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**RF** exposure information

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FCC ID: NT862932; IC: 3043A-62932

## 1. Introduction

The device is a designed to be installed in mobile exposure conditions. It integrates a Bluetooth transsmitter and a 2.4 WiFi transmitter which can not operate simultaneusly.

The antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all the persons and must not be co-located or operating in conjunction with any other antenna or transmitter except as under the conditions described KDB 447498 D01 General RF Exposure Guidance.

## 2. MPE exposure limits

The table below is excerpted from Table 1B of 47 CFR 1.1310 titled Limits for Maximum Permissible Exposure (MPE), Limits for General Population/Uncontrolled Exposure:

Frequency Range (MHz)	Power density (mW/cm <sup>2</sup> )	Averaging time (minutes)
1500 - 100.000	1,0	30

The table below is excerpted from RSS-102, Issue 5, 4, titled "Table 4: RF Field Strength Limits for Devices Used by the General Public (Uncontrolled Environment)":

Frequency Range (MHz)	Power density (W/m <sup>2</sup> )	Averaging time (minutes)		
300-6000	$0.02619 \ f^{\ 0.6834}$	6		

## 3. Compliance criteria

Power density of individual transmitters is calculated using the equation:

$$S = \frac{PG}{4\pi R^2}$$

where: S = power density (in appropriate units, e.g. mW/cm<sup>2</sup>)

P = power input to the antenna (in appropriate units, e.g., 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 (appropriate units, e.g., cm)

Power density must be lower than the MPE limits stated in item 2.

## 4. Compliance calculations

Frequency Band (MHz)	Mode	Frequency Range (MHz)	Reference frequency (Lowest freq.) (MHz)	Maximum conducted output power (per tune-up) (dBm)	Antenna gain (dBi)	Evaluation distance for compliance with MPE limits (cm)	FCC MPE limit (mW/cm <sup>2</sup> )	IC MPE limit (mW/cm²)	$S = \frac{PG}{4 \pi R^2}$ (mW/cm2)
2400-2483,5	Bluetooth Basic Rate	2402-2480	2402,0	3,53	0,39	20	1,000	0,535	0,00049
2400-2483,5	Bluetooth EDR	2402-2480	2402,0	5,81	0,39	20	1,000	0,535	0,00083
2400-2483,5	802.11b	2412-2462	2412,0	17,44	0,39	20	1,000	0,537	0,01207
2400-2483,5	802.11g	2412-2462	2412,0	16,22	0,39	20	1,000	0,537	0,00911
2400-2483,5	802.11n20	2412-2462	2412,0	15,28	0,39	20	1,000	0,537	0,00734

Yours sincerely,

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