

# Dual Circular Polarized Scalar Feed Horn Antenna

17.7-31 GHz, WR42/WR28, 14.5 dB Directivity, 1 dB Axial Ratio

## DESCRIPTION

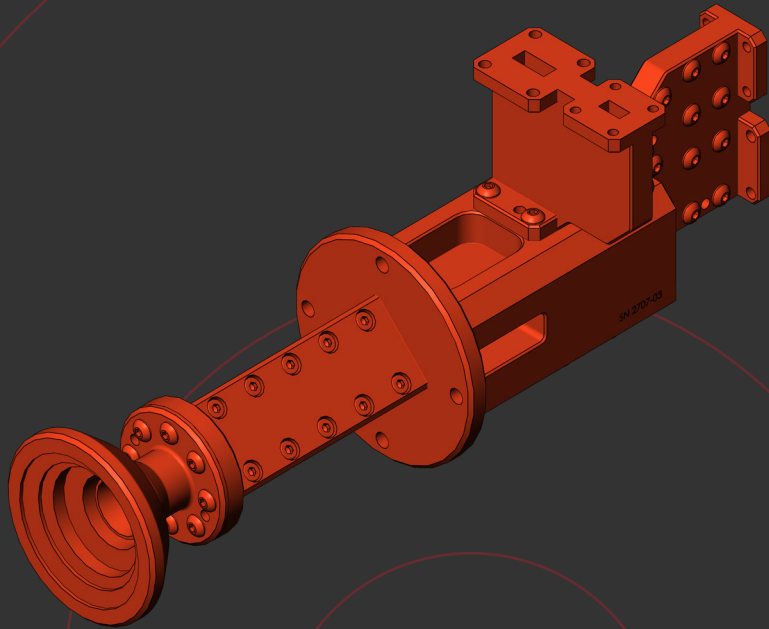
Anteral's DCPSFHA-15-SAT-KKa is a four-port dual-circular polarization antenna which operates from 17.7 to 25 GHz and from 25.5 to 31 GHz.

This system benefits from a high performance polarizer which achieves RHCP and LHCP with less than 1 dB typical axial ratio. It is fed by a high-performance orthomode transducer whose inputs are matched to a diplexer, which achieves more than 80-dB isolation between the transmission and reception channels.

Therefore, Anteral's DCPSFHA-15-SAT-KKa benefits from two RHCP and LHCP transmission ports and two RHCP and LHCP reception ports, providing a full reconfigurable subsystem.

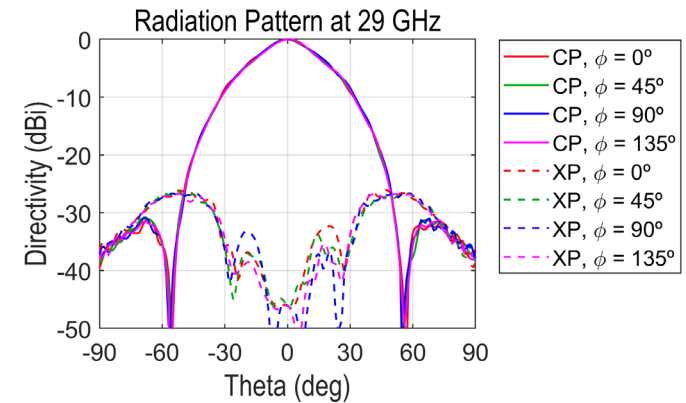
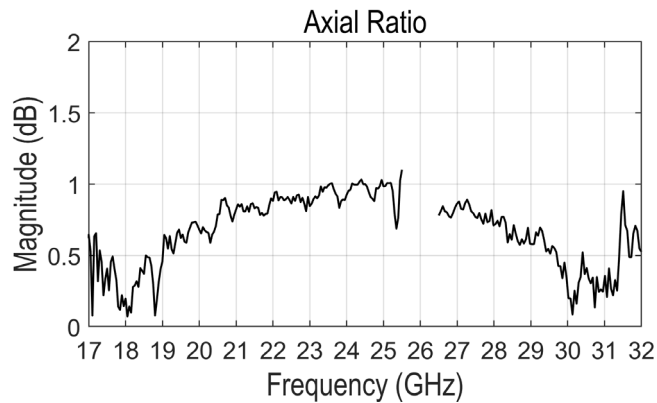
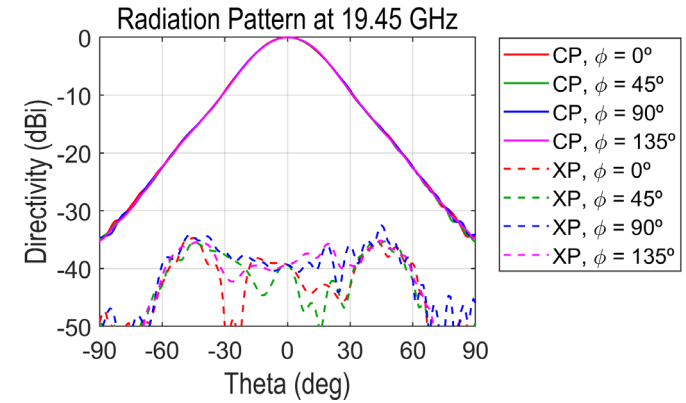
## APPLICATIONS

