

**WR-90 Twistable Flexible Waveguide Using UG-39/U Square Cover Flange With a 8.2 GHz to 12.4 GHz Frequency Range**

The SMW90TF005-24 is one of Fairview Microwave's flexible, twistable sections which operates in the 8.2 to 12.4 GHz range. It can be twisted and/or bent in both the E and H planes without impairing VSWR or attenuation because of its silver coated helically wound brass body construction. The twistable section is covered in a neoprene jacket which allows the section to be pressurized as well as protecting the waveguide's integrity.

**Electrical Specifications**

| Description     | Min | Typ   | Max  | Units |
|-----------------|-----|-------|------|-------|
| Frequency Range | 8.2 |       | 12.4 | GHz   |
| VSWR            |     | 1.1:1 |      |       |
| Insertion Loss  |     | 0.36  |      | dB    |

**Mechanical Specifications**

|                                       |                  |
|---------------------------------------|------------------|
| Waveguide Size                        | WR-90            |
| Waveguide Design                      | Twistable        |
| Section Length                        | 24 in [609.6 mm] |
| E-Plane Minimum Bend Radius, One Time | 2.5 in [63.5 mm] |
| E-Plane Minimum Bend Radius, Repeated | 10 in [254 mm]   |
| H-Plane Minimum Bend Radius, One Time | 5 in [127 mm]    |
| H-Plane Minimum Bend Radius, Repeated | 20 in [508 mm]   |
| Maximum Offset Rotation, One Time     | 96 degrees/ft    |
| Maximum Offset Rotation, Repeated     | 24 degrees/ft    |
| Maximum Operating Pressure            | 45 psig          |

| Description | Flange 1     | Waveguide | Flange 2     |
|-------------|--------------|-----------|--------------|
| Type        | Square Cover | WR-90     | Square Cover |
| Designation | UG-39/U      |           | UG-39/U      |
| Material    | Brass        | Brass     | Brass        |
| Plating     |              | Silver    |              |
| Color       | Gold         | Black     | Gold         |

**Compliance Certifications** (visit [www.FairviewMicrowave.com](http://www.FairviewMicrowave.com) for current document)

|                 |            |
|-----------------|------------|
| RoHS Compliant  | Yes        |
| REACH Compliant | 12/17/2015 |

**Plotted and Other Data**

- Notes:
- Notes, Plotted Data



**Features:**

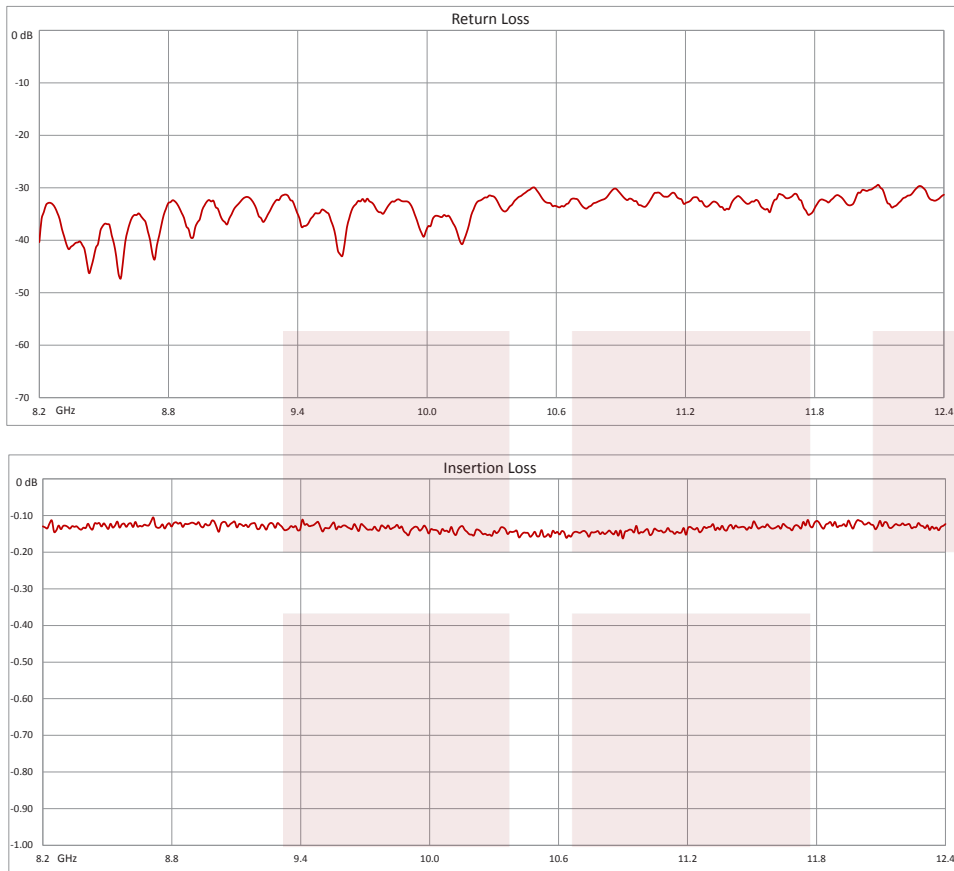
- Twistable/Flexible in both the E and H plane
- Neoprene Jacket allows pressurization
- 8.2 GHz to 12.4 GHz Range
- Brass flanges with a silver plated brass body

**Applications:**

- Test Benches
- Microwave Radio
- Pressurized waveguide systems
- Provides vibration isolation
- Easily connects misaligned sections.
- Relieves mechanical stresses caused by thermal expansion/contraction.

