

Maximum Permissive Exposure

FCC ID: BEJWF500

Product Name: Wi-Fi/Bluetooth Dongle

Model No: AN-WF500

1. According to FCC CFR 47 §1.1310, the criteria listed in the following table shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b).

Table 1 Limits for Maximum Permissible Exposure

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Average Time (Minutes)
(A) Limits For Occupational / Control Exposures (f = frequency)				
30-300	61.4	0.163	1.0	6
300-1500	...	...	f/300	6
1500-100,000	...	...	5.0	6
(B) Limits For General Population / Uncontrolled Exposure (f = frequency)				
30-300	27.5	0.073	0.2	30
300-1500	...	...	f/1500	30
1500-100,000	...	...	1.0	30

2. MPE Calculation

For 2.4GHz WLAN:

Based on safety distance 20cm, the antenna gain is 2.81dBi, and the power output is 445.65mW, the power density is 0.169mW/cm².

RF Exposure Calculations:

$$S = (P * G) / (4 * \pi * r^2) \text{ or } r = \sqrt{(P * G) / (4 * \pi * S)}$$

Where S = Power Density in mW/cm²

P = 18.84 dBm = 76.559mW

G = 1.44dBi = 1.393 Numerical

r = 20cm

$$S = 76.559 * 1.393 / (4 * \pi * 20^2) = 0.0212 \text{ mW/cm}^2$$

For WIFI 5GHz WLAN:

Based on safety distance 20cm, the antenna gain is 0.94dBi, and the power output is 290.40mW, the power density is 0.0717mW/cm^2.

RF Exposure Calculations:

$$S = (P * G) / (4 * \pi * r^2) \text{ or } r = \sqrt{(P * G) / (4 * \pi * S)}$$

Where S = Power Density in mW/cm^2

P = 19.46 dBm = 88.307 mW

G = 0.61 dBi = 1.15 Numerical

r = 20cm

$$S = 88.307 * 1.15 / (4 * \pi * 20^2) = 0.0202 \text{ mW/cm}^2$$

For BT:

Based on safety distance 20cm, the antenna gain is 0.94dBi, and the power output is 290.40mW, the power density is 0.0717mW/cm^2.

RF Exposure Calculations:

$$S = (P * G) / (4 * \pi * r^2) \text{ or } r = \sqrt{(P * G) / (4 * \pi * S)}$$

Where S = Power Density in mW/cm^2

P = 5.423 dBm = 3.485 mW

G = -3.84 dBi = 0.413 Numerical

r = 20cm

$$S = 3.485 * 0.413 / (4 * \pi * 20^2) = 0.002 \text{ mW/cm}^2$$

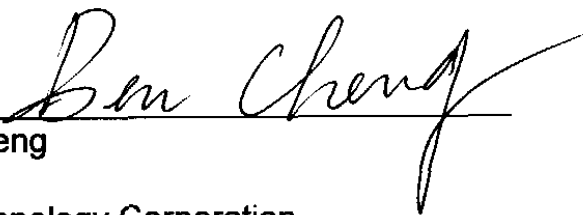
2.4GHz WIFI+BT

WLAN MPE (mW/cm^2)	BT MPE (mW/cm^2)	Total MPE (mW/cm^2)	Limit (mW/cm^2)	Compliance or not
0.0212	0.002	0.0232	1	YES

5GHz WIFI+BT

WLAN MPE (mW/cm^2)	BT MPE (mW/cm^2)	Total MPE (mW/cm^2)	Limit (mW/cm^2)	Compliance or not
0.0202	0.002	0.0222	1	YES

Sincerely Yours,



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