



Testing Tomorrow's Technology

**CFR 47 Part 18 Industrial Scientific and Medical Equipment
Subpart C Technical Standards,
Part 18.305, Field Strength Limits and Part 18.307, Conducted limits**

Permissive Change Report

for the

Sharp Corporation

High Speed Oven

Model: SWA3099MS

FCC ID: APYDMR0183

Test Dates: August 25, 2025, September 10, 2025 and October 1, 2025

Issue Date: October 14, 2025

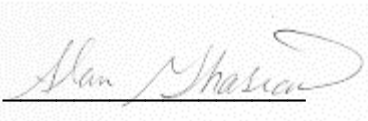
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PH: 770-740-0717 Fax: 770-740-1508
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I certify that I am authorized to sign for the manufacturer and that all of the statements in this report and in the exhibits attached hereto are true and correct to the best of my knowledge and belief:

US Tech (Agent responsible for test):

By: 

Name: Alan Ghasiani

Title: President – Consulting Engineer

Date: October 14, 2025



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1 General Information

1.1 Purpose of the Report

This report is prepared as a class two permissive change as a means of conveying test results and information concerning the suitability of this exact product for public distribution according to the FCC Rules and Regulations Part 18.305 and 18.307 and FCC Methods of Measurements of Radio Noise Emissions from Industrial, Scientific, and Medical Equipment (FCC/OST MP-5:1986).

The changes to the EUT are as follows:

- Removal of EMI filter, Corcom 10EH1 and 6EH1 and removal of ferrite RFIL-A015WRZZ on GND line and added ferrite RFIL-A015WRZZ on AC lines L1 & L2.
- Addition Noise Filter of a 10000pF/250 Y-capacitor from Line 2 to ground
- Change of capacitors from 1.0uF to 1.5 uF and 2200pF to 10000 pF on noise filter unit.
- Replaced noise filter FPWBFA555WRKZ with FPWBFA585WRKZ
- Addition of ferrite RFIL-A016WRZZ (x2) on high voltage circuit
- Addition of snap on ferrite RCORFA002DRZZ to low voltage lines towards the front panel.

The changes to the equipment do not affect the basic functionality and intended use of the device. The cavity design and magnetron have not been altered and remain identical to the original design.

To ensure continued compliance with the product standard the product has been re-evaluated for compliance with Part 18 Subpart C Technical standards paragraph 18.305- Field Strength Limits and 18.307(b)- Conduction Limits. The test results are presented herein.

1.2 Product Description

The Equipment under Test (EUT) is the Sharp Corporation model SWA3099MS High Speed Oven. This is a combination unit that incorporates a microwave oven with convection oven capabilities. This combination unit also has wireless capabilities and contains a certified Wi-Fi radio module. The EUT is rated to be 950 Watts. The input power is rated at 208-240 VAC, 60Hz two-phase. The EUT was tested at 100% microwave power setting.

The FCC ID for the Wi-Fi module contained within the device is FCC ID: RX3-BZ02.

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1.3 Related Submittal(s)/Grant(s)

The EUT is subject to the following FCC authorizations:

- a) Certification under FCC CFR 47:2007.
- b) Verification under Part 18.305 and 18.307 Subpart C, Consumer.

A separate verification report will be provided for the Supplier Declaration of Conformity compliance.

1.4 Test Methodology

The EUT was configured as shown in the block diagram and photographs herein. The sample was tested per FCC measurement Procedure MP-5, "Methods of Measurement of Radio Noise Emissions from Industrial, Scientific and Medical Equipment" (1986) as well as per CFR 47 part 18. Conducted and radiated emissions data were taken with the Test Receiver or Spectrum Analyzer's resolution bandwidth adjusted to 9 kHz and 120 kHz, respectively. At frequencies above 1 GHz, the resolution bandwidth was increased to 1 MHz. The video bandwidth was three times more than resolution bandwidth on the spectrum analyzer. All measurements are peak unless stated otherwise. Interconnecting cables were manipulated as necessary to maximize emissions.

1.5 Test Facility

Testing was performed at US Tech's measurement facility at 3505 Francis Circle, Alpharetta, GA. This site has been fully described and registered with the FCC under site designation number US5301. Additionally, this site has also been fully described and submitted to Industry Canada (IC), and has been approved under ISED site number 9900A-1.

US Tech currently is Accredited by the NIST NVLAP organization, Lab Code: 200162-0 and FCC Part 18 is in our Scope of Accreditation.

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1.6 Test Equipment

The following table details the test equipment used in the evaluation of this product.

Table 1. Test Equipment

INSTRUMENT	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	CALIBRATION DUE DATE
Spectrum Analyzer	Rigol	DSA815	DSA8A180300138	02/22/2026 2 Years
Spectrum Analyzer	Agilent Technologies Inc	E4440A	MY45304803	9/4/2027 2 Years
Bicon Antenna	EMCO	3110B	9307-1431	2/24/2027 2 Year
Log Periodic	EMCO	3146	9110-3236	11/15/2026 2 Year
Horn Antenna	A. H. Systems	SAS-571	605	3/18/2027 2 Years
Preamp	Hewlett Packard	8449B	3008A00914	3/10/2026
Preamp	Hewlett-Packard	8447D	1937A01611	3/7/2026
LISN (X3)	Solar Electronics	9247-50-TS-50-N	955824, 955825, 955826	4/29/2026
20dB DC -6.0 GHz	MA Attenuator	20 dB Atten	-	5/2/2026
RF Cable	US Tech	LMR400	None	3/12/2026
RF Cable	BRACKE M	RG188A	None	1/23/2026
RF Cable	Time Microwave Systems	LMR400	19424	3/7/2026
RF Cable	Time Microwave Systems	LMR400	None	4/3/2026
RF Cable	Harbour Industries	LL142	A13355-3036	7/17/2026
RF Cable	Pasternack	PE300-24	1226	7/7/2026
RF Cable	US Tech	LMR 400	None	7/7/2026
Filter - High Pass above 3 GHz	Microwave Circuits Inc.	H3R020G2	001DC9528	7/2/2025
Waterproof Thermometer	Yacumama	HY107	X0021LIOY9	2/6/2027 2 year
Power Analyzer	Valhalla	2101	3/1/6350	2/6/2027 2 year

Note: The calibration interval of the above test instruments is 12 months unless stated otherwise and all calibrations are traceable to NIST/USA.

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1.7 Characterization of Sample Tested

The sample used for testing was received on August 22, 2025 in good condition.

1.8 EUT Exercise Software

The EUT was programmed to perform at 100% power level. The test was performed using 700 mL or 1000 mL of tap water in a 150 mm diameter cylindrical glass vessel placed in the center of the oven.

1.9 Special Accessories

There were not special accessories required for this product testing.

1.10 Test Rationale

The EUT, cable and wiring arrangement, and mode of operation that produced the emissions with the highest levels relative to the applicable limits was selected for final measurements.

The interconnect cable(s) and/or power cord(s) were moved into various positions of the most likely configurations to maximize the emissions. In this case the placement of the cables had negligible effects. The test configuration photographs represent the final configuration used for testing.

