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FEDERAL COMMUNICATIONS COMMISSION

Registration number: 282399

Report No.: GLEMO09120383701

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FCC ID: XZHELECTECH1

## Test Report

**Application No.:** GLEMO091203837HS  
**Applicant:** Elec-Tech International Co., Ltd.  
**FCC ID:** XZHELECTECH1

**Equipment Under Test (EUT):**

**EUT Name:** Induction cooker  
**Item No.:** 250207, 250208, 780-2402 ♣

♣ Please refer to section 2 of this report which indicates which item was actually tested and which were electrically identical.

**Standards:** FCC PART 18: 2008  
**Date of Receipt:** 11 December 2009  
**Date of Test:** 16 to 28 December 2009  
**Date of Issue:** 04 January 2010

<b>Test Result :</b>	<b>PASS*</b>
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\* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:



Stephen Guo  
Manager

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. All test results in this report can be traceable to National or International Standards.

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## 2 Test Summary

The customer requested EMC tests for an Induction cooker.

Test	Test Requirement	Test Method	Class / Severity	Result
Radiated Emission (9KHz to 30MHz)	FCC PART 18: 2008	FCC OST/ MP-5:1986	18.305(b)	PASS
Conducted Emission (9KHz to 30MHz)	FCC PART 18: 2008	FCC OST/ MP-5:1986	18.307(a)	PASS

♣ Item No.: 250207, 250208, 780-2402

According to the declaration of the applicant, the electrical circuit design, layout, components used and internal wiring were identical for all models, with only difference being the model number.

Therefore only one model 250207 was tested in this report.



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## 4 General Information

### 4.1 Client Information

Applicant: Elec-Tech International Co., Ltd.  
Address of Applicant: No.1 Jinfeng Road, Tangjiawan Town, Xiangzhou District, Zhuhai City, Guangdong Province, P.R.China

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

EUT Name: Induction cooker  
Item No.: 250207, 250208, 780-2402

### 4.3 Details of E.U.T.

Power Supply: AC 120V 60Hz 1300W  
Power Cord: 0.5m x 2 wires unscreened AC mains cable

### 4.4 Description of Support Units

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

### 4.5 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou EMC Laboratory,  
198 Kezhu Road, Scientech Park, Guangzhou Economic & Technology Development District,  
Guangzhou, China 510663

Tel: +86 20 82155555 Fax: +86 20 82075059

No tests were sub-contracted.



## 4.6 Test Facility

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

- **NVLAP (Lab Code: 200611-0)**

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou EMC Laboratory is recognized under the National Voluntary Laboratory Accreditation Program (NVLAP/NIST). NVLAP Code: 200611-0.

- **ACMA**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory can also perform testing for the Australian C-Tick mark as a result of our NVLAP accreditation.

- **SGS UK(Certificate No.: 32), SGS-TUV SAARLAND and SGS-FIMKO**

Have approved SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory as a supplier of EMC TESTING SERVICES and SAFETY TESTING SERVICES.

- **CNAS (Lab Code: L0167)**

SGS-CSTC Standards Technical Services Co., Ltd., EMC 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.: 282399)**

SGS-CSTC Standards Technical Services 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 282399, May 31, 2002.

- **Industry Canada (Registration No.: 4620B-1)**

The 3m/10m Alternate Semi-anechoic chamber of SGS-CSTC Standards Technical Services Co., Ltd. has been registered by Certification and Engineering of Industry Canada for radio equipment testing with Registration No. 4620B-1.

Date of Registration: February 18, 2009. Valid until February 18, 2011.

- **VCCI (Registration No.: R-2460 and C-2584)**

The 10m Semi-anechoic chamber and Shielded Room of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-2460 and C-2584 respectively.

- **CBTL (Lab Code: TL129)**

SGS-CSTC Standards Technical Services Co., Ltd., E&E Laboratory has been assessed and fully comply with the requirements of ISO/IEC 17025:2005, the Basic Rules, IECEE 01:2006-10 and Rules of procedure IECEE 02:2006-10, and the relevant IECEE CB-Scheme Operational documents.

This certificate was issued Aug.6.2009 and valid until May.19.2012.



#### **4.7 Deviation from Standards**

For Radiated Emission, test at 10m distance instead of 30m distance. 19.1dB was plus to the limit of 30m measurement limit. More details refer to FCC part 15.31(f)(2).

#### **4.8 Abnormalities from Standard Conditions**

None.



## 5 Equipments Used during Test

Conducted Emission						
No:	Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date (dd-mm-yy)	Cal.Due date (dd-mm-yy)
EMC0306	Shielding Room	Zhong Yu	8 x 3 x 3.8 m <sup>3</sup>	N/A	N/A	N/A
EMC0102	LISN	Schaffner Chase	MNZ050D/1	1421	24-11-2009	24-11-2010
EMC0118	Two-line v-netwok	Rohde & Schwarz	ENV216	3560.6550.02	18-08-2009	18-08-2010
EMC0506	EMI Test Receiver	Rohde & Schwarz	ESCS30	100085	24-11-2009	24-11-2010
EMC0107	Coaxial Cable	SGS	2m	N/A	25-11-2009	25-11-2010
EMC0106	Voltage Probe	SGS	N/A	N/A	N/A	N/A
EMC0120	8 Line ISN	Fischer Custom Communications Inc.	FCC-TLISN-T8-02	20550	21-02-2009	21-02-2010
EMC0121	4 Line ISN	Fischer Custom Communications Inc.	FCC-TLISN-T4-02	20549	21-02-2009	21-02-2010
EMC0122	2 Line ISN	Fischer Custom Communications Inc.	FCC-TLISN-T2-02	20548	21-02-2009	21-02-2010

RE in Chamber						
No:	Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date (dd-mm-yy)	Cal.Due date (dd-mm-yy)
EMC0525	Compact Semi-Anechoic Chamber	ChangZhou ZhongYu	N/A	N/A	N/A	N/A
EMC0522	EMI Test Receiver	Rohde & Schwarz	ESIB26	100249	19-02-2009	19-02-2010
EMC0056	EMI Test Receiver	Rohde & Schwarz	ESCI	10036	18-07-2009	18-07-2010
N/A	EMI Test Software	Audix	E3	N/A	N/A	N/A
EMC0514	Coaxial cable	SGS	N/A	N/A	09-12-2009	09-12-2010
EMC0524	Bi-log Type Antenna	Schaffner -Chase	CBL6112B	2966	20-12-2009	20-12-2010
EMC0519	Bilog Type Antenna	Schaffner -Chase	CBL6143	5070	20-12-2009	20-12-2010
EMC0517	Horn Antenna	Rohde & Schwarz	HF906	100095	15-09-2009	15-09-2010
EMC0040	Spectrum Analyzer	Rohde & Schwarz	FSP30	100324	05-12-2009	05-12-2010
EMC0521	1-26.5 GHz Pre-Amplifier	Agilent	8449B	3008A01649	24-02-2009	24-02-2010
EMC0075	310N Amplifier	Sonama	310N	272683	26-10-2009	26-10-2010
EMC0523	Active Loop Antenna	EMCO	6502	00042963	17-11-2009	17-11-2010
EMC0530	10m Semi- Anechoic Chamber	ETS	N/A	N/A	02-06-2009	02-06-2010

General used equipment						
No:	Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date (dd-mm-yy)	Cal.Due date (dd-mm-yy)
EMC0006	DMM	Fluke	73	70681569	16-12-2009	16-12-2010
EMC0007	DMM	Fluke	73	70671122	16-12-2009	16-12-2010

## 6 Test Results

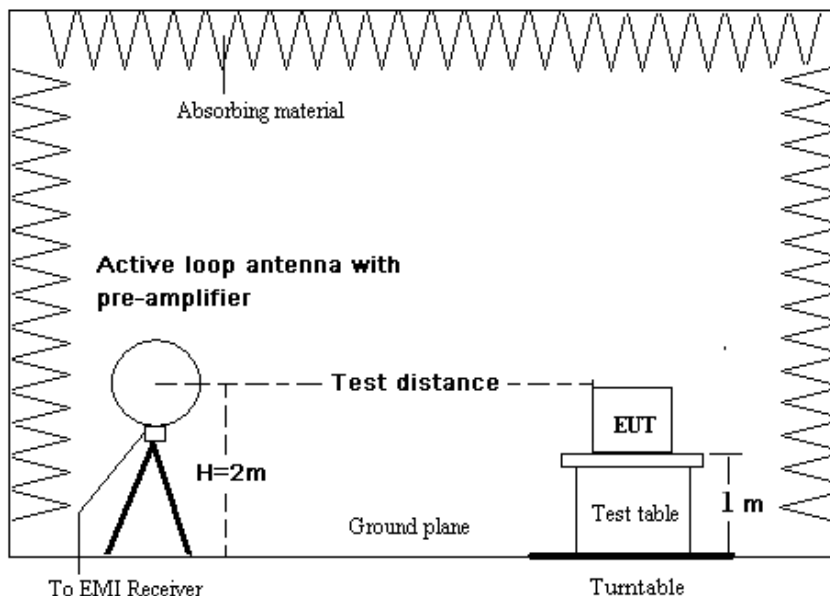
### 6.1 Radiated Emission, 9kHz to 30MHz

Test Requirement: FCC Part18  
 Test Method: FCC OST/ MP-5  
 Test Date: 16 December 2009  
 Frequency Range: 9KHz to 30MHz  
 Limit: 18.305(b)  
 Measurement distance: 10m  
 Detector: Peak for pre-scan, Average for the final result  
 (200Hz Resolution Bandwidth for 9KHz to 150KHz, 9kHz Resolution Bandwidth for 150KHz to 30MHz)

#### 6.1.1 E.U.T. Operation

Operating Environment:  
 Temperature: 21.0 °C Humidity: 54 % RH Atmospheric Pressure: 1007 Mbar  
 EUT Operation: Test the EUT in cooking mode with maximum power output.

#### 6.1.2 Test Setup



#### 6.1.3 Measurement Data

An initial pre-scan was performed in the 10m chamber using the spectrum analyser in peak detection mode. Average measurements were conducted based on the peak sweep graph. The EUT was measured by a loop antenna.

The following average measurements were performed on the EUT:

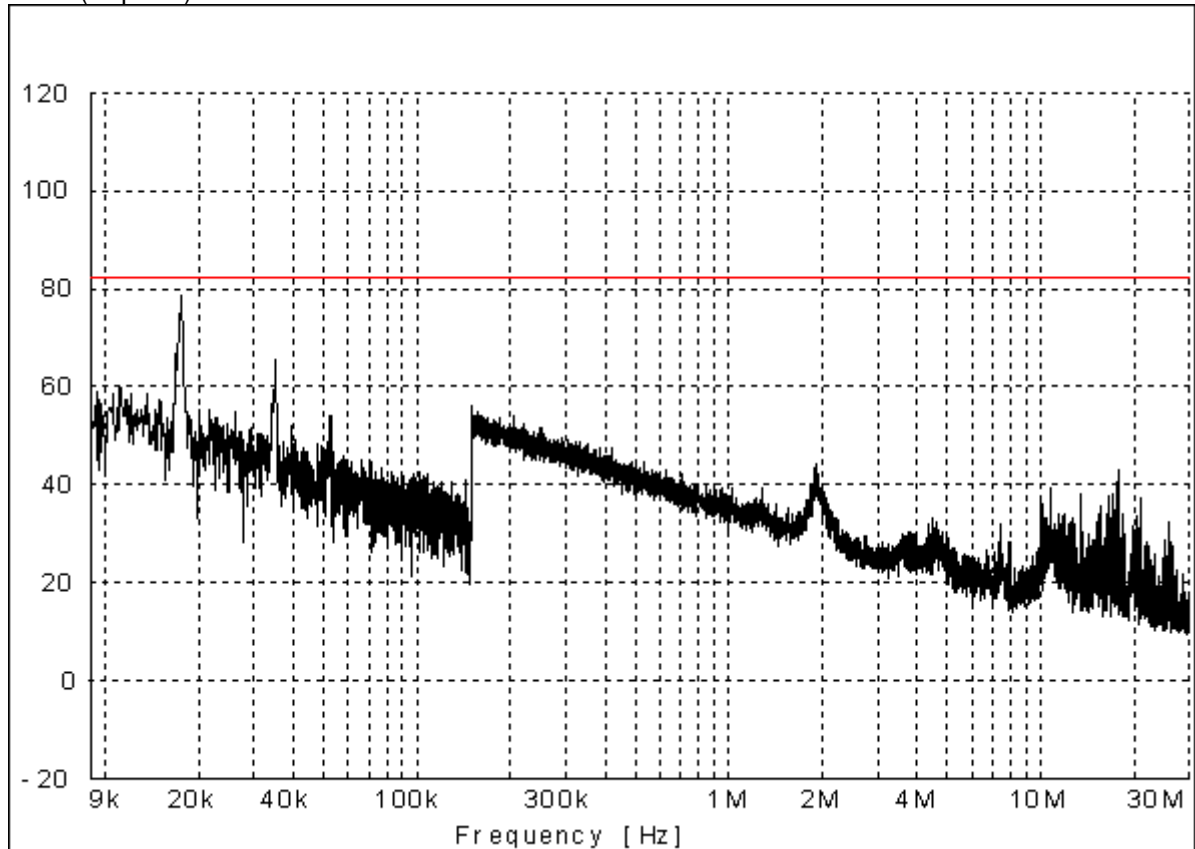




Vertical:

Peak scan

Level (dB $\mu$ V/m)



Average measurement

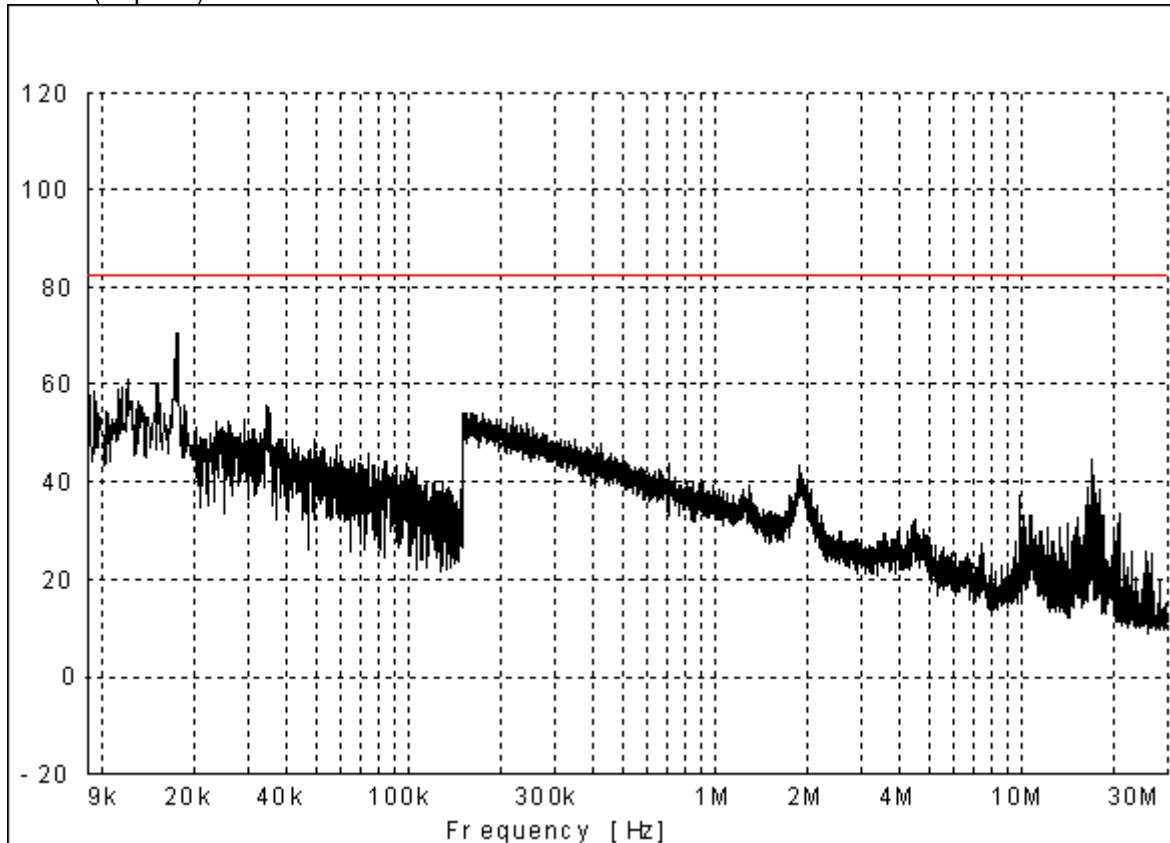
Frequency (MHz)	Transducer (dB)	QP Level (dB $\mu$ A)	Limit (dB $\mu$ A)	Margin (dB)	Frequency (MHz)
0.0242	-5.5	80.1	82.5	2.4	0.0242
0.0352	-5.5	62.1	82.5	20.4	0.0352
0.0520	-5.5	43.2	82.5	39.3	0.0520
0.1520	-5.5	46.5	82.5	36.0	0.1520
1.8250	-5.5	40.1	82.5	42.4	1.8250
18.5000	-5.5	40.1	82.5	42.4	18.5000



Horizontal:

Peak scan

Level (dB $\mu$ V/m)



Average measurement

Frequency (MHz)	Transducer (dB)	QP Level (dBuA)	Limit (dBuA)	Margin (dB)	Frequency (MHz)
0.0254	-4.8	70.2	82.5	12.3	0.0254
0.0352	-4.8	50.1	82.5	32.4	0.0352
0.1520	-4.8	45.2	82.5	37.3	0.1520
1.8250	-4.8	42.2	82.5	40.3	1.8250
10.2500	-4.8	34.5	82.5	48.0	10.2500
18.5000	-4.8	40.3	82.5	42.3	18.5000

**1. Level = Read Level + Antenna Factor + Cable Loss – Preamp gain.**

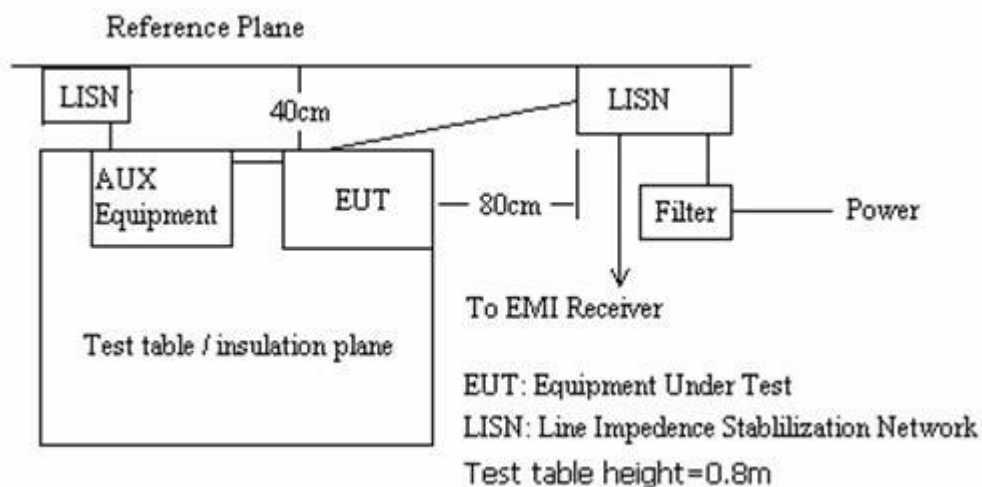
## 6.2 Conducted Emissions, 9KHz to 30MHz

Test Requirement: FCC Part18  
 Test Method: FCC OST/ MP-5  
 Test Date: 28 December 2009  
 Frequency Range: 9KHz to 30MHz  
 Class: 18.307(a)  
 Detector: Peak for pre-scan, Quasi-Peak and Average for the final result.  
 (200Hz Resolution Bandwidth for 9KHz to 150KHz, 9kHz Resolution Bandwidth for 150KHz to 30MHz)

### 6.2.1 E.U.T. Operation

Operating Environment:  
 Temperature: 21.0 °C Humidity: 54% RH Atmospheric Pressure: 1013 mbar  
 EUT Operation: Test the EUT in cooking mode with maximum power output.

