

# INTERTEK TESTING SERVICES

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## RF Exposure

The equipment under test (EUT) is a 6.0 SOUNDBAR with Bluetooth function. The EUT will operate from external power adapter. For more detail information pls. refer to the user manual.

Modulation Type: GFSK,  $\pi/4$  -DQPSK and 8-DPSK.  
Bluetooth Version: 2.1 with EDR function.

Antenna Type: Integral antenna.

Antenna Gain: 0dBi.

The nominal conducted output power specified: 2dBm +/-3dB.

The nominal radiated output power (e.i.r.p) specified: 2dBm (+/- 3dB)

According to the KDB 447498:

The minimum peak radiated emission for the EUT is 97.6dB $\mu$ V/m at 3m in the frequency 2441MHz

The EIRP =  $[(FS \cdot D)^2 / 30]$  mW = 2.4dBm  
which is within the production variation.

The maximum peak radiated emission for the EUT is 99.6dB $\mu$ V/m at 3m in the frequency 2402MHz

The EIRP =  $[(FS \cdot D)^2 / 30]$  mW = 4.4dBm  
which is within the production variation.

The maximum conducted output power specified is 5dBm = 3.2mW

The source- based time-averaging conducted output power  
= 3.2 \* Duty Cycle mW= 2.7 mW

The SAR Exclusion Threshold Level:

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

= 3.0 \* 5 / 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.

### Transmitter Duty Cycle Calculation

Based on the Bluetooth Specification (BT version: 2.1 + EDR), the duty factor is dependent of packet type (DH1, DH3 and DH5).For one period for a pseudo-random hopping through all 79 RF channels, for DH5:

One hop set consists of 5 TX slot and 1 RX slot.

Duty factor = 5 / 6 = 0.833

This requirement is according to KDB 865664 D02