HR19-25

25 dBi Gain, 39.2-59.6 GHz, WR19 Standard Gain Horn with UG383/U-Mod Flange

Electrical

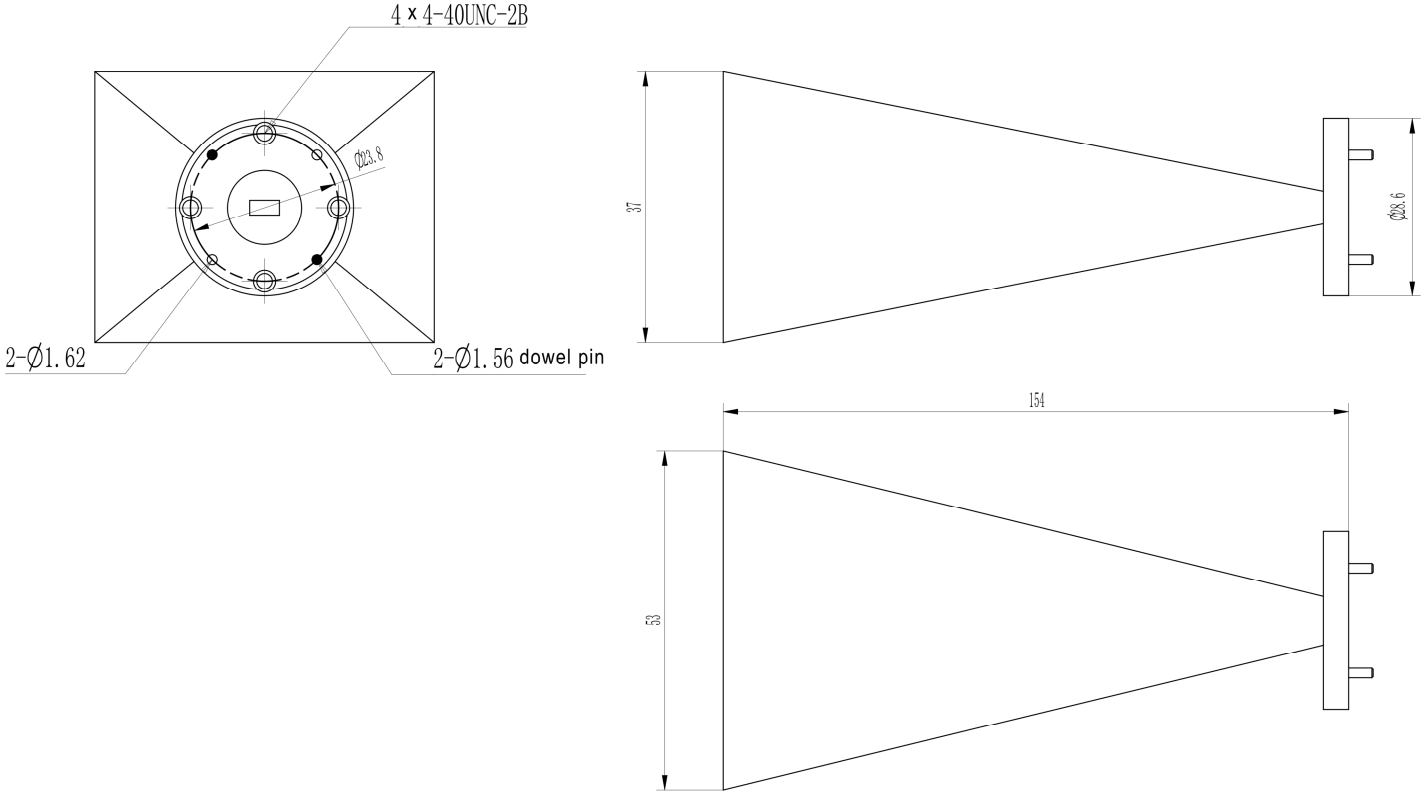
Frequency Range	39.2-59.6 GHz
Norminal Gain	25 dBi
Polarization	Linear
VSWR	1.2 max
3dB Beamwidth	H-Plane: 7.7~10.3 deg, E-Plane: 7.4~10.6 deg
Operating Temperature	-40℃~+70℃

Note: Measured pattern data is not provided by default. CST simulated data & VSWR measurement available.

