

## § 18.307

limits shall be adjusted using 1/d as an attenuation factor.

[50 FR 36070, Sept. 5, 1985, as amended at 51 FR 17970, May 16, 1986; 52 FR 43197, Nov. 10, 1987]

### § 18.307 Conduction limits.

For the following equipment, when designed to be connected to the public utility (AC) power line the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies shall not exceed the limits in the following tables. Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal using a 50  $\mu$ H/50 ohms line impedance stabilization network (LISN).

(a) All Induction cooking ranges and ultrasonic equipment:

Frequency of emission (MHz)	Conducted limit (dB $\mu$ V)	
	Quasi-peak	Average
0.009–0.05 .....	110 .....	—
0.05–0.15 .....	90–80* .....	—
0.15–0.5 .....	66 to 56* .....	56 to 46*
0.5–5 .....	56 .....	46
5–30 .....	60 .....	50

\*Decreases with the logarithm of the frequency.

(b) All other part 18 consumer devices:

Frequency of emission (MHz)	Conducted limit (dB $\mu$ V)	
	Quasi-peak	Average
0.15–0.5 .....	66 to 56* .....	56 to 46*
0.5–5 .....	56 .....	46
5–30 .....	60 .....	50

\*Decreases with the logarithm of the frequency.

Frequency band in which device operates (MHz)	Range of frequency measurements	
	Lowest frequency	Highest frequency
Below 1.705 .....	Lowest frequency generated in the device, but not lower than 9 kHz.	30 MHz.
1.705 to 30 .....	Lowest frequency generated in the device, but not lower than 9 kHz.	400 MHz.
30 to 500 .....	Lowest frequency generated in the device or 25 MHz, whichever is lower.	Tenth harmonic or 1,000 MHz, whichever is higher.
500 to 1,000 .....	Lowest frequency generated in the device or 100 MHz, whichever is lower.	Tenth harmonic.
Above 1,000 .....	.....do .....	Tenth harmonic or highest detectable emission.

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(c) RF lighting devices:

Frequency (MHz)	Maximum RF line voltage measured with a 50 $\mu$ H/50 ohm LISN ( $\mu$ V)
Non-consumer equipment:	
0.45 to 1.6 .....	1,000
1.6 to 30 .....	3,000
Consumer equipment:	
0.45 to 2.51 .....	250
2.51 to 3.0 .....	3,000
3.0 to 30 .....	250

(d) If testing with a quasi-peak detector demonstrates that the equipment complies with the average limits specified in the appropriate table in this section, additional testing to demonstrate compliance using an average detector is not required.

(e) These conduction limits shall apply only outside of the frequency bands specified in § 18.301.

(f) For ultrasonic equipment, compliance with the conducted limits shall preclude the need to show compliance with the field strength limits below 30 MHz unless requested by the Commission.

(g) The tighter limits shall apply at the boundary between two frequency ranges.

[50 FR 36067, Sept. 5, 1985, as amended at 52 FR 43198, Nov. 10, 1987; 64 FR 37419, July 12, 1999; 67 FR 45671, July 10, 2002]

### § 18.309 Frequency range of measurements.

(a) For field strength measurements: