

FCC ID:2A3VP-Q41

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:

$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where:

- $f(\text{GHz})$ 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.

BR EDR

Antenna Type: PCB Antenna

Antenna Gain: 2.88dBi

Modulation	Channel Freq. (GHz)	Conduct ed power (dBm)	Conducte d 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
GFSK	2.402	-1.82	0.658	-2±1	-1.0	0.794	<5	0.24622	3.00	YES
	2.441	-2.53	0.558	-2±1	-1.0	0.794	<5	0.24821	3.00	YES
	2.480	-2.77	0.528	-2±1	-1.0	0.794	<5	0.25018	3.00	YES
π/4-DQPSK	2.402	-0.08	0.982	0±1	1.0	1.259	<5	0.39023	3.00	YES
	2.441	-0.56	0.879	0±1	1.0	1.259	<5	0.39338	3.00	YES
	2.480	-0.66	0.859	0±1	1.0	1.259	<5	0.39651	3.00	YES
8DPSK	2.402	0.23	1.054	0±1	1.0	1.259	<5	0.39023	3.00	YES
	2.441	-0.24	0.946	0±1	1.0	1.259	<5	0.39338	3.00	YES
	2.480	-0.31	0.931	0±1	1.0	1.259	<5	0.39651	3.00	YES

BLE:

Antenna Type: PCB Antenna

Antenna Gain: 2.88dBi

Modulation	Channel Freq. (GHz)	Conduct ed power (dBm)	Conducte d 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
GFSK	2.402	-1.87	0.650	-2±1	-1.0	0.794	<5	0.24622	3.00	YES
	2.44	-1.46	0.714	-2±1	-1.0	0.794	<5	0.24816	3.00	YES
	2.480	-2.04	0.625	-2±1	-1.0	0.794	<5	0.25018	3.00	YES

SIMULTANEOUS TRANSMISSIONS

When a number of sources at different frequencies, and/or broadband sources, contribute to the total exposure, it becomes necessary to weigh each contribution relative to the MPE. To comply with the MPE, the fraction of the MPE in terms of E^2 , H^2 (or power density) incurred within each frequency interval should be determined and the sum of all such fractions should not exceed unity. In order to ensure compliance with the MPE for a controlled environment, the sum of the ratios of the power density to the corresponding MPE should not exceed unity. That is

$$\sum_{i=1}^n \frac{S_i}{MPE_i} \leq 1$$

Transmitting Mode	Result calculation	1g SAR Exclusion threshold	Total S	MPE Limit	Conclusion
BR EDR	0.39651	3	0.216	1.000	Pass
BLE	0.25018	3			

Conclusion: $0.39651/3 + 0.25018/3 \approx 0.216$
For the max result : $0.216 \leq 1$, No SAR is required.



Signature:

Date: 6/26/2023

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