FCC Part 18

TEST REPORT

For

Microwave oven

MODEL NUMBER: 400H, 300H

REPORT NUMBER:4789399284.1

ISSUE DATE: Aug 10, 2020

FCC ID: 2AVWHATOLLSPEED

Prepared for

Kolb Huizhou Ltd.
Shatou Industrial Area,Yuanzhou Town, Boluo County, Huizhou City,
Guangdong Province, China

Prepared by

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The results reported herein have been performed in accordance with the laboratory's terms of accreditation. This report shall not be reproduced except in full without the written approval of the Laboratory. The results in this report apply to the test sample(s) mentioned above at the time of the testing period only and are not to be used to indicate applicability to other similar products. This report does not imply that the product(s) has met the criteria for certification.

Revision History

Rev.	Issue Date	Revisions	Revised By
--	08/10/2020	Initial Issue	--

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Summary of Test Results				
Standard	**Test Item**	**Test Method**	**Class / Severity**	**Result**
FCC CFR 47 Part 18	Conducted Emission (150 kHz to 30 MHz)	FCC OST/ MP-5:1986	18.307(b)	PASS
	Radiated Emission (9 kHz to 30 MHz)	FCC OST/ MP-5:1986	18.305(b)	PASS
	Radiated Emission (30 MHz to1 GHz)	FCC OST/ MP-5:1986	18.305(b)	PASS
	Radiation Hazard	FCC OST/ MP-5:1986	Clause 3.1	PASS
	Operating Frequency	FCC OST/ MP-5:1986	Clause 4.5	PASS
	Output Power Measurement	FCC OST/ MP-5:1986	Clause 4.3	PASS

Remark :
EUT: In this whole report EUT means Equipment Under Test.
Model named description: /

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1. ATTESTATION OF TEST RESULTS

Applicant Information

Company Name:	Kolb Huizhou Ltd.
Address:	Shatou Industrial Area,Yuanzhou Town, Boluo County, Huizhou City, Guangdong Province, China

Manufacturer Information

Company Name:	Same as the Applicant
Address:	Same as the Applicant

EUT Information

EUT Name:	Microwave oven
Model:	400H
Brand:	N/A
Sample Status:	Normal
Sample ID:	/
Sample Received Date:	Mar 18, 2020
Date of Tested:	Mar 19, 2020 ~ Aug 10, 2020

APPLICABLE STANDARDS	
STANDARDS	**TEST RESULTS**
FCC CFR 47 Part 18	**PASS**

Prepared By:

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Engineer Project Associate

Checked By:

Shawn Wen
Laboratory Leader

Approved By:

Stephen Guo
Laboratory Manager

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2. TEST METHODOLOGY

All tests were performed in accordance with the standard FCC CFR 47 Part 18 (FCC MP-5).

3. FACILITIES AND ACCREDITATION

Accreditation Certificate	**A2LA (Certificate No.: 4338.01)** Shenzhen STS Test Services Co., Ltd. has been assessed and proved to be in compliance with A2LA. **CNAS (Registration No.: L7649)** Shenzhen STS Test Services Co., Ltd. has been assessed and proved to be in compliance with CNAS. **FCC (FCC Designation No.: 625569)** Shenzhen STS Test Services Co., Ltd. has been recognized to perform compliance testing on equipment subject to the Commission's Delcaration of Conformity (DoC) and Certification rules

Note: All tests measurement facilities use to collect the measurement data are located at A 1/F, Building B, Zhuoke Science Park, No.190 Chongqing Road, HepingShequ, Fuyong Sub-District,Bao'an District, Shenzhen, Guang Dong, China

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4. CALIBRATION AND UNCERTAINTY

4.1. Measuring Instrument Calibration

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

4.2. Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

Test Item	Measurement Frequency Range	K	U(dB)
Conducted disturbance at mains terminals ports	0.15MHz ~ 30MHz	2	3.83 dB
Radiated disturbance Test	Below 1GHz	2	5.6 dB
Radiated disturbance Test	Above 1GHz	2	5.8 dB
Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.			

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5. EQUIPMENT UNDER TEST

5.1. Description of EUT

EUT Name	Microwave oven		
EUT Discription	The device is a Microwave oven		
Model	400H		
Series Model	300H		
Model Difference	Model 400H & 300H there's the same series; according to the description of applicant, All types of electronic circuit of the same, the difference is rating power, appearance(size or clour)		
Rated Input	1. AC 200V-210V 60Hz 2. AC 240V-250V 60Hz		
Power Supply	Power Adapter	Input	1. AC 200V-210V 60Hz 2. AC 240V-250V 60Hz
		Output	--
	Battery	--	

5.2. Test Mode

Test Mode	Description
Mode 1	Maximum microwave power (AC 240V 60Hz)
Mode 1	Maximum microwave power (AC 208V 60Hz)

Note:The EUT has been tested independently.

5.3. EUT Accessory

Item	Accessory	Brand Name	Model Name	Description
1				

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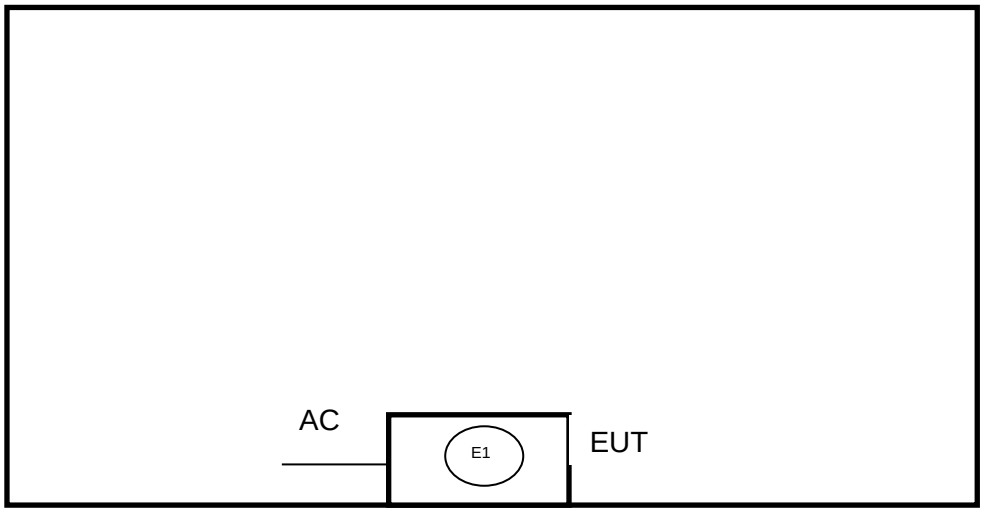
5.4. Block Diagram Showing the Configuration of System Tested



The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	Specification	Series No.
E1	Glassware	--	--	Diameter 1900mm height 900mm	005
Load for power output measurement :1000 milliliters of water in the beaker located in the center of the oven; Load for frequency measurement :1000 milliliters of water in the beaker located in the center of the oven; Load for measurement of radiation on second and third harmonic; Two loads, one of 700 and the other of 300 milliliters, of water are used. Each load is tested both with the beaker located in the center of the oven and with it in the right front corner. Load for all other measurements: 700 milliliters of water, with the beaker located in the center of the oven.					

Item	Type of cable	Shielded Type	Ferrite Core	Length
--	--	--	--	--

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6. MEASURING EQUIPMENT AND SOFTWARE USED

Conducted Disturbance						
Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
☑	EMI Test Receiver	R&S	ESCI	101427	2019.10.09	2020.10.08
☑	LISN	R&S	ENV216	101242	2019.10.09	2020.10.08
☑	LISN	ETS	3810/2NM	00023625	2019.10.09	2020.10.08
☑	CE Cable	N/A	C01	N/A	2019.10.12	2020.10.11
☑	Temperature & Humidity	Mieo	HH660	N/A	2019.10.12	2020.10.11
☑	Power Meter	STS S094	PF9901	G100731C J351244	2020.03.05	2021.03.04
☑	Testing Software		EZ-EMC(Ver.STSLAB-03A1 CE)			
Software						
Used	Description			Manufacturer	Name	Version
☑	Test Software for Conducted Emissions			Farad	EZ-EMC	Ver. UL-3A1
Radiated Disturbance						
Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
☑	EMI Test Receiver	R&S	ESCI	101427	2019.10.09	2020.10.08
☑	Bi-log Antenna	TESEQ	CBL6111D	34678	2017.11.02	2020.11.01
☑	Horn Antenna	SCHWARZBE CK	BBHA 9120D	9120D-1343	2018.10.19	2021.10.18
☑	Pre-amplifier(1G-26.5G)	Agilent	8449B	3008A0238 3	2019.10.11	2020.10.10
☑	Pre-amplifier(0.1M-3GHz)	EM	EM330	060665	2019.10.09	2020.10.08
☑	Spectrum Analyzer	Agilent	N9020A	MY491000 60	2019.10.09	2020.10.08
☑	RE Cable (9K-1G)	N/A	R01	N/A	2019.10.12	2020.10.11
☑	RE Cable (1G-26G)	N/A	R02	N/A	2019.10.12	2020.10.11
☑	Temperature & Humidity	Mieo	HH660	N/A	2019.10.12	2020.10.11
☑	Active Loop Antenna	ZHINAN	ZN30900C	16035	2018.03.11	2021.03.10
☑	Testing Software		EZ-EMC(Ver.STSLAB-03A1 RE)			
Software						
Used	Description			Manufacturer	Name	Version
☑	Test Software for Radiated Emissions			Farad	EZ-EMC	Ver. UL-3A1

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7. EMISSION TEST

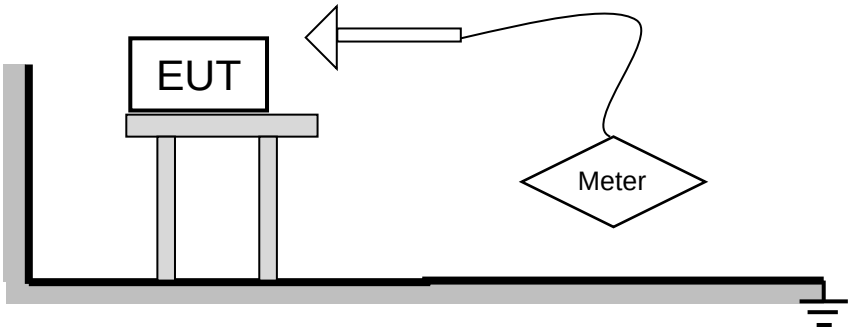
7.1. Radiation Hazard

7.1.1. Limits of Radiation Hazard

Maximum Emission, mW/cm^2
1.00

7.1.2. Test Procuedure

The EUT was set-up according to the FCC MP-5 and FCC Part 18 for Radiation Hazard Measurement. The measurement was using a microwave leakage meter to measure the Radiation leakage in the as-received condition with the oven door closed. A 1000ml water load in a beaker was located in the center of the oven and the Microwave Oven was set to maximum power. While the oven operating, the microwave meter will check the leakage and then record the maximum leakage.



For the actual test configuration, please refer to Appendix I: Photographs of the Test Configuration.

7.1.3. Test Datas

Condition	Maximum Emission, mW/cm^2
A	0.88
B	0.92
C	0.58
D	0.54
E	0.23
F	0.77
G	--
M. UNCERTAINTY:	0.0002

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7.2. Operating Frequency

7.2.1. Limits of Operating Ferquency

ISM equipment may be operated on any frequency above 9 kHz. And the frequency band 2400-2500MHz is allocated for use by ISM equipment. (§18.301)

ISM frequency	Tolerance
6.78 MHz	±15.0 kHz
13.56 MHz	±7.0 kHz
27.12 MHz	±163.0 kHz
40.68 MHz	±20.0 kHz
915 MHz	±13.0 MHz
2,450 MHz	±50.0 MHz
5,800 MHz	±75.0 MHz
24,125 MHz	±125.0 MHz
61.25 GHz	±250.0 MHz
122.50 GHz	±500.0 MHz
245.00 GHz	±1.0 GHz

7.2.2. Test Procuedure

a. FREQUENCY FOR NORMAL VOLTAGE
The operating frequency was measured using a spectrum analyzer. Starting with the EUT at room temperature, a 1000mL water load was placed in the center of the oven and the oven was operated at maximum output power. The fundamental operating frequency was monitored until the water load was reduced to 20 percent of the original load.

b. FREQUENCY FOR LINE VOLTAGE
The EUT was operated / warmed by at least 10 minutes of use with a 1000 mL water load at room temperature at the beginning of the test. Then the operating frequency was monitored as the input voltage was varied between 80 and 125 percent of the nominal rating.

