

## 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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### Release Control Record

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

## 1 Certificate of Conformity

**Product:** Bluetooth wireless door sensor

**Brand:** Xirgo Technologies

**Test Model:** XT1040S1

**Series Model:** N/A

**Sample Status:** Engineering sample

**Applicant:** Xirgo Technologies, LLC

**Standards:** FCC Part 2 (Section 2.1093)

KDB 447498 D01 General RF Exposure Guidance v06

IEEE C95.1-1992

The above equipment has been tested by **Bureau Veritas Consumer Products Services, Inc., Milpitas Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

**Prepared by :**



**Date:**

11/05/2019

Deon Dai / Test Engineer

**Approved by :**



**Date:**

11/05/2019

Chen Ge / Engineer Reviewer

## 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

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

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:

1. 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 ---**