



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

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**FEDERAL COMMUNICATIONS COMMISSION**

Registration number: 282399

Report No.: GLEMO081203695HSF

Page: 1 of 14

FCC ID:TAPMC-ESH13I

# Test Report

**Application No.:** GLEMO081203695HS

**Applicant:** Guangdong MD Consumer Electric Manufacturing CO., Ltd.

**FCC ID:** TAPMC-ESH13I

**Equipment Under Test (EUT):**

**EUT Name:** Induction cooker

**Item No.:** MC-ESH13I

**Trade mark:** midea

**Serial No.:** Not supplied by client

**Standards:** FCC PART 18: 2006

**Date of Receipt:** 11 December 2008

**Date of Test:** 16 December 2008

**Date of Issue:** 18 December 2008

<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: 2006	FCC OST/ MP-5:1986	18.305	PASS
Conducted Emission (9KHz to 30MHz)	FCC PART 18: 2006	FCC OST/ MP-5:1986	18.307(a)	PASS



### 3 Contents

Page

1	COVER PAGE.....	1
2	TEST SUMMARY .....	2
3	CONTENTS .....	3
4	GENERAL INFORMATION.....	4
4.1	CLIENT INFORMATION.....	4
4.2	GENERAL DESCRIPTION OF E.U.T. ....	4
4.3	DETAILS OF E.U.T. ....	4
4.4	DESCRIPTION OF SUPPORT UNITS .....	4
4.5	TEST LOCATION.....	4
4.6	TEST FACILITY .....	5
4.7	DEVIATION FROM STANDARDS .....	6
4.8	ABNORMALITIES FROM STANDARD CONDITIONS.....	6
5	EQUIPMENTS USED DURING TEST .....	7
6	TEST RESULTS.....	9
6.1	RADIATED EMISSION, 9KHZ TO 30MHZ.....	9
6.1.1	E.U.T. Operation.....	9
6.1.2	Test Setup .....	9
6.1.3	Measurement Data .....	9
6.2	CONDUCTED EMISSIONS, 9KHZ TO 30MHZ.....	12
6.2.1	E.U.T. Operation.....	12
6.2.2	Plan View of Test Setup .....	12
6.2.3	Measurement Data .....	12-14



## **4 General Information**

### **4.1 Client Information**

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

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

EUT Name: Induction cooker  
Item No.: MC-ESH13I  
Trade mark: midea  
Serial No.: Not supplied by client

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

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

### **4.4 Description of Support Units**

The EUT has been tested with one steel vessel provided by client.

### **4.5 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.



#### **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. With the above and NVLAP's accreditation, SGS-CSTC is an authorized test laboratory for the DoC process.

- **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 Bureau of Industry Canada for radio equipment testing with Registration No.: 4620B-1.

Date of Registration: Jan 15, 2007. Valid until Jan 15, 2009

- **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 Dec.04.2006 and valid until Oct.12.2009.



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

Report No.: GLEMO081203695HSF

Page: 6 of 14

FCC ID:TAPMC-ESH13I

### **4.7 Deviation from Standards**

For Radiated Emission, test at 10m 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).

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

None.



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

Report No.: GLEMO081203695HSF

Page: 7 of 14

FCC ID:TAPMC-ESH13I

## 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	14-12-2008	14-12-2009
EMC0118	Two-line v-netwok	Rohde & Schwarz	ENV216	3560.6550.02	28-07-2008	28-07-2009
EMC0506	EMI Test Receiver	Rohde & Schwarz	ESCS30	100085	14-12-2008	14-12-2009
EMC0107	Coaxial Cable	SGS	2m	N/A	26-11-2008	26-11-2009
EMC0106	Voltage Probe	SGS	N/A	N/A	N/A	N/A
EMC0120	8 Line LISN	Fischer Custom Communications Inc.	FCC-TLISN-T8-02	20550	21-02-2008	21-02-2009
EMC0121	4 Line LISN	Fischer Custom Communications Inc.	FCC-TLISN-T4-02	20549	21-02-2008	21-02-2009
EMC0122	2 Line LISN	Fischer Custom Communications Inc.	FCC-TLISN-T2-02	20548	21-02-2008	21-02-2009

