

FCC RADIO TEST REPORT

Applicant..... : Raffel Systems, LLC

Address..... : N112 W14600 Mequon Road Germantown Wisconsin United States

Manufacturer..... : Xiamen Raffel Electronic Technology Co., LTD

Address..... : Unit 2002, NO.5 Yilan Road, Guanyinshan CBD, Siming District, Xiamen, Fujian, China.

Factory..... : Fortress Electronics (Xiamen) Co.,LTD

Address..... : East of The Fifth Floor, 181 Banqiao Road, Jimei District, Xiamen, Fujian, China

Product Name..... : MPP emission module

Brand Name..... : Raffel Systems

Model No. : MDL MPP15 01

FCC ID..... : YZHMDLMPP1501

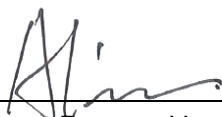
Measurement Standard..... : 47 CFR FCC Part 15, Subpart C

Receipt Date of Samples..... : May 22, 2026

Date of Tested..... : May 22, 2026 to June 01, 2026

Date of Report..... : June 04, 2026

This report shows that above equipment is technically compliant with the requirements of the standards above. All test results in this report apply only to the tested sample(s). Without prior written approval of Dongguan Nore Testing Center Co., Ltd, this report shall not be reproduced except in full.



Prepared by

Alina Guo / Project Engineer



Iori Fan / Authorized Signatory

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Revision History

[illegible]

1. Summary of Test Result

FCC Rules	Description of Test	Result	Remarks
§15.207 (a)	AC Power Conducted Emission	PASS	---
§15.209	Radiated Emissions	PASS	---
§15.215(c)	20dB Bandwidth	PASS	---
§15.203	Antenna Requirement	PASS	---

2. General Description of EUT

Product Information	
Product Name:	MPP emission module
Main Model Name:	MDL MPP15 01
Additional Model Name:	N/A
Model Difference:	N/A
S/N:	2605-2723
Brand Name:	Raffel Systems
Hardware Version:	V01
Software Version:	V01
Rating:	Input: DC 9-29V, 2.2A Max Output: 15W Max
Typical Arrangement:	Table-top
I/O Port:	Refer to user manual
Accessories Information	
Adapter:	N/A
Cable:	N/A
Other:	N/A
Additional Information	
Note:	N/A
Remark:	All the information above are provided by the manufacturer. More detailed feature of the EUT please refers to the user manual.

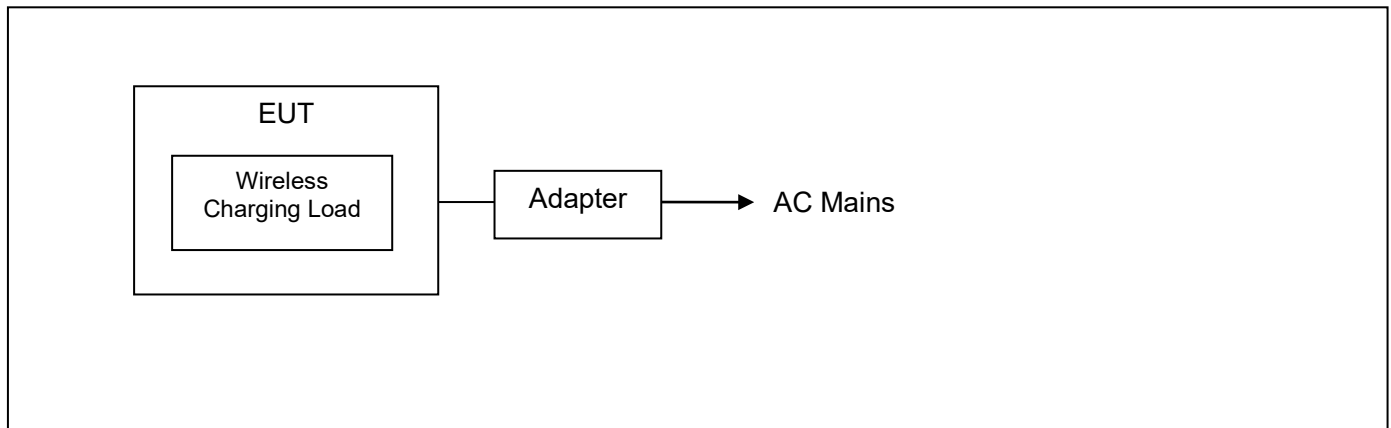
Technical Specification	
Frequency Range:	110.1-150.1KHz 360.670KHz (only Supports 15W power)
Modulation type:	ASK
Antenna Type:	Coil antenna
Number of Antenna:	1
Output power for coil:	5W, 10W, 15W

3. Test Channels and Modes Detail

Mode		Modulation
1	Wireless Charging (Full Load 5W)	ASK
2	Wireless Charging (Full Load 10W)	ASK
3	Wireless Charging (Full Load 15W)	ASK

Note: Full load, half load and light load have been considered in different wireless charging power, and only the worst case was recorded in the report.

4. Configuration of EUT



5. Modification of EUT

No modifications are made to the EUT during all test items.

6. Description of Support Device

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.

No.	Equipment	Brand	M/N	S/N	Specification	Remarks
1.	Wireless Charging Load	Consumer Electronics	2S	N/A	N/A	Provided by the Lab.
2.	Adapter	---	P0013	K27F8Q5 L05146	Input: AC 200-240V-50/60Hz, 1.2A Output: USB-C:5V=3A or 9V=3A Max or 10V=4A Max or 15V=2.66A Max or 20V=2A Max USB-A:5V=3A or 10V=4A Max or 20V.=2A Max Input: AC100-130V-50/60Hz, 1.2A Output: USB-C:5V=3A or 9V=2A Max or 10V=2.25A Max or 15V=1.5A Max or 20V.m1A Max USB-A:5V=3A or 10V=2.25A Max or 20V.=1A Max	Provided by the Lab.

7. Test Facility and Location

Test Site	:	Dongguan Nore Testing Center Co., Ltd. (Dongguan NTC Co., Ltd.)
Accreditations and Authorizations	:	The Laboratory has been assessed and proved to be in compliance with CNAS/CL01 Listed by CNAS, August 13, 2018 The Certificate Registration Number is L5795. The Certificate is valid until August 13, 2030 The Laboratory has been assessed and proved to be in compliance with ISO17025 Listed by A2LA, November 01, 2017 The Certificate Registration Number is 4429.01 The Certificate is valid until December 31, 2027 Listed by FCC, November 06, 2017 Test Firm Registration Number: 907417 Listed by ISED, June 08, 2017 The Certificate Registration Number. Is 9743A The CAB identifier number: CN0015
Test Site Location	:	Room 101, 1101, Building 2, No. 61, Hongmei Section, Wangsha Road, Hongmei Town, Dongguan, Guangdong, People's Republic of China

8. Applicable Standards and References

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

Test Standards:

47 CFR Part 15, Subpart C

ANSI C63.10-2020+Cor 1-2023

References Test Guidance:

N/A

9. Deviations and Abnormalities from Standard Conditions

No additions, deviations and exclusions from the standard.

10. Test Conditions

No.	Test Item	Test Mode	Test Voltage	Tested by	Remarks
1.	AC Power Conducted Emission	1-3	AC 120V 60Hz	Dick	See note 1
2.	Radiated Emissions	1-3	AC 120V 60Hz	Dick	See note 1
3.	20dB Bandwidth	3	AC 120V 60Hz	Dick	See note 1
4.	Antenna Requirement	---	---	---	See note 1

Note:

- The testing climatic conditions for temperature, humidity, and atmospheric pressure are within: 15~35°C, 30~70%, 86~106kPa.
- For test modes, only the worst case was recorded in this report.

11. Measurement Uncertainty

No.	Test Item	Frequency	Uncertainty	Remarks
1.	Conducted Emission	150KHz ~ 30MHz	±2.46 dB	---
2.	Radiated Emission Test	9kHz ~ 30MHz	±5.63 dB	---
		30MHz ~ 1GHz	±5.63 dB	---
		1GHz ~ 18GHz	±5.16 dB	---
		18GHz ~ 40GHz	±5.16 dB	---
3.	Conducted Spurious Emissions	10Hz ~ 40GHz	±1.06 dB	---
4.	RF Output Power	10Hz ~ 40GHz	±1.08 dB	---
5.	Power Spectral Density	10Hz ~ 40GHz	±1.06 dB	---
6.	Occupied Channel Bandwidth	---	±1.06 %	---

Note:

1. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.
2. The measurement uncertainty levels above are estimated and calculated according to CISPR 16-4-2.
3. The conformity assessment statement in this report is based solely on the test results, measurement uncertainty is excluded.

12. Sample Calculations

Conducted Emission						
Freq. (MHz)	Reading Level (dBUV)	Correct Factor (dB)	Measurement (dBUV)	Limit (dBUV)	Over (dB)	Detector
0.1500	35.52	9.98	45.50	65.57	-20.07	QP
Where, Freq. = Emission frequency in MHz Reading Level = Spectrum Analyzer/Receiver Reading Corrector Factor = Insertion loss of LISN + Cable Loss + RF Switching Unit attenuation Measurement = Reading + Corrector Factor Limit = Limit stated in standard Margin = Measurement - Limit Detector = Reading for Quasi-Peak / Average / Peak						

Radiated Spurious Emissions and Restricted Bands						
Freq. (MHz)	Reading Level (dBUV)	Correct Factor (dB/m)	Measurement (dBUV/m)	Limit (dBUV/m)	Over (dB)	Detector
43.5800	31.61	-6.81	24.80	40.00	-15.20	QP
Where, Freq. = Emission frequency in MHz Reading Level = Spectrum Analyzer/Receiver Reading Corrector Factor = Antenna Factor + Cable Loss - Pre-amplifier Measurement = Reading + Corrector Factor Limit = Limit stated in standard Over = Margin, which calculated by Measurement - Limit Detector = Reading for Quasi-Peak / Average / Peak						

Note: For all conducted test items, the spectrum analyzer offset or transducer is derived from RF cable loss and attenuator factor. The offset or transducer is equal to the RF cable loss plus attenuator factor.

