

§ 15.245

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**§ 15.245 Operation within the bands 902–928 MHz, 2435–2465 MHz, 5785–5815 MHz, 10500–10550 MHz, and 24075–24175 MHz.**

(a) Operation under the provisions of this section is limited to intentional radiators used as field disturbance sensors, excluding perimeter protection systems.

(b) The field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

Fundamental frequency (MHz)	Field strength of fundamental (millivolts/meter)	Field strength of harmonics (millivolts/meter)
902–928 .....	500	1.6
2435–2465 .....	500	1.6
5785–5815 .....	500	1.6
10500–10550 .....	2500	25.0
24075–24175 .....	2500	25.0

(1) Regardless of the limits shown in the above table, harmonic emissions in the restricted bands below 17.7 GHz, as specified in § 15.205, shall not exceed the field strength limits shown in § 15.209. Harmonic emissions in the restricted bands at and above 17.7 GHz shall not exceed the following field strength limits:

(i) For the second and third harmonics of field disturbance sensors operating in the 24075–24175 MHz band and for other field disturbance sensors designed for use only within a building or to open building doors, 25.0 mV/m.

(ii) For all other field disturbance sensors, 7.5 mV/m.

(iii) Field disturbance sensors designed to be used in motor vehicles or aircraft must include features to prevent continuous operation unless their emissions in the restricted bands, other than the second and third harmonics from devices operating in the 24075–24175 MHz band, fully comply with the limits given in § 15.209. Continuous operation of field disturbance sensors designed to be used in farm equipment, vehicles such as fork lifts that are intended primarily for use indoors or for very specialized operations, or railroad locomotives, railroad cars and other equipment which travels on fixed tracks is permitted. A field disturbance sensor will be considered not to be operating in a continuous mode if its op-

eration is limited to specific activities of limited duration (e.g., putting a vehicle into reverse gear, activating a turn signal, etc.).

(2) Field strength limits are specified at a distance of 3 meters.

(3) Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in § 15.209, whichever is the lesser attenuation.

(4) The emission limits shown above are based on measurement instrumentation employing an average detector. The provisions in § 15.35 for limiting peak emissions apply.

[54 FR 17714, Apr. 25, 1989, as amended at 55 FR 46792, Nov. 7, 1990; 61 FR 42558, Aug. 16, 1996; 68 FR 68547, Dec. 9, 2003]

**§ 15.247 Operation within the bands 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz.**

(a) Operation under the provisions of this Section is limited to frequency hopping and digitally modulated intentional radiators that comply with the following provisions:

(1) Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400–2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW. The system shall hop to channel frequencies that are selected at the system hopping rate from a pseudo randomly ordered list of hopping frequencies. Each frequency must be used equally on the average by each transmitter. The system receivers shall have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shall shift frequencies in synchronization with the transmitted signals.

(i) For frequency hopping systems operating in the 902–928 MHz band: if the 20 dB bandwidth of the hopping channel is less than 250 kHz, the system shall