

## WR-90 Standard Gain Horn with 15 dBi gain, SMA Male connector, Integrated Cage-Style Mount

### Technical Data Sheet

### PE1WAN090-15SM

#### Features

- 8.2 GHz to 12.4 GHz
- WR-90 Waveguide Band
- 15 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 PE1WAN090-15SM 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 PE1WAN090-15SM standard gain horn antenna with integrated cage-style mount has a nominal gain of 15 dBi with a Horizontal and Vertical HPBW (Half Power Beam Width) of 31 dB and 32 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 PE1WAN090-15SM 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

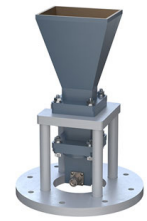
Design  
Coaxial Interface

WR-90 Standard Gain Horn  
SMA Male

#### Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	8.2		12.4	GHz
<b>Waveguide Standard Gain Horn</b>				
Gain		15		dBi
Horizontal Half Power Beam Width		31		Degrees
Vertical Half Power Beam Width		32		Degrees
<b>Waveguide to Coaxial Adapter</b>				
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 15 dBi gain, SMA Male connector, Integrated Cage-Style Mount PE1WAN090-15SM](#)



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### Mechanical Specifications

#### Size

Length	4.724 in [119.99 mm]
Width	4.724 in [119.99 mm]
Height	6.69 in [169.93 mm]
Weight	0.93355 lbs [423.45 g]

#### RF Connector

Type	SMA Male
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#### Waveguide Interface

Waveguide Size	WR-90
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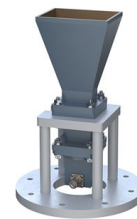
### Environmental Specifications

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

### Plotted and Other Data

Notes:

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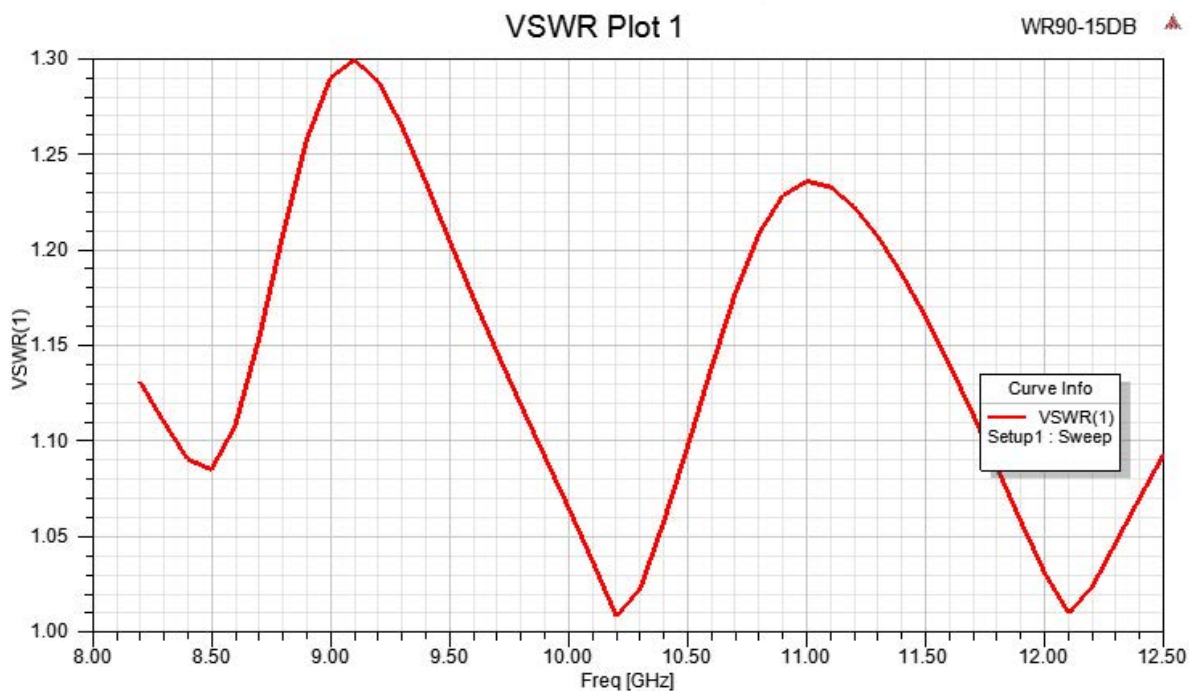


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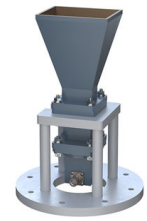
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Typical Performance Data



