§ 101.137 Interconnection of private operational fixed point-to-point microwave stations.

Private operational fixed point-to-point microwave stations may be interconnected with facilities of common carriers subject to applicable tariffs.

§ 101.139 Authorization of transmitters.

(a) Unless specified otherwise, transmitters used in the private operational fixed and common carrier fixed point-to-point microwave and point-to-multipoint services under this part must be a type that has been verified for compliance.

(b) Any manufacturer of a transmitter to be produced for use under the rules of this part may request certification or obtain verification by following the applicable procedures set forth in part 2 of this chapter.

(c) Certification for an individual transmitter may also be requested by an applicant for a station authorization, pursuant to the procedures set forth in part 2 of this chapter.

(d) A transmitter presently shown on an instrument of authorization, which operates on an assigned frequency in the 890–940 MHz band and has not been certificated, may continue to be used by the licensee without certification provided such transmitter continues otherwise to comply with the applicable rules and regulations of the Commission.

(e) Certification or verification is not required for portable transmitters operating with peak output power not greater than 250 mW. If operation of such equipment causes harmful interference the FCC may, at its discretion, require the licensee to take such corrective action as is necessary to eliminate the interference.

(f) After July 15, 1996, the manufacturer (except for export) or importation of equipment employing digital modulation techniques in the 3700–4200, 5925–6425, 6525–6875, 10,550–10,680 and 10,700–11,700 MHz bands must meet the minimum payload capacity requirements of § 101.141.

(g) After April 1, 2005, the manufacture (except for export) or importation of equipment for operation in the 21,200–23,600 MHz band must meet:

(1) The 0.001% frequency tolerance requirement for digital systems in § 101.107(a) or the 0.03–0.003% frequency tolerance for analog sytems; and

(2) For equipment employing digital modulation techniques, the minimum bit rate requirements of § 101.141(a).

(h) *71,000–76,000 MHz; 81,000–86,000 MHz.* For equipment employing digital modulation techniques, the minimum bit rate requirement is 0.125 bit per second per Hz.

(i) *92,000–94,000 MHz; 94,100–95,000 MHz.* For equipment employing digital modulation techniques, the minimum bit rate requirement is 1.0 bit per second per Hz.

[63 FR 36611, July 7, 1998, as amended at 65 FR 59358, Oct. 5, 2000; 67 FR 43038, June 26, 2002; 68 FR 4958, Jan. 31, 2003; 70 FR 29998, May 25, 2005]

§ 101.141 Microwave modulation.

(a) Microwave transmitters employing digital modulation techniques and operating below 25.25 GHz (except for MVDDS stations in the 12,200–12,700 MHz band) must, with appropriate multiplex equipment, comply with the following additional requirements:

(1) The bit rate, in bits per second, must be equal to or greater than the bandwidth specified by the emission designator in Hertz (*e.g.*, to be acceptable, equipment transmitting at a 20 Mb/s rate must not require a bandwidth of greater than 20 MHz), except the bandwidth used to calculate the minimum rate may not include any authorized guard band.

(i) Stations authorized prior to December 1, 1988 may install equipment after that date with no minimum bit rate. Equipment applied for or authorized prior to April 1, 2005 in the 21.2–23.6 GHz band may be installed with no minimum bit rate.

(ii) However, any digital equipment applied for after April 1, 2005 and equipment replacing existing equipment in the 21.2–23.6 GHz band must meet the bit rate standard.

(2) Equipment to be used for voice transmission placed in service, authorized, or applied for on or before June 1, 1997 in the 2110 to 2130 and 2160 to 2180 MHz bands must be capable of satisfactory operation within the authorized bandwidth to encode at least 96 voice