

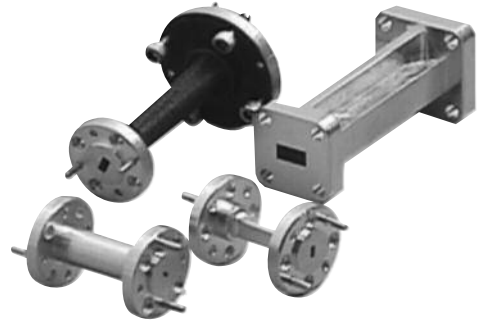


# Waveguide Straight Sections and Tapered Transitions

## QWS/QWR/QWP

### Characteristics

- ◆ Low VSWR
- ◆ Minimum Insertion Loss
- ◆ Precise Construction



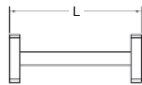
### Product Description

QuinStar Technology's **QWS**, **QWR** and **QWP** series waveguide straight sections, raw waveguide and tapered transitions cover the frequency range of 18 to 220 GHz in ten waveguide bands. Straight waveguide sections are available in standard lengths as well as customer-specific lengths.

The tapered transitions allow very efficient propagation of RF energy from one waveguide size to another.

The straight sections are built with precision and plated for low insertion loss and high corrosion resistance. Typical VSWR for straight sections is 1.05:1 over the entire frequency band.

### Outline Drawings/Mechanical Specifications



Straight Section



Tapered Transition

TAPERED TRANSITION LENGTHS, inches/mm										
FREQUENCY BAND	K	Ka	Q	U	V	E	W	F	D	G
<b>Freq. Range (GHz)</b>	18-26.5	26.5-40	33-50	40-60	50-75	60-90	75-110	90-140	110-170	140-220
<b>Waveguide Size</b>	WR-42	WR-28	WR-22	WR-19	WR-15	WR-12	WR-10	WR-8	WR-6	WR-5
<b>K-band to</b>		2.20/56.0	2.20/56.0	2.50/64.0	2.70/69.0	3.30/84.0	3.30/84.0	3.20/81.0	3.50/89.0	3.60/92.0
<b>Ka-band to</b>			2.00/51.0	2.00/51.0	2.00/51.0	2.40/61.0	1.80/46.0	2.20/56.0	2.30/58.0	2.40/61.0
<b>Q-band to</b>				1.80/46.0	1.80/46.0	1.80/46.0	1.80/46.0	1.80/46.0	1.80/46.0	1.90/48.3
<b>U-band to</b>					1.60/40.6	1.50/38.0	1.50/38.0	1.50/38.0	1.50/38.0	1.60/40.6
<b>V-band to</b>						1.40/36.0	1.40/36.0	1.40/36.0	1.40/36.0	1.40/36.0
<b>E-band to</b>							1.30/33.0	1.30/33.0	1.30/33.0	1.30/33.0
<b>W-band to</b>								1.20/31.0	1.20/31.0	1.20/31.0
<b>F-band to</b>									1.10/27.0	1.10/27.0
<b>D-band to</b>										1.00/26.0



# Waveguide Straight Sections and Tapered Transitions

## QWS/QWR/QWP

### Ordering Information

**Model Number** **QW - A BCD E 0**

model prefix

S = straight section  
R = raw waveguide (no flanges)

waveguide band designator

K = K-band	E = E-band
A = Ka-band	W = W-band
Q = Q-band	F = F-band
U = U-band	D = D-band
V = V-band	G = G-band

options

0 = none  
Z = special features

length rounded to nearest tenth of an inch

010 = 1.0 inch

**Model Number** **QWP - A B 0000**

larger waveguide band designator

K = K-band	E = E-band
A = Ka-band	W = W-band
Q = Q-band	F = F-band
U = U-band	D = D-band
V = V-band	G = G-band

smaller waveguide band designator  
(see list at left)