

RF Exposure Report

Project Number: 4035896

Report Number: 4035896EMC02 **Revision Level:** 0

Client: Sensorfield LLC

Equipment Under Test: Wireless Monitoring Units (Sensor, Hub, Gateway)

Models: S1-B / H1

FCC ID: 2AJRESFNJR1

Applicable Standards: 47 C.F.R. §§ 2.1091 and 2.1093; FCC KDB 447498

FCC OET Bulletin 65 Supplement

Report issued on: 05 December 2016

Test Result: Compliant

Reviewed by:


Jeremy Pickens, Senior EMC Engineer

Remarks:

This report details the results of the testing carried out on one sample, the results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

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1 General Information

1.1 Client Information

Name: Sensorfield LLC
Address: 2503 Robinhood, Suite 165
City, State, Zip, Country: Houston, TX 77005, USA

1.2 Test Laboratory

Name: SGS North America, Inc.
Address: 620 Old Peachtree Road NW, Suite 100
City, State, Zip, Country: Suwanee, GA 30024, USA

Accrediting Body: A2LA
Type of lab: Testing Laboratory
Certificate Number: 3212.01

1.3 General Information of EUT

EUT: Wireless Monitoring Units (Sensor, Hub, Gateway)
Model Number: S1-B / H1

Frequency Range: 903.074 to 926.826 MHz
Number of channels: 15.247 Hybrid device employing 10 channels
Modulation type: LoRa
Channel spacing: 1 and 2.2 MHz
Antenna: 9" Wire

Rated Voltage: 3.7 VDC Solar Power / Internal Battery

Sample Received Date: 07 September 2016

1.4 Operating Modes and Conditions

For this assessment, the EUT's maximum measured power was considered. While the gain value of the wire antenna is unknown, radiated measurements showed that the gain is significantly less than 0 dBi. For the exposure calculations, 0 dBi was used as worst-case.

2 RF Exposure

2.1 Test Result

| Test Description | Product Specific Standard | Test Result |
|------------------|---------------------------|-------------|
| RF Exposure | FCC Part 1.1310 | Compliant |

2.2 Test Method

Using the maximum conducted power, the power density was calculated.

2.3 Single transmission RF Exposure Levels

| Band of Operation | | Conducted Power w/tolerance dBm | Antenna Gain | Cable Loss | Average EIRP | | Distance (R) cm | Power Density EIRP _{Avg} /(4πR ²) mW | FCC mW/cm ² | % of Limit | Verdict |
|-------------------|---------|---------------------------------|--------------|------------|--------------|----|-----------------|-----------------------------------------------------------|------------------------|------------|---------|
| Type | MHz | | | | dBm | mW | | | | | |
| LoRa | 902-928 | 18.4 | 0.0 | 0.0 | 18.4 | 69 | 20 | 0.014 | 0.60 | 2% | Pass |

3 Revision History

| Revision Level | Description of changes | Revision Date |
|----------------|------------------------|------------------|
| 0 | Initial release | 05 December 2016 |
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