

K-Band Focusing Lens Horn Antenna

18 to 26.5 GHz, WR42

DESCRIPTION

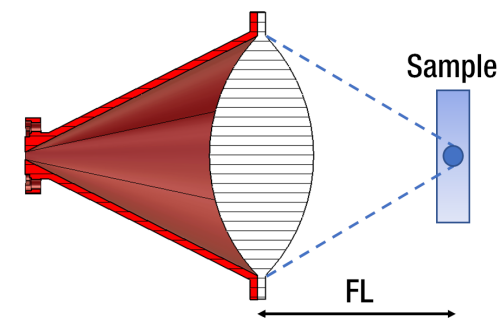
Anteral's Focusing Lens Horn Antennas are conical horn antennas with a double-convex Teflon (PTFE) lens added in the aperture, in order to apply phase correction and achieve superior focusing performance with minimum size.

The FLHA-F-WR42 model operates at the K-band between 18 and 26.5 GHz with a focal length of 148 mm and a diameter beam focus of 18 mm.

APPLICATIONS

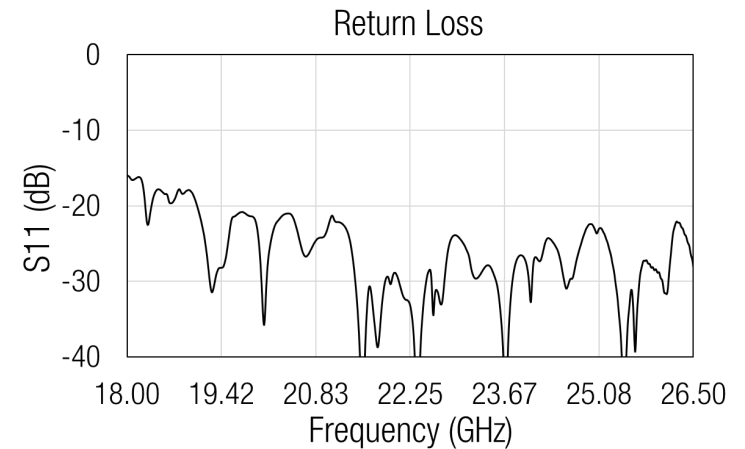
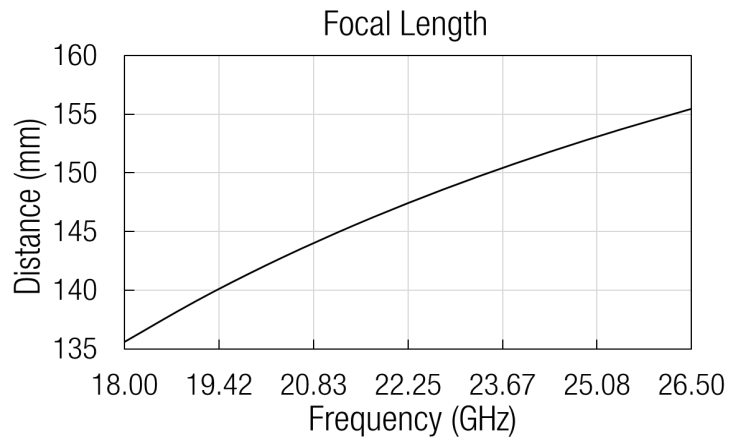
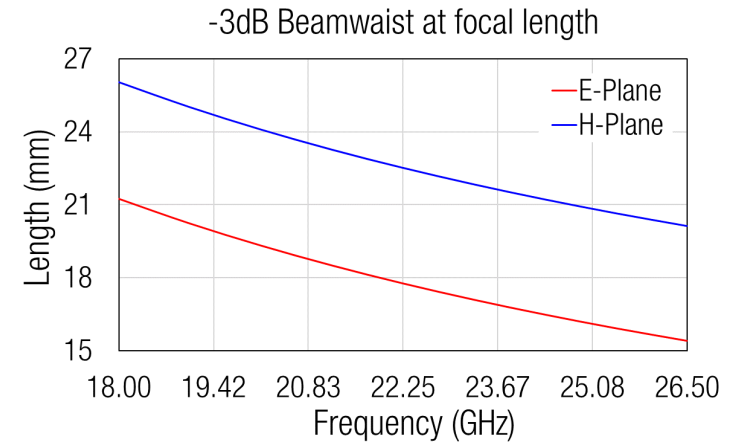
Focusing Lens Horn Antennas are especially useful when focusing beam is required with short focal distances. Therefore, these antennas are widely used in testing and material characterization.

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	18 GHz	22.25 GHz	26.5 GHz
Focal Length	135.6 mm	147.5 mm	155.5 mm
3 dB Beamwaist, E-plane		17.8 mm	
3 dB Beamwaist, H-plane		22.5 mm	
S11		-20 dB	-15 dB

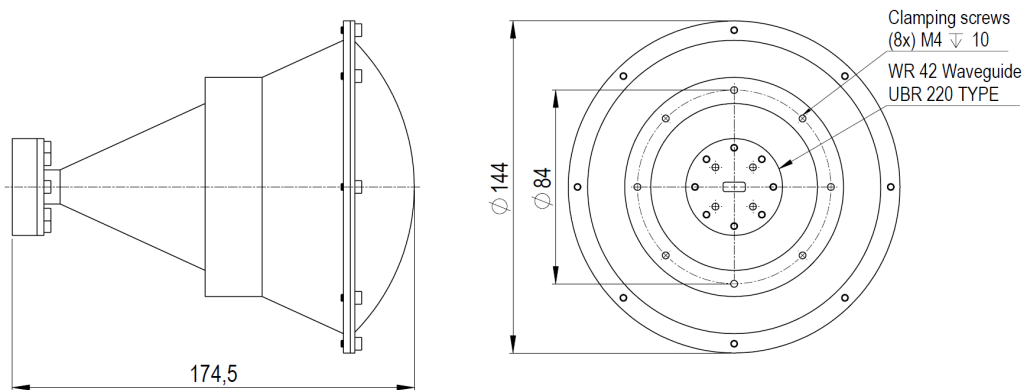


MECHANICAL SPECIFICATIONS

Parameter	Description
Antenna Port*	WR-42 (10.668 mm x 4.318 mm)
Flange	UBR 220
Total length	174.5 mm
Total diameter	144 mm
Total weight	1160 g
Horn Material	Aluminum
Lens Material	PTFE
External Color	Ruby Red

*The antenna includes a rectangular to circular waveguide transition (WR-42 to WC-168)

MECHANICAL OUTLINE



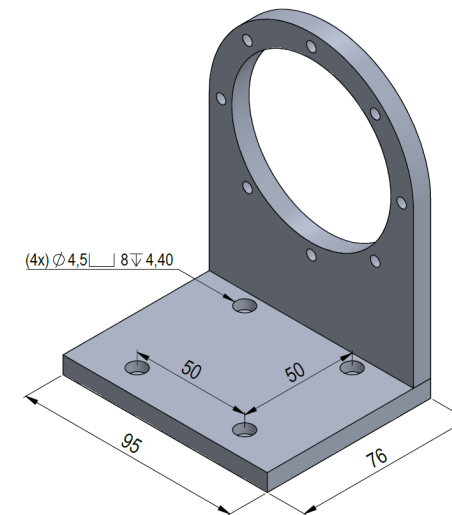
CLAMPING STRUCTURE

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-WR42 with the following specifications.

Model	Material	Weight (g)
LHA-F-WR42-CLAMP	Aluminum	300

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



Additional notes

Focal length, beamwaist and return loss data are measured from a sample. Actual values could vary slightly.

The return loss performance of all items is checked before delivery.