13. Test Items and Results

13.1 Conducted Emissions Measurement

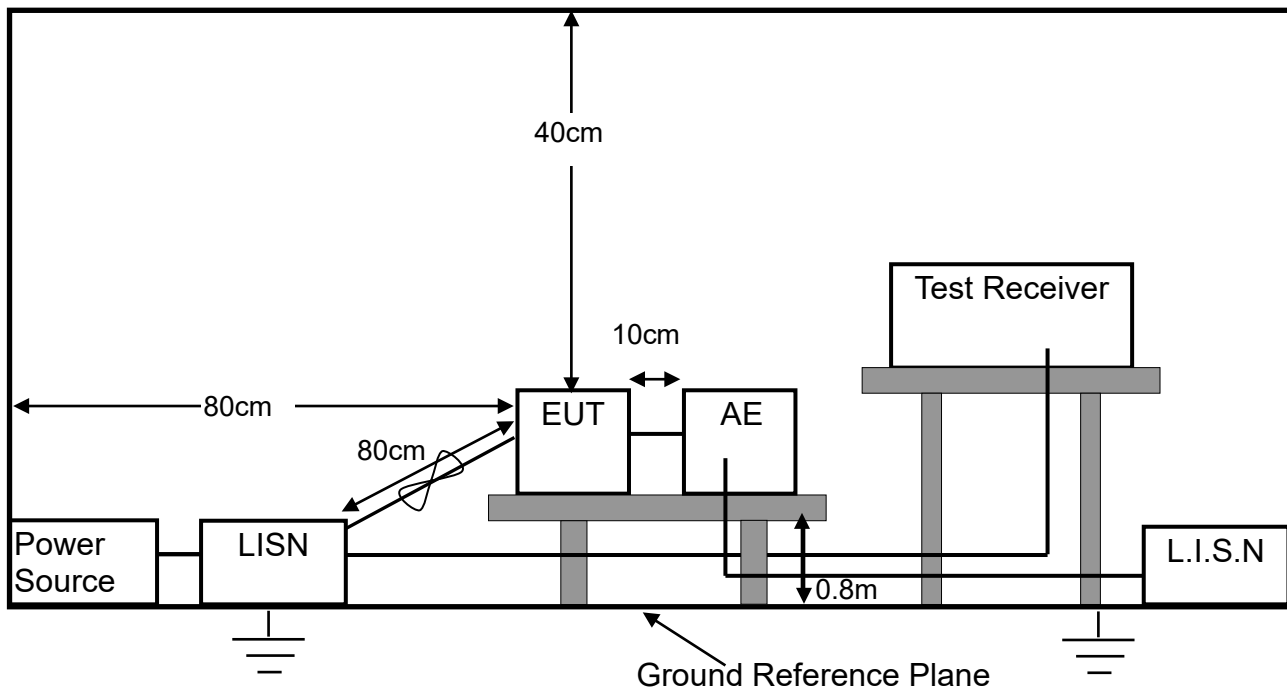
LIMITS

According to the requirements of FCC PART 15.207, the limits are as follows:

Frequency (MHz)	Quasi-peak	Average
0.15 to 0.5	66 to 56	56 to 46
0.5 to 5	56	46
5 to 30	60	50

Note: 1. If the limits for the average detector are met when using the quasi-peak detector, then the limits for the measurements with the average detector are considered to be met.
2. The lower limit shall apply at the transition frequencies.
3. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5MHz.

BLOCK DIAGRAM OF TEST SETUP



TEST PROCEDURES

- a. The EUT was placed on a wooden table 0.8m height from the metal ground plan and 0.4m from the conducting wall of the shielding room and it was kept at 0.8m from any other grounded conducting surface.
- b. All I/O cables and support devices were positioned as per ANSI C63.10.
- c. Connect mains power port of the EUT to a line impedance stabilization network (LISN).
- d. Connect all support devices to the other LISN and AAN, if needed.
- e. Scan the frequency range from 150KHz to 30MHz at both sides of AC line for maximum conducted interference checking and record the test data.

TEST RESULTS

PASS

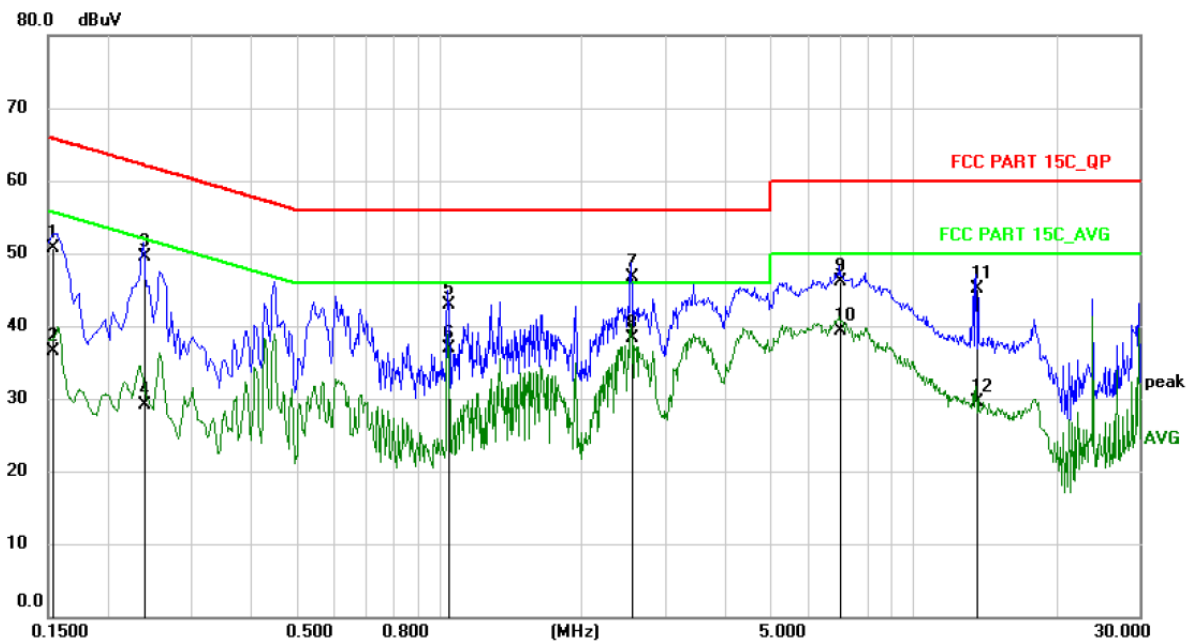
Please refer to the following pages of the worst case.

M/N: MDL MPP15 01	Testing Voltage: AC 120V / 60Hz
Phase: L1	Detector: QP & AVG
Test Mode: 1	Test frequency: 110.1-150KHz

Conducted Emission Measurement

Date: 2026/5/27

Time: 14:54:19



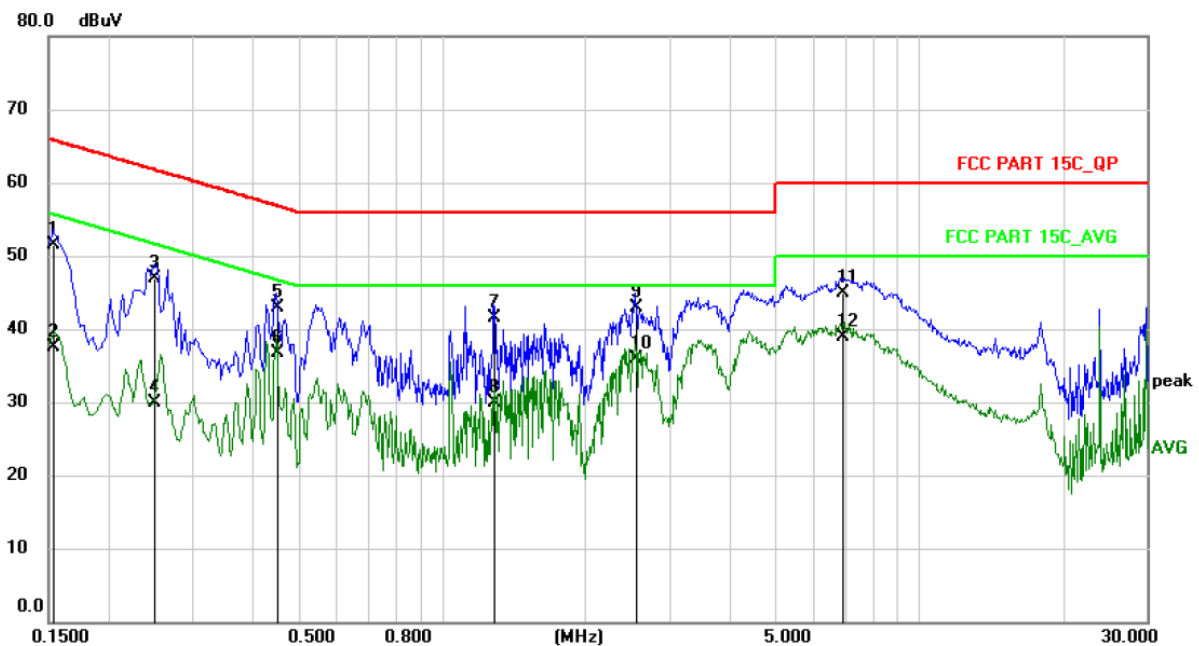
No. Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	0.1539	30.94	19.76	50.70	65.79	-15.09	QP	
2	0.1539	16.74	19.76	36.50	55.79	-19.29	AVG	
3	0.2380	29.74	19.76	49.50	62.17	-12.67	QP	
4	0.2380	9.34	19.76	29.10	52.17	-23.07	AVG	
5	1.0460	23.19	19.71	42.90	56.00	-13.10	QP	
6	1.0460	17.19	19.71	36.90	46.00	-9.10	AVG	
7	2.5420	26.98	19.72	46.70	56.00	-9.30	QP	
8 *	2.5420	18.58	19.72	38.30	46.00	-7.70	AVG	
9	7.0219	26.44	19.76	46.20	60.00	-13.80	QP	
10	7.0219	19.64	19.76	39.40	50.00	-10.60	AVG	
11	13.5939	25.19	19.91	45.10	60.00	-14.90	QP	
12	13.5939	9.69	19.91	29.60	50.00	-20.40	AVG	

M/N: MDL MPP15 01	Testing Voltage: AC 120V / 60Hz
Phase: N	Detector: QP & AVG
Test Mode: 1	Test frequency: 110.1-150KHz

