



## RADIO TEST REPORT

|                         |   |                                                                                                                                                                                                                                                                 |
|-------------------------|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Applicant               | : | FOSHAN ELECTRICAL & LIGHTING CO., LTD                                                                                                                                                                                                                           |
| Address of Applicant    | : | 64 North Fenjiang Road, Foshan, Guangdong, China                                                                                                                                                                                                                |
| Manufacturer            | : | FOSHAN ELECTRICAL & LIGHTING CO., LTD                                                                                                                                                                                                                           |
| Address of Manufacturer | : | 64 North Fenjiang Road, Foshan, Guangdong, China                                                                                                                                                                                                                |
| Equipment under Test    | : | Smart LED/DEL BR30                                                                                                                                                                                                                                              |
| FCC Model No.           | : | 50035, 50035-A                                                                                                                                                                                                                                                  |
| IC Model No.            | : | 50035                                                                                                                                                                                                                                                           |
| FCC ID                  | : | P6CBR308W5L-I                                                                                                                                                                                                                                                   |
| IC                      | : | 35512-BR308W5LI                                                                                                                                                                                                                                                 |
| Test Standard(s)        | : | FCC Rules and Regulations Part 15 Subpart C,<br>C63.10-2020+Cor.1-2023 for FCC<br>RSS-247 Issue 4 July 24, 2025,<br>RSS-Gen Issue 5, Apr. 2018, Amendment 2<br>(February 2021),<br>ANSI C63.10-2020+Cor.1-2023+C63.10a-2024<br>+Errata to C63.10a-2024 for ISED |
| Report No.              | : | DDT-RE26031809-2E02                                                                                                                                                                                                                                             |
| Issue Date              | : | 2026/06/09                                                                                                                                                                                                                                                      |
| Issue By                | : | Guangdong Dongdian Testing Service Co., Ltd.<br>Unit 2, Building 1, No. 17, Zongbu 2nd Road,<br>Songshan Lake Park, Dongguan, Guangdong, China,<br>523808                                                                                                       |

# REPORT

## Table of Contents

|      |                                                  |    |
|------|--------------------------------------------------|----|
| 1.   | Summary of Test Results .....                    | 7  |
| 2.   | General Test Information.....                    | 8  |
| 2.1. | Description of EUT .....                         | 8  |
| 2.2. | Accessories of EUT .....                         | 8  |
| 2.3. | Assistant equipment used for test .....          | 9  |
| 2.4. | Block diagram of EUT configuration for test..... | 9  |
| 2.5. | Decision of final test mode .....                | 9  |
| 2.6. | Deviations of test standard .....                | 10 |
| 2.7. | Test environment conditions .....                | 10 |
| 2.8. | Test laboratory .....                            | 10 |
| 2.9. | Measurement uncertainty .....                    | 11 |
| 3.   | Equipment Used During Conductive Test .....      | 12 |
| 4.   | 6dB Bandwidth .....                              | 13 |
| 4.1. | Block diagram of test setup .....                | 13 |
| 4.2. | Limits .....                                     | 13 |
| 4.3. | Test procedure .....                             | 13 |
| 4.4. | Test result.....                                 | 14 |
| 4.5. | Test graphs .....                                | 15 |
| 5.   | 99% Bandwidth .....                              | 18 |
| 5.1. | Block diagram of test setup .....                | 18 |
| 5.2. | Limits .....                                     | 18 |
| 5.3. | Test procedure .....                             | 18 |
| 5.4. | Test result.....                                 | 19 |
| 5.5. | Test graphs .....                                | 20 |
| 6.   | Conducted Output Power .....                     | 23 |
| 6.1. | Block diagram of test setup .....                | 23 |
| 6.2. | Limits .....                                     | 23 |
| 6.3. | Test procedure .....                             | 23 |
| 6.4. | Test result average.....                         | 24 |
| 7.   | Power Spectral Density .....                     | 25 |
| 7.1. | Block diagram of test setup .....                | 25 |
| 7.2. | Limits .....                                     | 25 |
| 7.3. | Test procedure .....                             | 25 |
| 7.4. | Test result.....                                 | 26 |
| 7.5. | Test graphs .....                                | 27 |
| 8.   | Band Edge Compliance (Conducted Method) .....    | 30 |

|       |                                         |    |
|-------|-----------------------------------------|----|
| 8.1.  | Block diagram of test setup .....       | 30 |
| 8.2.  | Limits .....                            | 30 |
| 8.3.  | Test procedure .....                    | 30 |
| 8.4.  | Test result.....                        | 31 |
| 8.5.  | Test graphs .....                       | 32 |
| 9.    | RF Conducted Spurious Emissions.....    | 34 |
| 9.1.  | Block diagram of test setup .....       | 34 |
| 9.2.  | Limits .....                            | 34 |
| 9.3.  | Test procedure .....                    | 34 |
| 9.4.  | Test result.....                        | 35 |
| 9.5.  | Test graphs .....                       | 36 |
| 10.   | Duty Cycle .....                        | 45 |
| 10.1. | Block diagram of test setup .....       | 45 |
| 10.2. | Limit .....                             | 45 |
| 10.3. | Test procedure .....                    | 45 |
| 10.4. | Test result.....                        | 46 |
| 10.5. | Test graphs .....                       | 47 |
| 11.   | Antenna Requirements.....               | 50 |
| 11.1. | Limit.....                              | 50 |
| 11.2. | Result .....                            | 50 |
| 12.   | Radiated Emission .....                 | 51 |
| 12.1. | Test equipment.....                     | 51 |
| 12.2. | Block diagram of test setup .....       | 52 |
| 12.3. | Limits .....                            | 53 |
| 12.4. | Assistant equipment used for test ..... | 55 |
| 12.5. | Test procedure .....                    | 55 |
| 12.6. | Test result.....                        | 57 |
| 12.7. | Test data .....                         | 58 |
| 13.   | Band Edge Compliance.....               | 72 |
| 13.1. | Test equipment.....                     | 72 |
| 13.2. | Block diagram of test setup .....       | 72 |
| 13.3. | Limits .....                            | 72 |
| 13.4. | Assistant equipment used for test ..... | 72 |
| 13.5. | Test procedure .....                    | 73 |
| 13.6. | Test result.....                        | 73 |
| 13.7. | Test data .....                         | 74 |
| 14.   | Power Line Conducted Emissions.....     | 86 |
| 14.1. | Test equipment.....                     | 86 |

14.2. Block diagram of test setup .....86

14.3. Limits .....86

14.4. Assistant equipment used for test .....86

14.5. Test procedure .....86

14.6. Test result.....87

14.7. Test data .....88

15. Test Setup Photograph .....90

17. Photos of the EUT .....93

Test Report Declare

|                         |   |                                                  |
|-------------------------|---|--------------------------------------------------|
| Applicant               | : | FOSHAN ELECTRICAL & LIGHTING CO., LTD            |
| Address of Applicant    | : | 64 North Fenjiang Road, Foshan, Guangdong, China |
| Equipment under Test    | : | Smart LED/DEL BR30                               |
| FCC Model No.           | : | 50035, 50035-A                                   |
| IC Model No.            | : | 50035                                            |
| Manufacturer            | : | FOSHAN ELECTRICAL & LIGHTING CO., LTD            |
| Address of Manufacturer | : | 64 North Fenjiang Road, Foshan, Guangdong, China |

**Test Standard Used:**  
FCC Rules and Regulations Part 15 Subpart C,  
C63.10-2020+Cor.1-2023 for FCC,  
RSS-247 Issue 4 July 24, 2025,  
RSS-Gen Issue 5, Apr. 2018, Amendment 2 (February 2021),  
ANSI C63.10-2020+Cor.1-2023+C63.10a-2024+Errata to C63.10a-2024 for ISED

**We Declare:**  
The equipment described above is tested by Guangdong Dongdian Testing Service Co., Ltd. and in the configuration tested the equipment complied with the standards specified above. The test results are contained in this test report and Guangdong Dongdian Testing Service Co., Ltd. is assumed of full responsibility for the accuracy and completeness of these tests.

|                  |                     |               |                         |
|------------------|---------------------|---------------|-------------------------|
| Report No.:      | DDT-RE26031809-2E02 |               |                         |
| Date of Receipt: | 2026/03/19          | Date of Test: | 2026/03/19 - 2026/05/20 |

|                                                                                     |                                                                                     |                                                                                       |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Created: Tiger Mo                                                                   | Reviewed: Johnson Huang                                                             | Approved: Ella Gong                                                                   |
|  |  |  |
| 2026/05/20                                                                          | 2026/06/09                                                                          | 2026/06/09                                                                            |

Note: This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Guangdong Dongdian Testing Service Co., Ltd.

Revision History

| Version | Revision Content | Issue Date | Approved  |
|---------|------------------|------------|-----------|
| V0      | Initial issue    | 2026/06/09 | Ella Gong |
|         |                  |            |           |

## 1. Summary of Test Results

| No. | Test Parameter                   | Clause No.                                                                                                                          | Condition | Result |
|-----|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------|--------|
| 1   | 6 dB Bandwidth and 99% Bandwidth | 47 CFR Part 15 15.247(a)(2), RSS-247 clause 6.3.1(a), RSS-Gen clause 6.7                                                            | /         | Pass   |
| 2   | Peak Output Power                | 47 CFR Part 15 15.247(b)(3), RSS-247 clause 6.3.2                                                                                   | /         | Pass   |
| 3   | Power Spectral Density           | 47 CFR Part 15 15.247(e), RSS-247 clause 6.3.1(b)                                                                                   | /         | Pass   |
| 4   | RF Conducted Spurious Emissions  | 47 CFR Part 15 15.247(d), RSS-247 clause 6.6                                                                                        | /         | Pass   |
| 5   | Radiated Emission                | 47 CFR Part 15 15.205, 47 CFR Part 15 15.209, 47 CFR Part 15 15.247(d), RSS-247 clause 6.6, RSS-Gen clause 8.9, RSS-Gen clause 8.10 | /         | Pass   |
| 6   | Band Edge Compliance             | 47 CFR Part 15 15.205, 47 CFR Part 15 15.209, 47 CFR Part 15 15.247(d), RSS-247 clause 6.6, RSS-Gen clause 8.9, RSS-Gen clause 8.10 | /         | Pass   |
| 7   | Power Line Conducted Emissions   | 47 CFR Part 15 15.207(a), RSS-Gen clause 8.8                                                                                        | /         | Pass   |
| 8   | Antenna Requirement              | 47 CFR Part 15 15.203, RSS-Gen clause 6.8                                                                                           | /         | Pass   |

Note: N/A is an abbreviation for Not Applicable, and means this item is not applicable for this device or no need to test according to standard.

## 2. General Test Information

### 2.1. Description of EUT

|                            |                                                                                                                                                                              |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EUT Name                   | : Smart LED/DEL BR30                                                                                                                                                         |
| FCC Model No.              | : 50035, 50035-A                                                                                                                                                             |
| IC Model No.               | : 50035                                                                                                                                                                      |
| Difference of model number | : Above models are identical in schematic, appearance and structure, only the Model Number is different for all the models, therefore the test performed on the model 50035. |
| EUT Function Description   | : Please reference user manual of this device                                                                                                                                |
| Power Supply               | : AC 120V                                                                                                                                                                    |
| Antenna Type               | : PCB                                                                                                                                                                        |
| Max Antenna Gain(dBi)      | : -0.23                                                                                                                                                                      |

|                     |                                                                                                                                            |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Radio Technology    | : IEEE 802.11b/g/n                                                                                                                         |
| Operation frequency | : IEEE 802.11b: 2412MHz to 2462MHz<br>IEEE 802.11g: 2412MHz to 2462MHz<br>IEEE 802.11n HT20: 2412MHz to 2462MHz                            |
| Modulation          | : IEEE 802.11b: DSSS (CCK, DQPSK, DBPSK)<br>IEEE 802.11g: OFDM (64QAM, 16QAM, QPSK, BPSK)<br>IEEE 802.11n: OFDM (64QAM, 16QAM, QPSK, BPSK) |

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

Note: The above EUT information is declared by manufacturer and for more detailed features description please refer to the manufacturer's specifications or User's Manual. The above Antenna information is declared by manufacturer and for more detailed features description please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

“☑” means to be chosen or applicable; “☐” means don't to be chosen or not applicable; This note applies to entire report.

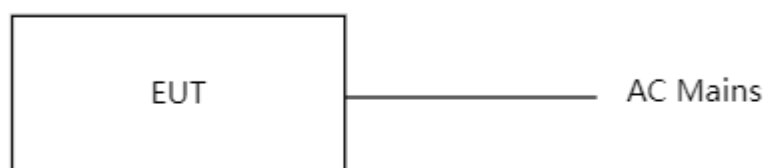
### 2.2. Accessories of EUT

| Accessories | Manufacturer | Model number | Description |
|-------------|--------------|--------------|-------------|
| /           | /            | /            | /           |

### 2.3. Assistant equipment used for test

| Assistant equipment | Manufacturer      | Model number          | EMC Compliance |
|---------------------|-------------------|-----------------------|----------------|
| Laptops             | DELL              | i7-1255U MX550        | N/A            |
| RF cable            | Zhongke Junchuang | JCT26S-SMAJ-SMAJ-0.6M | N/A            |

### 2.4. Block diagram of EUT configuration for test



### 2.5. Decision of final test mode

According pre-test, the worst test modes were reported as below:

Test software: Wifi Test Tool v1.7.4.exe

The test software was used to control EUT work in Continuous Tx mode and select test channel, wireless mode as below table.

The pathloss of external cable: 0.5dB (According to the manufacturer's claims)

| Tested mode, Tx Power Setting, Data rate, Channel, and Frequency                                                                    |                  |                                   |              |                    |
|-------------------------------------------------------------------------------------------------------------------------------------|------------------|-----------------------------------|--------------|--------------------|
| Tested mode                                                                                                                         | Tx Power Setting | Data rate<br>(Mbps)<br>(see Note) | Test Channel | Frequency<br>(MHz) |
|                                                                                                                                     | ANT1             |                                   |              |                    |
| IEEE 802.11b                                                                                                                        | 70               | 1                                 | LCH: CH1     | 2412               |
|                                                                                                                                     | 70               | 1                                 | MCH: CH6     | 2437               |
|                                                                                                                                     | 70               | 1                                 | HCH: CH11    | 2462               |
| IEEE 802.11g                                                                                                                        | 70               | 6                                 | LCH: CH1     | 2412               |
|                                                                                                                                     | 70               | 6                                 | MCH: CH6     | 2437               |
|                                                                                                                                     | 70               | 6                                 | HCH: CH11    | 2462               |
| IEEE 802.11n<br>HT20                                                                                                                | 70               | MCS 0                             | LCH: CH1     | 2412               |
|                                                                                                                                     | 70               | MCS 0                             | MCH: CH6     | 2437               |
|                                                                                                                                     | 70               | MCS 0                             | HCH: CH11    | 2462               |
| Note: According exploratory test, EUT will have maximum output power in those data rate, so those data rate were used for all test. |                  |                                   |              |                    |

## 2.6. Deviations of test standard

No deviation.

## 2.7. Test environment conditions

During the measurement the environmental conditions were within the listed ranges:

|                    |                  |
|--------------------|------------------|
| Temperature range: | +15°C to +35 °C  |
| Humidity range:    | 20% to 75%       |
| Pressure range:    | 86 kPa to106 kPa |

Note: The specific temperature and humidity information of each test item refers to the temperature and humidity record in the corresponding test data.

## 2.8. Test laboratory

Guangdong Dongdian Testing Service Co., Ltd.

Add.: Unit 2, Building 1, No. 17, Zongbu 2nd Road, Songshan Lake Park, Dongguan, Guangdong, China, 523808.

Tel.: +86-0769-38826678, <http://www.dgddt.com>, Email: [ddt@dgddt.com](mailto:ddt@dgddt.com).

CNAS Accreditation No. L6451; A2LA Accreditation Number: 3870.01

FCC Designation Number: CN1182, Test Firm Registration Number: 540522

Innovation, Science and Economic Development Canada Site Registration Number: 10288A

Conformity Assessment Body identifier: CN0048

VCCI facility registration number: C-20087, T-20088, R-20123, R-20240, G-20118

## 2.9. Measurement uncertainty

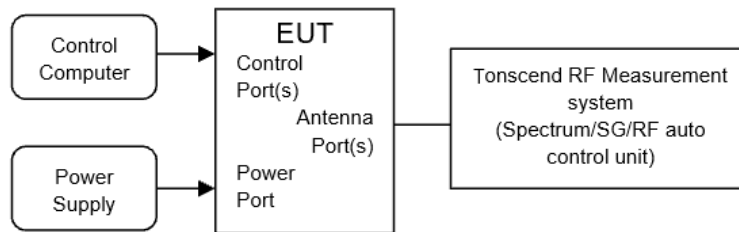
| Test Item                                                                                                                                     | Uncertainty                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|
| Bandwidth                                                                                                                                     | 1.9%                                              |
| Peak Output Power (Conducted) (Spectrum analyzer)                                                                                             | 0.98 dB                                           |
| Peak Output Power (Conducted) (Power Sensor)                                                                                                  | 1.18 dB                                           |
| Power Spectral Density (Base EIRP)                                                                                                            | 1.51 dB                                           |
| Power Spectral Density (Spectrum analyzer)                                                                                                    | 0.98 dB                                           |
| Frequencies Stability                                                                                                                         | 1.9 kHz                                           |
| Conducted spurious emissions                                                                                                                  | 1.21 dB ( $9\text{ kHz} \leq f < 7\text{ GHz}$ ); |
|                                                                                                                                               | 3.31 dB ( $7\text{ GHz} \leq f < 40\text{ GHz}$ ) |
| Uncertainty for radio frequency (RBW < 20 kHz)                                                                                                | $5.5 \times 10^{-8}$                              |
| Time                                                                                                                                          | 0.11%                                             |
| Temperature                                                                                                                                   | 0.3 °C                                            |
| Humidity                                                                                                                                      | 2 %                                               |
| Uncertainty for Radiation Emission test<br>(9 kHz – 30 MHz)                                                                                   | 3.44 dB                                           |
| Uncertainty for Radiation Emission test<br>(30 MHz - 1 GHz)                                                                                   | 4.28 dB (Antenna Polarize: V)                     |
|                                                                                                                                               | 4.14 dB (Antenna Polarize: H)                     |
| Uncertainty for Radiation Emission test<br>(1 GHz - 40 GHz)                                                                                   | 4.22 dB (1 - 6 GHz)                               |
|                                                                                                                                               | 4.52 dB (6 GHz - 18 GHz)                          |
|                                                                                                                                               | 4.58 dB (18 GHz - 40 GHz)                         |
| Uncertainty for Power line conduction emission test                                                                                           | 3.32dB (150KHz-30MHz)                             |
|                                                                                                                                               | 3.72dB (9KHz-150KHz)                              |
| Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2. |                                                   |

### 3. Equipment Used During Conductive Test

| Equipment                                     | Manufacturer | Model No.   | Serial Number | Due Date   |
|-----------------------------------------------|--------------|-------------|---------------|------------|
| ☑RF Connected Test (RF Measurement System 4#) |              |             |               |            |
| Signal &Spectrum Analyzer                     | R&S          | FSV3044     | 101173        | 2027/02/28 |
| Wideband Radio Communication Tester           | R&S          | CMW500      | 168801        | 2027/02/28 |
| MXG Vector Signal Generator                   | Agilent      | N5182A      | MY48180737    | 2026/08/28 |
| PSG Vector Signal Generator                   | Agilent      | E8267D      | US49060192    | 2026/08/10 |
| RF Control Unit                               | Tonscend     | JS0806-2    | 21I8060485    | 2027/02/28 |
| TEMP&HUMI Programmable Chamber                | ZHIXIANG     | ZXGDJS-150L | ZX170110-A    | 2026/08/12 |
| Test Software                                 | Tonscend     | JS1120-3    | V3.6.21       | N/A        |

## 4. 6dB Bandwidth

### 4.1. Block diagram of test setup



### 4.2. Limits

For direct sequence systems, the minimum 6 dB bandwidth shall be at least 500 kHz

### 4.3. Test procedure

- (1) The test according to ANSI C63.10 clause 11.8.
- (2) Connect EUT's antenna output to spectrum analyzer by RF cable, the path loss was compensated to the results
- (3) Set the EUT as maximum power setting and enable the EUT transmit continuously
- (4) Use the following spectrum analyzer settings for 6 dB Bandwidth:

|                |                               |
|----------------|-------------------------------|
| RBW:           | 1% to 5% of the OBW           |
| VBW:           | approximately three times RBW |
| Detector Mode: | peak                          |
| Sweep time:    | auto                          |
| Trace mode     | max hold                      |

