

INTERTEK TESTING SERVICES

RF Exposure

The equipment under test (EUT) is a Bluetooth Power Bank with Bluetooth function. The EUT was powered by the fully-charged DC 3.7V, 4000mAh new rechargeable battery which was charged by USB port (DC 5V). For more detail information pls. refer to the user manual.

Modulation Type: GFSK for BT 4.0 and GFSK, $\pi/4$ DQPSK, 8DPSK for BT 3.0+EDR.
Bluetooth Version: 4.0 and 3.0 with EDR.

Antenna Type: Integral antenna.

Antenna Gain: 0dBi.

The nominal conducted output power specified: -5dBm +/-3dB.

The nominal radiated output power (e.i.r.p) specified: -5dBm (+/- 3dB)

According to the KDB 447498:

The maximum peak radiated emission for the EUT is 91.8dB μ V/m at 3m in the frequency 2480MHz of BT 4.0

The EIRP = $[(FS^*D)^2 / 30]$ mW = -3.43dBm
which is within the production variation.

The minimum peak radiated emission for the EUT is 88.0dB μ V/m at 3m in the frequency 2402MHz of BT 4.0

The EIRP = $[(FS^*D)^2 / 30]$ mW = -7.23dBm
which is within the production variation.

The maximum conducted output power specified is -2.0dBm = 0.63mW

The source- based time-averaging conducted output power

= $0.63 * \text{Duty cycle mW}$ (where Duty cycle ≤ 1)

≤ 0.63 mW

The SAR Exclusion Threshold Level:

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

= $3.0 * 5 / \text{sqrt}(2.480)$ mW

= 9.5 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.