RF Exposure

The equipment under test (EUT) is a Bluetooth Headset. The EUT was powered by 3.7Vdc rechargeable battery left side & 3.7Vdc rechargeable battery right side. But it's can't use bluetooth function while charging or wired audio link. For more detail information pls. refer to the user manual.
Modulation Type: GFSK, Π/4-DQPSK, 8-DPSK
Bluetooth Version: 3.0 with AFH mode
Antenna Type: Integral antenna
Antenna Gain: 0dBi
The normal radiated output power (e.i.r.p) is: 4dBm (tolerance: +/- 3dB).
The normal conducted output power is: 4dBm (tolerance: +/- 3dB).

According to the KDB 447498:

The maximum radiated emission for the EUT is 101.2dBμV/m at 3m in the frequency 2480MHz
The EIRP = [(FS*D) ^2 / 30] mW = 6.0dBm
which is within the production variation.

The minimum radiated emission for the EUT is 100.3dBμV/m at 3m in the frequency 2402MHz
The EIRP = [(FS*D) ^2 / 30] mW =5.1dBm
which is within the production variation.

The maximum conducted output power specified is 7dBm = 5.0mW
The source- based time-averaging conducted output power
= 5.0 * Duty factor mW= 4.2 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.

Transmitter Duty Cycle Calculation

Based on the Bluetooth Specification (3.0 with AFH mode), transmitter ON time is independent of packet type (DH1, DH3 and DH5) For one period for a pseudo-random hopping through all 79 RF channels, for DH5:
One hopset consists of 5 TX slot and 1 RX slot.
Duty factor = 5 / 6 = 0.833

This requirement is according to KDB 865664 D02