

**FCC PART 18**  
**MEASUREMENT AND TEST REPORT**  
For

EUT Name: Induction  
Item No.: 6950020  
Trade Mark: VOLLRATH  
FCC ID: WZ66950020  
Serial No.: 6951020



Prepared for : Luxine (Xi'an) Electronical Co.,Ltd.  
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Report Number : **TB-F094569**  
Date of Test : Jul. 20-30, 2009  
Date of Report : Jul. 31-Aug. 03, 2009

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**TEST REPORT DECLARATION**

Applicant : Luxine (Xi'an) Electronical Co.,Ltd.  
Manufacturer : Luxine (Xi'an) Electronical Co.,Ltd.  
EUT Description : Induction  
Model No. : 6950020, 6951020

**Test Procedure Used:**

FCC Rules and Regulations CFR Title 47 Part 18 Subpart C and FCC/OST MP-5 (February 1986)

The device described above is tested by Audix Technology (Shenzhen) Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 18 Subpart C limits for both radiation and conduction emissions.

The measurement results are contained in this test report and Shenzhen Toby Technology Co., Ltd. is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT to be technically compliant with the FCC official limits. Shenzhen Toby Technology Co., Ltd. recommends that this data can be submitted for FCC certification purposes if a 6dB margin below FCC limits is obtained.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Shenzhen Toby Technology Co., Ltd.

Tested by: Jacky Wong Date: Aug. 03, 2009  
(Jacky Wang)

Reviewer: Benny Xu Date: Aug. 04, 2009  
(Benny Xu)

Approved by: Justin Zhang Date: Aug. 05, 2009  
(Justin Zhang)

## 1. GENERAL INFORMATION

### 1.1. Product Description for Equipment Under Test (EUT)

#### Client Information

Applicant: Luxine (Xi'an) Electronical Co.,Ltd.  
 Address of applicant: Room 220,Xigema Building,#18, FengHui South RD,Hi-tech Zone, Xi'an City ,Shanxi, P.R.China

Manufacturer: Luxine (Xi'an) Electronical Co.,Ltd.  
 Address of manufacturer: Room 220,Xigema Building,#18, FengHui South RD,Hi-tech Zone, Xi'an City ,Shanxi, P.R.China

#### General Description of E.U.T

Items	Description
EUT Description	Induction
Trade Mark	VOLLRATH
Model No.	6950020, 6951020
Power Supply	AC120V/ 60Hz
Size	45cm×33.5cm×10cm
For more information refer to the circuit diagram form and the user's manual. The test data is gathered from a production sample, provided by the manufacturer.	

### 1.2. Description of Support Units

The EUT has been tested as an independent unit.

### 1.3. Standards Applicable for Testing

The standard used was FCC PART18

### 1.4. Measurement Uncertainty

Conducted Emission Expanded Uncertainty: U=1.26dB  
 Radiated Emission Expanded Uncertainty : U=3.02dB

### 1.5. Test Location

#### FCC – Registration No.: 90454

Audix Technology (Shenzhen) 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 and the Registration is 90454.

EUT tested in Audix Technology (Shenzhen) Lab.

TOBY Tel: +86 0755 2804 5093 Fax: +86 0755 518055

## 2. SUMMARY OF TEST RESULTS

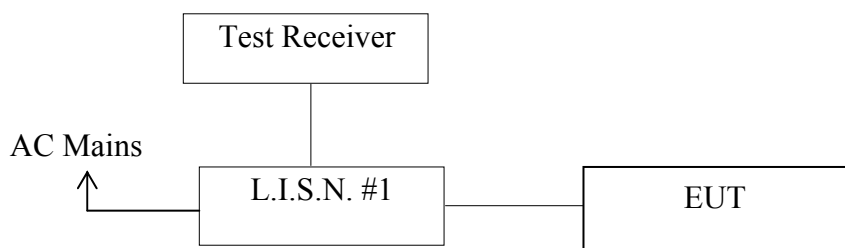
DESCRIPTION OF TEST	TEST REQUIREMENT	TEST METHOD	CLASS/ SEVERITY	RESULT
Conducted Emission (9KHz to 30MHz)	FCC PART 18	FCC OST/MP -5:1986	18.307(a)	PASS
Radiated Emission (9KHz to 30MHz)	FCC PART 18	FCC OST/MP -5:1986	18.305	PASS

### 3. §18.307(A) - CONDUCTED EMISSION

#### 3.1. Test Equipment List and Details

Description	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
Test Receiver	Rohde & Schwarz	ESCI	100842	Nov. 21, 2008	1 Year
Artificial Mains Network (AMN)	Rohde & Schwarz	ESH2-Z5	843890/011	Apr. 02, 2009	1 Year
Line Impedance Stabilization Network (LISN)	Kyoritsu	KNW-407	8-1280-4	Apr. 02, 2009	1 Year
50Ω Coaxial Switch	Anritsu	MP59B	6200426389	Mar. 19, 2009	1/2 Year
50Ω Terminator	Anritsu	BNC	001	Apr. 02, 2009	1 Year
Software	Audix	E3	SET00200 9804M592	----	----

#### 3.2. Basic Test Setup Block Diagram



( EUT: Induction )

#### 3.3. Configuration of EUT on Test

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

##### 3.3.1. Induction ( EUT )

Model Number : 6950020  
 Serial Number : 6951020  
 Manufacturer : Luxine (Xi'an) Electronical Co., Ltd.

