applicable rules set forth in this chapter, and the conditions on the Per-
mitt ed Space Station List applicable to that space station.

§ 25.132 Verification of earth station antenna performance standards.

(a)(1) All applications for transmitting earth stations, except for earth stations operating in the 20/30 GHz band, must be accompanied by a cer-
tificate pursuant to §2.902 of this chap-
ter from the manufacturer of each an-
tenna that the results of a series of ra-
diation pattern tests performed on rep-
resentative equipment in representa-
tive configurations by the manufac-
turer demonstrates that the equipment com-
plies with the performance stand-
ards set forth in §25.209. The licensee
must be prepared to demonstrate the measurements to the Commission on request.

(2) All applications for transmitting earth stations operating in the 20/30 GHz band must be accompanied by the measurements specified in §§25.138(d) and (e).

(b)(1) In order to demonstrate com-
pliance with §25.209 (a) and (b), the fol-
lowing measurements on a production antenna performed on calibrated an-
tenna range, as a minimum, shall be made at the bottom, middle and top of each allocated frequency band and sub-
mitted to the Commission:

(i) Co-polarized patterns for each of two orthogonal senses of polarizations in two orthogonal cuts of the antenna.

(A) In the azimuth plane, plus and minus 7 degrees and plus and minus 180 degrees.

(B) In the elevation plane, zero to forty-five degrees.

(ii) Cross-polarization patterns in the E- and H-planes, plus and minus 9 de-

(iii) Main beam gain.

(2) The FCC envelope specified in §25.209 shall be superimposed on each pattern. The minimum tests specified above are recognized as representative of the performance of the antenna in most planes although some increase in sidelobe levels should be expected in the spar planes and orthogonal spar planes.

(3) Applicants seeking authority to use an antenna that does not meet the standards set forth in §§25.209(a) and (b), pursuant to the procedure set forth in §25.220, §25.221, §25.222, §25.223 or §25.226, are required to submit a copy of the manufacturer’s range test plots of the antenna gain patterns specified in paragraph (b)(1) of this section.

(c) The tests specified in paragraph (b) of this section are normally per-
formed at the manufacturer’s facility; but for those antennas that are very large and only assembled on-site, on-
site measurements may be used for product qualification data. If on-site data is to be used for qualification, the test frequencies and number of pat-
terns should follow, where possible, the recommendations in paragraph (b) of this section, and the test data is to be submitted in the same manner as de-
scribed in paragraph (a) of this section.

(d) For each new or modified trans-
mitting antenna over 3 meters in di-
ameter, the following on-site verification measurements must be completed at one frequency on an available transponder in each fre-
quency band of interest and submitted to the Commission.

(1) Co-polarized patterns in the ele-
vation plane, plus and minus 7 degrees, in the transmit band.

(2) Co-polarized patterns in the azi-
muth and elevation planes, plus and minus 7 degrees, in the receive band.

(3) System cross-polarization discrimina-
tion on-axis. The FCC envelope specified in §25.209 shall be superimposed on each pattern. The transmit patterns are to be measured with the aid of a co-
operating earth station in coordination with the satellite system control cen-
ter under the provisions of §25.272.

(e) Certification that the tests re-
quired by paragraph (c) of this section have been satisfactorily performed shall be provided to the Commission in notification that construction of the facilities has been completed as re-
quired by §25.133.
§ 25.133 Period of construction; certification of commencement of operation.

(a)(1) Each license for an earth station governed by this part, except for mobile satellite earth station terminals (METs), shall specify as a condition therein the period in which construction of facilities must be completed and station operation commenced. Construction of the earth station must be completed and the station must be brought into operation within 12 months from the date of the license grant except as may be determined by the Commission for any particular application.

(b)(1) Each license for mobile satellite earth station terminals (METs) shall specify as a condition therein the period in which station operation must be commenced. The networks in which the METs will be operated must be brought into operation within 12 months from the date of the license grant except as may be determined by the Commission for any particular application.

(c) If the facility does not meet the technical parameters set forth in § 25.133, a request for a waiver must be submitted and approved by the Commission before operations may commence.

(d) Each receiving earth station licensed or registered pursuant to § 25.131 must be constructed and placed into service within 6 months after coordination has been completed. Each licensee or registrant must file with the Commission a certification that the facility is completed and operating as provided in paragraph (b) of this section, with the exception of certification of antenna patterns.

§ 25.133 Period of construction; certification of commencement of operation.

(f) Antennas less than 3 meters in diameter and antennas on simple (manual) drive mounts that are operated at a fixed site are exempt from the requirements of paragraphs (c) and (d) of this section provided that a detailed technical showing is made that confirms proper installation, pointing procedures, and polarization alignment and manufacturing quality control. These showing must also include a plan for periodic testing and field installation procedures and precautions.

(g) Records of the results of the tests required by this section must be maintained at the antenna site or the earth station operator’s control center and be available for inspection.


§ 25.134 Licensing provisions of Very Small Aperture Terminal (VSAT) and C-band Small Aperture Terminal (CSAT) networks.

(a)(1) VSAT networks operating in the 12/14 GHz bands. All applications for digital VSAT networks granted on or before September 15, 2005, with a maximum outbound downlink EIRP density of +10.0 dBW/4 kHz per carrier...