

# MPE ESTIMATION

FCC ID: 2BAIV-FIREFLY

1,Per FCC Part 2.1091 Radiofrequency radiation exposure evaluation: mobile devices, the 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> ) |
|---------|-----------------|--------------------------|--------------------|-----------------------|-------------------|-----------------------|---------------------------|
| EDR     | 2441            | 8.81                     | 8±1(9)             | 7.94                  | 0                 | 1.00                  | 0.00158                   |
| BLE     | 2440            | 1.5                      | 1±1(2)             | 1.58                  | 0                 | 1.00                  | 0.00031                   |
| 5.8G TX | 5806            | 14.02                    | 14±1(15)           | 31.62                 | 2                 | 1.58                  | 0.00994                   |

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

Note:

Note: The estimation distance is 20cm

Note:

PK Output power= conducted power.

Conducted power see the test report **HK2410226209-1E/2E/3E**, antenna gain=2dBi(5.8G TX ), 0dBi(BT)

5.8G TX (max)= 0.00994 (mW/cm<sup>2</sup>)

BT (max)= 0.00158 (mW/cm<sup>2</sup>)

simultaneously MPE=0.00994+0.00158=0.01152(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 0.01152 mW/cm<sup>2</sup> which is < 1.0mW/cm<sup>2</sup>, RF Exposure testing is not required.

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