#### 3.4. Operating Condition of EUT

3.4.1. Setup the EUT and simulator as shown on Section 3.2.

3.4.2. Turn on the power of all equipment.

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

### 3.5. Test Procedure

The EUT is connected to the power mains through a line impedance stabilization network (L.I.S.N.#2). This provides a 50 ohm coupling impedance for the EUT. 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 levels. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.4-2003 on Conducted Emission Test.

The bandwidth of test receiver (R & S ESHS10) is set at 10kHz.

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

The test result are reported on Section 2.7, all the scanning waveforms for Conducted Emission

Test are attached in Appendix I.

### 3.6. Conducted Emission Test Results

**PASS.**

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

All emissions not reported below are too low against the prescribed limits.

Model : 6950020

No.	Freq. (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Tested Line	Remark
1	0.04194	0.49	9.88	65.01	75.38	110.00	34.62	Peak	Line
2	0.12599	0.24	9.88	23.23	33.35	81.59	48.24	Peak	
3	2.060	0.21	9.90	28.98	39.09	56.00	16.91	Peak	
4	2.210	0.21	9.90	27.93	38.04	56.00	17.96	Peak	
5	2.628	0.23	9.90	26.22	36.35	56.00	19.65	Peak	
6	3.434	0.27	9.91	27.23	37.41	56.00	18.59	Peak	
7	13.015	0.40	9.96	27.34	37.70	60.00	22.30	Peak	

No.	Freq. (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Tested Line	Remark
1	0.04194	0.24	9.88	65.09	75.21	110.00	34.79	Peak	Neutral
2	0.08379	0.20	9.88	23.47	33.55	85.30	51.75	Peak	
3	2.150	0.21	9.90	29.86	39.97	56.00	16.03	Peak	
4	2.717	0.23	9.91	29.59	39.73	56.00	16.27	Peak	
5	3.254	0.25	9.91	32.96	43.12	56.00	12.88	Peak	
6	3.374	0.26	9.91	31.82	41.99	56.00	14.01	Peak	
7	13.344	0.32	9.96	27.91	38.19	60.00	21.81	Peak	



Model : 6951020

No.	Freq. (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Tested Line	Remark
1	0.03633	0.27	9.88	79.86	90.01	110.00	19.99	Peak	Line
2	0.07259	0.20	9.88	26.75	36.83	86.61	49.78	Peak	
3	2.180	0.21	9.90	28.51	38.62	56.00	17.38	Peak	
4	2.628	0.23	9.90	28.25	38.38	56.00	17.62	Peak	
5	2.926	0.24	9.91	27.74	37.89	56.00	18.11	Peak	
6	13.284	0.41	9.96	25.87	36.24	60.00	23.76	Peak	

No.	Freq. (MHz)	LISN Factor(d B)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Tested Line	Remark
1	0.03633	0.58	9.88	77.94	88.41	110.00	21.60	Peak	Neutral
2	0.07259	0.31	9.88	25.34	35.53	86.61	51.08	Peak	
3	2.180	0.21	9.90	28.71	38.82	56.00	17.18	Peak	
4	2.986	0.24	9.91	32.21	42.36	56.00	13.64	Peak	
5	13.165	0.32	9.96	26.27	36.55	60.00	23.45	Peak	

Remark: 1. Emission Level=LISN Factor + Cable Loss (Include 10Db pulse limit) + Reading.  
 2. If the average limit is met when using a quasi-peak detector. The EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

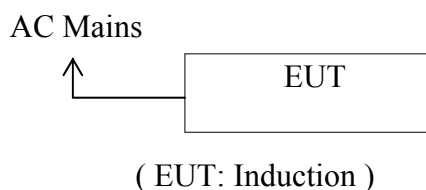
## 4. §18.305 - RADIATED EMISSION

### 4.1. Test Equipment List and Details

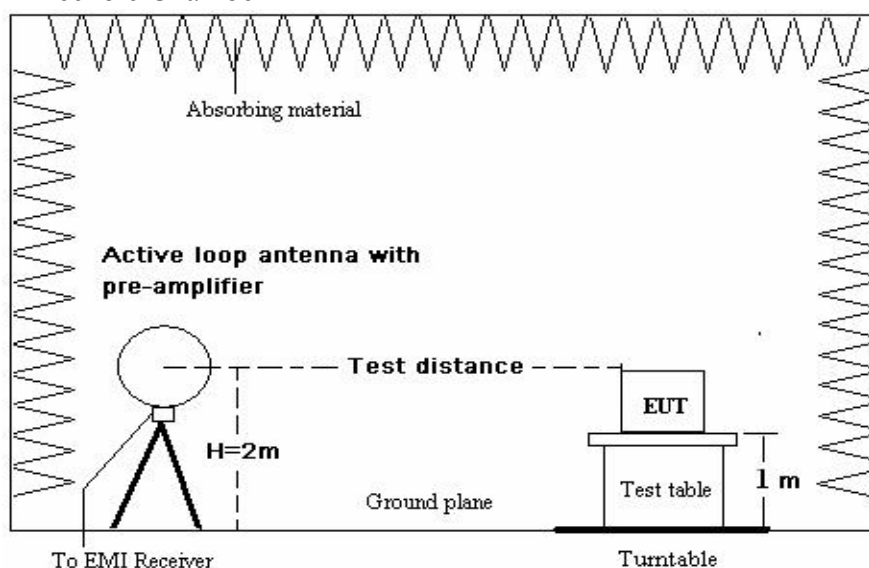
Description	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
Test Receiver	Rohde & Schwarz	ESVS10	844594/001	Mar. 07, 2009	1 Year
Preamplifier	Agilent	8447D	2944A10548	Mar. 19, 2009	1/2 Year
Preamplifier	HP	8449B	3008A00864	May 19, 2009	1/2 Year
Loop Antenna	Chase	HLA6120	1062	Jun. 28, 2008	1 Year
EMI Spectrum	Agilent	E7405A	MY45106600	May 19, 2009	1 Year
Software	Audix	E3	SET00200 9912M295-2	----	----

