

WR-90 Standard Gain Horn with 10 dBi gain, End Launch  
SMA Female connector, Integrated Cage-Style Mount



**FM1WAN090-10ELSF**

**Features**

- 8.2 GHz to 12.4 GHz
- WR-90 Waveguide Band
- 10 dBi Nominal Gain
- SMA Female End Launch Connector
- Ruggedized Aluminum Cage-Style Mount
- Integrates with Positioning Systems

**Applications**

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

**Description**

The FM1WAN090-10ELSF standard gain horn antenna with integrated cage-style mount (also known as waveguide horn) from Fairview Microwave is part of our comprehensive selection of waveguide antennas. The cage-style mount is a ruggedized aluminum mounting solution that integrates with test and measurement positioning systems, ensuring precise alignment and protection of the antenna. This standard gain horn is mated with a WR-90 to SMA Female End Launch waveguide to coaxial adapter and operates from 8.2 GHz to 12.4 GHz.

Our FM1WAN090-10ELSF standard gain horn antenna with integrated cage-style mount has a nominal gain of 10 dBi with a Horizontal and Vertical HPBW (Half Power Beam Width) of 52.1 dB and 51.6 dB respectively. Fairview Microwave's SMA Female End Launch 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 FM1WAN090-10ELSF 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 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-90
Coaxial Interface	SMA Female

**Electrical Specifications**

Description	Minimum	Typical	Maximum	Units
Frequency Range	8.2		12.4	GHz
<b>Waveguide Standard Gain Horn</b>		10		
Gain				
Horizontal Half Power Beam Width		52.1		Degrees
Vertical Half Power Beam Width		51.6		Degrees

**Mechanical Specifications**

<b>Size</b>	
Length	4.724 in [119.99 mm]
Width	4.724 in [119.99 mm]
Height	5.2 in [132.08 mm]
Weight	0.78355 lbs [355.41 g]

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**RF Connector**

Type	SMA Female
Specification	End Launch

**Waveguide Interface**

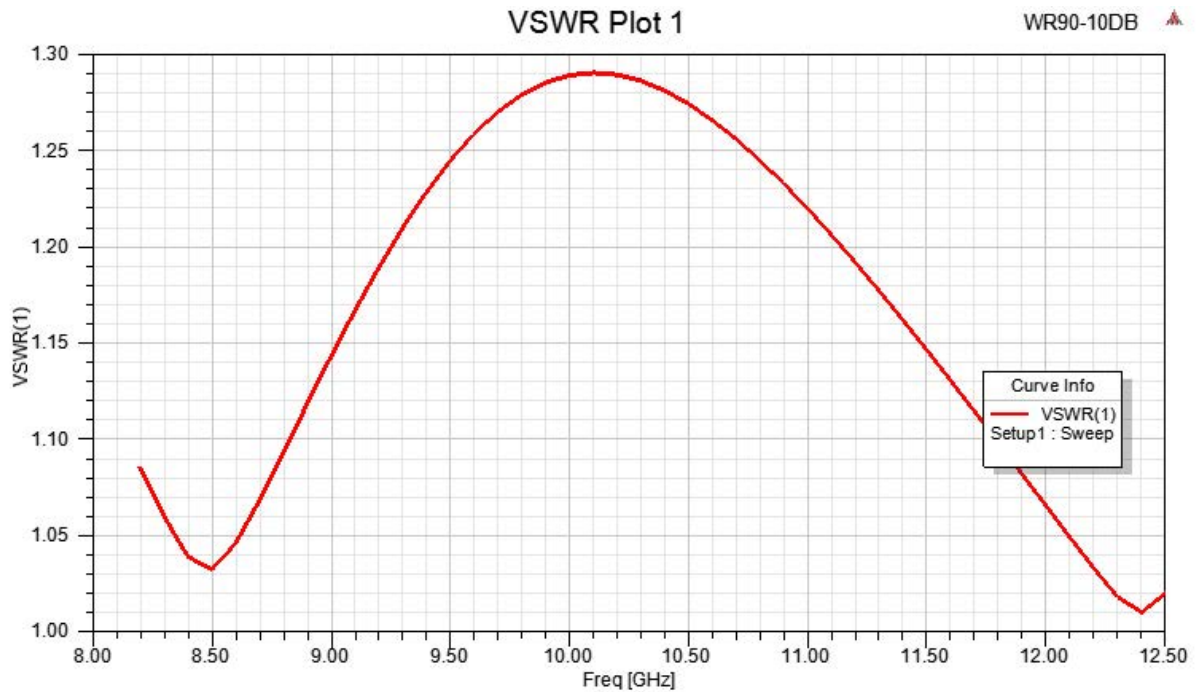
Waveguide Size	WR-90
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**Compliance Certifications** (see [product page](#) for current document)