7.2.3. Test Datas

Item	START Frequency (MHz)	STOP Frequency (MHz)	Detector
FREQUENCY FOR NORMAL VOLTAGE	2436.4	2480.4	Peak
FREQUENCY FOR LINE VOLTAGE	2406.4	2489.1	Peak

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7.3. RF Output Power Measurement

7.3.1. Test Procuedure

Formula :

$$P = \frac{4.2 \times m_w (T_2 - T_1) + 0.5 \times m_c (T_2 - T_0)}{t}$$

NOTE :
P is the microwave power output, in watts
m_w is the mass of the water, in grams
m_c is the mass of the container, in grams
T_0 is the ambient temperature, in degrees Celsius
T_1 is the initial temperature of the water, in degrees Celsius
T_2 is the final temperature of the water, in degrees Celsius
***t* is the heating time, in seconds, excluding the magnetron filament heating-up time.**

7.3.2. EUT operation

The EUT in microwave mode with full power.

7.3.3. Test Datas

Mass of water(g)	Mass of the container(g)	Ambient temperature(℃)	Initial temperature(℃)	Final temperature(℃)	Heating time(S)	Power output(watts)
1000	480	22.4	20.6	58.2	120	1394.76

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7.4. Conducted Disturbance Measurement

7.4.1. Limits of conducted disturbance voltage

(A) All other part 18 consumer devices:		
Frequency of emission (MHz)	**Conducted limit (dBμV)**	
	Quasi-peak	**Average**
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

Note:
(1) The tighter limit applies at the band edges.
(2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

7.4.2. Test Procedure

a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
c. LISN at least 80 cm from nearest part of EUT chassis.
d. For the actual test configuration, please refer to the related Item:EUT Test Photos.

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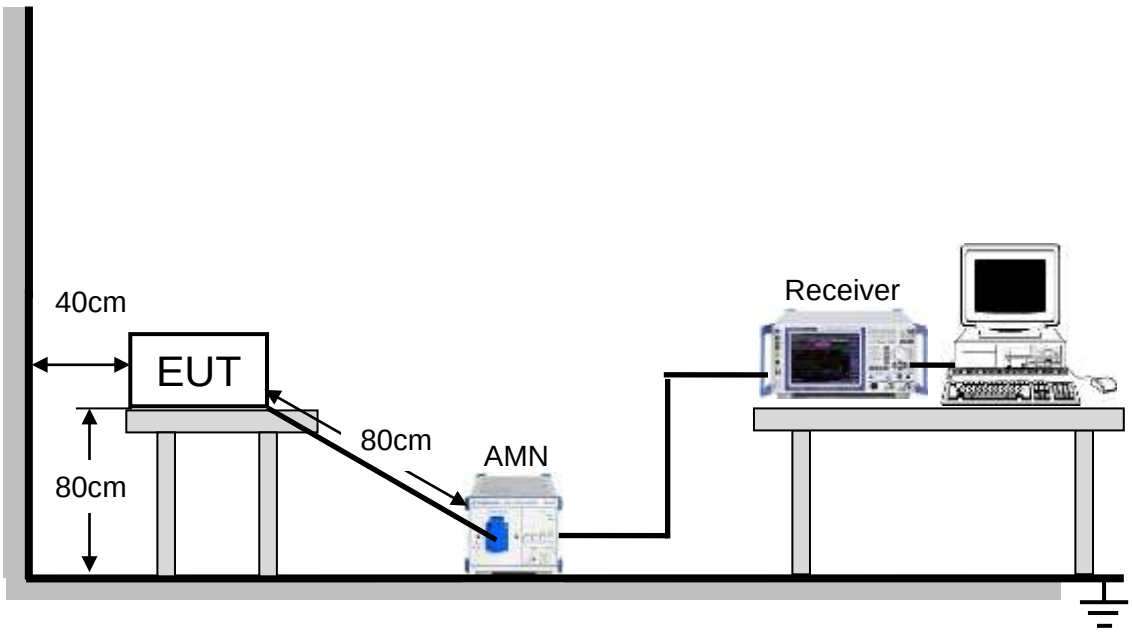
7.4.3. Test Setup



For the actual test configuration, please refer to Appendix I: Photographs of the Test Configuration.

7.4.4. Test Environment

Temperature:	23.8℃
Humidity:	55%
ATM pressure:	101kPa

7.4.5. Test Mode

Pre-test Mode:	Mode 1
Final Test Mode:	Mode 1

Note: According to pre-test results, the final test mode is each independent function's worst case and only shown in the report.

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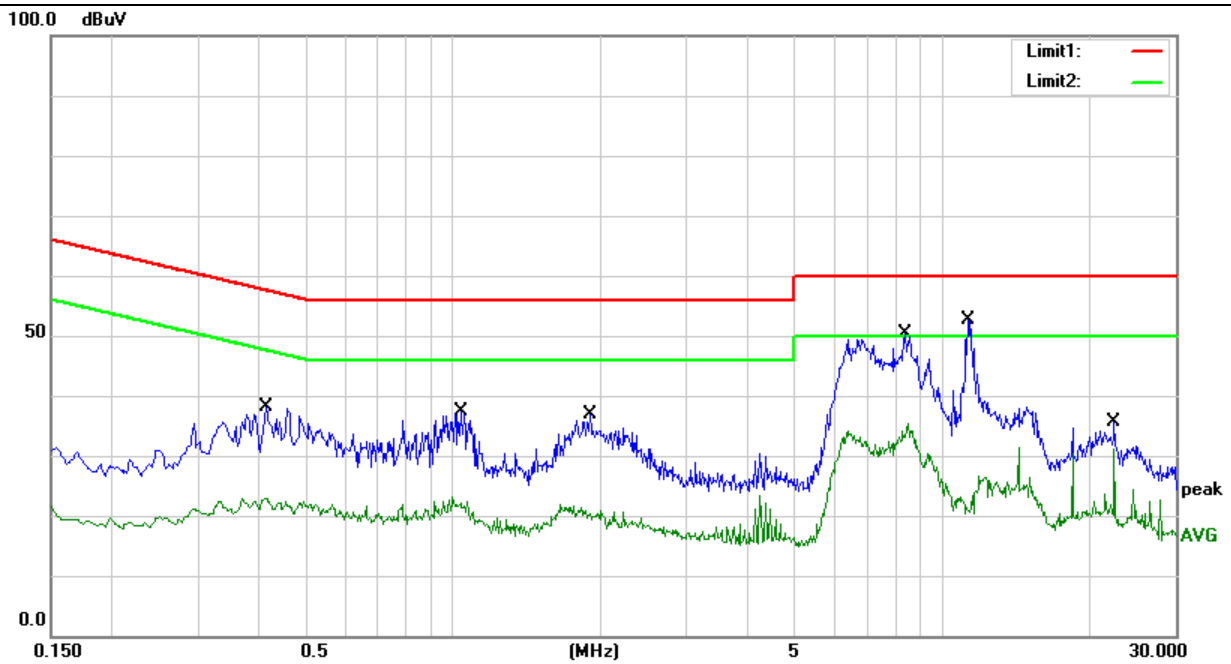
7.4.6. Test Results

Test Mode:	Mode 1
Test Voltage:	AC 208V/60Hz

Phase: Line



No.	Frequency (MHz)	Reading (dBuV)	Correct dB	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.4140	18.12	20.03	38.15	57.57	-19.42	QP
2	0.4140	2.90	20.03	22.93	47.57	-24.64	AVG
3	1.0340	17.58	19.80	37.38	56.00	-18.62	QP
4	1.0340	2.48	19.80	22.28	46.00	-23.72	AVG
5	1.8980	17.20	19.78	36.98	56.00	-19.02	QP
6	1.8980	1.20	19.78	20.98	46.00	-25.02	AVG
7	8.4020	30.33	20.03	50.36	60.00	-9.64	QP
8	8.4020	15.45	20.03	35.48	50.00	-14.52	AVG
9	11.2580	32.44	20.22	52.66	60.00	-7.34	QP
10	11.2580	3.87	20.22	24.09	50.00	-25.91	AVG
11	22.5260	15.43	20.30	35.73	60.00	-24.27	QP
12	22.5260	10.91	20.30	31.21	50.00	-18.79	AVG

Remark:
Result = Reading +Correct
Margin = Result - Limit
Factor = Insertion loss + Cable loss

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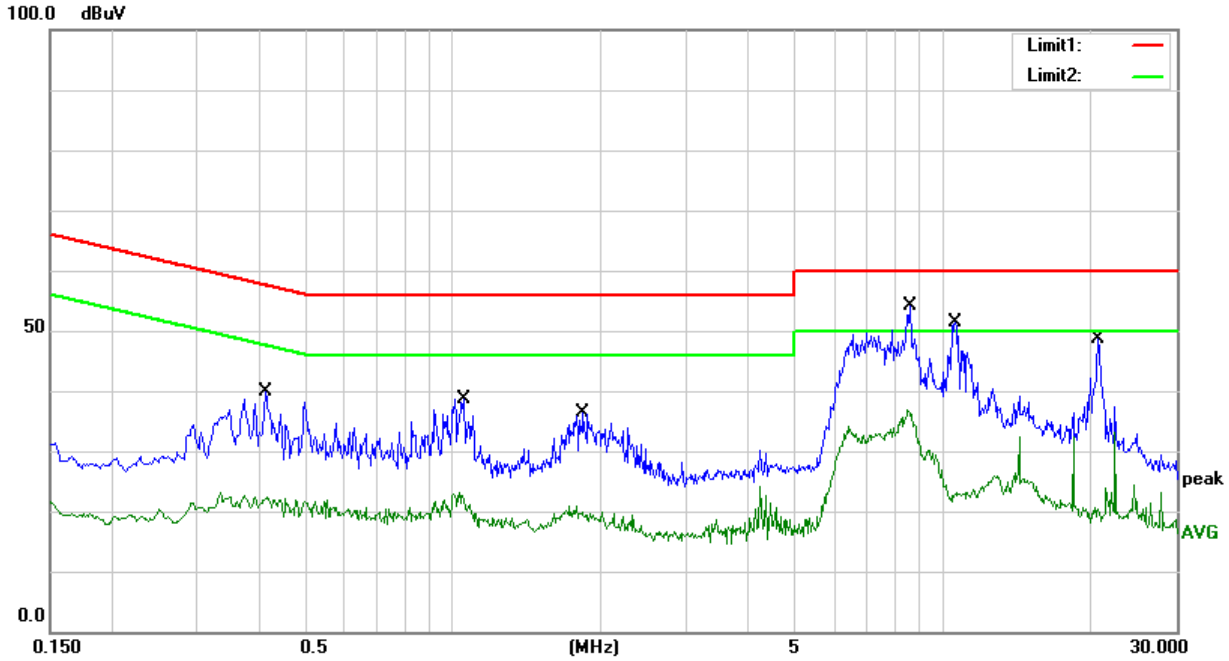
Test Mode:	Mode 1
Test Voltage:	AC 208V/60Hz

Phase: Neutral



No.	Frequency (MHz)	Reading (dBuV)	Correct dB	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.4140	19.87	20.03	39.90	57.57	-17.67	QP
2	0.4140	2.45	20.03	22.48	47.57	-25.09	AVG
3	1.0540	18.87	19.80	38.67	56.00	-17.33	QP
4	1.0540	2.44	19.80	22.24	46.00	-23.76	AVG
5	1.8420	16.70	19.78	36.48	56.00	-19.52	QP
6	1.8420	0.14	19.78	19.92	46.00	-26.08	AVG
7	8.5780	33.99	20.05	54.04	60.00	-5.96	QP
8	8.5780	16.79	20.05	36.84	50.00	-13.16	AVG
9	10.6140	31.16	20.21	51.37	60.00	-8.63	QP
10	10.6140	3.83	20.21	24.04	50.00	-25.96	AVG
11	20.7340	28.13	20.41	48.54	60.00	-11.46	QP
12	20.7340	0.25	20.41	20.66	50.00	-29.34	AVG

Remark:
Result = Reading +Correct
Margin = Result – Limit
Factor = Insertion loss + Cable loss

