

# TEST REPORT

Report No..... : KD2504S1897E01  
FCC ID..... : 2AZ2R-M3  
Applicant..... : Shenzhen USEER Robotics Co.,Ltd.  
Address..... : Building 2, Fashion Brand Industrial Park, E'Bu Town, Shenzhen-Shanwei  
Special Cooperation Zone, Shenzhen, Guangdong, China  
Manufacturer..... : Shenzhen USEER Robotics Co.,Ltd.  
Address..... : Building 2, Fashion Brand Industrial Park, E'Bu Town, Shenzhen-Shanwei  
Special Cooperation Zone, Shenzhen, Guangdong, China  
Product Name..... : Robotic Vacuum Cleaner  
Model/Type reference..... : M3, M3 Max, M3L  
Standard..... : 47 CFR Part 15.247  
Date of Receipt..... : April 22, 2025  
Date of Test Date..... : April 22, 2025 to May 24, 2025  
Date of issue..... : May 24, 2025  
**Test result..... : Pass**

Conclusion..... : The submitted sample was found to COMPLY with the standards above.

|              |                                           |                 |
|--------------|-------------------------------------------|-----------------|
| Prepared by: | Name: Chad Lin<br>Title: Project Engineer | <i>Chad Lin</i> |
| Approved by: | Name: Sky Dong<br>Title: EMC Supervisor   | <i>Sky Dong</i> |

**Testing Laboratory Name....: KSIGN(Guangdong) Testing Co., Ltd.**

Address..... : West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial  
Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong,  
China

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## 1. TEST SUMMARY

### 1.1. Test Standards

The tests were performed according to following standards:

**47 CFR Part 15.247:** Operation within the bands 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz

**ANSI C63.10-2013:** American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices.

**KDB 558074 D01 15.247 Meas Guidance v05r02:** Guidance for compliance measurements on digital transmission system, frequency hopping spread spectrum system, and hybrid system devices operating under section 15.247 of the FCC rules.

### 1.2. Report Version

| Revised No. | Date of issue | Description |
|-------------|---------------|-------------|
| 01          | May 24, 2025  | Original    |
|             |               |             |
|             |               |             |
|             |               |             |

### 1.3. Test Description

| Test Item                                   | Standard           | Requirement                      | Result |
|---------------------------------------------|--------------------|----------------------------------|--------|
| Antenna requirement                         | 47 CFR Part 15.247 | 47 CFR 15.203                    | Pass   |
| Conducted Emission at AC power line         | 47 CFR Part 15.247 | 47 CFR 15.207(a)                 | Pass   |
| Occupied Bandwidth                          | 47 CFR Part 15.247 | 47 CFR 15.247(a)(2)              | Pass   |
| Maximum Conducted Output Power              | 47 CFR Part 15.247 | 47 CFR 15.247(b)(3)              | Pass   |
| Power Spectral Density                      | 47 CFR Part 15.247 | 47 CFR 15.247(e)                 | Pass   |
| Emissions in non-restricted frequency bands | 47 CFR Part 15.247 | 47 CFR 15.247(d)                 | Pass   |
| Band edge emissions (Radiated)              | 47 CFR Part 15.247 | 47 CFR 15.247(d), 15.209, 15.205 | Pass   |
| Emissions in frequency bands (below 1GHz)   | 47 CFR Part 15.247 | 47 CFR 15.247(d), 15.209, 15.205 | Pass   |
| Emissions in frequency bands (above 1GHz)   | 47 CFR Part 15.247 | 47 CFR 15.247(d), 15.209, 15.205 | Pass   |

## 1.4. Test Facility

West Side of  
1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park,  
Minzhu, Shatou, Shajing, Bao'an District, Shenzhen,  
Guangdong, China

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

**CNAS-Lab Code: L 13261**

KSIGN(Guangdong) Testing Co., Ltd. has been assessed and proved to be in Compliance with CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC17025: 2017 General Requirements) for the Competence of Testing and Calibration Laboratories.

**A2LA-Lab Cert. No.: 5457.01**

KSIGN(Guangdong) Testing Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

**ISED# : 25693 CAB identifier.: CN0096**

KSIGN(Guangdong) Testing Co., Ltd. has been listed by Innovation, Science and Economic Development Canada to perform electromagnetic emission measurement.

**FCC-Registration No.: 294912 Designation Number: CN1328**

KSIGN(Guangdong) Testing Co., Ltd. EMC Laboratory has been listed on the US Federal Communications Commission list of test facilities recognized to perform electromagnetic emissions measurements.

## 1.5. Measurement Uncertainty

| Test Items                      | Measurement Uncertainty |
|---------------------------------|-------------------------|
| Conducted Emission (150k-30MHz) | ± 3.34dB                |
| Output Power, Conducted         | ± 1.4dB                 |
| PSD, Conducted                  | ± 1.0dB                 |
| Spurious Emissions, Conducted   | ± 3.3dB                 |
| RSE (1-18GHz)                   | ± 4.68dB                |
| RSE (30-1000MHz)                | ± 5.7dB                 |
| RSE (18-40GHz)                  | ± 5.18dB                |

The reported uncertainty of measurement  $y \pm U$ , where expended uncertainty  $U$  is based on a standard uncertainty multiplied by a coverage factor of  $k=2$ , providing a level of confidence of approximately 95 %. Otherwise required by the applicant or Product Regulations. Decision Rule in this report did not consider the uncertainty.

## 2. GENERAL INFORMATION

### 2.1. General Description Of EUT

|                         |                                                                                                                                                                                                                                                                                                                                                                                |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Sample Number:     | KD2504S1897E-01, KD2504S1897E-02                                                                                                                                                                                                                                                                                                                                               |
| Product Name:           | Robotic Vacuum Cleaner                                                                                                                                                                                                                                                                                                                                                         |
| Model / Type reference: | M3, M3 Max, M3L                                                                                                                                                                                                                                                                                                                                                                |
| Model Difference:       | M3 is white, M3 Max is twilight gray, M3L is light silver-gray. Different model names are available to meet market demands. Other power supply methods, appearance, internal structures, circuits and key components are the same, and do not affect safety and electromagnetic compatibility performance. According to the above information, all tests were performed on M3. |
| Power Supply:           | DC 14.4V from battery                                                                                                                                                                                                                                                                                                                                                          |
| Operation Frequency:    | 802.11b/g/n(HT20): 2412MHz to 2462MHz                                                                                                                                                                                                                                                                                                                                          |
| Number of Channels:     | 802.11b/g/n(HT20): 11 Channels                                                                                                                                                                                                                                                                                                                                                 |
| Modulation Type:        | 802.11b: DSSS(CCK, DQPSK, DBPSK);<br>802.11g: OFDM(BPSK, QPSK, 16QAM, 64QAM);<br>802.11n(HT20): OFDM (BPSK, QPSK, 16QAM, 64QAM)                                                                                                                                                                                                                                                |
| Antenna Type:           | FPC                                                                                                                                                                                                                                                                                                                                                                            |
| Antenna Gain:           | 2.98dBi                                                                                                                                                                                                                                                                                                                                                                        |
| Max TX Power:           | 13.74dBm                                                                                                                                                                                                                                                                                                                                                                       |
| Hardware Version:       | M3_V1.1                                                                                                                                                                                                                                                                                                                                                                        |
| Software Version:       | V1.1                                                                                                                                                                                                                                                                                                                                                                           |

**Note:**Antenna gain provided by the applicant Can affect the validity of results

### 2.2. Accessory Equipment Information

| Title    | Manufacturer | Model No.  | Technical Parameters | Provided by |
|----------|--------------|------------|----------------------|-------------|
| Computer | HP           | 15-cd028AX | /                    | Laboratory  |

### 2.3. Description of Test Modes

| No.        | Title              | Description of Mode                                                                    |
|------------|--------------------|----------------------------------------------------------------------------------------|
| Test Mode1 | 802.11b mode       | Keep the EUT in 802.11b transmitting mode at lowest, middle and highest channel.       |
| Test Mode2 | 802.11g mode       | Keep the EUT in 802.11g transmitting mode at lowest, middle and highest channel.       |
| Test Mode3 | 802.11n(HT20) mode | Keep the EUT in 802.11n(HT20) transmitting mode at lowest, middle and highest channel. |

## 2.4. Operation channel list

| Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) |
|---------|-----------------|---------|-----------------|---------|-----------------|
| 1       | 2412            | 5       | 2432            | 9       | 2452            |
| 2       | 2417            | 6       | 2437            | 10      | 2457            |
| 3       | 2422            | 7       | 2442            | 11      | 2462            |
| 4       | 2427            | 8       | 2447            | /       | /               |

## 2.5. Measurement Instruments List

| Conducted Emission at AC power line |                |           |                      |            |
|-------------------------------------|----------------|-----------|----------------------|------------|
| Test Equipment                      | Manufacturer   | Model No. | Serial No.           | Cal. Until |
| LISN                                | R&S            | ENV432    | 1326.6105.02         | 2025-12-22 |
| EMI Test Receiver                   | R&S            | ESR       | 102524               | 2026-01-10 |
| Manual RF Switch                    | JS TOYO        | /         | MSW-01/002           | 2025-12-22 |
| ISN CAT6                            | Schwarzbeck    | CAT5 8158 | 227                  | 2025-12-22 |
| Color Signal Generator              | Philips        | PM5418    | 672926               | 2025-12-22 |
| Power Absorbing Clamp               | R&S            | MDS-21    | 100925               | 2025-12-25 |
| LISN                                | EVERFINE       | LS-5      | G657431CD14311<br>12 | 2025-12-22 |
| Current Sensor Probe                | Beijin ZHINAN  | ZN23101   | 23013                | 2025-12-10 |
| PV Artificial power network         | Beijing KeHuan | KH8301    | 830120007            | 2025-07-23 |

| 6dB Bandwidth<br>Maximum Conducted Output Power<br>Power Spectral Density<br>Emissions in non-restricted frequency bands |                            |                         |            |            |
|--------------------------------------------------------------------------------------------------------------------------|----------------------------|-------------------------|------------|------------|
| Test Equipment                                                                                                           | Manufacturer               | Model No.               | Serial No. | Cal. Until |
| Wideband Radio Communication Tester                                                                                      | R&S                        | CMU200                  | 115297     | 2025-12-22 |
| Audio Analyzer                                                                                                           | R&S                        | UPL16                   | 100001     | 2025-12-22 |
| Shielding box                                                                                                            | Gxiong                     | GX-5915A                | 2201113    | 2025-12-22 |
| High Pass Filter                                                                                                         | COM-MW Technology Co., Ltd | ZHPF-M1.2-9G-1<br>87    | 09203403   | 2025-12-22 |
| Band Stop Filter                                                                                                         | COM-MW Technology Co., Ltd | ZBSF6-C820-920<br>-188  | 09203401   | 2025-12-22 |
| Splitter                                                                                                                 | COM-MW Technology Co., Ltd | ZPD-M1-8-2103           | 09203407   | 2025-12-22 |
| Coaxial Cable                                                                                                            | BEBES                      | A40-2.92M2.92F-<br>4.5M | 1907021    | 2025-12-22 |
| Hygrothermograph                                                                                                         | Anymetre                   | JB913                   | /          | 2025-12-22 |
| Climate Chamber                                                                                                          | Angul                      | AGNH80L                 | 1903042120 | 2025-12-22 |
| Spectrum Analyzer                                                                                                        | HP                         | 8593E                   | 3831U02087 | 2025-12-22 |
| Dual Output DC Power Supply                                                                                              | Agilent                    | E3646A                  | MY40009992 | 2025-12-29 |
| RF Control Unit                                                                                                          | Tonscend                   | JS0806-2                | /          | 2025-12-22 |
| Analog Signal Generator                                                                                                  | HP                         | 83752A                  | 3344A00337 | 2025-12-22 |
| Vector Signal Generator                                                                                                  | Agilent                    | N5182A                  | MY50142520 | 2025-12-22 |
| Wideband Radio Communication Tester                                                                                      | R&S                        | CMW500                  | 157282     | 2025-12-22 |
| Spectrum Analyzer                                                                                                        | R&S                        | FSV40-N                 | 101798     | 2026-02-11 |

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Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdksign.cn Web: www.gdksign.com

| <b>Band edge emissions (Radiated)</b><br><b>Emissions in frequency bands (below 1GHz)</b><br><b>Emissions in frequency bands (above 1GHz)</b> |                     |                  |                   |                   |
|-----------------------------------------------------------------------------------------------------------------------------------------------|---------------------|------------------|-------------------|-------------------|
| <b>Test Equipment</b>                                                                                                                         | <b>Manufacturer</b> | <b>Model No.</b> | <b>Serial No.</b> | <b>Cal. Until</b> |
| Color Signal Generator                                                                                                                        | Philips             | PM5418           | 672926            | 2025-12-22        |
| Log Periodic Antenna                                                                                                                          | Schwarzbeck         | VULB 9163        | 1230              | 2026-01-13        |
| Pre-Amplifier                                                                                                                                 | Schwarzbeck         | BBV 9745         | 9745#129          | 2025-12-22        |
| Broadcast Television<br>Signal Generator                                                                                                      | R&S                 | SFE100           | 141038            | 2025-12-22        |
| Analog Signal Generator                                                                                                                       | Agilent             | 8648A            | 3847M00445        | 2025-12-22        |
| EMI Test Receiver                                                                                                                             | R&S                 | ESR              | 102525            | 2026-01-10        |
| Loop Antenna                                                                                                                                  | Beijin ZHINAN       | ZN30900C         | 18050             | 2025-12-22        |
| Horn Antenna                                                                                                                                  | Schwarzbeck         | BBHA 9120 D      | 2023              | 2025-12-25        |
| Pre-Amplifier                                                                                                                                 | EMCI                | EMC051835SE      | 980662            | 2025-12-22        |
| Spectrum Analyzer                                                                                                                             | Keysight            | N9020A           | MY46471971        | 2025-12-22        |

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Shajing, Bao'an District, Shenzhen, Guangdong, China

Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdksign.cn Web: www.gdksign.com

### 3. Evaluation Results (Evaluation)

#### 3.1. Antenna requirement

|                   |                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Requirement: | Refer to 47 CFR Part 15.203, 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 shall be considered sufficient to comply with the provisions of this section. |
| Conclusion:       | The directional gain of the antenna less than 6dBi, please refer to the EUT internal photographs antenna photo.                                                                                                                                                                                                                                                                     |

### 4. Radio Spectrum Matter Test Results (RF)

#### 4.1. Conducted Emission at AC power line

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                              |           |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|-----------|
| Test Requirement: | Refer to 47 CFR 15.207(a), Except as shown in paragraphs (b) and (c) of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 $\mu$ H/50 ohms line impedance stabilization network (LISN). |                              |           |
| Test Limit:       | Frequency of emission (MHz)                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Conducted limit (dB $\mu$ V) |           |
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 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.                                                                                                                                                                                                                                                                                                                                                                                                                                 |                              |           |
| Test Method:      | ANSI C63.10-2013 section 6.2                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                              |           |
| Procedure:        | Refer to ANSI C63.10-2013 section 6.2, standard test method for ac power-line conducted emissions from unlicensed wireless devices                                                                                                                                                                                                                                                                                                                                              |                              |           |

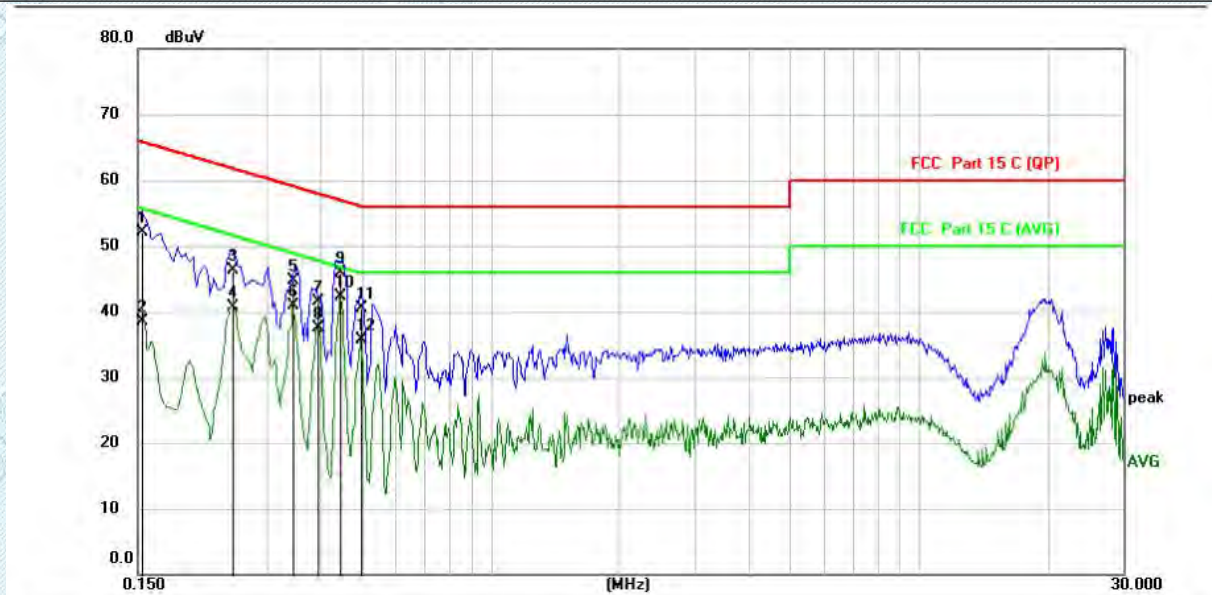
##### 4.1.1. E.U.T. Operation:

|                        |             |
|------------------------|-------------|
| Operating Environment: |             |
| Temperature:           | 25 °C       |
| Humidity:              | 50.1 %      |
| Atmospheric Pressure:  | 102 kPa     |
| Final test mode:       | Test Mode 1 |

The diagram illustrates a test setup for EUT/PSU and EUT/AE components. The setup includes a table with a height of 0.8 m. On the table, there are two EUT/AE components and one PSU component. The distance between the EUT/AE components is 0.1 m. The distance from the PSU to the EUT/AE components is 0.8 m. The distance from the EUT/AE components to the table surface is 0.4 m. The table surface is covered with insulation. Cables to the AE are connected to the EUT/AE components. The distance from the cables to the table surface is 0.8 m. The distance from the cables to the vertical reference ground plane is 0.4 m. The vertical reference ground plane is at a distance of  $\geq 0.8$  m from other metallic surfaces. The AMNs and AANs are bonded to a reference ground plane.

### 4.1.3. Test Data:

Test Mode1 / Line: Line / Band: 2400-2483.5 MHz / BW: 20 / CH: L

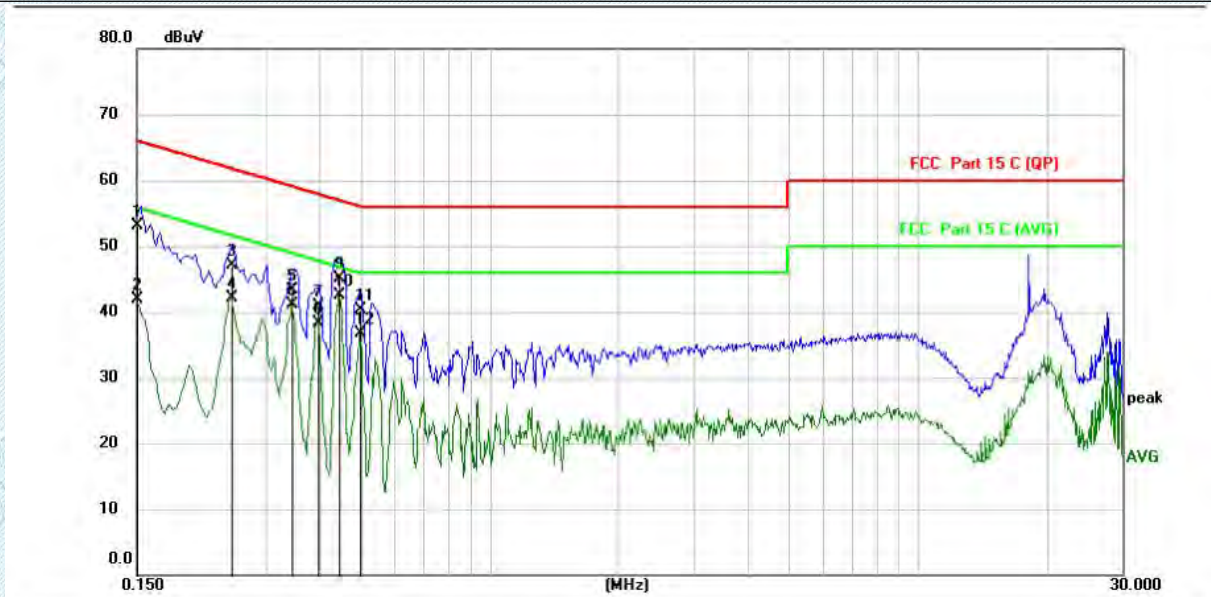


| No. Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV | Limit<br>dBuV | Over<br>dB | Detector | Comment |
|---------|--------------|--------------------------|-------------------------|--------------------------|---------------|------------|----------|---------|
| 1       | 0.1539       | 31.89                    | 20.23                   | 52.12                    | 65.79         | -13.67     | QP       |         |
| 2       | 0.1539       | 18.37                    | 20.23                   | 38.60                    | 55.79         | -17.19     | AVG      |         |
| 3       | 0.2500       | 26.02                    | 20.32                   | 46.34                    | 61.76         | -15.42     | QP       |         |
| 4       | 0.2500       | 20.45                    | 20.32                   | 40.77                    | 51.76         | -10.99     | AVG      |         |
| 5       | 0.3460       | 24.47                    | 20.30                   | 44.77                    | 59.06         | -14.29     | QP       |         |
| 6       | 0.3460       | 20.54                    | 20.30                   | 40.84                    | 49.06         | -8.22      | AVG      |         |
| 7       | 0.3940       | 21.25                    | 20.28                   | 41.53                    | 57.98         | -16.45     | QP       |         |
| 8       | 0.3940       | 17.30                    | 20.28                   | 37.58                    | 47.98         | -10.40     | AVG      |         |
| 9       | 0.4460       | 25.57                    | 20.26                   | 45.83                    | 56.95         | -11.12     | QP       |         |
| 10 *    | 0.4460       | 22.02                    | 20.26                   | 42.28                    | 46.95         | -4.67      | AVG      |         |
| 11      | 0.4980       | 20.34                    | 20.24                   | 40.58                    | 56.03         | -15.45     | QP       |         |
| 12      | 0.4980       | 15.52                    | 20.24                   | 35.76                    | 46.03         | -10.27     | AVG      |         |

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**Test Mode1 / Line: Neutral / Band: 2400-2483.5 MHz / BW: 20 / CH: L**


| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV | Limit<br>dBuV | Over<br>dB | Detector | Comment |
|-----|-----|--------------|--------------------------|-------------------------|--------------------------|---------------|------------|----------|---------|
| 1   |     | 0.1500       | 32.93                    | 20.22                   | 53.15                    | 66.00         | -12.85     | QP       |         |
| 2   |     | 0.1500       | 21.71                    | 20.22                   | 41.93                    | 56.00         | -14.07     | AVG      |         |
| 3   |     | 0.2500       | 26.70                    | 20.32                   | 47.02                    | 61.76         | -14.74     | QP       |         |
| 4   |     | 0.2500       | 21.69                    | 20.32                   | 42.01                    | 51.76         | -9.75      | AVG      |         |
| 5   |     | 0.3459       | 23.05                    | 20.30                   | 43.35                    | 59.06         | -15.71     | QP       |         |
| 6   |     | 0.3459       | 20.82                    | 20.30                   | 41.12                    | 49.06         | -7.94      | AVG      |         |
| 7   |     | 0.3980       | 20.58                    | 20.28                   | 40.86                    | 57.90         | -17.04     | QP       |         |
| 8   |     | 0.3980       | 17.95                    | 20.28                   | 38.23                    | 47.90         | -9.67      | AVG      |         |
| 9   |     | 0.4460       | 24.87                    | 20.26                   | 45.13                    | 56.95         | -11.82     | QP       |         |
| 10  | *   | 0.4460       | 22.22                    | 20.26                   | 42.48                    | 46.95         | -4.47      | AVG      |         |
| 11  |     | 0.4979       | 19.99                    | 20.24                   | 40.23                    | 56.03         | -15.80     | QP       |         |
| 12  |     | 0.4979       | 16.48                    | 20.24                   | 36.72                    | 46.03         | -9.31      | AVG      |         |

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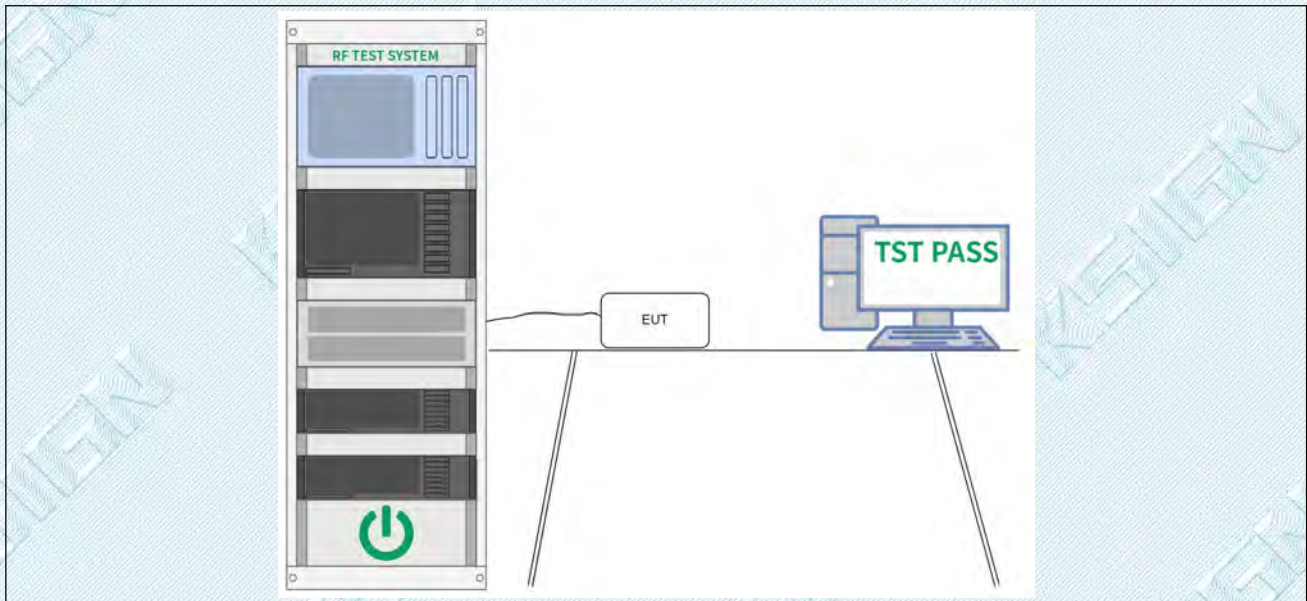
## 4.2. Occupied Bandwidth

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Requirement: | 47 CFR 15.247(a)(2)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Test Limit:       | Refer to 47 CFR 15.247(a)(2), Systems using digital modulation techniques may operate in the 902-928 MHz, and 2400-2483.5 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Test Method:      | ANSI C63.10-2013, section 11.8<br>KDB 558074 D01 15.247 Meas Guidance v05r02                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Procedure:        | <p>DTS Occupied Bandwidth:</p> <ul style="list-style-type: none"> <li>a) Set RBW = 100 kHz.</li> <li>b) Set the VBW <math>\geq [3 \times \text{RBW}]</math>.</li> <li>c) Detector = peak.</li> <li>d) Trace mode = max hold.</li> <li>e) Sweep = auto couple.</li> <li>f) Allow the trace to stabilize.</li> <li>g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.</li> </ul> <p>99% Occupied Bandwidth:</p> <ul style="list-style-type: none"> <li>a) Set RBW = 1% to 5% of the OBW.</li> <li>b) Set the VBW <math>\geq [3 \times \text{RBW}]</math>.</li> <li>c) Detector = peak.</li> <li>d) Trace mode = max hold.</li> <li>e) Sweep = auto couple.</li> <li>f) Allow the trace to stabilize.</li> <li>g) Use the 99% power bandwidth function of the instrument (if available) and report the measured bandwidth.</li> </ul> |

### 4.2.1. E.U.T. Operation:

|                        |                                    |
|------------------------|------------------------------------|
| Operating Environment: |                                    |
| Temperature:           | 25 °C                              |
| Humidity:              | 50.1 %                             |
| Atmospheric Pressure:  | 102 kPa                            |
| Final test mode:       | Test Mode1, Test Mode2, Test Mode3 |

#### 4.2.2. Test Setup Diagram:



#### 4.2.3. Test Data:

Please Refer to Appendix for Details.

