

# 1 Safety Human Exposure

## 1.1 Radio Frequency Exposure Compliance

### 1.1.1 Electromagnetic Fields

**RESULT:**
**Pass**
**Test Specification**

Test standard

: CFR47 FCC Part 2: Section 2.1091

CFR47 FCC Part 1: Section 1.1310

FCC KDB Publication 447498 v06, section 7

 ➤ **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 KDB 447498 v06**

 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>)

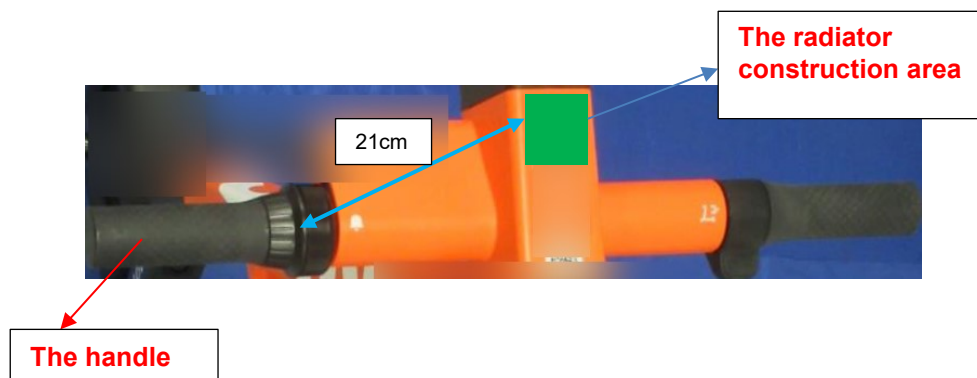
P = power input to the antenna (mW)

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)

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

This device is a scooter, when in normal use the nearest distance between the user and radiator is 21cm, the handle to radiator. Details as below diagram.



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**EUT RF Exposure Evaluation standalone operations, worst case**

Test Mode	Maximum conducted Power including tune-up (dBm)	Antenna Gain (dBi)	e.i.r.p		$S_{(mW/cm^2)} = \frac{PG}{4\pi R^2}$	Limit $(mW/cm^2)$
			(dBm)	(mW)		
Cat-M1, LTE 2	21.5	3.3	24.80	302.00	0.0601	1.0
Cat-M1, LTE 4	21.5	3.27	24.77	299.92	0.0597	1.0
Cat-M1, LTE 12	22.0	-1.83	20.17	103.99	0.0207	0.474
Cat-M1, LTE 13	22.5	-2.03	20.47	111.43	0.0222	0.521
2.4GHz Wi-Fi	20.0	3.84	23.84	242.10	0.0482	1.0

**Note: Simultaneous transmission not supported.**

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