

Reference No. : WTF23F10230873J
Applicant : Wenzhou Xuqin Electrical Appliances Co., Ltd
Address : No.116, Xinglong Road, Wanquan Town, Pingyang,
Wenzhou City, Zhejiang Province
Manufacturer : The same as above
Address : The same as above
Product : Hair Dryer
Model No. : LC-180, LC-182, LC-185, LC-186, LC-188
Technical data : 220-240V, 50-60Hz, 1700W, IPX0, Class II

**Test Specification:**

EN 60335-1:2012+A11:2014+A13:2017+A1:2019+A14:2019+A2:2019+A15:2021

EN 60335-2-23:2003+A1:2008+A11:2010+A2:2015

EN 62233:2008


The above product has been tested by us with the listed standards and found in compliance with the European Directive LVD 2014/35/EU. It is possible to use CE marking to demonstrate the compliance with this LVD Directive.

Household and similar electrical appliances**Part 1: General requirements****Part 2-23: Particular requirements for appliances for skin or hair care****Measurement methods for electromagnetic fields of household appliances and similar apparatus with regard to human exposure**

The referred test report(s) show that the product complies with standard(s) recognized as giving presumption of compliance with the essential requirements in the above mentioned EU Directive. Other relevant Directives have to be observed.

After preparation of the necessary technical documentation as well as the EU Declaration of Conformity, the CE marking as shown below can be affixed on the equipment under the sole responsibility of the manufacturer.




Manager: **Jerry Mu**
Date: Jan. 10, 2024

The statement is based on a single evaluation of the sample of above mentioned product. It does not imply an assessment of the whole production.

Waltek Testing Group (Foshan) Co., Ltd.

Hotline: 400-840-2288 E-mail: info@waltek.com.cn

[Http://www.waltek.com.cn](http://www.waltek.com.cn)

证书号第8177868号



外观设计专利证书

外观设计名称：吹风机

设计人：孔令国

专利号：ZL 2023 3 0217176.2

专利申请日：2023年04月19日

专利权人：孔令国

地址：325000 浙江省温州市平阳县万全镇古农村

授权公告日：2023年08月04日

授权公告号：CN 308159034 S

国家知识产权局依照中华人民共和国专利法经过初步审查，决定授予专利权，颁发外观设计专利证书并在专利登记簿上予以登记。专利权自授权公告之日起生效。专利权期限为十五年，自申请日起算。


专利证书记载专利权登记时的法律状况。专利权的转移、质押、无效、终止、恢复和专利权人的姓名或名称、国籍、地址变更等事项记载在专利登记簿上。



局长
申长雨

申长雨





证书号第8177868号

专利权人应当依照专利法及其实施细则规定缴纳年费。本专利的年费应当在每年04月19日前缴纳。未按照规定缴纳年费的，专利权自应当缴纳年费期满之日起终止。

申请日时本专利记载的申请人、设计人信息如下：

申请人：

孔令国

设计人：

孔令国



中国认可
国际互认
检测
TESTING
CNAS L6478



TEST REPORT

Reference No...... : WTF23F10230889E
Applicant..... : Wenzhou Xuqin Electrical Appliances Co., Ltd
Address..... : No.116, Xinglong Road, Wanquan Town, Pingyang, Wenzhou City, Zhejiang Province
Manufacturer : The same as above
Address..... : The same as above
Product Name..... : Hair Dryer
Model No..... : LC-180, LC-182, LC-185, LC-186, LC-188
Test specification..... : 47 CFR PART 15 SUBPART B (Oct.,2020)
Date of Receipt sample : 2023-11-08
Date of Test : 2023-11-13 to 2023-11-23
Date of Issue..... : 2023-11-28
Test Report Form No...... : WEO-FCC15A-01B
Test Result..... : **Pass**

Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of approver.

Prepared By:

Waltek Testing Group (Foshan) Co., Ltd.

