



RF MEASUREMENT REPORT

FCC ID: 2BAXN-MR0010
Applicant: Willand (Beijing) Technology Co., LTD.
Product: Robotic Lawn Mower
Model No.: Mi2710N
Serial Model No.: Mi2706N
Brand Name: Segway Navimow
FCC Classification: FCC Part 15 Spread Spectrum Transmitter (DSS)
FCC Rule Part(s): Part15 Subpart C (Section 15.247)
Result: Complies
Received Date: 2025-09-05
Test Date: 2025-10-09 ~ 2025-10-22

Reviewed By:

Vincent Yu

Vincent Yu

Approved By:

Robin Wu

Robin Wu



The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report. Testing was performed in accordance with the applicable measurement procedures. The test results reported herein apply only to the specific item(s) tested.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

Revision History

Report No.	Version	Description	Issue Date	Note
R25S1020096-U201	V01	Initial Report	2025-11-20	Valid

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1.1. Applicant

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Willand (Beijing) Technology Co., LTD.

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☒	Test Site - MRT Suzhou Laboratory
	Laboratory Location (Suzhou - Wuzhong) D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China
	Laboratory Location (Suzhou - SIP) 4b Building, Liando U Valley, No.200 Xingpu Rd., Shengpu Town, Suzhou Industrial Park, China
	Laboratory Location (Suzhou - Wujiang) Building 1, No.1 Xingdong Road, Wujiang, Suzhou, Jiangsu, People's Republic of China
	Laboratory Accreditations
	A2LA: 3628.01 FCC: CN1166
☐	Test Site - MRT Shenzhen Laboratory
	Laboratory Location (Shenzhen) 1G, Building A, Junxiangda Building, Zhongshanyuan Road West, Nanshan District, Shenzhen, China
	Laboratory Accreditations
	A2LA: 3628.02 FCC: CN1284
☐	Test Site - MRT Taiwan Laboratory
	Laboratory Location (Taiwan) No. 38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)
	Laboratory Accreditations
	TAF: 3261 FCC: 291082, TW3261

1.4. Product Information

Product Name	Robotic Lawn Mower
Model No.	Mi2710N
Serial Model No.	Mi2706N
Brand Name	Segway Navimow
EUT Identification No.	20250906Sample#03 (Conducted) 20250905Sample#01 (Radiated)
Wi-Fi Specification	802.11b/g/n
Bluetooth Specification	Bluetooth_LE only
SRD Specification	915.05 ~ 917.9 MHz
GNSS Specification	BDS, Galileo, GPS
3GPP Specification	LTE Band 2/4/5/12/13/66
Antenna Information	Refer to section 1.5
Operating Temperature	0 ~ 40 °C
Power Type	By Battery
Integrated Modular Information	
Specification	Modular Name: LTE Cat 1 bis Module Model Number: EG800Q-NA Manufacturer: Quectel
Remarks:	
- The information of the EUT (Equipment Under Test) was provided by the manufacturer. The accuracy, completeness, and validity of the information are solely the responsibility of the manufacturer. - The differences between the models lie in the different battery capacities and slight variations in the wheel hub covers, while everything else is completely identical. In this report, the model (Model No.: Mi2710N) was selected for testing.	

1.5. Radio Specification under Test

Frequency Range	915.05 ~ 917.9 MHz
Channel Number	58
Type of modulation	FHSS
Antenna Type	PCB Antenna
Antenna Gain	2.80 dBi

1.6. Working Frequencies

Channel	Frequency	Channel	Frequency	Channel	Frequency
01	915.05 MHz	02	915.10 MHz	03	915.15 MHz
04	915.20 MHz	05	915.25 MHz	06	915.30 MHz
07	915.35 MHz	08	915.40 MHz	09	915.45 MHz
10	915.50 MHz	11	915.55 MHz	12	915.60 MHz
13	915.65 MHz	14	915.70 MHz	15	915.75 MHz
16	915.80 MHz	17	915.85 MHz	18	915.90 MHz
19	915.95 MHz	20	916.00 MHz	21	916.05 MHz
22	916.10 MHz	23	916.15 MHz	24	916.20 MHz
25	916.25 MHz	26	916.30 MHz	27	916.35 MHz
28	916.40 MHz	29	916.45 MHz	30	916.50 MHz
31	916.55 MHz	32	916.60 MHz	33	916.65 MHz
34	916.70 MHz	35	916.75 MHz	36	916.80 MHz
37	916.85 MHz	38	916.90 MHz	39	916.95 MHz
40	917.00 MHz	41	917.05 MHz	42	917.10 MHz
43	917.15 MHz	44	917.20 MHz	45	917.25 MHz
46	917.30 MHz	47	917.35 MHz	48	917.40 MHz
49	917.45 MHz	50	917.50 MHz	51	917.55 MHz
52	917.60 MHz	53	917.65 MHz	54	917.70 MHz
55	917.75 MHz	56	917.80 MHz	57	917.85 MHz
58	917.90 MHz	-	-	-	-

Note: The CH01/CH29/CH58 were selected as Low/Mid/High test channels in this report.

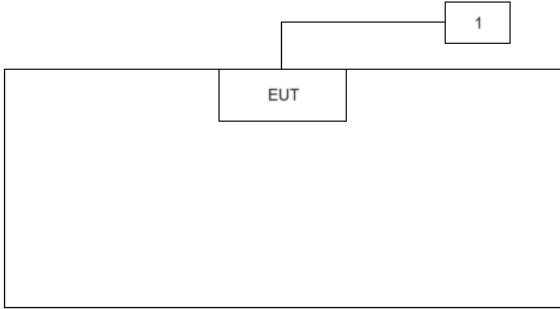
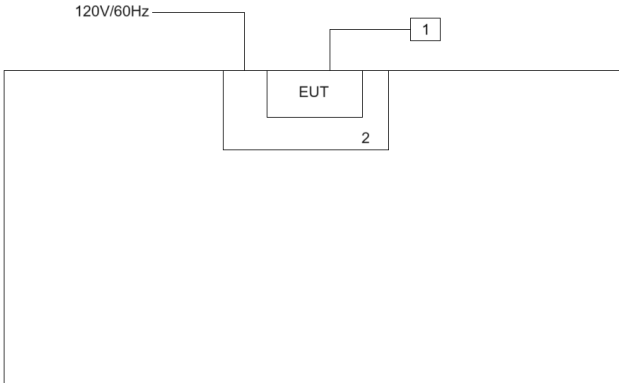
2. Test Configuration

2.1. Test Mode

Mode 1: Transmit at CH01 (915.05 MHz).
Mode 2: Transmit at CH29 (916.45 MHz).
Mode 3: Transmit at CH58 (917.90 MHz).
Mode 4: Transmit at frequency hopping mode.

2.2. Test System Connection Diagram

The device was tested per the guidance ANSI C63.10-2020 was used to reference the appropriate EUT setup for radiated emissions testing and AC line conducted testing.

Connection Diagram - Radiated Emissions testing			
			
Connection Diagram - AC Line Conducted testing			
			
Product	Manufacturer	Model No.	
1 Notebook	Lenovo	E430C	
2 Navimow Charging Station	Navimow B.V.	i1C00G	

2.3. Test Software

The test utility software used during testing was “sscom5.13.1.exe”, and the version was 5.13.1.

2.4. Applied Standards

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

- FCC Part 15.247
- KDB 558074 D01 v05r02
- ANSI C63.10-2020
- ANSI C63.10-2020/Cor1-2023
- ANSI C63.10a-2024

2.5. Test Environment Condition

Ambient Temperature	15 ~ 35 °C
Relative Humidity	20 ~ 75%RH

3. Antenna Requirement

Excerpt from §15.203 of the FCC Rules/Regulations:

“An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can 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 shall be considered sufficient to comply with the provisions of this section.”

- The antenna of the device is **permanently attached**.
- There are no provisions for connection to an external antenna.

Conclusion:

The unit complies with the requirement of §15.203.

4. Measuring Instrument

Instrument	Manufacturer	Model No.	Asset No.	Cali. Interval	Cali. Due Date	Test Site
Active Loop Antenna	Schwarzbeck	FMZB 1519-60 D	MRTSUE07076	1 year	2025-11-19	WJ-AC1
EMI Test Receiver	R&S	ESR3	MRTSUE07110	1 year	2026-04-19	WJ-AC1
TRILOG Broad Band Antenna	Schwarzbeck	VULB 9163	MRTSUE07099	1 year	2026-04-22	WJ-AC1
EMI Test Receiver	R&S	ESR3	MRTSUE07110	1 year	2026-04-19	WJ-AC1
Horn Antenna	ETS	3117	MRTSUE06257	1 year	2026-08-13	WJ-AC1
Preamplifier	EMCI	EMC001330	MRTSUE06643	1 year	2026-05-13	WJ-AC1
EXA Signal Analyzer	Keysight	N9010B	MRTSUE07147	1 year	2025-11-06	WJ-AC1
Anechoic Chamber	TDK	WJ-AC1	MRTSUE07115	1 year	2026-07-09	WJ-AC1
Thermohygrometer	testo	608-H1	MRTSUE11333	1 year	2026-06-16	WJ-AC1
Thermohygrometer	testo	608-H1	MRTSUE11402	1 year	2025-12-01	WJ-AC1
Broadband Horn Antenna	Schwarzbeck	BBHA 9170	MRTSUE07100	1 year	2026-04-10	WJ-AC2
Preamplifier	EMCI	EMC184045SE	MRTSUE07103	1 year	2026-04-09	WJ-AC2
Signal Analyzer	Keysight	N9010B	MRTSUE07285	1 year	2026-02-18	WJ-AC2
Anechoic Chamber	TDK	WJ-AC2	MRTSUE07117	1 year	2026-05-12	WJ-AC2
Thermohygrometer	testo	608-H1	MRTSUE11315	1 year	2026-06-16	WJ-AC2
Thermohygrometer	testo	608-H1	MRTSUE11332	1 year	2026-06-05	WJ-AC2
EMI Test Receiver	R&S	ESR3	MRTSUE07112	1 year	2026-04-19	WJ-SR5
Two-Line V-Network	R&S	ENV216	MRTSUE07201	1 year	2026-05-26	WJ-SR5
Shielding Room	TDK	WJ-SR5	MRTSUE07127	N/A	N/A	WJ-SR5
Thermohygrometer	testo	608-H1	MRTSUE11317	1 year	2026-06-05	WJ-SR5
Signal Analyzer	Keysight	N9010B	MRTSUE07285	1 year	2026-02-18	WJ-SR3
USB Power Sensor	Keysight	U2021XA	MRTSUE07141	1 year	2026-03-15	WJ-SR3
Shielding Room	TDK	WJ-SR3	MRTSUE07125	N/A	N/A	WJ-SR3
Thermohygrometer	testo	608-H1	MRTSUE11331	1 year	2026-06-05	WJ-SR3
Fixed Attenuator	MVE	MVE2213	MRTSUE07318	Note	Note	WJ-SR3
RF Cable	UCwave	UCE500	MRTSUE07349	Note	Note	WJ-SR3

Note: The loss of the Attenuator & Cable will be measured before testing.

Software	Version	Function
e3	230711	RE & CE
CONTROLLER CO3000	v 1.03.02	RE Antenna & Turntable
Agilent Power Panel	V 3.9	Power

5. Decision Rules and Measurement Uncertainty

5.1. Decision Rules

The Decision Rule is based on Simple Acceptance in accordance with ISO Guide 98-4:2012 Clause 8.2.

(Measurement uncertainty is not taken into account when stating conformity with a specified requirement.)

