



WR-90 Standard Gain Horn with 20 dBi gain, SMA Male connector, Integrated Cage-Style Mount

Technical Data Sheet

PE1WAN090-20SM

Features

- 8.2 GHz to 12.4 GHz
- WR-90 Waveguide Band
- 20 dBi Nominal Gain
- SMA Male 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 PE1WAN090-20SM standard gain horn antenna with integrated cage-style mount (also known as waveguide horn) from Pasternack 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 Male waveguide to coaxial adapter and operates from 8.2 GHz to 12.4 GHz.

Our PE1WAN090-20SM standard gain horn antenna with integrated cage-style mount 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. Pasternack's SMA Male 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 PE1WAN090-20SM 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 Male interface is part of over 40,000 RF, microwave and millimeter wave components from Pasternack available worldwide and ship same day.

Configuration

Design
Coaxial Interface

WR-90 Standard Gain Horn
SMA Male

Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	8.2		12.4	GHz
Waveguide Standard Gain Horn				
Gain		20		dBi
Horizontal Half Power Beam Width		17.5		Degrees
Vertical Half Power Beam Width		17.3		Degrees
Waveguide to Coaxial Adapter				
Input VSWR			1.25:1	

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-90 Standard Gain Horn with 20 dBi gain, SMA Male connector, Integrated Cage-Style Mount PE1WAN090-20SM](#)



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Mechanical Specifications

Size

Length	4.724 in [119.99 mm]
Width	4.724 in [119.99 mm]
Height	12.72 in [323.09 mm]
Weight	1.18355 lbs [536.85 g]

RF Connector

Type	SMA Male
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Waveguide Interface

Waveguide Size	WR-90
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Environmental Specifications

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

Plotted and Other Data

Notes:

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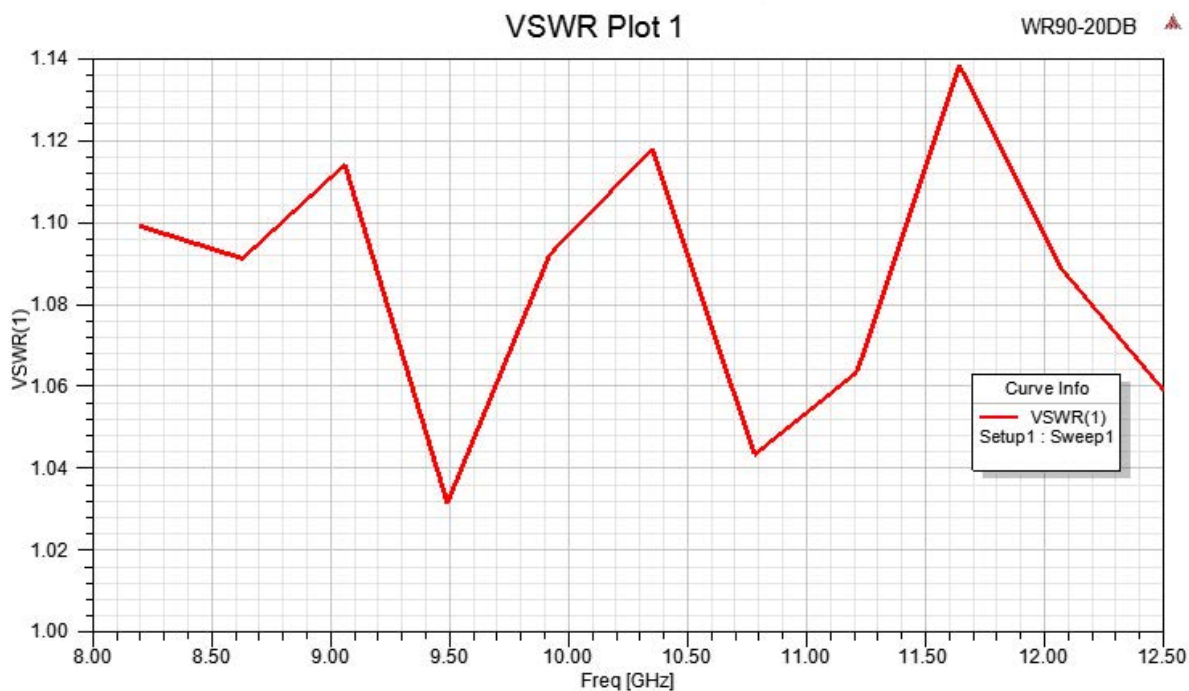