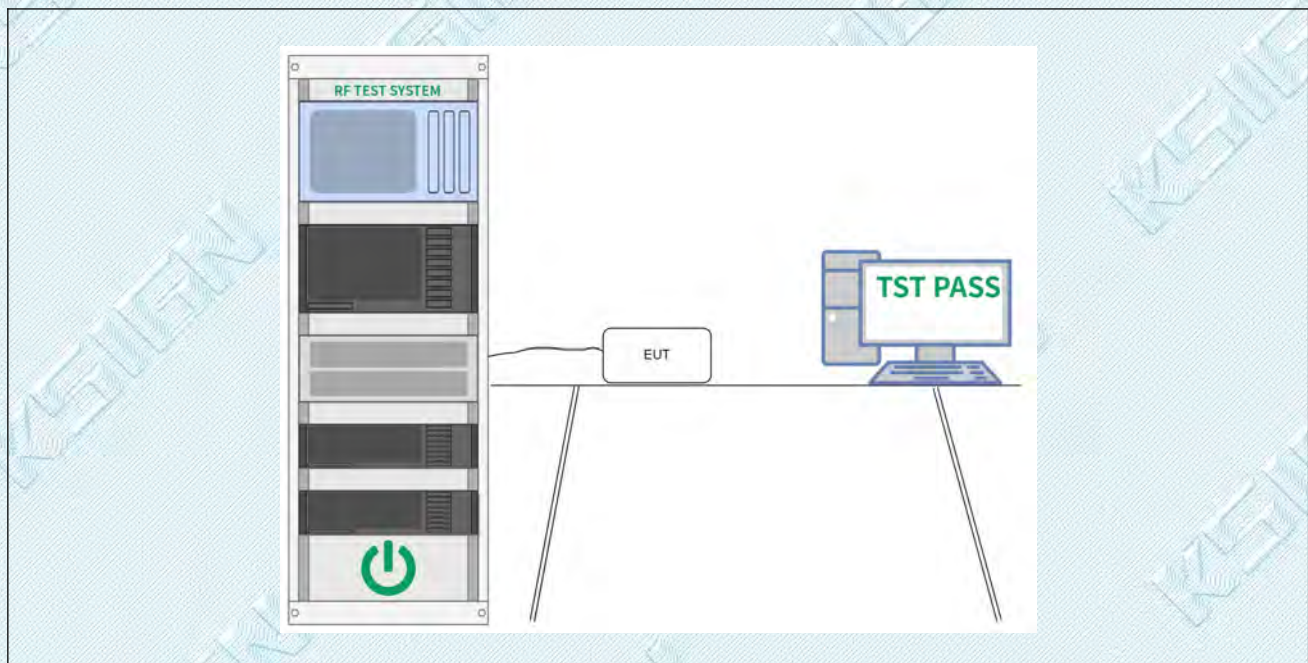
### 4.3. Maximum Conducted Output Power

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Requirement: | 47 CFR 15.247(b)(3)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Test Limit:       | Refer to 47 CFR 15.247(b)(3), For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode. |
| Test Method:      | ANSI C63.10-2013, section 11.9.2<br>KDB 558074 D01 15.247 Meas Guidance v05r02                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Procedure:        | ANSI C63.10-2013, section 11.9.2 Maximum conducted (average) output power                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

#### 4.3.1. E.U.T. Operation:

|                        |                                    |
|------------------------|------------------------------------|
| Operating Environment: |                                    |
| Temperature:           | 25 °C                              |
| Humidity:              | 50.1 %                             |
| Atmospheric Pressure:  | 102 kPa                            |
| Final test mode:       | Test Mode1, Test Mode2, Test Mode3 |

#### 4.3.2. Test Setup Diagram:



#### 4.3.3. Test Data:

Please Refer to Appendix for Details.

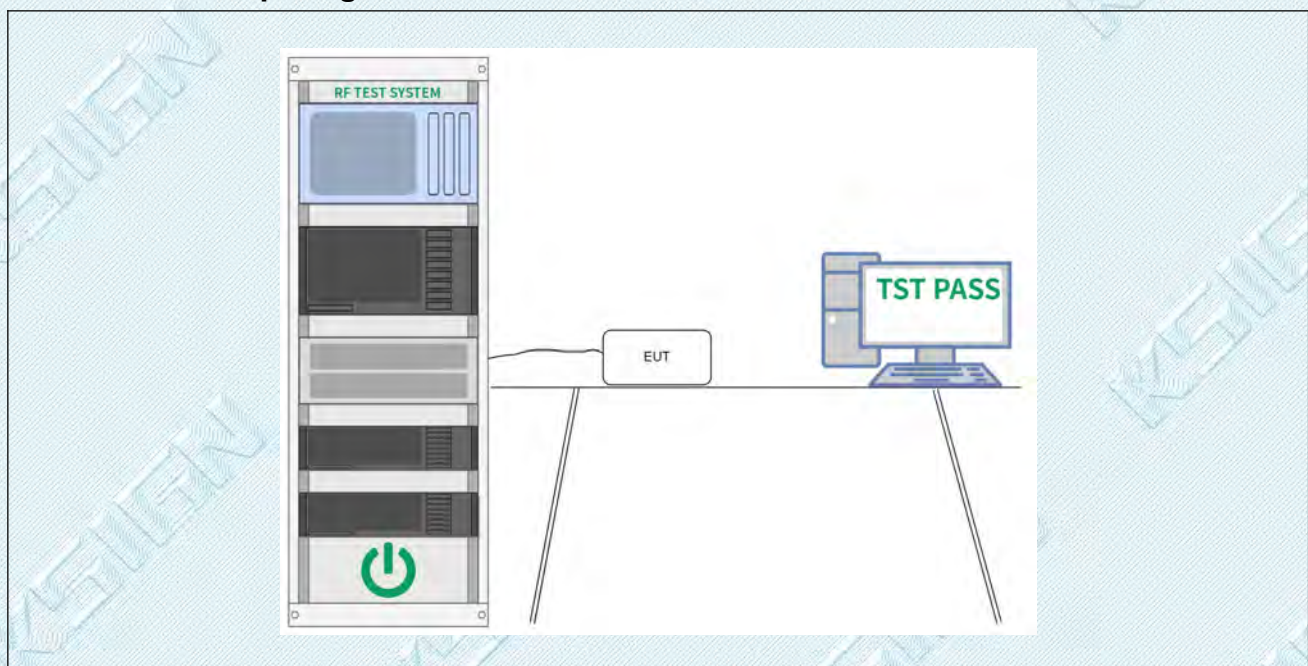
#### 4.4. Power Spectral Density

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Requirement: | 47 CFR 15.247(e)                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Test Limit:       | Refer to 47 CFR 15.247(e), For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density. |
| Test Method:      | ANSI C63.10-2013, section 11.10<br>KDB 558074 D01 15.247 Meas Guidance v05r02                                                                                                                                                                                                                                                                                                                                                                                                             |
| Procedure:        | ANSI C63.10-2013, section 11.10, Maximum power spectral density level in the fundamental emission                                                                                                                                                                                                                                                                                                                                                                                         |

##### 4.4.1. E.U.T. Operation:

|                        |                                    |
|------------------------|------------------------------------|
| Operating Environment: |                                    |
| Temperature:           | 25 °C                              |
| Humidity:              | 50.1 %                             |
| Atmospheric Pressure:  | 102 kPa                            |
| Final test mode:       | Test Mode1, Test Mode2, Test Mode3 |

##### 4.4.2. Test Setup Diagram:



##### 4.4.3. Test Data:

Please Refer to Appendix for Details.

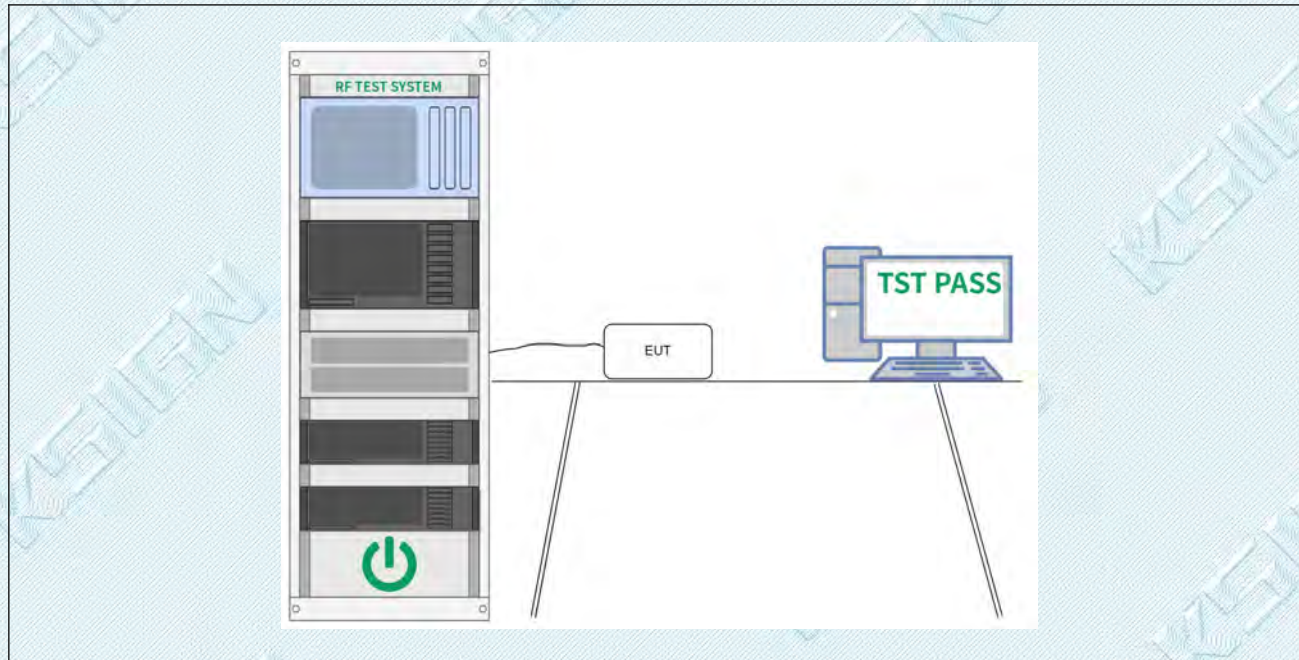
## 4.5. Emissions in non-restricted frequency bands

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Requirement: | 47 CFR 15.247(d)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Test Limit:       | Refer to 47 CFR 15.247(d), 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. |
| Test Method:      | ANSI C63.10-2013 section 11.11<br>KDB 558074 D01 15.247 Meas Guidance v05r02                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Procedure:        | ANSI C63.10-2013<br>Section 11.11.1, Section 11.11.2, Section 11.11.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

### 4.5.1. E.U.T. Operation:

|                        |                                    |
|------------------------|------------------------------------|
| Operating Environment: |                                    |
| Temperature:           | 25 °C                              |
| Humidity:              | 50.1 %                             |
| Atmospheric Pressure:  | 102 kPa                            |
| Final test mode:       | Test Mode1, Test Mode2, Test Mode3 |

### 4.5.2. Test Setup Diagram:



### 4.5.3. Test Data:

Please Refer to Appendix for Details.

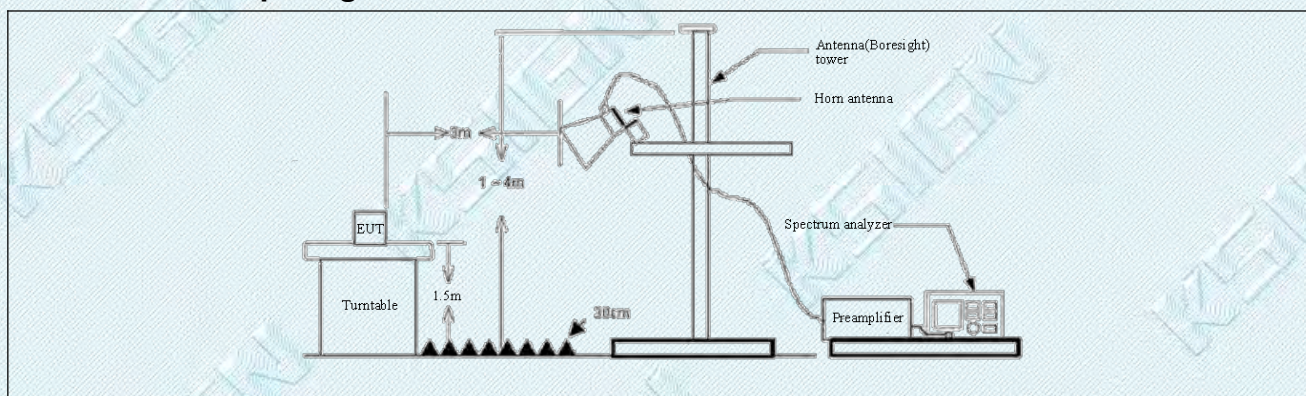
#### 4.6. Band edge emissions (Radiated)

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                          |                                   |                               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|-------------------------------|
| Test Requirement:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Refer to 47 CFR 15.247(d), 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)).` |                                   |                               |
| Test 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                             |
| <p>** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241.</p> <p>In the emission table above, the tighter limit applies at the band edges.</p> <p>The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.</p> |                                                                                                                                                                                                                          |                                   |                               |
| Test Method:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ANSI C63.10-2013 section 6.10<br>KDB 558074 D01 15.247 Meas Guidance v05r02                                                                                                                                              |                                   |                               |
| Procedure:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | ANSI C63.10-2013 section 6.10.5.2                                                                                                                                                                                        |                                   |                               |

##### 4.6.1. E.U.T. Operation:

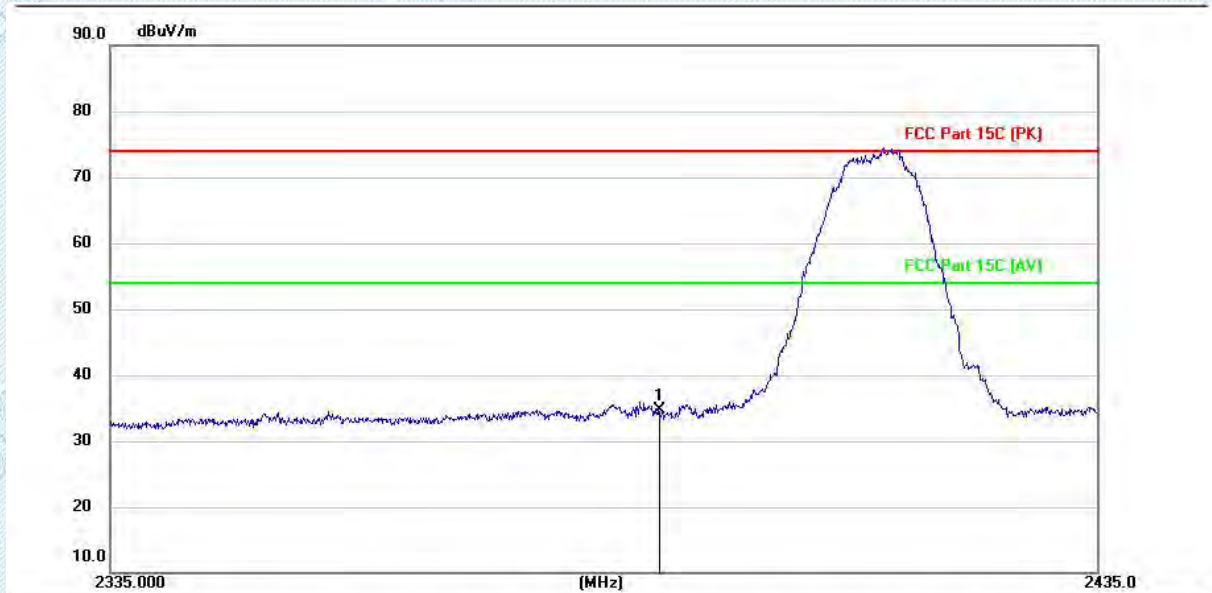
|                        |                                    |
|------------------------|------------------------------------|
| Operating Environment: |                                    |
| Temperature:           | 25 °C                              |
| Humidity:              | 50.1 %                             |
| Atmospheric Pressure:  | 102 kPa                            |
| Final test mode:       | Test Mode1, Test Mode2, Test Mode3 |

##### 4.6.2. Test Setup Diagram:



### 4.6.3. Test Data:

Test Mode1 / Polarization: Horizontal / Band: 2400-2483.5 MHz / BW: 20 / CH: L



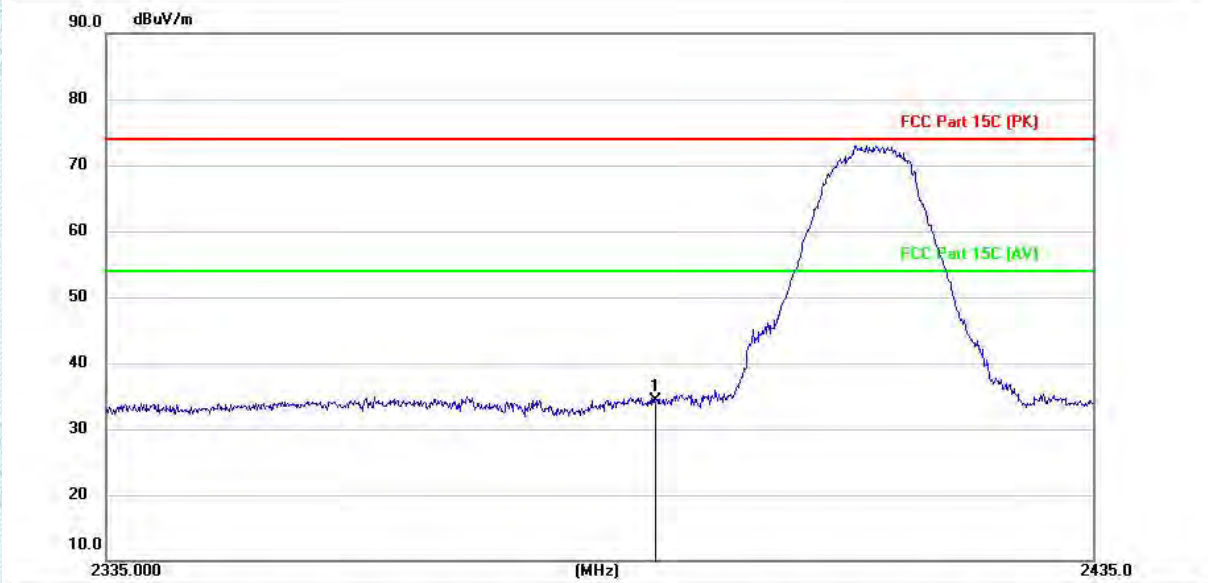
| No. | Mk. | Freq.    | Reading Level | Correct Factor | Measurement | Limit    | Over   |          |
|-----|-----|----------|---------------|----------------|-------------|----------|--------|----------|
|     |     | MHz      | (dBuV)        | (dB/m)         | (dBuV/m)    | (dBuV/m) | (dB)   | Detector |
| 1   | *   | 2390.000 | 33.76         | 0.90           | 34.66       | 74.00    | -39.34 | peak     |

TRF No. RF\_R1

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Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdksign.cn Web: www.gdksign.com

Test Mode1 / Polarization: Vertical / Band: 2400-2483.5 MHz / BW: 20 / CH: L

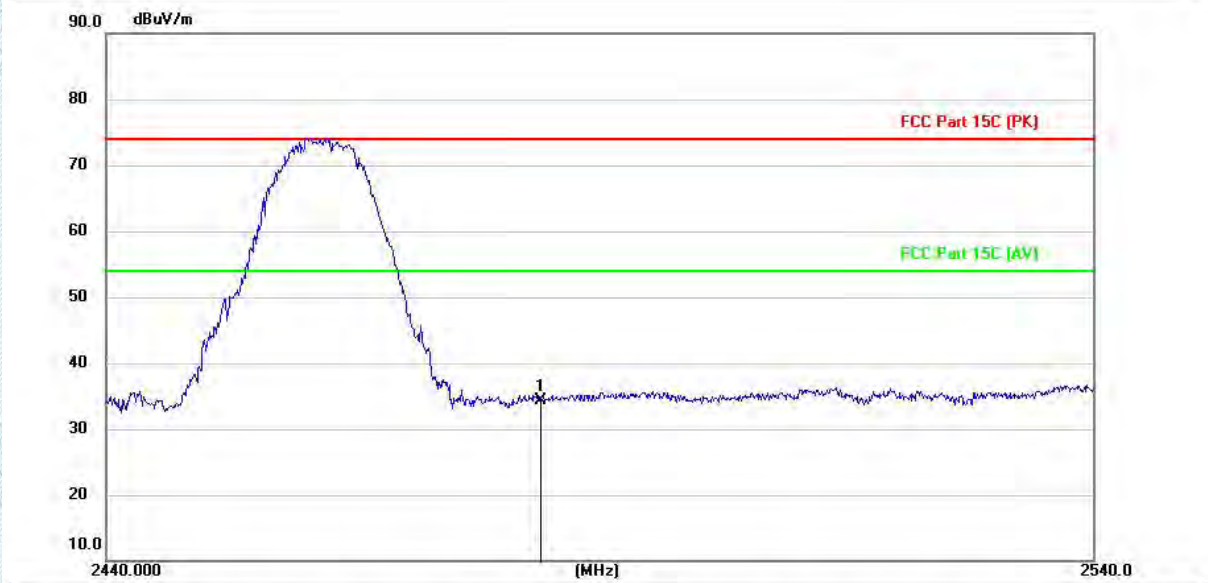


| No. | Mk. | Freq.    | Reading Level | Correct Factor | Measurement | Limit    | Over   |          |
|-----|-----|----------|---------------|----------------|-------------|----------|--------|----------|
|     |     | MHz      | (dBuV)        | (dB/m)         | (dBuV/m)    | (dBuV/m) | (dB)   | Detector |
| 1   | *   | 2390.000 | 33.48         | 0.90           | 34.38       | 74.00    | -39.62 | peak     |

TRF No. RF\_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

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**Test Mode1 / Polarization: Horizontal / Band: 2400-2483.5 MHz / BW: 20 / CH: H**


| No. | Mk. | Freq.    | Reading Level | Correct Factor | Measurement | Limit    | Over   |          |
|-----|-----|----------|---------------|----------------|-------------|----------|--------|----------|
|     |     | MHz      | (dBuV)        | (dB/m)         | (dBuV/m)    | (dBuV/m) | (dB)   | Detector |
| 1   | *   | 2483.500 | 33.53         | 0.69           | 34.22       | 74.00    | -39.78 | peak     |

TRF No. RF\_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

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**Test Mode1 / Polarization: Vertical / Band: 2400-2483.5 MHz / BW: 20 / CH: H**


| No. | Mk. | Freq.    | Reading Level | Correct Factor | Measurement | Limit    | Over   | Detector |
|-----|-----|----------|---------------|----------------|-------------|----------|--------|----------|
|     |     | MHz      | (dBuV)        | (dB/m)         | (dBuV/m)    | (dBuV/m) | (dB)   |          |
| 1   | *   | 2483.500 | 34.21         | 0.69           | 34.90       | 74.00    | -39.10 | peak     |

**Note:**

1.Measurement = Reading level + Correct Factor

Correct Factor=Antenna Factor + Cable Loss - Preamplifier Factor

Over = Measurement -Limit

2.Pre-scan 802.11b, 802.11g and 802.11n(HT20) mode, and found the 802.11b mode which it is worse case, so only show the test data for worse case.

3. Since the peak value is less than the limit of the AVG value, there is no AVG data.

TRF No. RF\_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

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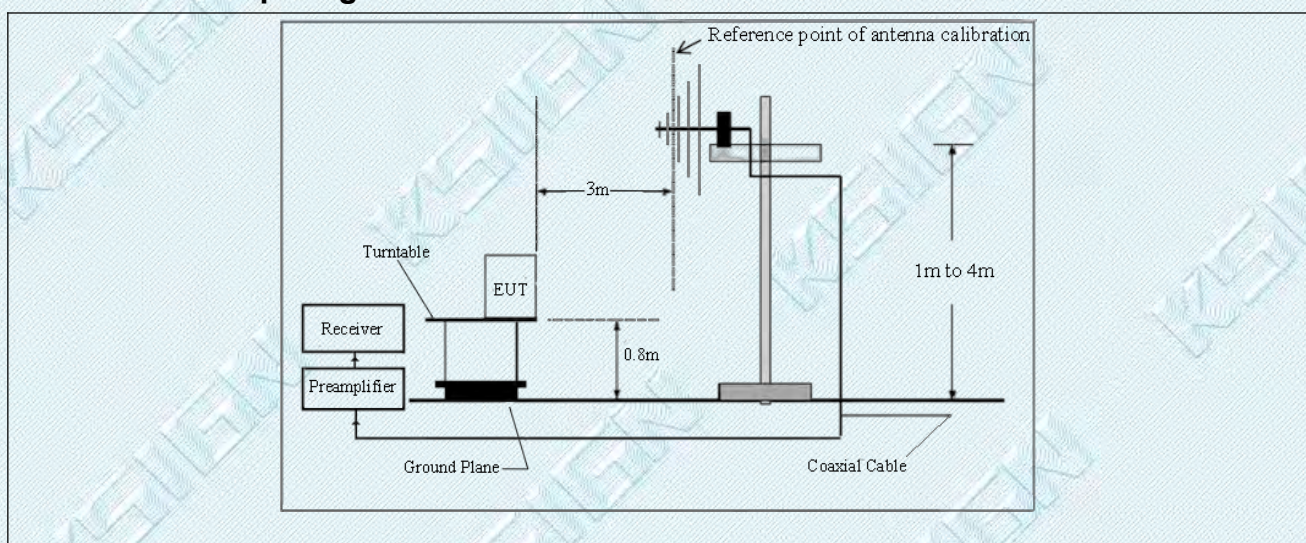
#### 4.7. Emissions in frequency bands (below 1GHz)

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                          |                                   |                               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|-------------------------------|
| Test Requirement:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Refer to 47 CFR 15.247(d), 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)).` |                                   |                               |
| Test 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                             |
| <p>** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241.</p> <p>In the emission table above, the tighter limit applies at the band edges.</p> <p>The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.</p> |                                                                                                                                                                                                                          |                                   |                               |
| Test Method:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ANSI C63.10-2013 section 6.6.4<br>KDB 558074 D01 15.247 Meas Guidance v05r02                                                                                                                                             |                                   |                               |
| Procedure:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | ANSI C63.10-2013 section 6.6.4                                                                                                                                                                                           |                                   |                               |

##### 4.7.1. E.U.T. Operation:

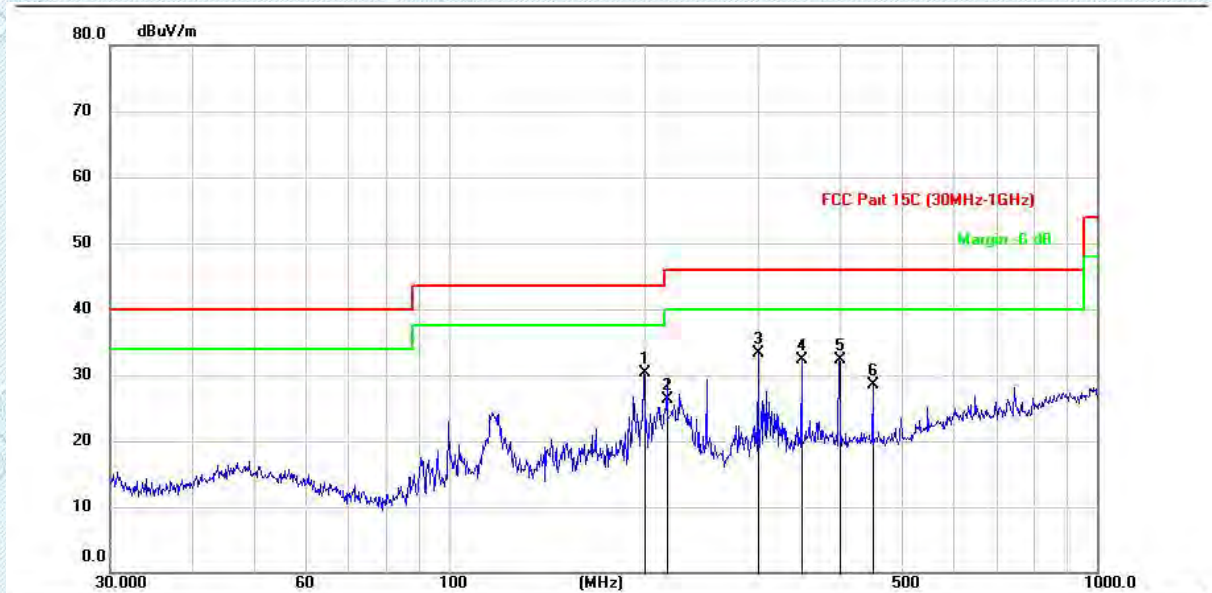
|                        |                                    |
|------------------------|------------------------------------|
| Operating Environment: |                                    |
| Temperature:           | 25 °C                              |
| Humidity:              | 50.1 %                             |
| Atmospheric Pressure:  | 102 kPa                            |
| Final test mode:       | Test Mode1, Test Mode2, Test Mode3 |

##### 4.7.2. Test Setup Diagram:



### 4.7.3. Test Data:

Test Mode1 / Polarization: Horizontal / Band: 2400-2483.5 MHz / BW: 20 / CH: L

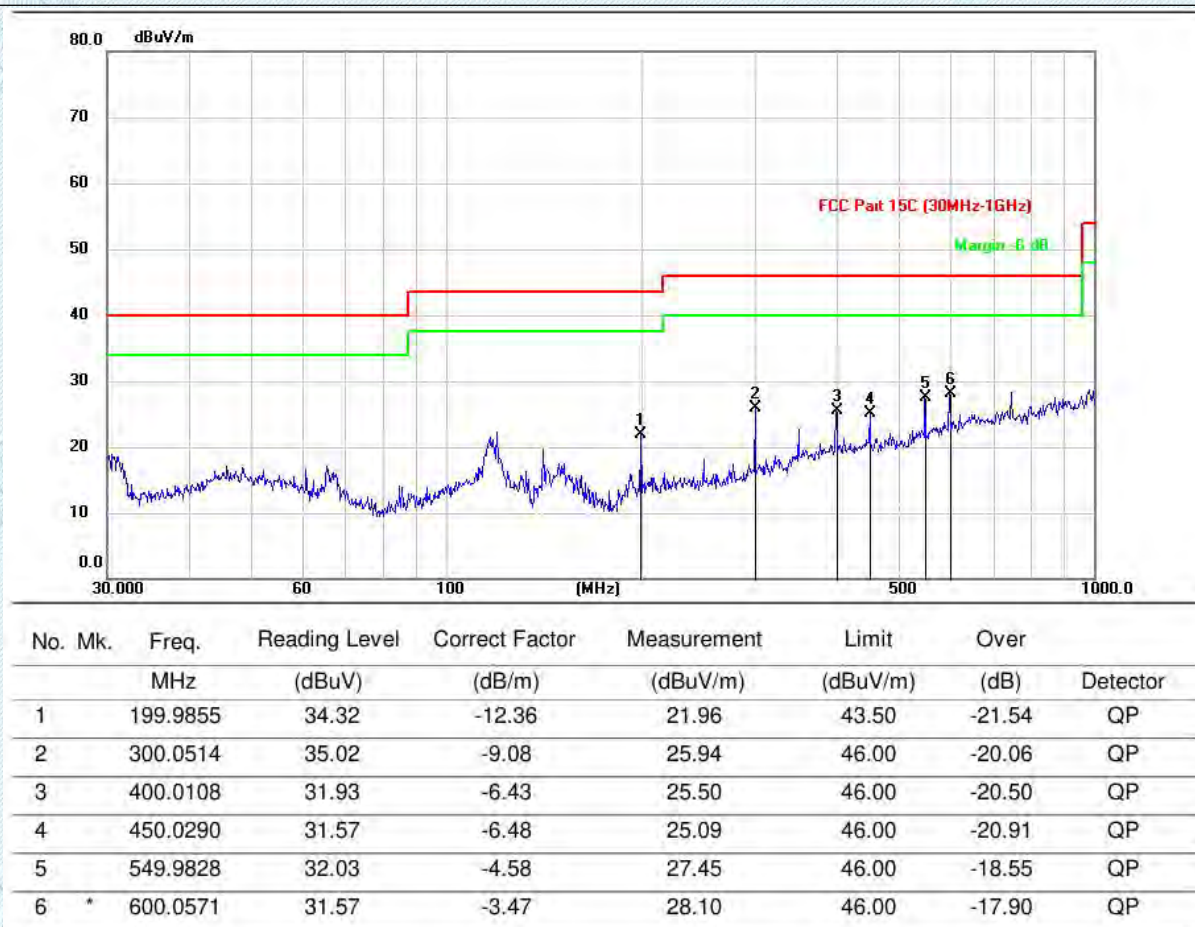


| No. | Mk. | Freq.<br>MHz | Reading Level<br>(dBuV) | Correct Factor<br>(dB/m) | Measurement<br>(dBuV/m) | Limit<br>(dBuV/m) | Over<br>(dB) | Detector |
|-----|-----|--------------|-------------------------|--------------------------|-------------------------|-------------------|--------------|----------|
| 1   |     | 200.0205     | 42.74                   | -12.36                   | 30.38                   | 43.50             | -13.12       | QP       |
| 2   |     | 217.0490     | 38.09                   | -11.84                   | 26.25                   | 46.00             | -19.75       | QP       |
| 3   | *   | 299.9988     | 42.48                   | -9.08                    | 33.40                   | 46.00             | -12.60       | QP       |
| 4   |     | 349.9854     | 39.96                   | -7.56                    | 32.40                   | 46.00             | -13.60       | QP       |
| 5   |     | 400.0108     | 38.79                   | -6.43                    | 32.36                   | 46.00             | -13.64       | QP       |
| 6   |     | 450.0290     | 34.98                   | -6.48                    | 28.50                   | 46.00             | -17.50       | QP       |

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**Test Mode1 / Polarization: Vertical / Band: 2400-2483.5 MHz / BW: 20 / CH: L**


9 KHz - 30 MHz:

The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

Note:

1.Pre-scan 802.11b/g/n(HT20) modulation, and found the 802.11b modulation which it is 2412MHz channel which it is worse case for below 1GHz, so only show the test data for worse case.

2. Measurement = Reading level + Correct Factor

Correct Factor=Antenna Factor + Cable Loss - Preamplifier Factor

Over = Measurement -Limit

TRF No. RF\_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

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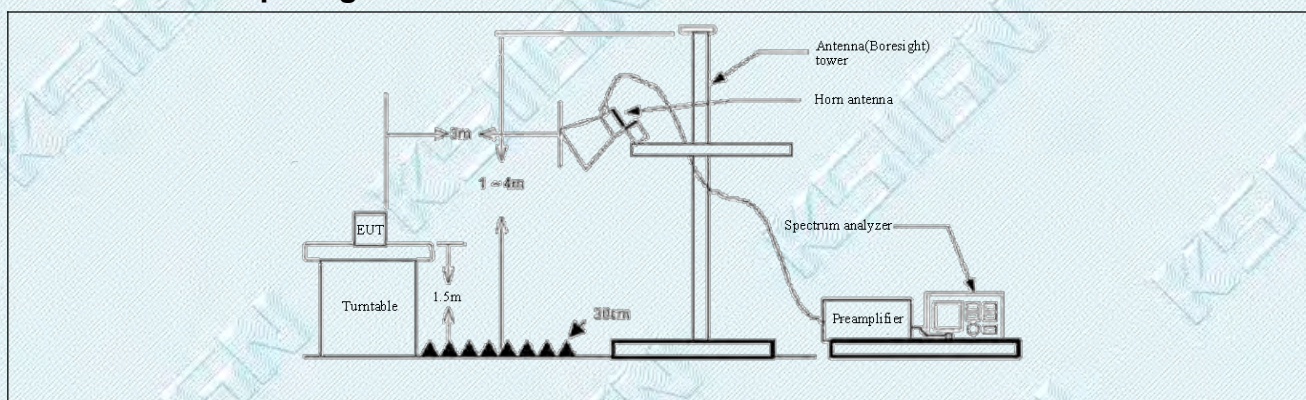
#### 4.8. Emissions in frequency bands (above 1GHz)

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                          |                                   |                               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|-------------------------------|
| Test Requirement:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Refer to 47 CFR 15.247(d), 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)).` |                                   |                               |
| Test 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                             |
| <p>** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241.</p> <p>In the emission table above, the tighter limit applies at the band edges.</p> <p>The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.</p> |                                                                                                                                                                                                                          |                                   |                               |
| Test Method:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ANSI C63.10-2013 section 6.6.4<br>KDB 558074 D01 15.247 Meas Guidance v05r02                                                                                                                                             |                                   |                               |
| Procedure:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | ANSI C63.10-2013 section 6.6.4                                                                                                                                                                                           |                                   |                               |

##### 4.8.1. E.U.T. Operation:

|                        |                                    |
|------------------------|------------------------------------|
| Operating Environment: |                                    |
| Temperature:           | 25 °C                              |
| Humidity:              | 50.1 %                             |
| Atmospheric Pressure:  | 102 kPa                            |
| Final test mode:       | Test Mode1, Test Mode2, Test Mode3 |

##### 4.8.2. Test Setup Diagram:



### 4.8.3. Test Data:

Test Mode1 / Polarization: Horizontal / Band: 2400-2483.5 MHz / BW: 20 / CH: L

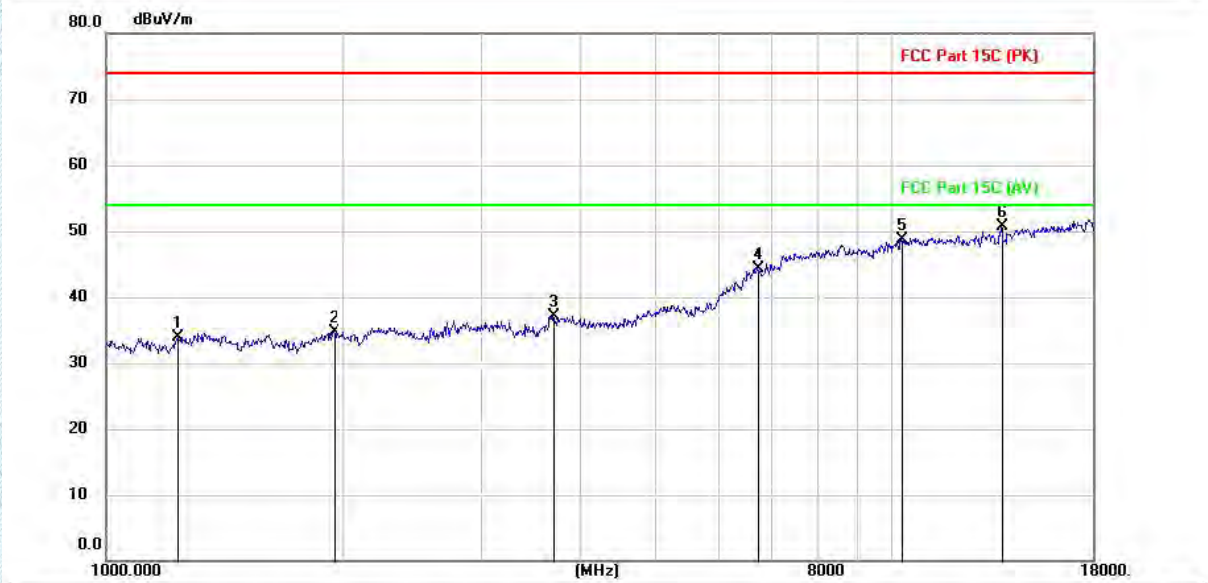


| No. | Mk. | Freq.<br>MHz | Reading Level<br>(dBuV) | Correct Factor<br>(dB/m) | Measurement<br>(dBuV/m) | Limit<br>(dBuV/m) | Over<br>(dB) | Detector |
|-----|-----|--------------|-------------------------|--------------------------|-------------------------|-------------------|--------------|----------|
| 1   |     | 1180.200     | 36.04                   | -2.10                    | 33.94                   | 74.00             | -40.06       | peak     |
| 2   |     | 2830.900     | 35.23                   | 1.18                     | 36.41                   | 74.00             | -37.59       | peak     |
| 3   |     | 5139.500     | 33.79                   | 4.44                     | 38.23                   | 74.00             | -35.77       | peak     |
| 4   |     | 8743.500     | 36.55                   | 10.46                    | 47.01                   | 74.00             | -26.99       | peak     |
| 5   |     | 11837.500    | 37.21                   | 13.39                    | 50.60                   | 74.00             | -23.40       | peak     |
| 6   | *   | 16310.200    | 37.03                   | 14.98                    | 52.01                   | 74.00             | -21.99       | peak     |

TRF No. RF\_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdksign.cn Web: www.gdksign.com

**Test Mode1 / Polarization: Vertical / Band: 2400-2483.5 MHz / BW: 20 / CH: L**


| No. | Mk. | Freq.<br>MHz | Reading Level<br>(dBuV) | Correct Factor<br>(dB/m) | Measurement<br>(dBuV/m) | Limit<br>(dBuV/m) | Over<br>(dB) | Detector |
|-----|-----|--------------|-------------------------|--------------------------|-------------------------|-------------------|--------------|----------|
| 1   |     | 1232.900     | 35.64                   | -1.67                    | 33.97                   | 74.00             | -40.03       | peak     |
| 2   |     | 1948.600     | 35.33                   | -0.69                    | 34.64                   | 74.00             | -39.36       | peak     |
| 3   |     | 3704.700     | 35.43                   | 1.67                     | 37.10                   | 74.00             | -36.90       | peak     |
| 4   |     | 6723.900     | 36.49                   | 7.86                     | 44.35                   | 74.00             | -29.65       | peak     |
| 5   |     | 10288.800    | 36.22                   | 12.49                    | 48.71                   | 74.00             | -25.29       | peak     |
| 6   | *   | 13794.200    | 35.18                   | 15.61                    | 50.79                   | 74.00             | -23.21       | peak     |

TRF No. RF\_R1

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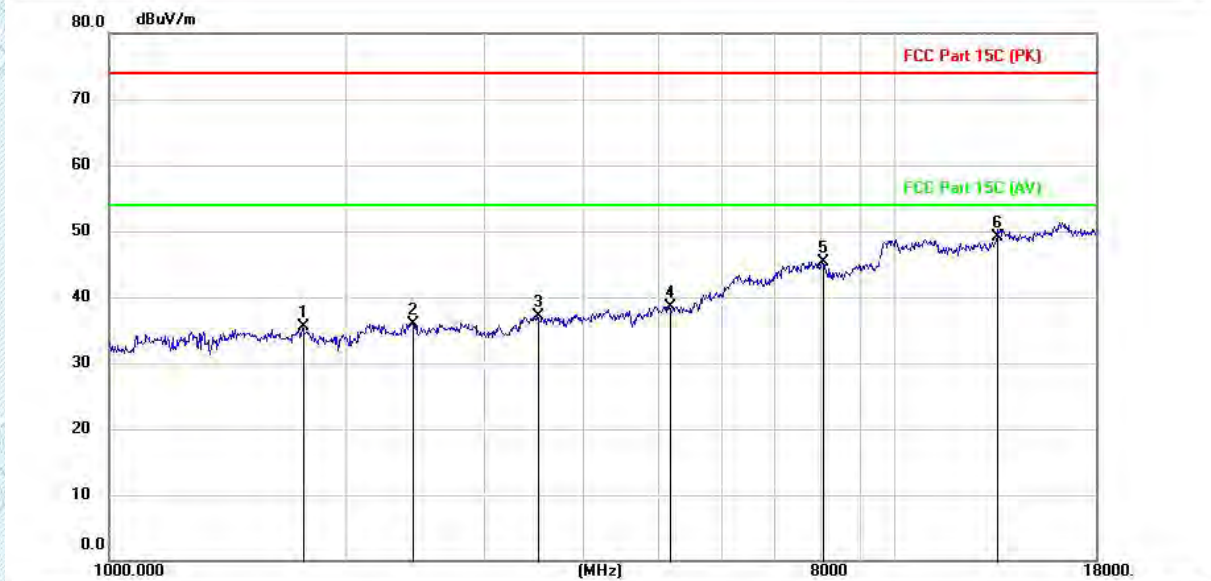
**Test Mode1 / Polarization: Horizontal / Band: 2400-2483.5 MHz / BW: 20 / CH: M**


| No. | Mk. | Freq.     | Reading Level | Correct Factor | Measurement | Limit    | Over   | Detector |
|-----|-----|-----------|---------------|----------------|-------------|----------|--------|----------|
|     |     | MHz       | (dBuV)        | (dB/m)         | (dBuV/m)    | (dBuV/m) | (dB)   |          |
| 1   |     | 1411.400  | 36.00         | -1.40          | 34.60       | 74.00    | -39.40 | peak     |
| 2   |     | 2167.900  | 34.94         | 1.03           | 35.97       | 74.00    | -38.03 | peak     |
| 3   |     | 3441.200  | 36.17         | 1.36           | 37.53       | 74.00    | -36.47 | peak     |
| 4   |     | 5539.000  | 36.53         | 4.44           | 40.97       | 74.00    | -33.03 | peak     |
| 5   |     | 10950.100 | 35.92         | 13.81          | 49.73       | 74.00    | -24.27 | peak     |
| 6   | *   | 16619.600 | 35.75         | 16.41          | 52.16       | 74.00    | -21.84 | peak     |

TRF No. RF\_R1

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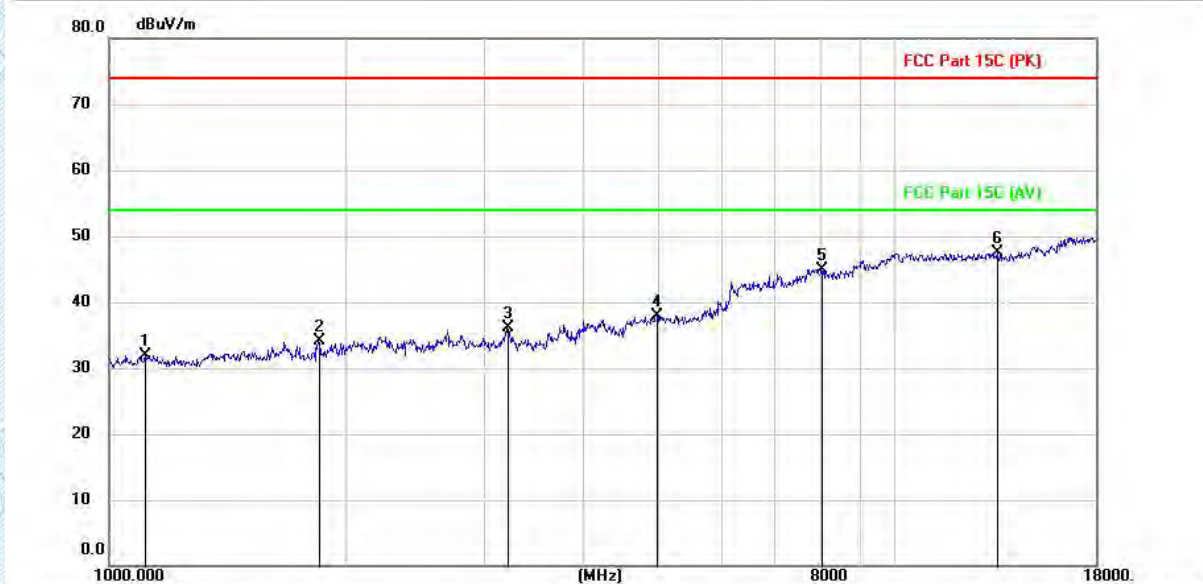
**Test Mode1 / Polarization: Vertical / Band: 2400-2483.5 MHz / BW: 20 / CH: M**


| No. | Mk. | Freq.     | Reading Level | Correct Factor | Measurement | Limit    | Over   | Detector |
|-----|-----|-----------|---------------|----------------|-------------|----------|--------|----------|
|     |     | MHz       | (dBuV)        | (dB/m)         | (dBuV/m)    | (dBuV/m) | (dB)   |          |
| 1   |     | 1758.200  | 37.01         | -1.46          | 35.55       | 74.00    | -38.45 | peak     |
| 2   |     | 2433.100  | 35.13         | 0.87           | 36.00       | 74.00    | -38.00 | peak     |
| 3   |     | 3507.500  | 35.45         | 1.57           | 37.02       | 74.00    | -36.98 | peak     |
| 4   |     | 5151.400  | 34.21         | 4.37           | 38.58       | 74.00    | -35.42 | peak     |
| 5   |     | 8073.700  | 34.27         | 11.02          | 45.29       | 74.00    | -28.71 | peak     |
| 6   | *   | 13496.700 | 33.80         | 15.33          | 49.13       | 74.00    | -24.87 | peak     |

TRF No. RF\_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

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**Test Mode1 / Polarization: Horizontal / Band: 2400-2483.5 MHz / BW: 20 / CH: H**


| No. | Mk. | Freq.     | Reading Level | Correct Factor | Measurement | Limit    | Over   | Detector |
|-----|-----|-----------|---------------|----------------|-------------|----------|--------|----------|
|     |     | MHz       | (dBuV)        | (dB/m)         | (dBuV/m)    | (dBuV/m) | (dB)   |          |
| 1   |     | 1112.200  | 34.36         | -2.47          | 31.89       | 74.00    | -42.11 | peak     |
| 2   |     | 1841.500  | 35.35         | -1.20          | 34.15       | 74.00    | -39.85 | peak     |
| 3   |     | 3208.300  | 34.65         | 1.48           | 36.13       | 74.00    | -37.87 | peak     |
| 4   |     | 4962.700  | 33.57         | 4.27           | 37.84       | 74.00    | -36.16 | peak     |
| 5   |     | 8053.300  | 33.86         | 11.13          | 44.99       | 74.00    | -29.01 | peak     |
| 6   | *   | 13512.000 | 32.18         | 15.32          | 47.50       | 74.00    | -26.50 | peak     |

TRF No. RF\_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

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**Test Mode1 / Polarization: Vertical / Band: 2400-2483.5 MHz / BW: 20 / CH: H**


| No. | Mk. | Freq.     | Reading Level | Correct Factor | Measurement | Limit    | Over   | Detector |
|-----|-----|-----------|---------------|----------------|-------------|----------|--------|----------|
|     |     | MHz       | (dBuV)        | (dB/m)         | (dBuV/m)    | (dBuV/m) | (dB)   |          |
| 1   |     | 1108.800  | 35.94         | -2.50          | 33.44       | 74.00    | -40.56 | peak     |
| 2   |     | 1647.700  | 35.73         | -1.73          | 34.00       | 74.00    | -40.00 | peak     |
| 3   |     | 3516.000  | 35.01         | 1.57           | 36.58       | 74.00    | -37.42 | peak     |
| 4   |     | 7369.900  | 35.39         | 9.81           | 45.20       | 74.00    | -28.80 | peak     |
| 5   |     | 11971.800 | 34.66         | 13.39          | 48.05       | 74.00    | -25.95 | peak     |
| 6   | *   | 16038.200 | 36.50         | 13.99          | 50.49       | 74.00    | -23.51 | peak     |

**Note:**

1.Measurement = Reading level + Correct Factor

Correct Factor=Antenna Factor + Cable Loss - Preamplifier Factor

Over = Measurement -Limit

2.Pre-scan 802.11b, 802.11g and 802.11n(HT20) mode, and found the 802.11b mode which it is worse case, so only show the test data for worse case.

3. Since the peak value is less than the limit of the AVG value, there is no AVG data.

4.From 18GHz to 26.5GHz,the amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

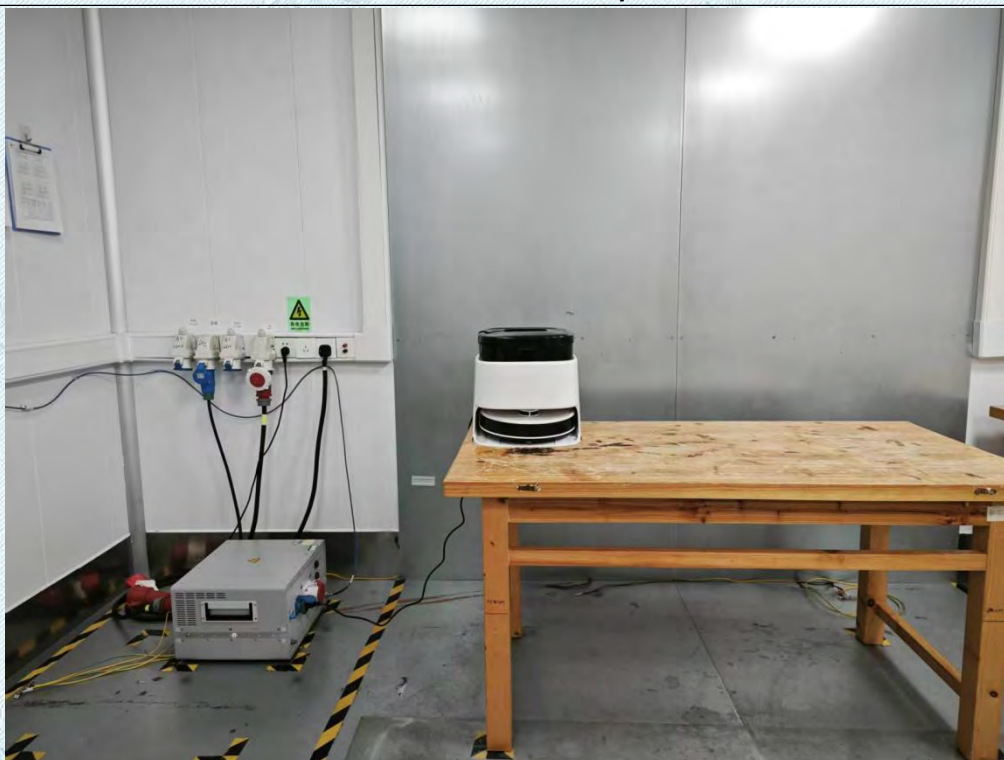
TRF No. RF\_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

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## 5. EUT TEST PHOTOS

Conducted Emission at AC power line



Emissions in frequency bands (below 1GHz)



Emissions in frequency bands (above 1GHz)



RF



TRF No. RF\_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujia Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

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## 6. PHOTOGRAPHS OF EUT CONSTRUCTIONAL

Refer to Appendix - EUT Photos for KD2504S1897E.

# Appendix

## 6.1. Appendix A: DTS Bandwidth

### 6.1.1. Test Result

| TestMode  | Antenna | Frequency [MHz] | DTS BW [MHz] | FL[MHz] | FH[MHz] | Limit[MHz] | Verdict |
|-----------|---------|-----------------|--------------|---------|---------|------------|---------|
| 11B       | Ant1    | 2412            | 10.04        | 2407.00 | 2417.04 | 0.5        | PASS    |
|           |         | 2437            | 10.04        | 2432.00 | 2442.04 | 0.5        | PASS    |
|           |         | 2462            | 10.00        | 2457.04 | 2467.04 | 0.5        | PASS    |
| 11G       | Ant1    | 2412            | 16.48        | 2403.76 | 2420.24 | 0.5        | PASS    |
|           |         | 2437            | 16.40        | 2428.84 | 2445.24 | 0.5        | PASS    |
|           |         | 2462            | 16.48        | 2453.76 | 2470.24 | 0.5        | PASS    |
| 11N20SISO | Ant1    | 2412            | 17.68        | 2403.16 | 2420.84 | 0.5        | PASS    |
|           |         | 2437            | 17.60        | 2428.24 | 2445.84 | 0.5        | PASS    |
|           |         | 2462            | 17.60        | 2453.24 | 2470.84 | 0.5        | PASS    |

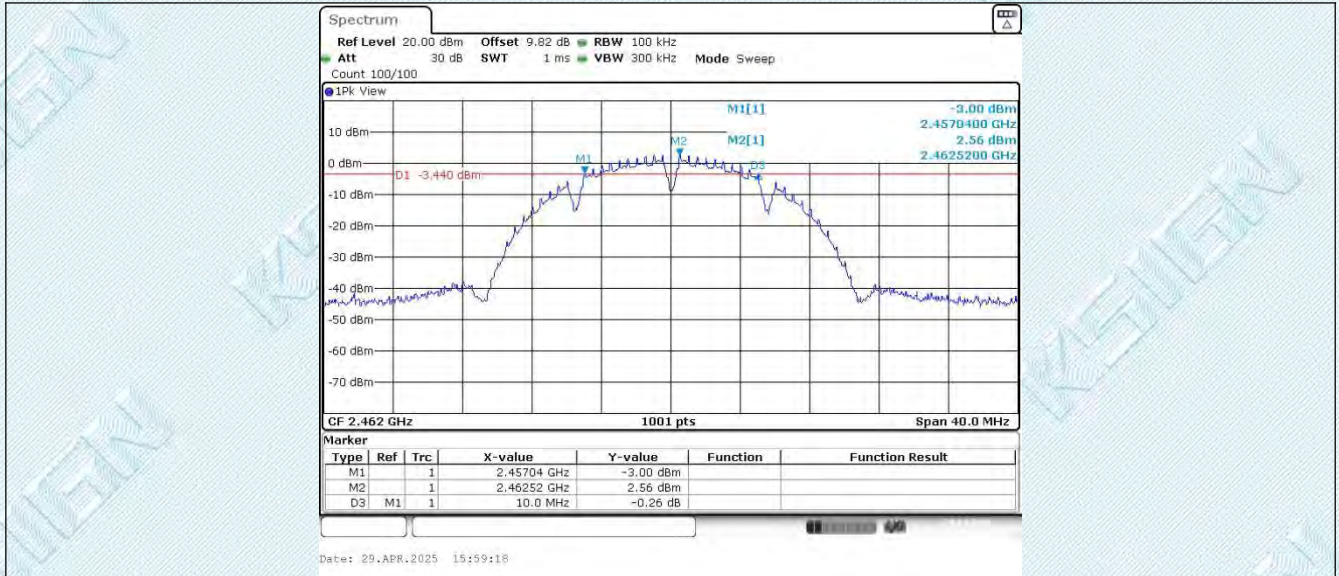
## 6.1.2. Test Graphs



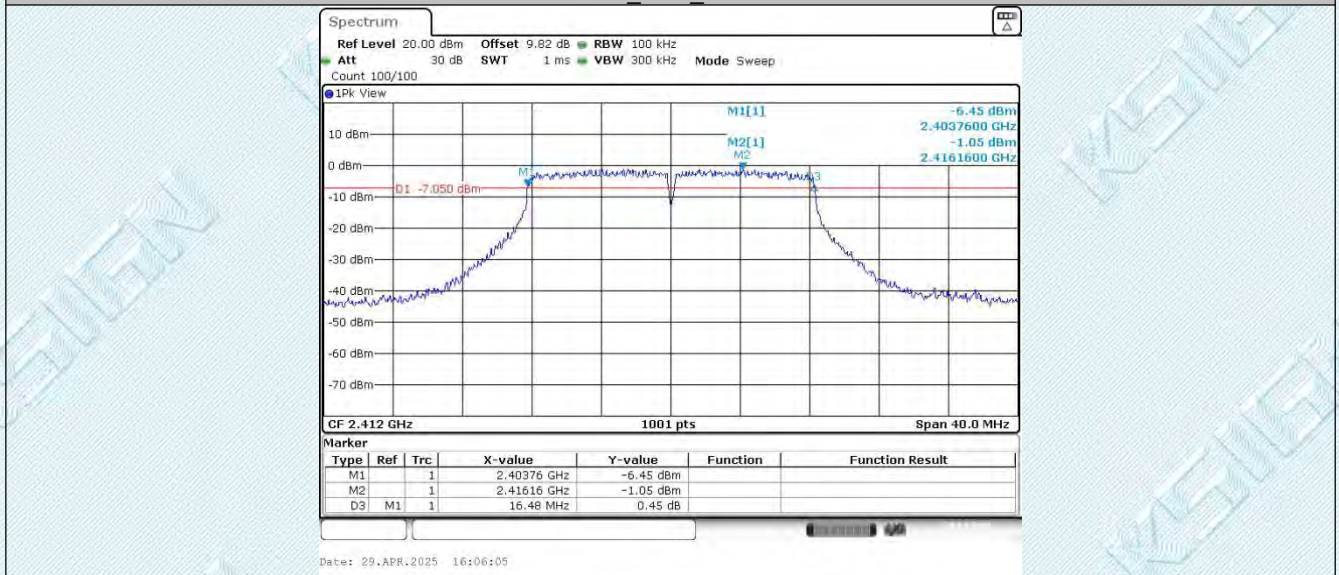
TRF No. RF\_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

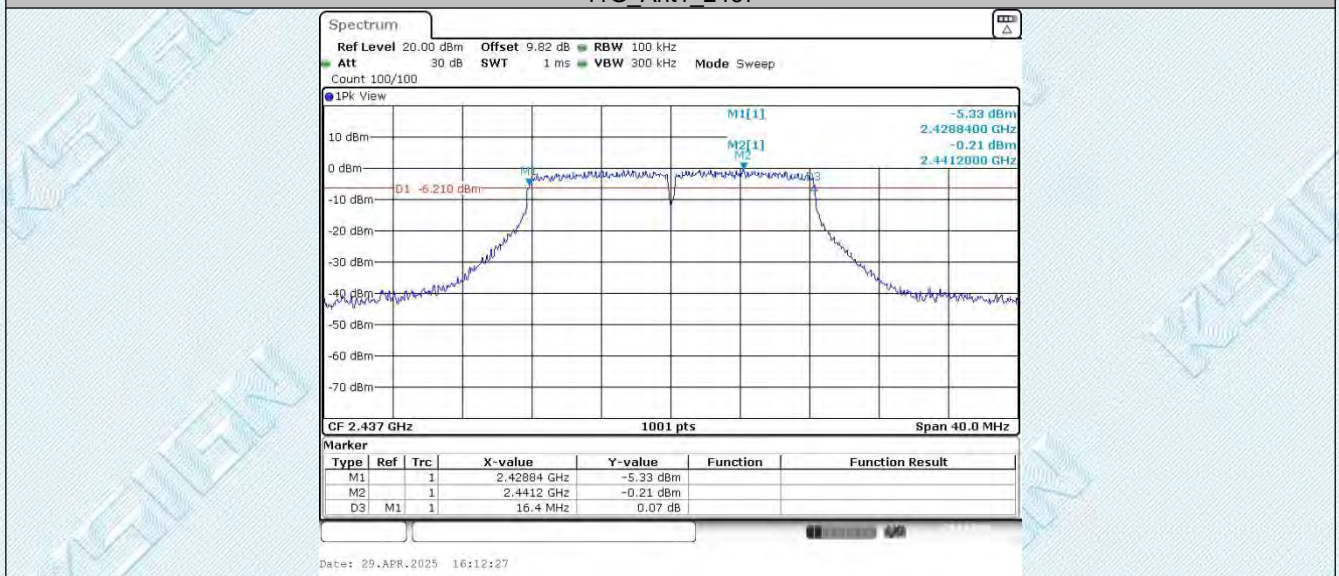
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11G\_Ant1\_2412



