

Dual Circular Polarized Scalar Feed Horn Antenna

From 7 to 110 GHz, 12 to 20 dBi Gain

DESCRIPTION

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

They are designed with different nominal mid-band gain and a low VSWR. The polarizer (POL) supports either **LHCP and RHCP polarized signals with high cross-polarization rejections and isolation**. The polarizer is configured with two WR waveguides for the LHCP and RHCP waveguide ports. Custom bands, gain values and flanges can be requested.

APPLICATIONS

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.

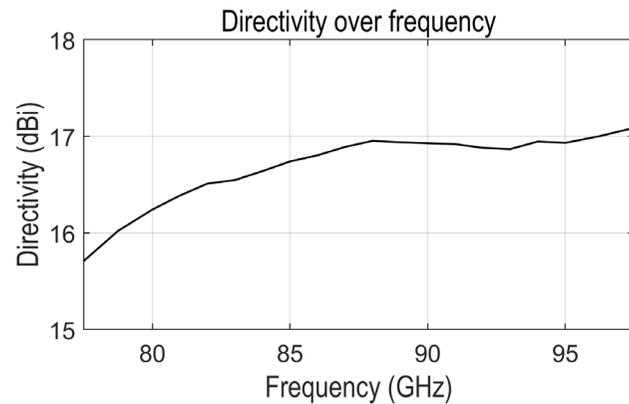
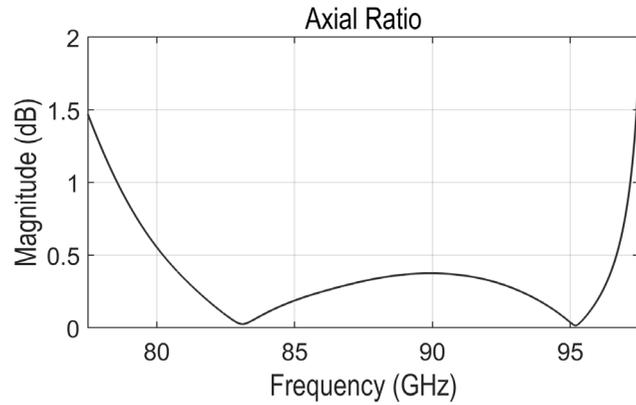


ELECTRICAL SPECIFICATIONS

Model	Frequency (GHz)	S11 (dB)	Directivity (dBi)	AR (dB) at boresight	XP (dB)
DCPSFHA-SAT-X-01	7.25 - 8.4	-23	15	0.1	25
DCPSFHA-15-WR112	7.05 - 10	-23	15	0.4	25
DCPSFHA-15-WR90	8.2 - 12.4	-23	15	0.4	25
DCPSFHA-15-WR75	10 - 15	-23	15	0.5	25
DCPSFHA-15-WR62	12.4 - 18	-23	15	0.5	25
DCPSFHA-15-WR51	15 - 22	-23	15	0.5	25
DCPSFHA-SAT-KKA-01	17.3 - 31	-20	15	1	25
DCPSFHA-15-WR42	18 - 26.5	-23	15	0.6	25
DCPSFHA-15-WR34	22 - 33	-20	15	0.7	25
DCPSFHA-15-WR28	26.5 - 40	-20	15	0.7	25
DCPSFHA-15-WR22	33 - 50	-20	15	0.7	25
DCPSFHA-SAT-QV-01	37.5 - 42.5 47.2 - 52	-20	15	0.4	25
DCPSFHA-SAT-5G-E-01	71 - 76 81-86	-18	15	0.8	25
DCPSFHA-17-WR10	80 - 95	-18	17	1	25

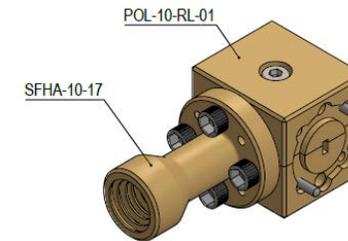
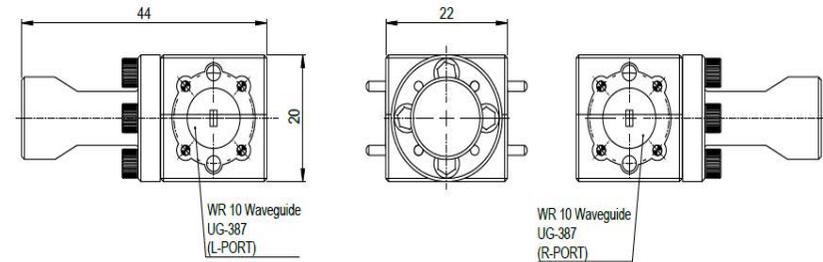
This table contains only a few DCPSFHA examples. All data are typical values. Contact us for custom values and more information.

TYPICAL PERFORMANCE



MECHANICAL OUTLINE

Flange	Standard UG-xxx/U
Operating temperature	-40°C to +85°C
External color	Aluminum. Gold plated in some cases.
Material	Aluminum.



Additional notes

All data are simulated. Actual values could vary slightly.
 Typical performance data and mechanical outline correspond to DCPSFHA-17-WR10 model.
 The return loss performance of all items is checked before delivery.
 Last version: 29/04/2022