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	28-01-2008	28-01-2009
EMC0056	EMI Test Receiver	Rohde & Schwarz	ESCI	10036	14-07-2008	14-07-2009
N/A	EMI Test Software	Audix	E3	N/A	N/A	N/A
EMC0514	Coaxial cable	SGS	N/A	N/A	04-12-2008	04-12-2009
EMC0524	Bi-log Type Antenna	Schaffner -Chase	CBL6112B	2966	12-08-2008	12-08-2009
EMC0519	Bilog Type Antenna	Schaffner -Chase	CBL6143	5070	12-08-2008	12-08-2009
EMC0517	Horn Antenna	Rohde & Schwarz	HF906	100095	12-08-2008	12-08-2009
EMC0040	Spectrum Analyzer	Rohde & Schwarz	FSP30	100324	05-12-2008	05-12-2009
EMC0520	0.1-1300 MHz Pre-Amplifier	HP	8447D OPT 010	2944A06252	11-03-2008	11-03-2009
EMC0521	1-26.5 GHz Pre-Amplifier	Agilent	8449B	3008A01649	11-03-2008	11-03-2009
EMC0075	310N Amplifier	Sonama	310N	272683	10-09-2008	10-09-2009
EMC0523	Active Loop Antenna	EMCO	6502	00042963	09-08-2008	09-08-2010
EMC0530	10m Semi- Anechoic Chamber	ETS	N/A	N/A	10-08-2008	10-08-2009



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

Report No.: GLEMO081203695HSF

Page: 8 of 14

FCC ID:TAPMC-ESH13I

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	27-09-2008	27-09-2009
EMC0007	DMM	Fluke	73	70671122	27-09-2008	27-09-2009



## 6 Test Results

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

Test Requirement: FCC Part18  
 Test Method: FCC OST/ MP-5  
 Test Date: 16 December 2008  
 Frequency Range: 9KHz to 30MHz  
 Limit: 18.305  
 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)

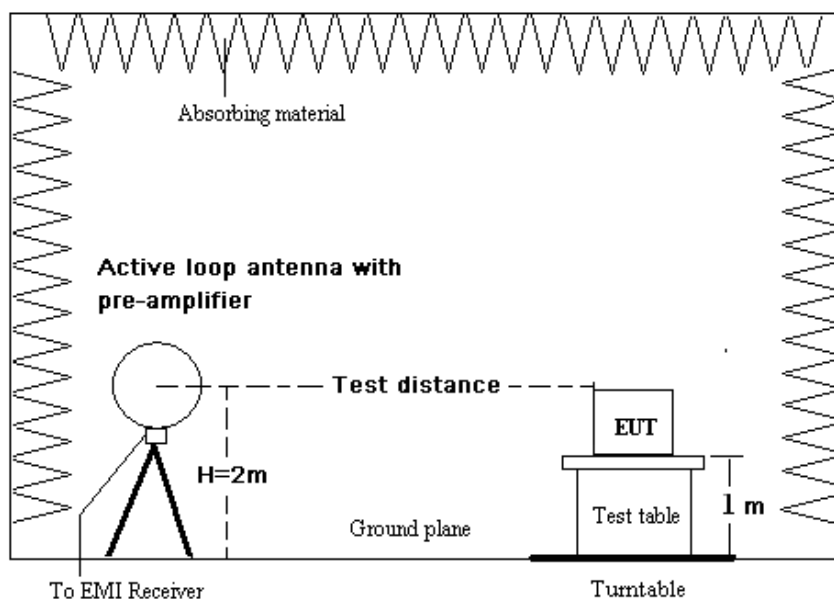
#### 6.1.1 E.U.T. Operation

Operating Environment:

Temperature: 20.0 °C Humidity: 50 % RH Atmospheric Pressure: 1005 mbar

EUT Operation: Test the EUT in heating mode with maximum output power.

