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TESTING Cert No.1152.01

DATE: 3 June 2013

I.T.L. (PRODUCT TESTING) LTD.

FCC Radio Test Report

for

Visonic Ltd.

Equipment under test:

Wireless PIR Detector

V-Motion MCW (315 MHz), V-PET MCW (315 MHZ)*

* See customer's declaration on page 5.

Written by: _____
D. Shidlowsky, Documentation

Approved by: _____
A. Sharabi, Test Engineer

Approved by: _____
I. Raz, EMC Laboratory Manager

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Measurement/Technical Report for
Visonic Ltd.

Wireless PIR Detector

V-Motion MCW (315 MHz)

V-PET MCW (315 MHz)*

* See customer's declaration on page 5.

FCC ID: WP3VMOTIONMCW

IC: 1467C-VMOTIONMCW

This report concerns:	Original Grant:	x
	Class I change:	
	Class II change:	

Equipment type: Part 15 Security/Remote Control Transceiver

47CFR15 Section 15.231 (a-d)

Measurement procedure used is ANSI C63.4-2003.

Application for Certification prepared by:

Ishaihou Raz
ITL (Product Testing) Ltd.
Kfar Bin Nun
D.N. Shimshon 99780
Israel
e-mail Sraz@itl.co.il

Applicant for this device: (different from "prepared by")

Arik Elshtein
Visonic Ltd.
24 Habarzel St.
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1. General Information

1.1 Administrative Information

Manufacturer:	Visonic Ltd.
Manufacturer's Address:	24 Habarzel St. Tel-Aviv 69710 Israel Tel: +972-3-645-6789 Fax: +972-3-645-6788
Manufacturer's Representative:	Arick Elshtein
Equipment Under Test (E.U.T):	Wireless PIR Detector
Equipment Model No.:	V-Motion MCW (315 MHz), V-PET MCW (315 MHz)*
Equipment Serial No.:	Not Designated
Date of Receipt of E.U.T:	14.11.12
Start of Test:	14.11.12
End of Test:	04.03.13
Test Laboratory Location:	I.T.L (Product Testing) Ltd. 1 Batsheva St., Lod ISRAEL 7120101
Test Specifications:	47CFR15, Section 15.231

* See customer's declaration on following page.

Visonic
A Tyco International Company

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P.O.Box 22020
Tel-Aviv 69710, Israel

Tele: +972 3 645 6789
Fax: +972 3 645 6788
www.visonic.com

Declaration of Similarity

To:
ITL: Israel Test Laboratory
Israel

10/2/2013

Attention: Mr. David Shidlowski , Mr Shmuel Gnatt

Please be advised that Visonic wireless intrusion detector V-PET MCW is a variant of V-MOTION MCW.
V –PET MCW has a pet immune lens, while V-MOTION MCW has a normal detection lens.

Regards

Arick Elshtein
Standard Manager

1.2 List of Accreditations

The EMC laboratory of I.T.L. is accredited by the following bodies:

1. The American Association for Laboratory Accreditation (A2LA) (U.S.A.), Certificate No. 1152.01.
2. The Federal Communications Commission (FCC) (U.S.A.), Registration No. 861911.
3. The Israel Ministry of the Environment (Israel), Registration No. 1104/01.
4. The Voluntary Control Council for Interference by Information Technology Equipment (VCCI) (Japan), Registration Numbers: C-3006, R-2729, T-1877, G-245.
5. Industry Canada (Canada), IC File No.: 46405-4025; Site No. IC 4025A-1.
6. TUV Product Services, England, ASLLAS No. 97201.

I.T.L. Product Testing Ltd. is accredited by the American Association for Laboratory Accreditation (A2LA) and the results shown in this test report have been determined in accordance with I.T.L.'s terms of accreditation unless stated otherwise in the report.

1.3 Product Description

The V-motion MCW and V-Pet MCW (pet immune) are microprocessor controlled wireless digital PIR detectors.
The detectors features are as follows:
• Cylindrical lens with uniform detection sensitivity throughout its operating range, up to 12 meters (40 ft).
• V-motion MCW includes wall creep zone protection.
• In V-Pet MCW, Target Specific Imaging™ (TSI) technology is used for distinction between human beings and pets weighing up to 27 kg (60lb).
• Incorporates a fully supervised PowerCode transmitter.
• The advanced True Motion Recognition™ algorithm (patented) allows distinguishing between the true motion of an intruder and any other disturbances which may cause false alarms.
• Sophisticated frequency domain digital signal processing.
• No vertical adjustment is needed.
• An on-board motion event jumper determines whether 1 or 2 consecutive motion events trigger an alarm.
• After detection, the detector disarms itself to save battery power. It rearms (reverts to the ready state) if there is no subsequent detection throughout the following 2-minute period.
• An optional version provides better protection for systems compliant with DD243. After initial detection, the detector is capable of 6 additional detections for a period of 5 minutes.
Further detection is possible only if no movement occurs during the following 2 minutes. The detector will revert to the initial state if there is no movement for an additional 5 minutes.
• Very low current consumption.
• Microprocessor-controlled temperature compensation.
• Sealed chamber protects the optical system.
• Front and back tamper protection
• White light protection.
• Elegantly styled, sturdy case.

1.4 Test Methodology

Radiated testing was performed according to the procedures in ANSI C63.4: 2003. Radiated testing was performed at an antenna to EUT distance of 3 meters.

1.5 Test Facility

The radiated emissions tests were performed at I.T.L.'s testing facility at Lod, Israel. This site is a FCC listed test laboratory (FCC Registration No. 861911, date of listing June 30, 2010).
I.T.L.'s EMC Laboratory is also accredited by A2LA, certificate No. 1152.01.

1.6 Measurement Uncertainty

Radiated Emission (CISPR 11, EN 55011, CISPR 22, EN 55022, ANSI C63.4) for open site 30-1000 MHz:
Expanded Uncertainty (95% Confidence, K=2):
± 4.98 dB

2. System Test Configuration

2.1 Justification

Testing was performed in normal installation position.

2.2 Special Accessories

No special accessories were needed.

