



## WR-51 Seamless Flexible Waveguide 12 Inch, Square Cover Flange Operating from 15 GHz to 22 GHz

### Flexible Waveguides Technical Data Sheet

PE-W51SF005-12

#### Features

- WR-51 waveguide
- Flexes in both the E and H plane
- 15 GHz to 22 GHz Frequency Range
- Brass flanges with a brass body
- Neoprene sleeve provides added protection and mechanical support

#### Applications

- Allows expansion/contraction due to thermal issues.
- Test Benches
- Microwave Radio
- Eliminates installation problems caused by misalignment.
- Pressurized waveguide systems
- Provides vibration isolation

#### Description

The PE-W51SF005-12 is part of Pasternack's family of flexible, seamless waveguides which operates in the 15 to 22 GHz range. The waveguide body is made of brass. It can be 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 and provides mechanical support.

#### Electrical Specifications

| Description     | Minimum | Typical | Maximum | Units  |
|-----------------|---------|---------|---------|--------|
| Frequency Range | 15      |         | 22      | GHz    |
| VSWR            |         | 1.1:1   |         |        |
| Insertion Loss  |         | 0.18    |         | dB     |
| Input Power     |         |         | 500     | Watts  |
| Peak Power      |         |         | 70      | kWatts |

#### Mechanical Specifications

|                                       |                    |
|---------------------------------------|--------------------|
| Waveguide Size                        | WR-51              |
| Waveguide Design                      | Seamless           |
| Section Length                        | 12 [in [304.8 mm]] |
| E-Plane Minimum Bend Radius, One Time | 0.59 in [14.99 mm] |
| H-Plane Minimum Bend Radius, One Time | 0.98 in [24.89 mm] |
| Maximum Operating Pressure            | 45 psig            |

| Description | Flange 1     | Waveguide | Flange 2     |
|-------------|--------------|-----------|--------------|
| Type        | Square Cover | WR-51     | Square Cover |
| Designation | None         |           | None         |
| Material    | Brass        | Brass     | Brass        |
| Color       | Gold         | Black     | Gold         |

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-51 Seamless Flexible Waveguide 12 Inch, Square Cover Flange Operating from 15 GHz to 22 GHz PE-W51SF005-12](#)



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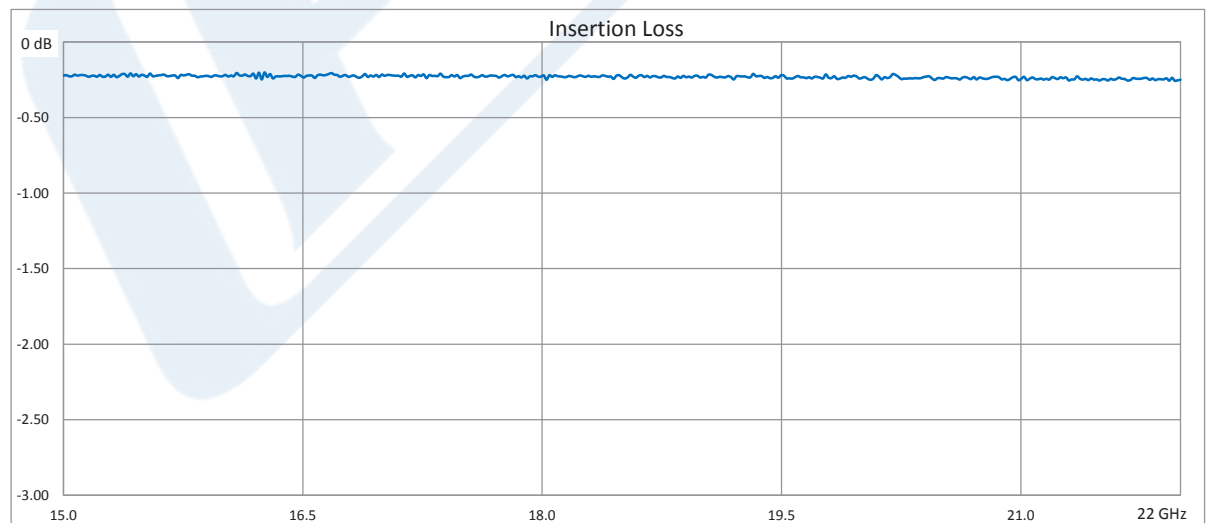
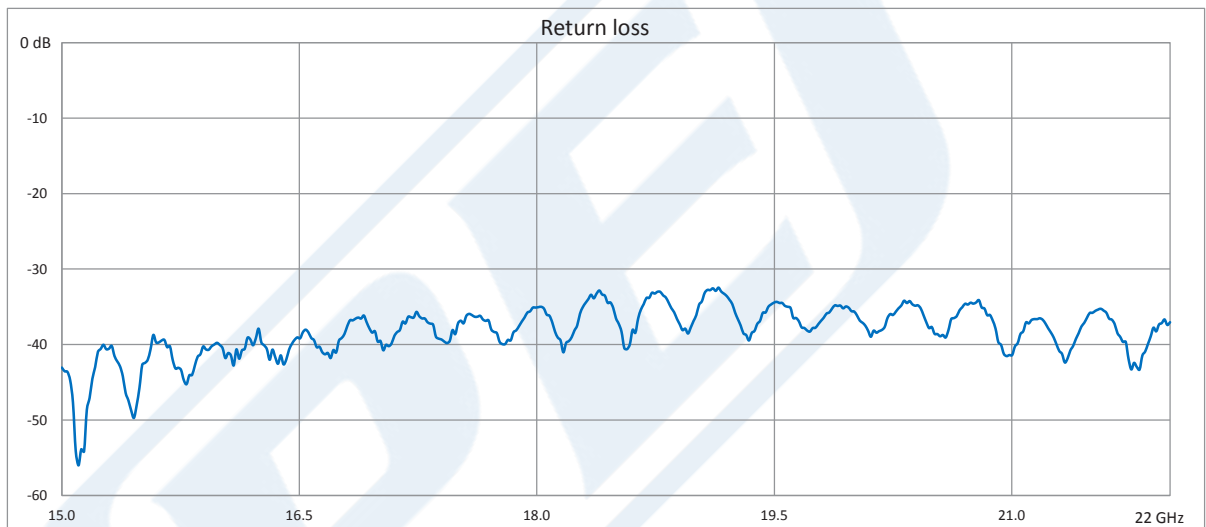
**Environmental Specifications**

