RF Exposure

The Equipment under Test (EUT) is an Bluetooth headset model: BH-110U. It is powered by DC 3.7V from internal rechargeable battery and can be charged by adapter with output DC voltage of 5V or PC USB port. For more detail information please refer to the user manual.

Antenna Type: Integral antenna.
Antenna Gain: -2.0dBi.
The nominal conducted output power specified: 6dBm ±3dB.

Modulation Type: GFSK, π/4 –DQPSK and 8-DPSK.

According to the KDB 447498:

The maximun conducted output power specified is 9dBm = 7.9mW
The source- based time-averaging conducted output power
= 7.9 * Duty Cycle mW= 6.58 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 (BT version: 3.0), Duty cycle is dependent 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 Cycle = 5 / 6 = 0.833

This requirement is according to KDB 865664 D02