



## SGS-CSTC Standards Technical Services Co., Ltd.

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**FEDERAL COMMUNICATIONS COMMISSION**

Registration number: 282399

Report No.: GZEM100500035901

Page: 1 of 14

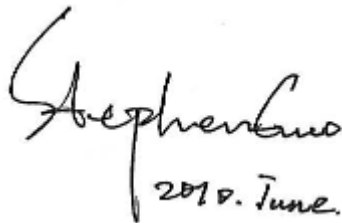
FCC ID: TAPMC-C13S501-1

# Test Report

|                                    |                                                                                                                                |
|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Application No.:                   | GZEM1005000359HS                                                                                                               |
| Applicant:                         | Guangdong MD Consumer Electric Manufacturing Co., Ltd.                                                                         |
| FCC ID:                            | TAPMC-C13S501-1                                                                                                                |
| <b>Equipment Under Test (EUT):</b> |                                                                                                                                |
| EUT Name:                          | Induction Cooker                                                                                                               |
| Item No.:                          | MC-ESH13C-1, MC-C13S501-1 ♣                                                                                                    |
| ♣                                  | Please refer to section 3 of this report which indicates which item was actually tested and which were electrically identical. |
| Trade mark:                        | midea                                                                                                                          |
| Standards:                         | FCC PART 18: 2009                                                                                                              |
| Date of Receipt:                   | 2010-05-28                                                                                                                     |
| Date of Test:                      | 2010-06-05 to 2010-06-12                                                                                                       |
| Date of Issue:                     | 2010-06-23                                                                                                                     |
| Test Result :                      | <b>PASS*</b>                                                                                                                   |

\* 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.

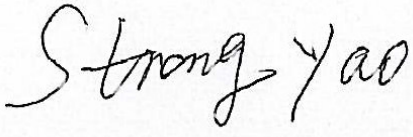
The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. All test results in this report can be traceable to National or International Standards.

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## 2 Version

| Revision Record |         |            |          |          |
|-----------------|---------|------------|----------|----------|
| Version         | Chapter | Date       | Modifier | Remark   |
| 00              |         | 2010-06-23 |          | Original |
|                 |         |            |          |          |
|                 |         |            |          |          |
|                 |         |            |          |          |
|                 |         |            |          |          |

|                          |                                                                                                                          |                                  |  |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------|----------------------------------|--|
| Authorized for issue by: |                                                                                                                          |                                  |  |
| Tested By                | <br>(Michael Huang) /Project Engineer | 2010-06-05 to 2010-06-12<br>Date |  |
| Prepared By              | <br>(Millie Li) /Clerk                | 2010-06-22<br>Date               |  |
| Checked By               | <br>(Strong Yao) /Reviewer           | 2010-06-23<br>Date               |  |



### 3 Test Summary

| The customer requested EMC tests for an Induction cooker.                                                                                                                                                                                                                                                                       |                   |                    |                  |        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------------------|------------------|--------|
| Test                                                                                                                                                                                                                                                                                                                            | Test Requirement  | Test Method        | Class / Severity | Result |
| Radiated Emission<br>(9KHz to 30MHz)                                                                                                                                                                                                                                                                                            | FCC PART 18: 2009 | FCC OST/ MP-5:1986 | 18.305(b)        | PASS   |
| Conducted Emission<br>(9KHz to 30MHz)                                                                                                                                                                                                                                                                                           | FCC PART 18: 2009 | FCC OST/ MP-5:1986 | 18.307(a)        | PASS   |
| <p>♣ Item No.: MC-ESH13C-1, MC-C13S501-1</p> <p>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 appearance.</p> <p>Therefore only one model MC-C13S501-1 was tested in this report.</p> |                   |                    |                  |        |



