

INTERTEK TESTING SERVICES

RF Exposure

The Equipment under Test (EUT) is a Control unit for Drone Scorpion model: YW858200 operating at 2.4GHz band. It is powered by DC 4.5V (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: 5.0dBm (tolerance: +/- 3dB).

The normal conducted output power is: 5.0dBm (tolerance: +/- 3dB).

Modulation Type: GFSK.

According to the KDB 447498:

The Maximum peak radiated emission for the EUT is 102.5dB μ V/m at 3m in the frequency 2472MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = 7.27dBm
which is within the production variation.

The Minimum peak radiated emission for the EUT is 99.7dB μ V/m at 3m in the frequency 2440MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = 4.47dBm
which is within the production variation.

The maximum conducted output power specified is 8dBm = 6.3mW

The source- based time-averaging conducted output power
= 6.3 * Duty Cycle mW < 6.3mW (Duty Cycle<100%)

The SAR Exclusion Threshold Level:

= 3.0 * (min. test separation distance, mm) / sqrt(freq. in GHz)

= 3.0 * 5 / sqrt (2.472) 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 = 100ms

Effective period of the cycle = 0.7536ms x 13=9.7968ms

DC = 9.7968ms / 100ms = 0.097968 or 9.8%