



## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 1 of 122

# TEST REPORT

**Application No.:** KSCR2406001067AT  
**FCC ID:** 2AXNA-EVOLR12  
**Applicant:** AGM Global Vision LLC  
**Address of Applicant:** 173 West Main Street, #962, Springerville, Arizona 85938 United States  
**Manufacturer:** AGM Global Vision LLC  
**Address of Manufacturer:** 173 West Main Street, #962, Springerville, Arizona 85938 United States  
**Equipment Under Test (EUT):**  
**EUT Name:** Thermal Imaging Rifle Scope  
**Model No.:** AGM Evolver LRF 1280  
**Trade Mark:** AGM  
**Standard(s) :** 47 CFR Part 15, Subpart C 15.247  
**Date of Receipt:** 2024-06-13  
**Date of Test:** 2024-06-20 to 2024-06-21  
**Date of Issue:** 2024-07-04

|                     |              |
|---------------------|--------------|
| <b>Test Result:</b> | <b>Pass*</b> |
|---------------------|--------------|

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

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Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 2 of 122

| Revision Record |             |            |        |
|-----------------|-------------|------------|--------|
| Version         | Description | Date       | Remark |
| 00              | Original    | 2024-07-04 | /      |
|                 |             |            |        |
|                 |             |            |        |

|                          |  |                                                                                     |  |
|--------------------------|--|-------------------------------------------------------------------------------------|--|
| Authorized for issue by: |  |                                                                                     |  |
| Tested By                |  |    |  |
|                          |  | Eric_Liu/Project Engineer                                                           |  |
| Approved By              |  |  |  |
|                          |  | Terry Hou /Reviewer                                                                 |  |



## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 3 of 122

## 2 Test Summary

| Radio Spectrum Technical Requirement |                                  |        |                                                 |        |
|--------------------------------------|----------------------------------|--------|-------------------------------------------------|--------|
| Item                                 | Standard                         | Method | Requirement                                     | Result |
| Antenna Requirement                  | 47 CFR Part 15, Subpart C 15.247 | N/A    | 47 CFR Part 15, Subpart C 15.203 & 15.247(b)(4) | Pass   |

| Radio Spectrum Matter Part                            |                                  |                                      |                                           |        |
|-------------------------------------------------------|----------------------------------|--------------------------------------|-------------------------------------------|--------|
| Item                                                  | Standard                         | Method                               | Requirement                               | Result |
| Conducted Emissions at AC Power Line (150kHz-30MHz)   | 47 CFR Part 15, Subpart C 15.247 | ANSI C63.10 (2013) Section 6.2       | 47 CFR Part 15, Subpart C 15.207          | Pass   |
| Radiated Emissions which fall in the restricted bands |                                  | ANSI C63.10 (2013) Section 6.10.5    | 47 CFR Part 15, Subpart C 15.205 & 15.209 | Pass   |
| Radiated Spurious Emissions Below 1GHz                |                                  | ANSI C63.10 (2013) Section 6.4,6.5   | 47 CFR Part 15, Subpart C 15.205 & 15.209 | Pass   |
| Radiated Spurious Emissions Above 1GHz                |                                  | ANSI C63.10 (2013) Section 6.6       | 47 CFR Part 15, Subpart C 15.205 & 15.209 | Pass   |
| Conducted Peak Output Power                           |                                  | ANSI C63.10 (2013) Section 11.9.1    | 47 CFR Part 15, Subpart C 15.247(b)(3)    | Pass   |
| Minimum 6dB Bandwidth                                 |                                  | ANSI C63.10 (2013) Section 11.8.1    | 47 CFR Part 15, Subpart C 15.247a(2)      | Pass   |
| Power Spectrum Density                                |                                  | ANSI C63.10 (2013) Section 11.10.2   | 47 CFR Part 15, Subpart C 15.247(e)       | Pass   |
| Conducted Band Edges Measurement                      |                                  | ANSI C63.10 (2013) Section 11.13.3.2 | 47 CFR Part 15, Subpart C 15.247(d)       | Pass   |
| Conducted Spurious Emissions                          |                                  | ANSI C63.10 (2013) Section 11.11     | 47 CFR Part 15, Subpart C 15.247(d)       | Pass   |

### 3 Contents

|                                                                | Page      |
|----------------------------------------------------------------|-----------|
| <b>1 COVER PAGE.....</b>                                       | <b>1</b>  |
| <b>2 Test Summary .....</b>                                    | <b>3</b>  |
| <b>3 Contents .....</b>                                        | <b>4</b>  |
| <b>4 General Information .....</b>                             | <b>5</b>  |
| 4.1 Details of E.U.T. ....                                     | 5         |
| 4.2 Description of Support Units .....                         | 5         |
| 4.3 Measurement Uncertainty .....                              | 5         |
| 4.4 Test Location.....                                         | 6         |
| 4.5 Test Facility .....                                        | 6         |
| 4.6 Deviation from Standards .....                             | 6         |
| 4.7 Abnormalities from Standard Conditions .....               | 6         |
| <b>Equipment List.....</b>                                     | <b>7</b>  |
| <b>5 Radio Spectrum Technical Requirement .....</b>            | <b>8</b>  |
| 5.1 Antenna Requirement .....                                  | 8         |
| <b>6 Radio Spectrum Matter Test Results .....</b>              | <b>9</b>  |
| 6.1 Conducted Emissions at AC Power Line (150kHz-30MHz).....   | 9         |
| 6.2 Radiated Emissions which fall in the restricted bands..... | 13        |
| 6.3 Radiated Spurious Emissions Below 1GHz .....               | 33        |
| 6.4 Radiated Spurious Emissions Above 1GHz.....                | 37        |
| 6.5 Conducted Peak Output Power.....                           | 63        |
| 6.6 Minimum 6dB Bandwidth .....                                | 65        |
| 6.7 Power Spectrum Density .....                               | 66        |
| 6.8 Conducted Band Edges Measurement.....                      | 67        |
| 6.9 Conducted Spurious Emissions .....                         | 68        |
| <b>7 Test Setup Photo .....</b>                                | <b>69</b> |
| <b>8 EUT Constructional Details (EUT Photos) .....</b>         | <b>69</b> |
| <b>9 Appendix .....</b>                                        | <b>70</b> |

## 4 General Information

### 4.1 Details of E.U.T.

|                      |                                                                                                                                                                   |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Power supply:        | DC 5V by Battery<br>Battery:<br>Model: NE-4400<br>Rating: 3.6Vdc/ 4.4Ah<br>Adapter:<br>Model: ADS-12EA-05 05010E<br>Input: 100-240V~ 50/60Hz<br>Output: 5.0V 2.0A |
| Test Voltage:        | AC 120V/60Hz                                                                                                                                                      |
| Operation Frequency: | 802.11b/g/n(HT20): 2412MHz to 2462MHz;802.11n(HT40): 2422MHz to 2452MHz                                                                                           |
| Modulation Type:     | 802.11b: DSSS (CCK, DQPSK, DBPSK);802.11g/n: OFDM (64QAM, 16QAM, QPSK, BPSK)                                                                                      |
| Number of Channels:  | 802.11b/g/n(HT20):11;802.11n(HT40):7                                                                                                                              |
| Channel Spacing:     | 5MHz                                                                                                                                                              |
| Antenna Type:        | PCB SMT Antenna                                                                                                                                                   |
| Antenna Gain:        | -3.32dBi (Provided by the manufacturer)                                                                                                                           |

### 4.2 Description of Support Units

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

### 4.3 Measurement Uncertainty

| No. | Item                            | Measurement Uncertainty                                                                |
|-----|---------------------------------|----------------------------------------------------------------------------------------|
| 1   | Radio Frequency                 | $8.4 \times 10^{-8}$                                                                   |
| 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)<br>5.9dB (Above 1GHz)                                               |
| 9   | Radiated Spurious Emission Test | 4.2dB (Below 30MHz)<br>4.5dB (30MHz-1GHz)<br>5.1dB (1GHz-18GHz)<br>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.: KSCR240600106701

Page: 6 of 122

### 4.4 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.

### 4.5 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.

### 4.6 Deviation from Standards

None

### 4.7 Abnormalities from Standard Conditions

None



## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 7 of 122

### Equipment List

| Item                                         | Equipment                            | Manufacturer       | Model             | Inventory No          | Cal Date   | Cal. Due Date |
|----------------------------------------------|--------------------------------------|--------------------|-------------------|-----------------------|------------|---------------|
| <b>Conducted Emission at Mains Terminals</b> |                                      |                    |                   |                       |            |               |
| 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         |
| <b>RF Conducted Test</b>                     |                                      |                    |                   |                       |            |               |
| 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-<br>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           |
| <b>RF Radiated Test</b>                      |                                      |                    |                   |                       |            |               |
| 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_EMV-3A1        | /                     | NCR        | NCR           |
| 15                                           | Software                             | ESE                | E3_V<br>6.111221a | /                     | NCR        | NCR           |



## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 8 of 122

## 5 Radio Spectrum Technical Requirement

### 5.1 Antenna Requirement

#### 5.1.1 Test Requirement:

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

#### 5.1.2 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.

The antenna is PCB SMT antenna and no consideration of replacement. The best case gain of the antenna is -3.32dBi.

Antenna location: Refer to internal photo.

## 6 Radio Spectrum Matter Test Results

### 6.1 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 |                       |           |

#### 6.1.1 E.U.T. Operation

Operating Environment:

Temperature: 23.0 °C

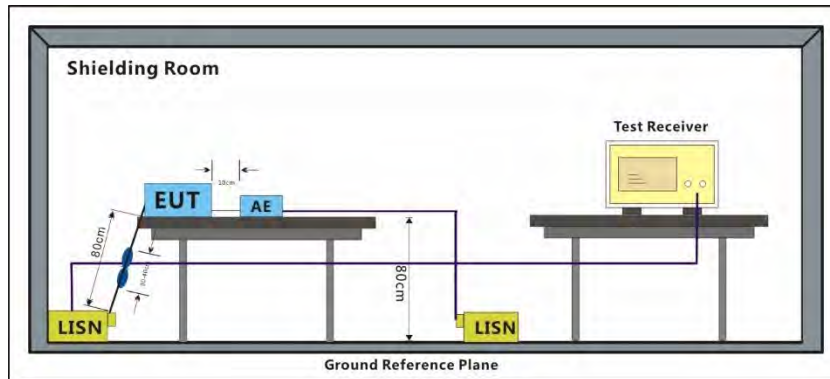
Humidity: 47.6 % RH

Atmospheric Pressure: 1010 mbar

#### 6.1.2 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), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report. |

### 6.1.3 Test Setup Diagram



### 6.1.4 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: Level=Read Level+ Cable Loss+ LISN Factor

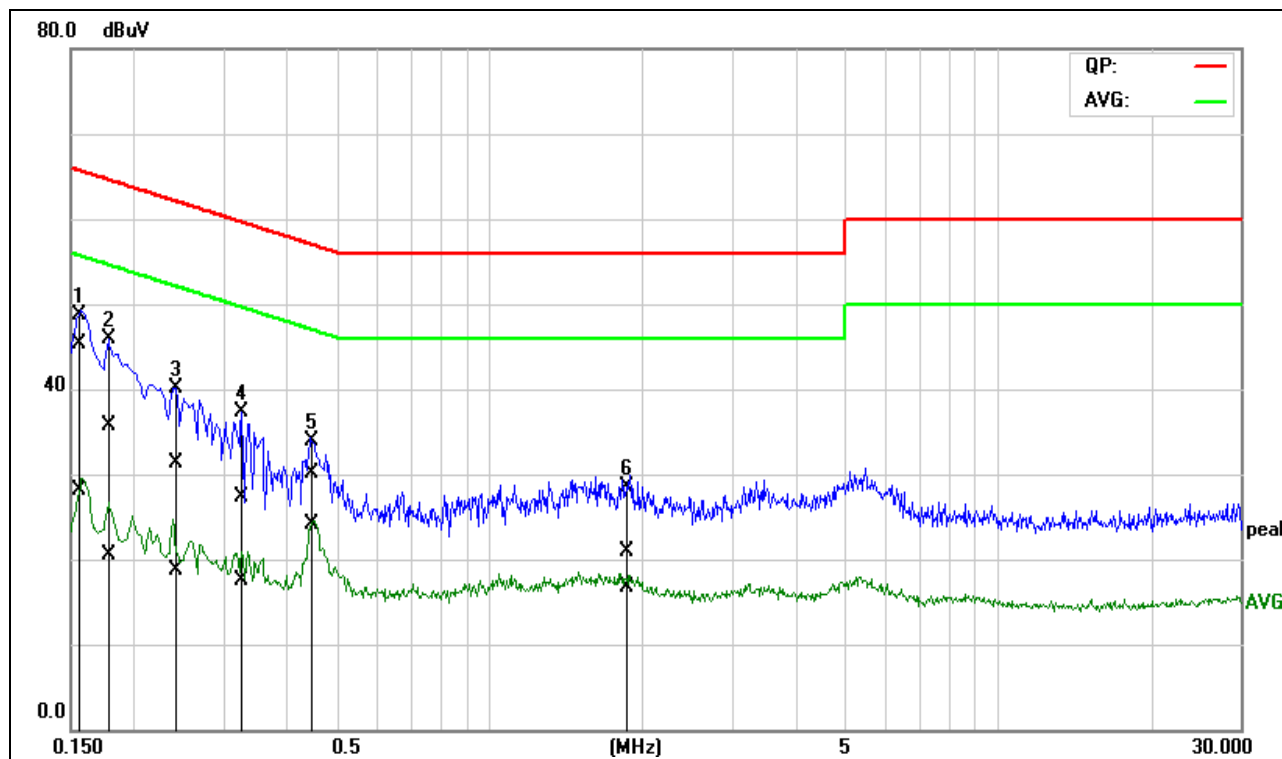
## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 11 of 122

Test Mode: 00; Line: Live line



| No. | Frequency<br>(MHz) | QuasiPeak<br>reading<br>(dBuV) | Average<br>reading<br>(dBuV) | Correction<br>factor<br>(dB) | QuasiPeak<br>result<br>(dBuV) | Average<br>result<br>(dBuV) | QuasiPeak<br>limit<br>(dBuV) | Average<br>limit<br>(dBuV) | QuasiPeak<br>margin<br>(dB) | Average<br>margin<br>(dB) | Remark |
|-----|--------------------|--------------------------------|------------------------------|------------------------------|-------------------------------|-----------------------------|------------------------------|----------------------------|-----------------------------|---------------------------|--------|
| 1*  | 0.1537             | 25.00                          | 7.77                         | 20.24                        | 45.24                         | 28.01                       | 65.80                        | 55.80                      | -20.56                      | -27.79                    | Pass   |
| 2   | 0.1777             | 15.49                          | 0.42                         | 20.14                        | 35.63                         | 20.56                       | 64.59                        | 54.59                      | -28.96                      | -34.03                    | Pass   |
| 3   | 0.2407             | 11.30                          | -1.34                        | 20.06                        | 31.36                         | 18.72                       | 62.07                        | 52.07                      | -30.71                      | -33.35                    | Pass   |
| 4   | 0.3241             | 7.16                           | -2.56                        | 20.08                        | 27.24                         | 17.52                       | 59.60                        | 49.60                      | -32.36                      | -32.08                    | Pass   |
| 5   | 0.4498             | 10.09                          | 4.00                         | 20.05                        | 30.14                         | 24.05                       | 56.88                        | 46.88                      | -26.74                      | -22.83                    | Pass   |
| 6   | 1.8481             | 0.86                           | -3.38                        | 20.03                        | 20.89                         | 16.65                       | 56.00                        | 46.00                      | -35.11                      | -29.35                    | Pass   |

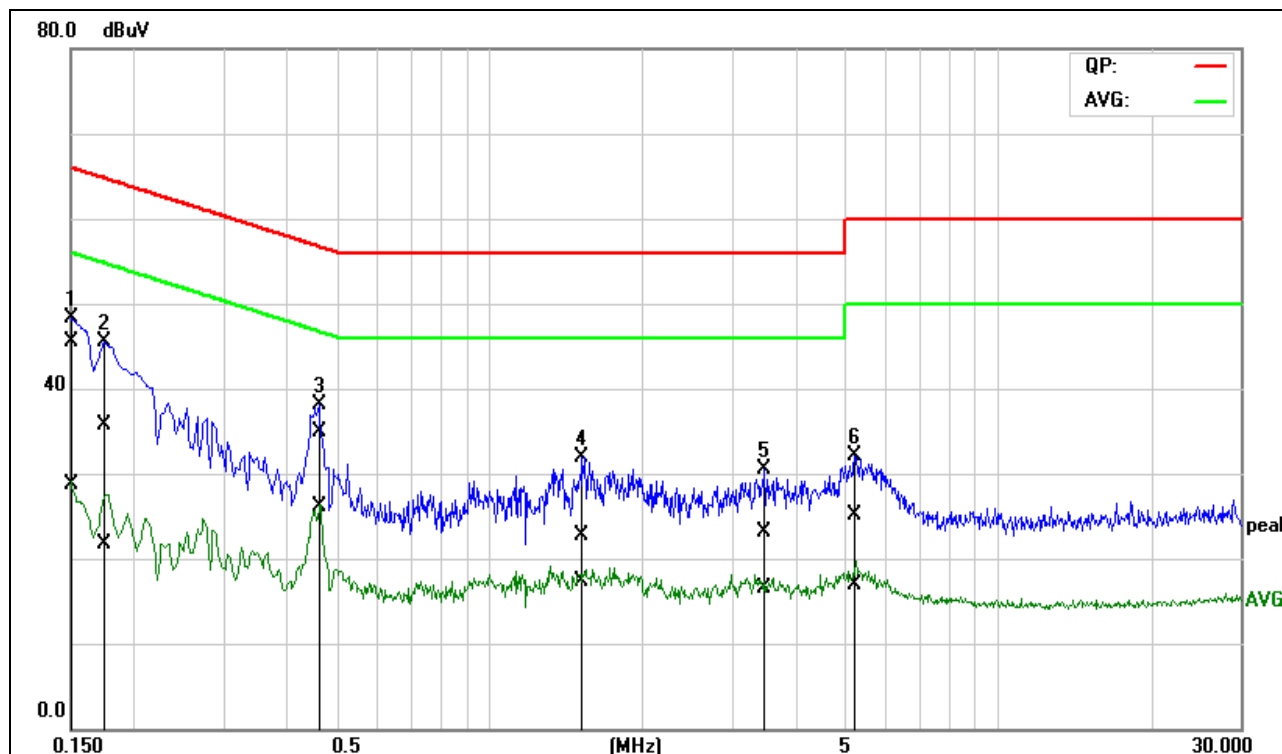
## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 12 of 122

Test Mode: 00; Line: Neutral Line



| No. | Frequency | QuasiPeak reading | Average reading | Correction factor | QuasiPeak result | Average result | QuasiPeak limit | Average limit | QuasiPeak margin | Average margin | Remark |
|-----|-----------|-------------------|-----------------|-------------------|------------------|----------------|-----------------|---------------|------------------|----------------|--------|
|     | (MHz)     | (dBuV)            | (dBuV)          | (dB)              | (dBuV)           | (dBuV)         | (dBuV)          | (dBuV)        | (dB)             | (dB)           |        |
| 1*  | 0.1515    | 25.39             | 8.55            | 20.18             | 45.57            | 28.73          | 65.92           | 55.92         | -20.35           | -27.19         | Pass   |
| 2   | 0.1728    | 15.47             | 1.54            | 20.15             | 35.62            | 21.69          | 64.82           | 54.82         | -29.20           | -33.13         | Pass   |
| 3   | 0.4594    | 14.88             | 6.08            | 20.01             | 34.89            | 26.09          | 56.70           | 46.70         | -21.81           | -20.61         | Pass   |
| 4   | 1.5035    | 2.81              | -2.63           | 19.90             | 22.71            | 17.27          | 56.00           | 46.00         | -33.29           | -28.73         | Pass   |
| 5   | 3.4544    | 3.19              | -3.45           | 19.95             | 23.14            | 16.50          | 56.00           | 46.00         | -32.86           | -29.50         | Pass   |
| 6   | 5.2393    | 5.19              | -2.93           | 19.89             | 25.08            | 16.96          | 60.00           | 50.00         | -34.92           | -33.04         | Pass   |

## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 13 of 122

### 6.2 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

Measurement Distance: 3m

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.

#### 6.2.1 E.U.T. Operation

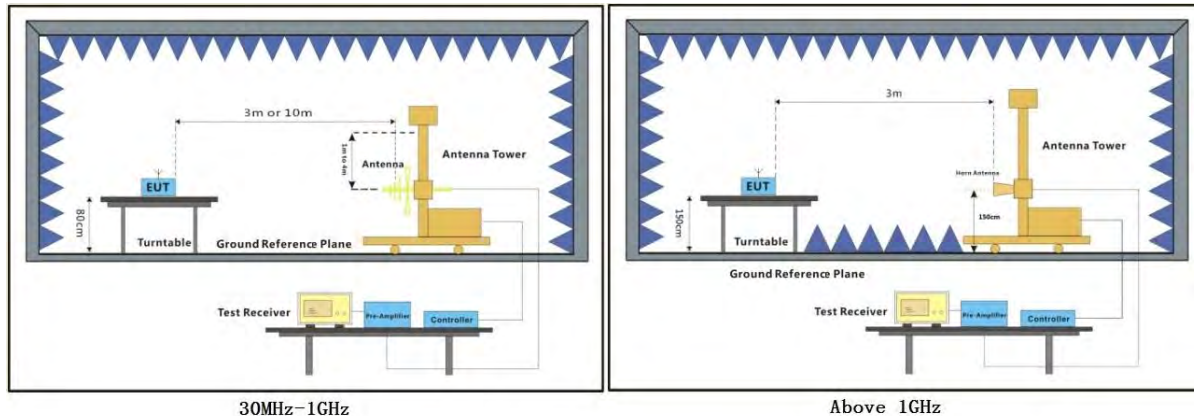
Operating Environment:

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

#### 6.2.2 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), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report. |

### 6.2.3 Test Setup Diagram



### 6.2.4 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.

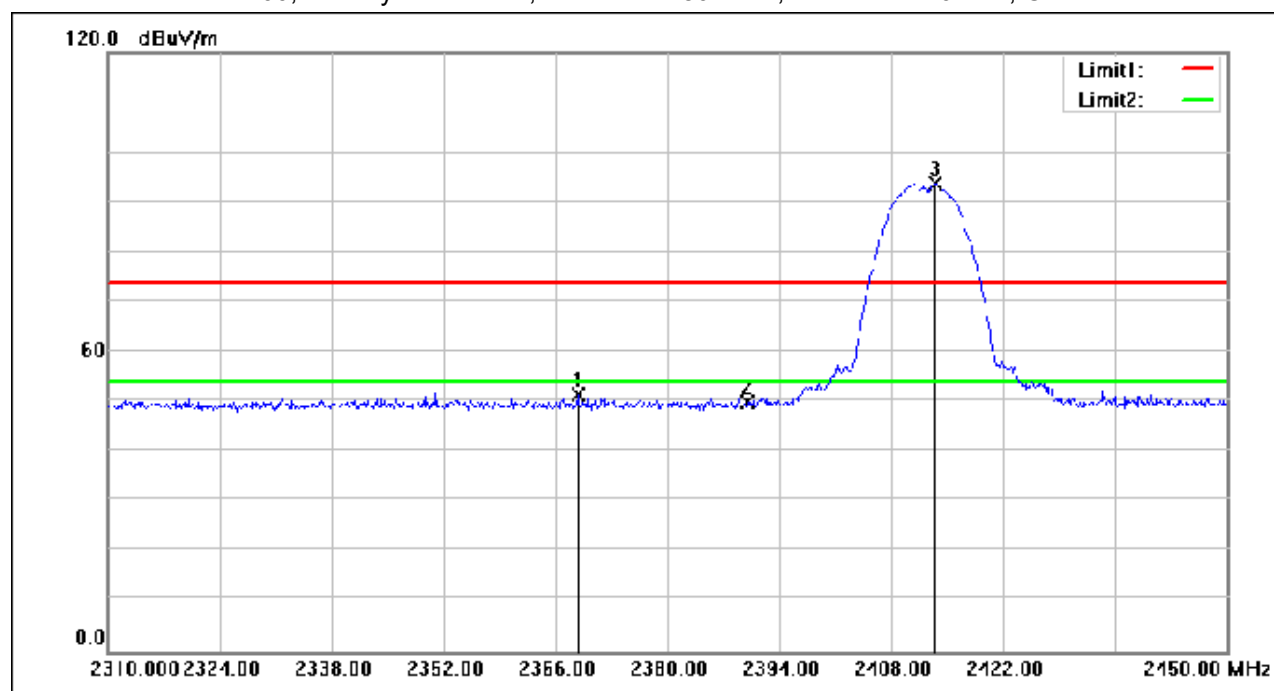
## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 15 of 122

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



| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|-------------------------|-----------------|----------------|-------------|--------|
| 1   | 2368.800        | 76.39          | -24.80                  | 51.59           | 74.00          | -22.41      | peak   |
| 2   | 2390.000        | 74.76          | -24.71                  | 50.05           | 74.00          | -23.95      | peak   |
| 3   | 2413.460        | 118.31         | -24.60                  | 93.71           | 74.00          | 19.71       | peak   |

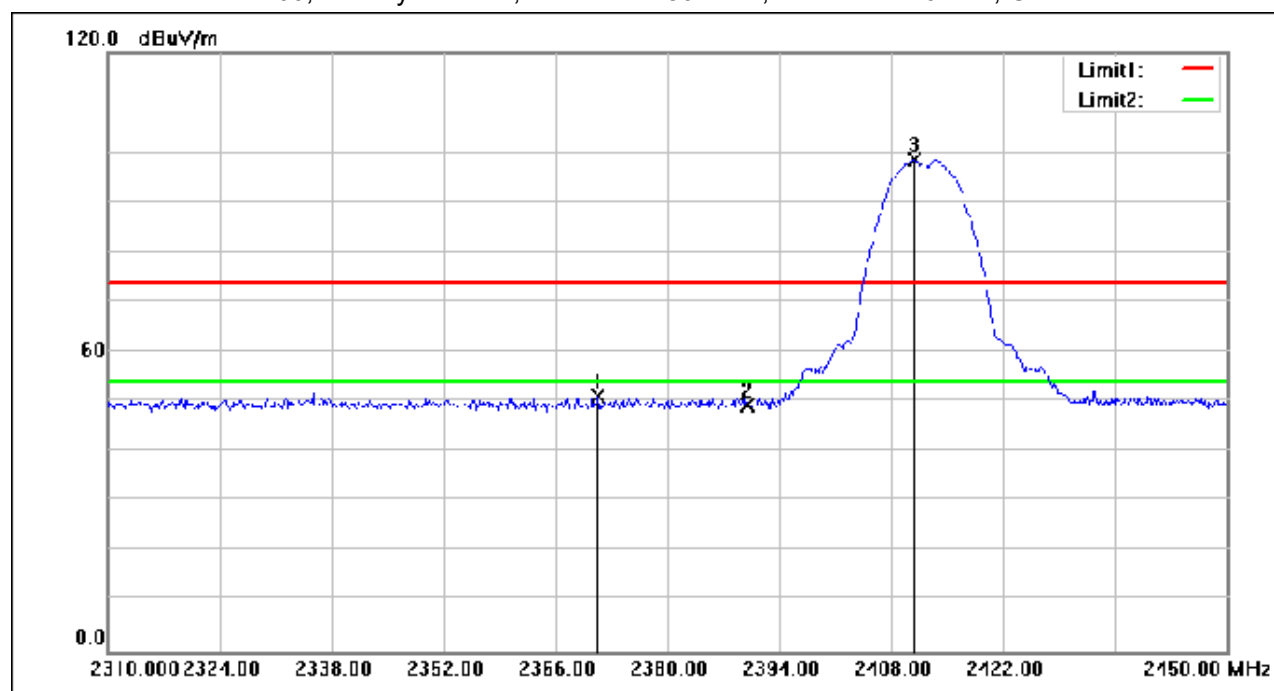
## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 16 of 122

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



| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|-------------------------|-----------------|----------------|-------------|--------|
| 1   | 2371.320        | 75.96          | -24.79                  | 51.17           | 74.00          | -22.83      | peak   |
| 2   | 2390.000        | 74.01          | -24.71                  | 49.30           | 74.00          | -24.70      | peak   |
| 3   | 2410.800        | 123.06         | -24.61                  | 98.45           | 74.00          | 24.45       | peak   |

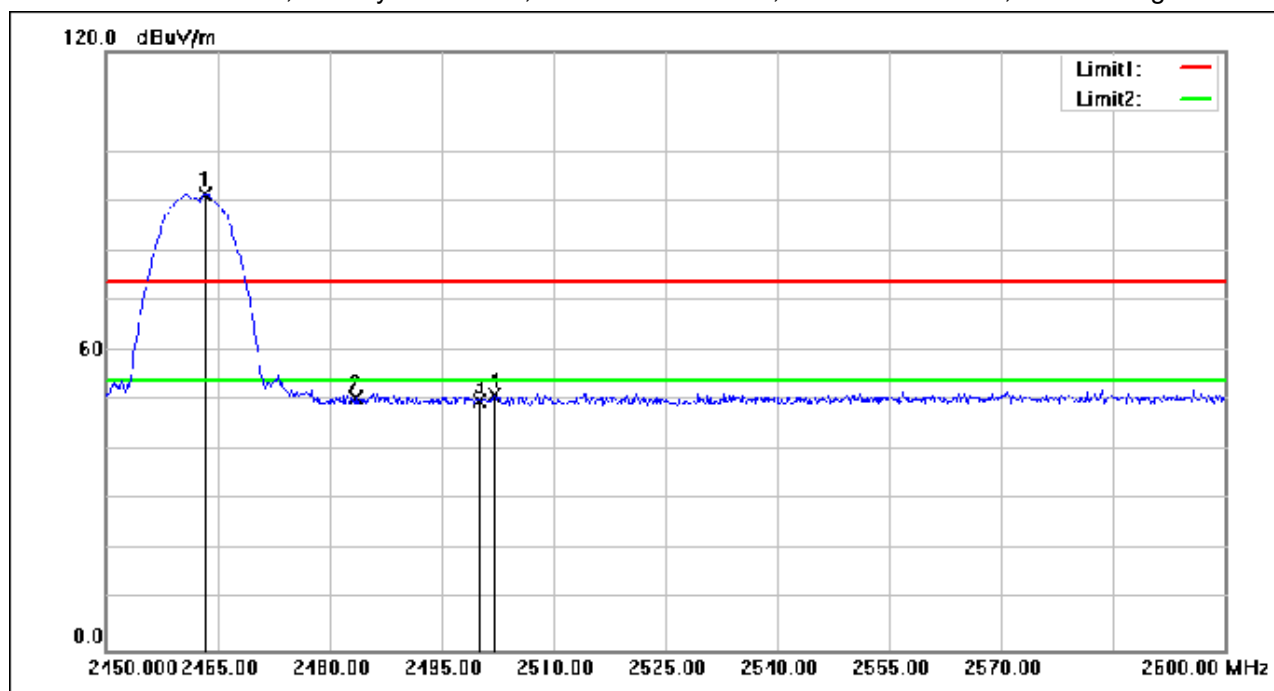
## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 17 of 122

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



| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|-------------------------|-----------------|----------------|-------------|--------|
| 1   | 2463.350        | 115.77         | -24.37                  | 91.40           | 74.00          | 17.40       | peak   |
| 2   | 2483.500        | 74.78          | -24.27                  | 50.51           | 74.00          | -23.49      | peak   |
| 3   | 2500.000        | 74.29          | -24.19                  | 50.10           | 74.00          | -23.90      | peak   |
| 4   | 2502.050        | 75.41          | -24.18                  | 51.23           | 74.00          | -22.77      | peak   |

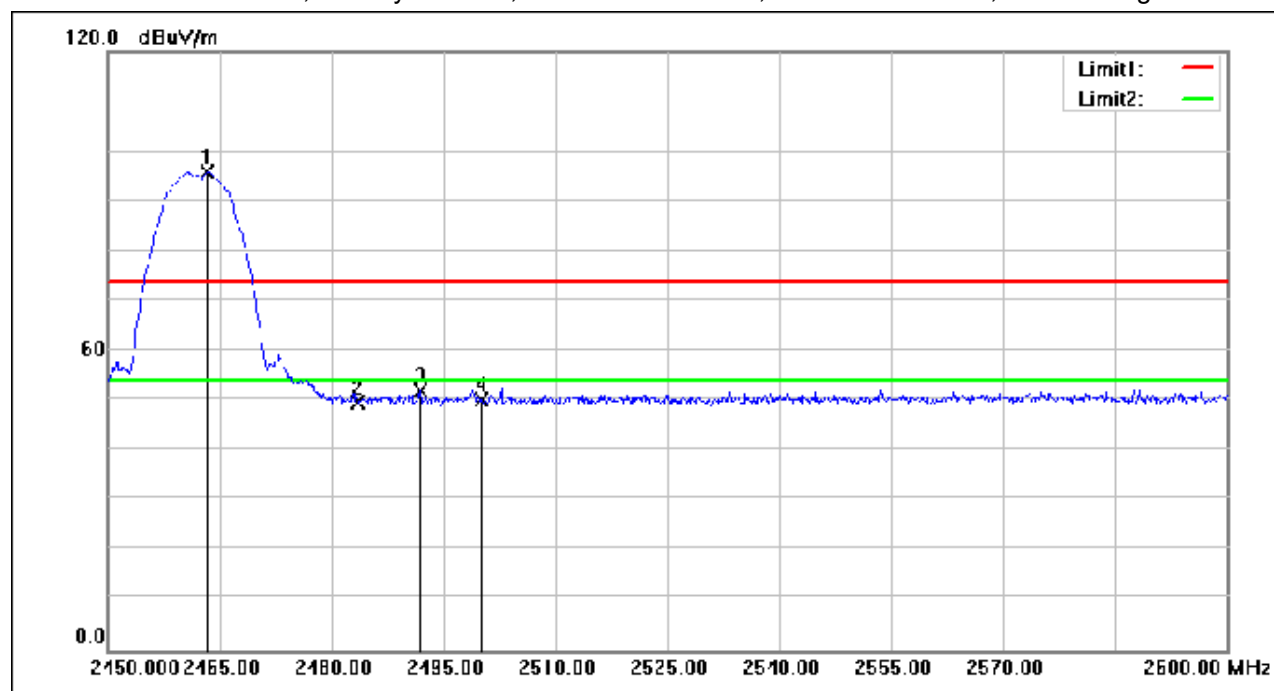
## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 18 of 122

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



| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|-------------------------|-----------------|----------------|-------------|--------|
| 1   | 2463.350        | 120.17         | -24.37                  | 95.80           | 74.00          | 21.80       | peak   |
| 2   | 2483.500        | 74.01          | -24.27                  | 49.74           | 74.00          | -24.26      | peak   |
| 3   | 2491.850        | 76.22          | -24.23                  | 51.99           | 74.00          | -22.01      | peak   |
| 4   | 2500.000        | 74.45          | -24.19                  | 50.26           | 74.00          | -23.74      | peak   |

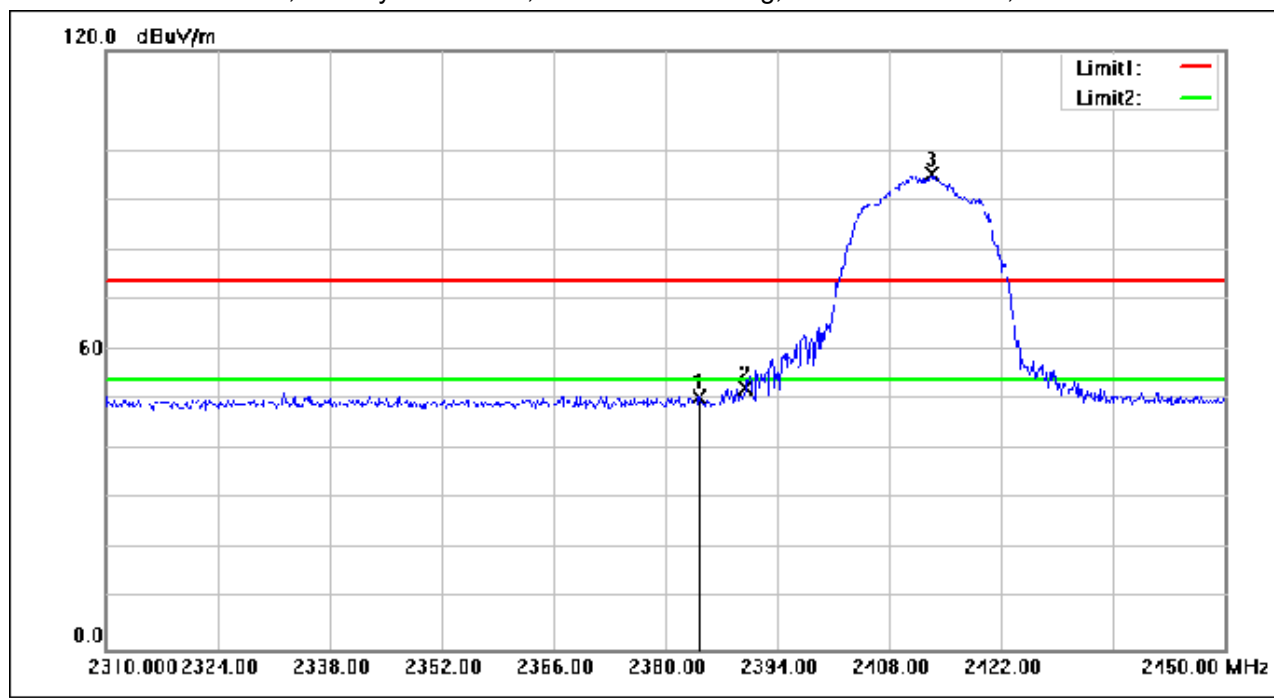
## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 19 of 122

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



| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|-------------------------|-----------------|----------------|-------------|--------|
| 1   | 2384.200        | 75.27          | -24.73                  | 50.54           | 74.00          | -23.46      | peak   |
| 2   | 2390.000        | 77.11          | -24.71                  | 52.40           | 74.00          | -21.60      | peak   |
| 3   | 2413.320        | 119.81         | -24.60                  | 95.21           | 74.00          | 21.21       | peak   |

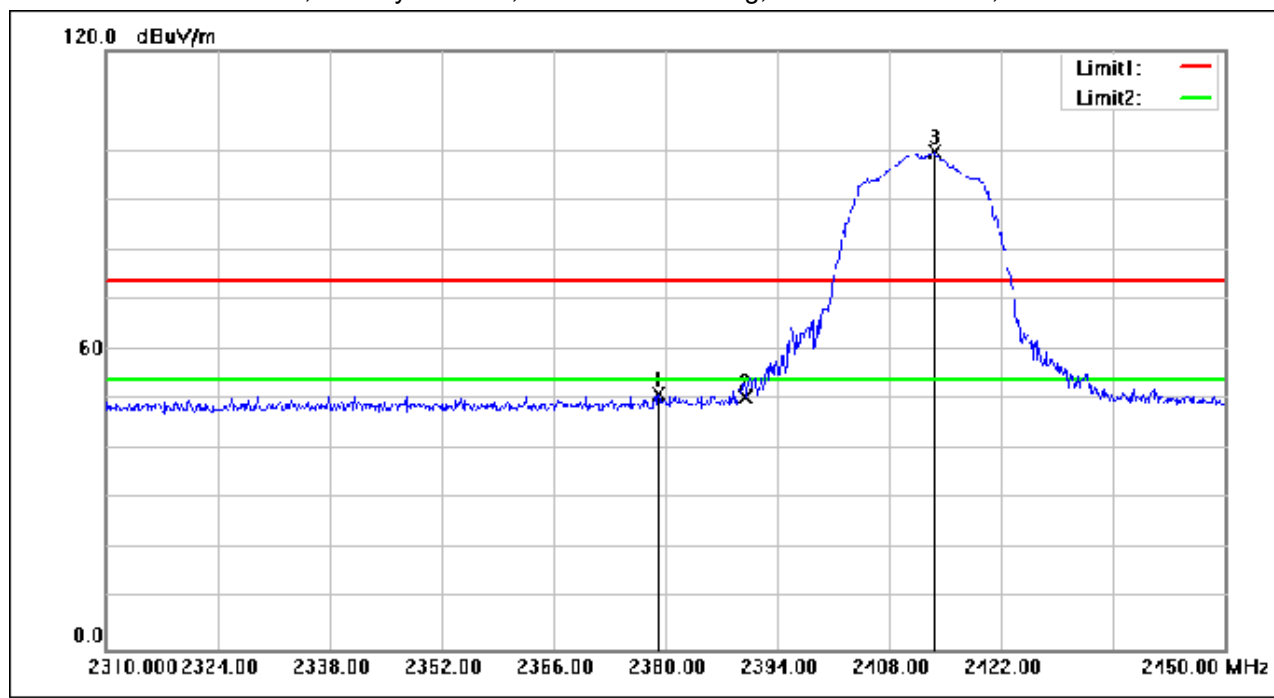
## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 20 of 122