### 4.2. Basic Test Setup Block Diagram

4.2.1. Block diagram of connection between the EUT and simulators



4.2.2. In Anechoic Chamber



### 4.3. Configuration of EUT on Test

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

## 4.3.1. Induction (EUT)

Model Number : 6950020  
 Serial Number : 6951020  
 Manufacturer : Luxine (Xi'an) Electronical Co., Ltd.

## 4.4. Operating Condition of EUT

4.4.1. Setup the EUT and simulator as shown on Section 4.2.

4.4.2. Turn on the power of all equipment.

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

## 4.5. 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. Power on the PC and let it work normally, we use a keyboard test soft ware, let EUT working in test mode, then test it. 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 are set on test.

The bandwidth of the EMI test receiver (R&S ESVS20) is set at 120kHz.

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

The test mode (ON) is tested in Anechoic Chamber, and all the scanning waveforms are attached in Appendix II.

## 4.6. Radiated Emission Test Results

**PASS.**

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

Model : 6950020

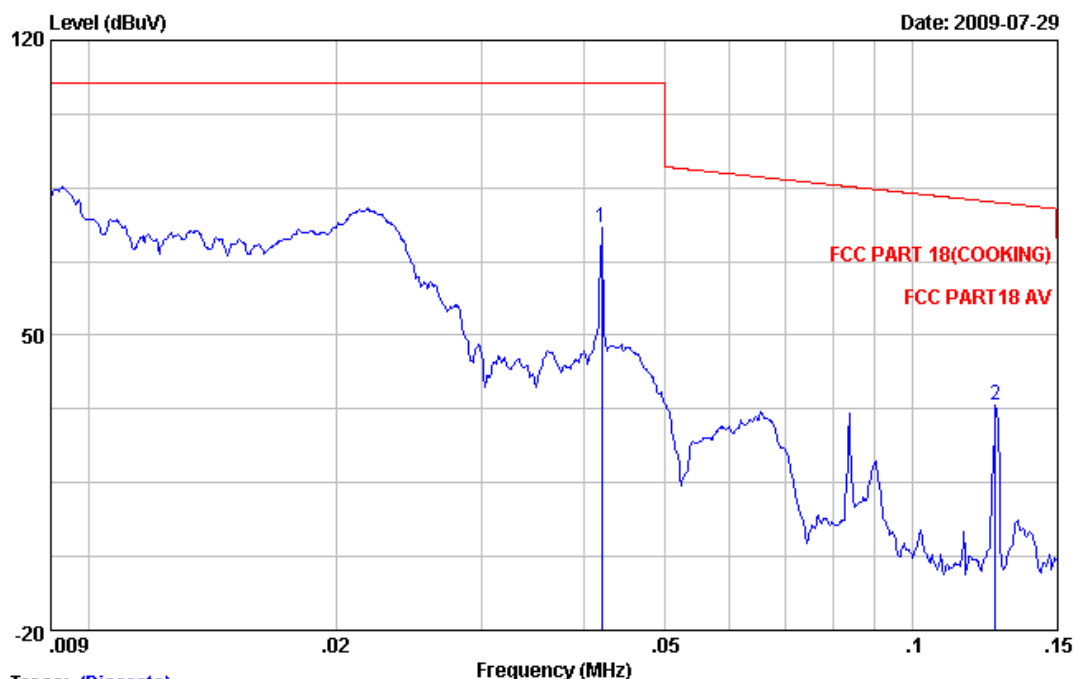
No.	Freq. (MHz)	Antenna Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.01562	20.50	1.20	52.45	74.15	92.50	18.35	Peak
2	0.05275	19.80	1.22	65.63	86.65	92.50	5.85	Peak
3	0.07180	20.20	1.24	58.30	79.74	92.50	12.76	Peak
4	0.10343	20.20	1.26	48.60	70.06	92.50	22.44	Peak
5	0.19004	20.53	1.31	41.98	63.82	92.50	28.68	Peak

Model : 6951020

No.	Freq. (MHz)	Antenna Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.05275	19.80	1.22	65.84	86.86	92.50	5.64	Peak
2	0.07180	20.20	1.24	59.27	80.71	92.50	11.79	Peak
3	0.10343	20.20	1.26	48.24	69.70	92.50	22.80	Peak
4	0.19004	20.53	1.31	45.58	67.42	92.50	25.08	Peak

