

## Q-Band Focusing Lens Horn Antenna

### 33 to 50 GHz, WR22

#### DESCRIPTION

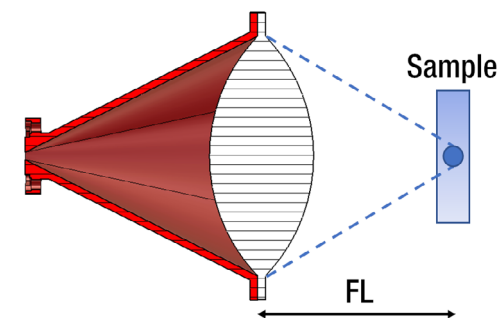
Anteral's Focusing Lens Horn Antennas are conical horn antennas with a **double-convex** Teflon (PTFE) lens added in the aperture, in order to apply phase correction and achieve superior focusing performance with minimum size.

The FLHA-F-WR22 model operates at the Q-band between 33 and 50 GHz with a focal length of 120 mm and a diameter beam focus of 11 mm.

#### APPLICATIONS

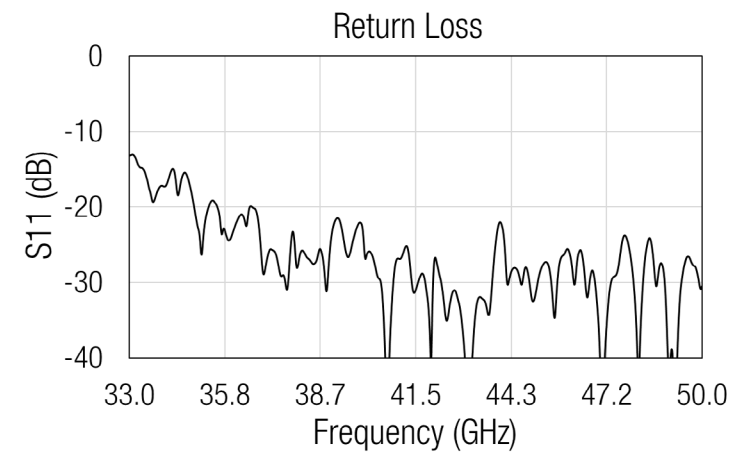
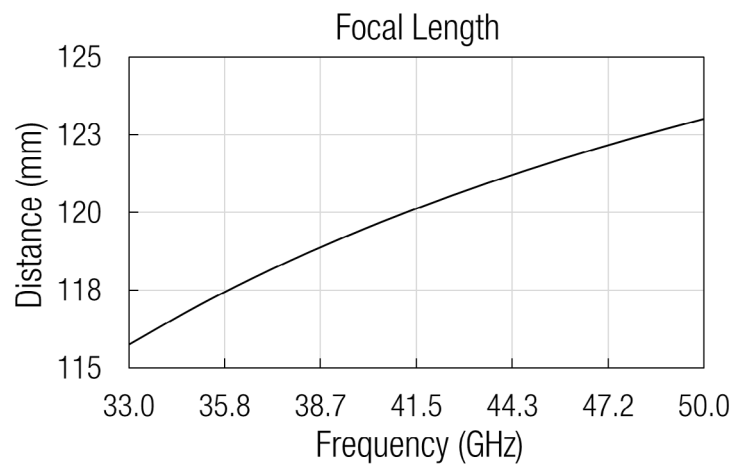
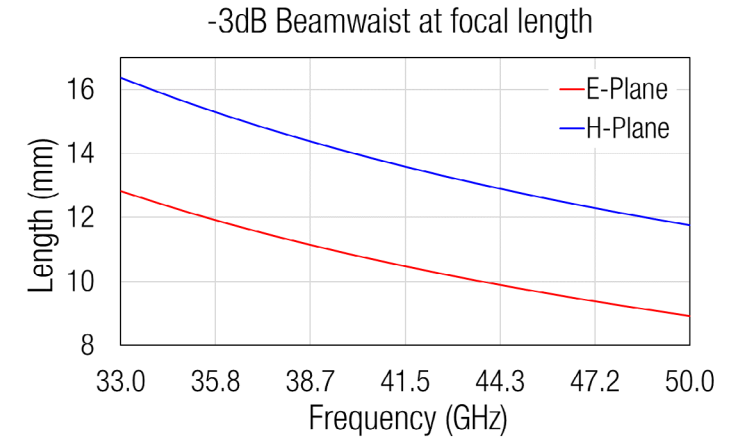
Focusing Lens Horn Antennas are especially useful when focusing beam is required with short focal distances. Therefore, these antennas are widely used in testing and material characterization.

