

# TEST REPORT

Applicant Name: Whirlpool Microwave Products Development Limited.  
Address: 17th Fl, Elite Centre, 22 Hung To Rd, Kwun Tong, Hong Kong  
Report Number: 2501V06190E-EM-00A2  
FCC ID: PR4RED199X1

## Test Standard (s)

FCC PART 18

## Sample Description

Product Type: Household microwave oven  
Model No.: WMH31017  
Multiple Model(s) No.: AMV2307, UMV1170, MMMS4230, WMMS3130RZ01, WMMS3130R/XYZ, UMV1170L/XYZ, AMV2307P/XYZ, WMH31017/XYZ, MMMS4230P/XYZ (X, Y, Z=A-Z, 0-9 or blank, denote different cosmetic or color change.)  
Trade Mark: Whirlpool, MAYTAG, AMANA  
Date Received: 2025/07/24  
Issue Date: 2025/08/23

Test Result:

Pass▲

▲ In the configuration tested, the EUT complied with the standards above.

Prepared and Checked By:

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Joson Xiao  
EMC Engineer

Approved By:

*Moon Liu*

Moon Liu  
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Note: The information marked # is provided by the applicant, the laboratory is not responsible for its authenticity and this information can affect the validity of the result in the test report. Customer model name, addresses, names, trademarks etc. are included.

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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
0	2501V06190E-EM-00A2	Original Report	2025/08/23

## GENERAL INFORMATION

### Product Description for Equipment under Test (EUT)

Product	Household microwave oven
Tested Model	WMH31017
Multiple Model(s)	AMV2307, UMV1170, MMMS4230, WMMS3130RZ01, WMMS3130R/XYZ, UMV1170L/XYZ, AMV2307P/XYZ, WMH31017/XYZ, MMMS4230P/XYZ (X, Y, Z=A-Z,0-9 or blank, denote different cosmetic or color change.)
Voltage Range	AC 120V/60Hz
Highest operating frequency <sup>#</sup>	2450MHz±50MHz
Microwave Output power <sup>#</sup>	1000 W
Microwave Input power <sup>#</sup>	1800W
Sample serial number	37AW-1 (Assigned by BACL, Shenzhen)
Sample/EUT Status	Good condition
Adapter Information	N/A
Note: The Multiple models are electrically identical with the test model except for model number,trade name, cosmetic, door open style, color and transformer. Please refer to the declaration letter <sup>#</sup> for more detail, which was provided by manufacturer.	

### Objective

This report is in accordance with Part 2-Subpart J, and Part 18-Subparts A, B and C of the Federal Communication Commissions rules and regulations.

The objective of the manufacturer is to determine compliance with FCC Part 18 limits.

Note:

1. This is a CIIPC application for FCC ID: PR4RED199X1, the below changes was made based on the device granted on 08/15/2024 which was provided by the manufacturer:

- (1) Adding the model number “WMH31017, AMV2307, UMV1170, MMMS4230”.
- (2) Changing the trade name to “Whirlpool, MAYTAG, AMANA”.
- (3) Changing the main board and filter board.
- (4) Changing the transformer.
- (5) Changing the appearance.

Based on above difference listed, the modifications will impact all the test items, so in this report, all the test items were performed. We also updated the related EUT photos and test setup photos in the report.

2. The Bay Area Compliance Laboratories Corp. (Shenzhen) is responsible for all the information provided in this report, except when information is provided by the customer as identified in this report.

## Measurement Uncertainty

Item	Frequency Range		Expanded Measurement uncertainty
Conducted Emissions	AC Mains	150kHz ~30MHz	3.66dB(k=2, 95% level of confidence)
Radiated Emissions	0.009MHz~30MHz	/	3.60dB(k=2, 95% level of confidence)
	30MHz~200MHz	Horizontal	5.32dB(k=2, 95% level of confidence)
	30MHz~200MHz	Vertical	5.43dB(k=2, 95% level of confidence)
	200MHz~1000MHz	Horizontal	5.77dB(k=2, 95% level of confidence)
	200MHz~1000MHz	Vertical	5.73dB(k=2, 95% level of confidence)
	1GHz~6GHz	/	5.34dB(k=2, 95% level of confidence)
	6GHz~18GHz	/	5.40dB(k=2, 95% level of confidence)
	18GHz~40GHz	/	5.64dB(k=2, 95% level of confidence)
Nerve Simulation	H-Field		0.74dB(k=2, 95% level of confidence)
	E-Field		1.14dB(k=2, 95% level of confidence)

*Note: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.*

## Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Shenzhen) to collect test data is located on the 5F(B-West), 6F, 7F, the 3rd Phase of Wan Li Industrial Building D, Shihua Rd, FuTian Free Trade Zone, Shenzhen, China.

The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No. : 715558, the FCC Designation No. : CN5045.

Each test item follows test standards and with no deviation.

## OPERATING CONDITION/TEST CONFIGURATION

### Description of Test Configuration

The EUT was operated at maximum (continuous) RF output power. The loads consisted of water in a glass beaker in the amounts specified in the test procedure.

Test Mode: Microwave

### EUT Exercise Software

No exercise software was used.

### Special Accessories

No special accessory was used.

### Equipment Modifications

No modifications were made to the EUT tested.

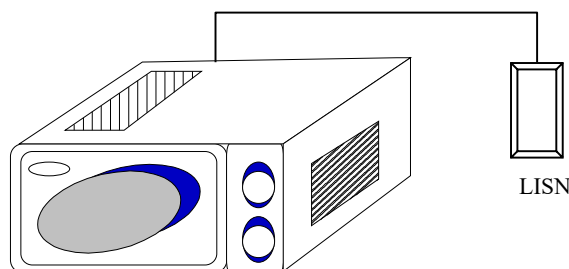
### Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
WEIY	Glass Beaker	GG-17 1000ml	Unknown

### External Cable List and Details

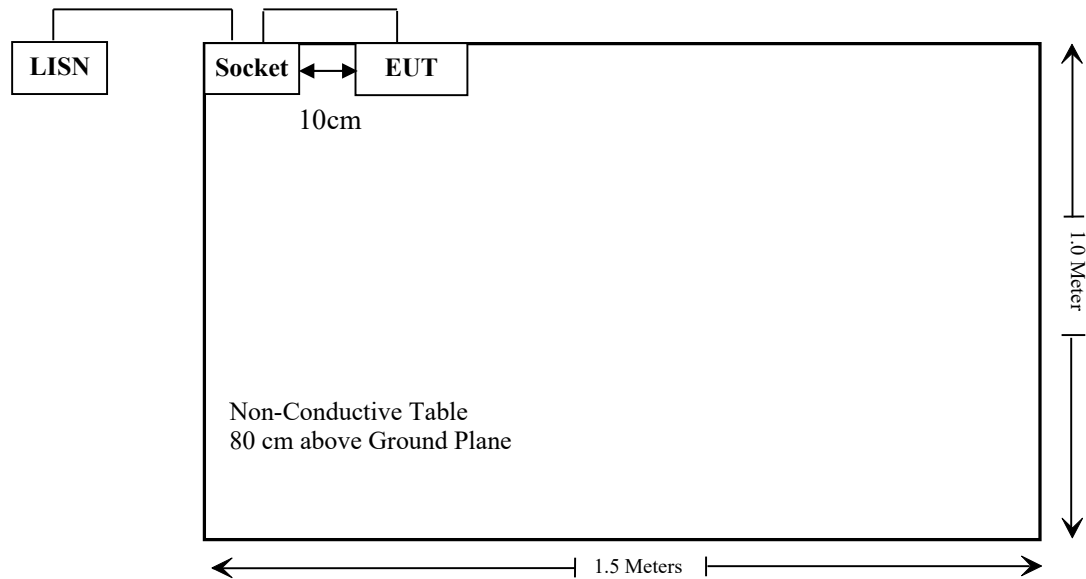
Cable Description	Length (m)	From/Port	To
Un-Shielding Un-Detachable AC Cable	1.0	Socket	LISN/Mains
Un-Shielding Un-Detachable AC Cable	0.8	Socket	EUT

