



# TEST REPORT

REPORT NUMBER: 123W00020-WIFI 5G RF

ON

**Type of Equipment:** 4G Smart Phone  
**Type of Designation:** MobiWire H6322, Altice S35  
**Brand Name:** MobiWire, Altice  
**Manufacturer:** MobiWire SAS  
**FCC ID:** QPN-H6322

ACCORDING TO

FCC Part15

**Chongqing Academy of Information and Communications Technology**

*Month date, year*

*Jun 16, 2023*

*Signature*

**Xiang Luoyong**

**Director**

**Note:**

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of Chongqing Academy of Information and Communications Technology.



Report No.: 123W00020-WIFI 5G RF

Revision Version

| Report Number       | Revision | Date       | Memo                            |
|---------------------|----------|------------|---------------------------------|
| 123W00020-WIFI5G RF | 00       | 2023-06-16 | Initial creation of test report |

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## 1. Test Laboratory

### 1.1. Testing Location

|                             |   |
|-----------------------------|---|
| Name:                       | Chongqing Academy of Information and Communications Technology  |
| FCC/IC Registration Number: | CN1239  |
| Address:                    | Building C, Technology Innovation Center, No.8, Yuma Road, Chayuan New Area, Nan'an District, Chongqing, People's Republic of China |
| Postal Code:                | 401336  |
| Telephone:                  | 0086-23-88069965  |
| Fax:                        | 0086-23-88608777  |

### 1.2. Testing Environment

|                     |         |
|---------------------|---------|
| Normal Temperature: | 15-35°C |
| Relative Humidity:  | 25-75%  |

### 1.3. Project data

|                     |            |
|---------------------|------------|
| Testing Start Date: | 2023-05-23 |
| Testing End Date:   | 2023-05-26 |

### 1.4. Signature



2023-06-16

**Dong Junxin**  
(Prepared this test report)

**Date**

2023-06-16

**Li Xu**  
(Reviewed this test report)

**Date**

2023-06-16

**Xiang Luoyong**  
Director of the laboratory  
(Approved this test report)

**Date**

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## 2. Client Information

### 2.1. Applicant Information

|                 |  |
|-----------------|--|
| Company Name:   | MobiWire SAS   |
| Address /Post:  | 107 Boulevard de la Mission Marchand 92400 Courbevoie,France |
| City:           | Courbevoie   |
| Country:        | France   |
| Telephone:      | +33625028368   |
| Fax:            | N/A  |
| Email:          | olivier.tiennault@mobiwire.com                               |
| Contact Person: | Olivier Tiennault  |

### 2.2. Manufacturer Information

|                 |  |
|-----------------|--|
| Company Name:   | MobiWire SAS   |
| Address /Post:  | 107 Boulevard de la Mission Marchand 92400 Courbevoie,France |
| City:           | Courbevoie   |
| Country:        | France   |
| Telephone:      | +33625028368   |
| Fax:            | N/A  |
| Email:          | olivier.tiennault@mobiwire.com                               |
| Contact Person: | Olivier Tiennault  |

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### 3. Equipment under Test (EUT) and Ancillary Equipment (AE)

#### 3.1. About EUT

|                          |  |
|--------------------------|--|
| EUT Description          | 4G Smart Phone   |
| Model name               | MobiWire H6322, Altice S35   |
| Brand name               | MobiWire, Altice   |
| Product Type             | Client Devices   |
| GSM Frequency Band       | GSM:850/ 900/ 1800/1900  |
| WCDMA Frequency Band     | WCDMA:B1/B2/B5/B8  |
| LTE Frequency Band       | LTE: B1/2/3/4/5/7/8/20/28/38/41  |
| BLUETOOTH Frequency Band | 2402MHz-2480MHz  |
| WLAN Frequency Band      | Wi-Fi 2.4G:802.11b/g/n,<br>Wi-Fi 5G U-NII-1/<br>U-NII-2a/U-NII-2c/U-NII-3:802.11a/n/ac |
| Type of modulation       | OFDM   |
| Extreme Temperature      | -10-55°C   |
| Nominal Voltage          | 3.85V  |
| Extreme High Voltage     | 4.4V   |
| Extreme Low Voltage      | 3.6V   |

Note: Photographs of EUT are shown in ANNEX A of this test report.

Note: High and low voltage values in extreme condition test are given by manufacturer.

#### 3.2. Internal Identification of EUT used during the test

| EUT ID* | SN or IMEI                         | HW Version | SW Version         | Date of receipt |
|---------|------------------------------------|------------|--------------------|-----------------|
| S4      | 354365420003740<br>354365420003757 | V01        | Mobiwire_H6322_V01 | 2023-05-23      |
| S5      | 354365420003864<br>354365420003872 | V01        | Mobiwire_H6322_V01 | 2023-05-23      |
| S8      | 354365420006222<br>354365420006230 | V01        | Mobiwire_H6322_V01 | 2023-05-23      |
| S9      | 354365420009044<br>354365420009051 | V01        | Mobiwire_H6322_V01 | 2023-05-23      |

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\*EUT ID: is used to identify the test sample in the lab internally.

| Technology | Band | UL Freq.(MHz)   | DL Freq.(MHz) | Note |
|------------|------|---|---------------|------|
| WLAN       | 5G   | UNII 1: 5150MHz-5240MHz<br>UNII 2A: 5250MHz-5350MHz<br>UNII 2C: 5470MHz-5725MHz |               | --   |

### 3.3. Outline of Equipment under Test

### 3.4. Internal Identification of AE used during the test

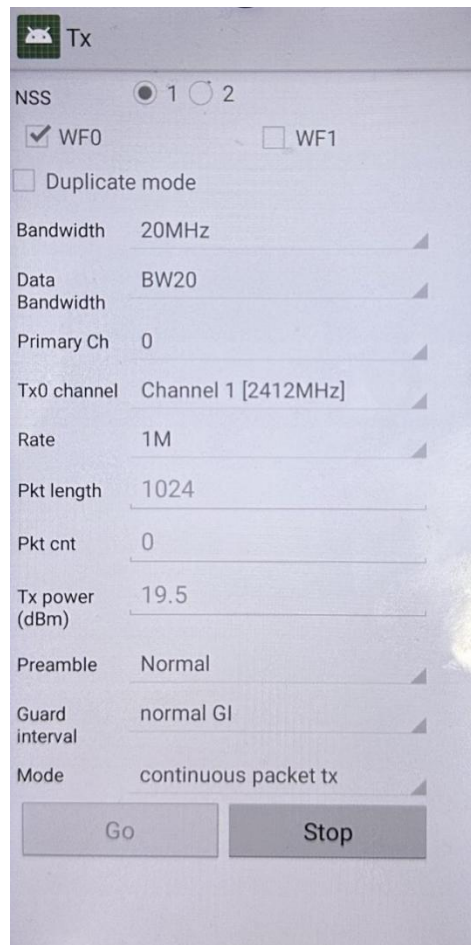
| AE ID* | Description | dB* |
|--------|-------------|-----|
| AE1    | RF cable    | 1dB |

\*AE ID: is used to identify the test sample in the lab internally.

dB\*: is provided customer.

### 3.5. EUT Test RF Confagle Configuration

EUT uses MTK working control emission measurement, Change power level, channel, rate and HT .



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## 4. Reference Documents

### 4.1. Documents supplied by applicant

PICS/PIXIT, referring to Annex B for detailed information, is supplied by the client or manufacturer, which is the basis of testing.

### 4.2. Reference Documents for testing

The following documents listed in this section are referred for testing.

| Reference  | Title   |
|------------|---|
| FCC Part15 | FCC CFR 47, Part 15, Subpart C:<br>15.205 Restricted bands of operation;<br>15.209 Radiated emission limits, general requirements;<br>15.247 Operation within the bands 902-928MHz,<br>2400-2483.5MHz, and 5725-5850MHz |
| KDB 558074 | Guidance for Performing Compliance Measurements on<br>Frequency Hopping Spread Spectrum systems (DSS) Operating<br>Under §15.247  |

## 5. Test Equipments Utilized

### 5.1. RF Test System

| No. | Equipment         | Model  | SN         | HW Version | SW Version | Manufacture | Cal.Due Date |
|-----|-------------------|--------|------------|------------|------------|-------------|--------------|
| 1   | Spectrum analyzer | FSQ 26 | 201137/026 | --         | --         | R&S         | 2023-06-29   |
| 2   | Spectrum analyzer | FSW26  | 104280     | --         | --         | R&S         | 2023-06-29   |
| 3   | DC Power Supply   | 3303D  | 801128     | --         | --         | Topward     | 2023-06-29   |

### 5.2. RSE Test System

| No. | Equipment                | Model     | SN       | HW Version | SW Version | Manufacture | Cal.Due Date |
|-----|--------------------------|-----------|----------|------------|------------|-------------|--------------|
| 1   | EMI Test Receiver        | ESU40     | 100307   | --         | --         | R&S         | 2023-06-29   |
| 2   | TRILOG Broadband Antenna | VULB9163  | 9163-586 | --         | --         | Schwarzbeck | 2024-10-28   |
| 3   | Horn antenna             | 9120D     | 1083     | --         | --         | Schwarzbeck | 2024-12-14   |
| 4   | Horn antenna             | DATE 1152 | LM7127   | --         | --         | ETS         | 2024-09-06   |
| 5   | Horn antenna             | DATE 1012 | LM5945   | --         | --         | ETS         | 2024-09-06   |
| 6   | Amplifier1               | SCU-08F1  | 8320027  | --         | --         | R&S         | 2023-06-29   |
| 7   | Amplifier2               | SCU-18F   | 180093   | --         | --         | R&S         | 2023-06-29   |

### 5.3. Climate Chamber

| No. | Name            | Type   | SN       | Manufacture | Cal.Due Date |
|-----|-----------------|--------|----------|-------------|--------------|
| 1   | Climate chamber | SH-241 | 92010759 | ESPEC       | 2023-06-29   |

### 5.4. Anechoic chamber Vibration table

| No. | Name                   | Type | SN | Manufacture | Cal.Due Date |
|-----|------------------------|------|----|-------------|--------------|
| 1   | Fully-Anechoic Chamber | FAC5 | -- | TDK         | 2024-09-22   |

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5.5. Test software

| No. | Name              | version        | SN | Manufacture |
|-----|-------------------|----------------|----|-------------|
| 1   | EMI Test Software | EMC32 V9.26.01 | -- | R&S         |

## 6. Measurement Results

### 6.1 Summary of Test Results

A brief summary of the tests carried out is shown as following.

| FCC Rules | Name of Test                            | Result |
|-----------|---|--------|
| 15.407(a) | Duty Cycle                              | Pass   |
| 15.407(a) | Maximum Output Power                    | Pass   |
| 15.407(a) | Power Spectral Density                  | Pass   |
| 15.407(a) | 99% Occupied Bandwidth                  | Pass   |
| 15.407(a) | Occupied 26dB Bandwidth                 | Pass   |
| 15.407(b) | Band edge compliance                    | Pass   |
| 15.407(b) | Transmitter spurious emissions radiated | Pass   |
| 15.407(g) | Frequency Stability                     | Pass   |
| 15.407(h) | Transmit Power Control                  | N/A    |
| 15.207    | AC Powerline Conducted Emission         | Pass   |

NOTE:  
The MobiWire H6322, Altice 535, manufactured by MobiWire SAS is a new product for testing.  
The following configurations were tested for radiation spurious emission:

## 6.2 Duty Cycle

|                           |  |
|---------------------------|--|
| <b>Specifications:</b>    | FCC 47 Part 15.407(a)  |
| <b>DUT Serial Number:</b> | S4   |
| <b>Test conditions:</b>   | Ambient Temperature:20°C<br>Relative Humidity:40%<br>Air pressure: 90kPa |
| <b>Test Results:</b>      | Pass   |

Measurement Uncertainty:

|                         |    |
|-------------------------|----|
| Measurement Uncertainty | -- |
|-------------------------|----|

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) 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.
- b) 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.)

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## Test Result

| TestMode   | Antenna | Frequency[MHz] | Transmission Duration [ms] | Transmission Period [ms] | Duty Cycle [%] |
|------------|---------|----------------|----------------------------|--------------------------|----------------|
| 11A        | Ant1    | 5745           | 1.39                       | 1.44                     | 96.53          |
| 11A        | Ant1    | 5785           | 1.39                       | 1.44                     | 96.53          |
| 11A        | Ant1    | 5825           | 1.39                       | 1.43                     | 97.20          |
| 11N20SISO  | Ant1    | 5745           | 1.30                       | 1.34                     | 97.01          |
| 11N20SISO  | Ant1    | 5785           | 1.30                       | 1.34                     | 97.01          |
| 11N20SISO  | Ant1    | 5825           | 1.30                       | 1.35                     | 96.30          |
| 11N40SISO  | Ant1    | 5755           | 0.64                       | 0.69                     | 92.75          |
| 11N40SISO  | Ant1    | 5795           | 0.65                       | 0.70                     | 92.86          |
| 11AC20SISO | Ant1    | 5745           | 1.31                       | 1.35                     | 97.04          |
| 11AC20SISO | Ant1    | 5785           | 1.32                       | 1.36                     | 97.06          |
| 11AC20SISO | Ant1    | 5825           | 1.31                       | 1.36                     | 96.32          |
| 11AC40SISO | Ant1    | 5755           | 0.65                       | 0.70                     | 92.86          |
| 11AC40SISO | Ant1    | 5795           | 0.65                       | 0.70                     | 92.86          |
| 11AC80SISO | Ant1    | 5775           | 0.33                       | 0.37                     | 89.19          |
| 11A        | Ant1    | 5180           | 1.39                       | 1.43                     | 97.20          |
| 11A        | Ant1    | 5200           | 1.39                       | 1.44                     | 96.53          |
| 11A        | Ant1    | 5240           | 1.39                       | 1.43                     | 97.20          |
| 11A        | Ant1    | 5260           | 1.39                       | 1.44                     | 96.53          |
| 11A        | Ant1    | 5280           | 1.39                       | 1.43                     | 97.20          |
| 11A        | Ant1    | 5320           | 1.39                       | 1.43                     | 97.20          |
| 11A        | Ant1    | 5500           | 1.39                       | 1.43                     | 97.20          |
| 11A        | Ant1    | 5580           | 1.39                       | 1.44                     | 96.53          |
| 11A        | Ant1    | 5700           | 1.39                       | 1.44                     | 96.53          |
| 11N20SISO  | Ant1    | 5180           | 1.30                       | 1.35                     | 96.30          |
| 11N20SISO  | Ant1    | 5200           | 1.30                       | 1.35                     | 96.30          |
| 11N20SISO  | Ant1    | 5240           | 1.30                       | 1.34                     | 97.01          |
| 11N20SISO  | Ant1    | 5260           | 1.30                       | 1.35                     | 96.30          |
| 11N20SISO  | Ant1    | 5280           | 1.30                       | 1.34                     | 97.01          |
| 11N20SISO  | Ant1    | 5320           | 1.30                       | 1.35                     | 96.30          |
| 11N20SISO  | Ant1    | 5500           | 1.30                       | 1.35                     | 96.30          |
| 11N20SISO  | Ant1    | 5580           | 1.30                       | 1.34                     | 97.01          |
| 11N20SISO  | Ant1    | 5700           | 1.30                       | 1.35                     | 96.30          |
| 11N40SISO  | Ant1    | 5190           | 0.65                       | 0.70                     | 92.86          |
| 11N40SISO  | Ant1    | 5230           | 0.65                       | 0.69                     | 94.20          |
| 11N40SISO  | Ant1    | 5270           | 0.65                       | 0.69                     | 94.20          |
| 11N40SISO  | Ant1    | 5310           | 0.64                       | 0.69                     | 92.75          |
| 11N40SISO  | Ant1    | 5510           | 0.65                       | 0.70                     | 92.86          |

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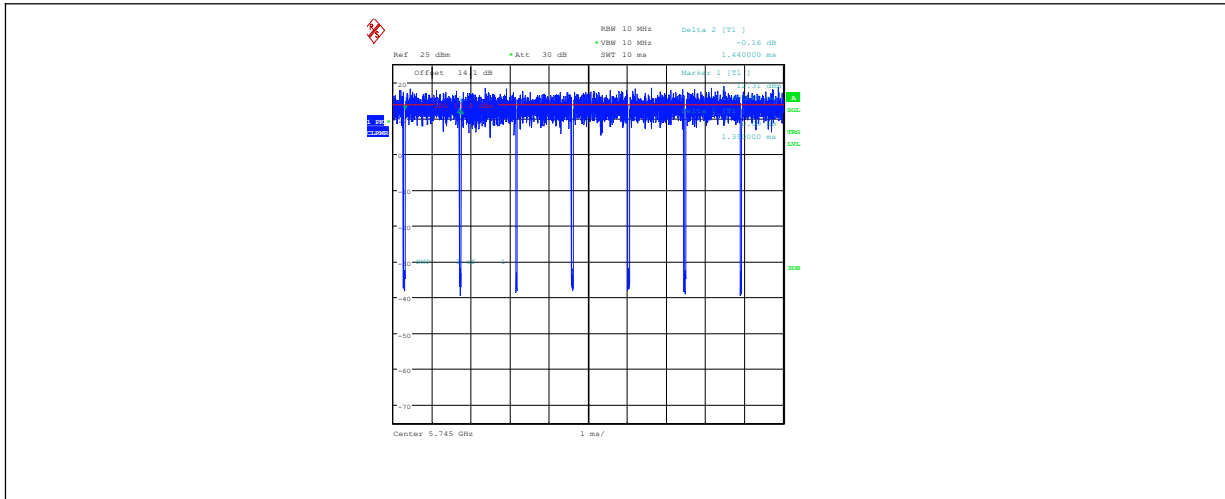
Report No.: 123W00020-WIFI 5G RF

|            |      |      |      |      |       |
|------------|------|------|------|------|-------|
| 11N40SISO  | Ant1 | 5550 | 0.65 | 0.69 | 94.20 |
| 11N40SISO  | Ant1 | 5670 | 0.65 | 0.70 | 92.86 |
| 11AC20SISO | Ant1 | 5180 | 1.31 | 1.36 | 96.32 |
| 11AC20SISO | Ant1 | 5200 | 1.31 | 1.36 | 96.32 |
| 11AC20SISO | Ant1 | 5240 | 1.31 | 1.36 | 96.32 |
| 11AC20SISO | Ant1 | 5260 | 1.31 | 1.36 | 96.32 |
| 11AC20SISO | Ant1 | 5280 | 1.31 | 1.36 | 96.32 |
| 11AC20SISO | Ant1 | 5320 | 1.32 | 1.36 | 97.06 |
| 11AC20SISO | Ant1 | 5500 | 1.31 | 1.35 | 97.04 |
| 11AC20SISO | Ant1 | 5580 | 1.31 | 1.36 | 96.32 |
| 11AC20SISO | Ant1 | 5700 | 1.31 | 1.35 | 97.04 |
| 11AC40SISO | Ant1 | 5190 | 0.65 | 0.70 | 92.86 |
| 11AC40SISO | Ant1 | 5230 | 0.65 | 0.70 | 92.86 |
| 11AC40SISO | Ant1 | 5270 | 0.65 | 0.69 | 94.20 |
| 11AC40SISO | Ant1 | 5310 | 0.65 | 0.69 | 94.20 |
| 11AC40SISO | Ant1 | 5510 | 0.66 | 0.70 | 94.29 |
| 11AC40SISO | Ant1 | 5550 | 0.65 | 0.70 | 92.86 |
| 11AC40SISO | Ant1 | 5670 | 0.66 | 0.70 | 94.29 |
| 11AC80SISO | Ant1 | 5210 | 0.32 | 0.37 | 86.49 |
| 11AC80SISO | Ant1 | 5290 | 0.32 | 0.37 | 86.49 |
| 11AC80SISO | Ant1 | 5530 | 0.32 | 0.37 | 86.49 |
| 11AC80SISO | Ant1 | 5610 | 0.32 | 0.37 | 86.49 |

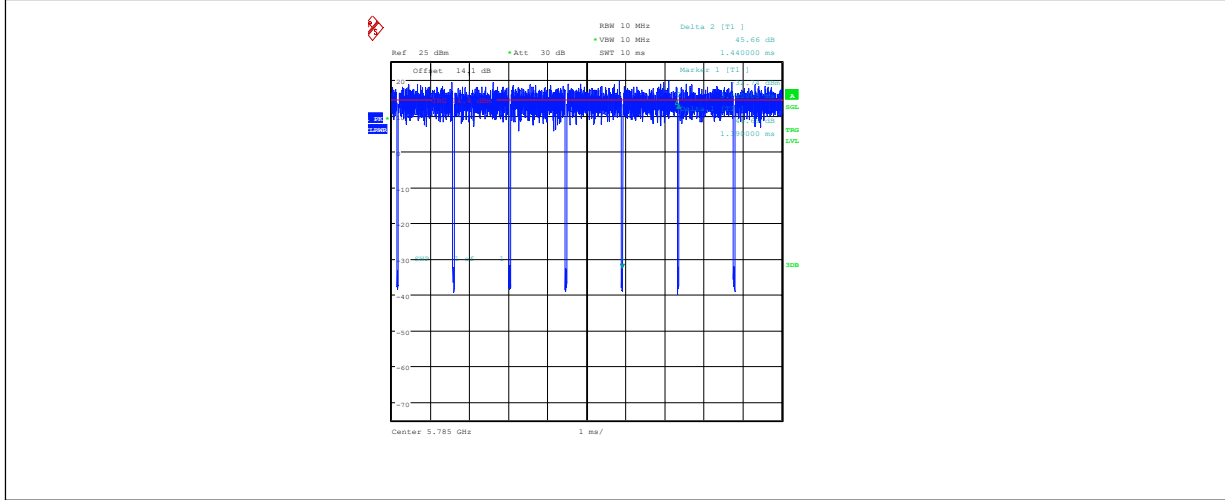
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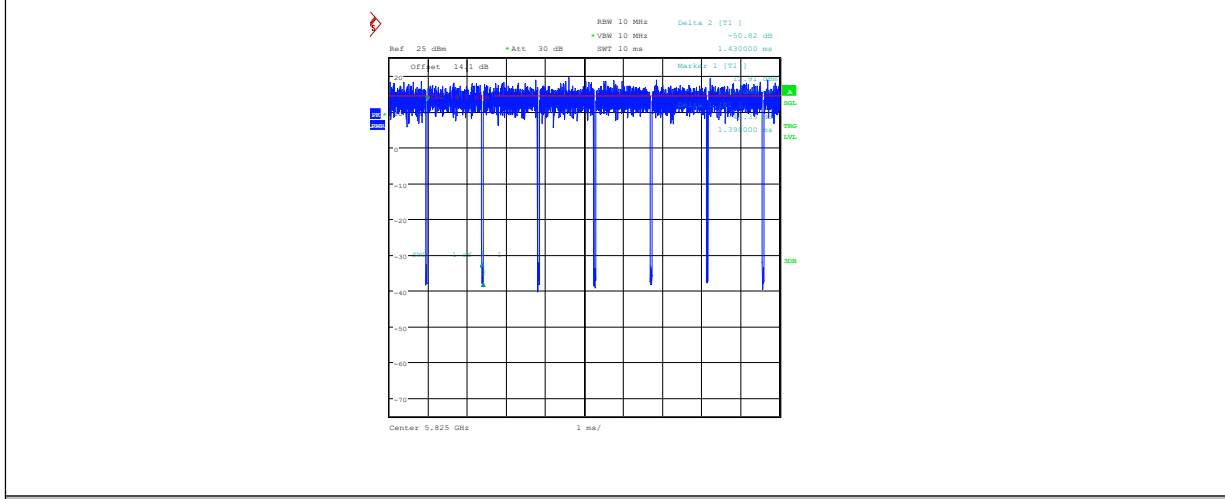
Test Graphs Channel Power



NTV-11A-Ant1-5745



NTV-11A-Ant1-5785

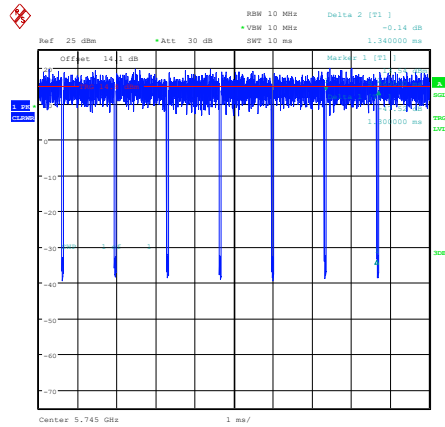


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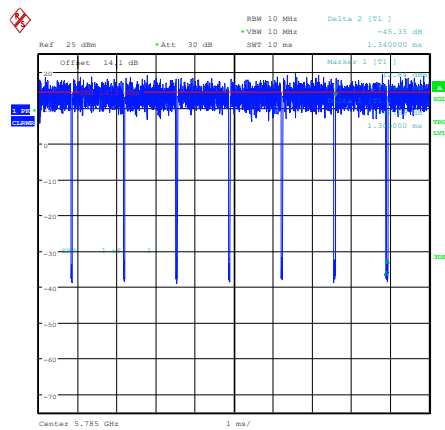
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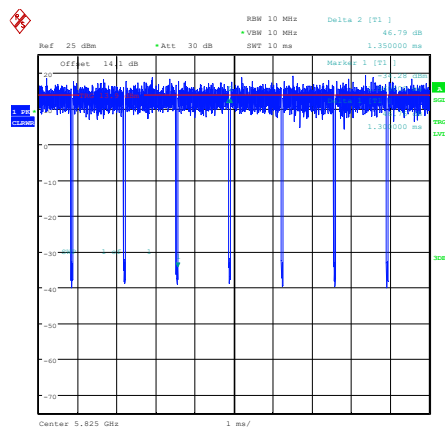




