



SGS-CSTC Standards Technical Services Co., Ltd.

198 Kezhu Road, Sciencetech Park, Guangzhou Economic & Technology
Development District, Guangzhou, China 510663

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

Email: sgs_internet_operations@sgs.com

FEDERAL COMMUNICATIONS COMMISSION

Registration number: 282399

Report No.: GZEM100700113701

Page: 1 of 20

FCC ID: YOFCEPE2010

TEST REPORT

Application No.:	GZEM1007001137HS
Applicant:	GUANGZHOU CITY SAIBEI HOUSEHOLD APPLIANCES CO., LTD.
FCC ID:	YOFCEPE2010
Equipment Under Test (EUT):	
EUT Name:	Induction Cooking Range
Item No.:	A6-18C-G, A6-18T-S ♣
♣	Please refer to section 3 of this report for more details.
Standards:	FCC PART 18:2009
Date of Receipt:	2010-07-26
Date of Test:	2010-07-27 to 2010-10-30
Date of Issue:	2010-11-17
Test Result :	Pass*

* 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.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.



2 Version

Revision Record				
Version	Chapter	Date	Modifier	Remark
00		2010-11-17		Original

Authorized for issue by:				
Tested By				2010-07-27 to 2010-10-30
		(Crystal Wang) /Project Engineer		Date
Prepared By				2010-11-16
		(Millie Li) /Clerk		Date
Checked By				2010-11-17
		(Strong Yao) /Reviewer		Date



3 Test Summary

Electromagnetic Interference (EMI)				
Test	Test Requirement	Test Method	Class / Severity	Result
Conducted Emission (9 kHz to 30 MHz)	FCC PART 18: 2009	FCC OST/ MP-5:1986	18.307(a)	PASS **
Radiated Emission (9 kHz to 30 MHz)	FCC PART 18: 2009	FCC OST/ MP-5:1986	18.305(b)	PASS **
Remark : EUT: In this whole report EUT means Equipment Under Test. ♣ Item no.: A6-18C-G, A6-18T-S Two models are identical in mechanical and two models are both tested in this report.				
** Model A6-18T-S pass Conducted Emission and Radiated Emission tests after modification by the applicant.				



4 Contents

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	Deviation from Standards	5
5.6	Abnormalities from Standard Conditions	5
5.7	Test Location.....	5
5.8	Test Facility	6
6	EQUIPMENT USED DURING TEST	7
7	EMISSION TEST RESULTS	9
7.1	Conducted Emissions, 9 kHz to 30 MHz	9
7.2	Radiated Emissions, 9 kHz to 30 MHz	15



5 General Information

5.1 Client Information

Applicant: GUANGZHOU CITY SAIBEI HOUSEHOLD APPLIANCES CO., LTD.
Address of Applicant: No. 36 Li Village, Dashijie, Panyu Zone, Guangzhou City

5.2 General Description of E.U.T.

EUT Name: Induction Cooking Range
Item No.: A6-18C-G, A6-18T-S

5.3 Details of E.U.T.

Power Supply: 120V AC, 60Hz
Power Cable: 1.8m x 3 wires unscreened AC mains cable.

5.4 Description of Support Units

The EUT has been tested as an independent unit.

5.5 Deviation from Standards

None.

5.6 Abnormalities from Standard Conditions

Model A6-18T-S pass Conducted Emission and Radiated Emission tests after retest.

5.7 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.



5.8 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.

- **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, IEC 60335-1:2006-10 and Rules of procedure IEC 60335-2:2006-10, and the relevant IEC 60335-2 Scheme Operational documents.



6 Equipment 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 ³	N/A	N/A	N/A
EMC0118	Two-line v-netwok	R&S	ENV216	100359	2010-09-25	2011-09-25
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	2010-09-06	2011-09-06
EMC0522	EMI Test Receiver	Rohde & Schwarz	ESIB26	100283	2010-01-25	2011-01-25
EMC0056	EMI Test Receiver	Rohde & Schwarz	ESCI	10036	2010-06-02	2011-06-02
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
EMC0518	Horn Antenna	Rohde & Schwarz	HF906	100096	2010-09-11	2011-09-11
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	2010-10-25	2011-10-25
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



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 Emission Test Results

7.1 Conducted Emissions, 9 kHz to 30 MHz

Test Requirement: FCC Part 18
Test Method: FCC OST/ MP-5
Test Date: 2010-07-27 (initial test)
2010-10-30 (retest)
Power Supply: 120V AC, 60 Hz
Frequency Range: 9 kHz to 30 MHz
Detector: Peak for pre-scan, Quasi-Peak and Average for the final result.
(200 Hz Resolution Bandwidth for 9 kHz to 150 kHz,
9 kHz Resolution Bandwidth for 150 kHz to 30 MHz)

Limit:

Frequency range MHz	AC mains terminals dB (μV)	
	Quasi-peak	Average
0.009 to 0.05	110	—
0.05 to 0.15	90 to 80*	—
0.15 to 0.5	66 to 56*	56 to 46*
0.5 to 5	56	46
5 to 30	60	50
Note1: The limit decreases linearly with the logarithm of the frequency in the range 0.05 MHz to 0.5 MHz.		
Note2: The lower limit is applicable at the transition frequency.		

