

FCC Test Report

E4064313301KY

Type / Model Name: SA-001A, SA-001S

Trade Name: Skylink™

Product Description: WIRELESS SIREN

Applicant: Capital Prospect Ltd.

FCC ID: KUTSA001

FCC -- TEST REPORT

Test Report No. : E4064313301KY	Sep 18, 2012 <hr style="border: 0; border-top: 1px solid black; margin: 0;"/> Date of issue
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Type / Model Name: SA-001A, SA-001S

Product Description: WIRELESS SIREN

Trade Name: Skylink™

Applicant: Capital Prospect Ltd.

Address: Room 03, 13/F., Block B,
Veristrong Ind. Centre, 34-36 Au Pui Wan Street,
Fo Tan, N.T.,
Hong Kong

Test Result according to the standards listed in clause 1 test standards:	POSITIVE
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The test report merely corresponds to the test sample.
It is not permitted to copy extracts of these test results without the written permission of the test laboratory.

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1 TEST STANDARDS

The tests were performed according to following standards:

FCC Part 15 Subpart B:2011-10-01

Radio frequency devices-Unintentional Radiators

ANSI C63.4:2003

Method of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz

Report No. **E4064313301KY**

emitel (Shenzhen)Limited, Building 2, No.171 Meihua Road , Futian District, Shenzhen, P.R.China

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2 SUMMARY

GENERAL REMARKS:

The model SA-001S is identical as the model SA-001A. The difference between the two models is the manner of power up. The model SA-001A uses the DC adapter and rechargeable battery and alkaline battery to power up the unit. And the model SA-100S uses the solar panel and rechargeable battery and alkaline battery to power up the unit.

The model SA-001A is selected as representative model for testing.

FINAL ASSESSMENT:

The equipment under test fulfils the FCC requirements cited in test standard listed in section 1

Date of receipt of test sample : Aug 09, 2012

Testing commenced on : Aug 09, 2012

Testing concluded on : Sep 18, 2012

Checked by:

Tested by:

Ivan Toa
Technical Manager

Kidd Yang
Engineer

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3 EQUIPMENT UNDER TEST

3.1 Photo documentation of the EuT



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3.2 Power supply system utilised

Power supply voltage: 120V/60Hz
 AC adaptor for model AK00G-0600020VW
 Input: 100-240V~50/60Hz, 0.2A
 Output: 6V, 0.2A

3.3 Short description of the Equipment under Test (EuT)

Number of tested sample: 1
 Serial number: Not labelled
 Dimensions: L: 25.8cm W: 25.6cm H: 10.5cm

EuT operation mode:

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

- Receiving mode

-
-

EuT configuration:

The following interface cables and peripheral devices were connected during the measurements:

Interface cables:

Interface cable	Length [m]	Type	Line		Line termination
			shielded	unshielded	
DC power cable	3.0	2-wires	<input type="checkbox"/>	<input checked="" type="checkbox"/>	LISN

Peripheral devices:

Kind of equipment	Model and/or Manufacturer
N/A	

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4 TEST ENVIRONMENT

4.1 Address of the test laboratory

**emitel (Shenzhen) Limited
Building 2, 171 Meihua Road,
Futian District,
Shenzhen, 518049
China**

FCC Registration No.: 746887

4.2 Environmental conditions

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

Temperature: 15-35 ° C

Humidity: 30-60 %

Atmospheric pressure: 86-106 kPa

4.3 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 16-4-2 /11.2003 „Uncertainties, statistics and limit modelling – Uncertainty in EMC measurements“ and is documented in the quality system acc. to ISO 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.

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5 TEST CONDITIONS AND RESULTS

5.1 Conducted disturbance

For test instruments and accessories used see section 6 Part I1.

5.1.1 Description of the test location

Test location: Shield Room

5.1.2 Photo documentation of the test set-up



5.1.3 Test specification:

Environmental conditions: Temperature: 25° C Humidity: 48% Atmospheric pressure: 103kPa

Frequency range: 150kHz – 30MHz

The test was carried out in the following operation mode(s):

- Receiving mode

5.1.4 Test result

Min. limit margin -20.3 dB

The requirements are **FULFILLED**

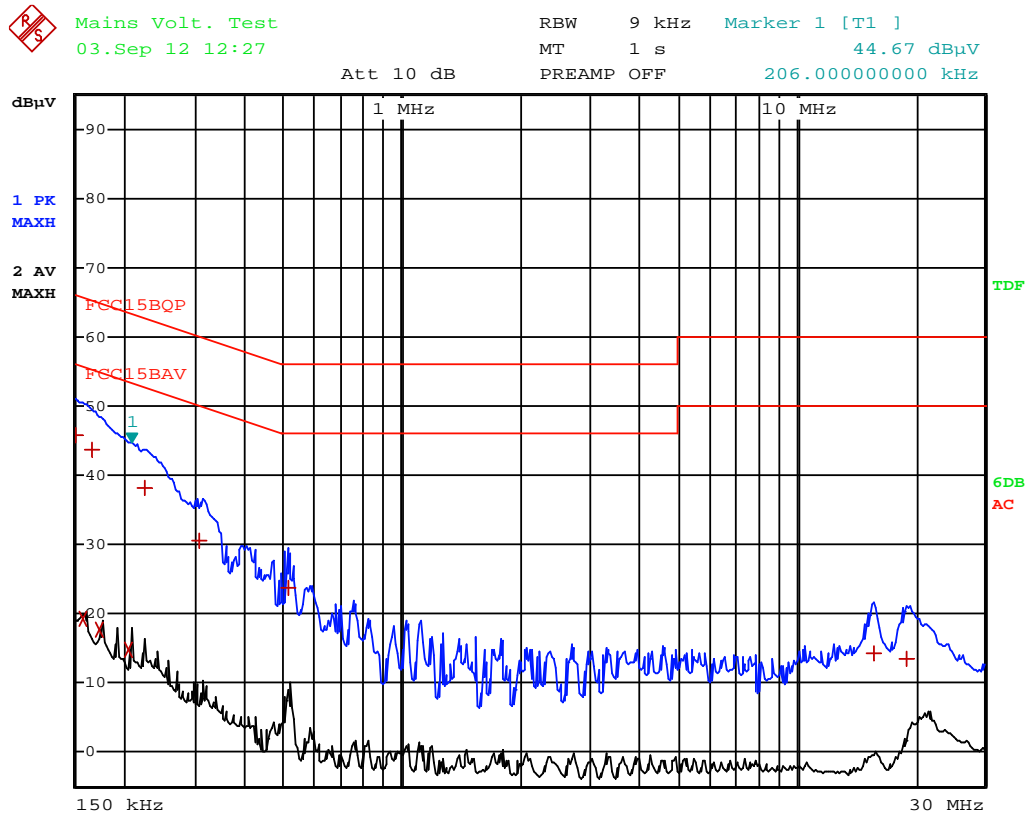
Remarks: 1) An unmodulated CW signal at the operating frequency of the EuT is supplied to the EuT for all measurements.

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5.1.5 Test protocol

Product Description: WIRELESS SIREN
 Operation mode: Receiving mode
 Date: Sep 03, 2012
 Tested by: Kidd Yang
 Test point: Line 1

Result: PASS



Date: 3.SEP.2012 12:27:18

Report No. **E4064313301KY**

Product Description:
Operation mode:
Date:
Tested by:
Test point:

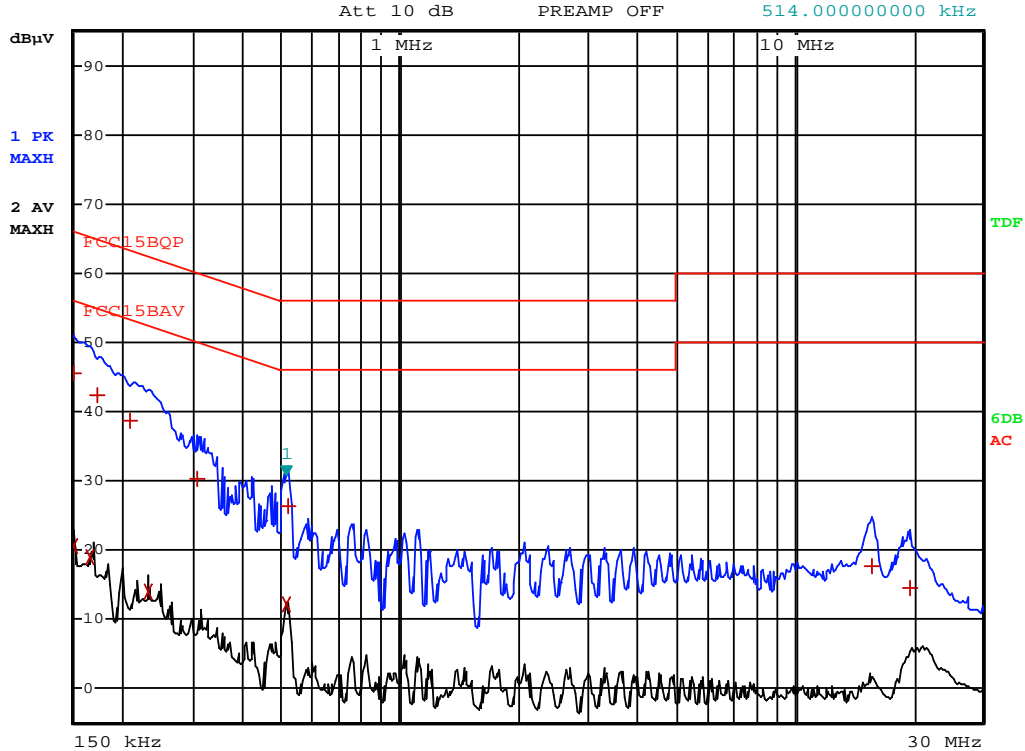
WIRELESS SIREN
Receiving mode
Sep 03, 2012
Kidd Yang
Neutral

Result: PASS



Mains Volt. Test
03.Sep 12 12:23

RBW 9 kHz Marker 1 [T1]
MT 1 s 30.88 dBuV
PREAMP OFF 514.00000000 kHz



Date: 3.SEP.2012 12:23:49

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Test data

LINE	Frequency	Measured QP Value	Limit	Margin
	[MHz]	[dB μ V]	[dB μ V/m]	[dB]
Line1	0.150	45.7	66.0	-20.3
Line1	0.166	43.7	65.1	-21.4
Line1	0.226	38.1	62.6	-24.5
Line1	0.310	30.5	60.0	-29.5
Line1	0.514	23.8	56.0	-32.2
Line1	15.678	14.2	60.0	-45.8
Line1	18.994	13.5	60.0	-46.5
Neutral	0.150	45.5	66.0	-20.5
Neutral	0.174	42.5	64.8	-22.3
Neutral	0.210	38.7	63.2	-24.5
Neutral	0.306	30.4	60.1	-29.7
Neutral	0.518	26.3	56.0	-29.7
Neutral	15.654	17.6	60.0	-42.4
Neutral	19.550	14.6	60.0	-45.4

LINE	Frequency	Measured AV Value	Limit	Margin
	[MHz]	[dB μ V]	[dB μ V/m]	[dB]
Line1	0.158	19.3	55.5	-36.2
Line1	0.174	17.8	54.8	-37.0
Line1	0.206	14.7	53.3	-38.6
Neutral	0.150	20.5	56.0	-35.5
Neutral	0.166	18.9	55.1	-36.2
Neutral	0.230	14.1	52.4	-38.3
Neutral	0.514	12.1	46.0	-33.9

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5.2 Radiated disturbance

For test instruments and accessories used see section 6 Part I2.

5.2.1 Description of the test location

Test location: 3m semi anechoic chamber

5.2.2 Photo documentation of the test set-up



5.2.3 Test specification:

Environmental conditions: Temperature: 24° C Humidity: 51% Atmospheric pressure: 103kPa

Frequency range: 30MHz – 2000MHz

The test was carried out in the following operation mode(s):

- Receiving mode

5.2.4 Test result

Min. limit margin -10.7dB

The requirements are **FULFILLED**

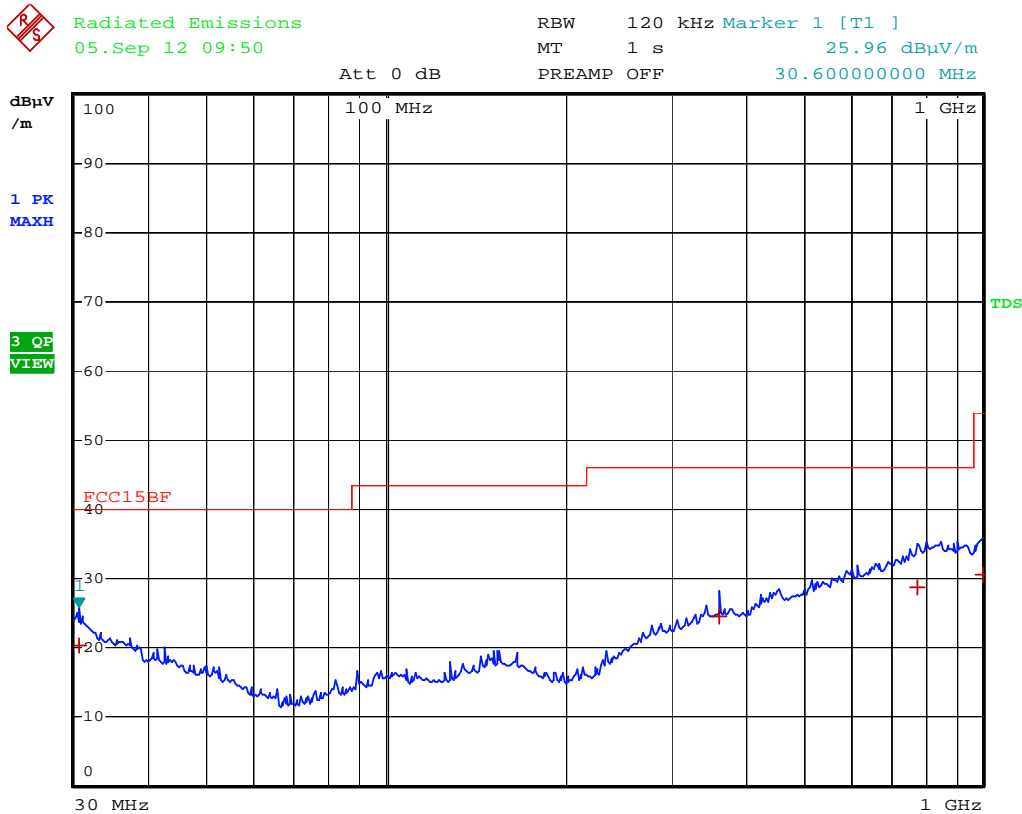
- Remarks:**
- 1) According to FCC part 15.33(b), since the EuT is used 433.92MHz radio frequency in the device, the upper frequency of measurement is up to 2000MHz.
 - 2) An unmodulated CW signal at the operating frequency of the EuT is supplied to the EuT for all measurements.