Address: No.13-19, 2/F., 2nd Building, Sunlink International Machinery City, Chencun, Shunde District, Foshan, Guangdong, China

Tel:+86-757-23811398 Fax:+86-757-23811381 E-mail:info@waltek.com.cn

Tested by:

Wen Feng

 Wen Feng

Approved by:

Danny Zhou

 Danny Zhou



1 Test Summary

Test Item	Test Requirement	Class	Test Method	Test Result
Conducted Emission	47 CFR PART 15 SUBPART B (Oct.,2020)	Class B	ANSI C63.4: 2014	Pass
Radiated Emission	47 CFR PART 15 SUBPART B (Oct.,2020)	Class B	ANSI C63.4: 2014	Pass

Remark:

Pass	Test item meets the requirement
Fail	Test item does not meet the requirement
N/A	Test case does not apply to the test object

WALTEK



2 Contents

	Page
COVER PAGE	1
1 TEST SUMMARY	2
2 CONTENTS	3
3 GENERAL INFORMATION	4
3.1 GENERAL DESCRIPTION OF E.U.T.	4
3.2 DETAILS OF E.U.T.....	4
3.3 DESCRIPTION OF SUPPORT UNITS.....	4
3.4 STANDARDS APPLICABLE FOR TESTING	4
3.5 TEST FACILITY.....	5
3.6 SUBCONTRACTED.....	5
3.7 ABNORMALITIES FROM STANDARD CONDITIONS	5
4 EQUIPMENT USED DURING TEST	6
4.1 SOFTWARE LIST	7
4.2 MEASUREMENT UNCERTAINTY	7
4.3 SPECIAL ACCESSORIES AND AUXILIARY EQUIPMENT.....	7
4.4 DECISION RULE.....	7
5 EMISSION TEST RESULTS	8
5.1 CONDUCTED EMISSION.....	8
5.1.1 <i>E.U.T. Operation</i>	8
5.1.2 <i>Block Diagram of Test Setup</i>	8
5.1.3 <i>Measurement Data</i>	8
5.1.4 <i>Corrected Amplitude & Margin Calculation</i>	9
5.1.5 <i>Conducted Emission Test Data</i>	9
5.2 RADIATED EMISSION.....	11
5.2.1 <i>E.U.T. Operation</i>	11
5.2.2 <i>Block Diagram of Test Setup</i>	11
5.2.3 <i>Measurement Data</i>	11
5.2.4 <i>Corrected Amplitude & Margin Calculation</i>	12
5.2.5 <i>Radiated Emission Test Data</i>	12
6 PHOTOGRAPHS – TEST SETUP	14
6.1 PHOTOGRAPH – CONDUCTED EMISSION TEST SETUP.....	14
6.2 PHOTOGRAPH – RADIATED EMISSION TEST SETUP.....	14
7 PHOTOGRAPHS – CONSTRUCTIONAL DETAILS	15
7.1 EUT – EXTERNAL VIEW.....	15



3 General Information

3.1 General Description of E.U.T.

Product Name : Hair Dryer
Model No. : LC-180, LC-182, LC-185, LC-186, LC-188
Remark : All models have same electric circuit only their appearance color is different. Therefore the EMC tests were performed on model LC-188.

3.2 Details of E.U.T.

Technical Data : 100-240V~, 50-60Hz, 1600W

3.3 Description of Support Units

The EUT has been tested as an independent unit. LC-188 is the test sample. Both tests were performed in the condition of AC 120V/60Hz input.

3.4 Standards Applicable for Testing

The tests were performed according to following standards:

47 CFR PART 15 SUBPART B (Oct.,2020) Radio frequency devices

WALTEK



3.5 Test Facility

The test facility has a test site registered with the following organizations:

- **ISED – Registration No.: 21895**

Waltek Testing Group (Foshan) Co., Ltd. has been registered and fully described in a report filed with the Innovation, Science and Economic Development Canada (ISED). The acceptance letter from the ISED is maintained in our files. Registration ISED number: 21895, March 12, 2019

- **FCC – Registration No.: 820106**

Waltek Testing Group (Foshan) 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 820106, August 16, 2018

- **NVLAP – Lab Code: 600191-0**

Waltek Testing Group (Foshan) Co., Ltd. EMC Laboratory is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP/NIST). NVLAP Code: 600191-0.

This 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.

3.6 Subcontracted

Whether parts of tests for the product have been subcontracted to other labs:

Yes No

If Yes, list the related test items and lab information:

Test items: --

Lab information: --

3.7 Abnormalities from Standard Conditions

None.