2.3 Equipment Modifications

No modifications were needed in order to achieve compliance

2.4 Configuration of Tested System

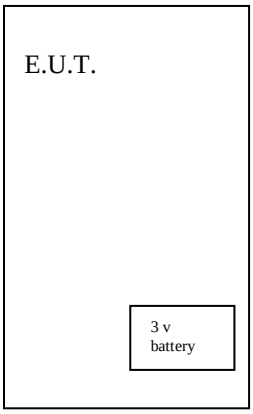

Figure 1. Configuration of Tested System

3. Radiated Measurement Test Set-up Photos

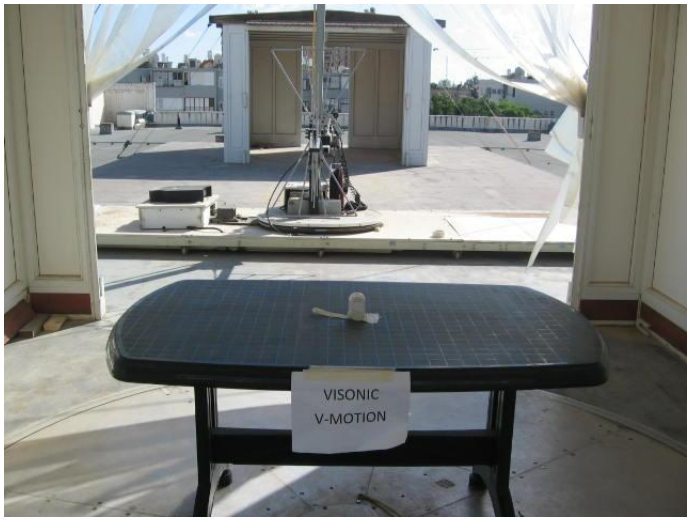

Figure 2. Radiated Emission Test

Figure 3. Radiated Emission Test

Figure 4. Radiated Emission Test

4. Average Factor Calculation

1. Burst duration =(100-4-4)=92msec
2. Time between bursts =N/A
3. Pulse duration = 729usec.
4. pulse period = 1150usec
5. $$\text{Average Factor} = 20\log\left[\frac{\text{Pulse duration}}{\text{Pulse period}} \times \frac{\text{burst duration}}{100\text{msec}} \times \text{Num of burst within } 100\text{msec}\right]$$

Duty cycle when '0' bit was sent, was the worst case.

$$\text{Average Factor} = 20\log\left[\frac{0.729}{1.150} \times \frac{92}{100}\right] = -4.6dB$$

