CENTRE OF TESTING SERVICE INTERNATIONAL

OPERATE ACCORDING TO ISO/IEC 17025

FCC ID TEST REPORT

TEST REPORT NUMBER : CNB3110307-00617-O

CENTRE OF TESTING SERVICE CO., LTD.
Building F, Dachuang industrial park, No.379, Zhongshan Dadao,
Guangzhou, China.

TEST REPORT For FCC ID

47 CFR PART 15 OCT, 2009

Report Reference No.	**CNB3110307-00617-O**
Date of issue	25-Mach 2011
Testing Laboratory Name	**CENTRE OF TESTING SERVICE CO., LTD**
Address	Building F, Dachuang industrial park, No.379, Zhongshan Dadao, Guangzhou, China.
Testing location/ procedure	Full application of Harmonised standards ■ Partial application of Harmonised standards □ Other standard testing method □
Applicant's name	Ningbo Saferhome Electronics Co.,Ltd
Address	NO.5,keyuanroad(North), Taoyuan street,Ningbo Zhejiang China
Test specification	
Standard	**47 CFR PART 15 OCT, 2009, ANSI C63.4-2009**
Test Report Form No.	CTSEMC-1.0
TRF Originator	CENTRE OF TESTING SERVICE CO., LTD
Master TRF	Dated 2009-01

Test item description.....	Solar-Powered Double-Beam Active Wireless Infrared Infrared Detectors
Trade Mark.....	/
Manufacturer.....	Ningbo Saferhome Electronics Co.,Ltd
Model/Type reference.....	HB-T001A2
Ratings.....	DC 3.2V
Operating Frequency	433.00MHz/ ASK
Result	**Positive**

Compiled by:	**Supervised by:**	**Approved by:**
Violet Lee / File administrators	Tom Xiao / Technique principal	Mike He / Manager

CENTRE OF TESTING SERVICE CO., LTD.
Building F, Dachuang industrial park, No.379, Zhongshan Dadao, Guangzhou, China
Tel：+86-20-85543113 (32 lines) Fax：+86-20-38780406
Complaint line：+86-20-85533471 E-mail：cts@cts-lab.com.cn

FCC ID -- T E S T R E P O R T

Test Report No. :	CNB3110307-00617-O	06 January 2011 Date of issue

Type / Model.....	HB-T001A2
EUT.....	Solar-Powered Double-Beam Active Wireless Infrared Infrared Detectors
Applicant……	Ningbo Saferhome Electronics Co.,Ltd.
Address.....	NO.5,keyuanroad(North), Taoyuan street,Ningbo Zhejiang China
Telephone.....	+86-574-65222130
Fax.....	+86-574-65222102
Contact.....	/
Manufacturer……	Ningbo Saferhome Electronics Co.,Ltd.
Address.....	NO.5,keyuanroad(North), Taoyuan street,Ningbo Zhejiang China
Telephone.....	+86-574-65222130
Fax.....	+86-574-65222102
Contact.....	/
Factory ……	Ningbo Saferhome Electronics Co.,Ltd.
Address.....	NO.5,keyuanroad(North), Taoyuan street,Ningbo Zhejiang China
Telephone.....	+86-574-65222130
Fax.....	+86-574-65222102
Contact.....	/

Test Result according to the standards on page 3: **Positive**

The test report merely corresponds to the test sample.
It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

CENTRE OF TESTING SERVICE CO., LTD.
Building F, Dachuang industrial park, No.379, Zhongshan Dadao, Guangzhou, China
Tel：+86-20-85543113 (32 lines) Fax：+86-20-38780406
Complaint line：+86-20-85533471 E-mail：cts@cts-lab.com.cn

TABLE OF CONTENTS

Description **Page**

CENTRE OF TESTING SERVICE CO., LTD.
Building F, Dachuang industrial park, No.379, Zhongshan Dadao, Guangzhou, China
Tel：+86-20-85543113 (32 lines) Fax：+86-20-38780406
Complaint line：+86-20-85533471 E-mail：cts@cts-lab.com.cn

CENTRE OF TESTING SERVICE CO., LTD.
Building F, Dachuang industrial park, No.379, Zhongshan Dadao, Guangzhou, China
Tel：+86-20-85543113 (32 lines) Fax：+86-20-38780406
Complaint line：+86-20-85533471 E-mail：cts@cts-lab.com.cn

1. TEST STANDARDS

The tests were performed according to following standards:

■**47 CFR PART 15 OCT, 2009**
■ **ANSI C63.4-2009**

2. SUMMARY

2.1 GENERAL REMARKS

Date of receipt of test sample	17 March 2011
Testing commenced on	18 March 2011
Testing concluded on	25 March 2011

2.2 FINAL ASSESSMENT

The FCC requirements pertaining to the technical standards and tested operation modes are

■ - fulfilled.

□ - **not** fulfilled.

The equipment under test

■ - fulfils the FCC requirements cited on page 3.

□ - **does not** fulfil the FCC requirements cited on page 3.

CENTRE OF TESTING SERVICE CO., LTD.
Building F, Dachuang industrial park, No.379, Zhongshan Dadao, Guangzhou, China
Tel：+86-20-85543113 (32 lines) Fax：+86-20-38780406
Complaint line：+86-20-85533471 E-mail：cts@cts-lab.com.cn

3. EQUIPMENT UNDER TEST

3.1 Power supply system utilised

Power supply voltage : ■ DC 3.2V

3.2 Short description of the Equipment under Test (EUT)

Number of tested samples: **1**
Serial number: Prototype

3.3 EUT operation mode

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

☐ - Standby
■ - Test program (customer specific)

Operation mode 1: TX

Note: X position of EUT is the worst case, so only these test results be recorded in the test report.

CENTRE OF TESTING SERVICE CO., LTD.
Building F, Dachuang industrial park, No.379, Zhongshan Dadao, Guangzhou, China
Tel：+86-20-85543113 (32 lines) Fax：+86-20-38780406
Complaint line：+86-20-85533471 E-mail：cts@cts-lab.com.cn

3.4 EUT configuration

3.4.1. Description of configuration (EUT)

Description	:	Solar-Powered Double-Beam Active Wireless Infrared Infrared Detectors
Model Number	:	HB-T001A2
Operation frequency	:	433.00MHz
Radio Technology	:	ASK
Modulation Technology	:	ASK modulation
Antenna	:	Integral antenna, met requirement of FCC Part 15 C: 15.231
Antenna Assembly Gain	:	2dBi (maximum)

3.4.2. Tested Supporting System Details

N/A

CENTRE OF TESTING SERVICE CO., LTD.
Building F, Dachuang industrial park, No.379, Zhongshan Dadao, Guangzhou, China
Tel：+86-20-85543113 (32 lines) Fax：+86-20-38780406
Complaint line：+86-20-85533471 E-mail：cts@cts-lab.com.cn

4. TEST ENVIRONMENT

4.1 Address of the test laboratory

Building F, Dachuang industrial park, No.379, Zhongshan Dadao, Guangzhou, China

Tel：+86-20-85543113 (32 lines) Fax：+86-20-38780406

4.2 Test facility

The test facility is recognized, certified, or accredited by the following organizations:

CNAS-Lab Code: L3394

CENTRE OF TESTING SERVICE CO., LTD has been assessed and proved to be in compliance with CNAS-CL01: 2006 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC 17025: 2005 General Requirements) for the Competence of Testing and Calibration Laboratories.

IC-Registration No.: 8374

The 3m Alternate Test Site of CENTRE OF TESTING SERVICE CO., LTD has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No. 8374 on June 24, 2009 .

FCC-Registration No.: 971995

CENTRE OF TESTING SERVICE CO., LTD, EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. Registration No.791995, July 21, 2009.

4.3 Environmental conditions

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

Temperature:	15~35 ° C
Humidity:	25~75 %
Atmospheric pressure:	86~106 kPa

4.4 Definitions of symbols used in this test report

■ - The black square indicates that the listed condition, standard or equipment is applicable for this report.

□ - The empty square indicates that the listed condition, standard or equipment is **not** applicable for this report.

4.5 Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16 - 4 “Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements” and is documented in the CTS quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

4.6 Measurement Uncertainty

Test Item	Frequency Range	Uncertainty	Note
Conduction disturbance	150kHz~30MHz	±1.22dB	(1)
Power disturbance	30MHz~300MHz	±1.38dB	(1)
Radiation emission (3m)	30MHz~300MHz	±3.14dB	(1)
	300MHz~1000MHz	±3.18dB	(1)

(1).This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

5. Summary of standards and results

5.1.Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below.

EMISSION		
Description of Test Item	**Standard**	**Results**
Conducted Emission Test	ANSI C63.4-2009 FCC Part 15 C: 15.207	N/A
Radiated Emission Test	ANSI C63.4-2009 FCC Part 15 C: 15.231	PASSED
20 dB Bandwidth Test	ANSI C63.4-2009 FCC Part 15 C: 15.231	PASSED
Stop Transmitting Time Test	ANSI C63.4-2009 FCC Part 15 C: 15.231	PASSED
N/A is an abbreviation for Not Applicable.		

CENTRE OF TESTING SERVICE CO., LTD.
Building F, Dachuang industrial park, No.379, Zhongshan Dadao, Guangzhou, China
Tel：+86-20-85543113 (32 lines) Fax：+86-20-38780406
Complaint line：+86-20-85533471 E-mail：cts@cts-lab.com.cn

6. Power Line Conducted Emission Test

According to Paragraph (f) of FCC Part 15 C: 15.207, Tests to demonstrate compliance with the conducted limits are not required for devices which only employ battery power for operation and which do not operate from the AC power lines or contain provisions for operation while connected to the AC power lines.