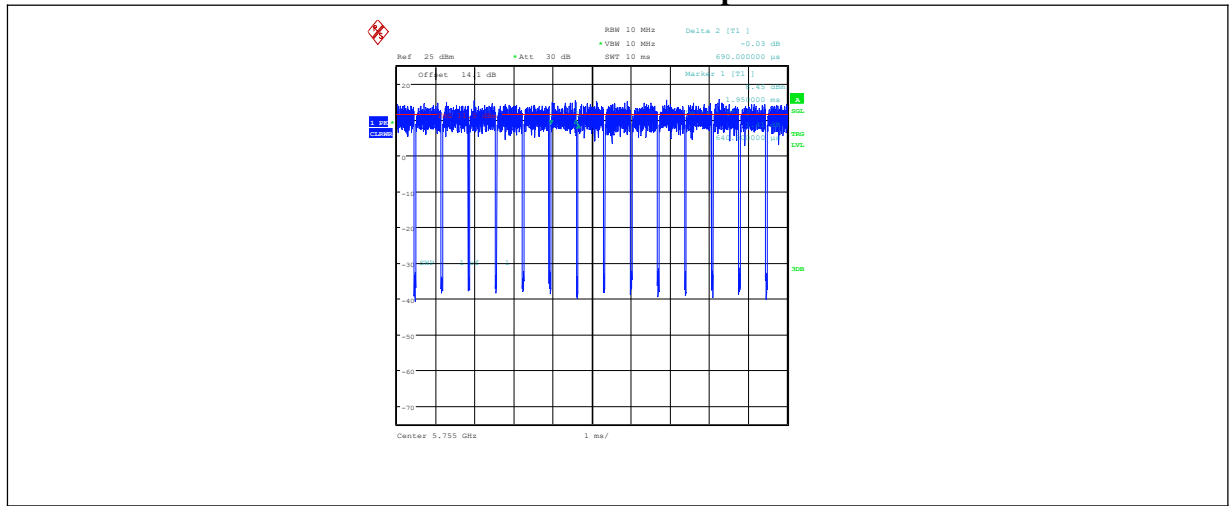
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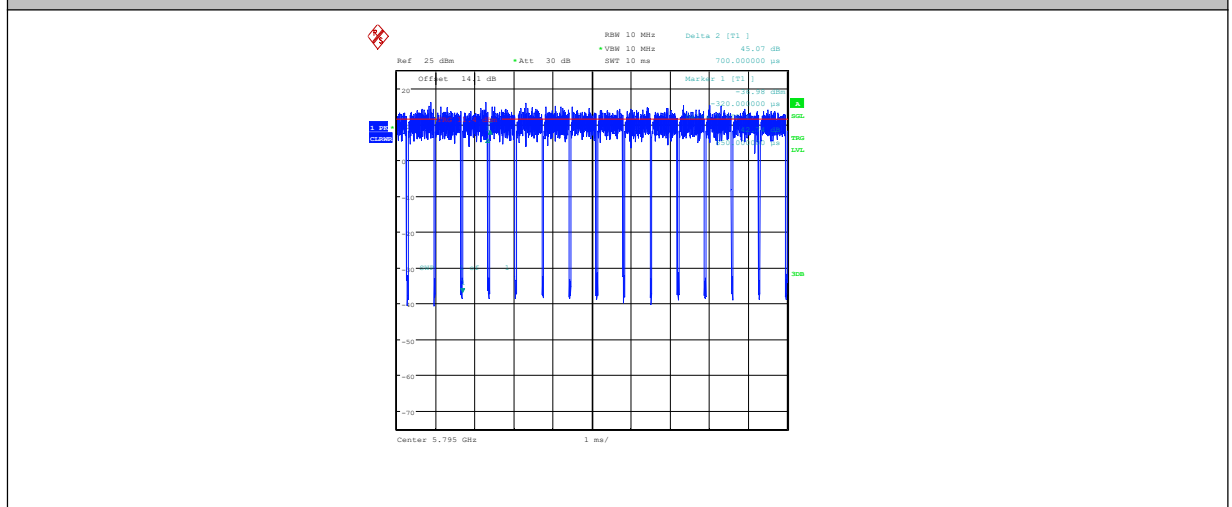
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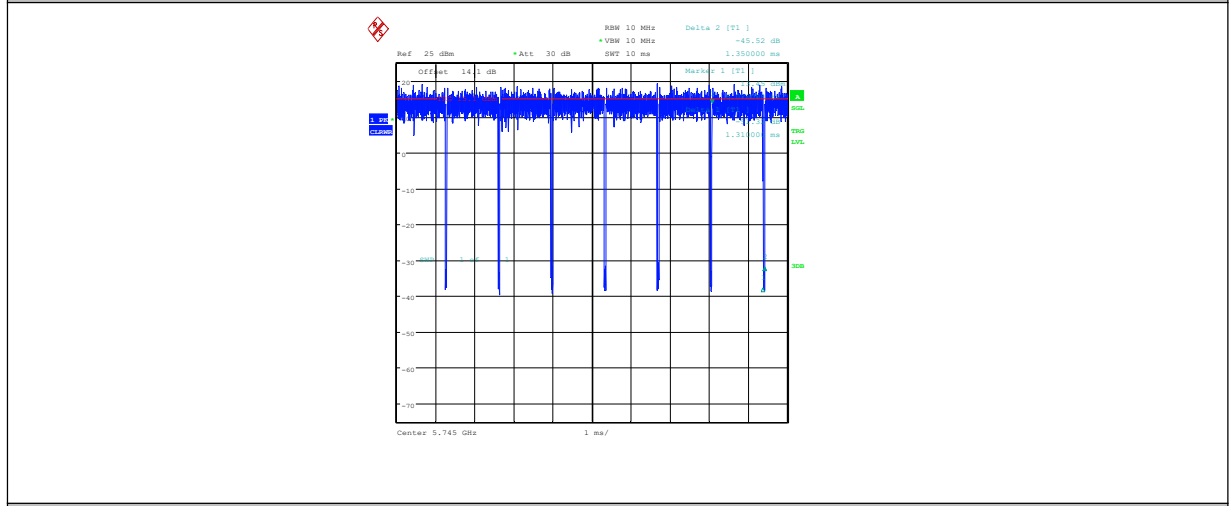
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NTNV-11N40SISO-Ant1-5755



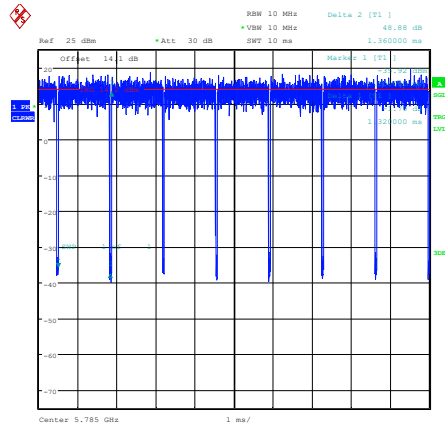
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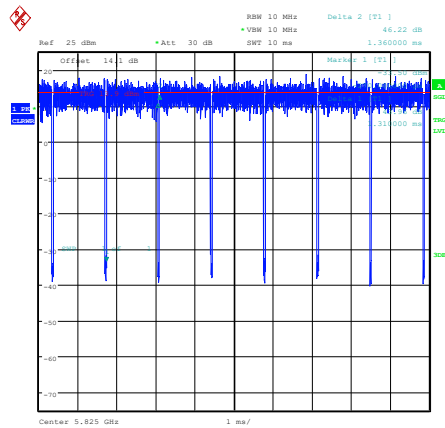
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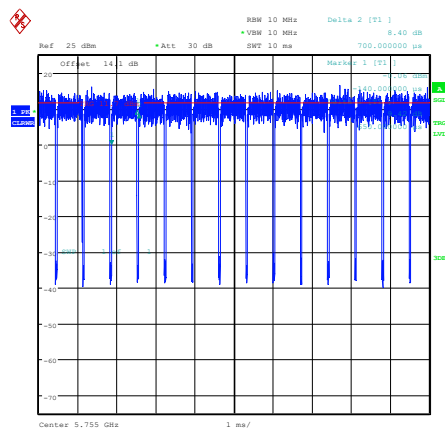
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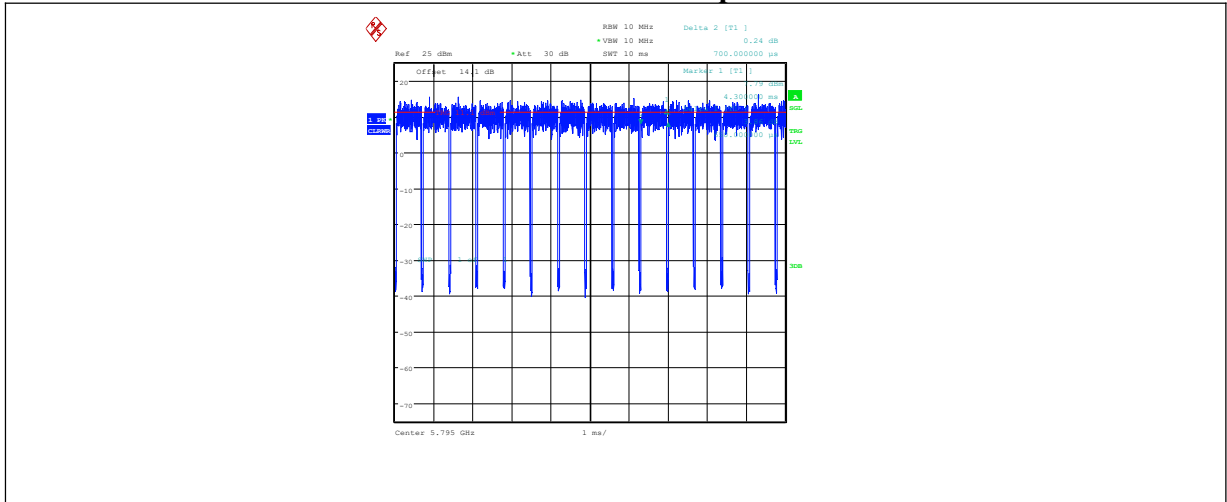
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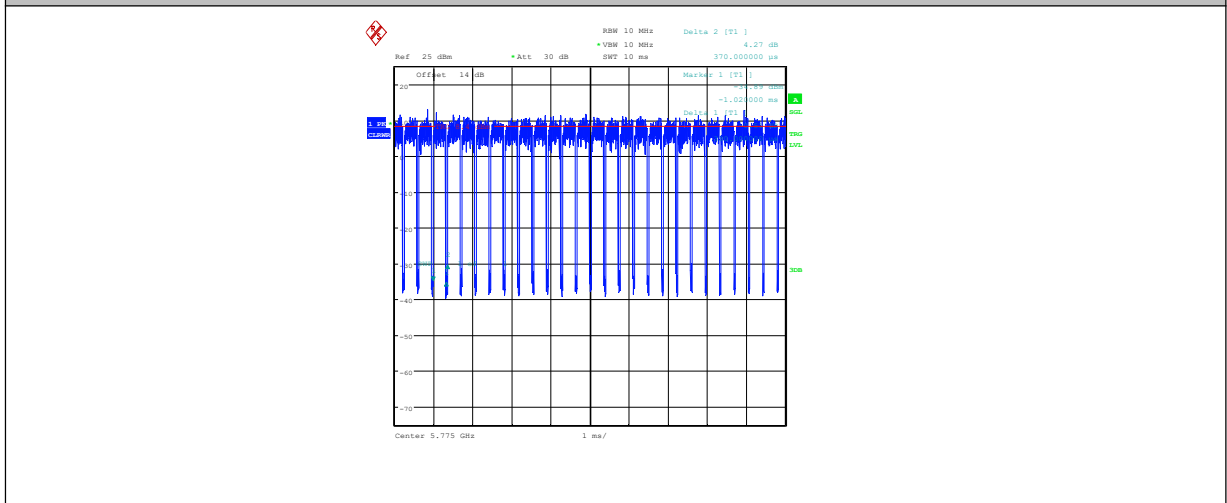
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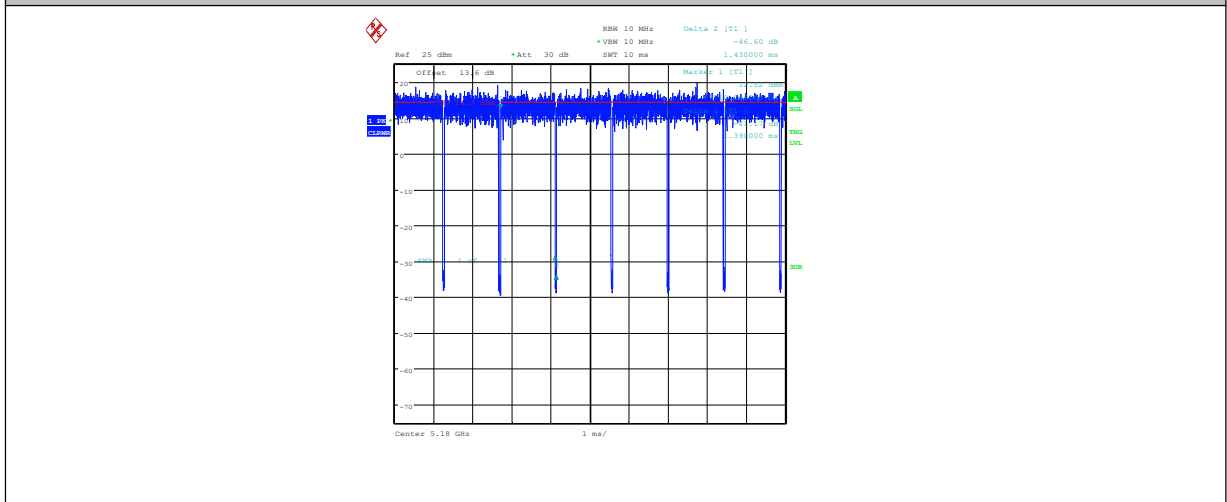
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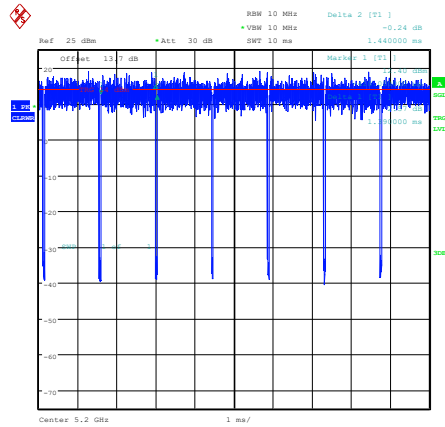
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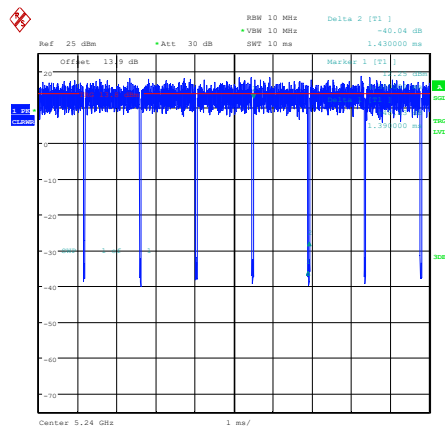
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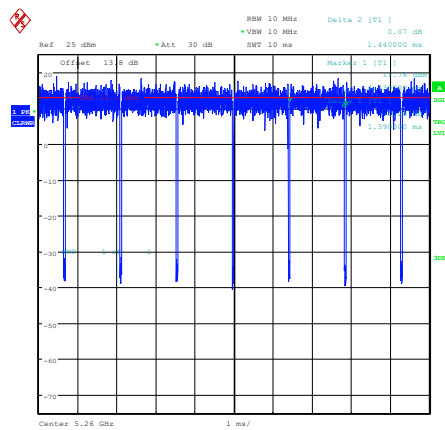
Address: No. 8, Yuma Road, Chayuan New City, Nan'an District, Chongqing, P. R. China, 401336  
 Tel: 0086-23-88069965 FAX: 0086-23-88608777



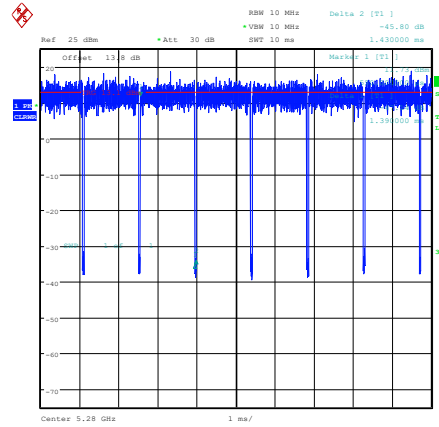
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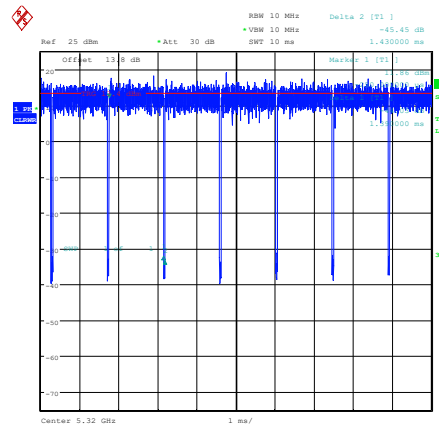
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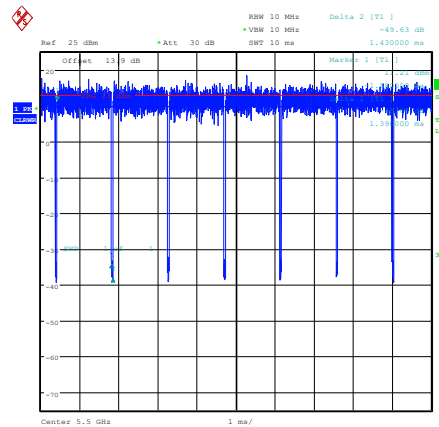
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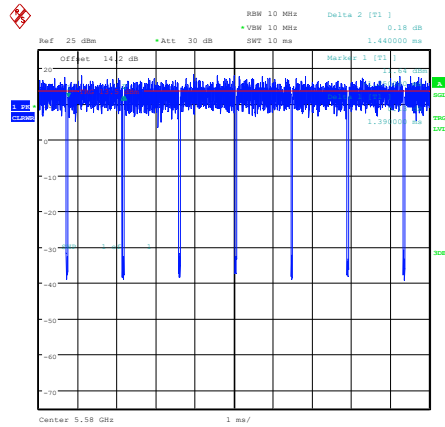
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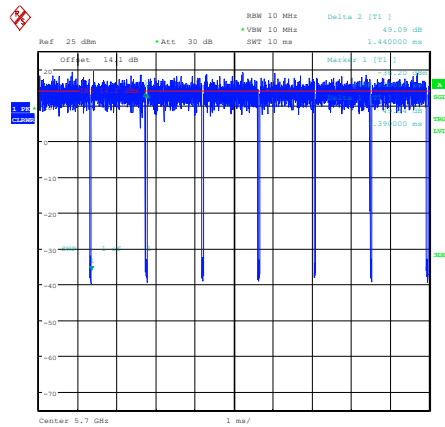
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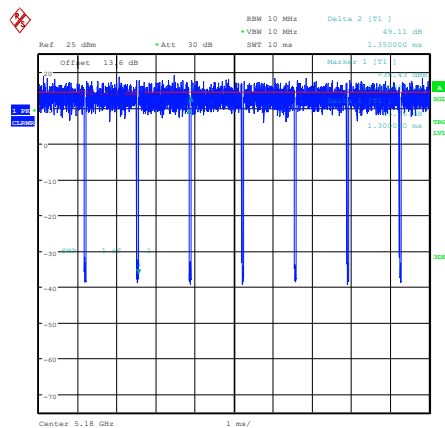
NTNV-11A-Ant1-5500



NTNV-11A-Ant1-5580



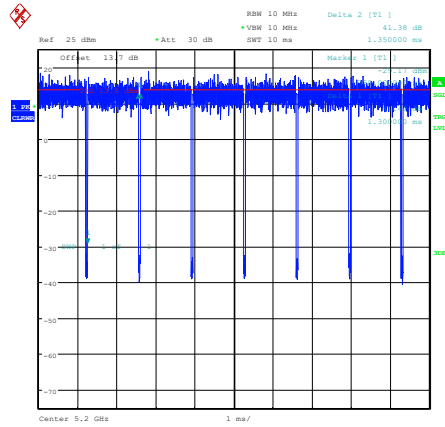
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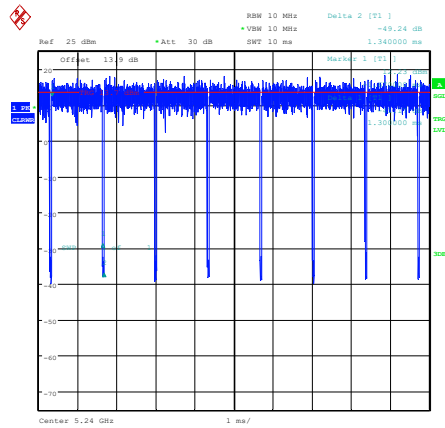
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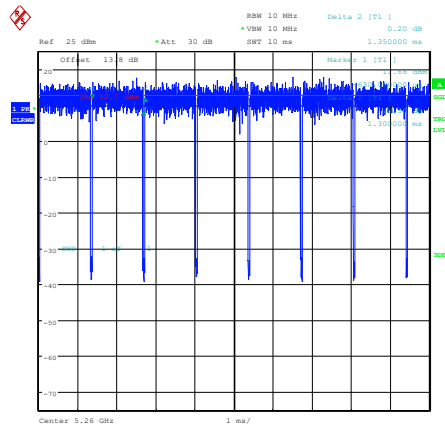
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NTNV-11N20SISO-Ant1-5200

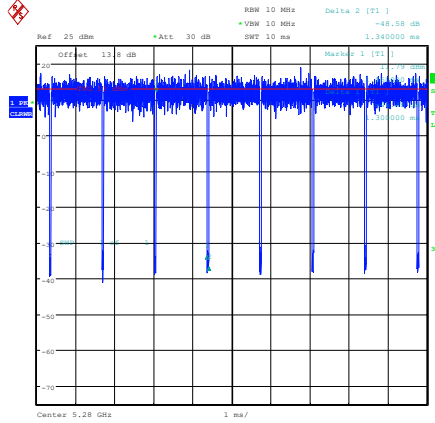


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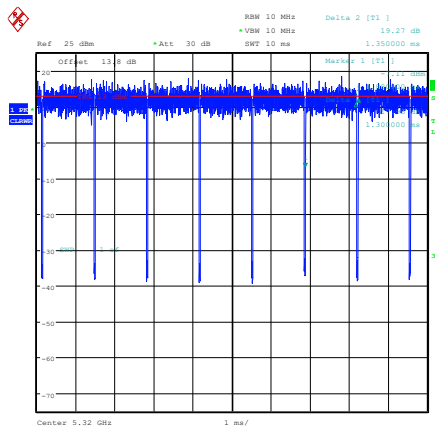


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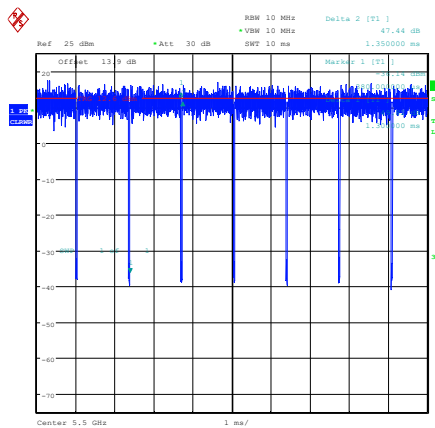




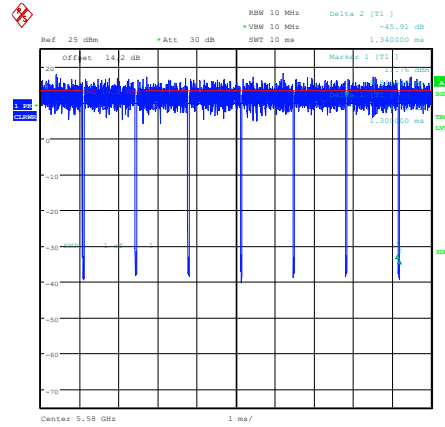
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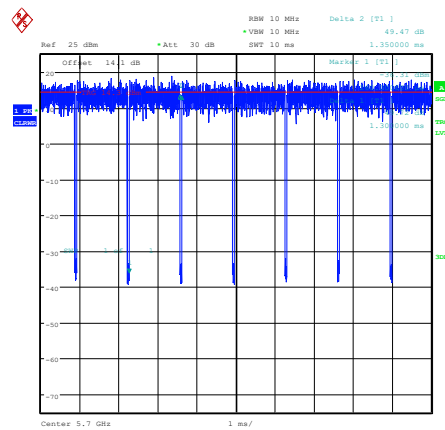
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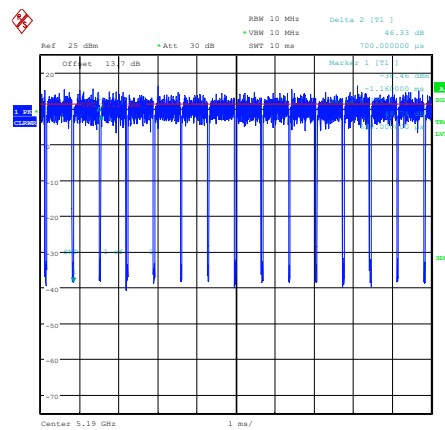
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NTNV-11N20SISO-Ant1-5580



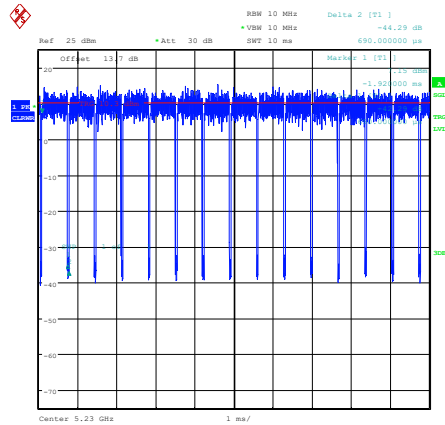
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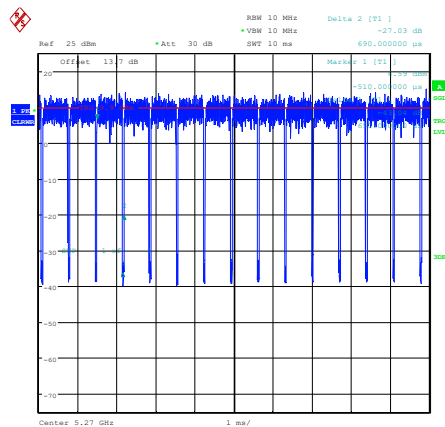
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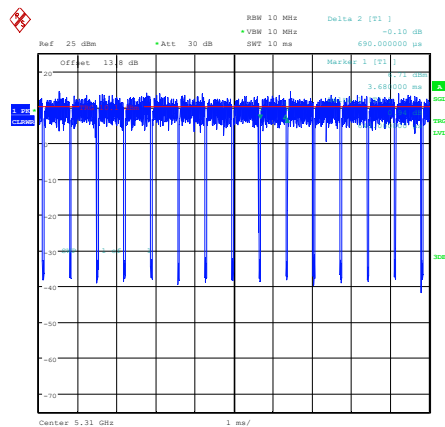
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NTNV-11N40SISO-Ant1-5230



