

Frequency band (MHz)	Radio service					Notes
	Common carrier (part 101)	Private radio (part 101)	Broadcast auxiliary (part 74)	Other (parts 15, 21, 24, 25, 74, 78, & 100)		
18,820–18,920	CC	OFS	SAT
19,160–19,260	CC	OFS	SAT

7. Section 101.107 is amended by revising the table in paragraph (a) to read as follows:

§ 101.107 Frequency tolerance.

(a) * * *

Frequency (MHz)	Frequency tolerance (percent)
928 to 929 ⁵	0.0005
932 to 932.5	0.00015
932.5 to 935	0.00025
941 to 941.5	0.00015
941.5 to 944	0.00025
952 to 960 ⁵	0.0005
1,850 to 1,990	0.002
2,110 to 2,200	0.001
2,450 to 2,500 ¹	0.001
3,700 to 4,200 ¹	0.005
5,925 to 6,875 ¹	0.005
10,550 to 11,700 ^{1,2}	0.005
11,700 to 12,200 ¹	0.005
12,200 to 13,250 ⁴	0.005
14,200 to 14,400	0.03
17,700 to 18,820 ³	0.003
18,820 to 18,920 ³	0.001
928 to 929 ⁵	0.0005
18,920 to 19,700 ³	0.003
19,700 to 27,500 ^{4,7}	0.001
27,500 to 28,350	0.001
29,100 to 29,250	0.001
31,000 to 31,300 ⁶	0.001
31,300 to 40,000 ⁴	0.03

¹Applicable only to common carrier LTTS stations. Tolerance for 2450–2500 MHz is 0.005%. Beginning Aug. 9, 1975, this tolerance will govern the marketing of LTTS equipment and the issuance of all such authorizations for new radio equipment. Until that date new equipment may be authorized with a frequency tolerance of .03% in the frequency range 2,200 to 10,500 MHz and .05% in the range 10,500 MHz to 12,200 MHz, and equipment so authorized may continue to be used for its life provided that it does not cause interference to the operation of any other licensee.

²See subpart G of this part for the stability requirements for transmitters used in the Digital Electronic Message Service.

³Existing type accepted equipment with a frequency tolerance of $\pm 0.03\%$ may be marketed until December 1, 1988. Equipment installed and operated prior to December 1, 1988 may continue to operate after that date with a minimum frequency tolerance of $\pm 0.03\%$. However, the replacement of equipment requires that the current tolerance be met.

⁴Applicable to private operational fixed point-to-point microwave and stations providing MVDDS.

⁵For private operational fixed point-to-point microwave systems, with a channel greater than or equal to 50 KHz bandwidth, $\pm 0.0005\%$; for multiple address master stations, regardless of bandwidth, $\pm 0.00015\%$; for multiple address remote stations with 12.5 KHz bandwidths, $\pm 0.00015\%$; for multiple address remote stations with channels greater than 12.5 KHz bandwidth, $\pm 0.0005\%$.

⁶For stations authorized prior to March 11, 1997, transmitter tolerance shall not exceed 0.03%.

⁷The frequency tolerance for stations authorized on or before April 1, 2005 is 0.03%. Existing licensees and pending applicants on that date may continue to operate after that date with a frequency tolerance of 0.03%, provided that it does not cause harmful interference to the operation of any other licensee. For analog systems, if the channel bandwidth is greater than 30 MHz up to 50 MHz, the frequency tolerance standard will be 0.03%; if the channel bandwidth is 30 MHz or less, then the frequency tolerance standard will be 0.003%. This analog standard is conditional provided that harmful interference is not caused to digital stations operating within the 0.001% tolerance standards. If harmful interference is caused to stations operating with the more stringent standard, the onus shall be on the operators with the less stringent parameters to develop an engineering solution to the problem. For exceptions, see § 101.147 and § 101.507.

8. Section 101.109 is amended by revising the frequency band of 21,200 to 23,600 table in paragraph (c) to read as follows:

§ 101.109 Bandwidth.

(c) * * *

Frequency band (MHz)	Maximum authorized bandwidth
21,200 to 23,600	50 MHz ^{1,4}

9. Section 101.111 is amended by revising (a)(2)(i) through (a)(2)(iv) to read as follows:

§ 101.111 Emission limitations.

(a) * * *
(2) * * *

(i) For operating frequencies below 15 GHz, in any 4 kHz band, the center frequency of which is removed from the assigned frequency by more than 50 percent up to and including 250 percent of the authorized bandwidth: As specified by the following equation but in no event less than 50 decibels:

$$A = 35 + 0.8(P - 50) + 10 \log_{10} B.$$

(Attenuation greater than 80 decibels or to an absolute power of less than -13 dBm/1MHz is not required.)

where:

A = Attenuation (in decibels) below the mean output power level.

P = Percent removed from the center frequency of the transmitter bandwidth.

B = Authorized bandwidth in MHz.

Note: MVDDS operations in the 12.2–12.7 GHz band shall use 24 megahertz for the value of B in the emission mask equation set forth in this section.

(ii) For operating frequencies above 15 GHz, in any 1 MHz band, the center frequency of which is removed from the assigned frequency by more than 50 percent up to and including 250 percent of the authorized bandwidth: As specified by the following equation but in no event less than 11 decibels:

$$A = 11 + 0.4(P - 50) + 10 \log_{10} B.$$

(Attenuation greater than 56 decibels or to an absolute power of less than -13 dBm/1MHz is not required.)

(iii) In any 1 MHz band, the center frequency of which is removed from the assigned frequency by more than 250 percent of the authorized bandwidth: At least $43 + 10 \log_{10}$ (the mean output power in watts) decibels, or 80 decibels, whichever is the lesser attenuation. The authorized bandwidth includes the nominal radio frequency bandwidth of an individual transmitter/modulator in block-assigned bands. Equipment licensed prior to April 1, 2005 shall only be required to meet this standard in any 4 kHz band.

(iv) The emission mask for LMDS and the 24 GHz Service shall use the equation in paragraph (a)(2)(ii) of this section and apply it only to the band edge of each block of spectrum, but not