1.11 Tested System Details

Table 2. EUT and Peripherals

PERIPHERAL/ MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	REMARKS	CABLES P/D
High Speed Oven (EUT)/ Sharp Corporation	SWA3099MS	Engineering Sample	FCC ID: APYDMR0183 Contains FCC ID: RX3-BZ02	P

U= unshielded S= shielded P= Power D= Data

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Table 3. Detail of I/O Cables Attached to EUT

DESCRIPTION OF CABLE	DETAILS OF CABLE			CABLE LENGTH
Power Cable	Manufacturer and Part Number			1.5 m
	CND			
	Shield Type	Shield Termination	Type of Backshell	
	C	NA	NA	

Shield Type

N/A = None
 F = Foil
 B = Braided
 2B = Double Braided
 CND = Could Not Determine
 C = Conduit

Shield Termination

N/A = None
 360 = 360°
 P = Pigtail/Drain Wire
 CND = Could Not Determine

Type of Backshell

N/A = Not Applicable
 PS = Plastic Shielded
 PU = Plastic Unshielded
 MS = Metal Shielded
 MU = Metal Unshielded

1.12 Configuration of Tested System



Figure 1. Block Diagram of Test Configuration

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1.13 Equipment Modifications

No modifications were made to the EUT in order for it to meet the requirements.

1.14 Test Results

Line conducted emissions testing was conducted and compared to 18.307(b) limits. The worst-case line conducted emission was 0.89 dB below the limit at 0.15 MHz on the White line. All other conducted emissions were at least 1.2 dB below the limit.

Radiated emissions testing was conducted and compared to 18.305 (a) and (b) limits. The worst-case radiated emission in the frequency range 30 MHz to 25 GHz was 5.75 dB below the limit at 14743.00 MHz; all other radiated emissions were at least 6.29 dB below the limit.

1.15 Measurement Uncertainty

Conducted Emissions:

Measurement Uncertainty (with a 95% confidence level) for power line conducted emissions is ± 2.80 dB.

Radiated Emissions:

For the measurement distance of 3 m, the measurement uncertainty (with a 95% confidence level) for this test using a Biconical Antenna (30 MHz to 200 MHz) is ± 5.40 dB.

For a measurement Distance of 3 m, the measurement uncertainty (with a 95% confidence level) for this test using a Log Periodic Antenna (200 MHz to 1000 MHz) is ± 5.19 dB.

For a measurement Distance of 3 m, the measurement uncertainty (with a 95% confidence level) for this test using a Horn Antenna (above 1 GHz) is ± 5.08 dB.

2 Emissions Data, Power Line and Radiated (47 CFR 18.301, 18.303, 18.305, 18.307)

2.1 Test Site Description, Power Line Emissions

The mains terminal interference measurement facility is a shielded room (Lectro Magnetics, Inc., Type LDC6-0812-8-2793) 4.0 m deep x 2.5 m wide x 2.5 m high. Power for the shielded room is filtered (Lectroline, EMX-1020-2, rated 125/250 V, 20 A, 50/60 Hz).

The artificial mains networks are Solar Electronics models 8028. A nonconductive table 1.5 m deep x 1.0 m wide x 0.8 m high is used for tabletop equipment. All grounded conducting surfaces including the case or cases of one or more artificial mains networks is at least 0.8 m from any surface of the EUT. The EUT is a wall mounted unit; therefore, the unit was placed on a nonconductive table 50cm away from all vertical coupling surfaces.

The load used for this measurement was 700 ml of water located in the center of the oven.

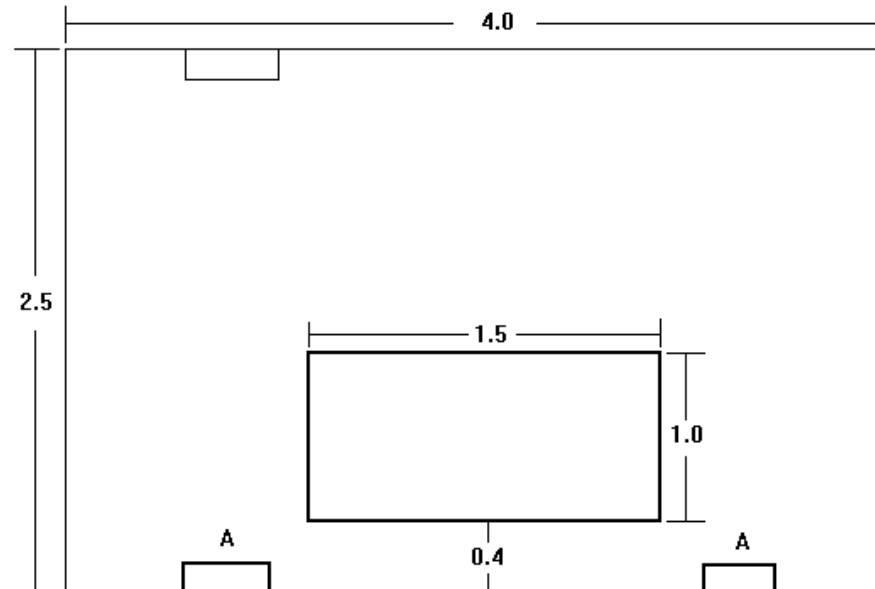


Figure 2. Power Line Emissions Disturbance Measurement Facility Diagram

2.2 Power Line Emissions Test Data

The EUT was operated in normal operating condition with the Wi-Fi radio exercising and 700 mL water in the center of the microwave. The EUT was powered with 220VAC, 60 Hz mains supply.

Table 4. Power Line Conducted Emissions – Line 1

Conducted Emissions 220 VAC						
Frequency (MHz)	Test Data (dBuV)	IL+CA-AMP (dB)	Results (dBuV)	Average Limits (dBuV)	Margin (dB)	Detector Used
Line 1 (Black)						
0.16	47.11	1.03	48.14	55.36	7.22	AVG
0.26	37.20	0.75	37.95	51.30	13.36	AVG
0.26	48.75	0.75	49.50	61.30*	11.81	QP
0.27	43.03	0.75	43.78	51.06	7.27	AVG
0.27	51.81	0.75	52.56	61.06*	8.50	QP
0.30	34.16	0.76	34.92	50.41	15.49	AVG
0.30	35.26	0.75	36.01	50.19	14.18	AVG
0.34	37.42	0.62	38.04	49.35	11.31	AVG
0.35	33.80	0.62	34.42	48.96	14.54	AVG
0.38	37.77	0.52	38.29	48.37	10.08	AVG
0.38	38.27	0.53	38.80	48.28	9.48	AVG
0.41	34.15	0.46	34.61	47.61	13.00	AVG
0.44	36.36	0.46	36.82	47.18	10.35	AVG
0.45	35.95	0.46	36.41	46.88	10.47	AVG
0.47	35.28	0.41	35.69	46.55	10.86	AVG
0.50	40.92	0.41	41.33	46.00	4.67	AVG
0.50	50.56	0.41	50.97	56.00*	5.03	QP
0.58	34.10	0.37	34.47	46.00	11.53	AVG
0.61	38.76	0.36	39.12	46.00	6.88	AVG
0.68	31.97	0.36	32.33	46.00	13.67	AVG
0.72	36.56	0.35	36.91	46.00	9.09	AVG
0.84	33.30	0.33	33.63	46.00	12.37	AVG
0.92	30.76	0.32	31.08	46.00	14.92	AVG
1.00	33.31	0.34	33.65	46.00	12.35	AVG
1.19	38.19	0.33	38.52	46.00	7.48	AVG
1.22	35.23	0.33	35.56	46.00	10.44	AVG
1.55	34.76	0.34	35.10	46.00	10.90	AVG
1.94	33.47	0.34	33.81	46.00	12.19	AVG
2.11	34.05	0.34	34.39	46.00	11.61	AVG
2.22	35.55	0.34	35.89	46.00	10.11	AVG
2.22	48.91	0.34	49.25	56.00	6.75	AVG
2.40	32.49	0.34	32.83	46.00	13.17	AVG
2.66	32.16	0.36	32.52	46.00	13.48	AVG
3.05	29.08	0.35	29.43	46.00	16.57	AVG
3.21	29.11	0.36	29.47	46.00	16.53	AVG

(*)= Quasi-Peak limit used.

