FCC ID: BEJ-LVRF001

According to KDB 447498 D04 Interim General RF Exposure Guidance v01

1. MPE-Based Exemption

An alternative to the SAR-based exemption is provided in § 1.1307(b)(3)(i)(C), for a much wider frequency range, from 300 kHz to 100 GHz, applicable for separation distances greater or equal to $\lambda/2\pi$, where λ is the free-space operating wavelength in meters. The MPE-based test exemption condition is in terms of ERP, defined as the product of the maximum antenna gain and the delivered maximum time-averaged power. For this case, a RF source is an RF exempt device if its ERP (watts) is no more than a frequency-dependent value, as detailed tabular form in Appendix B. These limits have been derived based on the basic specifications on Maximum Permissible Exposure (MPE) considered for the FCC rules in § 1.1310(e)(1).

Table 1 to 1.1307(b)(3)(i)(c) – Single RF Sources Subject to Routine Environmental Evaluation

RF Source Frequency (MHz)	Threshold ERP (watts)
0.3-1.34	1 920 R^2
1.34-30	3 450 R^2/f^2
30-300	3.83 R^2
300-1 500	0.012 8 $R^2 f$
1 500-100 000	19.2 R^2

2. RF Exposure Test Exemptions for Single Source

Mode	Frequency Range (㎒)	Minimum Separation Distance (㎝)	Maximum Average Output Power (dBm)	Antenna Gain (dBi)	ERP (dBm)	ERP (㎽)	Threshold ERP (㎽)	Ratio	Result
Bluetooth Low energy	2 400 ~ 2 483.5	20	7.50	1.57	6.92	4.92	768	0.006	Pass
WLAN 2.4G	2 400 ~ 2 483.5	20	20	1.57	19.42	87.50	768	0.114	Pass

Note ;

- Bluetooth Low Energy and WLAN 2.4G can't simultaneous transmission at the same time.
- ERP (dBm) = Maximum average output power (dBm) + Antenna gain (dBi) - 2.15 (dB).
- The ERP threshold as the "R must be at least λ/2π" as per 1.1307 b)3)C) table 1
- Maximum average output power is the manufacturer's declared rated power

3. Conclusion: No SAR is required.