

## WR-90 Standard Gain Horn with 20 dBi gain, Type N Female connector

The FMWAN090-20NF 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-90 to N Female waveguide to coaxial adapter and operates from 8.2 GHz to 12.4 GHz.

Our FMWAN090-20NF 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 N Female to WR-90 standard gain horns are available in 10, 15 and 20 dBi models with pyramidal shape and connectorized input.

Waveguide antennas, such as the FMWAN090-20NF 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-90 waveguide antennas with N 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-90 Standard Gain Horn  
 Coaxial Interface N Female

### Electrical Specifications

| Description                         | Min | Typ  | Max    | Units   |
|-------------------------------------|-----|------|--------|---------|
| Frequency Range                     | 8.2 |      | 12.4   | 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                          |     |      | 1.25:1 |         |

### Mechanical Specifications

**Size**  
 Length 10.37 in 263.4 mm  
 Width/Diameter 4.401 in 111.79 mm  
 Height 3.265 in 82.93 mm  
 Weight 0.629 lbs 285.31 g

**RF Connector**  
 Type N Female

**Waveguide Interface**  
 Waveguide Size WR-90

### Environmental Specifications

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

### Plotted and Other Data

Notes:



### Features:

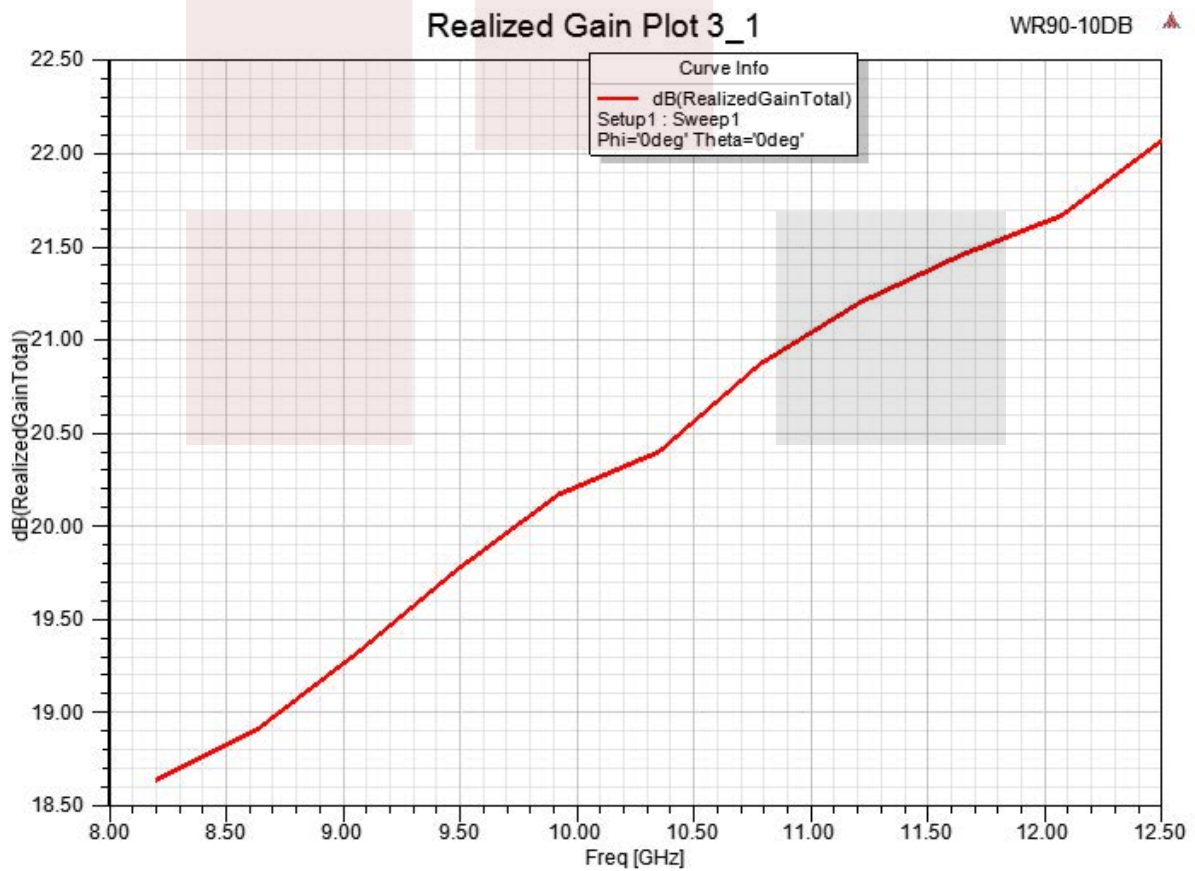
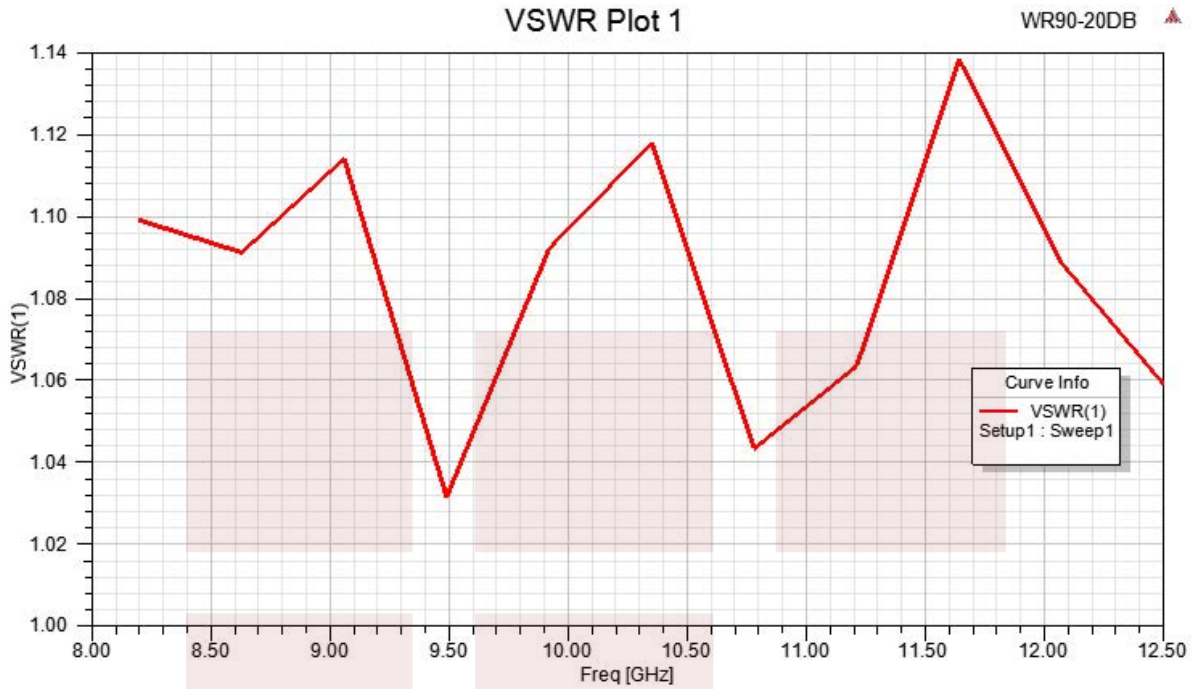
- 8.2 GHz to 12.4 GHz
- WR-90 Waveguide Band
- 20 dBi Nominal Gain
- N Female Connector