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Table 5. Power Line Conducted Emissions – Line 2

Conducted Emissions 220 VAC						
Frequency (MHz)	Test Data (dBuV)	IL+CA-AMP (dB)	Results (dBuV)	Average Limits (dBuV)	Margin (dB)	Detector Used
Line 2 (Red)						
0.17	42.01	0.95	42.96	54.96	12.00	AVG
0.17	58.55	0.95	59.50	64.96*	5.47	QP
0.19	45.27	0.69	45.96	53.95	7.99	AVG
0.19	58.75	0.69	59.44	63.95*	4.50	QP
0.20	45.10	0.69	45.79	53.86	8.07	AVG
0.20	58.03	0.69	58.72	63.86*	5.15	QP
0.21	48.29	0.69	48.98	53.21	4.23	AVG
0.21	58.47	0.69	59.16	63.21*	4.04	QP
0.25	40.09	0.49	40.58	51.69	11.11	AVG
0.25	52.98	0.49	53.47	61.69*	8.22	QP
0.26	42.92	0.49	43.41	51.56	8.15	AVG
0.26	53.28	0.49	53.77	61.56*	7.79	QP
0.27	41.23	0.47	41.70	51.12	9.42	AVG
0.27	55.96	0.47	56.43	61.12*	4.69	QP
0.29	40.44	0.50	40.94	50.70	9.76	AVG
0.29	56.97	0.50	57.47	60.70*	3.23	QP
0.42	39.57	0.32	39.89	47.49	7.59	AVG
0.42	52.76	0.32	53.08	57.49*	4.41	QP
0.43	45.82	0.31	46.13	47.33	1.20	AVG
0.43	55.17	0.31	55.48	57.33*	1.85	QP
0.45	36.11	0.29	36.40	46.88	10.48	AVG
0.45	50.13	0.29	50.42	56.88*	6.45	QP
0.47	39.65	0.28	39.93	46.44	6.52	AVG
0.47	50.69	0.28	50.97	56.44*	5.47	QP
0.50	37.11	0.28	37.39	46.03	8.64	AVG
0.50	47.96	0.28	48.24	56.03*	7.79	QP
0.50	37.31	0.28	37.59	46.00	8.41	AVG
0.50	48.39	0.28	48.67	56.00*	7.33	QP
0.53	38.80	0.25	39.05	46.00	6.95	AVG
0.53	50.59	0.25	50.84	56.00*	5.16	QP
0.56	37.57	0.25	37.82	46.00	8.18	AVG
0.56	49.41	0.25	49.66	56.00*	6.34	QP
0.64	37.01	0.22	37.23	46.00	8.77	AVG
0.64	47.67	0.22	47.89	56.00*	8.11	QP
0.71	40.73	0.22	40.95	46.00	5.05	AVG
0.71	48.64	0.22	48.86	56.00*	7.14	QP
0.86	34.49	0.20	34.69	46.00	11.31	AVG
0.86	46.34	0.20	46.54	56.00*	9.46	QP
0.92	35.33	0.20	35.53	46.00	10.47	AVG
0.92	46.54	0.20	46.74	56.00*	9.26	QP
0.98	35.97	0.20	36.17	46.00	9.83	AVG
0.98	48.51	0.20	48.71	56.00*	7.29	QP
1.16	43.52	0.23	43.75	46.00	2.25	AVG
1.16	51.19	0.23	51.42	56.00*	4.58	QP
1.21	42.37	0.22	42.59	46.00	3.41	AVG
1.21	47.67	0.22	47.89	56.00*	8.11	QP
1.99	37.40	0.24	37.64	46.00	8.36	AVG
1.99	43.84	0.24	44.08	56.00*	11.92	QP
2.03	34.84	0.24	35.08	46.00	10.92	AVG
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Conducted Emissions 220 VAC						
Frequency (MHz)	Test Data (dBuV)	IL+CA-AMP (dB)	Results (dBuV)	Average Limits (dBuV)	Margin (dB)	Detector Used
Line 2 (Red)						
2.03	46.36	0.24	46.60	56.00*	9.40	QP
2.21	42.73	0.24	42.97	46.00	3.03	AVG
2.21	48.03	0.24	48.27	56.00*	7.73	QP
2.60	34.01	0.25	34.26	46.00	11.74	AVG
3.00	34.37	0.26	34.63	46.00	11.37	AVG
4.38	29.31	0.30	29.61	46.00	16.39	AVG

(*)= Quasi-Peak limit used.

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Table 6. Power Line Conducted Emissions – Neutral

Conducted Emissions 220 VAC						
Frequency (MHz)	Test Data (dBuV)	IL+CA-AMP (dB)	Results (dBuV)	Average Limits (dBuV)	Margin (dB)	Detector Used
Neutral (WHITE)						
0.16	52.97	1.51	54.48	55.78	1.30	AVG
0.16	63.38	1.51	64.89	65.78*	0.89	QP
0.17	43.16	1.04	44.20	54.86	10.66	AVG
0.17	59.24	1.04	60.28	64.86*	4.58	QP
0.18	44.19	1.04	45.23	54.49	9.26	AVG
0.18	60.01	1.04	61.05	64.49*	3.44	QP
0.20	45.76	1.04	46.80	53.86	7.06	AVG
0.20	58.44	1.04	59.48	63.86*	4.38	QP
0.21	46.06	0.81	46.87	53.21	6.34	AVG
0.21	54.90	0.81	55.71	63.21*	7.49	QP
0.25	40.32	0.81	41.13	51.76	10.63	AVG
0.25	50.31	0.81	51.12	61.76*	10.64	QP
0.26	45.00	0.77	45.77	51.37	5.60	AVG
0.26	54.02	0.77	54.79	61.37*	6.57	QP
0.27	39.20	0.77	39.97	51.06	11.09	AVG
0.27	53.42	0.77	54.19	61.06*	6.87	QP
0.29	37.86	0.90	38.76	50.70	11.94	AVG
0.29	52.72	0.90	53.62	60.70*	7.08	QP
0.37	40.51	0.53	41.04	48.59	7.55	AVG
0.42	39.78	0.48	40.26	47.49	7.23	AVG
0.42	39.16	0.48	39.64	47.45	7.81	AVG
0.52	36.04	0.41	36.45	46.00	9.55	AVG
0.58	33.82	0.39	34.21	46.00	11.79	AVG
0.65	32.91	0.39	33.30	46.00	12.70	AVG
1.12	37.38	0.36	37.74	46.00	8.26	AVG
1.25	34.59	0.36	34.95	46.00	11.05	AVG
1.58	32.67	0.36	33.03	46.00	12.97	AVG
1.63	34.50	0.36	34.86	46.00	11.14	AVG
1.96	33.93	0.36	34.29	46.00	11.71	AVG
2.03	33.46	0.36	33.82	46.00	12.18	AVG
2.29	36.21	0.36	36.57	46.00	9.43	AVG
2.41	34.78	0.37	35.15	46.00	10.85	AVG
9.51	33.35	0.58	33.93	50.00	16.07	AVG
11.71	32.02	0.64	32.66	50.00	17.34	AVG

(*)= Quasi-Peak limit used.

