





FCC Test Report

FCC ID: WZ659300

Report No. : TB-FCC110224
Applicant : Luxine (Xi'an) Electronics Co., Ltd.
Equipment Under Test (EUT)
EUT Name : Induction Cooker
Model No. : 59300
Serial No. : 59310
Brand Name : VOLLRATH
Receipt Date : 2010-12-20
Test Date : 2010-12-21 to 2011-01-06
Issue Date : 2011-01-07
Standards : FCC Part 18 : 2008
Method : FCC OST/MP-5:1986
Conclusions : **PASS**

In the configuration tested, the EUT complied with the standards specified above,
The EUT technically complies with the FCC requirements

Test/Witness Engineer : 
Ray Lai (Engineer)

Approved& Authorized : 
Justin Zhang (Manager)

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in the report.

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1. General Information About EUT

1.1 Client Information

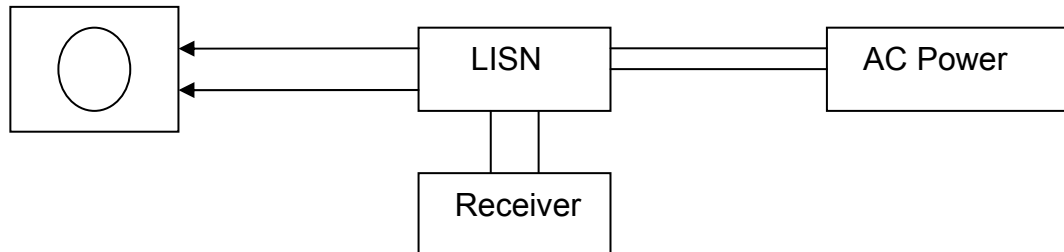
Applicant	:	Luxine (Xi'an) Electronics Co., Ltd.
Address	:	4th Floor, Building B, Seeker Industrial Park, 2nd JinYe Rd, Hi-tech Development Zone, Xi'an, China
Manufacturer	:	Luxine (Xi'an) Electronics Co., Ltd.
Address	:	4th Floor, Building B, Seeker Industrial Park, 2nd JinYe Rd, Hi-tech Development Zone, Xi'an, China

1.2 General Description of EUT (Equipment Under Test)

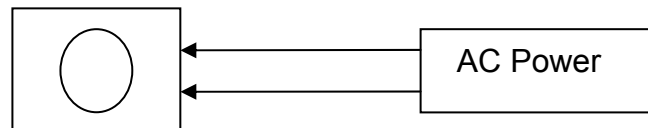
EUT Name	:	Induction Cooker
Model No.	:	59300
Serial No.	:	59310
Model difference	:	The only difference is the power. 59300:1800W (AC 120V/15A), 59310:1440W (AC 120V/12A)
Power Supply	:	AC 120V, 60Hz
Power	:	1800W
Connecting I/O Port(s)	:	Please refer to the User's Manual
Note: For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.		

1.3 Block Diagram Showing the Configuration of System Tested

Conducted Emission Test



Radiated Emission Test



1.4 Description of Support Units

The EUT has been tested with water up to 80% of the maximum capacity of the boiler.

1.5 Description of Test Mode

To investigate the maximum EMI emission characteristics generated from EUT, the test system was pre-scanning tested based on the consideration of the EUT operation mode, and the worst Case is when the EUT is operation with the maximum power, so the conducted and radiated emission data of below only showed the worst case.

1.6 Test Location

This test was performed at:
Shenzhen Huatongwei International Inspection Co., Ltd.
Keji Nan No. 12 Road, Hi-tech Park, Shenzhen, China
Tel: 86-755-26715686 Fax: 86-755-26748089

At the time of testing, the Laboratory was accredited. It is listed in the United States of American Federal Communications Commission (FCC), and the registration number is 662850.

The test report was fulfilled by Shenzhen Toby Technology Co., Ltd. Shenzhen Toby Technology Co., Ltd. is assumed full responsibility for the accuracy and completeness of these measurements results.

2. Test Summary

FCC Part 18: 2008			
Standard Section	Test Item	Test Method	Judgment
18.305	Radiated Emission (9KHz to 30MHz)	FCC OST/MP-5:1986	PASS
18.307(a)	Conducted Emission (9KHz to 30MHz)	FCC OST/MP-5:1986	PASS
Note: N/A is an abbreviation for Not Applicable.			

