



Main Features

- Frequency range: 19.2-21.2 GHz & 29-31 GHz.
- Main parameters:
 - Directivity: 21 dB (19.2 GHz)
25 dB (29 GHz)
 - RL 30 dB
 - XP -40 dB.
- Input waveguide: Circular custom Ka-band.
- Dual band corrugated horn with low sidelobe level and very low crosspolar level.
- Can feed a Single Offset Reflector (offset/D = 0.6) with f/D between 1.5 and 1.8.

CH-ARC-K-KA-D21

The CH-ARC-K-KA-D21 is a corrugated feed horn designed to feed a reflector and to provide high performance communications due to its high efficiency and low crosspolar level. Furthermore, it achieves low sidelobes level despite the high efficiency presented.

Typical applications

- Aerospace
- Satcom
- Military
- Commercial

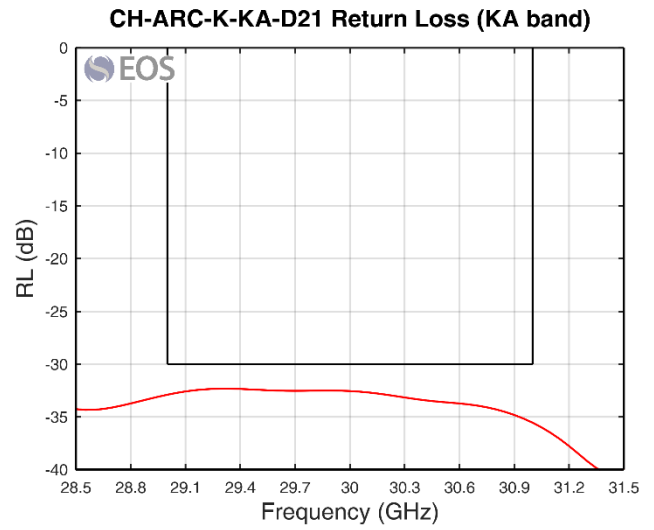
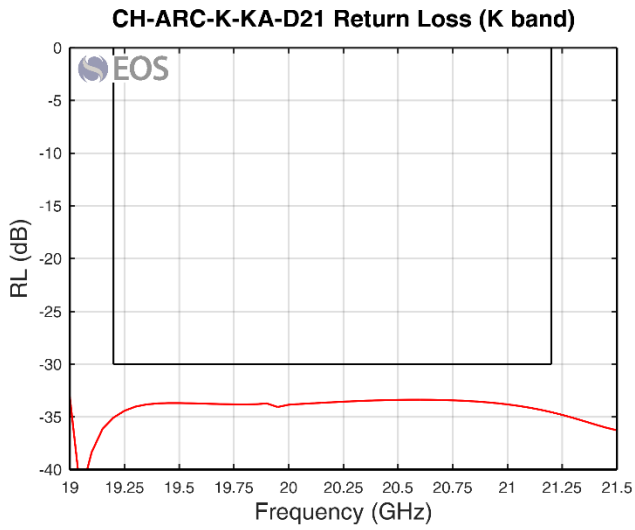
Performance

Parameter	Units	Value
Frequency	GHz	19.2 - 21.2 29 - 31
Return loss	dB	> 30
Directivity	dB	21 @19.2 GHz 25 @ 29 GHz
Crosspolar level	dB	< -40
Sidelobe level	dB	-22 @Ka band
Field of view (FoV)	°	18
Taper	dB	-12 dB at 16.7 deg
Partial power over FoV	%	> 95
Phase center variation over frequency	mm	< 20 @19.2-31 GHz
Ports	-	Input waveguide: Custom Ka band

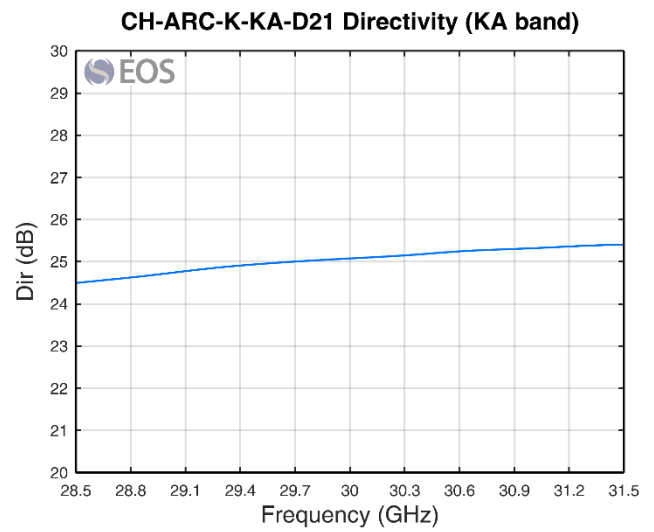
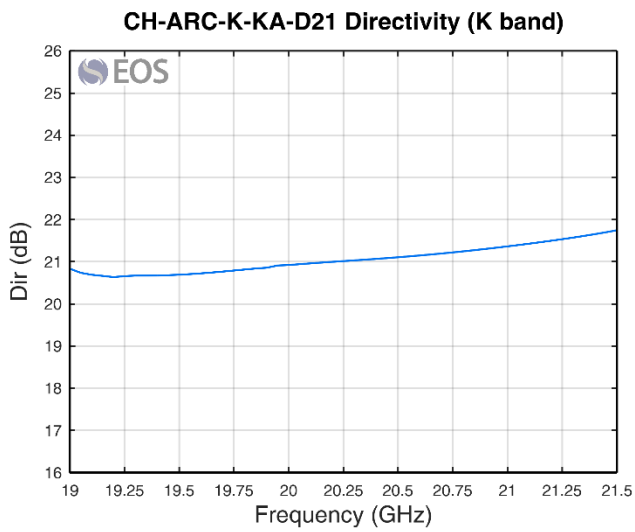
* Specifications for a designed and simulated model