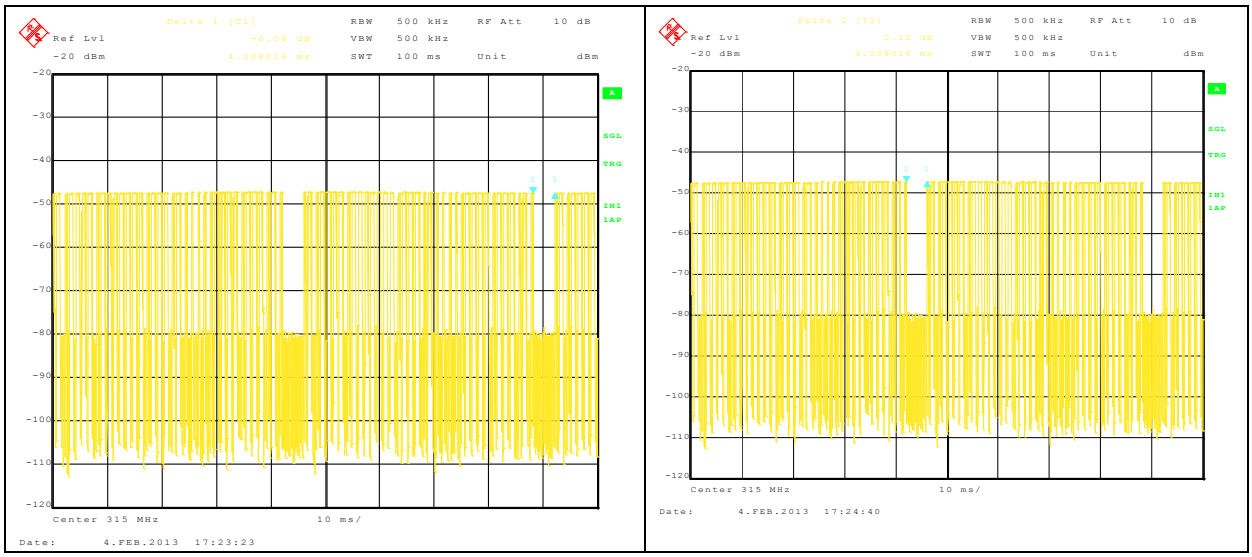

Figure 5. Burst Duration = 92 msec

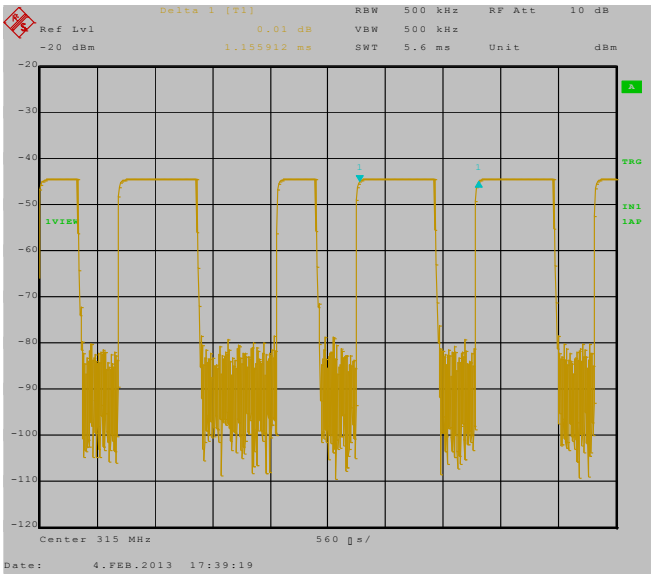

Figure 6. Pulse Period

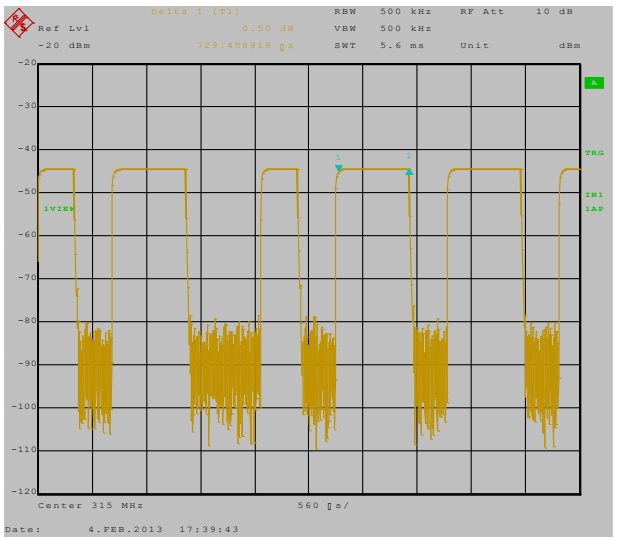

Figure 7. Pulse Duration

4.1 Test Equipment Used, Average Factor Calculation

Instrument	Manufacturer	Model	Serial Number	Calibration	Period
EMI Receiver	Rohde & Scwarz	1066.301	100120	November 01, 2012	1 Year
Antenna Bioconical	EMCO	3142B	1250	July 07, 2012	1 Year
Antenna Mast	ETS	2070-2	9608-1497	N/A	N/A
Turntable	ETS	2087	-	N/A	N/A
Mast & Turntable Controller	ETS/EMCO	2090	9608-1456	N/A	N/A

5. Periodic Operation

5.1 Specification

F.C.C., Part 15, Subpart C, Section 15.231(a)

5.2 Requirements

Requirement	Rationale	Verdict
Continuous transmissions are not permitted.	N/A	Complies
A manually operated transmitter shall be deactivated within not more than 5 seconds after releasing the switch.	N/A	Complies
An automatically operated transmitter shall cease operation within 5 seconds after activation.	See Figure 8 to Figure 9.	Complies
Periodic transmissions at regular predetermined intervals are not permitted.	N/A	Complies
Polling or supervised transmissions to determine system integrity of transmitter used in security or safety applications shall not exceed more than 2 seconds per hour. The E.U.T. supervised transmissions are every 13 minutes. Therefore the supervised transmission time per hour is 5 X 295 msec = 1475 msec = 1.475 sec.< 2 sec.	See Figure 10.	Complies

5.3 Test Results

JUDGEMENT: Passed

The EUT met the FCC Part 15, Subpart C, Section 15.231(a) specification requirements.

TEST PERSONNEL:

Tester Signature: _____ Date: 03.06.13

Typed/Printed Name: A. Sharabi

Periodic Operation

E.U.T Description	Wireless PIR Detector
Type	V-Motion MCW (315 MHz)
Serial Number:	Not Designated

Specification: F.C.C., Part 15, Subpart C, 15.231(a)

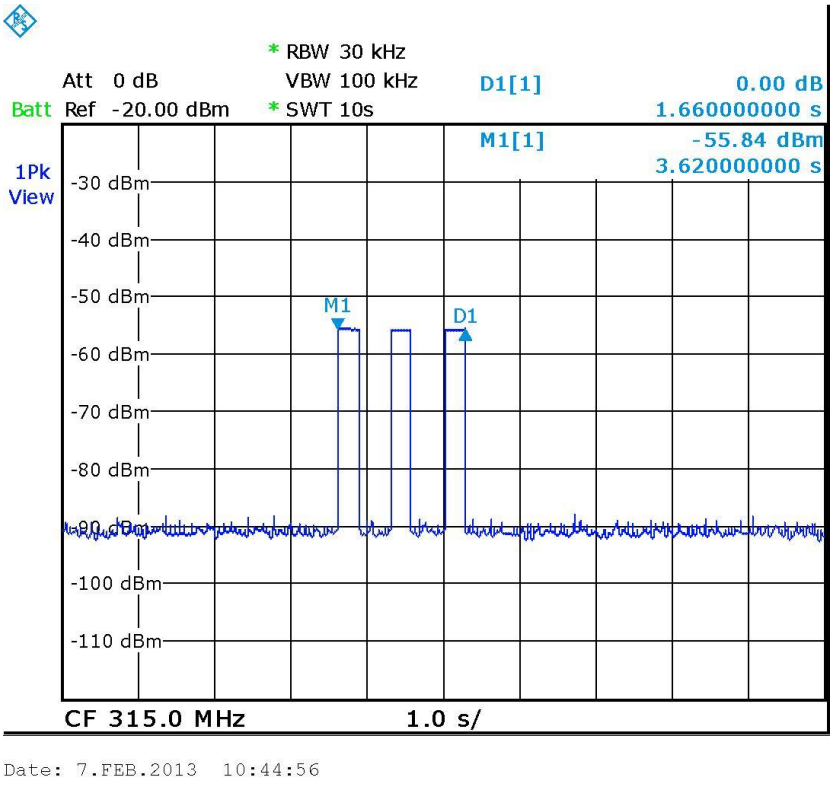

Figure 8 Configuration Transmission When Detector is ON, Within 5sec

Periodic Operation

E.U.T Description	Wireless PIR Detector
Type	V-Motion MCW (315 MHz)
Serial Number:	Not Designated

Specification: F.C.C., Part 15, Subpart C, 15.231(a)

