

INTERTEK TESTING SERVICES

RF Exposure

The Equipment under Test (EUT) is a Control unit for DRONE DX 2INCH NANO model: DX-1 operating at 2.4GHz band. It is powered by DC 3.0V (2 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: -11dBm (tolerance: +/- 3dB).

The normal conducted output power is: -11dBm (tolerance: +/- 3dB).

Modulation Type: GFSK.

According to the KDB 447498:

The Maximum peak radiated emission for the EUT is 84.5dB μ V/m at 3m in the frequency 2440MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = -10.73dBm

which is within the production variation.

The Minimum peak radiated emission for the EUT is 82.0dB μ V/m at 3m in the frequency 2475MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = -13.23dBm

which is within the production variation.

The maximum conducted output power specified is -8dBm = 0.16mW

The source- based time-averaging conducted output power

= $0.16 \cdot \text{Duty Cycle}$ mW < 0.16mW (Duty Cycle<100%)

The SAR Exclusion Threshold Level:

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

= $3.0 \cdot 5 / \text{sqrt}(2.475)$ 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 = 3.680ms

Effective period of the cycle = 0.400ms

DC = $0.400\text{ms} / 3.680\text{ms}$ = 0.1087 or 10.87%

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