

INTERTEK TESTING SERVICES

Analysis Report

The equipment under test (EUT) is a Clock Radio, Lightning Speaker with Bluetooth function operating in 2402-2480MHz. The EUT is powered by AC/DC Adaptor (Model No.: K15S050200U, Input: 100-240Vac, 50/60Hz, 0.5A, Output: 5.0Vdc, 2.0A). For more detail information pls. refer to the user manual.

Modulation Type: GFSK, $\pi/4$ DQPSK, 8DPSK
Bluetooth Version: 3.0 with EDR function
Antenna Type: Integral antenna (Gain: 0 dBi)

The nominal radiated output power (e.i.r.p) specified: 2dBm (Tolerance: +/-3dB)
The nominal conducted output power specified: 2dBm (Tolerance: +/-3dB)

According to the KDB 447498:

The maximum radiated emission for the EUT is 98.3dB μ V/m at 3m in the frequency 2.402GHz = $[(FS \cdot D)^2 / 30]$ mW
= 3.1dBm which is within the production variation

The minimum radiated emission for the EUT is 96.7dB μ V/m for at 3m in the frequency 2.480GHz = $[(FS \cdot D)^2 / 30]$ mW
= 1.5dBm which is within the production variation.

The maximum conducted output power specified is 5dBm = 3.2mW
The source- based time-averaging conducted output power
= 3.2 * Duty cycle mW < 3.2 mW (Duty Cycle<100%)

The SAR Exclusion Threshold Level:
= 3.0 * (min. test separation distance, mm) / sqrt(freq. in GHz)
= 3.0 * 5 / sqrt(2.480) mW
= 9.5 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.