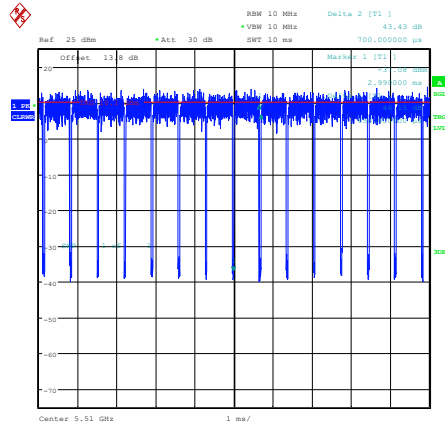
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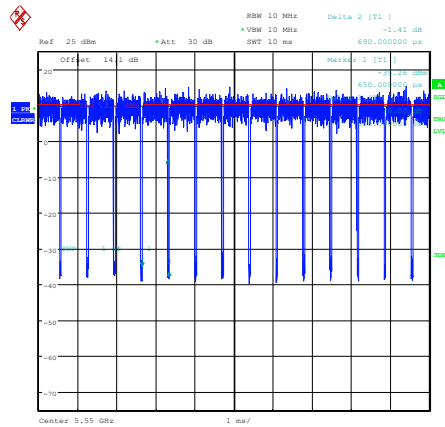
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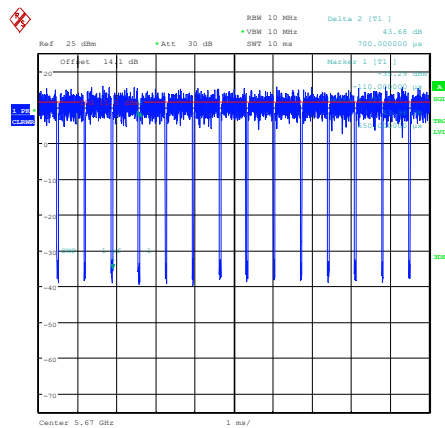
Address: No. 8, Yuma Road, Chayuan New City, Nan'an District, Chongqing, P. R. China, 401336  
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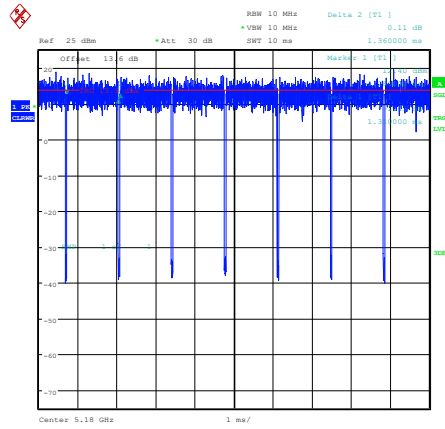
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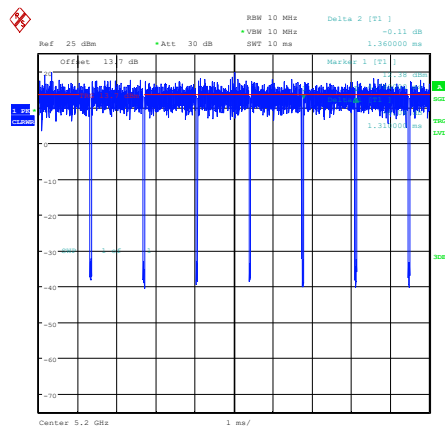
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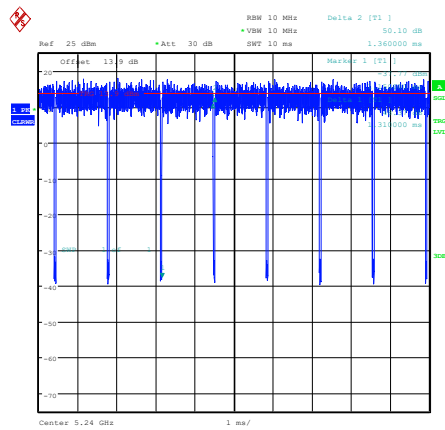
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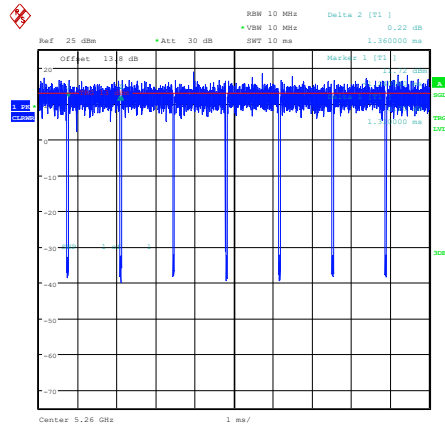
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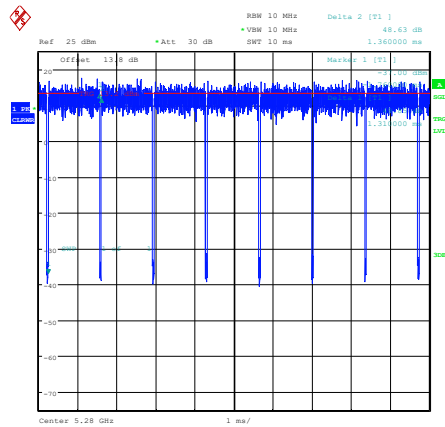
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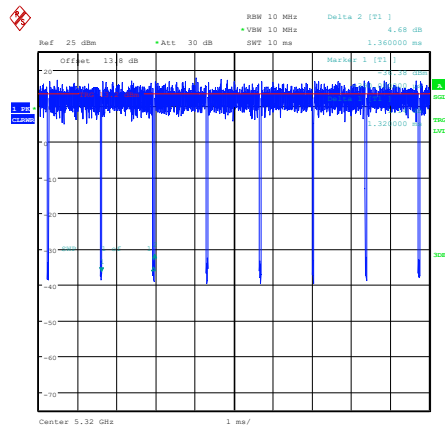
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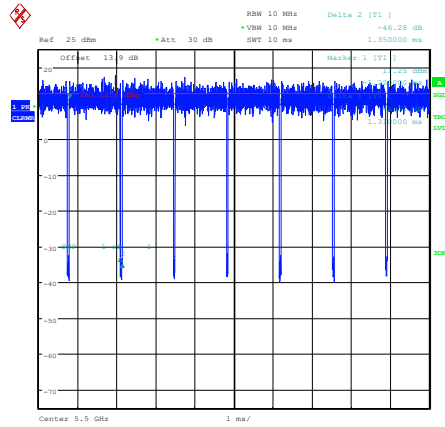
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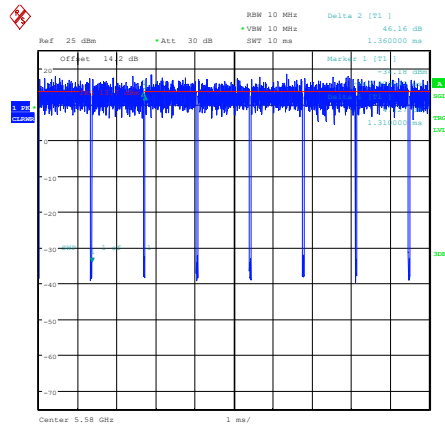
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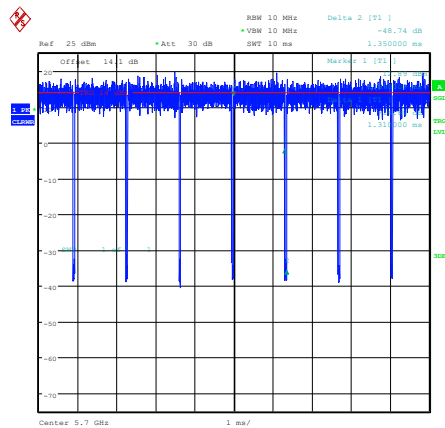
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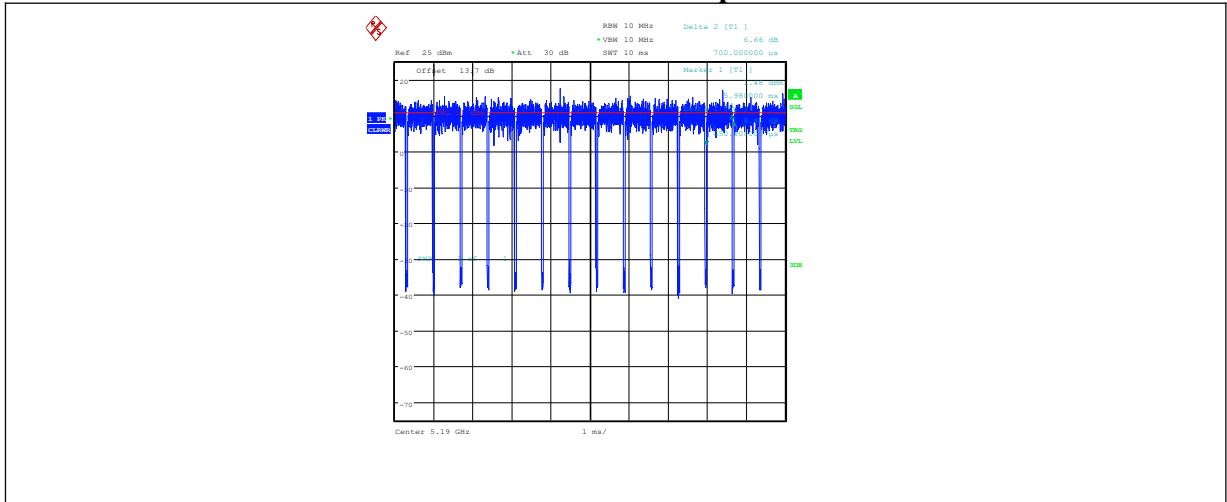
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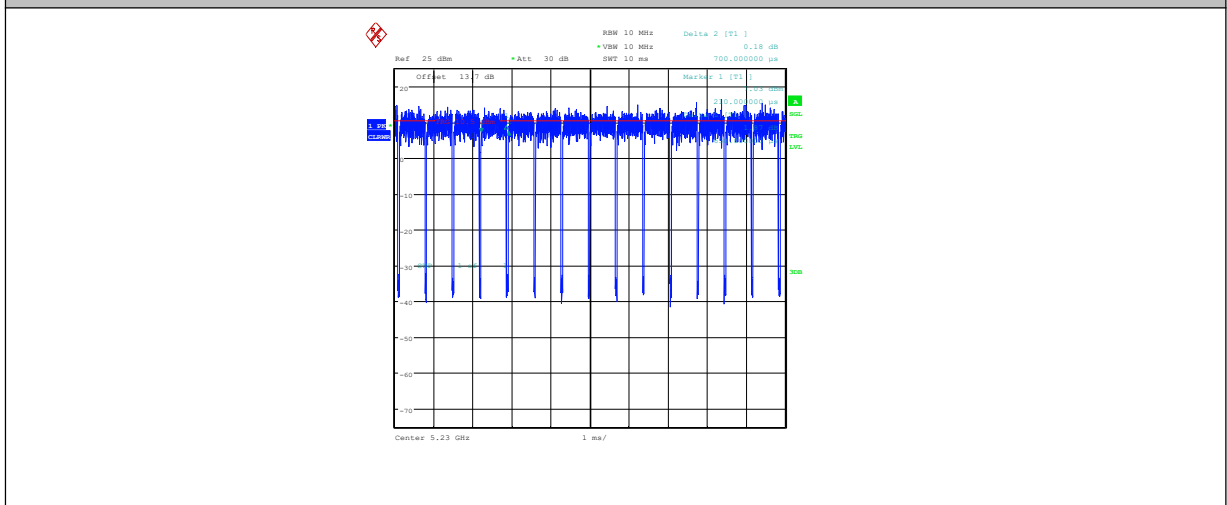
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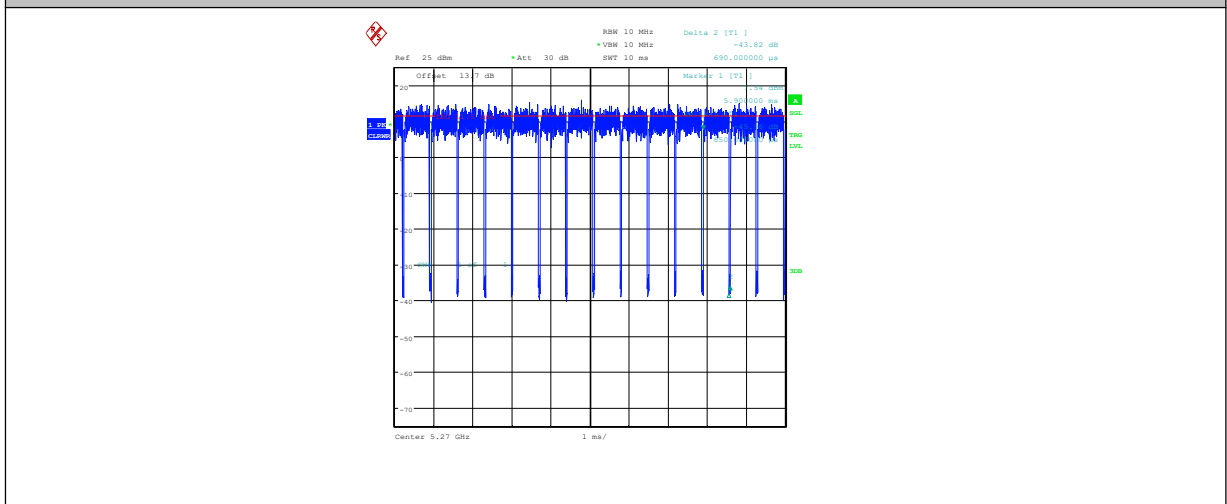
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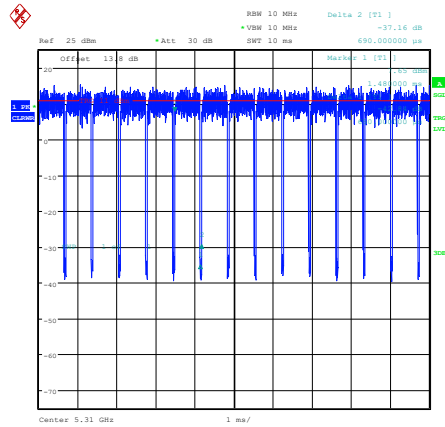


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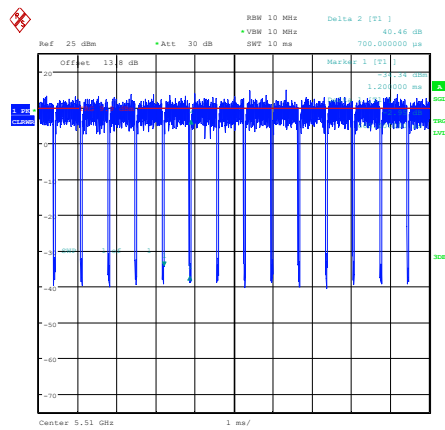


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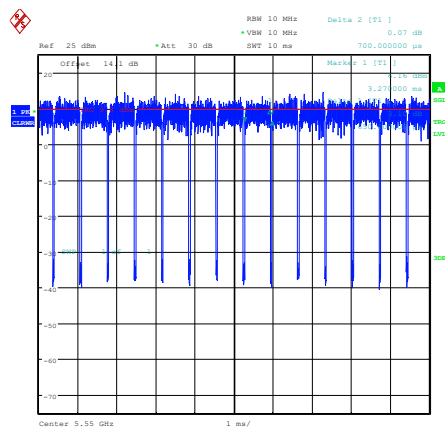




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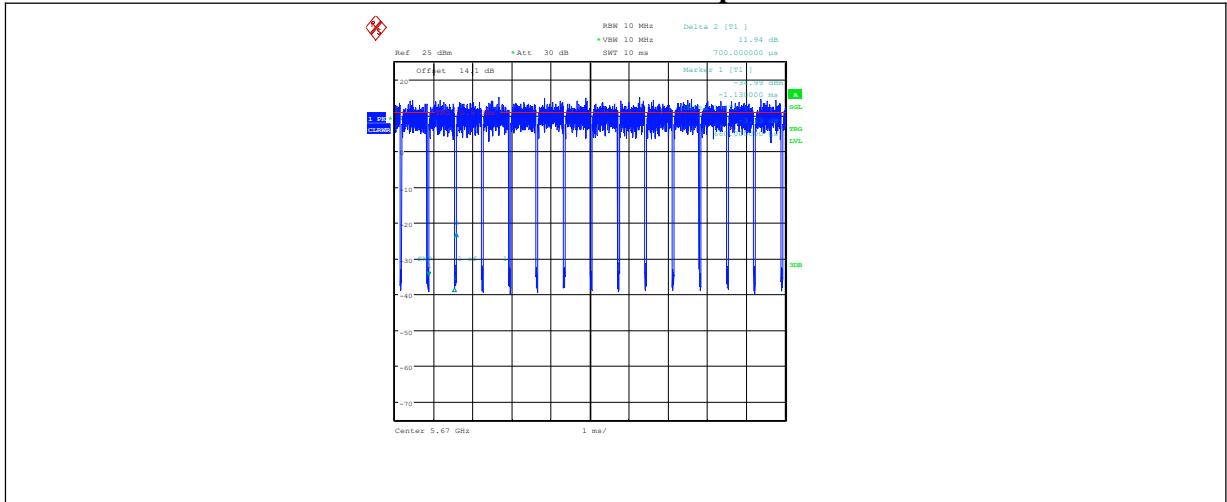
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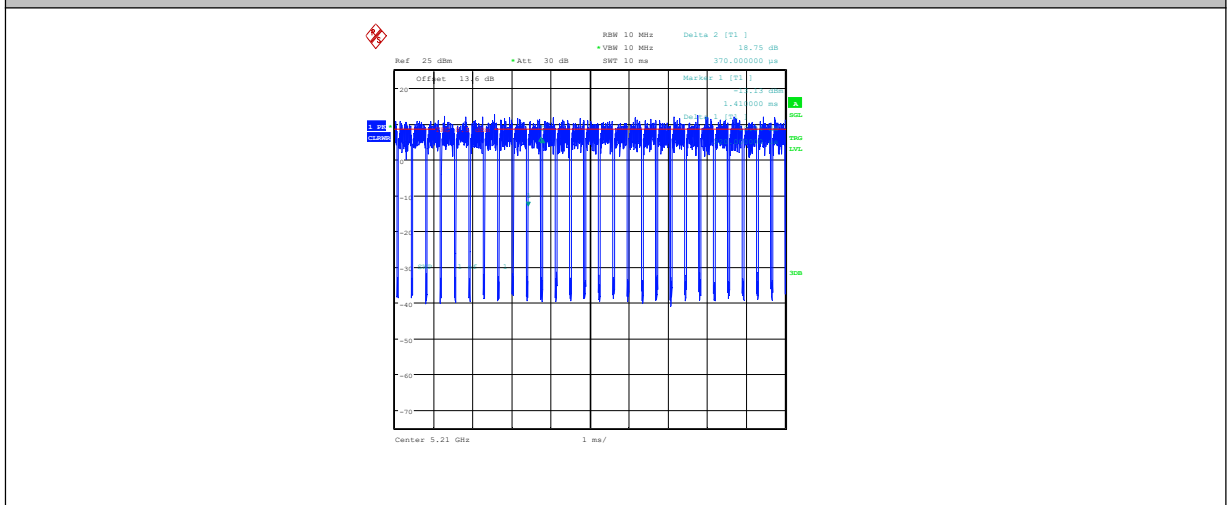
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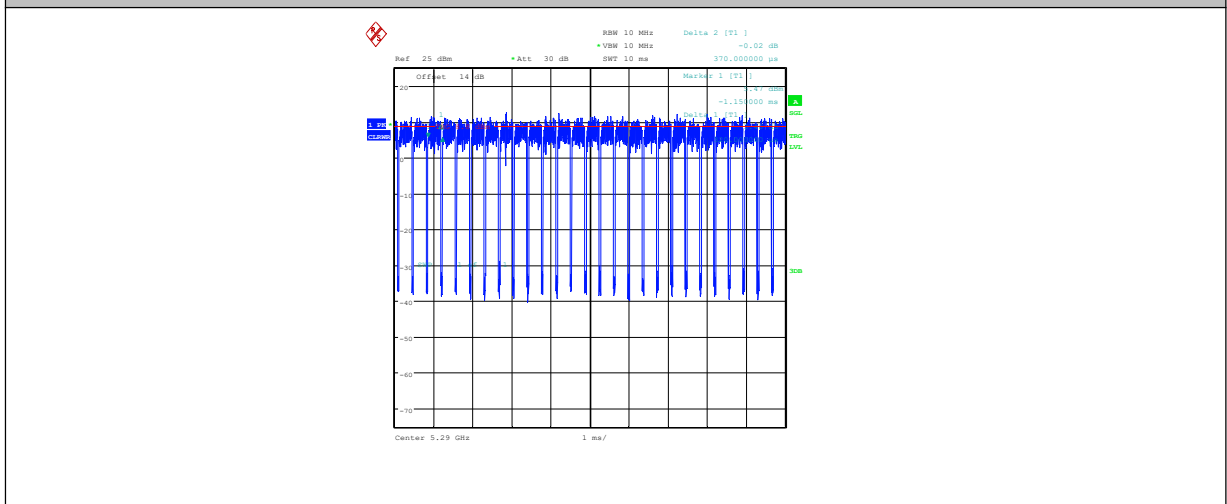
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NTNV-11AC40SISO-Ant1-5670



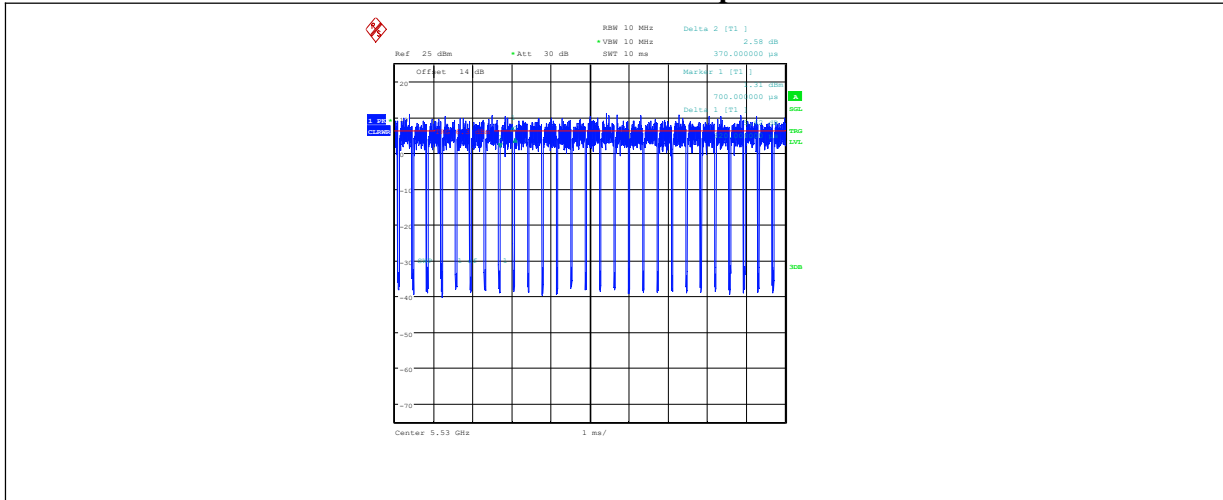
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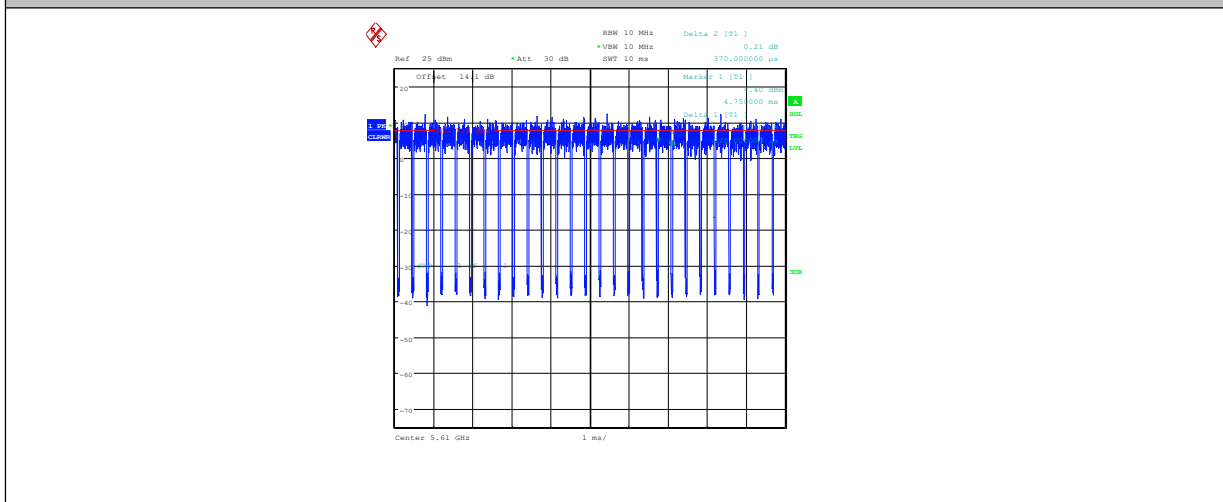
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NTNV-11AC80SISO-Ant1-5530



NTNV-11AC80SISO-Ant1-5610

### 6.3 Maximum conducted output power

|                           |  |
|---------------------------|--|
| <b>Specifications:</b>    | FCC 47 Part 15.407(a)  |
| <b>DUT Serial Number:</b> | S4   |
| <b>Test conditions:</b>   | Ambient Temperature:20°C<br>Relative Humidity:40%<br>Air pressure: 90kPa |
| <b>Test Results:</b>      | Pass   |

#### Measurement Limit and Method

| Standard              | Limit (dBm) |
|-----------------------|-------------|
| FCC 47 Part 15.407(a) | <30         |

Measurement Uncertainty:

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|                         |                     |
|-------------------------|---------------------|
| Measurement Uncertainty | $\pm 0.48\text{dB}$ |
|-------------------------|---------------------|

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).

