RF Exposure

The equipment under test (EUT) is a Drone Air Racer 6inch operating at 2.4G Band. The EUT can be powered by DC 6.0V (4 x 1.5V AA batteries).For more detail information pls. refer to the user manual.

Antenna Type: Integral antenna
Modulation Type: GFSK
Antenna Gain: 0dBi
The nominal conducted output power specified: 0.0 dBm (±3dB)
The nominal radiated output power (e.i.r.p) specified: 0.0 dBm (±3dB)

According to the KDB 447498:

The Maximum peak radiated emission for the 95.4 dBμV/m at 3m in EUT is
the frequency 2442MHz
The EIRP = [(FS*D) ^2 / 30] mW = 0.17dBm
which is within the production variation.

The Minimum peak radiated emission for the 93.5 dBμV/m at 3m in EUT is
the frequency 2420MHz
The EIRP = [(FS*D) ^2 / 30] mW = -1.73dBm
which is within the production variation.

The maximum conducted output power specified is 3dBm= 1.995mW
The source- based time-averaging conducted output power
=1.995* Duty cycle mW <1.995 mW(Duty cycle <100%)

The SAR Exclusion Threshold Level:

P_{th}(mW) = ERP_{20cm} * (d/20cm) ^{x} (X= $-\log_{10}\left(\frac{60}{ERP_{20\ cm}\sqrt{f}}\right)$)

= 3060 * $(0.5/20)^{1.9}$ mW
= 2.72 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 = 6.3768ms
Effective period of the cycle = 0.7536ms
DC =0.7536ms / 6.3768ms =0.1182 or 11.82%