5.2. Measurement Uncertainty

Where relevant, the following test uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

AC Conducted Emission Measurement	
The maximum measurement uncertainty is evaluated as:	
9 kHz ~ 150 kHz:	3.58 dB
150 kHz ~ 30 MHz:	3.20 dB
Radiated Emission Measurement	
The maximum measurement uncertainty is evaluated as:	
Coaxial:	9 kHz ~ 30 MHz: 2.35 dB
Coplanar:	9 kHz ~ 30 MHz: 2.37 dB
Horizontal:	30 MHz ~ 200 MHz: 3.47 dB
	200 MHz ~ 1 GHz: 4.17 dB
	1 GHz ~ 40 GHz: 4.97 dB
Vertical:	30 MHz ~ 200 MHz: 4.07 dB
	200 MHz ~ 1 GHz: 5.28 dB
	1 GHz ~ 40 GHz: 4.84 dB
Spurious Emissions, Conducted	
Measuring Uncertainty for a Level of Confidence of 95% ($U=2 U_c(y)$): 2.5 dB	
Output Power	
Measuring Uncertainty for a Level of Confidence of 95% ($U=2 U_c(y)$): 1.5 dB	
Occupied Bandwidth	
Measuring Uncertainty for a Level of Confidence of 95% ($U=2 U_c(y)$): 3.2%	

6. Test Result

6.1. Summary

FCC Section(s)	Test Description	Test Condition	Verdict
15.247(a)(1)	20 dB Bandwidth	Conducted	Pass
15.247(b)(1)	Peak Transmitter Output Power		Pass
15.247(a)(1)	Channel Separation		Pass
15.247(a)(1)(iii)	Number of Channels		Pass
15.247(a)(1)(iii)	Time of Occupancy		Pass
15.247(d)	Band Edge / Out- of-Band Emissions		Pass
15.205, 15.209	General Field Strength (Restricted Bands and Radiated Emission)	Radiated	Pass
15.207	AC Conducted Emissions 150 kHz - 30 MHz	Line Conducted	Pass

Note: The analyzer plots shown in this section were captured using a correction table to account for cable and attenuator losses in the system connecting the EUT to the analyzer across relevant frequencies.

6.2. 20dB Bandwidth Measurement

6.2.1. Test Limit

The maximum allowed 20 dB bandwidth of the hopping channel is 500 kHz.

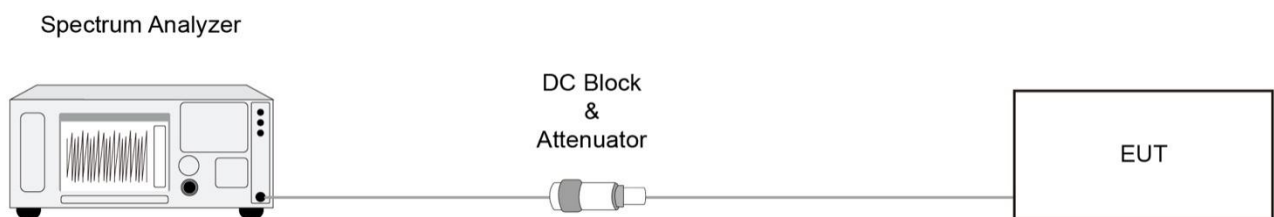
6.2.2. Test Procedure

ANSI C63.10a-2024 - Section 6.9.2 (20 dB Bandwidth)

6.2.3. Test Setting

1. RBW = 1% to 5% of the 20 dB bandwidth, without going below 10 kHz.
2. VBW $\geq 3 \times$ RBW
3. Span = 2 to 5 times the 20 dB bandwidth
4. Detector = Peak
5. Trace mode = Max hold
6. Sweep = Auto couple
7. Allow the trace to stabilize
8. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 20 dB relative to the maximum level measured in the fundamental emission.

6.2.4. Test Setup



6.2.5. Test Result

Refer to Appendix A.2.

6.3. Output Power Measurement

6.3.1. Test Limit

For frequency hopping systems operating in the 902-928 MHz band: 1 watt for systems employing at least 50 hopping channels; and, 0.25 watts for systems employing less than 50 hopping channels, but at least 25 hopping channels.

6.3.2. Test Procedure

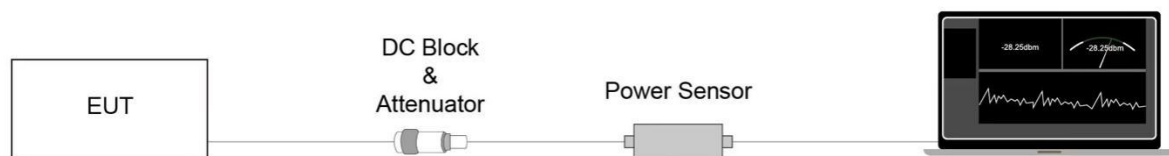
ANSI C63.10-2020 - Section 7.8.5

6.3.3. Test Setting

Method PKPM1 (Peak Power Measurement of Signals with DTS BW $\leq$ 50 MHz)

Peak power measurements were performed only when the EUT was transmitting at its maximum power control level using a broadband power meter with a pulse sensor. The pulse sensor employs a VBW = 50 MHz so this method was only used for signals whose DTS bandwidth was less than or equal to 50 MHz.

6.3.4. Test Setup



6.3.5. Test Result

Refer to Appendix A.3.

6.4. Carrier Frequency Separation Measurement

6.4.1. Test Limit

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.

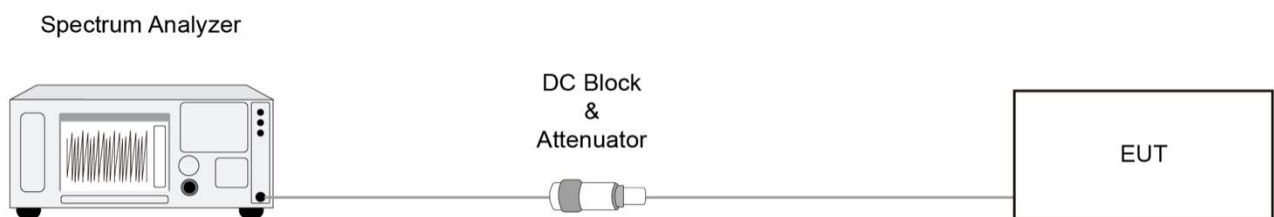
6.4.2. Test Procedure

ANSI C63.10a-2024 - Section 7.8.2.

6.4.3. Test Setting

1. Span = Wide enough to capture the peaks of two adjacent channels.
2. Start with the RBW set to approximately 30% of the channel spacing; adjust as necessary to best identify the center of each individual channel.
3. $VBW \geq \frac{1}{10} \times RBW$
4. Sweep time = Auto couple
5. Detector = Peak
6. Trace mode = Max hold
7. Allowed the trace to stabilize
8. Use the marker-delta function to determine the separation between the peaks of the adjacent channels.

6.4.4. Test Setup



6.4.5. Test Result

Refer to Appendix A.4.

6.5. Number of Hopping Channels Measurement

6.5.1. Test Limit

For frequency hopping systems operating in the 902-928 MHz band: if the 20 dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies; if the 20 dB bandwidth of the hopping channel is 250 kHz or greater, the system shall use at least 25 hopping frequencies.

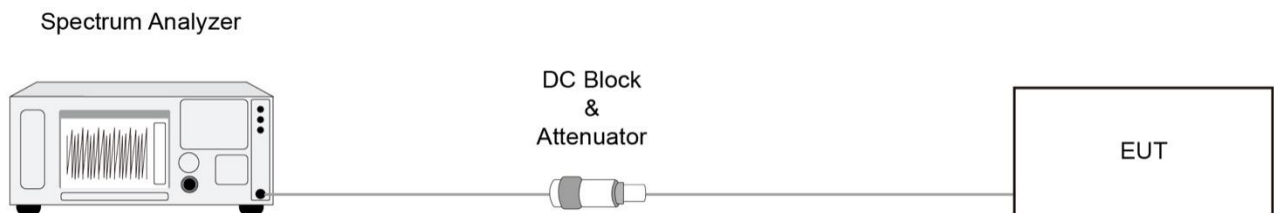
6.5.2. Test Procedure

ANSI C63.10a-2024 - Section 7.8.3.

6.5.3. Test Setting

1. Span = The frequency band of operation. Depending on the number of channels the device supports, it may be necessary to divide the frequency range of operation across multiple spans, to allow the individual channels to be clearly seen.
2. To identify clearly the individual channels, set the RBW to less than 30% of the channel spacing or the 20 dB bandwidth, whichever is smaller.
3. $VBW \geq \frac{1}{10} \times RBW$
4. Sweep time = Auto couple
5. Detector = Peak
6. Trace mode = Max hold
7. Allow the trace to stabilize

6.5.4. Test Setup



6.5.5. Test Result

Refer to Appendix A.5.

6.6. Time of Occupancy Measurement

6.6.1. Test Limit

For frequency hopping systems operating in the 902-928 MHz band: if the 20 dB bandwidth of the hopping channel is less than 250 kHz, the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 20 second period; if the 20 dB bandwidth of the hopping channel is 250 kHz or greater, the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 10 second period.

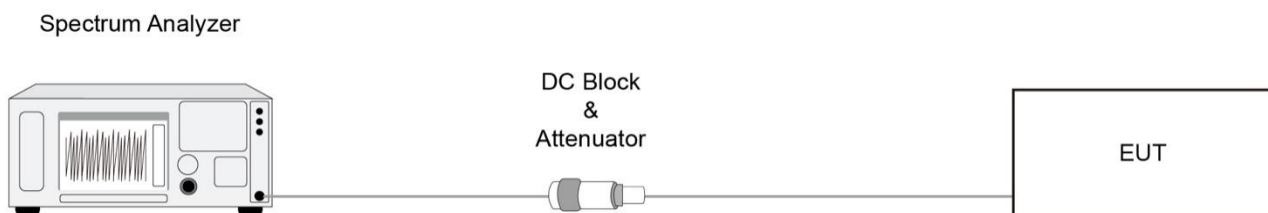
6.6.2. Test Procedure

ANSI C63.10-2020 - Section 7.8.4.

6.6.3. Test Setting

1. Span = zero span, centered on a hopping channel.
2. RBW shall be $\leq$ channel spacing and where possible RBW should be set $\gg 1 / T$, where T is the expected dwell time per channel.
3. VBW $\geq$ RBW
4. Sweep time = as necessary to capture the entire dwell time per hopping channel
5. Detector = Peak
6. Trace mode = max hold
7. Use the marker-delta function to determine the transmit time per hop. If this value varies with different modes of operation (data rate, modulation format, number of hopping channels, etc.), then repeat this test for each variation in transmit time. An oscilloscope may be used instead of a spectrum analyzer. The EUT shall show compliance with the appropriate regulatory limit for the number of hopping channels. A plot of the data shall be included in the test report.

6.6.4. Test Setup



6.6.5. Test Result

Refer to Appendix A.6.

6.7. Band-edge Compliance Measurement

6.7.1. Test Limit

The maximum permissible emission level is 20 dBc. Any emissions were lying outside of the emission bandwidth and in authorized band edges to a field strength limit specified in Section 15.209 of the Title 47 CFR.

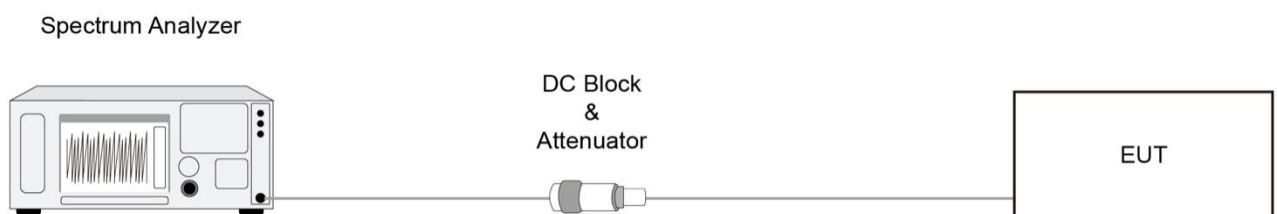
6.7.2. Test Procedure

ANSI C63.10-2020 - Section 6.10.4.

6.7.3. Test Setting

1. Span = wide enough to capture the peak level of the emission operating on the channel closest to the band edge, as well as any modulation products which fall outside of the authorized band of operation.
2. RBW = 100 kHz
3. VBW = 300 kHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize
8. Allow the trace to stabilize. Set the marker on the emission at the band edge, or on the highest modulation product outside of the band, if this level is greater than that at the band edge. Enable the marker-delta function, then use the marker-to-peak function to move the marker to the peak of the in-band emission.

6.7.4. Test Setup



6.7.5. Test Result

Refer to Appendix A.7.

