MPE ESTIMATION

FCC ID: 2A9K2-RSHGW018

1,Per FCC Part 2.1091 Radiofrequency radiation exposure evaluation: mobile devices, the limit for General Population/ Uncontrolled Exposures

Frequency	Power density (mW/ cm^2)	Averaging time(minutes)
300MHz----1.5GHz	F/1500	30
1.5GHz---100GHz	1.0	30

Note: F= Frequency in MHz

2, Estimation Result

Mode	Frequency (MHz)	Max PK Output power(dBm)	Tune Up Power(dBm)	Max Tune Up power(mW)	Antenna Gain(dBi)	Antenna Gain (linear)	MPE (mW/cm²)
BLE	2480	4.52	4±1(5)	3.16	1.05	1.27	0.0008
Zigbee	2480	-2.94	-2±1(-1)	0.79	1.11	1.29	0.0002

$$Pd = \frac{Pout * G}{4\pi r^2};$$

Note:

Note: The estimation distance is 20cm

Note:

PK Output power= conducted power.

Conducted power see the test report **HK2403131125-1E/2E**, antenna gain=1.05dBi(BLE), 1.11dBi(Zigbee)

BLE MPE (max)= 0.0008 (mW/cm²)

Zigbee(max)= 0.0002 (mW/cm²)

simultaneously MPE=0.0008+0.0002=0.001(mW/cm²)

When the minimum test separation distance is >20 cm, a distance of 20 cm is applied to determine RF Exposure test exclusion. The test exclusion threshold is 0.001 mW/cm² which is< 1.0mW/cm², RF Exposure testing is not required.

-------The End-------