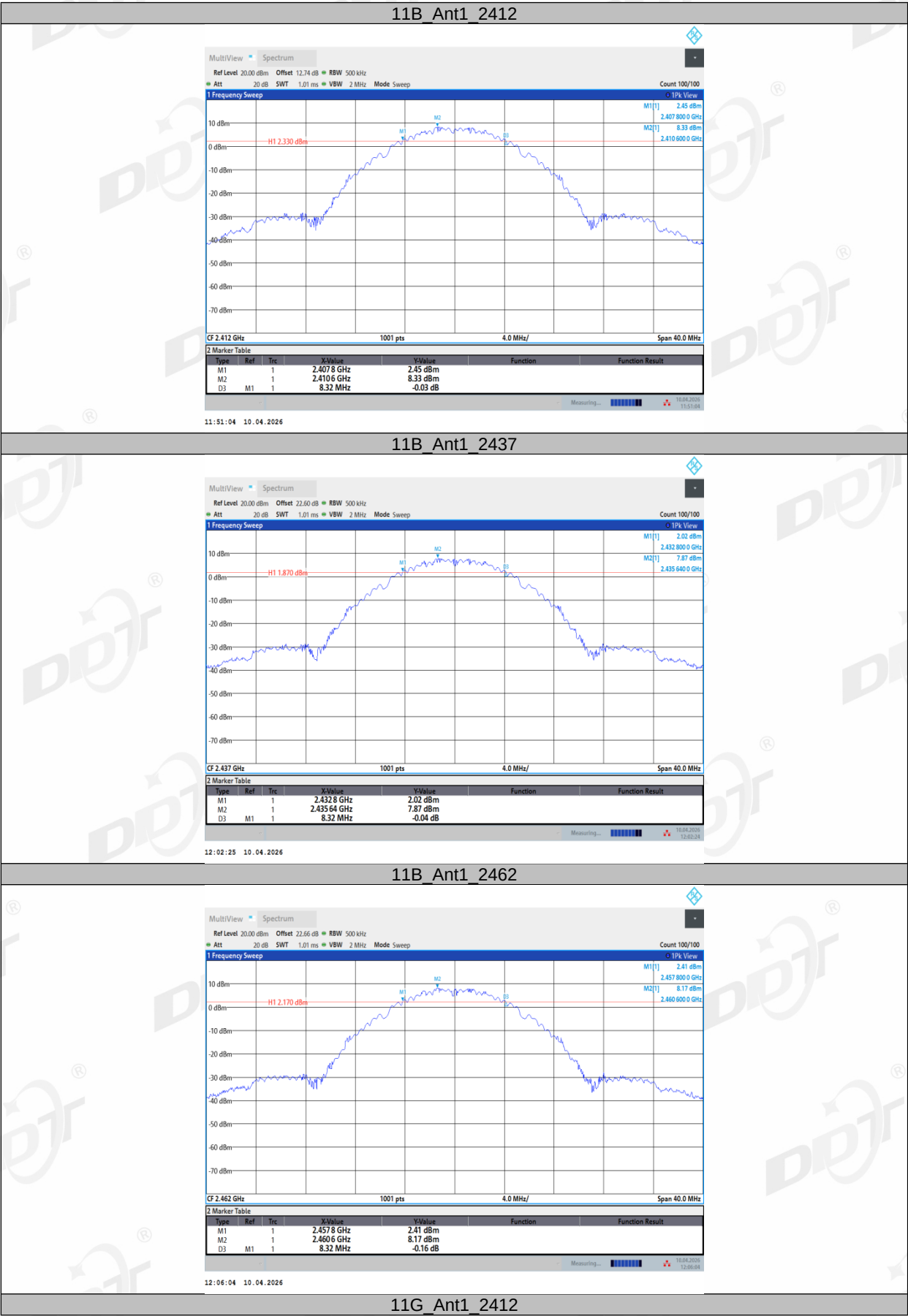
Allow the trace to stabilize, measure the 6 dB bandwidth of signal, and record the results in the report

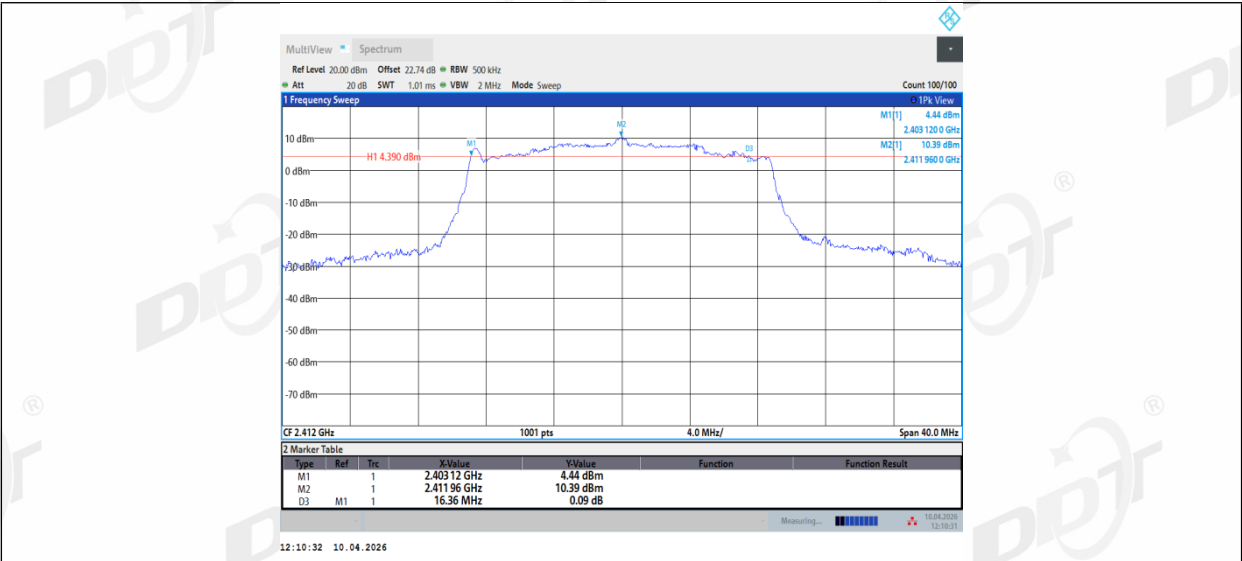
4.4. Test result

|                    |               |                |                          |
|--------------------|---------------|----------------|--------------------------|
| Test Engineer:     | Huang Yanwen  | Test Site:     | RF Measurement system 4# |
| Ambient Condition: | 25.3℃,46.1%RH | Test Date:     | 2026.04.10-2026.04.10    |
| Test Power Supply: | AC 120V       | Sample Number: | S26031809-004            |

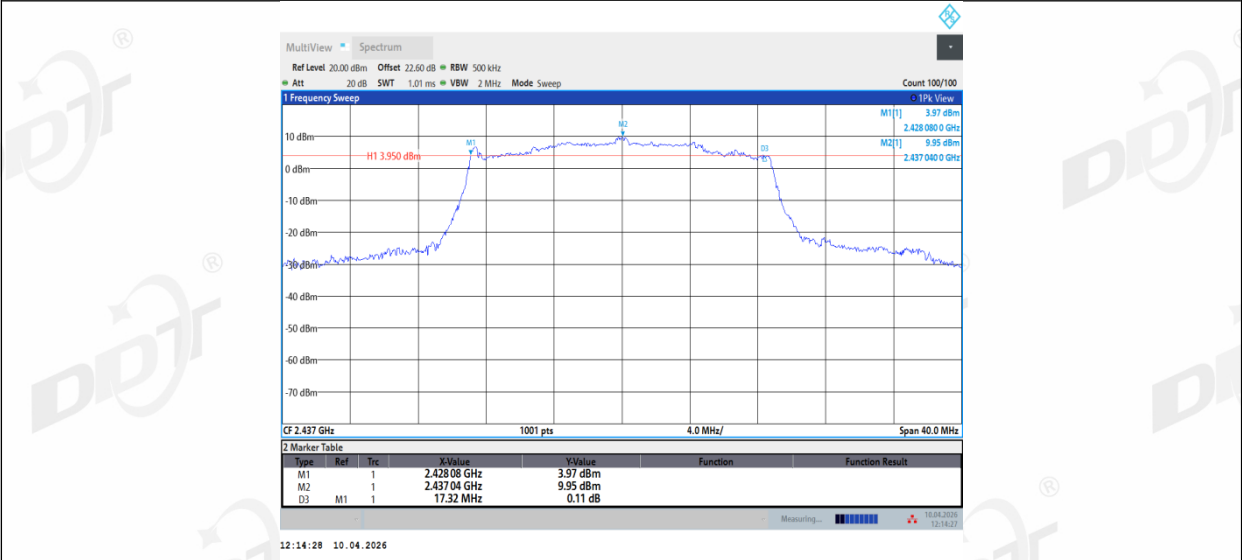
| Test Mode | Antenna | Frequency [MHz] | DTS BW [MHz] | FL [MHz] | FH [MHz] | Limit [MHz] | Verdict |
|-----------|---------|-----------------|--------------|----------|----------|-------------|---------|
| 11B       | Ant1    | 2412            | 8.32         | 2407.80  | 2416.12  | 0.5         | PASS    |
|           |         | 2437            | 8.32         | 2432.80  | 2441.12  | 0.5         | PASS    |
|           |         | 2462            | 8.32         | 2457.80  | 2466.12  | 0.5         | PASS    |
| 11G       | Ant1    | 2412            | 16.36        | 2403.12  | 2419.48  | 0.5         | PASS    |
|           |         | 2437            | 17.32        | 2428.08  | 2445.40  | 0.5         | PASS    |
|           |         | 2462            | 16.40        | 2453.08  | 2469.48  | 0.5         | PASS    |
| 11N20SISO | Ant1    | 2412            | 15.32        | 2404.16  | 2419.48  | 0.5         | PASS    |
|           |         | 2437            | 15.40        | 2429.16  | 2444.56  | 0.5         | PASS    |
|           |         | 2462            | 15.24        | 2454.16  | 2469.40  | 0.5         | PASS    |

4.5. Test graphs

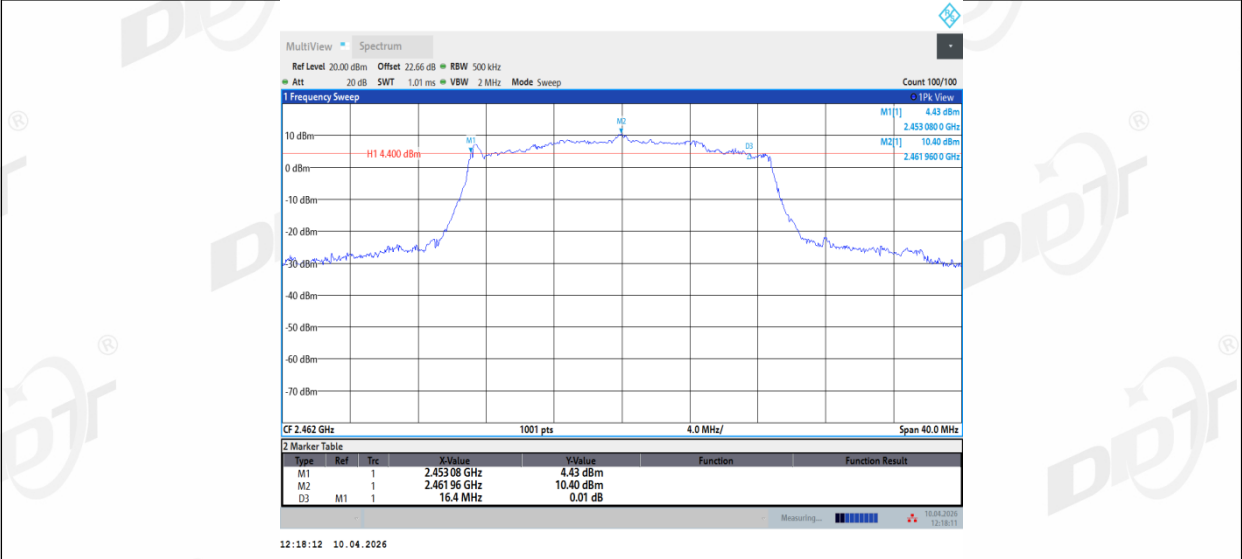




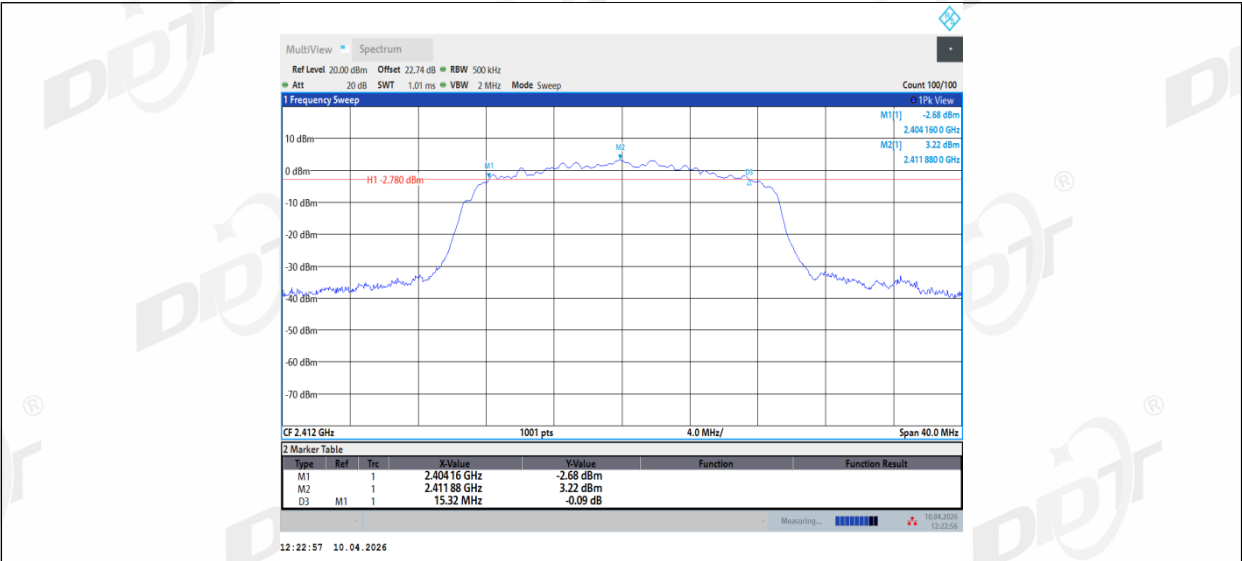
11G\_Ant1\_2437



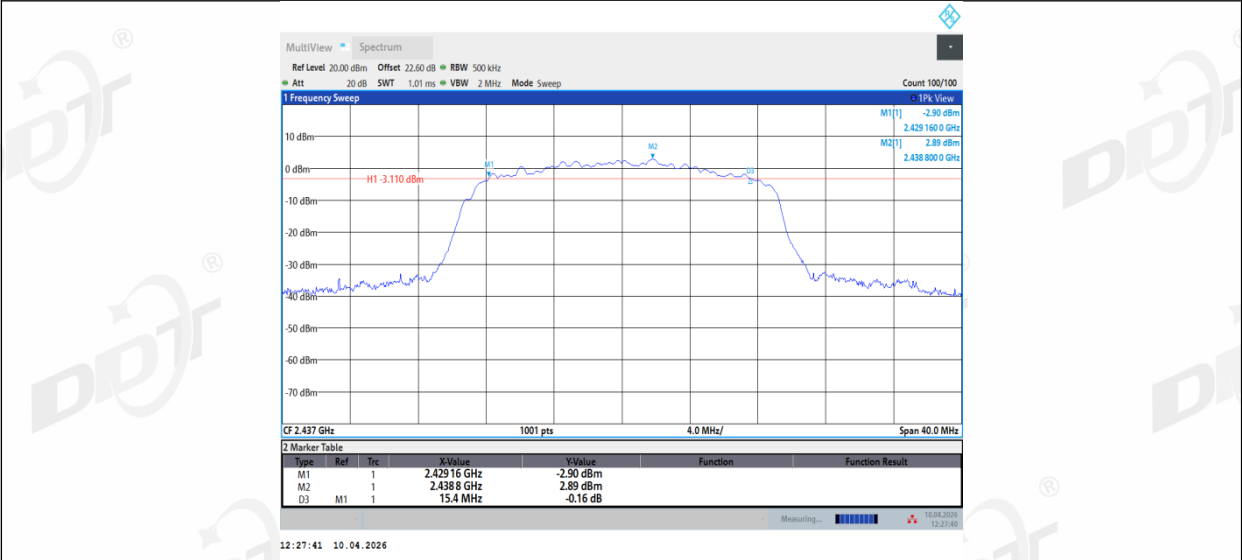
11G\_Ant1\_2462



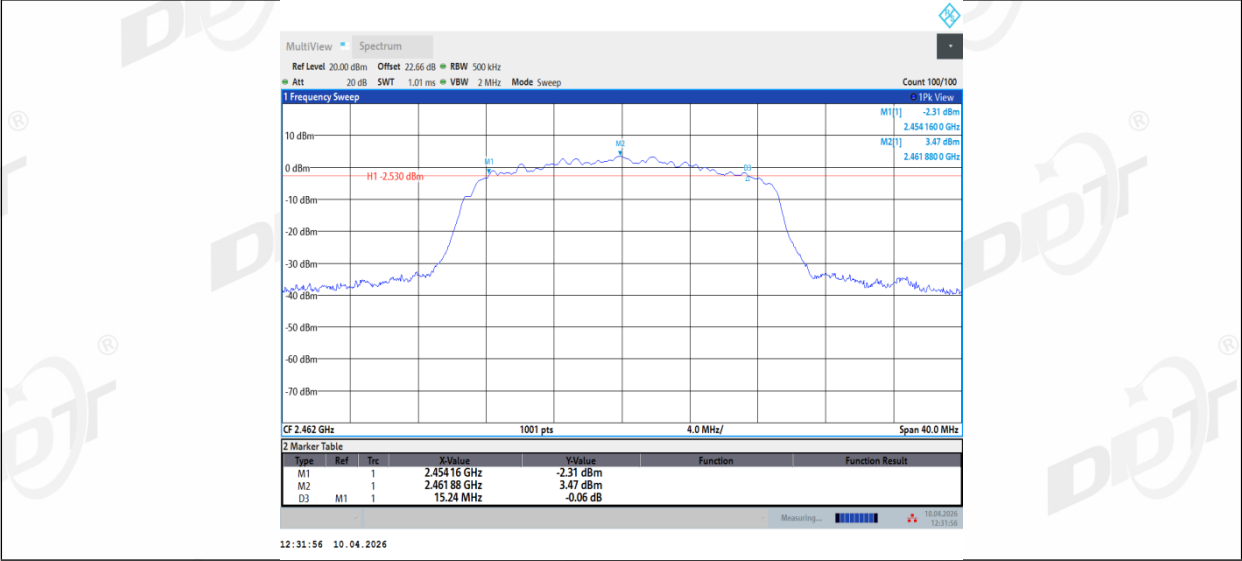
11N20SISO\_Ant1\_2412



11N20SISO\_Ant1\_2437

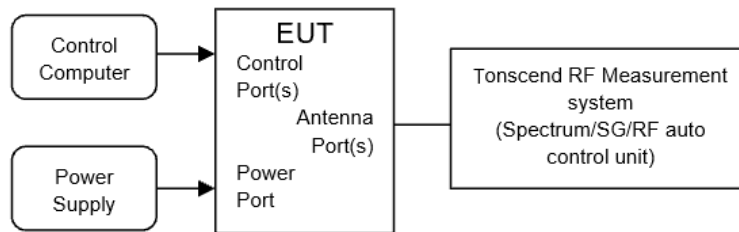


11N20SISO\_Ant1\_2462



## 5. 99% Bandwidth

### 5.1. Block diagram of test setup



### 5.2. Limits

Just for Report.

### 5.3. Test procedure

- (1) The test according to ANSI C63.10 clause 6.9.3.
- (2) Connect EUT's antenna output to spectrum analyzer by RF cable, the path loss was compensated to the results
- (3) Set the EUT as maximum power setting and enable the EUT transmit continuously
- (4) Use the following spectrum analyzer settings for the 99% Bandwidth:

|                |                                         |
|----------------|-----------------------------------------|
| RBW:           | 1% to 5% of the OBW                     |
| VBW:           | approximately three times RBW           |
| Span:          | between 1.5 times and 5.0 times the OBW |
| Detector Mode: | peak                                    |
| Sweep time:    | auto                                    |
| Trace mode     | max hold                                |

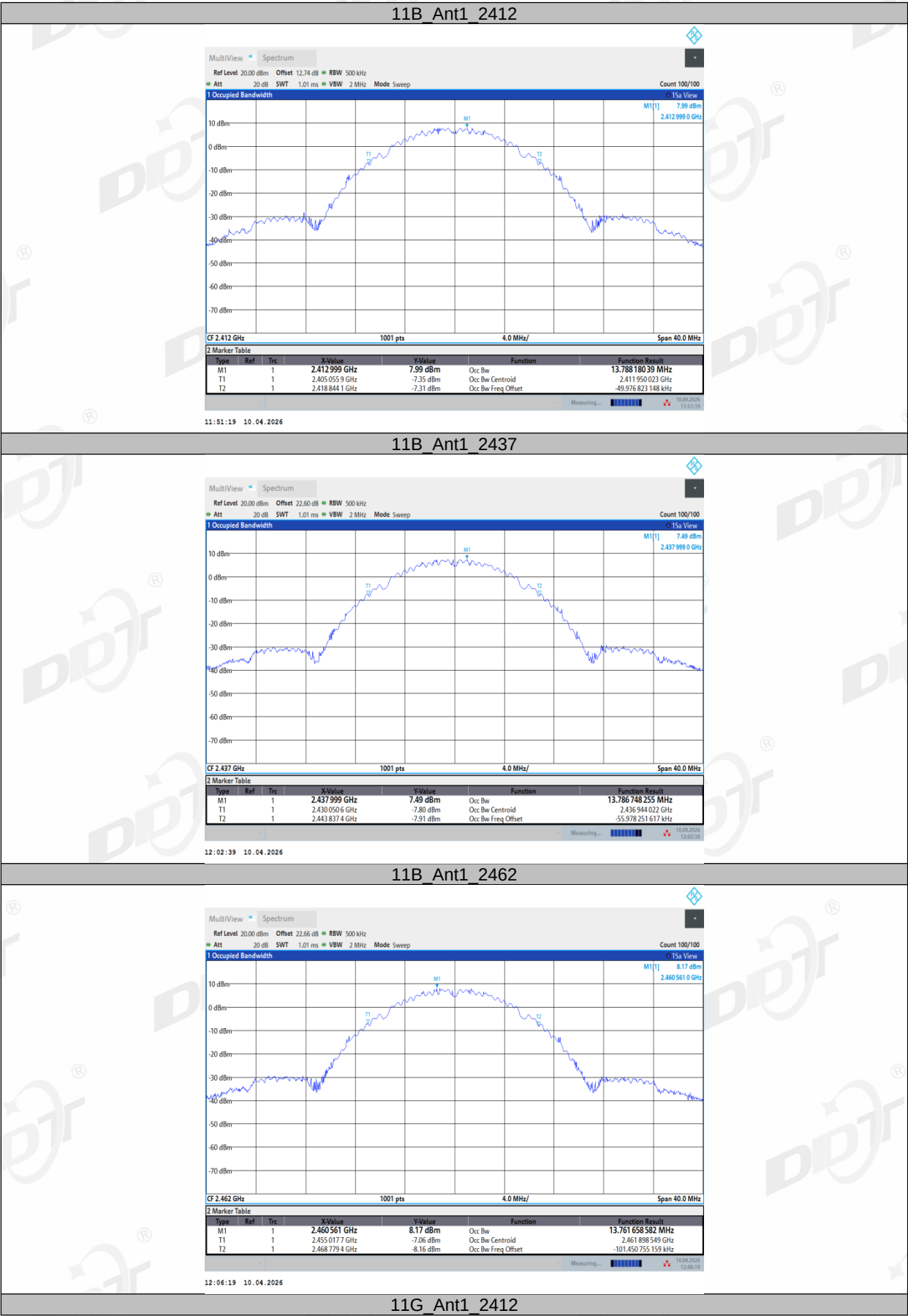
Allow the trace to stabilize, measure the 99% bandwidth of signal, and record the results in the report.