**Remark:** 1. Emission Level=Antenna Factor + Cable Loss + Reading.

# APPENDIX I

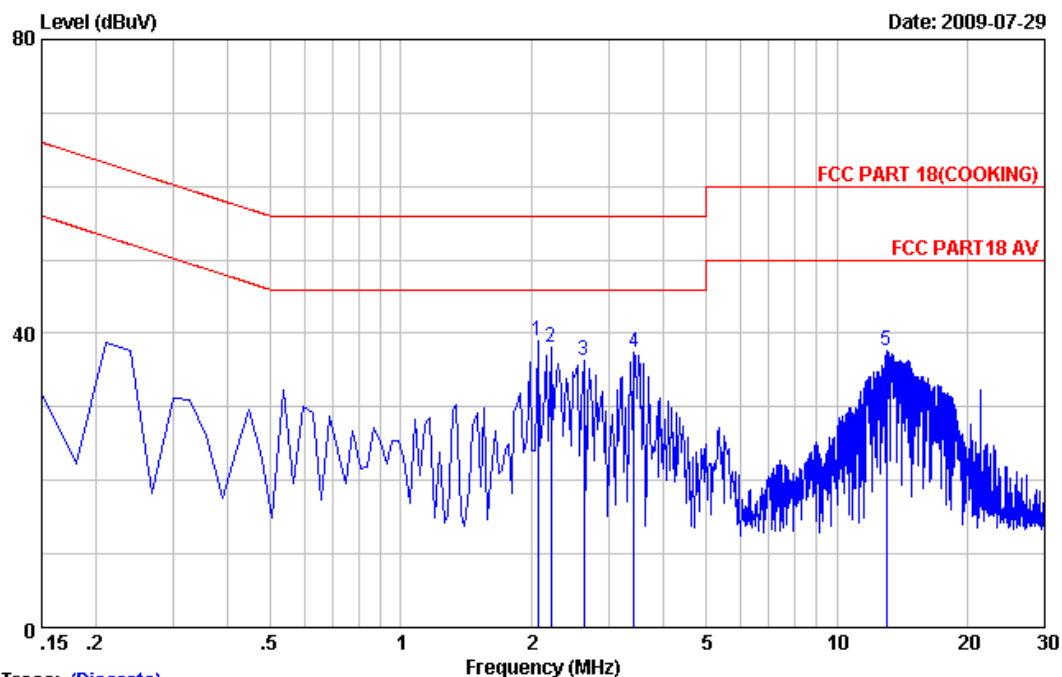
**(6950020-LINE Conducted Emission)**

Trace: (Discrete)

Site no : Audix No.1 Conduction  
 Dis./Ant. : \*\* 2009 ESH2-25 LINE  
 Limit : FCC PART 18(COOKING)  
 Env./Ins. : Temp:23'C Humi:54%  
 EUT : Induction M/N:6950020  
 Power Rating : AC 120V/60Hz  
 Test Mode : ON

Data no : 25

Engineer : Jolly\_Xu

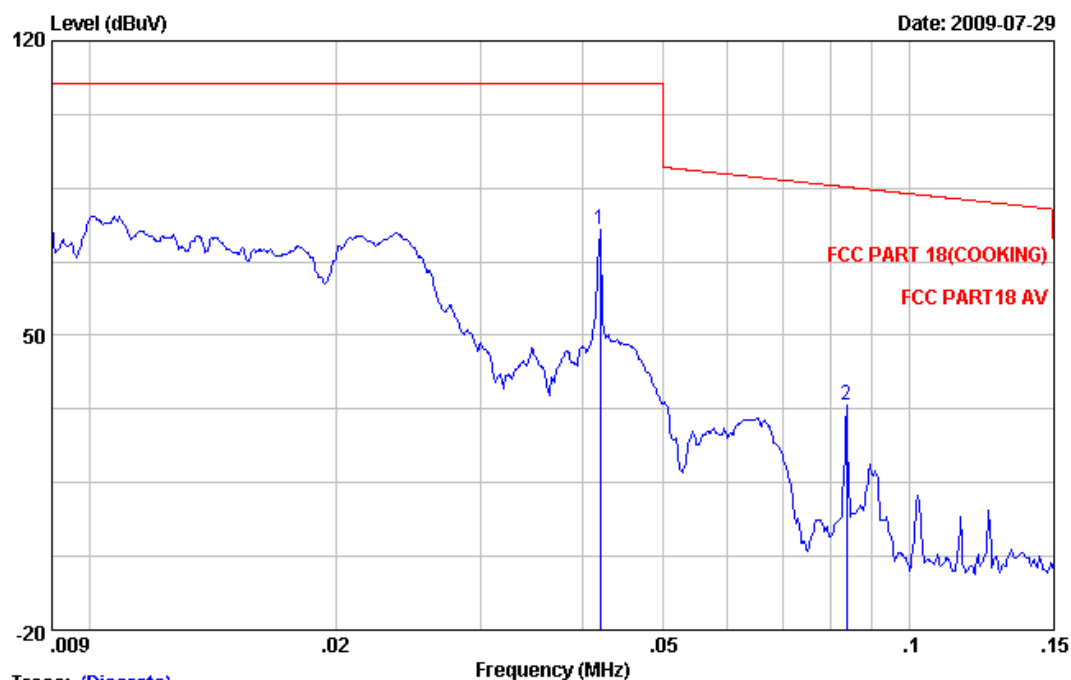


Trace: (Discrete)

Site no : Audix No.1 Conduction  
 Dis./Ant. : \*\* 2009 ESH2-25 LINE  
 Limit : FCC PART 18(COOKING)  
 Env./Ins. : Temp:23'C Humi:54%  
 EUT : Induction M/N:6950020  
 Power Rating : AC 120V/60Hz  
 Test Mode : ON

