

Date: **November 26th, 2018**

RF Exposure Analysis

FCC ID: U4FBT-VRG-STD

Analysis for FCC portable use – Bluetooth Module

Standalone SAR test exclusion considerations are defined in KDB 447498D01 (v06) Chapter 4.3.1 where the 1-g head or body and 10-g extremity SAR exclusion threshold is defined by the following formula:

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

- $f(\text{GHz})$ 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

The maximum conducted output power for the device is 9.9 dBm (9.8mW).

Applying the above data and using the given KDB 447498 D01 formula, the following results are achieved:

$$(9.8\text{mW} / 6 \text{ mm}) \times \sqrt{2.45 \text{ GHz}} = 2.6 \text{ (i.e.: } \leq 3.0 \text{ for 1-g SAR)}$$

$$(9.8\text{mW} / 5 \text{ mm}) \times \sqrt{2.45 \text{ GHz}} = 3.1 \text{ (i.e.: } \leq 7.5 \text{ for 10-g SAR)}$$

This demonstrates the device meets the criteria for 1-g head/ body SAR test exemption with a head/ body to antenna separation distance of 6mm.

This demonstrates the device meets the criteria for 10-g extremity SAR test exemption with a body extremity to antenna separation distance of 5mm.

Conclusion

The Bluetooth module is exempt from SAR testing and can be used for Portable applications providing the above separation distances are complied with.

Signature:

