

INTERTEK TESTING SERVICES

RF Exposure

The Equipment under Test (EUT) is a Control unit for HOTWHEELS BLADEZ DRONE RACERZ model: BTH01, BTQ01 operating at 2.4GHz band. It is 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.

Antenna Gain: 0dBi.

The normal radiated output power (e.i.r.p) is: -7.0dBm (tolerance: +/- 3dB).

The normal conducted output power is: -7.0dBm (tolerance: +/- 3dB).

Modulation Type: GFSK.

According to the KDB 447498:

The Maximum peak radiated emission for the EUT is 88.1dB μ V/m at 3m in the frequency 2405MHz

The EIRP = $[(FS^*D)^2 / 30] \text{ mW} = -7.13 \text{ dBm}$
which is within the production variation.

The Minimum peak radiated emission for the EUT is 87.2dB μ V/m at 3m in the frequency 2475MHz

The EIRP = $[(FS^*D)^2 / 30] \text{ mW} = -8.03 \text{ dBm}$
which is within the production variation.

The maximum conducted output power specified is -4.0dBm = 0.4mW

The source- based time-averaging conducted output power
= $0.4 * \text{Duty Cycle mW} < 0.4 \text{mW}$ (Duty Cycle<100%)

The SAR Exclusion Threshold Level:

= $3.0 * (\text{min. test separation distance, mm}) / \text{sqrt(freq. in GHz)}$
= $3.0 * 5 / \text{sqrt}(2.470) \text{ mW}$
= 9.54mW

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 duration of one cycle = 6.700ms

Effective period of the cycle = 2.000ms

DC = $2.000 \text{ms} / 6.700 \text{ms} = 0.2985$ or 29.85%

FCC ID: 2AMRHBTHW01