3. Conducted Emission Test

3.1 Test Standard and Limit

3.1.1 Test Standard

FCC Part 18.307(a)

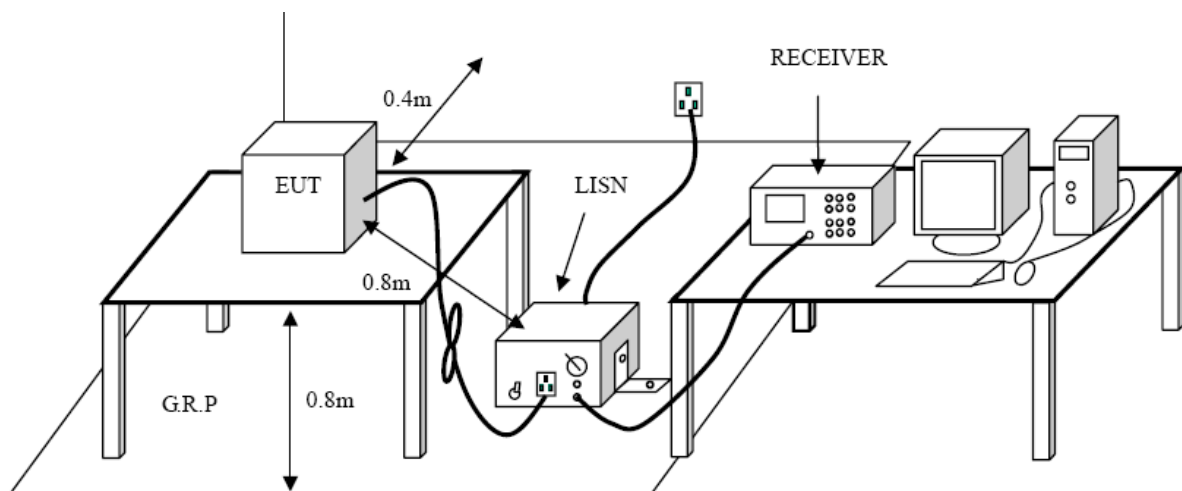
3.1.2 Test Limit

Conducted Emission Test Limit

Frequency (MHz)	Maximum RF Line Voltage (dB μ V)	
	Quasi-peak Level	Average Level
0.009 ~ 0.05	110	--
0.05 ~ 0.15	90 ~ 80	--
0.15 ~ 0.5	66 ~ 56 *	56 ~ 46 *
0.5 ~ 5	56	46
5 ~ 30	60	50

Notes: (1) *Decreasing linearly with logarithm of the frequency.
 (2) The lower limit shall apply at the transition frequencies.

3.2 Test Setup



3.3 Test Procedure

The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.

Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.

I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.

LISN at least 80 cm from nearest part of EUT chassis.

The bandwidth of EMI test receiver is set at 9kHz, and the test frequency band is from 0.15MHz to 30MHz.

3.4 Deviation

The test is no deviation from the standard.

