

Dual Circular Polarized Lens Horn Antenna

26.5 - 40 GHz, WR28, 30 dB Directivity

DESCRIPTION

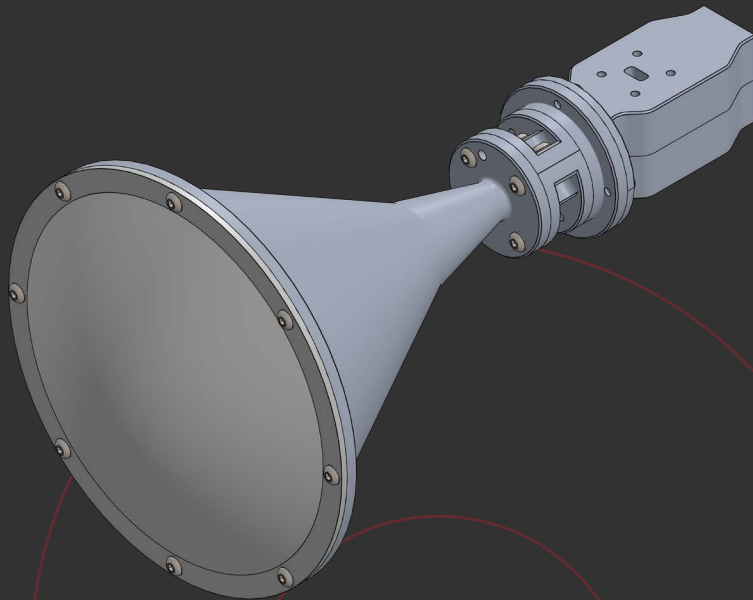
Anteral's Dual Circular Polarized Lens Horn Antennas (DCPLHA) are an integrated system composed of an orthomode transducer (OMT) that provides high isolation and cross-polarization (XP) cancellation, a high performance polarizer (POL) and a conical lens horn antenna. The antenna has a plano-convex Teflon (PTFE) lens added in the aperture, in order to apply phase correction and achieve high gain, low VSWR and low side-lobes, with minimum size.

They are designed to cover the frequency range of 8 to 110 GHz in 12 bands with 30 dBi nominal mid-band gain and a typical VSWR of 1.25. The OMT and POL combination supports both RHCP and LHCP signals with less than 1 dB axial ratio.

Besides, custom bands and gain values can be requested. Anteral offers LHAs with linear or circular polarization.

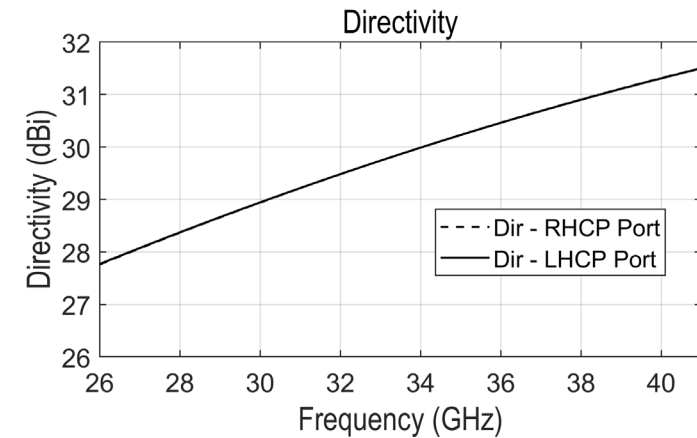
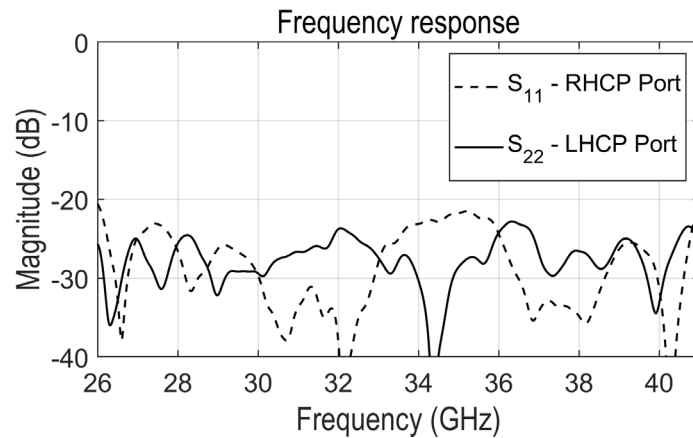
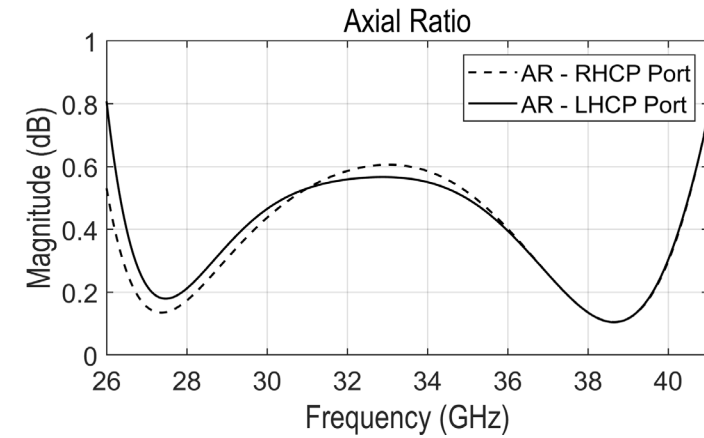
APPLICATIONS