### Configuration of Test Setup

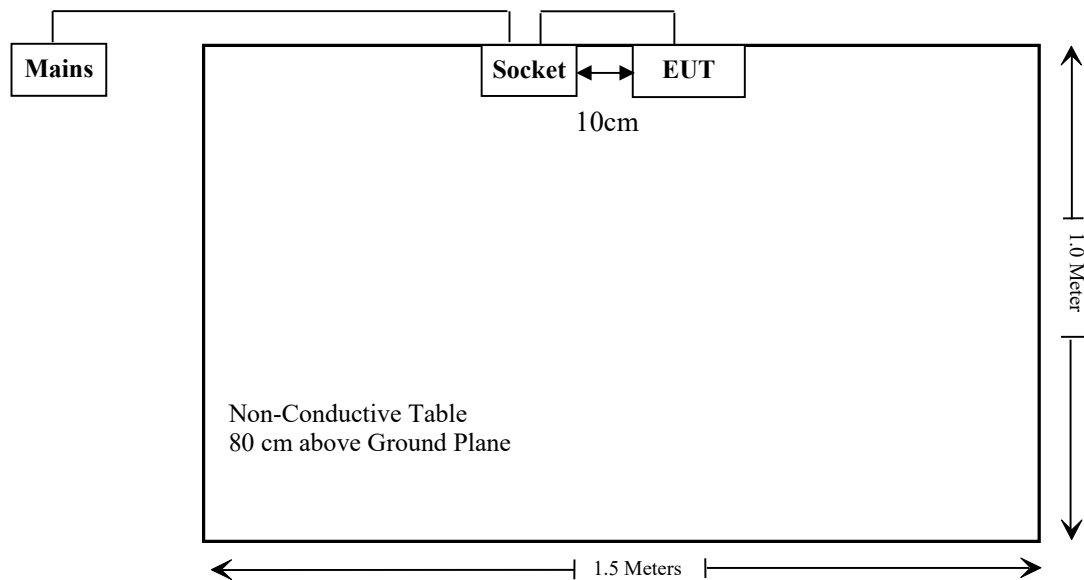


Block Diagram of Test Setup

Conducted Emission



For Radiated Emission



**SUMMARY OF TEST RESULT**

FCC Rules	Description of Test	Results
§18.307	AC Line Conducted Emissions	Compliant
FCC/OST MP-5 FCC §18.301	Radiation Hazard Measurement	Compliant
§18.305	Field Strength	Compliant
FCC/§18.313 §1.1310 §1.1091	Maximum Permissible Exposure	Compliant



**TEST EQUIPMENT LIST**

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
<b>Conducted Emissions</b>					
Rohde & Schwarz	EMI Test Receiver	ESCI	101120	2024/12/04	2025/12/03
Rohde & Schwarz	LISN	ENV216	101613	2024/12/04	2025/12/03
Rohde & Schwarz	Transient Limiter	ESH3Z2	DE25985	2025/04/29	2026/04/28
Unknown	CE Cable	Unknown	UF A210B-1-0720-504504	2025/04/29	2026/04/28
Audix	EMI Test software	E3	191218(V9)	NCR	NCR
<b>Radiation Hazard Measurement</b>					
Rohde & Schwarz	EMI Test Receiver	ESR3	102455	2024/12/04	2025/12/03
Sonoma instrument	Pre-amplifier	310 N	186238	2025/04/29	2026/04/28
Sunol Sciences	Broadband Antenna	JB1	A040904-1	2023/07/20	2026/07/19
Unknown	Cable	Chamber A Cable 1	N/A	2025/04/29	2026/04/28
Unknown	Cable	XH500C	J-10M-A	2025/04/29	2026/04/28
BACL	Active Loop Antenna	1313-1A	4031911	2024/05/14	2027/05/13
Audix	EMI Test software	E3	19821b(V9)	NCR	NCR
Rohde & Schwarz	Spectrum Analyzer	FSV40	101605	2025/03/26	2026/03/25
A.H.System	Preamplifier	PAM-0118P	489	2024/11/15	2025/11/14
Schwarzbeck	Horn Antenna	BBHA9120D(1201)	1143	2023/07/26	2026/07/25
Unknown	RF Cable	KMSE	735	2024/12/06	2025/12/05
Unknown	RF Cable	UFA147	219661	2024/12/06	2025/12/05
Unknown	RF Cable	XH750A-N	J-10M	2024/12/06	2025/12/05
JD	Filter Switch Unit	DT7220FSU	DS79906	2024/09/09	2025/09/08
JD	Multiplex Switch Test Control Set	DT7220SCU	DS79903	2024/09/09	2025/09/08
Audix	EMI Test software	E3	191218(V9)	NCR	NCR
A.H.System	Pre-amplifier	PAM-1840VH	190	2025/04/29	2026/04/28
UTIFLEX	RF Cable	NO. 13	232308-001	2024/12/18	2025/12/17
Electro-Mechanics Co	Horn Antenna	3116	9510-2270	2023/09/18	2026/09/17
ETS	microwave survery meter	HI-1501	3640274	2022/10/11	2025/10/10

**\* Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

## **FCC §18.313, §1.1310, §2.1091- MAXIMUM PERMISSIBLE EXPOSURE**

### **Applicable Standard**

According to subpart §1.1310, systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

Limits for Maximum Permissible Exposure (MPE) (§1.1310, §2.1091)

<b>(B) Limits for General Population/Uncontrolled Exposure</b>				
<b>Frequency Range (MHz)</b>	<b>Electric Field Strength (V/m)</b>	<b>Magnetic Field Strength (A/m)</b>	<b>Power Density (mW/cm<sup>2</sup>)</b>	<b>Averaging Time (minutes)</b>
0.3–1.34	614	1.63	*(100)	30
1.34–30	824/f	2.19/f	*(180/f <sup>2</sup> )	30
30–300	27.5	0.073	0.2	30
300–1500	/	/	f/1500	30
1500–100,000	/	/	1.0	30

f = frequency in MHz; \* = Plane-wave equivalent power density;

### **Measurement**

#### **Environmental Conditions**

<b>Temperature:</b>	25.1 °C
<b>Relative Humidity:</b>	52 %
<b>ATM Pressure:</b>	100.2 kPa

*The testing was performed by Wing K Ji on 2025-07-26.*

Radiation leakage was measured in the as-received condition with the oven door closed using a microwave leakage meter.

A 275ml water load was placed in the center of the oven and the oven was operated at maximum output power.

☒ There was no microwave leakage exceeding a power level of 0.1 mW/cm<sup>2</sup> observed at any point 5cm or more from the external surface of the oven.