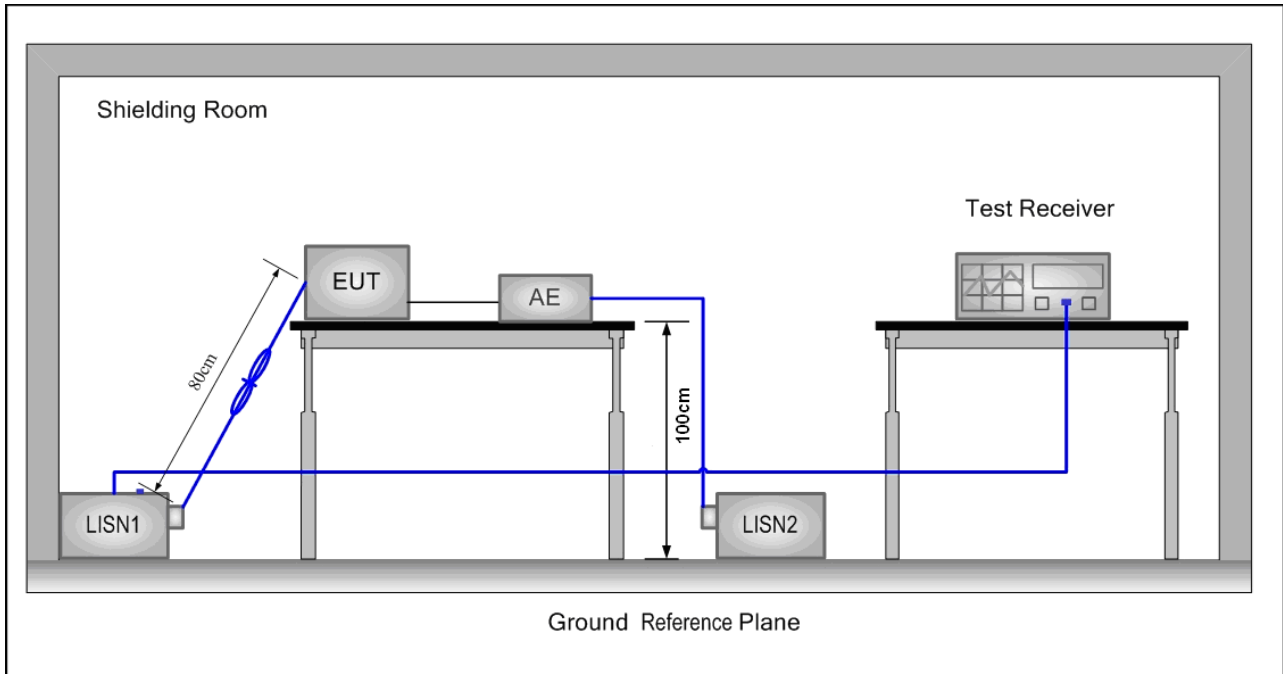
7.1.1 E.U.T. Operation

Operating Environment:

Temperature: 23.0 °C Humidity: 55% RH Atmospheric Pressure: 1008 mbar

EUT Operation: Test the EUT in heating mode with max power.

7.1.2 Test Setup and Procedure



1. The mains terminal disturbance voltage test was conducted in a shielded room.
2. The EUT was connected to nominal power supply through a LISN 1 (Line Impedance Stabilization Network) which provides a $50\Omega/50\mu\text{H} + 5\Omega$ linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.
3. The tabletop EUT was placed upon a non-metallic table 1 m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane, but separated from metallic contact with the ground reference plane by 0.1m of insulation.
4. The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2.

7.1.3 Measurement Data

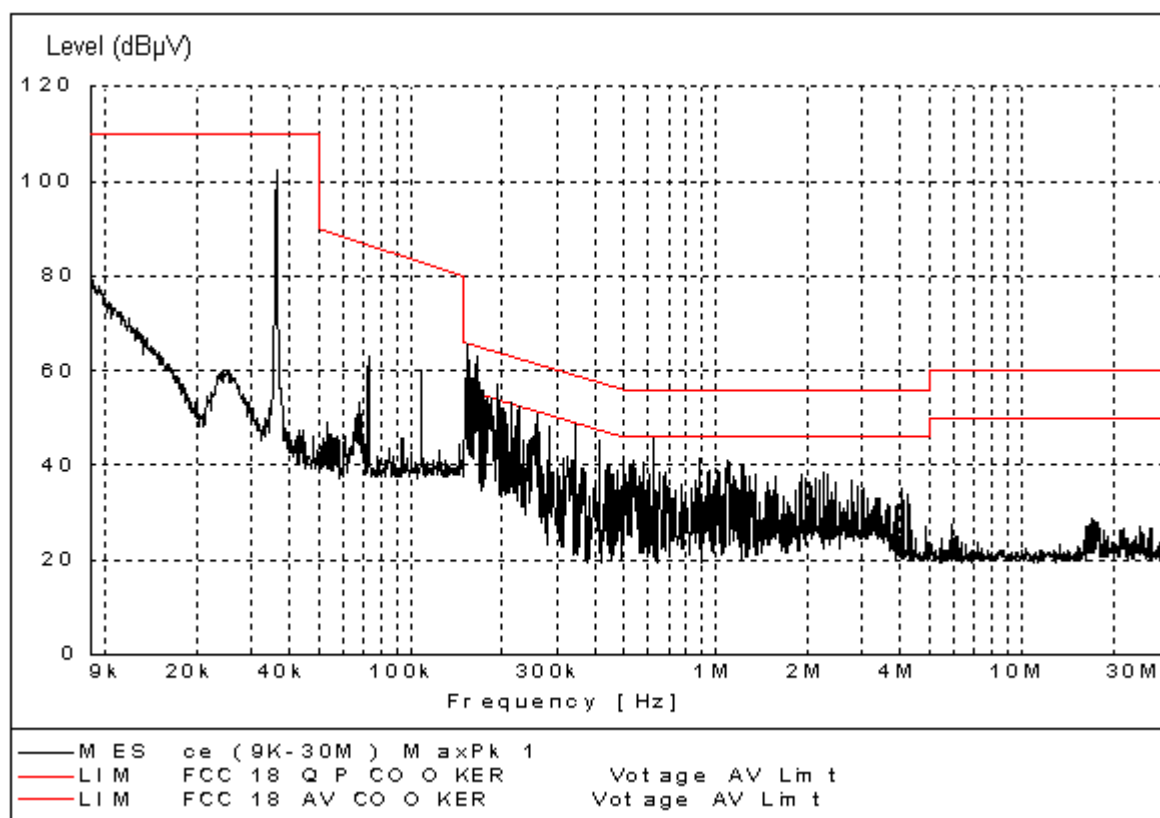
Pre-scan was performed with peak detected on both live and neutral cable. Quasi-peak & average measurements were performed at the frequencies which maximum peak emission level was detected.

