

Verification Of Conformity  
On Behalf of  
Dalian Seaside Door Controlling System Co., Ltd

Garage Door Opener

Model No.: 9357, 9367

Prepared for : Dalian Seaside Door Controlling System Co., Ltd  
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Report Number : 201303782F  
Date of Test : Mar. 17~ May 09, 2013  
Date of Report : May 09, 2013

**TABLE OF CONTENTS**

Description

Page

Test Report Verification

**1. GENERAL INFORMATION .....4**

    1.1. Description of Device (EUT) .....4

    1.2. Description of Test Facility .....5

    1.3. Measurement Uncertainty .....5

    1.4. Test Summary .....6

**2. POWER LINE CONDUCTED MEASUREMENT .....7**

    2.1. Test Equipment .....7

    2.2. Block Diagram of Test Setup .....7

    2.3. Power Line Conducted Emission Measurement Limits (FCC Part 15 Class B) .....7

    2.4. Configuration of EUT on Measurement .....8

    2.5. Operating Condition of EUT .....8

    2.6. Test Procedure .....8

    2.7. Power Line Conducted Emission Measurement Results .....8

**3. RADIATED EMISSION MEASUREMENT .....11**

    3.1. Test Equipment .....11

    3.2. Block Diagram of Test Setup .....11

    3.3. Radiated Emission Limit (Subpart B Class B) .....12

    3.4. EUT Configuration on Measurement .....12

    3.5. Operating Condition of EUT .....12

    3.6. Test Procedure .....12

    3.7. Radiated Emission Measurement Results .....13

**4. PHOTOGRAPH .....16**

    4.1. Photo of Power Line Conducted Emission Test .....16

    4.2. Photo of Radiated Emission Test .....16

APPENDIX I (Photos of EUT) (7 Pages)

**TEST REPORT VERIFICATION**

Applicant : Dalian Seaside Door Controlling System Co., Ltd  
Manufacturer : Dalian Seaside Door Controlling System Co., Ltd  
EUT : Garage Door Opener  
Model No. : 9357, 9367  
Rating : AC 120V, 60Hz  
Trade Mark : **SEASIDE**

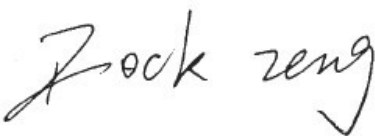
Measurement Procedure Used:


FCC Rules and Regulations Part 15 Subpart B 2011 & FCC / ANSI C63.4-2009

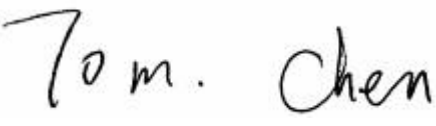
The device described above is tested by Anbotek Compliance Laboratory Limited To determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart B Class B limits both radiated and conducted emissions. The measurement results are contained in this test report and Anbotek Compliance Laboratory Limited Is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC requirements.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Anbotek Compliance Laboratory Limited

Date of Test : Mar. 17~ May 09, 2013

Prepared by :   
(Engineer/ Rock Zeng)

Reviewer :   
(Project Manager/ Sally Zhang)

Approved & Authorized Signer :   
(Manager/ Tom Chen)

## 1. GENERAL INFORMATION

### 1.1. Description of Device (EUT)

EUT : Garage Door Opener

Model Number : 9357, 9367

(Note: All samples are the same except the model number and appearance color, so we prepare "9357" for EMC test only.)

Test Power Supply : AC 120V, 60Hz

Max. Working Frequency : 32MHz

Applicant : Dalian Seaside Door Controlling System Co., Ltd

Address : No. 23-7, Yaobei Road, Ganjingzi District, Dalian, Liaoning, China

Manufacturer : Dalian Seaside Door Controlling System Co., Ltd

Address : No. 23-7, Yaobei Road, Ganjingzi District, Dalian, Liaoning, China

Date of receipt : Mar. 17, 2013

Date of Test : Mar. 17~ May 09, 2013

Remark : This device is used as a receiver for a remote control, which frequency is 315MHz.

## 1.2. Description of Test Facility

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

### **CNAS - LAB Code: L3503**

Anbotek Compliance Laboratory Limited., Laboratory has been assessed and in compliance with CNAS/CL01: 2006 accreditation criteria for testing laboratories (identical to ISO/IEC 17025:2005 General Requirements) for the Competence of Testing Laboratories.

### **FCC-Registration No.: 752021**

Anbotek Compliance Laboratory Limited, 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 752021, August 20, 2010

### **IC-Registration No.: 8058A-1**

Anbotek Compliance Laboratory Limited., EMC Laboratory has been registered and fully described in a report filed with the (IC) Industry Canada. The acceptance letter from the IC is maintained in our files. Registration 8058A-1, February 22, 2013

### **Test Location**

All Emissions tests were performed  
Anbotek Compliance Laboratory Limited. at 1/F, 1 /Build, SEC Industrial Park,  
No. 4 Qianhai Road, Nanshan District, Shenzhen, 518054, China

## 1.3. Measurement Uncertainty

Radiation Uncertainty : Ur = 4.3dB

Conduction Uncertainty : Uc = 3.4dB

#### 1.4. Test Summary

For the EUT described above. The standards used were FCC Part 15 Subpart B for Emissions.

