

INTERTEK TESTING SERVICES

RF Exposure

The Equipment Under Test (EUT) is a 2 IN 1 DETACHABLE TABLET with Bluetooth and WiFi function. The EUT is powered by two rechargeable battery (DC 3.8V, 6000mAh) which can be charged by AC/DC adapter (Input: AC100-240V, 50-60Hz, 0.5A; Output: DC 5V, 3.0A). The WiFi and Bluetooth transmitter can't transmit simultaneously. For more detailed features description, please refer to the user's manual.

Bluetooth function:

Bluetooth Version: 4.0 BLE

Antenna Type: Integral antenna.

Antenna Gain: 2.3dBi.

Modulation Type: GFSK.

The nominal conducted output power specified: 0dBm (+/-3dB)

The nominal radiated output power (e.i.r.p) specified: 2.3dBm (+/- 3dB)

According to the KDB 447498:

The maximum peak radiated emission for the EUT is 96.8dB μ V/m at 3m in the frequency 2440MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = 1.57dBm

which is within the production variation.

The minimum peak radiated emission for the EUT is 95.9dB μ V/m at 3m in the frequency 2480MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = 0.67dBm

which is within the production variation.

The maximum conducted output power specified is 3dBm = 2mW

The source- based time-averaging conducted output power

= 2 * Duty factor mW (where Duty Factor \leq 1) = 2mW

The SAR Exclusion Threshold Level:

= 3.0 * (min. test separation distance, mm) / sqrt(freq. in GHz)

= 3.0 * 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.

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2.4GHz WiFi function:

Antenna Type: Integral Antenna.

Antenna Gain: 2.3dBi.

Modulation Type: BPSK, QPSK, 16QAM, 64QAM, CCK, DQPSK, DBPSK and DSSS.

The nominal conducted output power specified: 7.5dBm (Tolerance: +/-2dB).

According to the KDB 447498:

The maximum conducted output power for the EUT is 9.46dBm in the frequency 2437MHz of IEEE 802.11b which is within the production variation.

The minimum conducted output power for the EUT is 6.93dBm in the frequency 2422MHz of IEEE 802.11n-HT40 which is within the production variation.

The maximum conducted output power specified is 9.5dBm = 8.9mW

The source-based time-averaging conducted output power

= 8.9 * Duty factor mW (where Duty Factor \leq 1) = 8.9mW

The SAR Exclusion Threshold Level:

= 3.0 * (min. test separation distance, mm) / sqrt(freq. in GHz)

= 3.0 * 5 / sqrt (2.462) mW

= 9.56 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.