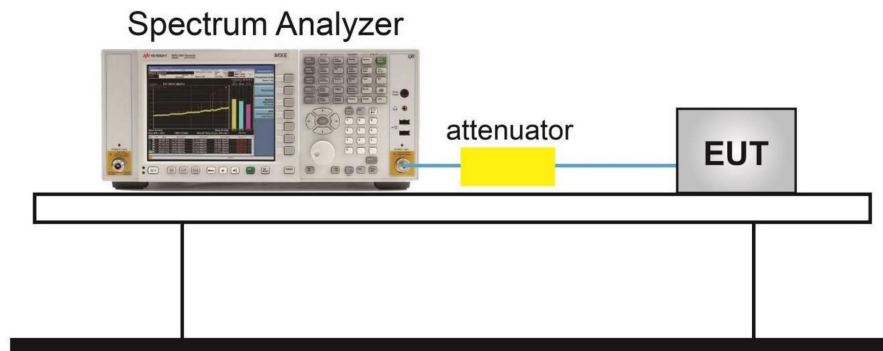
1. Measure the duty cycle,  $x$ , of the transmitter output signal as described in II.B.
2. Set span to encompass the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal.
3. Set RBW = 1 MHz. (iv) Set VBW  $\geq$  3 MHz.
4. Number of points in sweep  $\geq 2 \times \text{span} / \text{RBW}$ . (This ensures that bin-to-bin spacing is  $\leq \text{RBW}/2$ , 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%

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Test setup



Antenna gain of EUT

| No. | Item(s)               | Data     |
|-----|-----------------------|----------|
| 1   | Antenna 0 gain of EUT | 0.61 dBi |

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

Test Result Channel Power

| Test Mode | Frequency[MHz] | Set Power | Channel Power [dBm] | Duty Cycle [%] | DC Factor [dBm] | Result [dBm] | Limit [dBm] | Gain [dBi] | EIRP [dBm] | EIRP Limit [dBm] | Verdict |
|-----------|----------------|-----------|---------------------|----------------|-----------------|--------------|-------------|------------|------------|------------------|---------|
| 11A       | 5180           | 15        | 11.43               | 96.53          | 0.15            | 11.58        | ≤23.98      | 0.61       | 12.19      | ---              | PASS    |
|           | 5200           | 15        | 11.19               | 97.20          | 0.12            | 11.31        | ≤23.98      | 0.61       | 11.92      | ---              | PASS    |
|           | 5240           | 15        | 10.13               | 97.22          | 0.12            | 10.25        | ≤23.98      | 0.61       | 10.86      | ---              | PASS    |
|           | 5260           | 15        | 10.48               | 96.53          | 0.15            | 10.63        | ≤23.98      | 0.61       | 11.24      | ≤26.99           | PASS    |
|           | 5280           | 15        | 10.74               | 96.53          | 0.15            | 10.89        | ≤23.98      | 0.61       | 11.50      | ≤26.99           | PASS    |
|           | 5320           | 15        | 10.78               | 96.53          | 0.15            | 10.93        | ≤23.98      | 0.61       | 11.54      | ≤26.99           | PASS    |
|           | 5500           | 15        | 10.18               | 96.53          | 0.15            | 10.33        | ≤23.98      | 0.61       | 10.94      | ≤26.99           | PASS    |
|           | 5580           | 15        | 10.00               | 97.20          | 0.12            | 10.12        | ≤23.98      | 0.61       | 10.73      | ≤26.99           | PASS    |
| 11N20SISO | 5180           | 14-       | 9.71                | 96.30          | 0.16            | 9.87         | ≤23.98      | 0.61       | 10.48      | ---              | PASS    |
|           | 5200           | 14-       | 9.45                | 96.30          | 0.16            | 9.61         | ≤23.98      | 0.61       | 10.22      | ---              | PASS    |
|           | 5240           | 14-       | 9.20                | 97.01          | 0.13            | 9.33         | ≤23.98      | 0.61       | 9.94       | ---              | PASS    |
|           | 5260           | 14-       | 9.24                | 96.30          | 0.16            | 9.40         | ≤23.98      | 0.61       | 10.01      | ≤26.99           | PASS    |
|           | 5280           | 14-       | 9.26                | 96.30          | 0.16            | 9.42         | ≤23.98      | 0.61       | 10.03      | ≤26.99           | PASS    |
|           | 5320           | 14-       | 9.70                | 96.30          | 0.16            | 9.86         | ≤23.98      | 0.61       | 10.47      | ≤26.99           | PASS    |
|           | 5500           | 14-       | 8.16                | 97.01          | 0.13            | 8.29         | ≤23.98      | 0.61       | 8.90       | ≤26.99           | PASS    |

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Report No.: 123W00020-WIFI 5G RF

|            |      |      |      |       |      |      |        |      |       |        |      |
|------------|------|------|------|-------|------|------|--------|------|-------|--------|------|
|            | 5580 | 14-  | 7.72 | 97.01 | 0.13 | 7.85 | ≤23.98 | 0.61 | 8.46  | ≤26.99 | PASS |
|            | 5700 | 14-  | 8.28 | 97.01 | 0.13 | 8.41 | ≤23.98 | 0.61 | 9.02  | ≤26.99 | PASS |
| 11N40SISO  | 5190 | 14-  | 9.46 | 94.20 | 0.26 | 9.72 | ≤23.98 | 0.61 | 10.33 | ---    | PASS |
|            | 5230 | 14-  | 8.90 | 94.20 | 0.26 | 9.16 | ≤23.98 | 0.61 | 9.77  | ---    | PASS |
|            | 5270 | 14-  | 8.76 | 94.20 | 0.26 | 9.02 | ≤23.98 | 0.61 | 9.63  | ≤26.99 | PASS |
|            | 5310 | 14-  | 9.50 | 92.86 | 0.32 | 9.82 | ≤23.98 | 0.61 | 10.43 | ≤26.99 | PASS |
|            | 5510 | 14-  | 8.15 | 94.20 | 0.26 | 8.41 | ≤23.98 | 0.61 | 9.02  | ≤26.99 | PASS |
|            | 5550 | 14-  | 8.02 | 92.75 | 0.33 | 8.35 | ≤23.98 | 0.61 | 8.96  | ≤26.99 | PASS |
|            | 5670 | 14-  | 8.76 | 92.86 | 0.32 | 9.08 | ≤23.98 | 0.61 | 9.69  | ≤26.99 | PASS |
| 11AC20SISO | 5180 | 14-  | 9.59 | 97.06 | 0.13 | 9.72 | ≤23.98 | 0.61 | 10.33 | ---    | PASS |
|            | 5200 | 14-  | 9.65 | 97.06 | 0.13 | 9.78 | ≤23.98 | 0.61 | 10.39 | ---    | PASS |
|            | 5240 | 14-  | 8.80 | 97.06 | 0.13 | 8.93 | ≤23.98 | 0.61 | 9.54  | ---    | PASS |
|            | 5260 | 14-  | 8.40 | 96.32 | 0.16 | 8.56 | ≤23.98 | 0.61 | 9.17  | ≤26.99 | PASS |
|            | 5280 | 14-  | 8.75 | 96.32 | 0.16 | 8.91 | ≤23.98 | 0.61 | 9.52  | ≤26.99 | PASS |
|            | 5320 | 14-  | 9.12 | 96.32 | 0.16 | 9.28 | ≤23.98 | 0.61 | 9.89  | ≤26.99 | PASS |
|            | 5500 | 14-  | 8.29 | 97.04 | 0.13 | 8.42 | ≤23.98 | 0.61 | 9.03  | ≤26.99 | PASS |
|            | 5580 | 14-  | 8.47 | 97.04 | 0.13 | 8.60 | ≤23.98 | 0.61 | 9.21  | ≤26.99 | PASS |
|            | 5700 | 14-  | 8.62 | 96.32 | 0.16 | 8.78 | ≤23.98 | 0.61 | 9.39  | ≤26.99 | PASS |
| 11AC40SISO | 5190 | 14-  | 8.89 | 94.20 | 0.26 | 9.15 | ≤23.98 | 0.61 | 9.76  | ---    | PASS |
|            | 5230 | 14-  | 8.17 | 92.86 | 0.32 | 8.49 | ≤23.98 | 0.61 | 9.10  | ---    | PASS |
|            | 5270 | 14-  | 8.20 | 94.20 | 0.26 | 8.46 | ≤23.98 | 0.61 | 9.07  | ≤26.99 | PASS |
|            | 5310 | 14-  | 8.61 | 94.20 | 0.26 | 8.87 | ≤23.98 | 0.61 | 9.48  | ≤26.99 | PASS |
|            | 5510 | 14-  | 8.05 | 94.20 | 0.26 | 8.31 | ≤23.98 | 0.61 | 8.92  | ≤26.99 | PASS |
|            | 5550 | 14-  | 8.00 | 92.86 | 0.32 | 8.32 | ≤23.98 | 0.61 | 8.93  | ≤26.99 | PASS |
|            | 5670 | 14-  | 8.67 | 94.20 | 0.26 | 8.93 | ≤23.98 | 0.61 | 9.54  | ≤26.99 | PASS |
| 11AC80SISO | 5210 | 13.5 | 7.58 | 89.19 | 0.50 | 8.08 | ≤23.98 | 0.61 | 8.69  | ---    | PASS |
|            | 5290 | 13.5 | 8.09 | 89.19 | 0.50 | 8.59 | ≤23.98 | 0.61 | 9.20  | ≤26.99 | PASS |
|            | 5530 | 13.5 | 6.99 | 89.19 | 0.50 | 7.49 | ≤23.98 | 0.61 | 8.10  | ≤26.99 | PASS |
|            | 5610 | 13.5 | 7.22 | 86.49 | 0.63 | 7.85 | ≤23.98 | 0.61 | 8.46  | ≤26.99 | PASS |

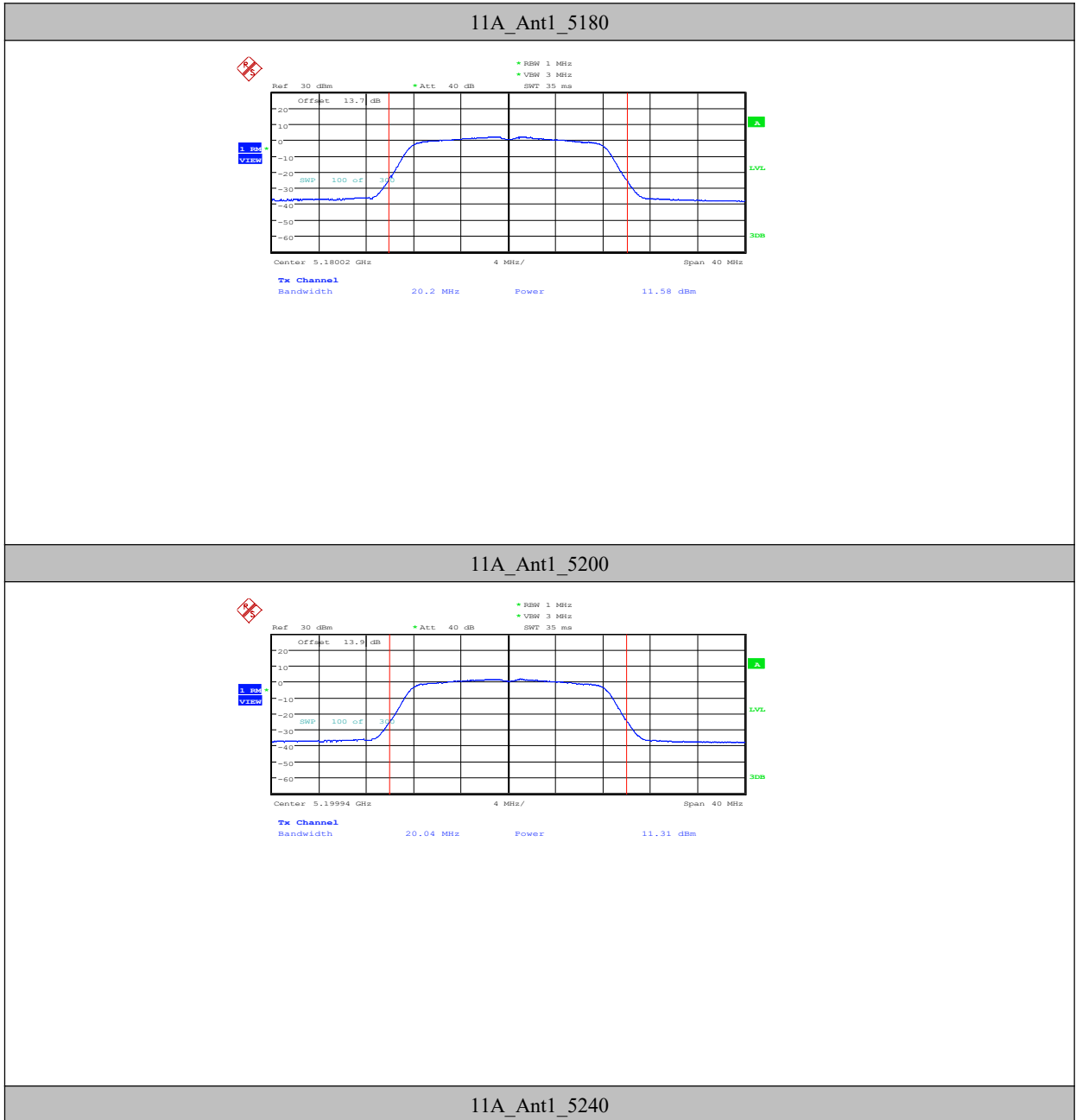
Note: The Duty Cycle Factor is compensated in the graph.

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.

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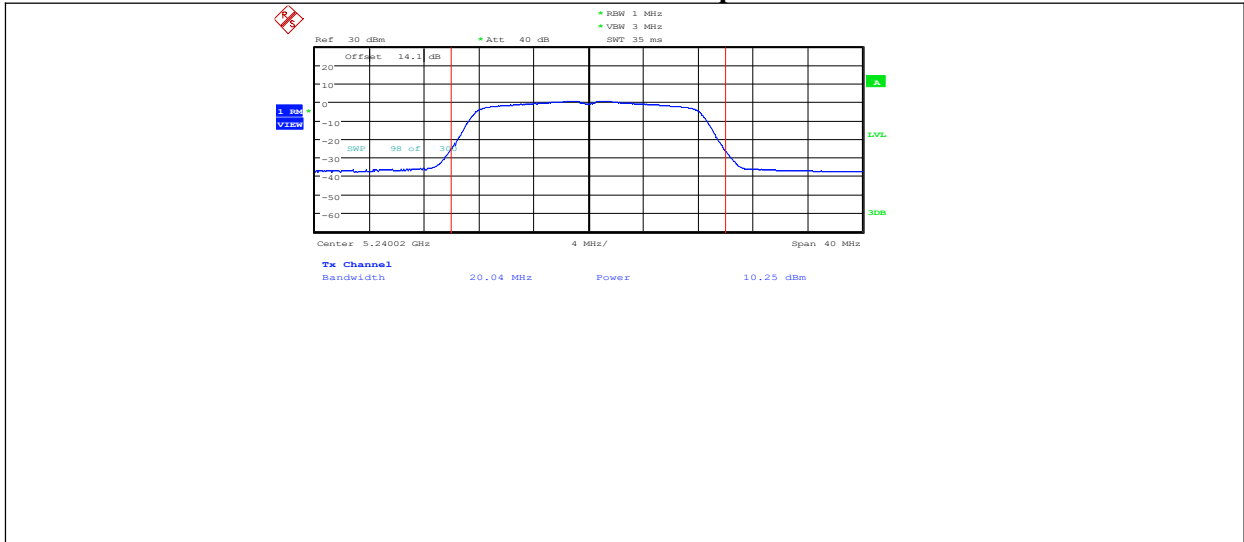
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Test Graphs Channel Power

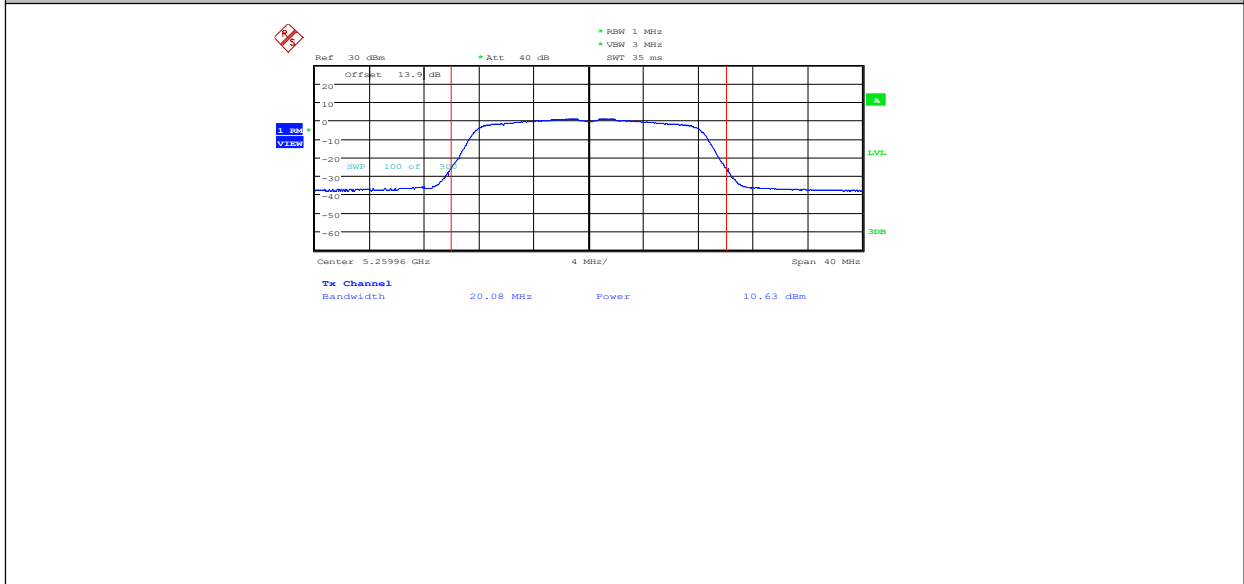


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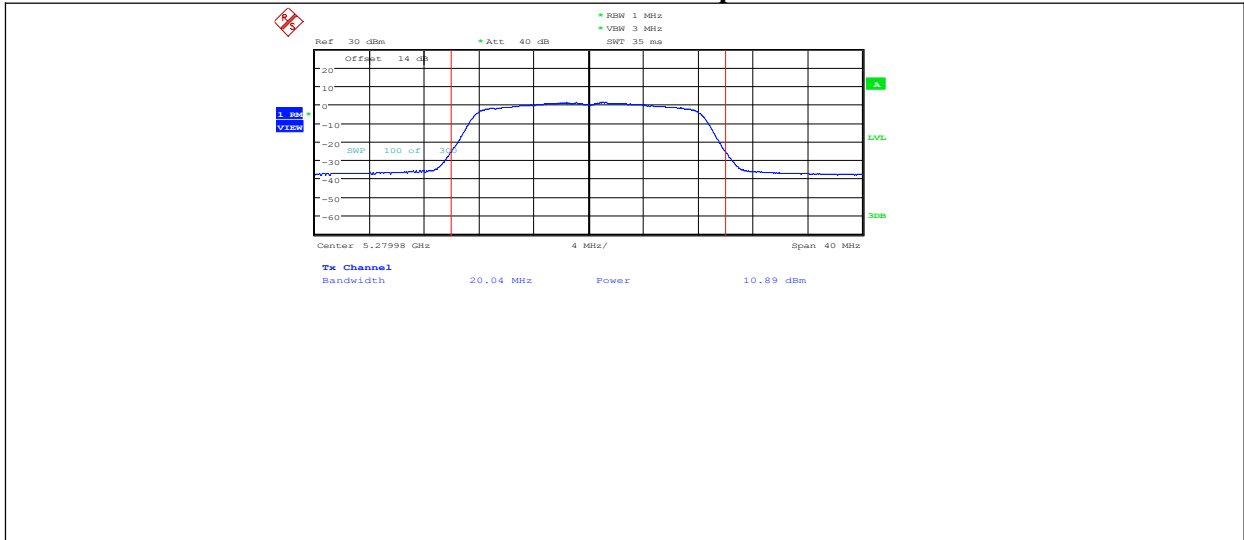


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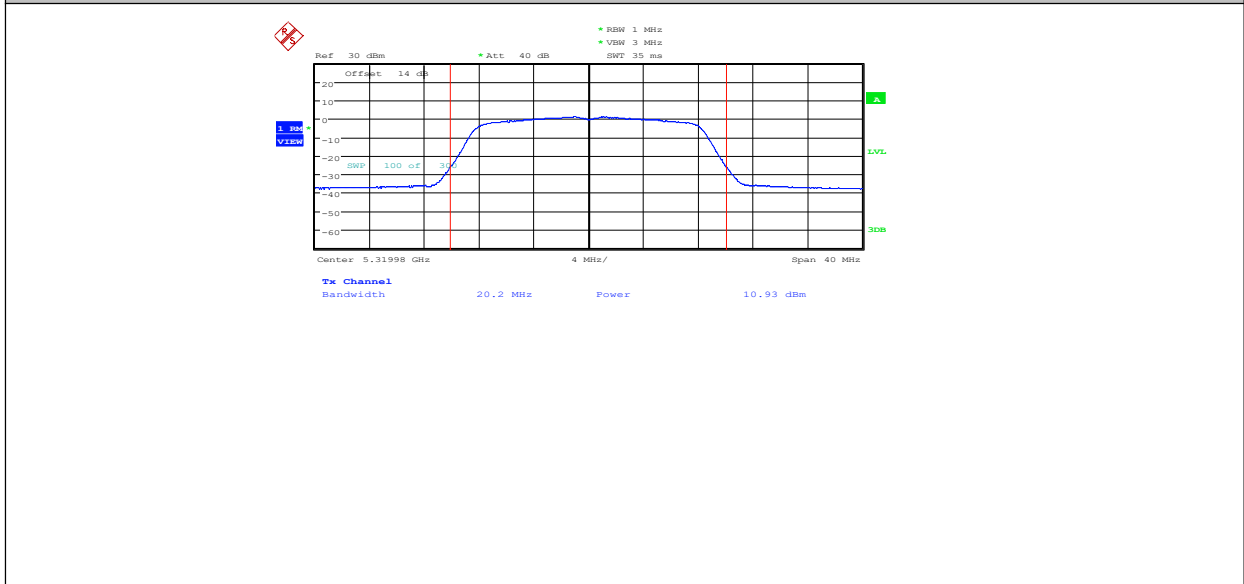


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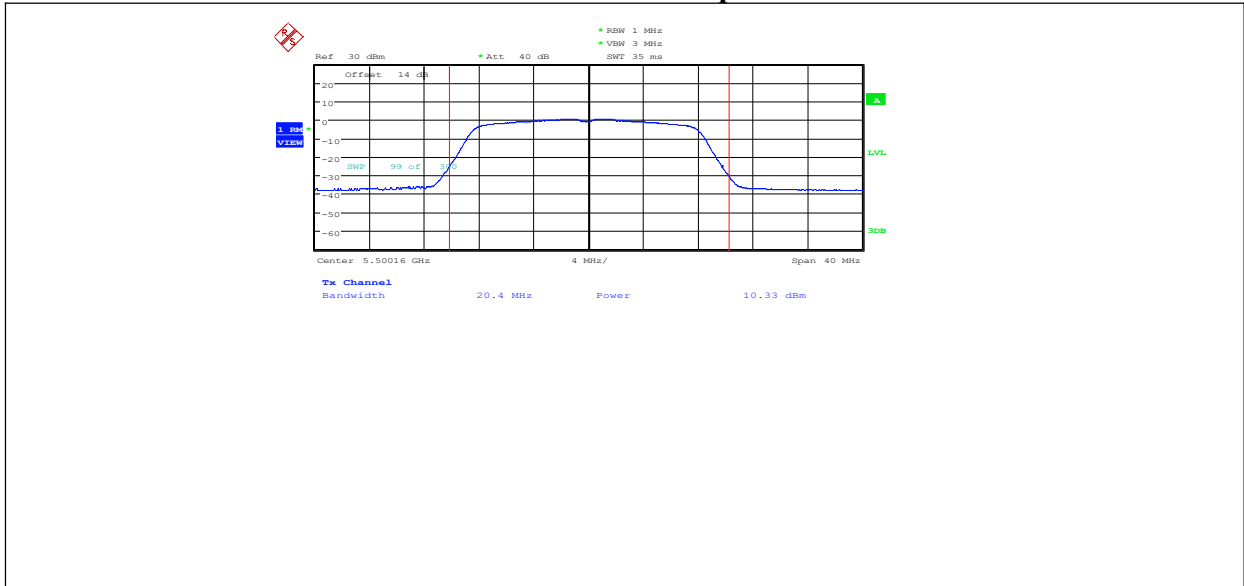




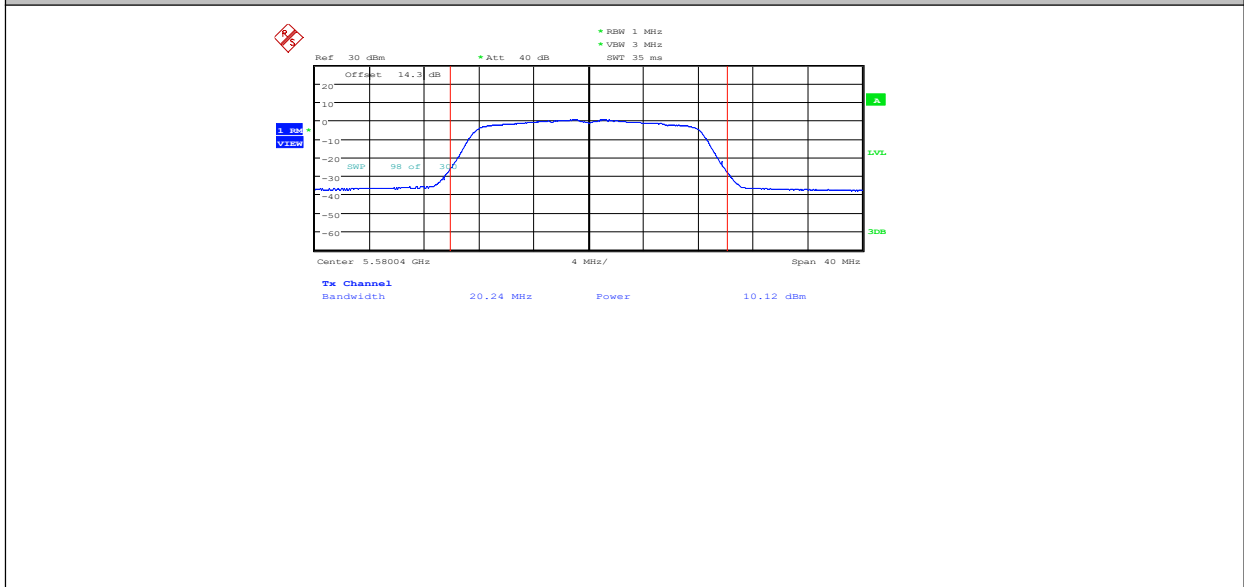
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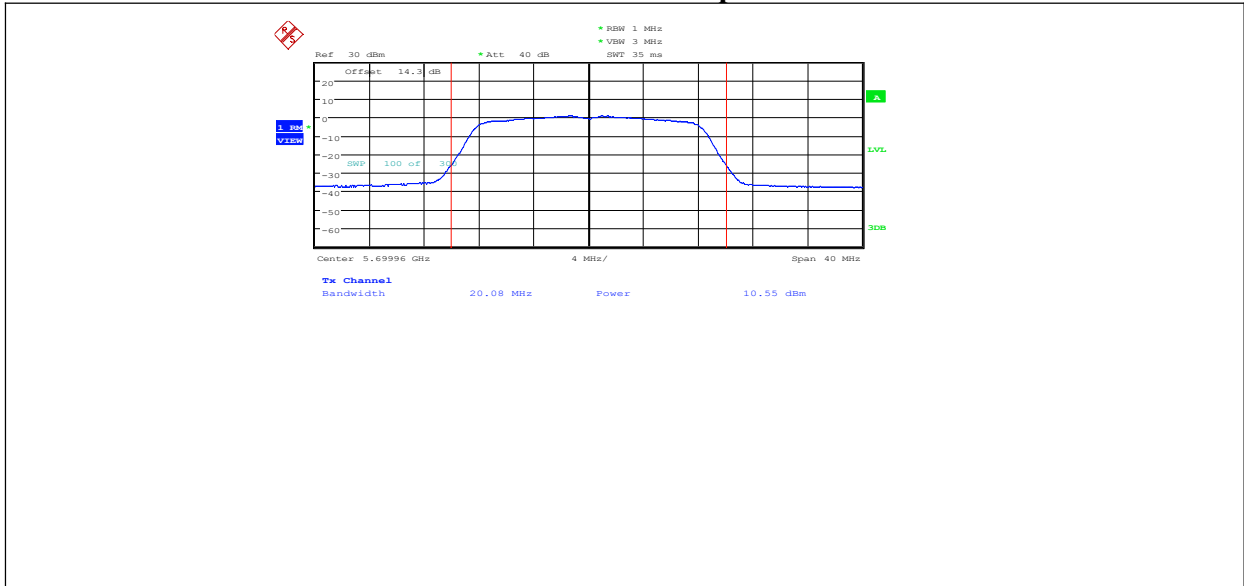
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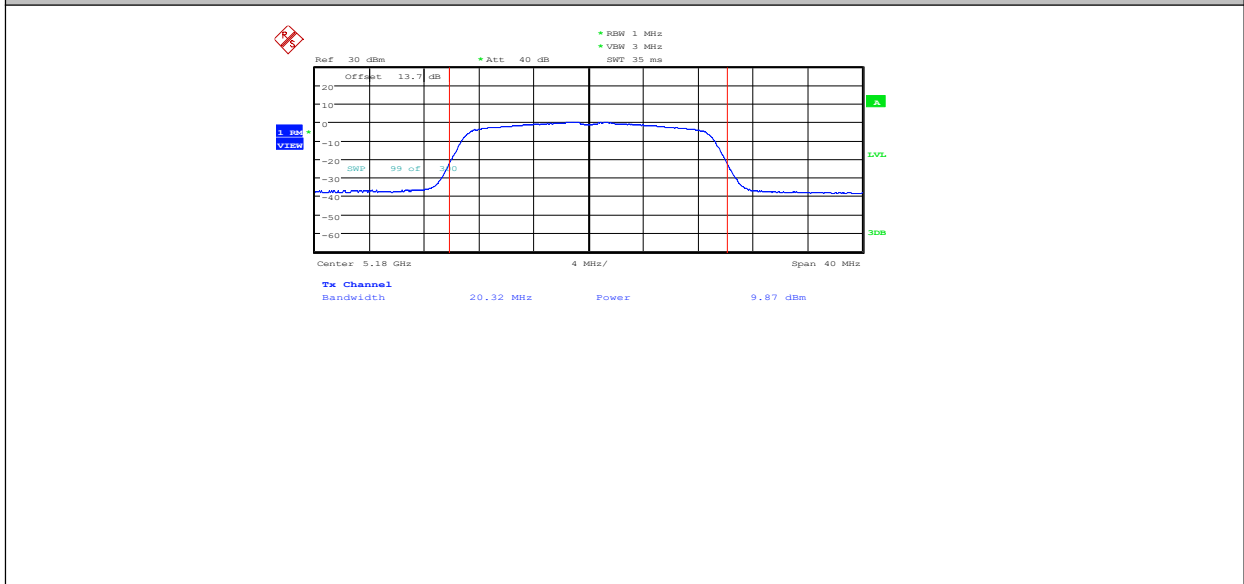
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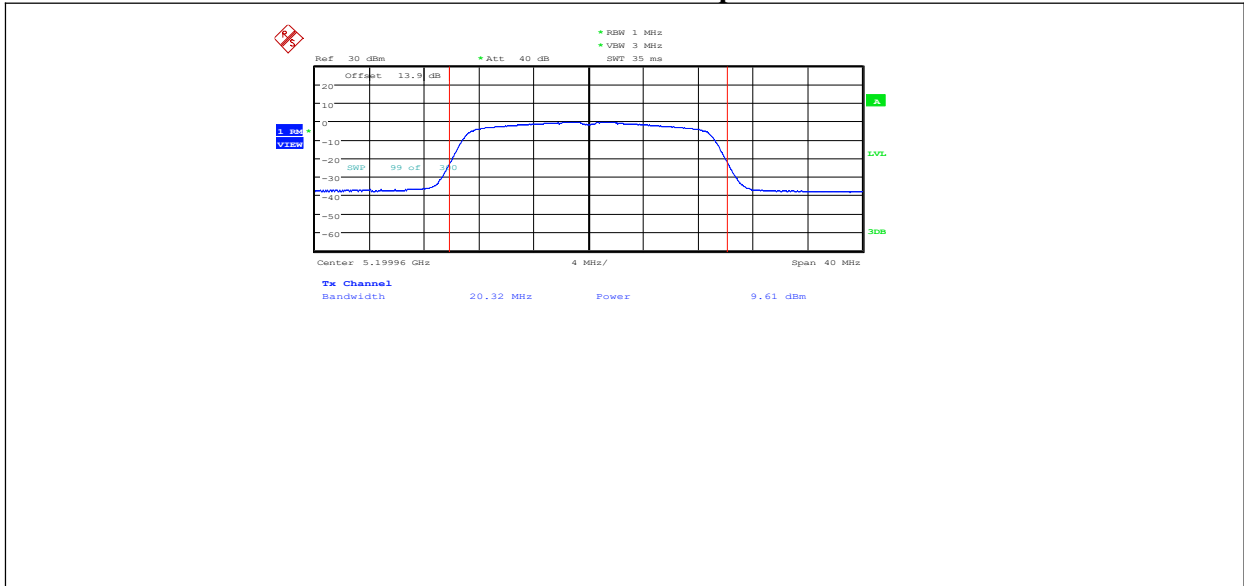
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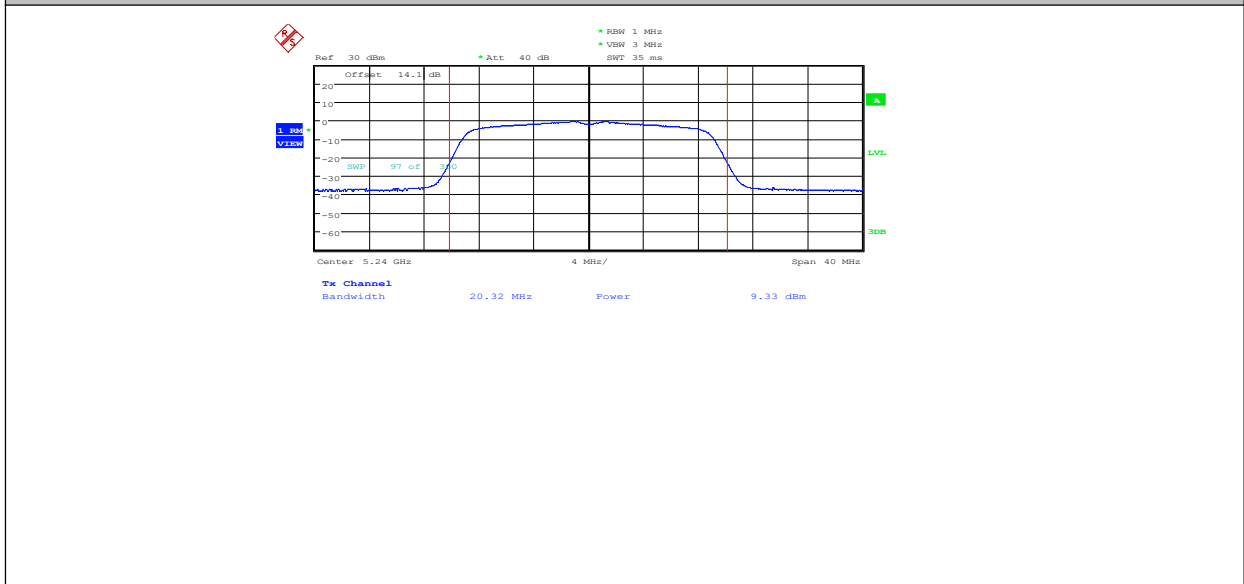
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11N20SISO\_Ant1\_5200



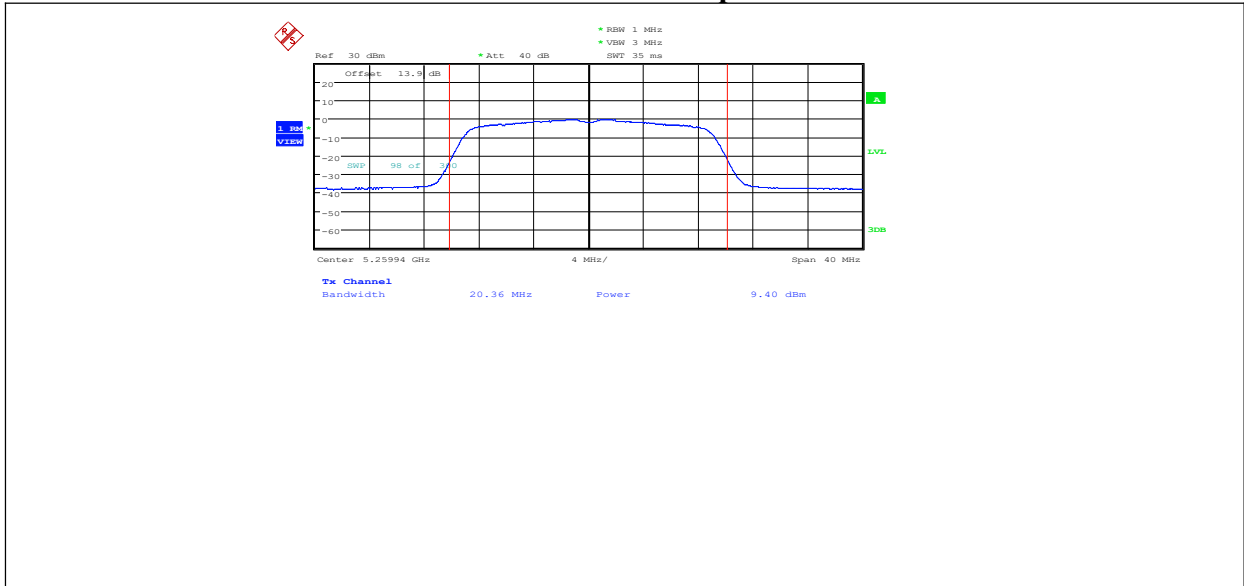
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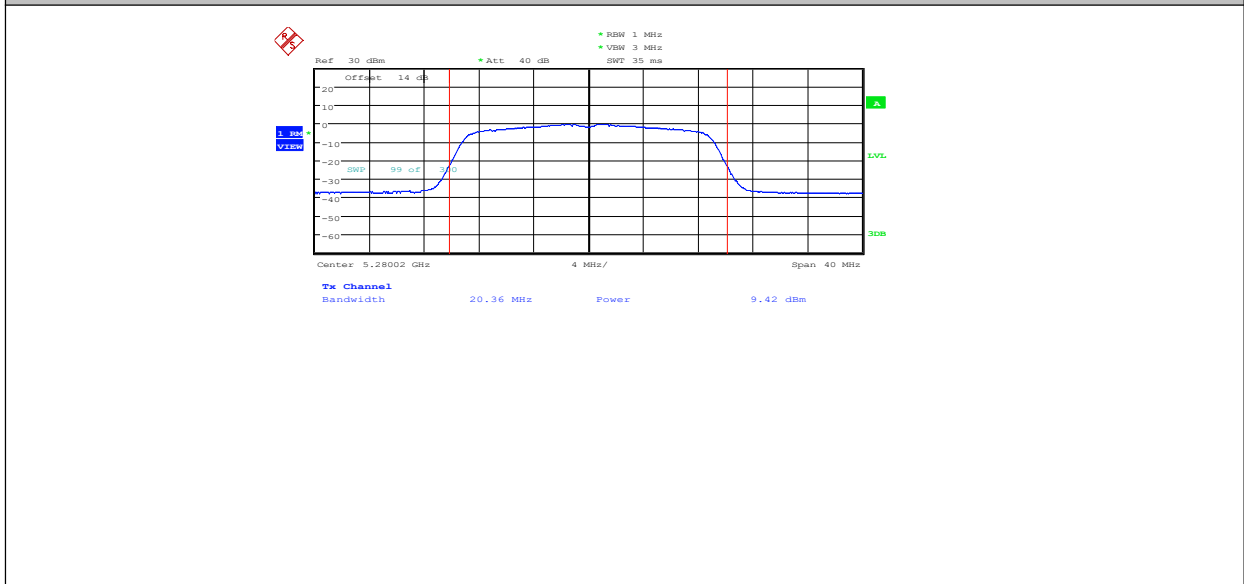
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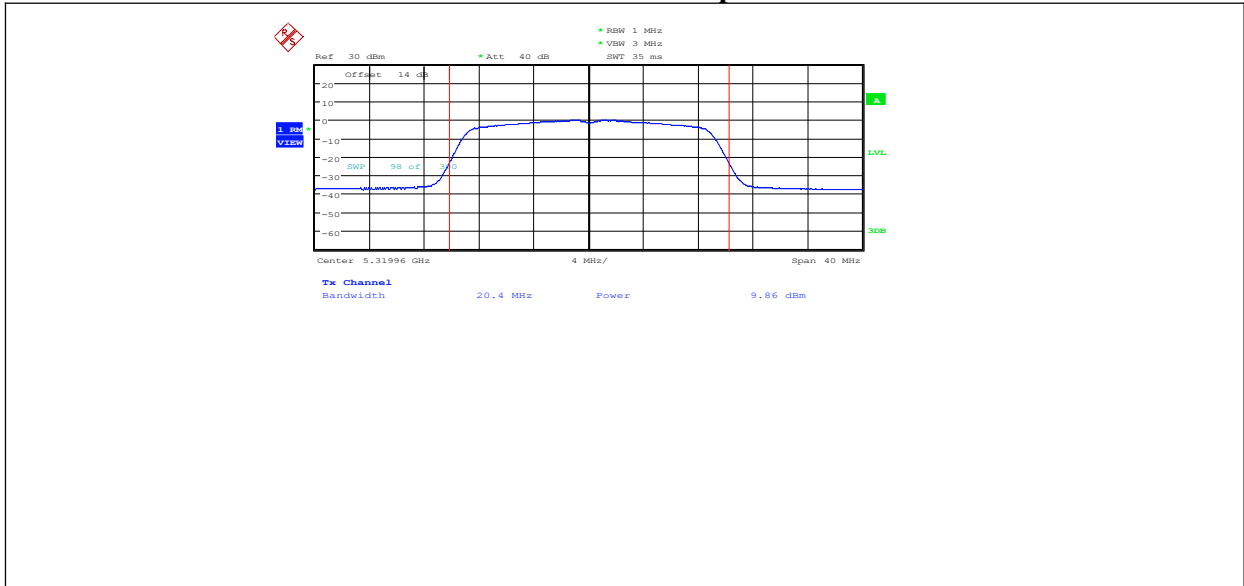
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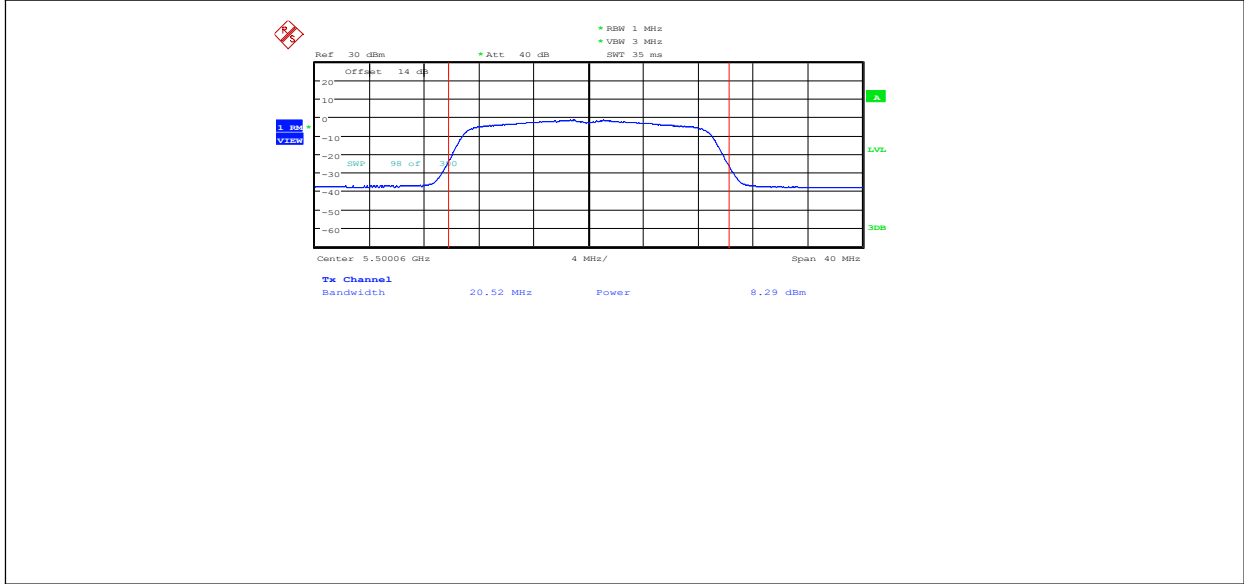
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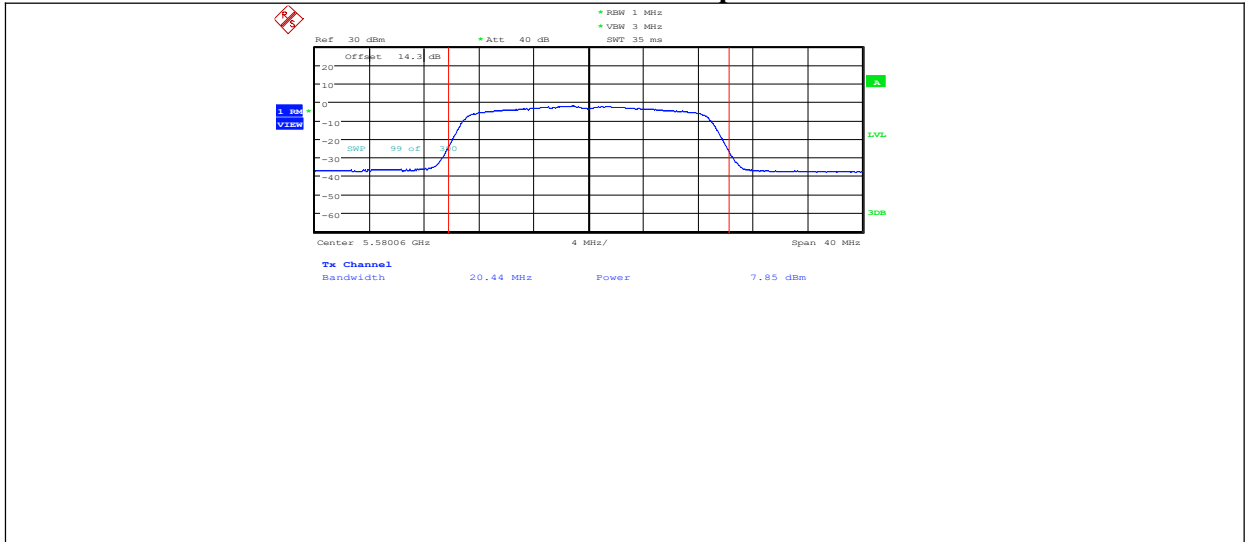
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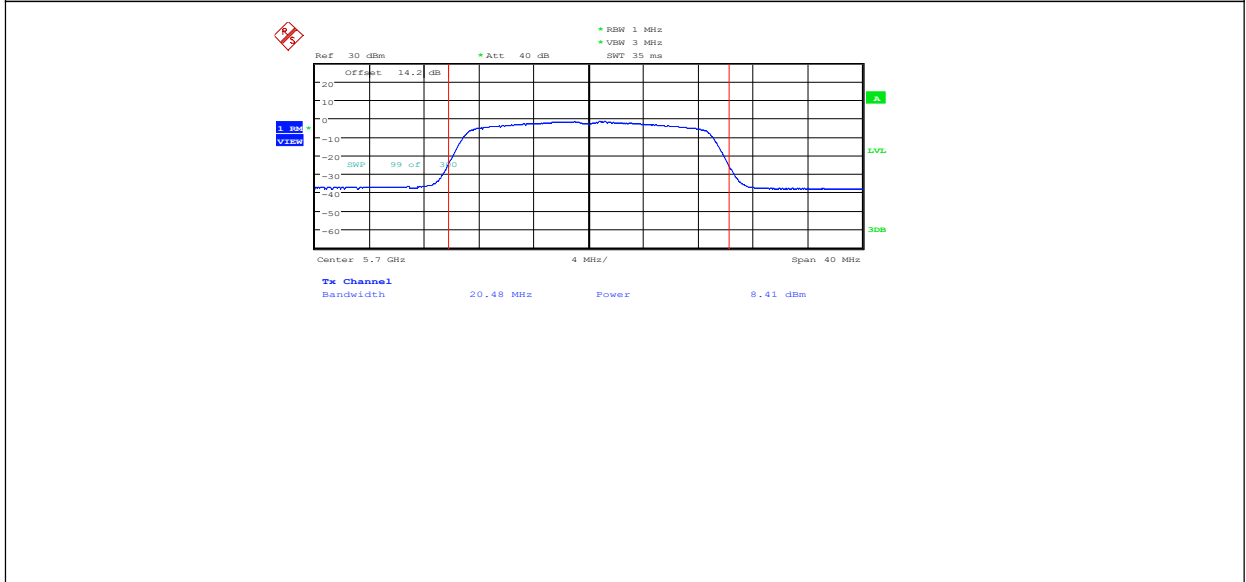
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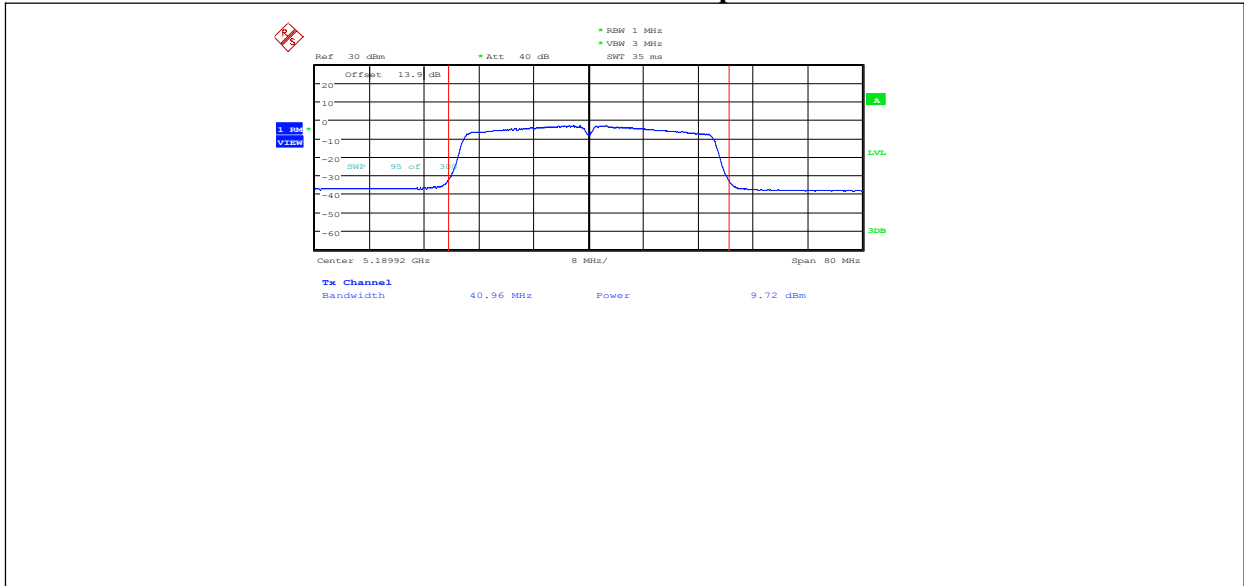
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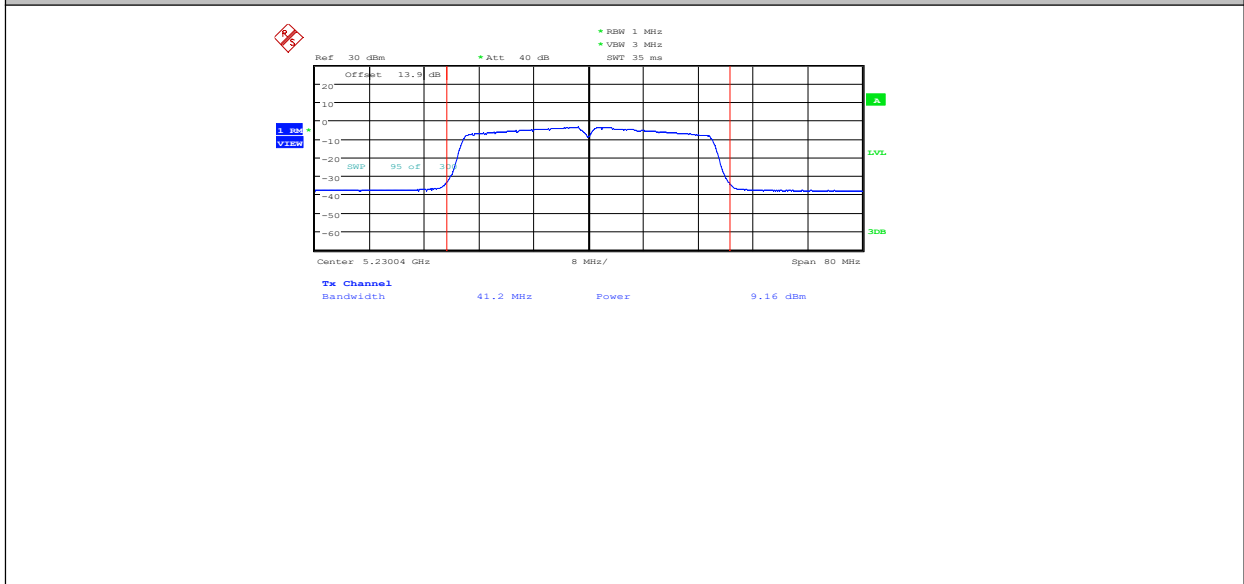
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11N40SISO\_Ant1\_5190

