



## RF Exposure Report

**Report No.:** SA150623E05

**FCC ID:** 2ABC8-5898

**Test Model:** 5898

**Received Date:** June 23, 2015

**Test Date:** Aug. 19, 2015

**Issued Date:** Oct. 02, 2015

**Applicant:** Honeywell Security Sensor CoE

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**Issued By:** Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Hsin Chu Laboratory

**Lab Address:** No. 81-1, Lu Liao Keng, 9th Ling,Wu Lung Tsuen, Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan R.O.C.

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**Test Location (3):** E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan R.O.C.

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### Release Control Record

Issue No.	Description	Date Issued
SA150623E05	Original release.	Oct. 02, 2015



**1 Certificate of Conformity**

**Product:** Wireless DUAL TEC Motion Sensor

**Brand:** Honeywell

**Test Model:** 5898

**Sample Status:** ENGINEERING SAMPLE

**Applicant:** Honeywell Security Sensor CoE

**Test Date:** Aug. 19, 2015

**Standards:** FCC Part 2 (Section 2.1091)

KDB 447498 D03

IEEE C95.1

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan 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 :** Phoenix Huang , **Date:** Oct. 02, 2015  
Phoenix Huang / Specialist

**Approved by :** May Chen , **Date:** Oct. 02, 2015  
May Chen / Manager

## 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				
300-1500	...	...	F/1500	30
1500-100,000	...	...	1.0	30

F = Frequency in MHz

### 2.2 MPE Calculation Formula

$$Pd = (Pout * G) / (4 * \pi * r^2)$$

where

Pd = power density in mW/cm<sup>2</sup>

Pout = 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 antenna of this product, under normal use condition, is at least 20cm away from the body of the user. So, this device is classified as **Mobile Device**.

### 3 Calculation Result of Maximum Power

Frequency Band	Max Field Strength Of Fundamental (dBuV/m)	Max Pout EIRP (dBm)	Max Pout EIRP (mW)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
345 MHz	88.6	-6.63	0.2173	20	0.00004	0.23 (See Note 2)
10.527 GHz	108.9	13.67	23.2809	20	0.00463	1

Note:

1. Pout EIRP (dBm) = Field Strength of Fundamental (dBuV/m) - 95.23 (dB)
2. Limit of Electric field=F/1500

#### Conclusion:

Both of the 345MHz and 10.527GHz can transmit simultaneously, the formula of calculated the MPE is:

$$CPD_1 / LPD_1 + CPD_2 / LPD_2 + \dots \text{etc.} < 1$$

**CPD = Calculation power density**

**LPD = Limit of power density**

Therefore, the worst-case situation is  $0.00004 / 0.23 + 0.00463 / 1 = 0.005$ , which is less than "1". This confirmed that the device comply with FCC 1.1310 MPE limit.

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