

MPE Calculation

| RF function  | Mode(TX Antenna)    | Transmitting frequency (MHz) | Max Target Power (dBm) | ANT Gain (dBi) | Maximum EIRP (dBm) | Maximum EIRP (mW) | Maximum power density (mW/cm <sup>2</sup> ) | Requiriment (mW/cm <sup>2</sup> ) |
|--------------|---------------------|------------------------------|------------------------|----------------|--------------------|-------------------|---------------------------------------------|-----------------------------------|
| Bluetooth    | 1Mbps               | 2441.0                       | 4.50                   | 3.50           | 8.00               | 6.310             | 0.0013                                      | 1.000                             |
| Bluetooth    | 2,3Mbps             | 2441.0                       | 3.50                   | 3.50           | 7.00               | 5.012             | 0.0010                                      | 1.000                             |
| Bluetooth LE | 1Mbps               | 2440.0                       | 6.00                   | 3.50           | 9.50               | 8.913             | 0.002                                       | 1.000                             |
| WLAN 2.4GHz  | 802.11b (Antenna 2) | 2437.0                       | 20.00                  | 3.50           | 23.50              | 223.873           | 0.045                                       | 1.000                             |
| WLAN 2.4GHz  | 802.11g (Antenna 2) | 2437.0                       | 17.50                  | 3.50           | 21.00              | 125.893           | 0.026                                       | 1.000                             |
| WLAN 2.4GHz  | 802.11n-HT20 (2TX)  | 2437.0                       | 19.50                  | 3.50           | 23.00              | 199.527           | 0.040                                       | 1.000                             |
| WLAN 2.4GHz  | 802.11n-HT40 (2TX)  | 2437.0                       | 20.00                  | 3.50           | 23.50              | 223.873           | 0.045                                       | 1.000                             |
|              |                     |                              |                        |                |                    |                   |                                             |                                   |
|              |                     |                              |                        |                |                    |                   |                                             |                                   |

Note: Please refer to the operation description for Max target power.

The EUT will only be used with a separation of 20 centimeters or greater between the antenna and the body of the user.

The MPE sample calculation for this exposure is shown below.

▪  $S = \text{EIRP} / (4 R^2 \pi)$

= 6.31 / (4 X 20<sup>2</sup> X π)

= 0.0013 mW/cm<sup>2</sup>

- Note

S= Maximum power density(mW/cm<sup>2</sup>)

EIRP= Equivalent Isotropic Radiated Power(mW)

R= Distance to the center of the radiation of the antenn

▪ Limits for Maximum Permissible Exposure (MPE)

| Frequency range (MHz) | Electric Field strength (V/m) | Magnetic field strength (A/m) | Power Density (mW/cm <sup>2</sup> ) | Averageing time (minutes) |
|-----------------------|-------------------------------|-------------------------------|-------------------------------------|---------------------------|
| 0.3 ~ 1.34            | 614                           | 1.63                          | *100                                | 30                        |
| 1.34 ~ 30             | 824/f                         | 2.19 / f                      | *180 / f <sup>2</sup>               | 30                        |
| 30 ~ 300              | 27.5                          | 0.073                         | 0.2                                 | 30                        |
| 300 ~ 1,500           |                               |                               | f / 1500                            | 30                        |
| 1,500 ~ 100,000       |                               |                               | 1.0                                 | 30                        |

Conclusion : The exposure condition of this device is compliant with FCC