#### 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 0.6m loop antenna.

The following average measurements were performed on the EUT on 16 December 2008:



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

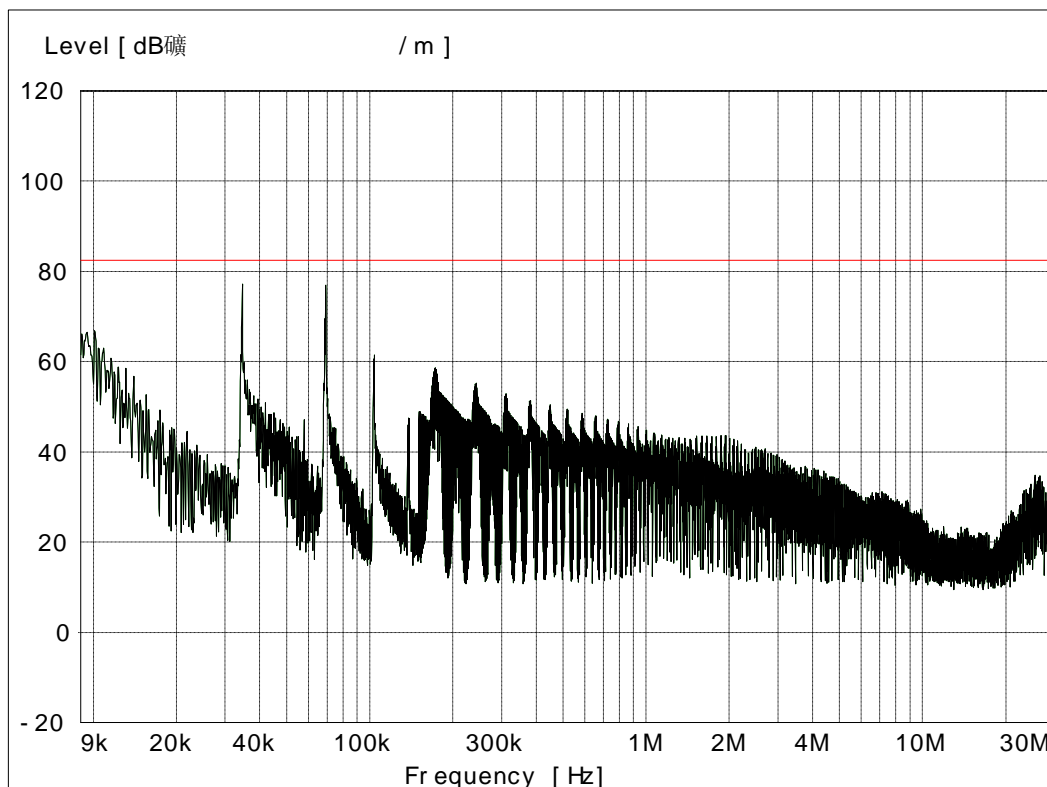
Report No.: GLEMO081203695HSF

Page: 10 of 14

FCC ID:TAPMC-ESH13I

Vertical:

Peak scan



Average measurement

Frequency	Transducer	Receiver QP Reading	Average Level	Limit	Margin
(MHz)	(dB)	(dBμV)	(dBμV/m)	(dBμV/m)	(dB)
0.035	14.6	59.5	74.1	82.5	8.4
0.069	12.9	62.1	75.0	82.5	7.5
0.012	12.9	62.1	75.0	82.5	7.5
0.013	12.9	47.3	60.2	82.5	22.3
0.014	12.9	46.6	59.5	82.5	23.0
0.015	12.9	39.3	52.2	82.5	30.3



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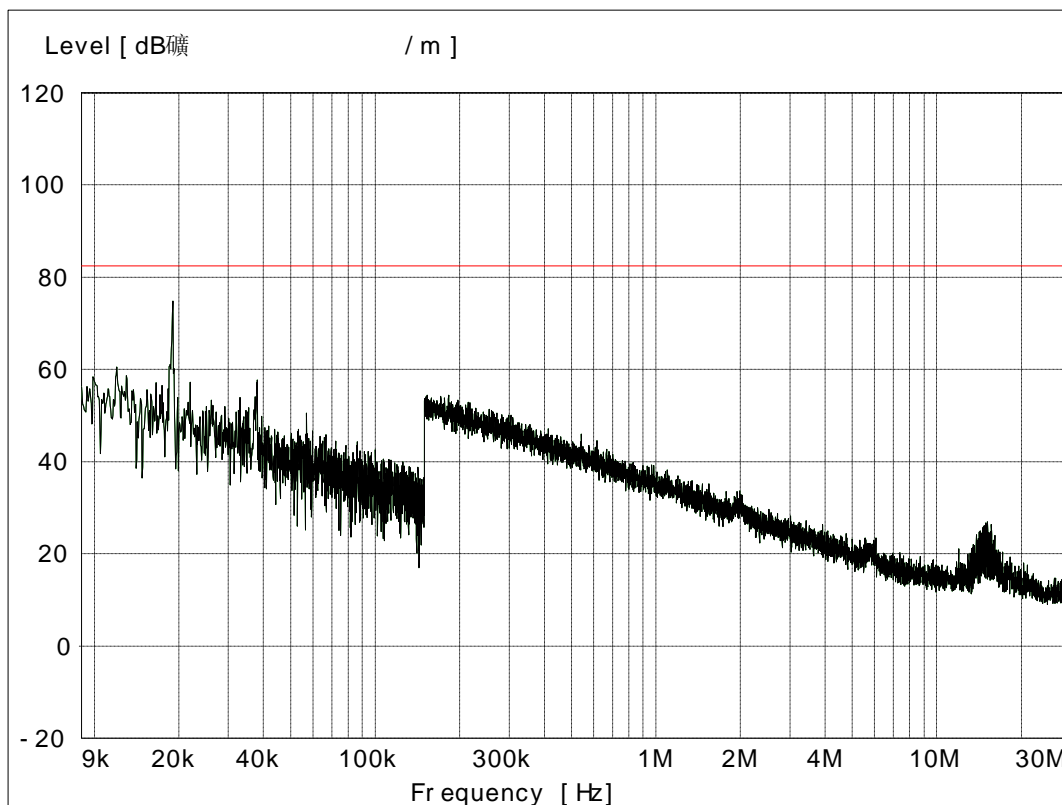
Report No.: GLEMO081203695HSF

Page: 11 of 14

FCC ID:TAPMC-ESH13I

Horizontal:

Peak scan



Average measurement

Frequency (MHz)	Transducer (dB)	Receiver QP Reading (dBμV)	Average Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)
0.019	14.6	46.8	61.4	82.5	21.1
0.038	12.8	32.4	45.2	82.5	37.3
0.012	12.0	42.7	54.7	82.5	27.8
0.024	12.0	30.5	42.5	82.5	40.0
0.032	12.0	28.8	40.8	82.5	41.7
0.040	12.0	27.8	39.8	82.5	42.7

**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: 16 December 2008  
 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)

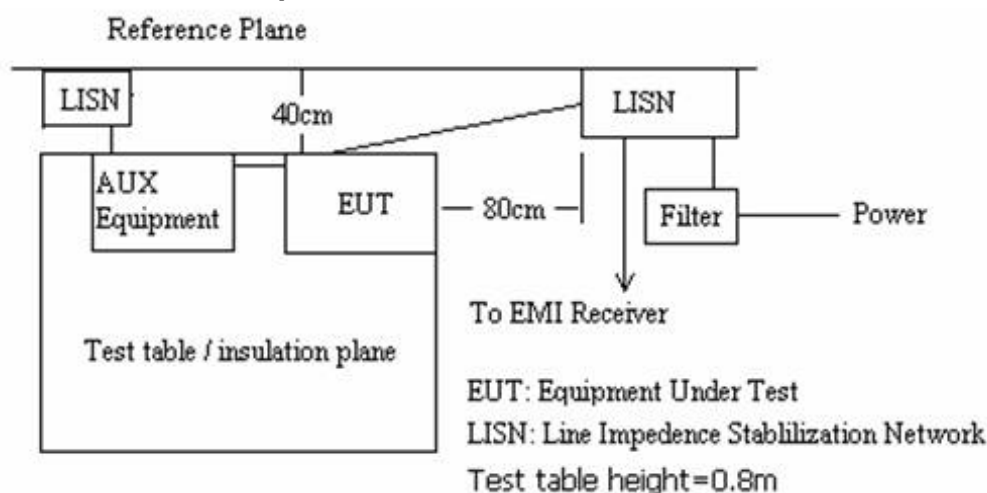
### 6.2.1 E.U.T. Operation

Operating Environment:

Temperature: 20.0 °C Humidity: 50 % RH Atmospheric Pressure: 1005 mbar

EUT Operation: Test the EUT in heating mode with maximum output power.

