

# FCC ID : 2ABX3- K5102BT

## 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 KDB 447498 D01 General RF Exposure Guidance v05, section 4.3.1

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances  $\leq 50$  mm are determined by:

$$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR,}^{16} \text{ where}$$

$f(\text{GHz})$  is the RF channel transmit frequency in GHz

Power and distance are rounded to the nearest mW and mm before calculation<sup>17</sup>

The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is  $\leq 50$  mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is  $< 5$  mm, a distance of 5 mm is applied to determine SAR test exclusion.

GFSK				
Frequency (MHz)	Peak Output Power (dBm)	Peak Output Power (mW)	Calculation Value	Threshold Value
2402	-2.09	0.618	0.192	3.0
2441	-0.72	0.847	0.265	3.0
2480	0.50	1.122	0.353	3.0

$\Pi/4$ -DQPSK				
Frequency (MHz)	Peak Output Power (dBm)	Peak Output Power (mW)	Calculation Value	Threshold Value
2402	-3.95	0.403	0.125	3.0
2441	-2.53	0.558	0.174	3.0
2480	-1.27	0.746	0.235	3.0

8DPSK				
Frequency (MHz)	Peak Output Power (dBm)	Peak Output Power (mW)	Calculation Value	Threshold Value
2402	-3.83	0.414	0.128	3.0
2441	-2.43	0.571	0.178	3.0
2480	-1.17	0.764	0.241	3.0

For example:  $\left[ \frac{\text{max. power of channel, including tune-up tolerance, mW}}{\text{min. test separation distance, mm}} \right] \cdot \left[ \sqrt{f(\text{GHz})} \right] = 0.847/5 \cdot \sqrt{2.441} = 0.265 \leq 3.0$

Threshold at which no SAR required is  $\leq 3.0$  for 1-g SAR, Separation distance is 5mm.

**Conclusion:** No SAR is required.

## **SIMULTANEOUS TRANSMISSION EVALUATION**

N/A