RF Exposure

The Equipment Under Test (EUT) is an Bluetooth Bottle Speaker Bluetooth 5.3 (BR/EDR Mode) function operating in 2402-2480MHz. The EUT is powered by DC3.7V rechargeable battery or DC 5V by USB input. The Key For more detailed features description, please refer to the user's manual.

Bluetooth Version: 5.3 BR/EDR
Modulation Type: GFSK, π/4-DQPSK and 8-DPSK
Antenna Type: Integral antenna.
Antenna Gain: 1.2dBi.
The nominal conducted output power specified: -4.2dBm (+/-3dB).
The nominal radiated output power (e.i.r.p) specified: -3dBm (+/- 3dB).

According to the KDB 447498 V06:

The maximun peak radiated emission for the EUT is 95.0dBμV/m at 3m in the frequency 2402MHz
The EIRP = [(FS*D) ^2 / 30] mW = -0.23dBm
which is within the production variation.

The minimum peak radiated emission for the EUT is 90.1dBμV/m at 3m in the frequency 2480MHz
The EIRP = [(FS*D) ^2 / 30] mW = -5.13dBm
which is within the production variation.

The maximun conducted output power specified is -1.2dBm = 0.759 mW
The source- based time-averaging conducted output power
= 0.759 * Duty factor mW (where Duty Factor≤1)
= 0.759 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.