RH12-1-20

20 dBi Gain, 60.5-91.9 GHz, WR12 Standard Gain Horn with 1.0mm Female Port

Rev 1

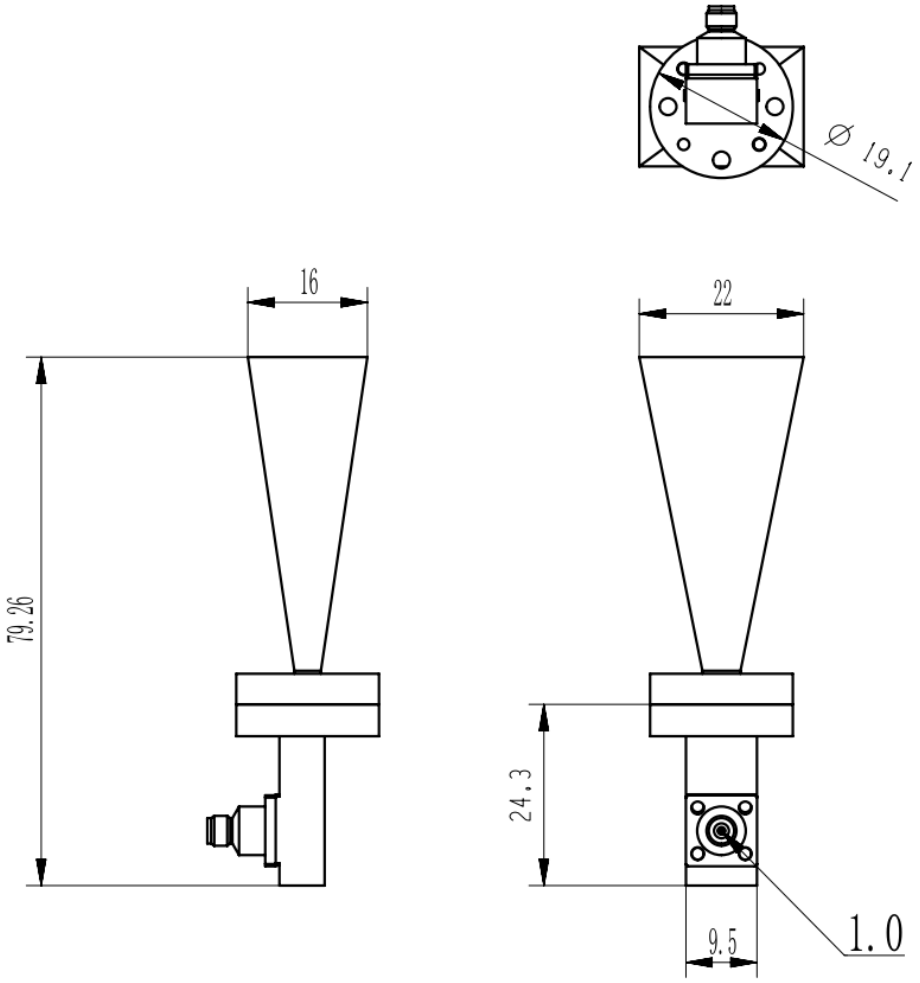
Electrical

Frequency Range	60.5-91.9 GHz
Norminal Gain	20 dBi
Polarization	Linear
VSWR	1.5 max
3dB Beamwidth	E-Plane: 11.2~15.9 deg, H-Plane: 10.6~15.0 deg
Operating Temperature	-40℃~+70℃

Mechanical

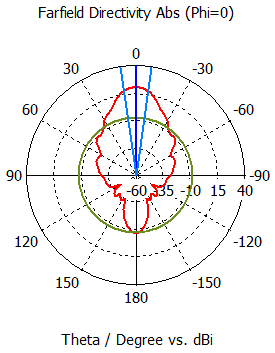
Waveguide Size	WR12
Flange Type	UG387/U-Mod Round Cover Flange
Body Material and Finish	Copper, Gold Plated
RF Connector	1.0mm Female

Dimensions(mm)



Simulated Antenna Patterns

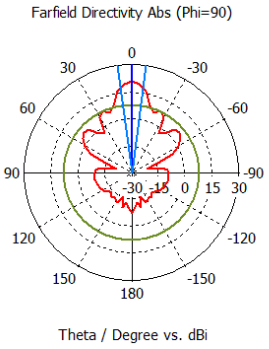
60.5GHz E-Plane



farfield (f=60.5) [1]

Frequency = 60.5
Main lobe magnitude = 20.9 dBi
Main lobe direction = 0.0 deg.
Angular width (3 dB) = 15.9 deg.
Side lobe level = -28.4 dB

