

K-Band Lens Horn Antenna

15 to 22 GHz, WR51, 30 dBi Gain

DESCRIPTION

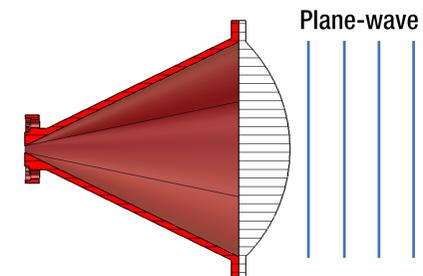
Anteral's Lens Horn Antennas are conical horn antennas with a **plano-convex** high-density polyethylene (HDPE) lens added in the aperture, in order to apply phase correction and achieve high gain, low VSWR and low side-lobes, with minimum size.

The LHA-30-WR51 model operates at the K-band between 15 and 22 GHz with 30 dBi nominal mid-band gain and a typical VSWR of 1.25.

APPLICATIONS

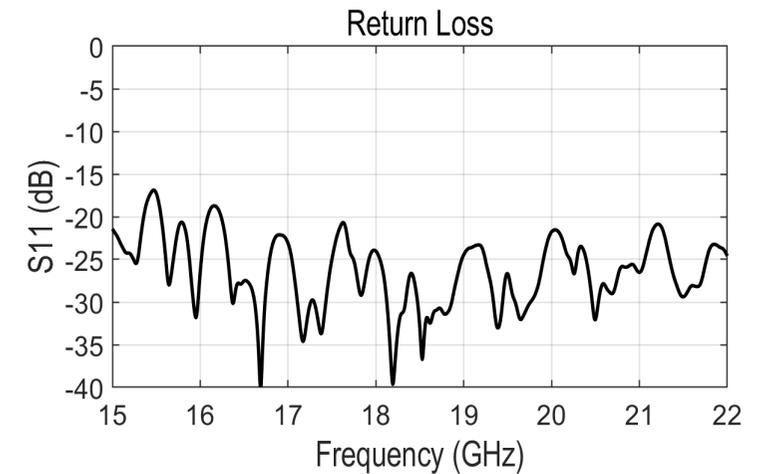
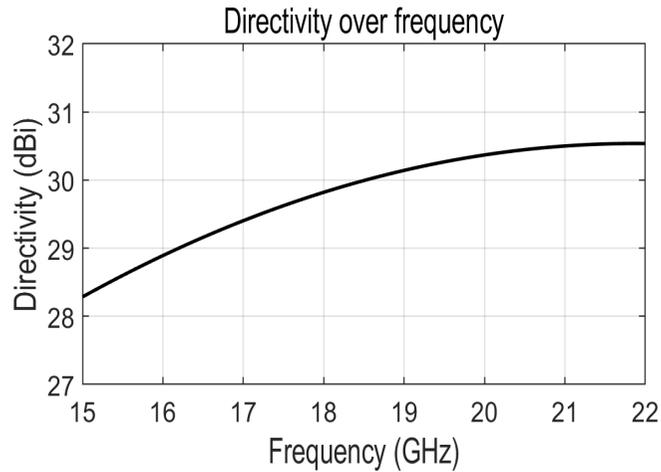
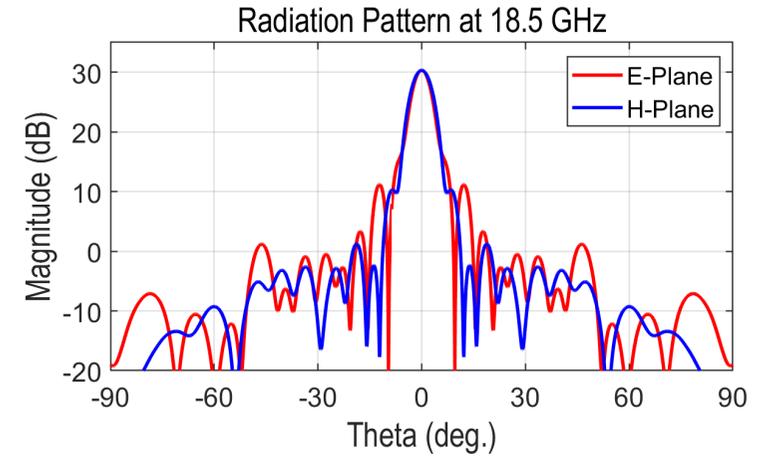
Lens Horn Antennas are especially useful when high gain is required with the minimum size. Therefore, these antennas are widely used in radar applications, communication links and meteorological systems among others.