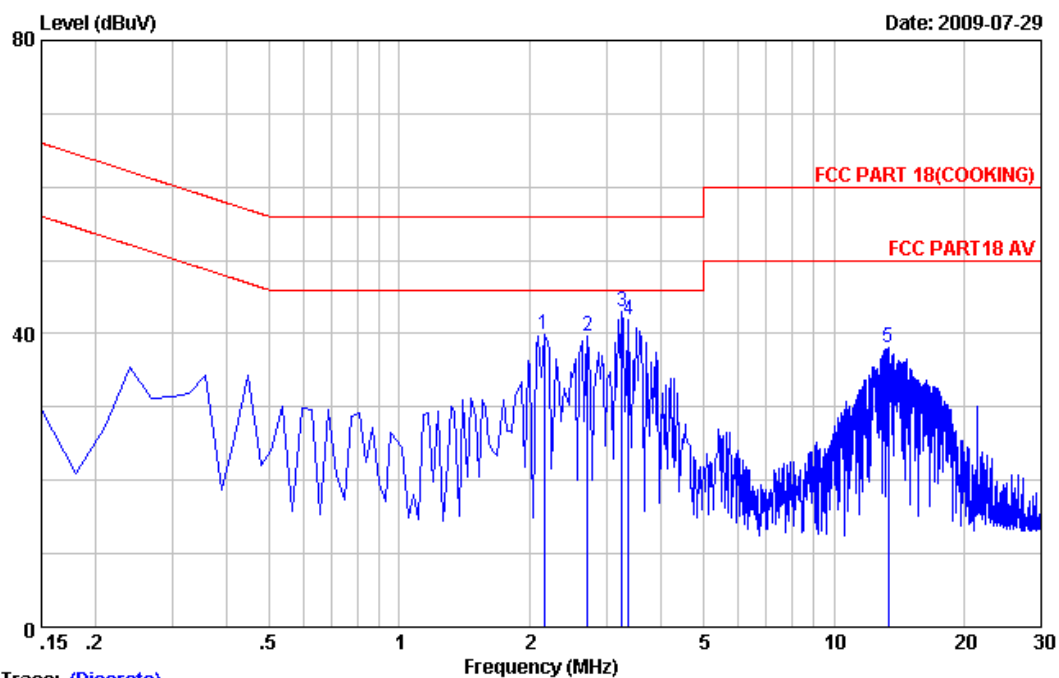
Data no : 28

Engineer : Jolly\_Xu

**(6950020-NEUTRAL Conducted Emission)**

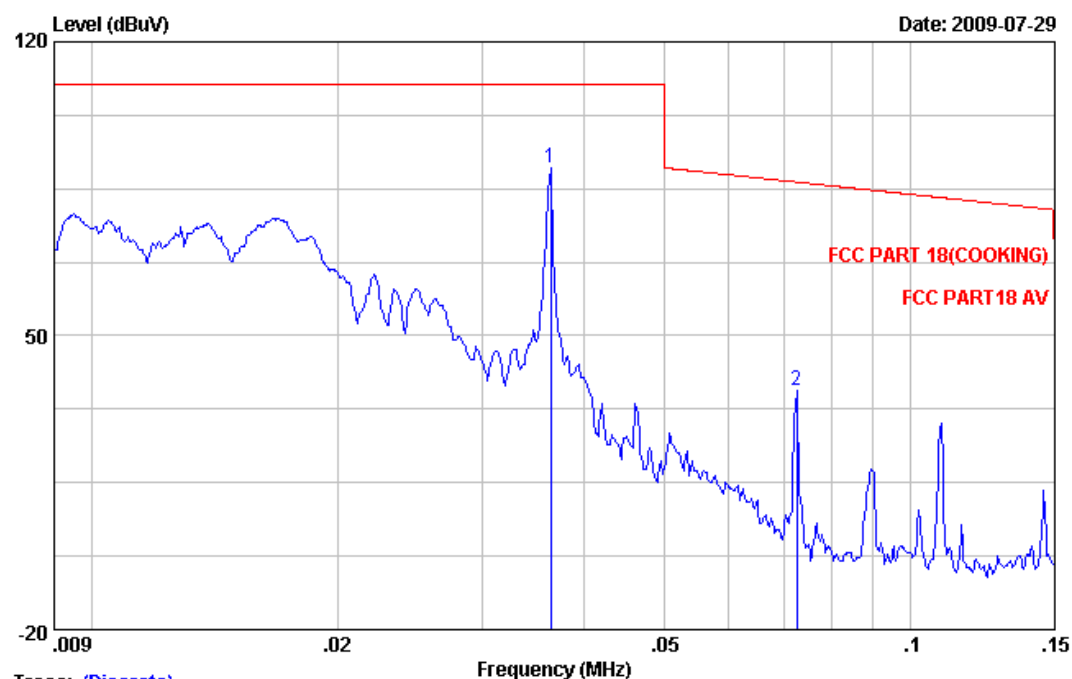
Trace: (Discrete)

Site no : Audix No.1 Conduction Data no : 26  
 Dis./Ant. : \*\* 2009 ESH2-Z5 NEUTRAL  
 Limit : FCC PART 18(COOKING)  
 Env./Ins. : Temp:23'C Humi:54% Engineer : Jolly\_Xu  
 EUT : Induction M/N:6950020  
 Power Rating : AC 120V/60Hz  
 Test Mode : ON



Trace: (Discrete)

Site no : Audix No.1 Conduction Data no : 27  
 Dis./Ant. : \*\* 2009 ESH2-Z5 NEUTRAL  
 Limit : FCC PART 18(COOKING)  
 Env./Ins. : Temp:23'C Humi:54% Engineer : Jolly\_Xu  
 EUT : Induction M/N:6950020  
 Power Rating : AC 120V/60Hz  
 Test Mode : ON

