

CFR 47 FCC PART 18

TEST REPORT

For

Microwave oven

MODEL NUMBER: EM925A2GK-P00A00/ GCST09U1WSS

REPORT NUMBER: 4791343499

FCC ID: VG8EM925AYYGEWG

ISSUE DATE: July 10, 2024

Prepared for

**Guangdong Midea Kitchen Appliances Manufacturing Co., Ltd.
No.6, Yong An Road, Beijiao, Shunde, Foshan, Guangdong, China**

Prepared by

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Revision History

Rev.	Issue Date	Revisions	Revised By
V0	July 10, 2024	Initial Issue	

Summary of Test Results

Emission			
Standard	Test Item	Limit	Result
CFR 47 FCC PART 18	Conducted Emissions	FCC Part 18.307(b)	Pass
	Radiated Emissions (30MHz~1000MHz)	FCC Part 18.305(b)	Pass
	Radiated Emissions (1GHz~25GHz)	FCC Part 18.305(b)	Pass
	Operating Frequency	FCC Part 18.301	Pass
	Input Power	FCC / OST MP-5 (1986) Clause 4.3	Pass
	Output Power	FCC / OST MP-5 (1986) Clause 4.3	Pass
	Radiation Hazard	FCC / OST MP-5 (1986) Clause 3.1	Pass

*This test report is only published to and used by the applicant, and it is not for evidence purpose in China.

*The measurement result for the sample received is <Pass> according to <CFR 47 FCC PART 18> when <Simple Acceptance> decision rule is applied.

CONTENTS

1. ATTESTATION OF TEST RESULTS.....	5
2. TEST METHODOLOGY.....	6
3. FACILITIES AND ACCREDITATION.....	6
4. CALIBRATION AND UNCERTAINTY	7
4.1. <i>MEASURING INSTRUMENT CALIBRATION</i>	<i>7</i>
4.2. <i>MEASUREMENT UNCERTAINTY.....</i>	<i>7</i>
5. EQUIPMENT UNDER TEST	8
5.1. <i>DESCRIPTION OF EUT</i>	<i>8</i>
5.2. <i>TEST MODE.....</i>	<i>8</i>
5.3. <i>EUT ACCESSORY.....</i>	<i>8</i>
5.4. <i>SUPPORT UNITS FOR SYSTEM TEST.....</i>	<i>8</i>
6. MEASURING EQUIPMENT AND SOFTWARE USED.....	9
7. EMISSION TEST	11
7.1. <i>CONDUCTED EMISSIONS</i>	<i>11</i>
7.2. <i>RADIATED EMISSIONS (30MHZ~1000MHZ).....</i>	<i>15</i>
7.3. <i>RADIATED EMISSIONS (1GHZ~25GHZ).....</i>	<i>19</i>
7.4. <i>OPERATING FREQUENCY.....</i>	<i>29</i>
7.5. <i>INPUT POWER.....</i>	<i>41</i>
7.6. <i>OUTPUT POWER.....</i>	<i>42</i>
7.7. <i>RADIATION HAZARD.....</i>	<i>44</i>

1. ATTESTATION OF TEST RESULTS

Applicant Information

Company Name: Guangdong Midea Kitchen Appliances Manufacturing Co., Ltd.
Address: No.6, Yong An Road, Beijiao, Shunde, Foshan, Guangdong, China

Manufacturer Information

Company Name: Guangdong Midea Kitchen Appliances Manufacturing Co., Ltd.
Address: No.6, Yong An Road, Beijiao, Shunde, Foshan, Guangdong, China

EUT Information

EUT Name: Microwave oven
Model: GCST09U1WSS
Series Model: EM925A2GK-P00A00
Brand: Midea/GE APPLIANCES
Sample Received Date: May 30, 2024
Sample Status: Normal
Sample ID: 7268429
Date of Tested: July 5, 2024 to July 5, 2024

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 FCC PART 18	Pass

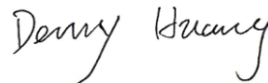
Prepared By:



Wite Chen

Engineer Project Associate

Checked By:



Denny Huang

Senior Project Engineer

Approved By:



Stephen Guo

Operations Manager

2. TEST METHODOLOGY

All tests were performed in accordance with the standard CFR 47 FCC PART 18

3. FACILITIES AND ACCREDITATION

Accreditation Certificate	<p>A2LA (Certificate No.: 4102.01) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with A2LA.</p> <p>FCC (FCC Designation No.: CN1187) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. Has been recognized to perform compliance testing on equipment subject to the Commission's Declaration of Conformity (DoC) and Certification rules.</p> <p>ISED (Company No.: 21320) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been registered and fully described in a report filed with ISED. The Company Number is 21320 and the test lab Conformity Assessment Body Identifier (CABID) is CN0046.</p> <p>VCCI (Registration No.: G-20192, C-20153, T-20155 and R-20202) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with VCCI, the Membership No. is 3793. Facility Name: Chamber D, the VCCI registration No. is G-20192 and R-20202 Shielding Room B, the VCCI registration No. is C-20153 and T-20155</p>
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Note:

All tests measurement facilities use to collect the measurement data are located at Building 10, Innovation Technology Park, No. 1, Li Bin Road, Song Shan Lake Hi-Tech Development Zone Dongguan, 523808, People's Republic of China.

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 Emissions	0.009 MHz - 0.15 MHz	2	4.00
	0.15MHz - 30MHz	2	3.63
Radiated Emissions (30MHz~1000MHz)	9kHz - 30MHz	2	2.20
	30MHz -1GHz	2	4.13
Radiated Emissions (1GHz~25GHz)	1GHz - 18GHz	2	5.64
	18GHz - 26GHz	2	5.23

Note1: This uncertainty represents an expanded uncertainty expressed at approximately the 95 % confidence level using a coverage factor of k=2.

Note 2: According to the standard CISPR 16-4-2, the MU for the Conducted emissions from the AC mains power ports using AMN should not exceed 3.8 in range of 9kHz to 150kHz and 3.4 in range of 150kHz to 30MHz. We have considered the test results containing the value of U_{lab} (in dB) for the measurement instrumentation actually used for the measurements.

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

EUT Name	Microwave oven
Model	GCST09U1WSS
Series Model	EM925A2GK-P00A00
Model Difference	The additional model EM925A2GK-P00A00 is identical with the test model GCST09U1WSS except the model number for marketing purpose.
Operating Frequency	2450MHz
Rated Input Power (Microwave)	1350W
Rated Output Power (Microwave)	900W
Rated Voltage	120V~, 60Hz, Single Phase
Remark	This EUT contains WiFi module (FCC ID: ZKJ-WCATA008)

5.2. TEST MODE

Test Mode	Description
M01	Maxmium power+1000mL water load
M02	Maxmium power+700mL water load
M03	Maxmium power+300mL water load

5.3. EUT ACCESSORY

Cable	
Description:	AC Cable
Cable Type:	Unshielded without ferrite
Length:	1.02 Meter

5.4. SUPPORT UNITS FOR SYSTEM TEST

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	Note
1	Glass Beaker	N/A	N/A	1000ML	UL Support

6. MEASURING EQUIPMENT AND SOFTWARE USED

Test Equipment of Conducted Emissions					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due Date
EMI Test Receiver	ROHDE & SCHWARZ	ESR3	101961	Oct. 13, 2023	Oct. 12, 2024
Two-Line V-Network	ROHDE & SCHWARZ	ENV216	101983	Oct. 13, 2023	Oct. 12, 2024
Test Software for Conducted Emission	Farad	EZ-EMC	Ver.UL-3A1	N/A	N/A

Test Equipment of Radiated Emissions (30MHz~1000MHz)					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due Date
Hybrid Log Periodic Antenna	TDK	HLP-3003C	130960	Aug. 2, 2021	Aug. 1, 2024
MXE EMI Receiver	KEYSIGHT	N9038A	MY56400036	Oct. 12, 2023	Oct. 11, 2024
Amplifier	HP	8447F	2944A03683	Oct. 12, 2023	Oct. 11, 2024
Test Software for Radiated Emission	Farad	EZ-EMC	Ver.UL-3A1	N/A	N/A

Test Equipment of Radiated Emissions (1GHz~25GHz)					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due Date
EMI Measurement Receiver	ROHDE & SCHWARZ	ESR26	101377	Oct. 12, 2023	Oct. 11, 2024
Preamplifier	TDK	PA-02-0118	TRS-305-00067	Oct. 12, 2023	Oct. 11, 2024
Preamplifier	TDK	PA-02-3	TRS-308-00002	Oct. 12, 2023	Oct. 11, 2024
Horn Antenna	TDK	HRN-0118	130940	Jul. 20, 2021	Jul. 19, 2024
High Gain Horn Antenna	Schwarzbeck	BBHA-9170	697	Jul. 20, 2021	Jul. 19, 2024
Test Software for Radiated Emission	Farad	EZ-EMC	Ver.UL-3A1	N/A	N/A

Test Equipment of Operating Frequency					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due Date
EMI Measurement Receiver	ROHDE & SCHWARZ	ESR26	101377	Oct. 12, 2023	Oct. 11, 2024
Preamplifier	TDK	PA-02-0118	TRS-305-00067	Oct. 12, 2023	Oct. 11, 2024
Horn Antenna	TDK	HRN-0118	130940	Jul. 20, 2021	Jul. 19, 2024
Test Software for Radiated Emission	Farad	EZ-EMC	Ver.UL-3A1	N/A	N/A

Test Equipment of Input Power					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due Date
Signal Conditioning Unit	TESEQ	CCN 1000-1	1544A00611	Dec.03,2023	Dec.02,2024
5K VA AC Power Source	TESEQ	NSG 1007	1616A00637	Dec.03,2023	Dec.02,2024

Radiation Hazard					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due Date
Electric Field	LTLUTRON	EMF-819/EP-05H	I.508502	Oct. 23, 2023	Oct. 22, 2024

Output Power Measurement					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due Date
Probe Thermometer	Control Company	4242	150709653	Oct. 12, 2023	Oct. 11, 2024

Other Instrument					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due Date
Temperature humidity probe	OMEGA	ITHX-SD-5	18470007	Oct.21, 2023	Oct.20, 2024
Barometer	Yiyi	Baro	N/A	Oct.19, 2023	Oct.18, 2024
Attenuator	Agilent	8495B	2814a12853	Oct.12, 2023	Oct.11, 2024

7. EMISSION TEST

7.1. CONDUCTED EMISSIONS

LIMITS

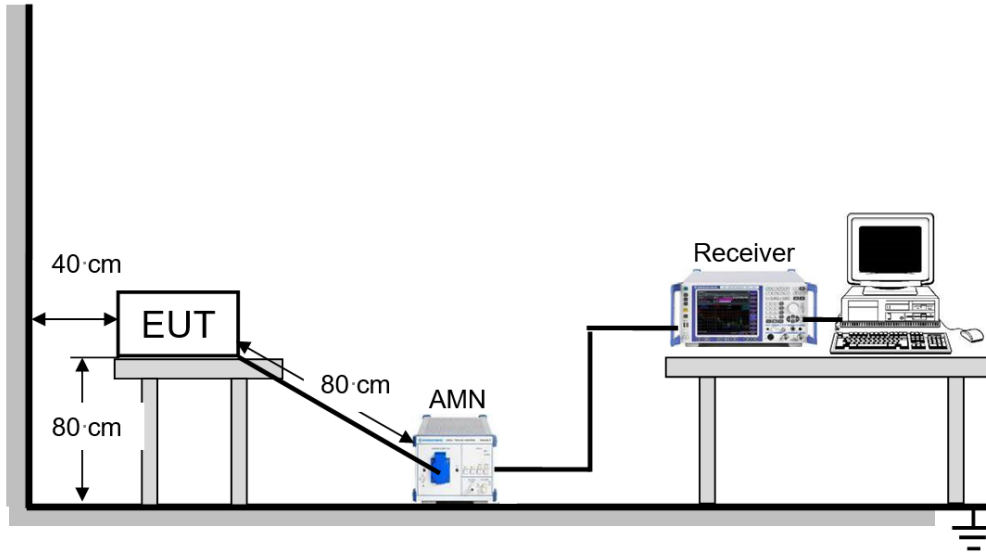
Frequency of emission (MHz)	Conducted limit (dB μ V)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

Note: *Decreases with the logarithm of the frequency.

TEST PROCEDURE

- 1) The testing follows the guideline in FCC / OST MP-5.
- 2) The EUT was placed on a 0.8m insulating material from the horizontal ground plane with EUT being connected to the power mains through a Line impedance stabilization network (LISN). All other support equipment powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- 3) Excess I/O cables shall be bundled in the center. If bundling is not possible, bundling shall not exceed 30 to 40 cm in length.
- 4) Excess power cords shall be bundled in the center or shortened to appropriate length.
- 5) LISN at least 80 cm from nearest part of EUT.
- 6) For ovens rated at 1000 watts or less power output, the beaker shall contain quantities of water as listed in the following subparagraphs, For ovens rated at more than 1000 watts output, each quantity shall be increased by 50% for each 500 watts or fraction there of in excess of 1000 watts,
A 700 milliliters of water in the beaker located in the center of the oven.
- 7) Conducted emissions from the EUT measured in the frequency range between 0.15MHz and 30MHz using CISPR Quasi-Peak and average detector mode, Resolution bandwidth set 9kHz.