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Product Description: WIRELESS SIREN
 Operation mode: Receiving mode
 Date: Sep 05, 2012
 Tested by: Kidd Yang
 Polarization: Horizontal

Result: PASS

Start Frequency 30MHz Stop Frequency 1000MHz Step 40kHz IF BW 120kHz Detector QP Final M-Time 1s Transducer Antenna



Date: 5.SEP.2012 09:50:40

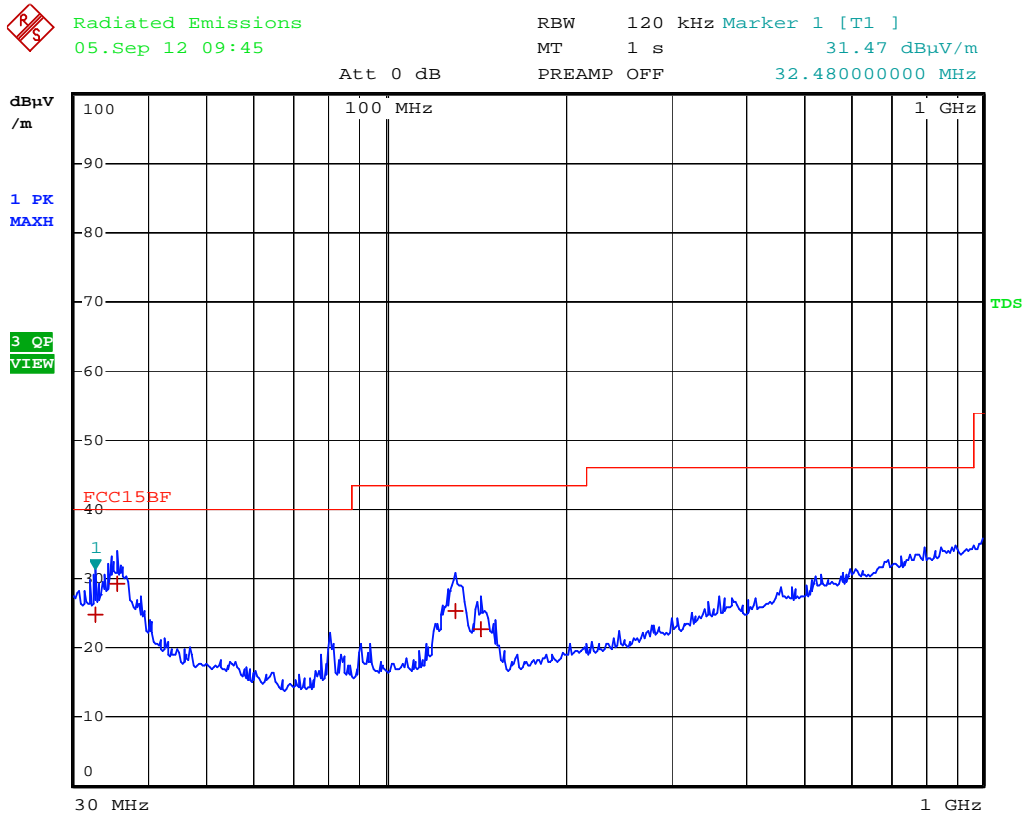
Polarization	Frequency (MHz)	Read Value (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Measured Result (dBuV/m)	QP limit (dBuV/m)	margin (dB)
H	30.60	37.0	16.2	0.6	20.2	40.0	-19.8
H	361.76	41.3	15.1	1.6	24.6	46.0	-21.4
H	774.84	53.7	22.7	2.3	28.7	46.0	-17.3
H	997.20	57.6	24.2	2.7	30.7	54.0	-23.3

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Product Description: WIRELESS SIREN
 Operation mode: Receiving mode
 Date: Sep 05, 2012
 Tested by: Kidd Yang
 Polarization: Vertical

Result: PASS

Start Frequency 30MHz Stop Frequency 1000MHz Step 40kHz IF BW 120kHz Detector QP Final M-Time 1s Transducer Antenna



