

**FCC ID:2BWLQ-PT-P1**

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  $\leq 7.5$  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:1M

| 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 calculatio n | SAR Exclusion threshold | SAR test exclusion |
|------------|---------------------|------------------------|-----------------------|---------------------|-------------------------|------------------------|---------------|---------------------|-------------------------|--------------------|
| GFSK       | 2.402               | 2.024                  | 1.59                  | 2±1                 | 3.00                    | 2.00                   | <5            | 0.61847             | 3.00                    | YES                |
|            | 2.44                | 2.787                  | 1.90                  | 2±1                 | 3.00                    | 2.00                   | <5            | 0.62334             | 3.00                    | YES                |
|            | 2.480               | 2.953                  | 1.97                  | 2±1                 | 3.00                    | 2.00                   | <5            | 0.62843             | 3.00                    | YES                |

BLE:2M

| 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 calculatio n | SAR Exclusion threshold | SAR test exclusion |
|------------|---------------------|------------------------|-----------------------|---------------------|-------------------------|------------------------|---------------|---------------------|-------------------------|--------------------|
| GFSK       | 2.402               | 1.833                  | 1.53                  | 1±1                 | 2.00                    | 1.58                   | <5            | 0.49127             | 3.00                    | YES                |
|            | 2.44                | 2.649                  | 1.84                  | 2±1                 | 3.00                    | 2.00                   | <5            | 0.62334             | 3.00                    | YES                |
|            | 2.480               | 2.799                  | 1.91                  | 2±1                 | 3.00                    | 2.00                   | <5            | 0.62843             | 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 calculatio n | SAR Exclusion threshold | SAR test exclusion |
|---------------|---------------------|------------------------|-----------------------|---------------------|-------------------------|------------------------|---------------|---------------------|-------------------------|--------------------|
| 802.11b       | 2.412               | 7.063                  | 5.09                  | 7±1                 | 8.00                    | 6.31                   | <5            | 1.95983             | 3.00                    | YES                |
|               | 2.437               | 7.902                  | 6.17                  | 7±1                 | 8.00                    | 6.31                   | <5            | 1.96996             | 3.00                    | YES                |
|               | 2.462               | 7.861                  | 6.11                  | 7±1                 | 8.00                    | 6.31                   | <5            | 1.98004             | 3.00                    | YES                |
| 802.11g       | 2.412               | 7.588                  | 5.74                  | 7±1                 | 8.00                    | 6.31                   | <5            | 1.95983             | 3.00                    | YES                |
|               | 2.437               | 7.916                  | 6.19                  | 7±1                 | 8.00                    | 6.31                   | <5            | 1.96996             | 3.00                    | YES                |
|               | 2.462               | 7.918                  | 6.19                  | 7±1                 | 8.00                    | 6.31                   | <5            | 1.98004             | 3.00                    | YES                |
| 802.11n(HT20) | 2.412               | 6.706                  | 4.68                  | 6±1                 | 7.00                    | 5.01                   | <5            | 1.55675             | 3.00                    | YES                |
|               | 2.437               | 7.076                  | 5.10                  | 7±1                 | 8.00                    | 6.31                   | <5            | 1.96996             | 3.00                    | YES                |
|               | 2.462               | 7.071                  | 5.09                  | 7±1                 | 8.00                    | 6.31                   | <5            | 1.98004             | 3.00                    | YES                |
| 802.11n(HT40) | 2.422               | 7.024                  | 5.04                  | 7±1                 | 8.00                    | 6.31                   | <5            | 1.96389             | 3.00                    | YES                |
|               | 2.437               | 7.276                  | 5.34                  | 7±1                 | 8.00                    | 6.31                   | <5            | 1.96996             | 3.00                    | YES                |
|               | 2.452               | 8.085                  | 6.43                  | 8±1                 | 9.00                    | 7.94                   | <5            | 2.48766             | 3.00                    | YES                |

**Conclusion:**

For the max result :  $2.48766 \leq \text{FCC Limit } 3.0$  for 1g SAR.