

FEED-RAD-C-X-DLP

The FEED-RAD-C-X-DLP is designed to feed a reflector at C and X band mainly for Earth Observation Radiometry applications. It provides very low spill over and therefore offers low sidelobes level. This feed could also be suitable for telecom applications since it can be customized adjusting the frequency bands and parameters to the desired ones.

Performance

Parameter	Units	Value
Frequency	GHz	6.6 – 7.25 10.6 – 10.7
Polarization	-	Dual linear C and X band
Return loss	dB	> 25
Directivity	dB	17.5 @6.6 GHz 20.75 @10.6 GHz
Max Crosspolar level	dB	< -35
Polarization Isolation (H/V)	dB	55
Frequency band isolation	dB	75
Insertion loss	dB	0.3 @ 6.6-7.25 GHz 0.3 @ 10.6-10.7GHz
Sidelobe level	dB	< 30
FoV	°	30
Partial power over FoV	%	> 97 @ 6.6-7.25 GHz > 99 @ 10.6-10.7GHz

Main Features

- Frequency range: 6.6-7.25 GHz & 10.6-10.7 GHz.
- Directivity: 17.5 dB (6.6 GHz)
20.75 dB (10.6 GHz)
- Return loss 25 dB
- Crosspolar values lower than -35 dB.
- Dual linear polarization feed with very low spillover.
- Low phase pattern variation and low phase center variation.
- Can feed a Single Offset Reflector (offset/D = 0.6) with f/D between 0.8 and 1.25.

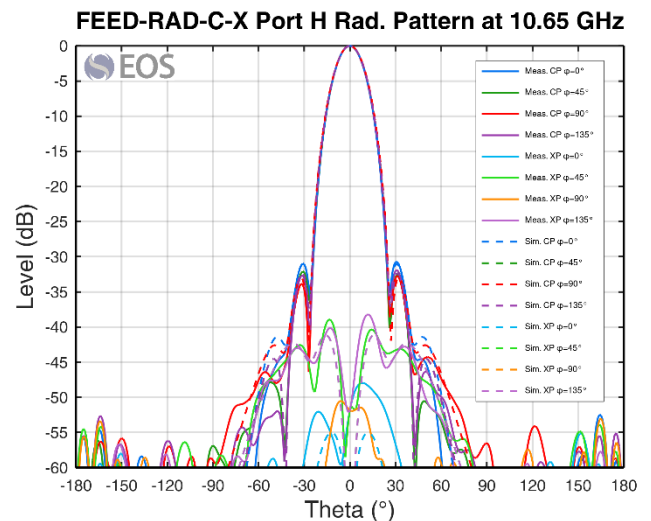
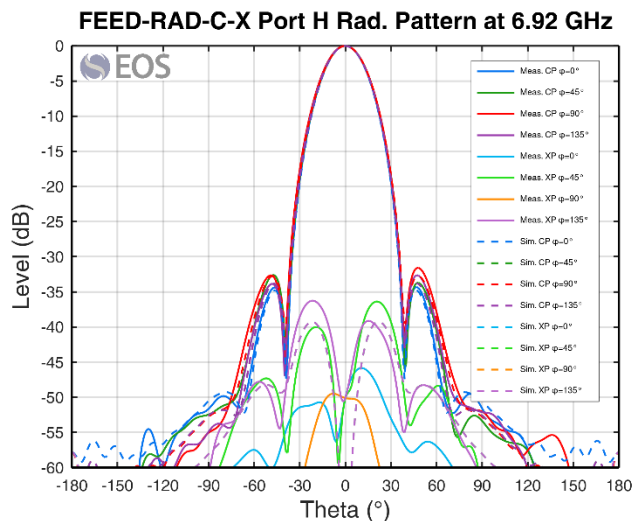
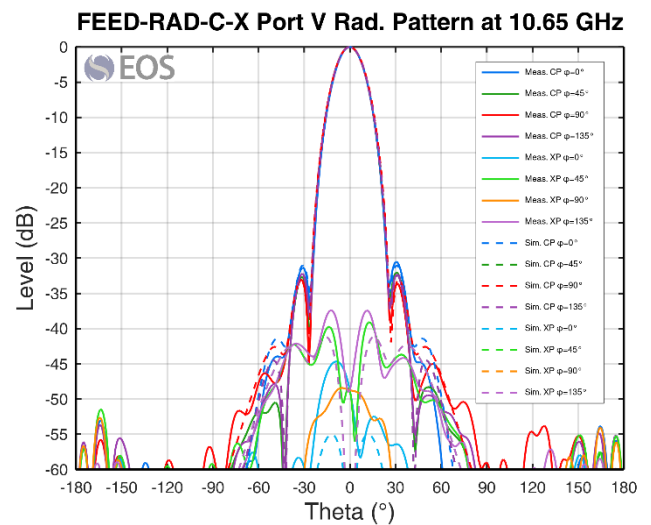
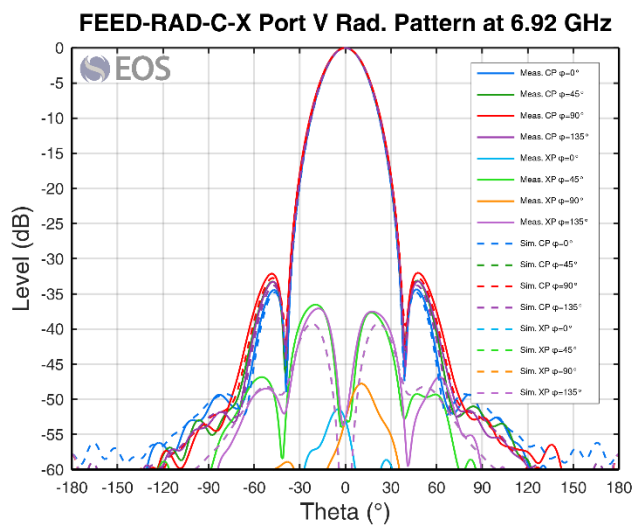
Typical applications