Mechanical

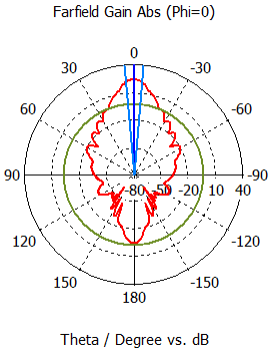
Waveguide Size	WR19
Flange Type	UG383/U-Mod Round Cover Flange
Body Material and Finish	Copper, painting over gold plating

Dimensions(mm)



Simulated Antenna Patterns

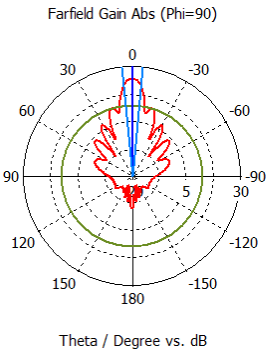
39GHz H-Plane



farfield (f=39) [1]

Frequency = 41
Main lobe magnitude = 24.6 dB
Main lobe direction = 0.0 deg.
Angular width (3 dB) = 10.3 deg.
Side lobe level = -27.3 dB

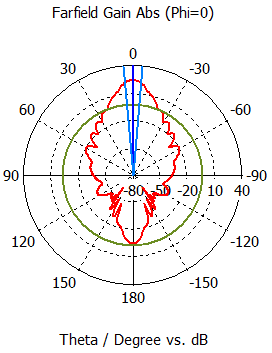
E-Plane



farfield (f=39) [1]

Frequency = 39
Main lobe magnitude = 24.6 dB
Main lobe direction = 0.0 deg.
Angular width (3 dB) = 10.6 deg.
Side lobe level = -12.1 dB

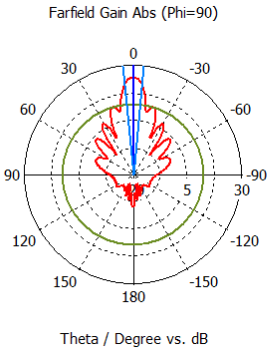
41GHz H-Plane



farfield (f=41) [1]

Frequency = 41
Main lobe magnitude = 24.6 dB
Main lobe direction = 0.0 deg.
Angular width (3 dB) = 10.3 deg.
Side lobe level = -27.3 dB

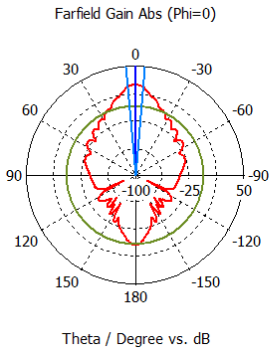
E-Plane



farfield (f=41) [1]

Frequency = 41
Main lobe magnitude = 24.6 dB
Main lobe direction = 0.0 deg.
Angular width (3 dB) = 10.6 deg.
Side lobe level = -12.1 dB

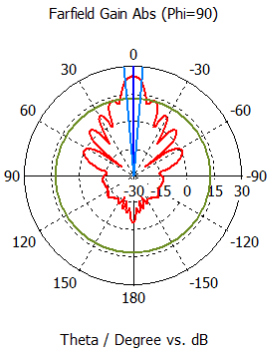
43GHz H-Plane



farfield (f=43) [1]

Frequency = 43
Main lobe magnitude = 25.0 dB
Main lobe direction = 0.0 deg.
Angular width (3 dB) = 9.9 deg.
Side lobe level = -29.2 dB

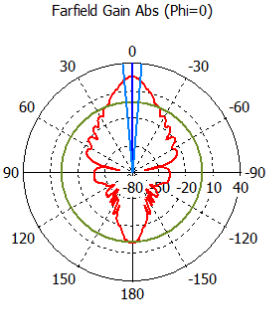
E-Plane



farfield (f=43) [1]