**Plotted and Other Data**

Notes:

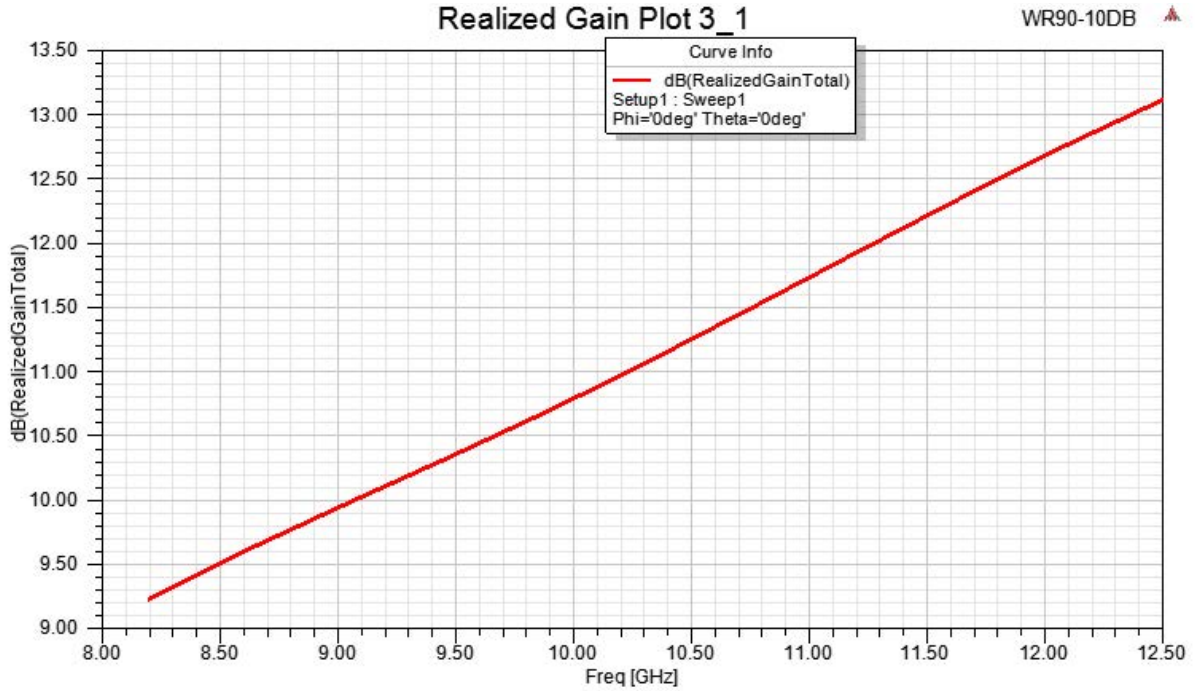
**Typical Performance Data**



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SMA Female connector, Integrated Cage-Style Mount



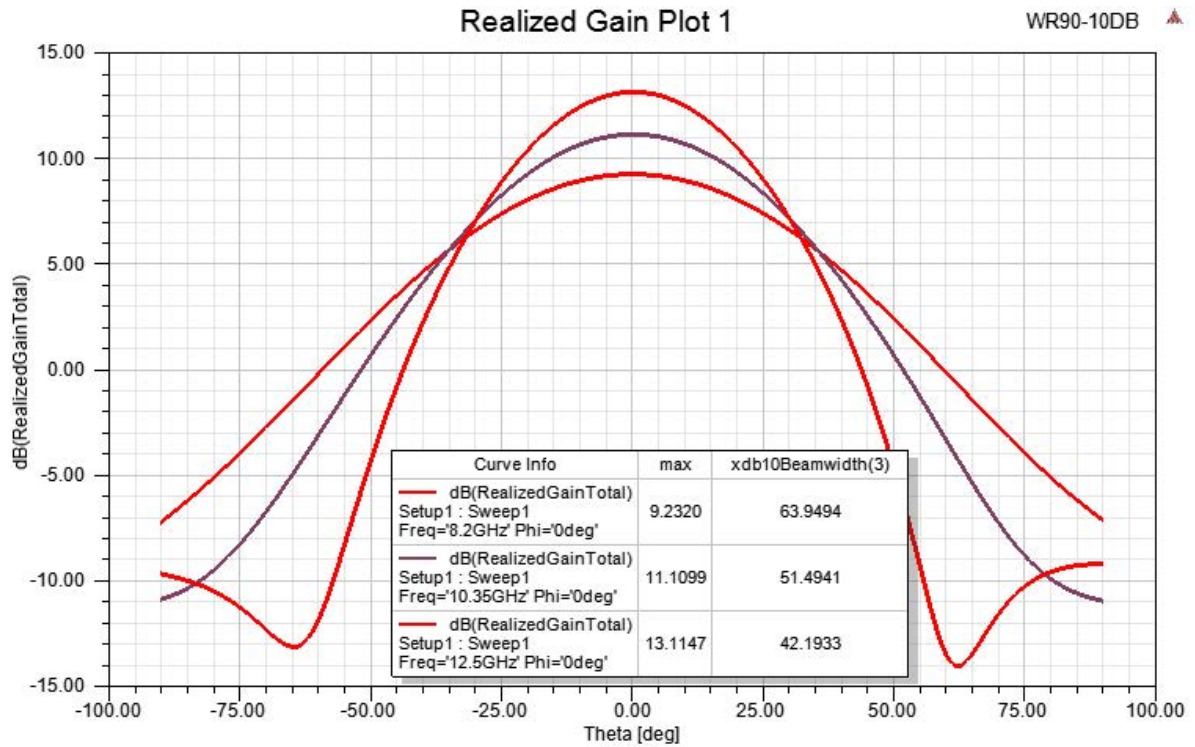
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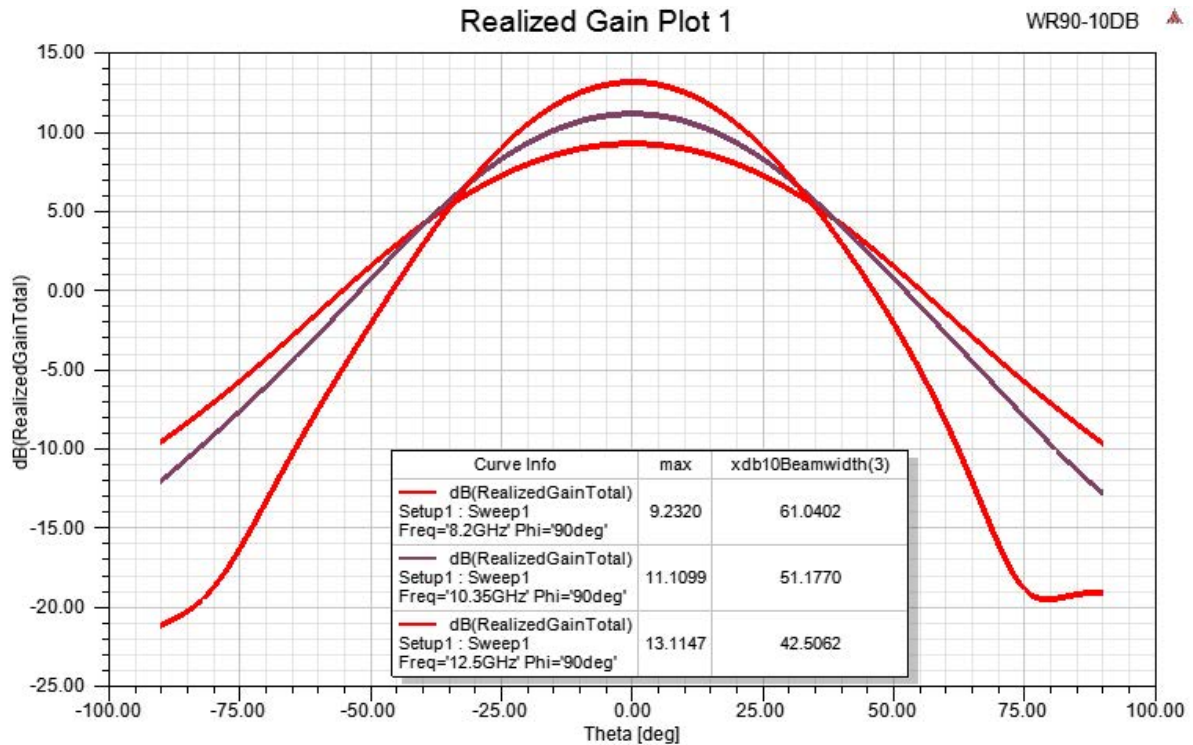
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**FM1WAN090-10ELSF**