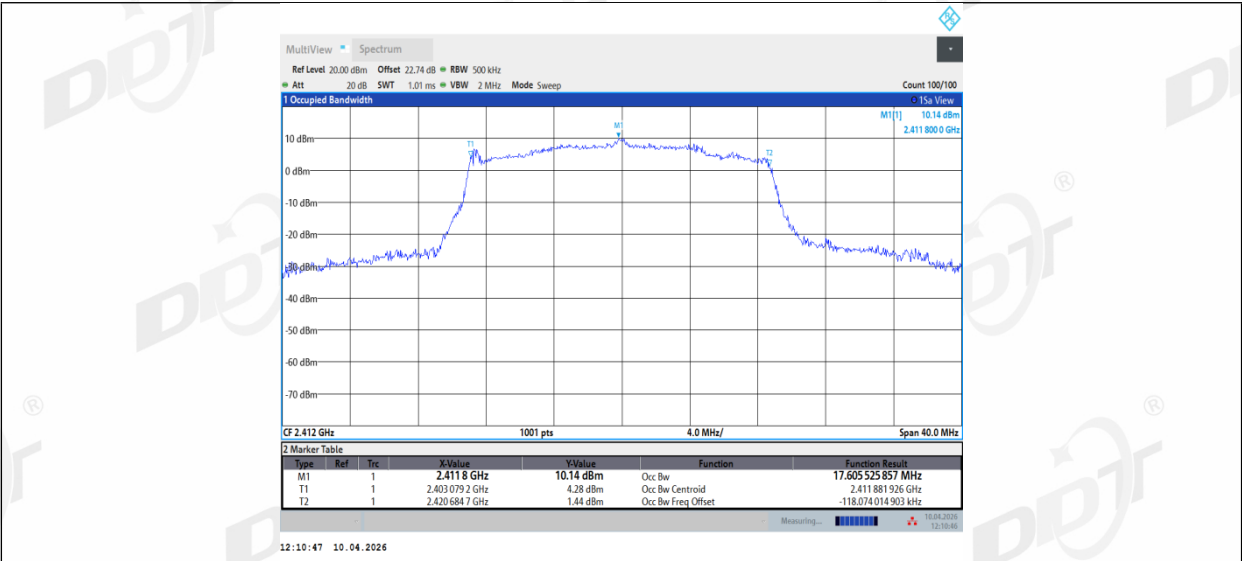
5.4. Test result

|                    |               |                |                          |
|--------------------|---------------|----------------|--------------------------|
| Test Engineer:     | Huang Yanwen  | Test Site:     | RF Measurement system 4# |
| Ambient Condition: | 25.3℃,46.1%RH | Test Date:     | 2026.04.10-2026.04.10    |
| Test Power Supply: | AC 120V       | Sample Number: | S26031809-004            |

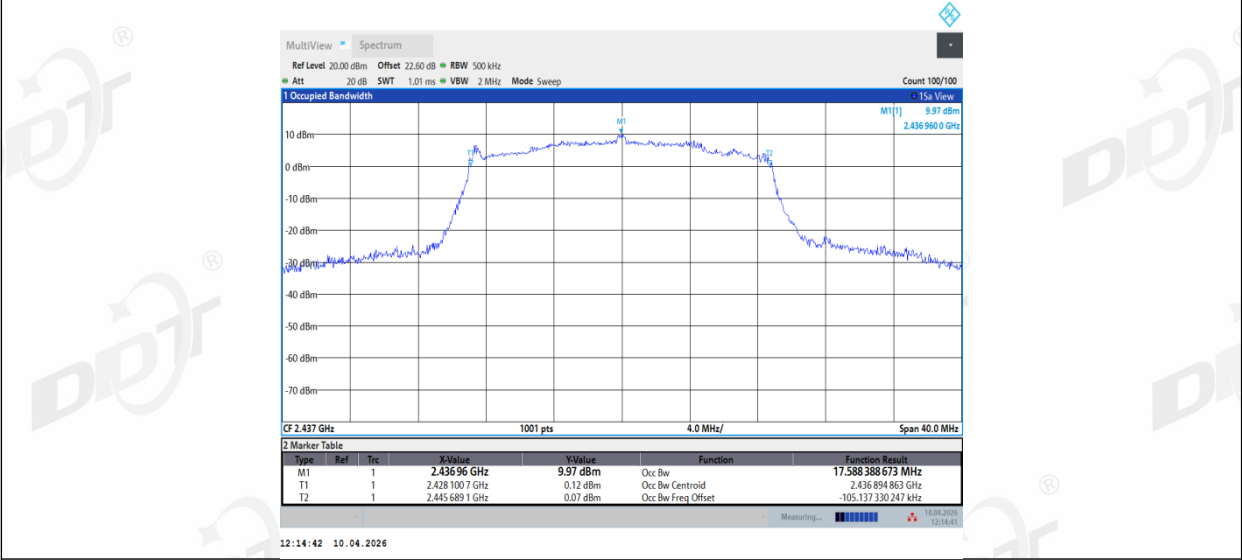
| TestMode   | Antenna | Channel Frequency[MHz] | OCB [MHz] | FL[MHz]   | FH[MHz]   | Limit[MHz] | Verdict |
|------------|---------|------------------------|-----------|-----------|-----------|------------|---------|
| 11B        | Ant1    | 2412                   | 13.788    | 2405.0559 | 2418.8441 | ---        | ---     |
|            |         | 2437                   | 13.787    | 2430.0506 | 2443.8374 | ---        | ---     |
|            |         | 2462                   | 13.762    | 2455.0177 | 2468.7794 | ---        | ---     |
| 11G        | Ant1    | 2412                   | 17.606    | 2403.0792 | 2420.6847 | ---        | ---     |
|            |         | 2437                   | 17.588    | 2428.1007 | 2445.6891 | ---        | ---     |
|            |         | 2462                   | 17.586    | 2453.1028 | 2470.6888 | ---        | ---     |
| 11N20SIS O | Ant1    | 2412                   | 17.603    | 2403.2335 | 2420.8364 | ---        | ---     |
|            |         | 2437                   | 17.619    | 2428.2229 | 2445.8416 | ---        | ---     |
|            |         | 2462                   | 17.598    | 2453.2175 | 2470.8153 | ---        | ---     |

5.5. Test graphs

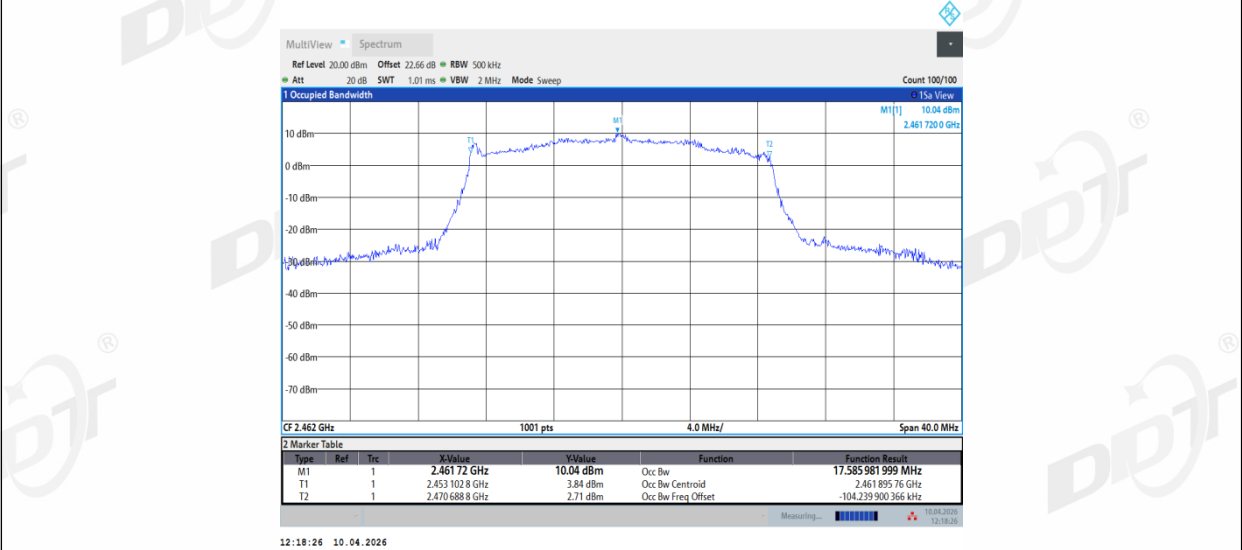




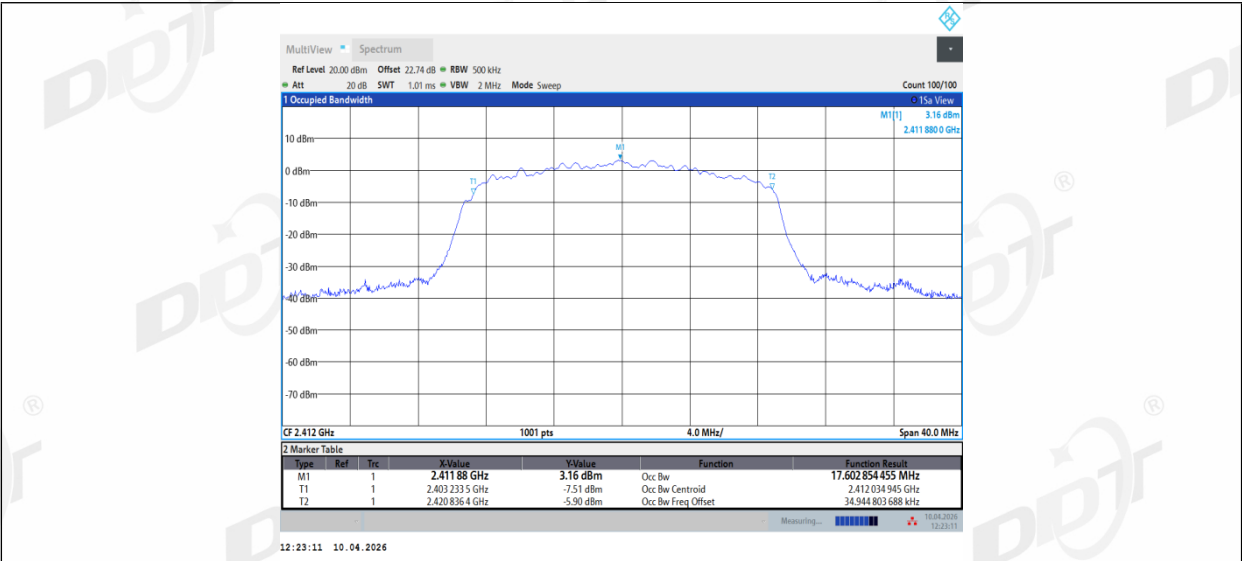
11G\_Ant1\_2437



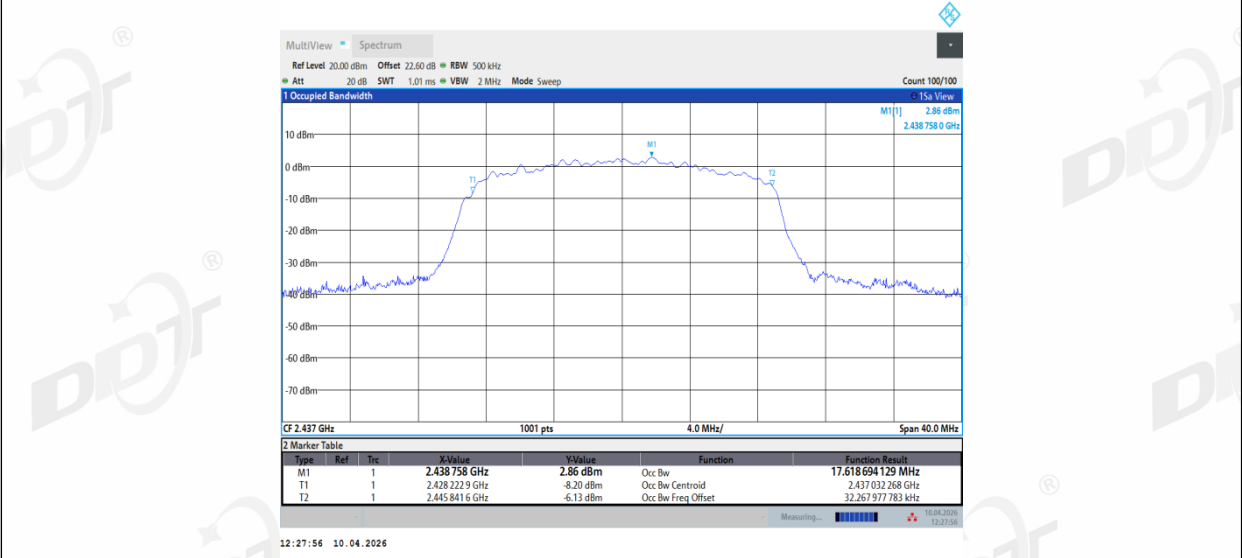
11G\_Ant1\_2462



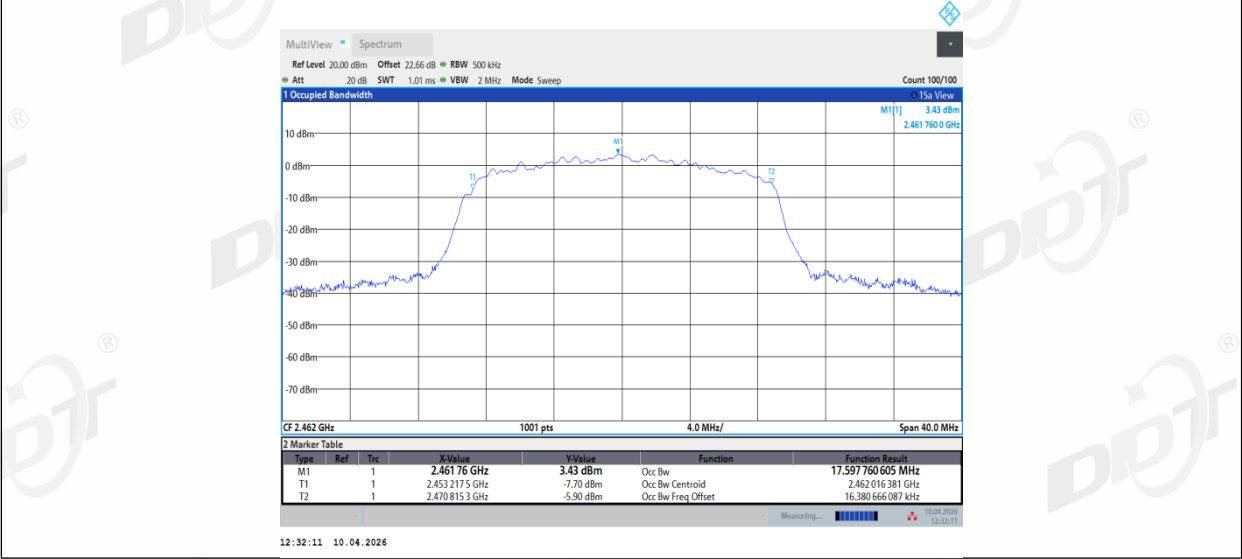
11N20SISO\_Ant1\_2412



11N20SISO\_Ant1\_2437

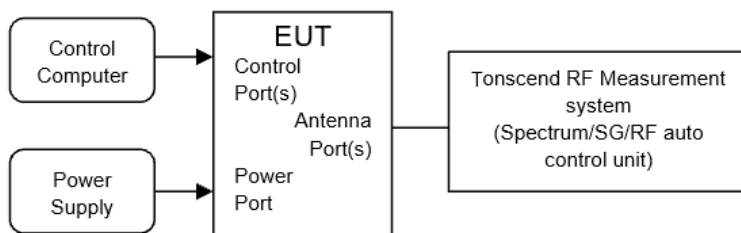


11N20SISO\_Ant1\_2462



## 6. Conducted Output Power

### 6.1. Block diagram of test setup



### 6.2. Limits

For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

### 6.3. Test procedure

- (1) The test according to ANSI C63.10 clause 11.9.2.3.
- (2) Connect EUT's antenna output to RF power meter by RF cable, the path loss was compensated to the results.
- (3) Set the EUT as maximum power setting and enable the EUT transmit continuously, If the transmitter does not transmit continuously, measure the duty cycle, D, of the transmitter output signal.
- (4) Measure the average power of the transmitter. This measurement is an average over both the ON and OFF periods of the transmitter.
- (5) Adjust the measurement in dBm by adding  $[10 \log (1 / D)]$ , where D is the duty cycle.
- (6) Record the RF average power of each antenna port.

6.4. Test result average

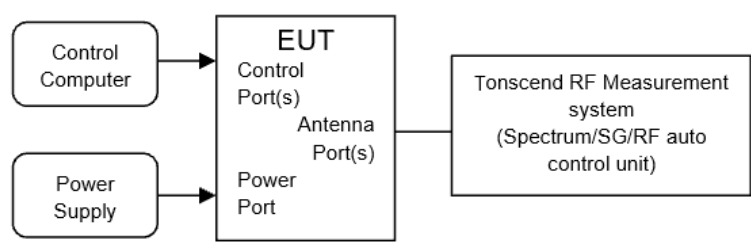
|                    |               |                |                          |
|--------------------|---------------|----------------|--------------------------|
| Test Engineer:     | Huang Yanwen  | Test Site:     | RF Measurement system 4# |
| Ambient Condition: | 25.3℃,46.1%RH | Test Date:     | 2026.04.10-2026.04.10    |
| Test Power Supply: | AC 120V       | Sample Number: | S26031809-004            |

| Test Mode | Antenna | Frequency [MHz] | Average power [dBm] | Duty Cycle [%] | DC Factor [dB] | Result [dBm] | Limit [dBm] | EIRP [dBm] | EIRP Limit [dBm] | Verdict |
|-----------|---------|-----------------|---------------------|----------------|----------------|--------------|-------------|------------|------------------|---------|
| 11B       | Ant1    | 2412            | 15.53               | 98.94          | 0.05           | 15.58        | ≤30.00      | 15.35      | ≤36.00           | PASS    |
|           |         | 2437            | 15.21               | 98.94          | 0.05           | 15.26        | ≤30.00      | 15.03      | ≤36.00           | PASS    |
|           |         | 2462            | 15.36               | 98.94          | 0.05           | 15.41        | ≤30.00      | 15.18      | ≤36.00           | PASS    |
| 11G       | Ant1    | 2412            | 14.10               | 98.92          | 0.05           | 14.15        | ≤30.00      | 13.92      | ≤36.00           | PASS    |
|           |         | 2437            | 13.88               | 98.92          | 0.05           | 13.93        | ≤30.00      | 13.7       | ≤36.00           | PASS    |
|           |         | 2462            | 14.05               | 98.92          | 0.05           | 14.1         | ≤30.00      | 13.87      | ≤36.00           | PASS    |
| 11N20SISO | Ant1    | 2412            | 8.81                | 94.12          | 0.26           | 9.07         | ≤30.00      | 8.84       | ≤36.00           | PASS    |
|           |         | 2437            | 8.55                | 94.12          | 0.26           | 8.81         | ≤30.00      | 8.58       | ≤36.00           | PASS    |
|           |         | 2462            | 8.79                | 94.12          | 0.26           | 9.05         | ≤30.00      | 8.82       | ≤36.00           | PASS    |

Note: EIRP (dBm)=Conducted Output Power (dBm)+ Antenna Gain (dBi)

7. Power Spectral Density

7.1. Block diagram of test setup



7.2. Limits

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.