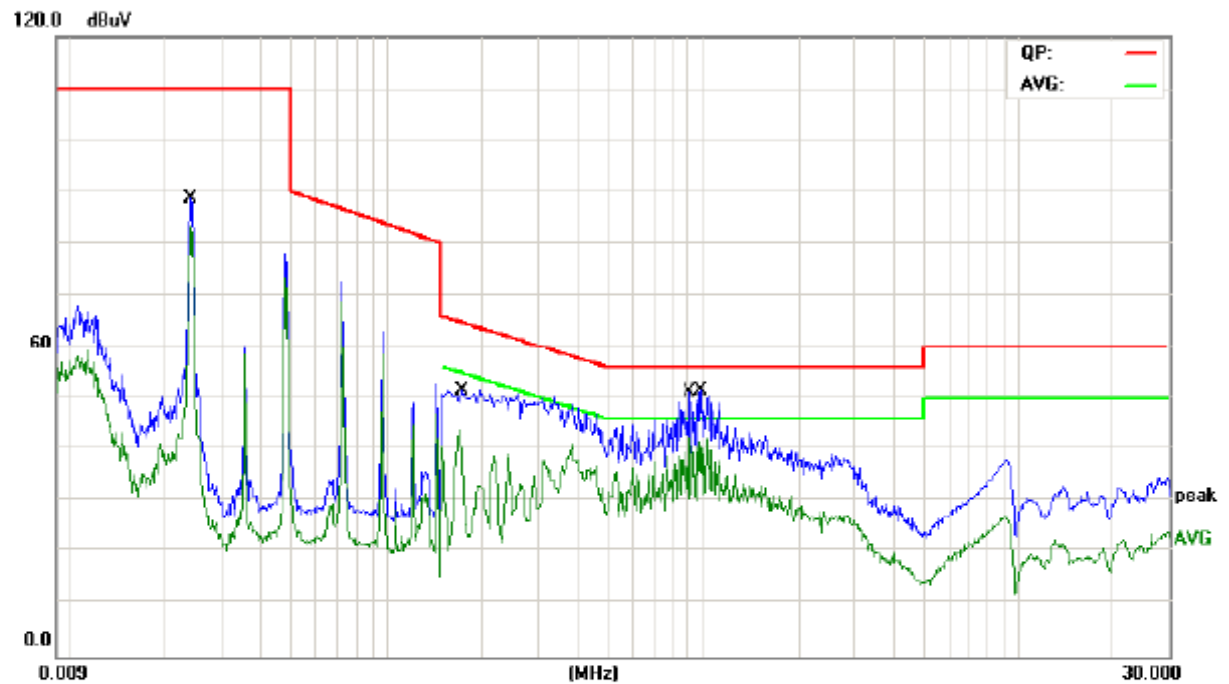
3.5 Test Equipment Used

Description	Manufacturer	Model No.	Serial No.	Last Cal.
EMI Test Receiver	Rohde & Schwarz	ESCI	DE25181	2010/10
50ΩCoaxial Switch	Anritsu	MP59B	X10321	2010/10
L.I.S.N	Rohde & Schwarz	ENV216	00063417	2010/10
L.I.S.N.	FCC	FCC-LISN-50 -25-2-01	3-21-2010	2010/10

3.5 Test Data

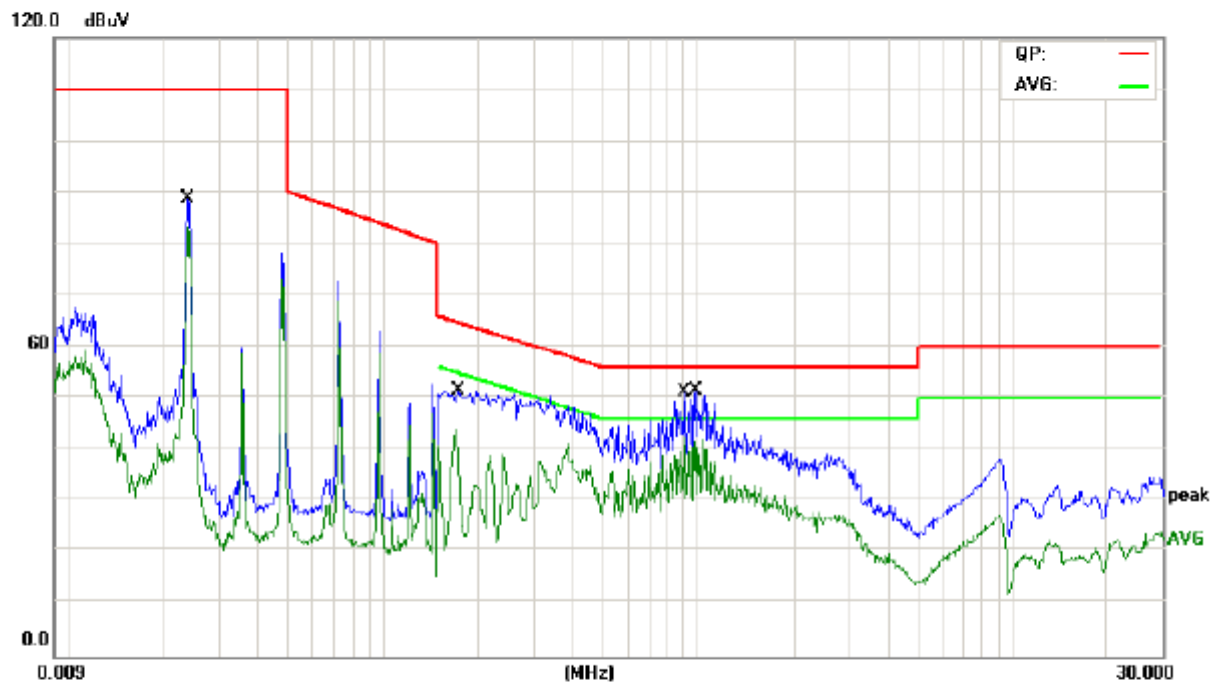
Please see the next page.

E.U.T :	Induction	Model Name :	59300
Temperature :	25°C	Relative Humidity :	52%
Terminal:	Line		
Test Voltage :	AC 120 V / 60Hz		
Test Mode :	The EUT in heating mode with the max power		



