

RF Exposure

Product: 2.1 wireless speaker system
FCC ID: ODLPSB4721B
IC: 10509A-PSB4721B

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/cm²)

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:

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

Limits for Maximum Permissible Exposure (MPE) according to FCC Part 1.1310: 1.0 mW/cm²

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.”