## 4 Contents

|                                                  | Page |
|--------------------------------------------------|------|
| 1 COVER PAGE .....                               | 1    |
| 2 VERSION .....                                  | 2    |
| 3 TEST SUMMARY .....                             | 3    |
| 4 CONTENTS .....                                 | 4    |
| 5 GENERAL INFORMATION.....                       | 5    |
| 5.1 CLIENT INFORMATION.....                      | 5    |
| 5.2 GENERAL DESCRIPTION OF E.U.T.....            | 5    |
| 5.3 DETAILS OF E.U.T. ....                       | 5    |
| 5.4 DESCRIPTION OF SUPPORT UNITS.....            | 5    |
| 5.5 TEST LOCATION .....                          | 5    |
| 5.6 DEVIATION FROM STANDARDS.....                | 5    |
| 5.7 ABNORMALITIES FROM STANDARD CONDITIONS ..... | 5    |
| 5.8 TEST FACILITY .....                          | 6    |
| 6 EQUIPMENTS USED DURING TEST.....               | 7    |
| 7 TEST RESULTS .....                             | 9    |
| 7.1 RADIATED EMISSION, 9KHZ TO 30MHZ.....        | 9    |
| 7.1.1 E.U.T. Operation.....                      | 9    |
| 7.1.2 Test Setup.....                            | 9    |
| 7.1.3 Measurement Data .....                     | 9    |
| 7.2 CONDUCTED EMISSIONS, 9KHZ TO 30MHZ.....      | 12   |
| 7.2.1 E.U.T. Operation.....                      | 12   |
| 7.2.2 Plan View of Test Setup.....               | 12   |
| 7.2.3 Measurement Data .....                     | 12   |



## **5 General Information**

### **5.1 Client Information**

Applicant: Guangdong MD Consumer Electric Manufacturing Co., Ltd.  
Address of Applicant: 19 Sanle Road, Beijiao, Shunde, Foshan, Guangdong

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

EUT Name: Induction Cooker  
Item No.: MC-ESH13C-1, MC-C13S501-1  
Trade mark: midea

### **5.3 Details of E.U.T.**

Power Supply: AC 120V, 60Hz  
Power Cord: 1.5m x 2 wires unscreened AC mains cable

### **5.4 Description of Support Units**

The EUT has been tested with a pan filled with water.

### **5.5 Test Location**

All tests were performed at:

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

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

No tests were sub-contracted.

### **5.6 Deviation from Standards**

None.

### **5.7 Abnormalities from Standard Conditions**

None.



## **5.8 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 August 6, 2009 and valid until May 19, 2012.



## 6 Equipments Used during Test

| Conducted Emission |                   |                                    |                            |              |              |              |
|--------------------|-------------------|------------------------------------|----------------------------|--------------|--------------|--------------|
| No.                | Test Equipment    | Manufacturer                       | Model No.                  | Serial No.   | Cal. Date    | Cal.Due date |
|                    |                   |                                    |                            |              | (YYYY-MM-DD) | (YYYY-MM-DD) |
| 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         | 2009-11-24   | 2010-11-24   |
| EMC0118            | Two-line v-netwok | Rohde & Schwarz                    | ENV216                     | 3560.6550.02 | 2009-08-18   | 2010-08-18   |
| EMC0506            | EMI Test Receiver | Rohde & Schwarz                    | ESCS30                     | 100085       | 2009-11-24   | 2010-11-24   |
| EMC0107            | Coaxial Cable     | SGS                                | 2m                         | N/A          | 2009-11-25   | 2010-11-25   |
| 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        | 2010-01-25   | 2011-01-25   |
| EMC0121            | 4 Line ISN        | Fischer Custom Communications Inc. | FCC-TLISN-T4-02            | 20549        | 2010-01-25   | 2011-01-25   |
| EMC0122            | 2 Line ISN        | Fischer Custom Communications Inc. | FCC-TLISN-T2-02            | 20548        | 2010-01-25   | 2011-01-25   |