6.8. Conducted Spurious Emissions Measurement

6.8.1. Test Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.

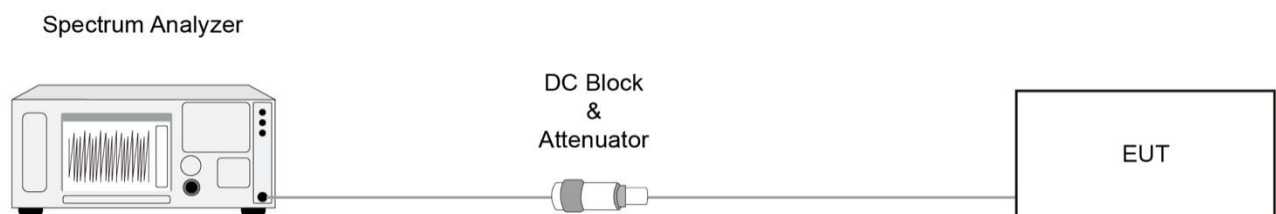
6.8.2. Test Procedure

ANSI C63.10-2020 - Section 7.8.7.

6.8.3. Test Setting

1. Span = wide enough to capture the peak level of the in-band emission and all spurious emissions (e.g., harmonics) from the lowest frequency generated in the EUT up through the 10 th harmonic. Typically, several plots are required to cover this entire span.
2. RBW = 100 kHz
3. VBW = 300 kHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize
8. Set the marker on the peak of any spurious emission recorded. The level displayed must comply with the limit specified in this section.

6.8.4. Test Setup



6.8.5. Test Result

Refer to Appendix A.8.

6.9. Radiated Spurious Emission Measurement

6.9.1. Test Limit

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [$\mu\text{V/m}$]	Measured Distance [Meters]
0.009 - 0.490	2400/F (kHz)	300
0.490 - 1.705	24000/F (kHz)	30
1.705 - 30	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

6.9.2. Test Procedure

ANSI C63.10-2020 - Section 6.3 (General Requirements)

ANSI C63.10-2020 - Section 6.4 (Standard test method below 30 MHz)

ANSI C63.10-2020 - Section 6.5 (Standard test method above 30 MHz to 1 GHz)

ANSI C63.10-2020 - Section 6.6 (Standard test method above 1 GHz)

6.9.3. Test Setting

Table 1 - RBW as a function of frequency

Frequency	RBW
9 ~ 150 kHz	200 ~ 300 Hz
0.15 ~ 30 MHz	9 ~ 10 kHz
30 ~ 1000 MHz	100 ~ 120 kHz
> 1000 MHz	1 MHz

Quasi-Peak Measurements below 1 GHz

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. Span was set greater than 1 MHz
3. RBW = as specified in Table 1
4. Detector = CISPR quasi-peak
5. Sweep time = auto couple
6. Trace was allowed to stabilize

Peak Measurements above 1 GHz

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1 MHz
3. VBW = 3 MHz
4. Detector = Peak
5. Sweep time = Auto couple
6. Trace mode = Max hold
7. Trace was allowed to stabilize

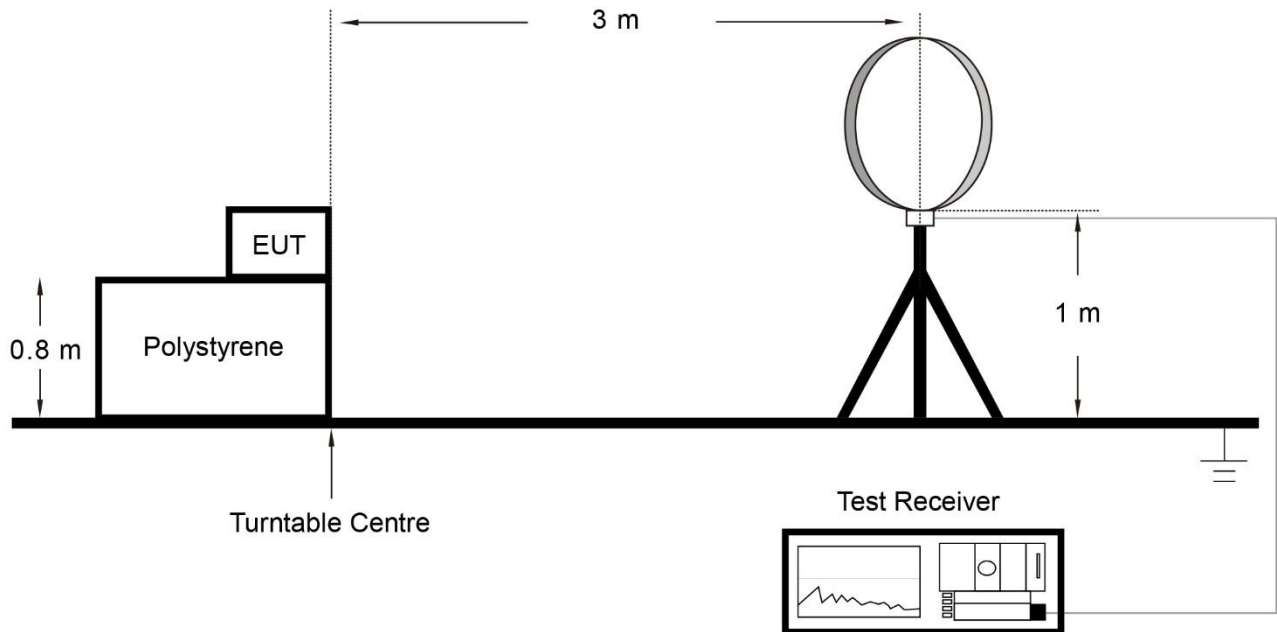
Average Measurements above 1 GHz (Method VB)

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1 MHz
3. VBW; if the EUT is configured to transmit with duty cycle $\geq 98\%$, set VBW = 10 Hz

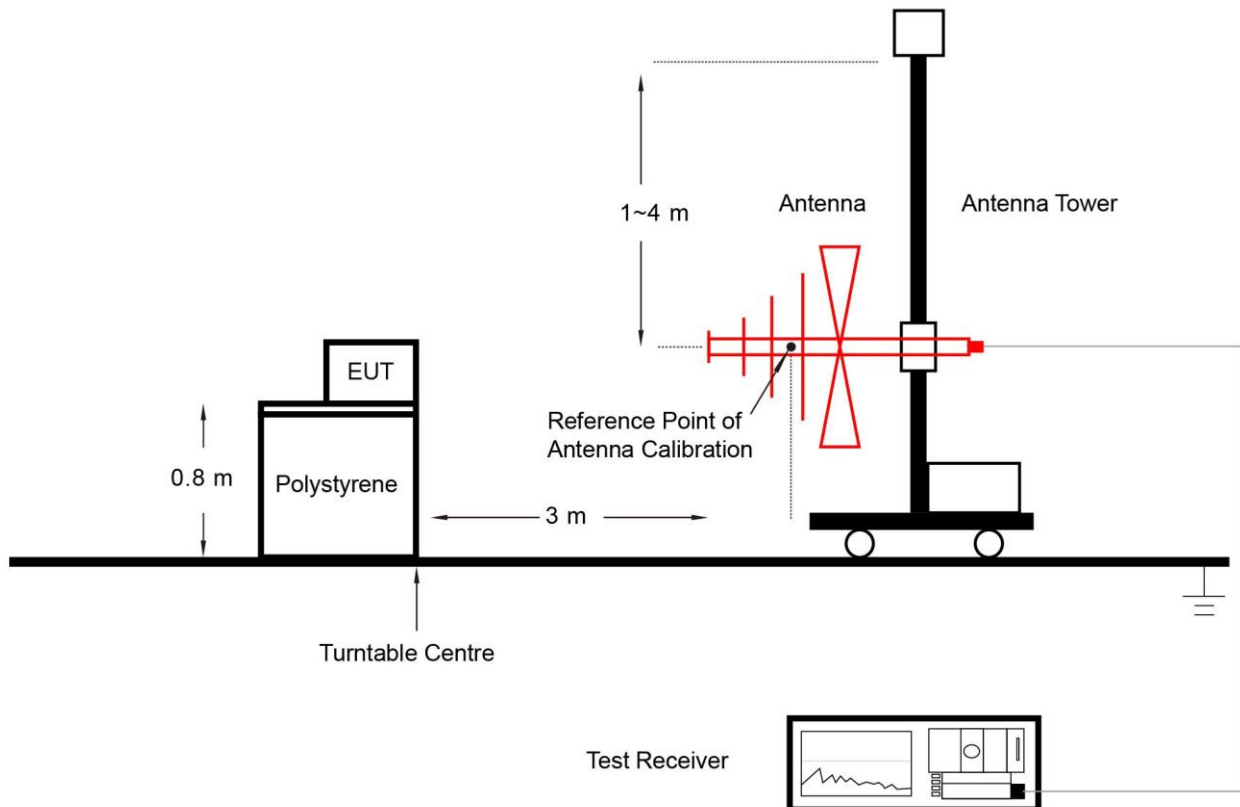
If the EUT duty cycle is $< 98\%$, set $VBW \geq 1/T$. T is the minimum transmission duration.
4. As an alternative, the instrument may be set to linear detector mode. Ensure that video filtering is applied in linear voltage domain (rather than in a log or dB domain). Some instruments require linear display mode in order to accomplish this. Others have a setting for Average-VBW Type, which can be set to "Voltage" regardless of the display mode
5. Detector = Peak
6. Sweep time = Auto
7. Trace mode = Max hold
8. Trace was allowed to stabilize

6.9.4. Test Setup

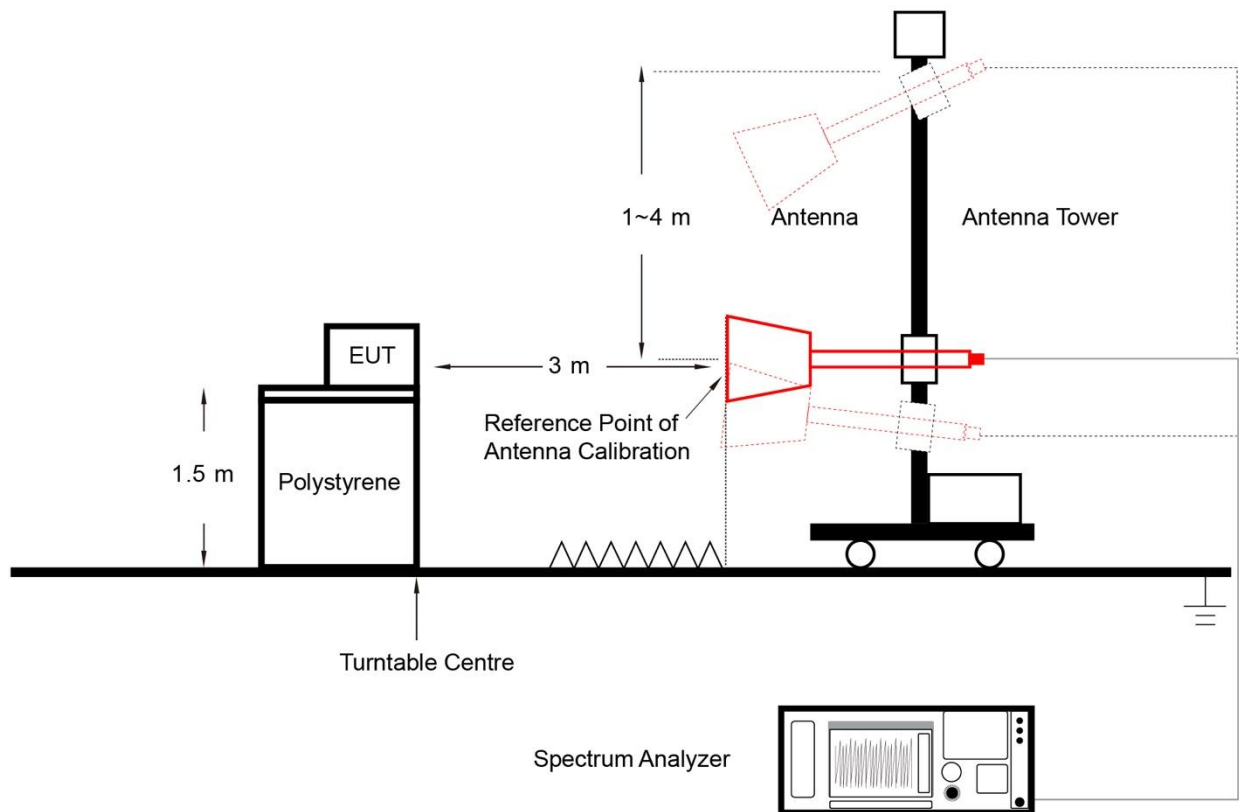
Below 30 MHz Test Setup:



Below 1 GHz Test Setup:



Above 1 GHz Test Setup:



6.9.5. Test Result

Refer to Appendix A.9.

6.10. Radiated Restricted Band Edge Measurement

6.10.1. Test Limit

For 15.205 requirement:

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a) of FCC part 15, must also comply with the radiated emission limits specified in Section 15.209(a).

Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
¹ 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	(²)
13.36 - 13.41	--	--	--

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [$\mu\text{V/m}$]	Measured Distance [Meters]
0.009 - 0.490	2400/F (kHz)	300
0.490 - 1.705	24000/F (kHz)	30
1.705 - 30	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

6.10.2. Test Procedure

ANSI C63.10-2020 - Section 6.3 (General Requirements)

ANSI C63.10-2020 - Section 6.6 (Standard test method above 1 GHz)

6.10.3. Test Setting

Peak Field Strength Measurements

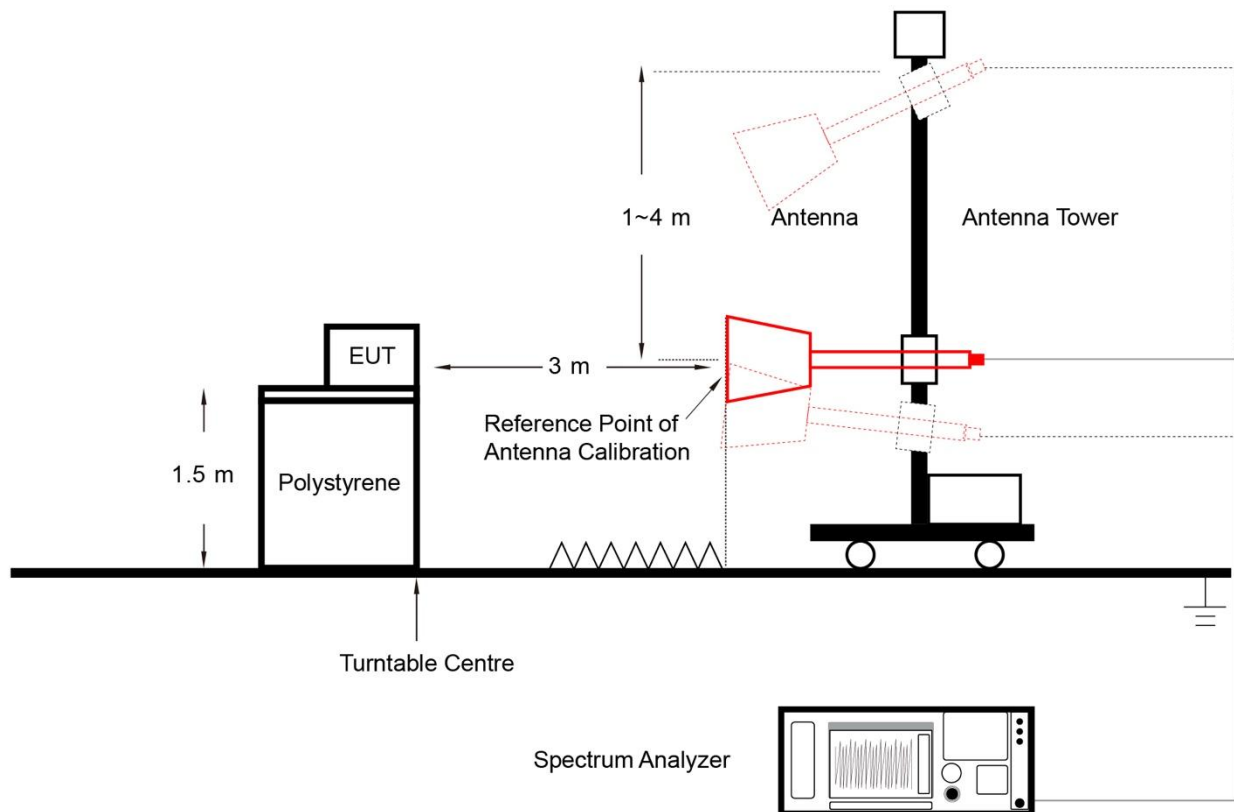
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1 MHz
3. VBW = 3 MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Average Measurements above 1 GHz (Method VB)

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1 MHz
3. VBW; if the EUT is configured to transmit with duty cycle $\geq 98\%$, set VBW = 10 Hz

If the EUT duty cycle is $< 98\%$, set VBW $\geq 1/T$. T is the minimum transmission duration.

4. As an alternative, the instrument may be set to linear detector mode. Ensure that video filtering is applied in linear voltage domain (rather than in a log or dB domain). Some instruments require linear display mode in order to accomplish this. Others have a setting for Average-VBW Type, which can be set to "Voltage" regardless of the display mode
5. Detector = Peak
6. Sweep time = Auto
7. Trace mode = Max hold
8. Trace was allowed to stabilize

6.10.4. Test Setup**6.10.5. Test Result**

Refer to Appendix A.10.

6.11. AC Conducted Emissions Measurement

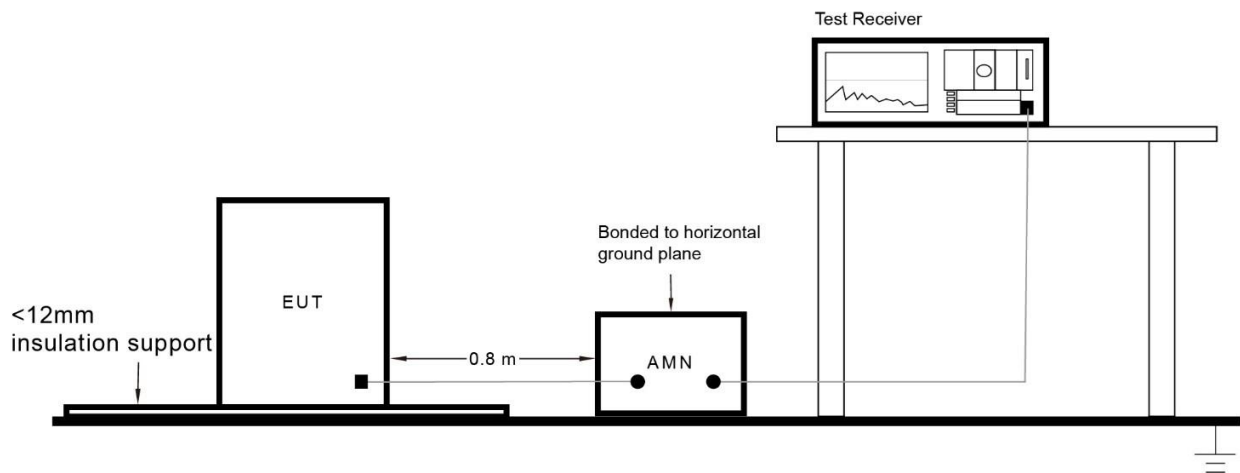
6.11.1. Test Limit

FCC Part 15 Subpart C Paragraph 15.207 Limits		
Frequency (MHz)	QP (dB μ V)	Average (dB μ V)
0.15 - 0.50	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30	60	50

Note 1: The lower limit shall apply at the transition frequencies.

Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

6.11.2. Test Setup



6.11.3. Test Result

Refer to Appendix A.11.

Appendix A - Test Result

A.1 Duty Cycle Test Result

Test Site	WJ-SR3	Test Engineer	Ellie Wang
Test Date	2025-10-09		

The screenshot shows a Keysight Spectrum Analyzer interface. The main display area shows a square wave signal. The top status bar indicates the center frequency is 915.05 MHz and the span is 50 MHz. The signal is a square wave with a period of 63.00 ms and a duty cycle of 40.87%. The signal level is 25.75 ms (Δ) and the offset is -0.34 dB. The signal is labeled 'CH01 (T = 25.75 ms)'.

A.2 20 dB Bandwidth Test Result

Test Site	WJ-SR3	Test Engineer	Ellie Wang
Test Date	2025-10-09		

Channel No.	Frequency (MHz)	20 dB Bandwidth (kHz)	Limit (kHz)	Result
01	915.05	46.70	≤ 500	Pass
29	916.45	46.70	≤ 500	Pass
58	917.90	46.70	≤ 500	Pass



A.3 Output Power Test Result

Test Site	WJ-SR3	Test Engineer	Ellie Wang
Test Date	2025-10-10		

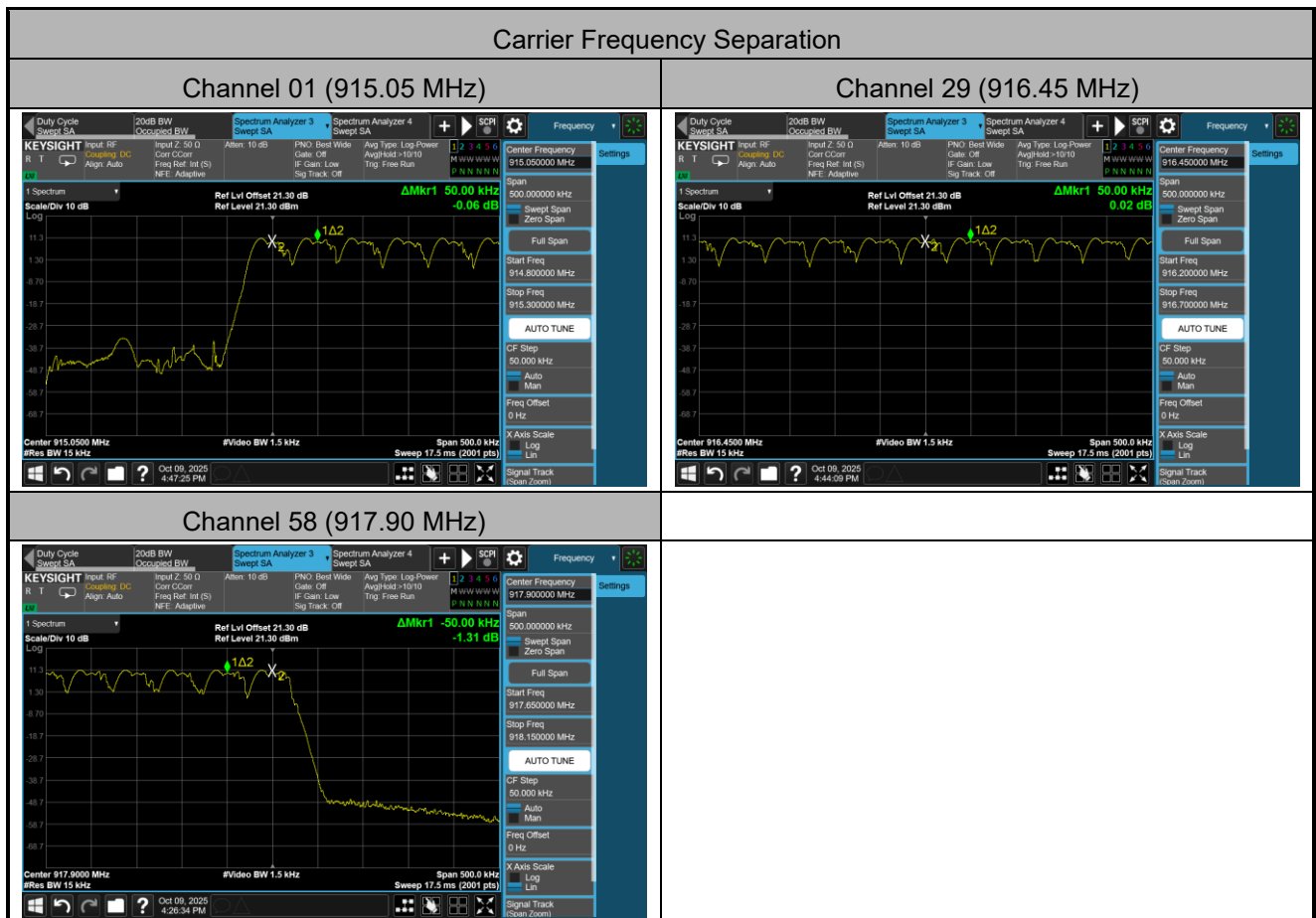
Channel No.	Frequency (MHz)	Output Power (dBm)	Power Limit (dBm)
01	915.05	12.31	≤ 30.00
29	916.45	12.14	≤ 30.00
58	917.90	12.09	≤ 30.00

A.4 Carrier Frequency Separation Test Result

Test Site	WJ-SR3	Test Engineer	Ellie Wang
Test Date	2025-10-09		

Channel No.	Frequency (MHz)	Carrier Frequency Separation (kHz)	Limit (kHz)	Result
01	915.05	50	≥ 46.70	Pass
29	916.45	50	≥ 46.70	Pass
58	917.90	50	≥ 46.70	Pass

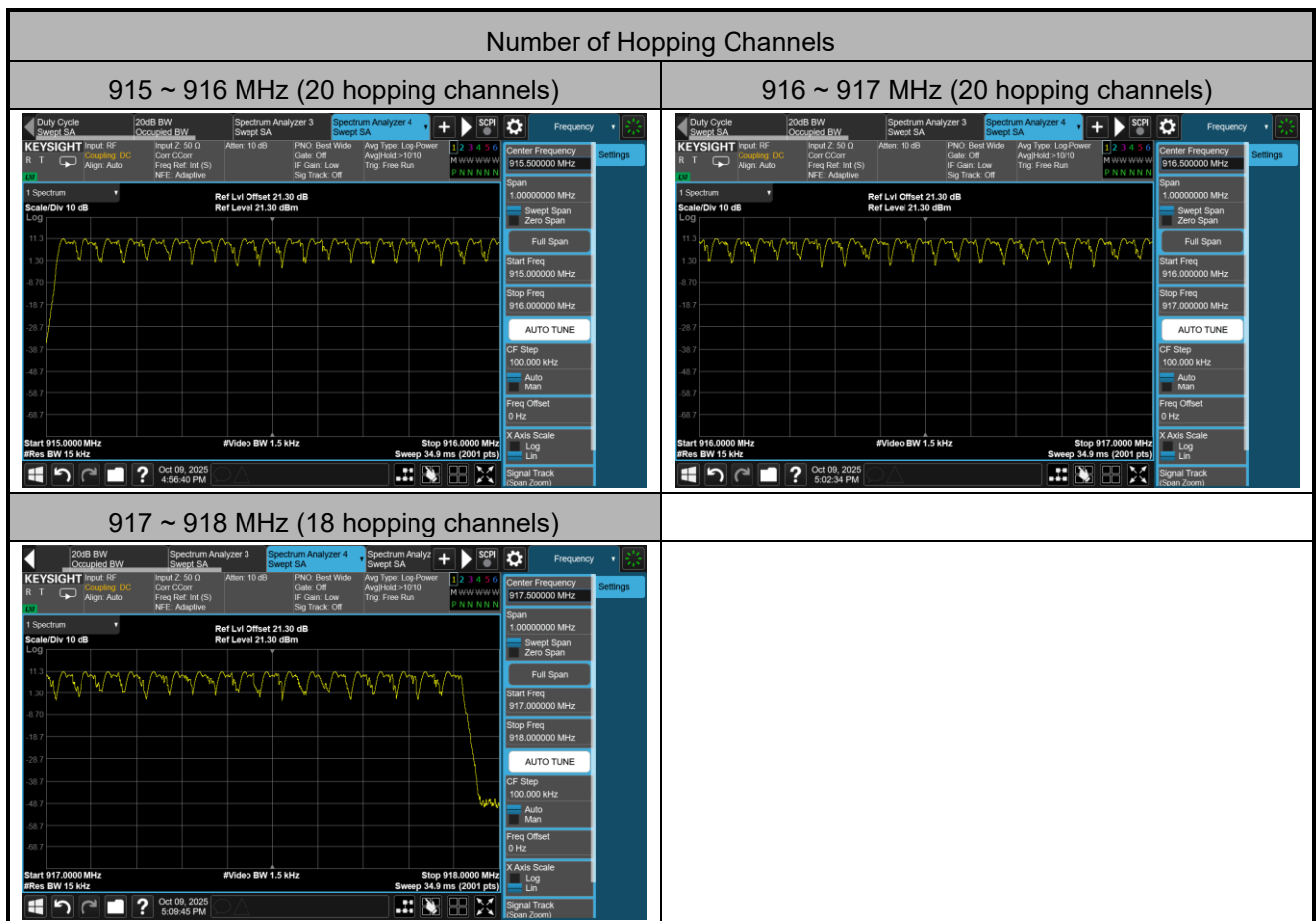
Note: The Limit is the value of the 20 dB BW.



A.5 Number of Hopping Channels Test Result

Test Site	WJ-SR3	Test Engineer	Ellie Wang
Test Date	2025-10-09		

Channel Numbers	Frequency (MHz)	Limit (Hopping Channels)	Result
58	915.05 ~ 917.90	≥ 50	Pass

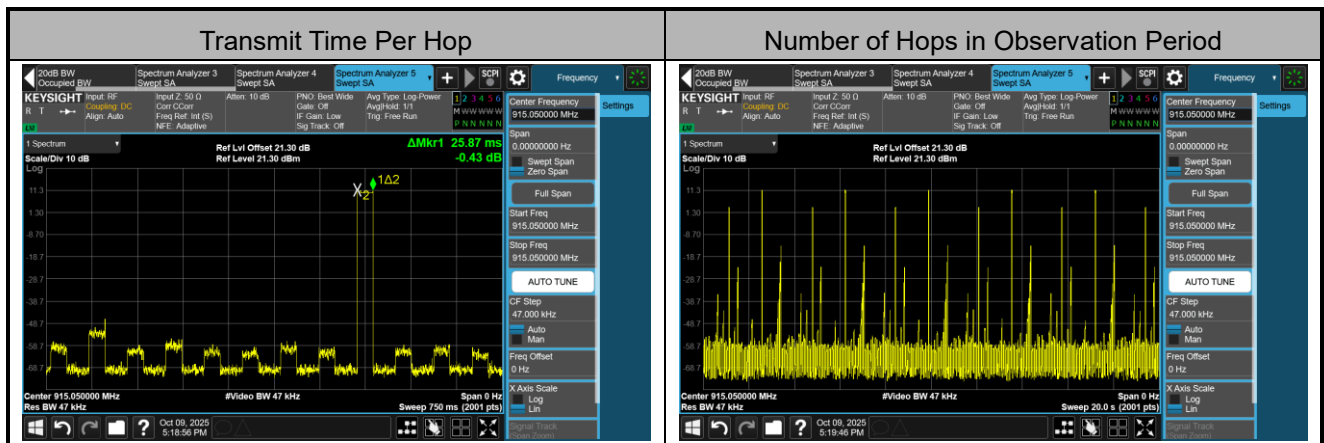


A.6 Time of Occupancy Test Result

Test Site	WJ-SR3	Test Engineer	Ellie Wang
Test Date	2025-10-09		

Channel No.	Frequency (MHz)	Transmit Time Per Hop (ms)	Observation Period (s)	Number of Hops in Observation Period	Time of Occupancy (ms)	Limit (ms)	Result
01 ~ 58	915.05 ~ 917.90	25.87	20	5	129.35	≤ 400	Pass

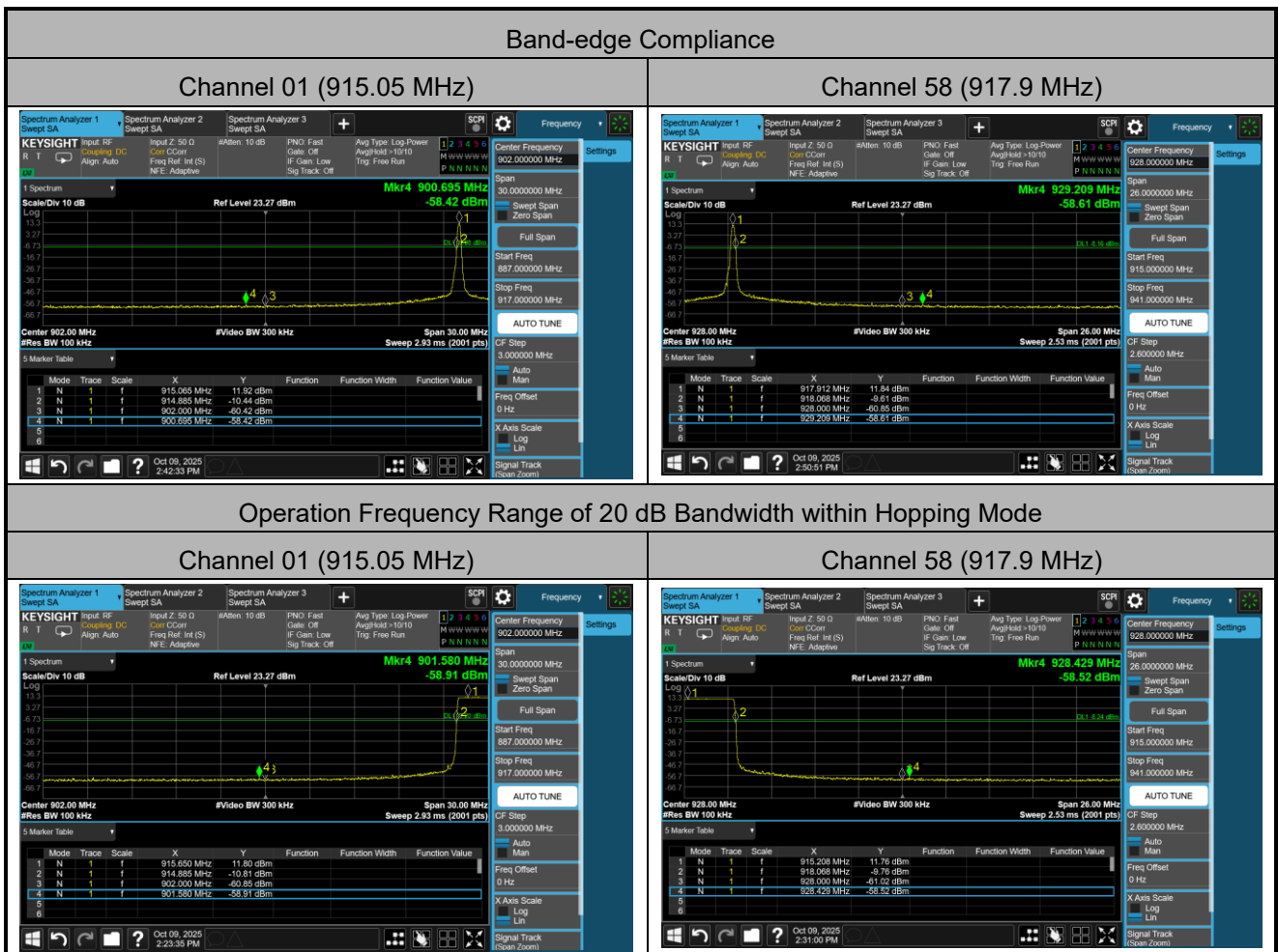
Note: Time of Occupancy (ms) = Transmit Time Per Hop (ms) * Number of Hops in Observation Period



A.7 Band-edge Compliance Test Result

Test Site	WJ-SR3	Test Engineer	Ellie Wang
Test Date	2025-10-09		

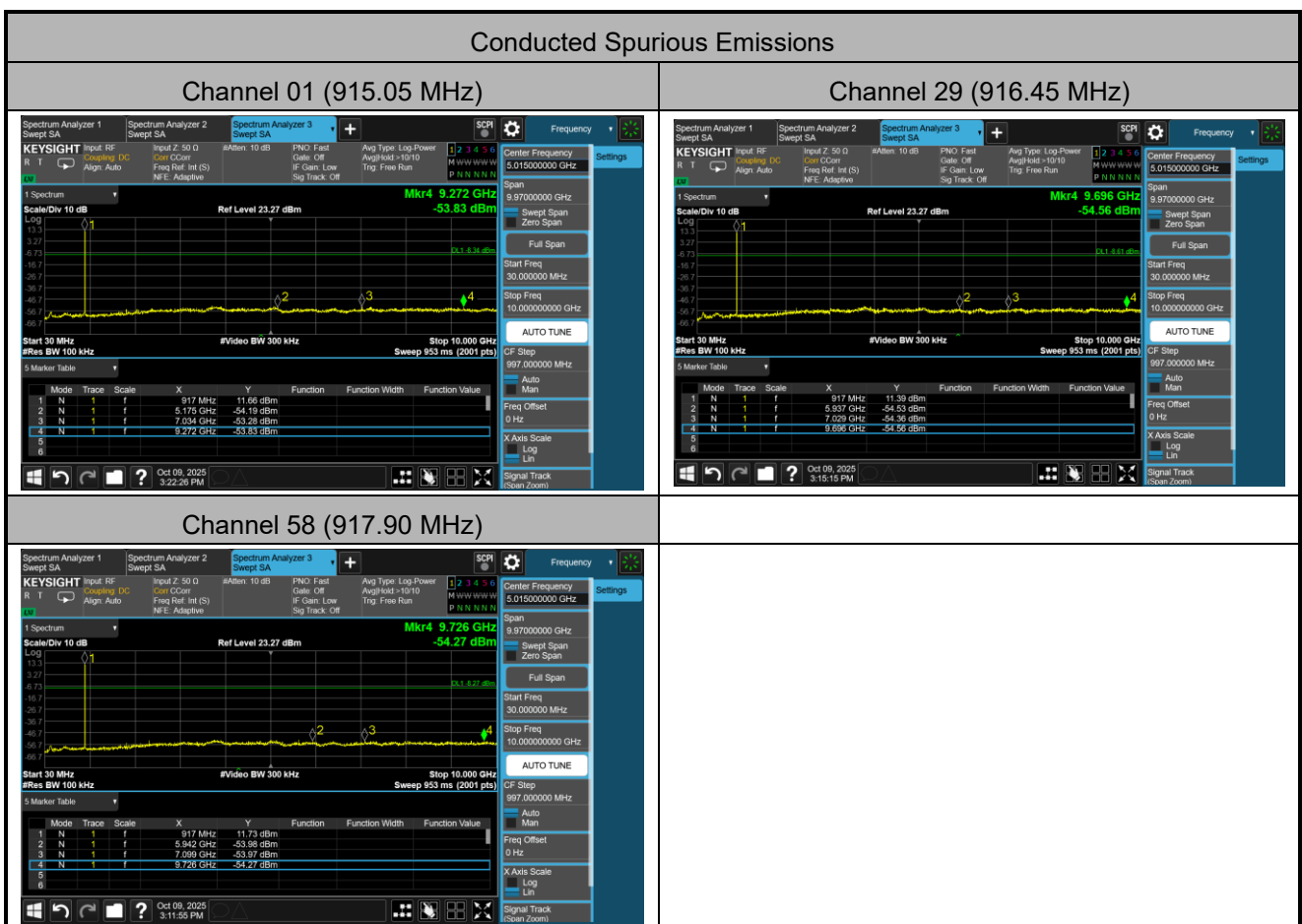
Channel No.	Frequency (MHz)	Limit	Result
01	915.05	20 dBc	Pass
58	917.90	20 dBc	Pass



A.8 Conducted Spurious Emissions Test Result

Test Site	WJ-SR3	Test Engineer	Ellie Wang
Test Date	2025-10-09		

Channel No.	Frequency (MHz)	Limit	Result
01	915.05	20 dBc	Pass
29	916.45	20 dBc	Pass
58	917.90	20 dBc	Pass



A.9 Radiated Spurious Emission Test Result

Test Site	WJ-AC1	Test Engineer	Carl Jiang
Test Date	2025-10-13		
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20 dB below limit line within 1-10 GHz, there is not show in the report.		

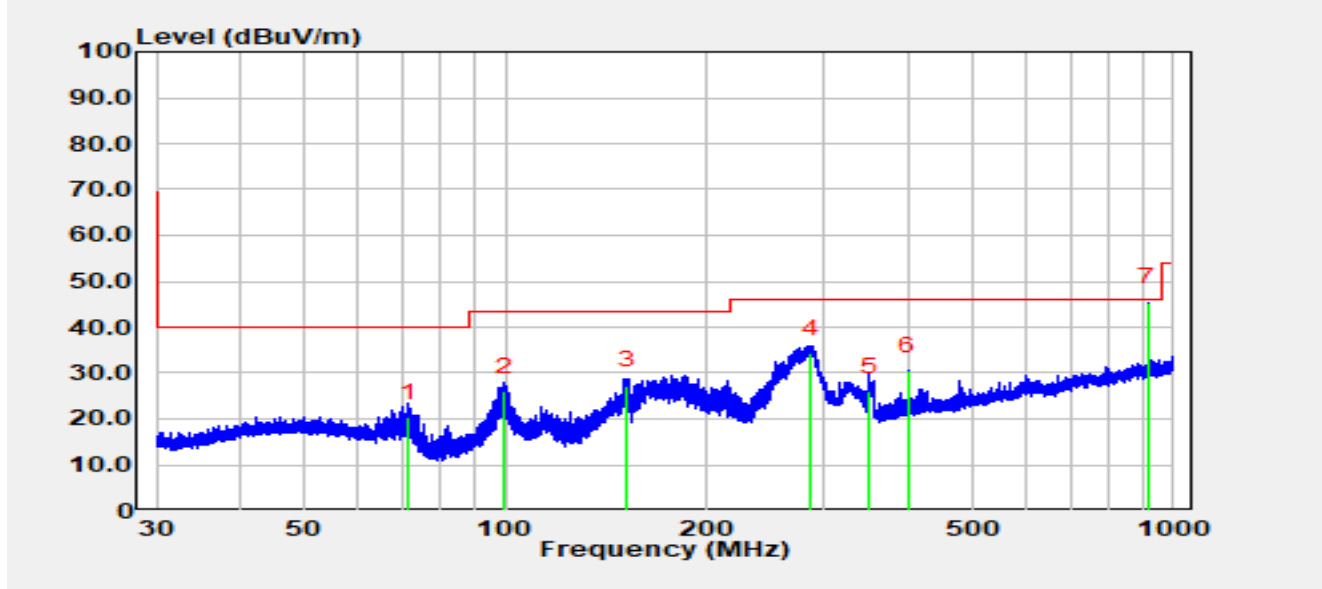
Test Channel	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
01	3660.40	37.48	6.69	44.17	74.00	-29.83	Peak	Horizontal
	4731.40	33.06	8.26	41.32	74.00	-32.68	Peak	Horizontal
	7370.20	30.45	13.46	43.91	74.00	-30.09	Peak	Horizontal
	3660.40	34.50	6.69	41.19	74.00	-32.81	Peak	Vertical
	4737.70	32.31	8.27	40.58	74.00	-33.42	Peak	Vertical
	7673.50	29.54	14.13	43.67	74.00	-30.33	Peak	Vertical
29	3665.80	37.81	6.69	44.50	74.00	-29.50	Peak	Horizontal
	4690.90	31.98	8.16	40.14	74.00	-33.86	Peak	Horizontal
	7544.80	30.35	13.72	44.07	74.00	-29.93	Peak	Horizontal
	3662.20	37.83	6.69	44.52	74.00	-29.48	Peak	Vertical
	4751.20	32.97	8.28	41.25	74.00	-32.75	Peak	Vertical
	7350.40	31.60	13.54	45.14	74.00	-28.86	Peak	Vertical
58	3662.20	37.43	6.69	44.12	74.00	-29.88	Peak	Horizontal
	4827.70	31.93	8.36	40.29	74.00	-33.71	Peak	Horizontal
	7513.30	29.73	13.94	43.67	74.00	-30.33	Peak	Horizontal
	3672.10	36.42	6.65	43.07	74.00	-30.93	Peak	Vertical
	4642.30	33.30	8.25	41.55	74.00	-32.45	Peak	Vertical
	7546.60	29.79	13.74	43.53	74.00	-30.47	Peak	Vertical

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

The Result of Radiated Emission below 1 GHz:

Site	WJ-AC1	Test Date	2025-10-13
Temperature	25.2 °C	Humidity	54.2%
Limit	FCC_Part 15.209_RSE (3 m)	Test Engineer	Carl Jiang
Test Voltage	By Battery	Polarity	Horizontal
Test Mode	Transmit by SRD at 915.05 MHz		

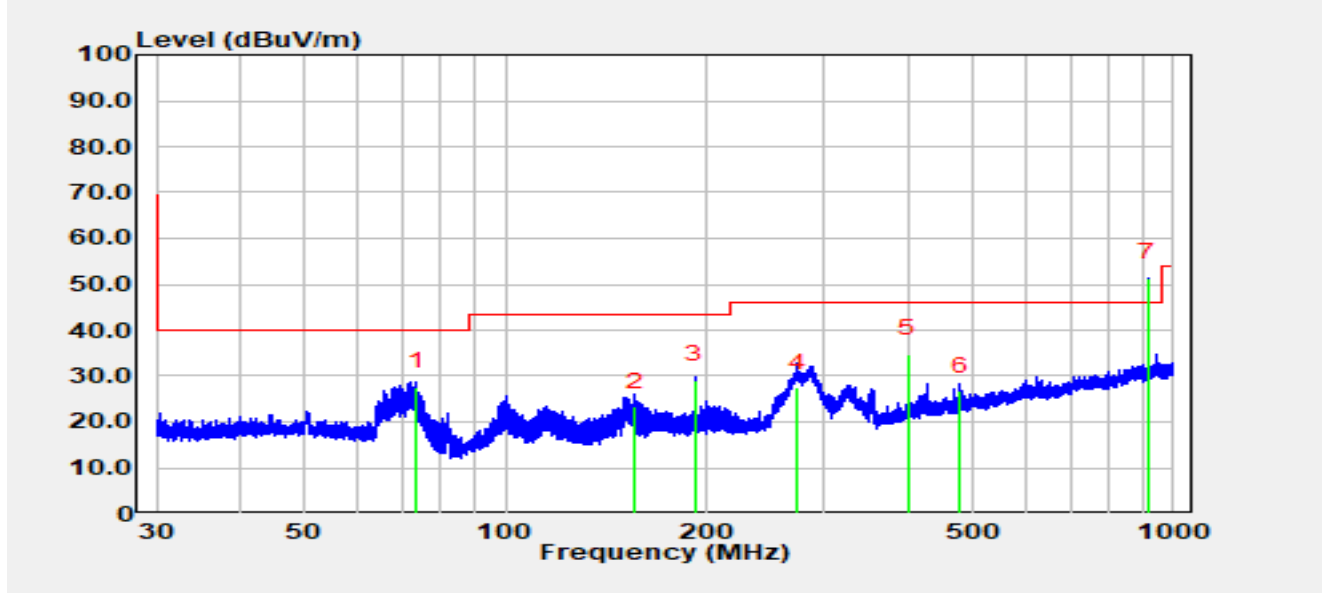


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1		71.56	4.80	15.51	20.31	-19.69	40.00	QP
2		99.46	7.30	18.65	25.95	-17.55	43.50	QP
3		151.65	12.40	14.95	27.35	-16.15	43.50	QP
4	*	285.88	13.90	20.34	34.24	-11.76	46.00	QP
5		350.97	3.50	22.50	26.00	-20.00	46.00	QP
6		400.01	7.10	23.30	30.40	-15.60	46.00	QP
7		915.11	14.38	30.97	45.34	N/A	N/A	Peak

Notes:

- " * " indicates the worst-case emission level observed during the measurement.
- C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
- Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).
- The point (7) is SRD fundamental frequency that is not evaluated in this standard.
- The amplitude of the radiated emissions in the frequency range from 9 kHz to 30 MHz is close to the ambient noise level, and all emissions are at least 20 dB below the applicable limit. Therefore, the data is not presented in this report.

