

## Industrial Internet Innovation Center (Shanghai) Co.,Ltd.

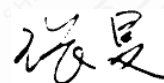
## SRD TEST REPORT

|             |                                               |
|-------------|-----------------------------------------------|
| PRODUCT     | Smart counter scale                           |
| BRAND       | SUNMI                                         |
| MODEL       | ACS-F2521,ACS-F2522,ACS-F2523                 |
| APPLICANT   | Shanghai Sunmi Technology Co.,Ltd.            |
| FCC ID      | 2AH25S2CC                                     |
| IC          | 22621-S2CC                                    |
| ISSUE DATE  | March 1, 2024                                 |
| STANDARD(S) | FCC Part15E, RSS-247 Issue 3, RSS-Gen Issue 5 |

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Reviewed by: Yang Fan

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## 1. Summary of Test Report

### 1.1 Test Standard(s)

| No. | Test Standard   | Title                                                                                                                              | Version |
|-----|-----------------|------------------------------------------------------------------------------------------------------------------------------------|---------|
| 1   | FCC Part15E     | Title 47 of the Code of Federal Regulations; Chapter I<br>Part 15 - Radio frequency devices                                        | --      |
| 2   | RSS-247 Issue 3 | Digital Transmission Systems (DTSS), Frequency<br>Hopping Systems (FHSs) and Licence-Exempt Local<br>Area Network (LE-LAN) Devices | 2023    |
| 3   | RSS-Gen Issue 5 | General Requirements for Compliance of Radio<br>Apparatus                                                                          | 2021    |

### 1.2 Reference Documents

| No. | Test Standard                                                      | Title                                                                                                                                      | Version |
|-----|--------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|---------|
| 1   | ANSI 63.10                                                         | Methods of Measurement of Radio-Noise Emissions<br>from Low-Voltage Electrical and Electronic Equipment<br>in the Range of 9 kHz to 40 GHz | 2013    |
| 2   | KDB 789033 D02 General<br>UNII Test Procedures New<br>Rules v02r01 | Information Infrastructure (U-NII) Devices - Part 15,<br>Subpart E                                                                         | --      |

Note: KDB 789033 D02 General UNII Test Procedures New Rules v02r01 is not A2LA certified.

### 1.3 Summary of Test Results

| No. | Measurement Items                          | FCC Rules          | IC Rules                    | Verdict                |
|-----|--------------------------------------------|--------------------|-----------------------------|------------------------|
| 1   | Maximum Output Power                       | 15.407(a)          | RSS-247 6.2                 | Pass                   |
| 2   | Power Spectral Density                     | 15.407(a)          | RSS-247 6.2                 | Pass                   |
| 3   | 99% Occupied Bandwidth                     | N/A                | RSS-247 6.2                 | Pass                   |
| 4   | -26dB Occupied Bandwidth                   | 15. 407(a)         | RSS-Gen 6.7                 | Pass                   |
| 5   | Band edge compliance                       | 15.407(b)          | RSS-247 6.2                 | Pass                   |
| 6   | Transmitter spurious emissions<br>radiated | 15.407(b)          | RSS-Gen 8.9, RSS-247<br>6.2 | Pass                   |
| 7   | Spurious emissions radiated < 30<br>MHz    | 15.209 & 15.407(b) | RSS-Gen 8.9, RSS-247<br>6.2 | Pass                   |
| 8   | Spurious emissions conducted <<br>30 MHz   | 15.407(b)          | RSS-Gen 8.11                | Pass                   |
| 9   | Frequency Stability                        | 15.407(g)          | RSS-247 6.2                 | Pass                   |
| 10  | Transmit Power Control                     | 15.407(h)          | RSS-Gen 8.8                 | N/A                    |
| 11  | AC Powerline Conducted Emission            | 15.207             | RSS Gen 6.8                 | Pass                   |
| 12  | Antenna requirement                        | 15.203             | RSS-247 6.2                 | Pass <sup>Note 2</sup> |

**NOTE1:**

The ACS-F2521,ACS-F2522,ACS-F2523 manufactured by Shanghai Sunmi Technology Co.,Ltd. is a new

products for testing.

There are three configurations S03aa&S08aa (Mainly Supply), S16aa (Secondary Supply) and S12(Thirdly supply) in this project. We mainly tested the S03aa&S08aa (Mainly Supply), and the S16aa (Secondary Supply) and S12(Thirdly supply) tested the worst mode of the mainly supply, and recorded the test results of the worst mode respectively in the report.

The description of the differences between S03aa&S08aa (Mainly Supply), S16aa (Secondary Supply) and S12(Thirdly supply) are as follows:

| Model                               | Screen size               |
|-------------------------------------|---------------------------|
| ACS-F2521: S16aa (Secondary Supply) | 15.6" screen+10.1" screen |
| ACS-F2522: S08aa (Mainly Supply)    | 15.6" screen+15.6" screen |
| ACS-F2523: S12aa (Thirdly Supply)   | 15.6" screen              |

Industrial Internet Innovation Center (Shanghai) Co., Ltd. only performed test cases which identified with Pass/Fail/Inc result in section 1.3.

Industrial Internet Innovation Center (Shanghai) Co., Ltd. has verified that the compliance of the tested device specified in section 4 of this test report is successfully evaluated according to the procedure and test methods as defined in type certification requirement listed in section 1 of this test report.

Note2:

5G RLAN used a FPC antenna with max Gain 0.78/0.88/0.93 dBi that complied with 15.203 Requirements.

a. All the test data for each data were verified, but only the worst case was reported.

#### 1.4 Data Provided by Applicant

| No. | Item(s)             | Data               |
|-----|---------------------|--------------------|
| 1   | Antenna gain of EUT | 0.78/0.88/0.93 dBi |

Note: The data of antenna gain is provided by the Antenna specification may affect the validity of the test results in this report, and the impact and consequences of this shall be undertaken by the customer.

## 2. General Information of The Laboratory

### 2.1 Testing Laboratory

|                      |                                                            |
|----------------------|------------------------------------------------------------|
| Lab Name             | Industrial Internet Innovation Center (Shanghai) Co.,Ltd.  |
| Address              | Building 4, No. 766, Jingang Road, Pudong, Shanghai, China |
| Telephone            | 021-68866880                                               |
| FCC Registration No. | 708870                                                     |
| FCC Designation No.  | CN1364                                                     |
| IC Designation No.   | 10766A                                                     |
| CAB identifier       | CN0067                                                     |

### 2.2 Laboratory Environmental Requirements

|                      |              |
|----------------------|--------------|
| Temperature          | 15℃~35℃      |
| Relative Humidity    | 25%RH~75%RH  |
| Atmospheric Pressure | 86kPa~106kPa |

### 2.3 Project Information

|                 |                                       |
|-----------------|---------------------------------------|
| Project Manager | Gao Hongning                          |
| Test Date       | January 02, 2024 to February 02, 2024 |

### 3. General Information of The Customer

#### 3.1 Applicant

|           |                                                              |
|-----------|--------------------------------------------------------------|
| Company   | Shanghai Sunmi Technology Co.,Ltd.                           |
| Address   | Room 505,No.388,Song Hu Road,Yang Pu District,Shanghai,China |
| Telephone | +86 17302160204                                              |

#### 3.2 Manufacturer

|           |                                                              |
|-----------|--------------------------------------------------------------|
| Company   | Shanghai Sunmi Technology Co.,Ltd.                           |
| Address   | Room 505,No.388,Song Hu Road,Yang Pu District,Shanghai,China |
| Telephone | +86 17302160204                                              |

## 4. General Information of The Product

### 4.1 Product Description for Equipment under Test (EUT)

|                                                                                                                                                                                                                         |                                                            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|
| Product Name                                                                                                                                                                                                            | Smart counter scale                                        |
| Model name                                                                                                                                                                                                              | ACS-F2521,ACS-F2522,ACS-F2523                              |
| Date of Receipt                                                                                                                                                                                                         | S03aa/S08aa/S16aa/S12aa:February 02, 2024                  |
| EUT ID*                                                                                                                                                                                                                 | S03aa/S08aa/S16aa/S12aa                                    |
| SN/IMEI                                                                                                                                                                                                                 | NA                                                         |
| Supported Radio Technology and Bands                                                                                                                                                                                    | BT 4.2 BR/EDR/BLE<br>WLAN 802.11b/g/n<br>WLAN 802.11a/n/ac |
| Hardware Version                                                                                                                                                                                                        | RK3568_MB_V2.0                                             |
| Software Version                                                                                                                                                                                                        | 3.0.11                                                     |
| FCC ID                                                                                                                                                                                                                  | 2AH25S2CC                                                  |
| IC                                                                                                                                                                                                                      | 22621-S2CC                                                 |
| NOTE1: EUT ID is the internal identification code of the laboratory.<br>NOTE2: Samples in the test report are provided by the customer. The test results are only applicable to the samples received by the laboratory. |                                                            |

### 4.2 Internal Identification of AE used during the test

| AE ID* | Description   | Model                | SN/Remark                                       |
|--------|---------------|----------------------|-------------------------------------------------|
| CB04   | Adapter       | CYSE65-240250        | Jiangsu Chenyang Electron Co., Ltd.<br>24V,2.5A |
| UB04   | AC Cable      | N/A                  | N/A                                             |
| AE1    | Notebook PC   | DELL Latitude E6510  | N/A                                             |
| AE2    | LAN Cable     | N/A                  | N/A                                             |
| AE3    | Keyboard      | KB212-B              | CN-0Y88XT-65890-12I-005Q-A00                    |
| AE4    | Mouse         | MS111-P              | CN-011D3V-71581-19J-1A64                        |
| AE5    | Earphone      | N/A                  | N/A                                             |
| AE6    | Micro SD card | Kingston SDC4/4GB 77 | N/A                                             |
| AE7    | Cash Box      | NC020                | N/A                                             |
| AE8    | Telephone     | HA8000(28) P/T S     | N/A                                             |
| AE9    | U disk        | Kingston DTSE9 16GB  | N/A                                             |

|      |                  |                     |     |
|------|------------------|---------------------|-----|
| AE10 | U disk           | Kingston DTSE9 16GB | N/A |
| AE11 | USB Cable        | N/A                 | N/A |
| AE12 | Object of weight | N/A                 | N/A |

NOTE: AE ID is the internal identification code of the laboratory.

### 4.3 Additional Information

|                            |                                                                              |
|----------------------------|------------------------------------------------------------------------------|
| WLAN Frequency             | U-NII-1: 5180-5240MHz<br>U-NII-2A: 5260-5320MHz<br>U-NII-2C: 5500MHz-5700MHz |
| Occupied Channel Bandwidth | 20 MHz: 802.11 a/n/ac<br>40 MHz: 802.11 n/ac<br>80 MHz: 802.11 ac            |
| WLAN type of modulation    | OFDM                                                                         |

Test frequency list:

UNII-1 and UNII-2A:

|        |             |      |      |      |      |      |      |      |      |
|--------|-------------|------|------|------|------|------|------|------|------|
| BW_20M | Channel     | 36   | 40   | 44   | 48   | 52   | 56   | 60   | 64   |
|        | Freq. (MHz) | 5180 | 5200 | 5220 | 5240 | 5260 | 5280 | 5300 | 5320 |
| BW_40M | Channel     | 38   |      | 46   |      | 54   |      | 62   |      |
|        | Freq. (MHz) | 5190 |      | 5230 |      | 5270 |      | 5310 |      |
| BW_80M | Channel     | 42   |      |      |      | 58   |      |      |      |
|        | Freq. (MHz) | 5210 |      |      |      | 5290 |      |      |      |

UNII-2C:

|        |                |      |      |      |      |      |      |      |      |      |      |      |
|--------|----------------|------|------|------|------|------|------|------|------|------|------|------|
| BW_20M | Channel        | 100  | 104  | 108  | 112  | 116  | 120  | 124  | 128  | 132  | 136  | 140  |
|        | Freq.<br>(MHz) | 5500 | 5520 | 5540 | 5560 | 5580 | 5600 | 5620 | 5640 | 5660 | 5680 | 5700 |
| BW_40M | Channel        | 102  |      | 110  |      | 118  |      | 126  |      | 134  |      | /    |
|        | Freq.<br>(MHz) | 5510 |      | 5550 |      | 5590 |      | 5630 |      | 5670 |      | /    |
| BW_80M | Channel        | 106  |      |      |      | 122  |      |      |      | /    |      |      |
|        | Freq.<br>(MHz) | 5530 |      |      |      | 5610 |      |      |      | /    |      |      |

Note: "/" Represents empty

Note: This report is for WLAN UNII-1, UNII-2A and UNII-2C only.

## 5. Test Configuration Information

### 5.1 Laboratory Environmental Conditions

#### 5.1.1 Permanent Facilities

|                        |                          |         |         |
|------------------------|--------------------------|---------|---------|
| Relative Humidity      | Min. = 45 %, Max. = 55 % |         |         |
| Atmospheric Pressure   | 101kPa                   |         |         |
| Temperature            | Normal                   | Minimum | Maximum |
|                        | 25°C                     | -10°C   | 40°C    |
| Working Voltage of EUT | Normal                   | Minimum | Maximum |
|                        | 24V                      | 22.8V   | 25.2V   |

### 5.2 Test Equipments Utilized

#### 5.2.1 Conducted Test System

| No. | Name                                        | Model         | S/N               | SW Version              | HW Version | Manufacturer | Cal. Date  | Cal. Interval |
|-----|---------------------------------------------|---------------|-------------------|-------------------------|------------|--------------|------------|---------------|
| 1   | Test Software                               | TS1120        | 10727             | V3.2.22                 | N/A        | Tonscend     | N/A        | N/A           |
| 2   | Automatic control unit                      | JS0806-2      | 2218060623        | N/A                     | N/A        | Tonscend     | 2023-05-06 | 1 Year        |
| 3   | Wireless communication comprehensive tester | CMW500        | 164865            | V3.8.12                 | N/A        | R&S          | 2023-07-26 | 1 Year        |
| 4   | Spectrum Analyzer                           | FSQ40         | 200063            | V4.75                   | N/A        | R&S          | 2023-10-16 | 1 Year        |
| 5   | Analog Signal Generator                     | SMF           | 104770            | V3.0.13.0-2.20.530.15.4 | N/A        | R&S          | 2023-10-16 | 1 year        |
| 6   | Vector Signal Generator                     | SMCV100B      | 103691            | V5.00.122.24            | N/A        | R&S          | 2023-07-27 | 1 Year        |
| 7   | Programmable Power Supply                   | Keithley 2303 | 4039070           | N/A                     | N/A        | Keithley     | 2023-06-23 | 1 Year        |
| 8   | Temperature box                             | B-TF-107C     | BTF107C-201804107 | N/A                     | N/A        | Boyi         | 2023-06-28 | 1 Year        |
| 9   | Network test unit AP                        | GT-AXE11000   | N2IG0X401637KWF   | V3.0.0.4.386_45940      | N/A        | ASUS         | N/A        | N/A           |
| 10  | Vector Signal Generator                     | SMBV100A      | 257904            | V4.15.125.49            | N/A        | R&S          | 2023-10-16 | 1 Year        |

### 5.2.2 Radiated Emission Test System

| No | Name                                 | Model           | S/N      | SW Version | HW Version   | Manufacturer | Cal. Date  | Cal. Interval |
|----|--------------------------------------|-----------------|----------|------------|--------------|--------------|------------|---------------|
| 1  | Universal Radio Communication Tester | CMU200          | 123126   | V5.2.1     | B12          | R&S          | 2023-10-16 | 1 Year        |
| 2  | Universal Radio Communication Tester | CMW500          | 104178   | V3.7.20    | 1206.0600.00 | R&S          | 2023-10-16 | 1 Year        |
| 3  | EMI Test Receiver                    | ESU40           | 100307   | V5.1-24-3  | 01           | R&S          | 2022-12-19 | 1 Year        |
| 4  | TRILOG Broadband Antenna             | VULB9163        | 01345    | N/A        | N/A          | Schwarzbeck  | 2023-03-23 | 1 Year        |
| 5  | Double-ridged Waveguide Antenna      | ETS-3117        | 00135890 | N/A        | N/A          | ETS          | 2022-03-09 | 2 Years       |
| 6  | EMI Test Software                    | EMC32 V10.35.02 | N/A      | N/A        | N/A          | R&S          | N/A        | N/A           |
| 7  | Horn Antenna                         | 3160-09         | LM6321   | N/A        | N/A          | R&S          | 2023-07-16 | 1 Year        |
| 8  | Horn Antenna                         | 3160-10         | LM5942   | N/A        | N/A          | R&S          | 2023-07-16 | 1 Year        |
| 9  | Loop Antenna                         | AL-130R         | 121083   | N/A        | N/A          | COM-POWER    | 2023-9-13  | 1 Year        |
| 10 | Preamplifier                         | SCU08F1         | 8320024  | N/A        | N/A          | R&S          | 2023-10-16 | 1 Year        |
| 11 | Preamplifier                         | SCU18           | 10155    | N/A        | N/A          | R&S          | 2023-10-16 | 1 Year        |
| 12 | Preamplifier                         | SCU26           | 10025    | N/A        | N/A          | R&S          | 2023-10-16 | 1 Year        |
| 13 | Preamplifier                         | SCU40           | 10020    | N/A        | N/A          | R&S          | 2023-10-16 | 1 Year        |
| 14 | 2-Line V-Network                     | ENV216          | 101380   | N/A        | N/A          | R&S          | 2023-12-19 | 1 Year        |
| 15 | EMI Test Software                    | EMC32 V10.35.02 | N/A      | N/A        | N/A          | R&S          | N/A        | N/A           |
| 16 | Test Receiver                        | ESCI            | 101235   | V5.1-24-3  | 0            | R&S          | 2023-12-19 | 1 Year        |

### 5.2.3 Test Environment

**Shielding Room1** (6.0 meters×3.0 meters×2.7 meters) did not exceed following limits along the conducted RF performance testing:

|                          |                            |
|--------------------------|----------------------------|
| Temperature              | Min. = 15 °C, Max. = 35 °C |
| Relative humidity        | Min. = 20 %, Max. = 75 %   |
| Shielding effectiveness  | > 100 dB                   |
| Ground system resistance | < 0.5 Ω                    |
| Temperature              | Min. = 15 °C, Max. = 35 °C |

**Control room** did not exceed following limits along the EMC testing:

|                          |                            |
|--------------------------|----------------------------|
| Temperature              | Min. = 15 °C, Max. = 35 °C |
| Relative humidity        | Min. =30 %, Max. = 60 %    |
| Shielding effectiveness  | > 100 dB                   |
| Electrical insulation    | > 10 kΩ                    |
| Ground system resistance | < 0.5 Ω                    |

**Fully-anechoic chamber1** (9.8 meters×6.7 meters×6.7 meters) did not exceed following limits along the EMC testing:

|                            |                                        |
|----------------------------|----------------------------------------|
| Temperature                | Min. = 15 °C, Max. = 35 °C             |
| Relative humidity          | Min. = 25 %, Max. = 75 %               |
| Shielding effectiveness    | > 100 dB                               |
| Electrical insulation      | > 10 kΩ                                |
| Ground system resistance   | < 0.5 Ω                                |
| VSWR                       | Between 0 and 6 dB, from 1GHz to 18GHz |
| Site Attenuation Deviation | Between -4 and 4 dB,30MHz to 1GHz      |

### 5.3 Measurement Uncertainty

Measurement Uncertainty of Conduction test

| Measurement Items              | Range        | Confidence Level | Calculated Uncertainty                   |
|--------------------------------|--------------|------------------|------------------------------------------|
| Emission Bandwidth             | 5150-5850MHz | 95%              | ±1.9%                                    |
| Maximum Conduct Output Power   | 5150-5850MHz | 95%              | ± 1.18 dB                                |
| Power Spectral Density         | 5150-5850MHz | 95%              | ±0.98 dB                                 |
| Band Edge Measurements         | 5150-5850MHz | 95%              | ±1.21dB                                  |
| Unwanted Emissions Measurement | 9kHz-40GHz   | 95%              | 9kHz-7GHz:±1.21dB<br>7GHz-40GHz: ±3.31dB |

|                     |              |     |       |
|---------------------|--------------|-----|-------|
| Frequency Stability | 5150-5850MHz | 95% | ±1.9% |
|---------------------|--------------|-----|-------|

**Measurement Uncertainty of Radiation test**

| Measurement Items                                                                                                                                | Uncertainty(dB) |
|--------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| Radiated Emission 30MHz-1000MHz                                                                                                                  | ±5.10           |
| Radiated Emission 1000MHz-18000MHz                                                                                                               | ±5.66           |
| Radiated Emission 18000MHz-40000MHz                                                                                                              | ±5.22           |
| AC Powerline Conducted Emission                                                                                                                  | ±4.38           |
| Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$ . |                 |

## 6. Measurement Results

### 6.1. Duty Cycle

#### 6.1.1. Measurement Limit and Method

| Standard                  | Limit (dBm) |
|---------------------------|-------------|
| FCC 47 CFR Part 15.407(a) | N/A         |
| RSS-247 6.2               | N/A         |

#### 6.1.2. Test Procedure

The measurement method is made according to KDB 789033 B

Measurements of duty cycle and transmission duration shall be performed using one of the following techniques:

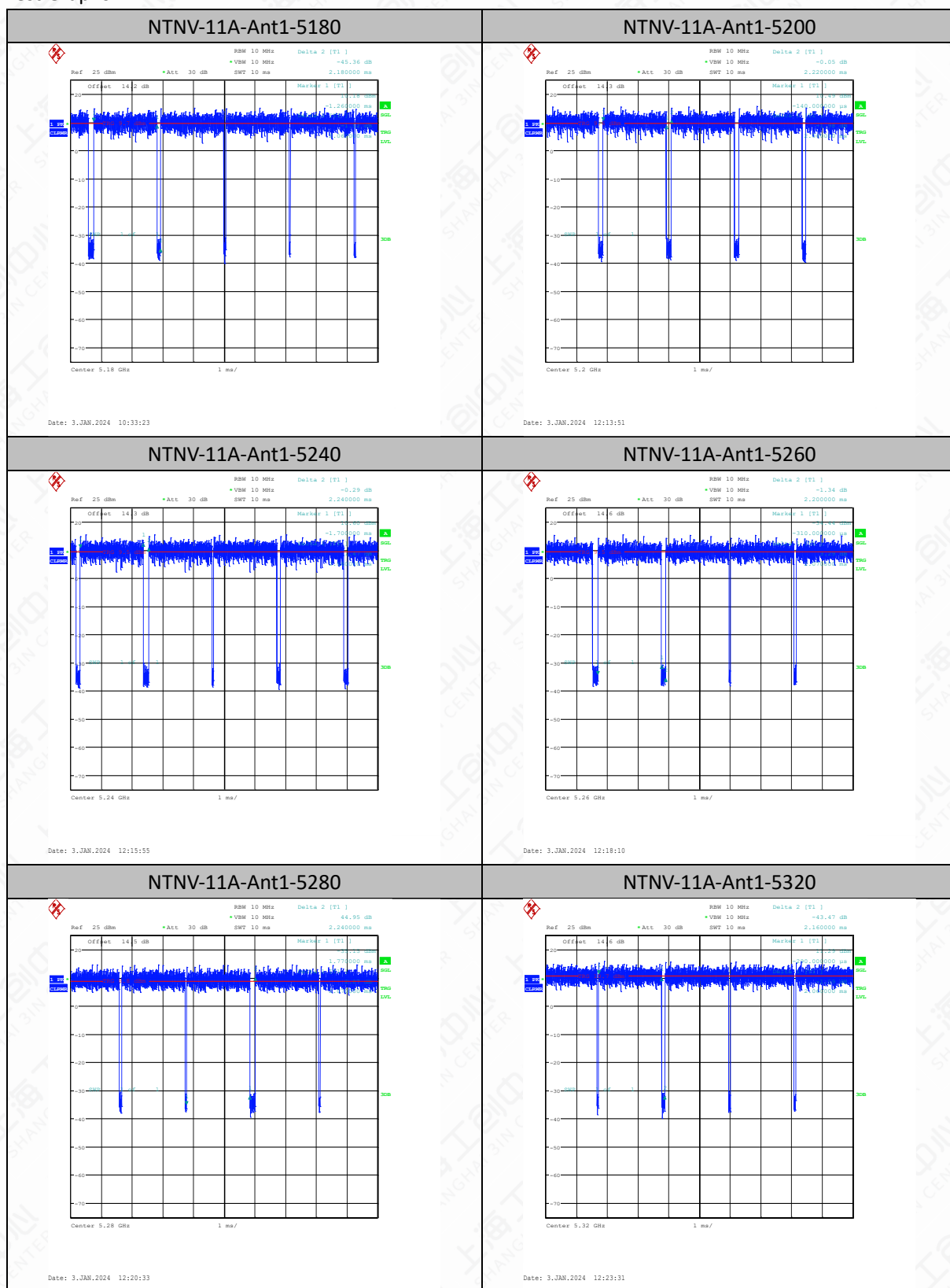
- A diode detector and an oscilloscope that together have sufficiently short response time to permit accurate measurements of the on and off times of the transmitted signal.
- The zero-span mode on a spectrum analyzer or EMI receiver, if the response time and spacing between bins on the sweep are sufficient to permit accurate measurements of the on and off times of the transmitted signal. Set the center frequency of the instrument to the center frequency of the transmission, Set RBW > EBW if possible; otherwise, set RBW to the largest available value. Set VBW > RBW. Set detector = peak or average. The zero-span measurement method shall not be used unless both RBW and VBW are > 50/T, where T is defined in II.B.1.a), and the number of sweep points across duration T exceeds 100. (For example, if VBW and/or RBW are limited to 3 MHz, then the zero-span method of measuring duty cycle shall not be used if  $T < 16.7$  microseconds.)

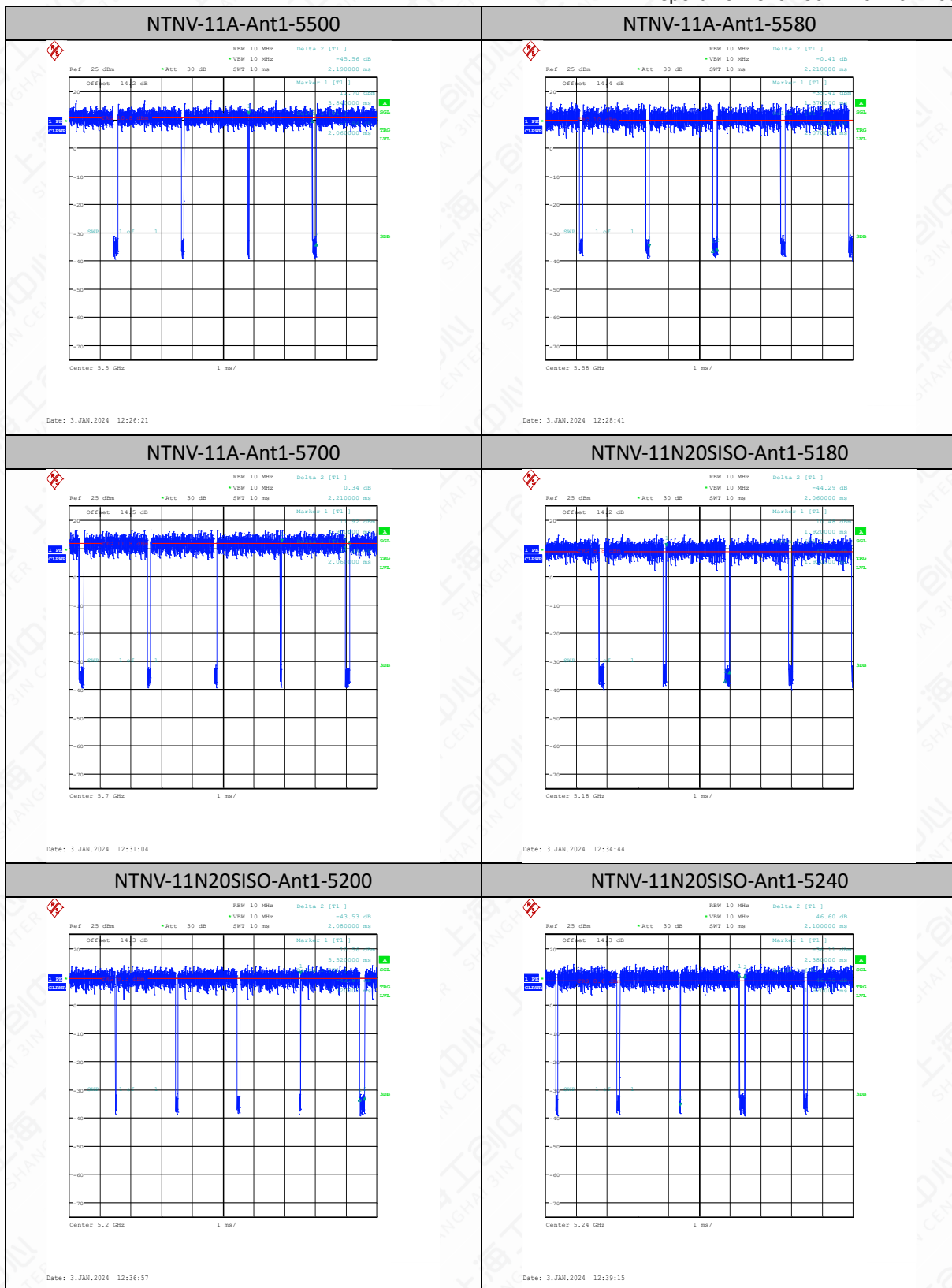
#### 6.1.3. Measurement Results

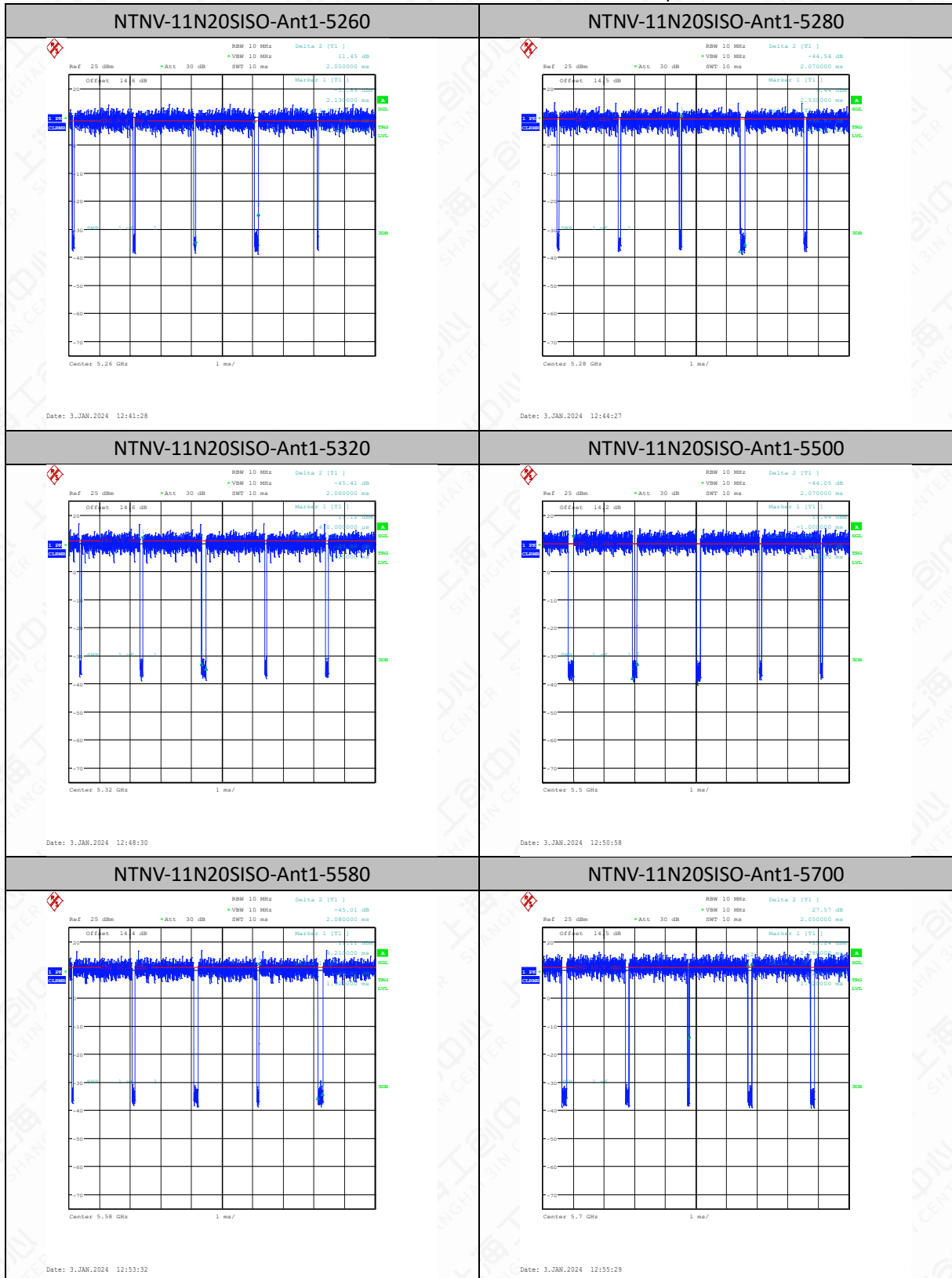
| Test Mode | Antenna | Frequency [MHz] | Transmission Duration [ms] | Transmission Period [ms] | Duty Cycle [%] |
|-----------|---------|-----------------|----------------------------|--------------------------|----------------|
| 11A       | Ant1    | 5180            | 2.06                       | 2.18                     | 94.50          |
| 11A       | Ant1    | 5200            | 2.06                       | 2.22                     | 92.79          |
| 11A       | Ant1    | 5240            | 2.06                       | 2.24                     | 91.96          |
| 11A       | Ant1    | 5260            | 2.07                       | 2.20                     | 94.09          |
| 11A       | Ant1    | 5280            | 2.07                       | 2.24                     | 92.41          |
| 11A       | Ant1    | 5320            | 2.06                       | 2.16                     | 95.37          |
| 11A       | Ant1    | 5500            | 2.06                       | 2.19                     | 94.06          |
| 11A       | Ant1    | 5580            | 2.07                       | 2.21                     | 93.67          |
| 11A       | Ant1    | 5700            | 2.06                       | 2.21                     | 93.21          |
| 11N20SISO | Ant1    | 5180            | 1.92                       | 2.06                     | 93.20          |
| 11N20SISO | Ant1    | 5200            | 1.92                       | 2.08                     | 92.31          |
| 11N20SISO | Ant1    | 5240            | 1.92                       | 2.10                     | 91.43          |

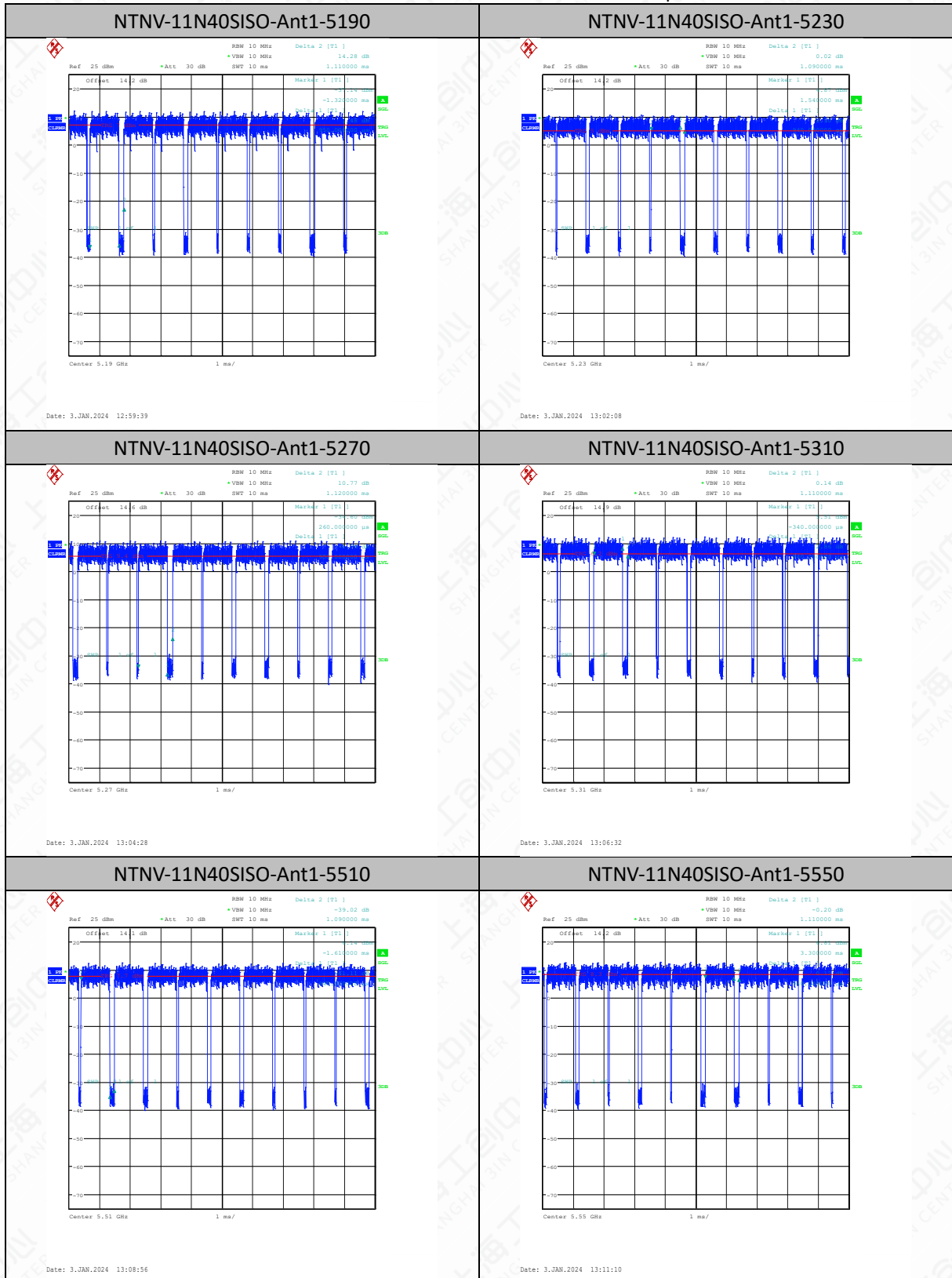
|            |      |      |      |      |       |
|------------|------|------|------|------|-------|
| 11N20SISO  | Ant1 | 5260 | 1.92 | 2.05 | 93.66 |
| 11N20SISO  | Ant1 | 5280 | 1.92 | 2.07 | 92.75 |
| 11N20SISO  | Ant1 | 5320 | 1.92 | 2.06 | 93.20 |
| 11N20SISO  | Ant1 | 5500 | 1.92 | 2.07 | 92.75 |
| 11N20SISO  | Ant1 | 5580 | 1.92 | 2.08 | 92.31 |
| 11N20SISO  | Ant1 | 5700 | 1.92 | 2.05 | 93.66 |
| 11N40SISO  | Ant1 | 5190 | 0.95 | 1.11 | 85.59 |
| 11N40SISO  | Ant1 | 5230 | 0.94 | 1.09 | 86.24 |
| 11N40SISO  | Ant1 | 5270 | 0.95 | 1.12 | 84.82 |
| 11N40SISO  | Ant1 | 5310 | 0.94 | 1.11 | 84.68 |
| 11N40SISO  | Ant1 | 5510 | 0.94 | 1.09 | 86.24 |
| 11N40SISO  | Ant1 | 5550 | 0.94 | 1.11 | 84.68 |
| 11N40SISO  | Ant1 | 5670 | 0.94 | 1.09 | 86.24 |
| 11AC20SISO | Ant1 | 5180 | 1.93 | 2.08 | 92.79 |
| 11AC20SISO | Ant1 | 5200 | 1.94 | 2.11 | 91.94 |
| 11AC20SISO | Ant1 | 5240 | 1.93 | 2.10 | 91.90 |
| 11AC20SISO | Ant1 | 5260 | 1.93 | 2.09 | 92.34 |
| 11AC20SISO | Ant1 | 5280 | 1.94 | 2.07 | 93.72 |
| 11AC20SISO | Ant1 | 5320 | 1.93 | 2.00 | 96.50 |
| 11AC20SISO | Ant1 | 5500 | 1.93 | 2.09 | 92.34 |
| 11AC20SISO | Ant1 | 5580 | 1.93 | 2.06 | 93.69 |
| 11AC20SISO | Ant1 | 5700 | 1.93 | 2.08 | 92.79 |
| 11AC40SISO | Ant1 | 5190 | 0.95 | 1.13 | 84.07 |
| 11AC40SISO | Ant1 | 5230 | 0.95 | 1.10 | 86.36 |
| 11AC40SISO | Ant1 | 5270 | 0.95 | 1.11 | 85.59 |
| 11AC40SISO | Ant1 | 5310 | 0.95 | 1.11 | 85.59 |
| 11AC40SISO | Ant1 | 5510 | 0.95 | 1.57 | 60.51 |
| 11AC40SISO | Ant1 | 5550 | 0.95 | 1.11 | 85.59 |
| 11AC40SISO | Ant1 | 5670 | 0.95 | 1.10 | 86.36 |
| 11AC80SISO | Ant1 | 5210 | 0.46 | 0.63 | 73.02 |
| 11AC80SISO | Ant1 | 5290 | 0.46 | 0.63 | 73.02 |
| 11AC80SISO | Ant1 | 5530 | 0.46 | 0.98 | 46.94 |
| 11AC80SISO | Ant1 | 5610 | 0.46 | 0.62 | 74.19 |