Frequency = 43
Main lobe magnitude = 25.0 dB
Main lobe direction = 0.0 deg.
Angular width (3 dB) = 10.1 deg.
Side lobe level = -12.0 dB

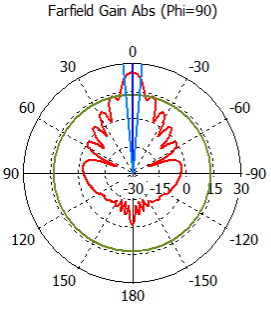
45GHz H-Plane



farfield (f=45) [1]

Frequency = 45
Main lobe magnitude = 25.3 dB
Main lobe direction = 0.0 deg.
Angular width (3 dB) = 9.5 deg.
Side lobe level = -27.0 dB

E-Plane

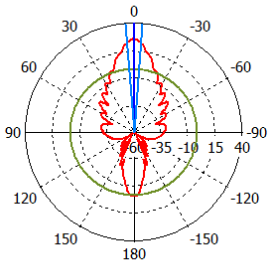


farfield (f=45) [1]

Frequency = 45
Main lobe magnitude = 25.3 dB
Main lobe direction = 0.0 deg.
Angular width (3 dB) = 9.7 deg.
Side lobe level = -11.9 dB

47GHz H-Plane

Farfield Gain Abs (Phi=0)



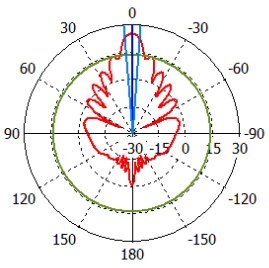
Theta / Degree vs. dB

farfield (f=47) [1]

Frequency = 47
Main lobe magnitude = 25.6 dB
Main lobe direction = 0.0 deg.
Angular width (3 dB) = 9.2 deg.
Side lobe level = -26.8 dB

E-Plane

Farfield Gain Abs (Phi=90)



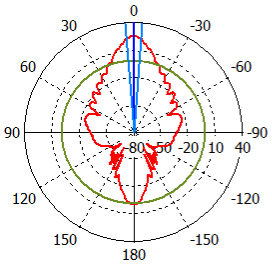
Theta / Degree vs. dB

farfield (f=47) [1]

Frequency = 47
Main lobe magnitude = 25.6 dB
Main lobe direction = 0.0 deg.
Angular width (3 dB) = 9.3 deg.
Side lobe level = -11.7 dB

49GHz H-Plane

Farfield Gain Abs (Phi=0)



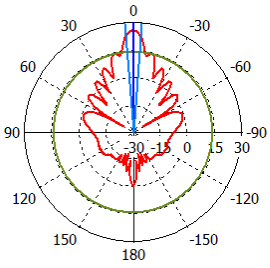
Theta / Degree vs. dB

farfield (f=49) [1]

Frequency = 49
Main lobe magnitude = 25.8 dB
Main lobe direction = 0.0 deg.
Angular width (3 dB) = 8.9 deg.
Side lobe level = -26.4 dB

E-Plane

Farfield Gain Abs (Phi=90)



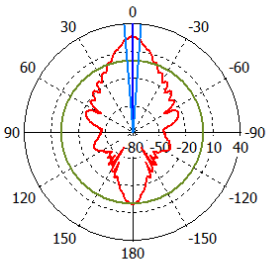
Theta / Degree vs. dB

farfield (f=49) [1]

Frequency = 49
Main lobe magnitude = 25.8 dB
Main lobe direction = 0.0 deg.
Angular width (3 dB) = 8.9 deg.
Side lobe level = -11.6 dB

51GHz H-Plane

Farfield Gain Abs (Phi=0)



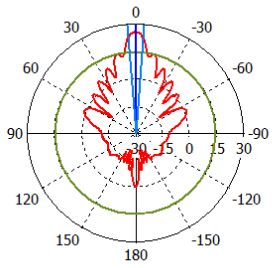
Theta / Degree vs. dB

farfield (f=51) [1]

