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Maximum Permissive Exposure

FCC ID: ROW-CDB1048B20
 Product Name: Bluetooth audio module
 M/N: CDB-BM1048B20-00

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 Exposures (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

GT Technology Chongqing Limited 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.

RF Exposure Calculations: $S = (P * G) / (4 * \pi * r^2)$ or $r = \sqrt{(P * G) / (4 * \pi * S)}$

2.1. Estimation Result

Bluetooth:

Mode	Frequency (MHz)	PK Output power (dBm)	Output power (mW)	antenna Gain (dBi)	antenna Gain (linear)	MPE (mW/cm ²)
GFSK (DSS)	2402	5.776	3.78	4.23	2.65	0.00199
	2441	3.836	2.42	4.23	2.65	0.00128
	2480	1.629	1.46	4.23	2.65	0.00077
8-DPSK (DSS)	2402	5.826	3.82	4.23	2.65	0.00202
	2441	4.659	2.92	4.23	2.65	0.00154
	2480	2.093	1.62	4.23	2.65	0.00085

Based on safety distance (r) **20cm**, the antenna gain (G) is **2.65 Numerical**, and the highest power output (P) is **3.82mW**, the power density (S) is **0.00202mW/cm²**.