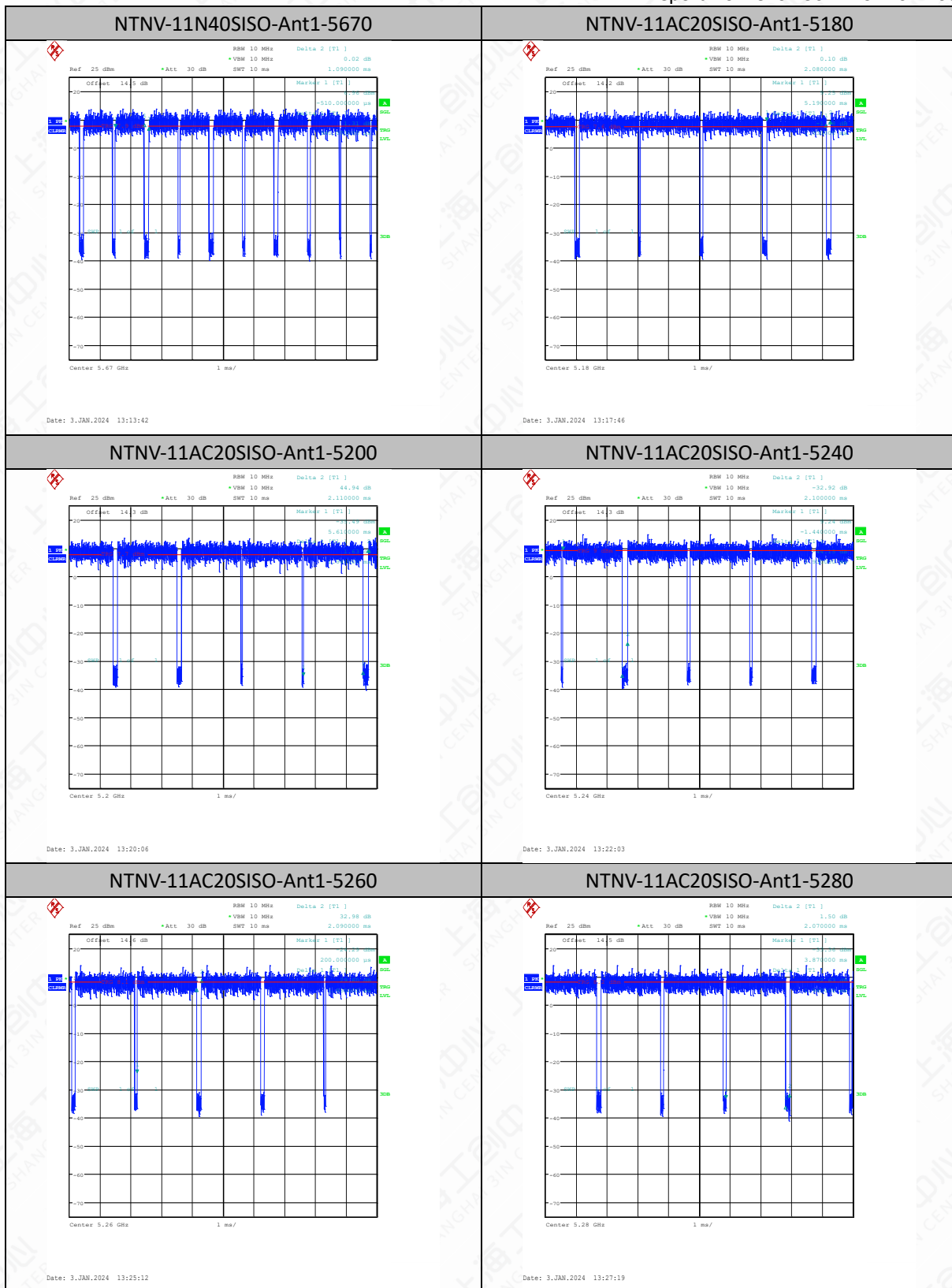
## Test Graphs

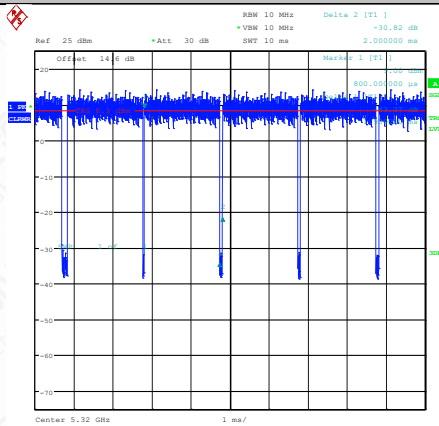




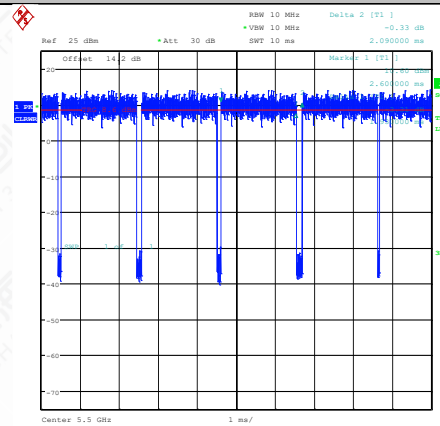




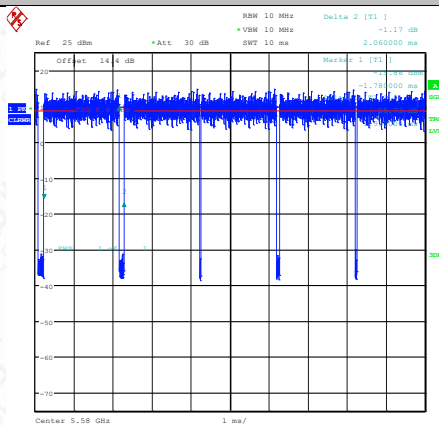


**NTNV-11AC20SISO-Ant1-5320**


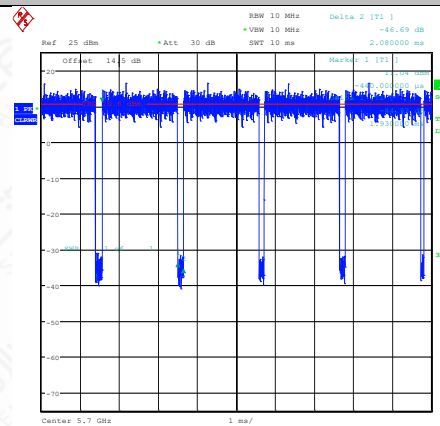
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**NTNV-11AC20SISO-Ant1-5500**


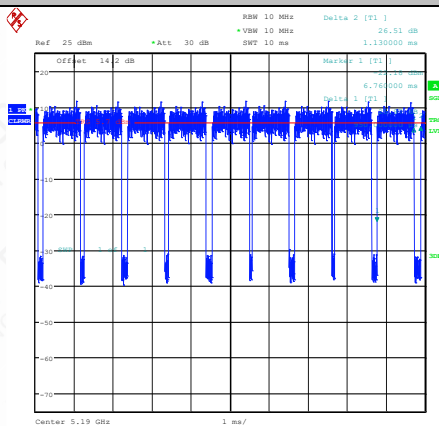
Date: 3.JAN.2024 13:32:39

**NTNV-11AC20SISO-Ant1-5580**


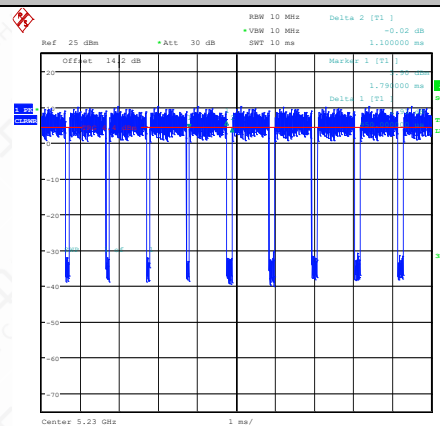
Date: 3.JAN.2024 13:34:55

**NTNV-11AC20SISO-Ant1-5700**


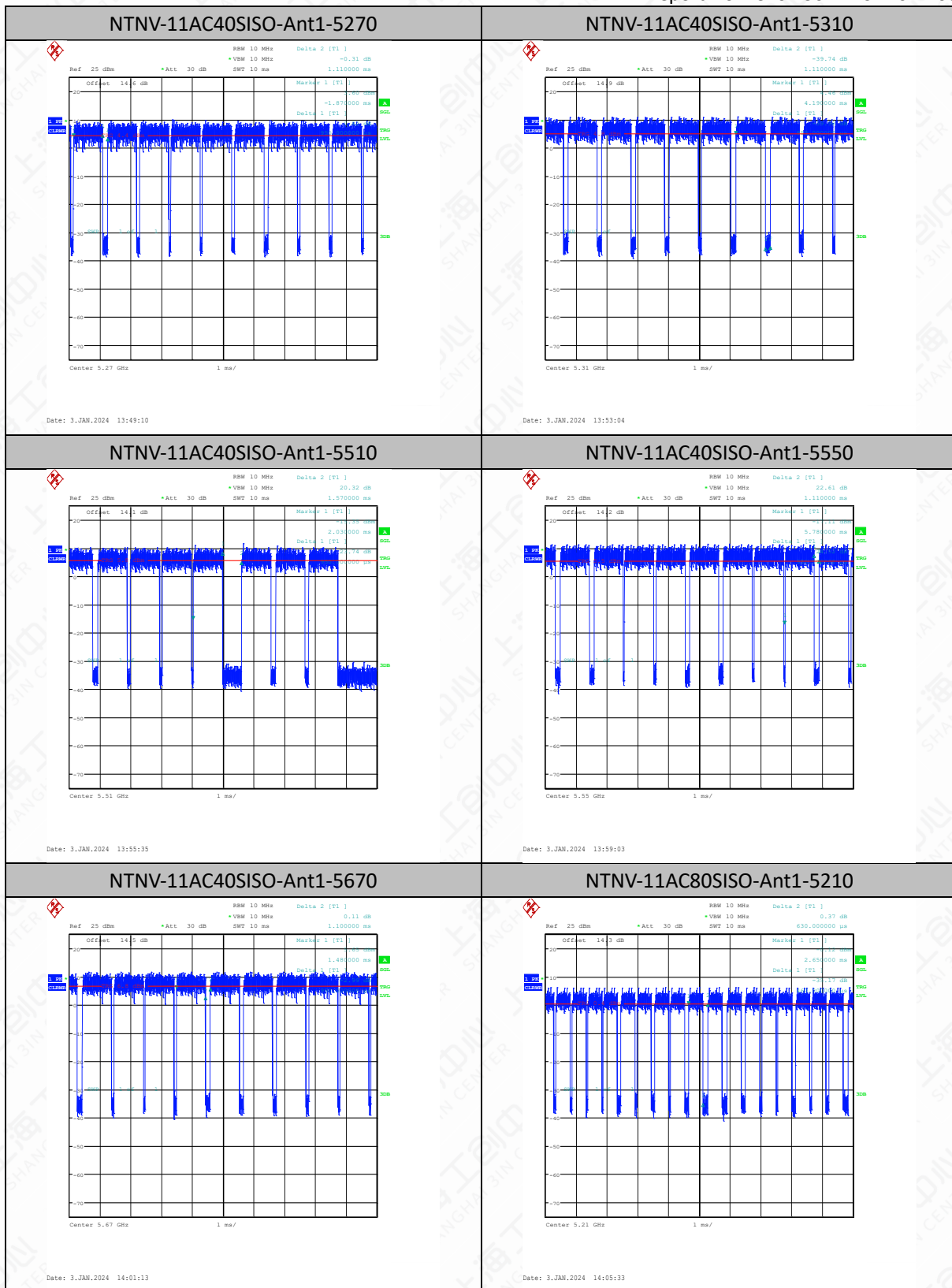
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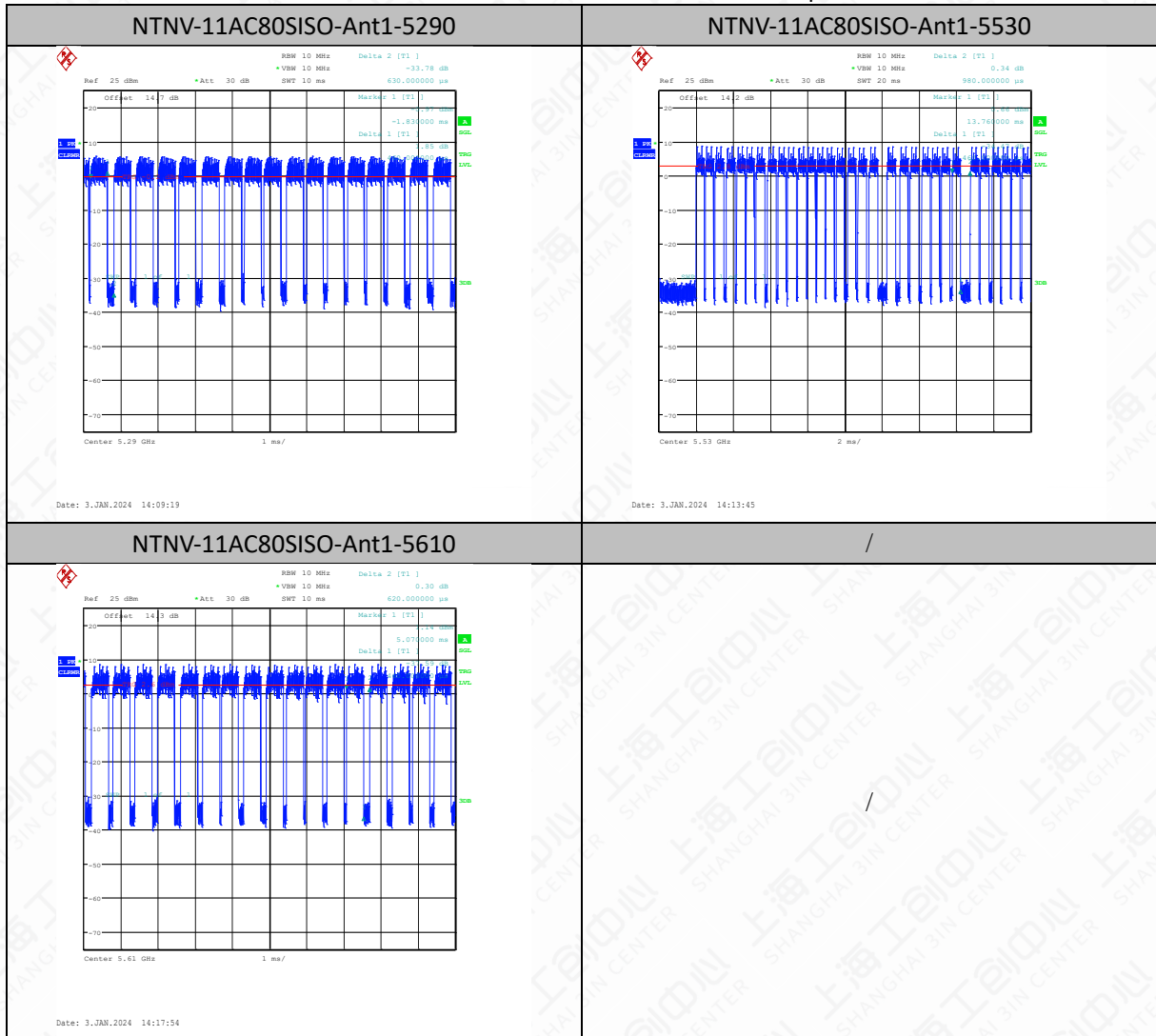
**NTNV-11AC40SISO-Ant1-5190**


Date: 3.JAN.2024 13:42:01

**NTNV-11AC40SISO-Ant1-5230**


Date: 3.JAN.2024 13:44:30





## 6.2. Maximum Output Power-Conducted

### 6.2.1. Measurement Limit and Method

| Standard                         | Limit (dBm)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| FCC 47 CFR Part 15.407(a)(1)(iv) | <p>For client devices in the 5.15–5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi.</p> <p>For the 5.25–5.35 GHz and 5.47–5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.</p>                                                                                                                                                                                                                                                                                                                                                                                                                        |
| RSS-247 6.2                      | <p>5150-5250 MHz:<br/>For other devices, the maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10B, dBm, whichever power is less. B is the 99% emission bandwidth in megahertz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.</p> <p>5250-5350 MHz:<br/>The maximum conducted output power shall not exceed 250 mW or 11 + 10 log10B, dBm, whichever is less. The power spectral density shall not exceed 11 dBm in any 1.0 MHz band. The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log10B, dBm, whichever is less.</p> <p>5470-5600 MHz and 5650-5725 MHz:<br/>The maximum conducted output power shall not exceed 250 mW or 11 + 10 log10B, dBm, whichever is less. The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.</p> <p>The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log10B, dBm, whichever is less. B is the 99% emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum</p> |

### 6.2.2. Test Procedure

The measurement method SA-2 is made according to KDB 789033 E

Method SA-2 (trace averaging across on and off times of the EUT transmissions, followed by duty cycle correction).

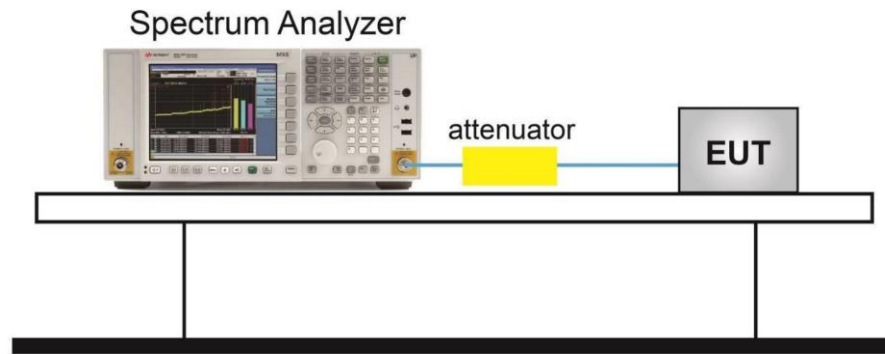
1. Measure the duty cycle, x, of the transmitter output signal as described in II.B.
2. Set span to encompass the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal.
3. Set RBW = 1 MHz. (iv) Set VBW ≥ 3 MHz.
4. Number of points in sweep ≥ 2 × span / RBW. (This ensures that bin-to-bin spacing is ≤ RBW/2, so that narrowband signals are not lost between frequency bins.)
5. Sweep time = auto.
6. Detector = power averaging (rms), if available. Otherwise, use sample detector mode.
7. Do not use sweep triggering. Allow the sweep to “free run.”
8. Trace average at least 100 traces in power averaging (rms) mode; however, the number of traces to be

averaged shall be increased above 100 as needed to ensure that the average accurately represents the true average over the on and off periods of the transmitter.

9. Compute power by integrating the spectrum across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal using the instrument's band power measurement function with band limits set equal to the EBW (or occupied bandwidth) band edges. If the instrument does not have a band power function, sum the spectrum levels (in power units) at 1 MHz intervals extending across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal.

Add  $10 \log(1/x)$ , where  $x$  is the duty cycle, to the measured power to compute the average power during the actual transmission times (because the measurement represents an average over both the on and off times of the transmission). For example, add  $10 \log(1/0.25) = 6 \text{ dB}$  if the duty cycle is 25%

#### 6.2.3. Test setup



#### 6.2.4. Measurement Results

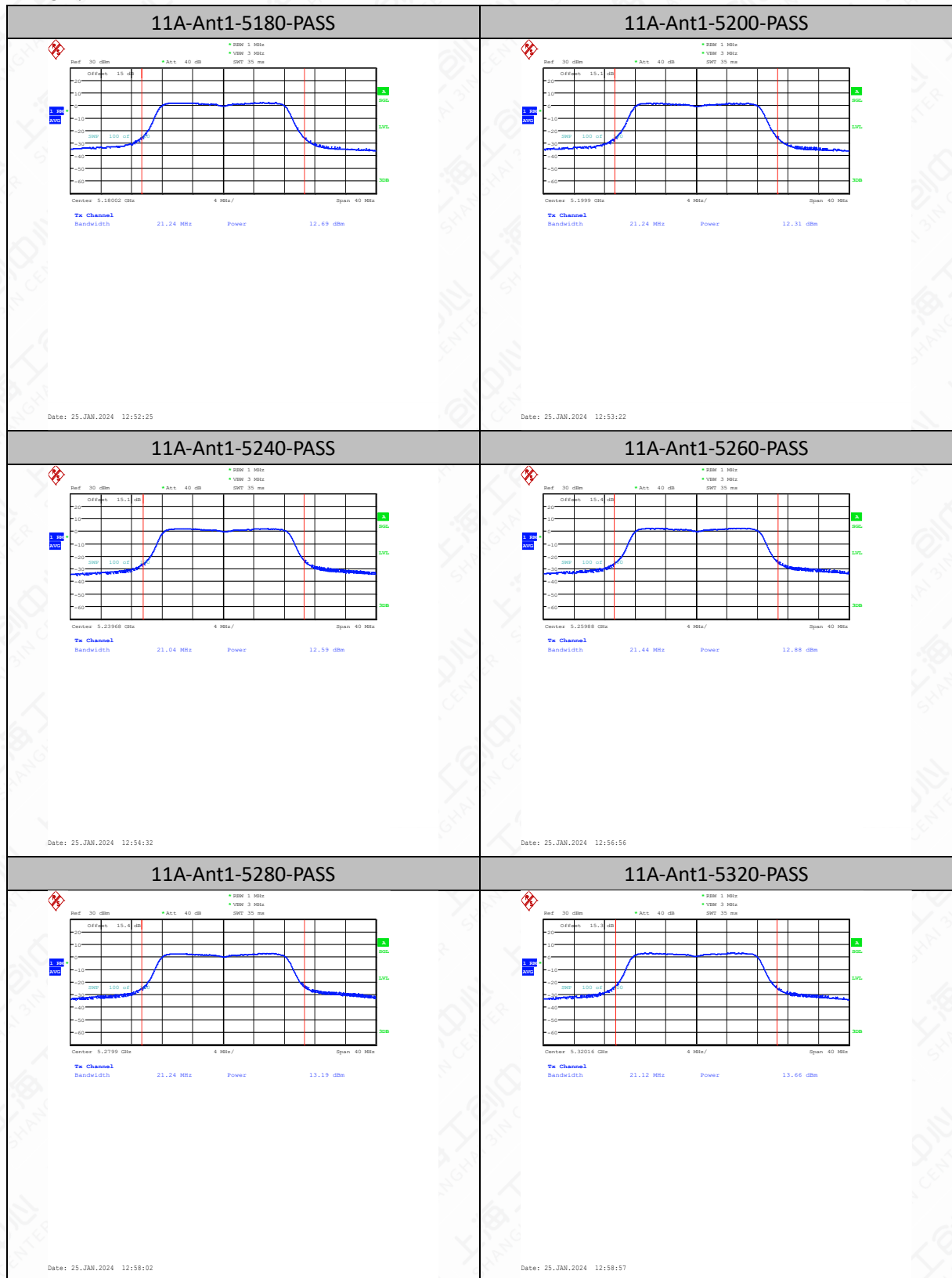
| Test Mode | Frequency [MHz] | Set Power | Channel Power [dBm] | Duty Cycle [%] | DC Factor [dBm] | Result [dBm] | Limit [dBm] | Gain [dBi] | EIRP [dBm] |
|-----------|-----------------|-----------|---------------------|----------------|-----------------|--------------|-------------|------------|------------|
| 11A       | 5180            | 49        | 12.44               | 94.50          | 0.25            | 12.69        | ≤23.98      | 0.78       | 13.47      |
| 11A       | 5200            | 49        | 11.99               | 92.79          | 0.32            | 12.31        | ≤23.98      | 0.78       | 13.09      |
| 11A       | 5240            | 49        | 12.23               | 91.96          | 0.36            | 12.59        | ≤23.98      | 0.78       | 13.37      |
| 11A       | 5260            | 49        | 12.62               | 94.09          | 0.26            | 12.88        | ≤23.98      | 0.88       | 13.76      |
| 11A       | 5280            | 49        | 12.85               | 92.41          | 0.34            | 13.19        | ≤23.98      | 0.88       | 14.07      |
| 11A       | 5320            | 49        | 13.45               | 95.37          | 0.21            | 13.66        | ≤23.98      | 0.88       | 14.54      |
| 11A       | 5500            | 44        | 11.19               | 94.06          | 0.27            | 11.46        | ≤23.98      | 0.93       | 12.39      |
| 11A       | 5580            | 44        | 11.73               | 93.67          | 0.28            | 12.01        | ≤23.98      | 0.93       | 12.94      |
| 11A       | 5700            | 37        | 9.12                | 93.21          | 0.31            | 9.43         | ≤23.98      | 0.93       | 10.36      |
| 11N20SISO | 5180            | 47        | 11.21               | 93.20          | 0.31            | 11.52        | ≤23.98      | 0.78       | 12.3       |
| 11N20SISO | 5200            | 47        | 12.12               | 92.31          | 0.35            | 12.47        | ≤23.98      | 0.78       | 13.25      |
| 11N20SISO | 5240            | 47        | 11.30               | 91.43          | 0.39            | 11.69        | ≤23.98      | 0.78       | 12.47      |
| 11N20SISO | 5260            | 47        | 11.62               | 93.66          | 0.28            | 11.90        | ≤23.98      | 0.88       | 12.78      |
| 11N20SISO | 5280            | 47        | 11.91               | 92.75          | 0.33            | 12.24        | ≤23.98      | 0.88       | 13.12      |
| 11N20SISO | 5320            | 47        | 12.43               | 93.20          | 0.31            | 12.74        | ≤23.98      | 0.88       | 13.62      |

