

INTERTEK TESTING SERVICES

RF Exposure

The equipment under test (EUT) is a Smart Micro Egg with Bluetooth 4.2 BLE function operating in 2402-2480MHz. The EUT is powered by DC 3.7V by rechargeable battery. For more detail information pls. refer to the user manual.

Antenna Type: Integral antenna.

Antenna Gain: 0dBi.

Modulation Type: GFSK.

Bluetooth Version: 4.2 BLE (Single Mode)

The normal peak radiated output power (e.i.r.p) is: -20.0dBm (tolerance: +/- 3dB).

The normal peak conducted output power is -20.0dBm (tolerance: +/- 3dB).

According to the KDB 447498:

The Maximum peak radiated emission for the EUT is 75.5 dBμV/m at 3m in the frequency 2402MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = -19.73dBm
which is within the production variation.

The Minimum peak radiated emission for the EUT is 72.8dBμV/m at 3m in the frequency 2480MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = -22.43dBm
which is within the production variation.

The maximum conducted output power specified is -17dBm= 0.020mW
The source- based time-averaging conducted output power
=0.020* Duty cycle mW <0.020 mW(Duty cycle <100%)

The SAR Exclusion Threshold Level:

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