



**20 dBi Gain, 17.6-26.7 GHz, WR42 Standard Gain Horn with 2.92mm Female Port**

Rev 1

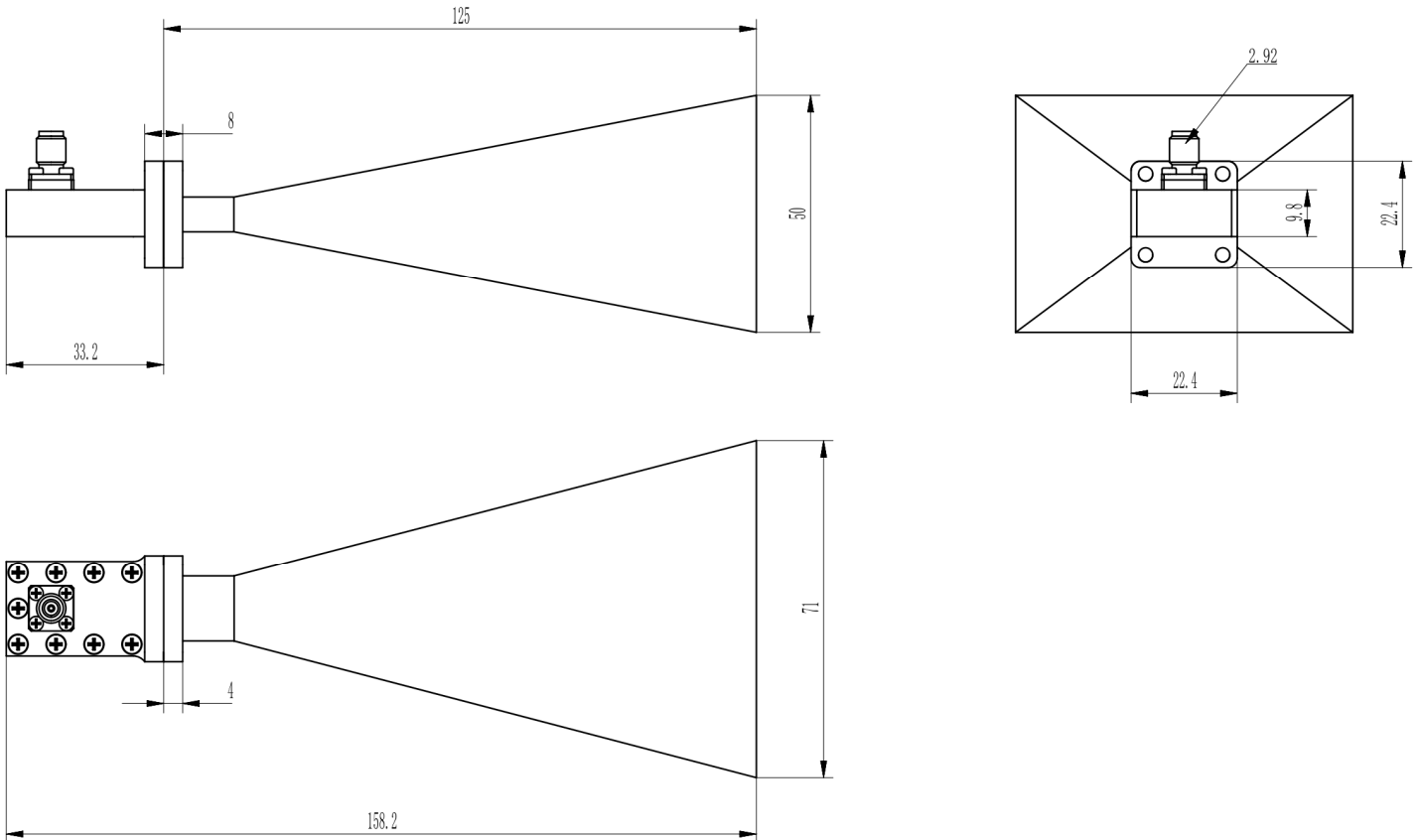
**Electrical**

Frequency Range	17.6-26.7 GHz
Norminal Gain	20 dBi
Polarization	Linear
VSWR	1.3 max
3dB Beamwidth	H-Plane: 12.6~16.7 deg, E-Plane: 12.0~18.5 deg
Operating Temperature	-40°C~+70°C

