

## WR-51 Standard Gain Horn with 15 dBi gain, SMA Female connector

The FMWAN051-15SF standard gain horn antenna (also known as waveguide horn) from Fairview Microwave is part of our comprehensive selection of waveguide antennas. This standard gain horn is mated with a WR-51 to SMA Female waveguide to coaxial adapter and operates from 15 GHz to 22 GHz.

Our FMWAN051-15SF standard gain horn antenna has a nominal gain of 15 dBi with a Horizontal and Vertical HPBW (Half Power Beam Width) of 32 dB and 32 dB respectively. Fairview Microwave's SMA Female to WR-51 standard gain horns are available in 10, 15 and 20 dBi models with pyramidal shape and connectorized input.

Waveguide antennas, such as the FMWAN051-15SF are used in a wide variety of applications due to the high-power handling capability, low loss, high directivity, and near constant electrical performance. Our WR-51 waveguide antennas with SMA Female interface is part of over 40,000 RF, microwave and millimeter wave components from Fairview Microwave available worldwide and Ship same day.

### Configuration

Design WR-51 Standard Gain Horn  
Coaxial Interface SMA Female

### Electrical Specifications

| Description                         | Min | Typ | Max    | Units   |
|-------------------------------------|-----|-----|--------|---------|
| Frequency Range                     | 15  |     | 22     | GHz     |
| <b>Waveguide Standard Gain Horn</b> |     |     |        |         |
| Gain                                |     | 15  |        | dBi     |
| Horizontal 3dB Beam Width           |     | 32  |        | Degrees |
| Vertical 3dB Beam Width             |     | 32  |        | Degrees |
| <b>Waveguide to Coaxial Adapter</b> |     |     |        |         |
| Input VSWR                          |     |     | 1.25:1 |         |

### Mechanical Specifications

**Size**  
 Length 3.199 in 81.25 mm  
 Width/Diameter 1.382 in 35.1 mm  
 Height 0.994 in 25.25 mm  
 Weight 0.173 lbs 78.47 g

**RF Connector**  
 Type SMA Female

**Waveguide Interface**  
 Waveguide Size WR-51

### Environmental Specifications

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

### Plotted and Other Data

Notes:



### Features:

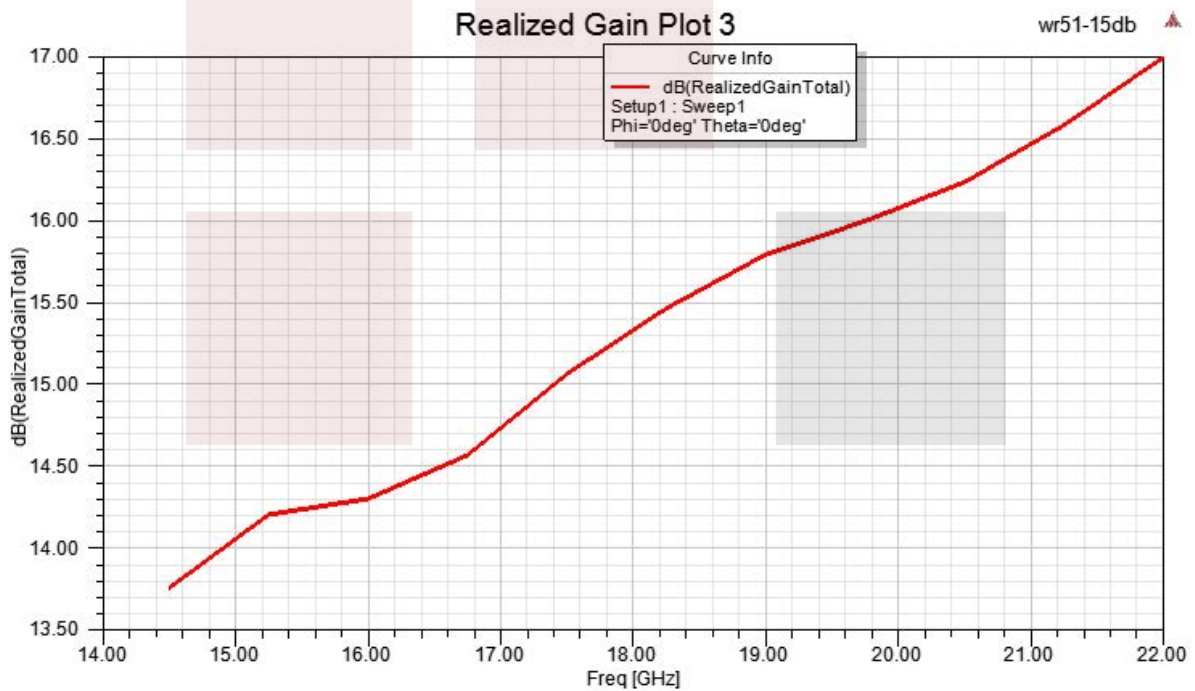
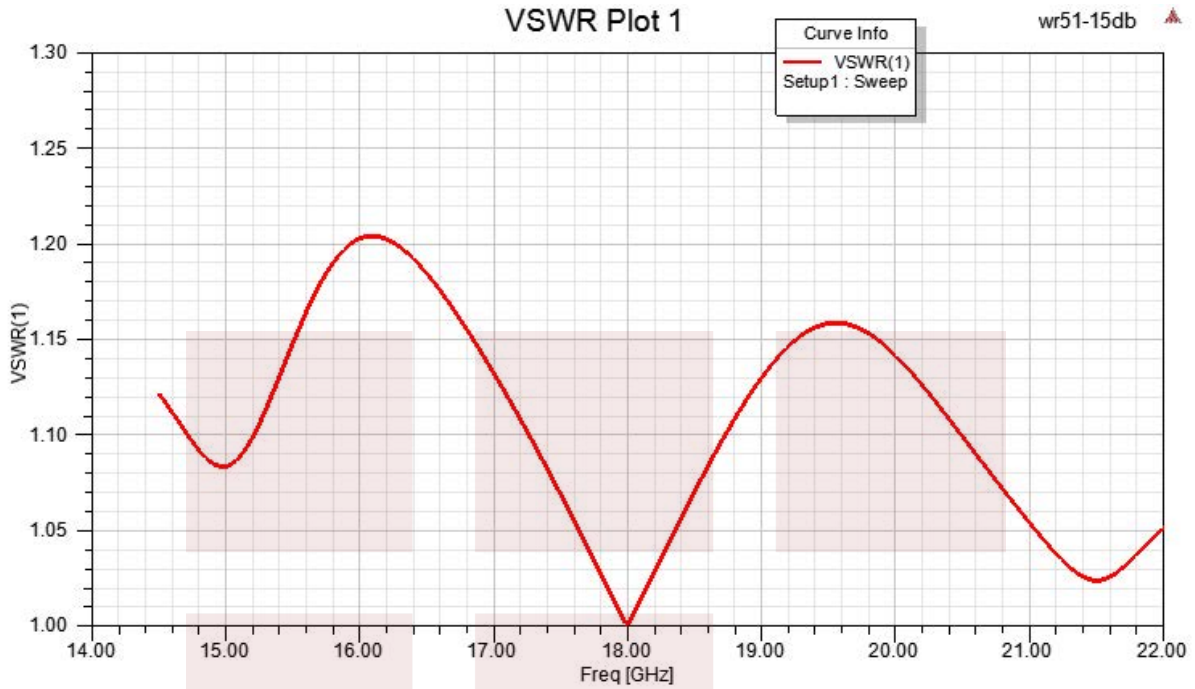
- 15 GHz to 22 GHz
- WR-51 Waveguide Band
- 15 dBi Nominal Gain
- SMA Female Connector

