

CENTRE OF TESTING SERVICE INTERNATIONAL

OPERATE ACCORDING TO ISO/IEC 17025

FCC ID TEST REPORT

TEST REPORT NUMBER: CGZ3150210-00171-EF-R1



CENTRE OF TESTING SERVICE CO., LTD.

A101, No.65, Zhuji Highway, Tianhe District, Guangzhou, China







	TEST REPORT For FCC ID
Report Reference No	CGZ3150210-00171-EF-R1
Date of issue	
	CENTRE OF TESTING SERVICE CO., LTD.
	A101, No.65, Zhuji Highway,Tianhe District, Guangzhou, China
Testing location/ procedure	Full application of Harmonised standards ■
	Partial application of Harmonised standards \square
	Other standard testing method \square
Applicant's name	Capital Prospect Ltd.
Address	1303, Blk B, Veristrong Ind center, 36 Apuiwan Street, Fotan, HK
Test specification	
Standard	47 CFR PART 15 OCT, 2015, ANSI C63.10:2013
Test Report Form No	CTSEMC-1.0
TRF Originator	CENTRE OF TESTING SERVICE CO., LTD.
Master TRF	Dated 2009-01
CENTRE OF TESTING SERVIO	CE CO., LTD. All rights reserved.
CENTRE OF TESTING SERVIOR MATERIAL CENTRE OF TESTING	uced in whole or in part for non-commercial purposes as long as the CE CO., LTD is acknowledged as copyright owner and source of the G SERVICE CO., LTD takes no responsibility for and will not assume liability reader's interpretation of the reproduced material due to its placement and
Test item description	: Alarm System
Trade Mark	Skylink
Manufacturer	Capital Prospect Ltd.
Model/Type reference	HU-100
Ratings	Battery 1.5V*4 or DC 6V by adapter;
	Adapter Input:AC 100~240V, 50/60Hz; Output:DC 5V
Operating Frequency	433.92 MHz
Result	PASSED

Compiled by:

Supervised by:

Approved by:

Kate zhang / Fileadministrators

Duke yang / Technique principal

Vincent yao / Manager

THE RNATION P.

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

CENTRE OF TESTING SERVICE CO., LTD.

A101, No.65, Zhuji Highway, Tianhe District, Guangzhou, China

Tel: +86-20-85543113 (32 lines) Complaint line: +86-20-85533471 Fax: +86-20-38780406 E-mail: cts@cts-lab.com.cn





FCCID-TEST REPORT

Test Report No. : CGZ3150210-00171-EF-R1

29 February 2016

Date of issue

Type / Model	HU-100
Type / Model	HO-100
EUT	Alarm System
Applicant	Capital Prospect Ltd.
Address	1303, Blk B, Veristrong Ind center, 36 Apuiwan Street, Fotan, HK
Telephone	+852-2602-1318
Fax	+852-2602-4684
Contact	Joe Ng
Manufacturer	Capital Prospect Ltd.
Address	1303, Blk B, Veristrong Ind center, 36 Apuiwan Street, Fotan, HK
Telephone	+852-2602-1318
Fax	+852-2602-4684
Contact	Joe Ng
Factory	Capital Prospect Ltd.
Address	1303, Blk B, Veristrong Ind center, 36 Apuiwan Street, Fotan, HK
Telephone	+852-2602-1318
Fax	+852-2602-4684
Contact	Joe Ng

Test Result according to the standards on page 3: PASSED

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.

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

CENTRE OF TESTING SERVICE CO., LTD.

A101, No.65, Zhuji Highway, Tianhe District, Guangzhou, China

Tel: +86-20-85543113 (32 lines) Complaint line: +86-20-85533471

Fax: +86-20-38780406 E-mail: cts@cts-lab.com.cn

CENTRE OF TESTING SERVICE





TABLE OF CONTENTS

Description	Page
1. TEST STANDARDS	5
2. SUMMARY	5
2.1 GENERAL REMARKS	5 5
3. EQUIPMENT UNDER TEST	
J. EQUIFWENT UNDER TEST	
3.1 POWER SUPPLY SYSTEM UTILISED	6
3.2 SHORT DESCRIPTION OF THE EQUIPMENT UNDER TEST (EUT)	
3.3 EUT OPERATION MODE	
3.4 EUT CONFIGURATION	
4. TEST ENVIRONMENT	8
4.1 Address of the test laboratory	8
4.2 TEST FACILITY	
4.3 Environmental conditions	
4.4 DEFINITIONS OF SYMBOLS USED IN THIS TEST REPORT	
4.5 STATEMENT OF THE MEASUREMENT UNCERTAINTY	
5. Summary of standards and results	9
5.1.DESCRIPTION OF STANDARDS AND RESULTS	9
6. Power Line Conducted Emission Test	10
6.1.1 DESCRIPTION OF THE TEST LOCATION	10
6.1.2Test Equipment	
6.2.1 BLOCK DIAGRAM OF TEST SETUP	
6.2.2 DESCRIPTION OF THE TEST SET-UP	
6.2.3 LIMITS OF DISTURBANCE (CLASS B)	
7. Radiated disturbance (electric field)	
7. Hadiated disturbance (electric field)	14
7.1.TEST EQUIPMENT	
7.2.BLOCK DIAGRAM OF TEST SETUP	
7.3.RADIATED EMISSION LIMIT STANDARD: FCC 15.231,209	
7.4.Test Procedure	
8. 20 dB Bandwidth test	24
8.1. Test Equipment	
8.2. Test Information	24

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

CENTRE OF TESTING SERVICE CO., LTD.