| RE in Chamber |                               |                   |           |            |              |              |
|---------------|-------------------------------|-------------------|-----------|------------|--------------|--------------|
| No.           | Test Equipment                | Manufacturer      | Model No. | Serial No. | Cal. Date    | Cal.Due date |
|               |                               |                   |           |            | (YYYY-MM-DD) | (YYYY-MM-DD) |
| EMC0525       | Compact Semi-Anechoic Chamber | ChangZhou ZhongYu | N/A       | N/A        | N/A          | N/A          |
| EMC0522       | EMI Test Receiver             | Rohde & Schwarz   | ESIB26    | 100283     | 2010-01-25   | 2011-01-25   |
| EMC0056       | EMI Test Receiver             | Rohde & Schwarz   | ESCI      | 10036      | 2009-07-18   | 2010-07-18   |
| N/A           | EMI Test Software             | Audix             | E3        | N/A        | N/A          | N/A          |
| EMC0514       | Coaxial cable                 | SGS               | N/A       | N/A        | 2009-12-09   | 2010-12-09   |
| EMC0524       | Bi-log Type Antenna           | Schaffner -Chase  | CBL6112B  | 2966       | 2009-12-20   | 2010-12-20   |
| EMC0519       | Bilog Type Antenna            | Schaffner -Chase  | CBL6143   | 5070       | 2009-12-20   | 2010-12-20   |
| EMC0517       | Horn Antenna                  | Rohde & Schwarz   | HF906     | 100095     | 2009-09-15   | 2010-09-15   |
| EMC0040       | Spectrum Analyzer             | Rohde & Schwarz   | FSP30     | 100324     | 2009-12-05   | 2010-12-05   |
| EMC0521       | 1-26.5 GHz Pre-Amplifier      | Agilent           | 8449B     | 3008A01649 | 2010-01-25   | 2011-01-25   |
| EMC0049       | Amplifier                     | Agilent           | 8447D     | 2944A10862 | 2010-04-21   | 2011-04-21   |
| EMC0075       | 310N Amplifier                | Sonama            | 310N      | 272683     | 2009-10-26   | 2010-10-26   |
| EMC0523       | Active Loop Antenna           | EMCO              | 6502      | 42963      | 2009-11-17   | 2010-11-17   |
| EMC0530       | 10m Semi- Anechoic Chamber    | ETS               | N/A       | N/A        | 2010-05-17   | 2011-05-17   |



## SGS-CSTC Standards Technical Services Co., Ltd.

Report No.: GZEM100500035901

Page: 8 of 14

FCC ID: TAPMC-C13S501-1

| General used equipment |                |              |           |            |              |              |
|------------------------|----------------|--------------|-----------|------------|--------------|--------------|
| No.                    | Test Equipment | Manufacturer | Model No. | Serial No. | Cal. Date    | Cal.Due date |
|                        |                |              |           |            | (YYYY-MM-DD) | (YYYY-MM-DD) |
| EMC0006                | DMM            | Fluke        | 73        | 70681569   | 2009-12-16   | 2010-12-16   |
| EMC0007                | DMM            | Fluke        | 73        | 70671122   | 2009-12-16   | 2010-12-16   |

## 7 Test Results

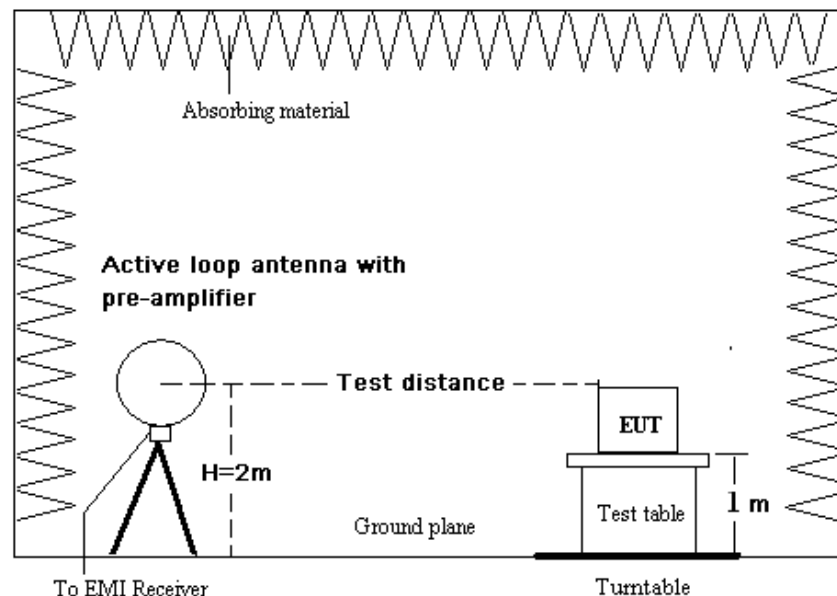
### 7.1 Radiated Emission, 9kHz to 30MHz

Test Requirement: FCC Part18  
 Test Method: FCC OST/ MP-5  
 Test Date: 2010-06-05  
 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)

#### 7.1.1 E.U.T. Operation

Operating Environment:  
 Temperature: 22.0 °C Humidity: 52 % RH Atmospheric Pressure: 1003 Mbar  
 EUT Operation: Test the EUT in heating mode with max power.