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Typical Performance Data



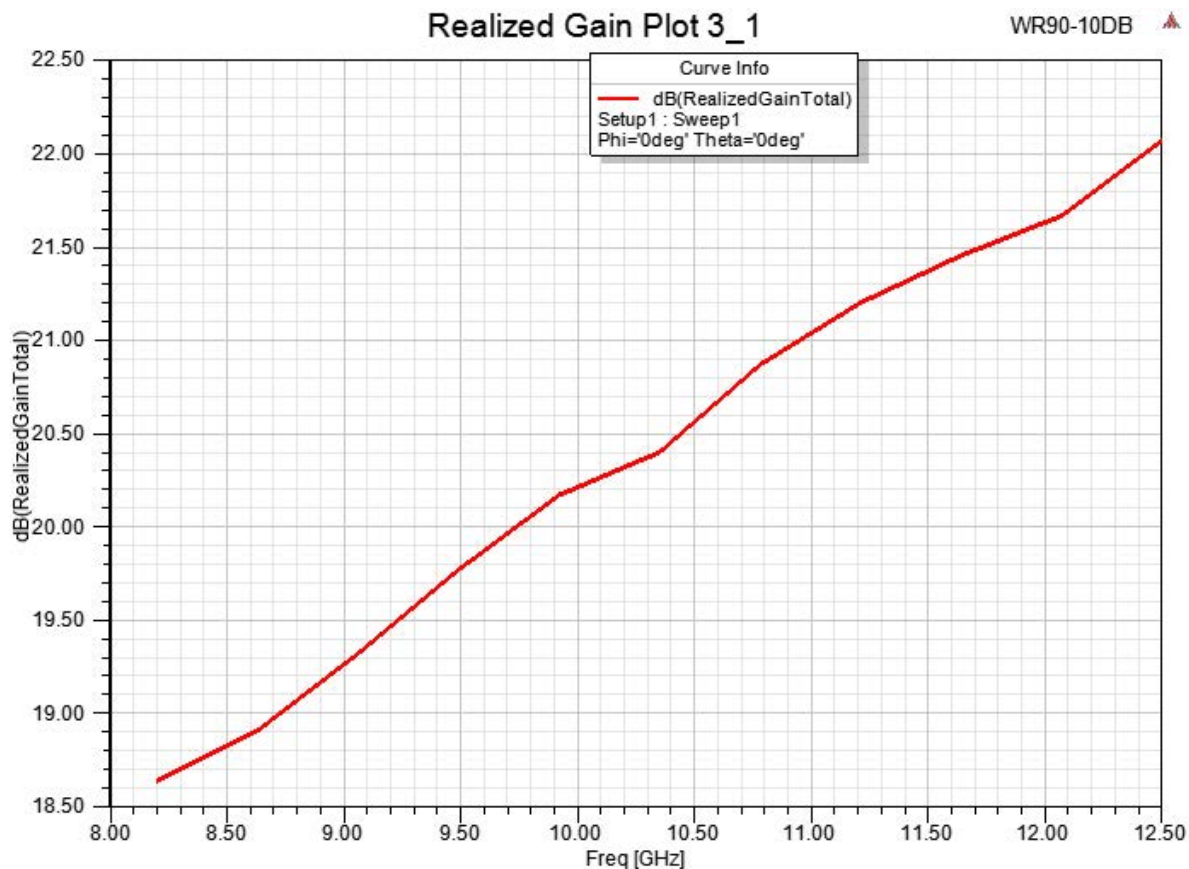
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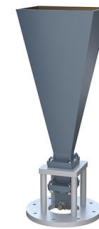
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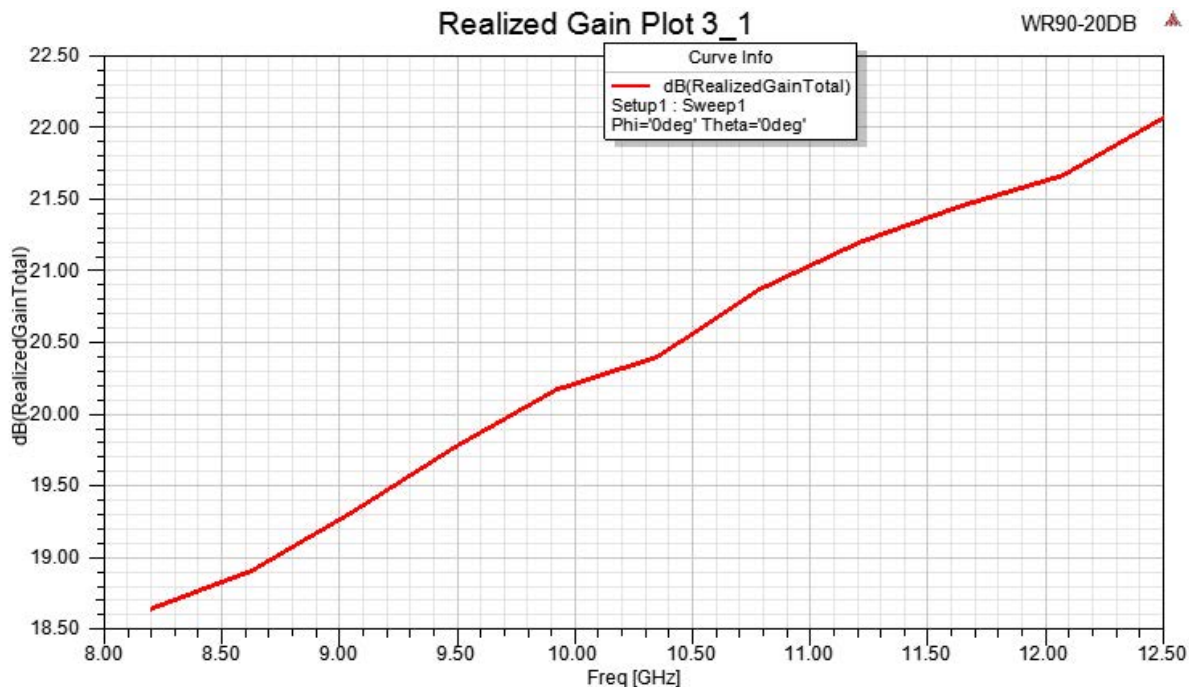
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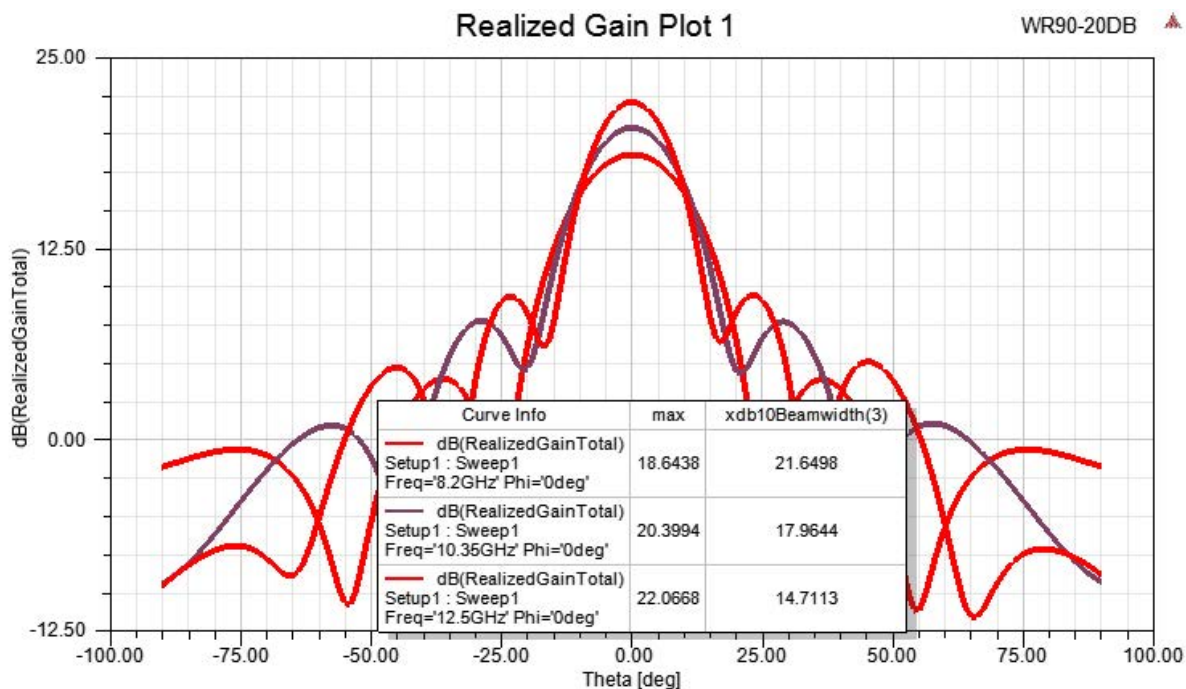
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WR-90 Standard Gain Horn with 20 dBi gain, SMA Male connector, Integrated Cage-Style Mount from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-90 Standard Gain Horn with 20 dBi gain, SMA Male connector, Integrated Cage-Style Mount PE1WAN090-20SM](https://www.pasternack.com/wr-90-standard-gain-horn-with-20-dbi-gain-sma-male-connector-integrated-cage-style-mount-pe1wan090-20sm-p.aspx)