A101, No.65, Zhuji Highway, Tianhe District, Guangzhou, China

Tel: +86-20-85543113 (32 lines) Complaint line: +86-20-85533471 Fax: +86-20-38780406 E-mail: cts@cts-lab.com.cn

CENTRE OF TESTING SERVICE



CTS

8.3. Test Results	25
9. Stop Transmitting Time Test	26
9.1. Test Equipment	26
9.3. TEST RESULTS	26
10. Pulse Desensitization Correction Factor	28
10.1. TEST EQUIPMENT	28
10.2. Test Information	28 28
11. TEST PHOTOGRAPHS	32
11.1. PHOTOS OF TX RADIATED EMISSION TEST (IN ANECHOIC CHAMBER)	32
12. External and Internal Photos of the EUT	33
13 Manufacturer/ Approval holder Declaration	37

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

A101, No.65, Zhuji Highway, Tianhe District, Guangzhou, China

Tel: +86-20-85543113 (32 lines) Complaint line: +86-20-85533471 Fax: +86-20-38780406 E-mail: cts@cts-lab.com.cn







1. TEST STANDARDS

The tests were performed according to following standards:

- 47 CFR PART 15 OCT, 2015
- ANSI C63.10:2013

2. SUMMARY

2.1 GENERAL REMARKS

Date of receipt of test sample	10 February 2015	
Testing commenced on	10~11 February 2015	
Testing concluded on	29 February 2016	

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 1.
- **does not** fulfil the FCC requirements cited on page 1.

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

CENTRE OF TESTING SERVICE CO., LTD.

A101, No.65, Zhuji Highway, Tianhe District, Guangzhou, China

Tel: +86-20-85543113 (32 lines) Complaint line: +86-20-85533471 Fax: +86-20-38780406 E-mail: cts@cts-lab.com.cn

See Reverse For Terms And Conditions of Service

Report No.: CGZ3150210-00171-EF-R1 Page 5 of 37







3. EQUIPMENT UNDER TEST

3.1 Power supply system utilised

Power supply voltage : ■ AC 120V/60Hz

☐ Other

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: For Radiation emission:

■ -TX +X position

□ −TX +Y position

□ –TX +Z position

Operation mode 1: TX +X position

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

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

CENTRE OF TESTING SERVICE CO., LTD.

A101, No.65, Zhuji Highway, Tianhe District, Guangzhou, China

Tel: +86-20-85543113 (32 lines) Complaint line: +86-20-85533471 Fax: +86-20-38780406 E-mail: cts@cts-lab.com.cn

See Reverse For Terms And Conditions of Service

Report No.: CGZ3150210-00171-EF-R1

CENTRE OF TESTING SERVICE





3.4 EUT configuration

3.4.1. Description of configuration (EUT)

Description	:	Alarm System
Model Number	:	HU-100
Operation frequency	:	433.92 MHz
Radio Technology	:	ASK
Modulation Technology	:	ASK modulation
Antenna	:	Internal Antenna

3.4.2. Tested Supporting System Details

N/A

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

CENTRE OF TESTING SERVICE CO., LTD.

A101, No.65, Zhuji Highway, Tianhe District, Guangzhou, China

Tel: +86-20-85543113 (32 lines) Complaint line: +86-20-85533471 Fax: +86-20-38780406 E-mail: cts@cts-lab.com.cn

See Reverse For Terms And Conditions of Service

Report No.: CGZ3150210-00171-EF-R1 Page 7 of 37

CENTRE OF TESTING SERVICE





4. TEST ENVIRONMENT

4.1 Address of the test laboratory

A101, No.65, Zhuji Highway, Tianhe District, 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.: 8374A

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. 8374A on 22 May, 2014.

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 13,2012.

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.

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

CENTRE OF TESTING SERVICE CO., LTD.

A101, No.65, Zhuji Highway, Tianhe District, Guangzhou, China

Tel: +86-20-85543113 (32 lines) Fax: +86-20-38780406 Complaint line: +86-20-85533471 E-mail: cts@cts-lab.coi

E-mail: cts@cts-lab.com.cn See Reverse For Terms And Conditions of Service

Report No.: CGZ3150210-00171-EF-R1 Page 8 of 37







4.6 Measurement Uncertainty

Test Item	Frequency Range	Uncertainty	Note
Conduction disturbance	150kHz~30MHz ±1.22dB		(1)
Power disturbance	30MHz~300MHz ±1.38dB		(1)
	30MHz~300MHz	±3.14dB	(1)
Radiation emission (3m)	300MHz~1000MHz	±3.18dB	(1)
	1GHz~18GHz	±3.54dB	(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 C63.10:2013 FCC Part 15 C: 15.207	PASSED			
Radiated Emission Test	ANSI C63.10:2013 FCC Part 15 C: 15.231(a)	PASSED			
20 dB Bandwidth Test	ANSI C63.10:2013 FCC Part 15 C: 15.231	PASSED			
Stop Transmitting Time Test	ANSI C63.10:2013 FCC Part 15 C: 15.231	PASSED			
N/A is an abbreviation for Not Applicable.					

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

CENTRE OF TESTING SERVICE CO., LTD.

A101, No.65, Zhuji Highway, Tianhe District, Guangzhou, China

Tel: +86-20-85543113 (32 lines) Complaint line: +86-20-85533471 Fax: +86-20-38780406 E-mail: cts@cts-lab.com.cn

See Reverse For Terms And Conditions of Service

Report No.: CGZ3150210-00171-EF-R1





6. Power Line Conducted Emission Test

6.1.1 Description of the test location

Test location : Shielding Room

6.1.2Test Equipment

Conduc	Conducted Disturbance					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	
1	EMI Test Receiver	ROHDE & SCHWARZ	ESHS10	842884/012	2015/11	
2	Artificial Mains	ROHDE & SCHWARZ	ESH3-Z5	832479/025	2015/11	
3	Artificial Mains	ROHDE & SCHWARZ	ESH3-Z5	832479/026	2015/11	
4	Pulse Limiter	ROHDE & SCHWARZ	ESHSZ2	100301	2015/11	
5	EMI Test Software	ROHDE & SCHWARZ	ESK1	N/A	2015/11	

6.2.1 Block Diagram of Test Setup

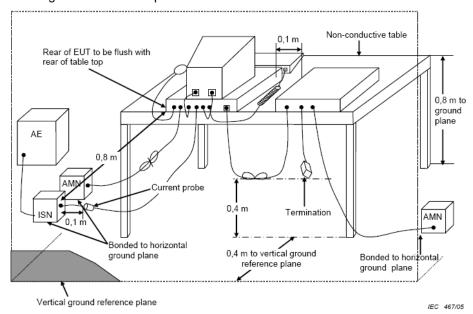
TXEUT

(EUT: Alarm System)

6.2.2 Description of the test set-up

6.1.2.1 Operating Condition

The EUT is engraving during the test, and the results of the maximum emanation are recorded 6.1.2.2 Block Diagram of Test Setup



Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

CENTRE OF TESTING SERVICE CO., LTD.

