FCC ID: TQ8-ADB10SWEN

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 ㎑ to 100 ㎓, applicable for separation distances greater or equal to λ/2π, 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 (㎒)	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^2f
1 500-100 000	19.2 R^2

2. RF Exposure Test Exemptions for Single Source

Mode	Frequency Range (㎒)	Minimum Separation Distance (㎝)	Maximum Average Target Power (dBm)	Maximum Tune up (dB)	Maximum Average Power (dBm)	Antenna Gain (dBi)	ERP		P_{th}	Ratio	Result
							(dBm)	(㎽)	(㎽)		
Bluetooth	2 400 ~ 2 483.5	20	2	3	5.0	-0.18	2.67	1.85	768	0.002	Pass
WLAN (2.4㎓)	2 400 ~ 2 483.5	20	4	2	6.0	-0.01	3.84	2.42	768	0.003	Pass
WLAN (5㎓)	5 150 ~ 5 250	20	8	2	10.0	-0.61	7.24	5.30	768	0.007	Pass
WLAN (5㎓)	5 250 ~ 5 350	20	8	2	10.0	-0.18	7.67	5.85	768	0.008	Pass
WLAN (5㎓)	5 470 ~ 5 725	20	5	2	7.0	-0.77	4.08	2.56	768	0.003	Pass
WLAN (5㎓)	5 725 ~ 5 850	20	2.5	2	4.5	-0.18	2.17	1.65	768	0.002	Pass

Note ;

- Maximum average target power is the manufacturer's declared rated power.
- Maximum average power = Maximum average target power (㏈m) + Maximum tune up (㏈).
- ERP (㏈m) = Maximum average Power (㏈m) + Antenna Gain (㏈i) -2.15

3. RF Exposure Test Exemptions for Simultaneous Transmission

Mode	P_i/P_{th} Ratio Mode A	P_i/P_{th} Ratio Mode B	Σ P_i/P_{th} Ratio Mode A+B	Limit	Result
Bluetooth + WLAN(5G)	0.002	0.008	0.010	1	Pass

Note;

- Bluetooth and WLAN can transmit simultaneously.

Conclusion: No SAR is required.