RF Exposure

The equipment under test (EUT) is an Drone Mach 10inch with Camera Streaming operating at 2.4G Band. The EUT can be powered by DC 9.0V (6 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: 2.0 dBm (±3dB)
The nominal radiated output power (e.i.r.p) specified: 2.0 dBm (±3dB)

According to the KDB 447498:

The Maximum peak radiated emission for the EUT is 99.3 dBμV/m at 3m in the frequency 2475MHz
The EIRP = [(FS*D) ^2 / 30] mW = 4.07dBm
which is within the production variation.

The Minimum peak radiated emission for the EUT is 97.3 dBμV/m at 3m in the frequency 2456MHz
The EIRP = [(FS*D) ^2 / 30] mW = 2.07dBm
which is within the production variation.

The maximum conducted output power specified is 5.0dBm= 3.162mW
The source- based time-averaging conducted output power
=3.162* Duty cycle mW =3.162 mW*0.0325=0.103mW

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 = 80.217ms
Effective period of the cycle = 434.8μs x6 = 2.6088ms
DC =2.6088ms / 80.217ms =0.0325 or 3.25%