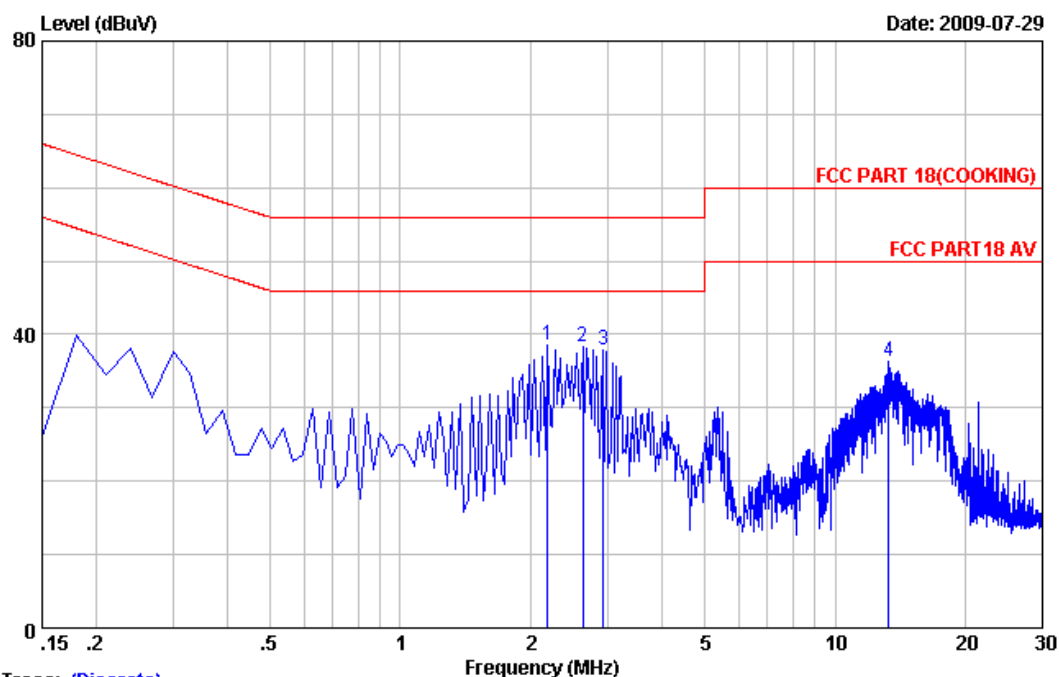
**(6951020-LINE Conducted Emission)**

Trace: (Discrete)

Site no : Audix No.1 Conduction  
 Dis./Ant. : \*\* 2009 ESH2-25 NEUTRAL  
 Limit : FCC PART 18(COOKING)  
 Env./Ins. : Temp:23'C Humi:54%  
 EUT : Induction M/N:6951020  
 Power Rating : AC 120V/60Hz  
 Test Mode : ON

Data no : 31

Engineer : Jolly\_Xu



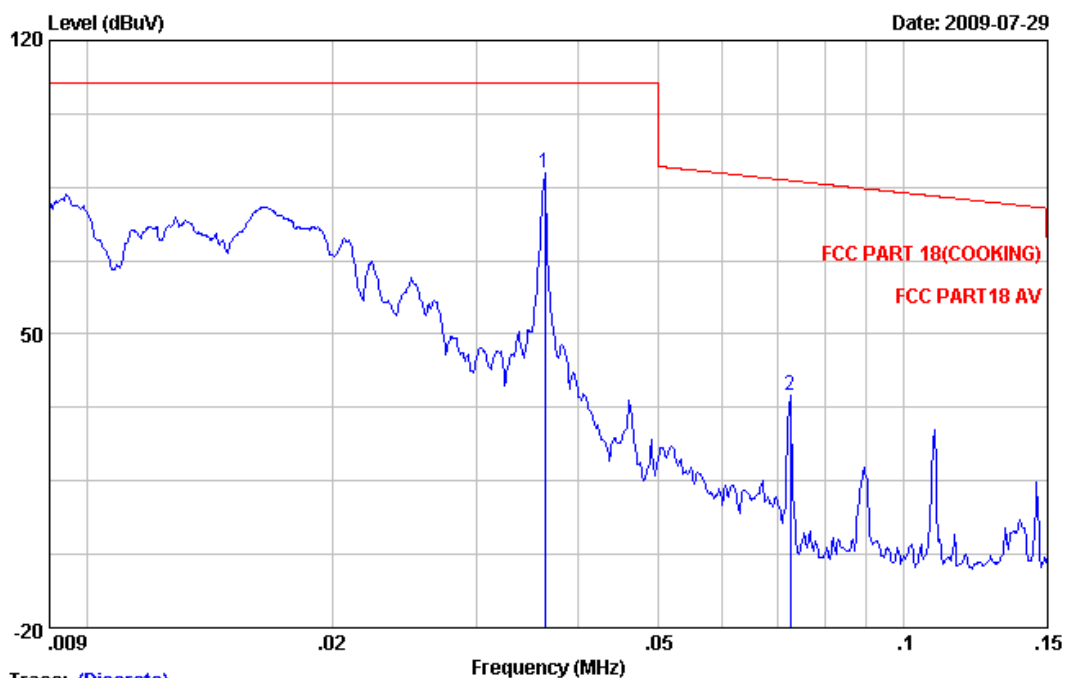
Trace: (Discrete)

