RF Exposure

The equipment under test (EUT) is a Vector with Bluetooth function operating at 2.4G Band. The EUT can be powered by DC 1.5V(1 X 1.5V LR1 battery). For more detail information pls. refer to the user manual.

Bluetooth Version: 4.1 BLE (single mode)
Antenna Type: Integral antenna.
Antenna Gain: 0dBi.
The normal radiated output power (e.i.r.p) is: 1.0dBm (tolerance: +/- 3dB).
The normal conducted output power is 1.0dBm (tolerance: +/- 3dB).
Modulation Type: GFSK.

According to the KDB 447498:

The Maximum peak radiated emission for the EUT is 97.0dBμV/m at 3m in the frequency 2402MHz
The EIRP = [(FS*D) ^2 / 30] mW = 1.77dBm
which is within the production variation.

The Minimum peak radiated emission for the EUT is 96.1dBμV/m at 3m in the frequency 2480MHz
The EIRP = [(FS*D) ^2 / 30] mW = 0.87dBm
which is within the production variation.

The maximum conducted output power specified is 4dBm =2.5mW
The source- based time-averaging conducted output power
=2.5* Duty cycle mW = 2.5 mW(Duty cycle ≤100%)

The SAR Exclusion Threshold Level:
= 3.0 * (min. test separation distance, mm) / sqrt(freq. in GHz)
= 3.0 * 5 / sqrt (2.480) mW
= 9.53 mW

Since the source-based time-averaging conducted output power is well below the SAR low threshold level, so the EUT is considered to comply with SAR requirement without testing.