DCPSFHA-15-SAT-KKa is especially useful for antenna feeding for SATCOM terminals, new-space applications, 5G and CATR systems.



### ELECTRICAL SPECIFICATIONS

Parameter	Typical values
Frequency - Pass band TX	17.7 - 25 GHz
Frequency - Pass band RX	25.5 - 31 GHz
Return Loss	18 dB
Insertion Loss	0.45 dB
Isolation TX/RX & RX/TX	80 dB
Axial Ratio	1 dB
Directivity	14.5 dBi
XP ( $30^\circ < \text{Theta (deg)} < 30^\circ$ )	22 dB



## MECHANICAL SPECIFICATIONS

Parameter	Description
RHCP TX Port	WR42 (10.668 x 4.318 mm)
RHCP RX Port	WR28 (7.112 x 3.556 mm)
LHCP TX Port	WR42 (10.668 x 4.318 mm)
LHCP RX Port	WR28 (7.112 x 3.556 mm)
Size	87 x 66 x 222 mm
Weight	430 g
Material	Aluminum

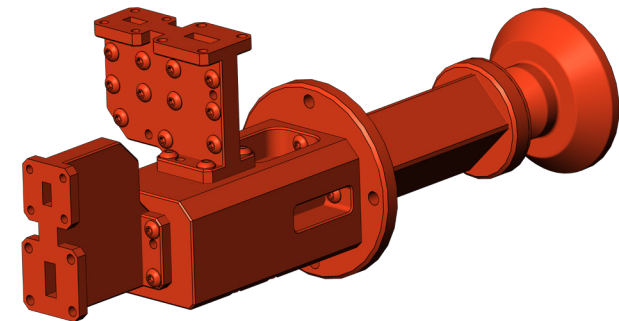
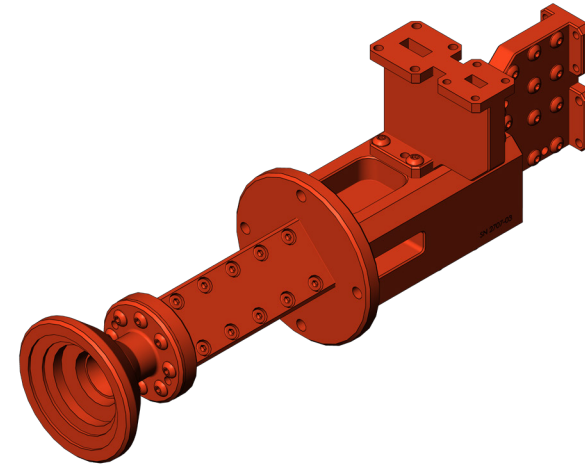
### Additional notes

All values are typical. The axial ratio data are measured from a sample. The rest of the values are simulated. Actual values could vary slightly. The return loss and axial ratio of all items are checked before delivery to fulfill specifications.



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## MECHANICAL OUTLINE



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