Table 1 : Tests Carried Out Under FCC Part 15 Subpart B

Standard	Test Items	Status
FCC Part 15 Subpart B	Power Line Conducted Emission Test (150KHz To 30MHz)	√
FCC Part 15 Subpart B	Radiated Emission Test (30MHz To 1000MHz)	√

- √ Indicates that the test is applicable
- x Indicates that the test is not applicable

## 2. POWER LINE CONDUCTED MEASUREMENT

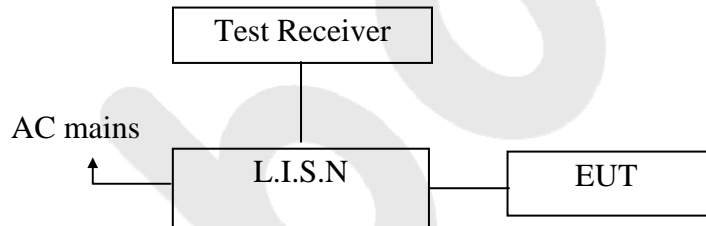
### 2.1. Test Equipment

The following test equipments are used during the power line conducted measurement:

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	EMI Receiver	Rohde & Schwarz	ESCI	100627	Nov. 12, 2012	1 Year
2.	LISN	SchwarzBeck	NSLK 8126	8126377	May 19, 2012	1 Year
3.	RF Switching Unit	Compliance Direction	RSU-M2	38303	May 19, 2012	1 Year
4.	EMI Test Software ES-K1	Rohde & Schwarz	N/A	N/A	N/A	N/A

### 2.2. Block Diagram of Test Setup

2.2.1. Block diagram of connection between the EUT and simulators



(EUT: Garage Door Opener )

### 2.3. Power Line Conducted Emission Measurement Limits (FCC Part 15

Class B)

Frequency MHz	Limits dB(μV)	
	Quasi-peak Level	Average Level
0.15 ~ 0.50	66 ~ 56*	56 ~ 46*
0.50 ~ 5.00	56	46
5.00 ~ 30.00	60	50

Notes: 1. \*Decreasing linearly with logarithm of frequency.

2. The lower limit shall apply at the transition frequencies.

## 2.4. Configuration of EUT on Measurement

The following equipments are installed on Power Line Conducted Emission Measurement to meet the commission requirement and operating regulations in a manner which tends to maximize its emission characteristics in a normal application.

EUT : Garage Door Opener  
Model Number : 9357  
Applicant : Dalian Seaside Door Controlling System Co., Ltd

## 2.5. Operating Condition of EUT

- 2.5.1. Setup the EUT and simulator as shown as Section 2.2.
- 2.5.2. Turn on the power of all equipment.
- 2.5.3. Let the EUT work in test mode (ON) and measure it.

## 2.6. Test Procedure

The EUT system is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC line are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to FCC ANSI C63.4-2009 on Conducted Emission Measurement.

The bandwidth of test receiver (ESCI) set at 9KHz.

The frequency range from 150KHz to 30MHz is checked.

The test result are reported on Section 2.7.

## 2.7. Power Line Conducted Emission Measurement Results

**PASS.**

The frequency range from 150KHz to 30 MHz is investigated.

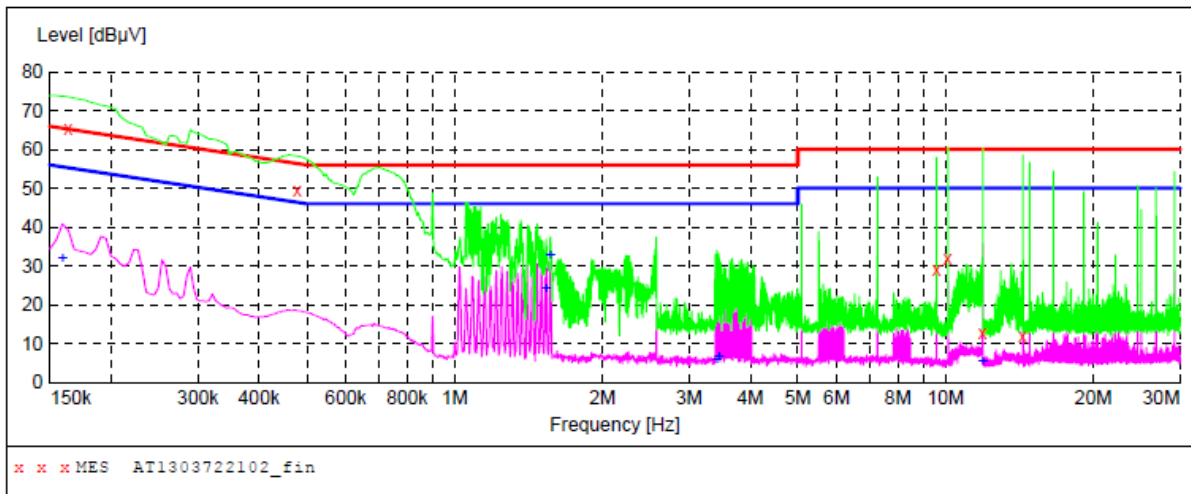
The test curves are shown in the following pages.



