FCC§1.1307(b)(1) &§2.1091-RF EXPOSURE

1. Applicable Standard

According to FCC§part 1.1310 and §Part 2.1091 (Mobile Devices)RF exposure is calculated.

Frequency Range(MHz)	Electric Field Stength(V/m)	Magnetic Field Stength(A/m)	Power Density (mW/cm²)	Averaging Time (minute)
Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f²)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

f=frequency in MHz

*=Plane-wave equivalent power density

2.Prediction of MPE limit at given distance, equations from OET Bulletin 65, Edition 97·01:

$S = (1.64 * P * G) / (4 * \pi * R^2)$ (where PG = ERP)

$S = (P * G) / (4 * \pi * R^2)$ (where PG = EIRP)
Where:
S = power density

P= power input to antenna

G= numeric gain of the antenna

R= distance to the center of radiation of the antenna

a   700MHz Lower ABC Band (Uplink 698~716MHz):

Maximum peak output power at antenna input terminal (dBm):	-23.15
Maximum peak output power at antenna input terminal (mW):	0.0048
Prediction frequency (MHz):	698.7
Maximum antenna gain (dBi):	12.5
Maximum antenna gain (dBd):	10.35
Maximum antenna gain (numeric):	10.84
Maximum RF output power (ERP, mW):	0.052
MPE limit for uncontrolled exposure at predication frequency (mW/ cm²):	0.466

Prediction distance (cm) R= $\sqrt{\dfrac{1.64 * P * G}{S * 4 * 3.14}}$:   0.12

b   700MHz UpperC Band (Uplink 776~787MHz):

Maximum peak output power at antenna input terminal (dBm):	-23.49
Maximum peak output power at antenna input terminal (mW):	0.0045
Prediction frequency (MHz):	781.5
Maximum antenna gain (dBi):	12.5
Maximum antenna gain (dBd):	10.35
Maximum antenna gain (numeric):	10.84
Maximum RF output power (ERP, mW):	0.049
MPE limit for uncontrolled exposure at predication frequency (mW/ cm²):	0.521

Prediction distance (cm) R= $\sqrt{\dfrac{1.64 * P * G}{S * 4 * 3.14}}$:   0.11

c   850MHz Band (824~849MHz):

Maximum peak output power at antenna input terminal (dBm):	-23.31
Maximum peak output power at antenna input terminal (mW):	0.0047
Prediction frequency (MHz):	836.5
Maximum antenna gain (dBi):	12.5
Maximum antenna gain (dBd):	10.35
Maximum antenna gain (numeric):	10.84
Maximum RF output power (ERP, mW):	0.051
MPE limit for uncontrolled exposure at predication frequency (mW/ cm²):	0.567

Prediction distance (cm) R= $\sqrt{\dfrac{1.64 * P * G}{S * 4 * 3.14}}$:   0.11

d   1900MHz Broadband PCS (1850~1910MHz):

Maximum peak output power at antenna input terminal (dBm):	-22.90
Maximum peak output power at antenna input terminal (mW):	0.0051
Prediction frequency (MHz):	1910
Maximum antenna gain (dBi):	12.5
Maximum antenna gain (dBd):	10.35
Maximum antenna gain (numeric):	10.84

Maximum RF output power (ERP, mW):	0.055
MPE limit for uncontrolled exposure at predication frequency (mW/ cm²):	1

Prediction distance (cm) $R=\sqrt{\dfrac{1.64 * P * G}{S * 4 * 3.14}}$:   0.084

e   AWS-1 Band (1710~1755MHz)

Maximum peak output power at antenna input terminal (dBm):	-23.58
Maximum peak output power at antenna input terminal (mW):	0.0044
Prediction frequency (MHz):	1732.5
Maximum antenna gain (dBi):	12.5
Maximum antenna gain (dBd):	10.35
Maximum antenna gain (numeric):	10.84
Maximum RF output power (ERP, mW):	0.048
MPE limit for uncontrolled exposure at predication frequency (mW/ cm²):	1

Prediction distance (cm) $R=\sqrt{\dfrac{1.64 * P * G}{S * 4 * 3.14}}$:   0.08

3. Test Results

The above all ,when the Maximum antenna gain is 12.5dBi and the shortest distance from the human

specific is 0.12cm, ,the device is compliant with the requirement MPE limit for uncontrolled exposure.