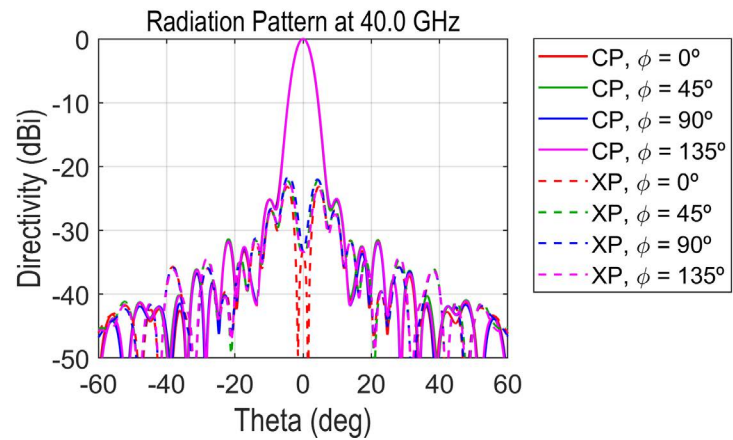
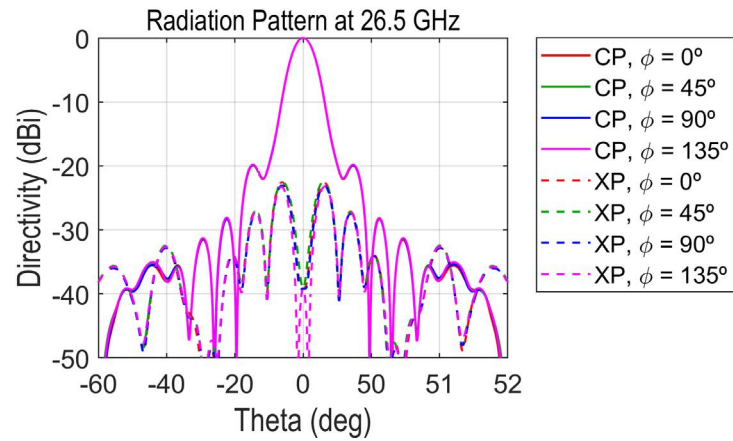
Dual Circular Polarized Lens Horn Antennas are especially useful when high gain is required with minimum size. Therefore, these antennas are widely used in radar applications, communication links and meteorological systems, among others. New cutting-edge space applications include LHA's for MiniSat, MicroSat, NanoSat and CubeSat communications.



ELECTRICAL SPECIFICATIONS

Parameter	Minimum	Typical	Maximum
Frequency band	26.5 GHz		40 GHz
Isolation (RHCP to LHCP Port)		18 dB	
Insertion Loss (A to RHCP Port)		0.5 dB	
Insertion Loss (A to LHCP Port)		0.5 dB	
Axial Ratio (A to RHCP)		1	
Axial Ratio (A to LHCP)		1	
Cross-Polarization (A to RHCP Port)		20 dB	
Cross-Polarization (A to LHCP Port)		20 dB	
Return Loss (RHCP Port)		18 dB	
Return Loss (LHCP Port)		18 dB	
Half Power Beam Width (RHCP Port)		5.5 °	
Half Power Beam Width (LHCP Port)		5.5 °	
Directivity		30 dB	





MECHANICAL SPECIFICATIONS

Parameter	Description
RHCP Port	WR-28 (7.112 mm x 3.556 mm)
RHCP Flange	UG-599/U
LHCP Port	WR-28 (7.112 mm x 3.556 mm)
LHCP Flange	UG-599/U
Size	233 x 126 x 126 mm
Weight	630 g
Material	Aluminum & PTFE (lens)

Additional notes

All values are typical and simulated. Actual values could vary slightly. The return loss and the isolation of all items are checked before delivery to fulfill specifications.

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MECHANICAL OUTLINE