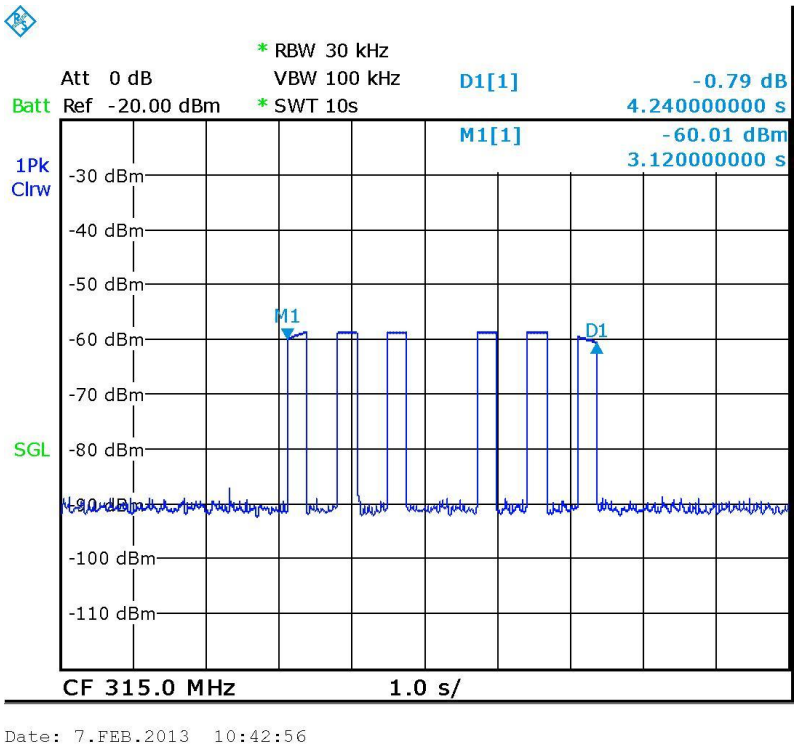

Figure 9 Configuration When Tamper is Open is ON, Within 5sec

Periodic Operation

E.U.T Description	Wireless PIR Detector
Type	V-Motion MCW (315 MHz)
Serial Number:	Not Designated

Specification: F.C.C., Part 15, Subpart C, 15.231(a)

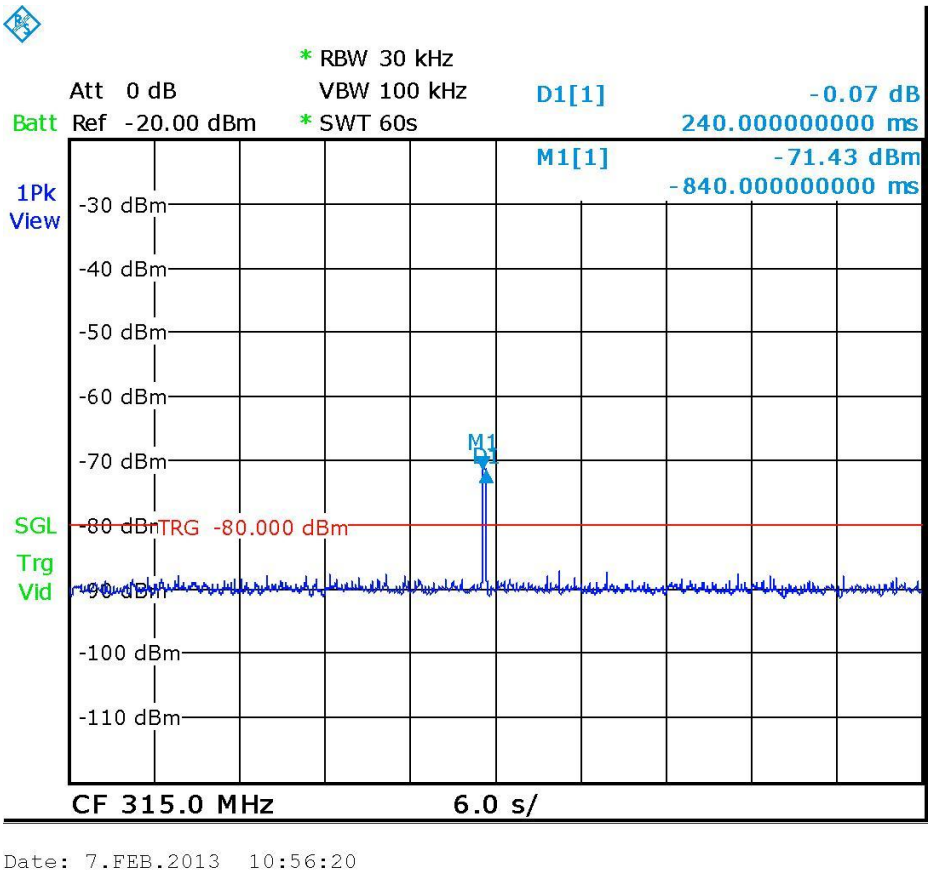

Figure 10 Burst of Supervision Signal 240msec every 13 min.

[(60/13)X240msec=1.17sec]<2sec

5.4 Test Equipment Used, Periodic Operation

Instrument	Manufacturer	Model	Serial Number	Calibration	Period
Spectrum Analyzer	Rodhe & Schwarz	FSL6	100194	November 01, 2012	1 Year

6. Field Strength of Fundamental

6.1 Test Specification

F.C.C., Part 15, Subpart C, Section 15.231(b)

6.2 Test Procedure

The E.U.T. operation mode and test set-up are as described in Section 3.

The E.U.T. was placed on a non-conductive table, 0.8 meters above the O.A.T.S. ground plane.
The EMI receiver was set to the E.U.T. Fundamental Frequency (315 MHz) and Peak Detection.
The turntable and antenna mast were adjusted for maximum level reading on the EMI receiver.
The measurement was performed for vertical and horizontal polarizations of the test antenna.

The average result is:

Peak Level(dBµV/m) + E.U.T. Duty Cycle Factor, in 100msec time window (dB)

6.3 Test Results

JUDGEMENT: Passed by 3.6 dB

The EUT met the FCC Part 15, Subpart C, Section 15.231(b) specification requirements.

The details of the highest emissions are given in Figure 11 to Figure 13.

TEST PERSONNEL:

Tester Signature: _____ Date: 03.06.13

Typed/Printed Name: A. Sharabi

Field Strength of Fundamental

E.U.T Description	Wireless PIR Detector
Type	V-Motion MCW (315 MHz)
Serial Number:	Not Designated

Specification: F.C.C., Part 15, Subpart C, 15.231(b)

Antenna Polarization: Horizontal/Vertical

Test Distance: 3 meters Detector: Peak

Freq. (MHz)	Pol. V/H	Peak Reading (dBµV/m)	Average Factor (dB)	AVG Result (dBµV/m)	AVG Specification (dBµV/m)	Margin (dB)
315.0	V	75.16	-4.6	70.56	75.62	-5.06
315.0	H	76.62	-4.6	72.02	75.62	-3.60

Figure 11. Field Strength of Fundamental. Antenna Polarization: HORIZONTAL/VERTICAL. Detector: Peak

Notes:

1. Margin refers to the test results obtained minus specified requirement; thus a positive number indicates failure, and a negative result indicates that the product passes the test.
2. "Peak Reading." (dBµV/m) included the "Correction Factors".
3. "Correction Factors" (dB) = Test Antenna Correction Factor(dB) + Cable Loss.
4. "Average Result" (dBµV/m)=Peak Reading (dBµV/m)+ Average Factor (dB)

Field Strength of Fundamental

E.U.T Description	Wireless PIR Detector
Type	V-Motion MCW (315 MHz)
Serial Number:	Not Designated

Specification: F.C.C., Part 15, Subpart C, 15.231(b)

Antenna Polarization: Horizontal

Test Distance: 3 meters Detector: Peak

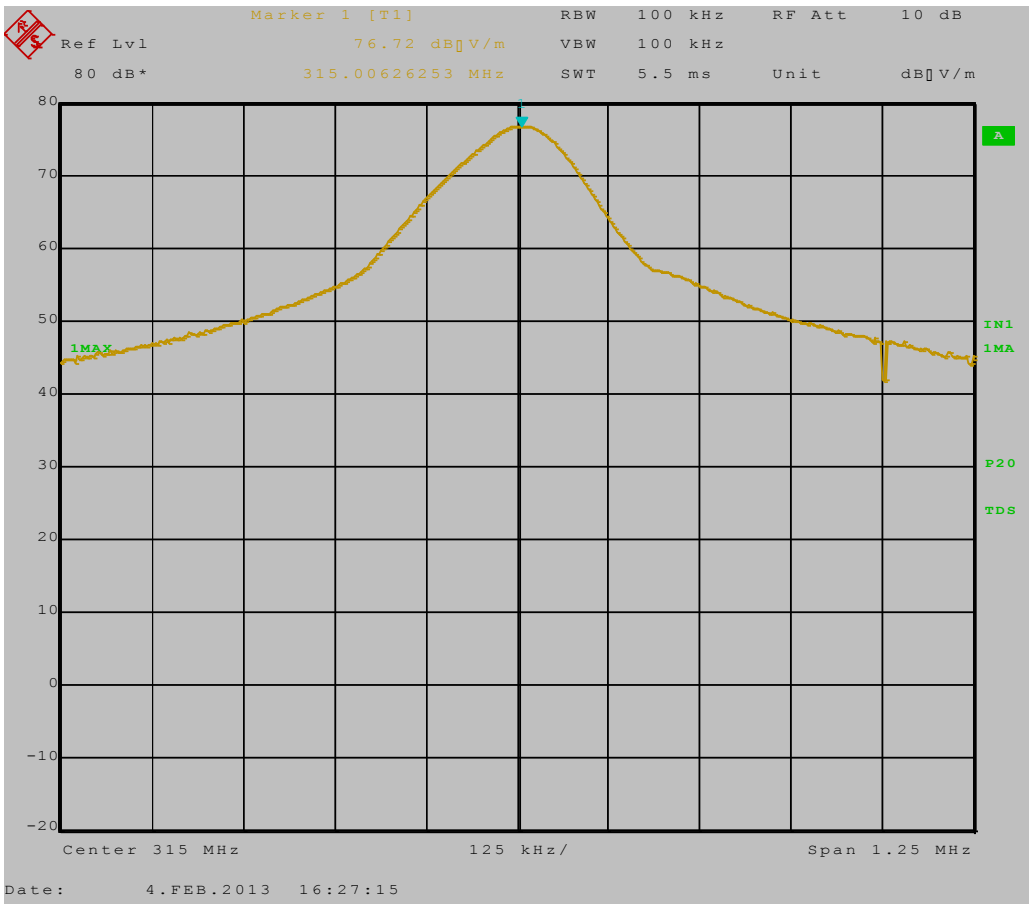

Figure 12. Field Strength of Fundamental. Antenna Polarization: HORIZONTAL.

Detector: Peak

Field Strength of Fundamental

E.U.T Description	Wireless PIR Detector
Type	V-Motion MCW (315 MHz)
Serial Number:	Not Designated

Specification: F.C.C., Part 15, Subpart C, 15.231(b)

Antenna Polarization: Vertical

Test Distance: 3 meters Detector: Peak

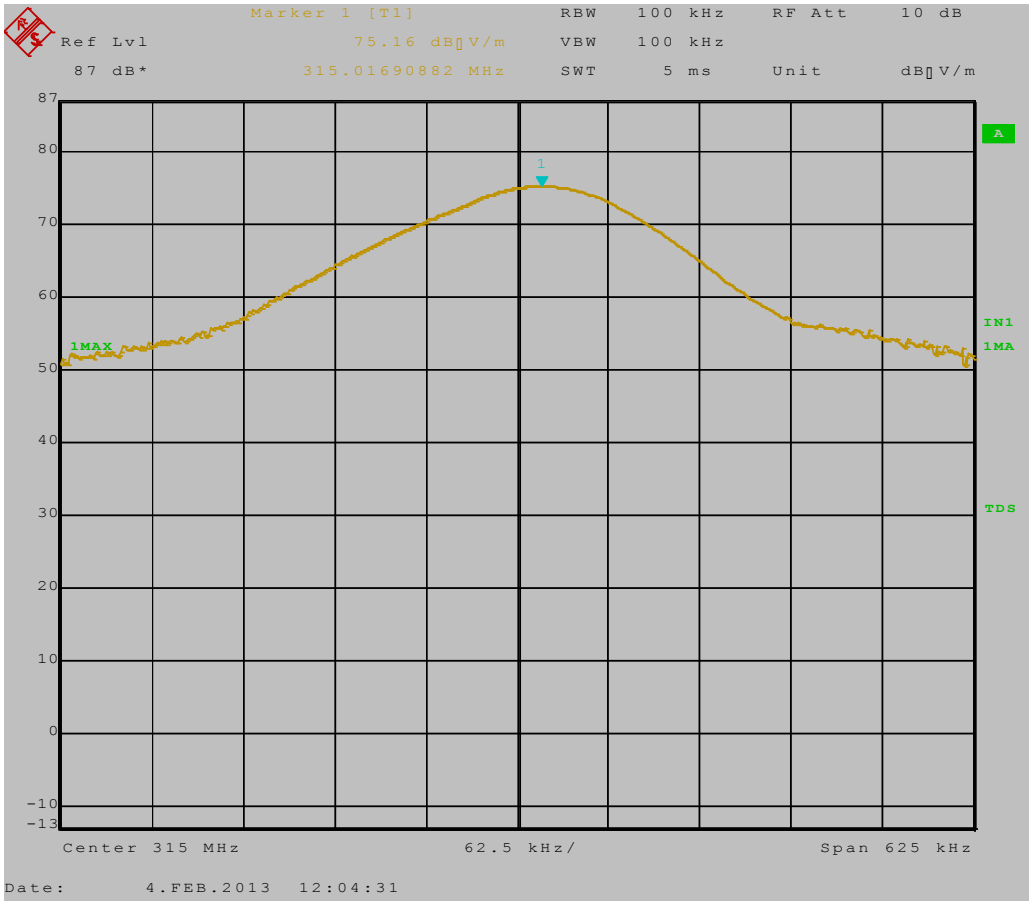

Figure 13. Field Strength of Fundamental. Antenna Polarization: VERTICAL.

Detector: Peak

6.4 Test Equipment Used, Field Strength of Fundamental

Instrument	Manufacturer	Model	Serial Number	Calibration	Period
EMI Receiver	R&S	1066.301	100120	November 01, 2012	1 Year
Antenna Bioconical	EMCO	3142B	1250	July 07, 2012	1 Year
Antenna Mast	ETS	2070-2	9608-1497	N/A	N/A
Turntable	ETS	2087	-	N/A	N/A
Mast & Turntable Controller	ETS/EMCO	2090	9608-1456	N/A	N/A

7. Spurious Radiated Emission, 9 kHz – 30 MHz

7.1 Test Specification

9 kHz-30 MHz, FCC, Part 15, Subpart C, Section 209

7.2 Test Procedure

The E.U.T. operation mode and test set-up are as described in Section 3.

A preliminary measurement to characterize the E.U.T was performed inside the shielded room at a distance of 3 meters, using peak detection mode and broadband antennas. The preliminary measurements produced a list of the highest emissions. The E.U.T was then transferred to the open site, and placed on a remote-controlled turntable. The E.U.T was placed on a non-metallic table, 0.8 meters above the ground. The configuration tested is shown in Figure 3.1.

The frequency range 9 kHz-30 MHz was scanned.

The emissions were measured using a computerized EMI receiver complying to CISPR 16 requirements. The specification limits and applicable correction factors are loaded to the receiver via a 3.5" floppy disk.

In the frequency range 9 kHz-30MHz, the loop antenna was rotated on its vertical axis. The antenna height (center of loop) was 1 meter at a distance of 3 meters.

The E.U.T. was operated at the frequency of 315MHz. This frequency was measured using a peak detector.

7.3 Test Results

JUDGEMENT: Passed

The EUT was tested and it met the requirements of the FCC Part 15, Subpart C, specification.

No signals were detected in frequency range of 9 kHz-30 MHz

TEST PERSONNEL:

Tester Signature: _____ Date: 03.06.13

Typed/Printed Name: A. Sharabi

7.4 Test Equipment Used, Spurious Radiated Emission 9 kHz – 30 MHz

Instrument	Manufacturer	Model	Serial Number	Calibration	Period
EMI Receiver	Rohde & Schwarz	1066.301	100120	November 01, 2012	1 Year
Active Loop Antenna	EMCO	6502	9506-2950	October 21, 2012	1 Year
Antenna Mast	ETS	2070-2	9608-1497	N/A	N/A
Turntable	ETS	2087	-	N/A	N/A
Mast & Turntable Controller	ETS/EMCO	2090	9608-1456	N/A	N/A

7.5 Field Strength Calculation

The field strength is calculated directly by the EMI Receiver software, and a "Correction Factors" data disk, using the following equation:

$$FS = RA + AF + CF$$

FS: Field Strength [dBμv/m]
RA: Receiver Amplitude [dBμv]
AF: Receiving Antenna Correction Factor [dB/m]
CF: Cable Attenuation Factor [dB]

No external pre-amplifiers are used.

8. Spurious Radiated Emission 30 MHz – 3500 MHz

8.1 Test Specification

30 - 3500 MHz, F.C.C., Part 15, Subpart C

8.2 Test Procedure

The E.U.T. operation mode and test set-up are as described in Section 3.
See Section 3.1 Justification of the System Test Configuration concerning the E.U.T. orientation for this test.
A preliminary measurement to characterize the E.U.T was performed inside the shielded room at a distance of 3 meters, using peak detection mode and broadband antennas. The preliminary measurements produced a list of the highest emissions. The E.U.T was then transferred to the open site, and placed on a remote-controlled turntable. The E.U.T was placed on a non-metallic table, 0.8 meters above the ground. The configuration tested is shown in Figure 1.
The signals from the list of the highest emissions were verified and the list was updated accordingly.
The levels of the emissions within the frequency ranges of the restricted bands (Section 15.205 of FCC Part 15) were compared to the limits of the table in Section 15.209 (a), General Requirements.

The emissions were measured using a computerized EMI receiver complying to CISPR 16 requirements. The specification limits and applicable correction factors are pre-loaded to the receiver.

During peak measurements, the I.F. bandwidth was 1 MHz, and video bandwidth 3 MHz. During average measurements, the I.F. bandwidth was 1 MHz and video bandwidth was 100 Hz.

The readings were maximized by adjusting the antenna height between 1-4 meters, the turntable azimuth between 0-360°, and the antenna polarization. Verification of the E.U.T emissions was based on the following methods: turning the E.U.T on and off; using a frequency span less than 10 MHz; observation of the signal level during turntable rotation. (Background noise is not affected by the rotation of the E.U.T.)

The emissions were measured at a distance of 3 meters.

8.3 Test Results

JUDGEMENT: Passed by 2.6 dB

The EUT met the requirements of the F.C.C. Part 15, Subpart C, specification.

The margin between the emission level and the specification limit was 2.6 dB in the worst case at the frequency of 945.11 MHz, vertical polarization.