TEST SETUP



TEST ENVIRONMENT

Temperature	23.1 °C	Relative Humidity	57.5%
Atmosphere Pressure	101kPa		

TEST DATE / ENGINEER

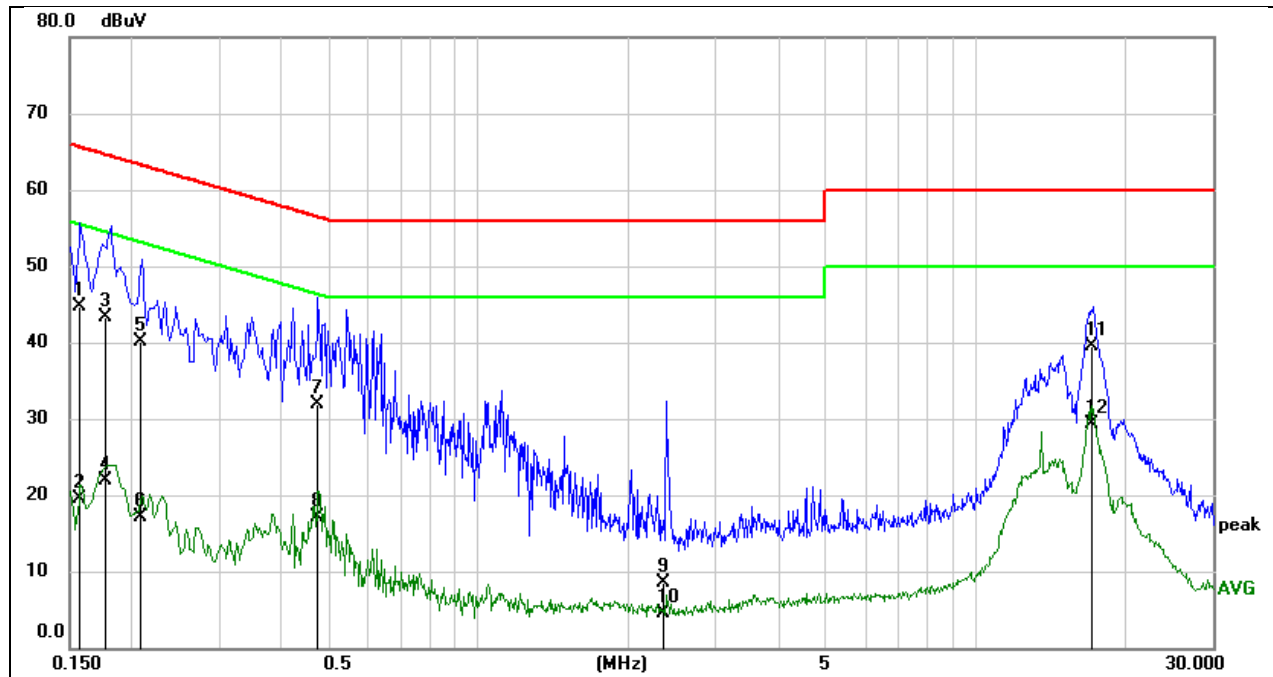
Test Date	July 5, 2024	Test By	Karl Wu
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TEST MODE

Pre-test Mode:	M02
Final Test Mode:	M02

TEST RESULTS

Test Mode:	M02	Line:	Line
Test Voltage:	AC 120V_60Hz		



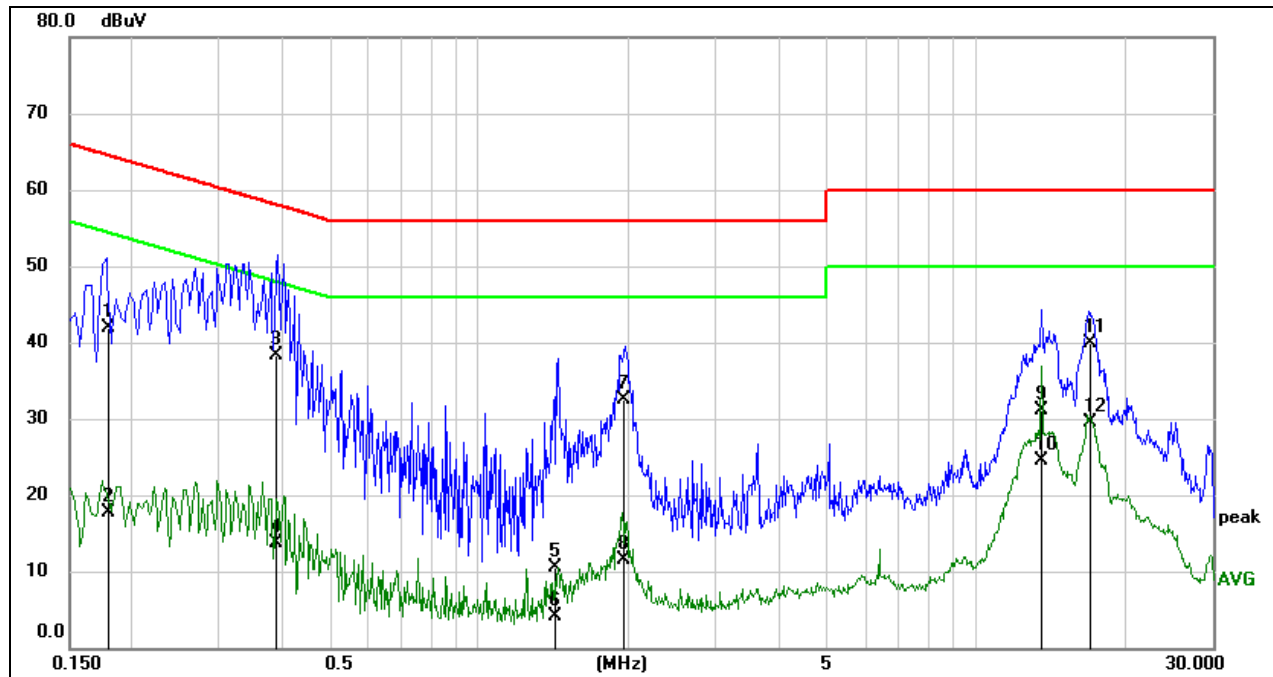
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1570	34.47	10.23	44.70	65.62	-20.92	QP
2	0.1570	9.36	10.23	19.59	55.62	-36.03	AVG
3	0.1779	33.07	10.18	43.25	64.58	-21.33	QP
4	0.1779	11.78	10.18	21.96	54.58	-32.62	AVG
5	0.2075	30.00	10.14	40.14	63.30	-23.16	QP
6	0.2075	6.92	10.14	17.06	53.30	-36.24	AVG
7	0.4766	21.93	10.05	31.98	56.40	-24.42	QP
8	0.4766	7.04	10.05	17.09	46.40	-29.31	AVG
9	2.3436	-1.49	10.09	8.60	56.00	-47.40	QP
10	2.3436	-5.53	10.09	4.56	46.00	-41.44	AVG
11	17.1282	28.83	10.77	39.60	60.00	-20.40	QP
12	17.1282	18.49	10.77	29.26	50.00	-20.74	AVG

Remark:

$$\text{Result} = \text{Reading} + \text{Correct (Insertion Loss + Cable Loss + Attenuator Factor)}$$

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

Test Mode:	M02	Line:	Neutral
Test Voltage:	AC 120V_60Hz		



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1802	31.74	10.18	41.92	64.48	-22.56	QP
2	0.1802	7.52	10.18	17.70	54.48	-36.78	AVG
3	0.3904	28.13	10.08	38.21	58.06	-19.85	QP
4	0.3904	3.71	10.08	13.79	48.06	-34.27	AVG
5	1.4156	0.63	9.92	10.55	56.00	-45.45	QP
6	1.4156	-5.84	9.92	4.08	46.00	-41.92	AVG
7	1.9512	22.44	10.03	32.47	56.00	-23.53	QP
8	1.9512	1.57	10.03	11.60	46.00	-34.40	AVG
9	13.5600	20.49	10.58	31.07	60.00	-28.93	QP
10	13.5600	13.87	10.58	24.45	50.00	-25.55	AVG
11	17.0039	29.16	10.76	39.92	60.00	-20.08	QP
12	17.0039	18.70	10.76	29.46	50.00	-20.54	AVG

Remark:

Result = Reading + Correct (Insertion Loss + Cable Loss + Attenuator Factor)

Margin = Result - Limit

7.2. RADIATED EMISSIONS (30MHZ~1000MHZ)

LIMITS

- a) ISM equipment operating on a frequency specified in §18.301 is permitted unlimited radiated energy in the band specified for that frequency.
- b) 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	25	300
		500 or more	$25 \times \text{SQRT}(\text{power}/500)$	1300*

*Field strength may not exceed 10 $\mu\text{V}/\text{m}$ at 1600 meters. Consumer equipment operating below 1000 MHz is not permitted the increase in field strength otherwise permitted here for power over 500 watts.

Note: (1). $\text{dBuV}/\text{m} = 20\log(\text{uV}/\text{m})$

(2). $\text{dBuV}/\text{m} @3\text{m} = \text{dBuV}/\text{m} @300\text{m} + 20\log(300\text{m}/3\text{m})$

- c) Frequency range for field strength measurements:

Frequency band in which device operates (MHz)	Range of frequency measurements	
	Lowest frequency	Highest frequency
Below 1.705	Lowest frequency generated in the device, but not lower than 9 kHz	30 MHz.
1.705 to 30	Lowest frequency generated in the device, but not lower than 9 kHz	400 MHz.
30 to 500	Lowest frequency generated in the device or 25 MHz, whichever is lower	Tenth harmonic or 1,000 MHz, whichever is higher.
500 to 1,000	Lowest frequency generated in the device or 100 MHz, whichever is lower	Tenth harmonic.
Above 1,000do	Tenth harmonic or highest detectable emission.

TEST PROCEDURE

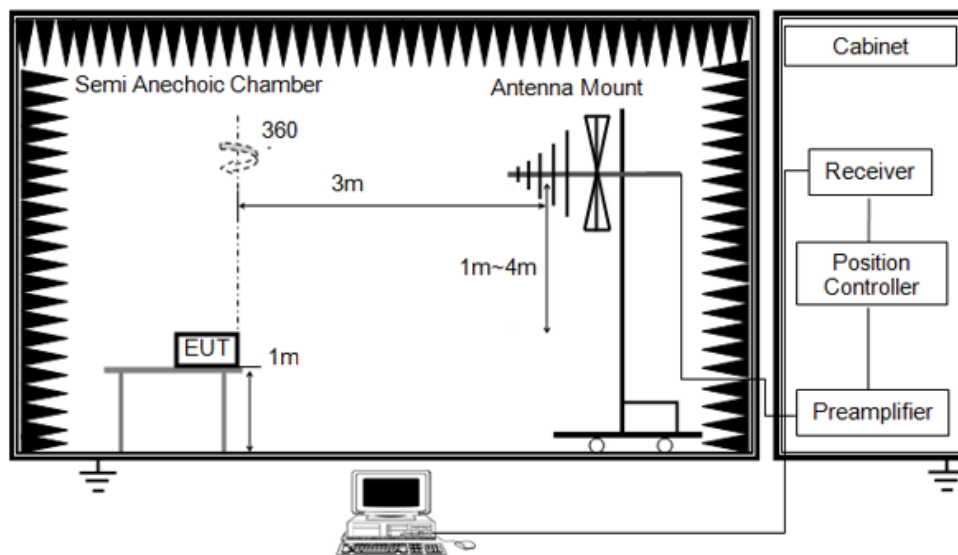
- 1) The testing follows the guidelines in FCC / OST MP-5.
- 2) The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- 3) The EUT was placed on a turntable with 1m meter above ground.
- 4) The EUT was set 3 meters from the interference receiving antenna, test antenna mast is remotely controlled and can be varied in height from 1m to 4m.
- 5) 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.
- 6) I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.

- 7) For ovens rated at 1000 watts or less power output, the beaker shall contain quantities of water as listed in the following subparagraphs, For ovens rated at more than 1000 watts output, each quantity shall be increased by 50% for each 500 watts or fraction there of in excess of 1000 watts,
- Load for measurement of radiation on second and third harmonic; Two loads, one of 700ml and the other of 300ml, 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.
 - All other emissions were measured while a 700ml water load was placed in the center of the oven.
- 8) The setting of the spectrum analyser

RBW	100kHz
VBW	300kHz
Detector	Peak / Average #

Note: # Peak for pre-scan, average for the final result.