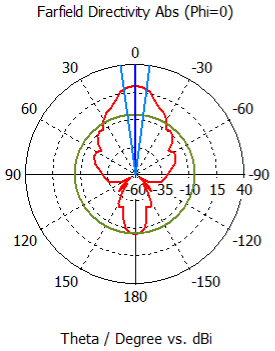
H-Plane



farfield (f=60.5) [1]

Frequency = 60.5
Main lobe magnitude = 20.9 dBi
Main lobe direction = 0.0 deg.
Angular width (3 dB) = 15.0 deg.
Side lobe level = -13.0 dB

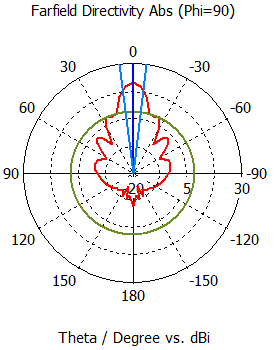
64GHz E-Plane



farfield (f=64) [1]

Frequency = 64
Main lobe magnitude = 21.3 dBi
Main lobe direction = 0.0 deg.
Angular width (3 dB) = 15.0 deg.
Side lobe level = -26.5 dB

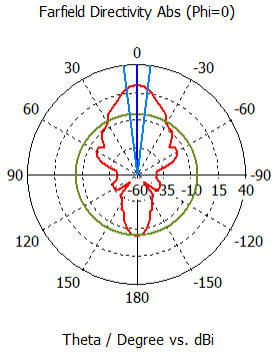
H-Plane



farfield (f=64) [1]

Frequency = 64
Main lobe magnitude = 21.3 dBi
Main lobe direction = 0.0 deg.
Angular width (3 dB) = 14.2 deg.
Side lobe level = -12.9 dB

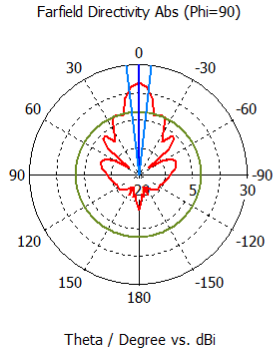
68GHz E-Plane



farfield (f=68) [1]

Frequency = 68
Main lobe magnitude = 21.8 dBi
Main lobe direction = 0.0 deg.
Angular width (3 dB) = 14.1 deg.
Side lobe level = -26.0 dB

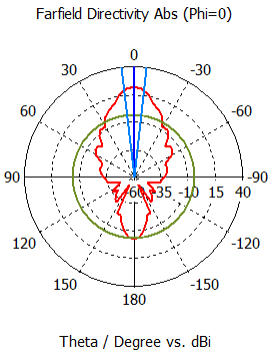
H-Plane



farfield (f=68) [1]

Frequency = 68
Main lobe magnitude = 21.8 dBi
Main lobe direction = 0.0 deg.
Angular width (3 dB) = 13.3 deg.
Side lobe level = -12.9 dB

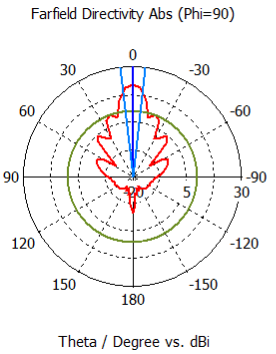
72GHz E-Plane



farfield (f=72) [1]

Frequency = 72
Main lobe magnitude = 22.2 dBi
Main lobe direction = 0.0 deg.
Angular width (3 dB) = 13.4 deg.
Side lobe level = -25.8 dB

H-Plane

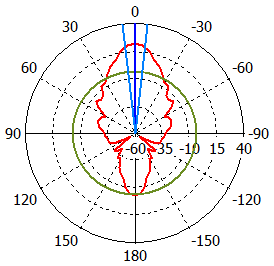


farfield (f=72) [1]

Frequency = 72
Main lobe magnitude = 22.2 dBi
Main lobe direction = 0.0 deg.
Angular width (3 dB) = 12.7 deg.
Side lobe level = -12.1 dB

76GHz E-Plane

Farfield Directivity Abs (Phi=0)



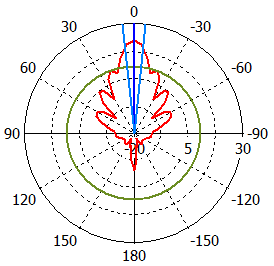
Theta / Degree vs. dBi

farfield (f=76) [1]

Frequency = 76
Main lobe magnitude = 22.6 dBi
Main lobe direction = 0.0 deg.
Angular width (3 dB) = 12.8 deg.
Side lobe level = -25.8 dB

H-Plane

Farfield Directivity Abs (Phi=90)



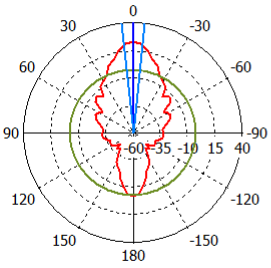
Theta / Degree vs. dBi

farfield (f=76) [1]