4 Equipment Used during Test

<input type="checkbox"/> Mains Terminal Disturbance Voltage (Conducted Emission) 1#					
Item	Equipment	Manufacturer	Model No.	Serial No.	Calibration Status
1.	EMI Test Receiver	R&S	ESR3	102423	Valid
2.	LISN	R&S	ENV216	101343	Valid
3.	Cable	HUBER+SUHNER	CBL2-NN-6M	223NN624	Valid
4.	Switch	CD	RSU-A4 18G	RSUA4008	Valid
<input checked="" type="checkbox"/> Mains Terminal Disturbance Voltage (Conducted Emission) 2#					
Item	Equipment	Manufacturer	Model No.	Serial No.	Calibration Status
1.	EMI Test Receiver	R&S	ESCI	101178	Valid
2.	LISN	R&S	ENV216	101215	Valid
3.	Cable	HUBER+SUHNER	CBL2-NN-6M	6102701	Valid
4.	Switch	ESE	RSU/M2	---	Valid
<input type="checkbox"/> Mains Terminal Disturbance Voltage (Conducted Emission) 3#					
Item	Equipment	Manufacturer	Model No.	Serial No.	Calibration Status
1.	EMI Test Receiver	R&S	ESR3	102842	Valid
2.	LISN	R&S	ENV216	101542	Valid
3.	Cable	YIHENG	LMR195UF-NMNM-2.5	---	Valid
4.	Manual RF Switch	YIHENG	SW-2	RSU0402	Valid
<input checked="" type="checkbox"/> Radiated Emission (30MHz to 1GHz) 1#					
Item	Equipment	Manufacturer	Model No.	Serial No.	Calibration Status
1.	3m Semi-anechoic Chamber	CHANGCHUANG	9m×6m×6m	---	Valid
2.	EMI Test Receiver	R&S	ESR7	101566	Valid
3.	Trilog Broadband Antenna	SCHWARZBECK	VULB 9162	9162-117	Valid
4.	Coaxial Cable (below 1GHz)	H+S	CBL3-NN-12+3 m	214NN320	Valid
<input type="checkbox"/> Radiated Emission (30MHz to 1GHz) 2#					
Item	Equipment	Manufacturer	Model No.	Serial No.	Calibration Status
1.	3m Semi-anechoic Chamber	YIHENG	10m×5.3m×3.5m	YH2021071804	Valid
2.	EMI Test Receiver	R&S	ESR7	102454	Valid
3.	Trilog Broadband Antenna	SCHWARZBECK	VULB 9163	01418	Valid
4.	Coaxial Cable (below 1GHz)	Times-Microwave Systems	LMR240UF-NMSM-7.5	---	Valid

: Not Used

: Used



4.1 Software List

Description	Manufacturer	Model	Version
EMI Test Software (Conducted Emission 1#)	FARATRONIC	EZ-EMC	EMEC-3A1
EMI Test Software (Conducted Emission 2#)	FARATRONIC	EZ-EMC	CON-03A1
EMI Test Software (Conducted Emission 3#)	FARATRONIC	EZ-EMC	COM 3A1.1
EMI Test Software (Radiated Emission 1#)	FARATRONIC	EZ-EMC	RA-03A1-1
EMI Test Software (Radiated Emission 2#)	FARATRONIC	EZ-EMC	RA-03A1-1

4.2 Measurement Uncertainty

Test Item	Frequency Range	Uncertainty	Note
Conducted Emission	150kHz~30MHz	±2.6dB	(1)
Radiated Emission	30MHz~1GHz	±4.5dB	(1)

(1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.

4.3 Special Accessories and Auxiliary Equipment

Item	Equipment	Technical Data	Manufacturer	Model No.	Serial No.
1.	/	/	/	/	/

4.4 Decision Rule

Compliance or non-compliance with a disturbance limit shall be determined in the following manner.

If U_{LAB} is less than or equal to U_{CISPR} , then

- Compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit;
- Non-compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit.

If U_{LAB} is greater than U_{CISPR} , then

- Compliance is deemed to occur if no measured disturbance level, increased by $(U_{LAB} - U_{CISPR})$, exceeds the disturbance limit;
- Non-compliance is deemed to occur if any measured disturbance level, increased by $(U_{LAB} - U_{CISPR})$, exceeds the disturbance limit.



5 Emission Test Results

5.1 Conducted Emission

Test Requirement.....	: 47 CFR PART 15, SUBPART B
Test Method.....	: ANSI C63.4
Test Result.....	: Pass
Test Limit.....	: 47 CFR PART 15, SUBPART B Section 15.107
Frequency Range.....	: 150kHz to 30MHz
Class.....	: Class B

5.1.1 E.U.T. Operation

Operating Environment:

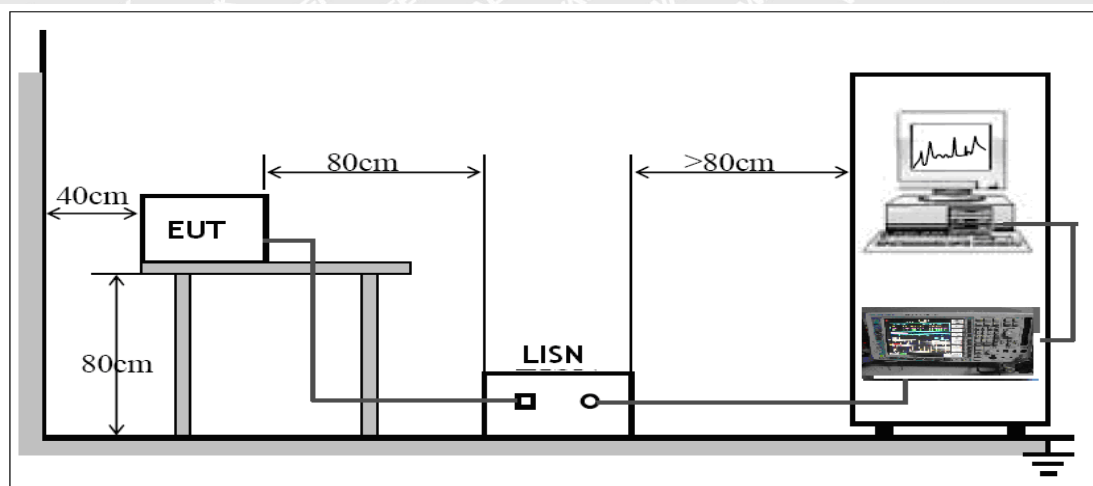
Temperature.....	: 24.8°C
Humidity.....	: 49.3%RH
Atmospheric Pressure.....	: 101.2 kPa

EUT Operation:

Input Voltage.....	: AC 120V/60Hz
Operating Mode.....	: Max power mode

5.1.2 Block Diagram of Test Setup

The Conducted Emission tests were performed in accordance with the ANSI C63.4.



5.1.3 Measurement Data

The maximised peak emissions from the EUT was scanned and measured for both the Live and Neutral Lines. Quasi-peak & average measurements were performed if peak emissions were within 6dB of the average limit line.



5.1.4 Corrected Amplitude & Margin Calculation

The Corrected factor is calculated by adding LISN VDF(Voltage Division Factor), Cable Loss and Transient Limiter Attenuation. The basic equation is as follows:

$$\text{Measurement} = \text{Reading Level} + \text{Correct Factor}$$

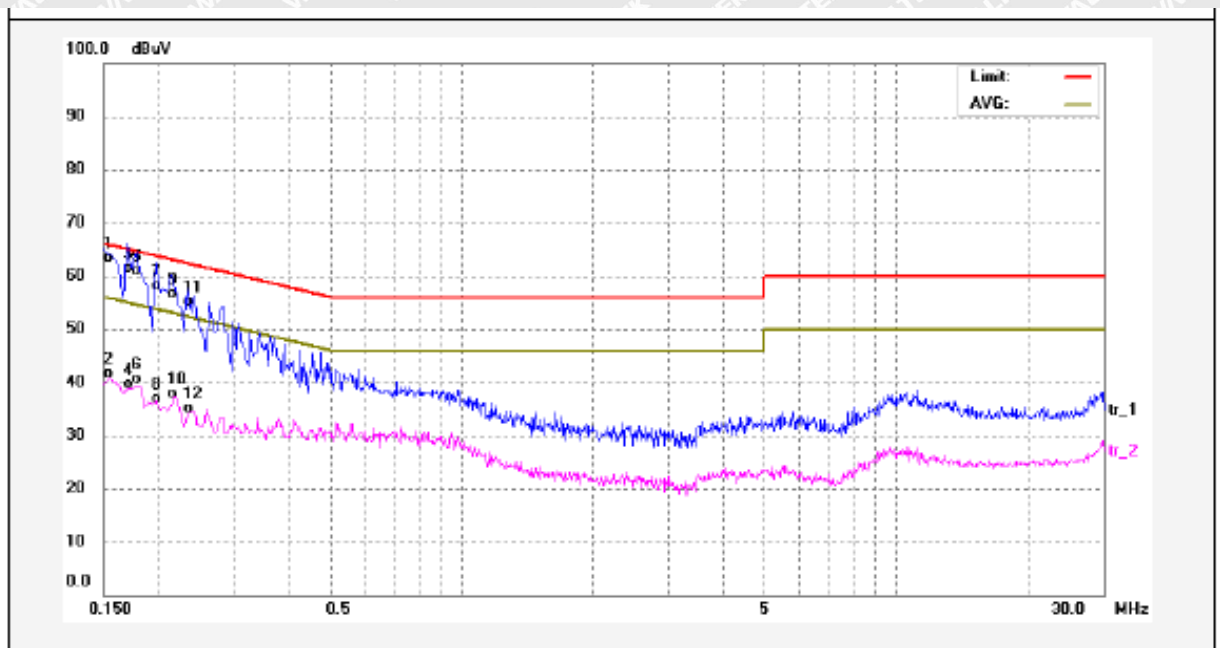
$$\text{Correct Factor} = \text{LISN VDF} + \text{Cable Loss}$$