7.3. Test procedure

- (1) The test according to ANSI C63.10 clause 11.10.5.

(2) Connect EUT’s antenna output to spectrum analyzer by RF cable, the path loss was compensated to the results.

(3) Set the EUT as maximum power setting and enable the EUT transmit continuously.

(4) Use the following spectrum analyzer settings for Power Spectral Density measurement:
- |                  |                                    |
|------------------|------------------------------------|
| Center frequency | DTS Channel center frequency       |
| RBW:             | 3 kHz ≤ RBW ≤ 100 kHz              |
| VBW:             | ≥ 3RBW                             |
| Span             | 1.5 times the DTS bandwidth        |
| Detector Mode:   | RMS                                |
| Sweep time:      | auto                               |
| Trace mode       | max hold                           |
|                  | Employ trace averaging (rms)       |
| Trace            | mode over a minimum of 100 traces. |

- (5) Add [10 log (1 / D)], where D is the duty cycle measured in step a), to the measured PSD to compute the average PSD during the actual transmission time.
- If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

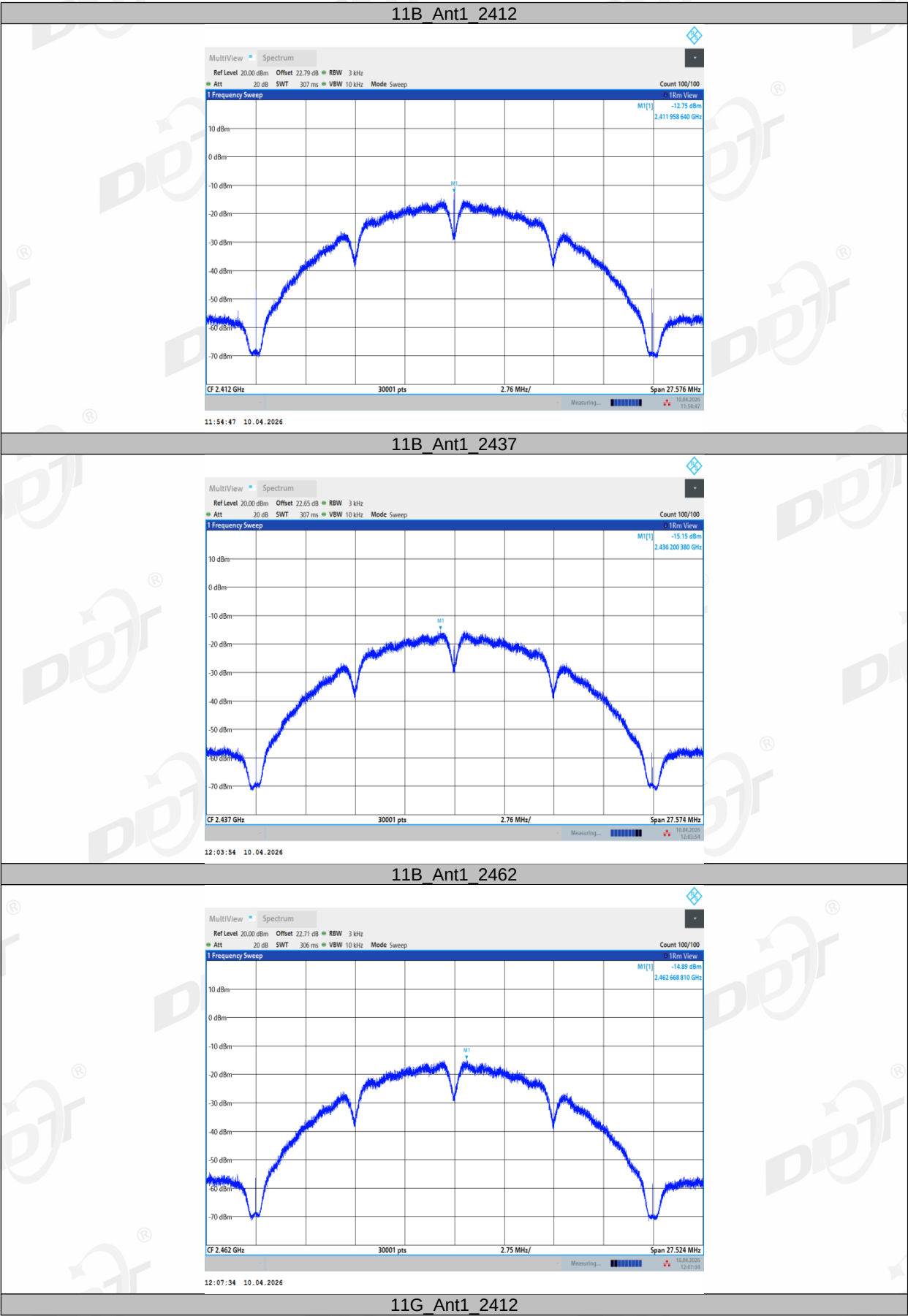
7.4. Test result

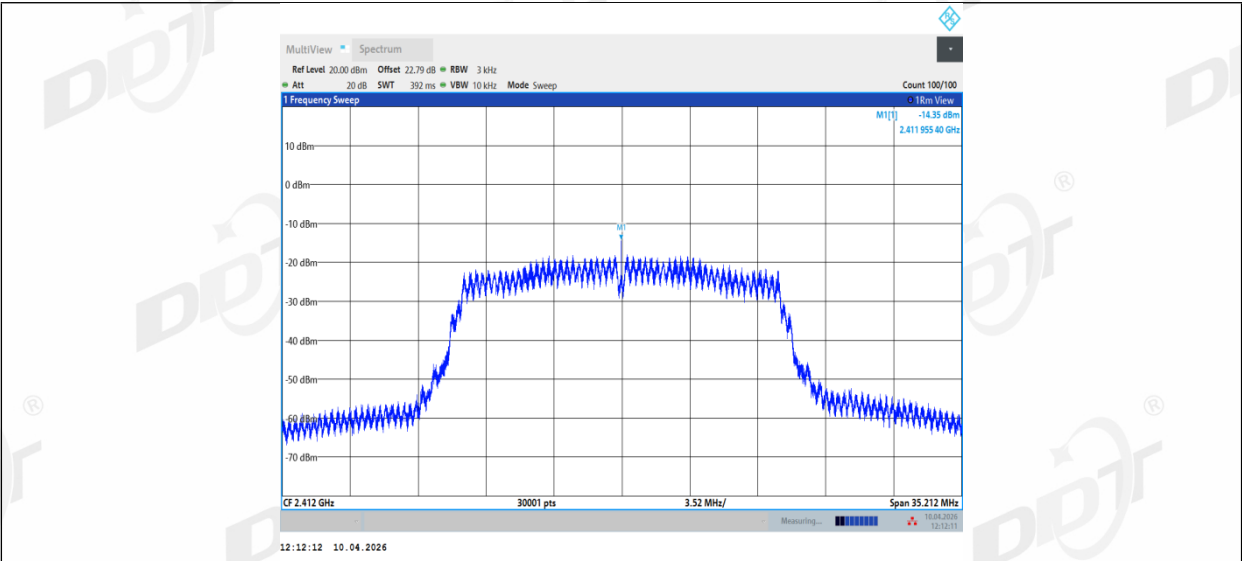
|                    |               |                |                          |
|--------------------|---------------|----------------|--------------------------|
| Test Engineer:     | Huang Yanwen  | Test Site:     | RF Measurement system 4# |
| Ambient Condition: | 25.3℃,46.1%RH | Test Date:     | 2026.04.10-2026.04.10    |
| Test Power Supply: | AC 120V       | Sample Number: | S26031809-004            |

| Test Mode | Antenna | Frequency [MHz] | Result[dBm/3-100kHz] | Limit[dBm/3kHz] | Verdict |
|-----------|---------|-----------------|----------------------|-----------------|---------|
| 11B       | Ant1    | 2412            | -12.75               | ≤8.00           | PASS    |
|           |         | 2437            | -15.15               | ≤8.00           | PASS    |
|           |         | 2462            | -14.89               | ≤8.00           | PASS    |
| 11G       | Ant1    | 2412            | -14.35               | ≤8.00           | PASS    |
|           |         | 2437            | -16.26               | ≤8.00           | PASS    |
|           |         | 2462            | -13.69               | ≤8.00           | PASS    |
| 11N20SISO | Ant1    | 2412            | -14.81               | ≤8.00           | PASS    |
|           |         | 2437            | -15.73               | ≤8.00           | PASS    |
|           |         | 2462            | -12.38               | ≤8.00           | PASS    |

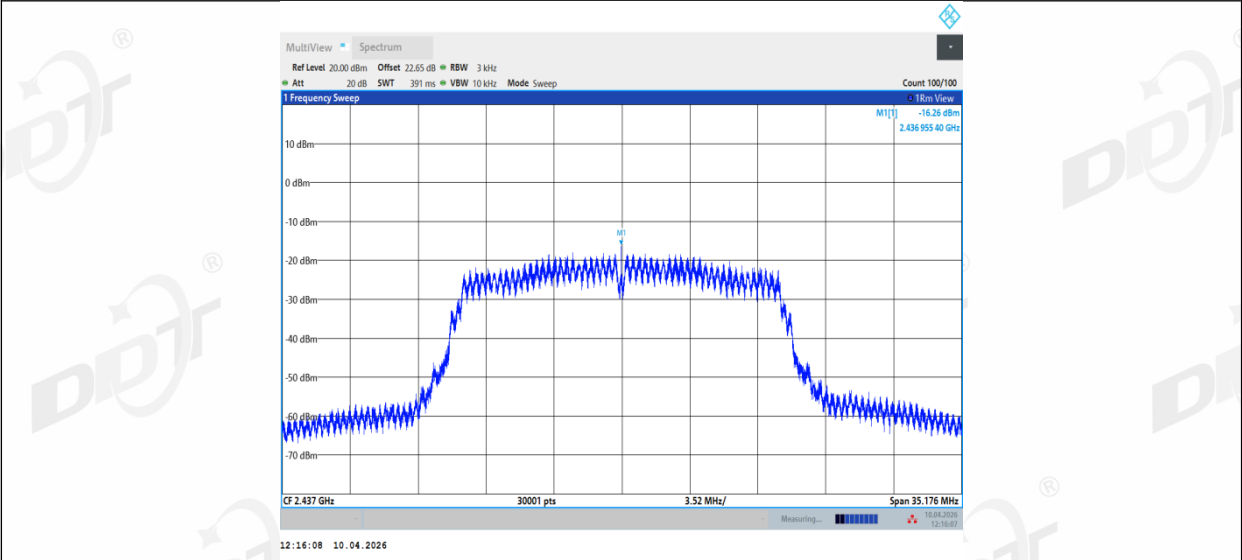
Note: The Duty Cycle Factor is compensated in the graph.

7.5. Test graphs

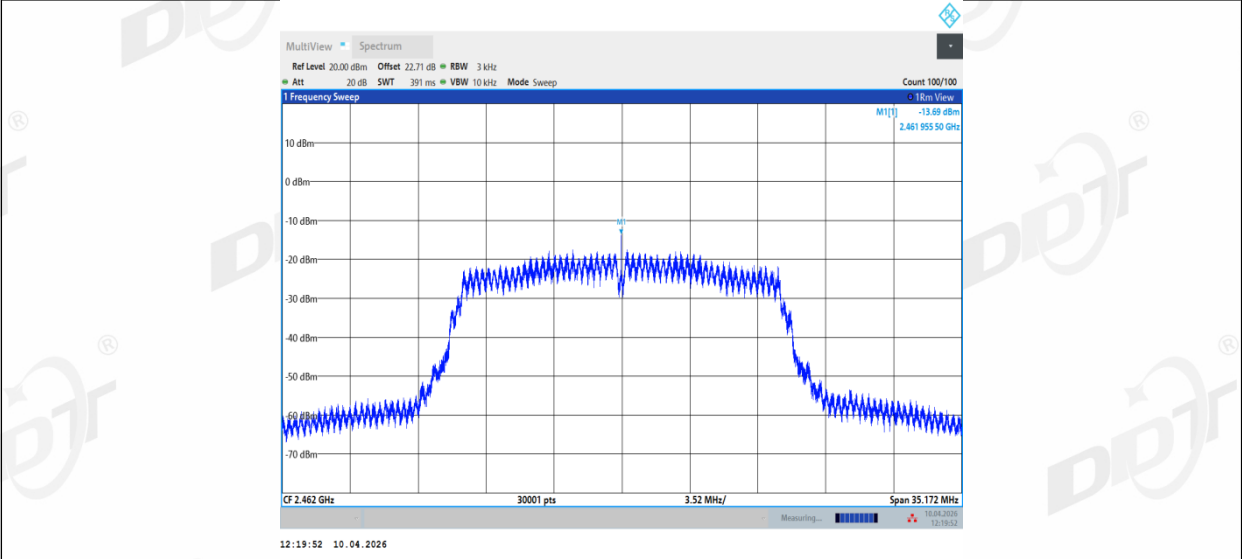




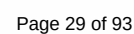
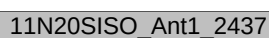
11G\_Ant1\_2437



11G\_Ant1\_2462

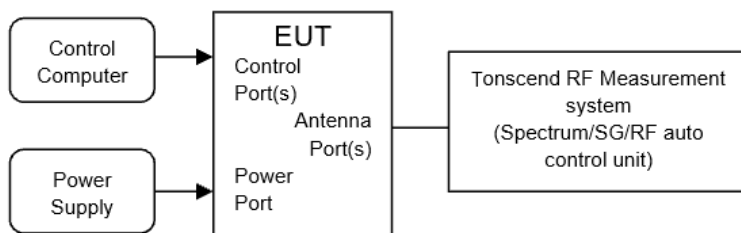


11N20SISO\_Ant1\_2412



## 8. Band Edge Compliance (Conducted Method)

### 8.1. Block diagram of test setup



### 8.2. Limits

In any 100 kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 30 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power.

### 8.3. Test procedure

(1) Connect EUT's antenna output to spectrum analyzer by RF cable.

(2) Establish a reference level by using the following procedure:

|                |                                          |
|----------------|------------------------------------------|
| RBW:           | 100 kHz                                  |
| VBW:           | 300 kHz                                  |
| Span           | Encompass frequency range to be measured |
| Detector Mode: | Peak                                     |
| Sweep time:    | auto                                     |
| Trace mode     | Max hold                                 |

(3) Allow the trace to stabilize, use the peak marker function to determine the maximum peak power level to establish the reference level.

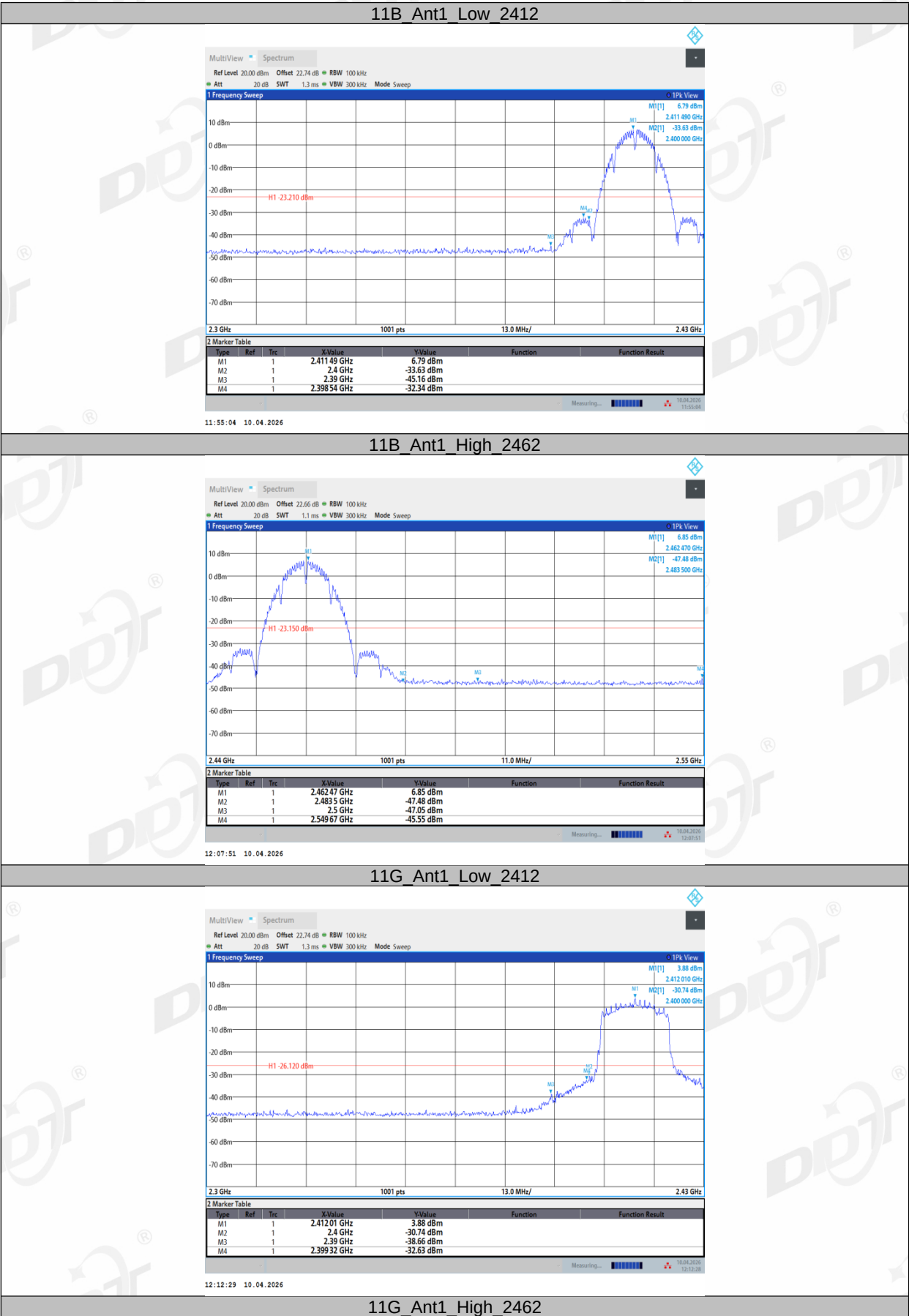
Then mark the maximum amplitude of all unwanted emissions outside of the authorized frequency band.