**CONDUCTED EMISSION TEST DATA**

EUT: Garage Door Opener M/N:9357, 9367  
 Operating Condition: ON  
 Test Site: 1# Shielded Room  
 Operator: Finley Li  
 Test Specification: AC 120V, 60Hz  
 Comment: L  
 Tem:25°C Hum:50%

**SCAN TABLE: "Voltage (150K~30M) FIN"**  
 Short Description: 150K-30M Disturbance Voltages



**MEASUREMENT RESULT: "AT1303722102\_fin"**

3/25/2013 5:22PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.163500	65.20	20.1	65	0.1	QP	L1	GND
0.478500	49.30	20.1	56	7.1	QP	L1	GND
9.577000	29.20	20.6	60	30.8	QP	L1	GND
10.103500	31.90	20.6	60	28.1	QP	L1	GND
11.894500	12.70	20.6	60	47.3	QP	L1	GND
14.360500	12.10	20.7	60	47.9	QP	L1	GND

**MEASUREMENT RESULT: "AT1303722102\_fin2"**

3/25/2013 5:22PM

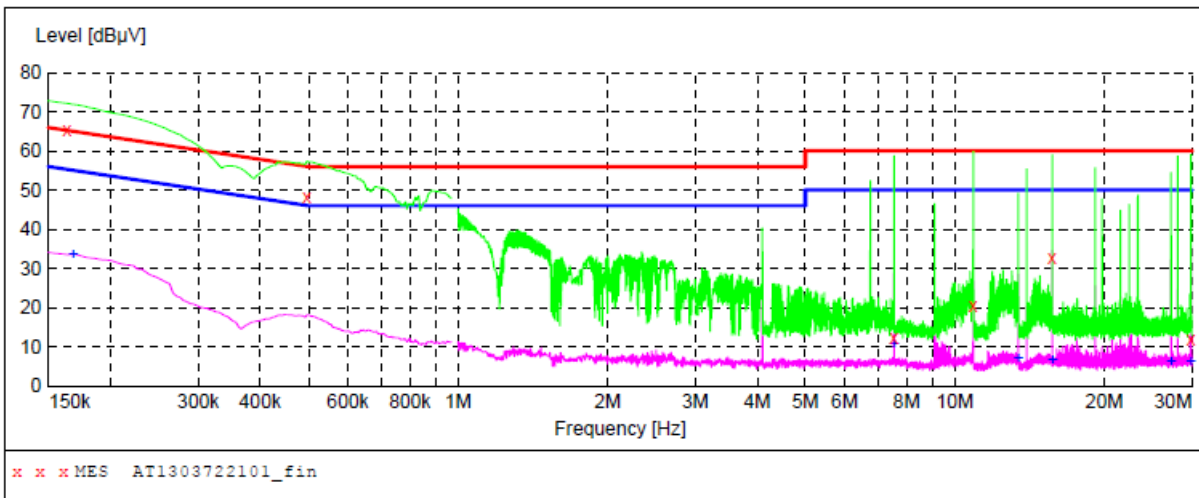
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.159000	32.10	20.1	56	23.4	AV	L1	GND
1.535500	24.00	20.3	46	22.0	AV	L1	GND
1.567000	32.80	20.3	46	13.2	AV	L1	GND
3.421000	5.90	20.4	46	40.1	AV	L1	GND
3.452500	6.50	20.4	46	39.5	AV	L1	GND
11.894500	5.20	20.6	50	44.8	AV	L1	GND

**CONDUCTED EMISSION TEST DATA**

EUT: Garage Door Opener M/N:9357, 9367  
 Operating Condition: ON  
 Test Site: 1# Shielded Room  
 Operator: Finley Li  
 Test Specification: AC 120V, 60Hz  
 Comment: N  
 Tem:25°C Hum:50%

**SCAN TABLE: "Voltage (150K~30M) FIN"**

Short Description: 150K-30M Disturbance Voltages



**MEASUREMENT RESULT: "AT1303722101\_fin"**

3/25/2013 5:19PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.163500	65.20	20.1	65	0.1	QP	N	GND
0.496500	48.10	20.1	56	8.0	QP	N	GND
7.543000	12.20	20.5	60	47.8	QP	N	GND
10.886500	20.60	20.6	60	39.4	QP	N	GND
15.701500	32.70	20.7	60	27.3	QP	N	GND
29.831500	11.80	20.9	60	48.2	QP	N	GND

**MEASUREMENT RESULT: "AT1303722101\_fin2"**

3/25/2013 5:19PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.168000	33.70	20.1	55	21.4	AV	N	GND
7.543000	10.80	20.5	50	39.2	AV	N	GND
13.402000	6.90	20.7	50	43.1	AV	N	GND
15.701500	6.60	20.7	50	43.4	AV	N	GND
27.217000	6.30	20.9	50	43.7	AV	N	GND
29.831500	6.30	20.9	50	43.7	AV	N	GND

### 3. RADIATED EMISSION MEASUREMENT

#### 3.1. Test Equipment

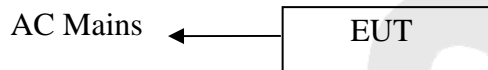
The following test equipments are used during the radiated emission measurement:

##### 3.1.1. For Anechoic Chamber

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
7	EMI Test Receiver	Rohde & Schwarz	ESCI	100627	Nov. 12, 2012	1 Year
8	Trilog Broadband Antenna	Schwarzbeck	VULB9163	VULB 9163-289	May 17, 2012	1 Year
9	Pre-amplifier	Compliance Direction	PAP-0203	22008	May 19, 2012	1 Year
10	EMI Test Software	SHURPLE	N/A	N/A	N/A	N/A

