

# **RF EXPOSURE REPORT**

#### **REPORT NO.:** SA140605E05

- MODEL NO.: SYP1-J1100-GR, SYP1-J11YY-XX (YY-Colour Variant (0~9 and A~Z) and XX-Customer Variant (0~9 and A~Z))
  - FCC ID: Z3M-GSYP1J11
  - RECEIVED: June 05, 2014
    - **TESTED:** June 18, 2014
    - **ISSUED:** July 04, 2014
  - **APPLICANT:** Greenwave Systems Pte Ltd
    - ADDRESS: 41 Science Park Road, #03-01, The Gemini, Science Park II, Singapore, 117610 Singapore
  - **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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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



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### **RELEASE CONTROL RECORD**

| ISSUE NO.   | REASON FOR CHANGE | DATE ISSUED   |
|-------------|-------------------|---------------|
| SA140605E05 | Original release  | July 04, 2014 |



#### 1. CERTIFICATION

| PRODUCT:     | Wireless Motion Sensor   |
|--------------|--|
| BRAND NAME:  | greenwave systems  |
| MODEL NO.:   | SYP1-J1100-GR,<br>SYP1-J11YY-XX (YY-Colour Variant (0~9 and A~Z)<br>and XX-Customer Variant (0~9 and A~Z)) |
| TEST SAMPLE: | ENGINEERING SAMPLE   |
| APPLICANT:   | Greenwave Systems Pte Ltd  |
| TESTED DATE: | June 18, 2014  |
| STANDARDS:   | FCC Part 2 (Section 2.1091)  |
|              | FCC OET Bulletin 65, Supplement C (01-01)  |
|              | IEEE C95.1   |

The above equipment (Model: SYP1-J1100-GR) 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 | : <u>Dheenix Huang</u> , <b>DATE</b> : <u>July 04, 2014</u><br>(Phoenix Huang, Specialist) |  |
|-------------|--|--|
| APPROVED BY | :, DATE: <u>July 04, 2014</u><br>(May Chen, Manager)                                       |  |
|             |  |  |



#### 2. RF EXPOSURE LIMIT

#### LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

| FREQUENCY<br>RANGE (MHz)                              | ELECTRIC FIELD<br>STRENGTH (V/m) | MAGNETIC FIELD<br>STRENGTH (A/m) | POWER DENSITY<br>(mW/cm <sup>2</sup> ) | AVERAGE TIME<br>(minutes) |  |  |
|---|----------------------------------|----------------------------------|--|---------------------------|--|--|
| LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE |                                  |                                  |  |                           |  |  |
| 300-1500  |                                  |                                  | F/1500                                 | 30                        |  |  |
| 1500-100,000  |                                  |                                  | 1.0                                    | 30                        |  |  |

F = Frequency in MHz

#### 3. MPE CALCULATION FORMULA

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

where

 $Pd = power density in mW/cm^2$ 

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

#### 4. 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**.

#### 5. ANTENNA GAIN

The antenna provided to the EUT, please refer to the following table:

| Brand | Antenna Type | Antenna<br>Connector | Gain(dBi) | Frequency range<br>(GHz) |
|-------|--------------|----------------------|-----------|--------------------------|
| NA    | PCB          | NA                   | 1.2       | 2.4~2.4835               |



### 6. CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

| FREQUENCY<br>BAND<br>(MHz) | CONDUCTED<br>POWER<br>(mW) | ANTENNA<br>GAIN<br>(dBi) | DISTANCE<br>(cm) | POWER<br>DENSITY<br>(mW/cm²) | LIMIT<br>(mW/cm²) |
|----------------------------|----------------------------|--------------------------|------------------|------------------------------|-------------------|
| 2405 - 2480                | 1.694                      | 1.2                      | 20               | 0.00044                      | 1.00              |

--- END ----