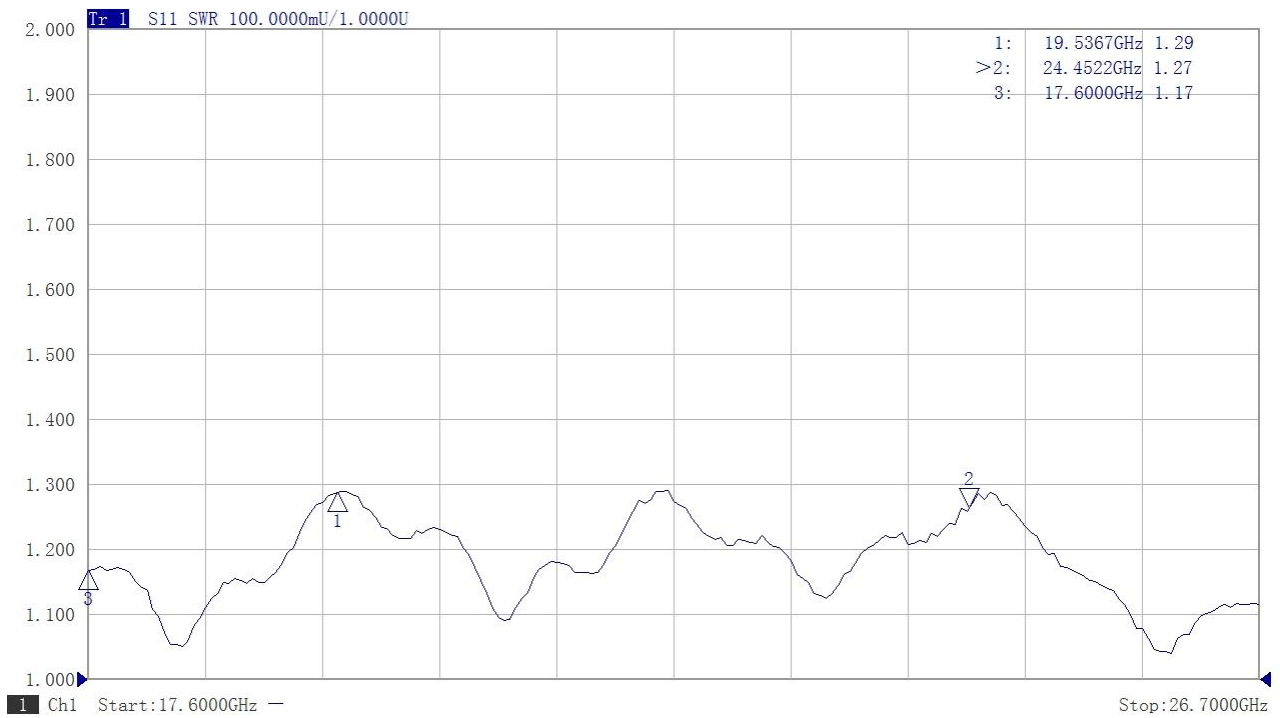
**Mechanical**

Waveguide Size	WR42
Flange Type	UBR220 Square Cover Flange
Body Material and Finish	Copper, Painted
RF Connector	2.92mm Female
Net Weight	270g

