

### Characteristics

- ◆ Low Insertion Loss
- ◆ Custom Versions Available
- ◆ High rejection Level

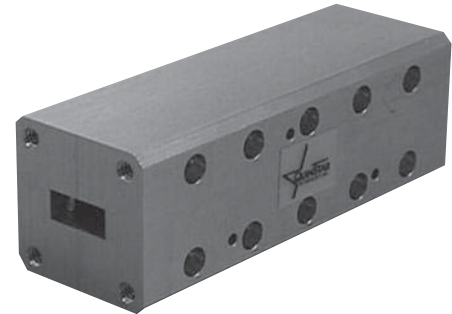
### Product Description

Series QFH High-Pass Filters provide sharp skirt selectivity and high rejection levels for frequencies below their cutoff frequency and have minimum insertion loss in the pass band. Figure 1 shows the characteristics of this type of filters. These filters are offered in seven waveguide bands covering 18 to 110 GHz. Their rejection characteristics can be custom-designed to meet specified subsystem requirements.

These filters are ideally suited for rejecting lower sideband or image band in receivers, and for eliminating high power

signals at lower frequencies below the applicable signal band. They are also suitable for eliminating local oscillator leakage or spurious signals by limiting the band. Series QFH filters may be combined with series QFL Low Pass Filters to produce a band pass filter with very broad pass band.

The length of these filters depends on the rejection level and skirt selectivity. Please contact QuinStar for mechanical outline dimensions.



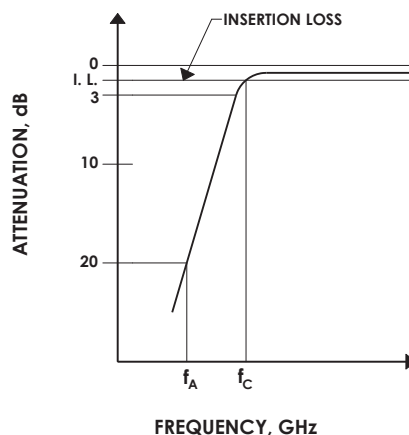
### Specifications

FREQUENCY BAND	K	Ka	Q	U	V	E	W
Frequency Range (GHz)	18-26.5	26.5-40	33-50	40-60	50-75	60-90	75-110
Waveguide Size	WR-42	WR-28	WR-22	WR-19	WR-15	WR-12	WR-10
Cutoff Frequency Range (GHz)	14-23	21-35	26-44	31-53	40-65	48-80	59-95
Pass Band Insertion Loss (dB max)	0.8	0.9	1.0	1.0	1.0	1.2	1.2
Pass Band VSWR (max)	1.15:1						
Rejection at 90% of Cutoff Frequency (dB min) <sup>1</sup>	45	45	40	40	40	35	35
Skirt Selectivity (dB/GHz typ) <sup>2</sup>	20	15	10	10	8	6	5

Other waveguide sizes are available.

<sup>1</sup> High pass filters are typically custom designed to meet your specific requirements. Typical performance presented here.

<sup>2</sup> Please contact QuinStar for mechanical specifications and/or outline drawing.



$f_C$ : Cut-off frequency  
 $f_A$ : Low side rejection frequency

Figure 1: High Pass Filter



# High Pass Filters QFH

## Ordering Information

Model Number **QFH -** **AB C D 00**

lower cutoff frequency rounded to nearest GHz

waveguide band designator

configuration

S = Standard  
Z = Custom

K = K-band      V = V-band  
A = Ka-band     E = E-band  
Q = Q-band      W = W-band  
U = U-band