WR-90 Standard Gain Horn with 10 dBi gain, End Launch SMA Female connector, Integrated Cage-Style Mount 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.

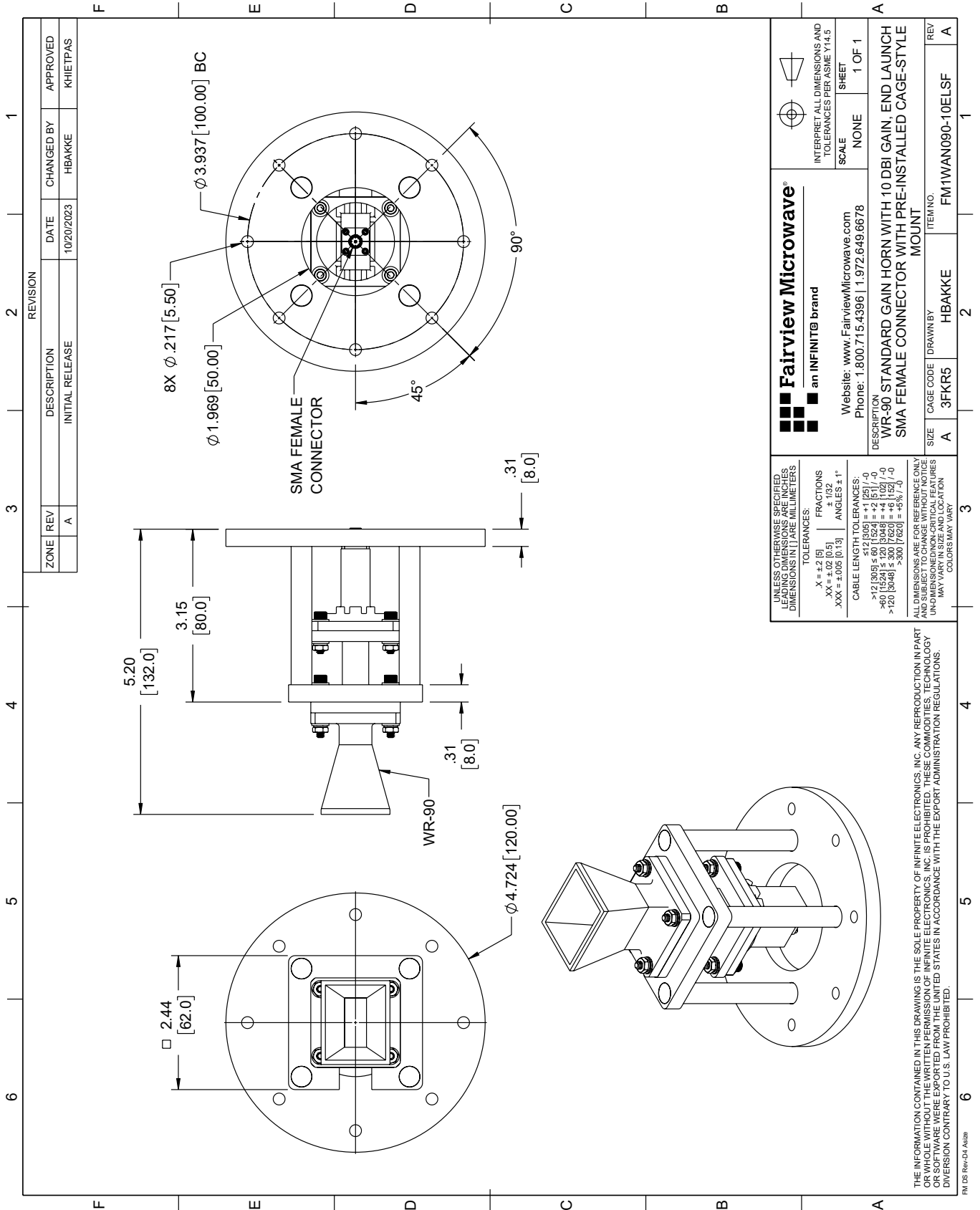
For additional information on this product, please click the following link: [WR-90 Standard Gain Horn with 10 dBi gain, End Launch SMA Female connector, Integrated Cage-Style Mount FM1WAN090-10ELSF](#)

