

WR-90 Standard Waveguide Horn With UG-135/U Square Cover Flange and 20 dBi Nominal Gain Operating From 8.2 GHz to 12.4 GHz Frequency Range

Fairview Microwave's SH190-20 WR-90 waveguide standard gain horn antenna operating from 8.2 GHz to 12.4 GHz with a nominal 20 dBi gain is part of our full line of RF components available for same-day shipping. This pyramidal horn antenna has a lightweight anodized aluminum body and a precision tolerance UG-135/U square cover flange. The SH190-20 WR-90 waveguide standard gain horn antenna offers low gain variation across its operating frequency range and 16.5 degrees of half power beam width.

Waveguide standard gain horn antennas are used in a wide variety of applications due to their high power handling capability, low loss, high directivity, and near constant electrical performance across a broad bandwidth. Fairview Microwave's WR-90 standard gain horns are available in 10, 15 and 20 dB models with pyramidal shape and rectangular waveguide input.

Configuration

Design	WR-90 Standard Gain Horn
Pattern	Directional
Polarization	Linear

Electrical Specifications

Description	Min	Typ	Max	Units
Frequency Range	8.2		12.4	GHz
Nominal Gain		20		dBi
Horizontal 3dB Beam Width		16.5		Deg
Vertical 3dB Beam Width		16.1		Deg

Electrical Specification Notes:
 3 dB beam width is calculated by computer simulation.

Mechanical Specifications

Size

Length	10.06 in [255.52 mm]
Width/Diameter	5 in [127 mm]
Height	3.7 in [93.98 mm]
Weight	0.75 lbs [340.19 g]

Waveguide Interface

Waveguide Size	WR-90
Flange Type	Square Cover
Flange Designation	UG-135/U
Body Material and Plating	Anodized Aluminum

Environmental Specifications

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

Plotted and Other Data

Notes:



Features:

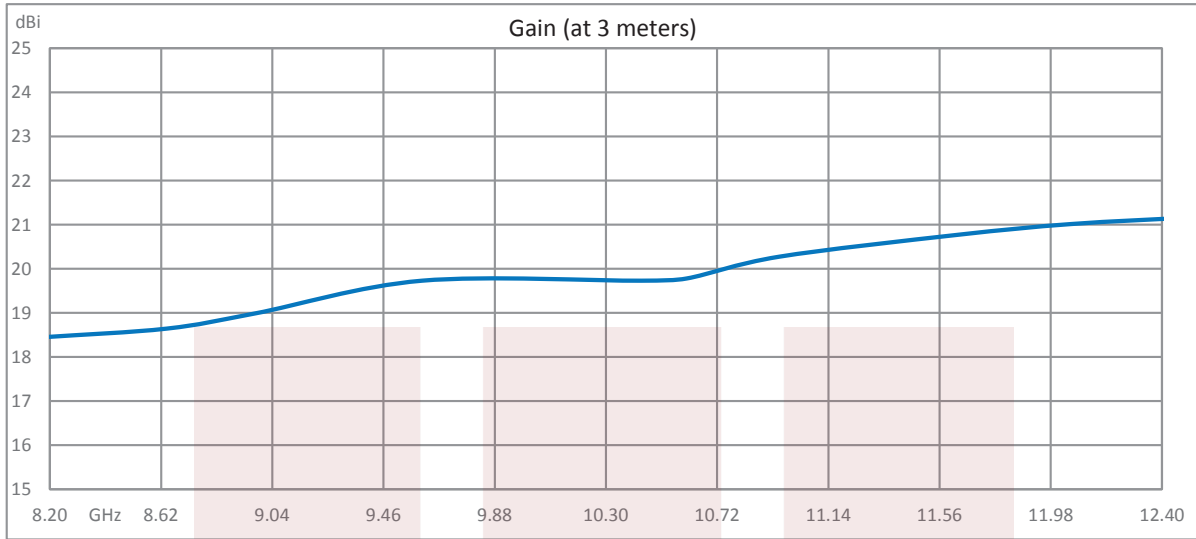
- Rectangular Waveguide Interface
- 8.2 GHz to 12.4 GHz
- 20 dBi Nominal Gain
- UG-135/U Square Cover Flange

Applications:

- Antenna Measurements
- Wireless Communication
- Laboratory Use
- Microwave Radio Systems