TEST SETUP



TEST ENVIRONMENT

Temperature	22.4°C	Relative Humidity	57.1%
Atmosphere Pressure	101kPa		

TEST DATE / ENGINEER

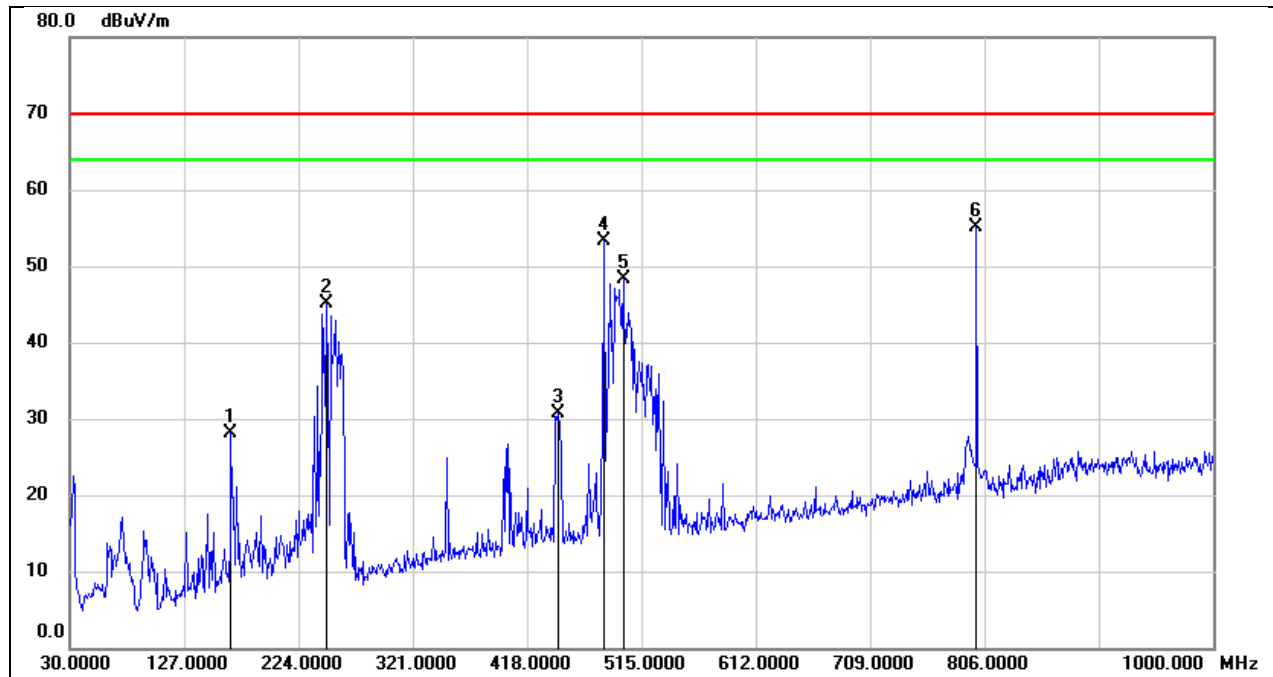
Test Date	July 5, 2024	Test By	Deacon Tan
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TEST MODE

Pre-test Mode:	M02
Final Test Mode:	M02

TEST RESULTS

Test Mode:	M02	Polarity:	Horizontal
Test Voltage:	AC 120V_60Hz		

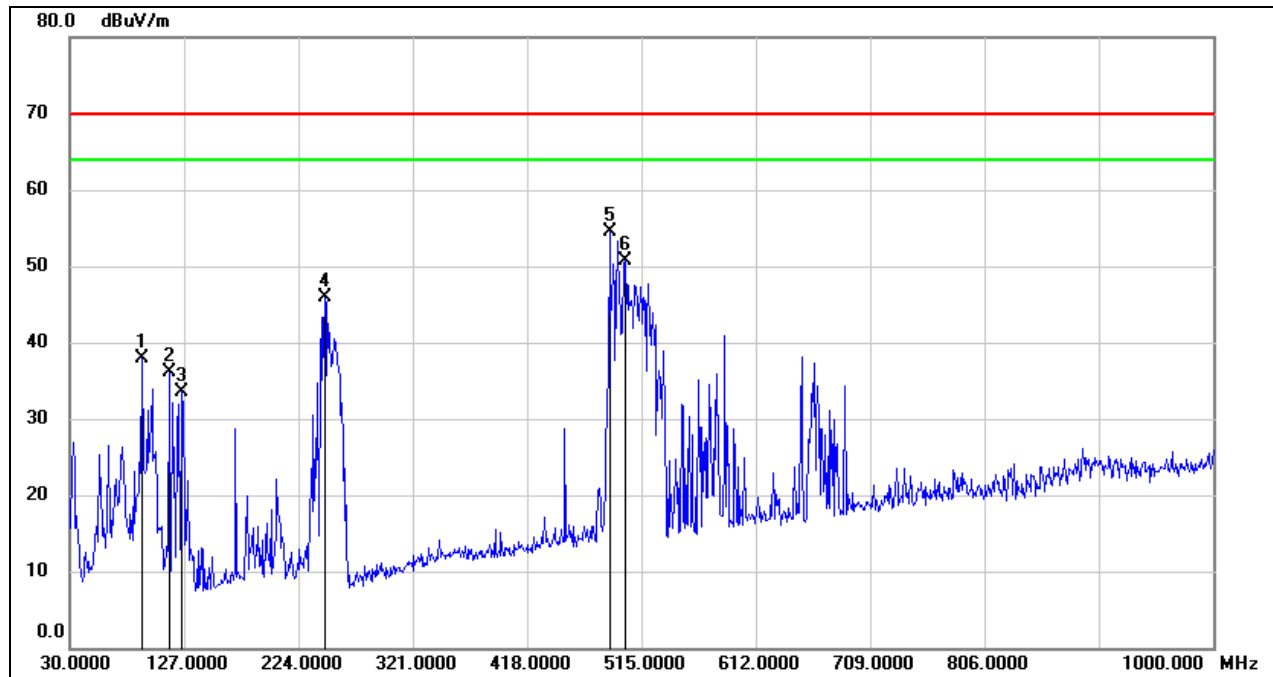


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	166.7700	40.54	-12.36	28.18	69.92	-41.74	AVG
2	247.2800	59.45	-14.42	45.03	69.92	-24.89	AVG
3	444.1900	39.43	-8.69	30.74	69.92	-39.18	AVG
4	482.9900	61.53	-8.27	53.26	69.92	-16.66	AVG
5	499.4800	56.35	-8.09	48.26	69.92	-21.66	AVG
6	799.2100	58.22	-3.02	55.20	69.92	-14.72	AVG

Remark:

1. Result = Reading +Correct (Amplifier Factor + Cable Loss + Antenna Factor)
2. Margin = Result - Limit

Test Mode:	M02	Polarity:	Vertical
Test Voltage:	AC 120V_60Hz		



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	91.1100	54.68	-16.83	37.85	69.92	-32.07	AVG
2	114.3900	51.29	-15.21	36.08	69.92	-33.84	AVG
3	125.0600	48.21	-14.62	33.59	69.92	-36.33	AVG
4	246.3100	60.37	-14.38	45.99	69.92	-23.93	AVG
5	487.8400	62.71	-8.24	54.47	69.92	-15.45	AVG
6	501.4200	58.68	-8.06	50.62	69.92	-19.30	AVG

Remark:

1. Result = Reading +Correct (Amplifier Factor + Cable Loss + Antenna Factor)

2. Margin = Result - Limit

7.3. RADIATED EMISSIONS (1GHZ~25GHZ)

LIMITS

- a) ISM equipment operating on a frequency specified in §18.301 is permitted unlimited radiated energy in the band specified for that frequency.
- b) 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	25	300
		500 or more	$25 \times \text{SQRT}(\text{power}/500)$	1300*

*Field strength may not exceed 10 $\mu\text{V}/\text{m}$ at 1600 meters. Consumer equipment operating below 1000 MHz is not permitted the increase in field strength otherwise permitted here for power over 500 watts.

Note: (1). $\text{dBuV}/\text{m} = 20\log(\text{uV}/\text{m})$

(2). $\text{dBuV}/\text{m} @3\text{m} = \text{dBuV}/\text{m} @300\text{m} + 20\log(300\text{m}/3\text{m})$

- c) Frequency range for field strength measurements:

Frequency band in which device operates (MHz)	Range of frequency measurements	
	Lowest frequency	Highest frequency
Below 1.705	Lowest frequency generated in the device, but not lower than 9 kHz	30 MHz.
1.705 to 30	Lowest frequency generated in the device, but not lower than 9 kHz	400 MHz.
30 to 500	Lowest frequency generated in the device or 25 MHz, whichever is lower	Tenth harmonic or 1,000 MHz, whichever is higher.
500 to 1,000	Lowest frequency generated in the device or 100 MHz, whichever is lower	Tenth harmonic.
Above 1,000do	Tenth harmonic or highest detectable emission.

TEST PROCEDURE

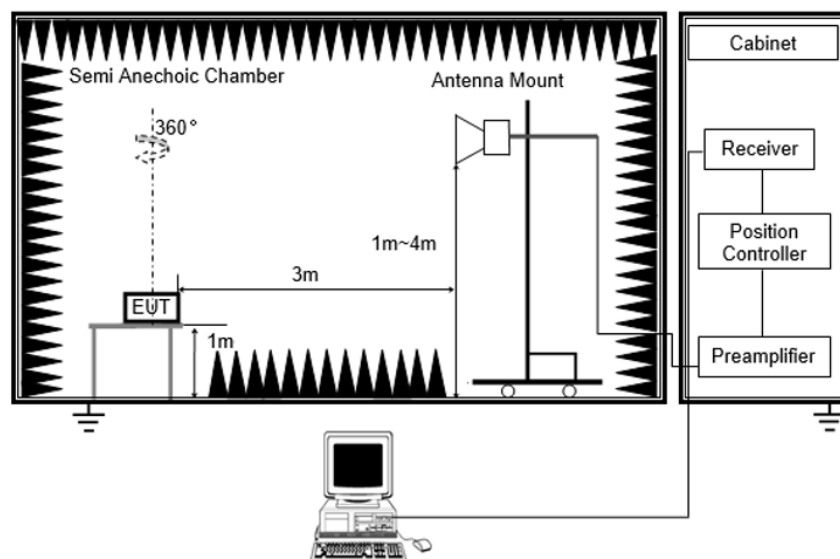
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- 2) The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- 3) The EUT was placed on a turntable with 1m meter above ground.
- 4) The EUT was set 3 meters from the interference receiving antenna, test antenna mast is remotely controlled and can be varied in height form 1m to 4m.
- 5) 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.
- 6) I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.

- 7) For ovens rated at 1000 watts or less power output, the beaker shall contain quantities of water as listed in the following subparagraphs, For ovens rated at more than 1000 watts output, each quantity shall be increased by 50% for each 500 watts or fraction there of in excess of 1000 watts,
- Load for measurement of radiation on second and third harmonic; Two loads, one of 700ml and the other of 300ml, 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.
 - All other emissions were measured while a 700ml water load was placed in the center of the oven.
- 8) The setting of the spectrum analyser

RBW	1MHz
VBW	3MHz
Detector	Peak / Average [#]

Note: # Peak for pre-scan, average for the final result.

TEST SETUP



TEST ENVIRONMENT

Temperature	21.3°C	Relative Humidity	60.5%
Atmosphere Pressure	101kPa		

TEST DATE / ENGINEER

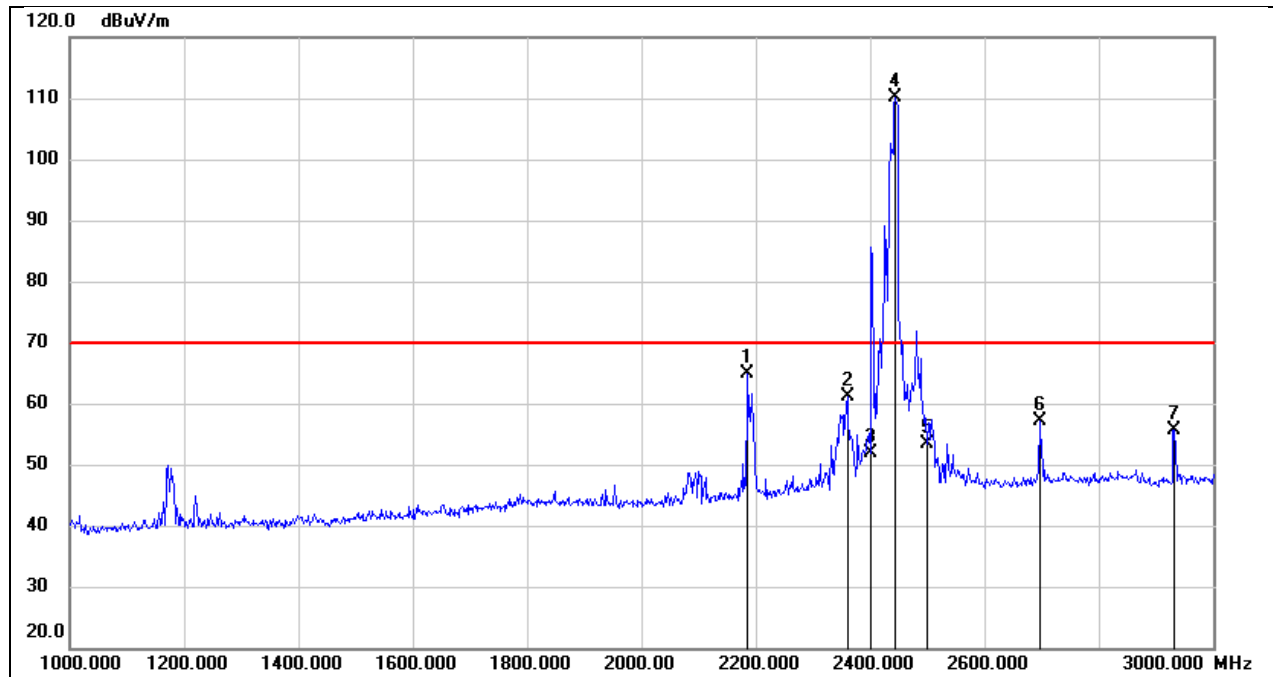
Test Date	July 5, 2024	Test By	Mason Wang
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TEST MODE

