



Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 1 of 189

TEST REPORT

Application No.: KSCR2407001230AT
FCC ID: 2BHGF-0235C7PB
IC: 23743-0235C7PB
Applicant: KeyLife International Technology Limited
Address of Applicant: 27th Floor, Alexandra House, 18 Chater Road, Central, Hong Kong
Manufacturer: KeyLife International Technology Limited
Address of Manufacturer: 27th Floor, Alexandra House, 18 Chater Road, Central, Hong Kong
Factory: Zhejiang Uniview Systems Technology Co., Ltd.
Address of Factory: No.1277 South Qingfeng South Road, Tongxiang City, Jiaxing City, Zhejiang Province, China

Equipment Under Test (EUT):
EUT Name: Indoor Pan & Tilt Camera
Model No.: P310, P310 XXX XXX (where X may be 0-9 A-Z a-z or blank. The differences no impact safety related constructions and EMC) ♣
♣ Please refer to section 2 of this report which indicates which model was actually tested and which were electrically identical.

For IC Model No.: P310
Standard(s) : 47 CFR Part 15, Subpart C 15.247
RSS-247 Issue 3, August 2023
RSS-Gen Issue 5 Amendment 2 (February 2021)

Date of Receipt: 2024-07-02
Date of Test: 2024-07-03 to 2024-07-24
Date of Issue: 2024-07-25

Test Result:	Pass*
---------------------	--------------

* In the configuration tested, the EUT complied with the standards specified above.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.



Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 2 of 189

Revision Record			
Version	Description	Date	Remark
00	Original	2024-07-25	/

Authorized for issue by:			
Tested By		Maker Qi	
		Maker_Qi/Project Engineer	
Approved By		Terry Hou	
		Terry Hou /Reviewer	



Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 3 of 189

2 Test Summary

Radio Spectrum Technical Requirement				
Item	FCC Requirement	IC Requirement	Method	Result
Antenna Requirement	47 CFR Part 15, Subpart C 15.203 & 15.247(c)	RSS-Gen Clause 6.8	N/A	Customer Declaration

N/A: Not applicable

Radio Spectrum Matter Part				
Item	FCC Requirement	IC Requirement	Method	Result
Conducted Emissions at AC Power Line (150kHz-30MHz)	47 CFR Part 15, Subpart C 15.207	RSS-Gen Clause 8.8	ANSI C63.10 (2013) Section 6.2	Pass
Minimum 6dB Bandwidth	47 CFR Part 15, Subpart C 15.247a(2)	RSS-247 Clause 5.2(a)	ANSI C63.10 (2013) Section 11.8.1	Pass
Conducted Peak Output Power	47 CFR Part 15, Subpart C 15.247(b)(3)	RSS-247 Clause 5.4(d)	ANSI C63.10 (2013) Section 11.9.1	Pass
Power Spectrum Density	47 CFR Part 15, Subpart C 15.247(e)	RSS-247 Clause 5.2(b)	ANSI C63.10 (2013) Section 11.10.3	Pass
Conducted Band Edges Measurement	47 CFR Part 15, Subpart C 15.247(d)	RSS-247 Clause 5.5	ANSI C63.10 (2013) Section 11.13.3.2	Pass
Conducted Spurious Emissions	47 CFR Part 15, Subpart C 15.247(d)	RSS-247 Clause 5.5	ANSI C63.10 (2013) Section 11.11	Pass
Radiated Emissions which fall in the restricted bands	47 CFR Part 15, Subpart C 15.209 & 15.247(d)	RSS-247 Section 3.3 & RSS-Gen Section 8.9	ANSI C63.10 (2013) Section 6.10.5	Pass
Radiated Spurious Emissions	47 CFR Part 15, Subpart C 15.209 & 15.247(d)	RSS-247 Section 3.3 & RSS-Gen Section 8.9	ANSI C63.10 (2013) Section 6.4,6.5,6.6	Pass
99% Bandwidth	-	RSS-Gen Section 6.7	ANSI C63.10 Section 6.9.3	Pass

Declaration of EUT Family Grouping:

Note: There are series models mentioned in this report, and they are identical in electrical and electronic characters. Only the model P310 was tested since their differences were the model number and appearance.

3 Contents

	Page
1 COVER PAGE.....	1
2 Test Summary	3
3 Contents	4
4 General Information	5
4.1 Details of E.U.T.....	5
4.2 Power level setting using in test:	5
4.3 Description of Support Units	5
4.4 Measurement Uncertainty.....	6
4.5 Test Location	7
4.6 Test Facility.....	7
4.7 Deviation from Standards	7
4.8 Abnormalities from Standard Conditions	7
5 Equipment List.....	8
6 Radio Spectrum Technical Requirement	9
6.1 Antenna Requirement	9
7 Radio Spectrum Matter Test Results.....	10
7.1 Conducted Emissions at AC Power Line (150kHz-30MHz).....	10
7.2 Radiated Emissions which fall in the restricted bands.....	14
7.3 Radiated Spurious Emissions Below 1GHz.....	64
7.4 Radiated Spurious Emissions Above 1GHz	68
7.5 Conducted Peak Output Power	106
7.6 Minimum 6dB Bandwidth	108
7.7 Power Spectrum Density	109
7.8 Conducted Band Edges Measurement.....	110
7.9 Conducted Spurious Emissions	112
8 Test Setup Photo	114
9 EUT Constructional Details (EUT Photos)	114
10 Appendix	115

4 General Information

4.1 Details of E.U.T.

Power supply:	Power Adapter1: Model: S010-1A050150VUU INPUT: 100~240V~,50/60Hz,0.3A OUTPUT: 5.0V/1.5A Power Adapter2: Model: TPA-141A050150UU01 INPUT: 100~240V~,50/60Hz,0.3A OUTPUT: 5.0V/1.5A
Test voltage	AC 120V/60Hz
Operation Frequency:	802.11b/g/n(HT20)/ax(HEW20): 2412MHz to 2462MHz; 802.11n(HT40)/ax(HEW40): 2422MHz to 2452MHz
Modulation Type:	802.11b: DSSS (CCK, DQPSK, DBPSK), 802.11g/n: OFDM (64QAM, 16QAM, QPSK, BPSK), 802.11ax: OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024-QAM)
Data rate:	802.11b:1/2/5.5/11Mbps 802.11g:6/9/12/18/24/36/48/54Mbps 802.11n/ax:MCS0-MCS7
Number of Channels:	802.11b/g/n(HT20)/ax(HEW20):11;802.11n(HT40)/ax(HEW40):7
Channel Spacing:	5MHz
Antenna Type:	Internal antenna
Antenna Gain:	2.93dBi(Provided by the manufacturer)

4.2 Power level setting using in test:

Channel	802.11b	802.11g	802.11n(HT20)
	Ant 1	Ant 1	Ant 1
1	17	11	11
6	17	11	11
11	17	11	11
Channel	802.11n(HT40)	802.11ax(HEW20)	802.11ax(HEW40)
	Ant 1	Ant 1	Ant 1
3	9	10	8
6	9	10	8
9	9	10	8

4.3 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
Notebook	LENOVO	K27	EB24537645

4.4 Measurement Uncertainty

No.	Item	Measurement Uncertainty
1	Radio Frequency	8.4×10^{-8}
2	Timeout	2s
3	Duty Cycle	0.37%
4	Occupied Bandwidth	3%
5	RF Conducted Power	0.6dB
6	RF Power Density	2.9dB
7	Conducted Spurious Emissions	0.75dB
8	RF Radiated Power	5.2dB (Below 1GHz)
		5.9dB (Above 1GHz)
9	Radiated Spurious Emission Test	4.2dB (Below 30MHz)
		4.5dB (30MHz-1GHz)
		5.1dB (1GHz-18GHz)
		5.4dB (Above 18GHz)
10	Temperature Test	1°C
11	Humidity Test	3%
12	Supply Voltages	1.5%
13	Time	3%

Note: The measurement uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 7 of 189

4.5 Test Location

All tests were performed at:

Compliance Certification Services (Kunshan) Inc.

No.10 Weiye Rd, Innovation park, Eco&Tec, Development Zone, Kunshan City, Jiangsu, China.

Tel: +86 512 5735 5888 Fax: +86 512 5737 0818

No tests were sub-contracted.

Note:

1. SGS is not responsible for wrong test results due to incorrect information (e.g., max. internal working frequency, antenna gain, cable loss, etc) is provided by the applicant. (If applicable).
2. SGS is not responsible for the authenticity, integrity and the validity of the conclusion based on results of the data provided by applicant. (If applicable).
3. Sample source: sent by customer.

4.6 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

• A2LA

Compliance Certification Services (Kunshan) Inc. is accredited by the American Association for Laboratory Accreditation (A2LA). Certificate No. 2541.01.

• FCC

Compliance Certification Services (Kunshan) Inc. has been recognized as an accredited testing laboratory. Designation Number: CN1172.

• ISED

Compliance Certification Services (Kunshan) Inc. has been recognized by Innovation, Science and Economic Development Canada (ISED) as an accredited testing laboratory. Company Number: 2324E

• VCCI

The 3m and 10m Semi-anechoic chamber and Shielded Room of Compliance Certification Services (Kunshan) Inc. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-20134, R-11600, C-11707, T-11499, G-10216 respectively.

4.7 Deviation from Standards

None

4.8 Abnormalities from Standard Conditions

None

Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCSR240700123002

Page: 8 of 189

5 Equipment List

Item	Equipment	Manufacturer	Model	Inventory No	Cal Date	Cal. Due Date
Conducted Emission at Mains Terminals						
1	EMI Test Receive	R&S	ESCI	KS301101	01/15/2024	01/14/2025
2	LISN	R&S	ENV216	KS301197	01/15/2024	01/14/2025
3	LISN	Schwarzbeck	NNLK 8129	KS301091	01/15/2024	01/14/2025
4	Pulse Limiter	R&S	ESH3-Z2	KUS1902E001	01/15/2024	01/14/2025
5	CE test Cable	Thermax	/	CZ301102	01/15/2024	01/14/2025
6	Test Software	Farad	EZ-EMC	/	N.C.R	N.C.R
RF Conducted Test						
1	Spectrum Analyzer	Keysight	N9020A	KUS1911E004-2	08/24/2023	08/23/2024
2	Spectrum Analyzer	Keysight	N9020A	KUS2001M001-2	08/24/2023	08/23/2024
3	Spectrum Analyzer	Keysight	N9030B	KSEM021-1	01/15/2024	01/14/2025
4	Signal Generator	R&S	SMBV100B	KSEM032	03/19/2024	03/18/2025
5	Signal Generator	R&S	SMW200A	KSEM020-1	08/24/2023	08/23/2024
6	Signal Generator	Agilent	N5182A	KUS2001M001-1	08/24/2023	08/23/2024
7	Radio Communication Test Station	Anritsu	MT8000A	KSEM001-1	08/24/2023	08/23/2024
8	Radio Communication Analyzer	Anritsu	MT8821C	KSEM002-1	03/19/2024	03/18/2025
9	Universal Radio Communication Tester	R&S	CMW500	KUS1911E004-1	08/24/2023	08/23/2024
10	Switcher	TST	FY562	KUS2001M001-4	01/15/2024	01/14/2025
11	AC Power Source	EXTECH	6605	KS301178	N.C.R	N.C.R
12	DC Power Supply	Aglient	E3632A	KS301180	N.C.R	N.C.R
13	Conducted Test Cable	Thermax	RF01-RF04	CZ301111-CZ301120	01/15/2024	01/14/2025
14	Temp. / Humidity Chamber	TERCHY	MHK-120AK	KS301190	08/24/2023	08/23/2024
15	Temperature & Humidity Recorder	Renke Control	RS-WS-N01-6J	KSEM024-5	03/19/2024	03/18/2025
16	Software	BST	TST-PASS	/	NCR	NCR
RF Radiated Test						
1	Spectrum Analyzer	R&S	FSV40	KUS1806E003	08/24/2023	08/23/2024
2	Universal Radio Communication Tester	R&S	CMW500	KSEM009-1	03/19/2024	03/18/2025
3	Signal Generator	Agilent	E8257C	KS301066	08/24/2023	08/23/2024
4	Loop Antenna	COM-POWER	AL-130R	KUS1806E001	03/18/2023	03/17/2025
5	Bilog Antenna	TESEQ	CBL 6112D	KUS1806E005	06/29/2023	06/28/2025
6	Bilog Antenna	TESEQ	CBL 6112D	KUS1806E006	03/19/2024	03/18/2025
7	Horn-antenna(1-18GHz)	Schwarzbeck	BBHA9120D	KS301079	08/24/2023	08/23/2024
8	Horn-antenna(1-18GHz)	ETS-LINDGREN	3117	KS301186	04/07/2023	04/06/2025
9	Horn Antenna(18-40GHz)	Schwarzbeck	BBHA9170	CZ301058	01/07/2024	01/06/2026
10	Amplifier(30MHz~18GHz)	PANSHAN TECHNOLOGY	LNA:1~18G	KSEM010-1	01/15/2024	01/14/2025
11	Amplifier(18~40GHz)	PANSHAN TECHNOLOGY	LNA180400G40	KSEM038	08/24/2023	08/23/2024
12	RE Test Cable	REBES MICROWAVE	/	CZ301097	08/24/2023	08/23/2024
13	Temperature & Humidity Recorder	Renke Control	RS-WS-N01-6J	KSEM024-4	03/19/2024	03/18/2025
14	Software	Faratronic	EZ_EMG-v 3A1	/	NCR	NCR
15	Software	ESE	E3_V 6.111221a	/	NCR	NCR

6 Radio Spectrum Technical Requirement

6.1 Antenna Requirement

6.1.1 Test Requirement:

47 CFR Part 15, Subpart C 15.203 & 15.247(b)(4)

6.1.2 Conclusion

Standard Requirement:

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.

15.247(b) (4) requirement:

The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, 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 (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

EUT Antenna:

The antenna is Internal antenna on the main PCB and no consideration of replacement. The best case gain of the antenna is 2.93 dBi.

Antenna location: Refer to internal photo.

7 Radio Spectrum Matter Test Results

7.1 Conducted Emissions at AC Power Line (150kHz-30MHz)

Test Requirement 47 CFR Part 15, Subpart C 15.207

Test Method: ANSI C63.10 (2013) Section 6.2

Limit:

Frequency of emission(MHz)	Conducted limit(dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50
*Decreases with the logarithm of the frequency.		
Detector: Peak for pre-scan (9kHz resolution bandwidth) 0.15M to 30MHz		

7.1.1 E.U.T. Operation

Operating Environment:

Temperature: 20.3 °C

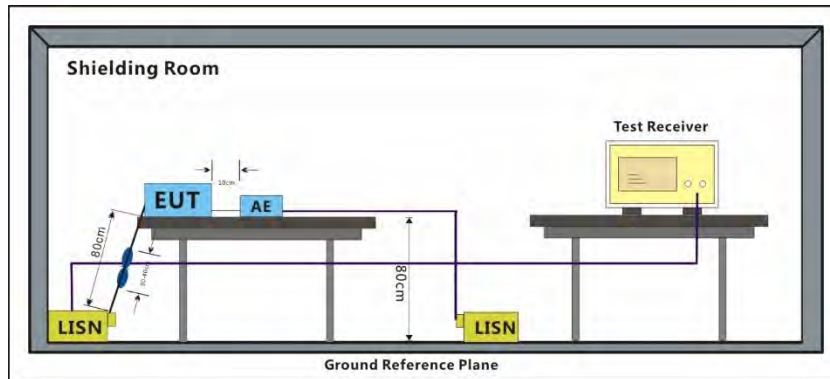
Humidity: 45.4 % RH

Atmospheric Pressure: 1010 mbar

7.1.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20); data rate @ 13.5Mbps is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40). Only the data of worst case is recorded in the report.

7.1.3 Test Setup Diagram



7.1.4 Measurement Procedure and Data

- 1) The mains terminal disturbance voltage test was conducted in a shielded room.
- 2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50ohm/50μH + 5ohm linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.
- 3) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane.
- 4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2.
- 5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.

Remark 1: Level=Read Level+ Cable Loss+ LISN Factor.

Remark 2: The EUT has two different types of adapters: the Power Adapter1 (S010-1A050150VUU) and the Power Adapter2 (TPA-141A050150UU01), both of which were pre-tested. Power Adapter1 is identified as the worst case, and only the worst results are reflected in the report.

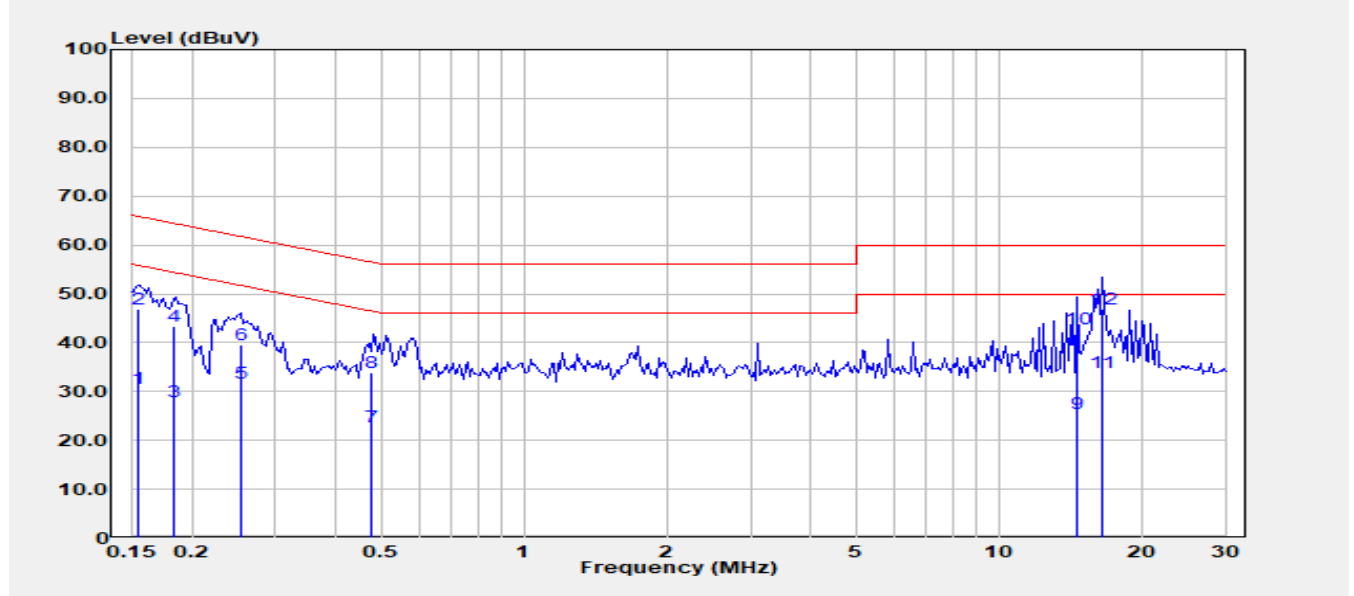
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 12 of 189

Test Mode: 00; Line: Live line



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1543	10.36	20.23	30.59	55.77	-25.18	Average
2	0.1543	26.53	20.23	46.76	65.77	-19.01	QP
3	0.1840	7.86	20.11	27.97	54.30	-26.33	Average
4	0.1840	23.15	20.11	43.26	64.30	-21.04	QP
5	0.2545	11.73	20.07	31.80	51.61	-19.81	Average
6	0.2545	19.48	20.07	39.55	61.61	-22.06	QP
7	0.4773	2.85	20.04	22.89	46.39	-23.50	Average
8	0.4773	13.78	20.04	33.82	56.39	-22.57	QP
9	14.6800	5.76	19.75	25.51	50.00	-24.49	Average
10	14.6800	23.09	19.75	42.84	60.00	-17.16	QP
11	16.4480	14.01	19.75	33.76	50.00	-16.24	Average
12	16.4480	27.14	19.75	46.89	60.00	-13.11	QP

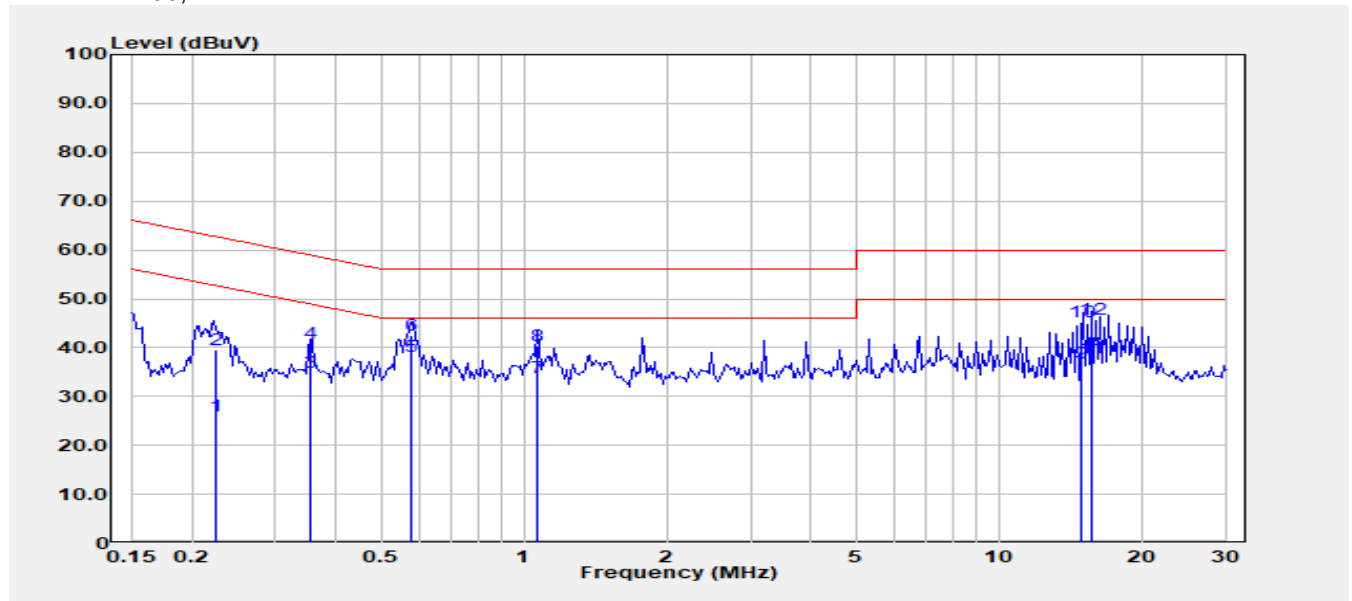
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 13 of 189

Test Mode: 00; Line: Neutral Line



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.2236	5.98	20.10	26.08	52.68	-26.60	Average
2	0.2236	19.44	20.10	39.54	62.68	-23.14	QP
3	0.3561	14.87	20.10	34.97	48.82	-13.85	Average
4	0.3561	20.75	20.10	40.85	58.82	-17.97	QP
5	0.5778	18.22	19.89	38.11	46.00	-7.89	Average
6	0.5778	22.69	19.89	42.58	56.00	-13.42	QP
7	1.0670	14.05	19.91	33.96	46.00	-12.04	Average
8	1.0670	20.35	19.91	40.26	56.00	-15.74	QP
9	14.9520	17.14	19.84	36.98	50.00	-13.02	Average
10	14.9520	25.29	19.84	45.13	60.00	-14.87	QP
11	15.6670	18.20	19.84	38.04	50.00	-11.96	Average
12	15.6670	26.05	19.84	45.89	60.00	-14.11	QP

Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 14 of 189

7.2 Radiated Emissions which fall in the restricted bands

Test Requirement 47 CFR Part 15, Subpart C 15.205 & 15.209

Test Method: ANSI C63.10 (2013) Section 6.10.5

Limit:

Frequency(MHz)	Field strength(microvolts/meter)	Measurement distance(meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

7.2.1 E.U.T. Operation

Operating Environment:

Temperature: 21.9 °C

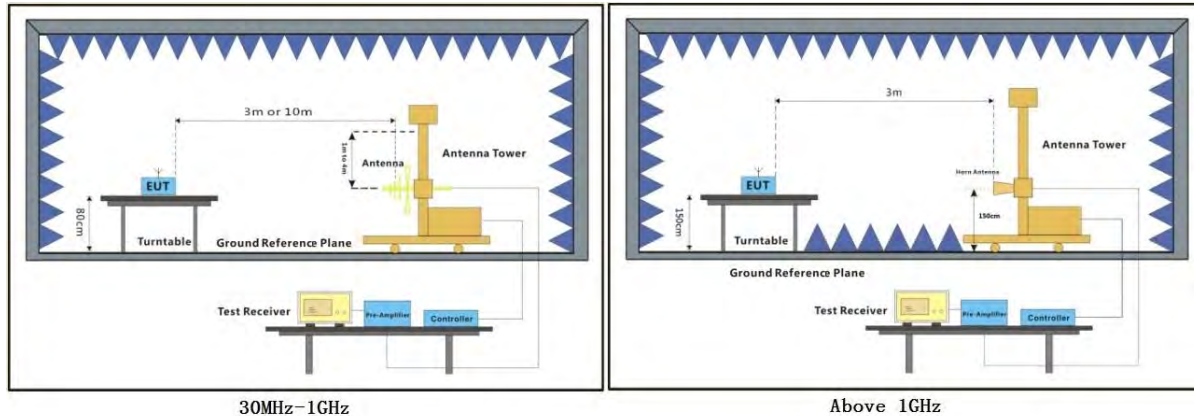
Humidity: 55.5 % RH

Atmospheric Pressure: 1010 mbar

7.2.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20); data rate @ 13.5Mbps is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40). Only the data of worst case is recorded in the report.

7.2.3 Test Setup Diagram



7.2.4 Measurement Procedure and Data

- For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- The antenna height 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.
- 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 (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) 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.
- If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
- Test the EUT in the lowest channel, the middle channel, the Highest channel.
- The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- Repeat above procedures until all frequencies measured was complete.

Remark 1: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor

Remark 2: For frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.

Remark 3: The EUT has two different types of adapters: the Power Adapter1 (S010-1A050150VUU) and the Power Adapter2 (TPA-141A050150UU01), both of which were pre-tested. Power Adapter1 is identified as the worst case, and only the worst results are reflected in the report.

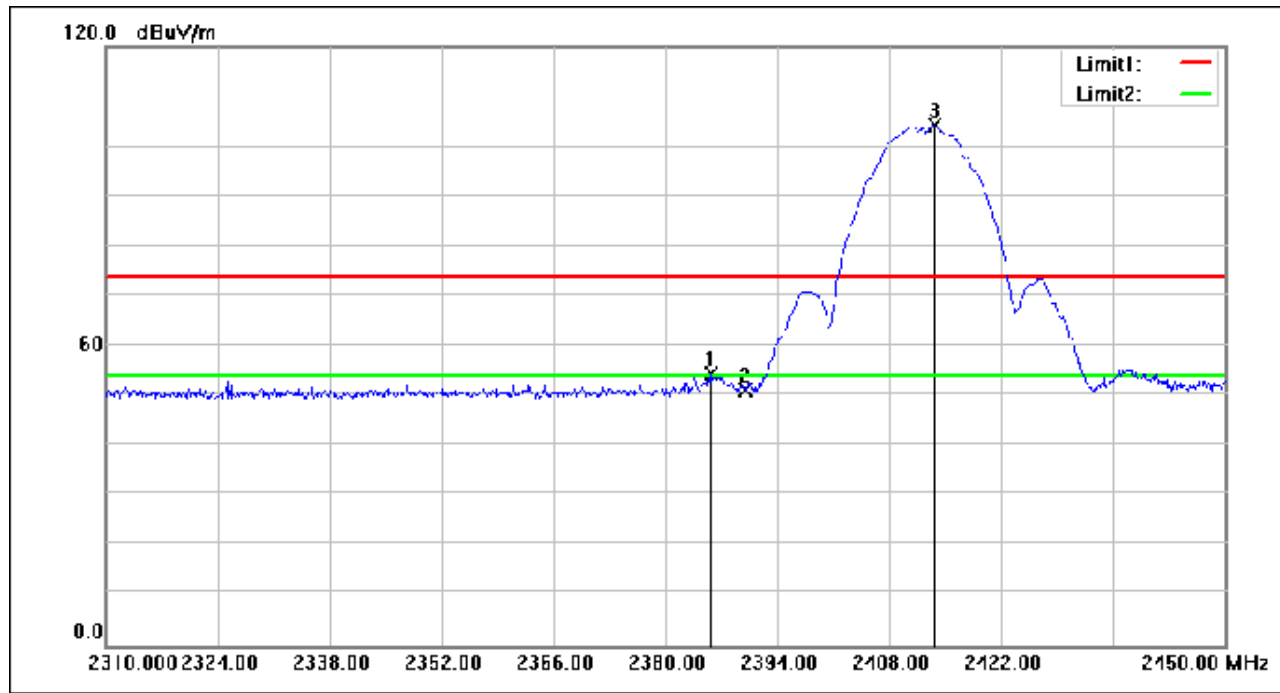
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 16 of 189

Test Mode: 00; Polarity: Horizontal; Modulation:802.11b; Bandwidth:20MHz; Channel:Low



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2385.740	79.27	-24.73	54.54	74.00	-19.46	peak
2	2390.000	75.81	-24.71	51.10	74.00	-22.90	peak
3	2413.600	128.73	-24.59	104.14	74.00	30.14	peak

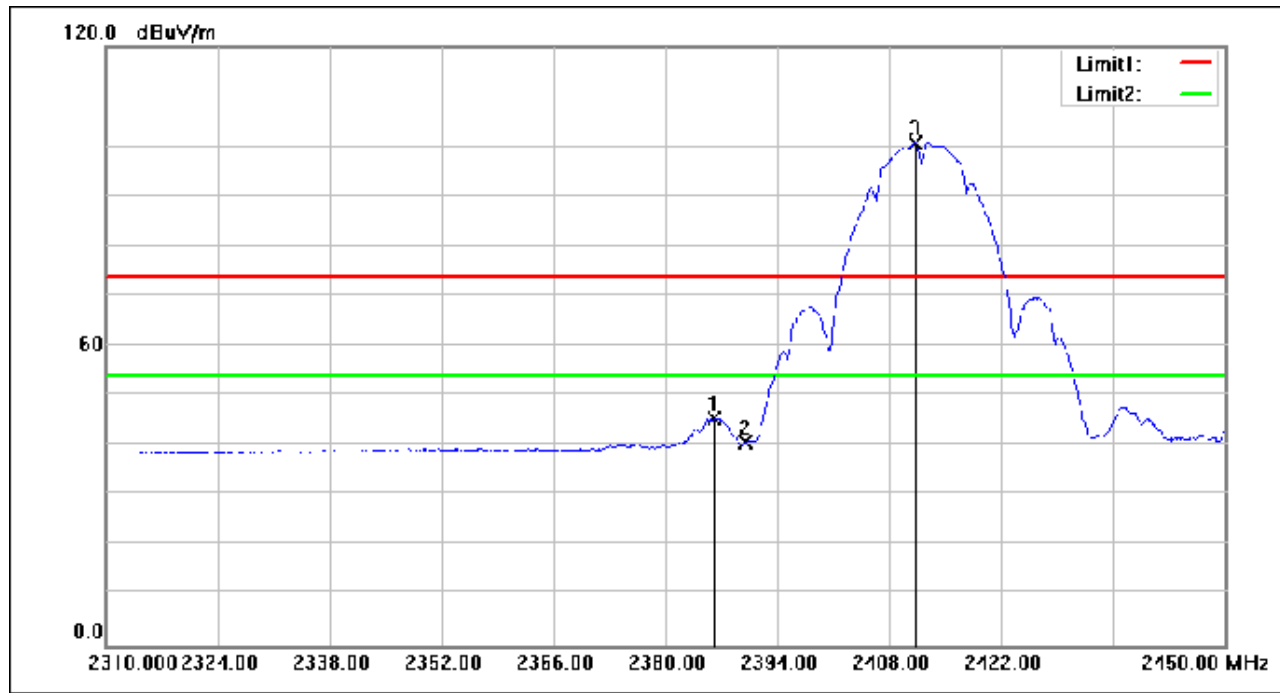
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 17 of 189

Test Mode: 00; Polarity: Horizontal; Modulation:802.11b; Bandwidth:20MHz; Channel:Low



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2386.020	70.29	-24.72	45.57	54.00	-8.43	AVG
2	2390.000	65.44	-24.71	40.73	54.00	-13.27	AVG
3	2411.220	125.25	-24.60	100.65	54.00	46.65	AVG

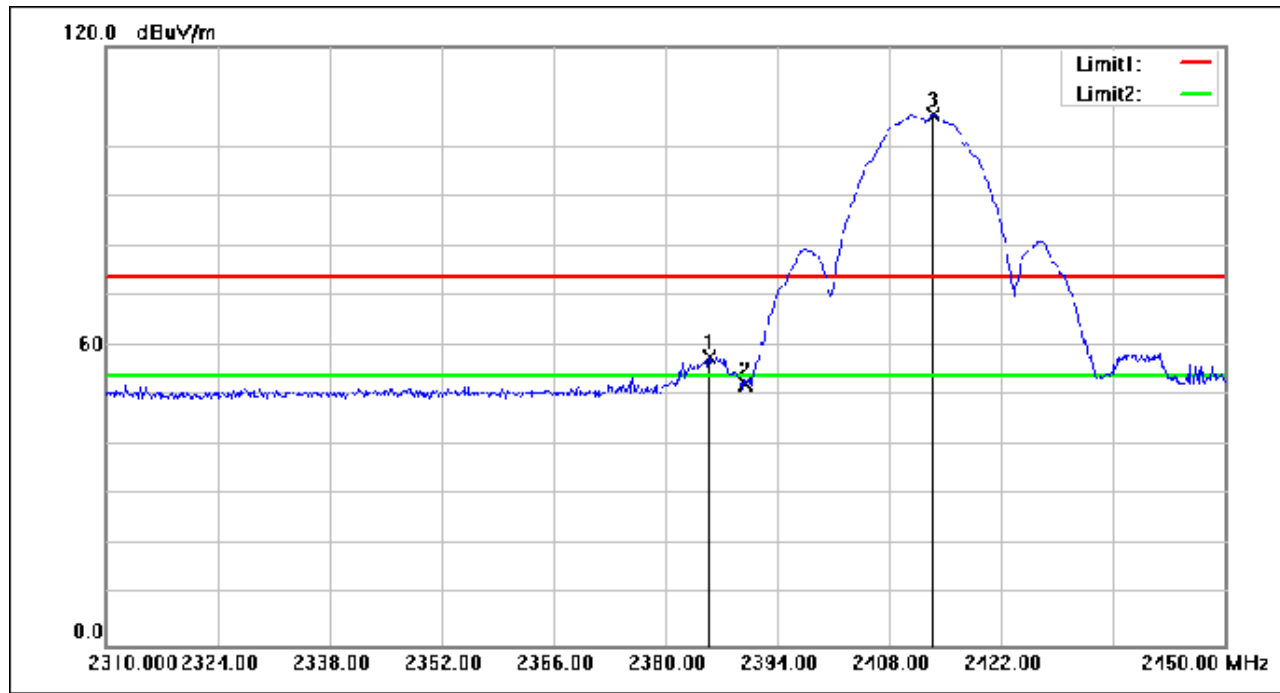
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 18 of 189

Test Mode: 00; Polarity: Vertical; Modulation:802.11b; Bandwidth:20MHz; Channel:Low



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2385.460	82.54	-24.73	57.81	74.00	-16.19	peak
2	2390.000	76.96	-24.71	52.25	74.00	-21.75	peak
3	2413.460	131.03	-24.60	106.43	74.00	32.43	peak

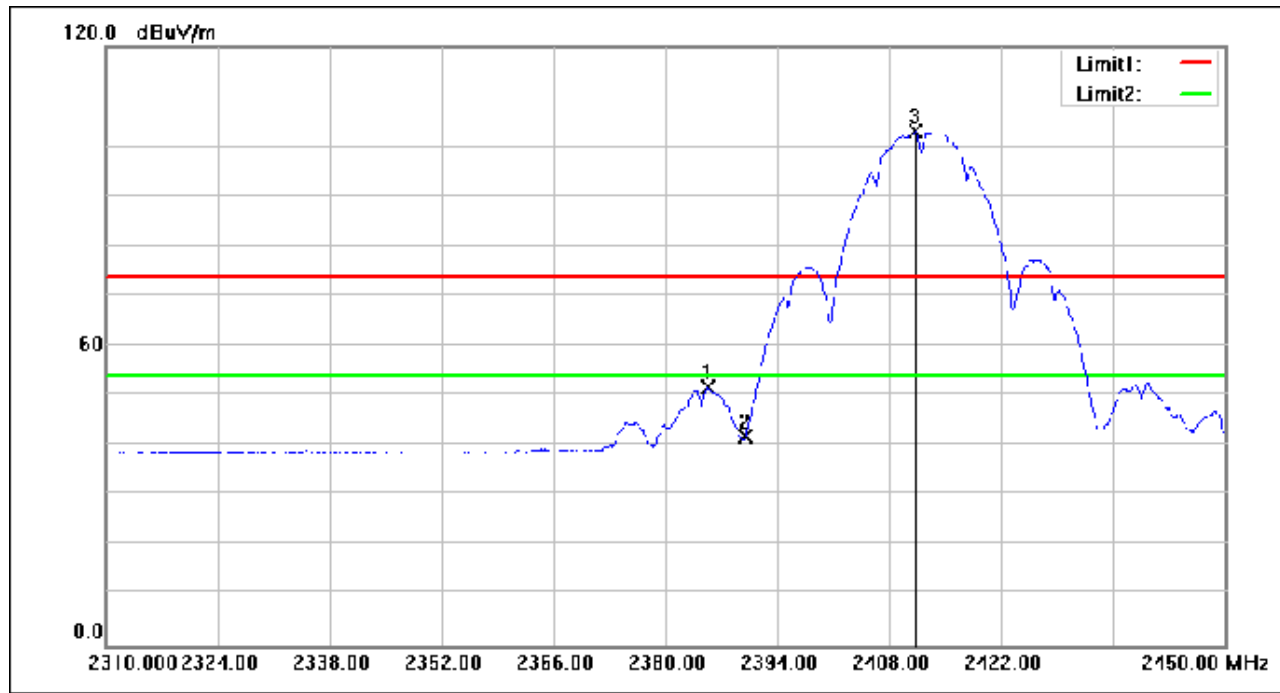
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 19 of 189

Test Mode: 00; Polarity: Vertical; Modulation:802.11b; Bandwidth:20MHz; Channel:Low



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2385.320	76.40	-24.73	51.67	54.00	-2.33	AVG
2	2390.000	66.71	-24.71	42.00	54.00	-12.00	AVG
3	2411.220	127.54	-24.60	102.94	54.00	48.94	AVG

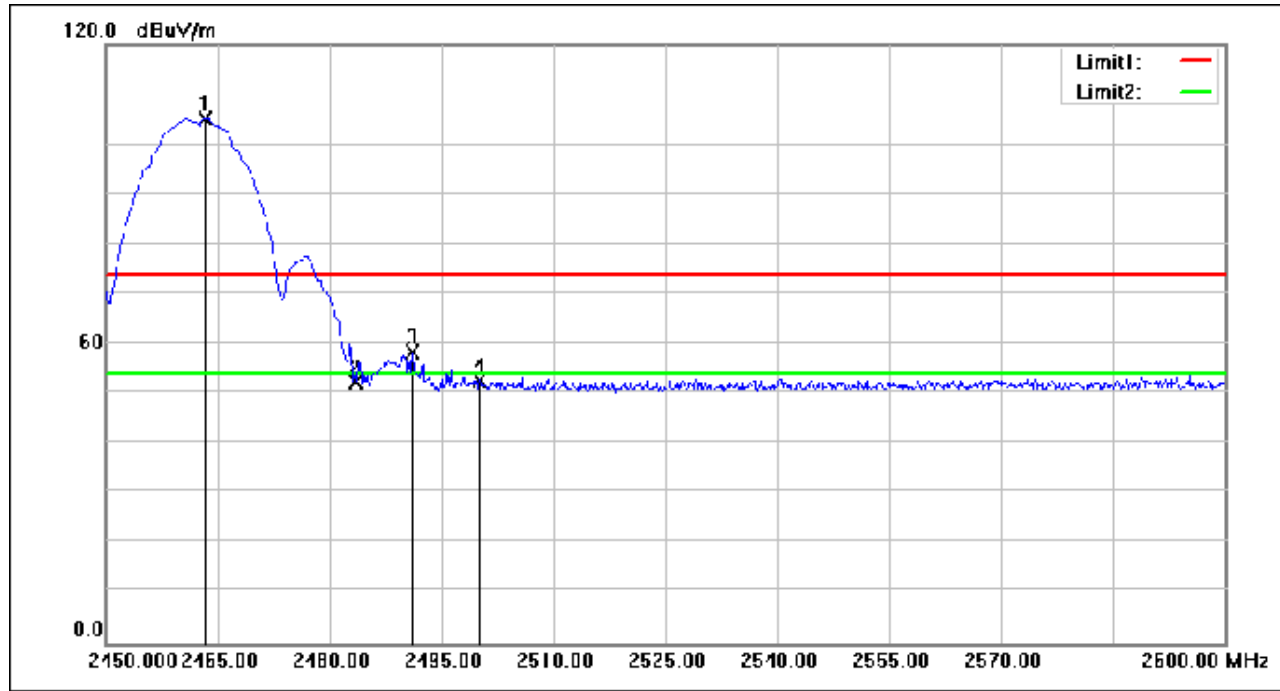
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 20 of 189

Test Mode: 00; Polarity: Horizontal; Modulation: 802.11b; Bandwidth: 20MHz; Channel: High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2463.350	129.61	-24.37	105.24	74.00	31.24	peak
2	2483.500	76.57	-24.27	52.30	74.00	-21.70	peak
3	2491.100	82.71	-24.24	58.47	74.00	-15.53	peak
4	2500.000	76.99	-24.19	52.80	74.00	-21.20	peak

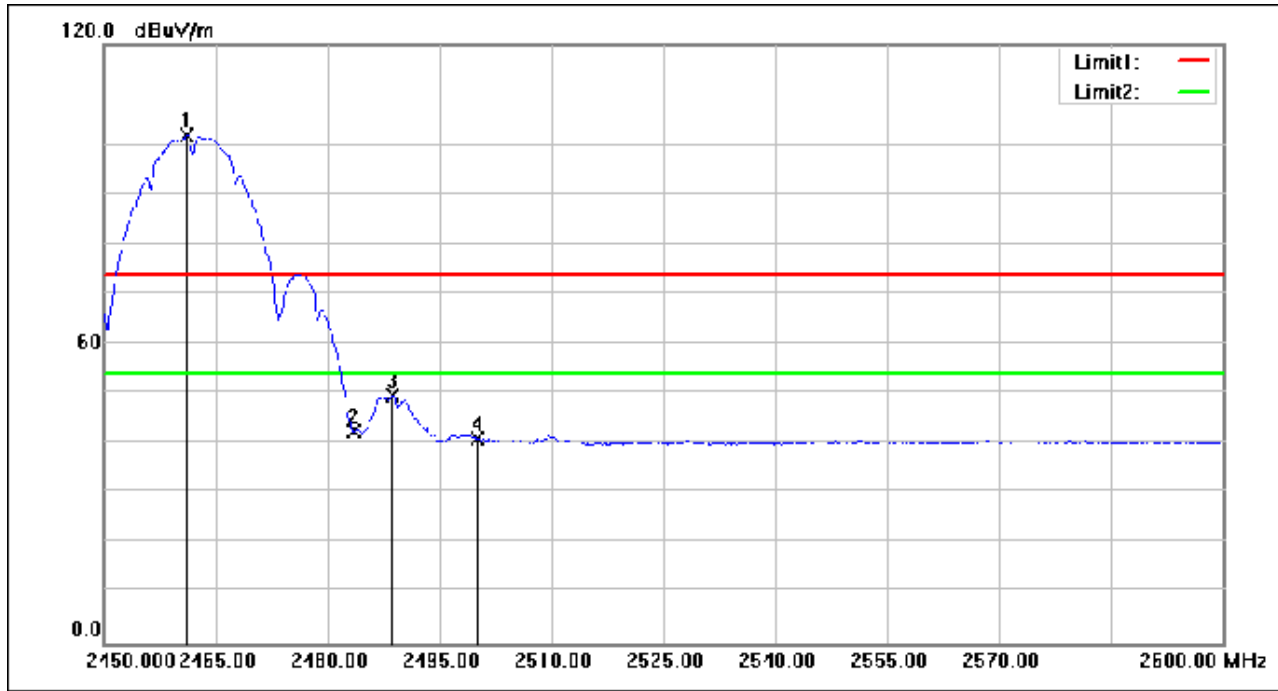
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 21 of 189

Test Mode: 00; Polarity: Horizontal; Modulation: 802.11b; Bandwidth: 20MHz; Channel: High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2461.100	126.19	-24.38	101.81	54.00	47.81	AVG
2	2483.500	66.60	-24.27	42.33	54.00	-11.67	AVG
3	2488.700	73.97	-24.25	49.72	54.00	-4.28	AVG
4	2500.000	65.07	-24.19	40.88	54.00	-13.12	AVG

Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 22 of 189

Test Mode: 00; Polarity: Vertical; Modulation: 802.11b; Bandwidth: 20MHz; Channel: High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	82.46	-24.27	58.19	74.00	-15.81	peak
2	2500.000	78.96	-24.19	54.77	74.00	-19.23	peak
3	2463.500	131.62	-24.37	107.25	74.00	33.25	peak
4	2485.700	87.38	-24.26	63.12	74.00	-10.88	peak

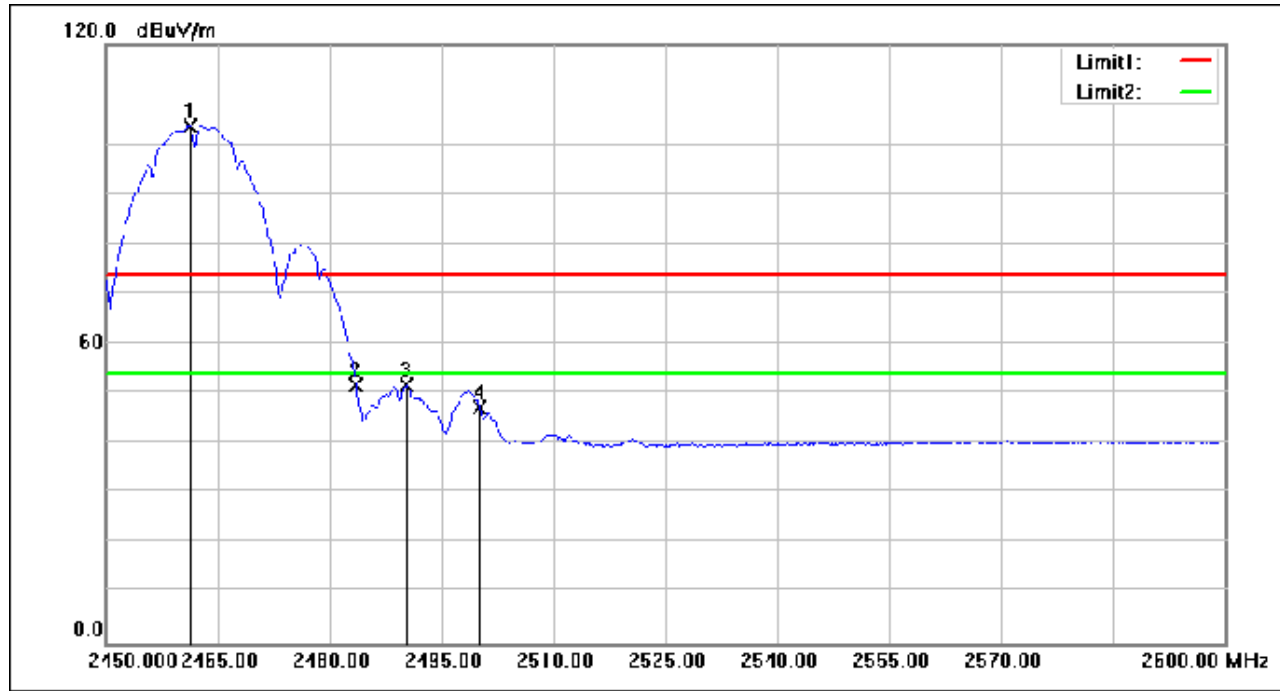
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 23 of 189

Test Mode: 00; Polarity: Vertical; Modulation:802.11b; Bandwidth:20MHz; Channel:High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2461.250	128.13	-24.37	103.76	54.00	49.76	AVG
2	2483.500	76.00	-24.27	51.73	54.00	-2.27	AVG
3	2490.200	75.95	-24.24	51.71	54.00	-2.29	AVG
4	2500.000	71.56	-24.19	47.37	54.00	-6.63	AVG

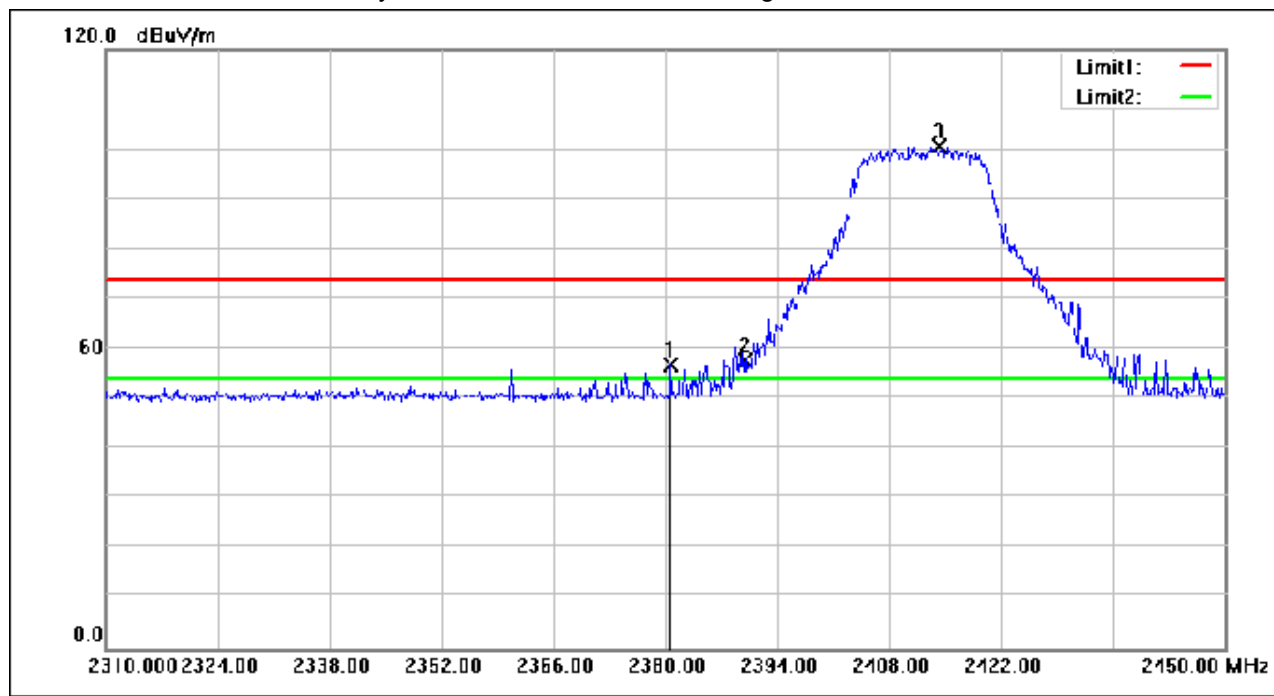
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 24 of 189

Test Mode: 00; Polarity: Horizontal; Modulation:802.11g; Bandwidth:20MHz; Channel:Low



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2380.700	81.75	-24.75	57.00	74.00	-17.00	peak
2	2390.000	82.38	-24.71	57.67	74.00	-16.33	peak
3	2414.300	125.19	-24.59	100.60	74.00	26.60	peak

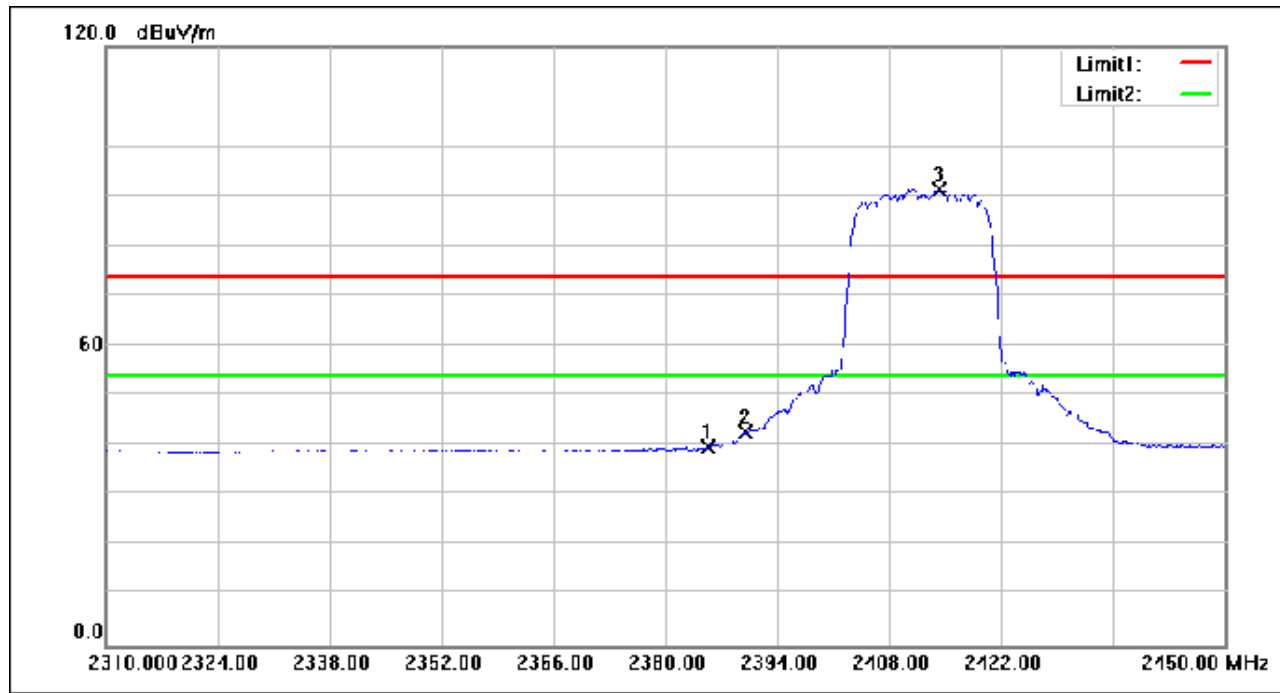
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 25 of 189

Test Mode: 00; Polarity: Horizontal; Modulation:802.11g; Bandwidth:20MHz; Channel:Low



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2385.320	64.51	-24.73	39.78	54.00	-14.22	AVG
2	2390.000	67.45	-24.71	42.74	54.00	-11.26	AVG
3	2414.160	116.09	-24.59	91.50	54.00	37.50	AVG

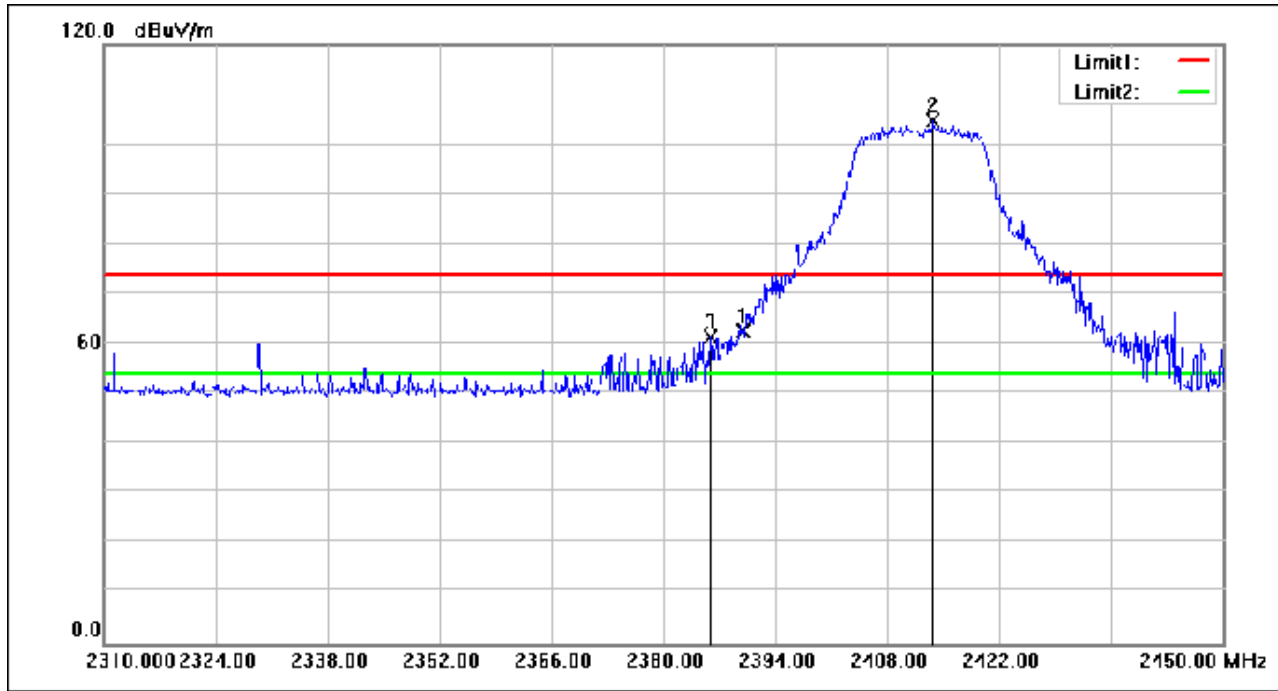
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 26 of 189

Test Mode: 00; Polarity: Vertical; Modulation:802.11g; Bandwidth:20MHz; Channel:Low



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	87.34	-24.71	62.63	74.00	-11.37	peak
2	2413.740	129.44	-24.59	104.85	74.00	30.85	peak
3	2385.880	86.00	-24.72	61.28	74.00	-12.72	peak

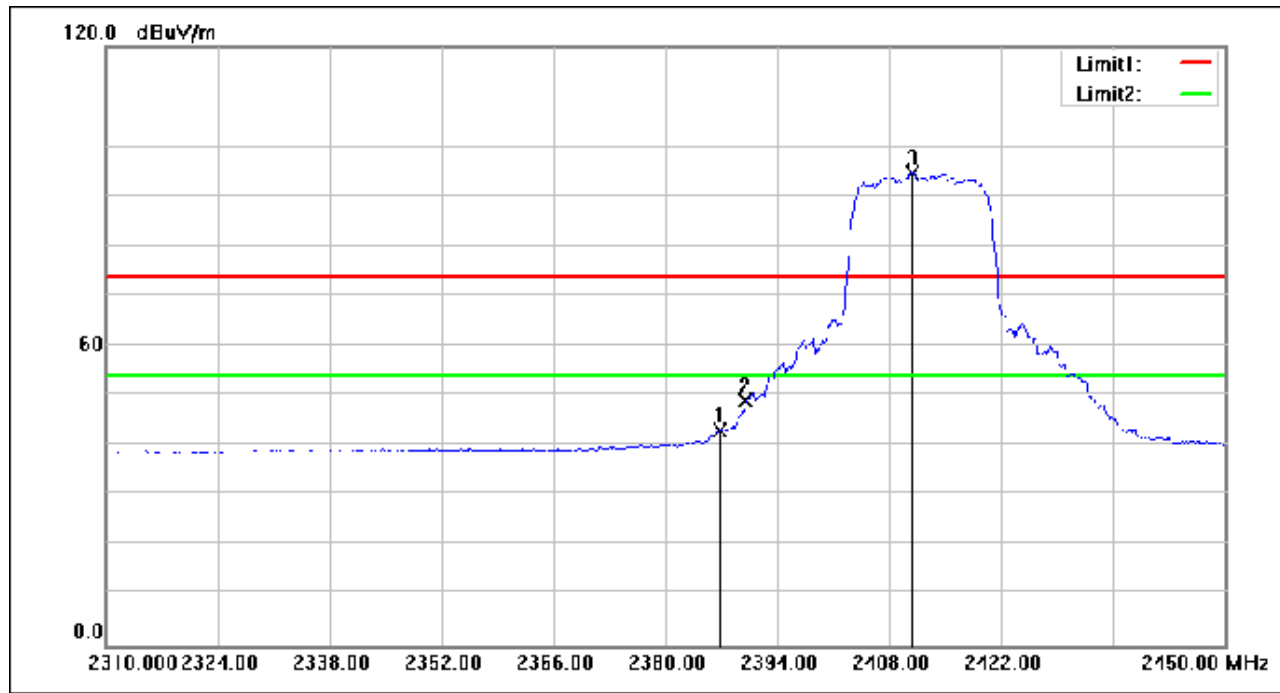
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 27 of 189

Test Mode: 00; Polarity: Vertical; Modulation:802.11g; Bandwidth:20MHz; Channel:Low



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2386.860	67.82	-24.72	43.10	54.00	-10.90	AVG
2	2390.000	73.66	-24.71	48.95	54.00	-5.05	AVG
3	2410.940	119.35	-24.61	94.74	54.00	40.74	AVG

Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 28 of 189

Test Mode: 00; Polarity: Horizontal; Modulation: 802.11g; Bandwidth: 20MHz; Channel: High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2463.350	127.06	-24.37	102.69	74.00	28.69	peak
2	2483.500	85.73	-24.27	61.46	74.00	-12.54	peak
3	2486.300	89.36	-24.25	65.11	74.00	-8.89	peak
4	2500.000	75.14	-24.19	50.95	74.00	-23.05	peak

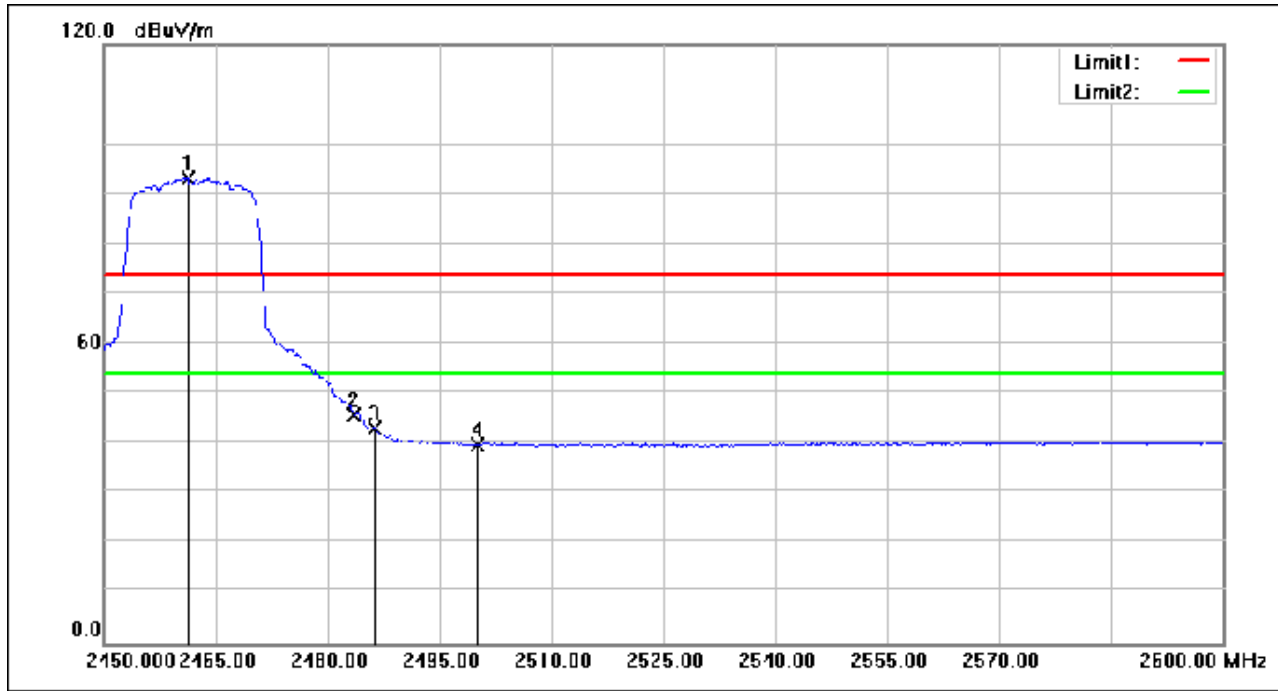
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 29 of 189

Test Mode: 00; Polarity: Horizontal; Modulation: 802.11g; Bandwidth: 20MHz; Channel: High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2461.250	117.47	-24.37	93.10	54.00	39.10	AVG
2	2483.500	70.11	-24.27	45.84	54.00	-8.16	AVG
3	2486.300	67.39	-24.25	43.14	54.00	-10.86	AVG
4	2500.000	63.84	-24.19	39.65	54.00	-14.35	AVG

Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 30 of 189

Test Mode: 00; Polarity: Vertical; Modulation:802.11g; Bandwidth:20MHz; Channel:High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2463.650	130.20	-24.37	105.83	74.00	31.83	peak
2	2483.500	95.21	-24.27	70.94	74.00	-3.06	peak
3	2485.550	90.94	-24.26	66.68	74.00	-7.32	peak
4	2500.000	76.79	-24.19	52.60	74.00	-21.40	peak

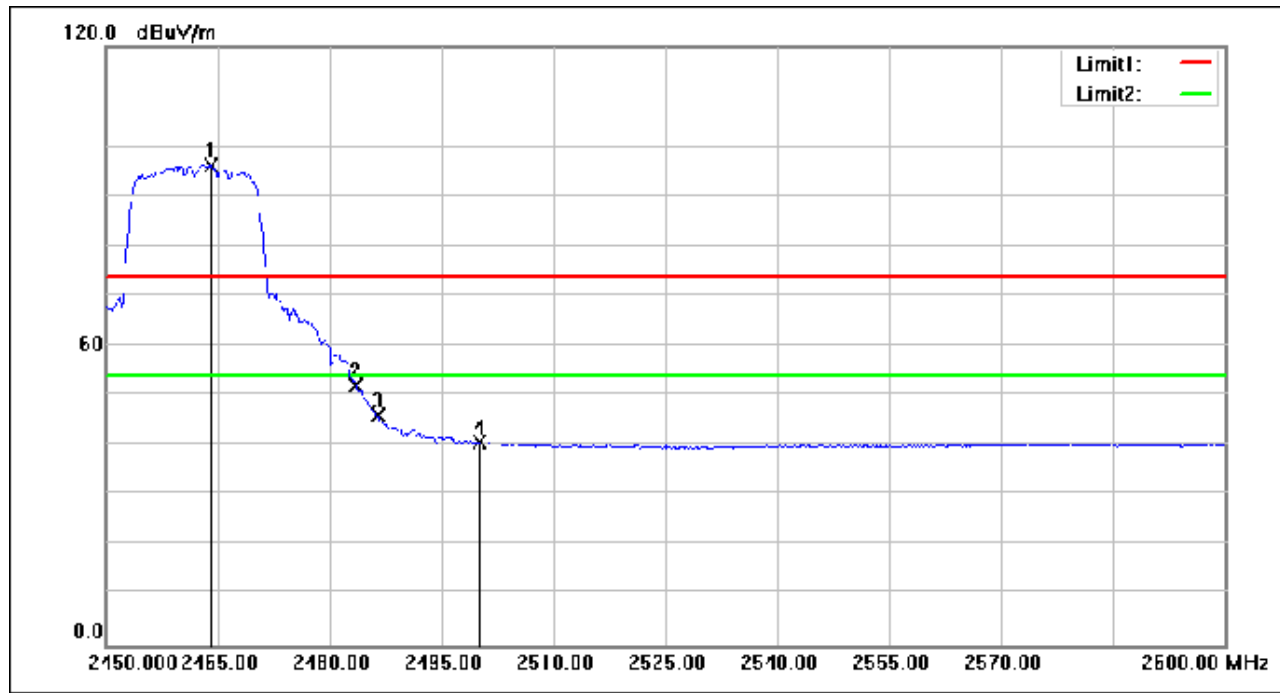
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 31 of 189

Test Mode: 00; Polarity: Vertical; Modulation:802.11g; Bandwidth:20MHz; Channel:High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2464.100	120.58	-24.36	96.22	54.00	42.22	AVG
2	2483.500	76.42	-24.27	52.15	54.00	-1.85	AVG
3	2486.450	70.17	-24.25	45.92	54.00	-8.08	AVG
4	2500.000	64.74	-24.19	40.55	54.00	-13.45	AVG

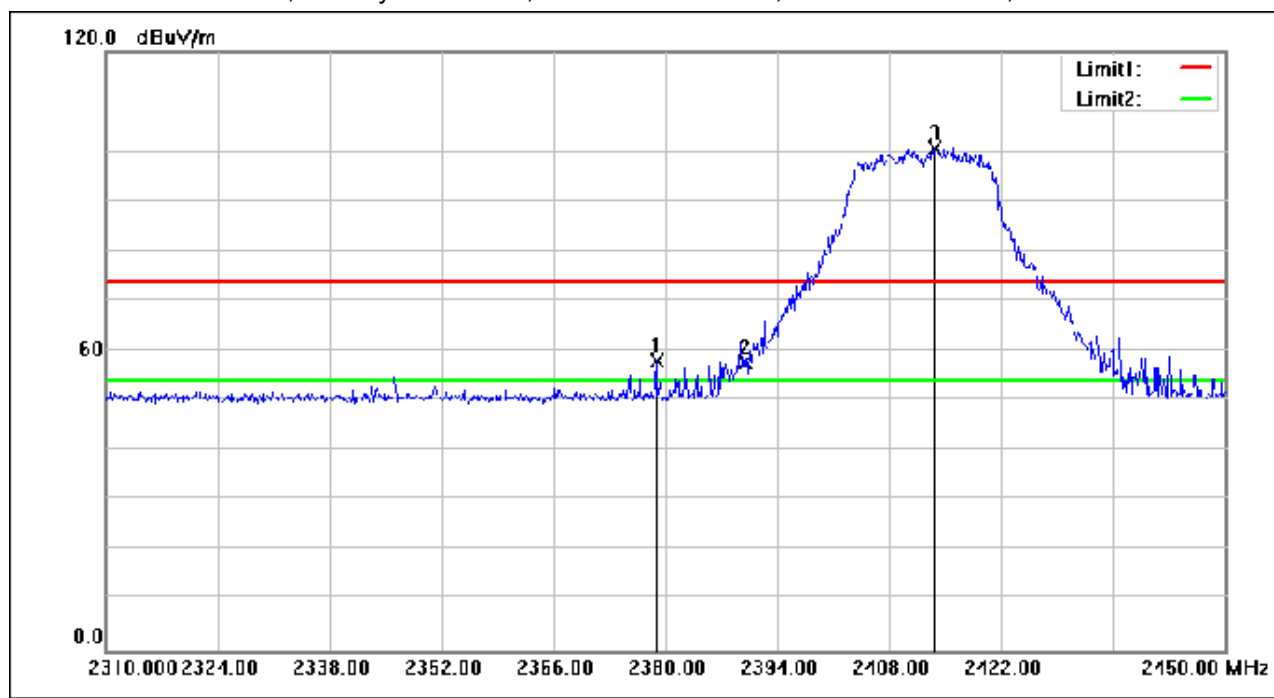
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 32 of 189

Test Mode: 00; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:Low



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2378.880	82.72	-24.75	57.97	74.00	-16.03	peak
2	2390.000	82.50	-24.71	57.79	74.00	-16.21	peak
3	2413.600	125.32	-24.59	100.73	74.00	26.73	peak

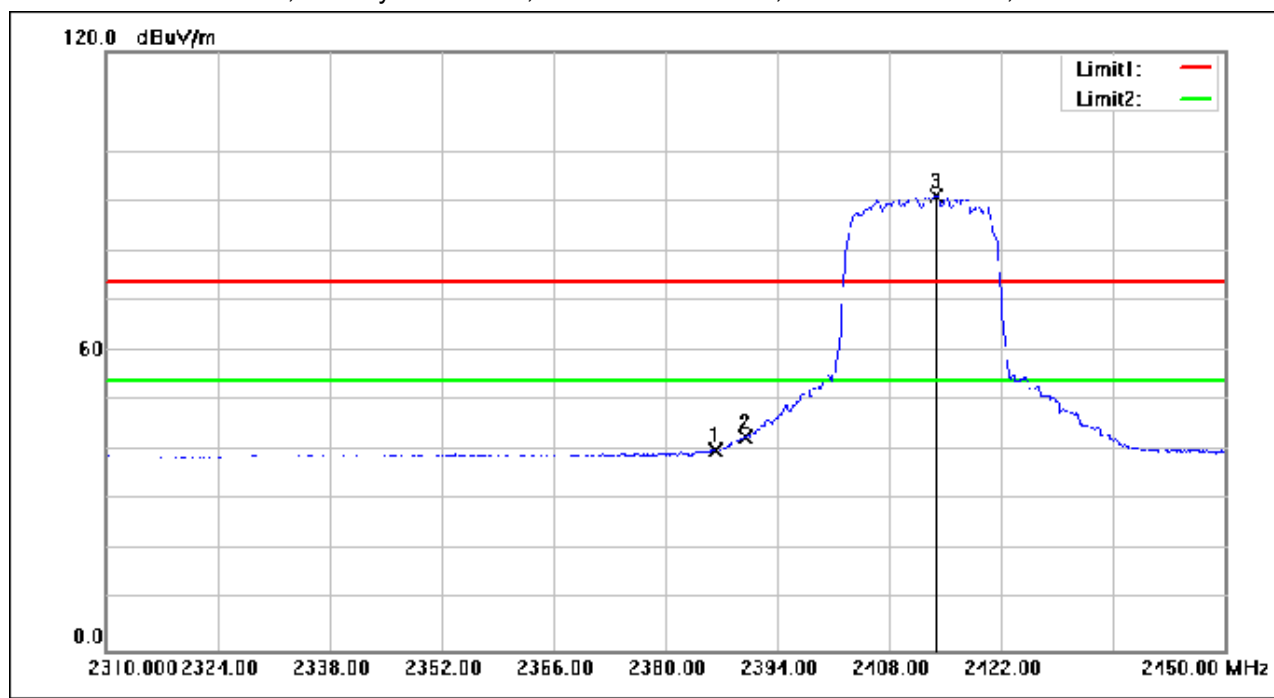
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 33 of 189

Test Mode: 00; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:Low



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2386.300	64.90	-24.72	40.18	54.00	-13.82	AVG
2	2390.000	67.40	-24.71	42.69	54.00	-11.31	AVG
3	2413.880	115.78	-24.59	91.19	54.00	37.19	AVG

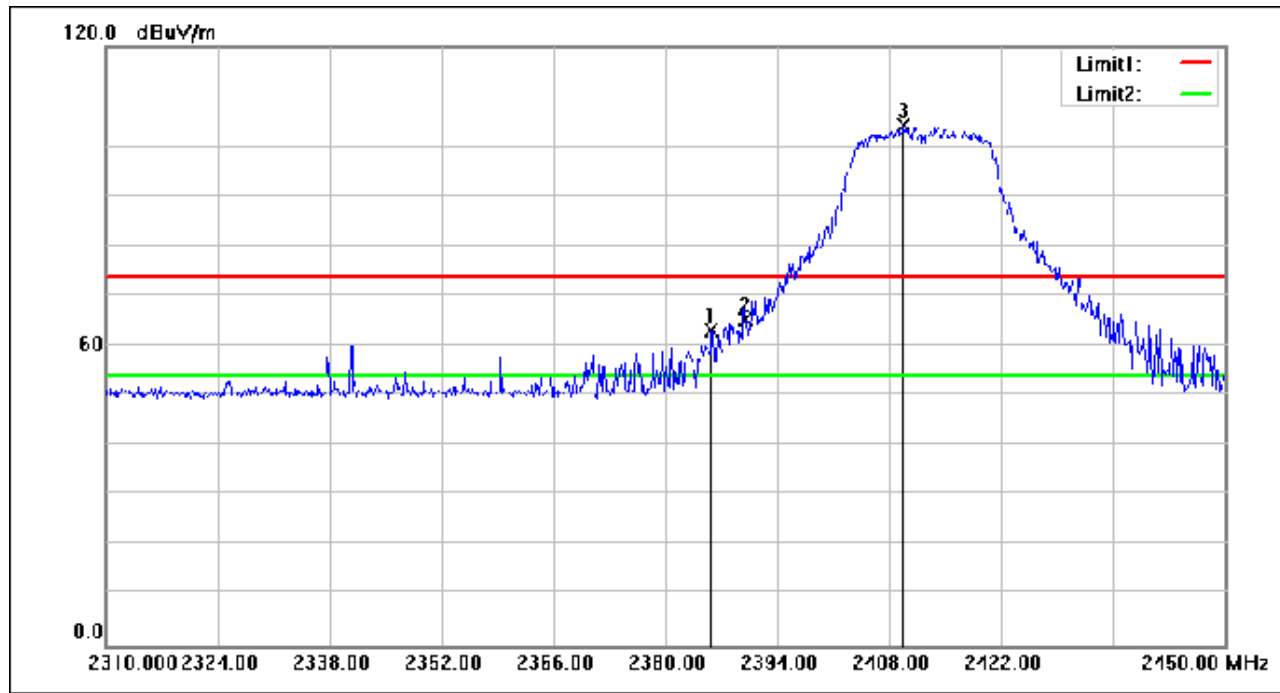
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 34 of 189

Test Mode: 00; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:Low



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2385.740	87.99	-24.73	63.26	74.00	-10.74	peak
2	2390.000	89.85	-24.71	65.14	74.00	-8.86	peak
3	2409.820	128.73	-24.61	104.12	74.00	30.12	peak

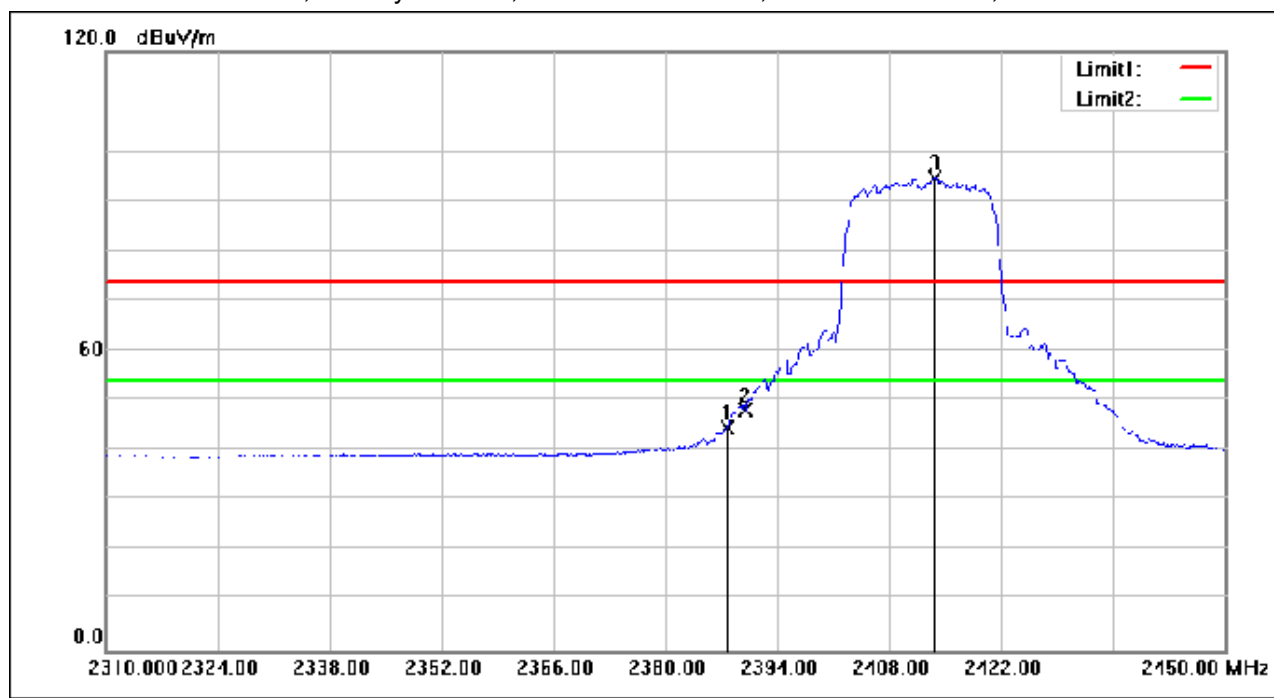
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 35 of 189

Test Mode: 00; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:Low



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2387.700	69.17	-24.72	44.45	54.00	-9.55	AVG
2	2390.000	72.98	-24.71	48.27	54.00	-5.73	AVG
3	2413.740	119.23	-24.59	94.64	54.00	40.64	AVG

Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 36 of 189

Test Mode: 00; Polarity: Horizontal; Modulation: 802.11n; Bandwidth: 20MHz; Channel: High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2460.950	126.71	-24.38	102.33	74.00	28.33	peak
2	2483.500	85.48	-24.27	61.21	74.00	-12.79	peak
3	2486.750	86.36	-24.25	62.11	74.00	-11.89	peak
4	2500.000	75.91	-24.19	51.72	74.00	-22.28	peak

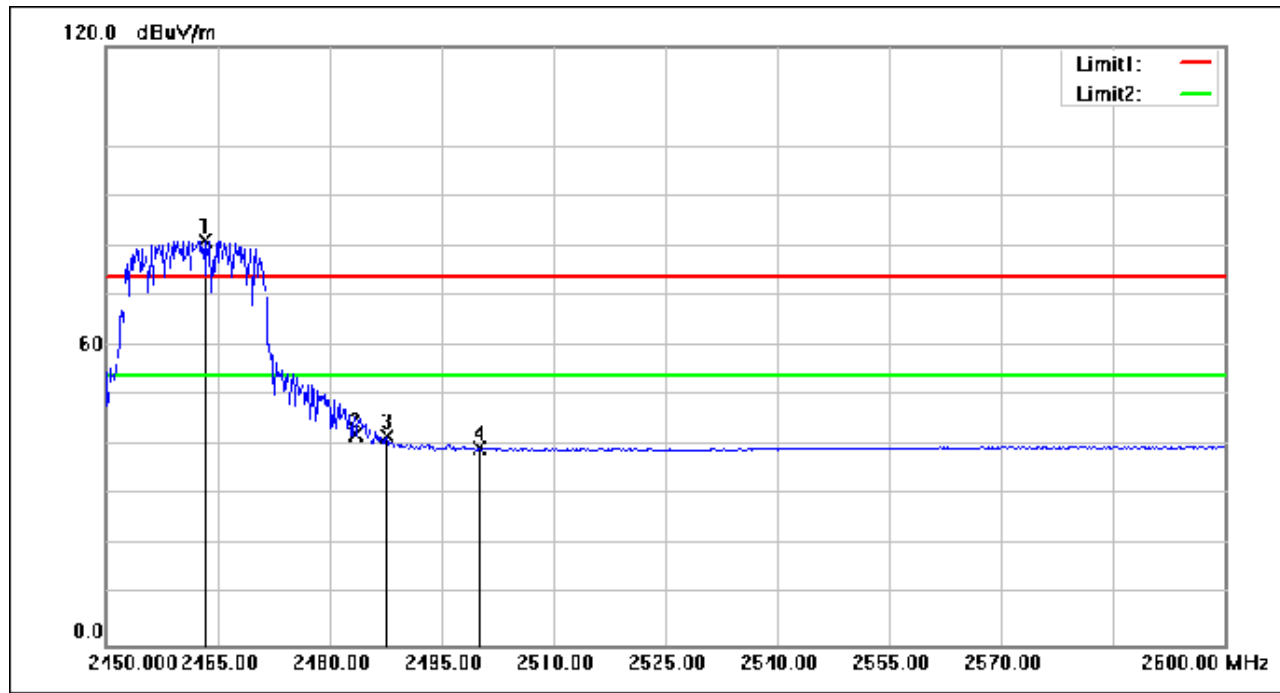
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 37 of 189

Test Mode: 00; Polarity: Horizontal; Modulation: 802.11n; Bandwidth: 20MHz; Channel: High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2463.200	105.57	-24.37	81.20	54.00	27.20	AVG
2	2483.500	66.39	-24.27	42.12	54.00	-11.88	AVG
3	2487.650	66.05	-24.25	41.80	54.00	-12.20	AVG
4	2500.000	63.64	-24.19	39.45	54.00	-14.55	AVG

Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 38 of 189

Test Mode: 00; Polarity: Vertical; Modulation: 802.11n; Bandwidth: 20MHz; Channel: High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2460.050	127.75	-24.38	103.37	74.00	29.37	peak
2	2483.500	90.70	-24.27	66.43	74.00	-7.57	peak
3	2488.400	89.42	-24.25	65.17	74.00	-8.83	peak
4	2500.000	80.33	-24.19	56.14	74.00	-17.86	peak

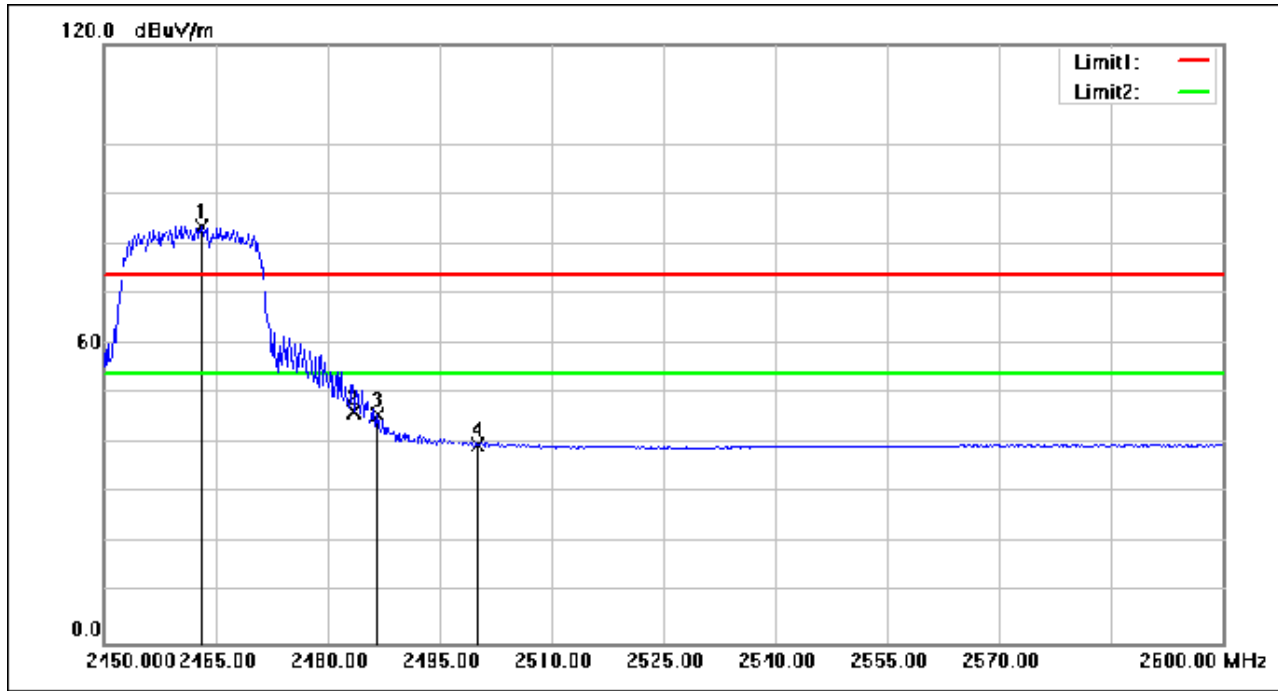
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 39 of 189

Test Mode: 00; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2463.050	108.04	-24.37	83.67	54.00	29.67	AVG
2	2483.500	70.47	-24.27	46.20	54.00	-7.80	AVG
3	2486.750	69.93	-24.25	45.68	54.00	-8.32	AVG
4	2500.000	63.99	-24.19	39.80	54.00	-14.20	AVG

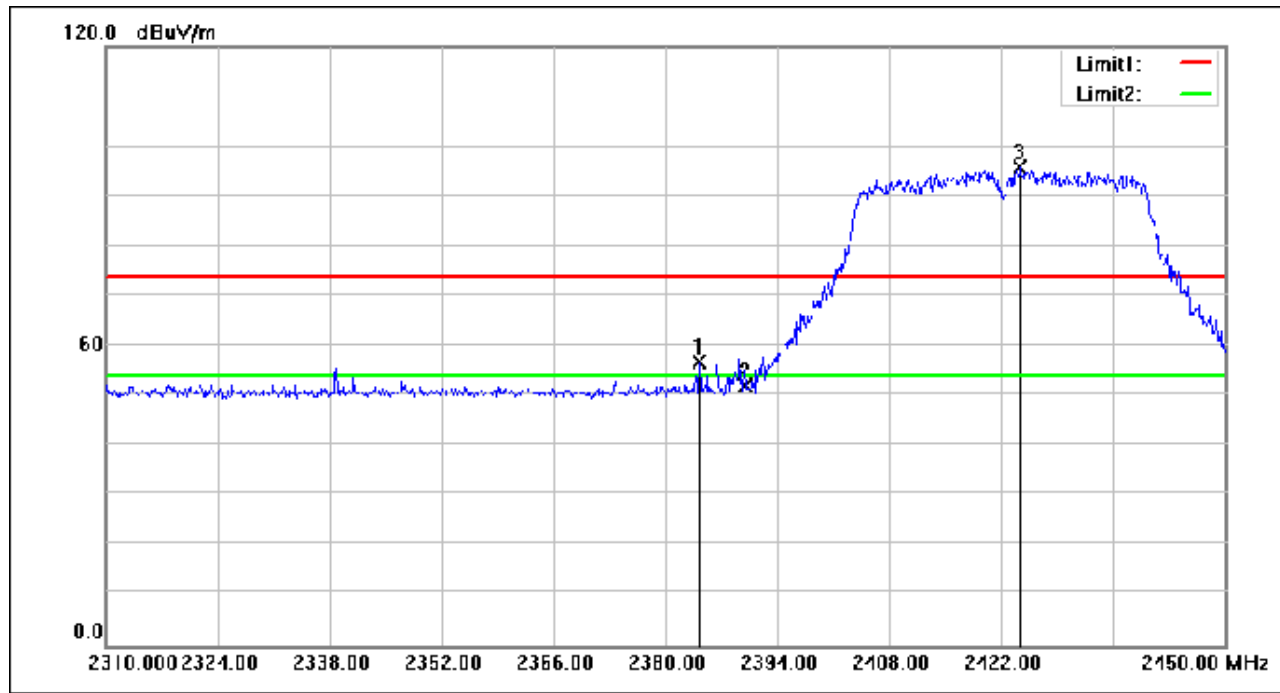
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 40 of 189

Test Mode: 00; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:Low



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2384.200	81.71	-24.73	56.98	74.00	-17.02	peak
2	2390.000	76.69	-24.71	51.98	74.00	-22.02	peak
3	2424.380	120.41	-24.54	95.87	74.00	21.87	peak

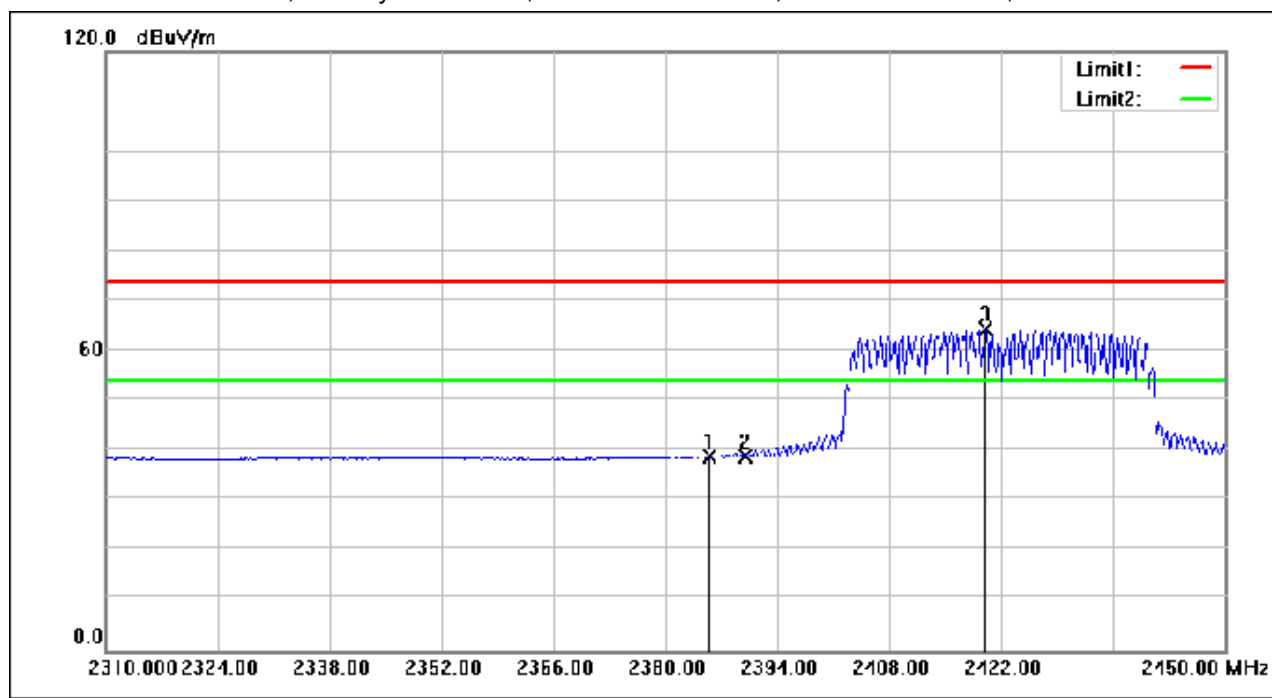
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 41 of 189

Test Mode: 00; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:Low



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2385.460	63.72	-24.73	38.99	54.00	-15.01	AVG
2	2390.000	63.64	-24.71	38.93	54.00	-15.07	AVG
3	2420.040	88.82	-24.57	64.25	54.00	10.25	AVG

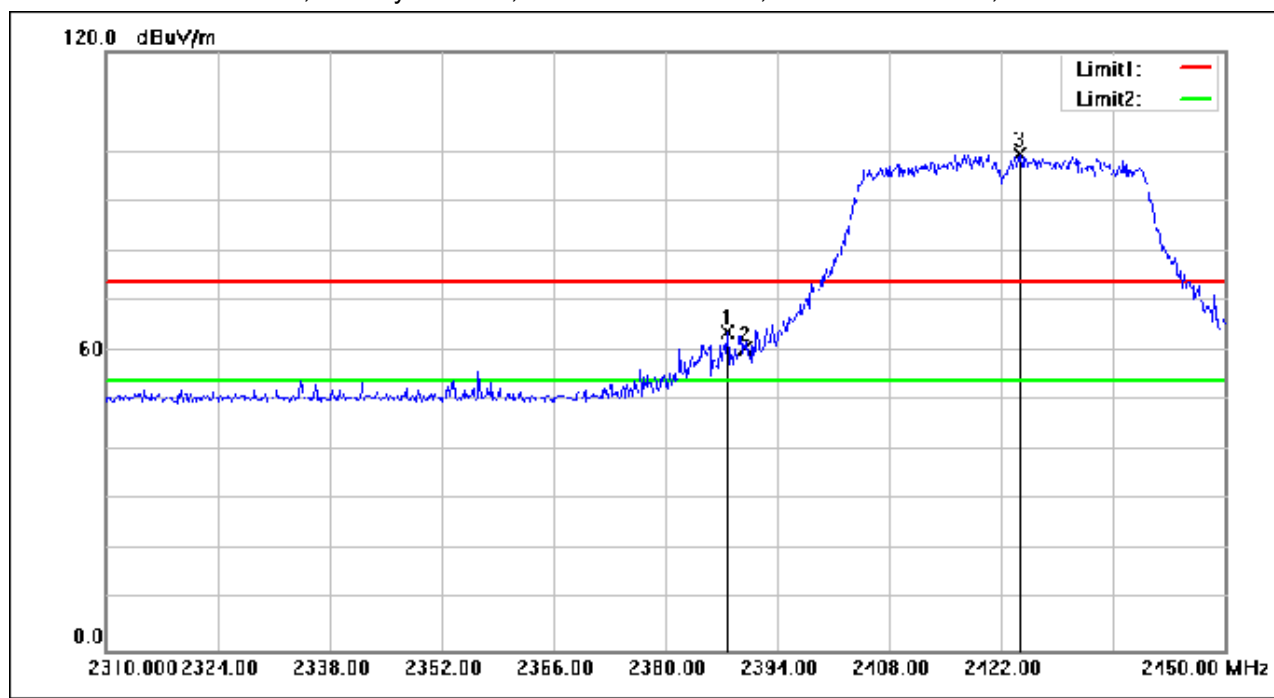
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 42 of 189

Test Mode: 00; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:Low



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2387.700	88.35	-24.72	63.63	74.00	-10.37	peak
2	2390.000	85.22	-24.71	60.51	74.00	-13.49	peak
3	2424.240	123.92	-24.54	99.38	74.00	25.38	peak

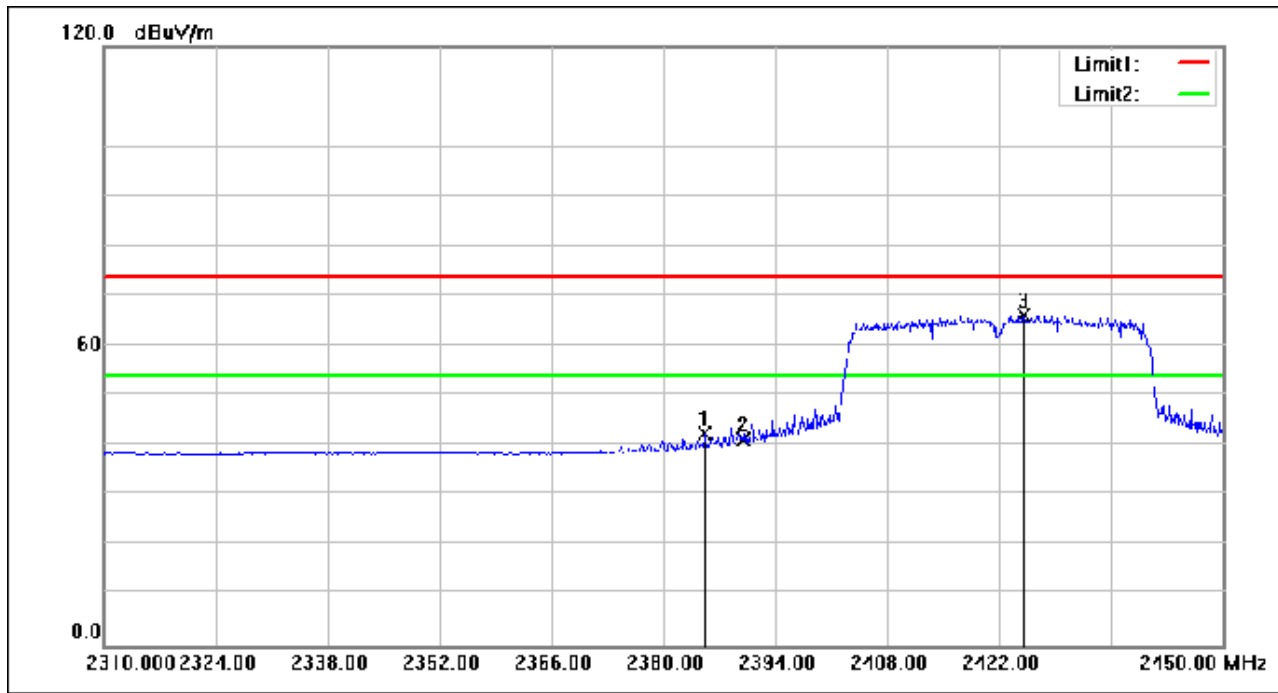
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 43 of 189

Test Mode: 00; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:Low



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2385.180	67.11	-24.73	42.38	54.00	-11.62	AVG
2	2390.000	66.03	-24.71	41.32	54.00	-12.68	AVG
3	2425.080	90.80	-24.54	66.26	54.00	12.26	AVG

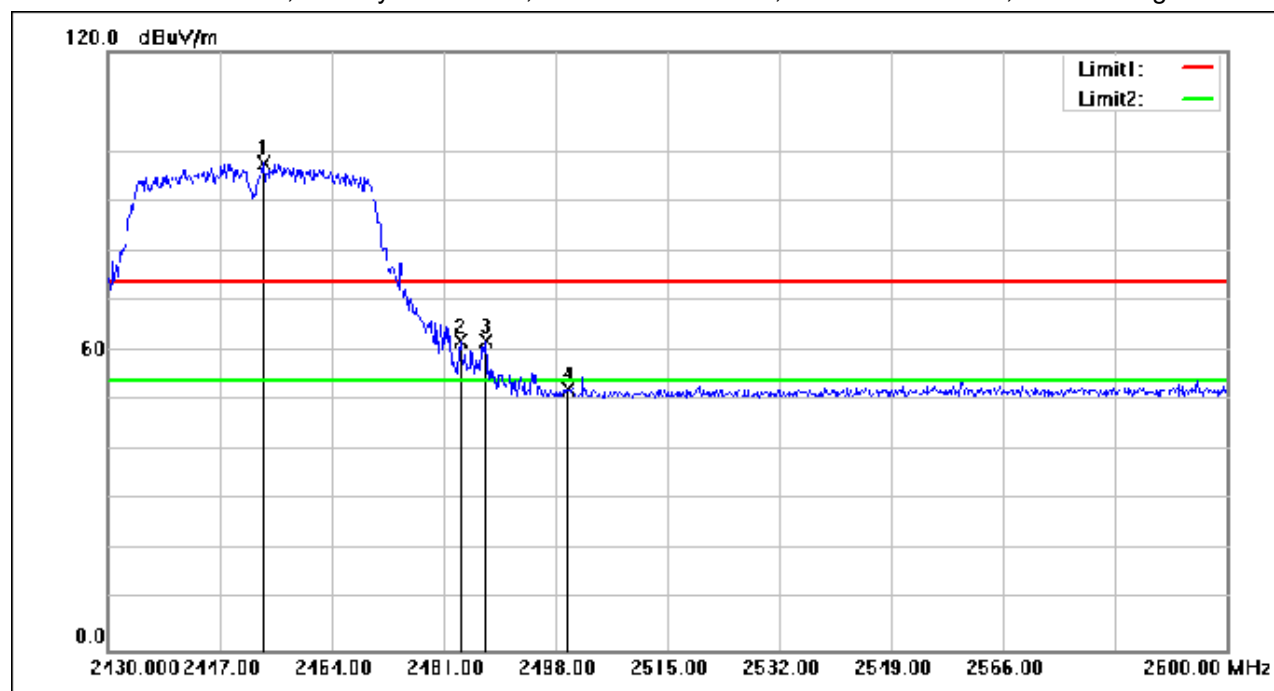
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 44 of 189

Test Mode: 00; Polarity: Horizontal; Modulation: 802.11n; Bandwidth: 40MHz; Channel: High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2453.630	121.93	-24.41	97.52	74.00	23.52	peak
2	2483.500	86.32	-24.27	62.05	74.00	-11.95	peak
3	2487.460	86.23	-24.25	61.98	74.00	-12.02	peak
4	2500.000	76.62	-24.19	52.43	74.00	-21.57	peak

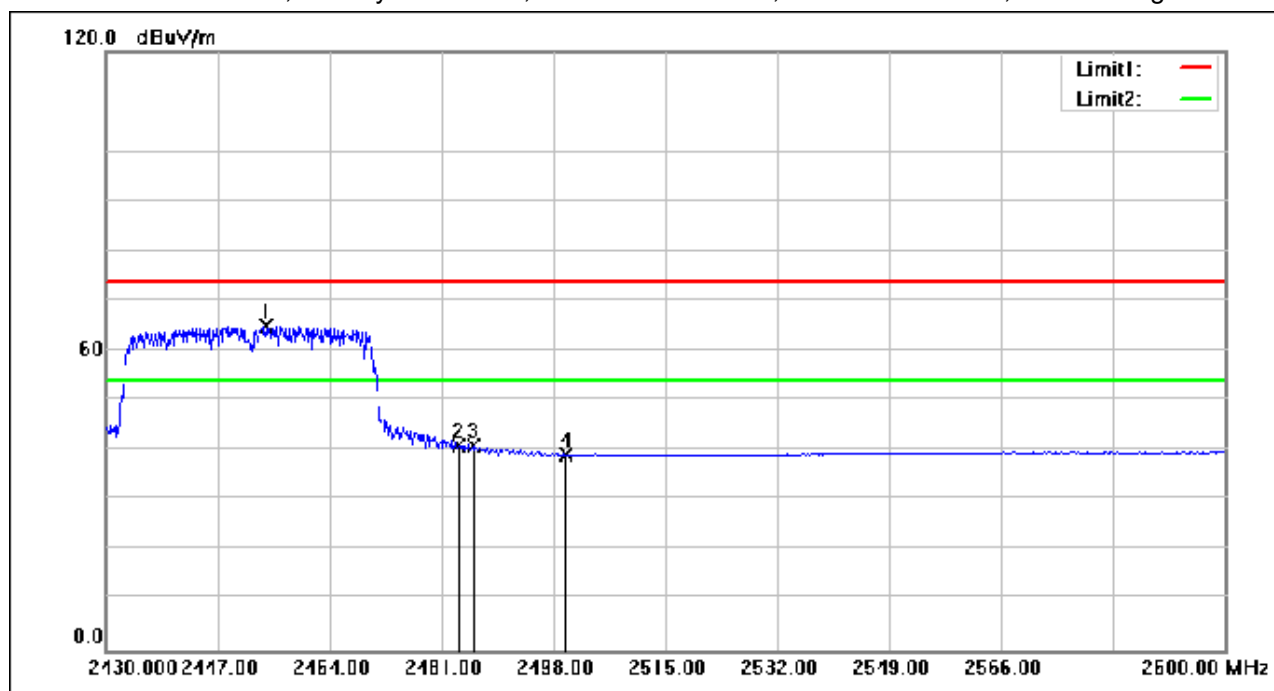
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 45 of 189

Test Mode: 00; Polarity: Horizontal; Modulation: 802.11n; Bandwidth: 40MHz; Channel: High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2454.310	89.49	-24.40	65.09	54.00	11.09	AVG
2	2483.500	65.26	-24.27	40.99	54.00	-13.01	AVG
3	2485.760	65.34	-24.26	41.08	54.00	-12.92	AVG
4	2500.000	63.40	-24.19	39.21	54.00	-14.79	AVG

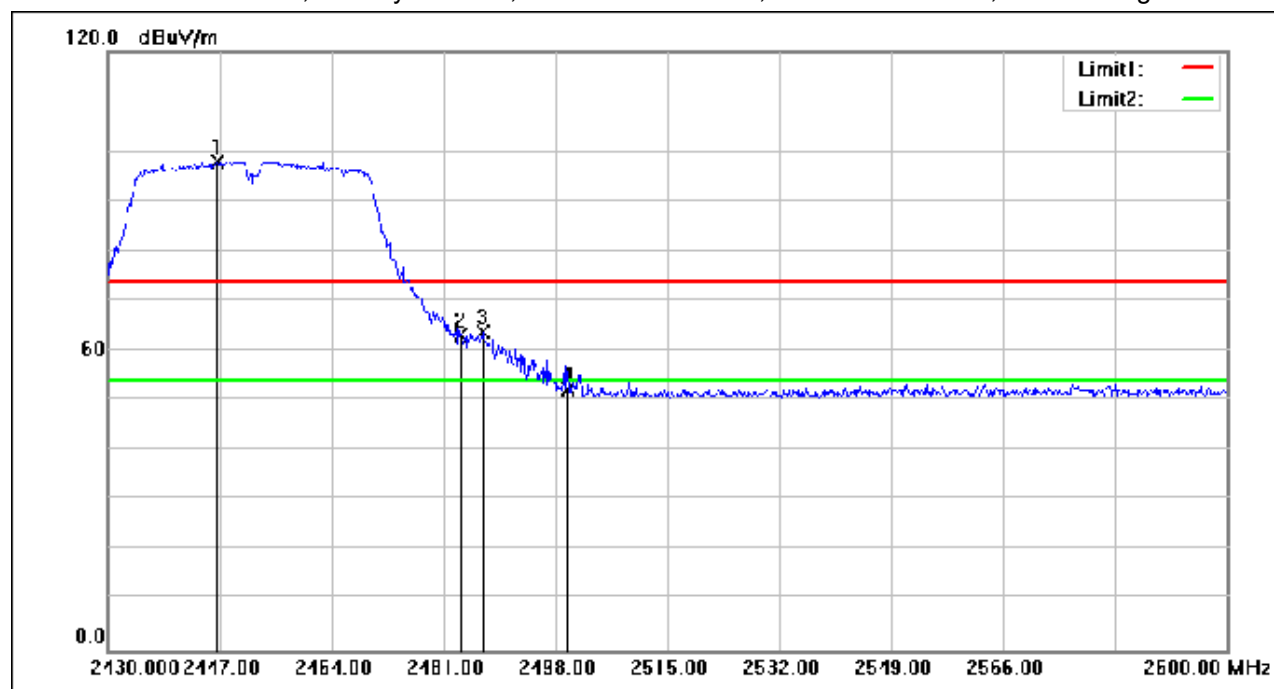
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 46 of 189

Test Mode: 00; Polarity: Vertical; Modulation: 802.11n; Bandwidth: 40MHz; Channel: High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2446.660	122.41	-24.44	97.97	74.00	23.97	peak
2	2483.500	87.43	-24.27	63.16	74.00	-10.84	peak
3	2486.950	87.90	-24.25	63.65	74.00	-10.35	peak
4	2500.000	76.54	-24.19	52.35	74.00	-21.65	peak

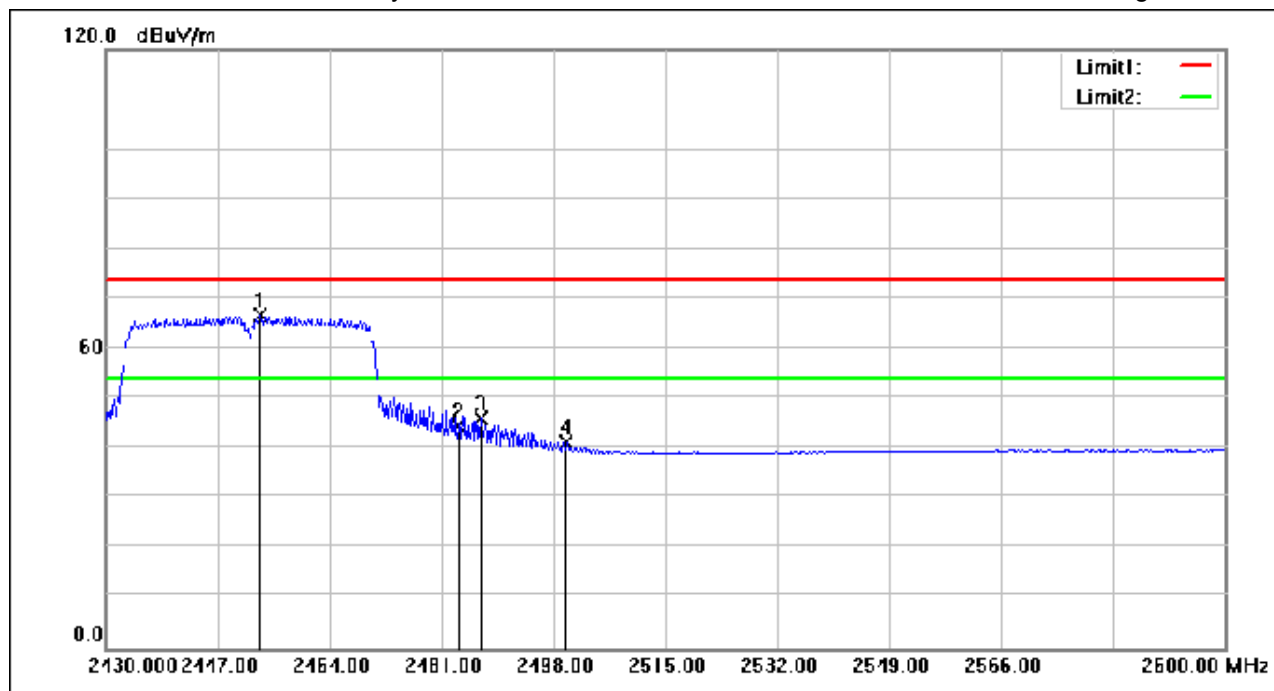
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 47 of 189

Test Mode: 00; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2453.460	91.09	-24.41	66.68	54.00	12.68	AVG
2	2483.500	68.78	-24.27	44.51	54.00	-9.49	AVG
3	2486.950	70.35	-24.25	46.10	54.00	-7.90	AVG
4	2500.000	65.35	-24.19	41.16	54.00	-12.84	AVG

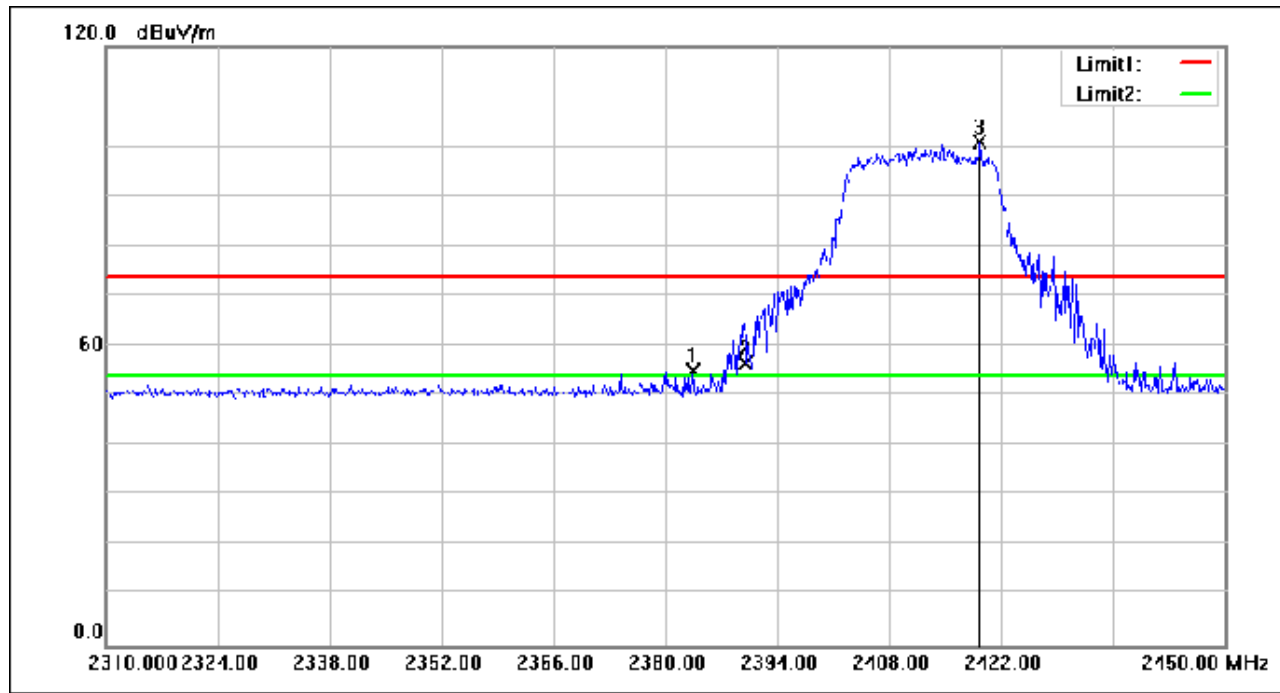
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 48 of 189

Test Mode: 00; Polarity: Horizontal; Modulation: 802.11ax(Full RU0); Bandwidth: 20MHz; Channel: Low



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2383.500	79.73	-24.73	55.00	74.00	-19.00	peak
2	2390.000	81.26	-24.71	56.55	74.00	-17.45	peak
3	2419.340	125.39	-24.57	100.82	74.00	26.82	peak

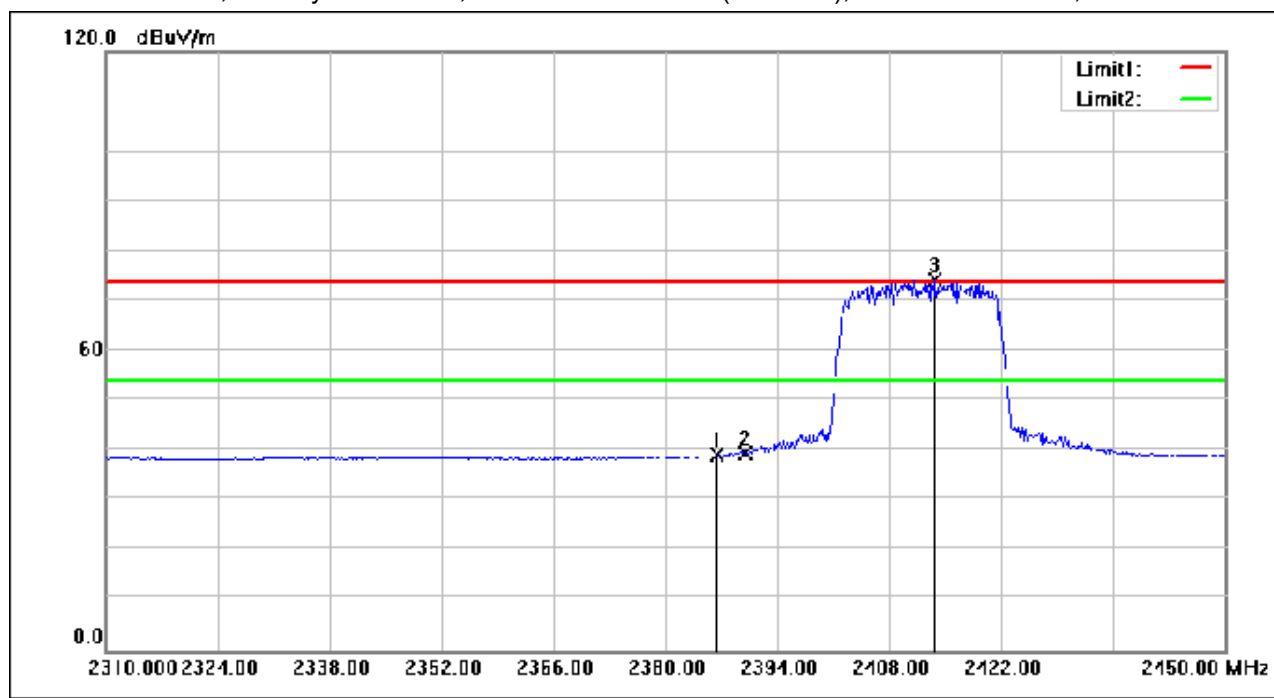
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 49 of 189

Test Mode: 00; Polarity: Horizontal; Modulation: 802.11ax(Full RU0); Bandwidth: 20MHz; Channel: Low



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2386.440	63.81	-24.72	39.09	54.00	-14.91	AVG
2	2390.000	64.26	-24.71	39.55	54.00	-14.45	AVG
3	2413.740	98.92	-24.59	74.33	54.00	20.33	AVG

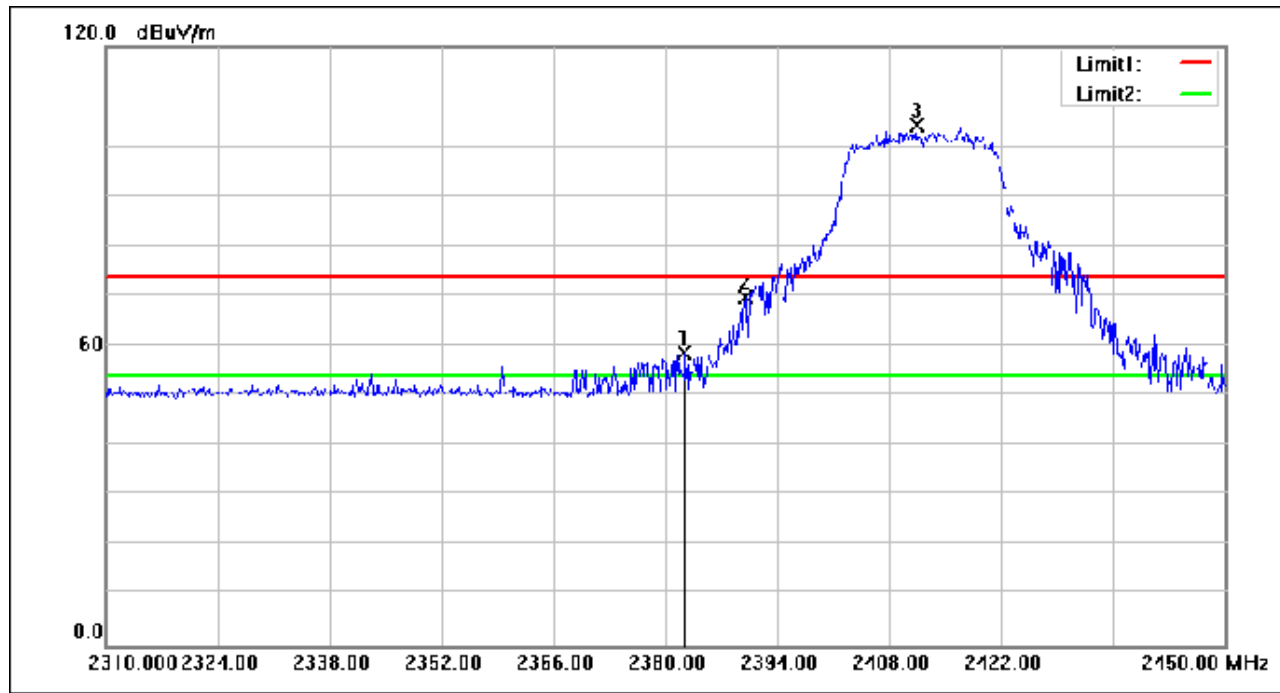
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 50 of 189

Test Mode: 00; Polarity: Vertical; Modulation: 802.11ax(Full RU0); Bandwidth: 20MHz; Channel: Low



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2382.380	83.28	-24.74	58.54	74.00	-15.46	peak
2	2390.000	94.54	-24.71	69.83	74.00	-4.17	peak
3	2411.360	128.72	-24.60	104.12	74.00	30.12	peak

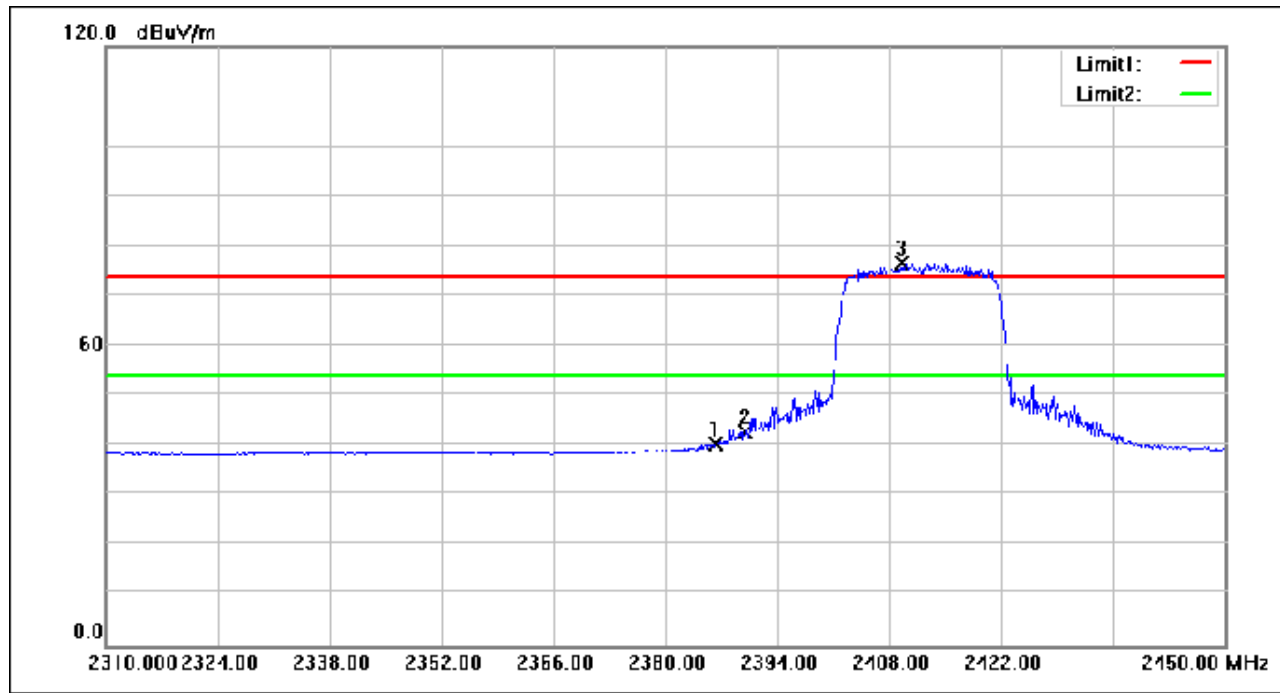
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 51 of 189

Test Mode: 00; Polarity: Vertical; Modulation:802.11ax(Full RU0); Bandwidth:20MHz; Channel:Low



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2386.160	65.11	-24.72	40.39	54.00	-13.61	AVG
2	2390.000	67.47	-24.71	42.76	54.00	-11.24	AVG
3	2409.540	101.36	-24.61	76.75	54.00	22.75	AVG

Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 52 of 189

Test Mode: 00; Polarity: Horizontal; Modulation: 802.11ax(Full RU0); Bandwidth: 20MHz; Channel: High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2464.250	126.46	-24.36	102.10	74.00	28.10	peak
2	2483.500	89.66	-24.27	65.39	74.00	-8.61	peak
3	2491.100	85.71	-24.24	61.47	74.00	-12.53	peak
4	2500.000	75.63	-24.19	51.44	74.00	-22.56	peak

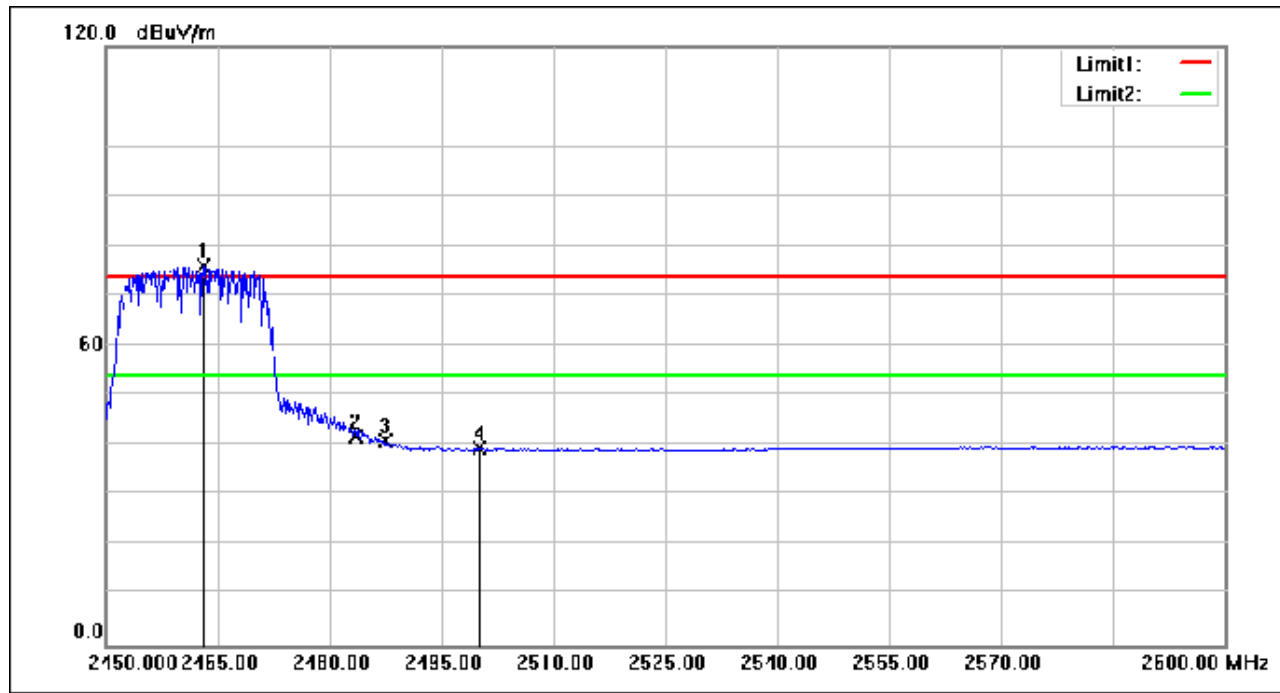
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 53 of 189

Test Mode: 00; Polarity: Horizontal; Modulation:802.11ax(Full RU0); Bandwidth:20MHz; Channel:High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2463.050	100.37	-24.37	76.00	54.00	22.00	AVG
2	2483.500	66.00	-24.27	41.73	54.00	-12.27	AVG
3	2487.500	65.09	-24.25	40.84	54.00	-13.16	AVG
4	2500.000	63.57	-24.19	39.38	54.00	-14.62	AVG

Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 54 of 189

Test Mode: 00; Polarity: Vertical; Modulation:802.11ax(Full RU0); Bandwidth:20MHz; Channel:High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2458.400	130.70	-24.39	106.31	74.00	32.31	peak
2	2483.500	95.35	-24.27	71.08	74.00	-2.92	peak
3	2486.450	94.21	-24.25	69.96	74.00	-4.04	peak
4	2500.000	75.73	-24.19	51.54	74.00	-22.46	peak

Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 55 of 189

Test Mode: 00; Polarity: Vertical; Modulation:802.11ax(Full RU0); Bandwidth:20MHz; Channel:High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2462.450	102.44	-24.37	78.07	54.00	24.07	AVG
2	2483.500	70.75	-24.27	46.48	54.00	-7.52	AVG
3	2486.900	69.80	-24.25	45.55	54.00	-8.45	AVG
4	2500.000	63.67	-24.19	39.48	54.00	-14.52	AVG

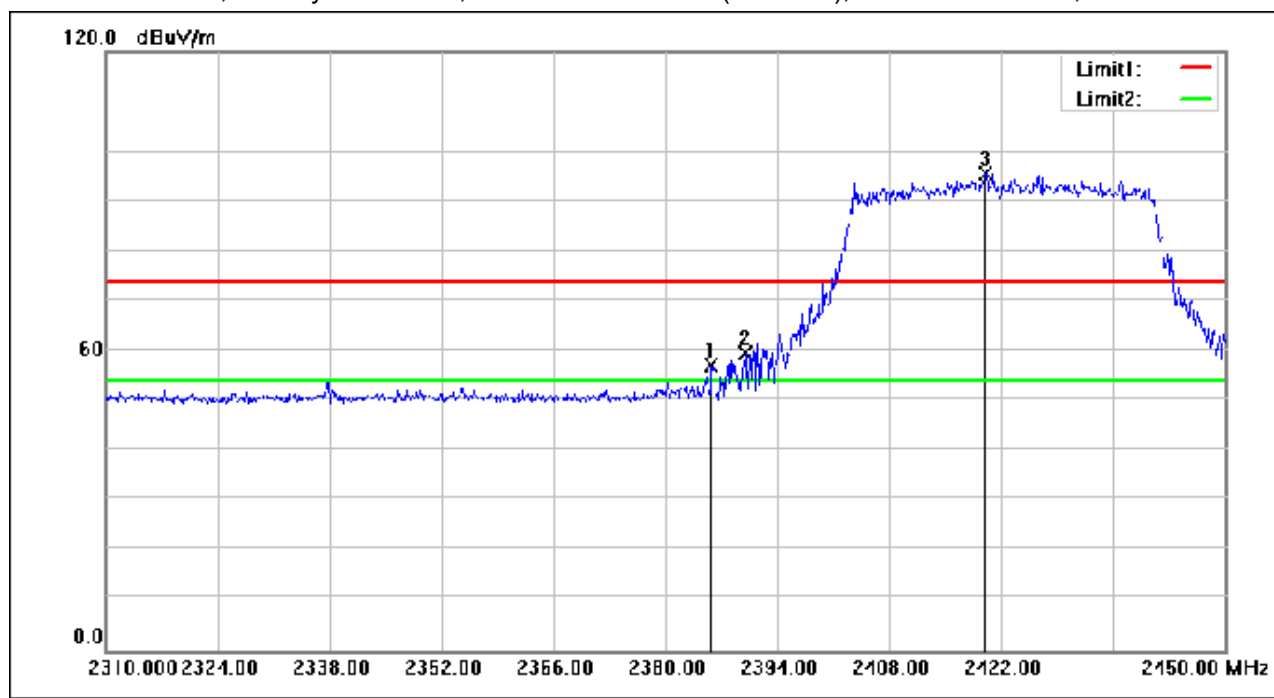
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 56 of 189

Test Mode: 00; Polarity: Horizontal; Modulation: 802.11ax(Full RU0); Bandwidth: 40MHz; Channel: Low



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2385.740	81.81	-24.73	57.08	74.00	-16.92	peak
2	2390.000	84.30	-24.71	59.59	74.00	-14.41	peak
3	2420.040	120.15	-24.57	95.58	74.00	21.58	peak

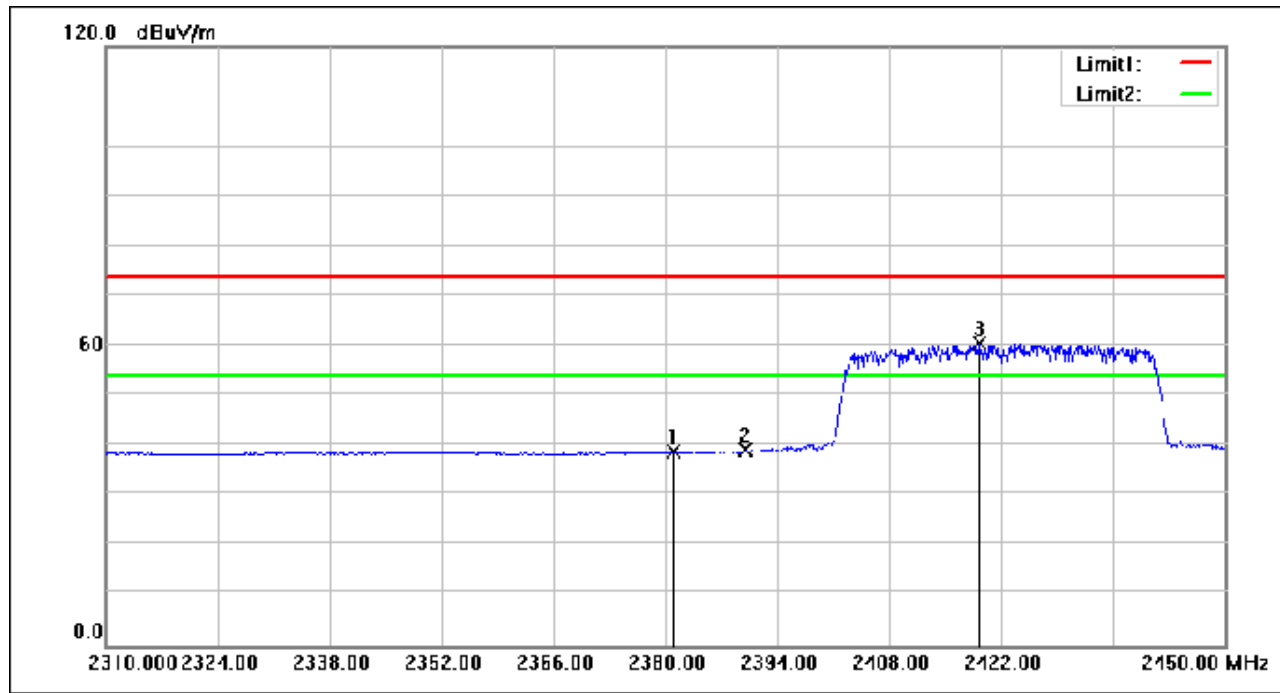
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 57 of 189

Test Mode: 00; Polarity: Horizontal; Modulation: 802.11ax(Full RU0); Bandwidth: 40MHz; Channel: Low



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2380.980	63.52	-24.74	38.78	54.00	-15.22	AVG
2	2390.000	63.73	-24.71	39.02	54.00	-14.98	AVG
3	2419.200	85.05	-24.57	60.48	54.00	6.48	AVG

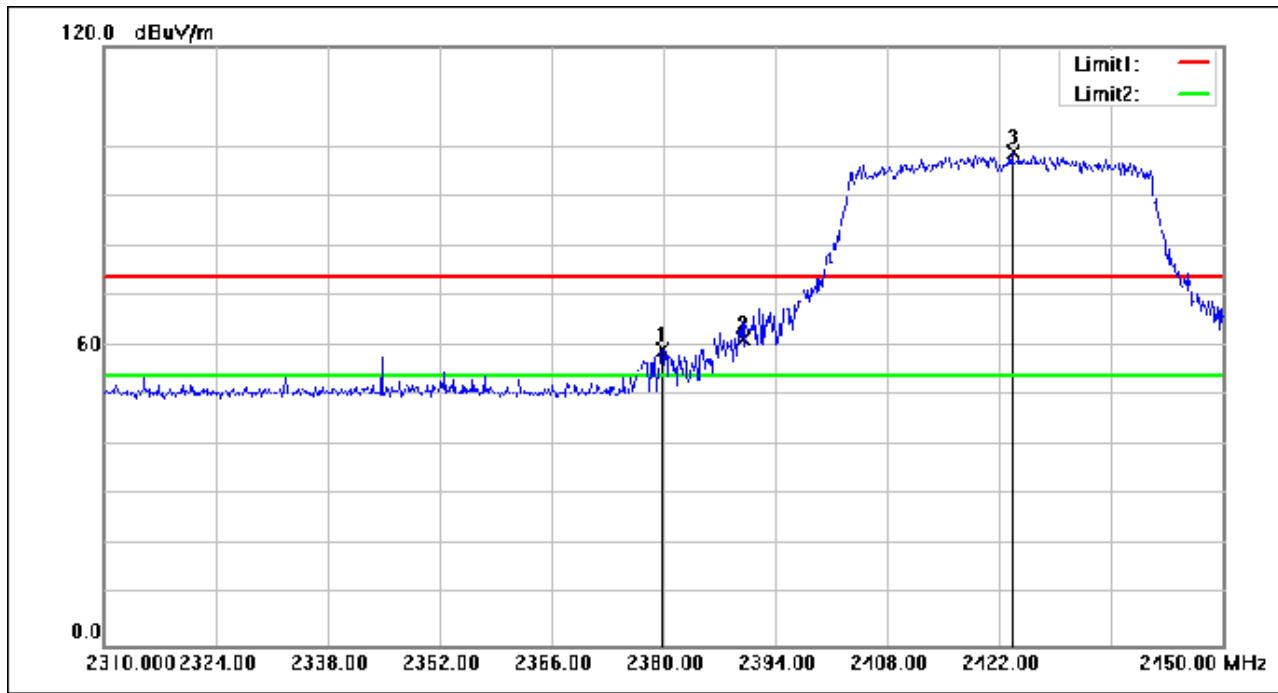
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 58 of 189

Test Mode: 00; Polarity: Vertical; Modulation: 802.11ax(Full RU0); Bandwidth: 40MHz; Channel: Low



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2379.860	84.14	-24.75	59.39	74.00	-14.61	peak
2	2390.000	85.97	-24.71	61.26	74.00	-12.74	peak
3	2423.680	123.25	-24.54	98.71	74.00	24.71	peak

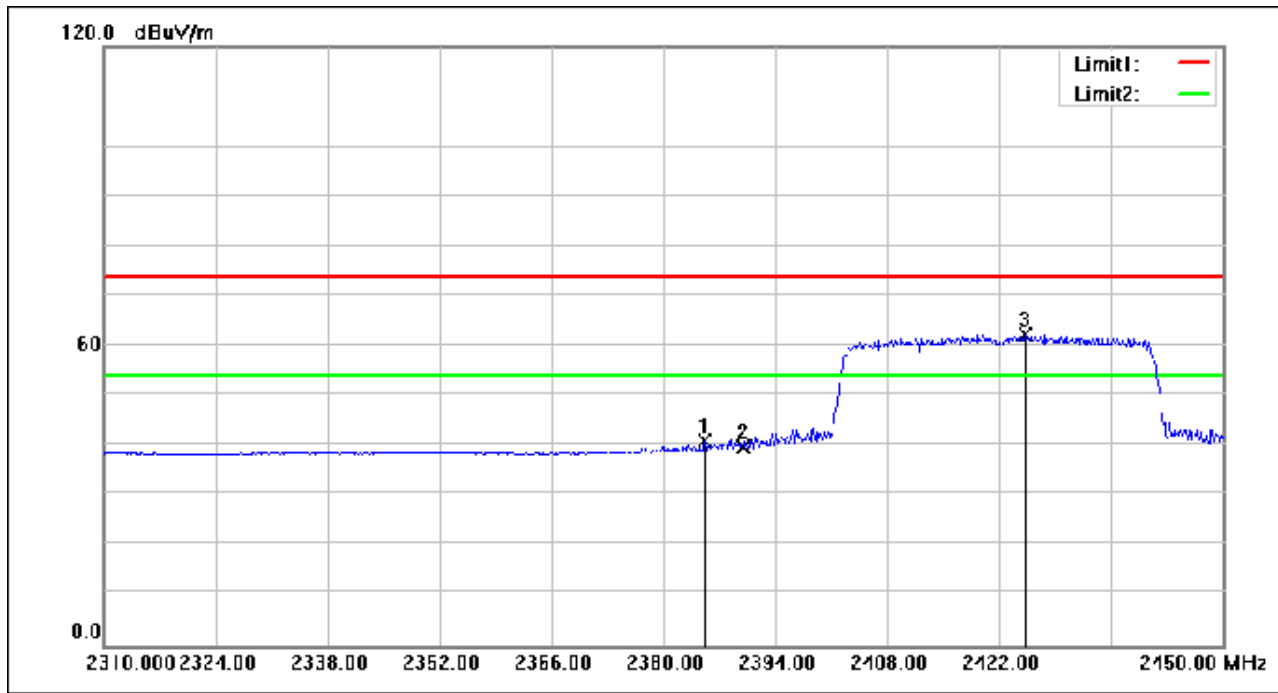
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 59 of 189

Test Mode: 00; Polarity: Vertical; Modulation: 802.11ax(Full RU0); Bandwidth: 40MHz; Channel: Low



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2385.040	65.60	-24.73	40.87	54.00	-13.13	AVG
2	2390.000	64.49	-24.71	39.78	54.00	-14.22	AVG
3	2425.220	86.88	-24.54	62.34	54.00	8.34	AVG

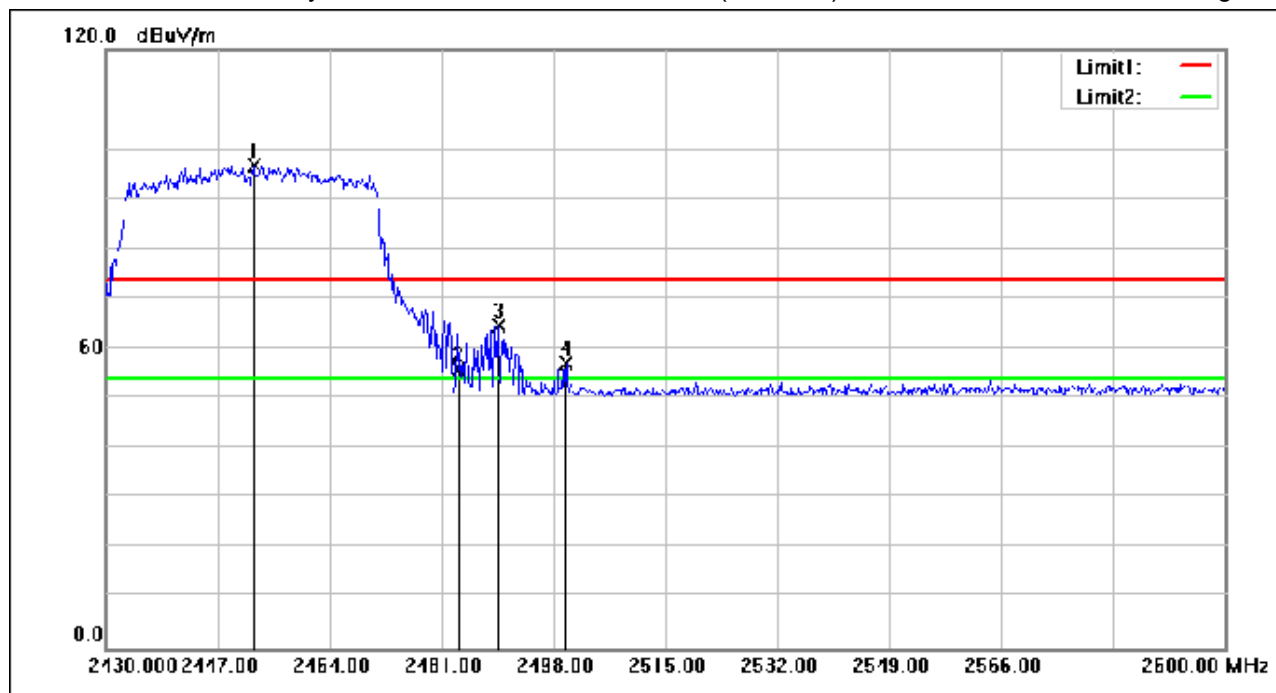
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 60 of 189

Test Mode: 00; Polarity: Horizontal; Modulation: 802.11ax(Full RU0); Bandwidth: 40MHz; Channel: High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2452.440	121.24	-24.41	96.83	74.00	22.83	peak
2	2483.500	80.19	-24.27	55.92	74.00	-18.08	peak
3	2489.670	88.81	-24.24	64.57	74.00	-9.43	peak
4	2500.000	81.27	-24.19	57.08	74.00	-16.92	peak

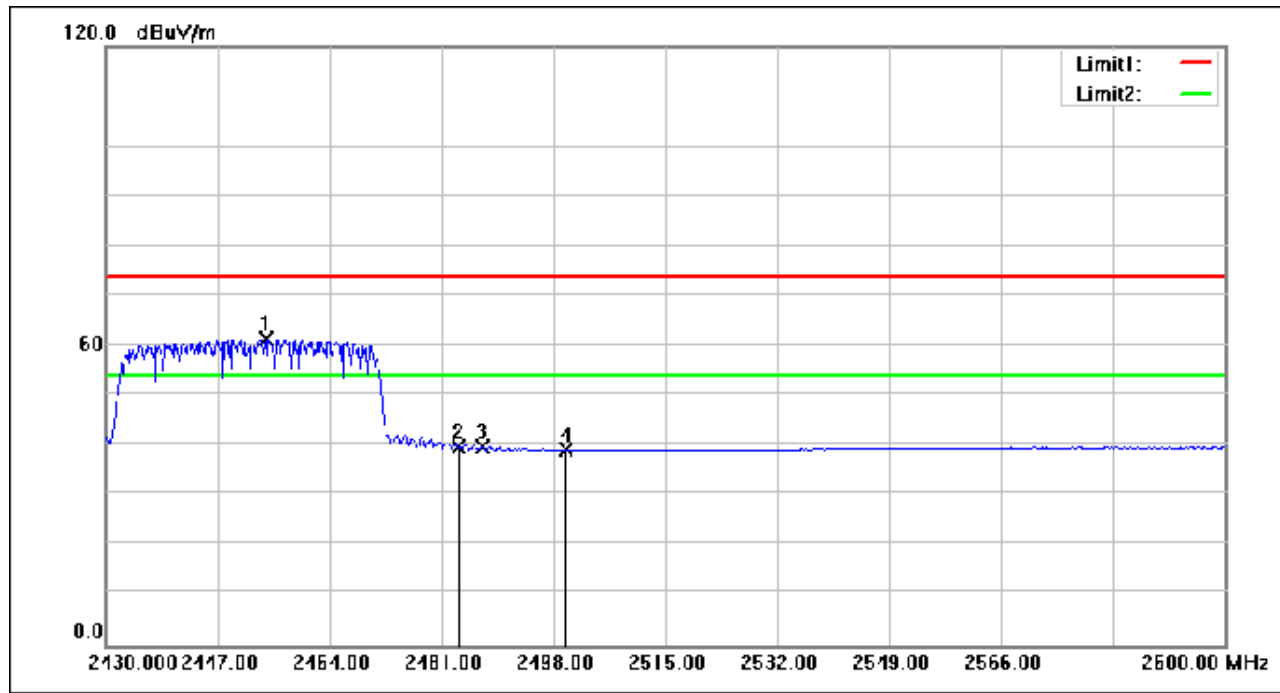
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 61 of 189

Test Mode: 00; Polarity: Horizontal; Modulation:802.11ax(Full RU0); Bandwidth:40MHz; Channel:High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2454.310	85.64	-24.40	61.24	54.00	7.24	AVG
2	2483.500	63.90	-24.27	39.63	54.00	-14.37	AVG
3	2487.290	64.15	-24.25	39.90	54.00	-14.10	AVG
4	2500.000	63.37	-24.19	39.18	54.00	-14.82	AVG

Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 62 of 189

Test Mode: 00; Polarity: Vertical; Modulation: 802.11ax(Full RU0); Bandwidth: 40MHz; Channel: High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2448.530	124.45	-24.44	100.01	74.00	26.01	peak
2	2483.500	88.25	-24.27	63.98	74.00	-10.02	peak
3	2488.140	95.52	-24.25	71.27	74.00	-2.73	peak
4	2500.000	82.79	-24.19	58.60	74.00	-15.40	peak

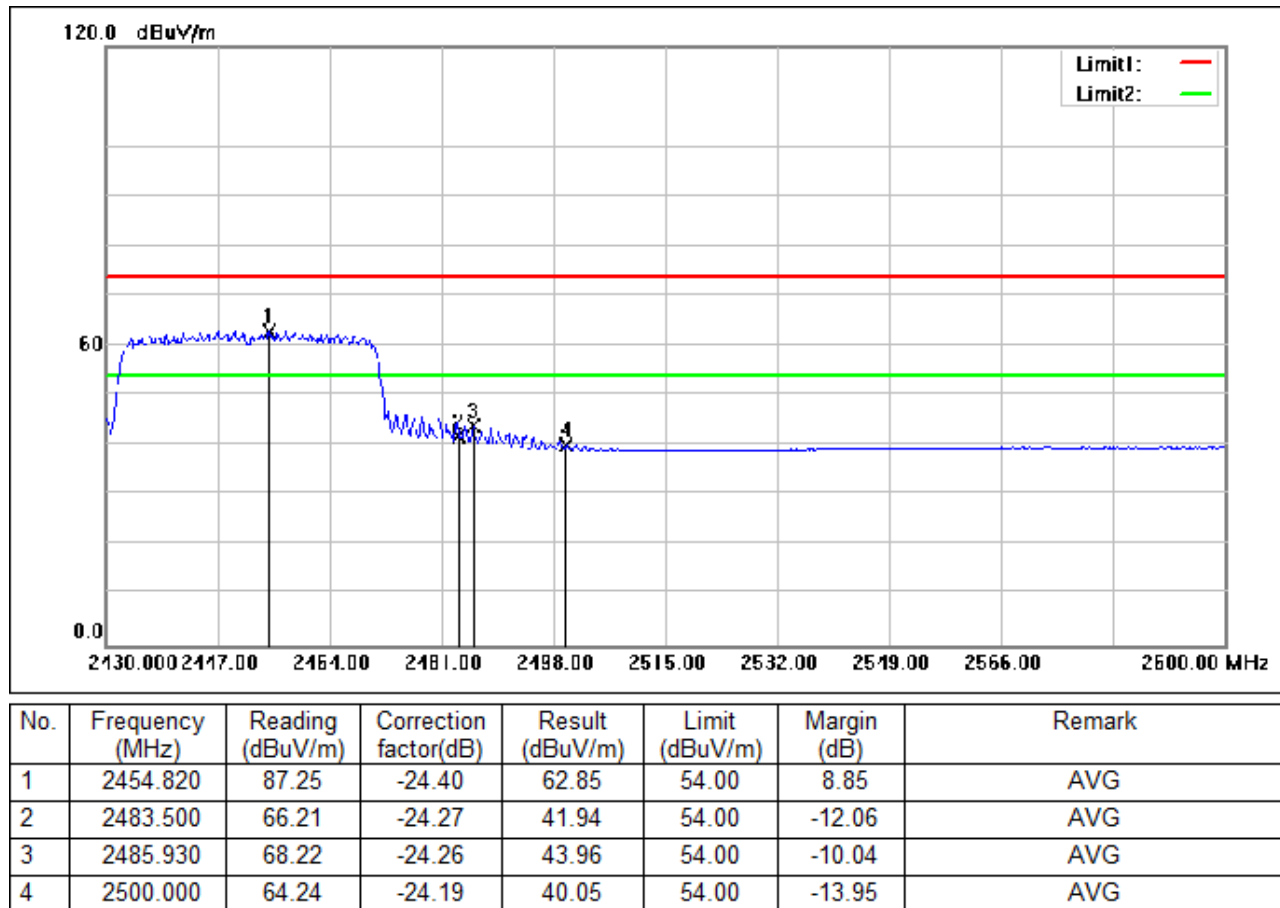
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 63 of 189

Test Mode: 00; Polarity: Vertical; Modulation:802.11ax(Full RU0); Bandwidth:40MHz; Channel:High



7.3 Radiated Spurious Emissions Below 1GHz

Test Requirement 47 CFR Part 15, Subpart C 15.205 & 15.209

Test Method: ANSI C63.10 (2013) Section 6.4,6.5

Limit:

Frequency(MHz)	Field strength(microvolts/meter)	Measurement distance(meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
960-1000	500	3

7.3.1 E.U.T. Operation

Operating Environment:

Temperature: 21.9 °C

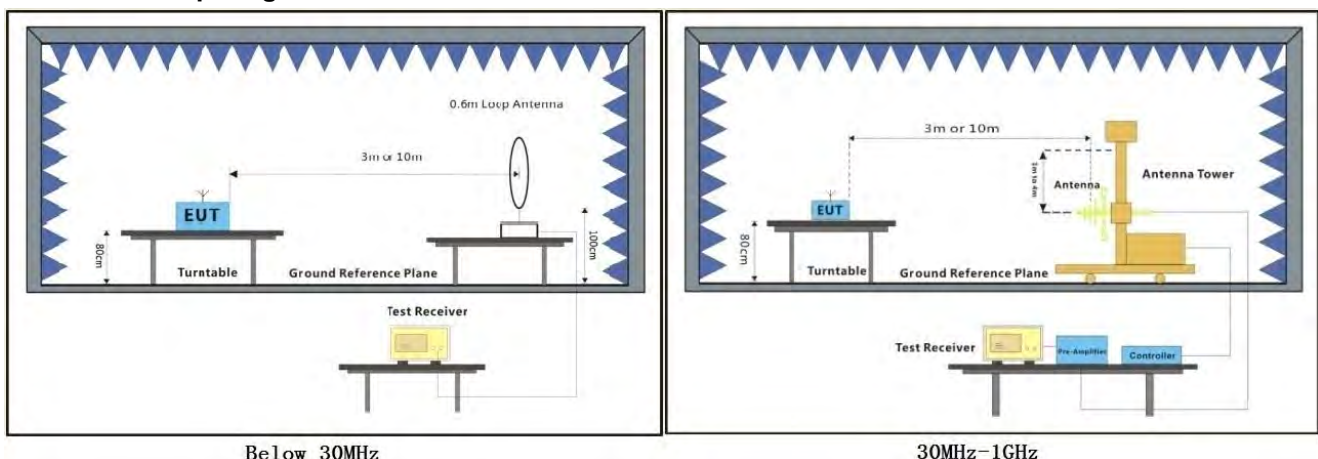
Humidity: 55.2 % RH

Atmospheric Pressure: 1010 mbar

7.3.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20); data rate @ 13.5Mbps is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40). Only the data of worst case is recorded in the report.

7.3.3 Test Setup Diagram



7.3.4 Measurement Procedure and Data

- a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna height 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.
- d. 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 (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using quasi-peak method as specified and then reported in a data sheet.
- g. Test the EUT in the lowest channel, the middle channel, the Highest channel.
- h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- i. Repeat above procedures until all frequencies measured was complete.

Remark:

1. $\text{Level} = \text{Read Level} + \text{Cable Loss} + \text{Antenna Factor} - \text{Preamplifier Factor}$
2. Scan from 9kHz to 30MHz, the disturbance below 30MHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.
3. The EUT has two different types of adapters: the Power Adapter1 (S010-1A050150VUU) and the Power Adapter2 (TPA-141A050150UU01), both of which were pre-tested. Power Adapter1 is identified as the worst case, and only the worst results are reflected in the report.

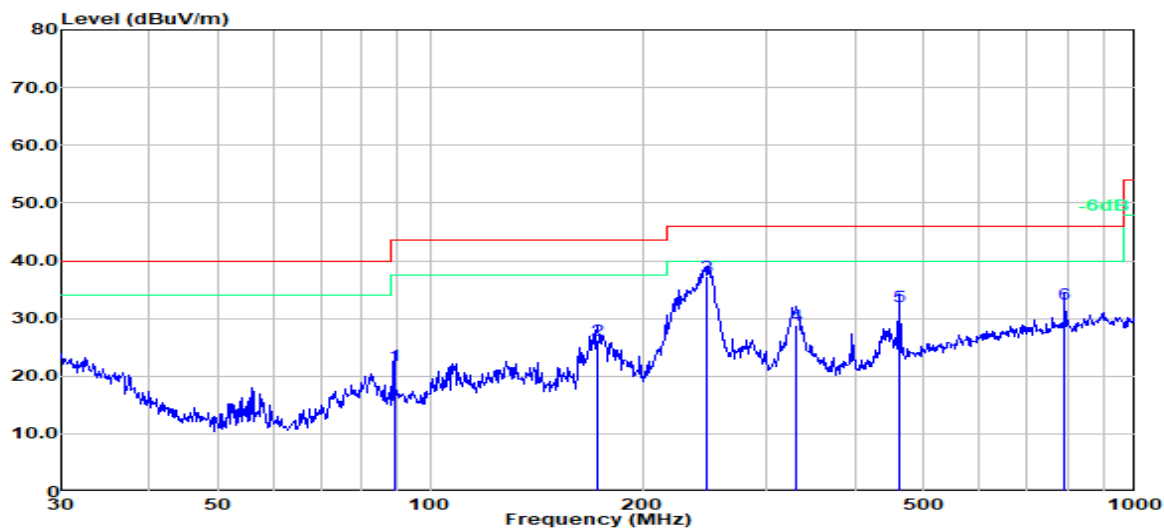
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 66 of 189

Test Mode: 00; Polarity: Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	88.9640	10.30	11.59	21.89	43.50	-21.61	100	423	QP
2	172.5990	15.07	11.07	26.14	43.50	-17.36	100	105	QP
3	245.9510	23.69	13.64	37.33	46.00	-8.67	100	342	QP
4	330.1950	12.18	16.60	28.78	46.00	-17.22	100	364	QP
5	462.3460	12.17	19.97	32.14	46.00	-13.86	100	253	QP
6	793.3960	8.06	24.49	32.55	46.00	-13.45	100	179	QP

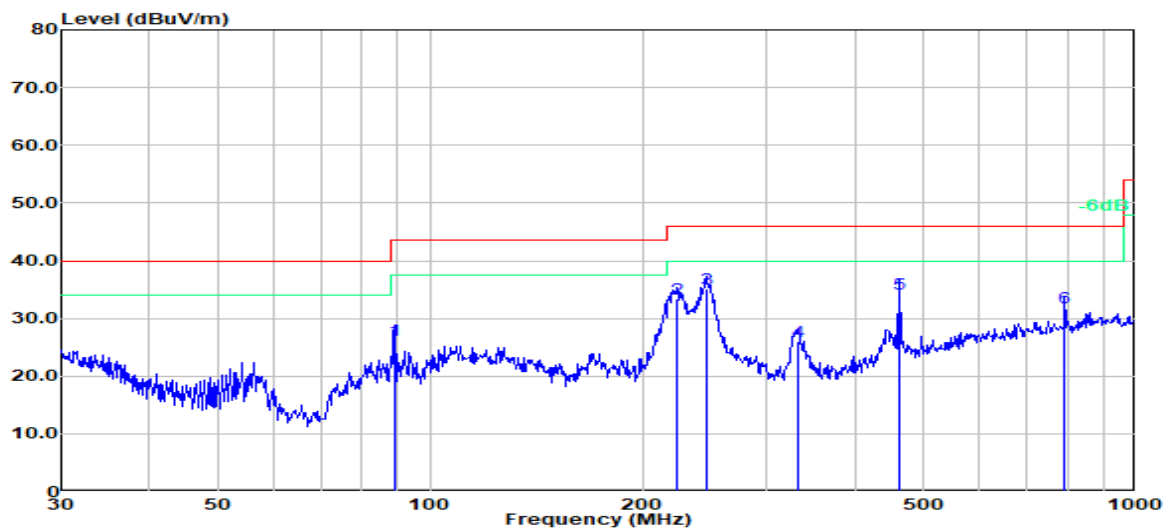
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 67 of 189

Test Mode: 00; Polarity: Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	88.9640	14.54	11.59	26.13	43.50	-17.37	100	92	QP
2	223.7330	20.60	12.87	33.47	46.00	-12.53	100	211	QP
3	245.9510	21.48	13.64	35.12	46.00	-10.88	100	158	QP
4	331.3550	9.55	16.48	26.03	46.00	-19.97	100	211	QP
5	462.3460	14.24	19.97	34.21	46.00	-11.79	100	196	QP
6	793.3960	7.38	24.49	31.87	46.00	-14.13	100	314	QP

Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 68 of 189

7.4 Radiated Spurious Emissions Above 1GHz

Test Requirement 47 CFR Part 15, Subpart C 15.205 & 15.209

Test Method: ANSI C63.10 (2013) Section 6.6

Limit:

Frequency(MHz)	Field strength(microvolts/meter)	Measurement distance(meters)
Above 1000	500	3

7.4.1 E.U.T. Operation

Operating Environment:

Temperature: 22.1 °C

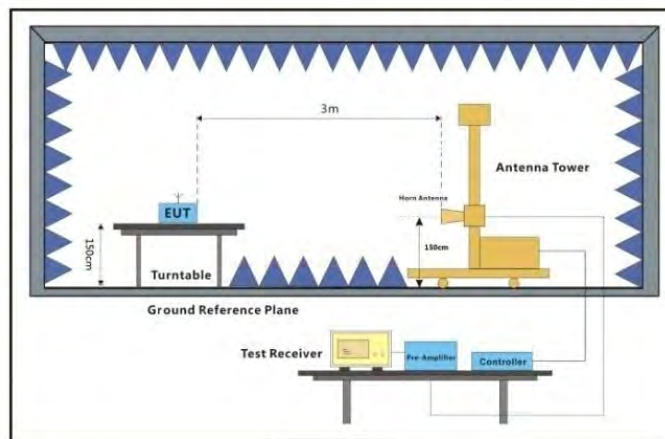
Humidity: 56.3 % RH

Atmospheric Pressure: 1010 mbar

7.4.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20); data rate @ 13.5Mbps is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40). Only the data of worst case is recorded in the report.

7.4.3 Test Setup Diagram



Above 1GHz

7.4.4 Measurement Procedure and Data

- a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna height 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.
- d. 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 (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak or average method as specified and then reported in a data sheet.
- g. Test the EUT in the lowest channel, the middle channel, the Highest channel.
- h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- i. Repeat above procedures until all frequencies measured was complete.

Remark:

1. $\text{Level} = \text{Read Level} + \text{Cable Loss} + \text{Antenna Factor} - \text{Preamplifier Factor}$
2. Scan from 1GHz to 25GHz, the disturbance above 18GHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.
3. As shown in this section, for frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.
4. The EUT has two different types of adapters: the Power Adapter1 (S010-1A050150VUU) and the Power Adapter2 (TPA-141A050150UU01), both of which were pre-tested. Power Adapter1 is identified as the worst case, and only the worst results are reflected in the report.

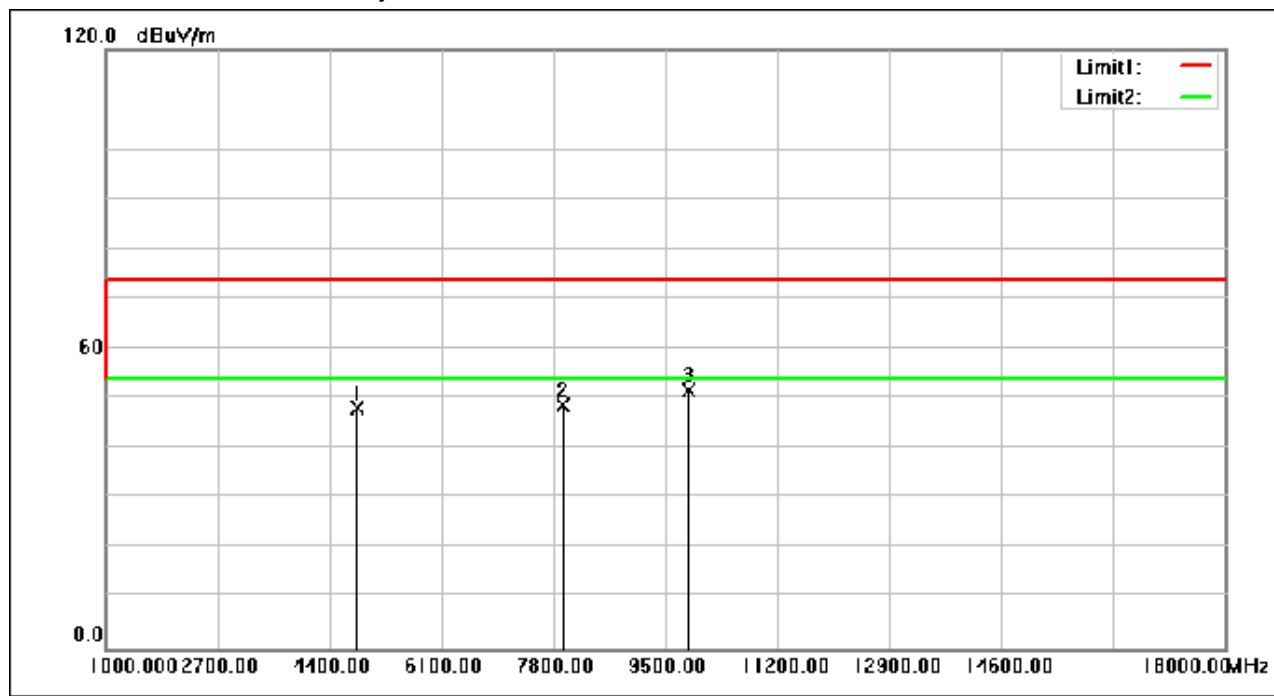
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 70 of 189

Test Mode: 00; Polarity: Horizontal; Modulation:802.11b; Bandwidth:20MHz; Channel:Low



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4824.320	66.61	-18.54	48.07	74.00	-25.93	peak
2	7960.480	59.52	-10.65	48.87	74.00	-25.13	peak
3	9855.640	58.95	-7.30	51.65	74.00	-22.35	peak

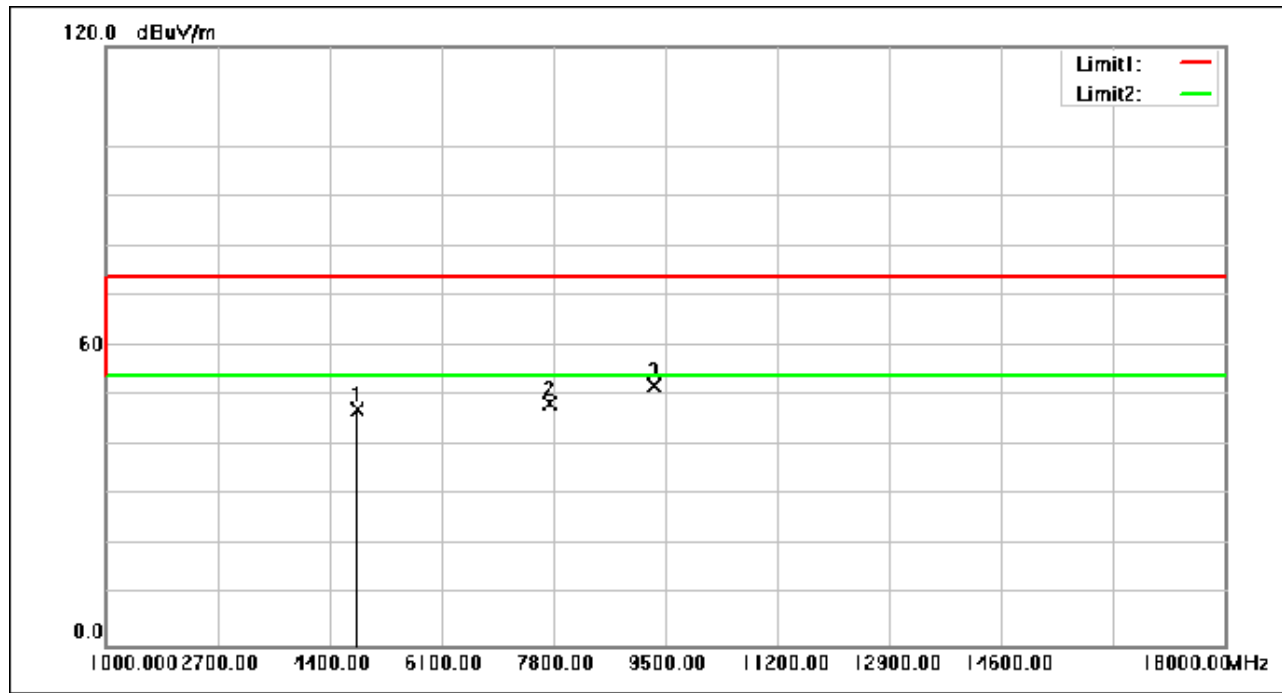
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 71 of 189

Test Mode: 00; Polarity: Vertical; Modulation:802.11b; Bandwidth:20MHz; Channel:Low



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4824.320	65.78	-18.54	47.24	74.00	-26.76	peak
2	7756.480	59.49	-10.92	48.57	74.00	-25.43	peak
3	9339.520	60.42	-8.25	52.17	74.00	-21.83	peak

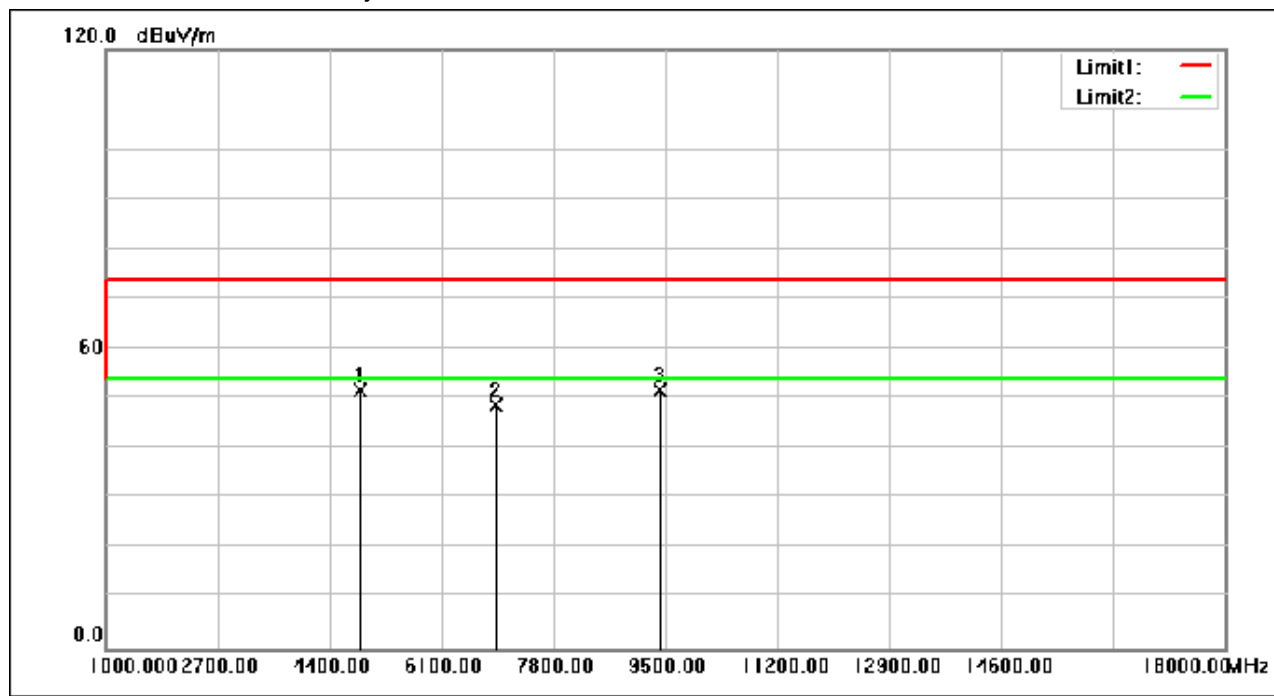
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 72 of 189

Test Mode: 00; Polarity: Horizontal; Modulation:802.11b; Bandwidth:20MHz; Channel:middle



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4873.960	70.19	-18.52	51.67	74.00	-22.33	peak
2	6943.200	60.39	-11.66	48.73	74.00	-25.27	peak
3	9423.840	59.98	-8.10	51.88	74.00	-22.12	peak

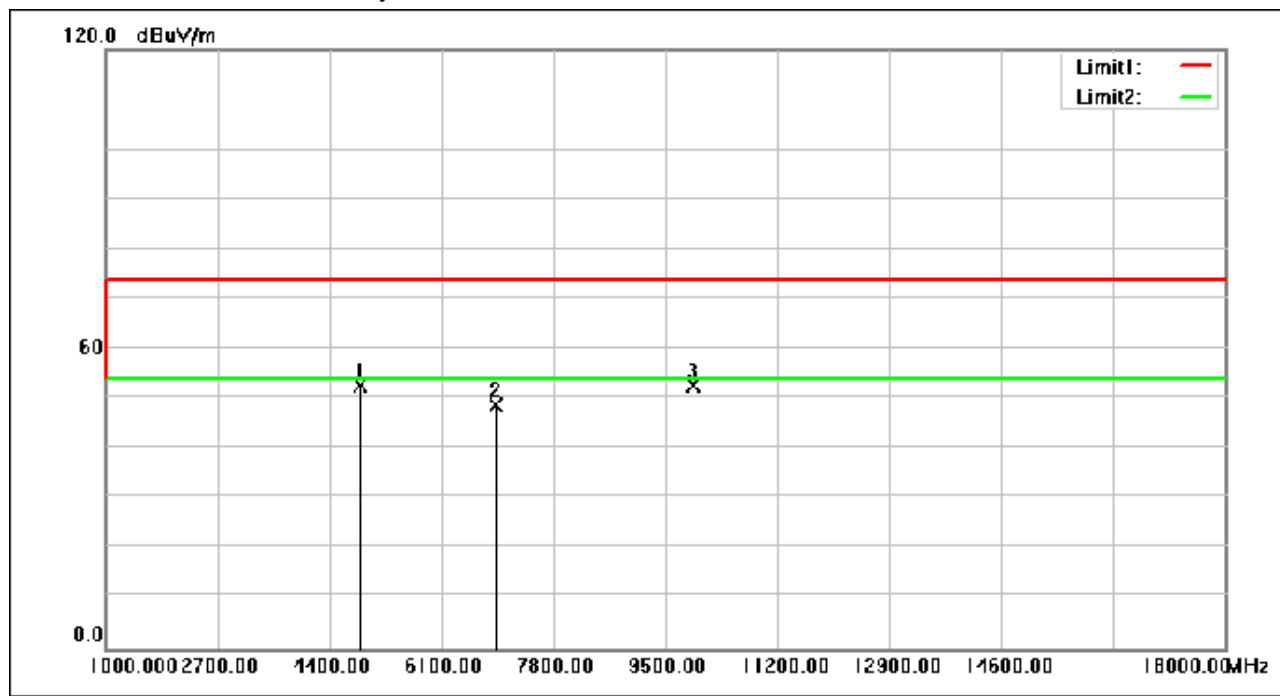
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 73 of 189

Test Mode: 00; Polarity: Vertical; Modulation:802.11b; Bandwidth:20MHz; Channel:middle



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4873.960	71.31	-18.52	52.79	74.00	-21.21	peak
2	6947.280	60.42	-11.66	48.76	74.00	-25.24	peak
3	9933.160	59.89	-7.31	52.58	74.00	-21.42	peak

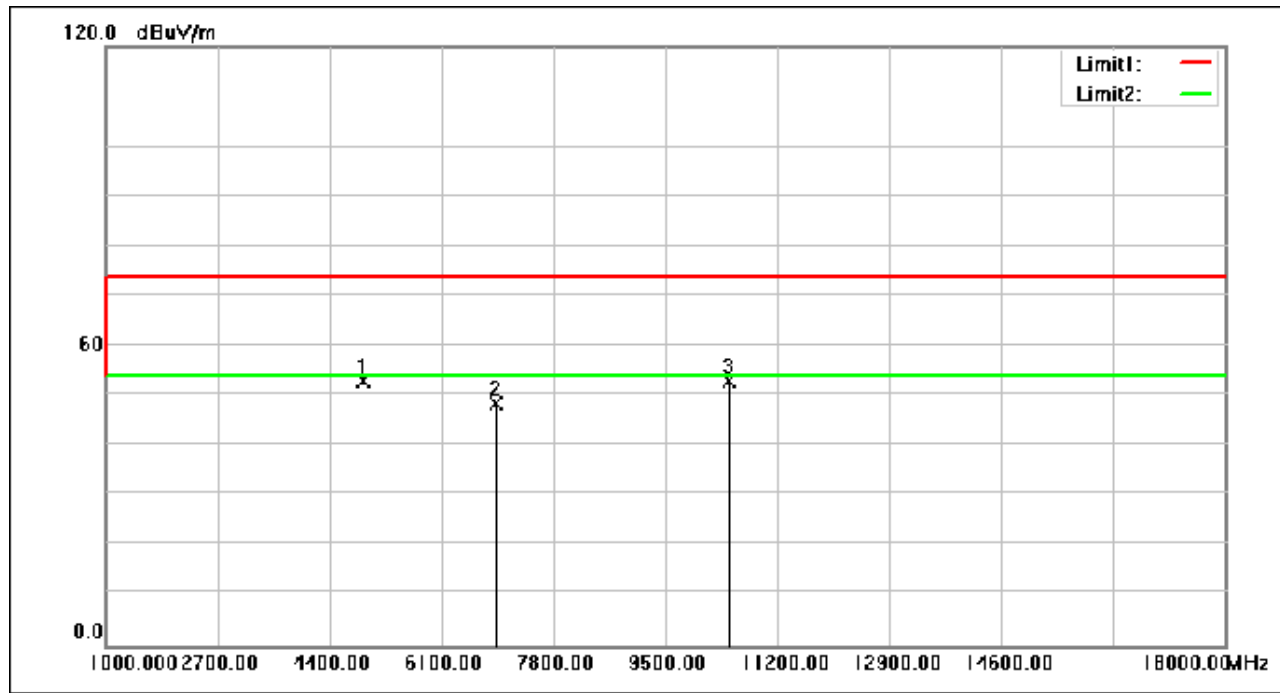
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 74 of 189

Test Mode: 00; Polarity: Horizontal; Modulation:802.11b; Bandwidth:20MHz; Channel:High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4924.280	71.32	-18.49	52.83	74.00	-21.17	peak
2	6947.280	60.26	-11.66	48.60	74.00	-25.40	peak
3	10477.160	60.13	-7.06	53.07	74.00	-20.93	peak

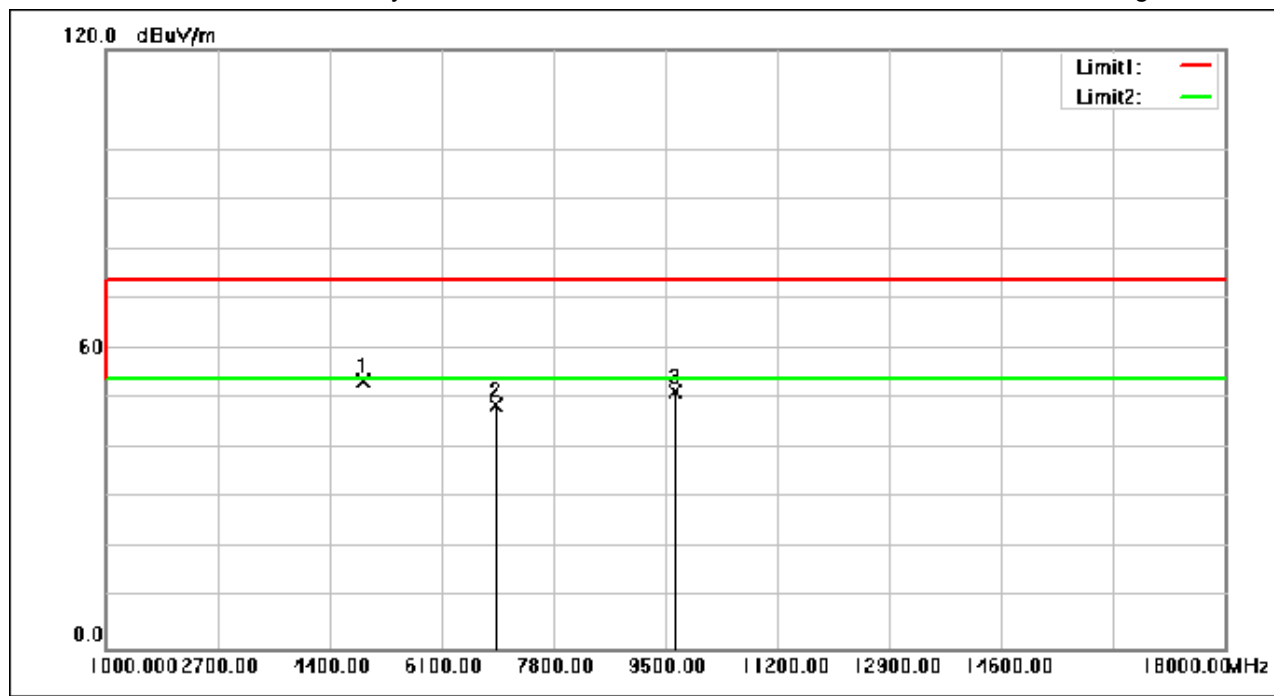
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 75 of 189

Test Mode: 00; Polarity: Vertical; Modulation:802.11b; Bandwidth:20MHz; Channel:High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4923.600	71.97	-18.49	53.48	74.00	-20.52	peak
2	6935.040	60.52	-11.68	48.84	74.00	-25.16	peak
3	9644.160	59.08	-7.68	51.40	74.00	-22.60	peak

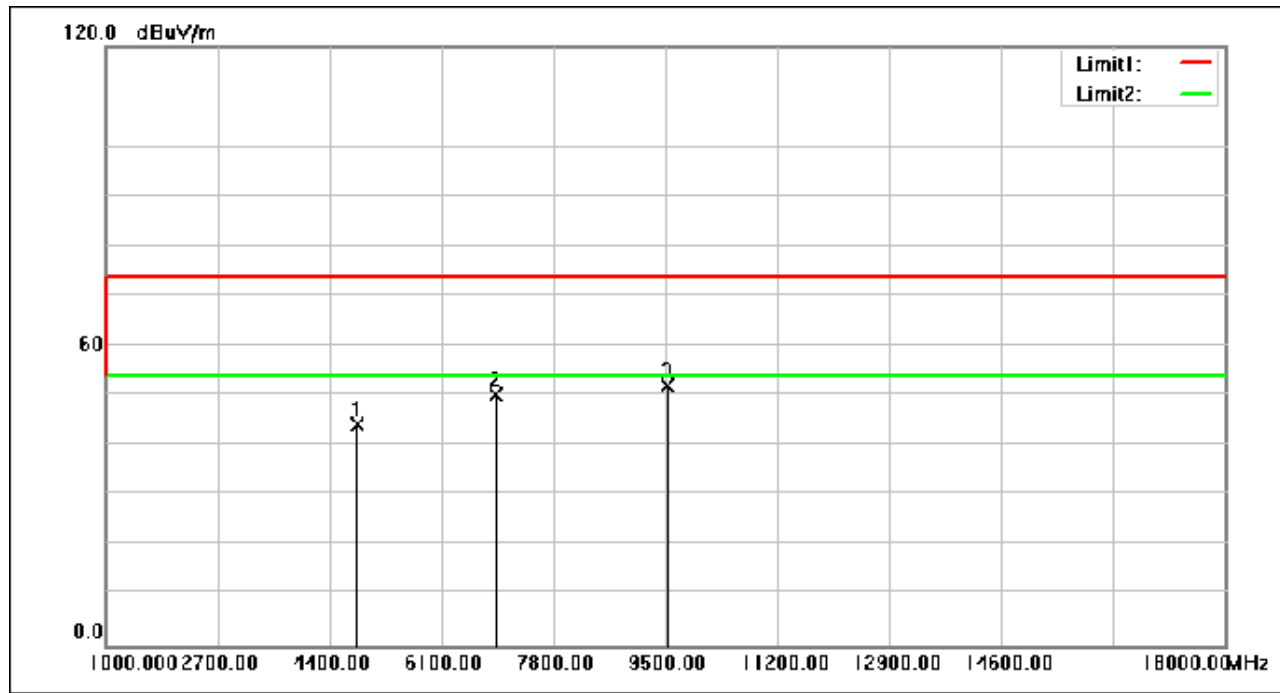
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 76 of 189

Test Mode: 00; Polarity: Horizontal; Modulation:802.11g; Bandwidth:20MHz; Channel:Low



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4823.640	62.75	-18.55	44.20	74.00	-29.80	peak
2	6924.840	61.94	-11.69	50.25	74.00	-23.75	peak
3	9539.440	59.98	-7.88	52.10	74.00	-21.90	peak

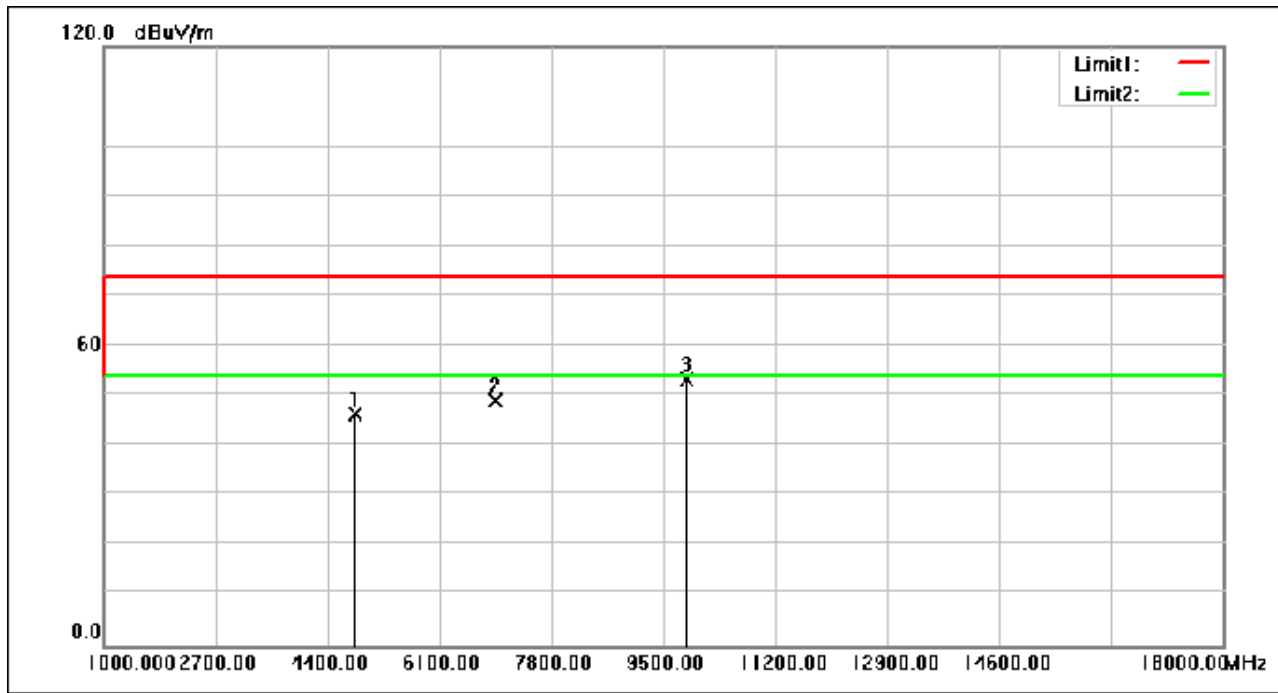
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 77 of 189

Test Mode: 00; Polarity: Vertical; Modulation:802.11g; Bandwidth:20MHz; Channel:Low



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4824.320	64.95	-18.54	46.41	74.00	-27.59	peak
2	6956.120	60.55	-11.64	48.91	74.00	-25.09	peak
3	9867.200	60.47	-7.30	53.17	74.00	-20.83	peak

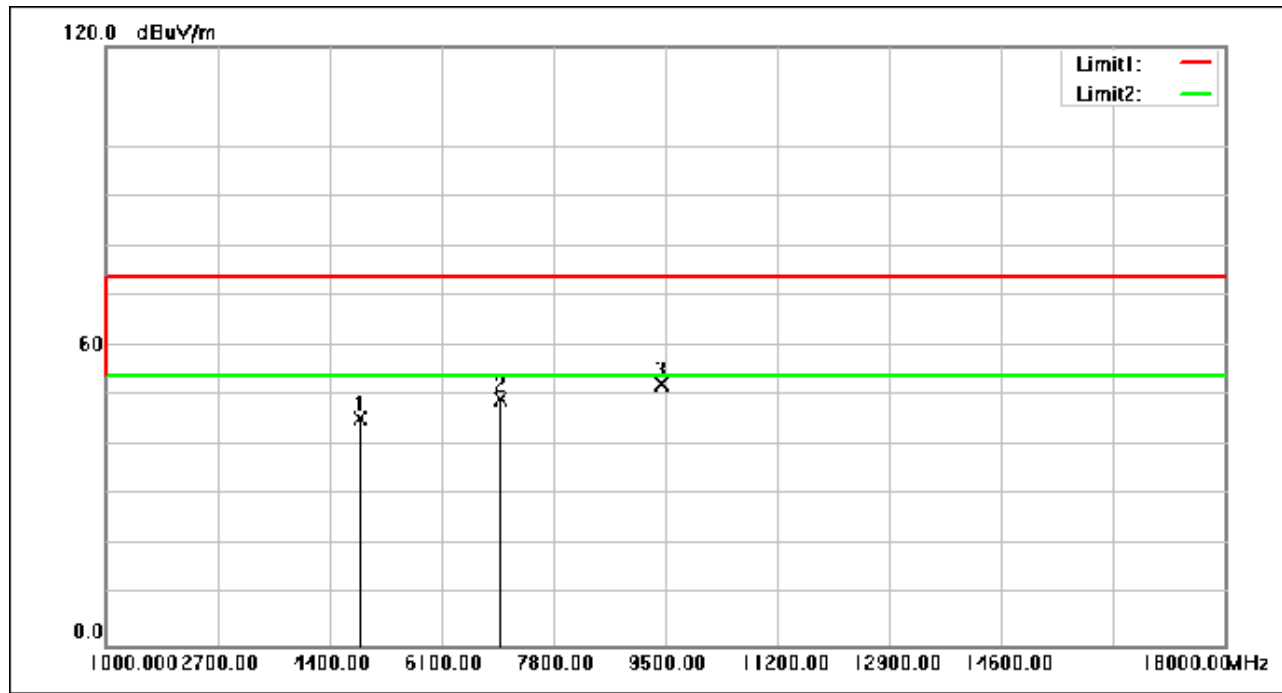
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 78 of 189

Test Mode: 00; Polarity: Horizontal; Modulation:802.11g; Bandwidth:20MHz; Channel:middle



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.320	63.95	-18.52	45.43	74.00	-28.57	peak
2	6992.160	60.79	-11.58	49.21	74.00	-24.79	peak
3	9464.640	60.22	-8.02	52.20	74.00	-21.80	peak

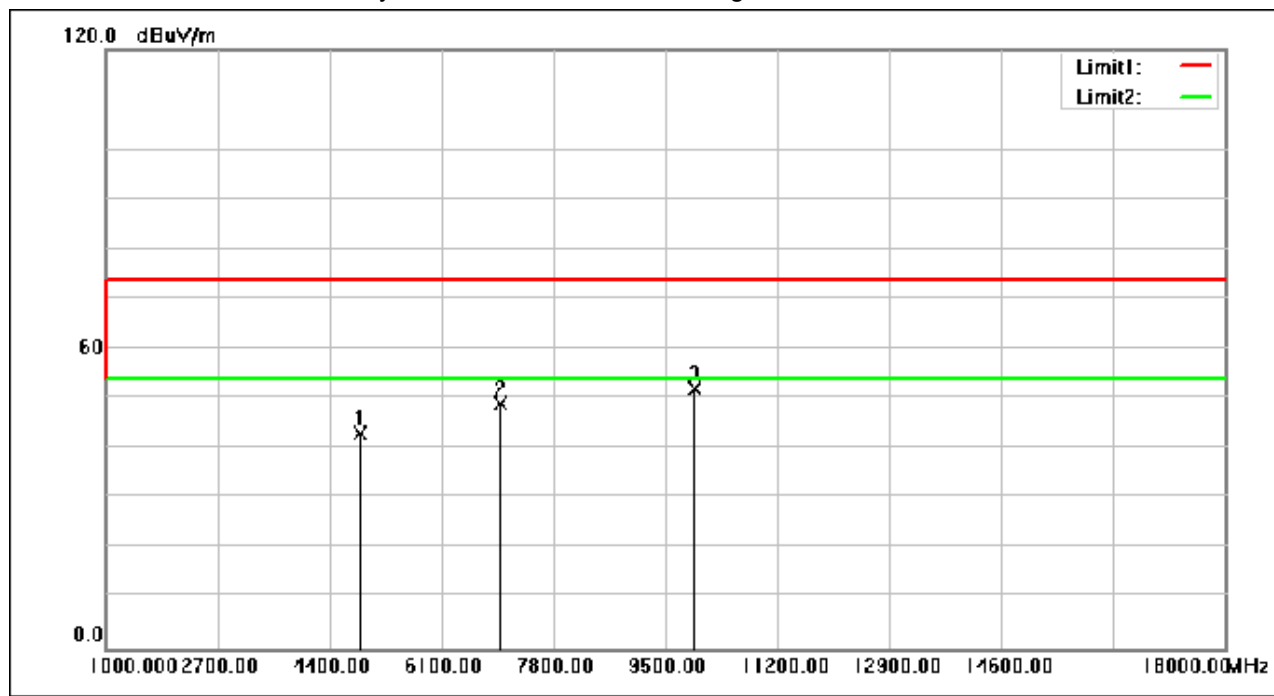
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 79 of 189

Test Mode: 00; Polarity: Vertical; Modulation:802.11g; Bandwidth:20MHz; Channel:middle



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4873.280	61.62	-18.52	43.10	74.00	-30.90	peak
2	6995.560	60.52	-11.57	48.95	74.00	-25.05	peak
3	9952.880	59.41	-7.32	52.09	74.00	-21.91	peak

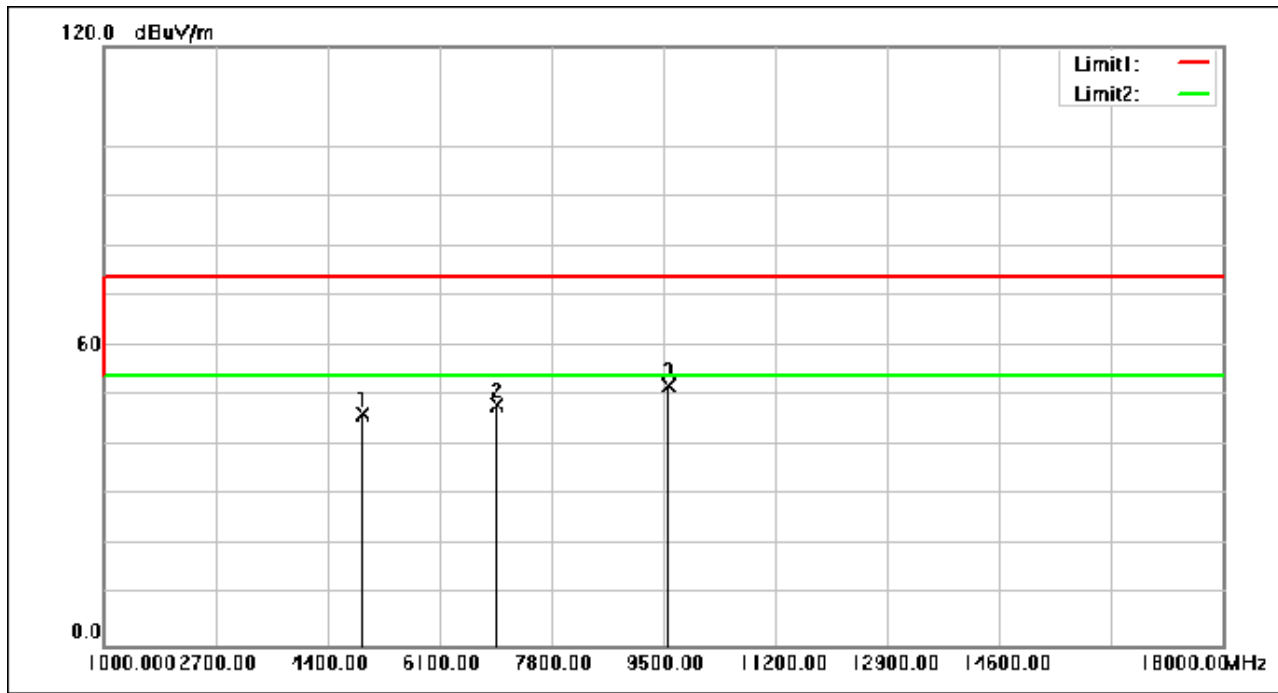
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 80 of 189

Test Mode: 00; Polarity: Horizontal; Modulation: 802.11g; Bandwidth: 20MHz; Channel: High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4928.360	64.76	-18.49	46.27	74.00	-27.73	peak
2	6969.720	59.84	-11.61	48.23	74.00	-25.77	peak
3	9597.920	59.87	-7.77	52.10	74.00	-21.90	peak

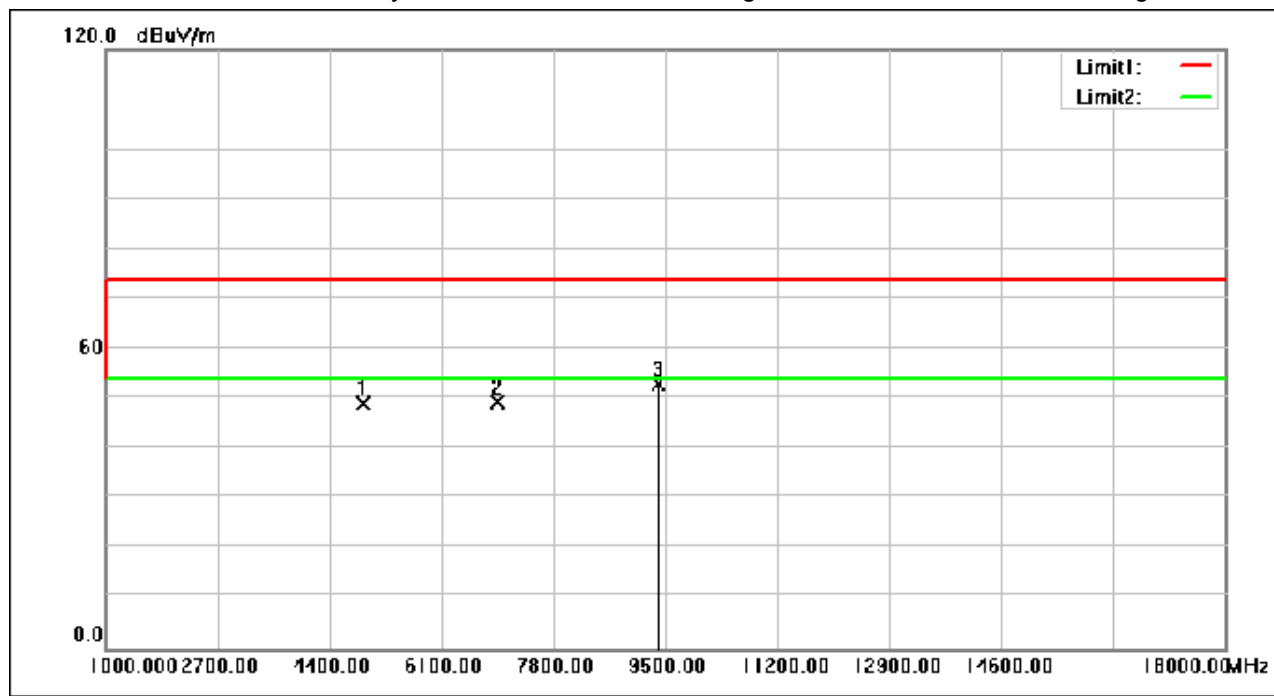
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 81 of 189

Test Mode: 00; Polarity: Vertical; Modulation:802.11g; Bandwidth:20MHz; Channel:High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4919.520	67.68	-18.49	49.19	74.00	-24.81	peak
2	6962.920	60.87	-11.63	49.24	74.00	-24.76	peak
3	9412.960	61.21	-8.12	53.09	74.00	-20.91	peak

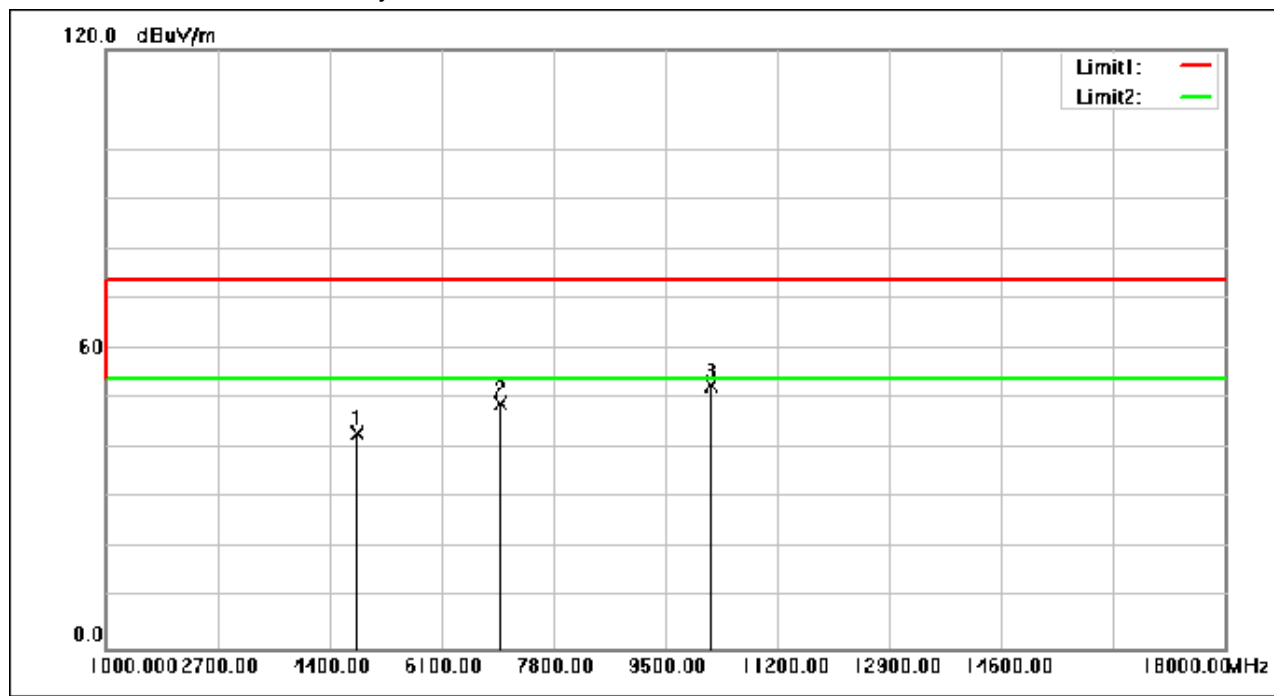
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 82 of 189

Test Mode: 00; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:Low



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4815.480	61.61	-18.56	43.05	74.00	-30.95	peak
2	6992.160	60.61	-11.58	49.03	74.00	-24.97	peak
3	10210.600	59.76	-7.20	52.56	74.00	-21.44	peak

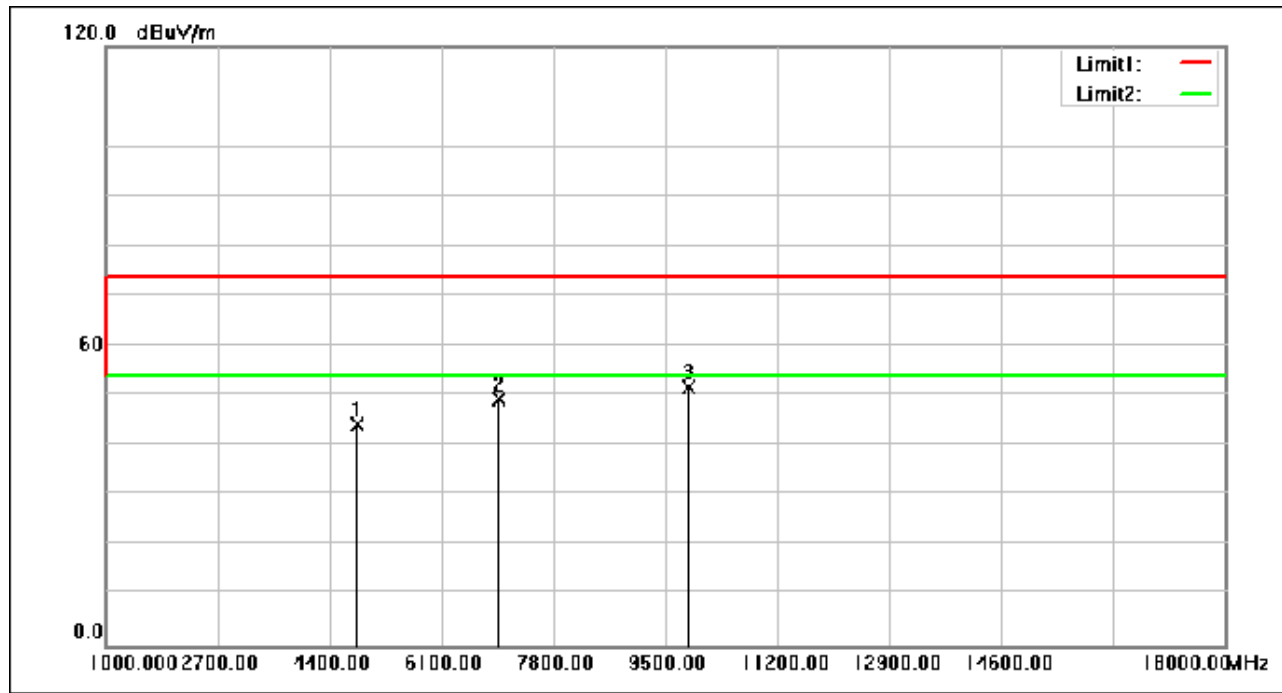
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 83 of 189

Test Mode: 00; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:Low



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4825.000	62.82	-18.55	44.27	74.00	-29.73	peak
2	6969.040	60.90	-11.62	49.28	74.00	-24.72	peak
3	9849.520	59.19	-7.29	51.90	74.00	-22.10	peak

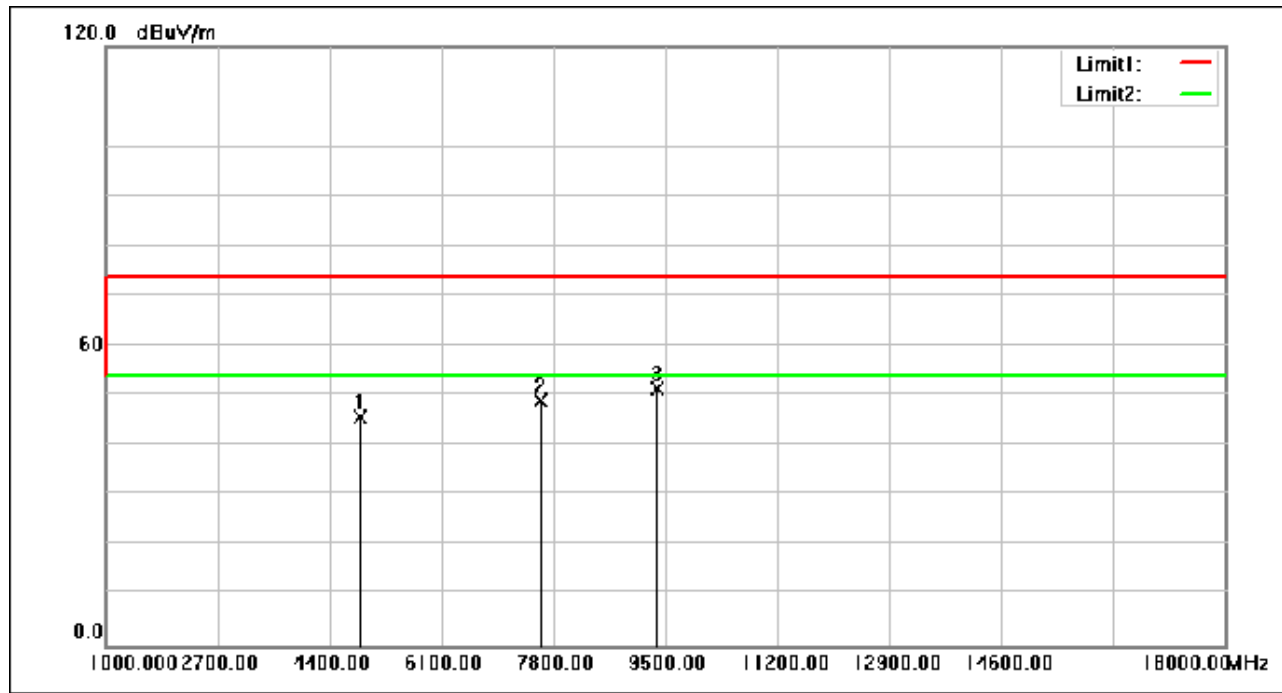
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 84 of 189

Test Mode: 00; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:middle



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4874.640	64.24	-18.51	45.73	74.00	-28.27	peak
2	7604.840	60.10	-11.12	48.98	74.00	-25.02	peak
3	9378.280	59.66	-8.19	51.47	74.00	-22.53	peak

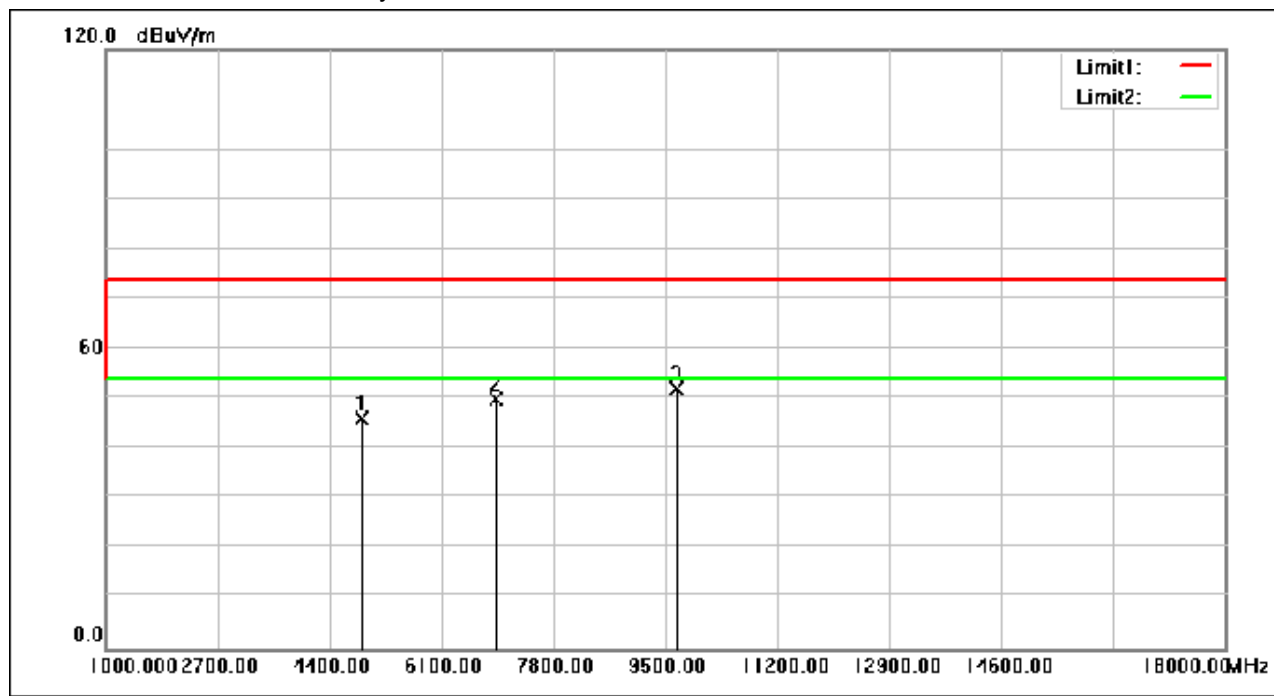
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 85 of 189

Test Mode: 00; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:middle



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4884.160	64.55	-18.51	46.04	74.00	-27.96	peak
2	6916.000	61.62	-11.71	49.91	74.00	-24.09	peak
3	9674.760	59.70	-7.63	52.07	74.00	-21.93	peak

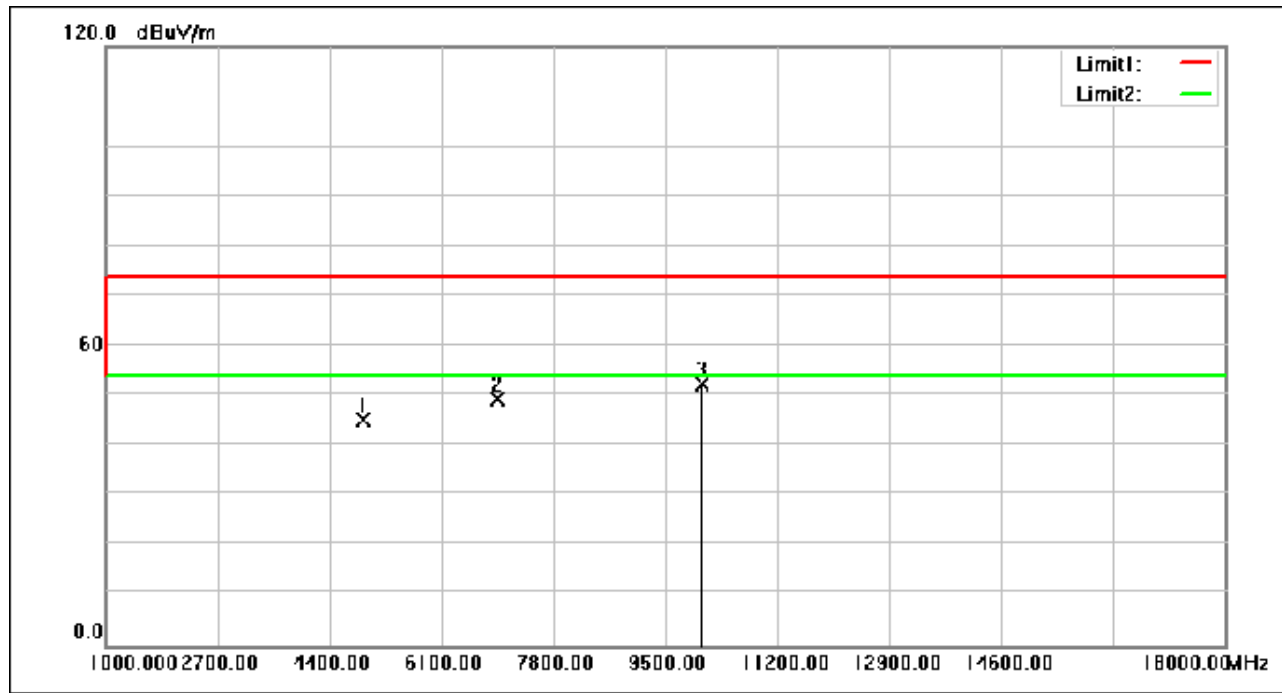
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 86 of 189

Test Mode: 00; Polarity: Horizontal; Modulation: 802.11n; Bandwidth: 20MHz; Channel: High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4926.320	63.73	-18.49	45.24	74.00	-28.76	peak
2	6952.040	61.10	-11.65	49.45	74.00	-24.55	peak
3	10045.360	59.52	-7.30	52.22	74.00	-21.78	peak

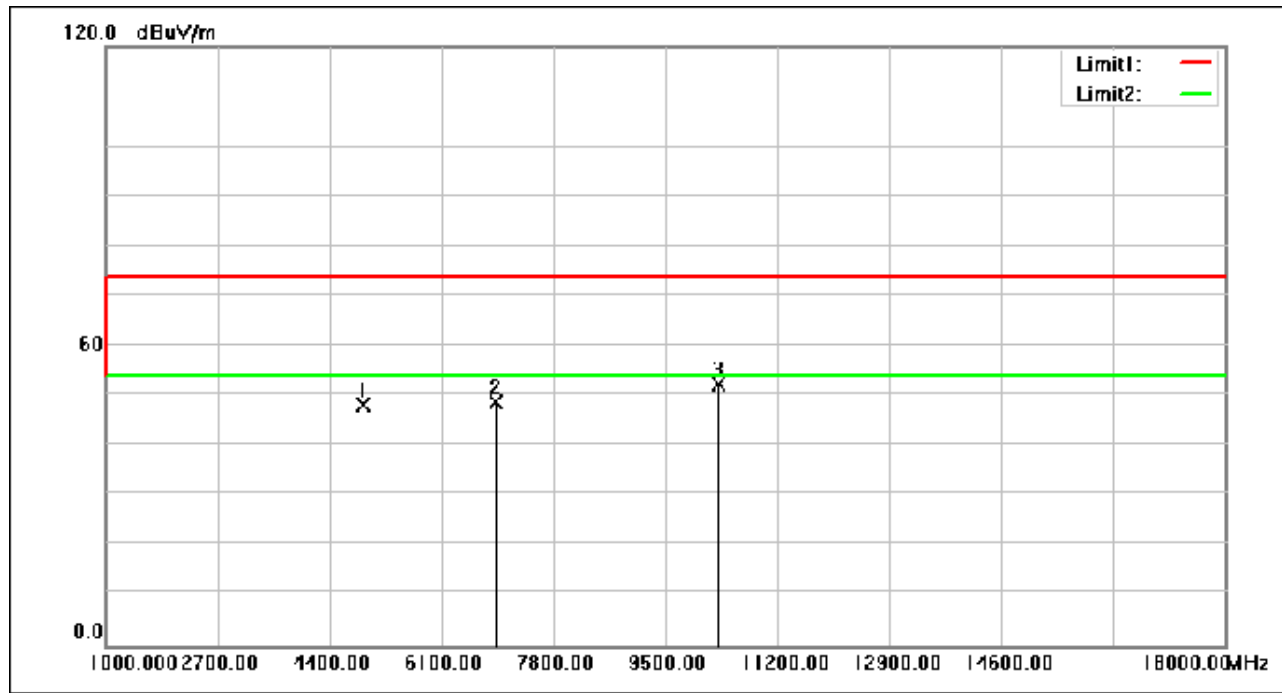
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 87 of 189

Test Mode: 00; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4916.800	66.56	-18.49	48.07	74.00	-25.93	peak
2	6949.320	60.34	-11.66	48.68	74.00	-25.32	peak
3	10300.360	59.47	-7.15	52.32	74.00	-21.68	peak

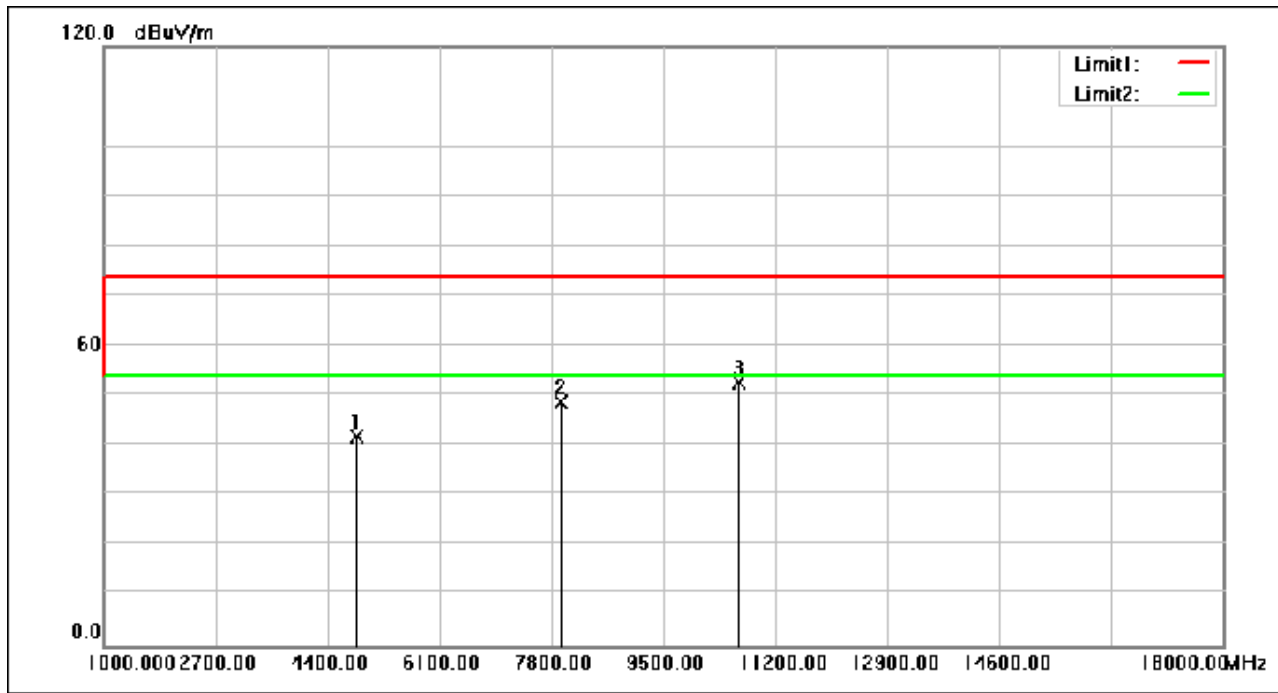
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 88 of 189

Test Mode: 00; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:Low



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4848.120	60.38	-18.54	41.84	74.00	-32.16	peak
2	7940.080	59.29	-10.68	48.61	74.00	-25.39	peak
3	10647.160	59.66	-6.96	52.70	74.00	-21.30	peak

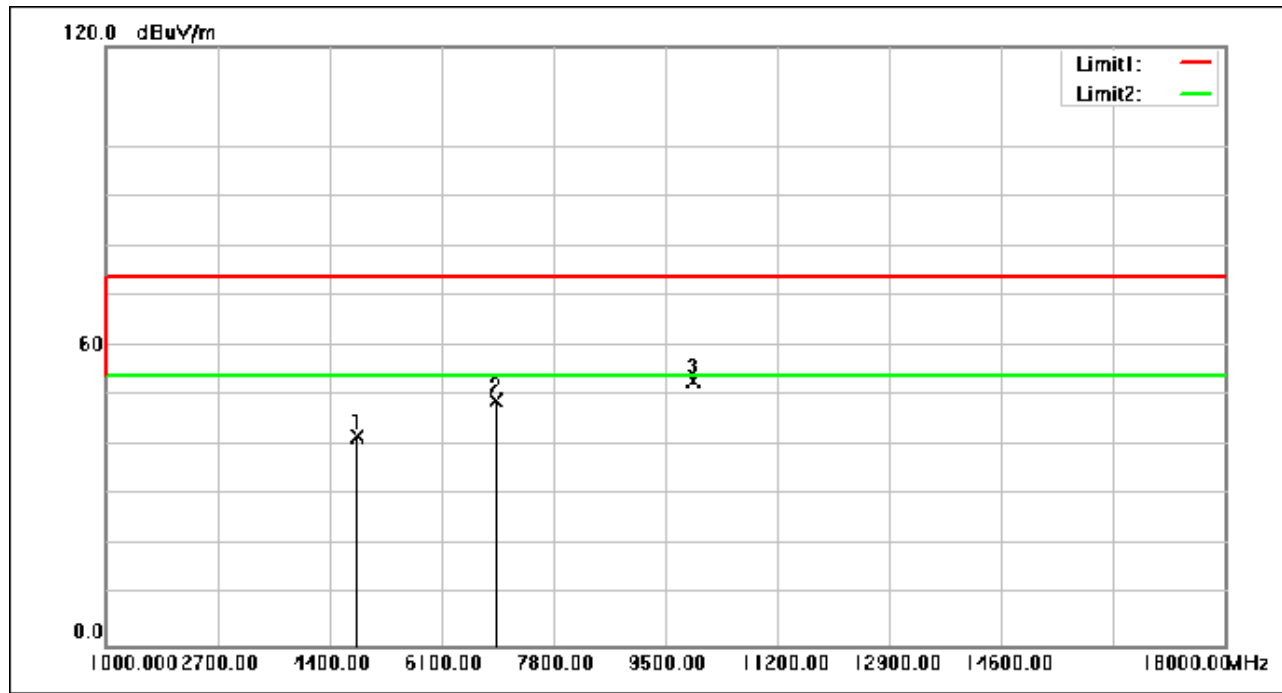
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 89 of 189

Test Mode: 00; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:Low



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4827.040	60.36	-18.55	41.81	74.00	-32.19	peak
2	6922.120	60.65	-11.71	48.94	74.00	-25.06	peak
3	9922.960	60.36	-7.31	53.05	74.00	-20.95	peak

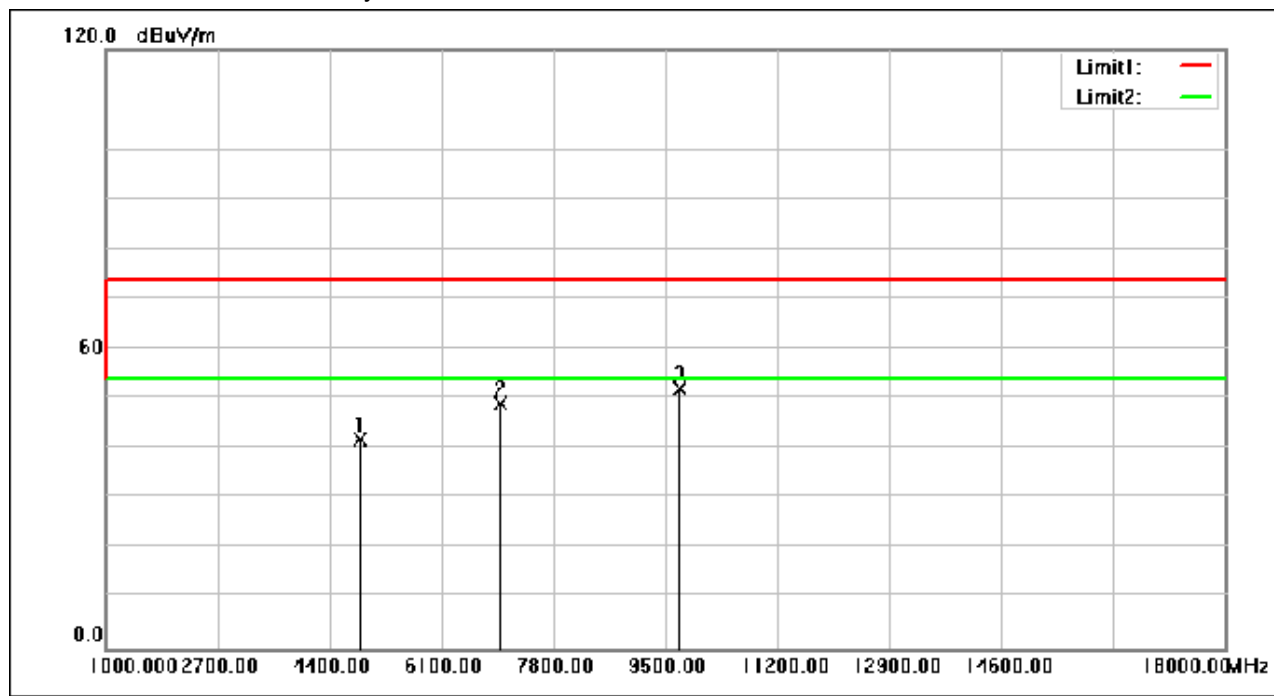
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 90 of 189

Test Mode: 00; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:middle



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4871.920	60.32	-18.52	41.80	74.00	-32.20	peak
2	6996.920	60.58	-11.57	49.01	74.00	-24.99	peak
3	9727.800	59.71	-7.52	52.19	74.00	-21.81	peak

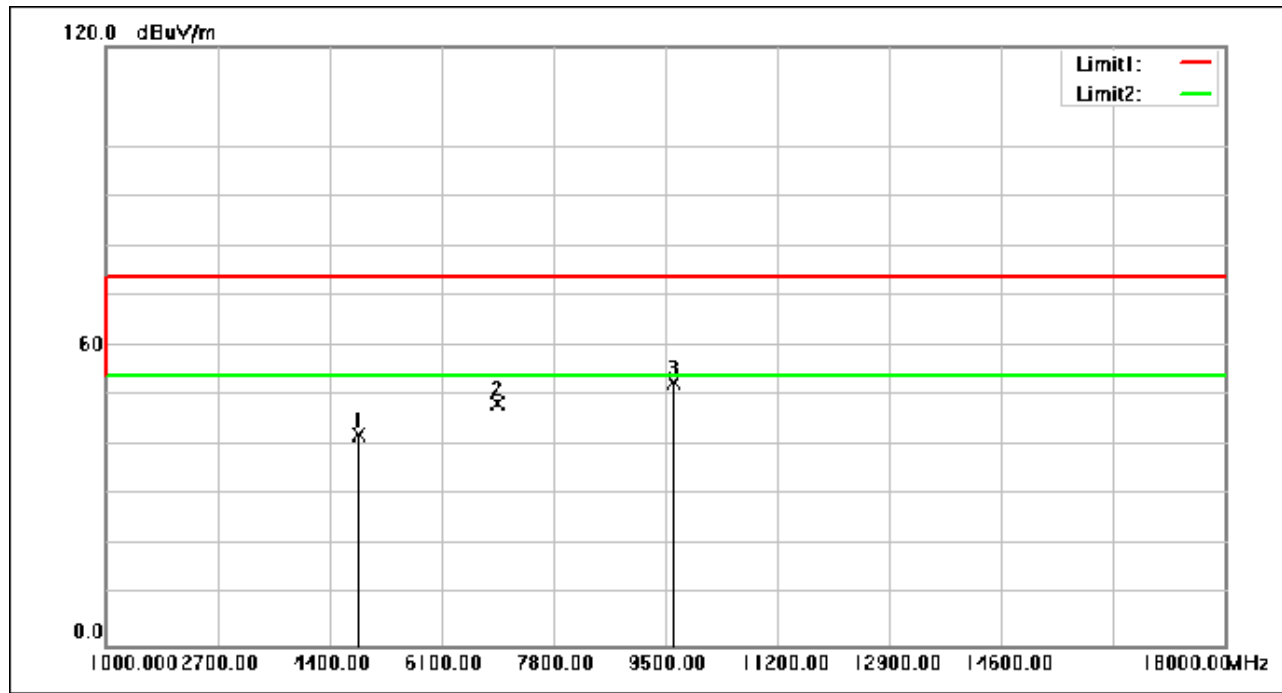
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 91 of 189

Test Mode: 00; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:middle



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4855.600	60.60	-18.53	42.07	74.00	-31.93	peak
2	6959.520	60.19	-11.63	48.56	74.00	-25.44	peak
3	9619.680	60.36	-7.73	52.63	74.00	-21.37	peak

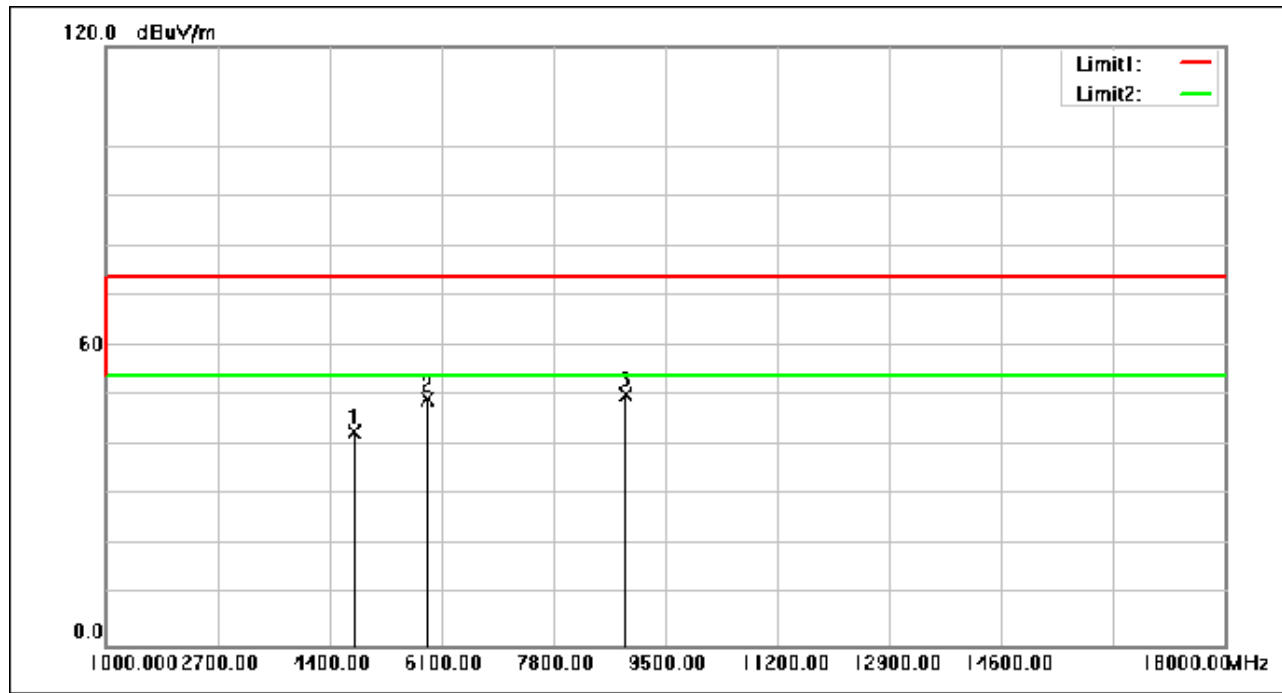
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 92 of 189

Test Mode: 00; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4786.240	61.27	-18.57	42.70	74.00	-31.30	peak
2	5884.440	65.48	-16.26	49.22	74.00	-24.78	peak
3	8915.880	59.27	-9.07	50.20	74.00	-23.80	peak

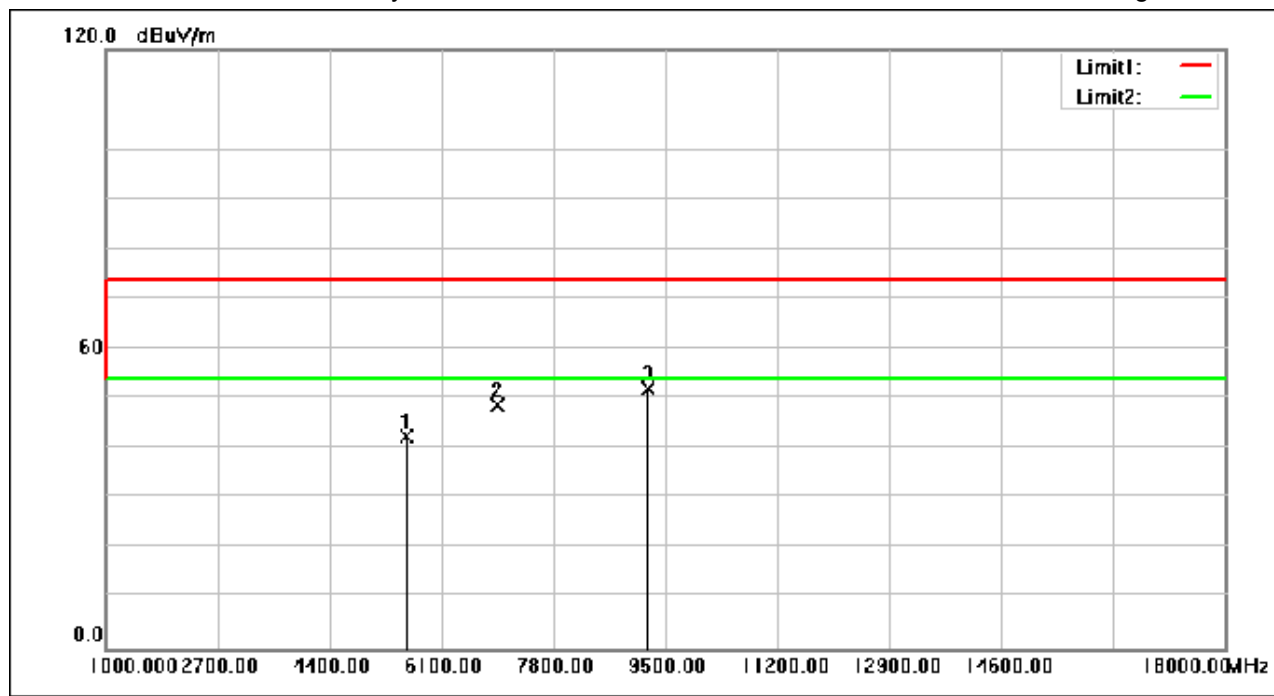
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 93 of 189

Test Mode: 00; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5586.600	59.93	-17.50	42.43	74.00	-31.57	peak
2	6954.760	60.34	-11.64	48.70	74.00	-25.30	peak
3	9241.600	60.55	-8.44	52.11	74.00	-21.89	peak

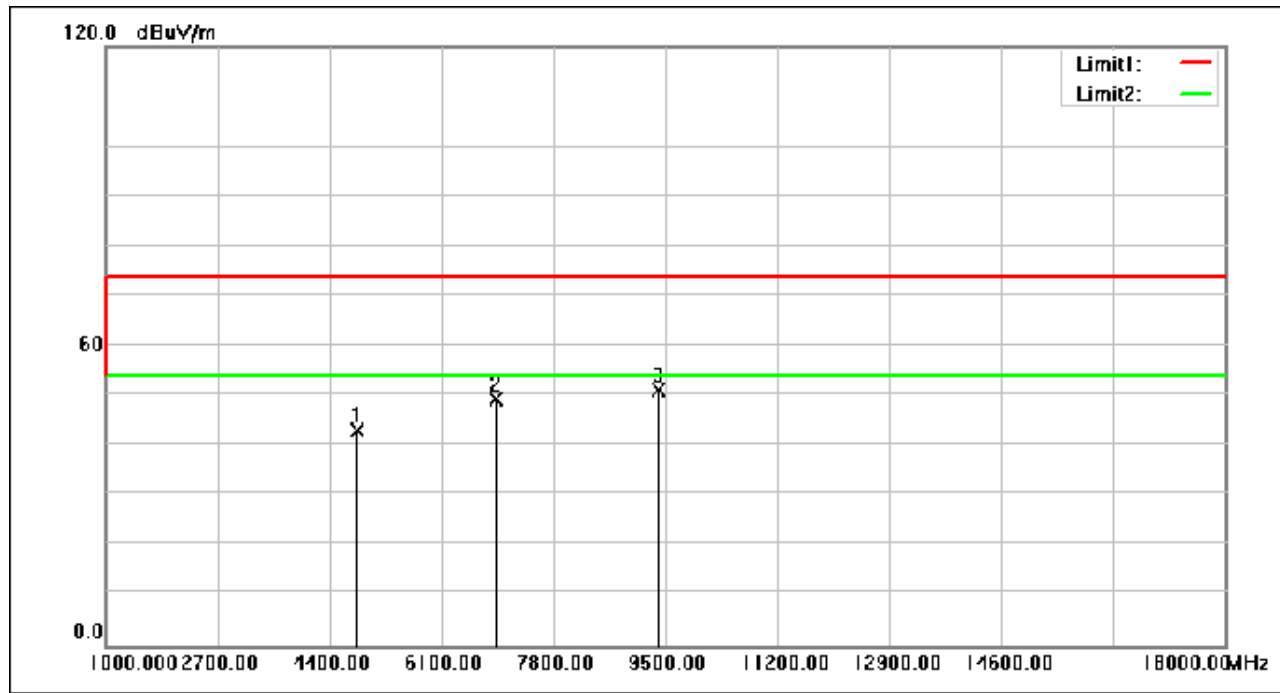
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 94 of 189

Test Mode: 00; Polarity: Horizontal; Modulation: 802.11ax(Full RU0); Bandwidth: 20MHz; Channel: Low



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4820.240	61.73	-18.55	43.18	74.00	-30.82	peak
2	6930.280	60.93	-11.69	49.24	74.00	-24.76	peak
3	9406.160	59.37	-8.13	51.24	74.00	-22.76	peak

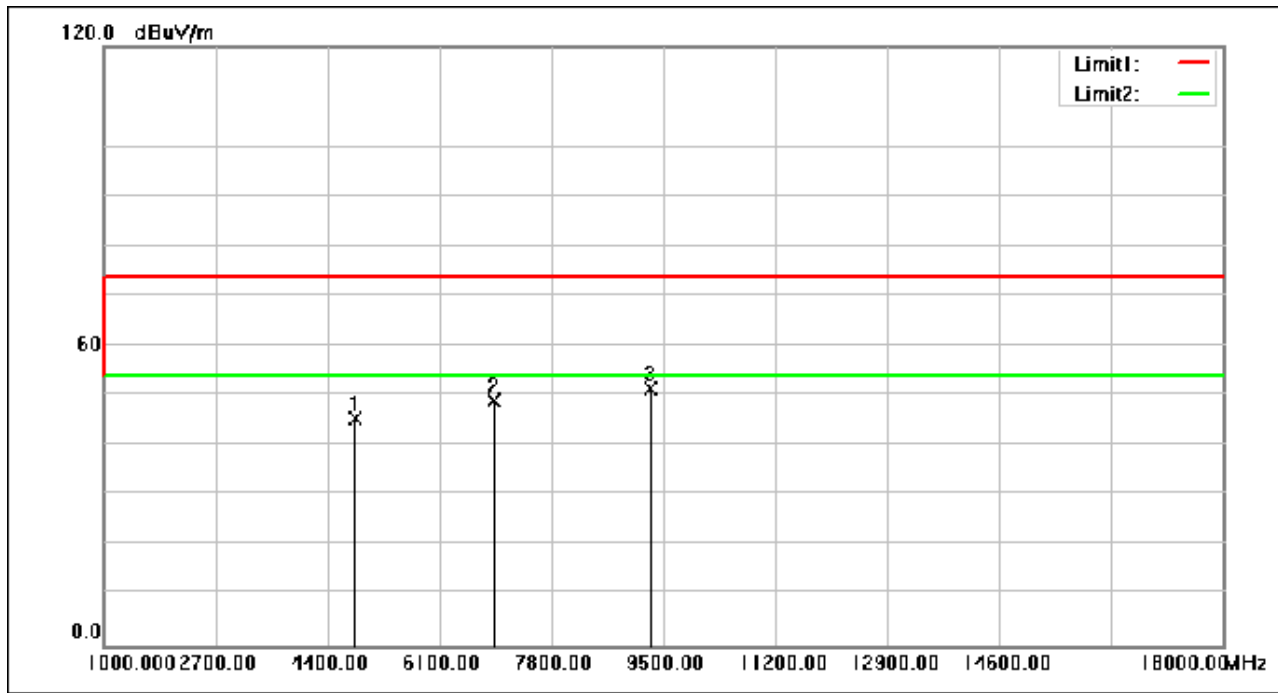
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 95 of 189

Test Mode: 00; Polarity: Vertical; Modulation:802.11ax(Full RU0); Bandwidth:20MHz; Channel:Low



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4828.400	63.92	-18.55	45.37	74.00	-28.63	peak
2	6929.600	60.67	-11.69	48.98	74.00	-25.02	peak
3	9306.880	59.79	-8.32	51.47	74.00	-22.53	peak

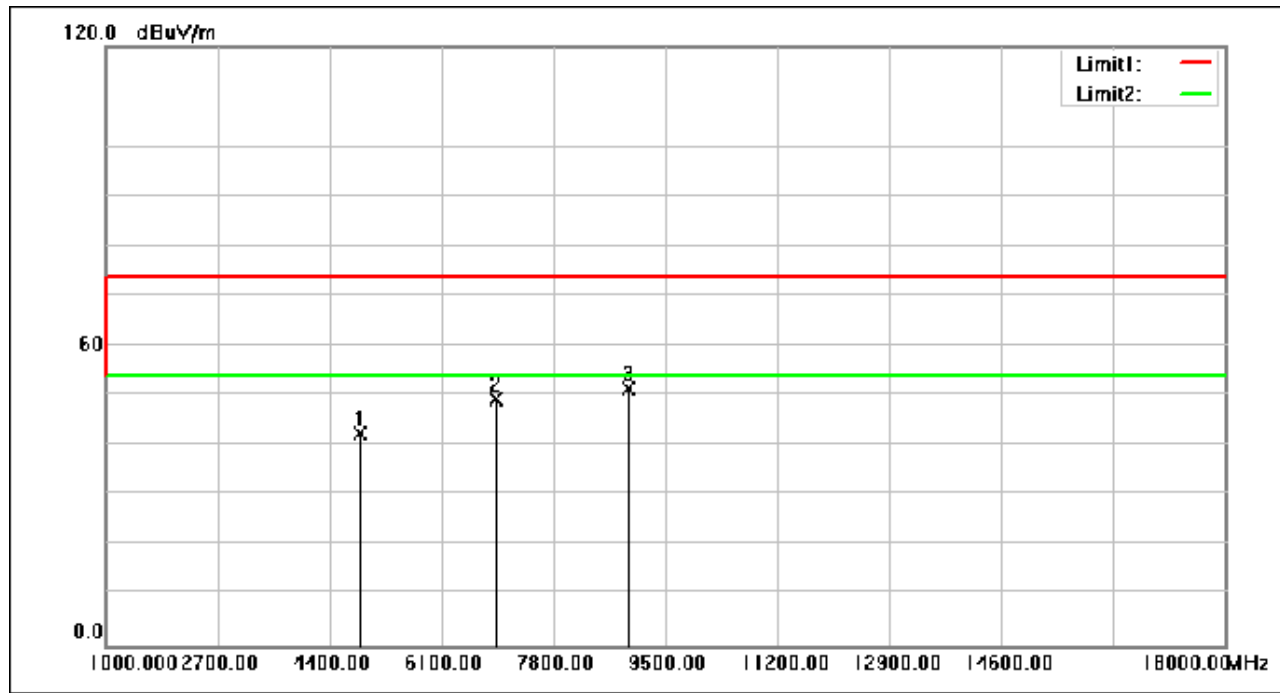
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 96 of 189

Test Mode: 00; Polarity: Horizontal; Modulation: 802.11ax(Full RU0); Bandwidth: 20MHz; Channel: middle



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4873.960	60.96	-18.52	42.44	74.00	-31.56	peak
2	6949.320	61.01	-11.66	49.35	74.00	-24.65	peak
3	8940.360	60.57	-9.03	51.54	74.00	-22.46	peak

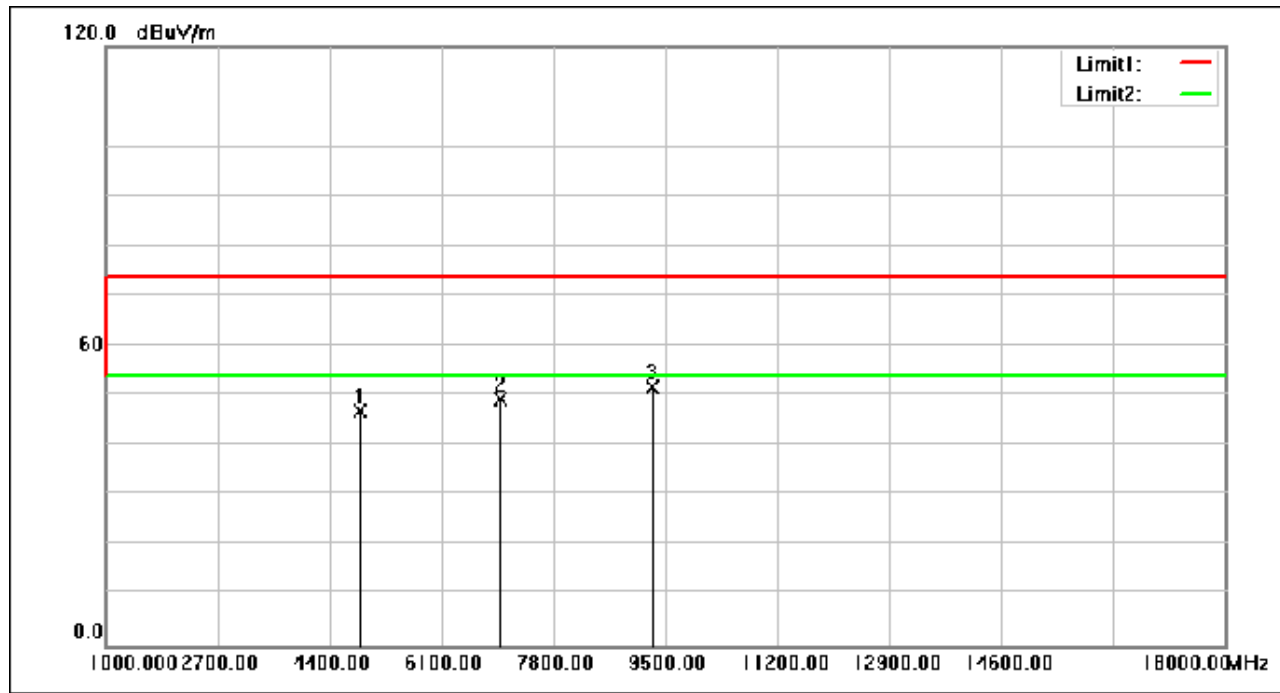
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 97 of 189

Test Mode: 00; Polarity: Vertical; Modulation:802.11ax(Full RU0); Bandwidth:20MHz; Channel:middle



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4871.920	65.36	-18.52	46.84	74.00	-27.16	peak
2	6998.960	61.04	-11.57	49.47	74.00	-24.53	peak
3	9297.360	60.14	-8.34	51.80	74.00	-22.20	peak

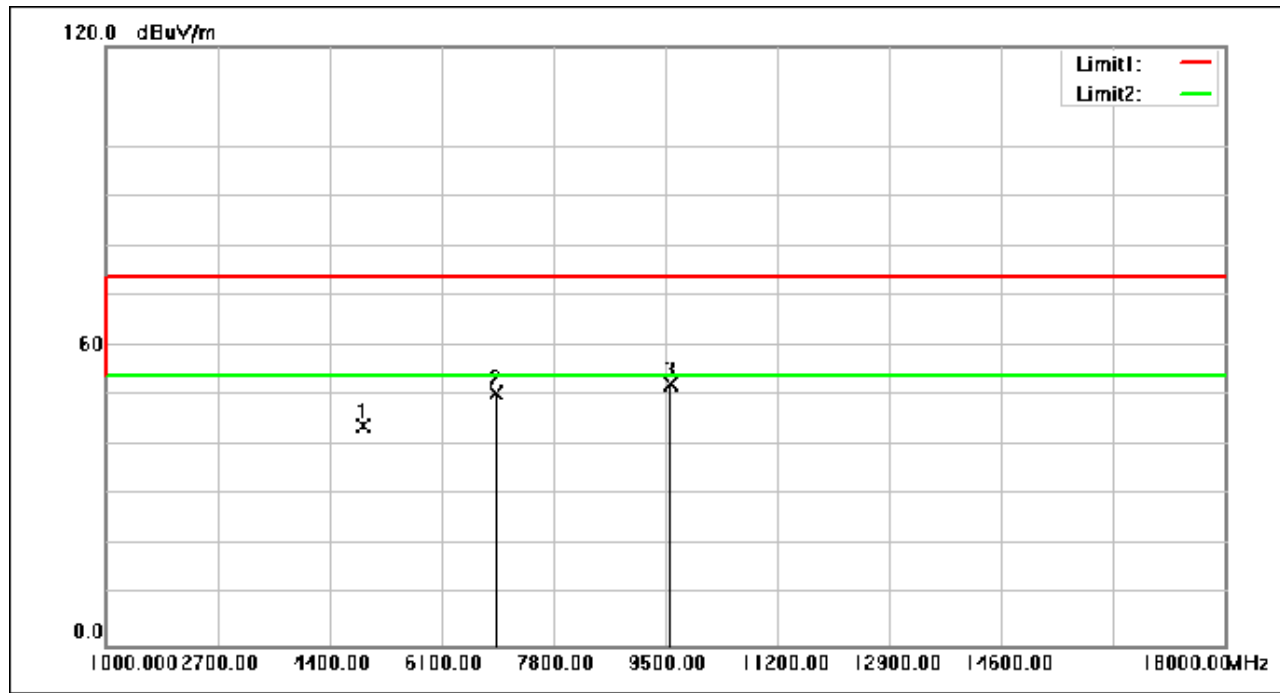
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 98 of 189

Test Mode: 00; Polarity: Horizontal; Modulation:802.11ax(Full RU0); Bandwidth:20MHz; Channel:High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4924.280	62.52	-18.49	44.03	74.00	-29.97	peak
2	6932.320	62.28	-11.68	50.60	74.00	-23.40	peak
3	9594.520	60.09	-7.78	52.31	74.00	-21.69	peak

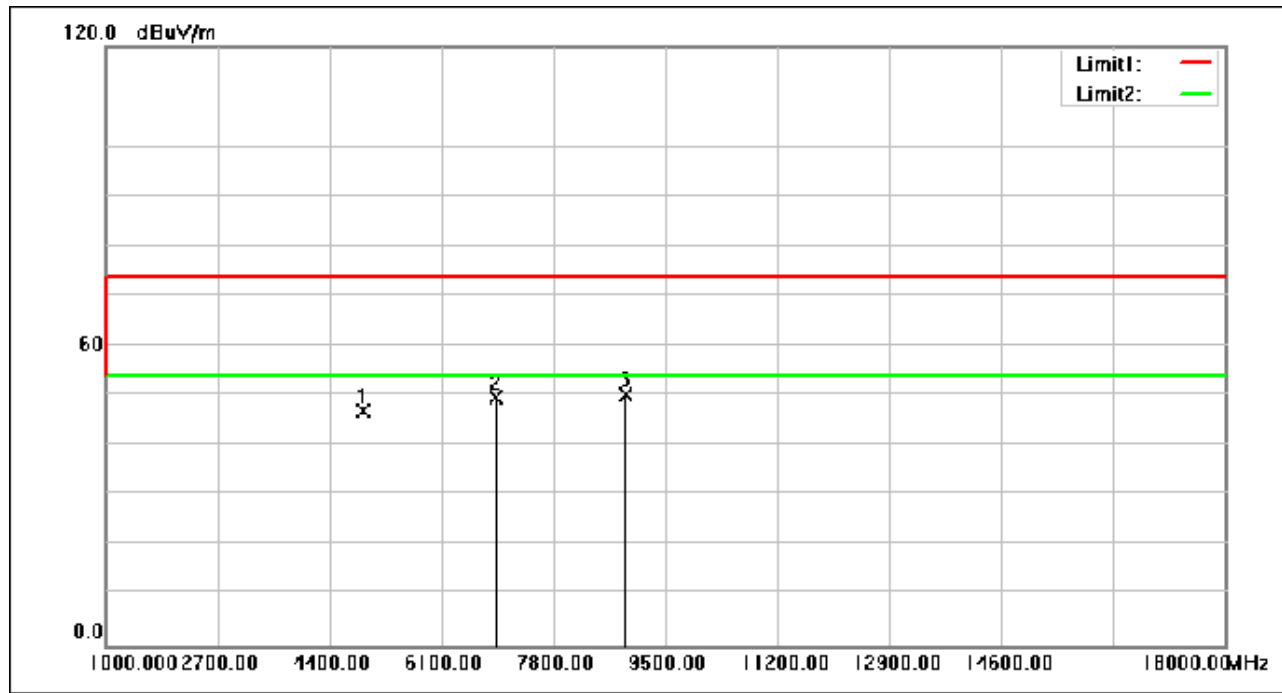
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 99 of 189

Test Mode: 00; Polarity: Vertical; Modulation:802.11ax(Full RU0); Bandwidth:20MHz; Channel:High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4922.240	65.50	-18.49	47.01	74.00	-26.99	peak
2	6938.440	61.27	-11.67	49.60	74.00	-24.40	peak
3	8908.400	59.22	-9.08	50.14	74.00	-23.86	peak

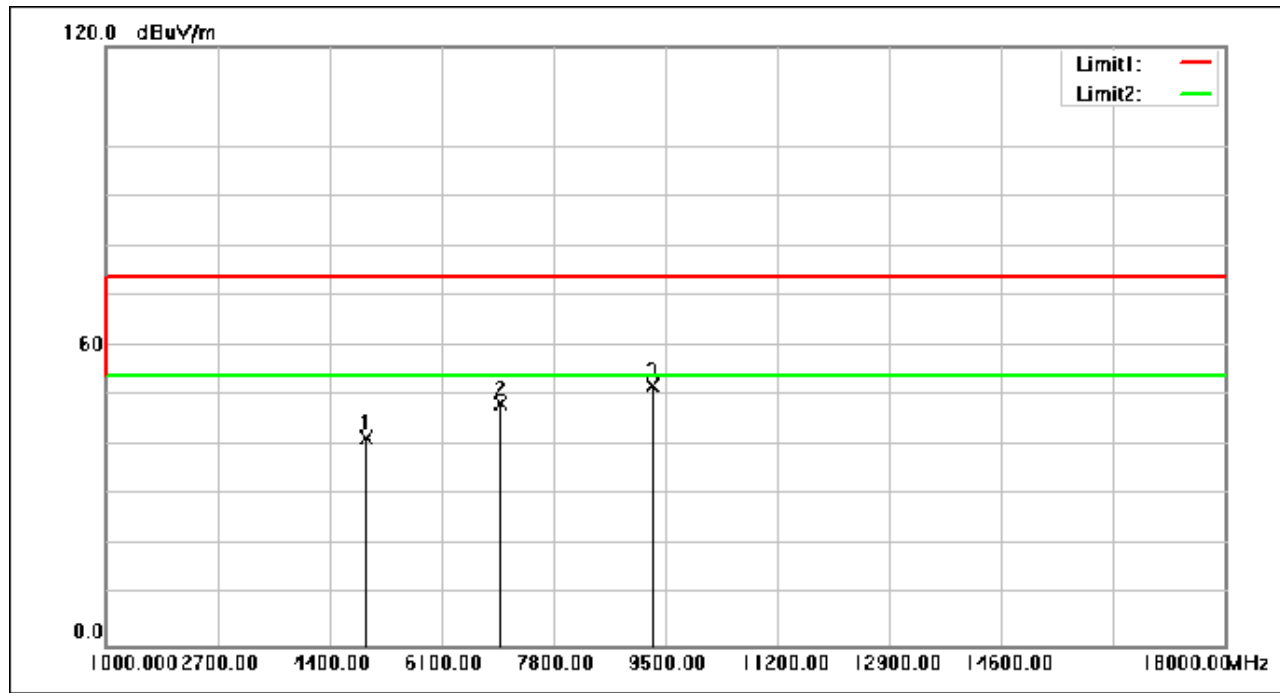
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 100 of 189

Test Mode: 00; Polarity: Horizontal; Modulation: 802.11ax(Full RU0); Bandwidth: 40MHz; Channel: Low



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4966.440	60.09	-18.46	41.63	74.00	-32.37	peak
2	6984.000	60.17	-11.60	48.57	74.00	-25.43	peak
3	9299.400	60.37	-8.33	52.04	74.00	-21.96	peak

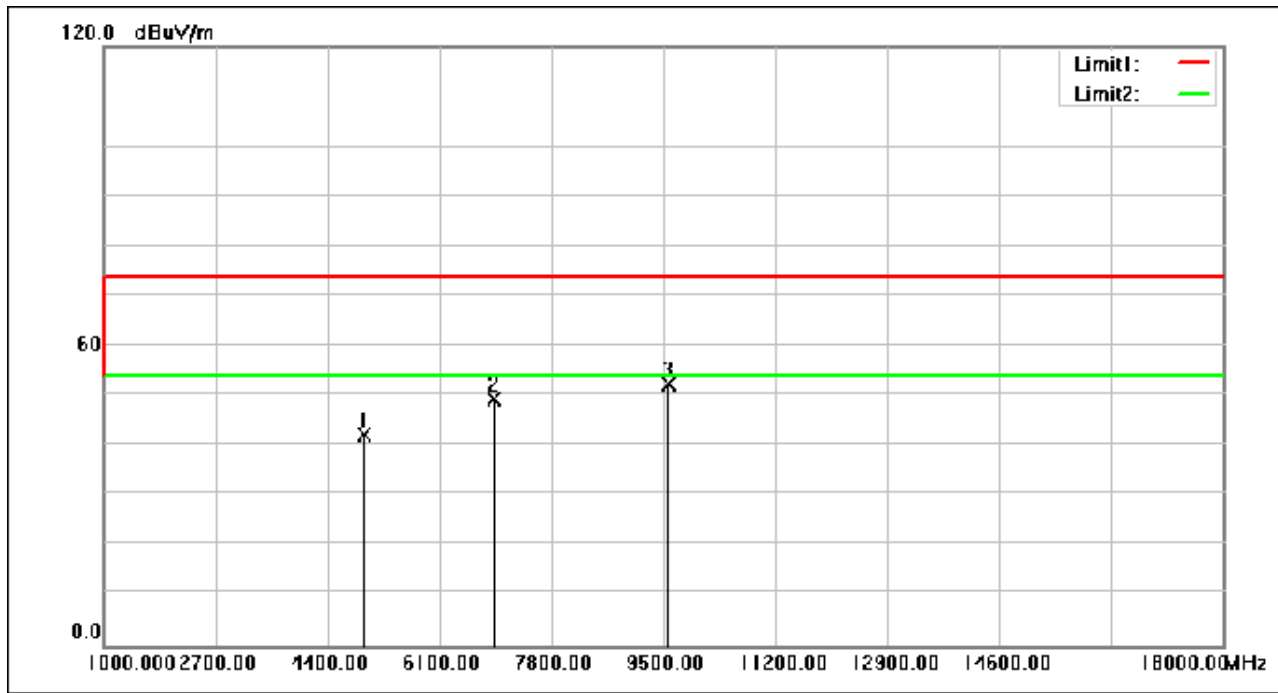
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 101 of 189

Test Mode: 00; Polarity: Vertical; Modulation: 802.11ax(Full RU0); Bandwidth: 40MHz; Channel: Low



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4965.080	60.53	-18.47	42.06	74.00	-31.94	peak
2	6935.720	61.09	-11.68	49.41	74.00	-24.59	peak
3	9590.440	59.99	-7.78	52.21	74.00	-21.79	peak

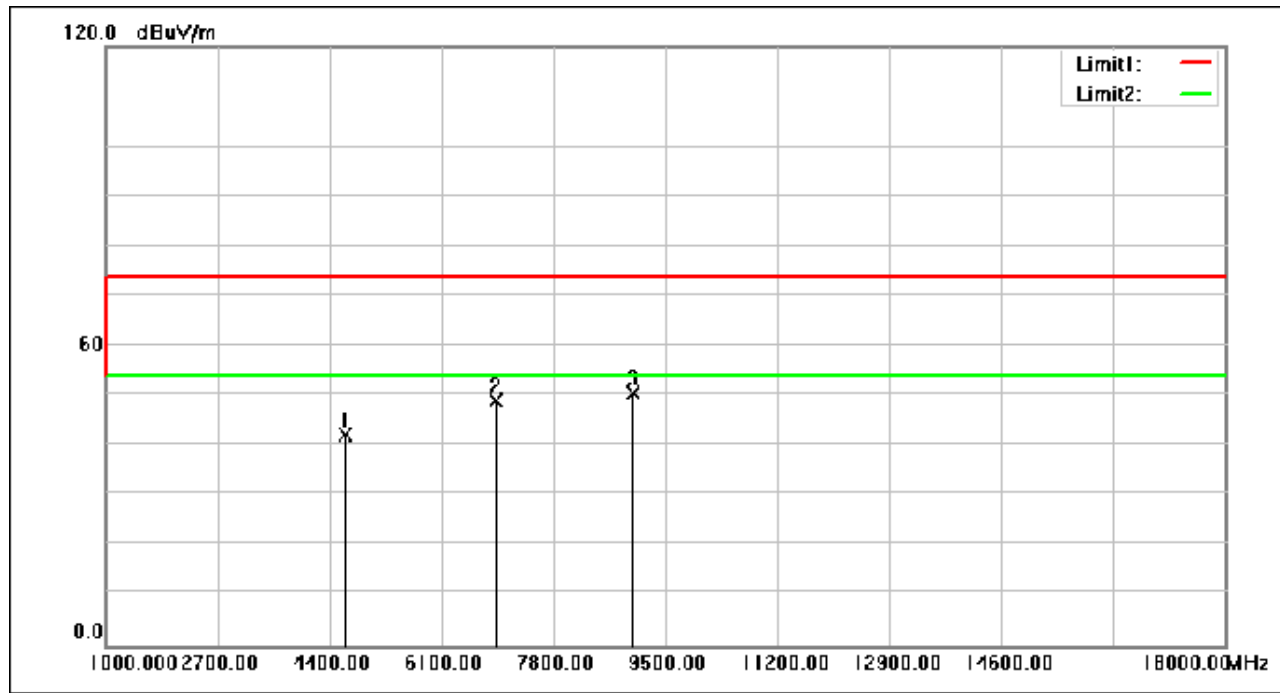
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 102 of 189

Test Mode: 00; Polarity: Horizontal; Modulation:802.11ax(Full RU0); Bandwidth:40MHz; Channel:middle



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4652.960	60.76	-18.65	42.11	74.00	-31.89	peak
2	6937.760	60.83	-11.68	49.15	74.00	-24.85	peak
3	9012.440	59.47	-8.87	50.60	74.00	-23.40	peak

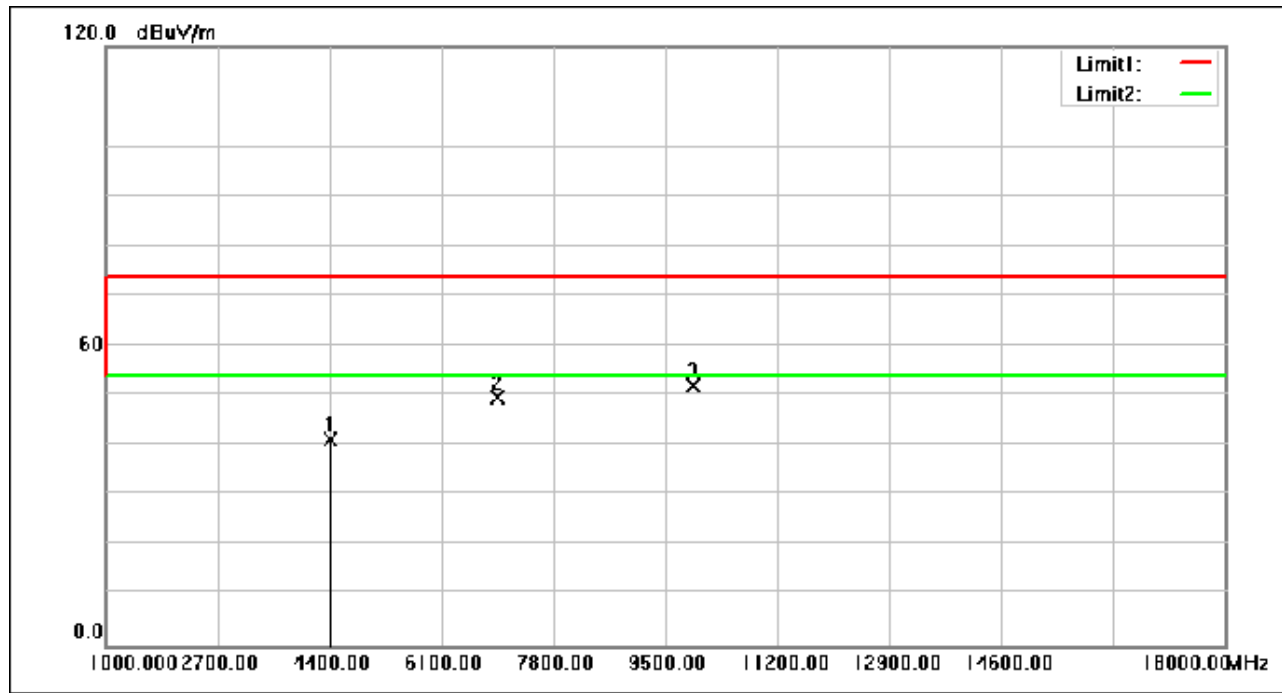
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 103 of 189

Test Mode: 00; Polarity: Vertical; Modulation:802.11ax(Full RU0); Bandwidth:40MHz; Channel:middle



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4424.480	60.52	-19.18	41.34	74.00	-32.66	peak
2	6952.720	61.18	-11.65	49.53	74.00	-24.47	peak
3	9938.600	59.34	-7.31	52.03	74.00	-21.97	peak

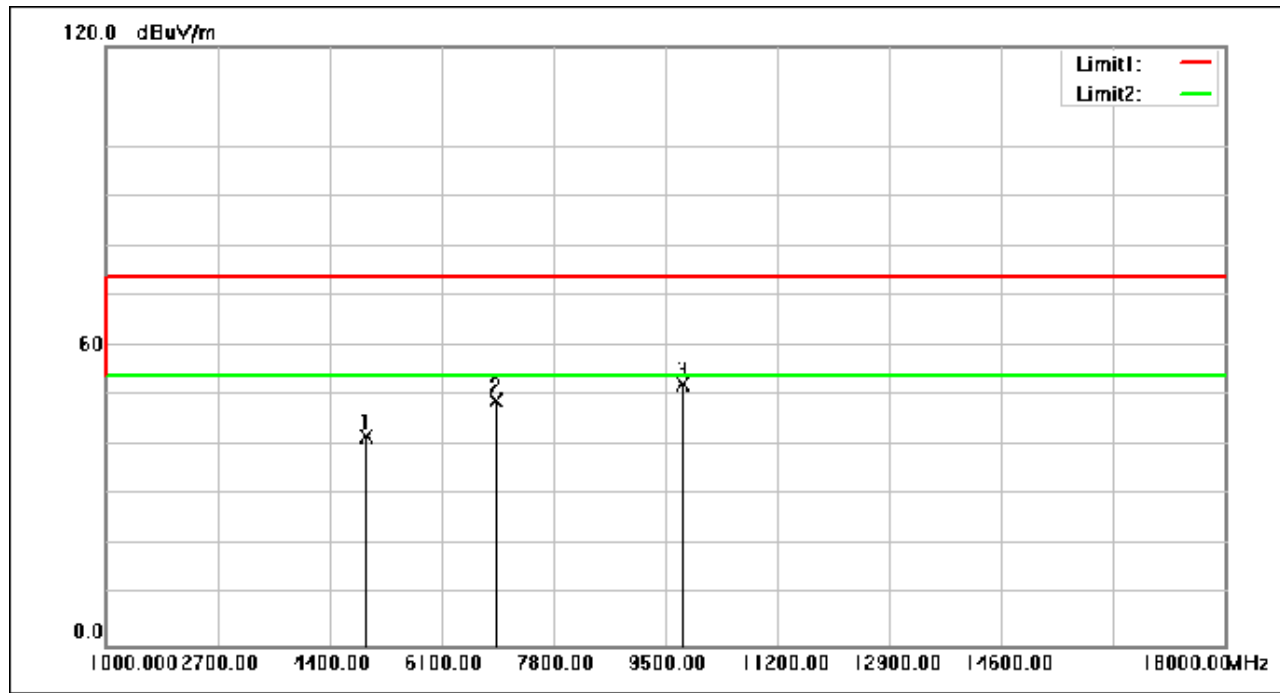
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 104 of 189

Test Mode: 00; Polarity: Horizontal; Modulation:802.11ax(Full RU0); Bandwidth:40MHz; Channel:High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4966.440	60.43	-18.46	41.97	74.00	-32.03	peak
2	6921.440	60.86	-11.71	49.15	74.00	-24.85	peak
3	9762.480	59.71	-7.46	52.25	74.00	-21.75	peak

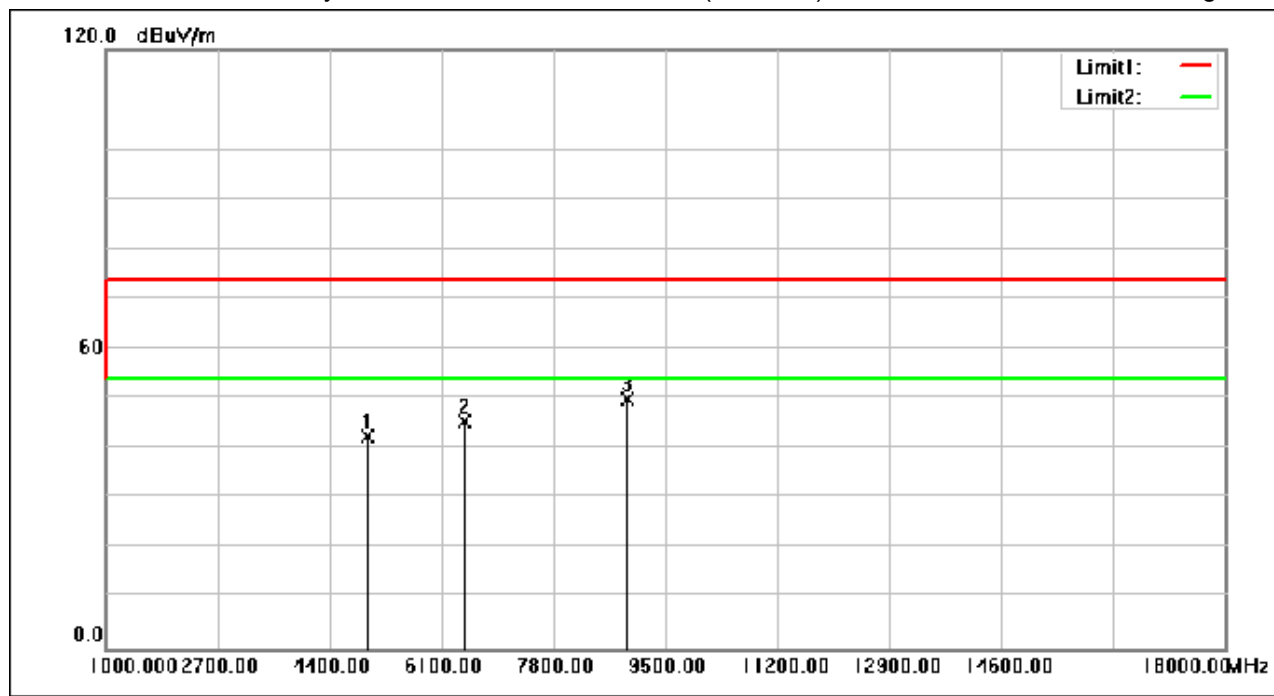
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 105 of 189

Test Mode: 00; Polarity: Vertical; Modulation:802.11ax(Full RU0); Bandwidth:40MHz; Channel:High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4980.720	60.80	-18.46	42.34	74.00	-31.66	peak
2	6470.600	58.71	-13.38	45.33	74.00	-28.67	peak
3	8931.520	59.13	-9.04	50.09	74.00	-23.91	peak

7.5 Conducted Peak Output Power

Test Requirement 47 CFR Part 15, Subpart C 15.247(b)(3)

Test Method: ANSI C63.10 (2013) Section 11.9.1

Limit:

Frequency range(MHz)	Output power of the intentional radiator(watt)
902-928	1 for ≥ 50 hopping channels
	0.25 for $25 \leq$ hopping channels < 50
	1 for digital modulation
2400-2483.5	1 for ≥ 75 non-overlapping hopping channels
	0.125 for all other frequency hopping systems
	1 for digital modulation
5725-5850	1 for frequency hopping systems and digital modulation

7.5.1 E.U.T. Operation

Operating Environment:

Temperature: 20.3 °C

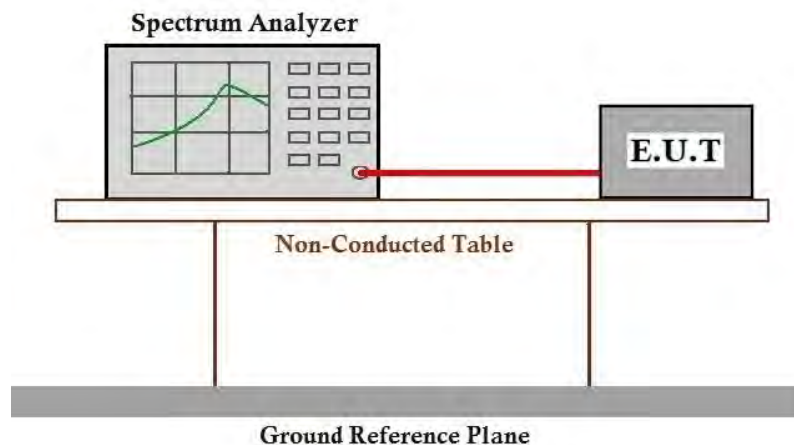
Humidity: 45.4 % RH

Atmospheric Pressure: 1010 mbar

7.5.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20); data rate @ 13.5Mbps is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40). Only the data of worst case is recorded in the report.

7.5.3 Test Setup Diagram





Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 107 of 189

7.5.4 Measurement Procedure and Data

Note: Since the verify power the same operating range bandwidth and smaller power can be covered by the higher power.

Please Refer to Appendix for Details

7.6 Minimum 6dB Bandwidth

Test Requirement 47 CFR Part 15, Subpart C 15.247a(2)

Test Method: ANSI C63.10 (2013) Section 11.8.1

Limit:

≥500 kHz

7.6.1 E.U.T. Operation

Operating Environment:

Temperature: 20.3 °C

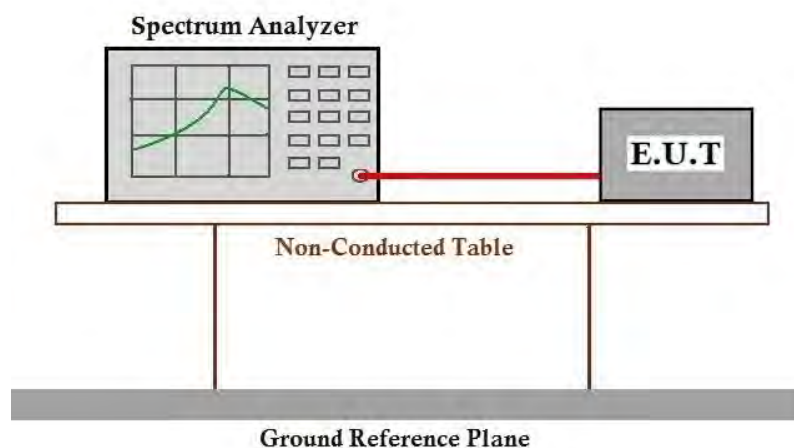
Humidity: 45.5 % RH

Atmospheric Pressure: 1010 mbar

7.6.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20); data rate @ 13.5Mbps is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40). Only the data of worst case is recorded in the report.

7.6.3 Test Setup Diagram



7.6.4 Measurement Procedure and Data

Please Refer to Appendix for Details

7.7 Power Spectrum Density

Test Requirement 47 CFR Part 15, Subpart C 15.247(e)

Test Method: ANSI C63.10 (2013) Section 11.10.2

Limit:

≤8dBm in any 3 kHz band during any time interval of continuous transmission

7.7.1 E.U.T. Operation

Operating Environment:

Temperature: 20.3 °C

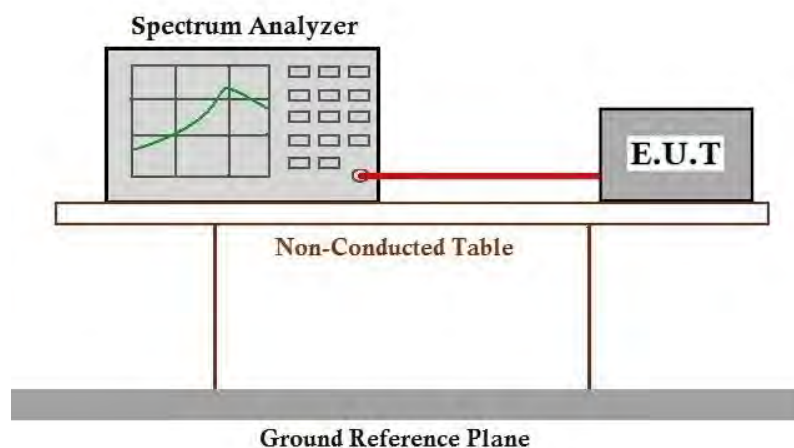
Humidity: 45.4 % RH

Atmospheric Pressure: 1010 mbar

7.7.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20); data rate @ 13.5Mbps is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40). Only the data of worst case is recorded in the report.

7.7.3 Test Setup Diagram



7.7.4 Measurement Procedure and Data

Please Refer to Appendix for Details

7.8 Conducted Band Edges Measurement

Test Requirement 47 CFR Part 15, Subpart C 15.247(d)
 Test Method: ANSI C63.10 (2013) Section 11.13.3.2

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 power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

7.8.1 E.U.T. Operation

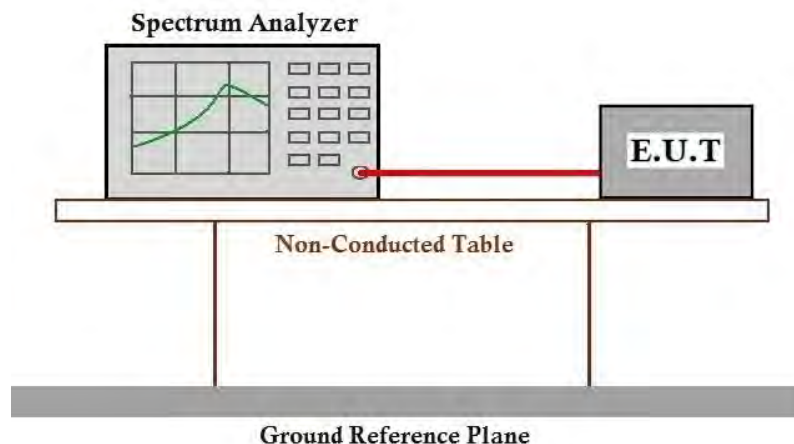
Operating Environment:

Temperature: 28.3 °C Humidity: 45.4 % RH Atmospheric Pressure: 1010 mbar

7.8.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20); data rate @ 13.5Mbps is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40). Only the data of worst case is recorded in the report.

7.8.3 Test Setup Diagram





Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 111 of 189

7.8.4 Measurement Procedure and Data

Please Refer to Appendix for Details

7.9 Conducted Spurious Emissions

Test Requirement 47 CFR Part 15, Subpart C 15.247(d)

Test Method: ANSI C63.10 (2013) Section 11.11

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 power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

7.9.1 E.U.T. Operation

Operating Environment:

Temperature: 20.3 °C

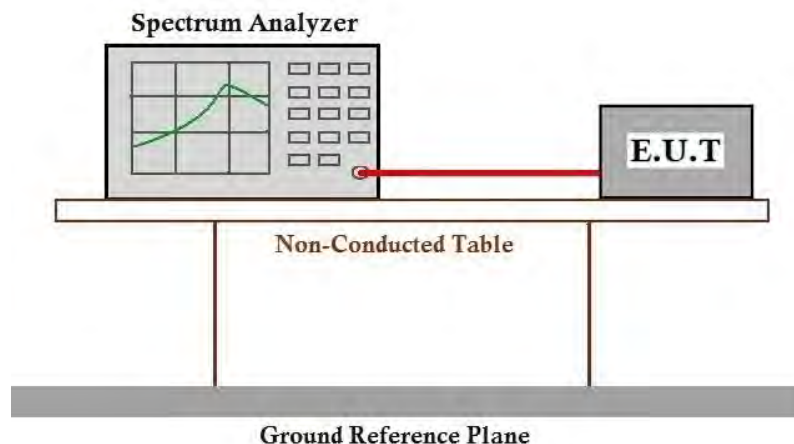
Humidity: 45.4 % RH

Atmospheric Pressure: 1010 mbar

7.9.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20); data rate @ 13.5Mbps is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40). Only the data of worst case is recorded in the report.

7.9.3 Test Setup Diagram





Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 113 of 189

7.9.4 Measurement Procedure and Data

Please Refer to Appendix for Details



Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 114 of 189

8 Test Setup Photo

Refer to Appendix - Test Setup Photo for KSCR2407001230AT

9 EUT Constructional Details (EUT Photos)

Refer to Appendix - Photographs of EUT Constructional Details for KSCR2407001230AT

10 Appendix

1. Duty Cycle

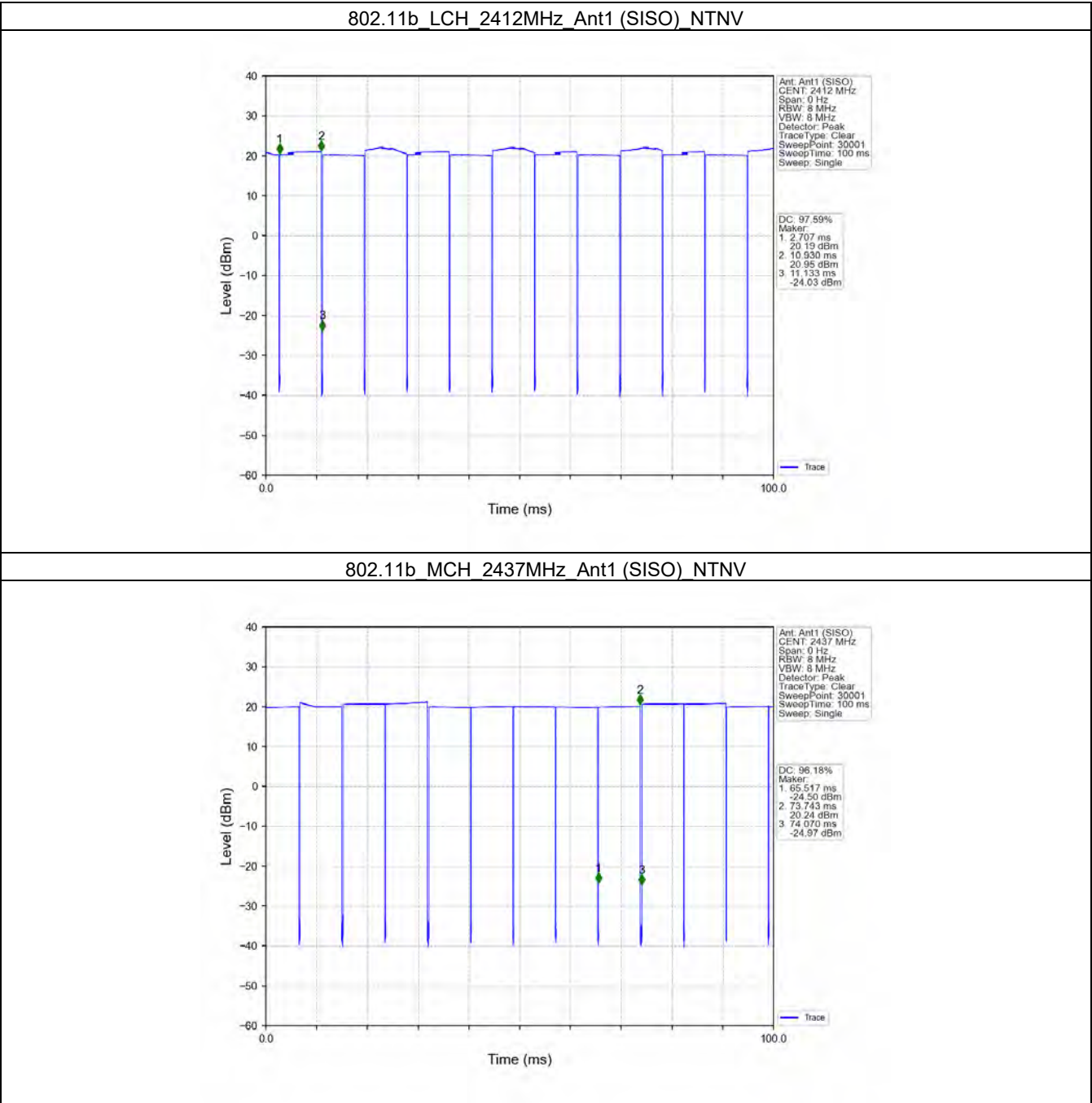
1.1 Test Result

1.1.1 Ant1

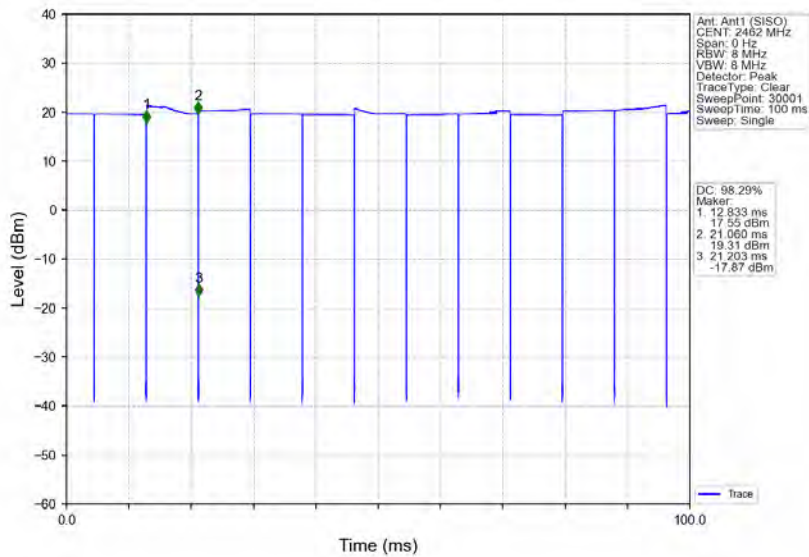
Ant1									
Mode	TX Type	Frequency (MHz)	RU	RU Pos	T _{on} (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
802.11b	SISO	2412	/	/	8.223	8.426	97.59	0.11	0.98
		2437	/	/	8.226	8.553	96.18	0.17	2.42
		2462	/	/	8.227	8.370	98.29	0.07	0.31
802.11g	SISO	2412	/	/	1.367	1.544	88.54	0.53	3.24
		2437	/	/	1.367	1.518	90.05	0.46	1.64
		2462	/	/	1.367	1.584	86.30	0.64	5.21
802.11n (HT20)	SISO	2412	/	/	1.279	1.504	85.04	0.70	5.95
		2437	/	/	1.279	1.448	88.33	0.54	2.84
		2462	/	/	1.279	1.515	84.42	0.74	4.80
802.11n (HT40)	SISO	2422	/	/	0.638	0.762	83.73	0.77	0.04
		2437	/	/	0.638	0.873	73.08	1.36	10.28
		2452	/	/	0.638	0.762	83.73	0.77	0.00
802.11ax (HEW20)	SISO	2412	RU242	Left	0.998	1.167	85.52	0.68	3.48
		2437	RU242	Left	0.998	1.216	82.07	0.86	6.57
		2462	RU242	Left	0.998	1.234	80.88	0.92	5.70
802.11ax (HEW40)	SISO	2422	RU484	Left	0.530	0.681	77.83	1.09	3.23
		2437	RU484	Left	0.530	0.765	69.28	1.59	11.38
		2452	RU484	Left	0.529	0.756	69.97	1.55	10.55

1.2 Test Graph

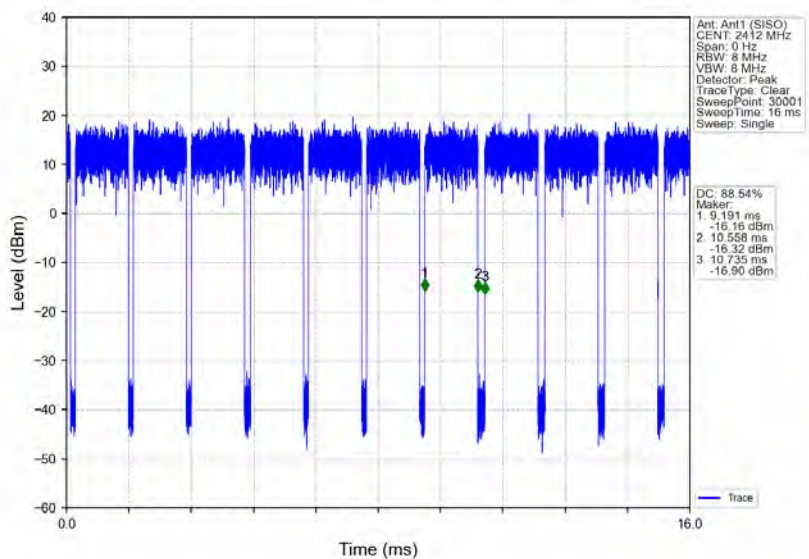
1.2.1 Ant1



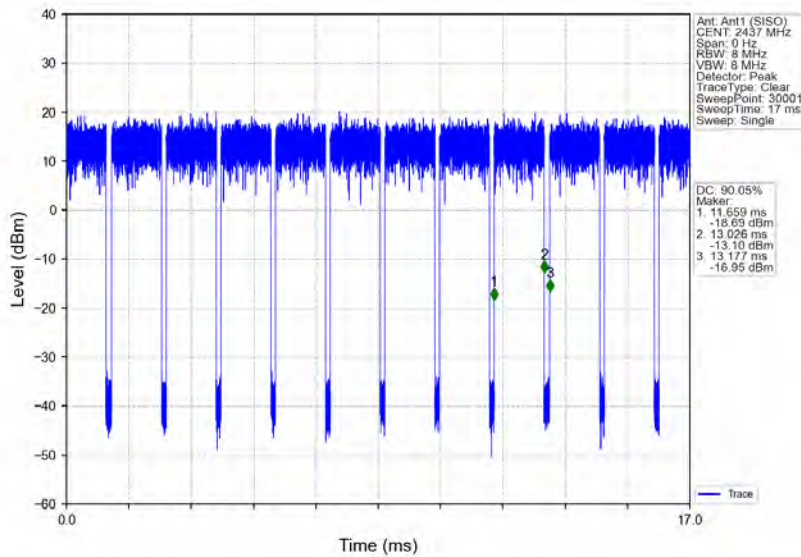
802.11b_HCH_2462MHz_Ant1 (SISO) NTN



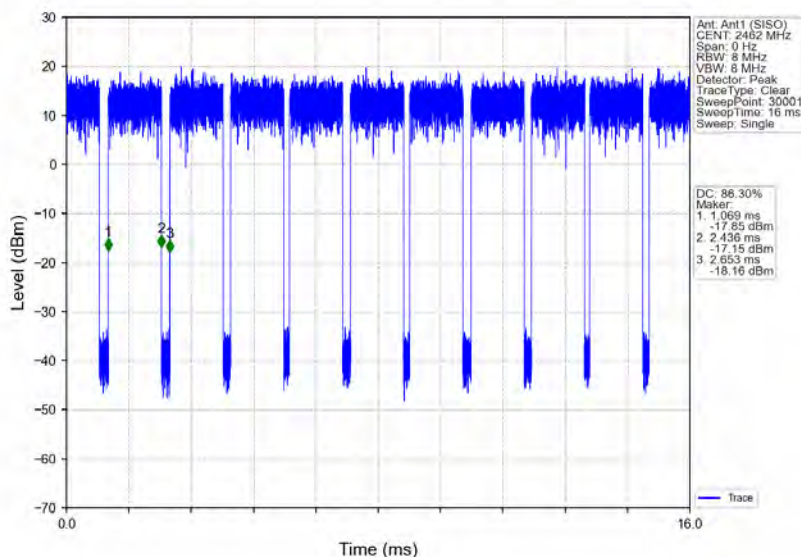
802.11g_LCH_2412MHz_Ant1 (SISO) NTN



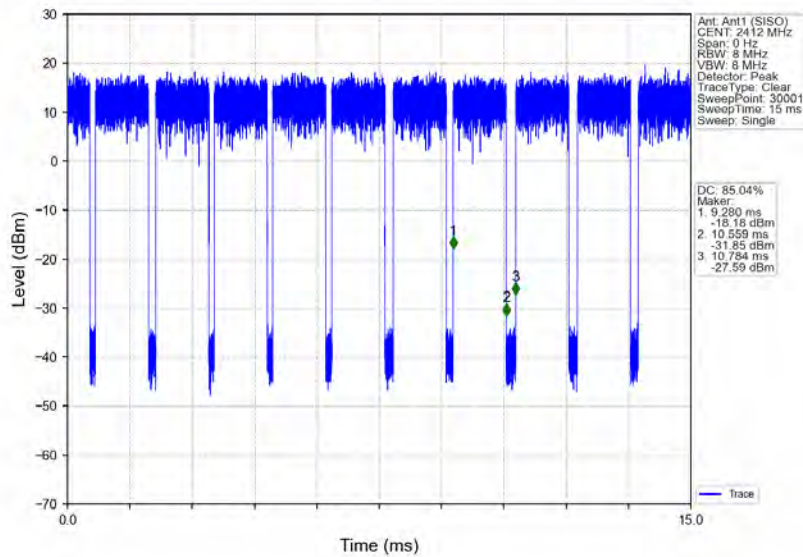
802.11g_MCH_2437MHz_Ant1 (SISO) NTN



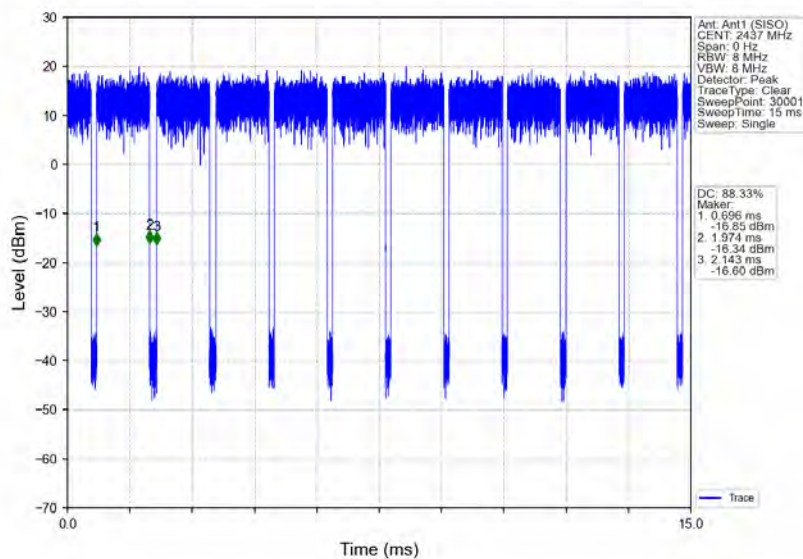
802.11g_HCH_2462MHz_Ant1 (SISO) NTN



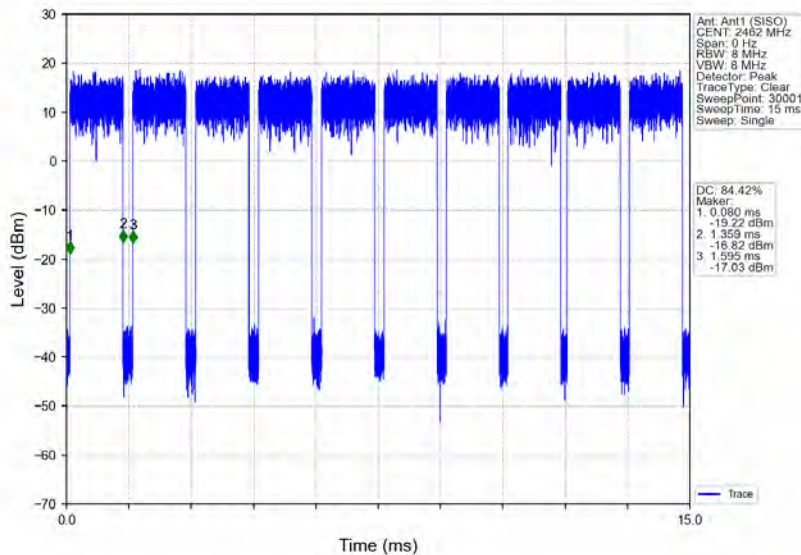
802.11n(HT20) LCH 2412MHz Ant1 (SISO) NTN



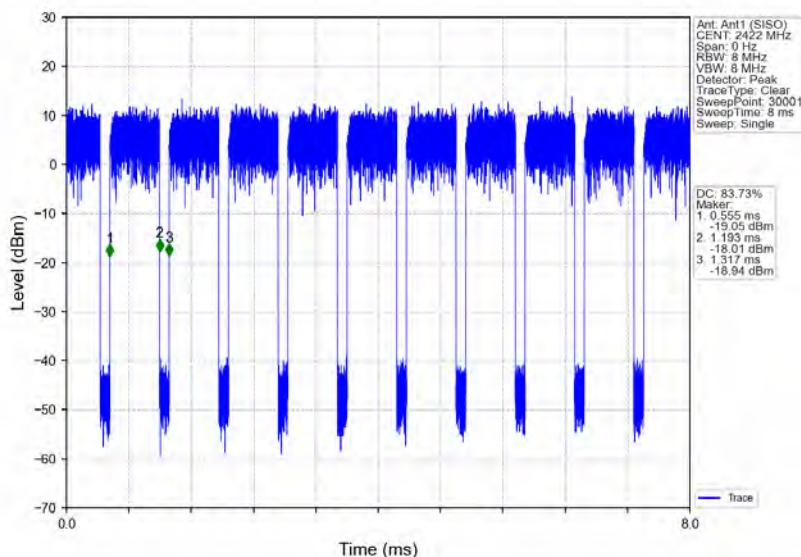
802.11n(HT20) MCH 2437MHz Ant1 (SISO) NTN



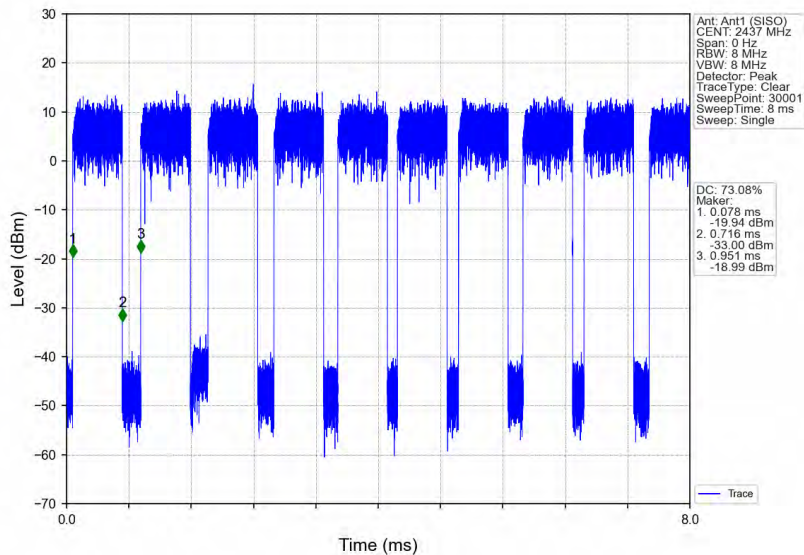
802.11n(HT20) HCH 2462MHz Ant1 (SISO) NTN



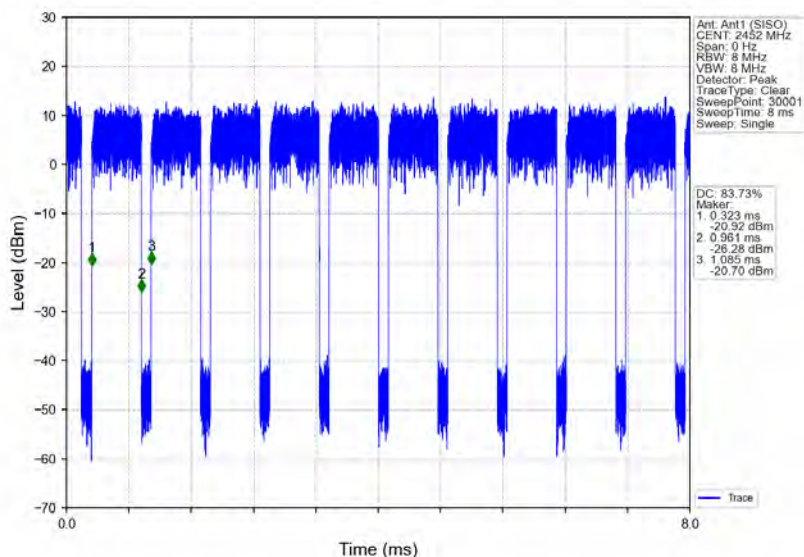
802.11n(HT40) LCH 2422MHz Ant1 (SISO) NTN



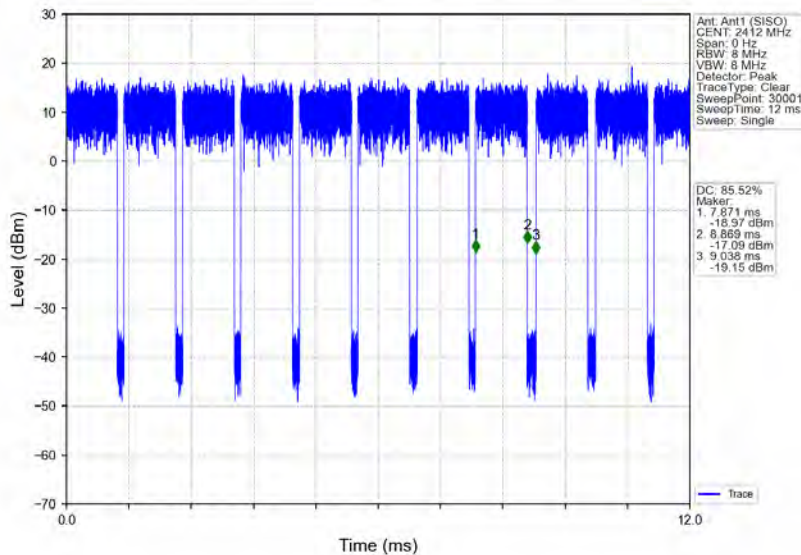
802.11n(HT40) MCH 2437MHz Ant1 (SISO) NTN



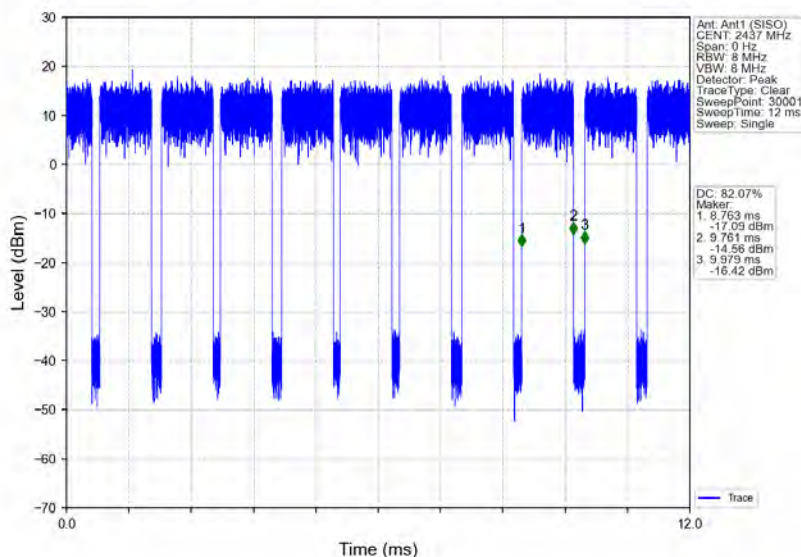
802.11n(HT40) HCH 2452MHz Ant1 (SISO) NTN



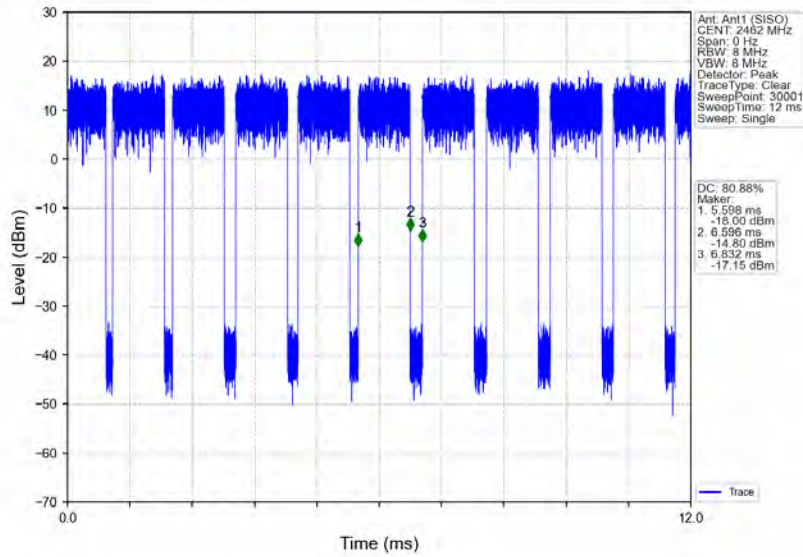
802.11ax(HEW20) LCH 2412MHz RU242 Left Ant1 (SISO) NTNV



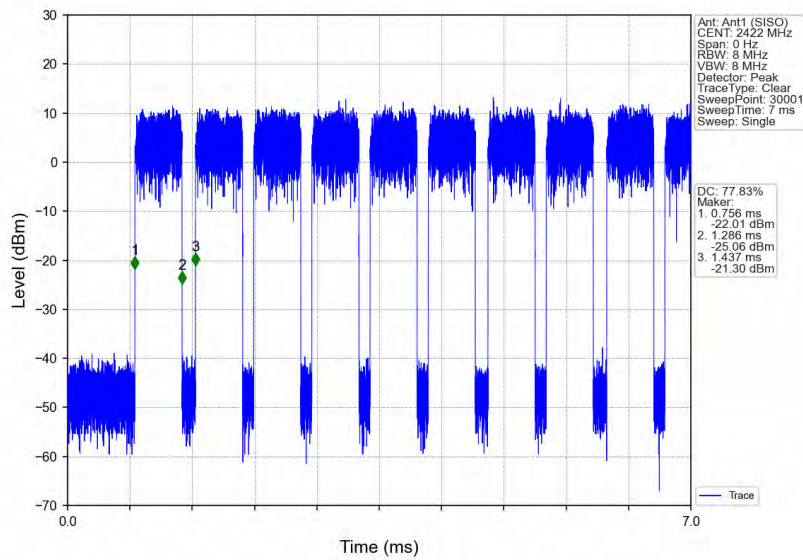
802.11ax(HEW20) MCH 2437MHz RU242 Left Ant1 (SISO) NTNV



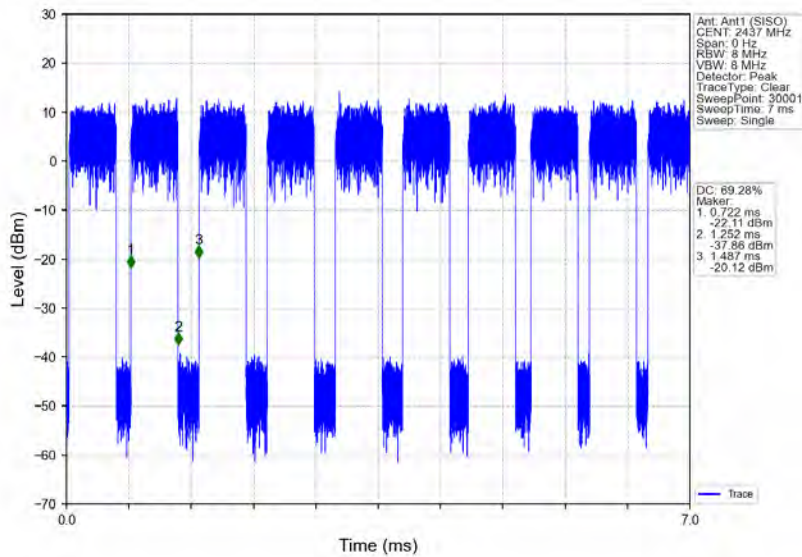
802.11ax(HEW20) HCH 2462MHz RU242 Left Ant1 (SISO) NTNV



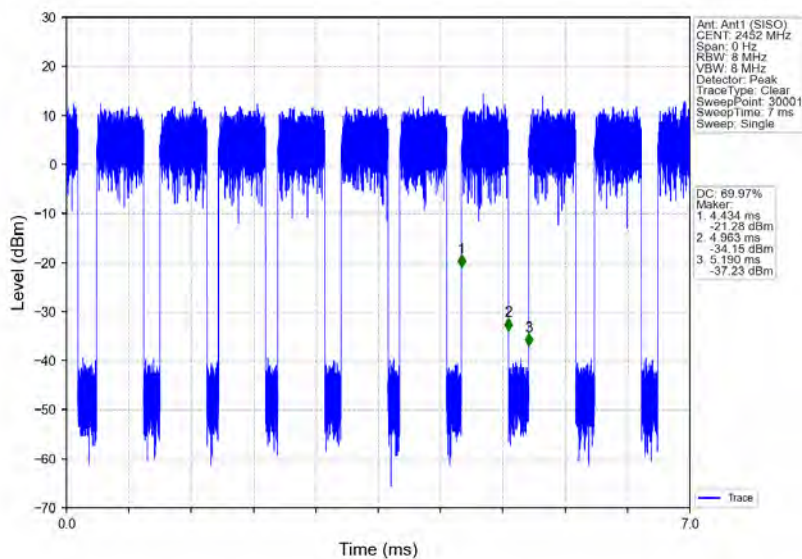
802.11ax(HEW40) LCH 2422MHz RU484 Left Ant1 (SISO) NTNV



802.11ax(HEW40) MCH 2437MHz RU484 Left Ant1 (SISO) NTN



802.11ax(HEW40) HCH 2452MHz RU484 Left Ant1 (SISO) NTN



2. Bandwidth

2.1 Test Result

2.1.1 OBW

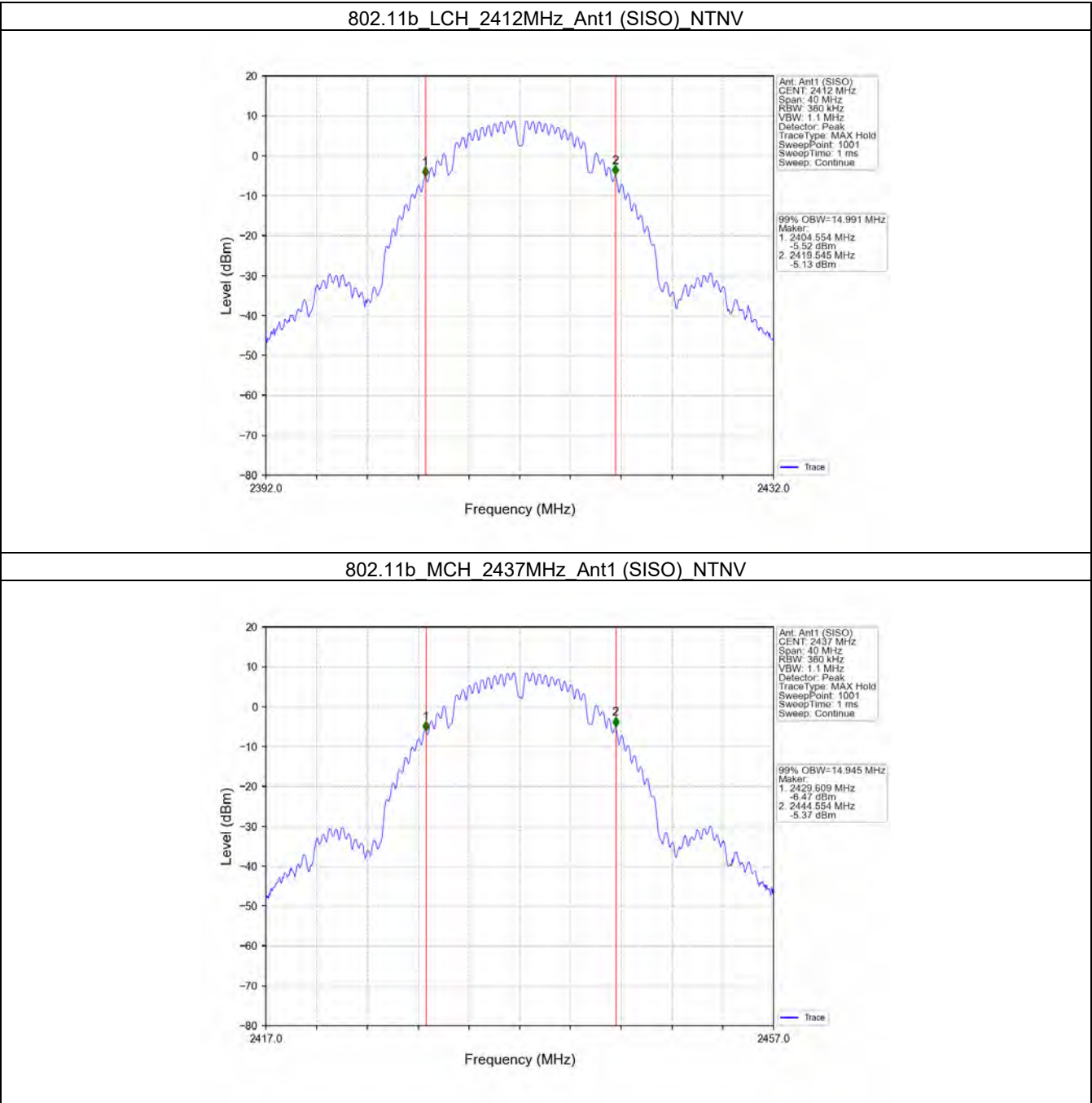
Mode	TX Type	Frequency (MHz)	RU	RU Pos	ANT	99% Occupied Bandwidth (MHz)		Verdict
						Result	Limit	
802.11b	SISO	2412	/	/	1	14.991	/	Pass
		2437	/	/	1	14.945	/	Pass
		2462	/	/	1	14.946	/	Pass
802.11g	SISO	2412	/	/	1	18.576	/	Pass
		2437	/	/	1	18.502	/	Pass
		2462	/	/	1	18.533	/	Pass
802.11n (HT20)	SISO	2412	/	/	1	19.540	/	Pass
		2437	/	/	1	19.403	/	Pass
		2462	/	/	1	19.466	/	Pass
802.11n (HT40)	SISO	2422	/	/	1	37.684	/	Pass
		2437	/	/	1	37.659	/	Pass
		2452	/	/	1	37.618	/	Pass
802.11ax (HEW20)	SISO	2412	RU242	Left	1	19.978	/	Pass
		2437	RU242	Left	1	19.884	/	Pass
		2462	RU242	Left	1	19.859	/	Pass
802.11ax (HEW40)	SISO	2422	RU484	Left	1	38.714	/	Pass
		2437	RU484	Left	1	38.629	/	Pass
		2452	RU484	Left	1	38.525	/	Pass

2.1.2 6dB BW

Mode	TX Type	Frequency (MHz)	RU	RU Pos	ANT	6dB Bandwidth (MHz)		Verdict
						Result	Limit	
802.11b	SISO	2412	/	/	1	10.207	≥ 0.5	Pass
		2437	/	/	1	10.198	≥ 0.5	Pass
		2462	/	/	1	10.199	≥ 0.5	Pass
802.11g	SISO	2412	/	/	1	16.596	≥ 0.5	Pass
		2437	/	/	1	16.587	≥ 0.5	Pass
		2462	/	/	1	16.557	≥ 0.5	Pass
802.11n (HT20)	SISO	2412	/	/	1	17.709	≥ 0.5	Pass
		2437	/	/	1	17.845	≥ 0.5	Pass
		2462	/	/	1	17.798	≥ 0.5	Pass
802.11n (HT40)	SISO	2422	/	/	1	36.466	≥ 0.5	Pass
		2437	/	/	1	36.211	≥ 0.5	Pass
		2452	/	/	1	36.312	≥ 0.5	Pass
802.11ax (HEW20)	SISO	2412	RU242	Left	1	18.733	≥ 0.5	Pass
		2437	RU242	Left	1	18.835	≥ 0.5	Pass
		2462	RU242	Left	1	18.836	≥ 0.5	Pass
802.11ax (HEW40)	SISO	2422	RU484	Left	1	37.642	≥ 0.5	Pass
		2437	RU484	Left	1	37.361	≥ 0.5	Pass
		2452	RU484	Left	1	37.524	≥ 0.5	Pass

2.2 Test Graph

2.2.1 OBW



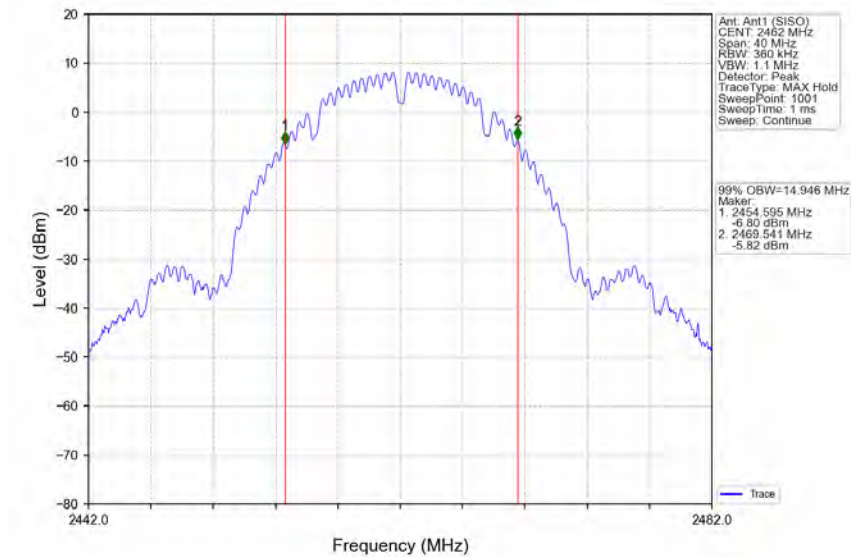
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

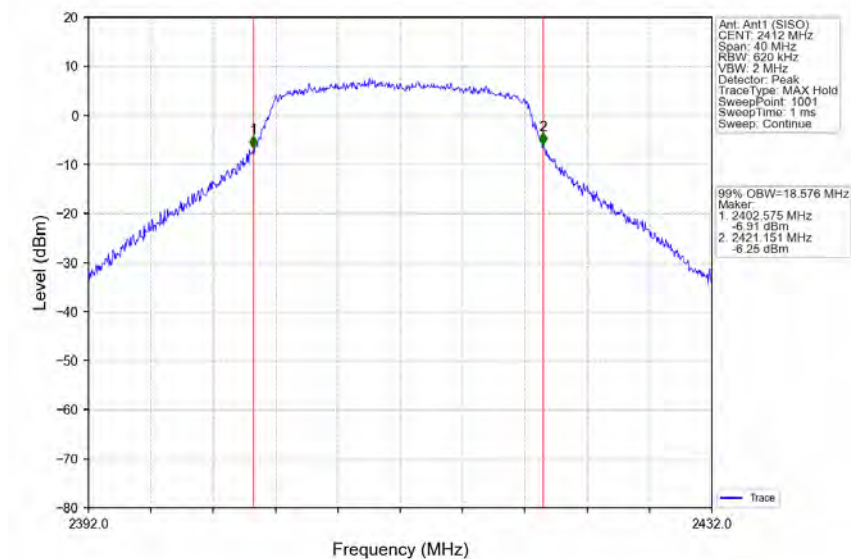
Report No.: KSCR240700123002

Page: 127 of 189

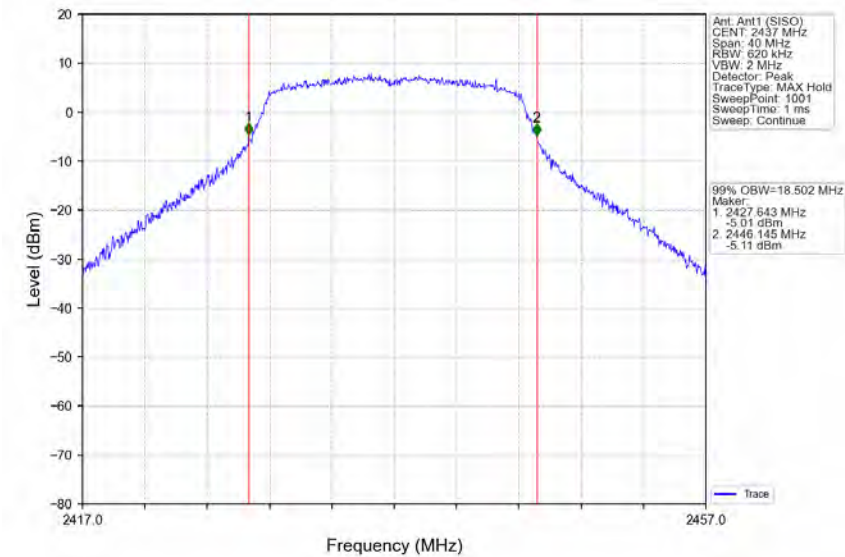
802.11b HCH 2462MHz Ant1 (SISO) NTN



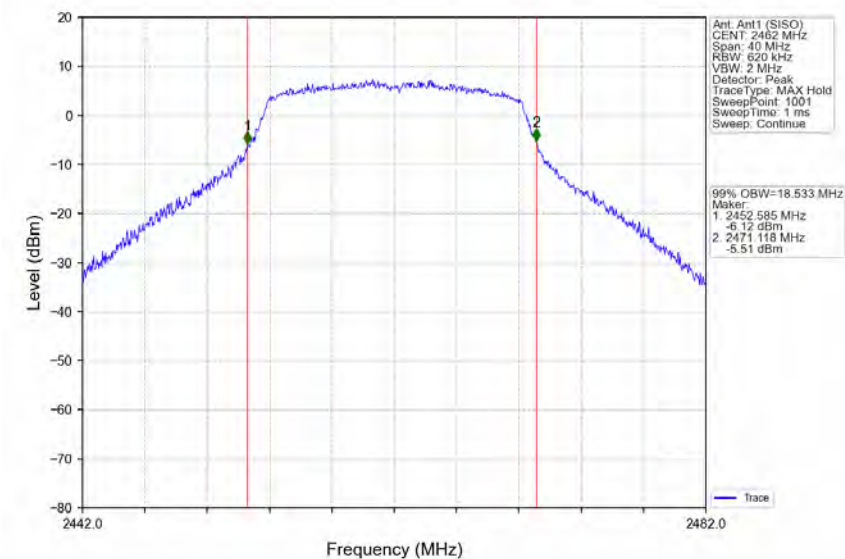
802.11g LCH 2412MHz Ant1 (SISO) NTN



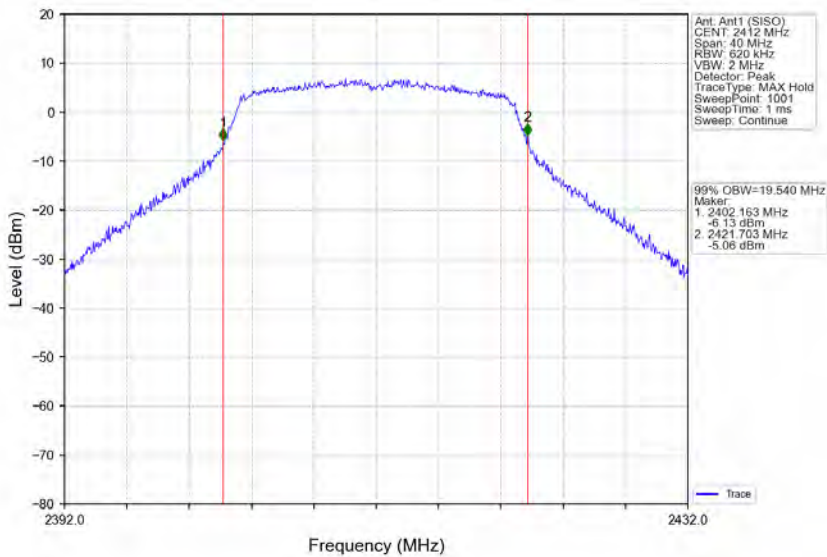
802.11g_MCH_2437MHz_Ant1 (SISO) NTN



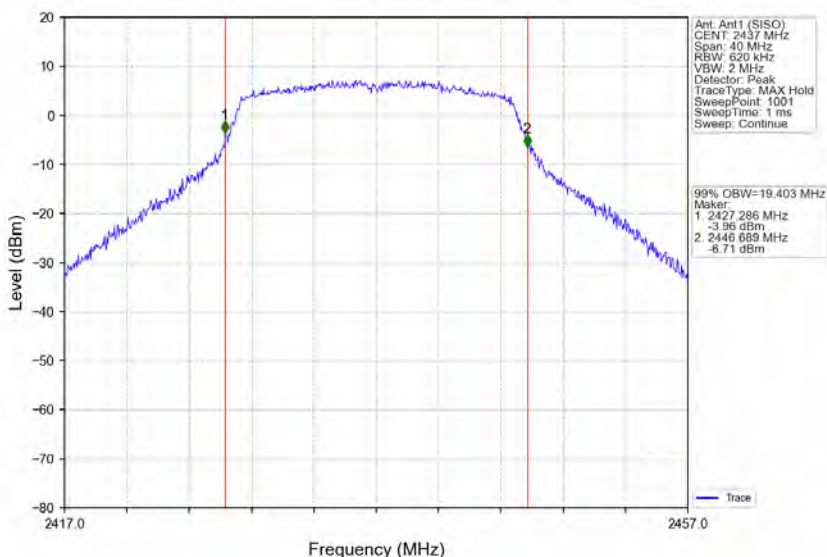
802.11g_HCH_2462MHz_Ant1 (SISO) NTN



802.11n(HT20) LCH 2412MHz Ant1 (SISO) NTN



802.11n(HT20) MCH 2437MHz Ant1 (SISO) NTN



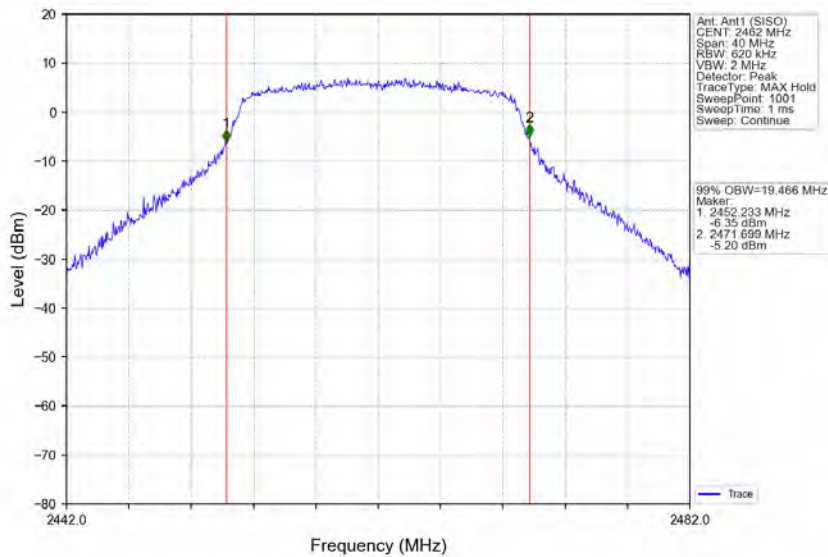
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

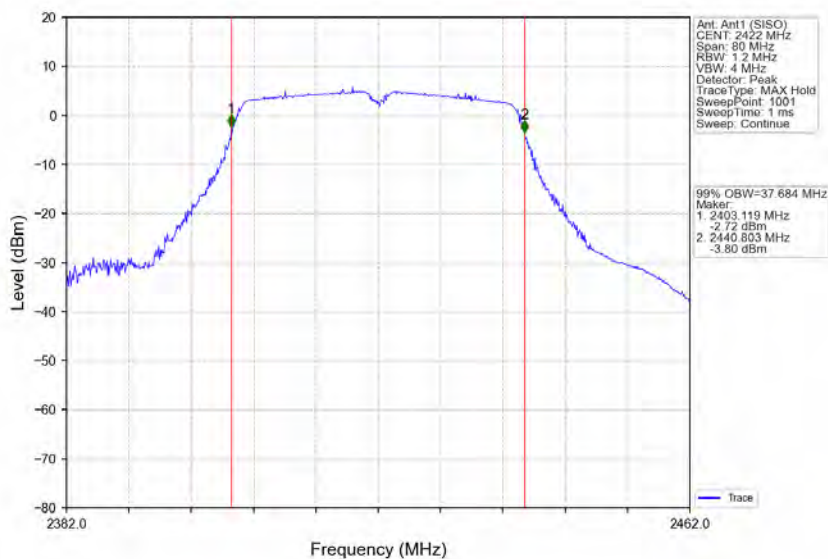
Report No.: KSCR240700123002

Page: 130 of 189

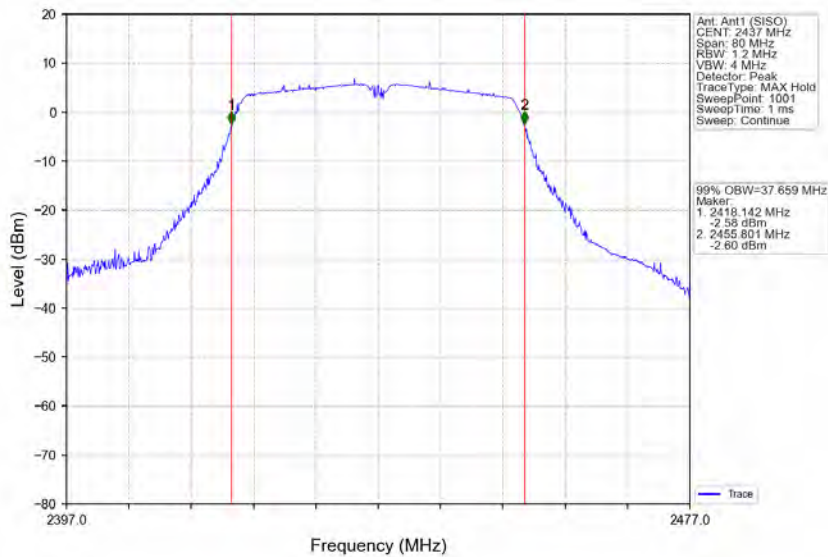
802.11n(HT20) HCH 2462MHz Ant1 (SISO) NTN



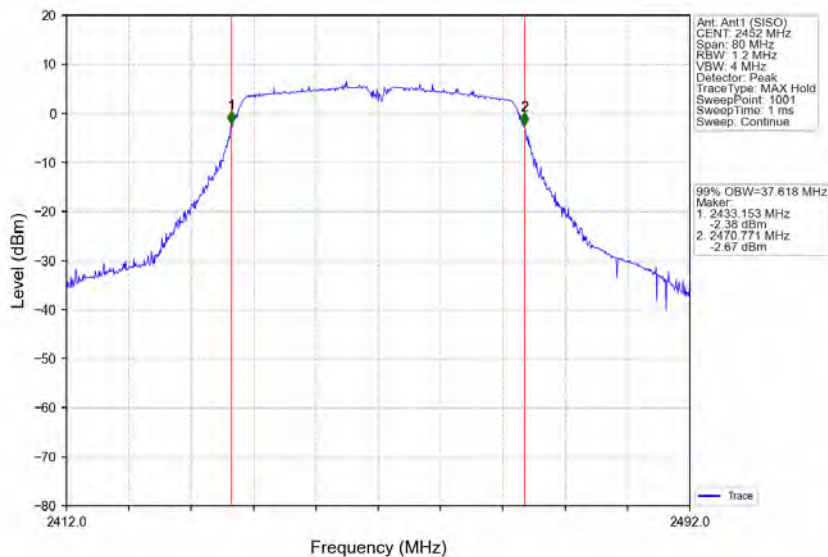
802.11n(HT40) LCH 2422MHz Ant1 (SISO) NTN



802.11n(HT40) MCH 2437MHz Ant1 (SISO) NTN



802.11n(HT40) HCH 2452MHz Ant1 (SISO) NTN



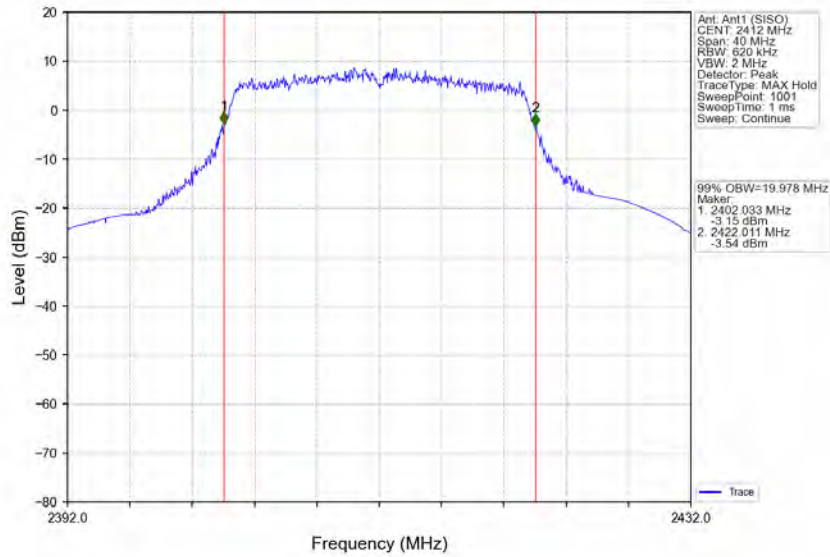
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

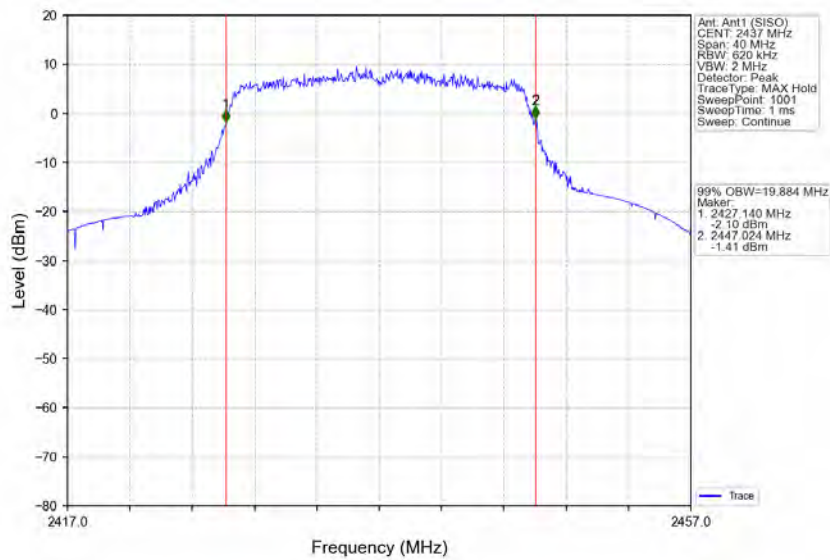
Report No.: KSCR240700123002

Page: 132 of 189

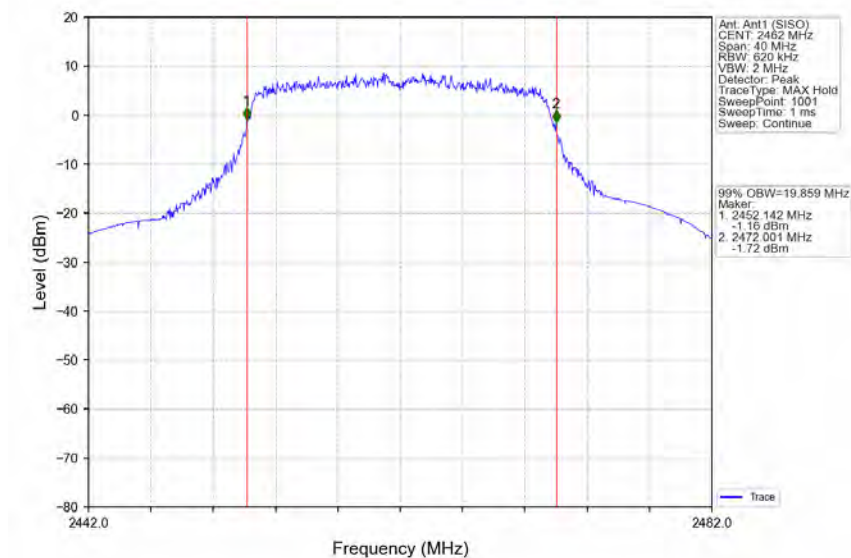
802.11ax(HEW20) LCH 2412MHz RU242 Left Ant1 (SISO) NTNV



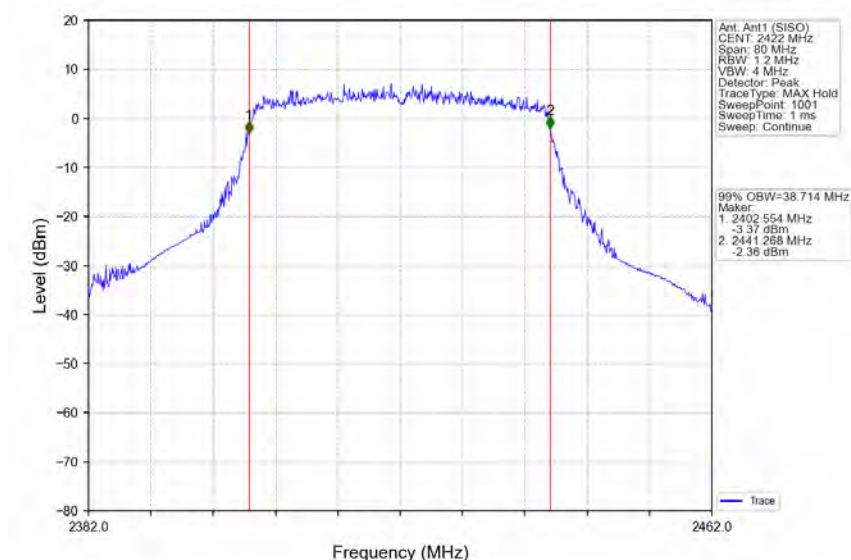
802.11ax(HEW20) MCH 2437MHz RU242 Left Ant1 (SISO) NTNV



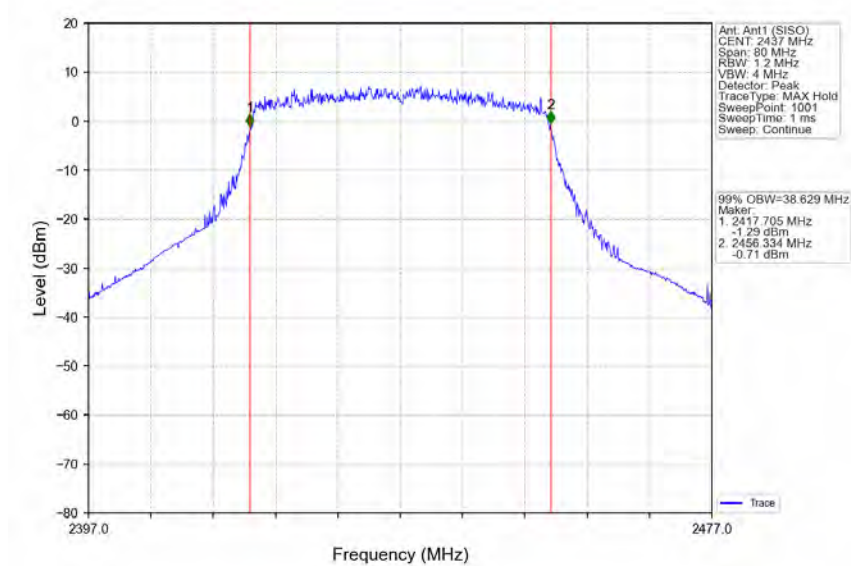
802.11ax(HEW20) HCH 2462MHz RU242 Left Ant1 (SISO) NTNV



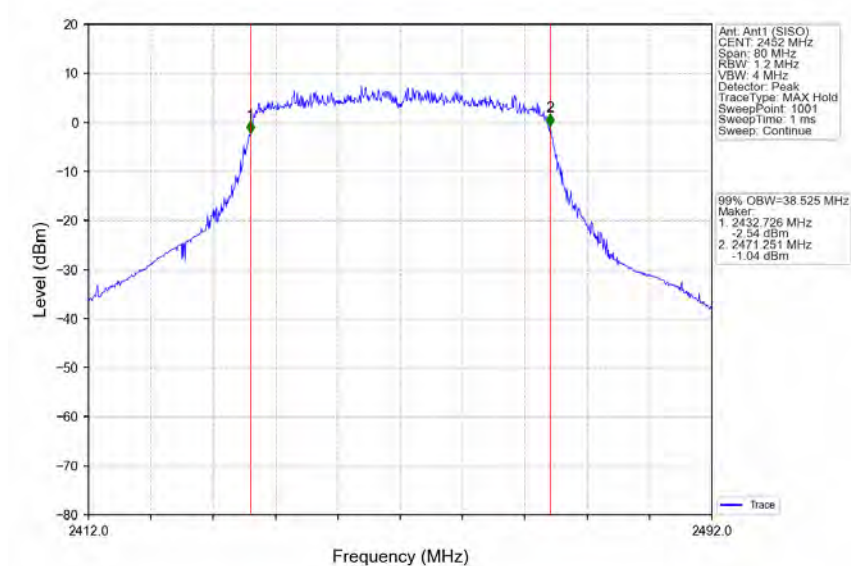
802.11ax(HEW40) LCH 2422MHz RU484 Left Ant1 (SISO) NTNV



802.11ax(HEW40) MCH 2437MHz RU484 Left Ant1 (SISO) NTN



802.11ax(HEW40) HCH 2452MHz RU484 Left Ant1 (SISO) NTN



Compliance Certification Services (Kunshan) Inc.

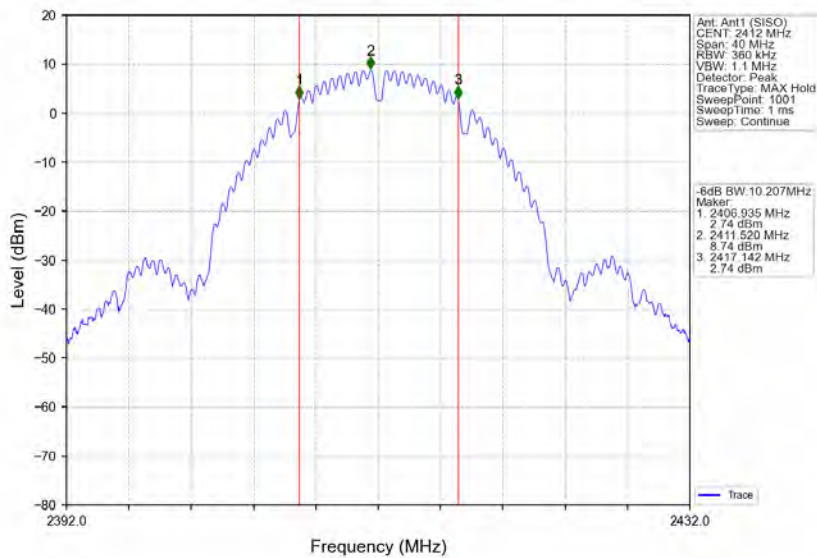
CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

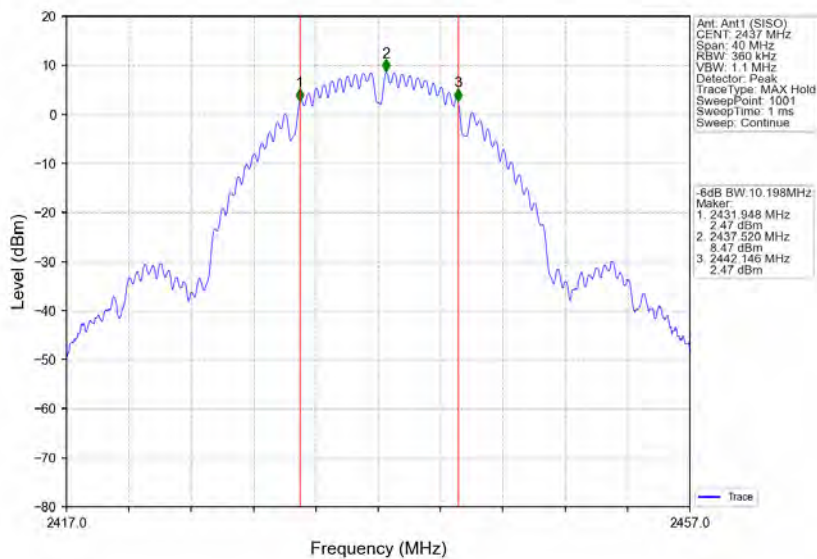
Page: 135 of 189

2.2.2 6dB BW

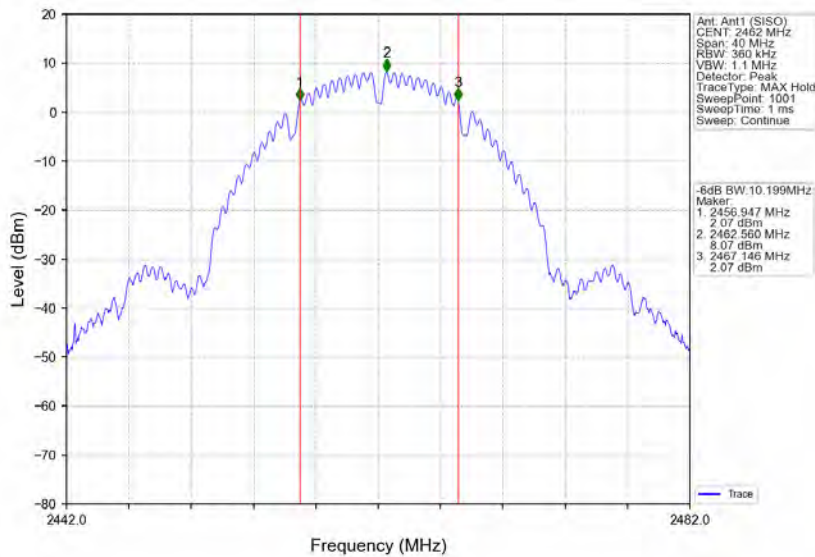
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



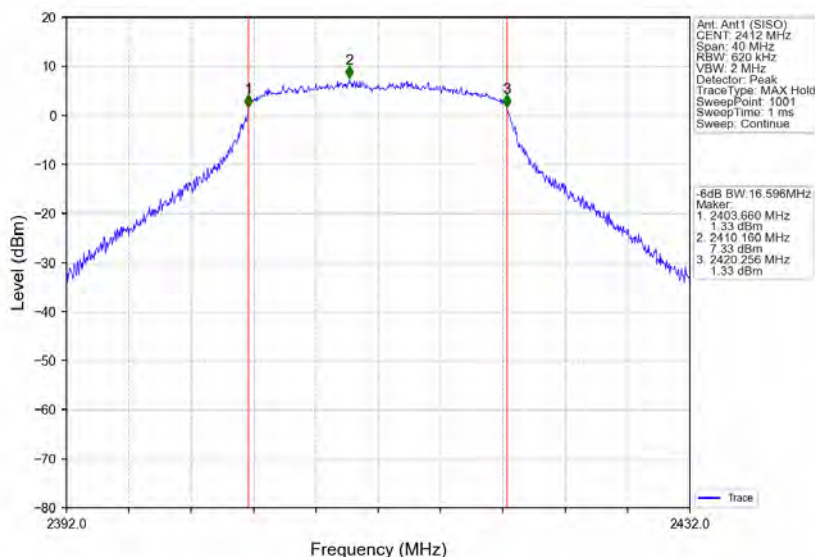
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11b HCH 2462MHz Ant1 (SISO) NTNV



802.11g LCH 2412MHz Ant1 (SISO) NTNV



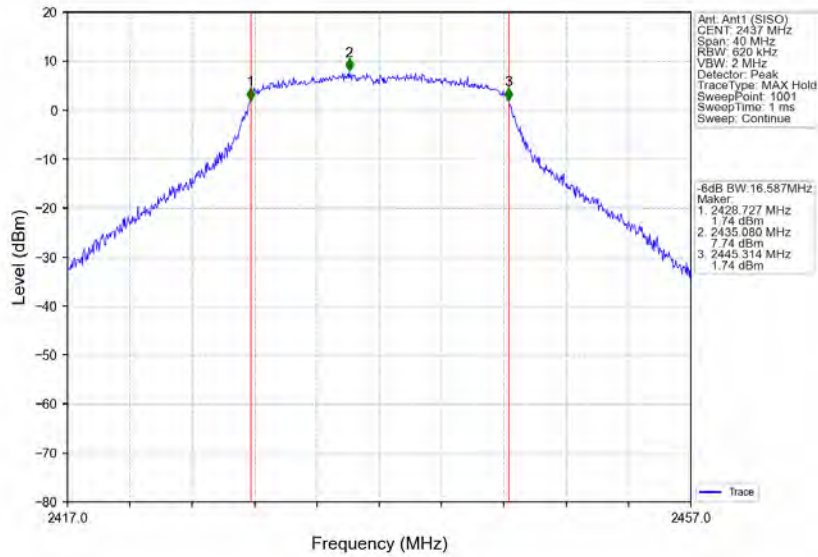
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

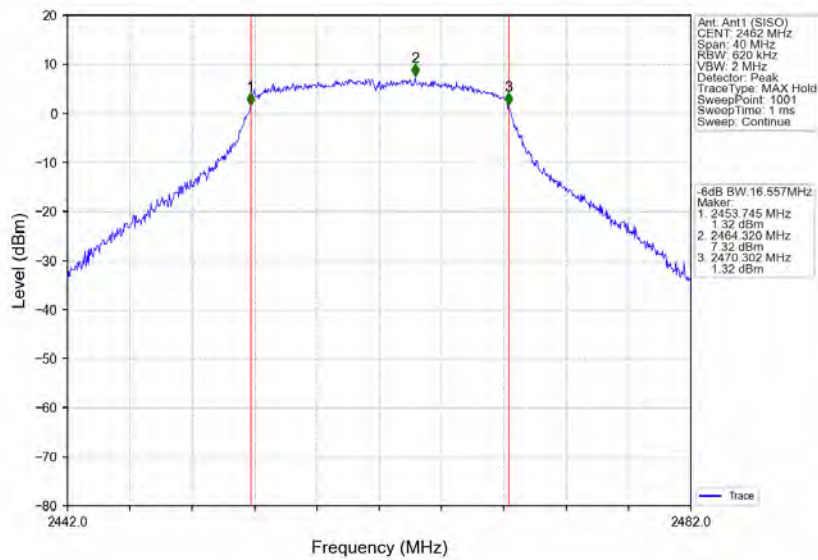
Report No.: KSCR240700123002

Page: 137 of 189

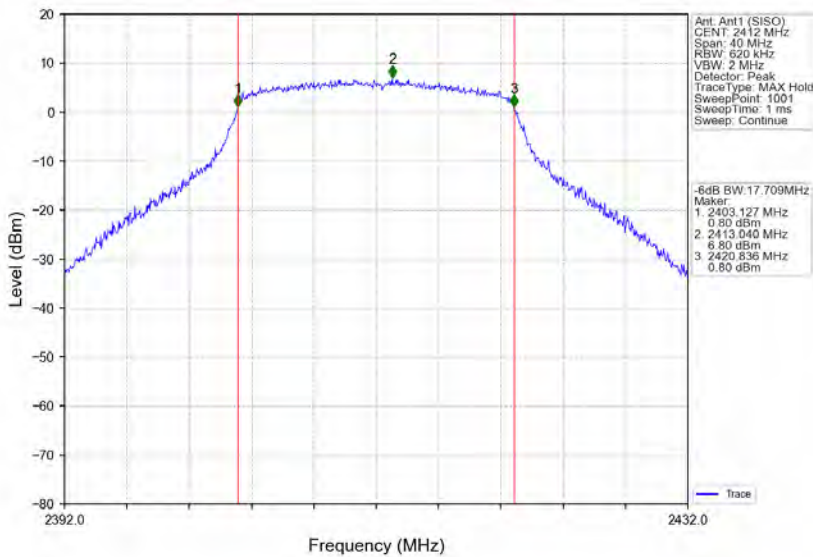
802.11g_MCH_2437MHz_Ant1 (SISO) NTN



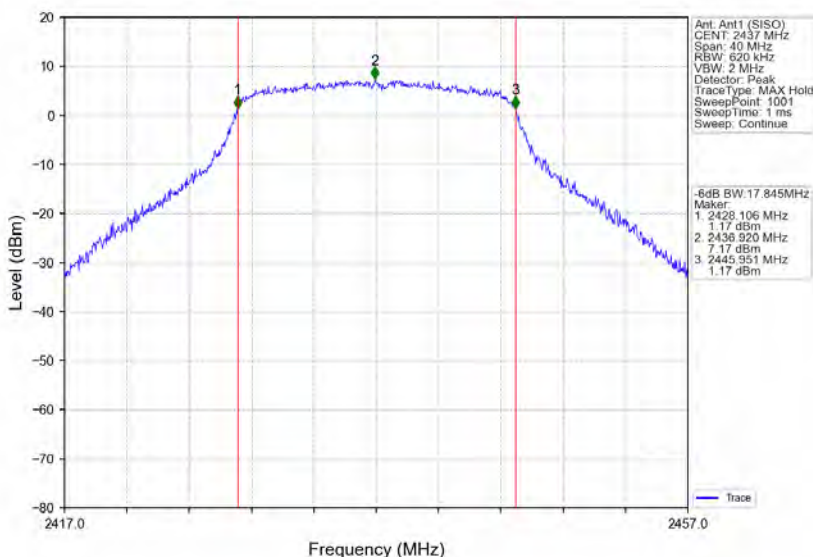
802.11g_HCH_2462MHz_Ant1 (SISO) NTN



802.11n(HT20) LCH 2412MHz Ant1 (SISO) NTN



802.11n(HT20) MCH 2437MHz Ant1 (SISO) NTN



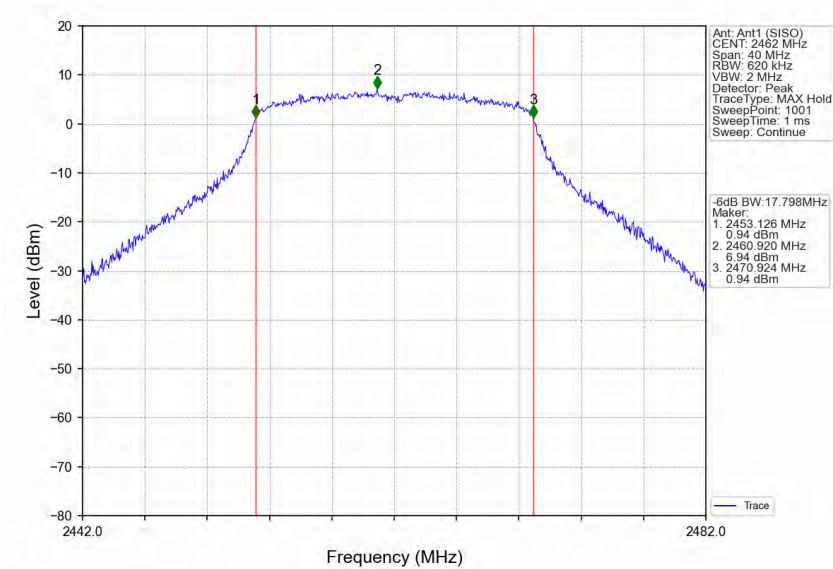
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

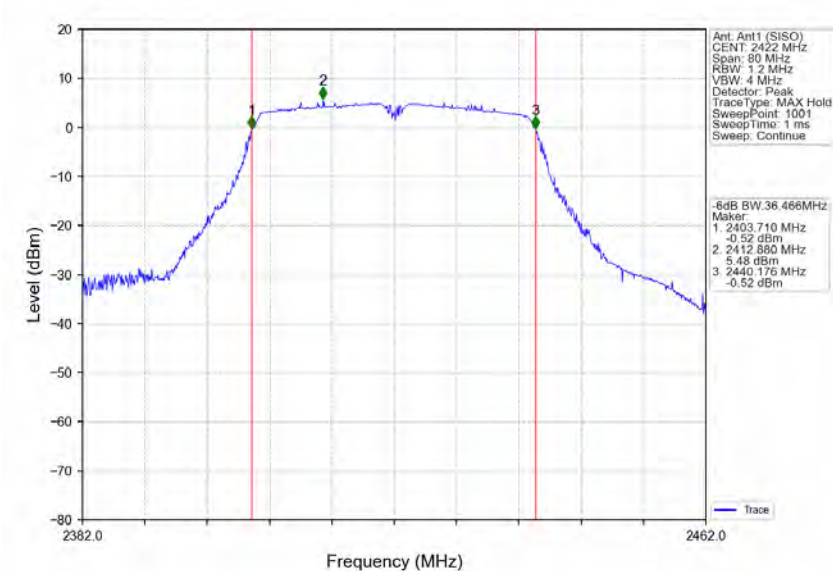
Report No.: KSCR240700123002

Page: 139 of 189

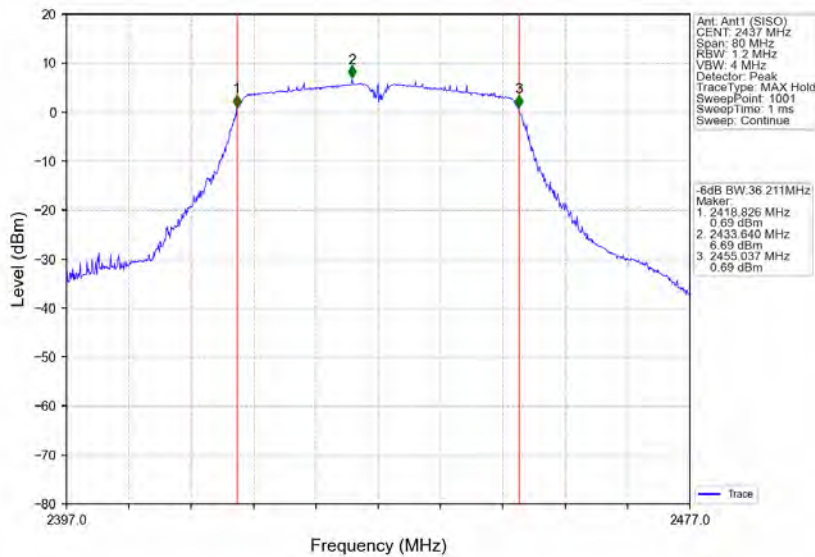
802.11n(HT20) HCH 2462MHz Ant1 (SISO) NTN



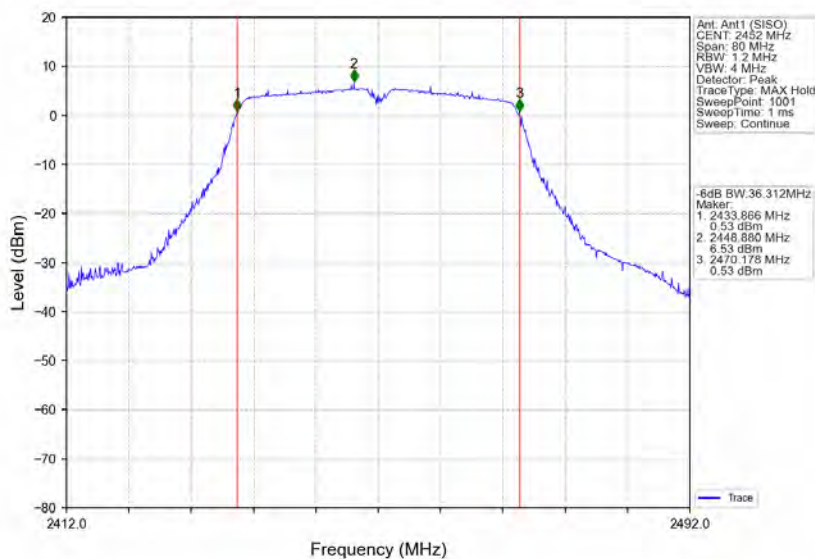
802.11n(HT40) LCH 2422MHz Ant1 (SISO) NTN



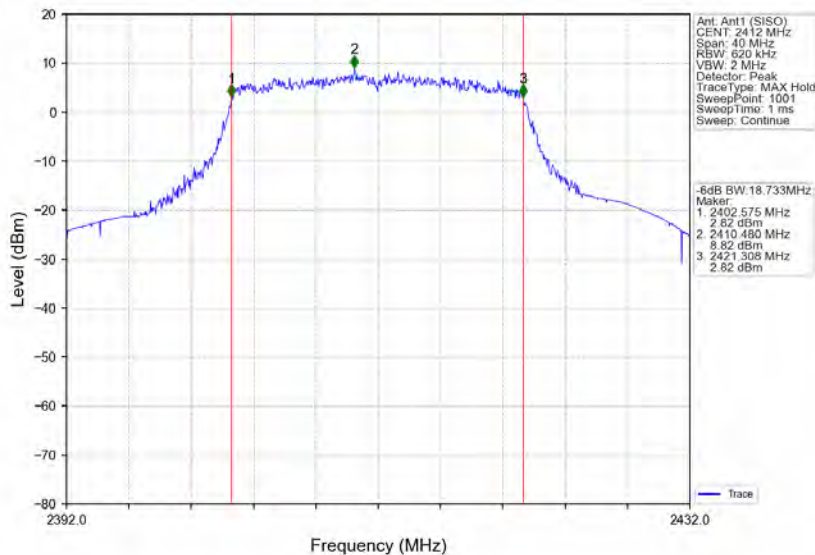
802.11n(HT40) MCH 2437MHz Ant1 (SISO) NTV



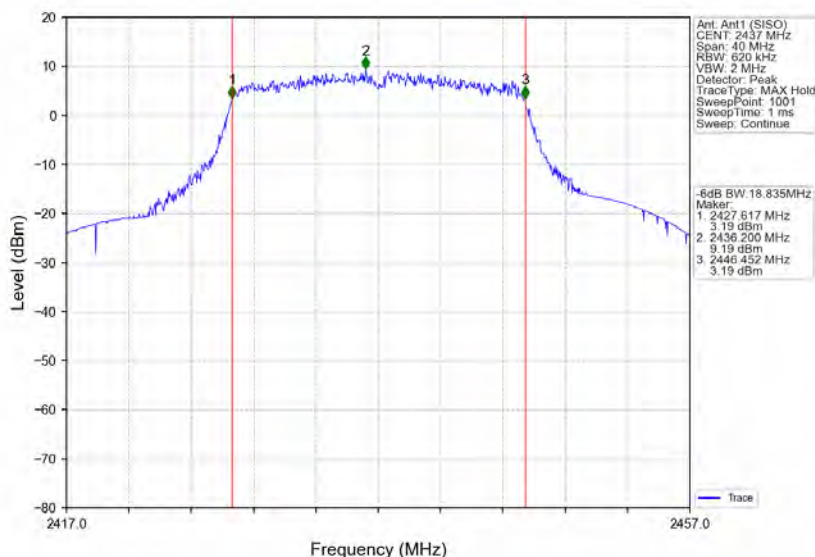
802.11n(HT40) HCH 2452MHz Ant1 (SISO) NTV



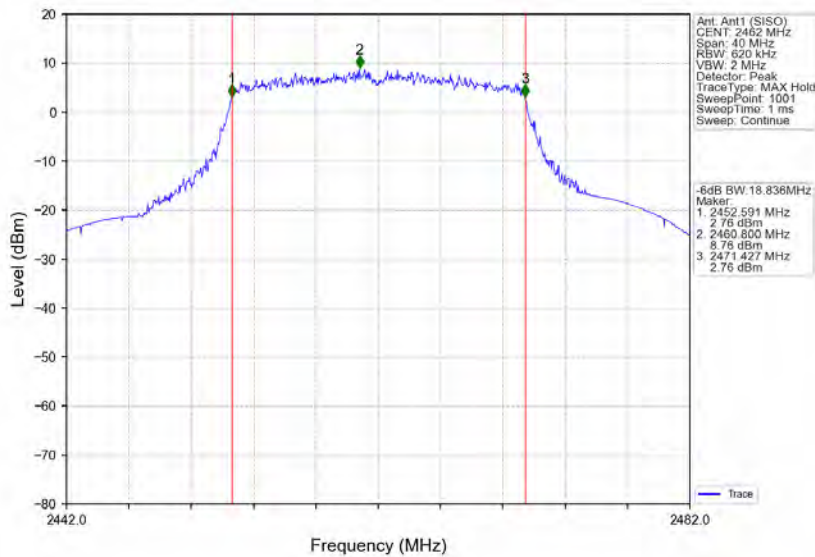
802.11ax(HEW20) LCH 2412MHz RU242 Left Ant1 (SISO) NTNV



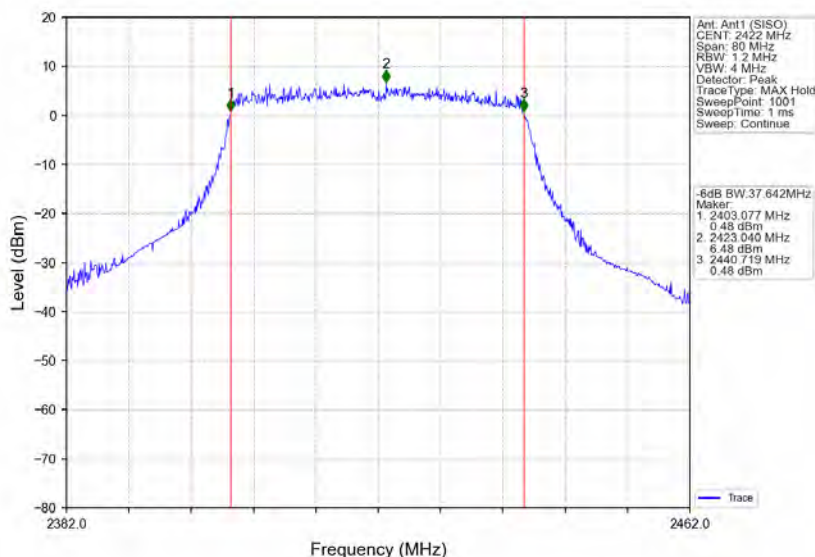
802.11ax(HEW20) MCH 2437MHz RU242 Left Ant1 (SISO) NTNV



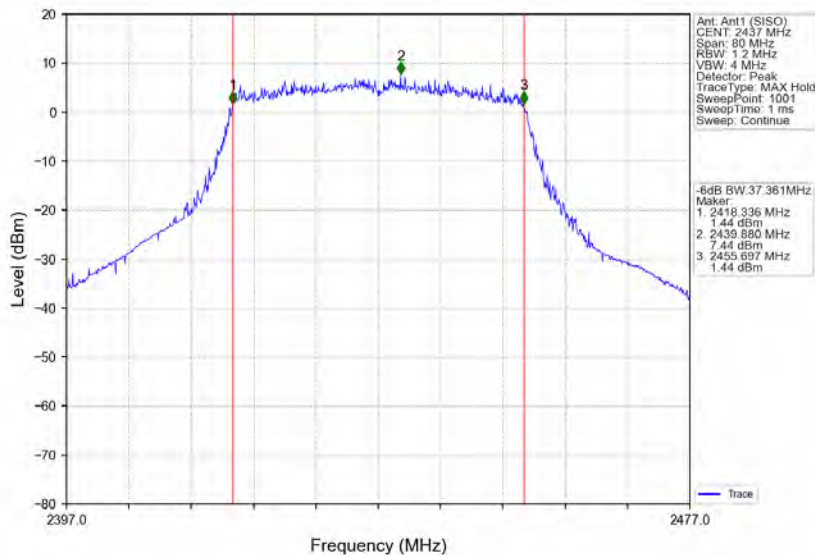
802.11ax(HEW20) HCH 2462MHz RU242 Left Ant1 (SISO) NTNV



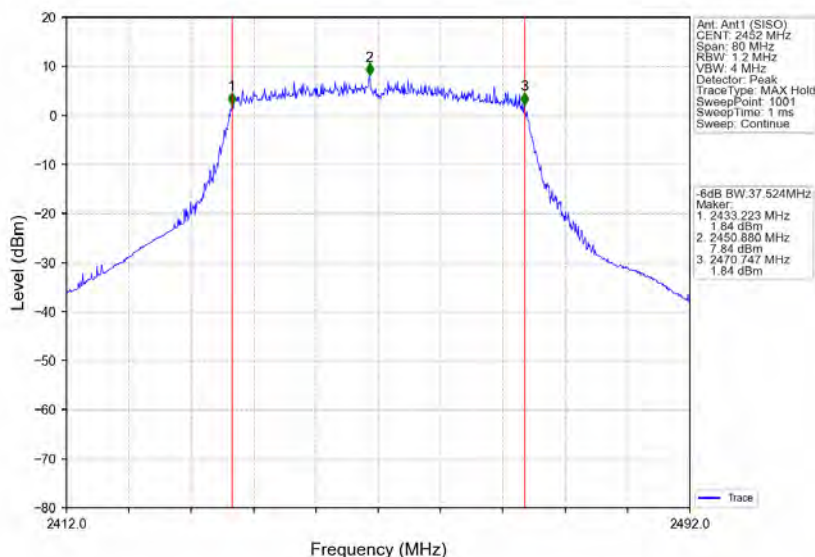
802.11ax(HEW40) LCH 2422MHz RU484 Left Ant1 (SISO) NTNV



802.11ax(HEW40) MCH 2437MHz RU484 Left Ant1 (SISO) NTNV



802.11ax(HEW40) HCH 2452MHz RU484 Left Ant1 (SISO) NTNV



Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240700123002

Page: 144 of 189

3. Maximum Conducted Output Power

3.1 Test Result

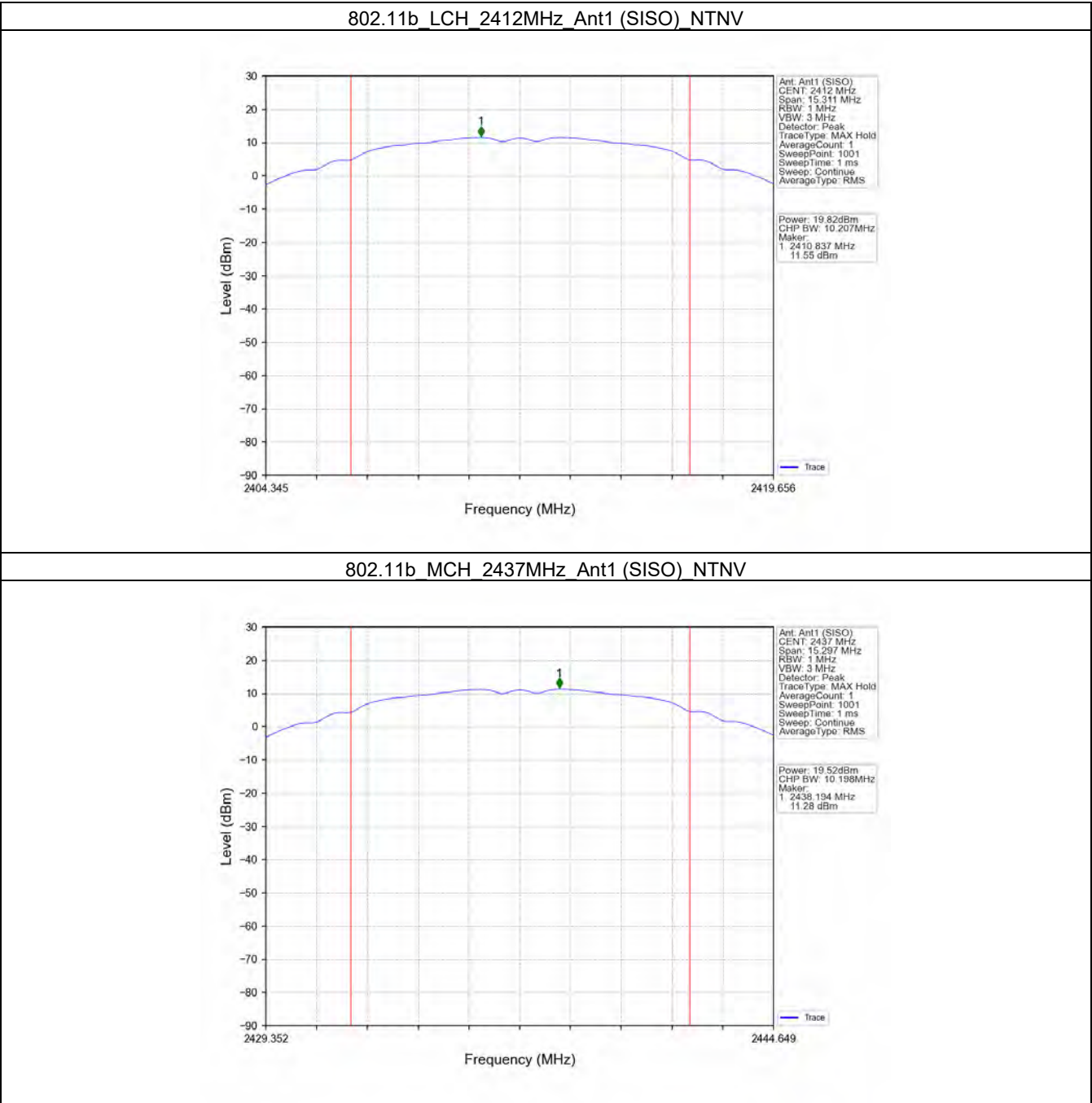
3.1.1 Power

Mode	TX Type	Frequency (MHz)	RU	RU Pos	Maximum Peak Conducted Output Power (dBm)		Verdict
					ANT1	Limit	
802.11b	SISO	2412	/	/	19.82	<=30	Pass
		2437	/	/	19.52	<=30	Pass
		2462	/	/	19.14	<=30	Pass
802.11g	SISO	2412	/	/	19.78	<=30	Pass
		2437	/	/	20.35	<=30	Pass
		2462	/	/	19.84	<=30	Pass
802.11n (HT20)	SISO	2412	/	/	19.69	<=30	Pass
		2437	/	/	20.29	<=30	Pass
		2462	/	/	19.78	<=30	Pass
802.11n (HT40)	SISO	2422	/	/	17.49	<=30	Pass
		2437	/	/	18.18	<=30	Pass
		2452	/	/	18.01	<=30	Pass
802.11ax (HEW20)	SISO	2412	RU242	Left	19.95	<=30	Pass
		2437	RU242	Left	20.66	<=30	Pass
		2462	RU242	Left	20.19	<=30	Pass
802.11ax (HEW40)	SISO	2422	RU484	Left	17.91	<=30	Pass
		2437	RU484	Left	18.71	<=30	Pass
		2452	RU484	Left	18.40	<=30	Pass

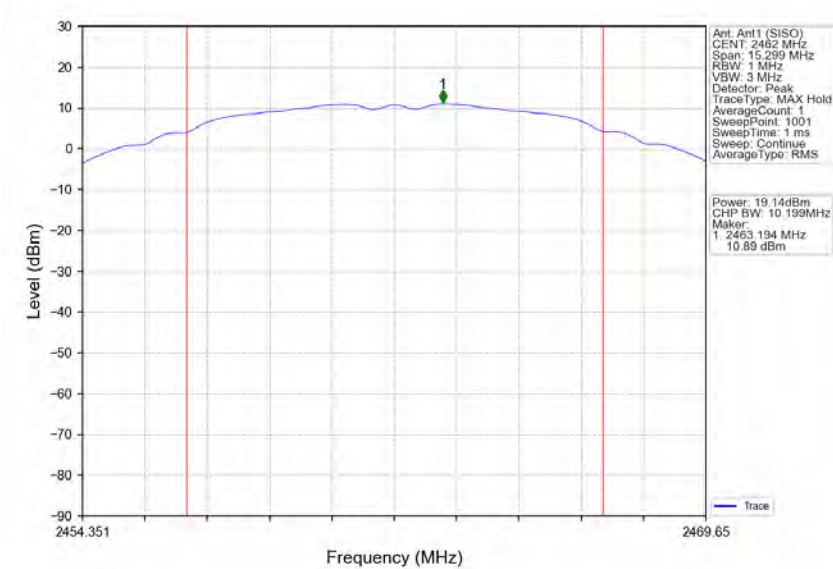
Note1: Antenna Gain: Ant1: 2.93dBi;

