

FEATURES

- ❖ Rugged waveguide configuration
- ❖ Full band operation
- ❖ High performance

APPLICATIONS

- ❖ Test benches
- ❖ Subsystems
- ❖ Prototypes
- ❖ Inter connections



PRC & PTW Series

DESCRIPTION

PRC series rectangular to circular waveguide transitions are offered to cover frequency range of 18 to 110 GHz. These transitions are manufactured with electro-forming technique to ensure high mechanical tolerance and surface smoothness. Typical VSWR for these transitions is 1.05:1. The transitions are used for connecting rectangular waveguide to circular waveguide with minimum loss. The outline drawing for these transitions is WT-E-6.

PTW series rectangular waveguide taper transitions are offered to cover frequency range of 18 to 110 GHz. These transitions are manufactured with EDM technique to ensure high mechanical tolerance and ruggedness. Typical VSWR for these transitions is 1.05:1. The transitions are used for smooth transition between different waveguide size with minimum loss. The outline drawing for these transitions is WT-E-6.

HOW TO ORDER

Rectangular to circular waveguide transitions

Specify Model Number $PRC - \underline{WG} \underline{DDD} -XX$ ← Factory Reserve

Rectangular Waveguide Size
Diameter in Mils

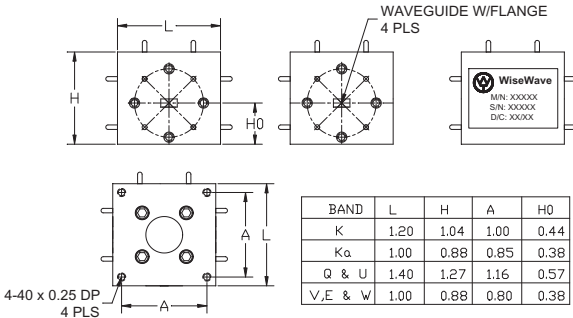
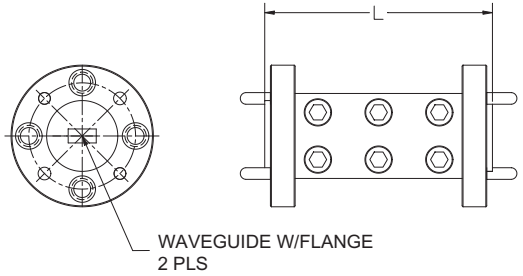
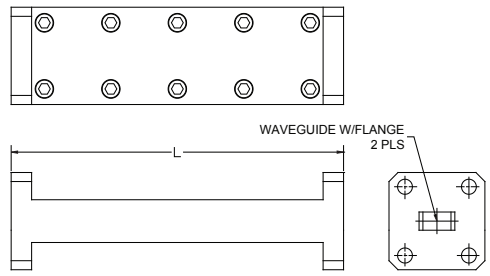
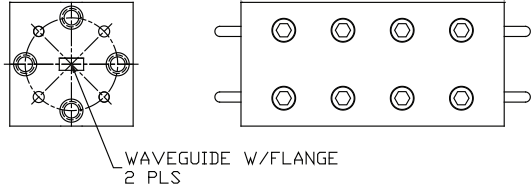
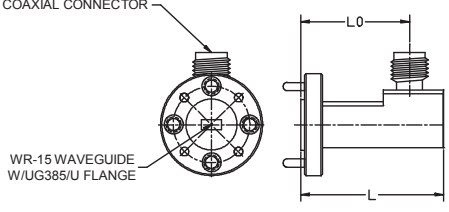
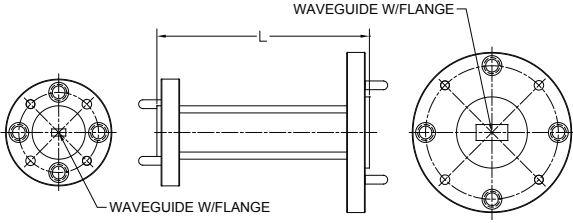
Example: To order a WR-15 to 0.141" diameter rectangular to circular waveguide transition, specify PRC-15141-XX.