11G\_Ant1\_2437

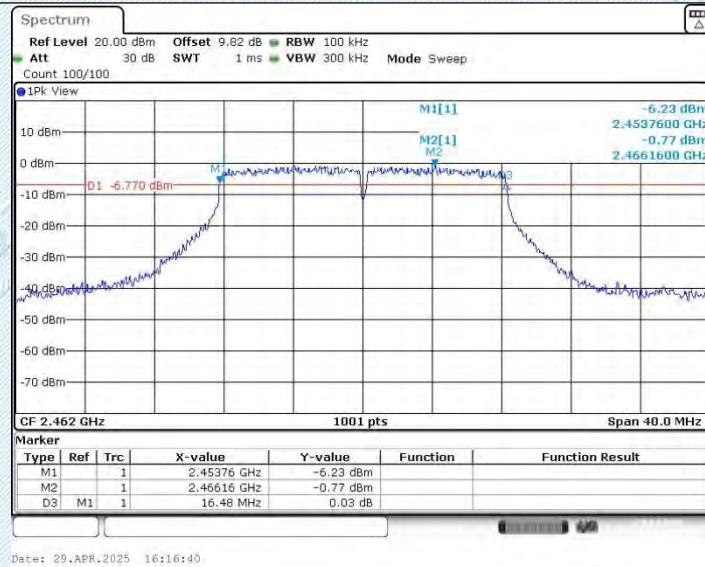


11G\_Ant1\_2462

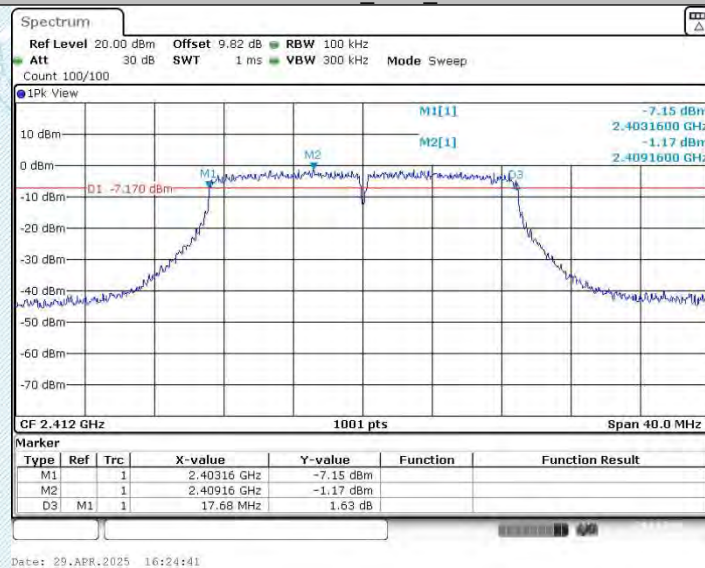
TRF No. RF\_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

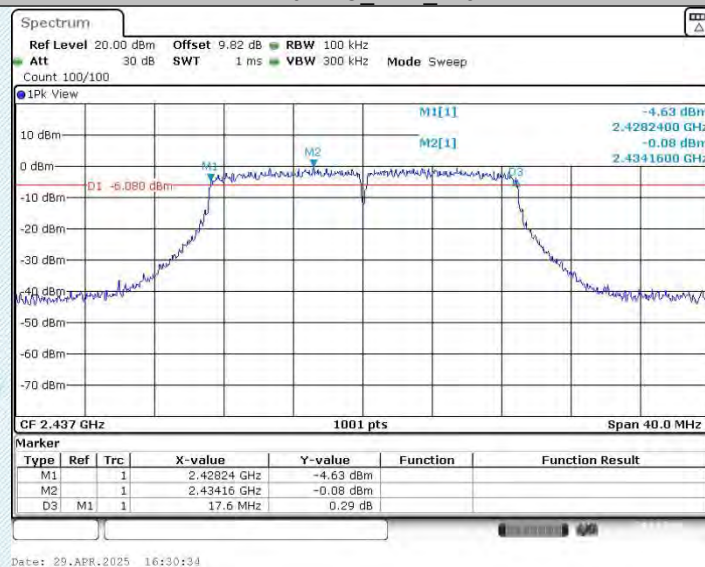
Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdkesign.cn Web: www.gdkesign.com



11N20SISO\_Ant1\_2412



11N20SISO\_Ant1\_2437

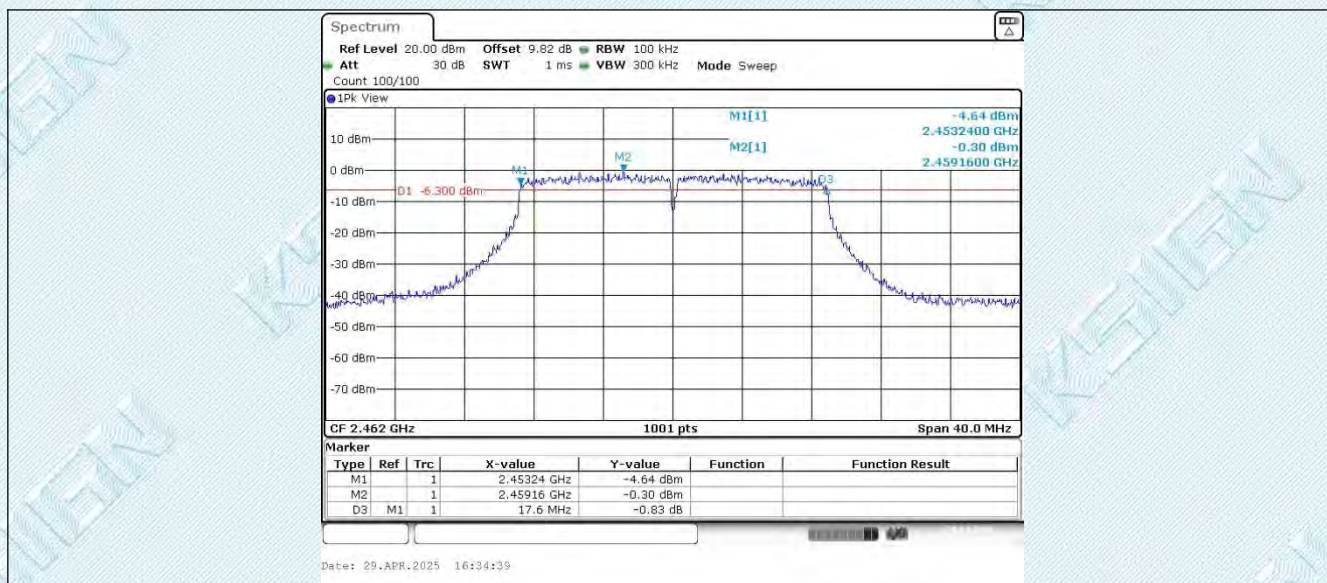


11N20SISO\_Ant1\_2462

TRF No. RF\_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

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TRF No. RF\_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

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## 6.2. Appendix B: Occupied Channel Bandwidth

### 6.2.1. Test Result

| TestMode  | Antenna | Channel Frequency[MHz] | OCB [MHz] | FL[MHz]  | FH[MHz]  | Limit[MHz] | Verdict |
|-----------|---------|------------------------|-----------|----------|----------|------------|---------|
| 11B       | Ant1    | 2412                   | 14.825    | 2404.567 | 2419.393 | ---        | ---     |
|           |         | 2437                   | 14.745    | 2429.647 | 2444.393 | ---        | ---     |
|           |         | 2462                   | 14.785    | 2454.567 | 2469.353 | ---        | ---     |
| 11G       | Ant1    | 2412                   | 17.263    | 2403.209 | 2420.472 | ---        | ---     |
|           |         | 2437                   | 17.263    | 2428.249 | 2445.511 | ---        | ---     |
|           |         | 2462                   | 17.263    | 2453.209 | 2470.472 | ---        | ---     |
| 11N20SISO | Ant1    | 2412                   | 18.102    | 2402.929 | 2421.031 | ---        | ---     |
|           |         | 2437                   | 18.102    | 2427.969 | 2446.071 | ---        | ---     |
|           |         | 2462                   | 18.142    | 2452.889 | 2471.031 | ---        | ---     |

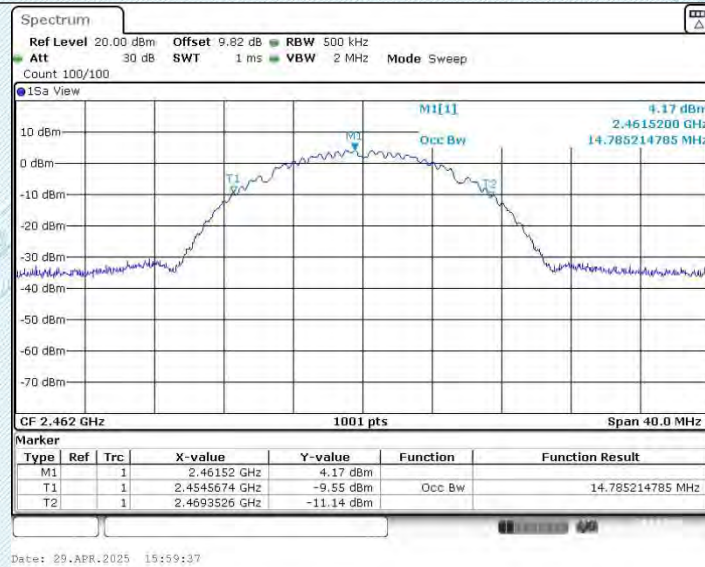
## 6.2.2. Test Graphs



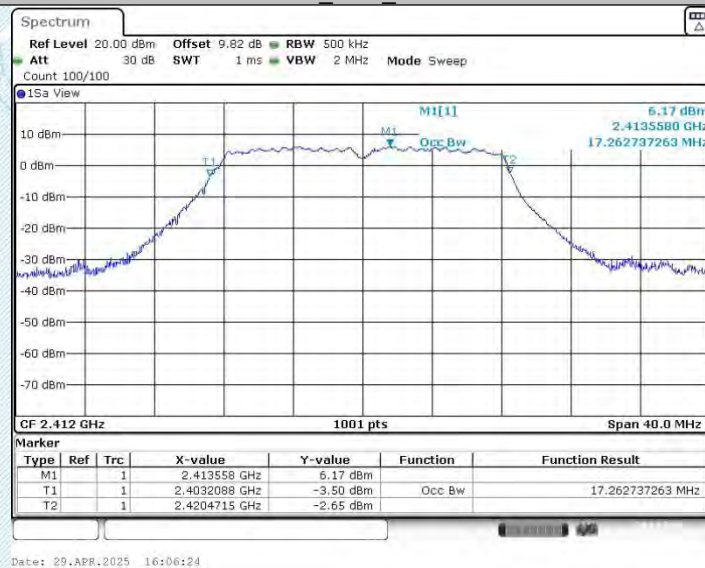
TRF No. RF\_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

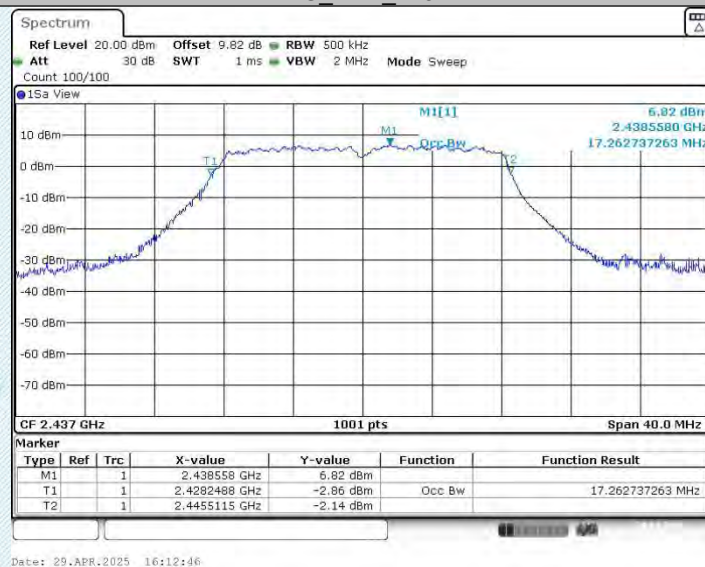
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11G\_Ant1\_2412



11G\_Ant1\_2437

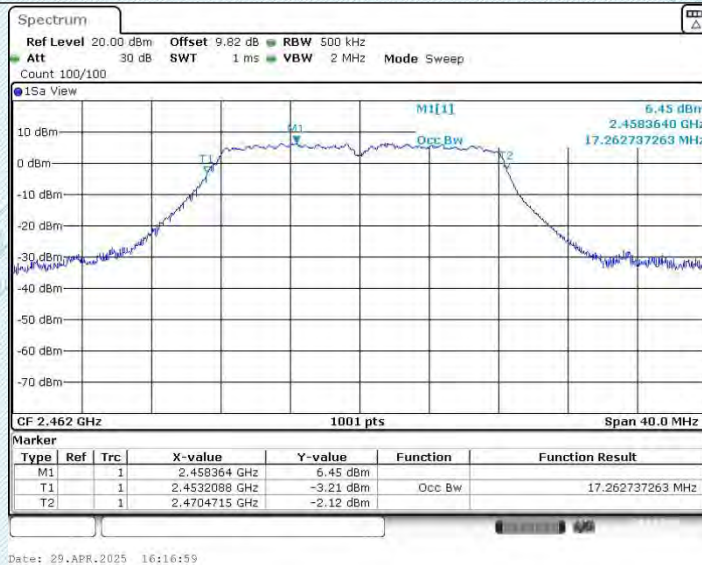


11G\_Ant1\_2462

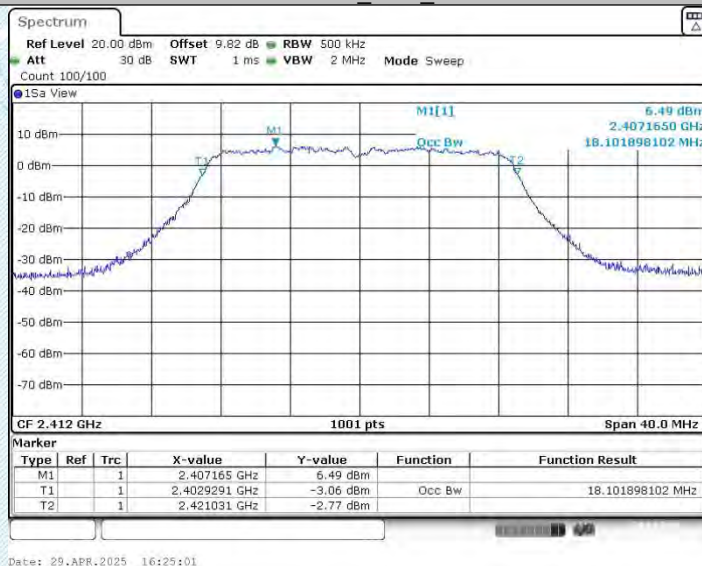
TRF No. RF\_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

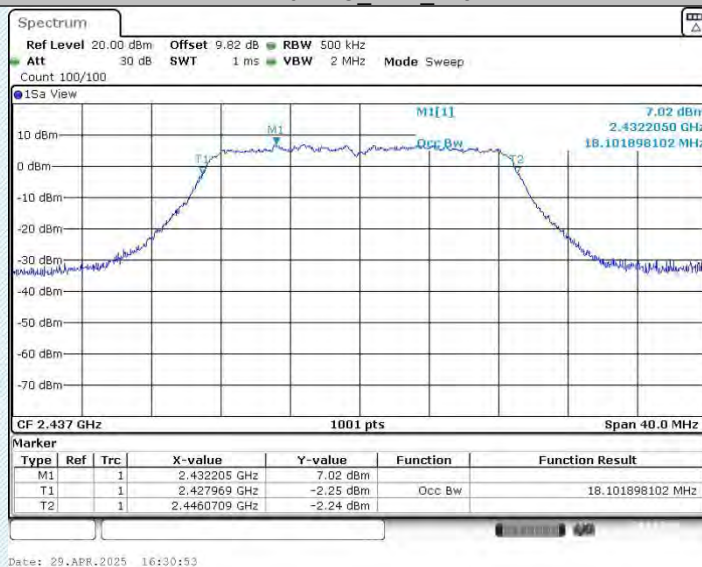
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11N20SISO\_Ant1\_2412



11N20SISO\_Ant1\_2437

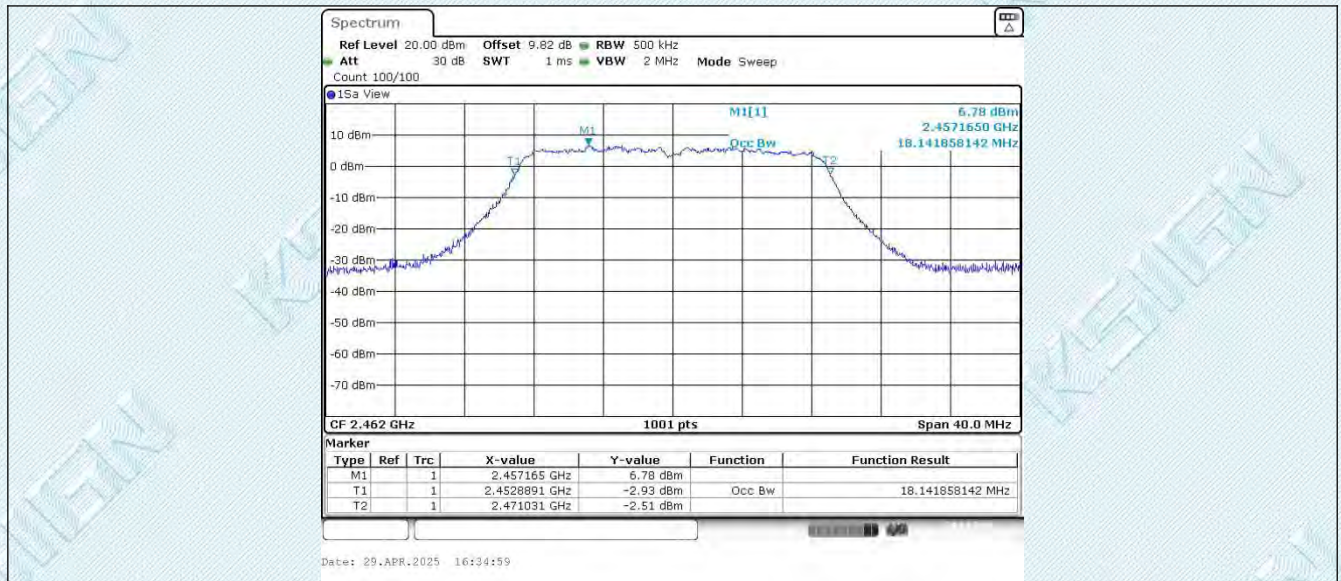


11N20SISO\_Ant1\_2462

TRF No. RF\_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

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### 6.3. Appendix C: Maximum conducted output power

#### 6.3.1. Test Result

| TestMode  | Antenna | Frequency [MHz] | Power [dBm] | Conducted Limit[dBm] | Verdict |
|-----------|---------|-----------------|-------------|----------------------|---------|
| 11B       | Ant1    | 2412            | 12.05       | ≤30.00               | PASS    |
|           |         | 2437            | 12.56       | ≤30.00               | PASS    |
|           |         | 2462            | 12.40       | ≤30.00               | PASS    |
| 11G       | Ant1    | 2412            | 13.18       | ≤30.00               | PASS    |
|           |         | 2437            | 13.74       | ≤30.00               | PASS    |
|           |         | 2462            | 13.40       | ≤30.00               | PASS    |
| 11N20SISO | Ant1    | 2412            | 13.00       | ≤30.00               | PASS    |
|           |         | 2437            | 13.72       | ≤30.00               | PASS    |
|           |         | 2462            | 13.28       | ≤30.00               | PASS    |

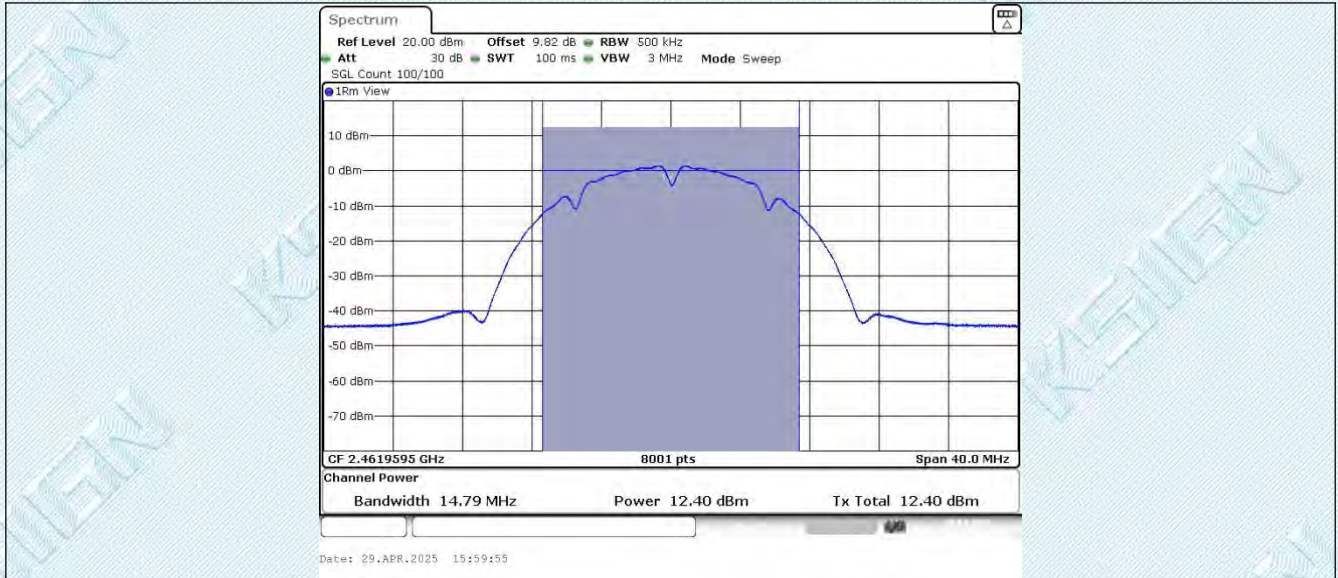
### 6.3.2. Test Graphs



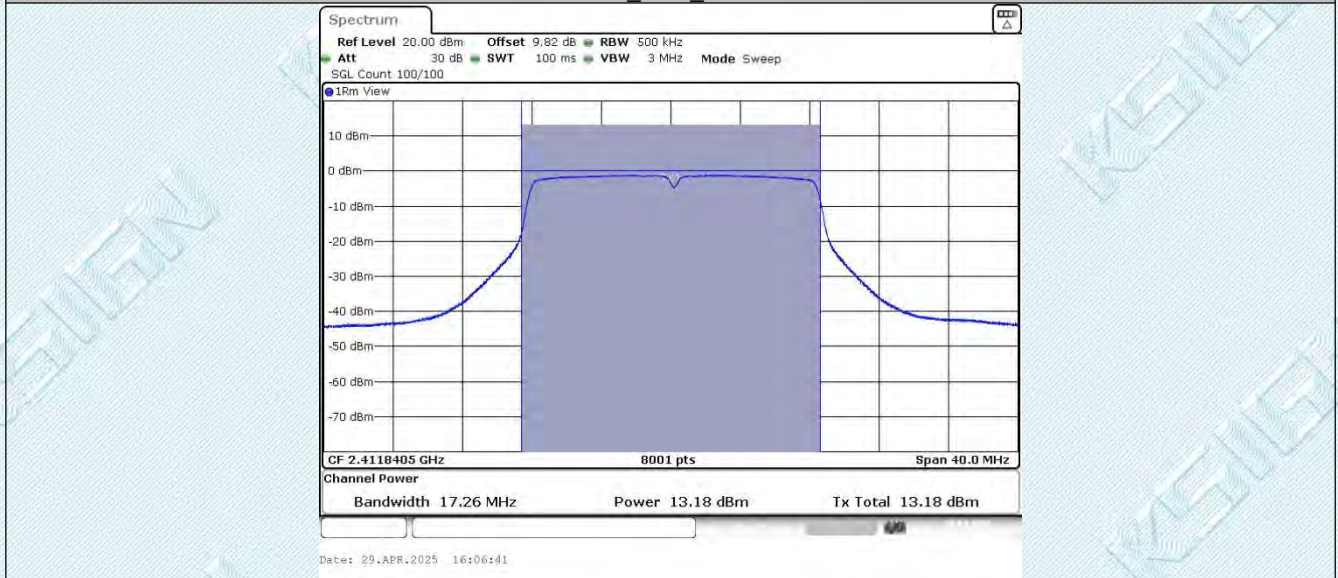
TRF No. RF\_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

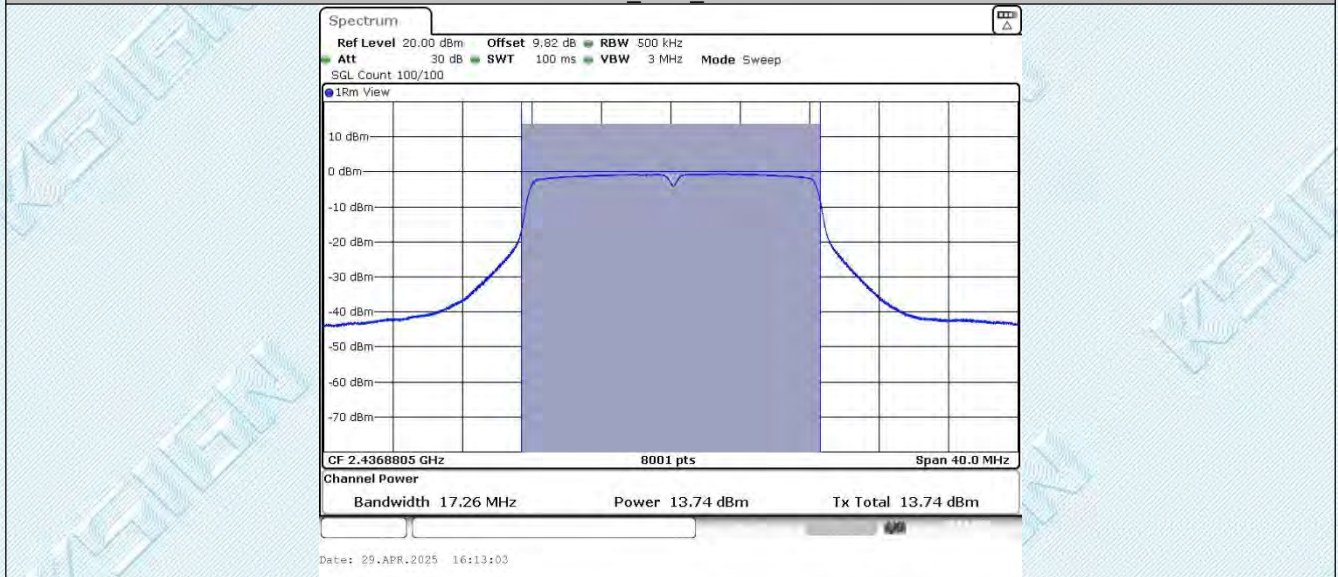
Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdksign.cn Web: www.gdksign.com



