

when the sum of the calculated signal levels received by an MSS receiver exceeds -70 dBm. The MSS receiver used in these calculations can be assumed to have an antenna with 0 dBi gain. Free-space propagation between the base station antennas and the MSS terminals can be assumed and actual signal polarizations for the ATC signals and the MSS system may be used.

[70 FR 19319, Apr. 13, 2005]

§ 25.254 Special requirements for ancillary terrestrial components operating in the 1610–1626.5 MHz/2483.5–2500 MHz bands.

(a) An applicant for an ancillary terrestrial component in these bands must demonstrate that ATC base stations shall:

(1) Not exceed a peak EIRP of 32 dBW in 1.25 MHz;

(2) Not cause unacceptable interference to systems identified in paragraph (c) of this section and, in any case, shall not exceed out-of-channel emissions of -44.1 dBW/30 kHz at the edge of the MSS licensee's authorized frequency assignment;

(3) At the time of application, that it has taken, or will take steps necessary to avoid causing interference to other services sharing the use of the 2450–2500 MHz band through frequency coordination; and

(4) Base stations operating in frequencies above 2483.5 MHz shall not generate EIRP density, averaged over any two-millisecond active transmission interval, greater than -70 dBW/MHz in the 1559–1610 MHz band. The EIRP, averaged over any two-millisecond active transmission interval, of discrete out-of-band emissions of less than 700 Hz bandwidth from such base stations shall not exceed -80 dBW in the 1559–1610 MHz band. A root-mean-square detector function with a resolution bandwidth of one megahertz or equivalent and no less video bandwidth shall be used to measure wideband EIRP density for purposes of this rule, and narrowband EIRP shall be measured with a root-mean-square detector function with a resolution bandwidth of one kilohertz or equivalent.

(b) An applicant for an ancillary terrestrial component in these bands must

demonstrate that mobile terminals shall:

(1) Meet the requirements contained in § 25.213 to protect radio astronomy service (RAS) observations in the 1610.6–1613.8 MHz band from unacceptable interference;

(2) Observe a peak EIRP limit of 1.0 dBW in 1.25 MHz;

(3) Observe an out-of-channel EIRP limit of -57.1 dBW/30 kHz at the edge of the licensed MSS frequency assignment.

(4) ATC mobile terminals operating in assigned frequencies in the 1610–1626.5 MHz band shall not generate EIRP density, averaged over any two-millisecond active transmission interval, greater than -70 dBW/MHz in the 1559–1605 MHz band or greater than a level determined by linear interpolation in the 1605–1610 MHz band, from -70 dBW/MHz at 1605 MHz to -10 dBW/MHz at 1610 MHz. The EIRP, averaged over any two-millisecond active transmission interval, of discrete out-of-band emissions of less than 700 Hz bandwidth from such mobile terminals shall not exceed -80 dBW in the 1559–1605 MHz band or exceed a level determined by linear interpolation in the 1605–1610 MHz band, from -80 dBW at 1605 MHz to -20 dBW at 1610 MHz. The EIRP density of carrier-off-state emissions from such mobile terminals shall not exceed -80 dBW/MHz in the 1559–1610 MHz band, averaged over a two-millisecond interval. A root-mean-square detector function with a resolution bandwidth of one megahertz or equivalent and no less video bandwidth shall be used to measure wideband EIRP density for purposes of this rule, and narrowband EIRP shall be measured with a root-mean-square detector function with a resolution bandwidth of one kilohertz or equivalent.

(c) Applicants for an ancillary terrestrial component to be used in conjunction with a Mobile-Satellite Service system using CDMA technology shall coordinate the use of the 1.6/2.4 GHz Mobile-Satellite Service spectrum designated for CDMA systems using the framework established by the ITU in Recommendation ITU-R M.1186 "Technical Considerations for the Coordination Between Mobile Satellite Service

(MSS) Networks Utilizing Code Division Multiple Access (CDMA) and Other Spread Spectrum Techniques in the 1–3 GHz Band” (1995). Recommendation ITU-R M.1186 is incorporated by reference. The Director of the Federal Register approves this incorporation by reference in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies of this standard can be inspected at the Federal Communications Commission, 445 12th Street, SW., Washington, DC (Reference Information Center) or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030, or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html. The ITU-R Recommendations can also be purchased from the International Telecommunication Union (ITU), Place des Nations, CH–1211 Geneva 20, Switzerland.

(d) To avoid interference to an adjacent channel licensee in the Broadband Radio Service (BRS), the power of any ATC base station emission above 2495 MHz shall be attenuated below the transmitter power (P) measured in watts in accordance with the standards below. If these measures do not resolve a documented interference complaint received from the adjacent channel BRS licensee, the provisions of § 25.255 shall apply.

(1) For base stations, the attenuation shall be not less than $43 + 10 \log (P)$ dB at the upper edge of the authorized ATC band, unless a documented interference complaint is received from an adjacent channel licensee in the BRS. Provided that a documented interference complaint cannot be mutually resolved between the parties, the following additional attenuation requirements set forth in subsections (2)–(5) shall apply:

(2) If a pre-existing BRS base station suffers harmful interference from emissions caused by a new or modified ATC base station located 1.5 km or more away, within 24 hours of the receipt of a documented interference complaint the ATC licensee must attenuate its emissions by at least $67 + 10 \log (P)$ dB measured at 3 megahertz above the edge of the authorized ATC band, and shall immediately notify the com-

plaining licensee upon implementation of the additional attenuation.