Pre-test Mode:	M02 ~ M03
Final Test Mode:	M02, M03

TEST RESULTS

Test Mode:	M02	Polarity:	Horizontal
Test Voltage:	AC 120V_60Hz		

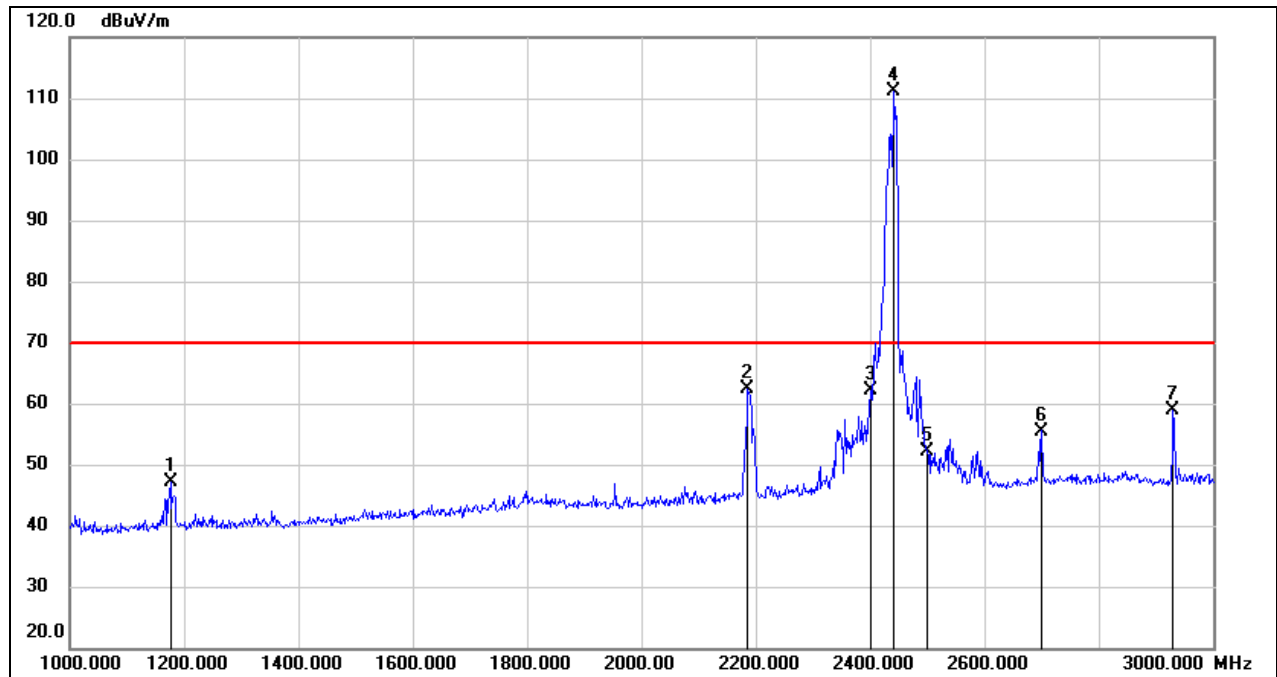


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2186.000	33.19	31.80	64.99	69.92	-4.93	AVG
2	2360.000	28.39	32.76	61.15	69.92	-8.77	AVG
3	2400.000	19.01	32.98	51.99	/	/	exempted frequency band
4	2444.000	77.19	32.95	110.14	/	/	exempted frequency band
5	2500.000	20.52	32.93	53.45	/	/	exempted frequency band
6	2696.000	23.88	33.13	57.01	69.92	-12.91	AVG
7	2932.000	21.91	33.69	55.60	69.92	-14.32	AVG

Remark:

1. Result = Reading +Correct (Amplifier Factor + Cable Loss + Antenna Factor)
2. Margin = Result - Limit

Test Mode:	M02	Polarity:	Vertical
Test Voltage:	AC 120V_60Hz		

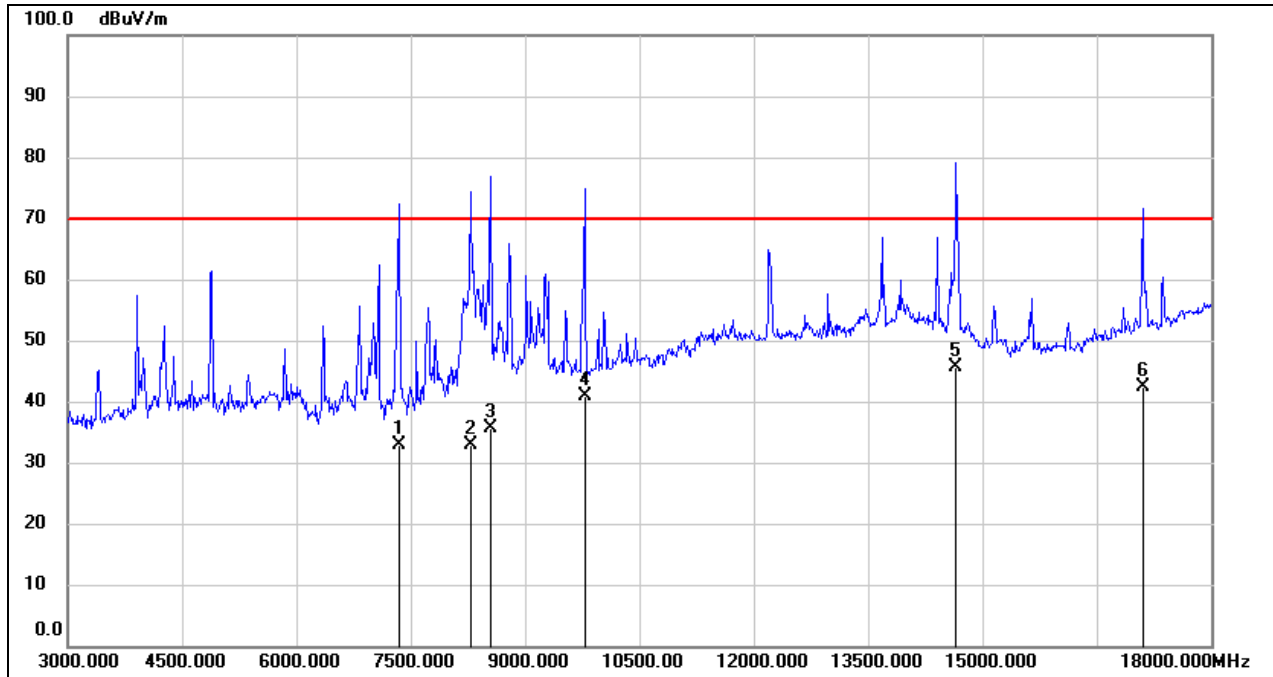


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1176.000	18.75	28.27	47.02	69.92	-22.90	AVG
2	2186.000	30.58	31.80	62.38	69.92	-7.54	AVG
3	2400.000	29.12	32.98	62.10	/	/	exempted frequency band
4	2442.000	78.05	32.96	111.01	/	/	exempted frequency band
5	2500.000	19.08	32.93	52.01	/	/	exempted frequency band
6	2700.000	22.35	33.15	55.50	69.92	-14.42	AVG
7	2930.000	25.12	33.68	58.80	69.92	-11.12	AVG

Remark:

1. Result = Reading +Correct (Amplifier Factor + Cable Loss + Antenna Factor)
2. Margin = Result - Limit

Test Mode:	M02	Polarity:	Horizontal
Test Voltage:	AC 120V_60Hz		

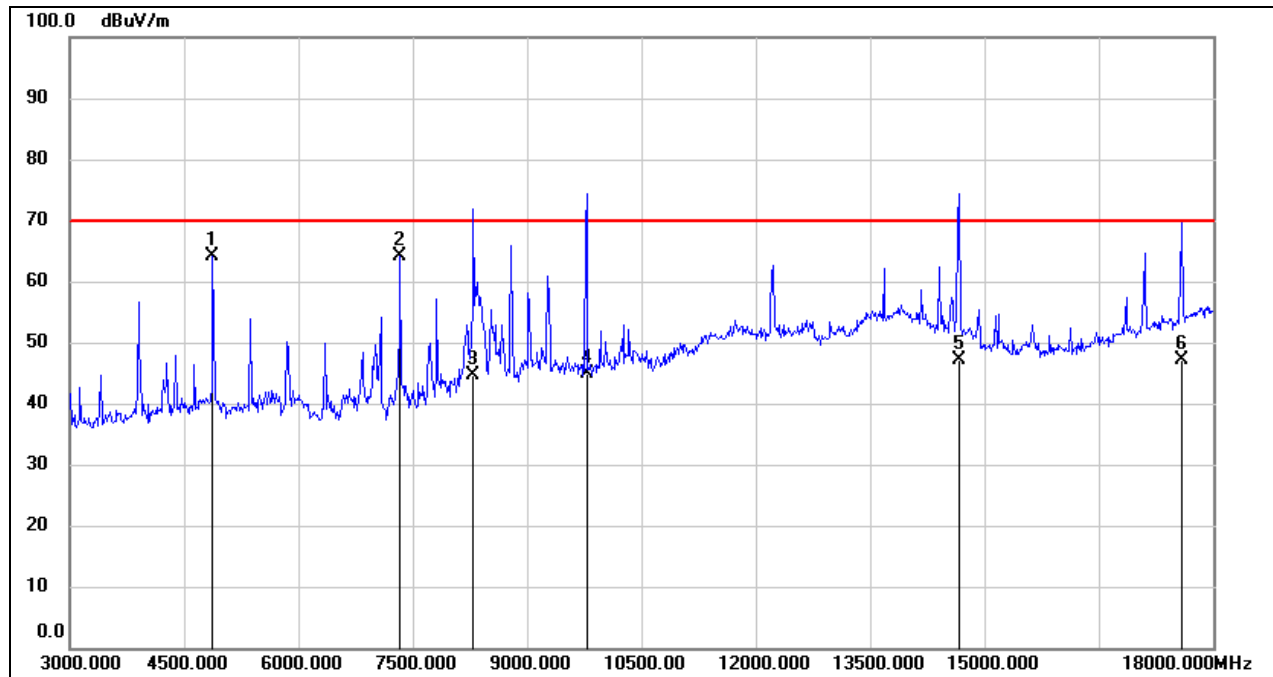


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7350.000	25.63	7.17	32.80	69.92	-37.12	AVG
2	8280.000	24.34	8.46	32.80	69.92	-37.12	AVG
3	8550.000	27.24	8.46	35.70	69.92	-34.22	AVG
4	9780.000	29.33	11.47	40.80	69.92	-29.12	AVG
5	14655.000	25.74	19.96	45.70	69.92	-24.22	AVG
6	17100.000	20.25	22.25	42.50	69.92	-27.42	AVG

Remark:

1. Result = Reading +Correct (Amplifier Factor + Cable Loss + Antenna Factor)
2. Margin = Result - Limit

Test Mode:	M02	Polarity:	Vertical
Test Voltage:	AC 120V_60Hz		



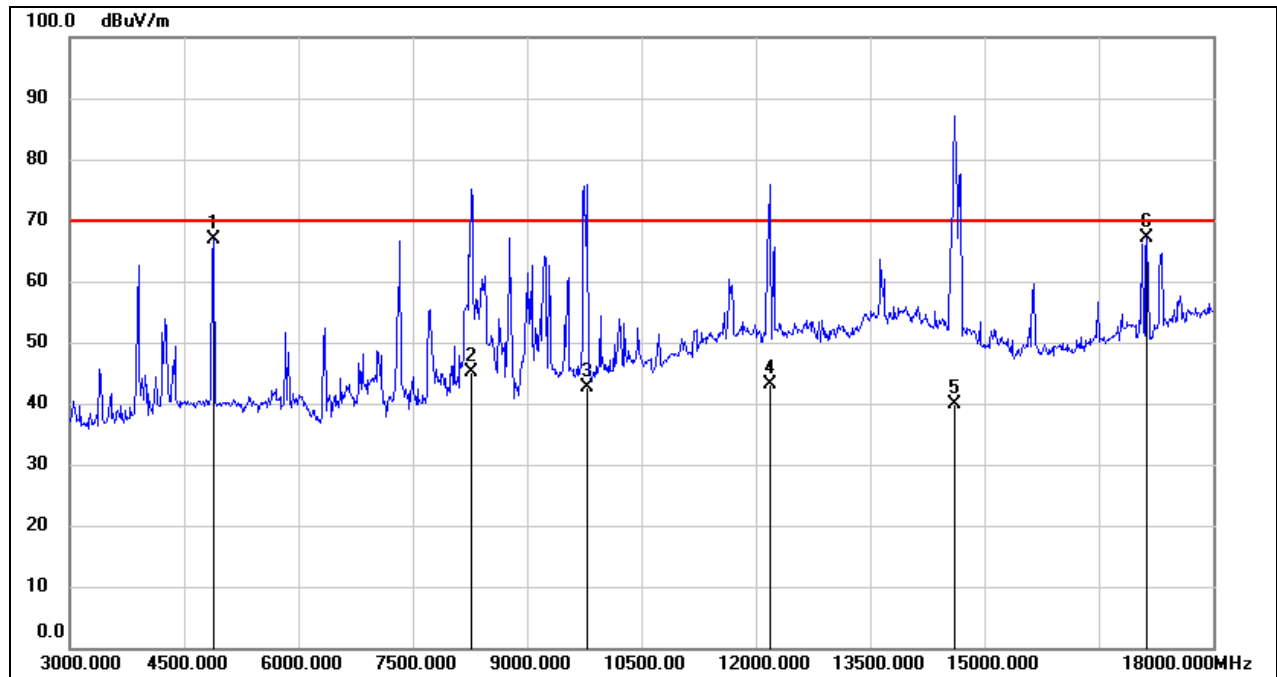
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	63.60	0.61	64.21	69.92	-5.71	peak
2	7335.000	57.17	7.07	64.24	69.92	-5.68	peak
3	8295.000	36.32	8.38	44.70	69.92	-25.22	AVG
4	9780.000	33.43	11.47	44.90	69.92	-25.02	AVG
5	14670.000	27.19	19.91	47.10	69.92	-22.82	AVG
6	17595.000	22.99	24.21	47.20	69.92	-22.72	AVG

Remark:

1. Result = Reading + Correct (Amplifier Factor + Cable Loss + Antenna Factor)

2. Margin = Result - Limit

Test Mode:	M03	Polarity:	Horizontal
Test Voltage:	AC 120V_60Hz		



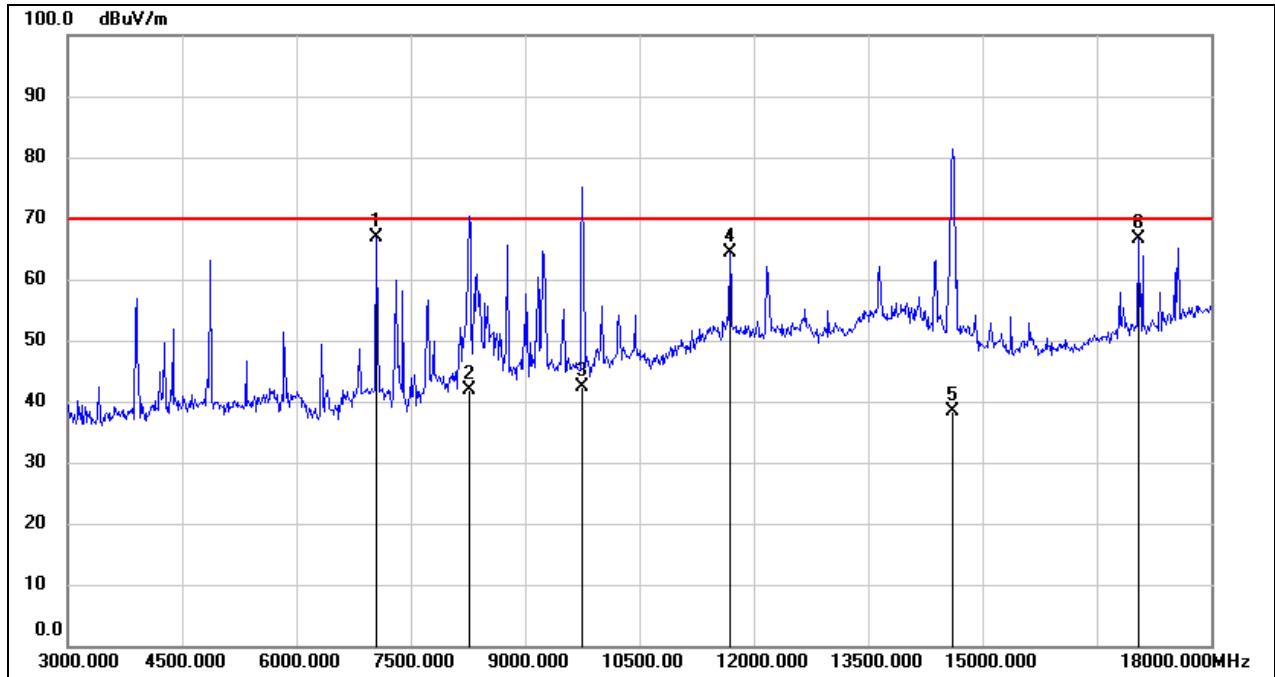
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4890.000	66.31	0.64	66.95	69.92	-2.97	peak
2	8265.000	36.67	8.53	45.20	69.92	-24.72	AVG
3	9780.000	31.23	11.47	42.70	69.92	-27.22	AVG
4	12180.000	24.77	18.33	43.10	69.92	-26.82	AVG
5	14610.000	19.77	20.13	39.90	69.92	-30.02	AVG
6	17130.000	44.64	22.45	67.09	69.92	-2.83	peak

Remark:

1. Result = Reading + Correct (Amplifier Factor + Cable Loss + Antenna Factor)

2. Margin = Result - Limit

Test Mode:	M03	Polarity:	Vertical
Test Voltage:	AC 120V_60Hz		



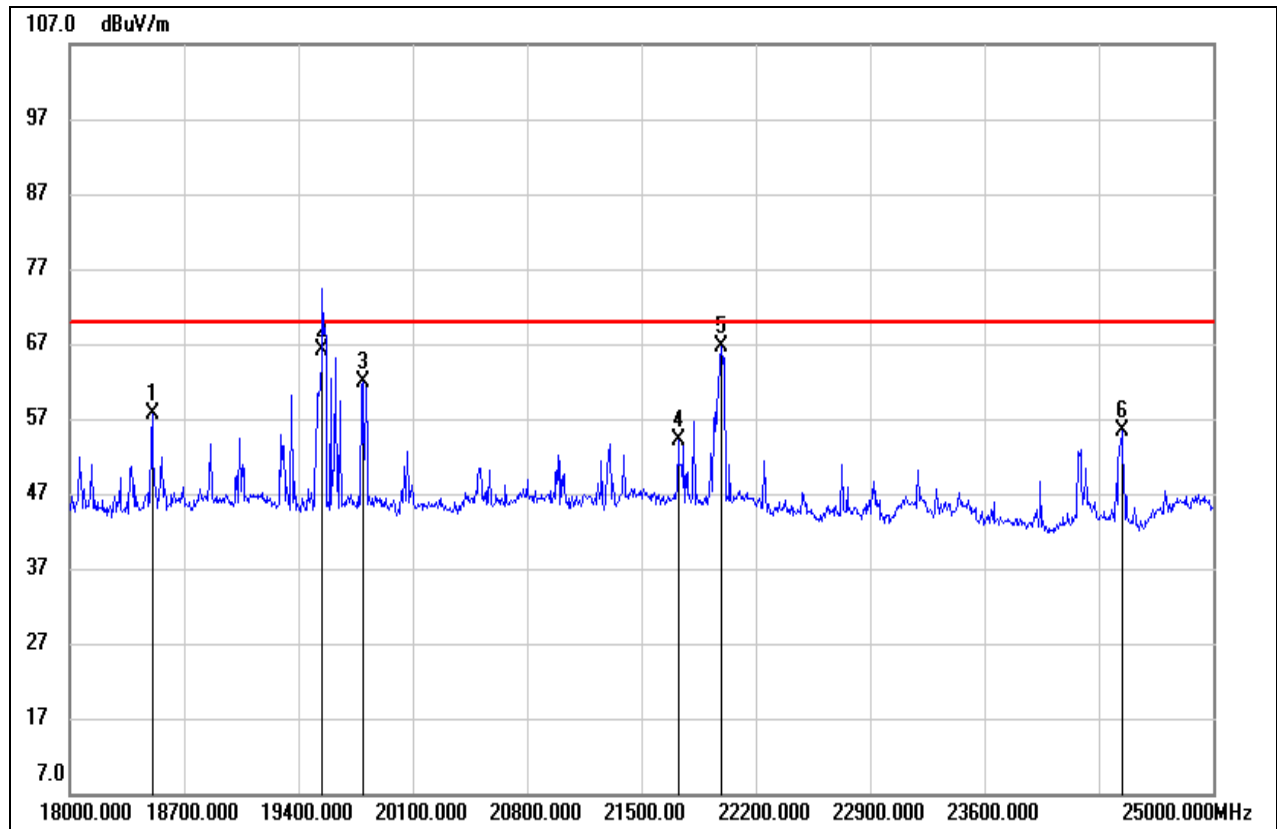
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7050.000	59.66	7.19	66.85	69.92	-3.07	peak
2	8265.000	33.27	8.53	41.80	69.92	-28.12	AVG
3	9750.000	31.10	11.40	42.50	69.92	-27.42	AVG
4	11685.000	47.01	17.28	64.29	69.92	-5.63	peak
5	14610.000	18.27	20.13	38.40	69.92	-31.52	AVG
6	17040.000	44.73	21.85	66.58	69.92	-3.34	peak

Remark:

1. Result = Reading +Correct (Amplifier Factor + Cable Loss + Antenna Factor)

2. Margin = Result - Limit

Test Mode:	M02	Polarity:	Horizontal
Test Voltage:	AC 120V_60Hz		

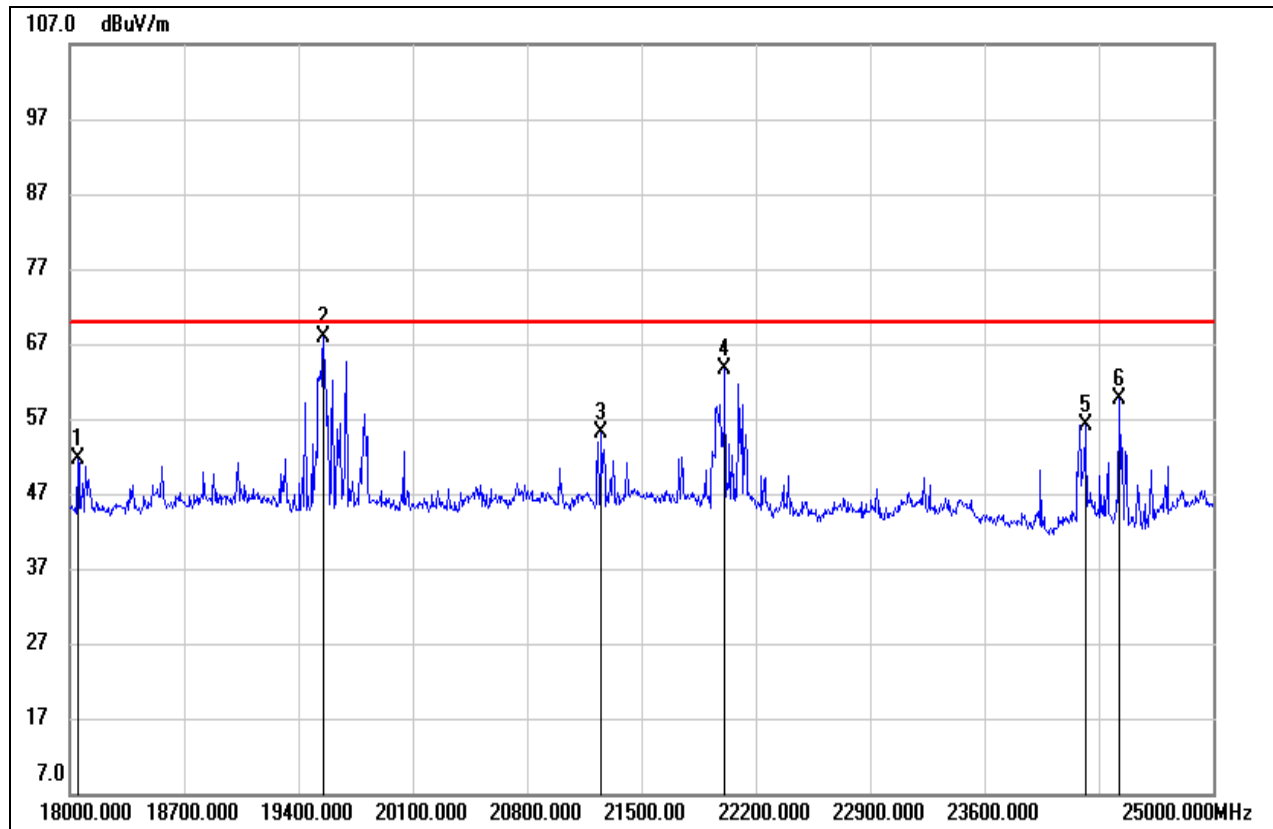


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	18504.000	60.68	-3.14	57.54	69.92	-12.38	peak
2	19548.538	69.45	-3.42	66.03	69.92	-3.89	AVG
3	19792.000	65.52	-3.54	61.98	69.92	-7.94	peak
4	21724.000	56.24	-2.19	54.05	69.92	-15.87	peak
5	21990.000	68.07	-1.50	66.57	69.92	-3.35	peak
6	24440.000	55.78	-0.48	55.30	69.92	-14.62	peak

Remark:

1. Result = Reading + Correct (Amplifier Factor + Cable Loss + Antenna Factor)
2. Margin = Result - Limit

Test Mode:	M02	Polarity:	Vertical
Test Voltage:	AC 120V_60Hz		



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	18049.000	53.77	-2.11	51.66	69.92	-18.26	peak
2	19554.000	71.43	-3.43	68.00	69.92	-1.92	peak
3	21255.000	57.63	-2.57	55.06	69.92	-14.86	peak
4	22011.000	65.07	-1.49	63.58	69.92	-6.34	peak
5	24216.000	56.85	-0.60	56.25	69.92	-13.67	peak
6	24426.000	60.22	-0.48	59.74	69.92	-10.18	peak

Remark:

1. Result = Reading + Correct (Amplifier Factor + Cable Loss + Antenna Factor)
2. Margin = Result - Limit

7.4. OPERATING FREQUENCY

LIMITS

2400MHz~2500MHz

TEST PROCEDURE

The EUT was setup inside the Fully Anechoic chamber, and a double ridge horn antenna and spectrum analyzer were used to measure the fundamental frequency of the EUT.

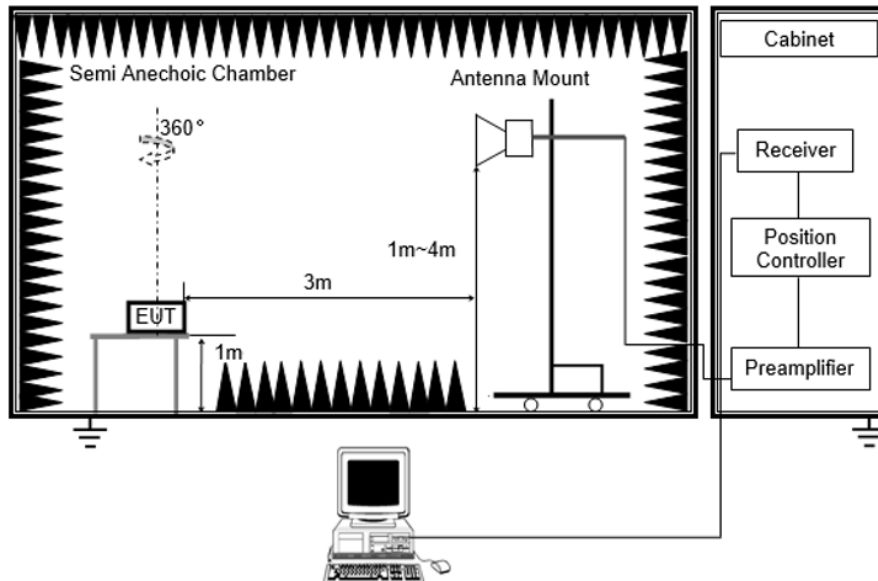
1) FREQUENCY FOR NORMAL VOLTAGE

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. This test is made with nominal rated ac supply voltage.

2) 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% of the nominal rating.

