FCC ID: 2AROAGPG-100

Portable device

According to §15.247(e)(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 SAR 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

When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

LoRa Antenna Type: Built-in helical antenna; Antenna Gain: 0.3 dBi

Modulation	Channel Freq. (GHz)	Conducted power (dBm)	Conducted power (mW)	Tune-up power (dBm)	Max tune-up power (dBm)	Max tune-up power (mW)	Distance (mm)	Result calculation	1g SAR Exclusion threshold	SAR test exclusion
LoRa	0.9150	8.89	7.745	9±1	10	10.000	<5	1.91311	3.00	YES
	0.9190	8.85	7.674	9±1	10	10.000	<5	1.91729	3.00	YES
	0.9225	8.81	7.603	9±1	10	10.000	<5	1.92094	3.00	YES

BT Antenna Type: PCB Antenna Antenna Gain: 2 dBi

Modulation	Channel Freq. (GHz)	Conducted power (dBm)	Conducted power (mW)	Tune-up power (dBm)	Max tune-up power (dBm)	Max tune-up power (mW)	Distance (mm)	Result calculation	1g SAR Exclusion threshold	SAR test exclusion
BLE	2.4020	-3.32	0.466	-4±1	-3	0.501	<5	0.15535	3.00	YES
	2.4400	-3.57	0.440	-4±1	-3	0.501	<5	0.15658	3.00	YES
	2.4800	-4.33	0.369	-4±1	-3	0.501	<5	0.15785	3.00	YES

Conclusion:

For the max result : 1.92094≤ 3.0 for 1-g SAR, No SAR is required.

Signature: **Date:** 2018-12-21

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