CENTRE OF TESTING SERVICE CO., LTD.
Building F, Dachuang industrial park, No.379, Zhongshan Dadao, Guangzhou, China
Tel：+86-20-85543113 (32 lines) Fax：+86-20-38780406
Complaint line：+86-20-85533471 E-mail：cts@cts-lab.com.cn

7. Radiated disturbance (electric field)

7.1.Test Equipment

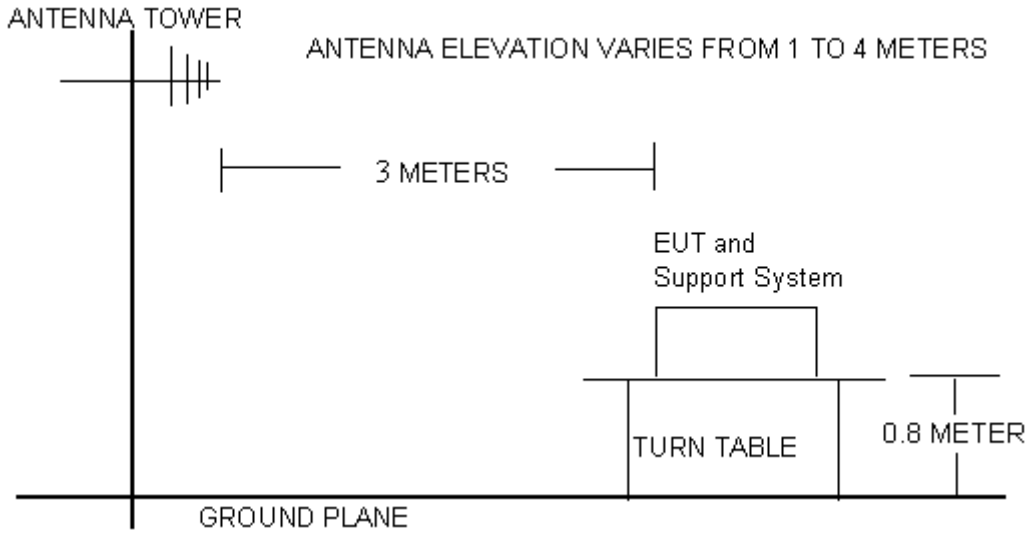
Radiated disturbance (electric field)					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	EMI Test Receiver	ROHDE & SCHWARZ	ESCI	100868	2010/12
2	Biconical Antenna	ROHDE & SCHWARZ	HK116	100221	2010/12
3	Log per Antenna	ROHDE & SCHWARZ	HL223	100226	2010/12
4	Log per Antenna	ROHDE & SCHWARZ	HL050	100186	2010/12
5	Signal analyzer	ROHDE & SCHWARZ	FSIQ26	100311	2010/12

7.2.Block Diagram of Test Setup

7.2.1 Block Diagram of connection between EUT and simulators

(EUT:* Solar-Powered Double-Beam Active Wireless Infrared Infrared Detectors*)

7.2.2 Anechoic Chamber Setup Diagram



7.3.Radiated Emission Limit Standard: FCC 15.231

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		μV/m	dB(μV)/m
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0
Above 1000	3	Other:74.0 dB(μV)/m (Peak) 54.0 dB(μV)/m (Average)	

Remark: (1) Emission level dBμV = 20 log Emission level μV/m

(2) The smaller limit shall apply at the cross point between two frequency bands.

(3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

7.4.Test Procedure

The EUT and its simulators are placed on a turn table, which is 0.8 meter high above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna, which is mounted on a antenna tower. The antenna can be moved up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna. Both horizontal and vertical polarization of the antenna is set on Test. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.4-2009on radiated emission Test.

The frequency range from 30MHz to 1000MHz and above 1GHz. is investigated. Please see the following pages.

All measurements for radiated emissions within the restricted bands were performed using a Quasi-Peak detector with 120kHz RBW below 1GHz and a Peak and Average detector with 1MHz RBW above 1GHz,

All measurements for radiated emissions within the restricted bands were performed using a Quasi-Peak detector with 300kHz VBW below 1GHz and a Peak detector with 1MHz VBW above 1GHz, A average detector be caluclated from peak value using duty cycle factor Both 30MHz to 1000MHz and above 1GHz

Pretest x, y, z position of EUT, final, select the worst case x position test and record the test results in the report.

The test modes (TX Mode) is tested in Anechoic Chamber and all the scanning waveforms are reported on section 7.5

7.5.Radiated Emission Test Results

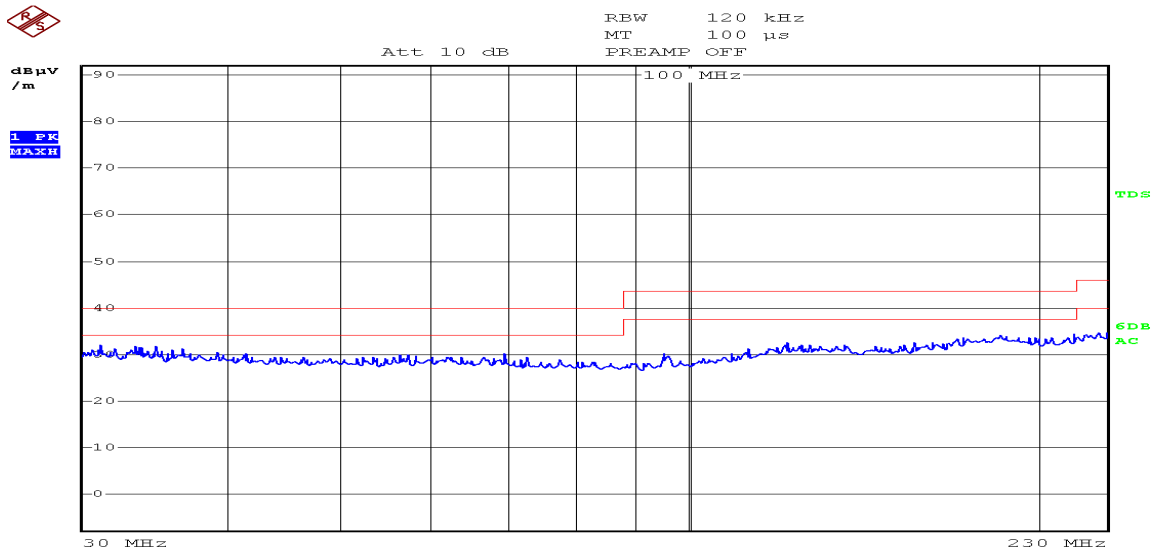
PASSED.

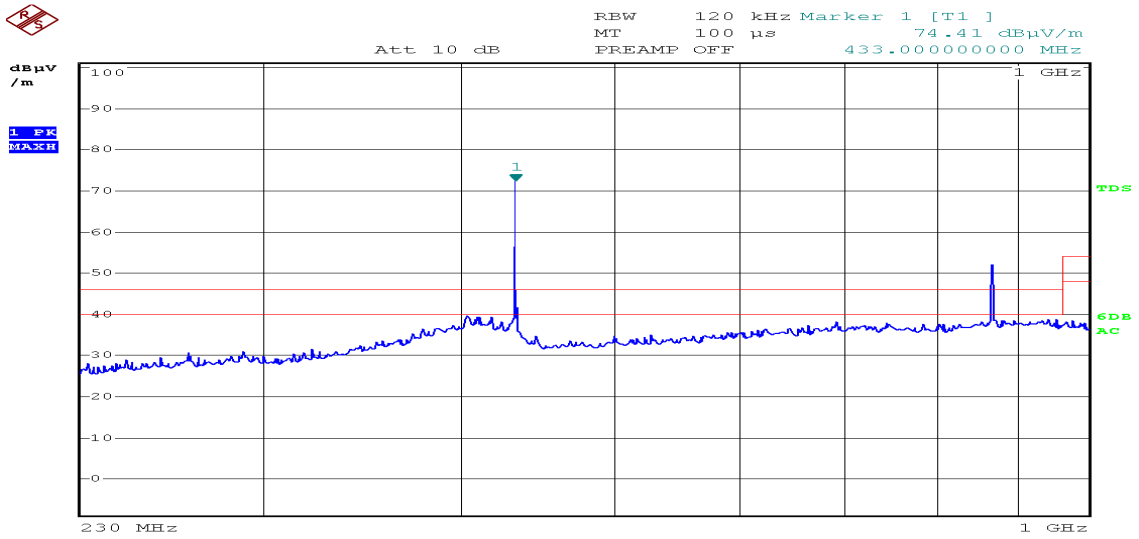
The frequency range from 30MHz to 230MHz, 230MHz to 1000MHz and above 1GHz. is investigated. Please see the following pages.