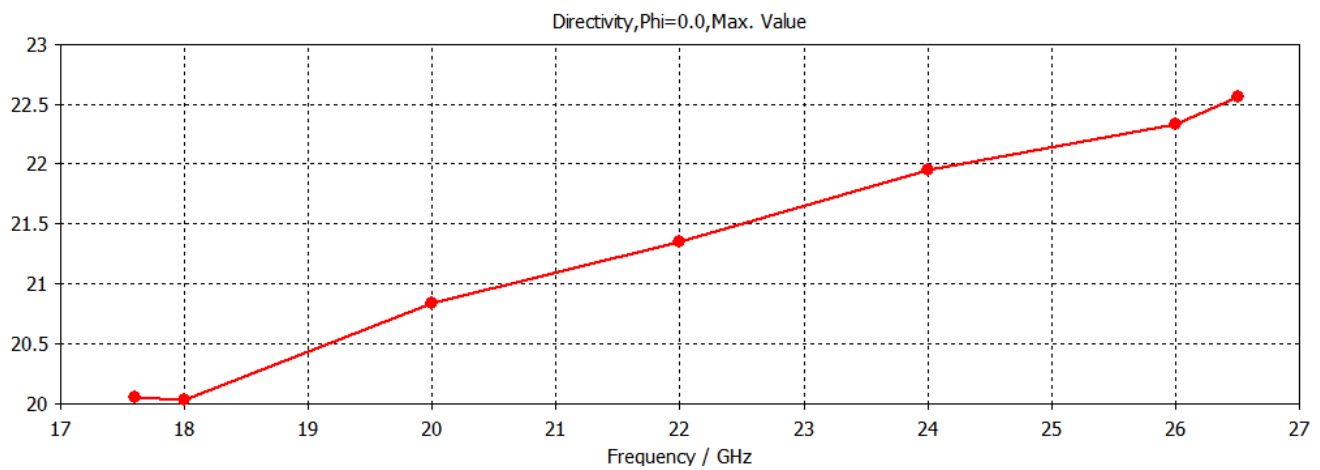
**Dimensions(mm)**



## Typical Test Data



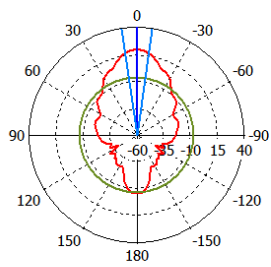
## Gain



# Simulated Antenna Patterns

## 17.6GHz H-Plane

Farfield Directivity Abs (Phi=0)



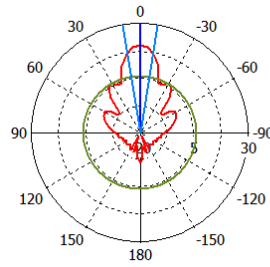
Theta / Degree vs. dBi

farfield (f=17.6) [1]

Frequency = 17.6  
Main lobe magnitude = 20.1 dBi  
Main lobe direction = 0.0 deg.  
Angular width (3 dB) = 16.7 deg.  
Side lobe level = -26.3 dB

## E-Plane

Farfield Directivity Abs (Phi=90)



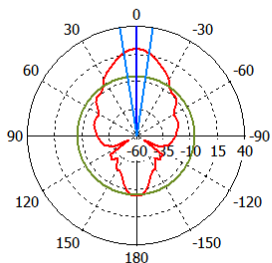
Theta / Degree vs. dBi

farfield (f=17.6) [1]

Frequency = 17.6  
Main lobe magnitude = 20.1 dBi  
Main lobe direction = 0.0 deg.  
Angular width (3 dB) = 18.5 deg.  
Side lobe level = -13.9 dB

## 18GHz H-Plane

Farfield Directivity Abs (Phi=0)



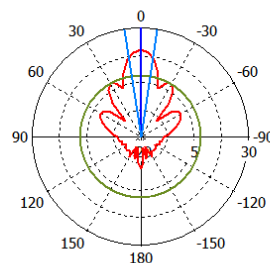
Theta / Degree vs. dBi

farfield (f=18) [1]

Frequency = 18  
Main lobe magnitude = 20.0 dBi  
Main lobe direction = 0.0 deg.  
Angular width (3 dB) = 17.3 deg.  
Side lobe level = -25.3 dB

## E-Plane

Farfield Directivity Abs (Phi=90)



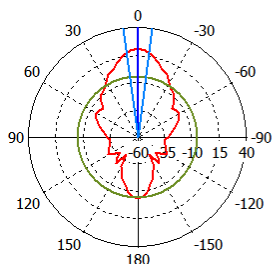
Theta / Degree vs. dBi

farfield (f=18) [1]

Frequency = 18  
Main lobe magnitude = 20.0 dBi  
Main lobe direction = 0.0 deg.  
Angular width (3 dB) = 16.8 deg.  
Side lobe level = -11.7 dB

## 20GHz H-Plane

Farfield Directivity Abs (Phi=0)



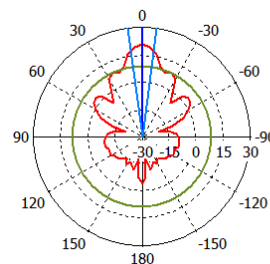
Theta / Degree vs. dBi

farfield (f=20) [1]

Frequency = 20  
Main lobe magnitude = 20.8 dBi  
Main lobe direction = 0.0 deg.  
Angular width (3 dB) = 15.1 deg.  
Side lobe level = -25.2 dB

## E-Plane

Farfield Directivity Abs (Phi=90)



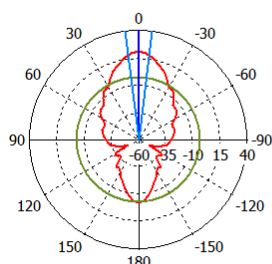
Theta / Degree vs. dBi

farfield (f=20) [1]

Frequency = 20  
Main lobe magnitude = 20.8 dBi  
Main lobe direction = 0.0 deg.  
Angular width (3 dB) = 15.5 deg.  
Side lobe level = -12.2 dB

