Eutelsat S.A. ESV Summary Sheet

Applicant:

THRANE & THRANE A/S trading as COBHAM
SATCOM
Lundtoftegaardsvej 93D, 2800 Kgs.
Lyngby
DENMARK

Tel : +45 39 55 89 59

Website : www.cobham.com
Email : info@cobham.com

Antenna model:
SAILOR 600 Ku
Diameter:
0.65 m
Standard:
Nomenclature M-x
Characterization date:
19-05-2017
Validity period:
See remark 4
Last test data submitted on:
23-02-2017

System Description:

Stabilized maritime antenna one Tx port, two (co-polar and cross-polar) Rx ports; splash feed Gregorian. Hydroformed aluminum reflector. Tuned multi-layer sandwich radome. Three axis stabilization platform with conical scanning tracking.
BUC: NexGenWave 6 W; LNB: Thrane & Thrane.

Maximum Allowed EIRP: For digital carriers transmitted at the satellite receive contour of 0 dB/K (EESS 502 refers):
In the 14.00-14.50 GHz band:
31.6 dBW / 40 kHz for an orbital separation from the adjacent satellite ≥ 1.5°
31.7 dBW / 40 kHz for an orbital separation from the adjacent satellite > 2.0°
33.5 dBW / 40 kHz for an orbital separation from the adjacent satellite > 2.5°
35.6 dBW / 40 kHz for an orbital separation from the adjacent satellite > 3.0°
In the 13.75-14.00 GHz band:
29.6 dBW / 40 kHz for an orbital separation from the adjacent satellite ≥ 1.5°
29.7 dBW / 40 kHz for an orbital separation from the adjacent satellite > 2.0°
31.9 dBW / 40 kHz for an orbital separation from the adjacent satellite > 2.5°
32.9 dBW / 40 kHz for an orbital separation from the adjacent satellite > 3.0°

Tx Frequency:
13.75 – 14.50 GHz

Tx Gain:
37.6 dBi (average at 14.25 GHz)
Tx XPD:
≥ 35 dB within -1 dB contour

Rx Frequency:
10.70 – 12.75 GHz

Rx Gain (co-polar and cross-polar ports):
35.8 dBi (average at 11.70 GHz)
Rx XPD :
≥ 30.2 dB within -1 dB contour (co-polar)
≥ 31 dB within -1 dB contour (cross-polar)
G/T:
15.9 dB/K typ @ 11.70 GHz at 30° El

Restrictions and remarks:

1. The manufacturer states that the RMS pointing error is less than 0.2° for the following ship motions:
   Roll = ± 30°/6s
   Pitch = ± 15°/5s
   Yaw = ± 10°/8s
2. The RF performance characterization was performed on one antenna unit with radome, at the Thales Alenia Space test range of Cannes, France on the 21-23 February 2017.
3. Cobham has inserted in the ACU software a look-up table with the polarization skew of the Eutelsat satellites, to protect against the mishandling of polarization skew values by installers. The transmission of the HPA is muted from the ACU when the maximum pointing error exceeds 0.5°, by cutting off the 10 MHz reference.
4. The characterization's validity is subject to regular submission of patterns to confirm that the system remains compliant with the Eutelsat standards.
5. The worst sidelobe excess in the near region receive side is 7.15 dB.
   The service quality in conjunction with operations in certain Rx bands and/or reduced orbital separations from the adjacent satellites may be impaired due to excessive Rx sidelobe levels. Nevertheless, to achieve the required service quality the level of the outroute carrier may need to be increased according to a valid Eutelsat transmission plan.
6. The transmission in the band 13.75-14.00 GHz for antennas with a diameter <1.2 m is subject to the ITU radio regulations in force.