

FCC ID: 2BEGY-VVABC-ULTRA2

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(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.

BT3.0

| 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 | SAR Exclusion threshold | SAR test exclusion |
|------------|---------------------|------------------------|-----------------------|---------------------|-------------------------|------------------------|---------------|--------------------|-------------------------|--------------------|
| GFSK | 2.402 | 1.88 | 1.54 | 2±1 | 3 | 2.00 | <5 | 0.61847 | 3.00 | YES |
| | 2.441 | 1.93 | 1.56 | 2±1 | 3 | 2.00 | <5 | 0.62347 | 3.00 | YES |
| | 2.480 | 2.12 | 1.63 | 2±1 | 3 | 2.00 | <5 | 0.62843 | 3.00 | YES |
| π/4-DQPSK | 2.402 | 4.96 | 3.13 | 4.5±1 | 5.5 | 3.55 | <5 | 1.09981 | 3.00 | YES |
| | 2.441 | 3.57 | 2.28 | 3.5±1 | 4.5 | 2.82 | <5 | 0.88067 | 3.00 | YES |
| | 2.480 | 3.06 | 2.02 | 3.5±1 | 4.5 | 2.82 | <5 | 0.88768 | 3.00 | YES |
| 8-DQPSK | 2.402 | 5.5 | 3.55 | 5±1 | 6 | 3.98 | <5 | 1.23400 | 3.00 | YES |
| | 2.441 | 4.17 | 2.61 | 4.5±1 | 5.5 | 3.55 | <5 | 1.10870 | 3.00 | YES |
| | 2.480 | 3.9 | 2.45 | 4.5±1 | 5.5 | 3.55 | <5 | 1.11752 | 3.00 | YES |

BLE

| 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 | SAR Exclusion threshold | SAR test exclusion |
|------------|---------------------|------------------------|-----------------------|---------------------|-------------------------|------------------------|---------------|--------------------|-------------------------|--------------------|
| BLE-1M | 2.402 | 2.02 | 1.59 | 2±1 | 3 | 2.00 | <5 | 0.61847 | 3.00 | YES |
| | 2.440 | 1.97 | 1.57 | 2±1 | 3 | 2.00 | <5 | 0.62334 | 3.00 | YES |
| | 2.480 | 2.1 | 1.62 | 2±1 | 3 | 2.00 | <5 | 0.62843 | 3.00 | YES |
| BLE-2M | 2.402 | 1.99 | 1.58 | 2±1 | 3 | 2.00 | <5 | 0.61847 | 3.00 | YES |
| | 2.440 | 2 | 1.58 | 2±1 | 3 | 2.00 | <5 | 0.62334 | 3.00 | YES |
| | 2.480 | 2.12 | 1.63 | 2±1 | 3 | 2.00 | <5 | 0.62843 | 3.00 | YES |

Conclusion:

For the max result : $1.23400 \leq 3.0$ for 1g SAR, SAR is not required.



Signature:

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