RF Exposure

The equipment under test (EUT) is a BLUETOOTH CARS (TURBO RACER) with Bluetooth (4.1 single mode) function. The EUT was powered by 3 x 1.5V AAA Batteries. For more detail information pls. refer to the user manual.

Antenna Type: Integral antenna.
Antenna Gain: 0dBi.
The normal radiated output power (e.i.r.p) is: -2.0dBm (tolerance: +/- 3dB).
The normal conducted output power is -2.0dBm (tolerance: +/- 3dB).
Modulation Type: GFSK.

According to the KDB 447498:

The Maximum peak radiated emission for the EUT is 93.5dBμV/m at 3m in the frequency 2402MHz
The EIRP = [(FS*D) ^2 / 30] mW = -1.73dBm
which is within the production variation.

The Minimum peak radiated emission for the EUT is 92.7dBμV/m at 3m in the frequency 2480MHz
The EIRP = [(FS*D) ^2 / 30] mW = -2.53dBm
which is within the production variation.

The maximum conducted output power specified is 1.0dBm = 1.3mW
The source- based time-averaging conducted output power
= 1.3 * Duty cycle mW=1.3mW

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%.