RF Exposure

The Equipment under Test (EUT) is a Head worn audio/video device with Bluetooth radio model: AG101. The device incorporates a Bluetooth radio, which can be used to provide audio over Bluetooth and to control the device functionality over the Bluetooth link. It is powered by DC 3.8V. For more detail information please refer to the user manual.

Bluetooth Radio Specification
Antenna Type: Integral antenna.
Antenna Gain: 1.0dBi.
Bluetooth Version: 4.1 Dual Modes.
Modulation Types: Bluetooth BR: GFSK; Bluetooth LE: GFSK.

Channels:

- 79 Channels for BT BR from the frequency range 2402MHz~2480MHz with 1MHz channel spacing.
- 40 Channels for BT 4.0 LE mode from the frequency range 2402MHz~2480MHz with 2MHz Channel spacing.

Bluetooth BR:
The nominal conducted output power specified: 1dBm ±3dB;

Bluetooth LE:
The nominal conducted output power specified: -11dBm ±3Db;

Maximum tested power is 2.03dBm for BR mode with GFSK modulation;
Minimum tested power is -13.3dBm for BLE mode with GFSK modulation;

According to the KDB 447498:

The maximun conducted output power of Bluetooth BR specified is 4.0dBm = 2.5mW
The source- based time-averaging conducted output power
= 2.5* Duty Cycle mW= 2.5mW

The SAR Exclusion Threshold Level:
= 3.0 * (min. test separation distance, mm) / sqrt(freq. in GHz)
= 3.0 * 5 / sqrt (2.480) mW
= 9.5 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
The test signal of the EUT is Continuous emission, the Duty Cycle is 100%.