TEST SETUP



TEST ENVIRONMENT

Temperature	20.7°C	Relative Humidity	60.2%
Atmosphere Pressure	101kPa		

TEST DATE / ENGINEER

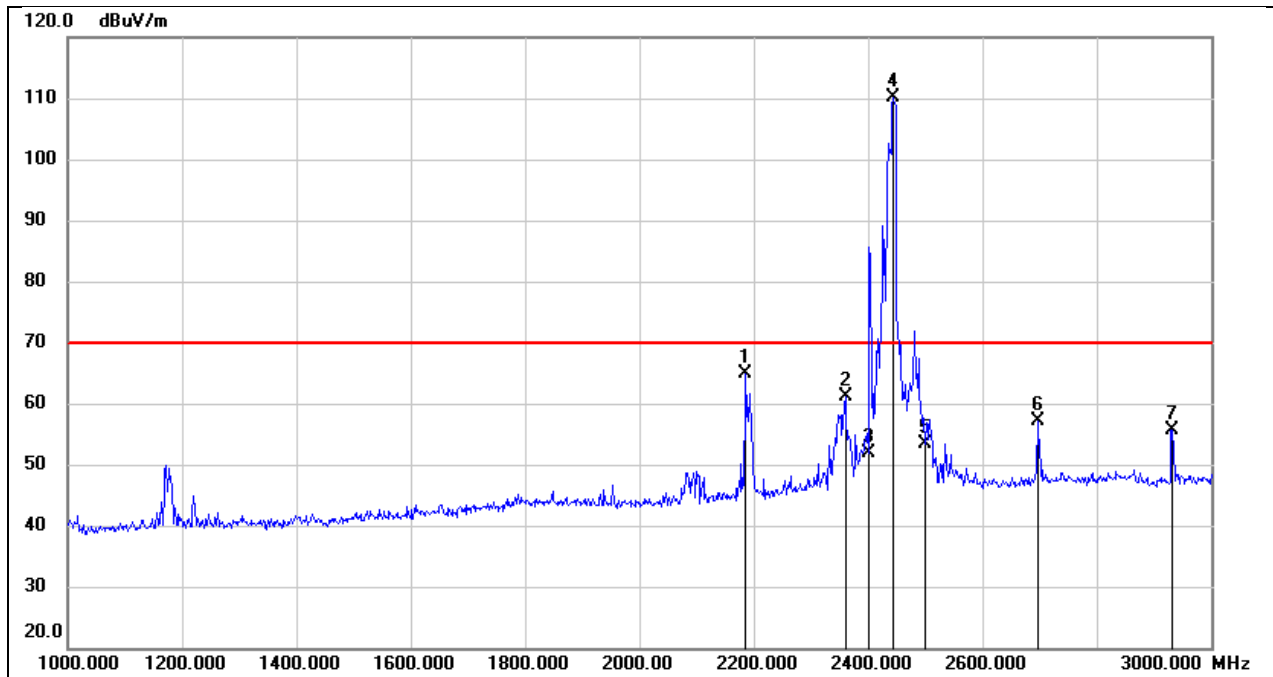
Test Date	July 5, 2024	Test By	Mason Wang
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TEST MODE

Pre-test Mode:	M01
Final Test Mode:	M01

TEST RESULTS

Test Mode:	M01	Polarity:	Horizontal
Test Voltage:	AC 120V_60Hz	Volume of Water:	1000mL

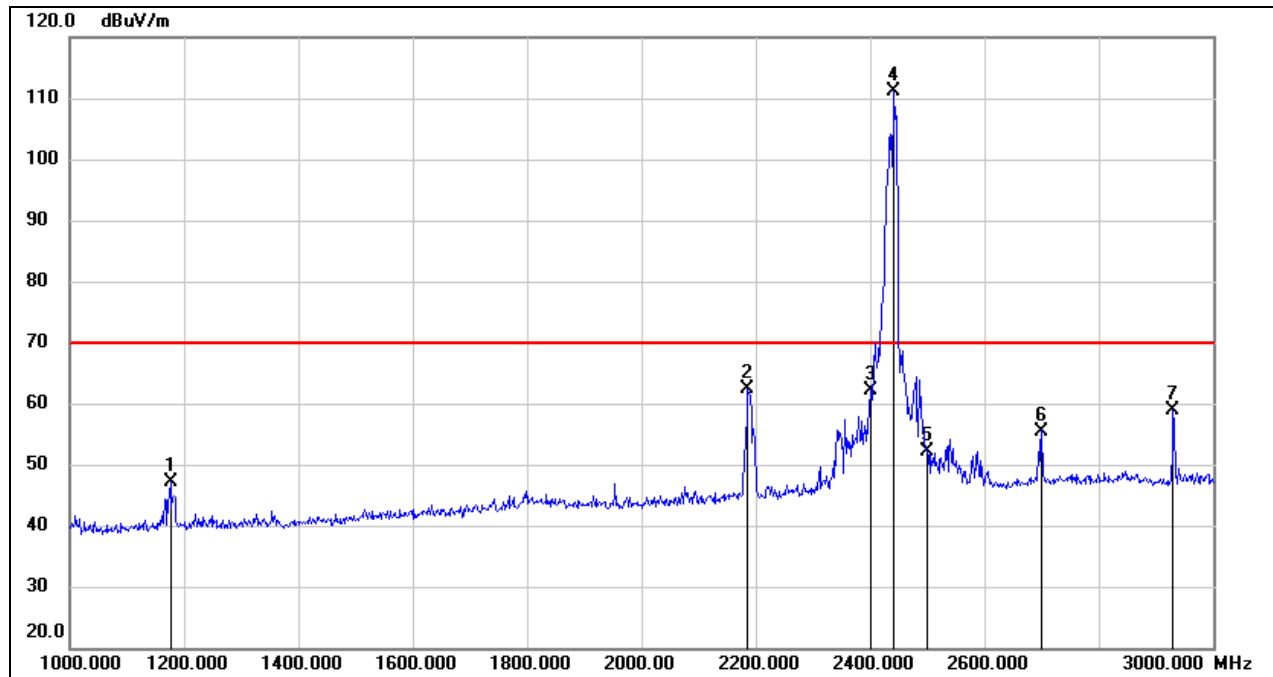


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2186.000	33.19	31.80	64.99	69.92	-4.93	peak
2	2360.000	28.39	32.76	61.15	69.92	-8.77	peak
3	2400.000	19.01	32.98	51.99	/	/	ISM frequency
4	2444.000	77.19	32.95	110.14	/	/	ISM frequency
5	2500.000	20.52	32.93	53.45	/	/	ISM frequency
6	2696.000	23.88	33.13	57.01	69.92	-12.91	peak
7	2932.000	21.91	33.69	55.60	69.92	-14.32	peak

Remark:

1. Result = Reading +Correct (Amplifier Factor + Cable Loss + Antenna Factor)
2. Margin = Result - Limit

Test Mode:	M01	Polarity:	Vertical
Test Voltage:	AC 120V_60Hz	Volume of Water:	1000mL

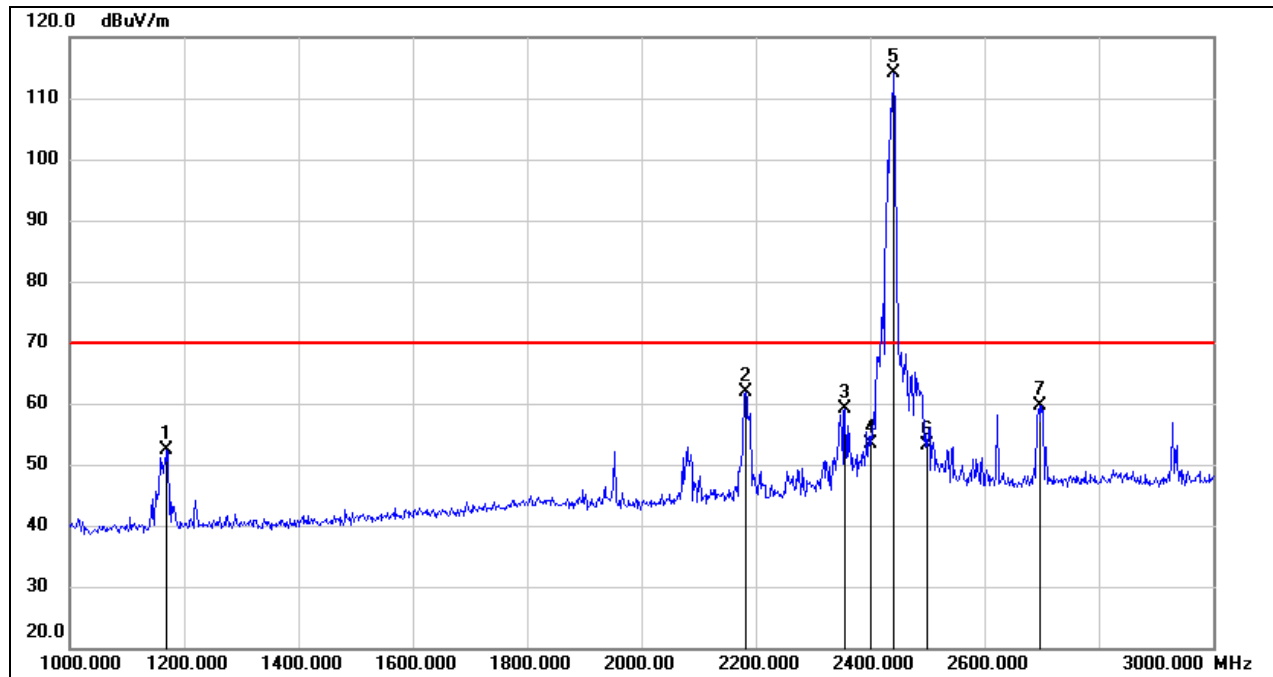


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1176.000	18.75	28.27	47.02	69.92	-22.90	peak
2	2186.000	30.58	31.80	62.38	69.92	-7.54	peak
3	2400.000	29.12	32.98	62.10	/	/	ISM frequency
4	2442.000	78.05	32.96	111.01	/	/	ISM frequency
5	2500.000	19.08	32.93	52.01	/	/	ISM frequency
6	2700.000	22.35	33.15	55.50	69.92	-14.42	peak
7	2930.000	25.12	33.68	58.80	69.92	-11.12	peak

Remark:

1. Result = Reading + Correct (Amplifier Factor + Cable Loss + Antenna Factor)
2. Margin = Result - Limit

Test Mode:	M01	Polarity:	Horizontal
Test Voltage:	AC 120V_60Hz	Volume of Water:	600mL

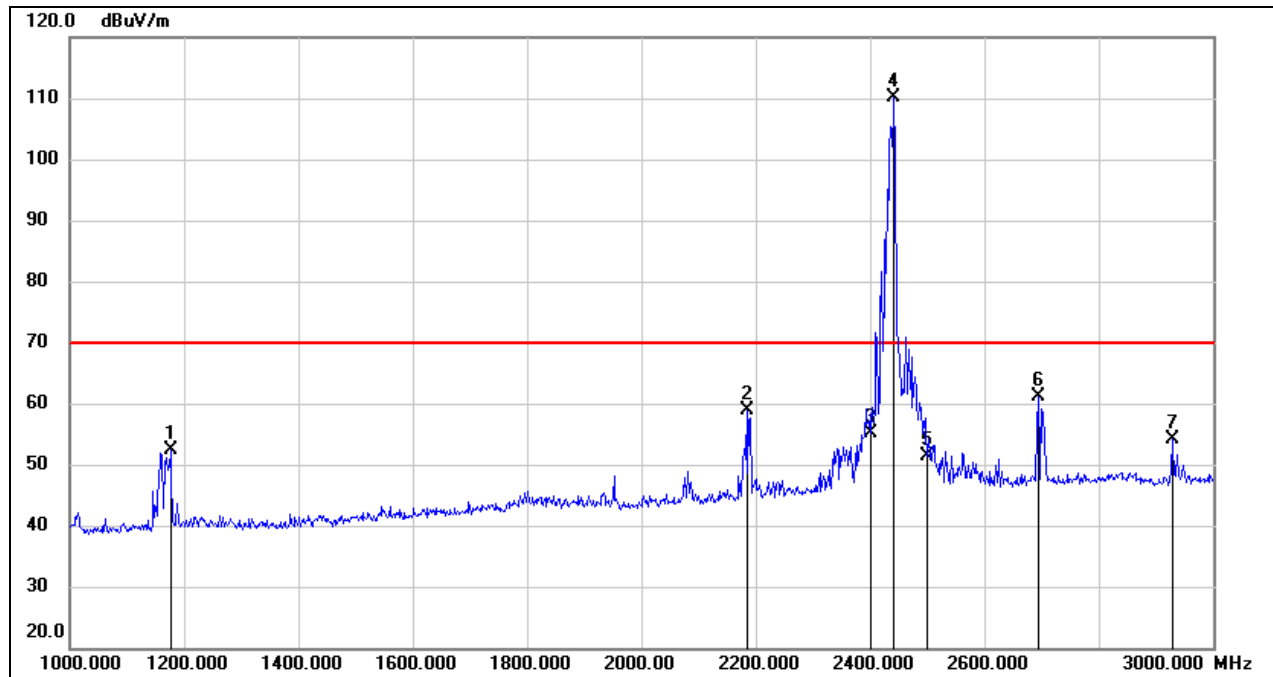


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1170.000	24.06	28.22	52.28	69.92	-17.64	peak
2	2182.000	30.06	31.78	61.84	69.92	-8.08	peak
3	2356.000	26.28	32.74	59.02	69.92	-10.90	peak
4	2400.000	20.43	32.98	53.41	/	/	ISM frequency
5	2440.000	81.11	32.96	114.07	/	/	ISM frequency
6	2500.000	20.25	32.93	53.18	/	/	ISM frequency
7	2696.000	26.54	33.13	59.67	69.92	-10.25	peak

Remark:

1. Result = Reading + Correct (Amplifier Factor + Cable Loss + Antenna Factor)
2. Margin = Result - Limit

Test Mode:	M01	Polarity:	Vertical
Test Voltage:	AC 120V_60Hz	Volume of Water:	600mL