Anteral also offers their **Lens Horn Antennas** with plano-convex lenses to exhibit high gain (>30 dB) in a very compact size which makes them optimal for radar applications, communication links or meteorological systems among others.



### ELECTRICAL SPECIFICATIONS

Parameter	Minimum	Typical	Maximum
Frequency	33 GHz	41.5 GHz	50 GHz
Focal Length	115.8 mm	120.1 mm	123.0 mm
3 dB Beamwaist, E-plane		10.5 mm	
3 dB Beamwaist, H-plane		13.6 mm	
S11		-20 dB	-15 dB

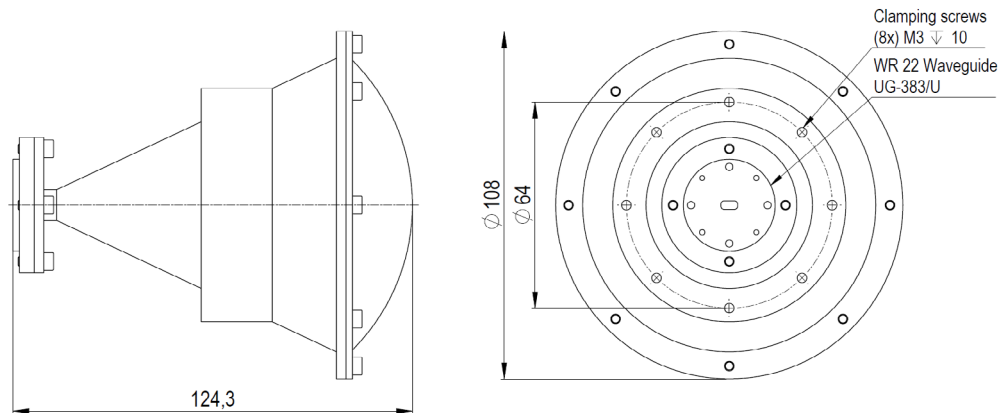


### MECHANICAL SPECIFICATIONS

Parameter	Description
Antenna Port*	WR-22 (5.690 mm x 2.845 mm)
Flange	UG-383/U
Total length	124.3 mm
Total diameter	108 mm
Total weight	520 g
Horn Material	Aluminum
Lens Material	PTFE
External Color	Ruby Red

\*The antenna includes a rectangular to circular waveguide transition (WR-22 to WC-380)

### MECHANICAL OUTLINE



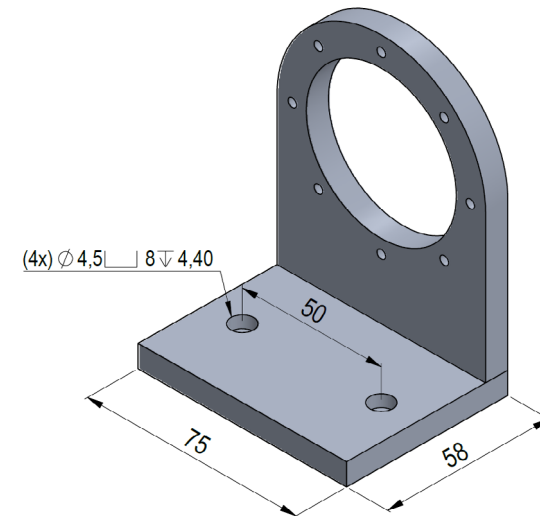
### CLAMPING STRUCTURE

Anteral's Lens Horn Antennas are drilled with some threads for clamping purpose. See the mechanical outline.

Anteral also offers clamping structure for the LHA-F-WR22 with the following specifications.

Model	Material	Weight (g)
LHA-F-WR22-CLAMP	Aluminum	190

\*The base is drilled with 4 through holes but any custom holes can be added.



### Additional notes

Focal length and beamwaist data are measured from a sample. Actual values could vary slightly. Return loss data is measured from a sample. Actual values could vary slightly. The return loss performance of all items is checked before delivery.