Please see the attached Quasi-peak and Average test results.

Model A6-18C-G

Live line:

Peak Scan



Quasi-peak and Average measurement:

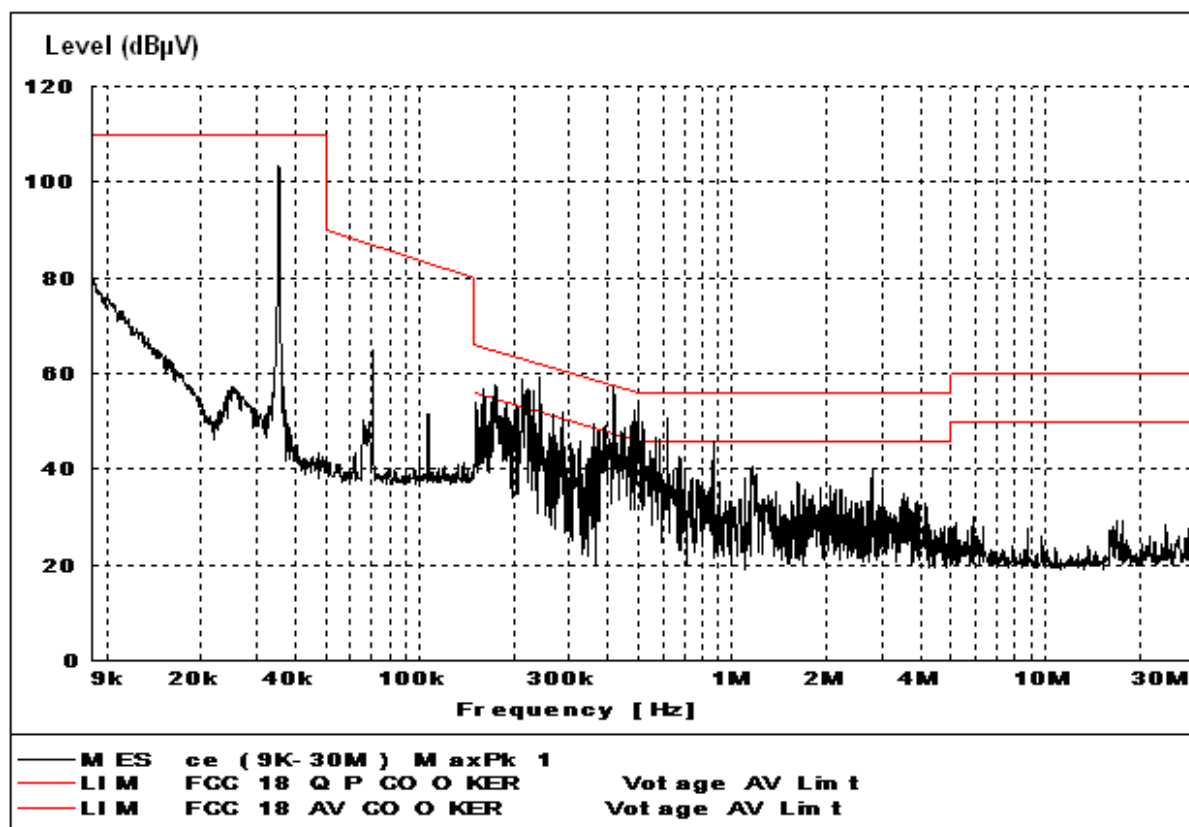
Frequency (MHz)	Transducer (dB)	Receiver QP Reading (dBμV)	QP Level (dBμV)	Limit (dBμV)	Margin (dB)	Receiver AV Reading (dBμV)	AV Level (dBμV)	Limit (dBμV)	Margin (dB)
0.036	9.6	75.6	85.2	110.0	24.8	*	*	*	*
0.073	9.6	28.5	38.1	86.6	48.5	*	*	*	*
0.154	9.6	29.5	39.1	65.8	26.7	4.3	13.9	55.8	41.9
0.193	9.6	22.3	31.9	63.9	32.0	1.7	11.3	53.9	42.6
0.344	9.6	6.0	15.6	59.1	43.5	-6.4	3.2	49.1	45.9
0.621	9.6	14.8	24.4	56.0	31.6	-4.4	5.2	46.0	40.8

*: Not requested by standards.