- Radiometry
- Aerospace
- Ground stations

Phase center variation over frequency	mm	4 @6.6-10.7 GHz
Ports	-	2 ports/each band: V and H polarization 2 ports at WR137 and 2 at WR90

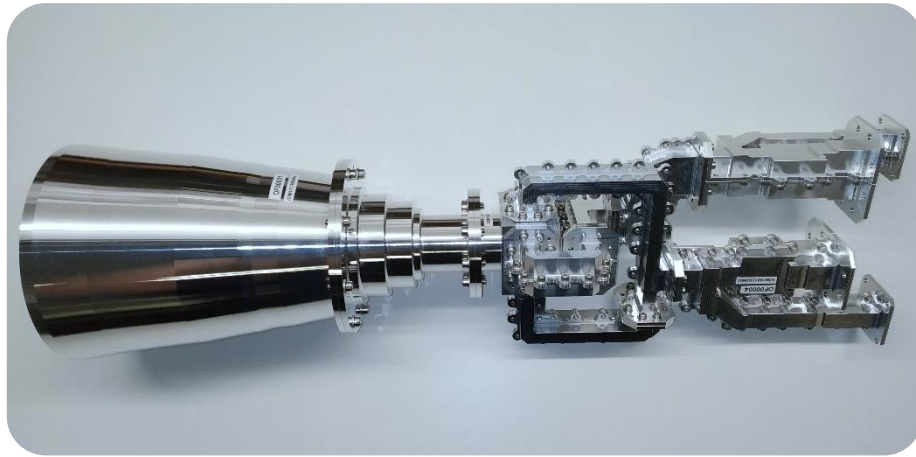
Results

Radiation pattern

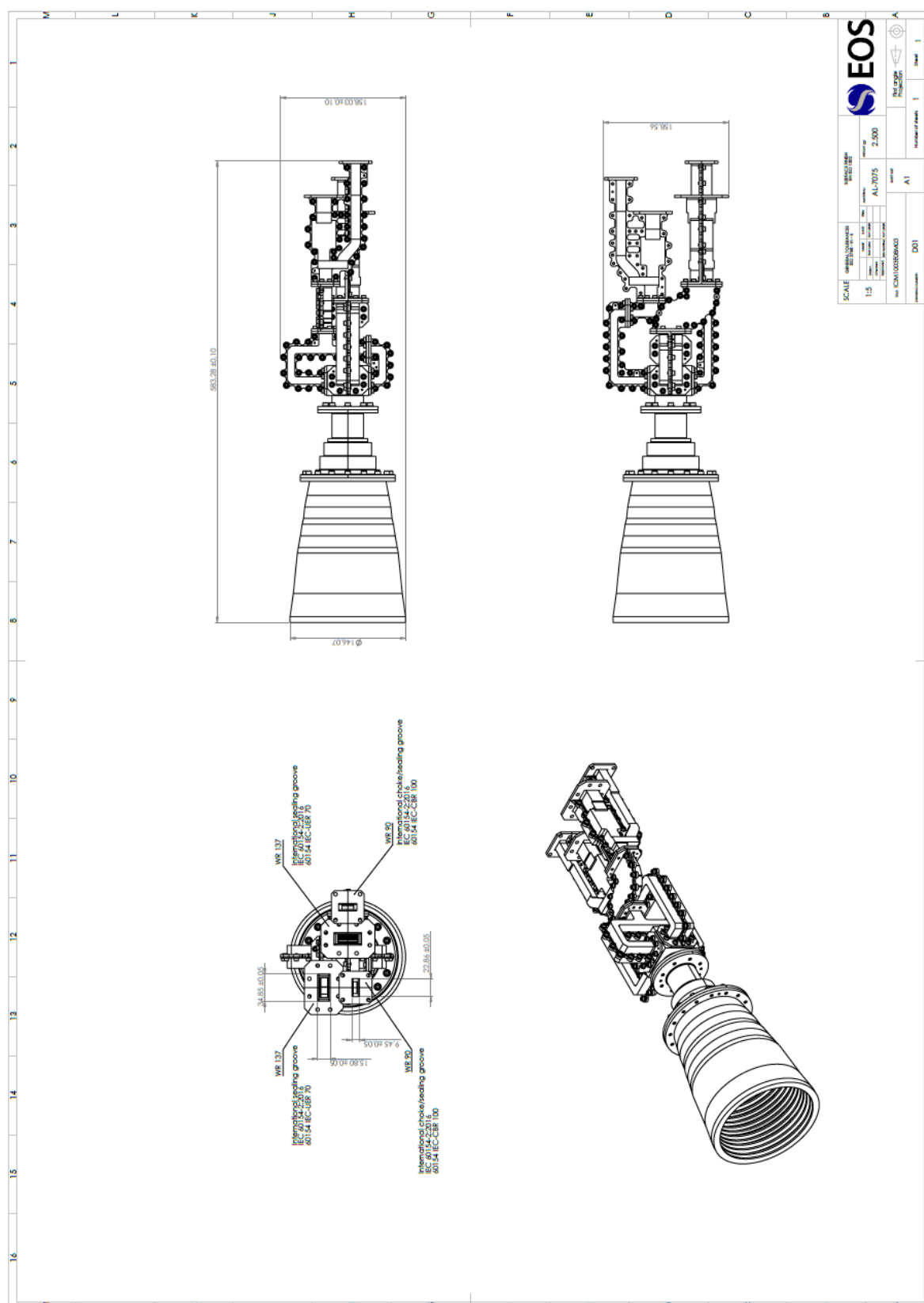


Physical characteristics

Parameter	Units	Value
Dimensions (LxWxH)	mm	583 x 158 x 158
Mass	g	2500g
Material	-	AL 7075
Surface treatment	-	Under specification
Coating	-	Under specification



Mechanical design and interfaces





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