Anteral

DLPLHA-30-WR10

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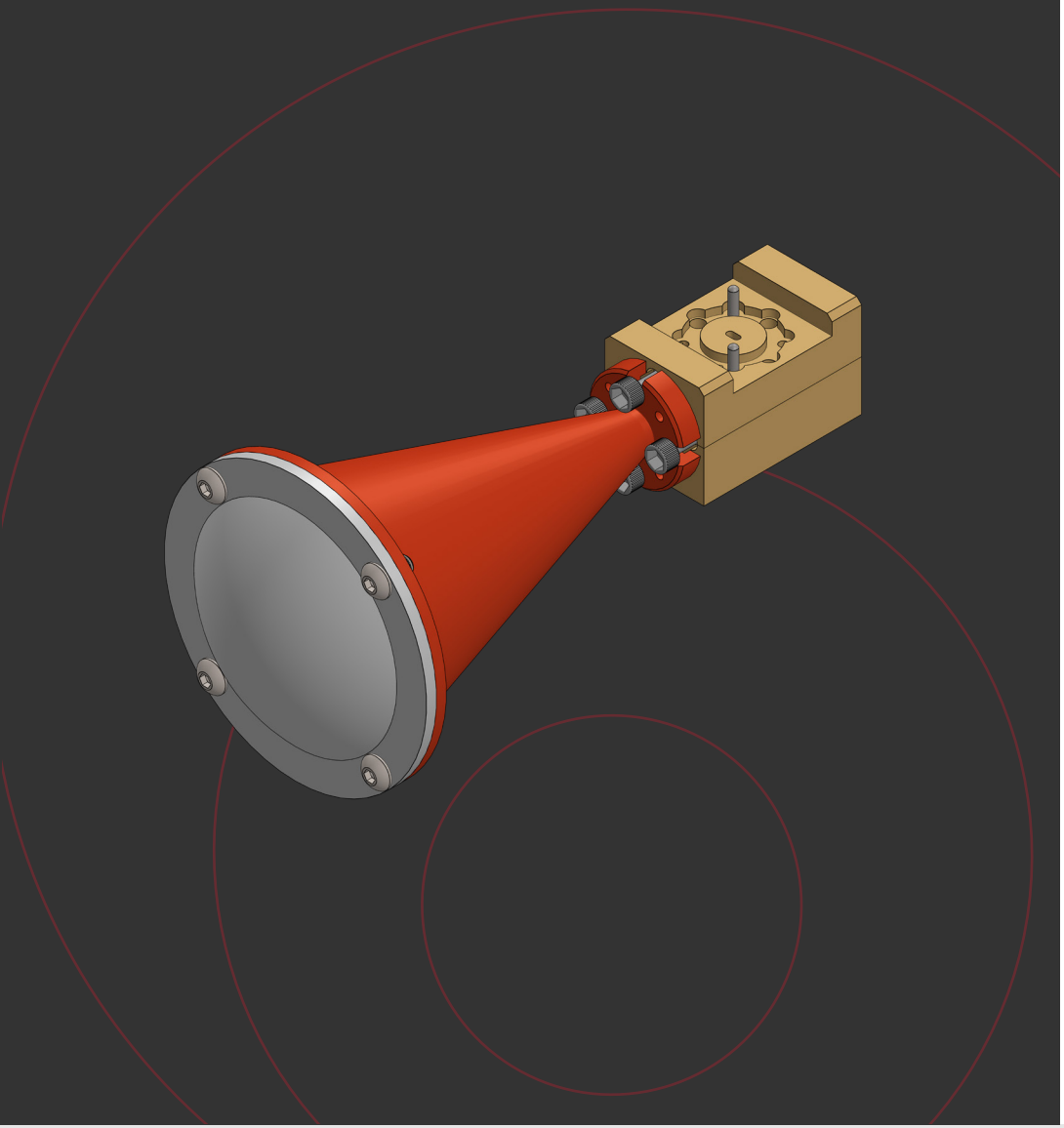

Dual Linear Polarized Lens Horn Antenna

75 - 110 GHz, WR10, 30 dB Directivity

DESCRIPTION

Anteral's Dual Polarized Lens Horn Antennas (DPLHA) are an integrated system composed of an orthomode transducer (OMT) that provides high isolation and cross-polarization (XP) cancellation and a conical horn antenna with 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 supports either horizontal or vertical polarized signals with more than 35 dB cross-polarization rejections and 35 dB isolation. The OMT is configured with two waveguide ports for the horizontal and vertical polarization. Besides, custom bands and gain values can be requested. Anteral offers LHAs with linear or circular polarization.