### 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 on 16 December 2008:



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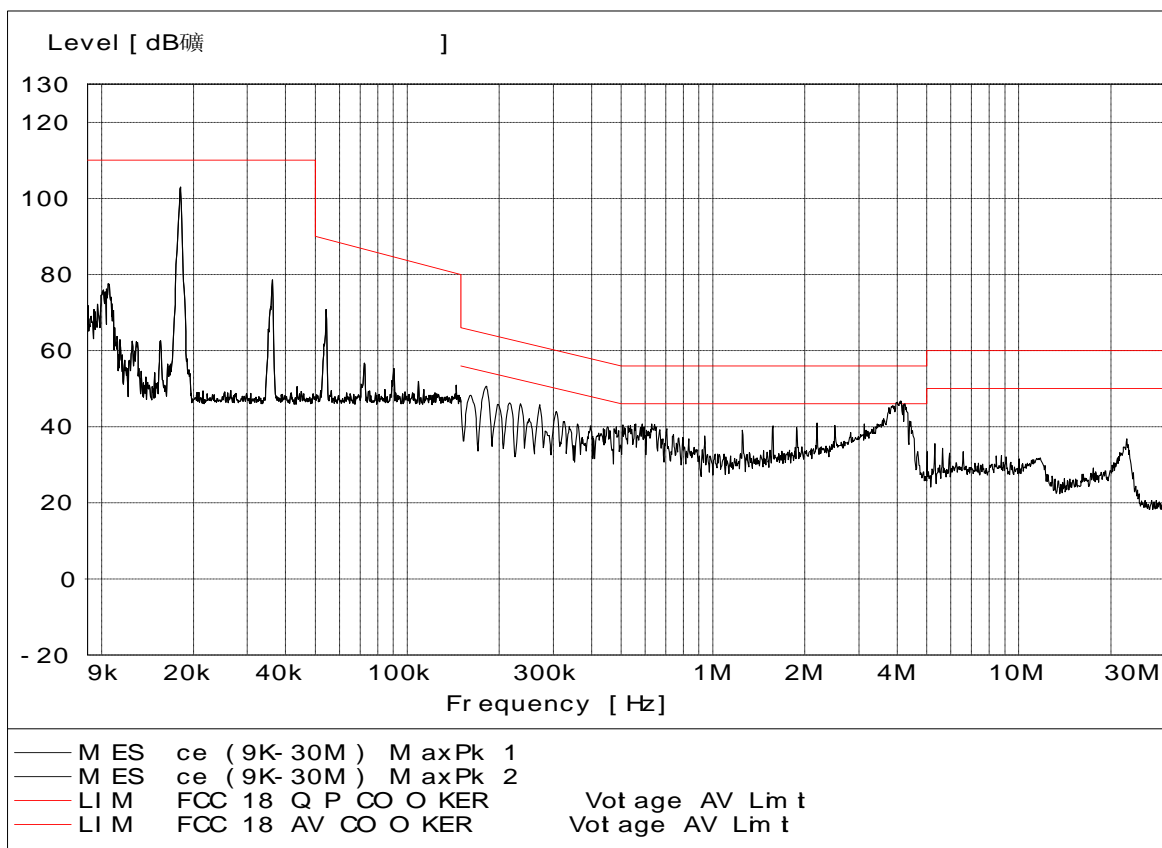
Report No.: GLEMO081203695HSF

Page: 13 of 14

FCC ID:TAPMC-ESH13I

Live line:

Peak Scan



Quasi-peak and Average measurement:

Frequency (MHz)	Transducer (dB)	Receiver QP Reading (dBμV)	QP Level (dBμV)	Limit (dBμV)	Margin (dB)	Receiver AV Reading (dBμV)	AV Level (dBμV)	Limit (dBμV)	Margin (dB)
4.105	9.8	34.2	44.0	56.0	12.0	24.3	34.1	46.0	11.9
4.152	9.8	35.2	45.0	56.0	11.0	25.3	35.1	46.0	10.9
4.256	9.8	32.5	42.3	56.0	13.8	23.8	33.6	46.0	12.4
4.356	9.8	31.7	41.5	56.0	14.5	22.8	32.6	46.0	13.4
4.012	9.8	30.5	40.3	56.0	15.8	22.2	32.0	46.0	14.0
0.018	9.6	88.8	98.4	110.0	11.6	*	*	*	*



