

# INTERTEK TESTING SERVICES

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## 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 dB $\mu$ V/m at 3m in the frequency 2.415GHz =  $[(FS^*D)^2 / 30]$  mW  
= -8.8 dBm which is within the production variation

The minimum radiated emission for the EUT is 85.6 dB $\mu$ V/m for at 3m in the frequency 2.465GHz =  $[(FS^*D)^2 / 30]$  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  
=  $0.398 * \text{Duty cycle mW} \leq 0.398 \text{ mW (Duty Cycle} \leq 100\%)$

The SAR Exclusion Threshold Level:

=  $3.0 * (\text{min. test separation distance, mm}) / \text{sqrt(freq. in GHz)}$   
=  $3.0 * 5 / \text{sqrt}(2.465)$  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.