11G\_Ant1\_2412



11G\_Ant1\_2437

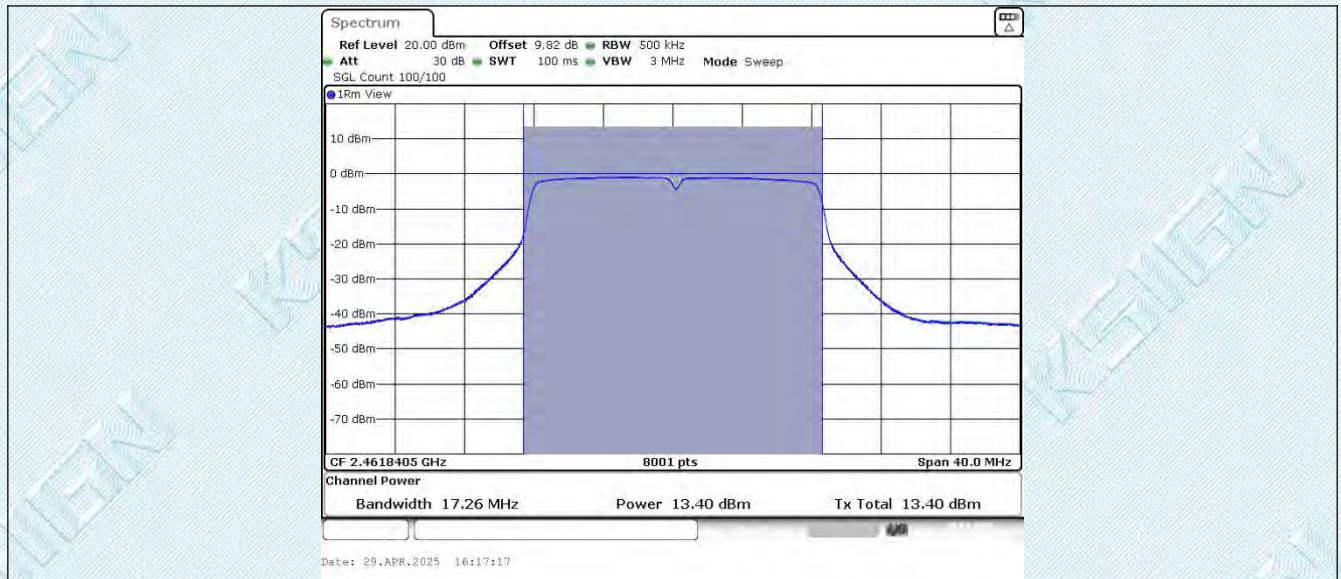


11G\_Ant1\_2462

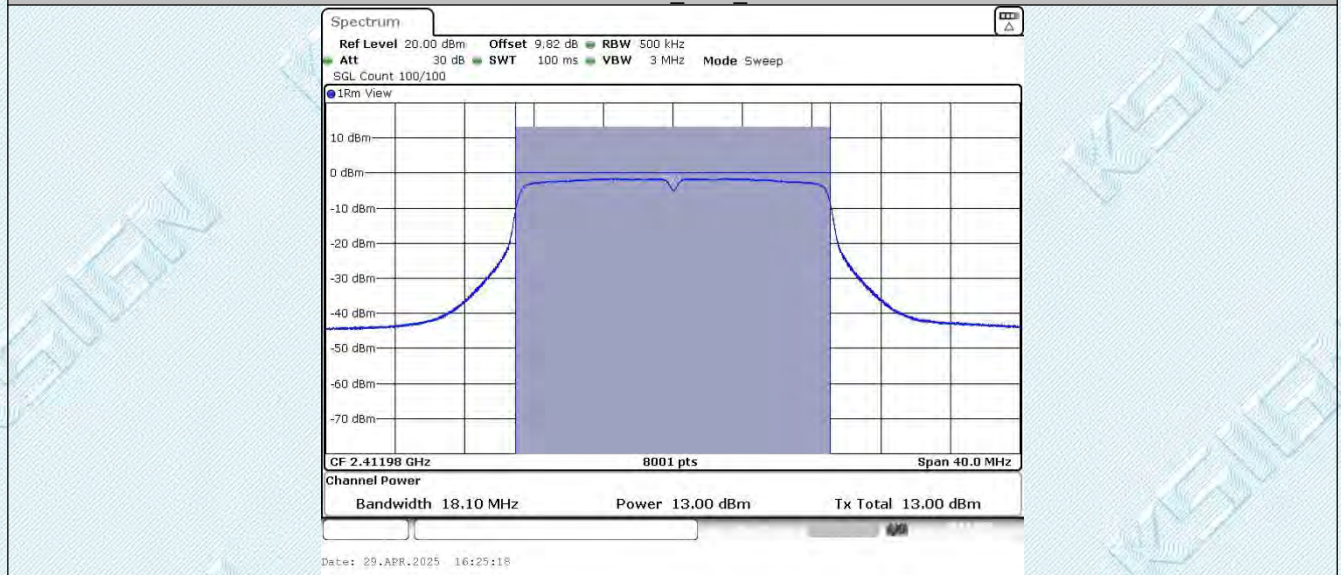
TRF No. RF\_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

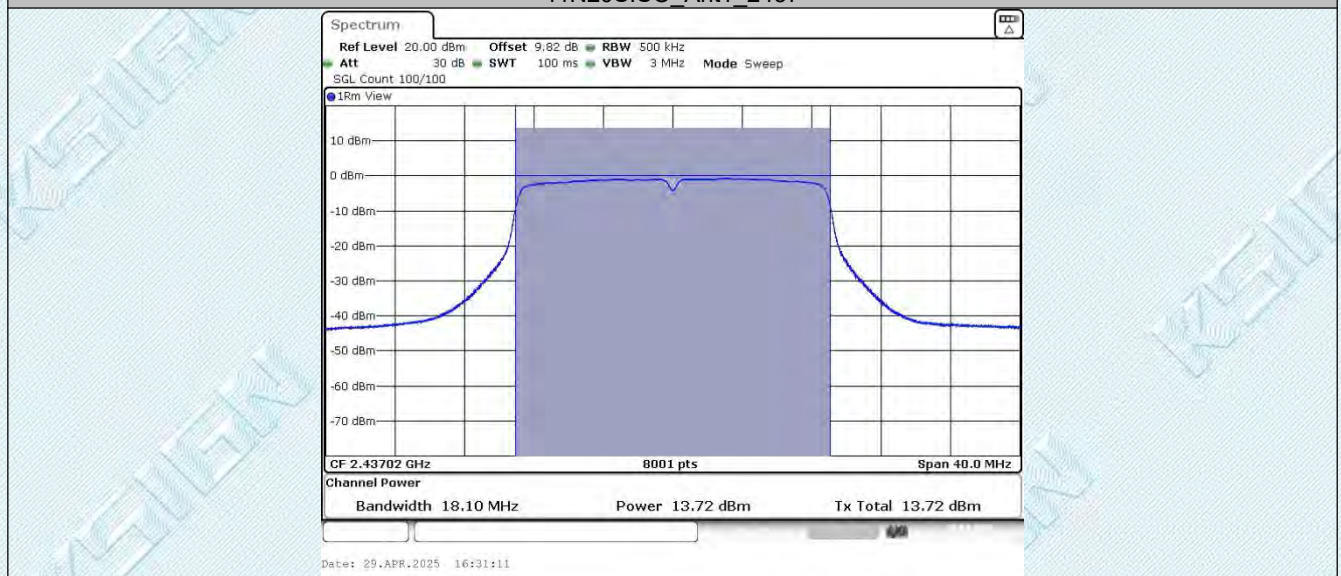
Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdkesign.cn Web: www.gdkesign.com



11N20SISO\_Ant1\_2412



11N20SISO\_Ant1\_2437

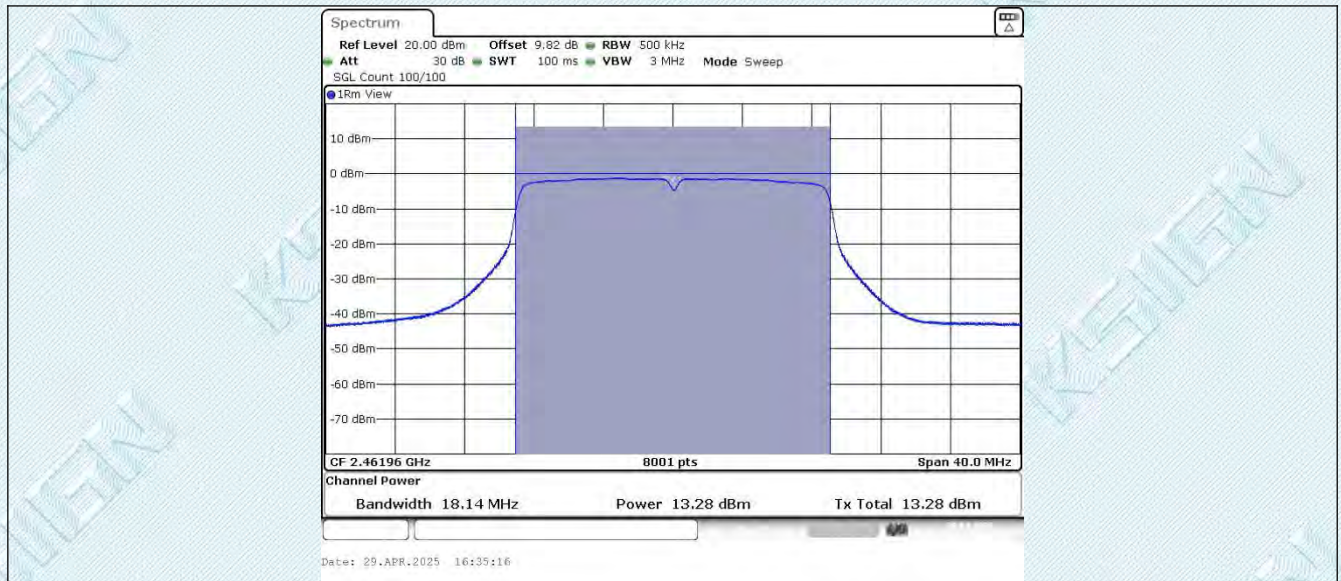


11N20SISO\_Ant1\_2462

TRF No. RF\_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdkesign.cn Web: www.gdkesign.com



TRF No. RF\_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

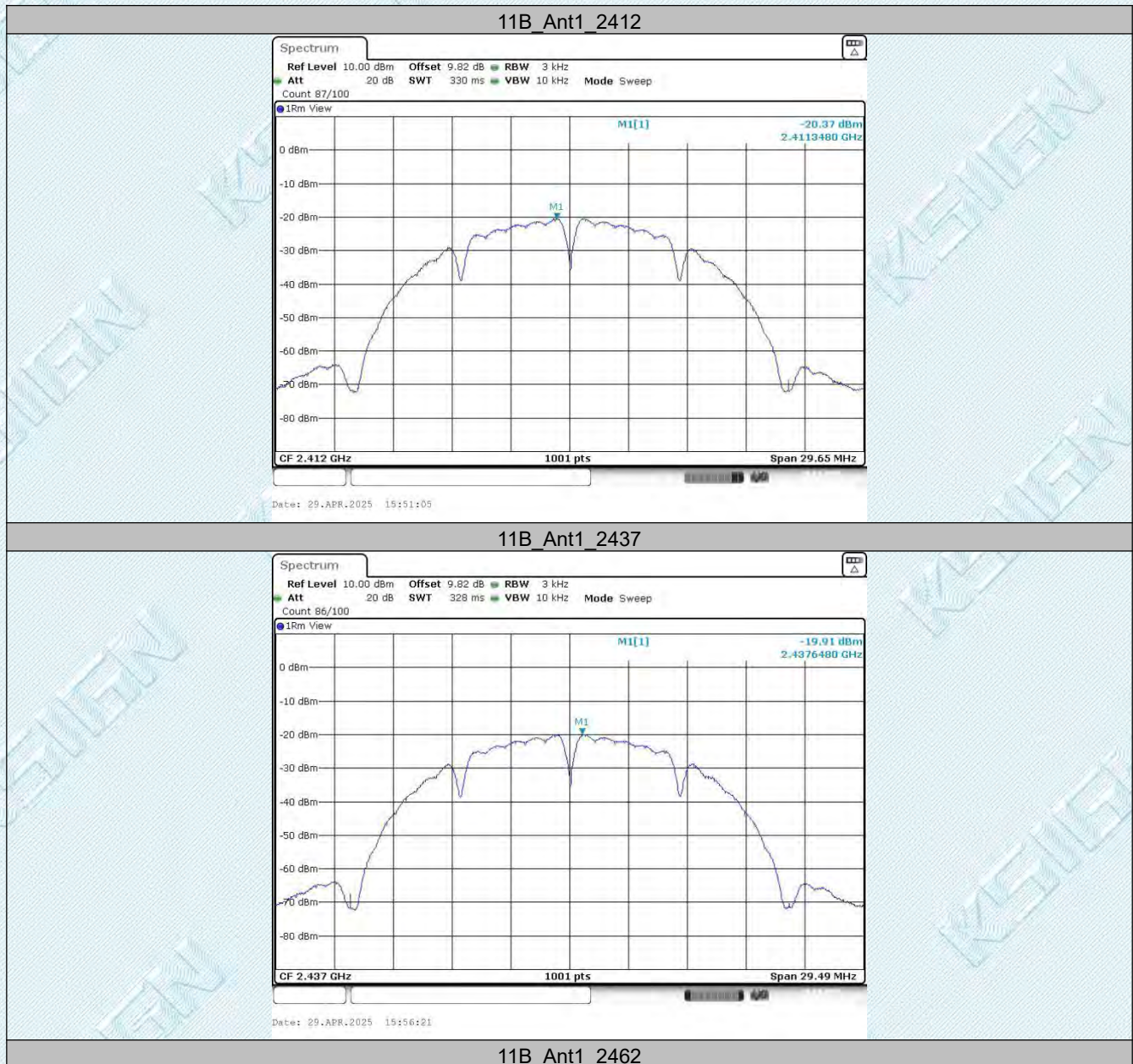
Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdksign.cn Web: www.gdksign.com

## 6.4. Appendix D: Maximum power spectral density

### 6.4.1. Test Result

| TestMode  | Antenna | Frequency[MHz] | Result[dBm/3kHz] | Limit[dBm/3kHz] | Verdict |
|-----------|---------|----------------|------------------|-----------------|---------|
| 11B       | Ant1    | 2412           | -20.37           | ≤8.00           | PASS    |
|           |         | 2437           | -19.91           | ≤8.00           | PASS    |
|           |         | 2462           | -20.11           | ≤8.00           | PASS    |
| 11G       | Ant1    | 2412           | -21.7            | ≤8.00           | PASS    |
|           |         | 2437           | -20.99           | ≤8.00           | PASS    |
|           |         | 2462           | -21.35           | ≤8.00           | PASS    |
| 11N20SISO | Ant1    | 2412           | -21.94           | ≤8.00           | PASS    |
|           |         | 2437           | -21.1            | ≤8.00           | PASS    |
|           |         | 2462           | -21.56           | ≤8.00           | PASS    |

## 6.4.2. Test Graphs



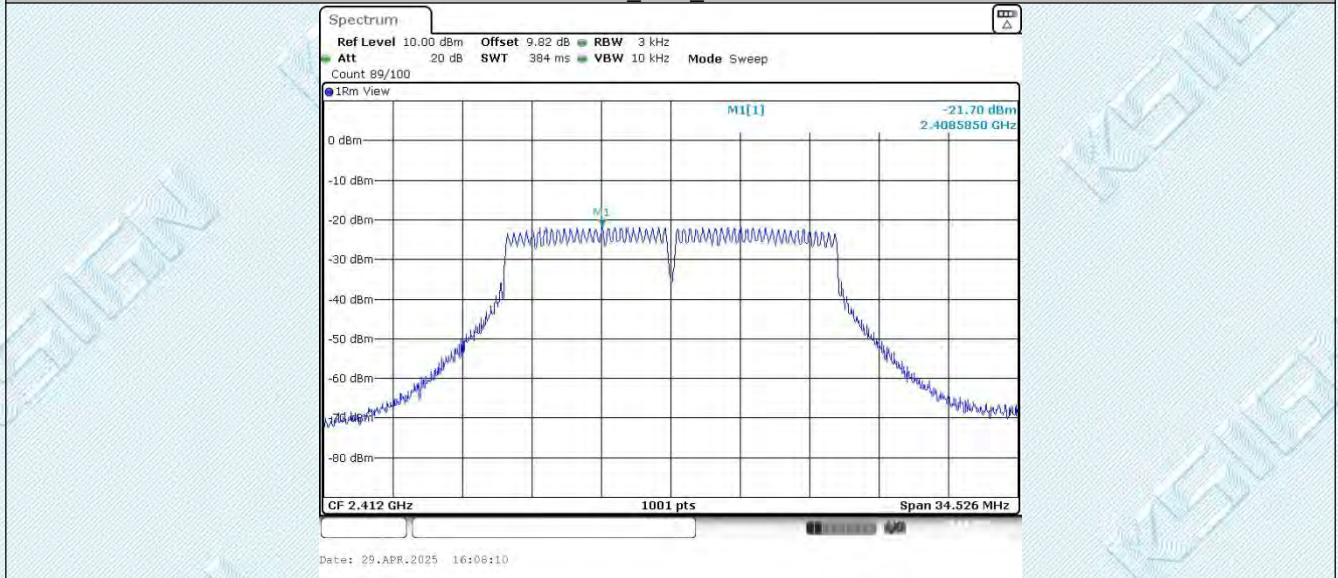
TRF No. RF\_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

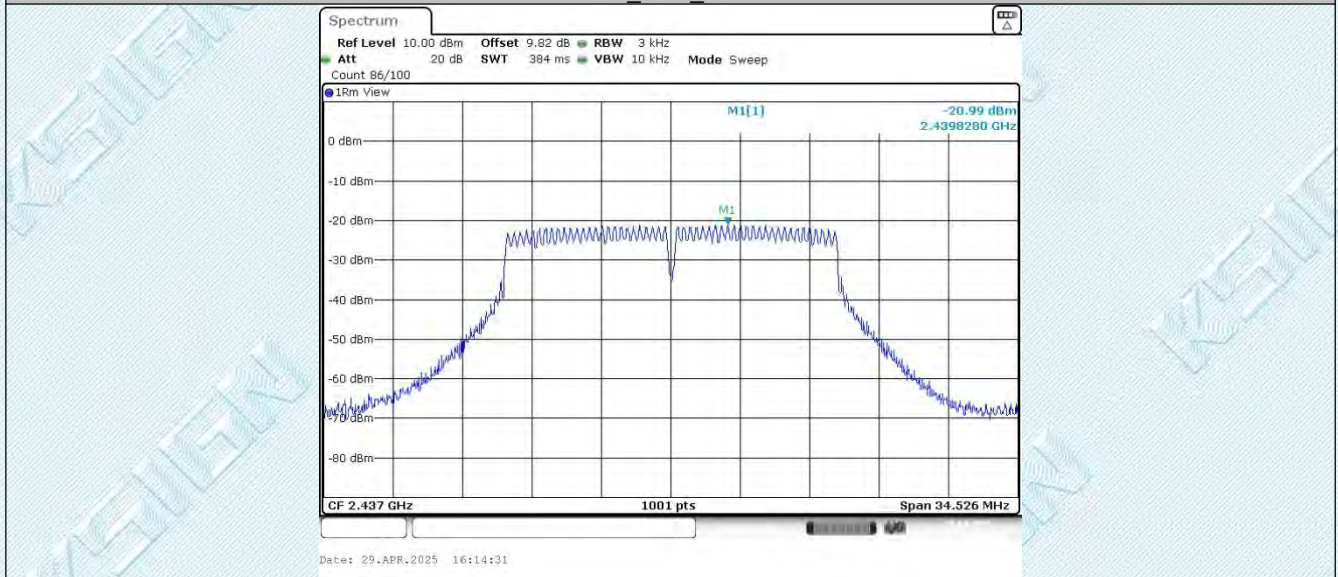
Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdksign.cn Web: www.gdksign.com



11G\_Ant1\_2412



11G\_Ant1\_2437

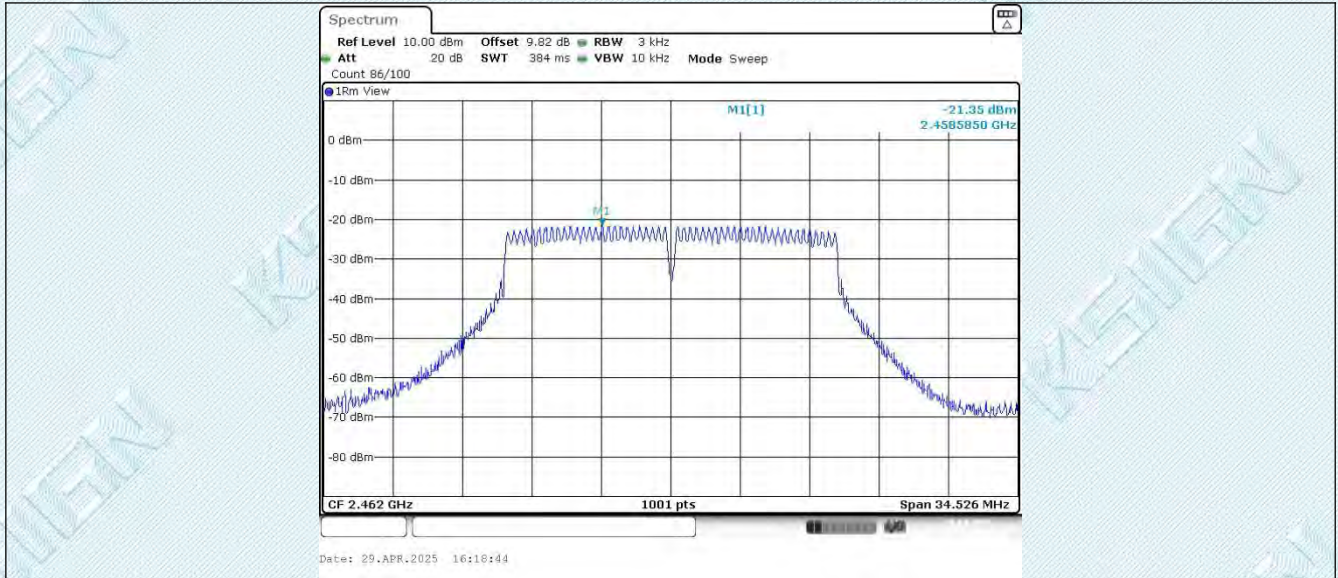


11G\_Ant1\_2462

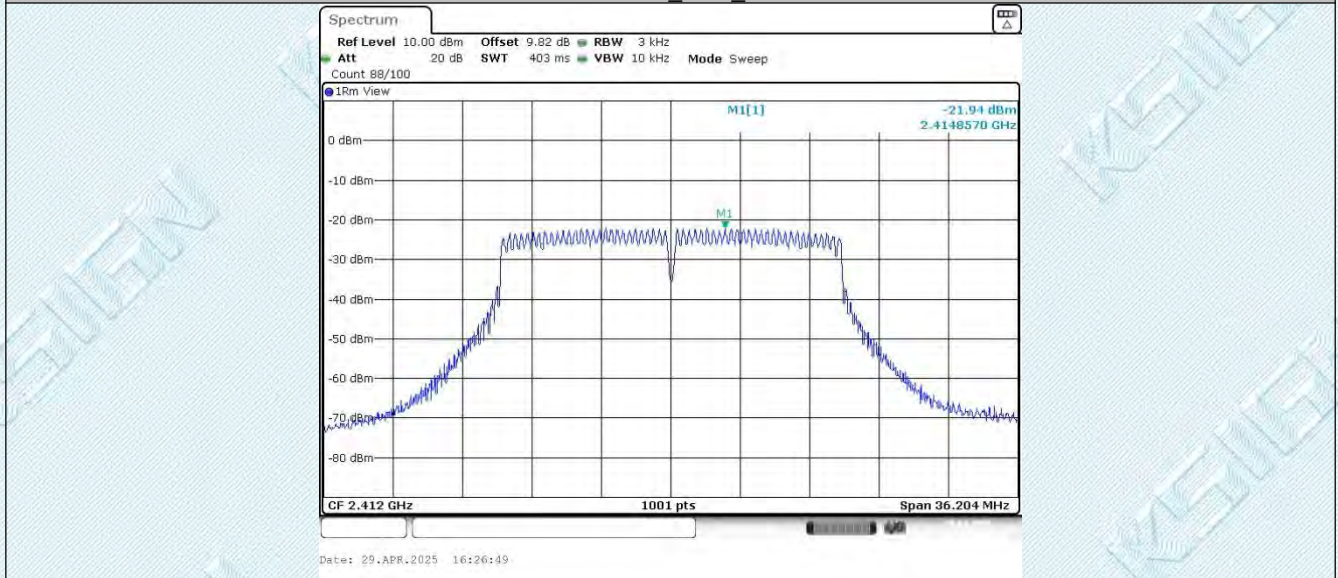
TRF No. RF\_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

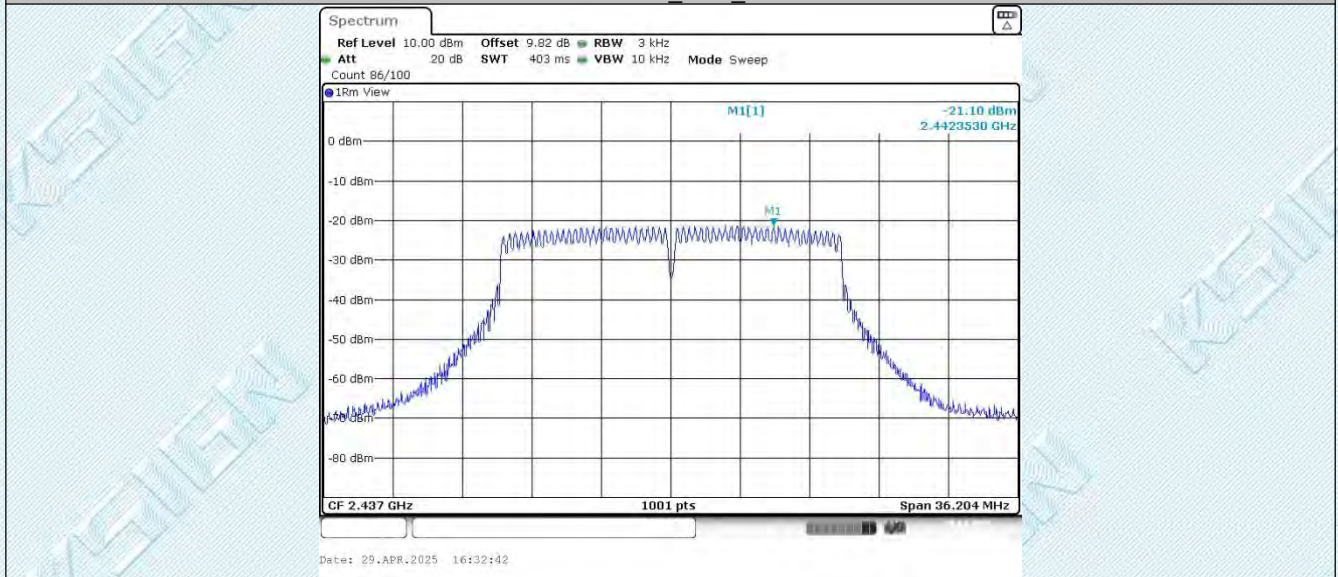
Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdkesign.cn Web: www.gdkesign.com



11N20SISO\_Ant1\_2412



11N20SISO\_Ant1\_2437

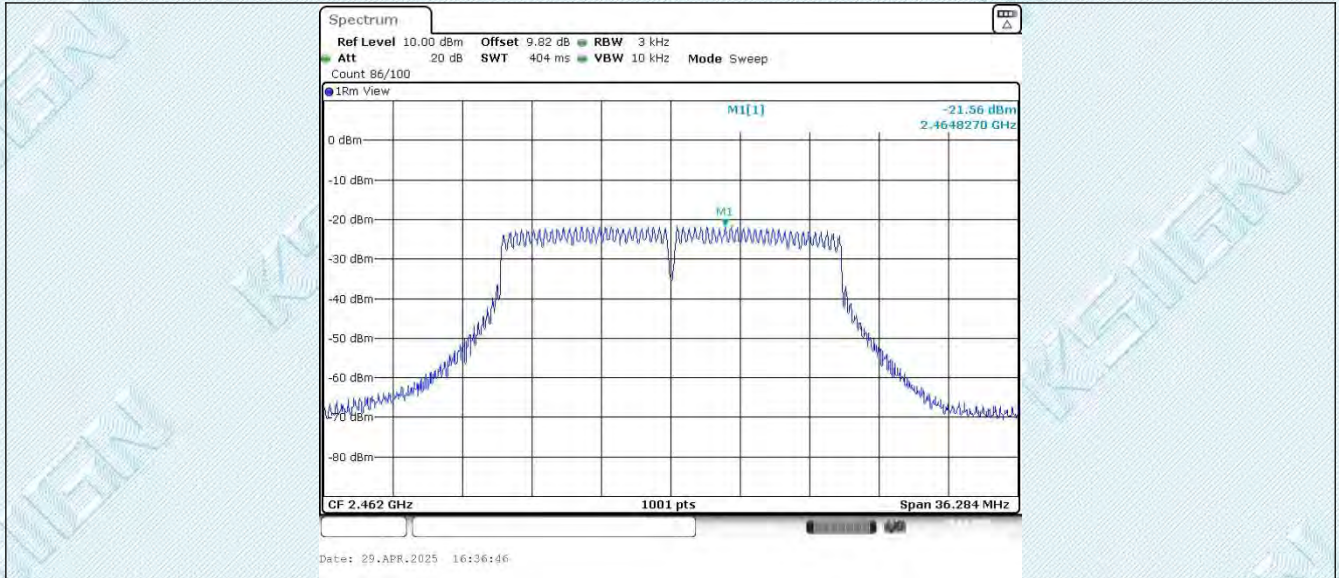


11N20SISO\_Ant1\_2462

TRF No. RF\_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdksign.cn Web: www.gdksign.com



TRF No. RF\_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

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## 6.5. Appendix E: Reference level measurement

### 6.5.1. Test Result

| TestMode  | Antenna | Freq(MHz) | Max.Point[MHz] | Result[dBm] |
|-----------|---------|-----------|----------------|-------------|
| 11B       | Ant1    | 2412      | 2411.52        | 2.11        |
|           |         | 2437      | 2437.55        | 2.55        |
|           |         | 2462      | 2462.52        | 2.37        |
| 11G       | Ant1    | 2412      | 2416.15        | -0.99       |
|           |         | 2437      | 2441.17        | -0.24       |
|           |         | 2462      | 2466.15        | -0.94       |
| 11N20SISO | Ant1    | 2412      | 2409.16        | -0.88       |
|           |         | 2437      | 2434.14        | -0.18       |
|           |         | 2462      | 2459.17        | -0.36       |

