

**Prüfbericht - Nr.:** **CN21RYZ6 001**  
Test report no.

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## 6 Safety Human Exposure

### 6.1 Radio Frequency Exposure Compliance

#### 6.1.1 Electromagnetic Fields

**RESULT:**

**Pass**

##### Test Specification

Test standard : CFR47 FCC Part 2.1091  
RSS-102 Issue 5 March 2015  
FCC KDB Publication 447498 v06

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

Where:

S = power density ( $\text{mW/cm}^2$ )

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:

802.11b/g/n: 21.20 dBm

From the peak RF output power, the minimum mobile separation distance, d=20 cm, as well as the antenna gain (3.00 dBi), the RF power density can be calculated as below:

For 802.11b/g/n:  $S_{(\text{mW/cm}^2)} = PG/4\pi R^2 = 0.052 \text{ mW/cm}^2$

**Limits for Maximum Permissible Exposure (MPE) according to FCC Part 1.1310:** 1.0  $\text{mW/cm}^2$

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- **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 2.4G DTS: 2.676 W

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

802.11b/g/n: 21.20 dBm

Antenna Gain: 3.00 dBi

The Max. e.i.r.p. for 802.11b/g/n: 24.20dBm = 0.263 W

The e.i.r.p. of EUT 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.”**