

* Standalone SAR test exclusion considerations

1. Applicable Standard

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 level in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.2m normally can be maintained between the user and the device.

a) Limits for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Times E 2, H 2 or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f)*	6
30-300	61.4	0.163	1.0	6
300-1500			F/300	6
1500-10000			5	6

b) 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 Times E 2, H 2 or S (minutes)
0.3-3.0	614	1.63	(100)*	30
3.0-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-10000			1.0	30

Note : f=frequency in MHz

***=Plane-wave equivalent power density**

2. MPE Calculation Method

S = power density

P = power input to antenna

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

Predication of MPE limit at a given distance, Equation from OET Bulletin 65, Edition 97-01

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

3. Calculated Result and Limit

(R = 20cm)

Mode	Channel	Max. tune up Power		Antenna Gain		Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Result
		(dBm)	(mW)	(dBi)	(numeric)			
802.11b	Low	23.84	242.103	5.05	3.199	0.154	1.00	PASS
	Middle	23.44	220.800	5.05	3.199	0.141	1.00	PASS
	High	23.69	233.884	5.05	3.199	0.149	1.00	PASS
802.11g	Low	25.52	356.451	5.05	3.199	0.227	1.00	PASS
	Middle	22.16	164.437	5.05	3.199	0.105	1.00	PASS
	High	25.10	323.594	5.05	3.199	0.206	1.00	PASS
802.11n20	Low	23.58	228.034	5.05	3.199	0.145	1.00	PASS
	Middle	21.79	151.008	5.05	3.199	0.096	1.00	PASS
	High	25.22	332.660	5.05	3.199	0.212	1.00	PASS