



## TEST REPORT

**Report Number: 100687320MIN-001H**

**Project Number: G100687320**

**Testing performed on the  
Oneprox GS3-MT PIN**

**FCC ID: OQLGS3PIN  
Industry Canada ID: 7309A-OQLGS3PIN**

**to**

**47 CFR Part 15.209; Part 15.215:2010  
47 CFR Part 15. 225:2010  
RSS- 210, Issue 8, 2010  
RSS-Gen, Issue 3, 2010**

**For  
Stanley Convergent Security Solutions, Inc.**

Test Performed by:  
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7250 Hudson Blvd., Suite 100  
Oakdale, MN 55128

Test Authorized by:  
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Date: July 9, 2013

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## 1.0 GENERAL DESCRIPTION

|                                     |                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Model:</b>                       | Onepro GS3-MT PIN                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Type of EUT:</b>                 | PIN MT Card Reader                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Serial Number:</b>               | MIN1306131420-004                                                                                                                                                                                                                                                                                                                                                                          |
| <b>FCC ID:</b>                      | OQLGS3PIN                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Industry Canada ID:</b>          | 7309A-OQLGS3PIN                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Related Submittal(s) Grants:</b> | None                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Company:</b>                     | Stanley Convergent Security Solutions, Inc.                                                                                                                                                                                                                                                                                                                                                |
| <b>Customer:</b>                    | Mr. Christopher Harris                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Address:</b>                     | 1707 Orlando Central Parkway, Suite 500<br>Orlando, FL 32809                                                                                                                                                                                                                                                                                                                               |
| <b>Phone:</b>                       | (407) 206-7415                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Fax:</b>                         | (866) 716-9006                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Test Standards:</b>              | <input checked="" type="checkbox"/> 47 CFR, Part 15:2010, §15.225<br><input checked="" type="checkbox"/> RSS-210, Issue 8, 2010<br><input checked="" type="checkbox"/> RSS-Gen, Issue 3, 2010<br><input checked="" type="checkbox"/> 47 CFR, Part 15:2010, §15.209, §15.215<br><input type="checkbox"/> 47 CFR, Part 15:2008, §15.107 and §15.109, Class<br><input type="checkbox"/> Other |
| <b>Type of radio:</b>               | <input checked="" type="checkbox"/> Stand -alone <input type="checkbox"/> Module <input type="checkbox"/> Hybrid                                                                                                                                                                                                                                                                           |
| <b>Date Sample Submitted:</b>       | June 10, 2013                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Test Work Started:</b>           | June 10, 2013                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Test Work Completed:</b>         | July 3, 2013                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Test Sample Conditions:</b>      | <input type="checkbox"/> Damaged <input type="checkbox"/> Poor (Usable) <input checked="" type="checkbox"/> Good                                                                                                                                                                                                                                                                           |



## 1.1 Product Description; Test Facility

|                                  |                                                                                                                                                                                                                                                                                                                         |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Description:             | SGR PIN MT Reader                                                                                                                                                                                                                                                                                                       |
| Operating Frequency              | 124.71kHz and 13.56MHz                                                                                                                                                                                                                                                                                                  |
| Modulation:                      | ASK (124kHz) and FSK (13.56MHz)                                                                                                                                                                                                                                                                                         |
| Emission Designator:             | 2K7A1D (ASK)<br>2K6FXD (FSK)                                                                                                                                                                                                                                                                                            |
| Antenna(s) Info:                 | Integral antenna                                                                                                                                                                                                                                                                                                        |
| Antenna Installation:            | <input type="checkbox"/> User <input type="checkbox"/> Professional <input checked="" type="checkbox"/> Factory                                                                                                                                                                                                         |
| Transmitter Power Configuration: | <input type="checkbox"/> Internal battery <input type="checkbox"/> External power source<br><input checked="" type="checkbox"/> 120VAC <input type="checkbox"/> 230VAC <input type="checkbox"/> 400VAC <input type="checkbox"/> VDC <input type="checkbox"/> Other:<br>Amp.<br><input checked="" type="checkbox"/> 60Hz |
| Special Test Arrangement:        | The transmitter was tested while connected to the SGR 512 Controller and was powered SGR 512 Controller. Conducted Emissions testing was performed at the SGR 512 Controller AC port.                                                                                                                                   |
| Test Facility Accreditation:     | A2LA (Certificate No. 1427.01)                                                                                                                                                                                                                                                                                          |
| Test Methodology:                | Measurements performed according to the procedures in ANSI C63.10-2009                                                                                                                                                                                                                                                  |



## 1.2 EUT Configuration

The equipment under test was operated during the measurement under the following conditions:

- ☐ - Standby
- ☒ - Continuous
- ☐ - Test program (customer specific)
- ☐ -

### Operating modes of the EUT:

| No. | Description                                       |
|-----|---------------------------------------------------|
| 1   | The transmitter was set to transmit continuously. |

### Cables:

| No. | Type                | Length | Designation                | Note |
|-----|---------------------|--------|----------------------------|------|
| 1   | Communication cable | >1m    | Reader cable, not shielded |      |

### Support equipment/Services:

| No. | Item       | Description        |
|-----|------------|--------------------|
| 1   | Controller | SGR 512 Controller |

**General notes:** PIN MT card reader is transmitter only, and has no receiver portion.

---

## 1.3 Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

### ☒ Normal

**Temperature:** 15-35°C

**Humidity:** 30-60%

**Atmospheric pressure:** 86-106kPa

### ☒ Extreme

**Temperature:** -20 to +50°C

**Primary Supply Voltage:** + 15%



#### 1.4 Measurement uncertainty

The expanded uncertainty ( $k = 2$ ) for radiated emissions from 30 to 1000 MHz has been determined to be:  $\pm 4$  dB at 10m and  $\pm 5.4$  dB at 3m

The expanded uncertainty ( $k = 2$ ) for conducted emissions from 150 kHz to 30 MHz has been determined to be:  
 $\pm 2.6$  dB

#### 1.5 Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any) from the measured emissions reading on the EMI Receiver.  
The basic equation with a sample calculation is as follows:

$$FS = RA + AF + CF - AG$$

Where: FS = Field Strength in dB( $\mu$ V/m)

RA = Receiver Amplitude in dB( $\mu$ V)

CF = Cable Attenuation Factor in dB

AF = Antenna Factor in dB( $m^{-1}$ )

AG = Amplifier Gain in dB

Assume a receiver reading of 48.1 dB( $\mu$ V) is obtained. The antenna factor of 7.4 dB( $m^{-1}$ ) and cable factor of 1.6 dB is added and amplifier gain of 16.0 dB is subtracted giving field strength of 41.1 dB( $\mu$ V/m).

$$RA = 48.1 \text{ dB}(\mu V)$$

$$AF = 7.4 \text{ dB}(m^{-1})$$

$$CF = 1.6 \text{ dB}$$

$$AG = 16.0 \text{ dB}$$

$$FS = RA + AF + CF - AG$$

$$FS = 48.1 + 7.4 + 1.6 - 16.0$$

$$FS = 41.1 \text{ dB}(\mu V/m)$$

**General notes:** None



## 2.0 TEST SUMMARY

Referring to the performance criteria and the operating mode during the tests specified in this report, the equipment complies with the requirements according to the following standards.

| TEST SPECIFICATION                      | TEST PARAMETERS                                      | RESULT |
|-----------------------------------------|------------------------------------------------------|--------|
| 15.209, 15.215(b) / RSS-Gen 4.11        | Field Strength of Fundamental and Spurious Emissions | Pass   |
| 15.225(a)(b)(c) / RSS-210 A2.6(a)(b)(c) | Field strength within the band of operation          | Pass   |
| 15.225(d) / RSS-210 A2.6(d)             | Out of band emissions                                | Pass   |
| 15.215(c) / RSS- Gen 4.6.1              | Bandwidth of the emission                            | Pass   |
| 15.225(e) / RSS-210 A2.6                | Frequency tolerance                                  | Pass   |
| 15.207/RSS-Gen 7.2.2                    | Transmitter Power Line conducted emissions           | Pass   |



### 3.0 TEST CONDITIONS AND RESULTS

#### 3.1 Field Strength of Fundamental and Spurious Emissions

**Test location:** ☒ OATS ☒ Anechoic Chamber ☐ Other

**Test distance:** ☒ 10 meters ☒ 3 meters

**Test result:** **Pass**

**Max. Emissions margin at fundamental:** 26.1dB below the limits

**Max. margin of harmonics and spurious emissions:** 9.6dB below the limits

1. The Emissions pre-scan was performed in the Anechoic chamber at 3m measurement distance (Graphs 3.1.1, 3.1.2); final measurements were performed in the Open Area Test Site at 10m measurement distance ( see Tables 3.1.1, 3.1.2).
2. Field Strength of Fundamental and Spurious Emissions measurements were made at Fundamental frequency of 124kHz; Spurious Emissions were tested up to 10<sup>th</sup> harmonic.
3. Measurements were taken using Peak detector with RBW=200kHz (below 150kHz), RBW=9kHz (above 150kHz) and RBW=120kHz (above 30MHz).