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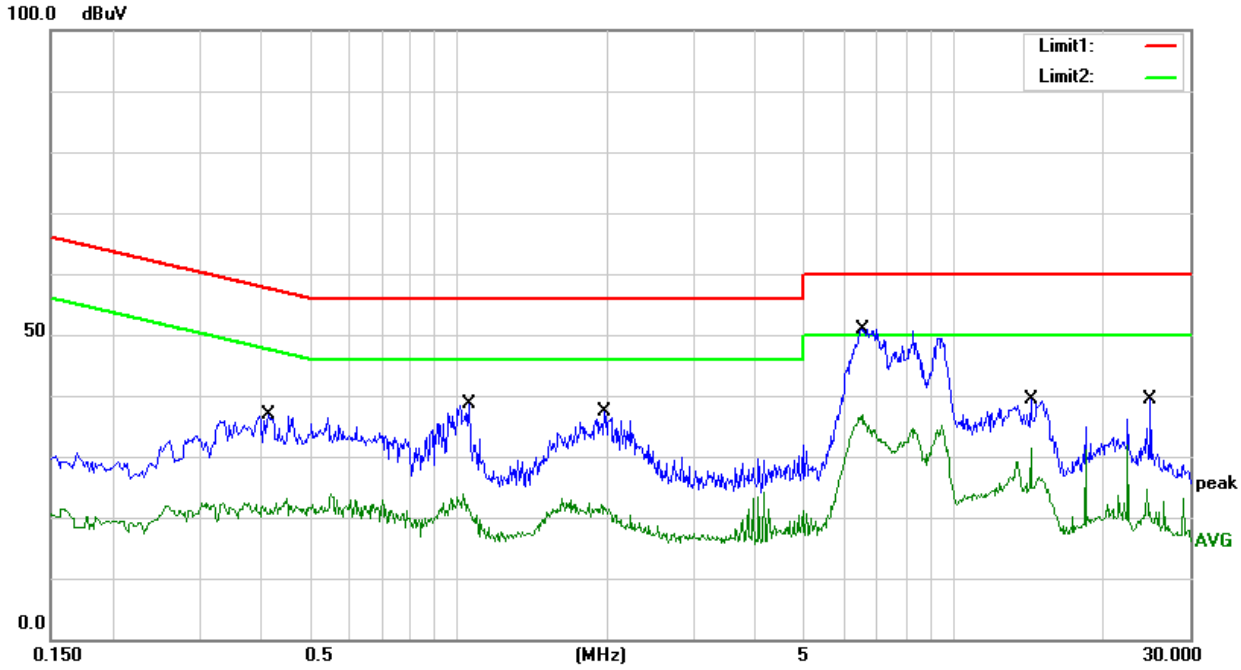
Test Mode:	Mode 1
Test Voltage:	AC 240V/60Hz

Phase: Line



No.	Frequency (MHz)	Reading (dBuV)	Correct dB	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.4140	16.83	20.03	36.86	57.57	-20.71	QP
2	0.4140	2.45	20.03	22.48	47.57	-25.09	AVG
3	1.0540	18.72	19.80	38.52	56.00	-17.48	QP
4	1.0540	2.41	19.80	22.21	46.00	-23.79	AVG
5	1.9740	17.50	19.78	37.28	56.00	-18.72	QP
6	1.9740	1.81	19.78	21.59	46.00	-24.41	AVG
7	6.5500	31.10	19.88	50.98	60.00	-9.02	QP
8	6.5500	16.91	19.88	36.79	50.00	-13.21	AVG
9	14.3380	19.10	20.23	39.33	60.00	-20.67	QP
10	14.3380	11.18	20.23	31.41	50.00	-18.59	AVG
11	24.9620	19.15	20.15	39.30	60.00	-20.70	QP
12	24.9620	4.39	20.15	24.54	50.00	-25.46	AVG

Remark:
Result = Reading +Correct
Margin = Result – Limit
Factor = Insertion loss + Cable loss

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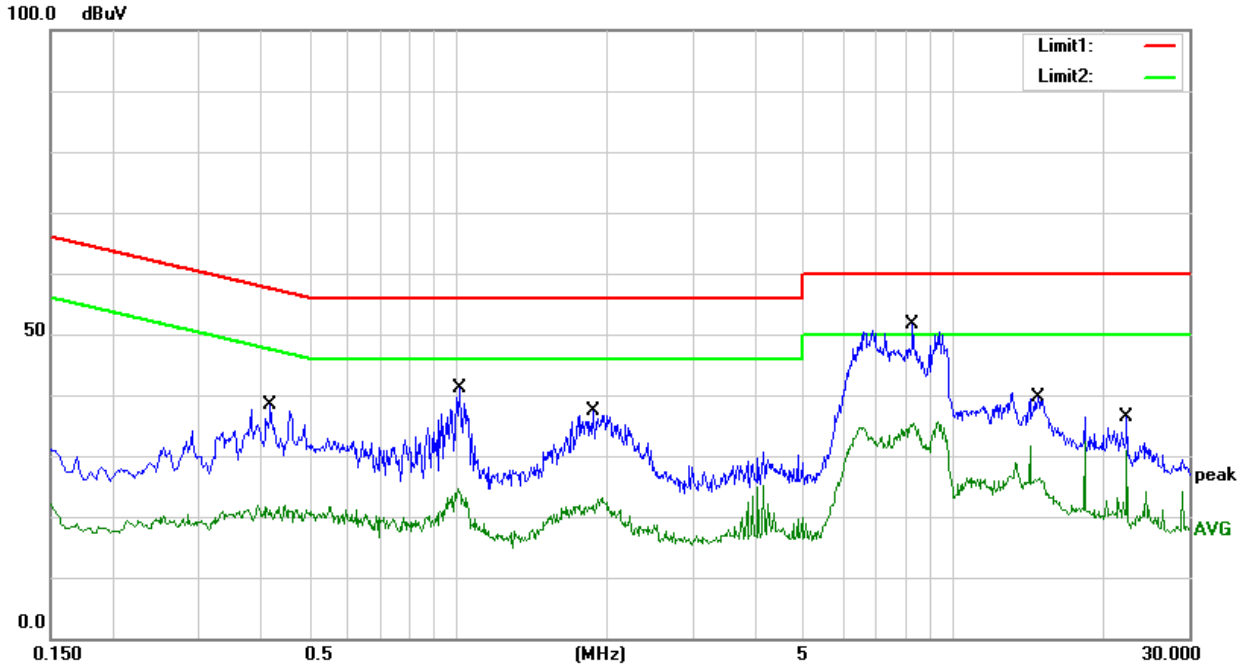
Test Mode:	Mode 1
Test Voltage:	AC 240V/60Hz

Phase: Neutral



No.	Frequency (MHz)	Reading (dBuV)	Correct dB	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.4180	18.22	20.03	38.25	57.49	-19.24	QP
2	0.4180	1.05	20.03	21.08	47.49	-26.41	AVG
3	1.0100	21.22	19.80	41.02	56.00	-14.98	QP
4	1.0100	4.89	19.80	24.69	46.00	-21.31	AVG
5	1.8700	17.59	19.78	37.37	56.00	-18.63	QP
6	1.8700	2.98	19.78	22.76	46.00	-23.24	AVG
7	8.2820	31.59	20.02	51.61	60.00	-8.39	QP
8	8.2820	15.43	20.02	35.45	50.00	-14.55	AVG
9	14.8460	19.29	20.23	39.52	60.00	-20.48	QP
10	14.8460	6.22	20.23	26.45	50.00	-23.55	AVG
11	22.5300	16.04	20.30	36.34	60.00	-23.66	QP
12	22.5300	10.58	20.30	30.88	50.00	-19.12	AVG

Remark:
Result = Reading +Correct
Margin = Result – Limit
Factor = Insertion loss + Cable loss

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7.5. Radiated Disturbance Measurement

7.5.1. Limits of radiated disturbance measurement

Field strength limits
(1) ISM equipment operating on a frequency specified in §18.301 is permitted unlimited radiated energy in the band specified for that frequency.
(2) The field strength levels of emissions which lie outside the bands specified in §18.301, unless otherwise indicated, shall not exceed the following:

Equipment	Operating frequency	RF Power generated by equipment (watts)	Field strength limit (uV/m)	Distance (meters)
Any type unless otherwise specified (miscellaneous)	Any ISM frequency	Below 500 500 or more	25 25 × SQRT(power/500)	300 [1]300

Power =1394.76W according to 7.3 calculated value
Limit=20lg(25*SQRT(power/500))+20lg(300/3) @ 3m distance.

NOTE:
(1) The limit for radiated test was performed according to;
(2) The tighter limit applies at the band edges;
(3) Emission level (dBuV/m) = 20log Emission level (uV/m),
3m Emission level = 30m Emission level + 20log(30m/3m);

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	-- dB
Start Frequency	0.009 MHz
Stop Frequency	25GHz
IF Bandwidth	200Hz,9 kHz,120 kHz, 1MHz

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7.5.2. Test Procedure

a. The measuring distance of at 3m shall be used for measurements at frequency up to 1GHz.

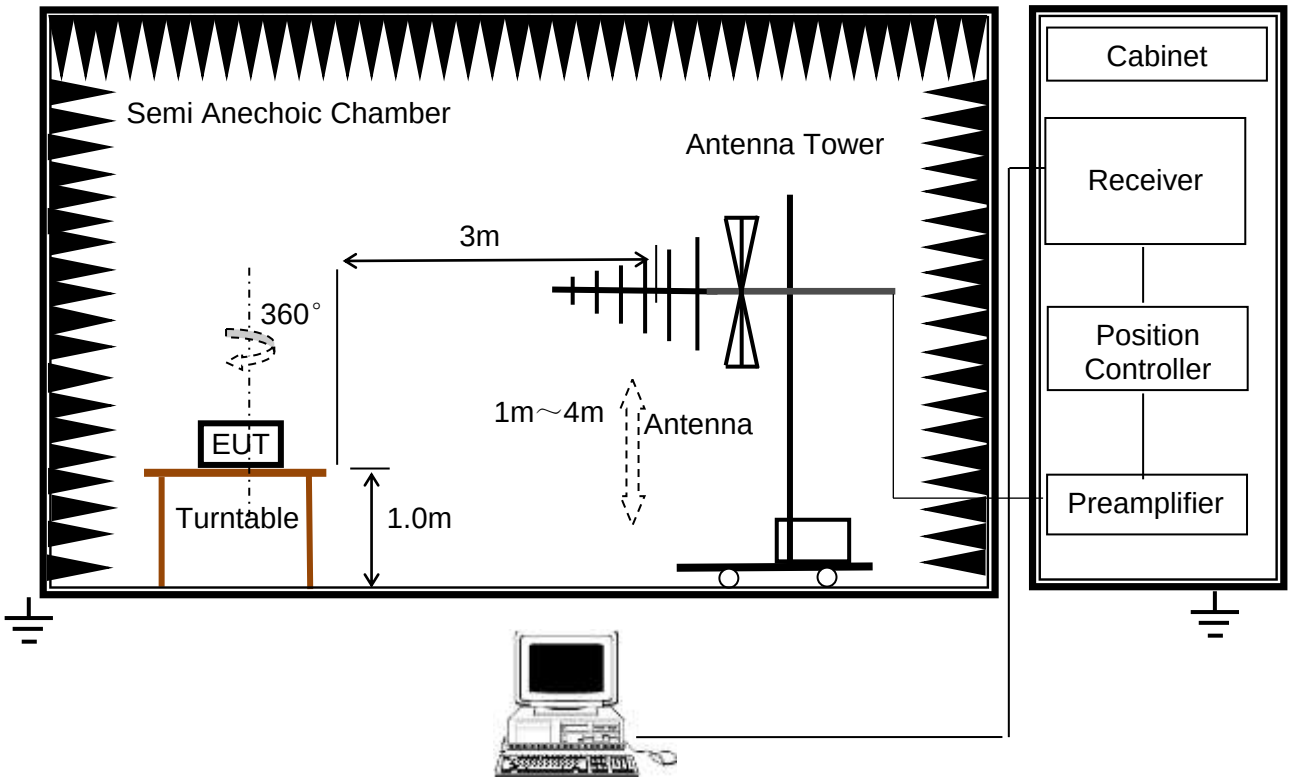
b. The EUT was placed on the top of a rotating table 1.0 meters above the ground at a 3 meter chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

c. The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For the actual test configuration, please refer to the related Item:EUT Test Photos.

7.5.3. Test Setup

(a) Radiated Disturbance Test Set-Up Frequency 30MHz - 1GHz



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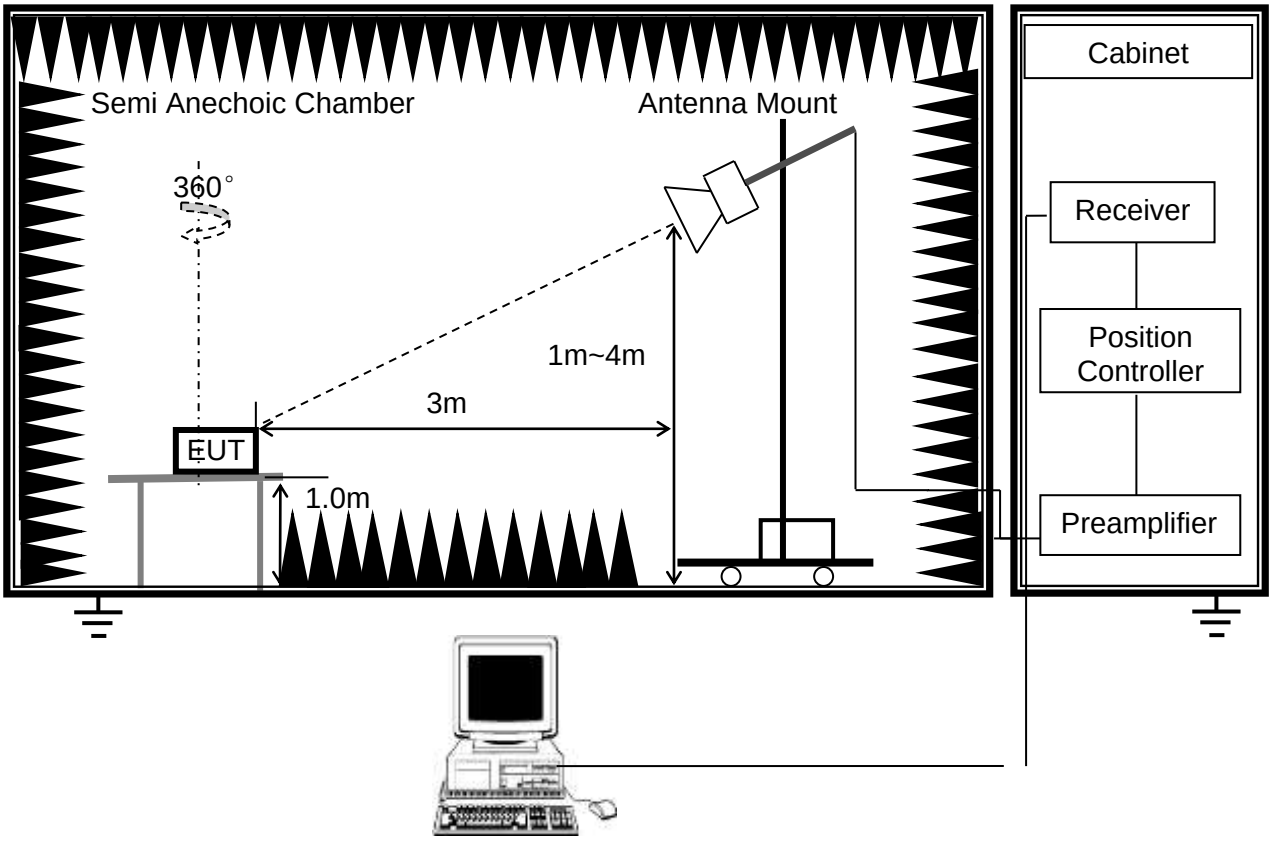
(b) Radiated Disturbance Test Set-Up Frequency above 1GHz



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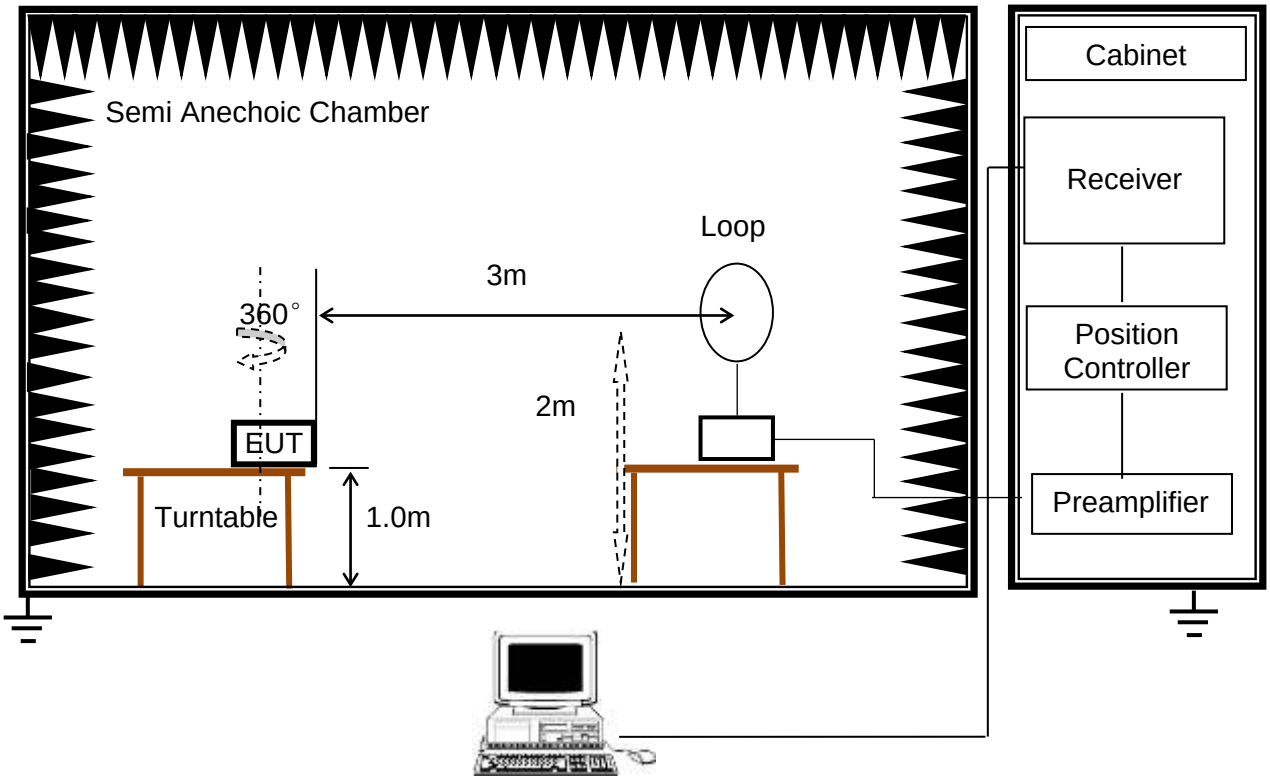
(C) Radiated Disturbance Test Set-Up Frequency 9KHz-30MHz



For the actual test configuration, please refer to Appendix I: Photographs of the Test Configuration.

7.5.4. Test Environment

Radiated Disturbance - below 1 GHz		Radiated Disturbance - above 1 GHz	
Temperature:	26.4℃	Temperature:	25.1℃
Humidity:	52%	Humidity:	55%
ATM pressure:	101kPa	ATM pressure:	101kPa

7.5.5. Test Mode

Radiated Disturbance - below 1 GHz		Radiated Disturbance - above 1 GHz	
Pre-test Mode:	Mode 1	Pre-test Mode:	Mode 1
Final Test Mode:	Mode 1	Final Test Mode:	Mode 1

Note: According to pre-test results, the final test mode is each independent function's worst case and only shown in the report.

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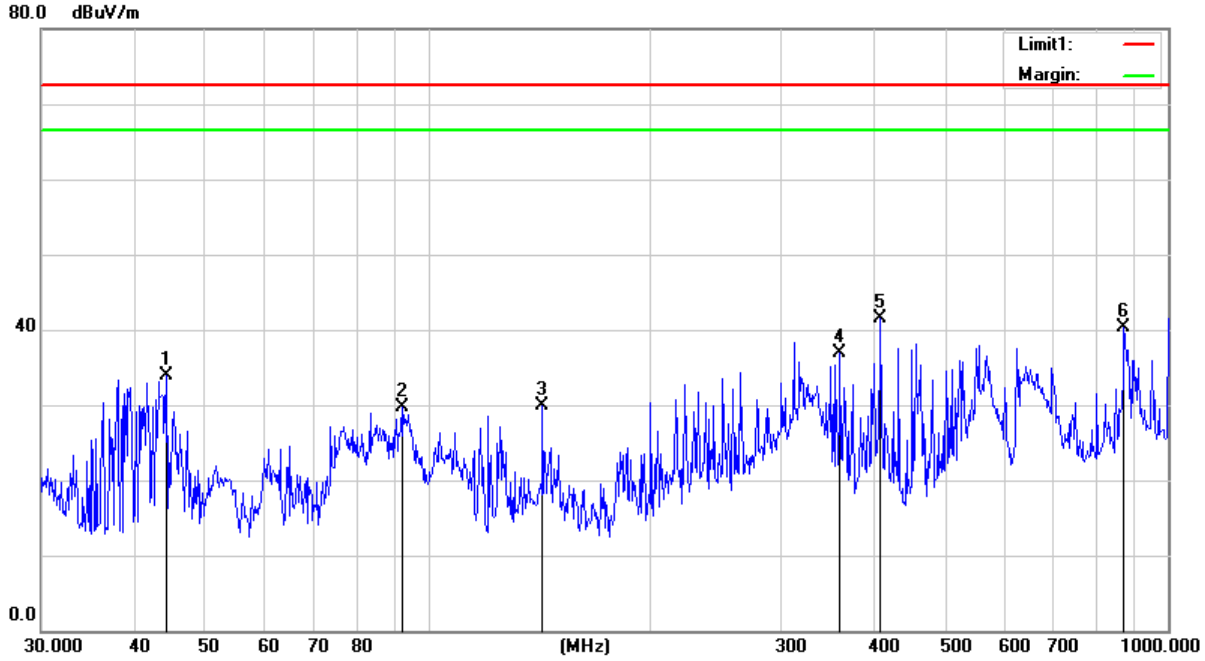
7.5.6. Test Results – below 1GHz(30~1000MHz)

Test Mode:	Mode 1
Test Voltage:	AC 208V/60Hz

Polarization: Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	44.2751	52.75	-18.76	33.99	72.41	-38.42	QP
2	92.1388	50.86	-21.22	29.64	72.41	-42.77	QP
3	142.8241	48.46	-18.55	29.91	72.41	-42.50	QP
4	360.4476	51.14	-14.20	36.94	72.41	-35.47	QP
5	408.9460	54.31	-12.83	41.48	72.41	-30.93	QP
6	872.1832	44.90	-4.60	40.30	72.41	-32.11	QP

Remark:
Result = Reading +Correct
Margin = Result – Limit
Factor= Cable Loss +Antenna Factor-Amplifier Gain

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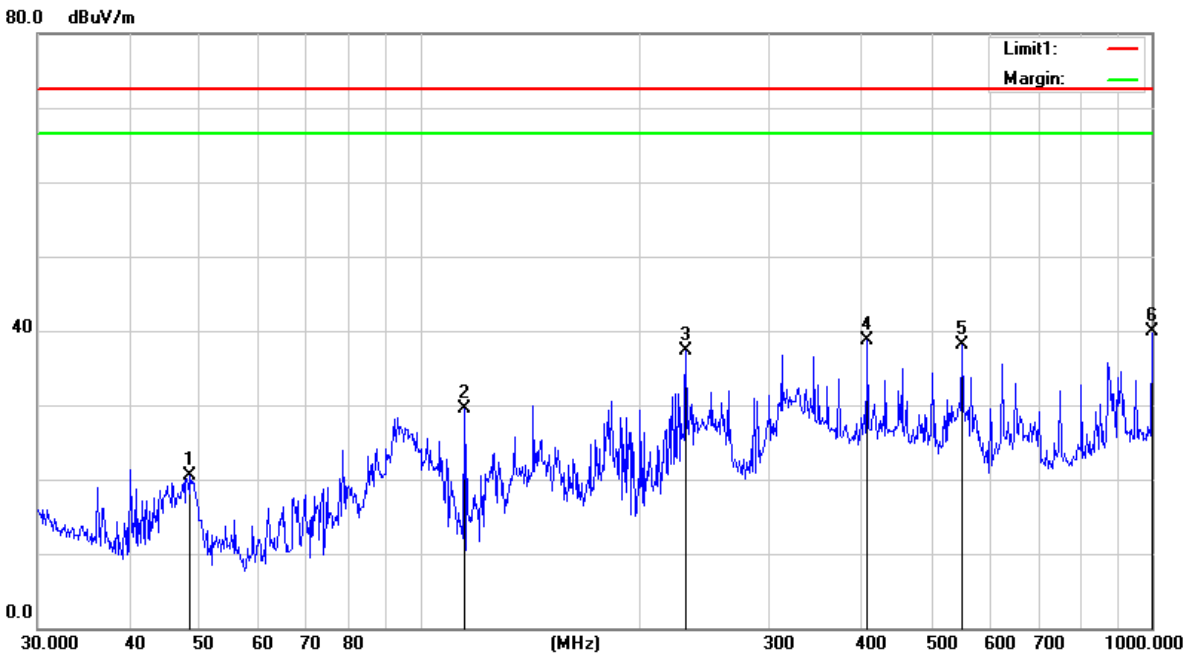
Test Mode:	Mode 1
Test Voltage:	AC 208V/60Hz