Sample Calculation at 0.16 MHz:

Magnitude of Measured Frequency	52.97 dBuV
+Correction Factors	1.51 dB
Corrected Result	54.48 dBuV

Test Date: August 25, 2025

Tested by
 Signature: 

Name: Ian Chaboneau

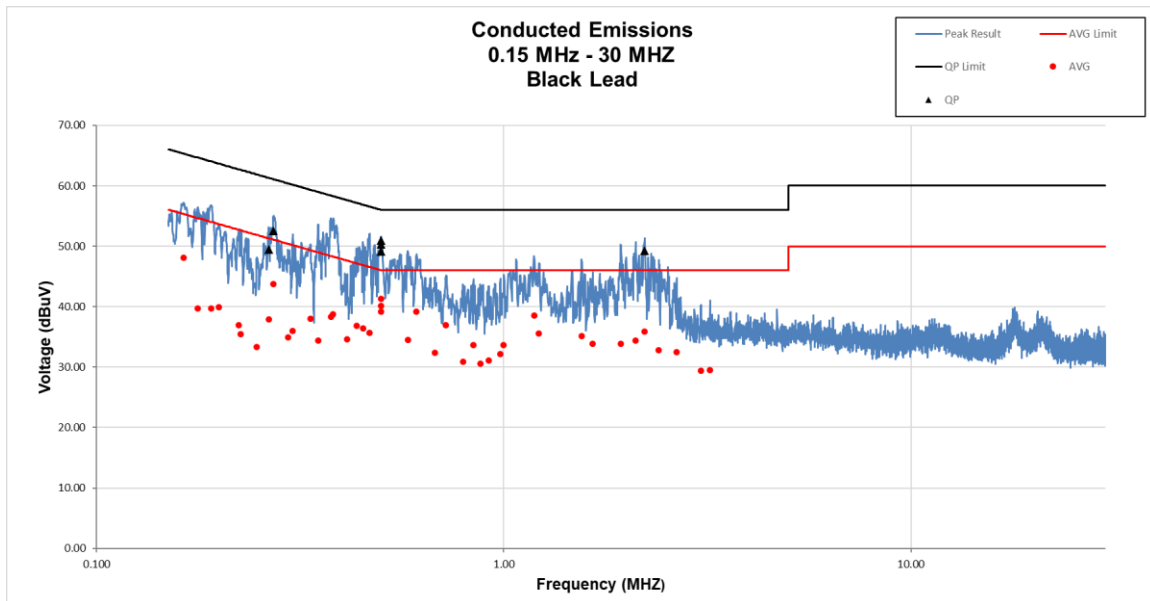


Figure 3. Conducted Emissions, Line 1 - Black, 0.15 MHz – 30 MHz

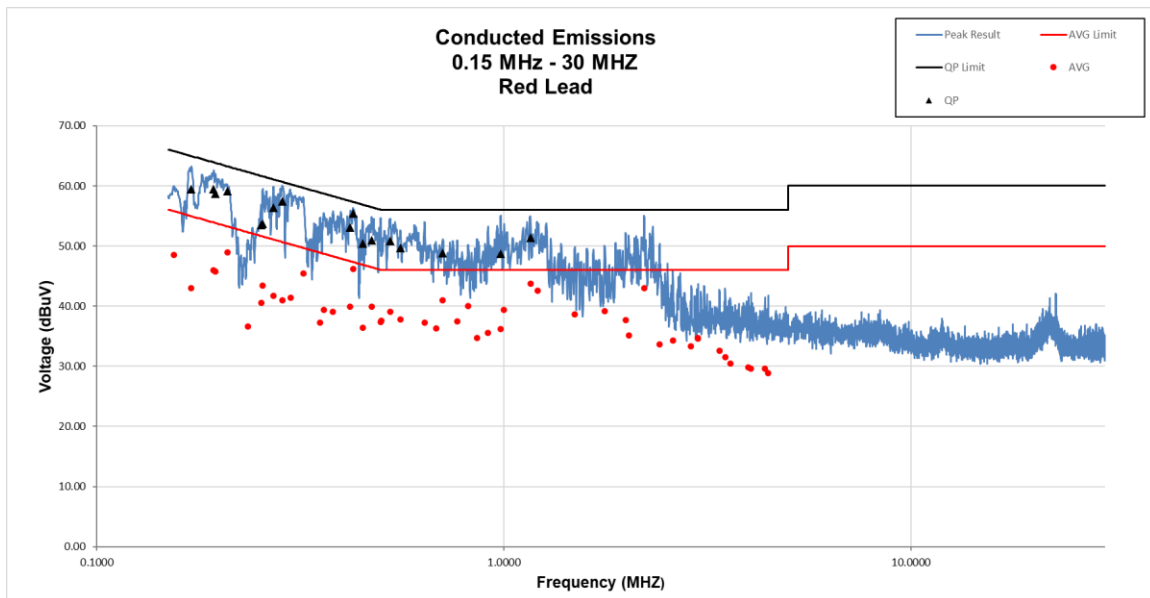


Figure 4. Conducted Emissions, Line 2 - Red, 0.15 MHz – 30 MHz

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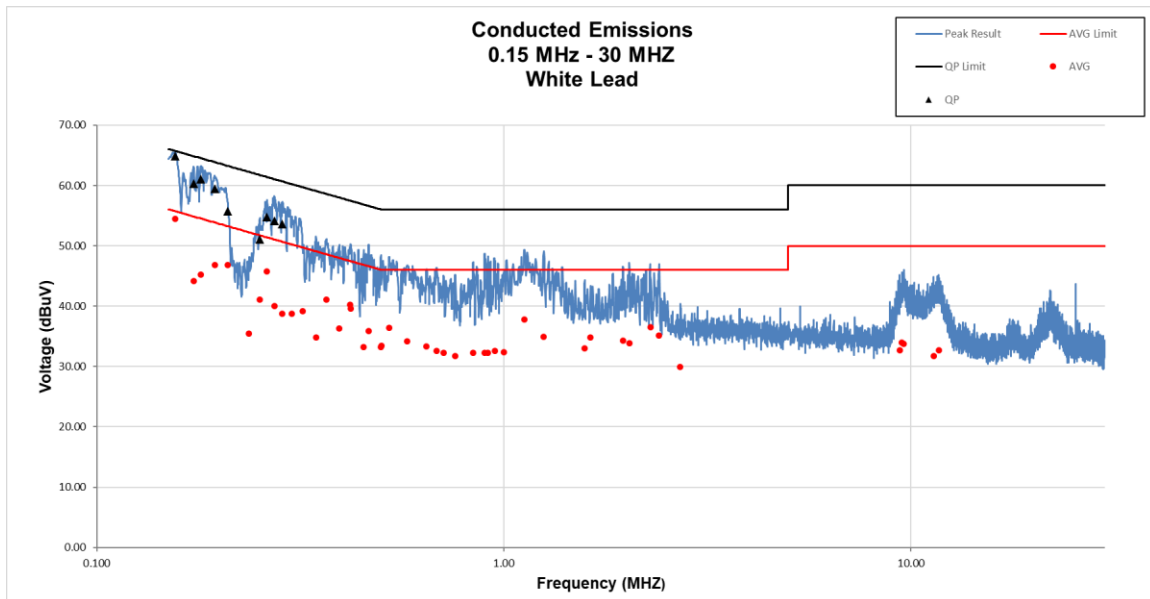


Figure 5. Conducted Emissions, Neutral - White, 0.15 MHz – 30 MHz

2.3 Test Site Description, Radiated Emissions

The radiated emissions disturbance measurement facility consists of a 8.5 meter long by 5.5 meter wide and 5.6-meter-high shielded semi anechoic EMC Chamber. The chamber is lined with ferrite core and RF absorbers. The quiet zone is 2.0 meter.

The test facility layout is shown in the figure below. A remotely controlled 2.0 m diameter flush-mounted turntable is provided for rotating (through at least 360 degrees) the EUT. A nonconductive table, 1.5 m long by 1.0 m wide by 0.8 m high is used in conjunction with the turntable for tabletop equipment. Electrical service for the EUT is provided through openings at the center of the turntable.

Provision for receiving antenna power and data wires is provided by junction boxes place at the parameter of the chamber. The receive antenna mast is remotely controlled and can be varied in height from 1 m to 4 m.