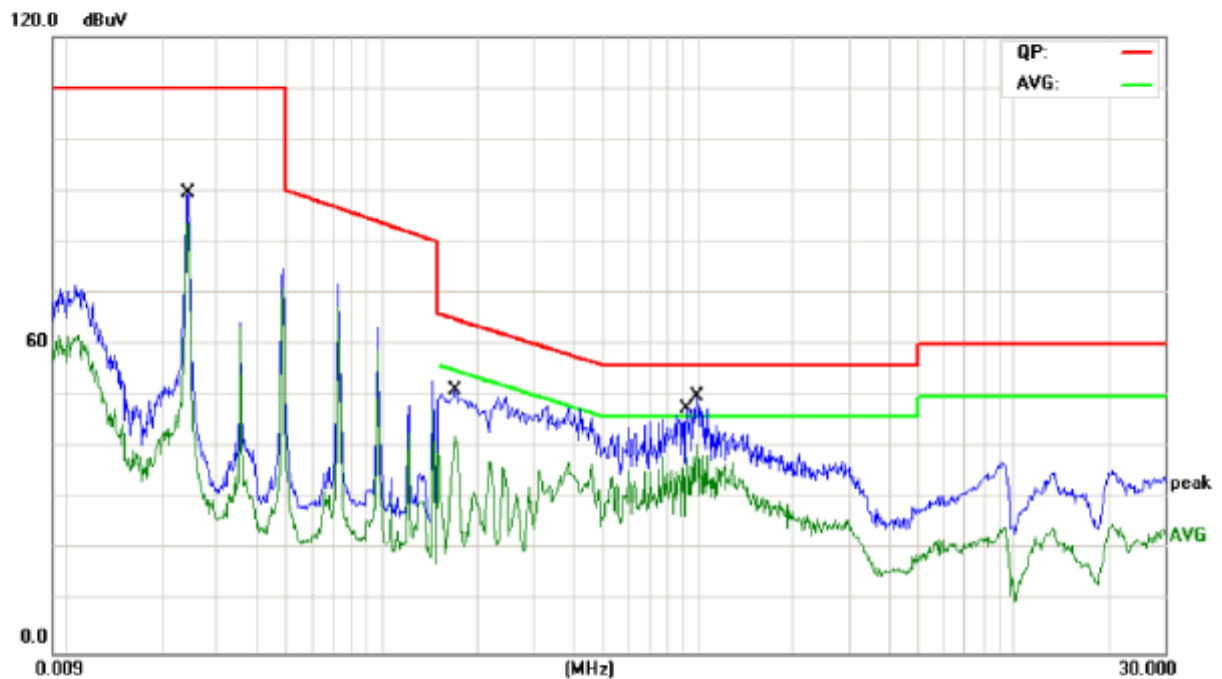
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.0241	77.54	9.96	87.50	110.0	-22.50	QP	
2		0.1740	38.37	9.95	48.32	64.76	-16.44	QP	
3		0.1740	32.64	9.95	42.59	54.76	-12.17	AVG	
4		0.9140	34.91	9.70	44.61	56.00	-11.39	QP	
5	*	0.9140	32.76	9.70	42.46	46.00	-3.54	AVG	
6		0.9900	38.90	9.70	48.60	56.00	-7.40	QP	
7		0.9900	31.54	9.70	41.24	46.00	-4.76	AVG	

E.U.T :	Induction	Model Name :	59300
Temperature :	25°C	Relative Humidity :	52 %
Terminal:	Neutral		
Test Voltage :	AC 120 V / 60Hz		
Test Mode :	The EUT in heating mode with the max power		



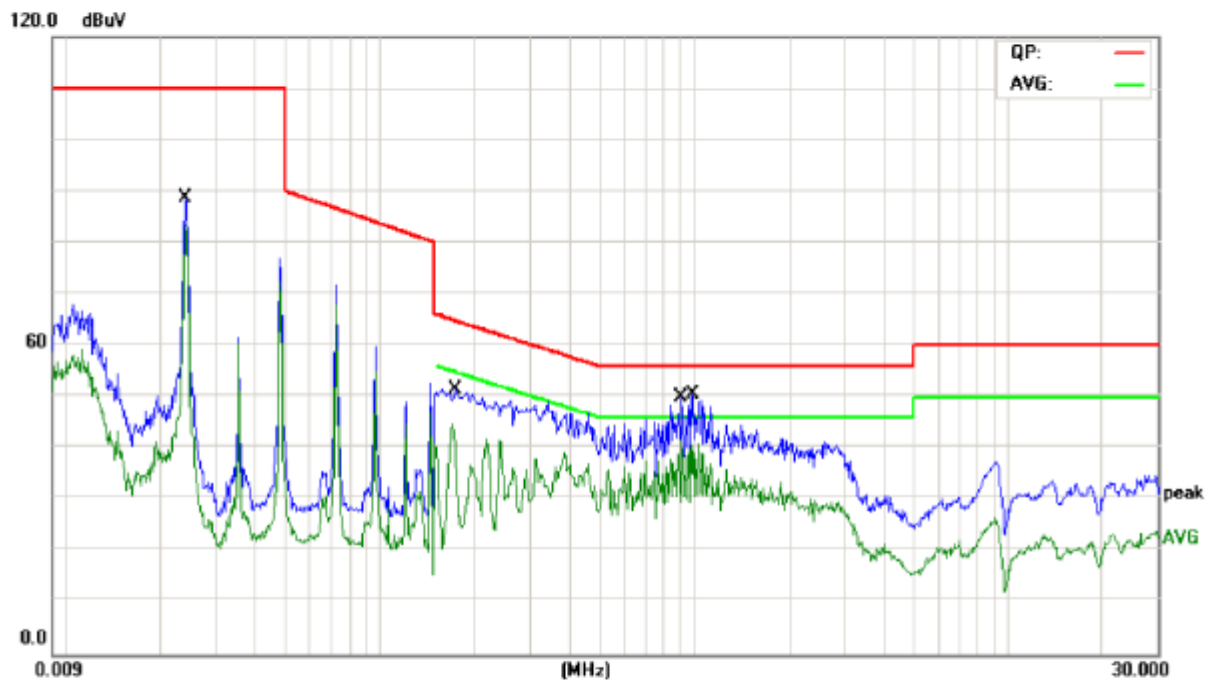
No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over		
		MHz	Level	Factor	ment			Detector	Comment
			dBuV	dB	dBuV	dBuV	dB		
1		0.0241	77.54	9.96	87.50	110.0	-22.50	QP	
2		0.1740	38.37	9.95	48.32	64.76	-16.44	QP	
3		0.1740	32.64	9.95	42.59	54.76	-12.17	AVG	
4		0.9140	34.91	9.70	44.61	56.00	-11.39	QP	
5	*	0.9140	32.76	9.70	42.46	46.00	-3.54	AVG	
6		0.9900	38.90	9.70	48.60	56.00	-7.40	QP	
7		0.9900	31.54	9.70	41.24	46.00	-4.76	AVG	