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)
0.036	9.6	76.7	86.3	110.0	23.7	*	*	*	*
0.073	9.6	29.9	39.5	86.6	47.1	*	*	*	*
0.154	9.6	29.6	39.2	65.8	26.6	4.9	14.5	55.8	41.3
0.193	9.6	22.7	32.3	63.9	31.6	2.7	12.3	53.9	41.6
0.344	9.6	7.9	17.5	59.1	41.6	-5.0	4.6	49.1	44.5
0.621	9.6	16.0	25.6	56.0	30.4	-3.4	6.2	46.0	39.8

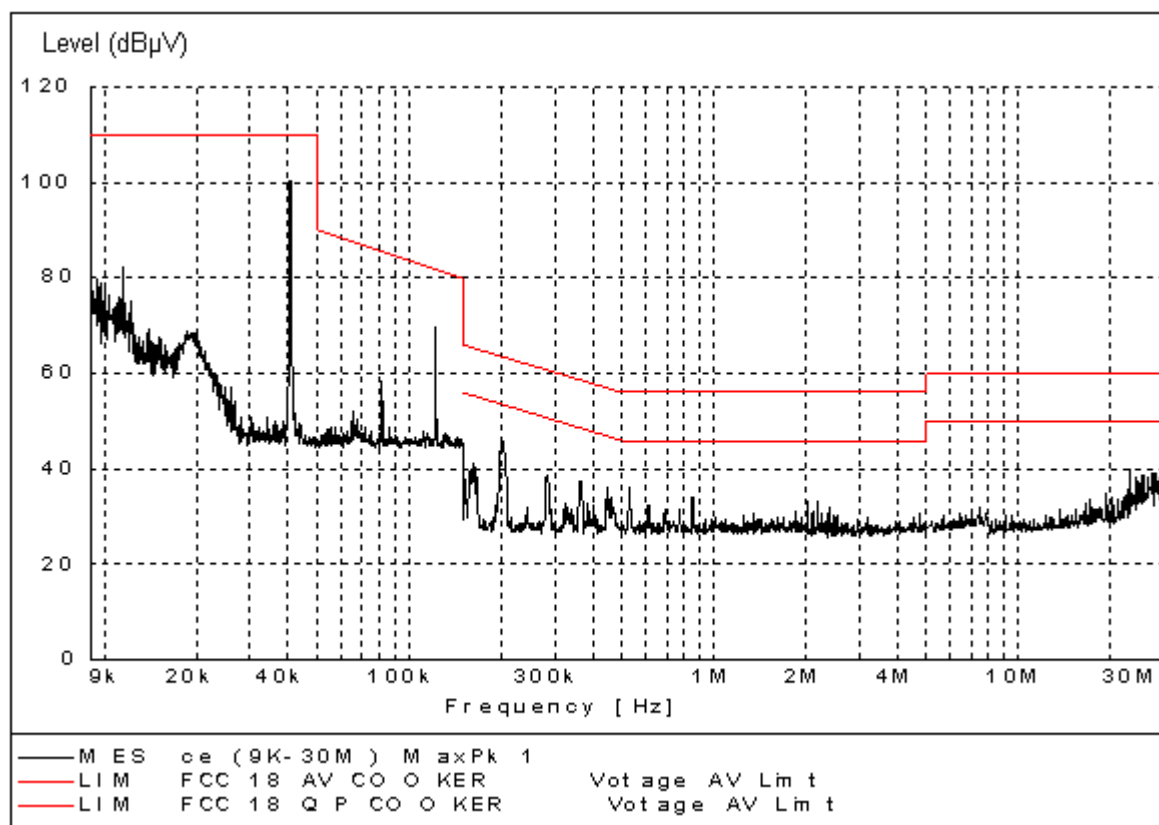
*: Not requested by standards.

Level = Read Level + Transducer.

Model A6-18T-S

Live line:

Peak Scan



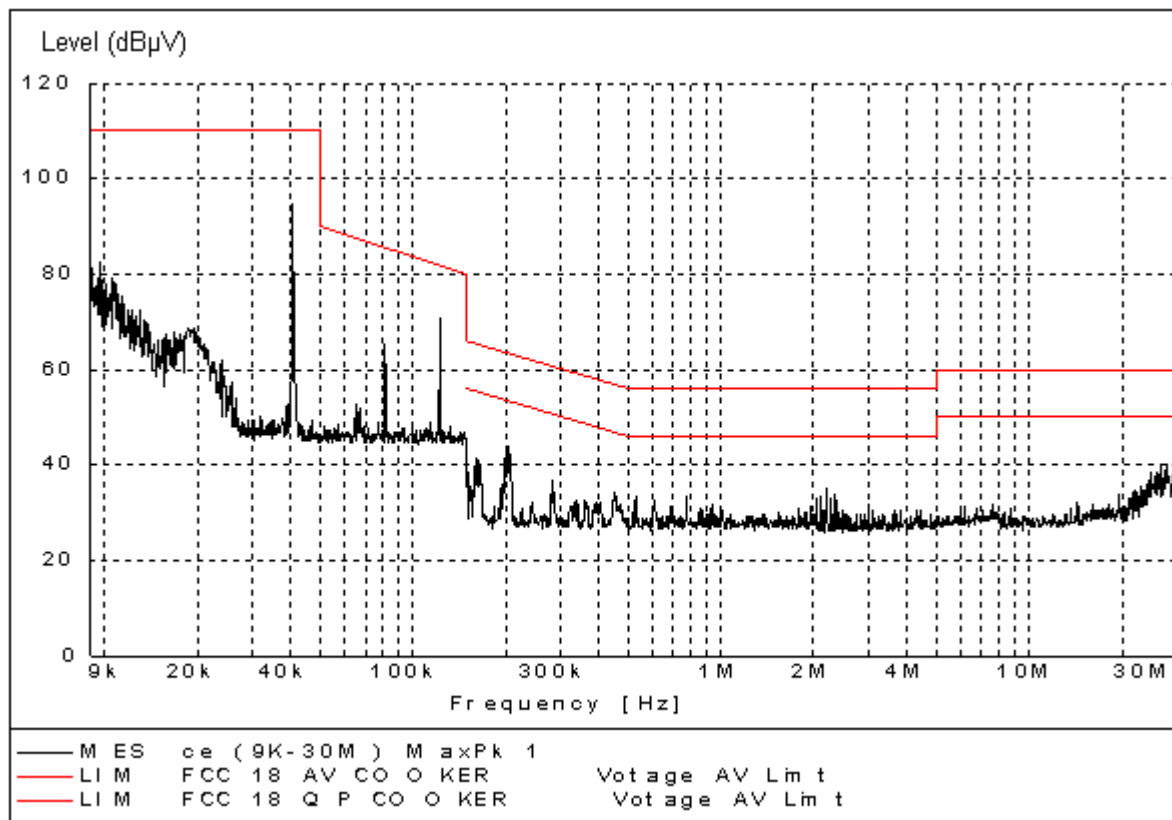
Quasi-peak and Average measurement:

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)
0.041	9.8	87.3	97.1	110.0	12.9	*	*	*	*
0.122	9.7	59.6	69.3	81.9	12.6	*	*	*	*
0.202	9.7	36.5	46.2	63.5	17.3	31.7	41.4	53.5	12.1
0.365	9.7	26.4	36.1	58.6	22.5	23.2	32.9	48.6	15.7
0.527	9.7	23.8	33.5	56.0	22.5	20.5	30.2	46.0	15.8
23.215	10.4	23.0	33.4	60.0	26.6	18.0	28.4	50.0	21.6

*: Not requested by standards.

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)
0.041	9.8	86.8	96.6	110.0	13.4	*	*	*	*
0.122	9.7	57.9	67.6	81.9	14.3	*	*	*	*
0.203	9.7	33.8	43.5	63.5	20.0	37.2	14.5	53.5	39.0
0.283	9.7	27.8	37.5	60.7	23.2	29.7	12.3	50.7	38.4
0.450	9.7	27.4	37.1	56.9	19.8	27.7	4.6	46.9	42.3
27.895	10.5	25.0	35.5	60.0	24.5	30.8	6.2	50.0	43.8

*: Not requested by standards.

Level = Read Level + Transducer.



7.2 Radiated Emissions, 9 kHz to 30 MHz

Test Requirement: FCC Part 18
Test Method: FCC OST/ MP-5
Power Supply: 120V AC, 60Hz
Test Date: 2010-07-27 (initial test)
2010-10-30 (retest)
Frequency Range: 9 kHz to 30 MHz
Measurement Distance: 10 m
Detector: Peak for pre-scan, Average for the final result
(200 Hz Resolution Bandwidth for 9 kHz to 150 kHz
9 kHz Resolution Bandwidth for 150 kHz to 30 MHz)

Limit:

Equipment	Operation frequency	RF Power generated by equipments(watts)	Field strength limit (μV/m)	Distance (meters)
Induction cooking ranges	Below 90kHz	Any	1,500	⁴ 30
	On or above 90kHz	Any	300	⁴ 30

For Induction cooking ranges and the operating frequency is below 90 kHz, the field strength limit is 1,500 μV/m@30m, i.e. $20\lg(1500\mu V)+20\lg(30m/10m) = 63.52\text{dBuV/m}+9.54\text{dB} = 73.06\text{dBuV/m}$ @ 10m distance.

