FCC ID: 2BN2L-GEN2S2PLUS

According to KDB 447498 D04 Interim General RF Exposure Guidance v01

1. SAR-based Exemption

A more comprehensive exemption, considering a variable power threshold that depends on both the separation distance and power, is provided in § 1.1307(b)(3)(i)(B). This exemption is applicable to the frequency range between 300 ㎒ and 6 ㎓, with test separation distances between 0.5 ㎝ and 40 ㎝, and for all RF sources in fixed, mobile, and portable device exposure conditions.

Accordingly, a RF source is considered an RF exempt device if its available maximum time-averaged (matched conducted) power or its effective radiated power (ERP), whichever is greater, are below a specified threshold. This exemption threshold was derived based on general population 1-g SAR requirements and is detailed in Appendix C.

$$P_{th}\ (\text{mW}) = \begin{cases} ERP_{20\,cm}(d/20\ \text{cm})^{x} & d \le 20\ \text{cm} \\ ERP_{20\,cm} & 20\ \text{cm} < d \le 40\ \text{cm} \end{cases}$$

Where

$$x = -\log_{10}\left(\frac{60}{ERP_{20\,cm}\sqrt{f}}\right) \text{ and } f \text{ is in GHz;}$$

and

$$ERP_{20\,cm}\ (\text{mW}) = \begin{cases} 2040f & 0.3\ \text{GHz} \le f < 1.5\ \text{GHz} \\ 3060 & 1.5\ \text{GHz} \le f \le 6\ \text{GHz} \end{cases}$$

2. RF Exposure Test Exemptions for Single Source

Mode	Frequency Range (㎒)	Minimum Separation Distance (㎝)	Maximum Average Target Power (dBm)	Tolerance (dB)	Maximum Average Output Power		Ant. Gain (dBi)	ERP		Limits P_{th} (㎽)	Ratio[1)]	Result
					(dBm)	(㎽)		(dBm)	(㎽)			
Zigbee	2 425 ~ 2 475	10	2	0.3	2.3	1.70	-0.47	-0.32	0.929	819.95	0.002	Pass

Note ;

- Maximum average target power is the manufacturer's declared rated power.
- ERP(㏈m) = Maximum average output power(㏈m) + Antenna gain(㏈i) - 2.15

1) A greater value between the ERP(㏈m) and the Maximum Average Output Power(㏈m) is applied.

3. Conclusion: No SAR is required.