Technical Information

| | Applicant | Manufacturer | | |
|-------------------|--------------------------|-------------------|---|--|
| Name: | Bosch Security Systems | Name: Bo | sch Security Systems Inc. China Factory | |
| Address: | 130 Perinton Parkway | Address: N | lei Chi Industrial Area, Blk B | |
| City, State, Zip: | Fairport, New York 14450 | City, State, Zip: | Qian Shan Zhuhai, Guangdong 51907, | |
| | | | China | |

Test Specifications: FCC Part 15, Subpart C Paragraph 15.247, FCC Part 15, Subpart B

Paragraph 15

Industry Canada RSS-210 Issue 7 Annex 8, and RSS-Gen Issue 2

Test Procedure: ANSI C63.4: 2003

Test Sample Description

Test Sample: wLSN Interior Siren Module

Brandname: Bosch

Model Number: ISW-BSR1-WY

FCC ID: T3XBSR1-WY

Type: Frequency Hopping Spread Spectrum Transceiver

Power Requirements: 9 VDC derived from 120 VAC, 60 Hz from AC Adapter

Frequency of Operation: 902 MHz to 928 MHz

Tests Performed

| FCC | Industry Canada | Test Method |
|-----------------|---|---|
| 15.247(a)(1) | RSS-210 Annex 8 A8 1(2) | Carrier Frequency Separation / Number of |
| 10.2 17 (a)(1) | 7(a)(1) RSS-210 Annex 8 A8.1(2) 7(a)(1) RSS-210 Annex 8 A8.1(2) (a)(1)(i) RSS-210 Annex 8 A8.1(3) 7(b)(2) RSS-210 Annex 8 A8.4(1) | hopping frequencies |
| 15.247(a)(1) | RSS-210 Annex 8 A8.1(2) | 20 dB Bandwidth |
| 15.247(a)(1)(i) | RSS-210 Annex 8 A8.1(3) | Occupancy Time |
| 15.247(b)(2) | RSS-210 Annex 8 A8.4(1) | Output Power |
| 15.247 (d) | DSS 210 Appay 8 A8 5 | Transmitter Spurious Radiated Emissions, |
| 15.247 (u) | NGG-210 Allilex 6 A6.5 | Restricted Bands / Band edge Measurements |
| 15.207(a) | RSS-Gen Paragraph 7.2.2 | Conducted Emissions |
| 15.109(a) | RSS-Gen Paragraph 6 | Receiver Spurious Radiated Emissions |
| 15.35 | RSS-Gen Paragraph 4.5 | Duty Cycle Determination |

TESTS RESULTS

DETERMINATION OF FIELD STRENGTH LIMITS

- 15.203: The intentional radiator is designed to ensure that no antenna other than that furnished by the applicant can be used with the device. The antenna is permanently soldered in place to the PCB.
- 15.204: The antenna used is not commercially available. It is a custom designed circularly polarized Omni-directional antenna with 1dBi gain.
- 15.207/107 (a): The radio frequency voltage that was conducted back on to the AC power line on any frequency/frequencies within the bandwidth of 150 kHz to 30 MHz did not exceed the limits specified.
- 15.247(a)(1): The frequency hopping system has hopping channel carrier frequencies separated by 100 kHz, which is less than the 20 dB bandwidth of the hopping channel.
- 15.247(a)(1)(i): The frequency hopping system operated in the 902-928 MHz band and uses 59 frequencies. The maximum 20 dB bandwidth of the hopping channel is less then 250 kHz, Measured 43.9 kHz. The average time of occupancy on any frequency is 0.362 seconds within a 20 second period.
- 15.247(b)(3): The device operates in the 902-928 MHz band. The maximum peak output power measured to be 29.3 mWatts and did not exceed 1 watt.
- 15.247(b)(3): The system operating under the provisions of this section is operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the Commission's guidelines. The maximum Output Power was measured to be 29.3 mWatts.
- 15.247 (d): In any 100 kHz bandwidth outside the frequency band in which the Spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator is at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power. All emissions, which fell within the restricted bands specified in 15.205(a), were measured and found to be in compliance with the limits specified in 15.209(a).
- 15.109 (a): The field strength of spurious radiated emissions generated by the receiver did not exceed the class B limits specified.

15.247(a): Description of pseudorandom hopping sequence -

The following describes the hopping sequence used by the "Hub" or central point in the network for Beacon announcements as well as the hopping sequence used by the individual points for sending status updates to the Hub.

Frequency Announcements (Beacon) Hopping

- Using 59 frequencies channels (all system frequencies)
- Frequency channels are numbered from 0 to 58 (for 59 overall channels)
- Frequency 0 and 1 are adjacent, etc.

The Beacon hop pattern is generated uniquely for each system as follows:

```
We start with a set of groups

Group 0 = \{0,1,2,3,...,9\}

Group 1 = \{10,11,..., 19\}

Group 2 = \{20,21,..., 29\}

Group 3 = \{30,31,..., 39\}

Group 4 = \{40,41,..., 49\}

Group 5 = \{50,..., 58\} Note one less than others!
```

We randomly shuffle the elements within each group

Example:

```
Shuffled G0 = { 2 5 4 1 7 6 3 8 0 9 }

Shuffled G1 = { 19 18 12 15 14 10 17 16 11 13 }

Shuffled G2 = { 26 21 24 22 29 25 28 23 20 27 }

Shuffled G3 = { 38 33 31 39 32 30 36 34 37 35 }

Shuffled G4 = { 47 45 49 48 42 43 46 41 40 44 }

Shuffled G5 = { 51 58 56 57 52 55 50 53 54 }
```

Then we pick from one of 60 group permutations that keep the groups as least 2 apart so the frequencies in the hop pattern will be as least 5 channels apart (this translates into 500 KHz apart with our system):

```
Example: using the following group order: \{G1, G5, G3, G0, G2, G4\}
Shuffled G1 = \{19 18 12 15 14 10 17 16 11 13\}
Shuffled G5 = \{51 58 56 57 52 55 50 53 54 XX\}
Shuffled G3 = \{38 33 31 39 32 30 36 34 37 35\}
Shuffled G0 = \{25 4 1 7 6 3 8 0 9\}
Shuffled G2 = \{26 21 24 22 29 25 28 23 20 27\}
Shuffled G4 = \{47 45 49 48 42 43 46 41 40 44\}
```

We read the elements by columns to form the overall hop pattern {19,51,38,2,26,47, 18,58,33,5,21,45, 12,56,31,4,24,49, ...

Each base station uses a value generated from its unique serial number to seed the random number generator used in the above operations.

A Node wishing to join a network will pick one of the original groups at random and sample frequencies until it hears a Beacon. The Beacon will contain timing information and the seed so the Node can also calculate the hopping pattern being used and synchronize in time with the Base Station.

Network Operations Application Slot hopping

- Using 59 frequencies channels (all system frequencies)
- Frequency channels are numbered from 0 to 58 (for 59 overall channels)
- Frequency 0 and 1 are adjacent, etc.

The App Slot hop pattern is generated uniquely for each system as follows:

We use 8 groups of size 7 and keep 00, 22, 44 on the side:

```
Group 0 = \{ 01,02,03,04,05,06,07 \} 7 elements
```

Group $1 = \{08,09,10,11,12,13,14\}$ 7 elements

Group $2 = \{15,16,17,18,19,20,21\}$ 7 elements

Group $3 = \{ 23,24,25,26,27,28,29 \} 7$ elements

Group $4 = \{30,31,32,33,34,35,36\}$ 7 elements

Group $5 = \{ 37,38,39,40,41,42,43 \} 7$ elements

Group $6 = \{45,46,47,48,49,50,51\}$ 7 elements

Group 7 = { 52,53,54,55,56,57,58 } 7 elements

We randomly shuffle the elements within each group.

Example:

- Group $0 = \{ 03, 05, 02, 04, 07, 01, 06 \} 00$
- Group 3 = { 29, 25, 27, 24, 26, 28, 23 } 22
- Group 6 = { 50, 46, 48, 51, 49, 45, 48 } 44
- Group 1 = { 11, 14, 10, 08, 13, 09, 12 }
- Group 4 = { 30, 33, 35, 31, 34, 36, 32 }
- Group 7 = { 58, 52, 55, 54, 53, 57, 56 }
- Group 2 = { 20, 16, 17, 21, 19, 18, 22 }
- Group $5 = \{40, 43, 39, 42, 41, 37, 38\}$

Now we read the pattern column by column and add the extras at the end:

• 03,29,50,11,30,58,20,40,05,25,46,14,33,52,16,42,02,...,22,38,00,22,44

The app slot hop pattern uses all system 59 frequencies:

- Every frame (every second) we move in the pattern a total of 12 hops
- We finish the whole pattern in almost 5 seconds (5x12=60)
- Every 5 seconds the pattern shifts by one to the left!

This approach ensures that more than one application slot (of the same type) is used in a second or from second to second, the frequencies used are at least 500 KHz apart. As well, all frequencies are utilized equally when the network is very busy.

15.247(a): Equal hopping Frequency Use

A beacon is transmitted only once on each frequency, every 20 seconds Beacon is transmitted for 118.3 ms under maximum communication load in the Security system, each frequency is used by a maximum of 4 application slots in every 20 second interval.

The duration of different application slots are:

Alarm = 31.1 ms

Back channel = 155.4 ms

Supervision = 28.6 ms

Maximum usage occurs when alarm, back channel and 2 supervision slots are used (243.7 ms) each frequency is used for a maximum of 362 ms (including Beacon)

15.247(a): Receiver Input Bandwidth

The receiver deviation is controlled by a register setting in the RFIC, the deviation setting is 30 KHz and the Tx deviation is ±4.95 KHz.

15.247(a): System Receiver Hopping Capability

Upon power up the nodes will listen for beacons from the base station device. Once a beacon is heard the device uses information in the beacon message to compute the base stations hopping pattern and current system time. The nodes will then hop in synchronization with the base station, periodically receiving beacon messages in order to maintain synchronization.

15.247(g): Frequency Hopping Description

The system consisting of the base station and the nodes meets the requirements of a true frequency hopping system in the following ways:

- 1. At power up the nodes synchronize to the base station hop pattern and continually hop in sync with the base station at the system hopping rate.
- 2. All devices in the system are changing frequency at the system hopping rate even when there is no data being transmitted, this allows all devices to distribute there transmissions equally over all of the frequencies whether the data is short period bursts or continuous.
- 15.247(h): Frequency Coordination

All nodes in a system synchronize to and follow the same hopping pattern as the base station that they are synchronized to. Base stations from different systems independently generate their hopping pattern using only a random generator that uses that base stations serial number as the initial seed value. There is no coordination of hopping between nodes in the same system or base stations in different systems for the purpose of unfairly occupying the available spectrum.

Spectrum Analyzer Desensitization Considerations

Due to the nature of the emissions being measured, care was taken to ensure that the resolution bandwidth of the spectrum analyzer was adequate to provide accurate measurements. FCC specified bandwidths of 100 kHz and 1 MHz were utilized below and above 1 GHz, respectively.

General Notes

- 1. All readings were taken utilizing a peak and/or Average detector function at a test distance of 3 meters.
- 2. All measurements were made with fully charged batteries installed in the unit.
- 3. The frequency range was scanned from 30 MHz to 10.0 GHz. All emissions not reported were more than 20dB below the specified limit.
- The device was tested with the following external accessories:
 120 VAC, 60 Hz AC Adapter, Manufactured By: TDC Power Products Co., LTD, Model Number:
 DA-09D-EI41
- 5. The unit tunes over the frequency range of: 915.5 to 921.5 MHz
 The unit was tested at the following frequencies: 915.5 MHz; 918.5 MHz; 921.5 MHz

Modifications:

Radio Frequency cans were added to the Radio Frequency portion of the PCB and a software change was utilized to lower the RF IC power output.

Certification and Signatures

We certify that this report is a true representation of the results obtained from the tests of the equipment stated. We further certify that the measurements shown in this report were made in accordance with the procedures indicated and vouch for the qualifications of all Retlif Testing Laboratories personnel taking them.

Donald C. Lerner EMC Test Engineer

Nicholas Dragotta

EMC Laboratory Supervisor

Non-Warranty Provision

The testing services have been performed, findings obtained and reports prepared in accordance with generally accepted laboratory principles and practices. This warranty is in lieu of all others, either expressed or implied.

Non-Endorsement

This test report contains only findings and results arrived at after employing the specific test procedures and standards listed herein. It is not intended to constitute a recommendation, endorsement or certification of the product or material tested. This test report must not be used by the client to claim product endorsement by NVLAP or any agency of the U.S. Government.

Equipment List

FCC Part 15, Subpart C, 15.247 (a)(1) Number of Hopping Frequency and Carrier separation

| EN | Туре | Manufacturer | Description | Model No. | Cal Date | Due Date |
|------|---------------------|-----------------|-----------------|-----------|------------|-----------------|
| 067 | Open Area Test Site | Retlif | 3/10 Meter | RNY | 9/12/2006 | 9/12/2009 |
| 141 | Spectrum Analyzer | Hewlett Packard | 100 Hz - 40 GHz | 8566B | 4/27/2007 | 4/27/2008 |
| 141B | Quasi-Peak Adaptor | Hewlett Packard | 100 Hz - 1 GHz | 85650A | 4/27/2007 | 4/27/2008 |
| 512 | Graphics Plotter | Hewlett Packard | N/A | 7470A | 10/18/2006 | 10/18/2007 |

FCC Part 15, Subpart C, Occupied Bandwidth

| EN | Туре | Manufacturer | Description | Model No. | Cal Date | Due Date |
|------|---------------------|-----------------|-----------------|-----------|------------|-----------------|
| 067 | Open Area Test Site | Retlif | 3/10 Meter | RNY | 9/12/2006 | 9/12/2009 |
| 141 | Spectrum Analyzer | Hewlett Packard | 100 Hz - 40 GHz | 8566B | 4/27/2007 | 4/27/2008 |
| 141B | Quasi-Peak Adaptor | Hewlett Packard | 100 Hz - 1 GHz | 85650A | 4/27/2007 | 4/27/2008 |
| 512 | Graphics Plotter | Hewlett Packard | N/A | 7470A | 10/18/2006 | 10/18/2007 |

FCC Part 15, Subpart C, 15.247(a)(1)(i), Occupancy Time

| EN | Туре | Manufacturer | Description | Model No. | Cal Date | Due Date |
|------|---------------------|-----------------|-----------------|-----------|------------|-----------------|
| 067 | Open Area Test Site | Retlif | 3/10 Meter | RNY | 9/12/2006 | 9/12/2009 |
| 141 | Spectrum Analyzer | Hewlett Packard | 100 Hz - 40 GHz | 8566B | 4/27/2007 | 4/27/2008 |
| 141B | Quasi-Peak Adaptor | Hewlett Packard | 100 Hz - 1 GHz | 85650A | 4/27/2007 | 4/27/2008 |
| 512 | Graphics Plotter | Hewlett Packard | N/A | 7470A | 10/18/2006 | 10/18/2007 |

FCC Part 15, Subpart C, Radiated Emissions, Fundamental Power Output

| EN | Туре | Manufacturer | Description | Model No. | Cal Date | Due Date |
|------|-------------------------|-----------------|----------------------|--------------|------------|-----------------|
| 067 | Open Area Test Site | Retlif | 3/10 Meter | RNY | 9/12/2006 | 9/12/2009 |
| 133 | Broadband Pre-Amplifier | Electro-Metrics | 10 kHz - 1 GHz, 26dB | BPA-1000 | 6/27/2007 | 6/27/2008 |
| 141 | Spectrum Analyzer | Hewlett Packard | 100 Hz - 40 GHz | 8566B | 4/27/2007 | 4/27/2008 |
| 141B | Quasi-Peak Adaptor | Hewlett Packard | 100 Hz - 1 GHz | 85650A | 4/27/2007 | 4/27/2008 |
| 206B | 6.0 dB Attenuator | Texscan | 0 - 1.0 GHz | FP-50 - 6 dB | 6/27/2007 | 6/27/2008 |
| 512 | Graphics Plotter | Hewlett Packard | N/A | 7470A | 10/18/2006 | 10/18/2007 |
| 617 | Interference Analyzer | Electro-Metrics | 10 kHz - 1 GHz | EMC-30 | 3/30/2007 | 3/30/2008 |
| 767 | Biconilog | EMCO | 26 - 2000 MHz | 3142B | 10/12/2006 | 10/12/2007 |

FCC Part 15, Subpart C, 15.247(d) Band Edge Measurements, 902 to 928 MHz Band

| EN | Туре | Manufacturer | Description | Model No. | Cal Date | Due Date |
|------|---------------------|-----------------|-----------------|-----------|------------|-----------------|
| 067 | Open Area Test Site | Retlif | 3/10 Meter | RNY | 9/12/2006 | 9/12/2009 |
| 141 | Spectrum Analyzer | Hewlett Packard | 100 Hz - 40 GHz | 8566B | 4/27/2007 | 4/27/2008 |
| 141B | Quasi-Peak Adaptor | Hewlett Packard | 100 Hz - 1 GHz | 85650A | 4/27/2007 | 4/27/2008 |
| 512 | Graphics Plotter | Hewlett Packard | N/A | 7470A | 10/18/2006 | 10/18/2007 |

FCC Part 15, Subparrt C, Fundamental and Harmonics

| EN | Туре | Manufacturer | Description | Model No. | Cal Date | Due |
|------|-------------------------|-------------------|----------------------|--------------|-----------|-----------|
| 032F | H.P. Filter | Microlab/FXR | 2 GHz | HD-20N | 9/22/2006 | 9/22/2007 |
| 032H | H.P. Filter | Microlab/FXR | 4 GHz | HD-40N | 2/20/2007 | 2/20/2008 |
| 032J | H.P. Filter | Microlab/FXR | 6 GHz | HD-60N | 3/13/2007 | 3/13/2008 |
| 067 | Open Area Test Site | Retlif | 3/10 Meter | RNY | 9/12/2006 | 9/12/2009 |
| 1049 | H.P. Filter | Microlab/FXR | 1 GHz | HD-10N | 9/22/2006 | 9/22/2007 |
| 128 | Double Ridged Guide | Electro-Mechanics | 1 GHz - 18 GHz | 3105 | 3/27/2007 | 3/27/2008 |
| 133 | Broadband Pre-Amplifier | Electro-Metrics | 10 kHz - 1 GHz, 26dB | BPA-1000 | 6/27/2007 | 6/27/2008 |
| 141 | Spectrum Analyzer | Hewlett Packard | 100 Hz - 40 GHz | 8566B | 4/27/2007 | 4/27/2008 |
| 206B | 6.0 dB Attenuator | Texscan | 0 - 1.0 GHz | FP-50 - 6 dB | 6/27/2007 | 6/27/2008 |
| 543 | Preamplifier | Hewlett Packard | 1.0 GHz - 26.5 GHz | 8449B | 9/9/2005 | 9/9/2007 |

FCC Part 15 Subpart C, Spurious Radiated Emissions

| EN | Туре | Manufacturer | Description | Model No. | Cal Date | Due |
|------|-------------------------|-------------------|----------------------|--------------|------------|------------|
| 067 | Open Area Test Site | Retlif | 3/10 Meter | RNY | 9/12/2006 | 9/12/2009 |
| 128 | Double Ridged Guide | Electro-Mechanics | 1 GHz - 18 GHz | 3105 | 3/27/2007 | 3/27/2008 |
| 133 | Broadband Pre-Amplifier | Electro-Metrics | 10 kHz - 1 GHz, 26dB | BPA-1000 | 6/27/2007 | 6/27/2008 |
| 141 | Spectrum Analyzer | Hewlett Packard | 100 Hz - 40 GHz | 8566B | 4/27/2007 | 4/27/2008 |
| 141B | Quasi-Peak Adaptor | Hewlett Packard | 100 Hz - 1 GHz | 85650A | 4/27/2007 | 4/27/2008 |
| 206B | 6.0 dB Attenuator | Texscan | 0 - 1.0 GHz | FP-50 - 6 dB | 6/27/2007 | 6/27/2008 |
| 512 | Graphics Plotter | Hewlett Packard | N/A | 7470A | 10/18/2006 | 10/18/2007 |
| 543 | Preamplifier | Hewlett Packard | 1.0 GHz - 26.5 GHz | 8449B | 9/9/2005 | 9/9/2007 |
| 767 | Biconilog | EMCO | 26 - 2000 MHz | 3142B | 10/12/2006 | 10/12/2007 |

FCC Part 15, Subpart C, Conducted Emissions, 150 kHz to 30 MHz

| EN | Туре | Manufacturer | Description | Model No. | Cal Date | Due Date |
|------|--------------------|-------------------|-----------------|-----------------|------------|-----------------|
| 078 | LISN | Solar Electronics | 10 kHz - 30 MHz | 8028-50-TS24BNC | 7/5/2007 | 7/5/2008 |
| 079 | LISN | Solar Electronics | 10 kHz - 30 MHz | 8028-50-TS24BNC | 7/5/2007 | 7/5/2008 |
| 091 | Shielded Enclosure | Retlif | 10 kHz - 1 GHz | Room 6 | 10/16/2006 | 10/16/2007 |
| 333 | Attenuator | Narda | DC - 11 GHz | 768-10 | 8/10/2007 | 8/10/2008 |
| 7016 | EMC Analyzer | Hewlett Packard | 9kHz - 1.8GHz | 8591EM | 7/25/2007 | 7/25/2008 |

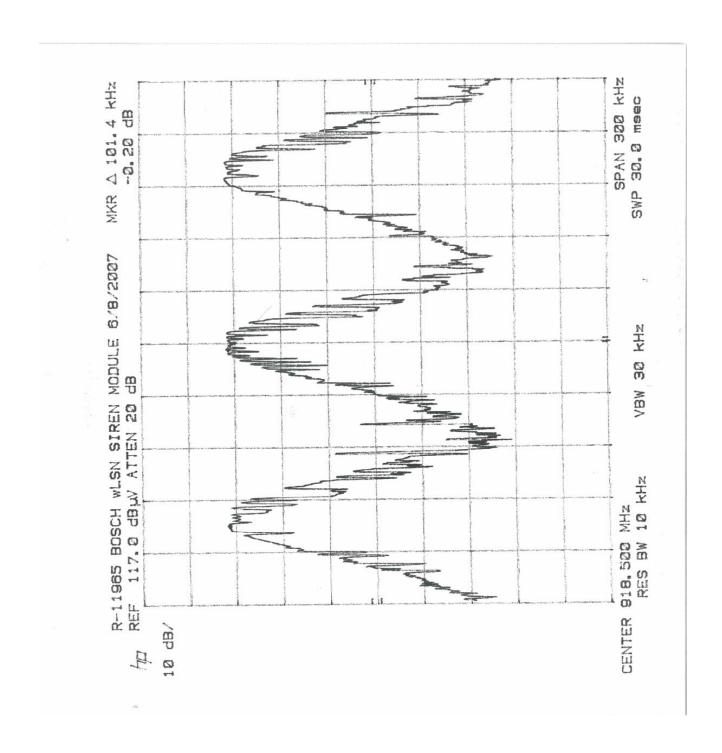
FCC Part 15 Subpart B, Class B, Radiated Emissions, 30 MHz to 5 GHz

| EN | Туре | Manufacturer | Description | Model No. | Cal Date | Due |
|------|-------------------------|-------------------|----------------------|--------------|------------|------------|
| 067 | Open Area Test Site | Retlif | 3/10 Meter | RNY | 9/12/2006 | 9/12/2009 |
| 128 | Double Ridged Guide | Electro-Mechanics | 1 GHz - 18 GHz | 3105 | 3/27/2007 | 3/27/2008 |
| 133 | Broadband Pre-Amplifier | Electro-Metrics | 10 kHz - 1 GHz, 26dB | BPA-1000 | 6/27/2007 | 6/27/2008 |
| 141 | Spectrum Analyzer | Hewlett Packard | 100 Hz - 40 GHz | 8566B | 4/27/2007 | 4/27/2008 |
| 206B | 6.0 dB Attenuator | Texscan | 0 - 1.0 GHz | FP-50 - 6 dB | 6/27/2007 | 6/27/2008 |
| 512 | Graphics Plotter | Hewlett Packard | N/A | 7470A | 10/18/2006 | 10/18/2007 |
| 543 | Preamplifier | Hewlett Packard | 1.0 GHz - 26.5 GHz | 8449B | 9/9/2005 | 9/9/2007 |
| 723 | H.P. Filter | Mini-Circuits | 1 GHz | BHP-1000 | 8/13/2007 | 8/13/2008 |
| 762 | AM/FM Signal Generator | Marconi Instru. | 10 kHz - 1.2 GHz | 2023 | 7/24/2007 | 7/24/2008 |

FCC Part 15.35, Duty Cycle Determination

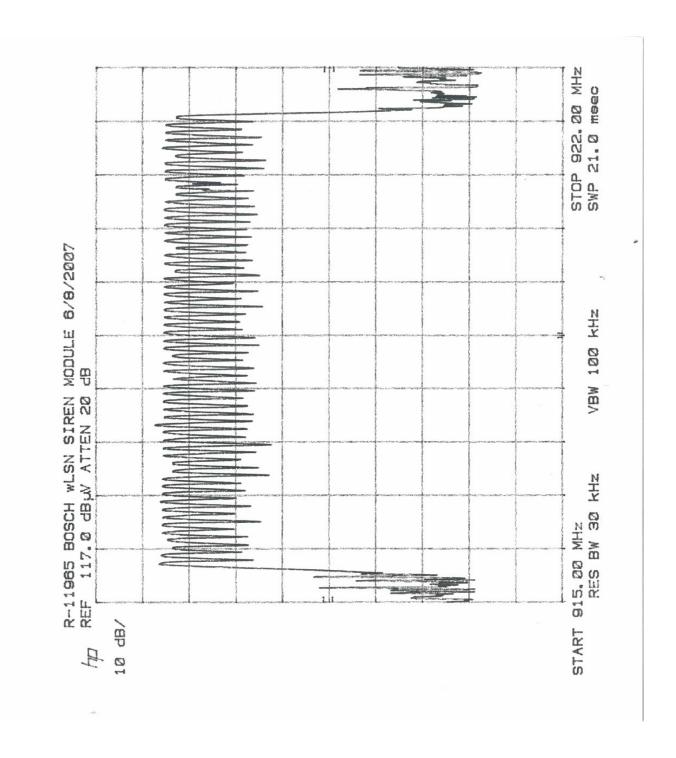
| EN | Туре | Manufacturer | Description | Model No. | Cal Date | Due Date |
|------|---------------------|-----------------|-----------------|-----------|------------|-----------------|
| 067 | Open Area Test Site | Retlif | 3/10 Meter | RNY | 9/12/2006 | 9/12/2009 |
| 141 | Spectrum Analyzer | Hewlett Packard | 100 Hz - 40 GHz | 8566B | 4/27/2007 | 4/27/2008 |
| 141B | Quasi-Peak Adaptor | Hewlett Packard | 100 Hz - 1 GHz | 85650A | 4/27/2007 | 4/27/2008 |
| 512 | Graphics Plotter | Hewlett Packard | N/A | 7470A | 10/18/2006 | 10/18/2007 |

FCC Part 15, Subpart C, 15.247 (a)(1) Carrier Frequency Separation and Number of Hopping Frequency
902 – 928 MHz Band Test Data



FCC Part 15, Subpart C, 15.247(a) (1)Hopping Channel Carrier Separation, 902 to 928 MHz Band Note: Hopping channel carrier frequency meets the required minimum separation of 25 kHz (Measured carrier separation =101.4kHz)

| Customer | Bosch Security System. | | | | |
|----------------|----------------------------|--------------|--|--|--|
| Test Sample | wLSN Interior Siren Module | | | | |
| Model Number | ISW- BSR1-WY | | | | |
| Date: 6-8-2007 | Tech: R.S. | Sheet 1 of 2 | | | |

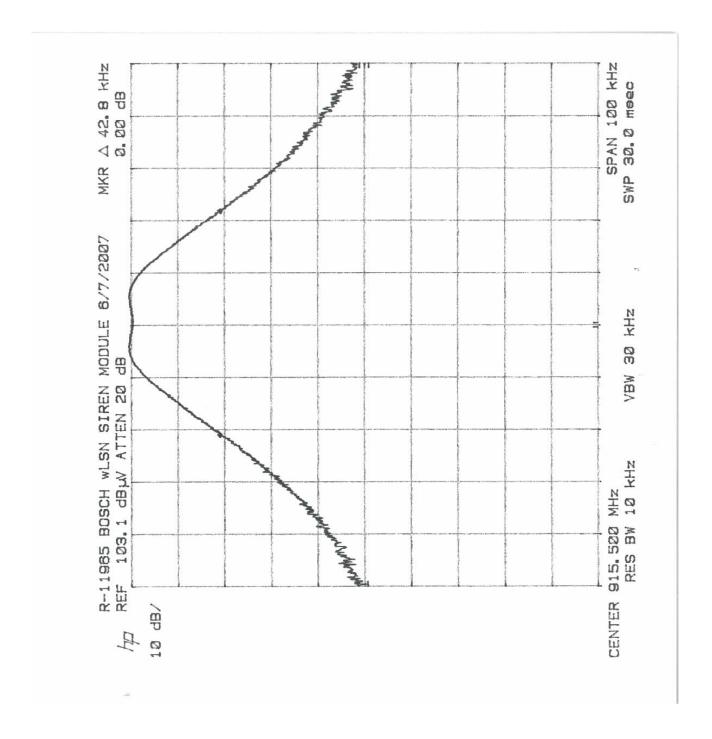


FCC Part 15, Subpart C, 15.247(a) (1) Number of Hopping Frequency, 902 to 928 MHz Band

Note: EUT uses 59 hopping frequencies which meets the 50 minimum hopping frequencies required by the 20dB bandwidth if less than 250 kHz(measured BW = 43.9 kHz).

| Customer | Bosch Security System. | | | | | |
|----------------|----------------------------|--------------|--|--|--|--|
| Test Sample | wLSN Interior Siren Module | | | | | |
| Model Number | ISW- BSR1-WY | | | | | |
| Date: 6-8-2007 | Tech: R.S. | Sheet 2 of 2 | | | | |

FCC Part 15, Subpart C, 15.247 (a)(1) Occupied Bandwidth, 902 - 928 MHz
Test Data



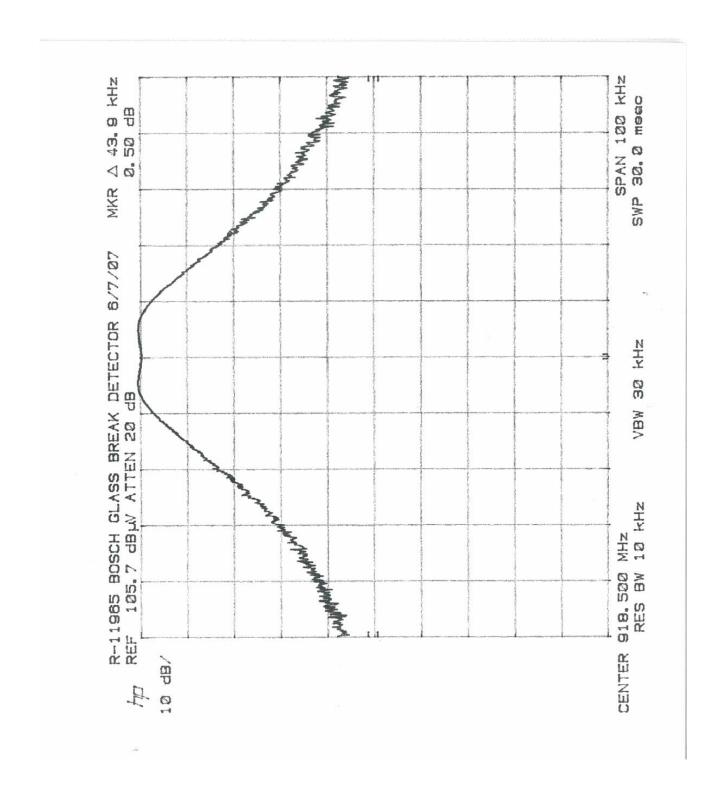
FCC Part 15, Subpart C, 15.247(a) (1) Occupied Bandwidth, 902 to 928 MHz Band

Note: The maximum 20 dB bandwidth of the hopping channel is less then 250 kHz. 20dB bandwidth

measured at 42.8 kHz

Note: EUT transmitting on channel 00 at 915.5 MHz.

| Customer | Bos | Bosch Security System. | | | | |
|----------------|-----|----------------------------|--------------|--|--|--|
| Test Sample | wL | wLSN Interior Siren Module | | | | |
| Model Number | ISV | ISW- BSR1-WY | | | | |
| Date: 6-7-2007 | | Tech: R.S. | Sheet 1 of 3 | | | |



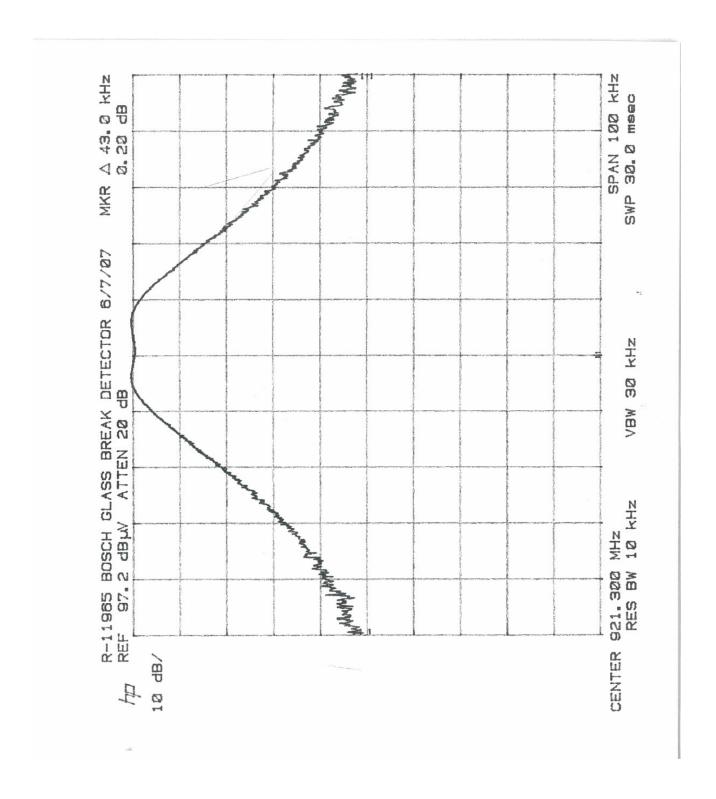
FCC Part 15, Subpart C, 15.247(a) (1) Occupied Bandwidth, 902 to 928 MHz Band

Note: The maximum 20 dB bandwidth of the hopping channel is less then 250 kHz. 20dB bandwidth

measured at 43.9 kHz

Note: EUT transmitting on channel 30 at 918.5 MHz.

| Customer | Bos | Bosch Security System. | | | | |
|----------------|-----|----------------------------|--------------|--|--|--|
| Test Sample | wL | wLSN Interior Siren Module | | | | |
| Model Number | ISV | ISW- BSR1-WY | | | | |
| Date: 6-7-2007 | | Tech: R.S. | Sheet 2 of 3 | | | |



FCC Part 15, Subpart C, 15.247(a) (1) Occupied Bandwidth, 902 to 928 MHz Band

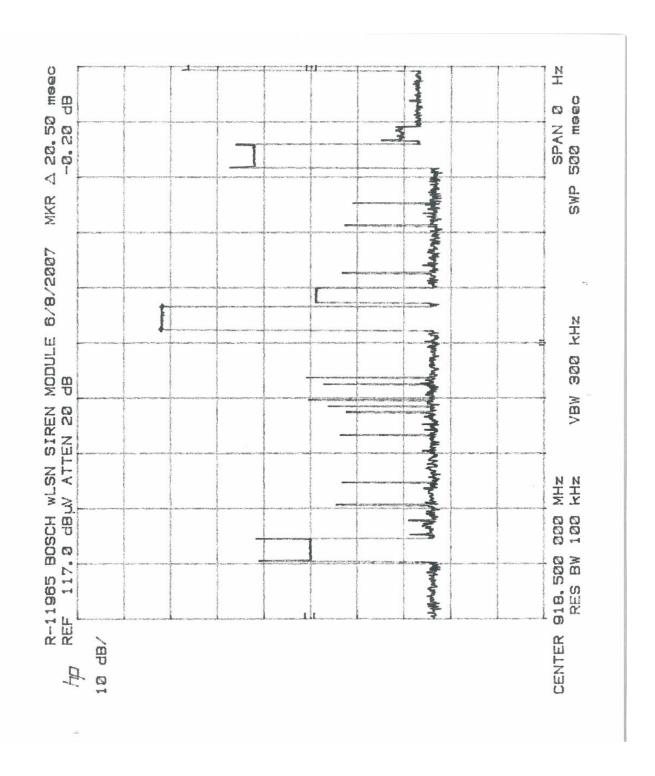
Note: The maximum 20 dB bandwidth of the hopping channel is less then 250 kHz. 20dB bandwidth

measured at 43.0 kHz

Note: EUT transmitting on channel 58 at 921.3 MHz.

| Customer | Bosch Security System. | | | | | |
|----------------|------------------------|----------------------------|--------------|--|--|--|
| Test Sample | wL | wLSN Interior Siren Module | | | | |
| Model Number | ISV | ISW- BSR1-WY | | | | |
| Date: 6-7-2007 | | Tech: R.S. | Sheet 3 of 3 | | | |

FCC Part 15, Subpart C, 15.247 (a)(1)(i) Occupancy Time 902 - 928 MHz Test Data



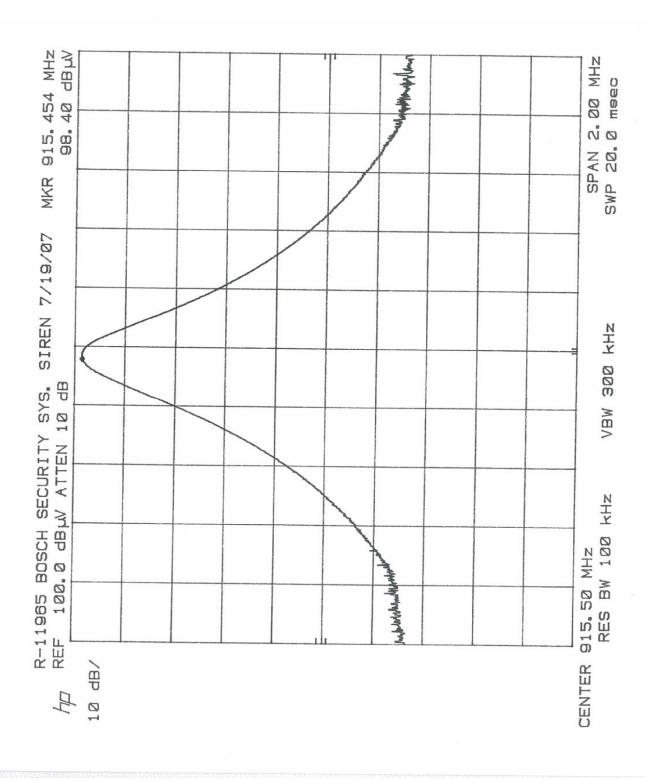
FCC Part 15, Subpart C, 15.247(a)(1)(i) Occupancy Time, 902 to 928 MHz Band Note: The measured occupancy time does not exceed the 0.4 seconds (Measured time =20.5mSec.) FCC ID:T3XBSR1-WY

| Customer | Bos | Bosch Security System. | | | | |
|----------------|-----|----------------------------|--------------|--|--|--|
| Test Sample | wL | wLSN Interior Siren Module | | | | |
| Model Number | ISV | V- BSR1-WY | | | | |
| Date: 6-8-2007 | | Tech: R.S. | Sheet 1 of 1 | | | |

FCC Part 15, Subpart C Radiated Emissions, Fundamental Power Output Paragraph 15.247(b) (2) Test Data

| Test Meth | od: | FCC F | Part 15, Subpart | C Radiated E | Emissions, Fu | ndamental Po | wer Output. | | |
|-----------|-----------|----------|------------------|-----------------|---------------|----------------|-------------------|--------------|----------|
| Customer | | | Security System | | | Job No | <u> </u> | -11 | |
| Test Samp | ole: | | Interior Siren M | | | | h 15.247(b |)(2) | |
| Model No. | | ISW- | BSR1-WY | | | | D: T3XBSR | | |
| Operating | | Contir | nuously transmit | ting a 915.5 N | ЛНz, 918.4 МН | | | | |
| Technicia | | R. So | | <u> </u> | , | Date | | 2007. | |
| Notes: | Test Dis | tance: 3 | Meters | Temp :28° | °C Humidity | :74% | | | |
| | Detector | : Peak | | • | • | | | | |
| Test | Anter | | EUT | Meter | Correction | Corrected | Converted | Converted | Peak |
| Freq. | Pol./He | | Orientation | Reading | Factor | Reading | Reading | Reading | Limit |
| MHz | (V/H) / N | | X/Y/Z | dBuV | dB | dBuV/m | V/m | milliWatts | Watts |
| 915.5 | V/1 | | Х | 95.0 | 9.6 | 104.6 | 0.17 | 8.7 | 1.0 |
| | V / 1 | | Υ | 92.7 | 9.6 | 102.3 | 0.13 | 5.1 | |
| | V / 1 | .0 | Z | 98.4 | 9.6 | 108.0 | 0.25 | 18.9 | |
| | H/2 | 3 | Х | 93.5 | 9.6 | 103.1 | 0.14 | 6.1 | |
| | H / 1 | .3 | Υ | 96.3 | 9.6 | 105.9 | 0.20 | 11.7 | |
| 915.5 | H/1 | .3 | Z | 93.6 | 9.6 | 103.2 | 0.14 | 6.3 | |
| | | | | | | | | | |
| 918.4 | V / 1 | | X | 95.0 | 9.6 | 104.6 | 0.17 | 8.7 | |
| | V / 1 | | Υ | 93.2 | 9.6 | 102.8 | 0.14 | 5.7 | |
| | V / 1 | | Z | 100.3 | 9.6 | 109.9 | 0.31 | 29.3 | |
| | H/1 | | Х | 96.1 | 9.6 | 105.7 | 0.19 | 11.1 | |
| | H/1 | | Υ | 96.6 | 9.6 | 106.2 | 0.20 | 12.5 | |
| 918.4 | H/1 | .8 | Z | 90.9 | 9.6 | 100.5 | 0.11 | 3.4 | |
| | | | | | | | | | <u> </u> |
| 921.3 | V / 1 | | X | 95.6 | 9.6 | 105.2 | 0.18 | 9.9 | <u> </u> |
| | V / 1 | | Y | 93.9 | 9.6 | 103.5 | 0.15 | 6.7 | <u> </u> |
| | V / 1 | | Z | 99.1 | 9.6 | 108.7 | 0.27 | 22.2 | <u> </u> |
| | H/2 | | X | 93.8 | 9.6 | 103.4 | 0.15 | 6.6 | <u> </u> |
| 024.2 | H/1 | | Y Z | 96.6 | 9.6 | 106.2 | 0.20 | 12.5 | 1.0 |
| 921.3 | H / 1 | .1 | ۷ | 86.8 | 9.6 | 96.4 | 0.07 | 1.3 | 1.0 |
| | | | | | | | | | |
| <u> </u> | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| · | | | | | | | | | |
| | The EUT | meets | the required lim | it indicated at | oove. | | | · | |
| | | | rmulae were us | | | gth in dBµV ir | nto V/m and \ | V/m to Watts | |
| | V/m = 10 |)^((dBı | uV/m-120) / 20) | | | | | | |
| | Power = | (V/m x | 3)2/30 | | | | | | |

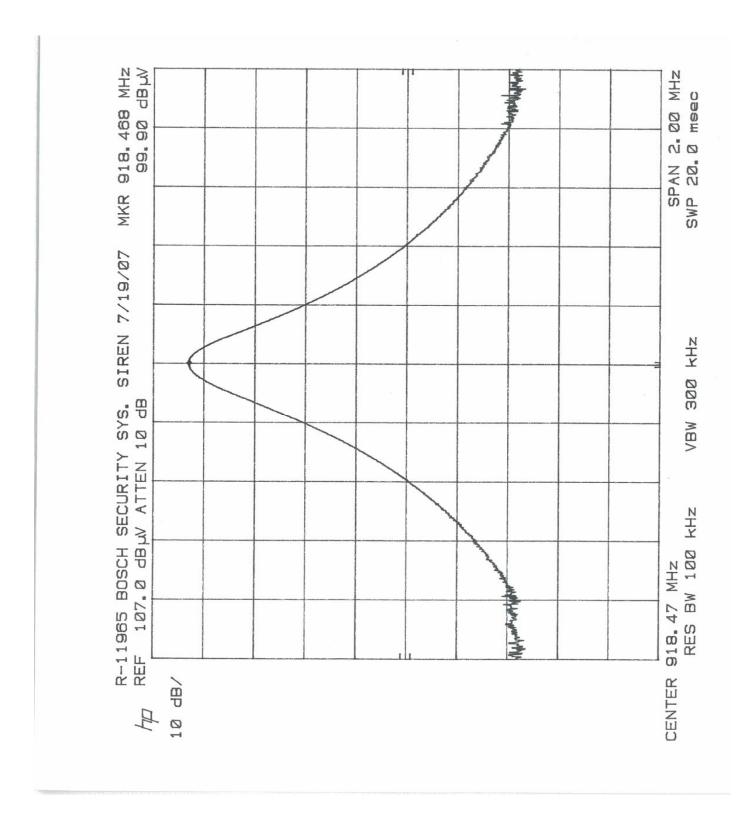
Page 1 of 1



FCC Part 15, Subpart C Radiated Emissions, Fundamental Power Output, Para.15.247(b)(2)

Note: EUT transmitting on channel 00 at 915.5 MHz.

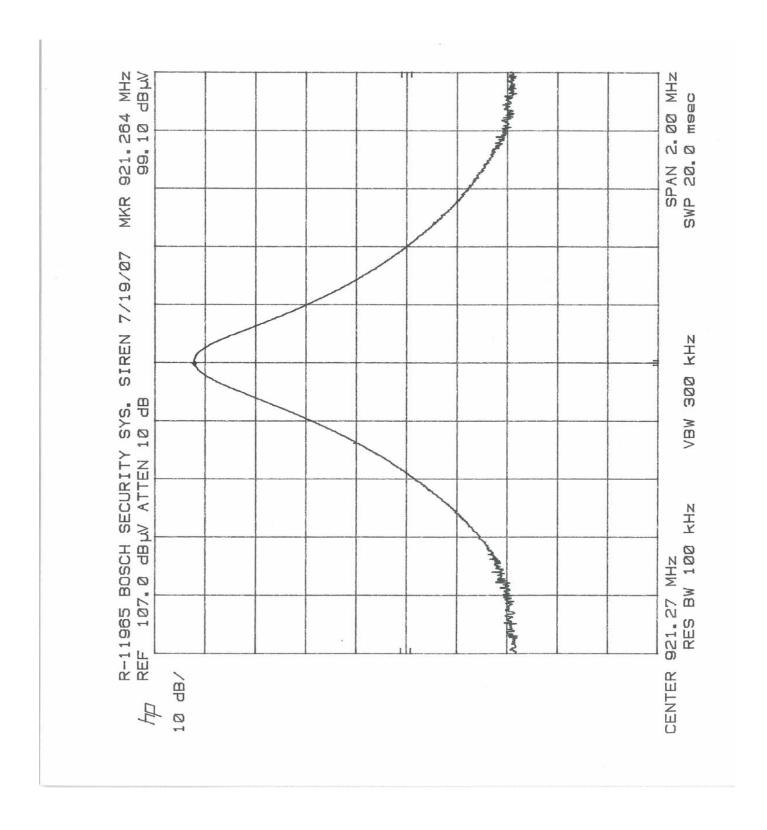
| Customer | Bosch Security System. | | | | |
|----------------------|----------------------------|------------|--------------|--|--|
| Test Sample | wLSN Interior Siren Module | | | | |
| Model Number | ISW- BSR1-WY | | | | |
| Date: July 18, 2007. | | Tech: R.S. | Sheet 1 of 3 | | |



FCC Part 15, Subpart C Radiated Emissions, Fundamental Power Output, Para.15.247(b)(2)

Note: EUT transmitting on channel 30 at 918.4 MHz.

| Customer | Bosch Security System. | | | | |
|----------------------|----------------------------|------------|--------------|--|--|
| Test Sample | wLSN Interior Siren Module | | | | |
| Model Number | ISW- BSR1-WY | | | | |
| Date: July 18, 2007. | | Tech: R.S. | Sheet 2 of 3 | | |

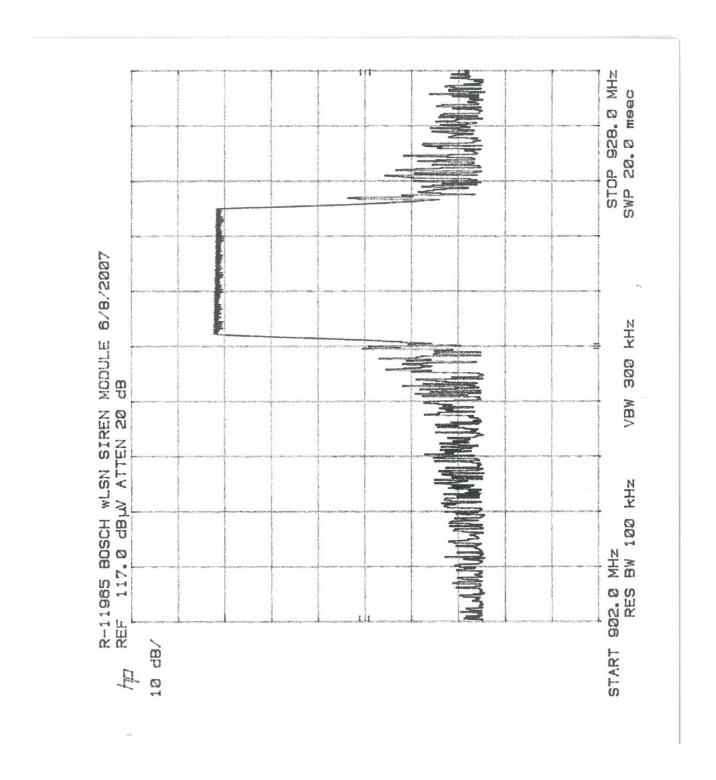


FCC Part 15, Subpart C Radiated Emissions, Fundamental Power Output, Para.15.247(b)(2)

Note: EUT transmitting on channel 58 at 921.3 MHz.

| Customer | Bosch Security System. | | | | |
|----------------------|----------------------------|--------------|--------------|--|--|
| Test Sample | wLSN Interior Siren Module | | | | |
| Model Number | ISW- | ISW- BSR1-WY | | | |
| Date: July 18, 2007. | | Tech: R.S. | Sheet 3 of 3 | | |

FCC Part 15, Subpart C, 15.247(d) Band Edge Measurements 902 - 928 MHz Range Test Data



FCC Part 15, Subpart C,15.247(d) Band Edge Measurements, 902 to 928 MHz Band

Note: The EUT complies with the Band Edge Measurements.

| Customer | Bos | Bosch Security System. | | | | |
|-----------------|-----|----------------------------|--------------|--|--|--|
| Test Sample | wL | wLSN Interior Siren Module | | | | |
| Model Number | ISV | ISW- BSR1-WY | | | | |
| Date: 6-08-2007 | | Tech: R.S. | Sheet 1 of 1 | | | |

FCC Part 15 Subpart C, Radiated Emissions, Harmonics Paragraphs 15.247(d). EUT transmitting at the Fundamental signal of 915.5 MHz

| Test Metho | d: | FCC Pa | rt 15 Subpart C | , Radiated Em | issions, Harmo | nics Emissio | ns. | | | | |
|-------------|-----------|-------------|---|---------------|----------------|--------------|----------------------|-------|----------|--|--|
| Customer: | | Bosch S | Security System | | | Job No. | R-11965-11 | | | | |
| Test Sampl | le: | wLSN I | nterior Siren Mo | dule | • | | | | | | |
| Model No.: | | ISW-BS | R1-WY | | | FCC ID: | T3XBSR1-WY | | | | |
| Operating I | Mode: | Continu | ously transmittir | ng a 915.5 MH | z signal. | • | | | | | |
| Technician | | | er, R. Soodoo, k | - | J | Date: | August 23, 2007 | | | | |
| Notes: | Test Dist | | | | | | . . | | | | |
| | | | nless otherwise | specified | | | | | | | |
| | Ante | | EUT | Meter | Correction | Corrected | Converted | Pe | eak | | |
| Test Freq. | | Height | Orientation | Reading | Factor | Reading | Reading | | mit | | |
| MHz | | Meters | X/Y/Z | dBµV | dB | dBµV/m | uV/m | u∖ | //m | | |
| 1831.0 | , , | 1.6 | X | 51.6 | 2.3 | 53.9 | 495.5 | | 18.0 | | |
| | | 1.4 | Y | 54.0 | 2.3 | 56.3 | 653.1 | | | | |
| İ | V / | 1.8 | Z | 59.4 | 2.3 | 61.7 | 1216.2 | | İ | | |
| ĺ | Η/ | 2.6 | Х | 52.0 | 2.3 | 54.3 | 518.8 | | İ | | |
| ĺ | Η/ | 1.0 | Y | 58.1 | 2.3 | 60.4 | 1047.1 | | İ | | |
| 1831.0 | H / | 1.9 | Z | 46.0 | 2.3 | 48.0 | 251.2 | 501 | 18.0 | | |
| | | | | | | | | | | | |
| 2746.5 | | 1.3 | X | 47.7 | 5.2 | 52.9 | 441.6 | 500 | 0.00 | | |
| | | 1.4 | Y | 47.5 | 5.2 | 52.7 | 431.5 | | | | |
| | V / | | Z | 47.0 | 5.2 | 52.2 | 407.4 | | | | |
| | | 1.4 | X | 47.6 | 5.2 | 52.8 | 436.5 | | | | |
| | | 1.8 | Y | 49.3 | 5.2 | 54.5 | 530.9 | | | | |
| 2746.5 | H / | 1.8 | Z | 46.0 | 5.2 | 51.2 | 363.1 | 500 | 0.00 | | |
| 0000 | N / / | 4.0 | | 40.4 | 40.0 | 50.4 | 100.7 | 500 | 20.0 | | |
| 3662.0 | | 1.8 | X Y | 42.1 | 10.0 | 52.1 | 402.7 | 500 | 0.00 | | |
| <u> </u> | | 1.25 1.8 | Z | 41.8 41.0 | 10.0 10.0 | 51.8 51.0 | 389.0 | | <u> </u> | | |
| | | 1.9 | X | 42.8 | 10.0 | 52.8 | 354.8 436.5 | | l . | | |
| | | 1.8 | Y | 41.4 | 10.0 | 51.4 | 371.5 | | | | |
| 3662.0 | | 1.8 | Z | 43.5 | 10.0 | 53.5 | 473.2 | 500 | 0.00 | | |
| 0002.0 | 117 | 1.0 | | 40.0 | 10.0 | 00.0 | 473.2 | - 000 | 70.0 | | |
| 4577.5 | V / | 1.6 | Х | 43.5 | 13.6 | 57.1 | 716.1 | 500 | 0.00 | | |
| | | 2.4 | Y | 43.2 | 13.6 | 56.8 | 691.8 | | | | |
| i | | 1.2 | Z | 42.6 | 13.6 | 56.2 | 645.7 | | i | | |
| İ | H/ | 1.6 | Х | 44.2 | 13.6 | 57.8 | 776.2 | | | | |
| İ | Η/ | 1.7 | Y | 43.8 | 13.6 | 57.4 | 741.3 | | İ | | |
| 4577.5 | H/ | 1.5 | Z | 44.8 | 13.6 | 58.4 | 831.8 | 500 | 0.00 | | |
| | | | | | | | | | | | |
| 5493.0 | 1 | 1.0 | X | 40.0 | 17.1 | 57.1 | *716.1 | 501 | 18.0 | | |
| | | 1.0 | Y | 40.1 | 17.1 | 57.2 | *724.4 | | | | |
| | | 1.0 | Z | 40.0 | 17.1 | 57.1 | *716.1 | | <u> </u> | | |
| | | 1.0 | X | 40.1 | 17.1 | 57.2 | *724.4 | | <u> </u> | | |
| - 165.5 | | 1.0 | Y | 40.0 | 17.1 | 57.1 | *716.1 | | 10.5 | | |
| 5493.0 | + | 1.0 | Z | 40.0 | 17.1 | 57.1 | *716.1 | | 18.0 | | |
| | | | | | | | s not recorded we | | re | | |
| | | | | | | do not excee | ed the specified lin | nıts. | | | |
| Ī | ^= Noise | e Floor M | Noise Floor Measurements (minimum sensitivity). | | | | | | | | |

| Test Metho | d: | FCC Pa | rt 15 Subpart C | , Radiated Em | issions, Harmo | nics Emissio | ns. | | | | | |
|-------------|---------------------------------------|------------|---|-------------------|------------------|---------------|---|----------|--|--|--|--|
| Customer: | | Bosch S | Bosch Security System. Job No. R-11965-11 | | | | | | | | | |
| Test Sampl | e: | wLSN Ir | nterior Siren Mo | dule | | | | | | | | |
| Model No.: | | ISW-BS | SW-BSR1-WY FCC ID: T3XBSR1-WY | | | | | | | | | |
| Operating I | Mode: | Continu | ously transmittir | ng a 915.5 MH | z signal. | - | | | | | | |
| Technician | | | D. Lerner, R. Soodoo, K. McDonald Date: August 23, 2007 | | | | | | | | | |
| Notes: | | tance: 3 N | | | 1 | <u>'</u> | <i>,</i> | | | | | |
| | | | nless otherwise | specified | | | | | | | | |
| | | enna | EUT | Meter | Correction | Corrected | Converted | Pe | eak | | | |
| Test Freq. | | Height | Orientation | Reading | Factor | Reading | Reading | | mit | | | |
| MHz | (V/H)- | Meters | X/Y/Z | dΒμV | dB | dBµV/m | uV/m | uV | //m | | | |
| 6408.5 | <u> </u> | 1.0 | Х | 42.2 | 19.9 | 62.1 | *1273.5 | _ | 18.0 | | | |
| | | 1.0 | Υ | 42.2 | 19.9 | 62.1 | *1273.5 | | | | | |
| İ | V / | 1.0 | Z | 42.2 | 19.9 | 62.1 | *1273.5 | | | | | |
| | H/ | 1.0 | Х | 41.3 | 19.9 | 61.2 | *1148.2 | | | | | |
| | H/ | 1.0 | Y | 41.3 | 19.9 | 61.2 | *1148.2 | | | | | |
| 6408.5 | H/ | 1.0 | Z | 41.3 | 19.9 | 61.2 | *1148.2 | 501 | 18.0 | | | |
| | | | | | | | | | | | | |
| 7324.0 | | 1.0 | Х | 43.0 | 21.3 | 64.3 | *1640.6 | 500 | 0.00 | | | |
| | | 1.0 | Υ | 43.0 | 21.3 | 64.3 | *1640.6 | | | | | |
| | | 1.0 | Z | 43.0 | 21.3 | 64.3 | *1640.6 | | | | | |
| | | 1.0 | X | 43.0 | 21.3 | 64.3 | *1640.6 | | <u> </u> | | | |
| | | 1.0 | Y | 43.0 | 21.3 | 64.3 | *1640.6 | | | | | |
| 7324.0 | H / | 1.0 | Z | 43.0 | 21.3 | 64.3 | *1640.6 | 500 | 0.00 | | | |
| 0000 5 | \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ | 1.0 | V | 40.5 | 22.0 | 00.4 | *2040.4 | 500 | 20.0 | | | |
| 8239.5 | | 1.0 | X Y | 42.5 42.5 | 23.6 23.6 | 66.1 66.1 | *2018.4 *2018.4 | 500 | 0.00 | | | |
| | | 1.0 | Z | 42.5 | 23.6 | 66.1 | *2018.4 | | <u> </u> | | | |
| | | 1.0 | X | 42.7 | 23.6 | 63.6 | *2065.4 | | <u> </u> | | | |
| <u> </u> | | 1.0 | Y | 42.7 | 23.6 | 63.6 | *2065.4 | | <u> </u> | | | |
| 8239.5 | | 1.0 | Z | 42.7 | 23.6 | 63.6 | *2065.4 | 500 | 0.0 | | | |
| 0200.0 | 117 | 1.0 | | 12.7 | 20.0 | 00.0 | 2000.1 | - 000 | 70.0 | | | |
| 9155.0 | V / | 1.0 | Х | 42.1 | 25.5 | 67.6 | *2398.8 | 500 | 0.00 | | | |
| | | 1.0 | Υ | 42.1 | 25.5 | 67.6 | *2398.8 | | | | | |
| i | | 1.0 | Z | 42.1 | 25.5 | 67.6 | *2398.8 | 1 | İ | | | |
| İ | H/ | 1.0 | X | 42.0 | 25.5 | 67.5 | *2371.4 | | | | | |
| | H/ | 1.0 | Υ | 42.0 | 25.5 | 67.5 | *2371.4 | | | | | |
| 9155.0 | H/ | 1.0 | Z | 42.0 | 25.5 | 67.5 | *2371.4 | 500 | 0.00 | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | 1 | | | | |
| | | | | | | | | <u> </u> | | | | |
| | | | | | | | | | | | | |
| | The free | 7110001150 | ngo woo 22255 | nd from 20 MI | 7 to 10 0 CLI- | All omissis a | not recorded ···· | ro mai | | | | |
| | | | • | | | | s not recorded we ed the specified lir | | <u> </u> | | | |
| | | | asurements (M | | | uo not excee | a trie specified III | iilis. | | | | |
| | =inoise | FIOUI IVIE | asurements (IV | ııııınıdın systel | ıı əciiəilivily) | | | | | | | |

| Test Metho | d: | FCC | Part 15 Subpa | art C, Radiat | ed Emissions | , Harmonics E | missions. | | | | |
|-------------|------------------------|----------|------------------|--------------------|----------------------|----------------|------------------------------|-------------------|-----------|-----------------|--|
| Customer: | | Boso | ch Security Sys | tem. | | Jo | b No. R-119 | 965-11 | | | |
| Test Sampl | e: | | N Interior Siren | | | 1 | · · | | | | |
| Model No.: | | | -BSR1-WY | | | FC | C ID: T3XB | SR1-WY | | | |
| Operating N | Mode: | | inuously transr | mitting a 915 | 5.5 MHz signa | - I | | | | | |
| Technician | | | erner, R. Soodo | | | | Date: August 23, 2007 | | | | |
| Notes: | | | 3 Meters | , | | Duty Cv | cle: 22% | | | | |
| 110100. | | | age, unless oth | nerwise spec | cified | | cle Correction | : -13.2dB | | | |
| | | | EUT | | | Duty cycle | Corrected | Converted | ۸, | | |
| Test Freq. | Antenna Pol./Height | | Orientation | Average Reading | Correction Factor | Correction | Corrected Reading | Converted Reading | A\ Lir | rg. nit | |
| | | | | | | Factor | | | | | |
| MHz | (V/H | | X/Y/Z | dΒμV | dB | dB | dBμV/m | uV/m | | <u>//m</u> | |
| 1831.0 | V / 1. | | X | 50.2 | 2.3 | -13.2 | 39.3 | 92.3 | 501 | 1.8 | |
| <u> </u> | V / 1. | | Y | 53.0 | 2.3 | -13.2 | 42.1 | 127.4 | | <u></u> | |
| <u> </u> | V / 1.8 | | Z | 51.0 | 2.3 | -13.2 | 40.1 | 101.2 | | <u></u> | |
| <u>.</u> | H/2 | | X | 50.1 | 2.3 | -13.2 | 39.2 | 91.2 | | <u></u> | |
| | H/1. | | Y | 52.4 | 2.3 | -13.2 | 41.5 | 118.9 | | | |
| 1831.0 | H / 1. | .9 | Z | 52.5 | 2.3 | -13.2 | 44.5 | 167.9 | 501 | 1.8 | |
| 2746.5 | V / 1. | .3 | X | 43.9 | 5.2 | -13.2 | 35.9 | 62.4 | 50 | 0.0 | |
| 1 | V / 1. | | Y | 43.2 | 5.2 | -13.2 | 35.2 | 57.5 | | <u></u> | |
| <u>_</u> | V / 1. | | Z | 42.1 | 5.2 | -13.2 | 34.1 | 50.7 | | | |
| i | H/1 | | X | 43.9 | 5.2 | -13.2 | 35.9 | 62.4 | | | |
| <u> </u> | H / 1. | | Y | 46.3 | 5.2 | -13.2 | 38.3 | 82.2 | | <u> </u> | |
| 2746.5 | H/1 | | Z | 40.7 | 5.2 | -13.2 | 32.7 | 43.2 | 50 | 0.0 | |
| | | | | | | | | | | | |
| 3662.0 | V / 1. | | X | 32.8 | 10.0 | -13.2 | 29.6 | 30.2 | 50 | 0.0 | |
| | V / 1. | 25 | Y | 33.3 | 10.0 | -13.2 | 31.1 | 35.9 | | | |
| | V / 1. | .8 | Z | 31.0 | 10.0 | -13.2* | 27.8 | 24.5 | | | |
| | H / 1. | .9 | X | 34.9 | 10.0 | -13.2 | 31.7 | 38.5 | | | |
| | H / 1. | .8 | Y | 32.6 | 10.0 | -13.2 | 29.4 | 29.5 | | | |
| 3662.0 | H / 1. | .8 | Z | 31.2 | 10.0 | -13.2* | 28.0 | 25.1 | 50 | 0.0 | |
| 4577 S | V / 1. | <u> </u> | V | 36.1 | 13.6 | -13.2 | 20.5 | 00.0 | 50 | 0.0 | |
| 4577.5 | V / 1. | | X Y | 35.8 | 13.6 | -13.2 | 36.5 36.2 | 66.8 | 50 | J.U | |
| <u> </u> | V / 2. | | Z | 33.8 | 13.6 | -13.2 | 34.2 | 64.6 | | <u> </u> | |
| <u> </u> | H / 1. | | X | 37.4 | 13.6 | -13.2 | 37.8 | 51.3 77.6 | | | |
| <u> </u> | H/1 | | Y | 35.7 | 13.6 | -13.2 | 36.1 | 63.8 | | | |
| 4577.5 | H / 1. | | Z | 39.2 | 13.6 | -13.2 | 39.6 | 95.5 | 50 | <u> </u> 0.0 | |
| TJ11.J | 11/1 | | | JJ.L | 13.0 | -10.2 | J3.0 | 90.0 | 30 | J.U | |
| 5493.0 | V / 1. | .0 | Х | 29.6 | 17.1 | -13.2 | 33.5 | *47.3 | 501 | 1.8 | |
| | V / 1. | .0_ | Y | 30.4 | 17.1 | -13.2 | 34.3 | *51.9 | | | |
| | V / 1. | .0 | Z | 29.5 | 17.1 | -13.2 | 33.4 | *46.8 | | | |
| | H /1. | 0 | Х | 29.5 | 17.1 | -13.2 | 33.4 | *46.8 | | | |
| | H/1 | .7 | Y | 30.4 | 17.1 | -13.2 | 34.3 | *51.9 | | | |
| 5493.0 | H / 1. | .0 | Z | 29.3 | 17.1 | -13.2 | 33.2 | *45.7 | 501 | 1.8 | |
| | The free | uency | / range was sc | anned from | 30 MHz to 10 | .0 GHz. All er | nissions not re | ecorded were | more | | |
| | Than 20 | dB be | elow the specif | ied limit. En | nissions from | the EUT do n | ot exceed the | specified limit | ts. | | |
| | *=Noise | Floor | Measurements | s (Minimum | system sens | itivity) | | | | | |
| | | | | | | | | | | | |

| Test Metho | d: | FCC | Part 15 Subpa | ırt C, Radiate | d Emissions, | Harmonics E | missio | ns. | | | |
|-------------|--|--------|--|----------------|---------------|-------------|---------|--------|-------------------|------|----------|
| Customer: | | Boso | h Security Sys | tem. | | Jo | b No. | R-119 | 965-11 | | |
| Test Sampl | e: | wLSI | N Interior Siren | Module | | • | • | | | | |
| Model No.: | | | BSR1-WY | | | FC | C ID: | T3XB | SR1-WY | | |
| Operating I | Mode: | | inuously transr | mitting a 915. | 5 MHz signal. | • | | | _ | | |
| Technician | | | erner, R. Soodo | | | | Date: | Augus | st 23, 2007 | | |
| Notes: | Test Dist | | | , | | Duty Cy | | | oo, _o. | | |
| | | | age, unless oth | erwise speci | fied | Duty Cy | | | · -13 2 | | |
| | | | | • | | Duty cycle | | | | | |
| Test Freq. | Anten | | EUT | Average | Correction | Correction | | ected | Converted | | /g. |
| · · | Pol./He | eignt | Orientation | Reading | Factor | Factor | Rea | ding | Reading | LII | mit |
| MHz | (V/H |)- | X/Y/Z | dΒμV | dB | dB | dBµ | V/m | uV/m | u∨ | //m |
| 6408.5 | V / 1 | .0 | Х | 31.6 | 19.9 | -13.2 | 38 | 3.3 | *82.2 | 501 | 11.8 |
| | V / 1 | .0 | Y | 31.6 | 19.9 | -13.2 | 38 | 3.3 | *82.2 | | |
| | V / 1. | .0 | Z | 31.6 | 19.9 | -13.2 | 38 | 3.3 | *82.2 | | |
| | H/1 | .0 | X | 32.2 | 19.9 | -13.2 | 38 | 3.9 | *88.1 | | |
| | H/1 | .0 | Υ | 32.2 | 19.9 | -13.2 | 38 | 3.9 | *88.1 | | |
| 6408.5 | H/1 | .0 | Z | 32.2 | 19.9 | -13.2 | 38 | 3.9 | *88.1 | 501 | 11.8 |
| | | | | | | | | | | | |
| 7324.0 | V / 1. | | X | 31.9 | 21.3 | -13.2 | 40 | 0.0 | *100.0 | 50 | 0.0 |
| | V / 1 | | Υ | 31.9 | 21.3 | -13.2 | 40 | 0.0 | *100.0 | | |
| | V / 1. | .0 | Z | 31.9 | 21.3 | -13.2 | 40 | 0.0 | *100.0 | | |
| | H/1 | .0 | X | 31.9 | 21.3 | -13.2 | 40 | 0.0 | *100.0 | | |
| | H/1 | .0 | Υ | 31.9 | 21.3 | -13.2 | 40 | 0.0 | *100.0 | | |
| 7324.0 | H/1 | .0 | Z | 31.9 | 21.3 | -13.2 | 40 | 0.0 | *100.0 | 50 | 0.0 |
| | | | | | | | | | | | |
| 8239.5 | V / 1. | | Х | 33.2 | 23.6 | -13.2 | | 2.6 | *151.4 | 50 | 0.0 |
| | V / 1 | | Υ | 33.2 | 23.6 | -13.2 | | 2.6 | *151.4 | | |
| | V / 1. | | Z | 33.2 | 23.6 | -13.2 | | 2.6 | *151.4 | | |
| | H/1 | | Х | 32.8 | 23.6 | -13.2 | | 3.2 | *144.5 | | |
| | H/1 | | Y | 32.8 | 23.6 | -13.2 | | 3.2 | *144.5 | | |
| 8239.5 | H/1 | .0 | Z | 32.8 | 23.6 | -13.2 | 43 | 3.2 | *144.5 | 50 | 0.0 |
| 0455.0 | | | V | 00.4 | 05.5 | 40.0 | | - 4 | *400.0 | | 0.0 |
| 9155.0 | V / 1. | | X | 33.1 | 25.5 | -13.2 | | 5.4 | *186.2 | 50 | 0.0 |
| | V / 1 | | Y | 33.1 | 25.5 | -13.2 | | 5.4 | *186.2 | | <u> </u> |
| | V / 1. | | Z | 33.1 | 25.5 | -13.2 | | 5.4 | *186.2 | | <u> </u> |
| | H/1 | | X | 33.2 | 25.5 | -13.2 | _ | 5.5 | *188.4 | | <u> </u> |
| 0455.0 | H/1 | | Y | 33.2 | 25.5 | -13.2 | | 5.5 | *188.4 | | <u> </u> |
| 9155.0 | H/1 | .0 | Z | 33.2 | 25.5 | -13.2 | 45 | 5.5 | *188.4 | 50 | 0.0 |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | 1 | | | | |
| | The free | 111000 | rango was sa | annod from a | | | nicolor | not ro | corded were | moro | |
| | | | range was scaled range was scaled range was scaled range was scaled range. | | | | | | | | |
| | | | | | | | or exce | eu me | specified liffill | .5. | |
| İ | *=Noise Floor Measurements (Minimum system sensitivity) | | | | | | | | | | |

FCC Part 15 Subpart C, Radiated Emissions, Harmonics
Paragraphs 15.247(d).

EUT transmitting at the Fundamental signal of 918.4 MHz

| Test Metho | d: | FCC Part 15 Subpart C, Radiated Emissions, Harmonics Emissions. Bosch Security System. Job No. R-11965-11 | | | | | | | | | | |
|-------------|--|---|--|---------------|------------|--------------|----------------------|-------|--|--|--|--|
| Customer: | | Bosch S | Security System | Ŧ | | R-11965-11 | | | | | | |
| Test Sampl | le: | wLSN Ir | nterior Siren Mo | dule | | | | | | | | |
| Model No.: | | ISW-BS | R1-WY | | | FCC ID: | T3XBSR1-WY | | | | | |
| Operating I | Mode: | Continu | ously transmittir | ng a 918.4 MH | z signal. | | | | | | | |
| Technician | | | D. Lerner, R. Soodoo, K. McDonald Date: August 23, 2007 | | | | | | | | | |
| Notes: | Test Dist | tance: 3 N | /leters | | | | | | | | | |
| | | | nless otherwise | specified | | | | | | | | |
| | | enna | EUT | Meter | Correction | Corrected | Converted | Pe | ak | | | |
| Test Freq. | | Height | Orientation | Reading | Factor | Reading | Reading | | mit | | | |
| MHz | (V/H)/ | Meters | X/Y/Z | dΒμV | dB | dBµV/m | uV/m | u∨ | //m | | | |
| 1836.8 | , , | 1.0 | Х | 54.2 | 2.3 | 56.5 | 668.3 | 501 | 18.0 | | | |
| | V / | 1.4 | Υ | 53.7 | 2.3 | 56.0 | 631.0 | | | | | |
| İ | V / | 1.0 | Z | 64.5 | 2.3 | 66.8 | 2187.8 | | İ | | | |
| | H/ | 1.9 | X | 49.9 | 2.3 | 52.2 | 407.4 | | | | | |
| | Η/ | 2.5 | Υ | 52.6 | 2.3 | 54.9 | 555.9 | | | | | |
| 1836.8 | H/ | 1.7 | Z | 53.4 | 2.3 | 55.7 | 609.5 | 501 | 18.0 | | | |
| | | | | | | | | | | | | |
| 2755.2 | | 1.0 | X | 49.0 | 5.2 | 54.2 | 512.9 | 500 | 0.00 | | | |
| | | 2.0 | Y | 45.7 | 5.2 | 50.9 | 350.8 | | | | | |
| | | 1.0 | Z | 45.3 | 5.2 | 50.5 | 335.0 | | | | | |
| | | 1.9 | X | 46.2 | 5.2 | 51.4 | 371.5 | | | | | |
| | | 1.3 | Υ | 48.0 | 5.2 | 53.2 | 457.1 | | | | | |
| 2755.2 | H/ | 2.1 | Z | 50.7 | 5.2 | 55.9 | 623.7 | 500 | 0.00 | | | |
| 0070.0 | | | | | | | | | | | | |
| 3673.6 | | 1.9 | X | 43.8 | 10.0 | 53.8 | 489.8 | 500 | 0.0 | | | |
| | | 1.5 | Y | 42.6 | 10.0 | 52.6 | 426.6 | | <u> </u> | | | |
| | | 1.0 | Z | 44.0 | 10.0 | 54.0 | 501.2 | | <u> </u> | | | |
| | | 1.7 | X | 42.8 | 10.0 | 52.8 | 436.5 | | <u> </u> | | | |
| 3673.6 | | 1.6 | Y Z | 42.1 | 10.0 | 52.1 | 402.7 | 500 | <u> </u> | | | |
| 3073.0 | П/ | 1.9 | | 43.5 | 10.0 | 53.5 | 473.2 | 500 | 0.00 | | | |
| 4592.0 | \/ / | 1.2 | Х | 45.3 | 13.6 | 58.9 | 881.0 | 500 | 0.0 | | | |
| 1002.0 | | 1.6 | Y | 47.6 | 13.6 | 61.2 | 1148.2 | 300 | l | | | |
| <u> </u> | | 1.2 | Z | 44.5 | 13.6 | 58.1 | 803.5 | | <u> </u> | | | |
| | | 1.8 | X | 45.2 | 13.6 | 58.8 | 871.0 | | <u> </u> | | | |
| | | 1.7 | Y | 44.6 | 13.6 | 58.2 | 812.8 | | <u> </u> | | | |
| 4592.0 | | 1.3 | Z | 44.9 | 13.6 | 58.5 | 841.4 | 500 | 0.0 | | | |
| | | | | | | | | | | | | |
| 5510.4 | V / | 1.9 | Х | 42.1 | 17.1 | 59.2 | 912.0 | 501 | 18.0 | | | |
| | V/ | 1.2 | Υ | 43.3 | 17.1 | 60.4 | 1047.1 | | | | | |
| | V / | 1.2 | Z | 42.0 | 17.1 | 59.1 | 901.6 | | | | | |
| | H/ | 1.8 | Х | 42.4 | 17.1 | 59.5 | 944.1 | | | | | |
| | | 2.0 | Υ | 42.0 | 17.1 | 59.1 | 901.6 | | | | | |
| 5510.4 | 1 | 1.1 | Z | 40.6 | 17.1 | 57.7 | 767.4 | | 18.0 | | | |
| | | | | | | | s not recorded we | | re | | | |
| | | | | | | do not excee | ed the specified lir | nits. | | | | |
| | *= Noise Floor Measurements (minimum sensitivity). | | | | | | | | | | | |

| Customer: Bosch Security System. Job No. R-11965-11 Test Sample: wLSN Interior Siren Module Model No.: ISW-BSR1-WY FCC ID: T3XBSR1-WY Operating Mode: Continuously transmitting a 918.4 MHz signal. Technician: D. Lerner, R. Soodoo, K. McDonald Date: August 23, 2007 Notes: Test Distance: 3 Meters Detector: Peak, unless otherwise specified |
|---|
| Model No.:ISW-BSR1-WYFCC ID:T3XBSR1-WYOperating Mode:Continuously transmitting a 918.4 MHz signal.Technician:D. Lerner, R. Soodoo, K. McDonaldDate:August 23, 2007Notes:Test Distance: 3 Meters Detector: Peak, unless otherwise specified |
| Operating Mode: Continuously transmitting a 918.4 MHz signal. Technician: D. Lerner, R. Soodoo, K. McDonald Date: August 23, 2007 Notes: Test Distance: 3 Meters Detector: Peak, unless otherwise specified |
| Technician: D. Lerner, R. Soodoo, K. McDonald Date: August 23, 2007 Notes: Test Distance: 3 Meters Detector: Peak, unless otherwise specified |
| Technician: D. Lerner, R. Soodoo, K. McDonald Date: August 23, 2007 Notes: Test Distance: 3 Meters Detector: Peak, unless otherwise specified |
| Notes: Test Distance: 3 Meters Detector: Peak, unless otherwise specified |
| Detector: Peak, unless otherwise specified |
| |
| Tack From Antenna EUT Meter Correction Corrected Converted Pea |
| Test Freq. Pol./Height Orientation Reading Factor Reading Reading Limit |
| MHz (V/H)-Meters X / Y / Z dBμV dB dBμV/m uV/m uV/r |
| 6408.5 V / 1.0 X 42.2 19.9 62.1 *1273.5 50118 |
| V / 1.0 Y 42.2 19.9 62.1 *1273.5 |
| V/1.0 Z 42.2 19.9 62.1 *1273.5 |
| H / 1.0 X 41.3 19.9 61.2 *1148.2 |
| H / 1.0 Y 41.3 19.9 61.2 *1148.2 |
| 6408.5 H / 1.0 Z 41.3 19.9 61.2 *1148.2 50118 |
| 7324.0 V / 1.0 X 43.0 21.3 64.3 *1640.6 5000 |
| V/1.0 |
| V/1.0 Z 43.0 21.3 64.3 *1640.6 |
| H/1.0 |
| H/1.0 Y 43.0 21.3 64.3 *1640.6 |
| 7324.0 H / 1.0 Z 43.0 21.3 64.3 *1640.6 5000 |
| |
| 8239.5 V / 1.0 X 42.5 23.6 66.1 *2018.4 5000 |
| V/1.0 Y 42.5 23.6 66.1 *2018.4 |
| V/1.0 Z 42.5 23.6 66.1 *2018.4 |
| H / 1.0 X 42.7 23.6 63.6 *2065.4 H / 1.0 Y 42.7 23.6 63.6 *2065.4 |
| H / 1.0 Y 42.7 23.6 63.6 *2065.4 8239.5 H / 1.0 Z 42.7 23.6 63.6 *2065.4 5000 |
| 6239.5 F1/1.0 Z 42.7 23.6 63.6 2003.4 5000 |
| 9155.0 V / 1.0 X 42.1 25.5 67.6 *2398.8 5000 |
| V/1.0 Y 42.1 25.5 67.6 *2398.8 |
| V / 1.0 Z 42.1 25.5 67.6 *2398.8 |
| H / 1.0 X 42.0 25.5 67.5 *2371.4 |
| H / 1.0 Y 42.0 25.5 67.5 *2371.4 |
| 9155.0 H / 1.0 Z 42.0 25.5 67.5 *2371.4 5000 |
| |
| |
| |
| |
| |
| The frequency range was scanned from 30 MHz to 10.0 GHz. All emissions not recorded were more |
| than 20 dB below the specified limit. Emissions from the EUT do not exceed the specified limits. |
| *=Noise Floor Measurements (Minimum system sensitivity) |

| rest Metho | u. | | rait is Subpa | | eu Ellissions | | | | | | | |
|-------------|--|-------|--------------------|--------------------|----------------------|------------------------------------|----------------------|----------------------|-------------|----|--|--|
| Customer: | | Boso | h Security Sys | tem. | | Jo | b No. R-119 | 965-11 | | | | |
| Test Sampl | e: | wLSI | N Interior Siren | Module | | | | | | | | |
| Model No.: | | ISW- | BSR1-WY | | | FC | FCC ID: T3XBSR1-WY | | | | | |
| Operating I | Mode: | Cont | inuously transr | mitting a 918 | 3.4 MHz signa | l. | | | | | | |
| Technician | 1 | | erner, R. Sood | | | | Date: Augus | st 23, 2007 | | | | |
| Notes: | Test Dista | ance: | 3 Meters | | | Duty Cy | cle: 22% | | | | | |
| | Detector: | | | | | | cle Correction: | : -13.2 | | | | |
| Test Freq. | Antenna Pol./Height | | EUT Orientation | Average Reading | Correction Factor | Duty cycle Correction Factor | Corrected Reading | Converted Reading | Avg Limi | | | |
| MHz | (V/H) |)- | X/Y/Z | dΒμV | dB | dB | dBµV/m | UV/m | uV/n | n | | |
| 1836.8 | V / 1. | 0 | Х | 52.3 | 2.3 | -13.2 | 41.4 | 117.49 | 5011. | .8 | | |
| | V / 1. | 4 | Υ | 52.1 | 2.3 | -13.2 | 41.2 | 114.82 | | | | |
| | V / 1. | 0 | Z | 59.4 | 2.3 | -13.2 | 48.5 | 266.07 | | | | |
| | H/1. | | X | 47.6 | 2.3 | -13.2 | 36.7 | 68.39 | | | | |
| | H/2. | | Υ | 51.3 | 2.3 | -13.2 | 40.4 | 104.71 | | | | |
| 1836.8 | H/1. | 7 | Z | 50.5 | 2.3 | -13.2 | 39.6 | 95.50 | 5011. | .8 | | |
| 2755.2 | V / 1. | Ω | X | 46.1 | 5.2 | -13.2 | 38.1 | 80.35 | 500.0 | Λ | | |
| 1 | V / 1. | | Y | 39.4 | 5.2 | -13.2 | 31.4 | 37.15 | 300. | 0 | | |
| | V / 1. | | Z | 35.2 | 5.2 | -13.2 | 27.2 | 22.91 | | | | |
| <u> </u> | H / 1. | | X | 42.5 | 5.2 | -13.2 | 34.5 | 53.09 | | | | |
| <u> </u> | H / 1. | | Y | 44.7 | 5.2 | -13.2 | 36.7 | 68.39 | | | | |
| 2755.2 | H / 2. | | Z | 43.8 | 5.2 | -13.2 | 35.8 | 61.66 | 500.0 | 0 | | |
| 0070.0 | 24.4 | • | ., | | | 10.0 | | | | | | |
| 3673.6 | V / 1. | | X | 33.4 | 10.0 | -13.2 | 30.2 | 32.36 | 500.0 | 0 | | |
| | V / 1. | | Y | 32.2 | 10.0 | -13.2 | 29.0 | 28.18 | | | | |
| | V / 1. | | Z | 35.2 | 10.0 | -13.2 | 32.0 | 39.81 | | | | |
| | H / 1. | | X | 33.9 | 10.0 | -13.2 | 30.7 | 34.28 | | | | |
| 3673.6 | H/1. | | Y Z | 31.8 | 10.0 | -13.2 -13.2 | 28.6 | 26.92 | 500 | | | |
| 3073.0 | H / 1. | 9 | | 36.2 | 10.0 | -13.2 | 33.0 | 44.67 | 500.0 | 0 | | |
| 4592.0 | V / 1. | 2 | Х | 39.4 | 13.6 | -13.2 | 39.8 | 97.72 | 500. | 0 | | |
| | V / 1. | 6 | Y | 43.2 | 13.6 | -13.2 | 43.6 | 151.36 | | | | |
| | V / 1. | | Z | 32.8 | 13.6 | -13.2 | 33.2 | 45.71 | | | | |
| | H / 1. | | X | 39.8 | 13.6 | -13.2 | 40.2 | 102.33 | | | | |
| | H/1. | | Υ | 35.2 | 13.6 | -13.2 | 36.0 | 63.10 | | | | |
| 4592.0 | H / 1. | 3 | Z | 45.0 | 13.6 | -13.2 | 45.4 | 186.21 | 500.0 | 0 | | |
| 5510.4 | V / 1. | 9 | X | 34.5 | 17.1 | -13.2 | 38.4 | 83.18 | 5011. | .8 | | |
| 1 | V / 1. | | Y | 34.5 | 17.1 | -13.2 | 38.4 | 83.18 | 1 | | | |
| | V / 1. | | Z | 31.6 | 17.1 | -13.2 | 35.5 | 59.57 | | | | |
| | H / 1. | | X | 34.7 | 17.1 | -13.2 | 38.6 | 85.11 | | | | |
| j | H / 2. | | Y | 31.5 | 17.1 | -13.2 | 35.4 | 58.88 | İ | | | |
| 5510.4 | H / 1. | | Z | 30.9 | 17.1 | -13.2 | 34.8 | 54.95 | 5011. | .8 | | |
| | | | range was sc | | | .0 GHz. All er | | corded were m | | | | |
| | | | | | | | | specified limits | | | | |
| | | | | | | | | - | | | | |
| | *=Noise Floor Measurements (Minimum system sensitivity) | | | | | | | | | | | |

FCC Part 15 Subpart C, Radiated Emissions, Harmonics Emissions.

Test Method:

| Test Metho | od: | FCC | Part 15 Subpa | rt C, Radiate | ed Emissions. | Harmonics | Emissio | ns. | | | |
|----------------|------------------|----------|--------------------|--------------------|----------------------|------------------------------------|---------|----------------|-------------------|------|--|
| Customer: | | | ch Security Sys | | | | b No. | R-119 | 965- | | |
| Test Samp | | | N Interior Siren | | | | | | | | |
| Model No.: | | | -BSR1-WY | | | F | CC ID: | T3XR | SR1-WY | | |
| Operating | | | inuously transr | mitting a 918 | 4 MHz signal | | | ייייי | CIXI VVI | | |
| Techniciar | | | erner, R. Sood | | | • | Date: | Διιαιι | st 23, 2007 | | |
| Notes: | | | 3 Meters | JO, IX. IVICDOI | iaiu | Duty Cy | | _ | 51 23, 2007 | | |
| Notes: | | | | omuiaa anaai | fied | | | | . 12.2 | | |
| | Detector | . Aver | age, unless oth | ierwise speci | T | Duty Cy | | rection. | 13. <u>/</u> | | |
| Test Freq. | Anten Pol./He | | EUT Orientation | Average Reading | Correction Factor | Duty cycle Correction Factor | Con | ected ading | Converted Reading | | /g. mit |
| MHz | (V/H |)- | X/Y/Z | dΒμV | dB | dB | dBı | ıV/m | uV/m | пΛ | //m |
| 6408.5 | V / 1 | <u> </u> | X | 31.6 | 19.9 | -13.2 | | 8.3 | *82.2 | | 11.8 |
| | V / 1 | | Y | 31.6 | 19.9 | -13.2 | | 3.3 3.3 | *82.2 | 30 | l 1.0 |
| <u> </u> | V / 1 | | Z | 31.6 | 19.9 | -13.2 | _ | 3.3 3.3 | *82.2 | | |
| <u> </u> | H/1 | | X | 32.2 | 19.9 | -13.2 | _ | 3.9 3.9 | *88.1 | | <u>. </u> |
| <u> </u> | H/1 | | Y | 32.2 | 19.9 | -13.2 | _ | 3.9 3.9 | *88.1 | | |
| 6408.5 | H/1 | | Z | 32.2 | 19.9 | -13.2 | _ | 3.9 | *88.1 | 501 | I I1.8 |
| J 100.0 | 11/1 | | | JL.L | 10.0 | | 1 3 | <u></u> | 55.1 | - 50 | |
| 7324.0 | V / 1 | 0 | Х | 31.9 | 21.3 | -13.2 | 4 | 0.0 | *100.0 | 50 | 0.0 |
| 1 | V / 1 | | Y | 31.9 | 21.3 | -13.2 | | 0.0 | *100.0 | - 00 | <u> </u> |
| - | V / 1 | | Z | 31.9 | 21.3 | -13.2 | _ | 0.0 | *100.0 | | |
| <u> </u> | H/1 | | X | 31.9 | 21.3 | -13.2 | | 0.0 | *100.0 | | <u> </u> |
| <u> </u> | H/1 | | Y | 31.9 | 21.3 | -13.2 | - | 0.0 | *100.0 | | <u> </u> |
| 7324.0 | H/1 | | Z | 31.9 | 21.3 | -13.2 | | 0.0 | *100.0 | 50 | 0.0 |
| 7 02 110 | 1 | | | 01.0 | 2110 | | 1 | 3.0 | 100.0 | - 00 | 0.0 |
| 8239.5 | V / 1 | .0 | Х | 33.2 | 23.6 | -13.2 | 4: | 2.6 | *151.4 | 50 | 0.0 |
| | V / 1 | | Y | 33.2 | 23.6 | -13.2 | | 2.6 | *151.4 | | l |
| i | V/1 | | Z | 33.2 | 23.6 | -13.2 | _ | 2.6 | *151.4 | | <u> </u> |
| i | H/1 | .0 | Х | 32.8 | 23.6 | -13.2 | _ | 3.2 | *144.5 | | |
| i | H/1 | .0 | Y | 32.8 | 23.6 | -13.2 | 4: | 3.2 | *144.5 | | |
| 8239.5 | H/1 | | Z | 32.8 | 23.6 | -13.2 | 4: | 3.2 | *144.5 | 50 | 0.0 |
| | | | | | | | | | | | |
| 9155.0 | V / 1 | | X | 33.1 | 25.5 | -13.2 | | 5.4 | *186.2 | 50 | 0.0 |
| | V / 1 | | Y | 33.1 | 25.5 | -13.2 | | 5.4 | *186.2 | | |
| | V / 1 | | Z | 33.1 | 25.5 | -13.2 | | 5.4 | *186.2 | | |
| | H/1 | | X | 33.2 | 25.5 | -13.2 | _ | 5.5 | *188.4 | | |
| | H/1 | | Y | 33.2 | 25.5 | -13.2 | | 5.5 | *188.4 | | |
| 9155.0 | H/1 | .0 | Z | 33.2 | 25.5 | -13.2 | 4: | 5.5 | *188.4 | 50 | 0.0 |
| | | | | | | | | | | | |
| | + | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | The free | quency | range was sc | anned from 3 | 30 MHz to 10.0 | 0 GHz. All e | mission | s not re | corded were | more | |
| | | | elow the specif | | | | | | | | |
| | *=Noise | Floor | Measurements | s (Minimum : | system sensit | ivity) | | | | | |
| | | | | | | | | | | | |

FCC Part 15 Subpart C, Radiated Emissions, Harmonics Paragraphs 15.247(d). EUT transmitting at the Fundamental signal of 921.3 MHz

| Test Metho | d: | FCC Pa | ırt 15 Subpart C | , Radiated Em | issions, Harmo | nics Emissior | ns. | | |
|-------------|-----------|----------|-------------------|---------------|----------------|---------------|----------------------|-----|--|
| Customer: | | | Security System | | | Job No. | R-11965-11 | | |
| Test Sampl | e: | wLSN Ir | nterior Siren Mo | dule | 1 | 1 | | | |
| Model No.: | | ISW-BS | | | | FCC ID: | T3XBSR1-WY | | |
| Operating N | Node: | | ously transmittir | ng a 921 3 MH | z signal | | | | |
| Technician | | | er, R. Soodoo, k | | 2 orginan | Date: | August 23, 2007 | , | |
| Notes: | Test Dist | | | t. Wobonaia | | Date: | 7 tagast 20, 2007 | | |
| 140103. | | | nless otherwise | specified | | | | | |
| | Ante | | EUT | Meter | Correction | Corrected | Converted | D | eak |
| Test Freq. | Pol./H | | Orientation | Reading | Factor | Reading | Reading | | mit |
| MHz | (V/H)/N | | X/Y/Z | dBµV | dB | dBµV/m | uV/m | | //m |
| 1842.6 | (V/11)/1 | | X | 48.4 | 2.3 | 50.7 | 342.8 | + | 18.0 |
| 1042.0 | V / | | Y | 50.0 | 2.3 | 52.3 | 412.1 | 501 | 10.U I |
| | V / | | Z | 49.7 | 2.3 | 52.0 | 398.1 | | <u> </u> |
| | H/ | | X | 46.6 | 2.3 | 48.9 | 278.6 | 1 | <u> </u> |
| | H / | | Y | 47.5 | 2.3 | 49.8 | 309.0 | | <u>. </u> |
| 1842.6 | H/ | | Z | 48.9 | 2.3 | 51.2 | 363.1 | 501 | 18.0 |
| - 1-1- | , | | _ | | 2.0 | V1.2 | 000.1 | 301 | . 0.0 |
| 2763.9 | V / | 1.1 | Х | 47.4 | 5.2 | 52.6 | 426.6 | 500 | 0.0 |
| | V / | | Y | 47.8 | 5.2 | 53.0 | 446.7 | | |
| i | V / | 1.1 | Z | 47.0 | 5.2 | 52.2 | 407.4 | | İ |
| ĺ | H/ | 1.9 | Х | 47.8 | 5.2 | 53.0 | 446.7 | | İ |
| İ | H/ | 1.9 | Y | 48.3 | 5.2 | 53.5 | 473.2 | | İ |
| 2763.9 | H/ | 1.1 | Z | 48.6 | 5.2 | 53.8 | 489.8 | 500 | 0.00 |
| 3685.2 | V / | 4.0 | V | 40.0 | 40.0 | 50.0 | 440.7 | 500 | 20.0 |
| 3003.2 | V / | | X Y | 43.0 | 10.0 | 53.0 | 446.7 | 500 | 0.0 |
| - | V / | | Z | 43.2 43.6 | 10.0 10.0 | 53.2 53.6 | 457.1 478.6 | | <u> </u> |
| | H/1 | | X | 41.3 | 10.0 | 51.3 | 367.3 | | <u> </u> |
| | H/ | | Y | 43.0 | 10.0 | 53.0 | 446.7 | | <u> </u> |
| 3685.2 | H / | | Z | 45.0 | 10.0 | 55.0 | 562.3 | 500 | 0.0 |
| | | | | 1010 | 10.0 | 00.0 | 002.0 | 000 | , |
| 4606.5 | V / | 1.2 | Х | 45.2 | 13.6 | 58.8 | 871.0 | 500 | 0.0 |
| | V / | 1.2 | Y | 47.5 | 13.6 | 61.1 | 1135.0 | | |
| | V / | | Z | 46.1 | 13.6 | 59.7 | 966.1 | | |
| | H/ | | X | 44.6 | 13.6 | 58.2 | 812.8 | | |
| | H/ | | Y | 43.6 | 13.6 | 57.2 | 724.4 | | |
| 4606.5 | H / | 1.1 | Z | 49.1 | 13.6 | 62.7 | 1364.6 | 500 | 0.00 |
| 5527.8 | V / | 1.0 | X | 40.3 | 17.1 | 57.4 | *741.3 | 501 | 18.0 |
| 1 | V / | | Y | 40.8 | 17.1 | 57.9 | *785.2 | 301 | . <u></u> |
| | V / | | Z | 39.6 | 17.1 | 56.7 | *683.9 | | <u> </u> |
| i | H/ | | X | 40.7 | 17.1 | 57.8 | *776.2 | | |
| i | H / | | Y | 40.7 | 17.1 | 57.8 | *776.2 | | |
| 5527.8 | H / | | Z | 41.2 | 17.1 | 58.3 | *822.2 | 501 | 18.0 |
| | The free | uency ra | nge was scanne | | | | not recorded we | | |
| | | | | | | | ed the specified lin | | |
| | | | easurements (m | | | | • | | |
| | | | , | | | | | | |

| Customer:Bosch Security System.Job No.R-11965-11Test Sample:wLSN Interior Siren Module | |
|--|-------------------|
| Test Sample: wl SN Interior Siren Module | |
| 1001 Garripro. HEGIT Intollor Giroll Modello | |
| Model No.: ISW-BSR1-WY FCC ID: T3XBSR1-WY | |
| Operating Mode: Continuously transmitting a 921.3 MHz signal. | |
| Technician: D. Lerner, R. Soodoo, K. McDonald Date: August 23, 2007 | |
| Notes: Test Distance: 3 Meters | |
| Detector: Peak, unless otherwise specified | |
| Antenna FLIT Meter Correction Corrected Converted F | Peak |
| Test Freq. Pol./Height Orientation Reading Factor Reading Reading I | ₋imit |
| MHz (V/H)-Meters X / Y / Z dBμV dB dBμV/m uV/m u | ıV/m |
| | 118.0 |
| V / 1.0 Y 42.2 19.9 62.1 *1273.5 | |
| V / 1.0 Z 42.2 19.9 62.1 *1273.5 | |
| H / 1.0 X 41.3 19.9 61.2 *1148.2 | |
| H / 1.0 Y 41.3 19.9 61.2 *1148.2 | |
| 6408.5 H / 1.0 Z 41.3 19.9 61.2 *1148.2 50 | 118.0 |
| 7324.0 V / 1.0 X 43.0 21.3 64.3 *1640.6 50 | 0.00 |
| V/1.0 | 1 |
| V/1.0 Z 43.0 21.3 64.3 *1640.6 | <u> </u> |
| H/1.0 X 43.0 21.3 64.3 *1640.6 | <u> </u> |
| H/1.0 Y 43.0 21.3 64.3 *1640.6 | <u> </u> |
| | 0.000 |
| | |
| | 0.000 |
| V/1.0 Y 42.5 23.6 66.1 *2018.4 | |
| V/1.0 Z 42.5 23.6 66.1 *2018.4 | <u> </u> |
| H / 1.0 X 42.7 23.6 63.6 *2065.4 | <u> </u> |
| | <u> </u> 000.0 |
| 6259.5 F1 1.0 Z 42.1 25.0 65.0 2065.4 50 | 0.00.0 |
| 9155.0 V / 1.0 X 42.1 25.5 67.6 *2398.8 50 | 0.000 |
| V / 1.0 Y 42.1 25.5 67.6 *2398.8 | |
| V / 1.0 Z 42.1 25.5 67.6 *2398.8 | |
| H / 1.0 X 42.0 25.5 67.5 *2371.4 | |
| H / 1.0 Y 42.0 25.5 67.5 *2371.4 | |
| 9155.0 H / 1.0 Z 42.0 25.5 67.5 *2371.4 50 | 0.000 |
| | |
| | |
| | |
| | |
| | |
| The frequency range was scanned from 30 MHz to 10.0 GHz. All emissions not recorded were m | ore |
| than 20 dB below the specified limit. Emissions from the EUT do not exceed the specified limits. | |
| *=Noise Floor Measurements (Minimum system sensitivity) | |

| Customer: | | Bosch Security Sys | | <u> </u> | 1 | i | 965-11 | |
|-------------|----------------------|--------------------|--------------------|----------------------|------------------------------------|----------------------|--|---------------|
| Test Sample | | wLSN Interior Sire | | | 30 | ₩ 140. 1\-118 | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | |
| Model No.: | | SW-BSR1-WY | i woude | | F. | C ID: T3XB | SR1-WY | |
| | | | ittin 001 | LO MILLE GIORGE | l . | .C ID: 13AB | SK I-VV I | |
| Operating N | | Continuously trans | | | | D-1- A - | -1.00.0007 | |
| Technician: | | D. Lerner, R. Sood | 00, K. McDo | nald | | | st 23, 2007 | |
| | | nce: 3 Meters | _ | | Duty Cy | | | |
| | Detector: A | Average, unless ot | nerwise spec | cified | | cle Correction | : -13.2 | |
| Test Freq. | Antenna Pol./Heig | | Average Reading | Correction Factor | Duty cycle Correction Factor | Corrected Reading | Converted Reading | Avg. Limit |
| MHz | (V/H)- | X/Y/Z | dΒμV | dB | dB | dBµV/m | uV/m | uV/m |
| 1842.6 | V / 1.4 | | 45.4 | 2.3 | -13.2 | 34.5 | 53.1 | 5011.8 |
| | V / 2.0 | | 47.2 | 2.3 | -13.2 | 36.3 | 65.3 | |
| | V / 1.5 | | 48.4 | 2.3 | -13.2 | 37.5 | 75.0 | |
| | H / 1.9 | | 40.3 | 2.3 | -13.2 | 29.4 | 29.5 | |
| 10:5 | H / 1.3 | | 44.1 | 2.3 | -13.2 | 33.2 | 45.7 | |
| 1842.6 | H / 1.2 | Z | 46.0 | 2.3 | -13.2 | 35.1 | 56.9 | 5011.8 |
| 2763.9 | V / 1.1 | X | 42.0 | 5.2 | -13.2 | 34.0 | 50.1 | 500.0 |
| 1 | V / 1.0 | | 42.4 | 5.2 | -13.2 | 34.4 | 52.5 | 1 |
| | V / 1.1 | | 40.4 | 5.2 | -13.2 | 32.4 | 41.7 | i |
| i | H / 1.9 | X | 41.4 | 5.2 | -13.2 | 33.4 | 46.8 | İ |
| İ | H / 1.9 | Y | 41.6 | 5.2 | -13.2 | 33.6 | 47.9 | ĺ |
| 2763.9 | H / 1.1 | Z | 43.9 | 5.2 | -13.2 | 35.9 | 62.4 | 500.0 |
| 3685.2 | V / 1.0 | X | 31.8 | 10.0 | -13.2 | 28.6 | 26.9 | 500.0 |
| 1 | V / 1.5 | | 31.0 | 10.0 | -13.2 | 27.8 | 24.5 | |
| 1 | V / 1.4 | | 32.1 | 10.0 | -13.2 | 29.9 | 31.3 | |
| i | H / | Х | 32.3 | 10.0 | -13.2 | 30.1 | 32.0 | i |
| i | H / 1.0 | | 32.2 | 10.0 | -13.2 | 30.0 | 31.6 | İ |
| 3685.2 | H / 1.2 | | 36.9 | 10.0 | -13.2 | 33.7 | 48.4 | 500.0 |
| 4606.5 | V / 1.2 | X | 34.5 | 13.6 | -13.2 | 34.9 | 55.6 | 500.0 |
| 1 | V / 1.2 | | 41.9 | 13.6 | -13.2 | 42.3 | 130.3 | J00.0 |
| | V / 1.2 | | 38.8 | 13.6 | -13.2 | 39.2 | 91.2 | <u> </u> |
| | H / 1.2 | | 34.1 | 13.6 | -13.2 | 34.5 | 53.1 | <u> </u> |
| | H / 2.0 | | 33.1 | 13.6 | -13.2 | 33.5 | 47.3 | |
| 4606.5 | H / 1.1 | | 45.0 | 13.6 | -13.2 | 45.4 | 186.2 | 500.0 |
| | | | | | | | | |
| 5527.8 | V / 1.0 | X | 29.1 | 17.1 | -13.2 | 33.0 | *44.7 | 5011.8 |
| | V / 1.0 | | 29.8 | 17.1 | -13.2 | 33.7 | *48.4 | |
| | V / 1.0 | | 29.4 | 17.1 | -13.2 | 33.3 | *46.2 | |
| | H / 1.0 | | 29.3 | 17.1 | -13.2 | 33.2 | *45.7 | |
| | H / 1.0 | | 29.4 | 17.1 | -13.2 | 33.3 | *46.2 | |
| 5527.8 | H / 1.0 | | 30.1 | 17.1 | -13.2 | 34.0 | *50.1 | 5011.8 |
| | | ency range was so | | | | | | |
| | | IB below the speci | | | | ot exceed the | specified limit | is. |
| | *=Noise F | loor Measurement | s (Minimum | system sens | itivity) | | | |

FCC Part 15 Subpart C, Radiated Emissions, Harmonics Emissions.

Test Method:

| Test Metho | od: | FCC | Part 15 Subpa | rt C, Radiate | ed Emissions, | Harmonics | Emission | ns. | | | |
|-------------|------------------|--------|--------------------|--------------------|----------------------|-----------------------------------|-----------|-----------------|-------------------|------|--|
| Customer | | | h Security Sys | | , | | Job No. | 1 | 965-11 | | |
| Test Samp | | | N Interior Siren | | | | | | | | |
| Model No. | | | -BSR1-WY | ·········· | | | FCC ID: | T3XB | SR1-WY | | |
| Operating | | | inuously transr | mitting a 021 | 3 MHz signal | | 00 ID. | TOND | OKT WI | | |
| Technicia | | | | | | | Doto | Λ.,,α,,, | ot 22, 2007 | | |
| | | | erner, R. Sood | JO, K. IVICIJOI | iaiu | D. t. C | Date: | | st 23, 2007 | | |
| Notes: | | | 3 Meters | | · . | • | Cycle: 22 | | 40.0 | | |
| | Detector | : Aver | age, unless oth | erwise speci | fied | | Cycle Co | rrection | : -13.2 | 1 | |
| Test Freq. | Anter Pol./He | | EUT Orientation | Average Reading | Correction Factor | Duty cycl Correction Factor | n Cor | rected ading | Converted Reading | | /g. mit |
| MHz | (V/H |)- | X/Y/Z | dΒμV | dB | dB | dB | μV/m | uV/m | пΛ | //m |
| 6408.5 | V / 1 | | X | 31.6 | 19.9 | -13.2 | | 8.3 | *82.2 | | 11.8 |
| 0400.5 I | V / 1 | | Y | 31.6 | 19.9 | -13.2 | | 8.3 | *82.2 | 301 | l 1.0 |
| | V / 1 | | Z | 31.6 | 19.9 | -13.2 | | 8.3 | *82.2 | | <u> </u> |
| | H/1 | | X | 32.2 | 19.9 | -13.2 | | 8.9 | *88.1 | | |
| | H/1 | | Y | 32.2 | 19.9 | -13.2 | | 8.9 | *88.1 | | I |
| 6408.5 | H/1 | | Z | 32.2 | 19.9 | -13.2 | | 8.9 | *88.1 | 501 | 1.8 |
| 0-00.0 | 11, 1 | | | 02.2 | 10.0 | 10.2 | | 0.0 | 55.1 | 301 | 1.0 |
| 7324.0 | V / 1 | 0 | Х | 31.9 | 21.3 | -13.2 | 4 | 0.0 | *100.0 | 50 | 0.0 |
| 1 | V / 1 | | Y | 31.9 | 21.3 | -13.2 | | 0.0 | *100.0 | | <u> </u> |
| İ | V / 1 | | Z | 31.9 | 21.3 | -13.2 | | 0.0 | *100.0 | | <u> </u> |
| i | H/1 | | X | 31.9 | 21.3 | -13.2 | | 0.0 | *100.0 | | <u> </u> |
| İ | H/1 | | Y | 31.9 | 21.3 | -13.2 | | 0.0 | *100.0 | | <u> </u> |
| 7324.0 | H/1 | | Z | 31.9 | 21.3 | -13.2 | | 0.0 | *100.0 | 50 | 0.0 |
| 7 02 110 | 1, | | | 01.0 | 2110 | | | 0.0 | 100.0 | | 0.0 |
| 8239.5 | V / 1 | .0 | Х | 33.2 | 23.6 | -13.2 | 4 | 2.6 | *151.4 | 50 | 0.0 |
| I | V / 1 | | Y | 33.2 | 23.6 | -13.2 | | 2.6 | *151.4 | | l |
| i | V / 1 | | Z | 33.2 | 23.6 | -13.2 | | 2.6 | *151.4 | | <u> </u> |
| i | H/1 | | X | 32.8 | 23.6 | -13.2 | | 3.2 | *144.5 | | <u>. </u> |
| i | H/1 | | Y | 32.8 | 23.6 | -13.2 | | 3.2 | *144.5 | | <u> </u> |
| 8239.5 | H/1 | | Z | 32.8 | 23.6 | -13.2 | | 3.2 | *144.5 | 50 | 0.0 |
| | | | | | | | | | | | |
| 9155.0 | V / 1 | .0 | Х | 33.1 | 25.5 | -13.2 | 4 | 5.4 | *186.2 | 50 | 0.0 |
| | V / 1 | .0 | Υ | 33.1 | 25.5 | -13.2 | 4 | 5.4 | *186.2 | | |
| | V / 1 | | Z | 33.1 | 25.5 | -13.2 | 4 | 5.4 | *186.2 | | |
| | H/1 | .0 | Х | 33.2 | 25.5 | -13.2 | 4 | 5.5 | *188.4 | | |
| i | H/1 | | Υ | 33.2 | 25.5 | -13.2 | | 5.5 | *188.4 | | L |
| 9155.0 | H/1 | .0 | Z | 33.2 | 25.5 | -13.2 | 4 | 5.5 | *188.4 | 50 | 0.0 |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | The free | quency | / range was sc | anned from 3 | 30 MHz to 10.0 | 0 GHz. All | emission | s not re | ecorded were | more | |
| | | | elow the specif | | | | not exc | eed the | specified limit | ts. | |
| | *=Noise | Floor | Measurements | s (Minimum : | system sensit | ivity) | | | | | |
| | | | | | | | | | | | |

FCC Part 15 Subpart C, Spurious Case Radiated Emissions, Paragraph 15.247(d) Test Data

| Test Meth | od: | FCC P | art 15 Subpar | t C, Spuriou | ıs Case Radi | ated Emi | ssions, Parag | raph 15.247(| d) |
|-----------|----------|----------------|--------------------|-------------------|----------------------|-----------|----------------|----------------------|---------------|
| Customer | | | Security Syste | | | | Job No.: | , ' | |
| Test Samp | ole: | | Interior Siren N | | | | | 1 | |
| Model No. | : | | SR1-WY | | | | Serial No.: | N/A | |
| Operating | Mode: | Continu | uously transmi | tting on char | nnel 00, a 915 | 5.5 MHz s | ignal. | 1 | |
| Technicia | | | ner and K. McE | | , | | Date: | August 23, | 2007 |
| Notes: | Test [| Distance: | : 3 Meters | | | | Temp: 28.1°C | | dity:65% |
| | Detec | tor:Peak | | | | | · | | • |
| Frequency | | enna sition | EUT Orientation | Meter Readings | Correction Factor | | ected ading | Converted Reading | Peak Limit |
| MHz | (V/H) / | Meters | Degrees | dBuV | dB | dB | uV/m | uV/m | uV/m |
| | | | | | | | | | |
| 30.00 | | | | | | | | | 93325.4 |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | 1 |
| | | | | | | | | | |
| | | | | | | | | | ĺ |
| | | | | | | | | | |
| | | | | | | | | | <u> </u> |
| | | | | | | | | | |
| | | | | | | | | | |
| | | — N | o emission | observed | d at the spe | ecified t | est distanc | е 💳 | |
| į | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | + | | |
| | | | | | | | | | 1 1 |
| | | | _ | | | | | | <u>i</u> |
| | | | | | | | | - | |
| | | | | | | | | | |
| | | | | | | | | | |
| 10000.0 | | | | | | | | | 93325.4 |
| 10000.0 | | | | | | | | | 93325.4 |
| | The fre | quency rar | nge was scanned | rom 30 MHz to | 10 GHz. | | | | |
| | The em | issions ob | served from the E | UT do not exce | ed the specified | | | | |
| | Emission | ons not rec | corded were more | than 20dB und | er the specified l | mit. | | | |
| | | | | | | | | | |

Page 1 of 3

| Test Me | ethod: | | FCC P | art 15 Subpar | t C, Spuriou | ıs Case Radi | ated Emi | ssions, Parag | raph 15.247(| d) |
|--------------|---------|--------|------------|-------------------|---------------|---------------------|-----------|---------------|--------------|----------|
| Custon | ner: | | | Security Syste | | | | | R-11965-11 | |
| Test Sa | ample: | | wLSN | Interior Siren N | /lodule | | ' | | | |
| Model N | No.: | | ISW-B | SR1-WY | | | | Serial No.: | N/A | |
| Operati | ing Mod | de: | Contin | uously transmi | tting on char | nel 30. a 918 | .5 MHz si | gnal. | 1 | |
| Technic | | | | ner and K. Mc | | | | Date: | August 23, | 2007 |
| Notes: | Te | est D | istance | : 3 Meters | | | | Temp: 28.1°C | | dity:65% |
| | D | etect | tor:Peak | (| | | | · | | • |
| | | | enna | EUT | Meter | Correction | Corre | ected | Converted | Peak |
| Frequer | ncy | | ition | Orientation | Readings | Factor | | ading | Reading | Limit |
| MHz | · (V | //H) / | Meters | Degrees | dBuV | dB | dBı | uV/m | uV/m | uV/m |
| | | | | | | | | | | |
| 30.00 | 0 | | | | | | | | | 93325.4 |
| | | | | | | | | | | |
| | | | | | | | | | | |
| <u> </u> | | | | | | | | | | 1 |
| | | | | | | | | | | |
| | | | | | | | | | | i |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| <u> </u> | | | | | | | | | | |
| | | | | Ala amissian a | | | | | | |
| | | | | No emissi | on observ | ed at the s | респе | d test dista | nce | |
| | | | L | | | | | | | 1 |
| | | | | | | | | | | |
| | | | | | | | | | | |
| <u> </u> | | | | | | | | | | |
| <u> </u> | | | | | | | | | | |
| i | | | | | | | | | | i |
| | | | | | | | | | | İ |
| <u> </u> _ | | | | | | | | | | <u> </u> |
| | | | | | | | | | | |
| 10000 | 0.0 | | | | | | | | | 93325.4 |
| 10000 | , | | | | | | | | | 33323.4 |
| | | | | nge was scanned | | | | L | | |
| | | | | served from the E | | | | | | |
| | Er | missio | ns not red | corded were more | than 20dB und | er the specified li | mit. | | | |
| | | | | | | | | | | |

Page 2 of 3

| Test Metho | d: | FCC Pa | art 15 Subpar | t C, Spuriou | ıs Case Radi | ated Emi | ssions, Parag | raph 15.247 | (d) | |
|-------------|---------|-----------|--------------------------------------|---------------|---------------------|-----------|---------------|-------------|----------|----------|
| Customer: | | | Security Syste | | | | Job No.: | | | |
| Test Sampl | e: | wLSN I | nterior Siren N | /lodule | | • | | 1 | | |
| Model No.: | | ISW-BS | SR1-WY | | | | Serial No.: | N/A | | |
| Operating I | /lode: | Continu | uously transmi | tting on char | nnel 58, a 921 | .3 MHz si | gnal. | 1 | | |
| Technician | | | er and K. McD | | , | | Date: | August 23, | 2007 | |
| Notes: | Test D | Distance: | 3 Meters | | | <u>'</u> | Temp: 28.1°C | | dity:65% | |
| | Detec | tor: Peal | < | | | | • | | • | |
| | Ante | enna | EUT | Meter | Correction | Corre | ected | Converted | Peak | <u> </u> |
| Frequency | Pos | ition | Orientation | Readings | Factor | Rea | iding | Reading | Limit | t |
| MHz | (V/H) / | Meters | Degrees | dBuV | dB | dBı | ιV/m | uV/m | uV/m | n |
| | | | | | | | | | | |
| 30.00 | | | | | | | | | 93325 | .4 |
| | | | | | | | | | | |
| <u> </u> | | | | | | | | | | |
| <u> </u> | | | | | | | | | | |
| | | | | | | | | | | _ |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | 1 | | |
| | | ─ No | emission | observed | at the spe | cified te | est distance | • | | |
| İ | | | | | _ | | | | i | |
| | | | | | | | | | | |
| | | | | | | | | | <u> </u> | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| İ | | | | | | | | | <u> </u> | |
| | | | | | | | | | | |
| | | | | | | | | | <u> </u> | |
| | | | | | | | | | | |
| <u> </u> | | | | | | | | | | — |
| | | | | | | | | | | |
| | | | | | | | | | | |
| 10000.0 | | | | | | | | | 93325 | .4 |
| | | | | | | | | | | |
| | | | nge was scanned | | | li na ita | | | | |
| | | | served from the E orded were more | | | | | | | |
| | | | 2.404 11010 111010 | an Edab and | s. are epocified if | | | | | |

Page 3 of 3

FCC Part 15, Subpart C, Section 15.207(a), Conducted Emissions, Power Leads,
150 kHz to 30 MHz
Transmitter Test Data

RETLIF Testing Laboratories, Job Number R-11965-11

FCC Part 15, Subpart C, Conducted Emissions, 150 kHz to 30 MHz

Customer: Bosch Security System.
Test Sample: wLSN Interior Siren Module.

Model Number: ISW-BSR1-WY FCC ID.: T3XBSR1-WY

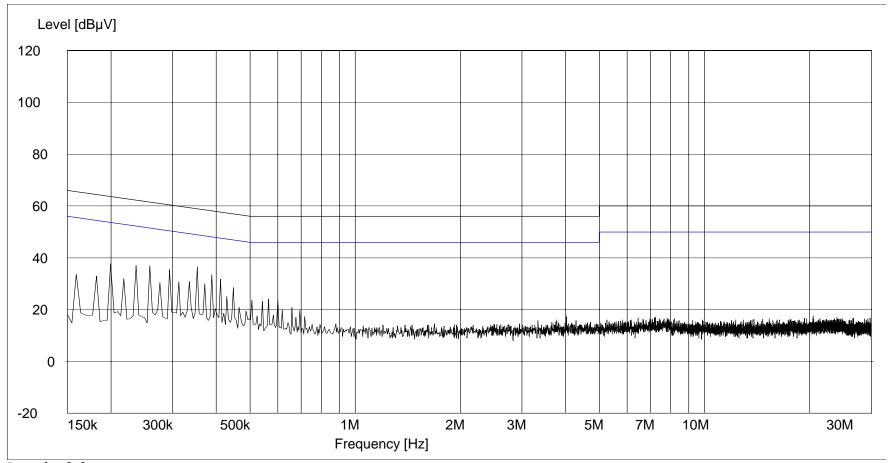
Test Specification: FCC Part 15 Subpart C Section 15.207(a)

Mode of Operation: Continuously transmitting on channel 00, a 915.5 MHz signal.

Lead Tested: 120 VAC/60 Hz hot input to AC adapter.

Technician / Date: R. Soodoo / August 28, 2007.

Detector / Note: Peak / Peak emissions passed average limit.



Page 1 of 2

RETLIF Testing Laboratories, Job Number R-11965-11

FCC Part 15, Subpart C, Conducted Emissions, 150 kHz to 30 MHz

Customer: Bosch Security System.
Test Sample: wLSN Interior Siren Module.

Model Number: ISW-BSR1-WY FCC ID.: T3XBSR1-WY

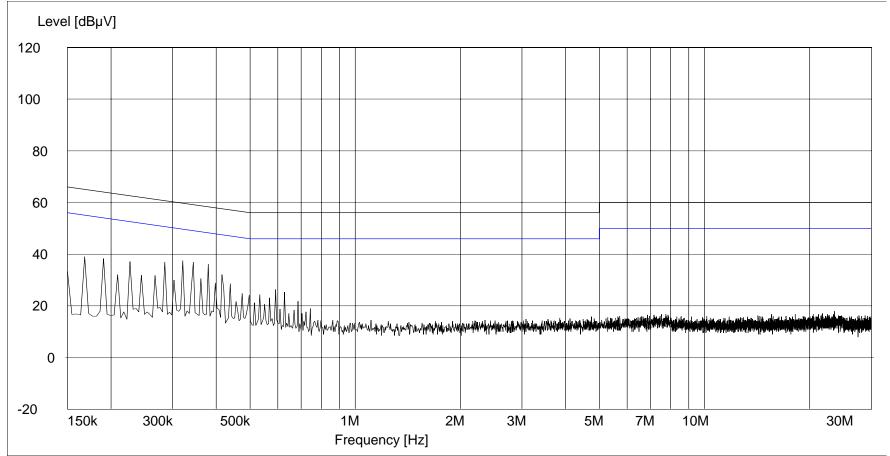
Test Specification: FCC Part 15 Subpart C Section 15.207(a)

Mode of Operation: Continuously transmitting on channel 00, a 915.5 MHz signal.

Lead Tested: 120 VAC/60 Hz neutral input to AC adapter.

Technician / Date: R. Soodoo / August 28, 2007.

Detector / Note: Peak / Peak emissions passed average limit.



Page 2 of 2

Customer: Bosch Security System.
Test Sample: wLSN Interior Siren Module.

Model Number: ISW-BSR1-WY FCC ID.: T3XBSR1-WY

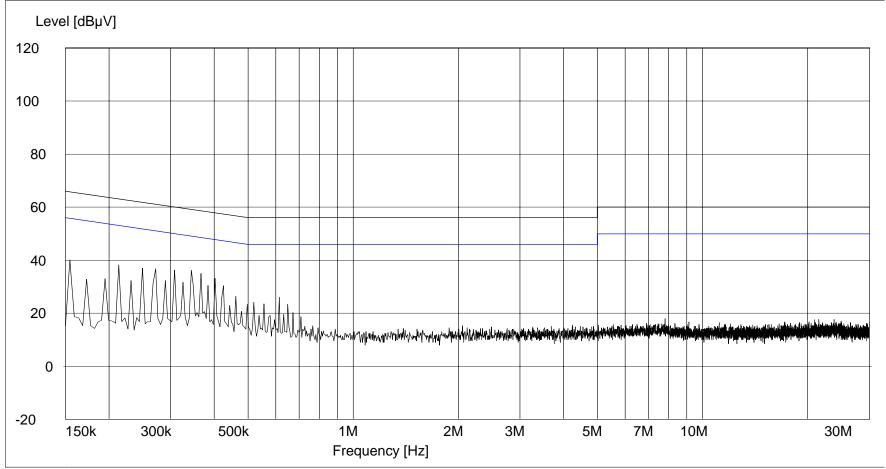
Test Specification: FCC Part 15 Subpart C Section 15.207(a)

Mode of Operation: Continuously transmitting on channel 30, a 918.5 MHz signal.

Lead Tested: 120 VAC/60 Hz hot input to AC adapter.

Technician / Date: R. Soodoo / August 28, 2007.

Detector / Note: Peak / Peak emissions passed average limit.



Page 1 of 2

Customer: Bosch Security System.
Test Sample: wLSN Interior Siren Module.

Model Number: ISW-BSR1-WY FCC ID.: T3XBSR1-WY

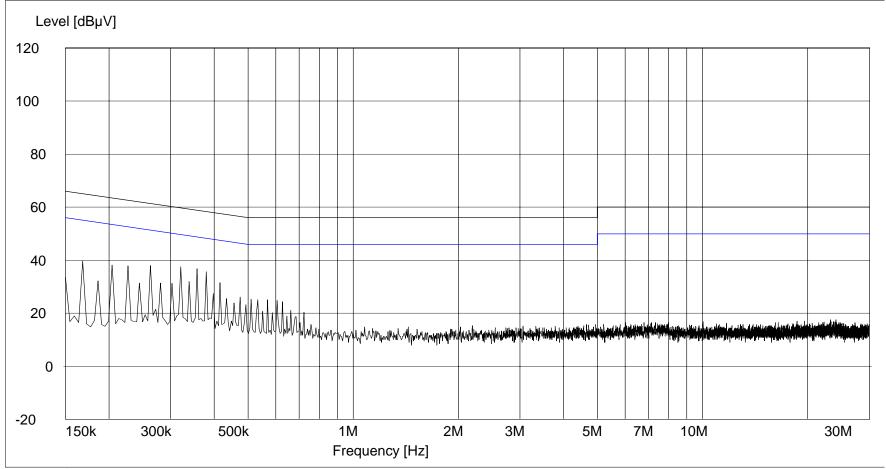
Test Specification: FCC Part 15 Subpart C Section 15.207(a)

Mode of Operation: Continuously transmitting on channel 30, a 918.5 MHz signal.

Lead Tested: 120 VAC/60 Hz neutral input to AC adapter.

Technician / Date: R. Soodoo / August 28, 2007.

Detector / Note: Peak / Peak emissions passed average limit.



Page 2 of 2

Customer: Bosch Security System.
Test Sample: wLSN Interior Siren Module.

Model Number: ISW-BSR1-WY FCC ID.: T3XBSR1-WY

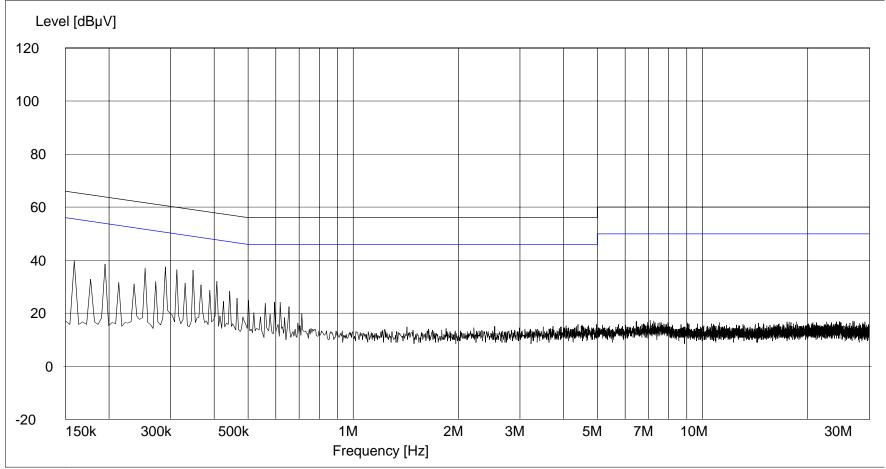
Test Specification: FCC Part 15 Subpart C Section 15.207(a)

Mode of Operation: Continuously transmitting on channel 58, a 921.3 MHz signal.

Lead Tested: 120 VAC/60 Hz hot input to AC adapter.

Technician / Date: R. Soodoo / August 28, 2007.

Detector / Note: Peak / Peak emissions passed average limit.



Page 1 of 2

Customer: Bosch Security System.
Test Sample: wLSN Interior Siren Module.

Model Number: ISW-BSR1-WY FCC ID.: T3XBSR1-WY

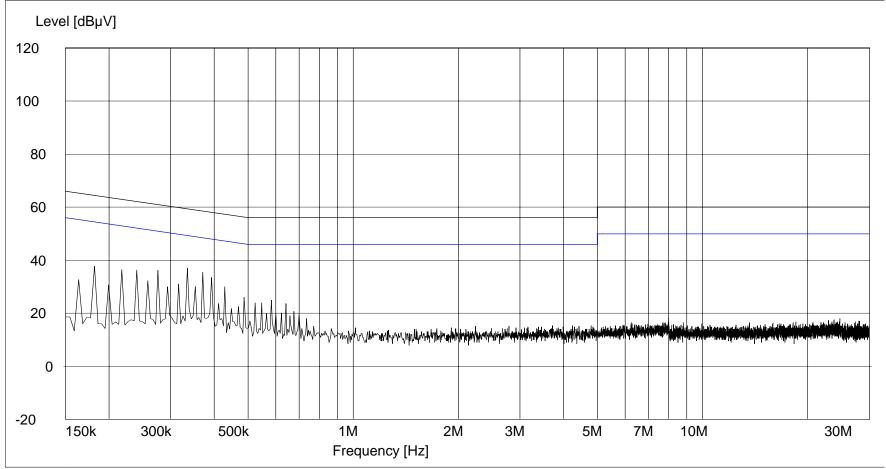
Test Specification: FCC Part 15 Subpart C Section 15.207(a)

Mode of Operation: Continuously transmitting on channel 58, a 921.3 MHz signal.

Lead Tested: 120 VAC/60 Hz neutral input to AC adapter.

Technician / Date: R. Soodoo / August 28, 2007.

Detector / Note: Peak / Peak emissions passed average limit.



Page 2 of 2

FCC Part 15, Subpart C, Section 15.207(a), Conducted Emissions, Power Leads, 150 kHz to 30 MHz
Receiver Test Data

RETLIF Testing Laboratories, Job Number R-11965-11

FCC Part 15, Subpart C, Conducted Emissions, 150 kHz to 30 MHz

Customer: Bosch Security System.
Test Sample: wLSN Interior Siren Module.

Model Number: ISW-BSR1-WY FCC ID.: T3XBSR1-WY

Test Specification: FCC Part 15 Subpart C Section 15.207(a)

Mode of Operation: EUT operating on channel 00 (915.5 MHz), continuously receiving a CW signal.

Lead Tested: 120 VAC/60 Hz hot input to AC adapter.

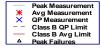
Technician / Date: R. Soodoo / September 05, 2007.

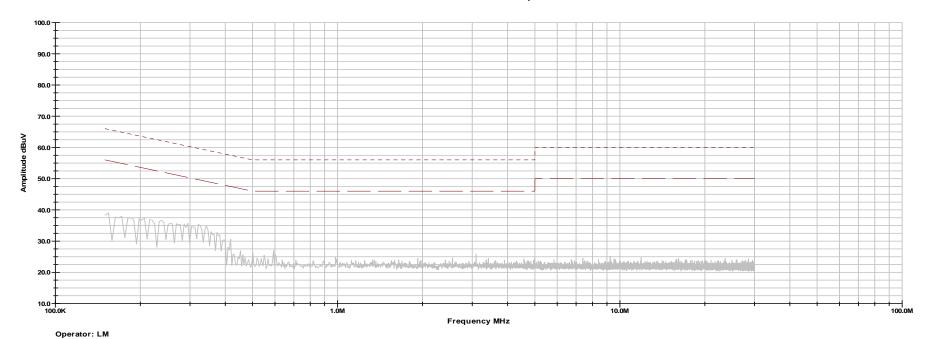
Detector / Note: Peak / Peak emissions passed average limit.

Retlif Testing Laboratories

Conducted Emissions

Class B 150kHz-30MHz Graph





11:30:17 AM, Wednesday, September 05, 2007

Page 1 of 2

Customer: Bosch Security System.
Test Sample: wLSN Interior Siren Module.

