INTERTEK TESTING SERVICES

Analysis Report

The equipment under test (EUT) is a portable ANDROID CORE CONTROLLER with Bluetooth function. The EUT was powered by DC 3.7V Internal rechargeable battery and charging by USB Port. For more detail information pls. refer to the user manual.

Antenna Type: Integral antenna
Antenna Gain: 0dBi

The nominal radiated and conducted output power specified: 0dBm+/- 3dB

Modulation Type: GFSK

According to the KDB 447498:

The worst-case radiated emission for the EUT is 98.2dBµV/m at 3m in the frequency 2.402GHz
= [(FS*D) ^2 / 30] mW
= 2.97dBm which is within the production variation.

The maximun conducted output power specified is 3dBm = 2.0mW
The source- based time-averaging conducted output power
= 2.0 mW

The SAR Exclusion Threshold Level:
= 3.0 * (min. test separation distance, mm) / sqrt(freq. in GHz)
= 3.0 * 5 / sqrt (2.402) mW
= 9.7 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.

Transmitter Duty Cycle Calculation

Based on the Bluetooth Specification (BT version: 2.1), transmitter ON time

FCC ID: YFK-00035001

is independent of packet type (DH1, DH3 and DH5) and packet length (single-slot and multi-slot). The maximum transmitter ON time for the Bluetooth is 625µs.

Each TX and RX time slot is 625µs in length. A TDD scheme is used where master and slave alternately transmit. For one period for a pseudo-random hopping through all 79 RF channels, for DH5:

Time of 1 hopset (5 TX slots + 1 RX slot) = 0.625 ms x 6 = 3.75 ms

Time of 1 cycle =3.75 ms x 79 = 296.25 ms

Duty factor = 3.125 / 100 = 0.03125

This requirement is according to KDB 865664 D02