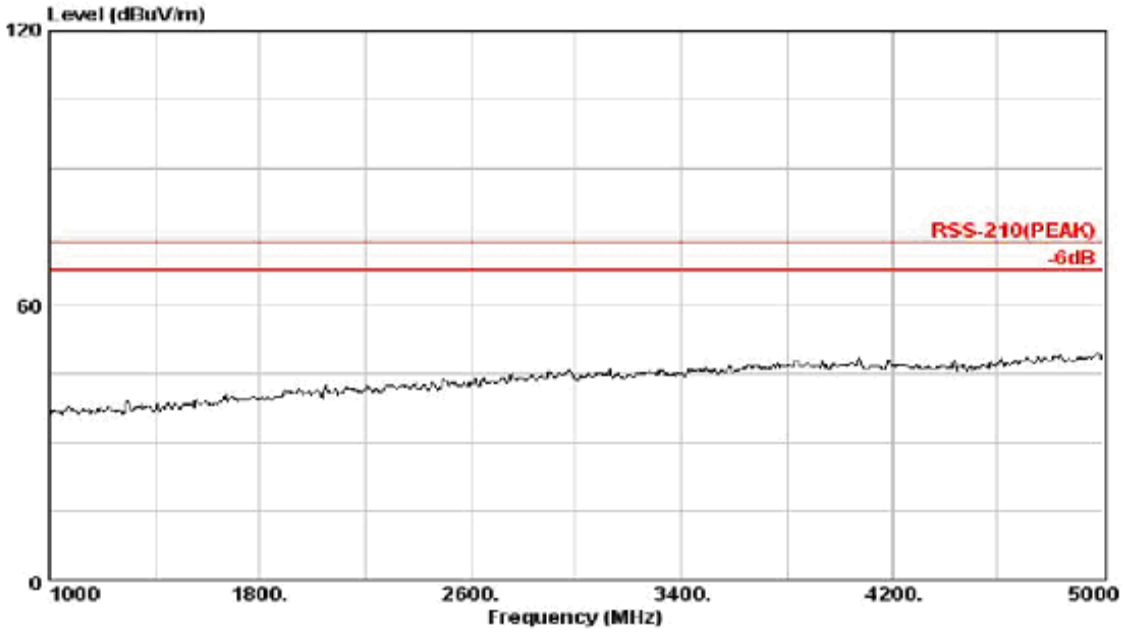
CENTRE OF TESTING SERVICE CO., LTD.
Building F, Dachuang industrial park, No.379, Zhongshan Dadao, Guangzhou, China
Tel：+86-20-85543113 (32 lines) Fax：+86-20-38780406
Complaint line：+86-20-85533471 E-mail：cts@cts-lab.com.cn

Channel: Test point: Frequency range:	433.00MHz Horizontal 30-230MHz and 230-1000MHz	Result:	■ - passed ☐ - not passed

EUT	Solar-Powered Multi-beam Double-Beam Active Infrared Detectors
Firm Name	Ningbo Saferhome Electronics Co.,Ltd
Operating Condition	DC 3.2V
Test Condition	Ambient Temperature: 25°C Humidity: 56%
Test Date:	18 March 2011 to 25 March 2011
Operator	**Peter**
MODEL NO	HB-T001A2







Fundamental and Harmonics Average Result					
Frequency (MHz)	Peak Level (dBμV/m)	PDCF(dBμV/m) (See section 11)	Average Level (dBμV/m)	Limit(dBμV/m) (average)	Conclusion
433.00	74.41	-7.55	66.86	80.80	PASSED
866.14	50.82	-7.55	43.27	60.80	PASSED

Frequency	Result [dBμV]		Limit [dBμV]		Dlimit [dBμV]	
[MHz]	Average	QP	Average	QP	Average	QP
30.90	---	26.3	---	40.0	---	13.7
56.24	---	27.5	---	40.0	---	12.5
86.93	---	29.2	---	43.5	---	14.3
120.20	---	27.5	---	43.5	---	16.0
198.87	---	31.4	---	43.5	---	12.1
210.32	---	32.3	---	43.5	---	11.2

Frequency	Result [dBμV]		Limit [dBμV]		Dlimit [dBμV]	
[MHz]	Average	QP	Average	QP	Average	QP
303.05	---	32.5	---	46.0	---	13.5
434.02	---	33.1	---	46.0	---	12.9
868.02	---	34.7	---	46.0	---	11.3
944.06	---	42.6	---	55.6	---	13.0

Note: 1. Emission level=Read level + Factor
2. Factor=Antenna factor + Cable loss

CENTRE OF TESTING SERVICE CO., LTD.
Building F, Dachuang industrial park, No.379, Zhongshan Dadao, Guangzhou, China
Tel：+86-20-85543113 (32 lines) Fax：+86-20-38780406
Complaint line：+86-20-85533471 E-mail：cts@cts-lab.com.cn

Channel:	433.00MMHz	Result:	■ - passed □ - not passed
Test point:	Horizontal		
Frequency range:	1GHz-5GHz		

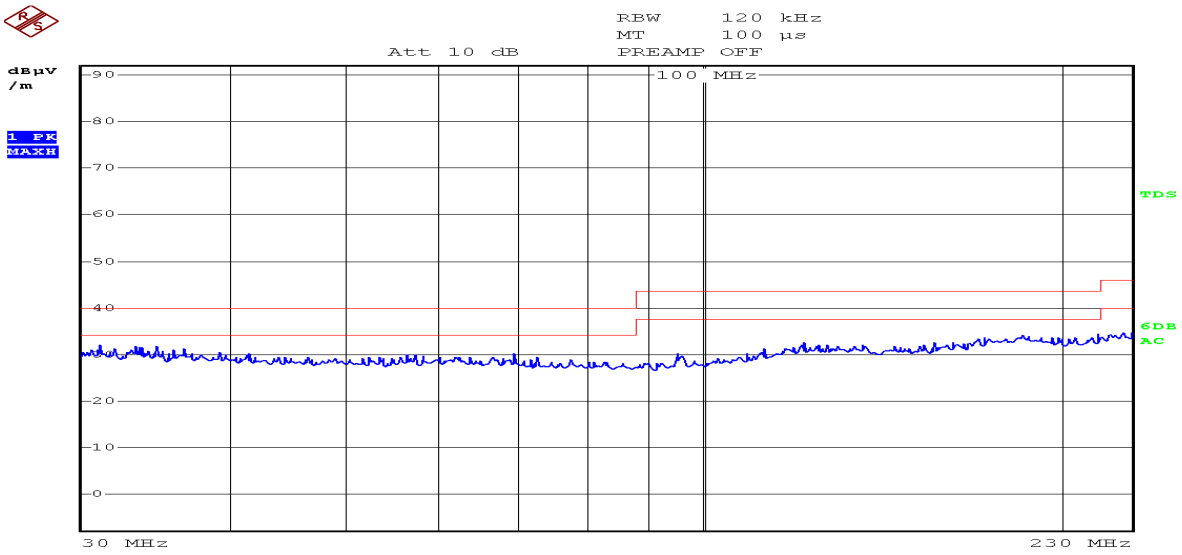
Frequency [MHz]	Result [dBμV]		Limit [dBμV]		Dlimit [dBμV]	
	Average	Peak	Average	Peak	Average	Peak
1840.2	46.46	54.3	54	74	7.54	19.7
2733.7	46.16	53.5	54	74	7.84	20.5
3480.4	41.16	48.8	54	74	12.84	25.2
4157.9	44.26	52.0	54	74	9.74	22.0
4274.6	43.16	50.6	54	74	10.84	23.4
4931.8	45.46	52.9	54	74	8.54	21.1

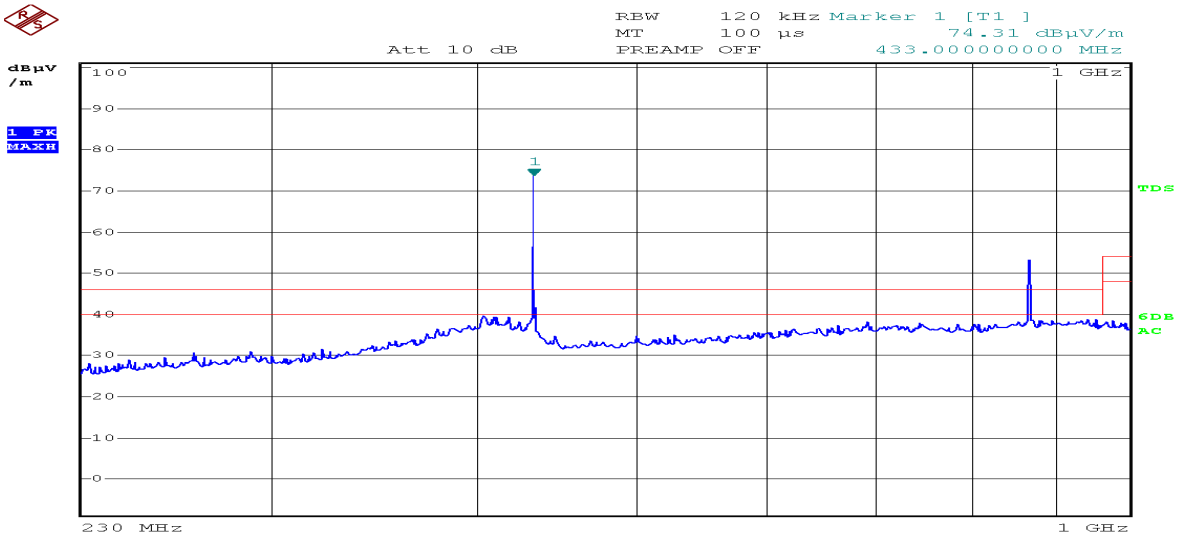
Note: 1. Emission level (Peak)=Read level + Factor
2. Emission level (Average) =Duty cycle factor +Peak value
3. Duty cycle factor value see section 11

CENTRE OF TESTING SERVICE CO., LTD.
Building F, Dachuang industrial park, No.379, Zhongshan Dadao, Guangzhou, China
Tel：+86-20-85543113 (32 lines) Fax：+86-20-38780406
Complaint line：+86-20-85533471 E-mail：cts@cts-lab.com.cn