#### 3.2. Block Diagram of Test Setup

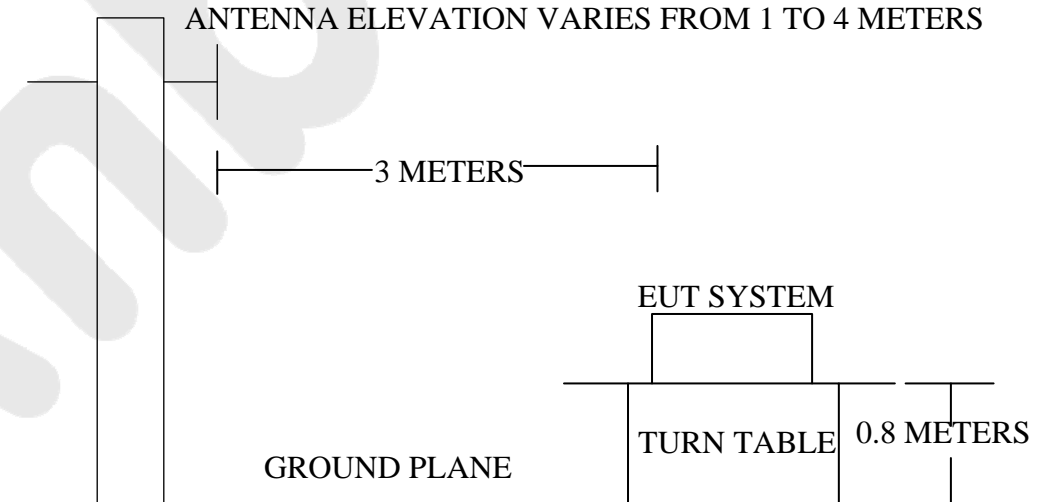
##### 3.2.1. Block diagram of connection between the EUT and simulators



(EUT: Garage Door Opener )

##### 3.2.2. Anechoic Chamber Test Setup Diagram

ANTENNA TOWER



(EUT: Garage Door Opener )

### 3.3. Radiated Emission Limit (Subpart B Class B)

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		$\mu\text{V}/\text{m}$	$\text{dB}(\mu\text{V})/\text{m}$
30~88	3	100	40.0
88~216	3	150	43.5
216~960	3	200	46.0
960~1000	3	500	54.0

- Remark :
- (1) Emission level  $(\text{dB})\mu\text{V} = 20 \log$  Emission level  $\mu\text{V}/\text{m}$
  - (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.

### 3.4. EUT Configuration on Measurement

The following equipments are installed on Radiated Emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

EUT : Garage Door Opener  
Model Number : 9357  
Applicant : Dalian Seaside Door Controlling System Co., Ltd

### 3.5. Operating Condition of EUT

3.5.1. Setup the EUT as shown in Section 3.2.

3.5.2. Let the EUT work in test mode (ON) and measure it.

### 3.6. Test Procedure

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. EUT is set 3.0 meters away from the receiving antenna, which is mounted on a antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (Trilog Broadband Antenna) is used as receiving antenna. Both horizontal and vertical polarizations of the antenna are set on measurement. 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 measurement.

The bandwidth of the EMI test receiver (ESCI) is set at 120kHz.

The frequency range from 30MHz to 1000MHz is checked.

The test mode (ON) is tested in chamber and all the test results are listed in Section 3.7.

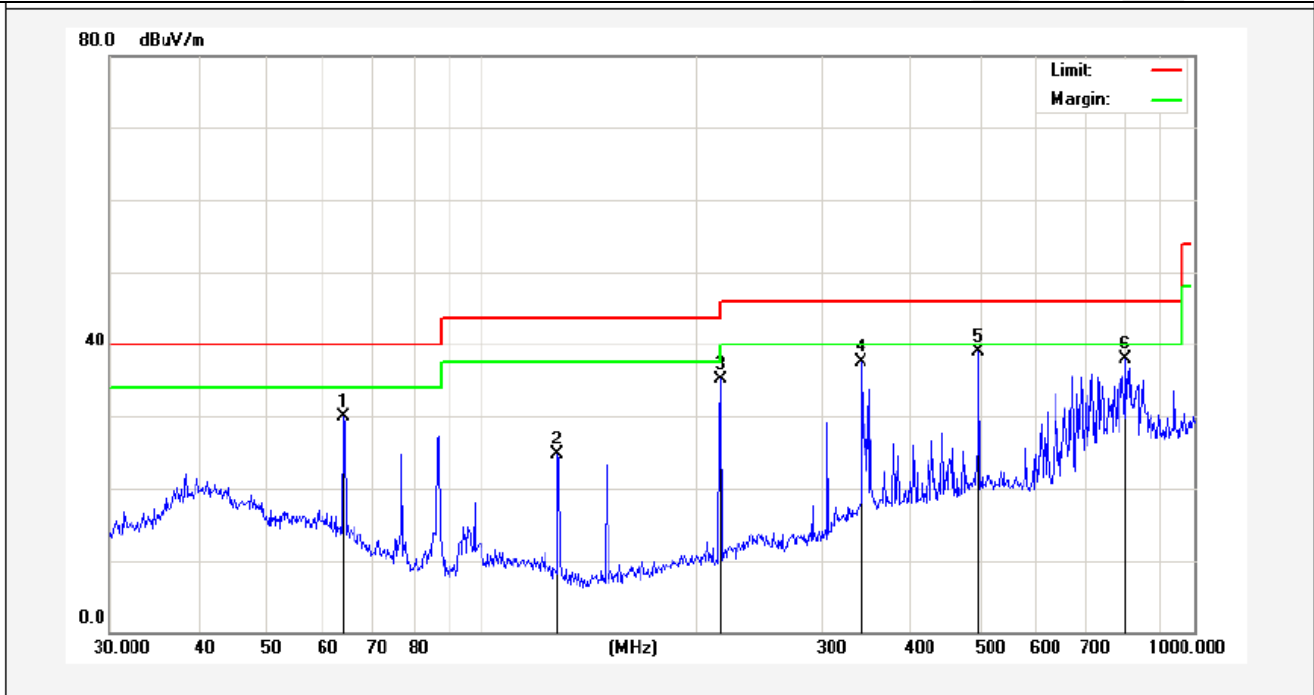
### 3.7. Radiated Emission Measurement Results