#### 7.1.2 Test Setup



#### 7.1.3 Measurement Data

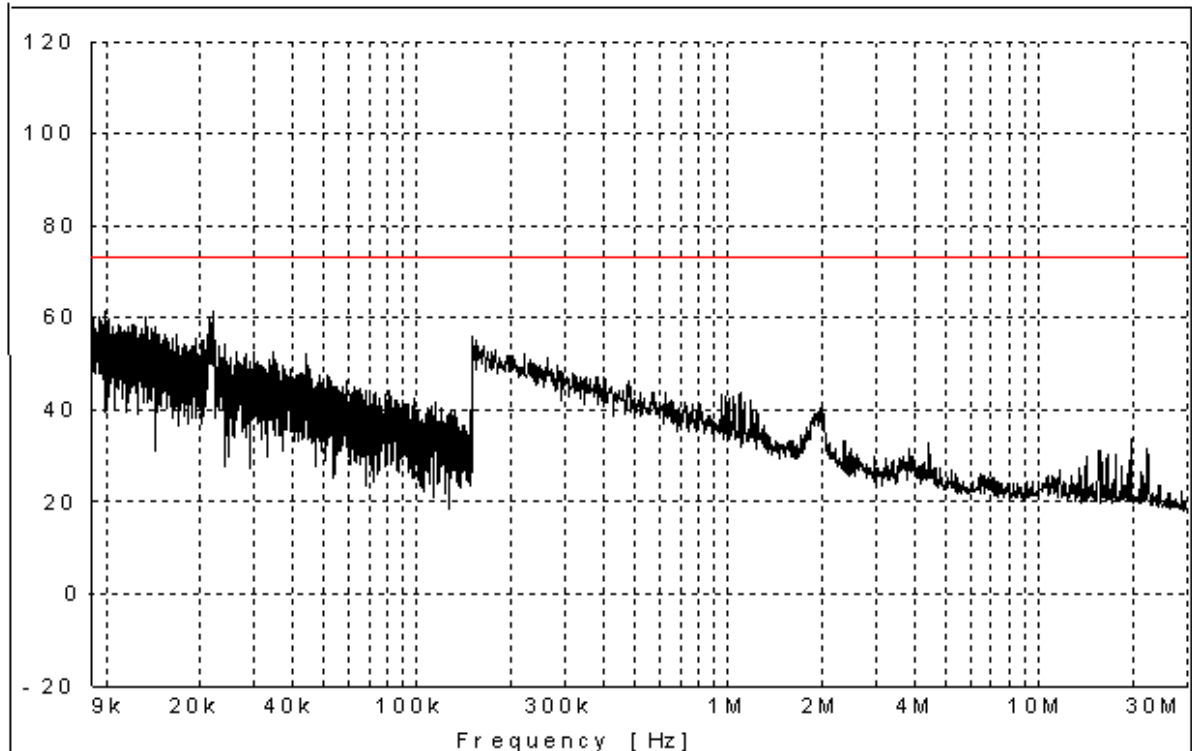
An initial pre-scan was performed in the 10m chamber using the spectrum analyser in peak detection mode. Average measurements were conducted based on the peak sweep graph. The EUT was measured by a loop antenna.

The following average measurements were performed on the EUT.