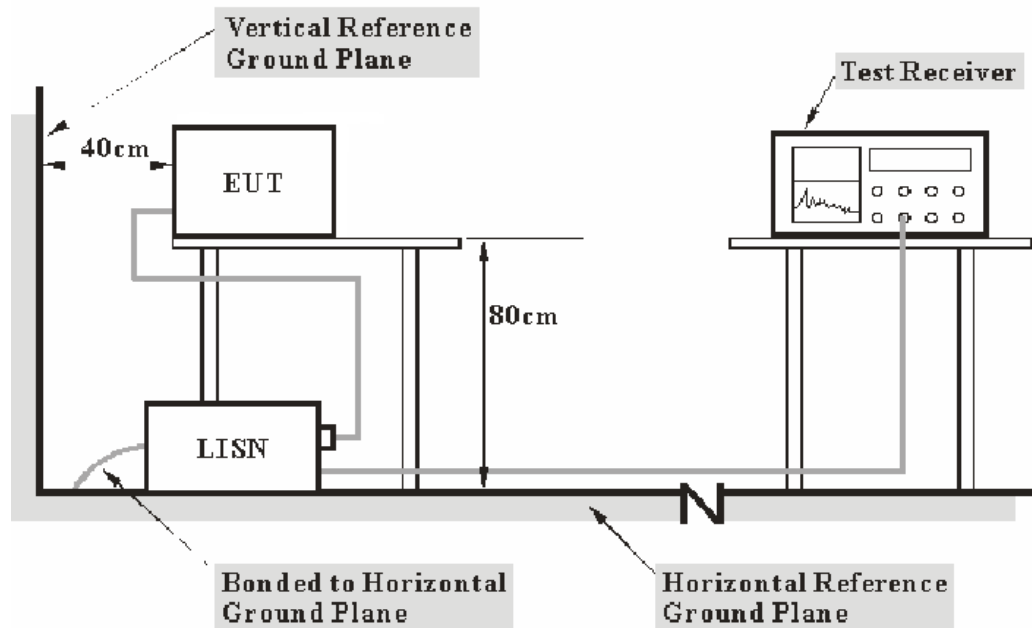
A maximum of 1.0mW/cm<sup>2</sup> is allowed in accordance with the applicable Federal Standards. Hence, microwave leakage in the as-received condition with the oven door closed was below the maximum allowed.

## CONDUCTED EMISSIONS

### Applicable Standard

FCC §18.307

### EUT Setup



- Note: 1. Support units were connected to second LISN.  
 2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The setup of EUT is according with MP-5: 1986 measurement procedure. Specification used was with the FCC Part 18.

The socket was connected to a 120 V<sub>AC</sub>/ 60Hz power source.

### EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	RBW
150 kHz – 30 MHz	9 kHz

**Test Procedure**

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All final data was recorded in the Quasi-peak and average detection mode.

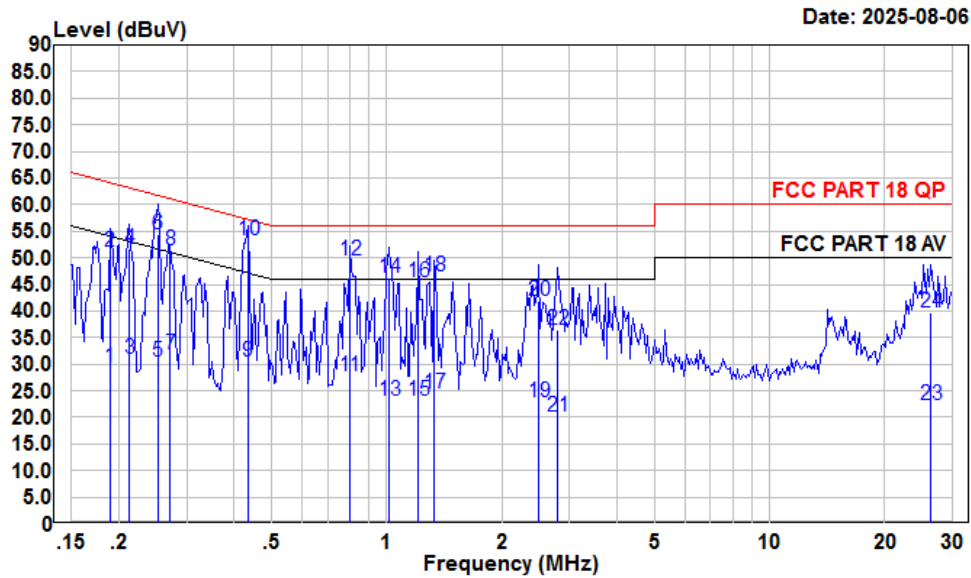
**Test Data****Environmental Conditions**

<b>Temperature:</b>	25.5 °C
<b>Relative Humidity:</b>	69 %
<b>ATM Pressure:</b>	100.0 kPa

*The testing was performed by Macy Shi on 2025-08-06.*

*Test Mode: Microwave*

## AC 120V/60 Hz, Line



Condition: Line

Project : 2501V06190E-EMA2

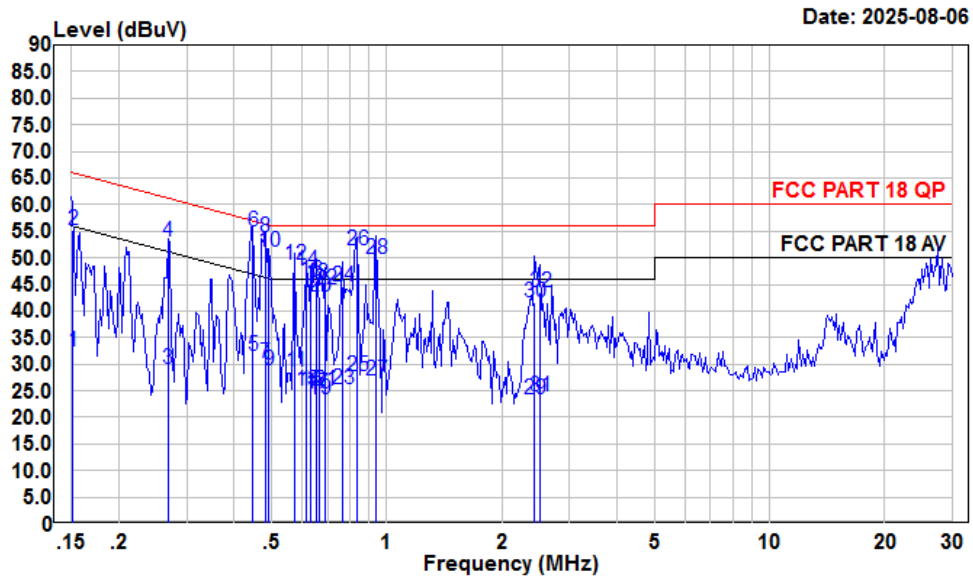
test Mode: Microwave

tester : Macy.shi Setting: RBW: 9kHz

	Freq	Read Level	LISN Level	LISN Factor	Cable Loss	Limit Line	Over Limit	Remark
	MHz	dBuV	dBuV	dB	dB	dBuV	dB	
1	0.189	8.65	29.48	10.64	10.19	54.06	-24.58	Average
2	0.189	30.19	51.02	10.64	10.19	64.06	-13.04	QP
3	0.213	10.00	30.88	10.69	10.19	53.10	-22.22	Average
4	0.213	30.90	51.78	10.69	10.19	63.10	-11.32	QP
5	0.252	9.67	30.52	10.65	10.20	51.69	-21.17	Average
6	0.252	33.63	54.48	10.65	10.20	61.69	-7.21	QP
7	0.272	10.90	31.73	10.63	10.20	51.07	-19.34	Average
8	0.272	30.60	51.43	10.63	10.20	61.07	-9.64	QP
9	0.433	9.81	30.55	10.53	10.21	47.20	-16.65	Average
10	0.433	32.46	53.20	10.53	10.21	57.20	-4.00	QP
11	0.800	6.62	27.64	10.79	10.23	46.00	-18.36	Average
12	0.800	28.49	49.51	10.79	10.23	56.00	-6.49	QP
13	1.010	2.19	23.05	10.61	10.25	46.00	-22.95	Average
14	1.010	25.49	46.35	10.61	10.25	56.00	-9.65	QP
15	1.210	2.10	23.00	10.74	10.16	46.00	-23.00	Average
16	1.210	24.50	45.40	10.74	10.16	56.00	-10.60	QP