Model Number: ISW-BSR1-WY FCC ID.: T3XBSR1-WY

Test Specification: FCC Part 15 Subpart C Section 15.207(a)

Mode of Operation: EUT operating on channel 00 (915.5 MHz), continuously receiving a CW signal.

Lead Tested: 120 VAC/60 Hz neutral input to AC adapter.

Technician / Date: R. Soodoo / September 05, 2007.

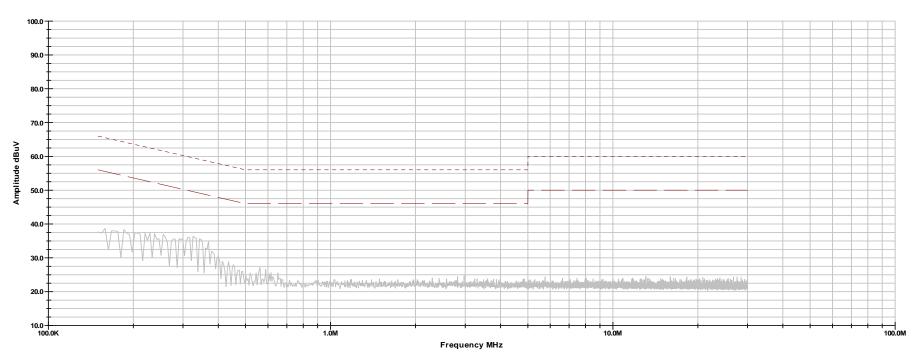
Detector / Note: Peak / Peak emissions passed average limit.

Retlif Testing Laboratories

Conducted Emissions

Class B 150kHz-30MHz Graph





Operator: LM / RS

11:44:07 AM, Wednesday, September 05, 2007

Page 2 of 2

Customer: Bosch Security System.
Test Sample: wLSN Interior Siren Module.

Model Number: ISW-BSR1-WY FCC ID.: T3XBSR1-WY

Test Specification: FCC Part 15 Subpart C Section 15.207(a)

Mode of Operation: EUT operating on channel 30 (918.5 MHz), continuously receiving a CW signal.

Lead Tested: 120 VAC/60 Hz hot input to AC adapter.

Technician / Date: R. Soodoo / September 05, 2007.

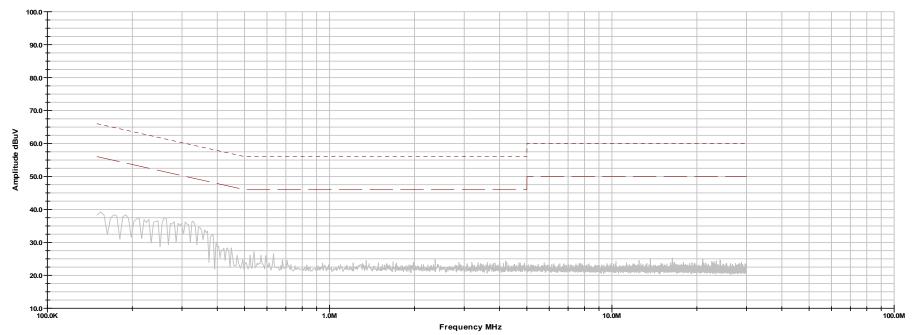
Detector / Note: Peak / Peak emissions passed average limit.

Retlif Testing Laboratories

Conducted Emissions

Class B 150kHz-30MHz Graph





Operator: LM / RS

11:50:49 AM, Wednesday, September 05, 2007

Page 1 of 2

Customer: Bosch Security System.
Test Sample: wLSN Interior Siren Module.

Model Number: ISW-BSR1-WY FCC ID.: T3XBSR1-WY

Test Specification: FCC Part 15 Subpart C Section 15.207(a)

Mode of Operation: EUT operating on channel 30 (918.5 MHz), continuously receiving a CW signal.

Lead Tested: 120 VAC/60 Hz neutral input to AC adapter.

Technician / Date: R. Soodoo / September 05, 2007.

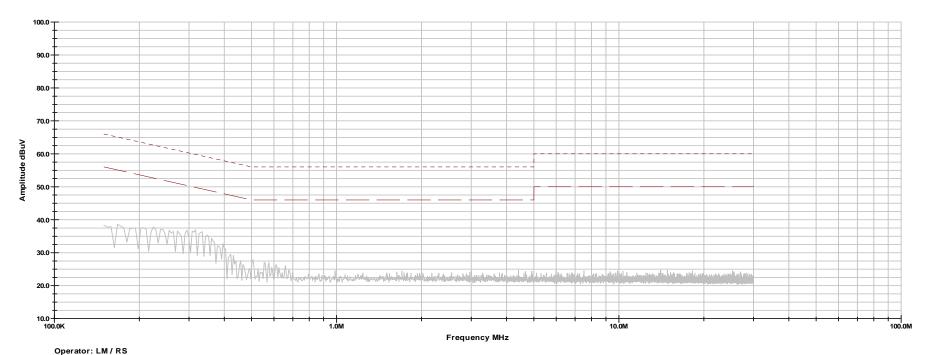
Detector / Note: Peak / Peak emissions passed average limit.

Retlif Testing Laboratories

Conducted Emissions

Class B 150kHz-30MHz Graph





11:48:23 AM, Wednesday, September 05, 2007

Page 2 of 2

RETLIF Testing Laboratories, Job Number R-11965-11

FCC Part 15, Subpart C, Conducted Emissions, 150 kHz to 30 MHz

Customer: Bosch Security System.
Test Sample: wLSN Interior Siren Module.

Model Number: ISW-BSR1-WY FCC ID.: T3XBSR1-WY

Test Specification: FCC Part 15 Subpart C Section 15.207(a)

Mode of Operation: EUT operating on channel 58 (921.3 MHz), continuously receiving a CW signal.

Lead Tested: 120 VAC/60 Hz hot input to AC adapter.

Technician / Date: R. Soodoo / September 05, 2007.

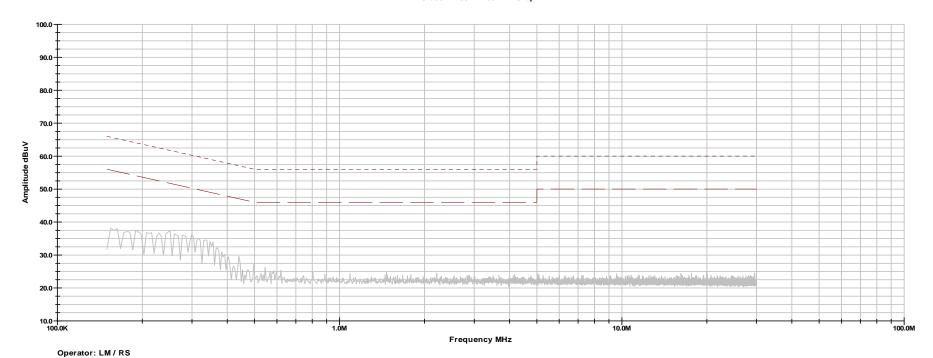
Detector / Note: Peak / Peak emissions passed average limit.

Retlif Testing Laboratories

Conducted Emissions

Class B 150kHz-30MHz Graph





11:54:14 AM, Wednesday, September 05, 2007

Page 1 of 2

RETLIF Testing Laboratories, Job Number R-11965-11

FCC Part 15, Subpart C, Conducted Emissions, 150 kHz to 30 MHz

Customer: Bosch Security System.
Test Sample: wLSN Interior Siren Module.

Model Number: ISW-BSR1-WY FCC ID.: T3XBSR1-WY

Test Specification: FCC Part 15 Subpart C Section 15.207(a)

Mode of Operation: EUT operating on channel 58 (921.3 MHz), continuously receiving a CW signal.

Lead Tested: 120 VAC/60 Hz neutral input to AC adapter.

Technician / Date: R. Soodoo / September 05, 2007.

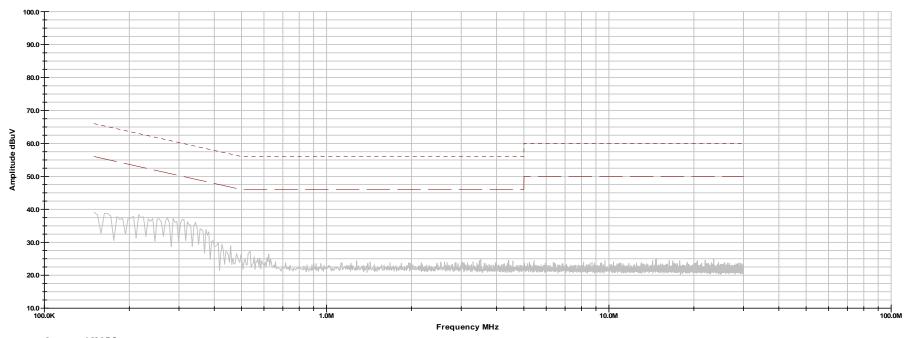
Detector / Note: Peak / Peak emissions passed average limit.

Retlif Testing Laboratories

Conducted Emissions

Class B 150kHz-30MHz Graph





Operator: LM / RS

11:56:56 AM, Wednesday, September 05, 2007

Page 2 of 2

FCC Part 15, Subpart B, Class B, Radiated Emissions, 30 MHz to 5.0 GHz,
Paragraph 15.109(a)
Receiver Test Data

| Test Method | 1 : | FCC P | art 15, Subpa | rt B, Class I | 3, Radiated E | mission | s, 30 MHz to 5. | 0 GHz, Para: | 15.109(a) |
|----------------|------------|----------------|------------------------------|-------------------|----------------------|-----------|-----------------|----------------------|------------|
| Customer: | | | Security Syste | | | | Job No.: | | . / |
| Test Sample | : | wLSN | Interior Siren N | /lodule | | | | | |
| Model No.: | | ISW-B | SR1-WY | | | | Serial No.: | N/A | |
| Operating M | lode: | EUT op | perating on cha | annel 00(91 | 5.5MHz), cont | inuously | receiving a CW | signal. | |
| Technician: | | D. Lerr | er and K. McE | Donald | | | Date: | August 23, 2 | 2007 |
| Notes: | | | : 3 Meters asi-Peak Belov | v 1 GHz. Pea | ak above 1 Gł | Нz | Temp: 28.1°C | Humid | ity:65% |
| Frequency | Ant | enna sition | EUT Orientation | Meter Readings | Correction Factor | Corr | ected (| Converted Reading | Limit |
| MHz | (V/H) / | Meters | Degrees | dBuV | dB | | uV/m | uV/m | uV/m |
| 30.0 | | | | | | | | | 100 |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | İ |
| 88.0 | | | | | | | | | 100 |
| 88.0 | | | | | | | | | 150 |
| | | | | | | | | | |
| | | | | | | | | | |
| 216.0 216.0 | | ─ No | emission | observed | at the spe | cified to | est distance | | 150 200 |
| 210.0 | | | | | | | | | 200 |
| | | | | | | | | | |
| 1 | | | | | | | | | |
| 960.0 | | | | | | | | | 200 |
| 960.0 | | | | | | | | | 500 |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | İ |
| | | | | | | | | | |
| | | | | | | | | | |
| 5000.0 | | | | | | | | | 500 |
| 0000.0 | The fre | quency rar | nge was scanned | rom 30 MHz to | 5.0 GHz. | | | | 300 |
| | The em | issions ob | served from the E | UT do not exce | ed the specified | | | | |
| | Emissio | ons not rec | orded were more | than 20dB und | er the specified li | mit. | | | |

Page 1 of 3

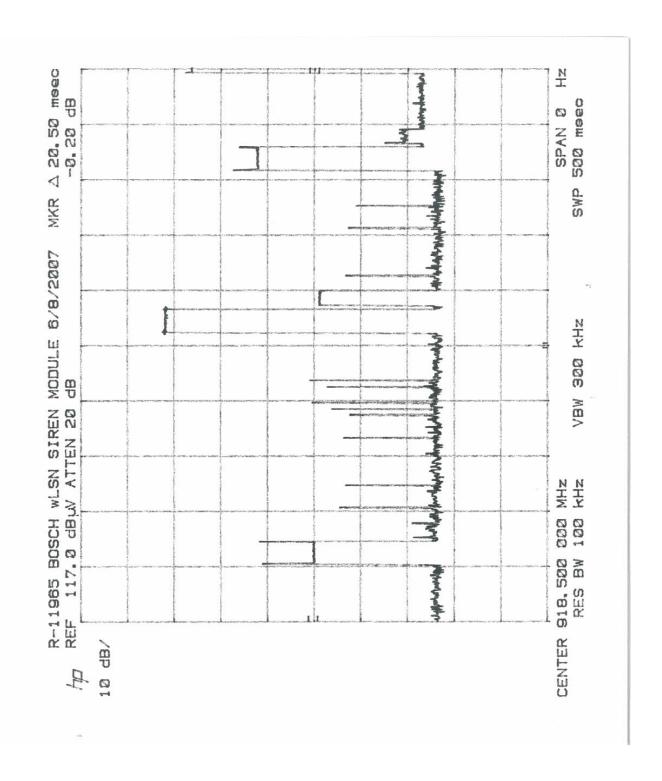
| Test Me | ethod: | | FCC Pa | art 15, Subpa | rt B, Class I | B, Radiated E | mission | s, 30 MHz to 5. | 0 GHz, Para: | 15.109(a) |
|--------------|---------|----------------|----------|-----------------------------------|-------------------|---------------------------------------|----------|-----------------|----------------------|-----------|
| Custom | ner: | | | Security Syste | • | • | | Job No.: | | |
| Test Sa | mple: | | | nterior Siren N | | | | I | · | |
| Model N | No.: | | ISW-BS | SR1-WY | | | | Serial No.: | N/A | |
| Operati | ng Mode | e: | EUT op | erating on cha | annel 30(91 | 8.5MHz), cont | inuously | receiving a CW | signal. | |
| Technic | cian: | | D. Lern | er and K. McD | Donald | · · · · · · · · · · · · · · · · · · · | - | Date: | August 23, 2 | 2007 |
| Notes: | | | | 3 Meters si-Peak Below | v 1 CHz Po | ak aboyo 1 Gl | J-7 | Temp: 28.1°C | Humid | ity:65% |
| | | | | | 1 | 1 | | | 2 | |
| Frequer | ncy F | Anter Posit | tion | EUT Orientation | Meter Readings | Correction Factor | Rea | ading | Converted Reading | Limit |
| MHz | (V/I | H) / N | Meters | Degrees | dΒμV | dB | dB | μV/m | uV/m | uV/m |
| | | | | | | | | | | 400 |
| 30.0 | | | | | | | | | | 100 |
| | | | | | | | | | | |
| <u> </u> | | | | | | | | | | |
| i | | | | | | | | | | |
| 88.0 | | | | | | | | | | 100 |
| 88.0 | | | | | | | | | | 150 |
| | | | | | | | | | | |
| <u> </u> | | | | | | | | | | |
| <u> </u> | | | \vdash | | | | | | | |
| 216.0 |) | | ⊢ No | emission o | bserved | at the spec | ified te | st distance | | 150 |
| 216.0 |) | | Ţ | | | <u>-</u> | | | | 200 |
| | | | | | | | | | | |
| | | | | | | | | | | <u> </u> |
| <u> </u> | | | | | | | | | | |
| 960.0 | , | | | | | | | | | 200 |
| 960.0 | | | | | | | | | | 500 |
| | | | | | | | | | | 1 |
| İ | | | | | | | | | | İ |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| <u> </u> | | | | | | | | | | |
| <u> </u> | | | | | | | | | | |
| <u> </u> | | | | | | | | | | 1 1 |
| | | | | | | | | | | Li |
| | | | | | | | | | | |
| 5000. | | | | | | | | | | 500 |
| | | | | ige was scanned served from the E | | | limits | | | |
| | | | | orded were more | | | | | | |
| | | | | · · | | , | | | | |

Page 2 of 3

| Test M | letho | d: | FCC P | art 15, Subpa | rt B, Class I | 3, Radiated E | mission | s, 30 MHz to 5 | .0 GHz, Par | a:15.109(a) |
|------------------|--------|------------|----------------|-----------------------------------|-------------------|----------------------|-----------|----------------|----------------------|-------------|
| Custo | mer: | | | Security Syste | | • | | Job No.: | | |
| Test S | ample | e: | | nterior Siren N | | | | | l | |
| Model | No.: | | ISW-BS | SR1-WY | | | | Serial No.: | N/A | |
| Operat | ting N | lode: | EUT op | perating on cha | annel 58(92 | 1.3MHz), con | tinuously | receiving a CW | / signal. | |
| Techni | | | D. Lerr | er and K. McD | Donald | | - | Date: | August 23 | , 2007 |
| Notes: | | Test D | Distance: | 3 Meters | | | | Temp: 28.1°C | | nidity:65% |
| | | Detec | tor: Qua | si-Peak Belov | v 1 GHz, Pea | ak above 1 Gl | Ηz | | | |
| Freque | ency | | enna sition | EUT Orientation | Meter Readings | Correction Factor | | ected ading | Converted Reading | Limit |
| MH | | (V/H) / | Meters | Degrees | dΒμV | dB | | μV/m | uV/m | uV/m |
| | | | | | - | | | | | |
| 30.0 | 0 | | | | | | | | | 100 |
| | | | | | | | | | | |
| | | | | | | | | | | |
| <u> </u> | | | | | | | | | | |
| 88.0 | 0 | | | | | | | | | 100 |
| 88.0 | 0 | | | | | | | | | 150 |
| | | | | | | | | | | ! |
| | | | | | | | | | | |
| | | | | | | | | | | |
| <u> </u> 216. | 0 | | | | | | | | 1 | 150 |
| 216. | | | No | emission | observed | at the spe | cified to | est distance | , | 200 |
| | | | | | | <u> </u> | | | | |
| | | | | | | | | | | |
| <u> </u> | | | | | | | | | | 1 |
| <u> </u> 960. | 0 | | | | | | | | | 200 |
| 960. 960. | | | | | | | | | | 200 500 |
| | .0 | | | | | | | | | 1 |
| | | | | | | | | | | |
| ĺ | | | | - | | | | | | İ |
| | | | | | | | | | | <u> </u> |
| | | | | | | | | | | |
| | | | | | | | | | | |
| <u> </u> | | | | | | | | | | 1 |
| <u>_</u> | | | | | | | | | | |
| <u></u> | | | | | | | | | | i |
| ĺ | | | | | | | | | | İ |
| 5000 | 0.0 | - - | | | | 5.0.0:: | | | | 500 |
| | | | | nge was scanned served from the E | | | limits | | | |
| | | | | orded were more | | | | | | |
| | | | | | | • | | | | |

Page 3 of 3

FCC Part 15.35, Duty Cycle Determination Test Data



Test Method: FCC Part 15.35, Duty Cycle Determination.

Notes: Duty cycle = (20.5 mSec / 100) = 0.205 = 20.5%

 $= 20 \log 0.205 = -13.2 \text{ dB}$

FCC ID:T3XBSR1-WY

| Customer | Bosch Security Syst | em. |
|----------------|-----------------------|--------------|
| Test Sample | wLSN Interior Siren N | Module |
| Model Number | ISW- BSR1-WY | |
| Date: 6-8-2007 | Tech: R.S. | Sheet 1 of 1 |