A101, No.65, Zhuji Highway, Tianhe District, Guangzhou, China

Tel: +86-20-85543113 (32 lines) Fax: +86-20-38780406 Complaint line: +86-20-85533471 Fax: +86-20-38780406 E-mail: cts@cts-lab.com.cn

See Reverse For Terms And Conditions of Service

Report No.: CGZ3150210-00171-EF-R1 Page 10 of 37







6.2.3 Limits of disturbance (Class B)

	Maximum RF Line Voltage		
Frequency	Quasi-Peak Level	Average Level	
	dB(μV)	dB(μV)	
150kHz ~ 500kHz	66 ~ 56*	56 ~ 46*	
500kHz ~ 5MHz	56	46	
5MHz ~ 30MHz	60	50	

Note: (1) The tighter limit shall apply at the edge between two frequency bands.

6.2.4 Power Line Conducted Emission Test Results

Passed

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

CENTRE OF TESTING SERVICE CO., LTD.

A101, No.65, Zhuji Highway, Tianhe District, Guangzhou, China

Tel: +86-20-85543113 (32 lines) Complaint line: +86-20-85533471 Fax: +86-20-38780406 E-mail: cts@cts-lab.com.cn

See Reverse For Terms And Conditions of Service

Report No.: CGZ3150210-00171-EF-R1 Page 11 of 37

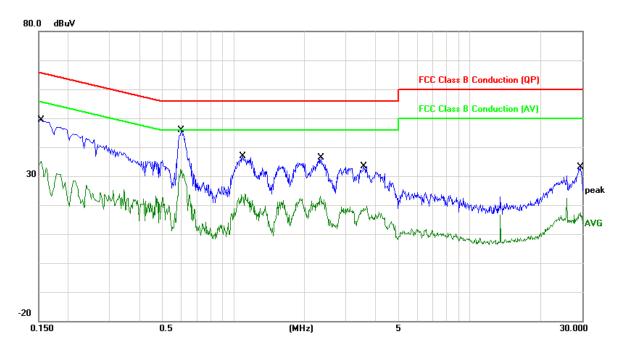






Test point:	L	Result:	■ - passed
Frequency range:	0.15MHz~30MHz		\square - not passed

EUT	Alarm System				
Test Condition	Ambient Temperature: 25°C Humidity: 56%				
Test Date:	10~11 February 2015				
Operator	Duke				
MODEL NO	HU-100				



No.	Frequency	Factor	Reading	Level	Limit	Margin	Det.
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	0.1548	9.78	38.22	48.00	65.74	-17.74	QP
2	0.1548	9.78	23.58	33.36	55.74	-22.38	AVG
3	0.6020	9.84	33.30	43.14	56.00	-12.86	QP
4	0.6020	9.84	19.76	29.60	46.00	-16.40	AVG
5	1.0980	9.83	23.24	33.07	56.00	-22.93	QP
6	1.0980	9.83	11.94	21.77	46.00	-24.23	AVG
7	2.3540	9.88	21.94	31.82	56.00	-24.18	QP
8	2.3540	9.88	11.19	21.07	46.00	-24.93	AVG
9	3.5700	9.90	18.89	28.79	56.00	-27.21	QP
10	3.5700	9.90	7.70	17.60	46.00	-28.40	AVG
11	29.4460	10.10	15.97	26.07	60.00	-33.93	QP
12	29.4460	10.10	4.52	14.62	50.00	-35.38	AVG
Remark:	Other frequen	icy mini ma	rgin all >6 dB	of Limit			

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

CENTRE OF TESTING SERVICE CO., LTD.

A101, No.65, Zhuji Highway, Tianhe District, Guangzhou, China

Tel: +86-20-85543113 (32 lines) Complaint line: +86-20-85533471 Fax: +86-20-38780406 E-mail: cts@cts-lab.com.cn

See Reverse For Terms And Conditions of Service

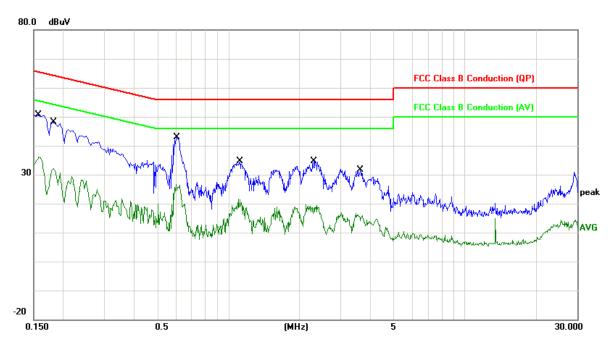
Report No.: CGZ3150210-00171-EF-R1 Page 12 of 37

CENTRE OF TESTING SERVICE





Test point: N Result: ■ - passed □ - not passed



No.	Frequency	Factor	Reading	Level	Limit	Margin	Det.
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	0.1580	9.78	38.44	48.22	65.57	-17.35	QP
2	0.1580	9.78	22.33	32.11	55.57	-23.46	AVG
3	0.1820	9.78	35.88	45.66	64.39	-18.73	QP
4	0.1820	9.78	21.44	31.22	54.39	-23.17	AVG
5	0.6060	9.84	30.50	40.34	56.00	-15.66	QP
6	0.6060	9.84	15.37	25.21	46.00	-20.79	AVG
7	1.1180	9.83	20.52	30.35	56.00	-25.65	QP
8	1.1180	9.83	7.53	17.36	46.00	-28.64	AVG
9	2.2980	9.87	18.26	28.13	56.00	-27.87	QP
10	2.2980	9.87	6.93	16.80	46.00	-29.20	AVG
11	3.6260	9.90	14.16	24.06	56.00	-31.94	QP
12	3.6260	9.90	3.99	13.89	46.00	-32.11	AVG
Remark:	Other frequen	icy mini ma	rgin all >6 dB o	of Limit			·

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

CENTRE OF TESTING SERVICE CO., LTD.

