

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

Technical Data Sheet

PE1WAN090-10SM

Features

- 8.2 GHz to 12.4 GHz
- WR-90 Waveguide Band
- 10 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 PE1WAN090-10SM 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 PE1WAN090-10SM 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. 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 PE1WAN090-10SM 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

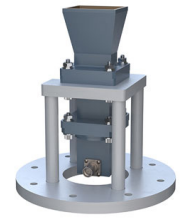
Design
Coaxial Interface

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		10		dBi
Horizontal Half Power Beam Width		52.1		Degrees
Vertical Half Power Beam Width		51.6		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 10 dBi gain, SMA Male connector, Integrated Cage-Style Mount PE1WAN090-10SM](#)



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

Technical Data Sheet

PE1WAN090-10SM

Mechanical Specifications

Size

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]

RF Connector

Type	SMA Male
------	----------

Waveguide Interface

Waveguide Size	WR-90
----------------	-------

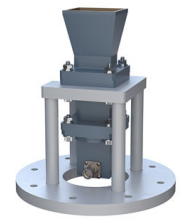
Environmental Specifications

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

Plotted and Other Data

Notes:

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 10 dBi gain, SMA Male connector, Integrated Cage-Style Mount PE1WAN090-10SM](#)

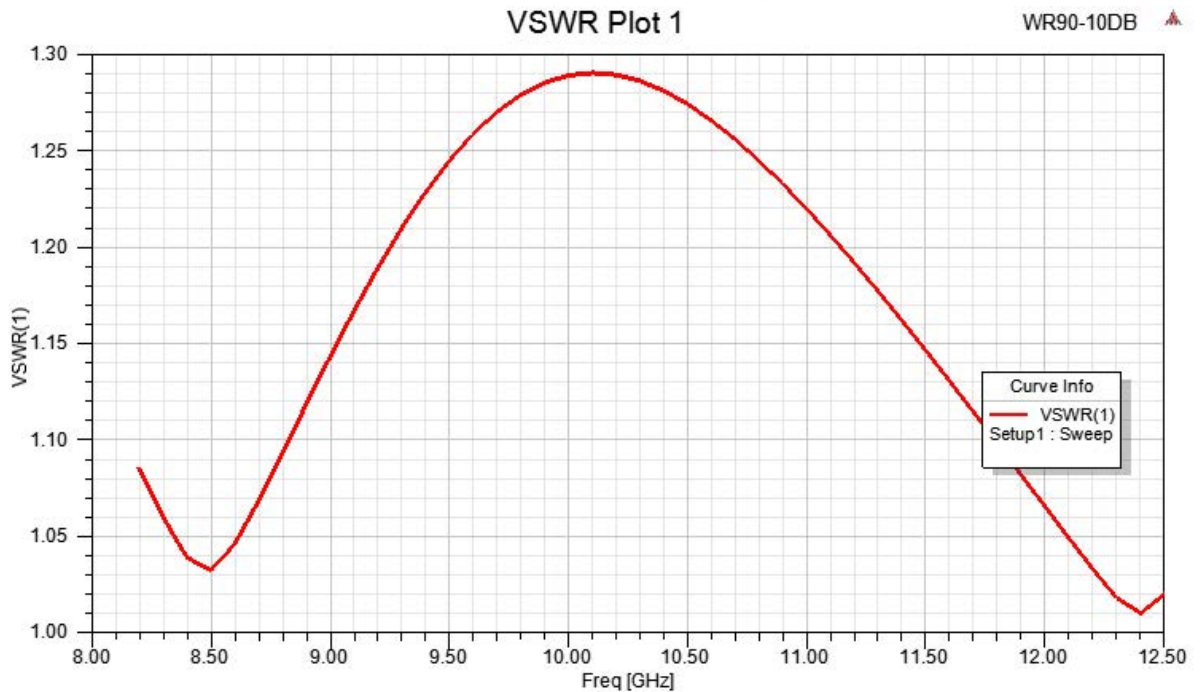


WR-90 Standard Gain Horn with 10 dBi gain, SMA
Male connector, Integrated Cage-Style Mount

