

## RF Exposure Report

**Report No.:** FCC\_RF\_SL19101801-XIR-016\_MPE

**FCC ID:** GKM-XT1040S1

**Test Model:** XT1040S1

**Series Model:** N/A

**Received Date:** 10/23/2019

**Test Date:** -

**Issued Date:** 11/05/2019

**Applicant:** Xirgo Technologies, LLC

**Address:** 188 Camino Ruiz, Camarillo CA 93012

**Manufacturer:** Xirgo Technologies, LLC

**Address:** 188 Camino Ruiz, Camarillo CA 93012

**Issued By:** Bureau Veritas Consumer Products Services, Inc.

**Lab Address:** 775 Montague Expressway, Milpitas, CA 95035

**Test Location (1):** 775 Montague Expressway, Milpitas, CA 95035

**FCC Registration /  
Designation Number:** 540430



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## Table of Contents

<b>Release Control Record</b> .....	<b>3</b>
<b>1 Certificate of Conformity</b> .....	<b>4</b>
<b>2 RF Exposure</b> .....	<b>5</b>
2.1 Limits for Maximum Permissible Exposure (MPE) .....	5
2.2 MPE Calculation Formula .....	5
2.3 Classification .....	5
2.4 Antenna Gain .....	5
2.5 Calculation Result of Maximum Conducted Power .....	6
<b>3 Conclusion</b> .....	<b>6</b>

### Release Control Record

Issue No.	Description	Date Issued
FCC_RF_SL19101801-XIR-016_MPE	Original Release	11/05/2019



## 2 RF Exposure

### 2.1 Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm <sup>2</sup> )	Average Time (minutes)
Limits For General Population / Uncontrolled Exposure				
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f <sup>2</sup> )*	30
30-300	27.5	0.073	0.2	30
300-1500	...	...	f/1500	30
1500-100,000	...	...	1.0	30

f = Frequency in MHz; \*Plane-wave equivalent power density

### 2.2 MPE Calculation Formula

$$P_d = (P_{out} * G) / (4 * \pi * r^2)$$

Where

$P_d$  = power density in mW/cm<sup>2</sup>

$P_{out}$  = output power to antenna in mW

$G$  = gain of antenna in linear scale

$\pi$  = 3.1416

$R$  = distance between observation point and center of the radiator in cm

### 2.3 Classification

The maximum output power and antenna gain is declared by the manufacturer and used in this assessment. The minimum RF exposure distance during normal operation is 20 cm (Mobile Condition).

### 2.4 Antenna Gain

The antenna type is Chip antenna with 1.5 dBi gain.

## 2.5 Calculation Result of Maximum Conducted Power

Frequency Band (MHz)	Max Power (dBm)	Max Power (mW)	Turn-Up Tolerance	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
2402-2480	3.93	2.47	± 1dB	1.5	20	0.000875	1

Note:

- Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

### 3 Conclusion

**BT\_LE**

**Power Density (mW/cm<sup>2</sup>) = 0.000875 < 1.0 mW/cm<sup>2</sup>**

**Therefore the maximum calculations of above situation is less than the “1” mW/cm<sup>2</sup> limit.**

**Pass**

**--- END ---**