Technical Information

	Manufacturer			
Name:	Bosch Security Systems	Name:	Bose	ch Security Systems Inc. China Factory
Address:	130 Perinton Parkway	Address:	Me	ei Chi Industrial Area, Blk B
City, State, Zip	: Fairport, New York 14450	City, State, 2	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 Relay Module

Brandname: Bosch

Model Number: ISW-BRL1-WY

FCC ID: T3XBRL1-WY

Type: Frequency Hopping Spread Spectrum Transceiver

Power Requirements: Four 1.5V AA Alkaline Batteries, 120 VAC, 60 Hz 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
13.247 (a)(1)	133-210 Allilex 8 A6.1(2)	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)	RSS-210 Annex 8 A8.5	Transmitter Spurious Radiated Emissions,
15.247 (u)	RSS-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 43.6 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 31.4 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 31.4 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.
- 4. The device was tested with the following external accessories: External 120 VAC, to 9 VDC adapter, manufactured by TDC Power Products Co., LTD, Model Number: DA-03-09D-El41. Five single unterminated conductors were connected to the EUT relay loop terminals.
- 5. The unit tunes over the frequency range of: 915.5 to 921.3 MHz
 The unit was tested at the following frequencies: 915.5 MHz; 918.4 MHz; 921.3 MHz

Modifications:

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

Retlif Testing Laboratories, Report R-11965-9 Bosch Security Systems, FCC ID: T3XBRL1-WY Page 5 of 64

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, Transmitter Spurious Radiated Emissions

EN	Туре	Manufacturer	Description	Model No.	Cal Date	Due Date
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
141A	Graphics Plotter	Hewlett Packard	N/A	7470A	3/12/2007	3/12/2008
206B	6.0 dB Attenuator	Texscan	0 - 1.0 GHz	FP-50 - 6 dB	6/27/2007	6/27/2008
379F	H.P. Filter	Microlab/FXR	500 MHz	HA-05N	9/22/2006	9/22/2007
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
826	10 DB Atten. (50 ohm)	Narda	DC - 10 GHz, 1W	774-10	5/21/2007	5/21/2008

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
712	EMI Test Receiver	Rohde & Schwarz	20 Hz - 26.5 GHz	ESIB26	9/26/2006	9/26/2007
829	10 DB Atten. (50 ohm)	Narda	DC - 11 GHz, 20W	768-10	5/21/2007	5/21/2008

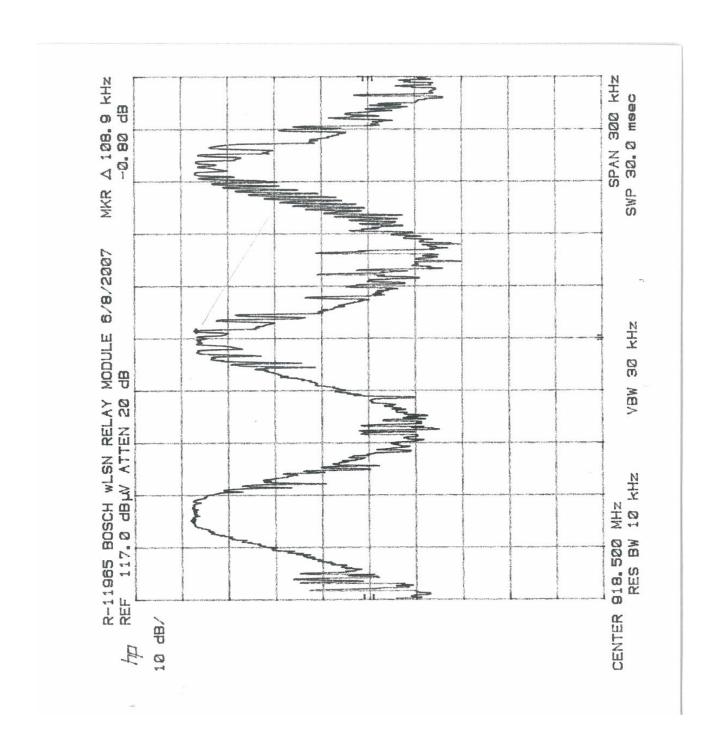
FCC Part 15 Subpart B, Class B, Radiated Emissions, 30 MHz to 5 GHz

EN	Туре	Manufacturer	Description	Model No.	Cal Date	Due Date
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
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
141A	Graphics Plotter	Hewlett Packard	N/A	7470A	3/12/2007	3/12/2008
206B	6.0 dB Attenuator	Texscan	0 - 1.0 GHz	FP-50 - 6 dB	6/27/2007	6/27/2008
379F	H.P. Filter	Microlab/FXR	500 MHz	HA-05N	9/22/2006	9/22/2007
543	Preamplifier	Hewlett Packard	1.0 GHz - 26.5 GHz	8449B	9/9/2005	9/9/2007
762	AM/FM Signal Generator	Marconi Instru.	10 kHz - 1.2 GHz	2023	7/24/2007	7/24/2008
767	Biconilog	EMCO	26 - 2000 MHz	3142B	10/12/2006	10/12/2007

FCC Part 15.35, Duty Cycle Determination

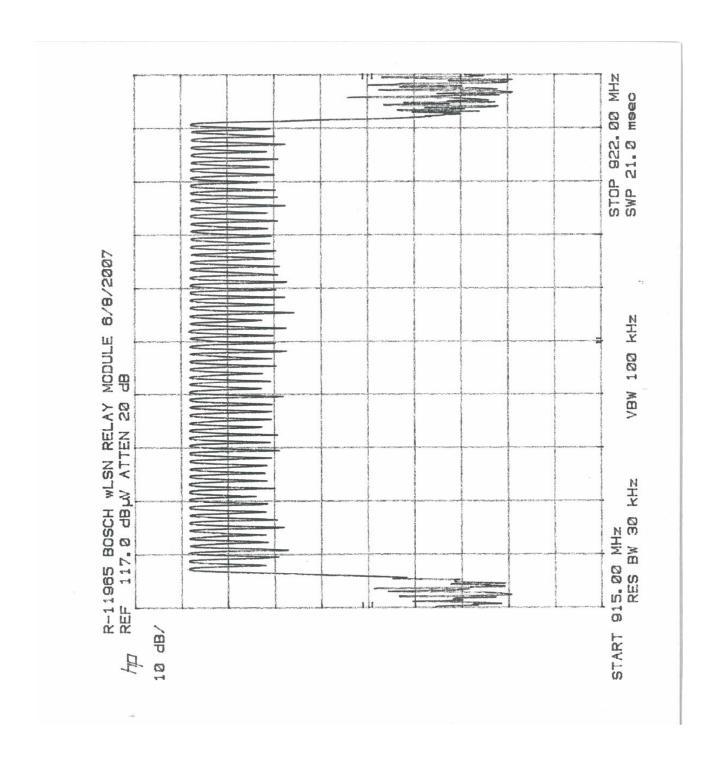
EN	Type	Manufacturer	Description	Model No.	Cal Date	Due Date
067	Open Area Test Site	Retlif	3/10 Meter	RNY	9/12/2006	9/12/2009
141	Spectrum Analyzer	Hewlett Packard	100 Hz - 40 GHz	8566B	4/27/2007	4/27/2008
141B	Quasi-Peak Adaptor	Hewlett Packard	100 Hz - 1 GHz	85650A	4/27/2007	4/27/2008
512	Graphics 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 =108.9kHz)

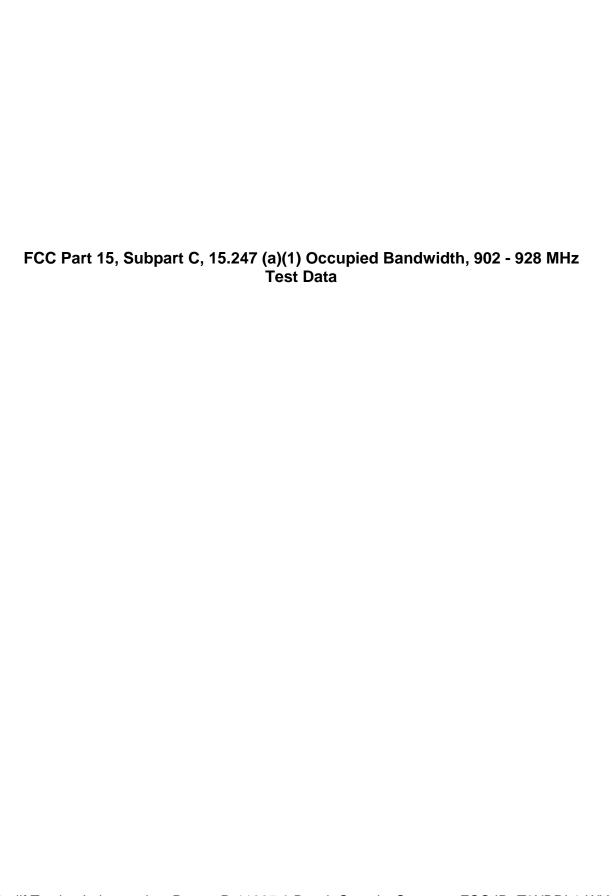
Customer	Bosch Security System.				
Test Sample	wLSN Relay Module				
Model Number	ISW- BRL1-WY				
Date: 6-8-2007	Tech: R.S.	Sheet 1 of 2			

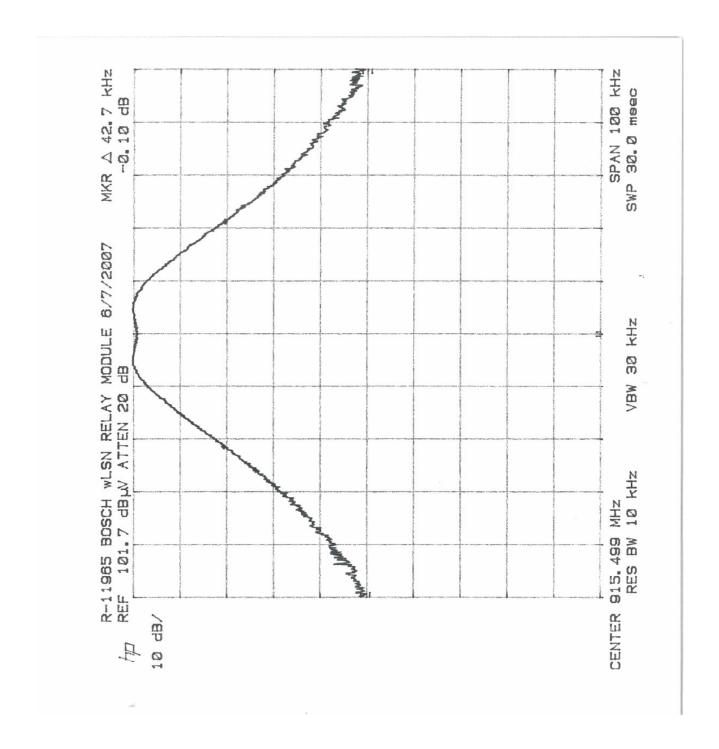


FCC Part 15, Subpart C, 15.247(a) (1) Number of Hopping Frequency, 902 to 928 MHz Band

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 Relay Module						
Model Number	ISW- BRL1-WY						
Date: 6-8-2007	Tech: R.S.	Sheet 2 of 2					





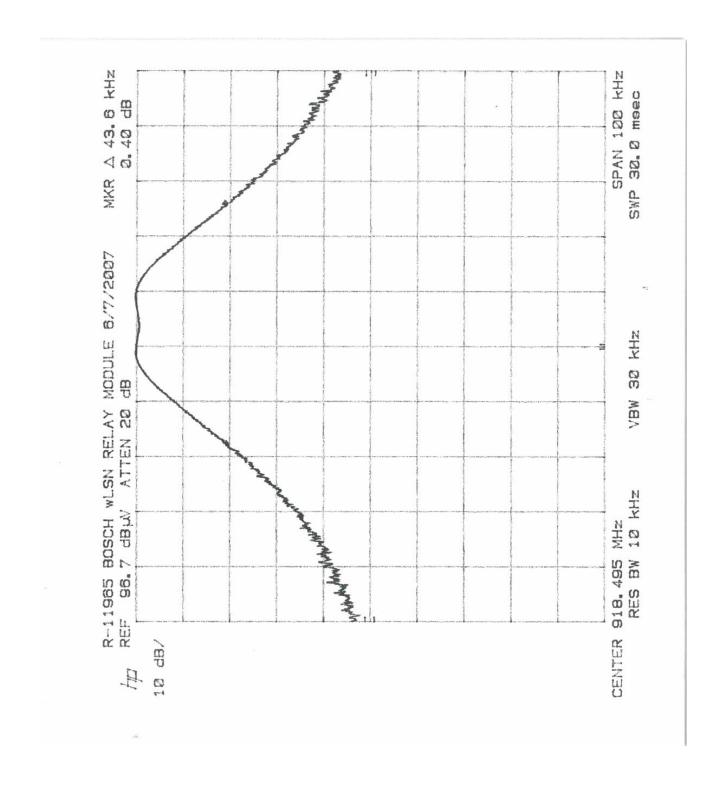
FCC Part 15, Subpart C, 15.247(a) (1) Occupied Bandwidth, 902 to 928 MHz Band

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

measured at 42.7 kHz

Note: EUT transmitting on channel 00 at 915.5 MHz.

