

## Safety Human Exposure

### 1.1 Radio Frequency Exposure Compliance

#### 1.1.1 Electromagnetic Fields

**RESULT:**

**Pass**

Report No.	: CN24WQW3 002
Test item	: Bluetooth Ambient Light
Identification / Type No.	: PARTYLIGHT BEAM
FCC ID	: APIJBLPLBEAM
IC:	6132A-JBLPLBEAM
HVIN:	PARTYLIGHT BEAM
Test standard	: CFR47 FCC Part 2: Section 2.1091 CFR47 FCC Part 1: Section 1.1310 KDB 447498 D01 General RF Exposure Guidance v06 RSS-102 Issue 6 December 15, 2023

**Stand-alone SAR evaluation:**

➤ **FCC requirements**

**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 nominal maximum conducted output power specified:**

Bluetooth: 7.70 dBm

From the peak RF output power, the minimum mobile separation distance, d=20 cm, as well as the antenna gain (Max. 2.05 dBi for Bluetooth), the RF power density can be calculated as below:

For Bluetooth:  $S_{(mW/cm^2)} = PG/4\pi R^2 = 0.0019$  mW/cm<sup>2</sup>

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

\* Refer to CN24WQW3 001 for power data.

Conclusion: SAR test is exempted

➤ **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 nominal maximum conducted output power specified:**

Bluetooth: 7.70 dBm

Antenna Gain: 2.05 dBi for Bluetooth

The Max. e.i.r.p. for Bluetooth: 9.75 dBm = 0.009 W

The e.i.r.p. for the Bluetooth is less than the RF exposure evaluation exempted power. So 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.”**