Conducted Emission Measurement

Date: 2026/5/27

Time: 15:01:48



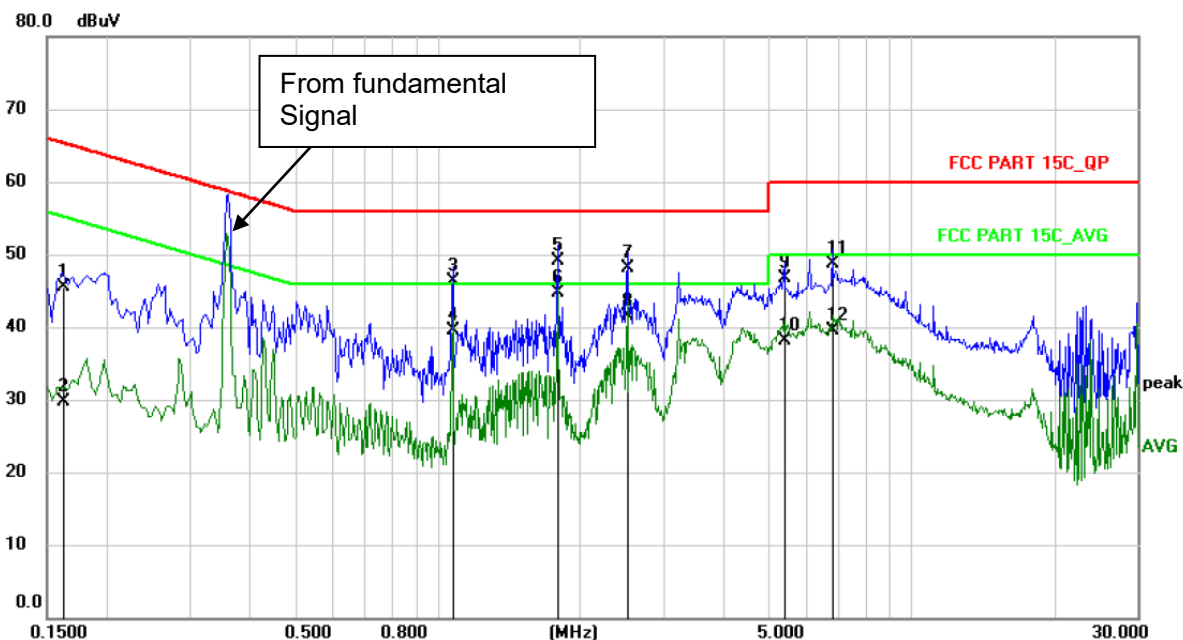
No. Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	0.1539	31.88	19.72	51.60	65.79	-14.19	QP	
2	0.1539	17.88	19.72	37.60	55.79	-18.19	AVG	
3	0.2500	27.18	19.72	46.90	61.76	-14.86	QP	
4	0.2500	10.18	19.72	29.90	51.76	-21.86	AVG	
5	0.4500	23.19	19.71	42.90	56.88	-13.98	QP	
6	0.4500	16.99	19.71	36.70	46.88	-10.18	AVG	
7	1.2860	21.83	19.67	41.50	56.00	-14.50	QP	
8	1.2860	10.23	19.67	29.90	46.00	-16.10	AVG	
9	2.5420	23.23	19.67	42.90	56.00	-13.10	QP	
10 *	2.5420	16.23	19.67	35.90	46.00	-10.10	AVG	
11	6.9059	25.18	19.72	44.90	60.00	-15.10	QP	
12	6.9059	19.18	19.72	38.90	50.00	-11.10	AVG	

M/N: MDL MPP15 01	Testing Voltage: AC 120V / 60Hz
Phase: L1	Detector: QP & AVG
Test Mode: 3	Test frequency: 360.670KHz

Conducted Emission Measurement

Date: 2026/5/27

Time: 15:22:06



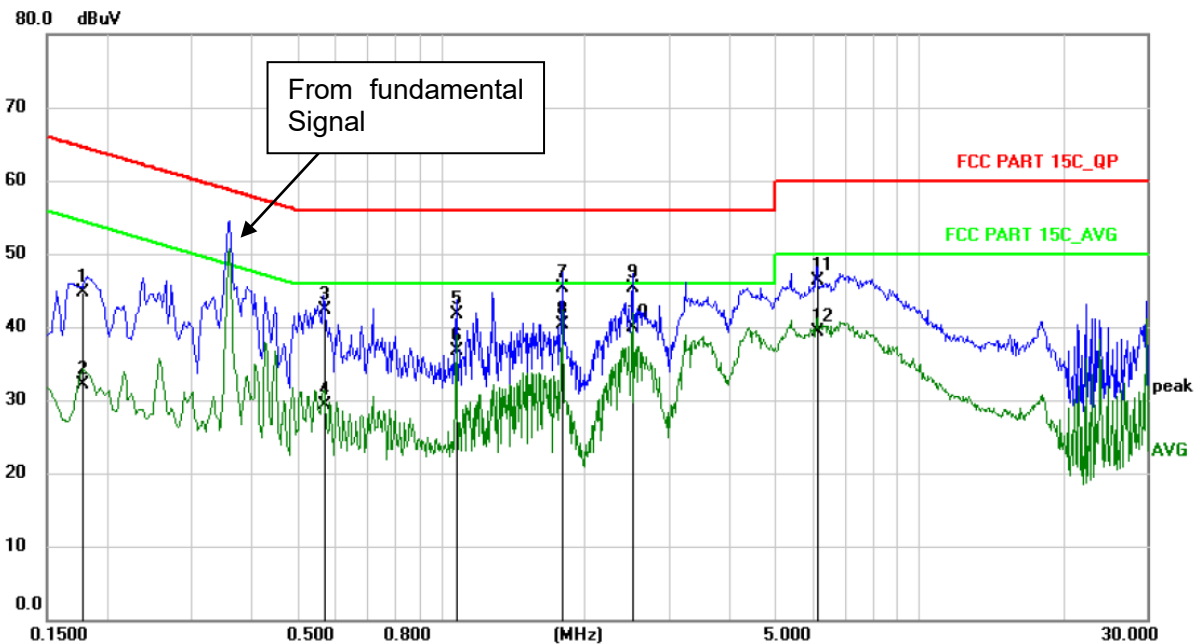
No. Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
	MHz	dBuV	dB	dBuV	dBuV	dB		
1	0.1620	25.74	19.76	45.50	65.36	-19.86	QP	
2	0.1620	9.94	19.76	29.70	55.36	-25.66	AVG	
3	1.0780	26.59	19.71	46.30	56.00	-9.70	QP	
4	1.0780	19.89	19.71	39.60	46.00	-6.40	AVG	
5	1.7980	29.39	19.71	49.10	56.00	-6.90	QP	
6 *	1.7980	24.99	19.71	44.70	46.00	-1.30	AVG	
7	2.5140	28.48	19.72	48.20	56.00	-7.80	QP	
8	2.5140	21.88	19.72	41.60	46.00	-4.40	AVG	
9	5.3939	27.05	19.75	46.80	60.00	-13.20	QP	
10	5.3939	18.45	19.75	38.20	50.00	-11.80	AVG	
11	6.8259	28.94	19.76	48.70	60.00	-11.30	QP	
12	6.8259	19.84	19.76	39.60	50.00	-10.40	AVG	

M/N: MDL MPP15 01	Testing Voltage: AC 120V / 60Hz
Phase: N	Detector: QP & AVG
Test Mode: 3	Test frequency: 360.670KHz

Conducted Emission Measurement

Date: 2026/5/27

Time: 15:29:40



No. Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
	MHz	dBuV	dB	dBuV	dBuV	dB		
1	0.1785	25.08	19.72	44.80	64.56	-19.76	QP	
2	0.1785	12.48	19.72	32.20	54.56	-22.36	AVG	
3	0.5700	22.70	19.70	42.40	56.00	-13.60	QP	
4	0.5700	9.70	19.70	29.40	46.00	-16.60	AVG	
5	1.0780	22.03	19.67	41.70	56.00	-14.30	QP	
6	1.0780	17.13	19.67	36.80	46.00	-9.20	AVG	
7	1.7980	25.73	19.67	45.40	56.00	-10.60	QP	
8 *	1.7980	20.73	19.67	40.40	46.00	-5.60	AVG	
9	2.5180	25.73	19.67	45.40	56.00	-10.60	QP	
10	2.5180	20.23	19.67	39.90	46.00	-6.10	AVG	
11	6.1179	26.58	19.72	46.30	60.00	-13.70	QP	
12	6.1179	19.58	19.72	39.30	50.00	-10.70	AVG	

13.2 Radiated Spurious Emissions and Restricted Bands Measurement

LIMITS

Frequency range MHz	Distance Meters	Field Strengths Limit (15.209)	
		$\mu\text{V/m}$	
0.009 ~ 0.490	300	2400/F(kHz)	
0.490 ~ 1.705	30	24000/F(kHz)	
1.705 ~ 30	30	30	
30 ~ 88	3	100	
88 ~ 216	3	150	
216 ~ 960	3	200	
Above 960	3	500	
Frequency range MHz	Distance Meters	Field Strengths Limit (15.249)	
		mV/m (Field strength of fundamental)	$\mu\text{V/m}$ (Field strength of Harmonics)
902 ~ 928	3	50	500
2400 ~ 2483.5	3	50	500
5725 ~ 5875	3	50	500
24000 ~ 2425000	3	250	2500

Remark: (1) Emission level (dB) μV = 20 log Emission level $\mu\text{V/m}$

(2) The smaller limit shall apply at the cross point between two frequency bands.

