# RH42-20

## 20 dBi Gain, 17.6-26.7 GHz, WR42 Standard Gain Horn with UBR220 Flange

Rev 1

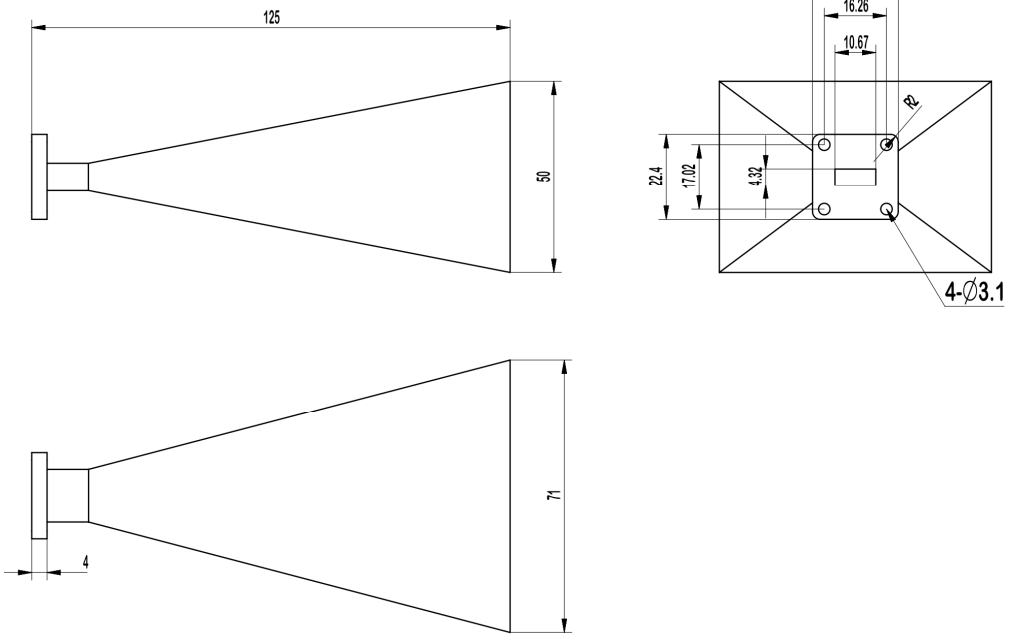
## Electrical

| | |
|---|---|
| **Frequency Range** | 17.6-26.7 GHz |
| **Norminal Gain** | 20 dBi |
| **Polarization** | Linear |
| **VSWR** | 1.2 max |
| **3dB Beamwidth** | E-Plane: 12.6~16.7 deg, H-Plane: 12.0~18.5 deg |
| **Operating Temperature** | -40℃~+70℃ |