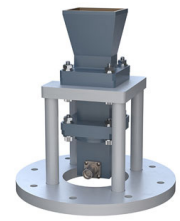
Technical Data Sheet

PE1WAN090-10SM

Typical Performance Data



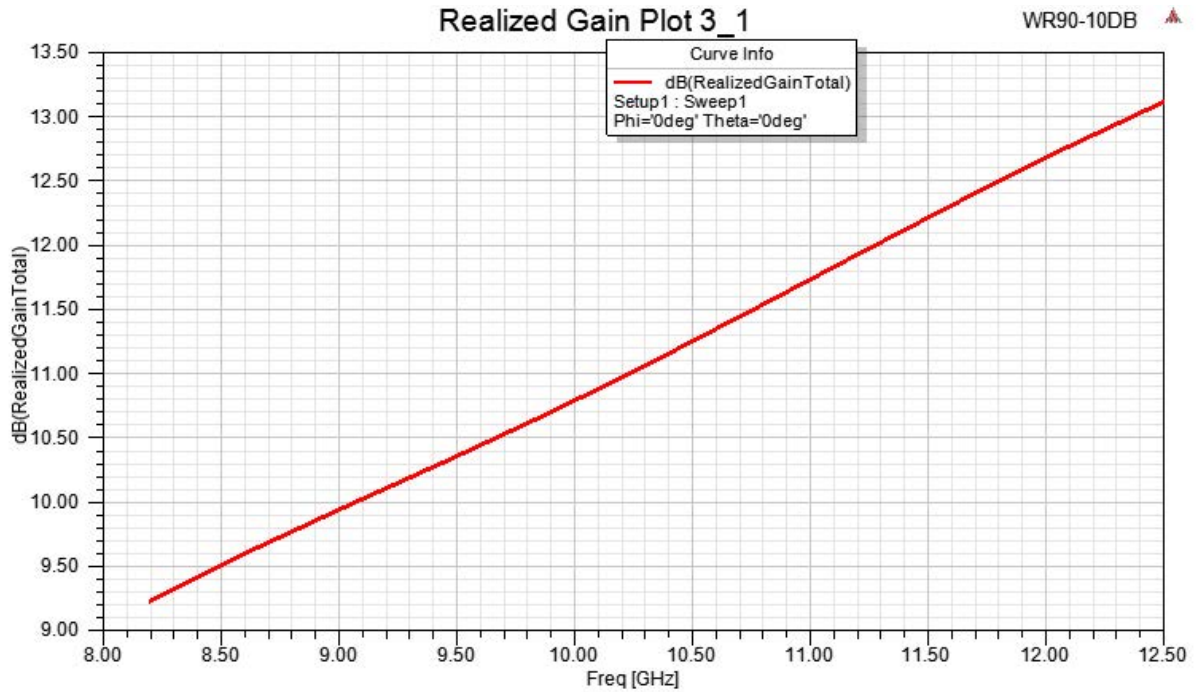
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-90 Standard Gain Horn with 10 dBi gain, SMA Male connector, Integrated Cage-Style Mount PE1WAN090-10SM](#)



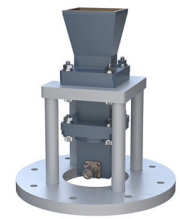
WR-90 Standard Gain Horn with 10 dBi gain, SMA
Male connector, Integrated Cage-Style Mount