Customer	Bosch Security System.				
Test Sample	wL	wLSN Relay Module			
Model Number	ISW- BRL1-WY				
Date: 6-7-2007		Tech: R.S.	Sheet 1 of 3		



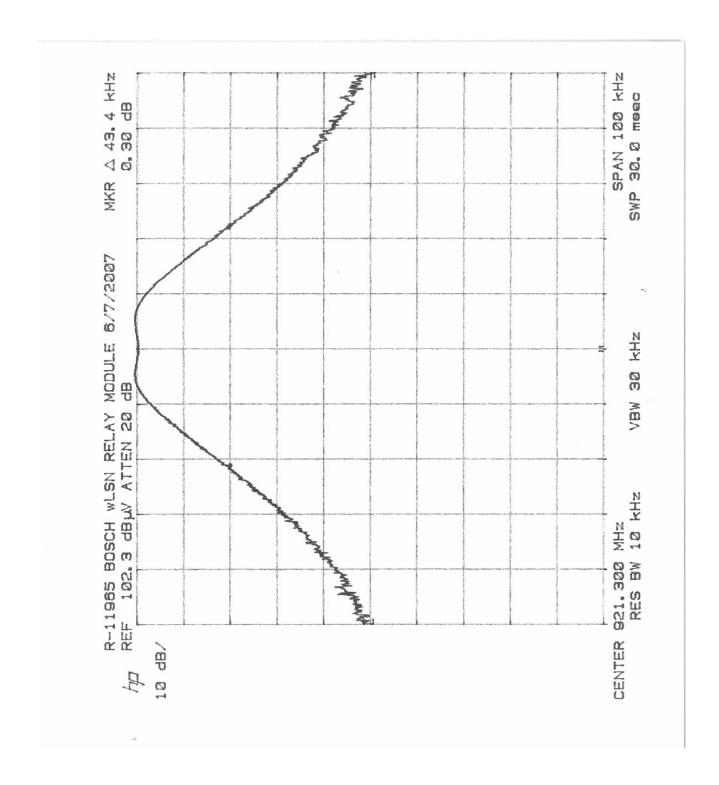
FCC Part 15, Subpart C, 15.247(a) (1) Occupied Bandwidth, 902 to 928 MHz Band

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

measured at 43.6 kHz

Note: EUT transmitting on channel 30 at 918.5 MHz.

1 00 121107121	1 0 0 1211 0 1 121 1 1 1					
Customer	Bos	Bosch Security System.				
Test Sample	wL	wLSN Relay Module				
Model Number	ISV	V- BRL1-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

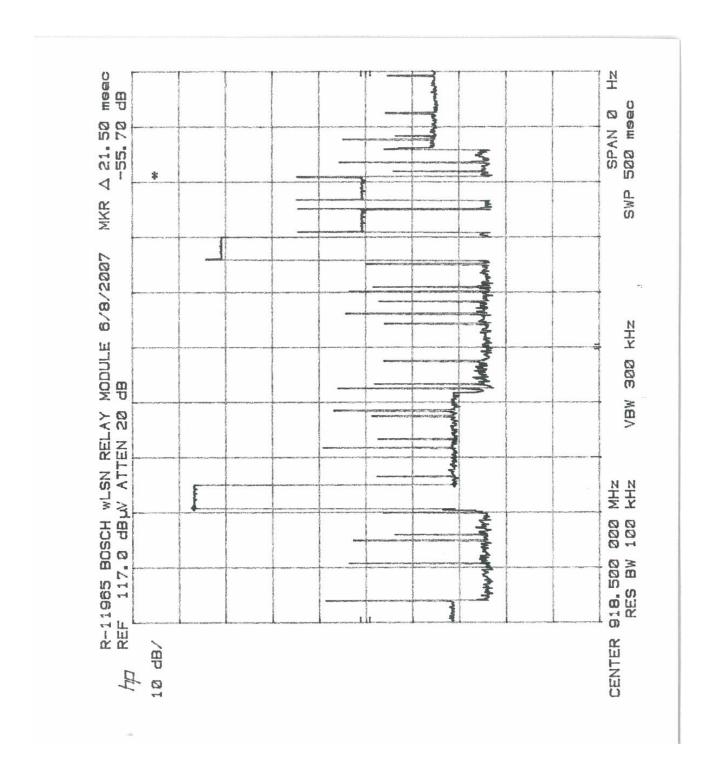
Note: The maximum 20 dB bandwidth of the hopping channel is less then 250 kHz. 20dB bandwidth

measured at 43.4 kHz

Note: EUT transmitting on channel 58 at 921.3 MHz.

T C C ID IT C/(DI							
Customer	Bos	Bosch Security System.					
Test Sample	wL	wLSN Relay Module					
Model Number	ISV	V- BRL1-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



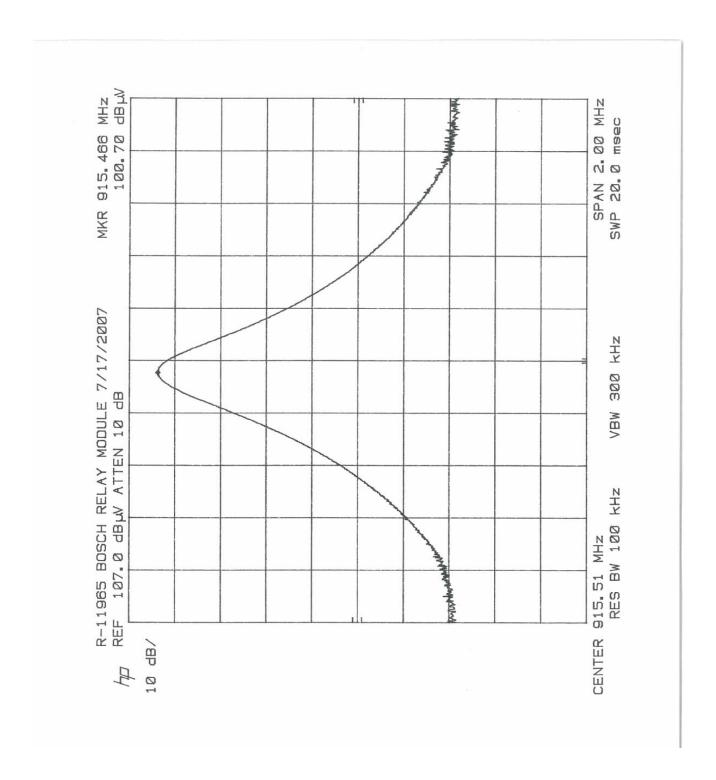
FCC Part 15, Subpart C, 15.247(a)(1)(i) Occupancy Time, 902 to 928 MHz Band Note: The measured occupancy time does not exceed the 0.4 seconds (Measured time =21.5mSec.) FCC ID:T3XBRL1-WY

Customer	Bos	Bosch Security System.				
Test Sample	wL	wLSN Relay Module				
Model Number	ISV	ISW- BRL1-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	missions. Fur	ndamental Po	wer Output.			
Customer			Security System		,	Job N	1 .	-9		
Test Samp			Relay Module				h 15.247(b			
Model No.			BRL1-WY			FCC II				
Operating			nuously transmit	ting a 915.5 N		1				
Technicia		R. So		<u> </u>	,	Dat		2007.		
Notes:	Test Dist			Temp :23.	4°C Humid	l .	o. oy, .			
	Detector:					,				
Test	Anten		EUT	Meter	Correction	Corrected	Converted	Converted	Peak	
Freq.	Pol./He		Orientation	Reading	Factor	Reading	Reading	Reading	Limit	
MHz	(V/H) / M	leters	X/Y/Z	dBuV	dB	dBuV/m	V/m	milliWatts	Watts	
915.5	V / 1.		Х	95.6	9.6	105.2	0.18	9.9	1.0	
	V / 1.	0	Υ	89.2	9.6	98.8	0.09	2.3		
	V / 1.	.0	Z	100.6	9.6	110.2	0.32	31.4		
	H/1.	.8	X	93.4	9.6	103.0	0.14	6.0		
	H/1.	.0	Υ	94.9	9.6	104.5	0.17	8.5		
915.5	H/2.	.3	Z	87.9	9.6	97.5	0.07	1.7	1	
918.4	V / 1.	.0	Х	92.7	9.6	102.3	0.13	5.1		
	V / 1.		Υ	85.1	9.6	94.7	0.05	0.9		
	V / 1.		Z	95.4	9.6	105.0	0.18	9.5		
	H/2.		X	92.8	9.6	102.4	0.13	5.2		
040.4	H/1.		Y	93.1	9.6	102.7	0.14	5.6	<u> </u>	
918.4	H / 1.	.0	Z 86.7 9.6 96.3 0.07 1.3							
921.3	V / 1.	5	Х	94.4	9.6	104.0	0.16	7.5	I	
921.3	V / 1.		Y	92.4	9.6	104.0	0.13	4.8	<u>'</u>	
	V / 1.		Z	100.5	9.6	110.1	0.32	30.7	<u> </u>	
	H/1.		X	94.7	9.6	104.3	0.16	8.1	<u> </u>	
i	H/1.		Y	94.4	9.6	104.0	0.16	7.5	i	
921.3	H/2.		Z	86.9	9.6	96.5	0.07	1.3	1.0	
			the required lim							
			rmulae were us	ed to convert	the field stren	gth in dBµV i	nto V/m and \	//m to Watts		
			uV/m-120) / 20)							
	Power =	(V/m x	3) ² / 30							

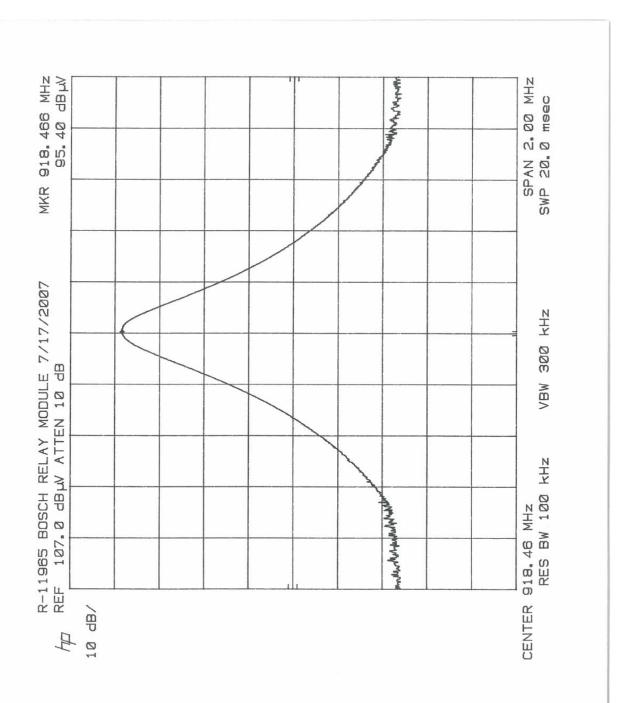
Page 1 of 1



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.

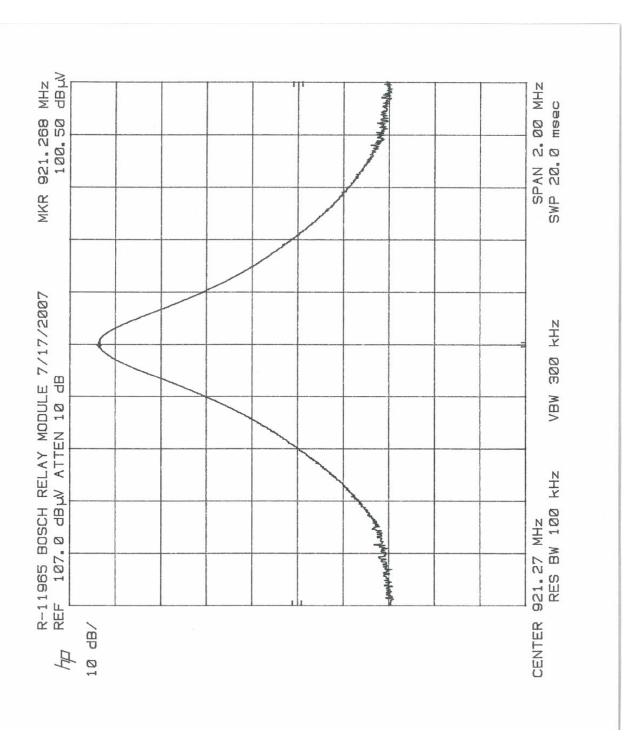
Customer	Во	Bosch Security System.				
Test Sample	wLSN Relay Module					
Model Number	IS\					
Date: July 17, 2007.		Tech: R.S.	Sheet 1 of 3			



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	Во	Bosch Security System.				
Test Sample	wLSN Relay Module					
Model Number	IS\	N- BRL1-WY				
Date: July 17, 20	07.	Tech: R.S.	Sheet 2 of 3			

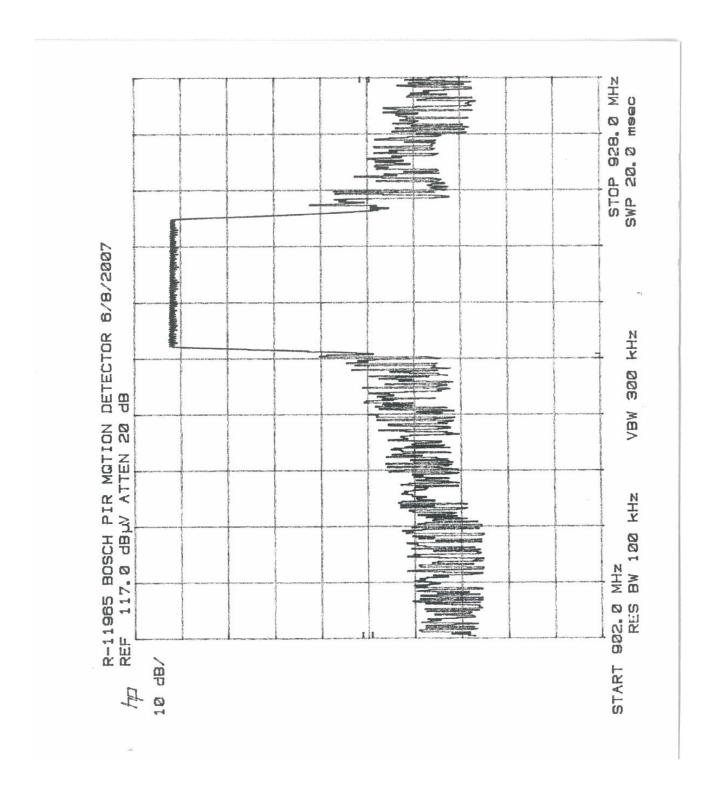


FCC Part 15, Subpart C Radiated Emissions, Fundamental Power Output, Para.15.247(b)(2)

Note: EUT transmitting on channel 58 at 921.3 MHz.

Customer	Bosch Security System.				
Test Sample	wL	wLSN Relay Module			
Model Number	ISW- BRL1-WY				
Date: July 17, 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	Bosch Security System.				
Test Sample	wLSN Relay Module				
Model Number	ISW- BRL1-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	CC Part 15 Subpart C, Radiated Emissions, Harmonics Emissions.							
Customer:		Bosch S	Security System			Job No.	R-11965-9			
Test Sampl	e:	wLSN R	Relay Module							
Model No.:		ISW-BR				FCC ID:	T3XBRL1-WY			
Operating I	Mode:	Continu	ously transmittir	ng a 915.5 MH	z signal.					
Technician	:	K. McD	onald			Date:	August 24, 2007			
Notes:	Test Dist	tance: 3 N	/leters		·					
	Detector	: Peak, U	nless otherwise	specified						
Таан Гиал	Ante	enna	EUT	Meter	Correction	Corrected	Converted	Рє	eak	
Test Freq.	Pol./F	Height	Orientation	Reading	Factor	Reading	Reading	Lir	mit	
MHz	(V/H)/l	Meters	X/Y/Z	dΒμV	dB	dBµV/m	uV/m	uV	//m	
1831.0		1.0	Χ	51.9	2.3	54.2	512.9	501	18.0	
	V /	1.1	Y	45.1	2.3	47.4	234.4			
	V /	1.0	Z	49.4	2.3	51.7	384.6			
		1.2	X	48.4	2.3	50.7	342.8			
		1.6	Y	44.8	2.3	47.1	226.5			
1831.0	H/	1.2	Z	49.7	2.3	52.0	398.1	501	18.0	
								<u> </u>		
2746.5		1.0	X	48.1	5.2	53.3	462.4	500	0.00	
<u> </u>		1.7	Y	46.3	5.2	51.5	375.8	-		
		1.7	Z	46.2	5.2	51.4	371.5			
		1.9	X	47.8	5.2	53.0	446.7	-	<u> </u>	
0740.5		1.4	Y Z	46.7	5.2	51.9	393.6	500		
2746.5	H/	1.1		48.1	5.2	53.3	462.4	500	0.00	
3662.0	V /	1.3	Х	44.9	10.0	54.9	555.9	500	0.00	
I		1.0	Y	42.3	10.0	52.3	*412.1			
i		1.1	Z	42.3	10.0	52.3	*412.1			
i	H/	1.8	Х	44.8	10.0	54.8	549.5			
i		1.0	Y	41.9	10.0	51.9	*393.6			
3662.0		1.1	Z	44.4	10.0	54.4	524.8	500	0.0	
4577.5		1.5	X	47.6	13.6	61.2	1148.2	500	0.00	
	V /	1.5	Υ	45.3	13.6	58.9	881.0			
	V /	1.3	Z	48.0	13.6	61.6	1202.3			
	H/	1.8	X	46.5	13.6	60.1	1011.6			
		1.4	Υ	43.7	13.6	57.3	732.8			
4577.5	H/	1.2	Z	49.4	13.6	63.0	1412.5	500	0.00	
E 400 0	111	1 1	V	40.4	47.4	00.5	4050.0	F04	10.0	
5493.0		1.4	X Y	43.4	17.1 17.1	60.5	1059.3	501	18.0	
		1.0	Z	40.5 43.8	17.1	57.6 60.9	*758.6	\vdash	<u> </u>	
		1.3	X	43.8	17.1	60.9	1109.2 1011.6	\vdash	<u> </u>	
	1							+	<u> </u>	
5402 O		1.0	Y Z	40.7	17.1 17.1	57.8	*776.2	E04	10 O	
5493.0				42.1		59.2	912.0		18.0	
							s not recorded we		е	
						uo not excee	ed the specified lin	IIIS.		
	= NOISE	*= Noise Floor Measurements (minimum sensitivity).								

Test Method	d:	FCC Pa	ırt 15 Subpart C	, Radiated Em	issions, Harmo	nics Emission	ns.					
Customer:		Bosch Security System. Job No. R-11965-9										
Test Sample	e:	wLSN F	Relay Module		'	1	1					
Model No.:		ISW-BR				FCC ID:	T3XBRL1-WY					
Operating N	/lode:	Continu	ously transmittir	ng a 915.5 MH	z signal.	1						
Technician:		K. McD	•	3		Date:	August 24, 2007					
		tance: 3 N					<u> </u>					
			nless otherwise	specified								
	Antenna FLIT Meter Correction Corrected C			Converted	Peak							
Test Freq.		Height	Orientation	Reading	Factor	Reading	Reading	Limit				
MHz		Meters	X/Y/Z	dBµV	dB	dBµV/m	uV/m	uV/m				
6408.5		1.0	Х	42.2	19.9	62.1	*1273.5	50118.0				
		1.0	Y	42.2	19.9	62.1	*1273.5					
	V /	1.0	Z	42.2	19.9	62.1	*1273.5	İ				
	H/	1.0	Х	41.3	19.9	61.2	*1148.2					
	<u>H</u> /	1.0	Y	41.3	19.9	61.2	*1148.2					
6408.5	Η/	1.0	Z	41.3	19.9	61.2	*1148.2	50118.0				
7324.0		1.0	X	43.0	21.3	64.3	*1640.6	5000.0				
		1.0	Y	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					
		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	5000.0				
0000.5	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	4.0		40.5	00.0	00.4	*0040.4	5000.0				
8239.5		1.0	X Y	42.5 42.5	23.6 23.6	66.1 66.1	*2018.4 *2018.4	5000.0				
		1.0	Z	42.5	23.6	66.1	*2018.4	1				
l		1.0	X	42.7	23.6	63.6	*2065.4					
		1.0	Y	42.7	23.6	63.6	*2065.4					
8239.5		1.0	Z	42.7	23.6	63.6	*2065.4	5000.0				
020010	,		_		20.0	00.0	2000.1	0000.0				
9155.0	V /	1.0	Х	42.1	25.5	67.6	*2398.8	5000.0				
	V /	1.0	Y	42.1	25.5	67.6	*2398.8					
İ	V /	1.0	Z	42.1	25.5	67.6	*2398.8	İ				
	H/	1.0	X	42.0	25.5	67.5	*2371.4	ĺ				
		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	5000.0				
	The free	NI 10 10 01 / 10	ngo was sees :	nd from 20 MI	7 to 10 0 CU-	All omissions	not recorded	ro moro				
							not recorded we					
						do not excee	d the specified lir	iiitS.				
	=indise	Noise Floor Measurements (Minimum system sensitivity)										

Dotation Continuous Face Fac	Test Meth	od:	FCC	Part 15 Subpa	art C, Radiat	ed Emissions	, Harmonics E	Emissions.					
Test Sample: Notes SW-BRL1-WY SW-BR									965-9				
Model No.: ISW-BRL1-WY								1					
Descript Mode:				•			FC	C ID: T3XB	RI 1-W/Y				
Notes Test Distance: 3 Meters Duty Cycle: 21.5%					mitting a 015	5 MHz signa		I I JABINET-WI					
Notes:					mung a 310	WII IZ SIGITA		Dato: Augus	st 24, 2007				
Detector: Average, unless otherwise specified Duty Cycle Correction: -13.6dB							I		51 24, 2007				
Test Freq. Antenna Pol./Height Orientation Reading Reading Factor Factor Reading Reading Correction Reading Reading Correction Reading Reading Correction Correction Reading Correction Reading Correction Reading Correction Reading Correction Reading Correction Correction Reading Correction Reading Correction Reading Correction Reading Correction Correcti	notes:					.: :: :1			40.040				
Test Freq. Anienta Pol./Height Pol.		Detector	: Aver	age, unless ou	ierwise spec	Пеа		cie Correction:	-13.60B				
MHz	Tost From			EUT	Average	Correction		Corrected		Avg.			
MHz	restried.	Pol./He	eight	Orientation	Reading	Factor		Reading	Reading	Limit			
1831.0	MHz	(V/H)-	X/Y/7	dBuV	dB		dBuV/m	uV/m	uV/m			
V/1.1		,											
V/1.0	1001.0									<u> </u>			
H/1.2 X 44.1 2.3 -13.6 32.8 43.7													
H / 1.6													
1831.0 H/1.2 Z 47.3 2.3 -13.6 36.0 63.1 5011.8 2746.5 V/1.0 X 42.0 5.2 -13.6 33.6 47.9 500.0 V/1.7 Y 39.5 5.2 -13.6 31.1 35.9 V/1.1 Z 40.1 5.2 -13.6 31.7 38.5 H/1.9 X 42.5 5.2 -13.6 34.1 50.7 H/1.4 Y 40.9 5.2 -13.6 32.5 42.2 2746.5 H/1.1 Z 42.4 5.2 -13.6 34.0 50.1 500.0 3662.0 V/1.3 X 34.8 10.0 -13.6 31.2 36.3 500.0 V/1.0 Y 31.4 10.0 -13.6 27.8 *24.5 V/1.1 Z 31.4 10.0 -13.6 27.8 *24.5 H/1.8 X 36.1 10.0 -13.6 32.1 40.3 H/1.0 Y 30.6 10.0 -13.6 32.1 40.3 H/1.0 Y 30.6 10.0 -13.6 36.0 66.6 *21.4 H/1.1 Z 35.6 10.0 -13.6 31.6 38.0 500.0 4577.5 V/1.5 X 40.8 13.6 -13.6 40.8 109.6 500.0 4577.5 V/1.3 Z 41.9 13.6 -13.6 36.1 63.8 V/1.3 Z 41.9 13.6 -13.6 34.1 50.7 H/1.8 X 40.4 13.6 -13.6 40.4 104.7 H/1.8 X 40.4 13.6 -13.6 34.1 50.7 H/1.8 X 40.4 13.6 -13.6 36.1 63.8 V/1.3 Z 41.9 13.6 -13.6 36.1 63.8 V/1.3 Z 41.9 13.6 -13.6 36.1 63.8 H/1.4 Y 34.1 13.6 -13.6 34.1 50.7 H/1.4 Y 34.1 13.6 -13.6 36.4 66.1 H/1.4 Y 34.1 13.6 -13.6 36.4 66.1 H/1.2 Z 45.4 13.6 -13.6 36.4 66.1 H/1.2 Z 32.5 17.1 -13.6 36.4 66.1 H/1.3 X 32.4 17.1 -13.6 36.3 65.3 H/1.0 Y 30.1 17.1 -13.6 36.3 65.3 H/1.0 Y 30.1 17.1 -13.6 36.3 65.3 H/1.0 Y 30.1 17.1 -13.6 36.3 65.3 H/1.0 Y 30.1 17.1 -13.6 36.3 65.3 H/1.0 Y 30.1 17.1 -13.6 36.3 65.3 H/1.0 Y 30.1 17.1 -13.6 36.3 65.3 H/1.0 H/1.0 Y 30.1 17.1 -13.6 36.3 65.3 H/1.0 Y 30.1 17.1 -13.6 36.3 65.3 H/1.0 Y 30.1 17.1 -13.6 36.3 65.3 H/1.0 Y 30.1 17.1 -13.6 36.3 65.3 H/1.0 Y 30.1 17.1 -13.6 36.3 65.3 H/1.0 Y 30.1 17.1 -13.6 36.3 65.3 H/1.0 Y 30.1 17.1 -13.6 36.3 65.3 H/1.0 Y 30.1 17.1 -13.6 36.3 65.3 H/1.0 Y 30.1 17.1 -13.6 36.3 65.3 H/1.0 Y 30.1 17.1 -13.6 36.3 65.3 H/1.0 Y 30.1 17.1 -13.6 36.3 65.3 H/1.0 Y 30.1 17.1 -13.6 36.3 65.3 H/1.0 Y 30.1 17.1 -13.6 36.3 65.3 H/1.0 Y 30.1 17.1 -13.6 36.3 65.3													
2746.5	1831.0									5011.8			
V/1.7				_				0010	00				
V/1.7	2746.5	V / 1	.0	Х	42.0	5.2	-13.6	33.6	47.9	500.0			
	1									I			
H/1.9 X 42.5 5.2 -13.6 34.1 50.7 H/1.4 Y 40.9 5.2 -13.6 32.5 42.2	i	V / 1	.1	Z	40.1	5.2	-13.6	31.7		İ			
H/1.4	İ				42.5	5.2				i			
2746.5	i	H/1	.4	Υ	40.9	5.2	-13.6	32.5		İ			
3662.0	2746.5	H/1	.1	Z	42.4	5.2	-13.6	34.0		500.0			
V/1.0													
V/1.1 Z 31.4 10.0 -13.6 27.8 *24.5	3662.0	V / 1	.3	Х	34.8	10.0	-13.6	31.2	36.3	500.0			
H/1.8		V / 1	.0	Y	31.4	10.0	-13.6	27.8	*24.5				
H/1.0	-	V / 1	.1	Z	31.4	10.0	-13.6	27.8	*24.5				
3662.0 H / 1.1 Z 35.6 10.0 -13.6 31.6 38.0 500.0 4577.5 V / 1.5 X 40.8 13.6 -13.6 40.8 109.6 500.0 V / 1.5 Y 36.1 13.6 -13.6 36.1 63.8 V / 1.3 Z 41.9 13.6 -13.6 41.9 124.5 H / 1.8 X 40.4 13.6 -13.6 40.4 104.7 H / 1.4 Y 34.1 13.6 -13.6 34.1 50.7 H / 1.2 Z 45.4 13.6 -13.6 34.1 50.7 4577.5 H / 1.2 Z 45.4 13.6 -13.6 37.8 77.6 5011.8 V / 1.0 Y 30.0 17.1 -13.6 33.5 *47.3 V / 1.9 Z 3		H/1	.8	X	36.1	10.0	-13.6	32.1	40.3				
4577.5		H/1	.0	Υ	30.6	10.0	-13.6	26.6	*21.4				
V/1.5	3662.0	H/1	.1	Z	35.6	10.0	-13.6	31.6	38.0	500.0			
V/1.5													
V/1.3	4577.5	V / 1	.5		40.8	13.6	-13.6	40.8	109.6	500.0			
H/1.8				-									
H/1.4		-			41.9								
4577.5 H / 1.2 Z 45.4 13.6 -13.6 45.4 186.2 500.0 5493.0 V / 1.4 X 34.3 17.1 -13.6 37.8 77.6 5011.8 V / 1.0 Y 30.0 17.1 -13.6 33.5 *47.3 V / 1.9 Z 32.5 17.1 -13.6 36.4 66.1 H / 1.3 X 32.4 17.1 -13.6 36.3 65.3 H / 1.0 Y 30.1 17.1 -13.6 33.6 *47.9 5493.0 H / 1.2 Z 32.4 17.1 -13.6 36.3 65.3 5011.8 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.													
5493.0 V / 1.4 X 34.3 17.1 -13.6 37.8 77.6 5011.8 V / 1.0 Y 30.0 17.1 -13.6 33.5 *47.3 V / 1.9 Z 32.5 17.1 -13.6 36.4 66.1 H / 1.3 X 32.4 17.1 -13.6 36.3 65.3 H / 1.0 Y 30.1 17.1 -13.6 33.6 *47.9 5493.0 H / 1.2 Z 32.4 17.1 -13.6 36.3 65.3 5011.8 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.		_											
V/1.0	4577.5	H/1	.2	Z	45.4	13.6	-13.6	45.4	186.2	500.0			
V/1.0							45.5						
V/1.9 Z 32.5 17.1 -13.6 36.4 66.1 H/1.3 X 32.4 17.1 -13.6 36.3 65.3 H/1.0 Y 30.1 17.1 -13.6 33.6 *47.9 5493.0 H/1.2 Z 32.4 17.1 -13.6 36.3 65.3 5011.8 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.	5493.0	_								5011.8			
H / 1.3													
H / 1.0 Y 30.1 17.1 -13.6 33.6 *47.9 5493.0 H / 1.2 Z 32.4 17.1 -13.6 36.3 65.3 5011.8 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.		_											
5493.0 H / 1.2 Z 32.4 17.1 -13.6 36.3 65.3 5011.8 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.													
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.	F 400 0									F044.0			
Than 20 dB below the specified limit. Emissions from the EUT do not exceed the specified limits.	5493.0	-				l .							
== Noise Floor ineasurements (Minimum system sensitivity)								ot exceed the	specified limit	IS.			
		^=Noise	Floor	ivieasurement	s (ivlinimum	system sensi	tivity)						

Desting Bosch Security System Security System WLSN Real Module WLSN Real Module SW-BRL1-WY	Test Metho	d:	FCC	Part 15 Subpa	rt C, Radiate	ed Emissions,	Harmonics E	missions.			
Node No.: ISW-BRL1-WY Section Continuously transmitting a 915.5 MHz signal. Technician: K. McDonald Notes: Test Distance: 3 Meters Detector: Average, unless otherwise specified Duty Cycle: Correction -13.6dB Correction Pol./Height Crientation Pol./Height Crientation Reading Factor Factor Reading Readi	Customer:		Bosc	h Security Sys	tem.		Jol	No. R-1	1965-9		
Node No.: ISW-BRL1-WY Section Continuously transmitting a 915.5 MHz signal. Technician: K. McDonald Notes: Test Distance: 3 Meters Detector: Average, unless otherwise specified Duty Cycle: Correction -13.6dB Correction Pol./Height Crientation Pol./Height Crientation Reading Factor Factor Reading Readi	Test Sampl	e:	wLSI	N Relay Modul	e		•				
Detection Detection Detection Detection Detection Notes Technician: K. McDonald K. McDonald K. McDonald K. McDonald K. McDonald K. McDonald K. McDonald K. McDonald K. McDonald K. McDonald Detection: Average, unless otherwise specified Duty Cycle: Correction: -13.6dB	Model No.:						FC	C ID: T3X	BRL1-WY		
Test Test Date Date Date Date Date Date Duty Cycle 2:1.5%		/lode:			mitting a 915.	5 MHz signal.					
Notes:		1				<u>-</u> g	1	Date: Aug	ust 24 2007		
Detector: Average, unless otherwise specified Duty Cycle Correction: -13.6dB									GOT 2 1, 2007		
Test Freq. Antenna Pol./Height Orientation Reading Correction Factor	140103.				nerwise sneci	fied			n: -13 6dB		
Test Freq. Pol./Height Orientation Reading Pactor Factor Pol./Height Orientation Reading Pactor Factor Pactor				-							
6408.5	Test Freq.						Correction				
V/1.0	MHz	(V/H))-	X/Y/Z	dBµV	dB	dB	dBµV/m	uV/m	u∖	//m
V/1.0	6408.5	V / 1.	0	Х	31.6	19.9	-13.6	38.3	*82.2	50′	11.8
V/1.0 Z 31.6 19.9 -13.6 38.3 *82.2											
H/1.0	İ										İ
H/1.0	i			Х							İ
7324.0 V/1.0 X 31.9 21.3 -13.6 40.0 *100.0 500.0 V/1.0 Y 31.9 21.3 -13.6 40.0 *100.0 100.0	i	H/1.	0	Y	32.2	19.9	-13.6	38.9	*88.1		İ
7324.0	6408.5									501	11.8
V/1.0											
V/1.0 Z 31.9 21.3 -13.6 40.0 *100.0	7324.0	V / 1.	0	Х	31.9	21.3	-13.6	40.0	*100.0	50	0.0
H/1.0		V / 1.	0	Y	31.9	21.3	-13.6	40.0			I
H/1.0	i	V / 1.	0	Z	31.9	21.3	-13.6	40.0	*100.0		<u>. </u>
Note	İ	H/1.	0	Х	31.9	21.3	-13.6	40.0	*100.0		İ
8239.5 V/1.0 X 33.2 23.6 -13.6 42.6 *151.4 500.0 V/1.0 Y 33.2 23.6 -13.6 42.6 *151.4 V/1.0 Z 33.2 23.6 -13.6 42.6 *151.4 H/1.0 X 32.8 23.6 -13.6 43.2 *144.5 H/1.0 Y 32.8 23.6 -13.6 43.2 *144.5 H/1.0 Y 32.8 23.6 -13.6 43.2 *144.5 H/1.0 Z 32.8 23.6 -13.6 43.2 *144.5 W/1.0 Z 32.8 23.6 -13.6 43.2 *144.5 W/1.0 X 33.1 25.5 -13.6 45.4 *186.2 V/1.0 Y 33.1 25.5 -13.6 45.4 *186.2 H/1.0 X 33.2	į	H/1.	0	Υ	31.9	21.3	-13.6	40.0	*100.0		İ
V/1.0	7324.0	H/1.	0	Z	31.9	21.3	-13.6	40.0	*100.0	50	0.0
V/1.0	8239.5	V / 1.	0	Х	33.2	23.6	-13.6	42.6	*151.4	50	0.0
H/1.0		V / 1.	0	Υ	33.2	23.6	-13.6	42.6	*151.4		
H/1.0	i	V / 1.	0	Z	33.2	23.6	-13.6	42.6	*151.4		<u>. </u>
8239.5 H/1.0 Z 32.8 23.6 -13.6 43.2 *144.5 500.0 9155.0 V/1.0 X 33.1 25.5 -13.6 45.4 *186.2 500.0 V/1.0 Y 33.1 25.5 -13.6 45.4 *186.2 V/1.0 Z 33.1 25.5 -13.6 45.4 *186.2 H/1.0 X 33.2 25.5 -13.6 45.5 *188.4 9155.0 H/1.0 Z 33.2 25.5 -13.6 45.5 *188.4 9155.0 H/1.0 Z 33.2 25.5 -13.6 45.5 *188.4	İ	H/1.	0	Х	32.8	23.6	-13.6	43.2	*144.5		İ
9155.0 V/1.0 X 33.1 25.5 -13.6 45.4 *186.2 500.0 V/1.0 Y 33.1 25.5 -13.6 45.4 *186.2 V/1.0 Z 33.1 25.5 -13.6 45.4 *186.2 H/1.0 X 33.2 25.5 -13.6 45.5 *188.4 H/1.0 Y 33.2 25.5 -13.6 45.5 *188.4 9155.0 H/1.0 Z 33.2 25.5 -13.6 45.5 *188.4	İ	H/1.	0	Υ	32.8	23.6	-13.6	43.2	*144.5		İ
V/1.0	8239.5	H/1.	0	Z	32.8	23.6	-13.6	43.2	*144.5	50	0.0
V/1.0	9155.0	V / 1.	0	Х	33.1	25.5	-13.6	45.4	*186.2	50	0.0
H/1.0	1										1
H/1.0	i	V / 1.	0	Z				45.4	*186.2		ĺ
H/1.0 Y 33.2 25.5 -13.6 45.5 *188.4 9155.0 H/1.0 Z 33.2 25.5 -13.6 45.5 *188.4 500.0	i	H/1.	0		33.2	25.5		45.5	*188.4		Ī
9155.0 H / 1.0 Z 33.2 25.5 -13.6 45.5 *188.4 500.0	ĺ	H/1.	0	Υ	33.2	25.5	-13.6	45.5	*188.4		
The frequency range was scanned from 30 MHz to 10.0 GHz. All emissions not recorded were more	9155.0	H/1.	0	Z		25.5	-13.6	45.5	*188.4	50	0.0
Than 20 dB below the specified limit. Emissions from the EUT do not exceed the specified limits.				•							
*=Noise Floor Measurements (Minimum system sensitivity)								n exceed III	e sheriiien iiiiii	io.	

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 Pa	rt 15 Subpart C	, Radiated Em	issions, Harmo	nics Emissio	ns.			
Customer:		Bosch S	Security System	<u>- </u>		Job No.	R-11965-9			
Test Sampl	e:	wLSN R	Relay Module		_					
Model No.:		ISW-BR	L1-WY			FCC ID:	T3XBRL1-WY	-11965-9 3XBRL1-WY		
Operating I	Mode:	Continu	ously transmittir	ng a 918.4 MH	z signal.					
Technician		K. McDo	onald			Date:	August 24, 2007			
Notes:	Test Dist	tance: 3 N	/leters		1					
	Detector	: Peak, U	nless otherwise			T -		T _		
Test Freq.		enna Height	EUT Orientation	Meter Reading	Correction Factor	Corrected Reading		Lir	mit	
MHz	, ,	Meters	X/Y/Z	dΒμV	dB	dBµV/m		uV	//m	
1836.8		1.6	X	55.1	2.3	57.4		501	18.0	
		1.0	Υ	55.1	2.3	57.4				
		1.8	Z	50.2	2.3	52.5				
<u> </u>		2.7	X	55.8	2.3	58.1				
		1.3	Y	50.5	2.3	52.8			10 -	
1836.8	H/	1.3	Z	52.5	2.3	54.8	549.5	501	18.0	
2755.2	V /	1.5	Х	46.3	5.2	51.5	375.8	500	0.0	
		1.1	Y	45.8	5.2	51.0			l	
İ	V /	1.2	Z	46.5	5.2	51.7	384.6			
İ	H/	1.4	Х	47.4	5.2	52.6	426.6			
İ	H/	1.9	Y	46.8	5.2	52.0	398.1			
2755.2	H/	1.7	Z	46.6	5.2	51.8	389.0	500	0.0	
3673.6	V /	1.0	X	41.4	10.0	*51.4	371.5	500	0.0	
	V /	1.0	Υ	41.5	10.0	*51.5	375.8			
	V /	1.0	Y	41.3	10.0	*51.3	367.3		ĺ	
İ	H/	1.0	Х	40.4	10.0	*50.4	331.1			
	H/	1.0	Υ	40.2	10.0	*50.2	323.6			
3673.6	H/	1.3	Z	44.7	10.0	54.7	543.3	500	0.0	
4592.0	V /	1.4	X	44.2	13.6	57.8	776.2	500	0.0	
		1.1	Y	44.3	13.6	57.9				
i		1.2	Z	44.0	13.6	57.6	758.6			
	H/	1.4	Х	44.7	13.6	58.3	822.2			
	H/	1.4	Υ	44.5	13.6	58.1	803.5			
4592.0	H/	1.3	Z	44.3	13.6	57.9	785.2	500	0.0	
5510.4	V /	1.0	X	43.8	17.1	*60.9	1109.2	501	18.0	
		1.0	Y	41.9	17.1	*59.0	891.3			
		1.0	Z	41.1	17.1	*58.2	812.8		<u>. </u>	
		1.0	X	41.3	17.1	*58.4	831.8			
i	H/	1.0	Y	37.8	17.1	*54.9	555.9		<u> </u>	
5510.4	H/	1.0	Z	42.0	17.1	*59.1	901.6	501	18.0	
	The free	quency ra	nge was scanne	ed from 30 MH	z to 10.0 GHz.	All emissions	s not recorded we	re mor	е	
							ed the specified lir			
	*= Noise	e Floor M	easurements (m	ninimum sensi	tivity).					

Test Metho	d:	FCC Pa	rt 15 Subpart C	, Radiated Em	issions, Harmo	nics Emissio	ns.		
Customer:		Bosch S	Security System.			Job No.	R-11965-9		
Test Samp	le:	wLSN R	Relay Module						
Model No.:		ISW-BR				FCC ID:	T3XBRL1-WY		
Operating I	Mode:	Continu	ously transmittir	ng a 918.4 MH	z signal.	•			
Technician		K. McDo				Date:	August 24, 2007		
Notes:		tance: 3 N	/leters		· ·	<u>'</u>	, , , , , , , , , , , , , , , , , , ,		
			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	uV	//m
6408.5		1.0	Х	42.2	19.9	62.1	*1273.5		18.0
1		1.0	Y	42.2	19.9	62.1	*1273.5		
	V /	1.0	Z	42.2	19.9	62.1	*1273.5		
i	H/	1.0	Х	41.3	19.9	61.2	*1148.2		
	H/	1.0	Υ	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	X	43.0	21.3	64.3	*1640.6	500	0.00
		1.0	Y	43.0	21.3	64.3	*1640.6		
	+	1.0	Z	43.0	21.3	64.3	*1640.6		
	1	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		4.0		40.5	00.0	00.4	*0040.4	500	
8239.5		1.0	X Y	42.5	23.6	66.1	*2018.4	500	0.00
		1.0	Z	42.5	23.6	66.1	*2018.4 *2018.4		<u> </u>
	+	1.0	X	42.5 42.7	23.6 23.6	66.1 63.6	*2065.4		
1		1.0	Y	42.7	23.6	63.6	*2065.4		
8239.5		1.0	Z	42.7	23.6	63.6	*2065.4	500	0.0
0239.3	117	1.0		72.7	23.0	03.0	2005.4	300	0.0
9155.0	V /	1.0	Х	42.1	25.5	67.6	*2398.8	500	0.00
1		1.0	Y	42.1	25.5	67.6	*2398.8		<u> </u>
		1.0	Z	42.1	25.5	67.6	*2398.8		<u> </u>
		1.0	X	42.0	25.5	67.5	*2371.4		
İ		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	0.0
	T					<u> </u>	<u> </u>		
			•				s not recorded we		e
						ao not excee	ed the specified lin	nits.	
	^=Noise	Hoor Me	easurements (M	ıınımum syste	m sensitivity)				

Test Metho	d:	FCC	Part 15 Subpa	art C, Radiat	ed Emissions	, Harmonics E	Emissions.						
Customer:		Boso	ch Security Sys	tem.		Jo	b No. R-119	965-9					
Test Sampl	e:		N Relay Modul			1	- '						
Model No.:			·BRL1-WY			FC	CC ID: T3XB	RL1-WY					
Operating N	/lode:		inuously transr	mitting a 918	8.4 MHz signa		70 121 10/12	. TOXBILL WI					
Technician:			cDonald				Date: Augus	st 24, 2007					
Notes:			3 Meters			Duty Cy	cle: 21.5%	5(21, 200)					
140103.			age, unless oth	nerwise spec	cified		cle Correction:	: -13.6dB					
						Duty cycle			۸.				
Test Freq.	Anten Pol./He		EUT Orientation	Average Reading	Correction Factor	Correction Factor	Corrected Reading	Converted Reading		/g. mit			
MHz	(V/H)-	X/Y/Z	dΒμV	dB	dB	dBµV/m	UV/m	u۷	/m			
1836.8	V / 1	.6	Х	53.3	2.3	-13.6	42.0	125.9	501	1.8			
	V / 1	.0	Y	53.6	2.3	-13.6	42.3	130.3					
	V / 1	.8	Z	46.2	2.3	-13.6	34.9	55.6					
	H/2		X	54.3	2.3	-13.6	43.0	141.3					
	H/1		Y	47.8	2.3	-13.6	36.5	66.8					
1836.8	H/1	.3	Z	50.8	2.3	-13.6	39.5	94.4	501	1.8			
2755.2	V / 1	5	X	40.4	5.2	-13.6	32.0	39.8	50	0.0			
1	V / 1		Y	37.2	5.2	-13.6	28.8	27.5		<u>0.0 </u>			
I	V / 1		Z	36.7	5.2	-13.6	28.3	26.0					
İ	H/1		X	40.9	5.2	-13.6	32.5	42.2					
İ	H/1		Y	36.1	5.2	-13.6	27.7	24.3					
2755.2	H/1		Z	40.1	5.2	-13.6	31.7	38.5	50	0.0			
				-									
3673.6	V / 1	.0	Х	31.2	10.0	-13.6	*27.6	24.0	50	0.0			
	V / 1	.0	Υ	31.3	10.0	-13.6	*27.7	24.3					
	V / 1	.0	Z	31.3	10.0	-13.6	*27.7	24.3					
	H/1	.0	X	31.4	10.0	-13.6	*28.0	25.1					
	H/1	.0	Y	31.7	10.0	-13.6	*28.3	26.0					
3673.6	H / 1	.3	Z	35.4	10.0	-13.6	31.8	38.9	50	0.0			
4592.0	V / 1	.4	X	34.6	13.6	-13.6	34.6	53.7	50	0.0			
1	V / 1		Y	33.2	13.6	-13.6	33.2	45.7		<u> </u>			
	V / 1		Z	32.7	13.6	-13.6	32.7	43.2		<u> </u>			
İ	H/1		Х	35.0	13.6	-13.6	35.0	56.2					
<u> </u>	H/1		Y	33.7	13.6	-13.6	33.7	48.4					
4592.0	H/1	.3	Z	32.9	13.6	-13.6	32.9	44.2	50	0.0			
5510.4	V / 1	0	X	30.7	17.1	-13.6	*34.2	51.3	501	1.8			
	V / 1		Y	31.0	17.1	-13.6	*34.5	53.1	301	<u>. </u>			
_	V / 1		Z	30.8	17.1	-13.6	*34.3	51.9		<u> </u>			
	H/1		X	30.8	17.1	-13.6	*34.3	51.9					
	H/1		Y	31.1	17.1	-13.6	*34.6	53.7					
5510.4	H/1		Z	31.0	17.1	-13.6	*34.5	53.1	501	1.8			
								corded were m					
								specified limits					
			Measurement										
				,	,	,							

Test Metho	d:	FCC	Part 15 Subpa	rt C, Radiate	d Emissions,	Harmonics E	missions.				
Customer:		Boso	h Security Sys	tem.		Jok	No. R-119	965-9			
Test Sampl	e:	wLSI	N Relay Modul	е		_	_				
Model No.:		ISW-	BRL1-WY			FC	CC ID: T3XBRL1-WY				
Operating N	Mode:	Cont	inuously transr	nitting a 918.	4 MHz signal						
Technician:K. McDonaldDate:August 24, 2007											
Notes:	Test Dist	ance:	3 Meters			Duty Cyc	le: 21.5%				
	Detector:	Avera	age, unless oth	erwise speci	fied	Duty Cyc	le Correction:	: -13.6dB			
	Anten	na	EUT	Average	Correction	Duty cycle	Corrected	Converted	Avg.		
Test Freq.	Pol./He		Orientation	Reading	Factor	Correction Factor	Reading	Reading	Limit		
MHz	(V/H))-	X/Y/Z	dΒμV	dB	dB	dBµV/m	uV/m	uV/m		
6408.5	V / 1.	0	Х	31.6	19.9	-13.6	38.3	*82.2	5011.8		
	V / 1.	0	Υ	31.6	19.9	-13.6	38.3	*82.2			
	V / 1.	.0	Z	31.6	19.9	-13.6	38.3	*82.2			
	H/1.	.0	Х	32.2	19.9	-13.6	38.9	*88.1			
	H/1.	.0	Υ	32.2	19.9	-13.6	38.9	*88.1			
6408.5	H / 1.	.0	Z	32.2	19.9	-13.6	38.9	*88.1	5011.8		
7324.0	V / 1.		X	31.9	21.3	-13.6	40.0	*100.0	500.0		
	V / 1.		Y Z	31.9	21.3	-13.6	40.0	*100.0			
l	V / 1.		X	31.9	21.3	-13.6 -13.6	40.0	*100.0 *100.0	i		
	H / 1. H / 1.		Y	31.9 31.9	21.3 21.3	-13.6	40.0 40.0	*100.0	 		
7324.0	H / 1.		Z	31.9	21.3	-13.6	40.0	*100.0	500.0		
7324.0	11/1.	.0		31.3	21.3	10.0	40.0	100.0	300.0		
8239.5	V / 1.	.0	Х	33.2	23.6	-13.6	42.6	*151.4	500.0		
	V / 1.		Y	33.2	23.6	-13.6	42.6	*151.4			
	V / 1.		Z	33.2	23.6	-13.6	42.6	*151.4			
İ	H/1.	.0	X	32.8	23.6	-13.6	43.2	*144.5			
	H/1.	.0	Y	32.8	23.6	-13.6	43.2	*144.5			
8239.5	H/1.	.0	Z	32.8	23.6	-13.6	43.2	*144.5	500.0		
0155.0	V / 1.	0	~	22.4	25.5	-13.6	4F 4	*406.0	F00.0		
9155.0	V / 1.		X	33.1 33.1	25.5 25.5	-13.6	45.4 45.4	*186.2 *186.2	500.0		
	V / 1.		Z	33.1	25.5	-13.6	45.4	*186.2			
	H / 1.		X	33.2	25.5	-13.6	45.5	*188.4			
i İ	H/1.		Y	33.2	25.5	-13.6	45.5	*188.4			
9155.0	H / 1.		Z	33.2	25.5	-13.6	45.5	*188.4	500.0		
	The first		/ ronge		O MU- 45 40 5) CU= ^" - ··	ioniona mater	oordod	marc		
			range was scale								
			elow the specif Measurements				n exceed the	specilied limit	.		
	-110126	1 1001	wicasulellicili	o (iviii iii iii ii i	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	art 15 Subpart C	, Radiated Em	issions, Harmo	nics Emissior	ns.		
Customer:			Security System		,	Job No.	R-11965-9		
Test Samp	le:		Relay Module		<u>'</u>				
Model No.:		ISW-BR				FCC ID:	T3XBRL1-WY		
Operating			ously transmittir	ng a 921.3 MH	z signal.				
Technician		K. McD	•	.g = 0= 110 1411 1	5.3.14.11	Date:	August 24, 2007	,	
Notes:		tance: 3 N			I	Duto.	7 tagaot 2 1, 2007		
Notes.			nless otherwise	specified					
		enna	EUT	Meter	Correction	Corrected	Converted	De	eak
Test Freq.		Height	Orientation	Reading	Factor	Reading	Reading		mit
MHz		Meters	X/Y/Z	dBµV	dB	dBµV/m	uV/m		//m
1842.6	- 	1.0	X	52.7	2.3	55.0	562.3	+	18.0
1042.0		1.3	Y	48.9	2.3	51.2	363.1	301	10.0 I
	-	1.0	Z	48.7	2.3	51.0	354.8		l
		1.9	X	47.6	2.3	49.9	312.6		<u> </u>
		1.3	Y	47.1	2.3	49.4	295.1		<u> </u>
1842.6		2.1	Z	52.3	2.3	54.6	537.0	501	18.0
				_	-				
2763.9	V /	1.7	Х	47.1	5.2	52.3	412.1	500	0.00
	V /	1.2	Υ	48.2	5.2	53.4	467.7		
	V /	1.6	Z	47.5	5.2	52.7	431.5		
	H/	2.3	X	46.8	5.2	52.0	398.1		
		1.7	Y	47.8	5.2	53.0	446.7		
2763.9	H/	1.6	Z	48.1	5.2	53.3	462.4	500	0.00
3685.2	V /	1.0	X	42.6	10.0	52.6	*426.6	500	0.0
1	-	1.0	Y	42.8	10.0	52.8	*436.5	300)U.U I
<u> </u>		1.0	Z	42.9	10.0	52.9	*441.6		<u> </u>
		1.7	X	44.8	10.0	54.8	549.5		<u> </u>
	-	1.0	Y	41.6	10.0	51.6	*380.2		<u> </u>
3685.2		1.0	Z	42.1	10.0	52.1	*402.7	500	0.0
4606.5	V /	1.2	X	46.1	13.6	59.7	966.1	500	0.0
		2.1	Y	46.6	13.6	60.2	1023.3		
		1.1	Z	47.2	13.6	60.8	1096.5		<u> </u>
	_	1.9	Х	46.6	13.6	60.2	1023.3		<u> </u>
1000 -		1.6	Y	45.8	13.6	59.4	933.3		<u> </u>
4606.5	H/	1.2	Z	51.0	13.6	64.6	1698.2	500	0.0
5527.8	V /	1.0	X	41.6	17.1	58.7	*861.0	501	18.0
1		1.0	Y	41.6	17.1	58.7	*861.0	301	. <u></u>
		1.2	Z	44.2	17.1	61.3	1161.4		<u>. </u>
i	-	1.0	X	42.5	17.1	59.6	*955.0		<u> </u>
i	+	1.0	Y	42.4	17.1	59.5	*944.1		<u>. </u>
5527.8		1.0	Z	44.8	17.1	61.9	1244.5	501	18.0
						1	not recorded we		
			_				d the specified lir		
			easurements (m				•		
			,						