**Notes:**

|                        |                             |                     |
|------------------------|-----------------------------|---------------------|
| <b>Date:</b>           | June 20-July 3, 2013        | <b>Result: Pass</b> |
| <b>Standard:</b>       | FCC 15.209 / RSS-210 A1.1.2 |                     |
| <b>Tested by:</b>      | Uri Spector                 |                     |
| <b>Test Point:</b>     | Enclosure with antenna      |                     |
| <b>Operation mode:</b> | See Page 5                  |                     |
| <b>Note:</b>           | 124kHz transmitter          |                     |

**Table 3.1.1**

| Frequency MHz | Antenna Orient. | Ant. CF dB1/m | Cable loss dB | Pre-amp Gain (dB) | Peak Reading dBμV | Total @ 10m dBμV/m | 15.209 Limit dBμV/m | Distance Factor (dB) | Margin dB | Comments |
|---------------|-----------------|---------------|---------------|-------------------|-------------------|--------------------|---------------------|----------------------|-----------|----------|
| 0.124         | Front           | 63.6          | 0.1           | 28.8              | 23.9              | 58.8               | 25.7                | 59.1                 | -26.1     | Fund     |
| 0.124         | Side            | 63.6          | 0.1           | 28.8              | 19.0              | 53.9               | 25.7                | 59.1                 | -31.0     | Fund     |
| 0.248         | Front           | 57.8          | 0.1           | 28.7              | 16.9              | 46.1               | 19.7                | 59.1                 | -32.7     |          |
| 0.248         | Side            | 57.8          | 0.1           | 28.7              | 15.0              | 44.2               | 19.7                | 59.1                 | -34.6     |          |
| 0.373         | Front           | 54.2          | 0.1           | 28.7              | 17.4              | 43.0               | 16.2                | 59.1                 | -32.3     |          |
| 0.373         | Side            | 54.2          | 0.1           | 28.7              | 14.8              | 40.4               | 16.2                | 59.1                 | -34.9     |          |
| 0.497         | Front           | 51.9          | 0.1           | 28.7              | 19.9              | 43.1               | 33.7                | 19.1                 | -9.6      |          |
| 0.497         | Side            | 51.9          | 0.1           | 28.7              | 14.0              | 37.2               | 33.7                | 19.1                 | -15.5     |          |
| 0.621         | Front           | 49.8          | 0.1           | 28.7              | 13.8              | 35.0               | 31.7                | 19.1                 | -15.8     |          |
| 0.621         | Side            | 49.8          | 0.1           | 28.7              | 11.1              | 32.3               | 31.7                | 19.1                 | -18.5     |          |
| 1.118         | Front           | 45.7          | 0.1           | 28.7              | 17.2              | 34.3               | 26.6                | 19.1                 | -11.4     |          |
| 1.118         | Side            | 45.7          | 0.1           | 28.7              | 10.9              | 28.0               | 26.6                | 19.1                 | -17.7     |          |

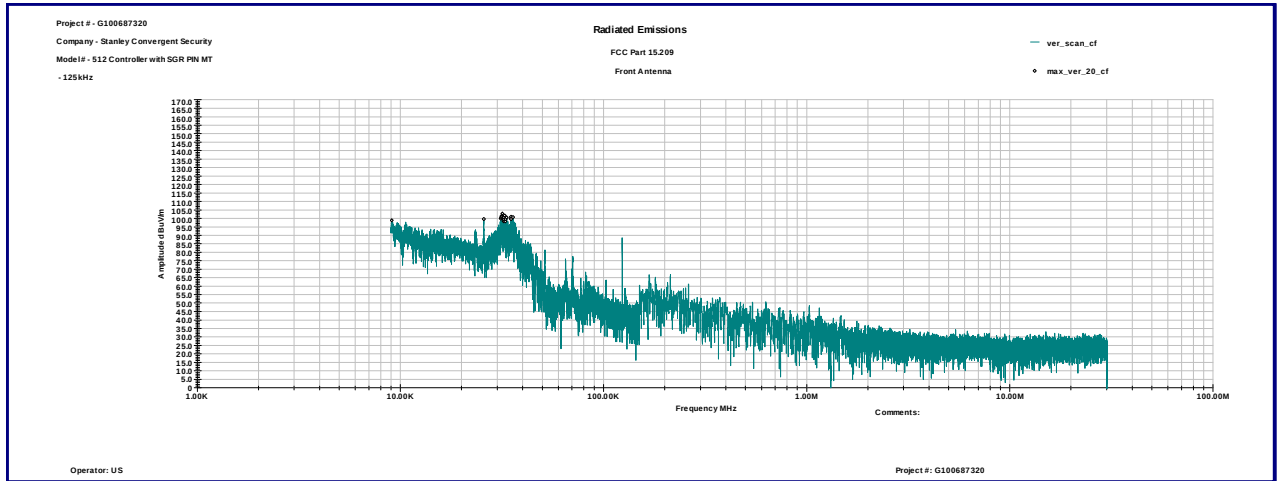
**Table 3.1.2**

| Frequency  | Ant. Polarity | Peak Reading dBμV | Total C.F. dB1/m | Total at 3m dBμV/m | Limit dBμV/m | Margin dB |
|------------|---------------|-------------------|------------------|--------------------|--------------|-----------|
| 31.437 MHz | V             | 7.2               | 19.3             | 26.6               | 40.0         | -13.4     |
| 67.793 MHz | V             | 16.9              | 7.1              | 24.0               | 40.0         | -16.0     |
| 128.89 MHz | V             | 12.7              | 14.0             | 26.6               | 43.5         | -16.9     |
| 135.61 MHz | V             | 15.6              | 13.6             | 29.2               | 43.5         | -14.3     |
| 144.02 MHz | V             | 13.0              | 13.0             | 25.9               | 43.5         | -17.6     |
| 149.18 MHz | V             | 16.9              | 12.7             | 29.5               | 43.5         | -14.0     |
| 288.03 MHz | V             | 12.3              | 15.5             | 27.7               | 46.0         | -18.3     |
| 30.217 MHz | H             | 7.4               | 20.1             | 27.5               | 40.0         | -12.5     |
| 56.94 MHz  | H             | 12.7              | 7.6              | 20.2               | 40.0         | -19.8     |
| 67.793 MHz | H             | 19.5              | 7.1              | 26.6               | 40.0         | -13.4     |
| 94.849 MHz | H             | 13.8              | 11.6             | 25.4               | 43.5         | -18.2     |
| 101.4 MHz  | H             | 11.7              | 12.5             | 24.1               | 43.5         | -19.4     |
| 124.94 MHz | H             | 11.4              | 14.0             | 25.3               | 43.5         | -18.2     |
| 149.18 MHz | H             | 11.7              | 12.7             | 24.4               | 43.5         | -19.1     |
| 176.28 MHz | H             | 11.7              | 11.4             | 23.1               | 43.5         | -20.4     |
| 186.48 MHz | H             | 9.8               | 11.3             | 21.1               | 43.5         | -22.4     |
| 288.03 MHz | H             | 11.9              | 15.5             | 27.4               | 46.0         | -18.7     |

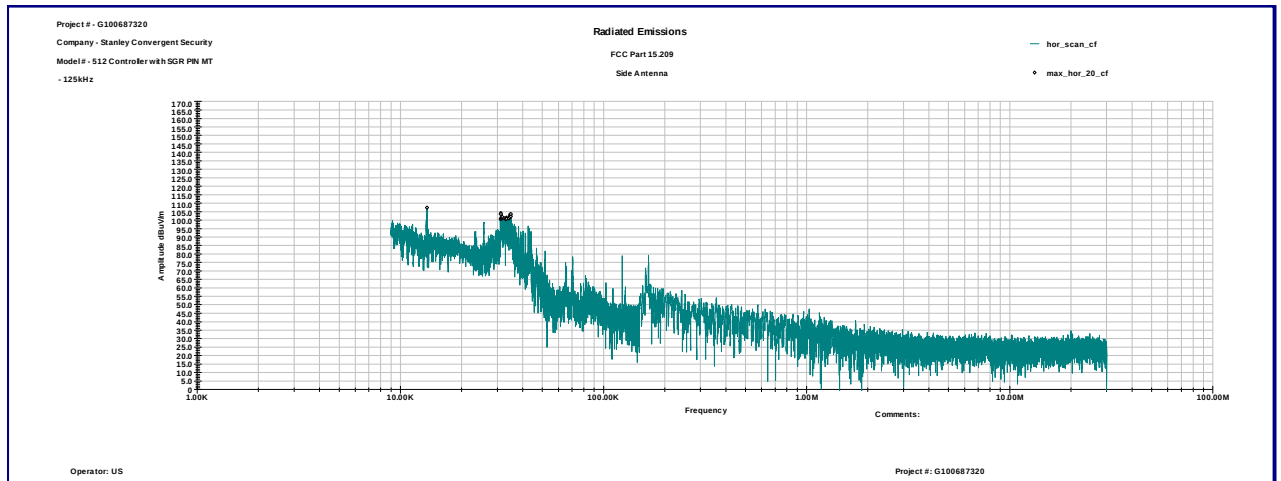


Graph 3.1.1

Front of antenna

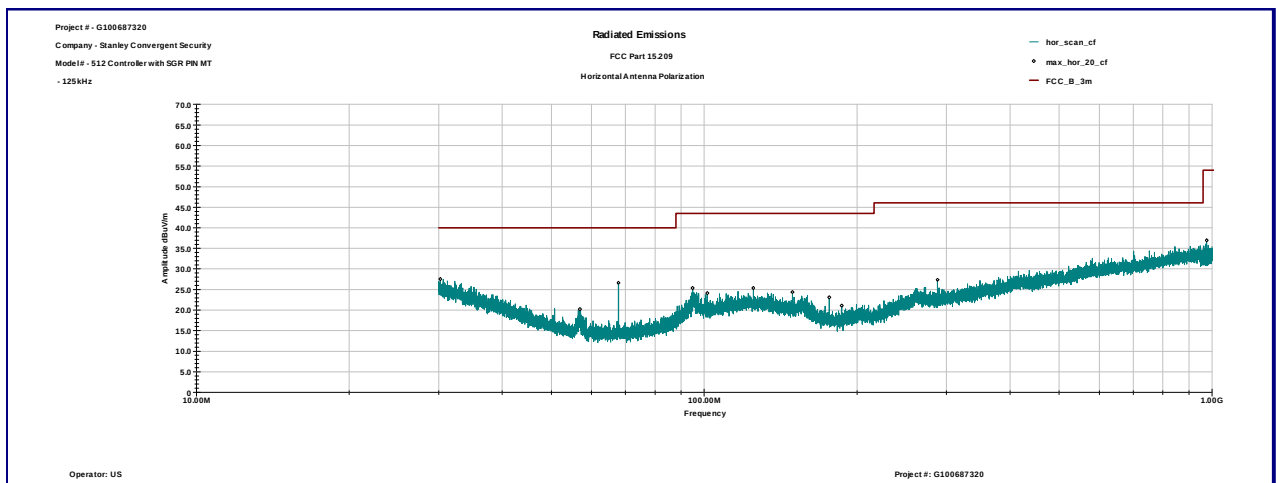
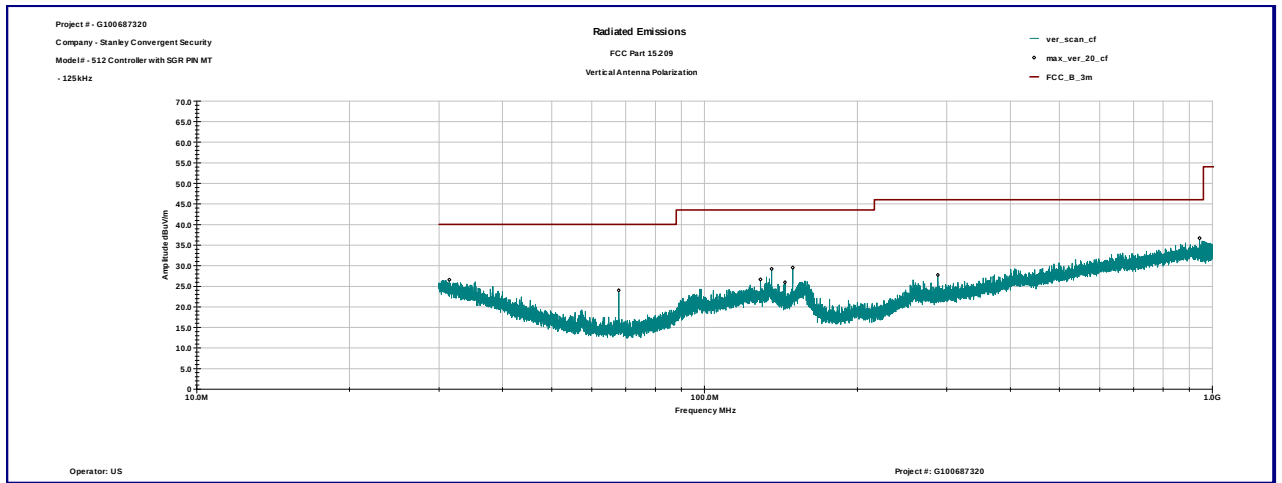


Side of antenna





Graph 3.1.2





### 3.2 Field strength within the band of operation

**Test location:** ☒ OATS ☐ Anechoic Chamber ☐ Other

**Test distance:** ☒ 10 meters ☐ 3 meters

**Test result:** **Pass**

**Max. Emissions margin:** 19.0dB below the limits

**Notes:** Measurements were taken using RBW=9kHz.

---



|                        |                                             |                     |
|------------------------|---------------------------------------------|---------------------|
| <b>Date:</b>           | July 3, 2013                                | <b>Result: Pass</b> |
| <b>Standard:</b>       | FCC 15.225(a)(b)(c) / RSS-210 A2.6(a)(b)(c) |                     |
| <b>Tested by:</b>      | Uri Spector                                 |                     |
| <b>Test Point:</b>     | Enclosure with antenna                      |                     |
| <b>Operation mode:</b> | See Page 5                                  |                     |
| <b>Note:</b>           | 13.56MHz transmitter                        |                     |

**Table 3.2.1**

| Frequency  | Ant. Orientation | Peak Reading dBμV | Ant.Factor dB1/m | Total at 10m dBμV/m | Limit dBμV/m | Margin dB |
|------------|------------------|-------------------|------------------|---------------------|--------------|-----------|
| 13.110 MHz | Front            | 4.5               | 34.4             | 38.9                | 59.6         | -20.7     |
| 13.410 MHz | Front            | 3.4               | 34.4             | 37.8                | 59.6         | -21.8     |
| 13.553 MHz | Front            | 15.9              | 34.4             | 50.3                | 69.6         | -19.3     |
| 13.560 MHz | Front            | 25.0              | 34.5             | 59.5                | 103.1        | -43.6     |
| 13.567 MHz | Front            | 16.0              | 34.5             | 50.5                | 69.6         | -19.1     |
| 13.710 MHz | Front            | 5.0               | 34.5             | 39.5                | 59.6         | -20.1     |
| 14.010 MHz | Front            | 5.6               | 34.5             | 40.1                | 59.6         | -19.5     |
|            |                  |                   |                  |                     |              |           |
|            |                  |                   |                  |                     |              |           |
|            |                  |                   |                  |                     |              |           |
| 13.110 MHz | Side             | 2.7               | 34.5             | 37.2                | 59.6         | -22.4     |
| 13.410 MHz | Side             | 1.8               | 34.4             | 36.2                | 59.6         | -23.4     |
| 13.553 MHz | Side             | 16.2              | 34.4             | 50.6                | 69.6         | -19.0     |
| 13.560 MHz | Side             | 27.7              | 34.5             | 62.2                | 103.1        | -40.9     |
| 13.567 MHz | Side             | 14.6              | 34.5             | 49.1                | 69.6         | -20.5     |
| 13.710 MHz | Side             | 3.7               | 34.5             | 38.2                | 59.6         | -21.4     |
| 14.010 MHz | Side             | 3.2               | 34.5             | 37.7                | 59.6         | -21.9     |
|            |                  |                   |                  |                     |              |           |



### 3.3 Field strength outside of the band of operation

**Test location:** ☒ OATS ☒ Anechoic Chamber ☐ Other

**Test distance:** ☒ 10 meters ☒ 3 meters

**Frequency range of measurements:** 0.15MHz-1000MHz

**Test result:** **Pass**

**Max. margin of spurious emissions:** 3.0dB below the limits

**Notes:** The Emissions pre-test in frequency range from 150kHz to 30MHz was performed in the Anechoic chamber at 3m measurement distance (see Graphs 3.3.1); final measurements were performed in the Open Area Test Site at 10m measurement distance: no emissions above the ambient were detected.  
The Emissions test in frequency range from 30MHz to 1GHz was performed in the Anechoic chamber at 3m measurement distance (see Table 3.3.1 and Graphs 3.3.2).

---



|                        |                                 |                     |
|------------------------|---------------------------------|---------------------|
| <b>Date:</b>           | July 2, 2013                    | <b>Result: Pass</b> |
| <b>Standard:</b>       | FCC 15.225(d) / RSS-210 A2.6(d) |                     |
| <b>Tested by:</b>      | Uri Spector                     |                     |
| <b>Test Point:</b>     | Enclosure with antenna          |                     |
| <b>Operation mode:</b> | See Page 5                      |                     |
| <b>Note:</b>           | Frequency range 30-1000MHz      |                     |

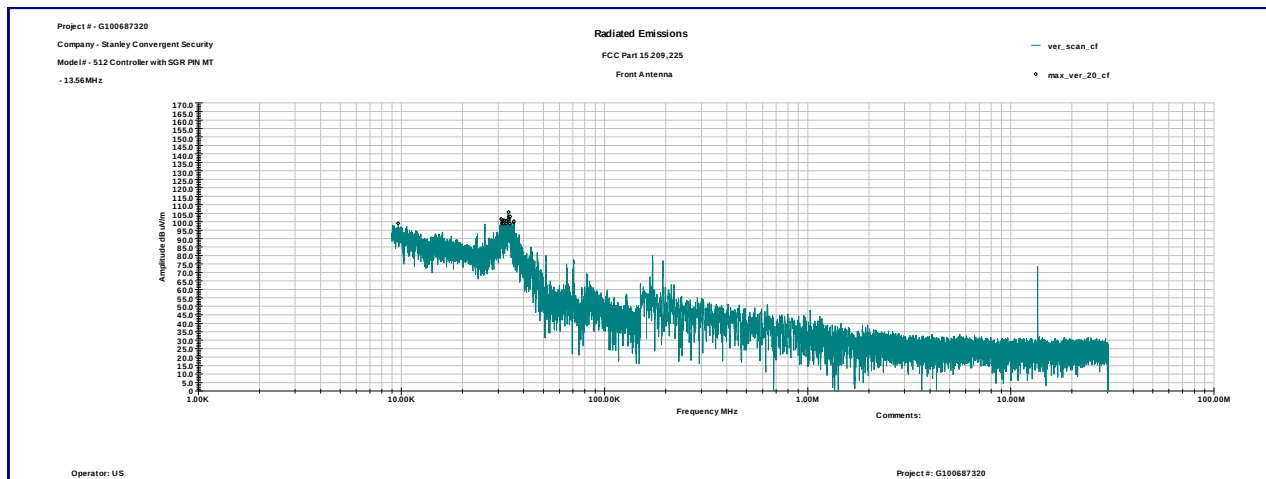
**Table 3.3.1**

| Frequency  | Ant. Polarity | Peak Reading dBμV | Total C.F. dB1/m | Total at 3m dBμV/m | Limit dBμV/m | Margin dB |
|------------|---------------|-------------------|------------------|--------------------|--------------|-----------|
| 135.61 MHz | V             | 23.4              | 13.6             | 37.0               | 43.5         | -6.5      |
| 149.18 MHz | V             | 22.3              | 12.7             | 34.9               | 43.5         | -8.6      |
| 162.7 MHz  | V             | 25.9              | 12.0             | 37.9               | 43.5         | -5.6      |
| 257.61 MHz | V             | 22.8              | 15.5             | 38.3               | 46.0         | -7.7      |
| 271.19 MHz | V             | 20.8              | 15.5             | 36.3               | 46.0         | -9.7      |
| 284.76 MHz | V             | 27.1              | 15.5             | 42.6               | 46.0         | -3.4      |
| 311.81 MHz | V             | 22.3              | 16.2             | 38.6               | 46.0         | -7.5      |
| 691.57 MHz | V             | 14.6              | 23.0             | 37.5               | 46.0         | -8.5      |
| 718.69 MHz | V             | 14.9              | 23.1             | 38.0               | 46.0         | -8.0      |
| 745.82 MHz | V             | 14.3              | 23.5             | 37.9               | 46.0         | -8.1      |
| 257.61 MHz | H             | 27.5              | 15.5             | 43.1               | 46.0         | -3.0      |
| 284.76 MHz | H             | 25.2              | 15.5             | 40.7               | 46.0         | -5.3      |
| 311.81 MHz | H             | 18.8              | 16.2             | 35.1               | 46.0         | -11.0     |
| 759.22 MHz | H             | 13.9              | 23.8             | 37.6               | 46.0         | -8.4      |
| 786.35 MHz | H             | 13.5              | 24.1             | 37.6               | 46.0         | -8.4      |

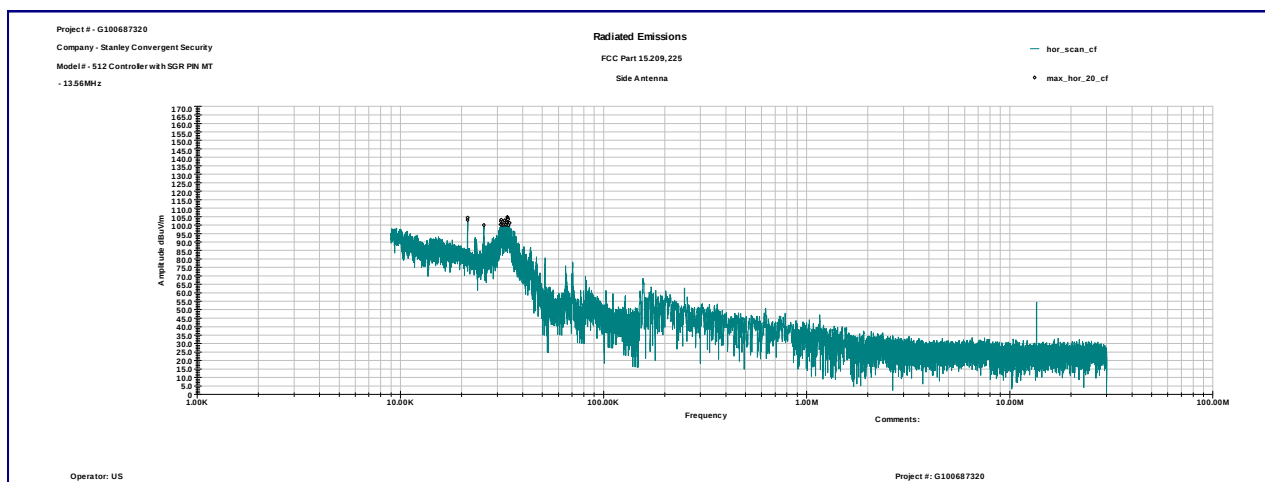


Graph 3.3.1

### Front of antenna

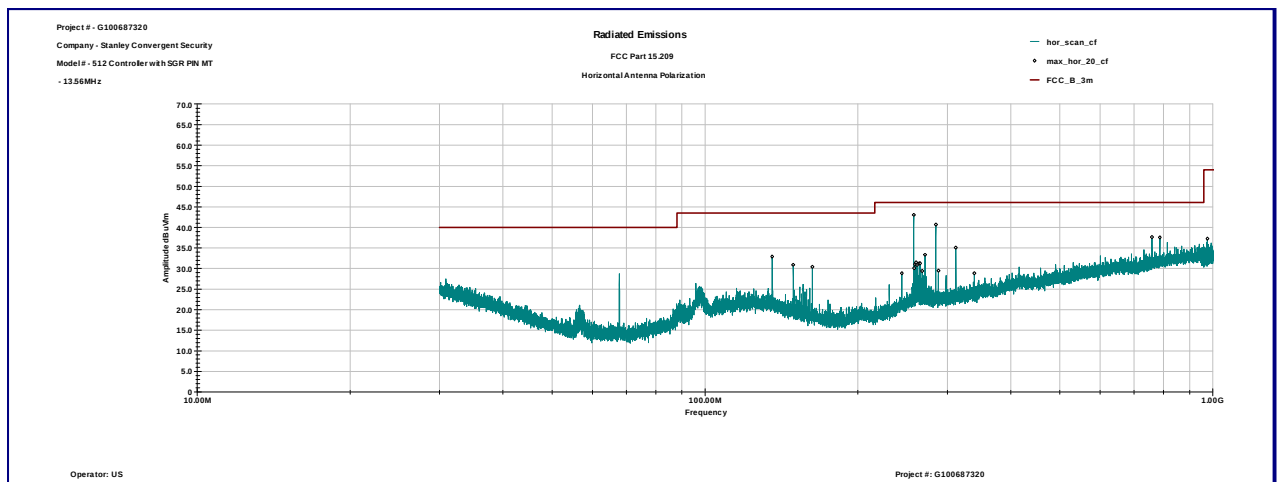
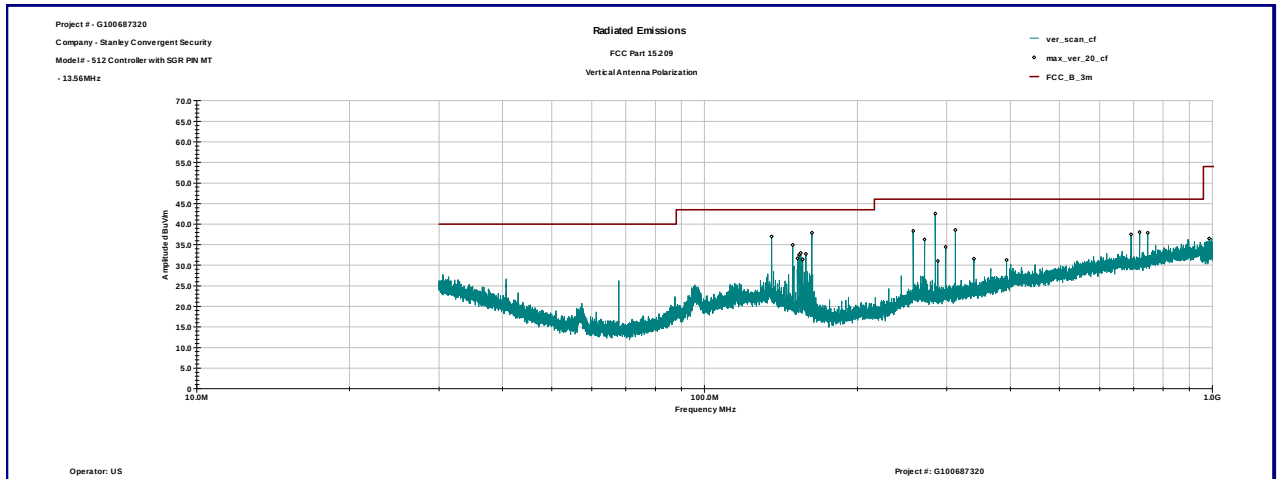


### Side of antenna





Graph 3.3.2





### 3.4 Frequency Tolerance

Test location: ☐ OATS ☐ Anechoic Chamber ☐ Other

Test date: June 27, 2013

Tested by: Uri Spector

Test result: Pass

| Test Parameter    |              | Measured Deviation<br>(Hz) | Maximum Allowed<br>Deviation<br>(Hz) | Test Results |
|-------------------|--------------|----------------------------|--------------------------------------|--------------|
| Temperature<br>°C | Voltage<br>V |                            |                                      |              |
| -20               | 120          | 48.2                       | 1356                                 | Pass         |
| -10               |              | 23.6                       | 1356                                 | Pass         |
| 0                 |              | 13.0                       | 1356                                 | Pass         |
| 10                |              | 8.8                        | 1356                                 | Pass         |
| 20                |              | 0                          | 1356                                 | Pass         |
| 35                |              | 32.6                       | 1356                                 | Pass         |
| 55                |              | 78.3                       | 1356                                 | Pass         |
| 20                | 102          | 0                          | 1356                                 | Pass         |
|                   | 108          | 0                          | 1356                                 | Pass         |
|                   | 114          | 0                          | 1356                                 | Pass         |
|                   | 120          | 0                          | 1356                                 | Pass         |
|                   | 126          | 0                          | 1356                                 | Pass         |
|                   | 132          | 0                          | 1356                                 | Pass         |
|                   | 138          | 0                          | 1356                                 | Pass         |

Notes: None

---



### 3.5 Bandwidth of Emissions

Test location: ☐ OATS ☐ Anechoic Chamber ☐ Other

Test distance: ☐ 10 meters ☐ 3 meters

Test result: Pass

| Center Frequency<br>of operation<br>kHz | Measured 20dB bandwidth<br>kHz | Measured 99% bandwidth<br>kHz |
|-----------------------------------------|--------------------------------|-------------------------------|
| 124.71                                  | 2.7                            | 2.3                           |

| Center Frequency<br>of operation<br>MHz | Measured 20dB bandwidth<br>kHz | Measured 99% bandwidth<br>kHz |
|-----------------------------------------|--------------------------------|-------------------------------|
| 13.56                                   | 2.6                            | 2.3                           |

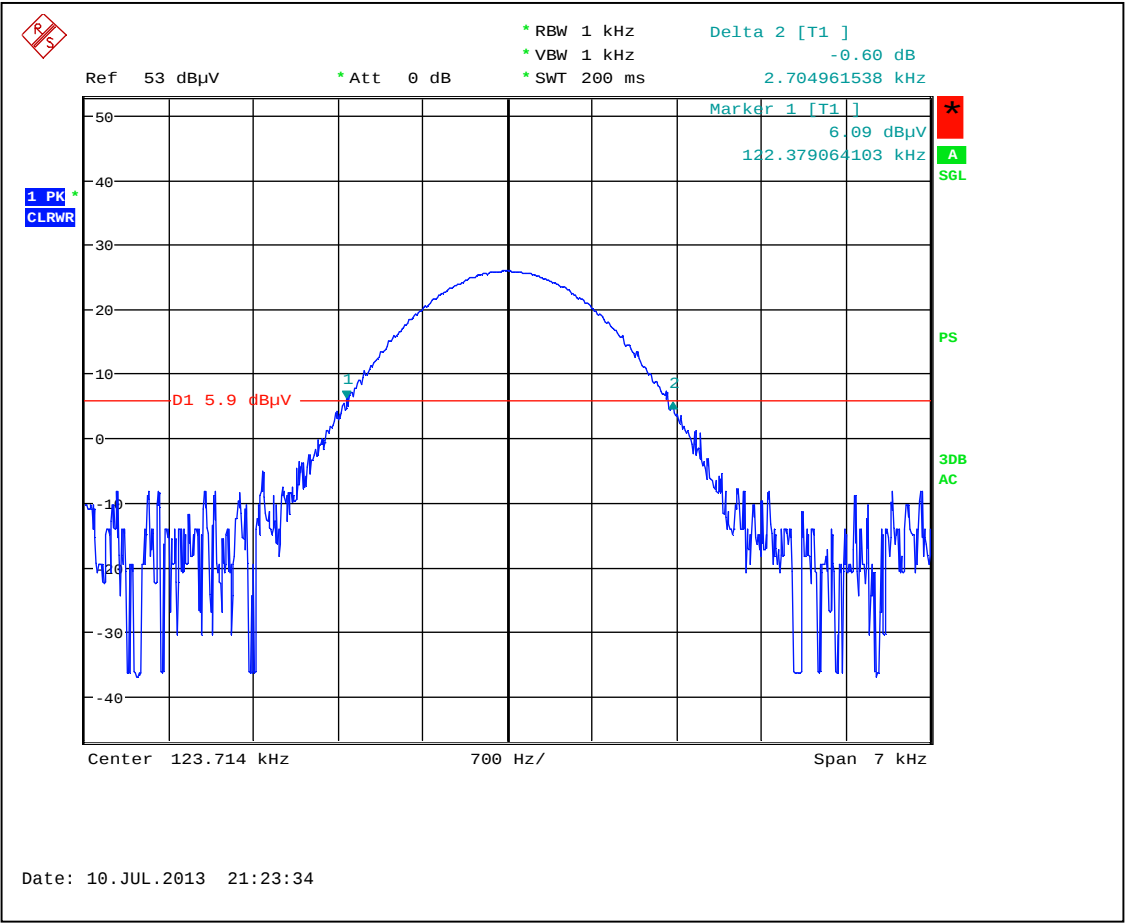
Graphs 3-5-1, 3-5-2, 3-5-3, 3-5-4 show bandwidth of emissions

Notes: None

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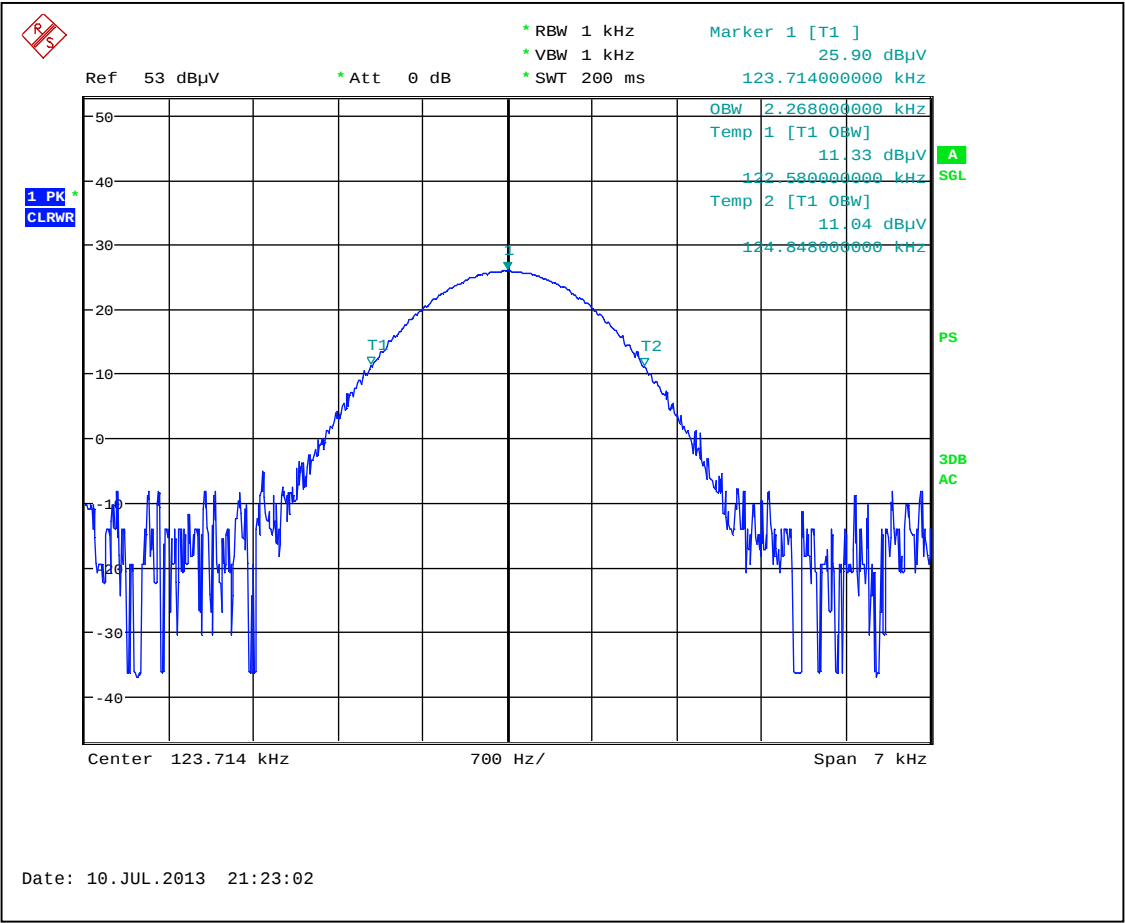