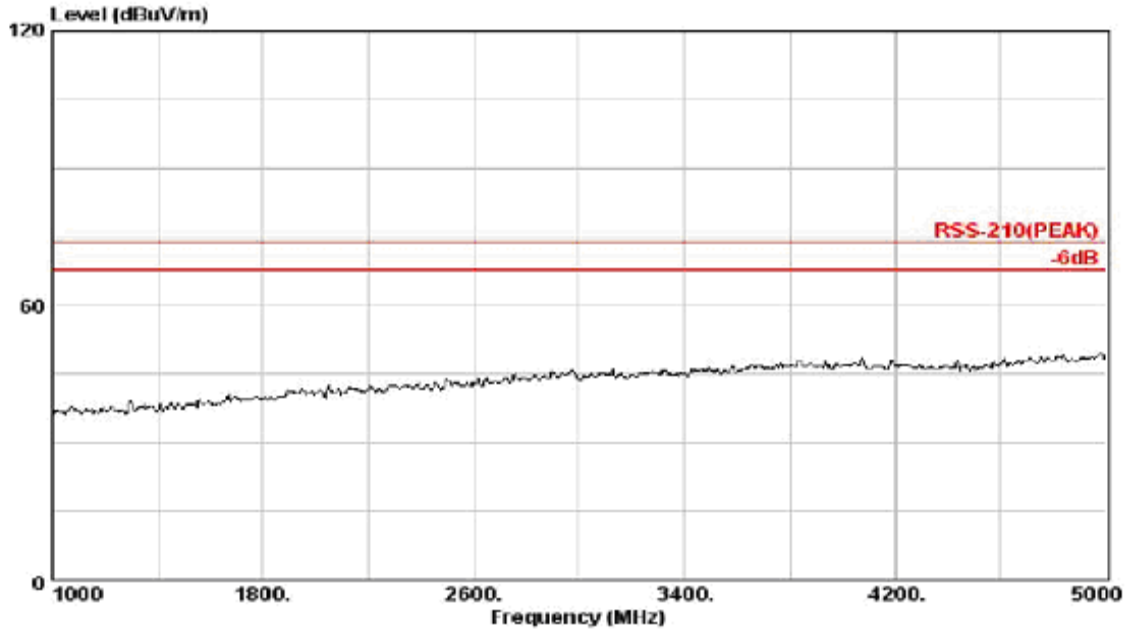
Channel: Test point: Frequency range:	433.00 MHz Vertical 30-230MHz and 230-1000MHz	Result:	■ - passed ☐ - not passed

EUT	Solar-Powered Multi-beam Double-Beam Active Infrared Detectors
Firm Name	Ningbo Saferhome Electronics Co.,Ltd
Operating Condition	DC 3.2V
Test Condition	Ambient Temperature: 25°C Humidity: 56%
Test Date:	18 March 2011 to 25 March 2011
Operator	**Peter**
MODEL NO	HB-T001A2





CENTRE OF TESTING SERVICE CO., LTD.
Building F, Dachuang industrial park, No.379, Zhongshan Dadao, Guangzhou, China
Tel：+86-20-85543113 (32 lines) Fax：+86-20-38780406
Complaint line：+86-20-85533471 E-mail：cts@cts-lab.com.cn See Reverse For Terms And Conditions of Service



Fundamental and Harmonics Average Result					
Frequency (MHz)	Peak Level (dBμV/m)	PDCF(dBμV/m) (See section 11)	Average Level (dBμV/m)	Limit(dBμV/m) (average)	Conclusion
433.00	74.31	-7.57	66.76	80.80	PASSED
867.24	54.23	-7.57	46.68	60.80	PASSED

Frequency	Result [dBμV]		Limit [dBμV]		Dlimit [dBμV]	
[MHz]	Average	QP	Average	QP	Average	QP
30.25	---	26.5	---	40.0	---	13.5
56.21	---	27.5	---	40.0	---	12.5
86.60	---	29.2	---	43.5	---	14.3
120.38	---	27.7	---	43.5	---	15.80
198.85	---	31.5	---	43.5	---	12.0
210.33	---	32.4	---	43.5	---	11.1

Frequency	Result [dBμV]		Limit [dBμV]		Dlimit [dBμV]	
[MHz]	Average	QP	Average	QP	Average	QP
303.58	---	32.9	---	46.0	---	13.1
434.64	---	33.5	---	46.0	---	12.6
868.60	---	34.6	---	46.0	---	11.4
945.06	---	42.9	---	55.6	---	12.7

Note: 1. Emission level=Read level + Factor
2. Factor=Antenna factor + Cable loss

CENTRE OF TESTING SERVICE CO., LTD.
Building F, Dachuang industrial park, No.379, Zhongshan Dadao, Guangzhou, China
Tel：+86-20-85543113 (32 lines) Fax：+86-20-38780406
Complaint line：+86-20-85533471 E-mail：cts@cts-lab.com.cn

Channel:	433.00MHz	Result:	■ - passed □ - not passed
Test point:	Vertical		
Frequency range:	1~5GHz		

Frequency	Result [dBμV]		Limit [dBμV]		Dlimit [dBμV]	
[MHz]	Average	Peak	Average	Peak	Average	Peak
1830.4	45.73	53.1	54	74	8.27	20.9
2744.7	43.14	50.6	54	74	10.86	23.4
3470.9	42.14	49.6	54	74	11.86	24.4
4148.8	46.43	53.8	54	74	7.57	20.2
4283.5	42.42	48.8	54	74	11.58	24.2
4951.7	44.43	51.8	54	74	9.57	22.2

Note: 1. Emission level (Peak)=Read level + Factor
2. Emission level (Average) =Duty cycle factor +Peak value
3. Duty cycle factor value see section 11

CENTRE OF TESTING SERVICE CO., LTD.
Building F, Dachuang industrial park, No.379, Zhongshan Dadao, Guangzhou, China
Tel：+86-20-85543113 (32 lines) Fax：+86-20-38780406
Complaint line：+86-20-85533471 E-mail：cts@cts-lab.com.cn

8. 20 dB Bandwidth test

8.1. Test Equipment

20 dB Bandwidth test					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	EMI Test Receiver	ROHDE & SCHWARZ	ESCI	10868	2010/12
2	Log per Antenna	ROHDE & SCHWARZ	HL223	100226	2010/12
3	Signal analyzer	ROHDE & SCHWARZ	FSIQ26	100311	2010/12

8.2. Test Information

EUT:	Solar-Powered Double-Beam Active Wireless Infrared Infrared Detectors
M/N:	HB-T001A2
Firm Name:	Ningbo Saferhome Electronics Co.,Ltd
Power supply:	DC 3.2V
Test Condition:	Ambient Temperature: 25°C Humidity: 56%
Test standard:	FCC PART 15C: 15.231
Test mode:	Transmitting
Test Frequency:	433.00MHz
Test Date:	18 March 2011 to 25 March 2011
Test By:	**Peter**

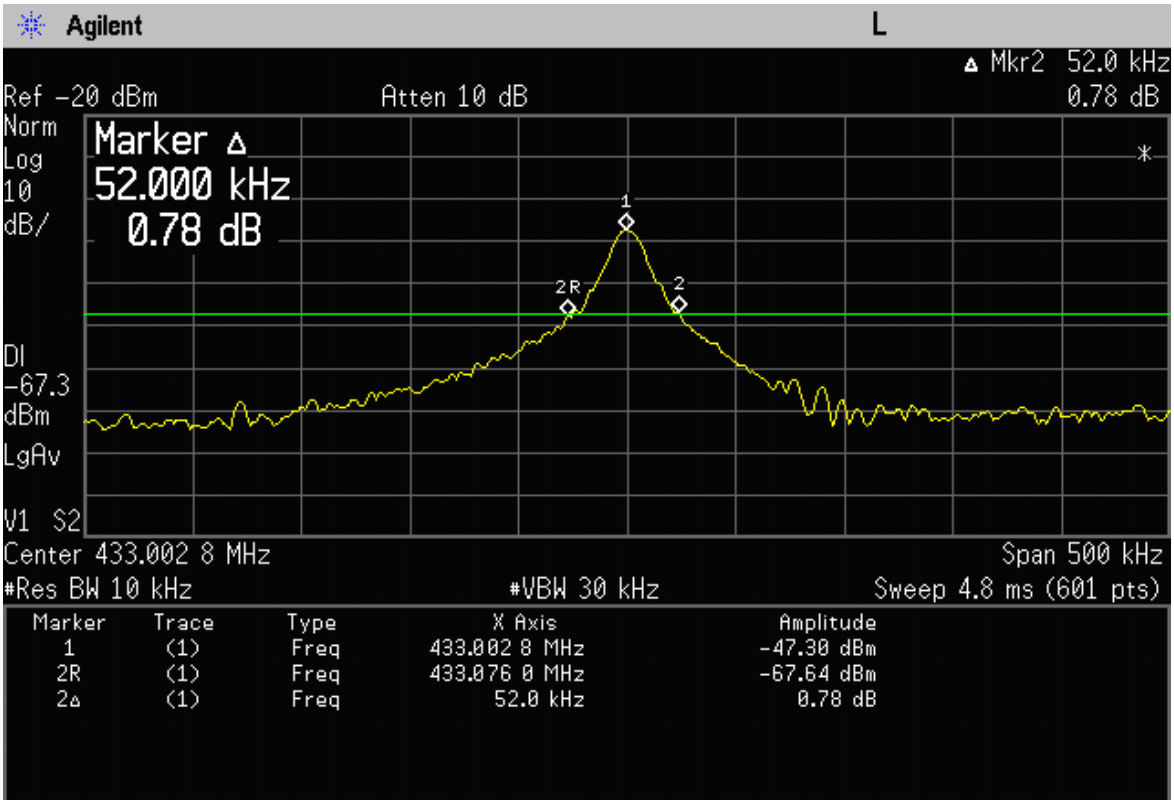
8.3. Test Results

PASSED.

The testing data was attached in the next pages.

