

INTERTEK TESTING SERVICES

RF Exposure

The equipment under test (EUT) is a Skin Scanner (Photographic accessories) with Bluetooth 5.2 (BLE-mode) function operating in 2402-2480MHz. The EUT is powered by DC 3.7V by battery or DC 5V from USB input. For more detail information pls. refer to the user manual.

Antenna Type: Integral antenna

Modulation Type: GFSK

Antenna Gain: 1.5dBi

Bluetooth Version: 5.2 (BLE Mode)

The nominal conducted output power specified: -5.0 dBm (± 3 dB)

The nominal radiated output power (e.i.r.p) specified: -3.5 dBm (± 3 dB)

According to the KDB 447498v07:

The Maximum peak radiated emission for the EUT is 92.7 dB μ V/m at 3m in the frequency 2402MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = -2.53dBm

which is within the production variation.

The Minimum peak radiated emission for the EUT is 90.5 dB μ V/m at 3m in the frequency 2440MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = -4.73dBm

which is within the production variation.

The maximum conducted output power specified is -2dBm= 0.631mW

The maximum EIRP specified is -0.5dBm= 0.891mW

The maximum ERP specified is -2.65dBm= 0.543mW

The SAR Exclusion Threshold Level:

$$\begin{aligned} P_{th}(\text{mW}) &= ERP_{20\text{cm}} * (d/20\text{cm})^x \quad (X = -\log_{10}\left(\frac{60}{ERP_{20\text{cm}}\sqrt{f}}\right)) \\ &= 3060 * (0.5/20)^{1.9} \text{ mW} \\ &= 2.72 \text{ mW} \end{aligned}$$

Since max. power of the source-based time-averaging conducted output power and effective radiated power (ERP) is well below the SAR low threshold level, so the EUT is considered to comply with SAR requirement without testing.