## 22GHz H-Plane

Farfield Directivity Abs (Phi=0)



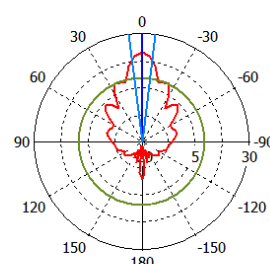
Theta / Degree vs. dBi

farfield (f=22) [1]

Frequency = 22  
Main lobe magnitude = 21.4 dBi  
Main lobe direction = 0.0 deg.  
Angular width (3 dB) = 14.3 deg.  
Side lobe level = -23.9 dB

## E-Plane

Farfield Directivity Abs (Phi=90)

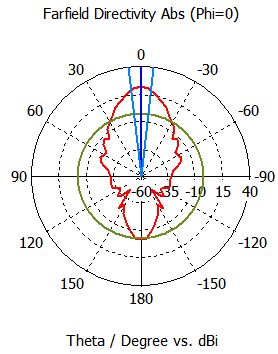


Theta / Degree vs. dBi

farfield (f=22) [1]

Frequency = 22  
Main lobe magnitude = 21.4 dBi  
Main lobe direction = 0.0 deg.  
Angular width (3 dB) = 13.9 deg.  
Side lobe level = -11.7 dB

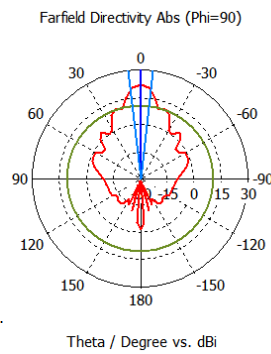
24GHz H-Plane



farfield (f=24) [1]

Frequency = 24  
 Main lobe magnitude = 22.0 dBi  
 Main lobe direction = 0.0 deg.  
 Angular width (3 dB) = 13.2 deg.  
 Side lobe level = -24.0 dB

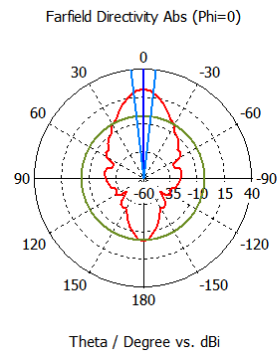
E-Plane



farfield (f=24) [1]

Frequency = 24  
 Main lobe magnitude = 22.0 dBi  
 Main lobe direction = 0.0 deg.  
 Angular width (3 dB) = 13.0 deg.  
 Side lobe level = -11.3 dB

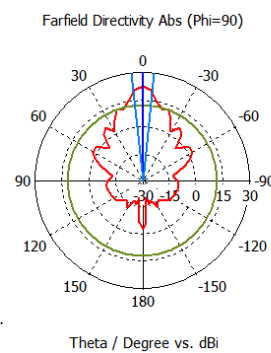
26GHz H-Plane



farfield (f=26) [1]

Frequency = 26  
 Main lobe magnitude = 22.3 dBi  
 Main lobe direction = 0.0 deg.  
 Angular width (3 dB) = 12.6 deg.  
 Side lobe level = -25.2 dB

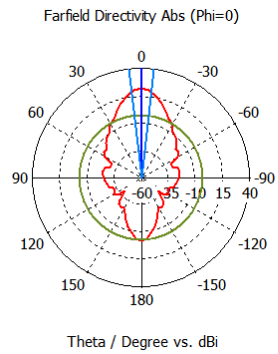
E-Plane



farfield (f=26) [1]

Frequency = 26  
 Main lobe magnitude = 22.3 dBi  
 Main lobe direction = 0.0 deg.  
 Angular width (3 dB) = 12.0 deg.  
 Side lobe level = -10.4 dB

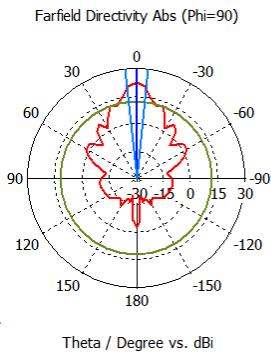
26.5GHz H-Plane



farfield (f=26) [1]

Frequency = 26  
 Main lobe magnitude = 22.3 dBi  
 Main lobe direction = 0.0 deg.  
 Angular width (3 dB) = 12.6 deg.  
 Side lobe level = -25.2 dB

E-Plane



farfield (f=26) [1]

Frequency = 26  
 Main lobe magnitude = 22.3 dBi  
 Main lobe direction = 0.0 deg.  
 Angular width (3 dB) = 12.0 deg.  
 Side lobe level = -10.4 dB