-E-6

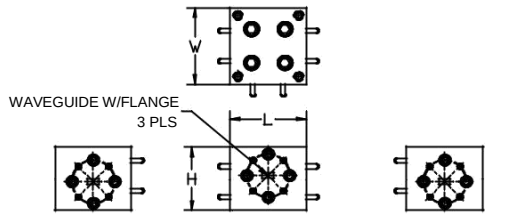


PTW	BIGGER WAVEGUIDE BAND	K	Ka	Q	U	V	E	
	L	2.00	2.00	1.50	1.50	1.00	1.00	
PRC	RECTANGULAR WG BAND	K	Ka	Q	U	V	E	W
	L	2.00	1.50	1.30	1.30	1.10	1.10	1.10

Dimensions are in inches

The flange pattern shown is for illustration purpose. Refer to Technical Reference Section for flange pattern details. The outline drawings shown are standard versions. Contact factory for your specific package requirements.

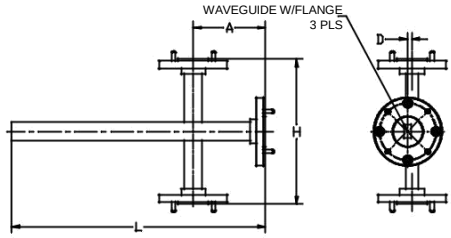
WT-E-7



BAND	K	Ka	Q	U	V	E	W
L	1.20	1.00	1.30	1.30	1.00	1.00	1.00
W	1.20	1.00	1.30	1.30	1.00	1.00	1.00
H	1.06	0.90	1.25	1.23	0.83	0.82	0.81

Dimensions are in inches

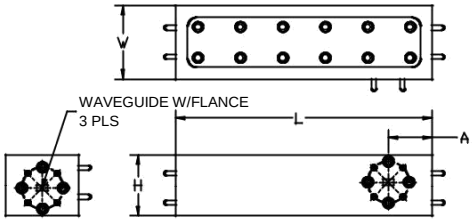
WT-E-8



Band	X	WR-75	Ku	K	Ka	Q	U	V	E	W
L	5.46	4.80	4.66	4.24	3.46	3.26	2.66	2.56	2.56	2.46
A	1.73	1.65	1.58	1.52	1.23	1.23	0.98	0.98	0.98	0.98
D	0.45	0.43	0.35	0.21	0.18	0.15	0.13	0.11	0.10	0.09
H	3.46	3.30	3.16	3.04	2.46	2.46	1.96	1.96	1.96	1.96

Dimensions are in inches

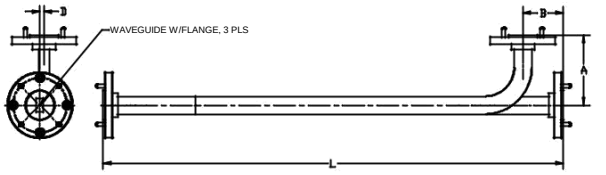
WT-E-9



BAND	Q	U	V	E	W
L	5.50	5.50	3.50	3.50	3.50
W	1.30	1.30	1.00	1.00	1.00
H	1.25	1.23	0.83	0.82	0.81
A	0.80	0.80	0.60	0.60	0.60

Dimensions are in inches

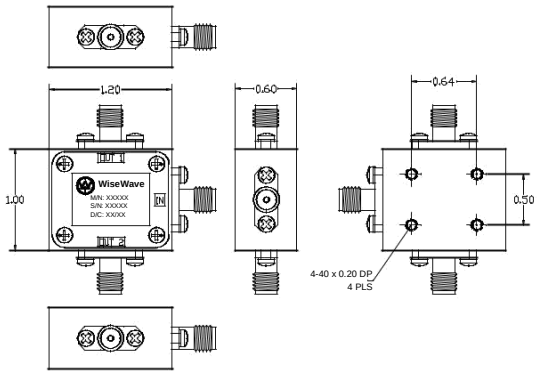
WT-E-10



Band	X	WR-75	Ku	K	Ka	Q	U	V	E	W
L	19.50	16.50	13.00	11.00	10.00	8.00	6.50	6.00	5.50	5.00
A	1.90	1.85	1.75	1.50	1.40	1.20	1.20	1.00	1.00	1.00
B	0.95	0.95	0.90	0.70	0.60	0.70	0.70	0.60	0.60	0.60
D	0.45	0.43	0.35	0.21	0.18	0.15	0.13	0.11	0.10	0.09

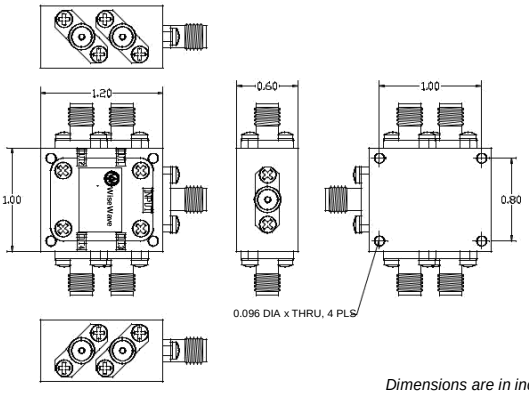
Dimensions are in inches

WT-E-11



Dimensions are in inches

WT-E-12



Dimensions are in inches

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