

§ 25.212

(b) All conventional C-band analog video transmissions must contain an energy dispersal signal at all times with a minimum peak-to-peak bandwidth set at whatever value is necessary to meet the power flux density limits specified in § 25.208(a) and successfully coordinated internationally and accepted by adjacent U.S. satellite operators based on the use of state of the art space and earth station facilities. All transmissions in frequency bands described in § 25.208(b) and (c) must also contain an energy dispersal signal at all times with a minimum peak-to-peak bandwidth set at whatever value is necessary to meet the power flux density limits specified in § 25.208(b) and (c) and successfully coordinated internationally and accepted by adjacent U.S. satellite operators based on the use of state of the art space and earth station facilities.

(c) All initial analog video transmissions shall be preceded by a video test transmission at an uplink e.i.r.p. at least 10 dB below the normal operating level. The earth station operator shall not increase power until receiving notification from the satellite network control center that the frequency and polarization alignment are satisfactory pursuant to the procedures specified in § 25.272. The stationary earth station operator that has successfully transmitted an initial video test signal to a satellite pursuant to this paragraph is not required to make subsequent video test transmissions if subsequent transmissions are conducted using exactly the same parameters as the initial transmission.

(d) An earth station may be routinely licensed for transmission of full-transponder analog video services in the 5925–6425 MHz band or 14.0–14.5 GHz band provided:

(1) The application includes certification, pursuant to § 25.132(a)(1), of conformance with the antenna performance standards in § 25.209(a) and (b);

(2) For transmission in the 5925–6425 MHz band, the input power into the antenna will not exceed 26.5 dBW; or

(3) For transmission in the 14.0–14.5 GHz band, the input power into the antenna will not exceed 27 dBW.

(e) Applications for authority for analog video uplink transmission in

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the 5925–6425 MHz or 14.0–14.5 GHz bands that are not eligible for routine processing under paragraph (d) of this section are subject to the requirements of § 25.220.

[58 FR 13421, Mar. 11, 1993, as amended at 61 FR 9952, Mar. 12, 1996; 62 FR 5931, Feb. 10, 1997; 70 FR 32256, June 2, 2005; 78 FR 8428, Feb. 6, 2013; 79 FR 8323, Feb. 12, 2014; 81 FR 55338, Aug. 18, 2016]

§ 25.212 Narrowband analog transmissions and digital transmissions in the GSO FSS.

(a) Except as otherwise provided by this part, criteria for unacceptable levels of interference caused by other satellite networks shall be established on the basis of nominal operating conditions and with the objective of minimizing orbital separations between satellites.

(b) Emissions with an occupied bandwidth of less than 2 MHz are not protected from interference from wider bandwidth transmissions if the r.f. carrier frequency of the narrowband signal is within ± 1 MHz of one of the frequencies specified in § 25.211(a).

(c)(1) An earth station that is not subject to licensing under § 25.222, § 25.226, or § 25.227 may be routinely licensed for analog transmissions in the conventional Ku-band or the extended Ku-band with bandwidths up to 200 kHz (or up to 1 MHz for command carriers at the band edge) if the input power spectral density into the antenna will not exceed -8 dBW/4 kHz, and the application includes certification pursuant to § 25.132(a)(1) of conformance with the antenna gain performance requirements in § 25.209(a) and (b).

(2) An earth station that is not subject to licensing under § 25.222, § 25.226, or § 25.227 may be routinely licensed for digital transmission, including digital video transmission, in the conventional Ku-band or the extended Ku-band if input power spectral density into the antenna will not exceed -14 dBW/4 kHz and the application includes certification pursuant to § 25.132(a)(1) of conformance with the antenna gain performance requirements in § 25.209(a) and (b).

(d) An individual earth station that is not subject to licensing under § 25.221 may be routinely licensed for digital

transmission, or for analog transmission with carrier bandwidths up to 200 kHz (or up to 1 MHz for command carriers at the band edge) in the conventional C-band or the extended C-band, if the applicant certifies conformance with relevant antenna performance standards in § 25.209(a) and (b), and power density into the antenna will not exceed +0.5 dBW/4 kHz for analog carriers or -2.7 dBW/4 kHz for digital carriers.

(e) An earth station may be routinely licensed for digital transmission in the 28.35–28.6 GHz and/or 29.25–30.0 GHz bands if the input power spectral density into the antenna will not exceed 3.5 dBW/MHz and the application includes certification pursuant to § 25.132(a)(1) of conformance with the antenna gain performance requirements in § 25.209(a) and (b).

(f) In the 24.75–25.25 GHz band, an earth station that meets the antenna gain pattern requirements set forth in § 25.209(a) and (b) of this part may be routinely licensed if the maximum power density into the antenna does not exceed 3.5 dBW/MHz.

(g) A license application for earth station operation in a network using variable power density control of earth stations transmitting simultaneously in shared frequencies to the same target satellite receiving beam may be routinely processed if the applicant certifies that the aggregate off-axis EIRP density from all co-frequency earth stations transmitting simultaneously to the same target satellite receiving beam, not resulting from colliding data bursts transmitted pursuant to a contention protocol, will not exceed the applicable off-axis EIRP density limits permissible for a single earth station, as specified in § 25.218 or § 25.138.

(h) Applications for authority for fixed earth station operation in the conventional C-band, the extended C-band, the conventional Ku-band, the extended Ku-band or the conventional Ka-band that do not qualify for routine processing under relevant criteria in this section, § 25.211, § 25.218, or § 25.138,

are subject to the requirements in § 25.220.

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§ 25.213 Inter-Service coordination requirements for the 1.6/2.4 GHz Mobile-Satellite Service.

(a) Protection of the radio astronomy service in the 1610.6–1613.8 MHz band against interference from 1.6/2.4 GHz Mobile-Satellite Service systems.

(1) *Protection zones.* All 1.6/2.4 GHz Mobile-Satellite Service systems shall be capable of determining the position of the user transceivers accessing the space segment through either internal radiodetermination calculations or external sources such as LORAN-C or the Global Positioning System.

(i) In the band 1610.6–1613.8 MHz, within a 160 km radius of the following radio astronomy sites:

Observatory	Latitude (DMS)	Longitude (DMS)
Arecibo, PR	18 20 46	66 45 11
Green Bank Telescope, WV	38 25 59	79 50 24
	38 26 09	79 49 42
Very Large Array, NM	34 04 43	107 37 04
Owens Valley, CA	37 13 54	118 17 36
Ohio State, OH	40 15 06	83 02 54

(ii) In the band 1610.6–1613.8 MHz, within a 50 km radius of the following sites:

Observatory	Latitude (DMS)	Longitude (DMS)
Pile Town, NM	34 18 04	108 07 07
Los Alamos, NM	35 46 30	106 14 42
Kitt Peak, AZ	31 57 22	111 36 42
Ft. Davis, TX	30 38 06	103 56 39
N. Liberty, IA	41 46 17	91 34 26
Brewster, WA	48 07 53	119 40 55
Owens Valley, CA	37 13 54	118 16 34
St. Croix, VI	17 45 31	64 35 03
Mauna Kea, HI	19 48 16	155 27 29
Hancock, NH	42 56 01	71 59 12

(iii) Out-of-band emissions of a mobile earth station licensed to operate within the 1610.0–1626.5 MHz band shall be attenuated so that the power flux density it produces in the 1610.6–1613.8 MHz band at any radio astronomy site listed in paragraph (a)(1) (i) or (ii) of