Polarization: Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	48.5016	41.30	-20.89	20.41	72.41	-52.00	QP
2	114.9167	48.38	-18.93	29.45	72.41	-42.96	QP
3	230.9068	55.94	-18.72	37.22	72.41	-35.19	QP
4	408.9460	51.47	-12.83	38.64	72.41	-33.77	QP
5	550.9480	46.59	-8.43	38.16	72.41	-34.25	QP
6	1000.0000	42.02	-2.19	39.83	72.41	-32.58	QP

Remark:
Result = Reading +Correct
Margin = Result – Limit
Factor= Cable Loss +Antenna Factor-Amplifier Gain

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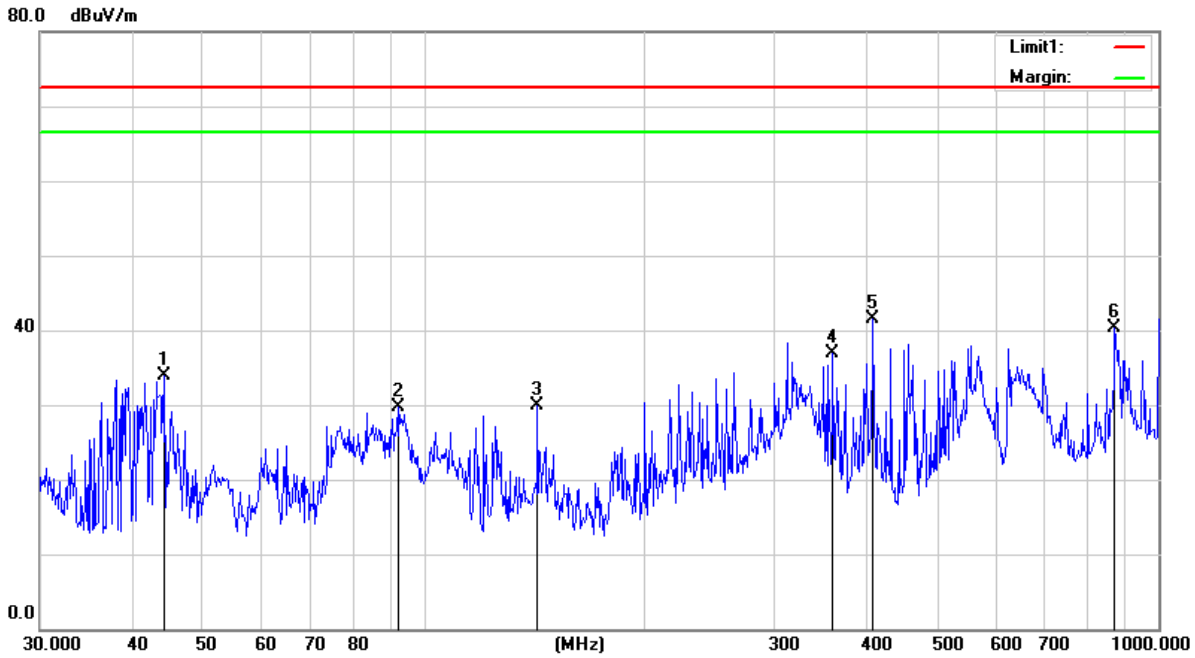
Test Mode:	Mode 1
Test Voltage:	AC 240V/60Hz

Polarization: Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	44.2751	52.75	-18.76	33.99	72.41	-38.42	QP
2	92.1388	50.86	-21.22	29.64	72.41	-42.77	QP
3	142.8241	48.46	-18.55	29.91	72.41	-42.50	QP
4	360.4476	51.14	-14.20	36.94	72.41	-35.47	QP
5	408.9460	54.31	-12.83	41.48	72.41	-30.93	QP
6	872.1832	44.90	-4.60	40.30	72.41	-32.11	QP

Remark:
Result = Reading +Correct
Margin = Result – Limit
Factor= Cable Loss +Antenna Factor-Amplifier Gain

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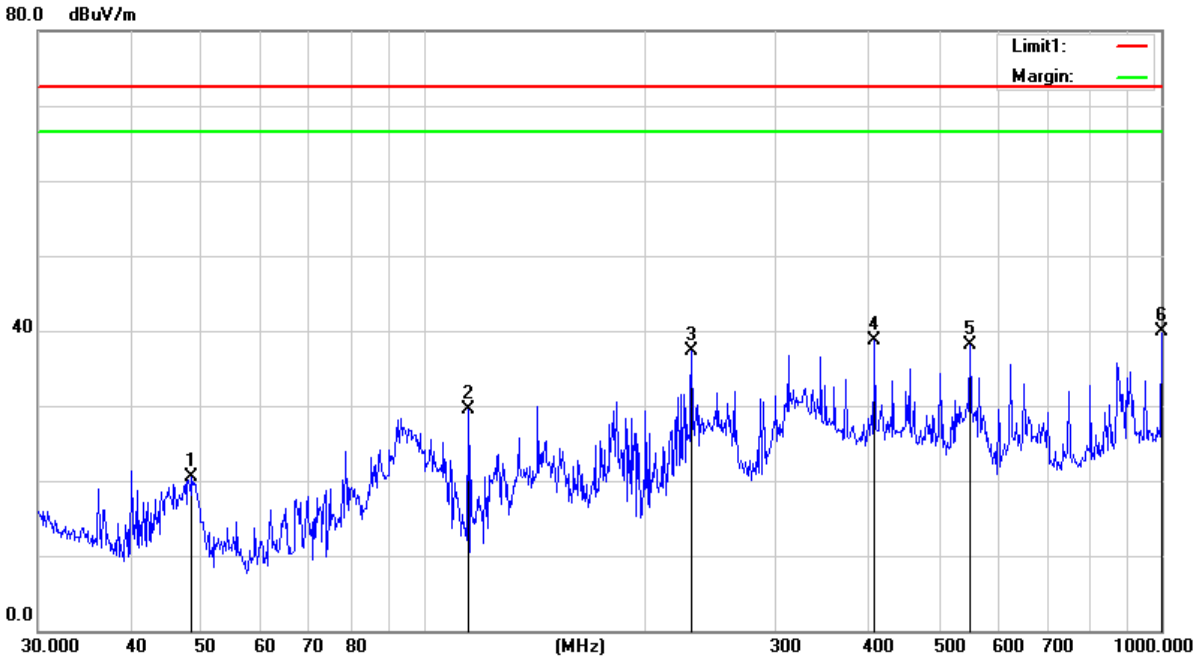
Test Mode:	Mode 1
Test Voltage:	AC 240V/60Hz

Polarization: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	48.5016	41.30	-20.89	20.41	72.41	-52.00	QP
2	114.9167	48.38	-18.93	29.45	72.41	-42.96	QP
3	230.9068	55.94	-18.72	37.22	72.41	-35.19	QP
4	408.9460	51.47	-12.83	38.64	72.41	-33.77	QP
5	550.9480	46.59	-8.43	38.16	72.41	-34.25	QP
6	1000.0000	42.02	-2.19	39.83	72.41	-32.58	QP

Remark:
Result = Reading +Correct
Margin = Result – Limit
Factor= Cable Loss +Antenna Factor-Amplifier Gain

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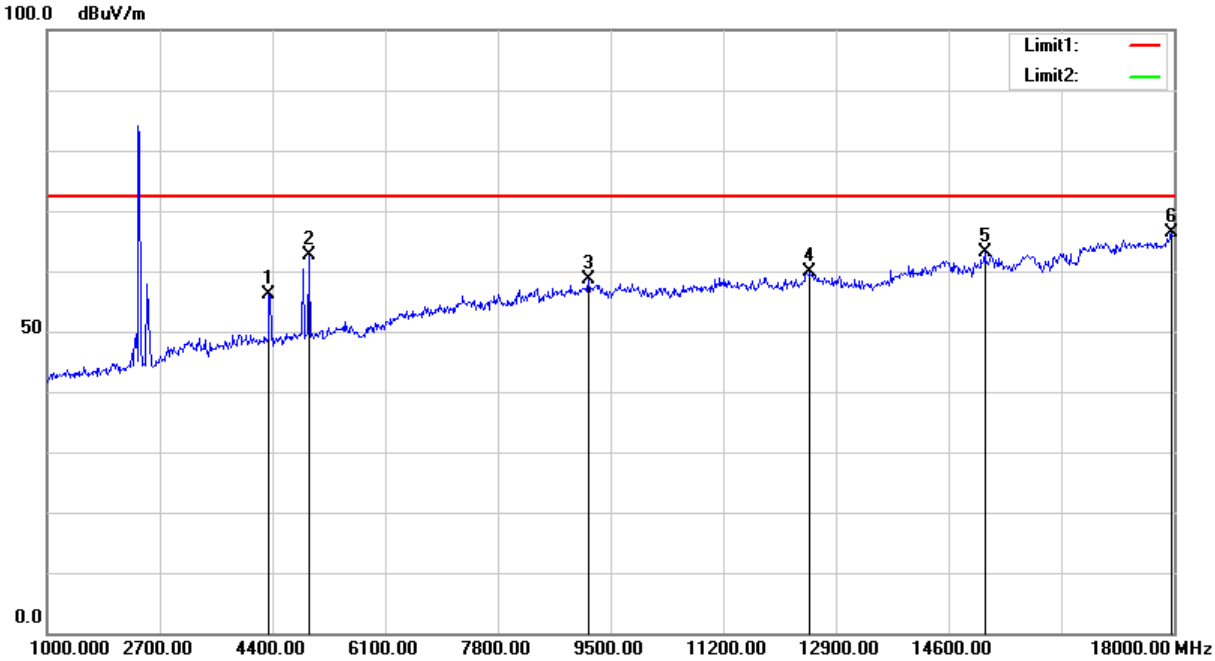
7.5.7. Test Results – above 1GHz

Test Mode:	Mode 1
Test Voltage:	AC 208V/60Hz

Polarization: Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4349.000	51.65	4.56	56.21	72.41	-16.20	peak
2	4944.000	56.76	5.98	62.74	72.41	-9.67	peak
3	9160.000	44.86	13.87	58.73	72.41	-13.68	peak
4	12509.000	44.27	15.56	59.83	72.41	-12.58	peak
5	15144.000	45.27	17.80	63.07	72.41	-9.34	peak
6	17966.000	41.90	24.36	66.26	72.41	-6.15	peak

Remark:
Result = Reading +Correct
Margin = Result - Limit
Factor= Cable Loss +Antenna Factor-Amplifier Gain

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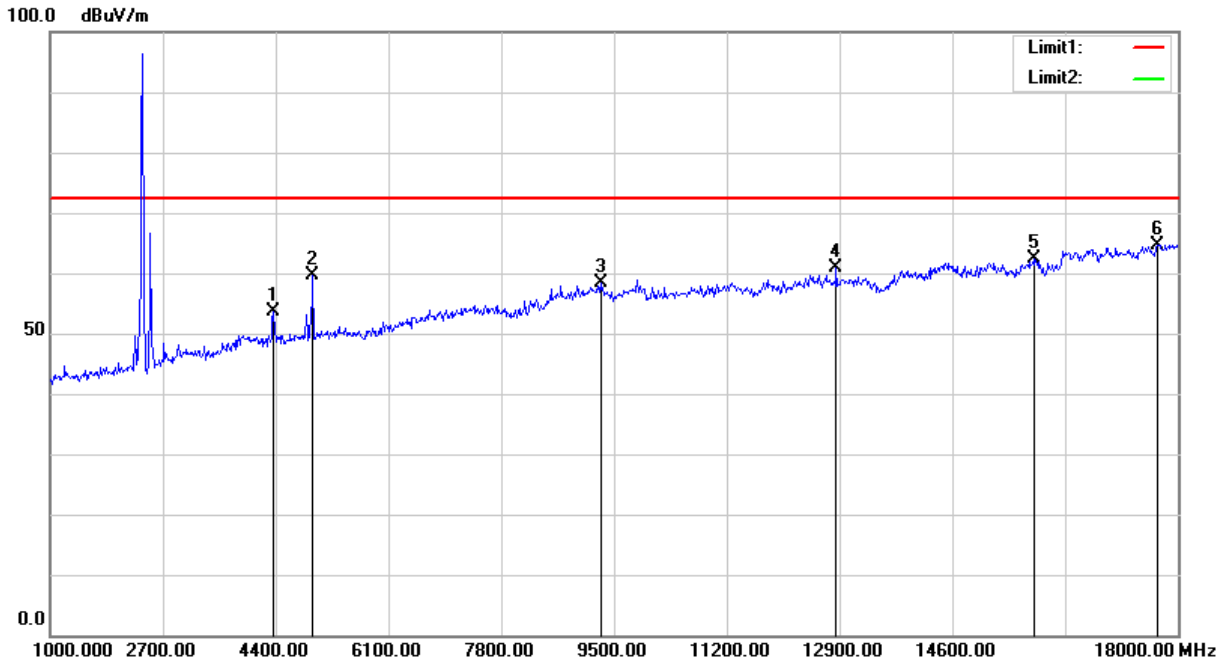
Test Mode:	Mode 1
Test Voltage:	AC 208V/60Hz