Frequency (MHz)	20 dB Bandwidth (kHz)	Limit(kHz): No wider than 0.25% of the center frequency	Conclusion
433.00	52.0	433.00*0.25%=1.08MHz	PASSED

CENTRE OF TESTING SERVICE CO., LTD.
Building F, Dachuang industrial park, No.379, Zhongshan Dadao, Guangzhou, China
Tel：+86-20-85543113 (32 lines) Fax：+86-20-38780406
Complaint line：+86-20-85533471 E-mail：cts@cts-lab.com.cn



CENTRE OF TESTING SERVICE CO., LTD.
Building F, Dachuang industrial park, No.379, Zhongshan Dadao, Guangzhou, China
Tel：+86-20-85543113 (32 lines) Fax：+86-20-38780406
Complaint line：+86-20-85533471 E-mail：cts@cts-lab.com.cn

9. Stop Transmitting Time Test

9.1. Test Equipment

Band Edge Compliance test					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	EMI Test Receiver	ROHDE & SCHWARZ	ESCI	10868	2010/12
2	Log per Antenna	ROHDE & SCHWARZ	HL223	100226	2010/12
3	Signal analyzer	ROHDE & SCHWARZ	FSIQ26	100311	2010/12

9.2. Test Information

EUT:	Solar-Powered Double-Beam Active Wireless Infrared Infrared Detectors
M/N:	HB-T001A2
Firm Name:	Ningbo Saferhome Electronics Co.,Ltd
Power supply:	DC 3.2V
Test Condition:	Ambient Temperature: 25°C Humidity: 56%
Test standard:	FCC PART 15C: 15.231
Test mode:	Transmitting
Test Frequency:	433.00MHz
Test Date:	18 March 2011 to 25 March 2011
Test By:	**Peter**

9.3. Test Results

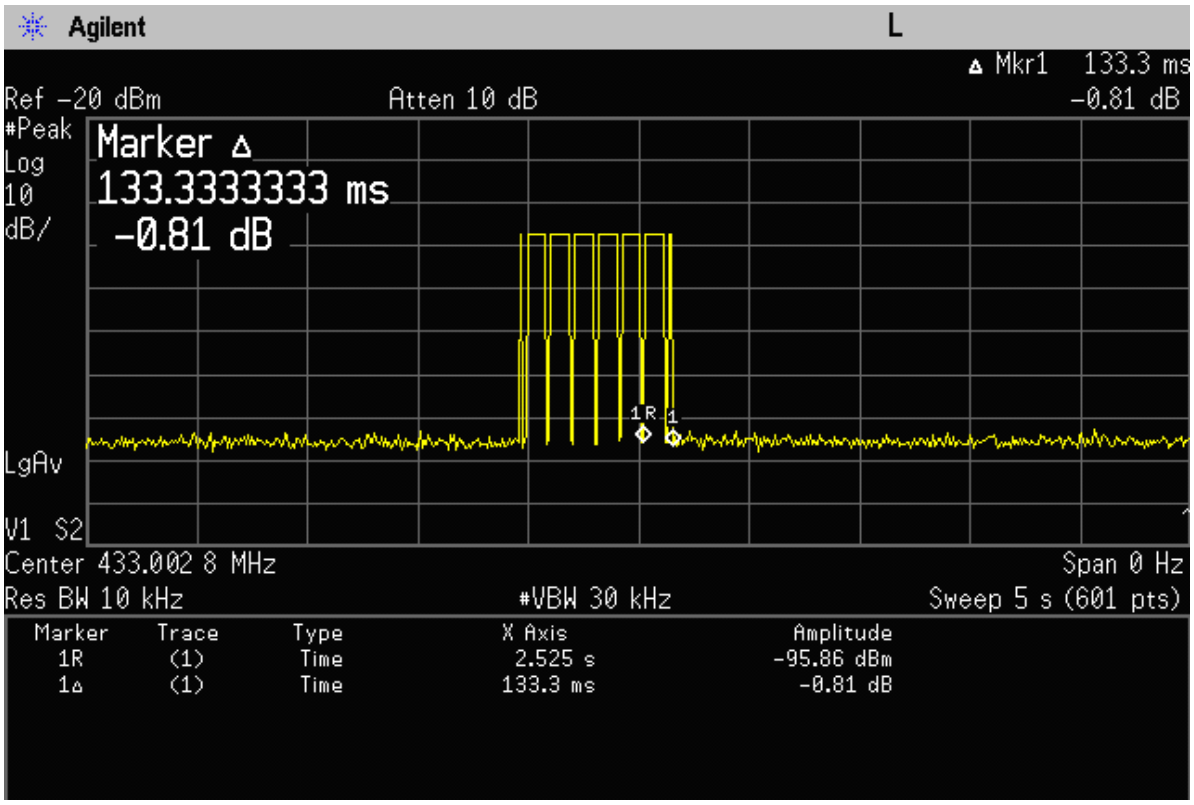
PASSED.

The testing data was attached in the next pages.

Set the spectrum to zero span, activated the EUT by manually, And then, we could see the transmitting wave in the spectrum, when the time marker went to “1R”, released the EUT, After 133.33ms, we could see the EUT stop transmitting.

Frequency (MHz)	Stop Transmitting Time	Limit: not more than 5 seconds of being released	Conclusion
433.00	133.33ms	5s	PASSED

CENTRE OF TESTING SERVICE CO., LTD.
Building F, Dachuang industrial park, No.379, Zhongshan Dadao, Guangzhou, China
Tel：+86-20-85543113 (32 lines) Fax：+86-20-38780406
Complaint line：+86-20-85533471 E-mail：cts@cts-lab.com.cn



CENTRE OF TESTING SERVICE CO., LTD.
Building F, Dachuang industrial park, No.379, Zhongshan Dadao, Guangzhou, China
Tel：+86-20-85543113 (32 lines) Fax：+86-20-38780406
Complaint line：+86-20-85533471 E-mail：cts@cts-lab.com.cn

10. Pulse Desensitization Correction Factor

10.1. Test Equipment

Band Edge Compliance test					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	EMI Test Receiver	ROHDE & SCHWARZ	ESCI	10868	2010/12
2	Log per Antenna	ROHDE & SCHWARZ	HL223	100226	2010/12
3	Signal analyzer	ROHDE & SCHWARZ	FSIQ26	100311	2010/12
4	Spectrum	Agilent	E4446A	44300459	2010/12

Test Information

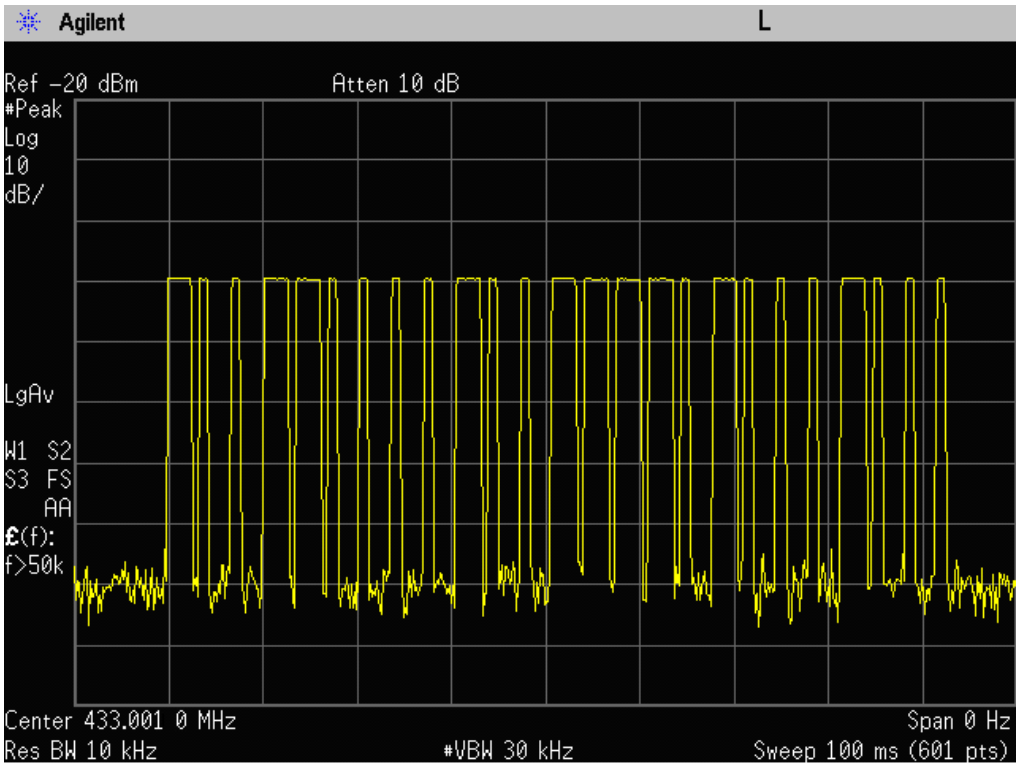
EUT:	Solar-Powered Double-Beam Active Wireless Infrared Infrared Detectors
M/N:	HB-T001A2
Firm Name:	Ningbo Saferhome Electronics Co.,Ltd
Power supply:	DC 3.2V
Test Condition:	Ambient Temperature: 25°C Humidity: 56%
Test standard:	FCC PART 15C: 15.231
Test mode:	Transmitting
Test Frequency:	433.00MHz
Test Date:	18 March 2011 to 25 March 2011
Test By:	**Peter**