Technical Data Sheet

PE1WAN090-10SM



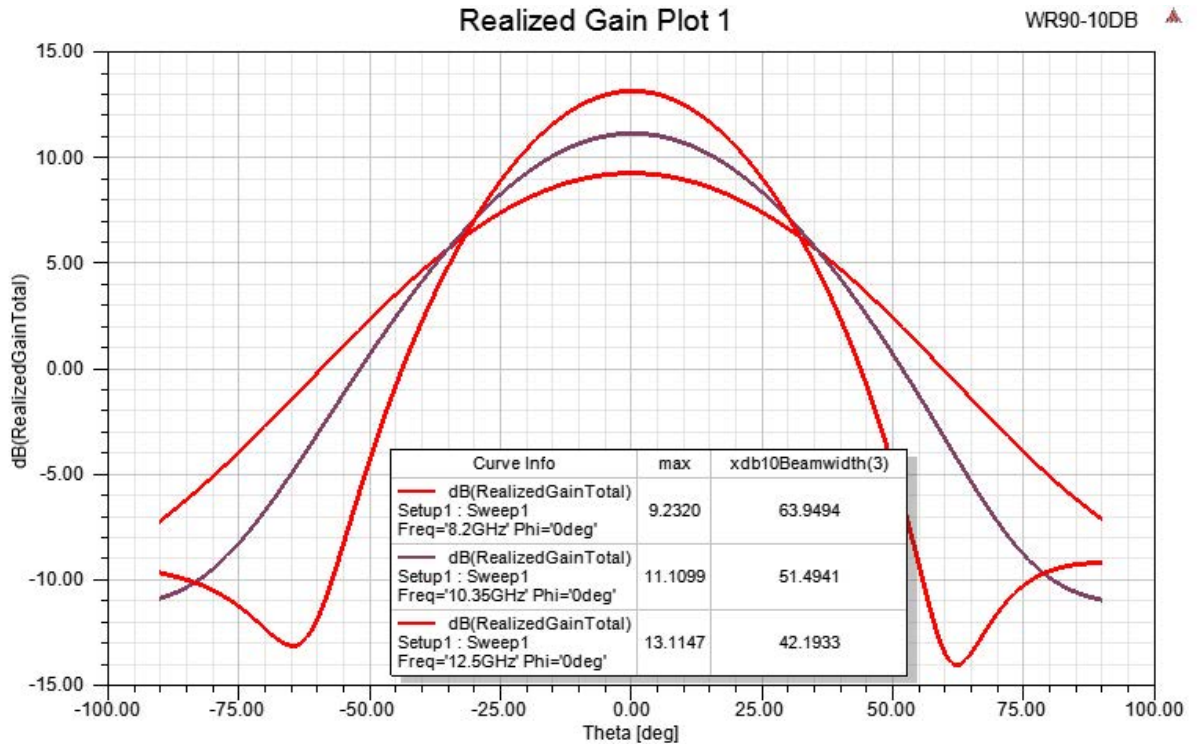
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-90 Standard Gain Horn with 10 dBi gain, SMA Male connector, Integrated Cage-Style Mount PE1WAN090-10SM](#)



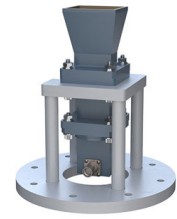
WR-90 Standard Gain Horn with 10 dBi gain, SMA
Male connector, Integrated Cage-Style Mount