APPLICATIONS

Dual Polarized 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. New cutting-edge space applications include LHA's for MiniSat, MicroSat, NanoSat and CubeSat communications.

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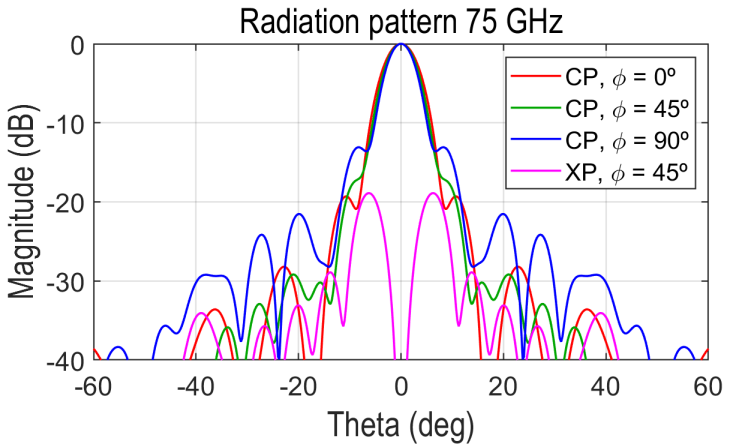
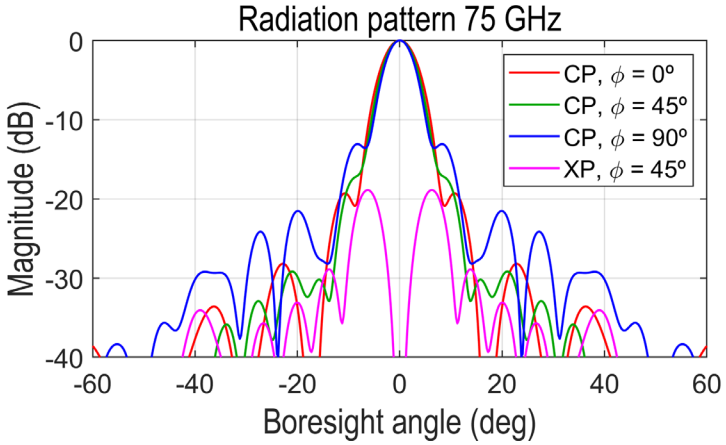
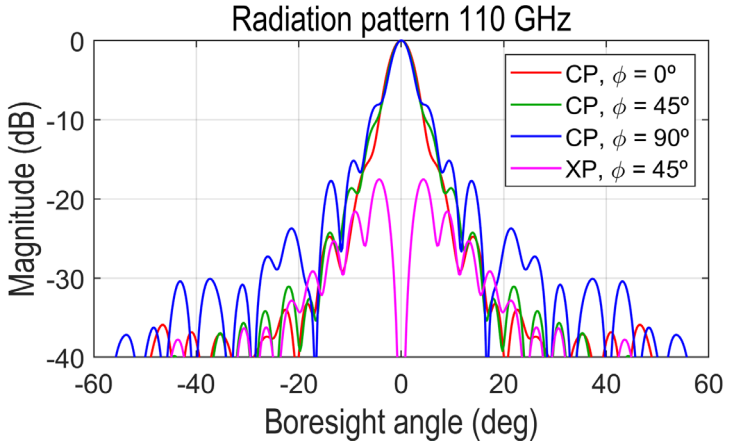
ELECTRICAL SPECIFICATIONS

Parameter	Maximum	Typical	Maximum
Frequency band	75 GHz		110 GHz
Isolation (H to V Port)		40 dB	
Insertion Loss (A to H Port)		0.5 dB	
Insertion Loss (A to V Port)		0.5 dB	
Cross-Polarization (A to H Port)		35 dB	
Cross-Polarization (A to V Port)		35 dB	
Return Loss (H Port)		18 dB	
Return Loss (V Port)		18 dB	
Horizontal Half Power Beam Width		5 °	
Vertical Half Power Beam Width		5 °	
Directivity		30 dB	







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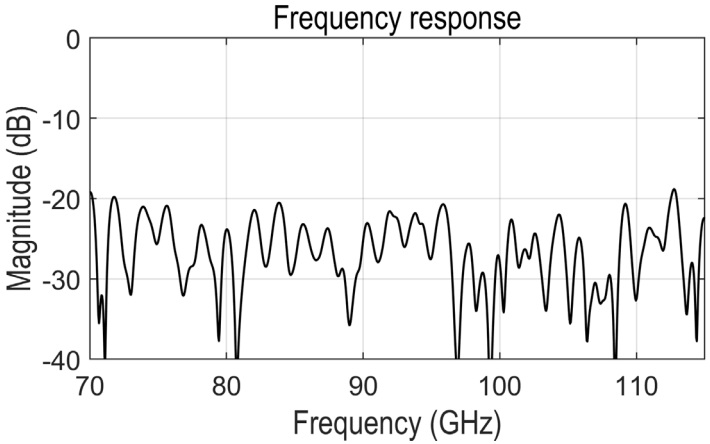