Rectangular taper transitions

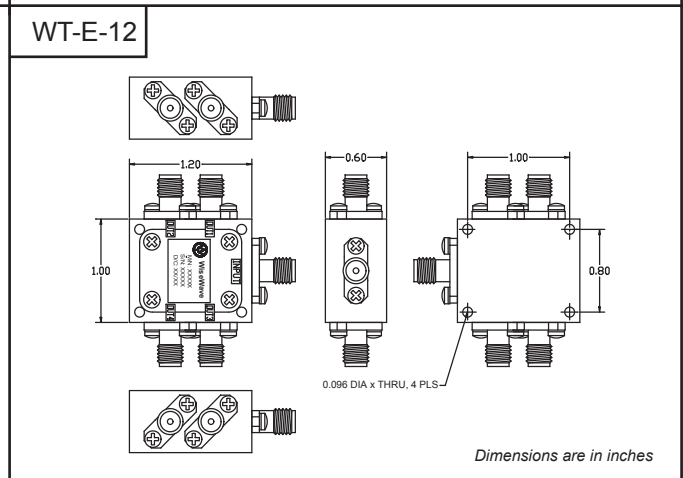
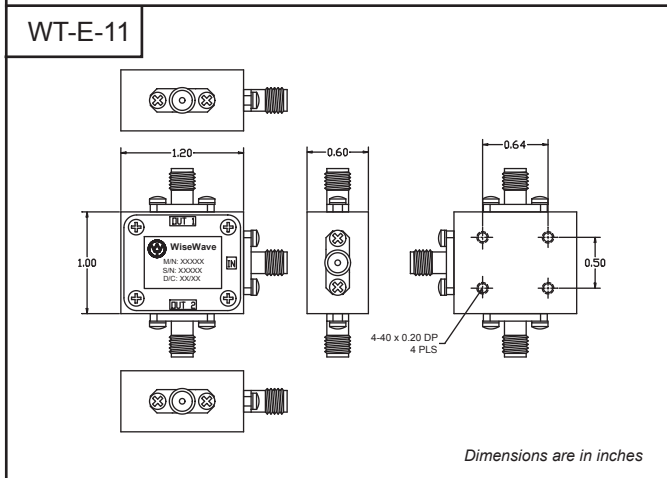
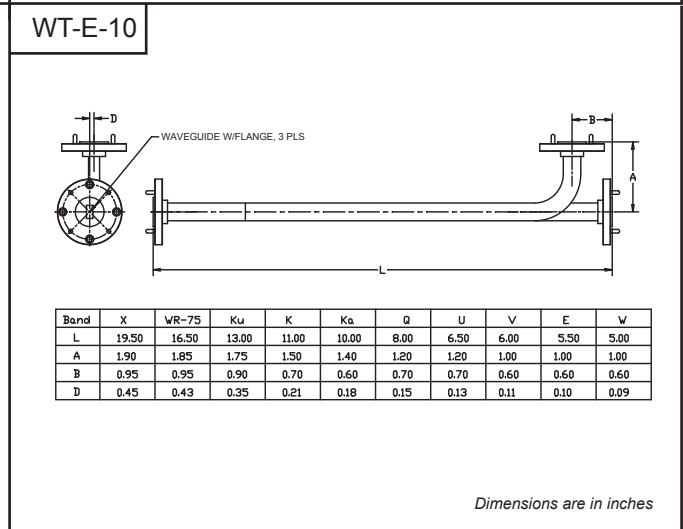
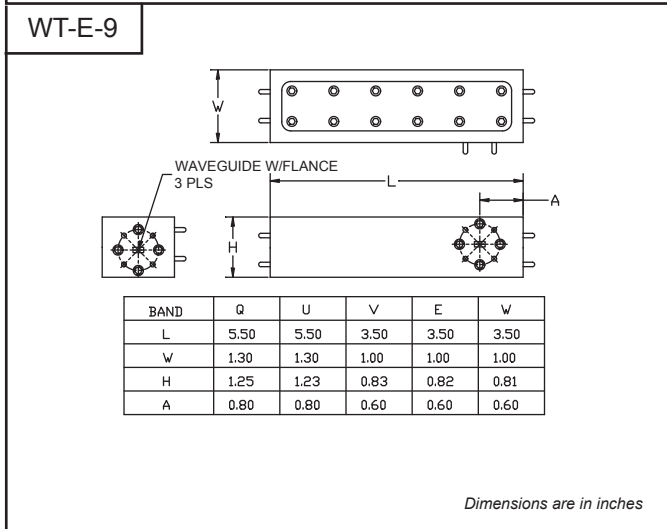