**PASS.**

The test curves are shown in the following pages.

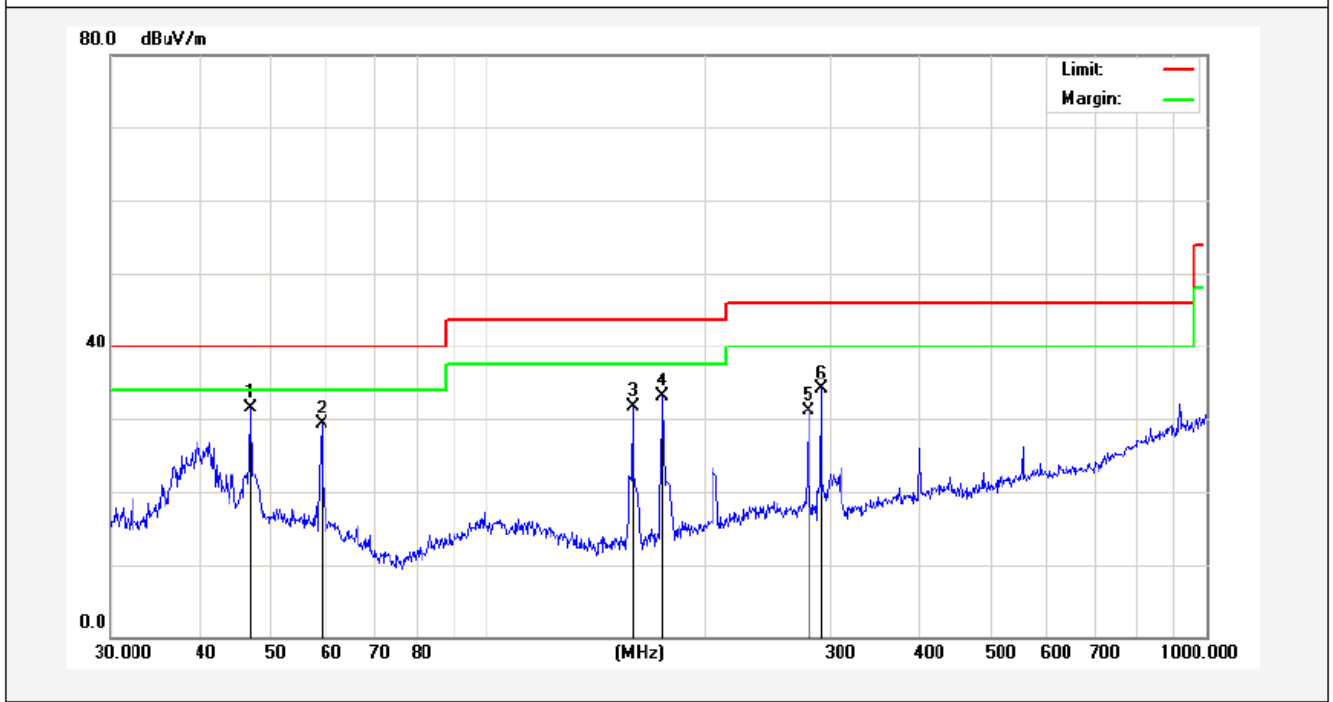
Anbotek

Job No.:	AT1303722F	Polarization:	Horizontal
Standard:	(RE)FCC PART15 B _3m	Power Source:	AC 120V, 60Hz
Test item:	Radiation Test	Date:	2013/04/24
Temp.(C)/Hum.(%RH):	24.3( C)/55%RH	Time:	9:16:44
EUT:	Garage Door Opener	Test By:	Jimly Chen
Model:	9357, 9367	Distance:	3m
Note:	ON		



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	63.7588	46.80	-16.95	29.85	40.00	-10.15	peak			
2	127.6645	47.22	-22.47	24.75	43.50	-18.75	peak			
3	216.0240	55.34	-20.27	35.07	46.00	-10.93	peak			
4	340.7817	51.84	-14.27	37.57	46.00	-8.43	peak			
5	497.6764	49.86	-11.02	38.84	46.00	-7.16	peak			
6	801.7862	44.46	-6.48	37.98	46.00	-8.02	peak			