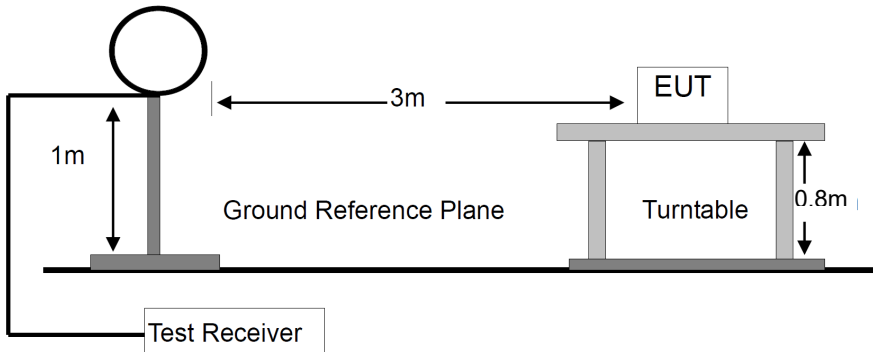
(3) As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

(4) The frequency range scanned is from the lowest radio frequency signal generated in the device which is greater than 9 kHz to the tenth harmonic of the highest fundamental frequency or 40 GHz, whichever is lower.

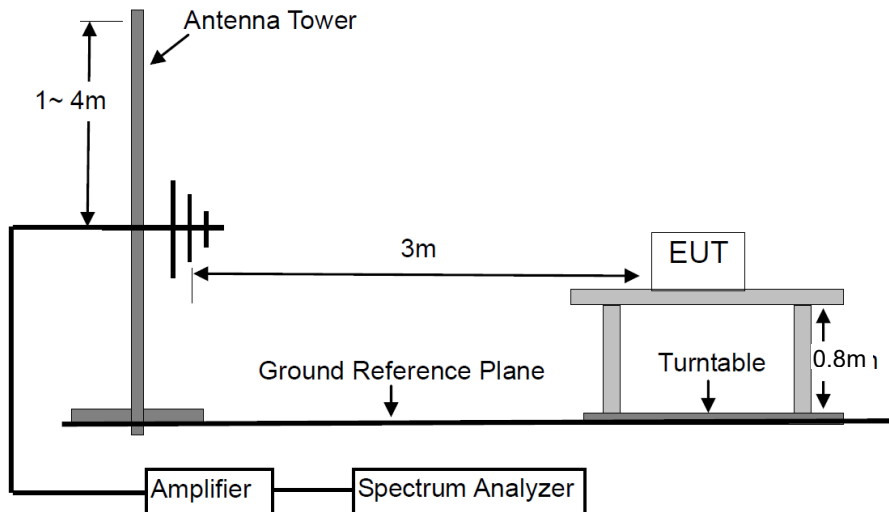
(5) §15.249(d) specifies that emissions which fall in the restricted bands, as defined in §15.205 comply with radiated emission limits specified in §15.209.

BLOCK DIAGRAM OF TEST SETUP

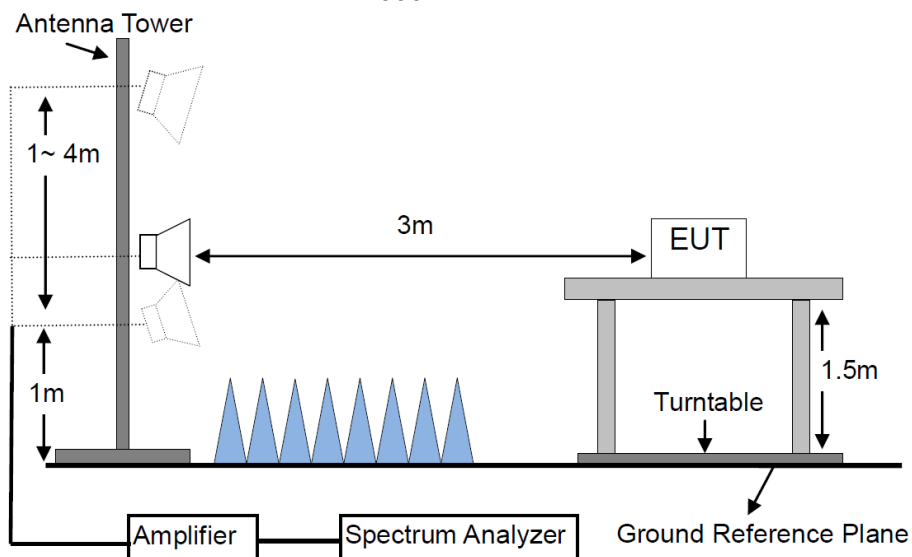
For Radiated Emission below 30MHz



For Radiated Emission 30-1000MHz



For Radiated Emission Above 1000MHz.



TEST PROCEDURES

- a. Below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi- anechoic chamber room.
- b. For the radiated emission test above 1GHz:
The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter full anechoic chamber room. The table was rotated 360 degrees to determine the position of the highest radiation. Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.
- c. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- d. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- e. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. The test-receiver system was set to peak detect function and specified bandwidth with maximum hold mode.
- f. A Quasi-peak measurement was then made for that frequency point for below 1GHz test. PK and AV for above 1GHz emission test.

During the radiated emission test, the spectrum analyzer was set with the following configurations:

Frequency Band	Detector	Resolution Bandwidth	Video Bandwidth
9KHz-90KHz	AVG	300Hz	1KHz
91KHz-109KHz	QP	300Hz	1KHz
110KHz-490KHz	AVG	300Hz/ 9KHz	1KHz /30KHz
150KHz-30MHz	QP	10KHz	30KHz
30MHz-1000MHz	QP	120KHz	300KHz
Above 1000MHz	Peak	1 MHz	3 MHz
	Average	1 MHz	10 Hz

TEST RESULTS

PASS

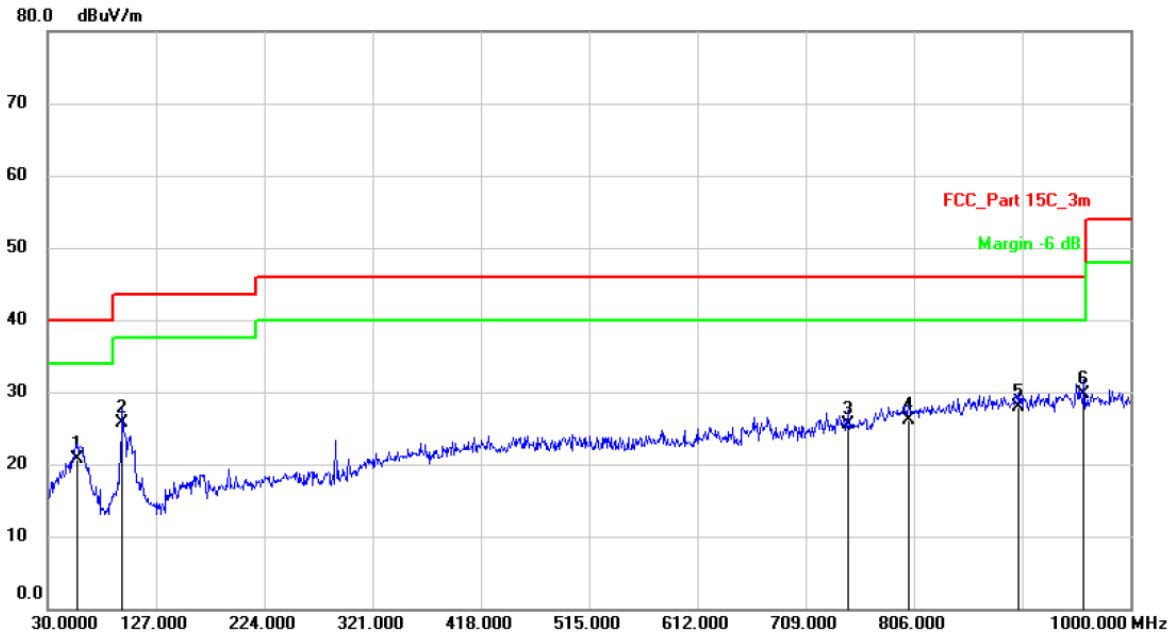
Please refer to the following pages of the worst case.

M/N: MDL MPP15 01	Testing Voltage: AC 120V / 60Hz
Polarization: Horizontal	Detector: QP
Test Mode: 3	Distance: 3m

Radiated Emission Measurement

Date: 2026/5/29

Time: 8:30:40



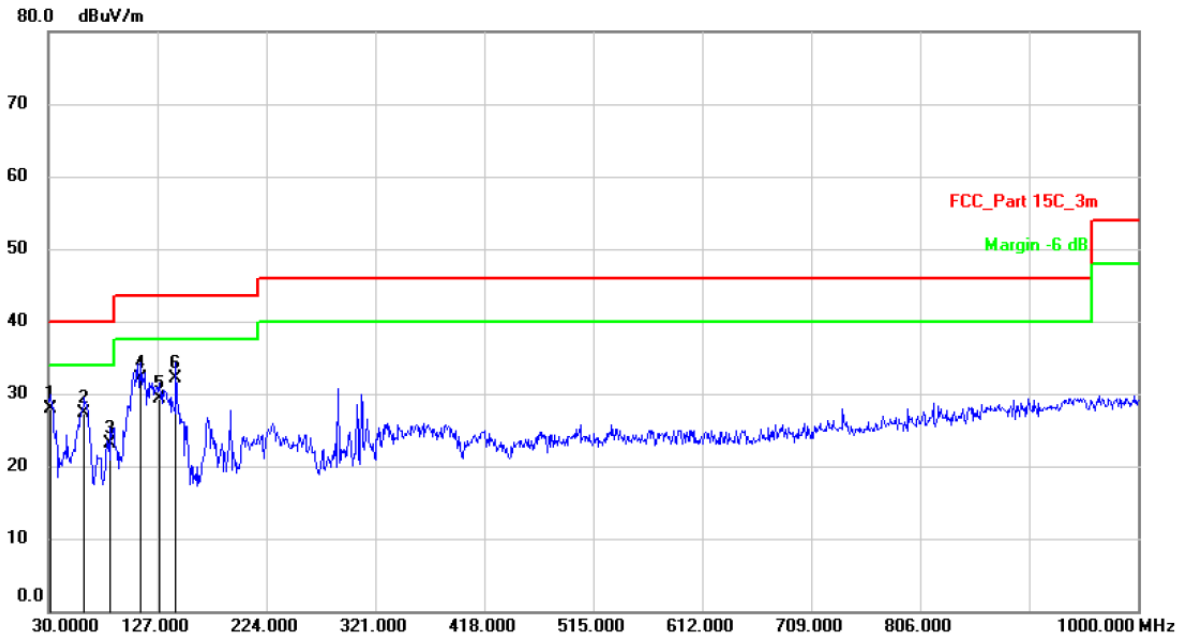
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	Comment
1		56.1900	29.02	-8.22	20.80	40.00	-19.20	QP	
2		96.9300	35.83	-10.13	25.70	43.50	-17.80	QP	
3		746.8300	23.85	1.65	25.50	46.00	-20.50	QP	
4		801.1500	23.81	2.39	26.20	46.00	-19.80	QP	
5		899.1200	24.17	3.73	27.90	46.00	-18.10	QP	
6	*	958.2900	25.80	3.90	29.70	46.00	-16.30	QP	