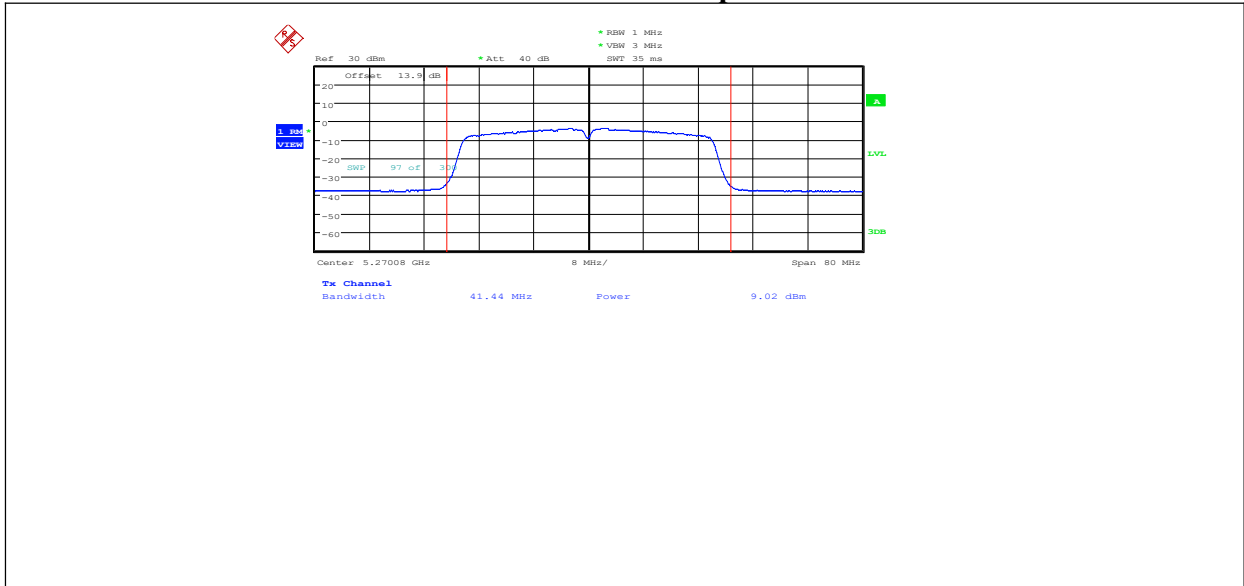


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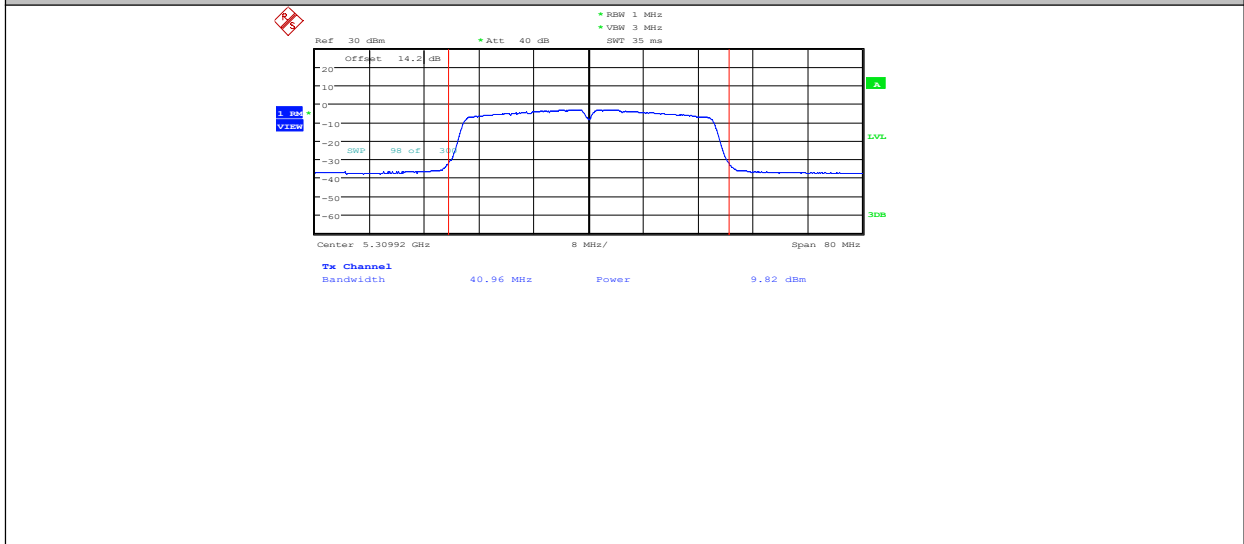


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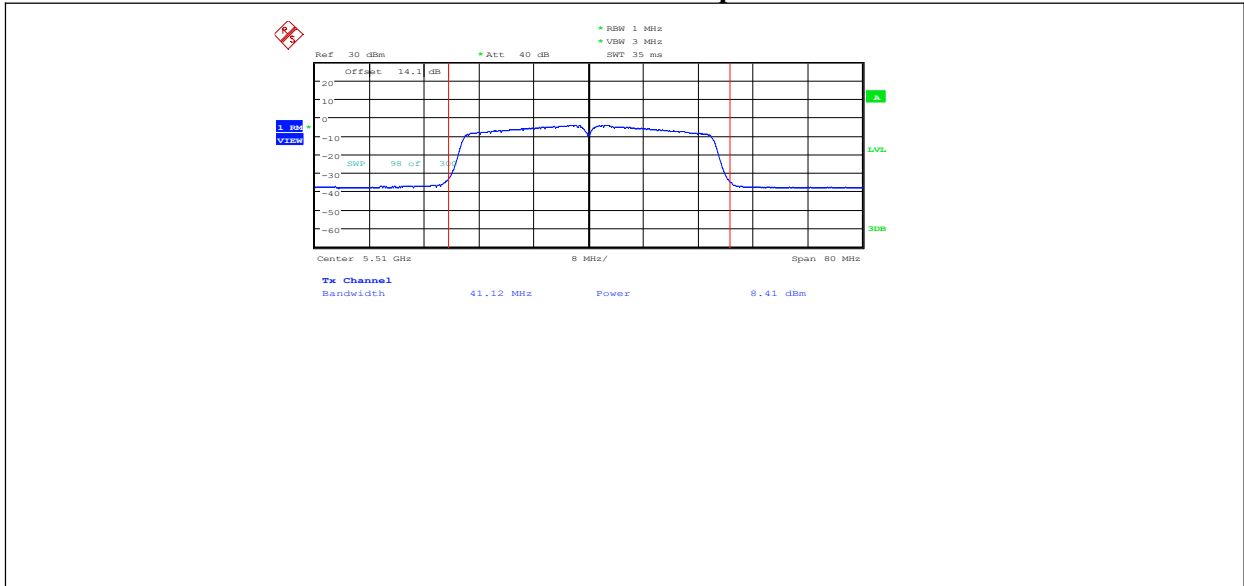




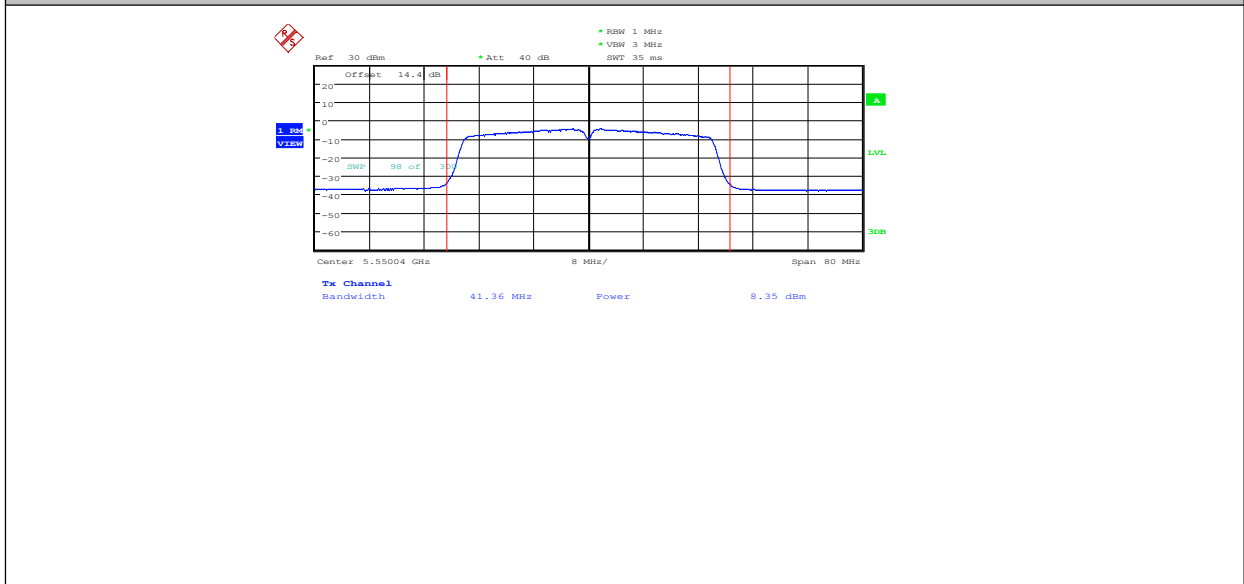
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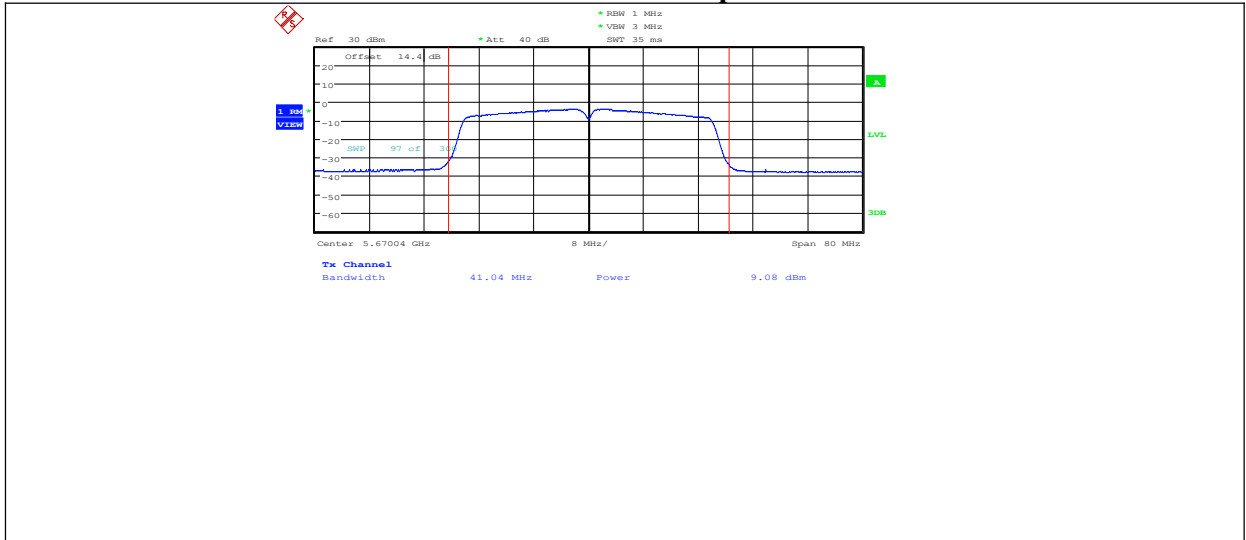
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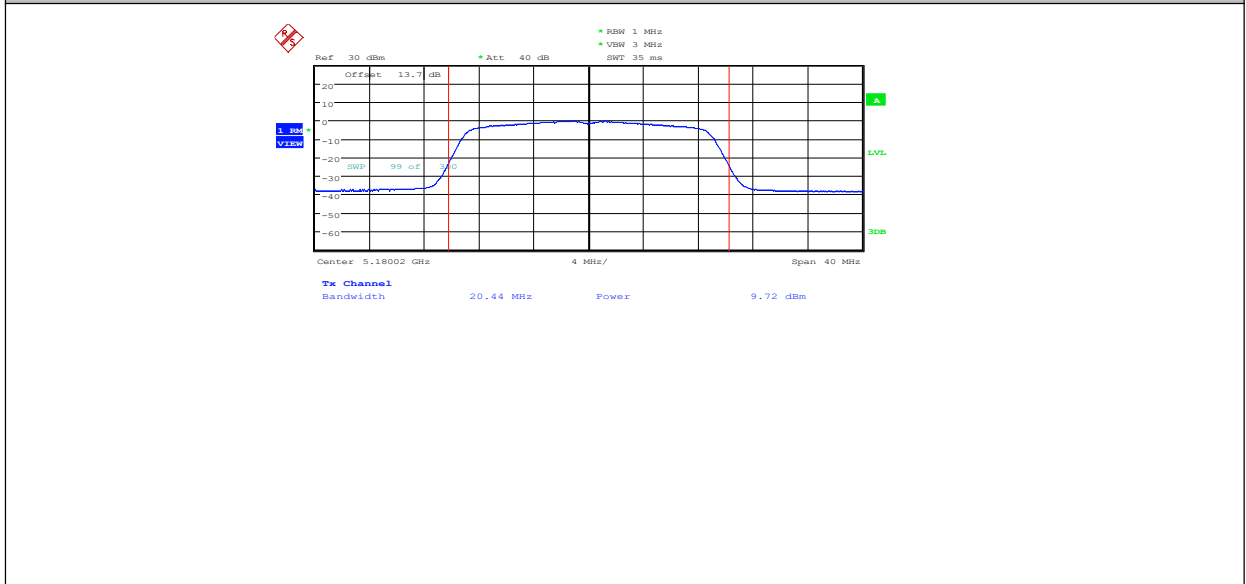
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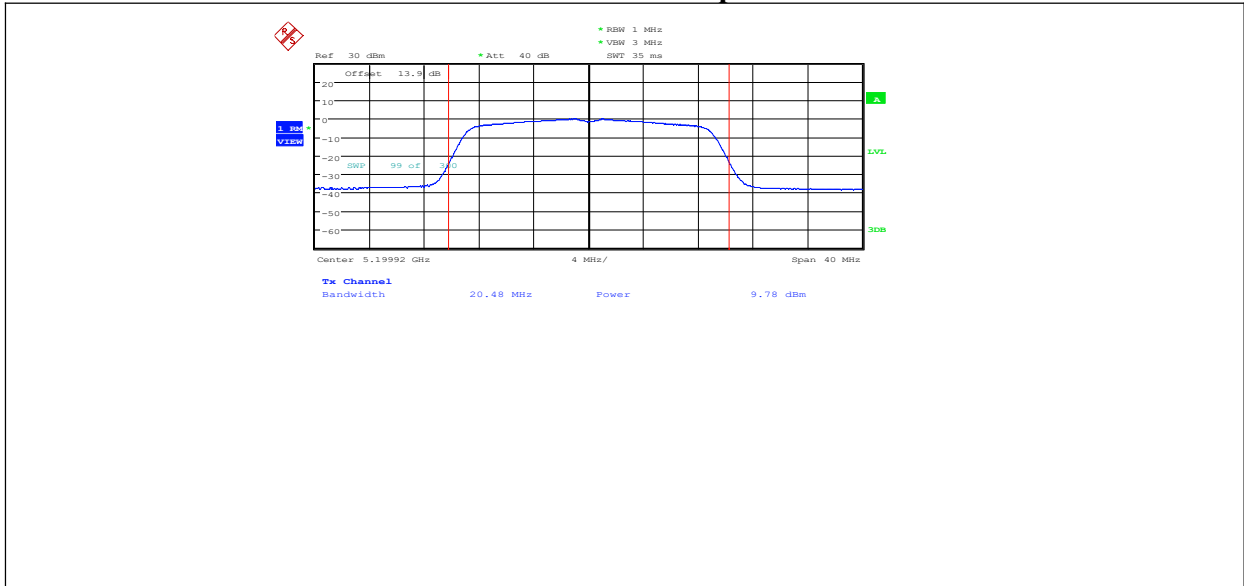
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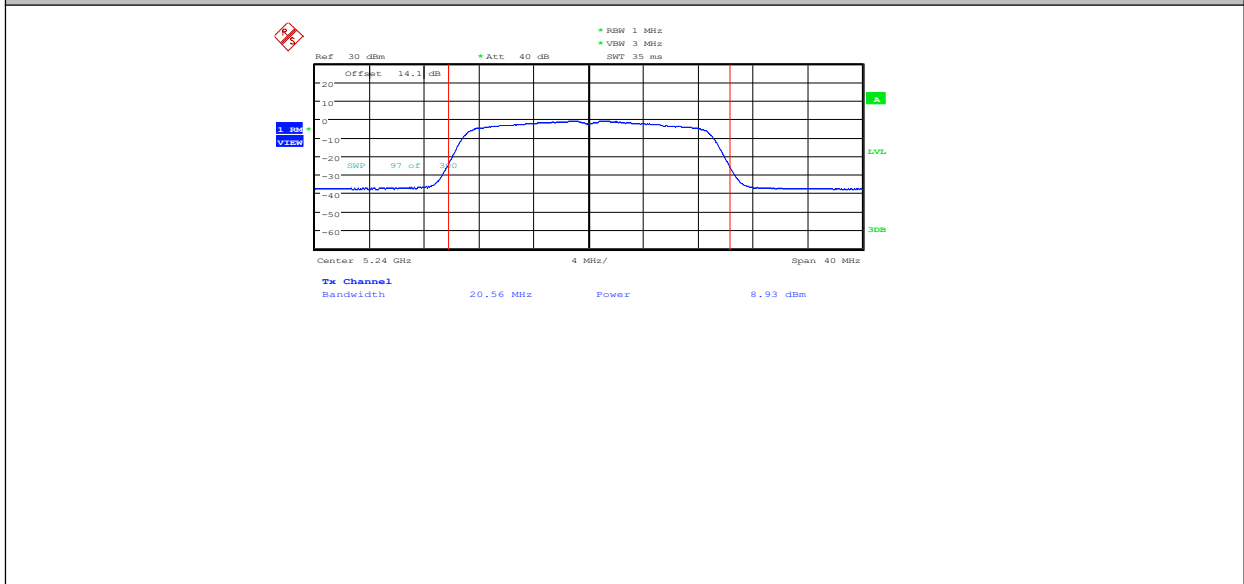
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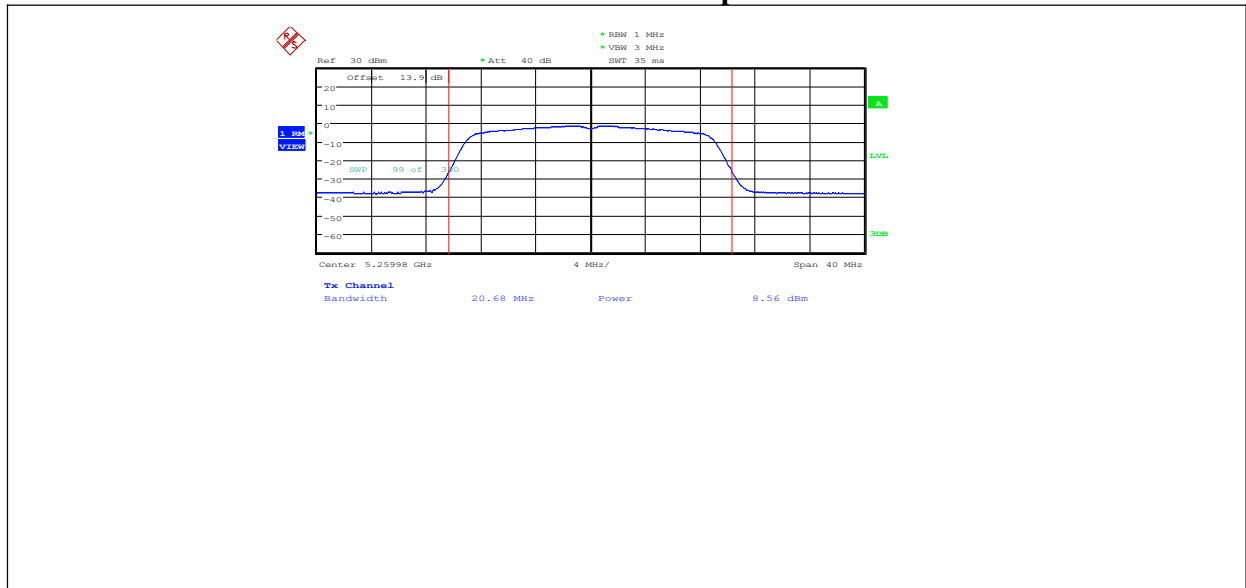
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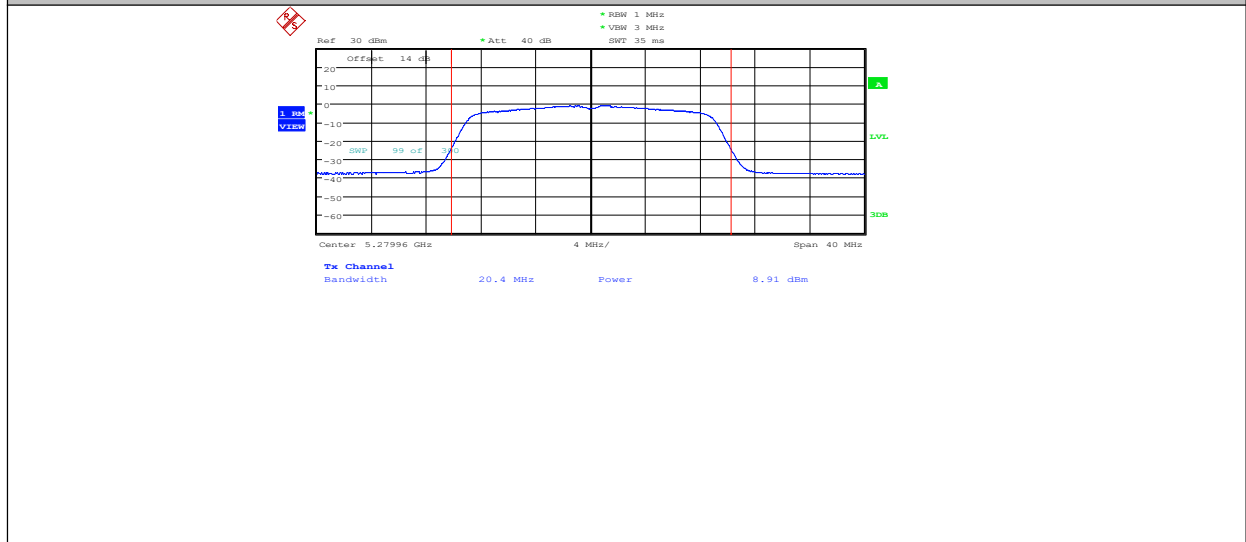
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11AC20SISO\_Ant1\_5260



