



WR-51 Flexible Waveguide Twist With a Square Cover Flange Operating From 15 GHz to 22 GHz

Waveguide Twists Technical Data Sheet

PE-W51TF005-12

Features

- Twelve inch long WR-51 waveguide
- Twistable
- Flexes in both the E and H plane
- Neoprene sleeve allows pressurization
- 15 GHz to 22 GHz Frequency Range
- Brass flanges with a silver plated brass body

Applications

- Simplifies positioning parabolic reflectors for line of sight microwave radio links.
- Test Benches
- Eliminates installation problems caused by misalignment.
- Allows expansion/contraction due to thermal issues.
- Pressurized waveguide systems
- Provides vibration isolation
- Microwave Radio

Description

The PE-W51TF005-12 is part of Pasternack's family of flexible, twistable waveguides which operates in the 15 to 22 GHz range. The waveguide body is made of a helically wound silver coated brass strip. It can be twisted and/or bent in both the E and H planes without impairing VSWR or attenuation. The waveguide is covered by a neoprene jacket which protects the waveguide, provides mechanical support and allows the waveguide to be pressurized.

Electrical Specifications

| Description | Minimum | Typical | Maximum | Units |
|-----------------|---------|---------|---------|-------|
| Frequency Range | 15 | | 22 | GHz |
| VSWR | | 1.15:1 | | |
| Insertion Loss | | 0.55 | | dB |

Mechanical Specifications

| | |
|---------------------------------------|------------------|
| Waveguide Size | WR-51 |
| Waveguide Design | Twistable |
| Section Length | 12 in [304.8 mm] |
| E-Plane Minimum Bend Radius, One Time | 2 in [50.8 mm] |
| E-Plane Minimum Bend Radius, Repeated | 8 in [203.2 mm] |
| H-Plane Minimum Bend Radius, One Time | 4 in [101.6 mm] |
| H-Plane Minimum Bend Radius, Repeated | 16 in [406.4 mm] |
| Maximum Offset Rotation, One Time | 136 degrees/ft |
| Maximum Offset Rotation, Repeated | 34 degrees/ft |
| Maximum Operating Pressure | 45 psig |

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-51 Flexible Waveguide Twist With a Square Cover Flange Operating From 15 GHz to 22 GHz PE-W51TF005-12](#)



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| Description | Flange 1 | Waveguide | Flange 2 |
|-------------|--------------|-----------|--------------|
| Interface | Square Cover | WR-51 | Square Cover |
| Material | Brass | Brass | Brass |
| Plating | | Silver | |
| Color | Gold | Black | Gold |

Environmental Specifications

Compliance Certifications (visit www.Pasternack.com for current document)

RoHS Compliant

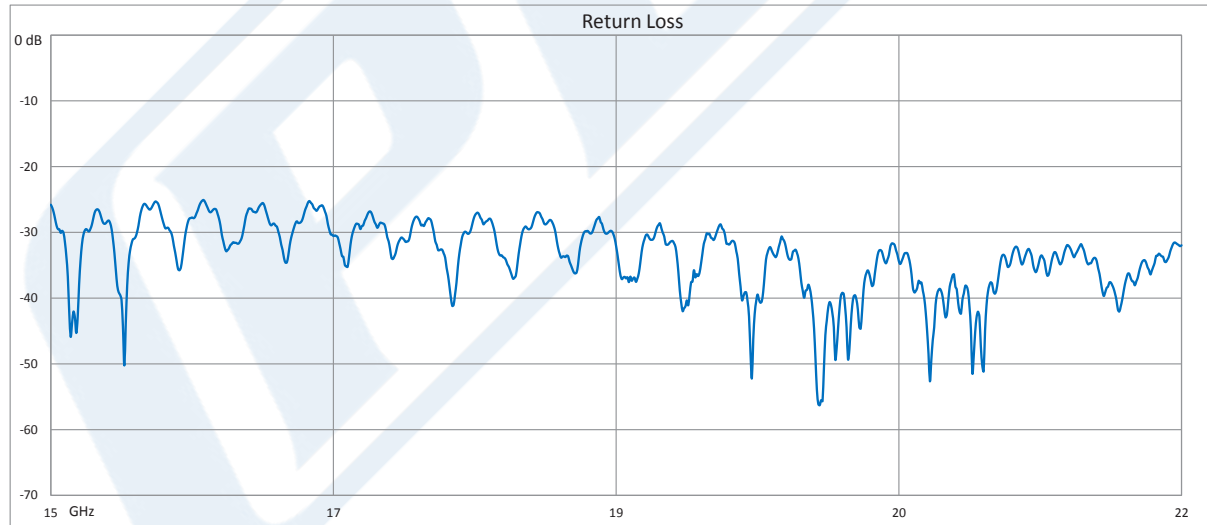
REACH Compliant

12/17/2014

Plotted and Other Data

Notes:

Typical Performance Data



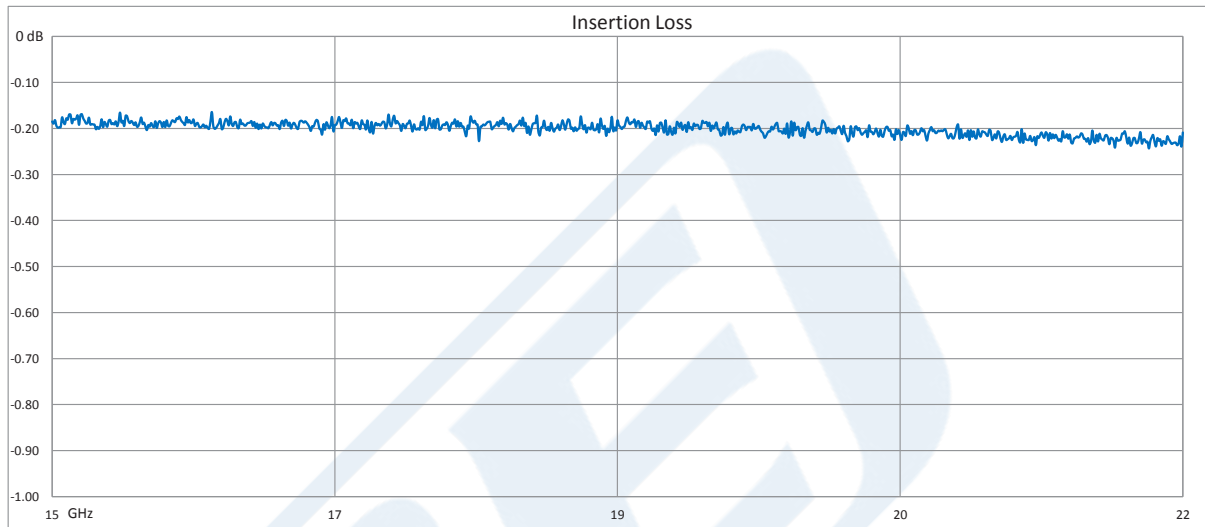
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WR-51 Flexible Waveguide Twist With a Square Cover Flange Operating From 15 GHz to 22 GHz from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99% availability and are part of the broadest selection in the industry.

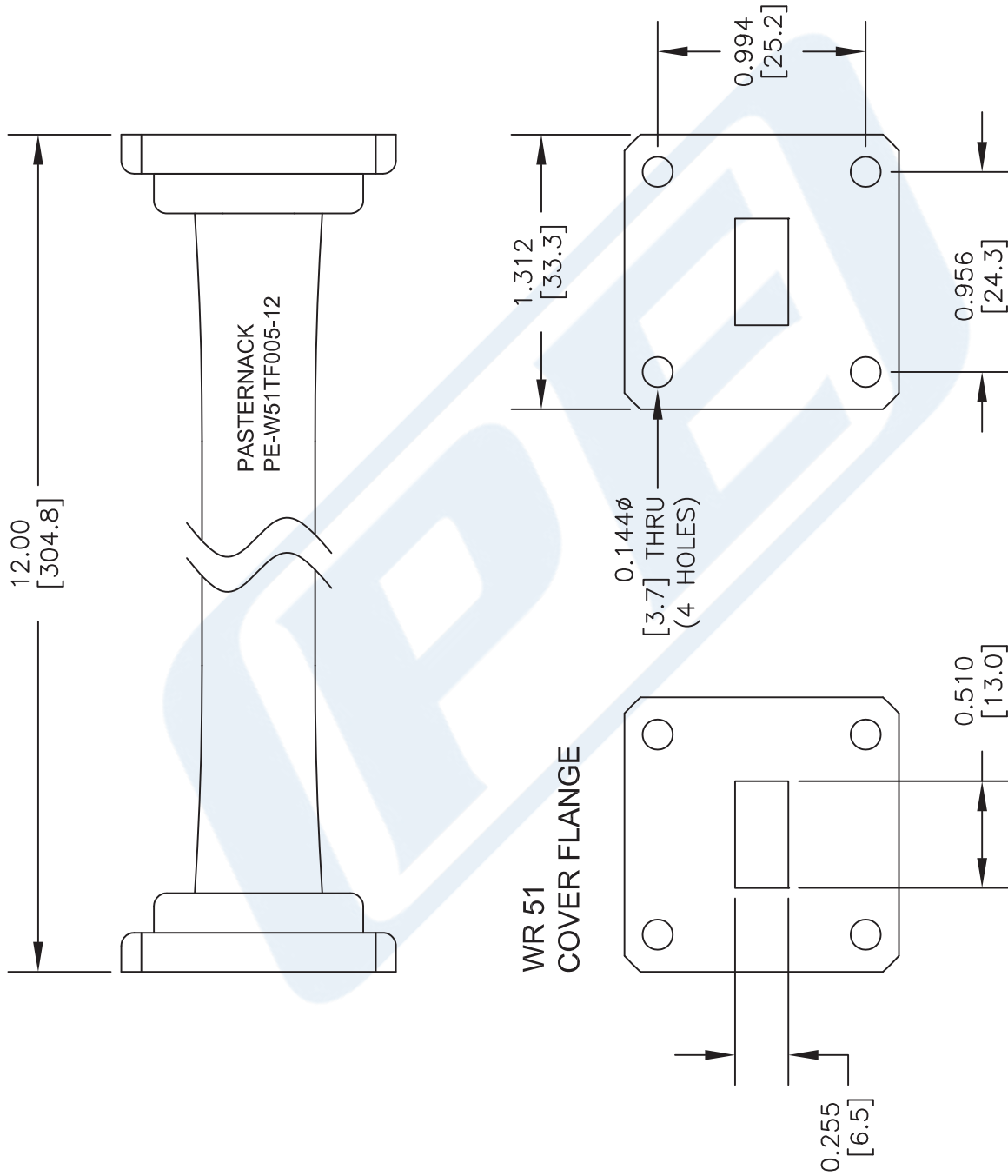
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The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. Pasternack reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Pasternack does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Pasternack does not assume any liability arising out of the use of any part or documentation.

PE-W51TF005-12 CAD Drawing

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DWG TITLE

PE-W51TF005-12

NOTES:
1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL.
2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME.
3. DIMENSIONS ARE IN INCHES [mm].

FSCM NO. 53919

2233

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