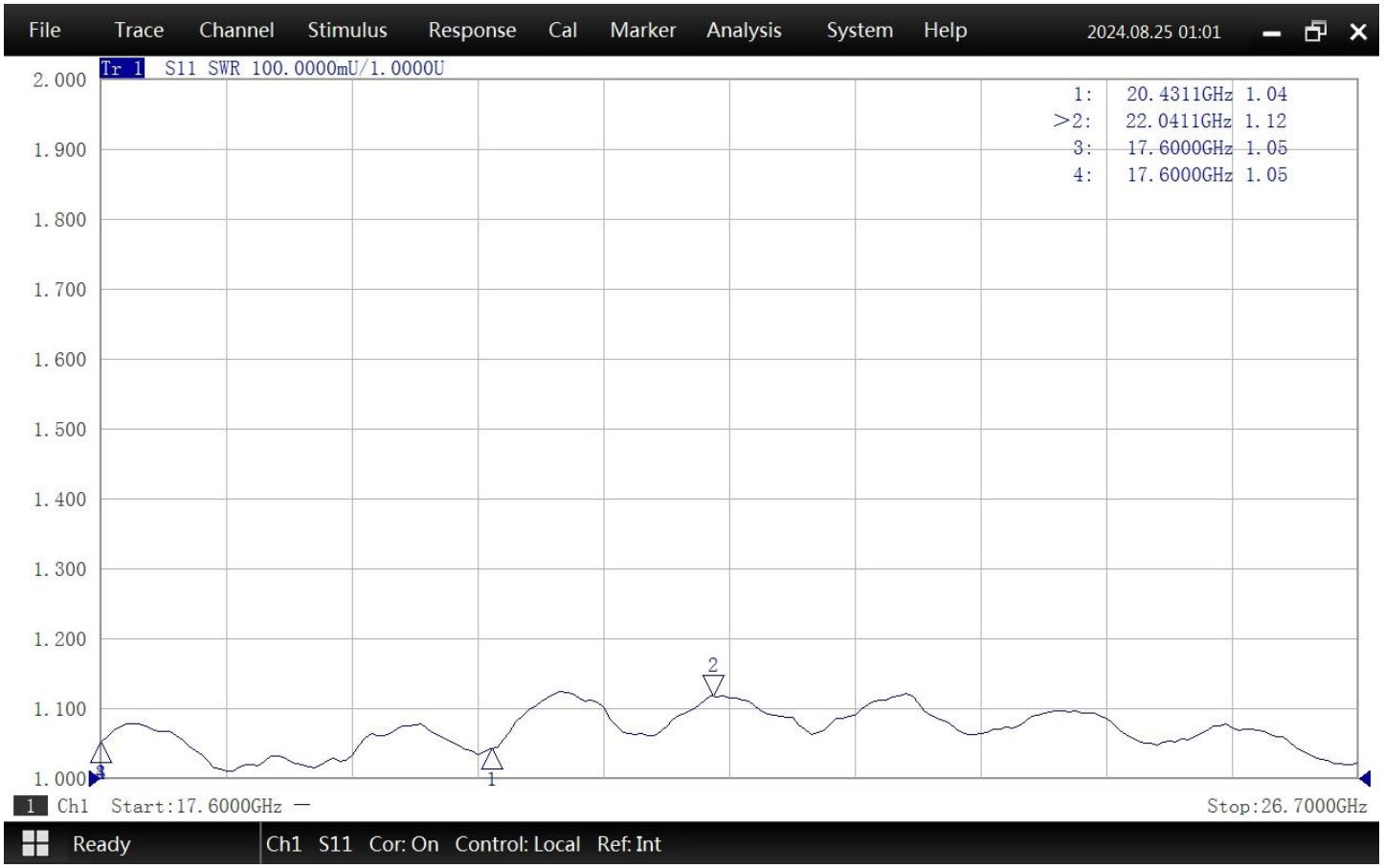
## Mechanical

| | |
|---|---|
| **Waveguide Size** | WR42 |
| **Flange Type** | UBR220 Square Cover Flange |
| **Body Material and Finish** | Copper, Painted |
| **Net Weight** | 215g |

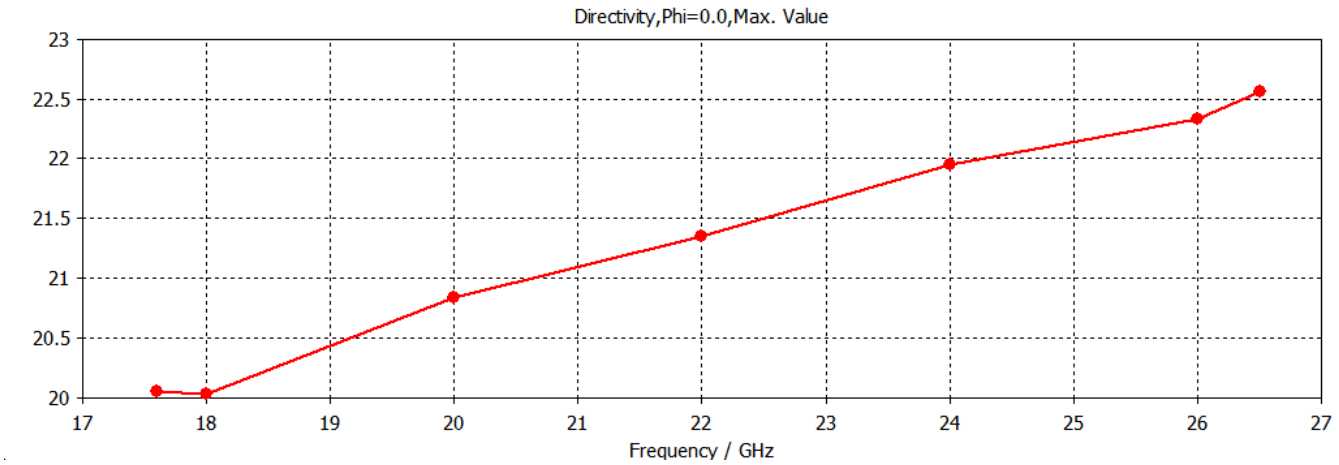
## Dimensions(mm)



