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)

Maximum peak output power at antenna input	:	-7.28 dBm (0.187 mW)
Prediction distance	:	20 cm
Predication frequency	:	2 425 MHz
Antenna gain(Max)	:	-2.30 dBi (0.588 8 numeric)
Power density at predication frequency at 20 cm	:	0.000 021 9 mW/cm^2
MPE Limit for	:	1 mW/cm^2

Test Result

The power density level at 20 cm is 0.000 021 9 mW/cm^2 which is below the uncontrolled exposure limit of 1 mW/cm^2 at 2 425 MHz to 2 475 MHz.

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