

Products

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## **RF Exposure**

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Product: 2.1 wireless speaker system

FCC ID: ODLPSB4721 IC: 10509A-PSB4721

# **Radio Frequency Exposure Compliance**

RESULT: Pass

**Test Specification** 

Test standard : CFR47 FCC Part 2.1091

RSS-102 Issue 5

Limit : CFR47 FCC Part 1.1310

**FCC requirement:** Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 20cm normally can be maintained between the user and the device.

#### MPE Calculation Method according to OET Bulletin 65

Power Density:  $S_{(mW/cm^2)} = PG/4\pi R^2$  or  $EIRP/4\pi R^2$ 

Where:

S = power density (mW/cm<sup>2</sup>)

P = power input to the antenna (mW)

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna (cm)

#### The maximum conducted output power specified: 10dBm

From the peak RF output power, the minimum mobile separation distance, d=20 cm, as well as the antenna gain (Max. -0.68 dBi), the RF power density can be calculated as below:

 $S_{(mW/cm^2)} = PG/4\pi R^2 = 0.002 \text{mW/cm}^2$ 

Limits for Maximum Permissible Exposure (MPE) according to FCC Part 1.1310: 1.0 mW/cm<sup>2</sup>

IC requirements: The EUT shall comply with the requirement of RSS-102 section 2.5.2.

### Exemption from Routine Evaluation Limits - RF Exposure Evaluation

RF exposure evaluation is required if the separation distance between the user and/or bystander and the device's radiating element is greater than 20 cm, except when the device operates as follows: at or above 300 MHz and below 6 GHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than  $1.31 \times 10^{-2} f^{0.6834}$  W (adjusted for tune-up tolerance), where f is in MHz;

• RF exposure evaluation exempted power for Bluetooth: 2.676 W

The maximum conducted output power and e.i.r.p. are far below the exempted power level, so the RF exposure evaluation is not required.

"RF Radiation Exposure Statement Caution: This transmitter must be installed to provide a separation distance of at least 20 cm from all persons."