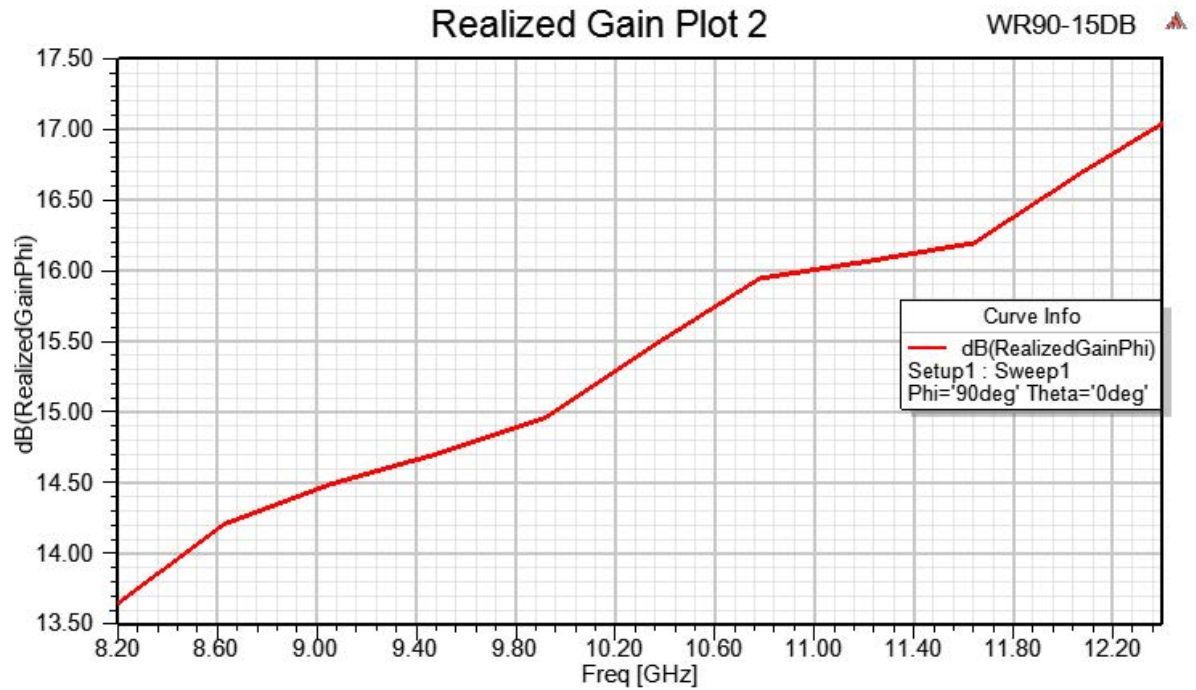
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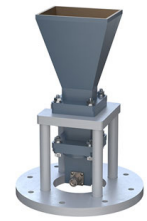
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