

## WR-102 Standard Gain Horn with 20 dBi gain, End Launch SMA Female connector

The FMWAN102-20ELSF 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-102 to SMA Female End Launch waveguide to coaxial adapter and operates from 7 GHz to 11 GHz.

Our FMWAN102-20ELSF standard gain horn antenna has a nominal gain of 20 dBi with a Horizontal and Vertical HPBW (Half Power Beam Width) of 17.5 dB and 17.3 dB respectively. Fairview Microwave's SMA Female End Launch to WR-102 standard gain horns are available in 10, 15 and 20 dBi models with pyramidal shape and connectorized input.

Waveguide antennas, such as the FMWAN102-20ELSF 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-102 waveguide antennas with SMA Female End Launch 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-102 Standard Gain Horn  
Coaxial Interface: SMA Female

### Electrical Specifications

| Description                         | Min | Typ  | Max   | Units   |
|-------------------------------------|-----|------|-------|---------|
| Frequency Range                     | 7   |      | 11    | GHz     |
| <b>Waveguide Standard Gain Horn</b> |     |      |       |         |
| Gain                                |     | 20   |       | dBi     |
| Horizontal 3dB Beam Width           |     | 17.5 |       | Degrees |
| Vertical 3dB Beam Width             |     | 17.3 |       | Degrees |
| <b>Waveguide to Coaxial Adapter</b> |     |      |       |         |
| Input VSWR                          |     |      | 1.4:1 |         |

### Mechanical Specifications

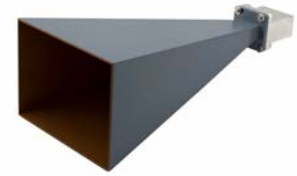
**Size**  
 Length: 11.933 in 303.1 mm  
 Width/Diameter: 4.988 in 126.7 mm  
 Height: 3.701 in 94.01 mm  
 Weight: 1.165 lbs 528.44 g

### RF Connector

Type: SMA Female  
 Specification: End Launch

### Waveguide Interface

Waveguide Size: WR-102



### Features:

- 7 GHz to 11 GHz
- WR-102 Waveguide Band
- 20 dBi Nominal Gain
- SMA Female End Launch 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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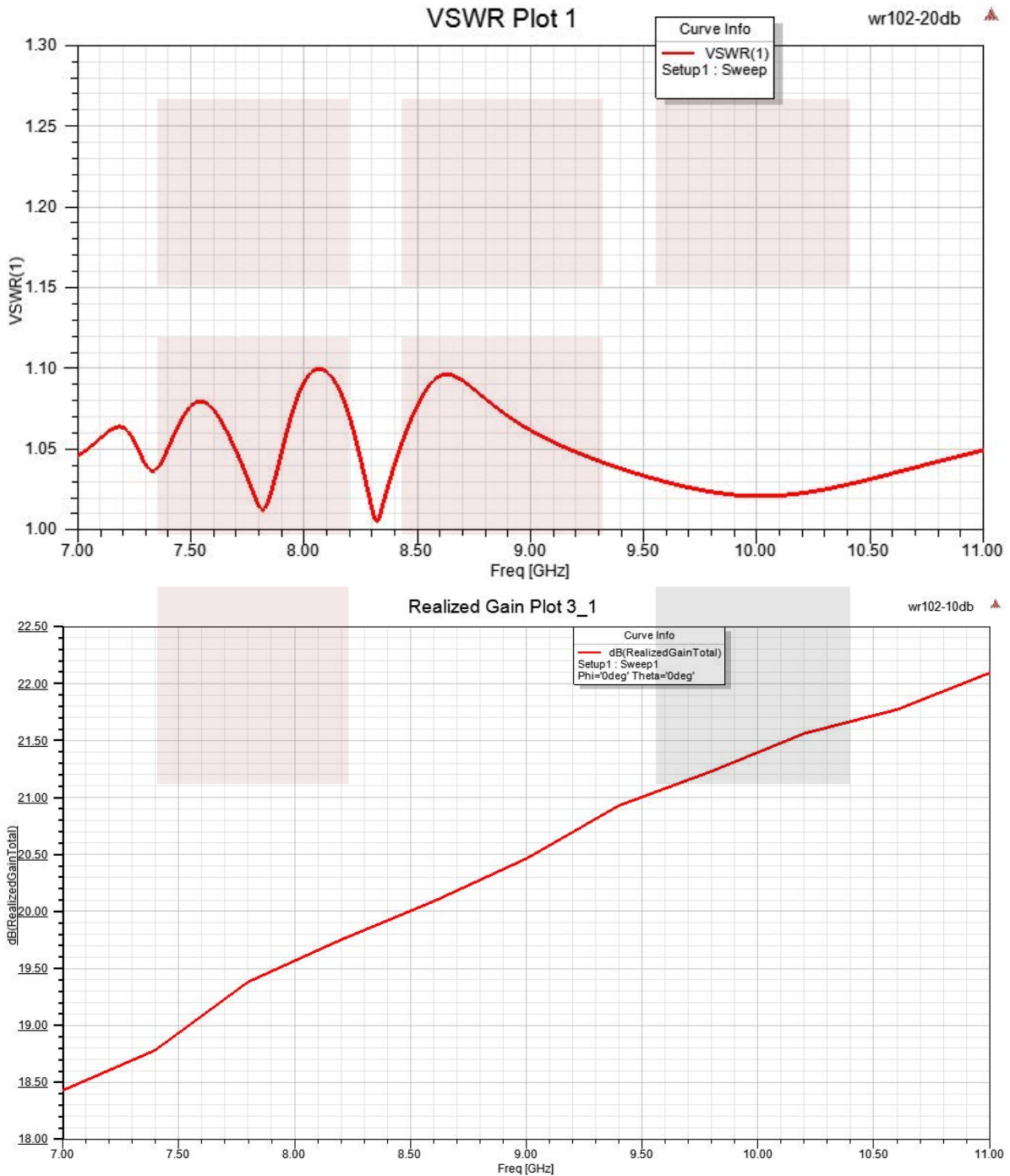
**Environmental Specifications**