M/N: MDL MPP15 01	Testing Voltage: AC 120V / 60Hz
Polarization: Vertical	Detector: QP
Test Mode: 3	Distance: 3m

Radiated Emission Measurement

Date: 2026/5/29

Time: 8:37:32



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	Comment
1		31.9400	38.62	-10.62	28.00	40.00	-12.00	QP	
2		62.0100	36.69	-9.29	27.40	40.00	-12.60	QP	
3		85.2900	36.01	-12.81	23.20	40.00	-16.80	QP	
4	*	112.4500	42.50	-10.30	32.20	43.50	-11.30	QP	
5		128.9400	42.09	-12.69	29.40	43.50	-14.10	QP	
6		143.4900	45.34	-13.14	32.20	43.50	-11.30	QP	

M/N: MDL MPP15 01

Testing Voltage: AC 120V / 60Hz

Polarization: Horizontal

Detector: QP, AVG

Test Mode: 3

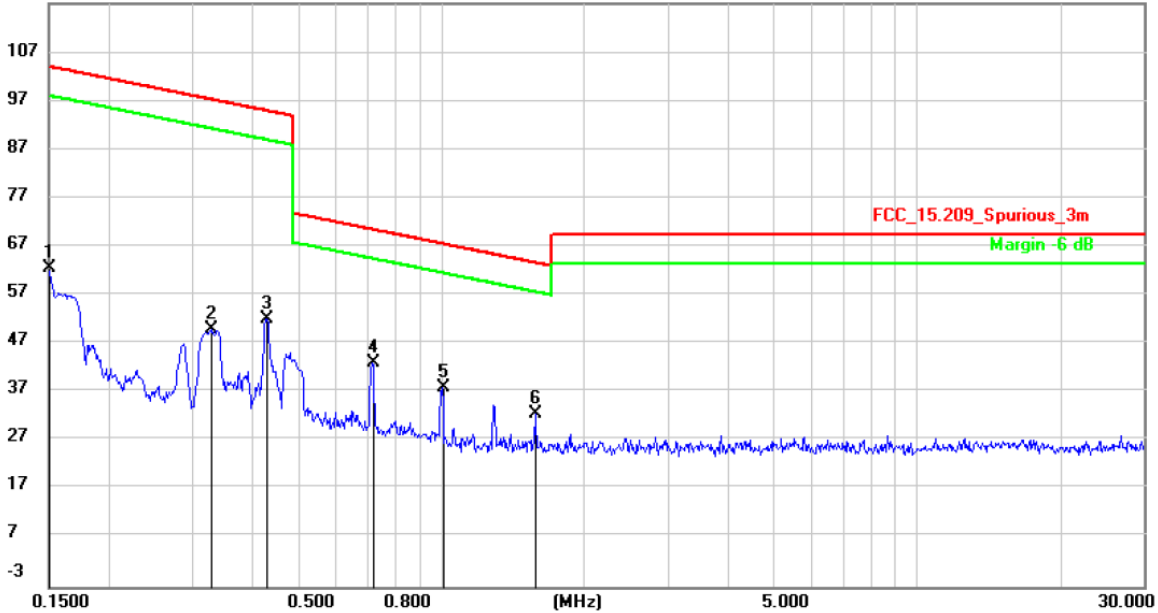
Distance: 3m

Radiated Emission Measurement

Date: 2026/5/26

Time: 19:38:19

117.0 dBuV/m



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector Comment
1		0.1500	42.19	20.46	62.65	104.02	-41.37	AVG
2		0.3286	29.49	20.41	49.90	97.25	-47.35	AVG
3		0.4305	31.73	20.41	52.14	94.92	-42.78	AVG
4	*	0.7160	22.68	20.39	43.07	70.51	-27.44	QP
5		1.0050	17.60	20.38	37.98	67.56	-29.58	QP
6		1.5766	12.10	20.39	32.49	63.65	-31.16	QP

M/N: MDL MPP15 01

Testing Voltage: AC 120V / 60Hz

Polarization: Vertical

Detector: QP, AVG

Test Mode: 3

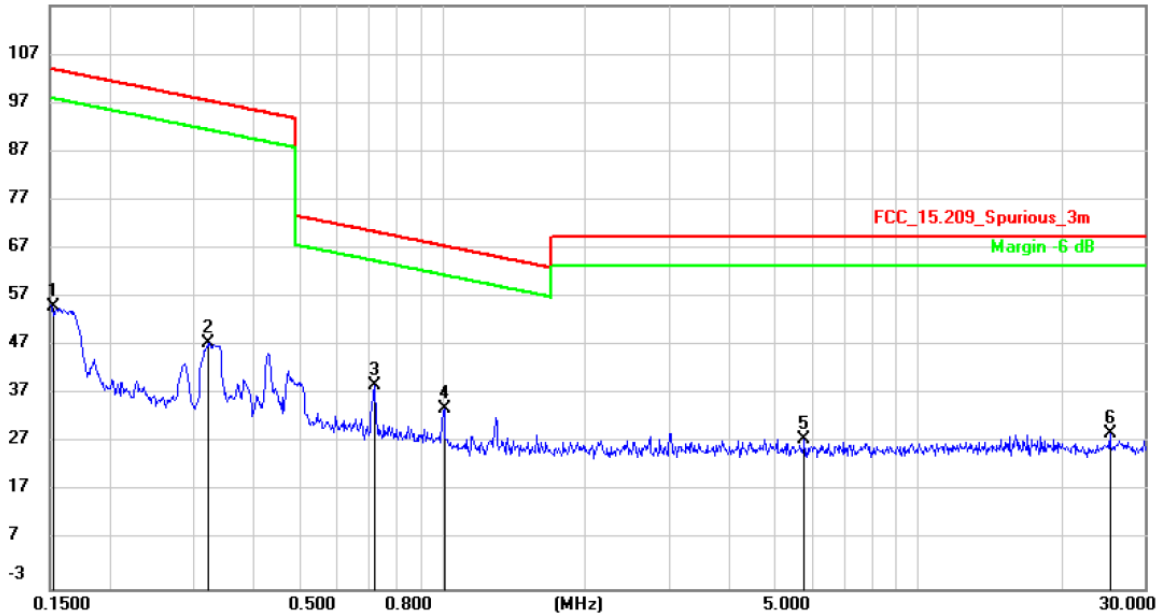
Distance: 3m

Radiated Emission Measurement

Date: 2026/5/26

Time: 19:45:01

117.0 dBuV/m



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector Comment
1		0.1516	34.47	20.46	54.93	103.93	-49.00	AVG
2		0.3234	27.12	20.41	47.53	97.39	-49.86	AVG
3	*	0.7198	18.42	20.39	38.81	70.46	-31.65	QP
4		1.0103	13.76	20.38	34.14	67.52	-33.38	QP
5		5.7743	7.17	20.46	27.63	69.50	-41.87	QP
6		25.3214	8.47	20.42	28.89	69.50	-40.61	QP

M/N: MDL MPP15 01

Testing Voltage: AC 120V / 60Hz

Polarization: Horizontal

Detector: AVG, QP, Peak

Test Mode: 3

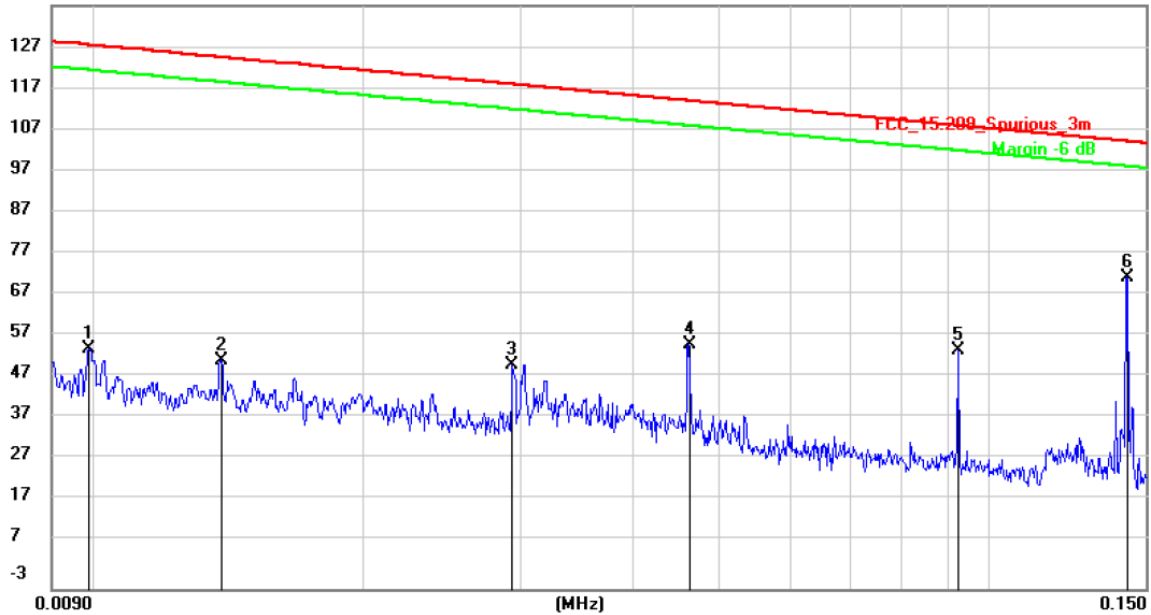
Distance: 3m

Radiated Emission Measurement

Date: 2026/5/26

Time: 19:31:56

137.0 dBuV/m



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	Comment
1		0.0099	35.25	19.26	54.51	127.50	-72.99	AVG	
2		0.0139	31.84	19.92	51.76	124.57	-72.81	AVG	
3		0.0294	30.34	20.42	50.76	118.10	-67.34	AVG	
4		0.0463	35.08	20.51	55.59	114.18	-58.59	AVG	
5		0.0925	33.58	20.48	54.06	108.20	-54.14	QP	
6	*	0.1428	51.29	20.47	71.76	104.45	-32.69	peak	

