Waveguide Highpass Filters

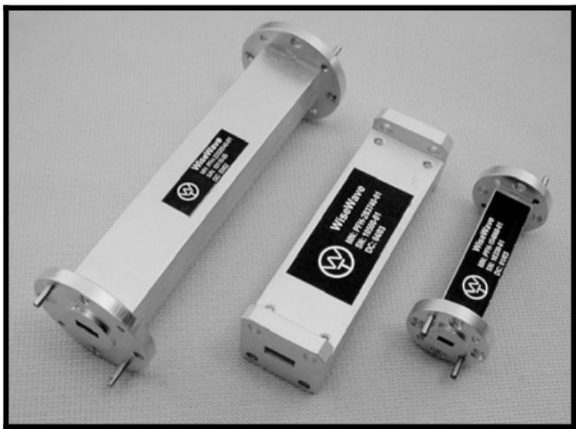
Bulletin No. PFH

FEATURES

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

APPLICATIONS

- Lower side band rejection
- Up and down converters
- Transceivers



PFH Series

DESCRIPTION

PFH series waveguide highpass filters are available in major communication frequency and Radar bands. The frequency coverage is up to 110 GHz in seven waveguide bands. These filters are designed to offer sharp cut off and high attenuation in the stop band and low insertion loss in the pass band. The corner frequency is specified at the time of order.

SPECIFICATIONS

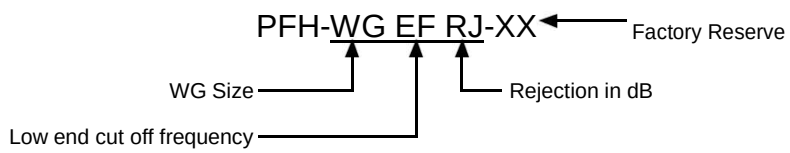
Frequency Band	K	Ka	Q	U	V	E	W
Waveguide	WR-42	WR-28	WR-22	WR-19	WR-15	WR-12	WR-10
Frequency Range (GHz)	18 to 26.5	26.5 to 40	33 to 50	40 to 60	50 to 75	60 to 90	75 to 110
Cut off Frequency Range (GHz)	14 to 23	21 to 36	26 to 45	31 to 54	40 to 68	48 to 82	59 to 100
Pass band Loss (dB)[1]	0.6	0.7	0.8	0.8	0.9	1.0	1.0
Stop band Rejection (dB)[1]	45	45	45	45	45	45	45
Outline Drawing	WT-E-3	WT-E-3	WT-E-3	WT-E-3	WT-E-3	WT-E-3	WT-E-3

Note:

1. The pass band insertion loss and stop band rejection is cut off frequency and filter physical length related. The longer the length, the higher the rejection in the stop bands.
2. Other waveguide band highpass filters are available upon request.

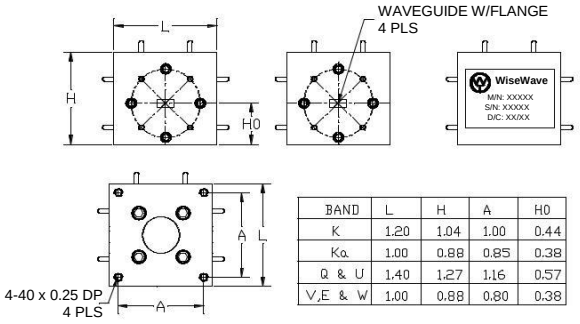
HOW TO ORDER

Specify Model Number



Example: To order a WR-28 highpass filter with 35 GHz cut off frequency and 40 dB minimum rejection, specify PHF-283540-XX.