Power and data cables for the radiated disturbance measurement facility are run through PVC tubing under the raised floor or are laid directly upon the ground plane.

Radiated emissions were evaluated based on 47 CFR 18.309 and MP-5 (1986). During testing the EUT was tested up to the 10th harmonic or the highest detectable emission.

The load used for frequency measurement was 1000 ml of water in the beaker located in the center of the oven. For radiation on second and third harmonic two loads, one of 700 ml and one of 300 ml of water was used. Each load was tested both with the beaker located in the center of the oven and with it in the right front corner.

Note: During spurious emissions testing both the microwave oven and Wi-Fi radio were on and transmitting as normally intended. The results above show no increase in spurious emissions due to intermodulation effects or other effects as a result of having both radios operating simultaneously. The results do not warrant additional testing beyond the above test.

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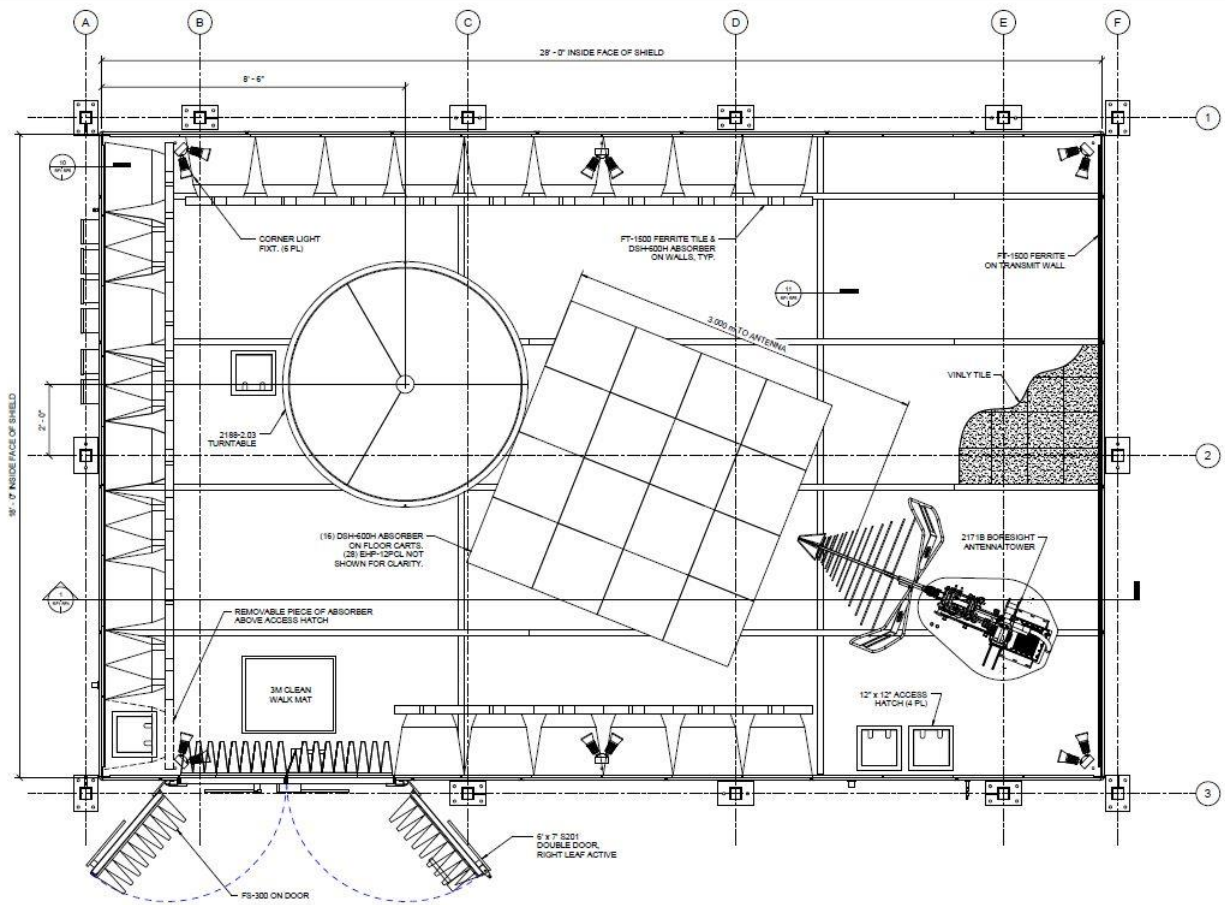


Figure 6. Radiated Emissions Disturbance Measurement Facility Diagram

2.4 Radiated Emissions Test Data

2.4.1 Part 18 ISM Test Limits and Calculations

Per 47 CFR 18.301 the ISM equipment may be operated on any frequency above 9 kHz except as indicated in 47 CFR 18.303. The field strength limit per 47 CFR 18.305 for ISM equipment operating on a frequency specified in 47 CFR 18.301 is permitted unlimited radiated energy in the band specified for that frequency. The field strength levels of emissions which lie outside the bands specified in 47 CFR 18.301 must not exceed the limits detailed in CFR 18.305, unless otherwise indicated.

Per the table in 18.301, the frequency 2450 MHz $\pm$ 50MHz is allowed unlimited radiated energy. The EUT fundamental frequency is stated to be 2450 MHz.

The field strength levels of emissions which lie outside the bands specified in 18.301, unless otherwise indicated, shall not exceed the following:

Any type of equipment unless otherwise specified that operate above 500 watts:

$$25 \frac{\mu V}{m} * \sqrt{\frac{Power\ W}{500\ W}} @ 300\ m.$$

Therefore, the limit converted to dBuV/m is:

$$20 * \log_{10} \left(25 * \sqrt{\frac{EUT\ Power}{500\ W}} \right) + 20 * \log_{10} \frac{300\ m}{test\ distance\ (m)}$$

The measured EUT power P, is 950 Watts as rated and tested by the manufacturer. This value was used in the calculation of the limit for this test.

Limit at 10 meters is:

$$20 * \log_{10} \left(25 * \sqrt{\frac{950\ W}{500\ W}} \right) + 20 * \log_{10} \frac{300\ m}{10\ m} = 60.28\ dBuV/m$$

Limit at 3 meters is:

$$20 * \log_{10} \left(25 * \sqrt{\frac{950\ W}{500\ W}} \right) + 20 * \log_{10} \frac{300\ m}{3\ m} = 70.74\ dBuV/m$$

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2.4.2 General Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$FS = RA + CF - AG$$

where FS = Field Strength

RA = Receiver Amplitude (dBuV)

CF = Correction Factor (Antenna Factor & Cable Loss) (dB/m)

AG = Amplifier Gain

Assuming a receiver reading of 100 dBuV and a correction factor of 11.8 dB/m, the following calculation would apply:

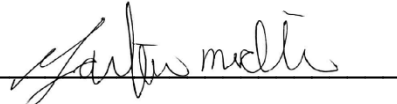
$$FS \text{ (dBuV/m)} = 100 \text{ dBuV} + 11.8 \text{ dB/m} = 111.8 \text{ dBuV/m}$$