A101, No.65, Zhuji Highway, Tianhe District, Guangzhou, China

Tel: +86-20-85543113 (32 lines) Complaint line: +86-20-85533471 Fax: +86-20-38780406 E-mail: cts@cts-lab.com.cn

See Reverse For Terms And Conditions of Service

Report No.: CGZ3150210-00171-EF-R1





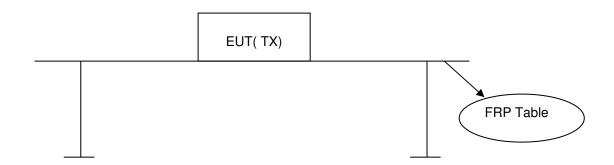
7. Radiated disturbance (electric field)

7.1.Test Equipment

Radia	ted disturbance (elect	tric field)			
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	EMI Test Receiver	ROHDE & SCHWARZ	ESCI	100868	2015/11
2	Biconical Antenna	ROHDE & SCHWARZ	HK116	100221	2015/03
3	Log per Antenna	ROHDE & SCHWARZ	HL223	100226	2015/03
4	Log per Antenna	ROHDE & SCHWARZ	HL050	100186	2015/03
5	Signal analyzer	ROHDE & SCHWARZ	FSIQ26	100311	2015/03
6	Loop Antenna	A.R.A	PLA-1030/B	1030	2015/11

7.2.Block Diagram of Test Setup

7.2.1 Block Diagram of connection between EUT and simulators



(EUT:Alarm System)

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

CENTRE OF TESTING SERVICE CO., LTD.

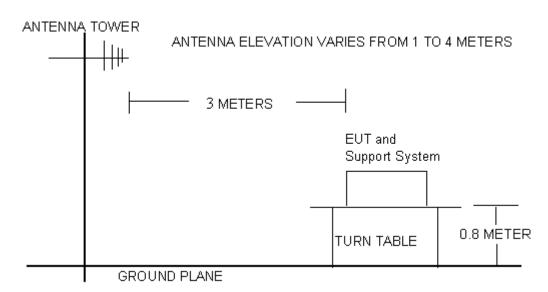
A101, No.65, Zhuji Highway, Tianhe District, Guangzhou, China

Tel: +86-20-85543113 (32 lines) Complaint line: +86-20-85533471 Fax: +86-20-38780406 E-mail: cts@cts-lab.com.cn





7.2.2 Anechoic Chamber Setup Diagram



7.3. Radiated Emission Limit Standard: FCC 15.231,209

FRE	QUEN	CY	DISTANCE	FIELD STREN	GTHS LIMIT
	MHz		Meters	$\mu V/m$	dB(μV)/m
0.009	~	0.490	300	2400/F(KHz)	
0.490		1.705	30	24000/F(KHz)	
1.705		30	3	30	
30	~	88	3	100	40.0
88	~	216	3	150	43.5
216	~	960	3	200	46.0
960	~	1000	3	500	54.0
Al	bove 10	000	3	Other:74.0 dB(μ 54.0 dB(μV)/n	

Remark:

- (1) Emission level $dB\mu V = 20 \log Emission level \mu V/m$
- (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 C63.10:2013on 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,

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

CENTRE OF TESTING SERVICE CO., LTD.

A101, No.65, Zhuji Highway, Tianhe District, Guangzhou, China

Tel: +86-20-85543113 (32 lines) Fax: +86-20-38780406 Complaint line: +86-20-85533471 Fax: +86-20-38780406 E-mail: cts@cts-lab.com.cn

See Reverse For Terms And Conditions of Service

Report No.: CGZ3150210-00171-EF-R1 Page 15 of 37







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 and RX 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 9KHz to 30MHz,30MHz to 230MHz, 230MHz to 1000MHz and above 1GHz. is investigated. Please see the following pages.

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

CENTRE OF TESTING SERVICE CO., LTD.

A101, No.65, Zhuji Highway, Tianhe District, Guangzhou, China

Tel: +86-20-85543113 (32 lines) Complaint line: +86-20-85533471 Fax: +86-20-38780406 E-mail: cts@cts-lab.com.cn

See Reverse For Terms And Conditions of Service

Report No.: CGZ3150210-00171-EF-R1 Page 16 of 37







Test Mode: TX –X Position Mode Result: □ - passed □ - not passed □ - not passed

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBµV/m)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Det.
	ark:Other freq cable Limit)	uency no sp	ecific emissi	ion form the	EUT (Margin	> 10dB for	m the

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

CENTRE OF TESTING SERVICE CO., LTD.

A101, No.65, Zhuji Highway, Tianhe District, Guangzhou, China

Tel: +86-20-85543113 (32 lines) Complaint line: +86-20-85533471 Fax: +86-20-38780406 E-mail: cts@cts-lab.com.cn

See Reverse For Terms And Conditions of Service

Report No.: CGZ3150210-00171-EF-R1 Page 17 of 37







Channel:	433.92 MHz (TX)	Result:	■ - passed
Test point:	Horizontal		\square - not passed
Frequency range:	30MHz ~18GHz		

EUT	Alarm System
Operating Condition	Battery 3V
Test Condition	Ambient Temperature: 25°C Humidity: 56%
Test Date:	10~11 February 2015
Operator	Duke
MODEL NO	HU-100

Fundamental and Harmonics Average Result										
Frequency (MHz) Factor (dB/m) (dBμV) Duty Cycle Correction (dBμV/m) (dBμV/m) (dBμV/m) (dBμV/m) (dBμV/m) Det.										
433.92	-24.78	101.90		77.12	100.83	-23.71	Peak			
433.92										

Note:Level=Reading+Factor. Margin= Limit-Level. Average Level=Peak level + Duty Factor

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

CENTRE OF TESTING SERVICE CO., LTD.