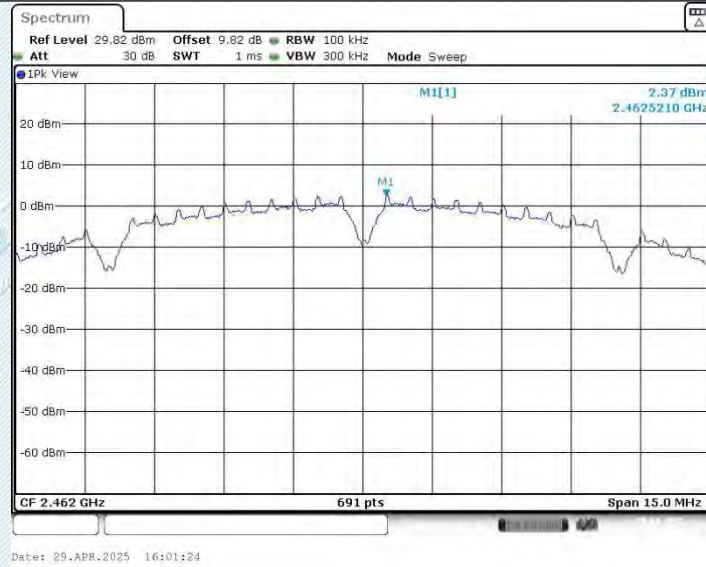
## 6.5.2. Test Graphs



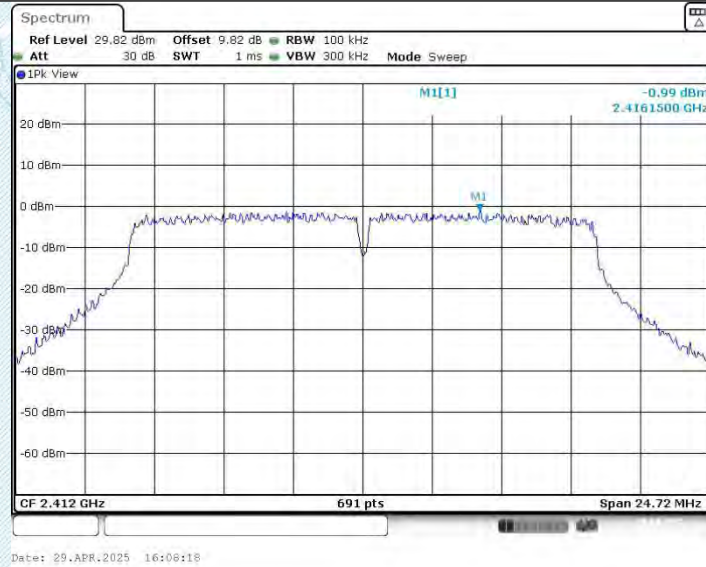
TRF No. RF\_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

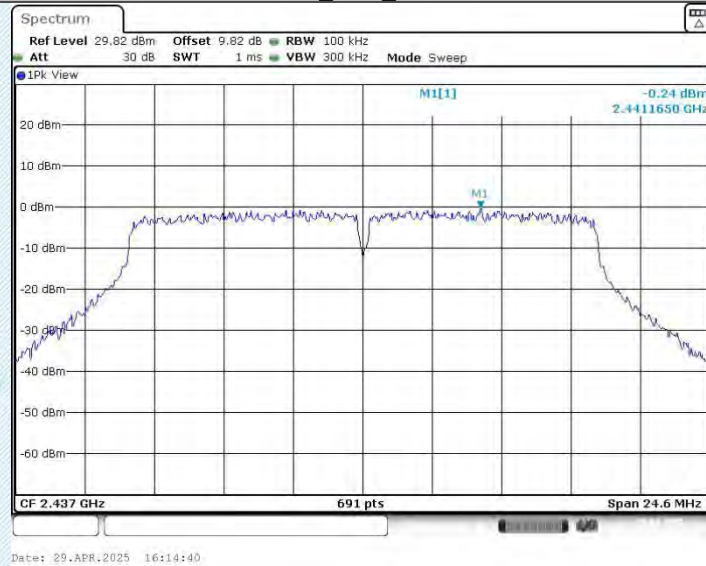
Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdksign.cn Web: www.gdksign.com



11G\_Ant1\_2412



11G\_Ant1\_2437

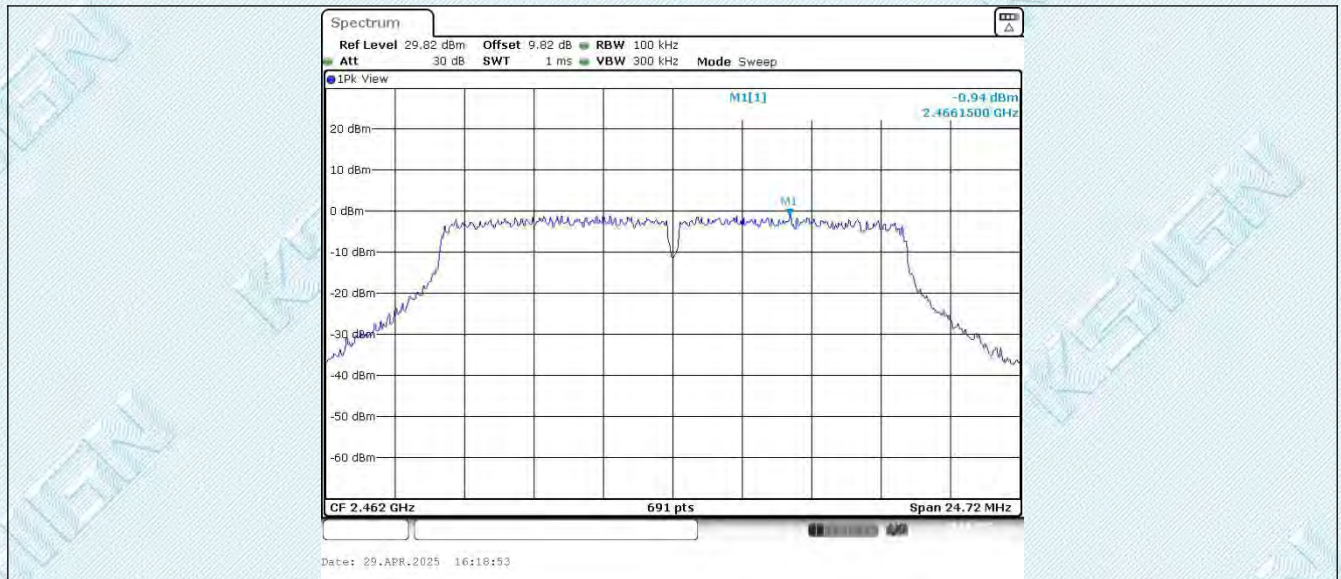


11G\_Ant1\_2462

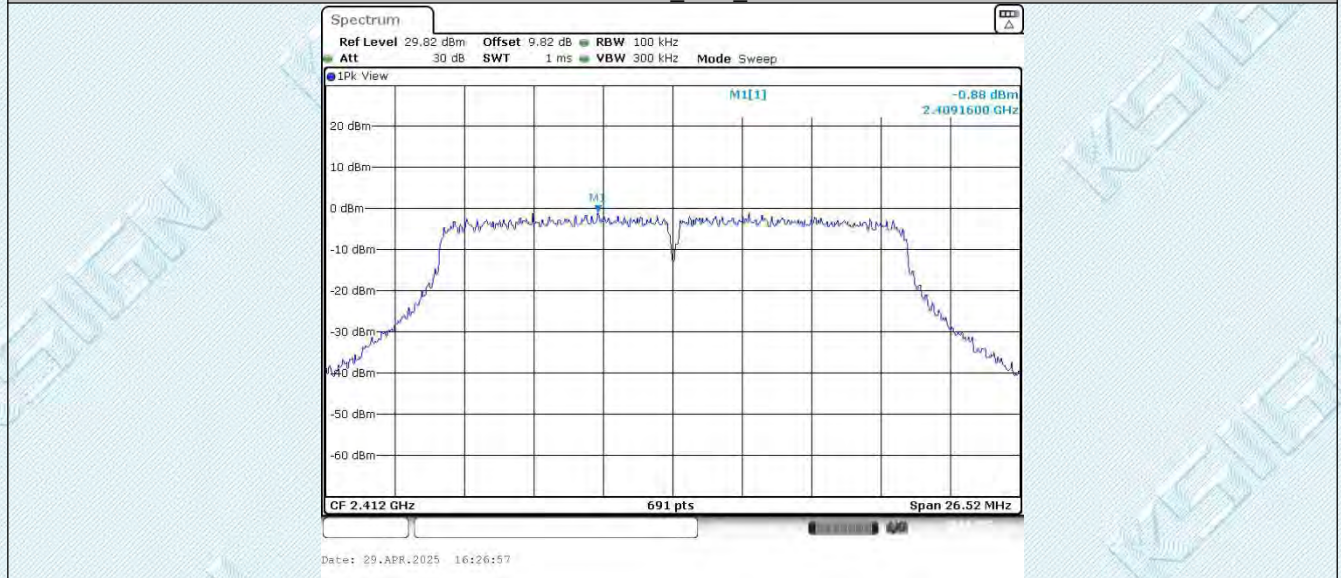
TRF No. RF\_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

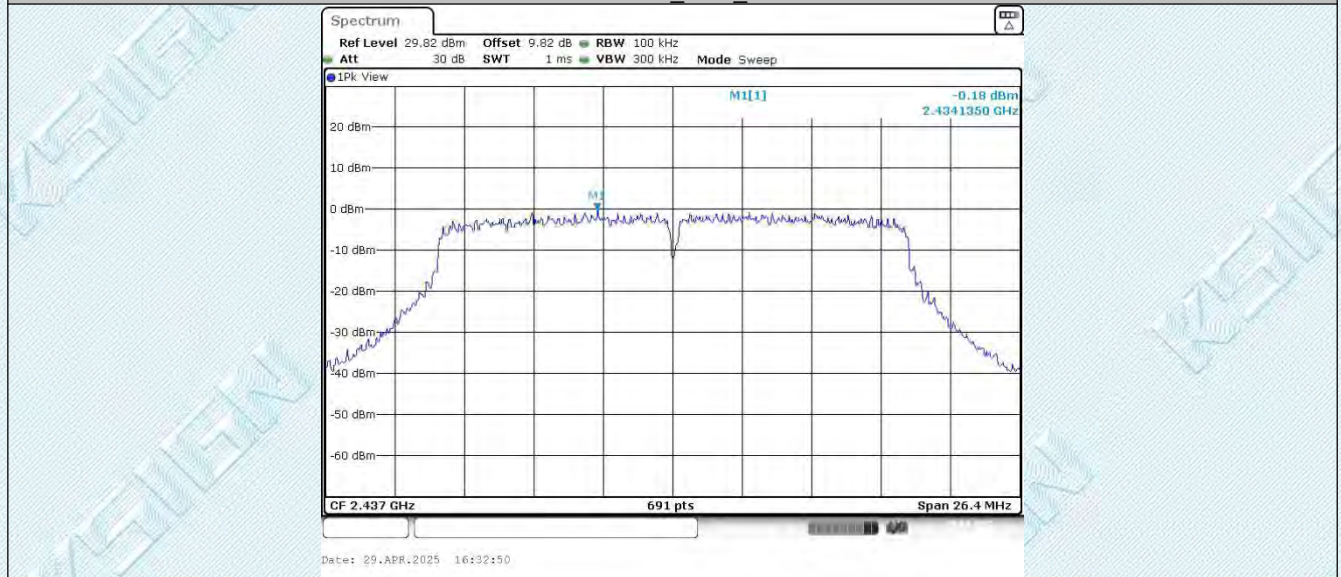
Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdkesign.cn Web: www.gdkesign.com



11N20SISO\_Ant1\_2412



11N20SISO\_Ant1\_2437

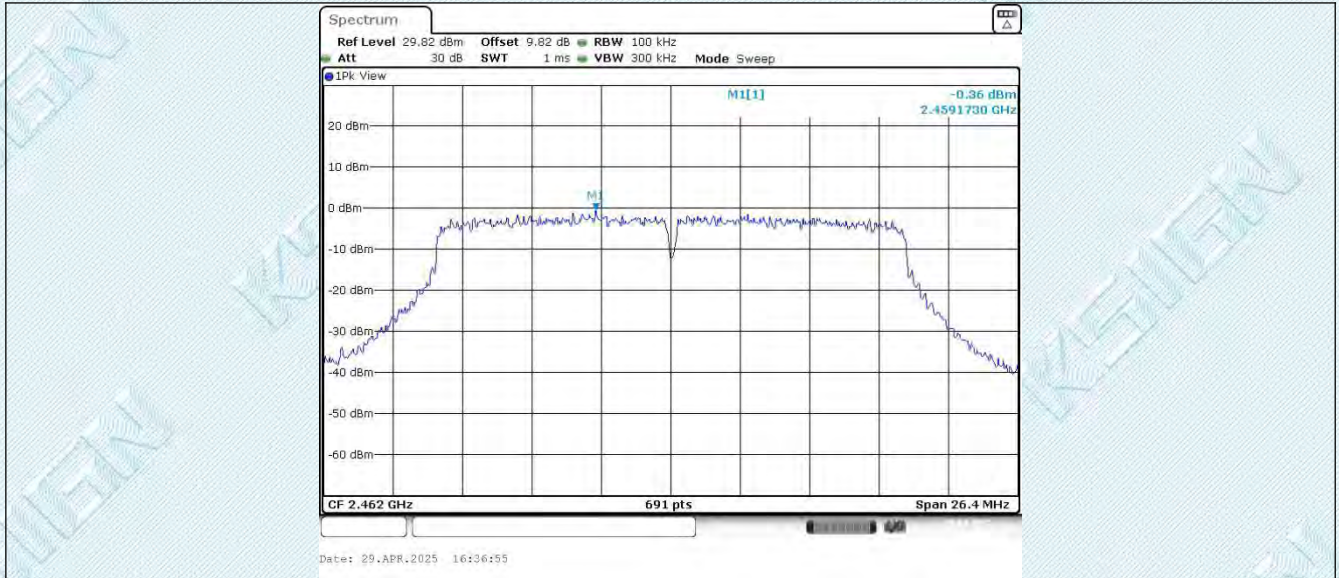


11N20SISO\_Ant1\_2462

TRF No. RF\_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdksign.cn Web: www.gdksign.com



TRF No. RF\_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

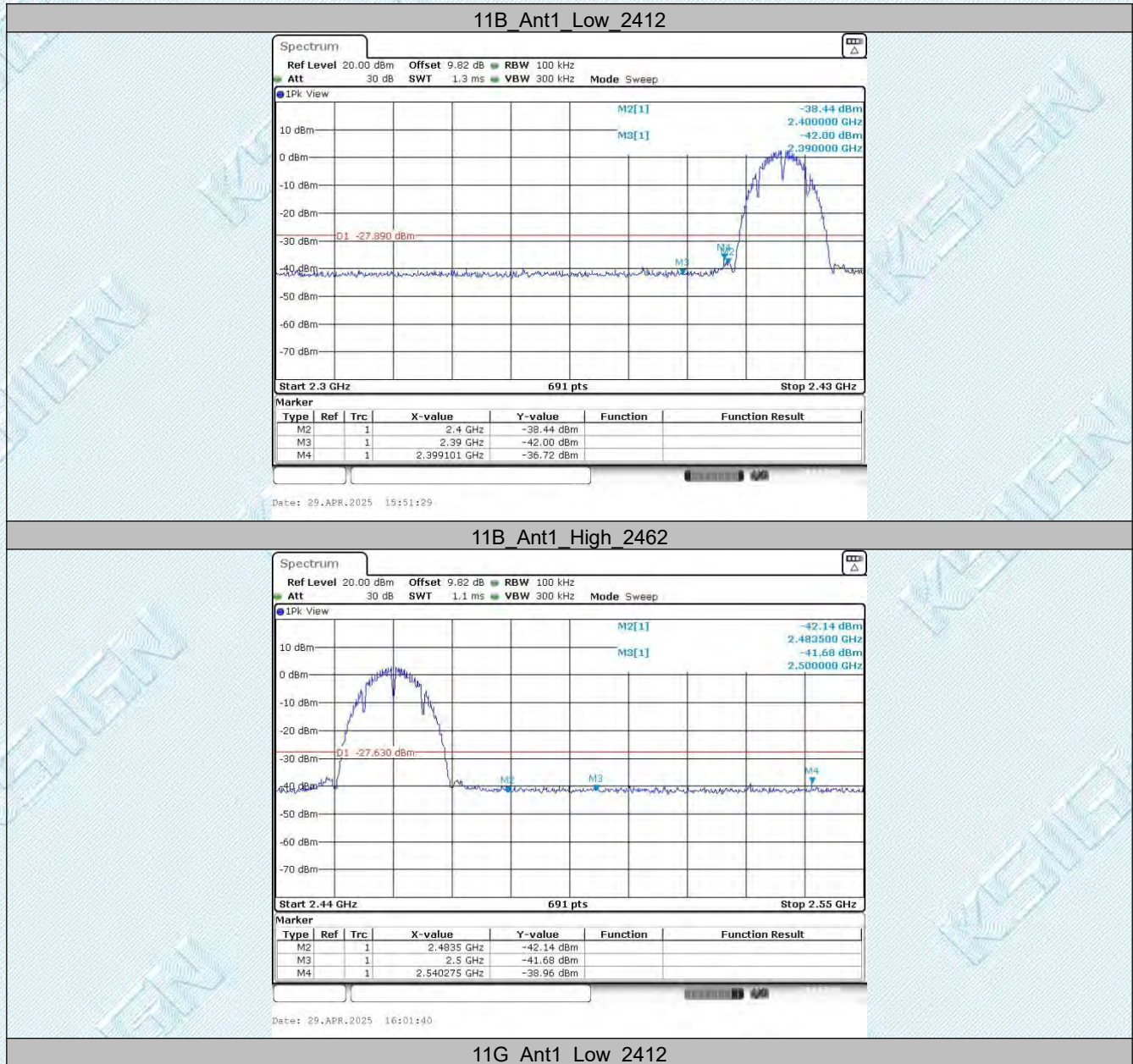
Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdksign.cn Web: www.gdksign.com

## 6.6. Appendix F: Band edge measurements

### 6.6.1. Test Result

| TestMode  | Antenna | ChName | Frequency [MHz] | RefLevel[dBm] | Result[dBm] | Limit[dBm] | Verdict |
|-----------|---------|--------|-----------------|---------------|-------------|------------|---------|
| 11B       | Ant1    | Low    | 2412            | 2.11          | -36.72      | ≤-27.89    | PASS    |
|           |         | High   | 2462            | 2.37          | -38.96      | ≤-27.63    | PASS    |
| 11G       | Ant1    | Low    | 2412            | -0.99         | -34.32      | ≤-30.99    | PASS    |
|           |         | High   | 2462            | -0.94         | -39.3       | ≤-30.94    | PASS    |
| 11N20SISO | Ant1    | Low    | 2412            | -0.88         | -35.39      | ≤-30.88    | PASS    |
|           |         | High   | 2462            | -0.36         | -38.92      | ≤-30.36    | PASS    |

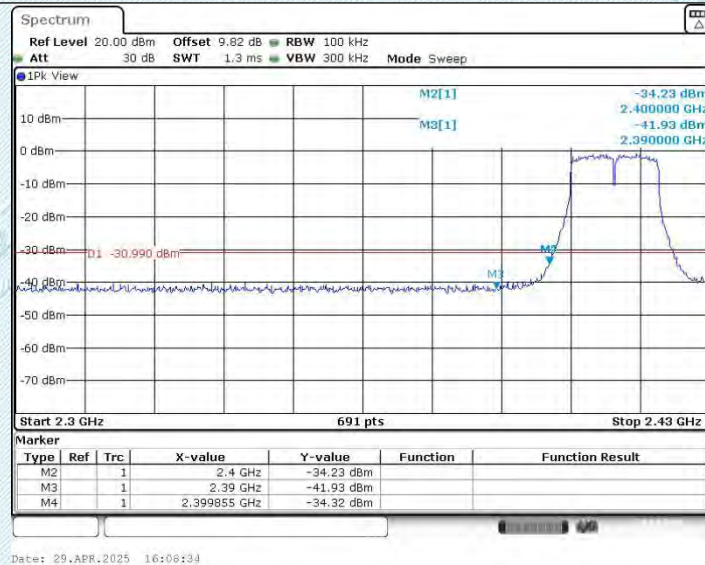
## 6.6.2. Test Graphs



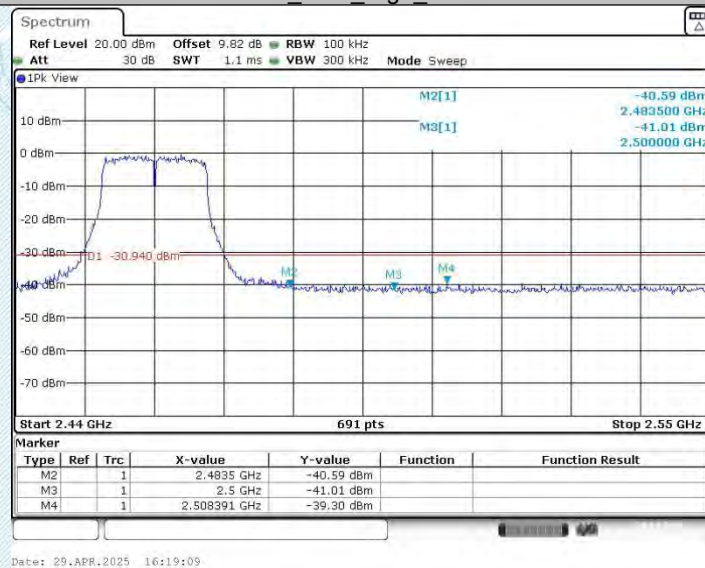
TRF No. RF\_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

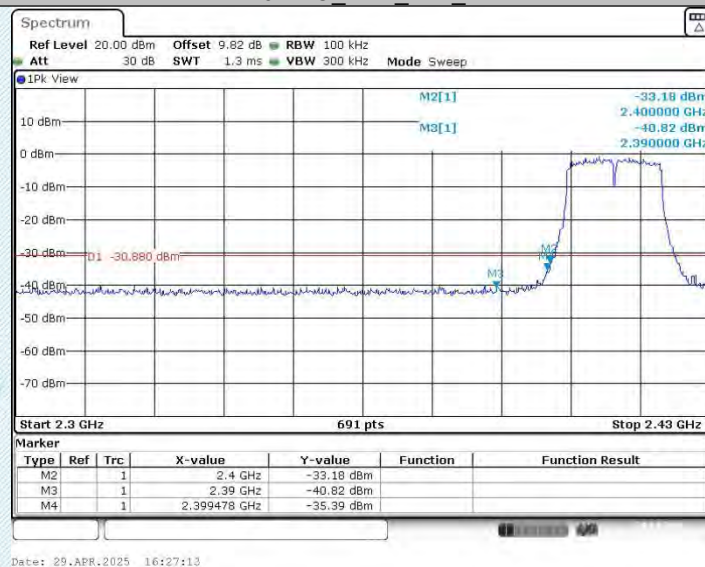
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11G\_Ant1\_High\_2462



11N20SISO\_Ant1\_Low\_2412

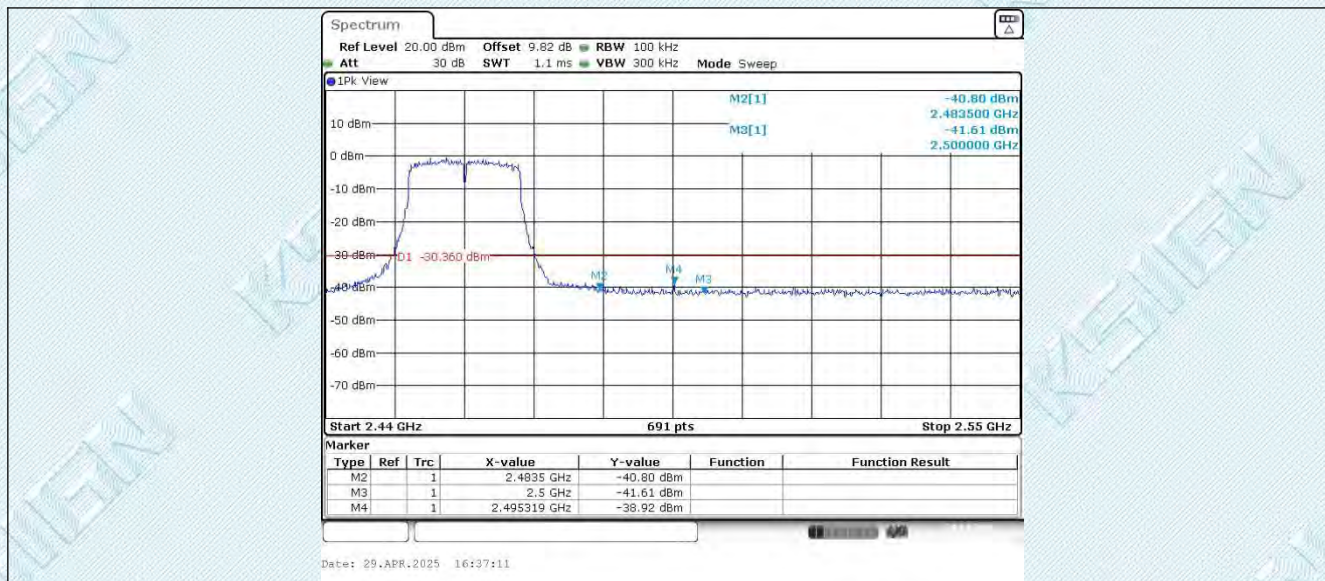


11N20SISO\_Ant1\_High\_2462

TRF No. RF\_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdkesign.cn Web: www.gdkesign.com



TRF No. RF\_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

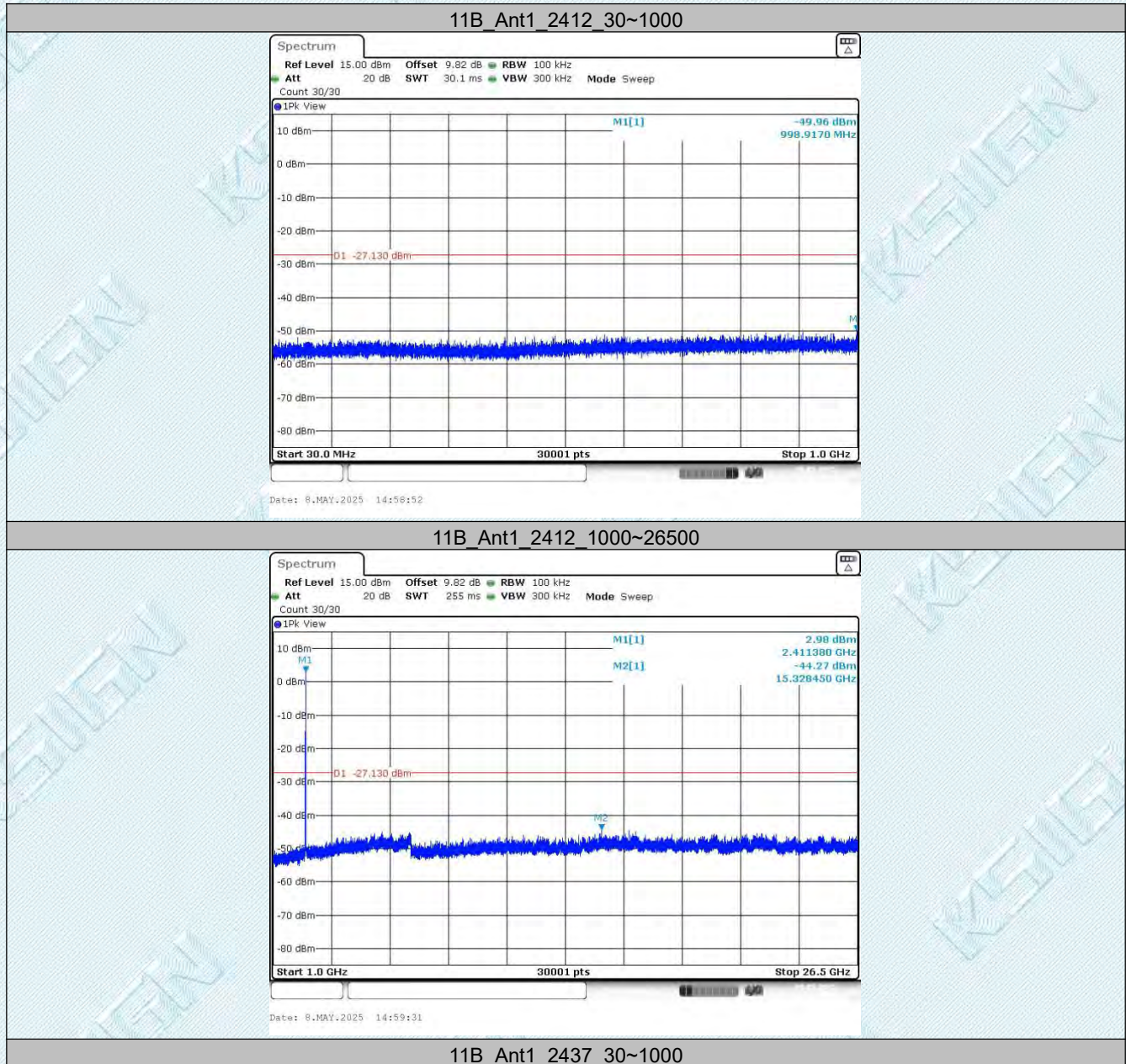
Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdksign.cn Web: www.gdksign.com

## 6.7. Appendix G: Conducted Spurious Emission

### 6.7.1. Test Result

| TestMode  | Antenna | Frequency [MHz] | FreqRange [Mhz] | RefLevel [dBm] | Result [dBm] | Limit [dBm] | Verdict |
|-----------|---------|-----------------|-----------------|----------------|--------------|-------------|---------|
| 11B       | Ant1    | 2412            | 30~1000         | 2.87           | -49.96       | ≤-27.13     | PASS    |
|           |         |                 | 1000~26500      | 2.87           | -44.27       | ≤-27.13     | PASS    |
|           |         | 2437            | 30~1000         | 3.28           | -49.95       | ≤-26.72     | PASS    |
|           |         |                 | 1000~26500      | 3.28           | -43.59       | ≤-26.72     | PASS    |
|           |         | 2462            | 30~1000         | 3.39           | -50.13       | ≤-26.61     | PASS    |
|           |         |                 | 1000~26500      | 3.39           | -44.69       | ≤-26.61     | PASS    |
| 11G       | Ant1    | 2412            | 30~1000         | 0.02           | -50.46       | ≤-29.98     | PASS    |
|           |         |                 | 1000~26500      | 0.02           | -44.88       | ≤-29.98     | PASS    |
|           |         | 2437            | 30~1000         | -0.03          | -50.51       | ≤-30.03     | PASS    |
|           |         |                 | 1000~26500      | -0.03          | -45.1        | ≤-30.03     | PASS    |
|           |         | 2462            | 30~1000         | 0.37           | -50.6        | ≤-29.63     | PASS    |
|           |         |                 | 1000~26500      | 0.37           | -45.15       | ≤-29.63     | PASS    |
| 11N20SISO | Ant1    | 2412            | 30~1000         | -0.18          | -49.89       | ≤-30.18     | PASS    |
|           |         |                 | 1000~26500      | -0.18          | -44.63       | ≤-30.18     | PASS    |
|           |         | 2437            | 30~1000         | 0.18           | -49.6        | ≤-29.82     | PASS    |
|           |         |                 | 1000~26500      | 0.18           | -44.81       | ≤-29.82     | PASS    |
|           |         | 2462            | 30~1000         | 0.43           | -49.78       | ≤-29.57     | PASS    |
|           |         |                 | 1000~26500      | 0.43           | -44.46       | ≤-29.57     | PASS    |

