RF Exposure

The equipment under test (EUT) is a Bluetooth Earphone with BT 4.1(without BLE) function operating in 2402-2480MHz. The EUT is powered by DC3.7V rechargeable battery which can be charged by USB port. The USB port is only use for charging purpose. The EUT cannot operate when charging. For more detail information pls. refer to the user manual.

Modulation Type: GFSK, π/4DQPSK, 8DPSK.
Bluetooth Version: BT 4.1(without BLE)

Antenna Type: Integral antenna.
Antenna Gain: 2dBi.
The nominal conducted output power specified: 1dBm (+/-3dB).
The nominal radiated output power (e.i.r.p) specified: 3dBm (+/- 3dB).

According to the KDB 447498:

The maximun peak radiated emission for the EUT is 100.5dBμV/m at 3m in the frequency 2441MHz
The EIRP = [(FS*D) ^2 / 30] mW = 5.27dBm
which is within the production variation.

The minimum peak radiated emission for the EUT is 99.1dBμV/m at 3m in the frequency 2402MHz
The EIRP = [(FS*D) ^2 / 30] mW = 3.87dBm
which is within the production variation.

The maximun conducted output power specified is 4dBm = 2.5mW
The source- based time-averaging conducted output power
= 2.5 * Duty factor mW (where Duty Factor≤1)
= 2.5 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.