A101, No.65, Zhuji Highway, Tianhe District, Guangzhou, China

Tel: +86-20-85543113 (32 lines) Complaint line: +86-20-85533471 Fax: +86-20-38780406 E-mail: cts@cts-lab.com.cn

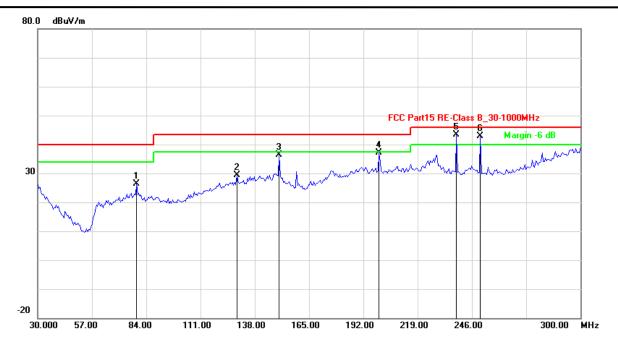
See Reverse For Terms And Conditions of Service

Report No.: CGZ3150210-00171-EF-R1 Page 18 of 37

CENTRE OF TESTING SERVICE







No.	Frequency (MHz)	Factor (dB/m)	Reading (dBµV/m)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Det.
1	79.2385	-27.42	53.76	26.34	40.00	-13.66	QP
2	129.0180	-23.17	52.56	29.39	43.50	-14.11	QP
3	150.1202	-23.36	59.72	36.36	43.50	-7.14	QP
4	199.8998	-18.65	55.82	37.17	43.50	-6.33	QP
5	238.3166	-19.00	62.47	43.47	46.00	-2.53	QP
6	250.2204	-18.77	61.57	42.80	46.00	-3.20	QP

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

CENTRE OF TESTING SERVICE CO., LTD.

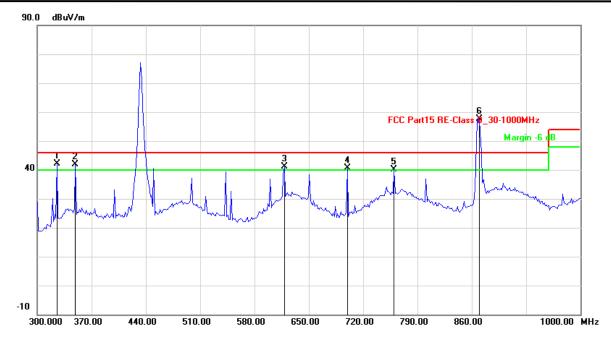
A101, No.65, Zhuji Highway, Tianhe District, Guangzhou, China

Tel: +86-20-85543113 (32 lines) Complaint line: +86-20-85533471 Fax: +86-20-38780406 E-mail: cts@cts-lab.com.cn

CENTRE OF TESTING SERVICE







No.	Frequenc (MHz)	y Fact (dB/			eading βμV/m)		vel uV/m)		Limit (dBµV/m)	Margin (dB)	Det.
1	325.2505	-26.	52	6	8.65	42	42.13 46.00		-3.87	QP	
2	349.0982	-23.	27	6	65.22		.95		46.00	-4.05	QP
3	618.4369	-15.	91	57.07		41	.16		46.00	-4.84	QP
4	699.7996	-21.	86	62.59		40.73			46.00	-5.27	QP
5	760.1201	-13.	88	5	54.11	40	.23		46.00	-5.77	QP
No.	Frequency (MHz)	Factor (dB/m)		ding μV)	Duty C Correct Factor	tion	Leve (dBµV/	-	Limit (15.231a) (dBµV/m)	Margin (dB)	Det.
6	869.5390	-14.55	72	.08			57.5	3	80.83	-23.30	Peak
0	869.5390	-14.55	72.	.08	-4.5	54	52.9	9	60.83	-7.84	AVG

Note:Level=Reading+Factor. Margin= Limit-Level.

Average Level=Peak level + Duty Factor (For line 6 **AVG** value)

Above 1GHz

No.	Frequency	Factor	Reading	Level	Limit	Margin	Det.
	(MHz)	(dB/m)	(dBµV/m)	(dBµV/m)	(dBµV/m)	(dB)	
1	1286.573	-13.15	62.16	49.01	74.00	-24.99	peak
2	1286.573	-13.15	56.43	43.28	54.00	-10.72	AVG
3	1727.455	-10.82	53.46	42.64	74.00	-31.36	peak
4	1727.455	-10.82	47.39	36.57	54.00	-17.43	AVG
5	2388.778	-5.61	52.97	47.36	74.00	-26.64	peak
6	2388.778	-5.61	48.19	42.58	54.00	-11.42	AVG

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

CENTRE OF TESTING SERVICE CO., LTD.

A101, No.65, Zhuji Highway, Tianhe District, Guangzhou, China

Tel: +86-20-85543113 (32 lines) Complaint line: +86-20-85533471 Fax: +86-20-38780406 E-mail: cts@cts-lab.com.cn

See Reverse For Terms And Conditions of Service

Report No.: CGZ3150210-00171-EF-R1







Channel:	433.92 MHz (TX)	Result:	■ - passed
Test point:	Vertical		☐ - not passed
Frequency range:	30MHz ~18GHz		

EUT	Alarm System
Test Condition	Ambient Temperature: 25°C Humidity: 56%
Test Date:	10~11 February 2015
Operator	Duke
MODEL NO	HU-100

Fundamental and Harmonics Average Result							
Frequency (MHz)	Factor (dB/m)	Reading (dBµV)	Duty Cycle Correction Factor(dB)	Level (dBμV/m)	Limit (15.231a) (dBμV/m)	Margin (dB)	Det.
433.92	-24.78	98.30		73.52	100.83	-27.31	Peak
433.92	-24.78	98.30	-4.54	68.98	80.83	-11.85	AVG

Note:Level=Reading+Factor. Margin= Limit - Level. Average Level=Peak level + Duty Factor

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

CENTRE OF TESTING SERVICE CO., LTD.

