

* 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	Frequency (MHz)	Max. Tune-up Power		Antenna Gain		Power Density (S)	Limit of Power Density (S)	Result
		(dBm)	(mW)	(dBi)	(numeric)	(mW/cm ²)	(mW/cm ²)	
WCDMA 850	826.40	23.000	199.526	-1.500	0.708	0.028	0.551	PASS
	836.60	23.000	199.526	-1.500	0.708	0.028	0.558	PASS
	846.60	23.000	199.526	-1.500	0.708	0.028	0.564	PASS
HSUPA 850	826.40	23.000	199.526	-1.500	0.708	0.028	0.551	PASS
	836.60	23.000	199.526	-1.500	0.708	0.028	0.558	PASS
	846.60	23.000	199.526	-1.500	0.708	0.028	0.564	PASS
WCDMA 1900	1852.40	23.000	199.526	-1.200	0.759	0.030	1.000	PASS
	1880.00	23.000	199.526	-1.200	0.759	0.030	1.000	PASS
	1907.60	23.000	199.526	-1.200	0.759	0.030	1.000	PASS
HSUPA 1900	1852.40	23.000	199.526	-1.200	0.759	0.030	1.000	PASS
	1880.00	23.000	199.526	-1.200	0.759	0.030	1.000	PASS
	1907.60	23.000	199.526	-1.200	0.759	0.030	1.000	PASS