Site no : Audix No.1 Conduction  
 Dis./Ant. : \*\* 2009 ESH2-25 LINE  
 Limit : FCC PART 18(COOKING)  
 Env./Ins. : Temp:23'C Humi:54%  
 EUT : Induction M/N:6951020  
 Power Rating : AC 120V/60Hz  
 Test Mode : ON

Data no : 29

Engineer : Jolly\_Xu



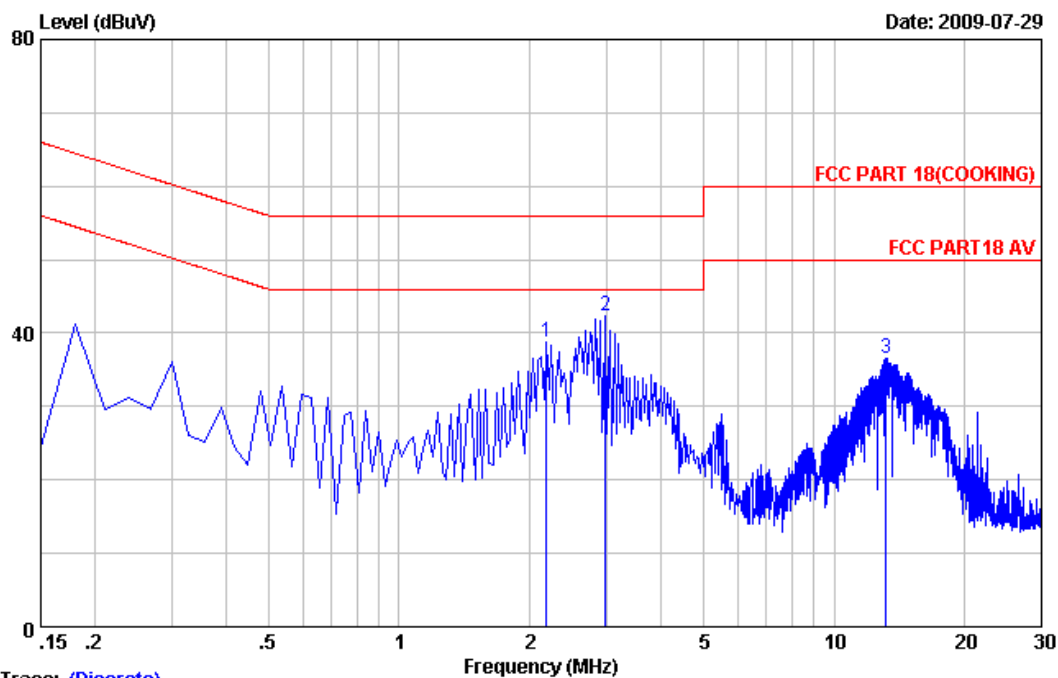
**(6951020-NEUTRAL Conducted Emission)**

Trace: (Discrete)

Site no : Audix No.1 Conduction  
 Dis./Ant. : \*\* 2009 ESH2-Z5 LINE  
 Limit : FCC PART 18(COOKING)  
 Env./Ins. : Temp:23'C Humi:54%  
 EUT : Induction M/N:6951020  
 Power Rating : AC 120V/60Hz  
 Test Mode : ON

Data no : 32

Engineer : Jolly\_Xu



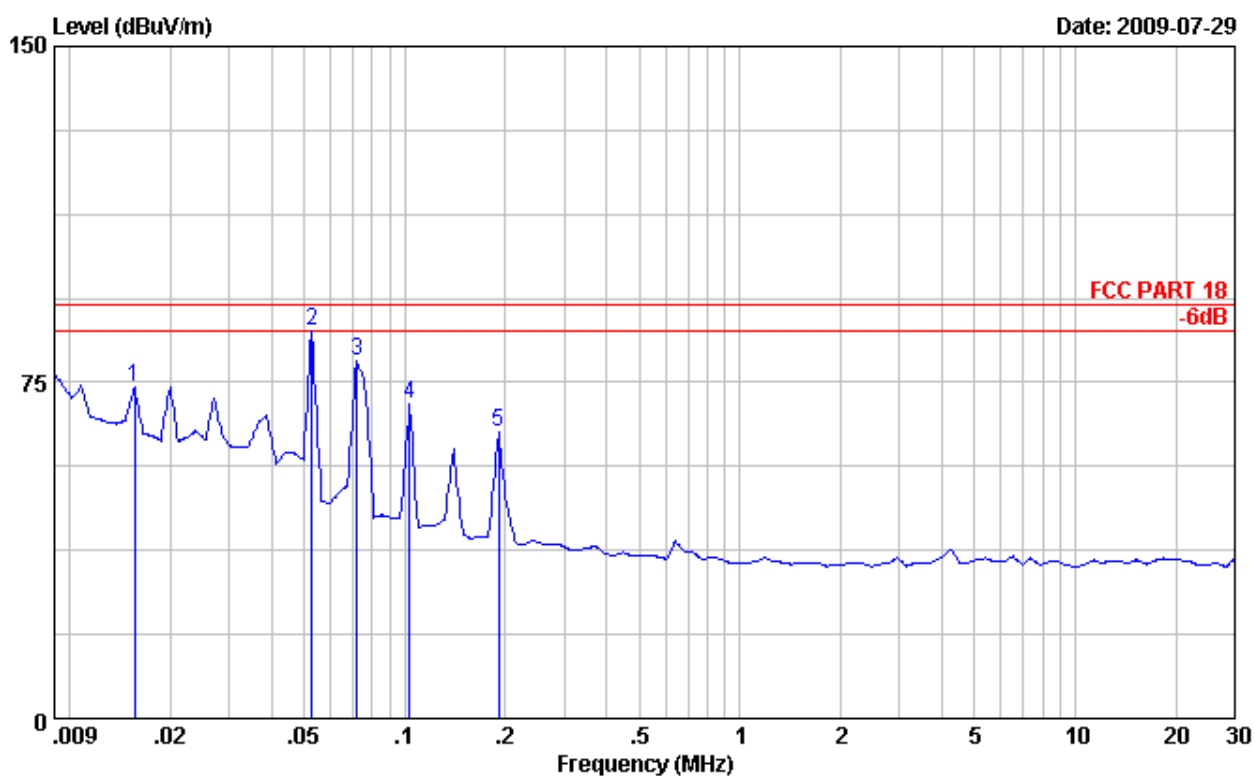
Trace: (Discrete)