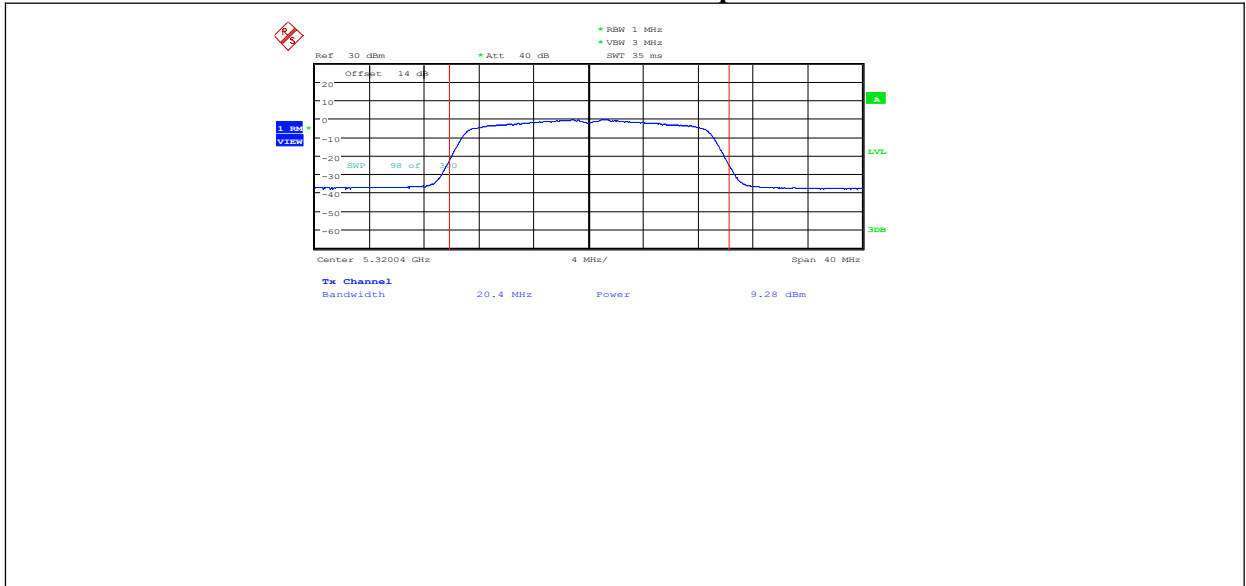
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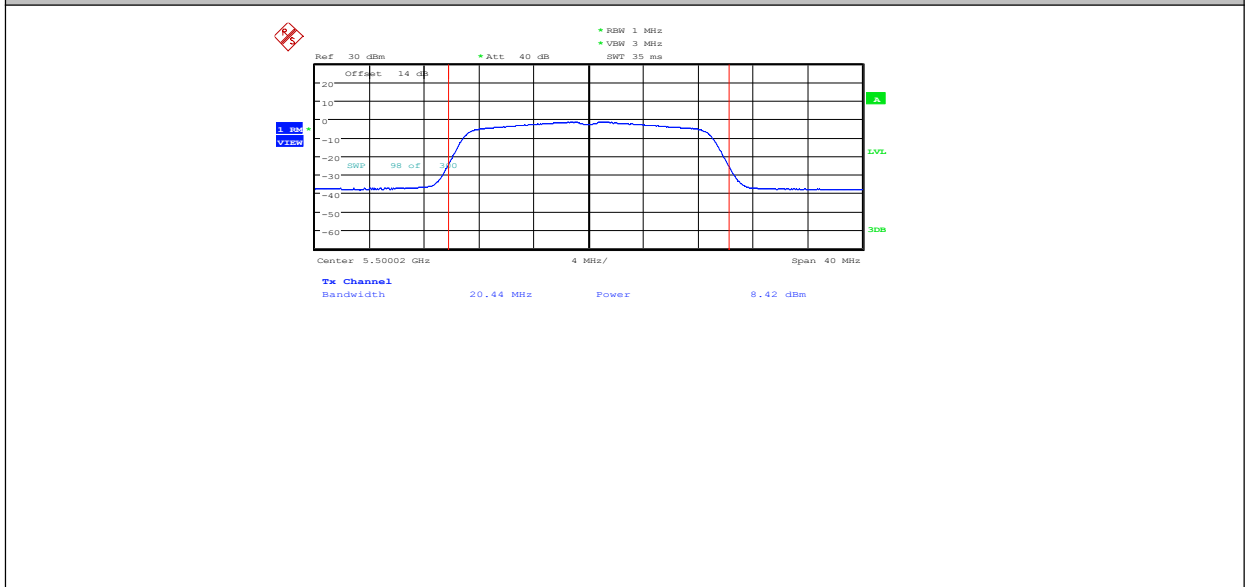
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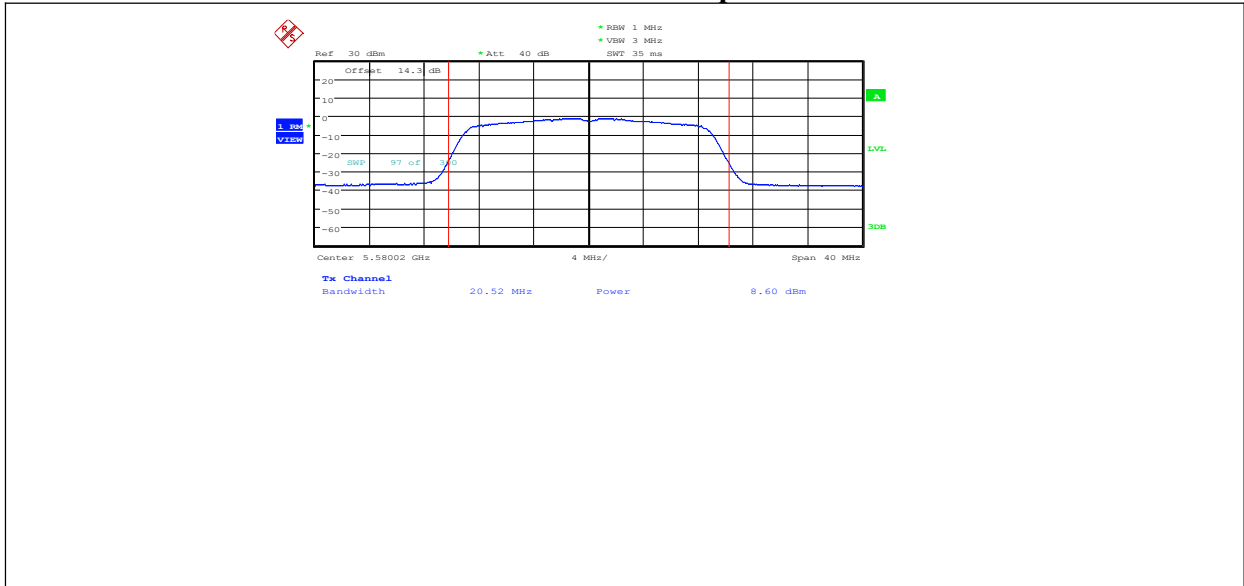
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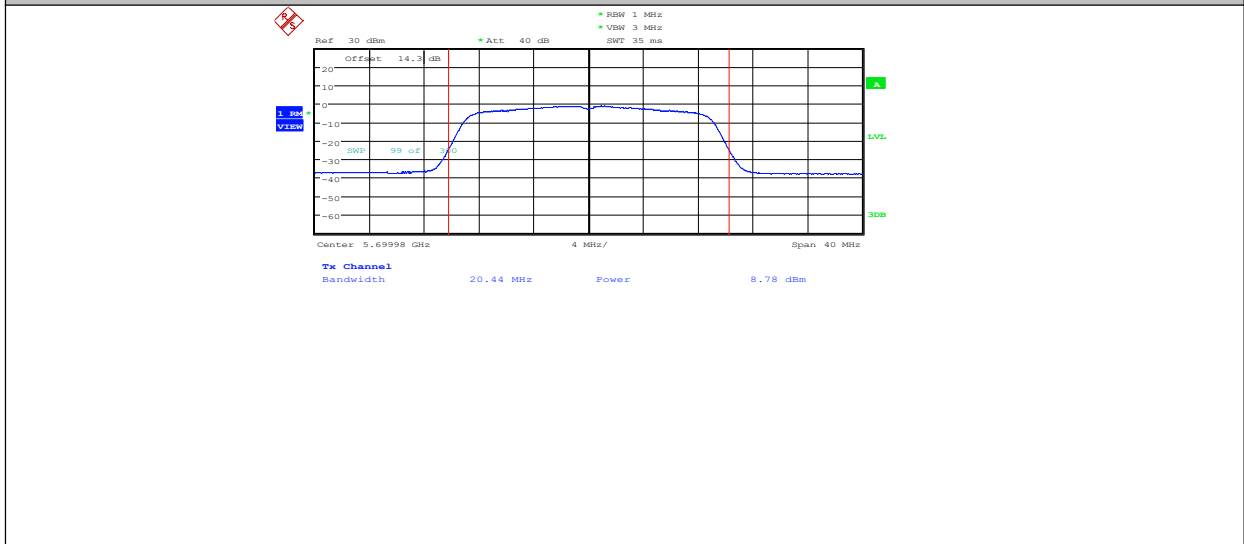
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11AC20SISO\_Ant1\_5580



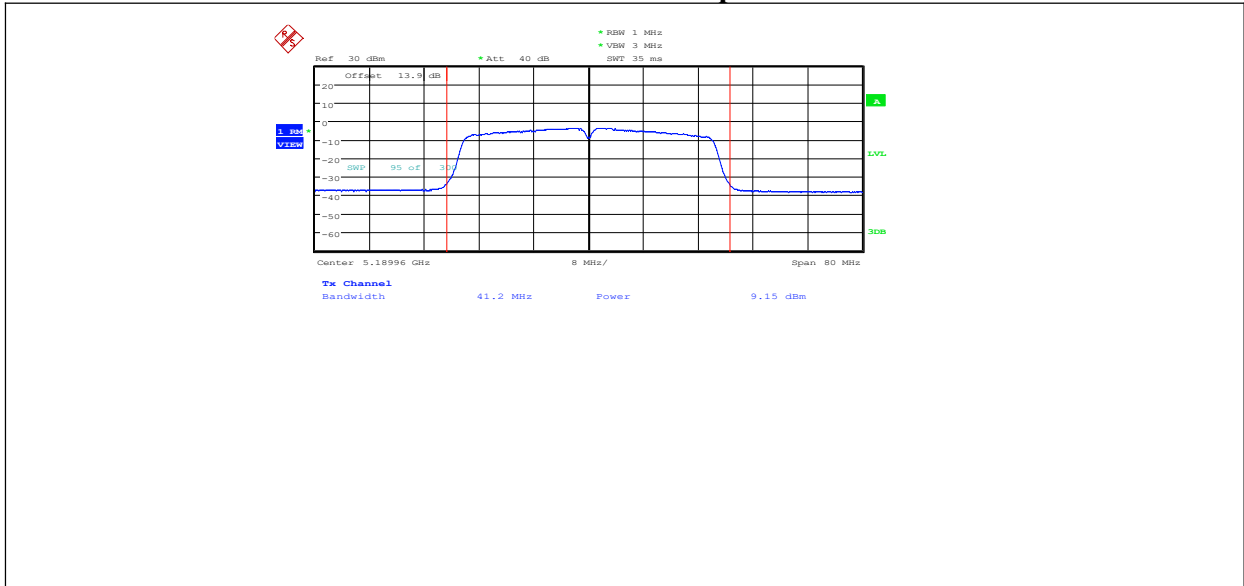
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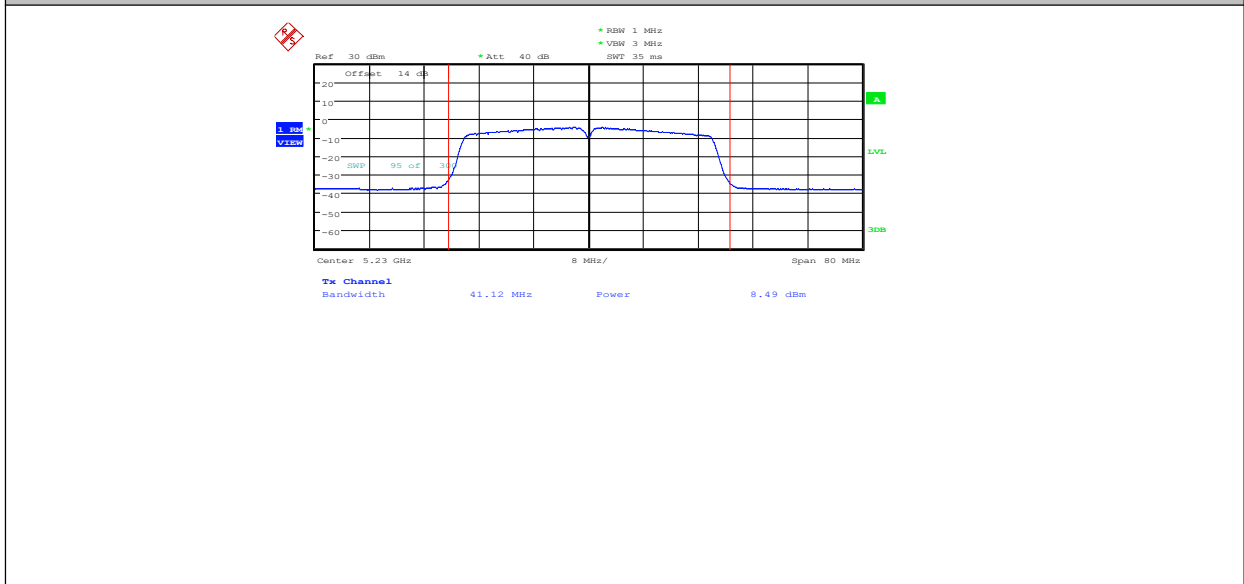
11AC40SISO\_Ant1\_5190

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11AC40SISO\_Ant1\_5230

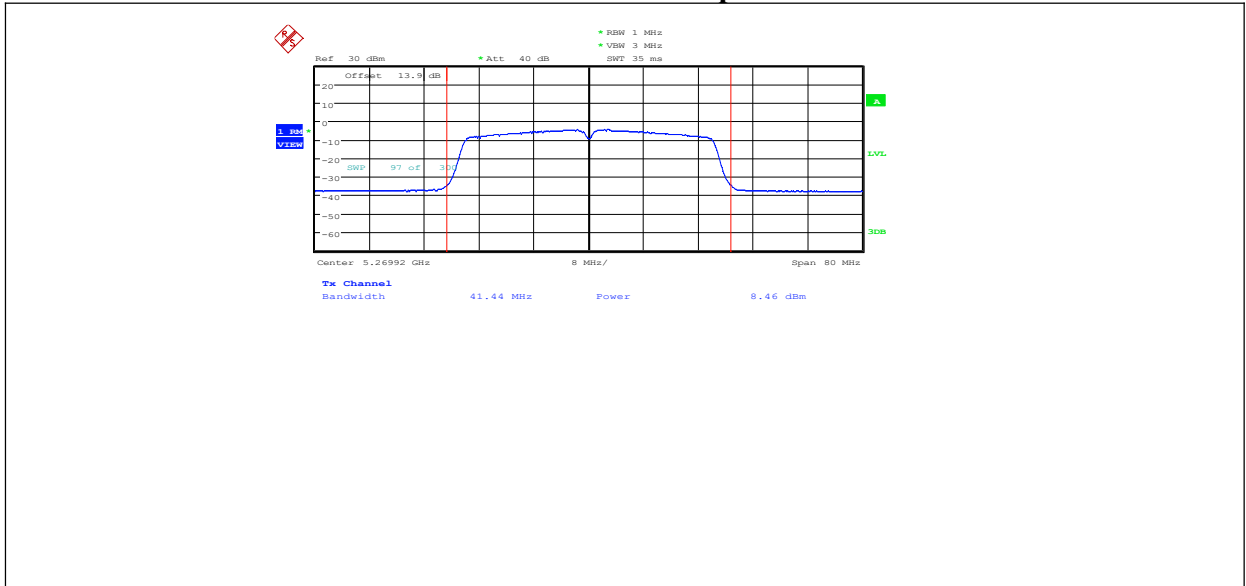


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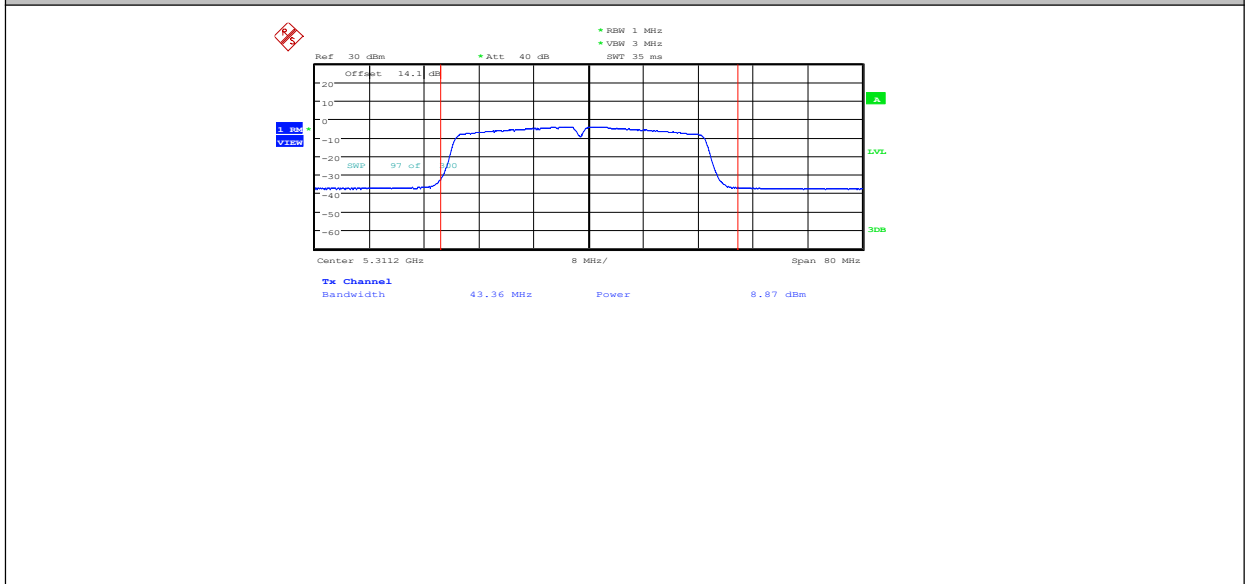
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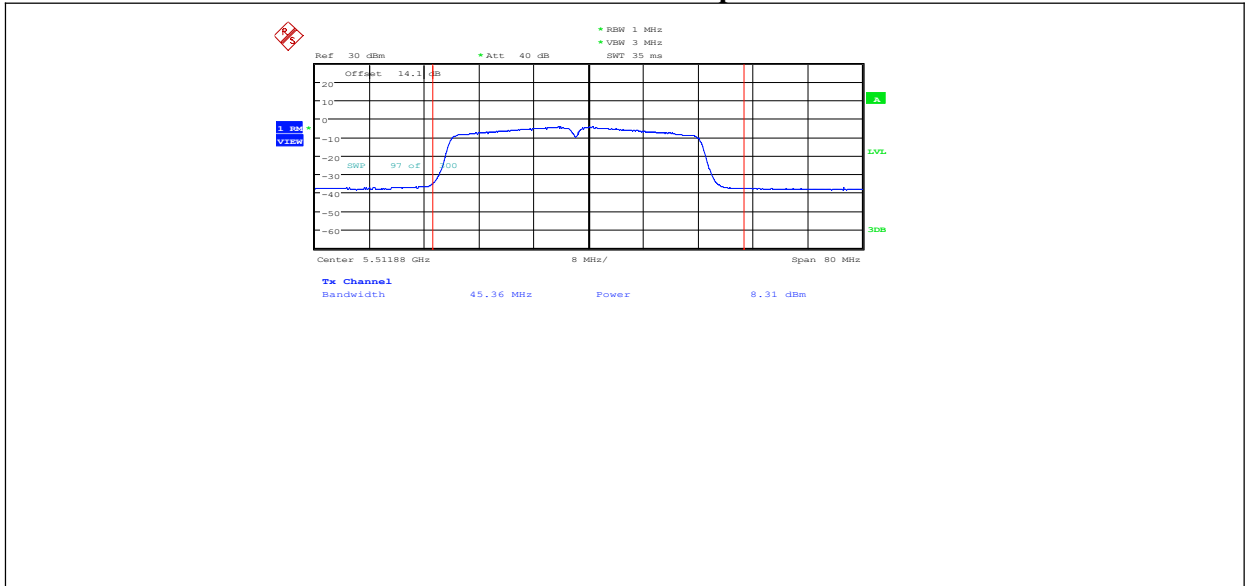




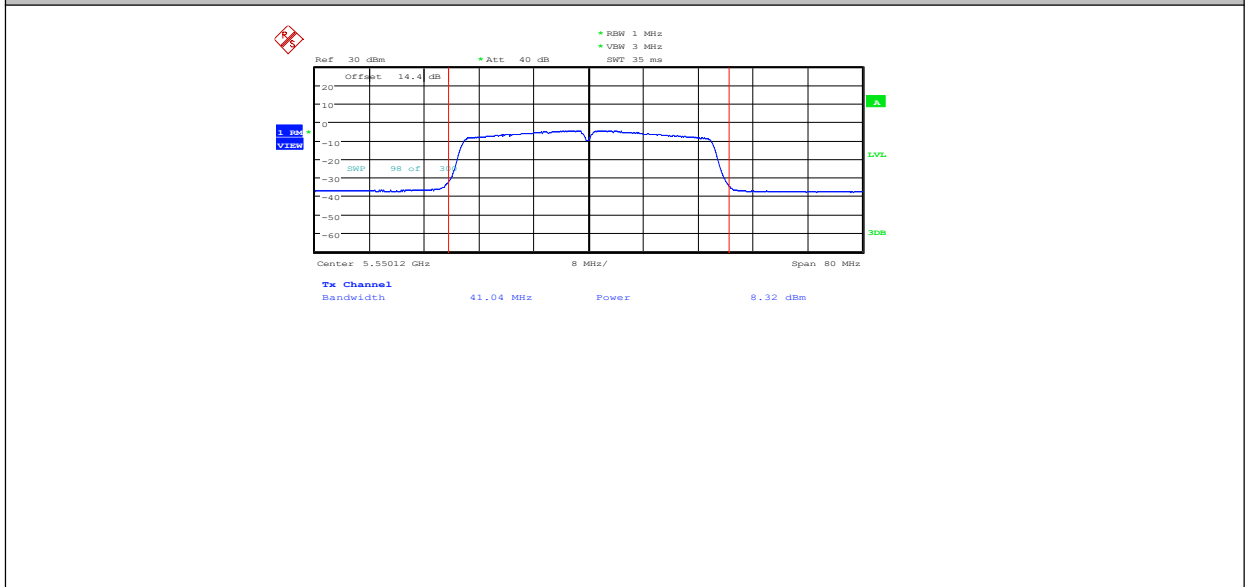
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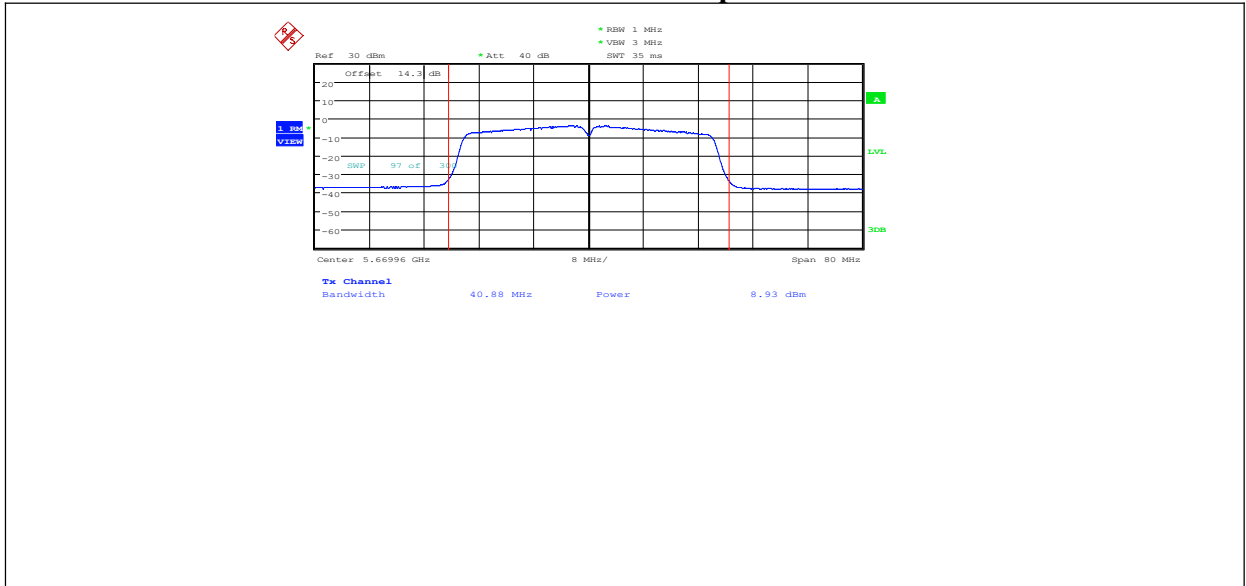
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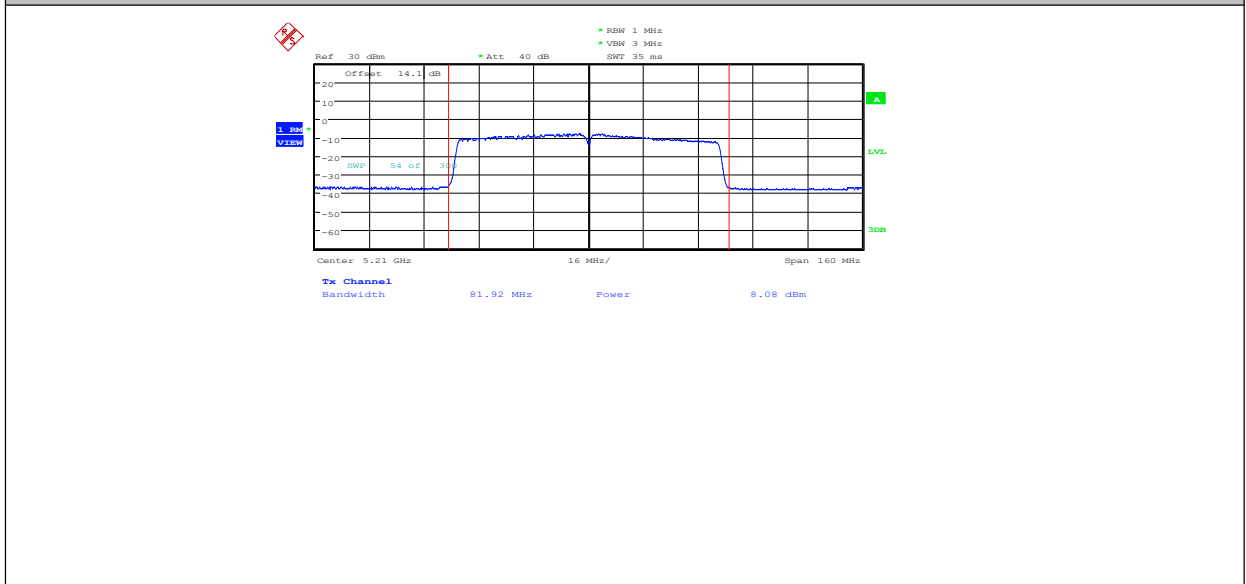
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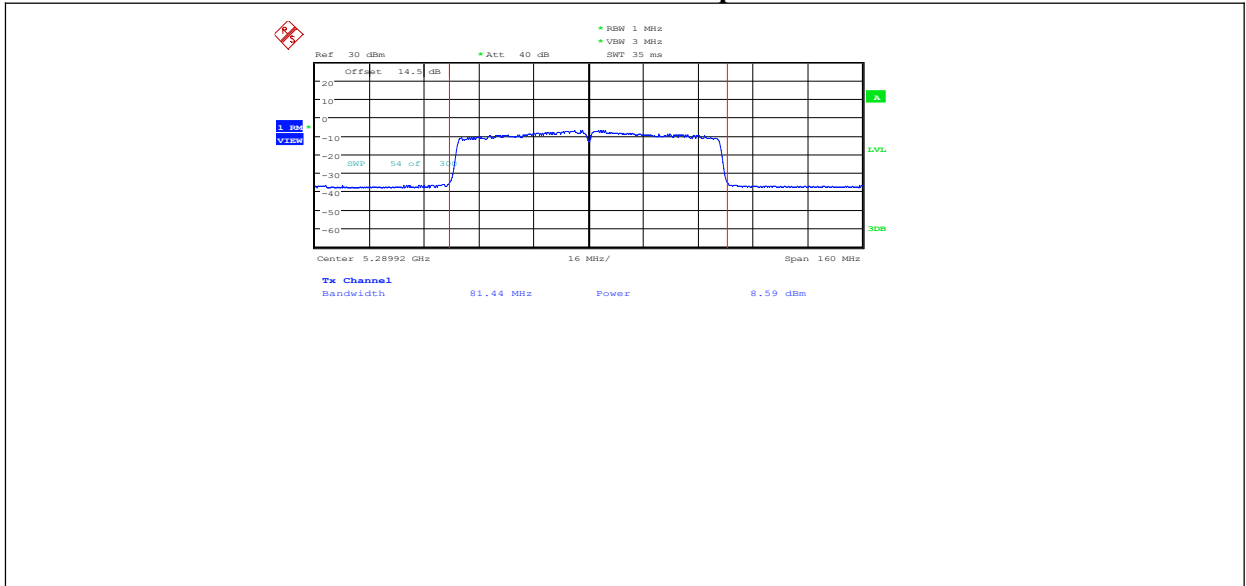
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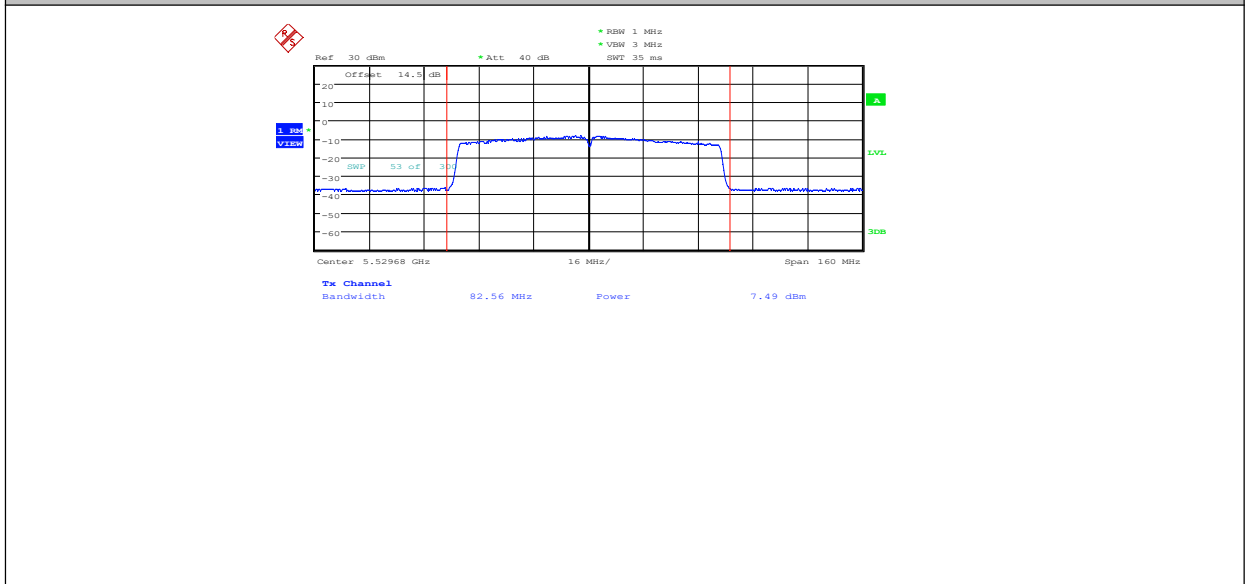
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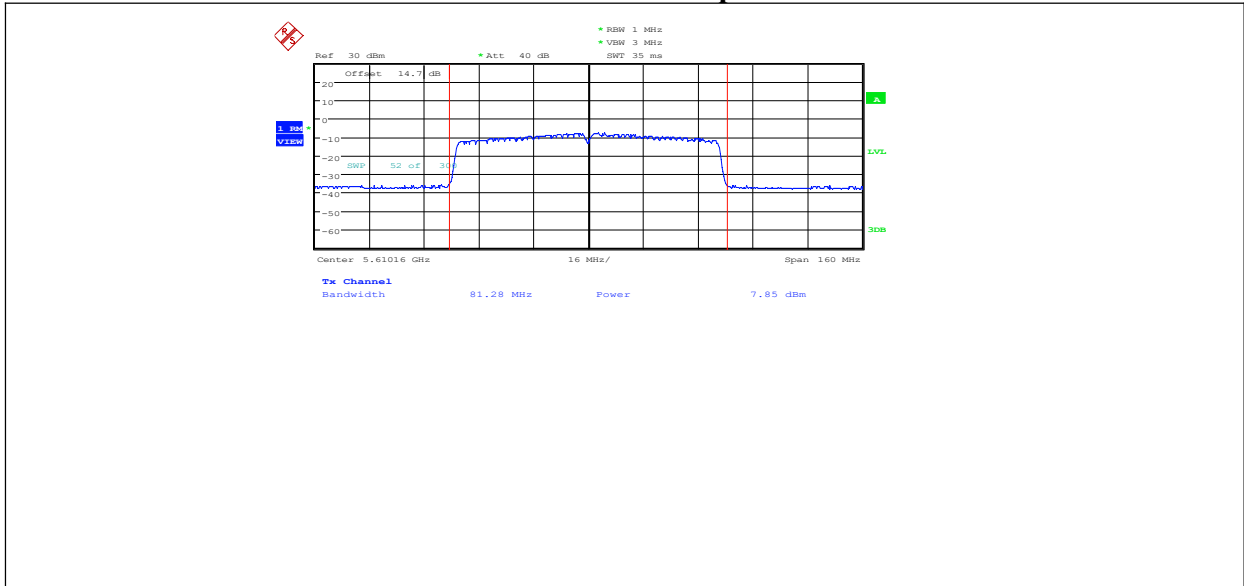
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11AC80SISO\_Ant1\_5530