The “Margin” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -7dB means the emission is 7dB below the limit. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Measurement} - \text{Limit}$$

5.1.5 Conducted Emission Test Data

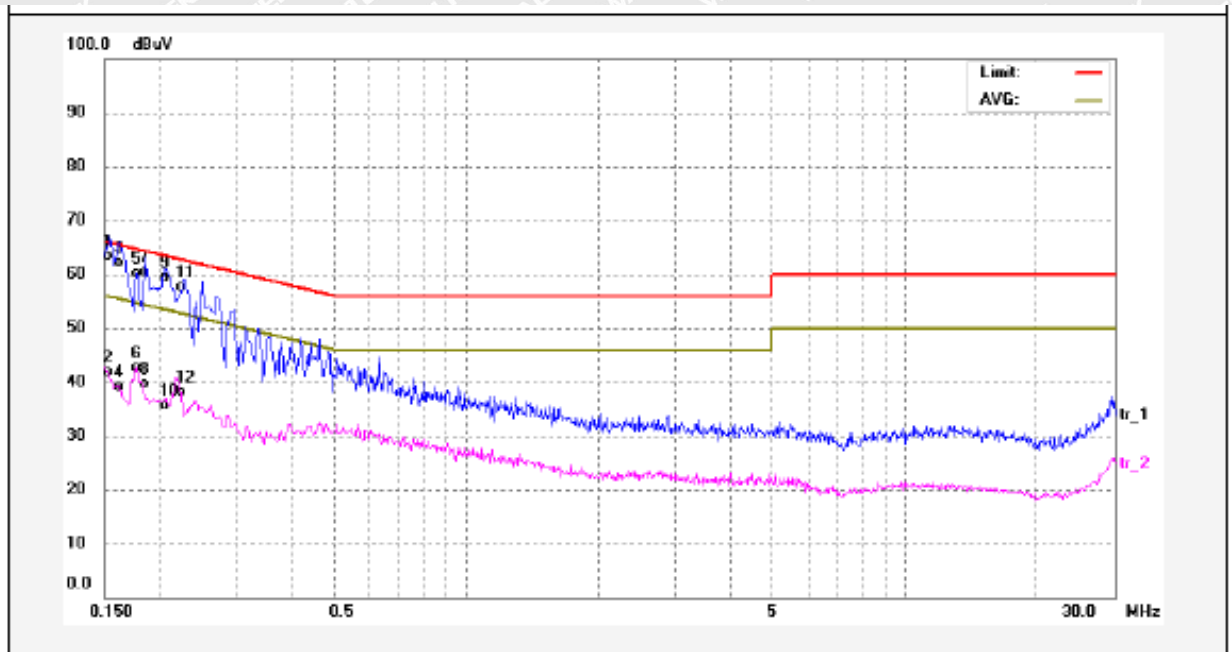
Live Line



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Margin (dB)	Detector	Remark
1	0.1539	52.60	9.73	62.33	65.78	-3.45	QP	
2	0.1539	30.79	9.73	40.52	55.78	-15.26	AVG	
3	0.1700	50.67	9.75	60.42	64.96	-4.54	QP	
4	0.1700	28.91	9.75	38.66	54.96	-16.30	AVG	
5	0.1787	50.18	9.76	59.94	64.54	-4.60	QP	
6	0.1787	29.76	9.76	39.52	54.54	-15.02	AVG	
7	0.1980	47.26	9.76	57.02	63.69	-6.67	QP	
8	0.1980	26.12	9.76	35.88	53.69	-17.81	AVG	
9	0.2140	45.87	9.73	55.60	63.04	-7.44	QP	
10	0.2140	27.04	9.73	36.77	53.04	-16.27	AVG	
11	0.2340	44.46	9.70	54.16	62.30	-8.14	QP	
12	0.2340	24.48	9.70	34.18	52.30	-18.12	AVG	



Neutral Line



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Margin (dB)	Detector	Remark