Graph 3.5.1



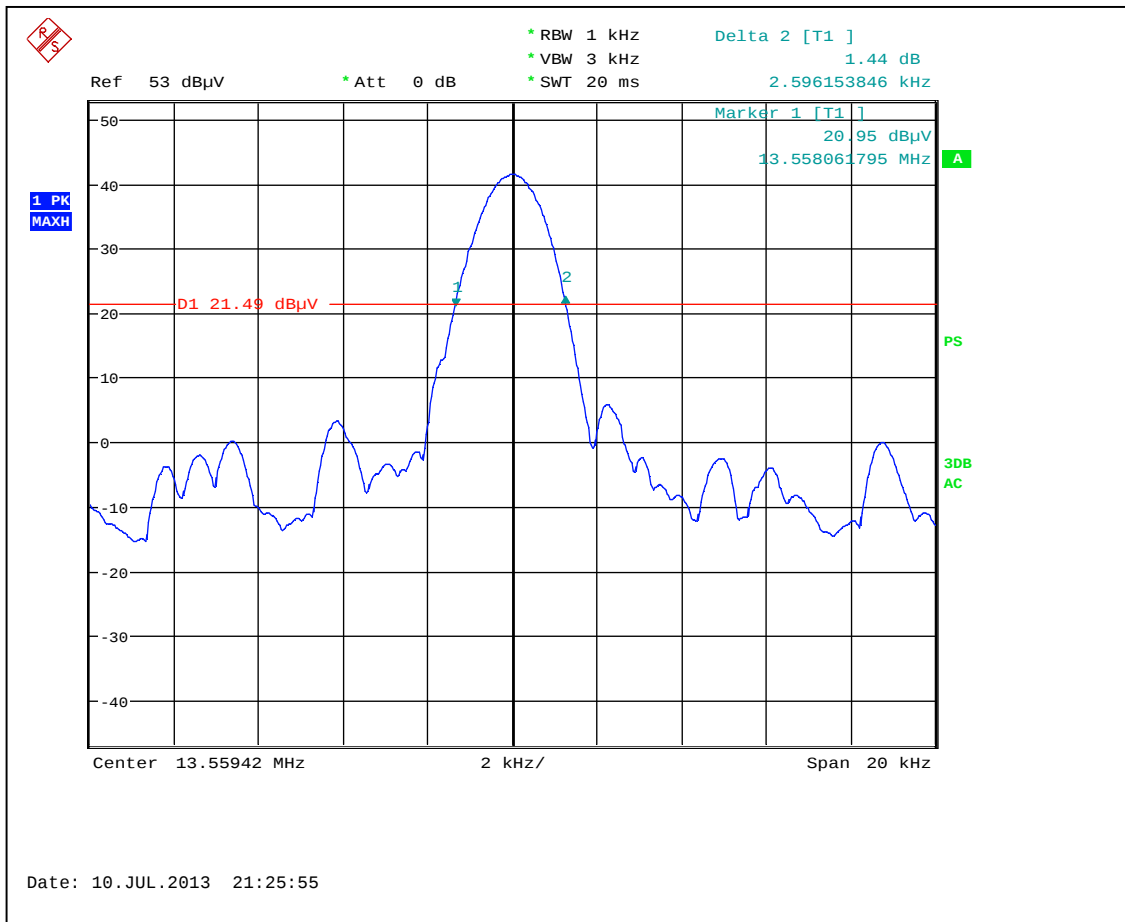


Graph 3.5.2



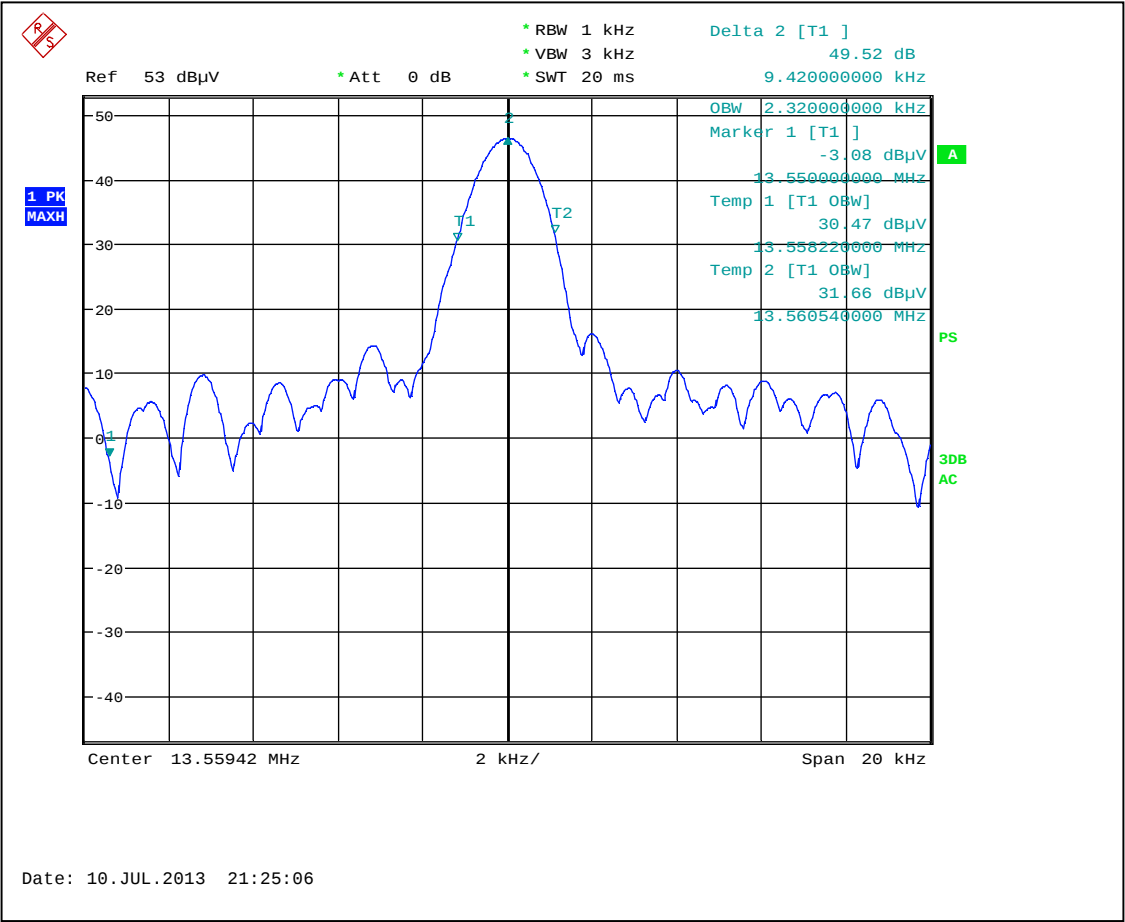


Graph 3.5.3





Graph 3.5.4





### 3.6 Transmitter power line conducted emissions

**Test location:** ☐ OATS ☒ Anechoic Chamber ☐ Other

**Test result:** **Pass**

**Frequency range:** 0.15MHz-30MHz

**Max. Emissions margin:** 5.2dB below the limits

**Notes:** None

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|                        |                           |                     |
|------------------------|---------------------------|---------------------|
| <b>Date:</b>           | June 21, 2013             | <b>Result: Pass</b> |
| <b>Standard:</b>       | FCC Part 15.207           |                     |
| <b>Tested by:</b>      | Uri Spector               |                     |
| <b>Test Point:</b>     | AC Port of 512 Controller |                     |
| <b>Operation mode:</b> | See Page 5                |                     |
| <b>Note:</b>           | 124kHz Transmitter        |                     |

**Table 3.6.1**

**Line 1**

| Frequency  | Peak dBμV | QP Limit dBμV | AVG Limit dBμV | QP Margin dB | AVG Margin dB |
|------------|-----------|---------------|----------------|--------------|---------------|
| 158.12 KHz | 46.1      | 65.6          | 55.6           | -19.4        | -9.4          |
| 159.98 KHz | 48.2      | 65.5          | 55.5           | -17.3        | -7.3          |
| 162.0 KHz  | 48.3      | 65.4          | 55.4           | -17.1        | -7.1          |
| 162.51 KHz | 48.0      | 65.3          | 55.3           | -17.3        | -7.3          |
| 164.6 KHz  | 45.7      | 65.2          | 55.2           | -19.6        | -9.6          |
| 193.43 KHz | 43.5      | 63.9          | 53.9           | -20.4        | -10.4         |

**Line 2**

| Frequency  | Peak dBμV | QP Limit dBmV | AVG Limit dBmV | QP Margin dB | AVG Margin dB |
|------------|-----------|---------------|----------------|--------------|---------------|
| 158.7 KHz  | 46.3      | 65.5          | 55.5           | -19.3        | -9.3          |
| 159.75 KHz | 47.5      | 65.5          | 55.5           | -18.0        | -8.0          |
| 161.26 KHz | 48.3      | 65.4          | 55.4           | -17.1        | -7.1          |
| 161.85 KHz | 48.0      | 65.4          | 55.4           | -17.4        | -7.4          |
| 5.999 MHz  | 38.0      | 60.0          | 50.0           | -22.0        | -12.0         |
| 23.401 MHz | 31.5      | 60.0          | 50.0           | -28.5        | -18.5         |



|                        |                           |                     |
|------------------------|---------------------------|---------------------|
| <b>Date:</b>           | June 21, 2013             | <b>Result: Pass</b> |
| <b>Standard:</b>       | FCC Part 15.207           |                     |
| <b>Tested by:</b>      | Uri Spector               |                     |
| <b>Test Point:</b>     | AC Port of 512 Controller |                     |
| <b>Operation mode:</b> | See Page 5                |                     |
| <b>Note:</b>           | 13.56MHz Transmitter      |                     |

**Table 3.6.2**

**Line 1**

| Frequency  | Peak<br>dBμV | QP Limit<br>dBμV | AVG Limit<br>dBμV | QP Margin<br>dB | AVG Margin<br>dB |
|------------|--------------|------------------|-------------------|-----------------|------------------|
| 158.89 KHz | 47.2         | 65.5             | 55.5              | -18.3           | -8.3             |
| 161.5 KHz  | 48.5         | 65.4             | 55.4              | -16.9           | -6.9             |
| 177.93 KHz | 48.5         | 64.6             | 54.6              | -16.1           | -6.1             |
| 178.55 KHz | 49.4         | 64.6             | 54.6              | -15.2           | -5.2             |
| 192.11 KHz | 42.7         | 63.9             | 53.9              | -21.2           | -11.2            |
| 196.08 KHz | 41.2         | 63.8             | 53.8              | -22.6           | -12.6            |

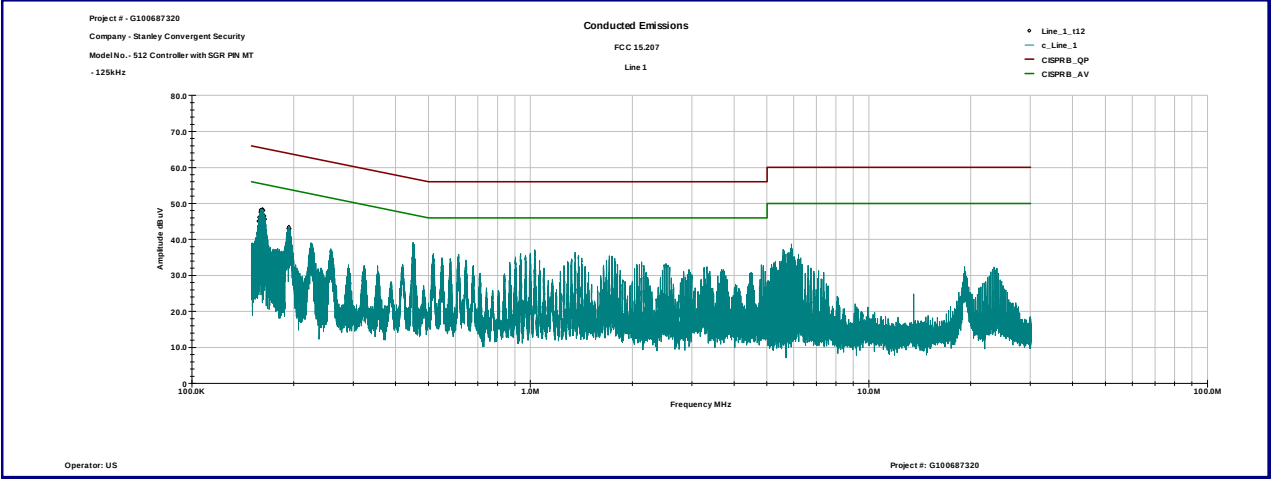
**Line 2**

| Frequency  | Peak<br>dBμV | QP Limit<br>dBmV | AVG Limit<br>dBmV | QP Margin<br>dB | AVG Margin<br>dB |
|------------|--------------|------------------|-------------------|-----------------|------------------|
| 158.89 KHz | 46.8         | 65.5             | 55.5              | -18.7           | -8.7             |
| 160.41 KHz | 48.2         | 65.4             | 55.4              | -17.2           | -7.2             |
| 161.5 KHz  | 48.4         | 65.4             | 55.4              | -17.0           | -7.0             |
| 162.97 KHz | 47.6         | 65.3             | 55.3              | -17.7           | -7.7             |
| 5.939MHz   | 37.9         | 60.0             | 50.0              | -22.1           | -12.1            |
| 23.396 MHz | 32.0         | 60.0             | 50.0              | -28.0           | -18.8            |