TEST PERSONNEL:

Tester Signature: _____ Date: 03.06.13

Typed/Printed Name: A. Sharabi

Spurious Radiated Emission, 30 MHz -3500 MHz

E.U.T Description Wireless PIR Detector
Type V-Motion MCW (315 MHz)
Serial Number: Not Designated

Specification: FCC Part 15, Subpart C

Antenna Polarization: Horizontal/Vertical
Antenna: 3 meters distance
Frequency range: 30 MHz to 3500 MHz
Detectors: Peak, Quasi-peak

Frequency (MHz)	Peak Amp (dBµV/m)	Avg Factor	Avg Amp (dBµV/m)	Antenna Polarity (H/V)	Specification (dBµV/m)	Margin (dB)
630.08	45.6	-4.6	41.0	V	55.62	-14.62
630.08	41.8	-4.6	37.2	H	55.62	-18.42
945.11	57.6	-4.6	53.0	V	55.62	-2.62
945.11	46.5	-4.6	41.9	H	55.62	-13.72
1260.11	52.3	-4.6	47.7	H	55.62	-7.92
1260.11	56.4	-4.6	51.8	V	55.62	-3.82

Figure 14. Radiated Emission. Antenna Polarization: VERTICAL. Detectors: Peak,Avg

Notes:

1. Margin refers to the test results obtained minus specified requirement; thus a positive number indicates failure, and a negative result indicates that the product passes the test.
2. “Peak Reading.” (dBµV/m) included the “Correction Factors”.
3. “Correction Factors” (dB) = Test Antenna Correction Factor(dB) + Cable Loss.
4. “Average Result” (dBµV/m)=Peak Reading (dBµV/m)+ Average Factor (dB)

8.4 Test Equipment Used, Spurious Radiated Emission, 30 MHz - 3500 MHz

Instrument	Manufacturer	Model	Serial Number	Calibration	Period
EMI Receiver	Rohde & Schwarz	1066.301	100120	November 01, 2012	1 Year
Low Noise Amplifier	DBS MICROWAVE	LNA-DBS-0411N313	013	August 08, 2012	1 Year
Biconilog Antenna	EMCO	3142B	1250	July 07, 2012	1 Year
Horn Antenna	ETS	3115	6142	March 14, 2012	2 Years
Antenna Mast	ETS	2070-2	9608-1497	N/A	N/A
Turntable	ETS	2087	-	N/A	N/A
Mast & Turntable Controller	ETS/EMCO	2090	9608-1456	N/A	N/A

9. Bandwidth

9.1 Test Specification

F.C.C. Part 15, Subpart C: (15.231(c))

9.2 Test procedure

The transmitter unit operated with normal modulation. The spectrum analyzer was set to 30 kHz resolution BW and center frequency of the transmitter fundamental. The spectrum bandwidth of the transmitter unit was measured and recorded. The BW was measured at 20Bc points.

The EUT was set up as shown in Figure 1, and its proper operation was checked. The transmitter occupied bandwidth was measured with the EMI receiver as frequency delta between reference points on the modulation envelope.

9.3 Test Results

Bandwidth Reading (kHz)	Specification* (kHz)	Margin (kHz)
62.5	787.5	-725.0

Figure 15 Bandwidth Test results Table

(1) 0.25% of the E.U.T. fundamental frequency, Section 15.231(c).

JUDGEMENT: Passed by 659.5kHz

TEST PERSONNEL:

Tester Signature: _____ Date: 03.06.13

Typed/Printed Name: A. Sharabi

Bandwidth

E.U.T Description	Wireless PIR Detector
Type	V-Motion MCW (315 MHz)
Serial Number:	Not Designated