Frequency = 51
Main lobe magnitude = 26.1 dB
Main lobe direction = 0.0 deg.
Angular width (3 dB) = 8.6 deg.
Side lobe level = -26.5 dB

E-Plane

Farfield Gain Abs (Phi=90)



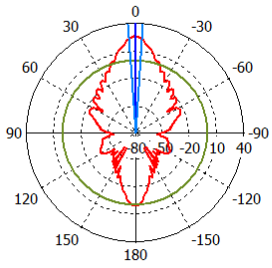
Theta / Degree vs. dB

farfield (f=51) [1]

Frequency = 51
Main lobe magnitude = 26.1 dB
Main lobe direction = 0.0 deg.
Angular width (3 dB) = 8.6 deg.
Side lobe level = -11.4 dB

53GHz H-Plane

Farfield Gain Abs (Phi=0)



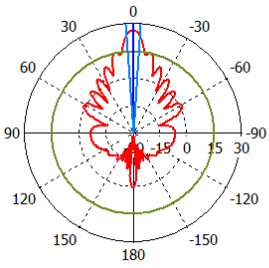
Theta / Degree vs. dB

farfield (f=53) [1]

Frequency = 53
Main lobe magnitude = 26.3 dB
Main lobe direction = 0.0 deg.
Angular width (3 dB) = 8.3 deg.
Side lobe level = -26.1 dB

E-Plane

Farfield Gain Abs (Phi=90)

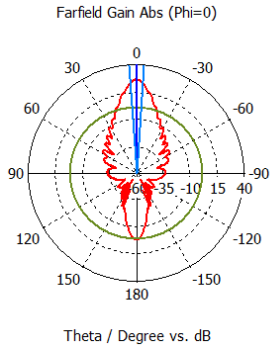


Theta / Degree vs. dB

farfield (f=53) [1]

Frequency = 53
Main lobe magnitude = 26.3 dB
Main lobe direction = 0.0 deg.
Angular width (3 dB) = 8.3 deg.
Side lobe level = -11.3 dB

57GHz H-Plane

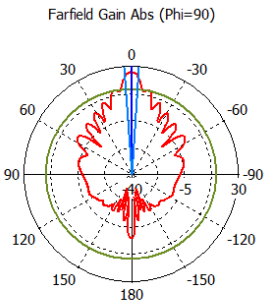


Theta / Degree vs. dB

farfield (f=57) [1]

Frequency = 57
Main lobe magnitude = 26.7 dB
Main lobe direction = 0.0 deg.
Angular width (3 dB) = 7.9 deg.
Side lobe level = -25.5 dB

E-Plane

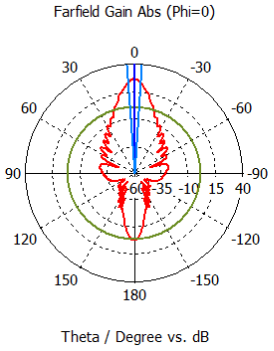


Theta / Degree vs. dB

farfield (f=57) [1]

Frequency = 57
Main lobe magnitude = 26.7 dB
Main lobe direction = 0.0 deg.
Angular width (3 dB) = 7.8 deg.
Side lobe level = -11.0 dB

59.6GHz H-Plane

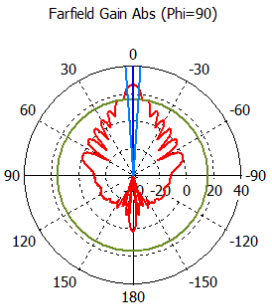


Theta / Degree vs. dB

farfield (f=59.6) [1]

Frequency = 59.6
Main lobe magnitude = 27.0 dB
Main lobe direction = 0.0 deg.
Angular width (3 dB) = 7.7 deg.
Side lobe level = -25.4 dB

E-Plane



Theta / Degree vs. dB

farfield (f=59.6) [1]

Frequency = 59.6
Main lobe magnitude = 27.0 dB
Main lobe direction = 0.0 deg.
Angular width (3 dB) = 7.4 deg.
Side lobe level = -10.7 dB

Typical VSWR

