

INTERTEK TESTING SERVICES

RF Exposure

The equipment under test (EUT) is a 6.56FT 5V RGB Strip + RF Strip Controller operating at 2410MHz. The EUT is powered by DC 5V. The USB port is only use for charging purpose. For more detail information pls. refer to the user manual.

Antenna Type: Integral antenna

Modulation Type: GFSK

Antenna Gain: 0dBi Max

The nominal radiated output power (e.i.r.p) specified: -6dBm (Tolerance: +/- 3dB)

The nominal conducted output power specified: -6dBm (Tolerance: +/- 3dB)

According to the KDB 447498:

The maximum peak radiated emission for the EUT is 87.3dBμV/m at 3m in the frequency 2410MHz.

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = -7.93dBm
which is within the production variation.

The maximum conducted output power specified is -3dBm = 0.5mW

The source- based time-averaging conducted output power
= $0.5 \cdot \text{Duty factor mW}$ (where Duty Factor ≤ 1)
= 0.5 mW

The SAR Exclusion Threshold Level:

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