A101, No.65, Zhuji Highway, Tianhe District, Guangzhou, China

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

Fax: +86-20-38780406 Complaint line: +86-20-85533471 E-mail: cts@cts-lab.com.cn

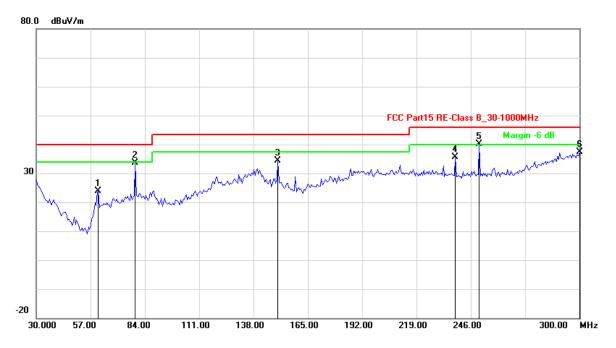
See Reverse For Terms And Conditions of Service

Report No.: CGZ3150210-00171-EF-R1 Page 21 of 37

CENTRE OF TESTING SERVICE







No.	Frequency (MHz)	Factor (dB/m)	Reading (dBµV/m)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Det.
1	60.8417	-30.09	53.95	23.86	40.00	-16.14	QP
2	79.2385	-27.42	61.16	33.74	40.00	-6.26	QP
3	150.1202	-23.36	57.71	34.35	43.50	-9.15	QP
4	238.3166	-19.00	54.66	35.66	46.00	-10.34	QP
5	250.2204	-18.77	58.87	40.10	46.00	-5.90	QP
6	300.0000	-12.07	49.42	37.35	46.00	-8.65	QP

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

CENTRE OF TESTING SERVICE CO., LTD.

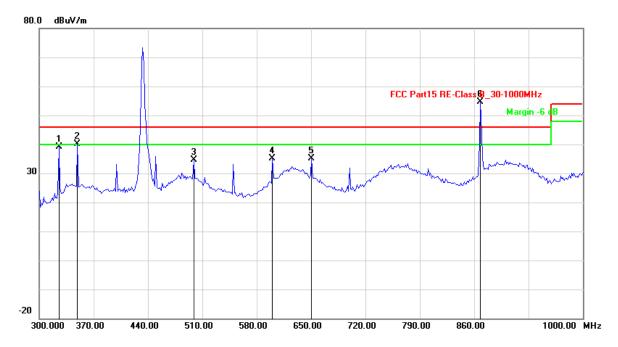
A101, No.65, Zhuji Highway, Tianhe District, Guangzhou, China

Tel: +86-20-85543113 (32 lines) Complaint line: +86-20-85533471 Fax: +86-20-38780406 E-mail: cts@cts-lab.com.cn

CENTRE OF TESTING SERVICE







No.	Frequency (MHz)	Factor (dB/m)	Reading (dBµV/m)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Det.
1	325.2505	-26.52	65.60	39.08	46.00	-6.92	QP
2	349.0981	-23.27	63.47	40.20	46.00	-5.80	QP
3	499.1983	-19.01	53.69	34.68	46.00	-11.32	QP
4	600.2004	-19.49	54.58	35.09	46.00	-10.91	QP
5	650.7014	-17.71	52.73	35.02	46.00	-10.98	QP

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBμV)	Duty Cycle Correction Factor(dB)	Level (dBμV/m)	Limit (15.231a) (dBµV/m)	Margin (dB)	Det.
6	868.1362	-14.87	69.58		54.71	80.83	-26.12	Peak
U	868.1362	-14.87	69.58	-4.54	50.17	60.83	-10.66	AVG

Note:Level=Reading+Factor. Margin= Limit - Level.

Average Level=Peak level + Duty Factor (For line 6 **AVG** value)

Above 1GHz

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBµV/m)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Det.
1	1286.573	-13.15	54.08	40.93	74.00	-33.07	peak
2	1286.573	-13.15	45.84	32.69	54.00	-21.31	AVG
3	2388.778	-5.61	51.22	45.61	74.00	-28.39	peak
4	2388.778	-5.61	45.78	40.17	54.00	-13.83	AVG
5	2587.174	-4.10	51.88	47.78	74.00	-26.22	peak
6	2587.174	-4.10	45.38	41.28	54.00	-12.72	AVG

Note:Level=Reading+Factor. Margin= Limit-Level.

Remark: Others frequency Radiated Emission level margin all >10dB of Limit.

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

CENTRE OF TESTING SERVICE CO., LTD.

A101, No.65, Zhuji Highway, Tianhe District, Guangzhou, China

Tel: +86-20-85543113 (32 lines) Complaint line: +86-20-85533471 Fax: +86-20-38780406 E-mail: cts@cts-lab.com.cn

See Reverse For Terms And Conditions of Service

Page 23 of 37

Report No.: CGZ3150210-00171-EF-R1





8.20 dB Bandwidth test

8.1. Test Equipment

20 dB I	20 dB Bandwidth test						
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.		
1	EMI Test Receiver	ROHDE & SCHWARZ	ESCI	10868	2015/11		
2	Log per Antenna	ROHDE & SCHWARZ	HL223	100226	2015/03		
3	Signal analyzer	ROHDE & SCHWARZ	FSIQ26	100311	2015/03		

8.2. Test Information

EUT:	Alarm System
M/N:	HU-100
Test Condition:	Ambient Temperature: 25°C Humidity: 56%
Test standard:	FCC PART 15C: 15.231a
Test mode:	Transmitting
Test Frequency:	433.92 MHz
Test Date:	11 February 2014
Test By:	Duke

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

CENTRE OF TESTING SERVICE CO., LTD.

A101, No.65, Zhuji Highway, Tianhe District, Guangzhou, China

Tel: +86-20-85543113 (32 lines) Complaint line: +86-20-85533471 Fax: +86-20-38780406 E-mail: cts@cts-lab.com.cn

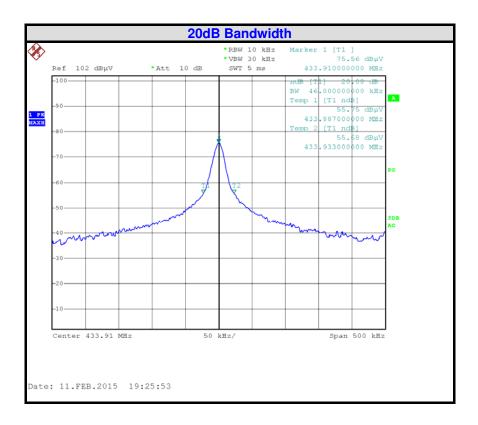




8.3. Test Results PASSED.

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
433.92	46	433.92*0.25%=1.085MHz	PASSED



Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

CENTRE OF TESTING SERVICE CO., LTD.