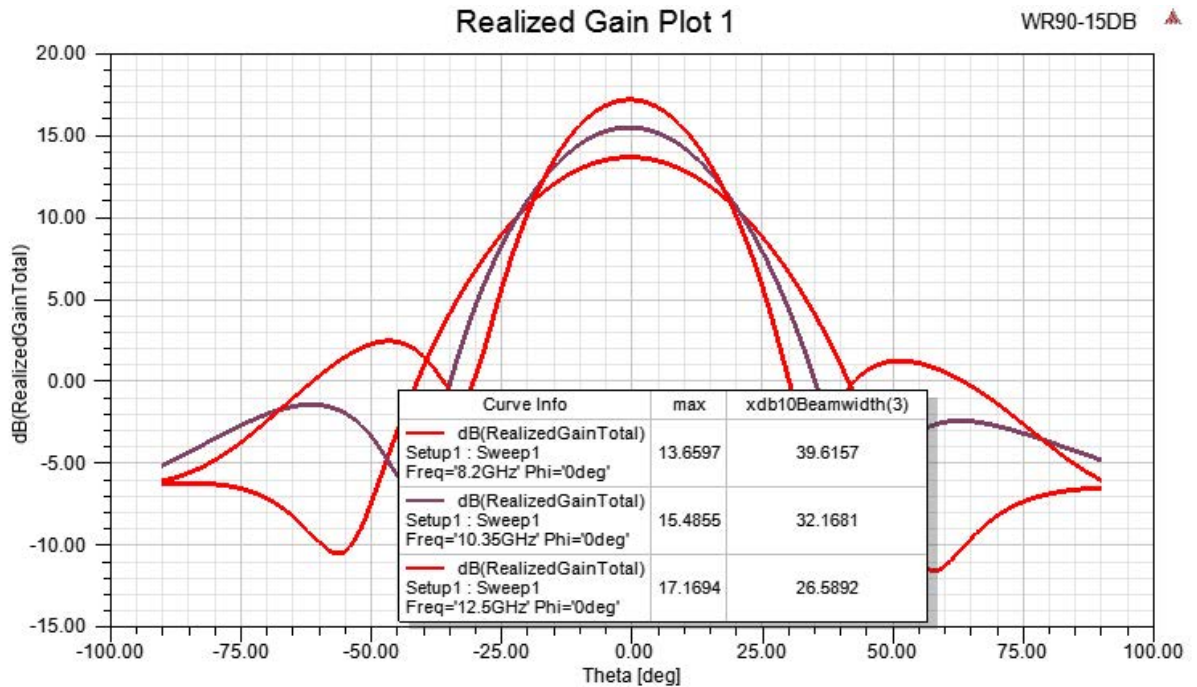
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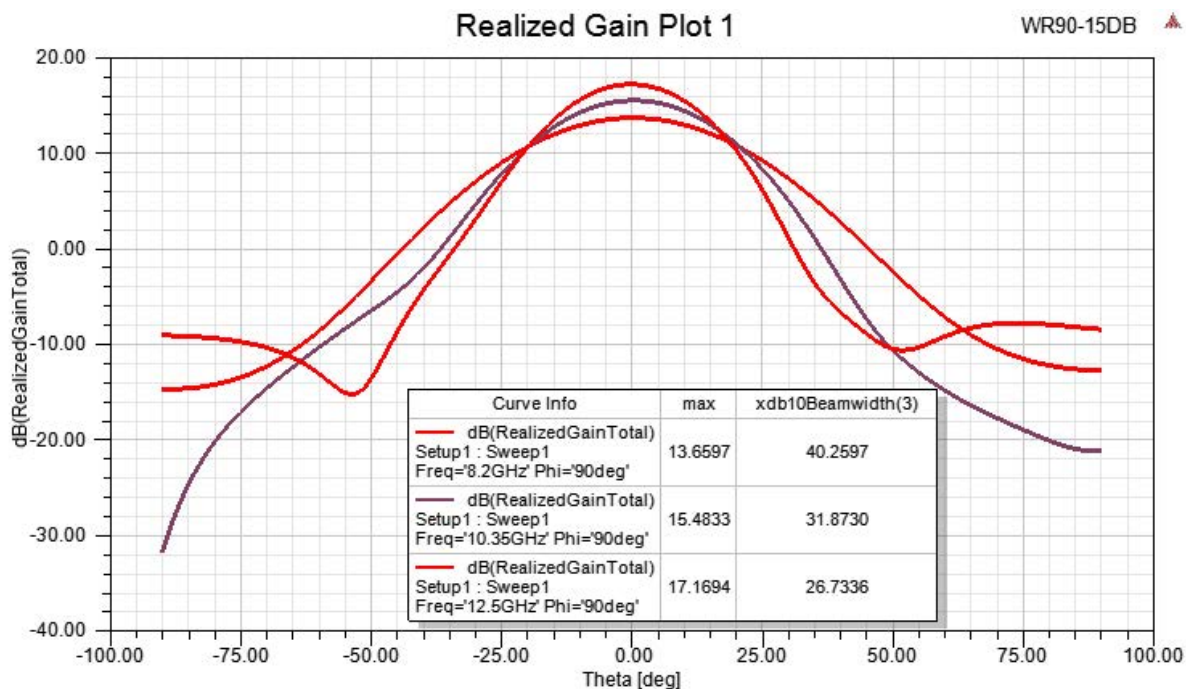