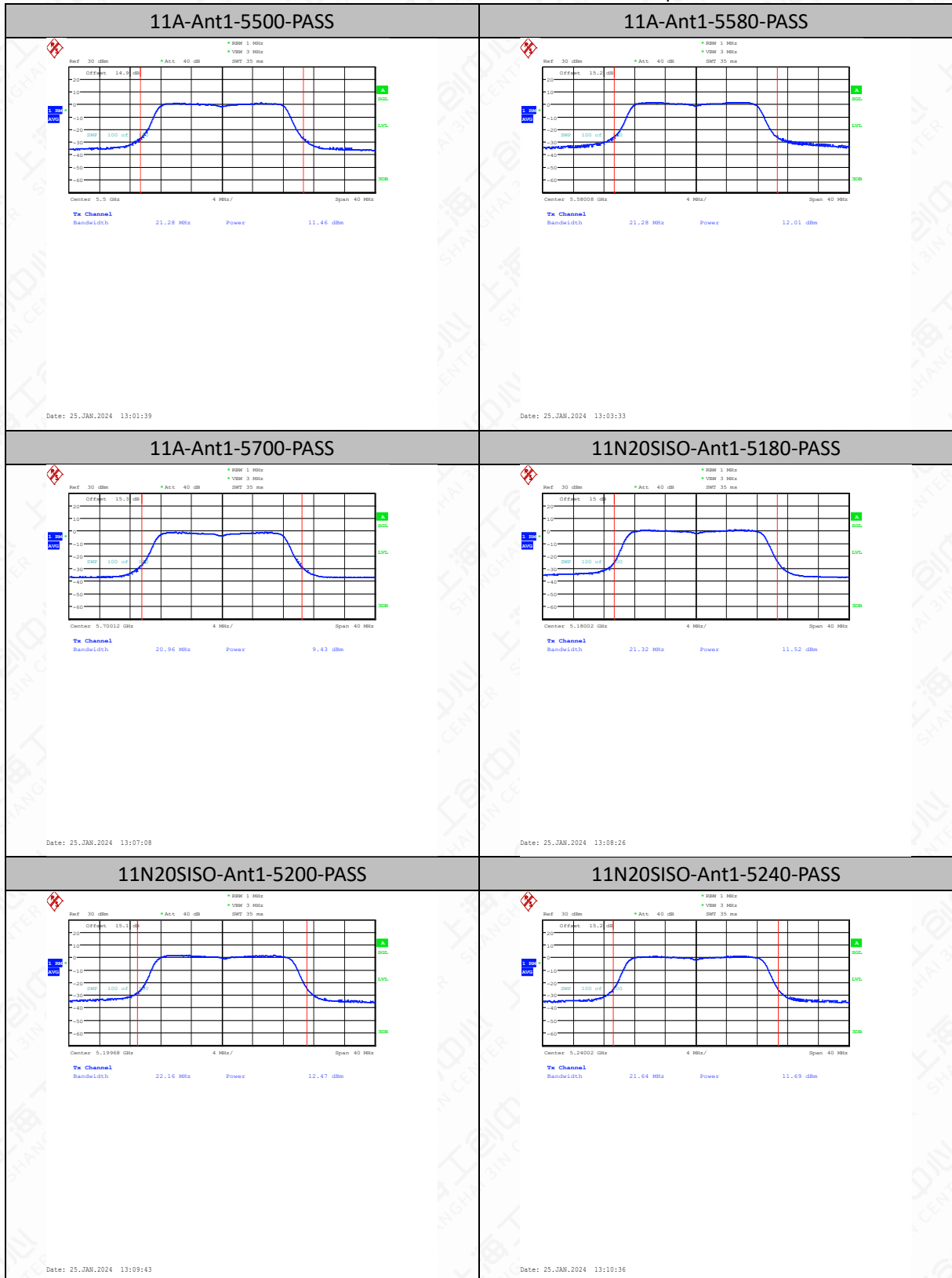
|            |      |    |       |       |      |       |        |      |       |
|------------|------|----|-------|-------|------|-------|--------|------|-------|
| 11N20SISO  | 5500 | 42 | 10.16 | 92.75 | 0.33 | 10.49 | ≤23.98 | 0.93 | 11.42 |
| 11N20SISO  | 5580 | 42 | 10.43 | 92.31 | 0.35 | 10.78 | ≤23.98 | 0.93 | 11.71 |
| 11N20SISO  | 5700 | 38 | 9.66  | 93.66 | 0.28 | 9.94  | ≤23.98 | 0.93 | 10.87 |
| 11N40SISO  | 5190 | 45 | 10.56 | 85.59 | 0.68 | 11.24 | ≤23.98 | 0.78 | 12.02 |
| 11N40SISO  | 5230 | 46 | 11.58 | 86.24 | 0.64 | 12.22 | ≤23.98 | 0.78 | 13    |
| 11N40SISO  | 5270 | 46 | 12.43 | 84.82 | 0.72 | 13.15 | ≤23.98 | 0.88 | 14.03 |
| 11N40SISO  | 5310 | 43 | 11.49 | 84.68 | 0.72 | 12.21 | ≤23.98 | 0.88 | 13.09 |
| 11N40SISO  | 5510 | 31 | 4.30  | 86.24 | 0.64 | 4.94  | ≤23.98 | 0.93 | 5.87  |
| 11N40SISO  | 5550 | 41 | 9.46  | 84.68 | 0.72 | 10.18 | ≤23.98 | 0.93 | 11.11 |
| 11N40SISO  | 5670 | 38 | 9.34  | 86.24 | 0.64 | 9.98  | ≤23.98 | 0.93 | 10.91 |
| 11AC20SISO | 5180 | 45 | 10.38 | 92.79 | 0.32 | 10.70 | ≤23.98 | 0.78 | 11.48 |
| 11AC20SISO | 5200 | 45 | 10.20 | 91.94 | 0.36 | 10.56 | ≤23.98 | 0.78 | 11.34 |
| 11AC20SISO | 5240 | 45 | 10.13 | 91.90 | 0.37 | 10.50 | ≤23.98 | 0.78 | 11.28 |
| 11AC20SISO | 5260 | 45 | 10.61 | 92.34 | 0.35 | 10.96 | ≤23.98 | 0.88 | 11.84 |
| 11AC20SISO | 5280 | 45 | 10.72 | 93.72 | 0.28 | 11.00 | ≤23.98 | 0.88 | 11.88 |
| 11AC20SISO | 5320 | 45 | 12.21 | 96.50 | 0.15 | 12.36 | ≤23.98 | 0.88 | 13.24 |
| 11AC20SISO | 5500 | 40 | 9.00  | 92.34 | 0.35 | 9.35  | ≤23.98 | 0.93 | 10.28 |
| 11AC20SISO | 5580 | 40 | 9.46  | 93.69 | 0.28 | 9.74  | ≤23.98 | 0.93 | 10.67 |
| 11AC20SISO | 5700 | 37 | 9.22  | 92.79 | 0.32 | 9.54  | ≤23.98 | 0.93 | 10.47 |
| 11AC40SISO | 5190 | 42 | 9.03  | 84.07 | 0.75 | 9.78  | ≤23.98 | 0.78 | 10.56 |
| 11AC40SISO | 5230 | 42 | 8.63  | 86.36 | 0.64 | 9.27  | ≤23.98 | 0.78 | 10.05 |
| 11AC40SISO | 5270 | 42 | 9.42  | 85.59 | 0.68 | 10.10 | ≤23.98 | 0.88 | 10.98 |
| 11AC40SISO | 5310 | 42 | 10.46 | 85.59 | 0.68 | 11.14 | ≤23.98 | 0.88 | 12.02 |
| 11AC40SISO | 5510 | 32 | 4.65  | 60.51 | 2.18 | 6.83  | ≤23.98 | 0.93 | 7.76  |
| 11AC40SISO | 5550 | 40 | 8.23  | 85.59 | 0.68 | 8.91  | ≤23.98 | 0.93 | 9.84  |
| 11AC40SISO | 5670 | 39 | 10.56 | 86.36 | 0.64 | 11.20 | ≤23.98 | 0.93 | 12.13 |
| 11AC80SISO | 5210 | 42 | 8.79  | 73.02 | 1.37 | 10.16 | ≤23.98 | 0.78 | 10.94 |
| 11AC80SISO | 5290 | 42 | 9.84  | 73.02 | 1.37 | 11.21 | ≤23.98 | 0.88 | 12.09 |
| 11AC80SISO | 5530 | 31 | 4.33  | 46.94 | 3.28 | 7.61  | ≤23.98 | 0.93 | 8.54  |
| 11AC80SISO | 5610 | 39 | 8.51  | 74.19 | 1.30 | 9.81  | ≤23.98 | 0.93 | 10.74 |

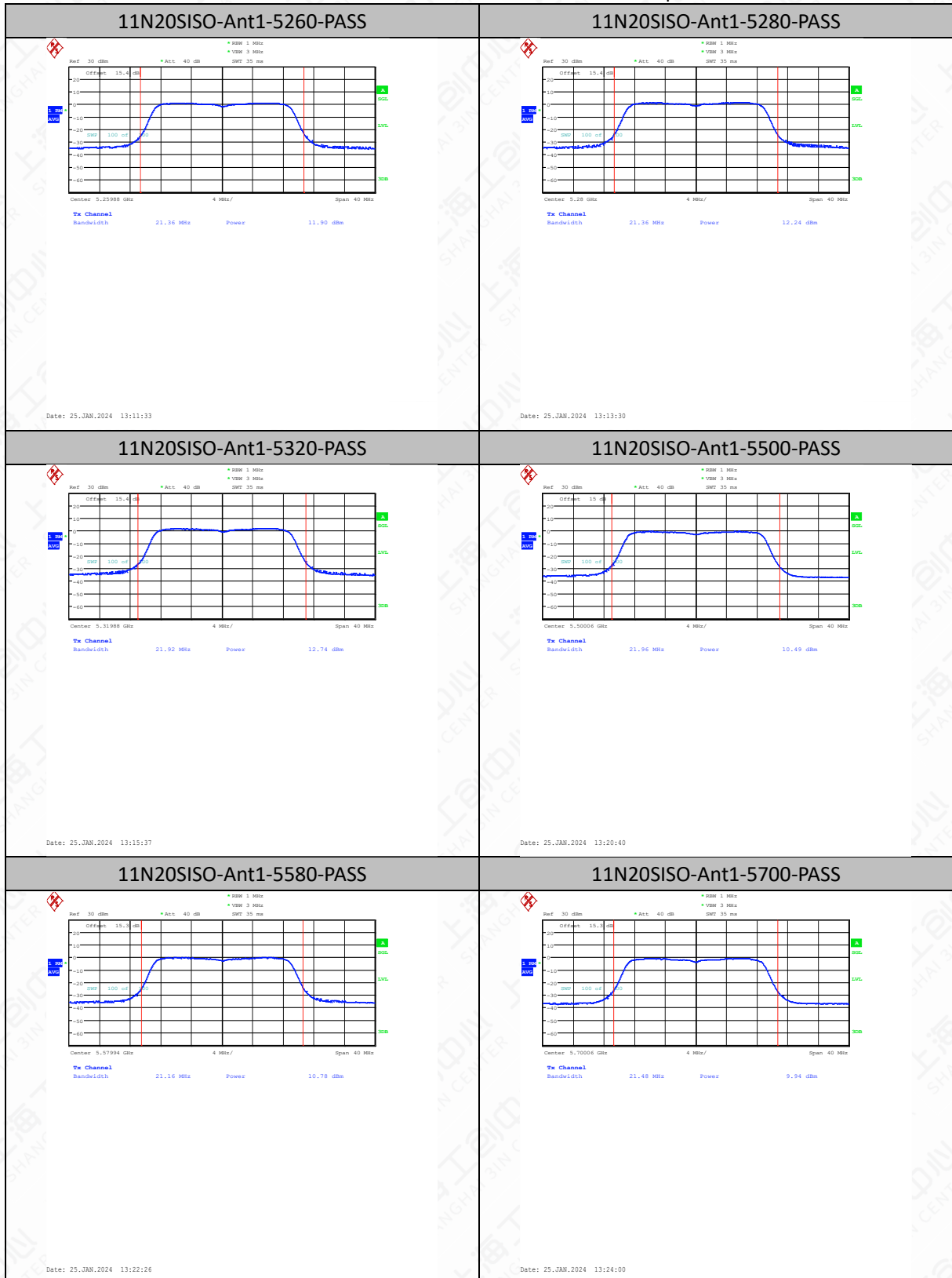
**Note:**

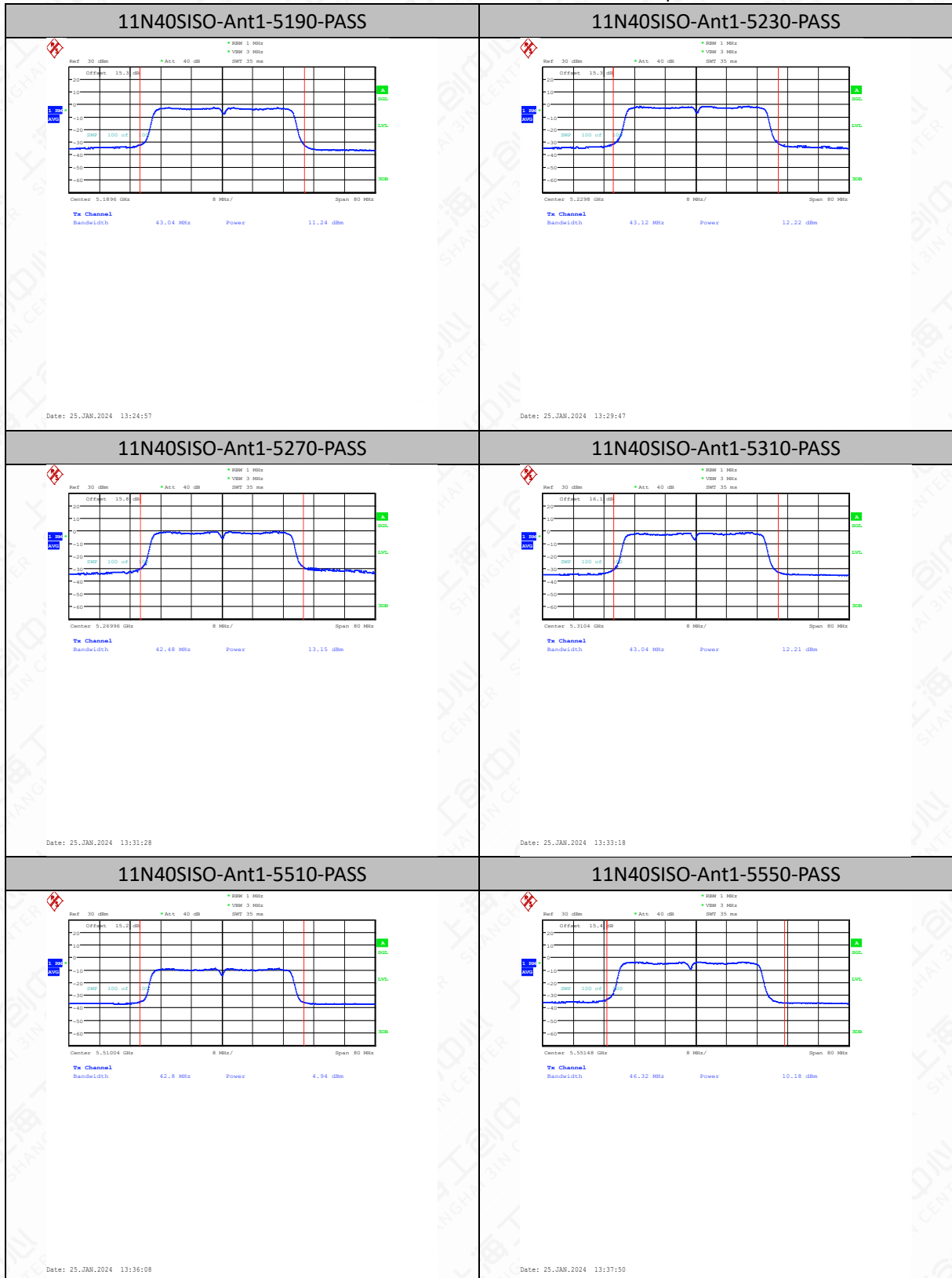
- 1.The Duty Cycle Factor is compensated in the graph.
2. In the graph, the Center frequency = (Low frequency of 26dB OBW + High frequency of 26dB OBW) /2.
- 3.The 11a data rate 6Mbps is selected as worse condition, 11n/11ac data rate MCS0 is selected as worse condition, and the following cases are performed with this condition.
4. For client devices in the 5.15–5.25 GHz band, Limit =250mW; For the 5.25–5.35 GHz and 5.47–5.725 GHz bands: Limit = Min (250mW, 11dBm+10log B), B is the 26 dB emission bandwidth in megahertz.

