Maximum Permissive Exposure

FCC ID: BEJ-WL1BKT23
Product Description: Wireless Audio Module
Model No: WL1BKT23

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
LG Electronics USA 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)
U-NII Band 1	5.10	1.176	6.0
U-NII Band 3	7.16	1.187	8.5

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

U-NII Band 1

Based on safety distance (r) **20cm**, the antenna gain (G) is **1.570 Numerical,** and the highest power output (P) is **3.98mW**, the power density (S) is **0.001243mW/cm^2.**

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) =	6.0	dBm =	**3.98**	mW
Antenna Gain (G) =	1.96	dBi =	**1.570**	Numerical
MPE (S) = (P*G) / (4*π*r^2) =	**(3.98*1.570)/(4*π*20^2) =**		0.001243	mW/cm^2

U-NII Band 3

Based on safety distance (r) **20cm**, the antenna gain (G) is **1.560 Numerical,** and the highest power output (P) is **7.08mW**, the power density (S) is **0.002197mW/cm^2.**

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) =	8.5	dBm =	**7.08**	mW
Antenna Gain (G) =	1.93	dBi =	**1.560**	Numerical
MPE (S) = (P*G) / (4*π*r^2) =	**(7.08*1.560)/(4*π*20^2) =**		0.002197	mW/cm^2

Sincerely Yours,

Mr. Johnny Hsueh
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