E.U.T :	Induction	Model Name :	59310
Temperature :	25°C	Relative Humidity :	52%
Terminal:	Line		
Test Voltage :	AC 120 V / 60Hz		
Test Mode :	The EUT in heating mode with the max power		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.0241	80.15	9.96	90.11	110.0	-19.89	QP	
2		0.1700	38.25	9.96	48.21	64.96	-16.75	QP	
3		0.1700	33.29	9.96	43.25	54.96	-11.71	AVG	
4		0.9220	34.18	9.70	43.88	56.00	-12.12	QP	
5	*	0.9220	32.03	9.70	41.73	46.00	-4.27	AVG	
6		0.9900	37.52	9.70	47.22	56.00	-8.78	QP	
7		0.9900	31.04	9.70	40.74	46.00	-5.26	AVG	

E.U.T :	Induction	Model Name :	59310
Temperature :	25°C	Relative Humidity :	52 %
Terminal:	Neutral		
Test Voltage :	AC 120 V / 60Hz		
Test Mode :	The EUT in heating mode with the max power		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV	dBuV	dB		
1		0.0241	77.54	9.96	87.50	110.0	-22.50	QP	
2		0.1740	38.37	9.95	48.32	64.76	-16.44	QP	
3		0.1740	31.97	9.95	41.92	54.76	-12.84	AVG	
4		0.9140	35.17	9.70	44.87	56.00	-11.13	QP	
5	*	0.9140	31.73	9.70	41.43	46.00	-4.57	AVG	
6		0.9900	37.88	9.70	47.58	56.00	-8.42	QP	
7		0.9900	31.22	9.70	40.92	46.00	-5.08	AVG	

4. Radiated Emission Test

4.1 Test Standard and Limit

4.1.1 Test Standard

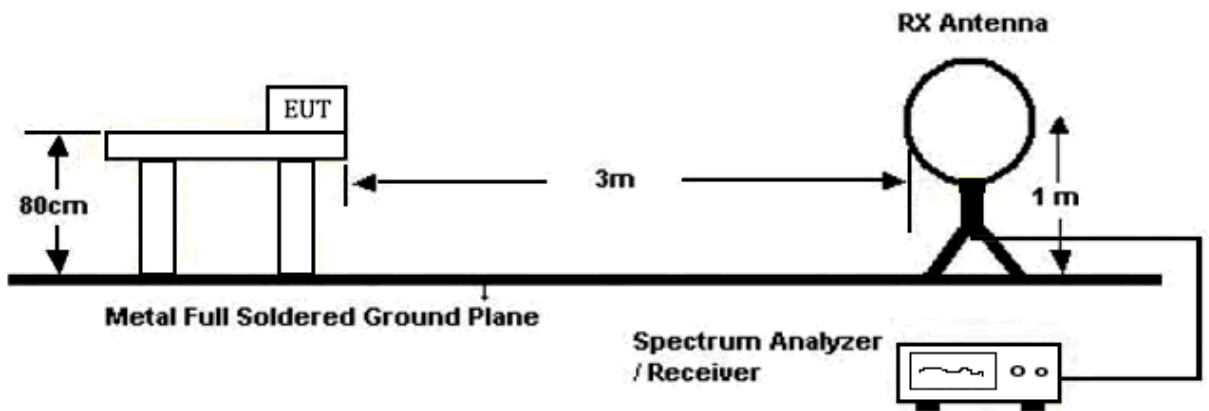
FCC Part 18.305

4.1.2 Test Limit

Radiated Emission Limit (9kHz~30MHz)

