

FCC ID:2BLE5-X10

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.

EDR:

| 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 | 0.999 | 1.26 | 0±1 | 1.00 | 1.26 | <5 | 0.39023 | 3.00 | YES |
| | 2.441 | 2.03 | 1.60 | 2±1 | 3.00 | 2.00 | <5 | 0.62347 | 3.00 | YES |
| | 2.480 | 1.148 | 1.30 | 1±1 | 2.00 | 1.58 | <5 | 0.49918 | 3.00 | YES |
| π /4DQPSK | 2.402 | 1.069 | 1.28 | 1±1 | 2.00 | 1.58 | <5 | 0.49127 | 3.00 | YES |
| | 2.441 | 1.974 | 1.58 | 1±1 | 2.00 | 1.58 | <5 | 0.49524 | 3.00 | YES |
| | 2.480 | 1.181 | 1.31 | 1±1 | 2.00 | 1.58 | <5 | 0.49918 | 3.00 | YES |
| 8DQPSK | 2.402 | 1.201 | 1.32 | 1±1 | 2.00 | 1.58 | <5 | 0.49127 | 3.00 | YES |
| | 2.441 | 2.258 | 1.68 | 2±1 | 3.00 | 2.00 | <5 | 0.62347 | 3.00 | YES |
| | 2.480 | 1.468 | 1.40 | 1±1 | 2.00 | 1.58 | <5 | 0.49918 | 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 |
|------------|---------------------|------------------------|-----------------------|---------------------|-------------------------|------------------------|---------------|--------------------|-------------------------|--------------------|
| GFSK | 2.402 | -6.208 | 0.24 | -6±1 | -5.00 | 0.32 | <5 | 0.09802 | 3.00 | YES |
| | 2.44 | -5.618 | 0.27 | -5±1 | -4.00 | 0.40 | <5 | 0.12437 | 3.00 | YES |
| | 2.480 | -6.574 | 0.22 | -6±1 | -5.00 | 0.32 | <5 | 0.09960 | 3.00 | YES |

2.4GWIFI:

| 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 |
|---------------|---------------------|------------------------|-----------------------|---------------------|-------------------------|------------------------|---------------|--------------------|-------------------------|--------------------|
| 802.11b | 2.412 | 7.598 | 5.75 | 7±1 | 8.00 | 6.31 | <5 | 1.95983 | 3.00 | YES |
| | 2.437 | 7.133 | 5.17 | 7±1 | 8.00 | 6.31 | <5 | 1.96996 | 3.00 | YES |
| | 2.462 | 6.668 | 4.64 | 6±1 | 7.00 | 5.01 | <5 | 1.57280 | 3.00 | YES |
| 802.11g | 2.412 | 7.814 | 6.05 | 7±1 | 8.00 | 6.31 | <5 | 1.95983 | 3.00 | YES |
| | 2.437 | 7.215 | 5.27 | 7±1 | 8.00 | 6.31 | <5 | 1.96996 | 3.00 | YES |
| | 2.462 | 6.87 | 4.86 | 6±1 | 7.00 | 5.01 | <5 | 1.57280 | 3.00 | YES |
| 802.11n(HT20) | 2.412 | 6.492 | 4.46 | 6±1 | 7.00 | 5.01 | <5 | 1.55675 | 3.00 | YES |
| | 2.437 | 7.183 | 5.23 | 7±1 | 8.00 | 6.31 | <5 | 1.96996 | 3.00 | YES |
| | 2.462 | 6.714 | 4.69 | 6±1 | 7.00 | 5.01 | <5 | 1.57280 | 3.00 | YES |
| 802.11n(HT40) | 2.422 | 6.543 | 4.51 | 6±1 | 7.00 | 5.01 | <5 | 1.55997 | 3.00 | YES |
| | 2.437 | 6.829 | 4.82 | 6±1 | 7.00 | 5.01 | <5 | 1.56480 | 3.00 | YES |
| | 2.452 | 6.595 | 4.57 | 6±1 | 7.00 | 5.01 | <5 | 1.56960 | 3.00 | YES |

Conclusion:

For the max result : $1.95996 \leq \text{FCC Limit } 3.0$ for 1g SAR.