



# MPE ESTIMATION

FCC ID: 2A409-8013

## 1, Limit for General Population/ Uncontrolled Exposures

| Frequency        | Power density (mW/ cm <sup>2</sup> ) | 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/cm <sup>2</sup> ) |
|----------|-----------------|--------------------------|--------------------|-----------------------|-------------------|-----------------------|---------------------------|
| 2.4GWiFi | 2412            | 14.79                    | 14±1(15)           | 31.62                 | 1                 | 1.2589                | 0.00792                   |
| BT       | 2480            | 2.87                     | 2±1(3)             | 2.00                  | 1                 | 1.2589                | 0.00050                   |
| 5.8GWiFi | 5775            | 13.33                    | 12.5±1(13.5)       | 22.39                 | 1                 | 1.2589                | 0.00561                   |

$$Pd = \frac{P_{out} * G}{4\pi r^2} :$$

Note:

Note: The estimation distance is 20cm

Note:

PK Output power= conducted power.

Conducted power see the test report **HK2201070083-1E/2E/3E**, 2.4G WIFI antenna gain=1dBi, BT antenna gain=1dBi, 5.8G WIFI antenna gain=1dBi

The device could not transmit simultaneously in 5.8GWIFI and 2.4GWIFI.

simultaneously MPE= BT+WIFI=0.00050+0.00792=0.00842 mW/cm<sup>2</sup>

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 0.00842 mW/cm<sup>2</sup> which is < 1.0mW/cm<sup>2</sup>, RF Exposure testing is not required.

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