URL: <https://www.fairviewmicrowave.com/wr-90-standard-gain-horn-with-10-dbi-gain-end-launch-sma-female-connector-integrated-cage-style-mount-fm1wan090-10elsf-p.aspx>

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# FM1WAN090-10ELSF CAD Drawing

WR-90 Standard Gain Horn with 10 dBi gain, End Launch SMA Female connector, Integrated Cage-Style Mount



REVISION		DATE	CHANGED BY	APPROVED
ZONE	REV	DESCRIPTION	INITIAL RELEASE	
	A			KHETTPAS

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an INFINIT® brand

Website: [www.FairviewMicrowave.com](http://www.FairviewMicrowave.com)  
Phone: 1.800.715.4396 | 1.972.649.6678

SCALE: NONE  
SHEET: 1 OF 1

INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5

DESCRIPTION: WR-90 STANDARD GAIN HORN WITH 10 DBI GAIN, END LAUNCH SMA FEMALE CONNECTOR WITH PRE-INSTALLED CAGE-STYLE MOUNT

SIZE	CAGE CODE	DRAWN BY	ITEM NO.
A	3FKR5	HBAKKE	FM1WAN090-10ELSF

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

TOLERANCES:  
 .X = ±.2 [5]  
 .XX = ±.02 [0.5]  
 .XXX = ±.005 [0.13]  
 FRACTIONS ± 1/32  
 ANGLES ± 1°

CABLE LENGTH TOLERANCES:  
 <12 [305] ≤ 60 [1524] = ±.125 [3.18]  
 >60 [1524] ≤ 120 [3048] = ±.1 [2.54]  
 >120 [3048] ≤ 300 [7620] = ±.063 [1.6]

ALL DIMENSIONS ARE FOR REFERENCE ONLY. UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES. DIMENSIONS IN [ ] ARE MILLIMETERS. DIMENSIONS AND LOCATIONS MAY VARY IN SIZE AND LOCATION. COLORS MAY VARY.

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FM DS Rev-D4 Alt2b