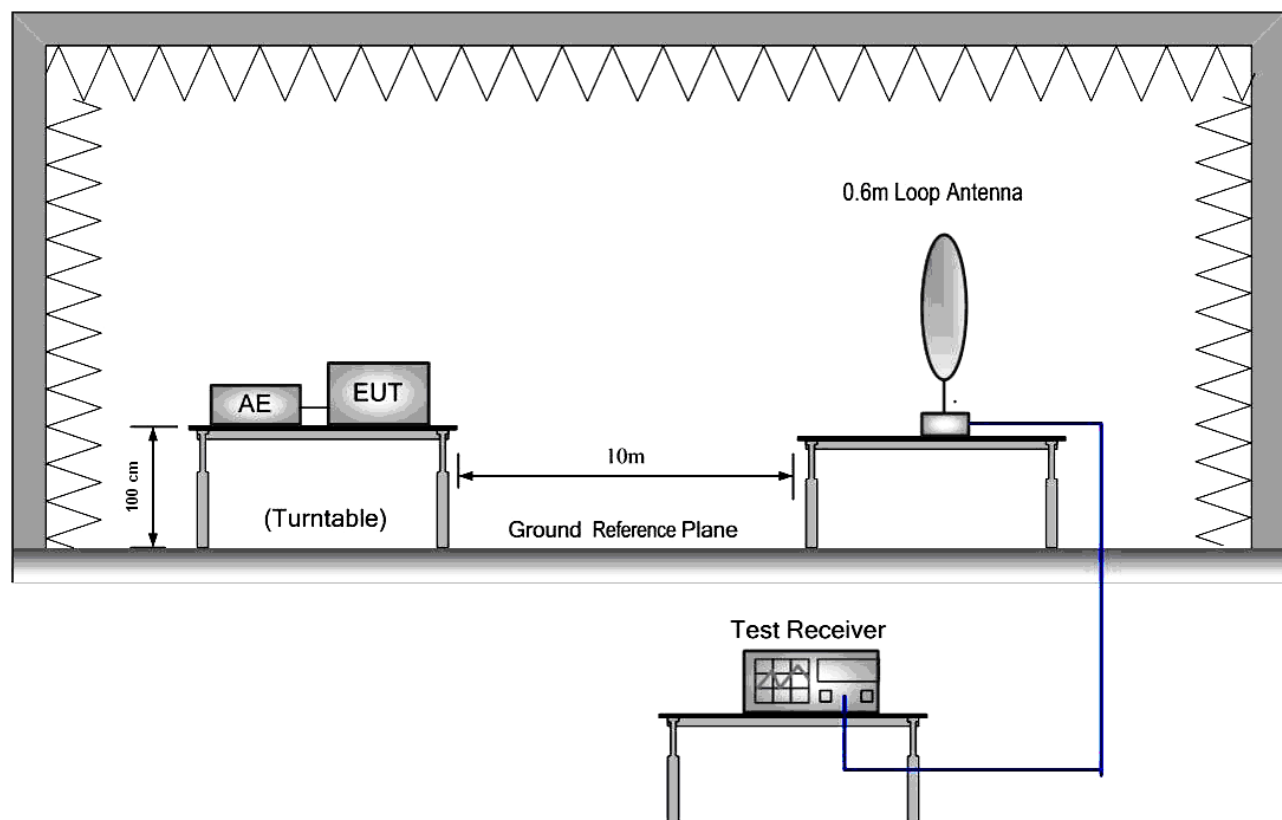
7.2.1 E.U.T. Operation

Operating Environment:

Temperature: 22.0 °C Humidity: 52 % RH Atmospheric Pressure: 1005 mbar

EUT Operation: Test the EUT in heating mode with max power.

7.2.2 Test Setup and Procedure



1. The magnetic emissions test was conducted in a semi-anechoic chamber.
2. The EUT was connected to AC power source through a mains power outlet which was bonded to the ground reference plane; The mains cables shall drape to the ground reference plane.
3. The tabletop EUT was placed upon a non-metallic table 1 m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane, but separated from metallic contact with the ground reference plane by 0.1m of insulation.
4. Before final measurements of magnetic emissions, a pre-scan was performed in the spectrum mode with the peak detector to find out the maximum emission spectrum signature data plots of the EUT.

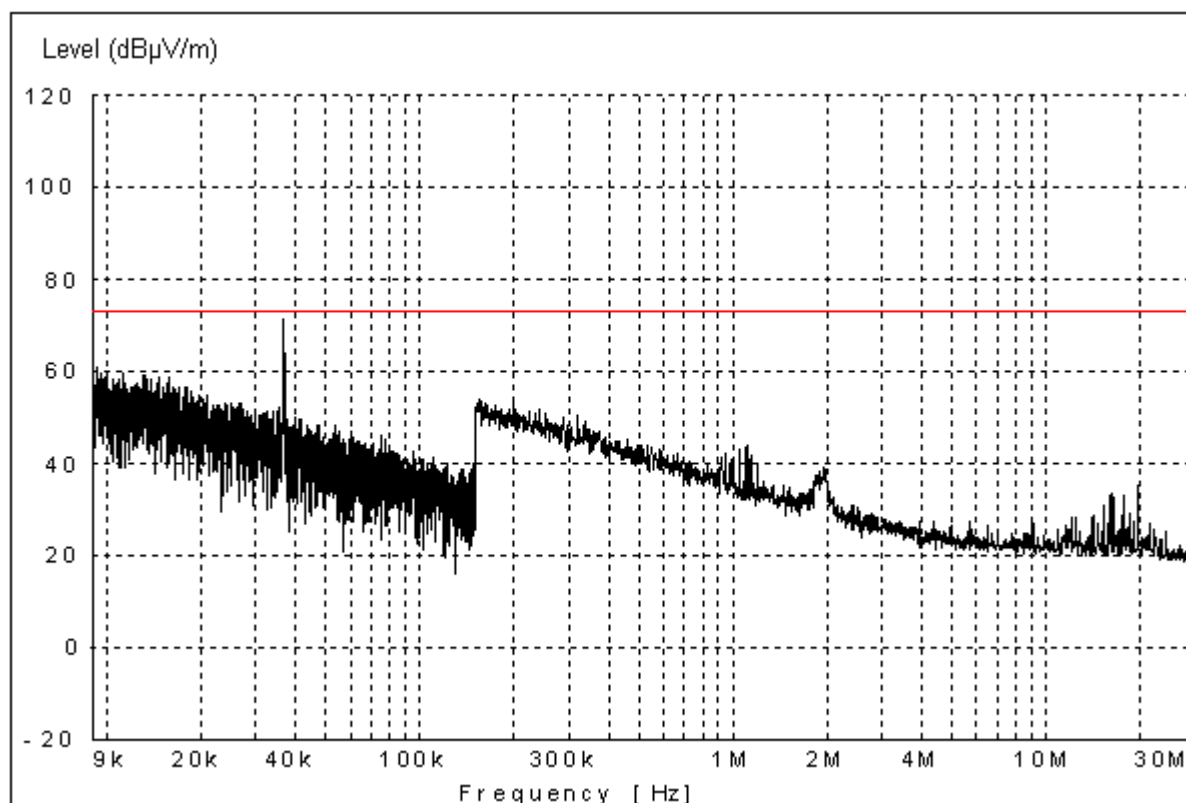
The frequencies of maximum emission were determined in the final magnetic emissions measurement, The physical arrangement of the test system and associated cabling was varied in order to determine the effect on the EUT's emissions in amplitude, direction and frequency. At each frequency, the EUT was rotated 360°, the antenna was supported in the vertical plane and be rotatable about a vertical axis. The antenna height was set at around 2 m above the ground reference plane.

