

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.

BT:

| Test Mode | Channel Frequency (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 | SAR Exclusion threshold | SAR test exclusion |
|-----------|-------------------------|-----------------------|----------------------|---------------------|-------------------------|------------------------|---------------|--------------------|-------------------------|--------------------|
| GFSK | 2.402 | 3.21 | 2.09 | 2+1 | 3.00 | 2.00 | <5 | 0.721 | 3.00 | YES |
| | 2.441 | 3.89 | 2.45 | 2+1 | 3.00 | 2.00 | <5 | 0.850 | 3.00 | YES |
| | 2.480 | 3.65 | 2.32 | 2+1 | 3.00 | 2.00 | <5 | 0.811 | 3.00 | YES |
| π/4-DQPSK | 2.402 | 5.86 | 3.85 | 3+1 | 4.00 | 2.51 | <5 | 1.328 | 3.00 | YES |
| | 2.441 | 6.36 | 4.33 | 4+1 | 5.00 | 3.16 | <5 | 1.502 | 3.00 | YES |
| | 2.480 | 6.26 | 4.23 | 4+1 | 5.00 | 3.16 | <5 | 1.479 | 3.00 | YES |
| 8-DPSK | 2.402 | 6.32 | 4.29 | 4+1 | 5.00 | 3.16 | <5 | 1.476 | 3.00 | YES |
| | 2.441 | 6.69 | 4.67 | 4+1 | 5.00 | 3.16 | <5 | 1.620 | 3.00 | YES |
| | 2.480 | 6.46 | 4.43 | 4+1 | 5.00 | 3.16 | <5 | 1.549 | 3.00 | YES |

BLE:

| Test Mode | Channel Frequency (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 | SAR Exclusion threshold | SAR test exclusion |
|-----------|-------------------------|-----------------------|----------------------|---------------------|-------------------------|------------------------|---------------|--------------------|-------------------------|--------------------|
| BLE(1M) | 2.402 | -1.89 | 0.65 | 0+1 | 1.00 | 1.26 | <5 | 0.223 | 3.00 | YES |
| | 2.441 | -1.31 | 0.74 | 0+1 | 1.00 | 1.26 | <5 | 0.257 | 3.00 | YES |
| | 2.480 | -1.51 | 0.71 | 0+1 | 1.00 | 1.26 | <5 | 0.247 | 3.00 | YES |
| BLE(2M) | 2.402 | -1.67 | 0.68 | 0+1 | 1.00 | 1.26 | <5 | 0.234 | 3.00 | YES |
| | 2.441 | -1.12 | 0.77 | 0+1 | 1.00 | 1.26 | <5 | 0.268 | 3.00 | YES |
| | 2.480 | -1.41 | 0.72 | 0+1 | 1.00 | 1.26 | <5 | 0.253 | 3.00 | YES |

Conclusion:

For the max result : $1.620 \leq$ FCC Limit 3.0 for 1g SAR.