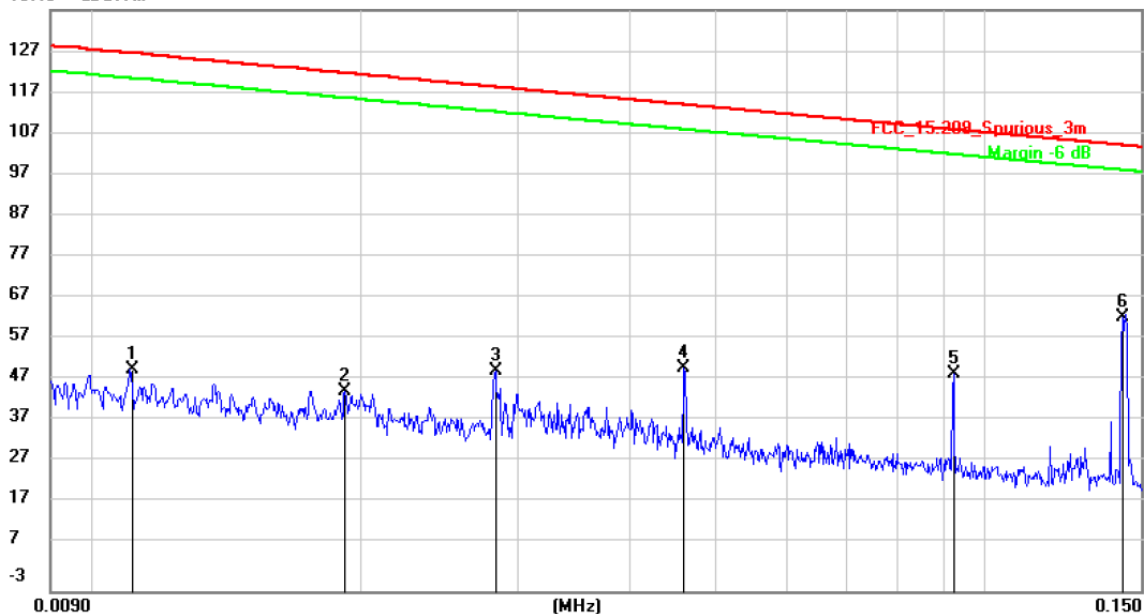
M/N: MDL MPP15 01	Testing Voltage: AC 120V / 60Hz
Polarization: Vertical	Detector: AVG, QP, Peak
Test Mode: 3	Distance: 3m

Radiated Emission Measurement

Date: 2026/5/26

Time: 19:52:31

137.0 dBuV/m



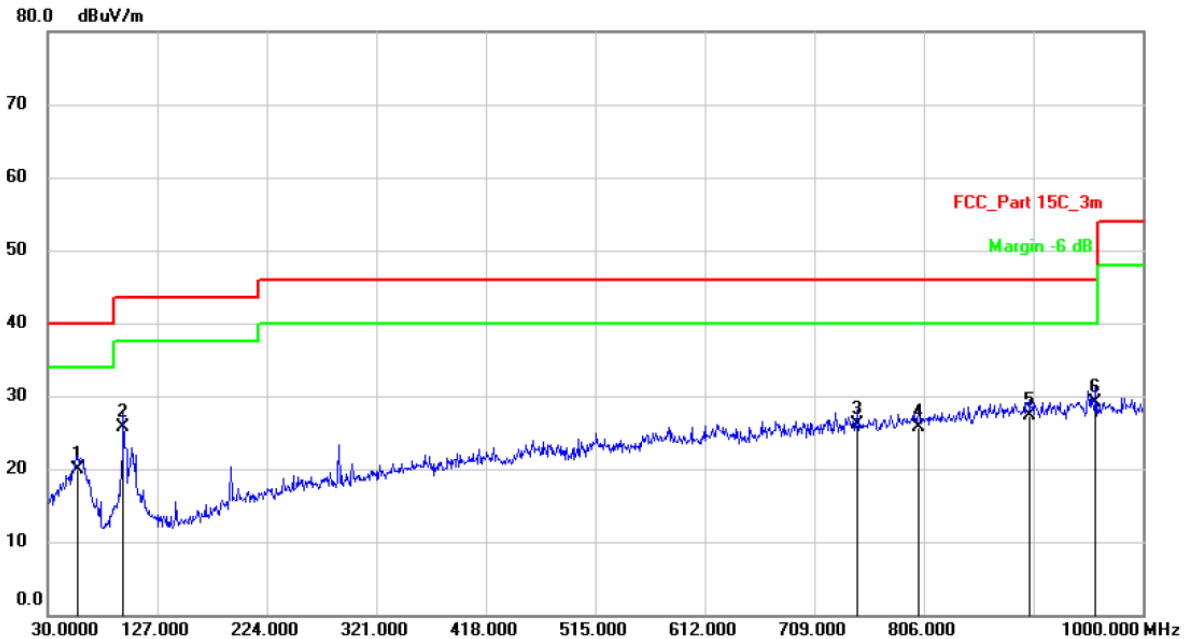
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	Comment
1		0.0111	30.70	19.53	50.23	126.51	-76.28	AVG	
2		0.0192	24.97	20.20	45.17	121.78	-76.61	AVG	
3		0.0284	29.66	20.42	50.08	118.40	-68.32	AVG	
4		0.0461	30.12	20.51	50.63	114.22	-63.59	AVG	
5		0.0925	28.92	20.48	49.40	108.20	-58.80	QP	
6	*	0.1428	42.66	20.47	63.13	104.45	-41.32	peak	

M/N: MDL MPP15 01	Testing Voltage: AC 120V / 60Hz
Polarization: Horizontal	Detector: QP
Test Mode: 3	Distance: 3m

Radiated Emission Measurement

Date: 2026/5/26

Time: 19:59:48



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector Comment
1		56.1900	28.12	-8.22	19.90	40.00	-20.10	QP
2		96.9300	35.83	-10.13	25.70	43.50	-17.80	QP
3		746.8300	24.45	1.65	26.10	46.00	-19.90	QP
4		801.1500	23.41	2.39	25.80	46.00	-20.20	QP
5		899.1200	23.67	3.73	27.40	46.00	-18.60	QP
6	*	958.2900	25.30	3.90	29.20	46.00	-16.80	QP

M/N: MDL MPP15 01

Testing Voltage: AC 120V / 60Hz

Polarization: Vertical

Detector: QP

Test Mode: 3

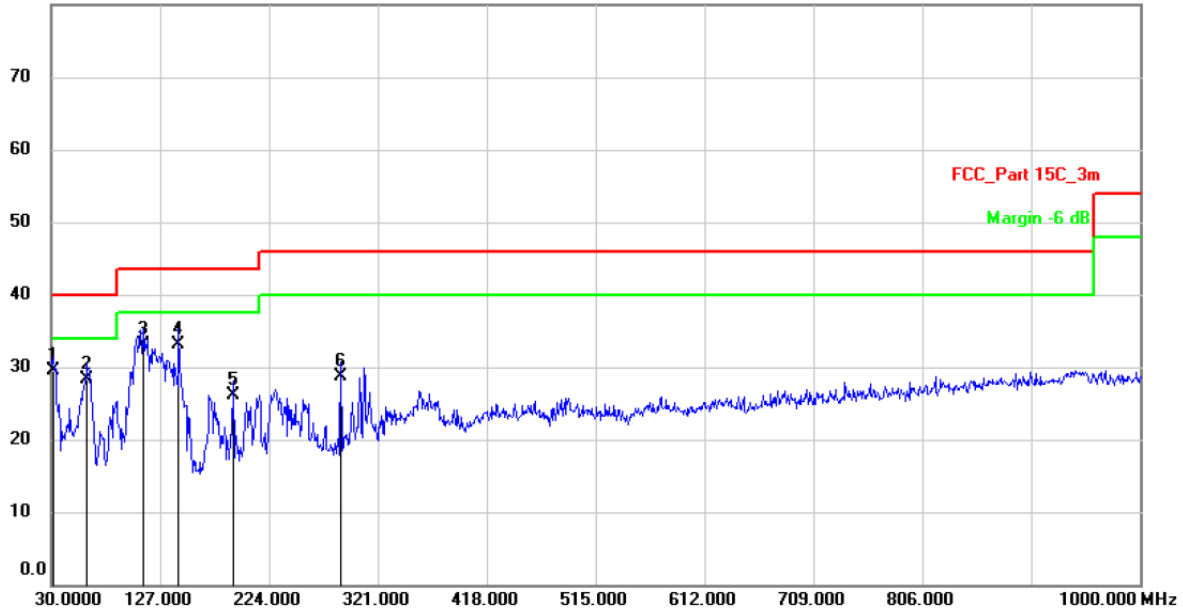
Distance: 3m

Radiated Emission Measurement

Date: 2026/5/26

Time: 20:06:30

80.0 dBuV/m



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	Comment
1		31.9400	40.12	-10.62	29.50	40.00	-10.50	QP	
2		62.0100	37.69	-9.29	28.40	40.00	-11.60	QP	
3	*	112.4500	43.50	-10.30	33.20	43.50	-10.30	QP	
4		143.4900	46.34	-13.14	33.20	43.50	-10.30	QP	
5		191.9900	36.33	-10.13	26.20	43.50	-17.30	QP	
6		288.0200	36.08	-7.38	28.70	46.00	-17.30	QP	

M/N: MDL MPP15 01

Testing Voltage: AC 120V / 60Hz

Polarization: Horizontal

Detector: QP, AVG

Test Mode: 3

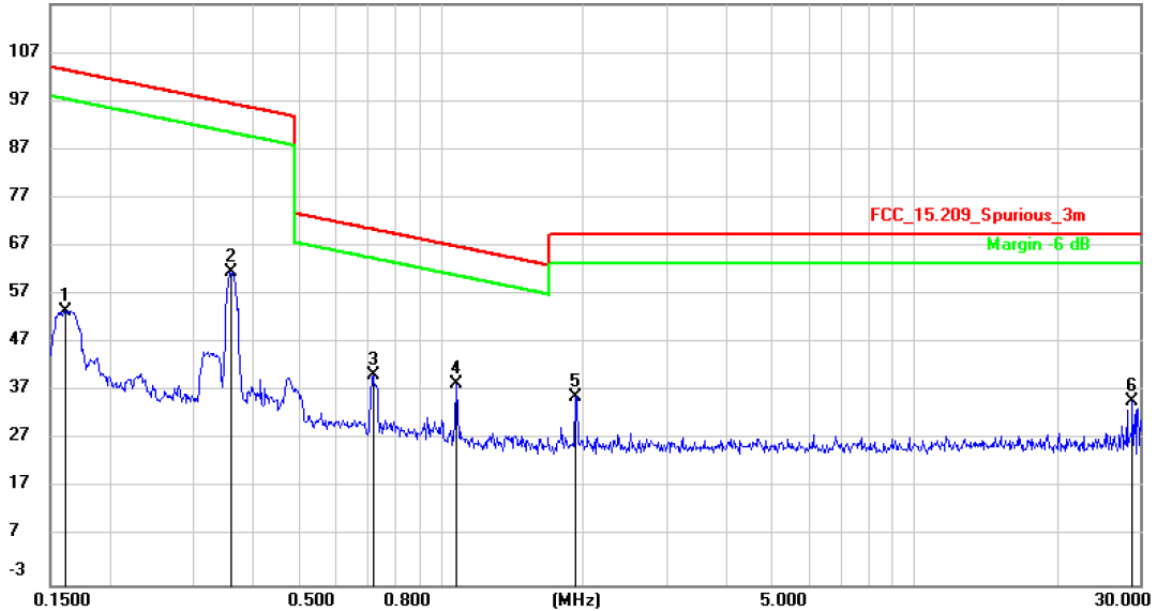
Distance: 3m

Radiated Emission Measurement

Date: 2026/5/28

Time: 20:33:45

117.0 dBuV/m



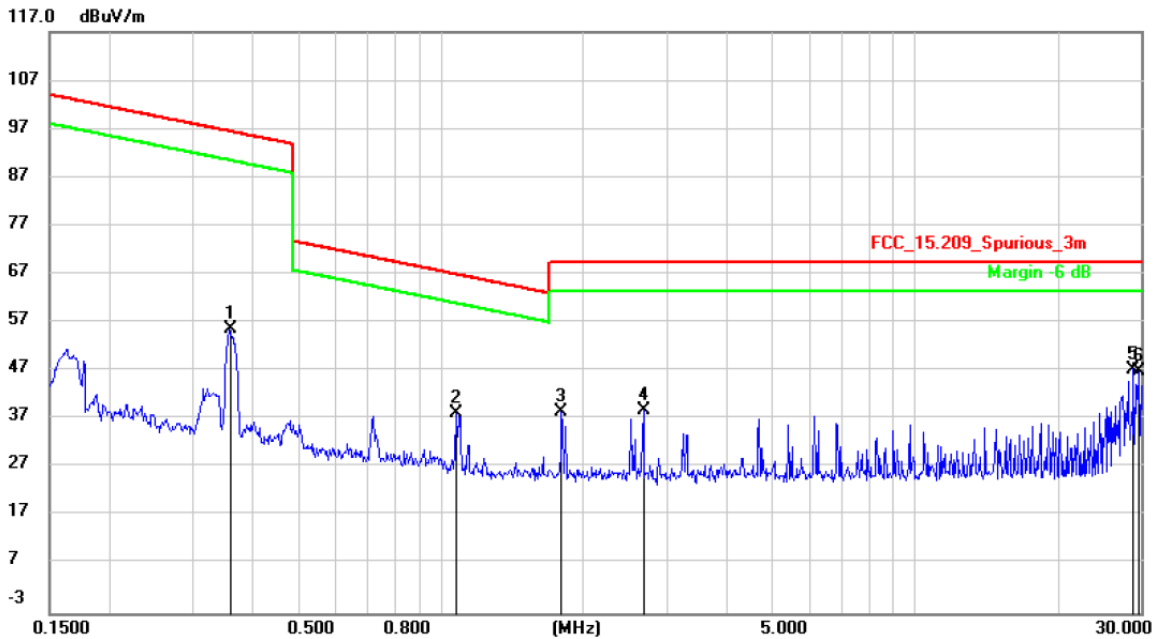
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		0.1615	33.20	20.46	53.66	103.39	-49.73	QP
2		0.3600	41.16	20.41	61.57	96.46	-34.89	peak
3		0.7197	19.86	20.39	40.25	70.46	-30.21	QP
4	*	1.0823	18.20	20.38	38.58	66.92	-28.34	QP
5		1.9282	15.53	20.39	35.92	69.50	-33.58	QP
6		28.9076	14.62	20.37	34.99	69.50	-34.51	QP

M/N: MDL MPP15 01	Testing Voltage: AC 120V / 60Hz
Polarization: Vertical	Detector: QP, AVG
Test Mode: 3	Distance: 3m

Radiated Emission Measurement

Date: 2026/5/28

Time: 20:40:31



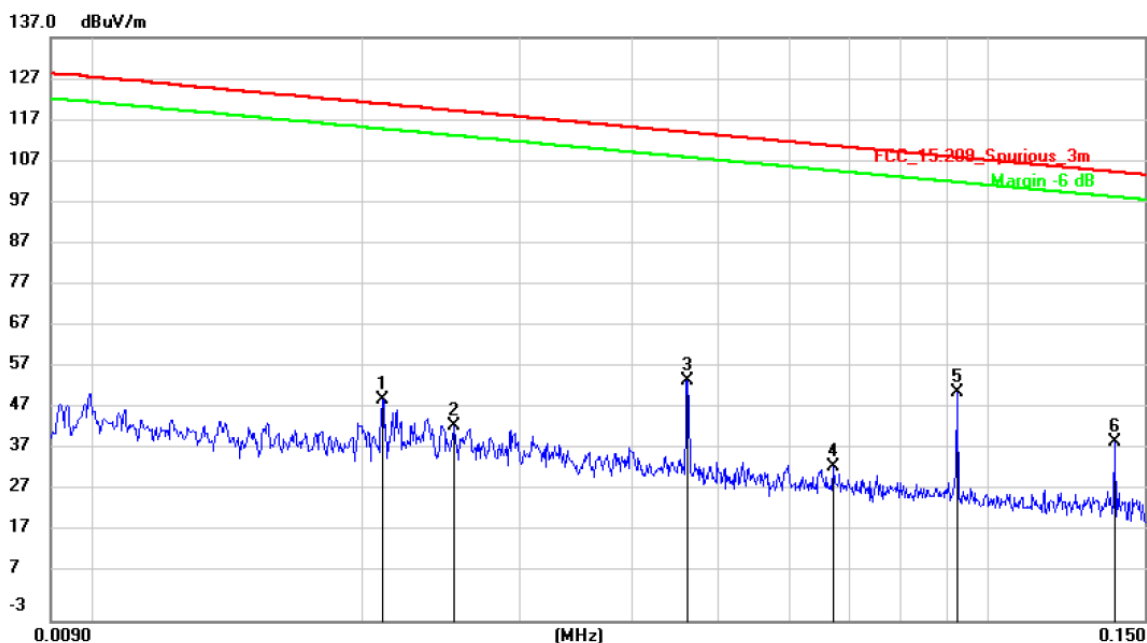
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector Comment
1		0.3600	35.17	20.41	55.58	96.46	-40.88	peak
2		1.0823	17.76	20.38	38.14	66.92	-28.78	QP
3		1.8000	18.22	20.39	38.61	69.50	-30.89	QP
4		2.6781	18.31	20.40	38.71	69.50	-30.79	QP
5	*	28.9077	27.03	20.37	47.40	69.50	-22.10	QP
6		29.6837	26.54	20.35	46.89	69.50	-22.61	QP

M/N: MDL MPP15 01	Testing Voltage: AC 120V / 60Hz
Polarization: Horizontal	Detector: AVG
Test Mode: 3	Distance: 3m

Radiated Emission Measurement

Date: 2026/5/28

Time: 20:25:17



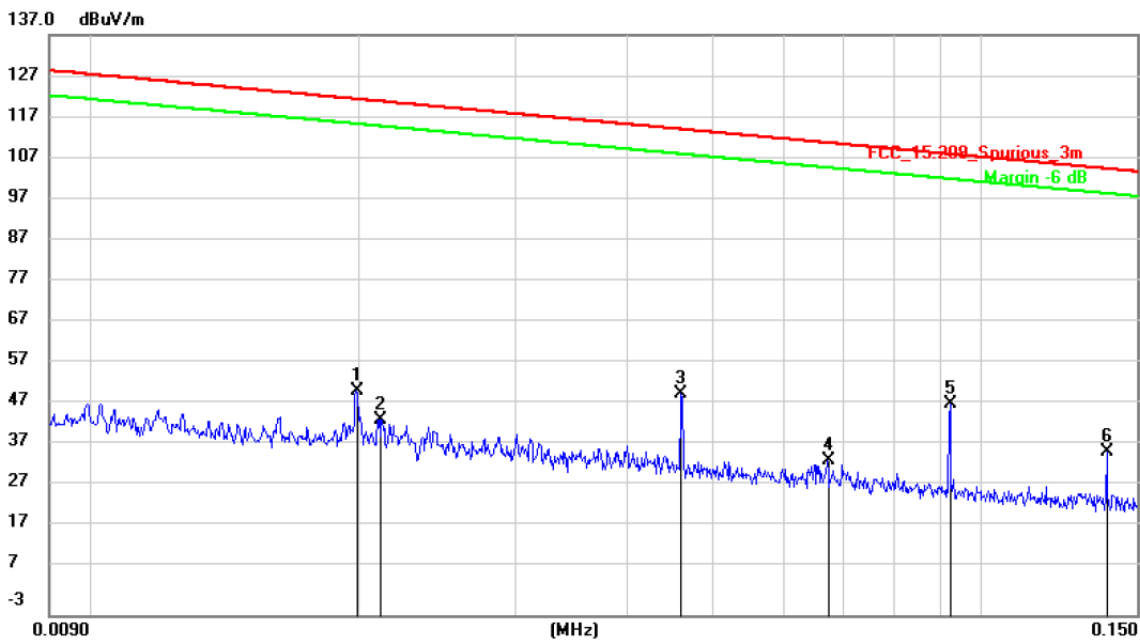
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	Comment
1		0.0211	29.80	20.29	50.09	120.97	-70.88	AVG	
2		0.0253	23.42	20.40	43.82	119.40	-75.58	QP	
3		0.0462	34.23	20.51	54.74	114.20	-59.46	AVG	
4		0.0672	13.43	20.45	33.88	110.96	-77.08	QP	
5	*	0.0924	31.20	20.48	51.68	108.21	-56.53	QP	
6		0.1386	19.35	20.47	39.82	104.71	-64.89	QP	