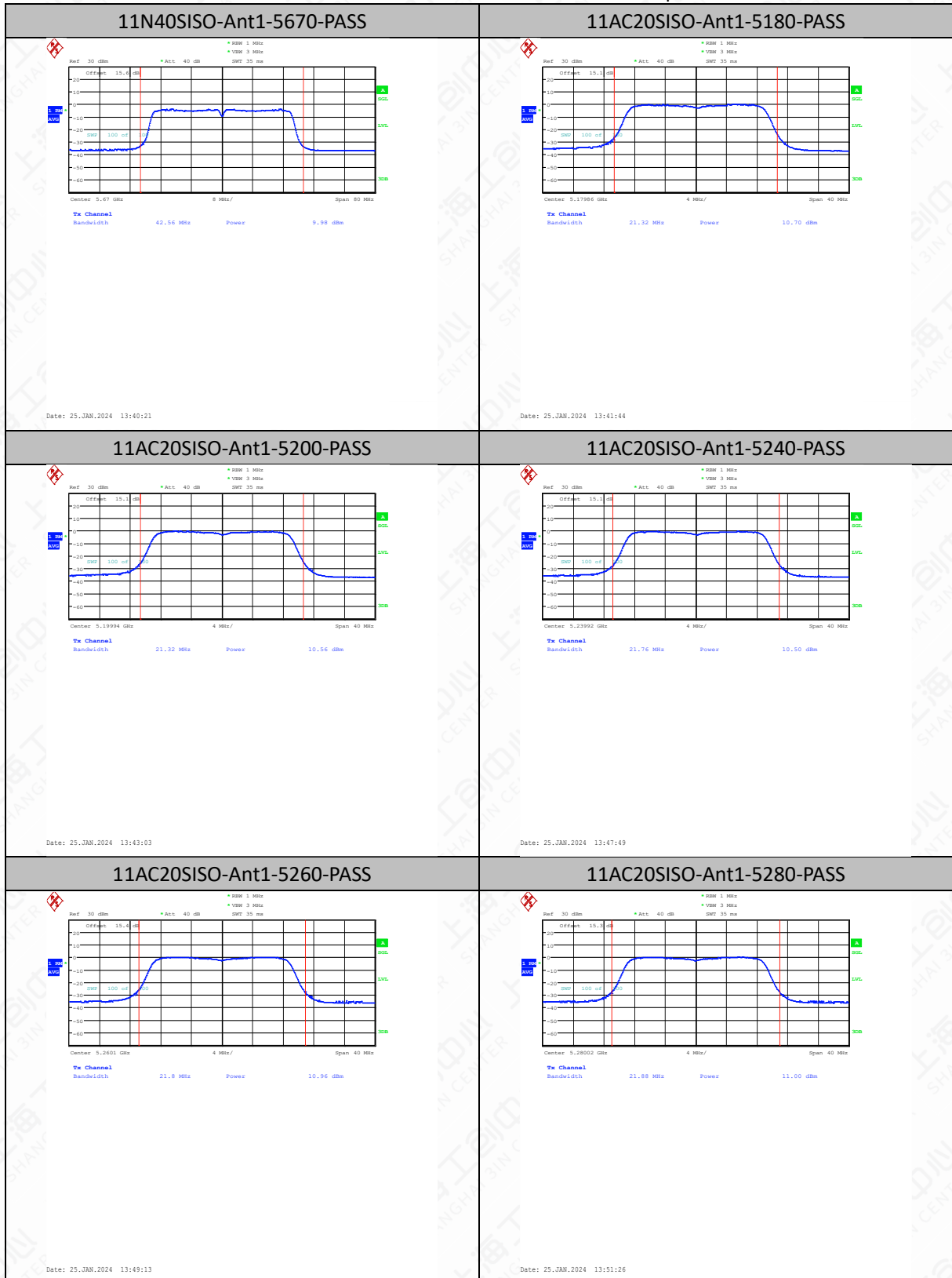
Test graphs

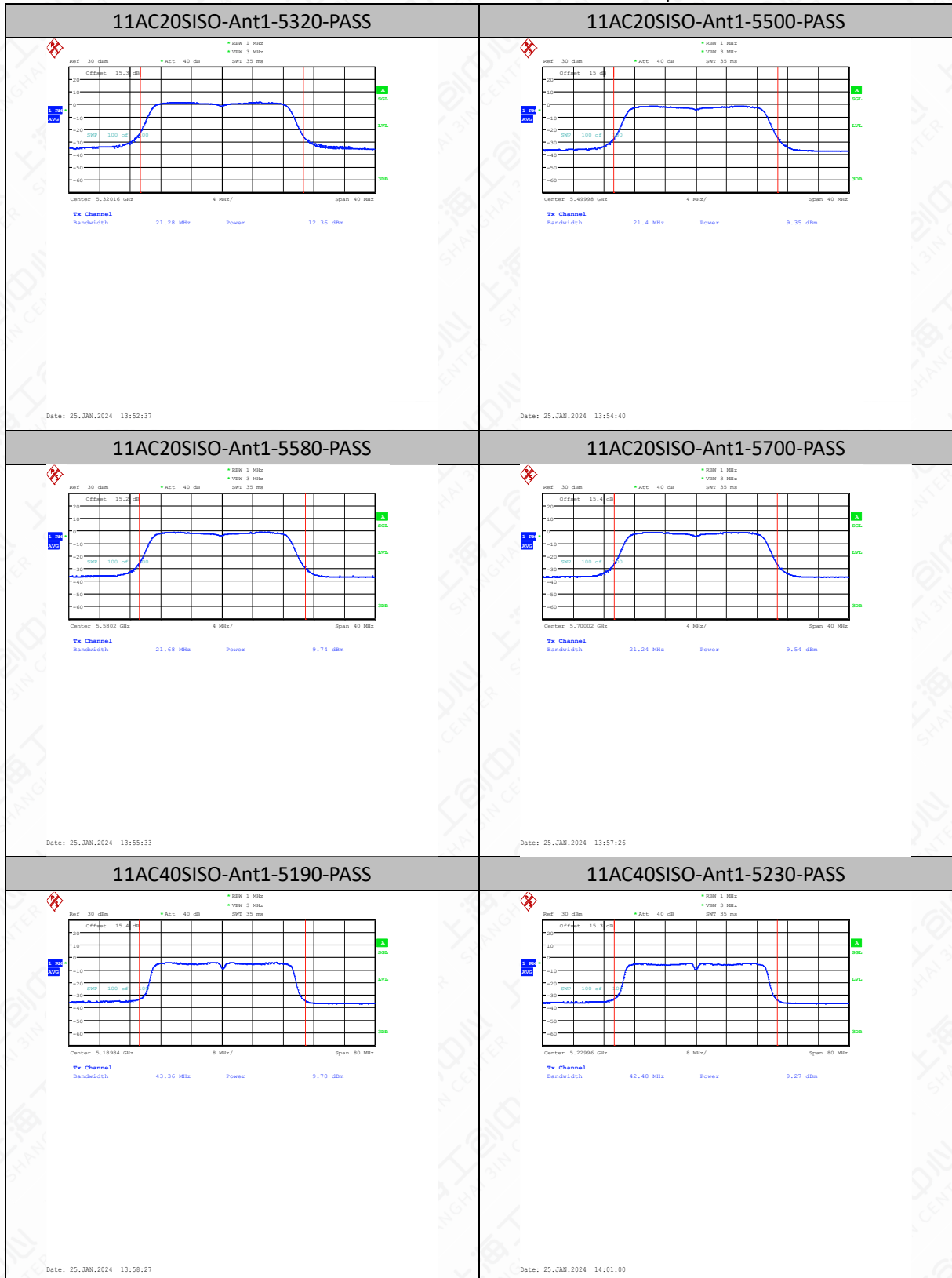


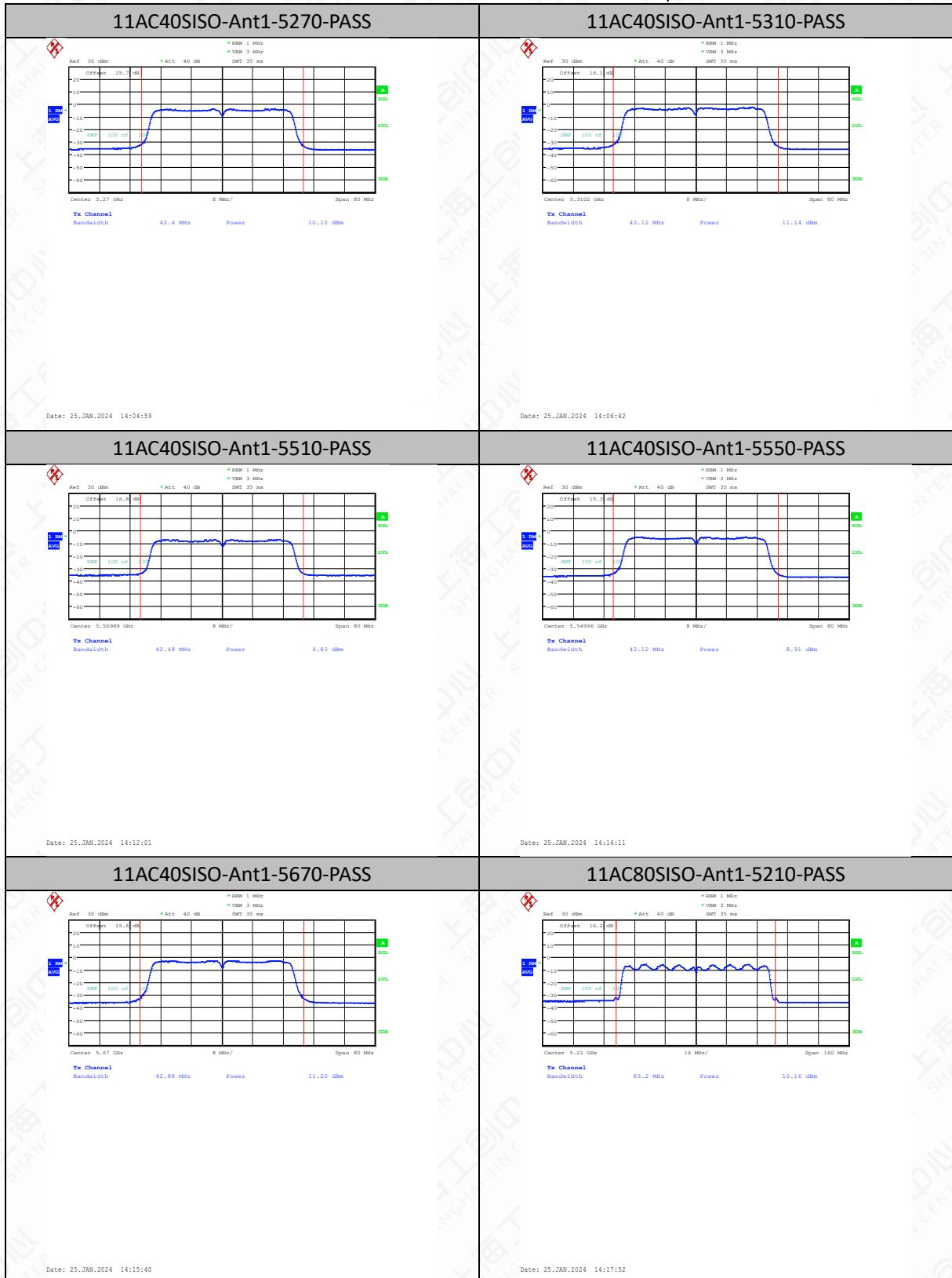


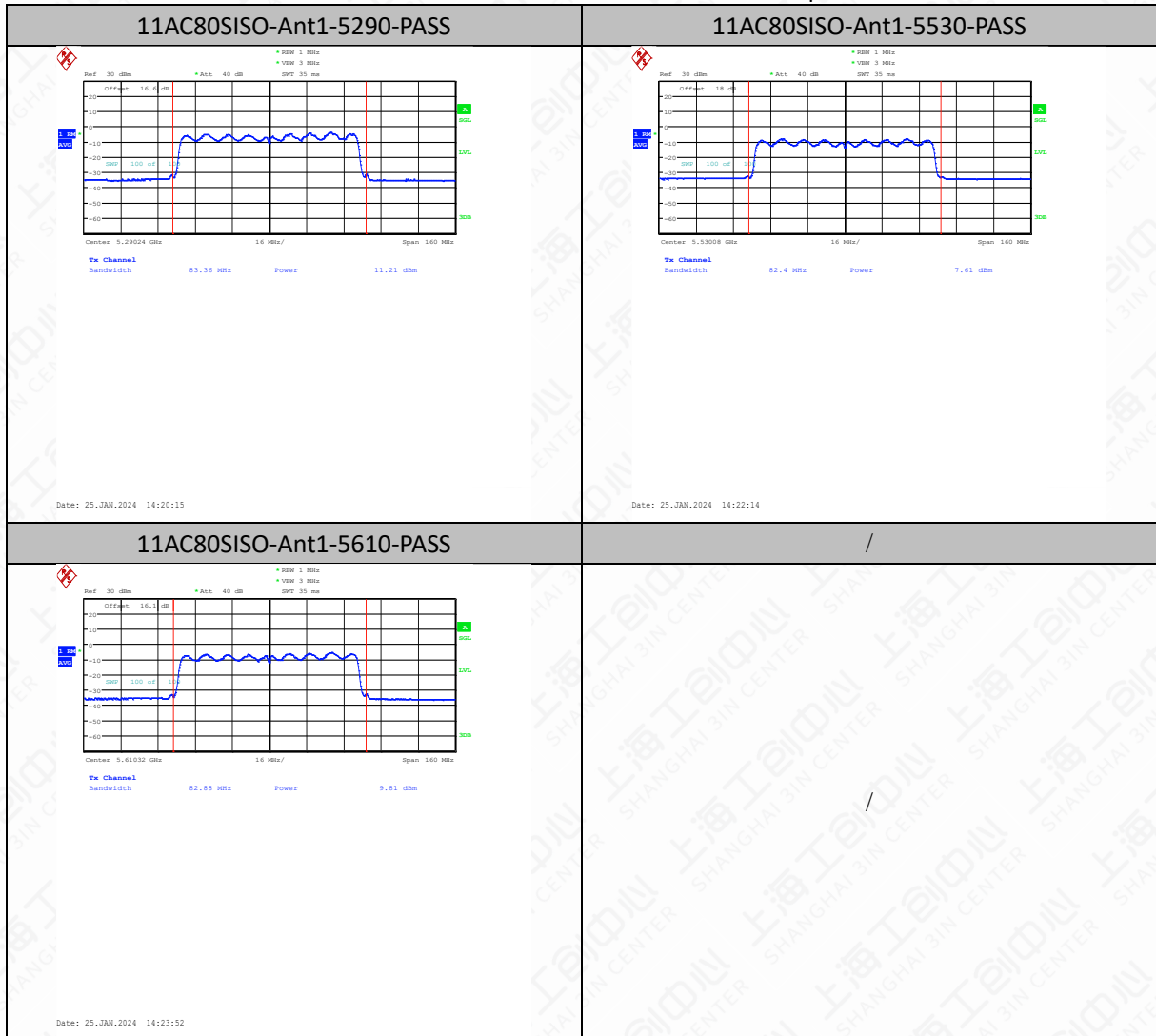












### 6.3. Peak Power Spectral Density

#### 6.3.1. Measurement Limit

| Standard                         | Limit (dBm)                                                                                                                                                                                                                                                                                              |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| FCC 47 CFR Part 15.407(a)(1)(iv) | $\leq 11$                                                                                                                                                                                                                                                                                                |
| RSS-247 6.2                      | 5150-5250 MHz:<br>The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.<br>5250-5350 MHz:<br>The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.<br>5470-5600 MHz and 5650-5725 MHz:<br>The power spectral density shall not exceed 11 dBm in any 1.0 MHz band. |

#### 6.3.2. Test Procedure

The measurement method is made according to KDB 789033 F

- Create an average power spectrum for the EUT operating mode being tested by following the instructions in II.E.2. for measuring maximum conducted output power using a spectrum analyzer or EMI receiver: select the appropriate test method (SA-1, SA-2, SA-3, or alternatives to each) and apply it up to, but not including, the step labeled, "Compute power...." (This procedure is required even if the maximum conducted output power measurement was performed using a power meter, method PM.)
- Use the peak search function on the instrument to find the peak of the spectrum and record its value.
- Make the following adjustments to the peak value of the spectrum, if applicable:
  - If Method SA-2 or SA-2 Alternative was used, add  $10 \log (1/x)$ , where  $x$  is the duty cycle, to the peak of the spectrum.
  - If Method SA-3 Alternative was used and the linear mode was used in step II.E.2.g)(viii), add 1 dB to the final result to compensate for the difference between linear averaging and power averaging.
- The result is the Maximum PSD over 1 MHz reference bandwidth.
- For devices operating in the bands 5.15-5.25 GHz, 5.25-5.35 GHz, and 5.47-5.725 GHz, the above procedures make use of 1 MHz RBW to satisfy directly the 1 MHz reference bandwidth specified in Section 15.407(a)(5). For devices operating in the band 5.725-5.85 GHz, the rules specify a measurement bandwidth of 500 kHz. Many spectrum analyzers do not have 500 kHz RBW, thus a narrower RBW may need to be used. The rules permit the use of a RBWs less than 1 MHz, or 500 kHz, "provided that the measured power is integrated over the full reference bandwidth" to show the total power over the

specified measurement bandwidth (i.e., 1 MHz, or 500 kHz). If measurements are performed using a reduced resolution bandwidth (< 1 MHz, or < 500 kHz) and integrated over 1 MHz, or 500 kHz bandwidth, the following adjustments to the procedures apply:

a) Set RBW  $\geq 1/T$ , where  $T$  is defined in II.B.I.a).

b) Set VBW  $\geq 3$  RBW.

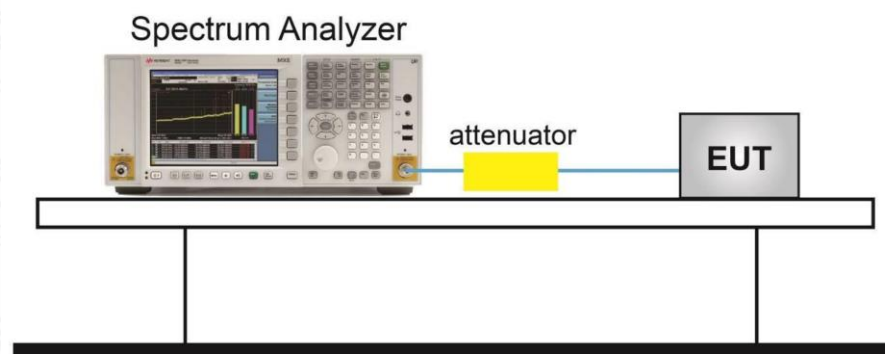
c) If measurement bandwidth of Maximum PSD is specified in 500 kHz, add  $10 \log (500 \text{ kHz}/\text{RBW})$  to the measured result, whereas RBW (<500 kHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement.

d) If measurement bandwidth of Maximum PSD is specified in 1 MHz, add  $10 \log (1\text{MHz}/\text{RBW})$  to the measured result, whereas RBW (< 1 MHz) is the reduced resolution bandwidth of spectrum analyzer set during measurement.

e) Care must be taken to ensure that the measurements are performed during a period of continuous transmission or are corrected upward for duty cycle.

Note: As a practical matter, it is recommended to use reduced RBW of 100 kHz for steps 5.c) and 5.d) above, since RBW=100 KHZ is available on nearly all spectrum analyzers.

### 6.3.3. Test setup



### 6.3.4. Measurement Results

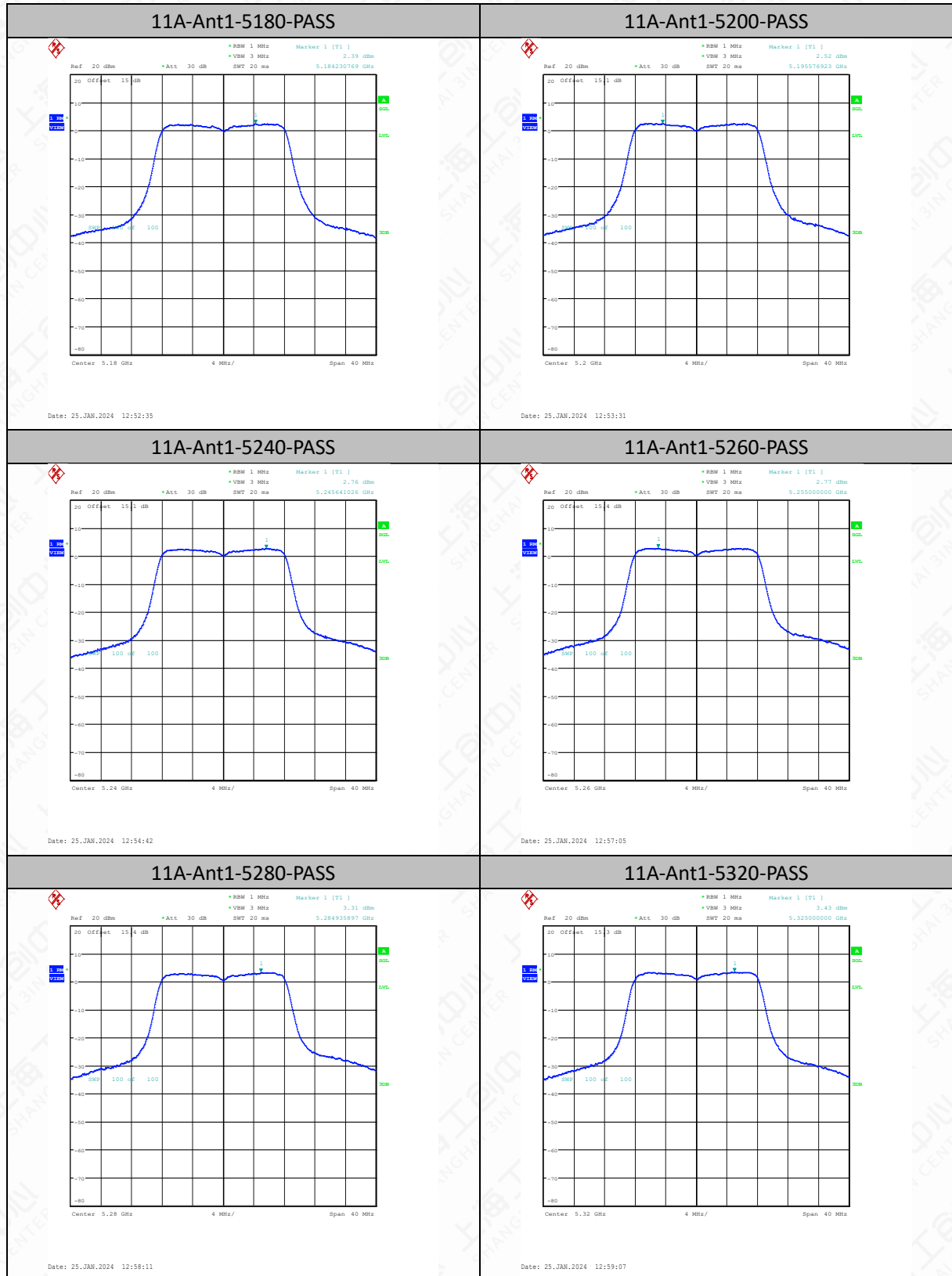
| TestMode | Antenna | Frequency[MHz] | Result [dBm/MHz] | Limit[dBm/MHz] | Verdict |
|----------|---------|----------------|------------------|----------------|---------|
| 11A      | Ant1    | 5180           | 2.39             | $\leq 11.00$   | PASS    |
| 11A      | Ant1    | 5200           | 2.52             | $\leq 11.00$   | PASS    |
| 11A      | Ant1    | 5240           | 2.76             | $\leq 11.00$   | PASS    |
| 11A      | Ant1    | 5260           | 2.77             | $\leq 11.00$   | PASS    |
| 11A      | Ant1    | 5280           | 3.31             | $\leq 11.00$   | PASS    |
| 11A      | Ant1    | 5320           | 3.43             | $\leq 11.00$   | PASS    |
| 11A      | Ant1    | 5500           | 1.48             | $\leq 11.00$   | PASS    |
| 11A      | Ant1    | 5580           | 1.32             | $\leq 11.00$   | PASS    |

