Standard Applicable:

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the Commission's guidelines. See § 1.1307(b)(1) of this Chapter.

Limit

Limits for general population/Uncontrolled exposure

Frequency Range [MHz]	Electric Field Strength (E) [V/m]	Magnetic Field Strength (H) [A/m]	Power Density (S) [mW/cm^2]	Averaging Time $\|E\|^2$, $\|H\|^2$ or S [minutes]
0.3 - 1.34	614	1.63	(100)	30
1.34 - 30	824/f	2.19/f	(180/f^2)	30
30 - 300	27.5	0.073	0.2	30
300 - 1 500	--	--	f/1 500	30
1 500 - 100 000	--	--	1.0	30

f = frequency in MHz *Plane-wave equivalent power density

MPE Prediction

Predication of MPE limit at a given distance.

Equation from page 18 of OET Bulletin 65, Edition 97-01

$S=PG/4\pi R^2$

Where: S = power density (in appropriate units, e.g. mW/cm^2)
P = power input to the antenna (in appropriate units, e.g., mW)
G = power gain of the antenna in the direction of interest relative to an isotropic radiator
R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

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Measurement Result:

Type of Modulation	Frequency [MHz]	Output Power [dBm]	Target power [dBm]	Allowed tolerance [dB]	Max tune up power [dBm]	Max tune up power [mW]	Antenna Gain [dBi]	RF exposure	Limit
802.11b	2 412	-0.15	-2.00	± 2.00	0.0	1.00	2.00	0.000 32	1.00
	2 442	-2.25	-4.00	± 2.00	-2.0	0.63	2.00	0.000 20	1.00
	2 472	-4.11	-6.00	± 2.00	-4.0	0.40	2.00	0.000 13	1.00
802.11g	2 412	-0.10	-2.00	± 2.00	0.0	1.00	2.00	0.000 32	1.00
	2 442	-1.68	-3.50	± 2.00	-1.5	0.71	2.00	0.000 22	1.00
	2 472	-3.58	-5.50	± 2.00	-3.5	0.45	2.00	0.000 14	1.00
802.11n(HT20)	**2 412**	**0.52**	**-1.00**	**± 2.00**	**1.0**	**1.26**	**2.00**	**0.000 40**	**1.00**
	2 442	-1.95	-3.50	± 2.00	-1.5	0.71	2.00	0.000 22	1.00
	2 472	-3.69	-5.50	± 2.00	-3.5	0.45	2.00	0.000 14	1.00

Test Result

The power density level at 20 cm is 0.000 40 mW/cm^2 which is below the uncontrolled exposure limit of 1 mW/cm^2 at 2 412 MHz.

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