Polarization: Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4366.000	48.97	4.55	53.52	72.41	-18.89	peak
2	4961.000	53.63	6.01	59.64	72.41	-12.77	peak
3	9296.000	44.54	13.93	58.47	72.41	-13.94	peak
4	12849.000	45.50	15.40	60.90	72.41	-11.51	peak
5	15824.000	45.63	16.66	62.29	72.41	-10.12	peak
6	17694.000	41.92	22.81	64.73	72.41	-7.68	peak

Remark:
Result = Reading +Correct
Margin = Result - Limit
Factor= Cable Loss +Antenna Factor-Amplifier Gain

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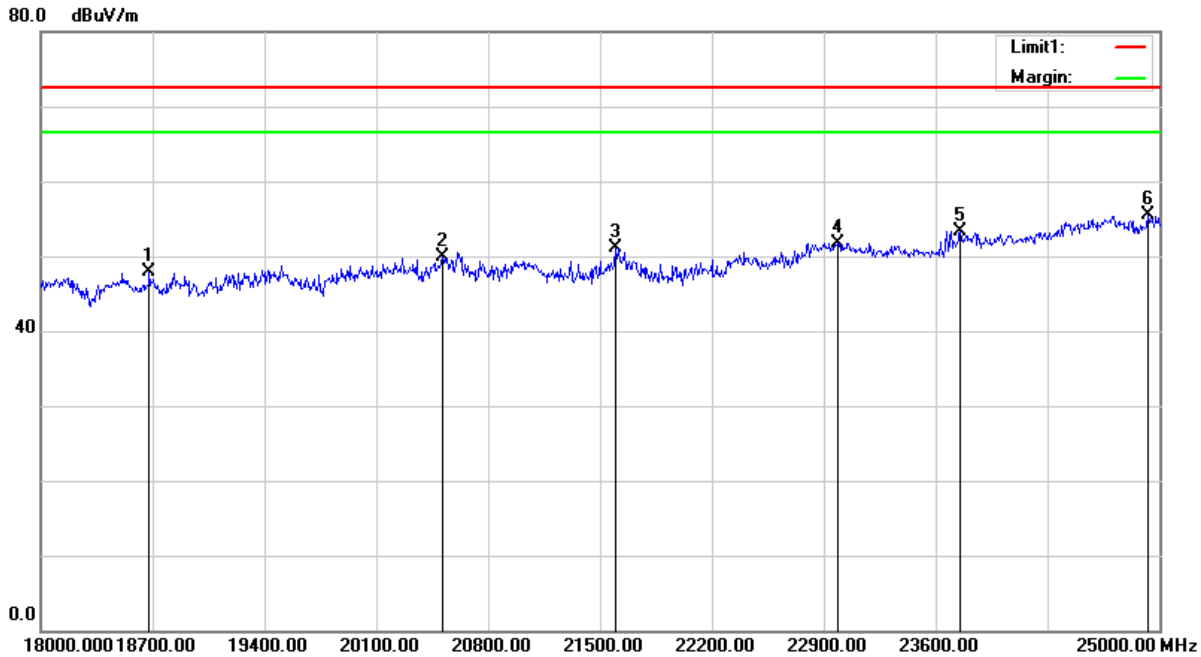
Test Mode:	Mode 1
Test Voltage:	AC 208V/60Hz

Polarization: Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	18679.000	23.23	24.62	47.85	72.41	-24.56	peak
2	20513.000	24.92	24.95	49.87	72.41	-22.54	peak
3	21598.000	26.49	24.71	51.20	72.41	-21.21	peak
4	22991.000	27.24	24.54	51.78	72.41	-20.63	peak
5	23754.000	28.51	24.79	53.30	72.41	-19.11	peak
6	24930.000	30.59	24.96	55.55	72.41	-16.86	peak

Remark:
Result = Reading +Correct
Margin = Result - Limit
Factor= Cable Loss +Antenna Factor-Amplifier Gain

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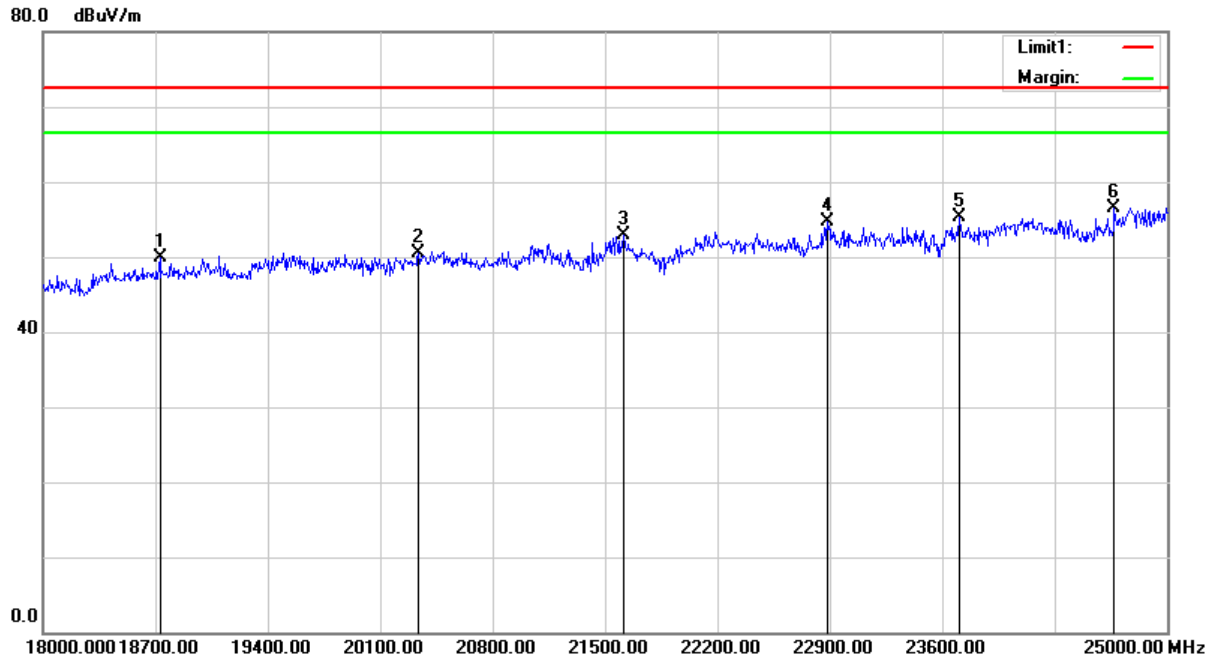
Test Mode:	Mode 1
Test Voltage:	AC 208V/60Hz

Polarization: Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	18728.000	25.27	24.69	49.96	72.41	-22.45	peak
2	20338.000	25.59	24.84	50.43	72.41	-21.98	peak
3	21619.000	28.14	24.69	52.83	72.41	-19.58	peak
4	22886.000	30.23	24.52	54.75	72.41	-17.66	peak
5	23705.000	30.53	24.77	55.30	72.41	-17.11	peak
6	24671.000	31.62	24.96	56.58	72.41	-15.83	peak

Remark:
Result = Reading +Correct
Margin = Result - Limit
Factor= Cable Loss +Antenna Factor-Amplifier Gain

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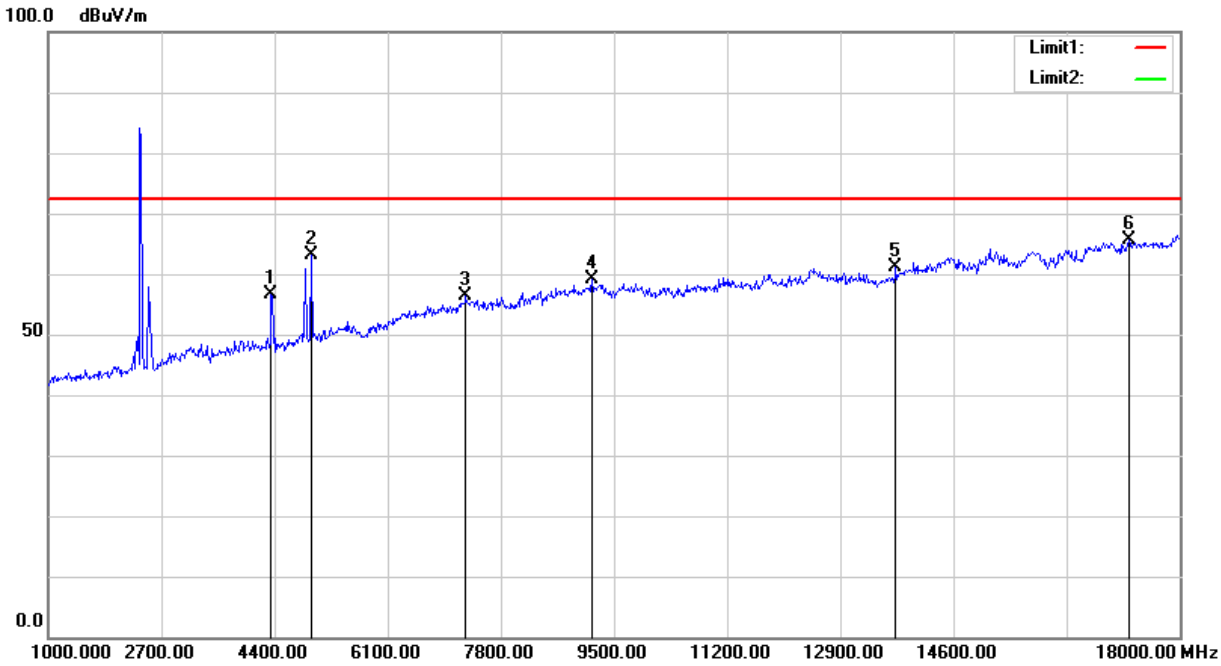
Test Mode:	Mode 1
Test Voltage:	AC 240V/60Hz

Polarization: Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4349.000	52.15	4.56	56.71	72.41	-15.70	peak
2	4944.000	57.26	5.98	63.24	72.41	-9.17	peak
3	7273.000	44.82	11.45	56.27	72.41	-16.14	peak
4	9160.000	45.36	13.87	59.23	72.41	-13.18	peak
5	13733.000	44.77	16.39	61.16	72.41	-11.25	peak
6	17235.000	45.48	20.13	65.61	72.41	-6.80	peak

Remark:
Result = Reading +Correct
Margin = Result - Limit
Factor= Cable Loss +Antenna Factor-Amplifier Gain

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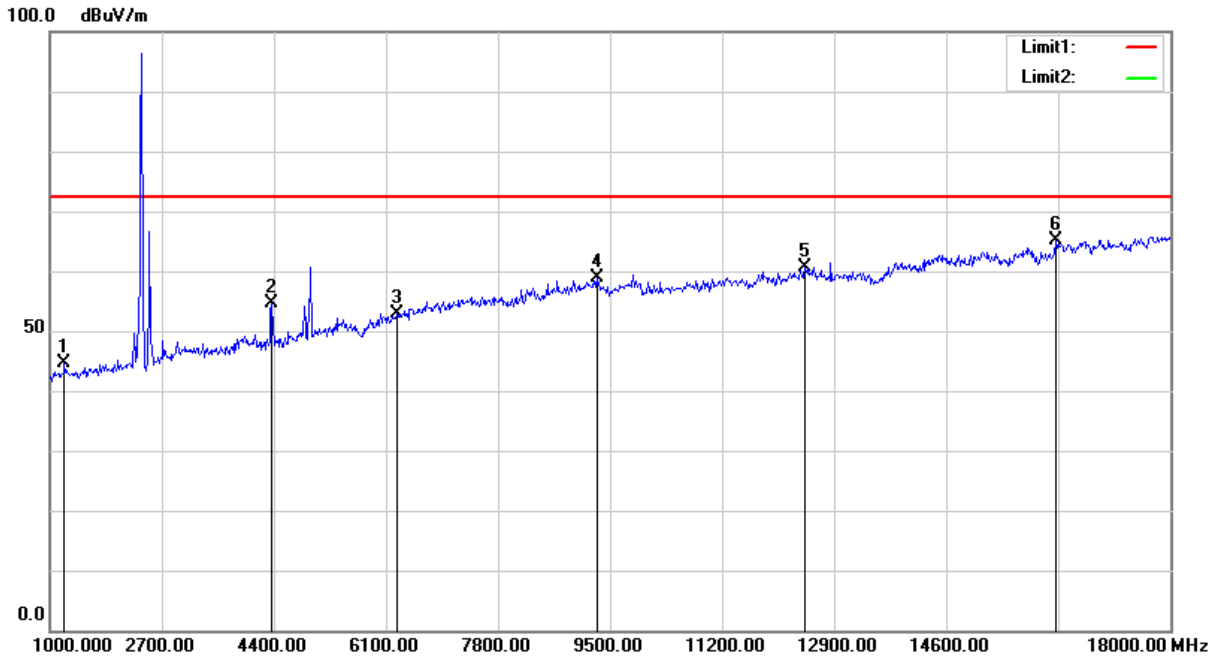
Test Mode:	Mode 1
Test Voltage:	AC 240V/60Hz

