

* 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

DC 5.0V

(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	18.500	70.795	-3.540	0.443	0.006233	1	PASS
	Middle	18.500	70.795	-3.540	0.443	0.006233	1	PASS
	High	18.500	70.795	-3.540	0.443	0.006233	1	PASS
802.11g	Low	23.000	199.526	-3.540	0.443	0.017568	1	PASS
	Middle	23.000	199.526	-3.540	0.443	0.017568	1	PASS
	High	23.000	199.526	-3.540	0.443	0.017568	1	PASS
802.11n20	Low	22.500	177.828	-3.540	0.443	0.015658	1	PASS
	Middle	22.000	158.489	-3.540	0.443	0.013955	1	PASS
	High	22.000	158.489	-3.540	0.443	0.013955	1	PASS

DC 48V(POE)**(R = 20cm)**

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	Middle	18.500	70.795	-3.540	0.443	0.006233	1	PASS
	High	18.500	70.795	-3.540	0.443	0.006233	1	PASS
802.11g	Low	23.000	199.526	-3.540	0.443	0.017568	1	PASS
	Middle	23.000	199.526	-3.540	0.443	0.017568	1	PASS
	High	23.000	199.526	-3.540	0.443	0.017568	1	PASS
802.11n20	Low	22.000	158.489	-3.540	0.443	0.013955	1	PASS
	Middle	22.000	158.489	-3.540	0.443	0.013955	1	PASS
	High	22.000	158.489	-3.540	0.443	0.013955	1	PASS