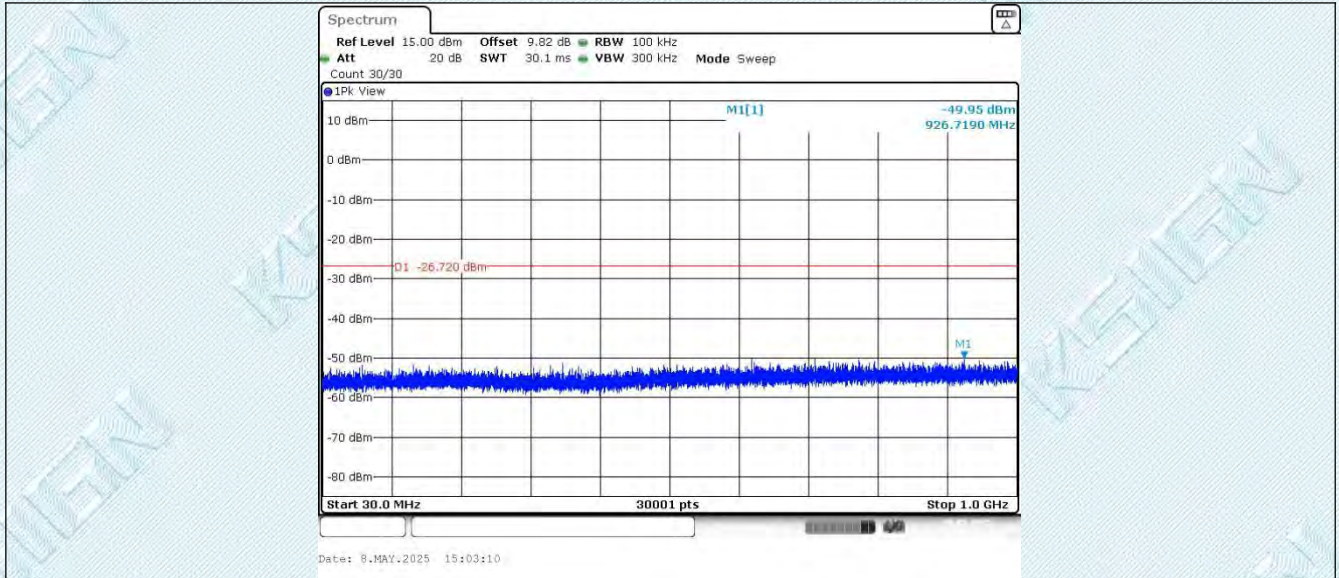
## 6.7.2. Test Graphs



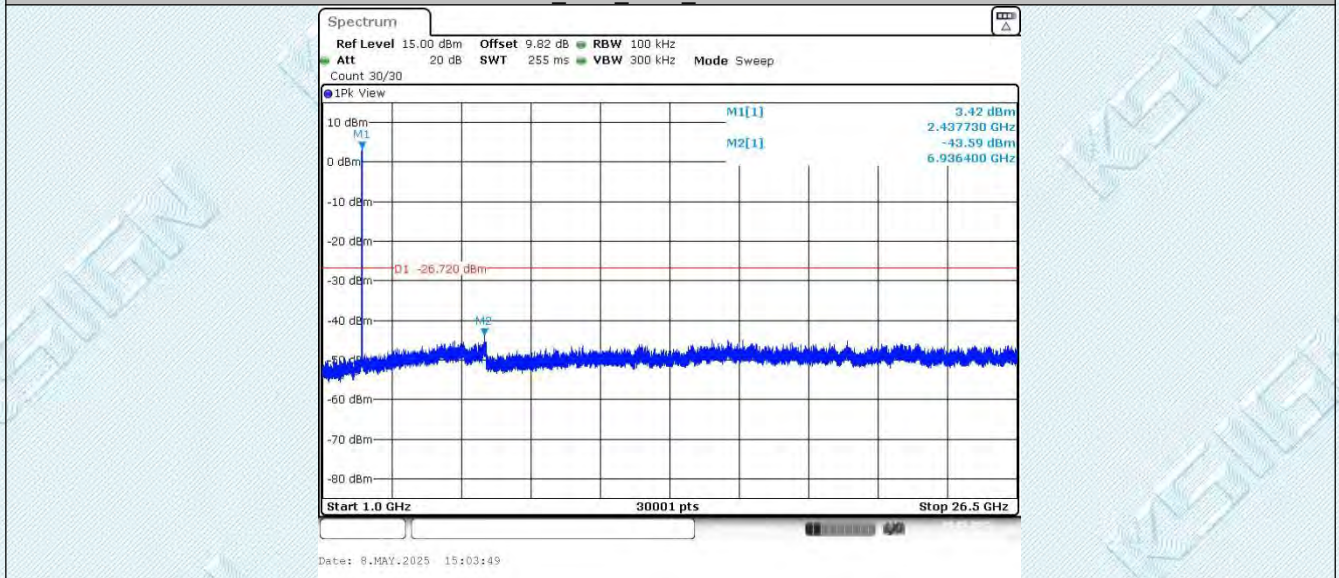
TRF No. RF\_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

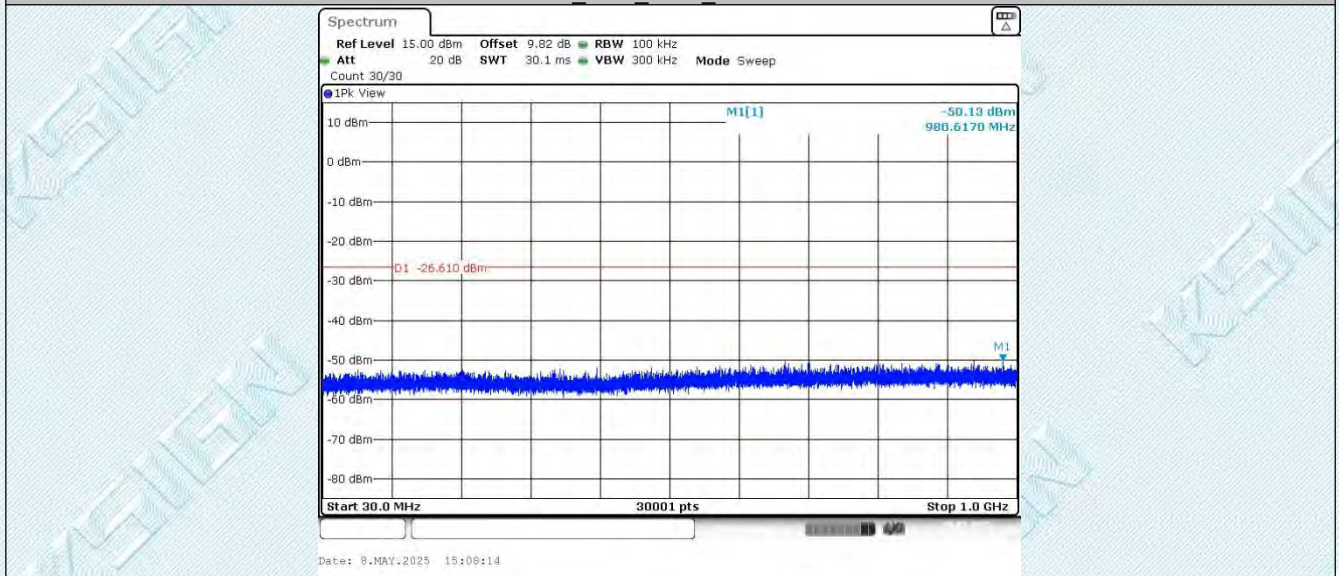
Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdkesign.cn Web: www.gdkesign.com



11B Ant1 2437\_1000~26500



11B Ant1 2462\_30~1000

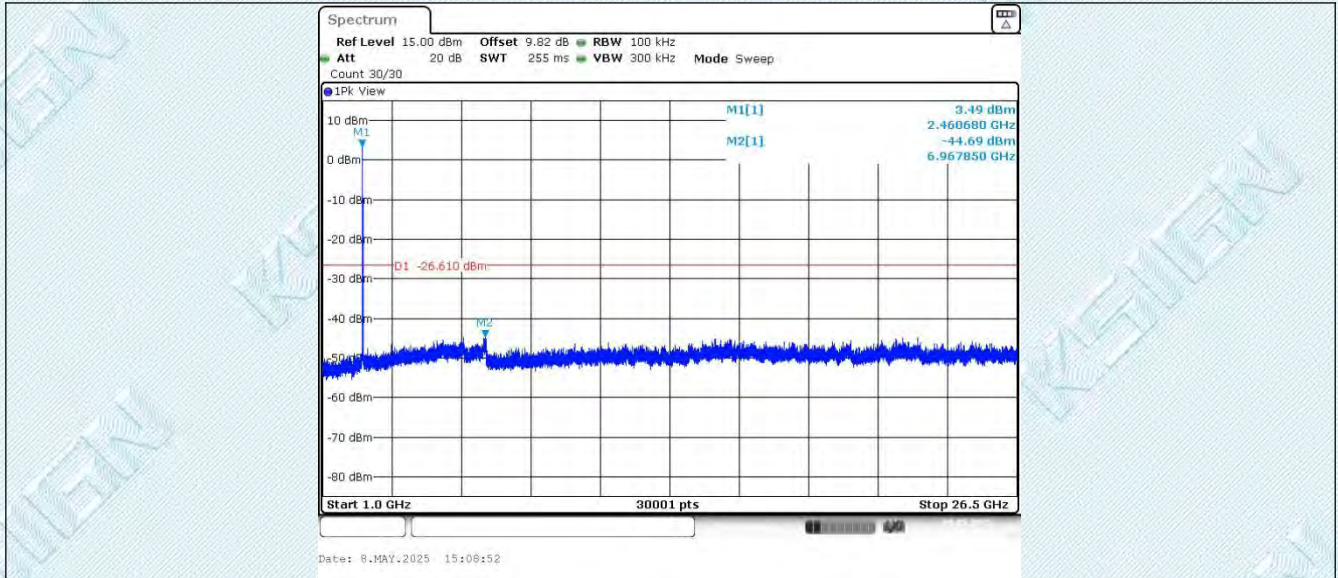


11B Ant1 2462\_1000~26500

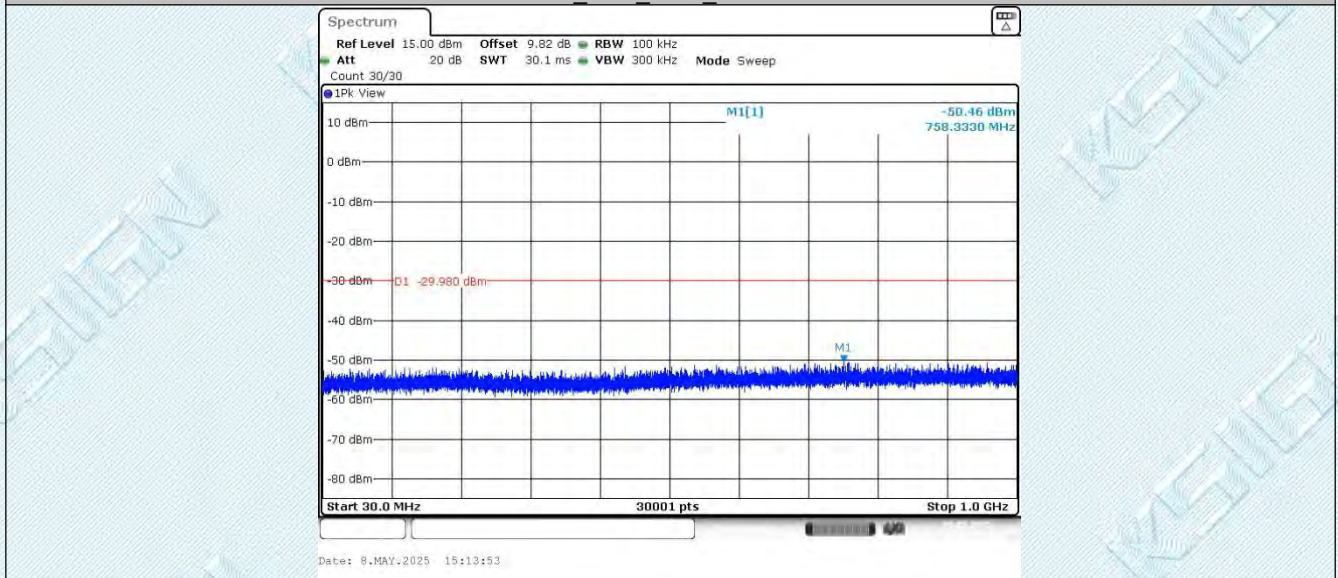
TRF No. RF\_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

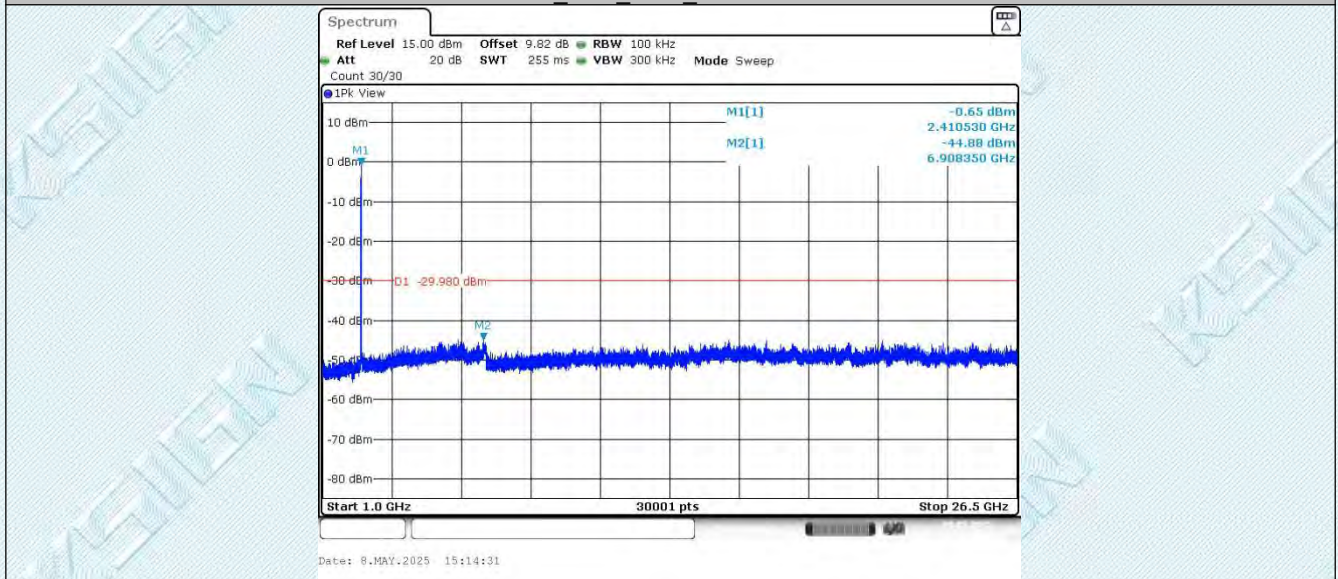
Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdkesign.cn Web: www.gdkesign.com



11G\_Ant1\_2412\_30~1000



11G\_Ant1\_2412\_1000~26500

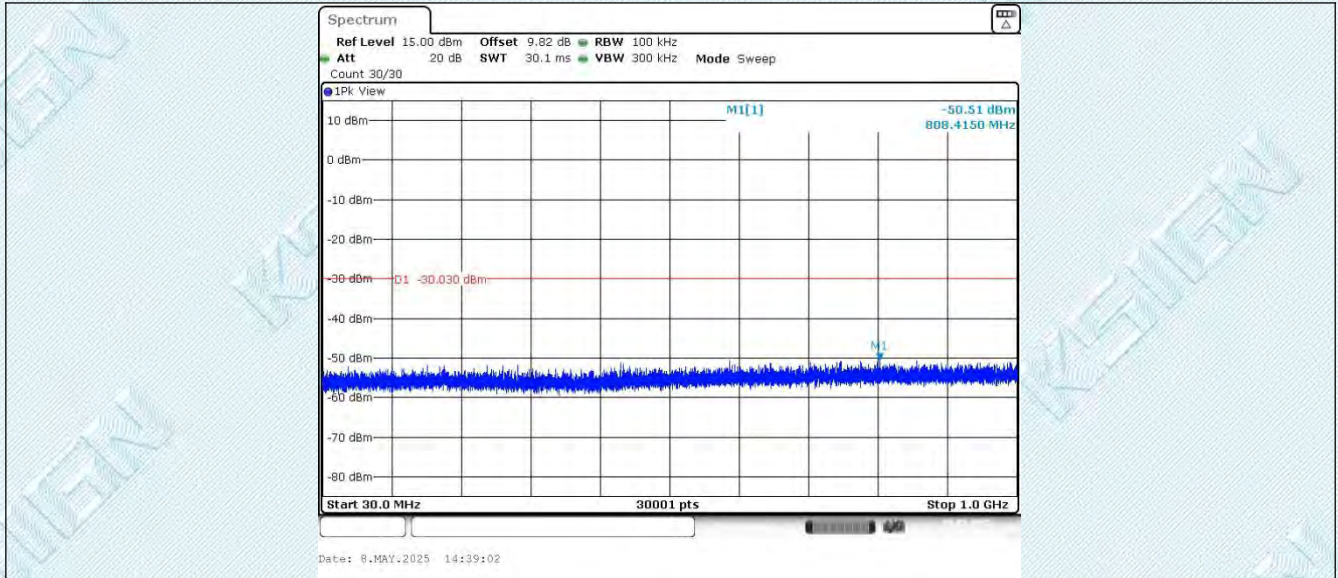


11G\_Ant1\_2437\_30~1000

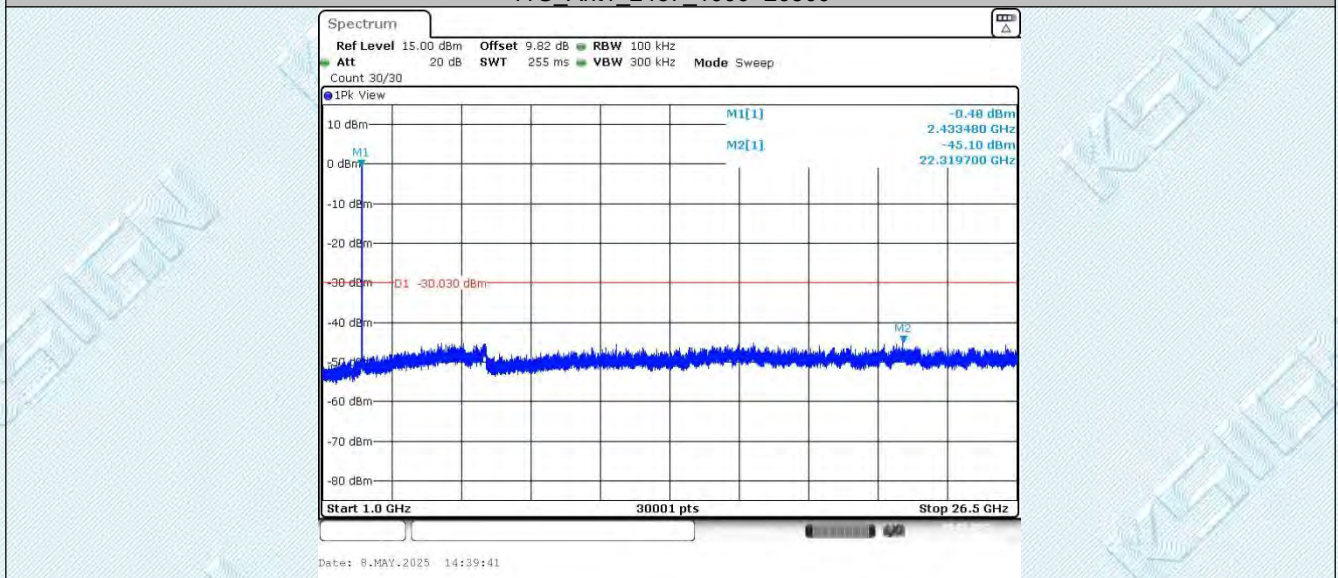
TRF No. RF\_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

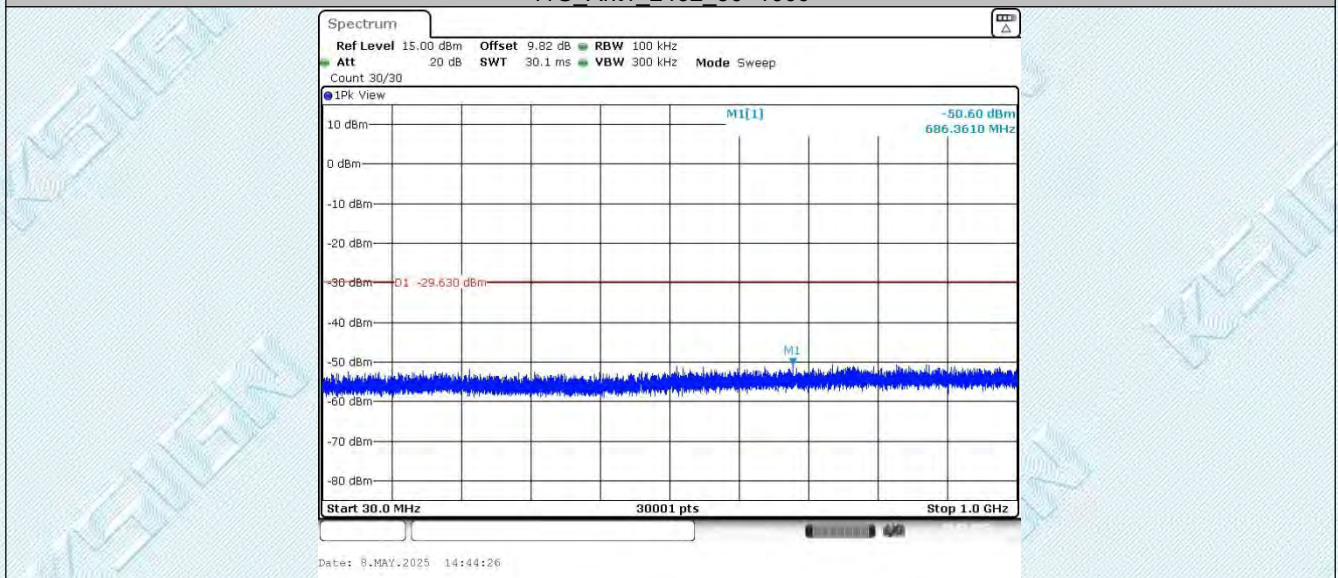
Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdkesign.cn Web: www.gdkesign.com



11G\_Ant1\_2437\_1000~26500



11G\_Ant1\_2462\_30~1000

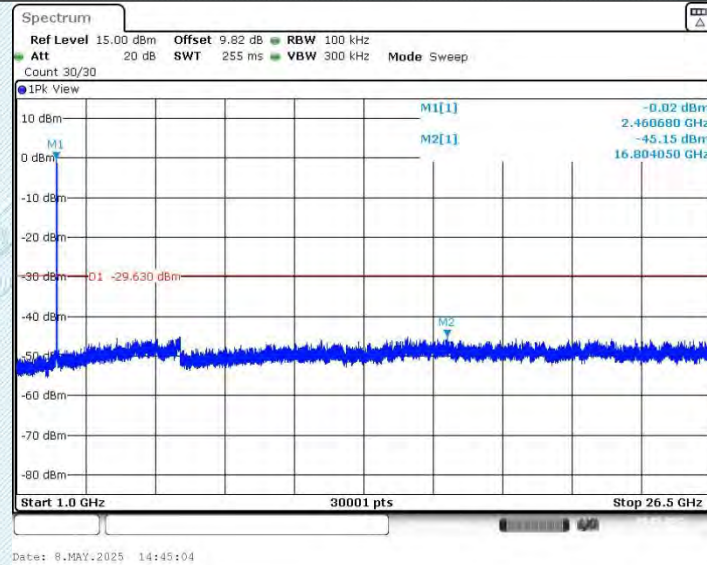


11G\_Ant1\_2462\_1000~26500

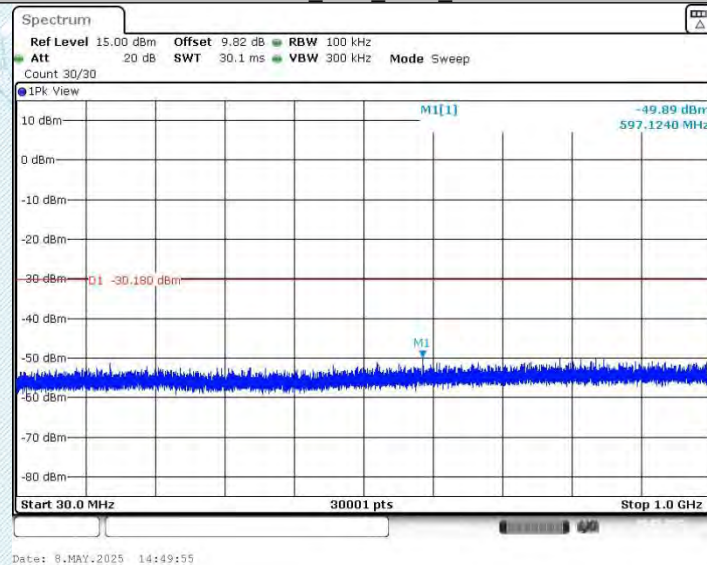
TRF No. RF\_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

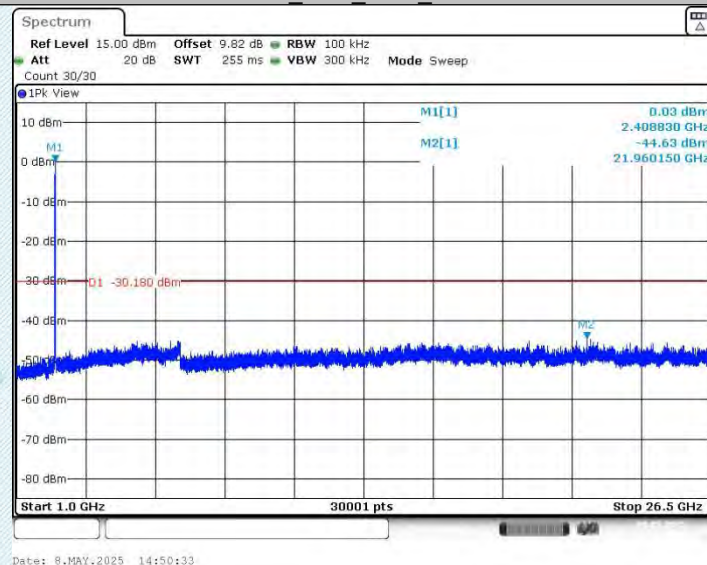
Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdkesign.cn Web: www.gdkesign.com



11N20SISO Ant1 2412\_30~1000



11N20SISO Ant1 2412\_1000~26500

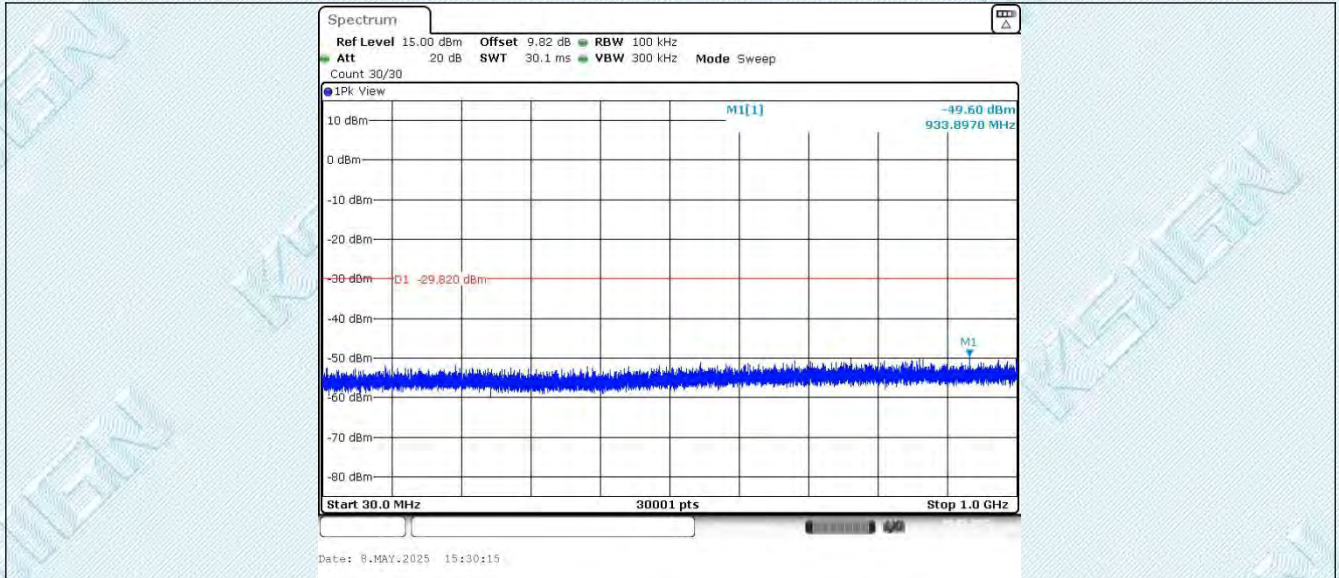


11N20SISO Ant1 2437\_30~1000

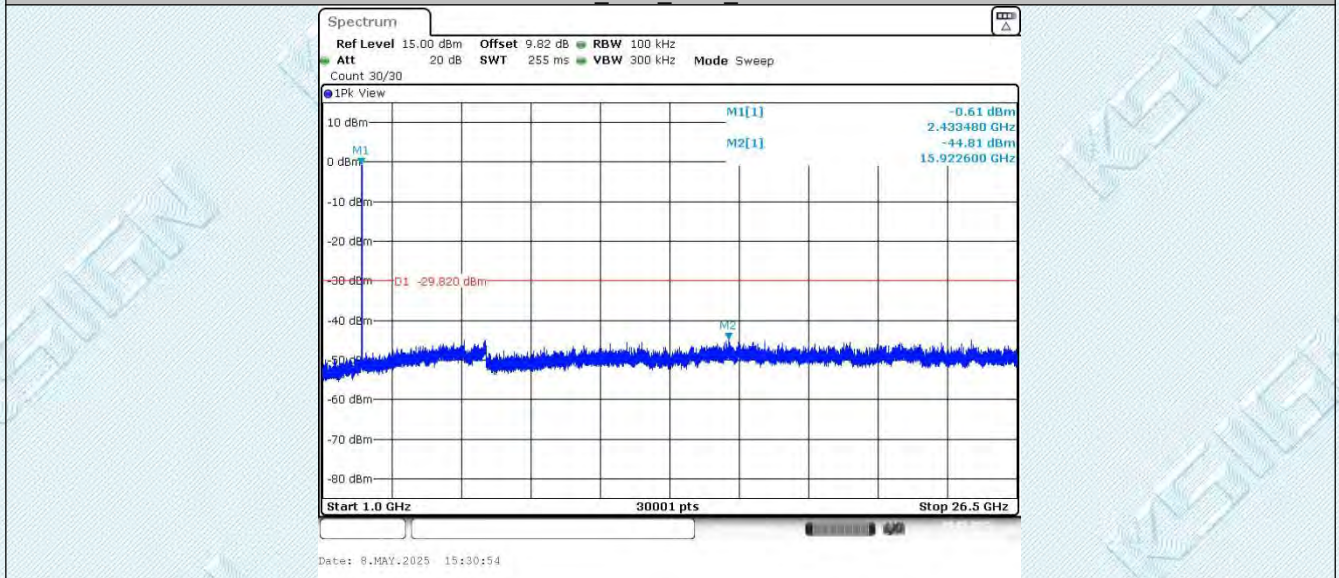
TRF No. RF\_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

