

Technical Description

The Boeing Company

Submitted: 08/19/2020
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JUSTIFICATION:

SATSIM test and setup

The Boeing Company is requesting a Special Temporary Authorization (STA) to support satellite antenna development. Boeing will conduct testing using a Ku and Ka Band Satellite simulator. The testing will be conducted in Silver Springs, NV, Bohemia, NY, and the Commercial EM Test Facility (Element) in Hillsboro, OR.

OBJECTIVE & TEST DESCRIPTION

The simulator will be used as a test bed to setup and operate satellite earth terminals under realistic operating conditions without the need for an actual satellite. The antenna and simulator will be point in a horizontal position to the ground and at no time be point toward the geostationary arc. The Ku-band test requires two uplink frequencies and two downlink frequencies in Ku-band. The Ka-band test requires two uplink frequencies and two downlink frequencies in Ka-band.

Start Date: 9/3/2020

Stop Date: 3/3/2021

Manufacturer: Atlantic Microwave Ltd
Model: CST-MSS-130020-S5S5 (Ku-band)
Frequencies: 10.7 – 12.75 GHz (Downlink)
Emissions: 10M0G7D
ERP: 0.0002 W (0.2 mW)
Station Class: FX

Manufacturer: Atlantic Microwave Ltd
Model: CST-MSS-130021-S5S5 (Ka-band)
Frequencies: 18.7 – 21.2 GHz (Downlink)
Emissions: 10M0G7D
ERP: 0.000005 W (5 μ W)
Station Class: FX

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Manufacturer: GetSAT
Model: Ku MicroSAT Antenna System
Frequencies: 13.75 - 14.5 GHz (Uplink)
Emissions: 10M0G7D
ERP: 17,000 W
Station Class: FX

Manufacturer: GetSAT
Model: Ka MicroSAT Antenna System
Frequencies: 29-31 GHz (Uplink)
Emissions: 10M0G7D
ERP: 39,811 W
Station Class: FX

Manufacturer: AvL Technologies
Model: 2.4 meter Ku Antenna System (Ground VSAT)
Frequencies: 13.75 – 14.5 GHz (Uplink)
Emissions: 10M0G7D
ERP: 1,200,000 W (1.2 MW)
Station Class: FX

Manufacturer: AvL Technologies
Model: 2.4 meter Ka Antenna System (Ground VSAT)
Frequencies: 29-31 GHz (Uplink)
Emissions: 10M0G7D
ERP: 2,350,000 W (2.35 MW)
Station Class: FX

LOCATIONS:

Location: Silver Springs, NV
Lat/Lon: within 5 km, centered around NL 39-17-50; WL 119-22-31
Station Class: FX

Location: Bohemia, NY -
Lat/Lon: within 5 km, centered around NL 40-46-16; WL 73-5-56
Station Class: FX

Location: Hillsboro, OR
Lat/Lon: within 5 km, centered around NL 45-31-45; WL 122-55-53
Station Class: FX

STOP BUZZER POINT OF CONTACT:

Stop Buzzer for Operation: **Ben Schreffler at 509-493-4691,**

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