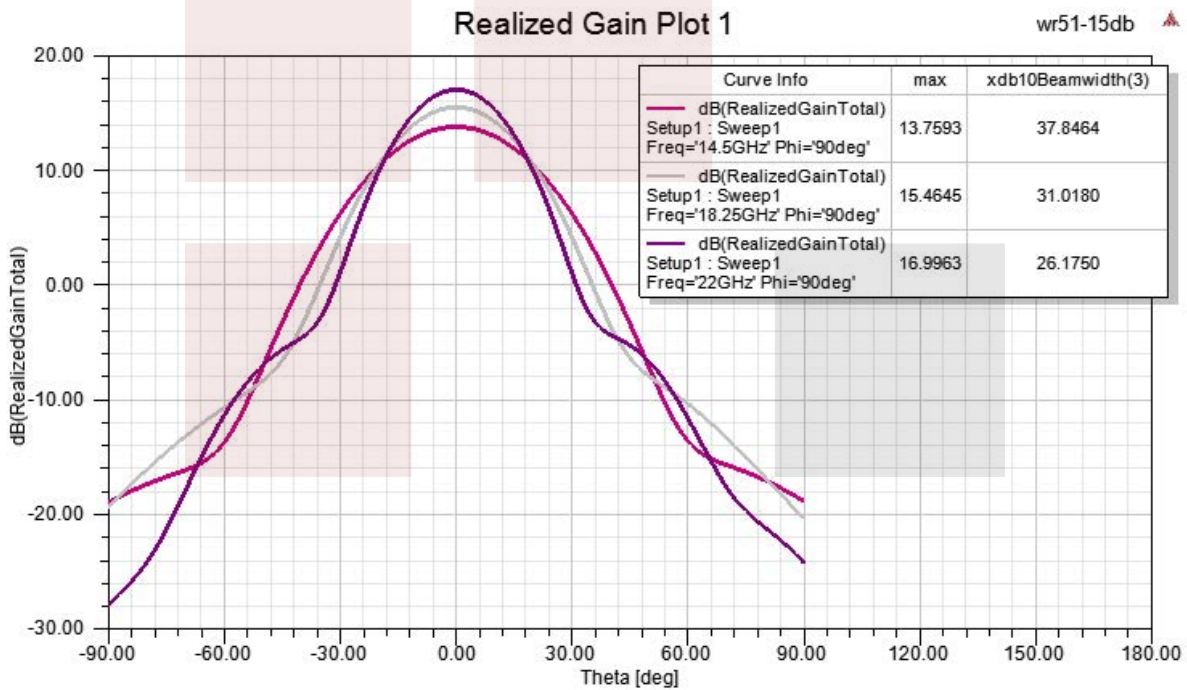
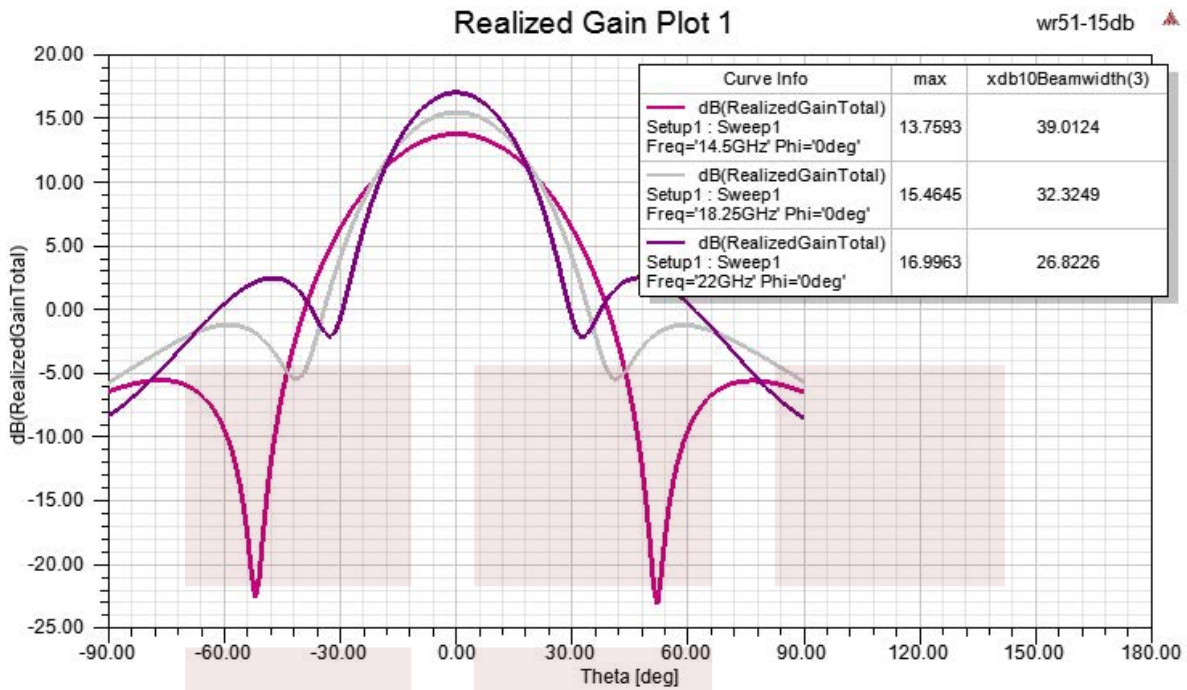
### Applications:

- Antenna Measurements
- Wireless Communication
- Laboratory Use
- Microwave Radio Systems
- Radome Testing
- Automotive Antenna Test Solutions
- Radar Cross Section
- Satellite Antenna Testing

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**Typical Performance Data**





WR-51 Standard Gain Horn with 15 dBi gain, SMA Female connector 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 Lewisville, Texas. Fairview Microwave is RF on-demand.

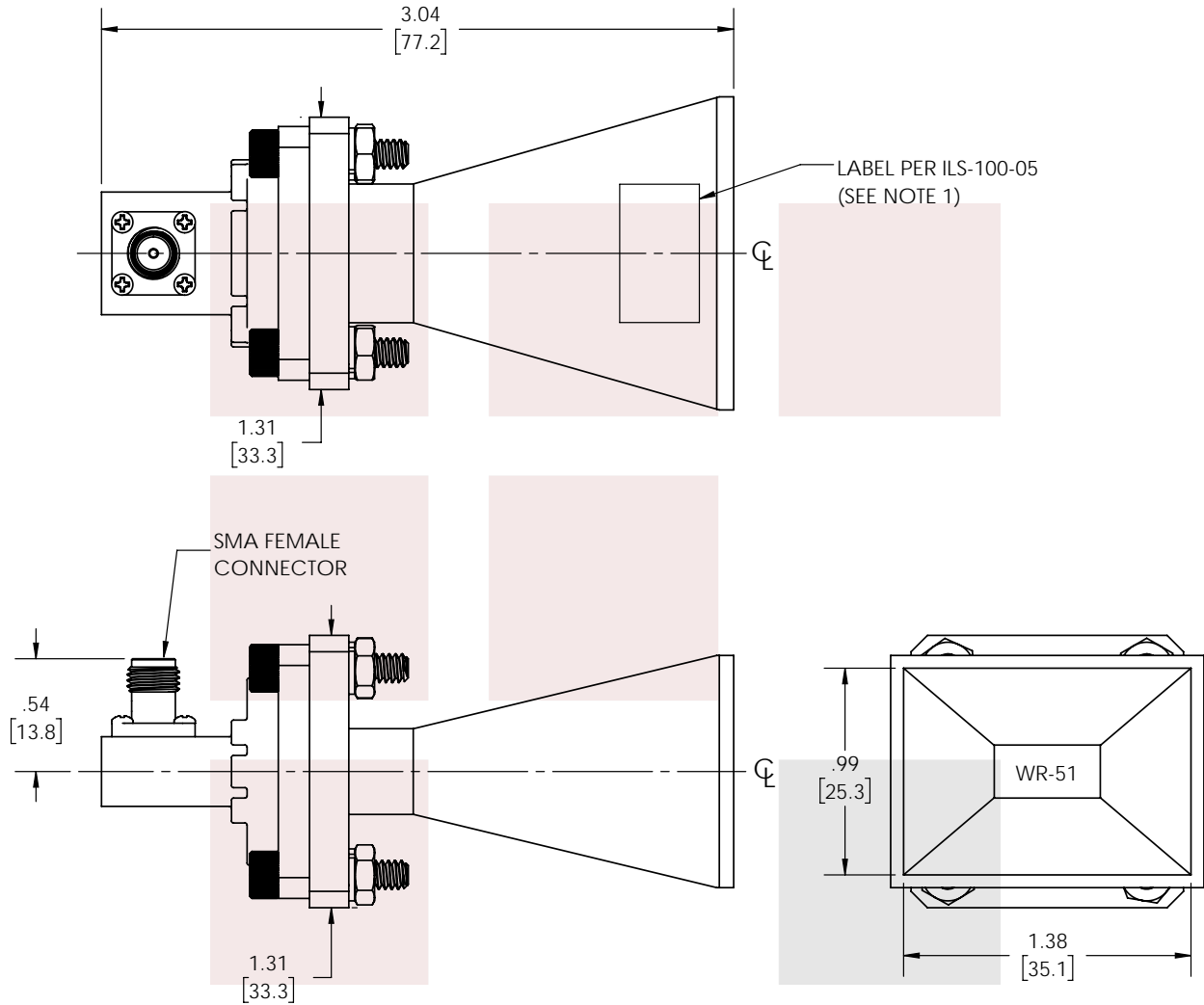
For additional information on this product, please click the following link: [WR-51 Standard Gain Horn with 15 dBi gain, SMA Female connector FMWAN051-15SF](#)