1	0.1539	52.76	9.57	62.33	65.78	-3.45	QP	
2	0.1539	31.25	9.57	40.82	55.78	-14.96	AVG	
3	0.1624	51.65	9.57	61.22	65.34	-4.12	QP	
4	0.1624	28.63	9.57	38.20	55.34	-17.14	AVG	
5	0.1780	49.56	9.58	59.14	64.57	-5.43	QP	
6	0.1780	32.09	9.58	41.67	54.57	-12.90	AVG	
7	0.1860	49.91	9.59	59.50	64.21	-4.71	QP	
8	0.1860	29.07	9.59	38.66	54.21	-15.55	AVG	
9	0.2060	48.86	9.59	58.45	63.36	-4.91	QP	
10	0.2060	25.04	9.59	34.63	53.36	-18.73	AVG	
11	0.2260	46.95	9.59	56.54	62.59	-6.05	QP	
12	0.2260	27.58	9.59	37.17	52.59	-15.42	AVG	



5.2 Radiated Emission

Test Requirement.....	: 47 CFR PART 15, SUBPART B
Test Method.....	: ANSI C63.4
Test Limit.....	: 47 CFR PART 15, SUBPART B Section 15.109
Test Result.....	: Pass
Frequency Range.....	: 30MHz to 1000MHz
Class.....	: Class B

5.2.1 E.U.T. Operation

Operating Environment:

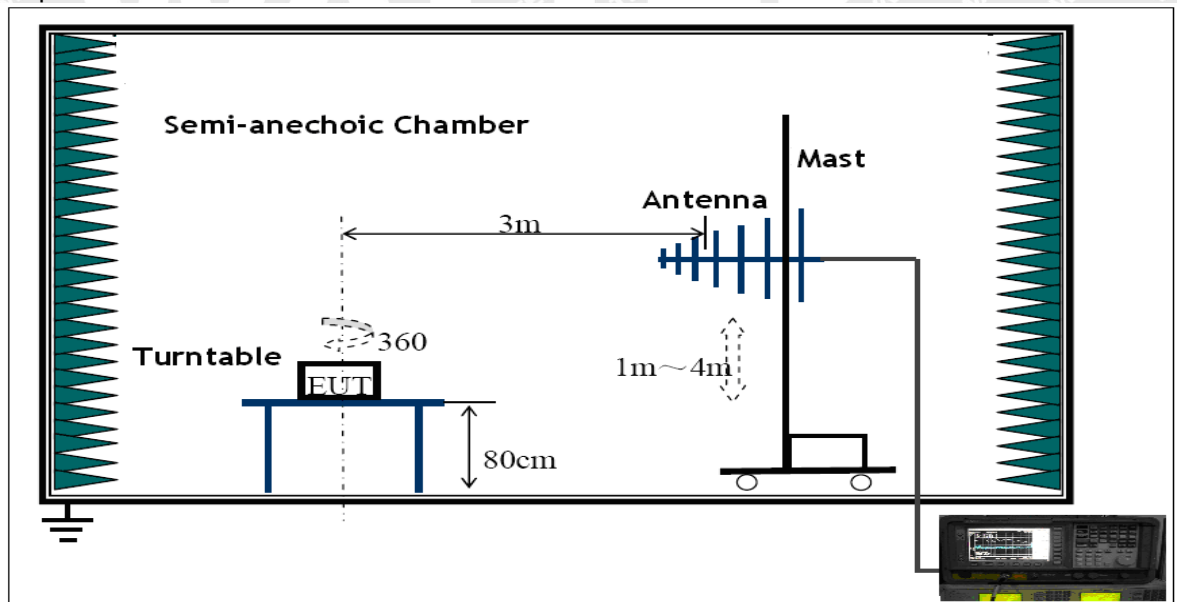
Temperature.....	: 23.2°C
Humidity.....	: 54.2%RH
Atmospheric Pressure.....	: 101.2 kPa

