RF MEASUREMENT REPORT

FCC ID:	U4GDL36WF
Applicant:	Datalogic S.r.l.
Product:	Barcode Reader
Model No.:	DL36WF
Brand Name:	DATALOGIC
FCC Classification:	Digital Transmission System (DTS)
FCC Rule Part(s):	Part 15 Subpart C (Section 15.247)
Result:	Complies
Received Date:	2025-01-13
Test Date:	2025-01-21 ~ 2025-02-23

Reviewed By: Jame Yuan

Jame Yuan

Approved By: Robin Wu

Robin Wu

ACCREDITED
TESTING LABORATORY
CERTIFICATE #3628.01

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 and was tested in accordance with the measurement procedures specified in ANSI C63.10-2013. Test results reported herein relate only to the 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
2412RSU067-U2	V01	Initial Report	2025-03-21	Valid

Note: This product has got FCC approval (FCC ID: U4GDL36WF, Original Report No.: 2209RSU002-U3), now it has been replaced with 2.4/5G Wi-Fi FEM (pin-for-pin compatible) and reduce Wi-Fi conducted power via software, no other change. Based on the above changes, we did some spot-check tests for partial items.

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1. General Information

1.1. Applicant

Datalogic S.r.l.

Via San Vitalino no.13, Calderara di Reno -40012(BO)-Italy

1.2. Manufacturer

Datalogic S.r.l.

Via San Vitalino no.13, Calderara di Reno -40012(BO)-Italy

1.3. Testing Facility

☒	**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		CNAS: L10551		
	FCC: CN1166		ISED: CN0001		
	VCCI:	☐R-20025	☐G-20034	☐C-20020	☐T-20020
		☐R-20141	☐G-20134	☐C-20103	☐T-20104
☐	**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		CNAS: L10551		
	FCC: CN1284		ISED: CN0105		
☐	**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		ISED: TW3261		

1.4. Product Information

Product Name	Barcode Reader
Model No.	DL36WF
EUT Identification No.	20250113Sample#05 (Conducted) 20250121Sample#19 (Radiated)
NFC Specification	13.56MHz
Wi-Fi Specification	802.11a/b/g/n
Bluetooth Specification	v5.2 dual mode
WPT Specification	119-140kHz, WPT client type
Operating Temp.	-20 ~ 50 ℃
Power Type	3.60 ~ 4.35Vdc, typical 3.8Vdc
Accessories	
AC Adapter	Model: S008ACM0500200 Input: 100-240V ~ 50/60Hz, 0.3A Output: 5V, 2A, 10W
Rechargeable Li-ion Battery 1#	Model No.: BTDL36 Rated Voltage: 3.8V Rated Capacity: 3980mAh/15.1Wh Limited Charge Voltage: 4.35V
Rechargeable Li-ion Battery 2#	Model No.: BTDL35 Rated Voltage: 3.8V Rated Capacity: 3980mAh/15.1Wh Limited Charge Voltage: 4.35V
Remark: The information of EUT was provided by the manufacturer, and the accuracy of the information shall be the responsibility of the manufacturer.	

1.5. Radio Specification under Test

Frequency Range	802.11b/g/n-HT20: 2412 ~ 2462MHz
Channel Number	802.11b/g/n-HT20: 11
Type of Modulation	802.11b: DSSS 802.11g/n: OFDM
Data Rate	802.11b: 1/2/5.5/11Mbps 802.11g: 6/9/12/18/24/36/48/54Mbps 802.11n: up to 72.2Mbps
Antenna Type	PIFA
Antenna Gain	0.46 dBi

1.6. Working Frequencies

802.11b/g/n-HT20

Channel	Frequency	Channel	Frequency	Channel	Frequency
01	2412 MHz	02	2417 MHz	03	2422 MHz
04	2427 MHz	05	2432 MHz	06	2437 MHz
07	2442 MHz	08	2447 MHz	09	2452 MHz
10	2457 MHz	11	2462 MHz	--	--

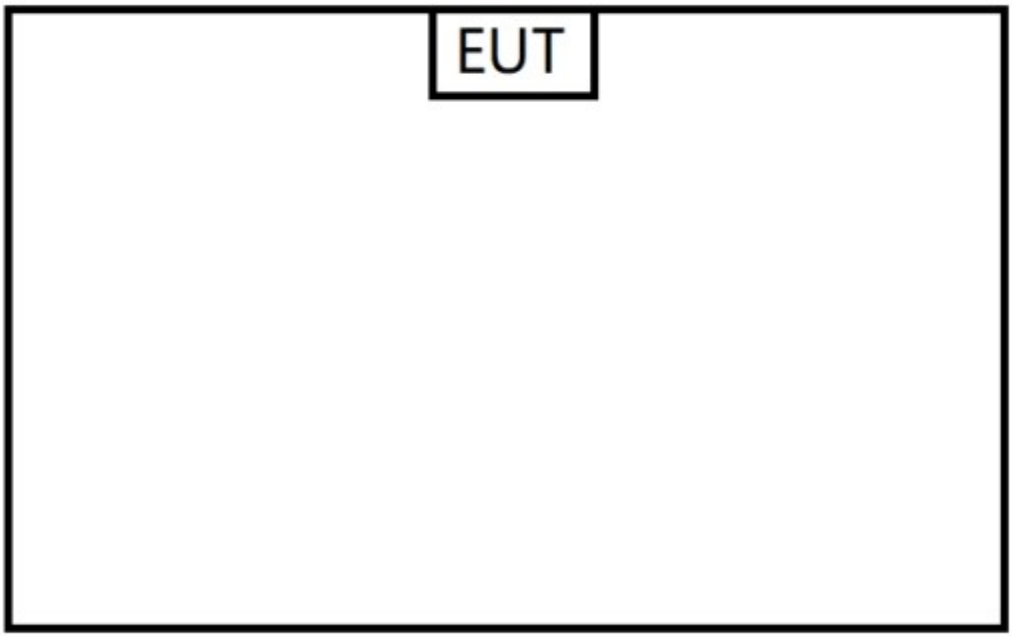
2. Test Configuration

2.1. Test Mode

Mode 1: Transmit by 802.11b (1Mbps)
Mode 2: Transmit by 802.11g (6Mbps)
Mode 3: Transmit by 802.11n-HT20 (MCS0)

2.2. Test System Connection Diagram

The device was tested per the guidance ANSI C63.10: 2013 was used to reference the appropriate EUT setup for radiated emissions testing.

Connection Diagram


2.3. Test Software

Type the code *#*#05740574#*#* to enter engineer mode to implement continuous transmit.

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 D01v05r02
- KDB 662911 D01v02r01
- ANSI C63.10-2013

2.5. Test Environment Condition

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

3. Antenna Requirements

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
TRILOG Broad Band Antenna	Schwarzbeck	VULB 9163	MRTSUE07099	1 year	2025-04-24	WJ-AC1
EMI Test Receiver	R&S	ESR3	MRTSUE07110	1 year	2025-04-24	WJ-AC1
Anechoic Chamber	TDK	WJ-AC1	MRTSUE07115	1 year	2025-05-17	WJ-AC1
EXA Signal Analyzer	Keysight	N9010B	MRTSUE07147	1 year	2025-04-28	WJ-AC1
Thermohygrometer	testo	608-H1	MRTSUE11333	1 year	2025-06-24	WJ-AC1
Thermohygrometer	testo	608-H1	MRTSUE11402	1 year	2025-12-01	WJ-AC1
Preamplifier	EMCI	EMC184045SE	MRTSUE07103	1 year	2025-04-14	WJ-AC2
Horn Antenna	EMCI	DRH18-E	MRTSUE07105	1 year	2025-05-12	WJ-AC2
Anechoic Chamber	TDK	WJ-AC2	MRTSUE07117	1 year	2025-05-14	WJ-AC2
EXA Signal Analyzer	Keysight	N9010B	MRTSUE07148	1 year	2025-05-11	WJ-AC2
Thermohygrometer	testo	608-H1	MRTSUE11315	1 year	2025-06-24	WJ-AC2
Thermohygrometer	testo	608-H1	MRTSUE11332	1 year	2025-06-24	WJ-AC2
USB Power Sensor	Keysight	U2021XA	MRTSUE07143	1 year	2025-03-22	WJ-SR3
Signal Analyzer	Keysight	N9020B	MRTSUE07037	1 year	2025-09-03	WJ-SR3

Software	Version	Function
e3	230711	EMI Test Software
CONTROLLER CO3000	v 1.03.02	RE Antenna & Turntable

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.

Radiated Emission Measurement
The maximum measurement uncertainty is evaluated as: Coaxial: 9kHz~30MHz: 2.61dB Coplanar: 9kHz~30MHz: 2.62dB Horizontal: 30MHz~200MHz: 3.79dB 200MHz~1GHz: 3.91dB 1GHz~40GHz: 4.99dB Vertical: 30MHz~200MHz: 4.06dB 200MHz~1GHz: 5.21dB 1GHz~40GHz: 4.90dB
Spurious Emissions, Conducted
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 2.2dB
Output Power
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 1.4dB

6. Test Result

6.1. Summary

FCC Section(s)	Test Description	Test Condition	Verdict
15.247(b)(3)	Output Power	Conducted	Pass
15.205 15.209	General Field Strength (Restricted Bands and Radiated Emission)	Radiated	Pass

Note:

1. The analyzer plots shown in this section were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables and attenuators used as part of the system to connect the EUT to the analyzer at all frequencies of interest.

6.2. Output Power Measurement

6.2.1. Test Limit

The maximum output power shall be less 1 Watt (30dBm).

The conducted output power limit specified in paragraph FCC Part 15.247(b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs FCC Part 15.247(b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

6.2.2. Test Procedure

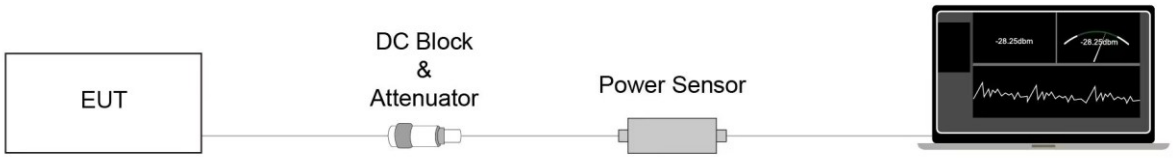
ANSI C63.10 - 2013 - Section 11.9.2.3.2

6.2.3. Test Setting

Average Power Measurement

Average 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 power meter implemented triggering and gating capabilities which were set up such that power measurements were recorded only during the ON time of the transmitter.

6.2.4. Test Setup



6.2.5. Test Result

Refer to Appendix A.1.

6.3. Radiated Spurious Emission Measurement

6.3.1. 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 [uV/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

6.3.2. Test Procedure

ANSI C63.10 - 2013 - Section 11.11 & 11.12

ANSI C63.10 - 2013 - Section 6.3 (General Requirements)

ANSI C63.10 - 2013 - Section 6.4 (Standard test method below 30MHz)

ANSI C63.10 - 2013 - Section 6.5 (Standard test method above 30MHz to 1GHz)

ANSI C63.10 - 2013 - Section 6.6 (Standard test method above 1GHz)

6.3.3. 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
> 1000MHz	1MHz

Quasi-Peak Measurements below 1GHz

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. Span was set greater than 1MHz
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 1GHz

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

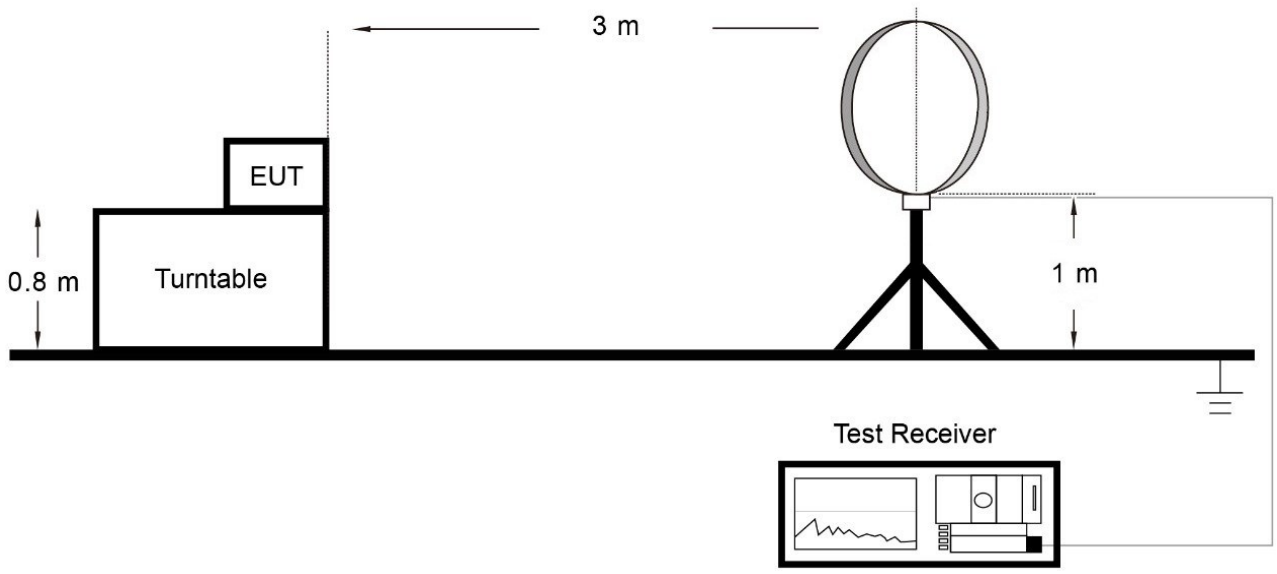
Average Measurements above 1GHz (Method VB)

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

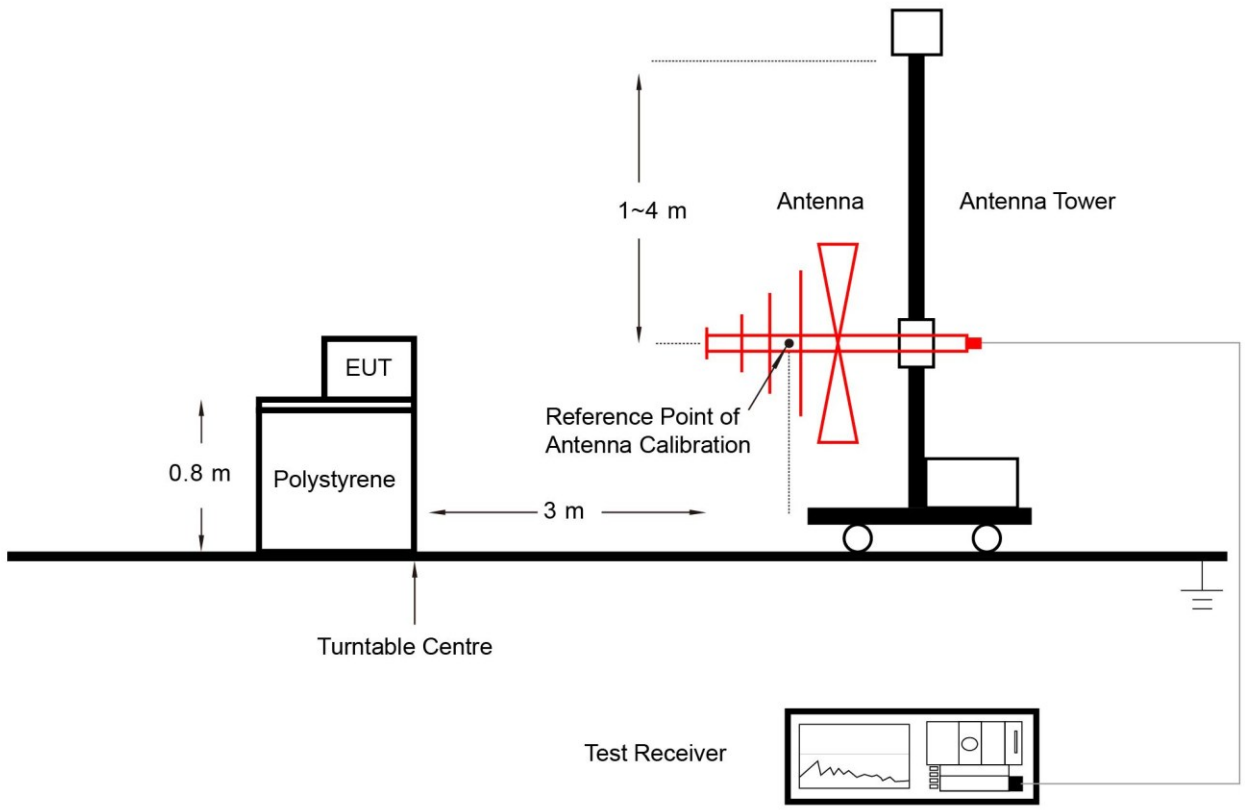
   If the EUT duty cycle is < 98%, set VBW ≥ 1/T. T is the minimum transmission duration.
4. As an alternative, the instrument may be set to linear detector mode. Ensure that video filtering is applied in linear voltage domain (rather than in a log or dB domain). Some instruments require linear display 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

6.3.4. Test Setup

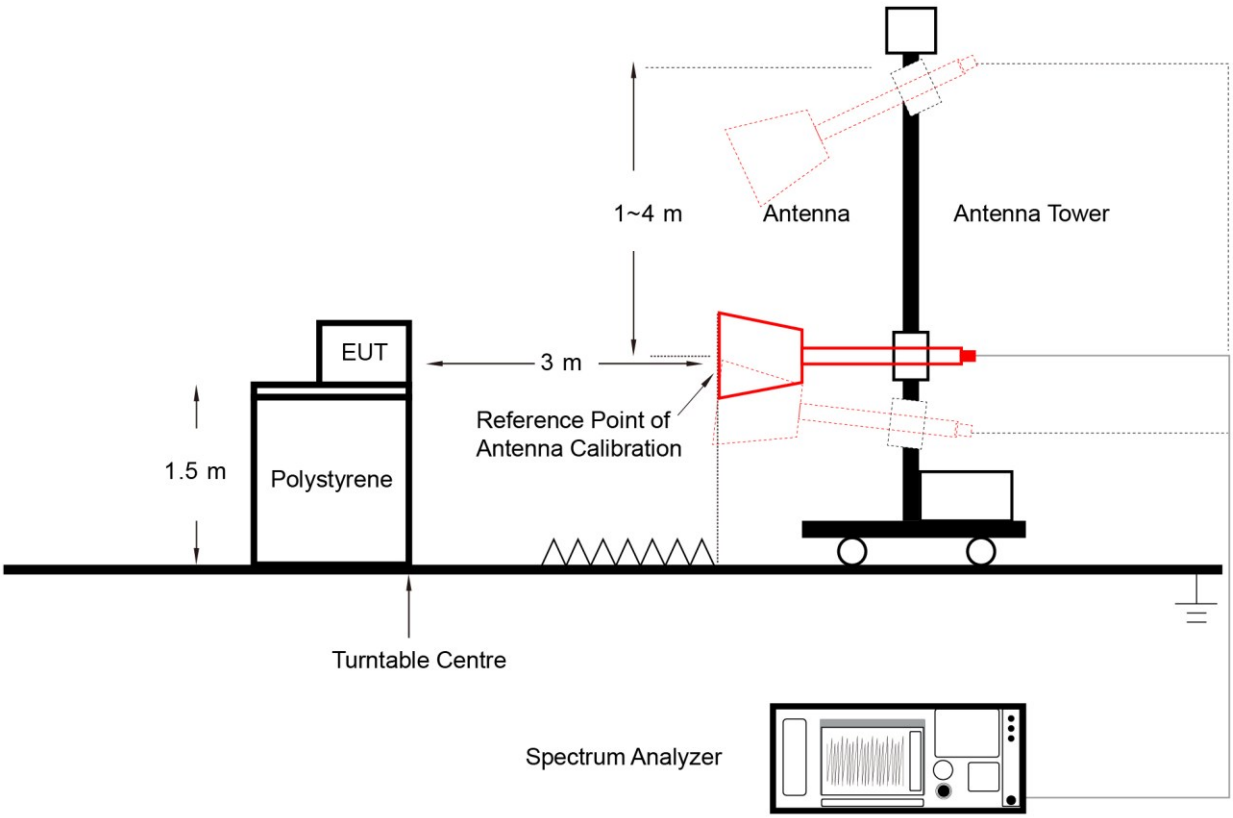
Below 30MHz Test Setup:



Below 1GHz Test Setup:



Above 1GHz Test Setup:



6.3.5. Test Result

Refer to Appendix A.2.

6.4. Radiated Restricted Band Edge Measurement

6.4.1. 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 47CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [uV/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

6.4.2. Test Procedure

ANSI C63.10-2013 Section 6.3 & 6.6 & 11.13

6.4.3. Test Setting

Peak Field Strength Measurements

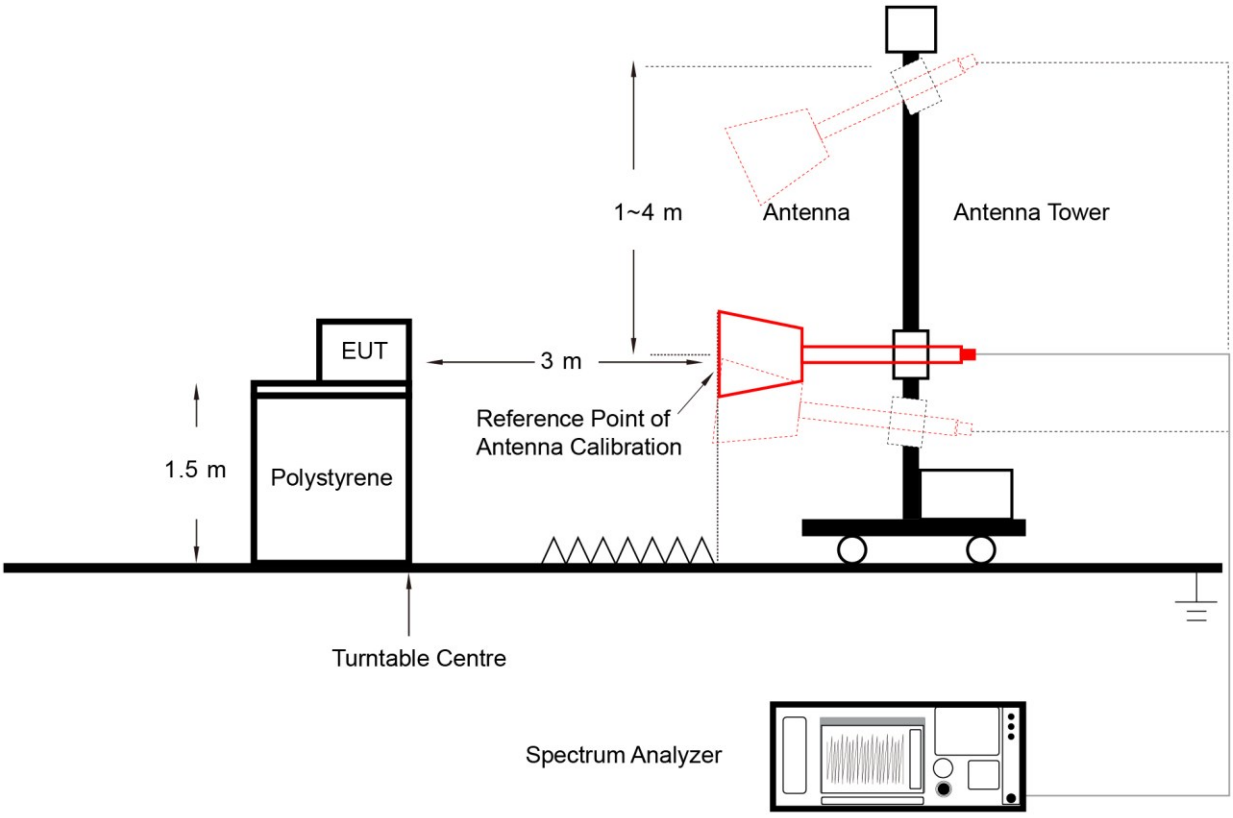
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Average Field Strength Measurements

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

   If the EUT duty cycle is < 98%, set VBW ≥ 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. Allow max hold to run for at least 50 times (1/duty cycle) traces

6.4.4. Test Setup



6.4.5. Test Result

Refer to Appendix A.3.

Appendix A – Test Result

A.1 Output Power Test Result

Test Site	WJ-SR3	Test Engineer	Jake Lan
Test Date	2025-02-23		

Test Mode	Data Rate / MCS	Channel No.	Freq. (MHz)	Total Average Power (dBm)	Limit (dBm)
11b	1Mbps	01	2412	19.73	≤ 30.00
11b	1Mbps	06	2437	19.64	≤ 30.00
11b	1Mbps	11	2462	19.32	≤ 30.00
11g	6Mbps	01	2412	18.14	≤ 30.00
11g	6Mbps	06	2437	18.02	≤ 30.00
11g	6Mbps	11	2462	17.61	≤ 30.00
11n-HT20	MCS0	01	2412	18.41	≤ 30.00
11n-HT20	MCS0	06	2437	18.39	≤ 30.00
11n-HT20	MCS0	11	2462	18.08	≤ 30.00

A.2 Radiated Spurious Emission Test Result

Test Site	WJ-AC2	Test Engineer	Bob Zhang
Test Date	2025-01-26	Test Mode	802.11n-HT20
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

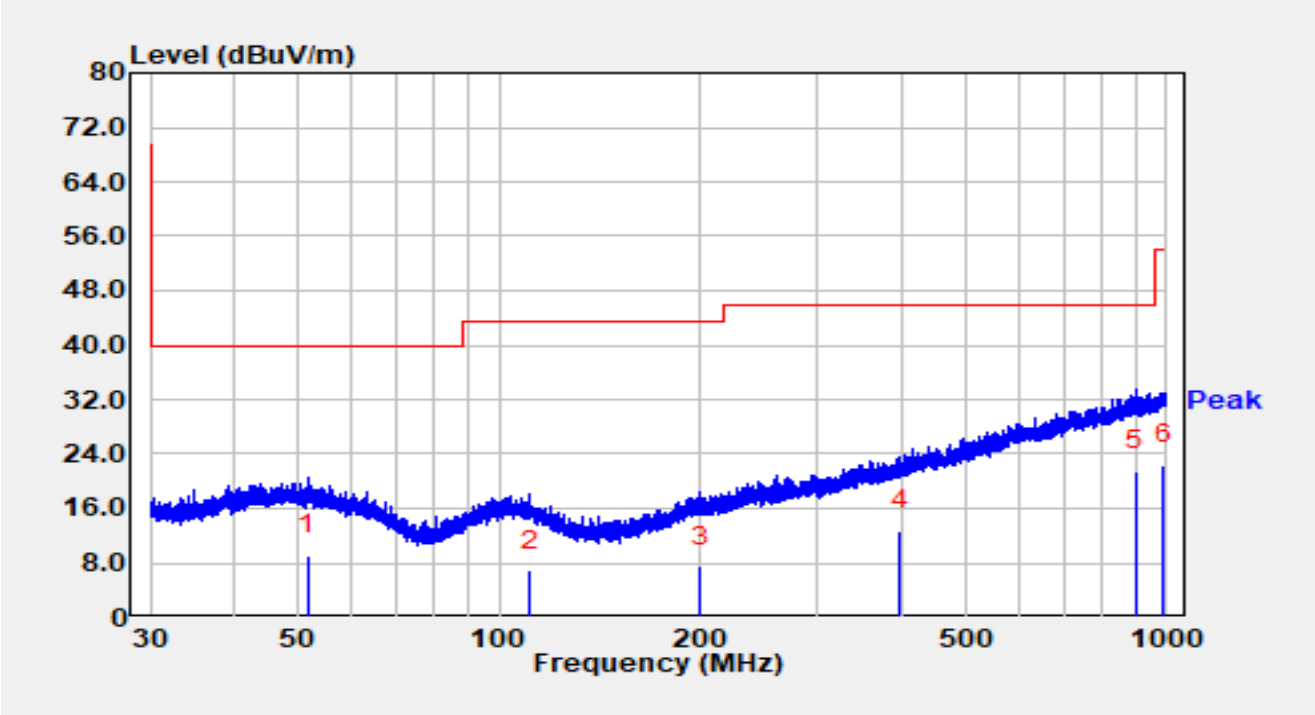
Test Channel	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
01	3859.4	41.6	-1.5	40.1	74.0	-33.9	Peak	Horizontal
	4821.6	41.7	0.0	41.7	74.0	-32.3	Peak	Horizontal
	11432.9	43.7	5.3	49.0	74.0	-25.0	Peak	Horizontal
	3861.1	40.0	-1.5	38.5	74.0	-35.5	Peak	Vertical
	4784.2	41.2	0.0	41.2	74.0	-32.8	Peak	Vertical
	11449.9	42.1	5.3	47.4	74.0	-26.6	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 1GHz:

Site	WJ-AC1	Test Date	2025-02-10
Temperature	13.8 °C	Humidity	25.1 %
Limit	FCC_Part 15.209_RSE(3m)	Test Engineer	Carl Jiang
Factor	VULB 9163_07099	Polarity	Horizontal
EUT	Barcode Reader	Test Voltage	By Battery
Test Mode	Transmit by 802.11n-HT20 at 2412MHz		



No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1		51.571	-10.40	19.60	9.20	-30.80	40.00	QP
2		111.152	-10.60	17.46	6.86	-36.64	43.50	QP
3		200.618	-10.50	17.99	7.49	-36.01	43.50	QP
4		399.170	-10.30	23.10	12.80	-33.20	46.00	QP
5	*	897.311	-9.20	30.75	21.55	-24.45	46.00	QP
6		987.802	-9.10	31.45	22.35	-31.65	54.00	QP

Notes:

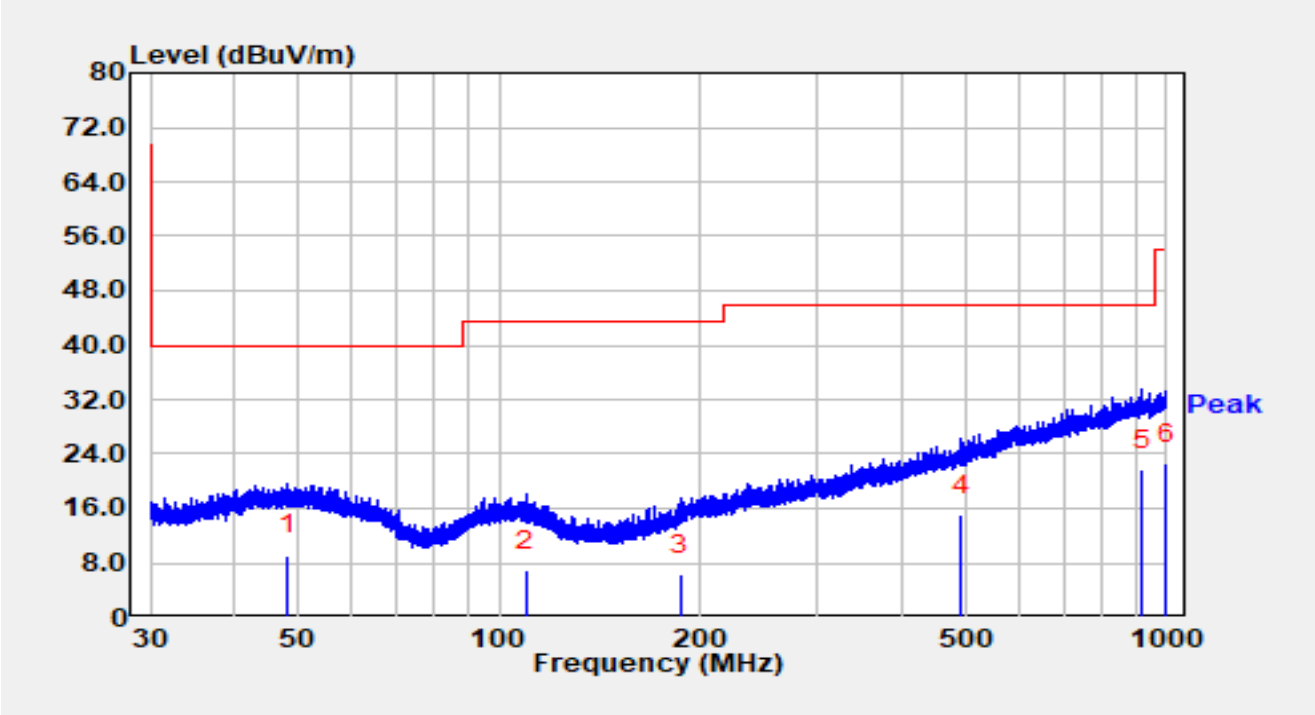
1. " * ", means this data is the worst emission level.

2. C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).

3. Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).

4. The amplitude of radiated emissions (frequency range from 9kHz to 30MHz and 18GHz to 25GHz) is that proximity to ambient noise, which also are attenuated more than 20 dB below the permissible value. Therefore, the data is not presented in this report.

Site	WJ-AC1	Test Date	2025-02-10
Temperature	13.8 °C	Humidity	25.1 %
Limit	FCC_Part 15.209_RSE(3m)	Test Engineer	Carl Jiang
Factor	VULB 9163_07099	Polarity	Vertical
EUT	Barcode Reader	Test Voltage	By Battery
Test Mode	Transmit by 802.11n-HT20 at 2412MHz		



No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1		48.264	-10.50	19.69	9.19	-30.81	40.00	QP
2		109.873	-10.70	17.61	6.91	-36.59	43.50	QP
3		187.161	-10.50	16.73	6.23	-37.27	43.50	QP
4		491.606	-9.80	24.79	14.99	-31.01	46.00	QP
5	*	921.546	-9.30	30.92	21.62	-24.38	46.00	QP
6		998.248	-9.00	31.58	22.58	-31.42	54.00	QP

Notes:

1. " * ", means this data is the worst emission level.

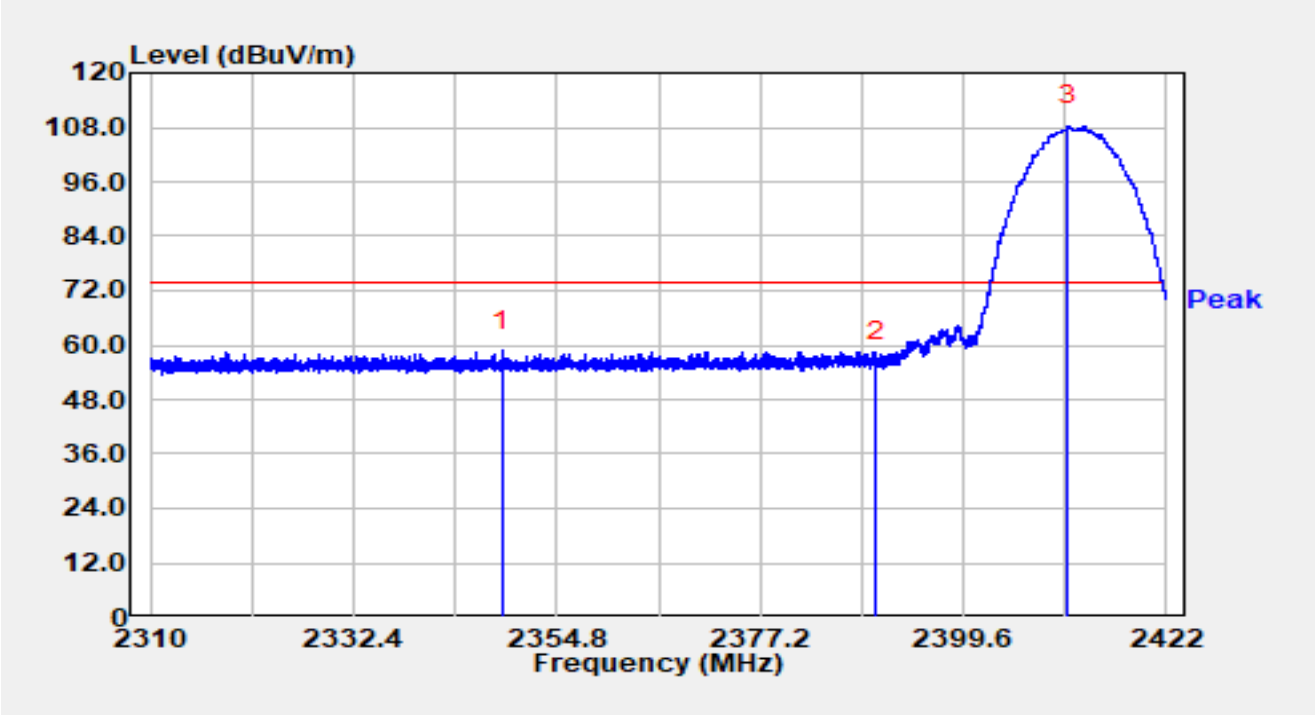
2. C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).

3. Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).

4. The amplitude of radiated emissions (frequency range from 9kHz to 30MHz and 18GHz to 25GHz) is that proximity to ambient noise, which also are attenuated more than 20 dB below the permissible value. Therefore, the data is not presented in this report.

A.3 Radiated Restricted Band Edge Test Result

Site	WJ-AC2	Test Date	2025-01-21
Temperature	15.6°C	Humidity	30.1%
Limit	FCC_Part 15_Band Edge(3m)	Test Engineer	Bob Zhang
Factor	DRH18-E_07105	Polarity	Horizontal
EUT	Barcode Reader	Test Voltage	By Battery
Test Mode	Transmit by 802.11b at 2412MHz		

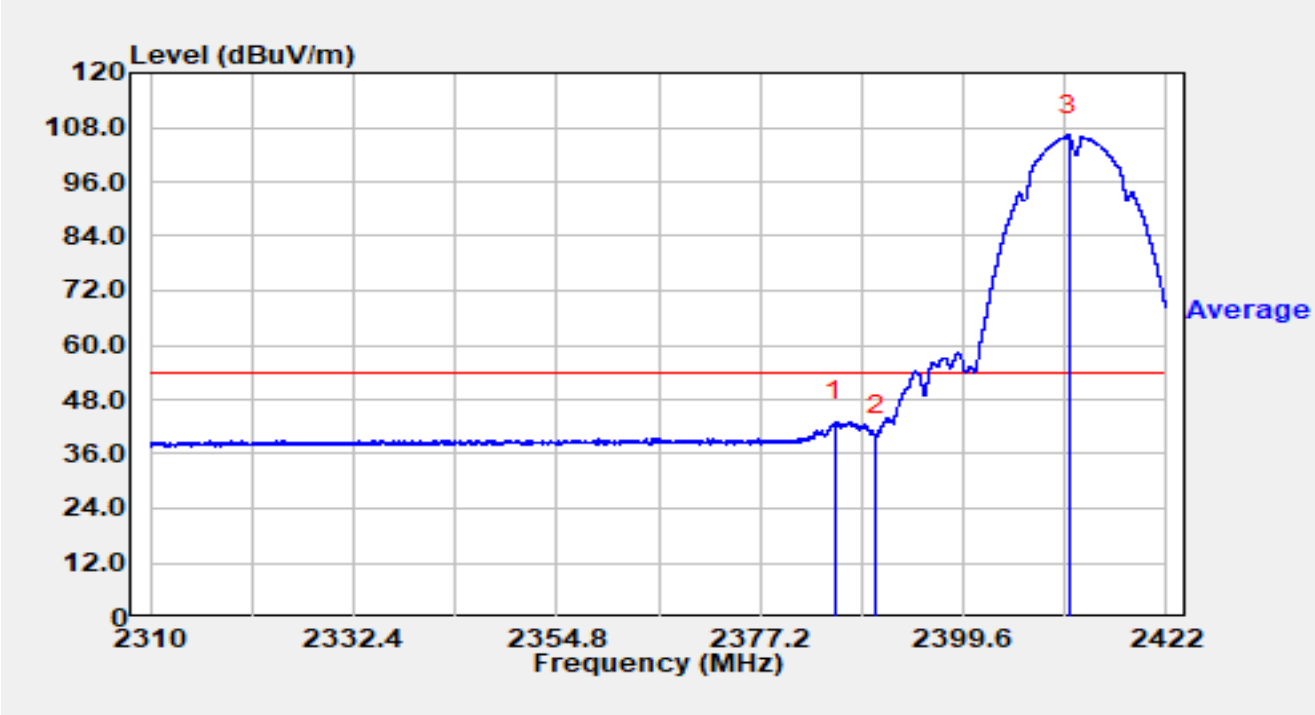


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1	*	2348.763	29.22	29.51	58.73	-15.27	74.00	Peak
2		2390.000	26.78	29.59	56.37	-17.63	74.00	Peak
3		2411.181	78.65	29.63	108.28	N/A	N/A	Peak

Notes:

1. " * ", means this data is the worst emission level.
2. C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
3. Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).

Site	WJ-AC2	Test Date	2025-01-21
Temperature	15.6°C	Humidity	30.1%
Limit	FCC_Part 15_Band Edge(3m)	Test Engineer	Bob Zhang
Factor	DRH18-E_07105	Polarity	Horizontal
EUT	Barcode Reader	Test Voltage	By Battery
Test Mode	Transmit by 802.11b at 2412MHz		

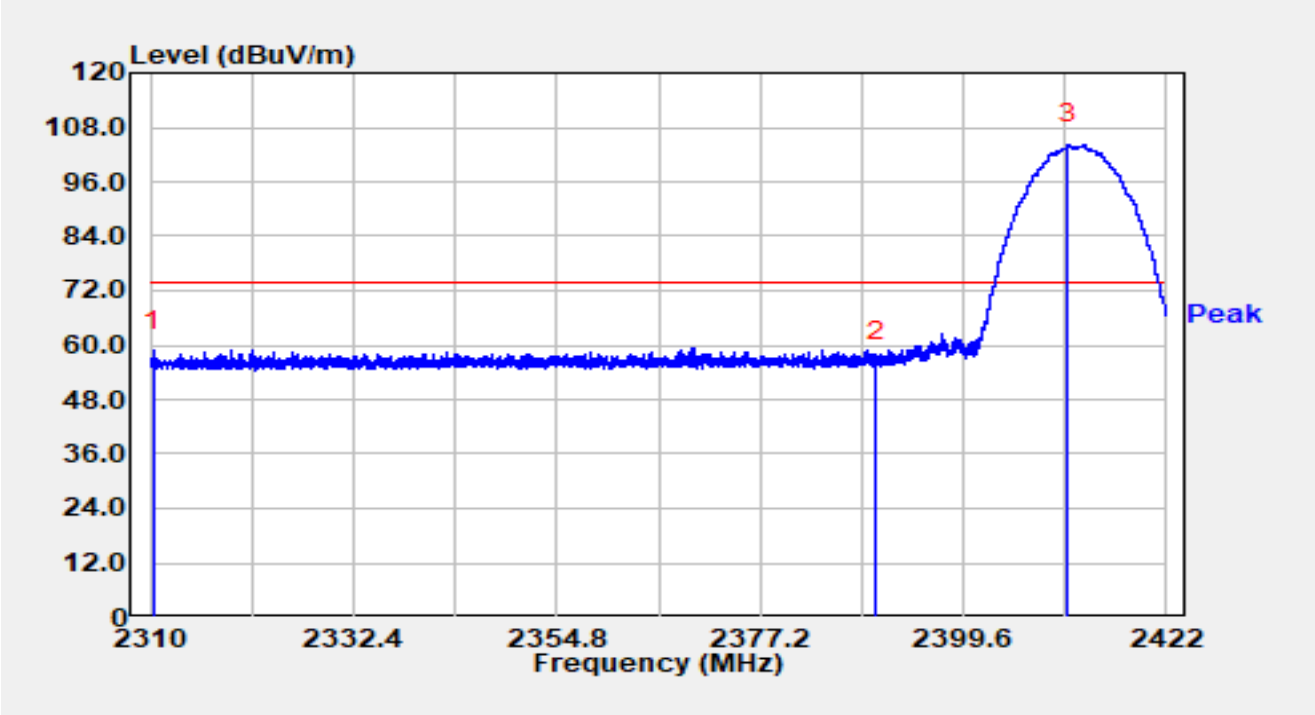


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1	*	2385.477	13.61	29.57	43.19	-10.81	54.00	Average
2		2390.002	10.34	29.59	39.93	-14.07	54.00	Average
3		2411.237	76.58	29.63	106.21	N/A	N/A	Average

Notes:

1. " * ", means this data is the worst emission level.
2. C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
3. Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).

Site	WJ-AC2	Test Date	2025-01-21
Temperature	15.6°C	Humidity	30.1%
Limit	FCC_Part 15_Band Edge(3m)	Test Engineer	Bob Zhang
Factor	DRH18-E_07105	Polarity	Vertical
EUT	Barcode Reader	Test Voltage	By Battery
Test Mode	Transmit by 802.11b at 2412MHz		

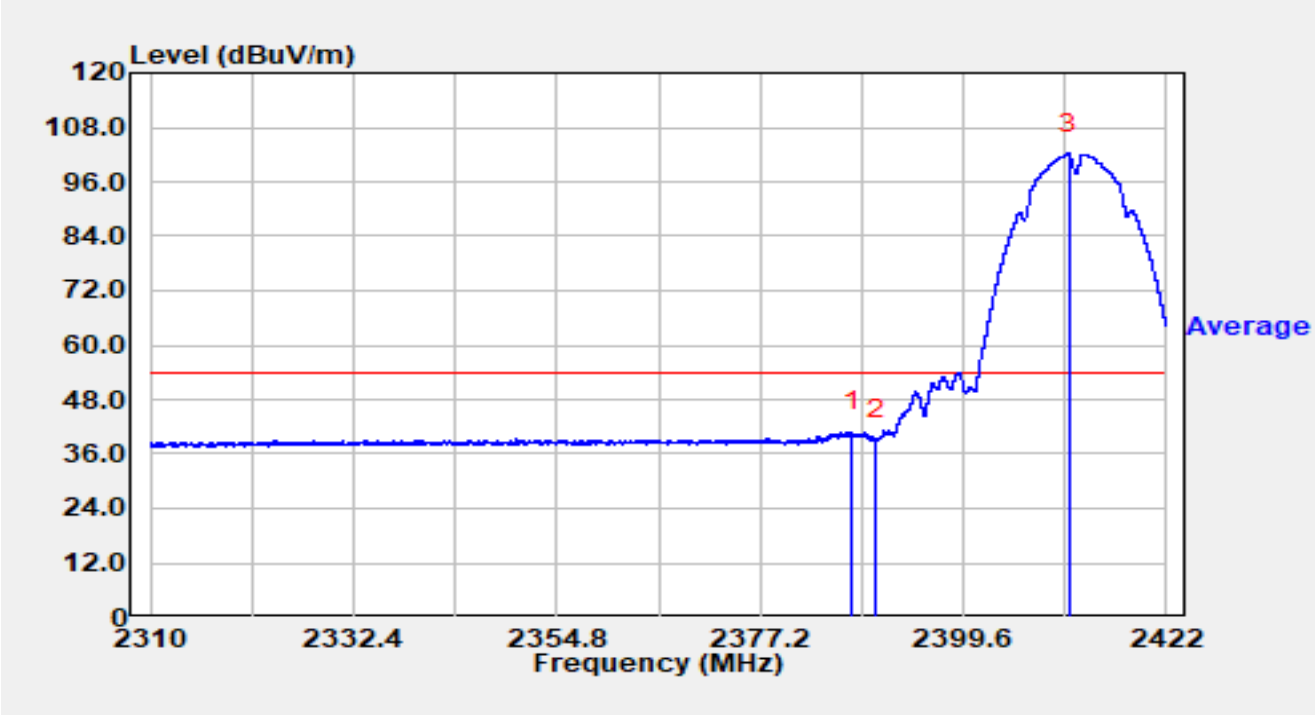


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1	*	2310.291	29.43	29.43	58.86	-15.14	74.00	Peak
2		2390.000	26.79	29.59	56.38	-17.62	74.00	Peak
3		2411.136	74.55	29.63	104.18	N/A	N/A	Peak

Notes:

1. " * ", means this data is the worst emission level.
2. C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
3. Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).

Site	WJ-AC2	Test Date	2025-01-21
Temperature	15.6°C	Humidity	30.1%
Limit	FCC_Part 15_Band Edge(3m)	Test Engineer	Bob Zhang
Factor	DRH18-E_07105	Polarity	Vertical
EUT	Barcode Reader	Test Voltage	By Battery
Test Mode	Transmit by 802.11b at 2412MHz		

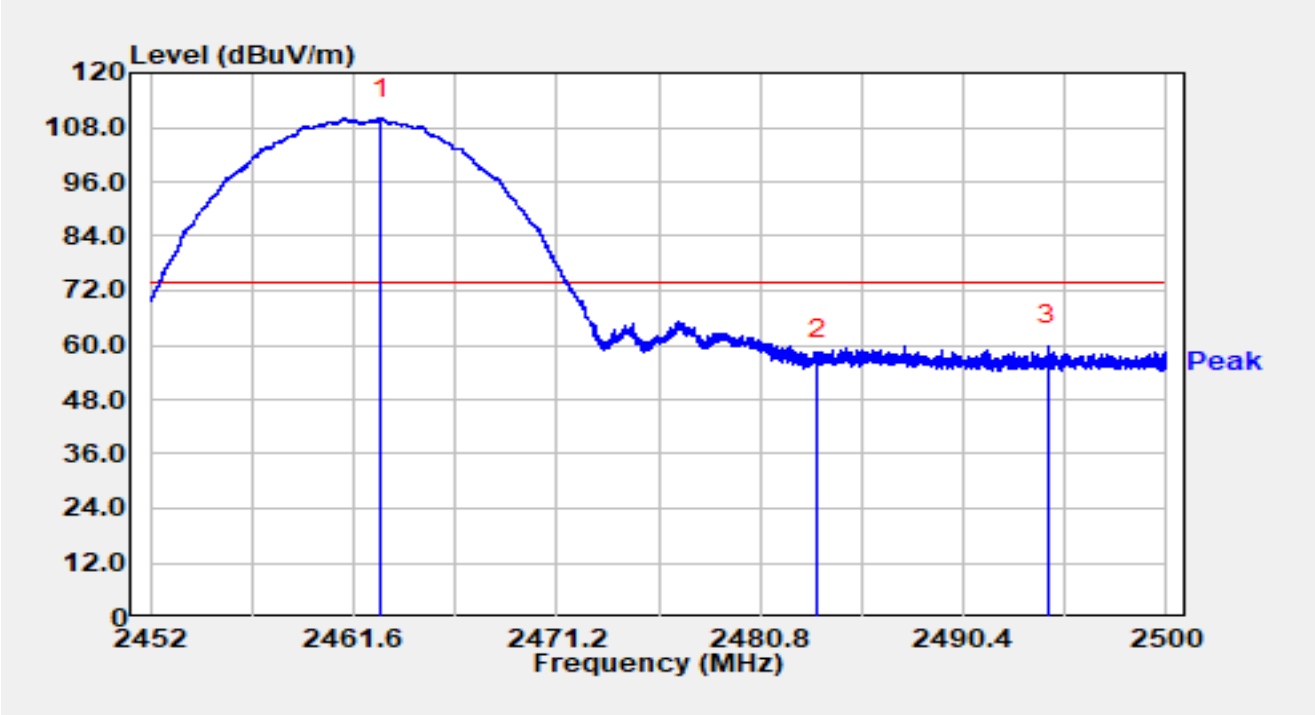


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1	*	2387.280	11.27	29.58	40.85	-13.15	54.00	Average
2		2390.000	9.49	29.59	39.08	-14.92	54.00	Average
3		2411.214	72.57	29.63	102.21	N/A	N/A	Average

Notes:

1. " * ", means this data is the worst emission level.
2. C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
3. Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).

Site	WJ-AC2	Test Date	2025-01-21
Temperature	15.6°C	Humidity	30.1%
Limit	FCC_Part 15_Band Edge(3m)	Test Engineer	Bob Zhang
Factor	DRH18-E_07105	Polarity	Horizontal
EUT	Barcode Reader	Test Voltage	By Battery
Test Mode	Transmit by 802.11b at 2462MHz		

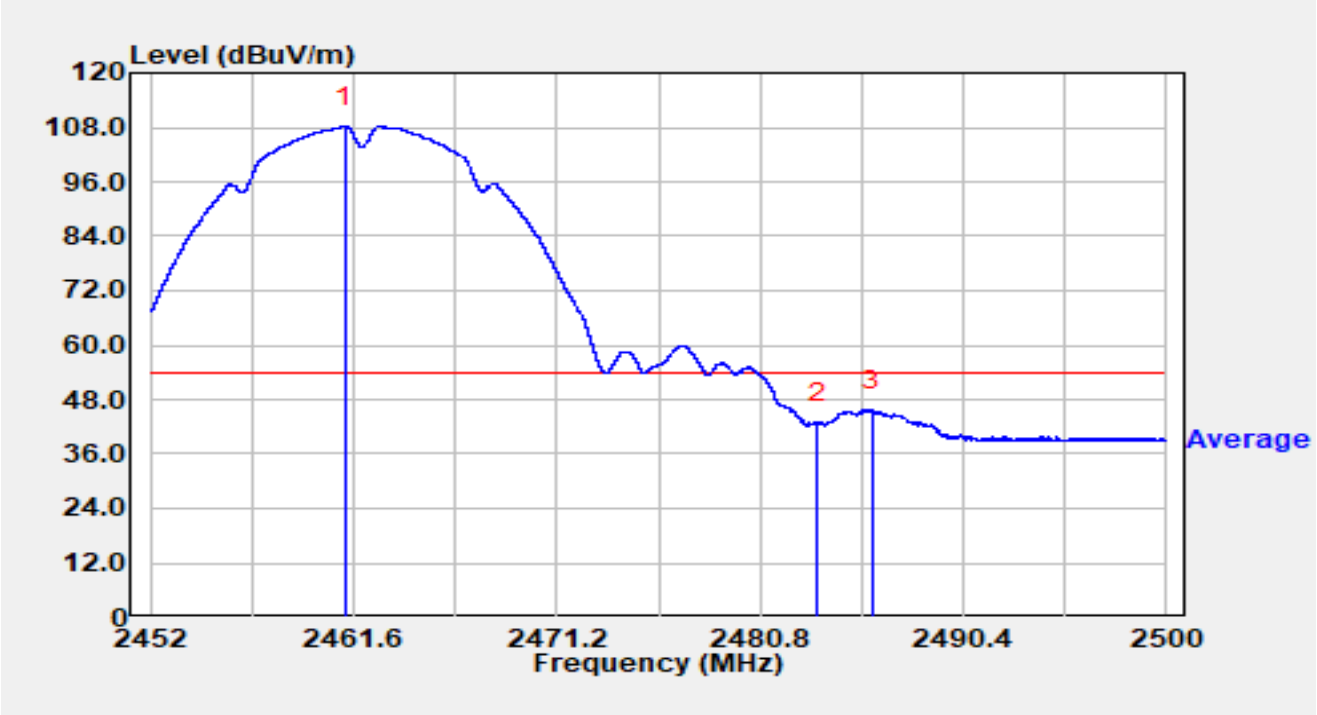


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1		2462.896	80.27	29.71	109.98	N/A	N/A	Peak
2		2483.500	27.00	29.76	56.76	-17.24	74.00	Peak
3	*	2494.413	30.19	29.79	59.98	-14.02	74.00	Peak

Notes:

1. " * ", means this data is the worst emission level.
2. C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
3. Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).

Site	WJ-AC2	Test Date	2025-01-21
Temperature	15.6°C	Humidity	30.1%
Limit	FCC_Part 15_Band Edge(3m)	Test Engineer	Bob Zhang
Factor	DRH18-E_07105	Polarity	Horizontal
EUT	Barcode Reader	Test Voltage	By Battery
Test Mode	Transmit by 802.11b at 2462MHz		

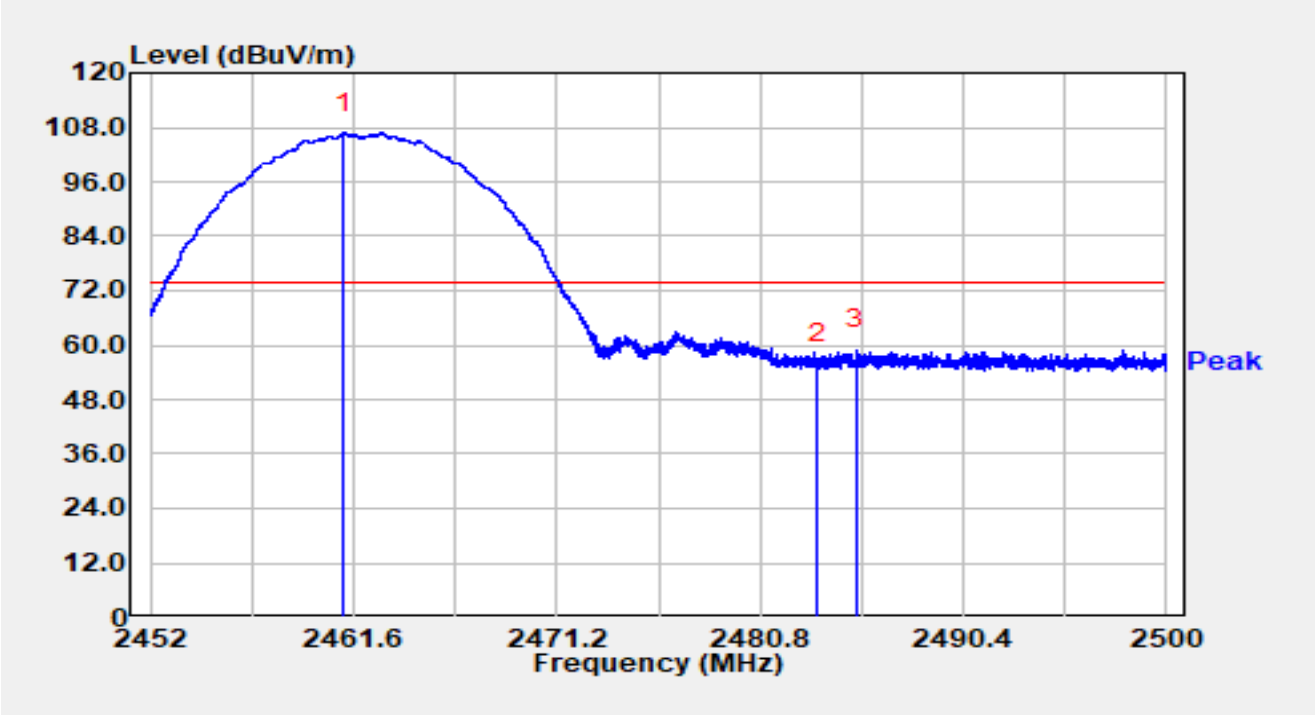


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1		2461.168	78.50	29.71	108.21	N/A	N/A	Average
2		2483.500	12.85	29.76	42.61	-11.39	54.00	Average
3	*	2486.066	15.87	29.77	45.65	-8.35	54.00	Average

Notes:

1. " * ", means this data is the worst emission level.
2. C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
3. Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).

Site	WJ-AC2	Test Date	2025-01-21
Temperature	15.6°C	Humidity	30.1%
Limit	FCC_Part 15_Band Edge(3m)	Test Engineer	Bob Zhang
Factor	DRH18-E_07105	Polarity	Vertical
EUT	Barcode Reader	Test Voltage	By Battery
Test Mode	Transmit by 802.11b at 2462MHz		

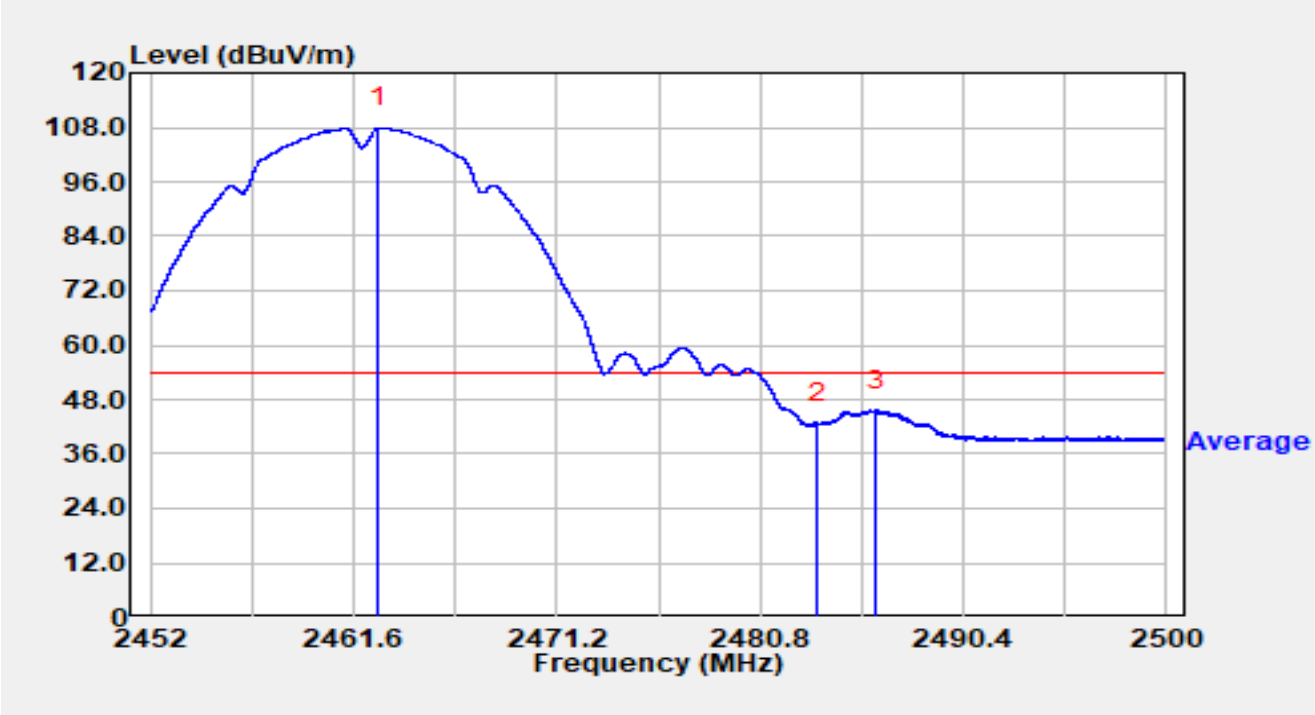


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1		2461.139	77.01	29.71	106.72	N/A	N/A	Peak
2		2483.500	25.99	29.76	55.75	-18.25	74.00	Peak
3	*	2485.360	29.18	29.77	58.95	-15.05	74.00	Peak

Notes:

1. " * ", means this data is the worst emission level.
2. C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
3. Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).

