FCC ID: GDDJW-5000

According to §15.247(i) and §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.
According to KDB447498 D01 General RF Exposure Guidance V06
The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:
[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] * [√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where
f(GHz) is the RF channel transmit frequency in GHz；
Power and distance are rounded to the nearest mW and mm before calculation；
The result is rounded to one decimal place for comparison；
The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.
We use 5mm as separation distance to calculate.

Maximum measured transmitter power:
Antenna Gain: 2.9 dBi

TestMode	Antenna	Frequency[MHz]	Conducted Peak Powert[dBm]	EIRP [dBm]	maximum power (dBm)	Result calculation	1-g SAR
BLE_1M	Ant1	2402	-0.75	2.15	3	0.618	3
		2440	-0.95	1.95	3	0.623	3
		2480	-0.64	2.26	3	0.628	3
BLE_2M	Ant1	2402	-0.72	2.18	3	0.618	3
		2440	-0.94	1.96	3	0.623	3
		2480	-0.66	2.24	3	0.628	3

Conclusion:
For the max result : 0.628≤ 3.0 for 1-g SAR extremity SAR, No SAR is required.

➢ Test Standards and Limits

1. According to KDB 447498 D01 v06, Section 4.3.1

2. FCC Radiofrequency radiation exposure limits:

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤50 mm are determined by:
[(max power of channel)/(min test separation distance)]*[√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where
• f(GHz) is the RF channel transmit frequency in GHz
• Power and distance are rounded to the nearest mW and mm
• The result is rounded to one decimal place for comparison
• 3.0 and 7.5 are referred to as the numeric thresholds
The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm, and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm according to 4.1 f) is applied to determine SAR test exclusion.
For 2.4G band device, the limit of worse case is
P_{max}≤3.0*D_{min})/ f =3.0*5/ [√2.474] =9.537mW

➢ Measurement and Calculation

1. Maximum transmit power

SRD 2.4G, Antenna Gain: 2.9 dBi

Operation Mode	Channel Number	Channel Frequency (MHz)	Emission Level(dBuV/m)	EIRP (dBm)
2.4G SRD	0	2402	90.84	-4.39
	19	2440	89.45	-5.78
	39	2480	91.28	-3.94
* EIRP[dBm] = E[dBμV/m] + 20 log(d[meters]) - 104.77				

2. MPE Calculation

According to the formula. calculate the EIRP test result:
EIRP= 0.4mW < 9.525mW

So the SAR report is not required.

Signature:  **Date:** 2024.1.18

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