<b>Job No.:</b>	AT1303722F	<b>Polarization:</b>	Vertical
<b>Standard:</b>	(RE)FCC PART15 B _3m	<b>Power Source:</b>	AC 120V, 60Hz
<b>Test item:</b>	Radiation Test	<b>Date:</b>	2013/04/24
<b>Temp.(C)/Hum.(%RH):</b>	24.3( C)/55%RH	<b>Time:</b>	9:14:43
<b>EUT:</b>	Garage Door Opener	<b>Test By:</b>	Jimly Chen
<b>Model:</b>	9357, 9367	<b>Distance:</b>	3m
<b>Note:</b>	ON		



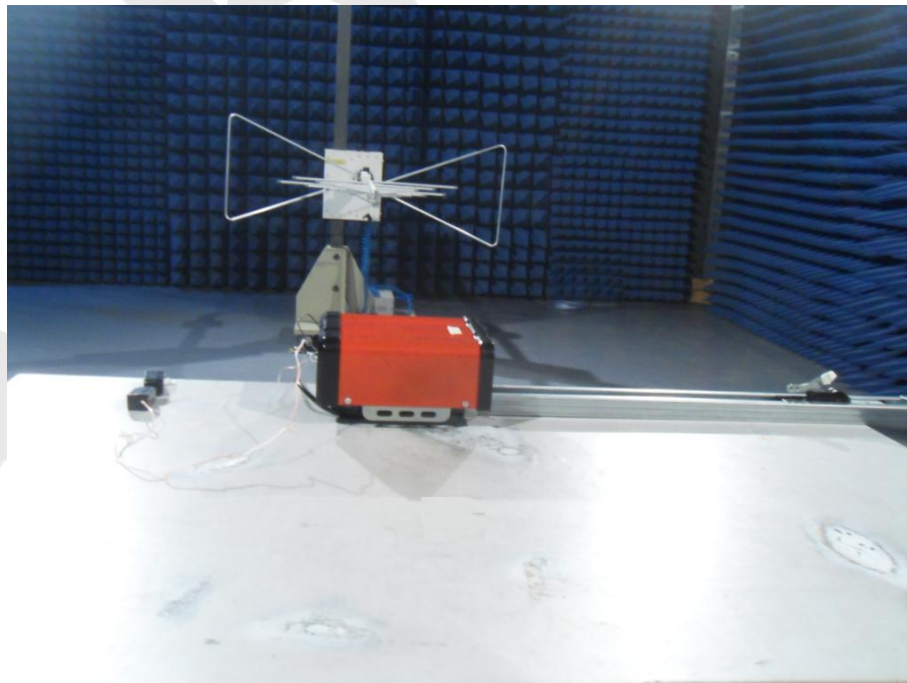
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	46.8303	44.71	-13.15	31.56	40.00	-8.44	peak			
2	58.8185	44.57	-15.28	29.29	40.00	-10.71	peak			
3	159.2249	49.55	-17.91	31.64	43.50	-11.86	peak			
4	175.0365	50.39	-17.20	33.19	43.50	-10.31	peak			
5	279.0436	46.25	-15.16	31.09	46.00	-14.91	peak			
6	291.0360	49.12	-14.92	34.20	46.00	-11.80	peak			