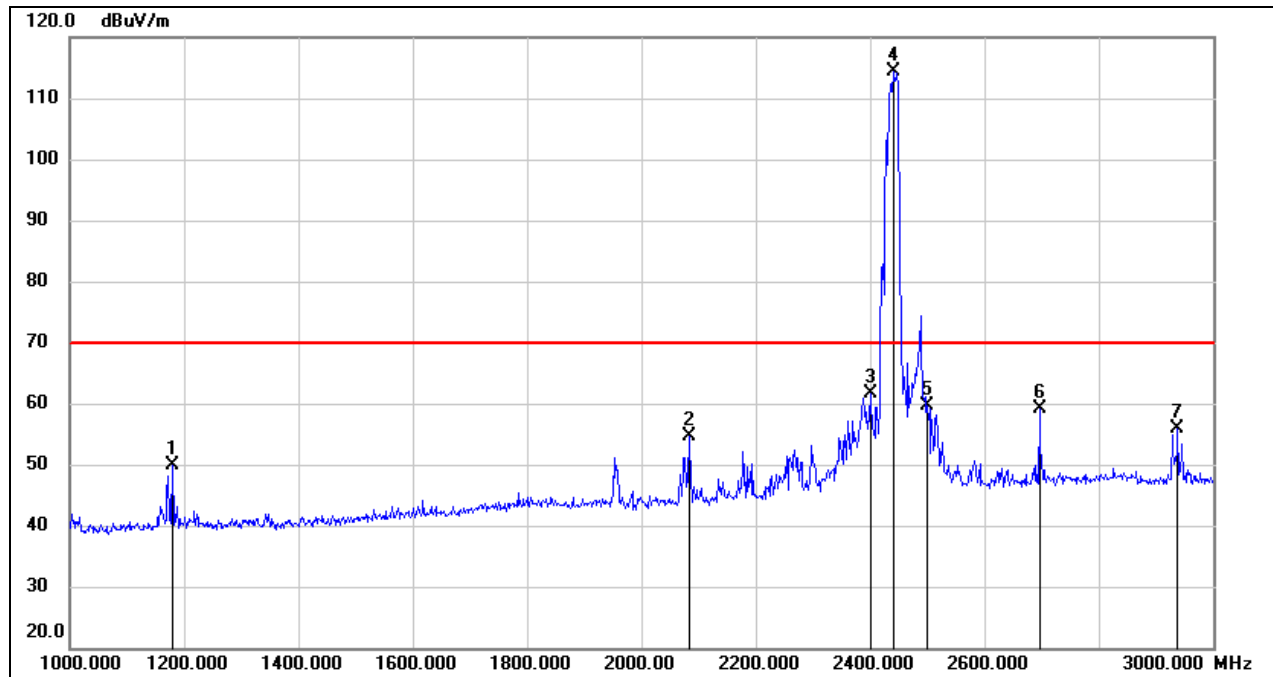


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1176.000	24.11	28.27	52.38	69.92	-17.54	peak
2	2184.000	26.99	31.79	58.78	69.92	-11.14	peak
3	2400.000	22.04	32.98	55.02	/	/	ISM frequency
4	2442.000	77.18	32.96	110.14	/	/	ISM frequency
5	2500.000	18.41	32.93	51.34	/	/	ISM frequency
6	2694.000	27.88	33.13	61.01	69.92	-8.91	peak
7	2928.000	20.46	33.68	54.14	69.92	-15.78	peak

Remark:

1. Result = Reading + Correct (Amplifier Factor + Cable Loss + Antenna Factor)
2. Margin = Result - Limit

Test Mode:	M01	Polarity:	Horizontal
Test Voltage:	AC 120V_60Hz	Volume of Water:	200mL

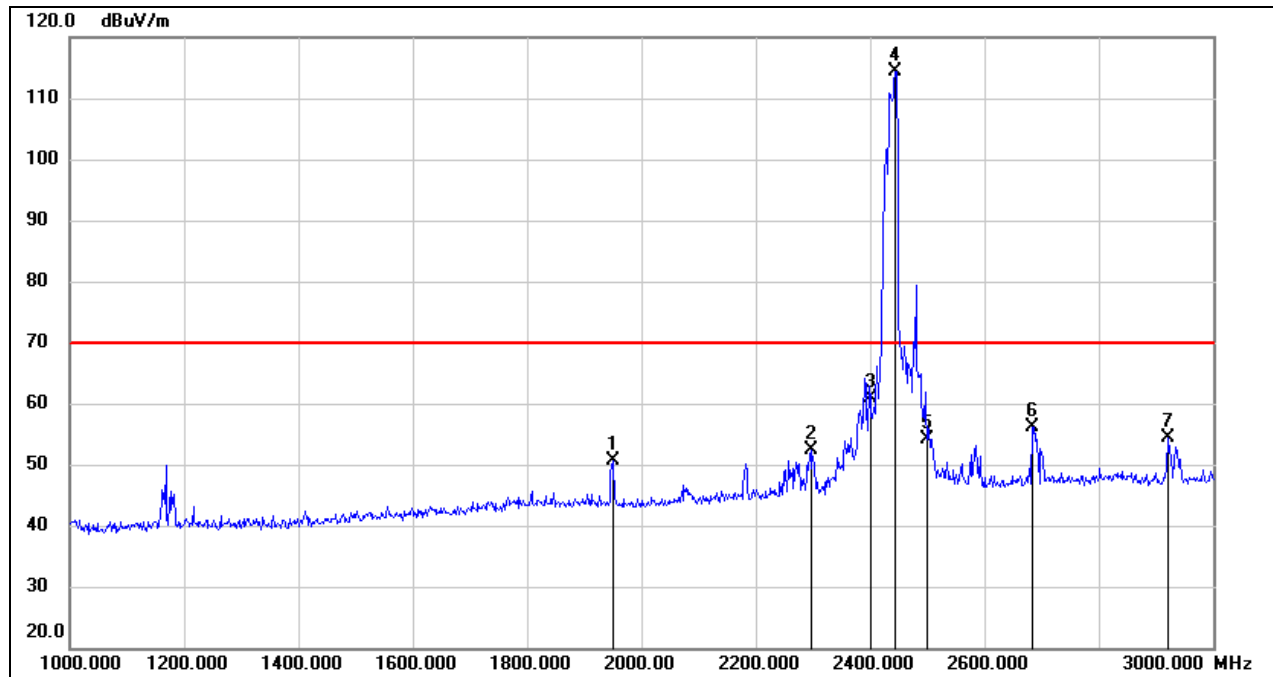


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1180.000	21.65	28.30	49.95	69.92	-19.97	peak
2	2084.000	23.50	31.24	54.74	69.92	-15.18	peak
3	2400.000	28.61	32.98	61.59	/	/	ISM frequency
4	2440.000	81.30	32.96	114.26	/	/	ISM frequency
5	2500.000	26.73	32.93	59.66	/	/	ISM frequency
6	2696.000	26.06	33.13	59.19	69.92	-10.73	peak
7	2938.000	22.16	33.69	55.85	69.92	-14.07	peak

Remark:

1. Result = Reading + Correct (Amplifier Factor + Cable Loss + Antenna Factor)
2. Margin = Result - Limit

Test Mode:	M01	Polarity:	Vertical
Test Voltage:	AC 120V_60Hz	Volume of Water:	200mL

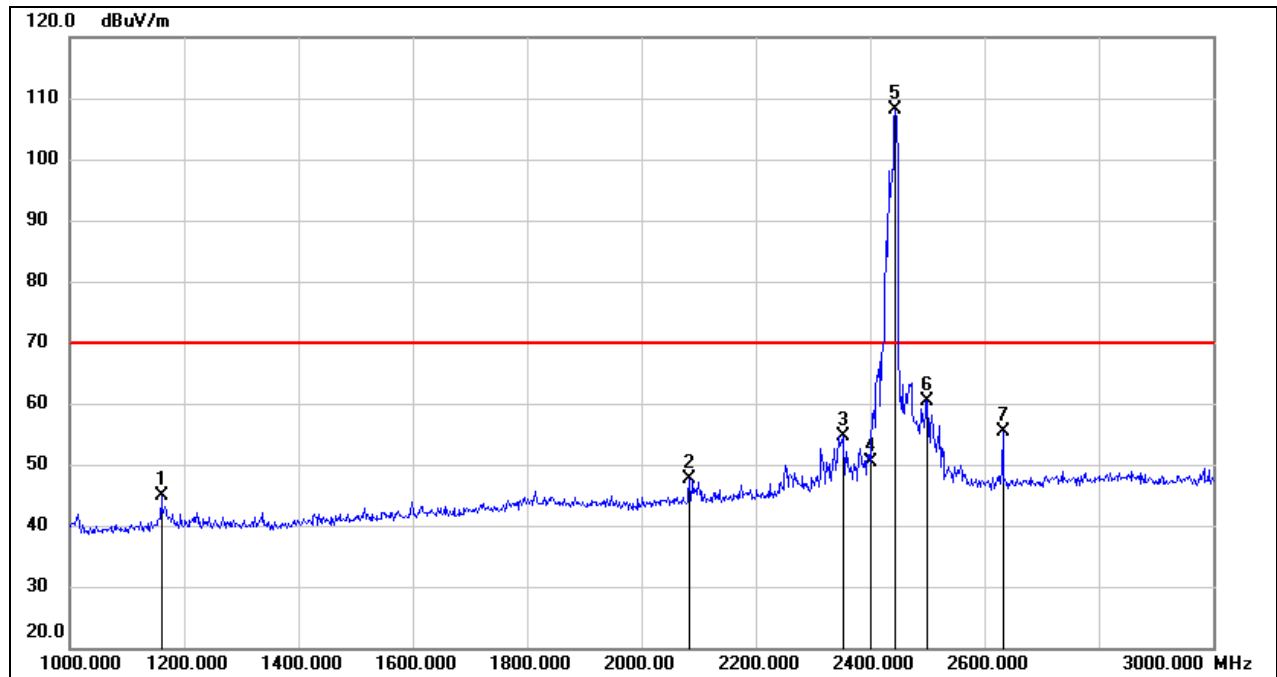


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1950.000	19.73	30.79	50.52	69.92	-19.40	peak
2	2296.000	19.86	32.41	52.27	69.92	-17.65	peak
3	2400.000	27.89	32.98	60.87	/	/	ISM frequency
4	2444.000	81.49	32.95	114.44	/	/	ISM frequency
5	2500.000	21.09	32.93	54.02	/	/	ISM frequency
6	2684.000	22.99	33.09	56.08	69.92	-13.84	peak
7	2920.000	20.71	33.67	54.38	69.92	-15.54	peak

Remark:

1. Result = Reading + Correct (Amplifier Factor + Cable Loss + Antenna Factor)
2. Margin = Result - Limit

Test Mode:	M01	Polarity:	Horizontal
Test Voltage:	AC 96V_60Hz		

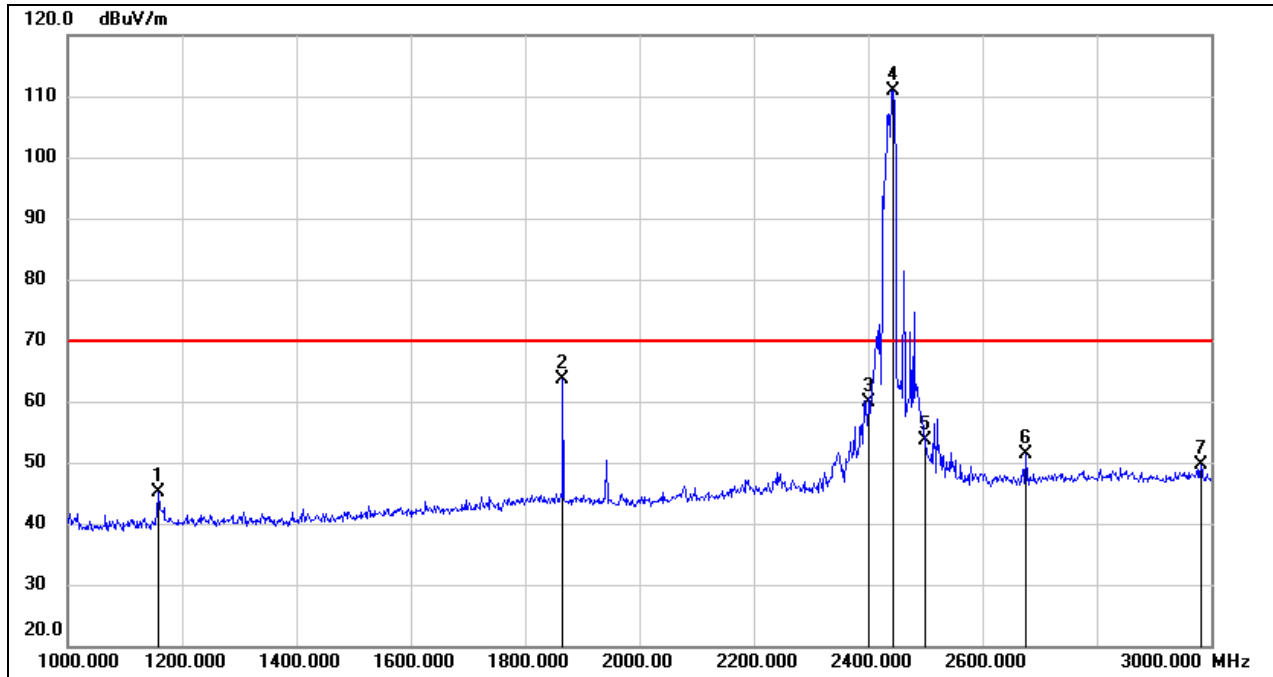


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1160.000	16.76	28.12	44.88	69.92	-25.04	peak
2	2084.000	16.30	31.24	47.54	69.92	-22.38	peak
3	2352.000	21.82	32.72	54.54	69.92	-15.38	peak
4	2400.000	17.29	32.98	50.27	/	/	ISM frequency
5	2444.000	75.25	32.95	108.20	/	/	ISM frequency
6	2500.000	27.47	32.93	60.40	/	/	ISM frequency
7	2632.000	22.35	32.91	55.26	69.92	-14.66	peak