8.4. Test result

|                    |               |                |                          |
|--------------------|---------------|----------------|--------------------------|
| Test Engineer:     | Huang Yanwen  | Test Site:     | RF Measurement system 4# |
| Ambient Condition: | 25.3℃,46.1%RH | Test Date:     | 2026.04.10-2026.04.10    |
| Test Power Supply: | AC 120V       | Sample Number: | S26031809-004            |

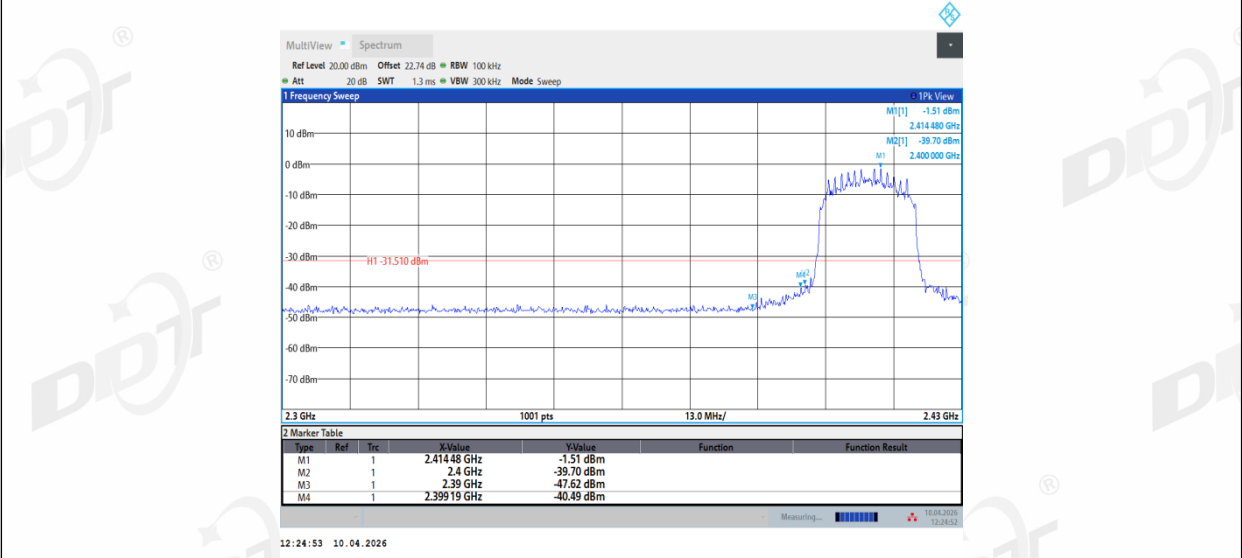
| EUT Set Mode | CH or Frequency | Result(dBm) |
|--------------|-----------------|-------------|
| 11b          | CH1             | Pass        |
|              | CH11            | Pass        |
| 11g          | CH1             | Pass        |
|              | CH11            | Pass        |
| 11n HT 20    | CH1             | Pass        |
|              | CH11            | Pass        |

8.5. Test graphs

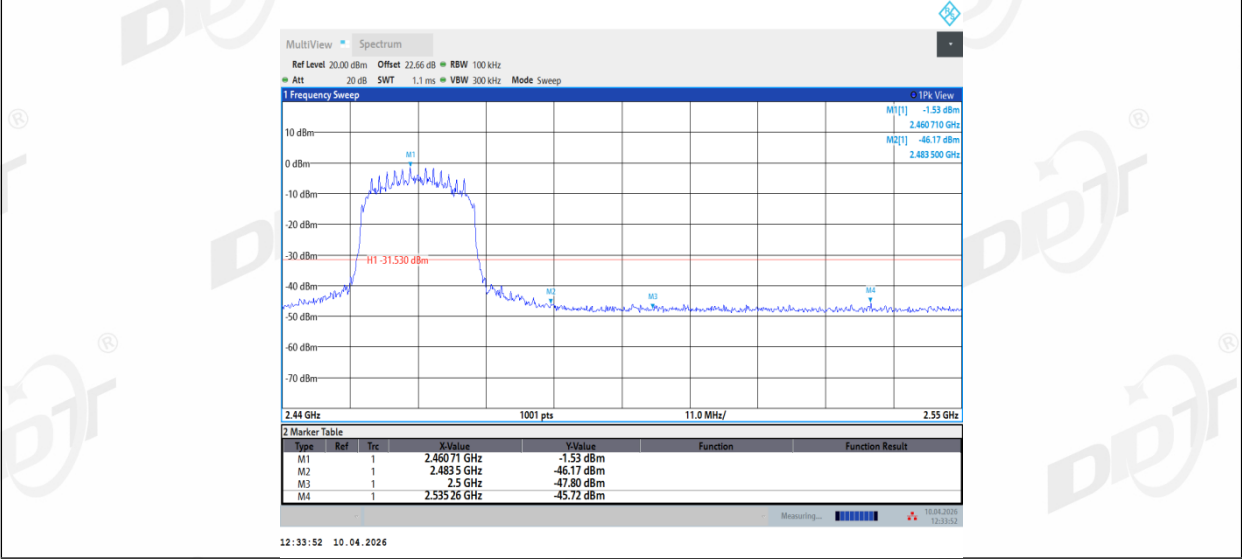




11N20SISO\_Ant1\_Low\_2412

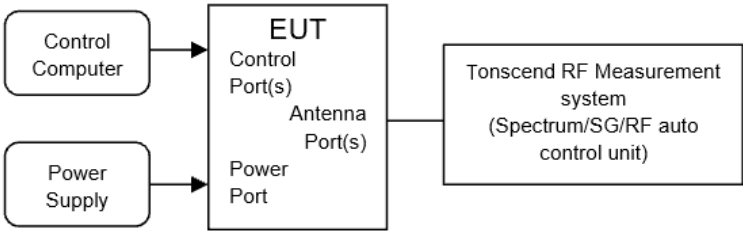


11N20SISO\_Ant1\_High\_2462



9. RF Conducted Spurious Emissions

9.1. Block diagram of test setup



9.2. Limits

In any 100 kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 30 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power.

9.3. Test procedure

- (1) Connect EUT’s antenna output to spectrum analyzer by RF cable.

(2) Establish a reference level by using the following procedure:

|                  |                                                               |
|------------------|---------------------------------------------------------------|
| Center frequency | Test frequency                                                |
| RBW:             | 100 kHz                                                       |
| VBW:             | 300 kHz                                                       |
| Span             | Wide enough to capture the peak level of the in-band emission |
| Detector Mode:   | Peak                                                          |
| Sweep time:      | auto                                                          |
| Trace mode       | Max hold                                                      |

(3) Allow the trace to stabilize, use the peak marker function to determine the maximum peak power level to establish the reference level.

(4) Set the spectrum analyzer as follows:

|                              |                                          |
|------------------------------|------------------------------------------|
| RBW:                         | 100 kHz                                  |
| VBW:                         | 300 kHz                                  |
| Span                         | Encompass frequency range to be measured |
| Number of measurement points | ≥Span/RBW                                |
| Detector Mode:               | Peak                                     |
| Sweep time:                  | auto                                     |
| Trace mode                   | Max hold                                 |

- (5) Allow the trace to stabilize, use the peak marker function to determine the maximum amplitude of all unwanted emissions outside of the authorized frequency band

#### 9.4. Test result

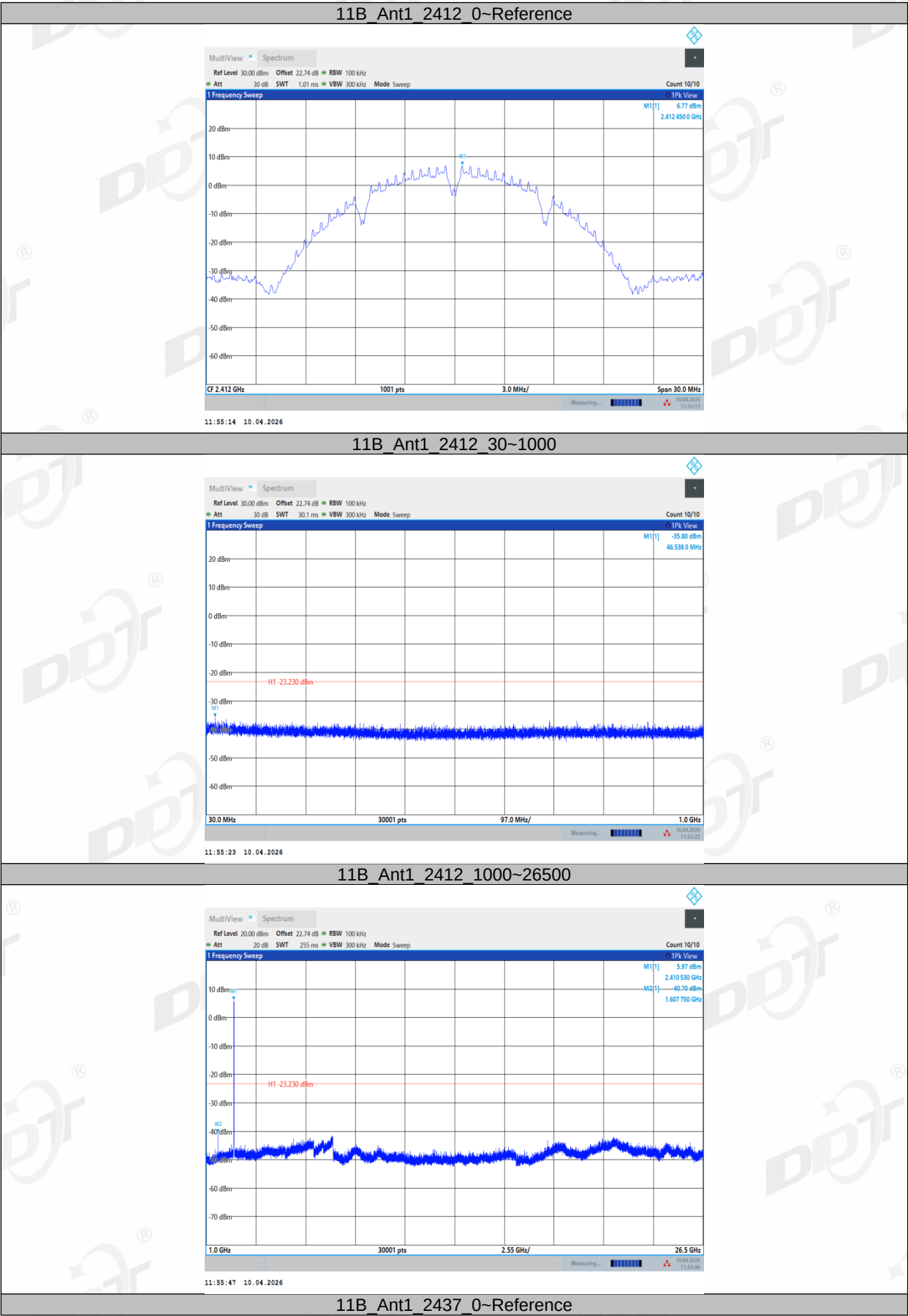
|                    |               |                |                          |
|--------------------|---------------|----------------|--------------------------|
| Test Engineer:     | Huang Yanwen  | Test Site:     | RF Measurement system 4# |
| Ambient Condition: | 25.3℃,46.1%RH | Test Date:     | 2026.04.10-2026.04.10    |
| Test Power Supply: | AC 120V       | Sample Number: | S26031809-004            |

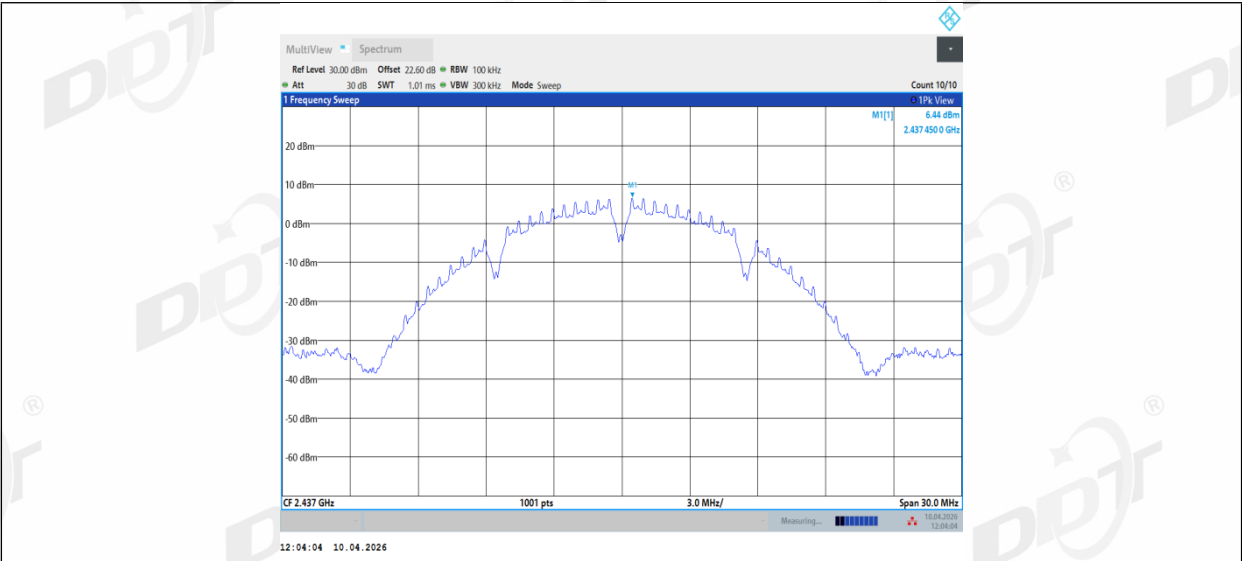
| Mode      | CH | Frequency [MHz] | Measuring Result[dBm] | Cable loss in measurement [dB] | Correct cable loss [dB] | Result [dBm] | Limit [dBm] | Verdict |
|-----------|----|-----------------|-----------------------|--------------------------------|-------------------------|--------------|-------------|---------|
| 11B       | 1  | 2412            | 6.77                  | 22.74                          | 22.74                   | 6.77         | /           | /       |
|           |    | 30~1000         | -35.80                | 22.74                          | 9.31                    | -49.23       | -13.23      | Pass    |
|           |    | 1000~26500      | -40.70                | 22.74                          | 22.70                   | -40.74       | -13.23      | Pass    |
|           | 6  | 2437            | 6.44                  | 22.60                          | 22.60                   | 6.44         | /           | /       |
|           |    | 30~1000         | -36.67                | 22.60                          | 9.31                    | -49.96       | -13.56      | Pass    |
|           |    | 1000~26500      | -41.00                | 22.60                          | 22.70                   | -40.9        | -13.56      | Pass    |
|           | 11 | 2462            | 6.91                  | 22.66                          | 22.66                   | 6.91         | /           | /       |
|           |    | 30~1000         | -36.22                | 22.66                          | 9.31                    | -49.57       | -13.09      | Pass    |
|           |    | 1000~26500      | -40.78                | 22.66                          | 22.70                   | -40.74       | -13.09      | Pass    |
| 11G       | 1  | 2412            | 4.57                  | 22.74                          | 22.74                   | 4.57         | /           | /       |
|           |    | 30~1000         | -36.01                | 22.74                          | 9.31                    | -49.44       | -15.43      | Pass    |
|           |    | 1000~26500      | -40.86                | 22.74                          | 22.70                   | -40.9        | -15.43      | Pass    |
|           | 6  | 2437            | 4.13                  | 22.60                          | 22.60                   | 4.13         | /           | /       |
|           |    | 30~1000         | -36.07                | 22.60                          | 9.31                    | -49.36       | -15.87      | Pass    |
|           |    | 1000~26500      | -40.62                | 22.60                          | 22.70                   | -40.52       | -15.87      | Pass    |
|           | 11 | 2462            | 4.61                  | 22.66                          | 22.66                   | 4.61         | /           | /       |
|           |    | 30~1000         | -36.25                | 22.66                          | 9.31                    | -49.6        | -15.39      | Pass    |
|           |    | 1000~26500      | -39.05                | 22.66                          | 22.70                   | -39.01       | -15.39      | Pass    |
| 11N20SISO | 1  | 2412            | -1.52                 | 22.74                          | 22.74                   | -1.52        | /           | /       |
|           |    | 30~1000         | -36.17                | 22.74                          | 9.31                    | -49.6        | -21.52      | Pass    |
|           |    | 1000~26500      | -40.95                | 22.74                          | 22.70                   | -40.99       | -21.52      | Pass    |
|           | 6  | 2437            | -1.79                 | 22.60                          | 22.60                   | -1.79        | /           | /       |
|           |    | 30~1000         | -36.64                | 22.60                          | 9.31                    | -49.93       | -21.79      | Pass    |
|           |    | 1000~26500      | -40.44                | 22.60                          | 22.70                   | -40.34       | -21.79      | Pass    |
|           | 11 | 2462            | -1.51                 | 22.66                          | 22.66                   | -1.51        | /           | /       |
|           |    | 30~1000         | -36.38                | 22.66                          | 9.31                    | -49.73       | -21.51      | Pass    |
|           |    | 1000~26500      | -40.94                | 22.66                          | 22.70                   | -40.9        | -21.51      | Pass    |

Note1: Result= Measuring Result - Cable loss in measurement + Correct cable loss

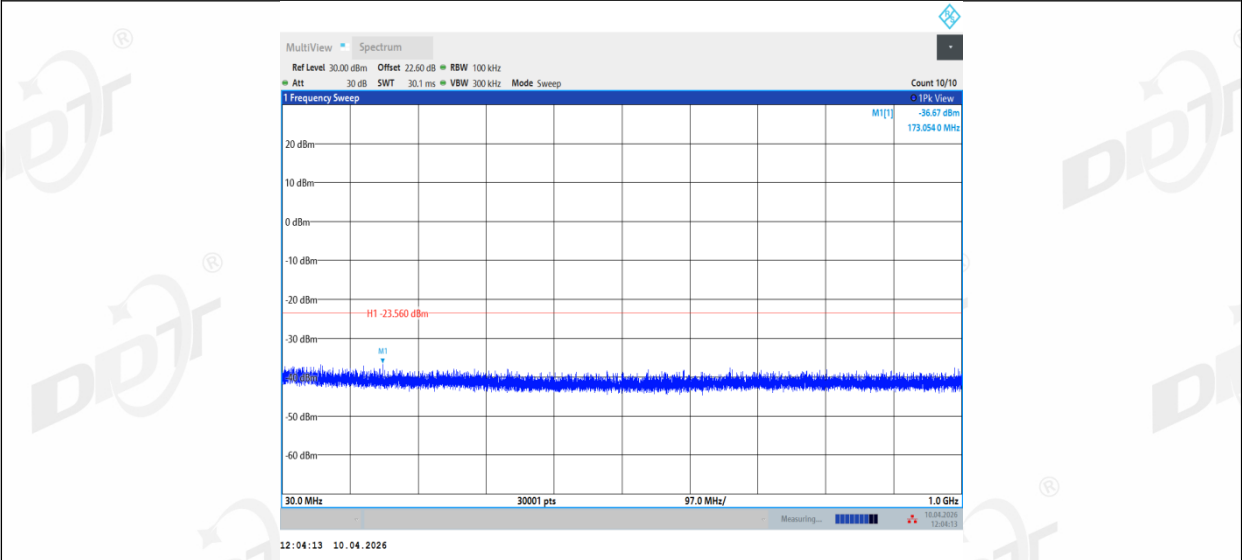
Note2: The conducted spurious emissions test has compensated for the maximum line loss measurement, and the recorded data represents the worst-case scenario.

