

INTERTEK TESTING SERVICES

Analysis Report

The equipment under test (EUT) is a Monster Bluetooth speaker with Bluetooth FHSS technology operating in 2402-2480MHz. The EUT is powered by DC 3.7V lithium battery which can be charged by USB port. The USB port is only use for charging purpose. For more detail information pls. refer to the user manual.

Modulation Type: GFSK, /4-DQPSK and 8-DPSK

Bluetooth Version: 4.2(dual-mode)

Antenna Type: Integral antenna

Antenna Gain: 0 dBi

The nominal conducted output power specified: 3.0dBm (Tolerance: +/-5dB)

The nominal radiated output power (e.i.r.p) specified: 3.0dBm (Tolerance: +/-5dB)

According to the KDB 447498:

The maximum conducted emission for the EUT is 3.00dBm at the frequency 2.480GHz in Bluetooth low energy mode which is within the production variation

The minimum conducted emission for the EUT is 1.25dBm at the frequency 2.402GHz in classic Bluetooth mode which is within the production variation

The maximum conducted output power specified is 8.0dBm = 6.31mW

The source-based time-averaging conducted output power

= $6.31 \times \text{Duty cycle mW} = 6.31 \text{ mW}$ (Duty cycle ≤ 1)

The SAR Exclusion Threshold Level:

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

= $3.0 \times 5 / \sqrt{2.480} \text{ mW}$

= 9.53 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.