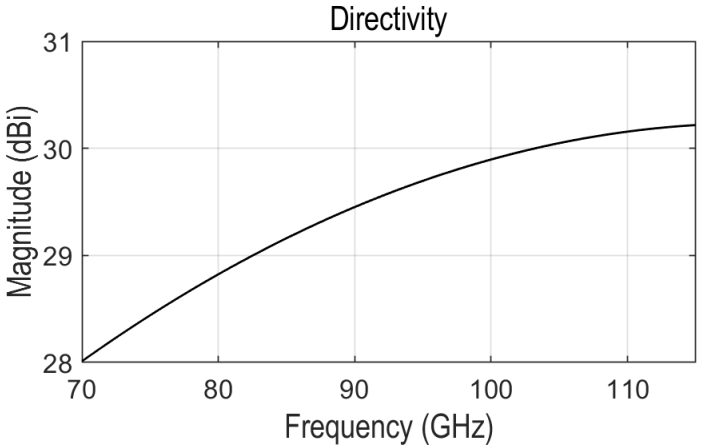

MECHANICAL SPECIFICATIONS

Parameter	Description
Horizontal Port	WR-10 (2.54 mm x 1.27 mm)
Horizontal Flange	UG-387/U
Vertical Port	WR-10 (2.54 mm x 1.27 mm)
Vertical Flange	UG-387/U
Size	53 x 53 x 112.7 mm
Weight	87 g
Material	Aluminum
Lens material	PTFE or HDPE depending on the model.

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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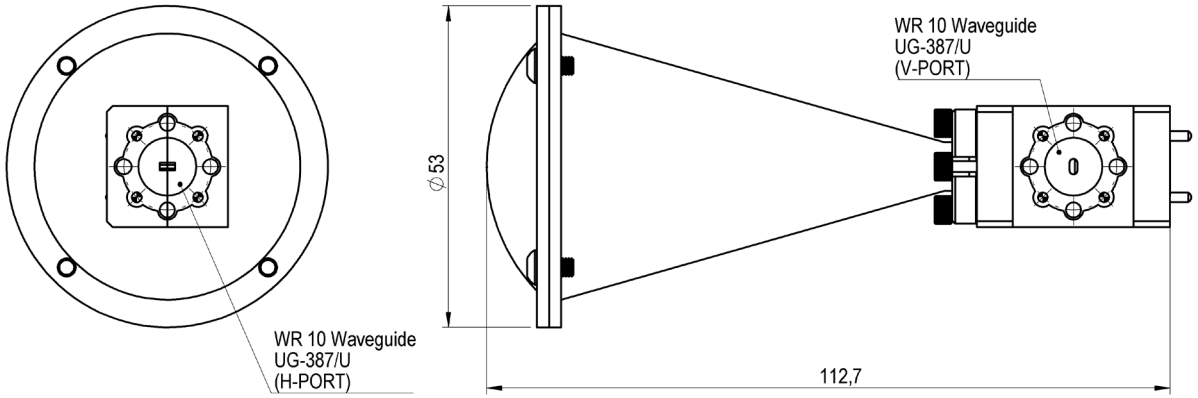
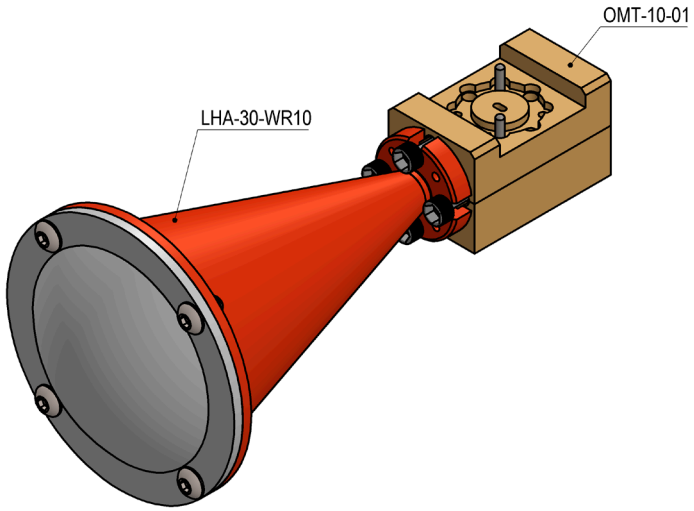
MECHANICAL OUTLINE





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