9.5. Test graphs

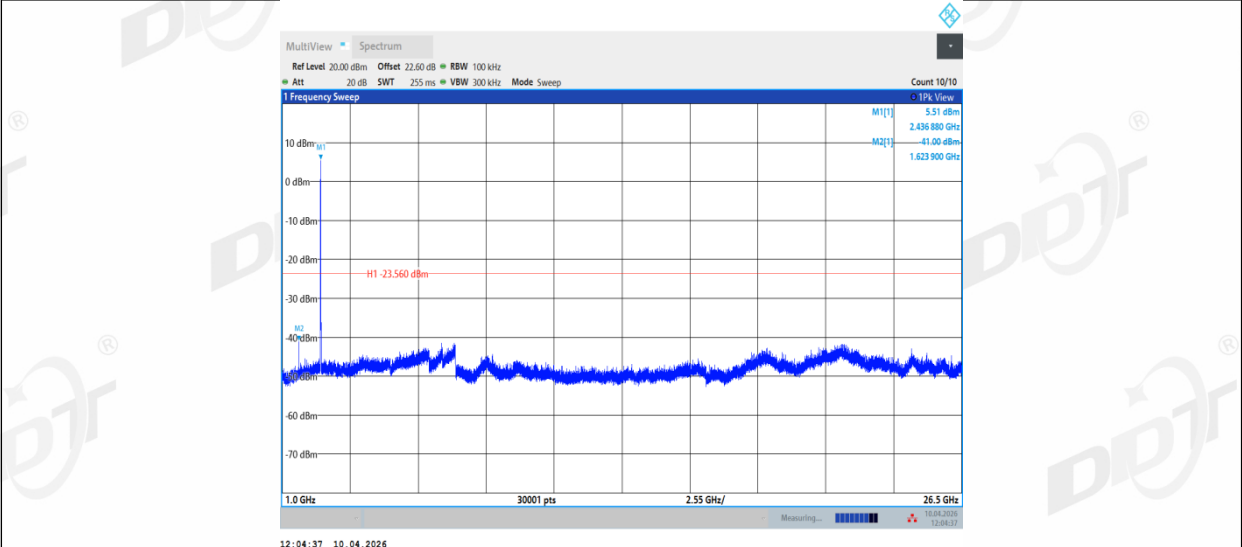




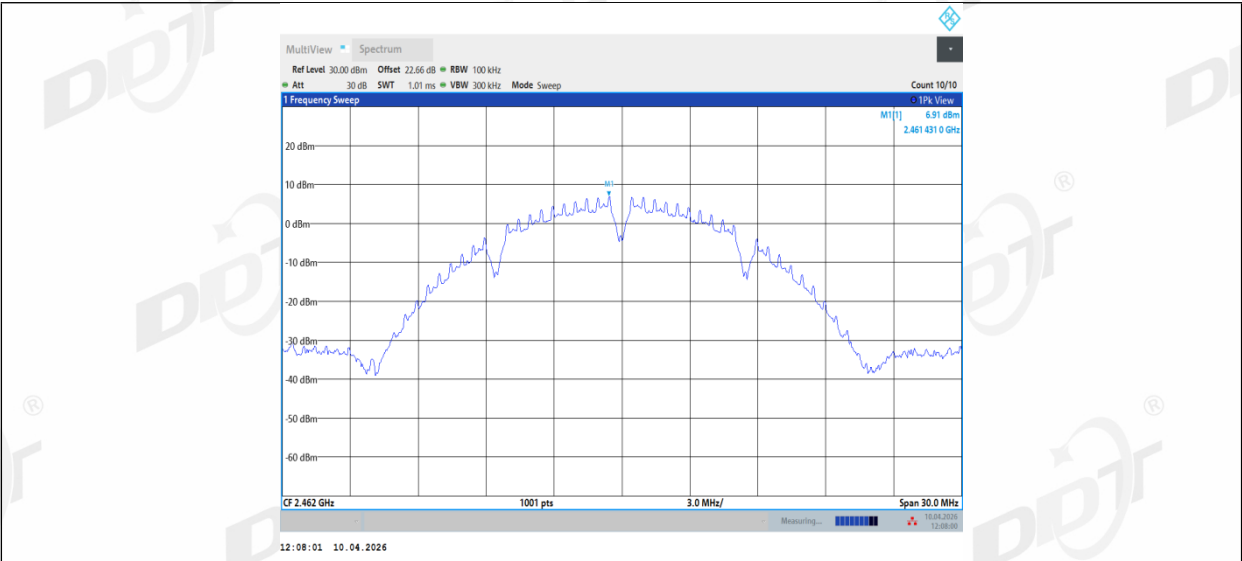
11B\_Ant1\_2437\_30~1000



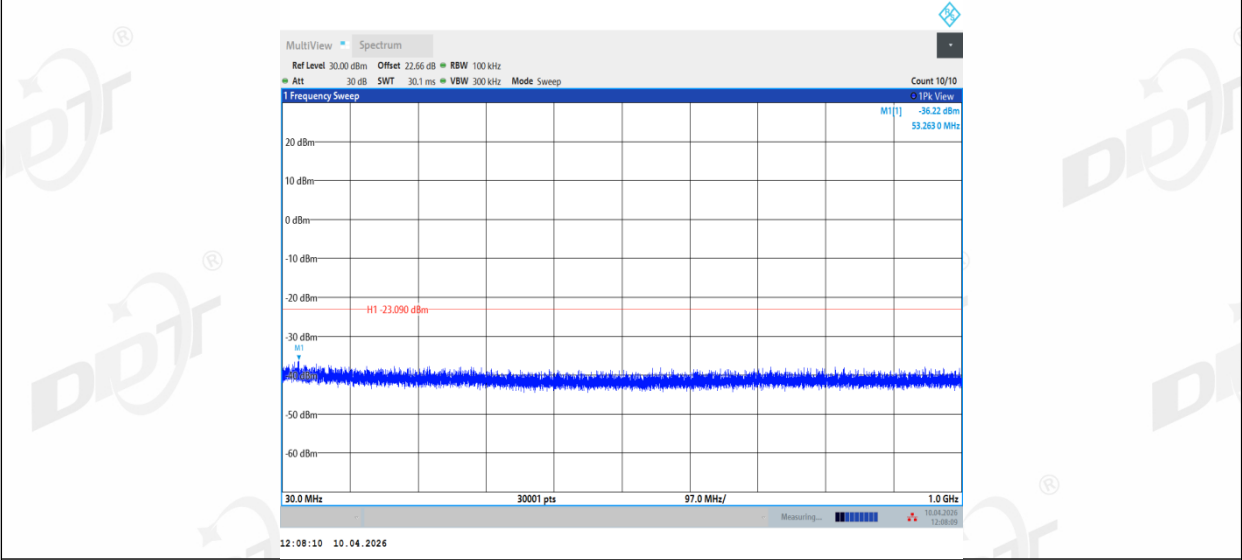
11B\_Ant1\_2437\_1000~26500



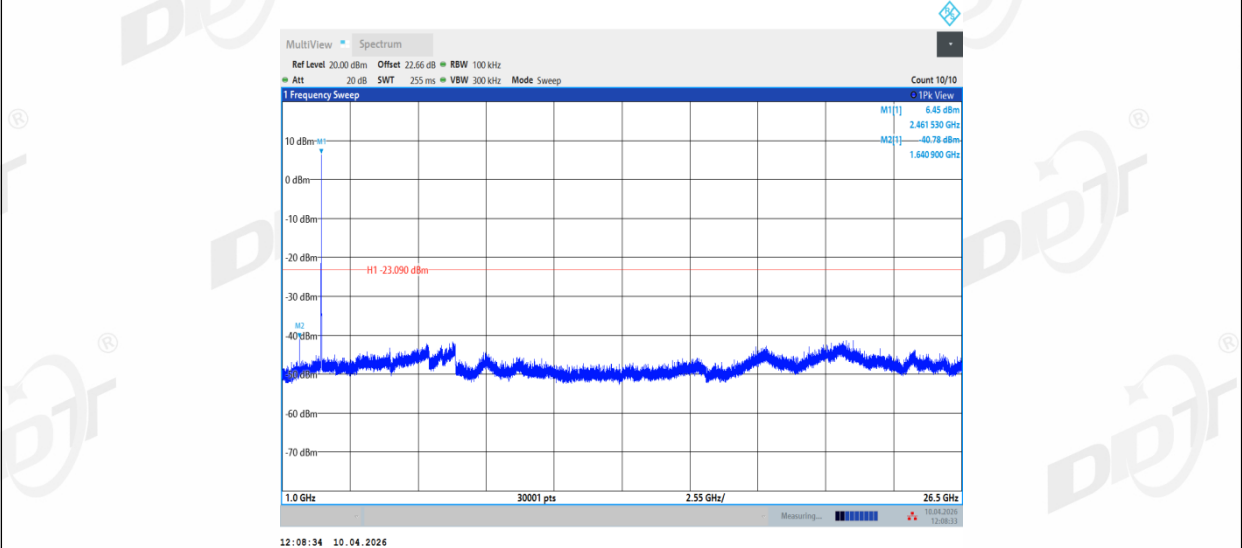
11B\_Ant1\_2462\_0~Reference



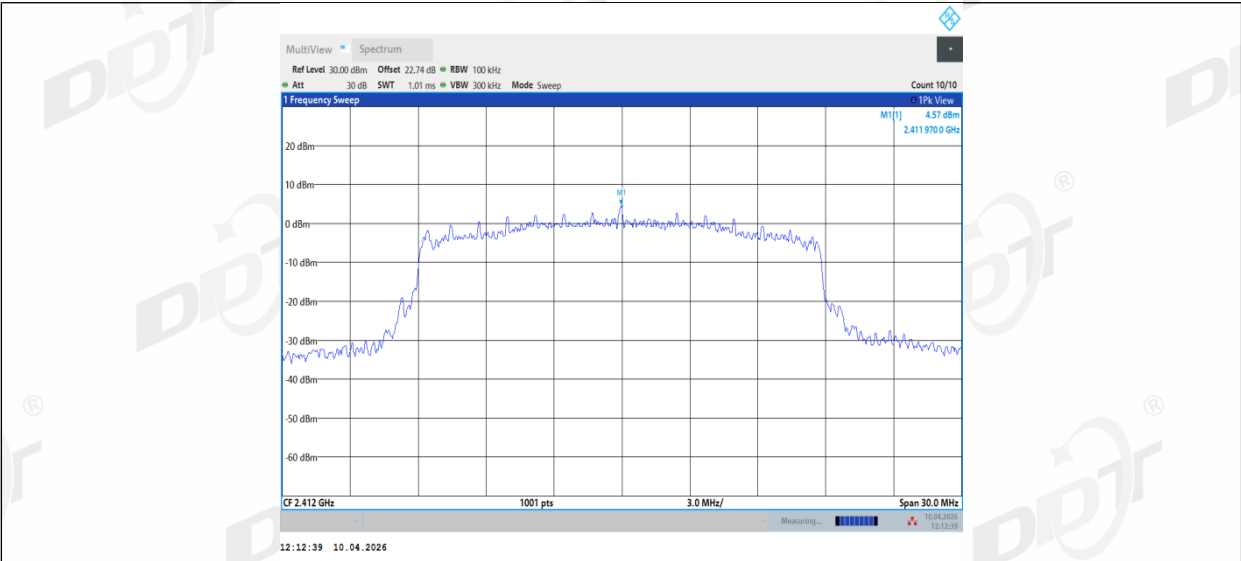
11B\_Ant1\_2462\_30~1000



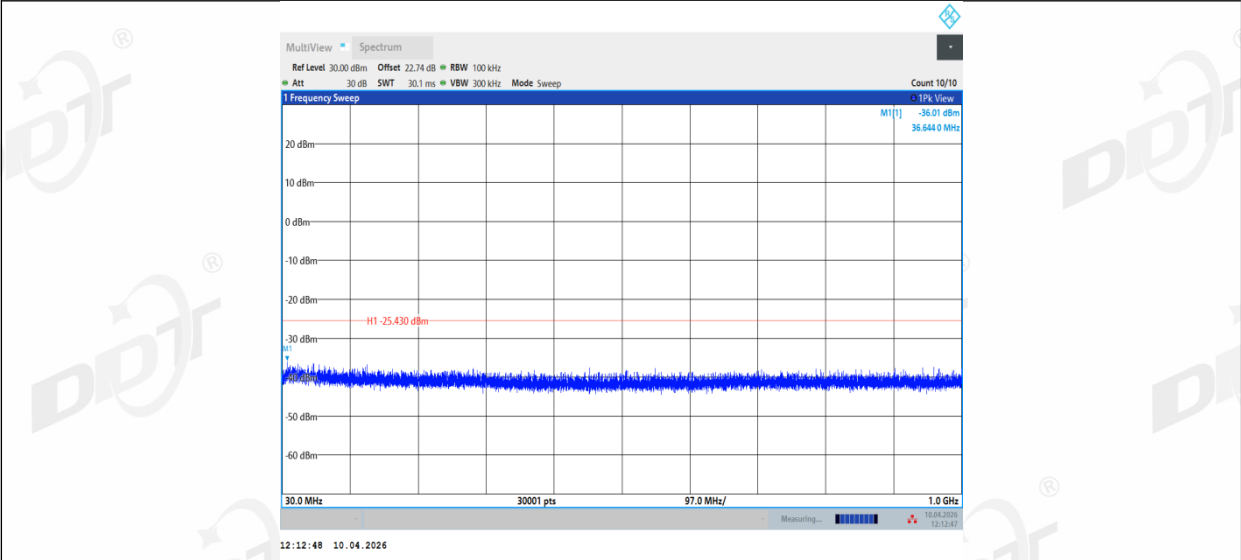
11B\_Ant1\_2462\_1000~26500



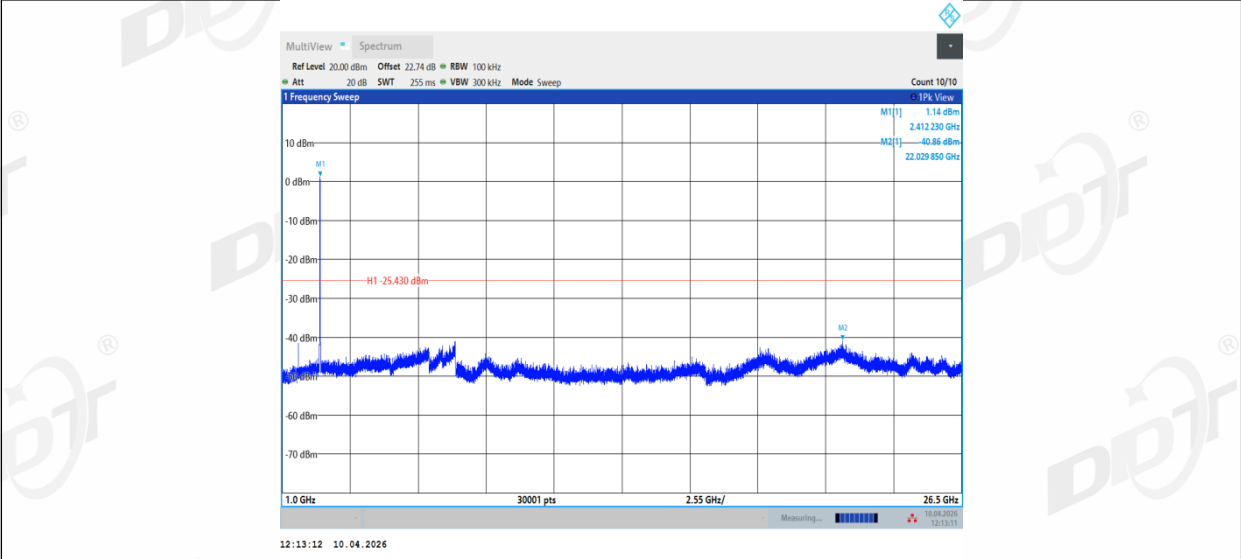
11G\_Ant1\_2412\_0~Reference



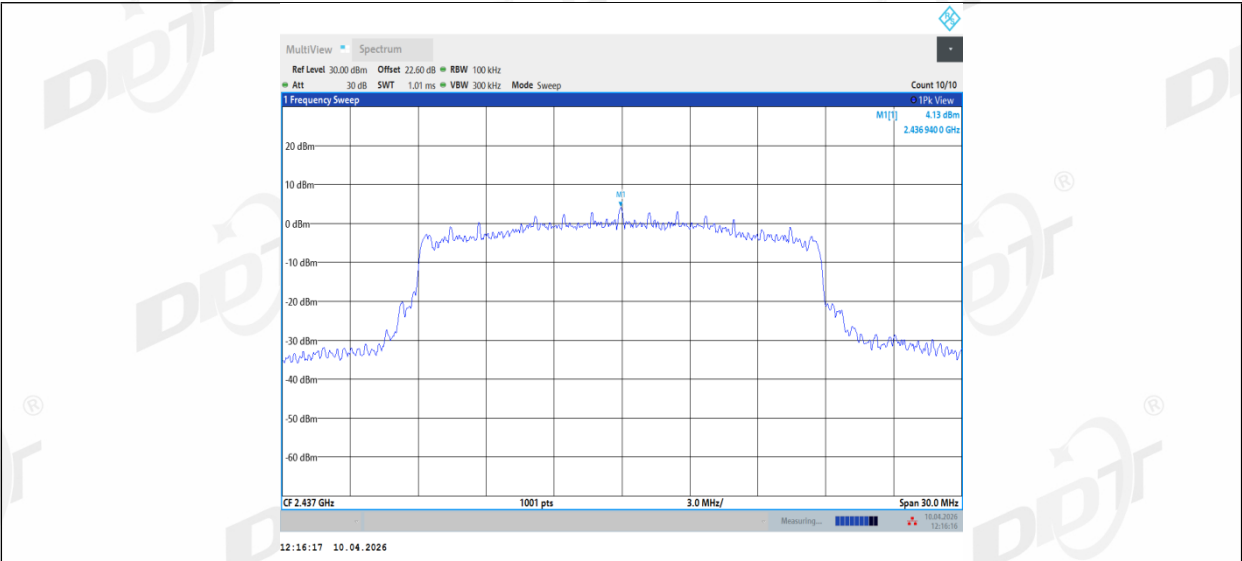
11G\_Ant1\_2412\_30~1000



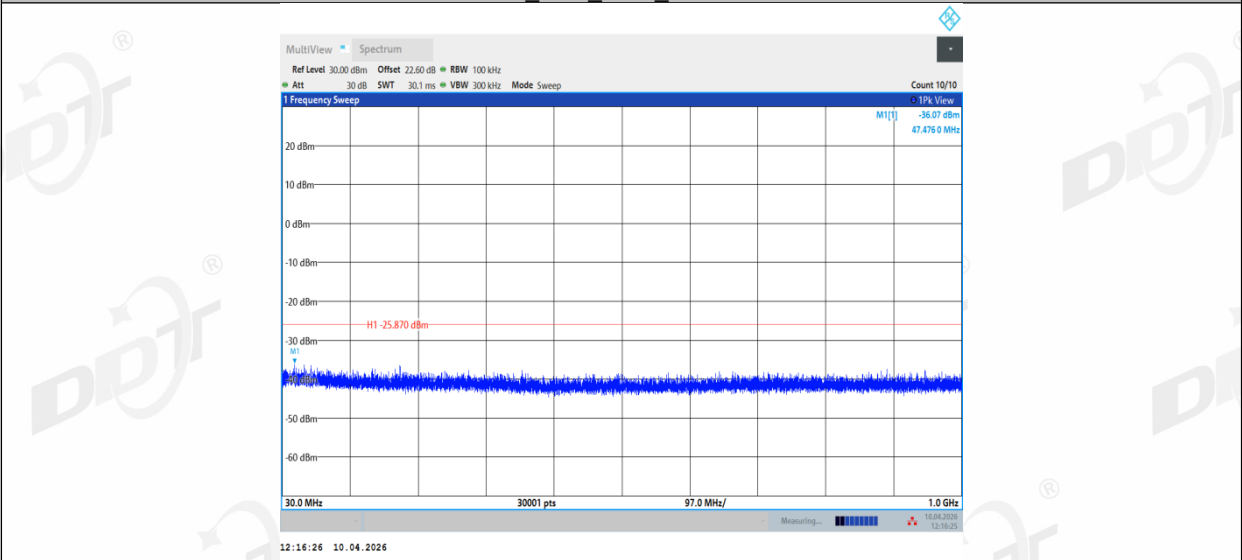
11G\_Ant1\_2412\_1000~26500



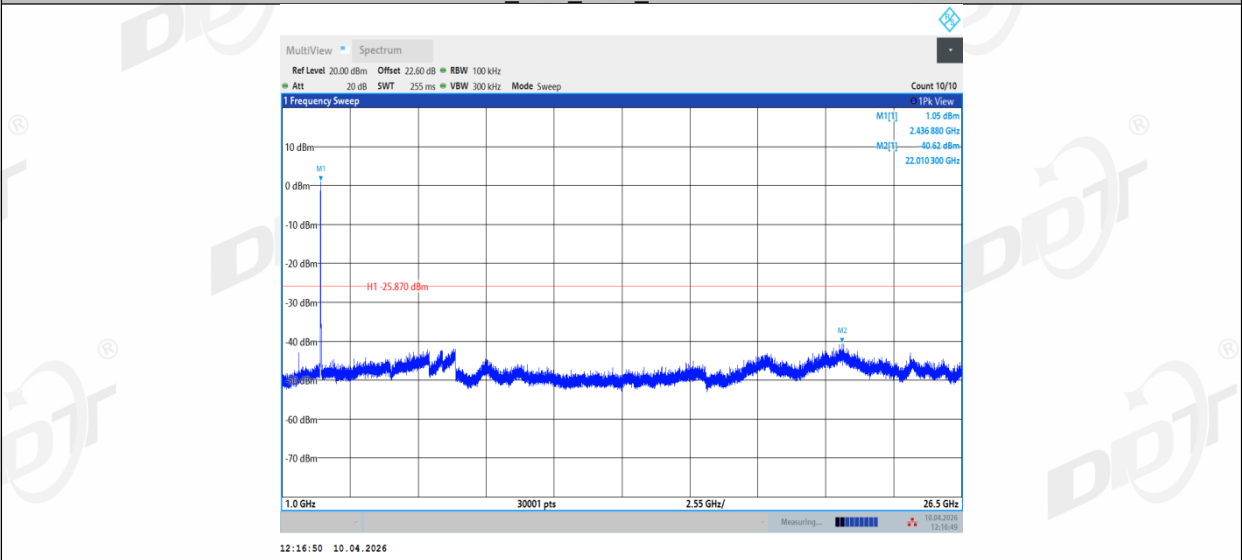
11G\_Ant1\_2437\_0~Reference



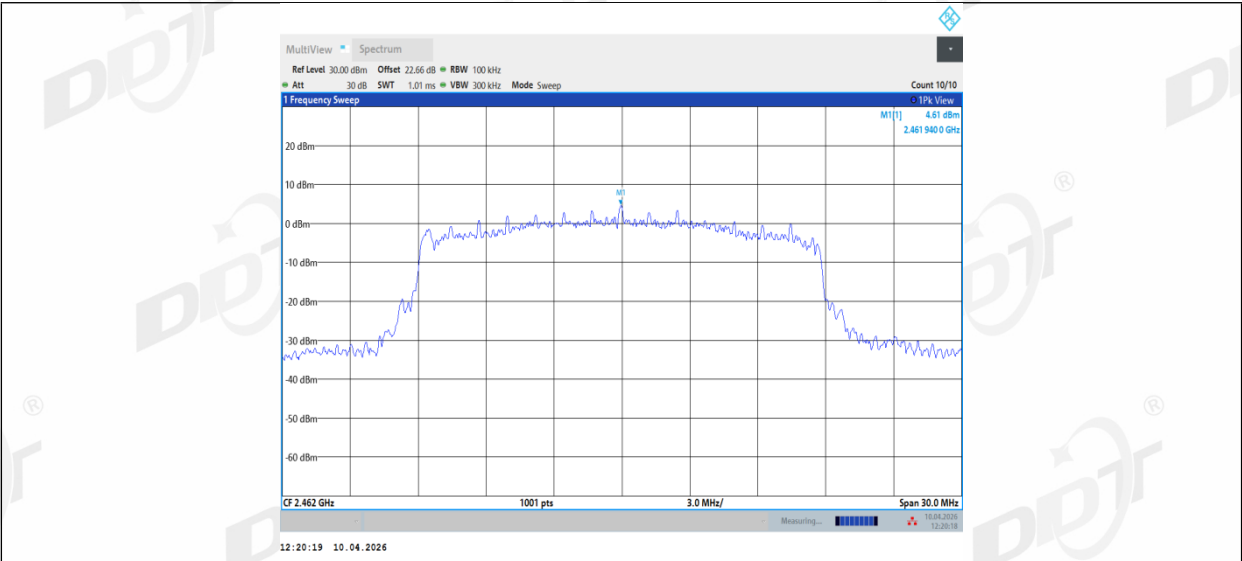
11G\_Ant1\_2437\_30~1000



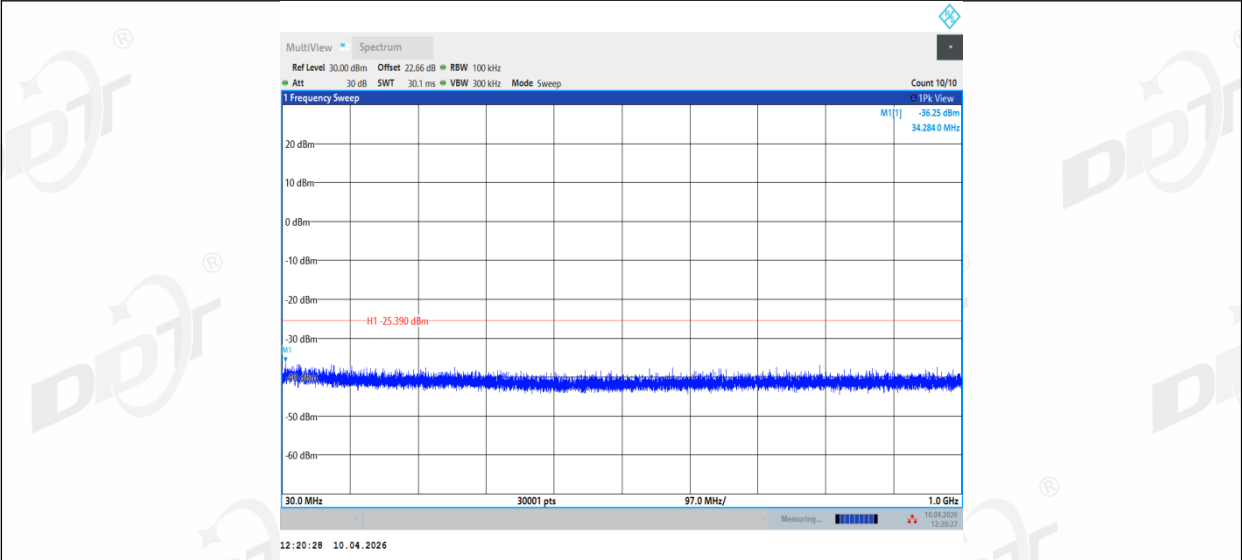
11G\_Ant1\_2437\_1000~26500



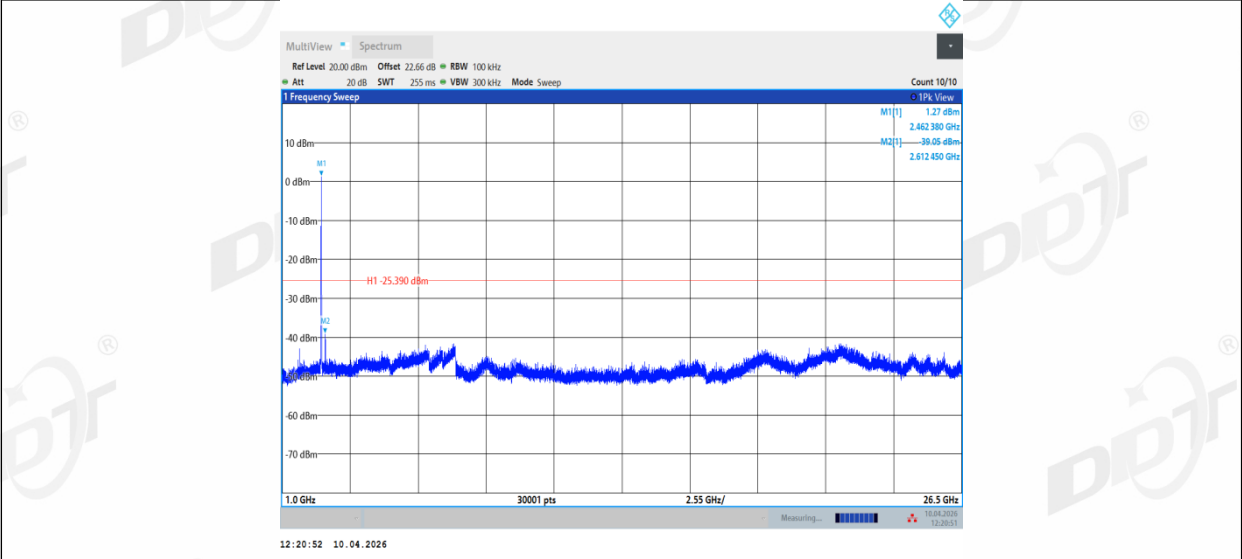
11G\_Ant1\_2462\_0~Reference



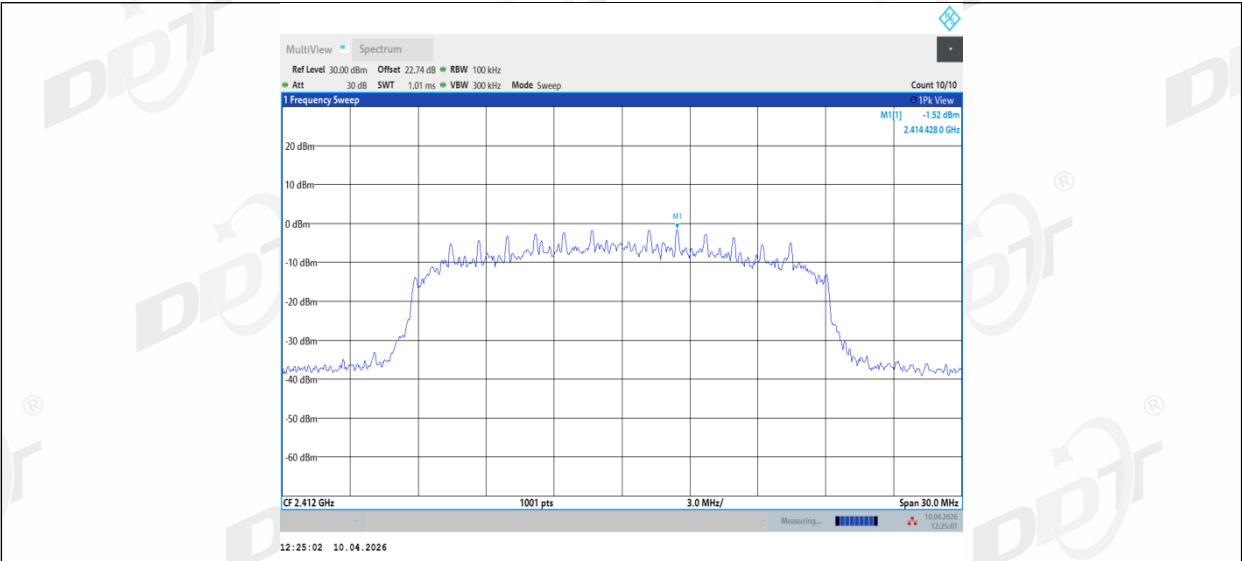
11G\_Ant1\_2462\_30~1000



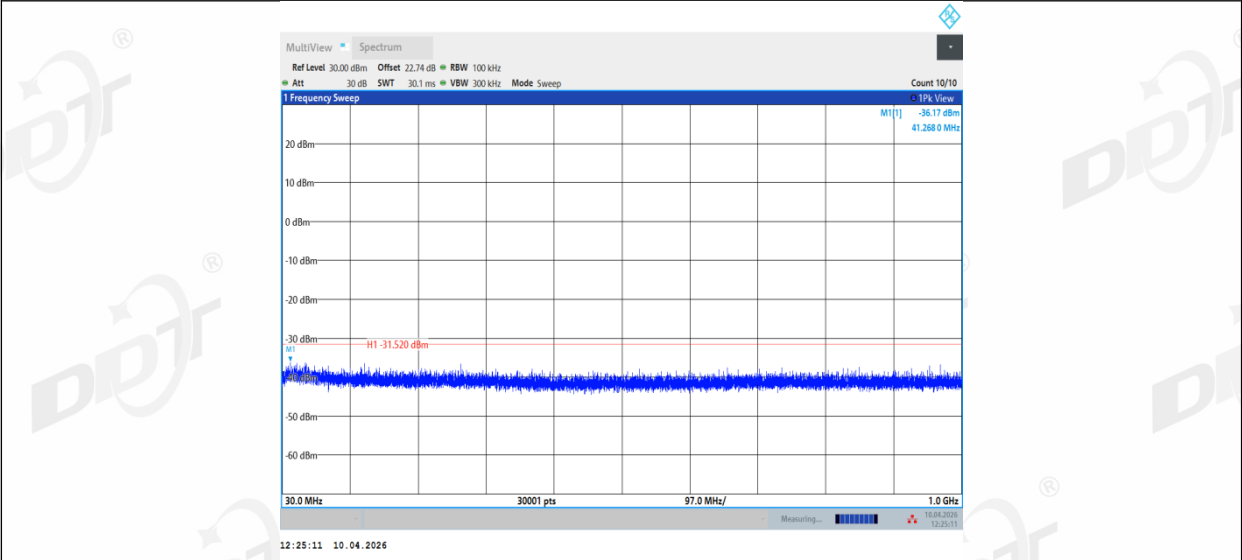
11G\_Ant1\_2462\_1000~26500



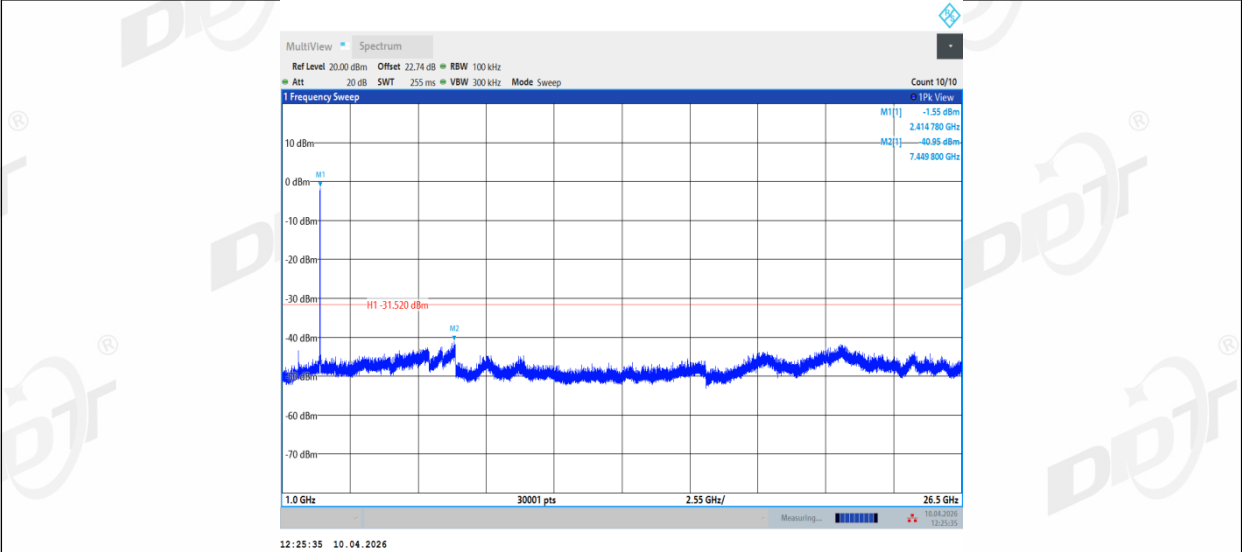
11N20SISO\_Ant1\_2412\_0~Reference



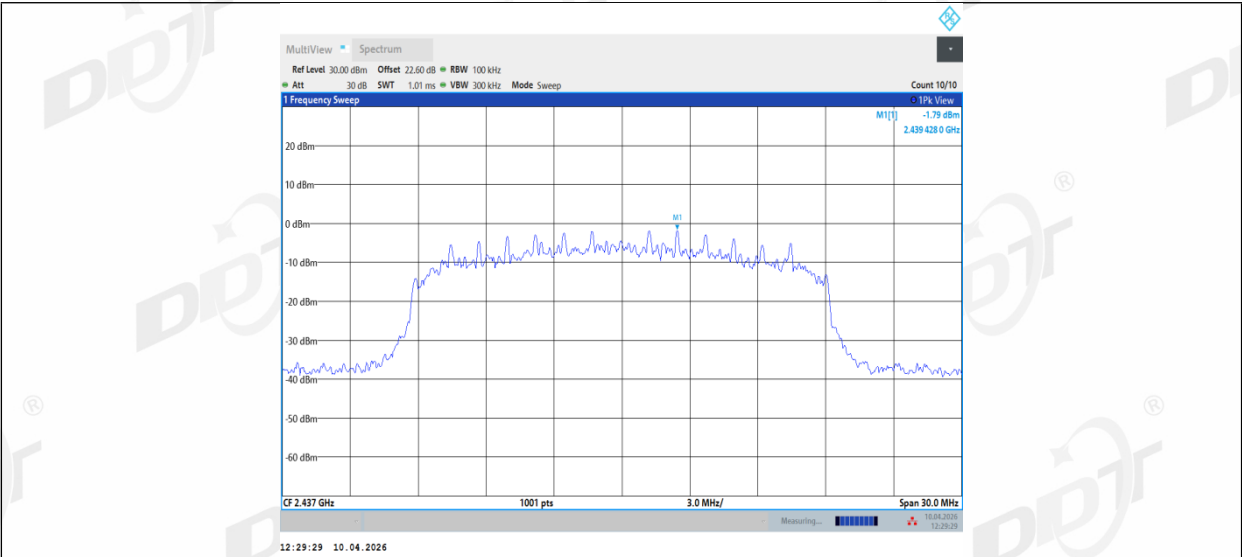
11N20SISO\_Ant1\_2412\_30~1000



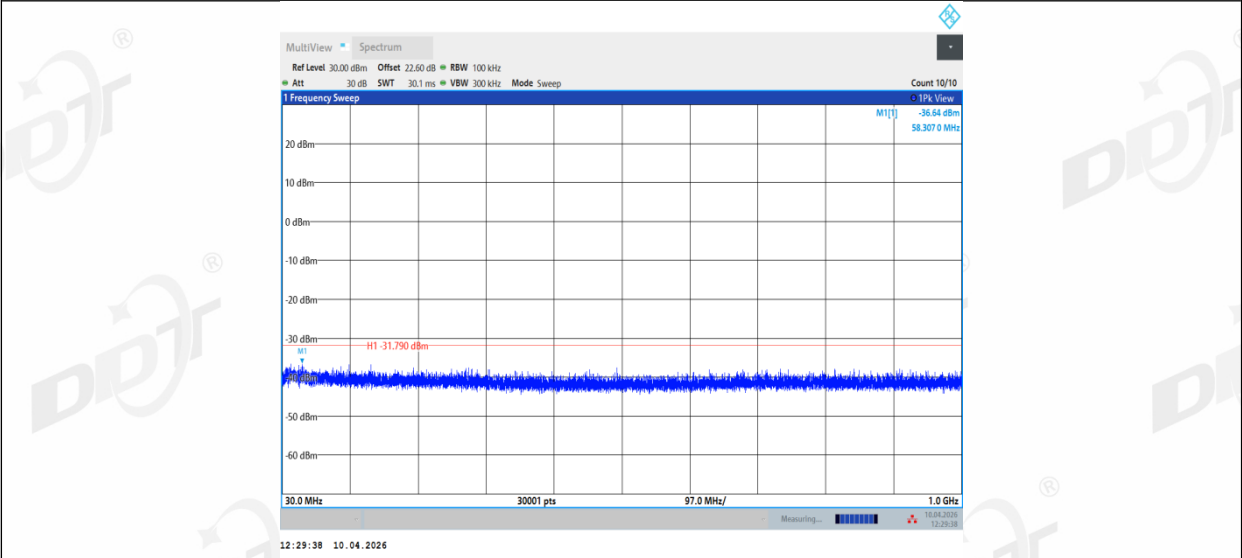
11N20SISO\_Ant1\_2412\_1000~26500



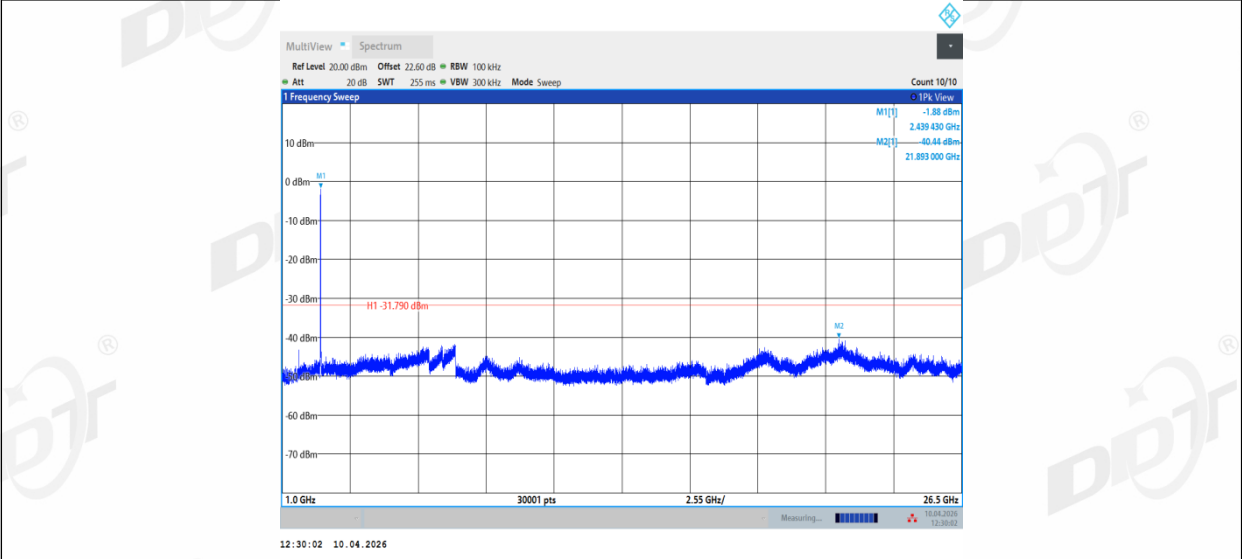
11N20SISO\_Ant1\_2437\_0~Reference



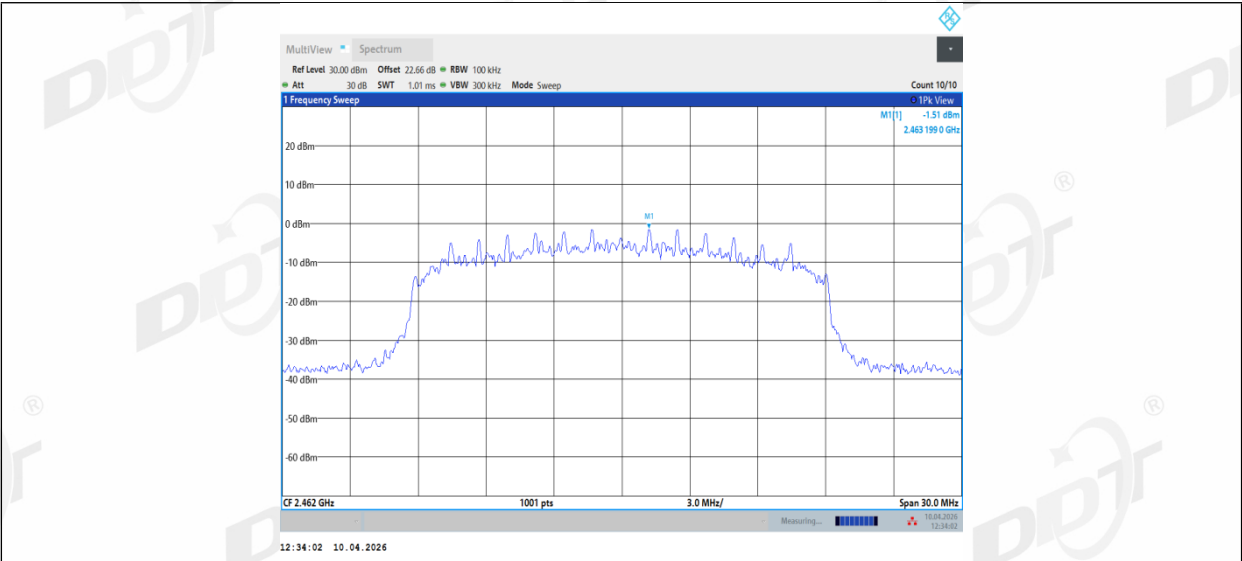
11N20SISO\_Ant1\_2437\_30~1000



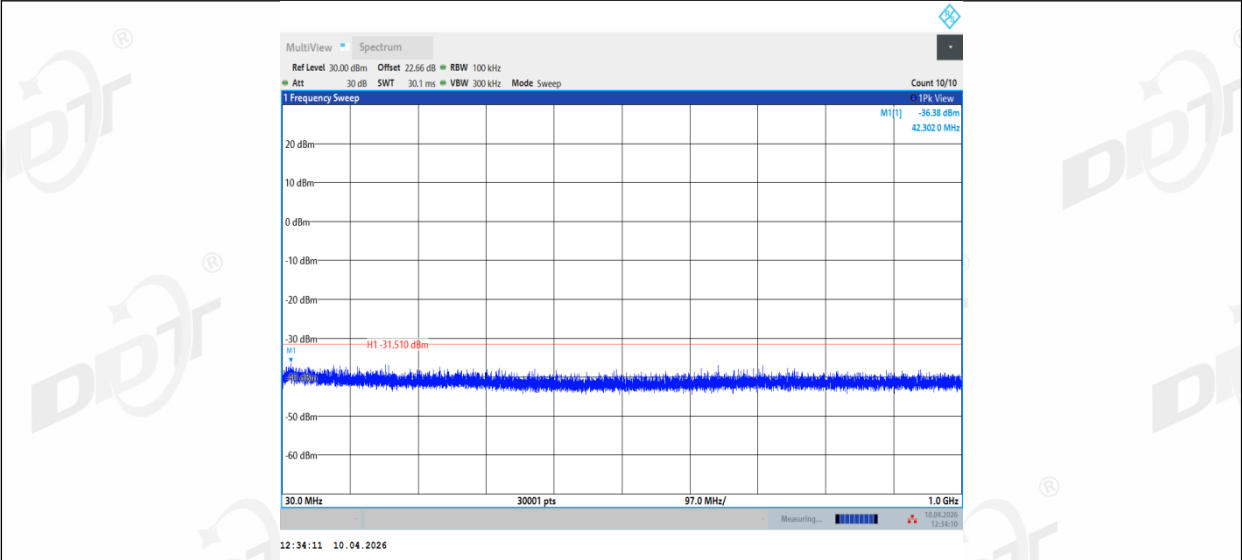
11N20SISO\_Ant1\_2437\_1000~26500



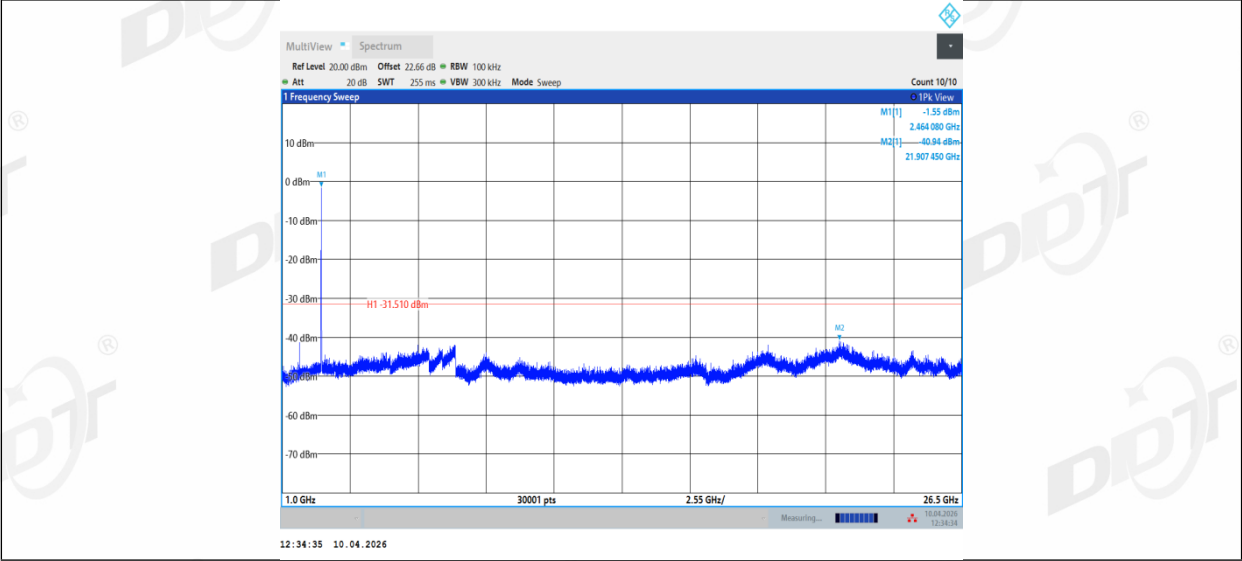
11N20SISO\_Ant1\_2462\_0~Reference



11N20SISO\_Ant1\_2462\_30~1000

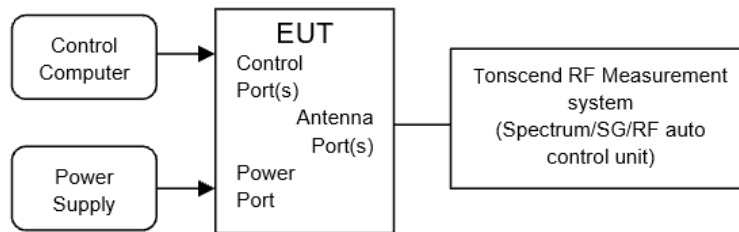


11N20SISO\_Ant1\_2462\_1000~26500



## 10. Duty Cycle

### 10.1. Block diagram of test setup



### 10.2. Limit

Just for Report.

### 10.3. Test procedure

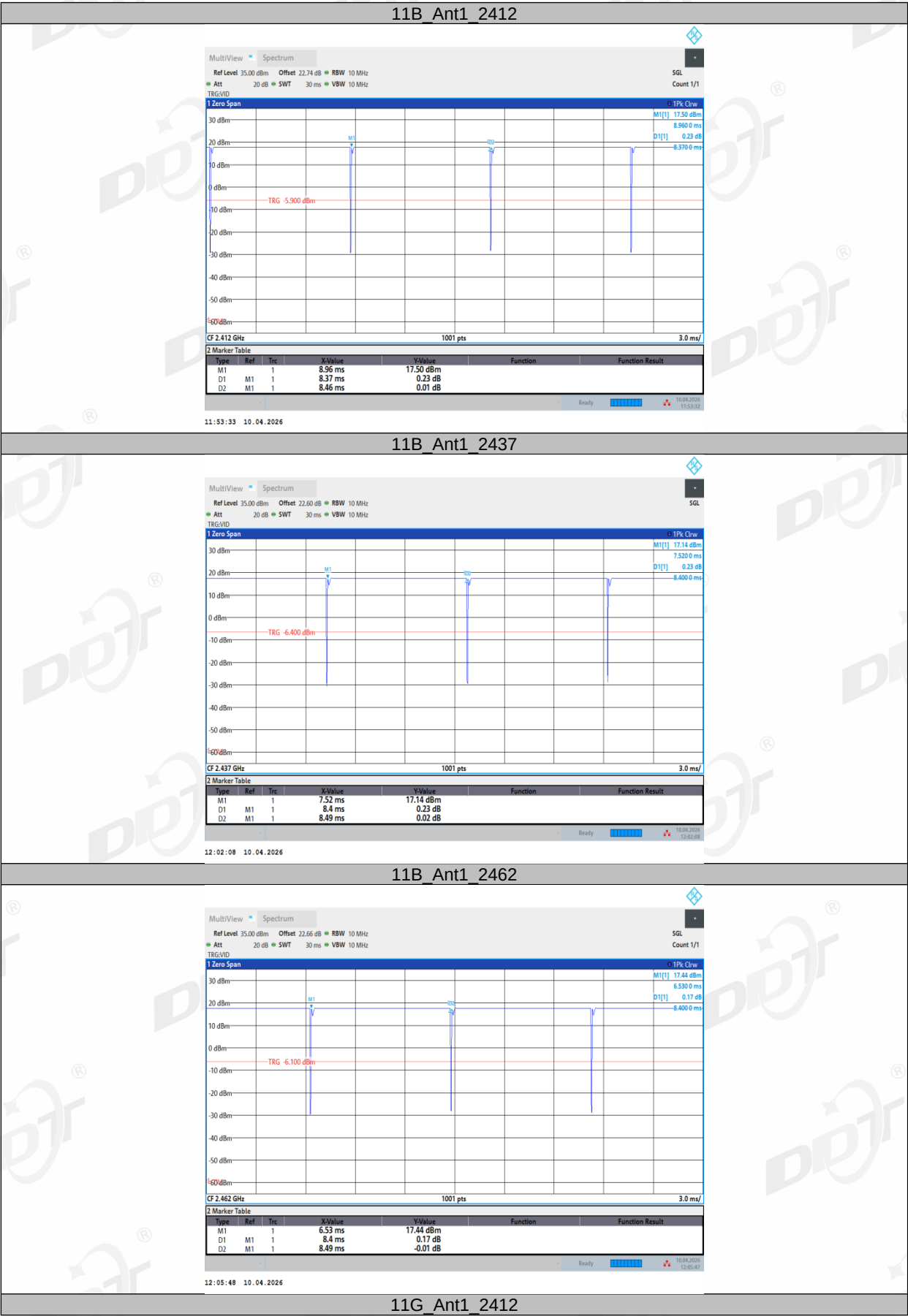