Simulated results

Return loss

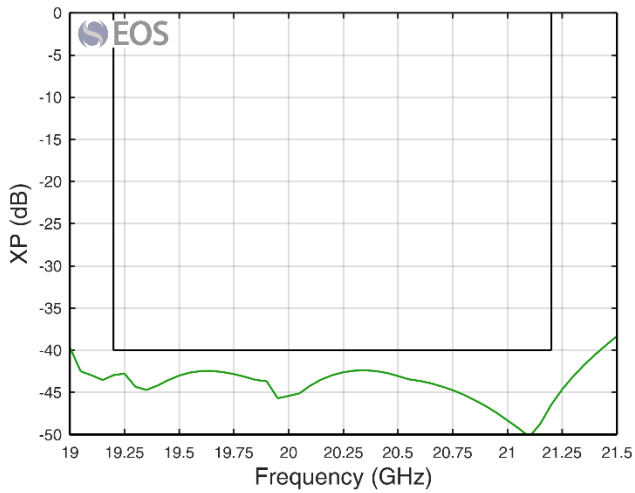


Directivity

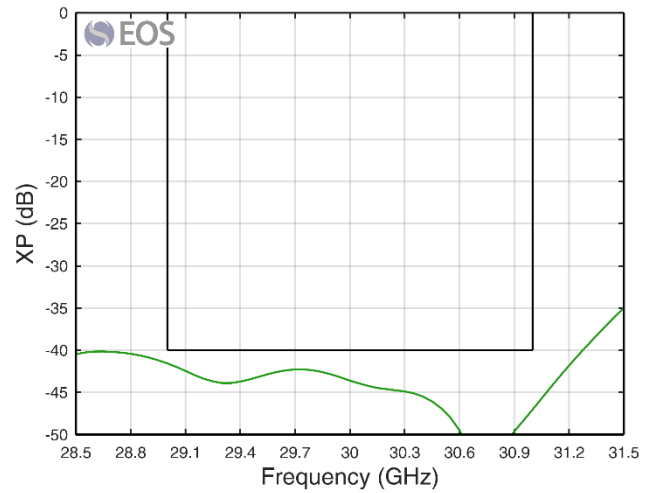


Maximum crosspolar level

CH-ARC-K-KA-D21 Max XP in FoV (K band)

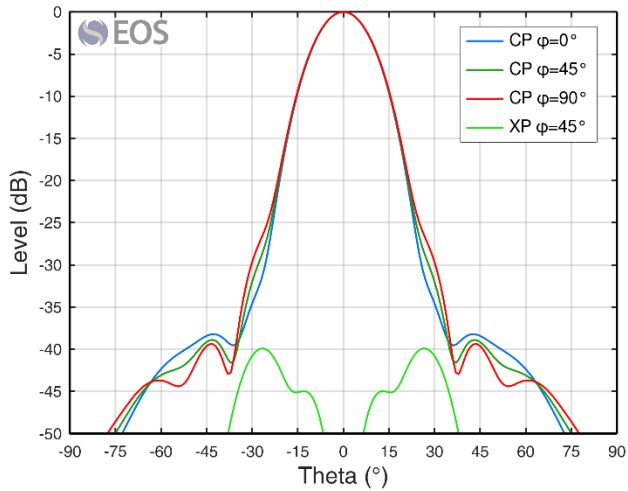


CH-ARC-K-KA-D21 Max XP in FoV (KA band)