Frequency = 76
Main lobe magnitude = 22.6 dBi
Main lobe direction = 0.0 deg.
Angular width (3 dB) = 12.1 deg.
Side lobe level = -11.8 dB

80GHz E-Plane

Farfield Directivity Abs (Phi=0)



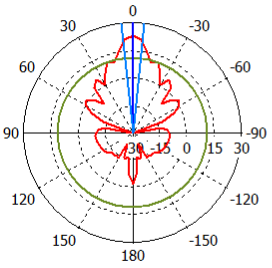
Theta / Degree vs. dBi

farfield (f=80) [1]

Frequency = 80
Main lobe magnitude = 23.0 dBi
Main lobe direction = 0.0 deg.
Angular width (3 dB) = 12.3 deg.
Side lobe level = -25.1 dB

H-Plane

Farfield Directivity Abs (Phi=90)



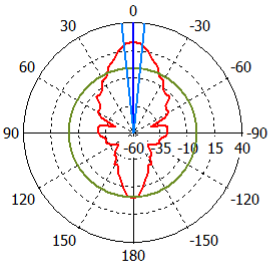
Theta / Degree vs. dBi

farfield (f=80) [1]

Frequency = 80
Main lobe magnitude = 23.0 dBi
Main lobe direction = 0.0 deg.
Angular width (3 dB) = 11.6 deg.
Side lobe level = -11.8 dB

84GHz E-Plane

Farfield Directivity Abs (Phi=0)



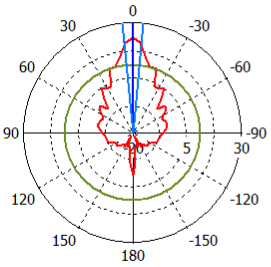
Theta / Degree vs. dBi

farfield (f=84) [1]

Frequency = 84
Main lobe magnitude = 23.2 dBi
Main lobe direction = 0.0 deg.
Angular width (3 dB) = 11.9 deg.
Side lobe level = -24.0 dB

H-Plane

Farfield Directivity Abs (Phi=90)



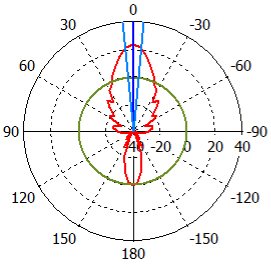
Theta / Degree vs. dBi

farfield (f=84) [1]

Frequency = 84
Main lobe magnitude = 23.2 dBi
Main lobe direction = 0.0 deg.
Angular width (3 dB) = 11.3 deg.
Side lobe level = -12.0 dB

88GHz E-Plane

Farfield Directivity Abs (Phi=0)



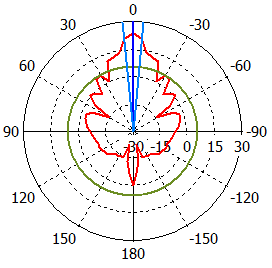
Theta / Degree vs. dBi

farfield (f=88) [1]

Frequency = 88
Main lobe magnitude = 23.6 dBi
Main lobe direction = 0.0 deg.
Angular width (3 dB) = 11.5 deg.
Side lobe level = -24.0 dB

H-Plane

Farfield Directivity Abs (Phi=90)

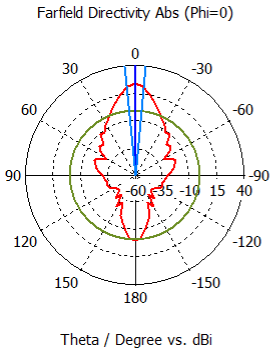


Theta / Degree vs. dBi

farfield (f=88) [1]

Frequency = 88
Main lobe magnitude = 23.6 dBi
Main lobe direction = 0.0 deg.
Angular width (3 dB) = 10.9 deg.
Side lobe level = -17.9 dB

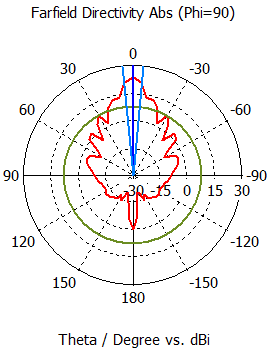
91.9GHz E-Plane



farfield (f=91.9) [1]

Frequency = 91.9
Main lobe magnitude = 23.8 dBi
Main lobe direction = 0.0 deg.
Angular width (3 dB) = 11.2 deg.
Side lobe level = -24.2 dB

H-Plane



farfield (f=91.9) [1]

Frequency = 91.9
Main lobe magnitude = 23.8 dBi
Main lobe direction = 0.0 deg.
Angular width (3 dB) = 10.6 deg.
Side lobe level = -15.9 dB

Typical Gain