A101, No.65, Zhuji Highway, Tianhe District, Guangzhou, China

Tel: +86-20-85543113 (32 lines) Complaint line: +86-20-85533471

Fax: +86-20-38780406 E-mail: cts@cts-lab.com.cn







9. Stop Transmitting Time Test

9.1. Test Equipment

Band E	Band Edge Compliance test						
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.		
1	EMI Test Receiver	ROHDE & SCHWARZ	ESCI	10868	2015/11		
2	Log per Antenna	ROHDE & SCHWARZ	HL223	100226	2015/03		
3	Signal analyzer	ROHDE & SCHWARZ	FSIQ26	100311	2015/03		

9.2. Test Information

EUT:	Alarm System
M/N:	HU-100
Test Condition:	Ambient Temperature: 25°C Humidity: 56%
Test standard:	FCC PART 15C: 15.231(a)
Test mode:	Transmitting
Test Frequency:	433.92 MHz
Test Date:	11 February 2014
Test By:	Duke

9.3. Test Results

PASSED.

The testing data was attached in the next pages.

Set the spectrum to zero span, activated the EUT automatically, And then, we could see the transmitting wave in the spectrum, when the time marker went to "1R", released the EUT, After 1.38s, we could see the EUT stop transmitting.

Frequency (MHz)	Stop Transmitting Time	Limit: not more than 5 seconds of being released	Conclusion
433.92 1.38s		5s	PASSED

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

CENTRE OF TESTING SERVICE CO., LTD.

A101, No.65, Zhuji Highway, Tianhe District, Guangzhou, China

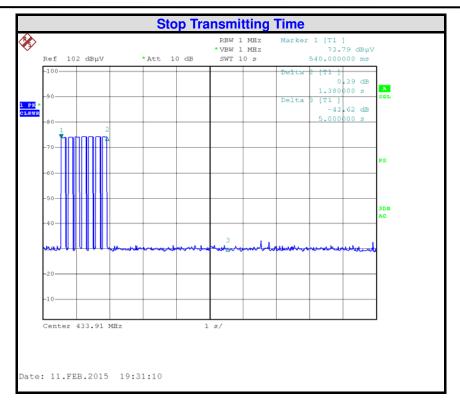
Tel: +86-20-85543113 (32 lines) Complaint line: +86-20-85533471 Fax: +86-20-38780406 E-mail: cts@cts-lab.com.cn

See Reverse For Terms And Conditions of Service

Report No.: CGZ3150210-00171-EF-R1 Page 26 of 37

CENTRE OF TESTING SERVICE





Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

A101, No.65, Zhuji Highway, Tianhe District, Guangzhou, China

Tel: +86-20-85543113 (32 lines) Complaint line: +86-20-85533471 Fax: +86-20-38780406 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	2015/11		
2	Log per Antenna	ROHDE & SCHWARZ	HL223	100226	2015/03		
3	Signal analyzer	ROHDE & SCHWARZ	FSIQ26	100311	2015/03		

10.2. Test Information

EUT:	Alarm System	
M/N:	HU-100	
Test Condition:	Ambient Temperature: 25°C Humidity: 56%	
Test standard:	FCC PART 15C: 15.231	
Test mode:	Transmitting	
Test Frequency:	433.92 MHz	
Test Date:	11 February 2014	
Test By:	Duke	

10.3. Test Results

PASSED.

The testing data was attached in the next pages.

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

CENTRE OF TESTING SERVICE CO., LTD.

A101, No.65, Zhuji Highway, Tianhe District, Guangzhou, China

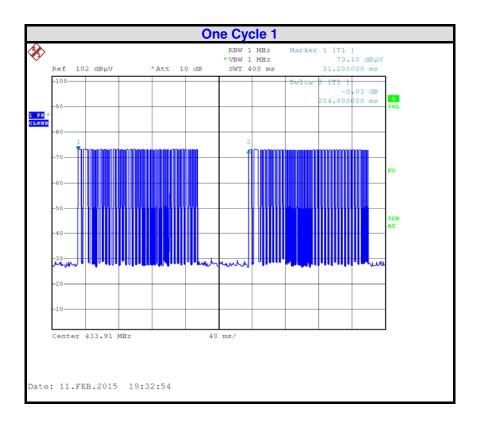
Tel: +86-20-85543113 (32 lines) Complaint line: +86-20-85533471 Fax: +86-20-38780406 E-mail: cts@cts-lab.com.cn

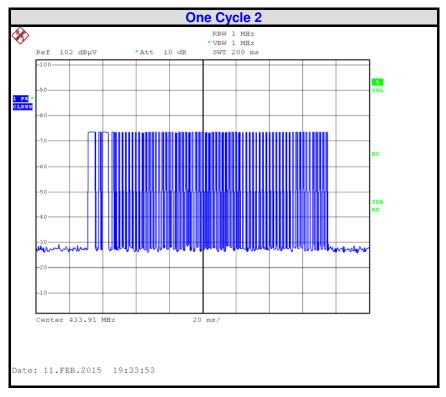
See Reverse For Terms And Conditions of Service

Report No.: CGZ3150210-00171-EF-R1 Page 28 of 37









Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

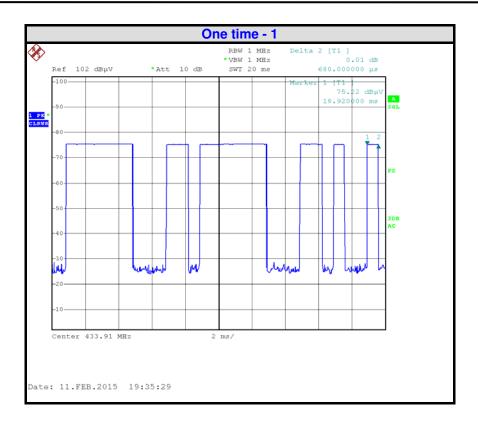
CENTRE OF TESTING SERVICE CO., LTD.

