

DESCRIPTION OF RESEARCH PROJECT

Pursuant to Sections 5.3(j) and Section 5.61 of the Federal Communications Commission’s rules, 47 C.F.R. §§ 5.3(j) and 5.61, Spectrum Wireless Holdings, LLC (“Charter”), a limited liability company and subsidiary of Charter Communications Operating, LLC, seeks Special Temporary Authority (“STA”) for 180 days, beginning January 27, 2022, or immediately upon grant, to test and evaluate millimeter wave 5G waveform coverage and capacity in the lower 37 GHz (37.0 – 37.6 GHz) band. The tests will be done in conjunction with CBRS band in EN-DC mode. Charter plans to characterize impact under all possible permutations, including different power, transmitter height and locations and also quantify mmWave coverage and throughput with CBRS as an anchor. The proposed operations will advance Charter’s understanding of potential of 37 GHz data aggregation with mid-band spectrum as an anchor.

Charter will conduct the proposed outdoor testing within a radius of 5 miles from the specified fixed location identified in the STA Form in Castle Rock, CO (N 39°25'39.32" W 104°52'1.57").

Radio Equipment Description

For the testing, Charter will use two models of equipment with the following technical parameters:

Equipment	Tx Power (mW)	EIRP (dBm)	ERP (watts)	Mean or Peak	Emission Designator	Frequency Tolerance	Modulation
Prototype	1000	60	57.85	Peak	800MD7D	0.001%	64 QAM, 16QAM, QPSK
Prototype	34000	51.1	48.95	Peak	192MG7D	0.000951%	64 QAM, 16QAM, QPSK

Protection against Interference

Charter understands it must accept RF interference from any federal and non-federal incumbent users of this band and that all Charter operations will be on a secondary basis. With regard to existing users, Charter identifies a portion of the band being used for the proposed testing of the lower 37 GHz. Following review of the FCC’s databases, Charter is aware of no incumbent or other experimental licensees operating within proximity to the proposed test location. CBRS band allocations will be actively controlled by SAS. Charter will conduct tests between the hours of 7 a.m. and 7 p.m., and Charter personnel will be present at all times during the testing.

Contact Information

Point of contact for FCC licensing issues:

Colleen King
Vice President, Regulatory Affairs
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Point of contact for questions about testing operations:

PJ Jayawardene
Sr. Director of Wireless Operations, R&D
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The following individual will be available 24/7 during all testing and has authority and ability to immediately cease all operations:

Matthew Hubbard
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