

Maximum Permissive Exposure

FCC ID: AK8WXT2HM2001
Product Name: WIFI+BT Module
Model No: WXT2HM2001

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

Sony Group Corporation declares that the product described above has been evaluated and found to comply with the RF exposure limits for humans, as specified based on ANSI/FCC recommendation.

Mode	Max Output Power (dBm)	Tune-up factor	Tune-up max power (dBm)
BT	11.93	1.016	12
Wireless 2.4G	16.40	1.148	17
Wireless 5G	18.43	1.140	19
Wireless 6G	13.63	1.250	14.6

**The value presented in the MPE is the maximum tune-up power.

1. MPE Calculation

● BT MPE

Based on safety distance (r) **20cm**, the antenna gain (G) is **2.070Numerical**, and the highest power output (P) is **15.849mW**, the power density (S) is **0.006527mW/cm²**.

RF Exposure Calculations:

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

Where :

Based on safety distance (r)=	20 cm
Highest Power Output (P)=	12.0 dBm = 15.849 mW
Antenna Gain (G)=	3.16 dBi = 2.070 Numerical
MPE (S) = (P*G) / (4*π*r ²) =	= (15.549*2.070)/(4*π*20²)= 0.006527 mW/cm²

- Wireless 2.4G MPE

Based on safety distance (r) **20cm**, the antenna gain (G) is **4.467Numerical**, and the highest power output (P) is **50.119mW**, the power density (S) is **0.044540mW/cm²**.

RF Exposure Calculations:

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

Where :

Based on safety distance (r)=	20 cm
Highest Power Output (P)=	17.0 dBm = 50.119 mW
Antenna Gain (G)=	6.5 dBi = 4.467 Numerical
MPE (S) = (P*G) / (4* π *r ²) =	= (50.119*4.467)/(4*π*20²)= 0.044540 mW/cm²

- Wireless 5G MPE

Based on safety distance (r) **20cm**, the antenna gain (G) is **5.916Numerical**, and the highest power output (P) is **79.433mW**, the power density (S) is **0.093489mW/cm²**.

RF Exposure Calculations:

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

Where :

Based on safety distance (r)=	20 cm
Highest Power Output (P)=	19.0 dBm = 79.433 mW
Antenna Gain (G)=	7.72 dBi = 5.916 Numerical
MPE (S) = (P*G) / (4* π *r ²) =	= (79.433*5.916)/(4*π*20²)= 0.093489 mW/cm²

- Wireless 6G MPE

Based on safety distance (r) **20cm**, the antenna gain (G) is **5.495Numerical**, and the highest power output (P) is **28.840mW**, the power density (S) is **0.031528mW/cm²**.

RF Exposure Calculations:

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

Where :

Based on safety distance (r)=	20 cm
Highest Power Output (P)=	14.6 dBm = 28.840 mW
Antenna Gain (G)=	7.4 dBi = 5.495 Numerical
MPE (S) = (P*G) / (4* π *r ²) =	= (28.840*5.495)/(4*π*20²)= 0.031528 mW/cm²

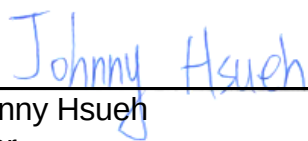
2. MPE Calculation for Simultaneous

MPE			
BT (mW/cm ²)	Wireless 2.4G (mW/cm ²)	Total (mW/cm ²)	Limit (mW/cm ²)
0.006527	0.044540	0.051067	≤ 1

MPE			
BT (mW/cm ²)	Wireless 5G (mW/cm ²)	Total (mW/cm ²)	Limit (mW/cm ²)
0.006527	0.093489	0.100016	≤ 1

MPE			
BT (mW/cm ²)	Wireless 6G (mW/cm ²)	Total (mW/cm ²)	Limit (mW/cm ²)
0.006527	0.031528	0.038055	≤ 1

Sincerely Yours,



Mr. Johnny Hsueh
Manager
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