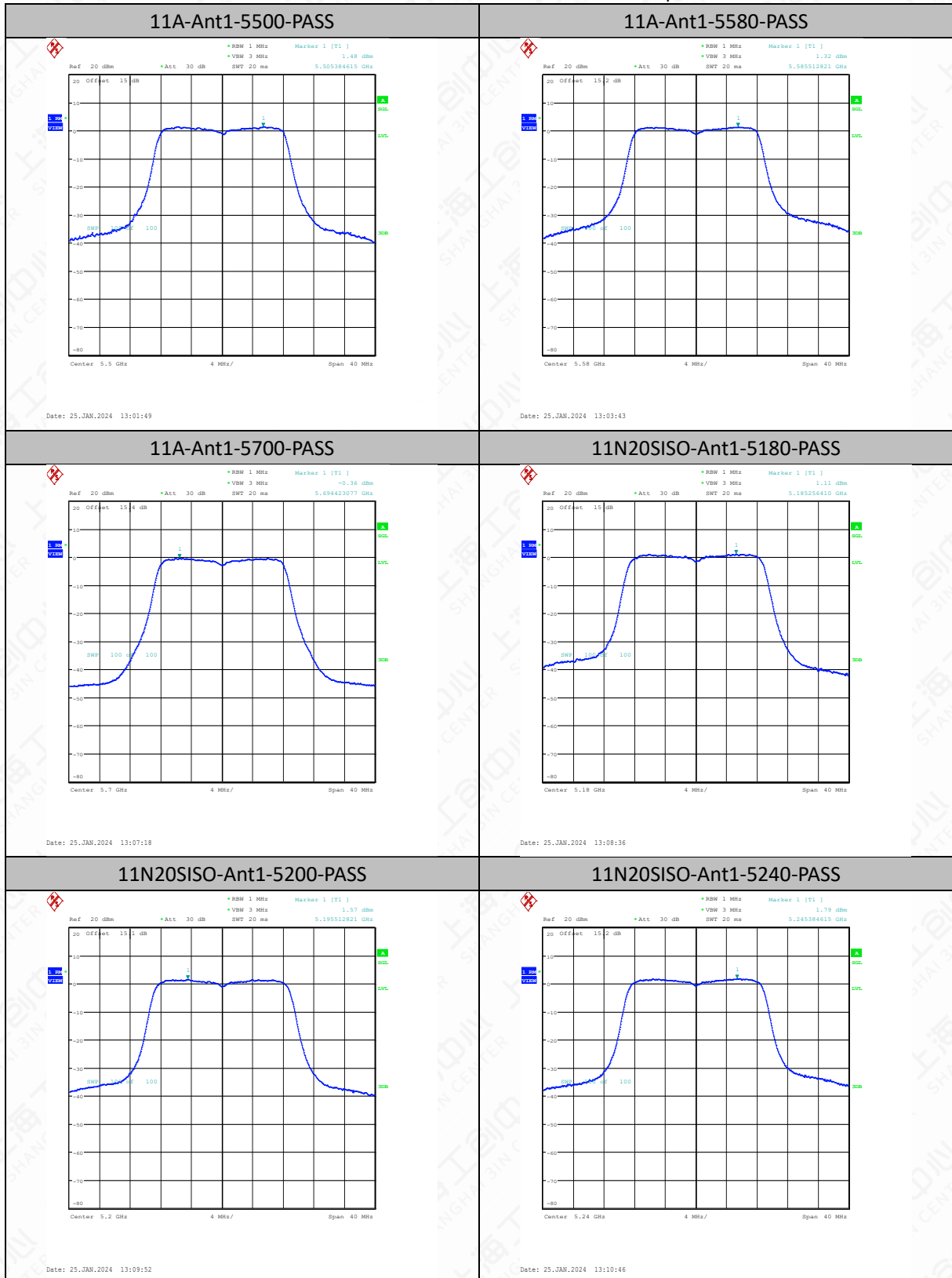
|            |      |      |       |        |      |
|------------|------|------|-------|--------|------|
| 11A        | Ant1 | 5700 | -0.36 | ≤11.00 | PASS |
| 11N20SISO  | Ant1 | 5180 | 1.11  | ≤11.00 | PASS |
| 11N20SISO  | Ant1 | 5200 | 1.57  | ≤11.00 | PASS |
| 11N20SISO  | Ant1 | 5240 | 1.79  | ≤11.00 | PASS |
| 11N20SISO  | Ant1 | 5260 | 1.89  | ≤11.00 | PASS |
| 11N20SISO  | Ant1 | 5280 | 2.17  | ≤11.00 | PASS |
| 11N20SISO  | Ant1 | 5320 | 2.38  | ≤11.00 | PASS |
| 11N20SISO  | Ant1 | 5500 | -0.07 | ≤11.00 | PASS |
| 11N20SISO  | Ant1 | 5580 | -0.15 | ≤11.00 | PASS |
| 11N20SISO  | Ant1 | 5700 | -0.60 | ≤11.00 | PASS |
| 11N40SISO  | Ant1 | 5190 | -1.89 | ≤11.00 | PASS |
| 11N40SISO  | Ant1 | 5230 | -2.02 | ≤11.00 | PASS |
| 11N40SISO  | Ant1 | 5270 | -0.98 | ≤11.00 | PASS |
| 11N40SISO  | Ant1 | 5310 | -1.09 | ≤11.00 | PASS |
| 11N40SISO  | Ant1 | 5510 | -8.28 | ≤11.00 | PASS |
| 11N40SISO  | Ant1 | 5550 | -3.82 | ≤11.00 | PASS |
| 11N40SISO  | Ant1 | 5670 | -3.17 | ≤11.00 | PASS |
| 11AC20SISO | Ant1 | 5180 | 0.36  | ≤11.00 | PASS |
| 11AC20SISO | Ant1 | 5200 | 0.40  | ≤11.00 | PASS |
| 11AC20SISO | Ant1 | 5240 | 0.66  | ≤11.00 | PASS |
| 11AC20SISO | Ant1 | 5260 | 0.90  | ≤11.00 | PASS |
| 11AC20SISO | Ant1 | 5280 | 1.12  | ≤11.00 | PASS |
| 11AC20SISO | Ant1 | 5320 | 1.52  | ≤11.00 | PASS |
| 11AC20SISO | Ant1 | 5500 | -1.57 | ≤11.00 | PASS |
| 11AC20SISO | Ant1 | 5580 | -1.59 | ≤11.00 | PASS |
| 11AC20SISO | Ant1 | 5700 | -0.94 | ≤11.00 | PASS |
| 11AC40SISO | Ant1 | 5190 | -3.85 | ≤11.00 | PASS |
| 11AC40SISO | Ant1 | 5230 | -3.80 | ≤11.00 | PASS |
| 11AC40SISO | Ant1 | 5270 | -3.41 | ≤11.00 | PASS |
| 11AC40SISO | Ant1 | 5310 | -2.08 | ≤11.00 | PASS |
| 11AC40SISO | Ant1 | 5510 | -6.37 | ≤11.00 | PASS |
| 11AC40SISO | Ant1 | 5550 | -4.42 | ≤11.00 | PASS |
| 11AC40SISO | Ant1 | 5670 | -2.60 | ≤11.00 | PASS |
| 11AC80SISO | Ant1 | 5210 | -5.03 | ≤11.00 | PASS |
| 11AC80SISO | Ant1 | 5290 | -3.66 | ≤11.00 | PASS |
| 11AC80SISO | Ant1 | 5530 | -8.32 | ≤11.00 | PASS |
| 11AC80SISO | Ant1 | 5610 | -5.33 | ≤11.00 | PASS |

Note:

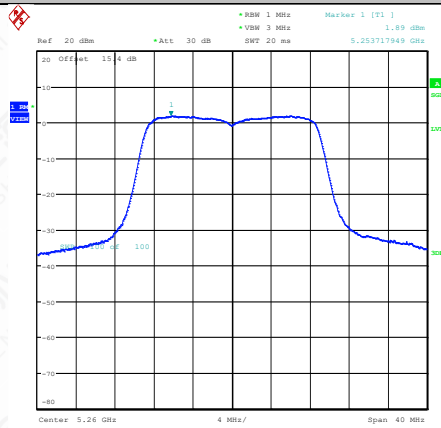
1. EIRP= Power Spectral Density(dBm/MHz)+Antenna gain(dBi)
2. The Duty Cycle Factor is compensated in the graph.

Test Graphs



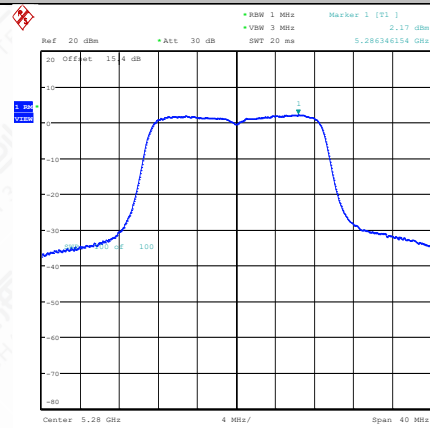


11N20SISO-Ant1-5260-PASS



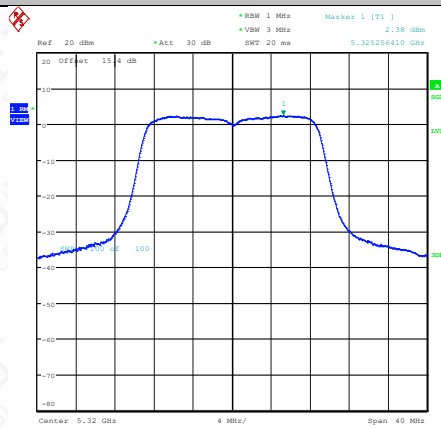
Date: 25.JAN.2024 13:11:43

11N20SISO-Ant1-5280-PASS



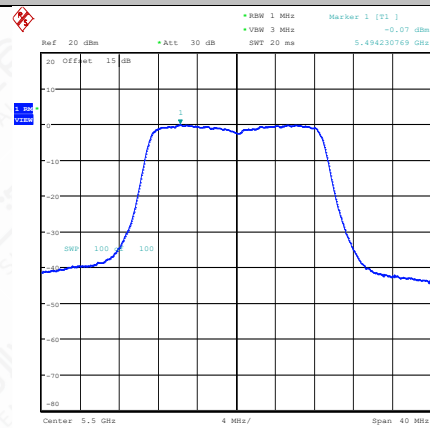
Date: 25.JAN.2024 13:13:39

11N20SISO-Ant1-5320-PASS



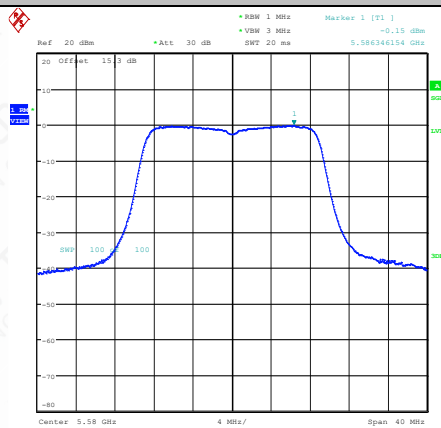
Date: 25.JAN.2024 13:15:47

11N20SISO-Ant1-5500-PASS



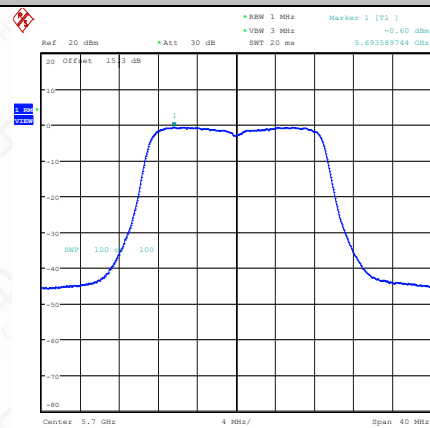
Date: 25.JAN.2024 13:20:50

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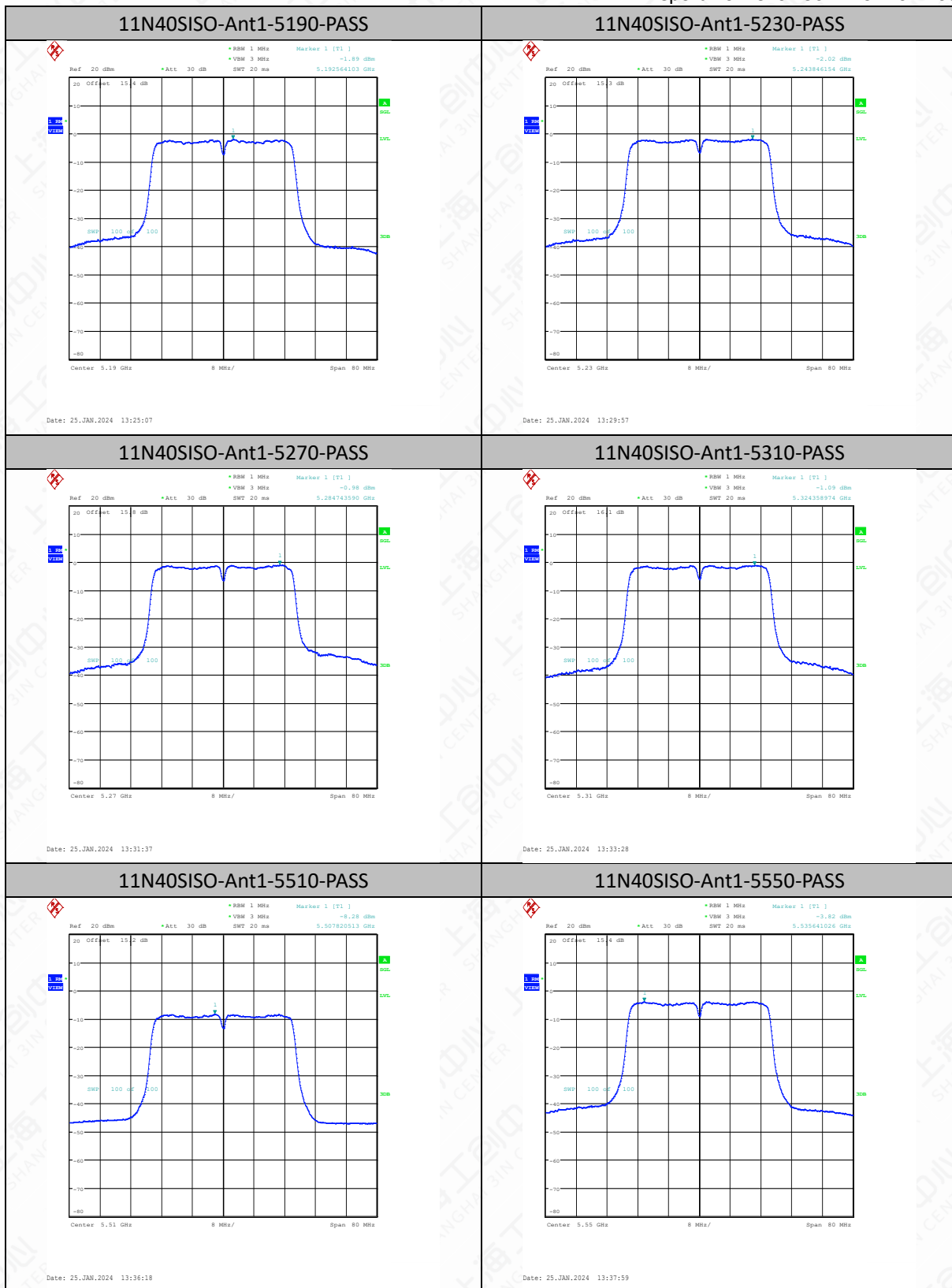


Date: 25.JAN.2024 13:22:36

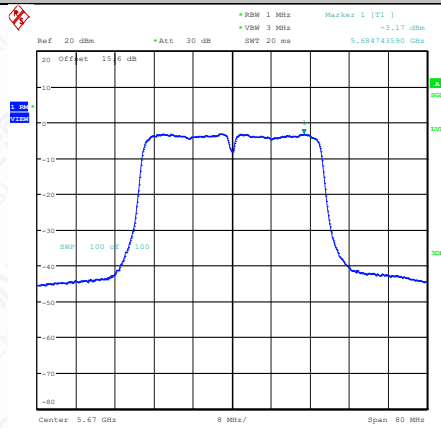
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Date: 25.JAN.2024 13:24:09

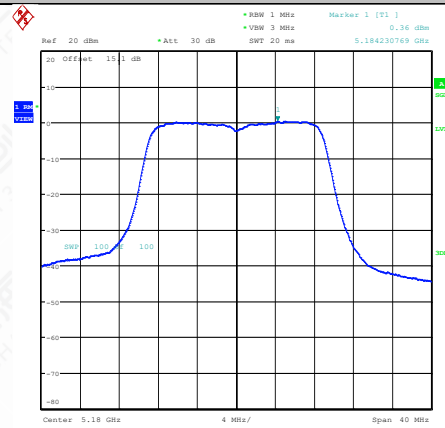


11N40SISO-Ant1-5670-PASS



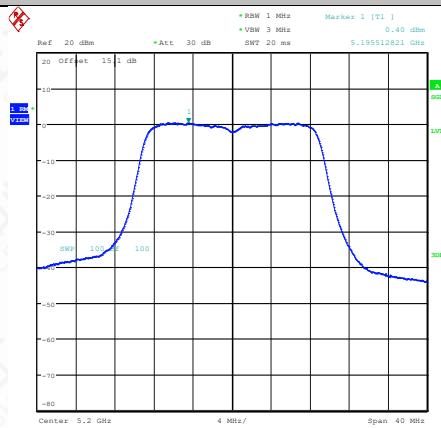
Date: 25.JAN.2024 13:40:30

11AC20SISO-Ant1-5180-PASS



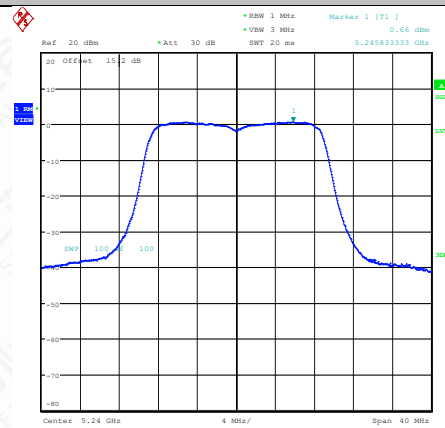
Date: 25.JAN.2024 13:41:53

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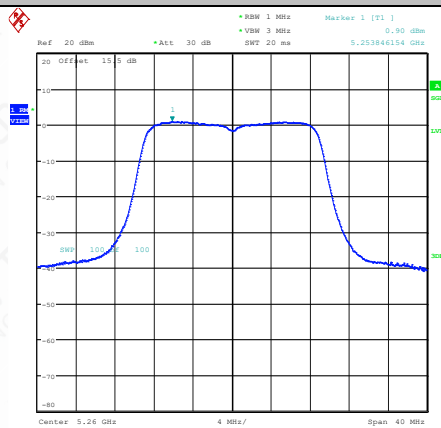
Date: 25.JAN.2024 13:43:12

11AC20SISO-Ant1-5240-PASS



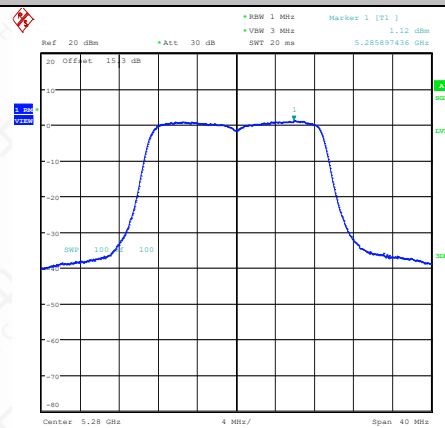
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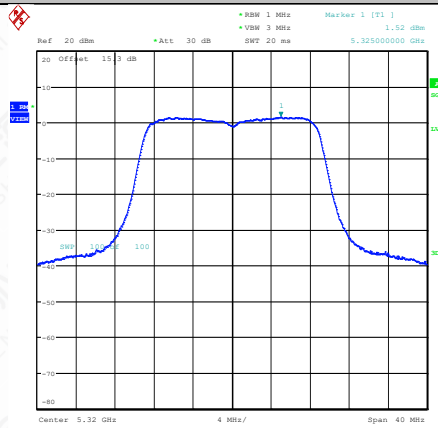
Date: 25.JAN.2024 13:49:22