## 4. PHOTOGRAPH

### 4.1. Photo of Power Line Conducted Emission Test



### 4.2. Photo of Radiated Emission Test





**APPENDIX I**  
**(Photos of EUT)**

Figure 1  
The EUT- Front View



Figure 2  
The EUT- Back View

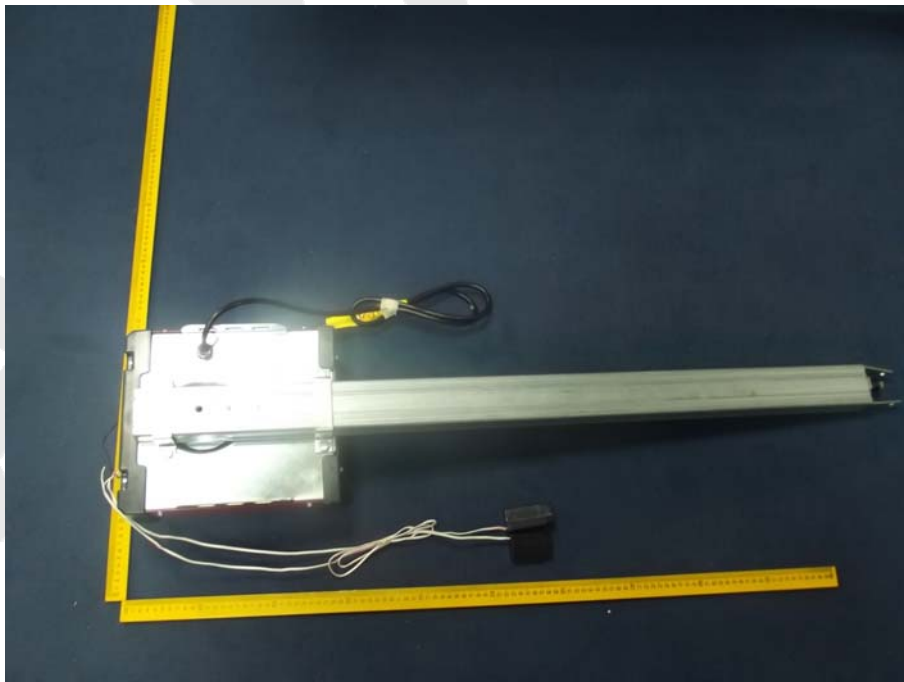


Figure 3  
The EUT-Side View



Figure 4  
The EUT-Side View

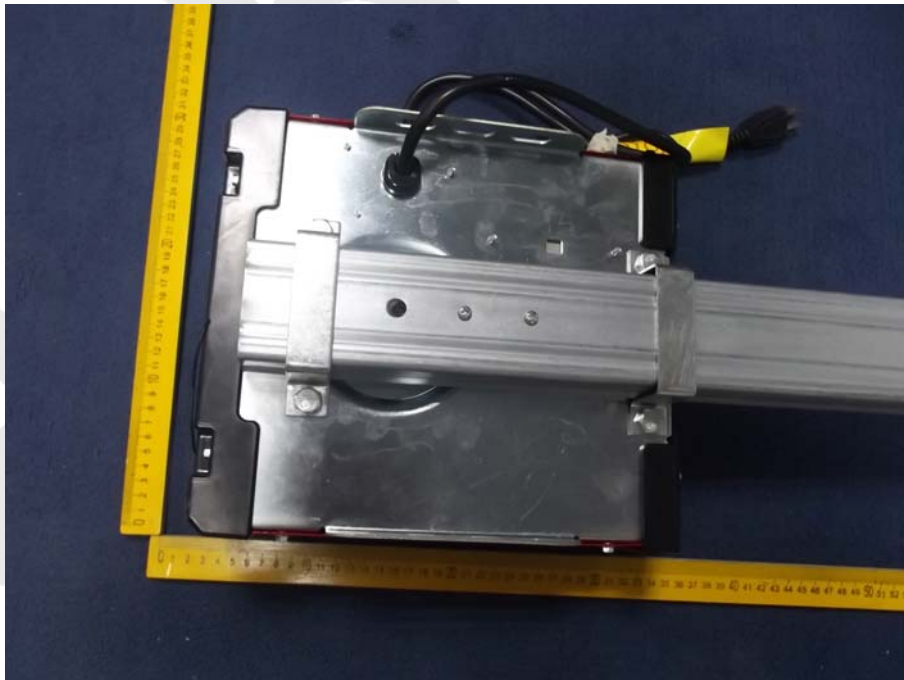


Figure 5  
The EUT-Side View

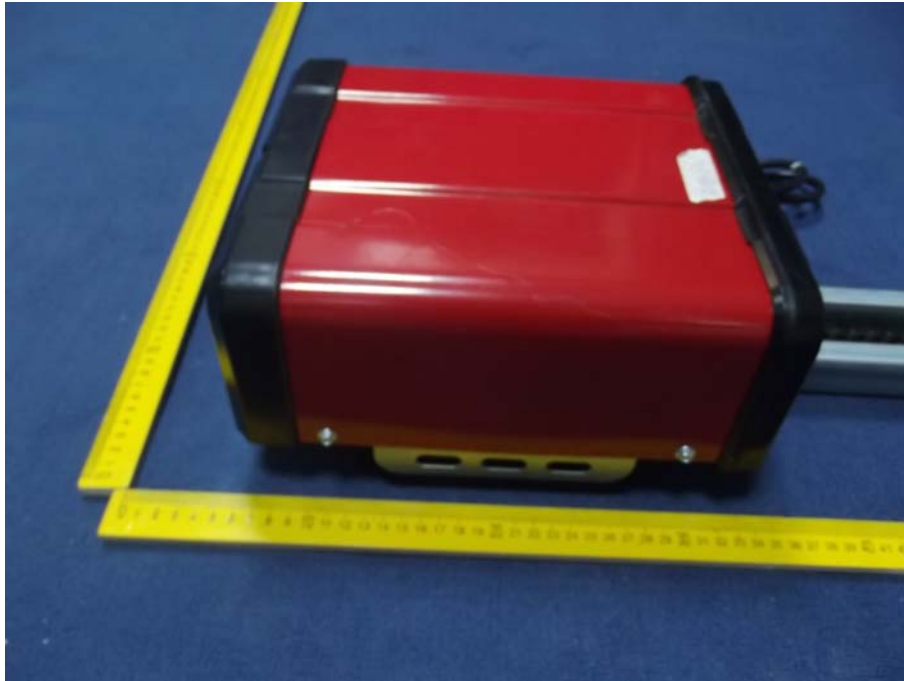