Vertical:

Peak scan

Level (dB $\mu$ V/m)



Average measurement

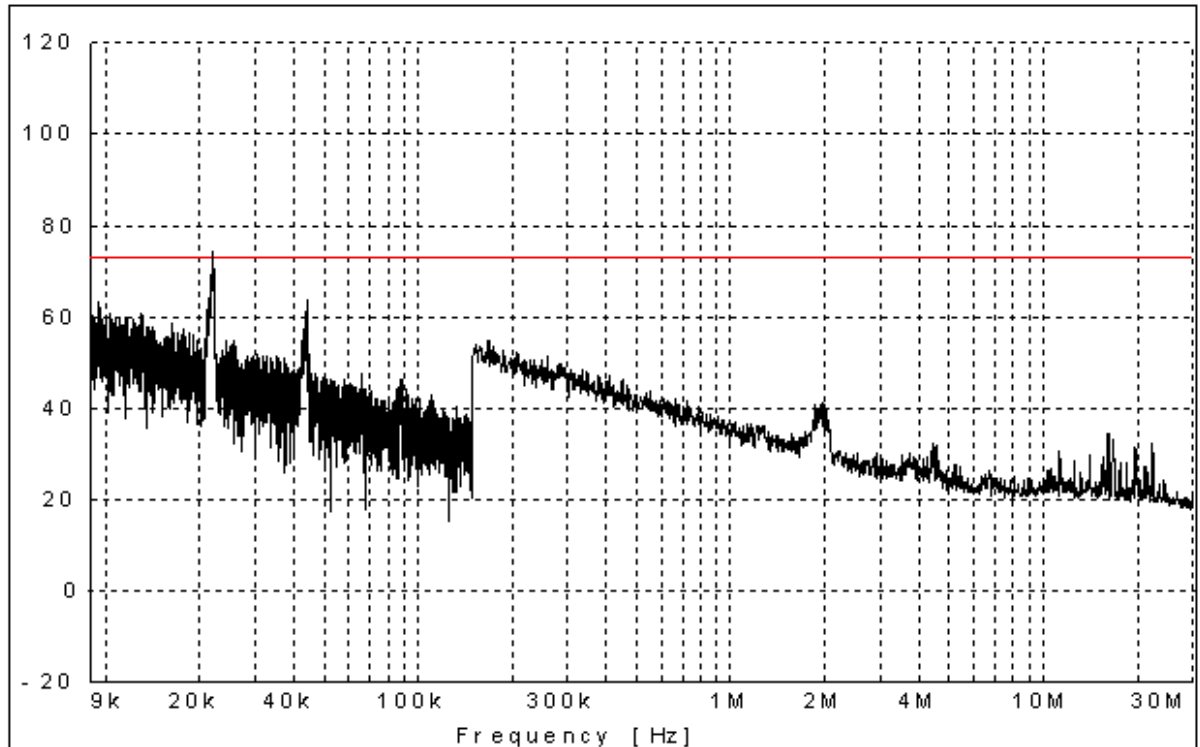
| Frequency<br>(MHz) | Transducer<br>(dB) | Receiver<br>AV<br>Reading<br>(dB $\mu$ V) | AV<br>Level<br>(dB $\mu$ V/m) | Limit<br>(dB $\mu$ V/m) | Margin<br>(dB) |
|--------------------|--------------------|-------------------------------------------|-------------------------------|-------------------------|----------------|
| 0.02               | -39.50             | 97.2                                      | 57.70                         | 73.06                   | -15.4          |
| 0.04               | -38.40             | 107.8                                     | 53.00                         | 73.06                   | -20.1          |
| 0.07               | -37.60             | 81.0                                      | 43.40                         | 73.06                   | -29.7          |
| 0.09               | -40.20             | 84.3                                      | 44.10                         | 73.06                   | -29.0          |
| 0.17               | -41.30             | 71.6                                      | 30.30                         | 73.06                   | -42.8          |
| 1.92               | -39.60             | 60.2                                      | 20.60                         | 73.06                   | -52.5          |



Horizontal:

Peak scan

Level (dB $\mu$ V/m)