2.4.3 Radiated Emissions Test Results

Table 7. Radiated Emissions Data 30 MHz to 1 GHz

Frequency (MHz)	Test Data (dBuV)	AF+CA-AMP (dB/m)	Results (dBuV/m)	Average Limits (dBuV/m)	Application Test Distance/ Polarization	Margin (dB)	Detector Used
95.95	65.51	-13.95	51.56	70.7	3m./HORZ	19.2	PK
102.15	63.51	-13.50	50.01	70.7	3m./HORZ	20.7	PK
113.60	62.84	-12.69	50.15	70.7	3m./HORZ	20.6	PK
245.94	64.63	-11.13	53.50	70.7	3m./HORZ	17.2	PK
833.41	45.78	0.01	45.79	70.7	3m./HORZ	25.0	PK
95.45	65.28	-13.05	52.23	70.7	3m./VERT	18.5	PK
112.90	63.35	-12.21	51.13	70.7	3m./VERT	19.6	PK
200.00	58.05	-7.35	50.71	70.7	3m./VERT	20.0	PK
245.80	73.49	-10.73	62.75	70.7	3m./VERT	8.0	PK
273.30	63.92	-10.39	53.53	70.7	3m./VERT	17.2	PK
All other emissions were at least 20 dB below the limit							

Test Date: October 1, 2025

Tested by
Signature: 

Name: Gabriel Medina

US Tech Test Report:
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Table 8. Radiated Emissions Data 1 GHz to 25 GHz

Frequency (MHz)	Test Data (dBuV)	AF+CA-AMP (dB/m)	Results (dBuV/m)	Average Limits (dBuV/m)	Application Test Distance/ Polarization	Margin (dB)	Detector Used
2186.00	42.00	13.98	55.98	70.75	3.m./HORZ	14.77	AVG
2294.00	48.48	14.33	62.81	70.75	3.m./HORZ	7.93	AVG
2394.50	48.01	15.24	63.25	70.75	3.m./HORZ	7.50	AVG
2553.00	37.69	15.87	53.56	70.75	3.m./HORZ	17.19	AVG
2628.00	40.87	16.17	57.04	70.75	3.m./HORZ	13.71	AVG
2699.00	45.59	16.21	61.80	70.75	3.m./HORZ	8.94	AVG
2741.00	37.15	16.13	53.28	70.75	3.m./HORZ	17.46	AVG
2787.00	31.34	15.97	47.31	70.75	3.m./HORZ	23.43	AVG
3195.00	39.03	1.08	40.11	70.75	3.m./HORZ	30.64	AVG
3440.10	39.45	0.97	40.42	70.75	3.m./HORZ	30.33	AVG
3686.00	63.38	-0.55	62.83	70.75	3.m./HORZ	7.92	PK
4356.00	41.35	2.80	44.15	70.75	3.m./HORZ	26.60	AVG
4843.00	46.48	3.53	50.01	70.75	3.m./HORZ	20.74	AVG
5456.11	35.31	3.89	39.20	70.75	3.m./HORZ	31.55	AVG
7102.00	36.06	7.33	43.39	70.75	3.m./HORZ	27.36	AVG
7360.84	56.23	8.23	64.46	70.75	3.m./HORZ	6.29	PK
8471.96	43.34	6.57	49.91	70.75	3.m./HORZ	20.83	AVG
8602.00	34.12	6.84	40.96	70.75	3.m./HORZ	29.78	AVG
9519.00	29.71	8.03	37.74	70.75	3.m./HORZ	33.01	AVG
9818.74	56.61	7.70	64.31	70.75	3.m./HORZ	6.44	PK
10071.00	39.46	7.43	46.89	70.75	3.m./HORZ	23.86	AVG
11051.00	32.20	9.17	41.37	70.75	3.m./HORZ	29.38	AVG
14743.00	47.00	18.00	65.00	70.75	3.m./HORZ	5.75	PK
17196.00	29.12	19.40	48.52	70.75	3.m./HORZ	22.22	AVG
2189.00	41.50	13.84	55.34	70.7	3. m./VERT	15.4	AVG
2289.00	47.56	14.21	61.77	70.7	3. m./VERT	9.0	AVG
2368.00	40.42	14.76	55.18	70.7	3. m./VERT	15.6	AVG
2541.00	39.58	16.00	55.58	70.7	3. m./VERT	15.2	AVG
2629.00	46.41	16.16	62.57	70.7	3. m./VERT	8.2	AVG
2704.25	46.37	16.06	62.43	70.7	3. m./VERT	8.3	AVG
2766.50	31.68	15.89	47.57	70.7	3. m./VERT	23.2	AVG
3195.92	39.82	1.06	40.88	70.7	3. m./VERT	29.9	AVG
4366.75	54.40	2.93	57.33	70.7	3. m./VERT	13.4	AVG
4839.20	43.86	3.73	47.59	70.7	3. m./VERT	23.2	AVG
5456.02	37.20	3.92	41.12	70.7	3. m./VERT	29.6	AVG
7068.84	33.90	7.30	41.20	70.7	3. m./VERT	29.5	AVG
7377.25	40.98	8.41	49.39	70.7	3. m./VERT	21.4	AVG
8478.71	48.18	6.62	54.80	70.7	3. m./VERT	15.9	AVG
8856.01	33.47	6.81	40.28	70.7	3. m./VERT	30.5	AVG
9535.17	34.72	7.87	42.59	70.7	3. m./VERT	28.2	AVG
10080.27	45.14	8.01	53.15	70.7	3. m./VERT	17.6	AVG
17212.57	29.62	19.47	49.09	70.7	3. m./VERT	21.7	AVG

Test Date: September 10, 2025 and October 1, 2025

Tested by

Signature: 

