Maximum Permissive Exposure

FCC ID: MDZAA55WW
Product Name: Video Conferencing Equipment
Model No: AA55WW

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 **2.891 Numerical,** and the highest power output (P) is **60.814mW**, the power density (S) is **0.034977mW/cm^2.**

RF Exposure Calculations:
$S = (P * G) / (4 * \pi * r^2)$ 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)=	4.61	dBi =	**2.891**	Numerical
MPE (S) = (P*G) / ($4*\pi*r^2$) =	**= (201.837*2.891)/($4*\pi*20^2$)=**		**0.034977**	mW/cm^2

2.2 BT MPE

Based on safety distance (r) **20cm**, the antenna gain (G) is **2.570 Numerical,** and the highest power output (P) is **11.561mW**, the power density (S) is **0.005911mW/cm^2.**

RF Exposure Calculations:
$S = (P * G) / (4 * \pi * r^2)$ 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)=	4.10	dBi =	**2.570**	Numerical
MPE (S) = (P*G) / (4*π*r^2) =	**= (11.561*2.570)/(4*π*20^2)=**		**0.005911**	mW/cm^2

2.3 WIFI 5G MPE

Based on safety distance (r) **20cm**, the antenna gain (G) is **3.776 Numerical,** and the highest power output (P) is **84.918mW**, the power density (S) is **0.063791mW/cm^2.**

RF Exposure Calculations:
$S = (P * G) / (4 * \pi * r^2)$ 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)=	5.77	dBi =	**3.776**	Numerical
MPE (S) = (P*G) / (4*π*r^2) =	**= (84.918*3.776)/(4*π*20^2)=**		**0.063791**	mW/cm^2

MPE			
WIFI 2.4G (mW/cm^2)	BT (mW/cm^2)	Total (mW/cm^2)	Limit (mW/cm^2)
0.034977	0.005911	0.040888	≦1

MPE			
WIFI 5G (mW/cm^2)	BT (mW/cm^2)	Total (mW/cm^2)	Limit (mW/cm^2)
0.063791	0.005911	0.069702	≦1

Sincerely Yours,

Ben Cheng

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