

# INTERTEK TESTING SERVICES

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## RF Exposure

The equipment under test (EUT) is a Maga Pro Power with Bluetooth function. The EUT was powered by a 3.7 VDC Li-ion rechargeable battery charged by an USB Power Adapter with AC 120V, 60Hz. For more detail information pls. refer to the user manual.

Antenna Type: Integral antenna.

Antenna Gain: 0dBi.

The nominal conducted output power specified: -5.0dBm +/-3dB.

The nominal radiated output power (e.i.r.p) specified: -5.0dBm (+/- 3dB)

Modulation Type: GFSK.

According to the KDB 447498:

The Maximum peak radiated emission for the EUT is 90.4dB $\mu$ V/m at 3m in the frequencies 2402MHz

The EIRP =  $[(FS * D)^2 / 30]$  mW = -4.8dBm  
which is within the production variation.

The Minimum peak radiated emission for the EUT is 88.7dB $\mu$ V/m at 3m in the frequency 2441MHz

The EIRP =  $[(FS * D)^2 / 30]$  mW = -6.5dBm  
which is within the production variation.

The maximum conducted output power specified is -2.0dBm = 0.6mW

The source- based time-averaging conducted output power  
= 0.6 \* Duty factor mW = 0.5 mW

The SAR Exclusion Threshold Level:

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

= 3.0 \* 5 / sqrt (2.480) mW

= 9.53 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.

### Transmitter Duty Cycle Calculation

Based on the Bluetooth Specification (BT version:2.1), the duty factor is dependent of packet type (DH1, DH3 and DH5).For one period for a pseudo-random hopping through all 79 RF channels, for DH5:

One hop set consists of 5 TX slot and 1 RX slot.

Duty factor =  $5 / 6 = 0.833$

This requirement is according to KDB 865664 D02