Name: Gabriel Medina

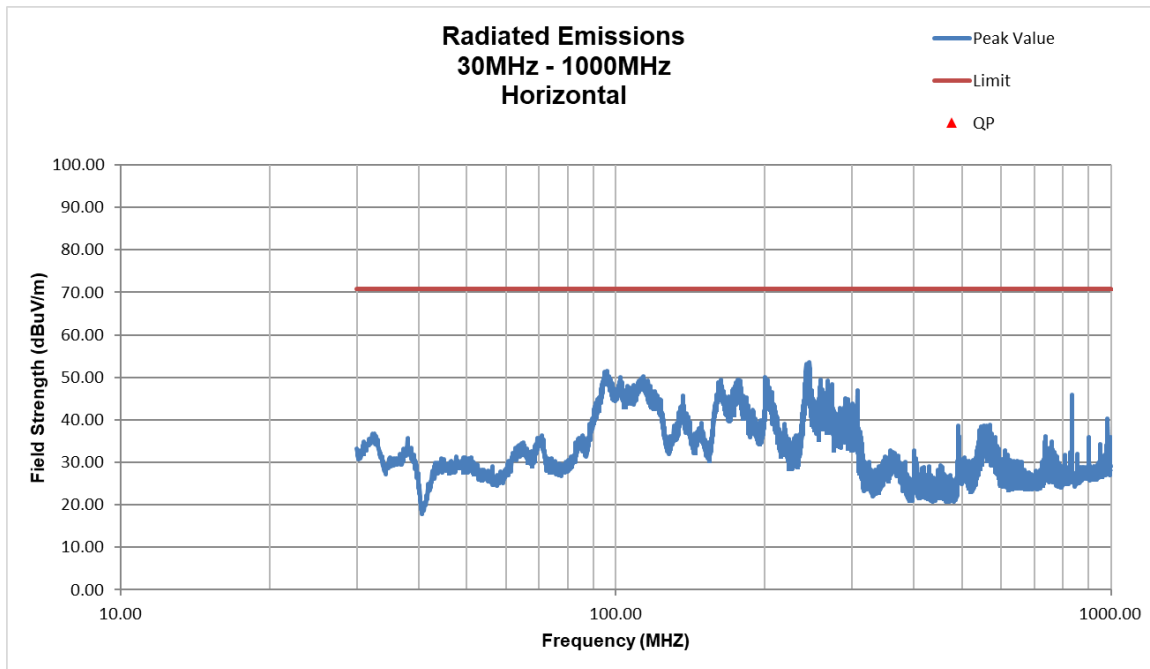


Figure 7. Radiated Emissions Below 30-1000 MHz Horizontal

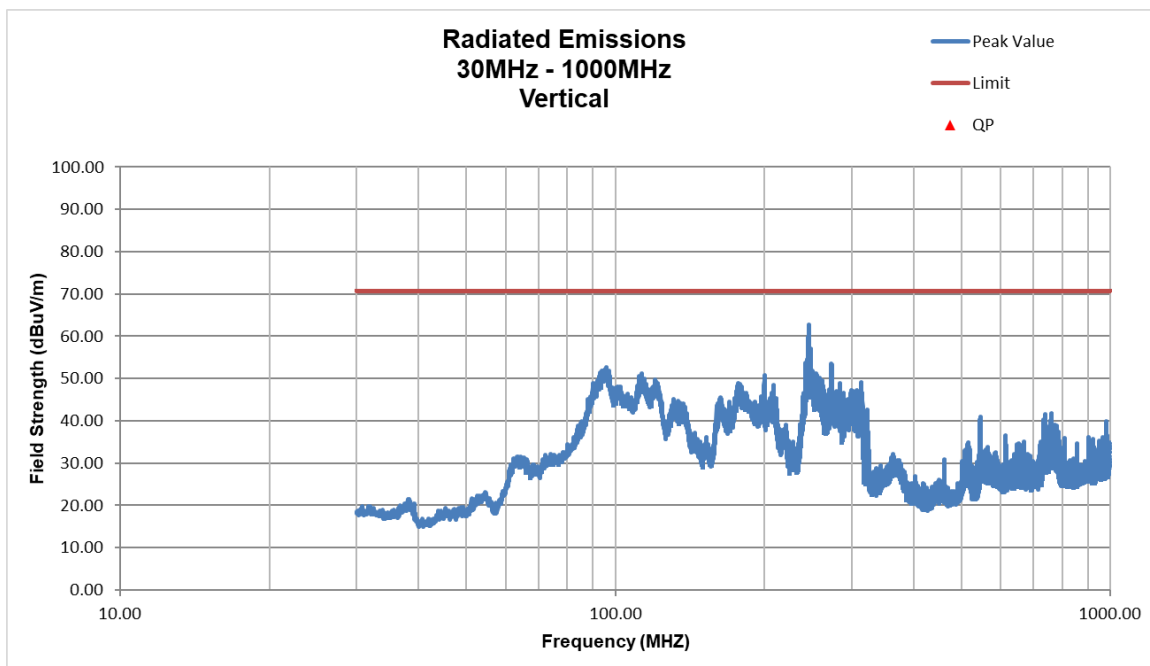


Figure 8. Radiated Emissions Below 30-1000 MHz Vertical

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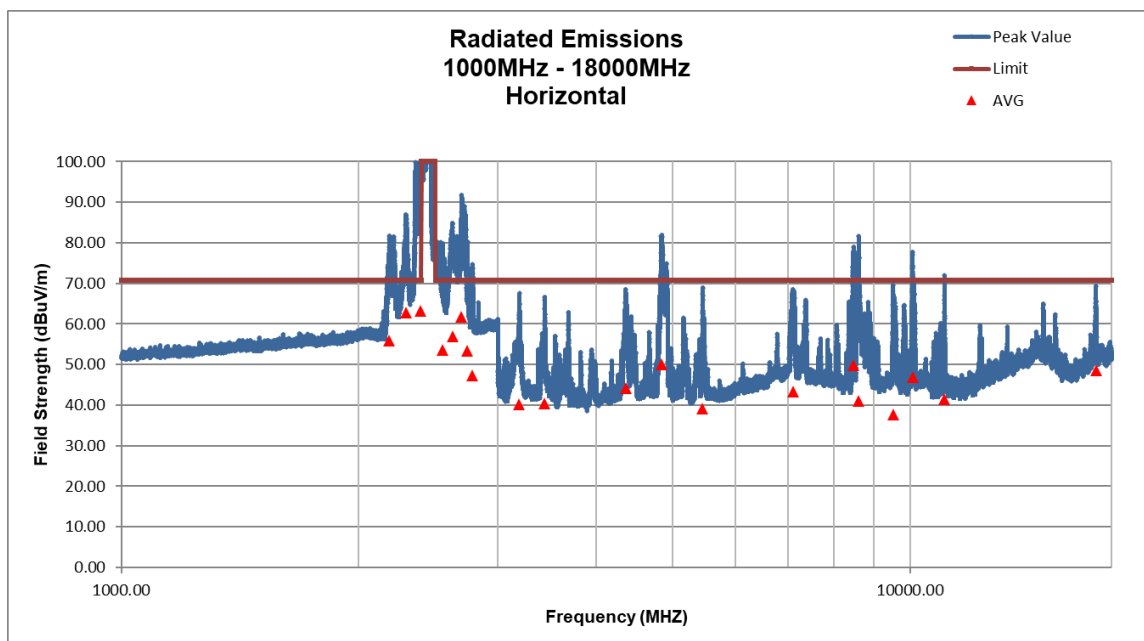


Figure 9. Radiated Emissions Above 1 GHz Horizontal

Note: Measurements were made over the frequency range of 1 GHz to 25 GHz.

Note: All other emissions were more than 20 dB from the limit.

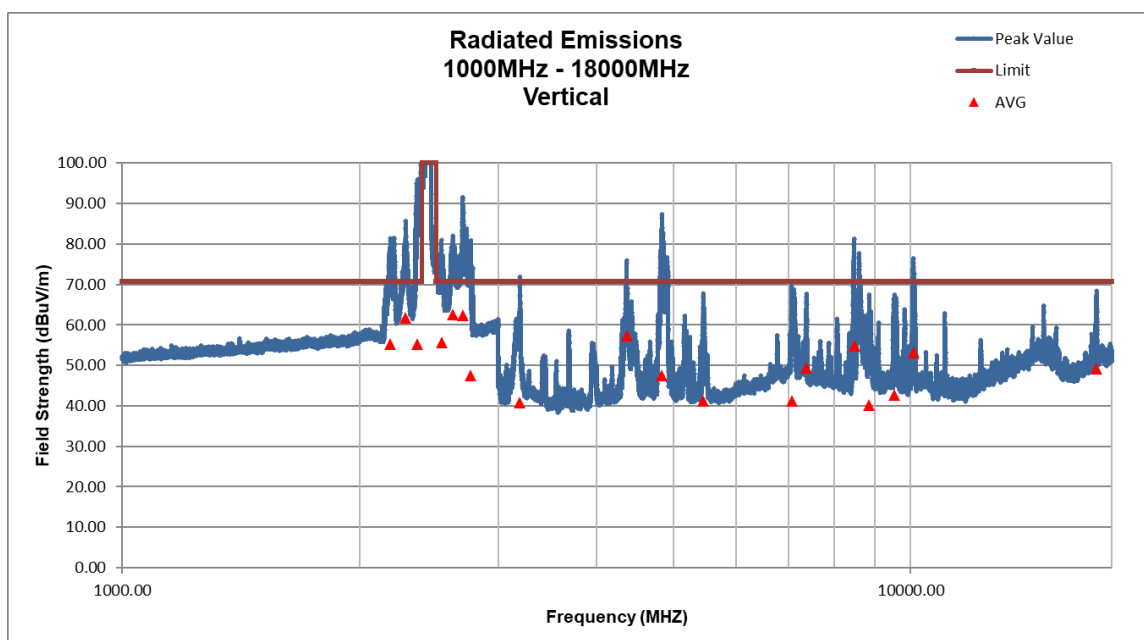


Figure 10. Radiated Emissions Above 1 GHz Vertical

Note: Measurements were made over the frequency range of 1 GHz to 25 GHz.