- (1) Connected the EUT's antenna port to the Spectrum Analyzer by suitable attenuator, The cable loss and attenuator loss have been put into spectrum analyzer as amplitude offset.  
set the Spectrum Analyzer as below:
  - Centre Frequency: The centre frequency of the middle hopping channel.
  - Resolution BW: 10 MHz.
  - Video BW: 10 MHz.
  - Span: Zero span.
  - Detector: Peak.
  - Trace Mode: Clear Write.
  - Sweep: Video Trigger
- (2) When the trace is complete, measure the sending time of 1 burst and the duty cycle of 1 burst cycle.
- (3) Calculate dwell time follow below formula:  
Duty cycle= Pulse's on time / Burst cycle

10.4. Test result

|                    |               |                |                          |
|--------------------|---------------|----------------|--------------------------|
| Test Engineer:     | Huang Yanwen  | Test Site:     | RF Measurement system 4# |
| Ambient Condition: | 25.3℃,46.1%RH | Test Date:     | 2026.04.10-2026.05.07    |
| Test Power Supply: | AC 120V       | Sample Number: | S26031809-004            |

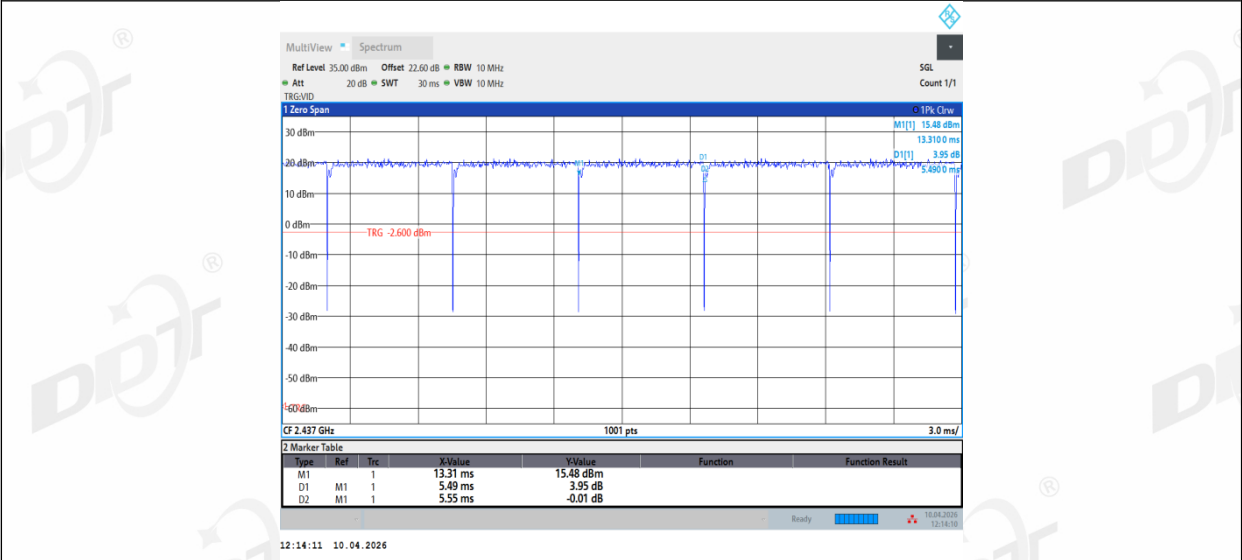
| Test Mode | Antenna | Frequency [MHz] | Transmission Duration [ms] | Transmission Period [ms] | Duty Cycle [%] |
|-----------|---------|-----------------|----------------------------|--------------------------|----------------|
| 11B       | Ant1    | 2412            | 8.37                       | 8.46                     | 98.94          |
|           |         | 2437            | 8.40                       | 8.49                     | 98.94          |
|           |         | 2462            | 8.40                       | 8.49                     | 98.94          |
| 11G       | Ant1    | 2412            | 5.49                       | 5.55                     | 98.92          |
