

Appendix to Rocket Lab USA, Inc. Ground Testing STA Application

Application File Number: 1316-EX-ST-2020

Date of Submission: August 26, 2020

This application seeks authority to engage in the ground testing described below, starting September 9, 2020. The requested authority is identical to that requested in a prior application for Special Temporary Authority with file number 0336-EX-ST-2020. However, due to the ongoing global pandemic and other factors beyond Rocket Lab's control, the launch that the previous STA was intended to support has been rescheduled beyond the end of the period covered by that authorization. This application therefore seeks new authority for ground testing in support of the rescheduled launch.

This document provides additional details for the application for Special Temporary Authority (STA) for which Rocket Lab USA, Inc. ("Rocket Lab") has applied to authorize ground testing for its Electron Launch Vehicle at Wallops Island, VA. It briefly summarizes the purpose of the STA application and the proposed testing and provides tables of technical details for the testing, including specific frequency usage information.

Background and Testing Overview:

Rocket Lab seeks FCC authorization to use frequencies to conduct ground testing on Rocket Lab's launch vehicle – Electron – at Rocket Lab's launch complex (LC-2) which is located at the Mid-Atlantic Regional Spaceport on Wallops Island, Virginia. The ground testing is conducted as part of vehicle and ground system verification. The testing is planned to be carried out while the launch vehicle is on the launch pad. The ground tests will include communications between the launch vehicle and ground systems. The actual launch operation will occur at some point in the future, and Rocket Lab currently has a separate granted STA (0822-EX-ST-2020) that covers the actual launch until January 2021.

REQUESTED TESTING TRANSMISSIONS

Center Frequency	2385 MHz
Minimum 99% BW	7.97 MHz
Maximum 99% BW	7.97 MHz
Proposed minimum emission designation	N/A
Proposed maximum emission designation	7M97G1D--
Minimum transmit power	3 dBW
Maximum transmit power	10 dBW
Minimum PSD	-67.8 dBW/Hz
Maximum PSD	-60.8 dBW/Hz
Minimum Elevation Angle Transmit	0

Maximum Elevation Angle Transmit	0
Transmit Antenna Polarization	Linear 45 degrees
Notes	Emission designation and maximum 99% BW includes +/- 65kHz of simulated Doppler shift.

Center Frequency	2374 MHz
Minimum 99% BW	3.17 MHz
Maximum 99% BW	3.17 MHz
Proposed minimum emission designation	N/A
Proposed maximum emission designation	3M17G1D--
Minimum transmit power	3 dBW
Maximum transmit power	6 dBW
Minimum PSD	-63.8 dBW/Hz
Maximum PSD	-56.8 dBW/Hz
Minimum Elevation Angle Transmit	0
Maximum Elevation Angle Transmit	-1.5
Transmit Antenna Polarization	Linear 45 degrees
Notes	Emission designation and maximum 99% BW includes +/- 65kHz of simulated Doppler shift.