Note: All other emissions were more than 20 dB from the limit.

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3 3. Emissions Test Configuration Photographs



Figure 11. Photograph of Conducted Emissions Test Configuration

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Figure 12. Photograph of Radiated Emissions Test Configuration, Close-Up

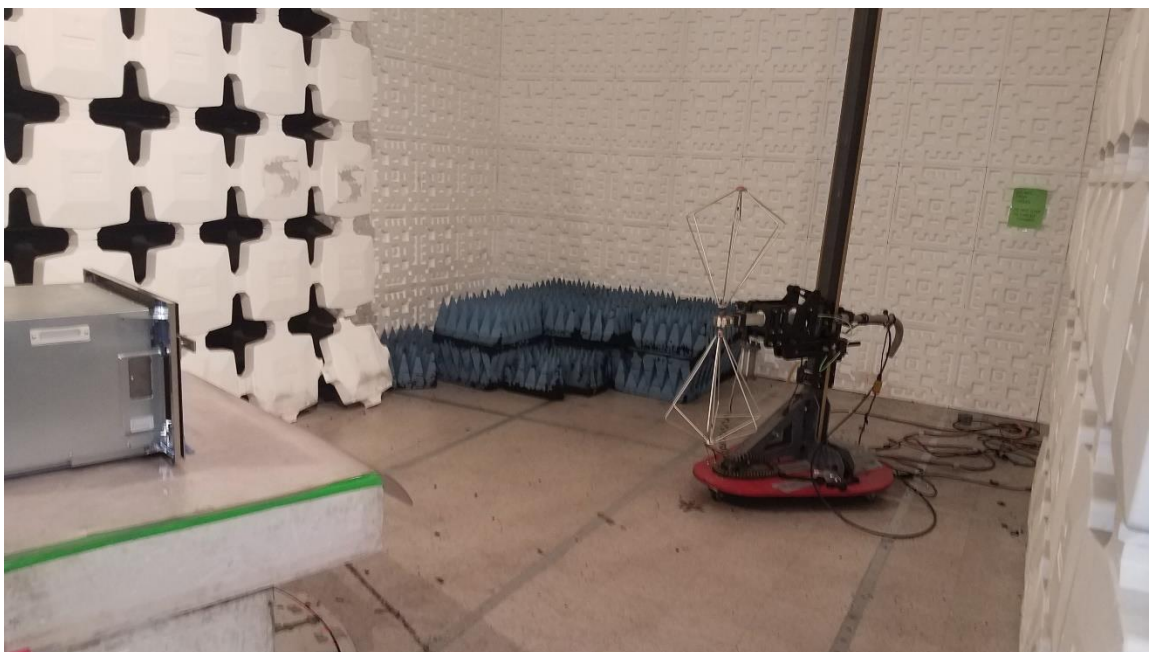


Figure 13. Photograph of Radiated Emissions Test Configuration, 30 - 200 MHz

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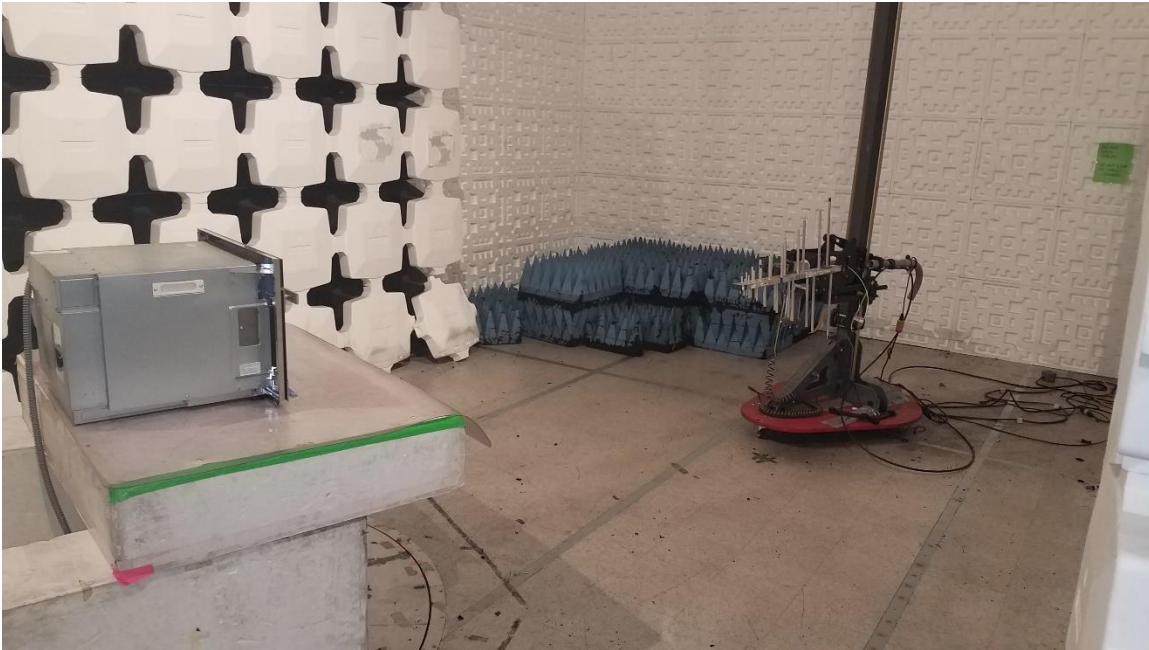


Figure 14. Photograph of Radiated Emissions Test Configuration, 30 - 200 MHz



Figure 15. Photograph of Radiated Emissions Test Configuration, 1 - 25 GHz

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4 Microwave Output Power Measurement, MP-5

The Caloric Method was used to determine maximum output power. The initial temperature of a 1000 ml water load was measured for ovens rated at 1000 watts or less power output. For ovens more than 1000 watts output rating, additional beakers by fraction thereof are used if necessary.

The water load was placed in the center of the oven. The oven was operated at maximum output power for 120 seconds, then the temperature of the water was re-measured.

Three trials were performed and then the results calculated using the following formula:

$$\text{Output Power} = \frac{4.2 \left(\frac{\text{Joules}}{\text{Cal}} \right) * \text{Volume (mL)} * \Delta T (^{\circ}\text{C})}{\text{Time (s)}}$$

Table 9. Output Power Results

Start Temperature (°C)	Final Temperature (°C)	Temperature Rise (ΔT)	Elapsed Time (seconds)	Water Volume (ml)	RF Power (Watts)
28.0	48.2	20.2	120	1000	707
23.7	46.4	22.7	120	1000	794
24.0	45.2	21.2	120	1000	742

EUT rated output power level: 950 Watts

Average from the three trials: 747.8 Watts

Test Date: October 1, 2025

Tested by
Signature: 

Name: Gabriel Medina

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5 Input Power

Input power and current was measured using a power analyzer. A 1000 mL 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.

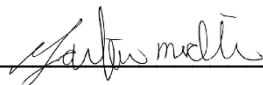
Only the microwave circuit was measured during this test. The convection oven circuit was not measured. The EUT was connected to 120VAC to power the microwave circuit and exercise the microwave during testing.

Table 10. Input Power

Input Voltage (VAC/Hz)	Input Current (Amps)	Measured Input Power (Watts)	Rated Input Power (Watts)
118.1 VAC/60Hz	14.30	1665	6000.0

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

Test Date: October 1, 2025

Tested by
Signature: 

Name: Gabriel Medina

US Tech Test Report:
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6 Test Results

The EUT meets the Technical Requirements of CFR 47 Part 18 Industrial Scientific and Medical Equipment, Subpart C Technical Standards, Part 18.305, Field Strength Limits and Part 18.307, Conducted limits and meets the criteria.

END TEST REPORT