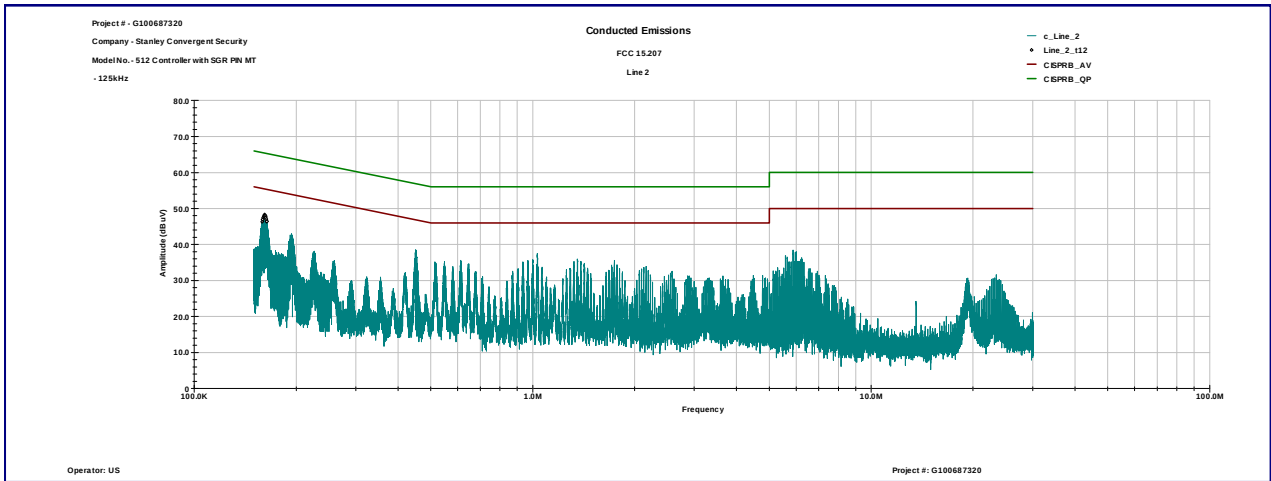


Graph 3.6.1

Line 1



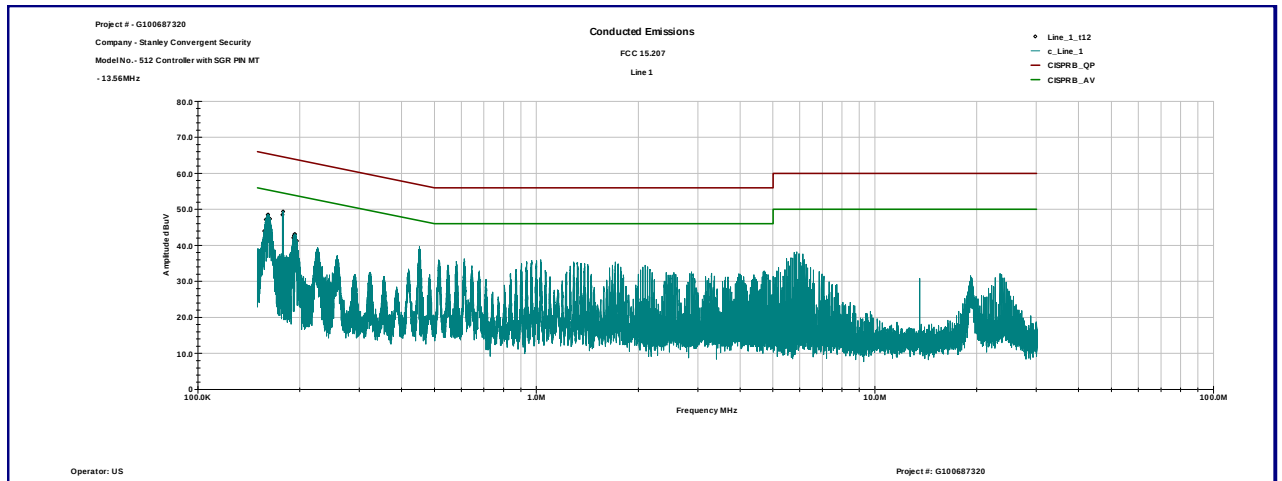
Line 2



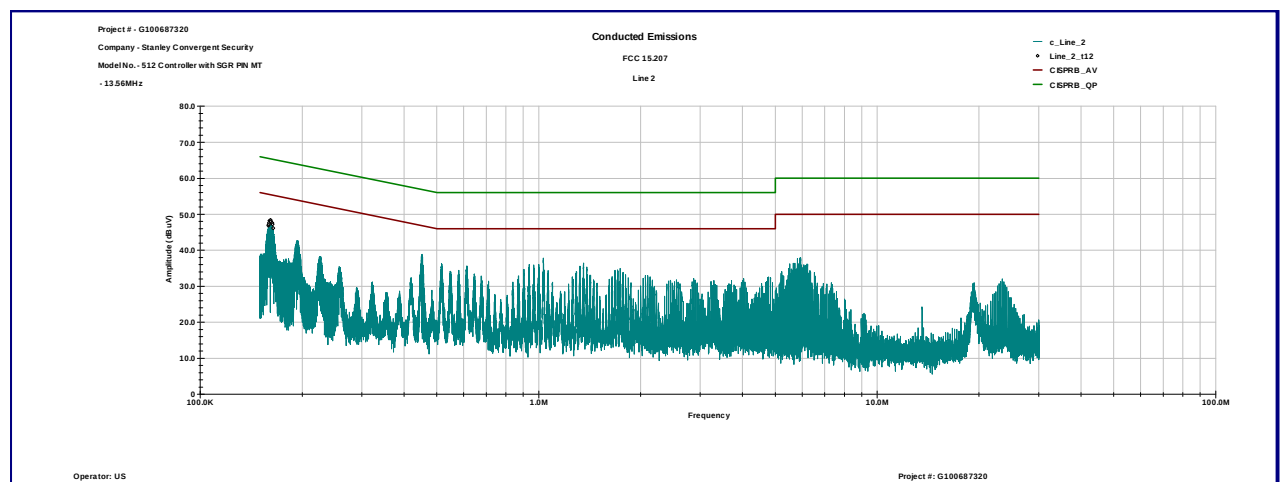


Graph 3.6.2

## Line 1



## Line 2





#### 4.0 TEST EQUIPMENT

| DESCRIPTION           | MANUFACTURER      | MODEL                    | SERIAL NO.    | INTERTEK ID | CAL DUE    | USED                                |
|-----------------------|-------------------|--------------------------|---------------|-------------|------------|-------------------------------------|
| Spectrum Analyzer     | R & S             | ESU                      | 100398        | 25283       | 12/19/2013 | <input checked="" type="checkbox"/> |
| Environmental Chamber | ESPEC             | ESX-4CA                  | 0111386       | 24300       | 04/11/2014 | <input checked="" type="checkbox"/> |
| Bicono-Log Antenna    | Teseq             | CBL6112D                 | 32859         | 25289       | 08/09/2013 | <input checked="" type="checkbox"/> |
| Loop Antenna          | ETS               | 6512                     | 00060486      | 19942       | 12/10/2013 | <input checked="" type="checkbox"/> |
| LISN                  | Solar Electronics | 9252-50-R-24-BNC         | 068545        | MIN-0060    | 02/07/2014 | <input checked="" type="checkbox"/> |
| Pre-Amplifier         | HP                | 8447F OPT H64            | 3113A04974    | 9934        | 08/16/2013 | <input checked="" type="checkbox"/> |
| System                | Quantum Change    | TILE! Instrument Control | Ver. 3.4.K.29 | 15259       | VBU        | <input checked="" type="checkbox"/> |