



# **RF Exposure**

**WM-BN-BM-26\_A**

**802.11b/g/n + BT Wireless LAN Module**

**FCCID: COF-WMBNBM26A**

## 1. RF Exposure

### 1.1 Limits for Maximum Permissible Exposure (MPE)

TABLE 1 TO §1.1310(E)(1)—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> )	Averaging time (minutes)
<b>(i) Limits for Occupational/Controlled Exposure</b>				
0.3-3.0	614	1.63	*(100)	≤6
3.0-30	1842/f	4.89/f	*(900/f <sup>2</sup> )	<6
30-300	61.4	0.163	1.0	<6
300-1,500			f/300	<6
1,500-100,000			5	<6
<b>(ii) Limits for General Population/Uncontrolled Exposure</b>				
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

f = frequency in MHz. \* = Plane-wave equivalent power density.

### 1.2 MPE Calculation Formula

$$P_d = (P_{out} * G) / (4 * \pi * r^2)$$

Where

$P_d$  = power density in mW/cm<sup>2</sup>

$P_{out}$  = output power to antenna in mW

G = gain of antenna in linear scale

$\pi$  = 3.1416

r = distance between observation point and center of the radiator in cm

### 1.3 Classification

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. Therefore, the device is classified as applicable of Table 1, Maximum Permissible Exposure

### 1.4 Antenna Gain

Brand	Model	Antenna Gain (dBi)	Freq. Range (GHz)	Antenna Type	Connector Type
Inventek	W2.4-5P-U	2.6	2400-2500	PCB	U.FI

## 1.5 Calculation Result of Maximum Conducted Power

Operation Mode	Evaluation Frequency (MHz)	Max Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
WLAN	2437	281.19	2.6	20	0.1018	1
BT-EDR	2441	5.495	2.6	20	0.0020	1
BT-LE	2480	4.92	2.6	20	0.0018	1

Note:

1. Determining compliance based on the results of the compliance measurement, not taking into account measurement.
2. WLAN and BT technology cannot transmit at the same time.