Frequency (MHz)	Field Strength Limit (microvolt/meter)	Measurement Distance (meters)
0.009~30	1500	30
Note: Emission Level(dBuV/m)=20log Emission Level(uV/m)		

4.2 Test Setup



4.3 Test Procedure

- (1) The measuring distance of 3m shall be used for measurements at frequency up to 30MHz. The EUT was placed on a rotating 0.8m high above ground, the table was rotated 360 degrees to determine the position of the highest radiation.
- (2) An initial scan was performed in the 3m chamber using the spectrum analyzer in peak detection mode. Average measurements were conducted based on the peak sweep graph. The EUT was measured by a loop antenna.
- (3) For the actual test configuration, please see the test setup photo.

4.4 Deviation

For Radiated Emission, test at 3m distance instead of 30m distance. 40dB was plus to the

limit of 30m measurement limit. More details refer to FCC part 15.31(f)(2).

4.5 Test Equipment

Description	Manufacturer	Model No.	Serial No.	Last Cal.
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100020	2010/10
Ultra-broadband Antenna	Rohde & Schwarz	HL562	100015	2010/10
EMI Test Receiver	Rohde & Schwarz	ESI 26	100009	2010/10
RF Test Panel	Rohde & Schwarz	TS/RSP	335015/ 0017	2010/10
Turntable	ETS	2088	2149	2010/10
Antenna Mast	ETS	2075	2346	2010/10

4.6 Test Condition

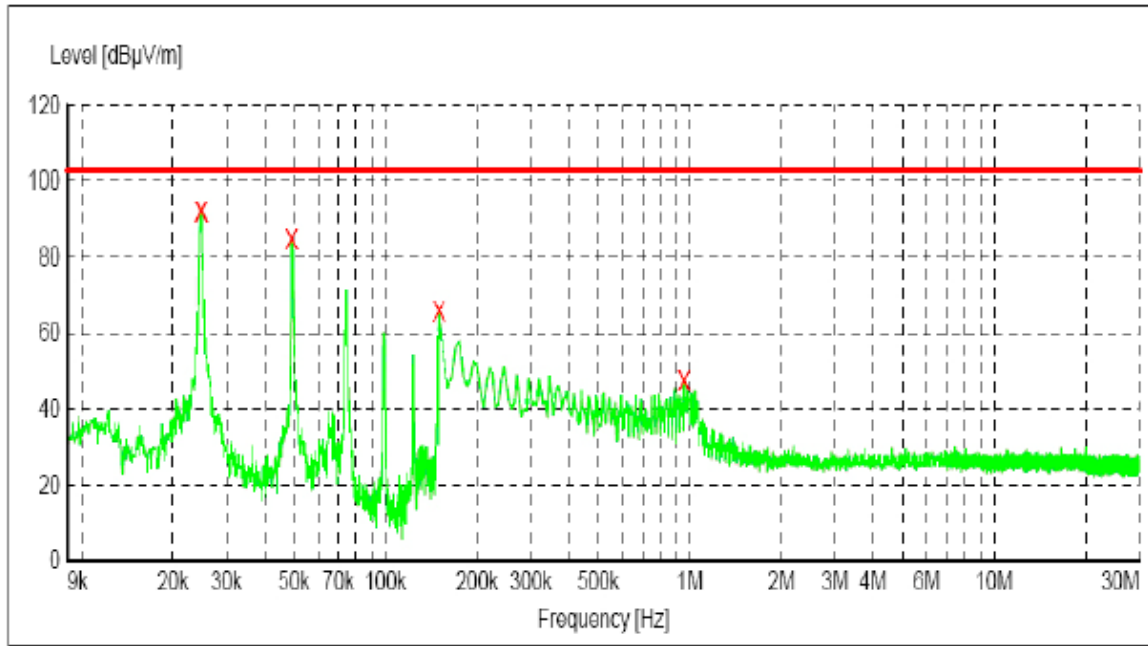
Temperature	:	25 °C
Relative Humidity	:	48 %
Pressure	:	1010 hPa
Test Power	:	AC 120V/60Hz

