FCC ID : 2AWE8GPRSSTICK

RF EXPOSURE EVALUATION

According to §1.1307(b)(1) and KDB 447498 D06 General RF Exposure Guidance v06, system operating under the provisions of this section shall be operating in a manner that the public is not exposed to radio frequency energy level in excess limit for maximum permissible exposure.

(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 $\lvert E \rvert^2$, $\lvert H \rvert^2$ 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
1500-100000	/	/	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 $\lvert E \rvert^2$, $\lvert H \rvert^2$ or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	F/1500	30
1500-100000	/	/	1	30

Note: f = frequency in MHz: * = Plane-wave equivalents power density

MPE Calculation Method

S = (30*P*G) / (377*R2)

S = power density (in appropriate units, e.g., mw/cm2)

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,

the power gain factor is normally numeric gain.

R = distance to the center of radiation of the antenna (in appropriate units, e.g., cm)

MPE Calculation Result

Device category: Mobile device

For GSM850:

Maximum peak output power: 33.0 (dBm)

Maximum peak output power at antenna input terminal: 1995.26 (mW)

Prediction distance: >30(cm)

Prediction frequency: 824.2 (MHz)

Antenna gain: 3.0 (dBi)

Directional gain (numeric gain): 2.0

The worst case is power density at prediction frequency at 30cm:

0.35(mw/cm2)

MPE limit for general population exposure at prediction frequency: 0.55 (mw/cm2)

Result: Pass

For GSM1900:

Maximum peak output power: <u>30.0 (dBm)</u>

Maximum peak output power at antenna input terminal:<u> 1000 (mW)</u>

Prediction distance:<u> >30(cm)</u>

Prediction frequency: <u>1850.2 (MHz)</u>

Antenna gain: <u>3 (dBi)</u>

Directional gain (numeric gain): <u>2.00</u>

The worst case is power density at prediction frequency at 30cm:

<u>0.18(mw/cm2)</u>

MPE limit for general population exposure at prediction frequency: <u>1 (mw/cm2)</u>

Result: Pass