Site	WJ-AC2	Test Date	2025-01-21
Temperature	15.6°C	Humidity	30.1%
Limit	FCC_Part 15_Band Edge(3m)	Test Engineer	Bob Zhang
Factor	DRH18-E_07105	Polarity	Vertical
EUT	Barcode Reader	Test Voltage	By Battery
Test Mode	Transmit by 802.11b at 2462MHz		

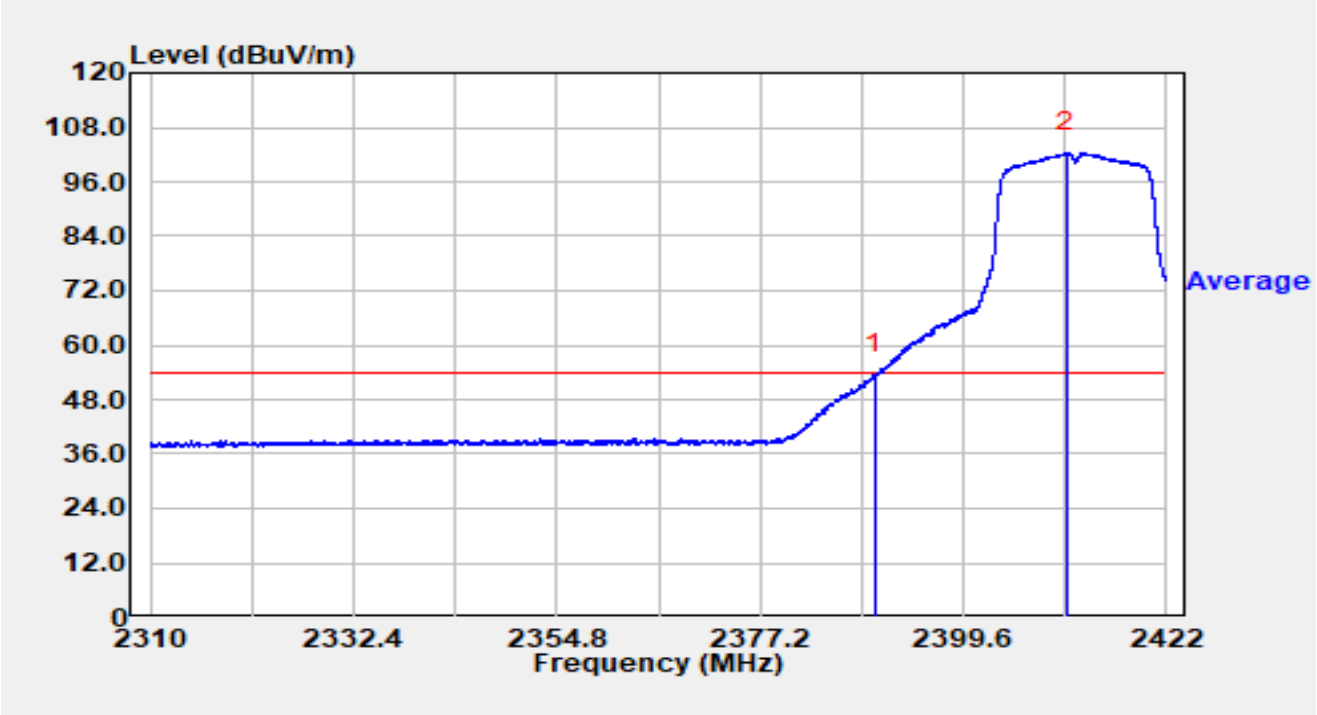


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1		2462.786	78.19	29.71	107.90	N/A	N/A	Average
2		2483.500	12.99	29.76	42.75	-11.25	54.00	Average
3	*	2486.291	15.81	29.77	45.58	-8.42	54.00	Average

Notes:

1. " * ", means this data is the worst emission level.
2. C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
3. Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).

Site	WJ-AC2	Test Date	2025-01-21
Temperature	15.6°C	Humidity	30.1%
Limit	FCC_Part 15_Band Edge(3m)	Test Engineer	Bob Zhang
Factor	DRH18-E_07105	Polarity	Horizontal
EUT	Barcode Reader	Test Voltage	By Battery
Test Mode	Transmit by 802.11g at 2412MHz		

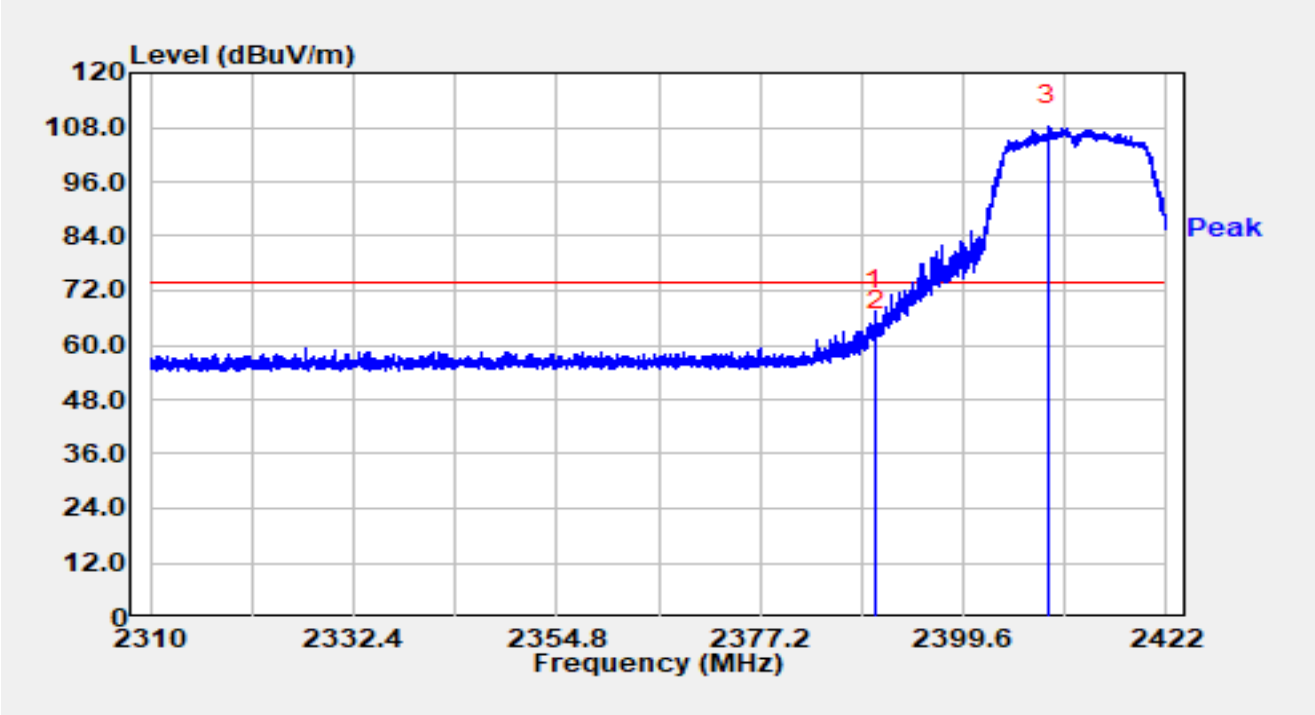


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1	*	2389.823	23.93	29.59	53.52	-0.48	54.00	Average
2		2410.912	72.71	29.63	102.34	N/A	N/A	Average

Notes:

1. " * ", means this data is the worst emission level.
2. C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
3. Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).

Site	WJ-AC2	Test Date	2025-01-21
Temperature	15.6°C	Humidity	30.1%
Limit	FCC_Part 15_Band Edge(3m)	Test Engineer	Bob Zhang
Factor	DRH18-E_07105	Polarity	Horizontal
EUT	Barcode Reader	Test Voltage	By Battery
Test Mode	Transmit by 802.11g at 2412MHz		

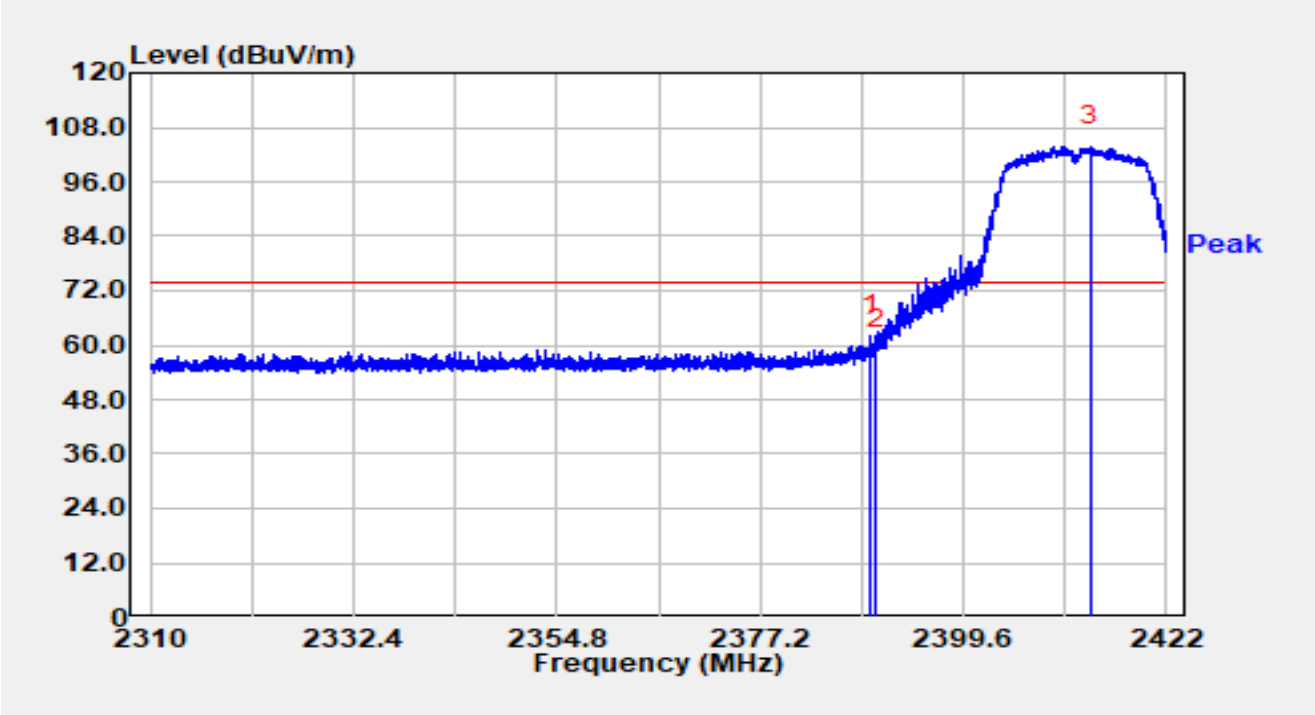


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1	*	2389.878	37.99	29.59	67.58	-6.42	74.00	Peak
2		2390.000	33.59	29.59	63.18	-10.82	74.00	Peak
3		2408.974	78.70	29.64	108.34	N/A	N/A	Peak

Notes:

1. " * ", means this data is the worst emission level.
2. C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
3. Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).

Site	WJ-AC2	Test Date	2025-01-21
Temperature	15.6°C	Humidity	30.1%
Limit	FCC_Part 15_Band Edge(3m)	Test Engineer	Bob Zhang
Factor	DRH18-E_07105	Polarity	Vertical
EUT	Barcode Reader	Test Voltage	By Battery
Test Mode	Transmit by 802.11g at 2412MHz		

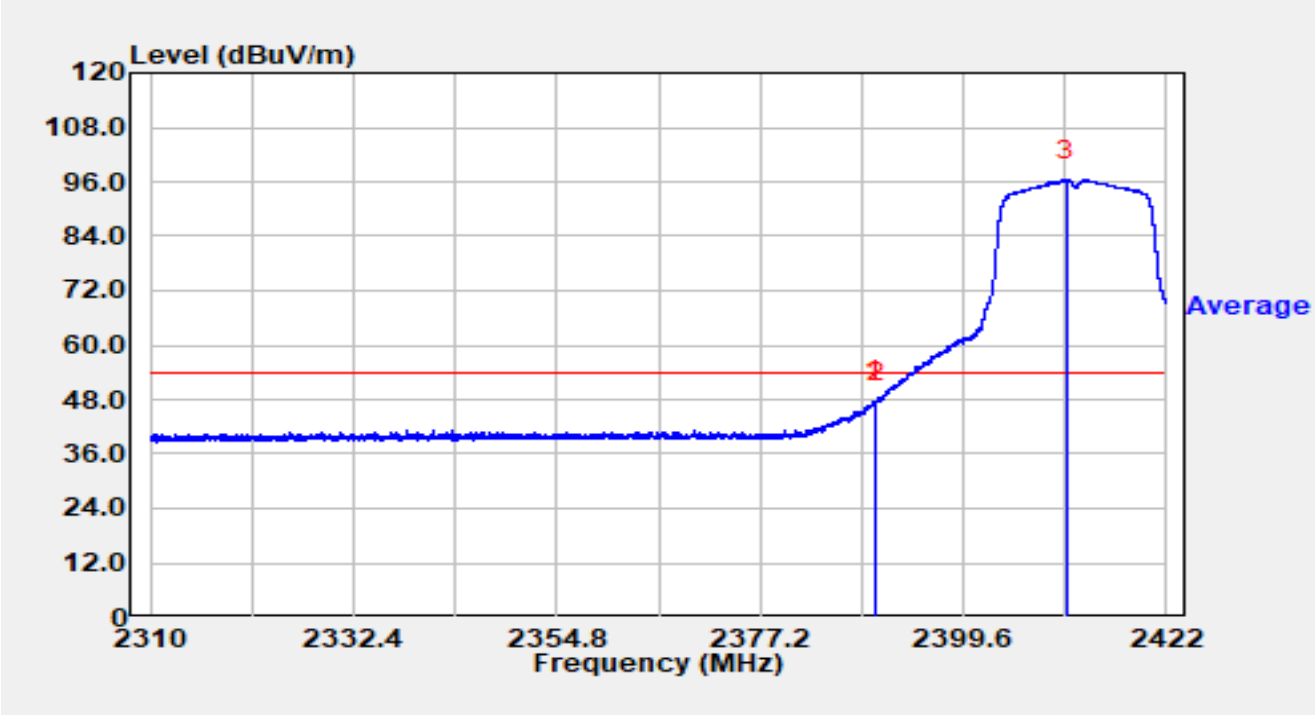


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1	*	2389.341	32.63	29.59	62.22	-11.78	74.00	Peak
2		2390.000	29.70	29.59	59.29	-14.71	74.00	Peak
3		2413.611	74.25	29.63	103.89	N/A	N/A	Peak

Notes:

1. " * ", means this data is the worst emission level.
2. C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
3. Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).

Site	WJ-AC2	Test Date	2025-01-21
Temperature	15.6°C	Humidity	30.1%
Limit	FCC_Part 15_Band Edge(3m)	Test Engineer	Bob Zhang
Factor	DRH18-E_07105	Polarity	Vertical
EUT	Barcode Reader	Test Voltage	By Battery
Test Mode	Transmit by 802.11g at 2412MHz		

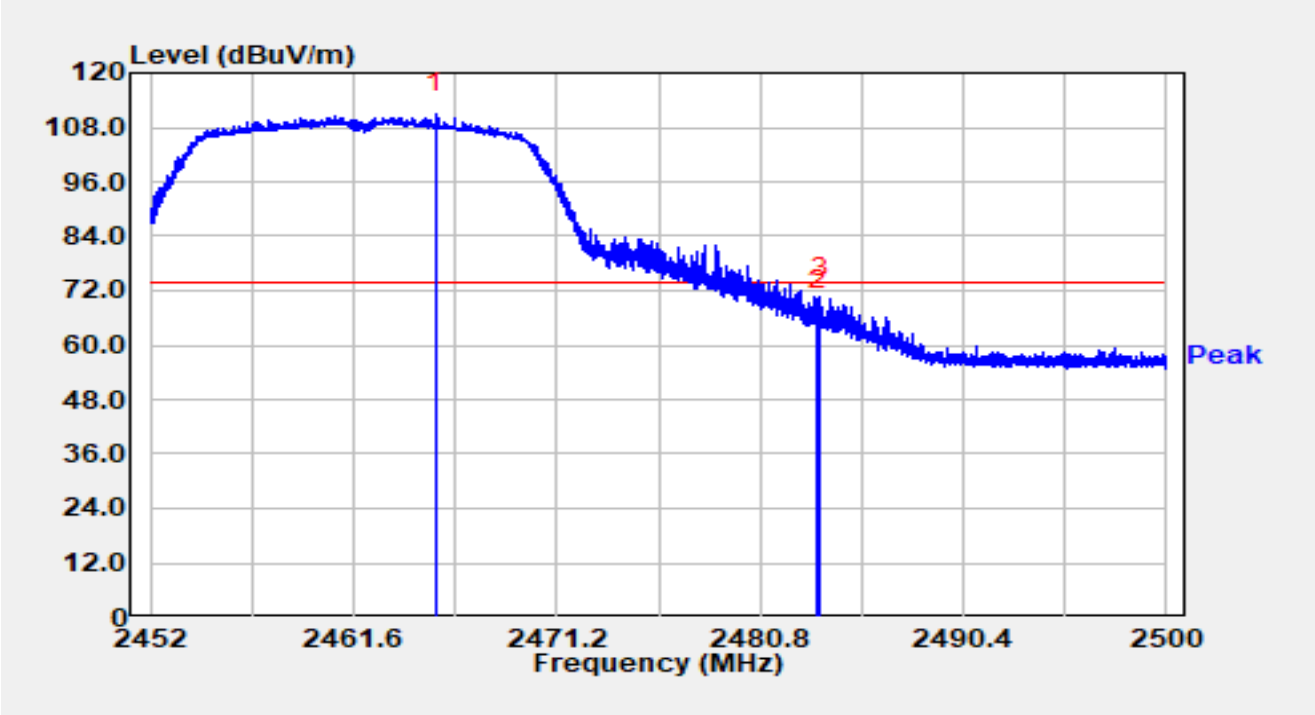


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1	*	2389.845	18.15	29.59	47.74	-6.26	54.00	Average
2		2390.000	17.59	29.59	47.18	-6.82	54.00	Average
3		2411.013	66.77	29.63	96.41	N/A	N/A	Average

Notes:

1. " * ", means this data is the worst emission level.
2. C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
3. Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).

Site	WJ-AC2	Test Date	2025-01-21
Temperature	15.6°C	Humidity	30.1%
Limit	FCC_Part 15_Band Edge(3m)	Test Engineer	Bob Zhang
Factor	DRH18-E_07105	Polarity	Horizontal
EUT	Barcode Reader	Test Voltage	By Battery
Test Mode	Transmit by 802.11g at 2462MHz		

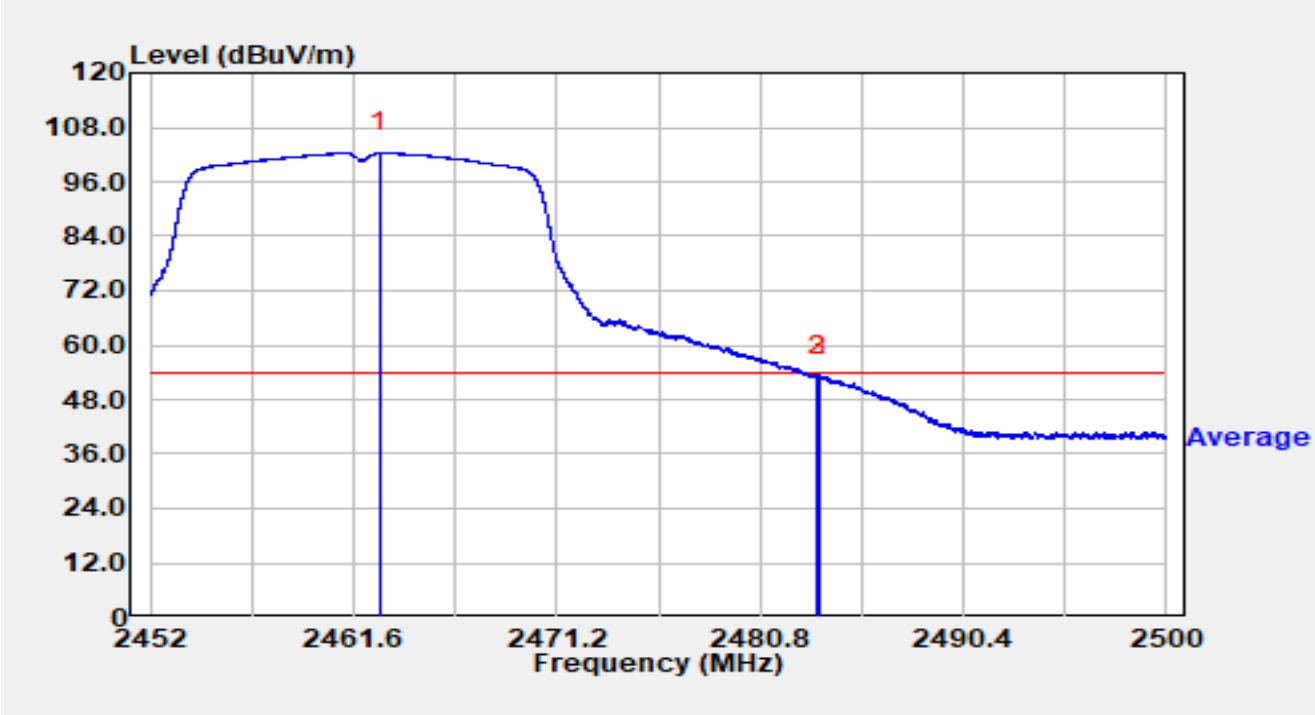


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1		2465.454	81.39	29.72	111.11	N/A	N/A	Peak
2		2483.500	37.77	29.76	67.54	-6.46	74.00	Peak
3	*	2483.637	40.75	29.76	70.52	-3.48	74.00	Peak

Notes:

1. " * ", means this data is the worst emission level.
2. C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
3. Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).

Site	WJ-AC2	Test Date	2025-01-21
Temperature	15.6°C	Humidity	30.1%
Limit	FCC_Part 15_Band Edge(3m)	Test Engineer	Bob Zhang
Factor	DRH18-E_07105	Polarity	Horizontal
EUT	Barcode Reader	Test Voltage	By Battery
Test Mode	Transmit by 802.11g at 2462MHz		

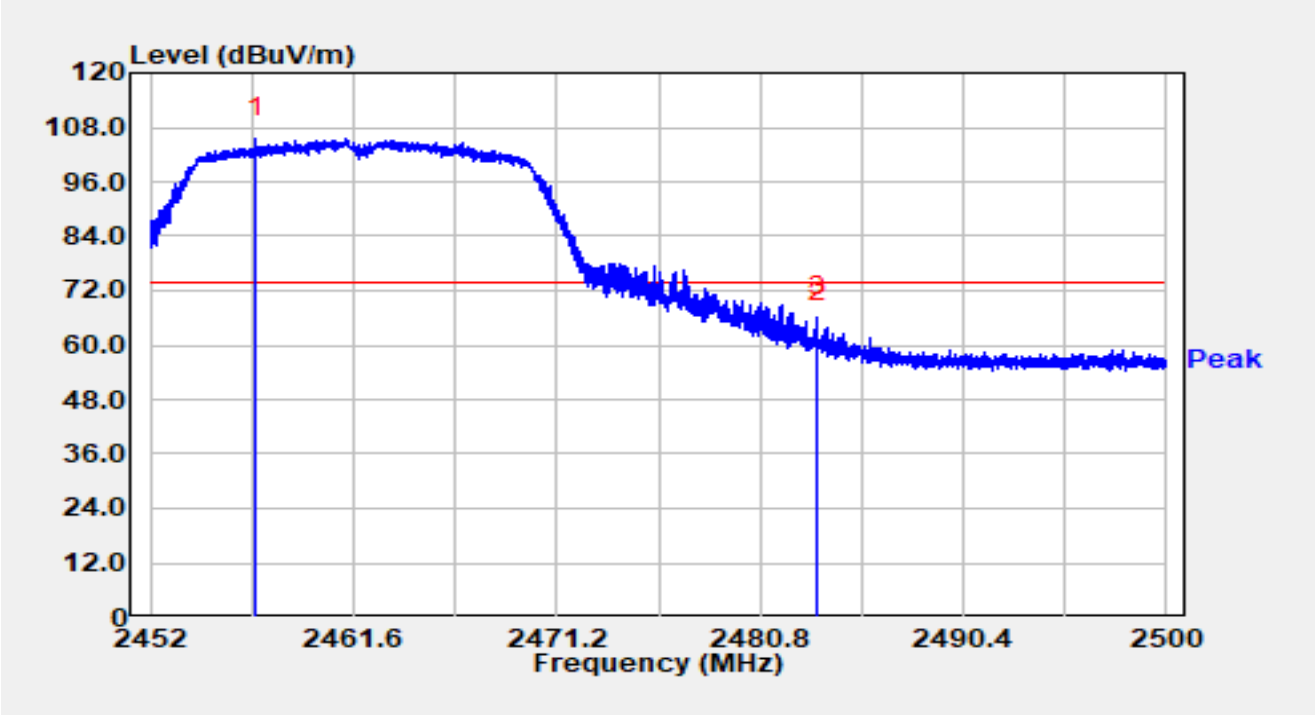


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1		2462.833	72.71	29.71	102.43	N/A	N/A	Average
2		2483.500	23.31	29.76	53.08	-0.92	54.00	Average
3	*	2483.546	23.63	29.76	53.40	-0.60	54.00	Average

Notes:

1. " * ", means this data is the worst emission level.
2. C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
3. Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).

Site	WJ-AC2	Test Date	2025-01-21
Temperature	15.6°C	Humidity	30.1%
Limit	FCC_Part 15_Band Edge(3m)	Test Engineer	Bob Zhang
Factor	DRH18-E_07105	Polarity	Vertical
EUT	Barcode Reader	Test Voltage	By Battery
Test Mode	Transmit by 802.11g at 2462MHz		

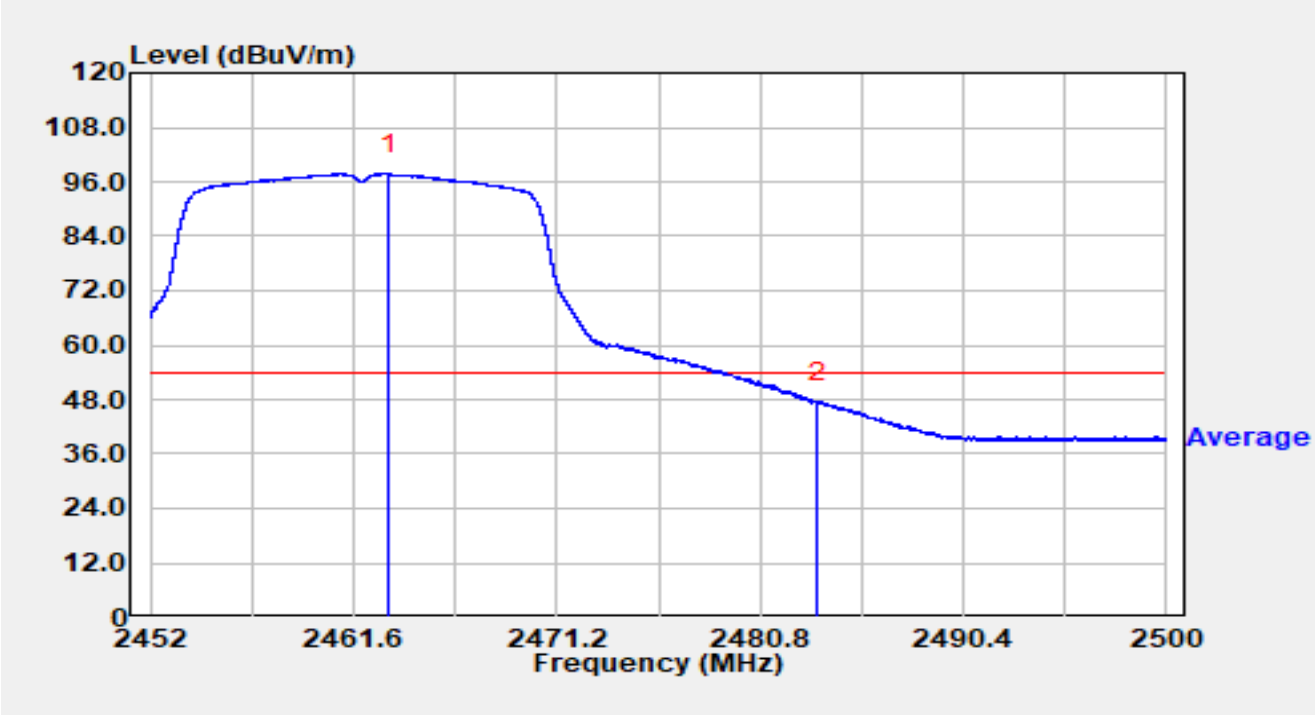


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1		2456.987	75.88	29.70	105.58	N/A	N/A	Peak
2		2483.500	35.18	29.76	64.95	-9.05	74.00	Peak
3	*	2483.512	36.55	29.76	66.32	-7.68	74.00	Peak

Notes:

1. " * ", means this data is the worst emission level.
2. C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
3. Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).

Site	WJ-AC2	Test Date	2025-01-21
Temperature	15.6°C	Humidity	30.1%
Limit	FCC_Part 15_Band Edge(3m)	Test Engineer	Bob Zhang
Factor	DRH18-E_07105	Polarity	Vertical
EUT	Barcode Reader	Test Voltage	By Battery
Test Mode	Transmit by 802.11g at 2462MHz		

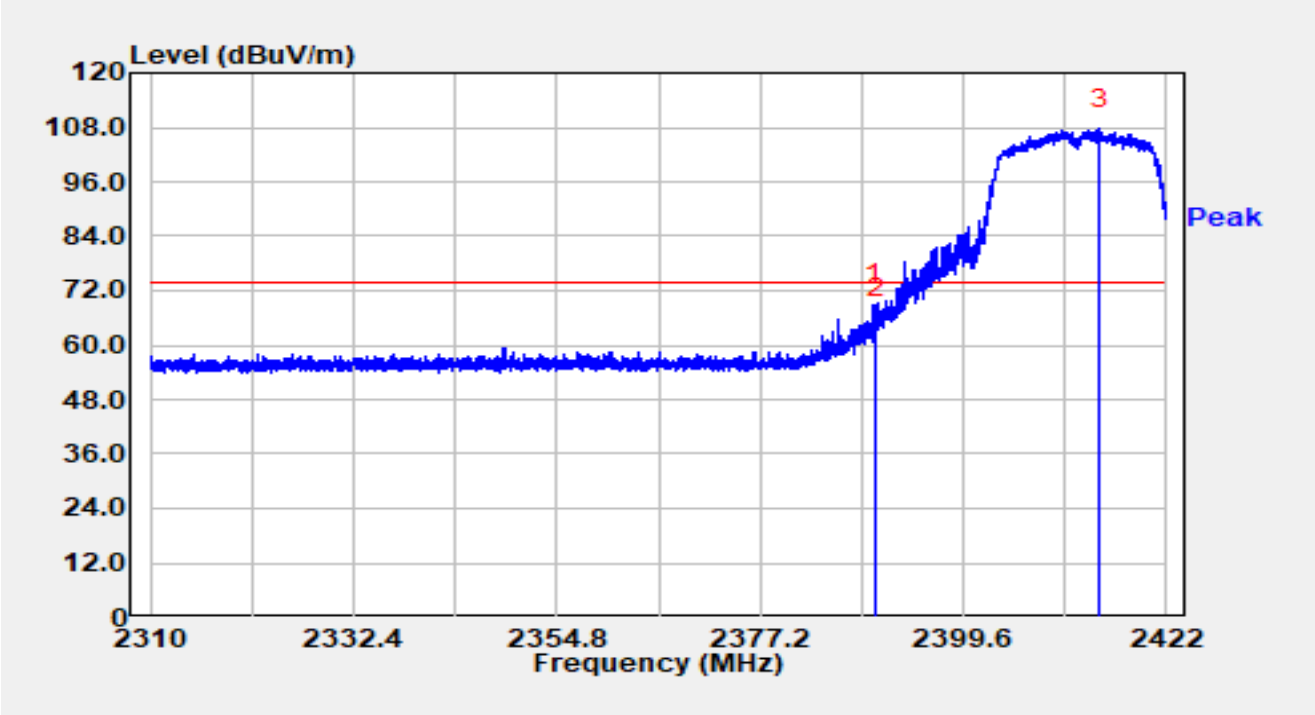


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1		2463.299	68.08	29.71	97.79	N/A	N/A	Average
2	*	2483.500	17.61	29.76	47.37	-6.63	54.00	Average

Notes:

1. " * ", means this data is the worst emission level.
2. C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
3. Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).

Site	WJ-AC2	Test Date	2025-01-21
Temperature	15.6°C	Humidity	30.1%
Limit	FCC_Part 15_Band Edge(3m)	Test Engineer	Bob Zhang
Factor	DRH18-E_07105	Polarity	Horizontal
EUT	Barcode Reader	Test Voltage	By Battery
Test Mode	Transmit by 802.11n-HT20 at 2412MHz		

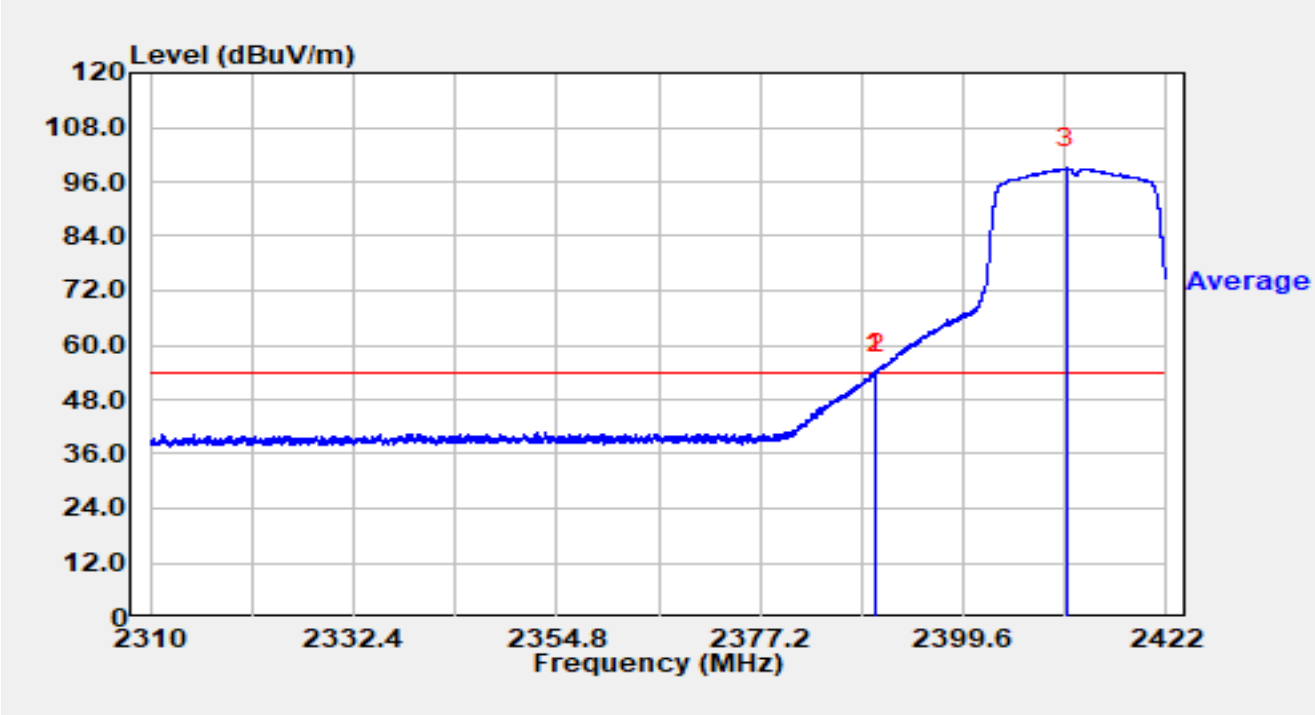


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1	*	2389.778	39.31	29.59	68.90	-5.10	74.00	Peak
2		2390.000	36.28	29.59	65.87	-8.13	74.00	Peak
3		2414.642	78.10	29.63	107.73	N/A	N/A	Peak

Notes:

1. " * ", means this data is the worst emission level.
2. C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
3. Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).

Site	WJ-AC2	Test Date	2025-01-21
Temperature	15.6°C	Humidity	30.1%
Limit	FCC_Part 15_Band Edge(3m)	Test Engineer	Bob Zhang
Factor	DRH18-E_07105	Polarity	Horizontal
EUT	Barcode Reader	Test Voltage	By Battery
Test Mode	Transmit by 802.11n-HT20 at 2412MHz		

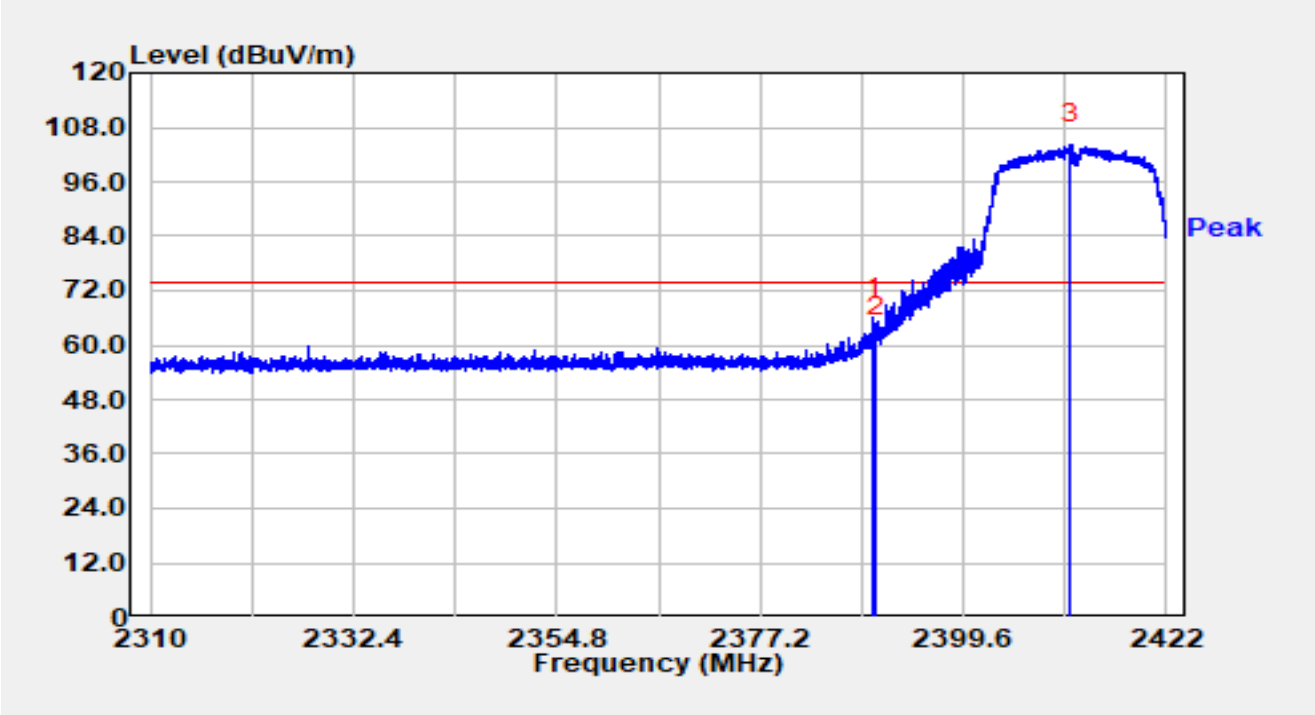


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1	*	2389.811	24.20	29.59	53.79	-0.21	54.00	Average
2		2390.000	24.10	29.59	53.69	-0.31	54.00	Average
3		2410.923	69.37	29.63	99.00	N/A	N/A	Average

Notes:

1. " * ", means this data is the worst emission level.
2. C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
3. Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).

Site	WJ-AC2	Test Date	2025-01-21
Temperature	15.6°C	Humidity	30.1%
Limit	FCC_Part 15_Band Edge(3m)	Test Engineer	Bob Zhang
Factor	DRH18-E_07105	Polarity	Vertical
EUT	Barcode Reader	Test Voltage	By Battery
Test Mode	Transmit by 802.11n-HT20 at 2412MHz		

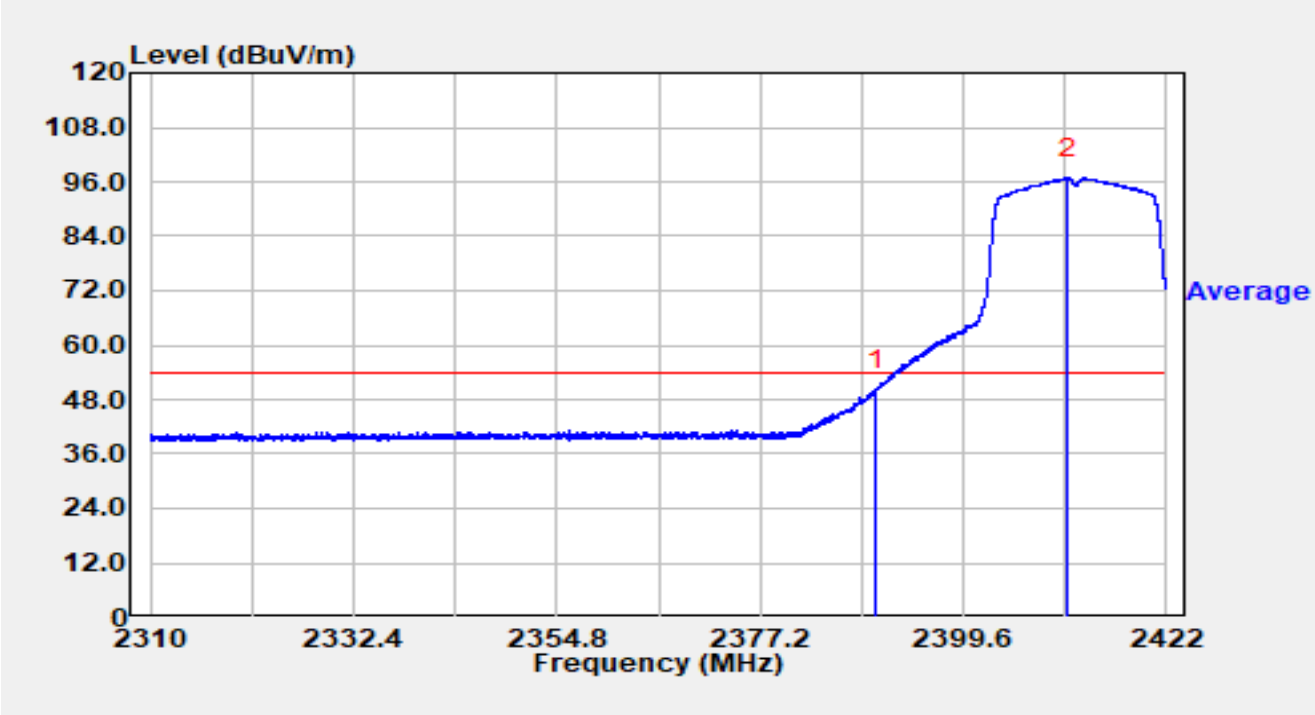


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1	*	2389.632	36.48	29.59	66.07	-7.93	74.00	Peak
2		2390.000	32.36	29.59	61.95	-12.05	74.00	Peak
3		2411.472	74.68	29.63	104.31	N/A	N/A	Peak

Notes:

1. " * ", means this data is the worst emission level.
2. C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
3. Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).

Site	WJ-AC2	Test Date	2025-01-21
Temperature	15.6°C	Humidity	30.1%
Limit	FCC_Part 15_Band Edge(3m)	Test Engineer	Bob Zhang
Factor	DRH18-E_07105	Polarity	Vertical
EUT	Barcode Reader	Test Voltage	By Battery
Test Mode	Transmit by 802.11n-HT20 at 2412MHz		

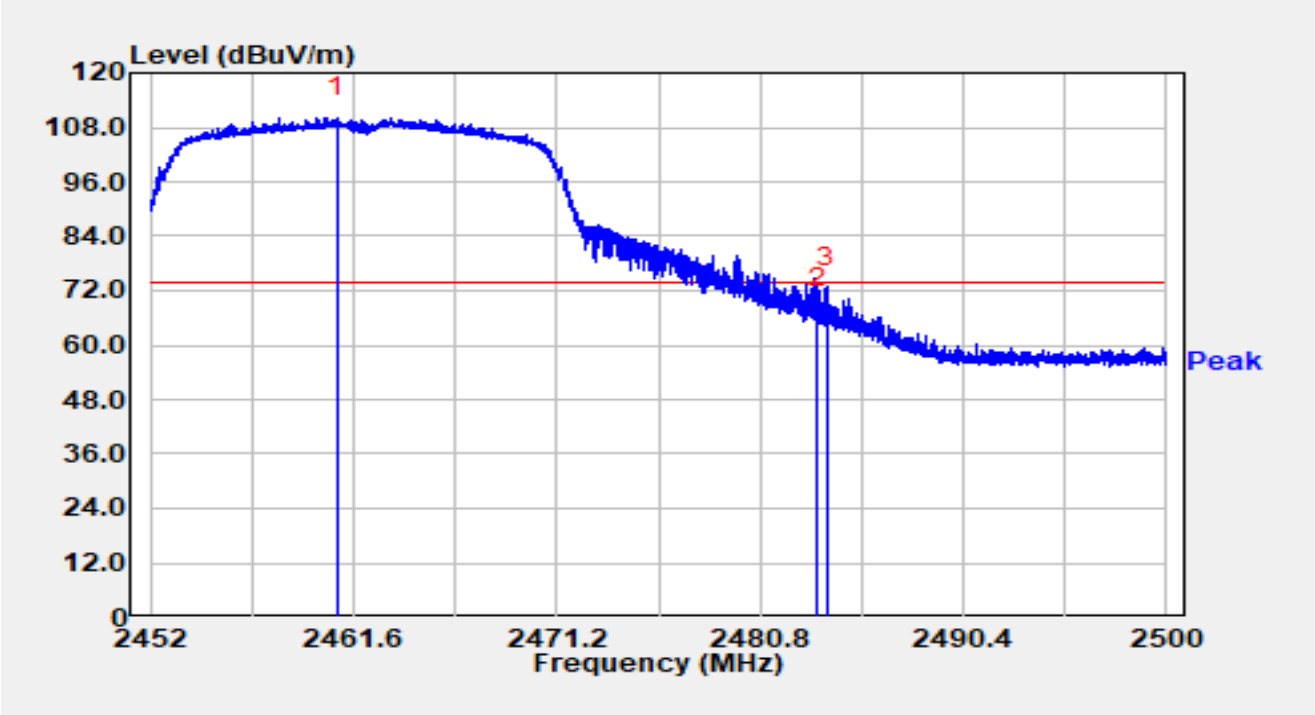


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1	*	2390.000	20.27	29.59	49.87	-4.13	54.00	Average
2		2411.158	67.15	29.63	96.79	N/A	N/A	Average

Notes:

1. " * ", means this data is the worst emission level.
2. C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
3. Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).

Site	WJ-AC2	Test Date	2025-01-21
Temperature	15.6°C	Humidity	30.1%
Limit	FCC_Part 15_Band Edge(3m)	Test Engineer	Bob Zhang
Factor	DRH18-E_07105	Polarity	Horizontal
EUT	Barcode Reader	Test Voltage	By Battery
Test Mode	Transmit by 802.11n-HT20 at 2462MHz		

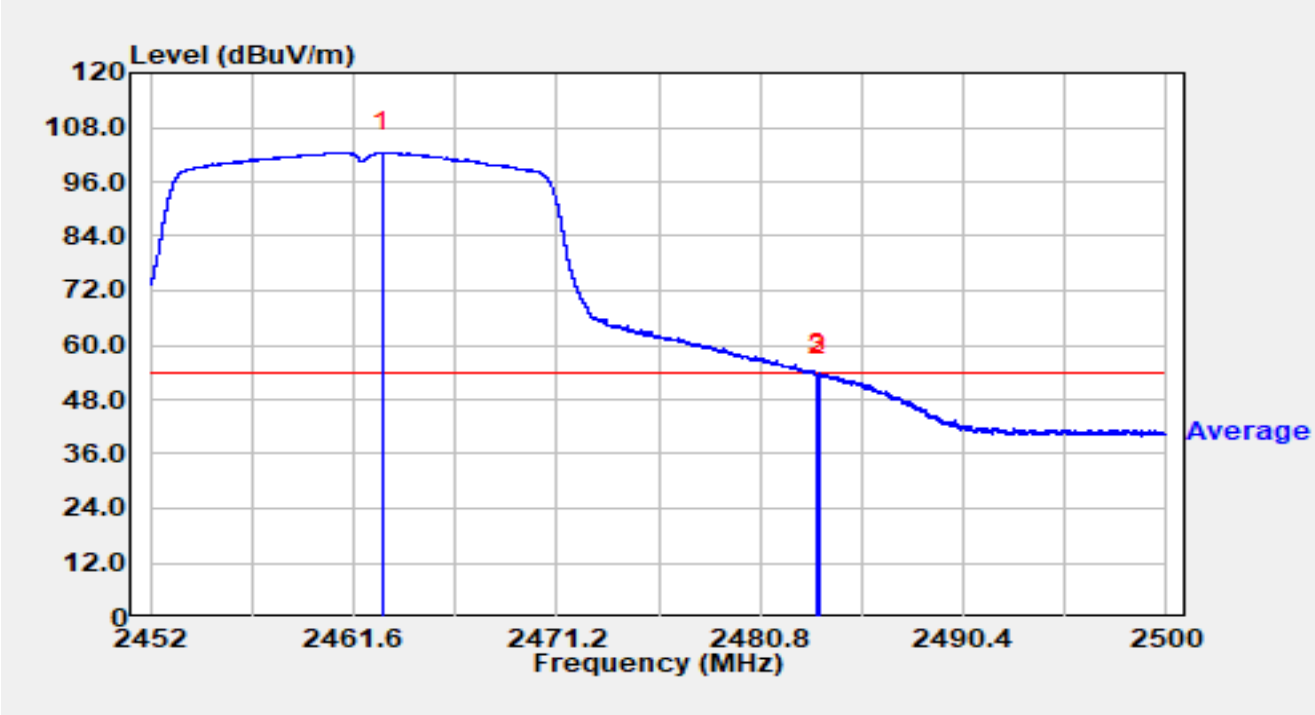


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1		2460.794	80.40	29.71	110.11	N/A	N/A	Peak
2		2483.500	38.61	29.76	68.38	-5.62	74.00	Peak
3	*	2483.925	43.00	29.77	72.77	-1.23	74.00	Peak

Notes:

1. " * ", means this data is the worst emission level.
2. C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
3. Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).

Site	WJ-AC2	Test Date	2025-01-21
Temperature	15.6°C	Humidity	30.1%
Limit	FCC_Part 15_Band Edge(3m)	Test Engineer	Bob Zhang
Factor	DRH18-E_07105	Polarity	Horizontal
EUT	Barcode Reader	Test Voltage	By Battery
Test Mode	Transmit by 802.11n-HT20 at 2462MHz		

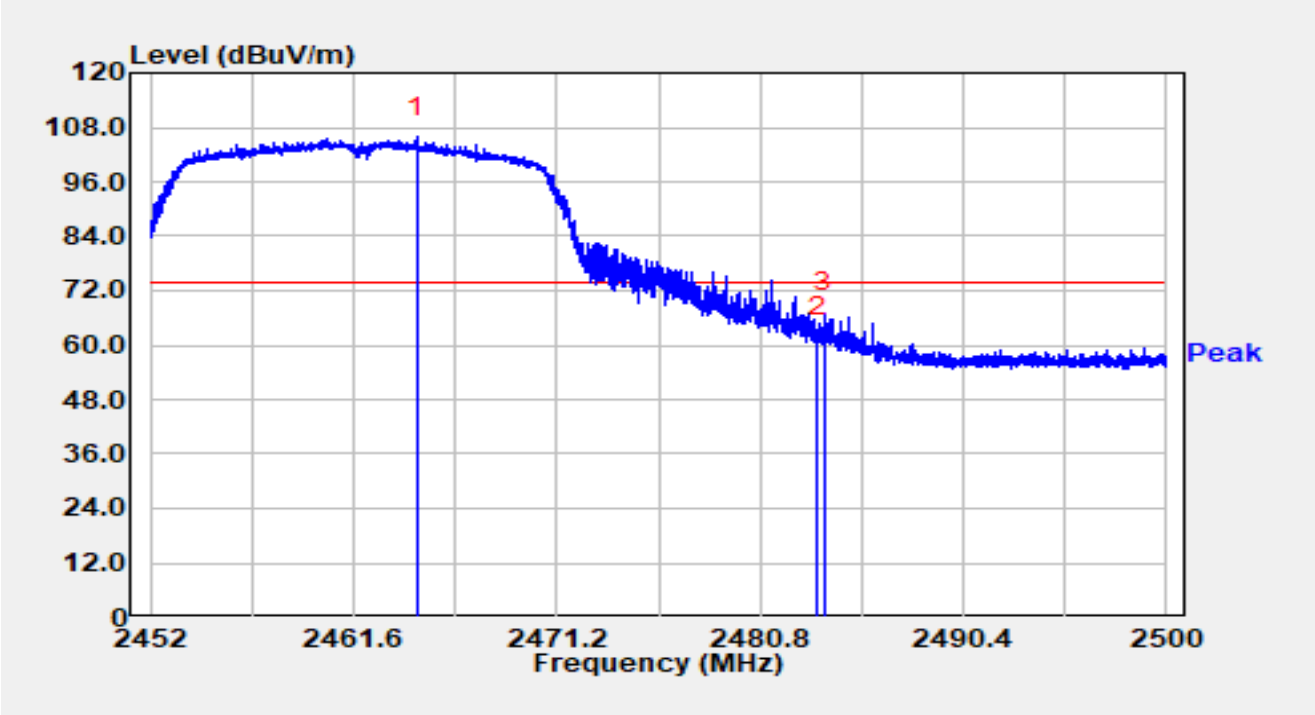


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1		2462.949	72.81	29.71	102.53	N/A	N/A	Average
2		2483.500	23.66	29.76	53.42	-0.58	54.00	Average
3	*	2483.589	23.96	29.76	53.73	-0.27	54.00	Average

Notes:

1. " * ", means this data is the worst emission level.
2. C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
3. Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).

Site	WJ-AC2	Test Date	2025-01-21
Temperature	15.6°C	Humidity	30.1%
Limit	FCC_Part 15_Band Edge(3m)	Test Engineer	Bob Zhang
Factor	DRH18-E_07105	Polarity	Vertical
EUT	Barcode Reader	Test Voltage	By Battery
Test Mode	Transmit by 802.11n-HT20 at 2462MHz		

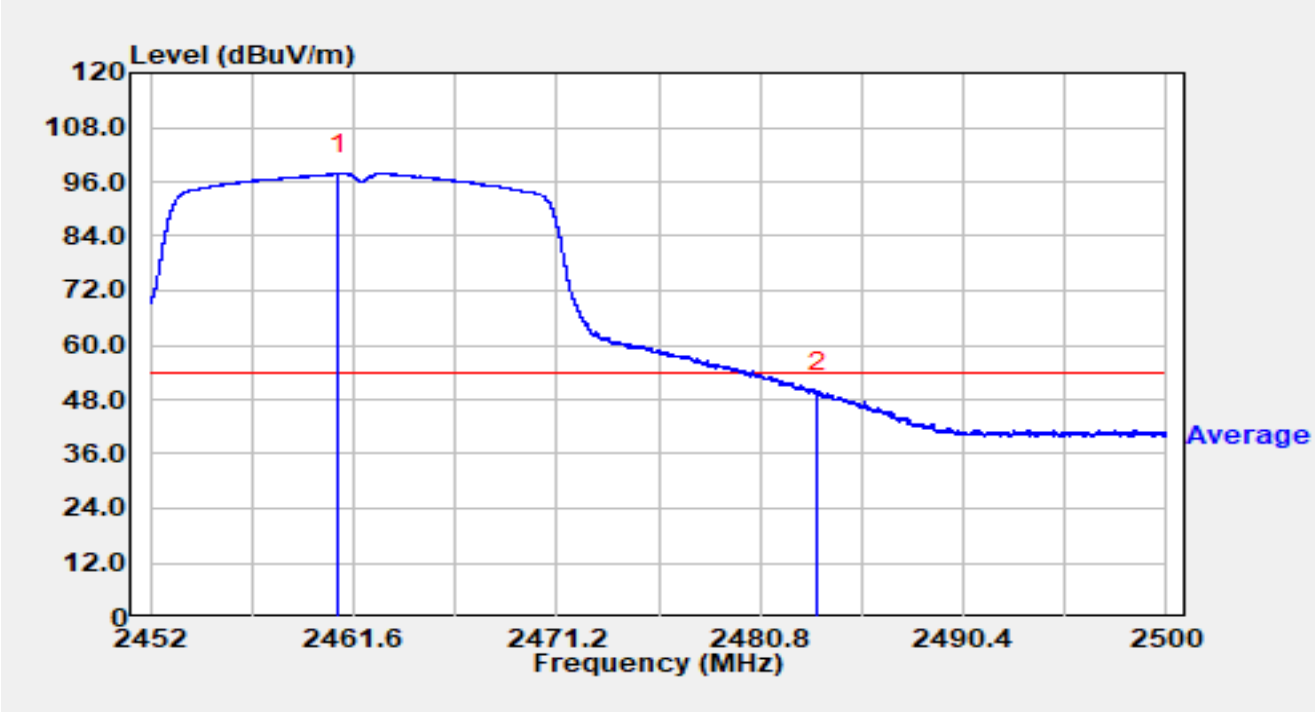


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1		2464.566	76.14	29.72	105.85	N/A	N/A	Peak
2		2483.500	32.07	29.76	61.83	-12.17	74.00	Peak
3	*	2483.853	37.31	29.77	67.07	-6.93	74.00	Peak

Notes:

1. " * ", means this data is the worst emission level.
2. C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
3. Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).

Site	WJ-AC2	Test Date	2025-01-21
Temperature	15.6°C	Humidity	30.1%
Limit	FCC_Part 15_Band Edge(3m)	Test Engineer	Bob Zhang
Factor	DRH18-E_07105	Polarity	Vertical
EUT	Barcode Reader	Test Voltage	By Battery
Test Mode	Transmit by 802.11n-HT20 at 2462MHz		



No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1		2460.899	68.10	29.71	97.81	N/A	N/A	Average
2	*	2483.500	19.75	29.76	49.52	-4.48	54.00	Average

Notes:

1. " * ", means this data is the worst emission level.
2. C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
3. Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).

Appendix B – Test Setup Photograph

Refer to “2412RSU067-UT” file.

Appendix C – EUT Photograph

Refer to “2412RSU067-UE” file.

The End