INTERTEK TESTING SERVICES

RF Exposure

The equipment under test (EUT) is a Drone Stunt Glow LED 5inch operating at 2.4G Band. The EUT can be 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
Modulation Type: GFSK
Antenna Gain: 0dBi
The nominal conducted output power specified: -8.0 dBm (±3dB)
The nominal radiated output power (e.i.r.p) specified: -8.0 dBm (±3dB)

According to the KDB 447498:

The Maximum peak radiated emission for the EUT is   87.1   dBμV/m at 3m in the frequency 2465MHz
The EIRP = [(FS*D) ^2 / 30] mW = -8.13dBm
which is within the production variation.

The Minimum peak radiated emission for the EUT is   85.7   dBμV/m at 3m in the frequency 2420MHz
The EIRP = [(FS*D) ^2 / 30] mW = -9.53dBm
which is within the production variation.

The maximum conducted output power specified is   -5.0dBm=   0.316mW
The source- based time-averaging conducted output power
=0.316* Duty cycle mW <0.316 mW(Duty cycle <100%)

The SAR Exclusion Threshold Level:

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

$$= 3060 * (0.5/20)^{1.9} \; mW$$

$$= 2.72 \; mW$$

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 = 20.2174ms
Effective period of the cycle =   217.4μs x1 = 0.2174ms
DC =0.2174ms   / 20.2174ms =0.0108 or 1.08%

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