	Freq	Read Level	Level	LISN Factor	Cable Loss	Limit Line	Over Limit	Remark
	MHz	dBuV	dBuV	dB	dB	dBuV	dB	
17	1.331	3.50	24.49	10.81	10.18	46.00	-21.51	Average
18	1.331	25.40	46.39	10.81	10.18	56.00	-9.61	QP
19	2.487	1.54	22.83	11.04	10.25	46.00	-23.17	Average
20	2.487	20.48	41.77	11.04	10.25	56.00	-14.23	QP
21	2.794	-1.19	20.07	11.00	10.26	46.00	-25.93	Average
22	2.794	15.31	36.57	11.00	10.26	56.00	-19.43	QP
23	26.418	1.27	22.20	10.66	10.27	50.00	-27.80	Average
24	26.418	18.85	39.78	10.66	10.27	60.00	-20.22	QP

## AC 120V/60 Hz, Neutral



Condition: Neutral

Project : 2501V06190E-EMA2

test Mode: Microwave

tester : Macy.shi Setting:RBW:9kHz

	Read	LISN	Cable	Limit	Over	
	Freq	Level	Level	Factor	Loss	Line
	MHz	dBuV	dBuV	dB	dB	dBuV
1	0.152	11.83	32.40	10.41	10.16	55.91
2	0.152	34.62	55.19	10.41	10.16	65.91
3	0.269	8.17	29.07	10.70	10.20	51.16
4	0.269	32.19	53.09	10.70	10.20	61.16
5	0.447	10.87	31.61	10.54	10.20	46.93
6	0.447	34.22	54.96	10.54	10.20	56.93
7	0.481	9.40	30.10	10.51	10.19	46.32
8	0.481	33.20	53.90	10.51	10.19	56.32
9	0.491	8.20	28.89	10.51	10.18	46.14
10	0.491	30.50	51.19	10.51	10.18	56.14
11	0.576	7.90	28.66	10.54	10.22	46.00
12	0.576	27.90	48.66	10.54	10.22	56.00
13	0.614	4.20	24.99	10.56	10.23	46.00
14	0.614	26.70	47.49	10.56	10.23	56.00
15	0.634	4.10	24.90	10.57	10.23	46.00
16	0.634	24.80	45.60	10.57	10.23	56.00

	Freq	Read Level	LISN Level	Factor	Cable Loss	Limit Line	Over Limit	Remark
	MHz	dBuV	dBuV	dB	dB	dBuV	dB	
17	0.654	3.80	24.61	10.58	10.23	46.00	-21.39	Average
18	0.654	24.40	45.21	10.58	10.23	56.00	-10.79	QP
19	0.668	2.70	23.52	10.59	10.23	46.00	-22.48	Average
20	0.668	22.00	42.82	10.59	10.23	56.00	-13.18	QP
21	0.690	4.30	25.13	10.60	10.23	46.00	-20.87	Average
22	0.690	23.10	43.93	10.60	10.23	56.00	-12.07	QP
23	0.767	4.30	25.18	10.65	10.23	46.00	-20.82	Average
24	0.767	23.70	44.58	10.65	10.23	56.00	-11.42	QP
25	0.835	6.80	27.73	10.70	10.23	46.00	-18.27	Average
26	0.835	30.50	51.43	10.70	10.23	56.00	-4.57	QP
27	0.938	5.84	26.83	10.76	10.23	46.00	-19.17	Average
28	0.938	28.68	49.67	10.76	10.23	56.00	-6.33	QP
29	2.435	2.27	23.31	10.79	10.25	46.00	-22.69	Average
30	2.435	20.65	41.69	10.79	10.25	56.00	-14.31	QP
31	2.513	2.80	23.85	10.80	10.25	46.00	-22.15	Average
32	2.513	22.50	43.55	10.80	10.25	56.00	-12.45	QP



## RADIATION HAZARD MEASUREMENT

### Applicable Standard

FCC §18.301 & FCC/OST MP-5

### Environmental Conditions

Temperature:	22.2~25.1 °C
Relative Humidity:	52~59 %
ATM Pressure:	100.2~100.8 kPa

*The testing was performed by Wing K Ji on 2025-07-26 to 2025-08-12 .*

### Input Power Test

Input power and current was measured using a power analyzer. A 1000ml water load was placed in the center of the oven and the oven was operated at maximum output power. A 1000ml water load was chosen for its compatibility with the procedure commonly used by manufacturers to determine their input ratings.

Refer to following tabular

Input Voltage (Vac/Hz)	Input Current (Amps)	Measured Input Power (Watts)	Rated Input Power (Watts)
119.2	14.8	1764.16	1800

☒ Based on the measured input power, the EUT was found to be operating within the intended specifications.

### Load for Microwave ovens

For all measurements, the energy developed by the oven was absorbed by a dummy load consisting of a quantity of tap water in a beaker. If the oven was provided with a shelf or other utensil support, this support was in its initial normal position. For ovens rated at 1000 watts or less power output, the beaker contained quantities of water as listed in the following subparagraphs. For ovens rated at more than 1000 watts output, each quantity was increased by 50% for each 500watts or fraction thereof in excess of 1000 watts. Additional beakers were used if necessary.

- 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.

## RF Output Power Measurement

A cylindrical container of borosilicate glass is used for the test. It has a maximum thickness of 3 mm, an external diameter of approximately 190 mm and a height of approximately 90 mm. The mass of the container is determined.

At the start of the test, the oven and the empty container are at ambient temperature. Water having an initial temperature is used for the test. The water temperature is measured immediately before it is poured into the container.

A quantity of  $1000 \text{ g} \pm 5 \text{ g}$  of water is added to the container and its actual mass obtained. The container is then immediately placed in the centre of the oven shelf, which is in its lowest normal position. The oven is operated and the time for the water temperature to attain is measured. The oven is then switched off and the final water temperature is measured within 60 s.

$m_w$ (g)	$m_c$ (g)	$T_0$ (°C)	$T_1$ (°C)	$T_2$ (°C)	$t$ (s)
1000	377.0	25.4	9.7	20.6	46

$$\text{RF Output Power} = 4.187 \times 1000 \times (20.6 - 9.7) + 0.55 \times 377.0 \times (20.6 - 25.4) / 46 = 970.50$$

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.

☐ The measurement output power was found to be less than 500 watts. Therefore, in accordance with Section 18.305 of Subpart-C, the measured out-of-band emissions were compared to the limit of 25µV/meter at a 300-meter measurement distance.

☒ The measured output power was found to exceed 500 watts. Therefore, in accordance with Section 18.305 of Subpart-C, the measured out-of-band emissions were compared with the limit calculated as following:

$$\text{LFS} = 25 * \text{SQRT} (\text{Power Output} / 500) = 25 * \text{SQRT} (970.50 / 500) = 34.83$$

Where: LFS is the maximum allowable field strength for out-of-band emissions in µV/meter at a 300-meter measurement distance. Power Output is the measured output power in watts.