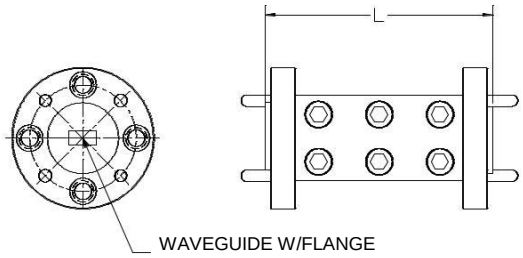
WT-E-1



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

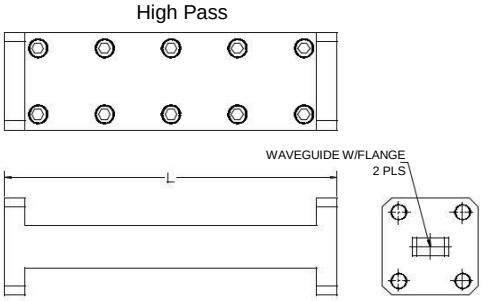
WT-E-2



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

Dimensions are in inches

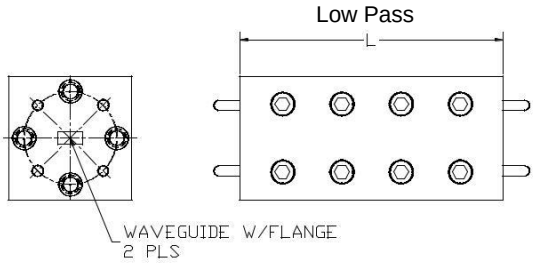
WT-E-3



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

Dimensions are in inches

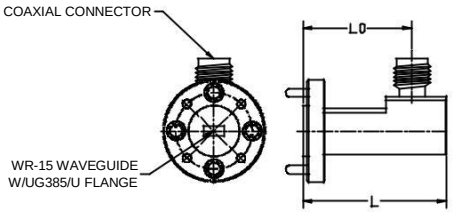
WT-E-4



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

Dimensions are in inches

WT-E-5

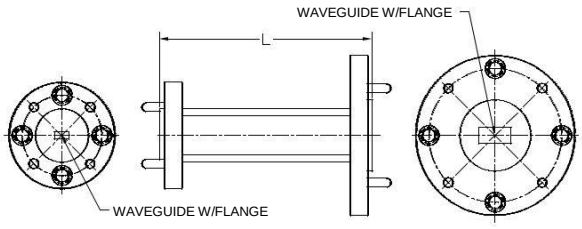


BAND	X	WR-75	WR-62	K/WR-34	Ka,Q & U	V
L	1.40	1.25	1.20	0.85	1.00	1.05
L0	1.00	0.90	0.95	0.60	0.75	0.80

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

Dimensions are in inches

WT-E-6

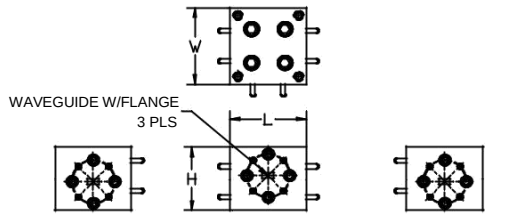


PTW	BIGGER WAVEGUIDE BAND	K	Ka	Q	U	V	E	
	L	2.00	2.00	1.50	1.50	1.00	1.00	
PRC	RECTANGULAR WG BAND	K	Ka	Q	U	V	E	W
	L	2.00	1.50	1.30	1.30	1.10	1.10	1.10

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.

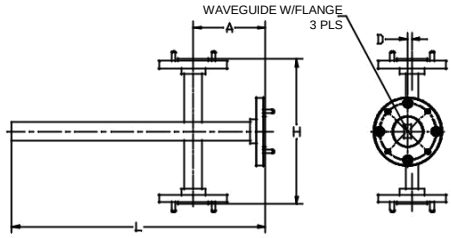
WT-E-7



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

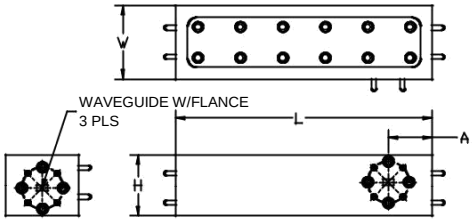
WT-E-8



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

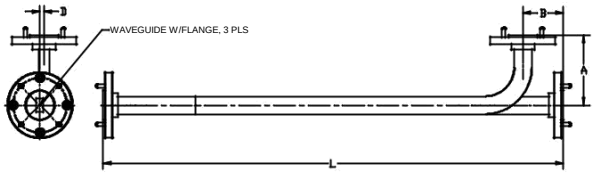
WT-E-9



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

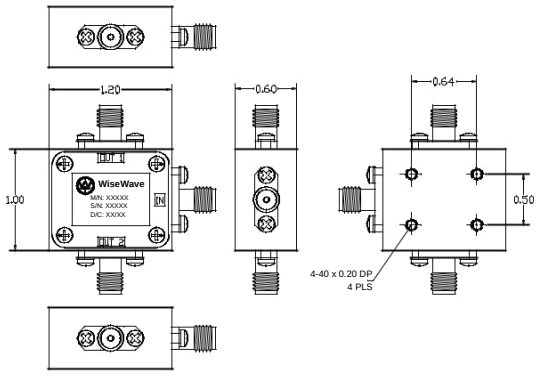
WT-E-10



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

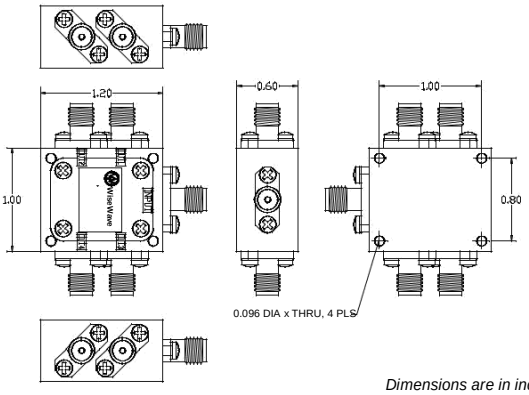
Dimensions are in inches

WT-E-11



Dimensions are in inches

WT-E-12



Dimensions are in inches

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