

## MPE ESTIMATION

## FCC ID: 2ASYM-CONTROLLER

## 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                      |

## 2, Estimation Result

### For 2.4G WIFI:

| Mode     | Max PK Output<br>power(dBm) | Tune Up<br>Power(dBm) | Max Tune Up<br>power(mW) | Antenna<br>Gain(dBi) | Antenna Gain<br>(linear) | MPE<br>(mW/cm <sup>2</sup> ) |
|----------|-----------------------------|-----------------------|--------------------------|----------------------|--------------------------|------------------------------|
| 11b      | 13.04                       | 13 ± 1(14)            | 25.12                    | 1                    | 1.2589                   | 0.00629                      |
| 11g      | 11.98                       | 11 ± 1(12)            | 15.85                    | 1                    | 1.2589                   | 0.00397                      |
| 11n/HT20 | 12.13                       | 12 ± 1(13)            | 19.95                    | 1                    | 1.2589                   | 0.00500                      |
| 11n/HT40 | 10.79                       | 10 ± 1(11)            | 12.59                    | 1                    | 1.2589                   | 0.00315                      |

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

**Note:**

Note: The estimation distance is 20cm

Note: PK Output power= conducted power.

Conducted power see the test report HK1903070392-E, antenna gain=1dBi.

| Mode                                                                                                              | CH   | PK Output power(dBm) | Output power(mW) | Antenna Gain(dBi) | Antenna Gain (linear) | MPE (mW/cm <sup>2</sup> ) |
|-------------------------------------------------------------------------------------------------------------------|------|----------------------|------------------|-------------------|-----------------------|---------------------------|
| 11b                                                                                                               | CH1  | 12.97                | 19.82            | 1                 | 1.2589                | 0.00497                   |
|                                                                                                                   | CH6  | 12.88                | 19.41            | 1                 | 1.2589                | 0.00486                   |
|                                                                                                                   | CH11 | 13.04                | 20.14            | 1                 | 1.2589                | 0.00505                   |
| 11g                                                                                                               | CH1  | 11.82                | 15.21            | 1                 | 1.2589                | 0.00381                   |
|                                                                                                                   | CH6  | 11.98                | 15.78            | 1                 | 1.2589                | 0.00395                   |
|                                                                                                                   | CH11 | 11.43                | 13.90            | 1                 | 1.2589                | 0.00348                   |
| 11n/HT20                                                                                                          | CH1  | 11.07                | 12.79            | 1                 | 1.2589                | 0.00321                   |
|                                                                                                                   | CH6  | 12.13                | 16.33            | 1                 | 1.2589                | 0.00409                   |
|                                                                                                                   | CH11 | 11.14                | 13.00            | 1                 | 1.2589                | 0.00326                   |
| 11n/HT40                                                                                                          | CH1  | 10.79                | 11.99            | 1                 | 1.2589                | 0.00301                   |
|                                                                                                                   | CH4  | 10.72                | 11.80            | 1                 | 1.2589                | 0.00296                   |
|                                                                                                                   | CH7  | 10.35                | 10.84            | 1                 | 1.2589                | 0.00272                   |
| $Pd = \frac{P_{out} * G}{4\pi r^2};$                                                                              |      |                      |                  |                   |                       |                           |
| Note:                                                                                                             |      |                      |                  |                   |                       |                           |
| Note: The estimation distance is 20cm                                                                             |      |                      |                  |                   |                       |                           |
| Note: PK Output power= conducted power.<br>Conducted power see the test report HK1903070392-E, antenna gain=1dBi. |      |                      |                  |                   |                       |                           |

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