**Compliance Certifications** (see [product page](#) for current document)

**Plotted and Other Data**

Notes:

**Typical Performance Data**



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WR-51 Seamless Flexible Waveguide 12 Inch, 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 99.4% availability and are part of the broadest selection in the industry.

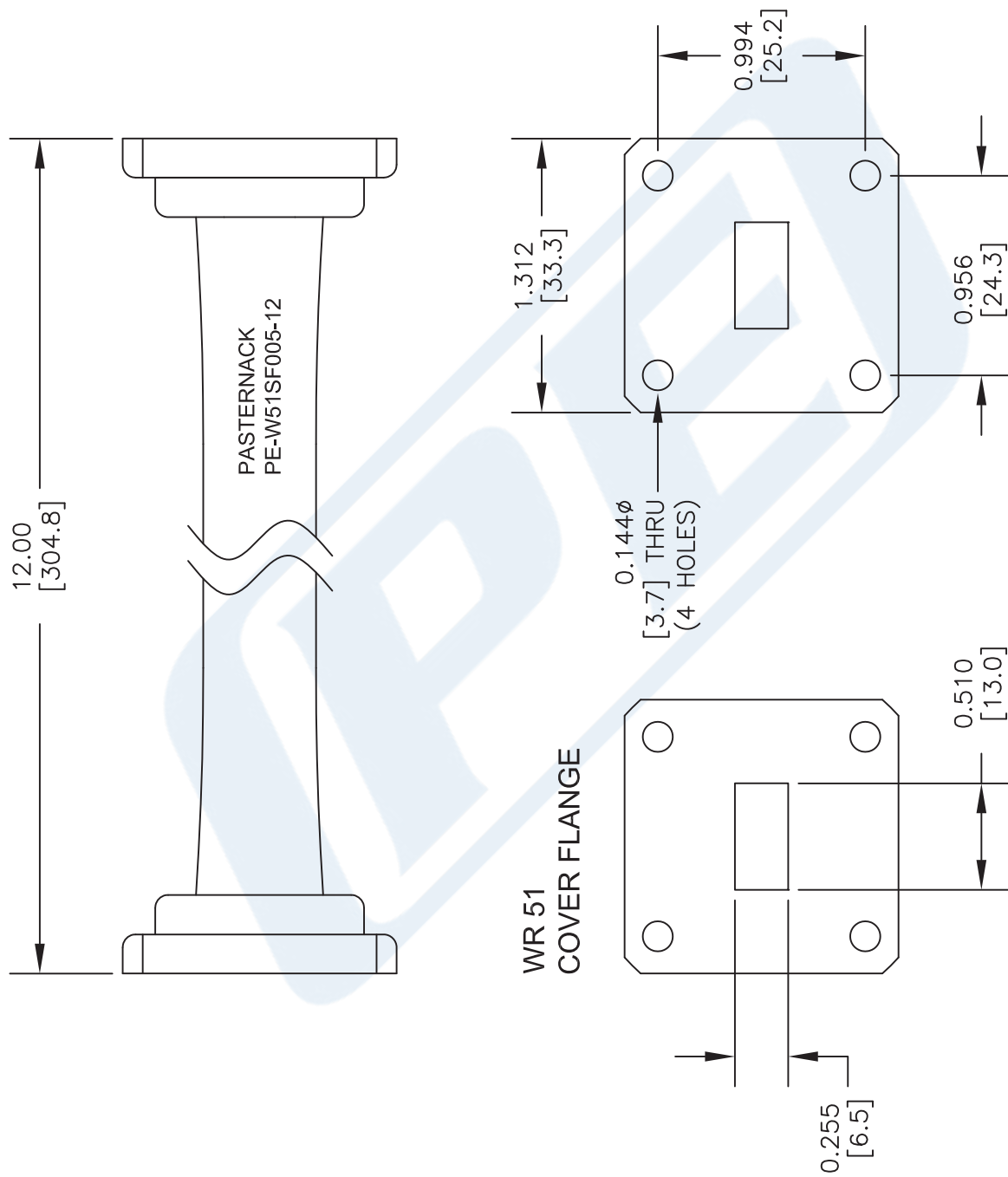
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The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. 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-W51SF005-12 CAD Drawing

WR-51 Seamless Flexible Waveguide 12 Inch, Square  
Cover Flange Operating from 15 GHz to 22 GHz



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].

DWG TITLE  
**PE-W51SF005-12**

FSCM NO. 53919

CAD FILE 101315 SCALE N/A SIZE A 2233

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