|           |         | 2437            | 5.49                       | 5.55                     | 98.92          |
|           |         | 2462            | 5.49                       | 5.55                     | 98.92          |
| 11N20SISO | Ant1    | 2412            | 0.16                       | 0.17                     | 94.12          |
|           |         | 2437            | 0.16                       | 0.17                     | 94.12          |
|           |         | 2462            | 0.16                       | 0.17                     | 94.12          |

10.5. Test graphs

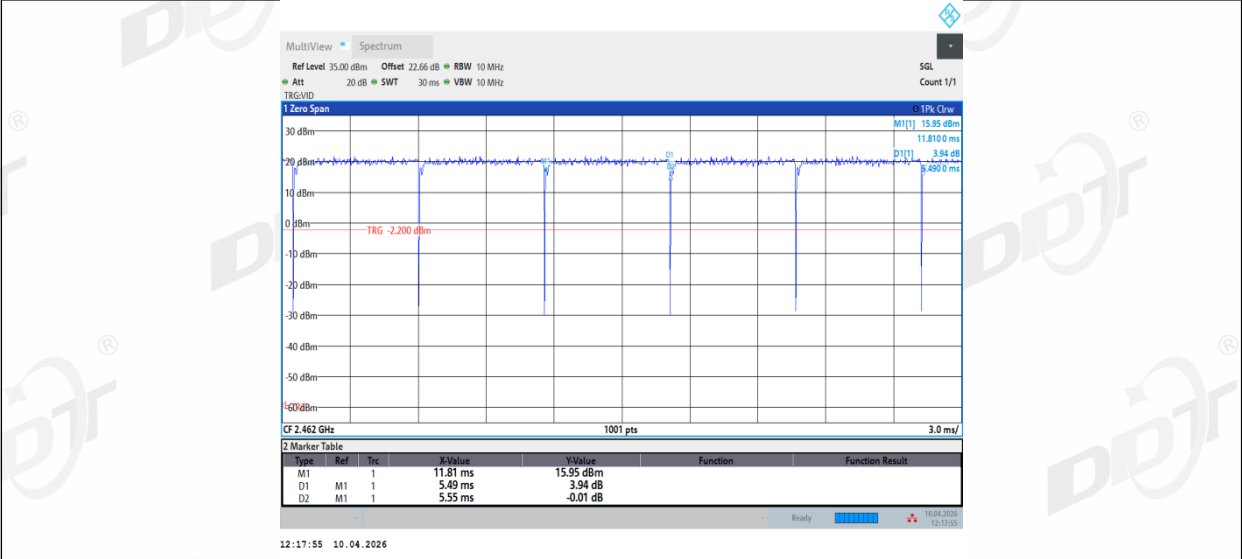




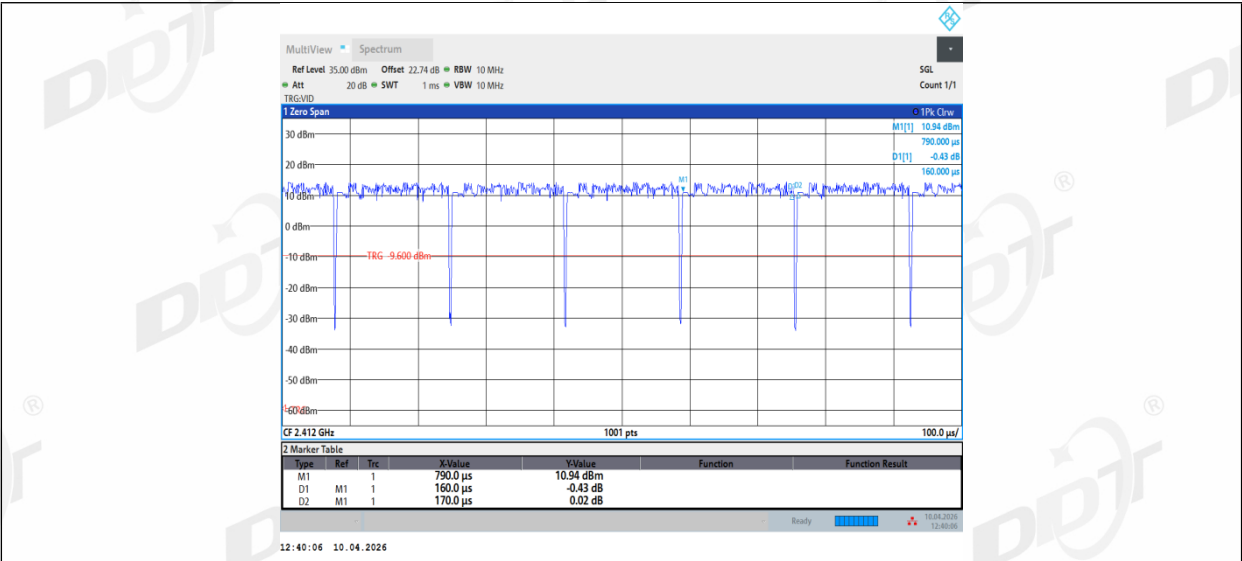
11G\_Ant1\_2437



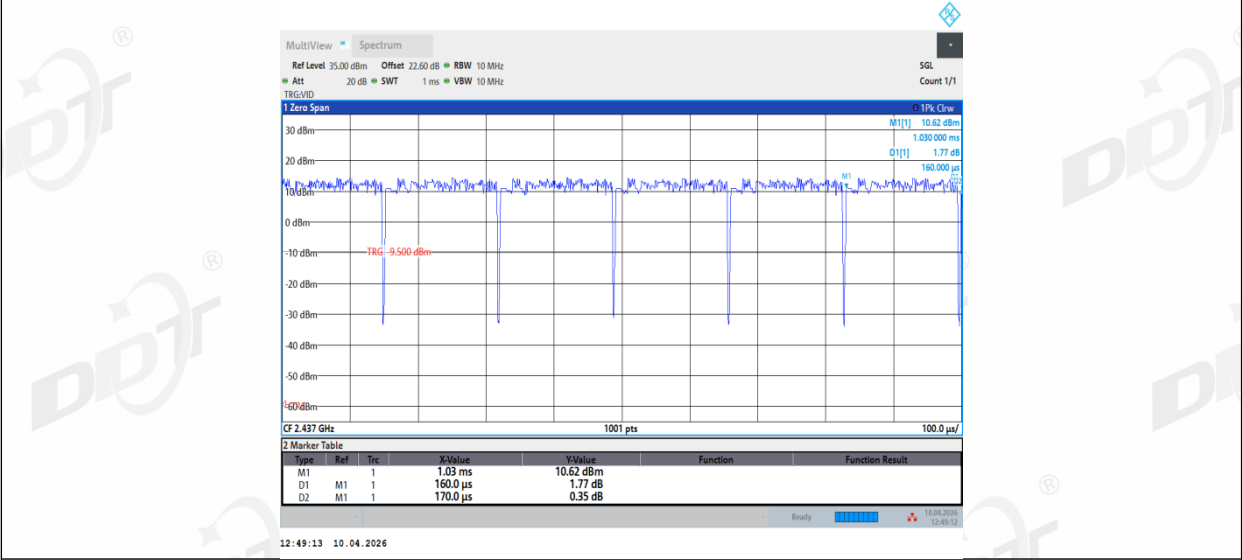
11G\_Ant1\_2462



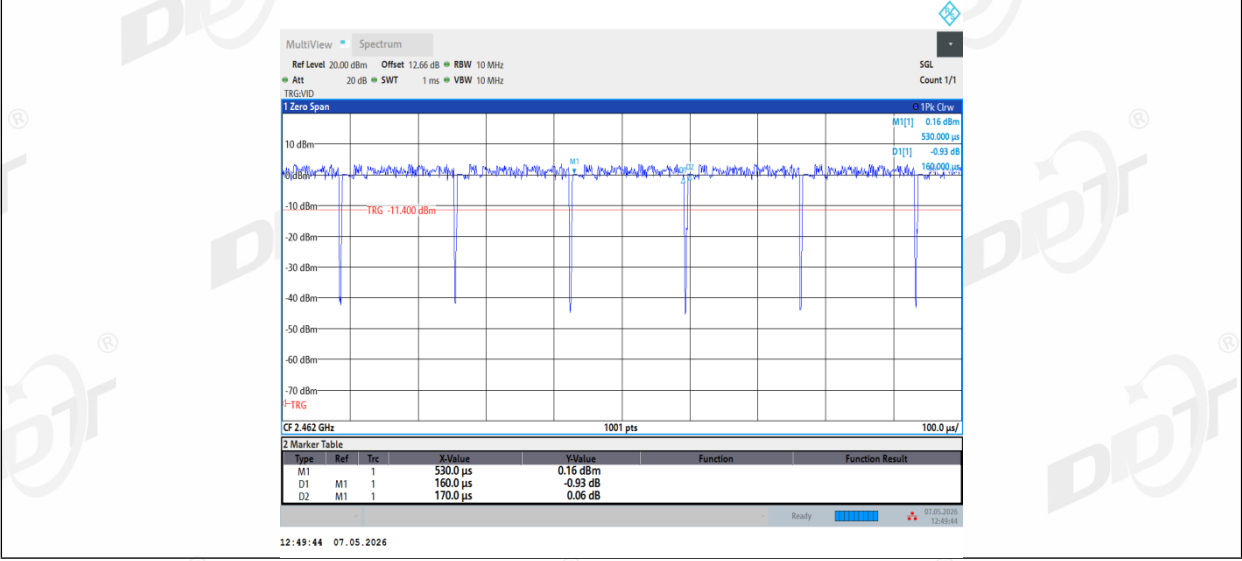
11N20SISO\_Ant1\_2412



11N20SISO\_Ant1\_2437



11N20SISO\_Ant1\_2462



## 11. Antenna Requirements

### 11.1. Limit

For intentional device, according to FCC 47 CFR Section 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. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For intentional device, according to RSS-Gen issue 5 section 6.8.

The applicant for equipment certification shall provide a list of all antenna types that may be used with the transmitter, where applicable (i.e. for transmitters with detachable antenna), indicating the maximum permissible antenna gain (in dBi) and the required impedance for each antenna. The test report shall demonstrate the compliance of the transmitter with the limit for maximum equivalent isotropically radiated power (e.i.r.p.) specified in the applicable RSS, when the transmitter is equipped with any antenna type, selected from this list.

### 11.2. Result

The antenna used for this product as Antenna information described in section 2.1 of the report, and there is no other antenna than that furnished by the responsible party shall be used with the device.