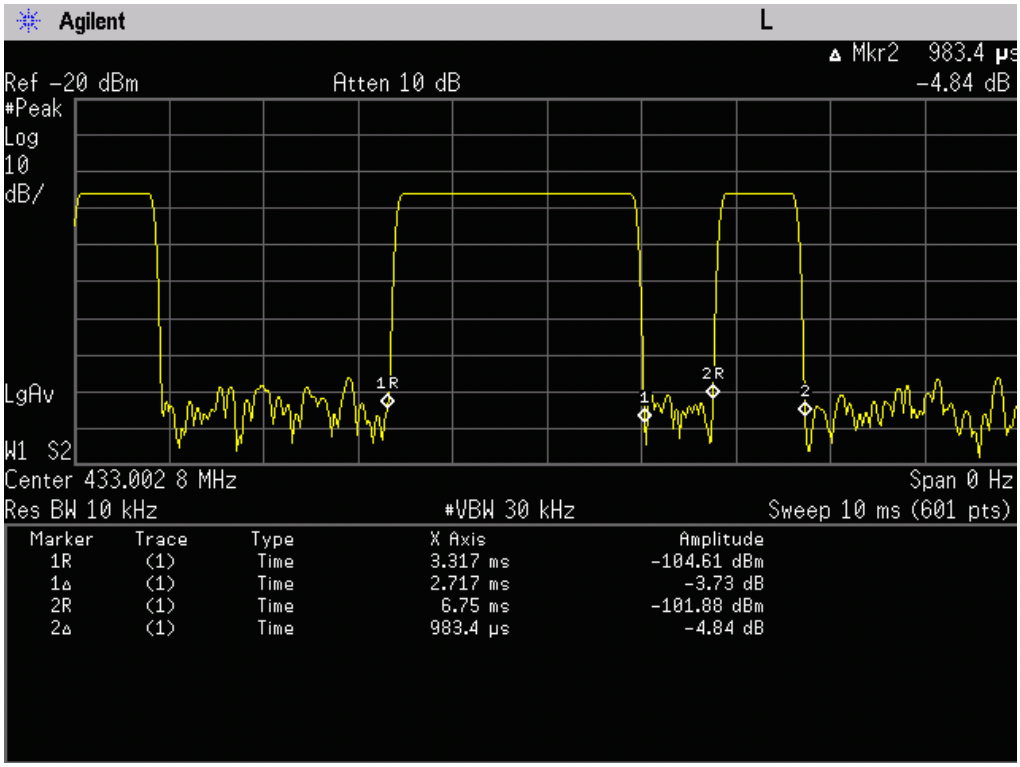
10.3. Test Results

PASSED.

The testing data was attached in the next pages.

CENTRE OF TESTING SERVICE CO., LTD.
Building F, Dachuang industrial park, No.379, Zhongshan Dadao, Guangzhou, China
Tel：+86-20-85543113 (32 lines) Fax：+86-20-38780406
Complaint line：+86-20-85533471 E-mail：cts@cts-lab.com.cn





Duty cycle= T ontime / 100ms=(10*2.717+15*0.9833) / 100=0.42
PDCF=20*log(Duty cycle)=20*log(0.42)=-7.55

CENTRE OF TESTING SERVICE CO., LTD.
Building F, Dachuang industrial park, No.379, Zhongshan Dadao, Guangzhou, China
Tel：+86-20-85543113 (32 lines) Fax：+86-20-38780406
Complaint line：+86-20-85533471 E-mail：cts@cts-lab.com.cn See Reverse For Terms And Conditions of Service

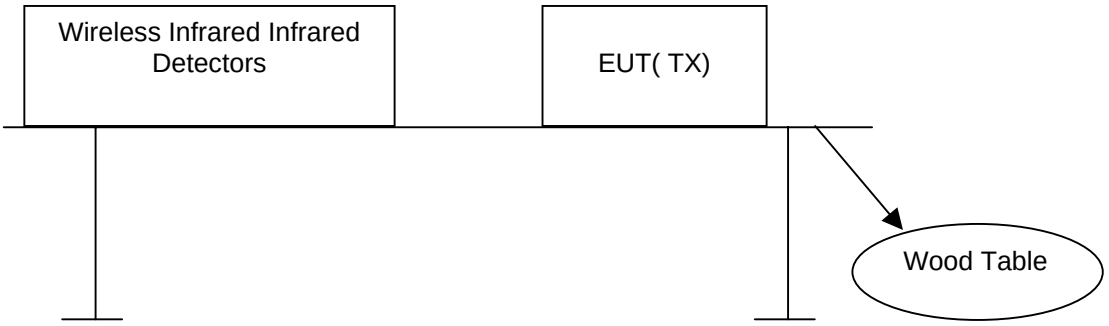
11. Receiver Spurious (electric field)

11.1.Test Equipment

Radiated disturbance (electric field)					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	EMI Test Receiver	ROHDE & SCHWARZ	ESCI	100868	2010/12
2	Biconical Antenna	ROHDE & SCHWARZ	HK116	100221	2010/12
3	Log per Antenna	ROHDE & SCHWARZ	HL223	100226	2010/12
4	Log per Antenna	ROHDE & SCHWARZ	HL050	100186	2010/12
5	Signal analyzer	ROHDE & SCHWARZ	FSIQ26	100311	2010/12

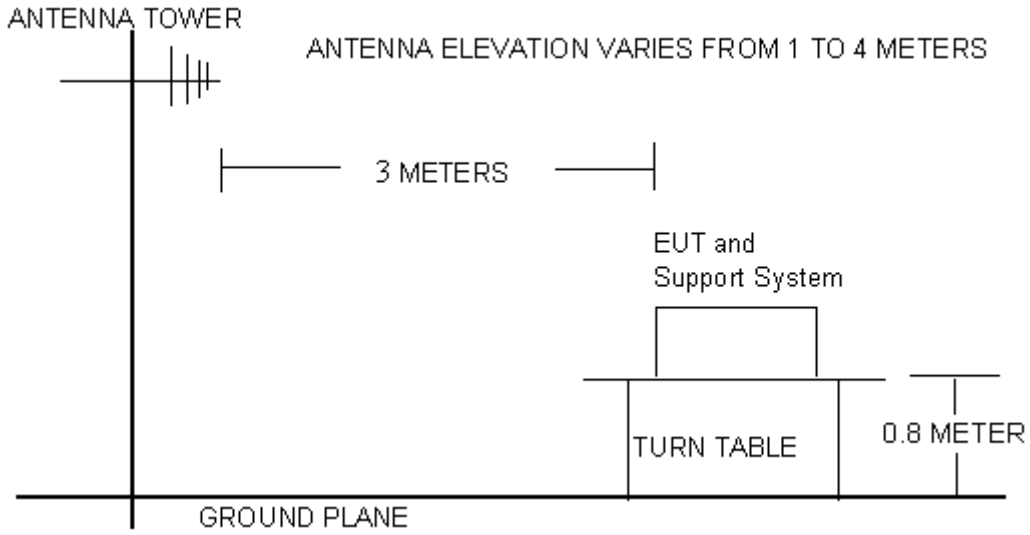
11.2.Block Diagram of Test Setup

11.2.1 Block Diagram of connection between EUT and simulators



(EUT:* Solar-Powered Double-Beam Active Wireless Infrared Infrared Detectors*)

11.2.2 Anechoic Chamber Setup Diagram



11.3.Radiated Emission Limit Standard: FCC 15.231

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		μV/m	dB(μV)/m
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0
Above 1000	3	Other:74.0 dB(μV)/m (Peak) 54.0 dB(μV)/m (Average)	

Remark: (1) Emission level dBμV = 20 log Emission level μV/m

(2) The smaller limit shall apply at the cross point between two frequency bands.

(3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

11.4.Test Procedure

The EUT and its simulators are placed on a turn table, which is 0.8 meter high above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna, which is mounted on a antenna tower. The antenna can be moved up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna. Both horizontal and vertical polarization of the antenna is set on Test. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.4-2009 on radiated emission Test.

The frequency range from 30MHz to 1000MHz and above 1GHz. is investigated. Please see the following pages.

All measurements for radiated emissions within the restricted bands were performed using a Quasi-Peak detector with 120kHz RBW below 1GHz and a Peak and Average detector with 1MHz RBW above 1GHz,

All measurements for radiated emissions within the restricted bands were performed using a Quasi-Peak detector with 300kHz VBW below 1GHz and a Peak detector with 1MHz VBW above 1GHz, A average detector be caluclated from peak value using duty cycle factor Both 30MHz to 1000MHz and above 1GHz

Pretest x, y, z position of EUT, final, select the worst case x position test and record the test results in the report.

The test modes (RX Mode) is tested in Anechoic Chamber and all the scanning waveforms are reported on section 11.5

11.5.Radiated Emission Test Results

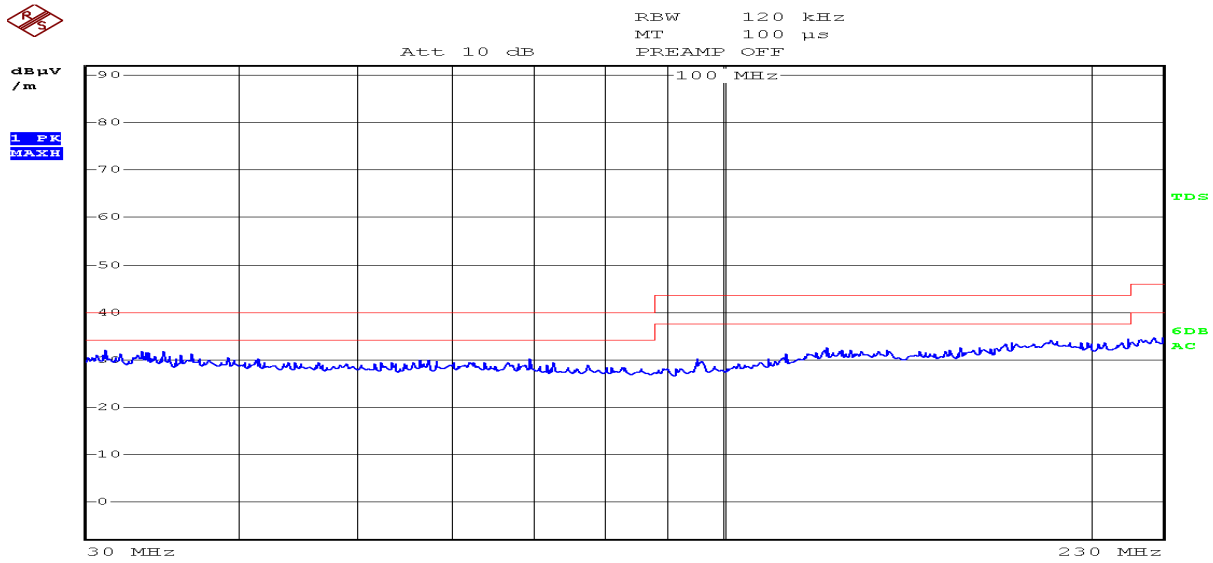
PASSED.

