

Federal Communications Commission

§ 2.101

Unwanted Emissions. Consist of spurious emissions and out-of-band emissions. (RR)

[49 FR 2368, Jan. 19, 1984, as amended at 50 FR 25239, June 18, 1985; 51 FR 37399, Oct. 22, 1986; 52 FR 7417, Mar. 11, 1987; 54 FR 49980, Dec. 4, 1990; 55 FR 28761, July 13, 1990; 56 FR 42703, Aug. 29, 1991; 58 FR 68058, Dec. 23, 1993; 62 FR 26242, May 13, 1997; 65 FR 60109, Oct. 10, 2000; 66 FR 50840, Oct. 5, 2001; 68 FR 74330, Dec. 23, 2003; 70 FR 23039, May 4, 2005; 70 FR 46583, Aug. 10, 2005; 71 FR 15619, Mar. 29, 2006; 72 FR 31192, June 6, 2007; 73 FR 25421, May 6, 2008; 75 FR 62933, Oct. 13, 2010; 78 FR 25161, Apr. 29, 2013]

Subpart B—Allocation, Assignment, and Use of Radio Frequencies

SOURCE: 49 FR 2373, Jan. 19, 1984, unless otherwise noted.

§ 2.100 International regulations in force.

The ITU *Radio Regulations*, Edition of 2004, have been incorporated to the extent practicable in Subparts A and B of this part, except that the International

Table within § 2.106 has been updated to reflect the ITU *Radio Regulations*, Edition of 2008.

[75 FR 62933, Oct. 13, 2010]

§ 2.101 Frequency and wavelength bands.

(a) The radio spectrum shall be subdivided into nine frequency bands, which shall be designated by progressive whole numbers in accordance with the following table. As the unit of frequency is the hertz (Hz), frequencies shall be expressed:

(1) In kilohertz (kHz), up to and including 3 000 kHz;

(2) In megahertz (MHz), above 3 MHz, up to and including 3 000 MHz;

(3) In gigahertz (GHz), above 3 GHz, up to and including 3 000 GHz.

(b) However, where adherence to these provisions would introduce serious difficulties, for example in connection with the notification and registration of frequencies, the lists of frequencies and related matters, reasonable departures may be made.¹

Band number	Symbols	Frequency range (lower limit exclusive, upper limit inclusive)	Corresponding metric subdivision	Metric abbreviations for the bands
4	VLF	3 to 30 kHz	Myriametric waves	B.Mam
5	LF	30 to 300 kHz	Kilometric waves	B.km
6	MF	300 to 3 000 kHz	Hectometric waves	B.hm
7	HF	3 to 30 MHz	Decametric waves	B.dam
8	VHF	30 to 300 MHz	Metric waves	B.m
9	UHF	300 to 3 000 MHz	Decimetric waves	B.dm
10	SHF	3 to 30 GHz	Centimetric waves	B.cm
11	EHF	30 to 300 GHz	Millimetric waves	B.mm
12	300 to 3 000 GHz	Decimillimetric waves

Note 1: "Band N" (N = band number) extends from 0.3×10^N Hz to 3×10^N Hz.

Note 2: Prefix: k = kilo (10^3), M = mega (10^6), G = giga (10^9).

(c) In communications between administrations and the ITU, no names, symbols or abbreviations should be used for the various frequency bands

other than those specified in this section.

[70 FR 46583, Aug. 10, 2005; 70 FR 53074, Sept. 7, 2005; 75 FR 62933, Oct. 13, 2010]

¹In the application of the ITU *Radio Regulations*, the Radiocommunication Bureau uses the following units:

kHz: For frequencies up to 28 000 kHz inclusive;

MHz: For frequencies above 28 000 kHz up to 10 500 MHz inclusive; and

GHz: For frequencies above 10 500 MHz.