LFS µV/m@300m	dBµV/M@300m	dBµV/M@3m
34.83	30.84	70.84

**Note:** Limit (dBµV/m@3m) = Limit (dBµV/m@300m) + 40(dB)

## Operating Frequency Measurement

### Variation in Operating Frequency with Time

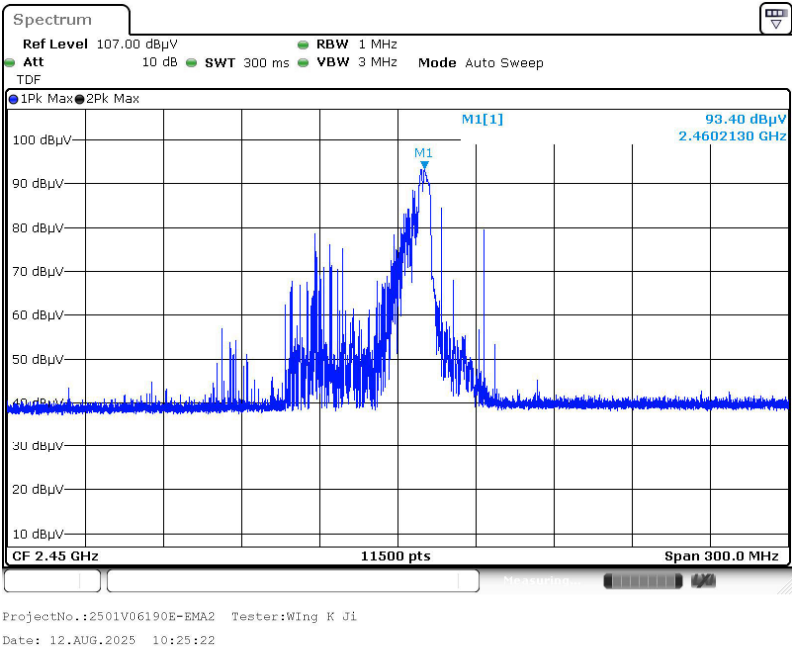
The operating frequency was measured using a spectrum analyzer. Starting with the EUT at room temperature, a 1000ml water load was placed in the center of the oven and the oven was operated at maximum output power. The fundamental operating frequency was monitored until the water load was reduced to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

The results of this test are as follows:

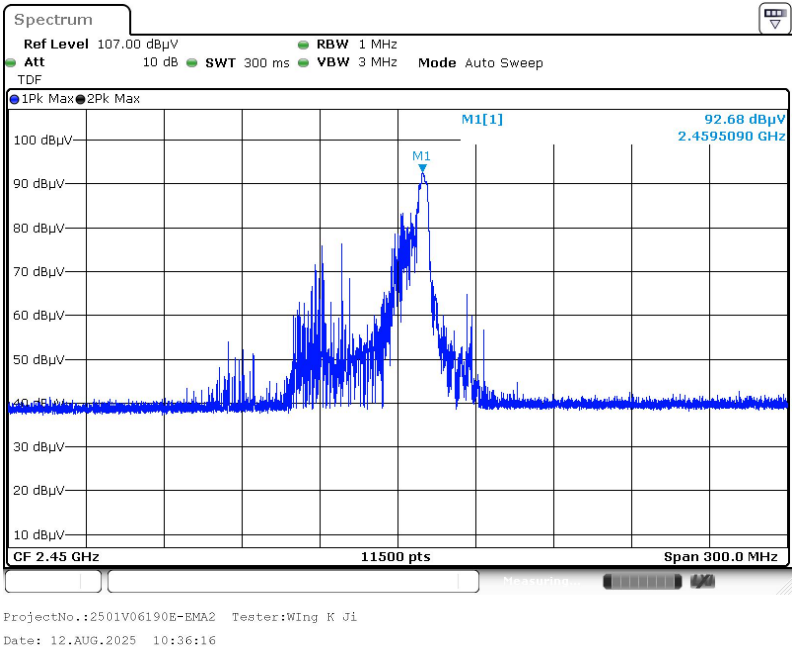
Frequency at Start time (MHz)	Frequency at End time (MHz)
2460.21	2459.51

Refer to data pages for details of the variation in operating frequency with time measurement.

Start time:



End time:



**Variation in Operating Frequency with Line Voltage**

The EUT was operated / warmed by at least 10 minutes of use with a 1000ml 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.

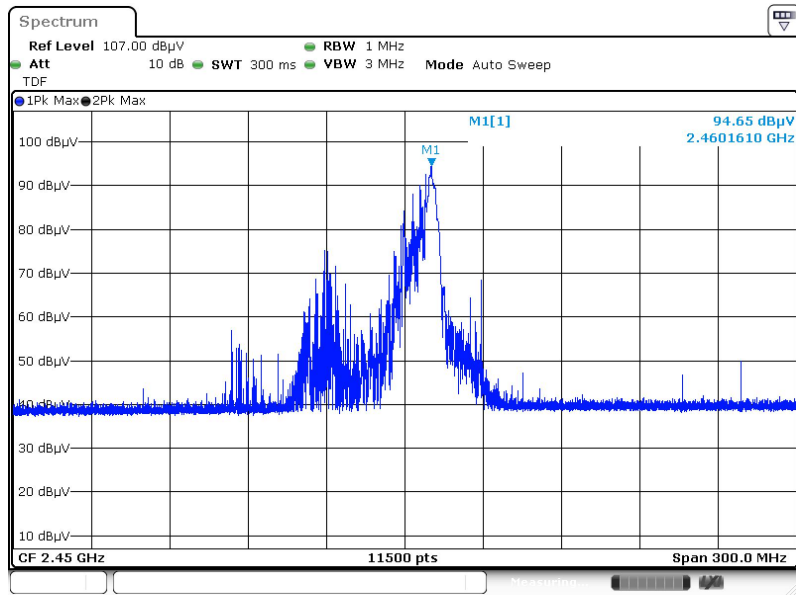
The results of this test are as follows:

Line voltage varied from 96 V<sub>AC</sub> to 150 V<sub>AC</sub>.

(Low voltage) Frequency (MHz)	(High voltage) Frequency (MHz)
2460.16	2458.67

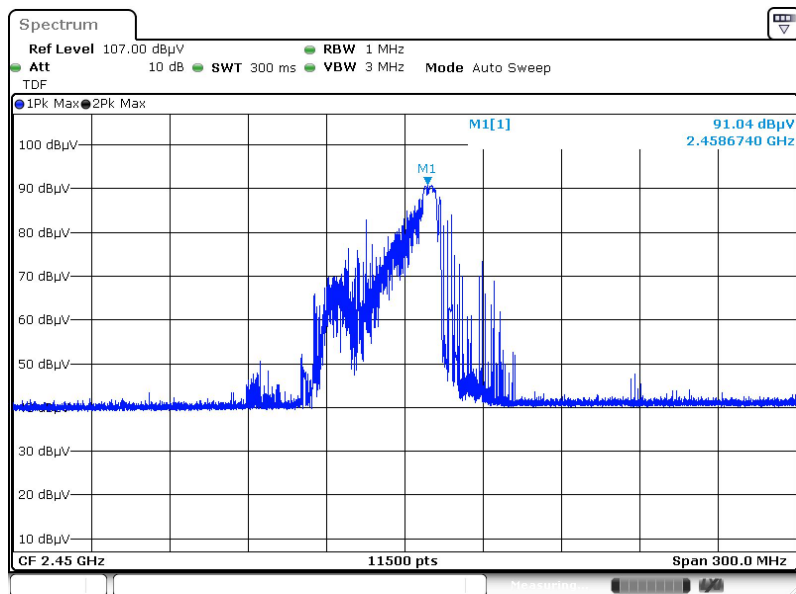
Please refer to following pages for details of the variation in operating frequency with line voltage measurement.

