



CTK Co., Ltd.
The Power Leader of Global Regulatory Compliance

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RF EXPOSURE EVALUATION

FCC ID : 2APDI-BCM-LN200-AS

Standard Requirement

The following FCC Rule Parts and procedures are applicable :

Part 1.1310 Radiofrequency radiation exposure limits

Table 1 below sets forth limits for Maximum Permissible Exposure (MPE) to radiofrequency electromagnetic fields.

Table 1—Limits for Maximum Permissible Exposure (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*100	6
3.0-30	1842/f	4.89/f	*900/f ²	6
30-300	61.4	0.163	1.0	6
300-1,500			f/300	6
1,500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*100	30
1.34-30	824/f	2.19/f	*180/f ²	30
30-300	27.5	0.073	0.2	30
300-1,500			f/1500	30
1,500-100,000			1.0	30

f = frequency in MHz

* = Plane-wave equivalent power density



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MPE calculation

$$S = \text{EIRP} / (4\pi R^2)$$

Where S : Power density (mW/cm²)
EIRP (mW) : P * T * G
EIRP (dBm) : P + T + G
P (dBm) : Maximum transmitter power
G (dBi) : Antenna gain
T (dB) : Power tolerance
R (cm) : Safety distance

Safety distance(R) : 20 cm

EUT RF Exposure

Mode	Frequency [MHz]	Conducted Output power [dBm]	Antenna Gain [dBi]	Power tolerance [dB]	EIRP [dBm]	EIRP [mW]	Power density [mW/cm ²]	Limit [mW/cm ²]
Bluetooth LE 1Mbps	2 402	5.08	-1.52	+ 1.5	5.06	3.21	0.0006	1
Bluetooth LE 2Mbps	2 480	0.88	-1.52	+ 1.5	0.86	1.22	0.0002	1

Conclusion

This confirms compliance to the required Radio frequency radiation exposure limit.