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WR-90 Standard Gain Horn with 20 dBi gain, SMA Male connector, Integrated Cage-Style Mount

12.72
[323.0]

3.15
[80.0]

2.44
[62.0]

WR-90

SMA MALE CONNECTOR

8X Ø .217 [5.50]

Ø 3.937 [100.00] BC

Ø 4.724 [120.00]

90°

45°

.31 [8.0]

.60 [15.3]

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an INFINITI[®] brand

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INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5

SCALE NONE SHEET 1 OF 1

DESCRIPTION
WR-90 STANDARD GAIN HORN WITH 20 DBI GAIN, SMA MALE CONNECTOR WITH PRE-INSTALLED CAGE-STYLE MOUNT

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

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

CABLE LENGTH TOLERANCES:
≤ 12 [305] = ±.1 [25] / -0
> 12 [305] ≤ 60 [1524] = ±.2 [5] / -0
> 60 [1524] ≤ 300 [7620] = ±.5 [12.7] / -0
> 300 [7620] = ±.5% / -0

ALL DIMENSIONS ARE FOR REFERENCE ONLY AND SUBJECT TO CHANGE WITHOUT NOTICE. UNDIMENSIONED DETAILS AND FEATURES MAY VARY IN SIZE AND LOCATION. COLORS MAY VARY.

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PE DS Rev-D4 A size

SIZE	CAGE CODE	DRAWN BY	ITEM NO.	REV
A	53919	HBAKKE	PE1WAN090-20SM	A

PE DS Rev-D4 A size