EUT Operation:

Input Voltage.....	: AC 120V/60Hz
Operating Mode.....	: Max power mode

5.2.2 Block Diagram of Test Setup

The Radiated Emission tests were performed in the 3m Semi- Anechoic Chamber test site, using the setup accordance with the ANSI C63.4.



5.2.3 Measurement Data

The maximised peak emissions from the EUT was scanned and measured for EUT 0°-360°. Quasi-peak measurements were performed if peak emissions were within 6dB of the limit line.



5.2.4 Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain from the Amplitude reading. The basic equation is as follows:

$$\text{Corr. Ampl.} = \text{Indicated Reading} + \text{Corr. Factor}$$

$$\text{Corr. Factor} = \text{Antenna Factor} + \text{Cable Factor} - \text{Amplifier Gain}$$

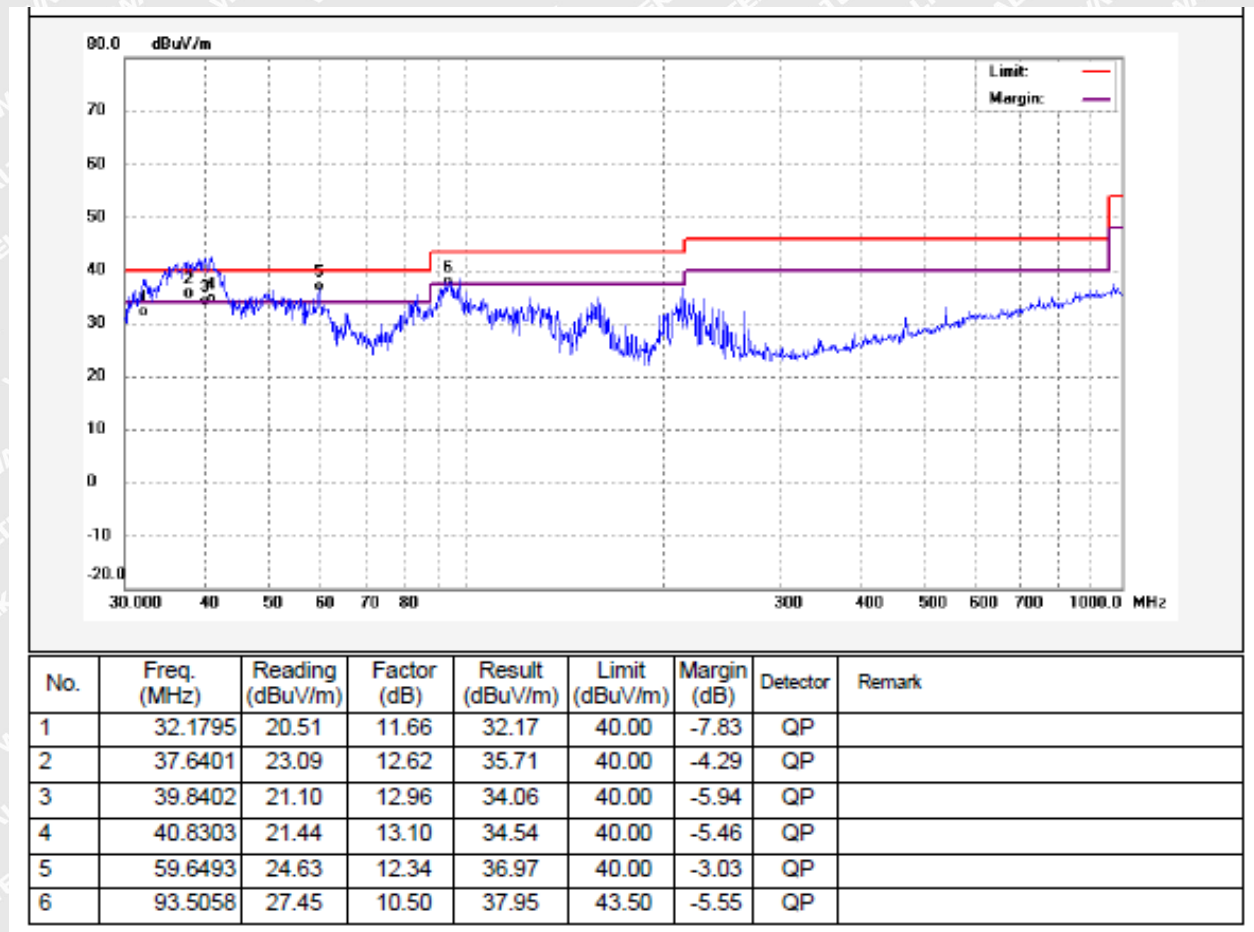
The "Margin" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -7dB means the emission is 7dB below the maximum limit for Class B.