### 6.2.2 Plan View of Test Setup



### 6.2.3 Measurement Data

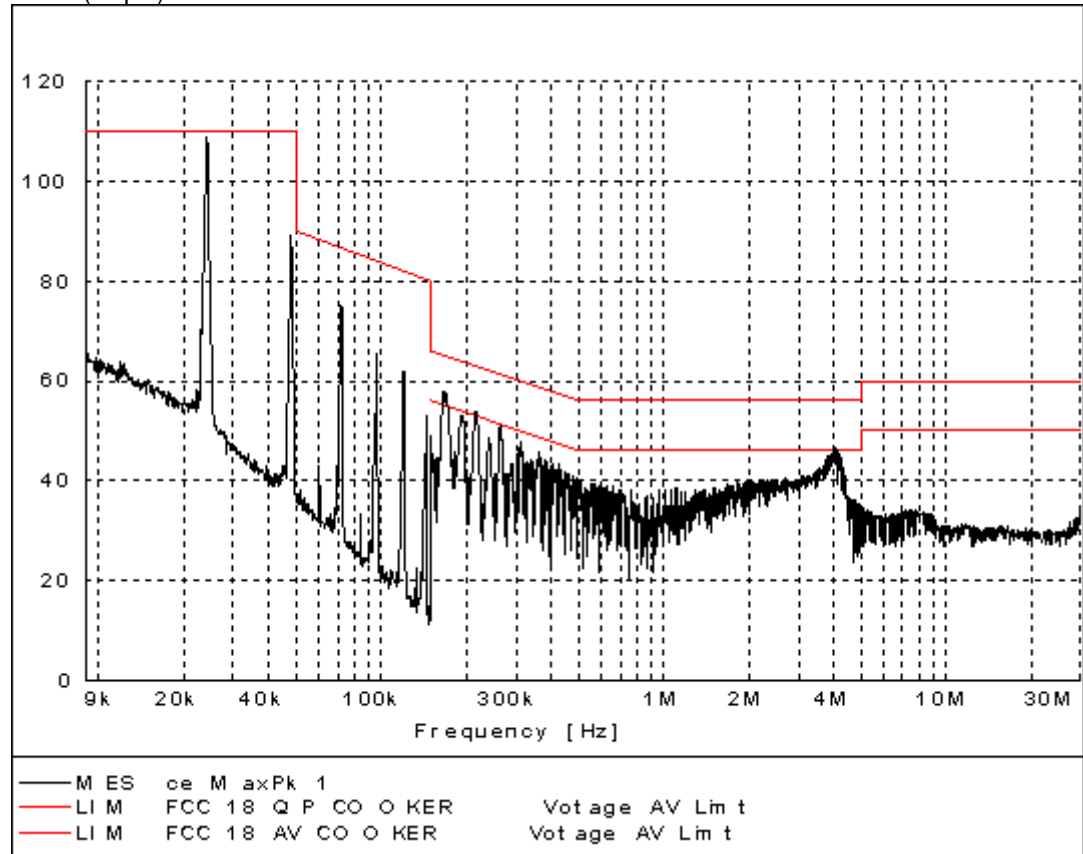
An initial pre-scan was performed on the live and neutral lines with peak detector.  
 Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected.  
 The following quasi-peak and average measurements were performed on the EUT:



Live line:

Peak Scan

Level (dBμV)



Quasi-peak and Average measurement:

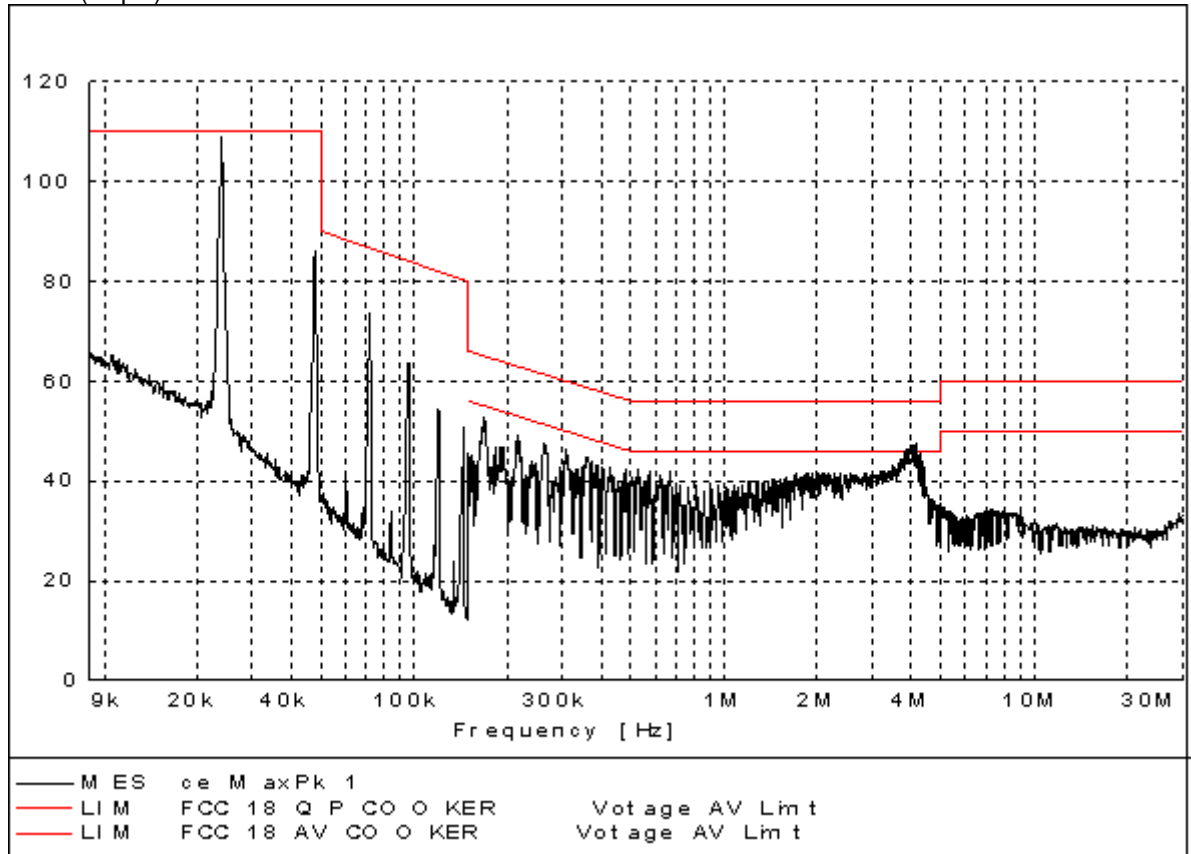
Frequency (MHz)	Transducer (dB)	Receiver QP Reading (dBμV)	QP Level (dBμV)	Limit (dBμV)	Over Limit (dB)	Receiver AV Reading (dBμV)	AV Level (dBμV)	Limit (dBμV)	Over Limit (dB)
0.024	9.7	94.9	104.6	110.0	-5.4	*	*	*	*
0.048	9.7	72.6	82.3	110.0	-27.7	*	*	*	*
0.072	9.7	60.1	69.8	86.7	-16.9	*	*	*	*
0.096	9.7	52.4	62.1	84.1	-22.0	*	*	*	*
0.168	9.7	44.9	54.6	65.0	-10.4	37.4	47.1	55.0	-7.9
4.155	9.7	37.1	46.8	56.0	-9.2	29.0	38.7	46.0	-7.3



Neutral line:

Peak Scan

Level (dBμV)



Quasi-peak and Average measurement:

Frequency (MHz)	Transducer (dB)	Receiver QP Reading (dBμV)	QP Level (dBμV)	Limit (dBμV)	Over Limit (dB)	Receiver AV Reading (dBμV)	AV Level (dBμV)	Limit (dBμV)	Over Limit (dB)
0.024	9.7	95.2	104.9	110.0	-5.1	*	*	*	*
0.048	9.7	71.8	81.5	110.0	-28.5	*	*	*	*
0.072	9.7	60.1	69.8	86.7	-16.9	*	*	*	*
0.096	9.7	51.4	61.1	84.1	-23.0	*	*	*	*
0.168	9.7	45.9	55.6	65.0	-9.4	54.9	45.5	55.0	-9.5
4.155	9.7	34.5	44.2	56.0	-11.8	52.4	40.6	46.0	-5.4

\*: Not requested by standards.