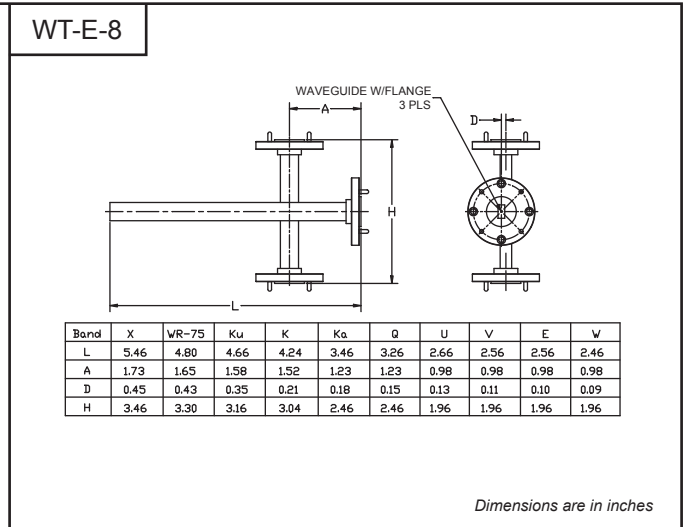
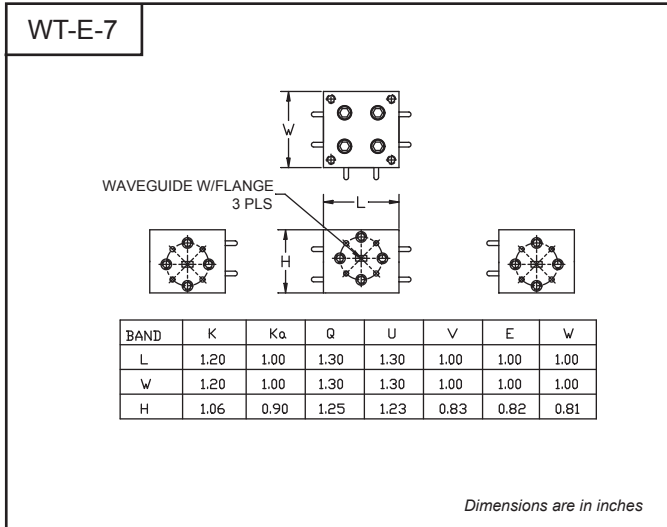
Specify Model Number $PTW - \underline{WG} \underline{WG} L - XX$ ← Factory Reserve

