

# INTERTEK TESTING SERVICES

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## Analysis Report

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

Modulation Type: GFSK

Bluetooth Version: 4.0

Antenna Type: Integral antenna

Antenna Gain: 0dBi

The nominal radiated output power (e.i.r.p) specified: 5dBm ( Tolerance: +/- 3dB)

The nominal conducted output power specified: 5dBm ( Tolerance: +/- 3dB)

According to the KDB 447498:

The maximum radiated emission for the EUT is 101.1dB $\mu$ V/m at 3m in the frequency 2.480GHz  
= [(FS\*D) ^2 / 30] mW  
= 5.9dBm which is within the production variation.

The minimum radiated emission for the EUT is 100.8dB $\mu$ V/m at 3m in the frequency 2.402GHz  
= [(FS\*D) ^2 / 30] mW  
= 5.6dBm which is within the production variation.

The maximum conducted output power specified is 8dBm = 6.3mW  
The source- based time-averaging conducted output power  
= 6.3 \* Duty cycle mW=6.3 mW

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.

Transmitter Duty Cycle Calculation

The test signal of the EUT is Continuous emission, so the Duty Cycle is 100%.