3.2 Test Graph

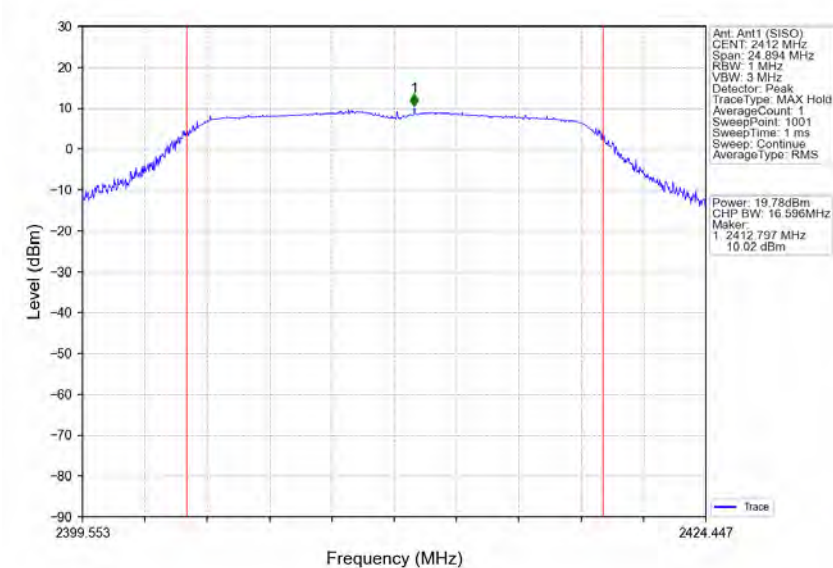
3.2.1 Power



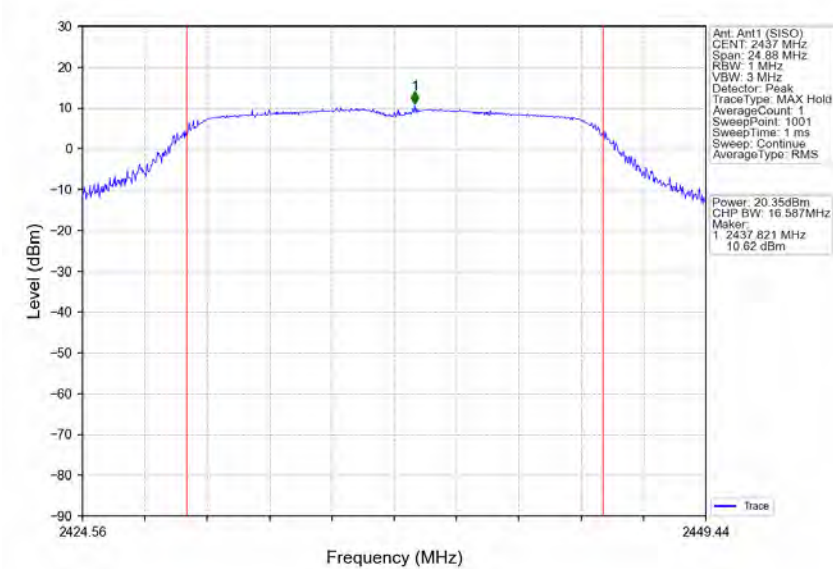
802.11b HCH 2462MHz Ant1 (SISO) NTN



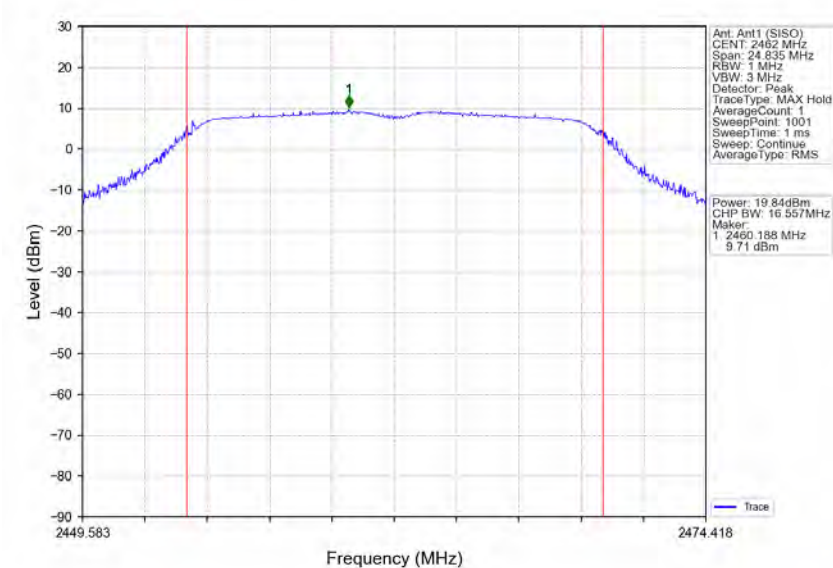
802.11g LCH 2412MHz Ant1 (SISO) NTN



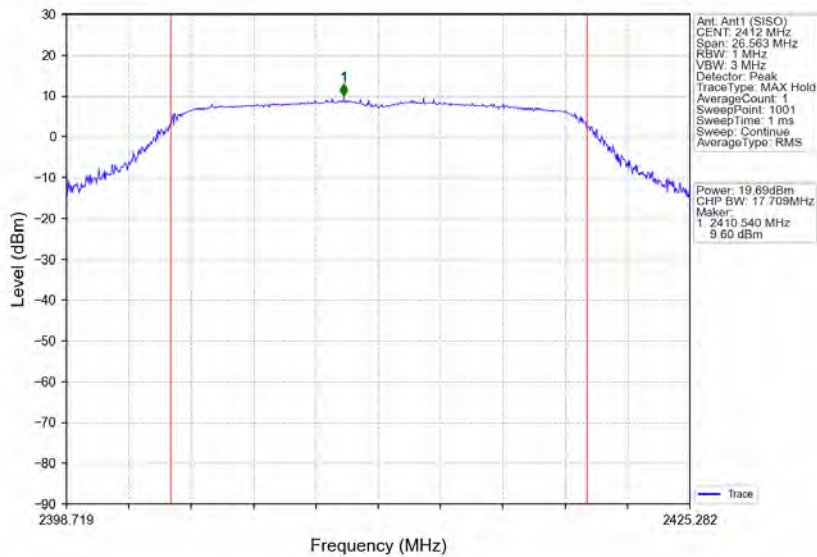
802.11g_MCH_2437MHz_Ant1 (SISO) NTN



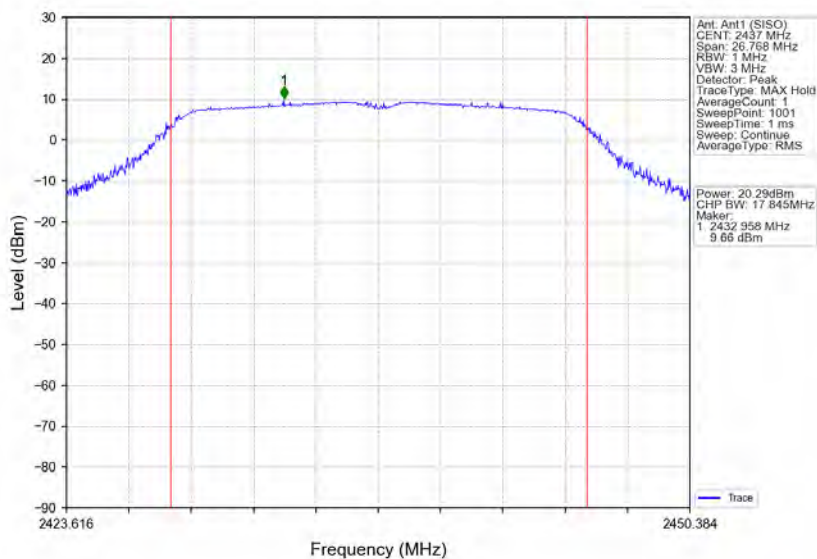
802.11g_HCH_2462MHz_Ant1 (SISO) NTN



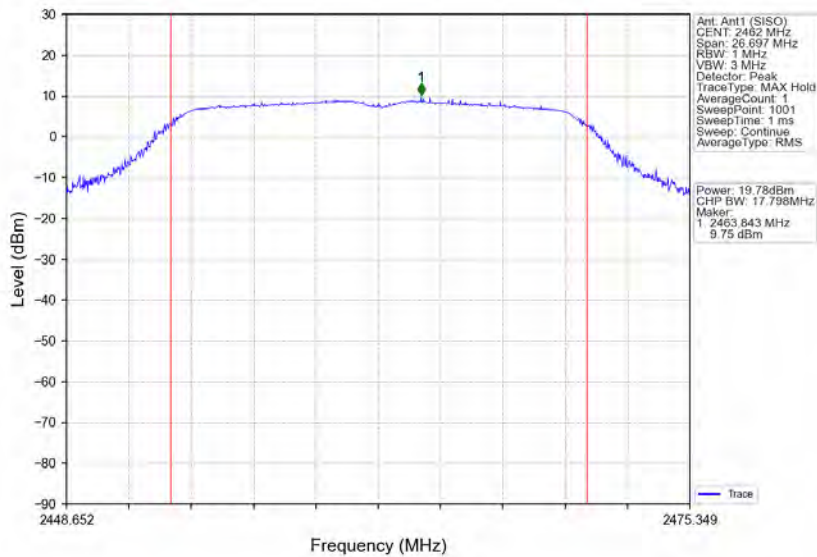
802.11n(HT20) LCH 2412MHz Ant1 (SISO) NTN



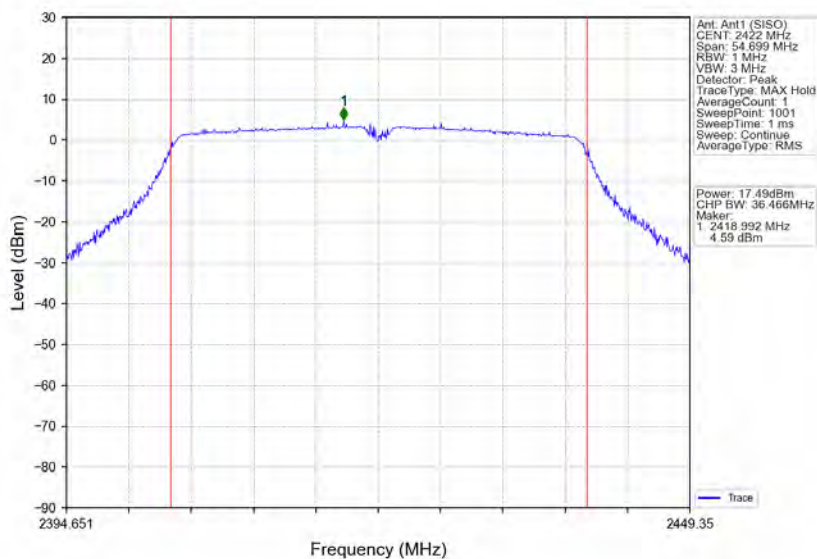
802.11n(HT20) MCH 2437MHz Ant1 (SISO) NTN



802.11n(HT20) HCH 2462MHz Ant1 (SISO) NTN



802.11n(HT40) LCH 2422MHz Ant1 (SISO) NTN



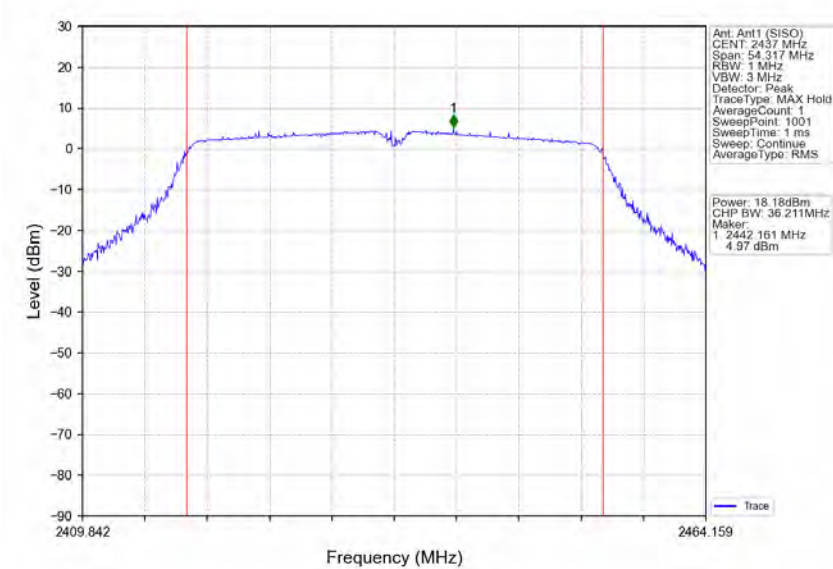
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

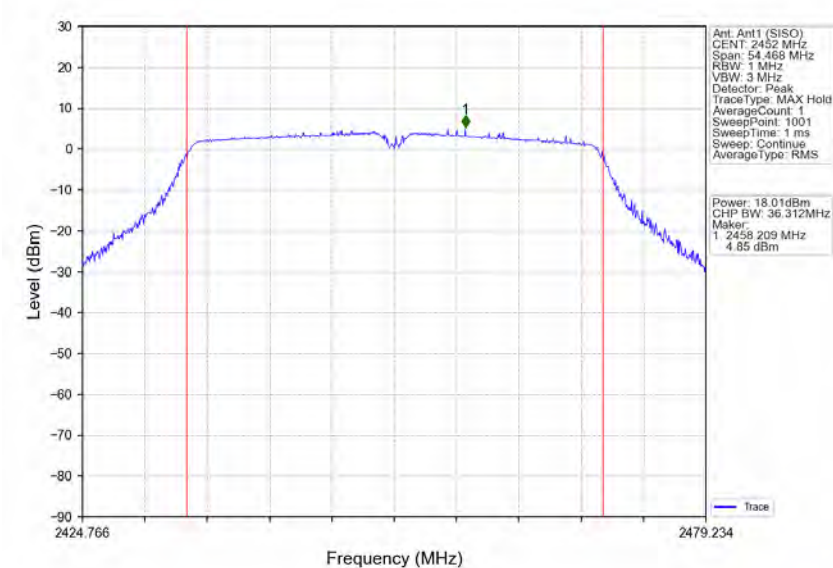
Report No.: KSCR240700123002

Page: 150 of 189

802.11n(HT40) MCH 2437MHz Ant1 (SISO) NTVN



802.11n(HT40) HCH 2452MHz Ant1 (SISO) NTVN



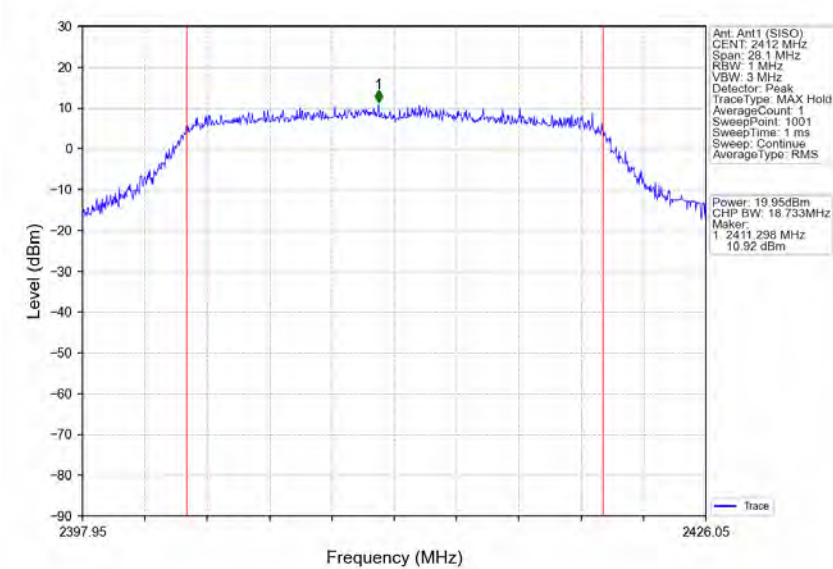
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

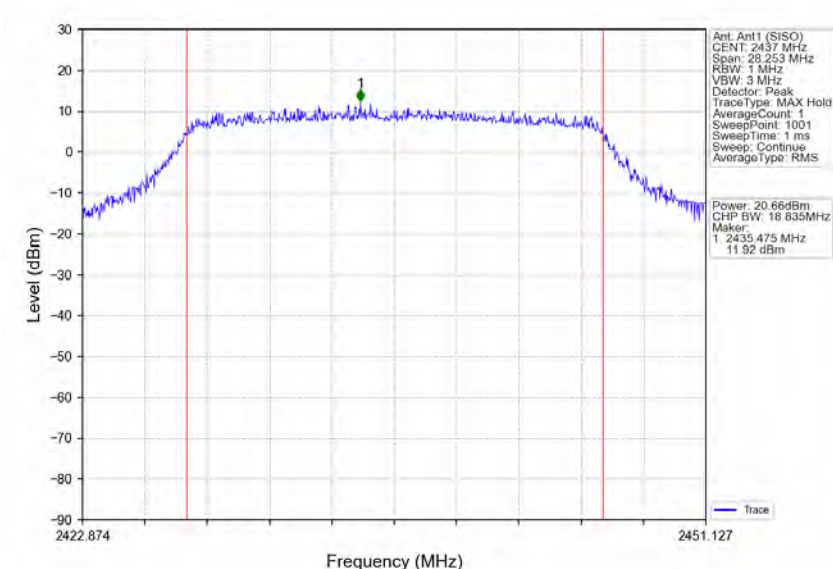
Report No.: KSCR240700123002

Page: 151 of 189

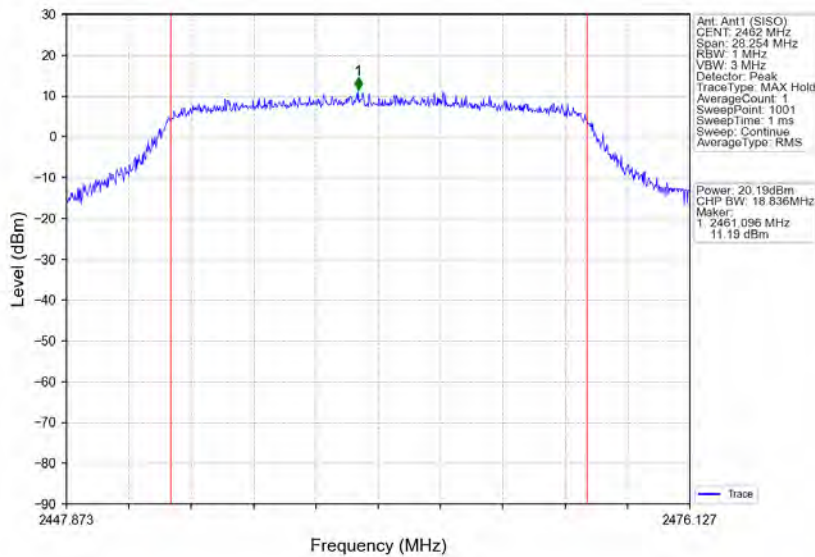
802.11ax(HEW20) LCH 2412MHz RU242 Left Ant1 (SISO) NTNV



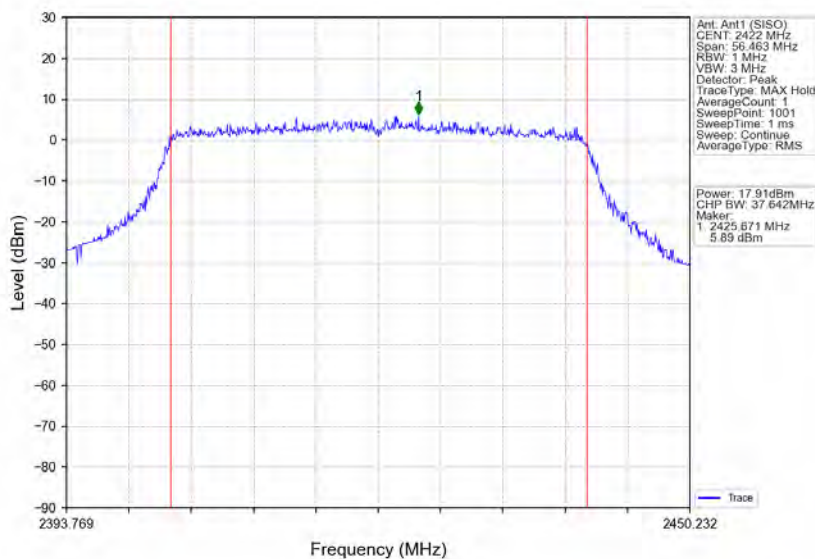
802.11ax(HEW20) MCH 2437MHz RU242 Left Ant1 (SISO) NTNV



802.11ax(HEW20) HCH 2462MHz RU242 Left Ant1 (SISO) NTN



802.11ax(HEW40) LCH 2422MHz RU484 Left Ant1 (SISO) NTN



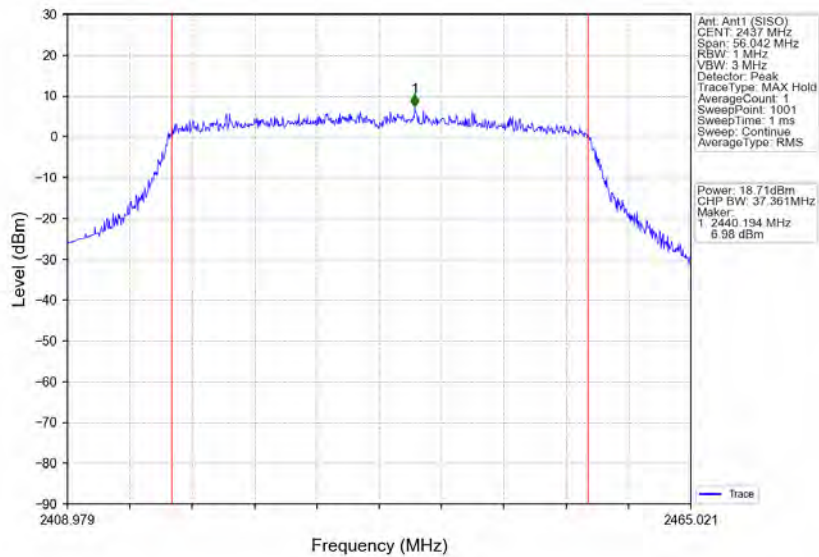
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

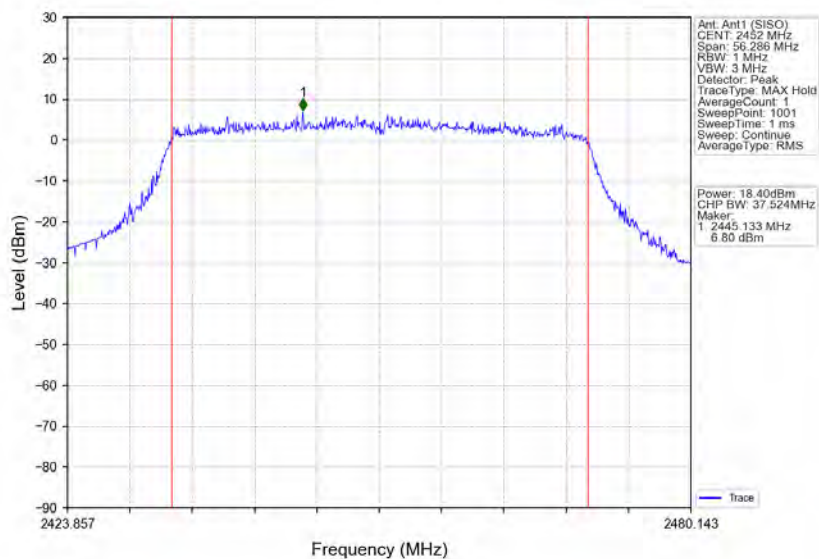
Report No.: KSCR240700123002

Page: 153 of 189

802.11ax(HEW40) MCH 2437MHz RU484 Left Ant1 (SISO) NTN



802.11ax(HEW40) HCH 2452MHz RU484 Left Ant1 (SISO) NTN



4. Maximum Power Spectral Density

4.1 Test Result

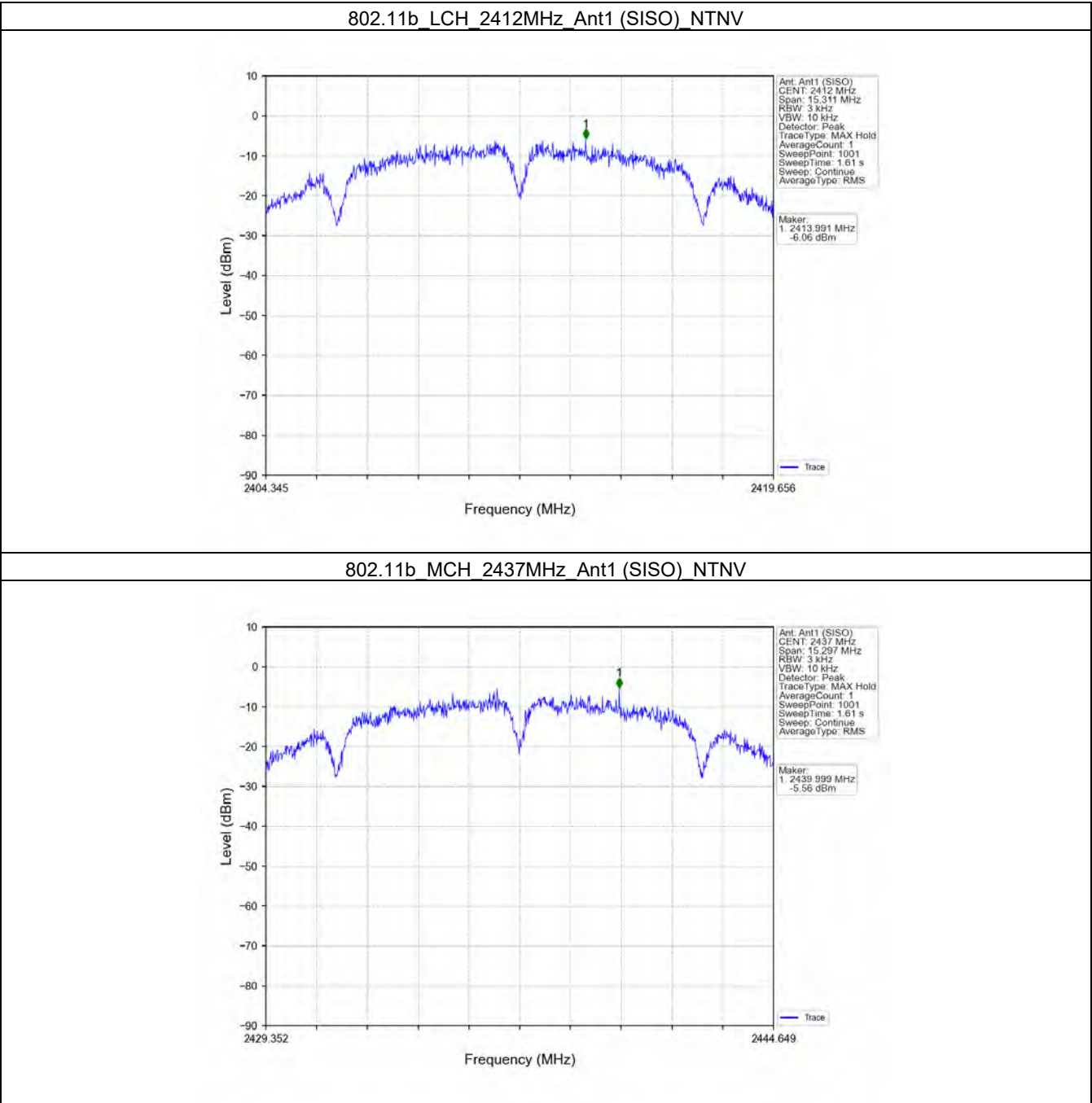
4.1.1 PSD

Mode	TX Type	Frequency (MHz)	RU	RU Pos	Maximum PSD (dBm/3kHz)		Verdict
					ANT1	Limit	
802.11b	SISO	2412	/	/	-6.06	<=8	Pass
		2437	/	/	-5.56	<=8	Pass
		2462	/	/	-7.25	<=8	Pass
802.11g	SISO	2412	/	/	-12.85	<=8	Pass
		2437	/	/	-12.60	<=8	Pass
		2462	/	/	-13.76	<=8	Pass
802.11n (HT20)	SISO	2412	/	/	-13.13	<=8	Pass
		2437	/	/	-11.99	<=8	Pass
		2462	/	/	-12.94	<=8	Pass
802.11n (HT40)	SISO	2422	/	/	-18.99	<=8	Pass
		2437	/	/	-17.76	<=8	Pass
		2452	/	/	-18.46	<=8	Pass
802.11ax (HEW20)	SISO	2412	RU242	Left	-15.08	<=8	Pass
		2437	RU242	Left	-14.59	<=8	Pass
		2462	RU242	Left	-16.05	<=8	Pass
802.11ax (HEW40)	SISO	2422	RU484	Left	-19.94	<=8	Pass
		2437	RU484	Left	-19.42	<=8	Pass
		2452	RU484	Left	-20.14	<=8	Pass

Note1: Antenna Gain: Ant1: 2.93dBi;

4.2 Test Graph

4.2.1 PSD



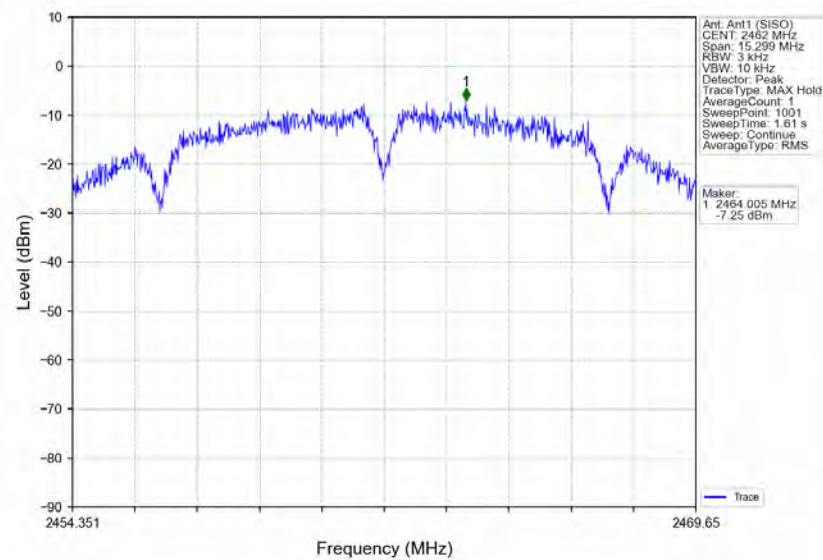
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

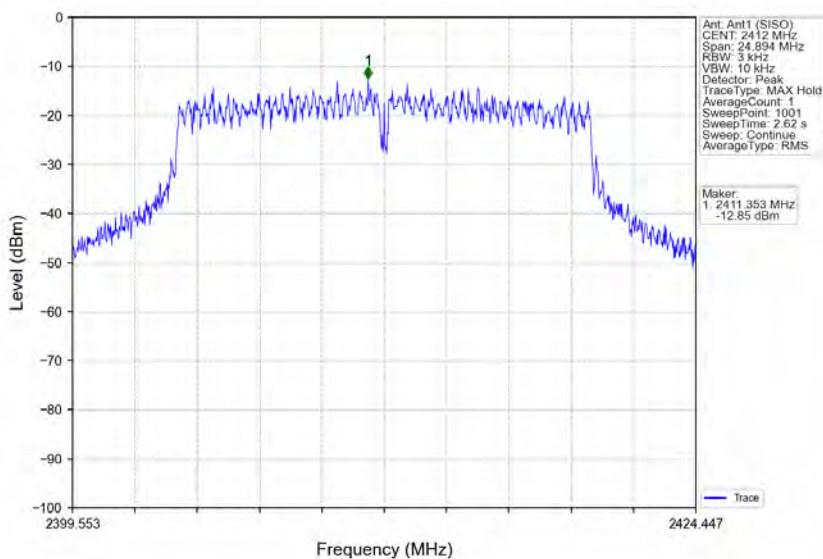
Report No.: KSCR240700123002

Page: 156 of 189

802.11b HCH 2462MHz Ant1 (SISO) NTN



802.11g LCH 2412MHz Ant1 (SISO) NTN



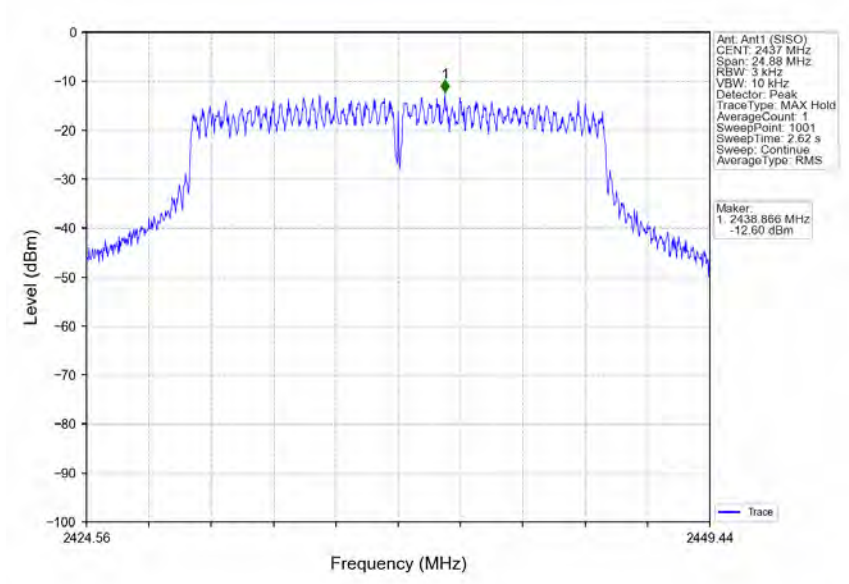
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

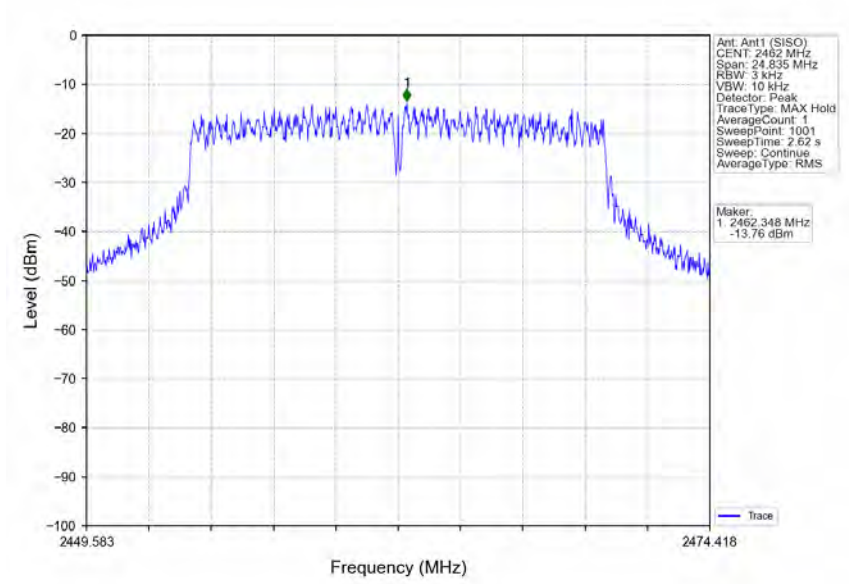
Report No.: KSCR240700123002

Page: 157 of 189

802.11g_MCH_2437MHz_Ant1 (SISO) NTN



802.11g_HCH_2462MHz_Ant1 (SISO) NTN



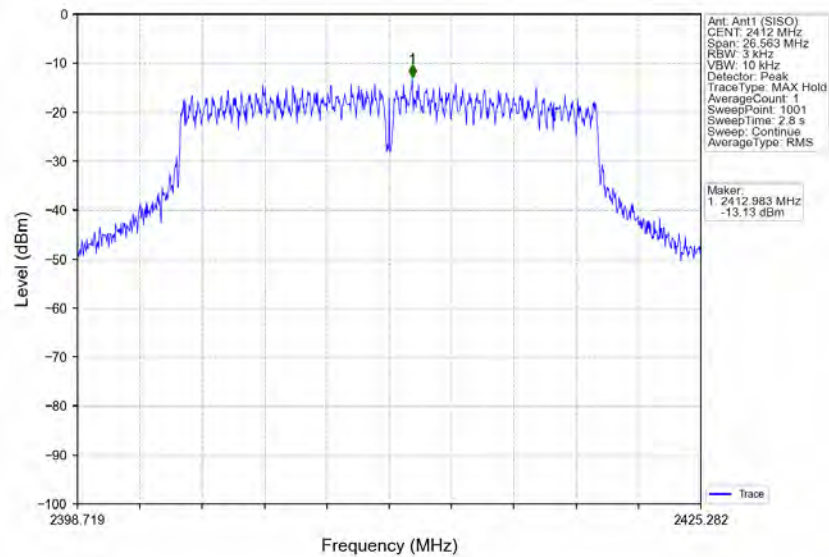
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

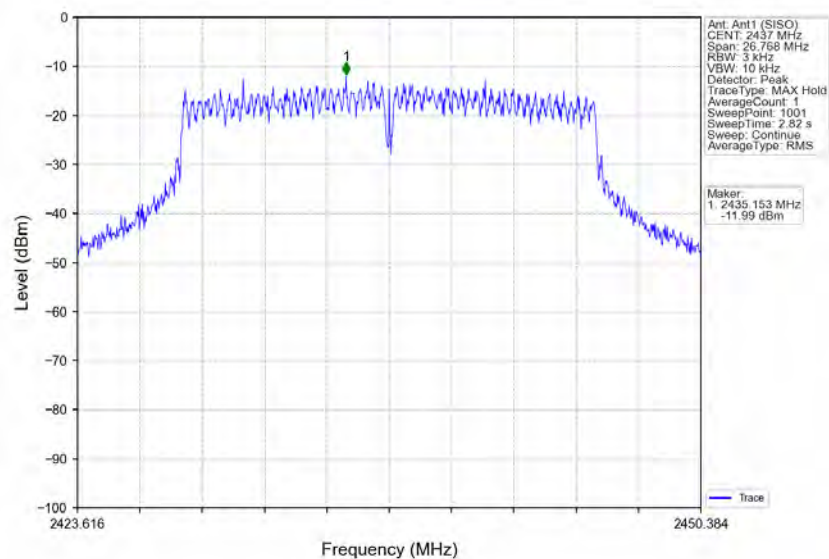
Report No.: KSCR240700123002

Page: 158 of 189

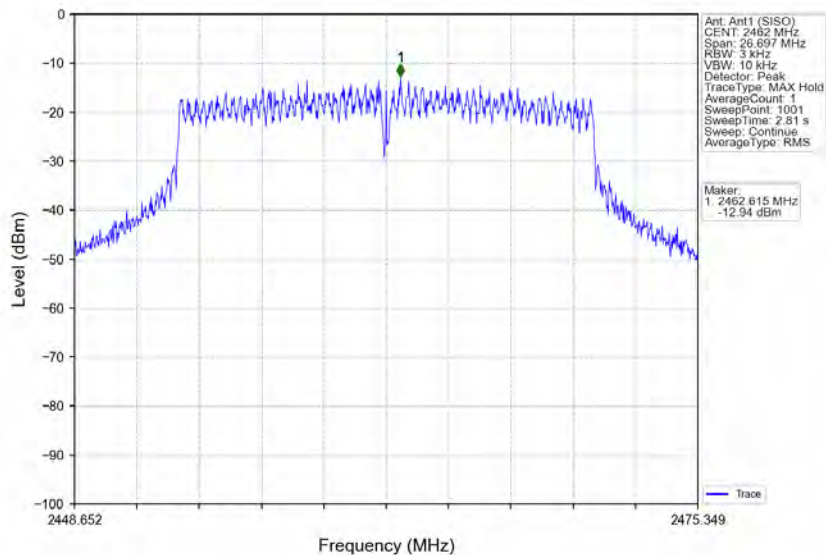
802.11n(HT20) LCH 2412MHz Ant1 (SISO) NTN



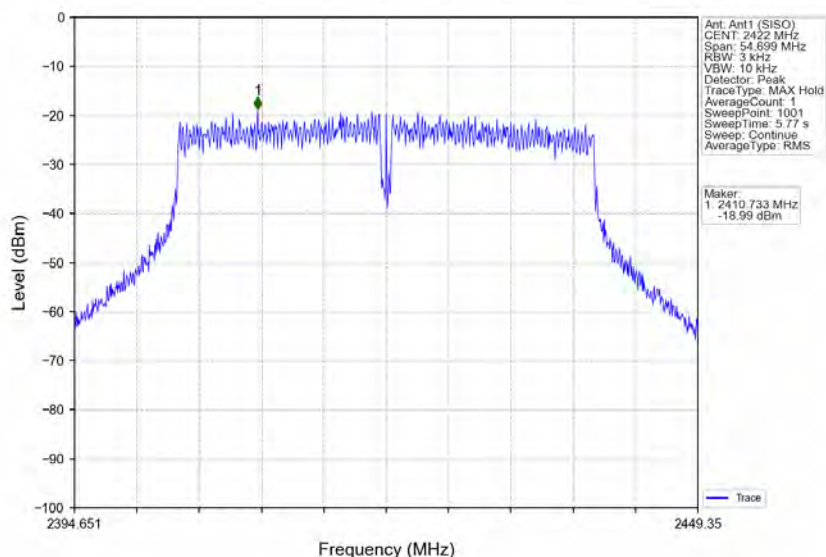
802.11n(HT20) MCH 2437MHz Ant1 (SISO) NTN



802.11n(HT20) HCH 2462MHz Ant1 (SISO) NTN



802.11n(HT40) LCH 2422MHz Ant1 (SISO) NTN



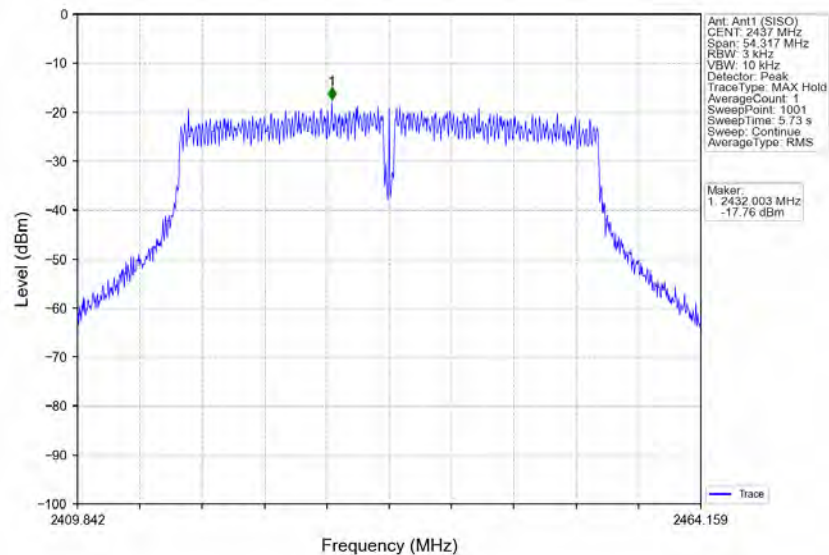
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

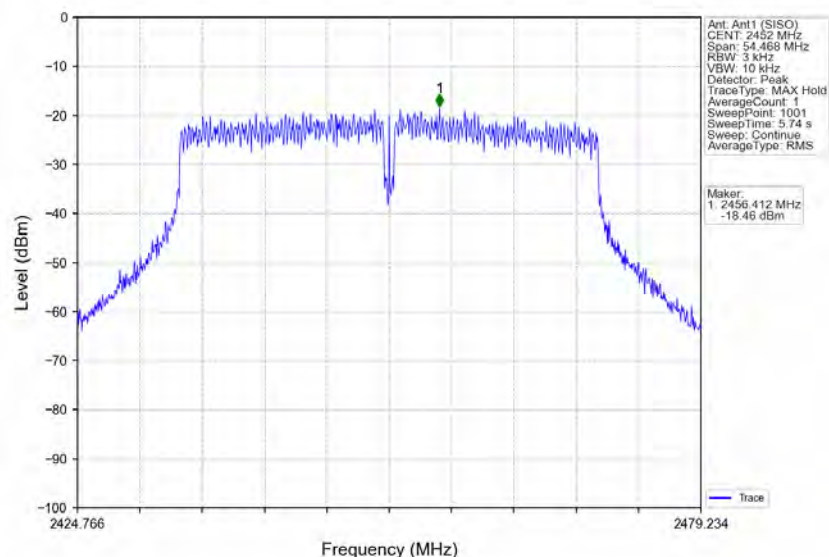
Report No.: KSCR240700123002

Page: 160 of 189

802.11n(HT40) MCH 2437MHz Ant1 (SISO) NTN



802.11n(HT40) HCH 2452MHz Ant1 (SISO) NTN



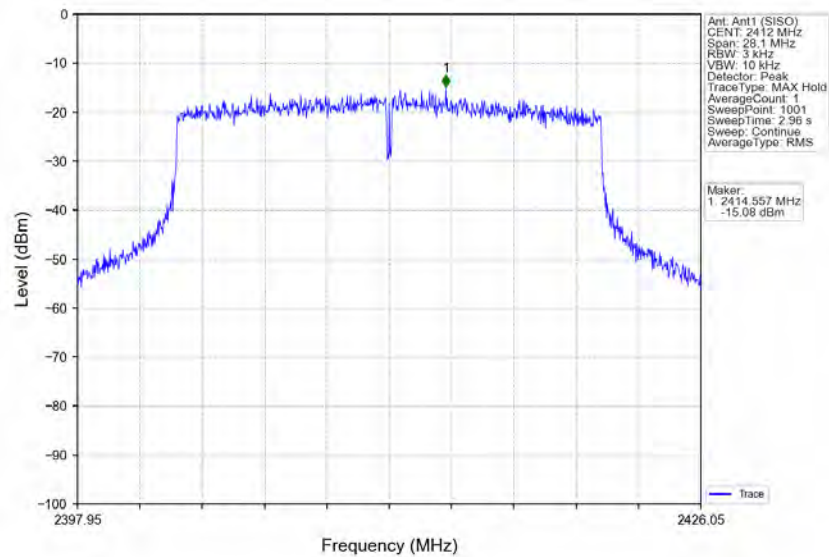
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

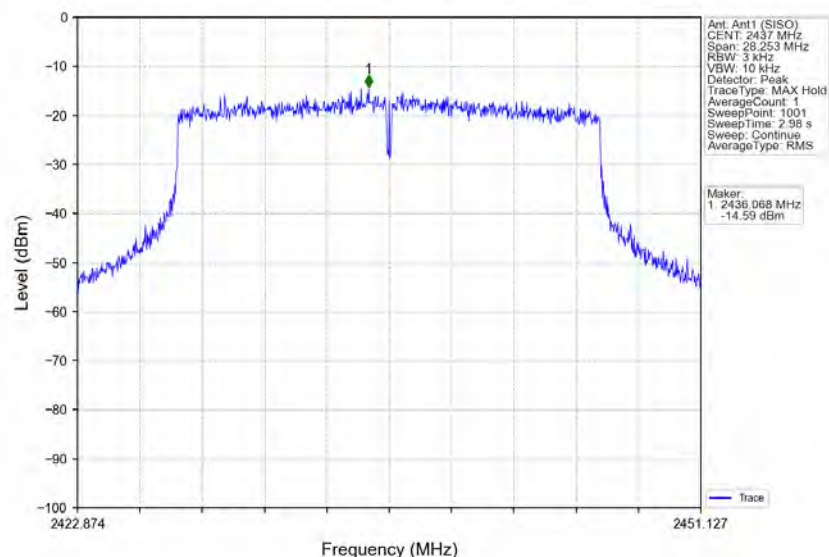
Report No.: KSCR240700123002

Page: 161 of 189

802.11ax(HEW20) LCH 2412MHz RU242 Left Ant1 (SISO) NTN



802.11ax(HEW20) MCH 2437MHz RU242 Left Ant1 (SISO) NTN



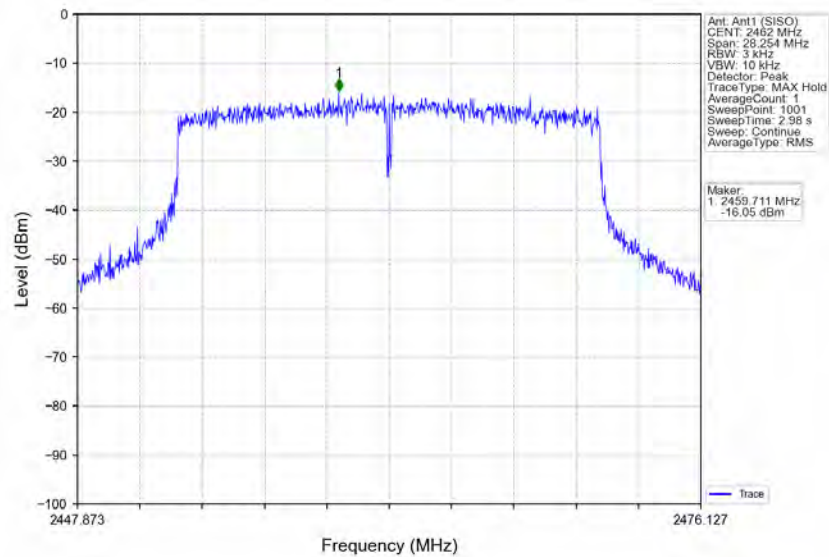
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

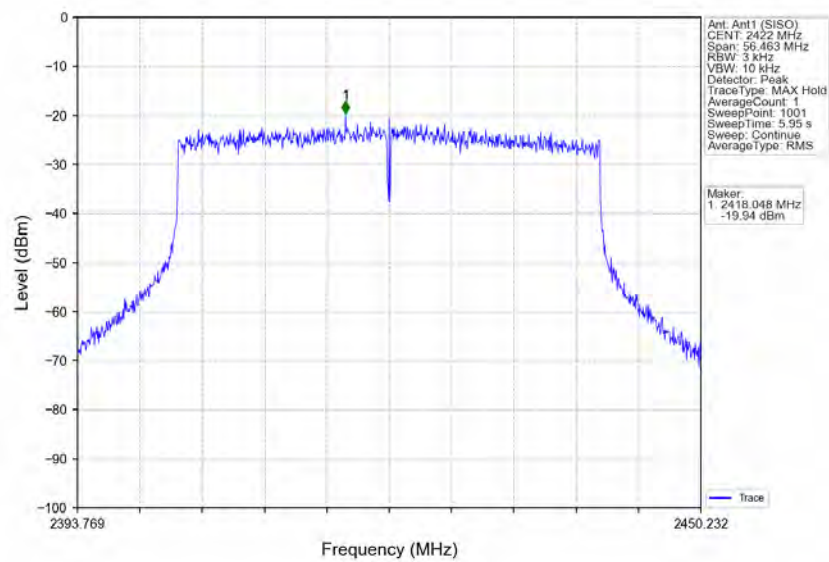
Report No.: KSCR240700123002

Page: 162 of 189

802.11ax(HEW20) HCH 2462MHz RU242 Left Ant1 (SISO) NTNV



802.11ax(HEW40) LCH 2422MHz RU484 Left Ant1 (SISO) NTNV



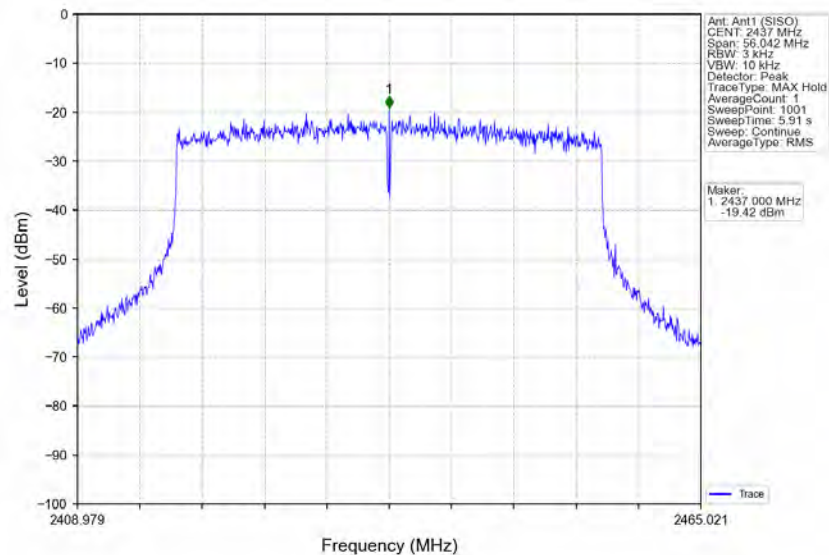
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

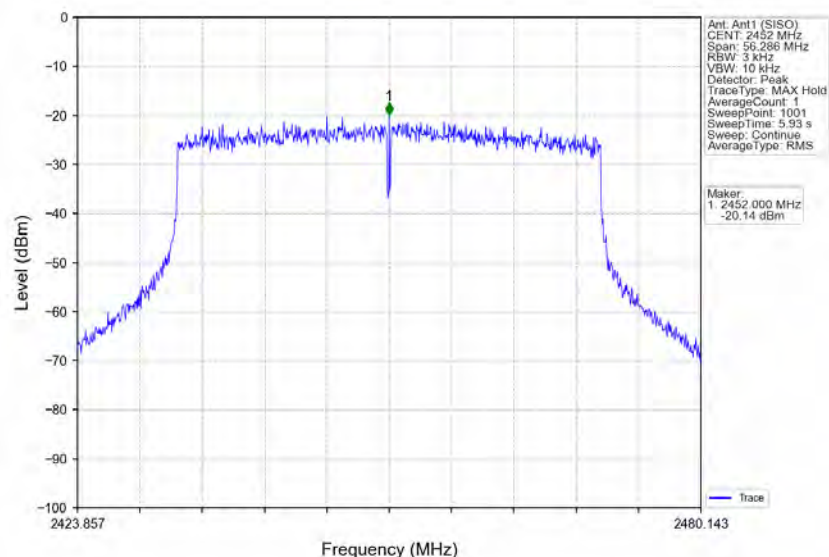
Report No.: KSCR240700123002

Page: 163 of 189

802.11ax(HEW40) MCH 2437MHz RU484 Left Ant1 (SISO) NTN



802.11ax(HEW40) HCH 2452MHz RU484 Left Ant1 (SISO) NTN



5. Unwanted Emissions In Non-restricted Frequency Bands

5.1 Test Result

5.1.1 Ref

Mode	TX Type	Frequency (MHz)	RU	RU Pos	ANT	Level of Reference (dBm)
802.11b	SISO	2412	/	/	1	8.47
		2437	/	/	1	8.33
		2462	/	/	1	7.92
802.11g	SISO	2412	/	/	1	1.44
		2437	/	/	1	1.55
		2462	/	/	1	1.06
802.11n (HT20)	SISO	2412	/	/	1	1.14
		2437	/	/	1	2.10
		2462	/	/	1	1.51
802.11n (HT40)	SISO	2422	/	/	1	-4.18
		2437	/	/	1	-3.16
		2452	/	/	1	-3.51
802.11ax (HEW20)	SISO	2412	RU242	Left	1	0.19
		2437	RU242	Left	1	1.09
		2462	RU242	Left	1	0.46
802.11ax (HEW40)	SISO	2422	RU484	Left	1	-5.23
		2437	RU484	Left	1	-4.13
		2452	RU484	Left	1	-4.50

Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.

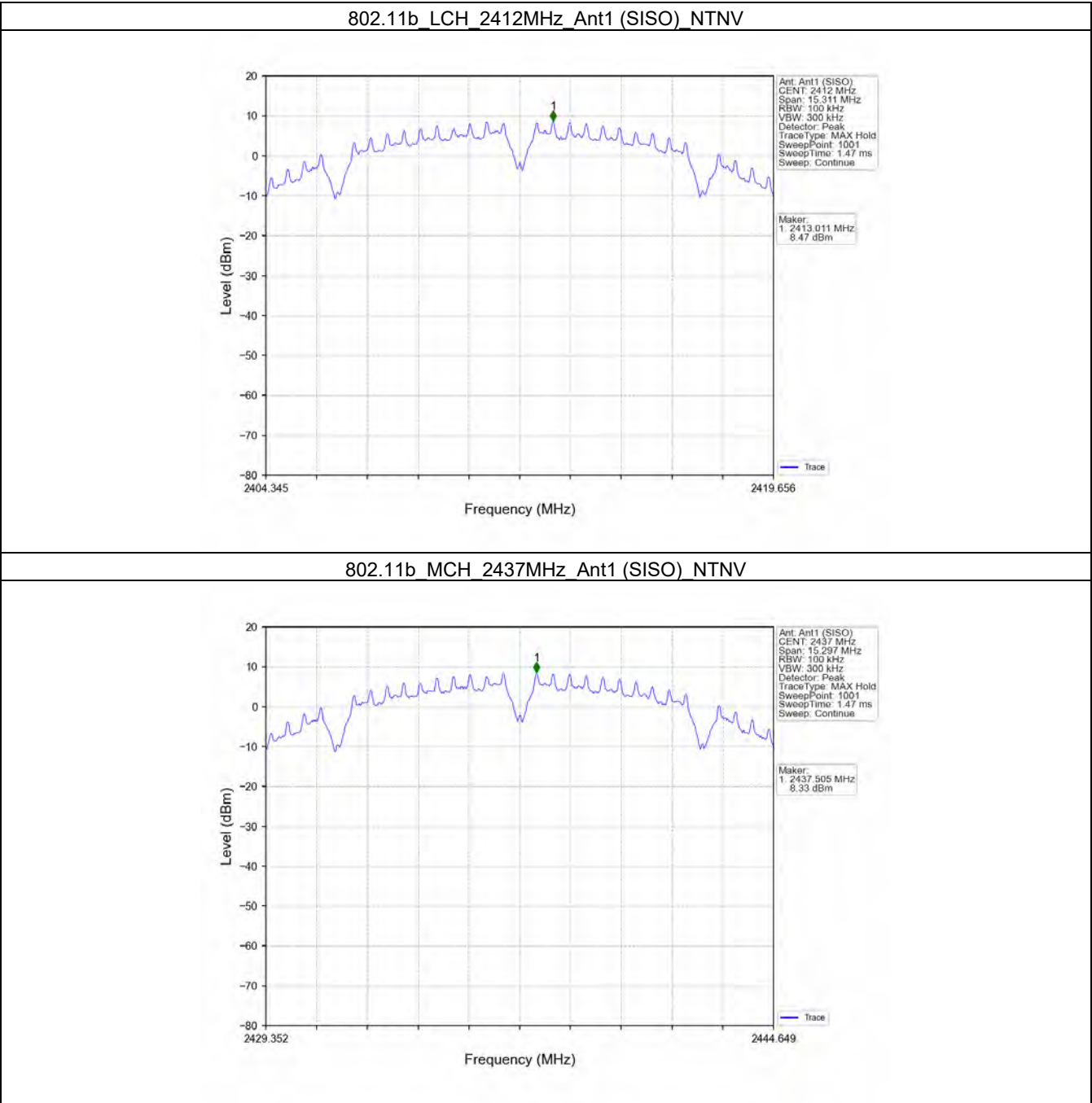
5.1.2 CSE

Mode	TX Type	Frequency (MHz)	RU	RU Pos	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
802.11b	SISO	2412	/	/	1	8.47	-11.53	Pass
		2437	/	/	1	8.47	-11.53	Pass
		2462	/	/	1	8.47	-11.53	Pass
802.11g	SISO	2412	/	/	1	1.55	-18.45	Pass
		2437	/	/	1	1.55	-18.45	Pass
		2462	/	/	1	1.55	-18.45	Pass
802.11n (HT20)	SISO	2412	/	/	1	2.10	-17.90	Pass
		2437	/	/	1	2.10	-17.90	Pass
		2462	/	/	1	2.10	-17.90	Pass
802.11n (HT40)	SISO	2422	/	/	1	-3.16	-23.16	Pass
		2437	/	/	1	-3.16	-23.16	Pass
		2452	/	/	1	-3.16	-23.16	Pass
802.11ax (HEW20)	SISO	2412	RU242	Left	1	1.09	-18.91	Pass
		2437	RU242	Left	1	1.09	-18.91	Pass
		2462	RU242	Left	1	1.09	-18.91	Pass
802.11ax	SISO	2422	RU484	Left	1	-4.13	-24.13	Pass

Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.

5.2 Test Graph

5.2.1 Ref



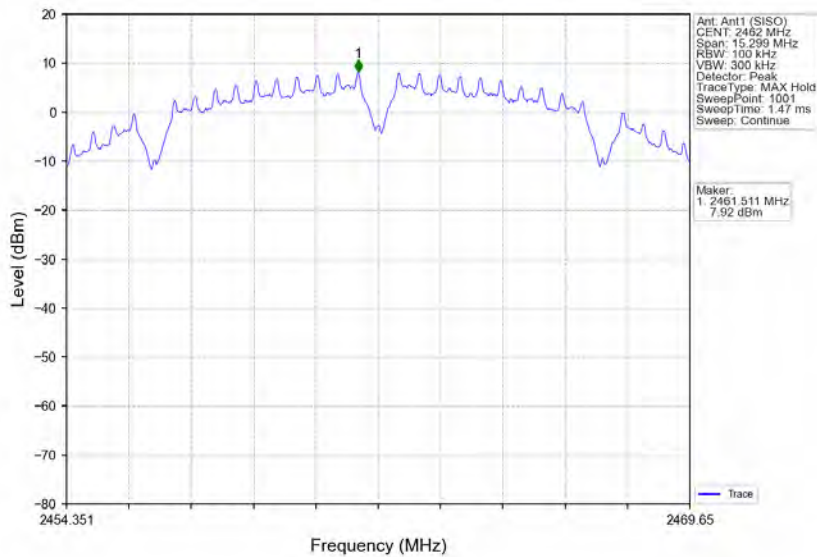
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

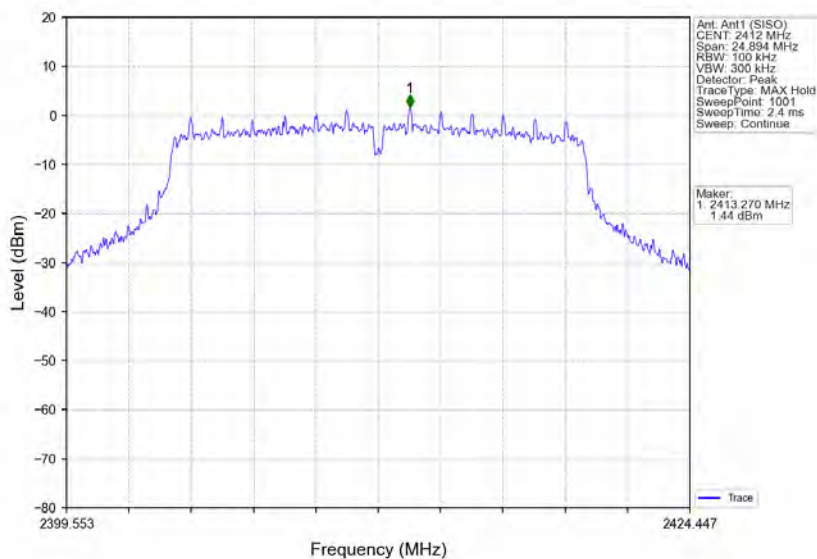
Report No.: KSCR240700123002

Page: 167 of 189

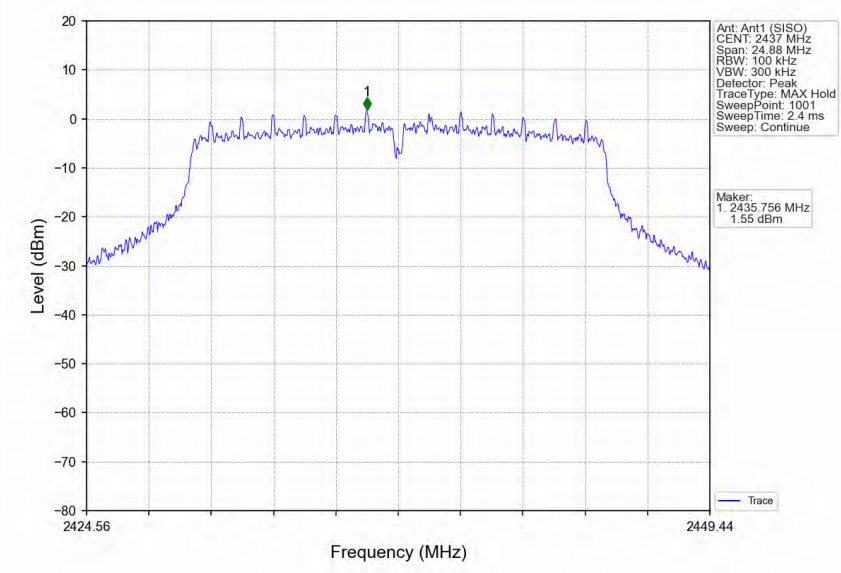
802.11b HCH 2462MHz Ant1 (SISO) NTNV



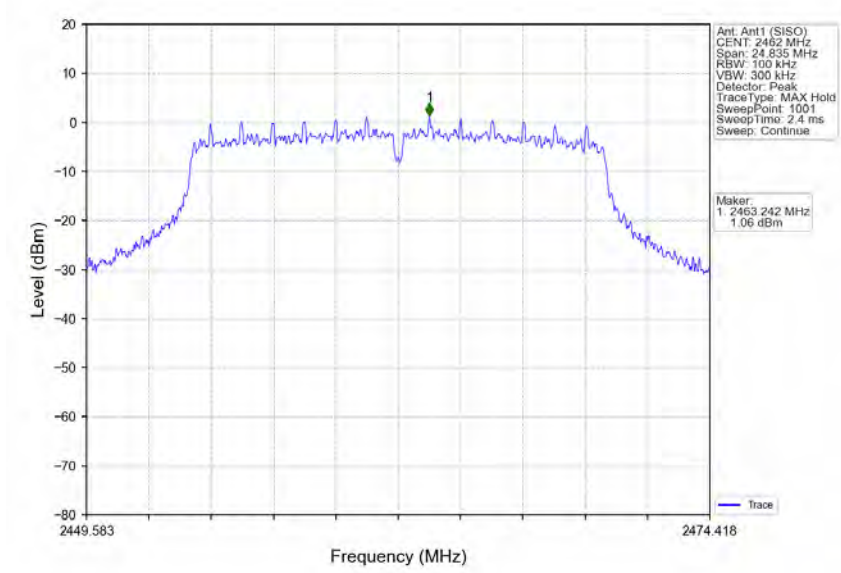
802.11g LCH 2412MHz Ant1 (SISO) NTNV



802.11g_MCH_2437MHz_Ant1 (SISO) NTN



802.11g_HCH_2462MHz_Ant1 (SISO) NTN



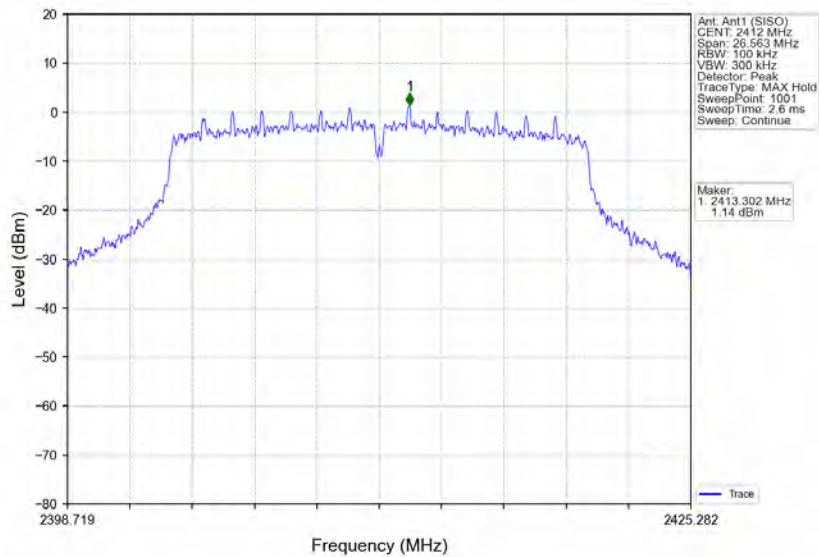
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

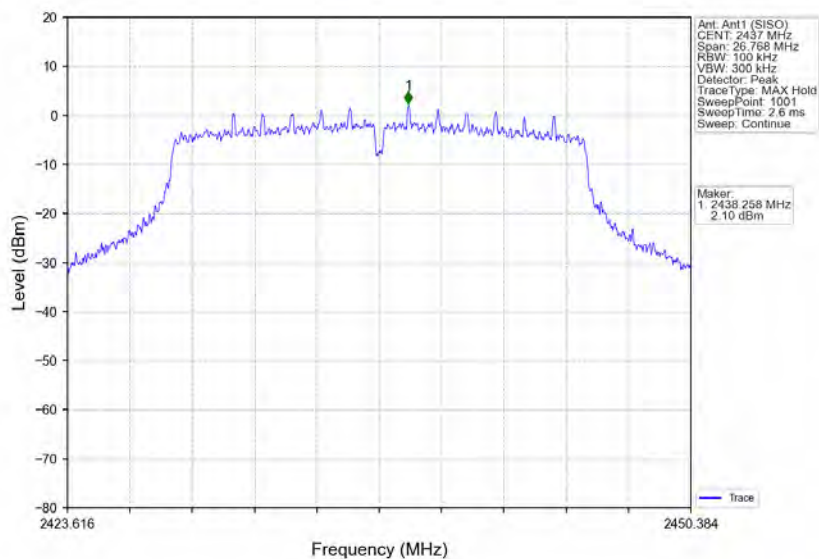
Report No.: KSCR240700123002

Page: 169 of 189

802.11n(HT20) LCH 2412MHz Ant1 (SISO) NTNV



802.11n(HT20) MCH 2437MHz Ant1 (SISO) NTNV



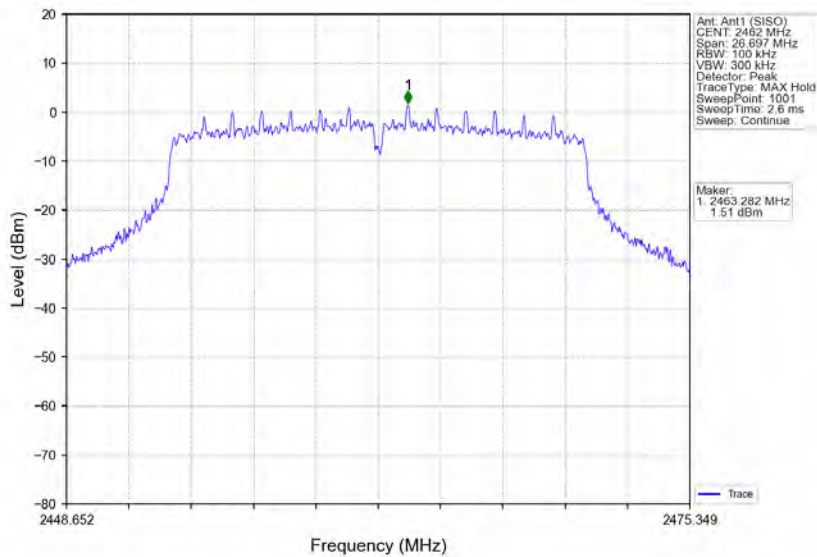
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

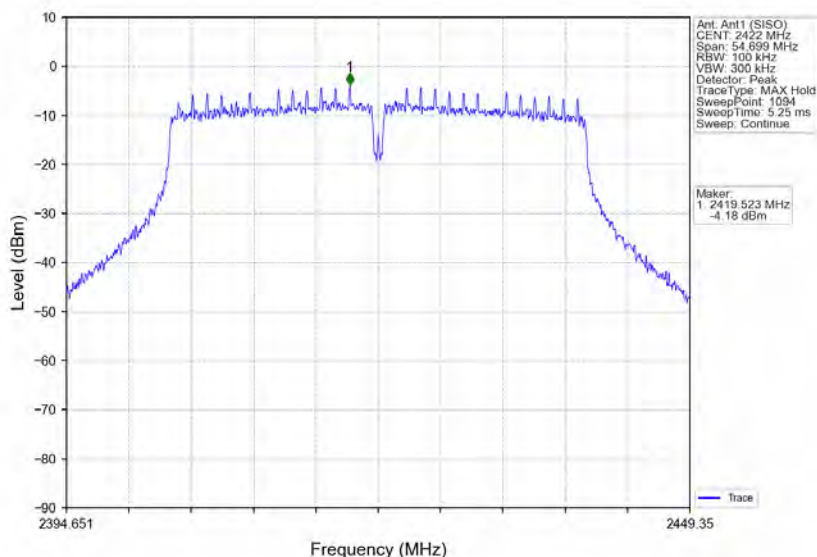
Report No.: KSCR240700123002

Page: 170 of 189

802.11n(HT20) HCH 2462MHz Ant1 (SISO) NTN



802.11n(HT40) LCH 2422MHz Ant1 (SISO) NTN



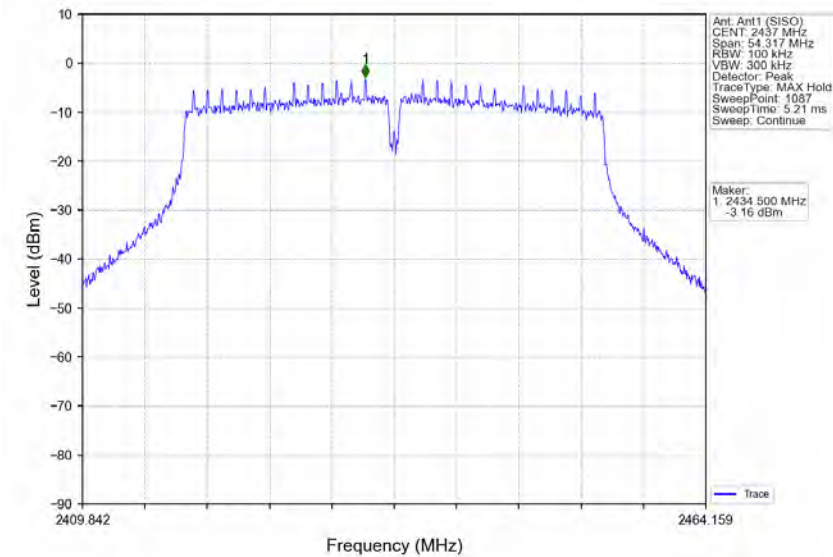
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

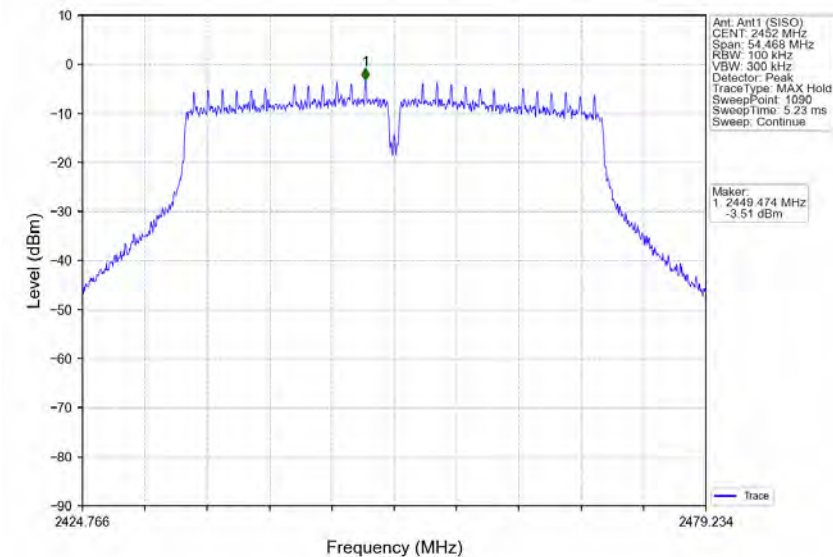
Report No.: KSCR240700123002

Page: 171 of 189

802.11n(HT40) MCH 2437MHz Ant1 (SISO) NTN



802.11n(HT40) HCH 2452MHz Ant1 (SISO) NTN



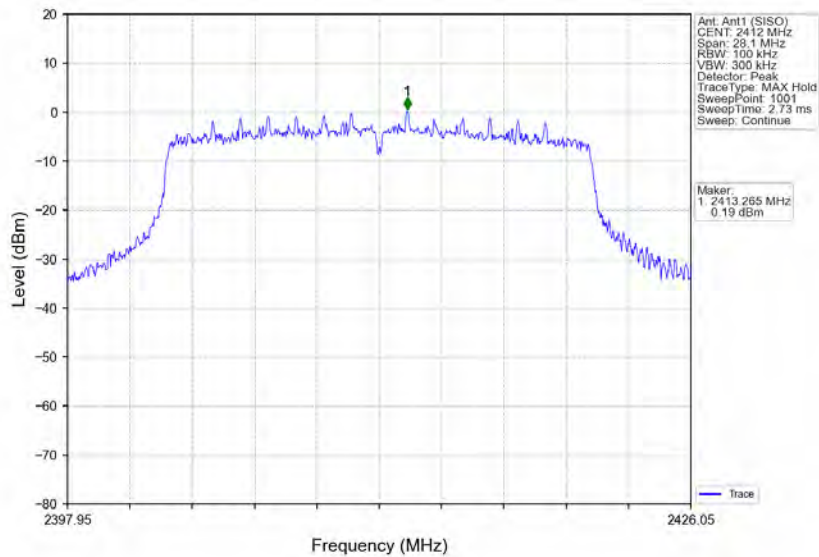
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

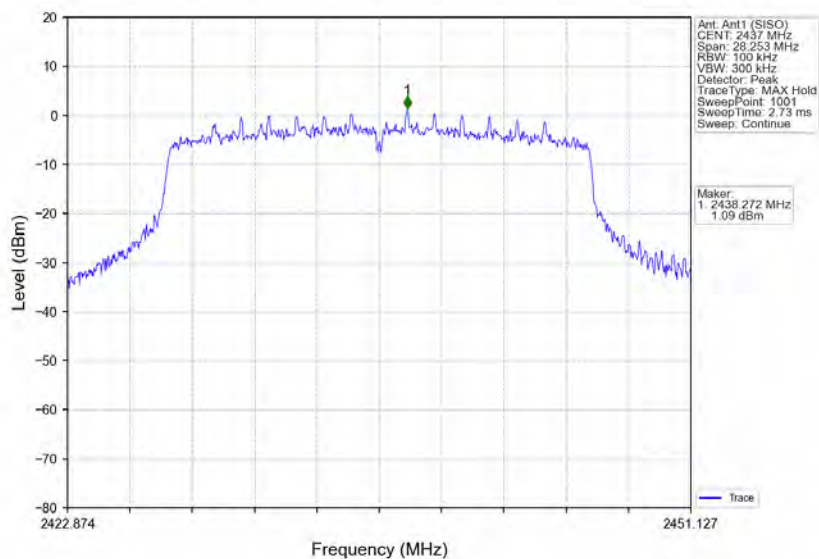
Report No.: KSCR240700123002

Page: 172 of 189

802.11ax(HEW20) LCH 2412MHz RU242 Left Ant1 (SISO) NTNV



802.11ax(HEW20) MCH 2437MHz RU242 Left Ant1 (SISO) NTNV



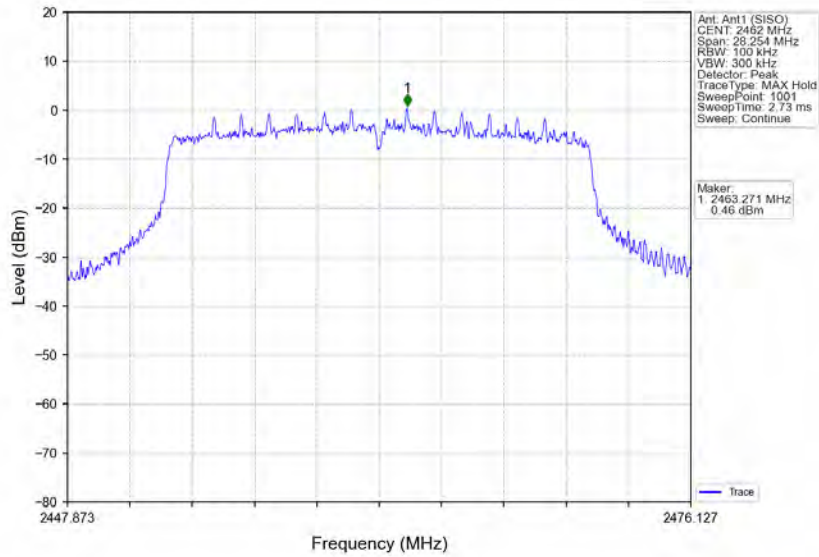
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

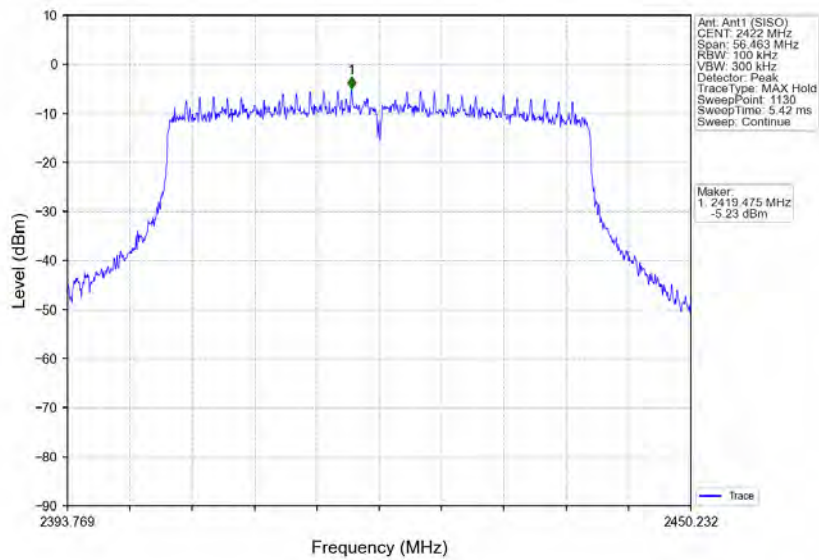
Report No.: KSCR240700123002

Page: 173 of 189

802.11ax(HEW20) HCH 2462MHz RU242 Left Ant1 (SISO) NTNV



802.11ax(HEW40) LCH 2422MHz RU484 Left Ant1 (SISO) NTNV



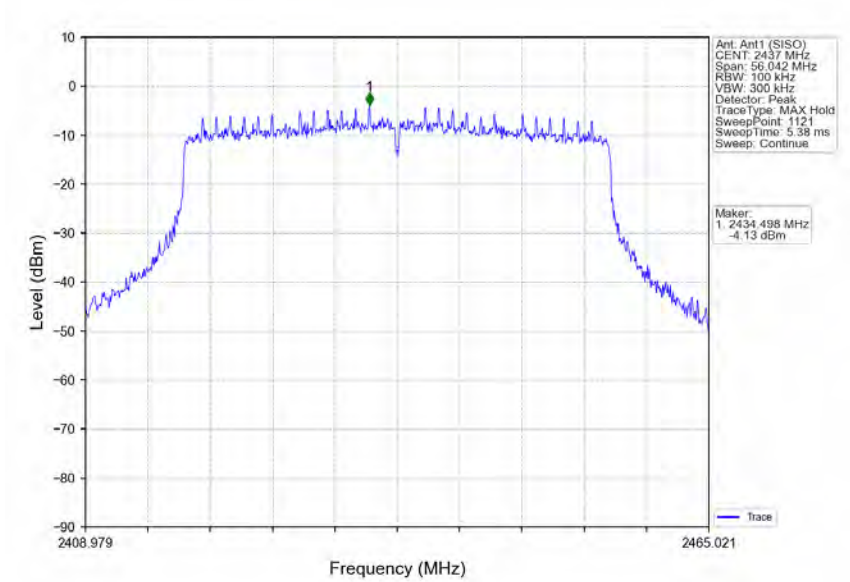
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

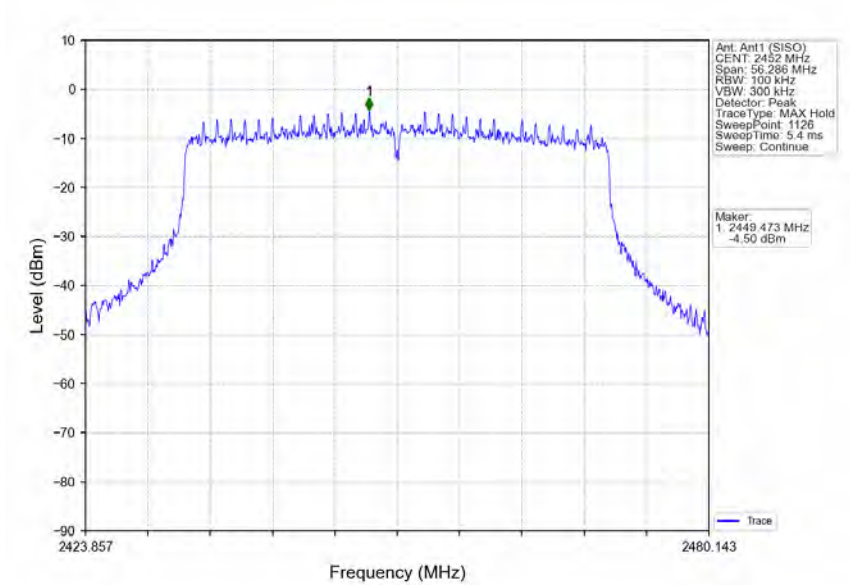
Report No.: KSCR240700123002

Page: 174 of 189

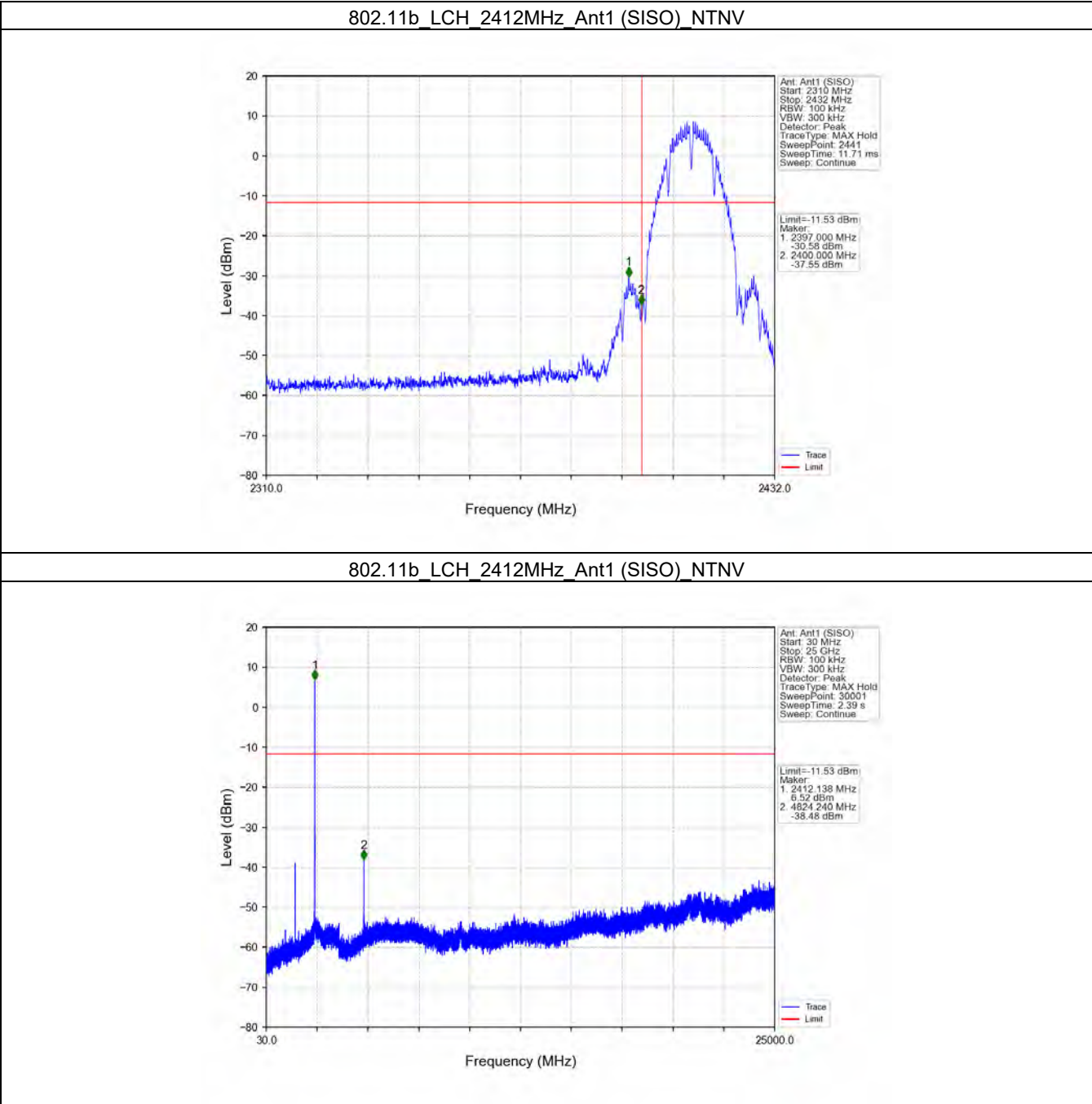
802.11ax(HEW40) MCH 2437MHz RU484 Left Ant1 (SISO) NTN



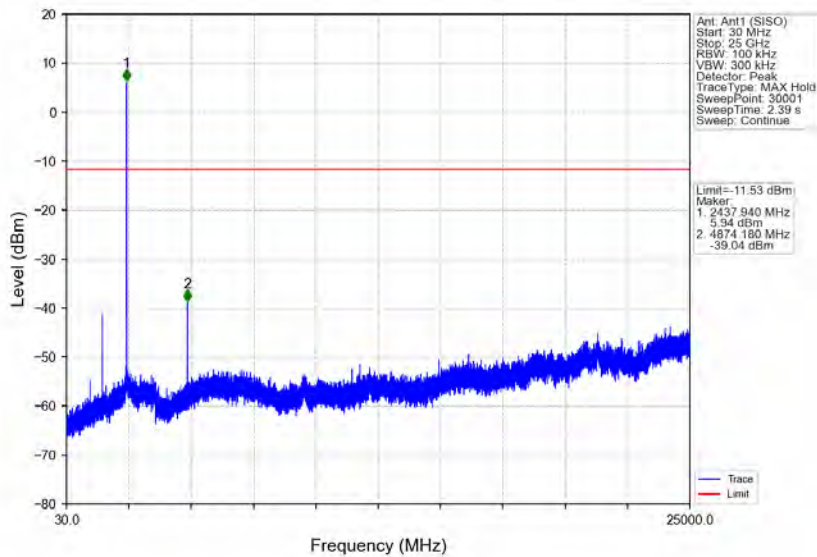
802.11ax(HEW40) HCH 2452MHz RU484 Left Ant1 (SISO) NTN



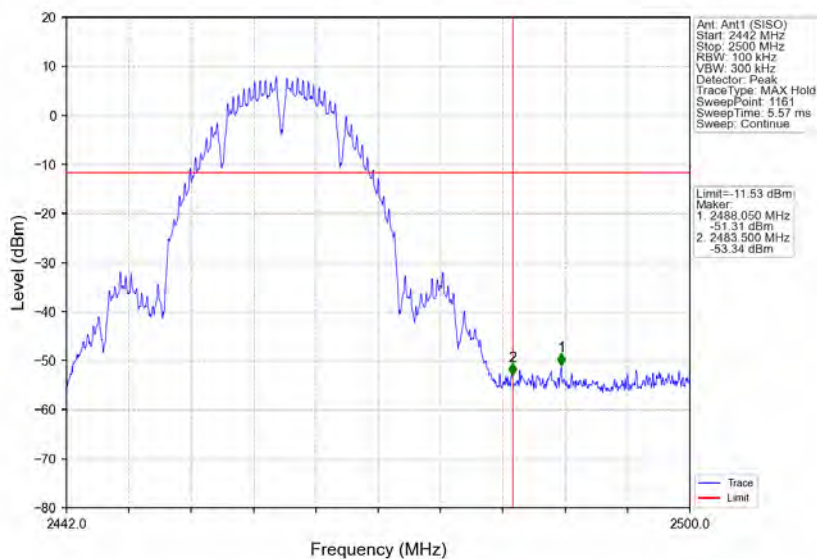
5.2.2 CSE



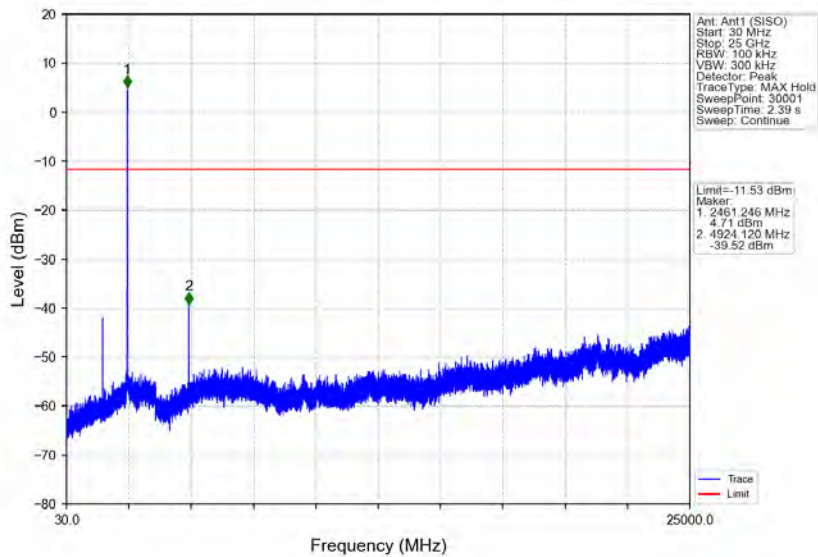
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



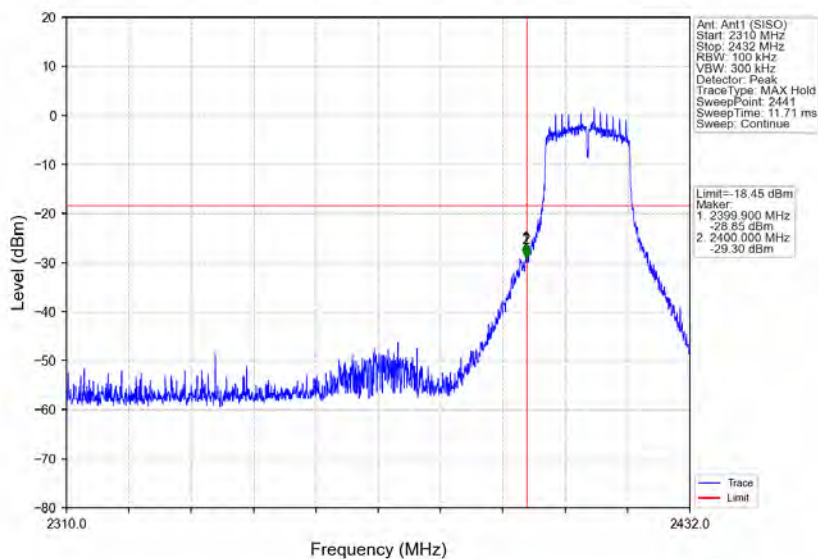
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



802.11b HCH 2462MHz Ant1 (SISO) NTNV



802.11g LCH 2412MHz Ant1 (SISO) NTNV



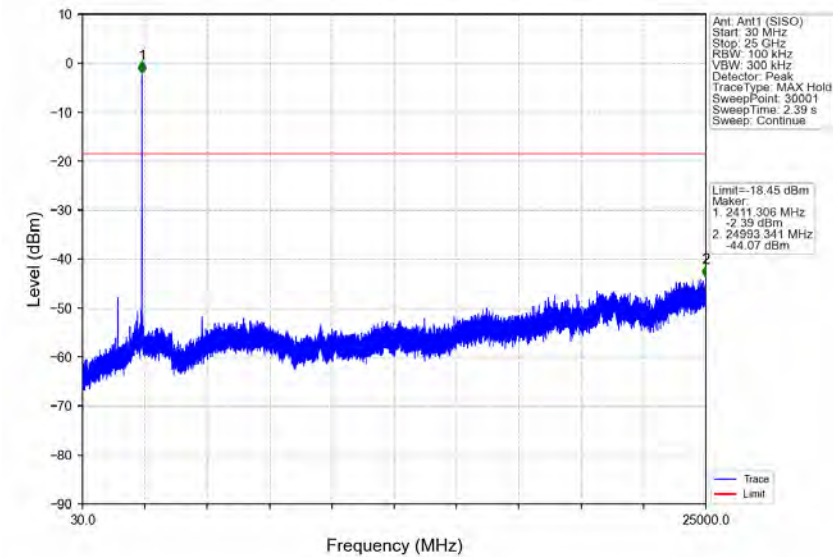
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

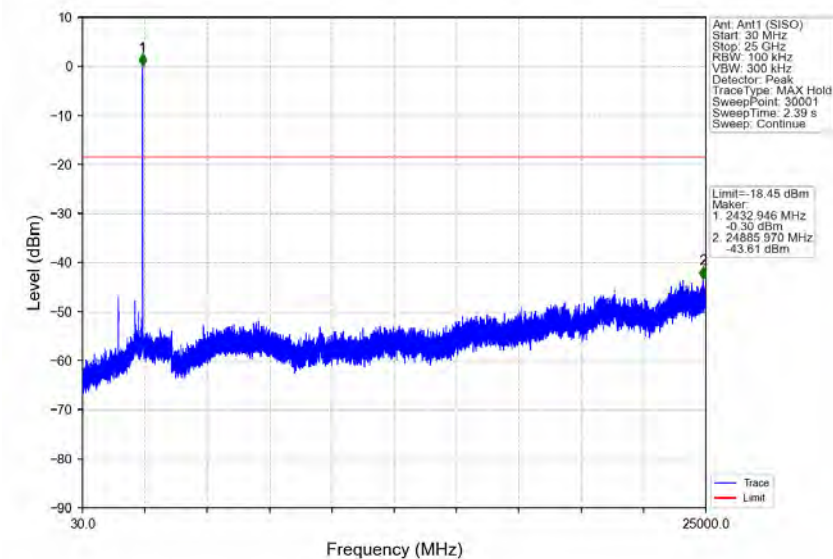
Report No.: KSCR240700123002

Page: 178 of 189

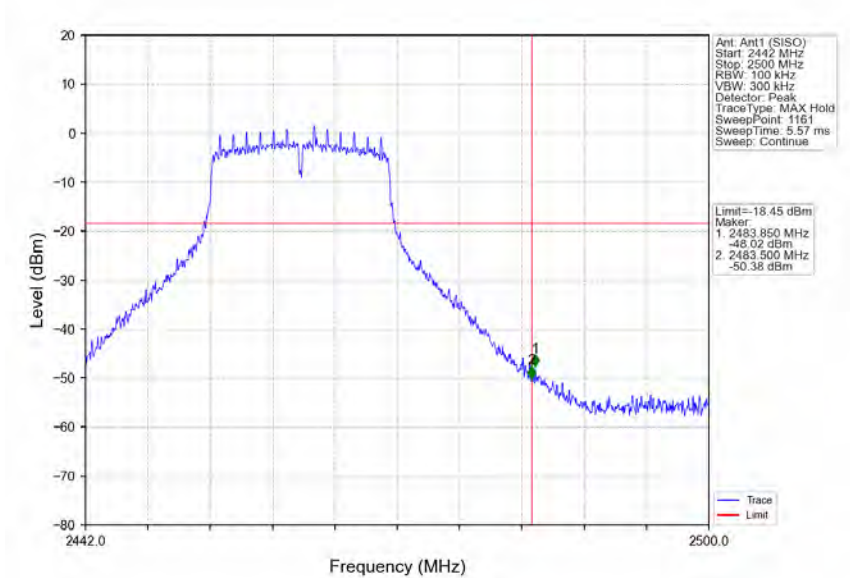
802.11g LCH 2412MHz Ant1 (SISO) NTN



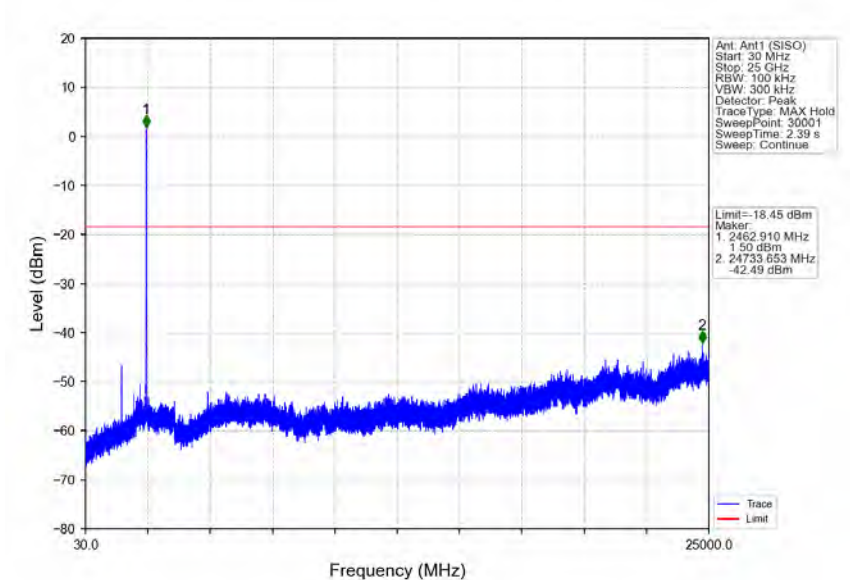
802.11g MCH 2437MHz Ant1 (SISO) NTN



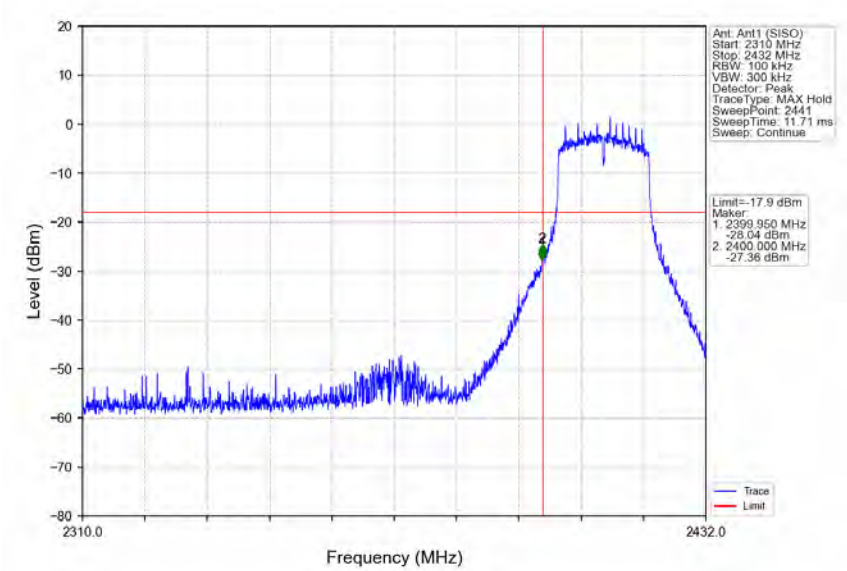
802.11g_HCH_2462MHz_Ant1 (SISO) NTN



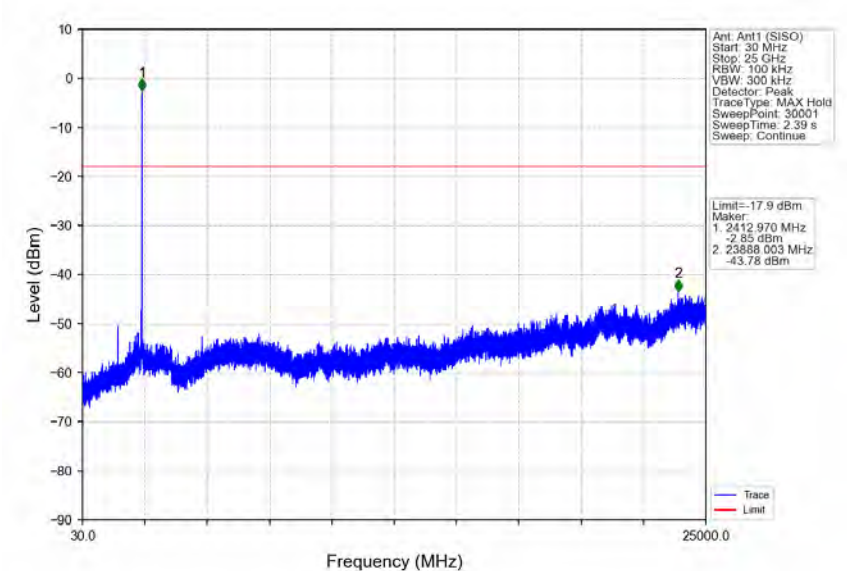
802.11g_HCH_2462MHz_Ant1 (SISO) NTN



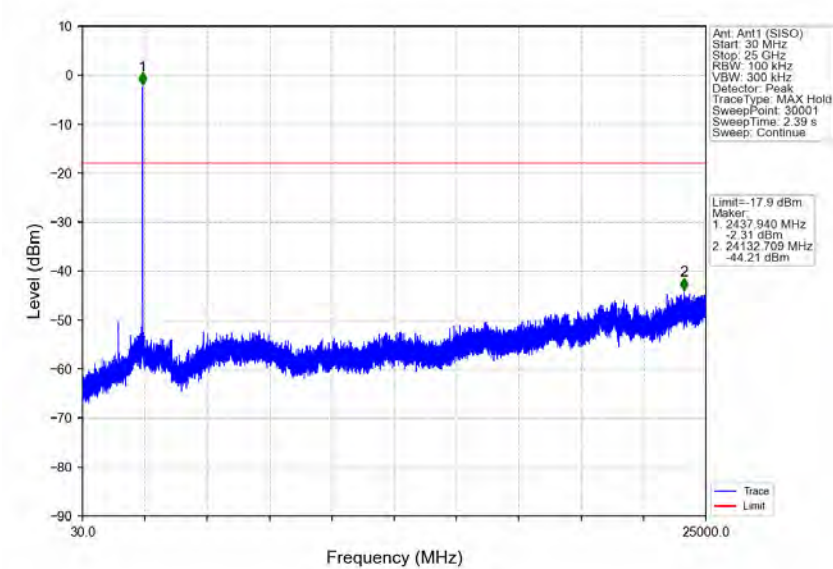
802.11n(HT20) LCH 2412MHz Ant1 (SISO) NTN



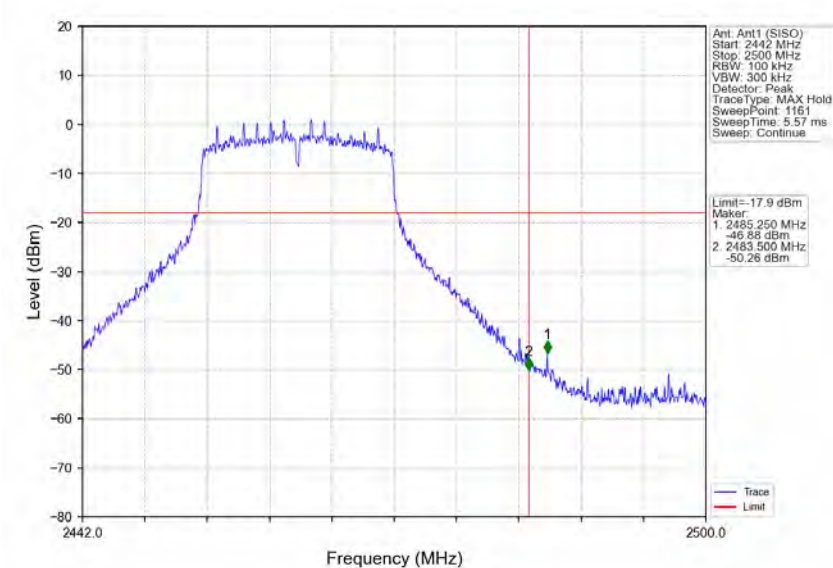
802.11n(HT20) LCH 2412MHz Ant1 (SISO) NTN



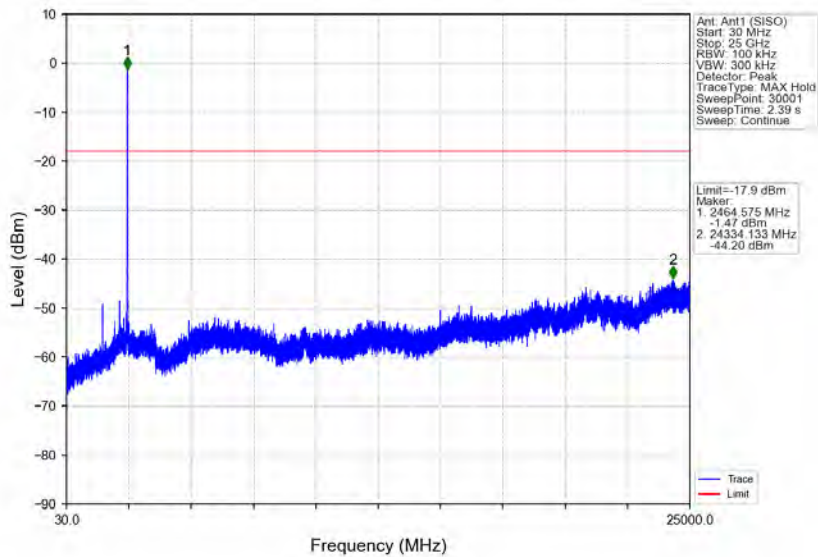
802.11n(HT20) MCH 2437MHz Ant1 (SISO) NTVN



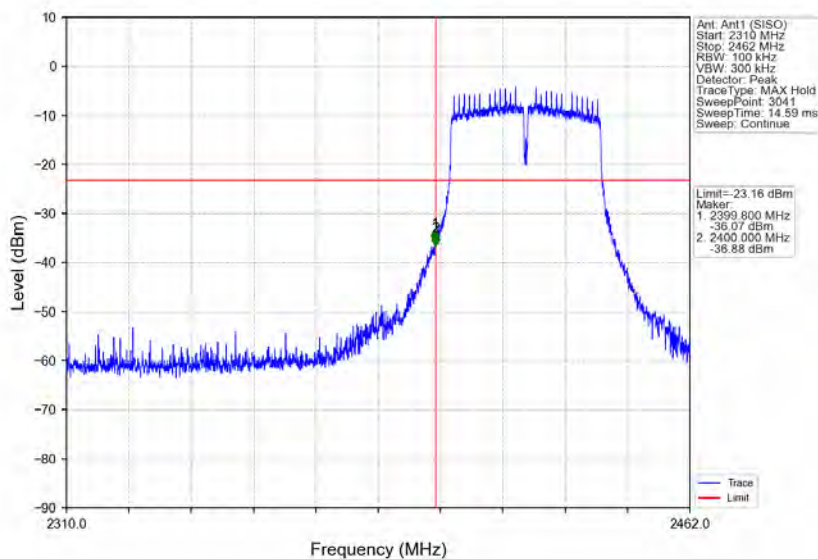
802.11n(HT20) HCH 2462MHz Ant1 (SISO) NTVN



802.11n(HT20) HCH 2462MHz Ant1 (SISO) NTN



802.11n(HT40) LCH 2422MHz Ant1 (SISO) NTN



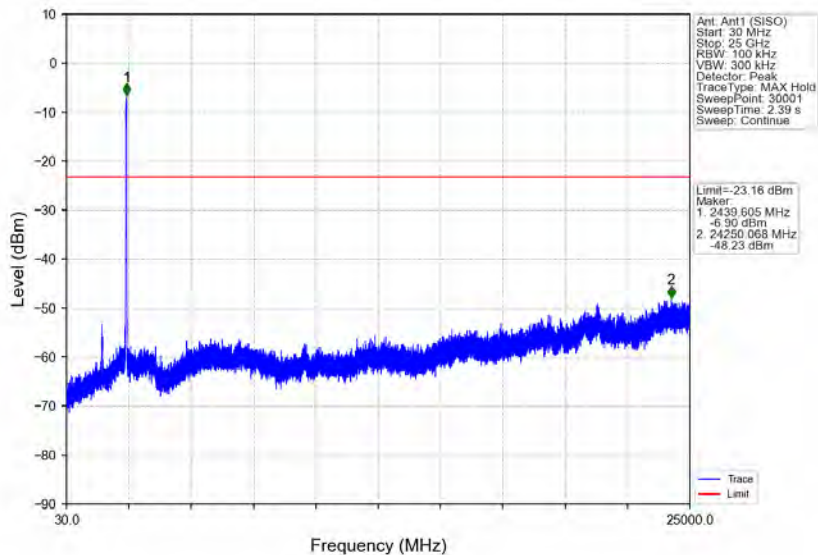
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

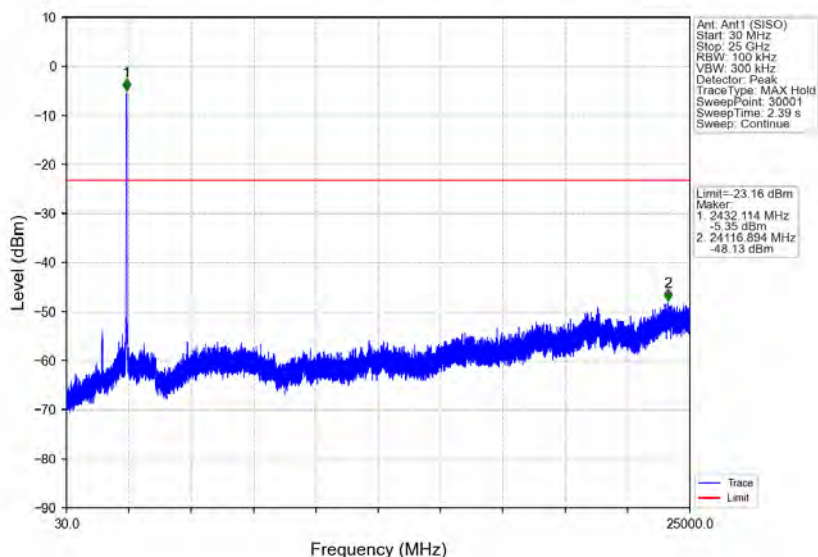
Report No.: KSCR240700123002

Page: 183 of 189

802.11n(HT40) LCH 2422MHz Ant1 (SISO) NTN



802.11n(HT40) MCH 2437MHz Ant1 (SISO) NTN



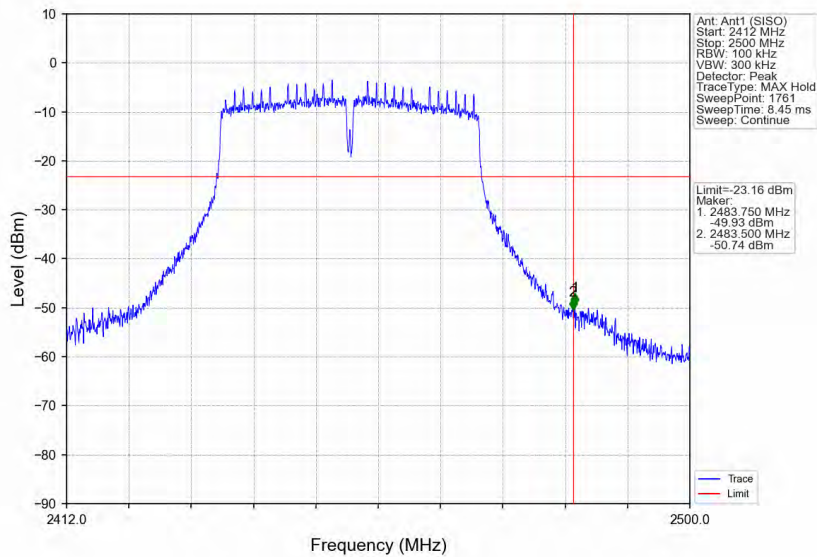
Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

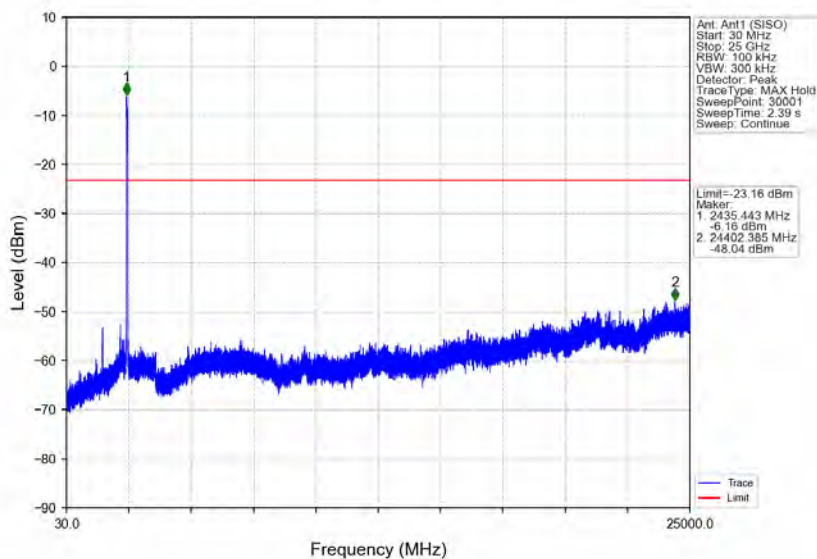
Report No.: KSCR240700123002

Page: 184 of 189

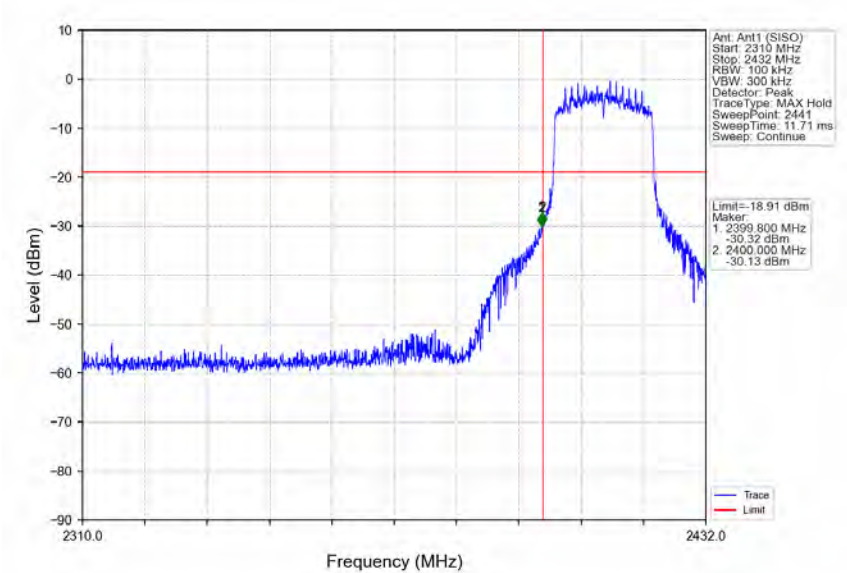
802.11n(HT40) HCH 2452MHz Ant1 (SISO) NTN



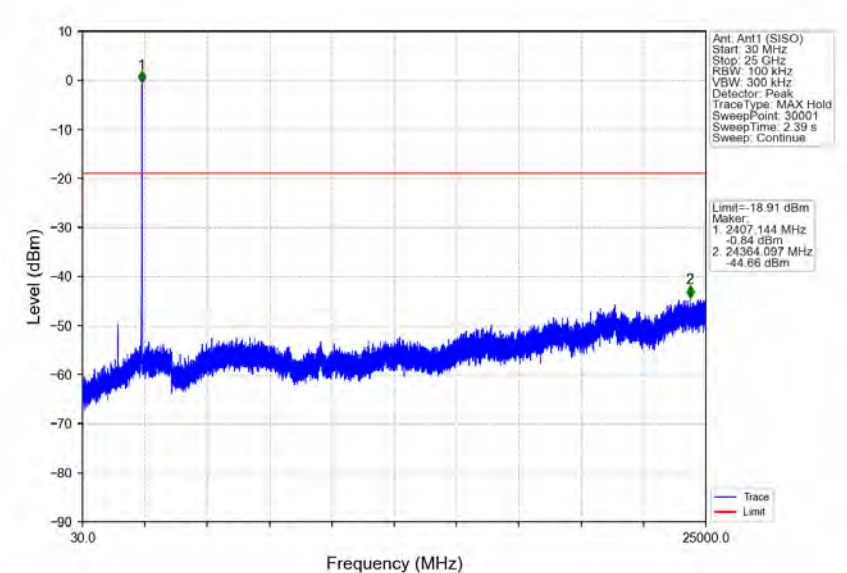
802.11n(HT40) HCH 2452MHz Ant1 (SISO) NTN



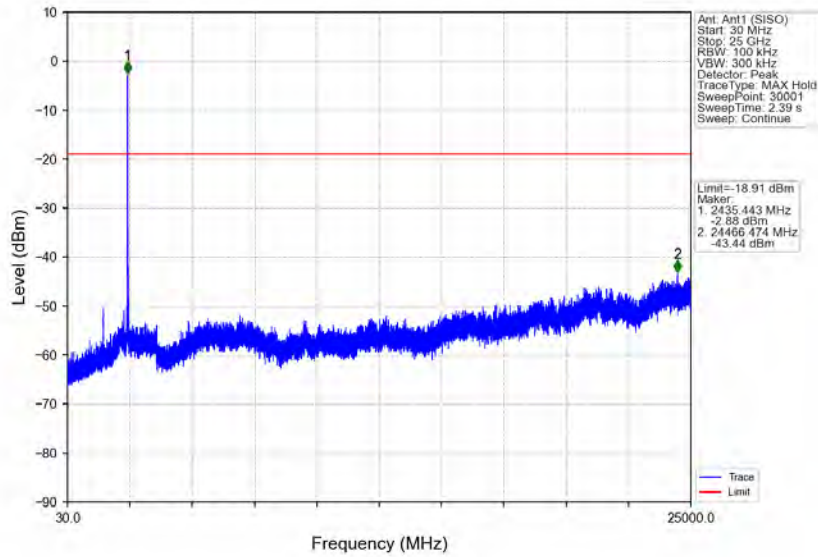
802.11ax(HEW20)_LCH_2412MHz_RU242_Left_Ant1 (SISO)_NTNV



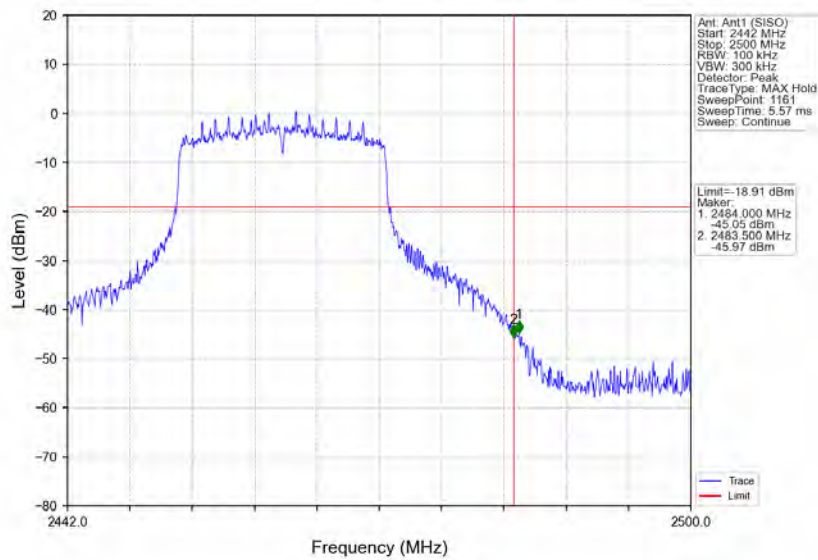
802.11ax(HEW20)_LCH_2412MHz_RU242_Left_Ant1 (SISO)_NTNV



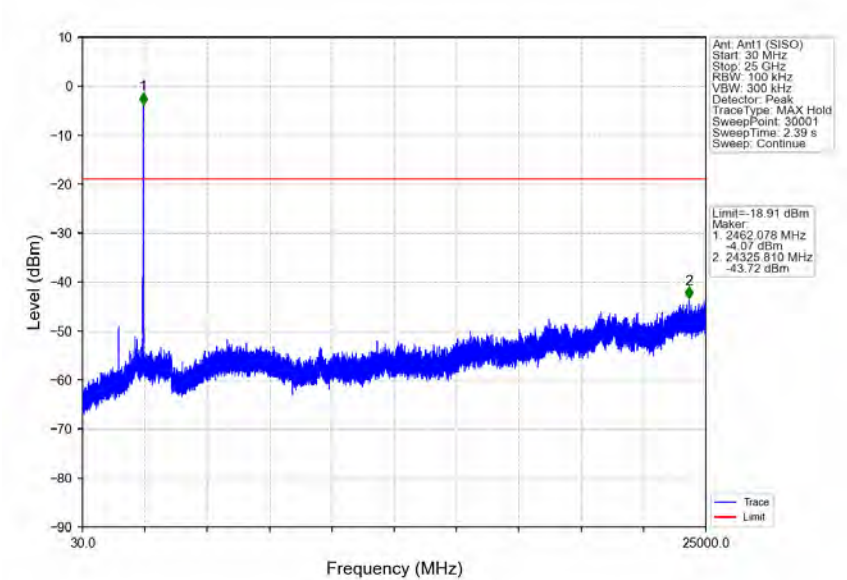
802.11ax(HEW20) MCH 2437MHz RU242 Left Ant1 (SISO) NTNV



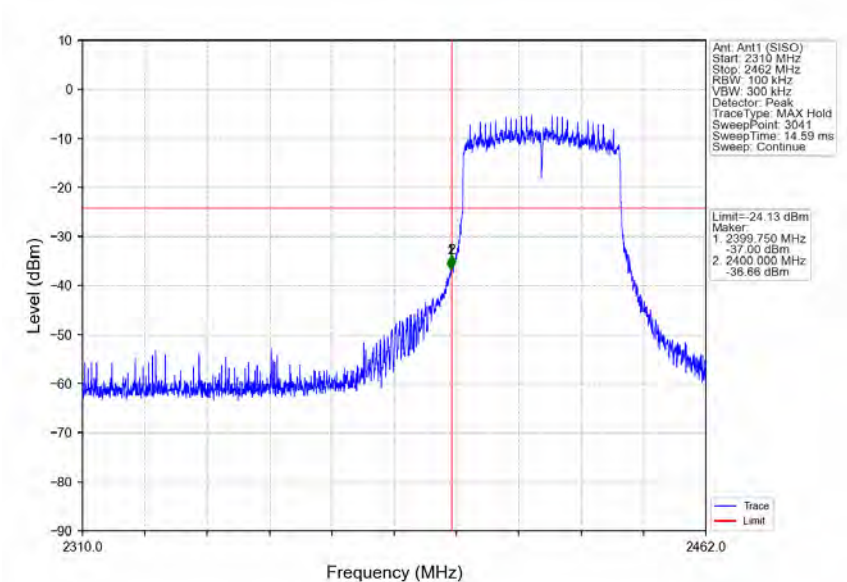
802.11ax(HEW20) HCH 2462MHz RU242 Left Ant1 (SISO) NTNV



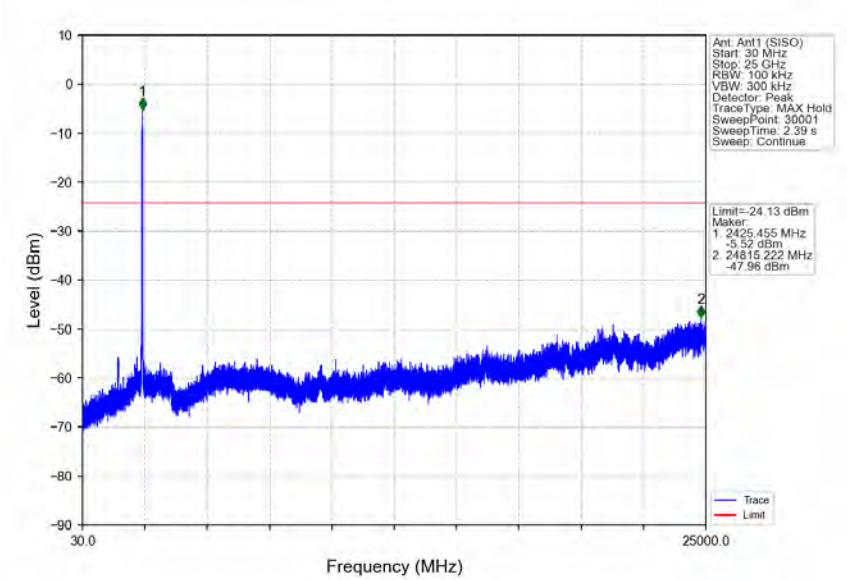
802.11ax(HEW20) HCH 2462MHz RU242 Left Ant1 (SISO) NTNV



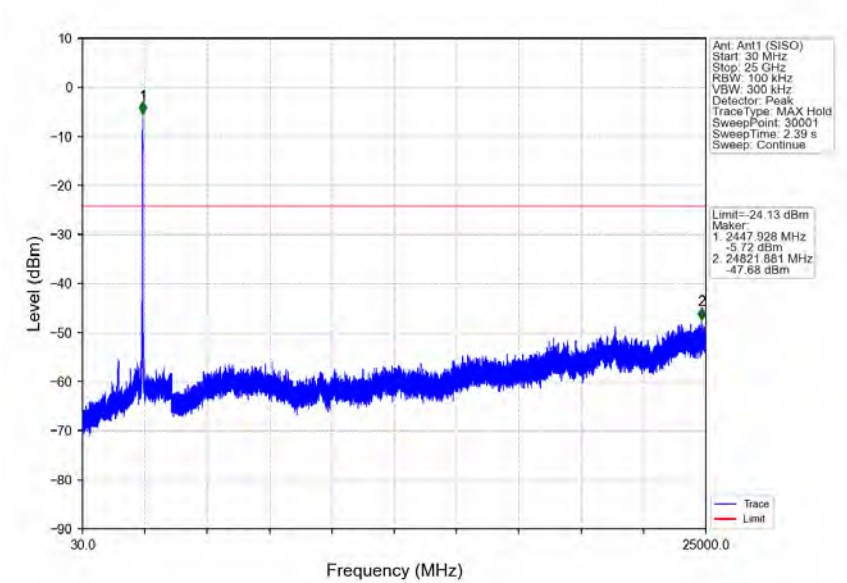
802.11ax(HEW40) LCH 2422MHz RU484 Left Ant1 (SISO) NTNV



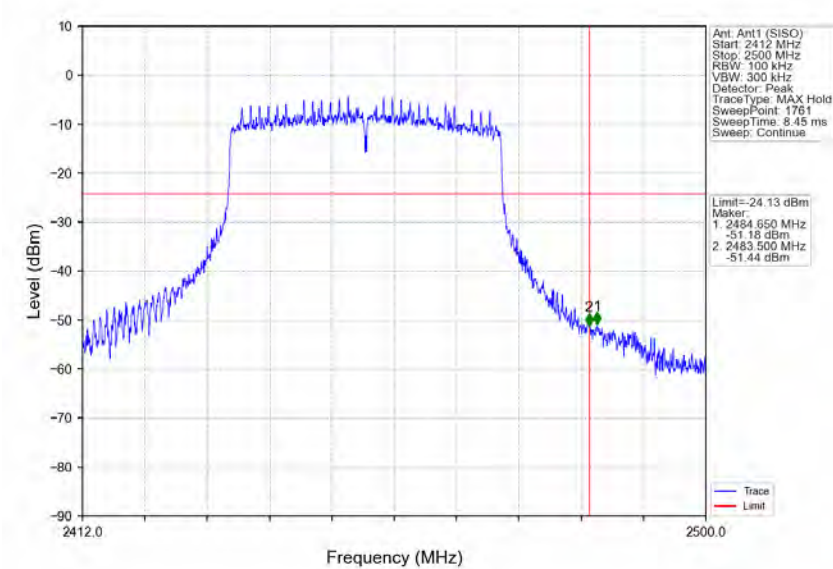
802.11ax(HEW40) LCH 2422MHz RU484 Left Ant1 (SISO) NTNV



802.11ax(HEW40) MCH 2437MHz RU484 Left Ant1 (SISO) NTNV



802.11ax(HEW40) HCH 2452MHz RU484 Left Ant1 (SISO) NTNV



802.11ax(HEW40) HCH 2452MHz RU484 Left Ant1 (SISO) NTNV