Average measurement

| Frequency<br>(MHz) | Transducer<br>(dB) | Receiver<br>AV<br>Reading<br>(dB $\mu$ V) | AV<br>Level<br>(dB $\mu$ V/m) | Limit<br>(dB $\mu$ V/m) | Margin<br>(dB) |
|--------------------|--------------------|-------------------------------------------|-------------------------------|-------------------------|----------------|
| 0.02               | -39.60             | 99.9                                      | 69.90                         | 73.06                   | -3.2           |
| 0.04               | -38.40             | 107.8                                     | 63.00                         | 73.06                   | -10.1          |
| 0.07               | -37.60             | 89.7                                      | 52.10                         | 73.06                   | -21.0          |
| 0.09               | -40.20             | 86.5                                      | 46.30                         | 73.06                   | -26.8          |
| 0.17               | -41.30             | 76.9                                      | 35.60                         | 73.06                   | -37.5          |
| 1.92               | -39.60             | 62.2                                      | 22.60                         | 73.06                   | -50.5          |

Level = Read Level + Transducer.

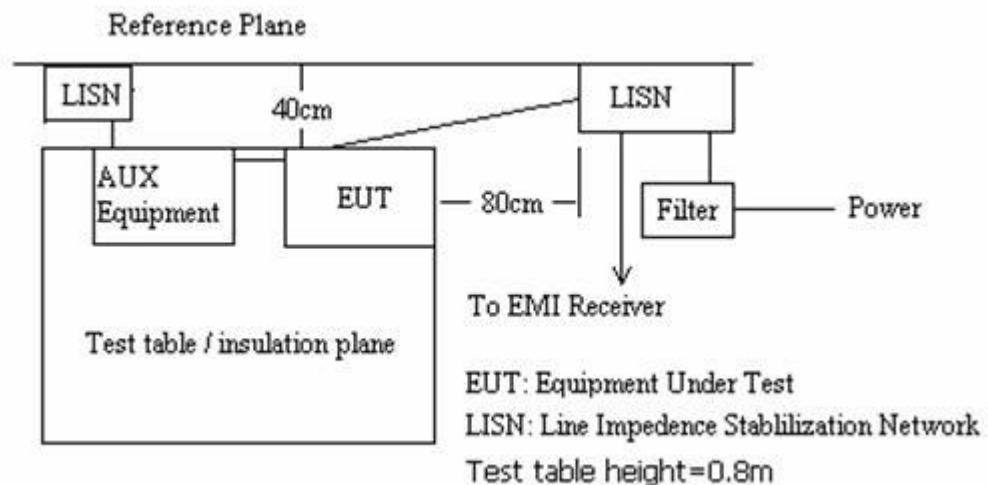
## 7.2 Conducted Emissions, 9KHz to 30MHz

Test Requirement: FCC Part18  
 Test Method: FCC OST/ MP-5  
 Test Date: 2010-06-12  
 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)

### 7.2.1 E.U.T. Operation

Operating Environment:  
 Temperature: 24.0 °C Humidity: 59% RH Atmospheric Pressure: 1027 mbar  
 EUT Operation: Test the EUT in heating mode with max power.

### 7.2.2 Plan View of Test Setup



### 7.2.3 Measurement Data

An initial pre-scan was performed on the live and neutral lines with peak detector.