Technical Data Sheet

PE1WAN090-10SM



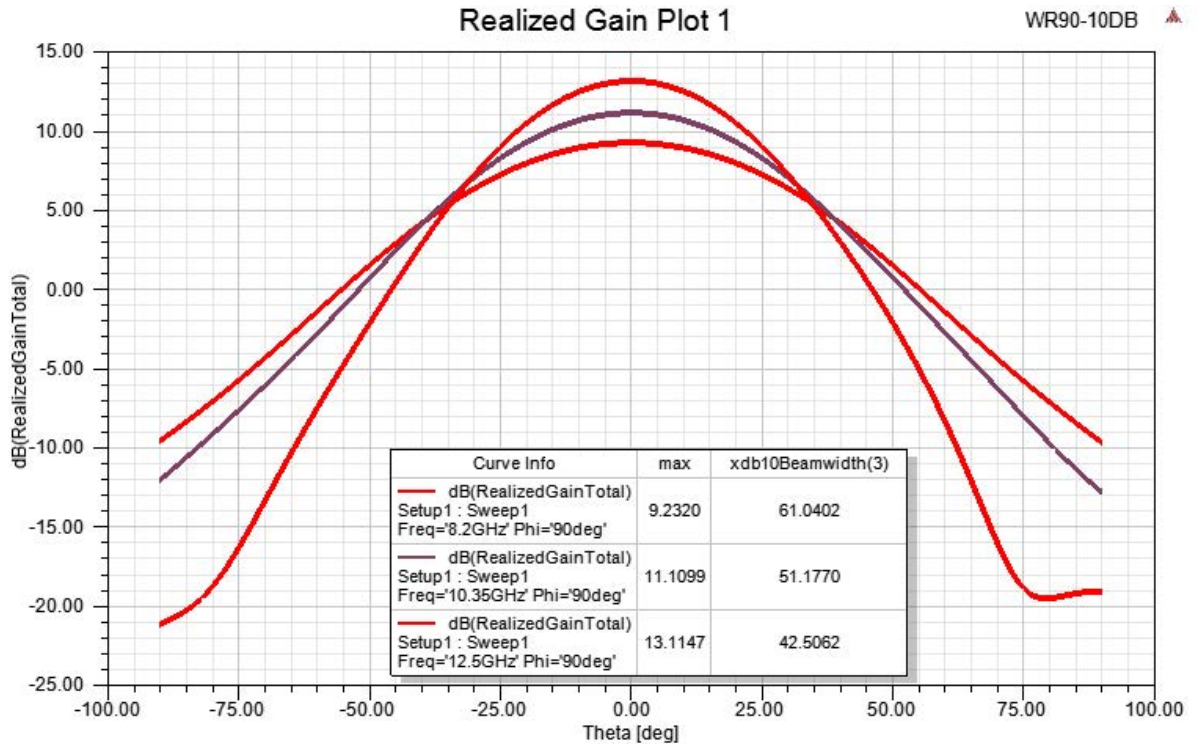
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-90 Standard Gain Horn with 10 dBi gain, SMA Male connector, Integrated Cage-Style Mount PE1WAN090-10SM](#)



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

Technical Data Sheet

PE1WAN090-10SM



WR-90 Standard Gain Horn with 10 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.

