

## INTERTEK TESTING SERVICES

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### RF Exposure

The equipment under test (EUT) is a NSW NANO ENHANCED WIRELESS CONTROLLER with Bluetooth function operating in 2402-2480MHz. The EUT is powered by DC 3.7V by rechargeable battery or DC 5V by USB port. For more detail information pls. refer to the user manual.

Antenna Type: Integral antenna

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

Antenna Gain: 4dBi Max

Bluetooth Version: 5.0(Single model)

The normal radiated output power (e.i.r.p) is: -8.0dBm (tolerance: +/- 3dB).

The normal conducted output power is -12.0dBm (tolerance: +/- 3dB).

According to the KDB 447498:

The Maximum peak radiated emission for the EUT is 87.3 dB $\mu$ V/m at 3m in the frequency 2441MHz

The EIRP =  $[(FS \cdot D)^2 / 30]$  mW = -7.93dBm

which is within the production variation.

The Minimum peak radiated emission for the EUT is 86.7dB $\mu$ V/m at 3m in the frequency 2402MHz

The EIRP =  $[(FS \cdot D)^2 / 30]$  mW = -8.53dBm

which is within the production variation.

The maximum conducted output power specified is -9.0dBm=0.126mW

The source- based time-averaging conducted output power = $0.126 \cdot \text{Duty cycle}$  mW <0.126 mW(Duty cycle <100%)

The SAR Exclusion Threshold Level:

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

=  $3.0 \cdot 5 / \text{sqrt}(2.480)$  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.