RF Exposure

The equipment under test (EUT) is a BMW M6GT3 Battery Operated Car operating at 2.4G Band. The EUT can be 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.
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 94.1dBμV/m at 3m in the frequency 2462MHz
The EIRP = [(FS*D) ^2 / 30] mW = -1.13dBm
which is within the production variation.

The Minimum peak radiated emission for the EUT is 92.5dBμV/m at 3m in the frequency 2440MHz
The EIRP = [(FS*D) ^2 / 30] mW = -2.73dBm
which is within the production variation.

The maximum conducted output power specified is 1dBm= 1.259mW
The source- based time-averaging conducted output power
=1.259* Duty cycle mW <1.259 mW(Duty cycle <100%)

The SAR Exclusion Threshold Level:
= 3.0 * (min. test separation distance, mm) / sqrt(freq. in GHz)
= 3.0 * 5 / sqrt (2.462) mW
= 9.56 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.

The duty cycle is simply the on-time divided by the period:

The duration of one cycle = 8.2319ms
Effective period of the cycle = 956.5μs = 0.9565ms
DC =0.9565ms / 8.2319ms =0.1162 or 11.62%