

Maximum Permissible Exposure

FCC ID: MDZAA70WW

Product Name: Video Conferencing Equipment

Model No: AA70WW

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

Amtran Technology Co., Ltd. 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.

(PS: The out power is reference to FCC ID: VOB-P2180 that is owned by NVIDIA Corporation)

2. MPE Calculation

2.1 WIFI 2.4G MPE

Based on safety distance (r) **20cm**, the antenna gain (G) is **1.910 Numerical**, and the highest power output (P) is **60.814mW**, the power density (S) is **0.023108mW/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)=	17.84 dBm = 60.814 mW
Antenna Gain (G)=	2.81 dBi = 1.910 Numerical
MPE (S) = (P*G) / (4*π*r ²) =	= (201.837*2.891)/(4*π*20²)= 0.023108 mW/cm²

2.2 BT MPE

Based on safety distance (r) **20cm**, the antenna gain (G) is **1.820 Numerical**, and the highest power output (P) is **11.561mW**, the power density (S) is **0.004186mW/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)=	10.63 dBm =	11.561 mW
Antenna Gain (G)=	2.6 dBi =	1.820 Numerical
MPE (S) = (P*G) / (4*π*r ²) =	= (11.561*2.570)/(4*π*20²)= 0.004186 mW/cm²	

2.3 WIFI 5G MPE

Based on safety distance (r) **20cm**, the antenna gain (G) is **3.105 Numerical**, and the highest power output (P) is **84.918mW**, the power density (S) is **0.052456mW/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)=	19.29 dBm =	84.918 mW
Antenna Gain (G)=	4.92 dBi =	3.105 Numerical
MPE (S) = (P*G) / (4*π*r ²) =	= (84.918*3.776)/(4*π*20²)= 0.052456 mW/cm²	

MPE			
WIFI 2.4G (mW/cm ²)	BT (mW/cm ²)	Total (mW/cm ²)	Limit (mW/cm ²)
0.023108	0.004186	0.027294	≤ 1

MPE			
WIFI 5G (mW/cm ²)	BT (mW/cm ²)	Total (mW/cm ²)	Limit (mW/cm ²)
0.052456	0.004186	0.056642	≤ 1

Sincerely Yours,



Mr. Ben Cheng
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