

# Dual Linear Polarized Scalar Feed Horn Antenna

7.05 - 10 GHz, WR112, 14 dB Directivity

## DESCRIPTION

Anteral's Dual Linear Polarized Scalar Feed Horn Antenna (DLPSFHA) is an integrated system composed of an **orthomode transducer** (OMT) that provides high isolation and cross-polarization (XP) cancellation and a broad band **scalar feed horn antenna** (SFHA) that provides high gain, low VSWR and low side-lobes, with minimum size. Client can choose the OMT and SFHA and Anteral will design the DLPSFHA that suits their needs.

They are designed to cover the frequency range of 7 to 110 GHz with different nominal mid-band gain and a low VSWR. The OMT supports either horizontal or vertical polarized signals with more than 35 dB cross-polarization rejections and 35 dB isolation. Besides, custom bands, gain values and flanges can be requested.

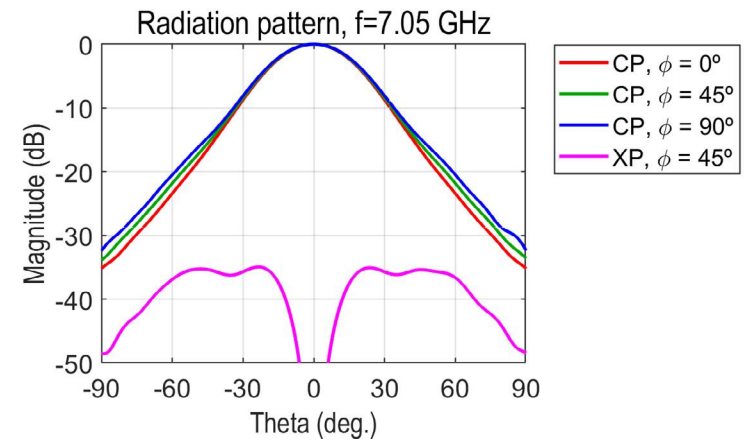
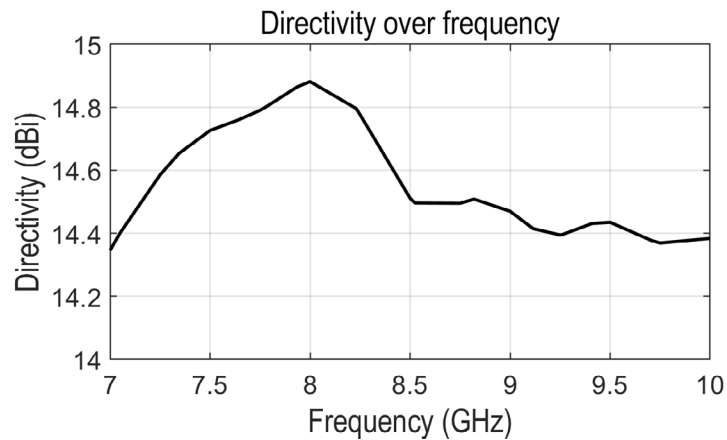
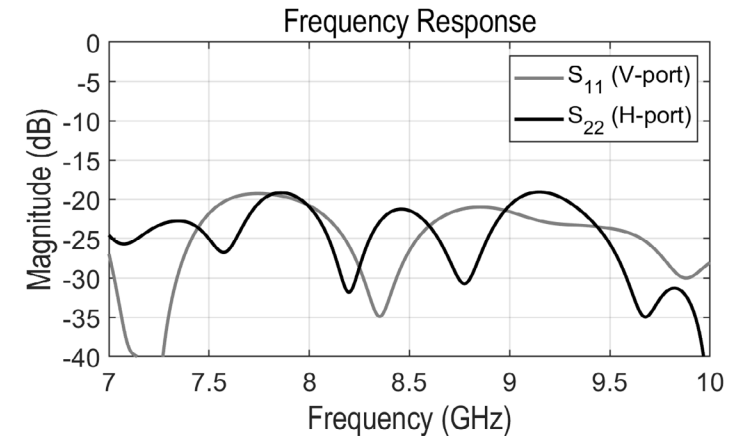
Dual Polarized Scalar Feed Horn Antennas are especially useful when high isolation and high cross polarization is required. They are widely used in 5G systems, radar applications, communication, and antenna ranges, among others.

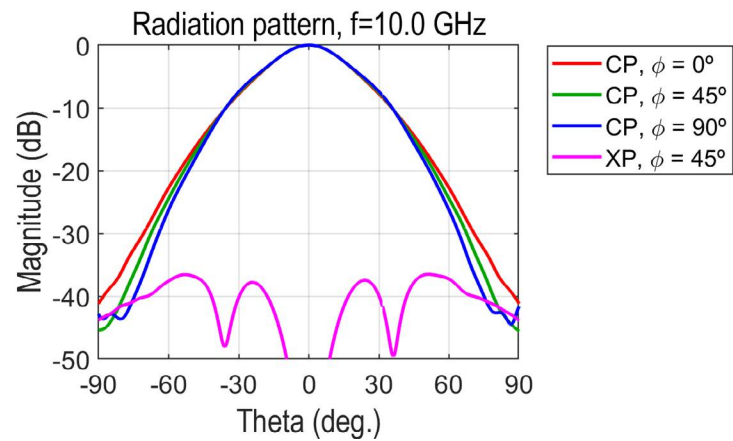
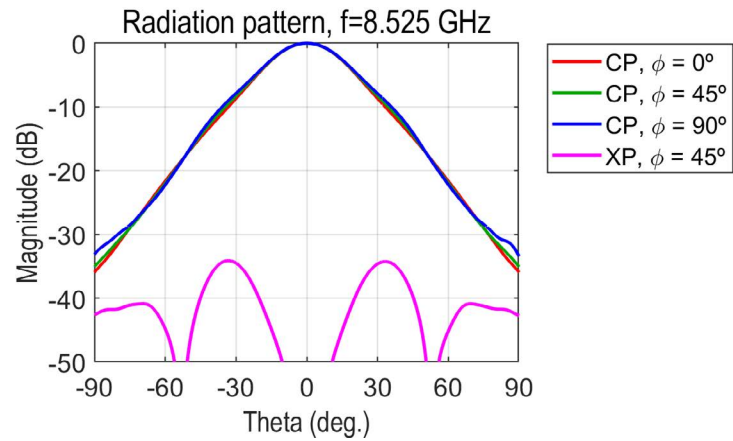
## APPLICATIONS

This type of horns is especially suitable for laboratory test measurements, electromagnetic measurements and gain calibration. Moreover, custom bands and gain values can be requested.

### ELECTRICAL SPECIFICATIONS

Parameter	Typical value
Frequency band	7.05 - 10 GHz
Isolation	45 dB
Insertion Loss (A to V Port)	0.2 dB
Insertion Loss (A to H Port)	0.2 dB
Cross-Polarization (A to V Port)	50 dB
Cross-Polarization (A to H Port)	50 dB
Return Loss (H Port)	18 dB
Return Loss (V Port)	18 dB
Half Power Beam Width (H Port)	32 °
Half Power Beam Width (V Port)	32 °
Directivity	14.5 dBi





## MECHANICAL SPECIFICATIONS

Parameter	Description
Horizontal Port	WR-112 (28.4988 mm x 12.6238 mm)
Horizontal Flange	UBR 84
Vertical Port	WR-112 (28.4988 mm x 12.6238 mm)
Vertical Flange	UBR 84
Size	123 x 212 mm
Weight	1 Kg
Material	Aluminum

### Additional notes

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

Last version: 13/05/2022.



### MECHANICAL OUTLINE

