

# INTERTEK TESTING SERVICES

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## RF Exposure report

The equipment under test (EUT) is a Soundbar. The EUT was powered by AC 120V, 60Hz.  
For more detail information pls. refer to the user manual.

Modulation Type: GFSK

Bluetooth Version: 3.0

Antenna Type: Integral antenna

Antenna Gain: 2.0dBi

The nominal conducted output power specified: 3.0dBm (Tolerance: +/- 3dB)

The maximum conducted output power is 4.61 dBm which is within the production variation.  
The minimum conducted output power is 4.27 dBm which is within the production variation.

According to FCC Part 2.1091, this unlicensed transmitting devices is categorically excluded from routine environmental evaluation for RF exposure prior to equipment authorization or use, According to the KDB 447498 and OET 65, the simple calculation as below:

For Maximum Permissible Exposure (MPE) evaluation of the product, the maximum power density at 20 cm from this transmitter shall be less than the General Population / Uncontrolled MPE limit in OET Bulletin 65.

The maximum radiated output power(EIRP)=Conducted Power+Antenna Gain =8.0 dBm=6.3mW  
The source-based time averaged maximum radiated power (including the tune-up tolerance)  
= 6.3 \* Duty Cycle < 6.3 mW (Duty Cycle < 1)

From above data, the exposed power density at a distance (R) of 20cm from the center of radiation of the antenna can be calculated according to OET Bulletin 65 as follow:

$$= 6.3 \text{ mW} / 4\pi R^2$$

$$= 0.0013 \text{ mW/cm}^2$$

The MPE limit is 1.0 mWcm<sup>-2</sup> for general population and uncontrolled exposure in the Bluetooth frequency range according to FCC Part 1.1310. As the measured power density at 20cm from the transmitter is lower than the MPE limit, the compliance to the MPE limit can be ensured by indicating the minimum 20cm separation between the transmitter's radiating structure and body of the user or nearby persons.

The following RF exposure statement is proposed to be included in the user manual:

**“FCC RF Radiation Exposure Statement Caution: This Transmitter must be installed to provide a separation distance of at least 20 cm from all persons.”**