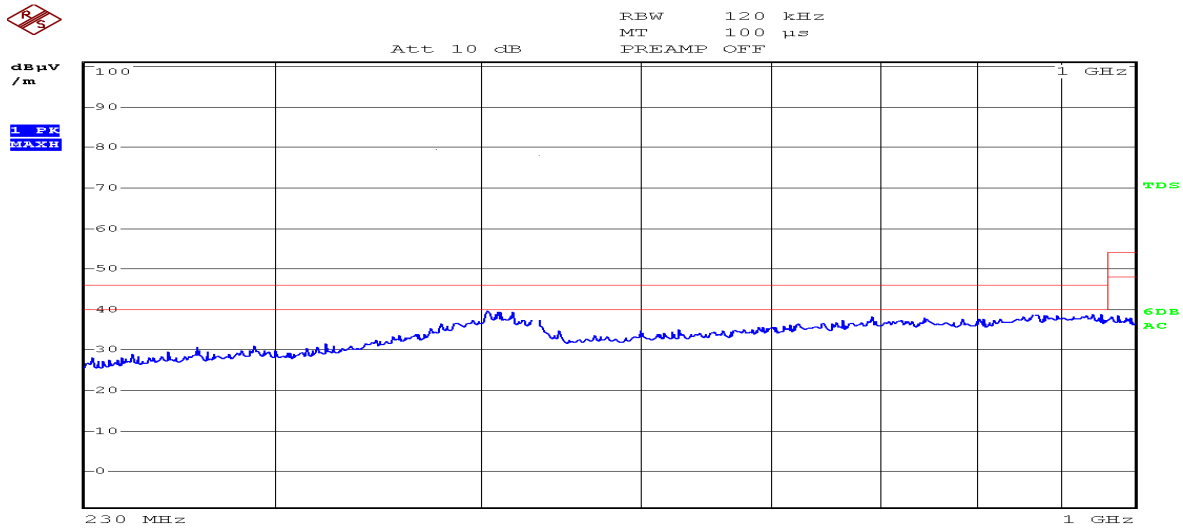
The frequency range from 30MHz to 230MHz, 230MHz to 1000MHz and above 1GHz. is investigated. Please see the following pages.

CENTRE OF TESTING SERVICE CO., LTD.
Building F, Dachuang industrial park, No.379, Zhongshan Dadao, Guangzhou, China
Tel：+86-20-85543113 (32 lines) Fax：+86-20-38780406
Complaint line：+86-20-85533471 E-mail：cts@cts-lab.com.cn

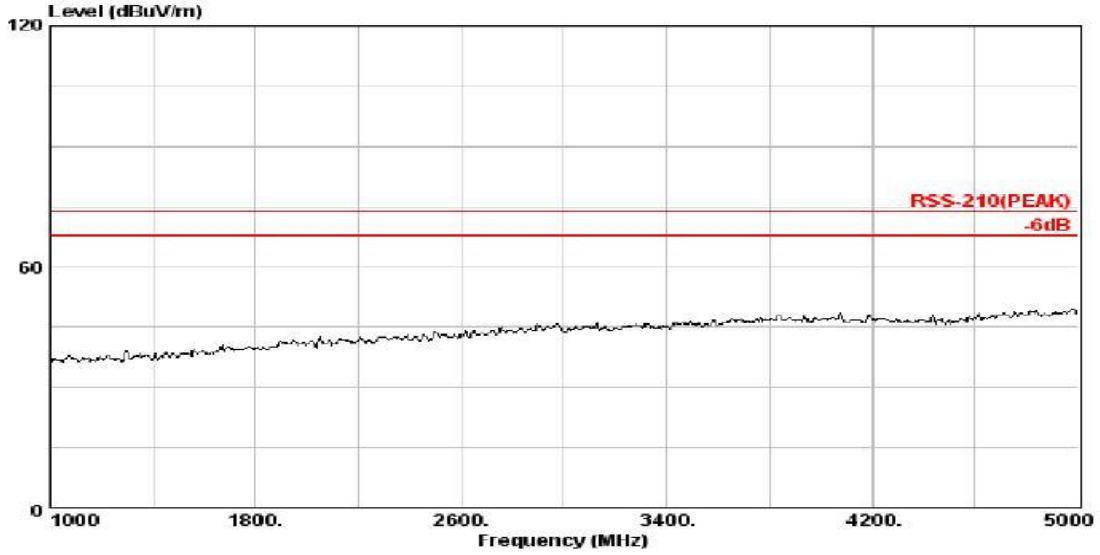
Channel: Test point: Frequency range:	433.00MHz Horizontal 30-230MHz and 230-1000MHz	Result:	■ - passed □ - not passed

EUT	Solar-Powered Double-Beam Active Wireless Infrared Infrared Detectors
Firm Name	Ningbo Saferhome Electronics Co.,Ltd
Operating Condition	DC 3.2V
Test Condition	Ambient Temperature: 25°C Humidity: 56%
Test Date:	18 March 2011 to 25 March 2011
Operator	**Peter**
MODEL NO	HB-T001A2





CENTRE OF TESTING SERVICE CO., LTD.
Building F, Dachuang industrial park, No.379, Zhongshan Dadao, Guangzhou, China
Tel：+86-20-85543113 (32 lines) Fax：+86-20-38780406
Complaint line：+86-20-85533471 E-mail：cts@cts-lab.com.cn See Reverse For Terms And Conditions of Service



Frequency	Result [dBµV]		Limit [dBµV]		Dlimit [dBµV]	
[MHz]	Average	QP	Average	QP	Average	QP
30.90	---	27.2	---	40.0	---	12.8
56.24	---	28.7	---	40.0	---	11.3
198.83	---	32.2	---	43.5	---	11.3

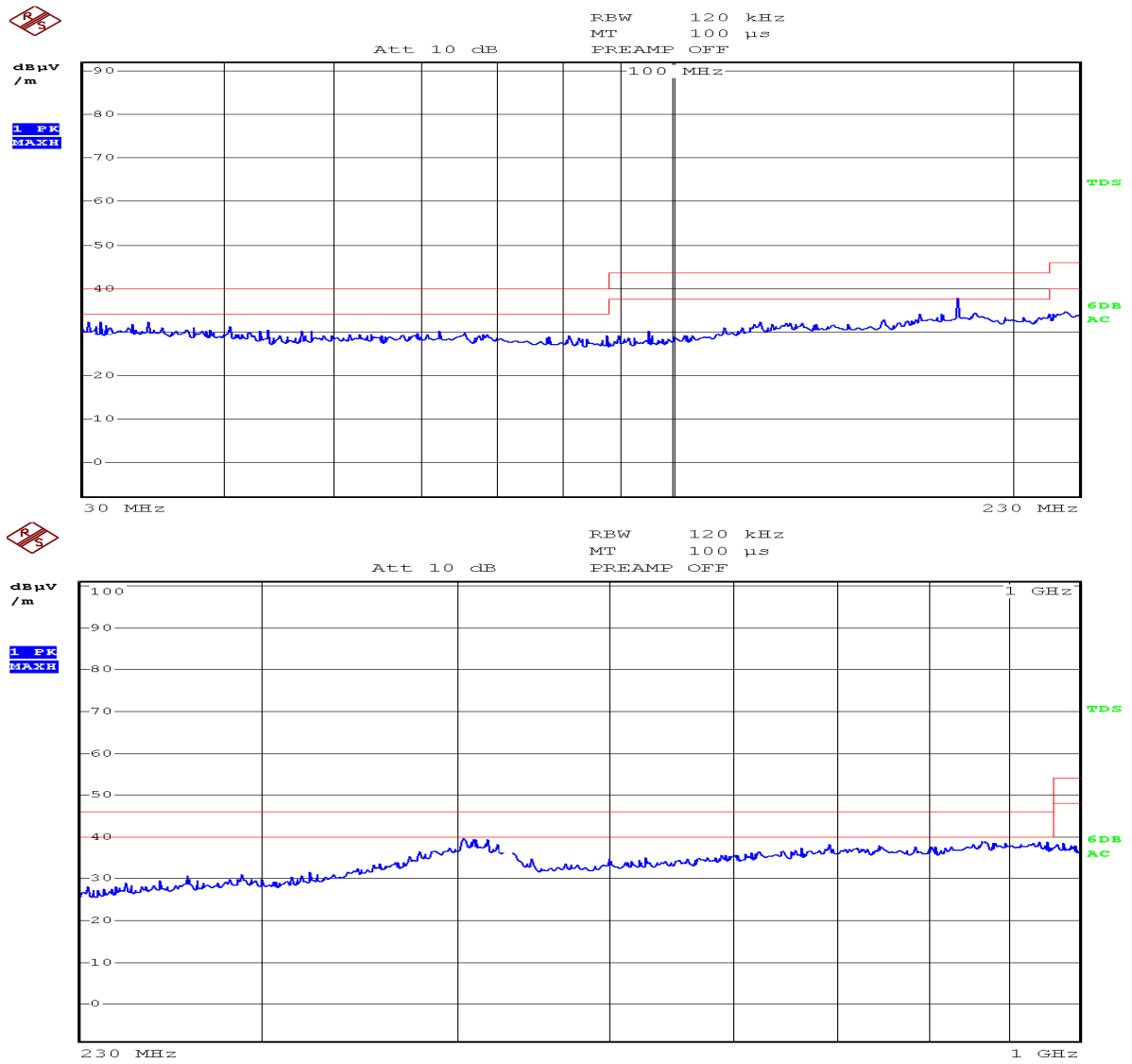
Frequency	Result [dBµV]		Limit [dBµV]		Dlimit [dBµV]	
[MHz]	Average	QP	Average	QP	Average	QP
303.02	---	33.2	---	46.0	---	12.8
840.02	---	35.2	---	46.0	---	10.8
945.06	---	44.0	---	55.6	---	11.6

