

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

Address: 38F, Block A of Galaxy Century Building, No.3069 Caitian Road, Fu Tian District, Shenzhen, China

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.

Test Location (1): No. 81-1, Lu Liao Keng, 9th Ling, Wu Lung Tsuen, Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan R.O.C.

Test Location (2): No. 49, Ln. 206, Wende Rd., Shangshan Tsuen, Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan R.O.C.

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

This report is for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents. Unless specific mention, the uncertainty of measurement has been explicitly taken into account to declare the compliance or non-compliance to the specification. The report must not be used by the client to claim product certification, approval, or endorsement by any government agencies.



Table of Contents

| | |
|--|----------|
| Release Control Record | 3 |
| 1 Certificate of Conformity | 4 |
| 2 RF Exposure | 5 |
| 2.1 Limits for Maximum Permissible Exposure (MPE)..... | 5 |
| 2.2 MPE Calculation Formula | 5 |
| 2.3 Classification | 5 |
| 3 Calculation Result of Maximum Power | 6 |



A D T

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 ²) | 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

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

where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 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 ²) | Limit (mW/cm ²) |
|----------------|--|---------------------|--------------------|---------------|-------------------------------------|-----------------------------|
| 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.

--- END ---