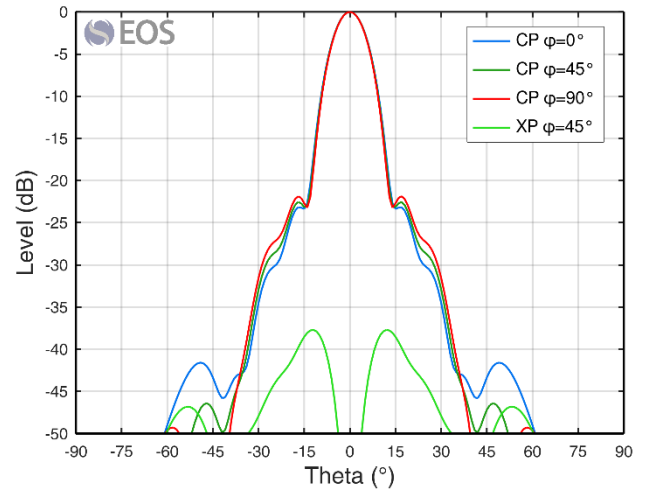


Radiation patterns

CH-ARC-K-KA-D21 Radiation Pattern at 20.20 GHz



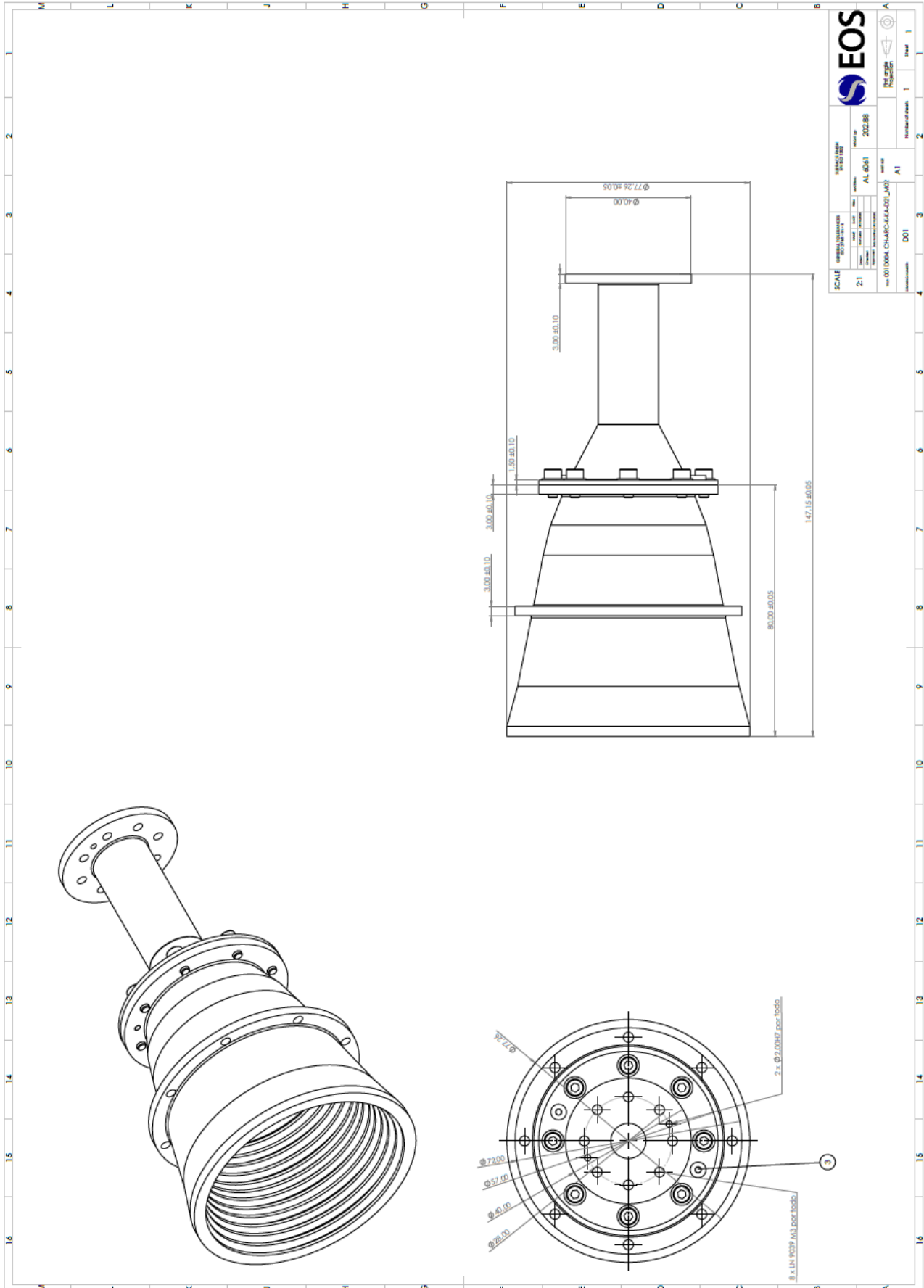
CH-ARC-K-KA-D21 Radiation Pattern at 30.00 GHz



Physical characteristics

Parameter	Units	Value
Dimensions (LxWxH)	mm	147 x 77 x 77
Mass	g	203
Material	-	AL 6061
Surface treatment	-	-

Mechanical design and interfaces





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