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WR-90 Standard Gain Horn with 15 dBi gain, SMA Male connector, Integrated Cage-Style Mount from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

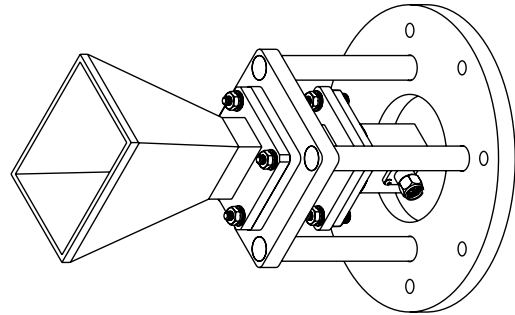
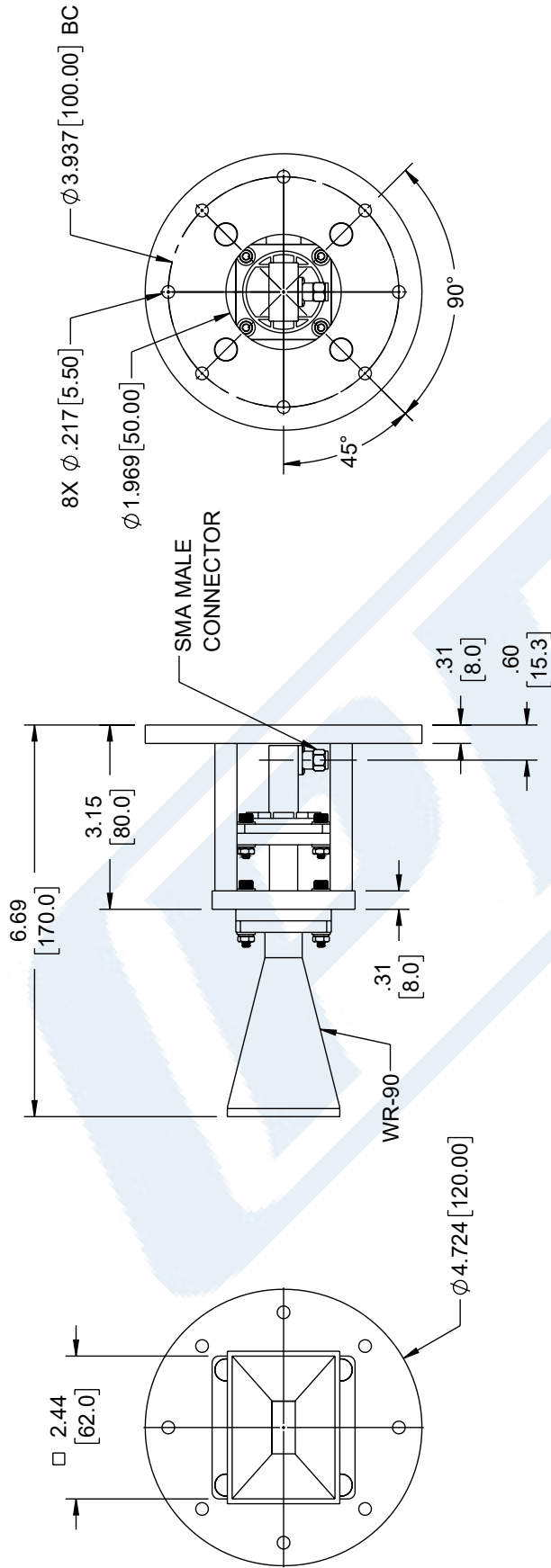
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ZONE	REV	DESCRIPTION	DATE	CHANGED BY	APPROVED
	A	INITIAL RELEASE	10/20/2023	HBAPKE	KHIETPAS



<p>UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES DIMENSIONS IN [ ] ARE MILLIMETERS</p>		<p><b>PE PASTERNAK®</b> an INFINIT® brand</p>		 		<p>INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5</p>	
<p>TOLERANCES:</p> <p>X = +2 [-5] XX = +0.02 [0.5] XXX = +0.005 [0.13]</p> <p>ANGLES ± °</p>		<p>Website: <a href="http://www.Pasternack.com">www.Pasternack.com</a> Phone: 1.866.727.8376   1.949.261.1920</p>		<p>SCALE NONE</p> <p>SHEET 1 OF 1</p>			
<p>CABLE LENGTH TOLERANCES:</p> <p>±12 [305] = ±1 [25] / -0 &gt;12 [305] = ±50 [1524] = ±2 [51] / -0 &gt;50 [1524] ≤ 300 [7620] = ±4 [102] / -0 &gt;300 [7620] = ±4 [102] / -0 &gt;120 [3048] &gt;300 [7620] = +5% / -0</p>		<p>DESCRIPTION WR-90 STANDARD GAIN HORN WITH 15 DBI GAIN, SMA MALE CONNECTOR WITH PRE-INSTALLED CAGE-STYLE MOUNT</p>					
<p>ALL DIMENSIONS ARE FOR REFERENCE ONLY AND SUBJECT TO CHANGE WITHOUT NOTICE UN-DIMENSIONED SIZE AND CAL. FEATURES MAY VARY BY SIZE AND FINISH COLORS MAY VARY</p>		<p>SIZE A</p>		<p>CAGE CODE 53919</p>		<p>ITEM NO. PE1WAN090-15SM</p>	
		<p>DRAWN BY HBAKKE</p>				<p>REV A</p>	

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