

INTERTEK TESTING SERVICES

Analysis Report

The equipment under test (EUT) is a Bluetooth speaker. The EUT was powered by DC 3.7V Internal Lithium battery and can be charged by USB Port. For more detail information pls. refer to the user manual.

Modulation Type: GFSK, $\pi/4$ DQPSK, 8DPSK for BT2.1 with EDR and GFSK for BT4.0.

Bluetooth Version: 4.0 and 2.1 with EDR

Antenna Type: Integral antenna

Antenna Gain: 0dBi

The nominal radiated output power (e.i.r.p) specified: 4dBm (Tolerance: +/- 3dB)

The nominal conducted output power specified: 4dBm (Tolerance: +/- 3dB)

According to the KDB 447498:

The maximum radiated emission for the EUT is 101.9dB μ V/m for BT2.1 at 3m in the frequency 2.441GHz
= $[(FS \cdot D)^2 / 30]$ mW
= 6.7dBm which is within the production variation.

The minimum radiated emission for the EUT is 99.1dB μ V/m at 3m for BT4.0 in the frequency 2.480GHz
= $[(FS \cdot D)^2 / 30]$ mW
= 3.9dBm which is within the production variation.

The maximum conducted output power specified is 7dBm = 5.0mW
The source- based time-averaging conducted output power
= 5.0 * Duty cycle mW \leq 5.0 mW (Duty Cycle \leq 100%)

The SAR Exclusion Threshold Level:
= 3.0 * (min. test separation distance, mm) / $\sqrt{\text{freq. in GHz}}$
= 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.