

Maximum transmitter power:

802.11b		
Frequency (MHz)	Maximum peak output power (dBm)	Output power(mW)
2412	12.2	16.60
2437	13.8	23.99
2462	13.1	20.42
802.11g		
Frequency (MHz)	Maximum peak output power (dBm)	Output power(mW)
2412	14.8	30.20
2437	16.3	42.66
2462	14.8	30.20
802.11n		
Frequency (MHz)	Maximum peak output power (dBm)	Output power(mW)
2412	14.1	25.70
2437	15.5	35.48
2462	14.4	27.54
BLE		
Frequency (MHz)	Maximum peak output power (dBm)	Output power(mW)
2402	0.5	1.13
2440	-3.5	0.45
2480	-1.9	0.65

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 42.66mW,

$$\begin{aligned} \text{The power density at 20cm} &= (42.66\text{mW} \times 1) / 4\pi R^2 \\ &= 0.0085 \text{ mWcm}^{-2} \end{aligned}$$

The maximum conducted output power of BLE is 1.13mW,

$$\begin{aligned} \text{The power density at 20cm} &= (1.13\text{mW} \times 1) / 4\pi R^2 \\ &= 0.000225 \text{ mWcm}^{-2} \end{aligned}$$

Sum of the MPE ratios for all simultaneous transmitting antennas = $0.0085/1 + 0.000225/1 = 0.008725$

Conclusion:

In the frequency range of 1,500 - 100,000MHz, the MPE limit is 1.0 mWcm^{-2} 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.