

RF Exposure

The equipment under test (EUT) is a Fitness Tracker with Bluetooth 4.0 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.

BT 4.0 BLE Mode:

Modulation Type: GFSK

Bluetooth Version: 4.0 BLE (Single Mode)

Antenna Type: Integral antenna.

Antenna Gain: -3.81dBi.

The nominal conducted output power specified: -13.19dBm (± 2 dB).

The nominal radiated output power (e.i.r.p) specified: -17.00dBm (± 2 dB)

According to the KDB 447498:

The maximum peak radiated emission for the EUT is 79.9dB μ V/m at 3m in the frequency 2402MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = -15.33dBm

which is within the production variation.

The minimum peak radiated emission for the EUT is 77.5dB μ V/m at 3m in the frequency 2440MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = -17.73dBm

which is within the production variation.

The maximum conducted output power specified is -11.19dBm = 0.08mW

The source- based time-averaging conducted output power

= $0.08 \cdot \text{Duty factor mW}$ (where Duty Factor ≤ 1)

= 0.08 mW

The SAR Exclusion Threshold Level:

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

= $3.0 \cdot 5 / \sqrt{2.480}$ 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.