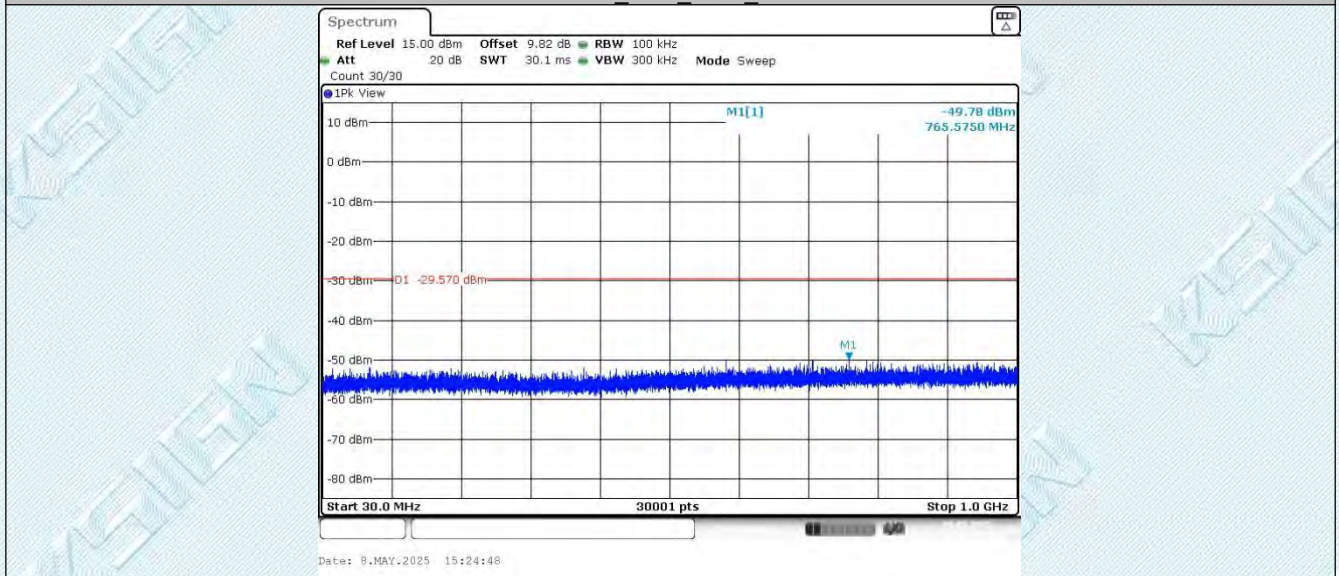
Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdkesign.cn Web: www.gdkesign.com



11N20SISO\_Ant1\_2437\_1000~26500



11N20SISO\_Ant1\_2462\_30~1000

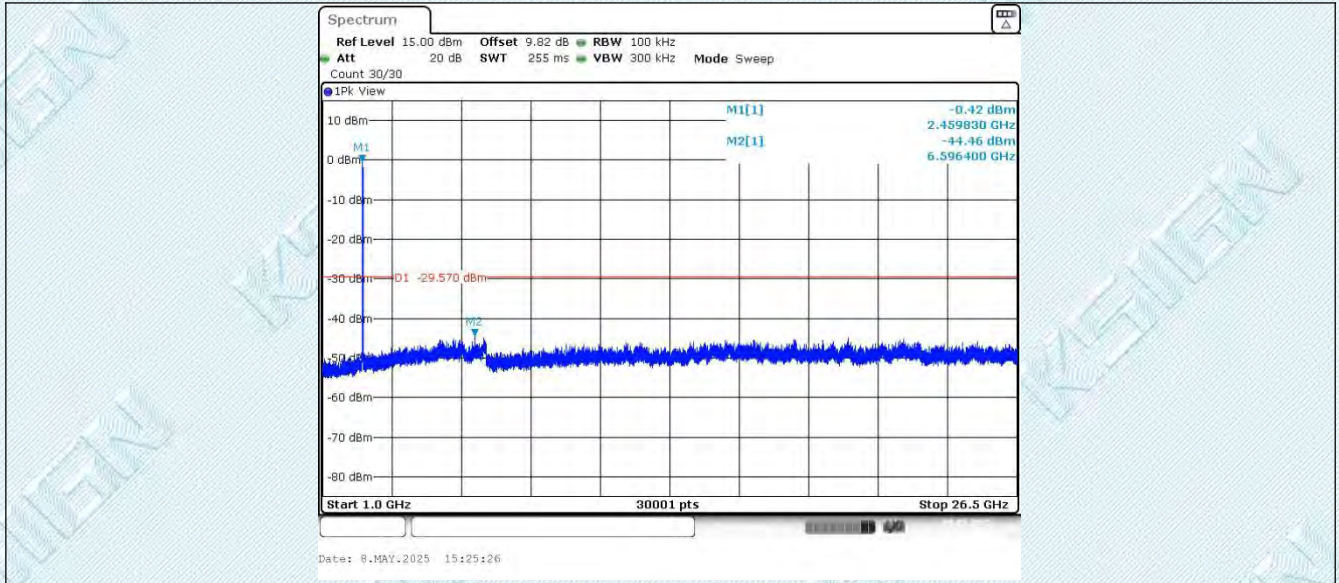


11N20SISO\_Ant1\_2462\_1000~26500

TRF No. RF\_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdksign.cn Web: www.gdksign.com



TRF No. RF\_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdksign.cn Web: www.gdksign.com

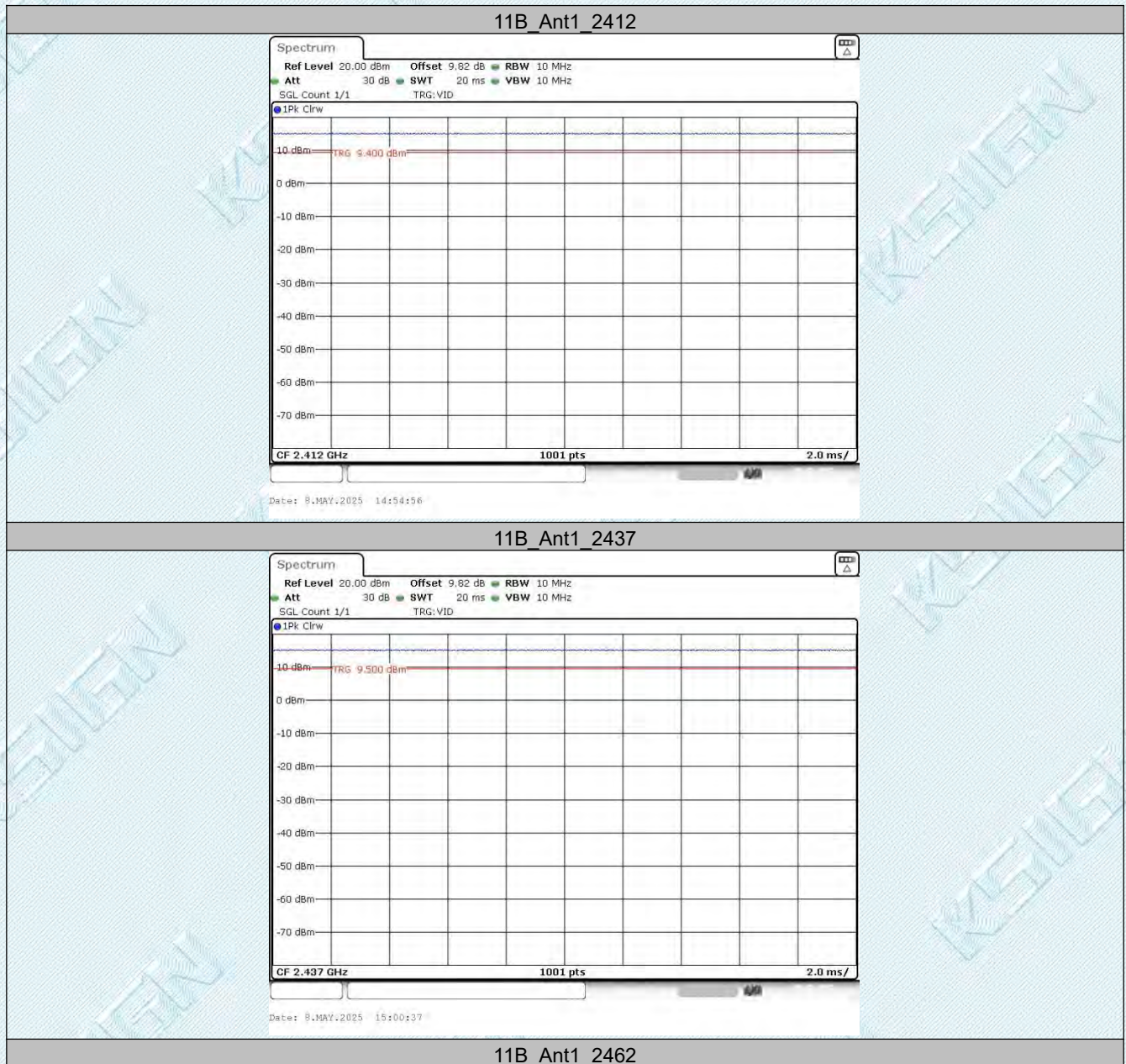
## 6.8. Appendix H: Duty Cycle

### 6.8.1. Test Result

| TestMode  | Antenna | Frequency[MHz] | Transmission Duration [ms] | Transmission Period [ms] | Duty Cycle [%] |
|-----------|---------|----------------|----------------------------|--------------------------|----------------|
| 11B       | Ant1    | 2412           | 20.00                      | 20.00                    | 100.00         |
|           |         | 2437           | 20.00                      | 20.00                    | 100.00         |
|           |         | 2462           | 20.00                      | 20.00                    | 100.00         |
| 11G       | Ant1    | 2412           | 20.00                      | 20.00                    | 100.00         |
|           |         | 2437           | 20.00                      | 20.00                    | 100.00         |
|           |         | 2462           | 20.00                      | 20.00                    | 100.00         |
| 11N20SISO | Ant1    | 2412           | 20.00                      | 20.00                    | 100.00         |
|           |         | 2437           | 20.00                      | 20.00                    | 100.00         |
|           |         | 2462           | 20.00                      | 20.00                    | 100.00         |

Duty Cycle=Transmission Duration/Transmission Period\*100%

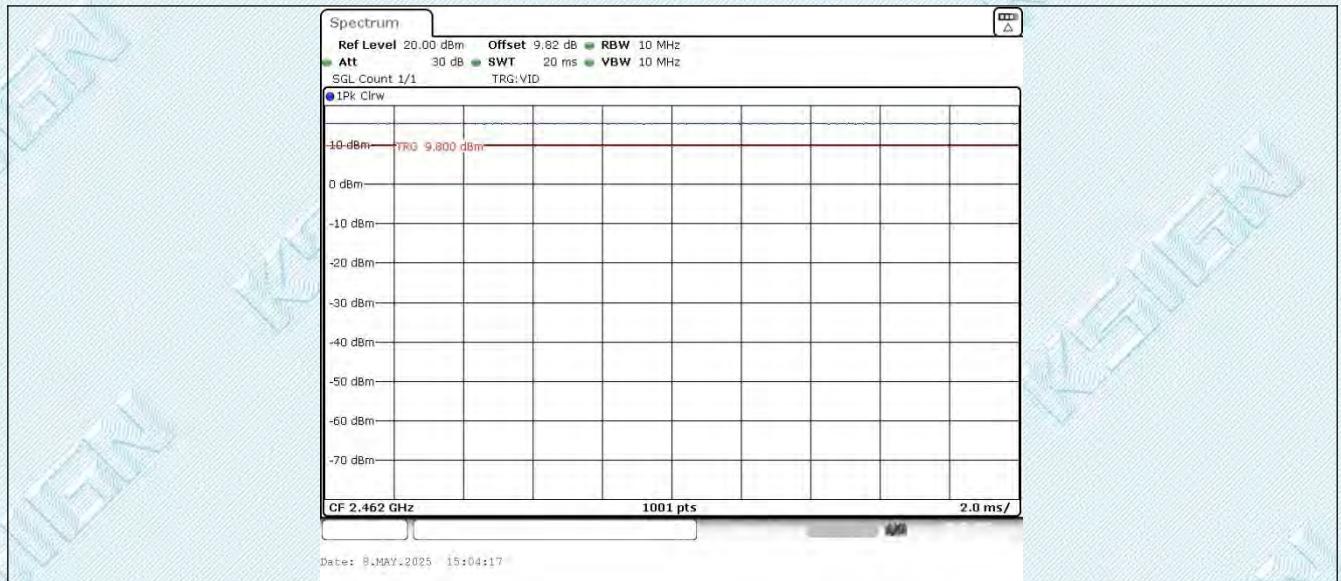
## 6.8.2. Test Graphs



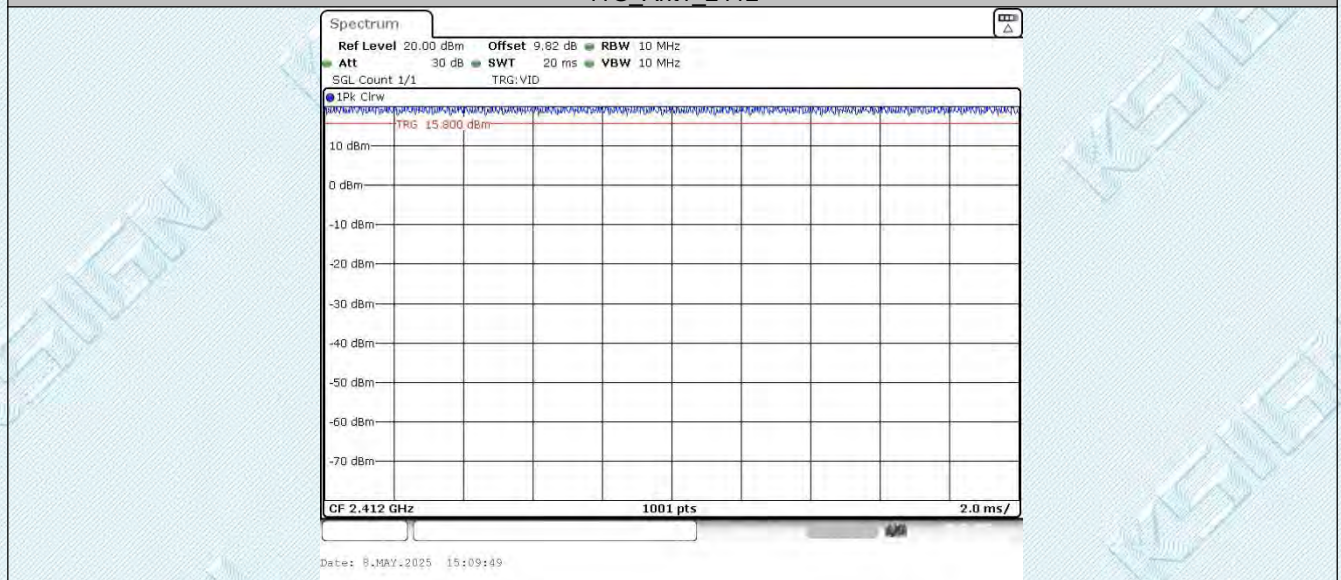
TRF No. RF\_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

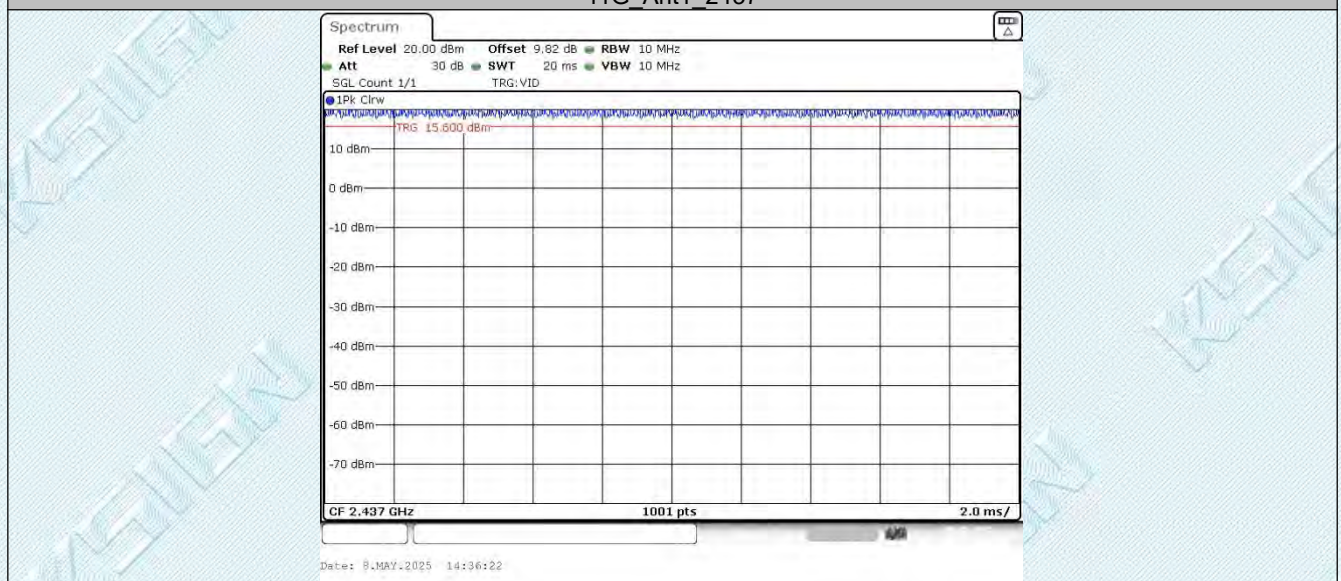
Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdksign.cn Web: www.gdksign.com



11G\_Ant1\_2412



11G\_Ant1\_2437

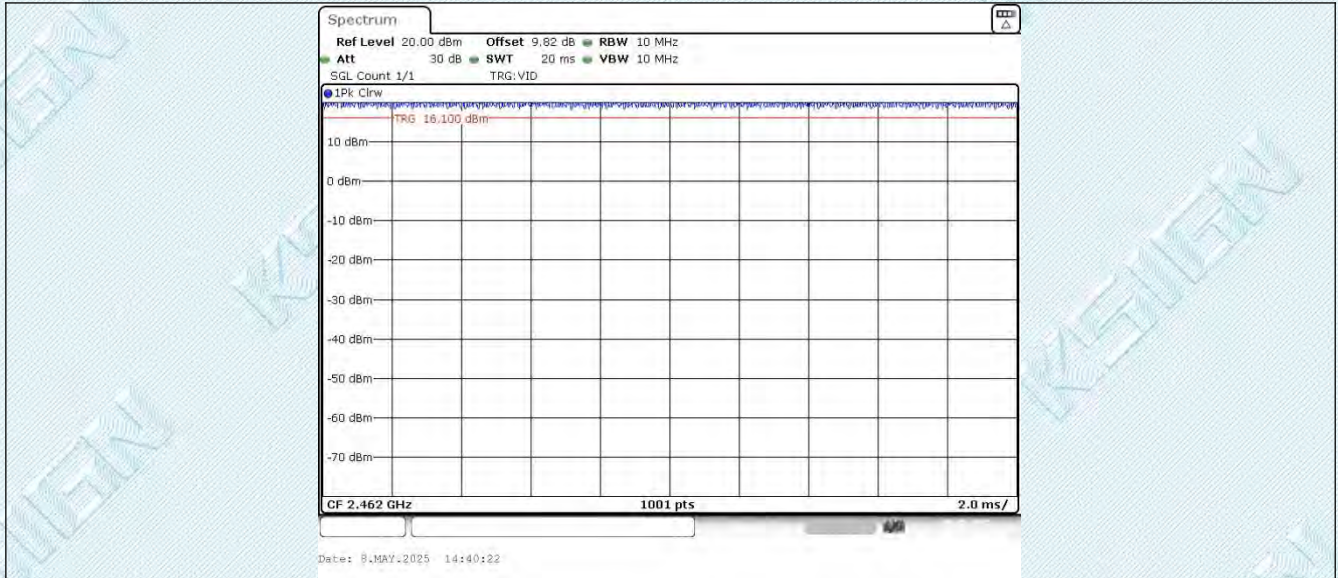


11G\_Ant1\_2462

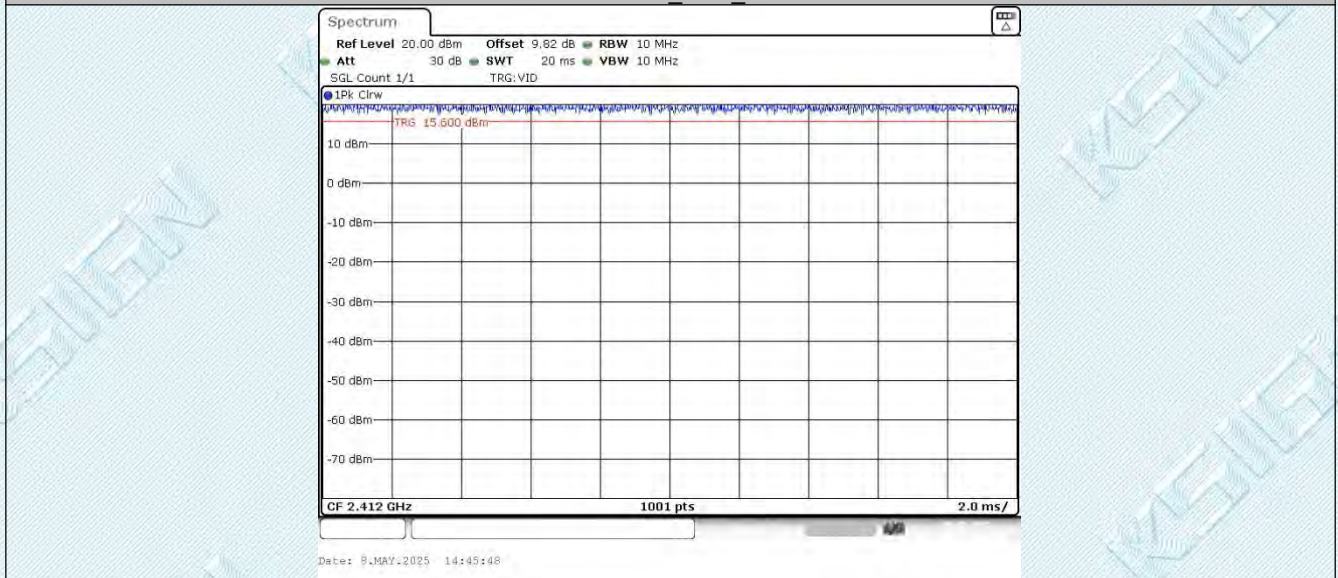
TRF No. RF\_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

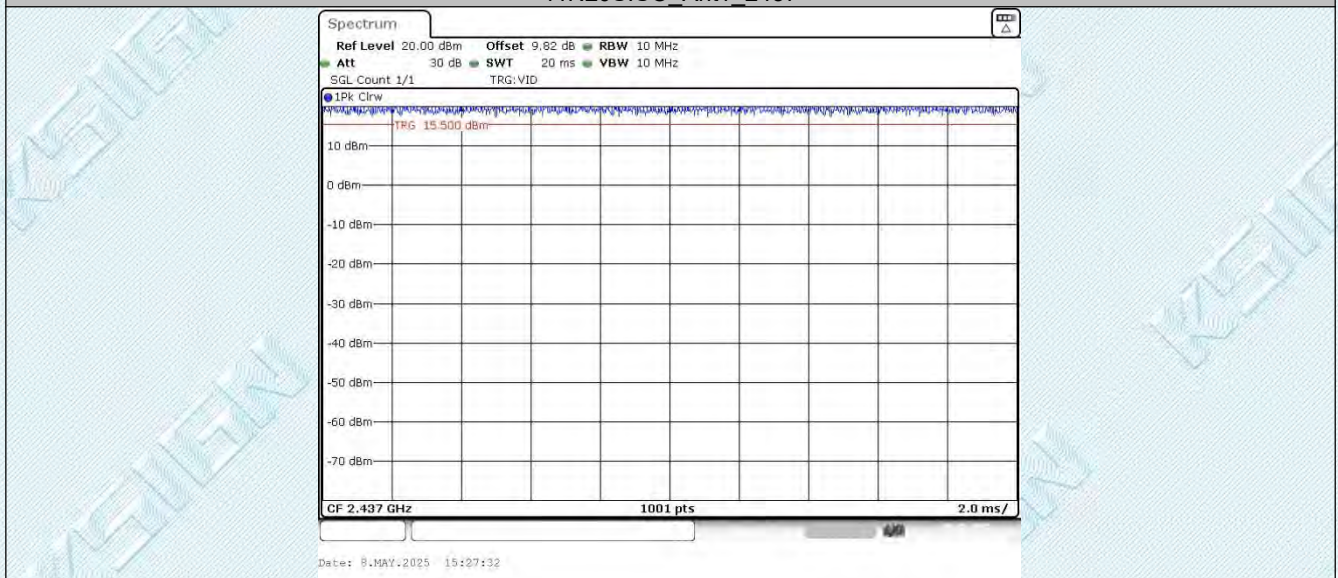
Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdkesign.cn Web: www.gdkesign.com



11N20SISO\_Ant1\_2412



11N20SISO\_Ant1\_2437

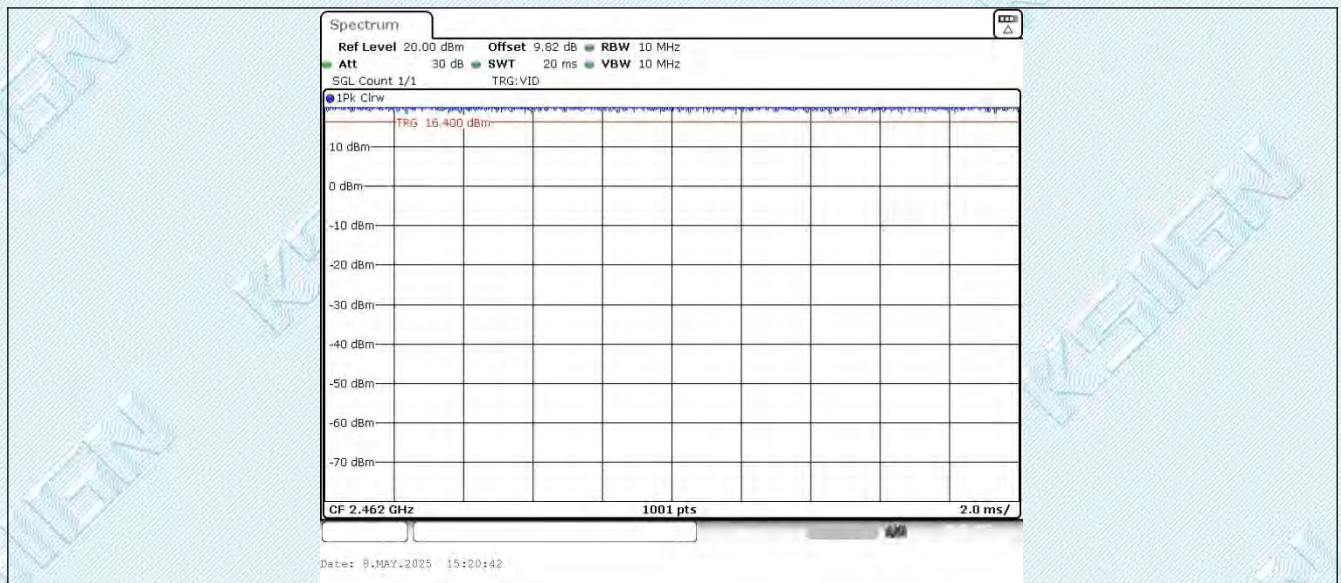


11N20SISO\_Ant1\_2462

TRF No. RF\_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdkesign.cn Web: www.gdkesign.com



TRF No. RF\_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdksign.cn Web: www.gdksign.com

--THE END--

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3. This report is invalid without the signature of the main inspector, reviewer, or approver.
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**Laboratory:** KSIGN(Guangdong) Testing Co., Ltd.

**Address:** First Floor West Side, Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu Village, Shatou Community, Shajing Street, Bao'an District, Shenzhen City, Guangdong Province, P. R. China. 518104

**Tel.:** +(86) 0755-29852678

**Fax.:** +(86) 0755-29852397

**E-mail:** info@gdksign.cn

**Web:** www.gdksign.com