## Low Voltage:



ProjectNo.:2501V06190E-EMA2 Tester:Wing K Ji  
Date: 12.AUG.2025 10:50:38

## High Voltage:



ProjectNo.:2501V06190E-EMA2 Tester:Wing K Ji  
Date: 12.AUG.2025 10:58:15

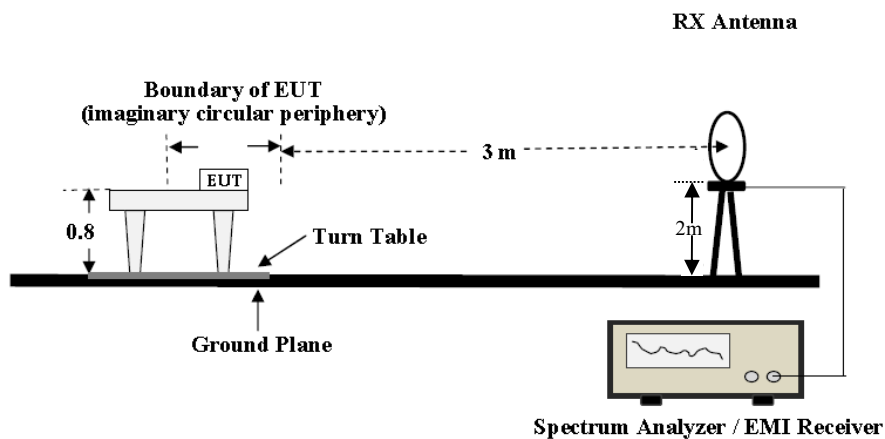
## RADIATED EMISSIONS

### Applicable Standard

FCC §18.305 and FCC §18.309

### EUT Setup

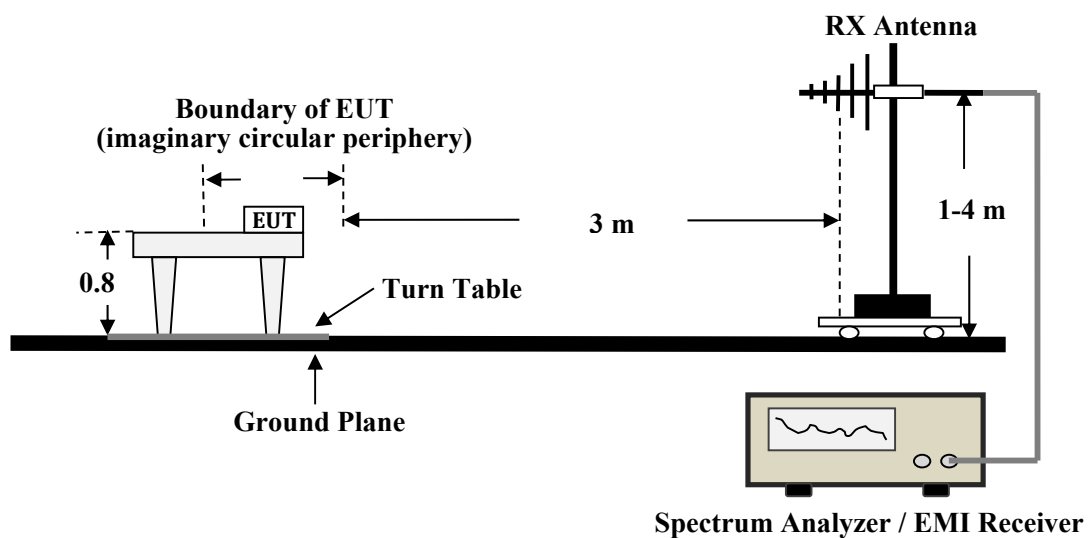
#### Below 30MHz for Radiated Emissions



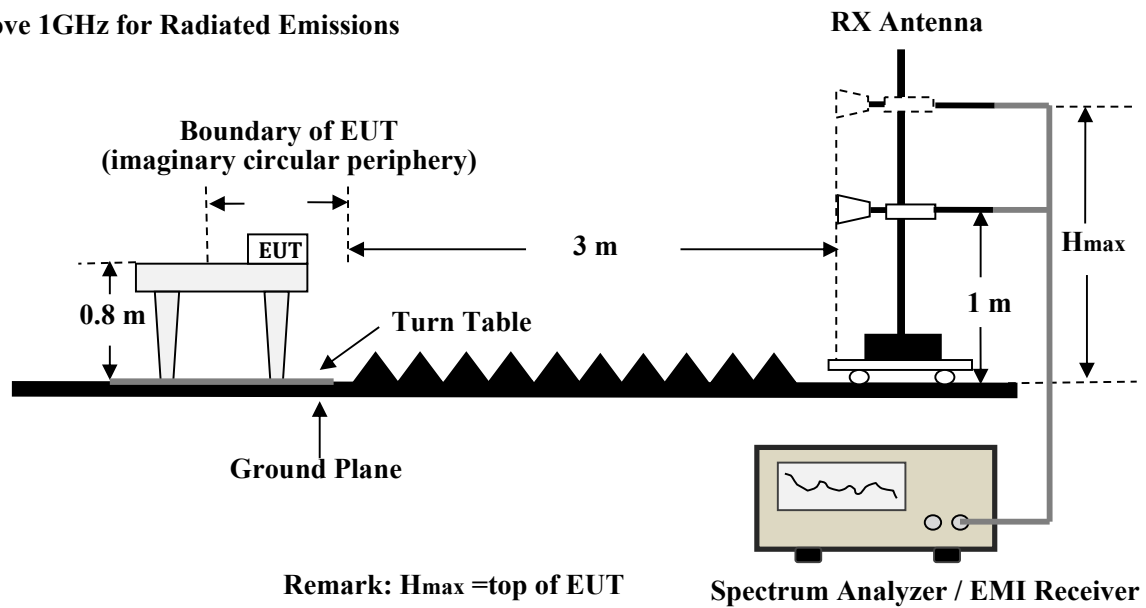
The radiated emission tests were performed in the 3 meters chamber test site, using the setup accordance with the FCC OST MP-5(1986). The related limit was specified in Part 18.305.

The distance from the loop antenna bracket to the ground is 2 meters.

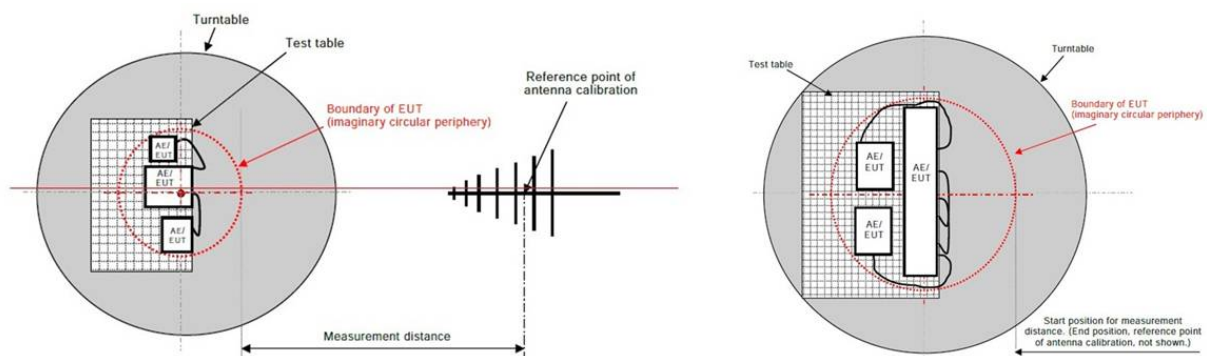
#### Below 1GHz for Radiated Emissions



### Above 1GHz for Radiated Emissions



### Radiated Emissions Setup Configuration



The radiated emission tests were performed in the 3 meters chamber test site, using the setup accordance with the FCC MP - 5. The specification used was the FCC part 18 limits.

The socket was connected to 120 VAC/60 Hz power source.

### EMI Test Receiver Setup and Spectrum Analyzer Setup

The system was investigated from 9kHz to 25 GHz.

