RF Exposure

The equipment under test (EUT) is an IRON MAN MK50 ROBOT BY UBTECH with BT 4.0 BLE function operating in 2402-2480MHz. The EUT is powered by DC 7.4V (2* lithium battery) which can be charged by DC 5V/2.0A. For more detail information pls. refer to the user manual.

Modulation Type: GFSK.
Bluetooth Version: BT 4.0 BLE(single mode)

Antenna Type: Integral antenna.
Antenna Gain: 3.1dBi.
The nominal conducted output power specified: -8.1dBm (+/-4dB).
The nominal radiated output power (e.i.r.p) specified: -5dBm (+/- 4dB).

According to the KDB 447498:

The maximun peak radiated emission for the EUT is 88.0dBμV/m at 3m in the frequency 2480MHz
The EIRP = [(FS*D) ^2 / 30] mW = -7.23dBm
which is within the production variation.

The minimum peak radiated emission for the EUT is 86.3dBμV/m at 3m in the frequency 2442MHz
The EIRP = [(FS*D) ^2 / 30] mW = -8.93dBm
which is within the production variation.

The maximun conducted output power specified is -4.1dBm = 0.4mW
The source- based time-averaging conducted output power
= 0.4 * Duty factor mW (where Duty Factor≤1)
= 0.4 mW

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.