

Request for Special Temporary Authority SAN Earth Stations (Blanket Authority)

The Commission has authorized Viasat to serve the United States market with the ViaSat-3 satellite, which will operate at 88.9° W.L. in the Ka band under Call Signs S2917 and S3050.¹ This authorization was based on the Commission's determination that allowing ViaSat-3 to communicate with users in the United States would serve the public interest.

Consistent with that authorization and underlying public interest finding, Viasat has filed an application seeking blanket authority to communicate with the ViaSat-3 satellite using 1.8 m and 2.4 m VSAT earth stations located throughout the United States.² That application remains pending and might not be granted prior to the anticipated launch of ViaSat-3 in mid-April 2023. Additionally, Viasat will need to perform in-orbit testing ("IOT") with the above-referenced earth stations, which will involve some operations that vary from the parameters specified in Viasat's pending application (as detailed below and in Attachment 1).

Accordingly, Viasat requests special temporary authority ("STA"), for thirty (30) days commencing on April 24, 2023, to perform IOT and to communicate with ViaSat-3 pending resolution of its pending application.³ Grant of the requested STA will facilitate Viasat's ability to operate the ViaSat-3 network and provide related services to consumers in the United States—activities that the Commission has already found to be in the public interest. Absent grant of this STA at the locations and frequency band segments specified in this request, Viasat would be unable to operate the ViaSat-3 network as configured and as described in the ViaSat-3 space station applications, resulting in degradation in the quality or scope of services and inhibiting Viasat's ability to serve users at certain geographic locations. The requested STA will also allow Viasat to perform IOT in a timely manner.

During IOT, Viasat will verify the performance of ViaSat-3 spacecraft components and each beam using those components. Operations during IOT will generally be conducted using modulated carriers consistent with the technical parameters of the ViaSat-3 space station authorizations and the parameters specified in Viasat's pending earth station application. However, consistent with industry practices, relevant earth stations and the ViaSat-3 space station will need to temporarily operate at higher-than-regularly-authorized power density levels

¹ See Call Sign S2917, IBFS File Nos. SAT-MOD-20190617-00047 (granted May 28, 2020), SAT-MOD-20210825-00110 (granted Dec. 23, 2021), and SAT-MOD-20220819-00091 (granted Oct. 31, 2022); Call Sign S3050, IBFS File No. SAT-LOA-20190617-00048 (granted May 27, 2020).

² See Call Sign E202143, IBFS File No. SES-LIC-20200811-00852.

³ See 47 C.F.R. § 25.120. Viasat is simultaneously filing for a space station STA to cover transmissions in frequency band segments covered by Call Sign S3050 (namely, the 19.7-20.2 GHz and 29.5-30.0 GHz band segments) and earth station STAs to cover transmissions in band segments covered by Viasat's pending applications for site-based authority (namely, the 17.7-18.3 GHz and 27.5-28.35 GHz band segments).

during certain tests that Viasat expects to conduct during a single day of IOT. Those tests will evaluate the ViaSat-3 communications payload by transmitting an unmodulated continuous wave (“CW”) uplink signal during brief periods (typically several seconds per transmission), which will be re-radiated down to the ground by the communications payload on the satellite. These tests will be conducted using the technical parameters specified in Attachment 1.⁴

Viasat is notifying operating co-frequency FSS systems authorized by the Commission of its IOT operations, including operators of commercial Ka-band satellites within six degrees of 88.9° W.L. and NGSO operators. Viasat similarly is notifying operating MSS systems of Viasat’s planned operations in the 19.4-19.6 GHz and 29.1-29.3 GHz band segments. In each case angular separation will ensure the absence of interference, including by Viasat’s muting transmissions during any period when the separation angle between Iridium gateway earth stations and the Iridium satellites and ViaSat-3 is 10° or less. Viasat will operate in the 19.4-19.6 GHz and 29.1-29.3 GHz band segments under this STA only during IOT. Viasat will complete coordination with appropriate U.S. government operators and provide the requisite notice prior to beginning operations.⁵

Viasat will operate pursuant to the STA on a non-protected, non-harmful interference basis. In the unlikely event of harmful interference caused by Viasat’s operations under the STA, Viasat will take steps to eliminate such interference, including termination of transmissions if needed. The U.S. point of contact available 24 hours a day, seven days a week, with authority and ability to cease emissions is:

349 Inverness Drive South
Englewood, CO 80112
Tel: 720-493-7300

⁴ Because IOT will occur simultaneously with both Call Signs S2917 and S3050, the details in Attachment 1 reflect communications with both Call Signs. The earth stations operated with ViaSat-3 under this STA will be at the same locations and with the same antenna sizes as the earth stations for which Viasat is seeking STAs for site-based authority.

⁵ See *ViaSat, Inc.; Application for Modification of Market Access Grant and for Extension or Waiver of Milestone Date*, DA 20-557, Call Sign S2917, IBFS File No. SAT-MOD-20190617-00047, ¶ 28 (rel. May 28, 2020).

Attachment 1
ViaSat-3 IOT STA Request

Emission Designator	CW Tests: 1H00N0N Modulated Tests: 464MG7D and 500MG7D
Uplink Bandwidth	Up to 600 MHz per carrier
Uplink Frequencies (MHz)	28.35 - 30 GHz
Uplink Polarization	LHCP and RHCP
Antenna Gain	52.5 dBi (1.8 m) 53.1 dBi (2.4 m)
Maximum Uplink EIRP per Carrier (dBW)	67.6 dBW (1.8 m) 68.2 dBW (2.4 m)
Maximum Uplink EIRP Density per Carrier (dBW/4 kHz)	CW Tests: 104.2 dBW/4kHz Modulated Tests: 17.6 dBW/4kHz
Emission Designator	CW Tests: 1H00N0N Modulated Tests: 464MG7D and 500MG7D
Downlink Bandwidth	Up to 600 MHz per carrier
Downlink Frequencies (MHz)	17.7 - 20.2 GHz
Downlink Polarization	LHCP and RHCP
Maximum Downlink EIRP per Carrier (dBW)	63 dBW
Maximum Downlink EIRP Density per Carrier (dBW/4 kHz)	CW Tests: 99.0 dBW/4kHz Modulated Tests: 12.5dBW/4kHz
Satellite Point of Communication	ViaSat-3
Satellite Call Sign	S2917/S3050
Satellite Location	88.9° W.L.