M/N: MDL MPP15 01	Testing Voltage: AC 120V / 60Hz
Polarization: Vertical	Detector: QP, AVG
Test Mode: 3	Distance: 3m

Radiated Emission Measurement

Date: 2026/5/28

Time: 20:47:37



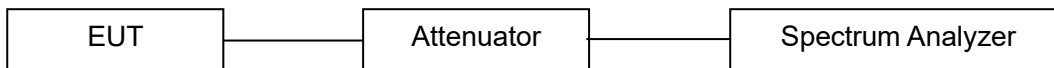
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		0.0199	30.93	20.23	51.16	121.47	-70.31	AVG
2		0.0212	23.94	20.29	44.23	120.93	-76.70	AVG
3		0.0461	29.76	20.51	50.27	114.22	-63.95	AVG
4		0.0673	13.94	20.45	34.39	110.95	-76.56	QP
5	*	0.0925	27.33	20.48	47.81	108.20	-60.39	QP
6		0.1386	15.85	20.47	36.32	104.71	-68.39	QP

13.3 20dB Bandwidth Measurement

LIMITS

There is no limit.

BLOCK DIAGRAM OF TEST SETUP



TEST PROCEDURES

The 20dB bandwidth of the emission was contained within the frequency band designated which the EUT operated. The effects, if any, from frequency sweeping, frequency hopping, other modulation techniques and frequency stability over excepted variations in temperature and supply voltage were considered, FCC Rule 15.35:

The antenna port of the EUT was connected to the input of a spectrum analyzer. Analyzer RBW was chosen so that the display was a result of the tested channel modulation. For each RF output channel investigated, the spectrum analyzer center frequency was set to the channel carrier. Use the spectrum 20dB down delta function to measure the bandwidth.

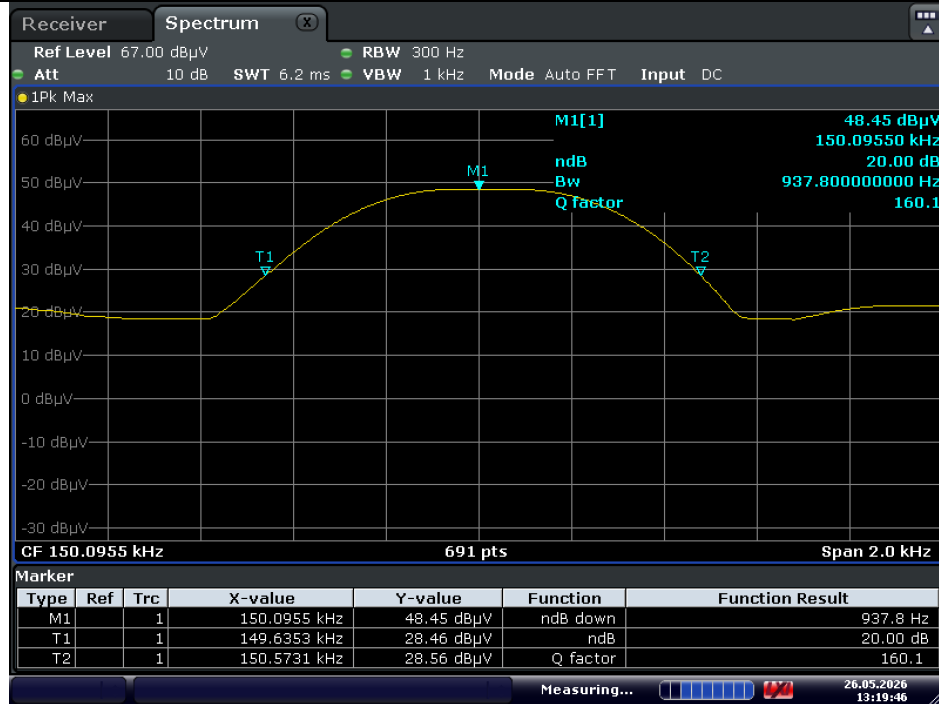
TEST RESULTS

PASS

Please refer to the following table.

Test frequency: 110.1-150.1KHz

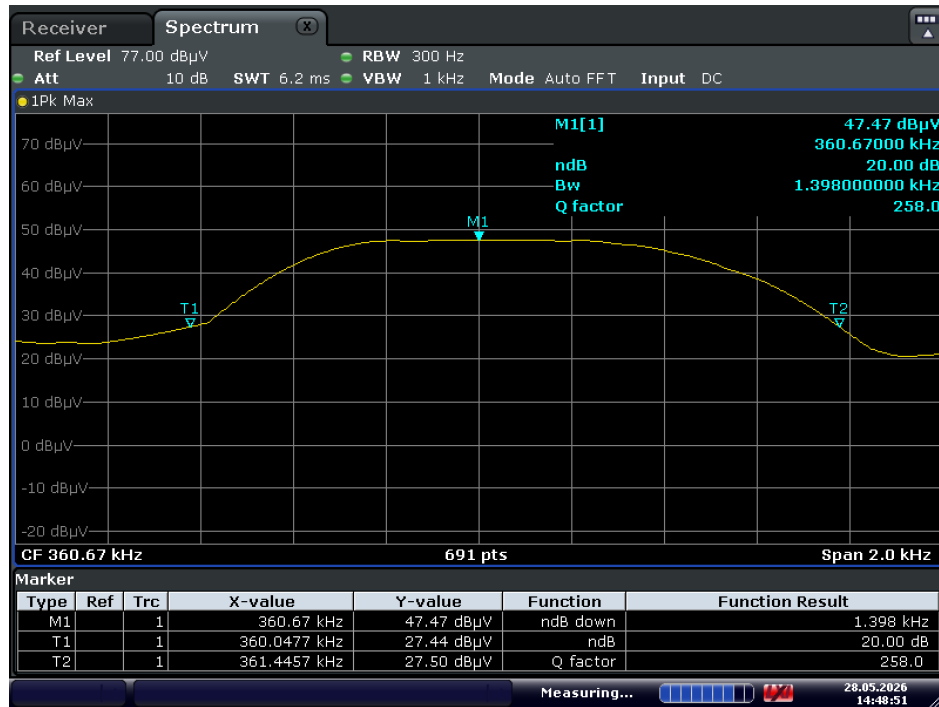
ASK		
Frequency (KHz)	20dB Bandwidth (Hz)	Result
150.0955	937.8	PASS



Date: 26.MAY.2026 13:19:47

Test frequency: 360.670KHz

ASK		
Frequency (KHz)	20dB Bandwidth (Hz)	Result
360.67	1398	PASS



Date: 28.MAY.2026 14:48:51

13.4 Antenna Requirement

STANDARD APPLICABLE

According to of FCC part 15C section 15.203:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

Systems operating in the 2400-2483.5MHz band that are used exclusively for fixed, point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum peak output power of the intentional radiator is reduced by 1dB for every 3dB that the directional gain of the antenna exceeds 6dBi.

ANTENNA CONNECTED CONSTRUCTION

The antenna is coil antenna that no antenna other than furnished by the responsible party shall be used with the device. Therefore, the antenna is considered meet the requirement.

14. Test Equipment List

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESCI	101152	Aug. 21, 2025	1 Year
2.	L.I.S.N	Rohde & Schwarz	ENV 216	101317	Aug. 21, 2025	1 Year
3.	L.I.S.N	Schwarzbeck	NNLK8129	00558	Aug. 23, 2025	1 Year
4.	RF Switching Unit	Compliance Direction Systems Inc.	RSU-M2	38311	Aug. 21, 2025	1 Year
5.	Test Receiver	Rohde & Schwarz	ESCI7	100837	Aug. 21, 2025	1 Year
6.	Spectrum Analyzer	Keysight	N9020A	MY50510314	Aug. 21, 2025	1 Year
7.	Spectrum Analyzer	Keysight	N9020A	MY54200831	Aug. 22, 2025	1 Year
8.	Spectrum Analyzer	Keysight	N9010B	MY62170254	Aug. 21, 2025	1 Year
9.	Antenna	Schwarzbeck	VULB9163	01552	Aug. 16, 2025	2 Year
10.	Loop Antenna	Schwarzbeck	FMZB 1513	1513-272	Aug. 16, 2025	2 Year
11.	Horn Antenna	COM-Power	AH-118	071078	Aug. 16, 2025	2 Year
12.	Pre-Amplifier	HP	HP 8447D	1145A00203	Aug. 21, 2025	1 Year
13.	Pre-Amplifier	HP	HP 8449B	3008A00964	Aug. 23, 2025	1 Year
14.	Communication Tester	Rohde & Schwarz	CMW500	109851	Aug. 28, 2025	1 Year
15.	Power Sensor	DARE	RPR3006W	15I00041SNO 64	Aug. 28, 2025	1 Year
16.	Horn Antenna	COM-Power	AH-840	10100020	Aug. 28, 2025	2 Year
17.	Temperature & Humidity Chamber	Wanshun	SS-HWHS-80	N/A	Aug. 09, 2025	1 Year
18.	DC Source	ZHAOXIN	KXN305D	N/A	Aug. 23, 2025	1 Year
19.	Temporary antenna connector	TESCOM	SS402	N/A	N/A	N/A
20.	Chamber	YIHENG	9*6*6m	N/A	Sep. 22, 2025	2 Year
21.	Test Software	MWRF	MTS 8310, V2.0.0.0	N/A	N/A	N/A
22.	Test Software	EZ	EZ EMC, NTC-3A1.1	N/A	N/A	N/A

Note: For photographs of EUT and measurement, please refer to appendix in separate documents.

---End---