Test Metho	d:	FCC Pa	rt 15 Subpart C	, Radiated Em	issions, Harmo	nics Emissio	ns.		
Customer:		Bosch S	Security System.			Job No.	R-11965-9		
Test Samp	le:	wLSN R	Relay Module						
Model No.:		ISW-BR				FCC ID:	T3XBRL1-WY		
Operating	Mode:	Continu	ously transmittir	ng a 921.3 MH	z signal.	•			
Technician		K. McDo				Date:	August 24, 2007		
Notes:		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	uV	//m
6408.5		1.0	Х	42.2	19.9	62.1	*1273.5		18.0
		1.0	Y	42.2	19.9	62.1	*1273.5		
	V /	1.0	Z	42.2	19.9	62.1	*1273.5		
i	H/	1.0	Х	41.3	19.9	61.2	*1148.2		
	H/	1.0	Υ	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	X	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	1.0	X	43.0	21.3	64.3	*1640.6		
		1.0	Y	43.0	21.3	64.3	*1640.6		<u> </u>
7324.0	H /	1.0	Z	43.0	21.3	64.3	*1640.6	500	0.00
0000 5		4.0		40.5	00.0	00.4	*0040.4	500	
8239.5		1.0	X Y	42.5	23.6	66.1	*2018.4	500	0.00
		1.0	Z	42.5	23.6	66.1	*2018.4 *2018.4		
	+	1.0	X	42.5 42.7	23.6 23.6	66.1 63.6	*2065.4		<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
0239.3	117	1.0		72.7	23.0	03.0	2003.4	300	10.0
9155.0	V /	1.0	Х	42.1	25.5	67.6	*2398.8	500	0.00
1		1.0	Y	42.1	25.5	67.6	*2398.8		<u> </u>
		1.0	Z	42.1	25.5	67.6	*2398.8		
İ		1.0	X	42.0	25.5	67.5	*2371.4		
İ		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	0.0
								1	
	The Co			ad fuer- 00 M	- 40 0 0 0	All a!!-			
			•				s not recorded we		е
						uo not excee	ed the specified lin	iiiS.	
	=ivoise	FIOOL IVIE	easurements (M	ıınımum syste	n sensitivity)				

Test Method	d:	FCC	Part 15 Subpa	art C, Radiat	ed Emissions	, Harmonics E	missions.		
Customer:			h Security Sys	**			b No. R-119	965-9	
Test Sample	a:		N Relay Modul			I.	II.		
Model No.:			BRL1-WY			FC	C ID: T3XB	RL1-WY	
Operating N	lode.		inuously transr	mitting a 921	3 MHz signa		10,12		
Technician:			cDonald	mang a oz i	10 1111 12 OIGITA		Date: Augus	st 24, 2007	
	· ·		3 Meters				cle: 21.5%	50 24, 2001	
			age, unless oth	narwica cnac	rified		cle Correction:	-13 6dB	
				•		Duty cycle			
Test Freq.	Anten		EUT	Average	Correction	Correction	Corrected	Converted	Avg.
	Pol./He	ight	Orientation	Reading	Factor	Factor	Reading	Reading	Limit
MHz	(V/H))-	X/Y/Z	dΒμV	dB	dB	dBµV/m	uV/m	uV/m
1842.6	V / 1.	0	Х	49.7	2.3	-13.6	38.4	83.2	5011.8
	V / 1.	3	Υ	43.8	2.3	-13.6	32.5	42.2	
	V / 1.	0	Z	44.7	2.3	-13.6	33.4	46.8	
	H/1.		X	41.2	2.3	-13.6	29.9	31.3	
	H / 1.		Y	41.5	2.3	-13.6	31.2	36.3	
1842.6	H / 2.	1	Z	49.3	2.3	-13.6	38.0	79.4	5011.8
2763.9	V / 1.		X	38.3	5.2	-13.6	29.9	31.3	500.0
	V / 1.		Υ	40.9	5.2	-13.6	32.5	42.2	
	V / 1.		Z	39.8	5.2	-13.6	31.4	37.2	
	H / 2.		Х	37.0	5.2	-13.6	28.6	26.9	
0700.0	H / 1.		Y	40.2	5.2	-13.6	31.8	38.9	
2763.9	H / 1.	6	Z	42.2	5.2	-13.6	33.80	49.0	500.0
3685.2	\/ / 4	^	V	32.7	40.0	-13.6	20.4	*20.5	F00 0
3065.2	V / 1. V / 1.		X Y	32.7	10.0 10.0	-13.6	29.1 29.2	*28.5 *28.8	500.0
l	V / 1.		Z	33.0	10.0	-13.6	29.2	*29.5	
	H / 1.		X	33.6	10.0	-13.6	30.0	31.6	
l	H / 1.		Y	32.6	10.0	-13.6	29.0	*28.2	
3685.2	H / 1.		Z	32.8	10.0	-13.6	29.2	*28.8	500.0
				02.0	10.0		20.2	20.0	000.0
4606.5	V / 1.	2	Х	36.7	13.6	-13.6	36.7	68.4	500.0
ı	V / 2.		Y	38.4	13.6	-13.6	38.4	83.2	
i	V / 1.	1_	Z	39.7	13.6	-13.6	39.7	96.6	i
	H/1.	9	X	38.5	13.6	-13.6	38.5	84.1	j
	H/1.	6	Y	36.0	13.6	-13.6	36.0	63.1	
4606.5	H / 1.	2	Z	46.2	13.6	-13.6	46.2	204.2	500.0
5527.8	V / 1.		X	31.1	17.1	-13.6	34.6	*53.7	5011.8
<u> </u>	V / 1.		Y	31.1	17.1	-13.6	34.6	*53.7	<u> </u>
	V / 1.		Z	33.5	17.1	-13.6	37.0	70.8	<u> </u>
	H / 1.		X	31.6	17.1	-13.6	35.1	*56.9	
FF07.0	H / 1.		Y	31.1	17.1	-13.6	34.7	*54.3	5044.0
5527.8	H / 1.		Z	36.5	17.1	-13.6	40.0	100.0	5011.8
			range was sc						
			elow the specif				ot exceed the	specilied limit	ເຣ.
	=NOISE	LIOOL	Measurements	o (iviiriirium	system sens	iuvity)			

Test Metho	d:	FCC Part 15 Subpart C, Radiated Emissions, Harmonics Emissions. Bosch Security System. Job No. R-11965-9								
Customer:		Bosch Security System. Job No. R-11965-9 wLSN Relay Module								
Test Sampl	e:	wLSI	N Relay Modul	е						
Model No.:		ISW-	BRL1-WY			FC	FCC ID: T3XBRL1-WY			
Operating I	Mode:	Cont	inuously transr	nitting a 921.	3 MHz signal.					
Technician		K. M	cDonald				Date: Augus	st 24, 2007		
Notes:	Test Dist	tance:	3 Meters			Duty Cyc	le: 21.5%	•		
	Detector	: Aver	age, unless oth	erwise speci	fied		le Correction:	: -13.6dB		
			EUT	•		Duty cycle			Δ	
Test Freq.	Anter Pol./He		Orientation	Average Reading	Correction Factor	Correction	Corrected Reading	Converted Reading	Avg. Limit	
						Factor		_		
MHz	(V/H	<u>′ </u>	X/Y/Z	dΒμV	dB	dB	dBµV/m	uV/m	uV/m	
6408.5	V / 1		X	31.6	19.9	-13.6	38.3	*82.2	5011.8	
	V / 1		Y	31.6	19.9	-13.6	38.3	*82.2		
	V / 1 H / 1		Z X	31.6 32.2	19.9 19.9	-13.6 -13.6	38.3 38.9	*82.2 *88.1		
1	H/1		Y	32.2	19.9	-13.6	38.9	*88.1	1	
6408.5	H / 1		Z	32.2	19.9	-13.6	38.9	*88.1	5011.8	
0400.5	1171	.0		0Z.Z	13.3	10.0	30.3	00.1	3011.0	
7324.0	V / 1	.0	Х	31.9	21.3	-13.6	40.0	*100.0	500.0	
1	V / 1		Y	31.9	21.3	-13.6	40.0	*100.0		
İ	V / 1		Z	31.9	21.3	-13.6	40.0	*100.0	i	
İ	H/1	.0	Х	31.9	21.3	-13.6	40.0	*100.0	İ	
	H/1	.0	Y	31.9	21.3	-13.6	40.0	*100.0		
7324.0	H/1	.0	Z	31.9	21.3	-13.6	40.0	*100.0	500.0	
8239.5	V / 1		Х	33.2	23.6	-13.6	42.6	*151.4	500.0	
<u> </u>	V / 1		Y	33.2	23.6	-13.6	42.6	*151.4		
	V / 1		Z	33.2	23.6	-13.6	42.6	*151.4		
	H/1		X	32.8	23.6	-13.6	43.2	*144.5		
8239.5	H/1		Y Z	32.8 32.8	23.6 23.6	-13.6 -13.6	43.2 43.2	*144.5 *144.5	500.0	
6239.3	H / 1	.0		32.0	23.0	-13.0	43.2	144.5	500.0	
9155.0	V / 1	0	Х	33.1	25.5	-13.6	45.4	*186.2	500.0	
1	V / 1		Y	33.1	25.5	-13.6	45.4	*186.2	1	
1	V / 1		Z	33.1	25.5	-13.6	45.4	*186.2		
İ	H/1		X	33.2	25.5	-13.6	45.5	*188.4	i	
	H/1		Υ	33.2	25.5	-13.6	45.5	*188.4	i i	
9155.0	H/1	.0	Z	33.2	25.5	-13.6	45.5	*188.4	500.0	
	T				0.00	0.011				
			range was sc							
			elow the specif				ot exceed the	specified limit	iS.	
	"=INOISE	rioor	Measurements	s (iviinimum s	system sensit	ivity)				

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

Test Metho	d:	FCC P	art 15 Subpar	t C, Spuriou	ıs Case Radi	ated Emi	ssions, Parag	raph 15.247(d)	
Customer:			Part 15 Subpart C, Spurious Case Radiated Emissions, Paragraph 15.247(d) a Security System. Job No.: R-11965-9 Relay Module FCC ID.: T3XBRL1-WY							
Test Sample	e:		Relay Module				FCC ID.:		VY	
Model No.:			RL1-WY				Serial No.:			
Operating N	/lode:		uously transmi	tting on char	nel 00, a 915	55 MHz si		L		
Technician:		R.Sood	•	tting on onai	1101 00, 4 0 10	7.0 1411 12 01	Date:	August 28,	2007.	
Notes:			: 3 Meters			Ton	np:33.1°C	Humidity:4		
140103.		tor: Peal				1611	ip.33.1 C	Humaity.4	1.076	
			EUT	Matar	Carraction	Co. ***	0.040.d	Canyontad	Dools	
Frequency		enna sition	Orientation	Meter Readings	Correction Factor		ected ading	Converted Reading	Peak Limit	
				dBuV	dB		uV/m	uV/m	_	
MHz	(V/H)/	Meters	Degrees	aBuv	ab	aB	u v/m	uv/m	uV/m	
30.0									32359.0	
									32333.0	
i										
ĺ										
									<u> </u>	
		⊢ No⊸	emissions	observed	at the spe	cified te	est distance	•		
		_	Г	1	- 				1	
İ									İ	
ĺ									<u> </u>	
100000									00070.5	
10000.0									32359.0	
	The fro	alleney ror	nge was scanned	from 30 MHz to	10.0 GHz				1	
			served from the E			limits.				
	Emissio	ons not rec	corded were more	than 20dB und	er the specified li	mit.				
						ncy as speci	fied in paragraph	15.247(d).		
	No emi	ssions wer	re observed in the	restricted band	l					

Page 1 of 3

Test Method	d:	FCC P	art 15 Subpar	t C, Transm	itter Spuriou	s Radiate	ed Emissions,	Paragraph 1	5.247(d).	
Customer:			CC Part 15 Subpart C, Transmitter Spurious Radiated Emissions, Paragraph osch Security System. Job No.: R-11965-9 SN Relay Module FCC ID: T3YRRI 1							
Test Sample	e:	wLSN	Relay Module				FCC ID.:	T3XBRL1-V	VY	
Model No.:			RL1-WY				Serial No.:	N/A		
Operating N	lode:	Continu	uously transmi	tting on char	nel 30, a 918	5.5 MHz si	gnal.	•		
Technician:		R.Sood			,		Date:	August 28,	2007.	
Notes:	Test D	Distance:	: 3 Meters			Ten	np:33.1°C	Humidity:4	1.0%	
	Detec	tor: Peal	k					•		
	Ant	enna	EUT	Meter	Correction	Corre	ected	Converted	Peak	
Frequency		sition	Orientation	Readings	Factor		ading	Reading	Limit	
MHz	(V/H) /	Meters	Degrees	dΒμV	dB	dBj	uV/m	uV/m	uV/m	
				-						
30.0									32359.0	
i										
İ									i	
								\neg		
		_ No	emissions	observed	l at the spe	cified t	est distance	e		
İ										
İ									İ	
<u> </u>									<u> </u>	
			_							
						-				
ļ.									<u> </u>	
10000.0									32359.0	
10000.0									32308.0	
	The fre	quency rar	nge was scanned	from 30 MHz to	10.0 GHz.	1	1		1	
	The em	issions ob	served from the E	UT do not exce	ed the specified					
			corded were more				fied in paragraph 1	15 247(d)		
			e observed in the			icy as speci	neu in paragraph	13.241 (u).		