7.2.3 Measurement Data

Model A6-18C-G

Vertical:

Peak scan



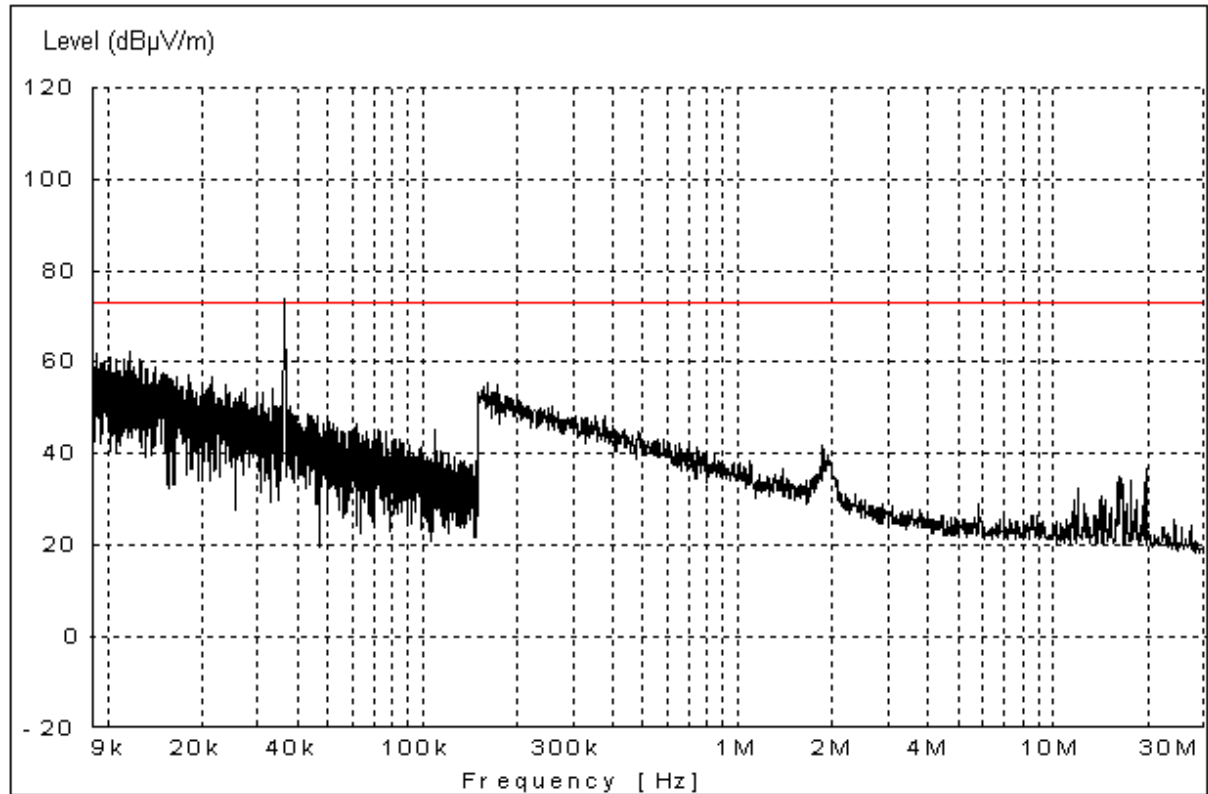
Average measurement

Frequency (MHz)	Transducer (dB)	Receiver AV Reading (dBμV)	AV Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)
0.04	13.30	95.8	52.70	73.06	16.7
0.16	12.00	107.0	28.60	73.06	4.5
0.24	12.00	79.9	25.20	73.06	30.9
1.05	12.10	75.6	28.10	73.06	37.6
1.96	12.30	62.4	29.00	73.06	51.9
19.71	10.30	78.3	30.10	73.06	34.3



Horizontal:

Peak scan



Average measurement

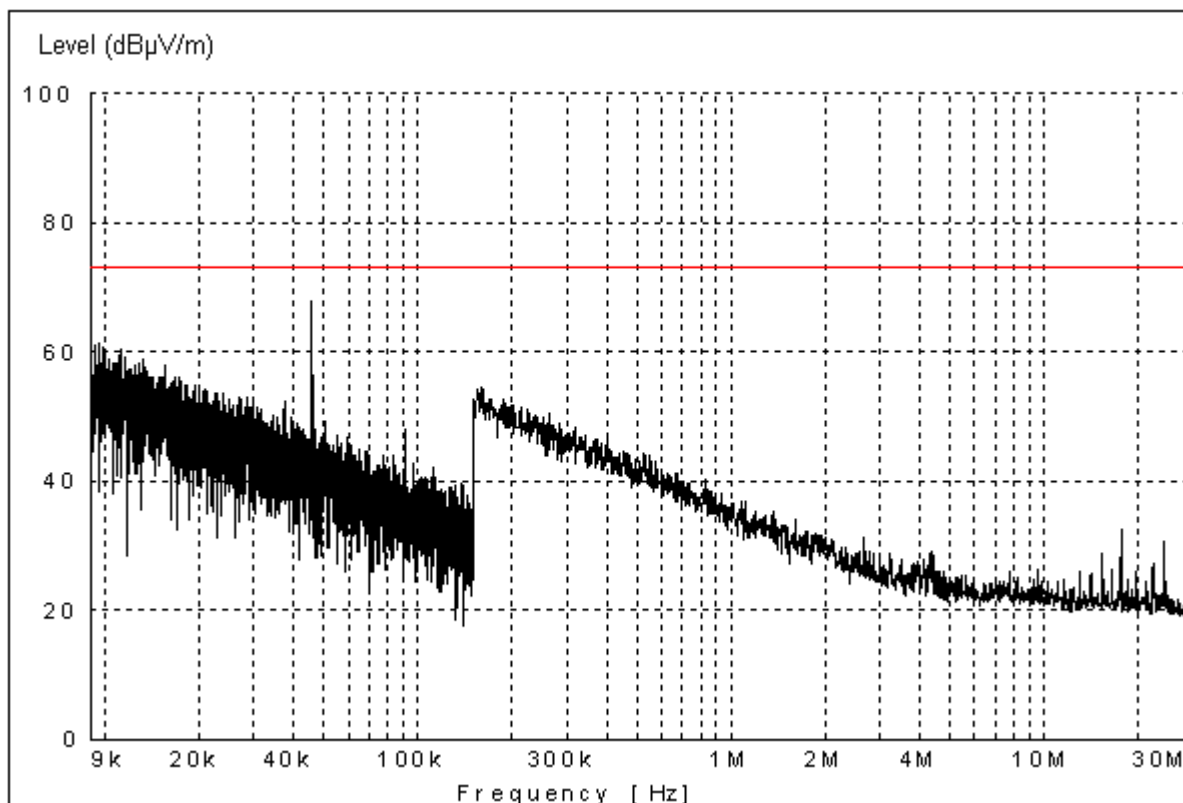
Frequency (MHz)	Transducer (dB)	Receiver AV Reading (dBμV)	AV Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)
0.04	13.20	56.8	70.00	73.06	3.1
0.16	12.00	56.5	44.70	73.06	28.4
0.35	12.10	25.9	38.00	73.06	35.1
1.86	12.20	18.0	30.20	73.06	42.9
16.21	10.90	6.3	17.20	73.06	55.9
17.70	10.80	76.0	32.70	73.06	47.0

