

SERIES TWT/WFA/SWS

TAPERED TRANSITIONS, WAVEGUIDE FLANGE ADAPTERS AND STRAIGHT WAVEGUIDE SECTIONS



FEATURES:

- Frequency band coverage from 18 to 220 GHz
- Low VSWR and insertion loss

APPLICATIONS:

- Assemblies and subsystems
- Test and measurement equipment

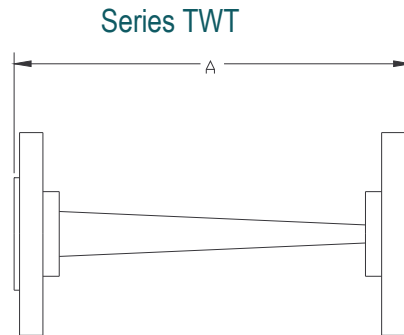
DESCRIPTION

Millitech series TWT tapered waveguide transitions are short sections of tapered waveguide with standard waveguide dimensions at each end. They are made using electroforming techniques for precise dimensions, resulting in a high degree of mode purity, along with minimum VSWR and insertion loss. Tapered transitions are available between 18 and 220 GHz.

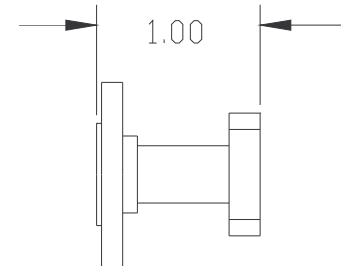
Series WFA flange adapters are short sections of waveguide with different flange types suitable for the waveguide size on either end. Series SWS straight waveguide sections are sections of waveguide offered in customer-specified lengths up to 48 inches. A length of one inch is provided as the standard product.

Millitech also offers a complete line of waveguide components and test measurement instruments.

OUTLINE DRAWINGS



Series WFA (dimensions in inches)



MECHANICAL SPECIFICATIONS

| Model Number | TWT-42 | TWT-28 | TWT-22 | TWT-19 | TWT-15 | TWT-12 | TWT-10 | TWT-08 | TWT-06 | TWT-05 |
|---------------------|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|
| WR-42 (18-26.5 GHz) | --- | 2.2/56 | 2.2/56 | 2.5/64 | 2.7/69 | 3.3/84 | 3.2/81 | 3.4/86 | 3.5/89 | 3.6/91 |
| WR-28 (26.5-40 GHz) | --- | --- | 2.0/51 | 2.0/51 | 2.0/51 | 2.4/61 | 1.8/46 | 2.2/56 | 2.3/58 | 2.4/61 |
| WR-22 (33-50 GHz) | --- | --- | --- | 1.8/46 | 1.8/46 | 1.8/46 | 1.8/46 | 1.8/46 | 1.8/46 | 1.9/48 |
| WR-19 (40-60 GHz) | --- | --- | --- | --- | 1.6/41 | 1.5/38 | 1.5/38 | 1.5/38 | 1.5/38 | 1.6/41 |
| WR-15 (50-75 GHz) | --- | --- | --- | --- | --- | 1.4/36 | 1.4/36 | 1.4/36 | 1.4/36 | 1.4/36 |
| WR-12 (60-90 GHz) | --- | --- | --- | --- | --- | --- | 1.3/33 | 1.3/33 | 1.3/33 | 1.3/33 |
| WR-10 (75-110 GHz) | --- | --- | --- | --- | --- | --- | --- | 1.2/31 | 1.2/31 | 1.2/31 |
| WR-08 (90-140 GHz) | --- | --- | --- | --- | --- | --- | --- | --- | 1.1/28 | 1.1/28 |
| WR-06 (110-170 GHz) | --- | --- | --- | --- | --- | --- | --- | --- | --- | 1.0/25 |
| Flange MIL.F-3922 | /54-001 | /54-003 | /67B-006 | /67B-008 | /67B-008 | /67B-009 | /67B-010 | /67B-M08 | /67B-M06 | /67B-M05 |

HOW TO ORDER

Specify Model Number
SWS-XX-ABBØ (straight waveguide sections)

XX = Waveguide Band
WR – number

A = Flange Type
R – round
S – square (WR-42 and WR-28 only)
P – pin contact (WR-08 through WR-05 only)

BB = Length in Inches (1 to 48)
Example: **01** = 1 inch (standard)

Note: Straight waveguide available in copper or stainless steel upon request

EXAMPLE:

To Order: a series SWS WR-22 straight waveguide section 2 inches in length with round flanges

Specify: SWS-22-R0200

HOW TO ORDER

| Specify Model Number TWT-XX-ABBCØ (tapered transitions) |
|--|
| XX = Large Size Waveguide Band WR – number |
| A = Large Waveguide Flange Type R – round (WR-28 through WR-05 only) S – square (WR-42 and WR-28 only) P – pin contact (WR-08 through WR-05 only) |
| BB = Small Size Waveguide Band WR – number |
| C = Small Waveguide Flange Type R – round S – square (WR-28 only) P – pin contact (WR-08 through WR-05 only) |

EXAMPLE:

To Order: a series TWT tapered transition from WR-15 to WR-08 with a round flange in WR-15 and a pin contact flange in WR-08

Specify: TWT-15-R08PØ

HOW TO ORDER

| Specify Model Number WFA-XX-ABØØ (waveguide flange adapters) |
|---|
| XX = Waveguide Band WR – number |
| A = Input Flange Type R – round (WR-28 through WR-05 only) S – square (WR-42 and WR-28 only) P – pin contact (WR-08 through WR-05 only) |
| B = Output Flange Type (WR-28 through WR-05 only) R – round S – square (WR-42 and WR-28 only) P – pin contact (WR-08 through WR-05 only) |

EXAMPLE:

To Order: a series WFA waveguide flange adapter for WR-28 with a square input flange and round output flange

Specify: WFA-28-SR000