Date: 5.SEP.2012 09:45:22

Polarization	Frequency (MHz)	Read Value (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Measured Result (dBuV/m)	QP limit (dBuV/m)	margin (dB)
V	32.48	44.9	19.5	0.6	24.8	40.0	-15.2
V	35.44	46.0	16.1	0.6	29.3	40.0	-10.7
V	131.20	33.4	7.2	0.8	25.4	43.5	-18.1
V	144.32	30.7	7.2	0.8	22.7	43.5	-20.8

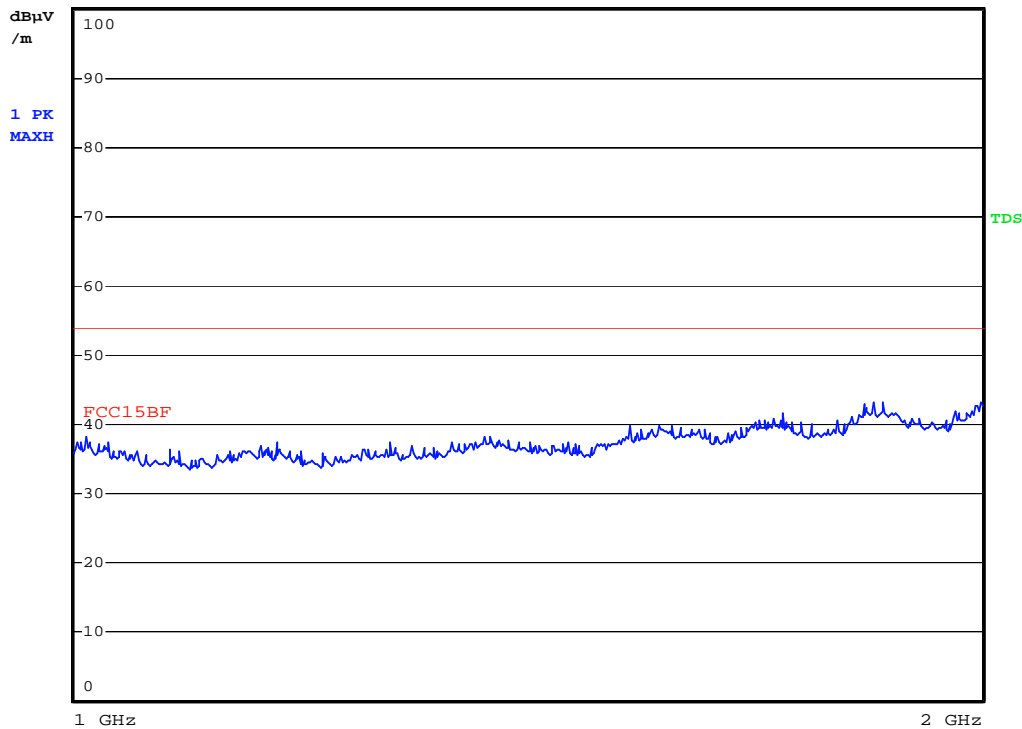
Report No. E4064313301KY

Product Description: WIRELESS SIREN
 Operation mode: Receiving mode
 Date: Sep 18, 2012
 Tested by: Kidd Yang
 Polarization: Horizontal

Result: PASS

Start Frequency	Stop Frequency	Step	IF BW	Detector	Scan Time	Transducer
1000MHz	2000MHz	400kHz	1MHz	PK	1 ms	Antenna

Radiated Emissions
 18.Sep 12 11:23
 Att 0 dB
 RBW 1 MHz
 MT 1 ms
 PREAMP ON



Date: 18.SEP.2012 11:23:41

Remark: There are no final measuring data because the peak values are under the average limit more than 10dB. The result is deemed to comply.