Site	WJ-AC1	Test Date	2025-10-13
Temperature	25.2 °C	Humidity	54.2%
Limit	FCC_Part 15.209_RSE (3 m)	Test Engineer	Carl Jiang
Test Voltage	By Battery	Polarity	Vertical
Test Mode	Transmit by SRD at 915.05 MHz		



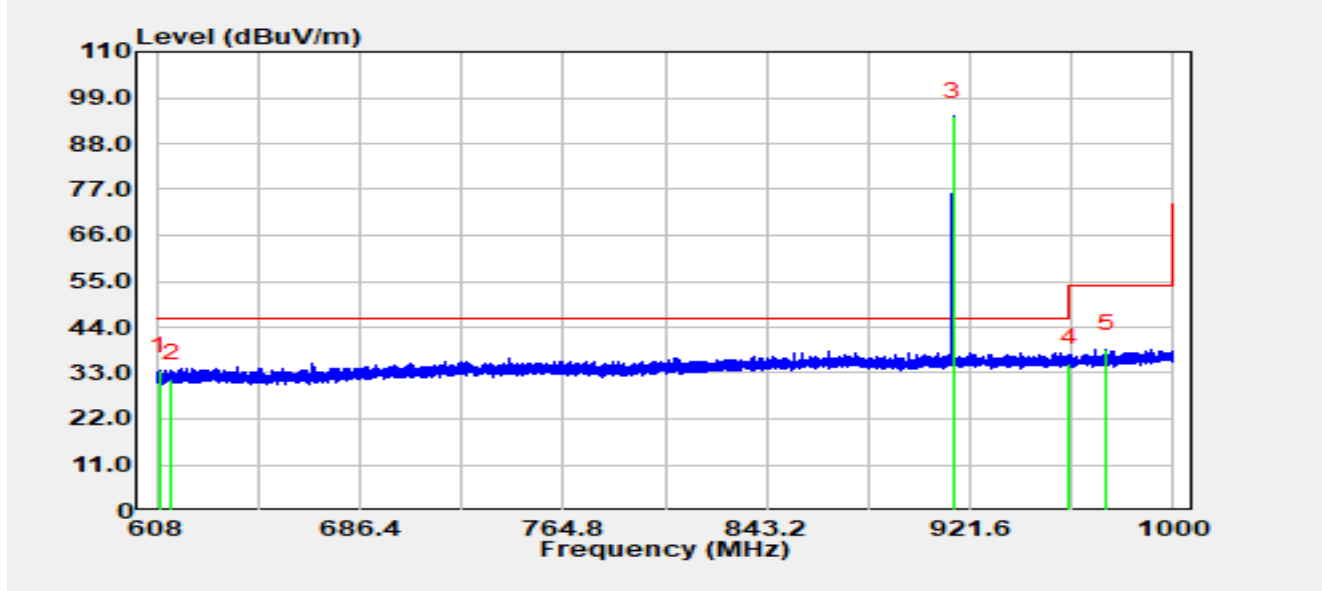
No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1		73.57	12.80	14.83	27.63	-12.37	40.00	QP
2		156.35	8.20	15.15	23.35	-20.15	43.50	QP
3		192.01	10.90	18.21	29.11	-14.39	43.50	QP
4		272.95	7.50	19.97	27.47	-18.53	46.00	QP
5	*	400.01	11.50	23.30	34.80	-11.20	46.00	QP
6		480.02	2.10	24.52	26.62	-19.38	46.00	QP
7		915.11	20.50	30.97	51.47	N/A	N/A	Peak

Notes:

- "*" indicates the worst-case emission level observed during the measurement.
- C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
- Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).
- The point (7) is SRD fundamental frequency that is not evaluated in this standard.
- The amplitude of the radiated emissions in the frequency range from 9 kHz to 30 MHz is close to the ambient noise level, and all emissions are at least 20 dB below the applicable limit. Therefore, the data is not presented in this report.

A.10 Radiated Restricted Band Edge Test Result

Site	WJ-AC1	Test Date	2025-10-13
Temperature	25.2 °C	Humidity	54.2%
Limit	FCC_Part 15.209_RSE (3 m)	Test Engineer	Carl Jiang
Test Voltage	By Battery	Polarity	Horizontal
Test Mode	Transmit by SRD at 915.05 MHz		

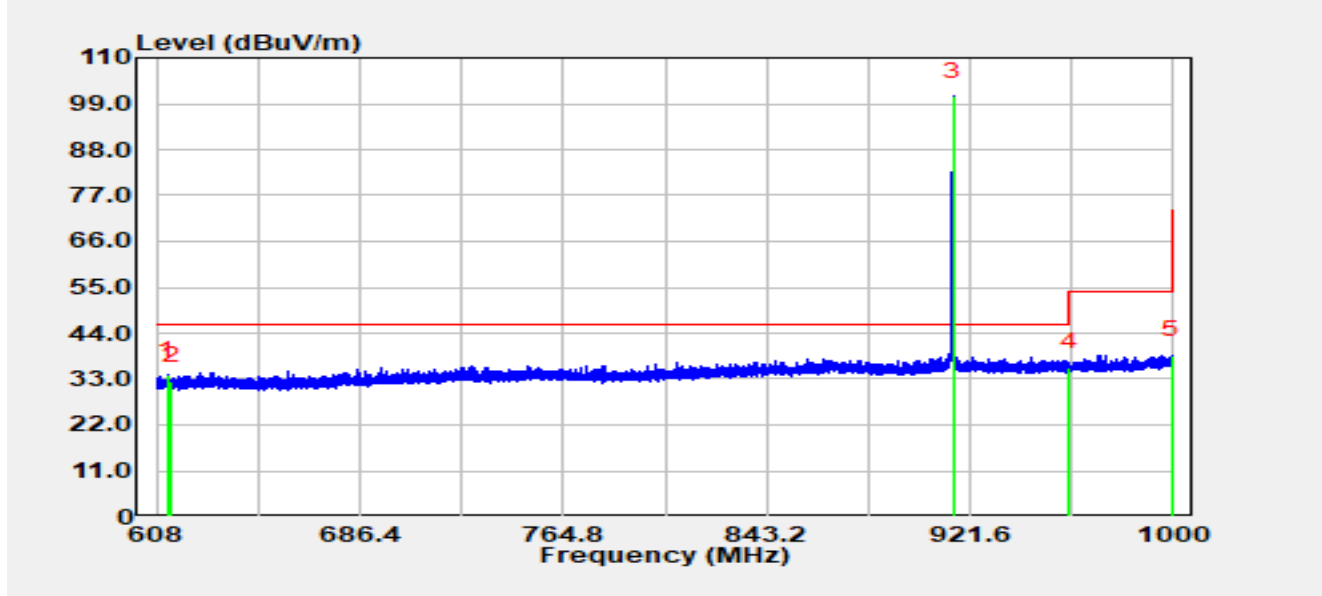


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1		609.23	6.06	27.52	33.58	-12.42	46.00	Peak
2		614.00	4.06	27.57	31.64	-14.36	46.00	Peak
3		915.08	63.61	30.96	94.57	N/A	N/A	Peak
4	*	960.00	4.30	31.02	35.32	-10.68	46.00	Peak
5		974.43	7.60	31.20	38.79	-15.21	54.00	Peak

Notes:

- "*" indicates the worst-case emission level observed during the measurement.
- C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
- Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).

Site	WJ-AC1	Test Date	2025-10-13
Temperature	25.2 °C	Humidity	54.2%
Limit	FCC_Part 15.209_RSE (3 m)	Test Engineer	Carl Jiang
Test Voltage	By Battery	Polarity	Vertical
Test Mode	Transmit by SRD at 915.05 MHz		

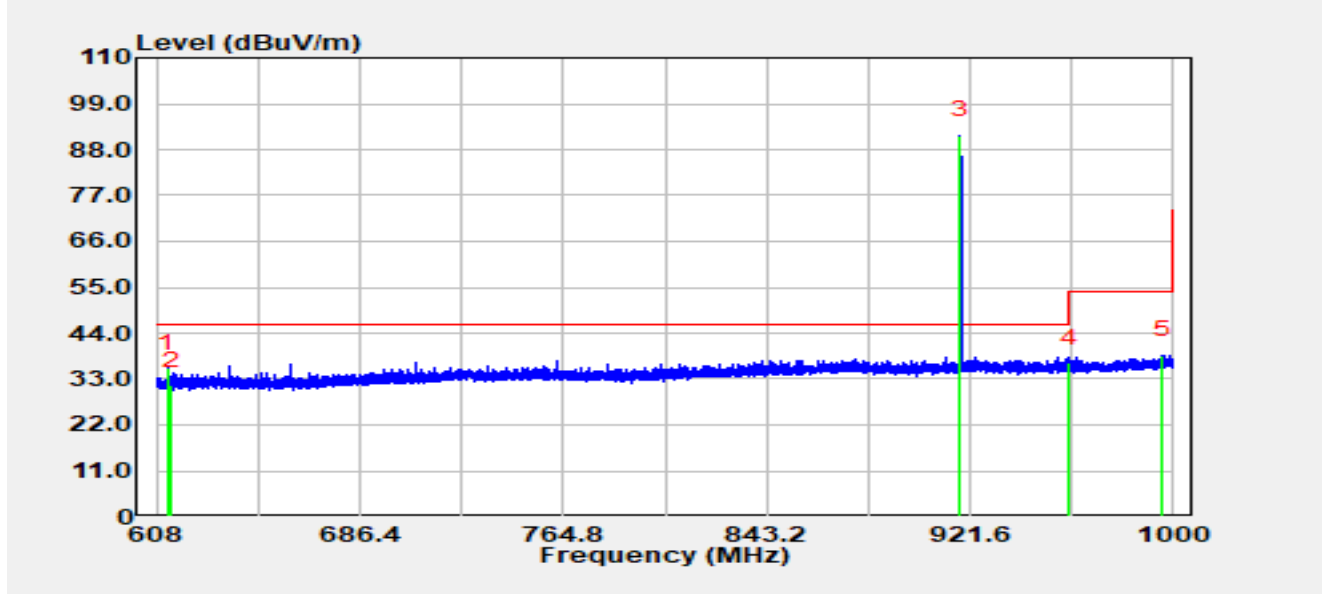


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1		612.17	6.37	27.55	33.92	-12.08	46.00	Peak
2		614.00	4.90	27.57	32.47	-13.53	46.00	Peak
3		915.08	69.79	30.96	100.76	N/A	N/A	Peak
4	*	960.00	4.87	31.02	35.89	-10.11	46.00	Peak
5		999.37	6.98	31.73	38.72	-15.28	54.00	Peak

Notes:

- " * " indicates the worst-case emission level observed during the measurement.
- C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
- Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).

Site	WJ-AC1	Test Date	2025-10-13
Temperature	25.2 °C	Humidity	54.2%
Limit	FCC_Part 15.209_RSE (3 m)	Test Engineer	Carl Jiang
Test Voltage	By Battery	Polarity	Horizontal
Test Mode	Transmit by SRD at 917.90 MHz		

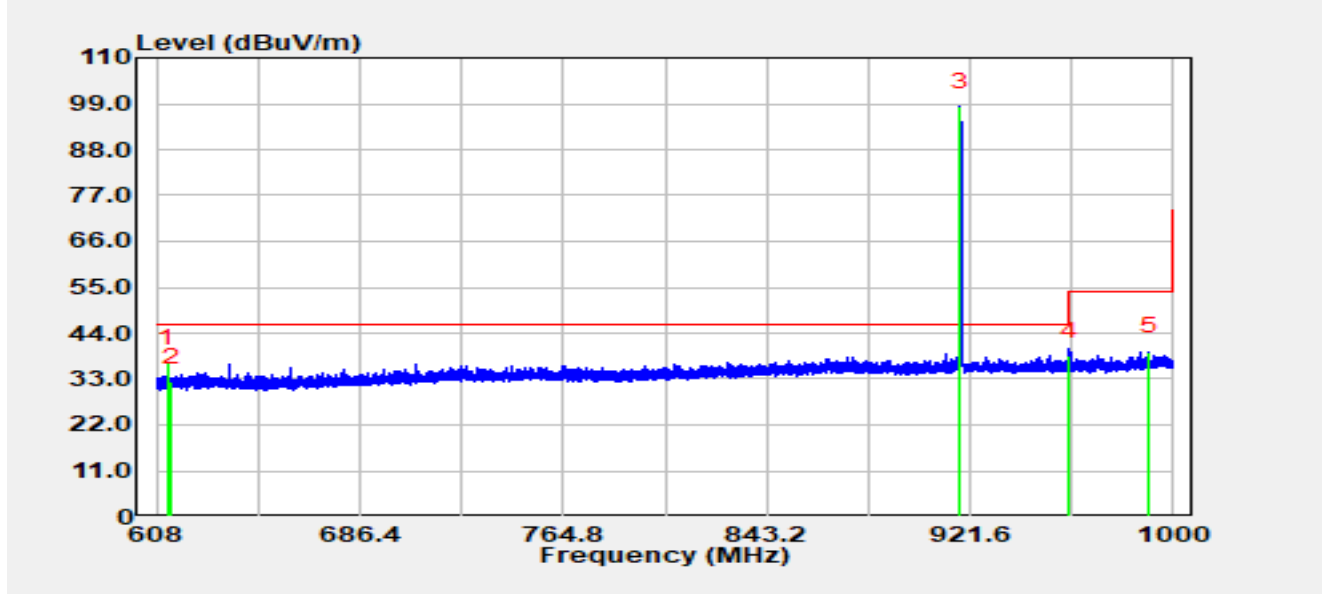


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1		612.04	8.02	27.55	35.56	-10.44	46.00	Peak
2		614.00	3.96	27.57	31.53	-14.47	46.00	Peak
3		917.93	60.45	31.04	91.49	N/A	N/A	Peak
4	*	960.00	5.80	31.02	36.82	-9.18	46.00	Peak
5		995.58	7.19	31.61	38.80	-15.20	54.00	Peak

Notes:

- " * " indicates the worst-case emission level observed during the measurement.
- C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
- Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).

Site	WJ-AC1	Test Date	2025-10-13
Temperature	25.2 °C	Humidity	54.2%
Limit	FCC_Part 15.209_RSE (3 m)	Test Engineer	Carl Jiang
Test Voltage	By Battery	Polarity	Vertical
Test Mode	Transmit by SRD at 917.90 MHz		



No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1		612.04	9.37	27.55	36.92	-9.08	46.00	Peak
2		614.00	4.61	27.57	32.18	-13.82	46.00	Peak
3		917.93	67.13	31.04	98.17	N/A	N/A	Peak
4	*	960.00	7.57	31.02	38.59	-7.41	46.00	Peak
5		990.44	7.91	31.54	39.45	-14.55	54.00	Peak

Notes:

- " * " indicates the worst-case emission level observed during the measurement.
- C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
- Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).

A.11 AC Conducted Emissions Test Result

Note Transmit By SRD

Test Voltage AC 120 V/60 Hz

Test Engineer Carl Jiang

Test Date 2025-10-21

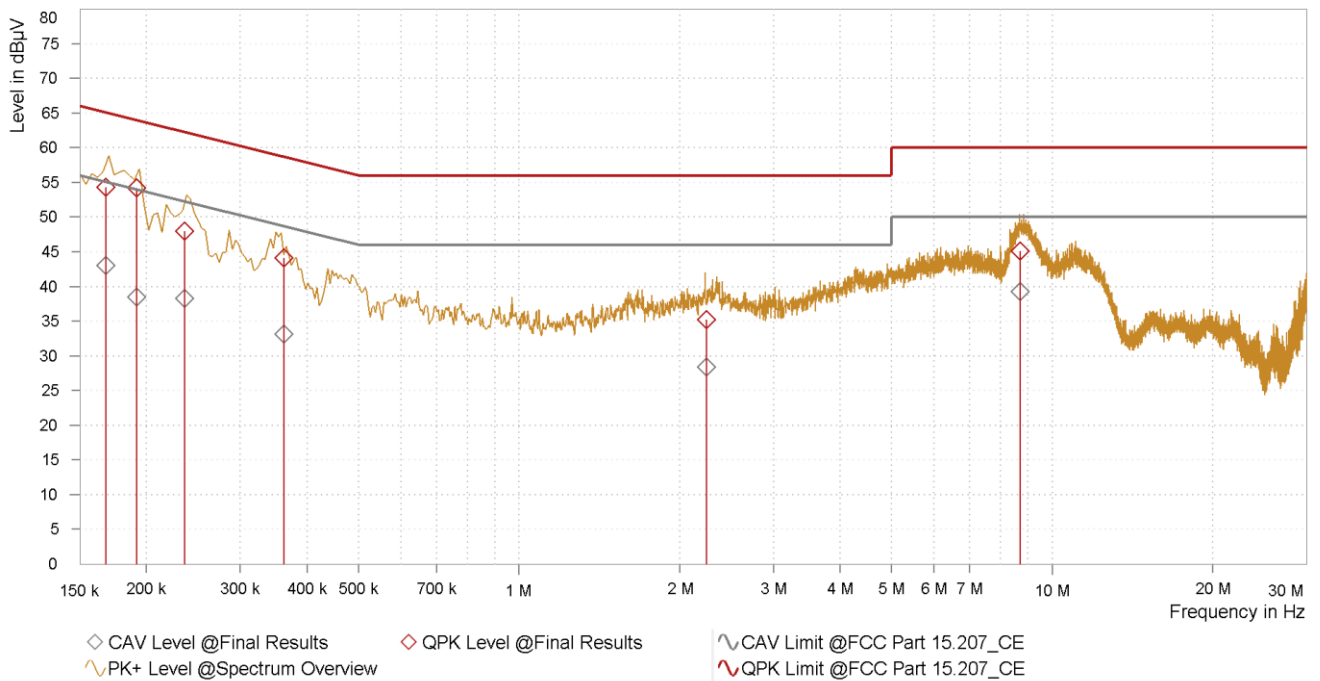
Temp 23.5 °C

Humi 50.1%

Polarity L

Test Site WJ-SR5

Spectrum Overview



Final Results

Frequency [MHz]	QPK Level [dBμV]	QPK Limit [dBμV]	QPK Margin [dB]	QPK Raw Lvl [dBμV]	CAV Level [dBμV]	CAV Limit [dBμV]	CAV Margin [dB]	CAV Raw Lvl [dBμV]	Correction [dB]	Line
0.168	54.34	65.06	10.72	44.60	43.06	55.06	12.00	33.32	9.74	L1
0.192	54.14	63.95	9.81	44.39	38.45	53.95	15.50	28.70	9.75	L1
0.236	48.00	62.24	14.23	38.25	38.29	52.24	13.95	28.54	9.76	L1
0.362	44.06	58.68	14.62	34.29	33.15	48.68	15.53	23.38	9.77	L1
2.248	35.24	56.00	20.76	25.12	28.38	46.00	17.62	18.26	10.12	L1
8.723	45.07	60.00	14.93	34.83	39.28	50.00	10.72	29.04	10.24	L1

Notes:

1. QPK Level [dB μ V] = QPK Raw Lvl [dB μ V] + Correction [dB]
2. CAV Level [dB μ V] = CAV Raw Lvl [dB μ V] + Correction [dB]
3. Correction [dB] = LISN Factor [dB] + Cable Loss [dB]

Note Transmit By SRD

Test Voltage AC 120 V/60 Hz

Test Engineer Carl Jiang

Test Date 2025-10-21

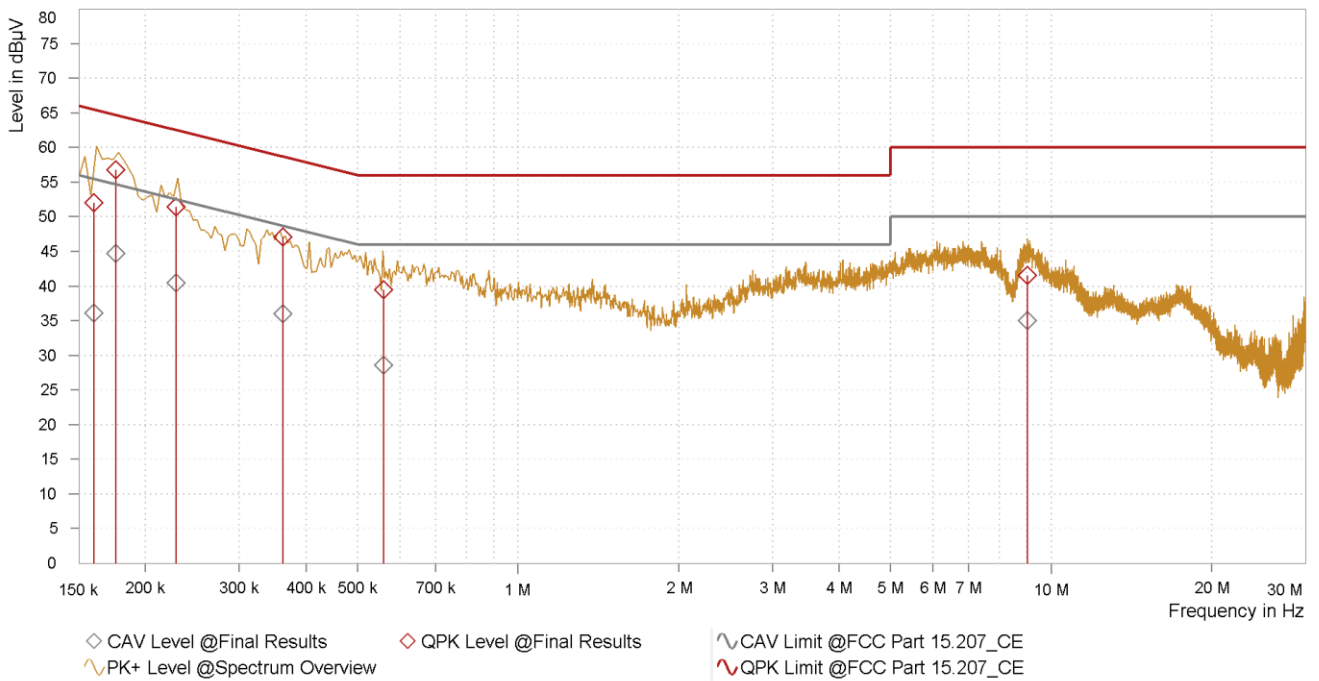
Temp 23.5 °C

Humi 50.1%

Polarity N

Test Site WJ-SR5

Spectrum Overview



Final Results

Frequency [MHz]	QPK Level [dBµV]	QPK Limit [dBµV]	QPK Margin [dB]	QPK Raw Lvl [dBµV]	CAV Level [dBµV]	CAV Limit [dBµV]	CAV Margin [dB]	CAV Raw Lvl [dBµV]	Correction [dB]	Line
0.160	52.04	65.46	13.42	42.36	36.13	55.46	19.33	26.46	9.68	N
0.176	56.78	64.67	7.89	47.08	44.71	54.67	9.97	35.01	9.69	N
0.228	51.45	62.52	11.07	41.73	40.40	52.52	12.12	30.68	9.72	N
0.362	47.08	58.68	11.60	37.32	36.04	48.68	12.64	26.28	9.76	N
0.560	39.45	56.00	16.55	29.59	28.54	46.00	17.46	18.69	9.85	N
9.032	41.56	60.00	18.44	31.29	35.04	50.00	14.96	24.76	10.27	N

Notes:

1. QPK Level [dB μ V] = QPK Raw Lvl [dB μ V] + Correction [dB]
2. CAV Level [dB μ V] = CAV Raw Lvl [dB μ V] + Correction [dB]
3. Correction [dB] = LISN Factor [dB] + Cable Loss [dB]

Appendix B - Test Setup Photograph

Refer to "R25S1020096-UT" file.

Appendix C - EUT Photograph

Refer to "R25S1020096-UE" file.

_____ The End _____