RF Exposure

The equipment under test (EUT) is a 123 Coder with Bluetooth function operating in 2402-2480MHz. The EUT is powered by DC 3.0V (2 x 1.5V AAA batteries). For more detail information pls. refer to the user manual.

Antenna Type: Integral antenna
Modulation Type: GFSK
Antenna Gain: 0dBi
Bluetooth Version: 5.1 BLE (Single Mode)
The normal radiated output power (e.i.r.p) is: -9.0dBm (tolerance: +/- 3dB).
The normal conducted output power is -9.0dBm (tolerance: +/- 3dB).

According to the KDB 447498:

The Maximum peak radiated emission for the EUT is 87.8dBμV/m at 3m in the frequency 2402MHz
The EIRP = [(FS*D) ^2 / 30] mW = -7.43dBm
which is within the production variation.

The Minimum peak radiated emission for the EUT is 84.3dBμV/m at 3m in the frequency 2480MHz
The EIRP = [(FS*D) ^2 / 30] mW = -10.93dBm
which is within the production variation.

The maximum conducted output power specified is -6dBm= 0.251mW
The source- based time-averaging conducted output power
=0.251* Duty cycle mW =0.251 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.