Page 2 of 3

Test Metho	d:	FCC P	art 15 Subpar	t C, Transm	itter Spuriou	s Radiate	ed Emissions	, Paragraph 1	5.247(d).	
Customer:			Part 15 Subpart C, Transmitter Spurious Radiated Emissions, Paragraph 15.247(d) h Security System. Job No.: R-11965-9 L Rolay Modulo							
Test Sampl	e:		Relay Module				FCC ID.:		VY	
Model No.:			RL1-WY				Serial No.:			
Operating N	/lode:		uously transmi	tting on char	nel 58, a 921	3 MHz si		1		
Technician		R.Sood	•	ttirig ori oriai	11101 00, 4 02 1	.0 IVII 12 3	Date:	August 28,	2007	
Notes:			: 3 Meters			Ton	np:33.1°C	Humidity:4		
Notes.		tor: Peal				1611	ip.55.1 C	riamaty.4	1.070	
		enna	EUT	Meter	Correction	Corr	ected	Converted	Peak	
Frequency	Pos	sition	Orientation	Readings	Factor	Rea	ading	Reading	Limit	
MHz	(V/H) /	Meters	Degrees	dΒμV	dB	dB _l	uV/m	uV/m	uV/m	
30.0									32359.0	
30.0									32339.0	
									1	
İ									i	
İ									İ	
									<u> </u>	
		^	No emissioi	ns observ	ed at the s	pecified	d test distar	nce	<u> </u>	
				T	T					
<u> </u>									<u> </u>	
<u> </u>										
<u> </u>										
1									1	
<u> </u>										
1										
<u> </u>										
1									+ +	
1										
1										
10000.0									32359.0	
	The fre	quency rar	nge was scanned	from 30 MHz to	10.0 GHz.		I		1	
	The em	issions ob	served from the E	UT do not exce	ed the specified					
			corded were more							
1						icy as speci	fied in paragraph	15.247(d).		
	ino emi	ssions wer	e observed in the	restricted band	l.					
]									

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**

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

Customer: Bosch Security System.
Test Sample: wLSN Relay Module.

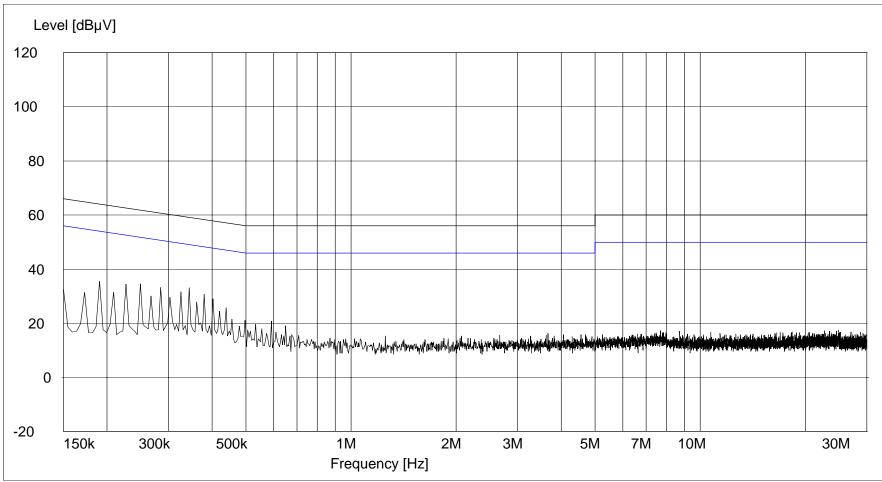
Model Number: ISW-BRL1-WY FCC ID.: T3XBRL1-WY

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.



Page 1 of 2

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

Customer: Bosch Security System.
Test Sample: wLSN Relay Module.

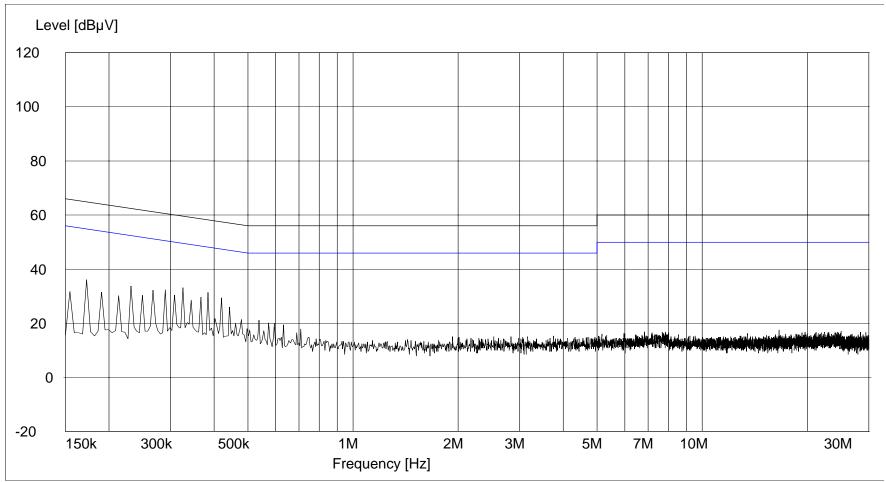
Model Number: ISW-BRL1-WY FCC ID.: T3XBRL1-WY

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.



Page 2 of 2

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

Customer: Bosch Security System.
Test Sample: wLSN Relay Module.

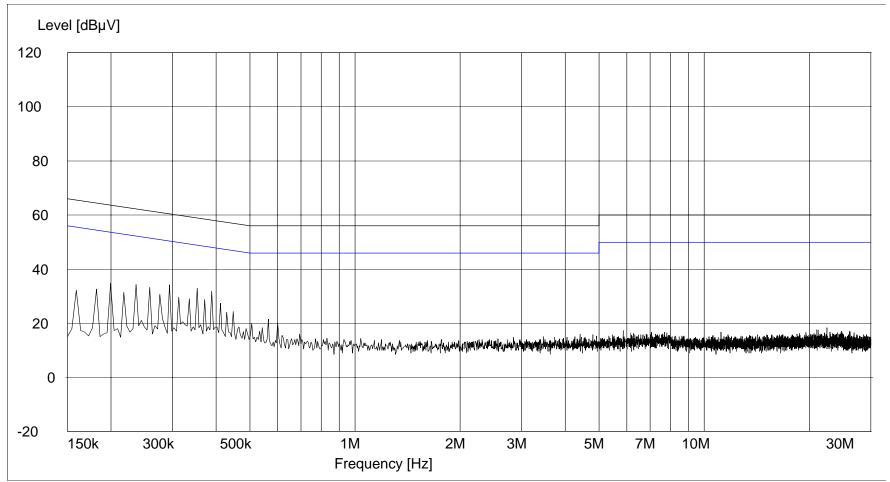
Model Number: ISW-BRL1-WY FCC ID.: T3XBRL1-WY

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.



Page 1 of 2

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

Customer: Bosch Security System.
Test Sample: wLSN Relay Module.

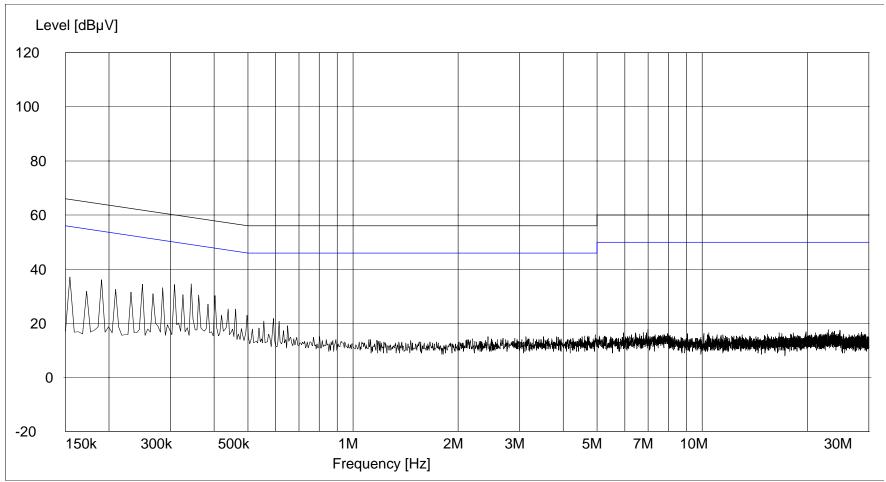
Model Number: ISW-BRL1-WY FCC ID.: T3XBRL1-WY

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.



Page 2 of 2

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

Customer: Bosch Security System.
Test Sample: wLSN Relay Module.

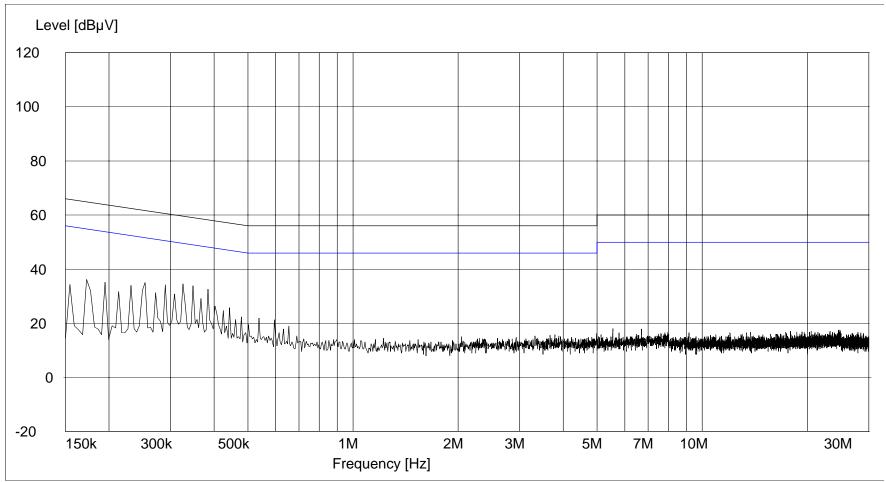
Model Number: ISW-BRL1-WY FCC ID.: T3XBRL1-WY

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.



Page 1 of 2

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

Customer: Bosch Security System.
Test Sample: wLSN Relay Module.

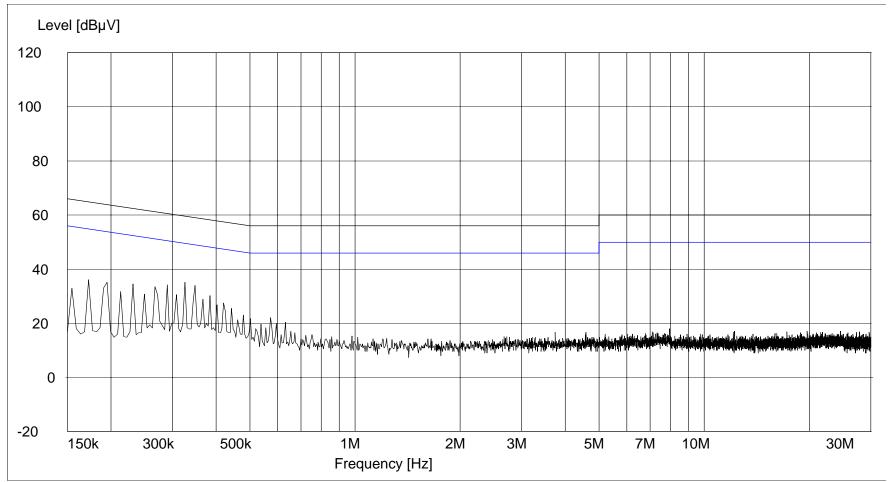
Model Number: ISW-BRL1-WY FCC ID.: T3XBRL1-WY

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.



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**

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

Customer: Bosch Security System.
Test Sample: wLSN Relay Module.

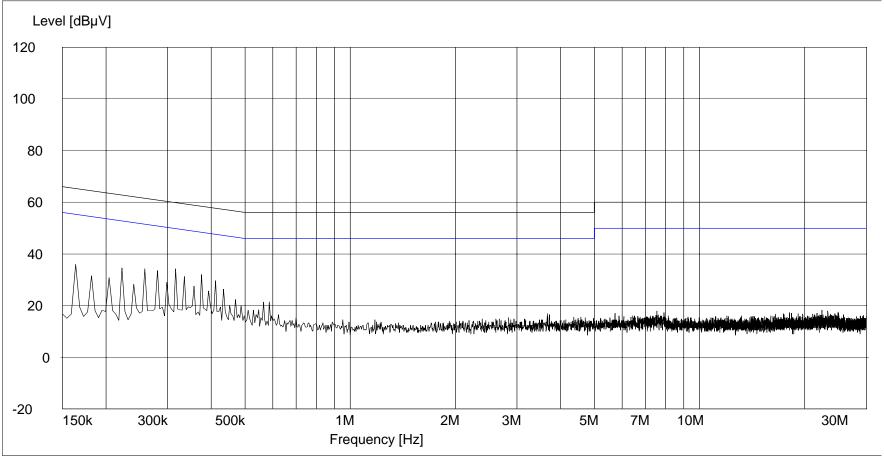
Model Number: ISW-BRL1-WY FCC ID.: T3XBRL1-WY

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 / August 28, 2007.



Page 1 of 2

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

Customer: Bosch Security System.
Test Sample: wLSN Relay Module.