4.7 Test Data

Antenna plane vertical the EUT

EUT: Induction

Model: 59300

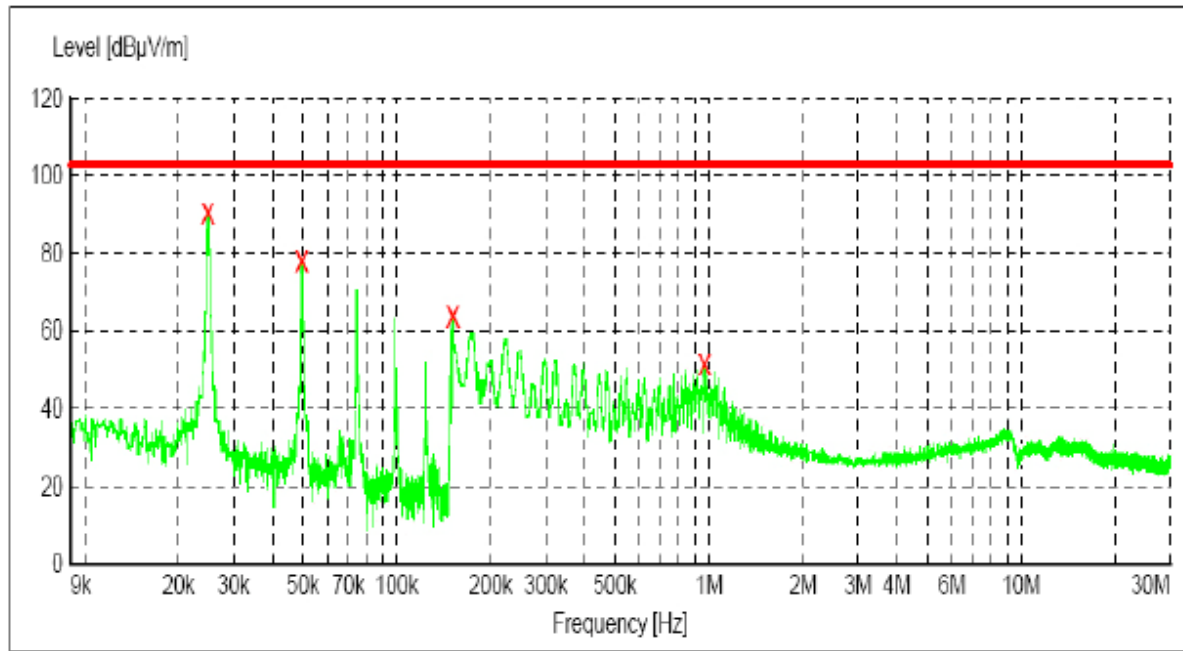


Frequency MHz	Level dBuV/m	Transd dB	Limit dBuV/m	Margin dB	Det.	Height cm	Azimuth deg
0.025452	92.10	-7.8	103.5	11.4	Peak	100.0	360.00
0.050000	83.60	-11.2	103.5	19.9	Peak	100.0	260.00
0.165720	67.60	-16.2	103.5	35.9	Peak	100.0	210.00
0.981860	47.80	-16.7	103.5	55.7	Peak	100.0	360.00