Level = Read Level + Transducer.

Model A6-18T-S

Vertical:

Peak scan



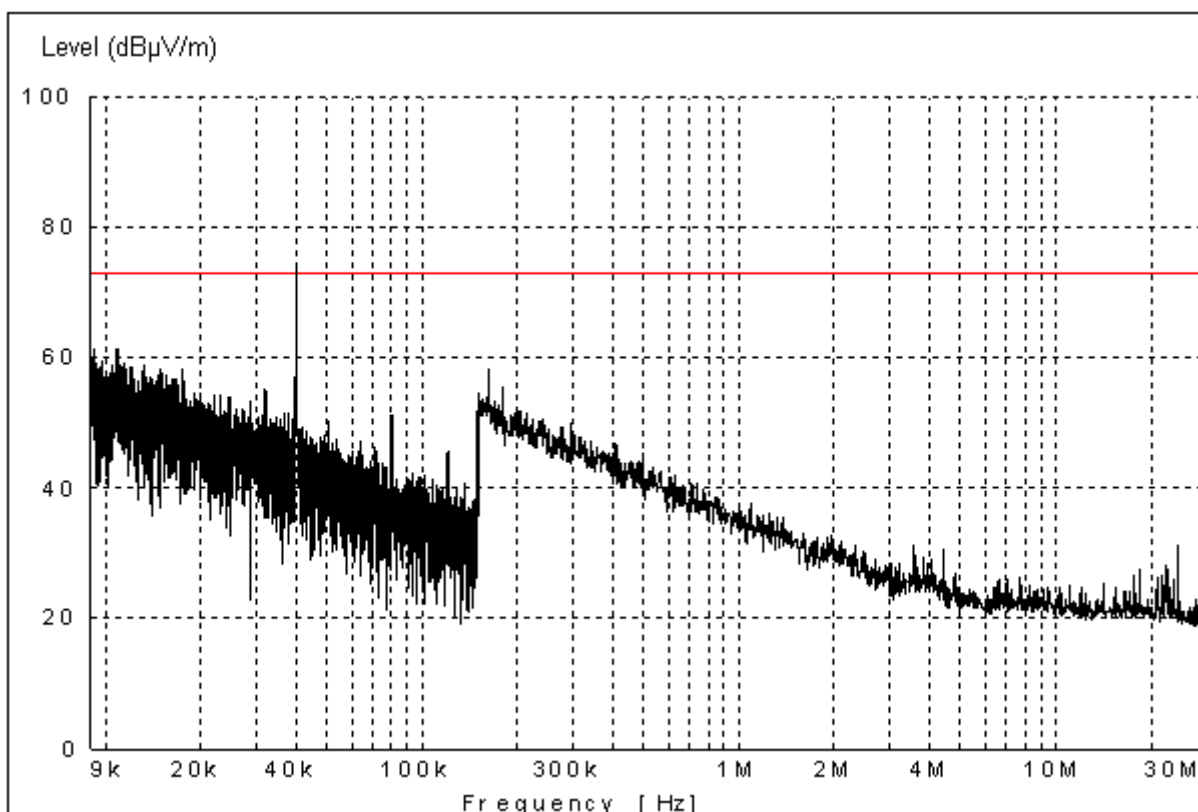
Average measurement

Frequency (MHz)	Transducer (dB)	Receiver AV Reading (dBμV)	AV Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)
0.04	13.00	56.5	69.52	73.06	3.5
0.08	11.90	27.6	39.50	73.06	33.6
0.12	12.00	23.1	35.10	73.06	38.0
0.16	12.00	38.0	50.01	73.06	23.1
0.21	12.00	33.5	45.50	73.06	27.6
0.33	12.00	31.8	43.80	73.06	29.3



Horizontal:

Peak scan



Average measurement

Frequency (MHz)	Transducer (dB)	Receiver AV Reading (dBμV)	AV Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)
0.04	13.00	58.0	71.00	73.06	2.1
0.08	11.90	37.5	49.40	73.06	23.7
0.12	12.00	30.5	42.50	73.06	30.6
0.16	12.00	39.2	51.20	73.06	21.9
0.18	12.00	37.4	49.40	73.06	23.7
0.30	12.00	33.2	45.20	73.06	27.9

Level = Read Level + Transducer.

--End of Report--