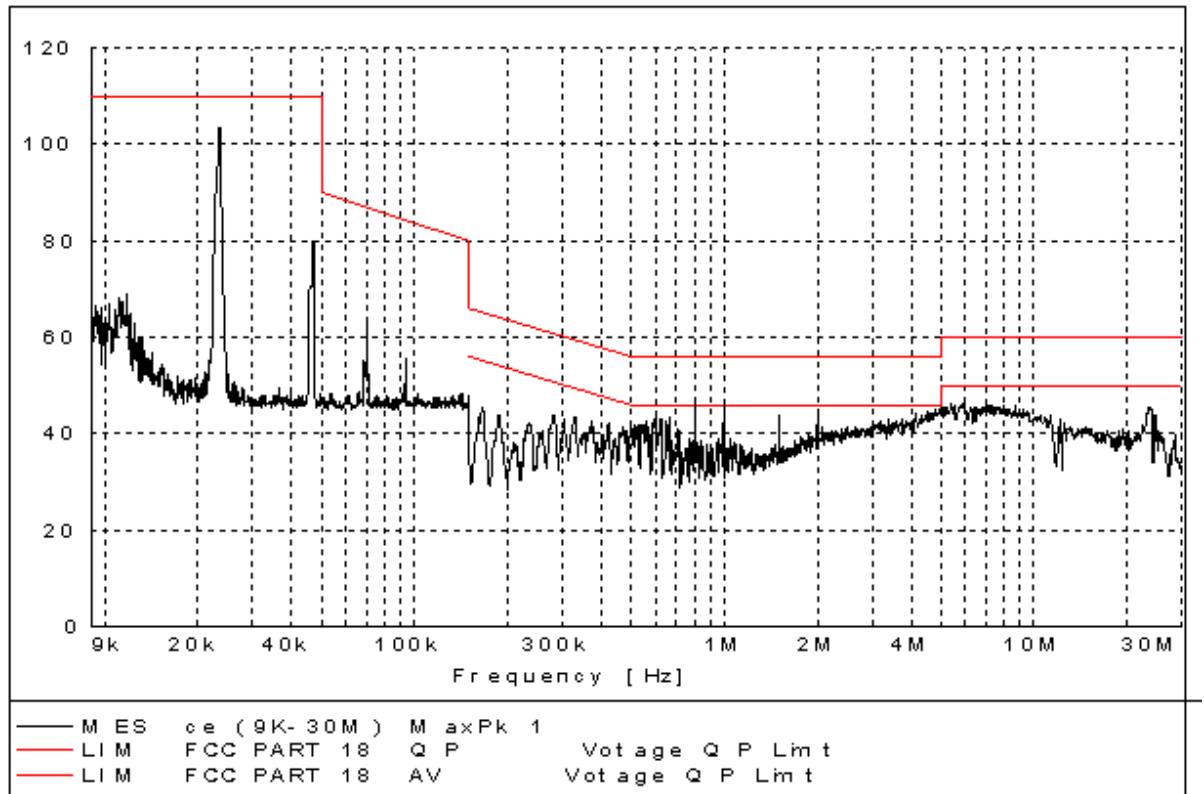
Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected.

The following quasi-peak and average measurements were performed on the EUT:

Live line:

Peak Scan

Level (dBμV)



Quasi-peak and Average measurement:

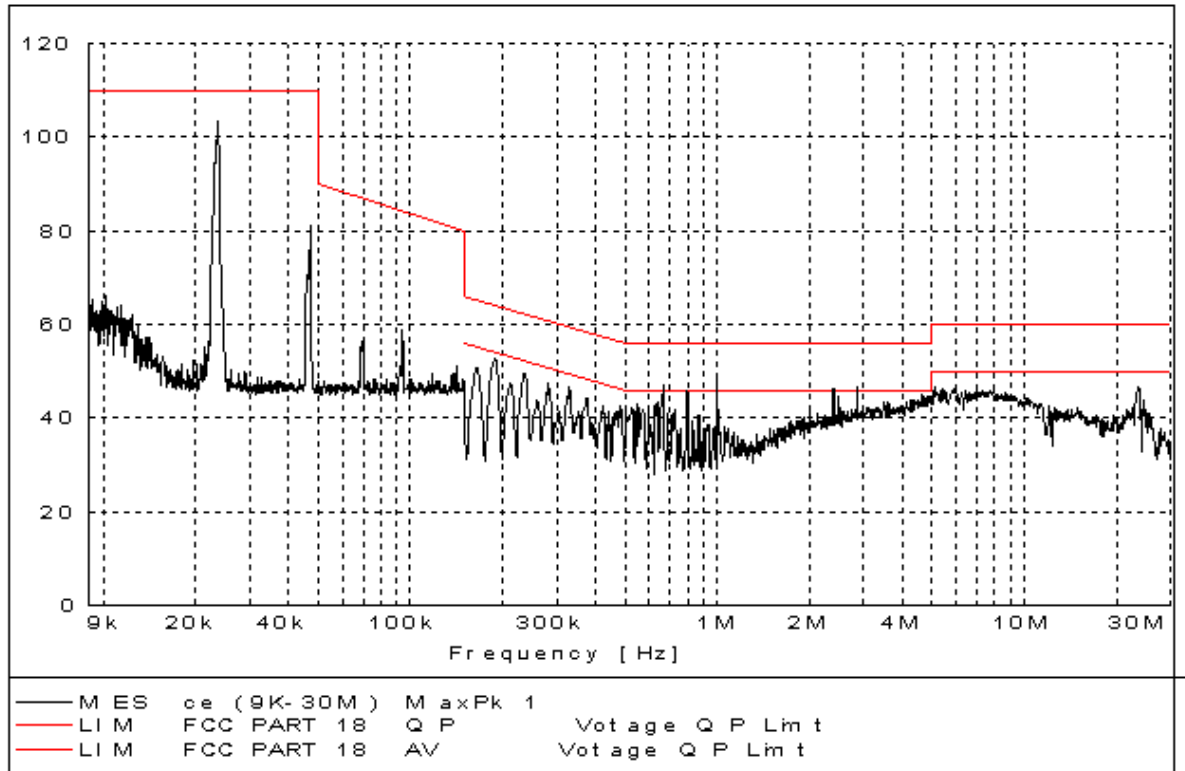
| Frequency<br>(MHz) | Transducer<br>(dB) | Receiver<br>QP<br>Reading<br>(dBμV) | QP<br>Level<br>(dBμV) | Limit<br>(dBμV) | Margin<br>(dB) | Receiver<br>AV<br>Reading<br>(dBμV) | AV<br>Level<br>(dBμV) | Limit<br>(dBμV) | Margin<br>(dB) |
|--------------------|--------------------|-------------------------------------|-----------------------|-----------------|----------------|-------------------------------------|-----------------------|-----------------|----------------|
| 0.023              | 9.6                | 90.8                                | 100.4                 | 110.0           | 9.6            | *                                   | *                     | *               | *              |
| 0.048              | 9.6                | 65.9                                | 75.5                  | 110.0           | 34.5           | *                                   | *                     | *               | *              |
| 2.995              | 9.6                | 36.8                                | 46.4                  | 56.0            | 9.6            | 26.3                                | 35.9                  | 46.0            | 10.1           |
| 2.395              | 9.6                | 36.7                                | 46.3                  | 56.0            | 9.7            | 29.3                                | 38.9                  | 46.0            | 7.1            |
| 0.799              | 9.6                | 34.7                                | 44.3                  | 56.0            | 11.7           | 26.5                                | 36.1                  | 46.0            | 9.9            |
| 0.995              | 9.6                | 34.4                                | 44.0                  | 56.0            | 12.0           | 23.3                                | 32.9                  | 46.0            | 13.1           |

\*: Not requested by standards.

Neutral line:

Peak Scan

Level (dBμV)



Quasi-peak and Average measurement:

| Frequency<br>(MHz) | Transducer<br>(dB) | Receiver<br>QP<br>Reading<br>(dBμV) | QP<br>Level<br>(dBμV) | Limit<br>(dBμV) | Margin<br>(dB) | Receiver<br>AV<br>Reading<br>(dBμV) | AV<br>Level<br>(dBμV) | Limit<br>(dBμV) | Margin<br>(dB) |
|--------------------|--------------------|-------------------------------------|-----------------------|-----------------|----------------|-------------------------------------|-----------------------|-----------------|----------------|
| 0.024              | 9.6                | 89.0                                | 98.6                  | 110.0           | 11.4           | *                                   | *                     | *               | *              |
| 0.047              | 9.6                | 59.7                                | 69.3                  | 110.0           | 40.7           | *                                   | *                     | *               | *              |
| 0.188              | 9.6                | 42.6                                | 52.2                  | 64.1            | 11.9           | 37.6                                | 47.2                  | 54.1            | 6.9            |
| 0.670              | 9.6                | 28.9                                | 38.5                  | 56.0            | 17.5           | 20.8                                | 30.4                  | 46.0            | 15.6           |
| 0.999              | 9.6                | 36.2                                | 45.8                  | 56.0            | 10.2           | 24.2                                | 33.8                  | 46.0            | 12.2           |
| 2.855              | 9.6                | 32.7                                | 42.3                  | 56.0            | 13.7           | 25.6                                | 35.2                  | 46.0            | 10.8           |

\*: Not requested by standards.