

From: Daniel Hastie

To: Hung Le

Date: October 08, 2021

Subject: Request for Info - File # 1567-EX-ST-2021

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Message:

1. the size (meter), antenna gain (dBi), input power at antenna flange (watts), and EIRP (dBW) of the proposed Sat-Lite Technologies TR01-0166-01, TR01-0167-01, and TR01-0168-01 antenna.

Response: These items are corrugated horns normally used to illuminate a reflector antenna. For the test range source, they are used directly connected through an RF switch to the signal generator via coaxial cable.

TR01-0166-01 is a Ku-band horn (0.02m dia) which operates from 10.70-12.75 and 12.75-14.5 GHz. Horn gain varies from 13 to 15 dBi. Signal Generator level less cable loss gives 6.0 to 5.6 mW at horn input. Total EIRP is 21.3 to 22.0 dBm (from low to high freq.)

TR01-0167-01 is a Ka-band horn (0.03m dia) which operates from 17.7-21.2 and 27.5-31.0 GHz. Horn gain varies from 15.6 to 17.8 dBi. Signal Generator level less cable loss gives 4.7 to 1.4 mW at horn input. Total EIRP is 22.3 to 19.2 dBm (from low to high freq.)

TR01-0168-01 is an X-band horn (0.07m dia) which operates from 7.25-7.75 and 7.9-8.4 GHz. Horn gain varies from 15.0-16.0 dBi. Signal Generator level less cable loss gives 6.7 to 6.5 mW at horn input. Total EIRP is 23.2-24.2 dBm (from low to high freq.)

From IB query on other Confirmation Number:

() Please provide Specification data sheet from manufacture or the antenna patterns of proposed antenna.

Response: There is not a specification data sheet for the horns, but horn patterns are available. Will attempt to add attachments of sample horn drawing and patterns to the application.

() Please provide Point of communication (satellite): name, call sign and file no. of GSO and/or NGSO Ku-band satellites operating in the 17.7-21.2 GHz and 27.5-31 GHz frequency bands.

Response: The application attempts to cover earth station antenna testing requirements at X, Ku and Ka-bands. No Ku-band satellites operate in the bands listed, only Ka-band.

() Experimental licenses only authorize transmission to Satellite(s). Please remove receiving frequency band 17.7-21.2 GHz.

Response: The application is not to transmit to any satellite, only to test performance of antennas which will transmit and receive from such satellites. Operation at 0 deg elevation is required in order to test the antennas.