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Typical Performance Data



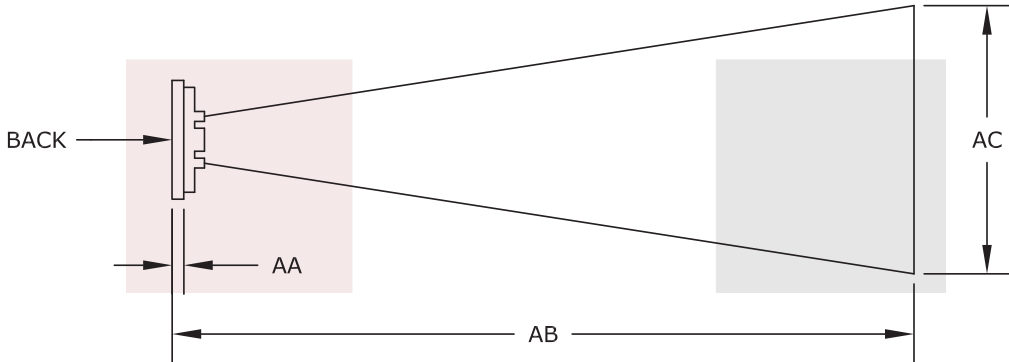
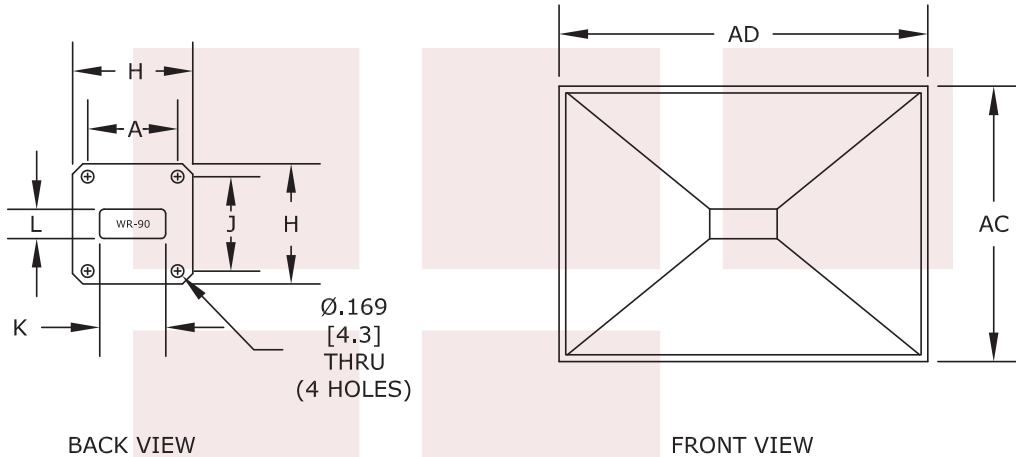
WR-90 Standard Waveguide Horn With UG-135/U Square Cover Flange and 20 dBi Nominal Gain Operating From 8.2 GHz to 12.4 GHz Frequency Range from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [WR-90 Standard Waveguide Horn With UG-135/U Square Cover Flange and 20 dBi Nominal Gain Operating From 8.2 GHz to 12.4 GHz Frequency Range SH190-20](#)

URL: <https://www.fairviewmicrowave.com/wr-90-standard-gain-horn-antenna-0-db-sh190-20-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. 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.

WR90		
Dimension	Inches	mm
A	1.220	30.99
H	1.630	41.40
J	1.280	32.51
K (± 0.003)	0.900	22.86
L (± 0.003)	0.400	10.16
AA	0.160	4.06
AB	10.060	255.52
AC	3.700	93.98
AD	5.000	127.00



STANDARD TOLERANCES	
.X	± 0.2
.XX	± 0.1
.XXX	± 0.05

*STANDARD TOLERANCES APPLY ONLY TO DIMENSIONS IN INCHES

FAIRVIEW MICROWAVE INC. ALLEN, TX 75013 WWW.FAIRVIEWMICROWAVE.COM		NOTES: 1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL. 2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME. 3. DIMENSIONS ARE IN INCHES [mm].			
TITLE WR-90 Standard Waveguide Horn With UG-135/U Square Cover Flange and 20 dBi Nominal Gain Operating From 8.2 GHz to 12.4 GHz Frequency		DWG NO SH190-20		CAGE CODE 3FKR5	
CAD FILE	120916	SHEET	SCALE	N/A	SIZE A 41742