

INTERTEK TESTING SERVICES

RF Exposure

The equipment under test (EUT) is a Go Smart Brain with Bluetooth function operating in 2402-2480MHz. The EUT is powered by DC 6.4V (1 x 6.4V rechargeable battery). For more detail information pls. refer to the user manual.

Antenna Type: Integral antenna

Modulation Type: GFSK

Antenna Gain: 0dBi

Bluetooth Version: 5.1 BLE (Single Mode)

The normal radiated output power (e.i.r.p) is: 1.0dBm (tolerance: +/- 3dB).

The normal conducted output power is 1.0dBm (tolerance: +/- 3dB).

According to the KDB 447498:

The Maximum peak radiated emission for the EUT is 97.7dB μ V/m at 3m in the frequency 2402MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = 2.47dBm

which is within the production variation.

The Minimum peak radiated emission for the EUT is 95.3dB μ V/m at 3m in the frequency 2480MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = 0.07dBm

which is within the production variation.

The maximum conducted output power specified is 4dBm= 2.512mW

The source- based time-averaging conducted output power

= $2.512 \cdot \text{Duty cycle}$ mW =2.512 mW(Duty cycle =100%)

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

= 9.54 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.