Polarization: Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1221.000	47.76	-3.12	44.64	72.41	-27.77	peak
2	4366.000	49.97	4.55	54.52	72.41	-17.89	peak
3	6270.000	44.18	8.78	52.96	72.41	-19.45	peak
4	9296.000	45.04	13.93	58.97	72.41	-13.44	peak
5	12458.000	45.14	15.49	60.63	72.41	-11.78	peak
6	16266.000	48.02	17.13	65.15	72.41	-7.26	peak

Remark:
Result = Reading +Correct
Margin = Result - Limit
Factor= Cable Loss +Antenna Factor-Amplifier Gain

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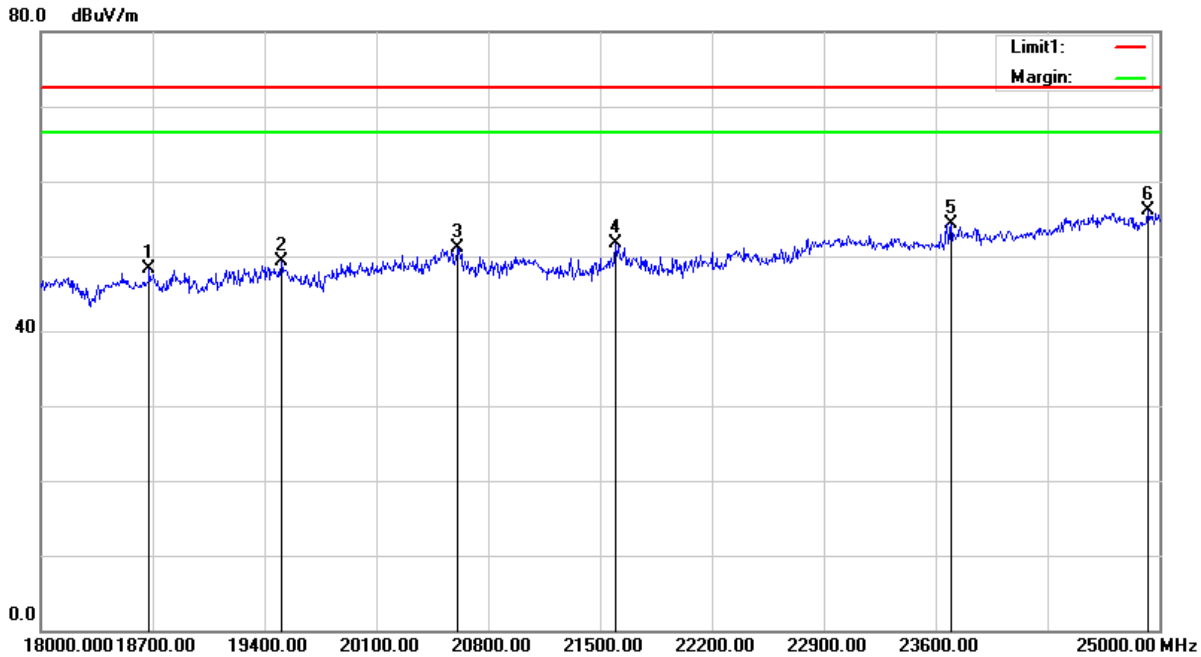
Test Mode:	Mode 1
Test Voltage:	AC 240V/60Hz

Polarization: Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	18679.000	23.73	24.62	48.35	72.41	-24.06	peak
2	19505.000	23.62	25.63	49.25	72.41	-23.16	peak
3	20611.000	26.13	24.94	51.07	72.41	-21.34	peak
4	21598.000	26.99	24.71	51.70	72.41	-20.71	peak
5	23698.000	29.47	24.77	54.24	72.41	-18.17	peak
6	24930.000	31.09	24.96	56.05	72.41	-16.36	peak

Remark:
Result = Reading +Correct
Margin = Result - Limit
Factor= Cable Loss +Antenna Factor-Amplifier Gain

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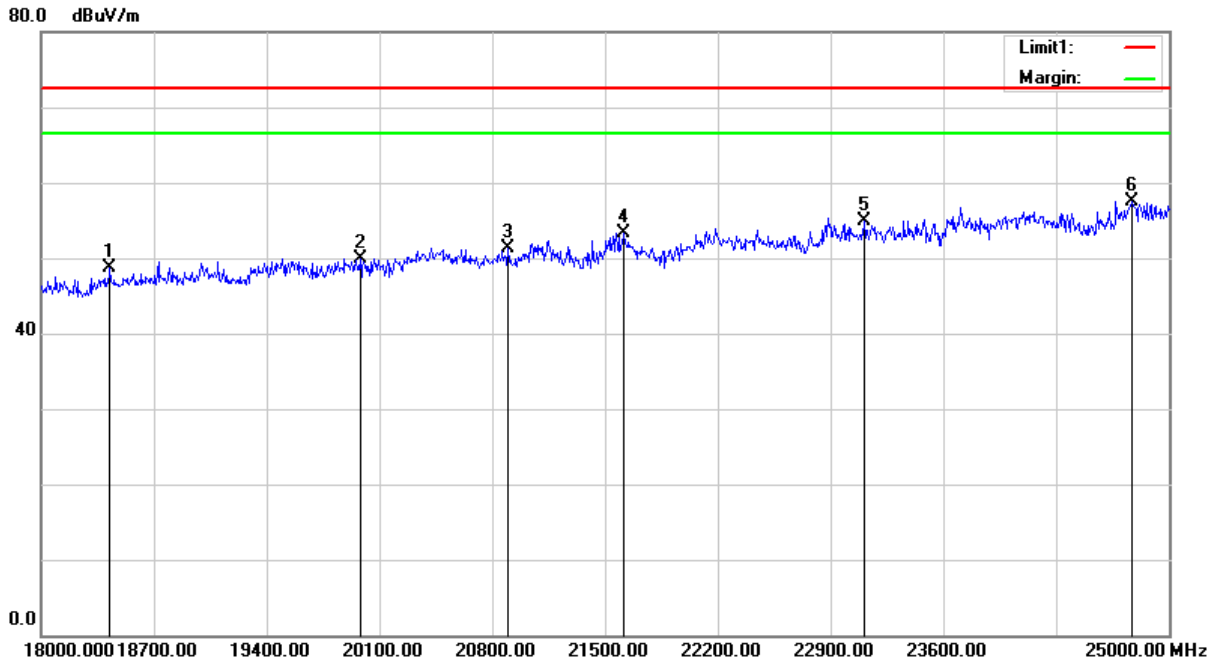
Test Mode:	Mode 1
Test Voltage:	AC 240V/60Hz

Polarization: Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	18427.000	23.74	24.87	48.61	72.41	-23.80	peak
2	19981.000	25.21	24.69	49.90	72.41	-22.51	peak
3	20898.000	26.32	24.92	51.24	72.41	-21.17	peak
4	21619.000	28.64	24.69	53.33	72.41	-19.08	peak
5	23110.000	30.24	24.59	54.83	72.41	-17.58	peak
6	24769.000	32.57	24.96	57.53	72.41	-14.88	peak

Remark:
Result = Reading +Correct
Margin = Result - Limit
Factor= Cable Loss +Antenna Factor-Amplifier Gain

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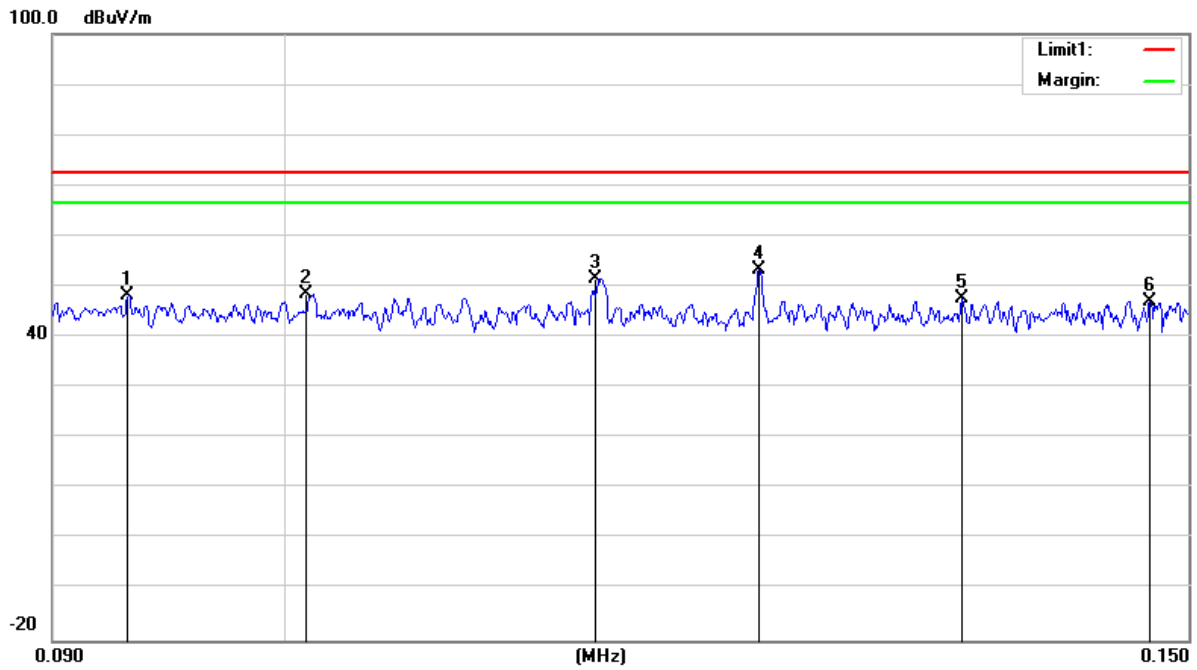
7.5.8. Test Results – 9KHz-150KHz

Test Mode:	Mode 1
Test Voltage:	AC 208V/60Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	dB	(dBuV)	(dBuV)	(dB)	
1	0.0931	30.27	17.93	48.20	72.41	-24.21	QP
2	0.1010	30.83	17.60	48.43	72.41	-23.98	QP
3	0.1150	33.99	17.57	51.56	72.41	-20.85	QP
4	0.1237	35.74	17.55	53.29	72.41	-19.12	QP
5	0.1355	30.05	17.53	47.58	72.41	-24.83	QP
6	0.1474	29.48	17.51	46.99	72.41	-25.42	QP

Remark:
Result = Reading +Correct
Margin = Result - Limit
Factor= Cable Loss +Antenna Factor-Amplifier Gain

