

# **FCC ID : XN6-BUS100**

Model No.: BeActiv S100

## **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 v06, 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:

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

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.

The test was performed with Bluetooth V4.1

This report is for BT classic mode

Antenna Gain = 0 dBi

### **GFSK mode**

| Frequency (MHz) | Output Power (dBm) | Target power (dBm) | Target power (mW) | Calculation Value | Threshold Value |
|-----------------|--------------------|--------------------|-------------------|-------------------|-----------------|
| 2402            | 6.65               | 7 $\pm$ 1          | 6.310             | 1.956             | 3.0             |
| 2441            | 7.10               | 7 $\pm$ 1          | 6.310             | 1.972             | 3.0             |
| 2480            | 6.76               | 7 $\pm$ 1          | 6.310             | 1.987             | 3.0             |

### **$\pi/4$ DQPSK mode**

| Frequency (MHz) | Output Power (dBm) | Target power (dBm) | Target power (mW) | Calculation Value | Threshold Value |
|-----------------|--------------------|--------------------|-------------------|-------------------|-----------------|
| 2402            | 5.87               | 6 $\pm$ 1          | 5.012             | 1.554             | 3.0             |
| 2441            | 6.47               | 6 $\pm$ 1          | 5.012             | 1.566             | 3.0             |
| 2480            | 6.09               | 6 $\pm$ 1          | 5.012             | 1.579             | 3.0             |

#### 8DPSK mode

| Frequency (MHz) | Output Power (dBm) | Target power (dBm) | Target power (mW) | Calculation Value | Threshold Value |
|-----------------|--------------------|--------------------|-------------------|-------------------|-----------------|
| 2402            | 5.83               | 6 ±1               | 5.012             | 1.554             | 3.0             |
| 2441            | 6.41               | 6 ±1               | 5.012             | 1.566             | 3.0             |
| 2480            | 6.09               | 6 ±1               | 5.012             | 1.579             | 3.0             |

The test was performed with Bluetooth V4.1

This report is for BLE

Antenna Gain = 0 dBi

#### GFSK mode

| Frequency (MHz) | Output Power (dBm) | Target power (dBm) | Target power (mW) | Calculation Value | Threshold Value |
|-----------------|--------------------|--------------------|-------------------|-------------------|-----------------|
| 2402            | 3.15               | 4 ±1               | 3.162             | 0.980             | 3.0             |
| 2440            | 4.20               | 4 ±1               | 3.162             | 0.988             | 3.0             |
| 2480            | 3.60               | 4 ±1               | 3.162             | 0.996             | 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