

INTERTEK TESTING SERVICES

RF Exposure

The equipment under test (EUT) is a Electric Wiggle Car with Bluetooth 5.4 function operating in 2402-2480MHz. The EUT can be powered by DC 12.0V (1 x 12.0V rechargeable battery). And the RF function will be shut down and it can't transmit RF signals while charging. For more detail information pls. refer to the user manual.

Antenna Type: Integral antenna

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

Antenna Gain: 0dBi Max

Bluetooth Version: 5.4 (EDR)

For EDR

The normal radiated output power (e.i.r.p) is: -4.0dBm (tolerance: +/- 3dB).

The normal conducted output power is -4.0dBm (tolerance: +/- 3dB).

According to the KDB 447498 V06:

The Maximum peak radiated emission for the EUT is 93.9dB μ V/m at 3m in the frequency 2402MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = -1.33dBm
which is within the production variation.

The Minimum peak radiated emission for the EUT is 89.9dB μ V/m at 3m in the frequency 2480MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = -5.33dBm
which is within the production variation.

The maximum conducted output average power specified is -1.0dBm= 0.794mW

The source- based time-averaging conducted output power
=0.794 mW

The SAR Exclusion Threshold Level:

= $3.0 \cdot (\text{min. test separation distance, mm}) / \text{sqrt}(\text{freq. in GHz})$
= $3.0 \cdot 5 / \text{sqrt}(2.480)$ 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.