

INTERTEK TESTING SERVICES

RF Exposure

The equipment under test (EUT) is a PPG Golf Speaker with Bluetooth 5.3 BT function operating in 2402-2480MHz. The EUT is powered by DC 3.7V by rechargeable battery and charged by DC 5V through adapter. For more detail information pls. refer to the user manual.

2.4G BT(EDR)

Antenna Type: Integral antenna

Modulation Type: GFSK, $\pi/4$ -DQPSK and 8-DPSK

Antenna Gain: 0.64dBi

Bluetooth Version: V5.3

The nominal conducted output power specified: -3.0dBm (Tolerance: +/-2.5dB).

The nominal radiated output power (e.i.r.p) specified: -2.36dBm (Tolerance: +/-2.5dB).

The maximum conducted output power for the EUT is -1.53dBm in the frequency 2480MHz which is within the production variation.

The minimum conducted output power for the EUT is -5.16dBm in the frequency 2402MHz which is within the production variation.

The source-based time averaged maximum radiated power = -0.5dBm +0.64dBi = 0.14dBm = 1.03mW

The maximum ERP=-0.5+0.64-2.15=-2.01dBm=0.63mW

The SAR Exclusion Threshold Level:

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

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

2.4G BT(BLE)

Antenna Type: Integral antenna

Modulation Type: GFSK

Antenna Gain: 0.64dBi

Bluetooth Version: V5.3

The nominal conducted output power specified: -4.5dBm (Tolerance: +/-2.0dB).

The nominal radiated output power (e.i.r.p) specified: -3.86dBm (Tolerance: +/-2.0dB).

The maximum conducted output power for the EUT is -2.95dBm in the frequency 2480MHz which is within the production variation.

The minimum conducted output power for the EUT is -6.23dBm in the frequency 2402MHz which is within the production variation.

The source-based time averaged maximum radiated power = -2.5dBm +0.64dBi = -1.86dBm = 0.65mW

The maximum ERP=-2.5+0.64-2.15=-4.01dBm=0.40mW

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. conducted output power and effective radiated power (ERP) is well below the ERP threshold level, so the EUT is considered to comply with SAR requirement without testing.