RF Exposure

The equipment under test (EUT) is a TRULY WIRE-FREE EARBUDS with Bluetooth 5.1 (Single Mode EDR) function operating in 2402-2480MHz. The EUT is powered by DC 3.7V by rechargeable battery. For more detail information pls. refer to the user manual.

Bluetooth Version: 5.1 (Single Mode EDR)
Antenna Type: Integral antenna
Modulation Type: GFSK, p/4-DQPSK, 8DPSK
Antenna Gain: 1.5dBi Max
The nominal conducted output power specified: -9.5 dBm (±3dB)
The nominal radiated output power (e.i.r.p) specified: -8.0 dBm (±3dB)

According to the KDB 447498:

The maximun peak radiated emission for the EUT is 86.5dBμV/m at 3m in the frequency 2480MHz
The EIRP = [(FS*D) ^2 / 30] mW = -8.73 dBm
which is within the production variation.

The minimum peak radiated emission for the EUT is 85.4dBμV/m at 3m in the frequency 2402MHz
The EIRP = [(FS*D) ^2 / 30] mW = -9.83dBm
which is within the production variation.

The maximun conducted output power specified is -6.5 dBm = 0.224 mW
The source- based time-averaging conducted output power
= 0.224 * Duty factor mW (where Duty Factor$\leqslant$1)
= 0.224 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.