## Typical VSWR

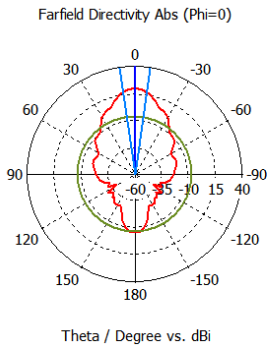



## Gain



## Simulated Antenna Patterns

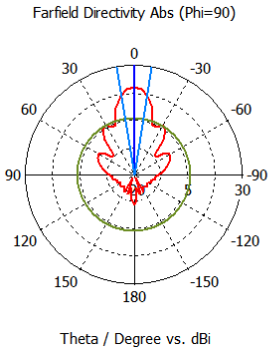
### 17.6GHz E-Plane




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

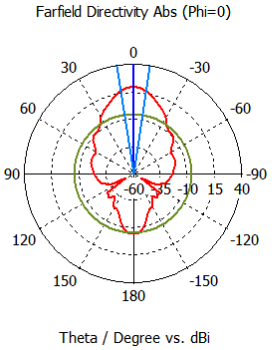
### H-Plane




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

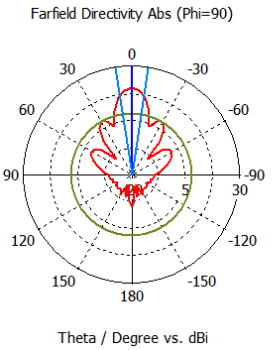
### 18GHz E-Plane




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

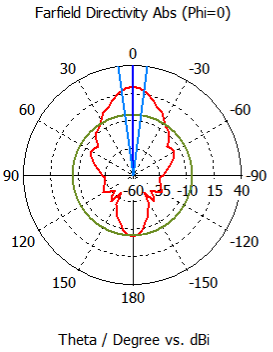
### H-Plane




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

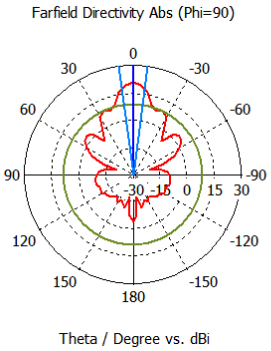
### 20GHz E-Plane




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

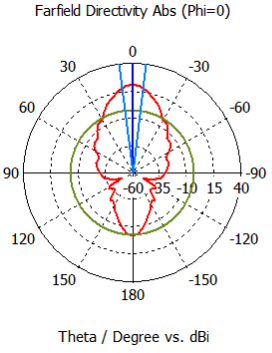
### H-Plane




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

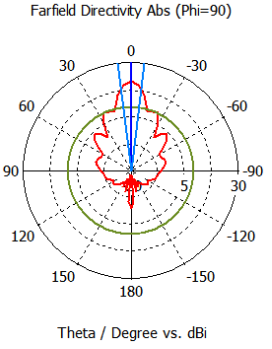
### 22GHz E-Plane




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

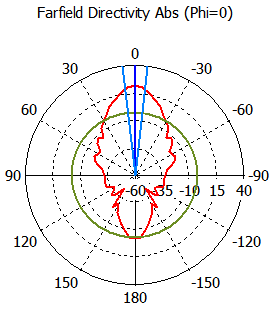
### H-Plane




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

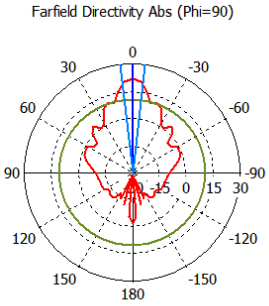
## 24GHz E-Plane




farfield (f=24) [1]

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

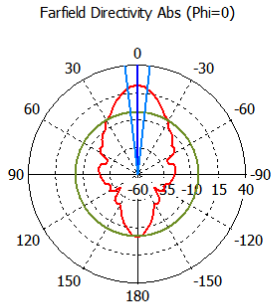
## H-Plane




farfield (f=24) [1]

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

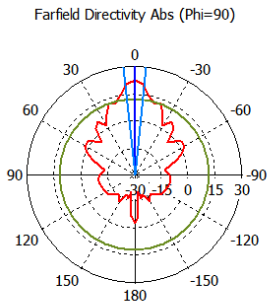
## 26GHz E-Plane




farfield (f=26) [1]

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

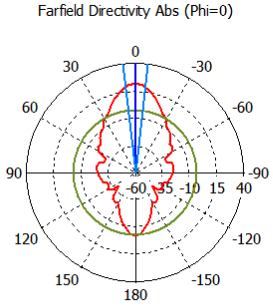
## H-Plane




farfield (f=26) [1]

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

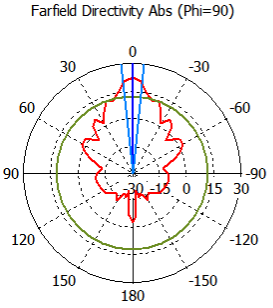
## 26.5GHz E-Plane




farfield (f=26) [1]

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

## H-Plane




farfield (f=26) [1]

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