

INTERTEK TESTING SERVICES

RF Exposure

The equipment under test (EUT) is a Wireless Keyboard with Bluetooth 5.1 (Single Mode BR) function operating in 2402-2480MHz. The EUT is powered by DC 3.0V (2 x AAA battery). For more detail information pls. refer to the user manual.

Bluetooth Version: 5.1 (Single Mode EDR)

Antenna Type: Integral antenna

Modulation Type: GFSK

Antenna Gain: 1.87dBi Max

The nominal conducted output power specified: -10.87dBm (± 3 dB)

The nominal radiated output power (e.i.r.p) specified: -9dBm (± 3 dB)

According to the KDB 447498:

The maximum peak radiated emission for the EUT is 85.9dB μ V/m at 3m in the frequency 2480MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = -9.33dBm

which is within the production variation.

The minimum peak radiated emission for the EUT is 84.9dB μ V/m at 3m in the frequency 2440MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = -10.33dBm

which is within the production variation.

The maximum conducted output power specified is -7.87dBm = 0.163mW

The source-based time-averaging conducted output power

= 0.163 * Duty factor mW (where Duty Factor ≤ 1)

= 0.163mW

The SAR Exclusion Threshold Level:

= 3.0 * (min. test separation distance, mm) / sqrt(freq. in GHz)

= 3.0 * 5 / sqrt(2.480)mW

= 9.53mW

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.