During the radiated emission test, the EMI test receiver and Spectrum Analyzer were set with the following configurations:



9 kHz-1GHz:

Frequency Range	RBW	Video B/W	IF B/W	Measurement	Detector
9 kHz – 150 kHz	/	/	200 Hz	QP	QP
	300 Hz	1 kHz	/	PK	Peak
150 kHz – 30 MHz	/	/	9 kHz	QP	QP
	10 kHz	30 kHz	/	PK	Peak
30 MHz – 1000 MHz	/	/	120 kHz	QP	QP
	100 kHz	300 kHz	/	PK	Peak

1-25GHz:

Pre-scan

Measurement	Detector	RBW	Video B/W
PK	Peak	1MHz	3MHz

Final measurement for emission identified during pre-scan

Measurement	Detector	RBW	Video B/W
Ave.	Peak	1MHz	10Hz

## Test Procedure

Maximizing procedure was performed on the six (6) highest emissions to ensure that the EUT complied with all installation combinations.

The EUT was in the normal (naïve) operating mode during the final qualification test to represent the worst results.

## Level & Over Limit Calculation

The Level is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain from the Read Level. The basic equation is as follows:

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

$$\text{Level} = \text{Read Level} + \text{Factor}$$

The “**Over Limit**” Column of the following data tables indicates the degree of compliance with the applicable limit. For example, an Over Limit of -6 dB means the emission is 6 dB below the limit. The equation for margin calculation is as follows:

$$\text{Over limit} = \text{Level} - \text{Limit}$$

**Test Data and Plots****Environmental Conditions**

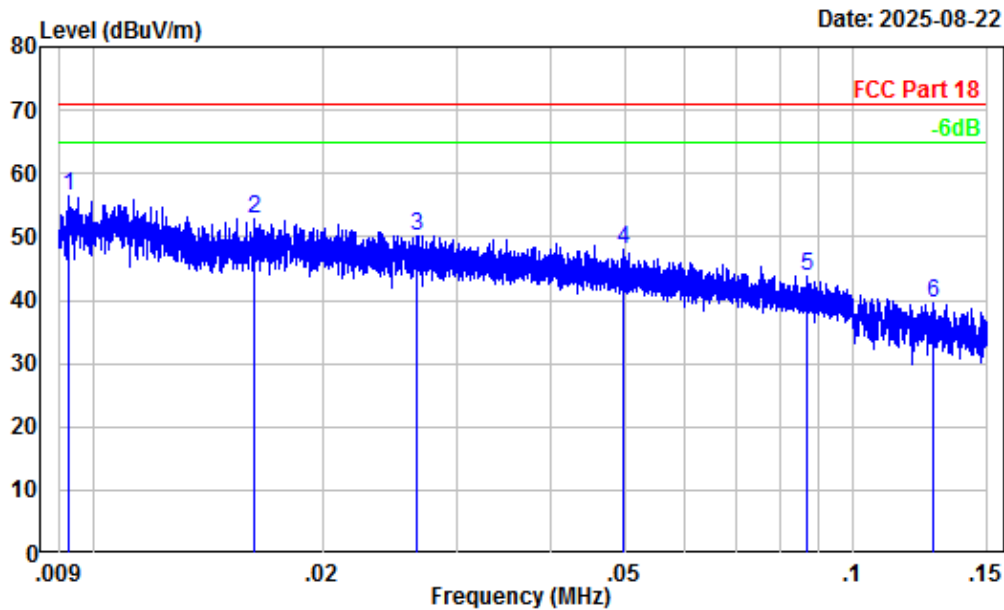
<b>Temperature:</b>	22.2~25.1 °C
<b>Relative Humidity:</b>	48~59 %
<b>ATM Pressure:</b>	100.3~100.8 kPa

*The testing was performed by Anson Su and Kungfumaster Liang from 2025-08-06 to 2025-08-22 for below 1GHz, by Wing K Ji on 2025-08-12 for above 1GHz.*

*Test Mode: Microwave*

*Note: For the radiation emissions below 30 MHz, test the X/Y/Z three planes of the loop antenna respectively, and only record the worst-case situation of the Y plane.*

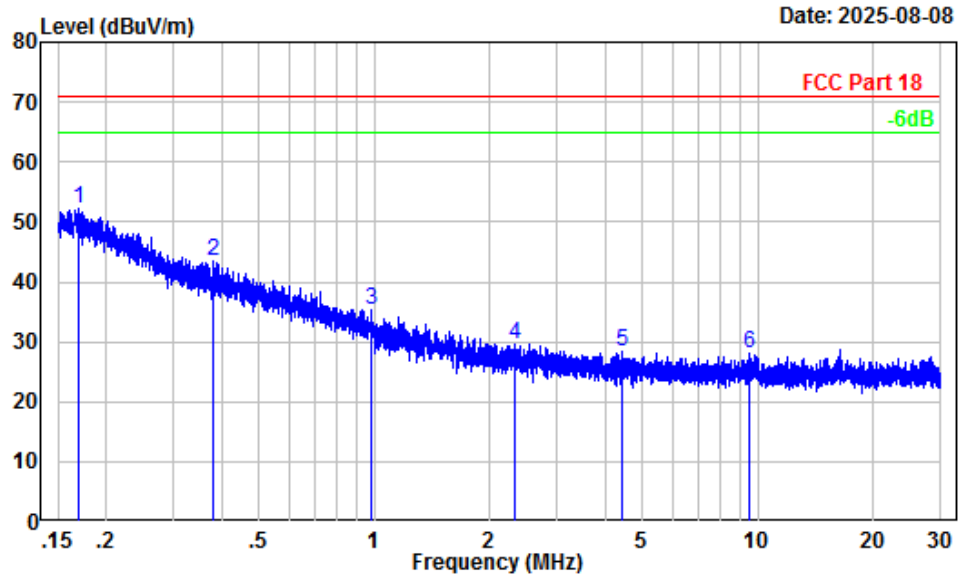
## 9 kHz-150kHz



Site : Chamber A  
Condition : 3m  
Project Number : 2501V06190E-EMA2  
Test Mode : Microwave heating  
Detector: Peak RBW/VBW: 0.3/1kHz  
Tester : Anson Su

	Freq Factor		Read	Level	Limit	Over	Remark
	MHz	dB/m	Level		Line	Limit	
			dBuV	dBuV/m	dBuV/m	dB	
1	0.009	32.45	23.96	56.41	70.84	-14.43	Peak
2	0.016	31.11	21.60	52.71	70.84	-18.13	Peak
3	0.027	29.13	21.05	50.18	70.84	-20.66	Peak
4	0.050	26.43	21.57	48.00	70.84	-22.84	Peak
5	0.087	22.91	20.92	43.83	70.84	-27.01	Peak
6	0.128	20.37	19.03	39.40	70.84	-31.44	Peak

## 150 kHz – 30 MHz

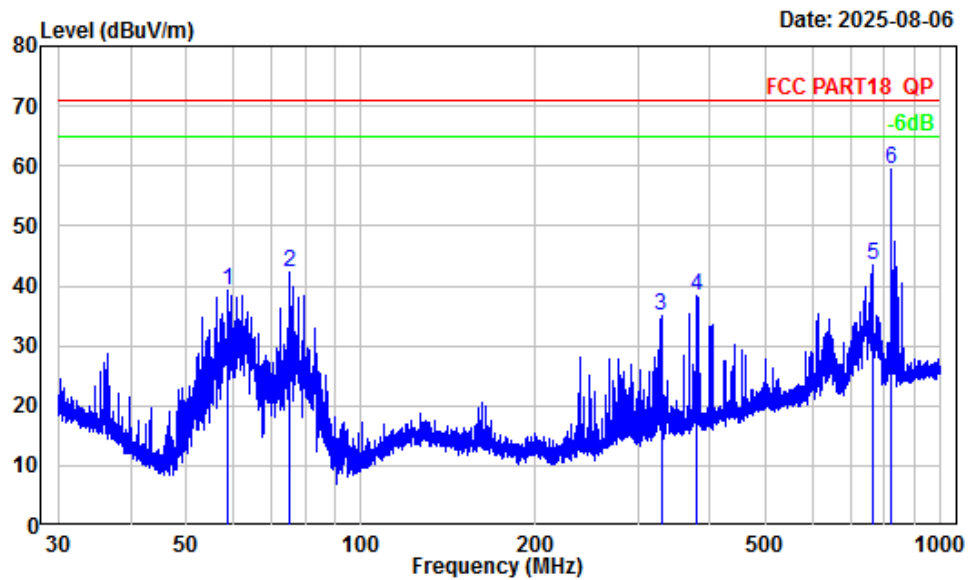


Site : Chamber A  
Condition : 3m  
Project Number : 2501V06190E-EMA2  
Test Mode : Microwave heating  
Detector: Peak RBW/VBW: 10/30kHz  
Tester : Anson Su