Site no : Audix No.1 Conduction  
 Dis./Ant. : \*\* 2009 ESH2-Z5 NEUTRAL  
 Limit : FCC PART 18(COOKING)  
 Env./Ins. : Temp:23'C Humi:54%  
 EUT : Induction M/N:6951020  
 Power Rating : AC 120V/60Hz  
 Test Mode : ON

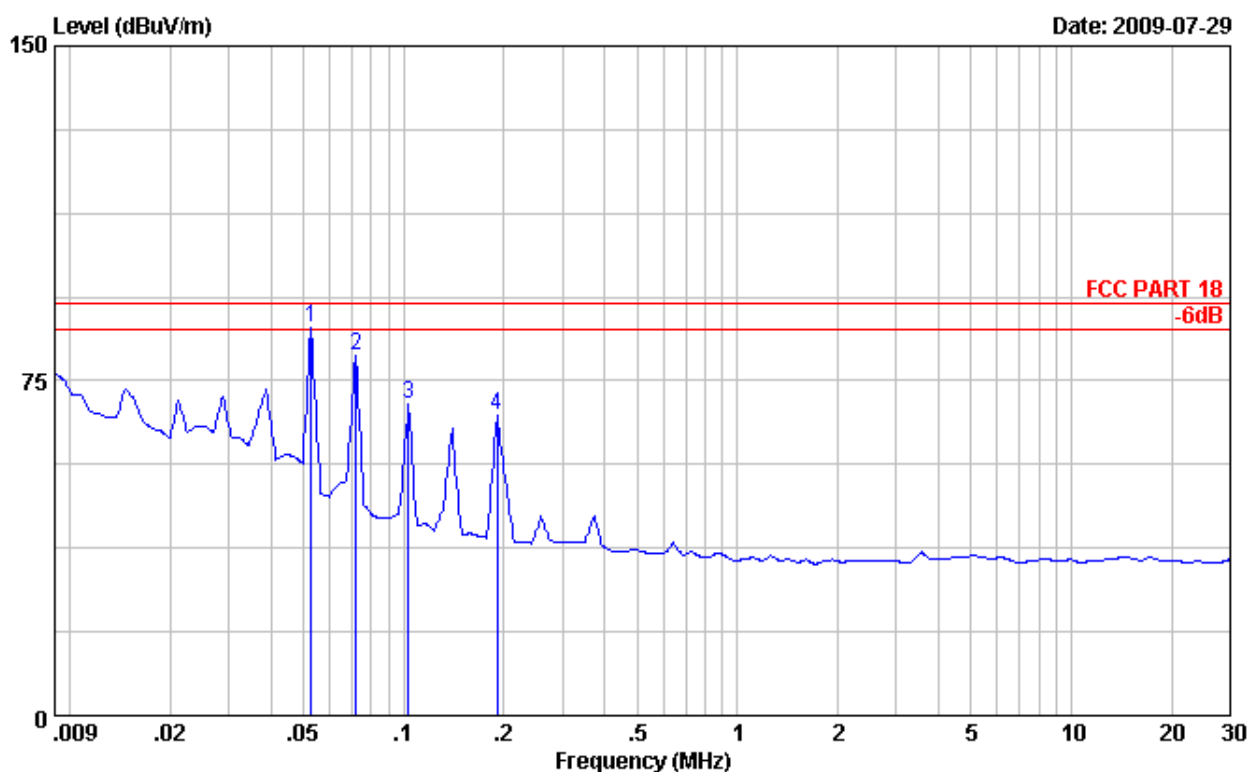
Data no : 30

Engineer : Jolly\_Xu

## APPENDIX II

**(6950020- Radiated Emission)**

Site no.	: 3m Chamber	Data no.	: 7
Dis. / Ant.	: 3m 3M HLA6120	Ant. pol.	:
Limit	: FCC PART 18	Engineer	: Thomax_Chen
Env. / Ins.	: 24°C/56%		
EUT	: Induction M/N:6950020		
Power Rating	: AC 120V/60Hz		
Test Mode	: on		

**(6951020- Radiated Emission)**

Site no. : 3m Chamber  
 Dis. / Ant. : 3m 3M HLA6120  
 Limit : FCC PART 18  
 Env. / Ins. : 24°C/56%  
 EUT : Induction M/N:6951020  
 Power Rating : AC 120V/60Hz  
 Test Mode : on

Data no. : 8  
 Ant. pol. :  
 Engineer : Thomax\_Chen