11AC20SISO-Ant1-5280-PASS



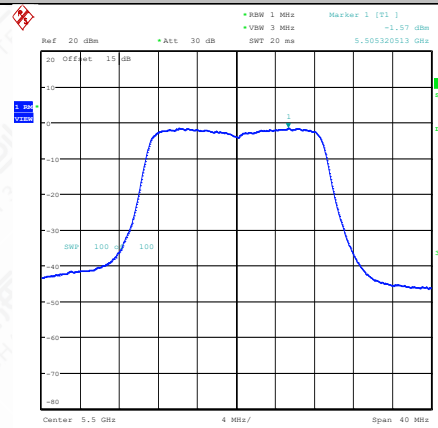
Date: 25.JAN.2024 13:51:35

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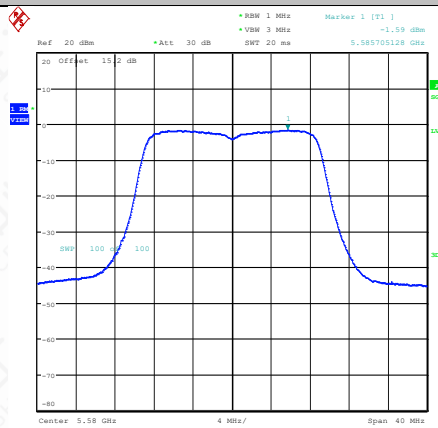
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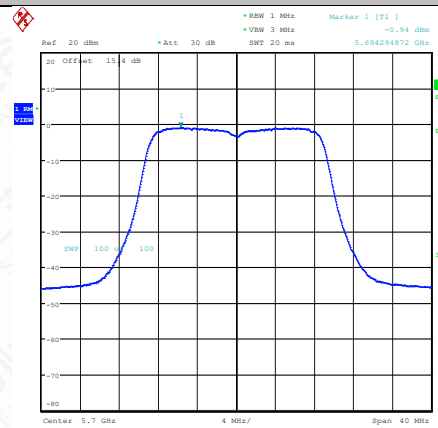
Date: 25.JAN.2024 13:54:49

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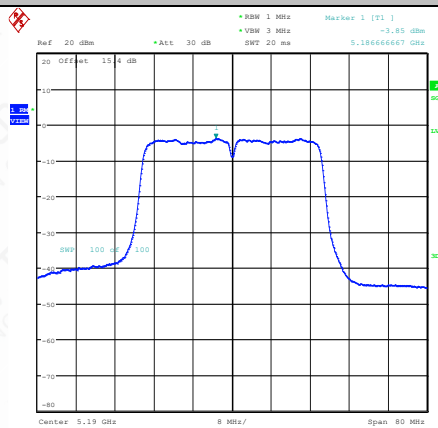
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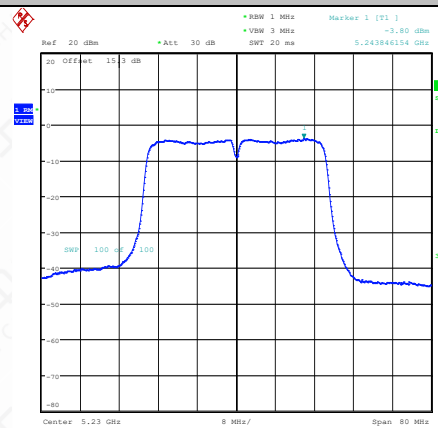
Date: 25.JAN.2024 13:57:35

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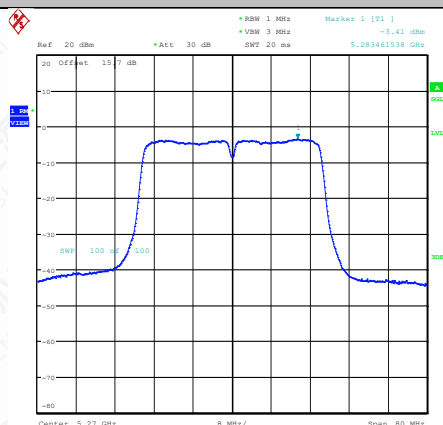


Date: 25.JAN.2024 13:58:37

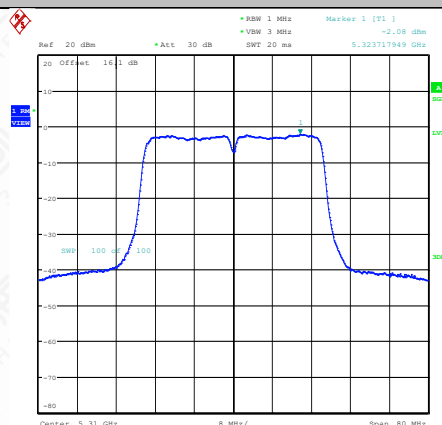
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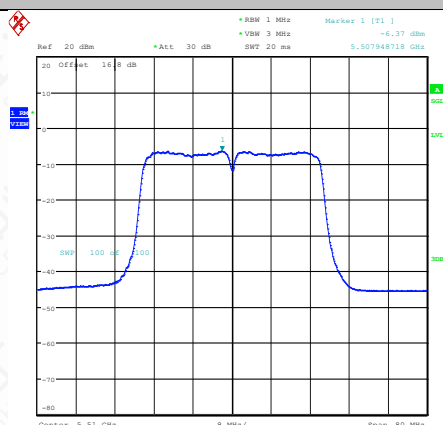
Date: 25.JAN.2024 14:01:10

**11AC40SISO-Ant1-5270-PASS**


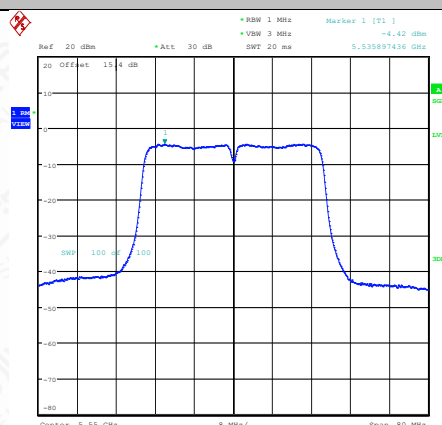
Date: 25.JAN.2024 14:05:09

**11AC40SISO-Ant1-5310-PASS**


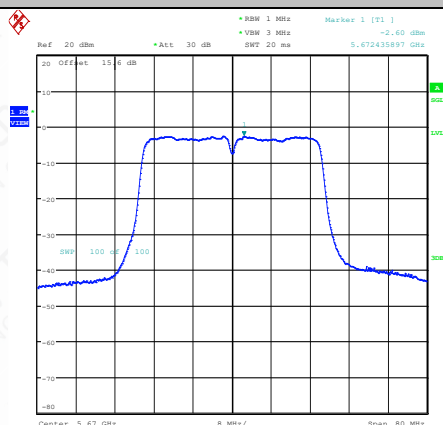
Date: 25.JAN.2024 14:06:51

**11AC40SISO-Ant1-5510-PASS**


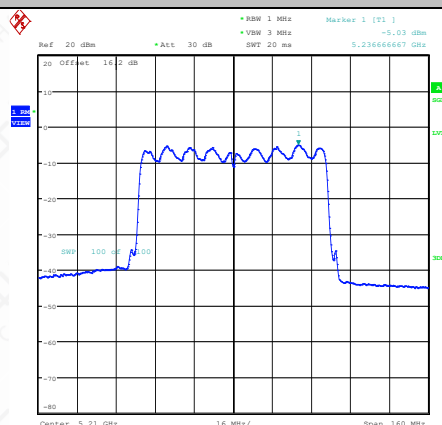
Date: 25.JAN.2024 14:12:11

**11AC40SISO-Ant1-5550-PASS**


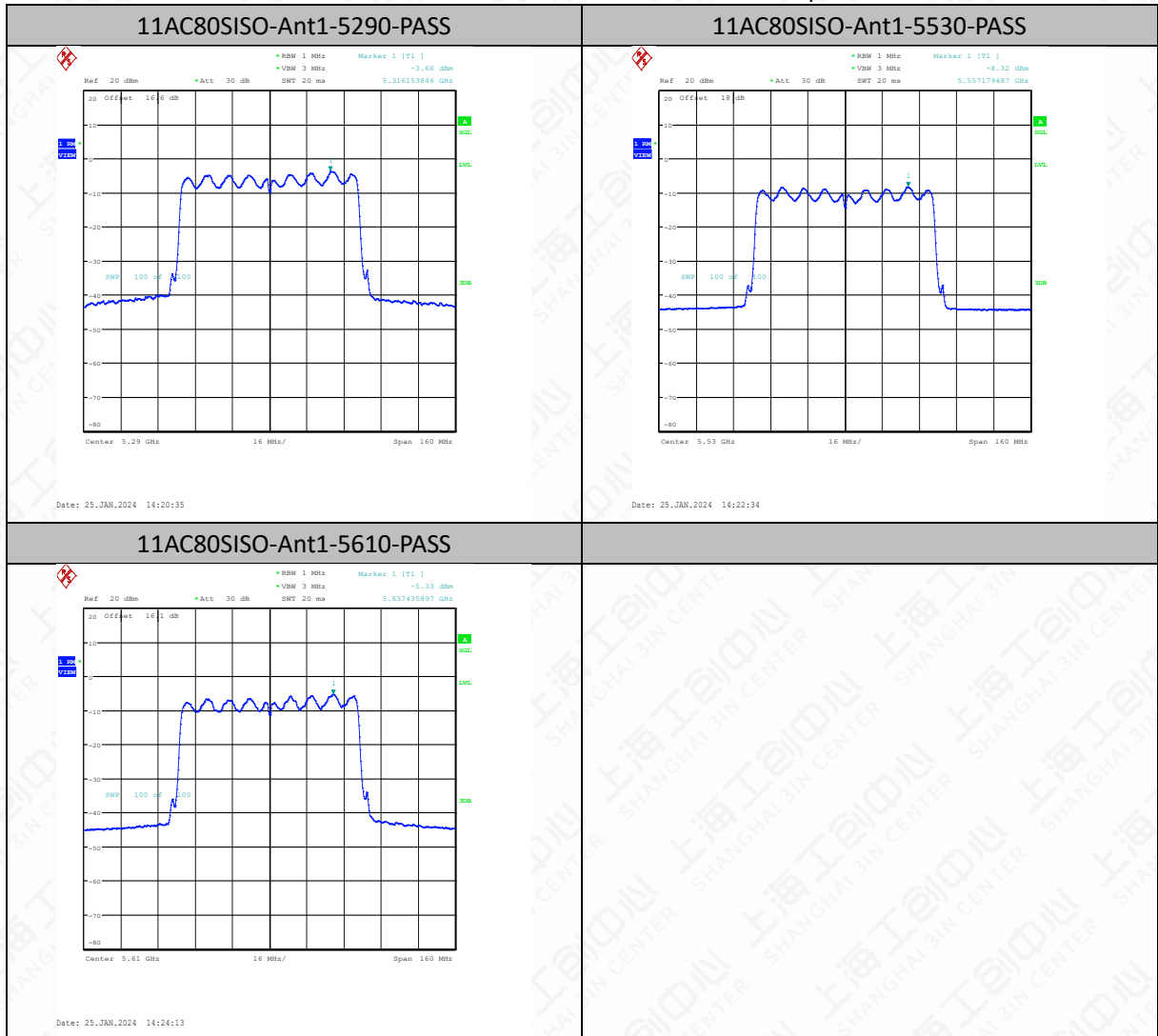
Date: 25.JAN.2024 14:14:21

**11AC40SISO-Ant1-5670-PASS**


Date: 25.JAN.2024 14:15:50

**11AC80SISO-Ant1-5210-PASS**


Date: 25.JAN.2024 14:18:14



## 6.4. Occupied 26dB Bandwidth(conducted)

### 6.4.1 Measurement Limit

| Standard                  | Limit(MHz) |
|---------------------------|------------|
| FCC 47 CFR Part 15.407(a) | N/A        |
| RSS-247 6.2               | N/A        |

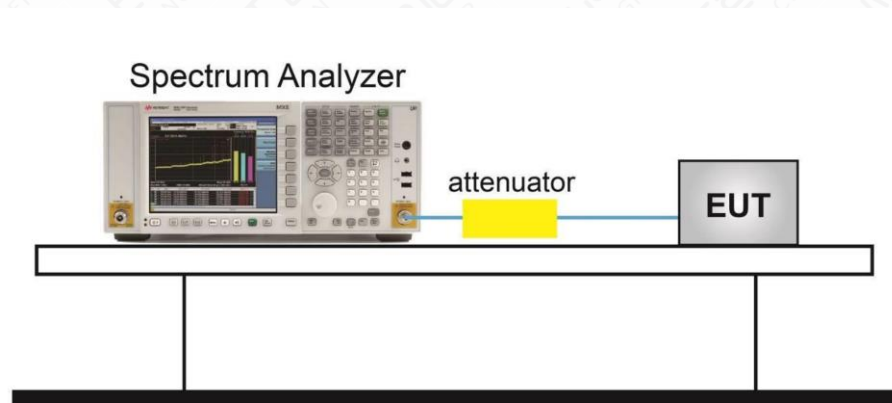
### 6.4.2 Test Procedure

The measurement method is made according to KDB 789033 C

1. Set RBW = approximately 1% of the emission bandwidth
2. Set the VBW > RBW
3. Detector = Peak.
4. Trace mode = max hold.
5. Measure the maximum width of the emission that is 26 dB down from the maximum of the emission.

Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

### 6.4.3 Test Setup

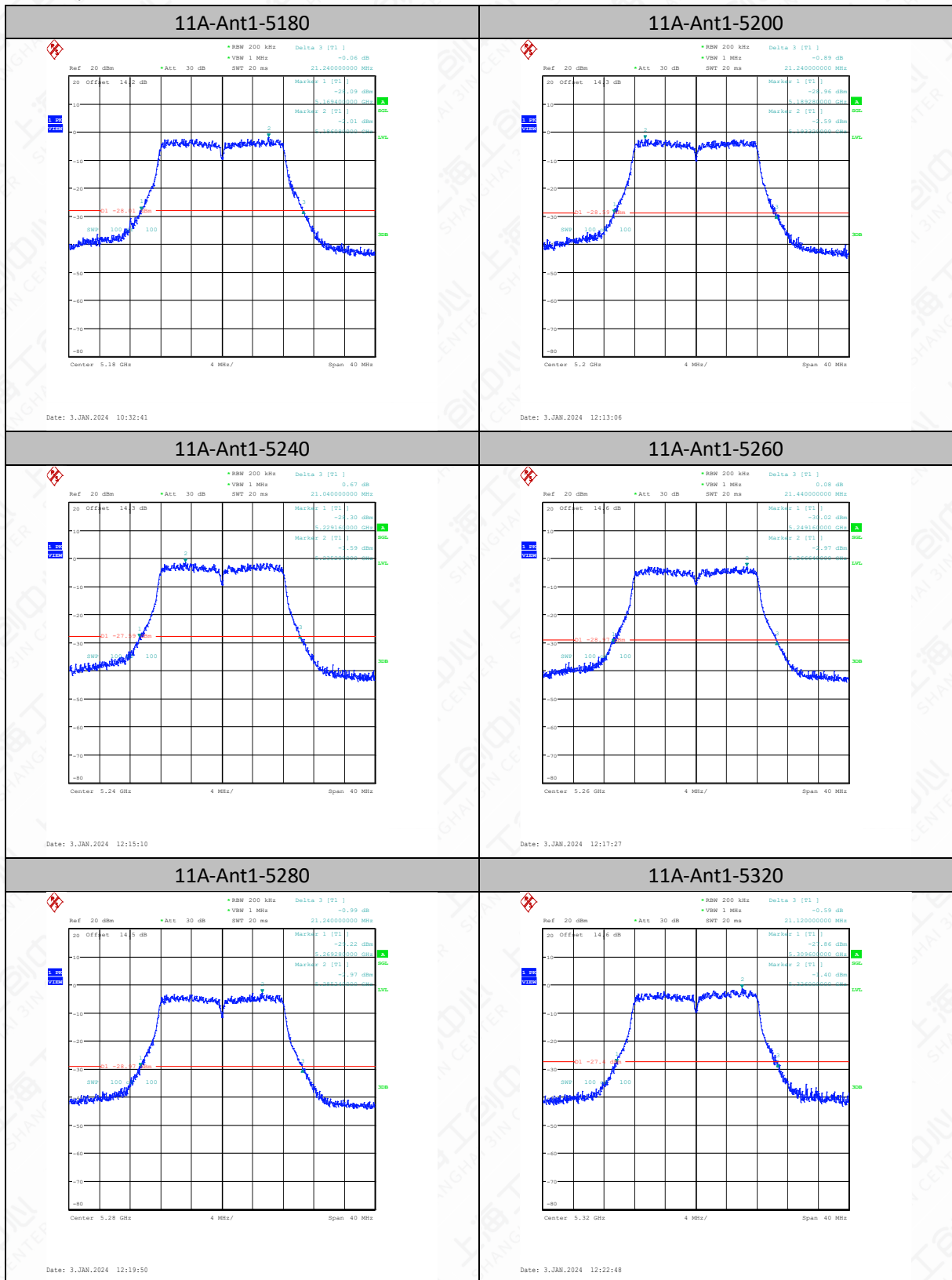


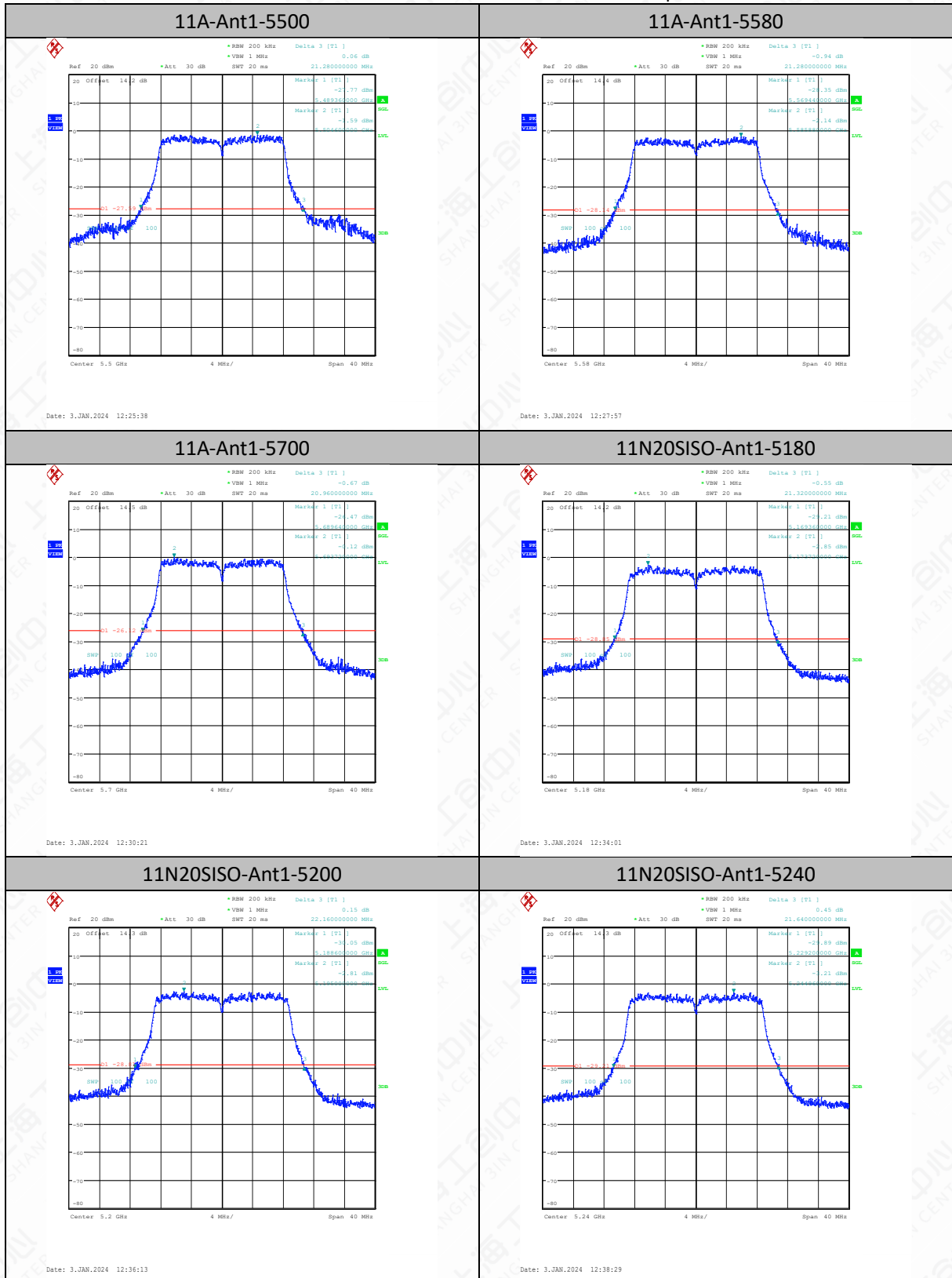
### 6.4.4 Measurement Results

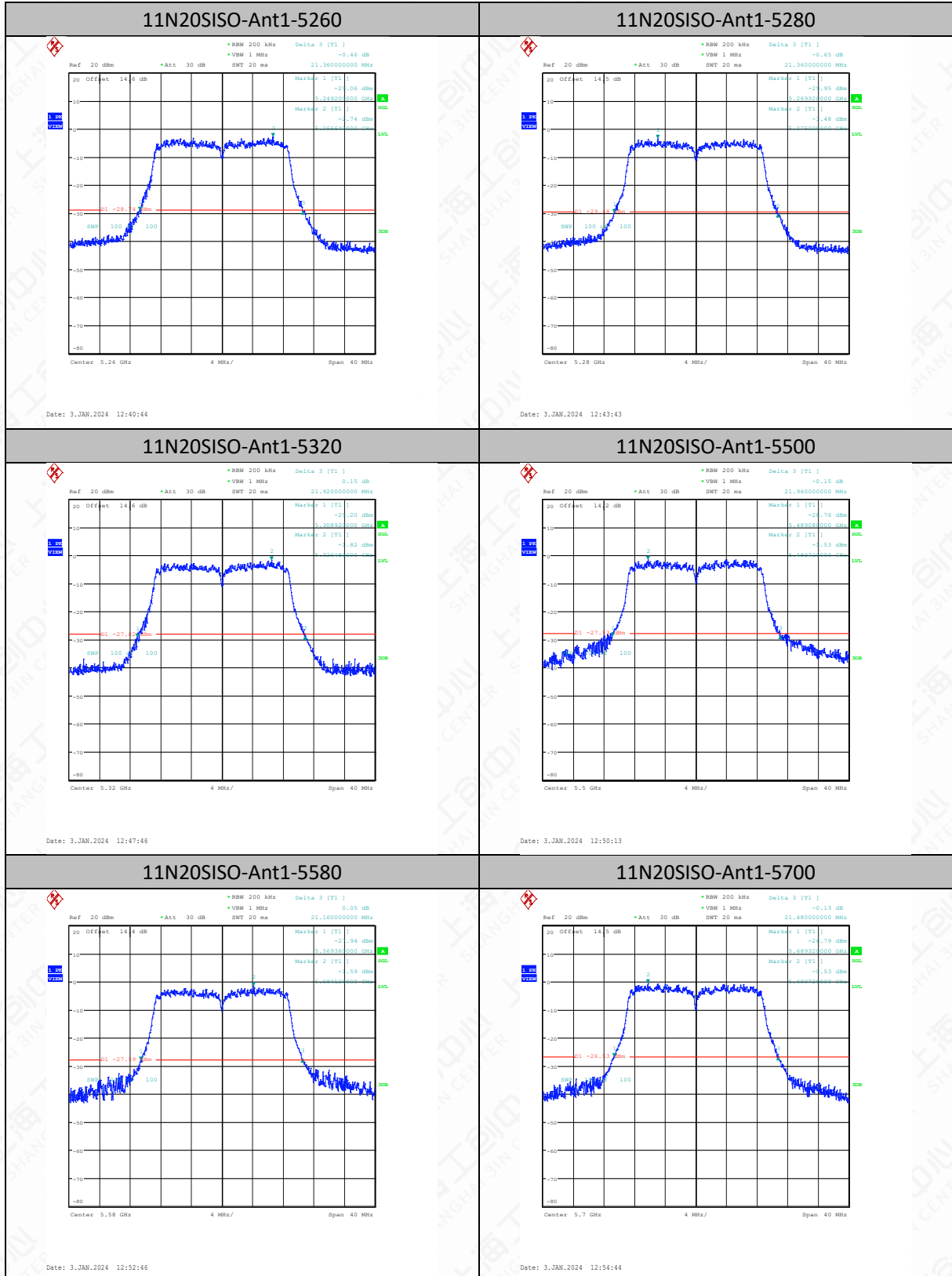
| TestMode | Antenna | Frequency[MHz] | 26db EBW [MHz] | FL[MHz] | FH[MHz] | Limit[MHz] | Verdict |
|----------|---------|----------------|----------------|---------|---------|------------|---------|
| 11A      | Ant1    | 5180           | 21.24          | 5169.40 | 5190.64 | ---        | ---     |
| 11A      | Ant1    | 5200           | 21.24          | 5189.28 | 5210.52 | ---        | ---     |
| 11A      | Ant1    | 5240           | 21.04          | 5229.16 | 5250.20 | ---        | ---     |
| 11A      | Ant1    | 5260           | 21.44          | 5249.16 | 5270.60 | ---        | ---     |
| 11A      | Ant1    | 5280           | 21.24          | 5269.28 | 5290.52 | ---        | ---     |
| 11A      | Ant1    | 5320           | 21.12          | 5309.60 | 5330.72 | ---        | ---     |
| 11A      | Ant1    | 5500           | 21.28          | 5489.36 | 5510.64 | ---        | ---     |
| 11A      | Ant1    | 5580           | 21.28          | 5569.44 | 5590.72 | ---        | ---     |

|            |      |      |       |         |         |     |     |
|------------|------|------|-------|---------|---------|-----|-----|
| 11A        | Ant1 | 5700 | 20.96 | 5689.64 | 5710.60 | --- | --- |
| 11N20SISO  | Ant1 | 5180 | 21.32 | 5169.36 | 5190.68 | --- | --- |
| 11N20SISO  | Ant1 | 5200 | 22.16 | 5188.60 | 5210.76 | --- | --- |
| 11N20SISO  | Ant1 | 5240 | 21.64 | 5229.20 | 5250.84 | --- | --- |
| 11N20SISO  | Ant1 | 5260 | 21.36 | 5249.20 | 5270.56 | --- | --- |
| 11N20SISO  | Ant1 | 5280 | 21.36 | 5269.32 | 5290.68 | --- | --- |
| 11N20SISO  | Ant1 | 5320 | 21.92 | 5308.92 | 5330.84 | --- | --- |
| 11N20SISO  | Ant1 | 5500 | 21.96 | 5489.08 | 5511.04 | --- | --- |
| 11N20SISO  | Ant1 | 5580 | 21.16 | 5569.36 | 5590.52 | --- | --- |
| 11N20SISO  | Ant1 | 5700 | 21.48 | 5689.32 | 5710.80 | --- | --- |
| 11N40SISO  | Ant1 | 5190 | 43.04 | 5168.08 | 5211.12 | --- | --- |
| 11N40SISO  | Ant1 | 5230 | 43.12 | 5208.24 | 5251.36 | --- | --- |
| 11N40SISO  | Ant1 | 5270 | 42.48 | 5248.72 | 5291.20 | --- | --- |
| 11N40SISO  | Ant1 | 5310 | 43.04 | 5288.88 | 5331.92 | --- | --- |
| 11N40SISO  | Ant1 | 5510 | 42.80 | 5488.64 | 5531.44 | --- | --- |
| 11N40SISO  | Ant1 | 5550 | 46.32 | 5528.32 | 5574.64 | --- | --- |
| 11N40SISO  | Ant1 | 5670 | 42.56 | 5648.72 | 5691.28 | --- | --- |
| 11AC20SISO | Ant1 | 5180 | 21.32 | 5169.20 | 5190.52 | --- | --- |
| 11AC20SISO | Ant1 | 5200 | 21.32 | 5189.28 | 5210.60 | --- | --- |
| 11AC20SISO | Ant1 | 5240 | 21.76 | 5229.04 | 5250.80 | --- | --- |
| 11AC20SISO | Ant1 | 5260 | 21.80 | 5249.20 | 5271.00 | --- | --- |
| 11AC20SISO | Ant1 | 5280 | 21.88 | 5269.08 | 5290.96 | --- | --- |
| 11AC20SISO | Ant1 | 5320 | 21.28 | 5309.52 | 5330.80 | --- | --- |
| 11AC20SISO | Ant1 | 5500 | 21.40 | 5489.28 | 5510.68 | --- | --- |
| 11AC20SISO | Ant1 | 5580 | 21.68 | 5569.36 | 5591.04 | --- | --- |
| 11AC20SISO | Ant1 | 5700 | 21.24 | 5689.40 | 5710.64 | --- | --- |
| 11AC40SISO | Ant1 | 5190 | 43.36 | 5168.16 | 5211.52 | --- | --- |
| 11AC40SISO | Ant1 | 5230 | 42.48 | 5208.72 | 5251.20 | --- | --- |
| 11AC40SISO | Ant1 | 5270 | 42.40 | 5248.80 | 5291.20 | --- | --- |
| 11AC40SISO | Ant1 | 5310 | 43.12 | 5288.64 | 5331.76 | --- | --- |
| 11AC40SISO | Ant1 | 5510 | 42.48 | 5488.64 | 5531.12 | --- | --- |
| 11AC40SISO | Ant1 | 5550 | 43.12 | 5528.40 | 5571.52 | --- | --- |
| 11AC40SISO | Ant1 | 5670 | 42.88 | 5648.56 | 5691.44 | --- | --- |
| 11AC80SISO | Ant1 | 5210 | 83.20 | 5168.40 | 5251.60 | --- | --- |
| 11AC80SISO | Ant1 | 5290 | 83.36 | 5248.56 | 5331.92 | --- | --- |
| 11AC80SISO | Ant1 | 5530 | 82.40 | 5488.88 | 5571.28 | --- | --- |
| 11AC80SISO | Ant1 | 5610 | 82.88 | 5568.88 | 5651.76 | --- | --- |

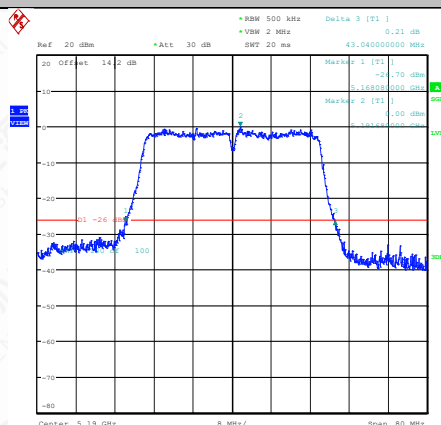
Test Graphs





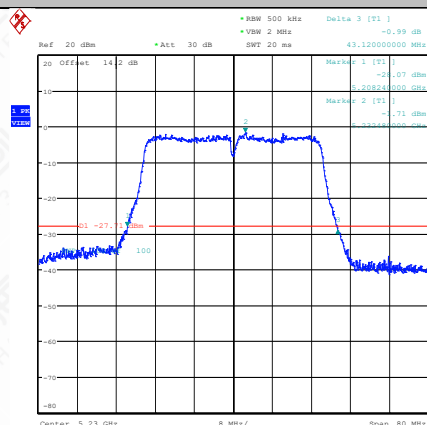


11N40SISO-Ant1-5190



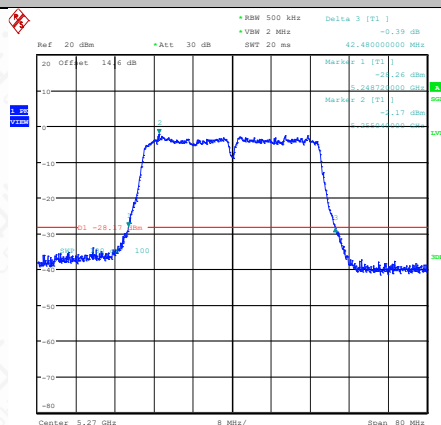
Date: 3 JAN 2024 12:58:52

11N40SISO-Ant1-5230



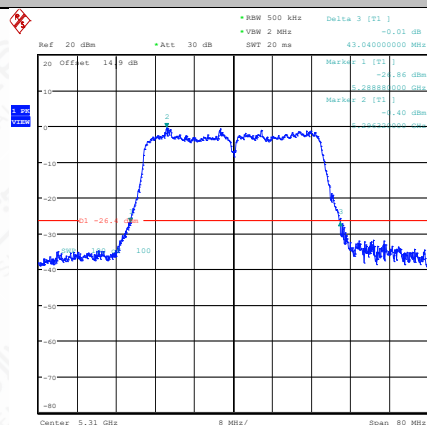
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11N40SISO-Ant1-5270



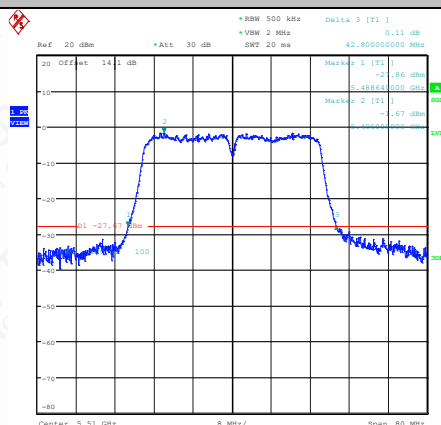
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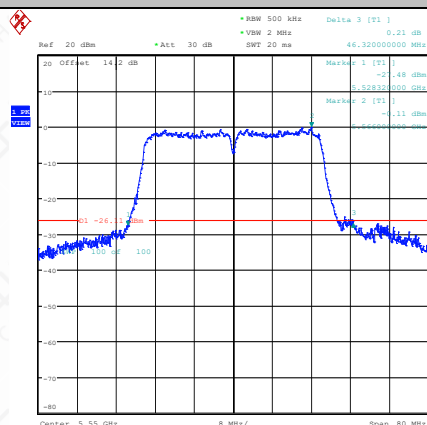
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11N40SISO-Ant1-5510

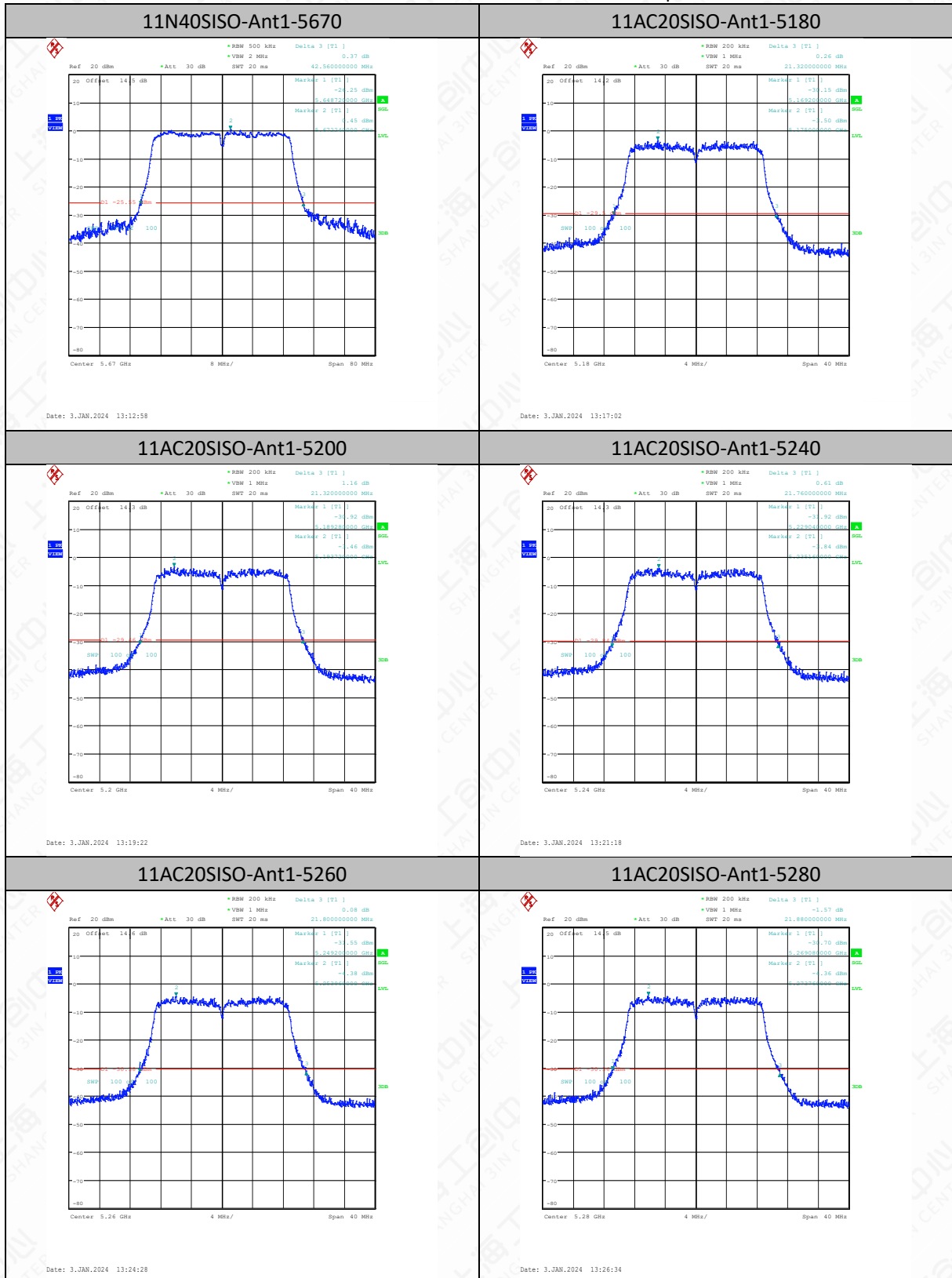


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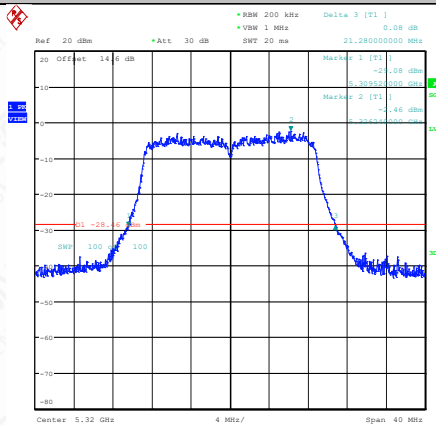
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Date: 3.JAN.2024 13:10:26

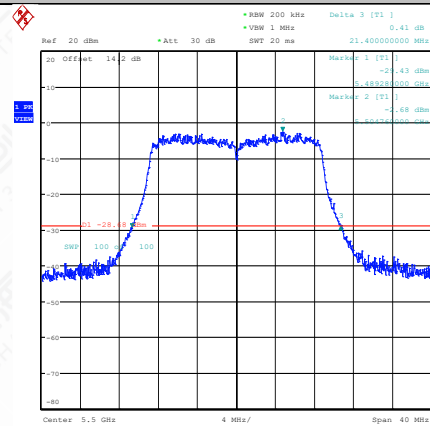


11AC20SISO-Ant1-5320



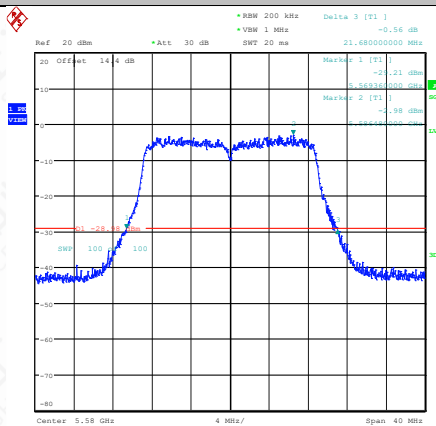
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11AC20SISO-Ant1-5500



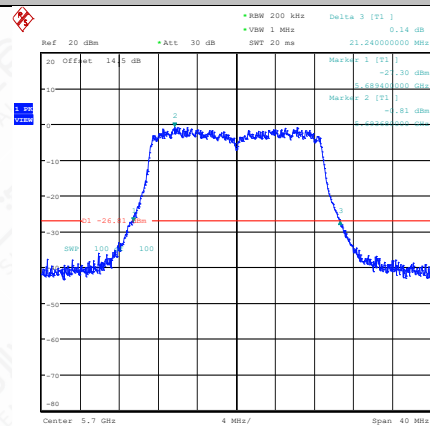
Date: 3.JAN.2024 13:31:53

11AC20SISO-Ant1-5580



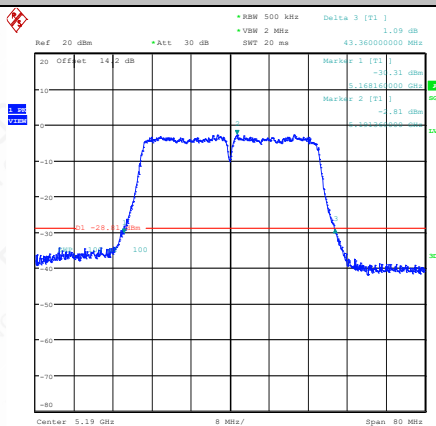
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11AC20SISO-Ant1-5700



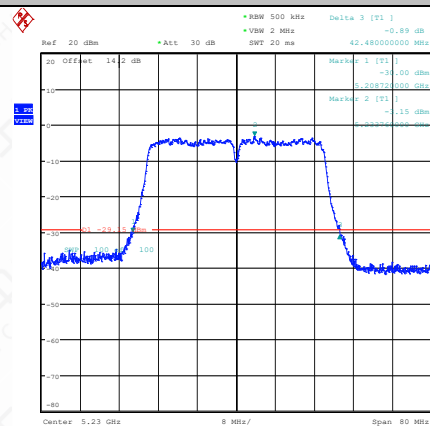
Date: 3.JAN.2024 13:36:09

11AC40SISO-Ant1-5190



Date: 3.JAN.2024 13:41:16

11AC40SISO-Ant1-5230



Date: 3.JAN.2024 13:43:44