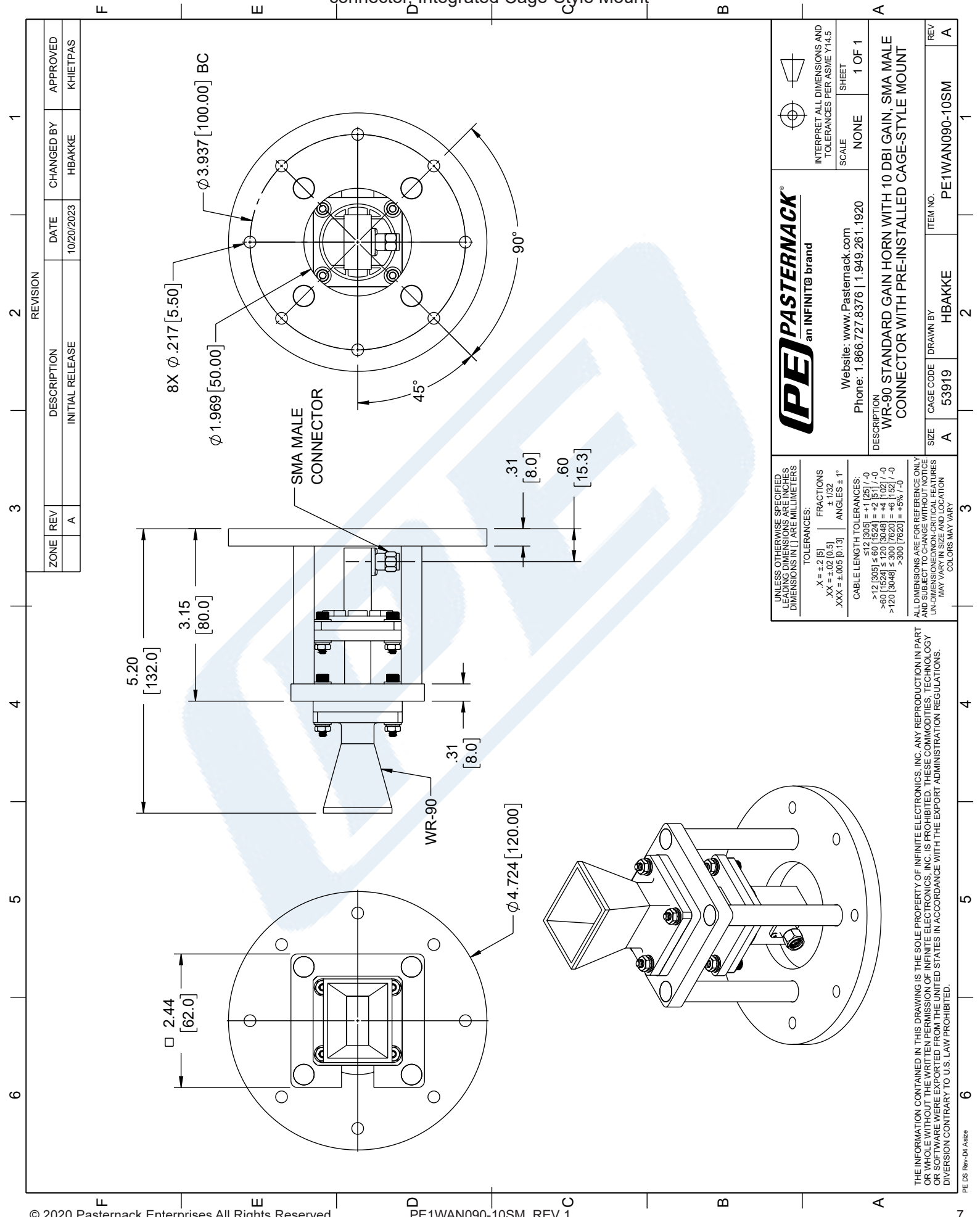
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-90 Standard Gain Horn with 10 dBi gain, SMA Male connector, Integrated Cage-Style Mount PE1WAN090-10SM](https://www.pasternack.com/wr-90-standard-gain-horn-with-10-dbi-gain-sma-male-connector-integrated-cage-style-mount-pe1wan090-10sm-p.aspx)

URL: <https://www.pasternack.com/wr-90-standard-gain-horn-with-10-dbi-gain-sma-male-connector-integrated-cage-style-mount-pe1wan090-10sm-p.aspx>

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. Pasternack reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Pasternack does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Pasternack does not assume any liability arising out of the use of any part or documentation.

PE1WAN090-10SM CAD Drawing

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



THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF INFINITE ELECTRONICS, INC. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF INFINITE ELECTRONICS, INC. IS PROHIBITED. THESE COMMODITIES, TECHNOLOGY OR SOFTWARE WERE EXPORTED FROM THE UNITED STATES IN ACCORDANCE WITH THE EXPORT ADMINISTRATION REGULATIONS. DIVERSION CONTRARY TO U.S. LAW PROHIBITED.

PE PASTERNAK an INFINIT@ brand			
Website: www.Pasternack.com Phone: 1.866.727.8376 1.949.261.1920		SCALE NONE	SHEET 1 OF 1
DESCRIPTION WR-90 STANDARD GAIN HORN WITH 10 DBI GAIN, SMA MALE CONNECTOR WITH PRE-INSTALLED CAGE-STYLE MOUNT		REVISION A	
SIZE A	CAGE CODE 53919	DRAWN BY HBAKKE	ITEM NO. PE1WAN090-10SM

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

TOLERANCES:

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

CABLE LENGTH TOLERANCES:

>12 [305] ≤ 512 [1299]	± 1 [25] / -0
>512 [1299] ≤ 1200 [3048]	± 2 [50] / -0
>1200 [3048] ≤ 3000 [7620]	± 4 [102] / -0
>3000 [7620]	± 5% / -0

ALL DIMENSIONS ARE FOR REFERENCE ONLY. UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES. UNLESS OTHERWISE SPECIFIED, DIMENSIONS IN [] ARE MILLIMETERS. UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES. UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES. UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES.