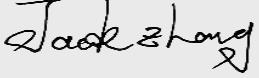


Test report No:  
24B0779R-RF-US-P07V03

## FCC TEST REPORT

|   |  |
|---|--|
| Product Name                                | Cat4 indoor CPE  |
| Trademark                                   | Smawave  |
| Model and /or type reference                | SRD221-b   |
| FCC ID                                      | 2AU8HSRD221-B  |
| Applicant's name / address                  | Shanghai Smawave Technology Co. ,Ltd<br>2/F, Building 8, 1001 North Qinzhou Road, Xuhui District,<br>Shanghai, China |
| Test method requested, standard             | 47 CFR FCC Part 2, Part 25<br>ANSI C63.26: 2015<br>ANSI/TIA-603-E: 2016  |
| Verdict Summary                             | IN COMPLIANCE  |
| Documented by (name / position & signature) | Tim Cao / Project Manager<br>     |
| Approved by (name / position & signature)   | Jack Zhang / Manager<br>          |
| Date of issue                               | 2024-12-25   |
| Report Version                              | V1.0   |
| Report template No                          | Template_Part 25-RF-V1.0   |

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## COMPETENCES AND GUARANTEES

DEKRA is a testing laboratory competent to carry out the tests described in this report.

In order to assure the traceability to other national and international laboratories, DEKRA has a calibration and maintenance program for its measurement equipment.

DEKRA guarantees the reliability of the data presented in this report, which is the result of the measurements and the tests performed to the item under test on the date and under the conditions stated in the report and it is based on the knowledge and technical facilities available at DEKRA at the time of performance of the test.

DEKRA is liable to the client for the maintenance of the confidentiality of all information related to the item under test and the results of the test.

The results presented in this Test Report apply only to the particular item under test established in this document.

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## GENERAL CONDITIONS

|                      |  |
|----------------------|--|
| Test Location        | No. 99, Hongye Road, Suzhou Industrial Park Suzhou, 215006, P.R. China |
| Date(receive sample) | Nov. 25, 2024  |
| Date (start test)    | Nov. 30, 2024  |
| Date (finish test)   | Dec. 25, 2024  |

1. This report is only referred to the item that has undergone the test.
2. This report does not constitute or imply on its own an approval of the product by the Certification Bodies or Competent Authorities.
3. This document is only valid if complete; no partial reproduction can be made without previous written permission of DEKRA.
4. This test report cannot be used partially or in full for publicity and/or promotional purposes without previous written permission of DEKRA.

## ENVIRONMENTAL CONDITIONS

The climatic conditions during the tests are within the limits specified by the manufacturer for the operation of the EUT and the test equipment. The climatic conditions during the tests were within the following limits:

|                       |               |
|-----------------------|---------------|
| Ambient temperature   | 15 °C – 35 °C |
| Relative Humidity air | 30% - 60%     |

If explicitly required in the basic standard or applied product / product family standard the climatic values are recorded and documented separately in this test report.

## POSSIBLE TEST CASE VERDICTS

|   |                 |
|---|-----------------|
| Test case does not apply to test object | N/A             |
| Test object does meet requirement       | P (Pass) / PASS |
| Test object does not meet requirement   | F (Fail) / FAIL |
| Not measured                            | N/M             |

## ABBREVIATIONS

For the purposes of the present document, the following abbreviations apply:

|       |                               |
|-------|-------------------------------|
| EUT   | : Equipment Under Test        |
| QP    | : Quasi-Peak                  |
| CAV   | : CISPR Average               |
| AV    | : Average                     |
| CDN   | : Coupling Decoupling Network |
| SAC   | : Semi-Anechoic Chamber       |
| OATS  | : Open Area Test Site         |
| BW    | : Bandwidth                   |
| AM    | : Amplitude Modulation        |
| PM    | : Pulse Modulation            |
| HCP   | : Horizontal Coupling Plane   |
| VCP   | : Vertical Coupling Plane     |
| $U_N$ | : Nominal voltage             |
| $T_x$ | : Transmitter                 |
| $R_x$ | : Receiver                    |
| N/A   | : Not Applicable              |
| N/M   | : Not Measured                |

## DOCUMENT HISTORY

| Report No.            | Version | Description              | Issued Date |
|-----------------------|---------|--------------------------|-------------|
| 24B0779R-RF-US-P07V03 | V1.0    | Initial issue of report. | 2024-12-25  |
|                       |         |                          |             |
|                       |         |                          |             |
|                       |         |                          |             |
|                       |         |                          |             |
|                       |         |                          |             |
|                       |         |                          |             |
|                       |         |                          |             |

## REMARKS AND COMMENTS

1. The equipment under test (EUT) does meet the essential requirements of the stated standard(s)/test(s).
2. This report is a limited report on the installation of a test module in a Cat4 indoor CPE, and the customer declares that the RF parameters of the module installed in the host computer are exactly the same as those of the certified module. We verified the RF output power and radiated emissions of the equipment. For other test data, please refer to FCC ID: HSW-TY1SCDM. These test results on a sample of the device are for the purpose of demonstrating Compliance with 47 CFR FCC Part 2 & 25.
3. The measurement result is considered in conformance with the requirement if it is within the prescribed limit, It is not necessary to account the uncertainty associated with the measurement result.
4. The test results relate only to the samples tested.
5. The test report shall not be reproduced without the written approval of DEKRA Testing and Certification (Suzhou) Co., Ltd.
6. This report will not be used for social proof function in China market.
7. DEKRA declines any responsibility with the following test data provided by customer that may affect the validity of result:
  - Chapter 1.1 General Description of the Item(s);
  - Chapter 1.2 Antenna Information;
  - Chapter 1.3 Channel List.

## USED EQUIPMENT

### RF Output Power / TR7

| Instrument  | Manufacturer | Model No.     | Serial No. | Cal. Date  | Next Cal. Date | Firmware Version | Software Version |
|---|--------------|---------------|------------|------------|----------------|------------------|------------------|
| Wideband Radio Communication Tester                           | R&S          | CMW 500       | 158243     | 2024.05.15 | 2025.05.14     | X 4.0.62.11      | N/A              |
| Signal analyzer   | R&S          | FSV30         | 104212     | 2024.07.06 | 2025.07.05     | 3.40             | N/A              |
| ESG Vector Signal Generator                                   | Agilent      | E4438C        | MY49070163 | 2024.10.19 | 2025.10.18     | C.05.85          | N/A              |
| RF Control Unit   | Tonscend     | JS0806-1      | 168060022  | 2024.06.11 | 2025.06.10     | N/A              | N/A              |
| PSG Analog Signal Generator                                   | Keysight     | E8257D        | MY60020890 | 2024.03.09 | 2025.03.08     | C.06.27          | N/A              |
| High and low temperature and fast temperature change test box | ASTUOD       | ASTD-FBT-225K | N/A        | 2024.04.21 | 2025.04.20     | N/A              | N/A              |
| Temperature/Humidity Meter                                    | RTS          | RTS-1909      | THM-036    | 2024.05.17 | 2025.05.16     | N/A              | N/A              |
| Temperature/Humidity Meter                                    | RTS          | RTS-1909      | THM-037    | 2024.05.17 | 2025.05.16     | N/A              | N/A              |
| Test Software   | Tonscend     | JS1120        | JS1120-8   | N/A        | N/A            | N/A              | V3.1.46          |

### Radiated Emission(9KHz-1GHz) / AC2

| Instrument                          | Manufacturer | Model No.    | Serial No. | Cal. Date  | Next Cal. Date | Firmware Version | Software version |
|-------------------------------------|--------------|--------------|------------|------------|----------------|------------------|------------------|
| Wideband Radio Communication Tester | R&S          | CMW 500      | 158243     | 2024.05.15 | 2025.05.14     | X 4.0.62.11      | N/A              |
| EMI Test Receiver                   | R&S          | ESCI         | 100176     | 2024.05.12 | 2025.05.11     | 4.42 SP3         | N/A              |
| Loop Antenna                        | R&S          | HFH2-Z2E     | 101149     | 2024.03.27 | 2025.03.26     | N/A              | N/A              |
| Bilog Antenna                       | Teseq GmbH   | CBL6112D     | 27611      | 2024.03.20 | 2025.03.19     | N/A              | N/A              |
| Antenna Pedestal                    | MF           | MFT-515DBSN  | 1308282    | N/A        | N/A            | N/A              | N/A              |
| Temperature/Humidity Meter          | RTS          | RTS-1909     | THM-021    | 2024.05.17 | 2025.05.16     | N/A              | N/A              |
| Coaxial Cable                       | Huber+Suhner | SUCOFLEX 106 | AC2-C      | 2024.04.27 | 2025.04.26     | N/A              | N/A              |
| Dekra test software                 | Dekra        | N/A          | N/A        | N/A        | N/A            | N/A              | 3                |

## Radiated Emission (1GHz-40GHz) / AC5

| Instrument                          | Manufacturer | Model No.          | Serial No.    | Cal. Date  | Next Cal. Date | Firmware Version | Software version |
|-------------------------------------|--------------|--------------------|---------------|------------|----------------|------------------|------------------|
| Wideband Radio Communication Tester | R&S          | CMW 500            | 158243        | 2024.05.15 | 2025.05.14     | X 4.0.62.11      | N/A              |
| EXA Spectrum Analyzer               | Keysight     | N9020B             | MY60112218    | 2024.11.02 | 2025.11.01     | A.31.05          | N/A              |
| Pre-Amplifier                       | SKET         | LNPA_0118 G-45     | SK2021090 101 | 2024.04.27 | 2025.04.26     | N/A              | N/A              |
| Preamplifier                        | CHENGYI      | EMC184045 SE       | 980263        | 2024.07.06 | 2025.07.05     | N/A              | N/A              |
| DRG Horn                            | ETS-Lindgren | 3117               | 00123988      | 2024.09.16 | 2025.09.15     | N/A              | N/A              |
| Antenna Pedestal                    | MF           | MFT-515DBSN        | 1308702       | N/A        | N/A            | N/A              | N/A              |
| Broad-Band Horn Antenna             | Schwarzbeck  | BBHA9170           | 294           | 2024.05.30 | 2025.05.29     | N/A              | N/A              |
| Filter Switch Box                   | MVE          | MSW-F196           | C070001S      | 2024.04.20 | 2025.04.19     | N/A              | N/A              |
| Coaxial Cable                       | ROSENBERGER  | LA1-C011-2000/3000 | AC5-40G       | 2024.01.25 | 2025.01.24     | N/A              | N/A              |
| Coaxial Cable                       | ROSENBERGER  | LA1-C011-2000/3000 | AC5-40G-2     | 2024.05.26 | 2025.05.25     | N/A              | N/A              |
| Cable                               | Rosenberger  | LA1-C011-1000      | 0523          | 2024.05.26 | 2025.05.25     | N/A              | N/A              |
| Temperature/Humidity Meter          | RTS          | RTS-1909           | THM-001       | 2024.07.11 | 2025.07.10     | N/A              | N/A              |
| Temperature/Humidity Meter          | RTS          | RTS-1909           | THM-024       | 2024.05.17 | 2025.05.16     | N/A              | N/A              |
| Dekra test software                 | Dekra        | N/A                | N/A           | N/A        | N/A            | N/A              | 3                |

## UNCERTAINTY

Uncertainties have been calculated according to the DEKRA internal document. The reported expanded uncertainties are based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95%. The Uncertainties is complice with standard required as below.

| Test item          | Uncertainty |
|--------------------|-------------|
| RF Output Power    | ±1.2 dB     |
| Radiated Emissions | ±3.2 dB     |

## 1 GENERAL INFORMATION

### 1.1 General Description of the Item(s)

|                             |  |
|-----------------------------|--|
| Product Name .....          | Cat4 indoor CPE  |
| Model No. ....              | SRD221-b   |
| Trademark.....              | Smawave  |
| FCC ID.....                 | 2AU8HSRD221-B  |
| Hardware Version.....       | V1.0   |
| Software Version.....       | STX1160_V1.0.1   |
| Manufacturer.....           | Shanghai Smawave Technology Co. ,Ltd                                       |
| Manufacturer Address .....  | 2/F, Building 8, 1001 North Qinzhou Road · Xuhui District, Shanghai, China |
| Factory.....                | Shanghai Smawave Technology Co. ,Ltd                                       |
| Factory address .....       | 2/F, Building 8, 1001 North Qinzhou Road · Xuhui District, Shanghai, China |
| Operating temperature ..... | -10°C~45°C   |

|                              |                   |
|------------------------------|-------------------|
| Wireless specification.....  | LTE               |
| Module .....                 | LBAD0XX1SC-DM     |
| Support Band(s) .....        | NTN Band 255      |
| Frequency Range.....         | 1626.7-1659.9 MHz |
| Channel Bandwidth(MHz) ..... | 3.75 kHz / 15 kHz |
| Type of Modulation.....      | BPSK, QPSK        |

| Rated power supply..... | Voltage and Frequency                                   |                                |
|-------------------------|---|--------------------------------|
|                         | <input type="checkbox"/>                                | AC: 220 - 240 V, 50/60 Hz      |
|                         | <input type="checkbox"/>                                | AC: 100 - 240 V, 50/60 Hz      |
|                         | <input checked="" type="checkbox"/>                     | Adapter:                       |
| Adapter Model.....      | TPA259-18120-US   |                                |
|                         | Input: 100-240V ~ 50/60Hz,0.6A<br>Output: 12.0V / 1.5 A |                                |
| UPS Model.....          | KFL-U02-5000  |                                |
|                         | Input: 12.0V / 1.5 A<br>Output: 12.0V / 1.5 A (Max)     |                                |
| Mounting position ..... | <input type="checkbox"/>                                | Tabletop equipment             |
|                         | <input checked="" type="checkbox"/>                     | Wall/Ceiling mounted equipment |
|                         | <input type="checkbox"/>                                | Floor standing equipment       |
|                         | <input type="checkbox"/>                                | Hand-held/Portable equipment   |
|                         | <input type="checkbox"/>                                | Other:                         |

## 1.2 Antenna Information

|                          |                                     |           |   |
|--------------------------|-------------------------------------|-----------|---|
| Antenna Delivery .....   | <input checked="" type="checkbox"/> | 1TX + 1RX |   |
|                          | <input type="checkbox"/>            | 2TX + 2RX |   |
| Antenna technology ..... | <input checked="" type="checkbox"/> | SISO      |   |
|                          | <input type="checkbox"/>            | MIMO      |   |
| Antenna Type .....       | <input type="checkbox"/>            | External  | <input type="checkbox"/> Dipole<br><input type="checkbox"/> Fixed               |
|                          | <input checked="" type="checkbox"/> | Internal  | <input checked="" type="checkbox"/> PCB<br><input type="checkbox"/> Others..... |
| Antenna Gain.....        | NTN Band 255: 1.97 dBi              |           |   |

Note: The General Description of the Item , antenna information, Channel List for the EUT in clause 1 are provided and confirmed by the client.

## 2 DESCRIPTION OF TEST SETUP

### 2.1 Operating mode(s) used for tests

During the tests the following operating mode(s) has(have) been used.

|           |                                  |
|-----------|----------------------------------|
| Test Mode | Mode 1: Transmit by NTN Band 255 |
|-----------|----------------------------------|

Notes :

1. For portable device, radiated tests was verified over X, Y, Z axis, and shown the worst case on this report.

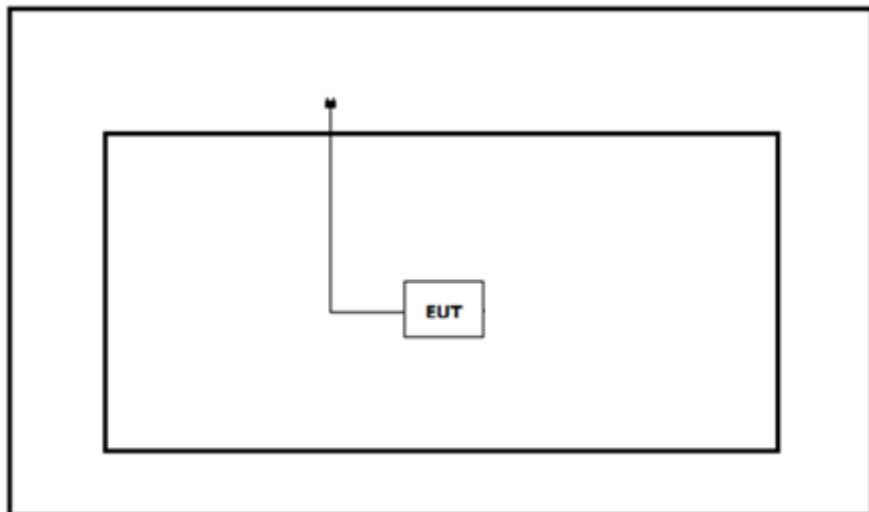
### 2.2 Auxiliary equipment / Test software for the EUT

| Auxiliary equipment | Type / Version | Manufacturer | Supplied by |
|---------------------|----------------|--------------|-------------|
| CMW 500             | X 4.0.62.11    | R&S          | N/A         |
| N/A                 | N/A            | N/A          | N/A         |
| N/A                 | N/A            | N/A          | N/A         |
| software            | Type / Version | Manufacturer | Supplied by |
| N/A                 | N/A            | N/A          | N/A         |

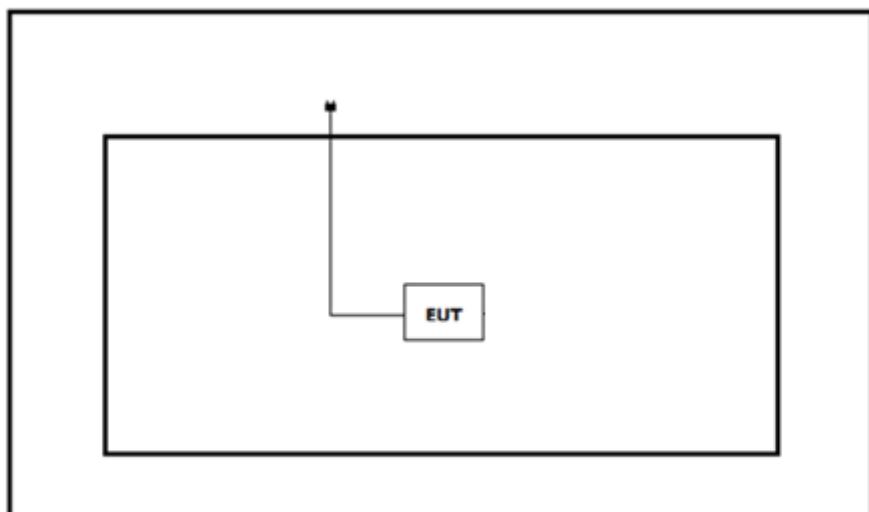
| Accessories Information | Cable                          |                                     |                                     |
|-------------------------|--------------------------------|-------------------------------------|-------------------------------------|
|                         | Length used during test<br>[m] | Attached during<br>test             | Shielded                            |
| (2)USB Control Cable    | 1                              | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| (3)USB Control Cable    | 8                              | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

## 2.3 Test Configuration / Block diagram used for tests

Test setup Diagram- Conducted test



Test setup Diagram- Radiated Emission



## **2.4 Testing process**

|   |  |
|---|--|
| 1 | Setup the EUT and simulators as shown on above.            |
| 2 | Turn on the power of all equipment.                        |
| 3 | EUT Communicate with CMW 500, then select channel to test. |

### 3 VERDICT SUMMARY SECTION

This chapter presents an overview of standards and results. Refer to the next chapters for details of measured test results and applied test levels.

#### 3.1 Standards

| Standard                 | Year | Description  |
|--------------------------|------|--|
| FCC CFR Title 47 Part 2  | 2024 | Frequency Allocations and Radio Treaty Matters; General Rules and Regulations  |
| FCC CFR Title 47 Part 25 | 2024 | Satellite communications   |
| ANSI C63.26              | 2015 | American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services  |
| ANSI TIA-603-E           | 2016 | Land Mobile FM or PM Communications Equipment Measurement and performance Standards  |
| KDB971168 D01 v03r01     | 2018 | Measurement Guidance for Certification of Licensed Digital Transmitters  |
| KDB971168 D02 v02r02     | 2023 | Miscellaneous and Basic Review and Approval Items for Transmitting Equipment Used in Licensed Radio Services   |
| KDB412172 D01 v01r01     | 2015 | Many FCC rule parts specify power and/or emission limits in terms of the transmitter system (transmitter, radiating antenna, and cable connector) effective radiated power (ERP) or equivalent (or effective) isotropically radiated power (EIRP). |

#### 3.2 Deviation(s) from the Standard(s) / Test Specification(s)

The following deviation(s) was / were made from the published requirements of the listed standards: N/A.

(Please define the deviations from the standard(s) if applicable)

### 3.3 Overview of results

#### NTN Band 255

| Test Item   | FCC Rule No.           | Requirements                               | Verdict    |
|---|------------------------|--|------------|
| Effective (Isotropic) Radiated Power Output Data      | §2.1046,<br>§25.204(a) | Note 1                                     | PASS       |
| Emissions Mask  | §25.202(f)             | Note 2                                     | See Remark |
| Additional Unwanted Emission                          | §25.216(c) (e) (h)     | Note 3, 4                                  | PASS       |
| Carrier-Off State Emissions                           | §25.216(i)             | e.i.r.p. density<br><-80 dBW/MHz(=-50 dBm) | PASS       |
| Occupied Bandwidth                                    | §2.1049                | OBW: No limit.<br>EBW: No limit.           | See Remark |
| Conducted Spurious Emissions                          | §25.202(f)(3)          | <43+ 10 log (P) dB (=-13dBm)               | See Remark |
| Radiated Spurious and Harmonic Emissions              | §25.202(f)(3)          | <43+ 10 log (P) dB (=-13dBm)               | PASS       |
| Frequency stability/ variation of ambient temperature | §25.202(d)             | 0.001 % or 10 ppm                          | See Remark |

**Remark:**

Only the Effective (Isotropic) Radiated Power Output Data and Radiated Spurious Emission were fully tested.

These items please refer to the NTN Module report TERF2406001815E2.

The FCC ID is HSW-TY1SCDM has been certified, and the test report issued by SGS Taiwan Ltd. on 27/09/2024.

**Notes:**

1. + 40 dBW in any 4 kHz band for  $0 \leq 0^\circ$ , + 40 + 30 dBW in any 4 kHz band for  $0^\circ < 0 \leq 5^\circ$
2. (1) In any 4 kHz band, the center frequency of which is removed from the assigned frequency by more than 50 percent up to and including 100 percent of the authorized bandwidth: 25 dB;  
 (2) In any 4 kHz band, the center frequency of which is removed from the assigned frequency by more than 100 percent up to and including 250 percent of the authorized bandwidth: 35 dB;  
 (3) In any 4 kHz band, the center frequency of which is removed from the assigned frequency by more than 250 percent of the authorized bandwidth: An amount equal to 43 dB plus 10 times the logarithm (to the base 10) of the transmitter power in watts;
3. Wide Band(e.i.r.p. density): Linear interpolation from -70 dBW/MHz(= -40dBm/MHz) at 1605 MHz to -46dBW/MHz(= -16 dBm/MHz) at 1610 MHz.
4. NarrowBand(e.i.r.p.): Linear interpolation from -80 dBW(= -50dBm) at 1605 MHz to -56 dBW(= -26 dBm) at 1610 MHz.

| Requirement – Test case                          | Basic standard(s) | Verdict | Remark                                      |
|--|-------------------|---------|---|
| Effective (Isotropic) Radiated Power Output Data | FCC Part 25       | PASS    | Test data please refer to <b>Appendix A</b> |
| Radiated Spurious and Harmonic Emissions         | FCC Part 25       | PASS    | Test data please refer to <b>Appendix B</b> |
| Additional Unwanted Emission                     | FCC Part 25       | PASS    | Test data please refer to <b>Appendix C</b> |
| Carrier-Off State Emissions                      | FCC Part 25       | PASS    | Test data please refer to <b>Appendix D</b> |

### 3.4 Test Matrix

| Test item  | Model : Cat4 indoor CPE             |                                     |
|--|-------------------------------------|-------------------------------------|
|  | SN: NI1Hv8Dn9Vw6                    | SN: Ka1Mn0Xf6Lx2                    |
| Effective (Isotropic) Radiated Power Output Data | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| Radiated Spurious and Harmonic Emissions         | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Additional Unwanted Emission                     | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| Carrier-Off State Emissions                      | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |

Note1: The only difference between sample #1 and sample #2 is whether to keep the original antenna, sample #1 is a conduction test product that removes the original antenna and is equipped with SMA wires, and sample #2 is a complete product that retains the original antenna.

### **3.5 Test Facility**

|            |  |
|------------|--|
| <b>USA</b> | <b>:</b> <b>FCC Designation Number: CN1199</b> |
|------------|--|

## 4 TEST RESULTS

### 4.1 Effective (Isotropic) Radiated Power Output

**VERDICT: PASS**

#### 4.1.1 Limit

##### Standard Part NO.

47 CFR FCC Part 2 (Section 2.1046)

47 CFR FCC Part 25 (Section 25.204)

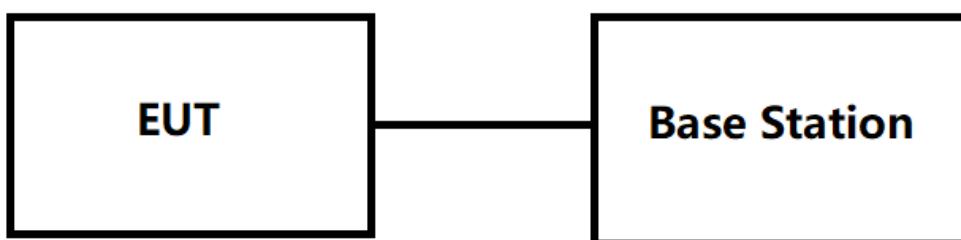
UE Power Class:3 (23 +/-2dBm).The allowed aximum Power Reduction (MPR) for the maximum output poweldue to higher order modulation and transmit bandwidth configruation (resource blocks) is specified in Table 6.2.3-of the 3GPP TS36.101.

**Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 3**

| Modulation | Channel bandwidth / Transmission bandwidth (RB) |         |       |        |        |        | MPR (dB) |
|------------|---|---------|-------|--------|--------|--------|----------|
|            | 1.4 MHz   | 3.0 MHz | 5 MHz | 10 MHz | 15 MHz | 20 MHz |          |
| QPSK       | > 5   | > 4     | > 8   | > 12   | > 16   | > 18   | ≤ 1      |
| 16 QAM     | ≤ 5   | ≤ 4     | ≤ 8   | ≤ 12   | ≤ 16   | ≤ 18   | ≤ 1      |
| 16 QAM     | > 5   | > 4     | > 8   | > 12   | > 16   | > 18   | ≤ 2      |

The allowed A-MPR values specified below in Table 6.2.4.-1 of 3GP TS36.101 are in addition to the allowedMPR reauirements, All the measurements below were performed with A-MPR disabled, by using NetworkSignaling Value of"NS 01".3

#### 4.1.2 Test Setup



#### 4.1.3 Test Procedure

|                                     | References Rule  | Chapter | Item                                   |
|-------------------------------------|------------------|---------|--|
| <input checked="" type="checkbox"/> | ANSI C63.26-2015 | 5.2     | RF output power measurement procedures |

The conducted RF Output Power measurements were made at the RF output terminals of the EUT using the power meter of the Universal Radio Communication tester R&S CMW500, selecting maximum transmission power of the EUT and different modes of modulation.

Peak to average ratio(PAPR) is used equation  $PAPR(dB) = PPK(dBm) - PAVG(dBm)$ , where PPK is measured peak power, and PAVG is measured average power.

The maximum equivalent isotropically radiated power(e.i.r.p.) is calculated by adding the declared maximum antenna gain(dBi).

The maximum effective radiated power e.r.p. is calculated form the maximum equivalent isotropically radiated power(e.i.r.p.) by subtracting 2.15 dB:  $E.R.P = E.I.R.P. - 2.15 \text{ dB}$

## 4.2 Radiated Spurious and Harmonic Emissions

**VERDICT: PASS**

### 4.2.1 Limit

#### Standard Part NO.

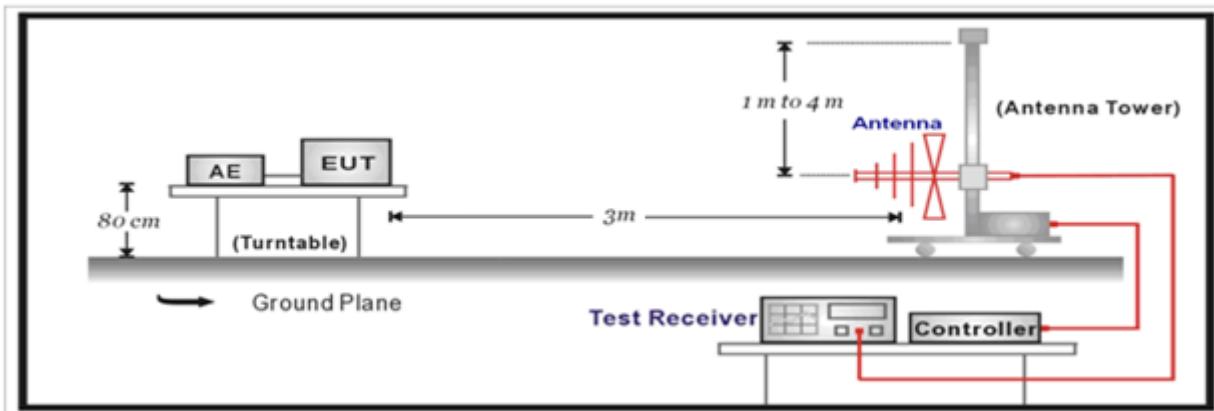
47 CFR FCC Part 2 (Section 2.1053)

47 CFR FCC Part 25 (Section 25.202)

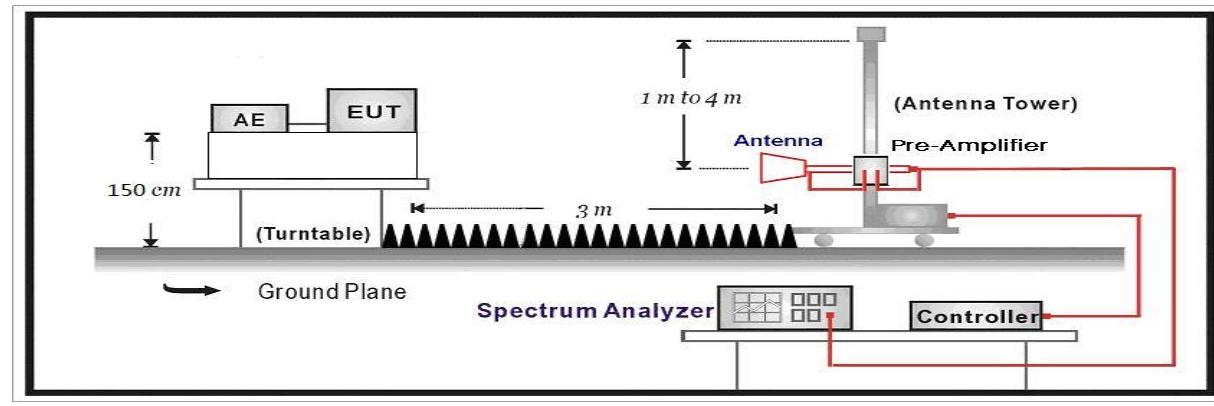
§25.202 (f)(3)  $<43 + 10 \log (P) \text{ dB} (= -13 \text{ dBm})$

### 4.2.2 Test Setup

30MHz-1GHz Test Setup:



Above 1GHz Test Setup:



### 4.2.3 Test Procedure

|                                     | Reference Rule | Chapter | Description                |
|-------------------------------------|----------------|---------|----------------------------|
| <input checked="" type="checkbox"/> | ANSI C63.26    | 5.5     | Radiated emissions testing |

The spectrum was scanned from 9 kHz to the 10th harmonic of the highest frequency generated within the equipment.

Emissions below 18 GHz were measured at a 3 meter test distance.

The EUT was tested in three orthogonal axes and in all possible test configurations and poisoning when measurement antenna is oriented in both horizontal and vertical polarization, the worst case emissions was showed in the report.

Radiated emissions were used the substitution method described in ANSI/TIA-603-E-2016.

Radiated emissions were measured with 100kHz RBW below 1GHz and 1MHz RBW above 1GHz.

According to specification, the power of emissions shall be attenuated below the transmitter power (P) by a factor of at least  $X + 10 \log (P)$  dB. P in watts. The specification can be interpreted as an absolute limit when the specified attenuation is actually subtracted from the maximum permissible transmitter power [i.e.,  $10 \log P - (X + 10 \log P)$ ], resulting in an absolute level of  $-X$  dBW [or  $(-X + 30)$  dBm].

**4.3 Additional Unwanted Emission****VERDICT: PASS****4.3.1 Limit****Standard Part NO.**

47 CFR FCC Part 2 (Section 2.1053)

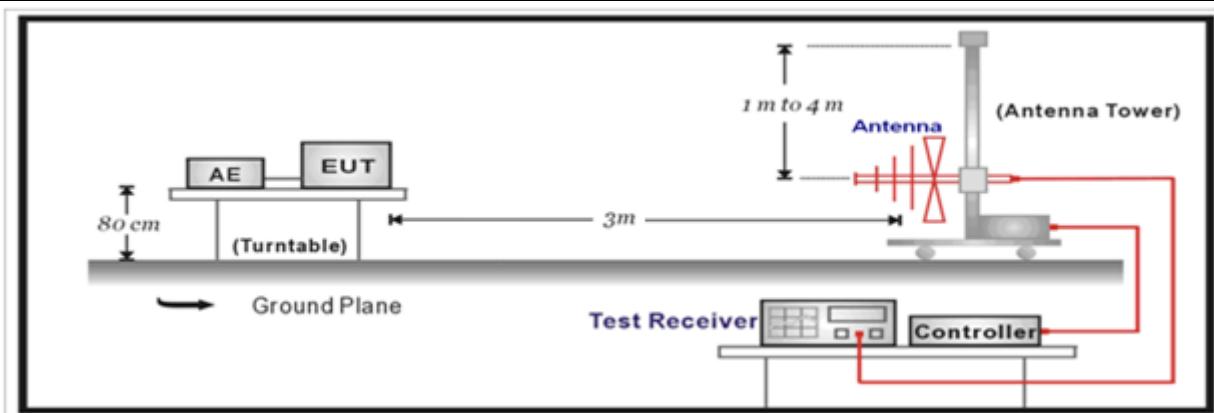
47 CFR FCC Part 25 (Section 25.216)

Wide Band(e.i.r.p. density): Linear interpolation from -70 dBW/MHz(= -40dBm/MHz) at 1605 MHz to  
-46dBW/MHz(= -16 dBm/MHz) at 1610 MHz.

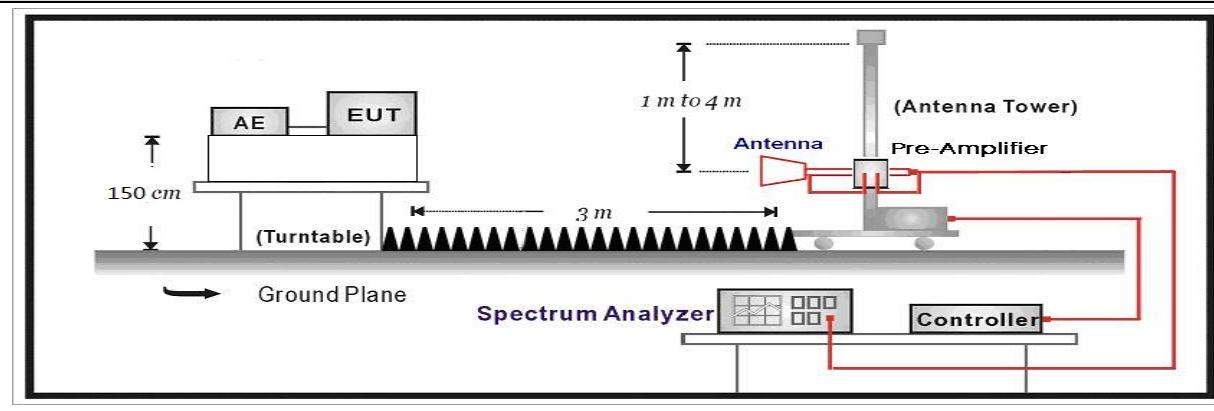
NarrowBand(e.i.r.p.): Linear interpolation from -80 dBW(= -50dBm) at 1605 MHz to  
-56 dBW(= -26 dBm) at 1610 MHz.

**4.3.2 Test Setup**

30MHz-1GHz Test Setup:



Above 1GHz Test Setup:

**4.3.3 Test Procedure**

|                                     | Reference Rule | Chapter | Description                |
|-------------------------------------|----------------|---------|----------------------------|
| <input checked="" type="checkbox"/> | ANSI C63.26    | 5.5     | Radiated emissions testing |

The spectrum was scanned from 9 kHz to the 10th harmonic of the highest frequency generated within the equipment.

Emissions below 18 GHz were measured at a 3 meter test distance.

The EUT was tested in three orthogonal axes and in all possible test configurations and poisoning when measurement antenna is oriented in both horizontal and vertical polarization, the worst case emissions was showed in the report.

Radiated emissions were used the substitution method described in ANSI/TIA-603-E-2016.

Radiated emissions were measured with 100kHz RBW below 1GHz and 1MHz RBW above 1GHz.

According to specification, the power of emissions shall be attenuated below the transmitter power (P) by a factor of at least  $X + 10 \log (P)$  dB. P in watts. The specification can be interpreted as an absolute limit when the specified attenuation is actually subtracted from the maximum permissible transmitter power [i.e.,  $10 \log P - (X + 10 \log P)$ ], resulting in an absolute level of  $-X$  dBW [or  $(-X + 30)$  dBm].

## 4.4 Carrier-Off State Emissions

**VERDICT: PASS**

### 4.4.1 Limit

Standard Part NO.

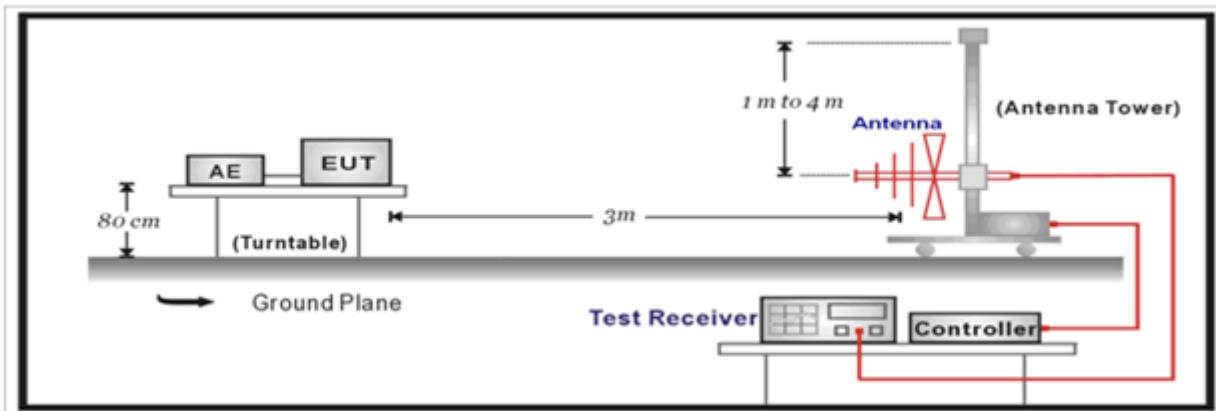
47 CFR FCC Part 2 (Section 2.1053)

47 CFR FCC Part 25 (Section 25.216)

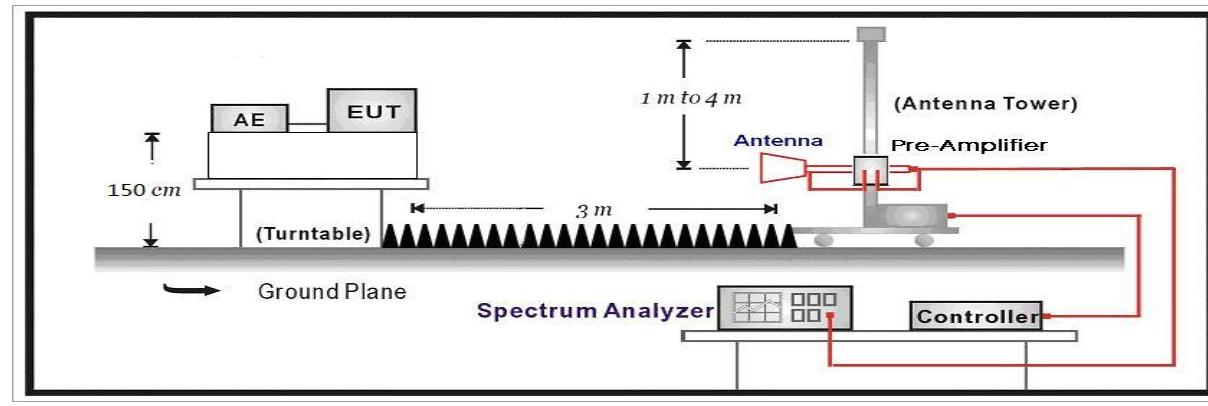
e.i.r.p. density <-80 dBW/MHz(= -50 dBm)

### 4.4.2 Test Setup

30MHz-1GHz Test Setup:



Above 1GHz Test Setup:



### 4.4.3 Test Procedure

|                                     | Reference Rule | Chapter | Description                |
|-------------------------------------|----------------|---------|----------------------------|
| <input checked="" type="checkbox"/> | ANSI C63.26    | 5.5     | Radiated emissions testing |

The spectrum was scanned from 9 kHz to the 10th harmonic of the highest frequency generated within the equipment.

Emissions below 18 GHz were measured at a 3 meter test distance.

The EUT was tested in three orthogonal axes and in all possible test configurations and poisoning when measurement antenna is oriented in both horizontal and vertical polarization, the worst case emissions was showed in the report.

Radiated emissions were used the substitution method described in ANSI/TIA-603-E-2016.

Radiated emissions were measured with 100kHz RBW below 1GHz and 1MHz RBW above 1GHz.

According to specification, the power of emissions shall be attenuated below the transmitter power (P) by a factor of at least  $X + 10 \log (P)$  dB. P in watts. The specification can be interpreted as an absolute limit when the specified attenuation is actually subtracted from the maximum permissible transmitter power [i.e.,  $10 \log P - (X + 10 \log P)$ ], resulting in an absolute level of  $-X$  dBW [or  $(-X + 30)$  dBm].

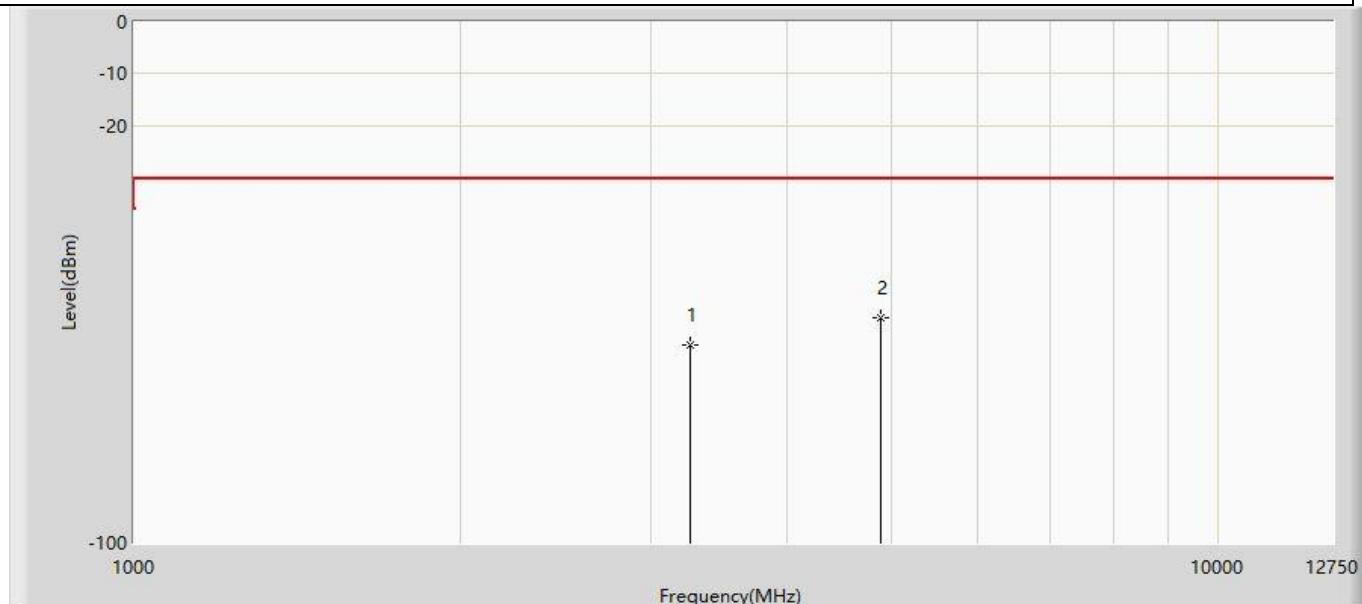
## **5 TEST SETUP PHOTO AND EUT PHOTO**

Remark: The test setup photo and EUT Photo please see appendix.



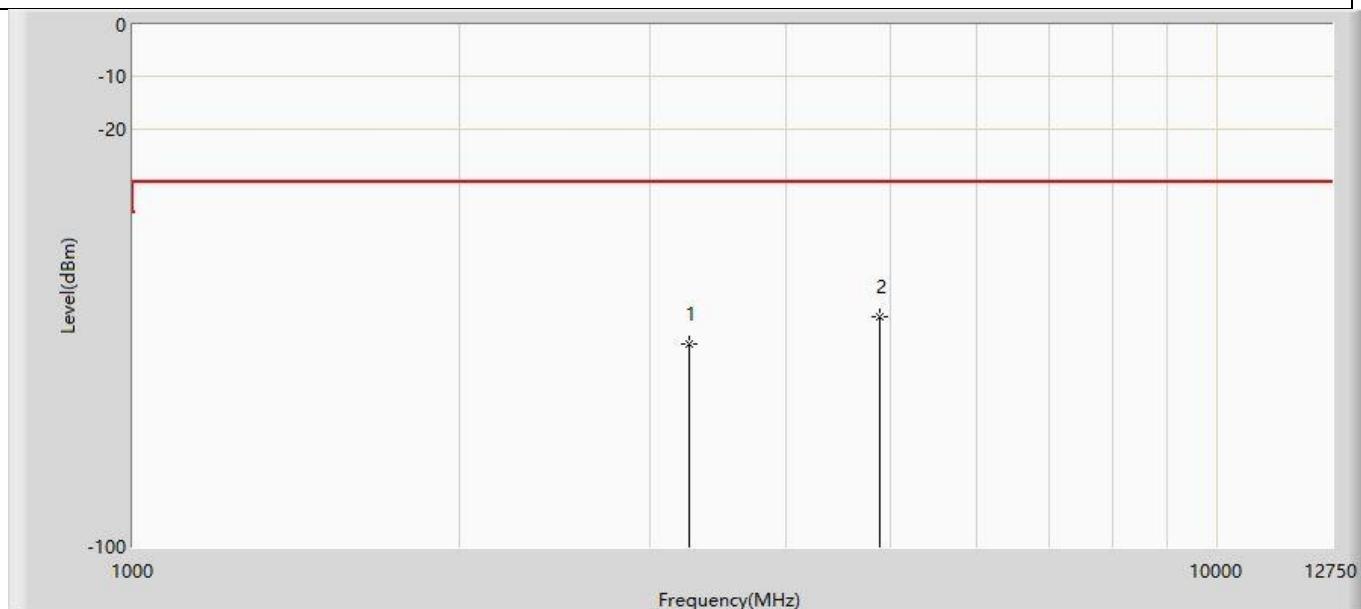
## Appendix B: Radiated Spurious and Harmonic Emissions

|   |                          |
|---|--------------------------|
| Profile: 24B0779R                           | Page No.: 25             |
| Engineer: Yuliu                             |                          |
| Site: AC6                                   | Time: 2024/12/18 - 16:01 |
| Limit: ETSI_EN301908-1_RSE(3m)_UE(Traffic)  | Margin: 0                |
| Probe: CE_1-18G_AMP                         | Polarity: Horizontal     |
| EUT: Cat4 indoor CPE                        | Power: 230 Vac / 50 Hz   |
| Note: Mode 1: NTN band255 Traffic 1626.7MHz |                          |



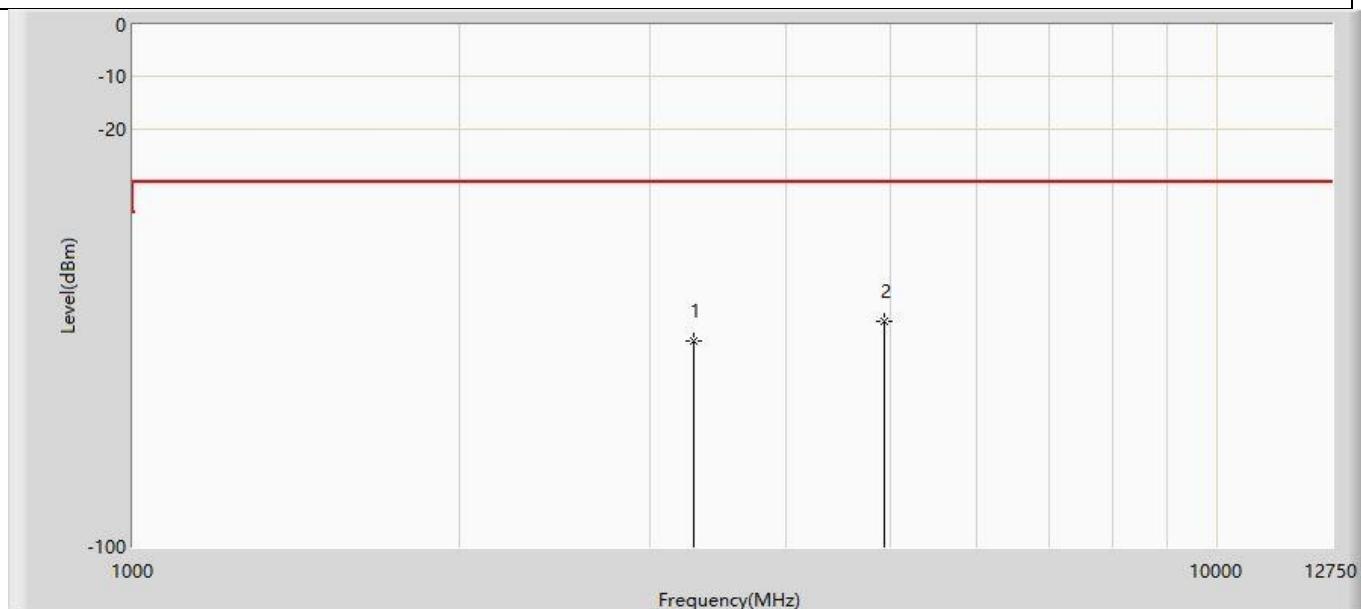
| No | Mark | Frequency (MHz) | Measure Level (dBm) | Reading Level (dBm) | Over Limit (dB) | Limit (dBm) | Factor (dB) | Type |
|----|------|-----------------|---------------------|---------------------|-----------------|-------------|-------------|------|
| 1  |      | 3253.400        | -62.073             | -53.639             | -32.073         | -30.000     | -8.434      | PK   |
| 2  | *    | 4880.100        | -56.911             | -54.235             | -26.911         | -30.000     | -2.676      | PK   |

|  |                          |
|--|--------------------------|
| Profile: 24B0779R                          | Page No.: 26             |
| Engineer: Yuliu                            |                          |
| Site: AC6                                  | Time: 2024/12/18 - 16:01 |
| Limit: ETSI_EN301908-1_RSE(3m)_UE(Traffic) | Margin: 0                |
| Probe: CE_1-18G_AMP                        | Polarity: Vertical       |
| EUT: Cat4 indoor CPE                       | Power: 230 Vac / 50 Hz   |
| Note: Mode 1:NTN band255 Traffic 1626.7MHz |                          |



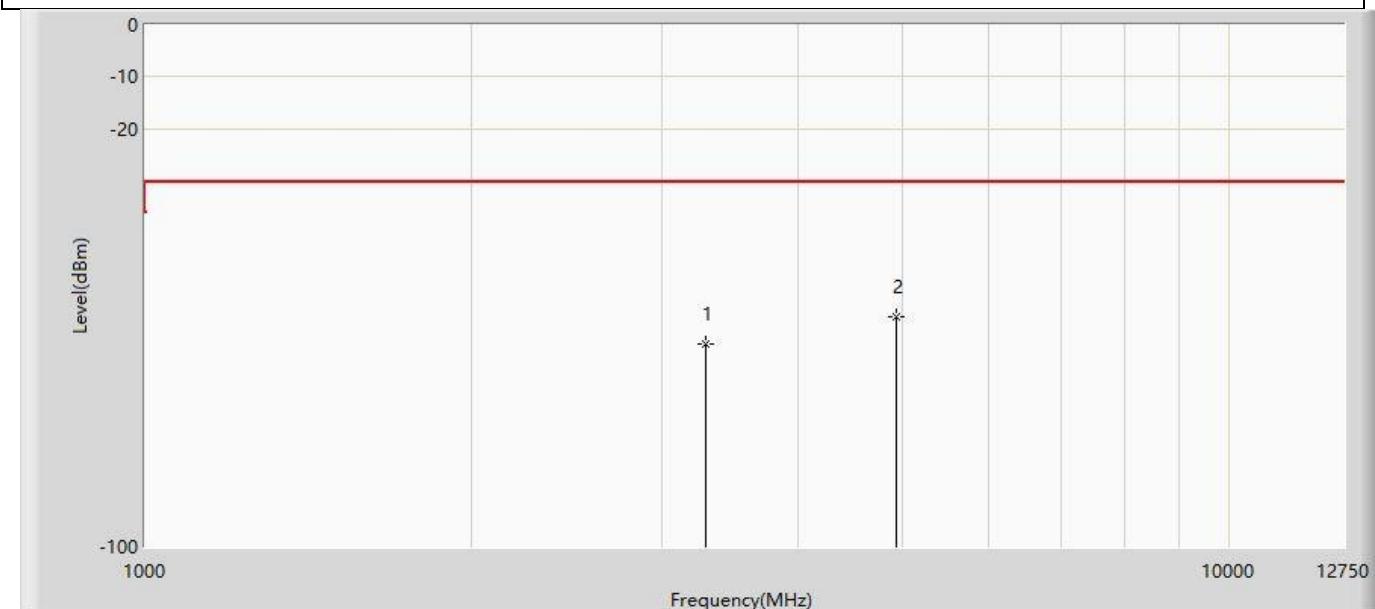
| No | Mark | Frequency (MHz) | Measure Level (dBm) | Reading Level (dBm) | Over Limit (dB) | Limit (dBm) | Factor (dB) | Type |
|----|------|-----------------|---------------------|---------------------|-----------------|-------------|-------------|------|
| 1  |      | 3253.400        | -61.260             | -53.127             | -31.260         | -30.000     | -8.133      | PK   |
| 2  | *    | 4880.100        | -55.991             | -54.024             | -25.991         | -30.000     | -1.967      | PK   |

|  |                          |
|--|--------------------------|
| Profile: 24B0779R                          | Page No.: 27             |
| Engineer: Yuliu                            |                          |
| Site: AC6                                  | Time: 2024/12/18 - 16:01 |
| Limit: ETSI_EN301908-1_RSE(3m)_UE(Traffic) | Margin: 0                |
| Probe: CE_1-18G_AMP                        | Polarity: Horizontal     |
| EUT: Cat4 indoor CPE                       | Power: 230 Vac / 50 Hz   |
| Note: Mode 1:NTN band255 Traffic 1643.3MHz |                          |



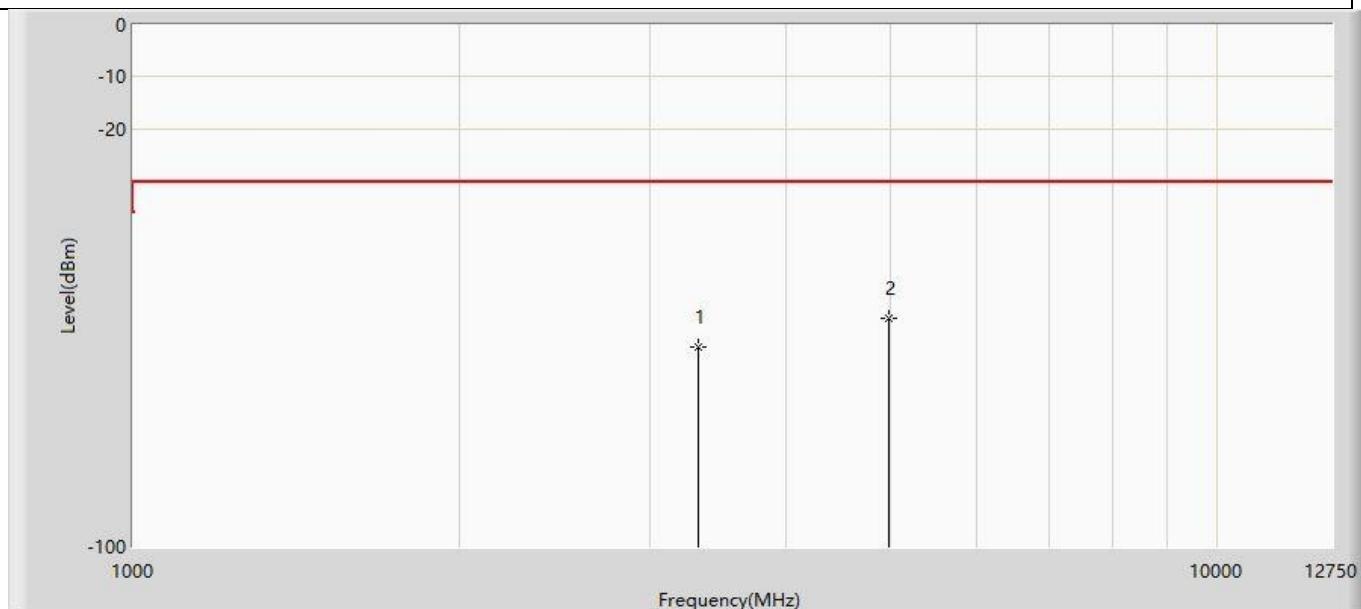
| No | Mark | Frequency (MHz) | Measure Level (dBm) | Reading Level (dBm) | Over Limit (dB) | Limit (dBm) | Factor (dB) | Type |
|----|------|-----------------|---------------------|---------------------|-----------------|-------------|-------------|------|
| 1  |      | 3286.600        | -60.525             | -51.960             | -30.525         | -30.000     | -8.565      | PK   |
| 2  | *    | 4929.900        | -56.757             | -54.326             | -26.757         | -30.000     | -2.431      | PK   |

|  |                          |
|--|--------------------------|
| Profile: 24B0779R                          | Page No.: 28             |
| Engineer: Yuliu                            |                          |
| Site: AC6                                  | Time: 2024/12/18 - 16:01 |
| Limit: ETSI_EN301908-1_RSE(3m)_UE(Traffic) | Margin: 0                |
| Probe: CE_1-18G_AMP                        | Polarity: Vertical       |
| EUT: Cat4 indoor CPE                       | Power: 230 Vac / 50 Hz   |
| Note: Mode 1:NTN band255 Traffic 1643.3MHz |                          |



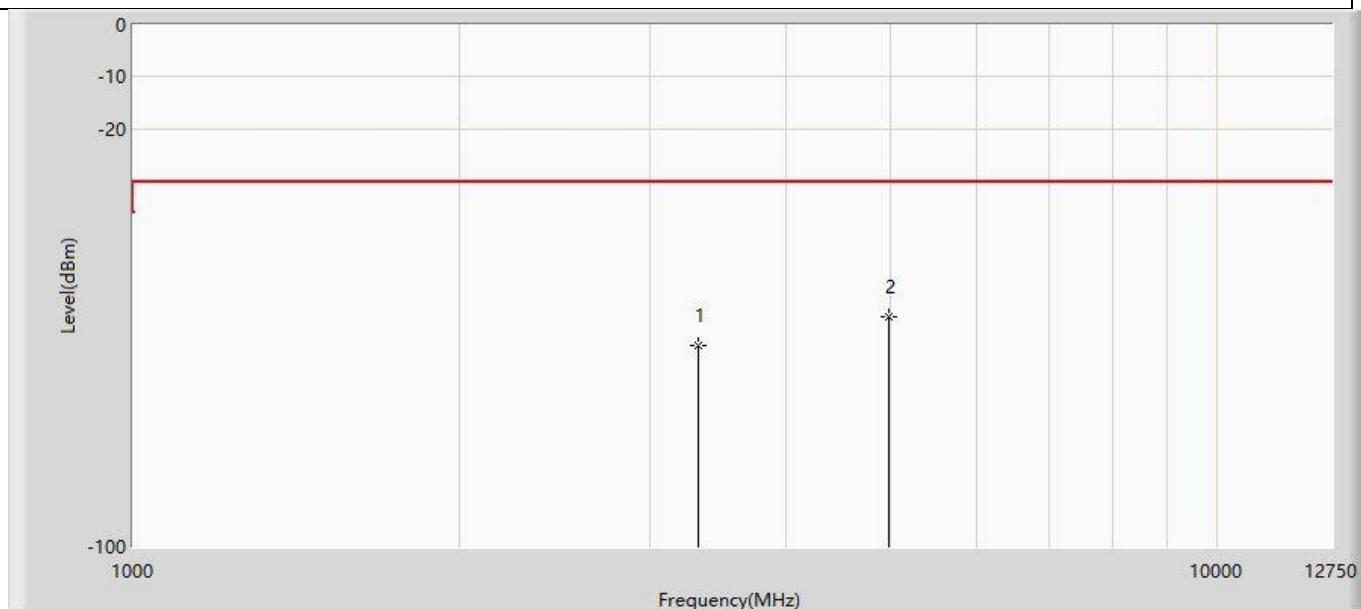
| No | Mark | Frequency (MHz) | Measure Level (dBm) | Reading Level (dBm) | Over Limit (dB) | Limit (dBm) | Factor (dB) | Type |
|----|------|-----------------|---------------------|---------------------|-----------------|-------------|-------------|------|
| 1  |      | 3286.600        | -61.081             | -52.865             | -31.081         | -30.000     | -8.216      | PK   |
| 2  | *    | 4929.900        | -56.044             | -53.699             | -26.044         | -30.000     | -2.345      | PK   |

|  |                          |
|--|--------------------------|
| Profile: 24B0779R                          | Page No.: 29             |
| Engineer: Yuliu                            |                          |
| Site: AC6                                  | Time: 2024/12/18 - 16:01 |
| Limit: ETSI_EN301908-1_RSE(3m)_UE(Traffic) | Margin: 0                |
| Probe: CE_1-18G_AMP                        | Polarity: Horizontal     |
| EUT: Cat4 indoor CPE                       | Power: 230 Vac / 50 Hz   |
| Note: Mode 1:NTN band255 Traffic 1659.9MHz |                          |



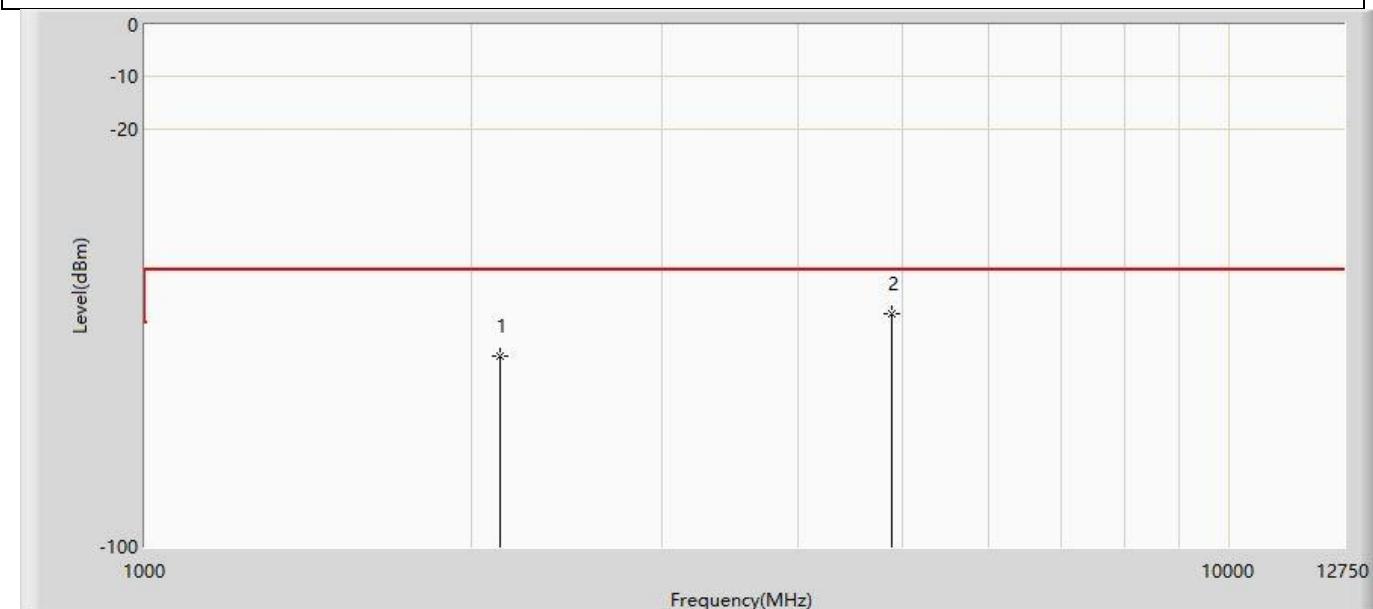
| No | Mark | Frequency (MHz) | Measure Level (dBm) | Reading Level (dBm) | Over Limit (dB) | Limit (dBm) | Factor (dB) | Type |
|----|------|-----------------|---------------------|---------------------|-----------------|-------------|-------------|------|
| 1  |      | 3319.800        | -61.711             | -53.175             | -31.711         | -30.000     | -8.536      | PK   |
| 2  | *    | 4979.700        | -56.344             | -53.657             | -26.344         | -30.000     | -2.687      | PK   |

|  |                          |
|--|--------------------------|
| Profile: 24B0779R                          | Page No.: 30             |
| Engineer: Yuliu                            |                          |
| Site: AC6                                  | Time: 2024/12/18 - 16:01 |
| Limit: ETSI_EN301908-1_RSE(3m)_UE(Traffic) | Margin: 0                |
| Probe: CE_1-18G_AMP                        | Polarity: Vertical       |
| EUT: Cat4 indoor CPE                       | Power: 230 Vac / 50 Hz   |
| Note: Mode 1:NTN band255 Traffic 1659.9MHz |                          |



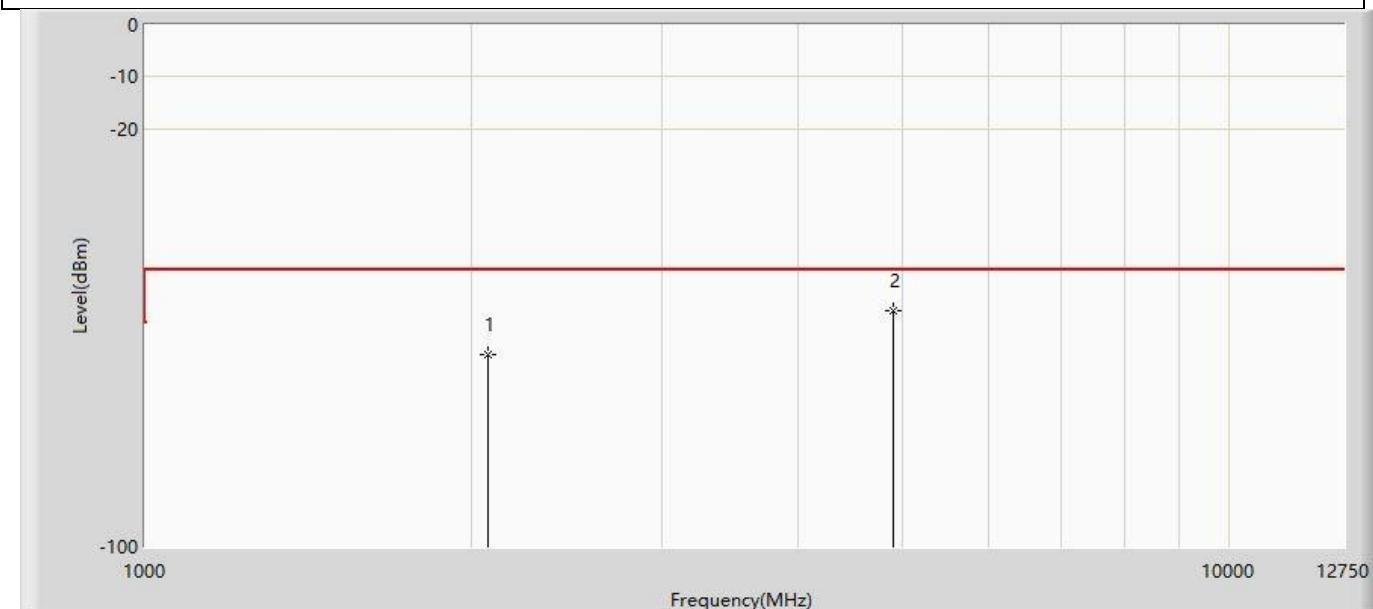
| No | Mark | Frequency (MHz) | Measure Level (dBm) | Reading Level (dBm) | Over Limit (dB) | Limit (dBm) | Factor (dB) | Type |
|----|------|-----------------|---------------------|---------------------|-----------------|-------------|-------------|------|
| 1  |      | 3319.800        | -61.378             | -52.872             | -31.378         | -30.000     | -8.506      | PK   |
| 2  | *    | 4979.700        | -55.883             | -53.451             | -25.883         | -30.000     | -2.432      | PK   |

|   |                          |
|---|--------------------------|
| Profile: 24B0779R                       | Page No.: 31             |
| Engineer: Yuliu                         |                          |
| Site: AC6                               | Time: 2024/12/18 - 16:01 |
| Limit: ETSI_EN301908-1_RSE(3m)_UE(Idle) | Margin: 0                |
| Probe: CE_1-18G_AMP                     | Polarity: Horizontal     |
| EUT: Cat4 indoor CPE                    | Power: 230 Vac / 50 Hz   |
| Note: Mode 1:NTN band255 Idle 1626.7MHz |                          |



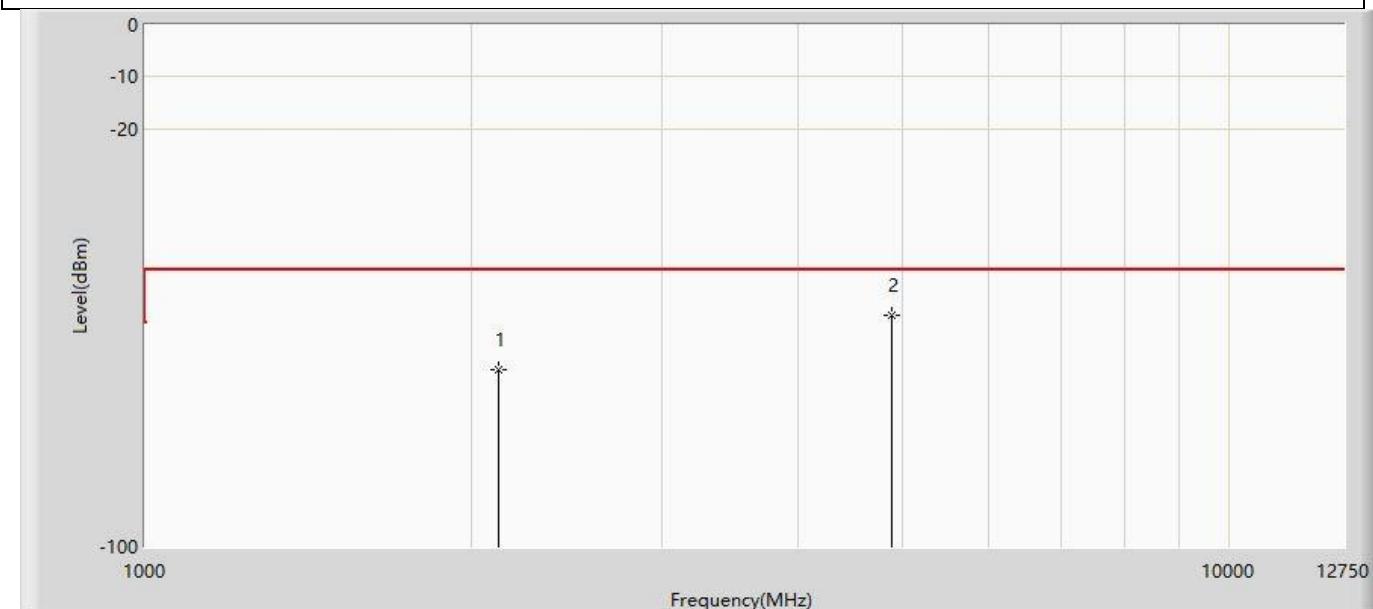
| No | Mark | Frequency (MHz) | Measure Level (dBm) | Reading Level (dBm) | Over Limit (dB) | Limit (dBm) | Factor (dB) | Type |
|----|------|-----------------|---------------------|---------------------|-----------------|-------------|-------------|------|
| 1  |      | 2128.000        | -63.582             | -53.406             | -33.582         | -30.000     | -10.176     | PK   |
| 2  | *    | 4877.500        | -55.353             | -52.624             | -25.353         | -30.000     | -2.729      | PK   |

|   |                          |
|---|--------------------------|
| Profile: 24B0779R                       | Page No.: 32             |
| Engineer: Yuliu                         |                          |
| Site: AC6                               | Time: 2024/12/18 - 16:01 |
| Limit: ETSI_EN301908-1_RSE(3m)_UE(Idle) | Margin: 0                |
| Probe: CE_1-18G_AMP                     | Polarity: Vertical       |
| EUT: Cat4 indoor CPE                    | Power: 230 Vac / 50 Hz   |
| Note: Mode 1:NTN band255 Idle 1626.7MHz |                          |



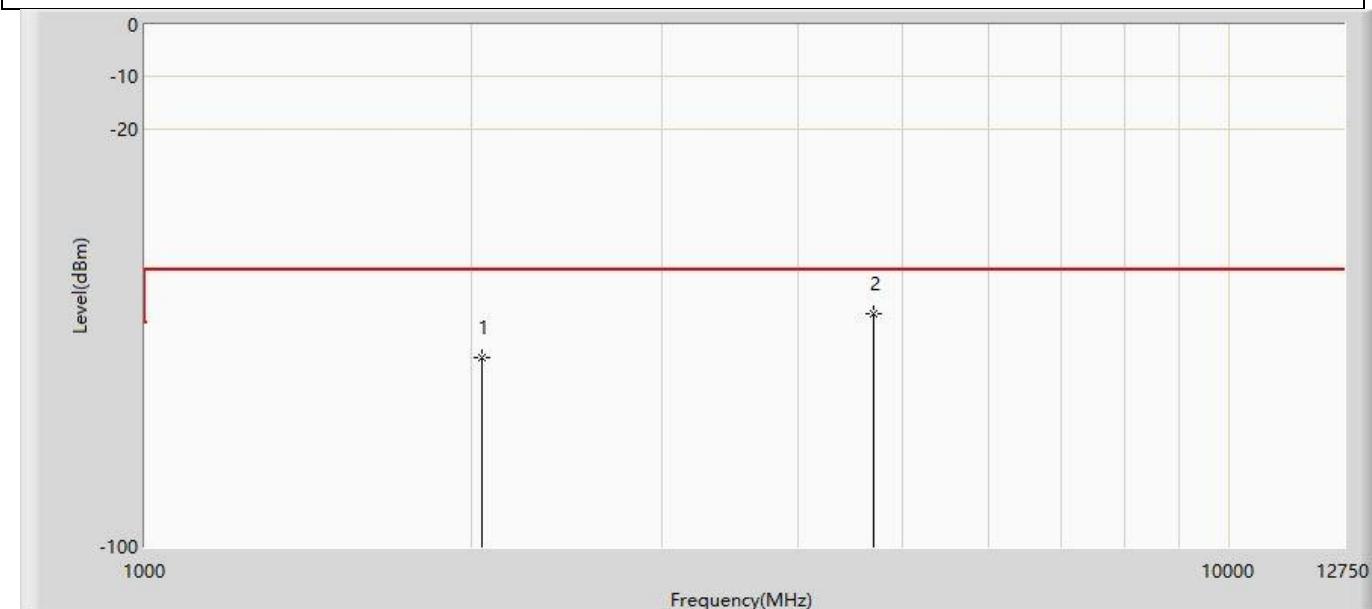
| No | Mark | Frequency (MHz) | Measure Level (dBm) | Reading Level (dBm) | Over Limit (dB) | Limit (dBm) | Factor (dB) | Type |
|----|------|-----------------|---------------------|---------------------|-----------------|-------------|-------------|------|
| 1  |      | 2069.250        | -63.093             | -53.196             | -16.093         | -47.000     | -9.897      | PK   |
| 2  | *    | 4901.000        | -54.784             | -53.050             | -7.784          | -47.000     | -1.734      | PK   |

|   |                          |
|---|--------------------------|
| Profile: 24B0779R                       | Page No.: 33             |
| Engineer: Yuliu                         |                          |
| Site: AC6                               | Time: 2024/12/18 - 16:01 |
| Limit: ETSI_EN301908-1_RSE(3m)_UE(Idle) | Margin: 0                |
| Probe: CE_1-18G_AMP                     | Polarity: Horizontal     |
| EUT: Cat4 indoor CPE                    | Power: 230 Vac / 50 Hz   |
| Note: Mode 1:NTN band255 Idle 1643.3MHz |                          |



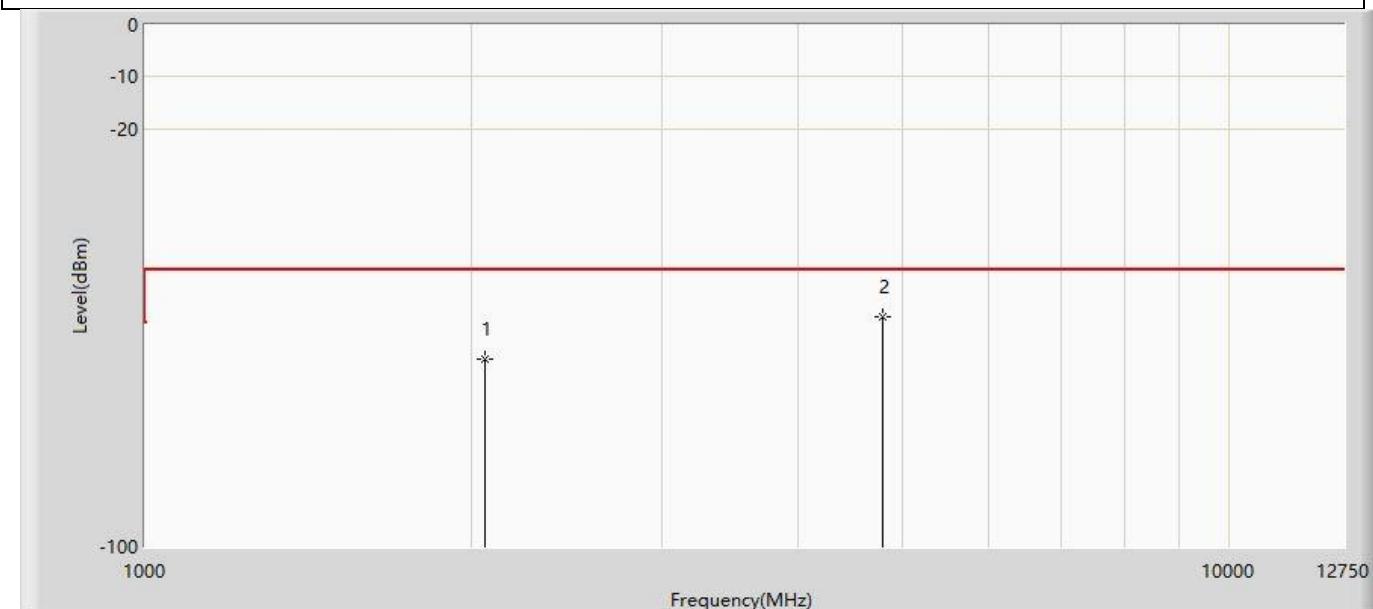
| No | Mark | Frequency (MHz) | Measure Level (dBm) | Reading Level (dBm) | Over Limit (dB) | Limit (dBm) | Factor (dB) | Type |
|----|------|-----------------|---------------------|---------------------|-----------------|-------------|-------------|------|
| 1  |      | 2116.250        | -65.945             | -55.785             | -18.945         | -47.000     | -10.160     | PK   |
| 2  | *    | 4889.250        | -55.614             | -53.127             | -8.614          | -47.000     | -2.487      | PK   |

|   |                          |
|---|--------------------------|
| Profile: 24B0779R                       | Page No.: 34             |
| Engineer: Yuliu                         |                          |
| Site: AC6                               | Time: 2024/12/18 - 16:01 |
| Limit: ETSI_EN301908-1_RSE(3m)_UE(Idle) | Margin: 0                |
| Probe: CE_1-18G_AMP                     | Polarity: Vertical       |
| EUT: Cat4 indoor CPE                    | Power: 230 Vac / 50 Hz   |
| Note: Mode 1:NTN band255 Idle 1643.3MHz |                          |



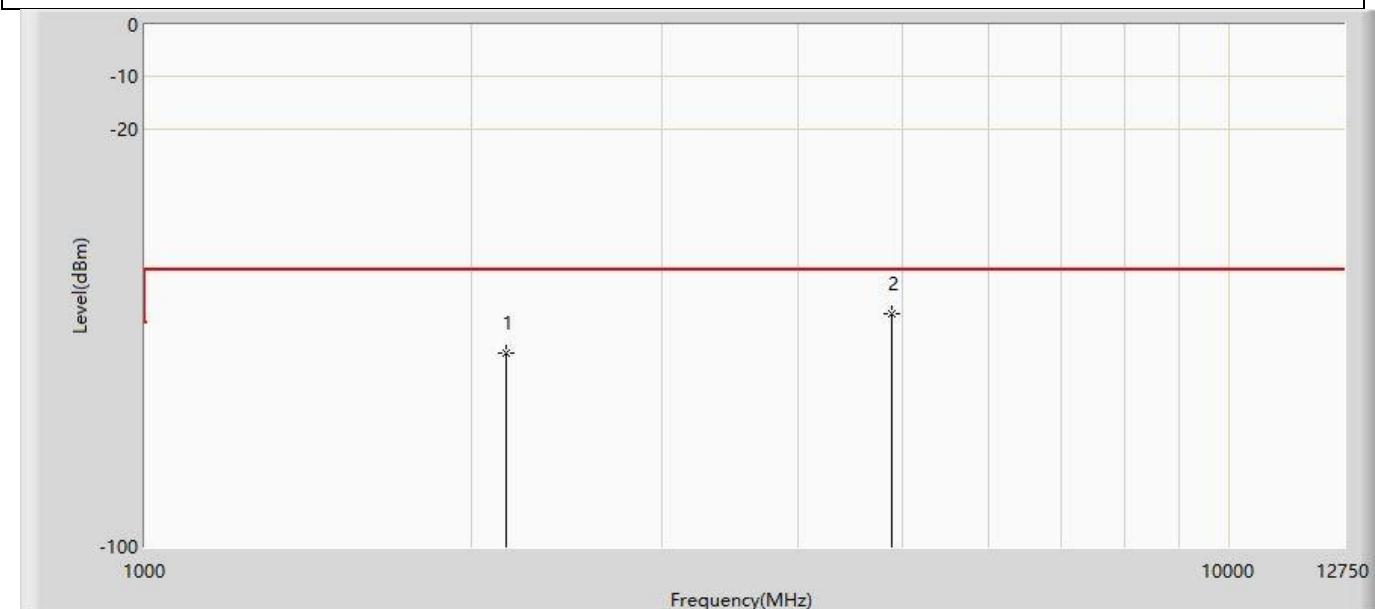
| No | Mark | Frequency (MHz) | Measure Level (dBm) | Reading Level (dBm) | Over Limit (dB) | Limit (dBm) | Factor (dB) | Type |
|----|------|-----------------|---------------------|---------------------|-----------------|-------------|-------------|------|
| 1  |      | 2045.750        | -63.730             | -53.420             | -16.730         | -47.000     | -10.310     | PK   |
| 2  | *    | 4701.250        | -55.219             | -52.368             | -8.219          | -47.000     | -2.851      | PK   |

|   |                          |
|---|--------------------------|
| Profile: 24B0779R                       | Page No.: 35             |
| Engineer: Yuliu                         |                          |
| Site: AC6                               | Time: 2024/12/18 - 16:01 |
| Limit: ETSI_EN301908-1_RSE(3m)_UE(Idle) | Margin: 0                |
| Probe: CE_1-18G_AMP                     | Polarity: Horizontal     |
| EUT: Cat4 indoor CPE                    | Power: 230 Vac / 50 Hz   |
| Note: Mode 1:NTN band255 Idle 1659.9MHz |                          |



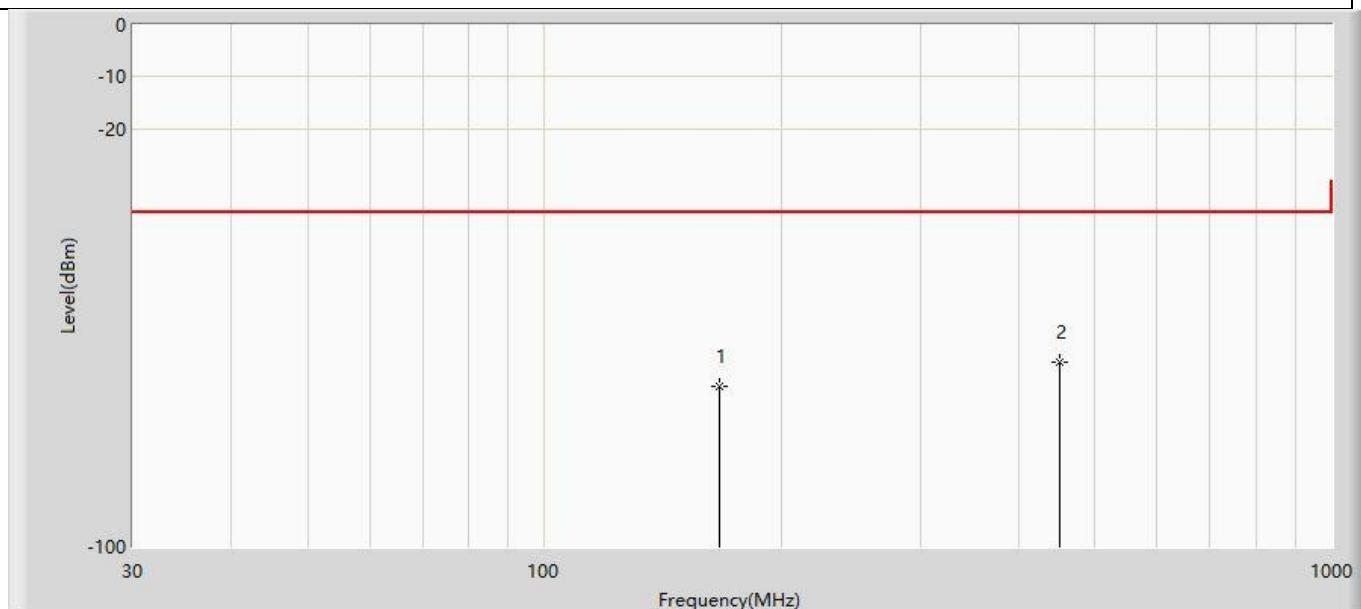
| No | Mark | Frequency (MHz) | Measure Level (dBm) | Reading Level (dBm) | Over Limit (dB) | Limit (dBm) | Factor (dB) | Type |
|----|------|-----------------|---------------------|---------------------|-----------------|-------------|-------------|------|
| 1  |      | 2057.500        | -64.042             | -53.138             | -17.042         | -47.000     | -10.904     | PK   |
| 2  | *    | 4795.250        | -56.042             | -52.915             | -9.042          | -47.000     | -3.127      | PK   |

|   |                          |
|---|--------------------------|
| Profile: 24B0779R                       | Page No.: 36             |
| Engineer: Yuliu                         |                          |
| Site: AC6                               | Time: 2024/12/18 - 16:01 |
| Limit: ETSI_EN301908-1_RSE(3m)_UE(Idle) | Margin: 0                |
| Probe: CE_1-18G_AMP                     | Polarity: Vertical       |
| EUT: Cat4 indoor CPE                    | Power: 230 Vac / 50 Hz   |
| Note: Mode 1:NTN band255 Idle 1659.9MHz |                          |



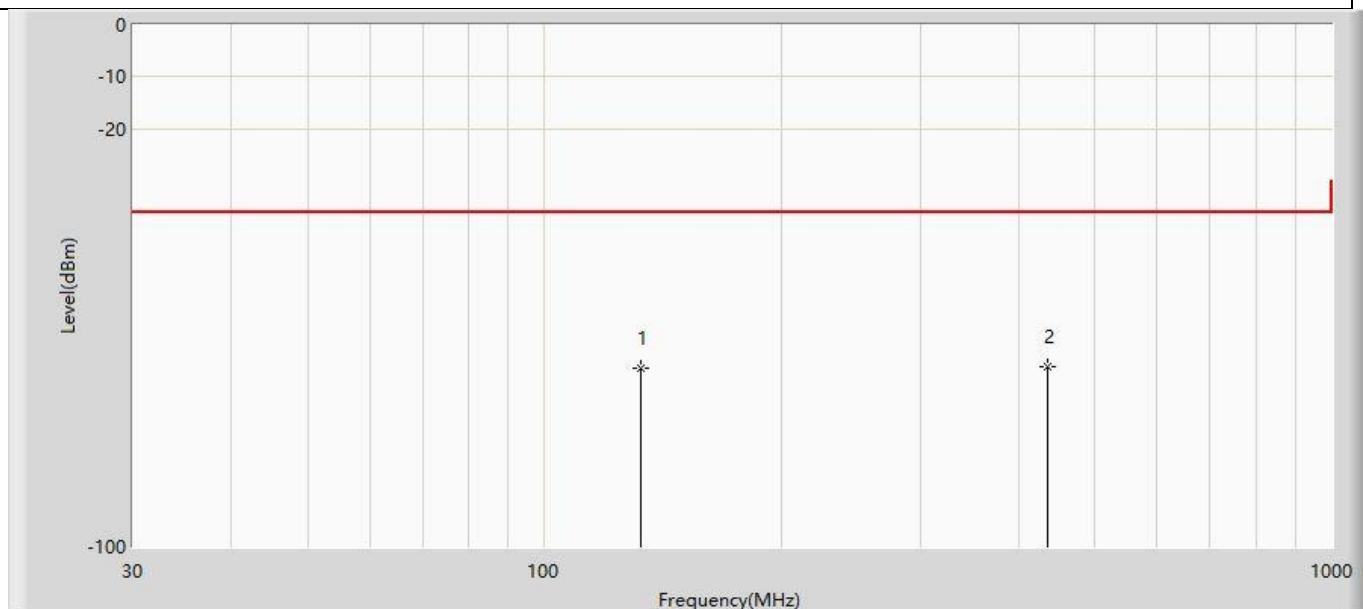
| No | Mark | Frequency (MHz) | Measure Level (dBm) | Reading Level (dBm) | Over Limit (dB) | Limit (dBm) | Factor (dB) | Type |
|----|------|-----------------|---------------------|---------------------|-----------------|-------------|-------------|------|
| 1  |      | 2151.500        | -62.762             | -52.861             | -15.762         | -47.000     | -9.901      | PK   |
| 2  | *    | 4889.250        | -55.261             | -53.412             | -8.261          | -47.000     | -1.849      | PK   |

|  |                          |
|--|--------------------------|
| Profile: 24B0779R                          | Page No.: 37             |
| Engineer: Yuliu                            |                          |
| Site: AC6                                  | Time: 2024/12/18 - 16:01 |
| Limit: ETSI_EN301908-1_RSE(3m)_UE(Traffic) | Margin: 0                |
| Probe: CE_30-1G                            | Polarity: Horizontal     |
| EUT: Cat4 indoor CPE                       | Power: 230 Vac / 50 Hz   |
| Note: Mode 1:NTN band255 Traffic 1626.7MHz |                          |



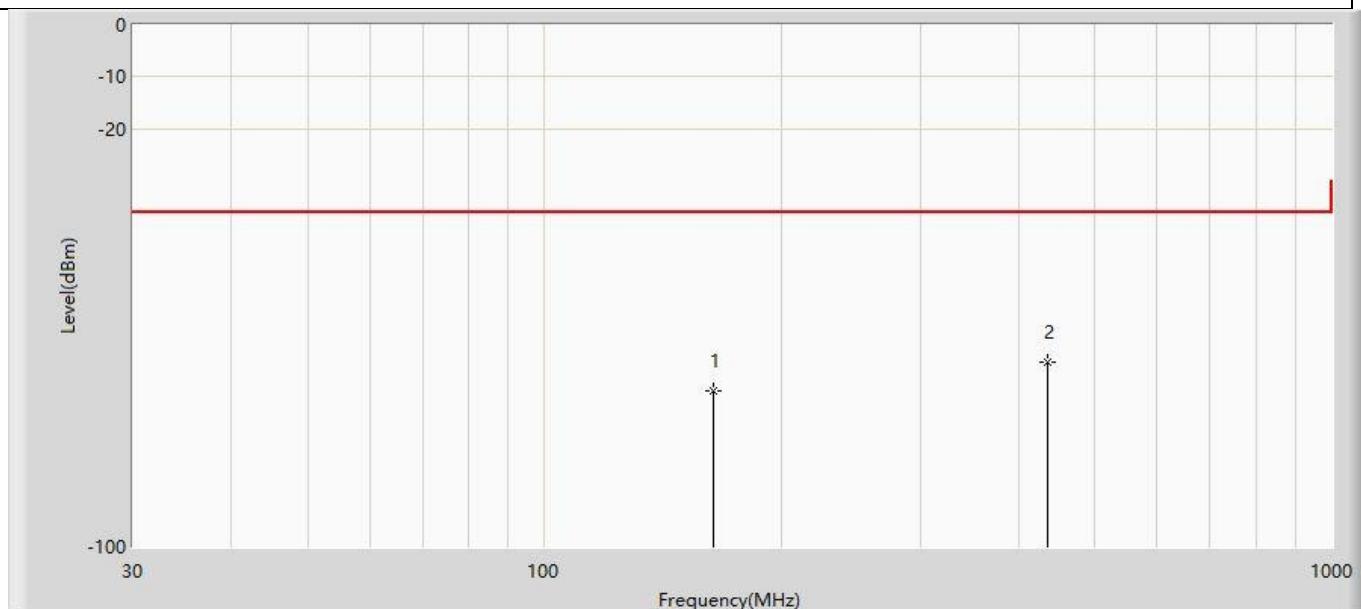
| No | Mark | Frequency (MHz) | Measure Level (dBm) | Reading Level (dBm) | Over Limit (dB) | Limit (dBm) | Factor (dB) | Type |
|----|------|-----------------|---------------------|---------------------|-----------------|-------------|-------------|------|
| 1  |      | 166.770         | -69.328             | -93.408             | -33.328         | -36.000     | 24.080      | PK   |
| 2  | *    | 451.950         | -64.718             | -93.418             | -28.718         | -36.000     | 28.700      | PK   |

|  |                          |
|--|--------------------------|
| Profile: 24B0779R                          | Page No.: 38             |
| Engineer: Yuliu                            |                          |
| Site: AC6                                  | Time: 2024/12/18 - 16:01 |
| Limit: ETSI_EN301908-1_RSE(3m)_UE(Traffic) | Margin: 0                |
| Probe: CE_30-1G                            | Polarity: Vertical       |
| EUT: Cat4 indoor CPE                       | Power: 230 Vac / 50 Hz   |
| Note: Mode 1:NTN band255 Traffic 1626.7MHz |                          |



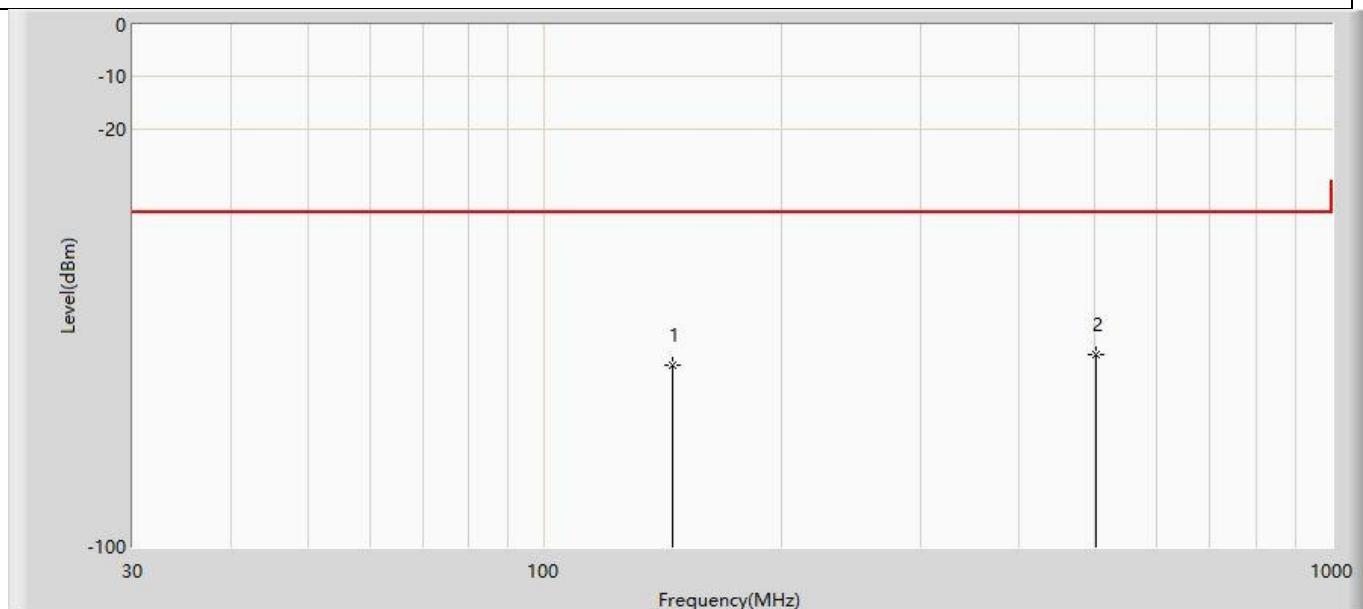
| No | Mark | Frequency (MHz) | Measure Level (dBm) | Reading Level (dBm) | Over Limit (dB) | Limit (dBm) | Factor (dB) | Type |
|----|------|-----------------|---------------------|---------------------|-----------------|-------------|-------------|------|
| 1  |      | 132.820         | -65.865             | -95.395             | -29.865         | -36.000     | 29.530      | PK   |
| 2  | *    | 435.460         | -65.545             | -94.175             | -29.545         | -36.000     | 28.630      | PK   |

|  |                          |
|--|--------------------------|
| Profile: 24B0779R                          | Page No.: 39             |
| Engineer: Yuliu                            |                          |
| Site: AC6                                  | Time: 2024/12/18 - 16:01 |
| Limit: ETSI_EN301908-1_RSE(3m)_UE(Traffic) | Margin: 0                |
| Probe: CE_30-1G                            | Polarity: Horizontal     |
| EUT: Cat4 indoor CPE                       | Power: 230 Vac / 50 Hz   |
| Note: Mode 1:NTN band255 Traffic 1643.3MHz |                          |



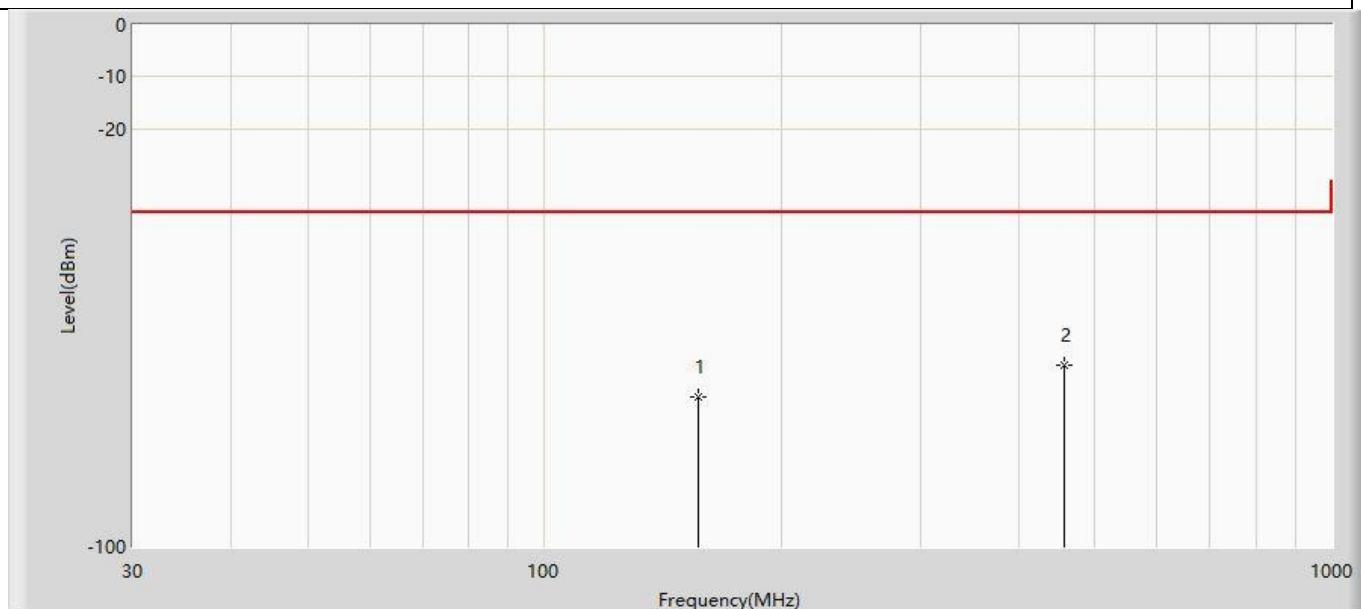
| No | Mark | Frequency (MHz) | Measure Level (dBm) | Reading Level (dBm) | Over Limit (dB) | Limit (dBm) | Factor (dB) | Type |
|----|------|-----------------|---------------------|---------------------|-----------------|-------------|-------------|------|
| 1  |      | 163.860         | -70.228             | -94.498             | -34.228         | -36.000     | 24.270      | PK   |
| 2  | *    | 436.430         | -64.678             | -93.428             | -28.678         | -36.000     | 28.750      | PK   |

|  |                          |
|--|--------------------------|
| Profile: 24B0779R                          | Page No.: 40             |
| Engineer: Yuliu                            |                          |
| Site: AC6                                  | Time: 2024/12/18 - 16:02 |
| Limit: ETSI_EN301908-1_RSE(3m)_UE(Traffic) | Margin: 0                |
| Probe: CE_30-1G                            | Polarity: Vertical       |
| EUT: Cat4 indoor CPE                       | Power: 230 Vac / 50 Hz   |
| Note: Mode 1:NTN band255 Traffic 1643.3MHz |                          |



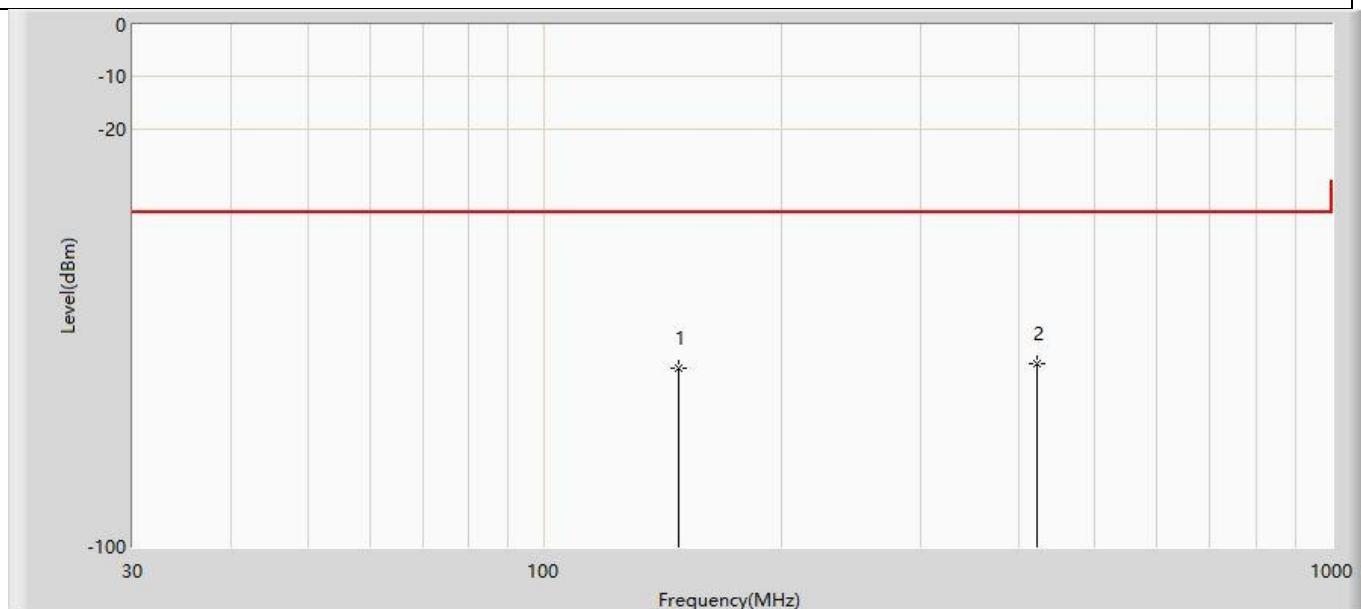
| No | Mark | Frequency (MHz) | Measure Level (dBm) | Reading Level (dBm) | Over Limit (dB) | Limit (dBm) | Factor (dB) | Type |
|----|------|-----------------|---------------------|---------------------|-----------------|-------------|-------------|------|
| 1  |      | 145.430         | -65.318             | -94.638             | -29.318         | -36.000     | 29.320      | PK   |
| 2  | *    | 501.420         | -63.233             | -93.063             | -27.233         | -36.000     | 29.830      | PK   |

|  |                          |
|--|--------------------------|
| Profile: 24B0779R                          | Page No.: 41             |
| Engineer: Yuliu                            |                          |
| Site: AC6                                  | Time: 2024/12/18 - 16:02 |
| Limit: ETSI_EN301908-1_RSE(3m)_UE(Traffic) | Margin: 0                |
| Probe: CE_30-1G                            | Polarity: Horizontal     |
| EUT: Cat4 indoor CPE                       | Power: 230 Vac / 50 Hz   |
| Note: Mode 1:NTN band255 Traffic 1659.9MHz |                          |



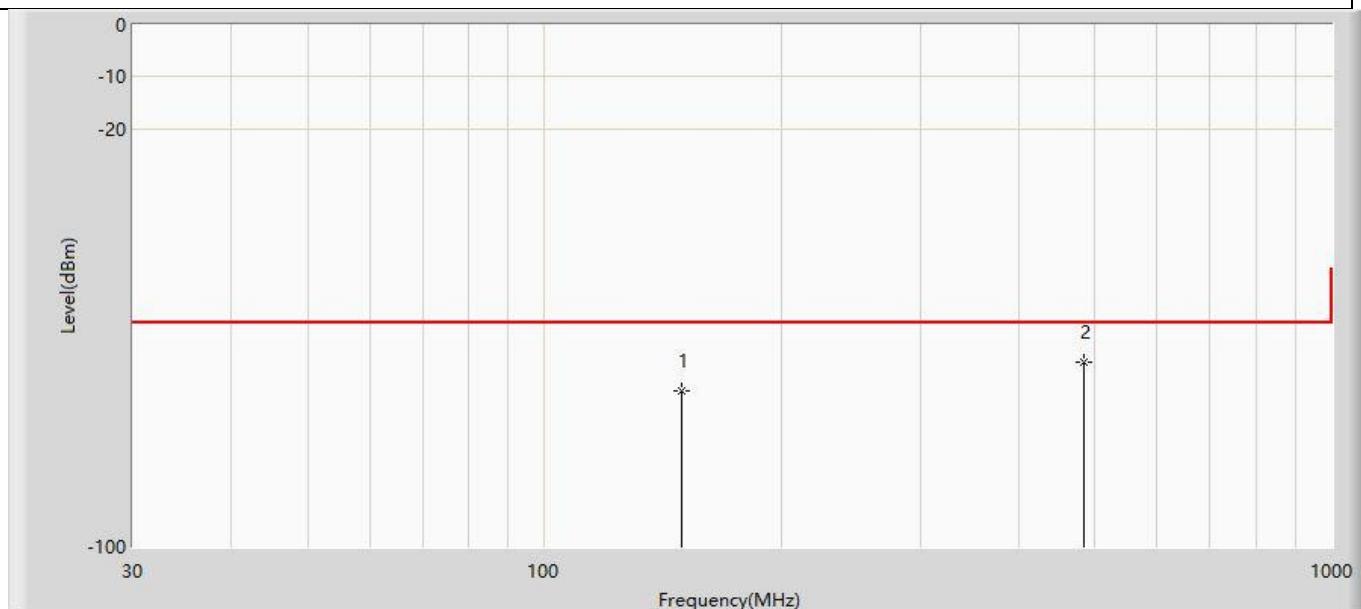
| No | Mark | Frequency (MHz) | Measure Level (dBm) | Reading Level (dBm) | Over Limit (dB) | Limit (dBm) | Factor (dB) | Type |
|----|------|-----------------|---------------------|---------------------|-----------------|-------------|-------------|------|
| 1  |      | 157.070         | -71.190             | -94.960             | -35.190         | -36.000     | 23.770      | PK   |
| 2  | *    | 456.800         | -65.194             | -93.674             | -29.194         | -36.000     | 28.480      | PK   |

|  |                          |
|--|--------------------------|
| Profile: 24B0779R                          | Page No.: 42             |
| Engineer: Yuliu                            |                          |
| Site: AC6                                  | Time: 2024/12/18 - 16:02 |
| Limit: ETSI_EN301908-1_RSE(3m)_UE(Traffic) | Margin: 0                |
| Probe: CE_30-1G                            | Polarity: Vertical       |
| EUT: Cat4 indoor CPE                       | Power: 230 Vac / 50 Hz   |
| Note: Mode 1:NTN band255 Traffic 1659.9MHz |                          |



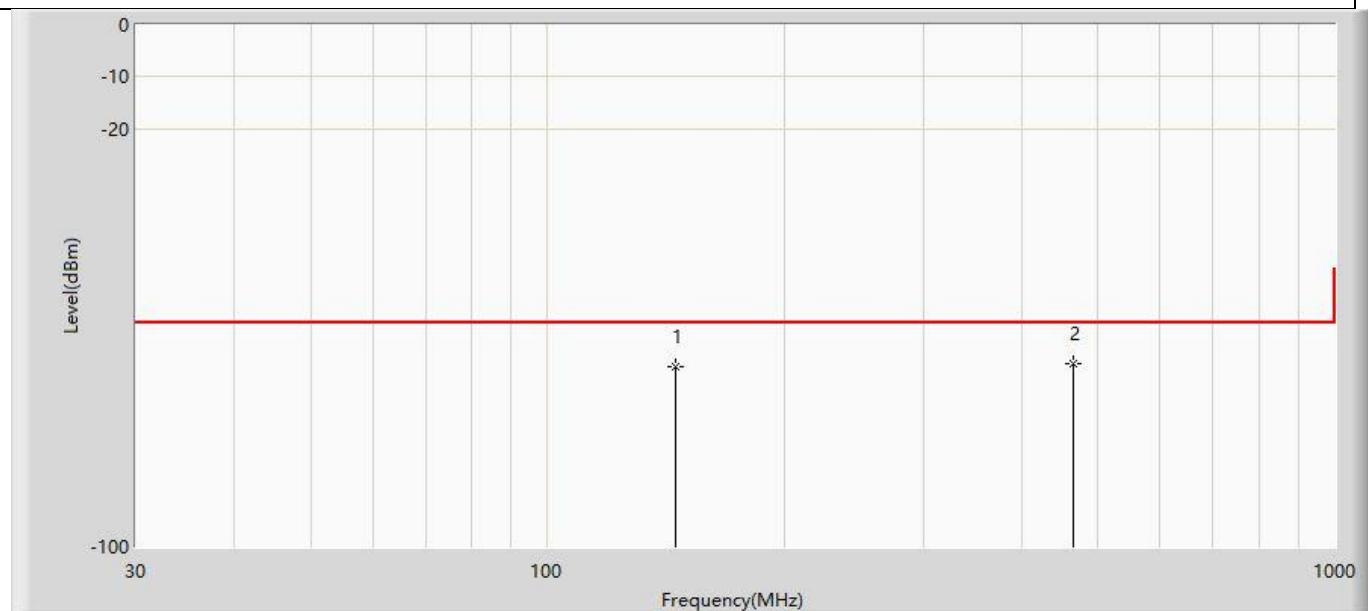
| No | Mark | Frequency (MHz) | Measure Level (dBm) | Reading Level (dBm) | Over Limit (dB) | Limit (dBm) | Factor (dB) | Type |
|----|------|-----------------|---------------------|---------------------|-----------------|-------------|-------------|------|
| 1  |      | 148.340         | -65.658             | -95.058             | -29.658         | -36.000     | 29.400      | PK   |
| 2  | *    | 422.850         | -64.917             | -93.347             | -28.917         | -36.000     | 28.430      | PK   |

|   |                          |
|---|--------------------------|
| Profile: 24B0779R                       | Page No.: 43             |
| Engineer: Yuliu                         |                          |
| Site: AC6                               | Time: 2024/12/18 - 16:02 |
| Limit: ETSI_EN301908-1_RSE(3m)_UE(Idle) | Margin: 0                |
| Probe: CE_30-1G                         | Polarity: Horizontal     |
| EUT: Cat4 indoor CPE                    | Power: 230 Vac / 50 Hz   |
| Note: Mode 1:NTN band255 Idle 1626.7MHz |                          |



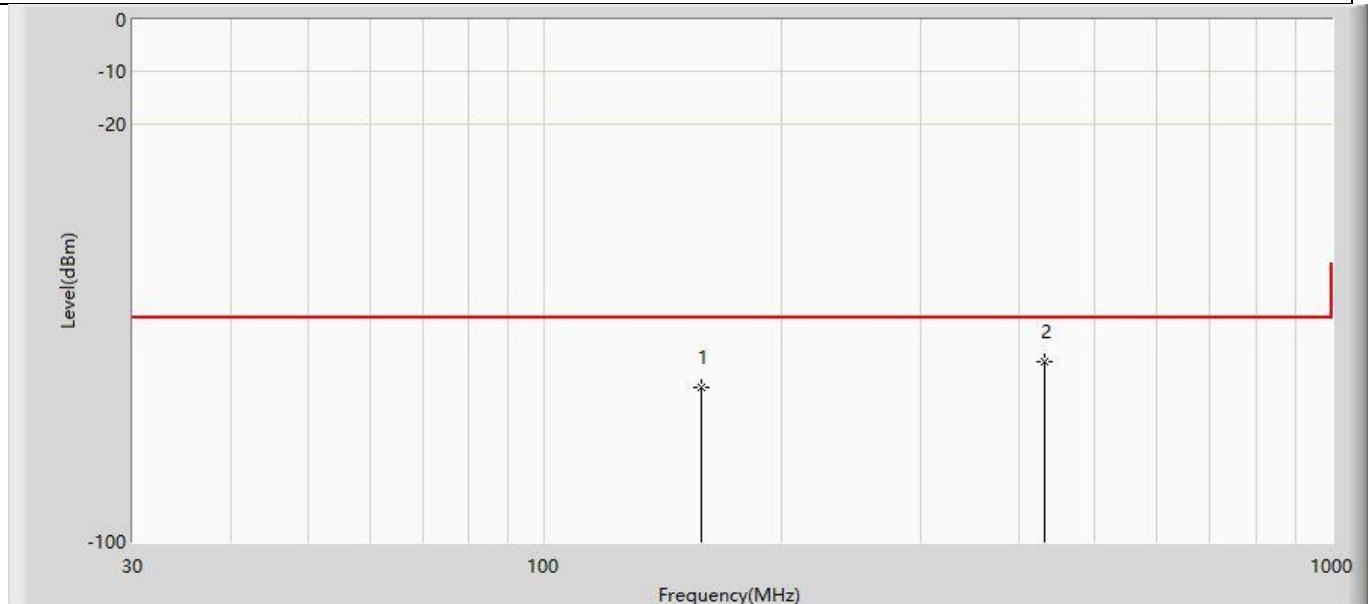
| No | Mark | Frequency (MHz) | Measure Level (dBm) | Reading Level (dBm) | Over Limit (dB) | Limit (dBm) | Factor (dB) | Type |
|----|------|-----------------|---------------------|---------------------|-----------------|-------------|-------------|------|
| 1  |      | 149.310         | -70.241             | -94.581             | -13.241         | -57.000     | 24.340      | PK   |
| 2  | *    | 484.930         | -64.776             | -93.636             | -7.776          | -57.000     | 28.860      | PK   |

|   |                          |
|---|--------------------------|
| Profile: 24B0779R                       | Page No.: 44             |
| Engineer: Yuliu                         |                          |
| Site: AC6                               | Time: 2024/12/18 - 16:02 |
| Limit: ETSI_EN301908-1_RSE(3m)_UE(Idle) | Margin: 0                |
| Probe: CE_30-1G                         | Polarity: Vertical       |
| EUT: Cat4 indoor CPE                    | Power: 230 Vac / 50 Hz   |
| Note: Mode 1:NTN band255 Idle 1626.7MHz |                          |



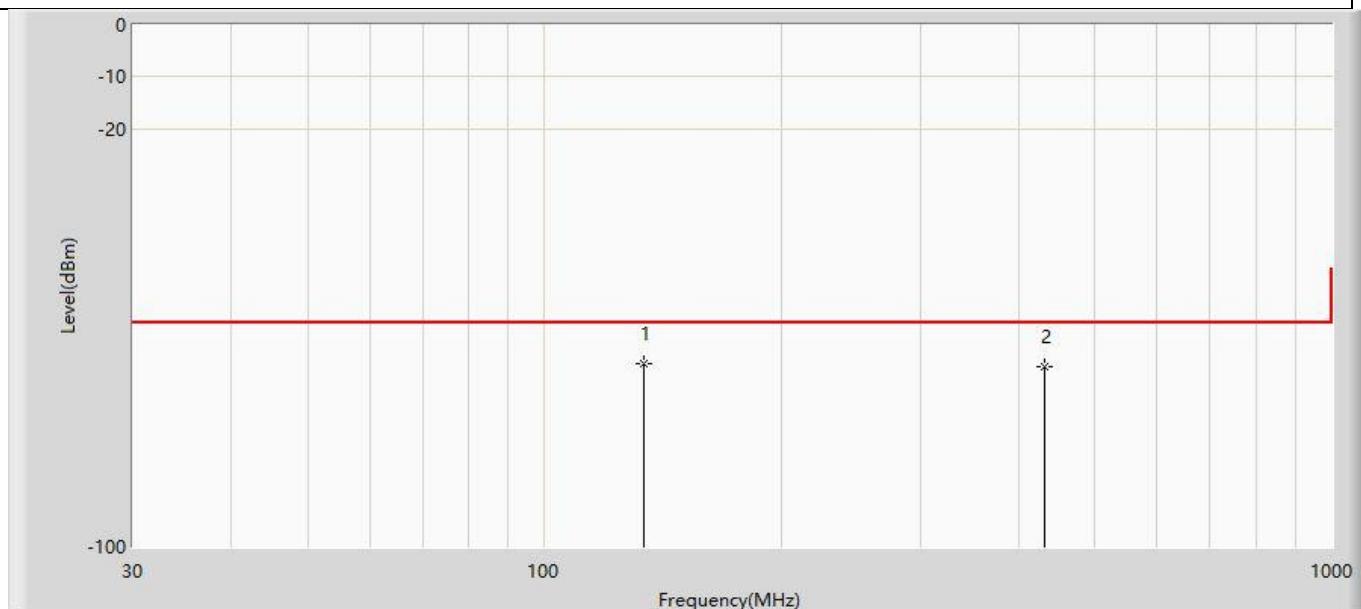
| No | Mark | Frequency (MHz) | Measure Level (dBm) | Reading Level (dBm) | Over Limit (dB) | Limit (dBm) | Factor (dB) | Type |
|----|------|-----------------|---------------------|---------------------|-----------------|-------------|-------------|------|
| 1  |      | 145.430         | -65.416             | -94.736             | -8.416          | -57.000     | 29.320      | PK   |
| 2  | *    | 465.530         | -64.875             | -93.665             | -7.875          | -57.000     | 28.790      | PK   |

|   |                          |
|---|--------------------------|
| Profile: 24B0779R                       | Page No.: 45             |
| Engineer: Yulu                          |                          |
| Site: AC6                               | Time: 2024/12/18 - 16:02 |
| Limit: ETSI_EN301908-1_RSE(3m)_UE(Idle) | Margin: 0                |
| Probe: CE_30-1G                         | Polarity: Horizontal     |
| EUT: Cat4 indoor CPE                    | Power: 230 Vac / 50 Hz   |
| Note: Mode 1:NTN band255 Idle 1643.3MHz |                          |



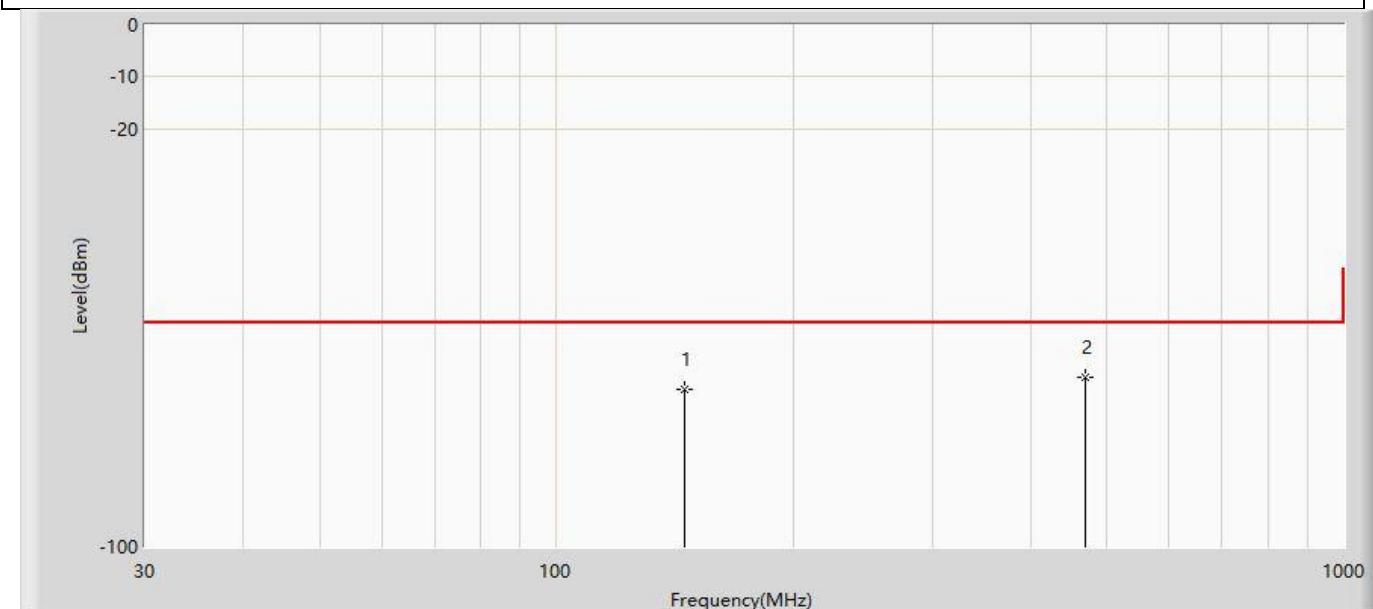
| No | Mark | Frequency (MHz) | Measure Level (dBm) | Reading Level (dBm) | Over Limit (dB) | Limit (dBm) | Factor (dB) | Type |
|----|------|-----------------|---------------------|---------------------|-----------------|-------------|-------------|------|
| 1  |      | 158.040         | -70.407             | -94.187             | -13.407         | -57.000     | 23.780      | PK   |
| 2  | *    | 431.580         | -65.457             | -94.257             | -8.457          | -57.000     | 28.800      | PK   |

|   |                          |
|---|--------------------------|
| Profile: 24B0779R                       | Page No.: 46             |
| Engineer: Yulu                          |                          |
| Site: AC6                               | Time: 2024/12/18 - 16:02 |
| Limit: ETSI_EN301908-1_RSE(3m)_UE(Idle) | Margin: 0                |
| Probe: CE_30-1G                         | Polarity: Vertical       |
| EUT: Cat4 indoor CPE                    | Power: 230 Vac / 50 Hz   |
| Note: Mode 1:NTN band255 Idle 1643.3MHz |                          |



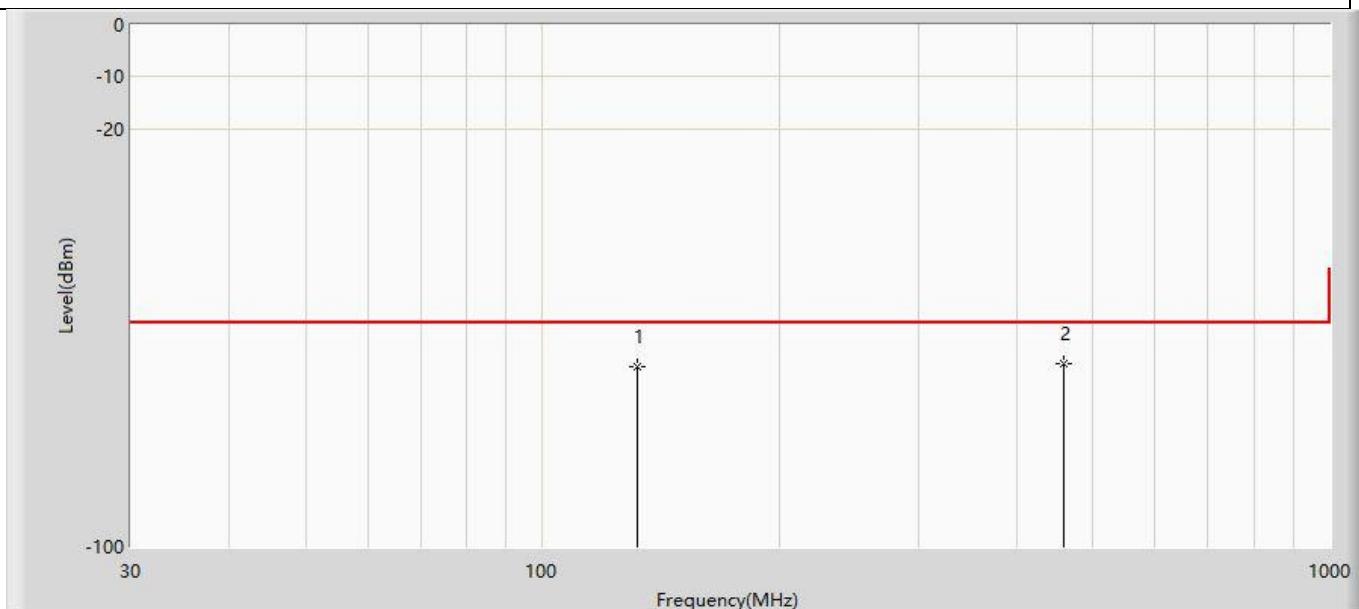
| No | Mark | Frequency (MHz) | Measure Level (dBm) | Reading Level (dBm) | Over Limit (dB) | Limit (dBm) | Factor (dB) | Type |
|----|------|-----------------|---------------------|---------------------|-----------------|-------------|-------------|------|
| 1  | *    | 133.790         | -65.030             | -94.620             | -8.030          | -57.000     | 29.590      | PK   |
| 2  |      | 431.580         | -65.492             | -94.132             | -8.492          | -57.000     | 28.640      | PK   |

|   |                          |
|---|--------------------------|
| Profile: 24B0779R                       | Page No.: 47             |
| Engineer: Yuliu                         |                          |
| Site: AC6                               | Time: 2024/12/18 - 16:02 |
| Limit: ETSI_EN301908-1_RSE(3m)_UE(Idle) | Margin: 0                |
| Probe: CE_30-1G                         | Polarity: Horizontal     |
| EUT: Cat4 indoor CPE                    | Power: 230 Vac / 50 Hz   |
| Note: Mode 1:NTN band255 Idle 1659.9MHz |                          |



| No | Mark | Frequency (MHz) | Measure Level (dBm) | Reading Level (dBm) | Over Limit (dB) | Limit (dBm) | Factor (dB) | Type |
|----|------|-----------------|---------------------|---------------------|-----------------|-------------|-------------|------|
| 1  |      | 145.430         | -69.811             | -94.191             | -12.811         | -57.000     | 24.380      | PK   |
| 2  | *    | 468.440         | -67.403             | -95.953             | -10.403         | -57.000     | 28.550      | PK   |

|   |                          |
|---|--------------------------|
| Profile: 24B0779R                       | Page No.: 48             |
| Engineer: Yuliu                         |                          |
| Site: AC6                               | Time: 2024/12/18 - 16:02 |
| Limit: ETSI_EN301908-1_RSE(3m)_UE(Idle) | Margin: 0                |
| Probe: CE_30-1G                         | Polarity: Vertical       |
| EUT: Cat4 indoor CPE                    | Power: 230 Vac / 50 Hz   |
| Note: Mode 1:NTN band255 Idle 1659.9MHz |                          |

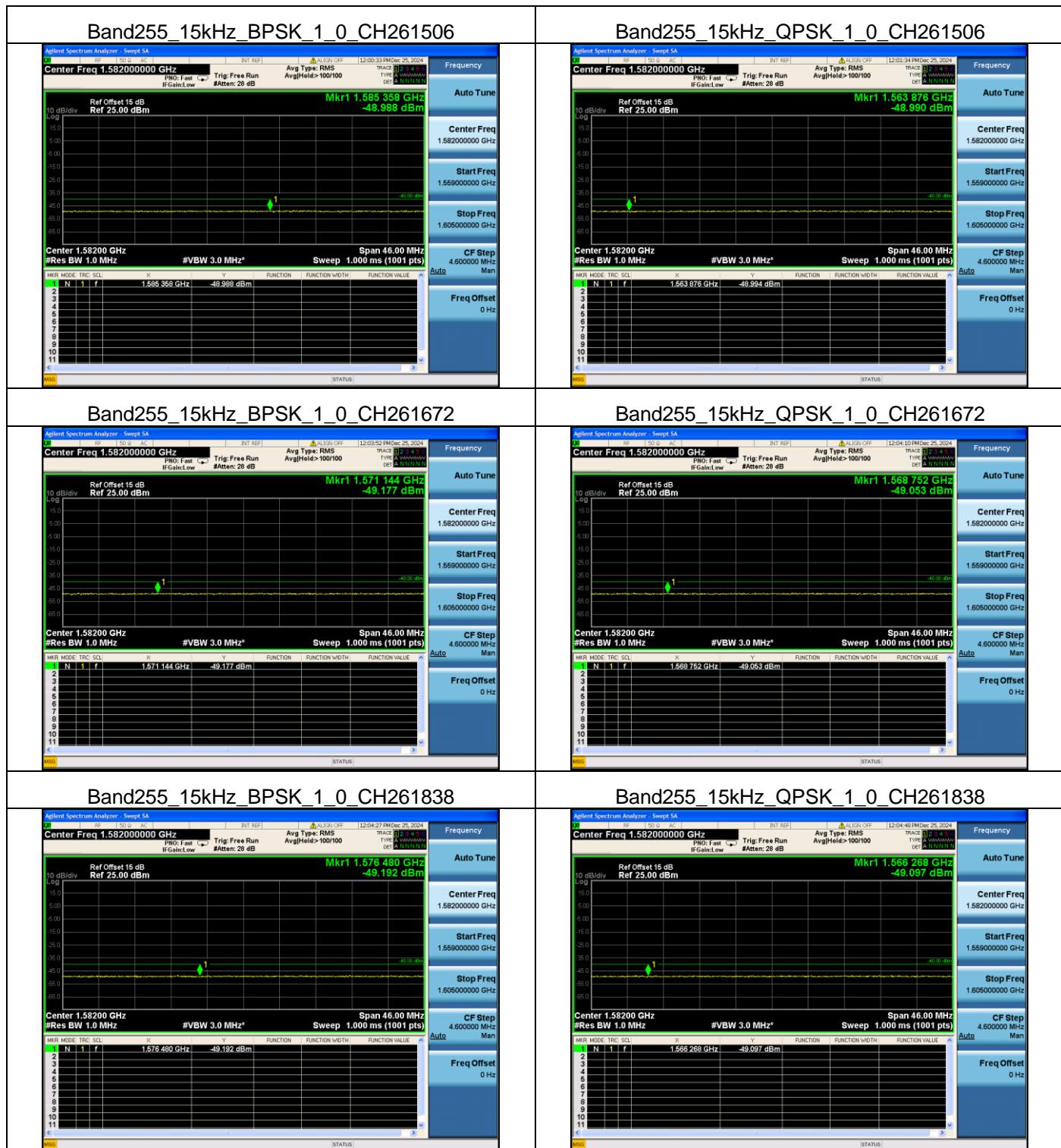


| No | Mark | Frequency (MHz) | Measure Level (dBm) | Reading Level (dBm) | Over Limit (dB) | Limit (dBm) | Factor (dB) | Type |
|----|------|-----------------|---------------------|---------------------|-----------------|-------------|-------------|------|
| 1  |      | 131.850         | -65.495             | -94.855             | -8.495          | -57.000     | 29.360      | PK   |
| 2  | *    | 458.740         | -64.886             | -93.536             | -7.886          | -57.000     | 28.650      | PK   |

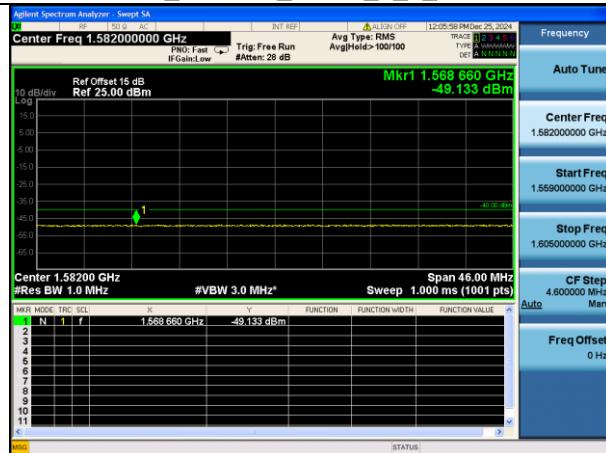
#### Notes:

1. " \* ", means this data is the worst emission level.
2. Measurement Level = Reading Level + Factor(Probe+Cable+Amp)
3. The test frequency range, 9kHz~30MHz, worst case are at least 20dB below the limits, therefore no data appear in the report.
4. The test frequency range, 12.75GHz~40GHz test result on peak is lower than average limit, all is the noise base, therefore no data appear in the report.
5. If the test result on peak is lower than average limit, then average measurement needn't be performed.

## Appendix C: Additional Unwanted Emission



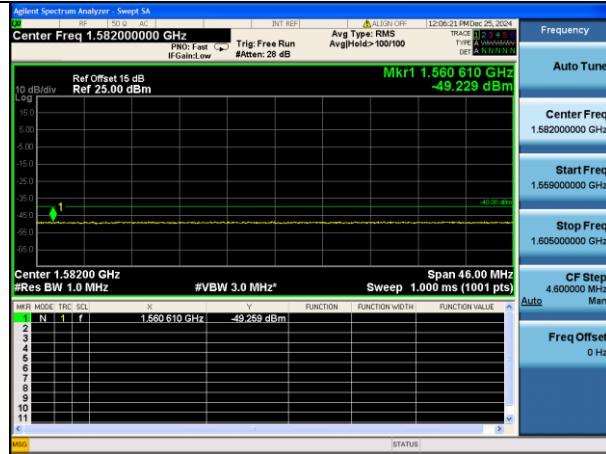
## Band255\_3.75kHz\_BPSK\_1\_0\_CH261506



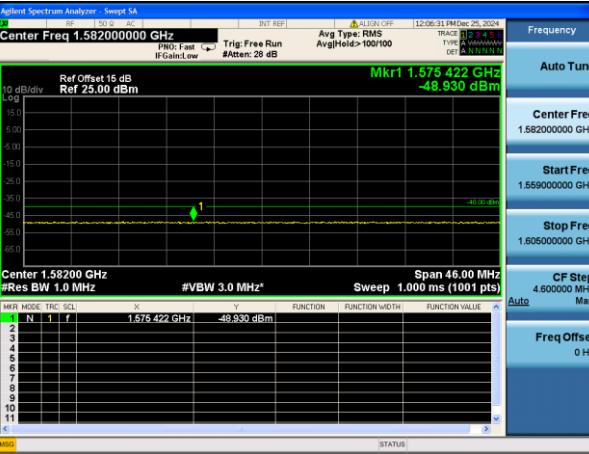
## Band255\_3.75kHz\_QPSK\_1\_0\_CH261506



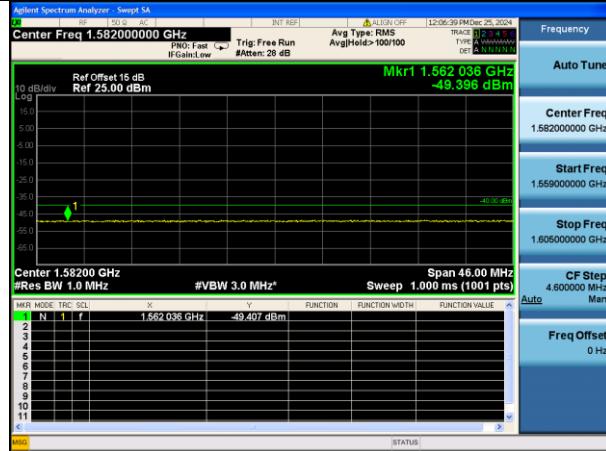
## Band255\_3.75kHz\_BPSK\_1\_0\_CH261672



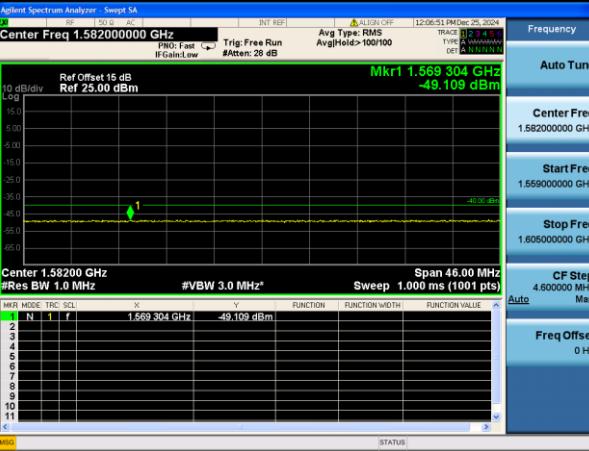
## Band255\_3.75kHz\_QPSK\_1\_0\_CH261672



## Band255\_3.75kHz\_BPSK\_1\_0\_CH261838



## Band255\_3.75kHz\_QPSK\_1\_0\_CH261838



## Band255\_15kHz\_BPSK\_1\_0\_CH261506



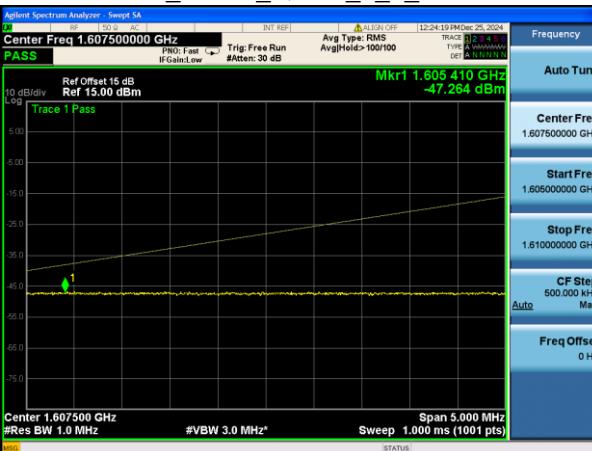
## Band255\_15kHz\_QPSK\_1\_0\_CH261506



## Band255\_15kHz\_BPSK\_1\_0\_CH261672



## Band255\_15kHz\_QPSK\_1\_0\_CH261672



## Band255\_15kHz\_BPSK\_1\_0\_CH261838



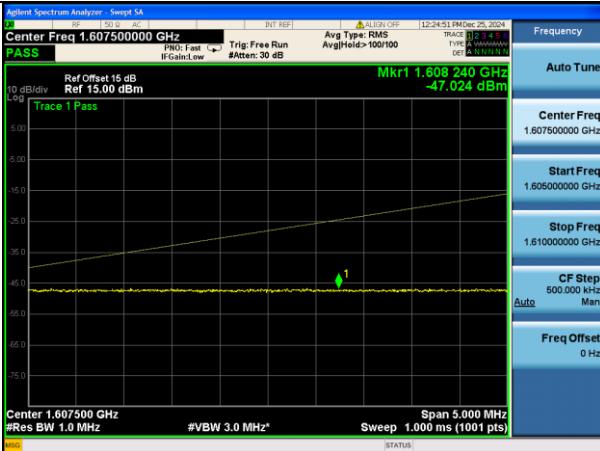
## Band255\_15kHz\_QPSK\_1\_0\_CH261838



## Band255\_3.75kHz\_BPSK\_1\_0\_CH261506



## Band255\_3.75kHz\_QPSK\_1\_0\_CH261506



## Band255\_3.75kHz\_BPSK\_1\_0\_CH261672



## Band255\_3.75kHz\_QPSK\_1\_0\_CH261672



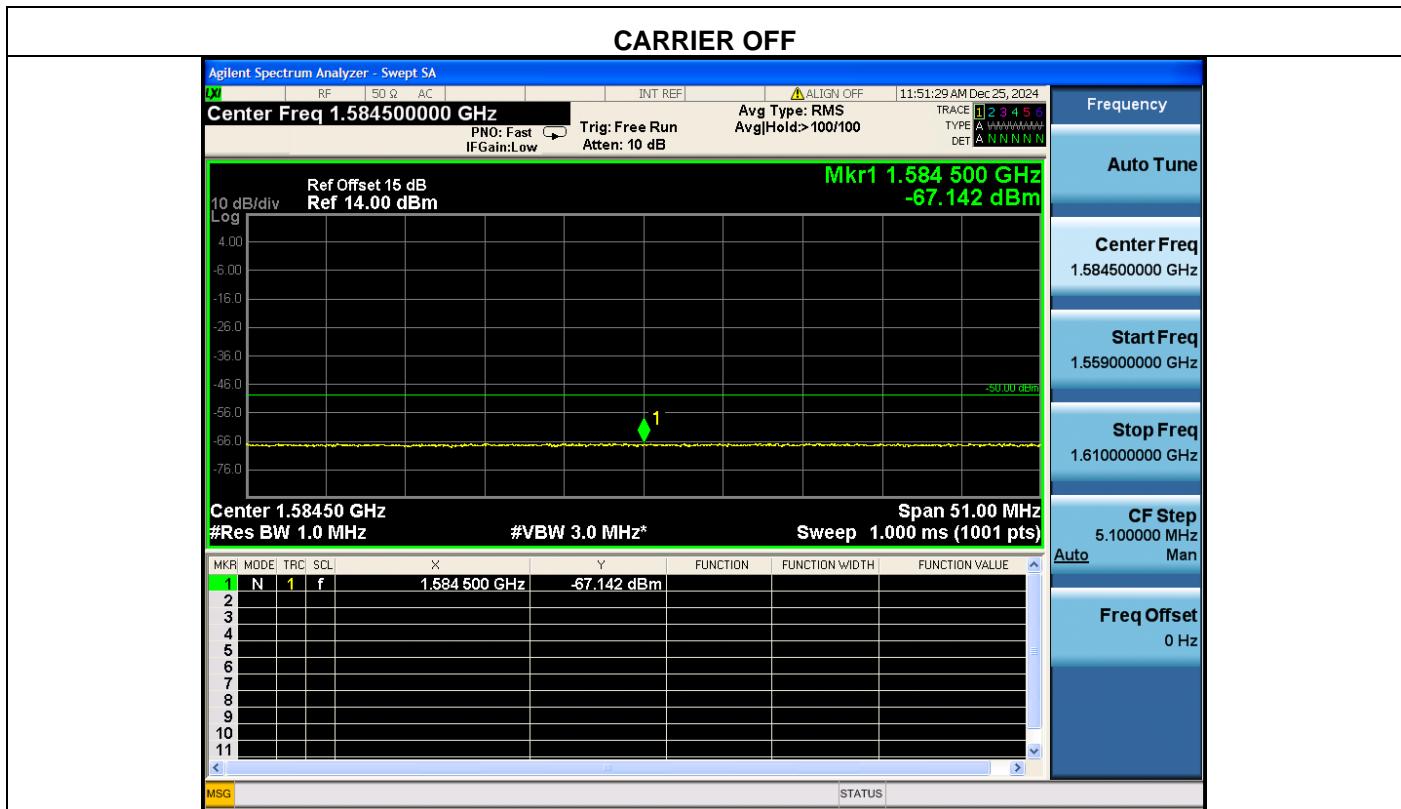
## Band255\_3.75kHz\_BPSK\_1\_0\_CH261838



## Band255\_3.75kHz\_QPSK\_1\_0\_CH261838



## Appendix D: Carrier-Off State Emissions



The End