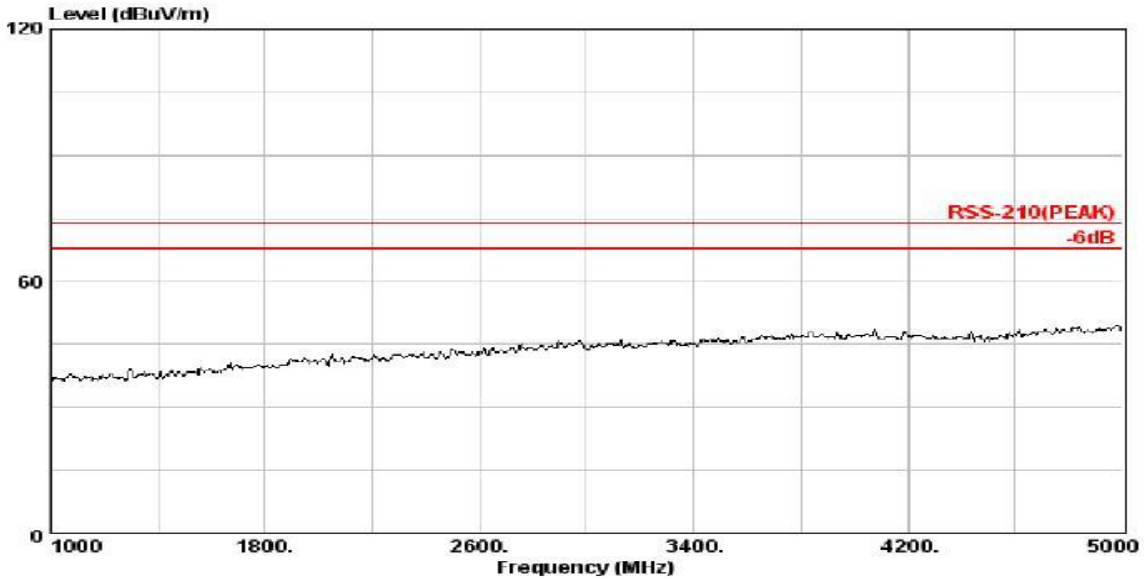
Note: 1. Emission level=Read level + Factor
2. Factor=Antenna factor + Cable loss
3. No Emission was detected for above 1GHz

CENTRE OF TESTING SERVICE CO., LTD.
Building F, Dachuang industrial park, No.379, Zhongshan Dadao, Guangzhou, China
Tel：+86-20-85543113 (32 lines) Fax：+86-20-38780406
Complaint line：+86-20-85533471 E-mail：cts@cts-lab.com.cn

Channel: Test point: Frequency range:	433.00MHz Vertical 30-230MHz and 230-1000MHz	Result:	■ - passed ☐ - not passed

EUT	Solar-Powered Double-Beam Active Wireless Infrared Infrared Detectors
Firm Name	Ningbo Saferhome Electronics Co.,Ltd
Operating Condition	DC 3.2V
Test Condition	Ambient Temperature: 25°C Humidity: 56%
Test Date:	18 March 2011 to 25 March 2011
Operator	**Peter**
MODEL NO	HB-T001A2





Frequency	Result [dBµV]		Limit [dBµV]		Dlimit [dBµV]	
[MHz]	Average	QP	Average	QP	Average	QP
30.25	---	26.01	---	40.0	---	13.99
56.24	---	26.01	---	40.0	---	13.99
198.89	---	32.7	---	43.5	---	10.8

Frequency	Result [dBµV]		Limit [dBµV]		Dlimit [dBµV]	
[MHz]	Average	QP	Average	QP	Average	QP
303.58	---	33.5	---	46.0	---	12.5
840.02	---	33.6	---	46.0	---	12.4
945.06	---	44.0	---	55.6	---	11.6

Note: 1. Emission level=Read level + Factor
2. Factor=Antenna factor + Cable loss
3. No Emission was detected for above 1GHz

CENTRE OF TESTING SERVICE CO., LTD.
Building F, Dachuang industrial park, No.379, Zhongshan Dadao, Guangzhou, China
Tel：+86-20-85543113 (32 lines) Fax：+86-20-38780406
Complaint line：+86-20-85533471 E-mail：cts@cts-lab.com.cn

12. 99% Bandwidth test

12.1. Test Equipment

20 dB Bandwidth test					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	EMI Test Receiver	ROHDE & SCHWARZ	ESCI	10868	2010/12
2	Log per Antenna	ROHDE & SCHWARZ	HL223	100226	2010/12
3	Signal analyzer	ROHDE & SCHWARZ	FSIQ26	100311	2010/12
4	Spectrum	Agilent	E4446A	44300459	2010/12

12.2. Test Information

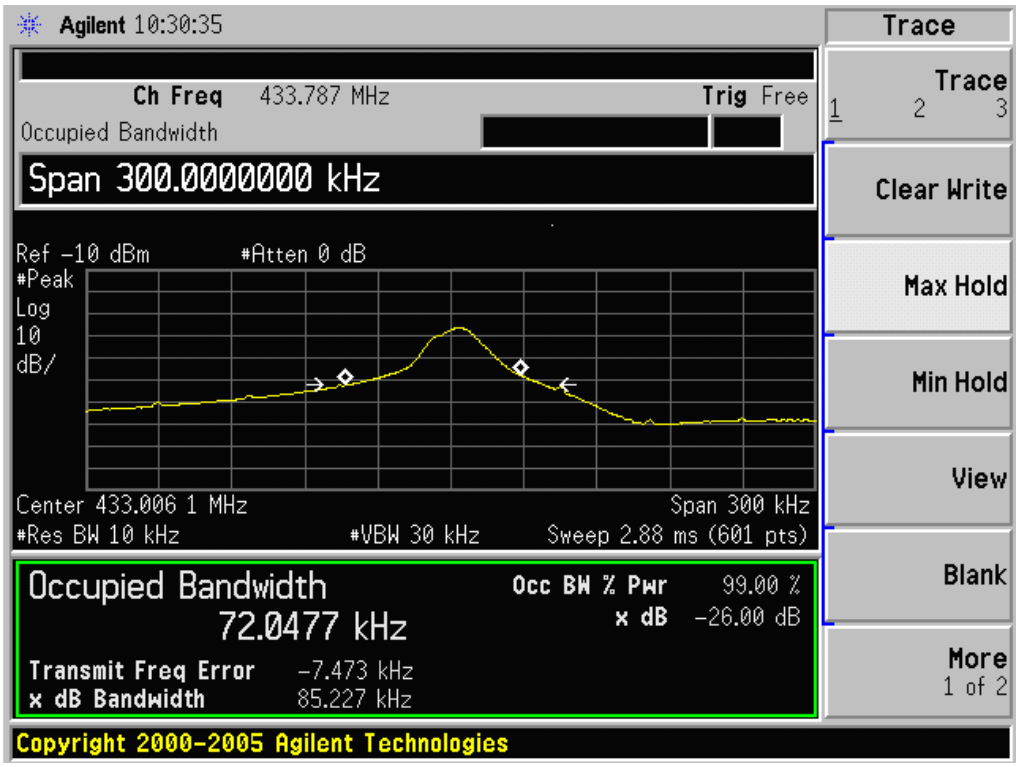
EUT:	Solar-Powered Double-Beam Active Wireless Infrared Infrared Detectors
M/N:	HB-T001A2
Firm Name:	Ningbo Saferhome Electronics Co.,Ltd
Power supply:	DC 3.2V
Test Condition:	Ambient Temperature: 25°C Humidity: 56%
Test standard:	FCC PART 15C: 15.231
Test mode:	Transmitting
Test Frequency:	433.00MHz
Test Date:	18 March 2011to 25 March 2011
Test By:	**Peter**

12.3. Test Results

PASSED.

The testing data was attached in the next pages.

CENTRE OF TESTING SERVICE CO., LTD.
Building F, Dachuang industrial park, No.379, Zhongshan Dadao, Guangzhou, China
Tel：+86-20-85543113 (32 lines) Fax：+86-20-38780406
Complaint line：+86-20-85533471 E-mail：cts@cts-lab.com.cn



CENTRE OF TESTING SERVICE CO., LTD.
Building F, Dachuang industrial park, No.379, Zhongshan Dadao, Guangzhou, China
Tel：+86-20-85543113 (32 lines) Fax：+86-20-38780406
Complaint line：+86-20-85533471 E-mail：cts@cts-lab.com.cn

13. Manufacturer/ Approval holder Declaration

The following identical model(s):

N/A

Belong to the tested device:

Product description: **Solar-Powered Double-Beam Active Wireless Infrared Infrared Detectors**
Model name: **HB-T001A2**

CENTRE OF TESTING SERVICE CO., LTD.
Building F, Dachuang industrial park, No.379, Zhongshan Dadao, Guangzhou, China
Tel：+86-20-85543113 (32 lines) Fax：+86-20-38780406
Complaint line：+86-20-85533471 E-mail：cts@cts-lab.com.cn