

FCC ID: 2BODM-EGL435

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 \leq 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.

BLE:

| 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 | SAR Exclusion threshold | SAR test exclusion |
|------------|---------------------|-----------------------|----------------------|---------------------|-------------------------|------------------------|---------------|--------------------|-------------------------|--------------------|
| GFSK | 2.402 | -2.218 | 0.60 | -2±1 | -1.00 | 0.79 | <5 | 0.24622 | 3.00 | YES |
| | 2.44 | -2.309 | 0.59 | -2±1 | -1.00 | 0.79 | <5 | 0.24816 | 3.00 | YES |
| | 2.480 | -3.615 | 0.44 | -3±1 | -2.00 | 0.63 | <5 | 0.19873 | 3.00 | YES |

2.4GHz SRD:

| 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 | SAR Exclusion threshold | SAR test exclusion |
|------------|---------------------|-----------------------|----------------------|---------------------|-------------------------|------------------------|---------------|--------------------|-------------------------|--------------------|
| GFSK | 2.402 | 7.62 | 5.78 | 7±1 | 8.00 | 6.31 | <5 | 1.95576 | 3.00 | YES |

Note: $\text{dbm} = \text{dbuv}/m - 95.2 = 105.16 - 95.2 = 9.96 \text{ dBm}$ (EIRP), so the conducted peak power = $9.96 - 2.34 = 7.62 \text{ dBm}$

Conclusion:

For the max result : $1.95576 \leq$ FCC Limit 3.0 for 1g SAR.