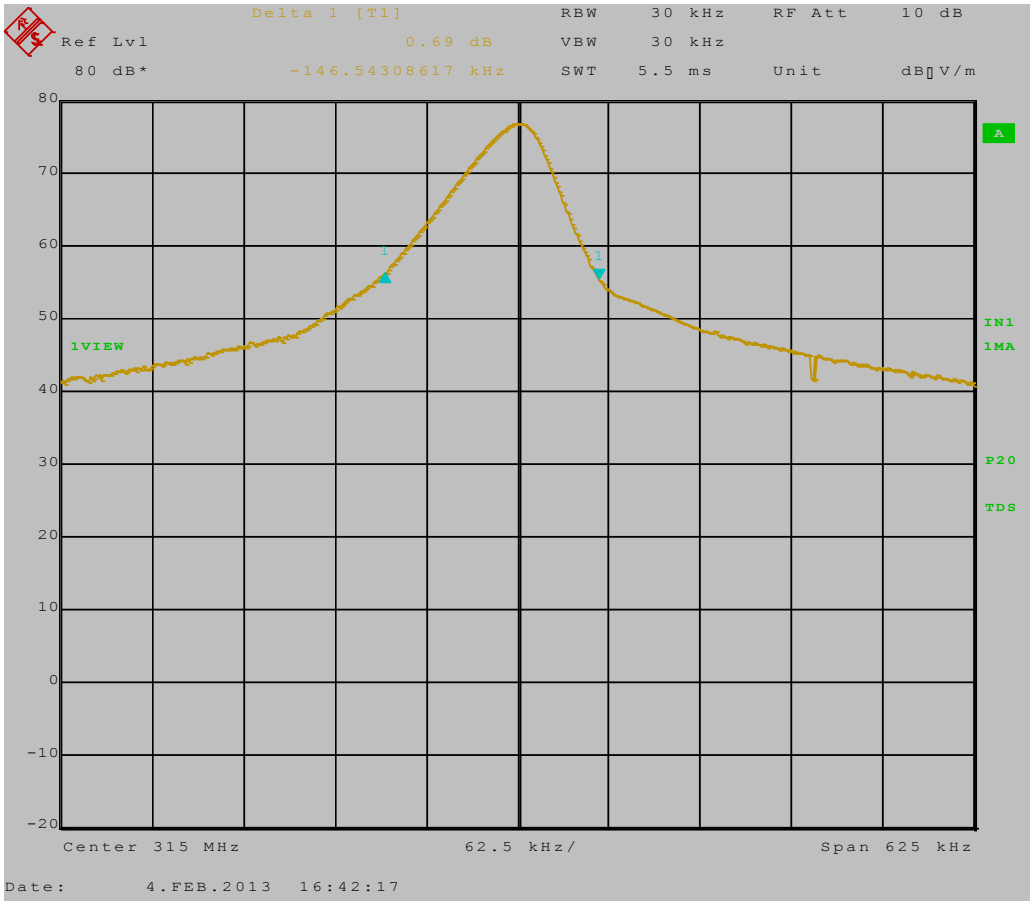

Figure 16 Bandwidth

9.4 Test Equipment Used.

Bandwidth

Instrument	Manufacturer	Model	Serial Number	Calibration	Period
EMI Receiver	R&S	1066.301	100120	November 01, 2012	1 Year
Antenna Bioconical	EMCO	3142B	1250	July 07, 2012	1 Year
Antenna Mast	ETS	2070-2	9608-1497	N/A	N/A
Turntable	ETS	2087	-	N/A	N/A
Mast & Turntable Controller	ETS/EMCO	2090	9608-1456	N/A	N/A

Figure 17 Test Equipment Used

10. APPENDIX A - CORRECTION FACTORS

10.1 Correction factors for CABLE

**from EMI receiver
to test antenna
at 3 meter range.**

FRQ	S.G.	REF	A AMP	
10K	-30	-29.8	-30.2	0.4
15K	-30	-29.5	-29.7	0.2
20K	-30	-29.7	-29.9	0.2
30K	-30	-29.6	-29.9	0.3
50K	-30	-29.7	-30.0	0.3
75K	-30	-29.7	-30.0	0.3
100K	-30	-29.8	-30.0	0.2
150K	-30	-29.8	-30.0	0.2
200K	-30	-29.9	-30.2	0.3
500K	-30	-29.9	-30.3	0.4
1M	-30	-30.1	-30.5	0.4
1.5M	-30	-30.1	-30.6	0.5
2M	-30	-30.2	-30.7	0.5
5M	-30	-30.3	-30.9	0.6
10M	-30	-30.2	-31.0	0.8
15M	-30	-30.2	-31.1	0.9
20M	-30	-30.5	-31.3	0.8

FRQ	S.G.	REF	A	
			AMP	
50M	-30	-30.5	-31.7	1.2
100M	-30	-30.5	-32.2	0.7
150M	-30	-30.4	-32.5	2.1
200M	-30	-30.5	-32.8	2.3
300M	-30	-30.4	-33.3	2.9
500M	-30	-30.5	-34.3	3.8
750M	-30	-30.7	-35.3	4.8
1G	-30	-30.9	-36.3	5.4
1.5G	-15	-15.7	-22.4	6.7
2G	-15	-15.9	-24.9	9.0
2.5G	-15	-16.3	-25.7	9.4
3G	-15	-16.5	-26.4	9.9
3.5G	-15	-16.7	-26.9	10.2
4G	-15	-16.3	-27.5	11.2
4.5G	-15	-16.6	-28.7	12.1
5G	-15	-16.8	-29.9	13.1
5.5G	-15	-17.6	-31.1	13.5
6G	-15	-17.2	-31.7	14.5

NOTES:

1. The cable type is SPUMA400 RF-11N(X2)and 39m long

2. The cable is manufactured by Huber + Suhner

10.2 Correction factors for Bilog ANTENNA

Model: 3142
Antenna serial number: 1250
3 meter range

FREQUENCY (MHz)	AFE (dB/m)	FREQUENCY (MHz)	AFE (dB/m)
30	18.4	1100	25
40	13.7	1200	24.9
50	9.9	1300	26
60	8.1	1400	26.1
70	7.4	1500	27.1
80	7.2	1600	27.2
90	7.5	1700	28.3
100	8.5	1800	28.1
120	7.8	1900	28.5
140	8.5	2000	28.9
160	10.8		
180	10.4		
200	10.5		
250	12.7		
300	14.3		
400	17		
500	18.6		
600	19.6		
700	21.1		
800	21.4		
900	23.5		
1000	24.3		

10.3 Correction factors for Horn ANTENNA

Model: 3115
Antenna serial number: 6142
3 meter range

FREQUENCY (MHz)	Antenna Factor (dB/m)	FREQUENCY (MHz)	Antenna Factor (dB/m)
1000	23.9	10500	38.4
1500	25.4	11000	38.5
2000	27.3	11500	39.4
2500	28.5	12000	39.2
3000	30.4	12500	39.4
3500	31.6	13000	40.7
4000	33	14000	42.1
4500	32.7	15000	40.1
5000	34.1	16000	38.2
5500	34.5	17000	41.7
6000	34.9	17500	45.7
6500	35.1	18000	47.7
7000	35.9		
7500	37.5		
8000	37.6		
8500	38.3		
9000	38.5		
9500	38.1		
10000	38.6		

10.4 Correction factors for ACTIVE LOOP ANTENNA

Model 6502
S/N 9506-2950

FREQUENCY	Magnetic Antenna Factor	Electric Antenna Factor
(MHz)	(dB)	(dB)
.009	-35.1	16.4
.010	-35.7	15.8
.020	-38.5	13.0
.050	-39.6	11.9
.075	-39.8	11.8
.100	-40.0	11.6
.150	-40.0	11.5
.250	-40.0	11.6
.500	-40.0	11.5
.750	-40.1	11.5
1.000	-39.9	11.7
2.000	-39.5	12.0
3.000	-39.4	12.1
4.000	-39.7	11.9
5.000	-39.7	11.8
10.000	40.2	11.3
15.000	-40.7	10.8
20.000	-40.5	11.0
25.000	-41.3	10.2
30.000	42.3	9.2

11. Comparison requirements FCC with Industry Canada

FCC Specification	According FCC Standard	IC Standard
Periodic Operation	FCC Part 15.231 (a)(1-5)	RSS- 210 Issue 8 Section 2.5 Annex 1, A1.1.1
Field Strength at Fundamental	FCC Part 15.231 (b)	RSS- 210 Issue 8 Section 2.5 Annex 1 A1.1.2,
Spurious Emissions	FCC Part 15.231 (b)	RSS GEN Issue 3 7.2.2(Table3)
Bandwidth	FCC Part 15.231 (c)	RSS- 210 Issue 8 Section 2.5 Annex 1 A1.1.3