

Main Features

- Frequency range: 20.2-21.2 GHz & 30-31 GHz
- Directivity: 16 dB (typical).
- Return loss 18 dB
- Axial ratio < 1.5 dB
- Single circular polarization antenna in each frequency band.
- Can feed a Single Offset Reflector (offset/D = 0.6) with f/D between 0.6 and 0.8.
- **Configuration:** Horn - Polarizer - Filters.
- The polarizer configuration on this feed can therefore be designed to work with ports in Tx/Tx or Rx/Rx (without using filters) .

FEED-COMS-KA-TX-RX-SCP

The FEED-COMS-KA-TX-RX-SCP is designed to feed an offset reflector at Ka band mainly for telecom applications. It provides low spillover and therefore the feed offers low sidelobes level.

The design can be adjusted to fit in other reflector configurations. Furthermore, reflector antenna simulation results can be included.

Typical applications

- Fixed Satcom terminals
- Flyaway Satcom terminals

Performance

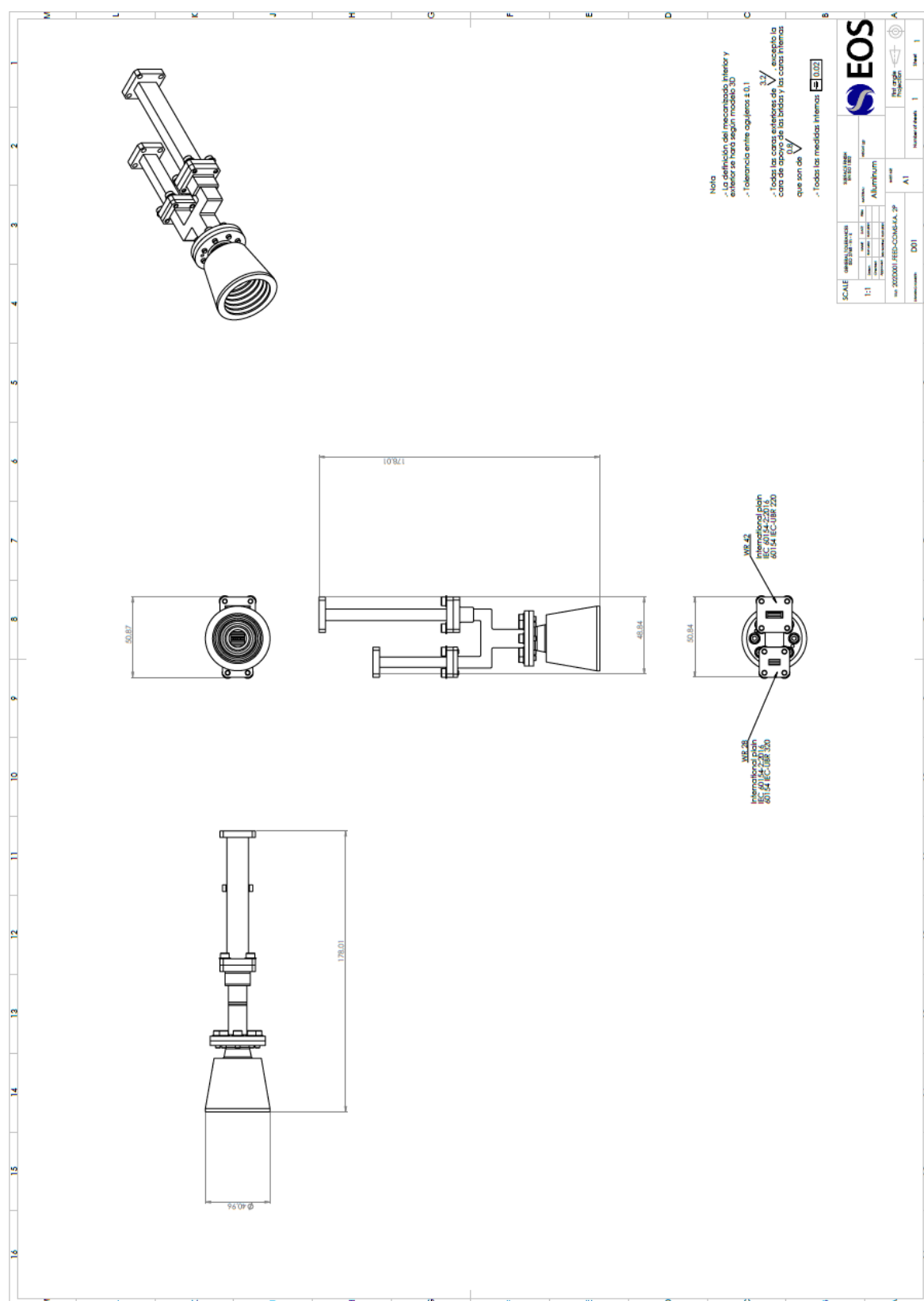
| Parameter | Units | Value |
|--------------------------------|-------|--|
| Frequency | GHz | RX: 20.2 – 21.2 TX: 30.0 – 31.0 |
| Polarization | - | Single Circular RX: LHCP/RHCP TX: RHCP/LHCP |
| Return loss | dB | > 18 |
| Directivity | dB | 16 (typ.) |
| FoV | ° | 31 |
| Tapper level @ FoV | dB | -12 (typ.) |
| Axial ratio | dB | RX: < 1.5 TX: < 1 |
| Max Crosspolar level (On axis) | dB | RX: -21.3 TX: -24.8 |

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|--|----|---|
| Max Crosspolar level (On FoV) | dB | RX: -21.3 TX: -24.8 |
| Isolation | dB | RX: TX/RX > 85 dB TX: RX/TX > 70 dB |
| Insertion loss | dB | < 0.4 |
| Partial power over FoV | % | > 90 @20.2 – 21.2 GHz > 90 @30.0 – 31.0 GHz |
| Phase center variation over frequency | mm | 5 @20.2-31 GHz |
| Ports | - | 2 ports, RHCP and LHCP. TX interface: WR28 RX interface: WR42 |

Physical characteristics

| Parameter | Units | Value |
|---------------------------|-------|---|
| Dimensions (LxWxH) | mm | 190 x 55 x 45 |
| Mass | g | < 300 |
| Material | - | Aluminium |
| Surface treatment | - | Bonderite (TBD) MIL-DTL-5541F, Type II, Class 1A |
| Coating | - | <i>*Under specification</i> MIL-DTL-53022 MIL-DTL-64159 |

Mechanical design and interfaces





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