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

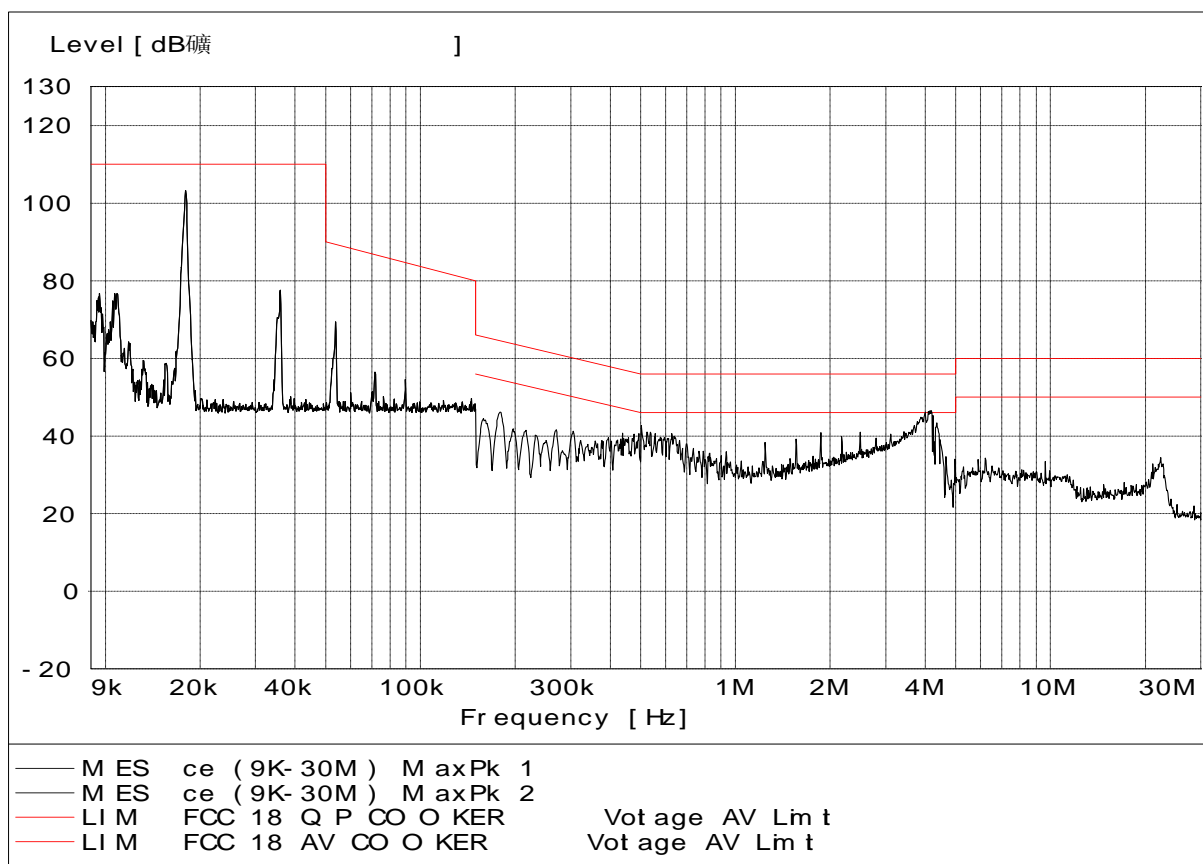
Report No.: GLEMO081203695HSF

Page: 14 of 14

FCC ID:TAPMC-ESH13I

Neutral line:

Peak Scan



Quasi-peak and Average measurement:

Frequency (MHz)	Transducer (dB)	Receiver QP Reading (dBμV)	QP Level (dBμV)	Limit (dBμV)	Margin (dB)	Receiver AV Reading (dBμV)	AV Level (dBμV)	Limit (dBμV)	Margin (dB)
4.188	9.8	34.6	44.4	56.0	11.6	22.2	32.0	46.0	14.0
4.154	9.8	33.5	43.3	56.0	12.8	21.5	31.3	46.0	14.8
4.088	9.8	32.3	42.1	56.0	14.0	20.5	30.3	46.0	15.8
4.008	9.8	31.3	41.1	56.0	14.9	20.1	29.9	46.0	16.2
4.238	9.8	30.2	40.0	56.0	16.0	18.4	28.2	46.0	17.8
0.018	9.6	88.6	98.2	110.0	11.8	*	*	*	*