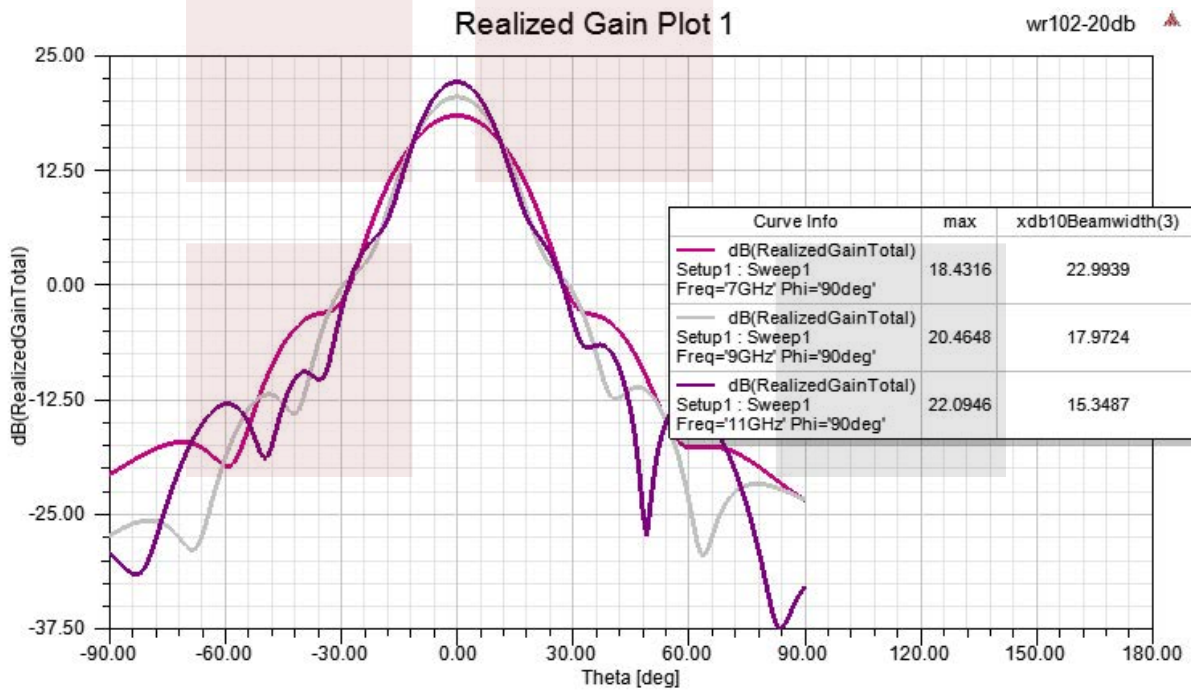
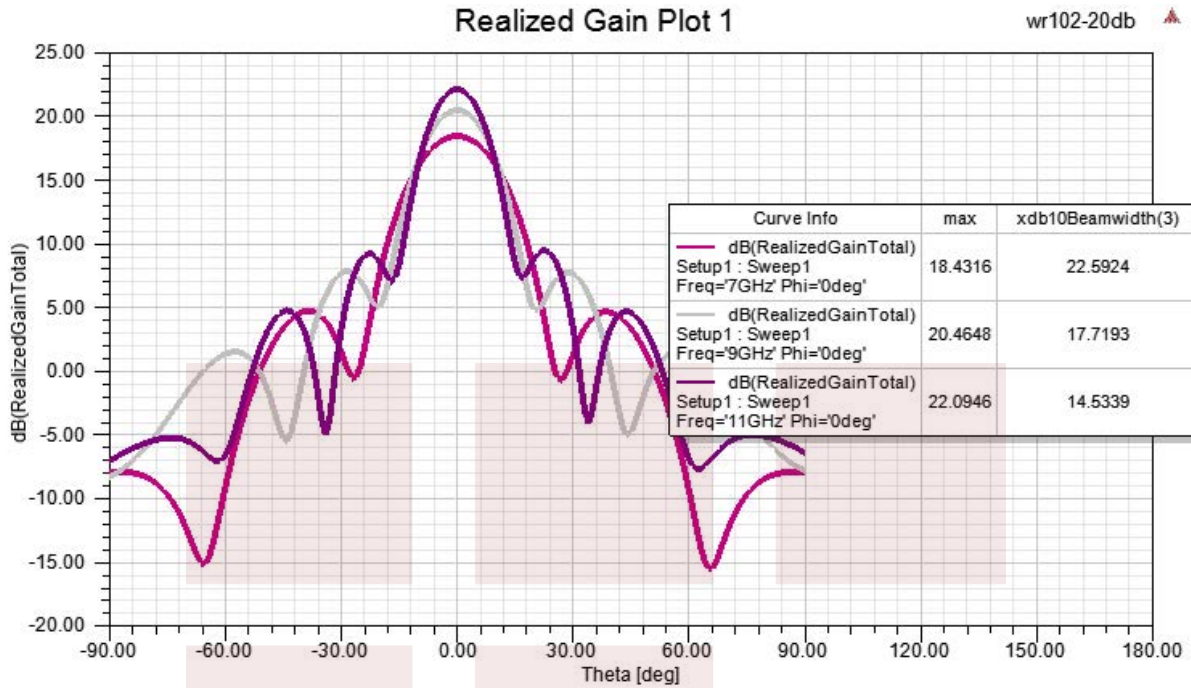
**Compliance Certifications** (see [product page](#) for current document)