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**Typical Performance Data**

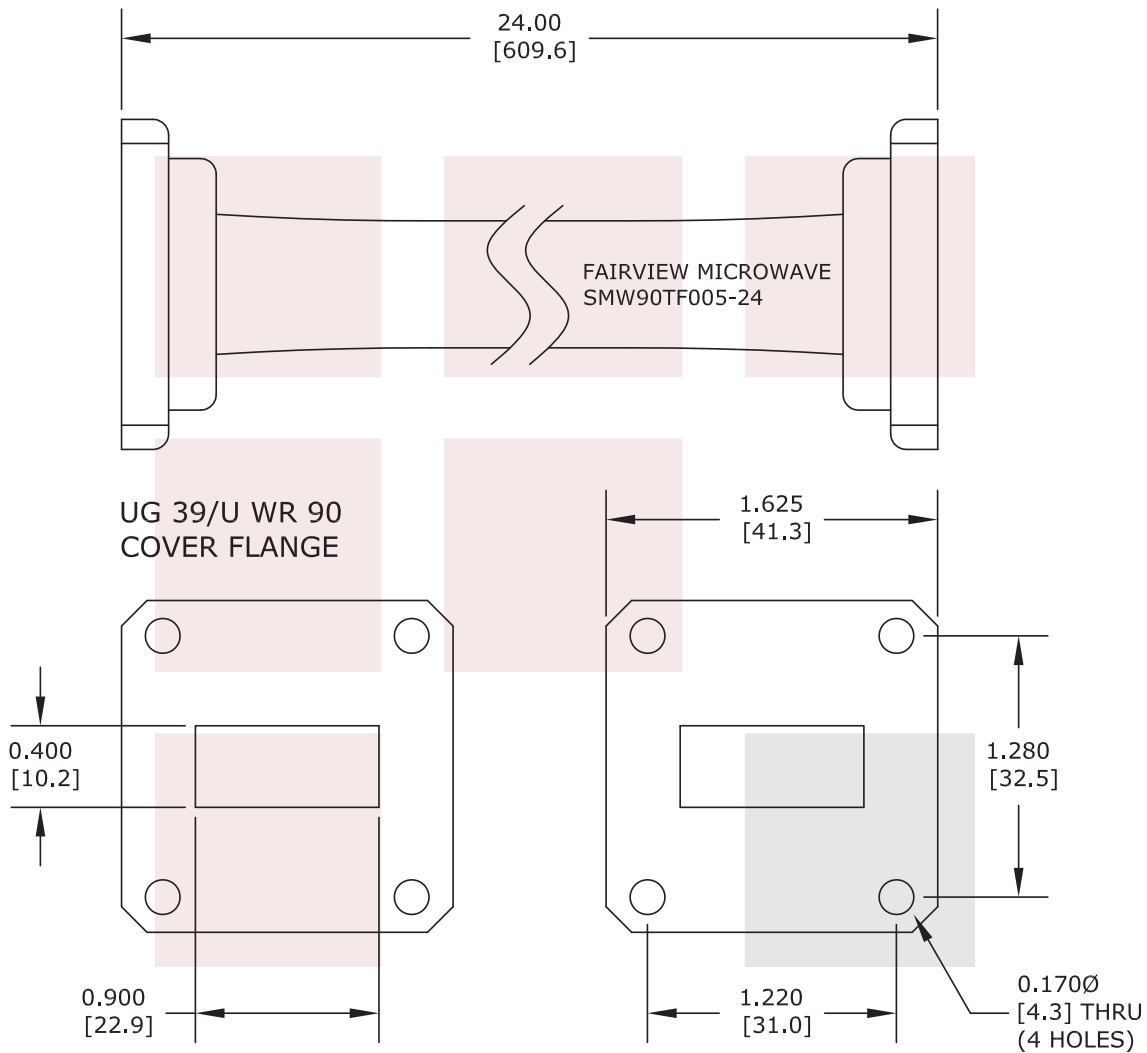


WR-90 Twistable Flexible Waveguide Using UG-39/U Square Cover Flange With a 8.2 GHz to 12.4 GHz Frequency Range from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [WR-90 Twistable Flexible Waveguide Using UG-39/U Square Cover Flange With a 8.2 GHz to 12.4 GHz Frequency Range SMW90TF005-24](#)

URL: <https://www.fairviewmicrowave.com/wr-90-twistable-flexible-waveguide-ug39-square-8.2-12.4-ghz-smw90tf005-24-p.aspx>

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|  |        |   |       |                    |             |
|--|--------|---|-------|--------------------|-------------|
| <b>FAIRVIEW MICROWAVE INC.</b><br>ALLEN, TX 75013 WWW.FAIRVIEWMICROWAVE.COM  |        | NOTES:<br>1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL.<br>2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME.<br>3. DIMENSIONS ARE IN INCHES [mm]. |       |                    |             |
| TITLE<br>WR-90 Twistable Flexible Waveguide Using UG-39/U<br>Square Cover Flange With a 8.2 GHz to 12.4 GHz<br>Frequency Range |        | DWG NO<br>SMW90TF005-24   |       | CAGE CODE<br>3FKR5 |             |
| CAD FILE   | 100515 | SHEET   | SCALE | N/A                | SIZE A 2233 |