

# MPE ESTIMATION

FCC ID: SMH-TBB85RX

1, According to §1.1310, 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

|               | Max PK Output power(dBm) | Tune Up Power(dBm) | Max Tune Up power(mW) | Antenna Gain(dBi) | Antenna Gain (numerical) | MPE (mW/cm <sup>2</sup> ) |
|---------------|--------------------------|--------------------|-----------------------|-------------------|--------------------------|---------------------------|
| 5.2GWiFi ANT1 | 9.92                     | 9±1(10)            | 10.000                | 4.89              | 3.08                     | 0.00614                   |
| 5.2GWiFi ANT2 | 10.29                    | 10±1(11)           | 12.589                | 4.89              | 3.08                     | 0.00773                   |
| MIMO          | /                        | /                  | /                     | /                 | /                        | 0.01387                   |
| 5.8GWiFi ANT1 | 9.67                     | 9±1(10)            | 10.000                | 5.13              | 3.26                     | 0.00649                   |
| 5.8GWiFi ANT2 | 9.98                     | 9±1(10)            | 10.000                | 5.13              | 3.26                     | 0.00649                   |
| MIMO          | /                        | /                  | /                     | /                 | /                        | 0.01298                   |

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

Note:

Note: The estimation distance is 20cm

Note:

PK Output power= conducted power in mW.

G=power gain of the antenna in the direction of interest relative to an isotropic radiator

R=distance to the center of radiation of the antenna in cm

Conducted power see the test report **HK2412268085-1E/2E**.

5.2G antenna 1 gain=4.89dBi, 5.2G antenna 2 gain=4.89dBi;

5.8G antenna 1 gain=5.13dBi, 5.8G antenna 2 gain=5.13dBi.

5G WIFI MPE (max)= 0.01387 (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 0.01387mW/cm<sup>2</sup> which is< 1.0mW/cm<sup>2</sup>, RF Exposure testing is not required.

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