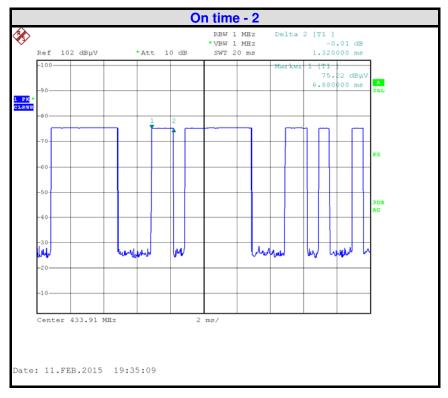
A101, No.65, Zhuji Highway, Tianhe District, Guangzhou, China

Tel: +86-20-85543113 (32 lines) Complaint line: +86-20-85533471 Fax: +86-20-38780406 E-mail: cts@cts-lab.com.cn









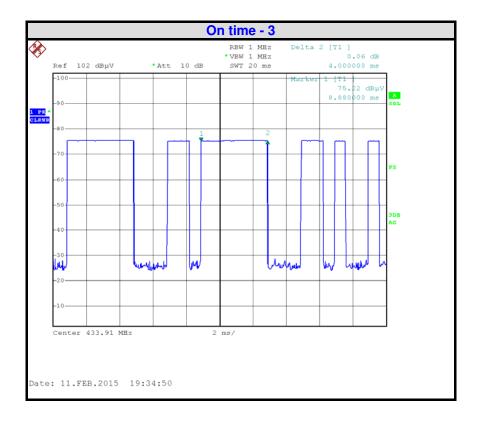
Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

CENTRE OF TESTING SERVICE CO., LTD.

A101, No.65, Zhuji Highway, Tianhe District, Guangzhou, China

Tel: +86-20-85543113 (32 lines) Fax: +86-20-38780406 Complaint line: +86-20-85533471 Fax: +86-20-38780406 E-mail: cts@cts-lab.com.cn





Test Data

Ton+off=204.8 ms(which exceeds 0.1 seconds,and use the formula Ton/100ms to calculate the duty-cycle correction factor)

Ton=0.68*56+1.32*10+4.0*2=59.28ms

Duty cycle Correction Factor=20*log(Ton/Ton+off)= 20*log 59.28ms /100ms= -4.54dB

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

CENTRE OF TESTING SERVICE CO., LTD.

A101, No.65, Zhuji Highway, Tianhe District, Guangzhou, China

Tel: +86-20-85543113 (32 lines) Complaint line: +86-20-85533471 Fax: +86-20-38780406 E-mail: cts@cts-lab.com.cn



11. TEST PHOTOGRAPHS

11.1. Photos of TX Radiated Emission Test (In Anechoic Chamber)

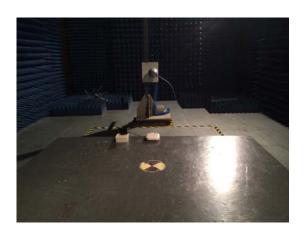
Below 30MHz



Below 1GHz



Above 1GHz



Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

CENTRE OF TESTING SERVICE CO., LTD.

A101, No.65, Zhuji Highway, Tianhe District, Guangzhou, China

Tel: +86-20-85543113 (32 lines) Complaint line: +86-20-85533471 Fax: +86-20-38780406 E-mail: cts@cts-lab.com.cn



12. External and Internal Photos of the EUT



External view



External view-1



External view-2

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

CENTRE OF TESTING SERVICE CO., LTD.

A101, No.65, Zhuji Highway, Tianhe District, Guangzhou, China

Tel: +86-20-85543113 (32 lines) Complaint line: +86-20-85533471 Fax: +86-20-38780406 E-mail: cts@cts-lab.com.cn

See Reverse For Terms And Conditions of Service

Report No.: CGZ3150210-00171-EF-R1 Page 33 of 37





External view-3



External view-4



External view-5

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

CENTRE OF TESTING SERVICE CO., LTD.

A101, No.65, Zhuji Highway, Tianhe District, Guangzhou, China

Tel: +86-20-85543113 (32 lines) Complaint line: +86-20-85533471 Fax: +86-20-38780406 E-mail: cts@cts-lab.com.cn

See Reverse For Terms And Conditions of Service

Report No.: CGZ3150210-00171-EF-R1 Page 34 of 37







External view-6



Adapter Label view

Alarm System Model: HU-100 FCC ID: KUTHU100 This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Brand Name: Skylink Capital Prospect Ltd.

Label

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

CENTRE OF TESTING SERVICE CO., LTD.

A101, No.65, Zhuji Highway, Tianhe District, Guangzhou, China

Tel: +86-20-85543113 (32 lines) Complaint line: +86-20-85533471 Fax: +86-20-38780406 E-mail: cts@cts-lab.com.cn

See Reverse For Terms And Conditions of Service

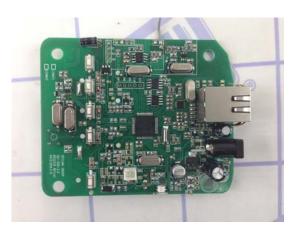
Report No.: CGZ3150210-00171-EF-R1 Page 35 of 37







Internal view



PCB Side 1 view



PCB Side 2 view

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

CENTRE OF TESTING SERVICE CO., LTD.

A101, No.65, Zhuji Highway, Tianhe District, Guangzhou, China

Tel: +86-20-85543113 (32 lines) Complaint line: +86-20-85533471 Fax: +86-20-38780406 E-mail: cts@cts-lab.com.cn

See Reverse For Terms And Conditions of Service

Report No.: CGZ3150210-00171-EF-R1 Page 36 of 37







13. Manufacturer/ Approval holder Declaration

N/A

Belong to the tested device:

The following identical model(s):

Product description: Alarm System

Model name: HU-100

Copyright of this report is owned by Centre of Testing Service and may not be reproduced other than in full except with the written approval of the issuing Company.

CENTRE OF TESTING SERVICE CO., LTD.

A101, No.65, Zhuji Highway, Tianhe District, Guangzhou, China

Tel: +86-20-85543113 (32 lines) Complaint line: +86-20-85533471 Fax: +86-20-38780406 E-mail: cts@cts-lab.com.cn