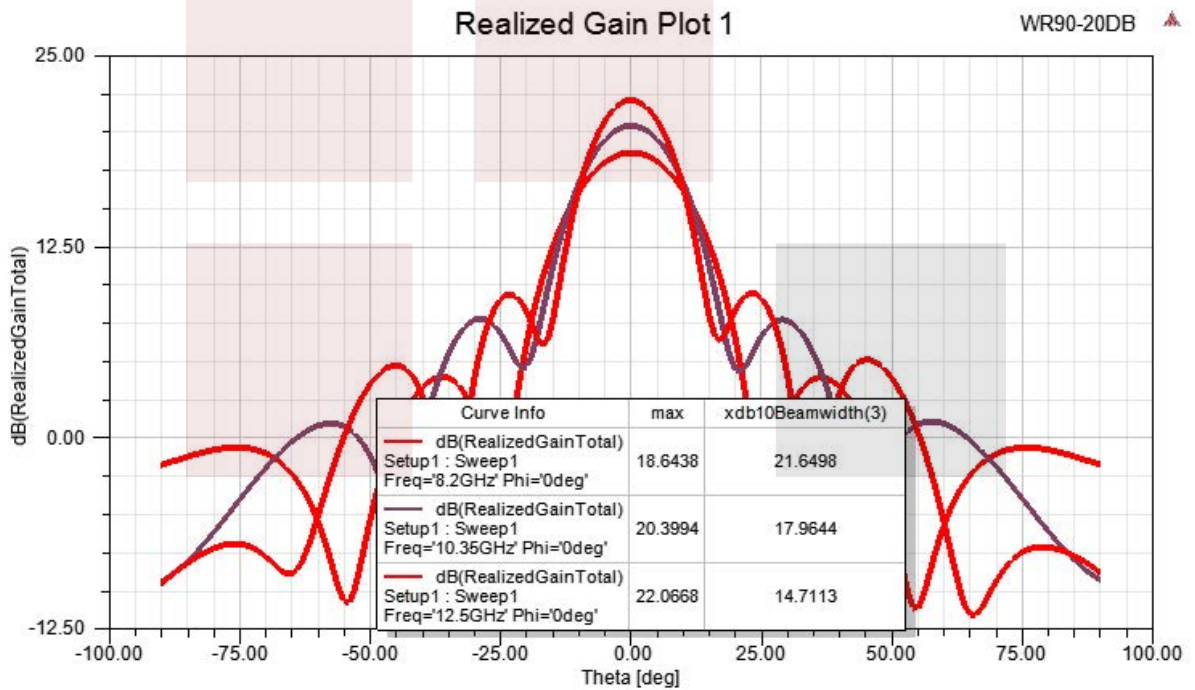
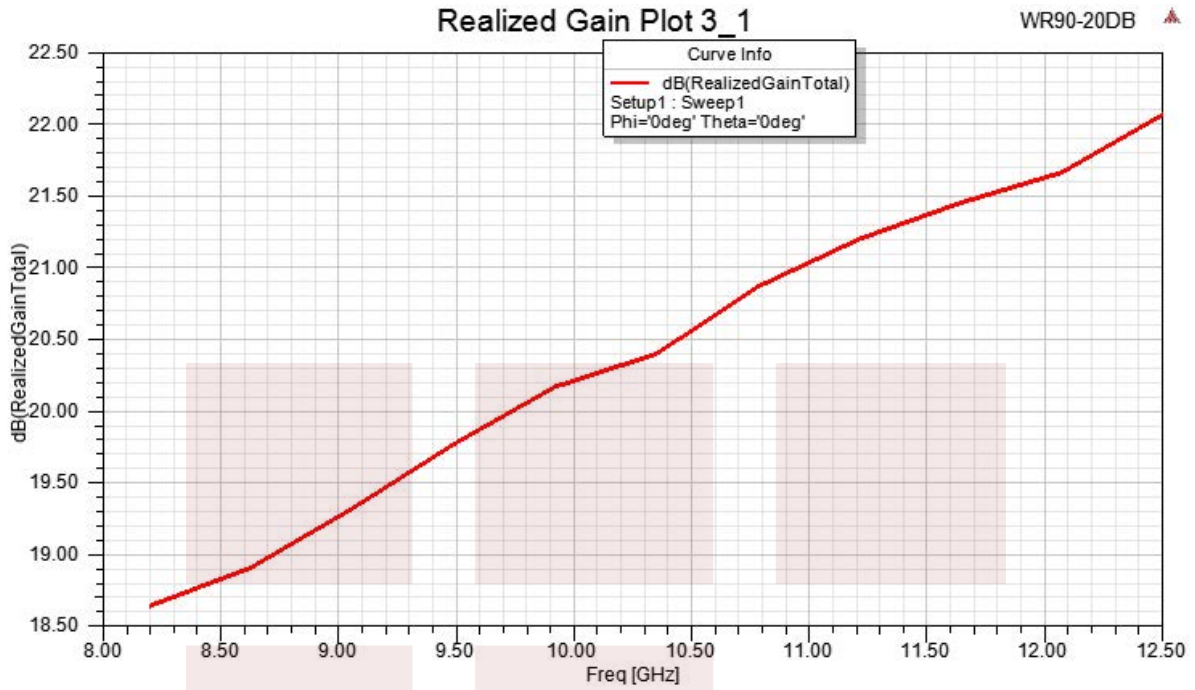
### Applications:

- 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-90 Standard Gain Horn with 20 dBi gain, Type N 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.

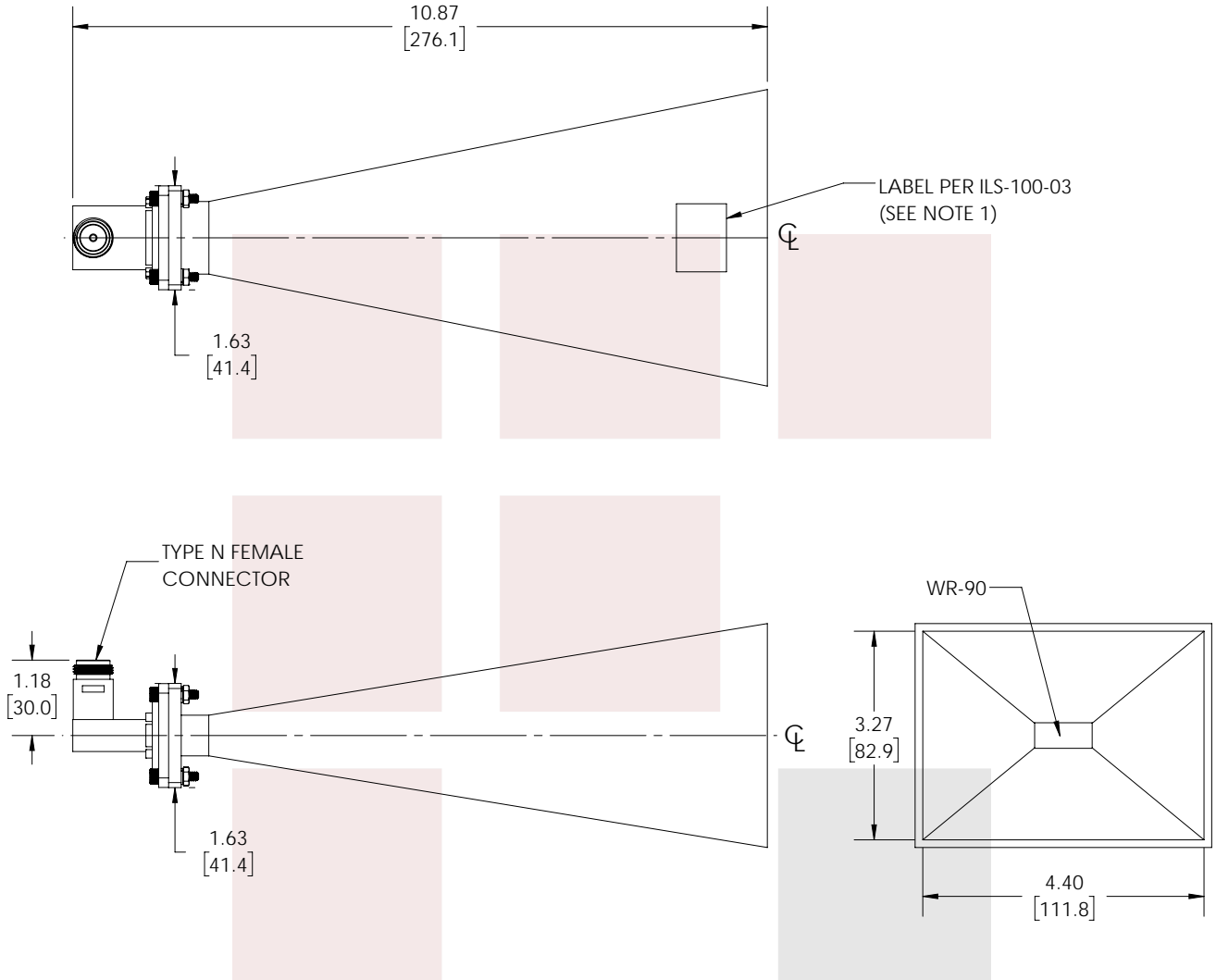
For additional information on this product, please click the following link: [WR-90 Standard Gain Horn with 20 dBi gain, Type N Female connector FMWAN090-20NF](#)

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-100-03 (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>                      | <p>UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES<br/>DIMENSIONS IN [ ] ARE MILLIMETERS</p> <p>TOLERANCES:                      CABLE LENGTH (L) TOLERANCES:</p> <table border="0"> <tr> <td>.X = ±.2 [5.08]</td> <td>FRACTIONS</td> <td>L ≤ 12 [305] = +1 [25] / -0</td> </tr> <tr> <td>.XX = ±.02 [.51]</td> <td>± 1/32</td> <td>12 [305] &lt; L ≤ 60 [1524] = +2 [51] / -0</td> </tr> <tr> <td>.XXX = ±.005 [.13]</td> <td>ANGLES ± 1°</td> <td>60 [1524] &lt; L ≤ 120 [3048] = +4 [102] / -0</td> </tr> <tr> <td></td> <td></td> <td>120 [3048] &lt; L ≤ 300 [7620] = +6 [152] / -0</td> </tr> <tr> <td></td> <td></td> <td>300 [7620] &lt; L = +5%L / -0</td> </tr> </table> |   | .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 | <p>THIRD-ANGLE PROJECTION</p> <p>THE INFORMATION AND DESIGN IN THIS DOCUMENT IS THE PROPERTY OF FAIRVIEW MICROWAVE CORPORATION. ALL RIGHTS RESERVED.</p> |
|  | .X = ±.2 [5.08]   | FRACTIONS                                   | L ≤ 12 [305] = +1 [25] / -0                |           |                             |                  |        |   |                    |             |  |  |  |   |  |  |                            |  |
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| <p>TITLE</p> <p>WR-90 Standard Gain Horn with 20 dBi gain, Type N Female connector</p> | <p>ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.</p>   |   | <p>SHEET 1 OF 1</p> <p>SCALE N/A</p>       |           |                             |                  |        |   |                    |             |  |  |  |   |  |  |                            |  |
| <p>SIZE A</p>  | <p>CAGE CODE 3FKR5</p>  | <p>DRAWN BY BPUCHASKI</p>                   | <p>ITEM NO. FMWAN090-20NF</p> <p>REV A</p> |           |                             |                  |        |   |                    |             |  |  |  |   |  |  |                            |  |

T-Rev.D