The equation for margin calculation is as follows:

$$\text{Margin} = \text{Corr. Ampl.} - \text{Limit}$$

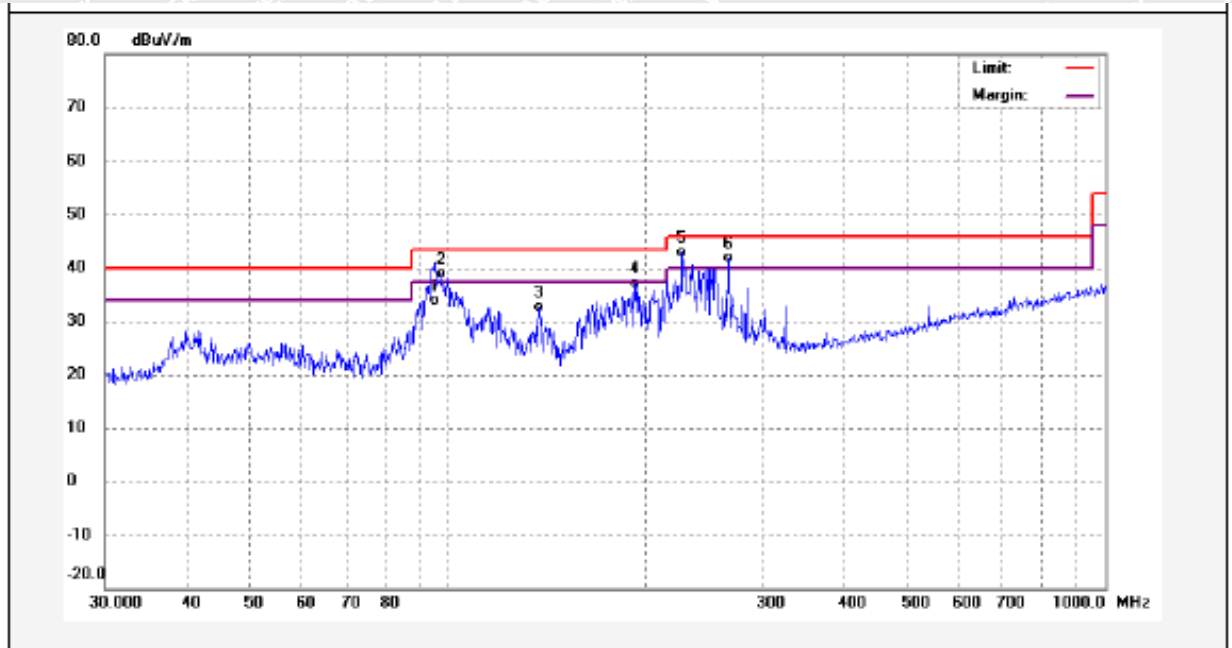
5.2.5 Radiated Emission Test Data

Vertical Polarization





Horizontal Polarization



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	95.5609	22.07	11.70	33.77	43.50	-9.73	QP	
2	97.8326	26.96	11.97	38.93	43.50	-4.57	QP	
3	137.5166	24.21	8.50	32.71	43.50	-10.79	QP	
4	192.8238	25.80	11.44	37.24	43.50	-6.26	QP	
5	227.1324	30.32	12.48	42.80	46.00	-3.20	QP	
6	267.4517	28.23	13.64	41.87	46.00	-4.13	QP	



6 Photographs – Test Setup

6.1 Photograph – Conducted Emission Test Setup



6.2 Photograph – Radiated Emission Test Setup





7 Photographs – Constructional Details

7.1 EUT – External View



===== End of Report =====