

INTERTEK TESTING SERVICES

RF Exposure

The Equipment under Test (EUT) is a controller unit for the DRONE ADVANCED WITH CAMERA STREAMING AND GPS model: GPS2017 operating at 2.4GHz band. It is powered by DC 6.0V (4 x 1.5V AA batteries). For more detail information please refer to the user manual.

Antenna Type: Integral antenna.

Antenna Gain: 0dBi.

The normal radiated output power (e.i.r.p) is: 5dBm (tolerance: +/- 3dB).

The normal conducted output power is: 5dBm (tolerance: +/- 3dB).

Modulation Type: GFSK.

According to the KDB 447498:

The Maximum peak radiated emission for the EUT is 102.6dBμV/m at 3m in the frequency 2410MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = 7.37dBm
which is within the production variation.

The Minimum peak radiated emission for the EUT is 97.8dBμV/m at 3m in the frequency 2475MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = 2.57dBm
which is within the production variation.

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

The source- based time-averaging conducted output power
= $6.3 \cdot \text{Duty Cycle}$ mW < 6.3mW (Duty Cycle < 100%)

The SAR Exclusion Threshold Level:

= $3.0 \cdot (\text{min. test separation distance, mm}) / \sqrt{\text{freq. in GHz}}$

= $3.0 \cdot 5 / \sqrt{2.475}$ mW

= 9.53mW

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 = 5.9420ms

Effective period of the cycle = 507.2μs = 0.5072ms

DC = 0.5072ms/5.9420ms = 0.0854 or 8.54%