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	0.170	17.90	34.40	52.30	70.84	-18.54	Peak
2	0.381	8.66	34.66	43.32	70.84	-27.52	Peak
3	0.983	1.33	33.90	35.23	70.84	-35.61	Peak
4	2.321	-1.78	31.33	29.55	70.84	-41.29	Peak
5	4.442	-2.74	30.99	28.25	70.84	-42.59	Peak
6	9.514	-2.85	30.91	28.06	70.84	-42.78	Peak

## 30 MHz – 1 GHz

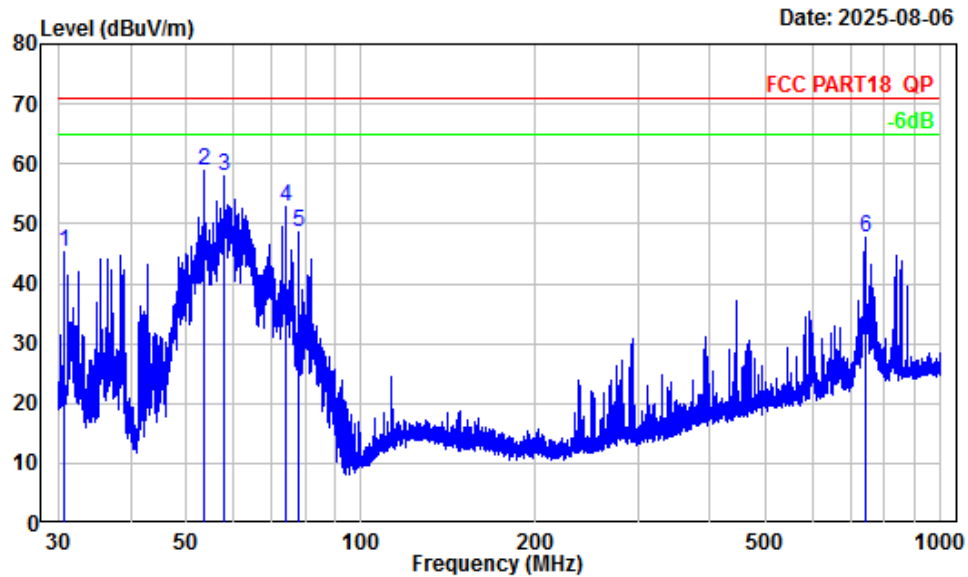
## Horizontal



Site : Chamber A  
Condition : 3m Horizontal  
Project Number : 2501V06190E-EMA2  
Test Mode : Microwave  
Detector: Peak RBW/VBW: 100/300kHz  
Tester : Kungfumaster Liang

	Freq	Factor	Read Level	Limit Level	Over Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	58.819	-18.22	57.34	39.12	70.84	-31.72	Peak
2	75.281	-17.83	60.18	42.35	70.84	-28.49	Peak
3	329.472	-10.66	45.71	35.05	70.84	-35.79	Peak
4	380.414	-9.14	47.42	38.28	70.84	-32.56	Peak
5	762.373	-2.63	46.00	43.37	70.84	-27.47	Peak
6	822.792	-1.97	61.34	59.37	70.84	-11.47	Peak

## Vertical



Site : Chamber A  
Condition : 3m Vertical  
Project Number : 2501V06190E-EMA2  
Test Mode : Microwave  
Detector: Peak RBW/VBW: 100/300kHz  
Tester : Kungfumaster Liang

	Freq	Factor	Read Level	Limit Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	30.705	-6.32	51.71	45.39	70.84	-25.45	Peak
2	53.576	-18.32	77.07	58.75	70.84	-12.09	Peak
3	58.177	-18.22	76.09	57.87	70.84	-12.97	Peak
4	74.005	-17.84	70.66	52.82	70.84	-18.02	Peak
5	78.139	-17.83	66.51	48.68	70.84	-22.16	Peak
6	741.934	-2.95	50.52	47.57	70.84	-23.27	Peak

**1 -25 GHz:**

For Band edge and spurious emissions:

Frequency (MHz)	Receiver		Turn-Table	Rx Antenna		Corrected Factor (dB/m)	Corrected Amplitude (dBμV/m)	FCC Part 18	
	Reading (dBμV)	Detector (PK/QP/AV)		Height (m)	Polar (H / V)			Limit (dBμV/m)	Margin (dB)
2147.64	64.63	AV	197	1.3	H	-11.61	53.02	70.84	17.82
2122.14	76.78	AV	197	1.3	V	-11.60	65.18	70.84	5.66
2802.23	70.91	AV	237	1.2	H	-10.58	60.33	70.84	10.51
2812.85	57.68	AV	237	1.2	V	-10.52	47.16	70.84	23.68
4925.37	58.27	AV	339	2.2	H	-7.58	50.69	70.84	20.15
4927.49	64.87	AV	339	2.2	V	-7.58	57.29	70.84	13.55
2398.90	55.89	AV	84	2.0	H	-11.01	44.88	70.84	25.96
2380.89	54.14	AV	84	2.0	V	-10.96	43.18	70.84	27.66
2534.27	57.97	AV	15	1.6	H	-10.98	46.99	70.84	23.85
2534.27	57.87	AV	15	1.6	V	-10.98	46.89	70.84	23.95
700ml water (Second and Third Harmonics)									
4920.87	57.06	AV	99	1.1	H	-7.56	49.50	70.84	21.34
4920.87	66.73	AV	99	1.1	V	-7.56	59.17	70.84	11.67
7383.048	42.52	AV	115	1.3	H	-2.14	40.38	70.84	30.46
7383.67	50.27	AV	115	1.3	V	-2.14	48.13	70.84	22.71
300ml water (Second and Third Harmonics)									
4921.49	54.83	AV	54	1.1	H	-7.56	47.27	70.84	23.57
4922.74	63.18	AV	54	1.1	V	-7.57	55.61	70.84	15.23
7384.92	43.87	AV	266	2.2	H	-2.13	41.74	70.84	29.10
7384.92	44.96	AV	266	2.2	V	-2.13	42.83	70.84	28.01

**Note:**

- 1) Corrected Amplitude = Meter Reading + Corrected Factor.
- 2) Correction Factor = Antenna Factor + Cable Loss - Amplifier Gain.
- 3) Margin = Limit – Corrected Amplitude.
- 4) The data below 20dB to the limit was not recorded.

## **EUT PHOTOGRAPHS**

Please refer to the attachment 2501V06190E-EMA2 External photo and 2501V06190E-EMA2 Internal photo.



## **TEST SETUP PHOTOGRAPHS**

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Please refer to the attachment 2501V06190E-EMA2 Test Setup photo.

**\*\*\*\*\* END OF REPORT \*\*\*\*\***