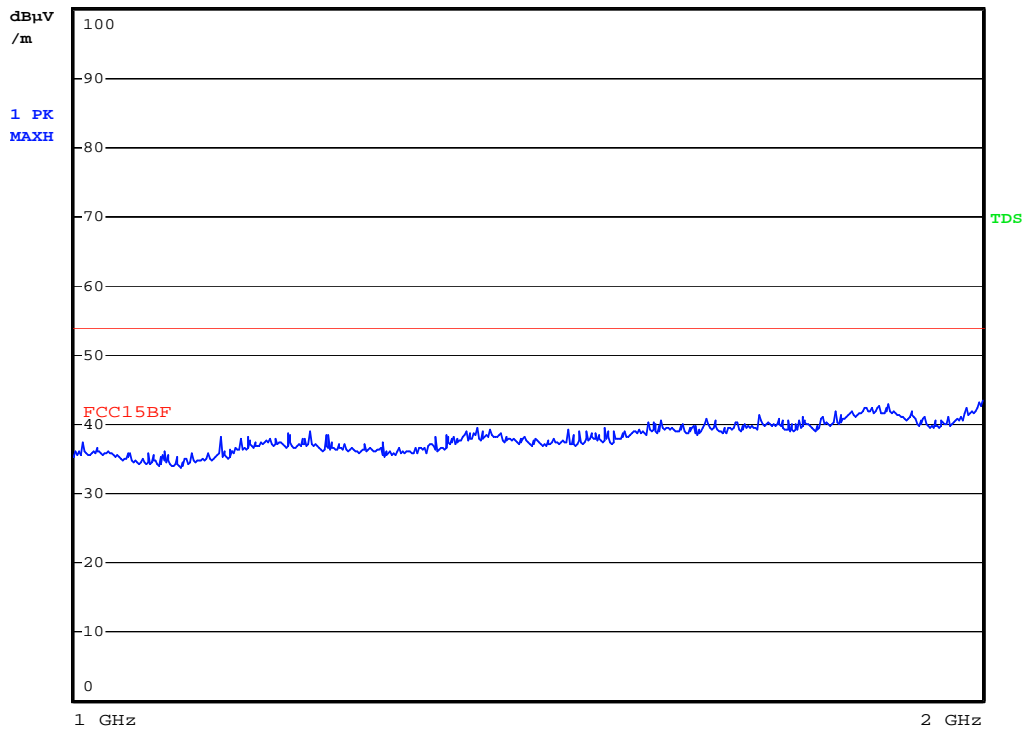
Report No. **E4064313301KY**

Product Description: WIRELESS SIREN
 Operation mode: Receiving mode
 Date: Sep 18, 2012
 Tested by: Kidd Yang
 Polarization: Vertical

Result: PASS

Start Frequency	Stop Frequency	Step	IF BW	Detector	Final M-Time	Transducer
1000MHz	2000MHz	400kHz	1MHz	PK	1ms	Antenna

Radiated Emissions
 18.Sep 12 11:26
 Att 0 dB
 RBW 1 MHz
 MT 1 ms
 PREAMP ON



Date: 18.SEP.2012 11:26:10

Remark: There are no final measuring data because the peak values are under the average limit more than 10dB. The result is deemed to comply.

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6 USED TEST EQUIPMENT AND ACCESSORIES

All test instruments used, in addition to the test accessories, are calibrated and verified regularly.

Test Item	Kind of Equipment	Model / Type	Manufacturer	Next Cal. Date	Equipment o.
I1	Test Receiver	ESPI3	Rohde & Schwarz	Apr 11, 2013	04-02/03-06-002
	LISN	ESH2-Z5	Rohde & Schwarz	Apr 11, 2013	04-02/20-06-001
I2	Test Receiver	ESPI3	Rohde & Schwarz	Apr 11, 2013	04-02/03-06-002
	BicoNILog Antenna	3142C	EMCO	Feb 11, 2014	04-02/24-06-001
	Double-Ridged	3117	ETS LINDGREN	May 07, 2013	04-02/24-07-001
	Waveguide Horn				
	MiniMast	2175	ETS LINDGREN	--	04-02/30-06-001
	Mult-Device controller	2091	EMCO	--	04-02/30-06-002

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