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



| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|-------------------------|-----------------|----------------|-------------|--------|
| 1   | 2379.160        | 75.77          | -24.75                  | 51.02           | 74.00          | -22.98      | peak   |
| 2   | 2390.000        | 75.26          | -24.71                  | 50.55           | 74.00          | -23.45      | peak   |
| 3   | 2413.600        | 124.26         | -24.59                  | 99.67           | 74.00          | 25.67       | peak   |

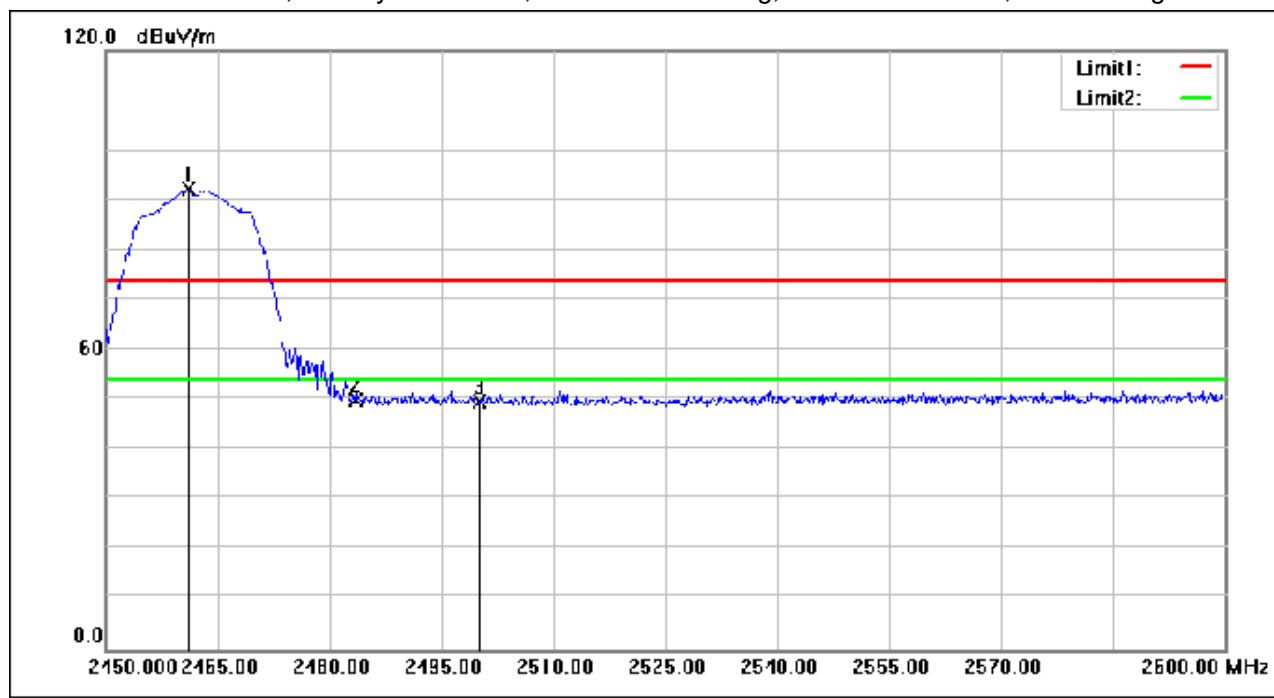
## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 21 of 122

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



| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|-------------------------|-----------------|----------------|-------------|--------|
| 1   | 2461.100        | 116.53         | -24.38                  | 92.15           | 74.00          | 18.15       | peak   |
| 2   | 2483.500        | 74.35          | -24.27                  | 50.08           | 74.00          | -23.92      | peak   |
| 3   | 2500.000        | 73.84          | -24.19                  | 49.65           | 74.00          | -24.35      | peak   |

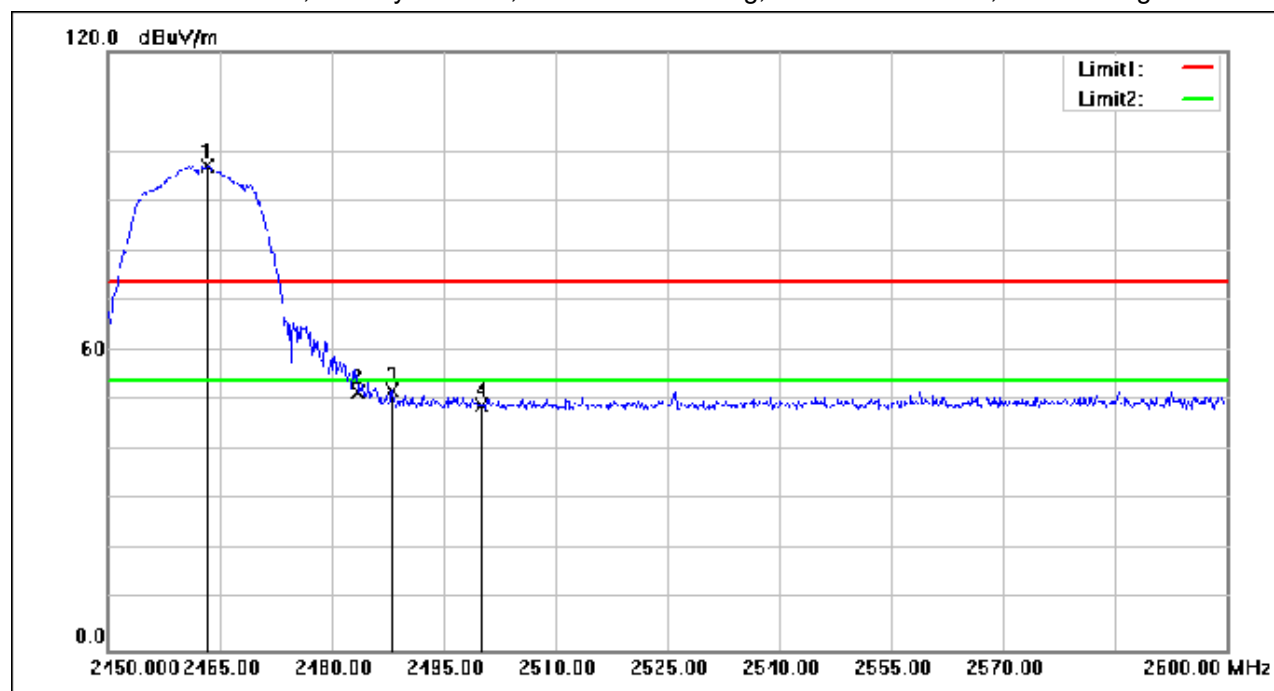
## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 22 of 122

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



| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|-------------------------|-----------------|----------------|-------------|--------|
| 1   | 2463.350        | 121.48         | -24.37                  | 97.11           | 74.00          | 23.11       | peak   |
| 2   | 2483.500        | 76.17          | -24.27                  | 51.90           | 74.00          | -22.10      | peak   |
| 3   | 2488.100        | 76.36          | -24.25                  | 52.11           | 74.00          | -21.89      | peak   |
| 4   | 2500.000        | 73.23          | -24.19                  | 49.04           | 74.00          | -24.96      | peak   |

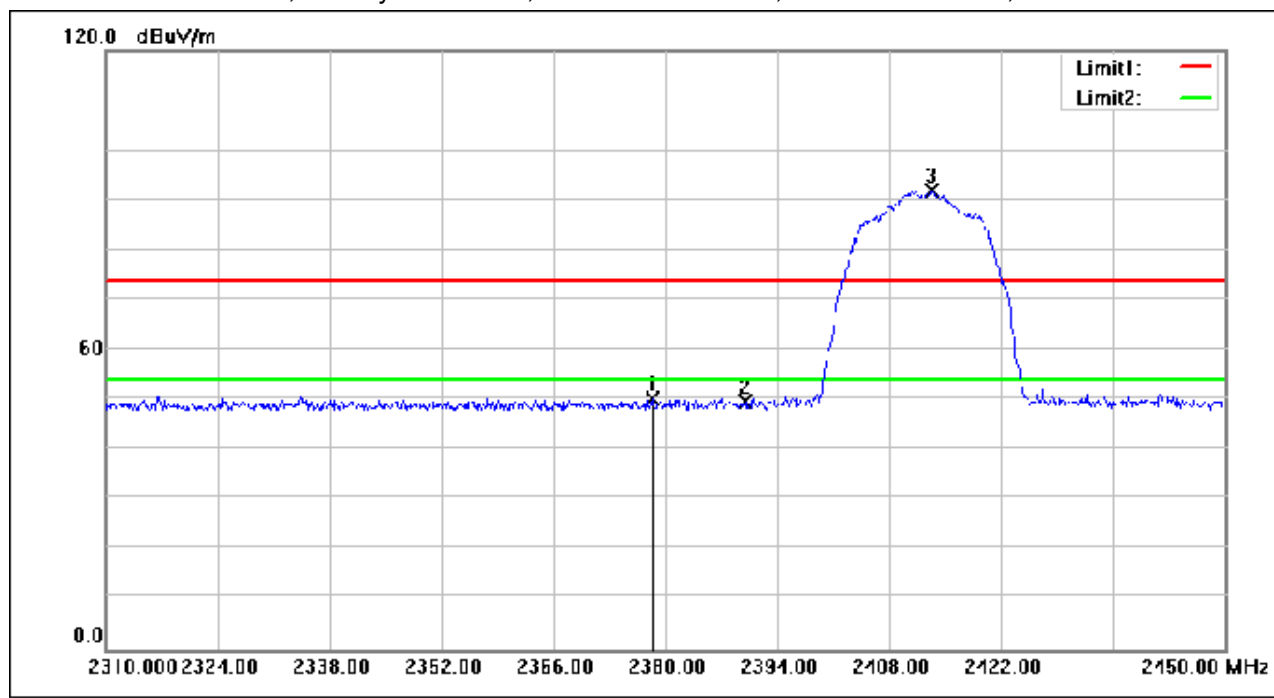
## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 23 of 122

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



| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|-------------------------|-----------------|----------------|-------------|--------|
| 1   | 2378.320        | 74.94          | -24.77                  | 50.17           | 74.00          | -23.83      | peak   |
| 2   | 2390.000        | 74.22          | -24.71                  | 49.51           | 74.00          | -24.49      | peak   |
| 3   | 2413.320        | 116.65         | -24.60                  | 92.05           | 74.00          | 18.05       | peak   |

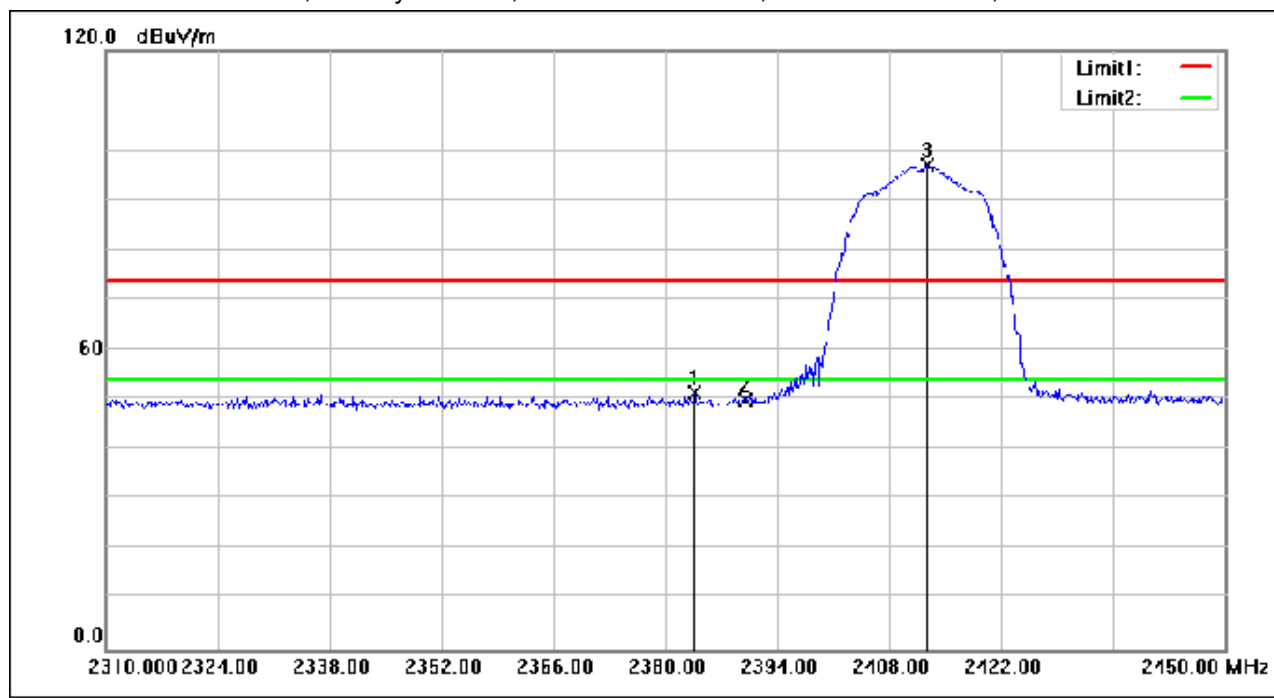
## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 24 of 122

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



| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|-------------------------|-----------------|----------------|-------------|--------|
| 1   | 2383.640        | 76.06          | -24.73                  | 51.33           | 74.00          | -22.67      | peak   |
| 2   | 2390.000        | 74.53          | -24.71                  | 49.82           | 74.00          | -24.18      | peak   |
| 3   | 2412.760        | 121.51         | -24.60                  | 96.91           | 74.00          | 22.91       | peak   |

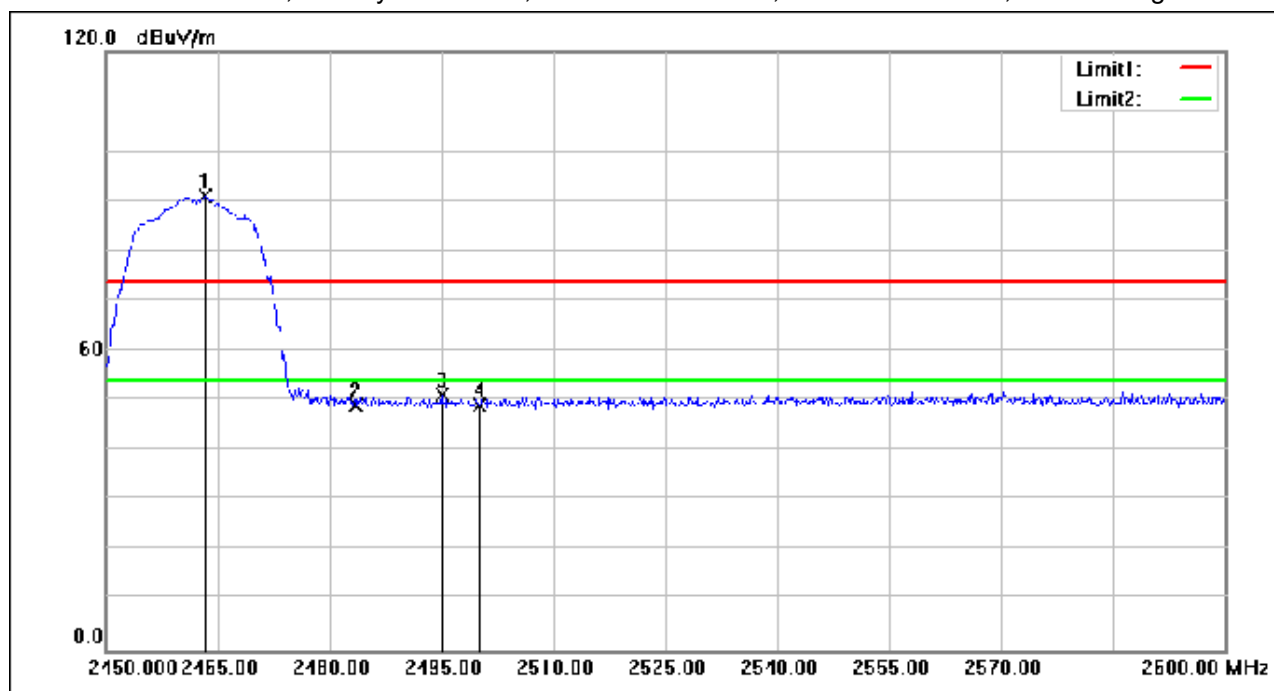
## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 25 of 122

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



| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|-------------------------|-----------------|----------------|-------------|--------|
| 1   | 2463.200        | 115.33         | -24.37                  | 90.96           | 74.00          | 16.96       | peak   |
| 2   | 2483.500        | 73.32          | -24.27                  | 49.05           | 74.00          | -24.95      | peak   |
| 3   | 2495.000        | 75.28          | -24.21                  | 51.07           | 74.00          | -22.93      | peak   |
| 4   | 2500.000        | 73.20          | -24.19                  | 49.01           | 74.00          | -24.99      | peak   |

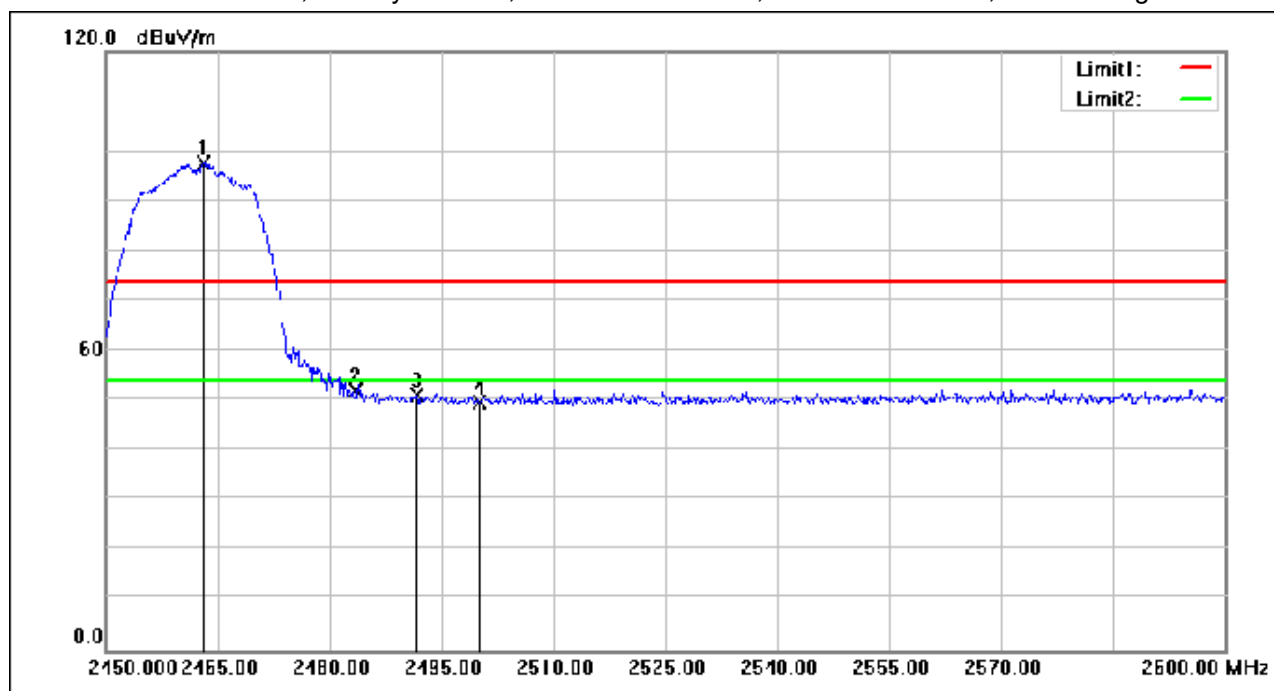
## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 26 of 122

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



| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|-------------------------|-----------------|----------------|-------------|--------|
| 1   | 2463.050        | 122.01         | -24.37                  | 97.64           | 74.00          | 23.64       | peak   |
| 2   | 2483.500        | 76.46          | -24.27                  | 52.19           | 74.00          | -21.81      | peak   |
| 3   | 2491.700        | 75.26          | -24.23                  | 51.03           | 74.00          | -22.97      | peak   |
| 4   | 2500.000        | 73.72          | -24.19                  | 49.53           | 74.00          | -24.47      | peak   |

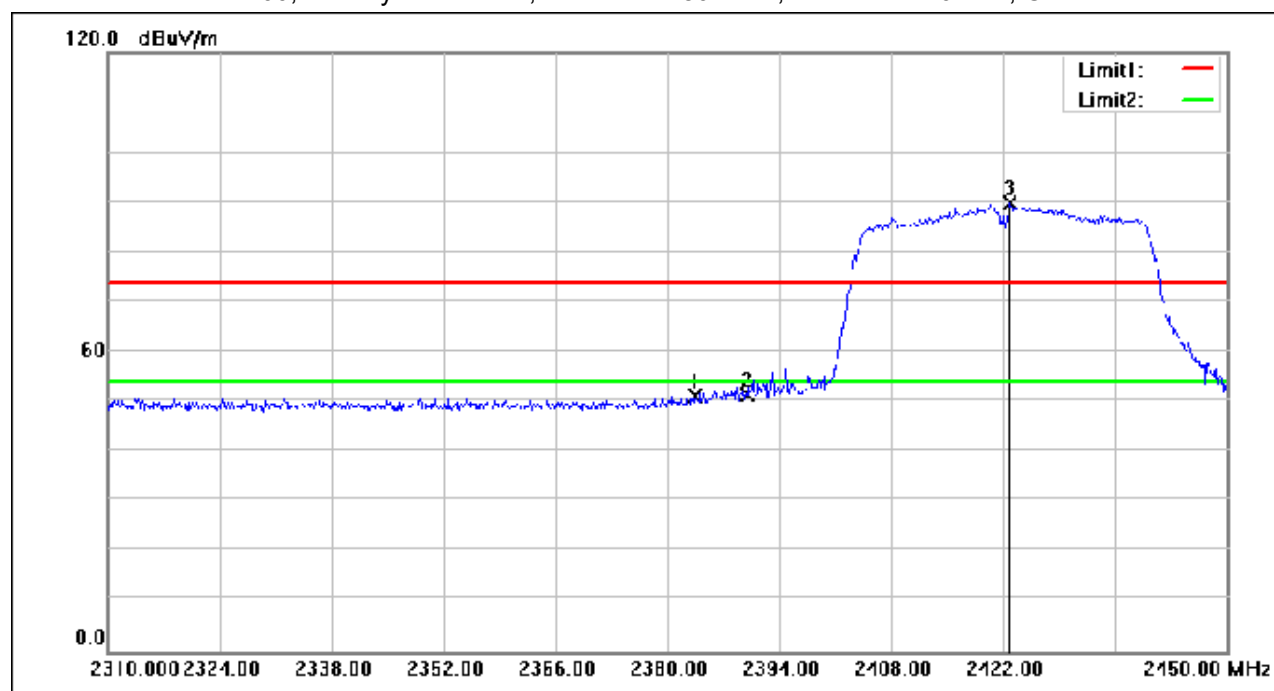
## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 27 of 122

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



| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|-------------------------|-----------------|----------------|-------------|--------|
| 1   | 2383.500        | 75.96          | -24.73                  | 51.23           | 74.00          | -22.77      | peak   |
| 2   | 2390.000        | 76.20          | -24.71                  | 51.49           | 74.00          | -22.51      | peak   |
| 3   | 2422.840        | 114.26         | -24.55                  | 89.71           | 74.00          | 15.71       | peak   |

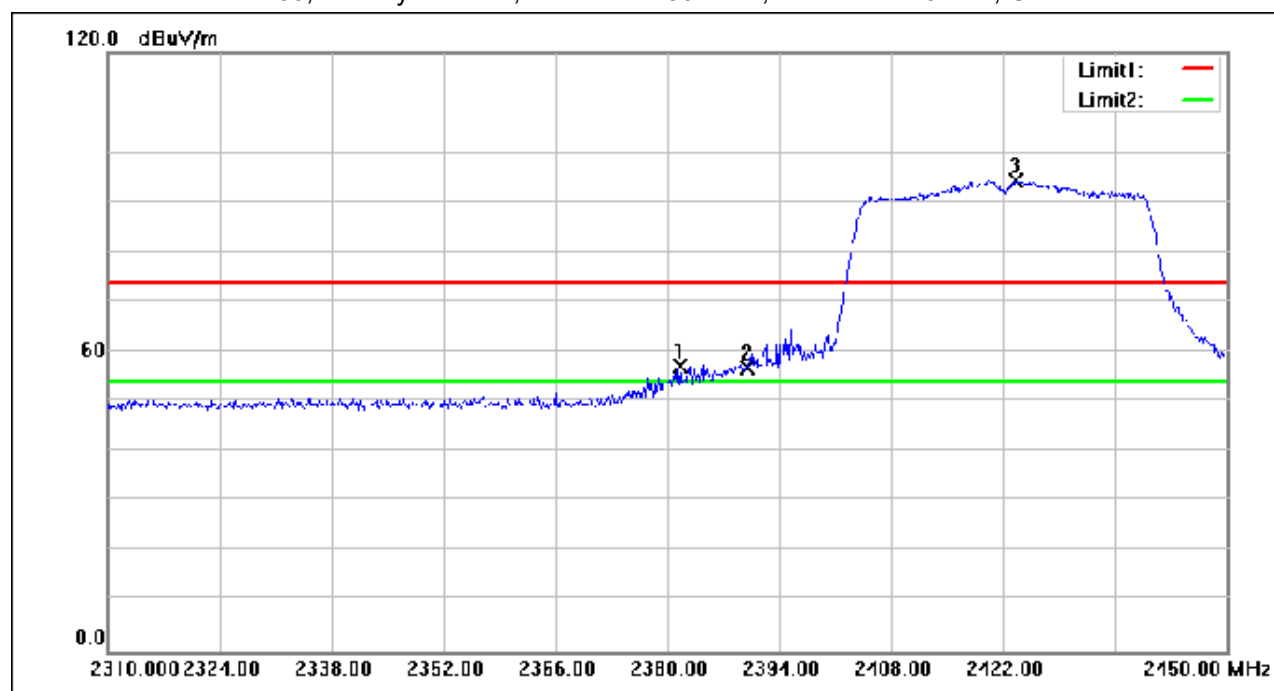
## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 28 of 122

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



| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|-------------------------|-----------------|----------------|-------------|--------|
| 1   | 2381.540        | 81.80          | -24.74                  | 57.06           | 74.00          | -16.94      | peak   |
| 2   | 2390.000        | 81.54          | -24.71                  | 56.83           | 74.00          | -17.17      | peak   |
| 3   | 2423.540        | 118.90         | -24.54                  | 94.36           | 74.00          | 20.36       | peak   |

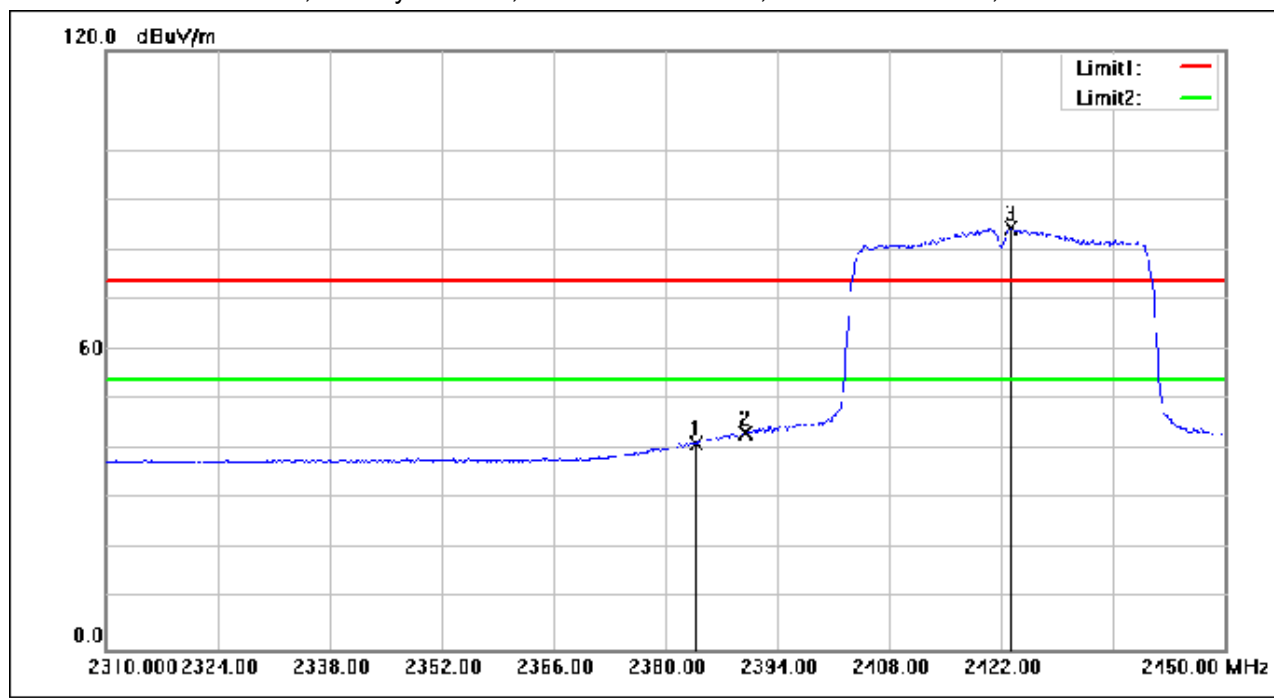
## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 29 of 122

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



| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|-------------------------|-----------------|----------------|-------------|--------|
| 1   | 2383.780        | 66.10          | -24.73                  | 41.37           | 54.00          | -12.63      | AVG    |
| 2   | 2390.000        | 68.20          | -24.71                  | 43.49           | 54.00          | -10.51      | AVG    |
| 3   | 2423.260        | 109.05         | -24.55                  | 84.50           | 54.00          | 30.50       | AVG    |

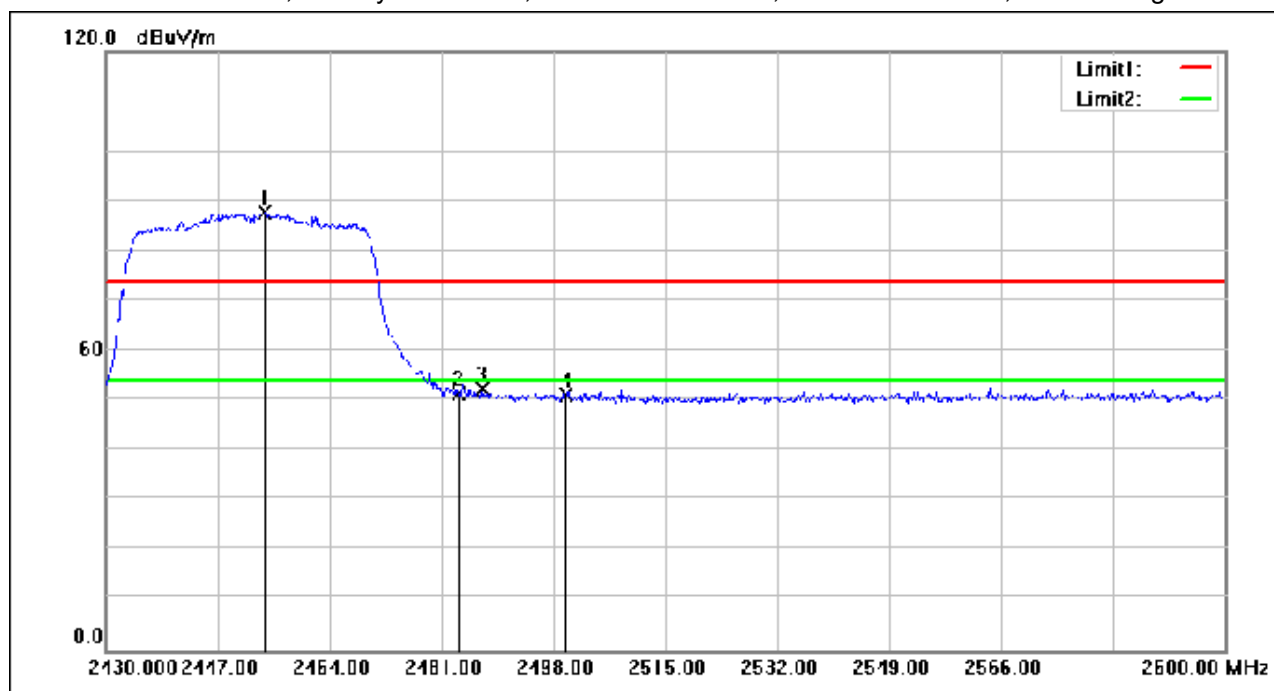
## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 30 of 122

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



| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|-------------------------|-----------------|----------------|-------------|--------|
| 1   | 2454.140        | 112.03         | -24.40                  | 87.63           | 74.00          | 13.63       | peak   |
| 2   | 2483.500        | 75.66          | -24.27                  | 51.39           | 74.00          | -22.61      | peak   |
| 3   | 2487.290        | 76.52          | -24.25                  | 52.27           | 74.00          | -21.73      | peak   |
| 4   | 2500.000        | 75.35          | -24.19                  | 51.16           | 74.00          | -22.84      | peak   |

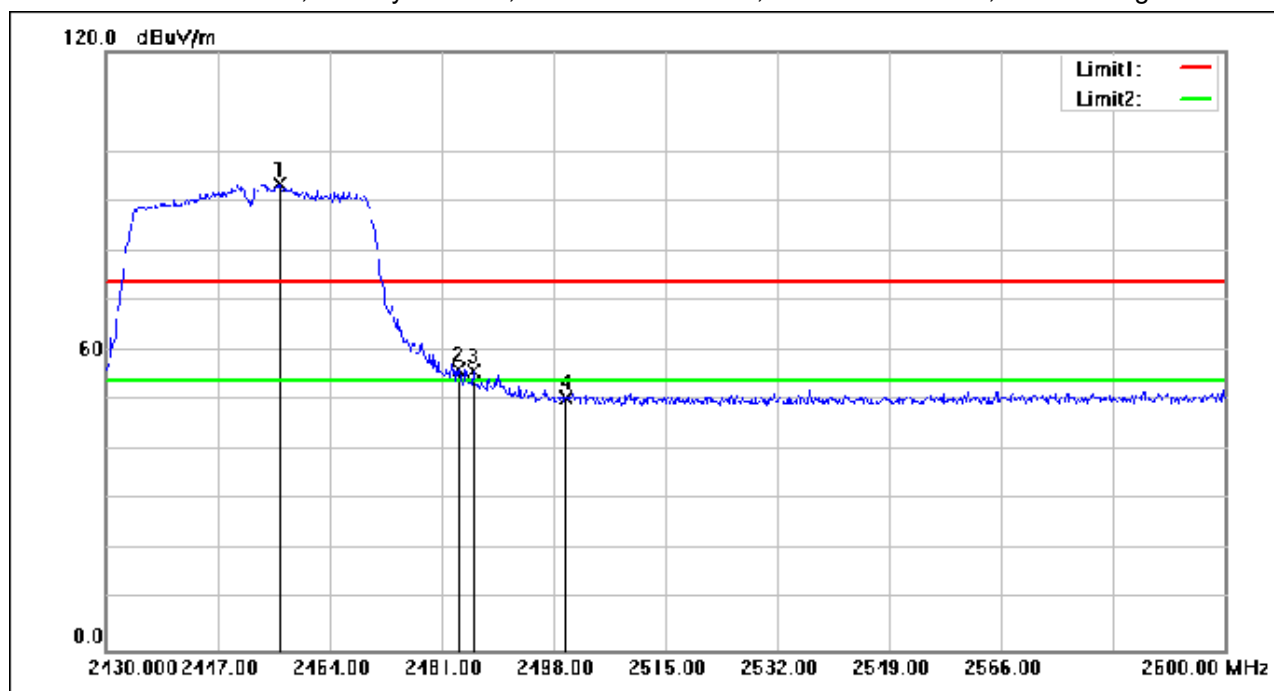
## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 31 of 122

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



| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|-------------------------|-----------------|----------------|-------------|--------|
| 1   | 2456.350        | 117.99         | -24.39                  | 93.60           | 74.00          | 19.60       | peak   |
| 2   | 2483.500        | 80.57          | -24.27                  | 56.30           | 74.00          | -17.70      | peak   |
| 3   | 2485.930        | 80.31          | -24.26                  | 56.05           | 74.00          | -17.95      | peak   |
| 4   | 2500.000        | 74.83          | -24.19                  | 50.64           | 74.00          | -23.36      | peak   |

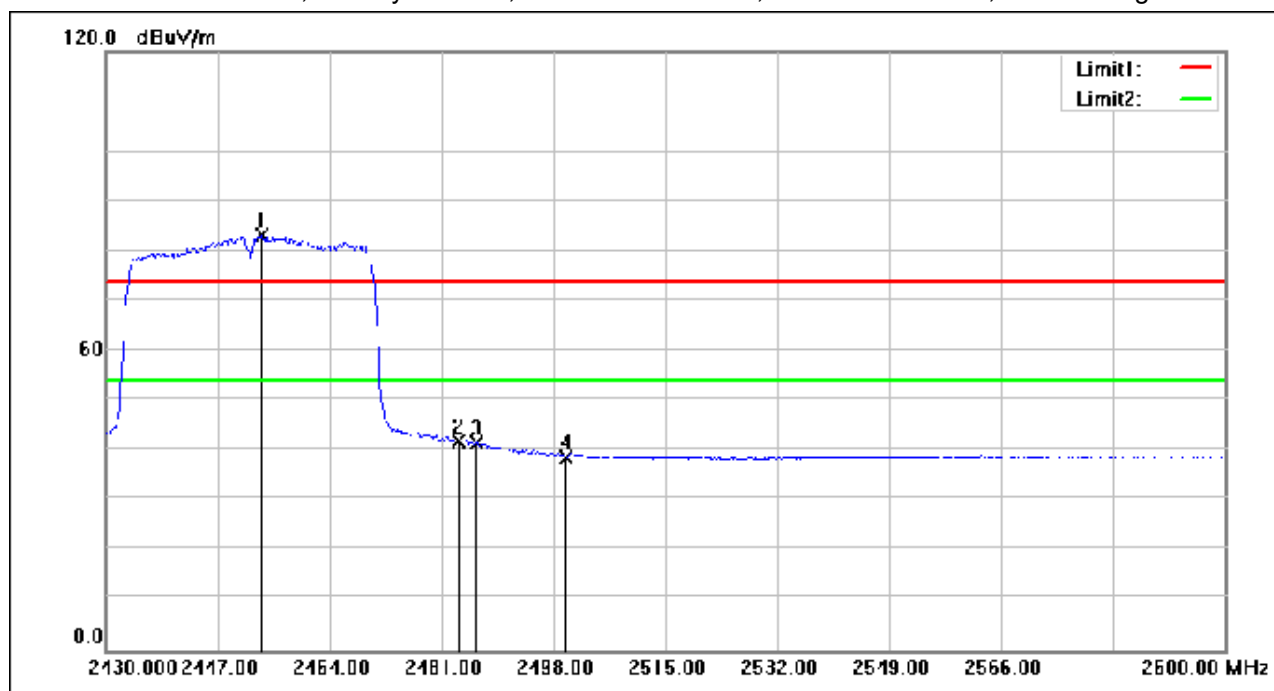
## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 32 of 122

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



| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|-------------------------|-----------------|----------------|-------------|--------|
| 1   | 2453.630        | 107.62         | -24.41                  | 83.21           | 54.00          | 29.21       | AVG    |
| 2   | 2483.500        | 66.24          | -24.27                  | 41.97           | 54.00          | -12.03      | AVG    |
| 3   | 2486.270        | 65.81          | -24.26                  | 41.55           | 54.00          | -12.45      | AVG    |
| 4   | 2500.000        | 62.86          | -24.19                  | 38.67           | 54.00          | -15.33      | AVG    |



## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 33 of 122

### 6.3 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

Measurement Distance: 3m

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                            |

#### 6.3.1 E.U.T. Operation

Operating Environment:

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

#### 6.3.2 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), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report. |

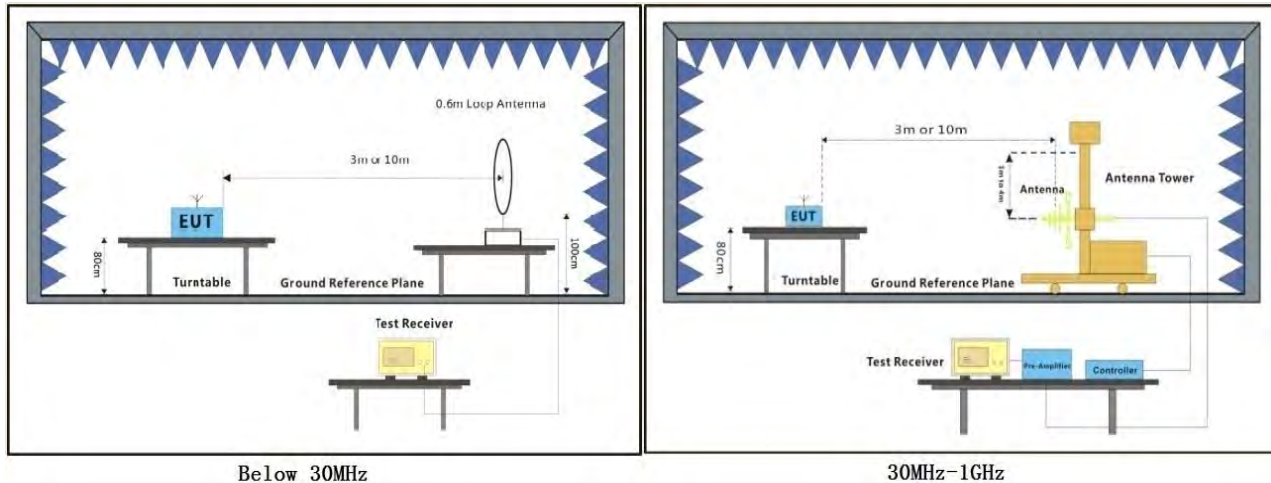
## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 34 of 122

### 6.3.3 Test Setup Diagram



### 6.3.4 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. Level= Read Level+ Cable Loss+ Antenna Factor- Preamp 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.

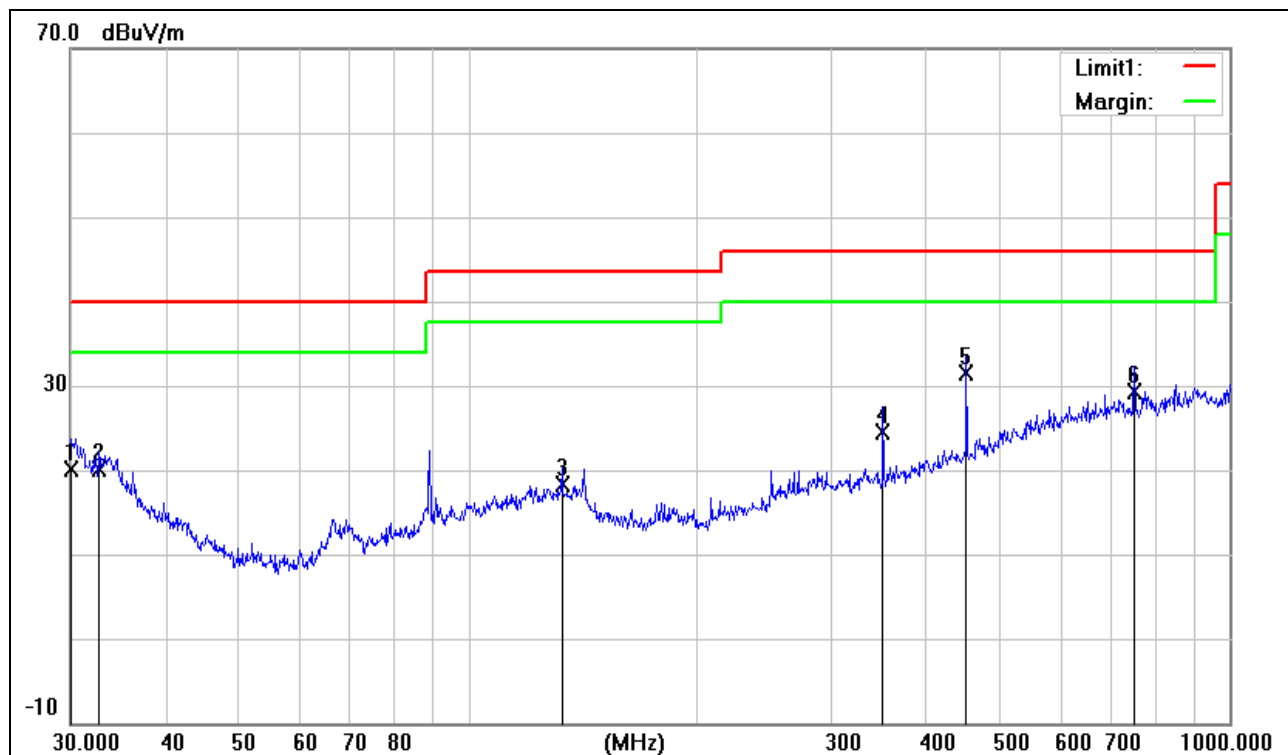
## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 35 of 122

Test Mode: 00; Polarity: Horizontal



| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>Factor(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Height<br>(cm) | Degree<br>(deg.) | Remark |
|-----|--------------------|-------------------|-------------------------|--------------------|-------------------|----------------|----------------|------------------|--------|
| 1   | 30.0000            | 0.74              | 19.42                   | 20.16              | 40.00             | -19.84         | 400            | 32               | QP     |
| 2   | 32.7486            | 2.66              | 17.49                   | 20.15              | 40.00             | -19.85         | 100            | 254              | QP     |
| 3   | 132.6850           | 3.95              | 14.31                   | 18.26              | 43.50             | -25.24         | 100            | 46               | QP     |
| 4   | 350.4768           | 7.92              | 16.64                   | 24.56              | 46.00             | -21.44         | 200            | 292              | QP     |
| 5   | 451.1350           | 12.31             | 19.21                   | 31.52              | 46.00             | -14.48         | 100            | 100              | QP     |
| 6   | 750.1083           | 5.07              | 24.29                   | 29.36              | 46.00             | -16.64         | 100            | 359              | QP     |

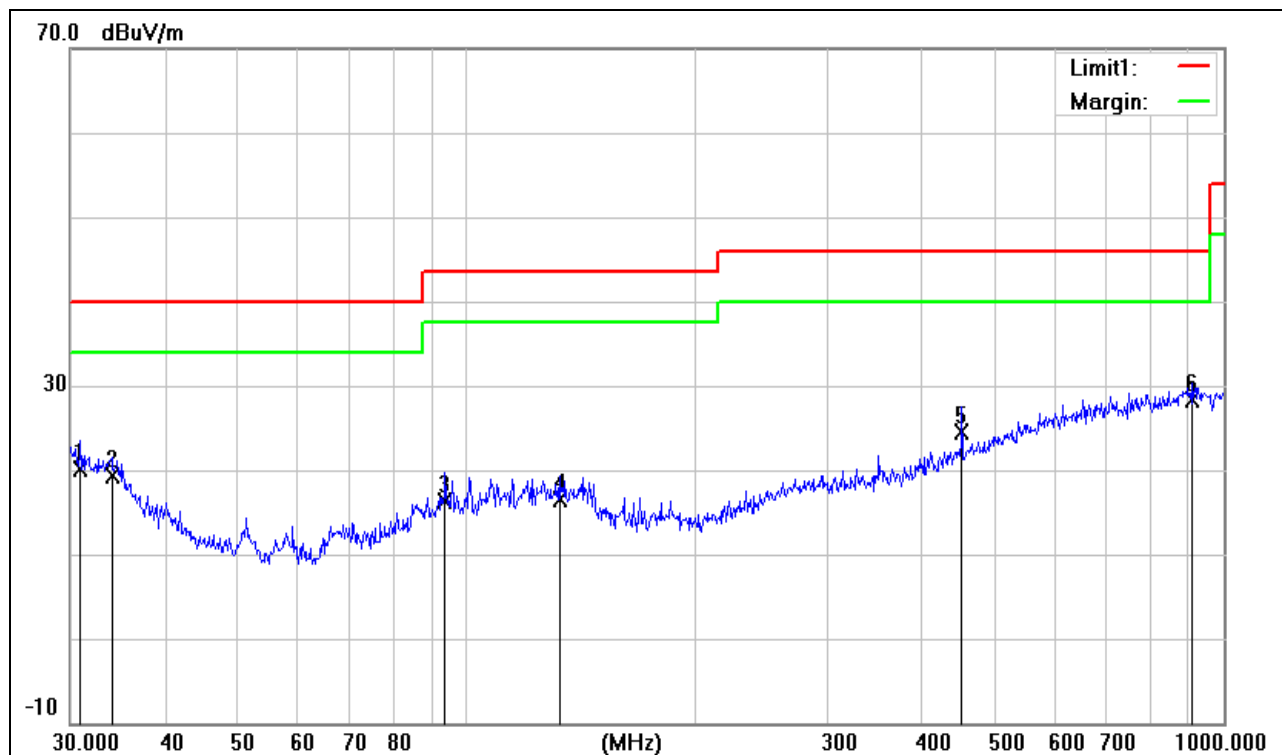
## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 36 of 122

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   | 30.9619         | 1.49           | 18.66                | 20.15           | 40.00          | -19.85      | 100         | 186           | QP     |
| 2   | 34.0365         | 2.64           | 16.72                | 19.36           | 40.00          | -20.64      | 300         | 320           | QP     |
| 3   | 93.7685         | 4.11           | 12.19                | 16.30           | 43.50          | -27.20      | 100         | 145           | QP     |
| 4   | 132.6850        | 2.21           | 14.31                | 16.52           | 43.50          | -26.98      | 200         | 265           | QP     |
| 5   | 451.1350        | 5.35           | 19.21                | 24.56           | 46.00          | -21.44      | 100         | 148           | QP     |
| 6   | 909.6667        | 2.65           | 25.71                | 28.36           | 46.00          | -17.64      | 100         | 303           | QP     |

### 6.4 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

Measurement Distance: 3m

Limit:

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

#### 6.4.1 E.U.T. Operation

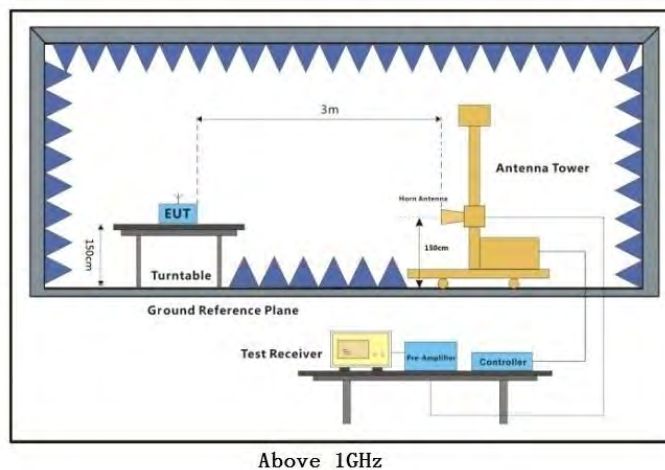
Operating Environment:

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

#### 6.4.2 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), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report. |

#### 6.4.3 Test Setup Diagram



**6.4.4 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.

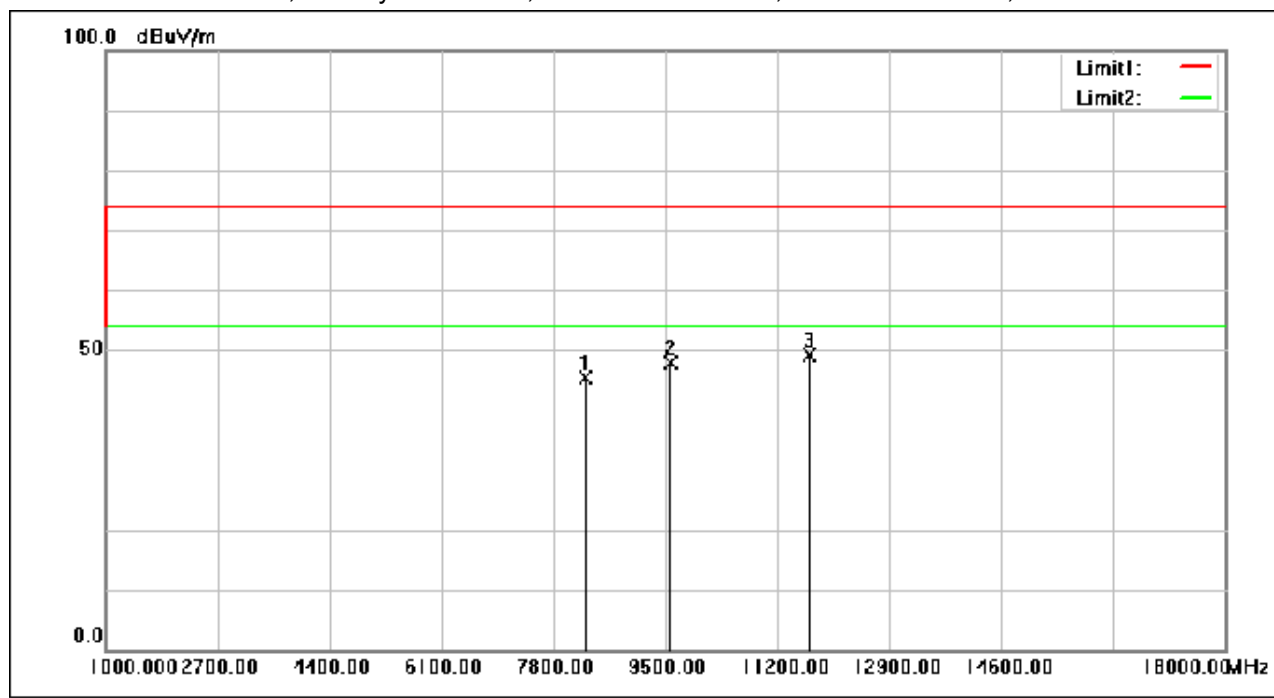
## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 39 of 122

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



| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|-------------------------|-----------------|----------------|-------------|--------|
| 1   | 8277.360        | 55.41          | -10.12                  | 45.29           | 74.00          | -28.71      | peak   |
| 2   | 9571.400        | 55.64          | -7.82                   | 47.82           | 74.00          | -26.18      | peak   |
| 3   | 11699.120       | 55.34          | -6.20                   | 49.14           | 74.00          | -24.86      | peak   |

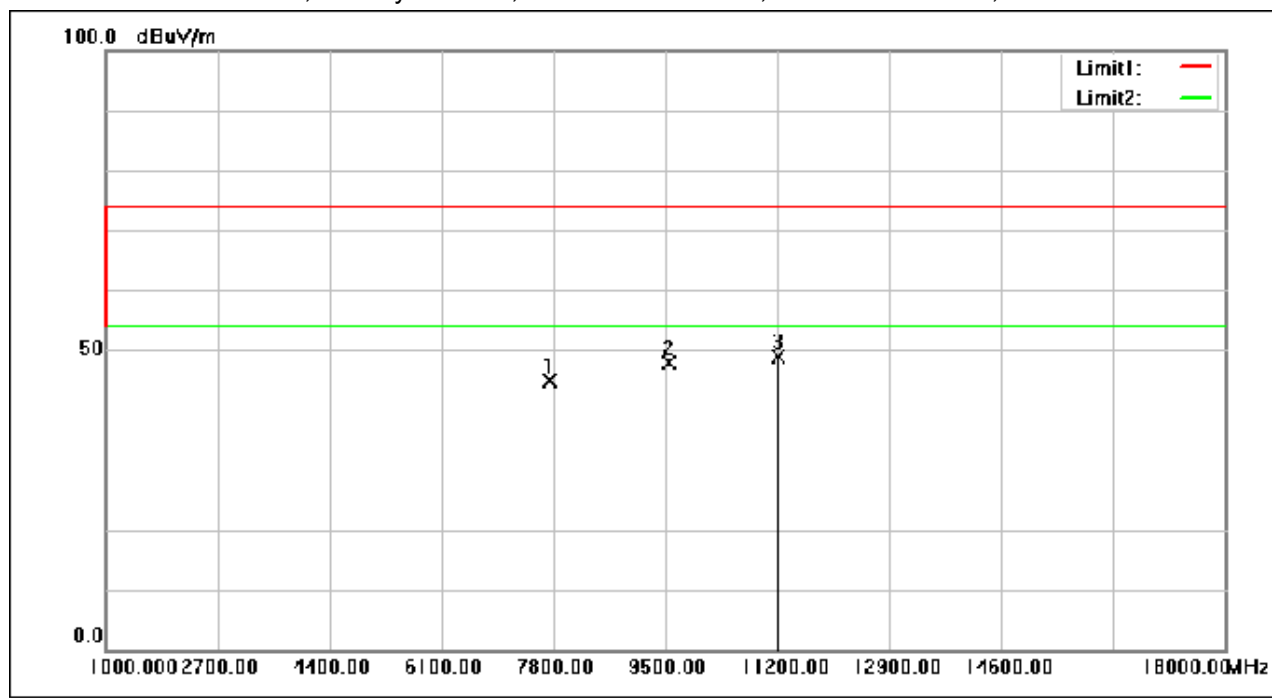
## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 40 of 122

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



| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|-------------------------|-----------------|----------------|-------------|--------|
| 1   | 7740.160        | 55.79          | -10.95                  | 44.84           | 74.00          | -29.16      | peak   |
| 2   | 9556.440        | 55.77          | -7.85                   | 47.92           | 74.00          | -26.08      | peak   |
| 3   | 11231.280       | 55.35          | -6.58                   | 48.77           | 74.00          | -25.23      | peak   |

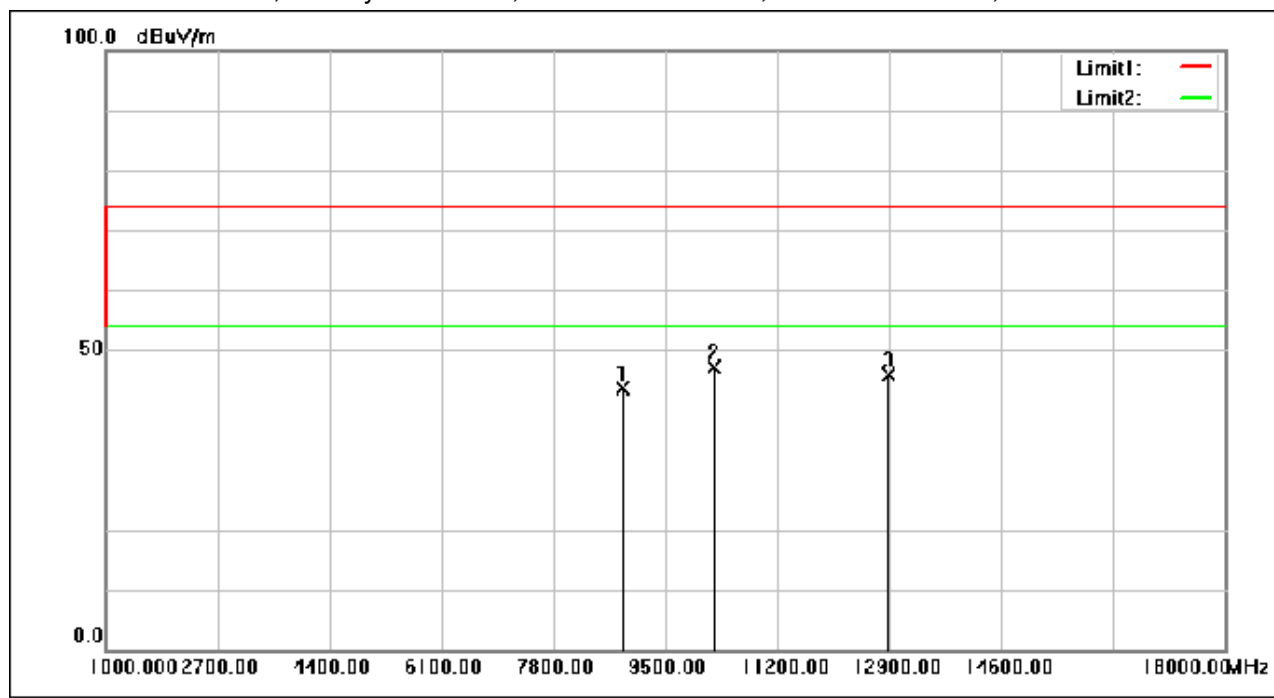
## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 41 of 122

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



| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|-------------------------|-----------------|----------------|-------------|--------|
| 1   | 8860.800        | 52.90          | -9.16                   | 43.74           | 74.00          | -30.26      | peak   |
| 2   | 10239.840       | 54.44          | -7.19                   | 47.25           | 74.00          | -26.75      | peak   |
| 3   | 12893.200       | 52.17          | -6.29                   | 45.88           | 74.00          | -28.12      | peak   |

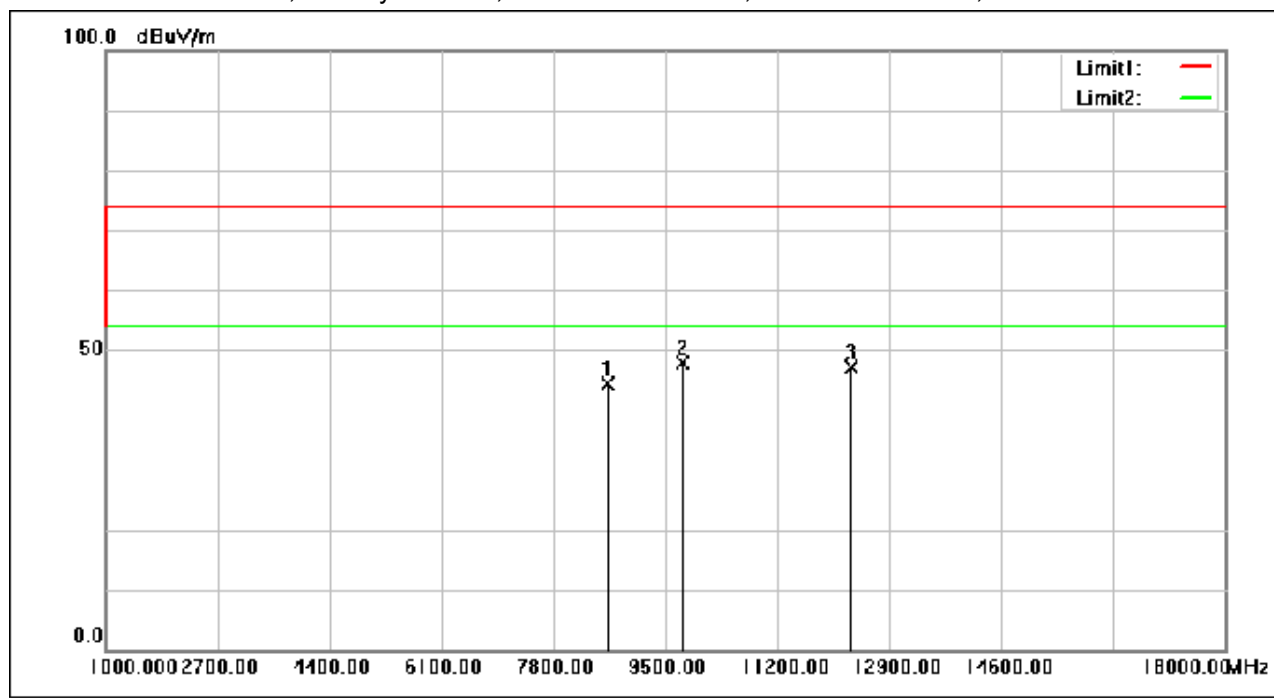
## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 42 of 122

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



| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|-------------------------|-----------------|----------------|-------------|--------|
| 1   | 8635.720        | 53.79          | -9.53                   | 44.26           | 74.00          | -29.74      | peak   |
| 2   | 9767.920        | 55.24          | -7.45                   | 47.79           | 74.00          | -26.21      | peak   |
| 3   | 12334.240       | 53.13          | -6.04                   | 47.09           | 74.00          | -26.91      | peak   |

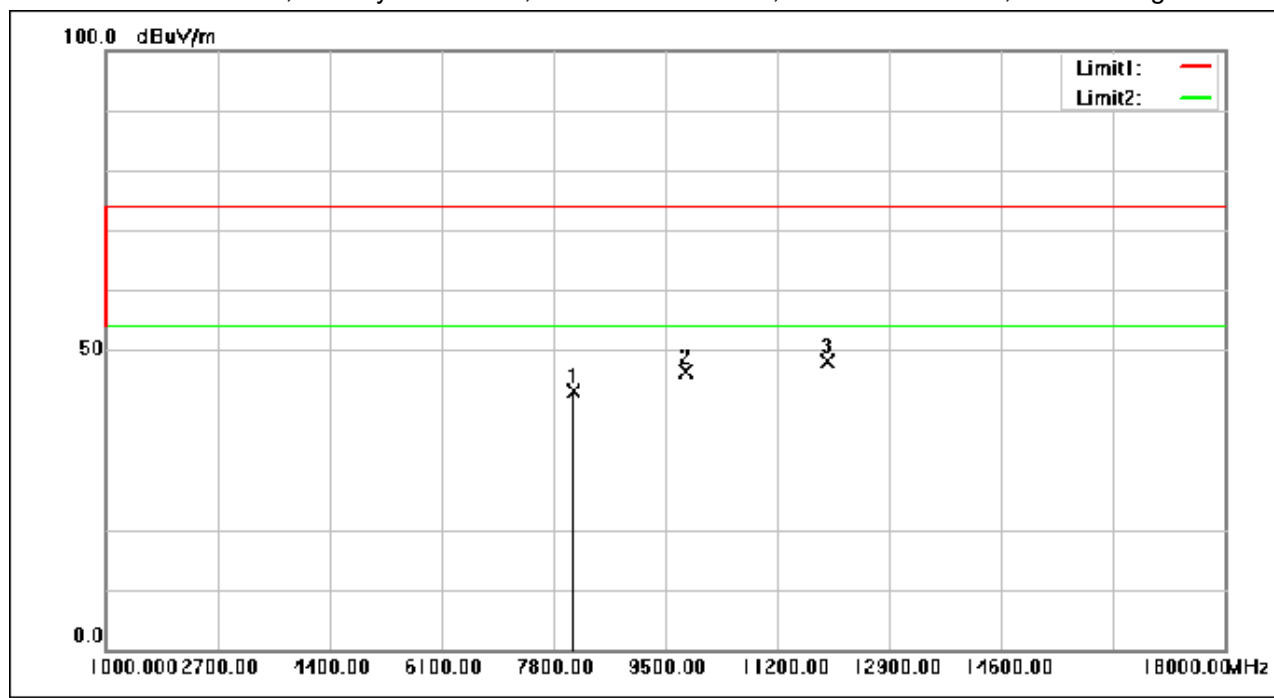
## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 43 of 122

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



| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|-------------------------|-----------------|----------------|-------------|--------|
| 1   | 8118.240        | 53.41          | -10.38                  | 43.03           | 74.00          | -30.97      | peak   |
| 2   | 9812.120        | 53.74          | -7.36                   | 46.38           | 74.00          | -27.62      | peak   |
| 3   | 11970.440       | 54.04          | -5.94                   | 48.10           | 74.00          | -25.90      | peak   |

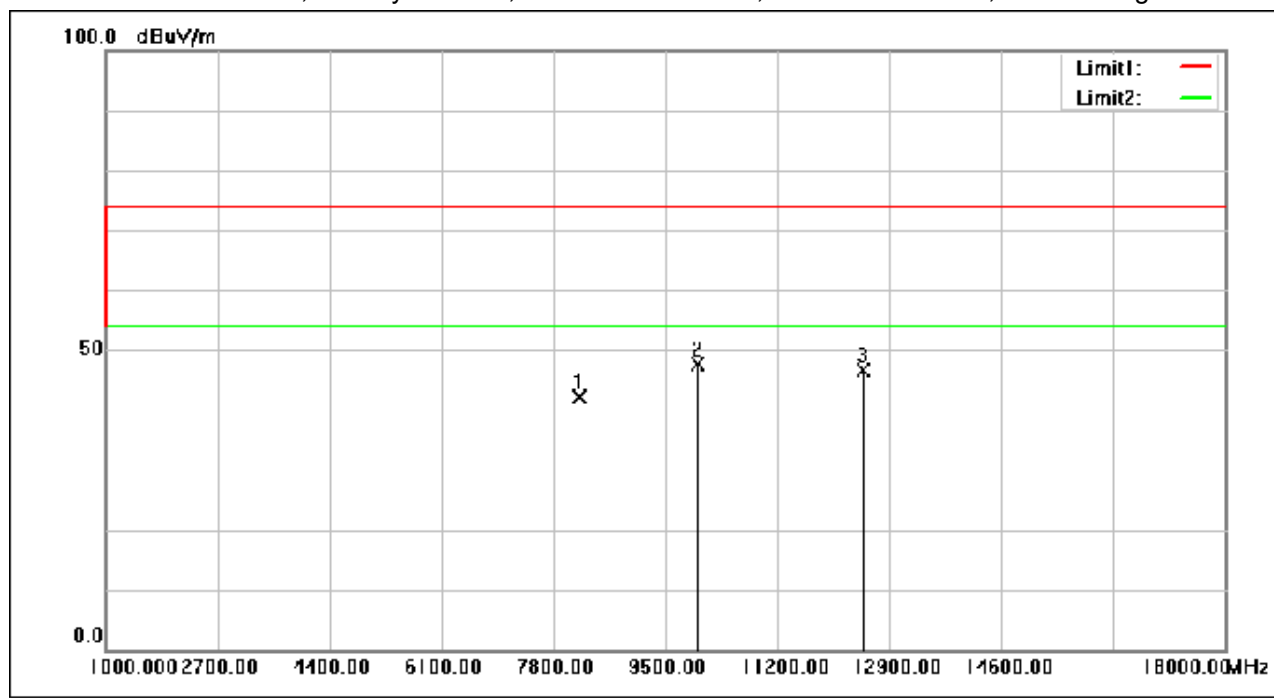
## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 44 of 122

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



| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|-------------------------|-----------------|----------------|-------------|--------|
| 1   | 8201.880        | 52.33          | -10.25                  | 42.08           | 74.00          | -31.92      | peak   |
| 2   | 9993.680        | 54.96          | -7.33                   | 47.63           | 74.00          | -26.37      | peak   |
| 3   | 12515.120       | 52.84          | -6.12                   | 46.72           | 74.00          | -27.28      | peak   |

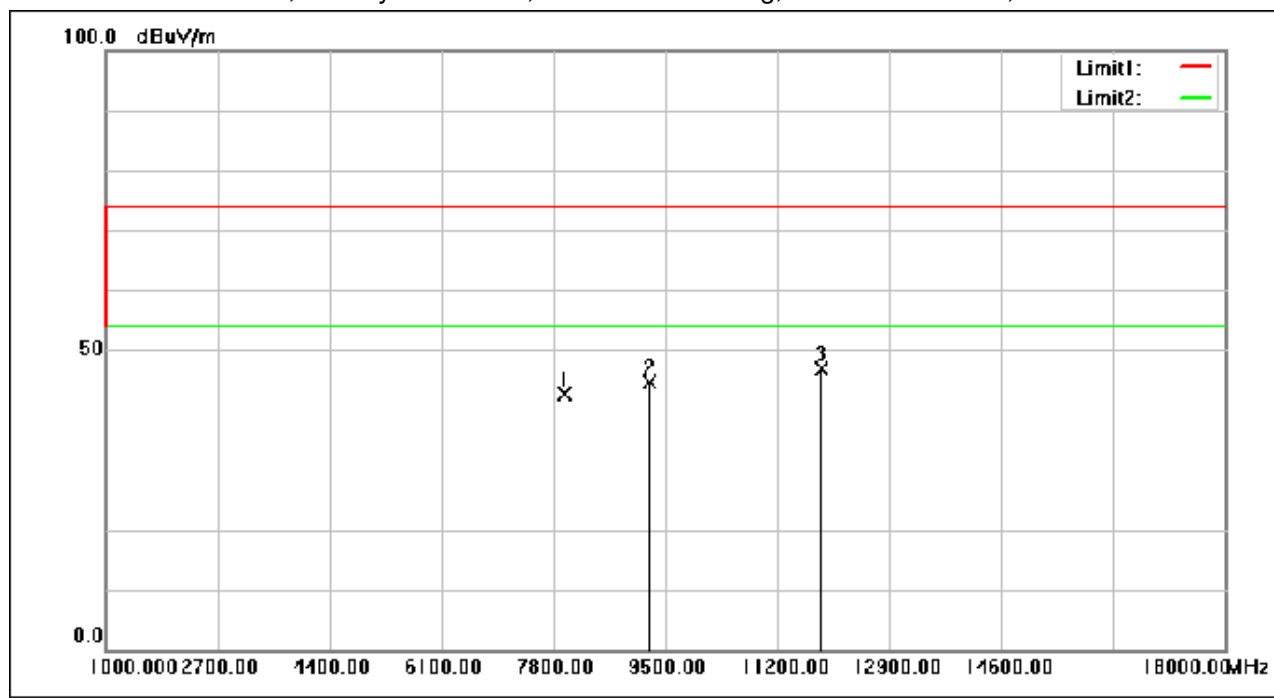
## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 45 of 122

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



| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|-------------------------|-----------------|----------------|-------------|--------|
| 1   | 7981.560        | 53.17          | -10.63                  | 42.54           | 74.00          | -31.46      | peak   |
| 2   | 9262.000        | 53.05          | -8.41                   | 44.64           | 74.00          | -29.36      | peak   |
| 3   | 11871.160       | 53.04          | -6.06                   | 46.98           | 74.00          | -27.02      | peak   |

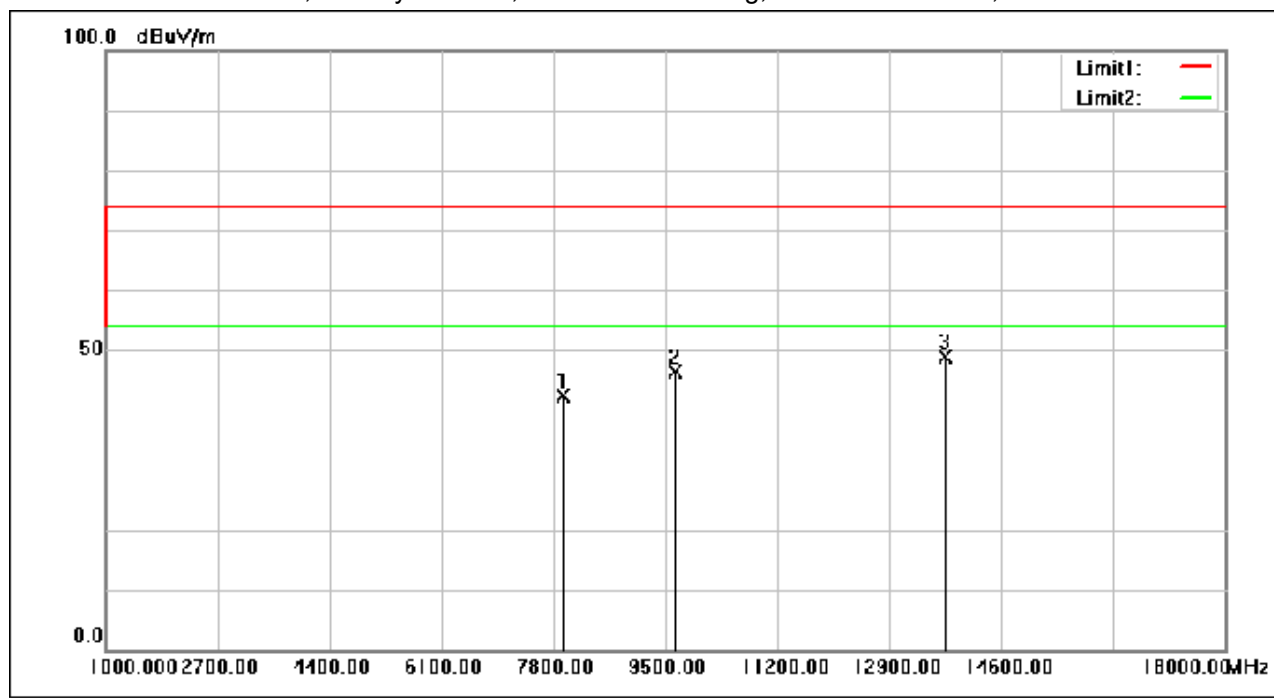
## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 46 of 122

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



| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|-------------------------|-----------------|----------------|-------------|--------|
| 1   | 7967.280        | 53.09          | -10.64                  | 42.45           | 74.00          | -31.55      | peak   |
| 2   | 9654.360        | 54.08          | -7.67                   | 46.41           | 74.00          | -27.59      | peak   |
| 3   | 13758.160       | 55.14          | -6.38                   | 48.76           | 74.00          | -25.24      | peak   |

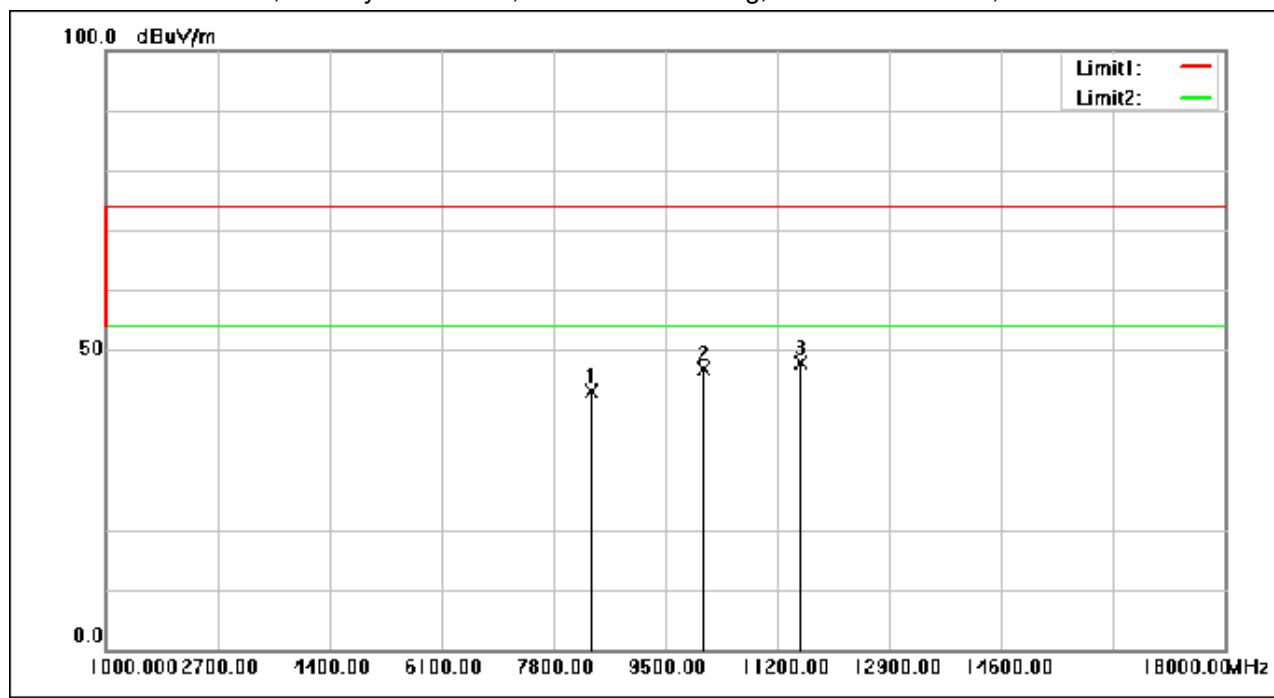
## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 47 of 122

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



| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|-------------------------|-----------------|----------------|-------------|--------|
| 1   | 8389.560        | 53.04          | -9.93                   | 43.11           | 74.00          | -30.89      | peak   |
| 2   | 10084.120       | 54.09          | -7.28                   | 46.81           | 74.00          | -27.19      | peak   |
| 3   | 11570.600       | 54.22          | -6.30                   | 47.92           | 74.00          | -26.08      | peak   |

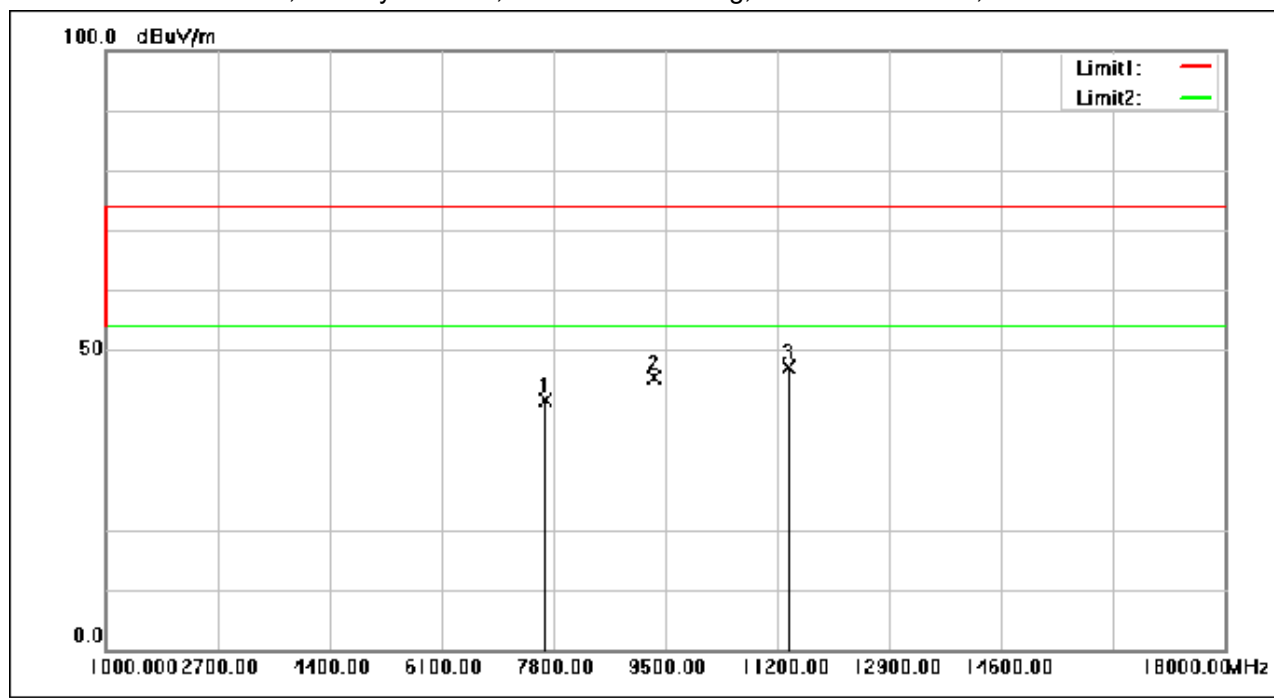
## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 48 of 122

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



| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|-------------------------|-----------------|----------------|-------------|--------|
| 1   | 7695.280        | 52.64          | -11.00                  | 41.64           | 74.00          | -32.36      | peak   |
| 2   | 9339.520        | 53.51          | -8.25                   | 45.26           | 74.00          | -28.74      | peak   |
| 3   | 11385.640       | 53.68          | -6.45                   | 47.23           | 74.00          | -26.77      | peak   |

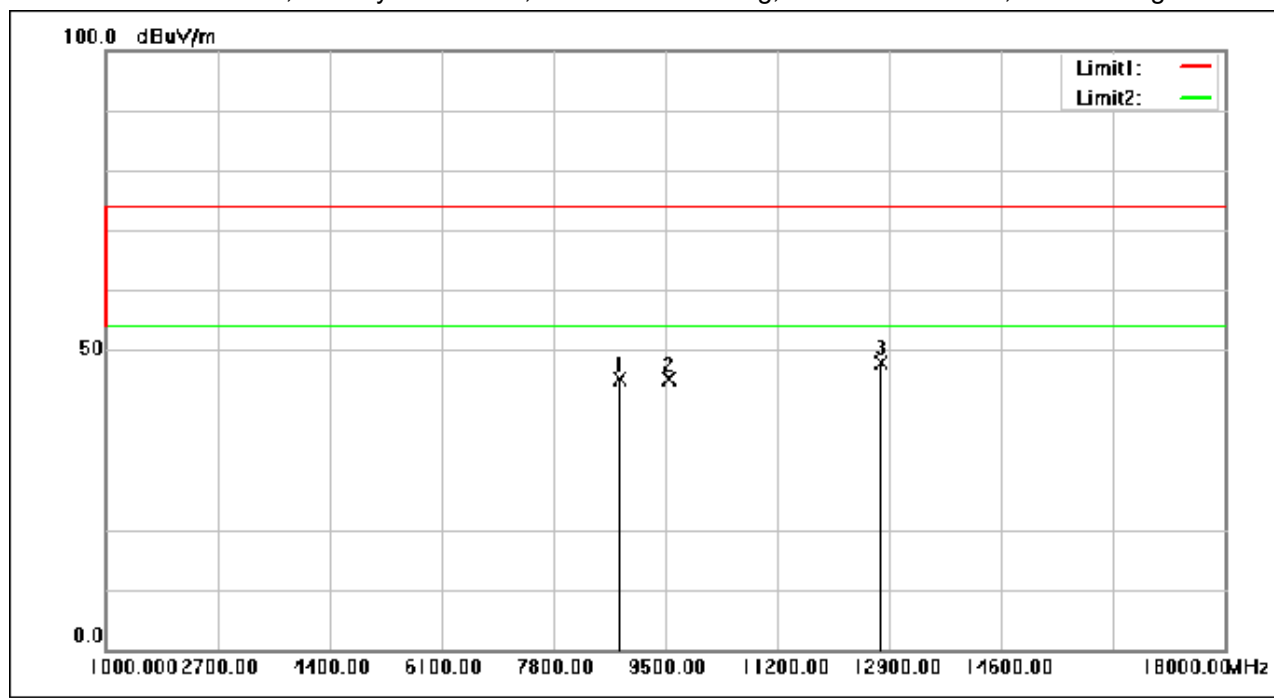
## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 49 of 122

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



| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|-------------------------|-----------------|----------------|-------------|--------|
| 1   | 8809.120        | 54.38          | -9.25                   | 45.13           | 74.00          | -28.87      | peak   |
| 2   | 9558.480        | 52.99          | -7.85                   | 45.14           | 74.00          | -28.86      | peak   |
| 3   | 12783.720       | 54.16          | -6.24                   | 47.92           | 74.00          | -26.08      | peak   |

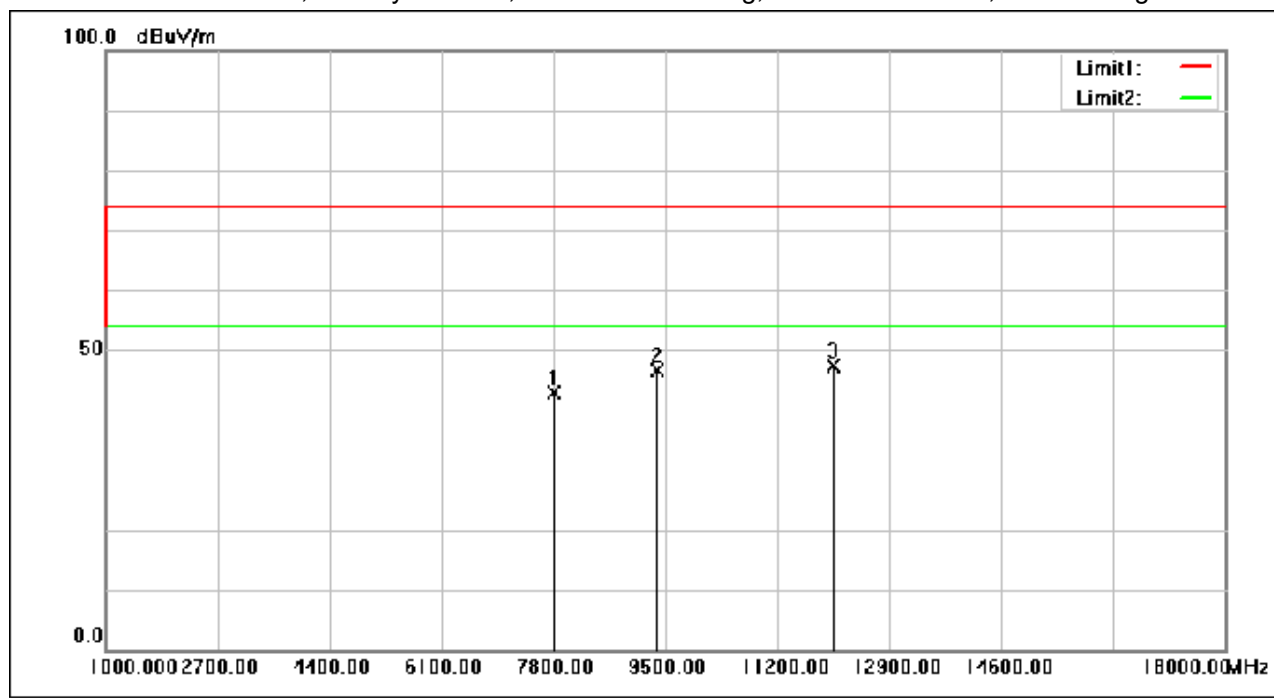
## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 50 of 122

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



| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|-------------------------|-----------------|----------------|-------------|--------|
| 1   | 7824.480        | 53.69          | -10.83                  | 42.86           | 74.00          | -31.14      | peak   |
| 2   | 9389.840        | 54.71          | -8.16                   | 46.55           | 74.00          | -27.45      | peak   |
| 3   | 12064.960       | 53.32          | -5.92                   | 47.40           | 74.00          | -26.60      | peak   |

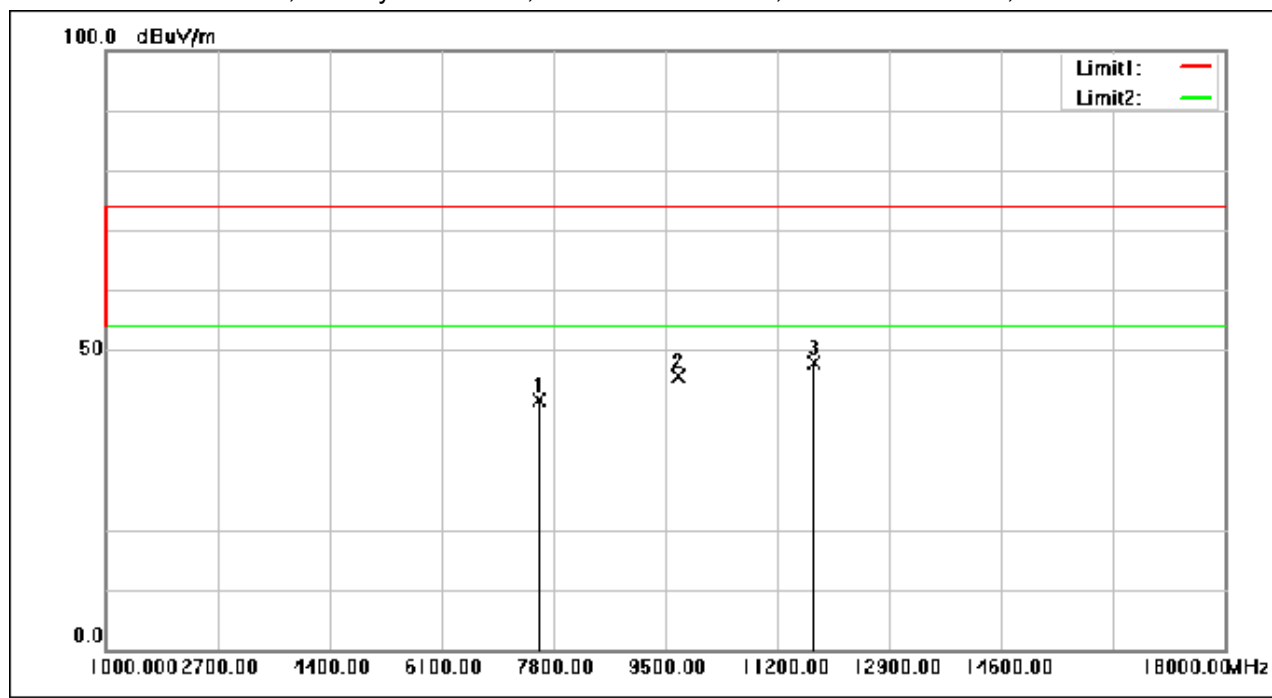
## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 51 of 122

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



| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|-------------------------|-----------------|----------------|-------------|--------|
| 1   | 7589.880        | 52.79          | -11.14                  | 41.65           | 74.00          | -32.35      | peak   |
| 2   | 9702.640        | 53.11          | -7.57                   | 45.54           | 74.00          | -28.46      | peak   |
| 3   | 11765.760       | 53.95          | -6.14                   | 47.81           | 74.00          | -26.19      | peak   |

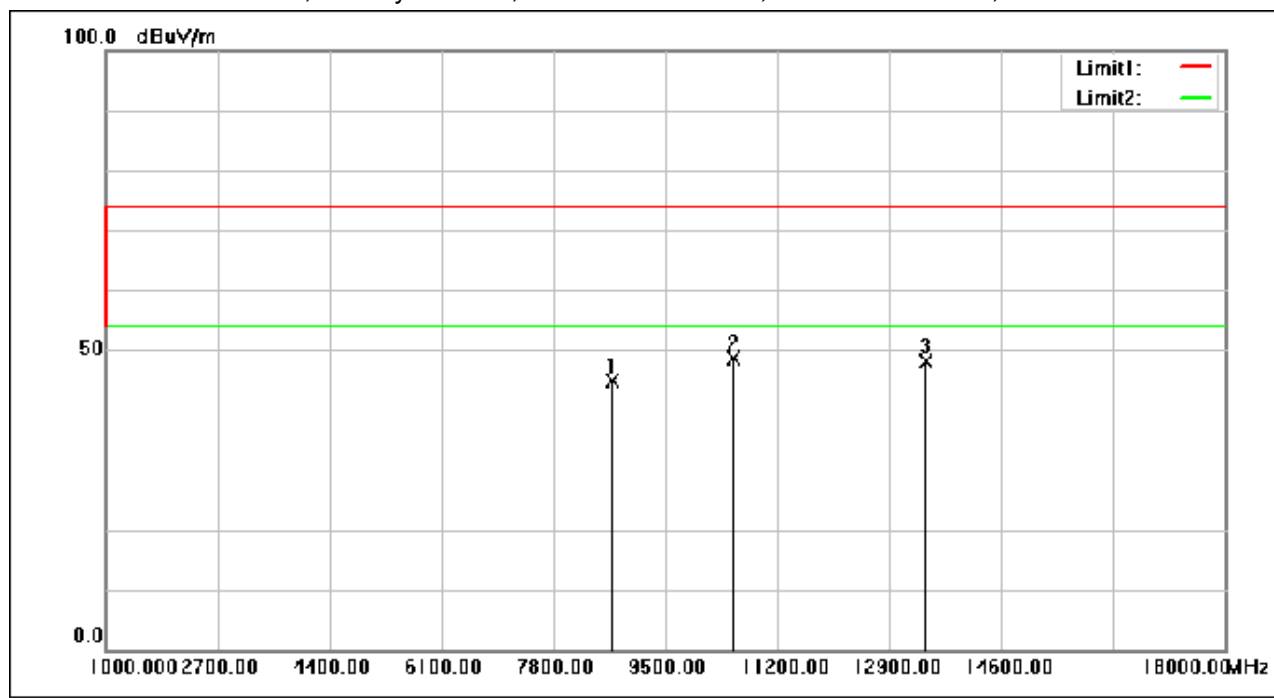
## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 52 of 122

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



| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|-------------------------|-----------------|----------------|-------------|--------|
| 1   | 8713.920        | 54.35          | -9.40                   | 44.95           | 74.00          | -29.05      | peak   |
| 2   | 10541.760       | 55.57          | -7.01                   | 48.56           | 74.00          | -25.44      | peak   |
| 3   | 13465.760       | 54.45          | -6.33                   | 48.12           | 74.00          | -25.88      | peak   |

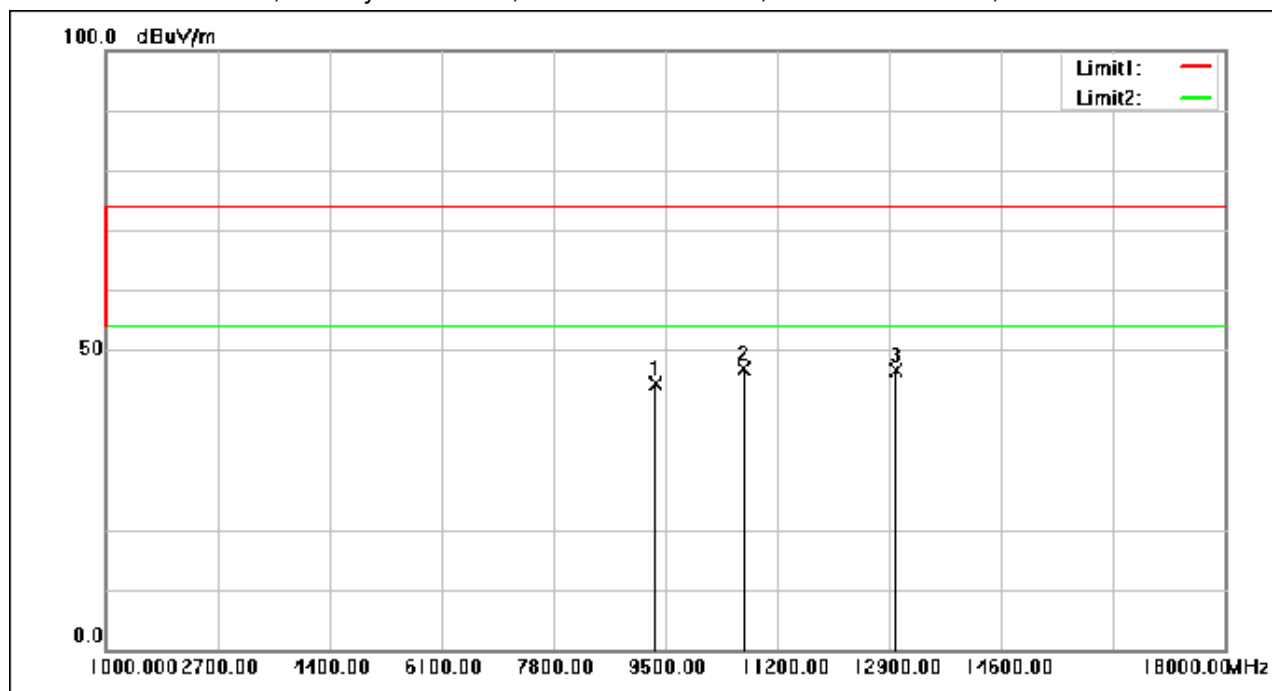
## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 53 of 122

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



| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|-------------------------|-----------------|----------------|-------------|--------|
| 1   | 9359.240        | 52.56          | -8.22                   | 44.34           | 74.00          | -29.66      | peak   |
| 2   | 10700.880       | 53.73          | -6.92                   | 46.81           | 74.00          | -27.19      | peak   |
| 3   | 13009.480       | 52.90          | -6.33                   | 46.57           | 74.00          | -27.43      | peak   |

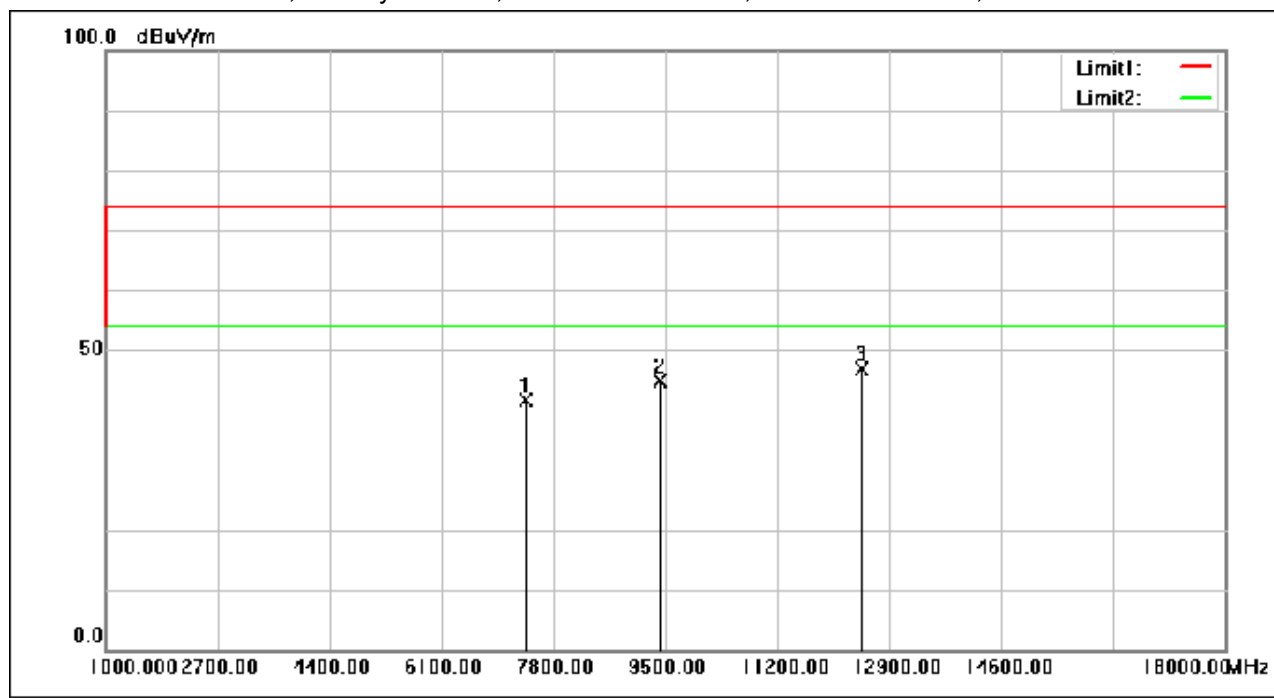
## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 54 of 122

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



| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|-------------------------|-----------------|----------------|-------------|--------|
| 1   | 7391.320        | 53.06          | -11.40                  | 41.66           | 74.00          | -32.34      | peak   |
| 2   | 9415.000        | 52.93          | -8.11                   | 44.82           | 74.00          | -29.18      | peak   |
| 3   | 12487.920       | 53.08          | -6.11                   | 46.97           | 74.00          | -27.03      | peak   |

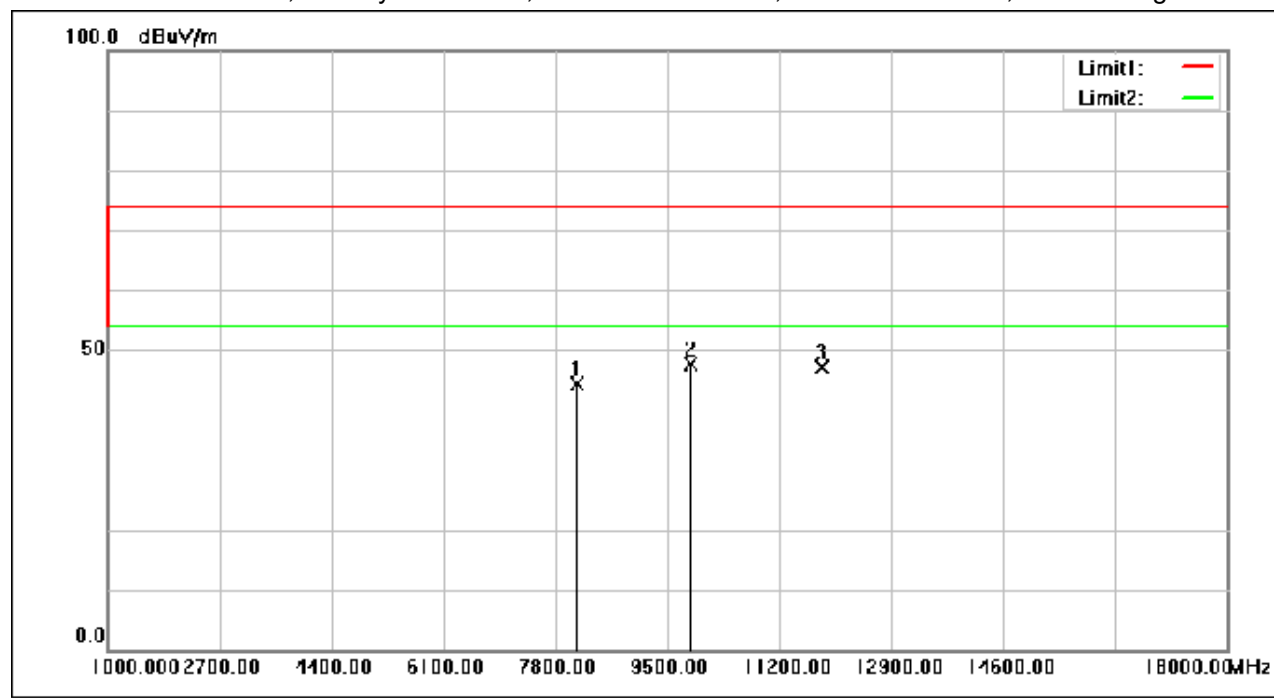
## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 55 of 122

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



| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|-------------------------|-----------------|----------------|-------------|--------|
| 1   | 8126.400        | 54.69          | -10.37                  | 44.32           | 74.00          | -29.68      | peak   |
| 2   | 9858.360        | 55.00          | -7.30                   | 47.70           | 74.00          | -26.30      | peak   |
| 3   | 11852.120       | 53.14          | -6.08                   | 47.06           | 74.00          | -26.94      | peak   |

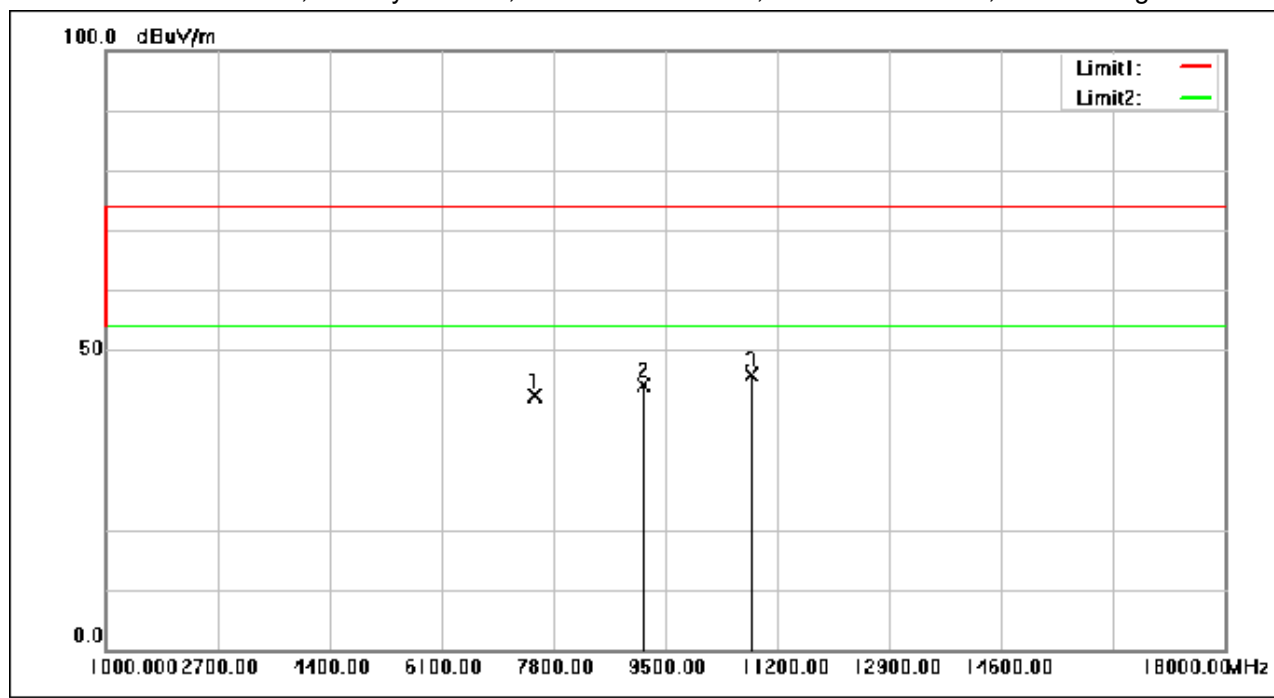
## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 56 of 122

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



| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|-------------------------|-----------------|----------------|-------------|--------|
| 1   | 7526.640        | 53.65          | -11.23                  | 42.42           | 74.00          | -31.58      | peak   |
| 2   | 9192.640        | 52.79          | -8.54                   | 44.25           | 74.00          | -29.75      | peak   |
| 3   | 10824.640       | 52.69          | -6.85                   | 45.84           | 74.00          | -28.16      | peak   |

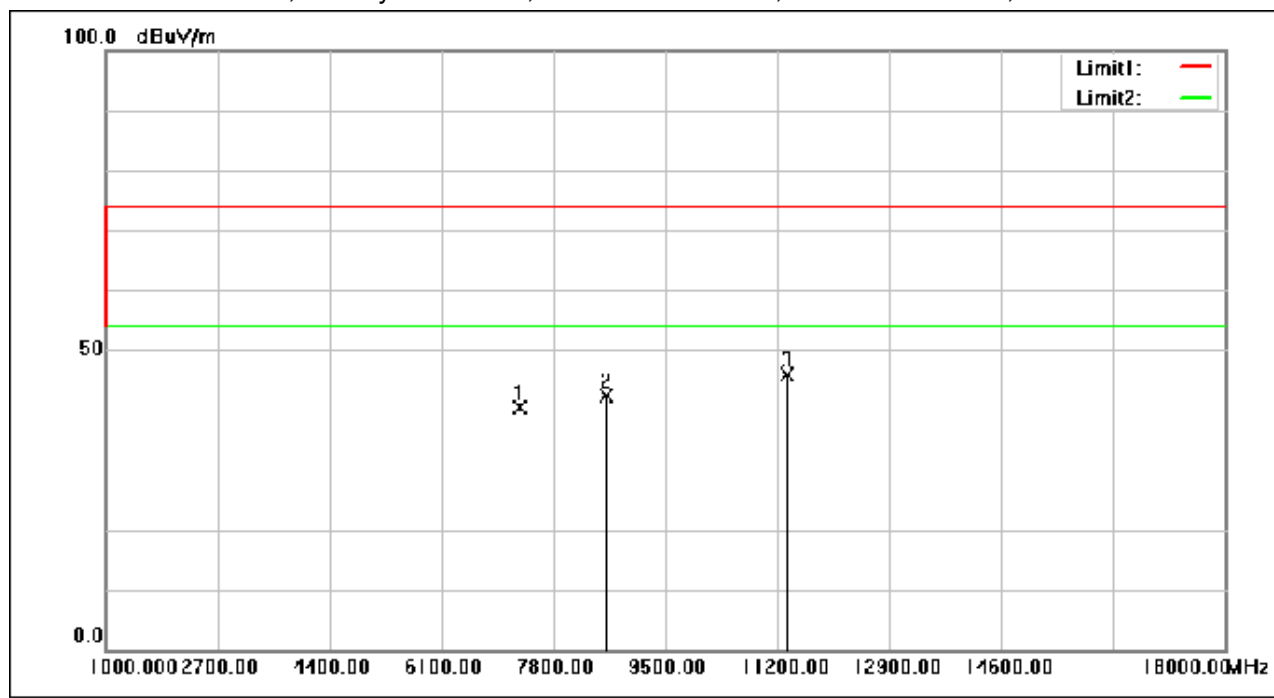
## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 57 of 122

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



| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|-------------------------|-----------------|----------------|-------------|--------|
| 1   | 7296.800        | 51.86          | -11.44                  | 40.42           | 74.00          | -33.58      | peak   |
| 2   | 8612.600        | 51.88          | -9.57                   | 42.31           | 74.00          | -31.69      | peak   |
| 3   | 11353.000       | 52.29          | -6.48                   | 45.81           | 74.00          | -28.19      | peak   |

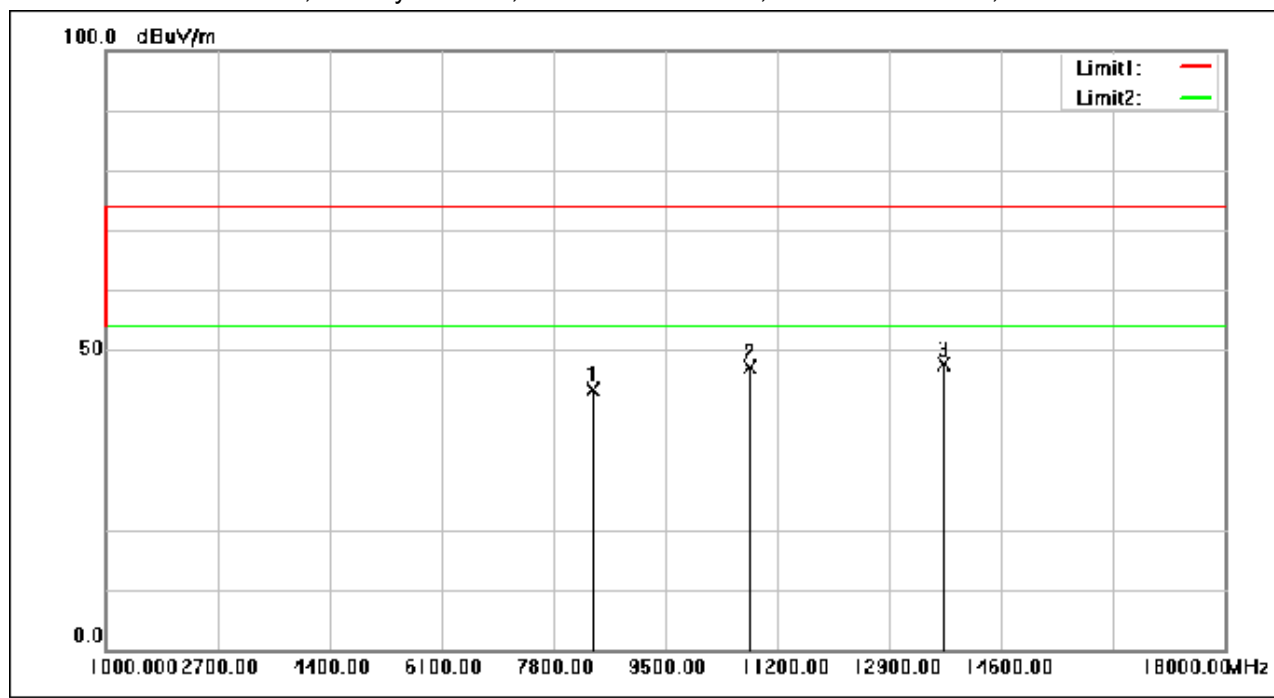
## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 58 of 122

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



| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|-------------------------|-----------------|----------------|-------------|--------|
| 1   | 8409.960        | 53.17          | -9.91                   | 43.26           | 74.00          | -30.74      | peak   |
| 2   | 10775.680       | 54.12          | -6.88                   | 47.24           | 74.00          | -26.76      | peak   |
| 3   | 13733.000       | 53.95          | -6.38                   | 47.57           | 74.00          | -26.43      | peak   |

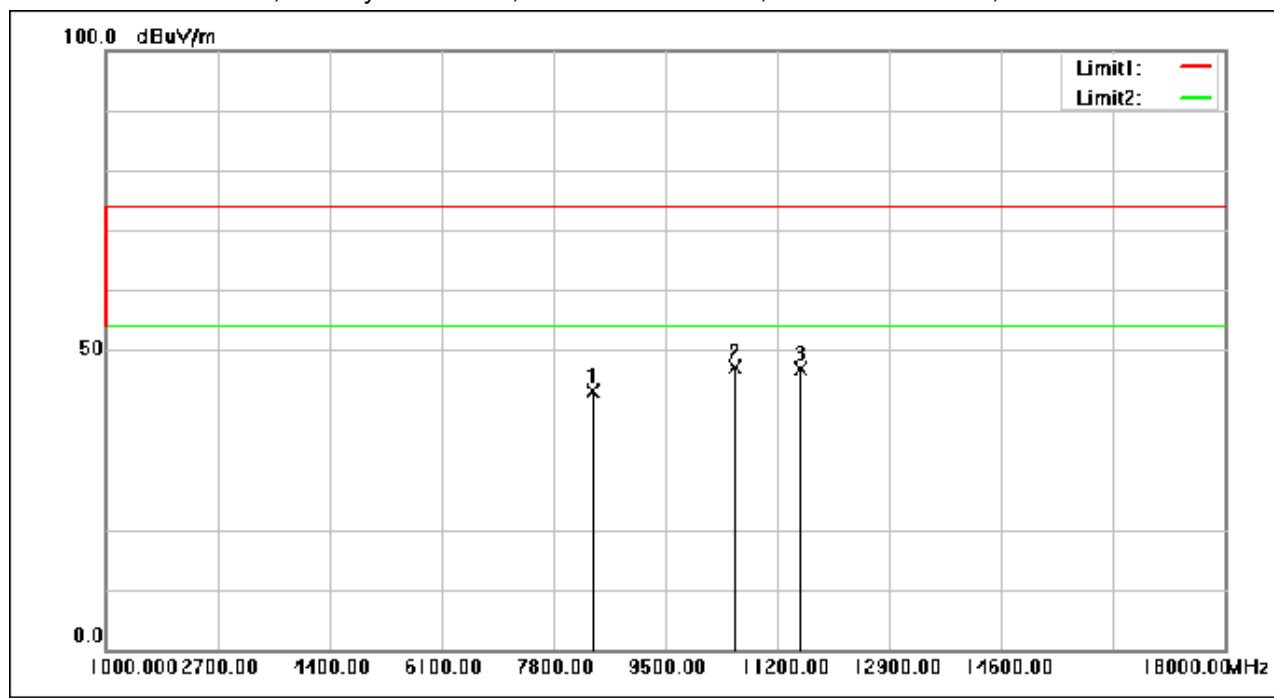
## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 59 of 122

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



| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|-------------------------|-----------------|----------------|-------------|--------|
| 1   | 8403.840        | 52.97          | -9.91                   | 43.06           | 74.00          | -30.94      | peak   |
| 2   | 10557.400       | 54.14          | -7.01                   | 47.13           | 74.00          | -26.87      | peak   |
| 3   | 11562.440       | 53.15          | -6.31                   | 46.84           | 74.00          | -27.16      | peak   |

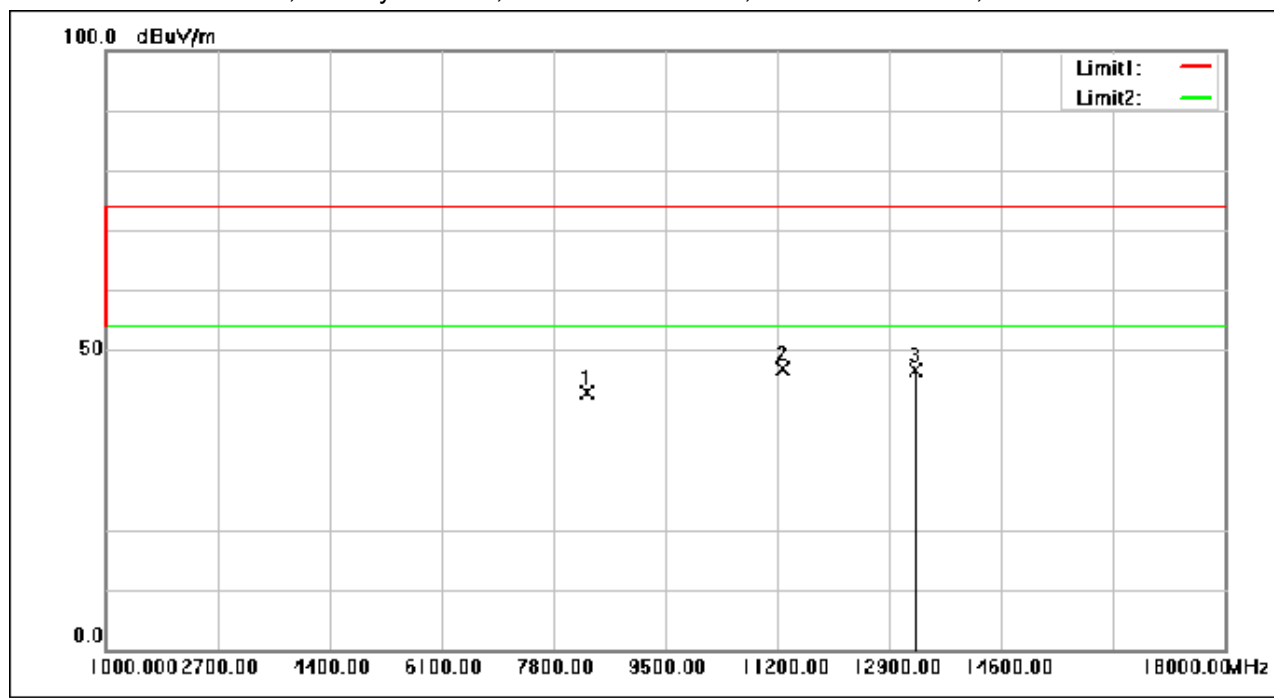
## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 60 of 122

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



| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|-------------------------|-----------------|----------------|-------------|--------|
| 1   | 8324.960        | 52.90          | -10.04                  | 42.86           | 74.00          | -31.14      | peak   |
| 2   | 11295.880       | 53.35          | -6.52                   | 46.83           | 74.00          | -27.17      | peak   |
| 3   | 13291.000       | 52.82          | -6.30                   | 46.52           | 74.00          | -27.48      | peak   |

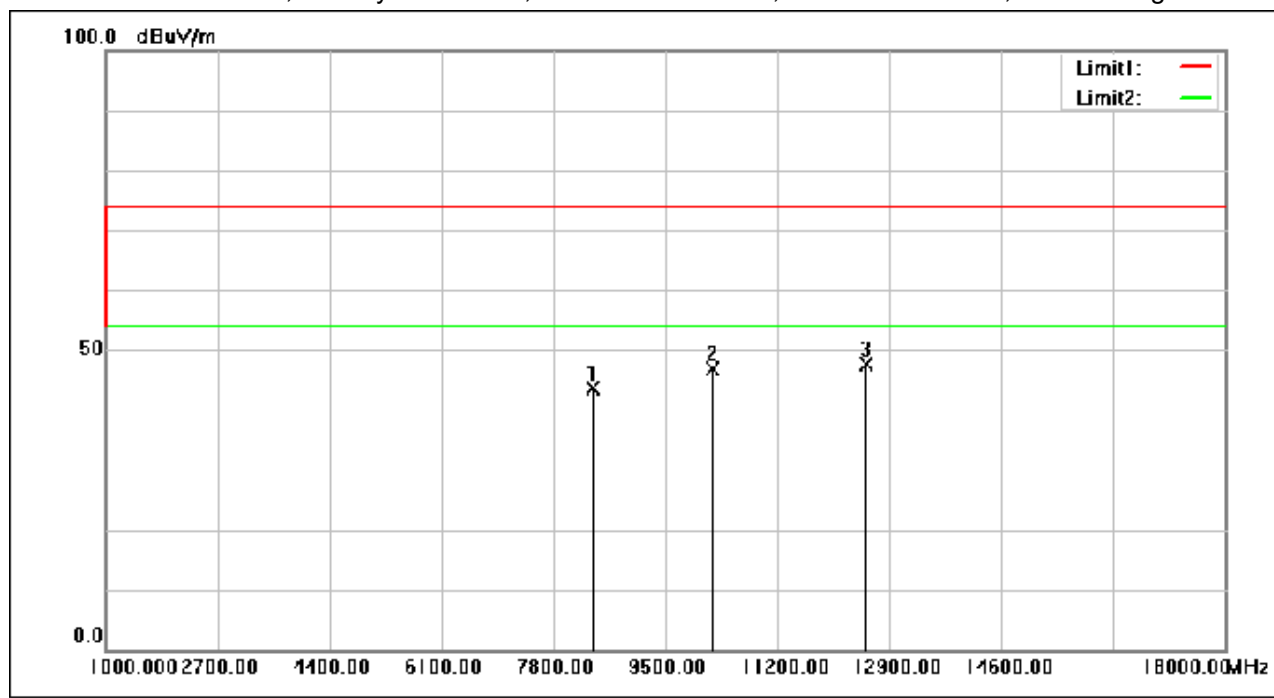
## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 61 of 122

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



| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|-------------------------|-----------------|----------------|-------------|--------|
| 1   | 8395.000        | 53.62          | -9.93                   | 43.69           | 74.00          | -30.31      | peak   |
| 2   | 10225.560       | 54.03          | -7.20                   | 46.83           | 74.00          | -27.17      | peak   |
| 3   | 12551.840       | 53.71          | -6.14                   | 47.57           | 74.00          | -26.43      | peak   |

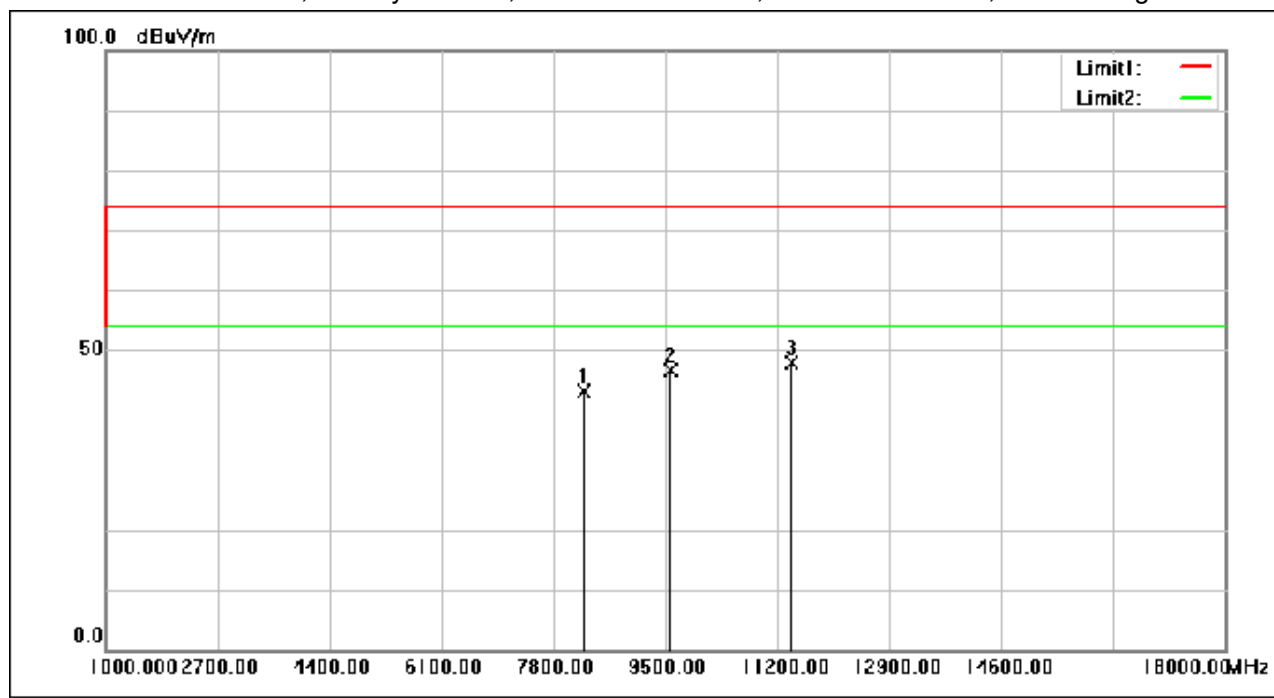
## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 62 of 122

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



| No. | Frequency (MHz) | Reading (dBuV) | Correction factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|-------------------------|-----------------|----------------|-------------|--------|
| 1   | 8266.480        | 53.28          | -10.14                  | 43.14           | 74.00          | -30.86      | peak   |
| 2   | 9597.920        | 54.37          | -7.77                   | 46.60           | 74.00          | -27.40      | peak   |
| 3   | 11425.080       | 54.33          | -6.41                   | 47.92           | 74.00          | -26.08      | peak   |

### 6.5 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 $\geq 50$ hopping channels                       |
|                      | 0.25 for $25 \leq$ hopping channels $< 50$             |
|                      | 1 for digital modulation                               |
| 2400-2483.5          | 1 for $\geq 75$ 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 |

#### 6.5.1 E.U.T. Operation

Operating Environment:

Temperature: 23.0 °C

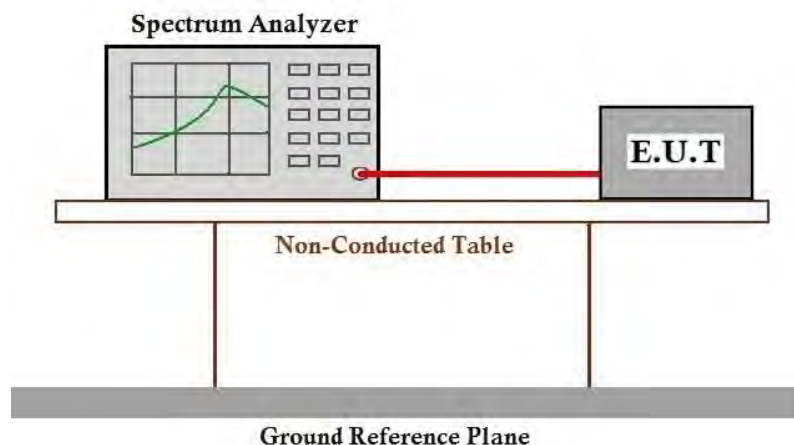
Humidity: 47.6 % RH

Atmospheric Pressure: 1010 mbar

#### 6.5.2 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), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report. |

#### 6.5.3 Test Setup Diagram





## **Compliance Certification Services (Kunshan) Inc.**

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

Report No.: KSCR240600106701

Page: 64 of 122

### **6.5.4 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

## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 65 of 122

### 6.6 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

#### 6.6.1 E.U.T. Operation

Operating Environment:

Temperature: 23.0 °C

Humidity: 47.6 % RH

Atmospheric Pressure: 1010 mbar

#### 6.6.2 Test Mode Description

| Pre-scan /<br>Final test | Mode<br>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), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report. |

#### 6.6.3 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.: KSCR240600106701

Page: 66 of 122

### 6.7 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

#### 6.7.1 E.U.T. Operation

Operating Environment:

Temperature: 23.0 °C

Humidity: 47.6 % RH

Atmospheric Pressure: 1010 mbar

#### 6.7.2 Test Mode Description

| Pre-scan /<br>Final test | Mode<br>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), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report. |

#### 6.7.3 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.: KSCR240600106701

Page: 67 of 122

### 6.8 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)).

#### 6.8.1 E.U.T. Operation

Operating Environment:

Temperature: 23.0 °C

Humidity: 47.6 % RH

Atmospheric Pressure: 1010 mbar

#### 6.8.2 Test Mode Description

| Pre-scan /<br>Final test | Mode<br>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), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report. |

#### 6.8.3 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.: KSCR240600106701

Page: 68 of 122

### 6.9 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)).

#### 6.9.1 E.U.T. Operation

Operating Environment:

Temperature: 23.0 °C

Humidity: 47.6 % RH

Atmospheric Pressure: 1010 mbar

#### 6.9.2 Test Mode Description

| Pre-scan /<br>Final test | Mode<br>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), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report. |

#### 6.9.3 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.: KSCR240600106701

Page: 69 of 122

### **7 Test Setup Photo**

Refer to Appendix - Test Setup Photo for KSCR2406001067AT

### **8 EUT Constructional Details (EUT Photos)**

Refer to Appendix - Photographs of EUT Constructional Details for KSCR2406001067AT

## 9 Appendix

### 1. Duty Cycle

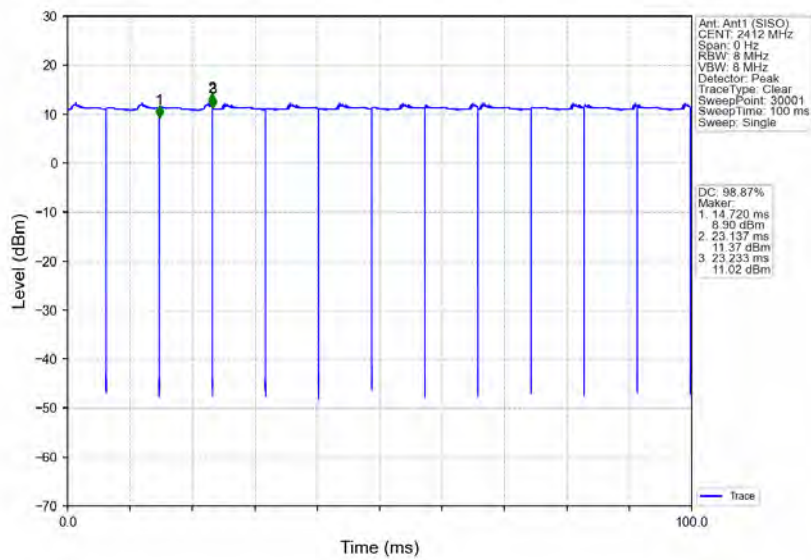
#### 1.1 Ant1

##### 1.1.1 Test Result

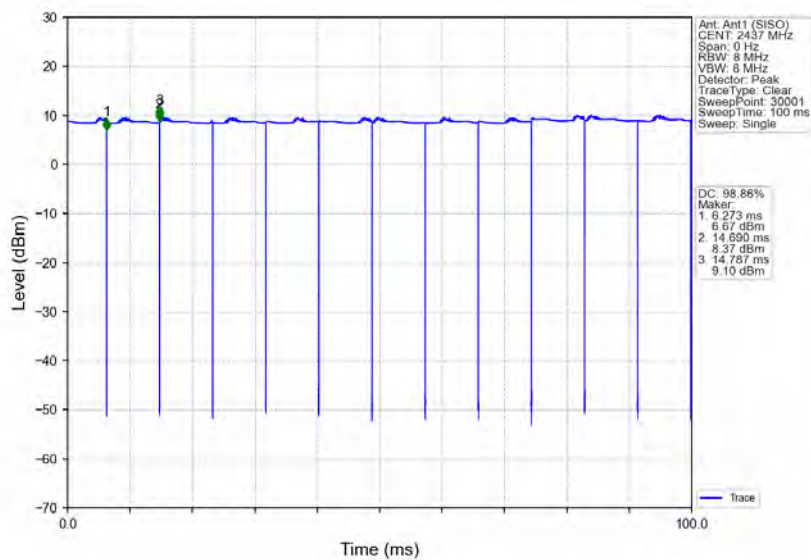
| Ant1           |         |                 |           |             |                |                                   |                       |
|----------------|---------|-----------------|-----------|-------------|----------------|-----------------------------------|-----------------------|
| Mode           | TX Type | Frequency (MHz) | T_on (ms) | Period (ms) | Duty Cycle (%) | Duty Cycle Correction Factor (dB) | Max. DC Variation (%) |
| 802.11b        | SISO    | 2412            | 8.417     | 8.513       | 98.87          | 0.05                              | 0.04                  |
|                |         | 2437            | 8.417     | 8.514       | 98.86          | 0.05                              | 0.04                  |
|                |         | 2462            | 8.417     | 8.514       | 98.86          | 0.05                              | 0.04                  |
| 802.11g        | SISO    | 2412            | 1.398     | 1.499       | 93.26          | 0.30                              | 0.03                  |
|                |         | 2437            | 1.397     | 1.499       | 93.20          | 0.31                              | 0.03                  |
|                |         | 2462            | 1.397     | 1.498       | 93.26          | 0.30                              | 0.00                  |
| 802.11n (HT20) | SISO    | 2412            | 1.309     | 1.410       | 92.84          | 0.32                              | 0.03                  |
|                |         | 2437            | 1.310     | 1.412       | 92.78          | 0.33                              | 0.06                  |
|                |         | 2462            | 1.309     | 1.411       | 92.77          | 0.33                              | 0.03                  |
| 802.11n (HT40) | SISO    | 2422            | 0.649     | 0.750       | 86.53          | 0.63                              | 0.04                  |
|                |         | 2437            | 0.650     | 0.751       | 86.55          | 0.63                              | 0.04                  |
|                |         | 2452            | 0.649     | 0.750       | 86.53          | 0.63                              | 0.04                  |

### 1.1.2 Test Graph

802.11b\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



802.11b\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



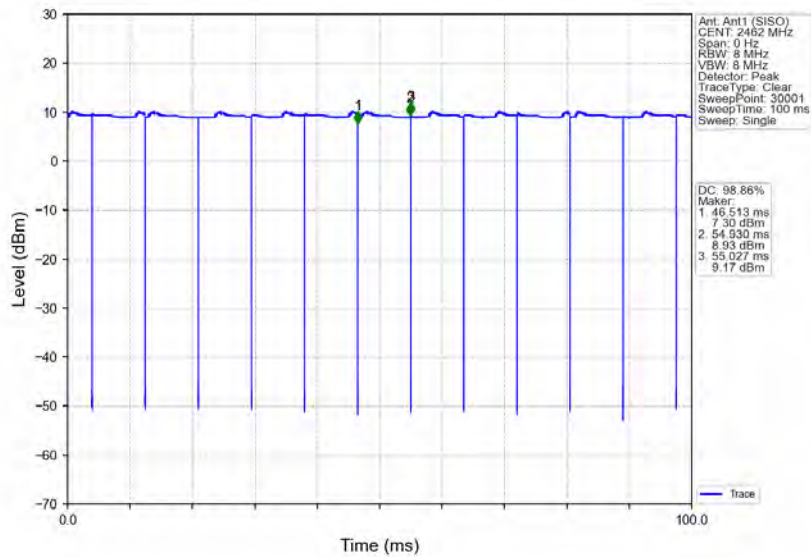
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CCSEM-TRF-001 Rev. 02 Sep 01, 2023

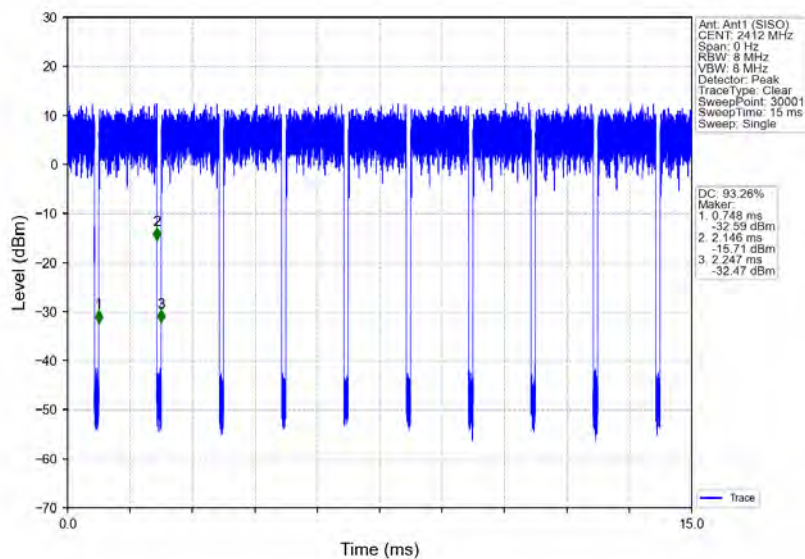
Report No.: KSCR240600106701

Page: 72 of 122

802.11b HCH 2462MHz Ant1 (SISO) NTNV



802.11g LCH 2412MHz Ant1 (SISO) NTNV



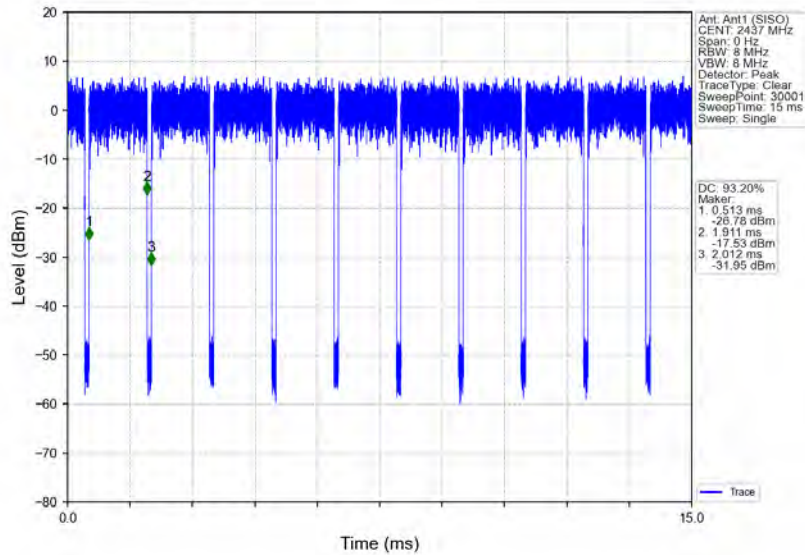
## Compliance Certification Services (Kunshan) Inc.

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

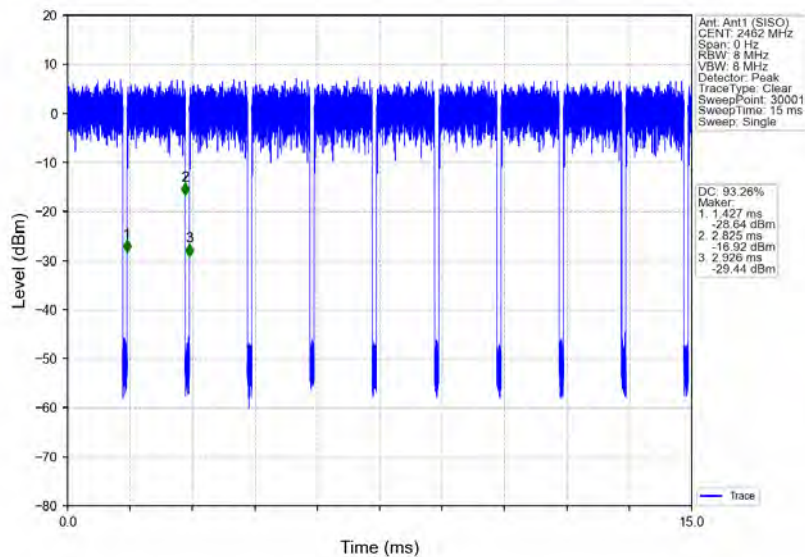
Report No.: KSCR240600106701

Page: 73 of 122

802.11g\_MCH\_2437MHz\_Ant1 (SISO) NTN



802.11g\_HCH\_2462MHz\_Ant1 (SISO) NTN



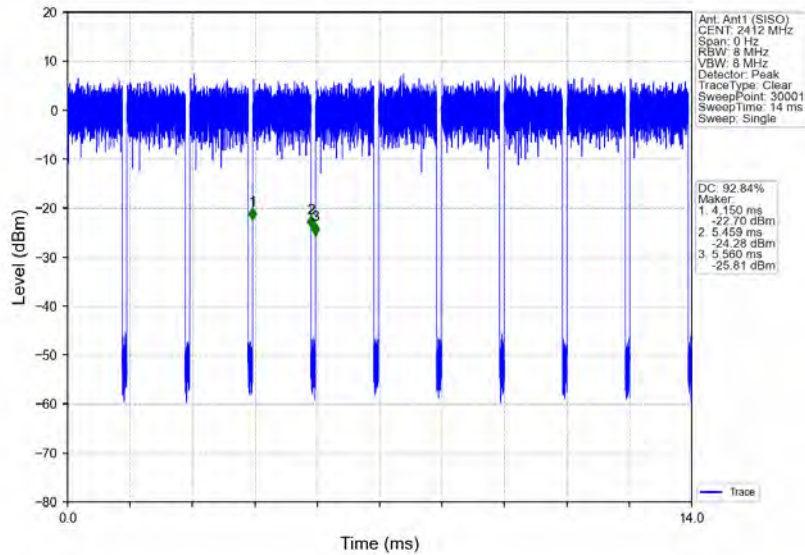
## Compliance Certification Services (Kunshan) Inc.

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

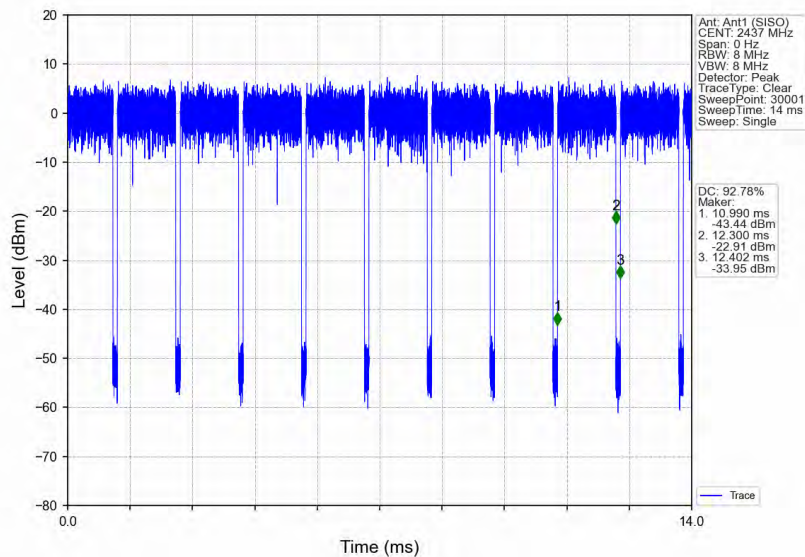
Report No.: KSCR240600106701

Page: 74 of 122

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



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



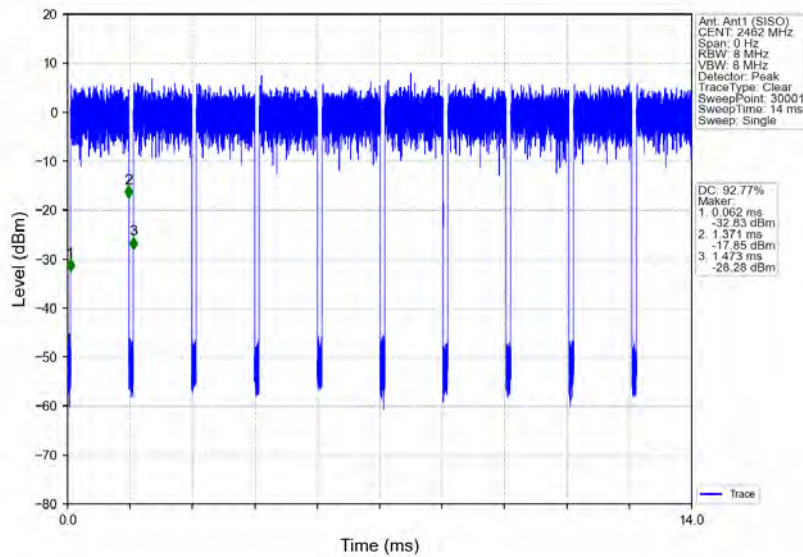
## Compliance Certification Services (Kunshan) Inc.

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

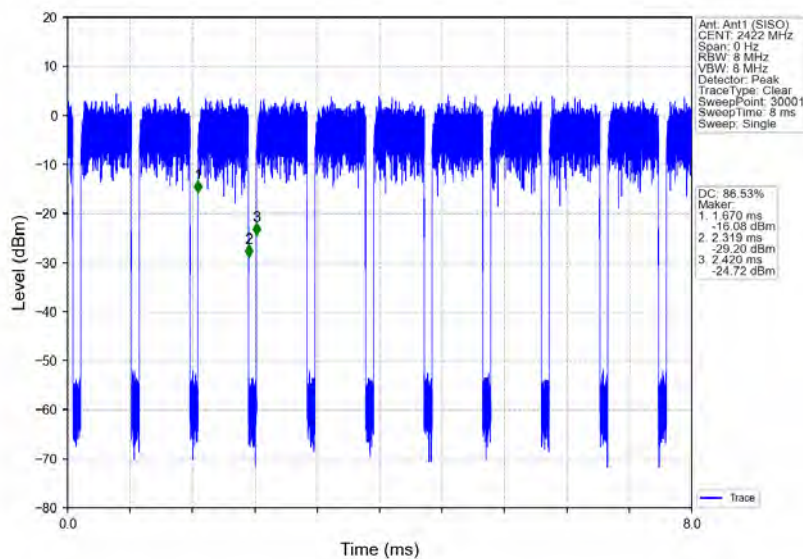
Report No.: KSCR240600106701

Page: 75 of 122

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



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



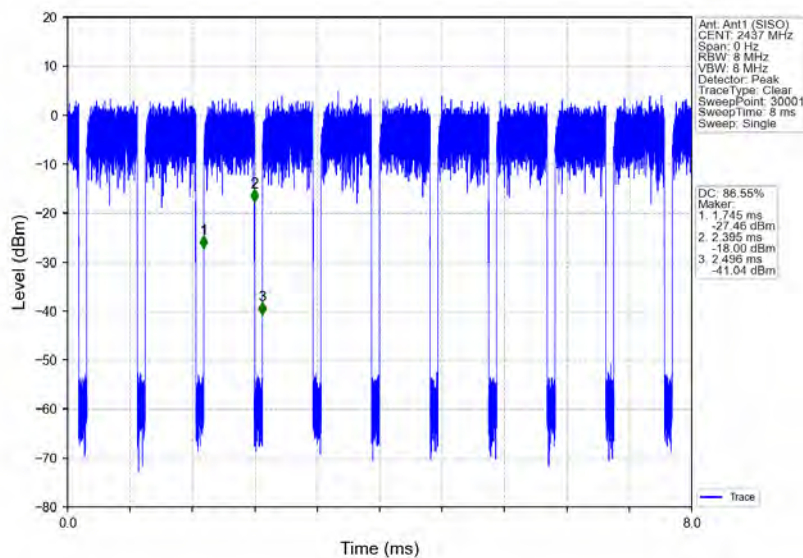
## Compliance Certification Services (Kunshan) Inc.

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

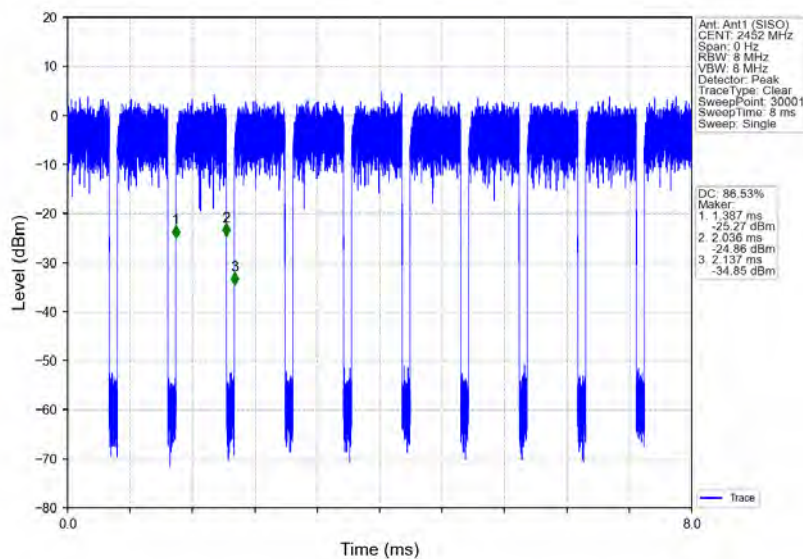
Report No.: KSCR240600106701

Page: 76 of 122

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.: KSCR240600106701

Page: 77 of 122

## 2. Bandwidth

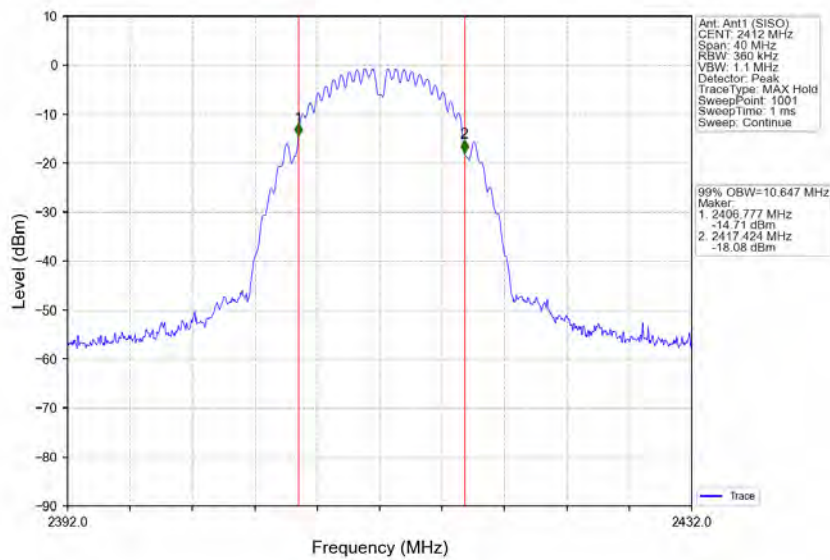
### 2.1 OBW

#### 2.1.1 Test Result

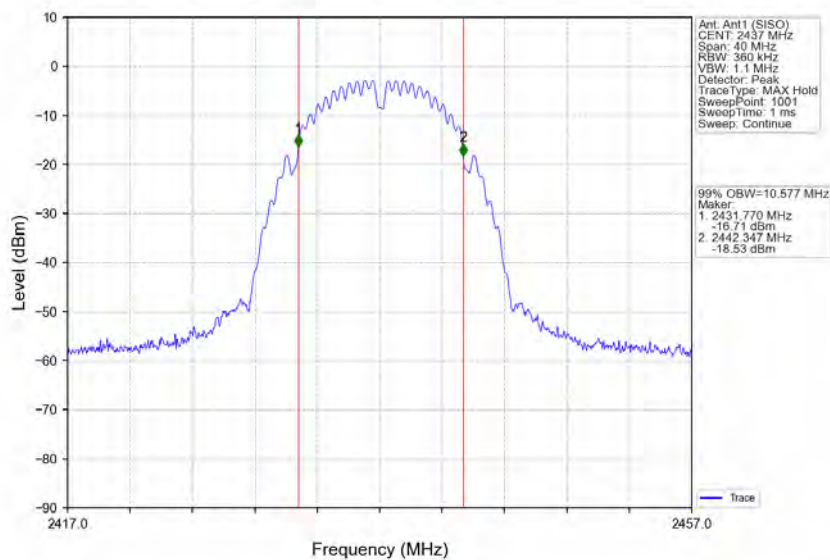
| Mode           | TX Type | Frequency (MHz) | ANT | 99% Occupied Bandwidth (MHz) |       | Verdict |
|----------------|---------|-----------------|-----|------------------------------|-------|---------|
|                |         |                 |     | Result                       | Limit |         |
| 802.11b        | SISO    | 2412            | 1   | 10.647                       | /     | Pass    |
|                |         | 2437            | 1   | 10.577                       | /     | Pass    |
|                |         | 2462            | 1   | 10.750                       | /     | Pass    |
| 802.11g        | SISO    | 2412            | 1   | 17.736                       | /     | Pass    |
|                |         | 2437            | 1   | 17.627                       | /     | Pass    |
|                |         | 2462            | 1   | 17.665                       | /     | Pass    |
| 802.11n (HT20) | SISO    | 2412            | 1   | 18.656                       | /     | Pass    |
|                |         | 2437            | 1   | 18.502                       | /     | Pass    |
|                |         | 2462            | 1   | 18.523                       | /     | Pass    |
| 802.11n (HT40) | SISO    | 2422            | 1   | 36.360                       | /     | Pass    |
|                |         | 2437            | 1   | 36.623                       | /     | Pass    |
|                |         | 2452            | 1   | 36.685                       | /     | Pass    |

### 2.1.2 Test Graph

802.11b\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



802.11b\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



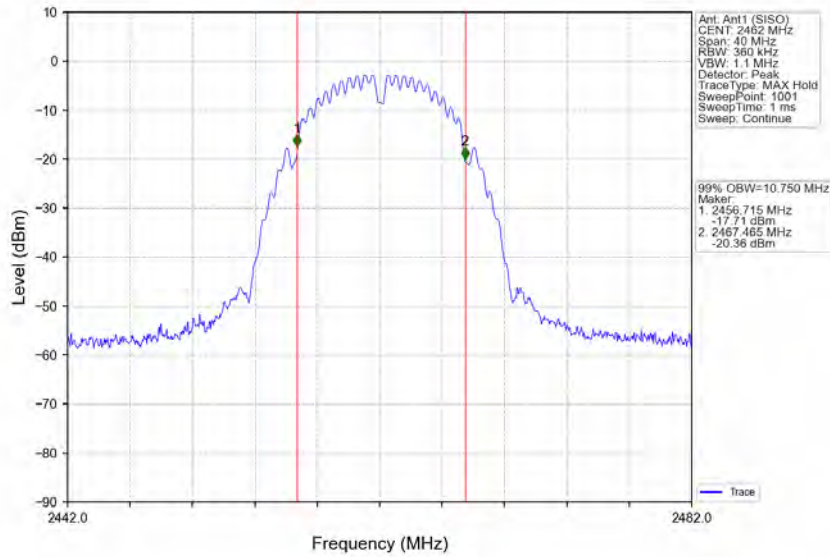
## Compliance Certification Services (Kunshan) Inc.

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

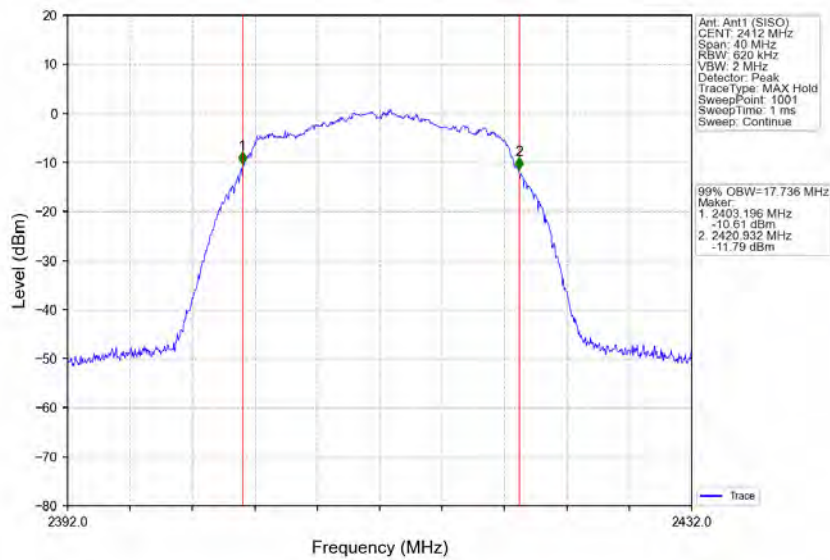
Report No.: KSCR240600106701

Page: 79 of 122

802.11b HCH 2462MHz Ant1 (SISO) NTNV



802.11g LCH 2412MHz Ant1 (SISO) NTNV



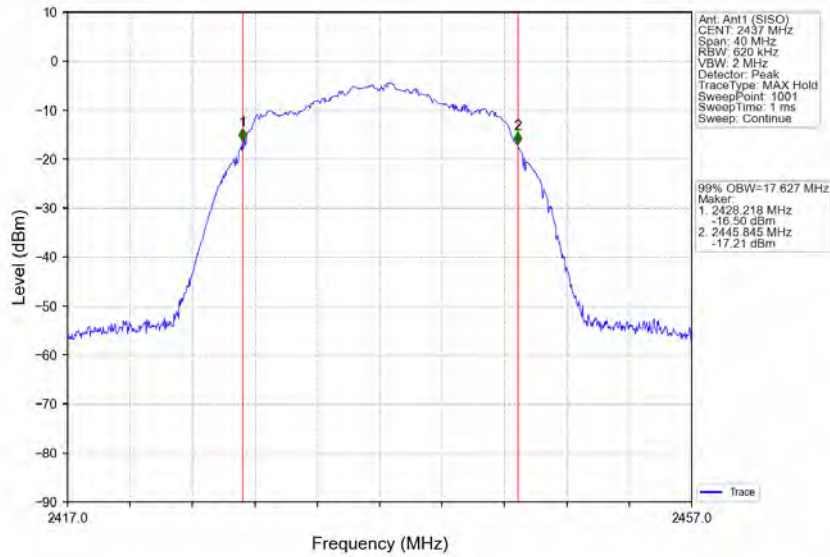
## Compliance Certification Services (Kunshan) Inc.

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

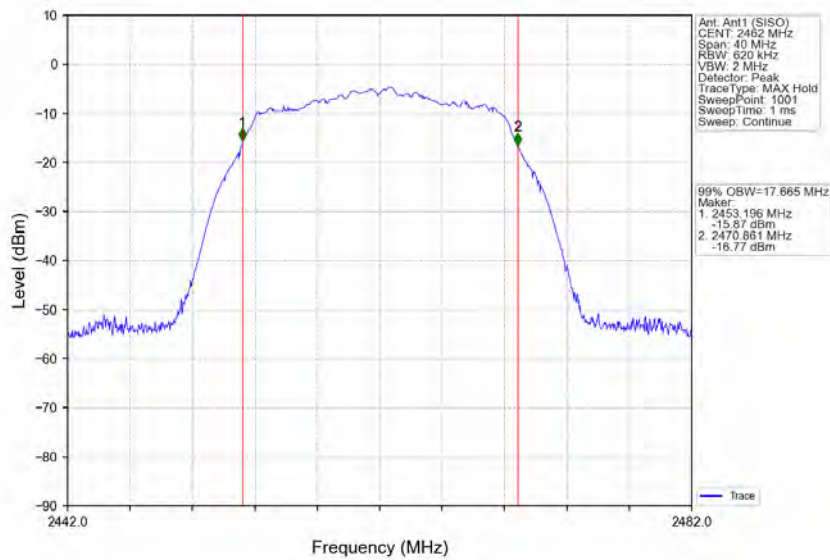
Report No.: KSCR240600106701

Page: 80 of 122

802.11g\_MCH\_2437MHz\_Ant1 (SISO) NTN



802.11g\_HCH\_2462MHz\_Ant1 (SISO) NTN



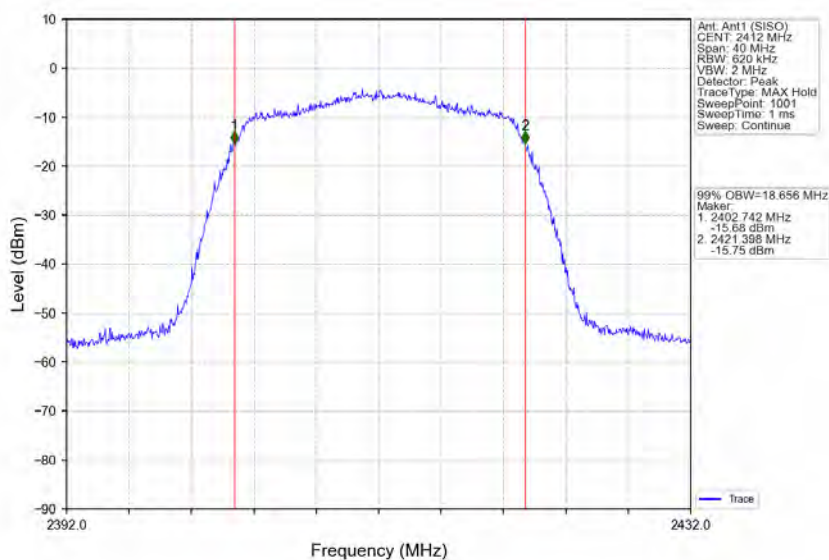
## Compliance Certification Services (Kunshan) Inc.

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

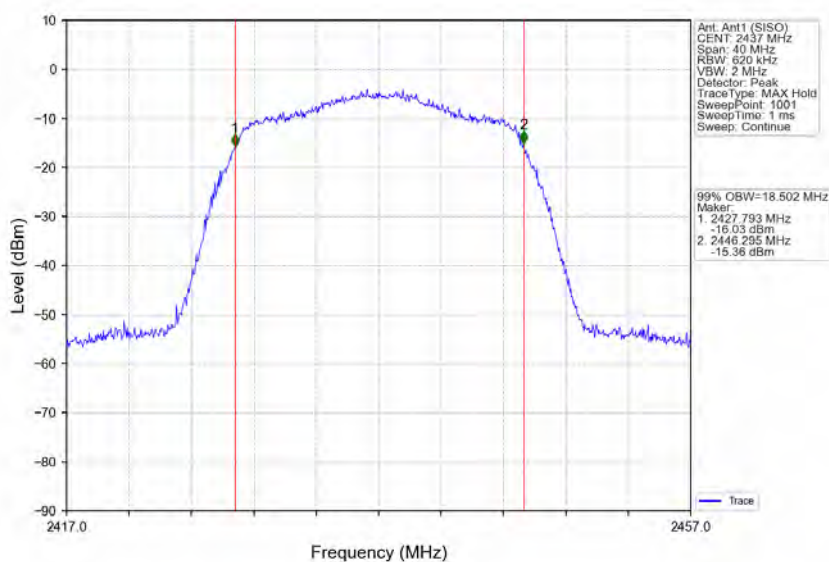
Report No.: KSCR240600106701

Page: 81 of 122

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



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



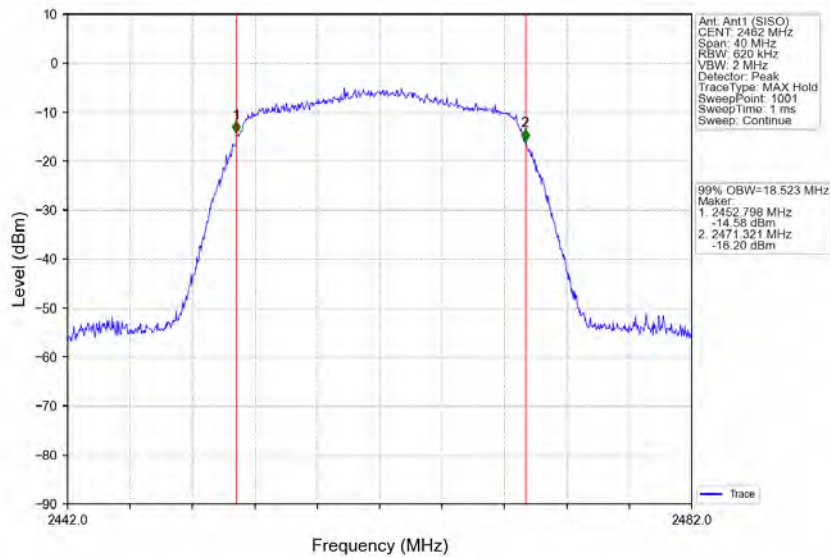
## Compliance Certification Services (Kunshan) Inc.

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

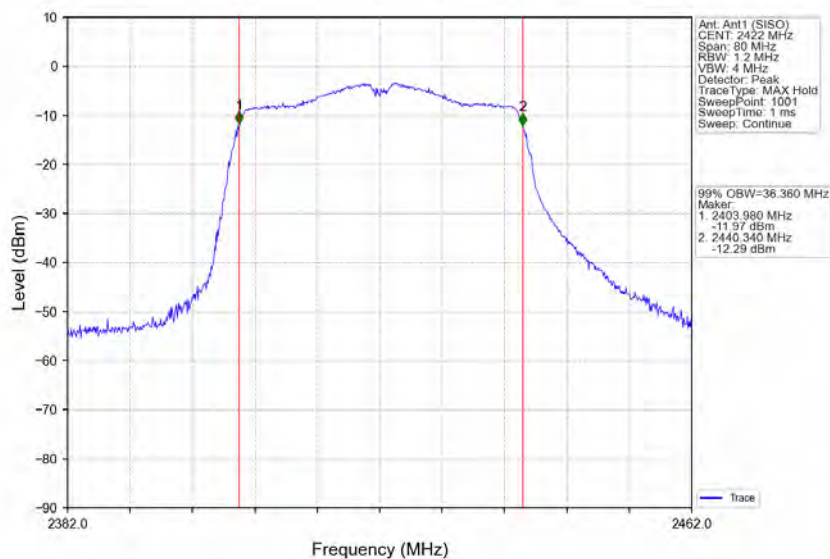
Report No.: KSCR240600106701

Page: 82 of 122

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



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



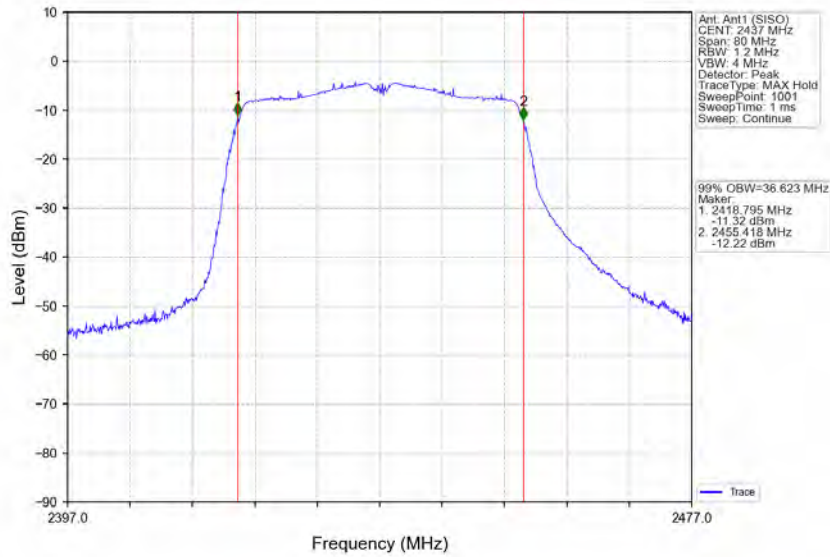
## Compliance Certification Services (Kunshan) Inc.

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

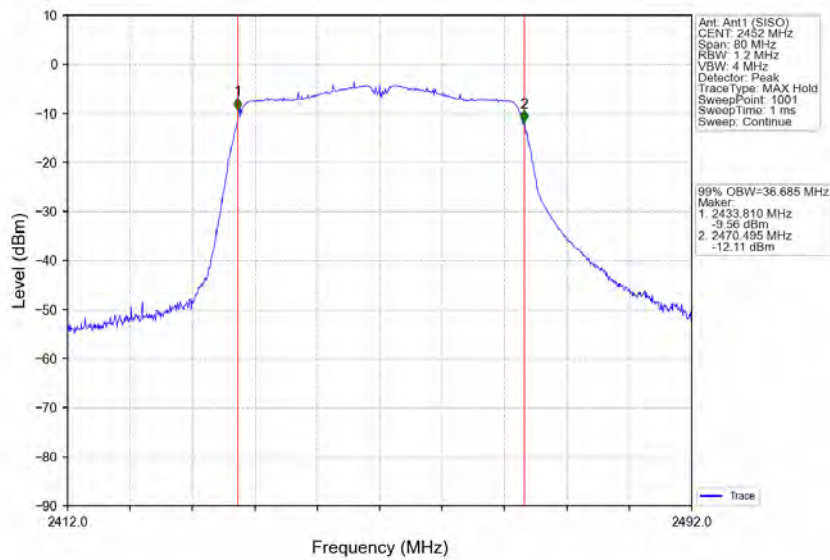
Report No.: KSCR240600106701

Page: 83 of 122

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.: KSCR240600106701

Page: 84 of 122

### 2.2 6dB BW

| Mode           | TX Type | Frequency (MHz) | ANT | 6dB Bandwidth (MHz) |            | Verdict |
|----------------|---------|-----------------|-----|---------------------|------------|---------|
|                |         |                 |     | Result              | Limit      |         |
| 802.11b        | SISO    | 2412            | 1   | 8.118               | $\geq 0.5$ | Pass    |
|                |         | 2437            | 1   | 8.083               | $\geq 0.5$ | Pass    |
|                |         | 2462            | 1   | 8.110               | $\geq 0.5$ | Pass    |
| 802.11g        | SISO    | 2412            | 1   | 15.803              | $\geq 0.5$ | Pass    |
|                |         | 2437            | 1   | 15.445              | $\geq 0.5$ | Pass    |
|                |         | 2462            | 1   | 15.827              | $\geq 0.5$ | Pass    |
| 802.11n (HT20) | SISO    | 2412            | 1   | 16.113              | $\geq 0.5$ | Pass    |
|                |         | 2437            | 1   | 15.220              | $\geq 0.5$ | Pass    |
|                |         | 2462            | 1   | 16.307              | $\geq 0.5$ | Pass    |
| 802.11n (HT40) | SISO    | 2422            | 1   | 35.231              | $\geq 0.5$ | Pass    |
|                |         | 2437            | 1   | 35.419              | $\geq 0.5$ | Pass    |
|                |         | 2452            | 1   | 35.656              | $\geq 0.5$ | Pass    |

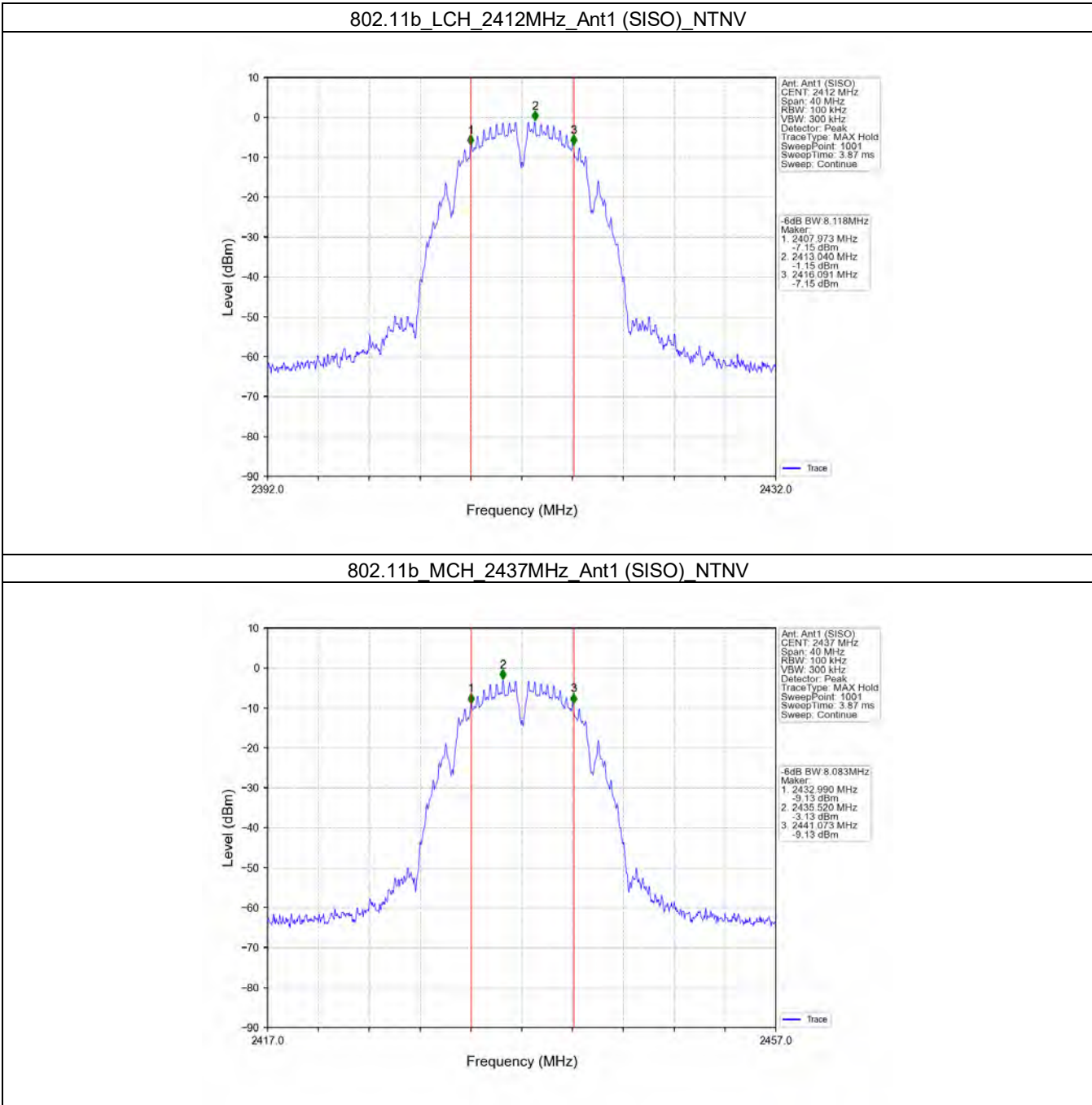
## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 85 of 122

### 2.2.2 Test Graph



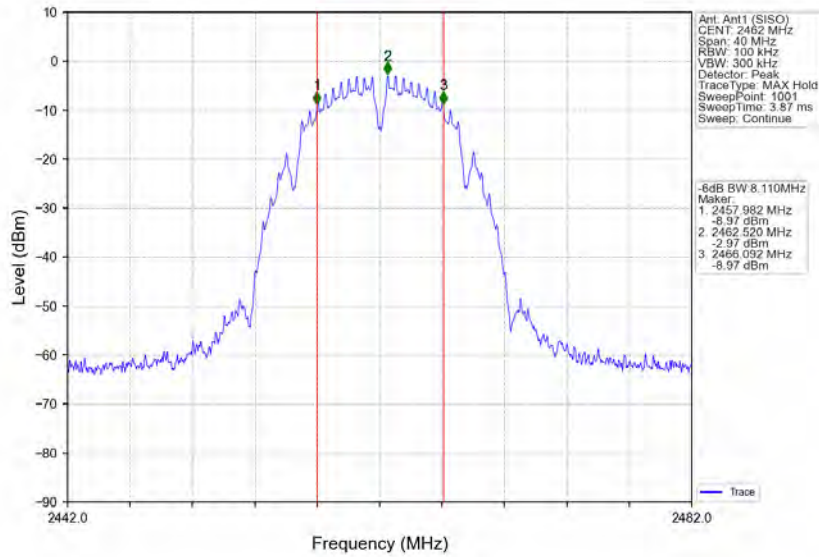
## Compliance Certification Services (Kunshan) Inc.

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

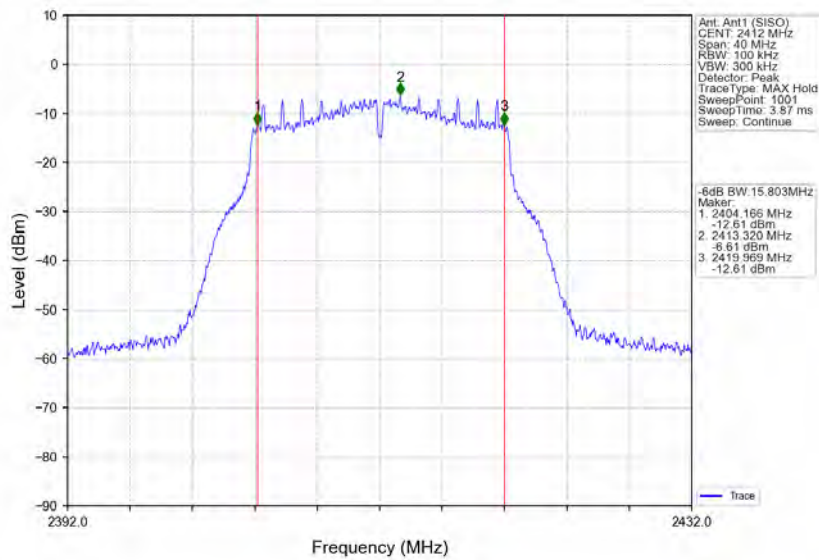
Report No.: KSCR240600106701

Page: 86 of 122

802.11b HCH 2462MHz Ant1 (SISO) NTNV



802.11g LCH 2412MHz Ant1 (SISO) NTNV



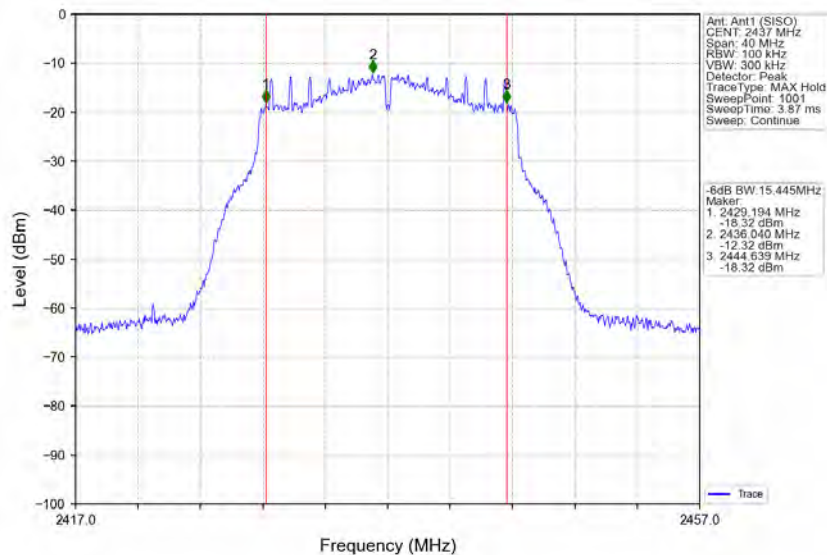
## Compliance Certification Services (Kunshan) Inc.

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

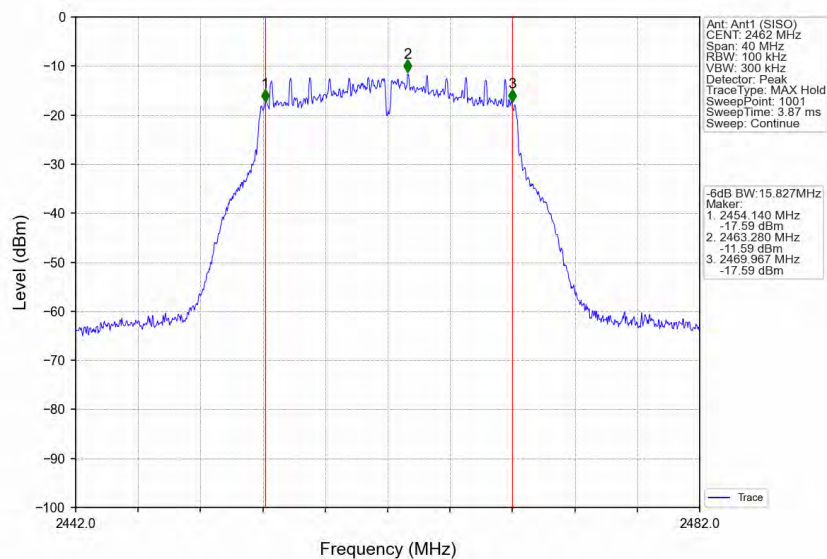
Report No.: KSCR240600106701

Page: 87 of 122

802.11g\_MCH\_2437MHz\_Ant1 (SISO) NTN



802.11g\_HCH\_2462MHz\_Ant1 (SISO) NTN



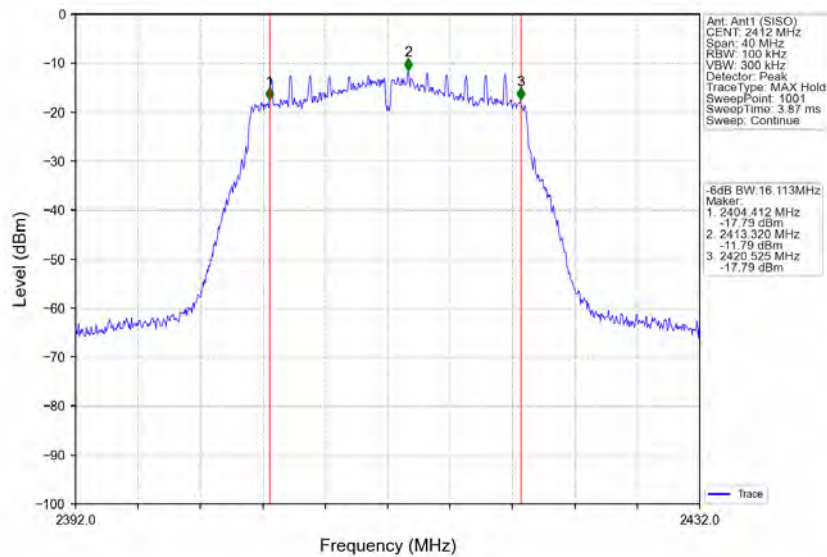
## Compliance Certification Services (Kunshan) Inc.

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

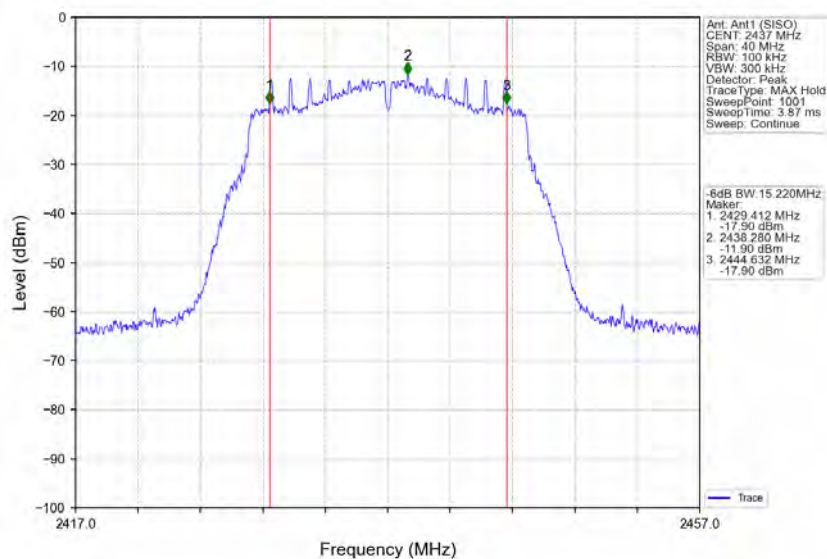
Report No.: KSCR240600106701

Page: 88 of 122

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



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



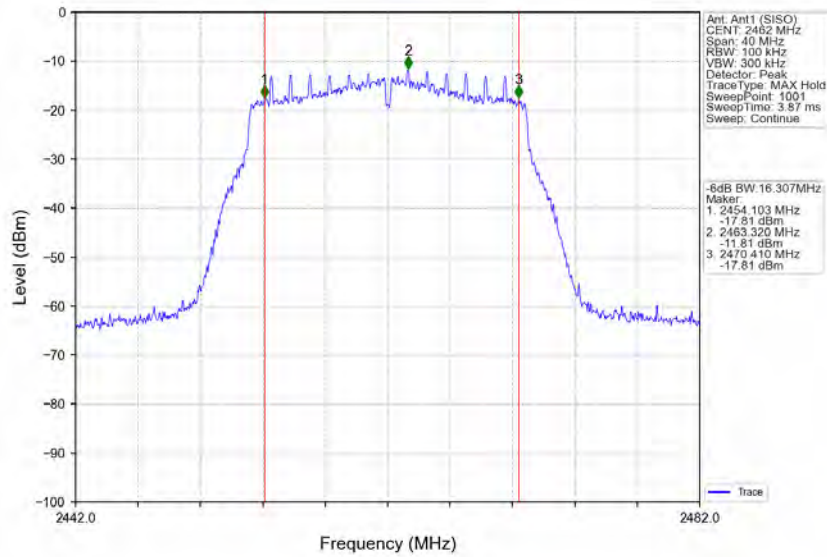
## Compliance Certification Services (Kunshan) Inc.

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

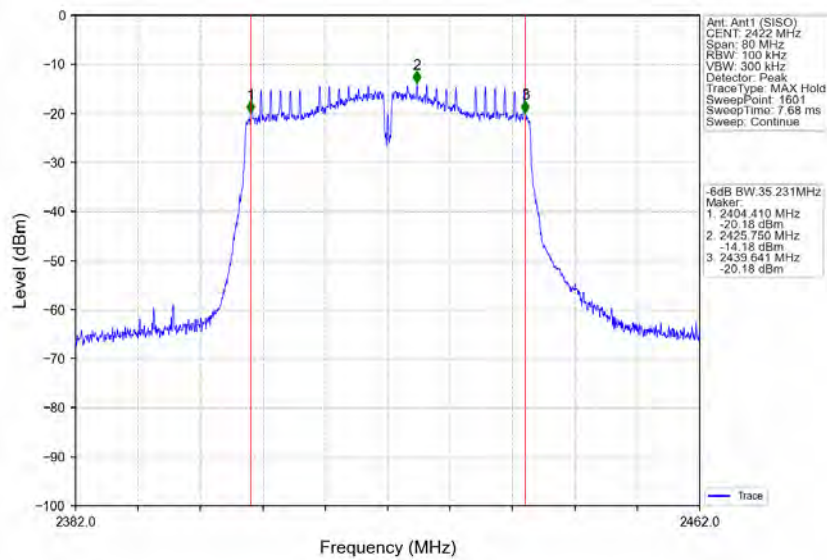
Report No.: KSCR240600106701

Page: 89 of 122

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



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



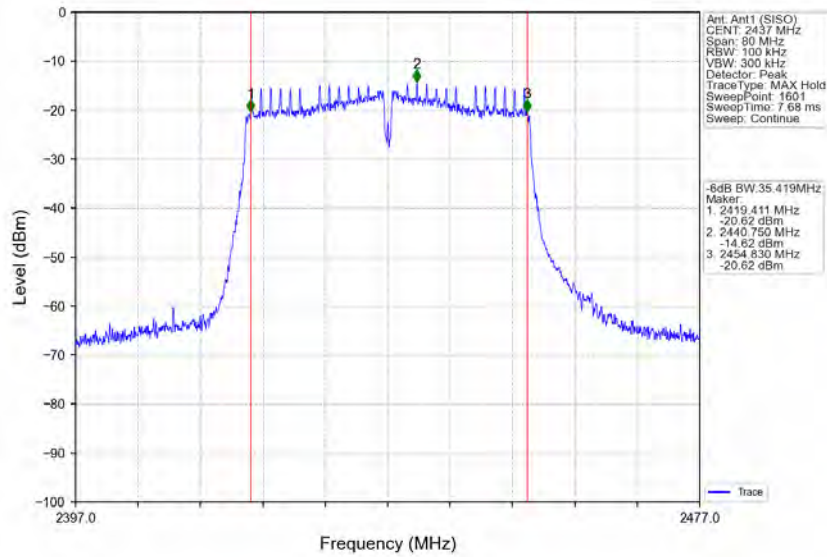
## Compliance Certification Services (Kunshan) Inc.

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

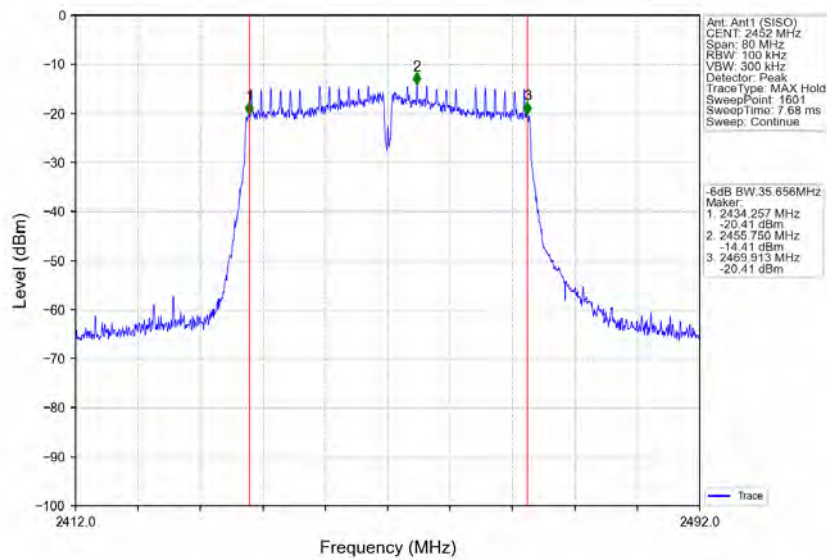
Report No.: KSCR240600106701

Page: 90 of 122

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



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



## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 91 of 122

### 3. Maximum Conducted Output Power

#### 3.1 Power

##### 3.1.1 Test Result

| Mode           | TX Type | Frequency (MHz) | Maximum Peak Conducted Output Power (dBm) |       | Verdict |
|----------------|---------|-----------------|-------------------------------------------|-------|---------|
|                |         |                 | ANT1                                      | Limit |         |
| 802.11b        | SISO    | 2412            | 7.54                                      | <=30  | Pass    |
|                |         | 2437            | 7.60                                      | <=30  | Pass    |
|                |         | 2462            | 7.70                                      | <=30  | Pass    |
| 802.11g        | SISO    | 2412            | 7.10                                      | <=30  | Pass    |
|                |         | 2437            | 6.83                                      | <=30  | Pass    |
|                |         | 2462            | 7.23                                      | <=30  | Pass    |
| 802.11n (HT20) | SISO    | 2412            | 6.85                                      | <=30  | Pass    |
|                |         | 2437            | 6.58                                      | <=30  | Pass    |
|                |         | 2462            | 6.61                                      | <=30  | Pass    |
| 802.11n (HT40) | SISO    | 2422            | 7.34                                      | <=30  | Pass    |
|                |         | 2437            | 7.33                                      | <=30  | Pass    |
|                |         | 2452            | 7.65                                      | <=30  | Pass    |

Note1: Antenna Gain: Ant1: -3.32dBi;

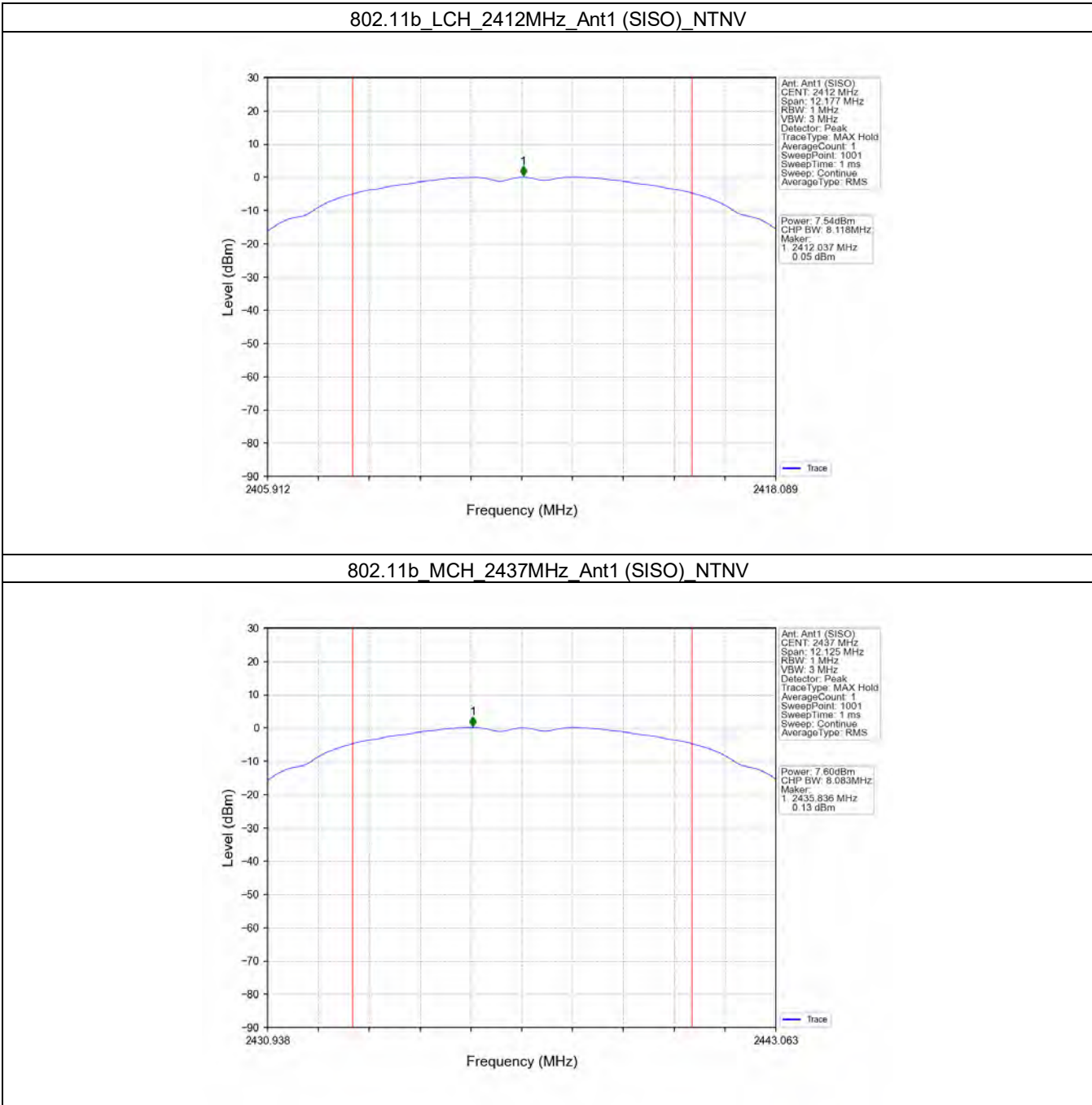
## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 92 of 122

### 3.1.2 Test Graph



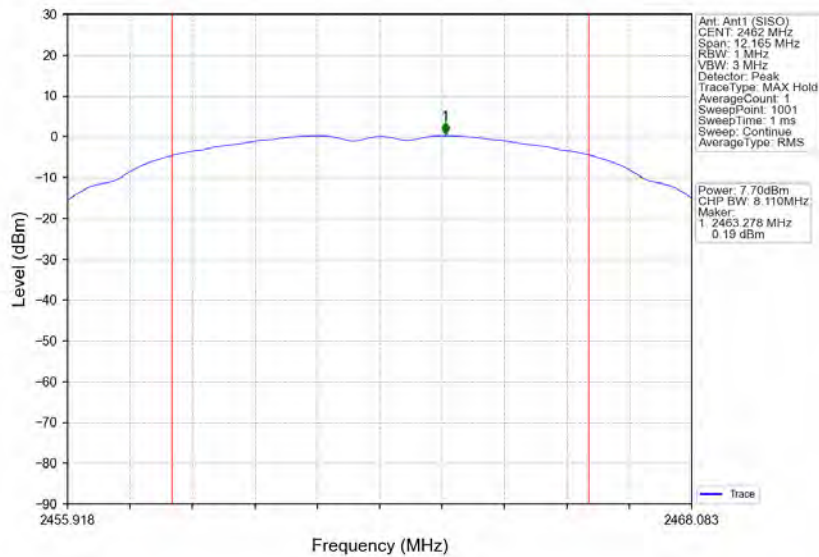
## Compliance Certification Services (Kunshan) Inc.

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

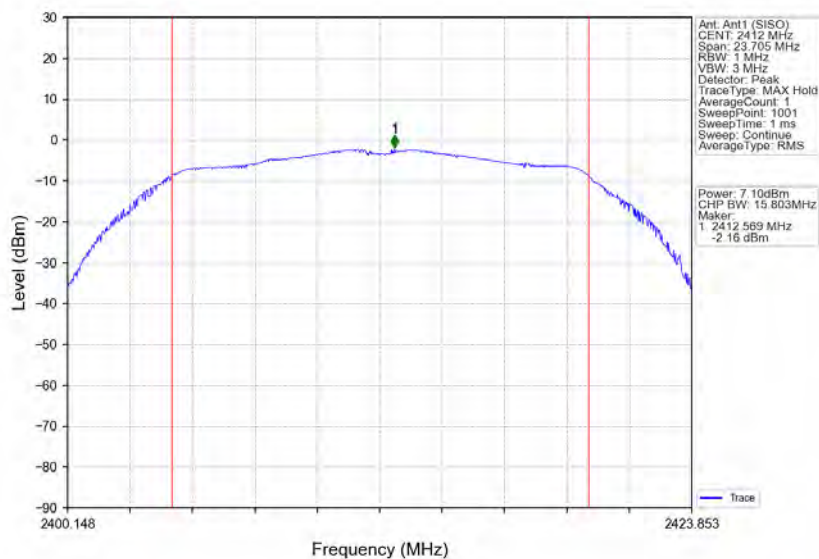
Report No.: KSCR240600106701

Page: 93 of 122

802.11b HCH 2462MHz Ant1 (SISO) NTNV



802.11g LCH 2412MHz Ant1 (SISO) NTNV



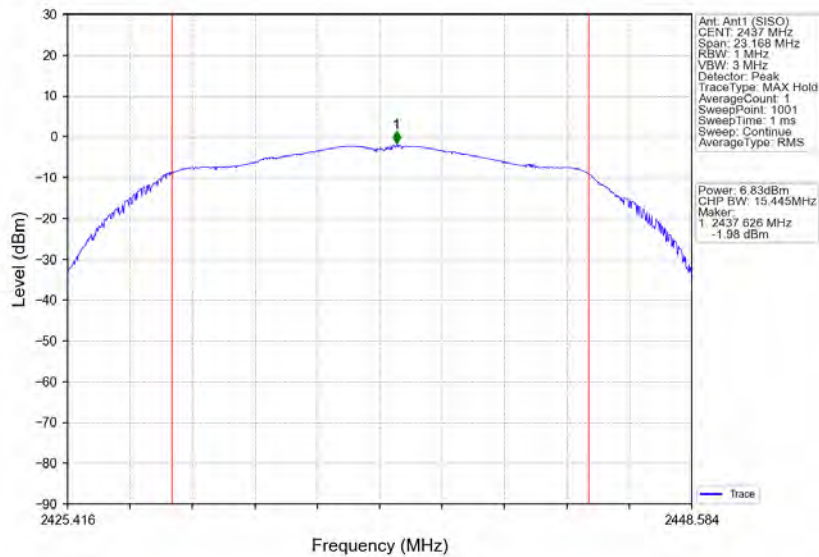
## Compliance Certification Services (Kunshan) Inc.

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

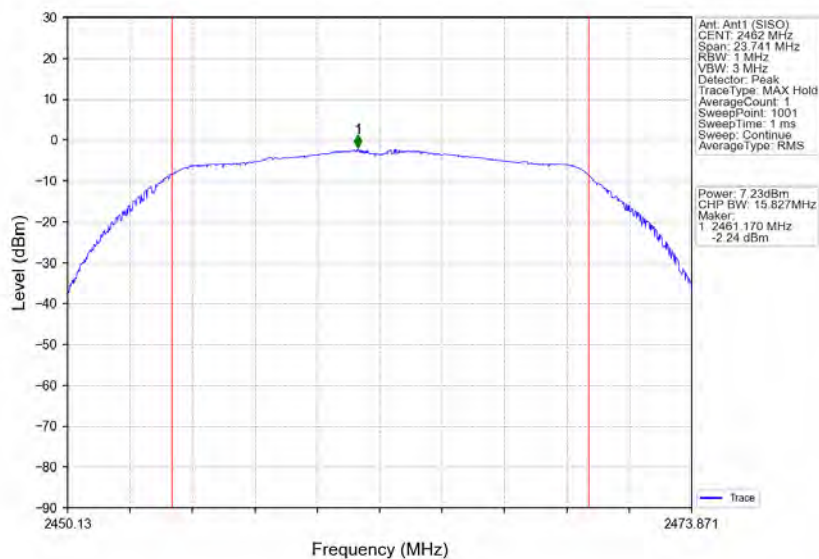
Report No.: KSCR240600106701

Page: 94 of 122

802.11g\_MCH\_2437MHz\_Ant1 (SISO) NTN



802.11g\_HCH\_2462MHz\_Ant1 (SISO) NTN



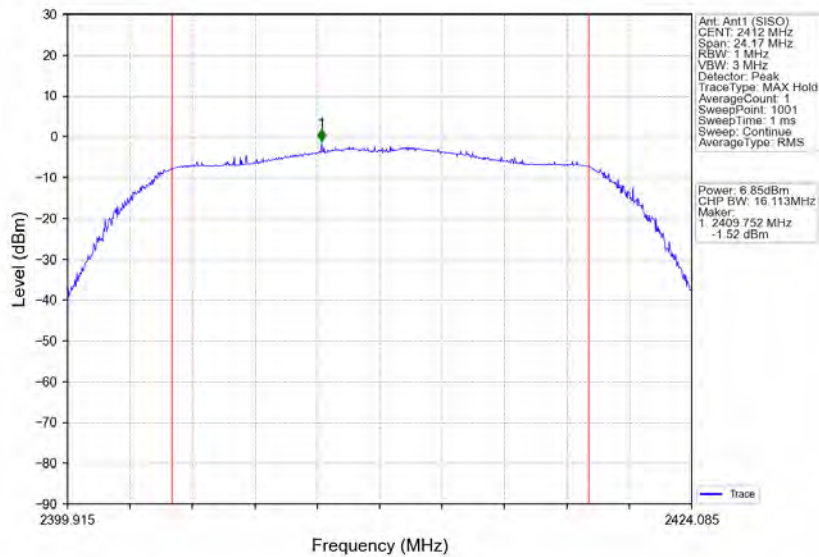
## Compliance Certification Services (Kunshan) Inc.

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

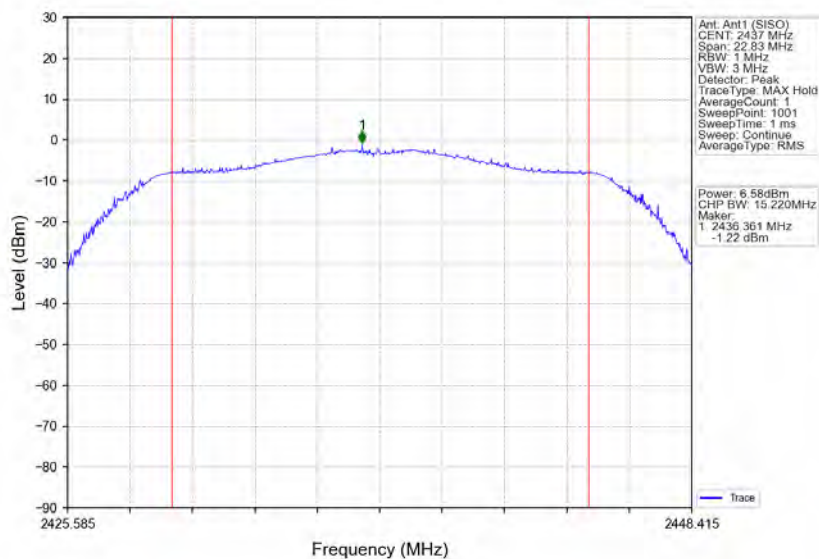
Report No.: KSCR240600106701

Page: 95 of 122

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



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



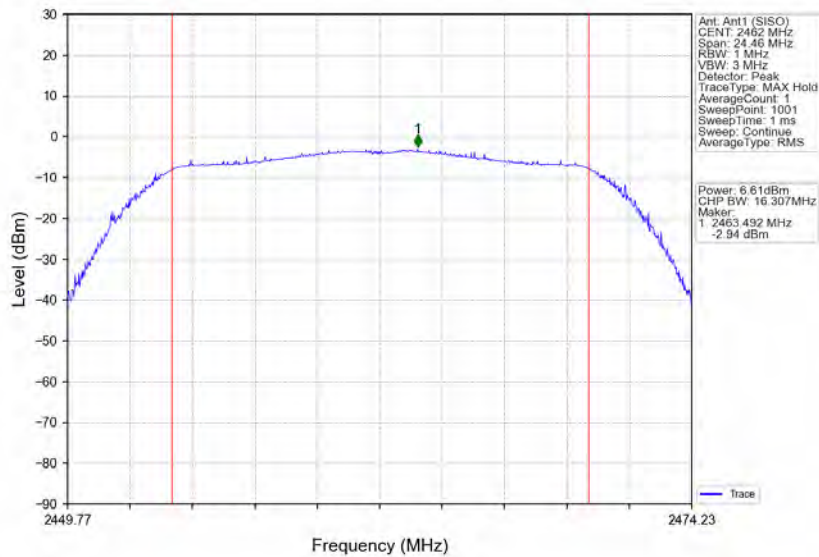
## Compliance Certification Services (Kunshan) Inc.

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

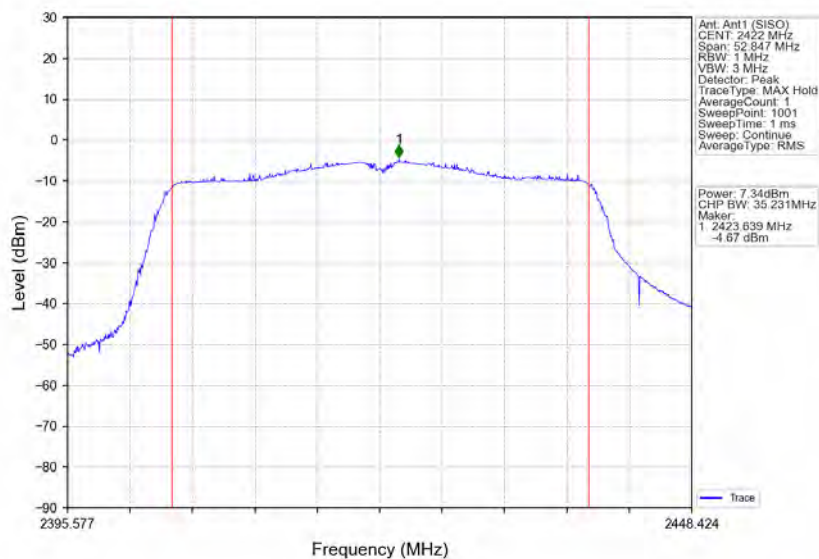
Report No.: KSCR240600106701

Page: 96 of 122

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



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



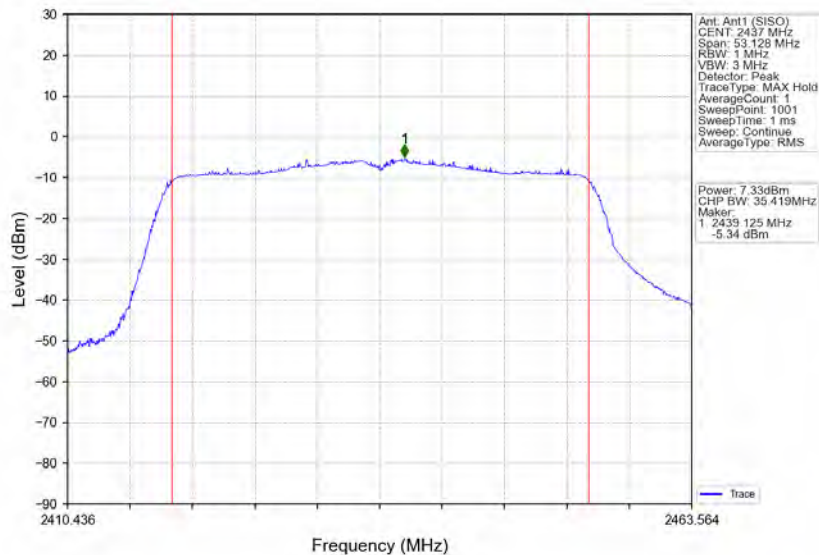
## Compliance Certification Services (Kunshan) Inc.

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

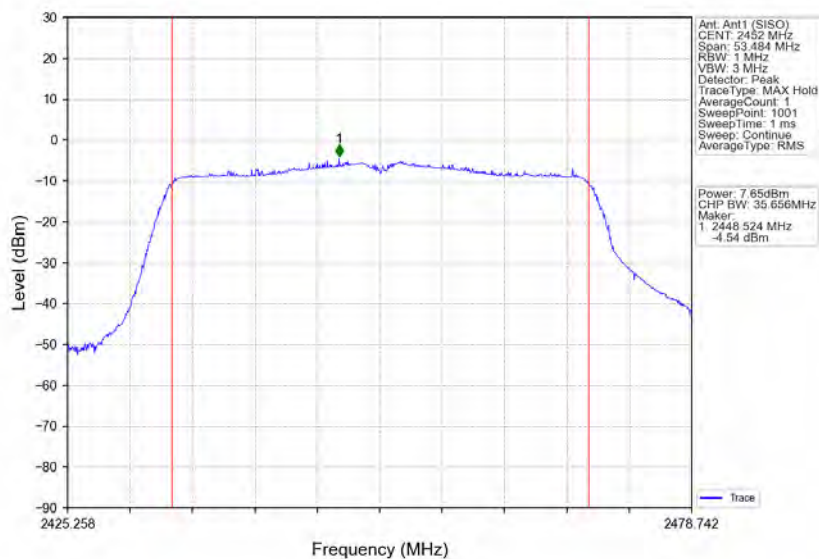
Report No.: KSCR240600106701

Page: 97 of 122

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



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



## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240600106701

Page: 98 of 122

### 4. Maximum Power Spectral Density

#### 4.1 PSD

##### 4.1.1 Test Result

| Mode           | TX Type | Frequency (MHz) | Maximum PSD (dBm/3kHz) |       | Verdict |
|----------------|---------|-----------------|------------------------|-------|---------|
|                |         |                 | ANT1                   | Limit |         |
| 802.11b        | SISO    | 2412            | -17.11                 | <=8   | Pass    |
|                |         | 2437            | -18.23                 | <=8   | Pass    |
|                |         | 2462            | -18.28                 | <=8   | Pass    |
| 802.11g        | SISO    | 2412            | -24.75                 | <=8   | Pass    |
|                |         | 2437            | -24.99                 | <=8   | Pass    |
|                |         | 2462            | -24.08                 | <=8   | Pass    |
| 802.11n (HT20) | SISO    | 2412            | -25.20                 | <=8   | Pass    |
|                |         | 2437            | -23.72                 | <=8   | Pass    |
|                |         | 2462            | -25.51                 | <=8   | Pass    |
| 802.11n (HT40) | SISO    | 2422            | -27.61                 | <=8   | Pass    |
|                |         | 2437            | -28.18                 | <=8   | Pass    |
|                |         | 2452            | -27.51                 | <=8   | Pass    |

Note1: Antenna Gain: Ant1: -3.32dBi;

## Compliance Certification Services (Kunshan) Inc.

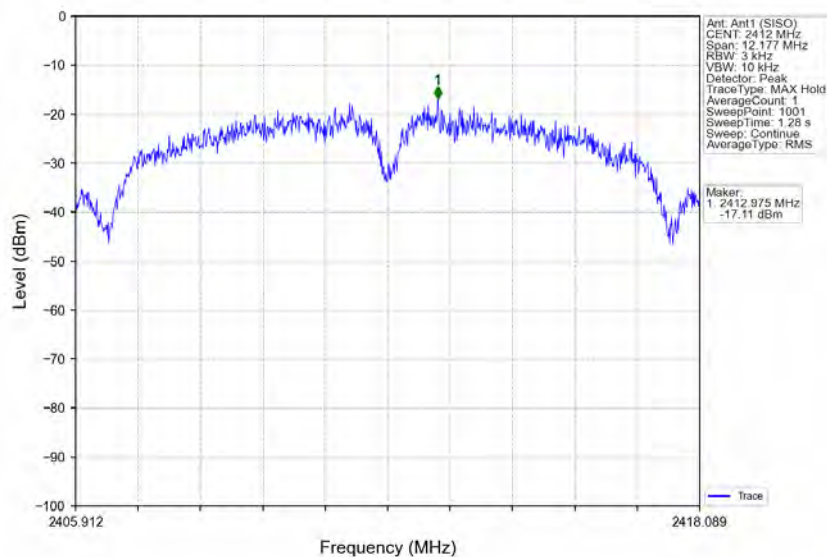
CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCRM240600106701

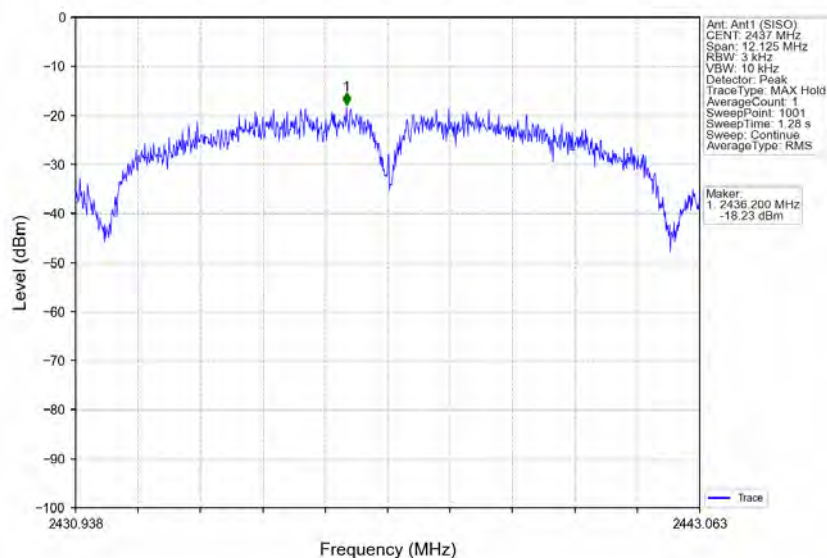
Page: 99 of 122

### 4.1.2 Test Graph

802.11b\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



802.11b\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



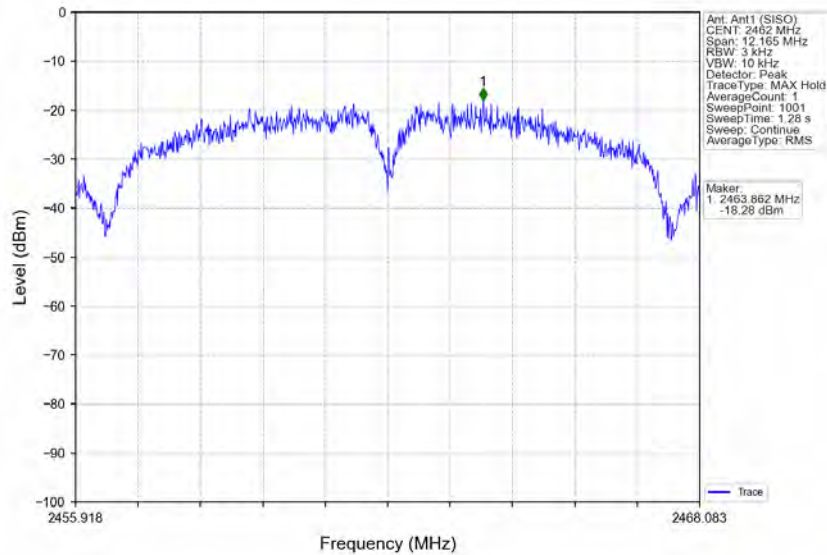
## Compliance Certification Services (Kunshan) Inc.

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

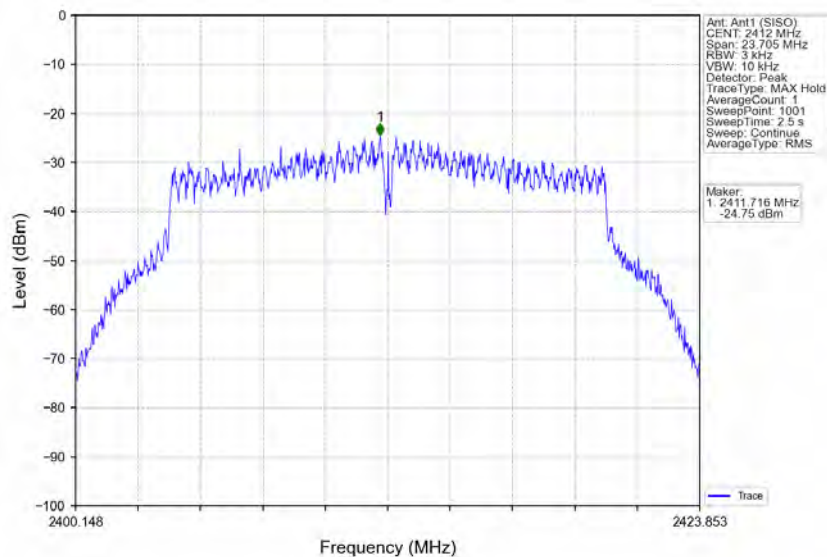
Report No.: KSCR240600106701

Page: 100 of 122

802.11b HCH 2462MHz Ant1 (SISO) NTN



802.11g LCH 2412MHz Ant1 (SISO) NTN



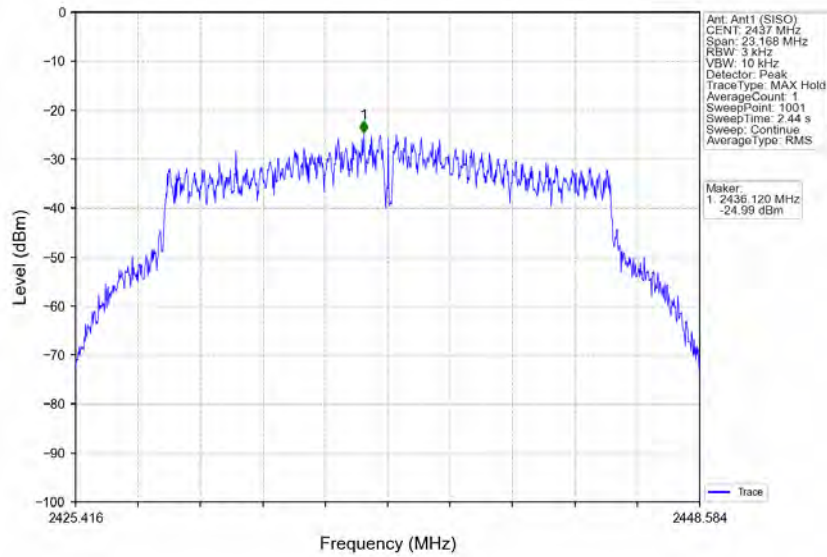
## Compliance Certification Services (Kunshan) Inc.

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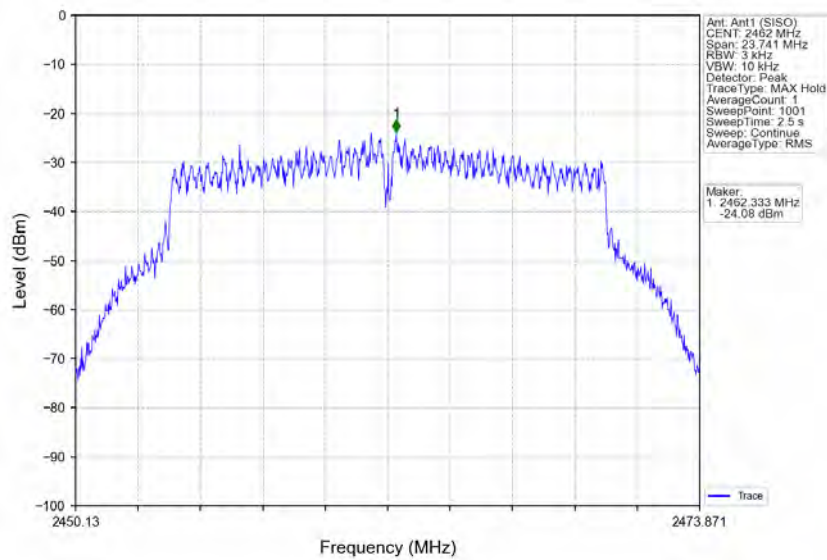
Report No.: KSCR240600106701

Page: 101 of 122

802.11g\_MCH\_2437MHz\_Ant1 (SISO) NTN



802.11g\_HCH\_2462MHz\_Ant1 (SISO) NTN



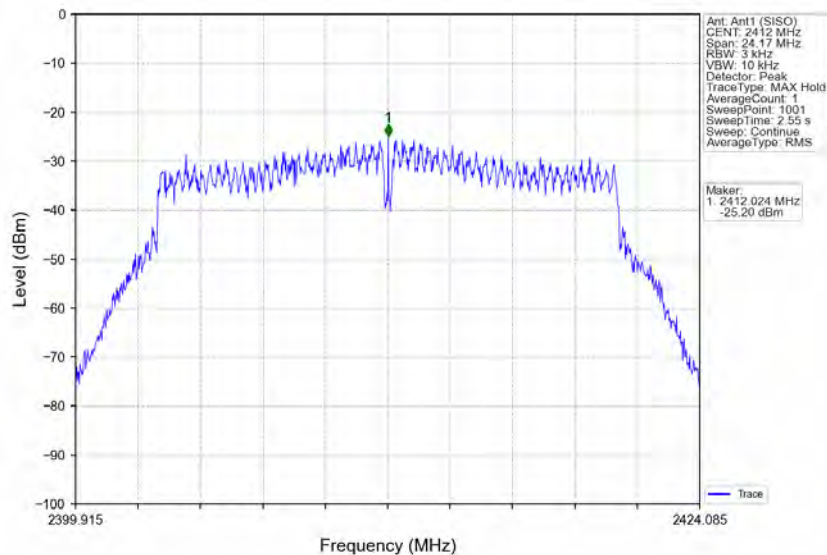
## Compliance Certification Services (Kunshan) Inc.

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

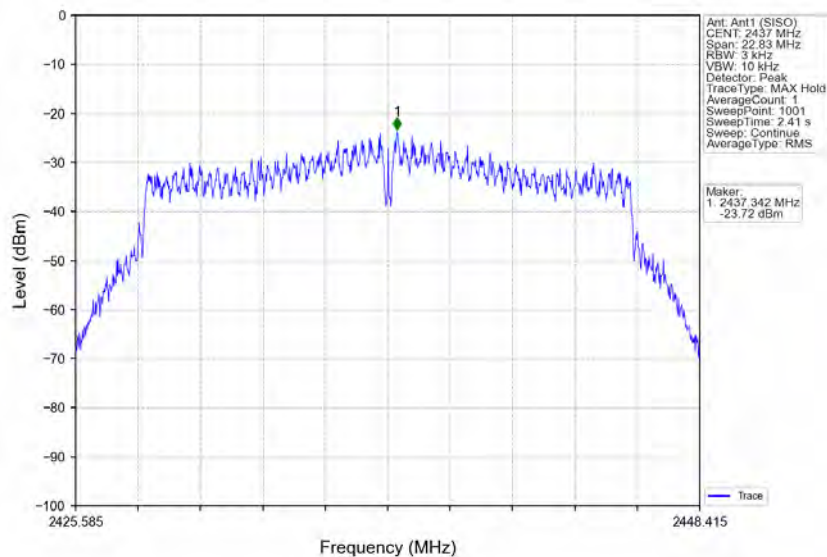
Report No.: KSCR240600106701

Page: 102 of 122

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



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



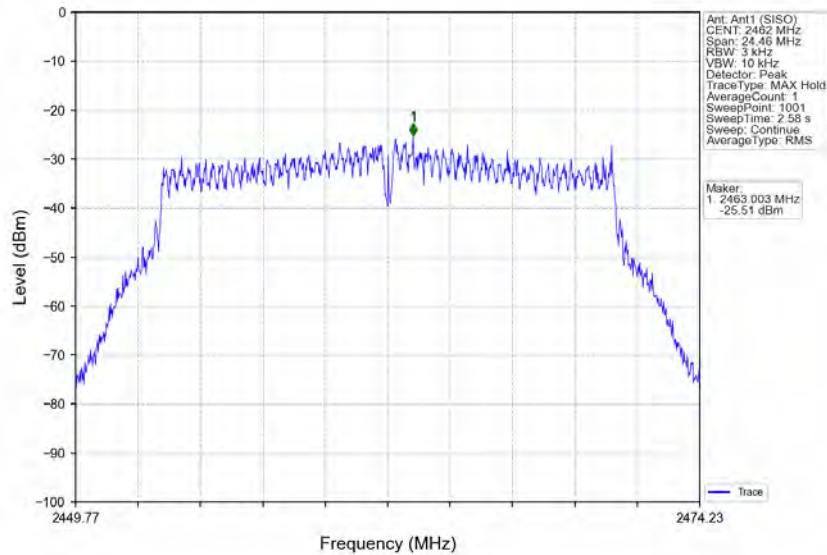
## Compliance Certification Services (Kunshan) Inc.

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

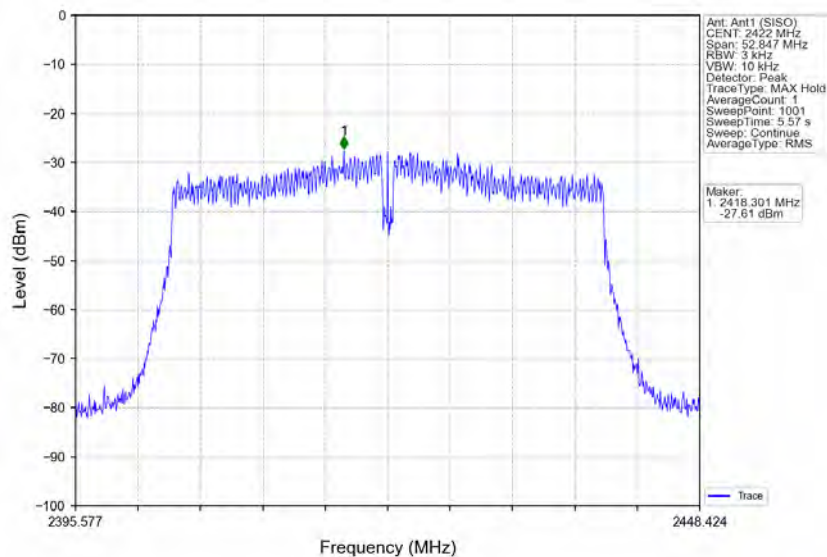
Report No.: KSCR240600106701

Page: 103 of 122

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



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



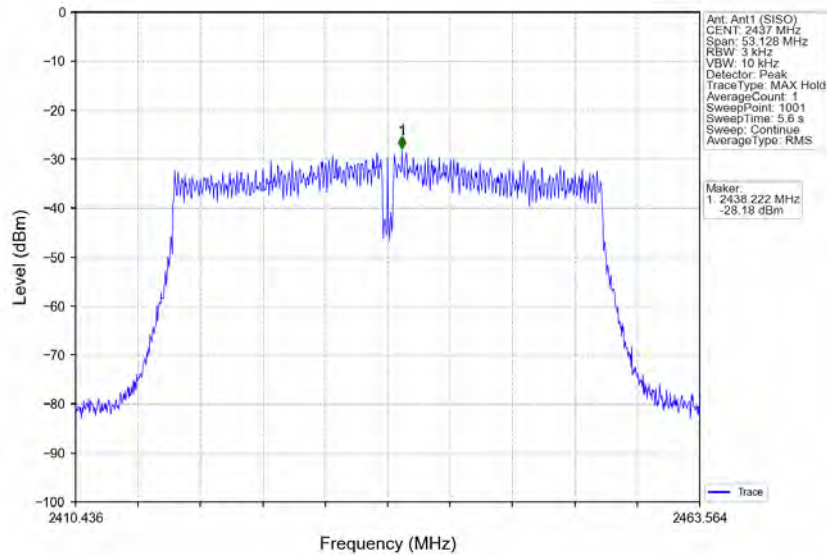
## Compliance Certification Services (Kunshan) Inc.

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

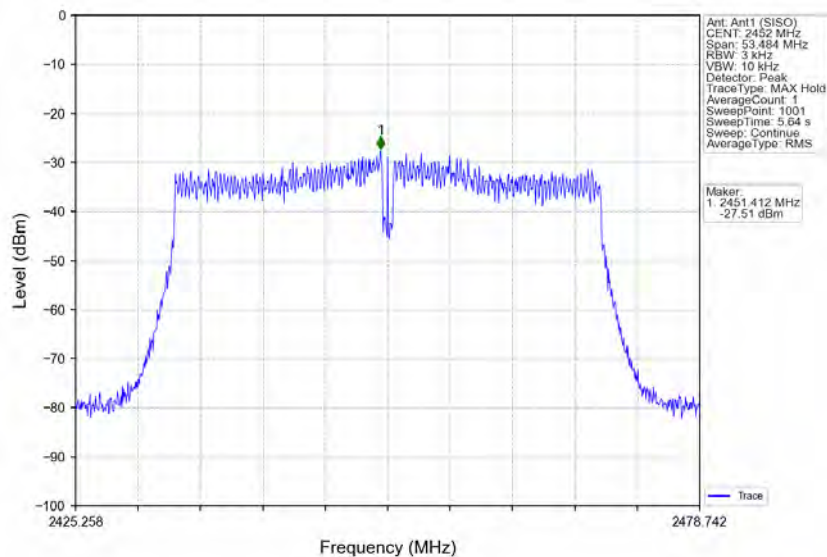
Report No.: KSCR240600106701

Page: 104 of 122

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.: KSCR240600106701

Page: 105 of 122

### 5. Unwanted Emissions In Non-restricted Frequency Bands

#### 5.1 Ref

##### 5.1.1 Test Result

| Mode           | TX Type | Frequency (MHz) | ANT | Level of Reference (dBm) |
|----------------|---------|-----------------|-----|--------------------------|
| 802.11b        | SISO    | 2412            | 1   | -3.07                    |
|                |         | 2437            | 1   | -3.08                    |
|                |         | 2462            | 1   | -3.11                    |
| 802.11g        | SISO    | 2412            | 1   | -12.33                   |
|                |         | 2437            | 1   | -12.33                   |
|                |         | 2462            | 1   | -11.74                   |
| 802.11n (HT20) | SISO    | 2412            | 1   | -11.70                   |
|                |         | 2437            | 1   | -11.91                   |
|                |         | 2462            | 1   | -11.88                   |
| 802.11n (HT40) | SISO    | 2422            | 1   | -14.19                   |
|                |         | 2437            | 1   | -14.59                   |
|                |         | 2452            | 1   | -14.44                   |

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.

## Compliance Certification Services (Kunshan) Inc.

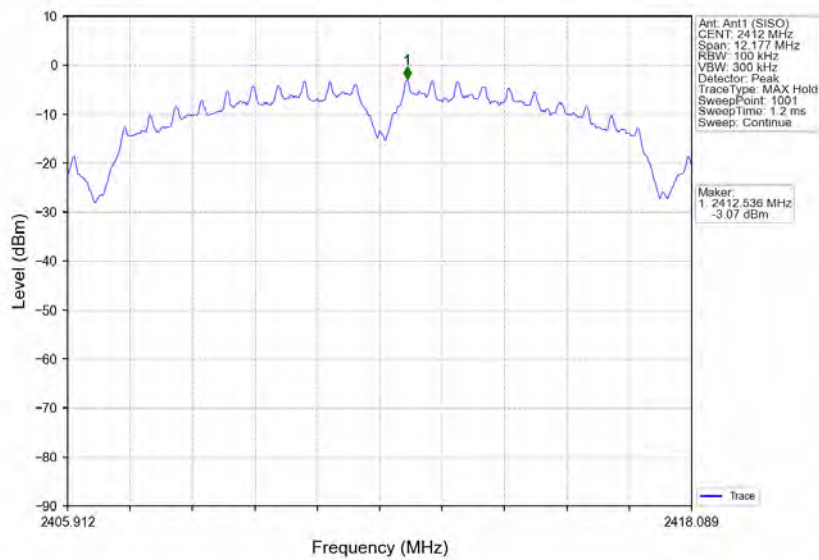
CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCRM240600106701

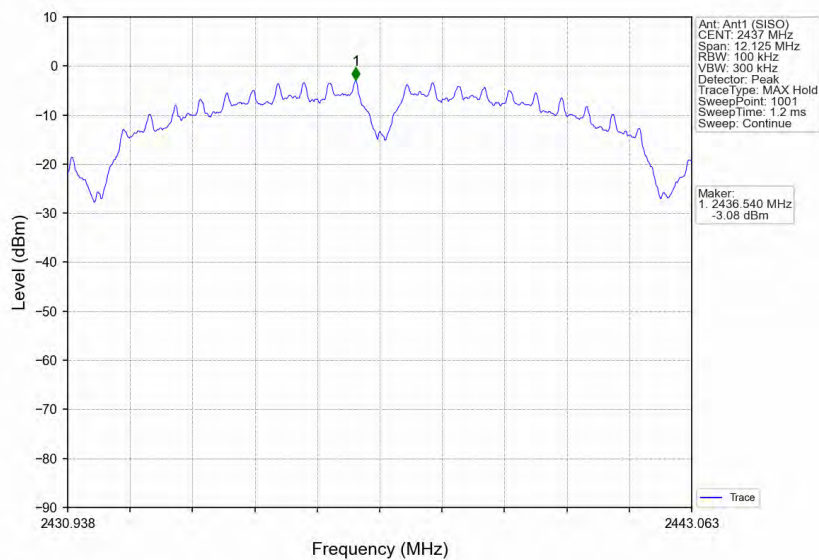
Page: 106 of 122

### 5.1.2 Test Graph

802.11b\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



802.11b\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



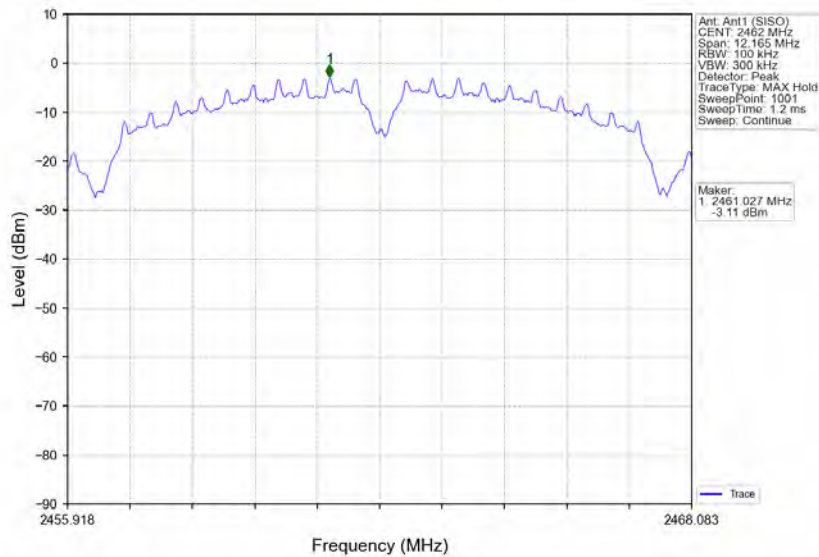
## Compliance Certification Services (Kunshan) Inc.

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

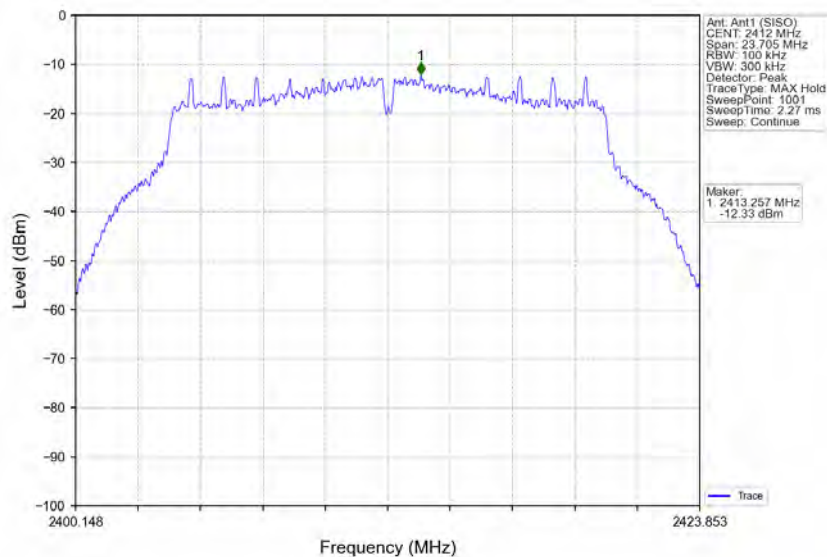
Report No.: KSCER240600106701

Page: 107 of 122

802.11b HCH 2462MHz Ant1 (SISO) NTN



802.11g LCH 2412MHz Ant1 (SISO) NTN



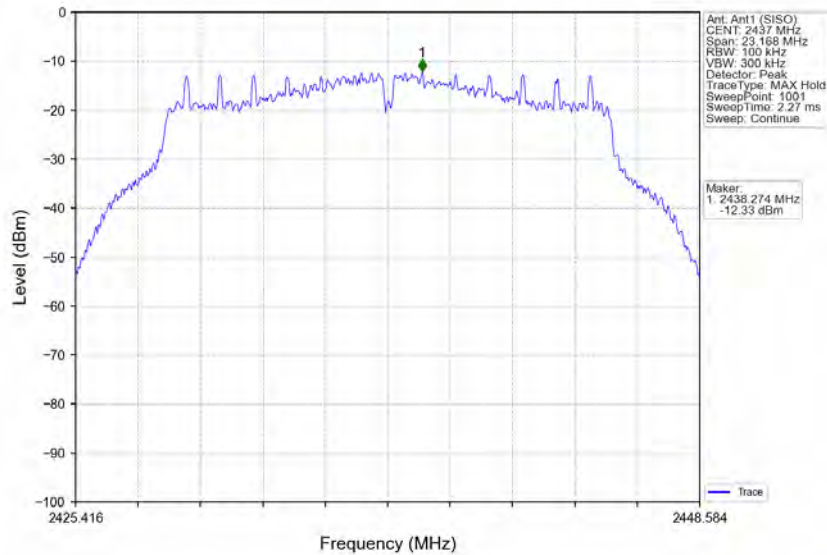
## Compliance Certification Services (Kunshan) Inc.

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

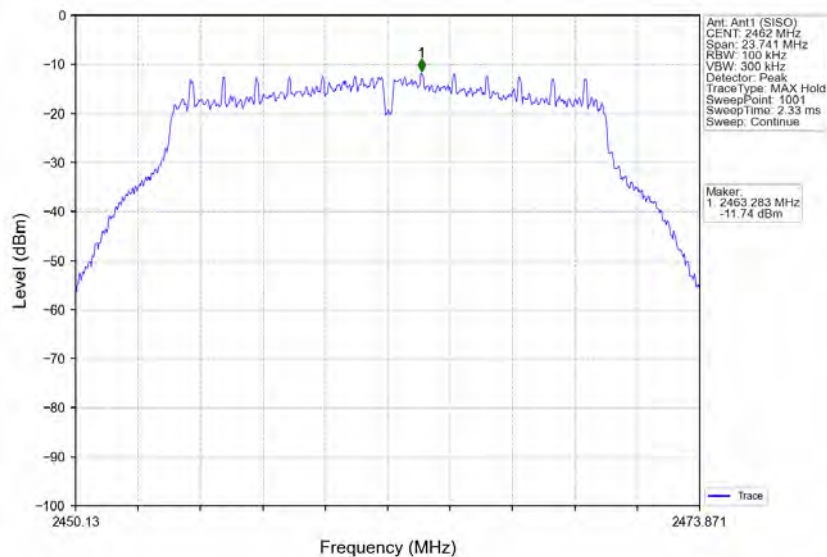
Report No.: KSCR240600106701

Page: 108 of 122

802.11g\_MCH\_2437MHz\_Ant1 (SISO) NTN



802.11g\_HCH\_2462MHz\_Ant1 (SISO) NTN



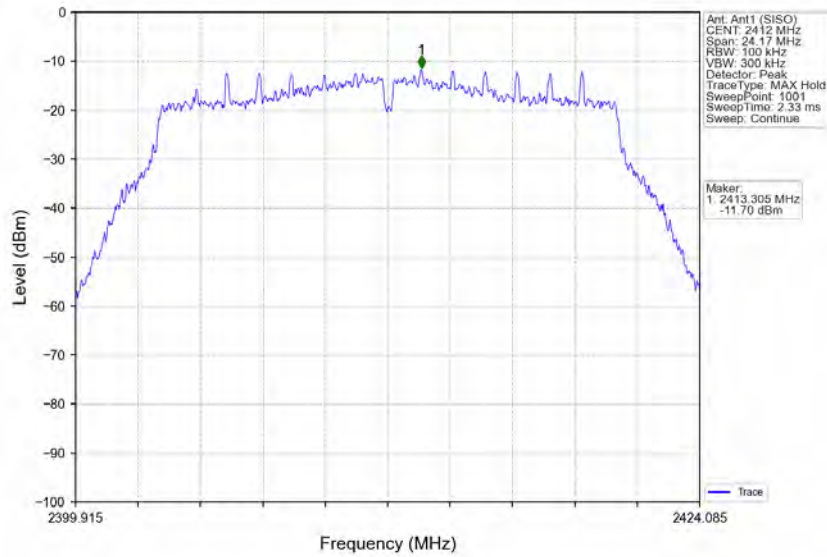
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CCSEM-TRF-001 Rev. 02 Sep 01, 2023

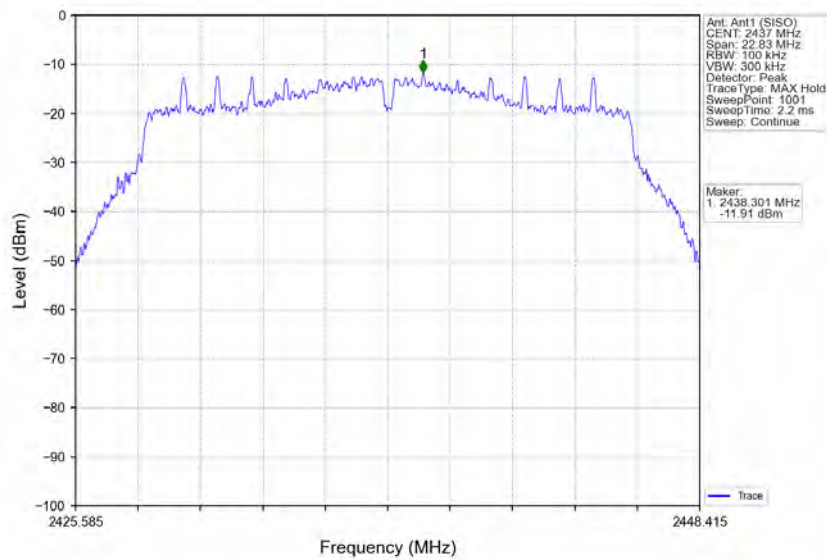
Report No.: KSCR240600106701

Page: 109 of 122

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



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



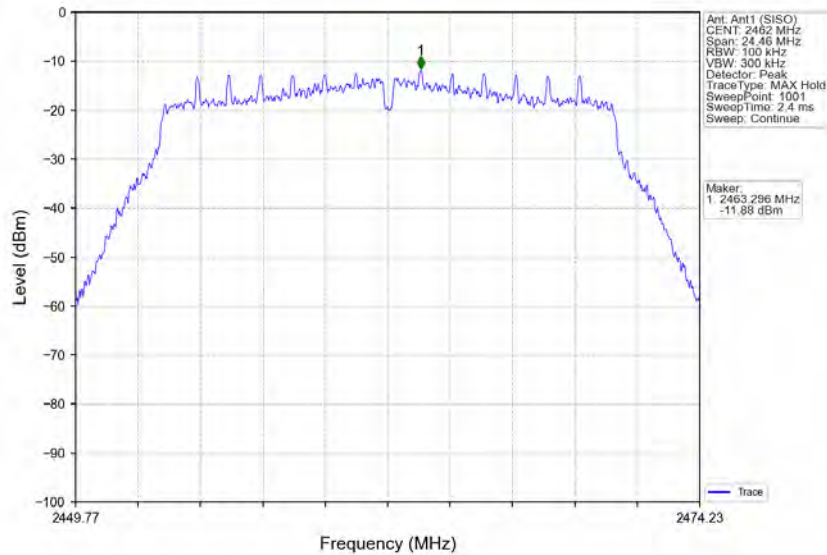
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CCSEM-TRF-001 Rev. 02 Sep 01, 2023

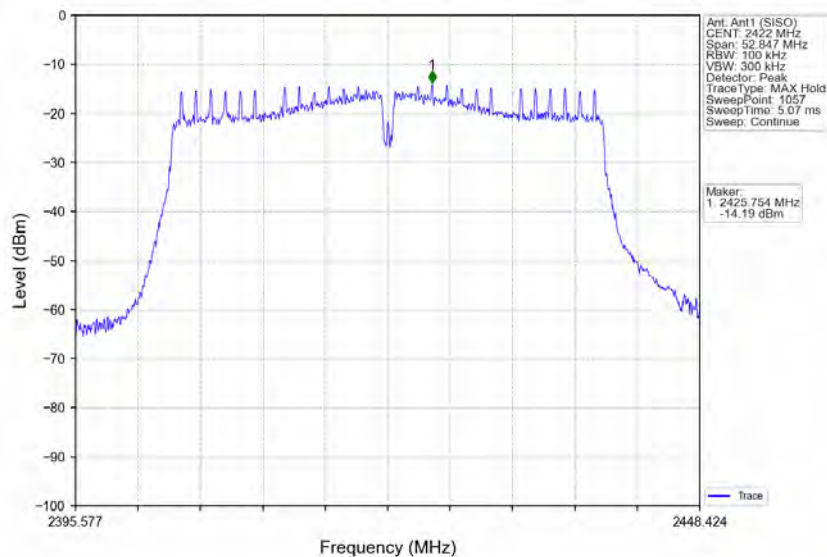
Report No.: KSCR240600106701

Page: 110 of 122

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



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



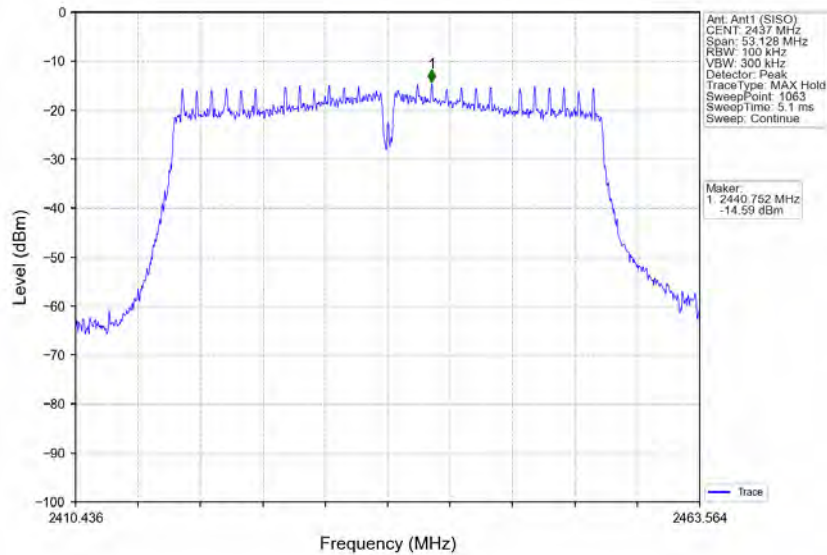
## Compliance Certification Services (Kunshan) Inc.

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

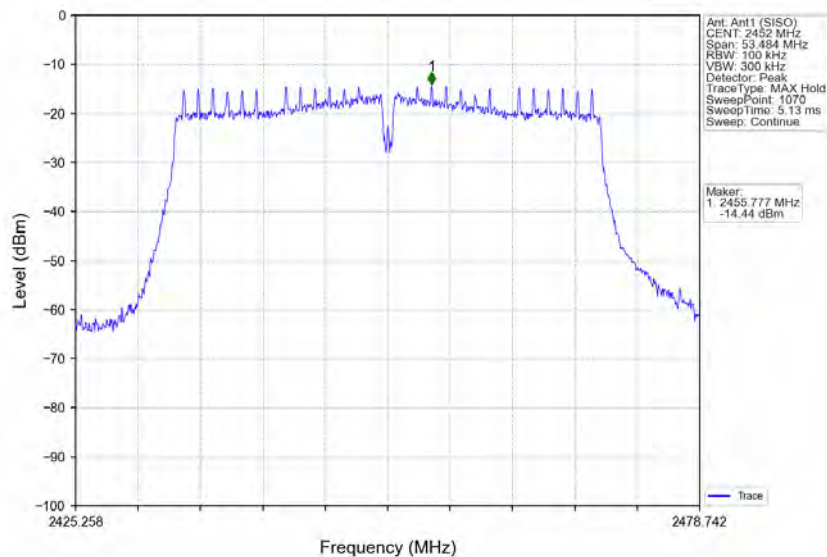
Report No.: KSCR240600106701

Page: 111 of 122

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.: KSCR240600106701

Page: 112 of 122

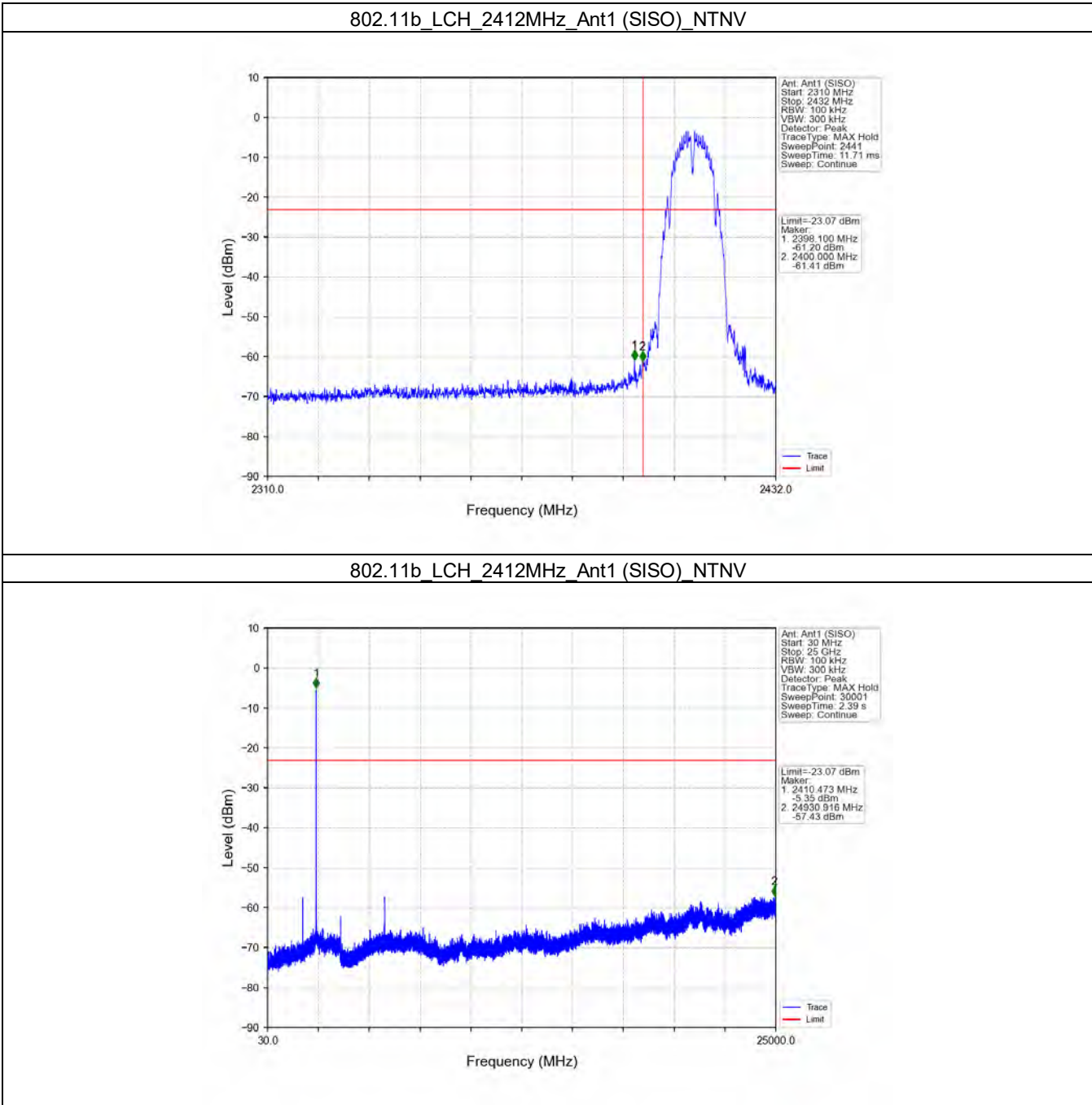
### 5.2 CSE

#### 5.2.1 Test Result

| Mode           | TX Type | Frequency (MHz) | ANT | Level of Reference (dBm) | Limit (dBm) | Verdict |
|----------------|---------|-----------------|-----|--------------------------|-------------|---------|
| 802.11b        | SISO    | 2412            | 1   | -3.07                    | -23.07      | Pass    |
|                |         | 2437            | 1   | -3.07                    | -23.07      | Pass    |
|                |         | 2462            | 1   | -3.07                    | -23.07      | Pass    |
| 802.11g        | SISO    | 2412            | 1   | -11.74                   | -31.74      | Pass    |
|                |         | 2437            | 1   | -11.74                   | -31.74      | Pass    |
|                |         | 2462            | 1   | -11.74                   | -31.74      | Pass    |
| 802.11n (HT20) | SISO    | 2412            | 1   | -11.70                   | -31.70      | Pass    |
|                |         | 2437            | 1   | -11.70                   | -31.70      | Pass    |
|                |         | 2462            | 1   | -11.70                   | -31.70      | Pass    |
| 802.11n (HT40) | SISO    | 2422            | 1   | -14.19                   | -34.19      | Pass    |
|                |         | 2437            | 1   | -14.19                   | -34.19      | Pass    |
|                |         | 2452            | 1   | -14.19                   | -34.19      | 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.

### 5.2.2 Test Graph



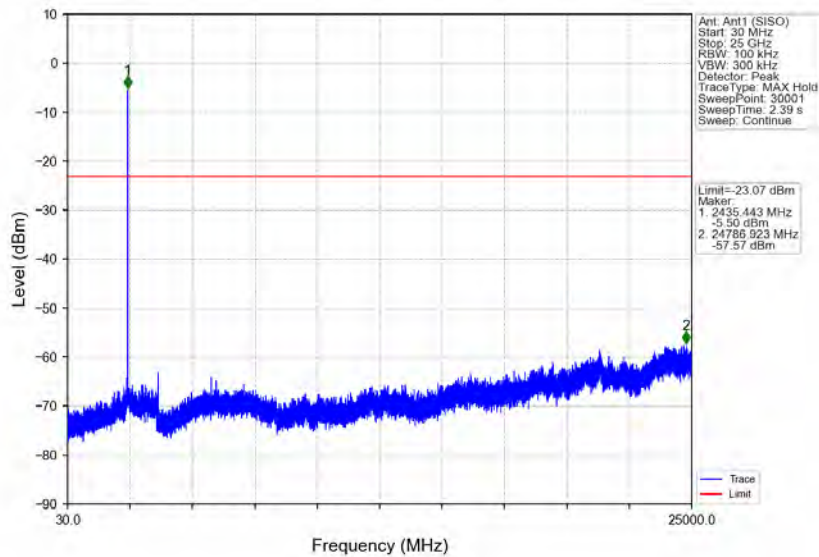
## Compliance Certification Services (Kunshan) Inc.

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

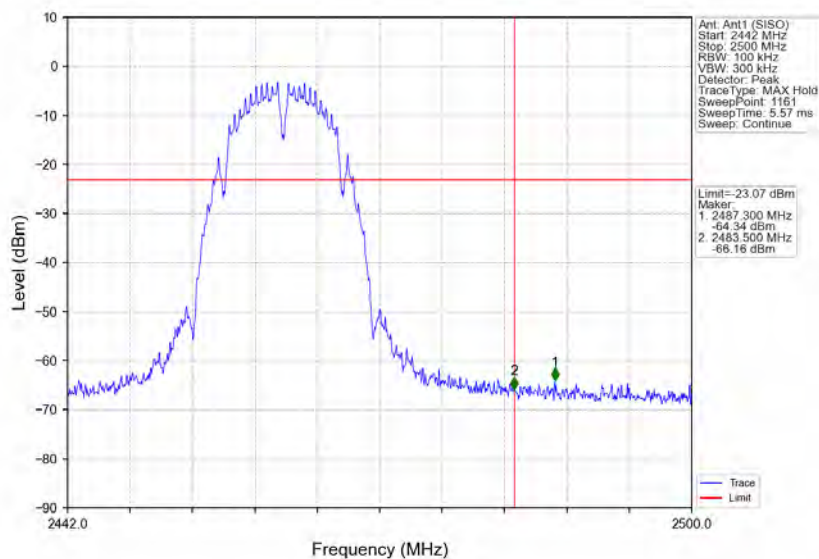
Report No.: KSCR240600106701

Page: 114 of 122

802.11b MCH 2437MHz Ant1 (SISO) NTV



802.11b HCH 2462MHz Ant1 (SISO) NTV



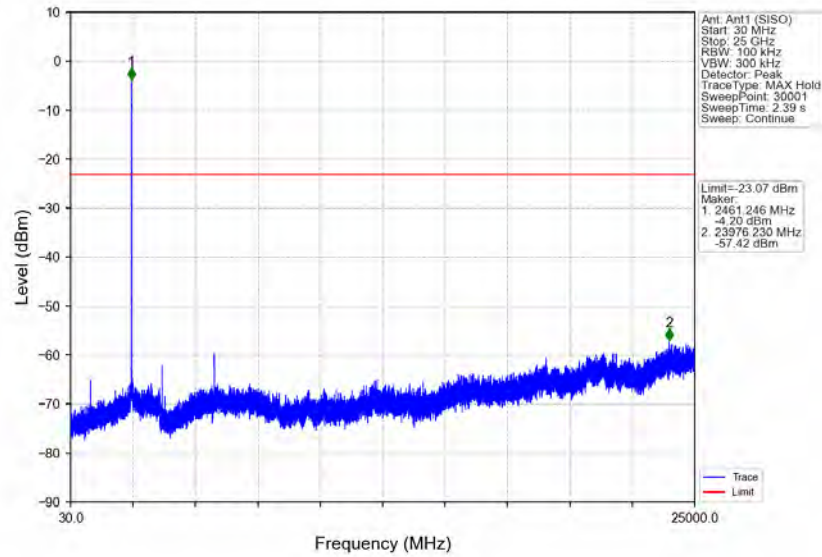
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CCSEM-TRF-001 Rev. 02 Sep 01, 2023

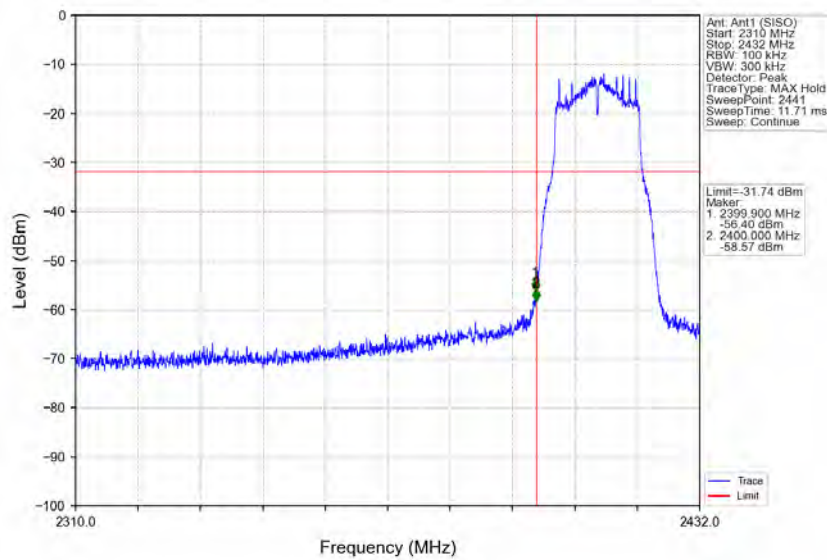
Report No.: KSCR240600106701

Page: 115 of 122

### 802.11b HCH 2462MHz Ant1 (SISO) NTN



### 802.11g LCH 2412MHz Ant1 (SISO) NTN



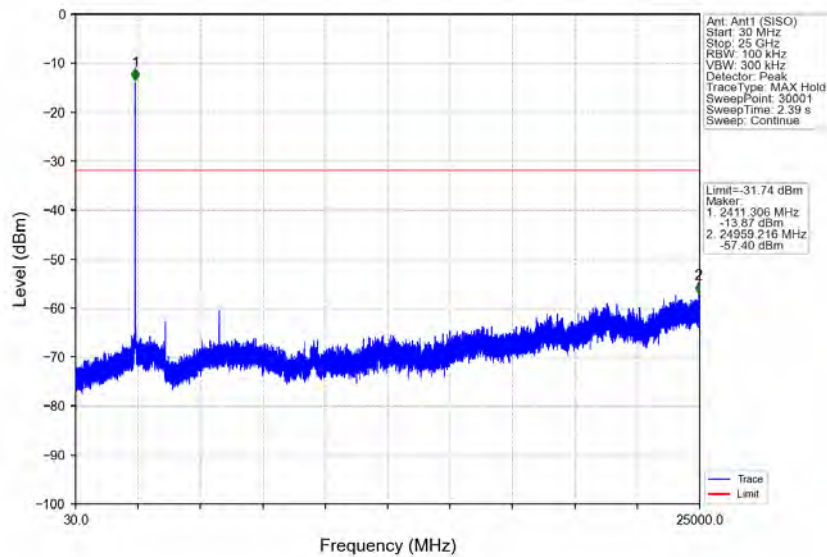
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CCSEM-TRF-001 Rev. 02 Sep 01, 2023

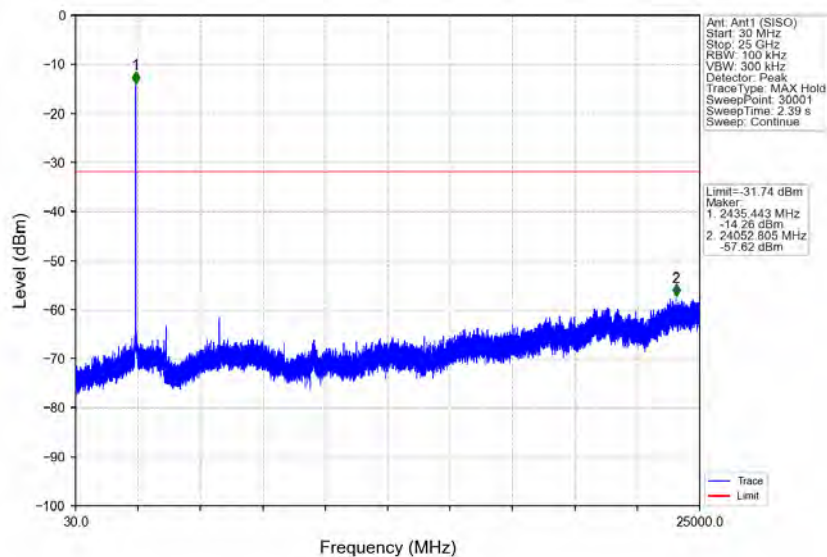
Report No.: KSCR240600106701

Page: 116 of 122

### 802.11g LCH 2412MHz Ant1 (SISO) NTN



### 802.11g MCH 2437MHz Ant1 (SISO) NTN



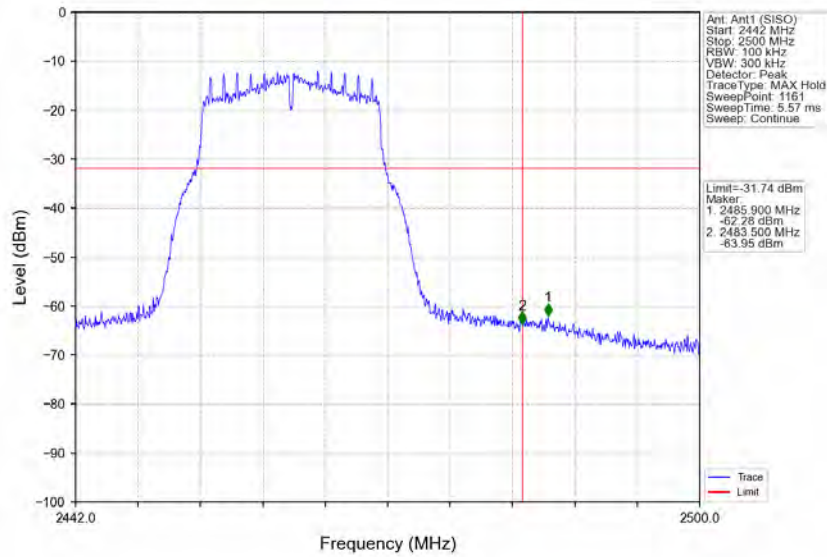
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CCSEM-TRF-001 Rev. 02 Sep 01, 2023

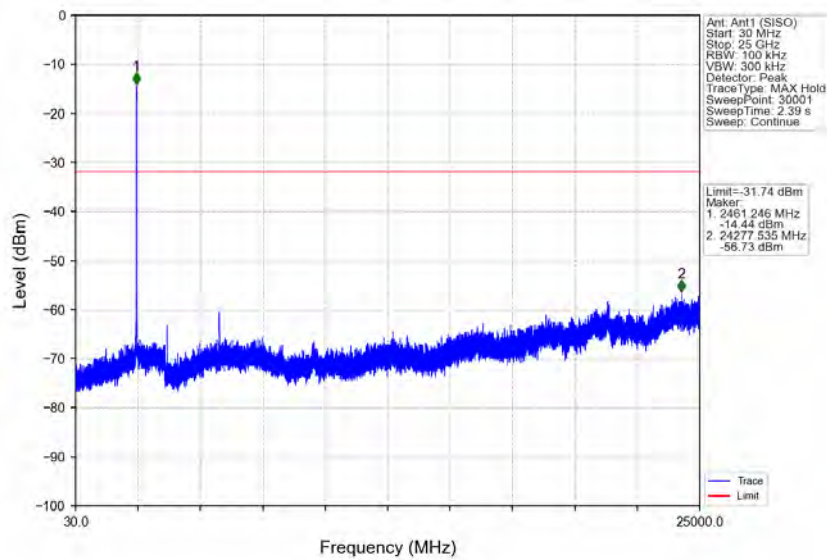
Report No.: KSCR240600106701

Page: 117 of 122

802.11g HCH 2462MHz Ant1 (SISO) NTNV



802.11g HCH 2462MHz Ant1 (SISO) NTNV



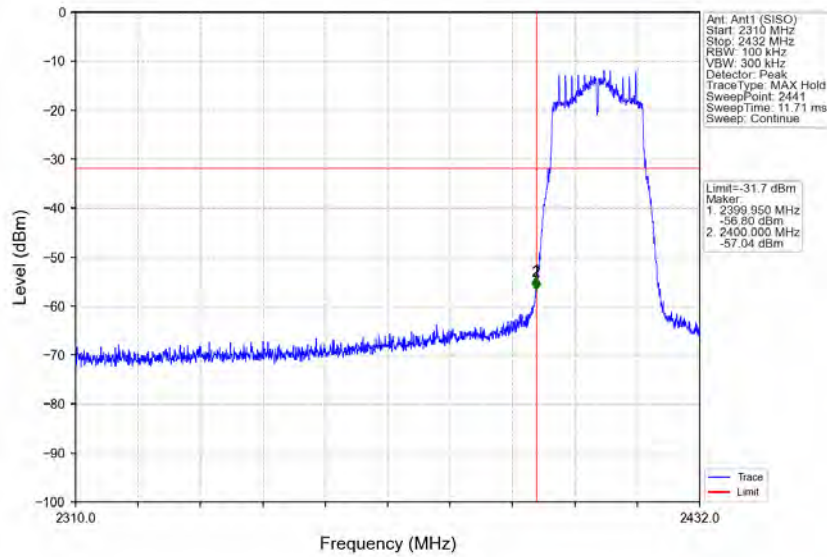
## Compliance Certification Services (Kunshan) Inc.

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

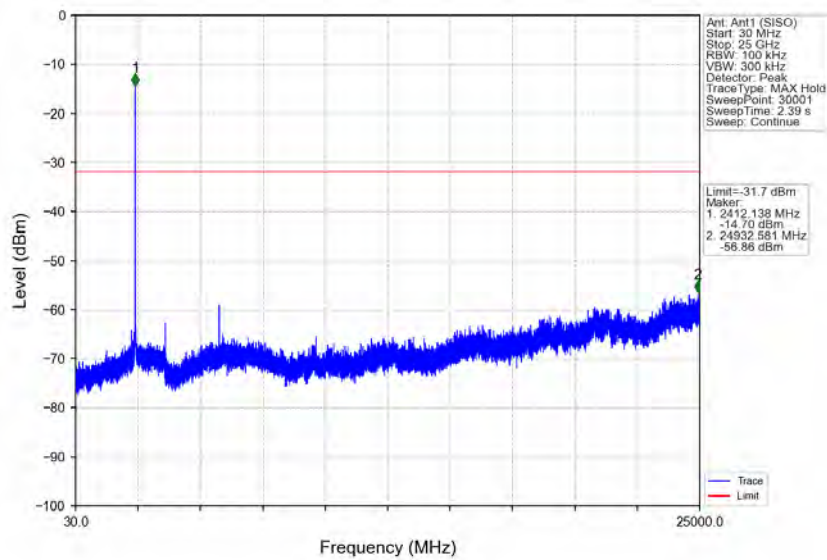
Report No.: KSCR240600106701

Page: 118 of 122

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



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



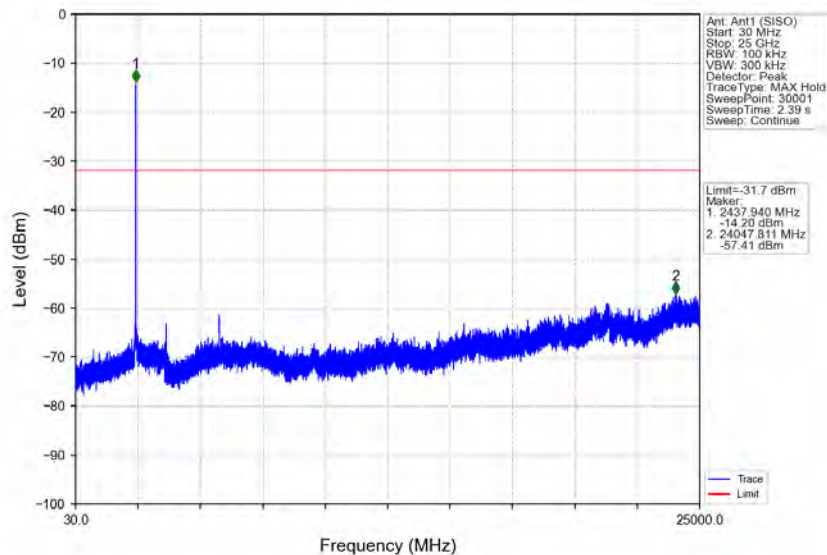
## Compliance Certification Services (Kunshan) Inc.

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

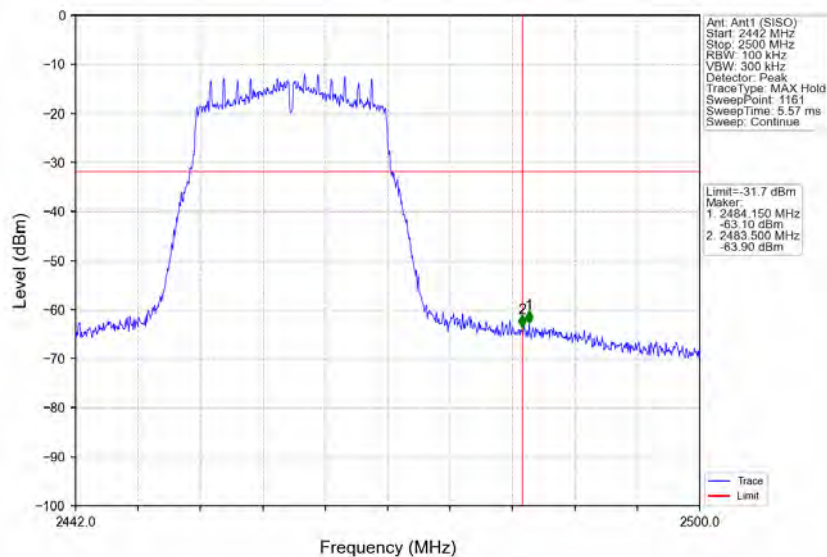
Report No.: KSCR240600106701

Page: 119 of 122

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



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



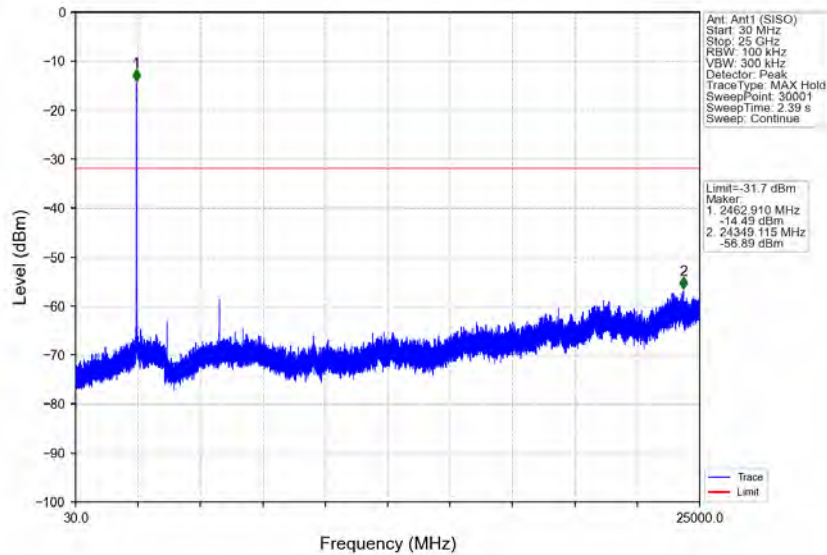
## Compliance Certification Services (Kunshan) Inc.

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

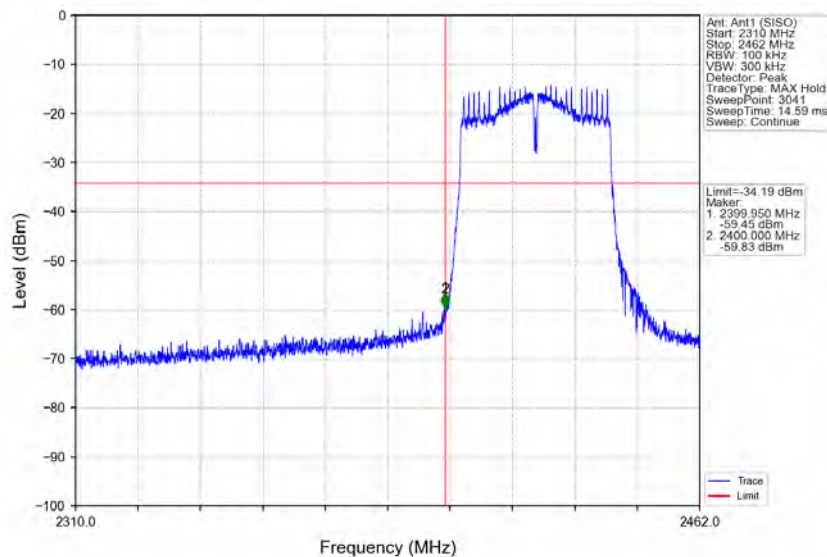
Report No.: KSCR240600106701

Page: 120 of 122

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



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



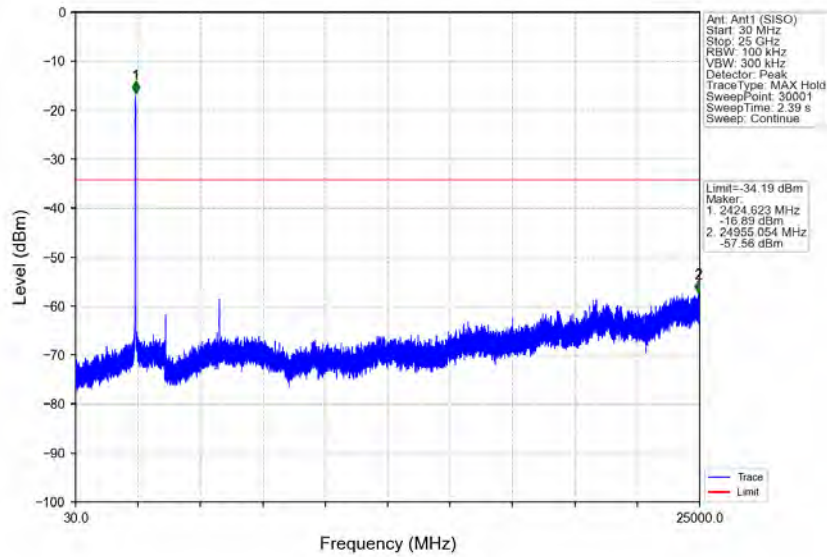
## Compliance Certification Services (Kunshan) Inc.

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

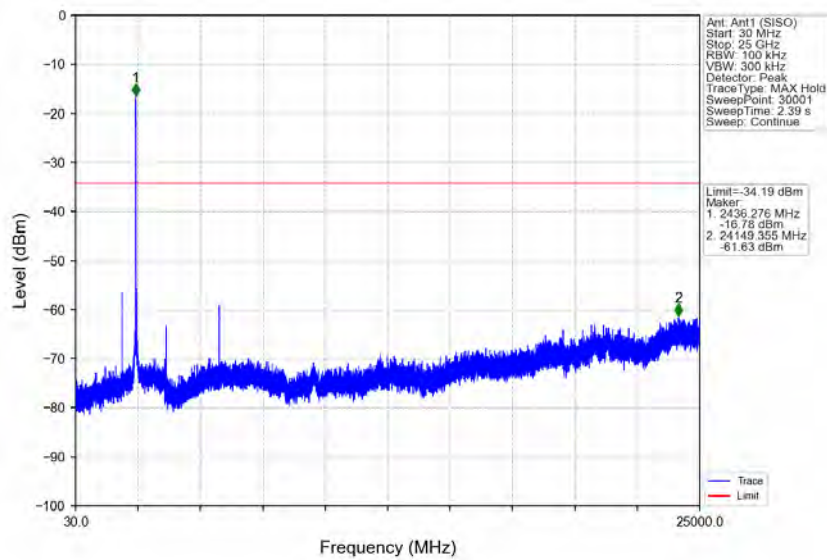
Report No.: KSCR240600106701

Page: 121 of 122

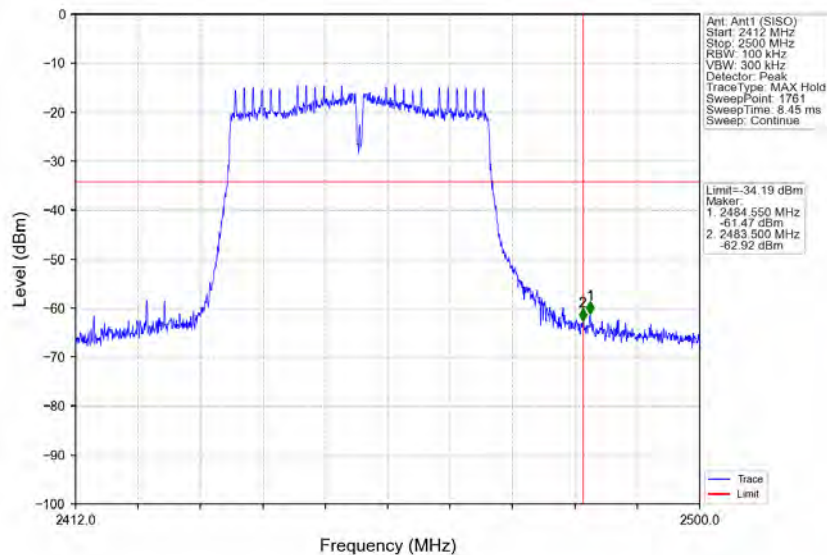
802.11n(HT40) LCH 2422MHz Ant1 (SISO) NTN



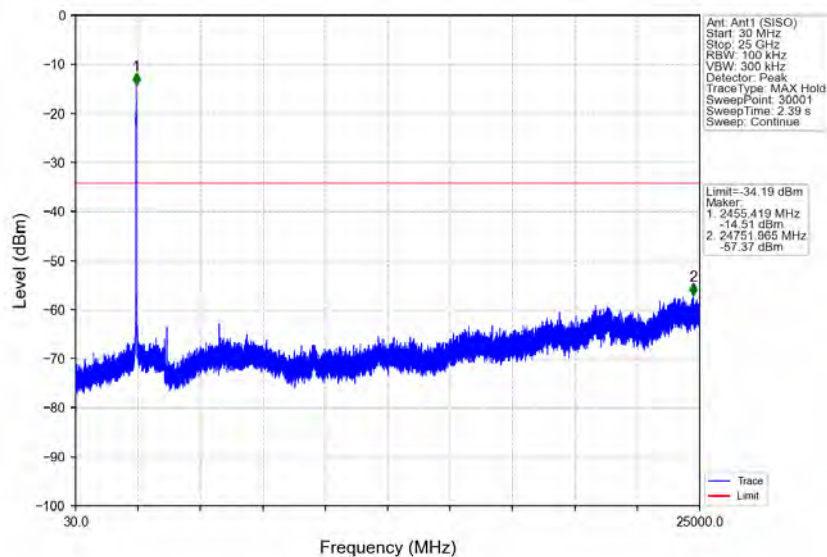
802.11n(HT40) MCH 2437MHz Ant1 (SISO) NTN



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



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



- End of the Report -