

# Appendix 6

## RF Exposure Information

**Maximum transmitter power:**

<b>802.11b</b>		
Frequency (MHz)	Maximum peak output power (dBm)	Output power(mW)
2412	18.6	72.44
2437	18.4	69.18
2462	18.6	72.44
<b>802.11g</b>		
Frequency (MHz)	Maximum peak output power (dBm)	Output power(mW)
2412	20.1	102.33
2437	20.5	112.20
2462	20.8	120.23
<b>802.11n</b>		
Frequency (MHz)	Maximum peak output power (dBm)	Output power(mW)
2412	18.9	77.62
2437	19.1	81.28
2462	19.4	87.10
<b>BLE</b>		
Frequency (MHz)	Maximum peak output power (dBm)	Output power(mW)
2402	-4.21	0.38
2440	-4.92	0.32
2480	-5.25	0.30

According to the manufacturer's installation instruction, the EUT operating in standalone mobile exposure conditions which minimum test separation distance is 20cm between the antenna and radiating structures of the device and nearby persons.

For Maximum Permissible Exposure (MPE) evaluation, the maximum power density at 20 cm from this mobile transmitter shall be less than the General Population / Uncontrolled MPE limit in OET Bulletin 65 and meet the requirement listed in KDB447498.

**Evaluation:**

The maximum conducted output power of WIFI is 120.23mW,

$$\begin{aligned} \text{The power density at 20cm} &= (120.23\text{mW} \times 1.58) / 4\pi R^2 \\ &= 0.0378 \text{ mWcm}^{-2} \end{aligned}$$

The maximum conducted output power of BLE is 0.38mW,

$$\begin{aligned} \text{The power density at 20cm} &= (0.38\text{mW} \times 1.58) / 4\pi R^2 \\ &= 0.00012 \text{ mWcm}^{-2} \end{aligned}$$

Sum of the MPE ratios for all simultaneous transmitting antennas = 0.0378/1 + 0.00012/1 = 0.03792

**Conclusion:**

In the frequency range of 1,500 - 100,000MHz, the MPE limit is 1.0 mWcm<sup>-2</sup> for general population and uncontrolled exposure. As the measured power density at 20cm from the transmitter is lower than the MPE limit, the compliance to the MPE limit can be ensured by indicating the minimum 20cm separation between the transmitter's radiating structures and body of the user or nearby persons.

The sum of the MPE ratios for all simultaneous transmitting antennas is <=1.0, therefore, simultaneous transmission MPE test exclusion applied.