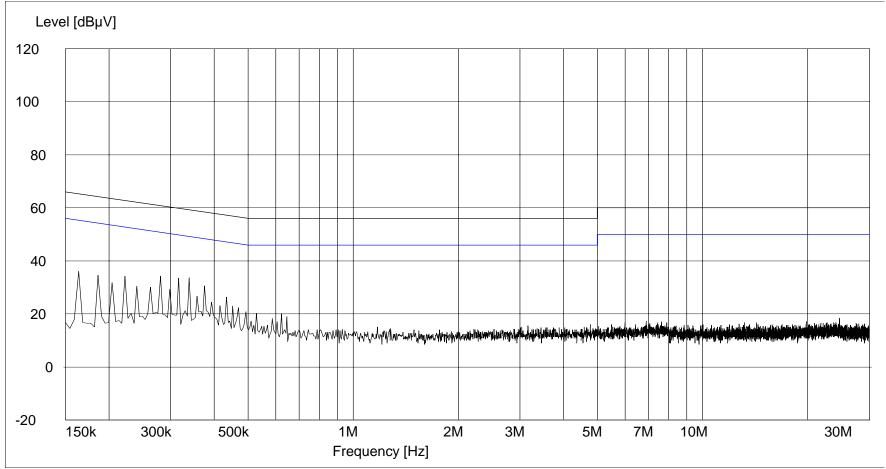
Model Number: ISW-BRL1-WY FCC ID.: T3XBRL1-WY

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 / August 28, 2007.



Page 2 of 2

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

Customer: Bosch Security System.
Test Sample: wLSN Relay Module.

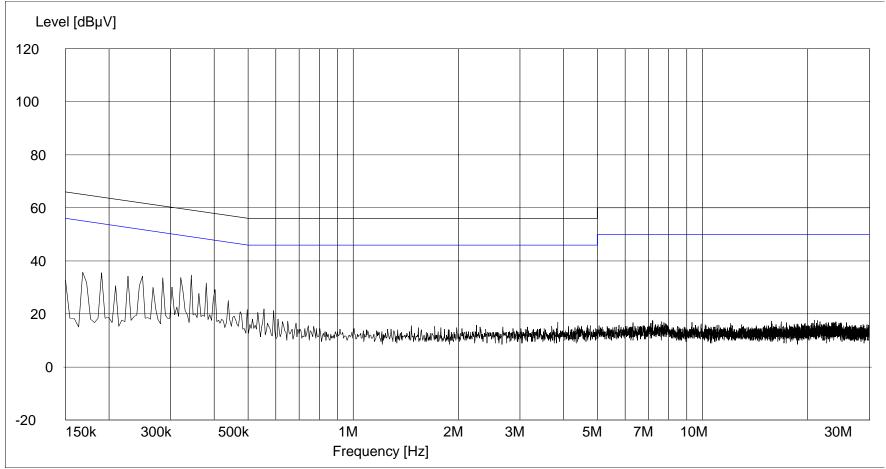
Model Number: ISW-BRL1-WY FCC ID.: T3XBRL1-WY

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 / August 28, 2007.



Page 1 of 2

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

Customer: Bosch Security System.
Test Sample: wLSN Relay Module.

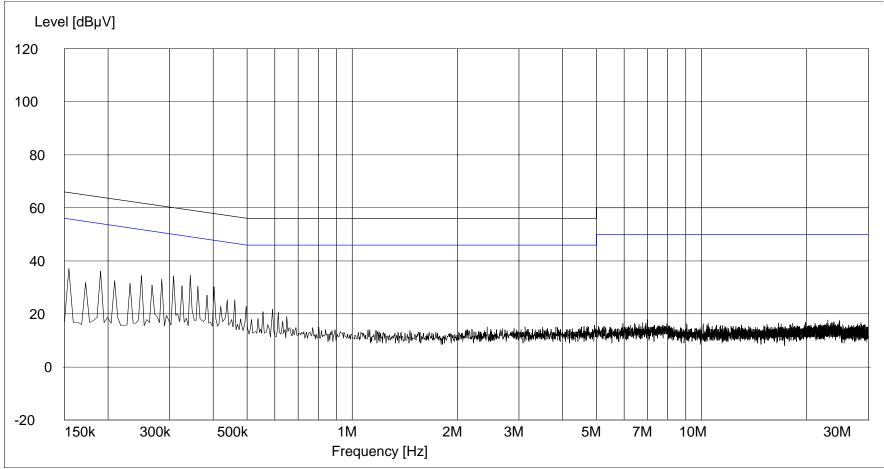
Model Number: ISW-BRL1-WY FCC ID.: T3XBRL1-WY

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

Mode of Operation: EUT operating on channel 00 (918.5 MHz), continuously receiving a CW signal.

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

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



Page 2 of 2

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

Customer: Bosch Security System.
Test Sample: wLSN Relay Module.

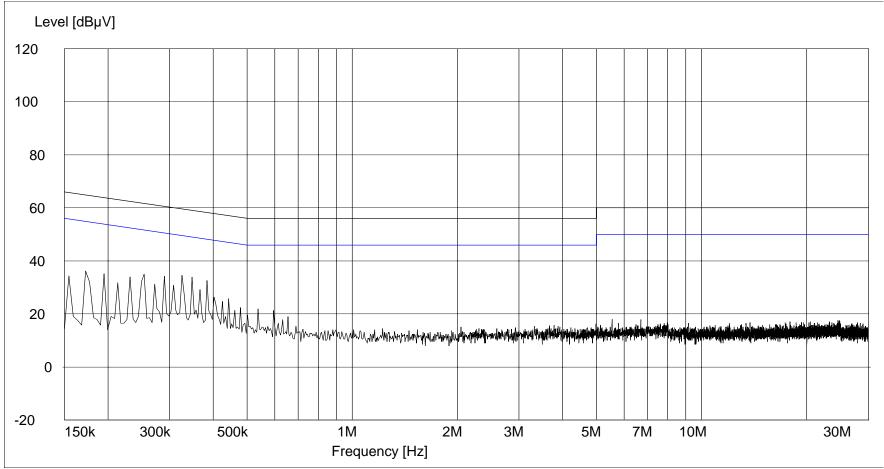
Model Number: ISW-BRL1-WY FCC ID.: T3XBRL1-WY

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 / August 28, 2007.



Page 1 of 2

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

Customer: Bosch Security System.
Test Sample: wLSN Relay Module.

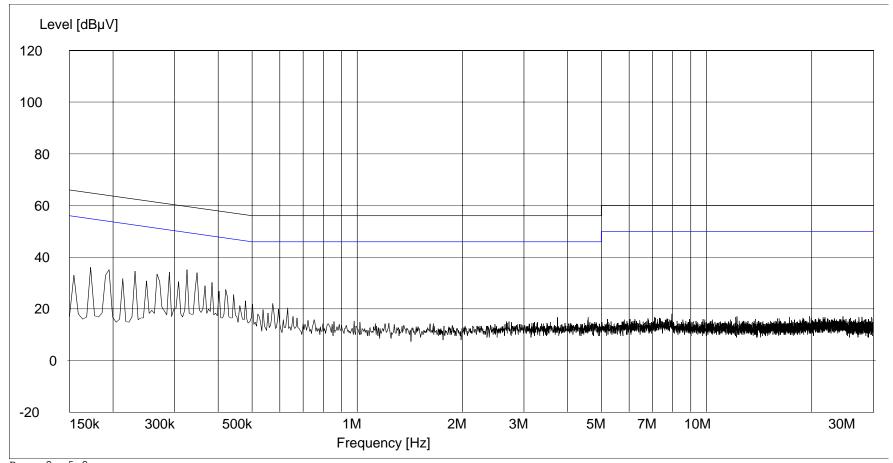
Model Number: ISW-BRL1-WY FCC ID.: T3XBRL1-WY

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 / August 28, 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 Metho	d:	FCC P	art 15, Subpa	rt B, Class I	B, Radiated E	mission	s, 30 MHz to 5.	0 GHz, Para:	15.109(a)
Customer:			osch Security System. SN Relay Module R-11965-9						
Test Sample	e:								
Model No.:		ISW- B	RL1-WY				Serial No.:	N/A	
Operating N	/lode:	EUT op	perating on cha	annel 00(91	5.5MHz), cont	tinuously	receiving a CW	signal.	
Technician:		R.Sood	doo				Date:	August 28, 2	2007.
Notes:			stance: 3 Meters Temp:33.1°C Humidity:47 or: Quasi-Peak Below 1 GHz, Peak above 1 GHz						/:47%
Frequency	Ant	enna sition	EUT Orientation	Meter Readings	Correction Factor	Corr	ected (Converted Reading	Limit
MHz	(V/H) /	Meters	Degrees	dBuV	dB	dB	uV/m	uV/m	uV/m
30.0									100
									100
88.0 88.0									100 150
00.0									130
 216.0									150
216.0		No	emission ob	served at 1	the specified	l test dis	tance		200
960.0									200
960.0									500
!									ļ.
<u> </u>									
İ									l i
<u> </u>									
5000.0									500
			nge was scanned			line is -			
			served from the E corded were more						
	Lillook	7.13 1101 160	oraca were more	man Zoub ullu	or the specified if				

Page 1 of 3

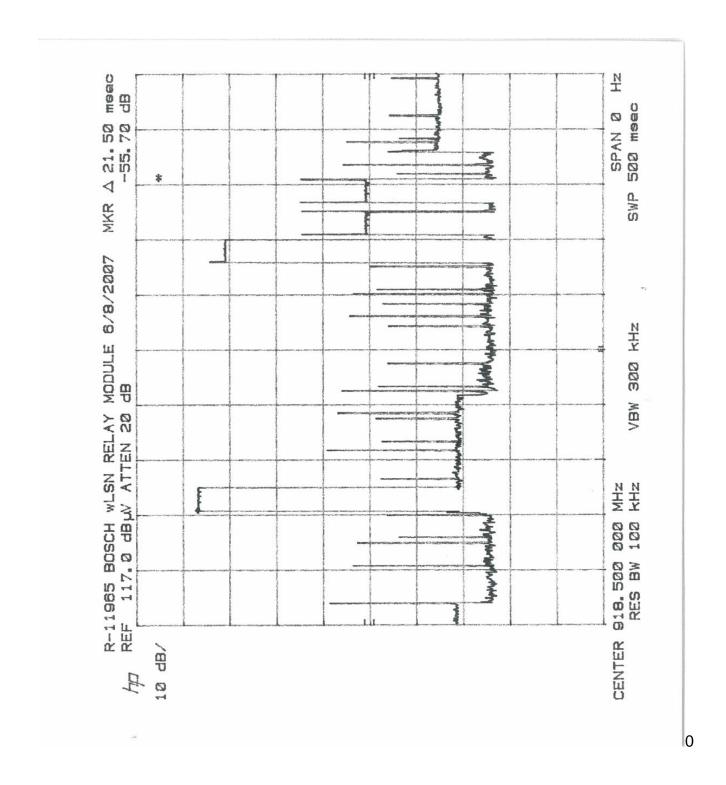
Test Me	thod:	FCC P	art 15, Subpa	rt B, Class I	B, Radiated E	mission	s, 30 MHz to 5.	.0 GHz, Para:	15.109(a)
Custom	er:		Security Syste		•		Job No.:	1	
Test Sai	nple:		Relay Module				1		
Model N	o.:		BRL1-WY				Serial No.:	N/A	
Operatir	ng Mode:	EUT o	perating on cha	annel 30(91	8.5MHz), cont	inuously	receiving a CW	/ signal.	
Technic		R.Soo	doo	,	ŕ		Date:	August 28, 2	2007.
Notes:	Test	Distance	: 3 Meters				Temp:33.1°C	Humidity	/:47%
	Dete	ctor: Qua	asi-Peak Belov	v 1 GHz, Pea	ak above 1 GF	Ηz			
Frequen		tenna sition						Limit	
MHz	(V/H)	/ Meters	Degrees	dΒμV	dB	dB	μV/m	uV/m	uV/m
							·		
30.0									100
_									
<u> </u> 									
88.0									100
88.0									150
									<u> </u>
216.0		- No	emission obs	served at t	he specified	test dist	ance		150
216.0			1	T	<u>. </u>				200
960.0									200
960.0									500
									000
<u> </u>									<u> </u>
<u> </u>									
<u> </u>									
- 									1 1
İ									j
5000.0				fue as 00 MHz :	5.0.011=				500
			nge was scanned oserved from the E			limits.			
			corded were more						

Page 2 of 3

Test Method	d:	FCC P	art 15, Subpa	rt B, Class I	B, Radiated E	mission	s, 30 MHz to 5	.0 GHz, Para	:15.109(a)	
Customer:			ch Security System. N Relay Module Job No.: R-11965-9							
Test Sample	e:									
Model No.:			RL1-WY				Serial No.:	N/A		
Operating N	/lode:	EUT or	perating on cha	annel 58(92	1.3MHz), con	tinuously	receiving a CW	/ signal.		
Technician:		R.Sood		,	,,		Date:	August 28,	2007.	
Notes:		l	: 3 Meters				Temp:33.1°C	Humidi		
			asi-Peak Belov	v 1 GHz, Pea	ak above 1 Gl	Hz				
Frequency	-	enna sition						Limit		
MHz	(V/H) /	Meters	Degrees	dΒμV	dB	dB	μV/m	uV/m	uV/m	
30.0									100	
!										
88.0									100	
88.0									150	
İ										
1 212.2									450	
216.0 216.0		- No	emission ob	served at 1	the specified	l test dis	tance		150 200	
210.U									200	
									i	
İ									İ	
960.0									200	
960.0									500	
<u> </u>							+		1 1	
<u> </u>										
- 										
i									T i	
									<u> </u>	
5000.0	The fre	allone: / #=:	20 400 0000	from 20 MI l= +=	F 0 CH-				500	
			nge was scanned served from the E			limits				
			corded 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 = (21.5 mSec / 100) = 0.215 = 21.5%

 $= 20 \log 0.215 = -13.6 dB$

FCC ID:T3XBRL1-WY

Customer	Bosch Security System	m.
Test Sample	wLSN Relay Module	
Model Number	ISW- BRL1-WY	
Date: 6-8-2007	Tech: R.S.	Sheet 1 of 1