

INTERTEK TESTING SERVICES

RF Exposure

The equipment under test (EUT) is a LIGHT BAR RGB with 2.4G SRD function operated at the frequency of 2410MHz. The EUT is powered by DC 5V by USB Port. For more detail information pls. refer to the user manual.

2.4G SRD:

Modulation Type: GFSK

Antenna Type: Integral antenna.

Antenna Gain: 0dBi Max.

The nominal conducted output power specified: -7dBm (+/-3dB).

The nominal radiated output power (e.i.r.p) specified: -7dBm (+/- 3dB).

According to the KDB 447498:

The maximum peak radiated emission for the EUT is 90.1dBμV/m at 3m in the frequency 2410MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = -5.13dBm
which is within the production variation.

The maximum conducted output power specified is -4dBm = 0.4mW

The source- based time-averaging conducted output power
= 0.4 * Duty factor mW (where Duty Factor ≤ 1)
= 0.4 mW

The SAR Exclusion Threshold Level:

= $3.0 * (\text{min. test separation distance, mm}) / \sqrt{\text{freq. in GHz}}$
= $3.0 * 5 / \sqrt{2.410}$ mW
= 9.66 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.