

INTERTEK TESTING SERVICES

Analysis Report

The equipment under test (EUT) is a controller with 2.4GHz wireless control function operating in 2415-2465MHz. The EUT is powered by DC 9V (6 * 1.5V AA size batteries). For more detail information pls. refer to the user manual.

Modulation Type: GFSK

Antenna Type: Integral antenna (Gain: 3 dBi)

The nominal radiated output power (e.i.r.p) specified: -6dBm (Tolerance: +/-5dB)

The nominal conducted output power specified: -9dBm (Tolerance: +/-5dB)

According to the KDB 447498:

The maximum radiated emission for the EUT is 86.4 dBμV/m at 3m in the frequency 2.415GHz = $[(FS \cdot D)^2 / 30]$ mW
= -8.8 dBm which is within the production variation

The minimum radiated emission for the EUT is 85.6 dBμV/m for at 3m in the frequency 2.465GHz = $[(FS \cdot D)^2 / 30]$ mW
= -9.6 dBm which is within the production variation

The maximum conducted output power specified is -4dBm = 0.398mW
The source- based time-averaging conducted output power
= 0.398 * Duty cycle mW ≤ 0.398 mW (Duty Cycle≤100%)

The SAR Exclusion Threshold Level:
= 3.0 * (min. test separation distance, mm) / sqrt(freq. in GHz)
= 3.0 * 5 / sqrt (2.465) mW
= 9.55 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.