Smaller Waveguide Size
Larger Waveguide Size

Example: To order a WR-10 to WR-28 waveguide taper transition, specify PTW-1028L-XX.

| <div style="border: 1px solid black; padding: 5px;"> <p>WT-E-1</p>  <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>BAND</th> <th>L</th> <th>H</th> <th>A</th> <th>H0</th> </tr> </thead> <tbody> <tr> <td>K</td> <td>1.20</td> <td>1.04</td> <td>1.00</td> <td>0.44</td> </tr> <tr> <td>K_a</td> <td>1.00</td> <td>0.88</td> <td>0.85</td> <td>0.38</td> </tr> <tr> <td>Q & U</td> <td>1.40</td> <td>1.27</td> <td>1.16</td> <td>0.57</td> </tr> <tr> <td>V,E & W</td> <td>1.00</td> <td>0.88</td> <td>0.80</td> <td>0.38</td> </tr> </tbody> </table> <p style="text-align: center; font-size: small;">Dimensions are in inches</p> </div> | BAND | L | H | A | H0 | K | 1.20 | 1.04 | 1.00 | 0.44 | K _a | 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 | <div style="border: 1px solid black; padding: 5px;"> <p>WT-E-2</p>  <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>BAND</th> <th>K</th> <th>K_a</th> <th>Q & U</th> <th>V,E & W</th> </tr> </thead> <tbody> <tr> <td>L</td> <td colspan="4">Vary per Specifications</td> </tr> </tbody> </table> <p style="text-align: center; font-size: small;">Dimensions are in inches</p> </div> | BAND | K | K _a | Q & U | V,E & W | L | Vary per Specifications | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|----------------|----------------|---------|------------------------|------------------------|------|------|------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|----------------|-------|---------|------|------|------|------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----------------------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|---|----------------|-------|---------|---|-------------------------|------|------|------|------|------|-----|---------------------|---|----------------|---|---|---|---|---|--|---|------|------|------|------|------|------|------|
| BAND | L | H | A | H0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| K | 1.20 | 1.04 | 1.00 | 0.44 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| K _a | 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 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BAND | K | K _a | Q & U | V,E & W | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L | Vary per Specifications | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div style="border: 1px solid black; padding: 5px;"> <p>WT-E-3</p> <p style="text-align: center;">High Pass</p>  <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>BAND</th> <th>K</th> <th>K_a</th> <th>Q & U</th> <th>V,E & W</th> </tr> </thead> <tbody> <tr> <td>L</td> <td>3.00</td> <td>2.60</td> <td>2.20</td> <td>1.80</td> </tr> </tbody> </table> <p style="text-align: center; font-size: small;">Dimensions are in inches</p> </div> | BAND | K | K _a | Q & U | V,E & W | L | 3.00 | 2.60 | 2.20 | 1.80 | <div style="border: 1px solid black; padding: 5px;"> <p>WT-E-4</p> <p style="text-align: center;">Low Pass</p>  <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>BAND</th> <th>K</th> <th>K_a</th> <th>Q & U</th> <th>V,E & W</th> </tr> </thead> <tbody> <tr> <td>L</td> <td>3.00</td> <td>2.50</td> <td>2.00</td> <td>1.60</td> </tr> </tbody> </table> <p style="text-align: center; font-size: small;">Dimensions are in inches</p> </div> | BAND | K | K _a | Q & U | V,E & W | L | 3.00 | 2.50 | 2.00 | 1.60 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BAND | K | K _a | Q & U | V,E & W | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L | 3.00 | 2.60 | 2.20 | 1.80 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BAND | K | K _a | Q & U | V,E & W | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L | 3.00 | 2.50 | 2.00 | 1.60 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div style="border: 1px solid black; padding: 5px;"> <p>WT-E-5</p>  <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>BAND</th> <th>X</th> <th>WR-75</th> <th>WR-62</th> <th>K/WR-34</th> <th>K_a, Q & U</th> <th>V</th> </tr> </thead> <tbody> <tr> <td>L</td> <td>1.40</td> <td>1.25</td> <td>1.20</td> <td>0.85</td> <td>1.00</td> <td>1.05</td> </tr> <tr> <td>L0</td> <td>1.00</td> <td>0.90</td> <td>0.95</td> <td>0.60</td> <td>0.75</td> <td>0.80</td> </tr> </tbody> </table> <p style="font-size: x-small;">NOTES: BOTH MALE AND FEMALE COAXIAL CONNECTORS ARE AVAILABLE FOR ALL BANDS</p> <p style="text-align: center; font-size: small;">Dimensions are in inches</p> </div> | BAND | X | WR-75 | WR-62 | K/WR-34 | K _a , 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 | <div style="border: 1px solid black; padding: 5px;"> <p>WT-E-6</p>  <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>PTW</th> <th>BIGGER WAVEGUIDE BAND</th> <th>K</th> <th>K_a</th> <th>Q</th> <th>U</th> <th>V</th> <th>E</th> </tr> </thead> <tbody> <tr> <td></td> <td>L</td> <td>2.00</td> <td>2.00</td> <td>1.50</td> <td>1.50</td> <td>1.00</td> <td>1.00</td> </tr> </tbody> </table> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>PRC</th> <th>RECTANGULAR WG BAND</th> <th>K</th> <th>K_a</th> <th>Q</th> <th>U</th> <th>V</th> <th>E</th> <th>W</th> </tr> </thead> <tbody> <tr> <td></td> <td>L</td> <td>2.00</td> <td>1.50</td> <td>1.30</td> <td>1.30</td> <td>1.10</td> <td>1.10</td> <td>1.10</td> </tr> </tbody> </table> <p style="text-align: center; font-size: small;">Dimensions are in inches</p> </div> | PTW | BIGGER WAVEGUIDE BAND | K | K _a | Q | U | V | E | | L | 2.00 | 2.00 | 1.50 | 1.50 | 1.00 | 1.00 | PRC | RECTANGULAR WG BAND | K | K _a | Q | U | V | E | W | | L | 2.00 | 1.50 | 1.30 | 1.30 | 1.10 | 1.10 | 1.10 |
| BAND | X | WR-75 | WR-62 | K/WR-34 | K _a , 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 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PTW | BIGGER WAVEGUIDE BAND | K | K _a | Q | U | V | E | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | L | 2.00 | 2.00 | 1.50 | 1.50 | 1.00 | 1.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PRC | RECTANGULAR WG BAND | K | K _a | Q | U | V | E | W | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | L | 2.00 | 1.50 | 1.30 | 1.30 | 1.10 | 1.10 | 1.10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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.



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