Figure 6  
The EUT-Side View



Figure 7  
The EUT-Side View



Figure 8  
The EUT-Side View

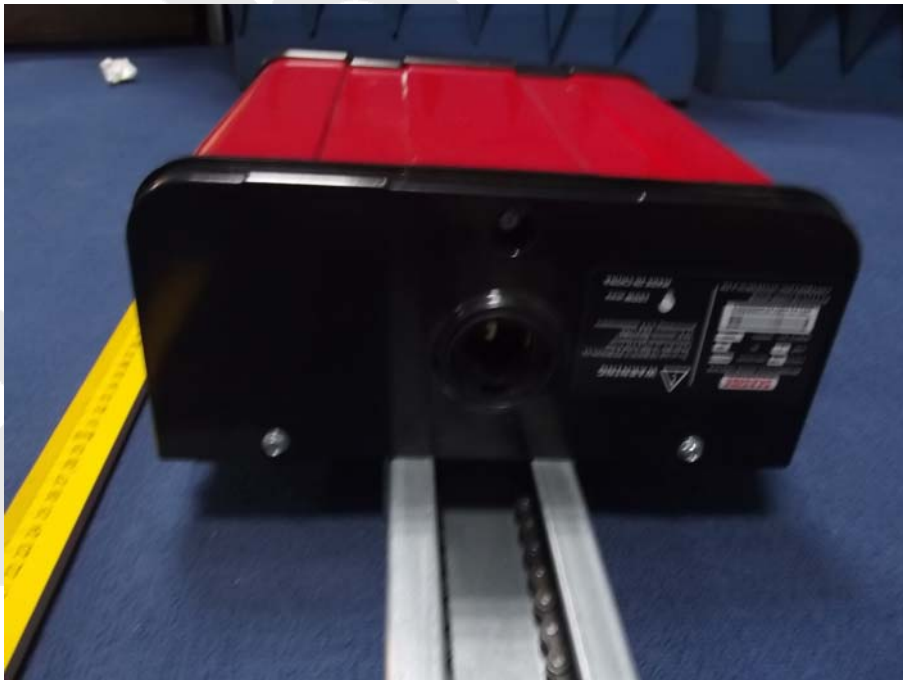


Figure 9  
The EUT-Side View



Figure 10  
The EUT- Inside View



Figure 11  
The EUT- Inside View

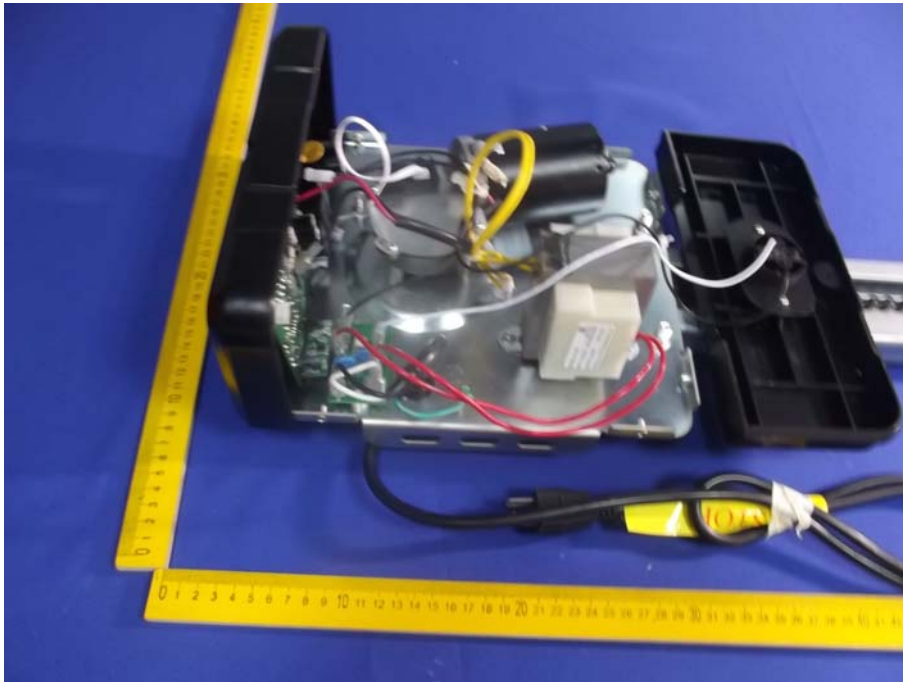


Figure 12  
PCB Of The EUT-Front View

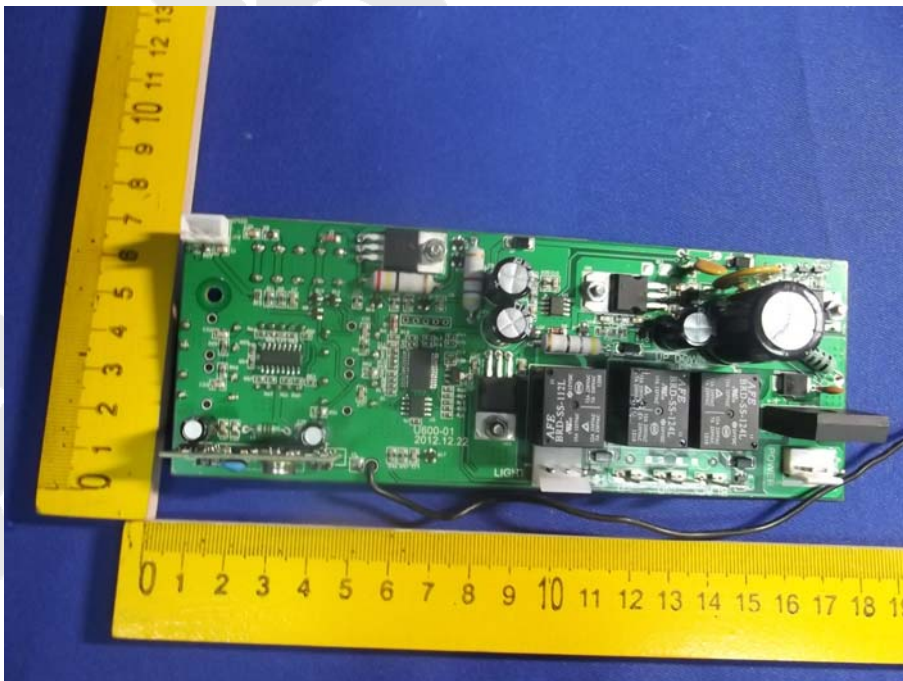


Figure 13  
PCB Of The EUT-Back View