Remark:

1. Result = Reading + Correct (Amplifier Factor + Cable Loss + Antenna Factor)
2. Margin = Result - Limit

Test Mode:	M01	Polarity:	Vertical
Test Voltage:	AC 96V_60Hz		

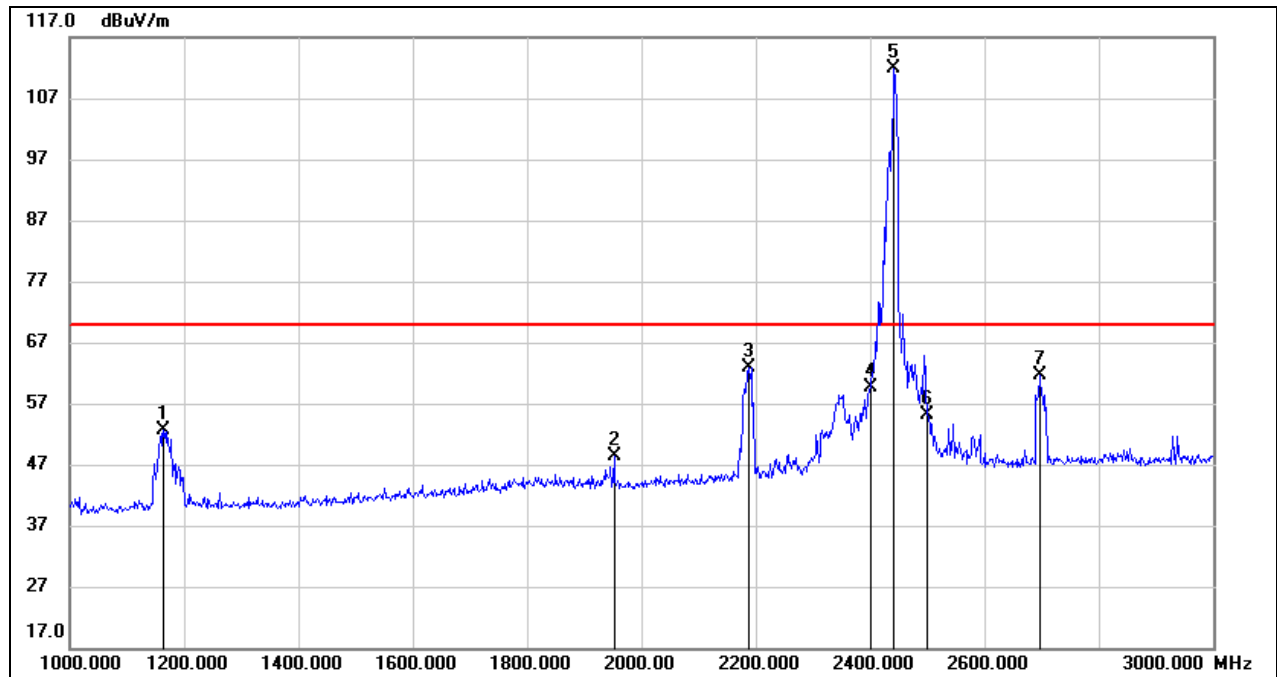


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1158.000	17.11	28.11	45.22	69.92	-24.70	peak
2	1866.000	32.85	30.84	63.69	69.92	-6.23	peak
3	2400.000	26.99	32.98	59.97	/	/	ISM frequency
4	2444.000	77.94	32.95	110.89	/	/	ISM frequency
5	2500.000	20.66	32.93	53.59	/	/	ISM frequency
6	2676.000	18.28	33.07	51.35	69.92	-18.57	peak
7	2982.000	15.99	33.76	49.75	69.92	-20.17	peak

Remark:

1. Result = Reading +Correct (Amplifier Factor + Cable Loss + Antenna Factor)
2. Margin = Result - Limit

Test Mode:	M01	Polarity:	Horizontal
Test Voltage:	AC 132V_60Hz		

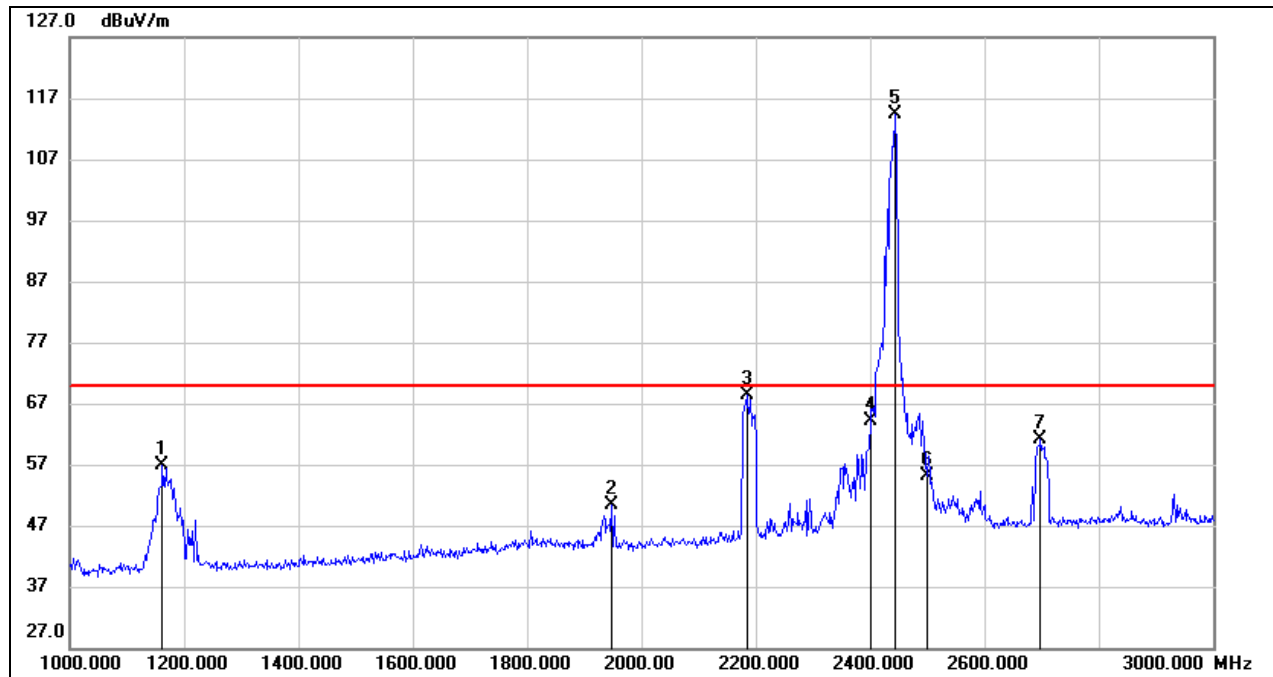


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1164.000	24.42	28.16	52.58	69.92	-17.34	peak
2	1952.000	17.55	30.79	48.34	69.92	-21.58	peak
3	2188.000	31.14	31.81	62.95	69.92	-6.97	peak
4	2400.000	26.60	32.98	59.58	/	/	ISM frequency
5	2442.000	78.97	32.96	111.93	/	/	ISM frequency
6	2500.000	22.32	32.93	55.25	/	/	ISM frequency
7	2696.000	28.59	33.13	61.72	69.92	-8.20	peak

Remark:

1. Result = Reading + Correct (Amplifier Factor + Cable Loss + Antenna Factor)
2. Margin = Result - Limit
3. According to the declaration of the manufacturer, the EUT support maximum operating voltage of nominal supply voltage multiplier 1.1

Test Mode:	M01	Polarity:	Vertical
Test Voltage:	AC 132V_60Hz		



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1162.000	28.80	28.14	56.94	69.92	-12.98	peak
2	1948.000	19.53	30.80	50.33	69.92	-19.59	peak
3	2184.000	36.58	31.79	68.37	69.92	-1.55	peak
4	2400.000	31.15	32.98	64.13	/	/	ISM frequency
5	2444.000	81.54	32.95	114.49	/	/	ISM frequency
6	2500.000	22.14	32.93	55.07	/	/	ISM frequency
7	2698.000	27.91	33.15	61.06	69.92	-8.86	peak

Remark:

1. Result = Reading +Correct (Amplifier Factor + Cable Loss + Antenna Factor)
2. Margin = Result – Limit
3. According to the declaration of the manufacturer, the EUT support maximum operating voltage of nominal supply voltage multiplier 1.1

7.5. INPUT POWER

TEST PROCEDURE

- 1) The input power and current was measured using a power source.
- 2) For ovens rated at 1000 watts or less power output, the beaker shall contain quantities of water as listed in the following subparagraphs, for ovens rated at more than 1000 watts output, each quantity shall be increased by 50% for each 500 watts or fraction there of in excess of 1000 watts,
A 700ml water load in a beaker was located in the center of the microwave oven and the microwave oven was set to full power.

TEST ENVIRONMENT

Temperature	26.0°C	Relative Humidity	57%
Atmosphere Pressure	101kPa		

TEST DATE / ENGINEER

Test Date	June 7, 2024	Test By	Wite Chen
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TEST MODE

Pre-test Mode:	M01
Final Test Mode:	M01

TEST RESULTS

Input Power

Input Voltage (Vac)	Input Current (A)	Power Factor	Measured Input Power (W)	Rated Input Power (W)
120	12.845	0.903	1396.21	786.11

7.6. OUTPUT POWER

TEST PROCEDURE

- 1) The caloric method was used to determine full output power.
- 2) For ovens rated at 1000 watts or less power output, the beaker shall contain quantities of water as listed in the following subparagraphs, For ovens rated at more than 1000 watts output, each quantity shall be increased by 50% for each 500 watts or fraction thereof in excess of 1000 watts,
Load for power output measurement: 1000 milliliters of water in the beaker located in the center of the oven
- 3) The Microwave Oven was set to maximum power and operation 120 seconds, Then measure and record the temperature of the water.
- 4) According to the calculated formula:

$$P = 4.187 * m_{\text{water}} * (T_2 - T_1) / \text{Time}$$

P: the microwave power output(W)

m_{water} : the mass of the water(g)

T_1 : the initial temperature of the water(°C)

T_2 : the final temperature of the water(°C)

Time: the heating time (second)

TEST ENVIRONMENT

Temperature	23.5°C	Relative Humidity	58%
Atmosphere Pressure	101kPa		

TEST DATE / ENGINEER

Test Date	June 7, 2024	Test By	Wite Chen
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TEST MODE

Pre-test Mode:	M01
Final Test Mode:	M01

TEST RESULTS

Output Power				
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m _{water} (g)	T ₁ (°C)	T ₂ (°C)	Time (second)	P (W)
1000	23.6	46.13	120	786.11

Field strength limit

P (W)	Field strength limit 25 x SQRT (power/500)		
	(uV/m) @300m	dBuV/m@300m	dBuV/m@3m
786.11	31.35	29.92	69.92

$\text{dBuV/m} = 20\log(\text{uV/m})$

$\text{dBuV/m @3m} = \text{dBuV/m @300m} + 20\log(300\text{m}/3\text{m})$

7.7. RADIATION HAZARD

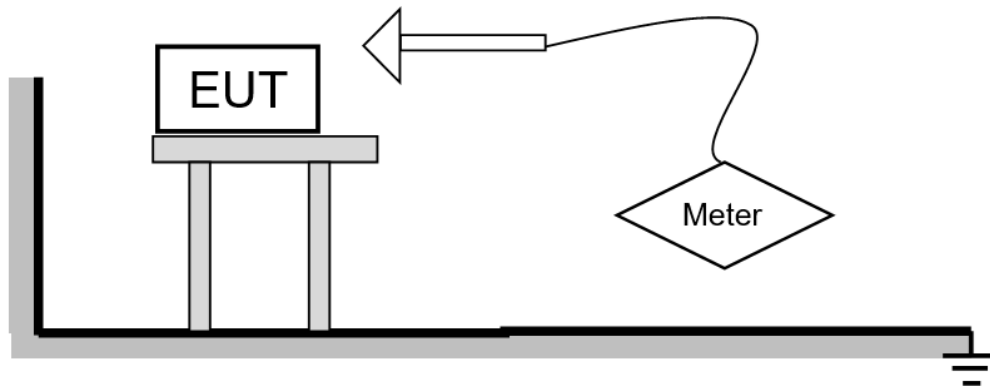
LIMITS

Maximum Emission (mW/cm ²)
1.00

TEST PROCEDURE

- 1) The EUT was set-up according to the FCC MP-5 and Part 18 for Radiation Hazard Measurement.
- 2) The measurement was using a microwave leakage meter to measure the Radiation leakage in the as-received condition with the oven door closed.
- 3) For ovens rated at 1000 watts or less power output, the beaker shall contain quantities of water as listed in the following subparagraphs, For ovens rated at more than 1000 watts output, each quantity shall be increased by 50% for each 500 watts or fraction thereof in excess of 1000 watts,
A 700ml water load in a beaker was located in the center of the oven and the Household Microwave Combi Oven was set to maximum power.
- 4) While the oven operating, the microwave survey meter probe was moved slowly around the door seams the check for maximum leakage.

TEST SETUP



TEST ENVIRONMENT

Temperature	23.5°C	Relative Humidity	57.6%
Atmosphere Pressure	101kPa		

TEST DATE / ENGINEER

Test Date	July 5, 2024	Test By	Karl Wu
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TEST MODE

Pre-test Mode:	M02
Final Test Mode:	M02

TEST RESULTS

Radiation Hazard

Maximum expose value mW/m ²	Limit (mW/m ²)	Result
0.037	1.00	Pass

END OF REPORT