Antenna plane horizontal the EUT

EUT: Induction

Model: 59300

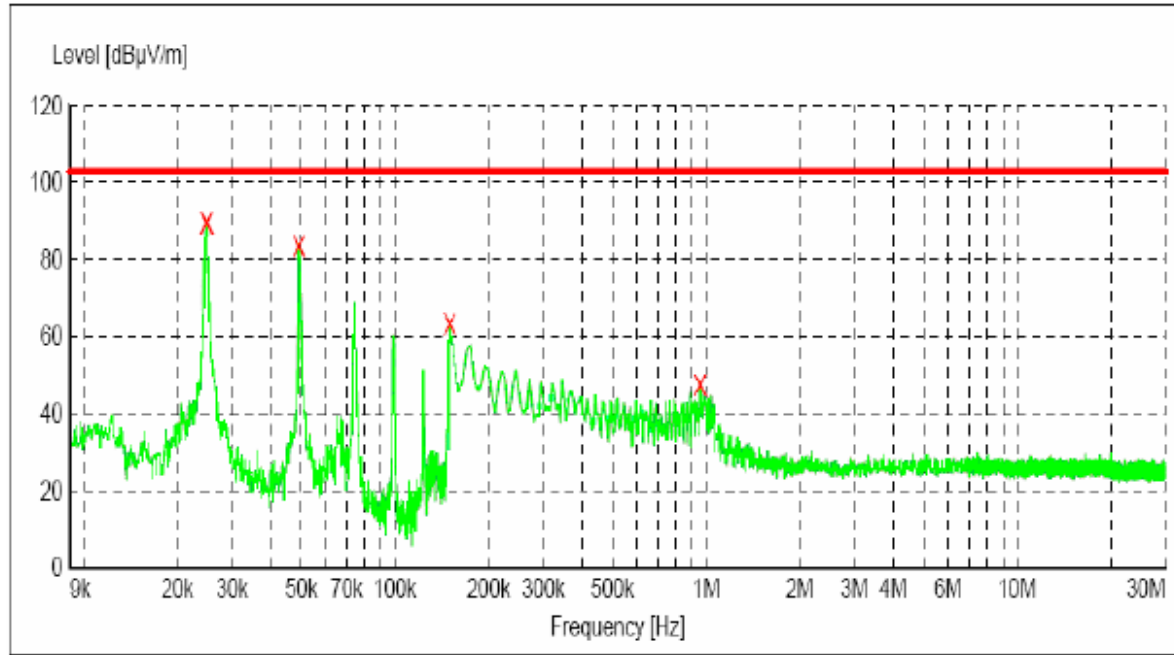


Frequency MHz	Level dBuV/m	Transd dB	Limit dBuV/m	Margin dB	Det.	Height cm	Azimuth deg
0.025284	91.40	-7.6	103.5	12.1	Peak	100.0	360.00
0.050000	79.10	-11.2	103.5	24.4	Peak	100.0	220.00
0.166720	62.60	-16.2	103.5	40.9	Peak	100.0	270.00
0.987520	51.20	-16.9	103.5	52.3	Peak	100.0	360.00

Antenna plane vertical the EUT

EUT: Induction

Model: 59310

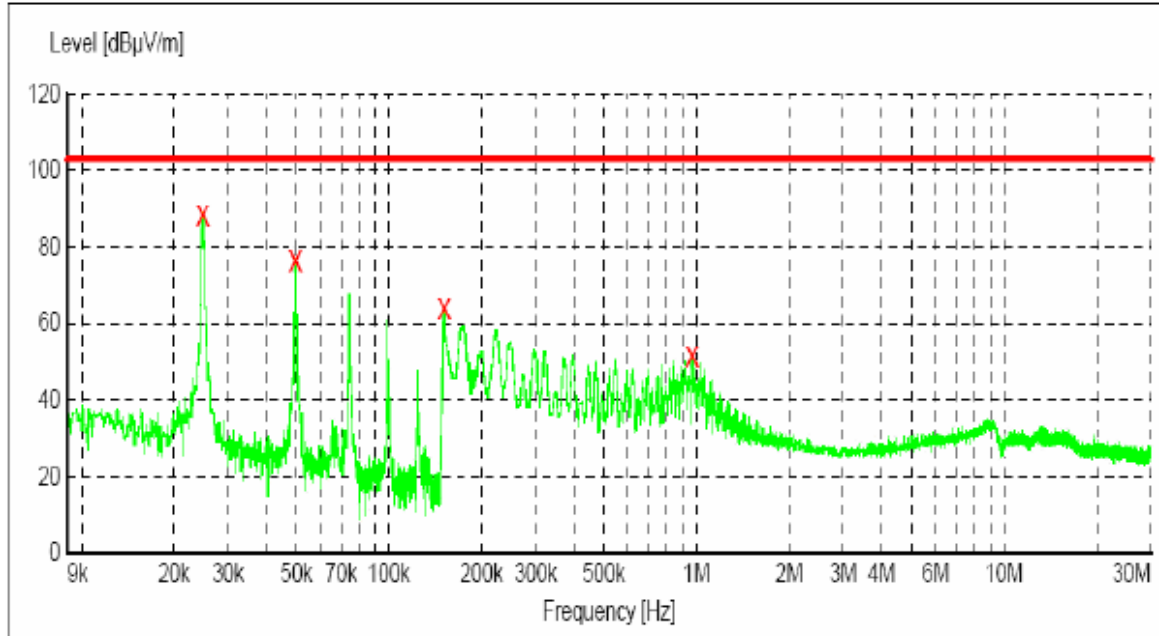


Frequency MHz	Level dBuV/m	Transd dB	Limit dBuV/m	Margin dB	Det.	Height cm	Azimuth deg
0.025452	88.60	-7.8	103.5	14.9	Peak	100.0	350.00
0.050000	83.10	-11.2	103.5	20.4	Peak	100.0	270.00
0.165720	62.80	-16.2	103.5	40.7	Peak	100.0	200.00
0.981860	47.60	-16.7	103.5	55.9	Peak	100.0	350.00

Antenna plane horizontal the EUT

EUT: Induction

Model: 59310



Frequency MHz	Level dBμV/m	Transd dB	Limit dBμV/m	Margin dB	Det.	Height cm	Azimuth deg
0.025284	87.70	-7.6	103.5	15.8	Peak	100.0	350.00
0.050000	78.10	-11.2	103.5	25.4	Peak	100.0	200.00
0.166720	62.40	-16.2	103.5	41.1	Peak	100.0	250.00
0.987520	50.40	-16.9	103.5	53.1	Peak	100.0	350.00