**Plotted and Other Data**

Notes:

**Typical Performance Data**





WR-102 Standard Gain Horn with 20 dBi gain, End Launch 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.

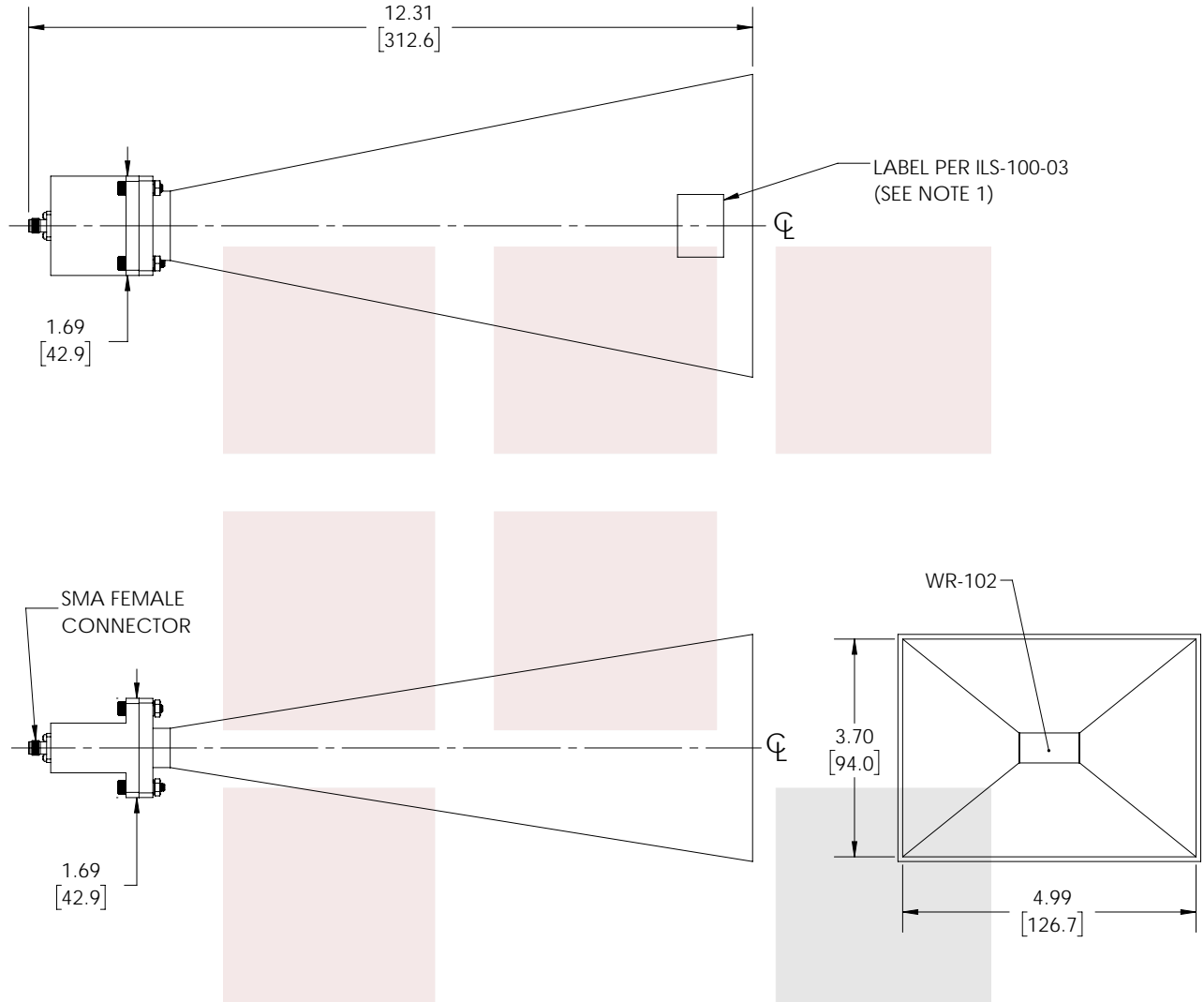
For additional information on this product, please click the following link: [WR-102 Standard Gain Horn with 20 dBi gain, End Launch SMA Female connector FMWAN102-20ELSF](#)

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 | 01/11/2022 | KHIETPAS |



- NOTES:**
1. LABEL PER ILS-100-03 (FOR INTERNAL REFERENCE ONLY)  
LABEL LOCATION FOR REFERENCE ONLY

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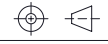
TITLE  
WR-102 Standard Gain Horn with 20 dBi gain, End Launch SMA Female connector

UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES  
DIMENSIONS IN [ ] ARE MILLIMETERS

TOLERANCES: CABLE LENGTH (L) TOLERANCES:

|                    |             |   |
|--------------------|-------------|---|
| .X = ±.2 [5.08]    | FRACTIONS   | L ≤ 12 [305] = +1 [25] / -0                 |
| .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  |
|                    |             | 120 [3048] < L ≤ 300 [7620] = +6 [152] / -0 |
|                    |             | 300 [7620] < L = +5%L / -0                  |

THIRD-ANGLE PROJECTION



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SHEET 1 OF 1

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

SCALE N/A

|           |                    |                       |                             |          |
|-----------|--------------------|-----------------------|-----------------------------|----------|
| SIZE<br>A | CAGE CODE<br>3FKR5 | DRAWN BY<br>BPUCHASKI | ITEM NO.<br>FMWAN102-20ELSF | REV<br>A |
|-----------|--------------------|-----------------------|-----------------------------|----------|

T-Rev.D