URL:

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. Fairview Microwave reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Fairview Microwave does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Fairview Microwave does not assume any liability arising out of the use of any part or documentation.



| REVISIONS |                 |            |          |
|-----------|-----------------|------------|----------|
| REV.      | DESCRIPTION     | DATE       | APPROVED |
| A         | INITIAL RELEASE | 10/04/2021 | KHIETPAS |



- NOTES:**  
 1. LABEL PER ILS-100-05 (FOR INTERNAL REFERENCE ONLY)  
 LABEL LOCATION FOR REFERENCE ONLY

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|  |   |   |   |       |
|--|---|---|---|-------|
| <p><b>Fairview Microwave</b><br/>an INFINIT<sup>®</sup> brand</p>        | UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES<br>DIMENSIONS IN [ ] ARE MILLIMETERS |   | THIRD-ANGLE PROJECTION<br>  |       |
|  | TOLERANCES:   |   | CABLE LENGTH (L) TOLERANCES:  |       |
| TITLE<br>WR-51 Standard Gain Horn with 15 dBi gain, SMA Female connector | .X = ±.2 [5.08] FRACTIONS   | L ≤ 12 [305] = +1 [25] / -0                 | THE INFORMATION AND DESIGN IN THIS DOCUMENT IS THE PROPERTY OF FAIRVIEW MICROWAVE CORPORATION. ALL RIGHTS RESERVED. |       |
|  | .XX = ±.02 [.51] ± 1/32   | 12 [305] < L ≤ 60 [1524] = +2 [51] / -0     |   |       |
|  | .XXX = ±.005 [.13] ANGLES ± 1°  | 60 [1524] < L ≤ 120 [3048] = +4 [102] / -0  | SHEET 1 OF 1  |       |
|  |   | 120 [3048] < L ≤ 300 [7620] = +6 [152] / -0 | SCALE N/A   |       |
|  |   | 300 [7620] < L = +5%L / -0                  | ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.  |       |
| SIZE A   | CAGE CODE 3FKR5   | DRAWN BY BPUCHASKI                          | ITEM NO. FMWAN051-15SF  | REV A |

T-Rev.D