(3) If a pre-existing BRS base station suffers harmful interference from emissions caused by a new or modified ATC base station located less than 1.5 km away, within 24 hours of the receipt of a documented interference complaint the ATC licensee must attenuate its emissions by at least $67 + 10 \log (P) - 20 \log (D_{\text{km}}/1.5)$ dB measured at 3 megahertz above the edge of the authorized ATC band, or if both base stations are co-located, limit its undesired signal level at the pre-existing BRS base station receiver(s) to no more than -107 dBm measured in a 5.5 megahertz bandwidth and shall immediately notify the complaining licensee upon such reduction in the undesired signal level.

(4) If a new or modified BRS base station suffers harmful interference from emissions caused by a pre-existing ATC base station located 1.5 km or more away, within 60 days of receipt of a documented interference complaint the licensee of the ATC base station must attenuate its base station emissions by at least $67 + 10 \log (P)$ dB measured at 3 megahertz above the edge of the authorized ATC band.

(5) If a new or modified BRS base station suffers harmful interference from emissions caused by a pre-existing ATC base station located less than 1.5 km away, within 60 days of receipt of a documented interference complaint:

(i) the ATC licensee must attenuate its base station emissions by at least $67 + 10 \log (P) - 20 \log (D_{\text{km}}/1.5)$ dB measured 3 megahertz above the edge of the authorized ATC band, or

(ii) if both base stations are co-located, the ATC licensee must limit its undesired signal level at the new or modified BRS base station receiver(s) to no more than -107 dBm measured in a 5.5 megahertz bandwidth.

(6) Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately above and adjacent to the 2495 MHz a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in

all cases to improve measurement accuracy, provided the measured power is integrated over the full required measurement bandwidth (i.e., 1 MHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power. When an emission outside of the authorized bandwidth causes harmful interference, the Commission may, at its discretion, require greater attenuation than specified in this section.

(e) Licensees of terrestrial low-power systems operating in the 2483.5–2495 MHz band shall operate consistent with the technical limits and other requirements specified in § 25.149(c)(4) and (g)(2)–(3).

NOTE TO § 25.254: The preceding rules of § 25.254 are based on cdma2000 and IS-95 system architecture. To the extent that a 1.6/2.4 GHz Mobile-Satellite Service licensee is able to demonstrate that the use of different system architectures would produce no greater potential interference than would be produced as a result of implementing the rules of this section, the licensee may apply for ATC authorization based on another system architecture.

[68 FR 33653, June 5, 2003, as amended at 69 FR 18803, Apr. 9, 2004; 70 FR 19320, Apr. 13, 2005; 73 FR 25592, May 5, 2008; 78 FR 8430, Feb. 6, 2013; 82 FR 8819, Jan. 31, 2017]

§ 25.255 Procedures for resolving harmful interference related to operation of ancillary terrestrial components operating in the 1.5/1.6 GHz and 1.6/2.4 GHz bands.

If harmful interference is caused to other services by ancillary MSS ATC operations, either from ATC base stations or mobile terminals, the MSS ATC operator must resolve any such interference. If the MSS ATC operator claims to have resolved the interference and other operators claim that interference has not been resolved, then the parties to the dispute may petition the Commission for a resolution of their claims.

[68 FR 33653, June 5, 2003, as amended at 78 FR 8267, Feb. 5, 2013]

§ 25.256 Special Requirements for operations in the 3.65–3.7 GHz band.

Upon request from a terrestrial licensee authorized under subpart Z, part 90 that seeks to place base and fixed stations in operation within 150 km of a primary earth station, licensees of earth stations operating on a primary basis in the Fixed-Satellite Service in the 3.65–3.7 GHz band must negotiate in good faith with that terrestrial licensee to arrive at mutually agreeable operating parameters to prevent unacceptable interference.

[70 FR 24725, May 11, 2005, as amended at 78 FR 8430, Feb. 6, 2013]

§ 25.257 Special requirements for NGSO MSS operations in the 29.1–29.25 GHz band regarding LMDS.

(a) Non-geostationary Mobile-Satellite Service (NGSO MSS) operators shall be licensed to use the 29.1–29.25 GHz band for Earth-to-space transmissions from feeder link earth station complexes. A “feeder link earth station complex” may include up to three (3) earth station groups, with each earth station group having up to four (4) antennas, located within a radius of 75 km of a given set of geographic coordinates provided by a NGSO MSS licensee or applicants pursuant to § 101.147.

(b) A maximum of seven (7) feeder link earth station complexes in the contiguous United States, Alaska and Hawaii may be placed into operation, in the largest 100 MSAs, in the band 29.1–29.25 GHz in accordance with § 25.203 and § 101.147 of this chapter.

(c) One of the NGSO MSS operators licensed to use the 29.1–29.25 GHz band may specify geographic coordinates for a maximum of eight feeder link earth station complexes that transmit in the 29.1–29.25 GHz band. The other NGSO MSS operator licensed to use the 29.1–29.25 GHz band may specify geographic coordinates for a maximum of two feeder link earth station complexes that transmit in the 29.1–29.25 GHz band.

(d) Additional NGSO MSS operators may be licensed in this band if the additional NGSO MSS operator shows that its system can share with the existing NGSO MSS systems.