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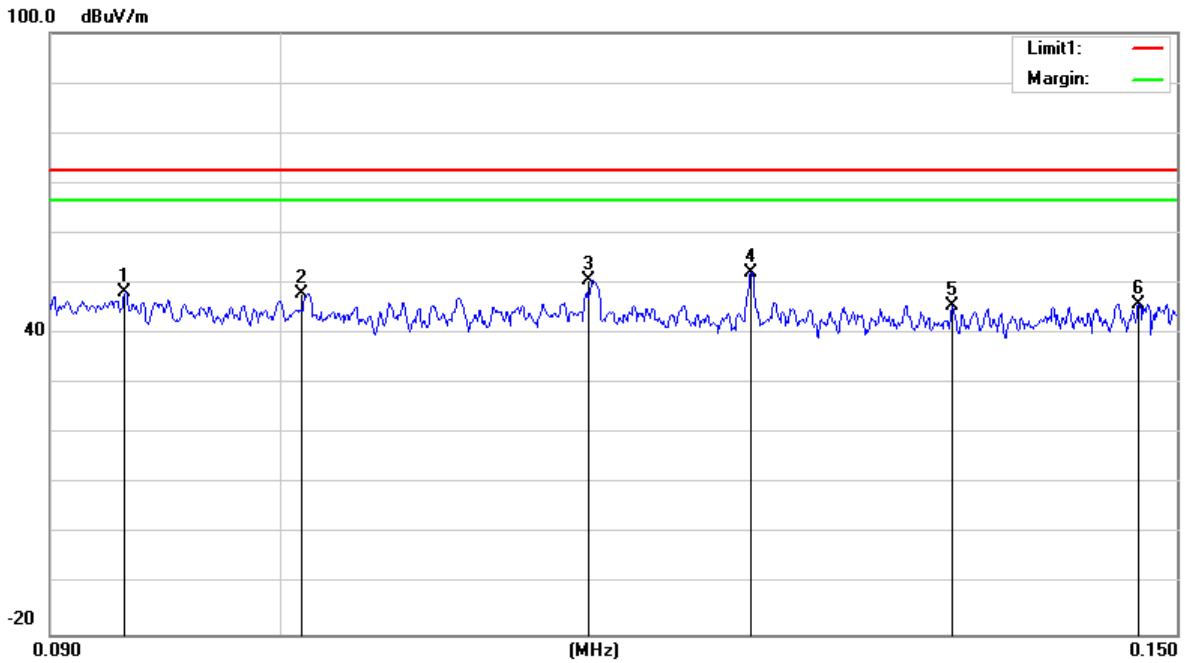
Test Mode:	Mode 1
Test Voltage:	AC 240V/60Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	dB	(dBuV)	(dBuV)	(dB)	
1	0.0931	30.27	17.93	48.20	72.41	-24.21	QP
2	0.1010	30.33	17.60	47.93	72.41	-24.48	QP
3	0.1150	32.99	17.57	50.56	72.41	-21.85	QP
4	0.1237	34.74	17.55	52.29	72.41	-20.12	QP
5	0.1355	28.05	17.53	45.58	72.41	-26.83	QP
6	0.1474	28.48	17.51	45.99	72.41	-26.42	QP

Remark:
Result = Reading +Correct
Margin = Result - Limit
Factor= Cable Loss +Antenna Factor-Amplifier Gain

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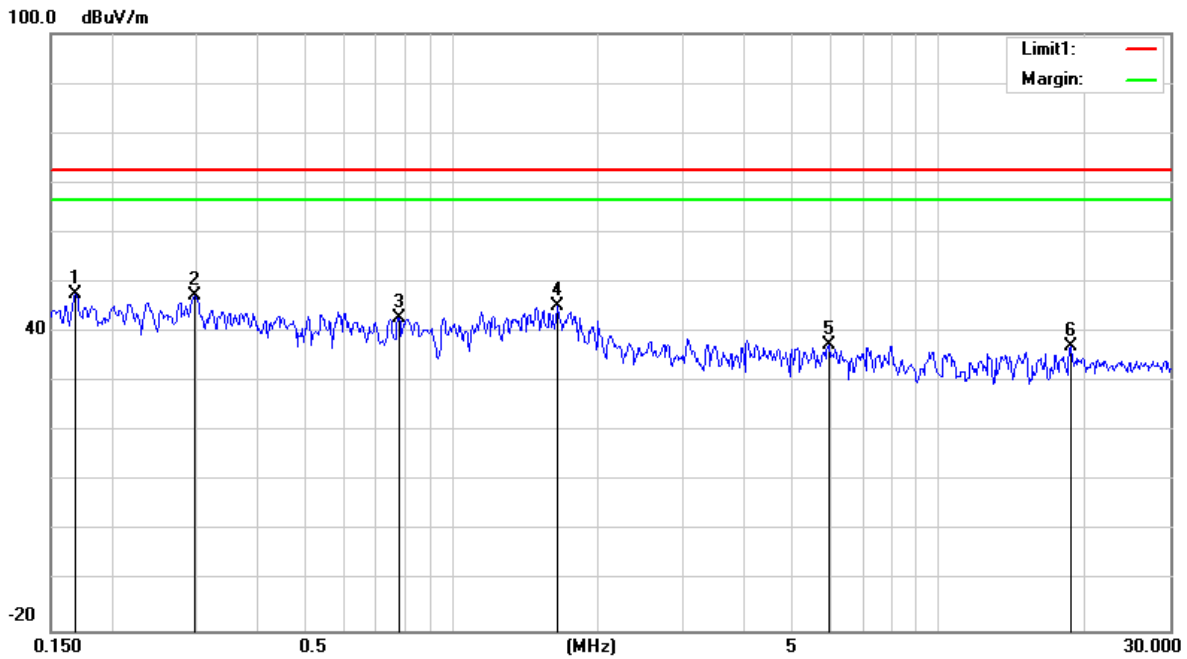
7.5.9. Test Results – 9KHz-30MHz

Test Mode:	Mode 1
Test Voltage:	AC 208V/60Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	dB	(dBuV)	(dBuV)	(dB)	
1	0.1685	29.58	17.98	47.56	72.41	-24.85	QP
2	0.2953	27.38	20.12	47.50	72.41	-24.91	QP
3	0.7792	22.54	20.29	42.83	72.41	-29.58	QP
4	1.6532	24.88	20.33	45.21	72.41	-27.20	QP
5	5.9607	16.89	20.44	37.33	72.41	-35.08	QP
6	18.7210	15.05	22.19	37.24	72.41	-35.17	QP

Remark:
Result = Reading +Correct
Margin = Result - Limit
Factor= Cable Loss +Antenna Factor-Amplifier Gain

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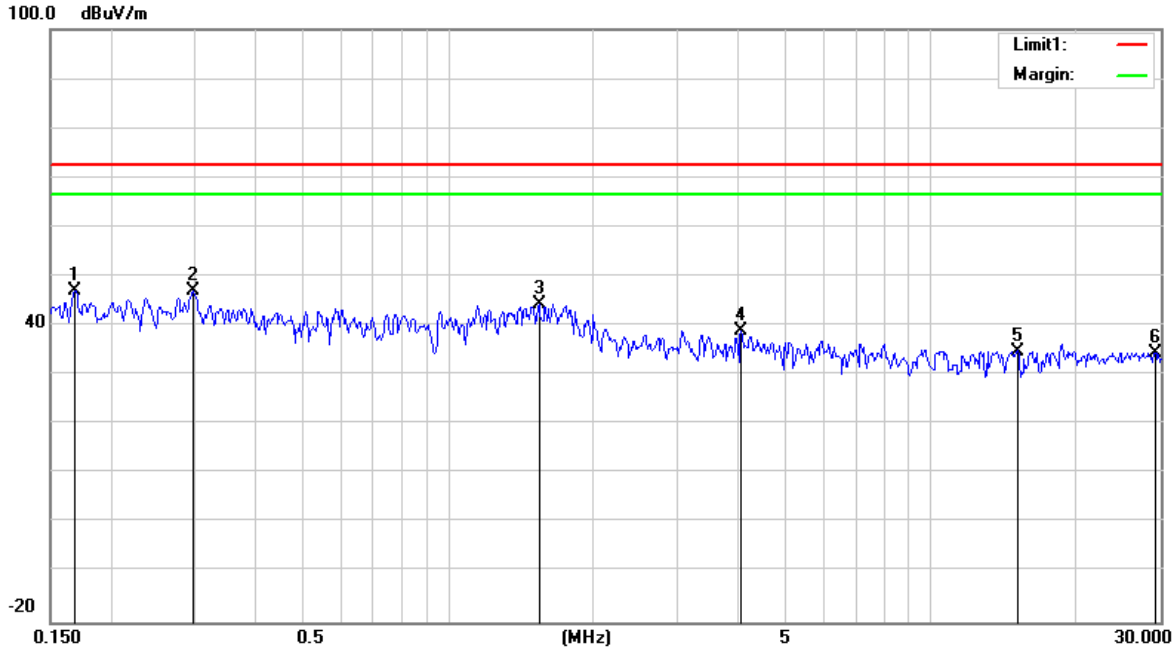
Test Mode:	Mode 1
Test Voltage:	AC 240V/60Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	dB	(dBuV)	(dBuV)	(dB)	
1	0.1685	29.08	17.98	47.06	72.41	-25.35	QP
2	0.2953	26.88	20.12	47.00	72.41	-25.41	QP
3	1.5436	23.92	20.31	44.23	72.41	-28.18	QP
4	4.0486	18.54	20.40	38.94	72.41	-33.47	QP
5	15.1455	13.57	21.33	34.90	72.41	-37.51	QP
6	29.2150	44.82	-10.27	34.55	72.41	-37.86	QP

Remark:
Result = Reading +Correct
Margin = Result - Limit
Factor= Cable Loss +Antenna Factor-Amplifier Gain

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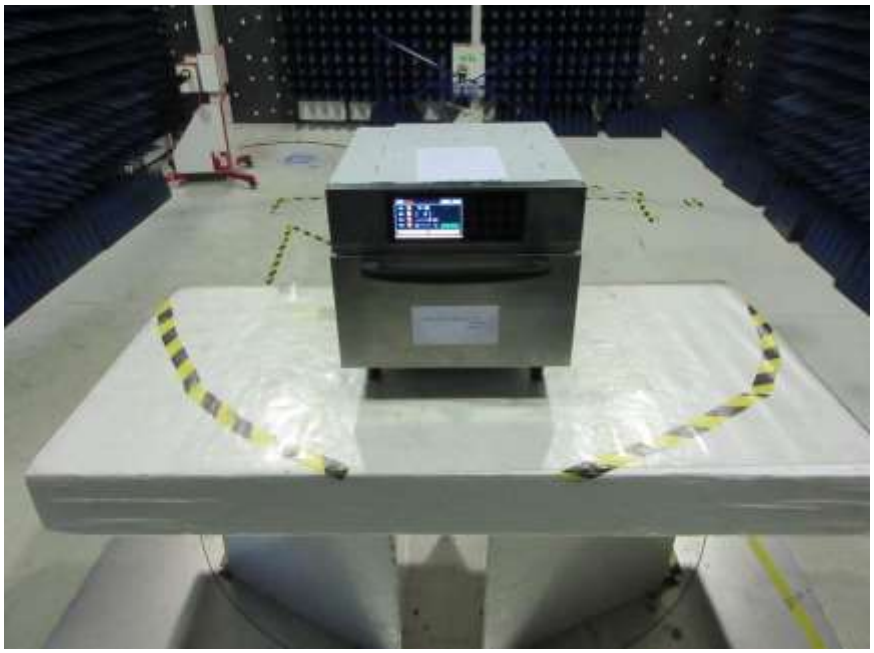
Appendix I: Photographs of EMC Test Configuration

Conducted Disturbance

Radiated Disturbance below 1GHz



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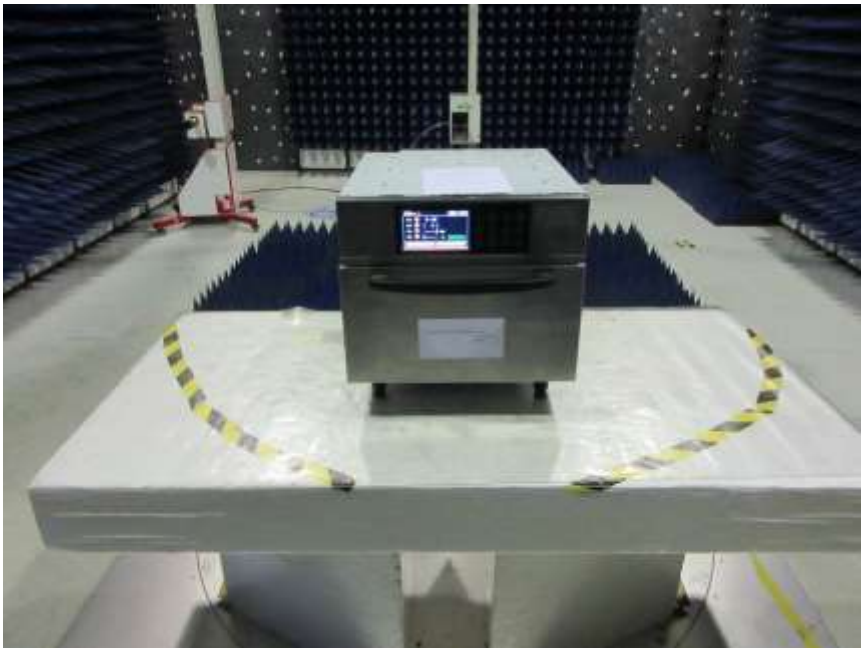
Radiated Disturbance above 1GHz



Radiated Disturbance above 9KHz-30MHz

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Power Test

Radiation Hazard

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