Anteral also offers their **Focusing Lens Horn Antennas** with double-convex lenses to exhibit very well define focusing beams with short focal distances which makes them optimal for testing and material characterization.



ELECTRICAL SPECIFICATIONS

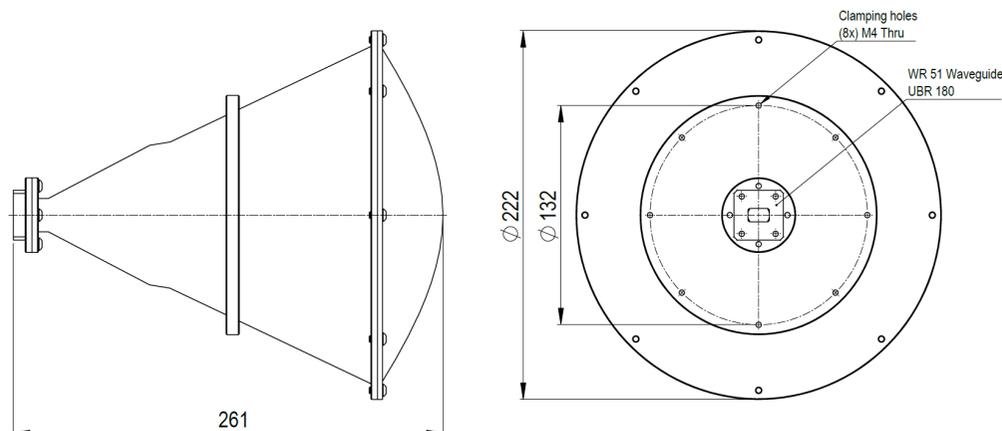
Parameter	Typical value
Frequency	15 -22 GHz
Gain	30 dBi
3 dB Beamwidth, E-plane	5 deg
3 dB Beamwidth, H-plane	5.75 deg
Sidelobe, E-plane	-18 dB
Sidelobe, H-plane	-18 dB
S11	-18 dB



MECHANICAL SPECIFICATIONS

Parameter	Description
Antenna Port*	WR-51 (12.954 mm x 6.477 mm)
Flange	UBR 180
Total length	261 mm
Total diameter	222 mm
Total weight	1.6 Kg
Horn Material	Aluminum
Lens Material	HDPE
External Color	Ruby Red

MECHANICAL OUTLINE

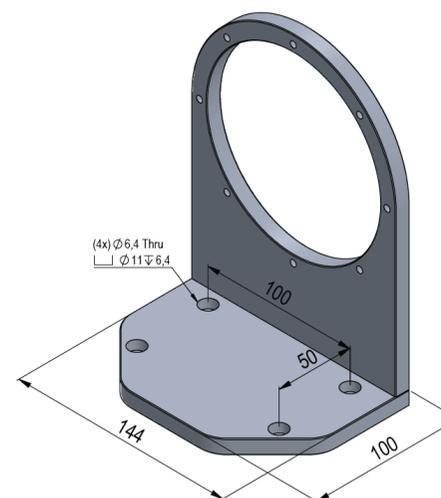


CLAMPING STRUCTURE

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-30-WR51 with the following specifications.

Model	Material	Weight (g)
LHA-30-WR51-CLAMP	Aluminum	670

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



Additional notes

Gain, return loss and radiation pattern data are simulated. Actual values have been checked experimentally but they could vary slightly. The return loss performance of all items is checked before delivery. Last version: 14/03/2023