11AC80SISO\_Ant1\_5610



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#### 6.4 Peak Power Spectral Density

|                           |  |
|---------------------------|--|
| <b>Specifications:</b>    | FCC 47 CFR Part 15.407(a)  |
| <b>DUT Serial Number:</b> | S4   |
| <b>Test conditions:</b>   | Ambient Temperature:20°C<br>Relative Humidity:40%<br>Air pressure: 90kPa |
| <b>Test Results:</b>      | Pass   |

##### Measurement Limit and Method

| Standard                         | Limit (dBm/MHz) | EIRP Limit (dBm/MHz) |
|----------------------------------|-----------------|----------------------|
| FCC 47 CFR Part 15.407(a)(1)(iv) | ≤17             | ≤17                  |

##### Measurement Uncertainty:

|                         |         |
|-------------------------|---------|
| Measurement Uncertainty | ±0.48dB |
|-------------------------|---------|

The measurement method is made according to KDB 789033 F

1. 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.)
2. Use the peak search function on the instrument to find the peak of the spectrum and record its value.
3. Make the following adjustments to the peak value of the spectrum, if applicable:
  - a) 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.
  - b) 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.
4. The result is the Maximum PSD over 1 MHz reference bandwidth.
5. 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

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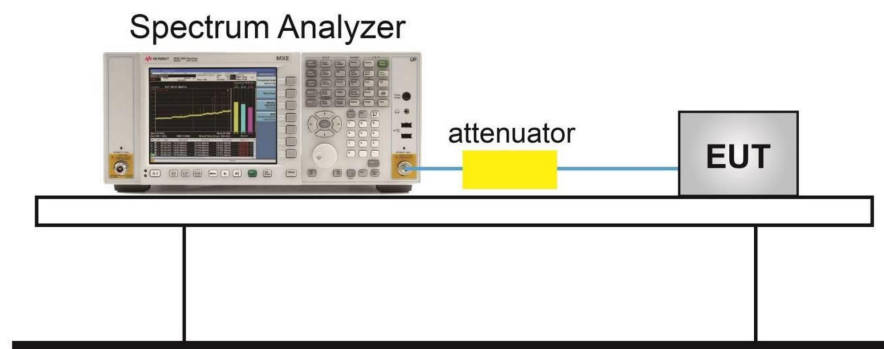
## Report No.: 123W00020-WIFI 5G RF

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.1.a).
- b) Set  $VBW \geq 3$  RBW.
- c) If measurement bandwidth of Maximum PSD is specified in 500 kHz, add  $10 \log(500 \text{ kHz}/RBW)$  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  $10 \log(1\text{MHz}/RBW)$  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.

Test setup



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**Test Result**

| TestMode   | Antenna | Frequency[MHz] | Result [dBm/MHz] | Limit[dBm/MHz] | Verdict |
|------------|---------|----------------|------------------|----------------|---------|
| 11A        | Ant1    | 5180           | 1.38             | ≤11.00         | PASS    |
|            |         | 5200           | 1.2              | ≤11.00         | PASS    |
|            |         | 5240           | 0.22             | ≤11.00         | PASS    |
|            |         | 5260           | 0.56             | ≤11.00         | PASS    |
|            |         | 5280           | 0.87             | ≤11.00         | PASS    |
|            |         | 5320           | 0.66             | ≤11.00         | PASS    |
|            |         | 5500           | -0.07            | ≤11.00         | PASS    |
|            |         | 5580           | 0.01             | ≤11.00         | PASS    |
|            |         | 5700           | 0.25             | ≤11.00         | PASS    |
| 11N20SISO  | Ant1    | 5180           | -0.57            | ≤11.00         | PASS    |
|            |         | 5200           | -0.72            | ≤11.00         | PASS    |
|            |         | 5240           | -0.9             | ≤11.00         | PASS    |
|            |         | 5260           | -0.81            | ≤11.00         | PASS    |
|            |         | 5280           | -0.78            | ≤11.00         | PASS    |
|            |         | 5320           | -0.63            | ≤11.00         | PASS    |
|            |         | 5500           | -2.08            | ≤11.00         | PASS    |
|            |         | 5580           | -2.58            | ≤11.00         | PASS    |
|            |         | 5700           | -2.03            | ≤11.00         | PASS    |
| 11N40SISO  | Ant1    | 5190           | -3.55            | ≤11.00         | PASS    |
|            |         | 5230           | -4.07            | ≤11.00         | PASS    |
|            |         | 5270           | -4.3             | ≤11.00         | PASS    |
|            |         | 5310           | -3.65            | ≤11.00         | PASS    |
|            |         | 5510           | -4.94            | ≤11.00         | PASS    |
|            |         | 5550           | -5.21            | ≤11.00         | PASS    |
|            |         | 5670           | -4.23            | ≤11.00         | PASS    |
| 11AC20SISO | Ant1    | 5180           | -0.75            | ≤11.00         | PASS    |
|            |         | 5200           | -0.53            | ≤11.00         | PASS    |
|            |         | 5240           | -1.3             | ≤11.00         | PASS    |
|            |         | 5260           | -1.69            | ≤11.00         | PASS    |
|            |         | 5280           | -1.29            | ≤11.00         | PASS    |
|            |         | 5320           | -1.19            | ≤11.00         | PASS    |
|            |         | 5500           | -2.12            | ≤11.00         | PASS    |
|            |         | 5580           | -1.91            | ≤11.00         | PASS    |
|            |         | 5700           | -1.66            | ≤11.00         | PASS    |
| 11AC40SISO | Ant1    | 5190           | -4.11            | ≤11.00         | PASS    |
|            |         | 5230           | -4.75            | ≤11.00         | PASS    |
|            |         | 5270           | -4.95            | ≤11.00         | PASS    |
|            |         | 5310           | -4.57            | ≤11.00         | PASS    |

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|            |      |      |       |              |      |
|------------|------|------|-------|--------------|------|
|            |      | 5510 | -4.86 | $\leq 11.00$ | PASS |
|            |      | 5550 | -5.21 | $\leq 11.00$ | PASS |
|            |      | 5670 | -4.3  | $\leq 11.00$ | PASS |
| 11AC80SISO | Ant1 | 5210 | -8.14 | $\leq 11.00$ | PASS |
|            |      | 5290 | -7.55 | $\leq 11.00$ | PASS |
|            |      | 5530 | -8.83 | $\leq 11.00$ | PASS |
|            |      | 5610 | -7.99 | $\leq 11.00$ | PASS |

Note:

1. Total PSD(dBm/ MHz)=  $10 \cdot \log\{10(\text{Ant 0 PSD}/10) + 10(\text{Ant1 PSD}/10)\}$ (dBm/MHz).

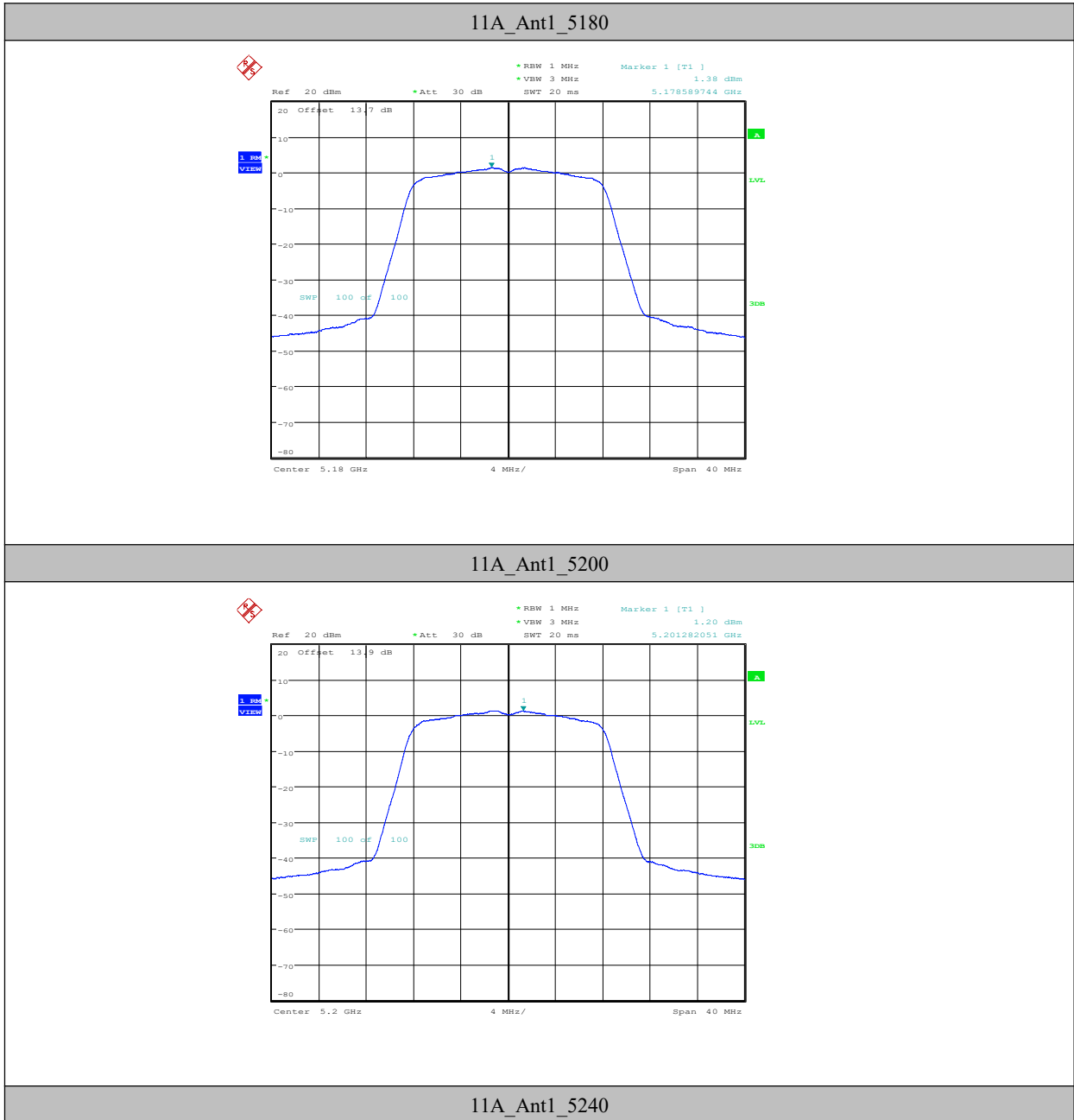
2. For the band 5.15-5.25 GHz, The Directional Gain =6.91 dBi, so the PSD Limit was calculated as below:

The PSD Limit (dBm/MHz)=[17 -(6.91 - 6)](dBm/MHz)= 16.09(dBm/MHz).

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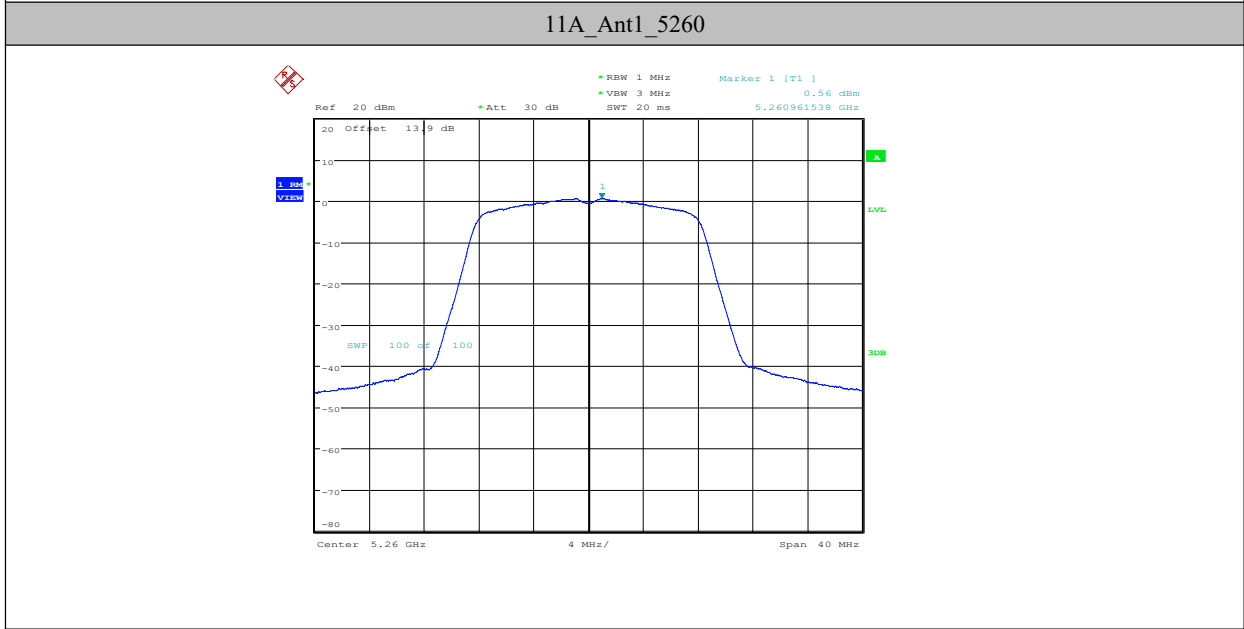
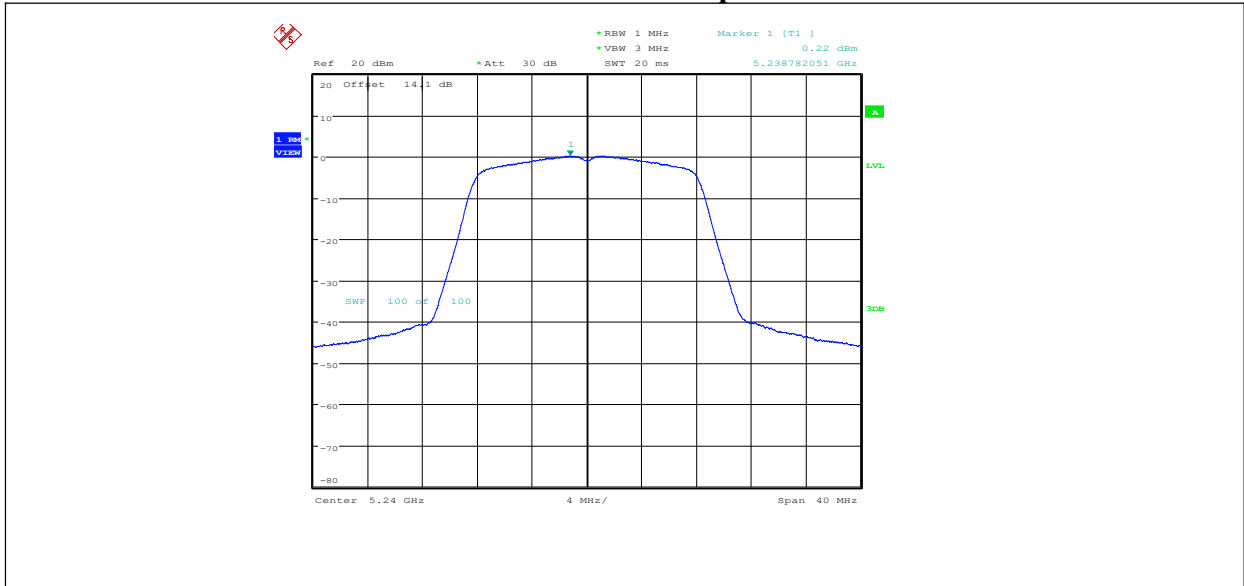
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Test Graphs



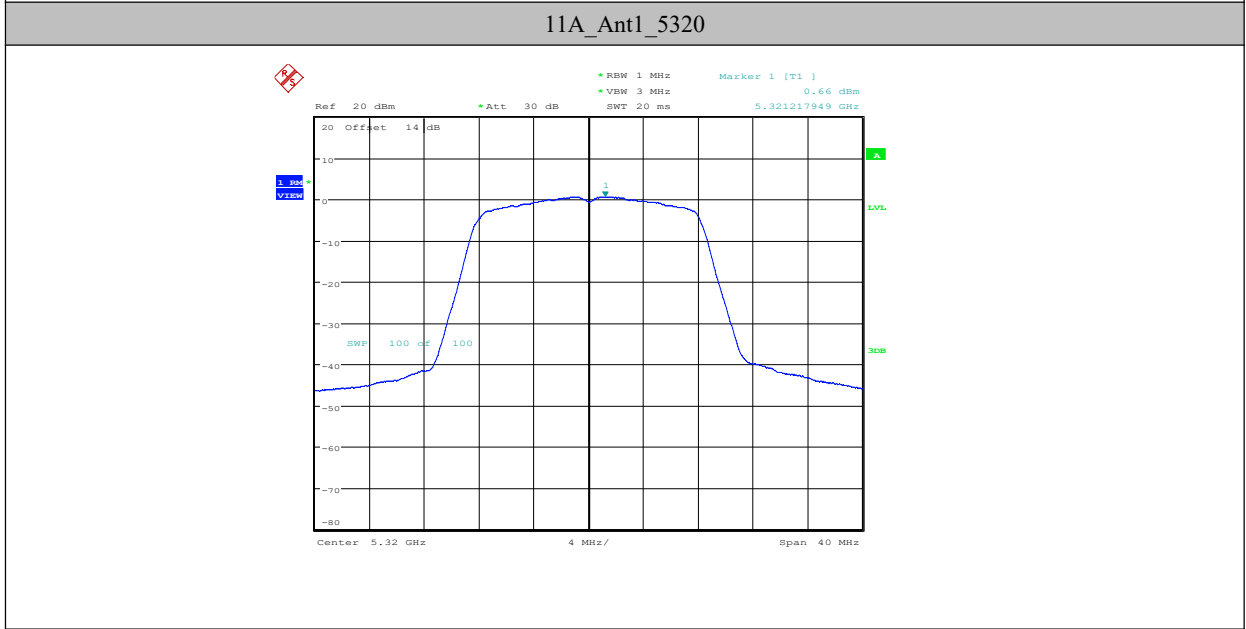
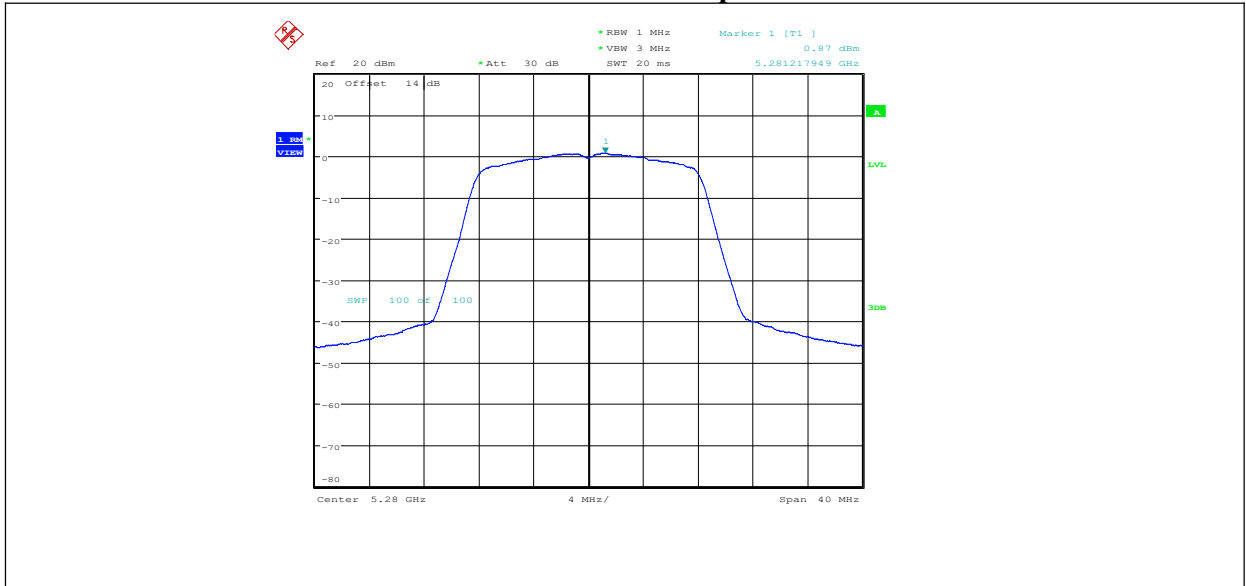
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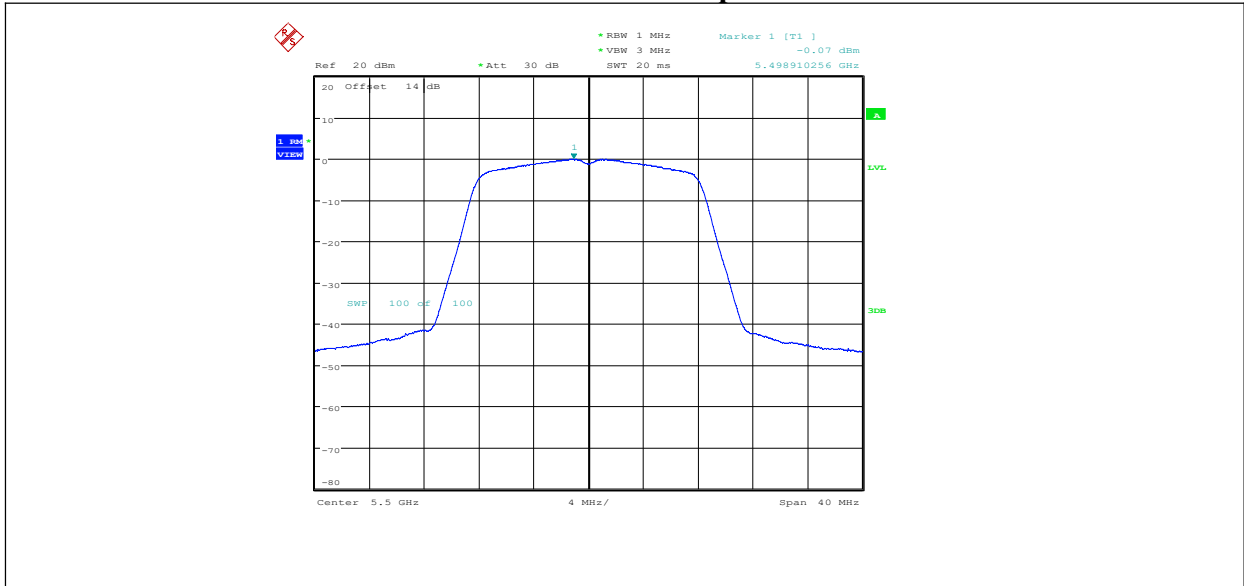
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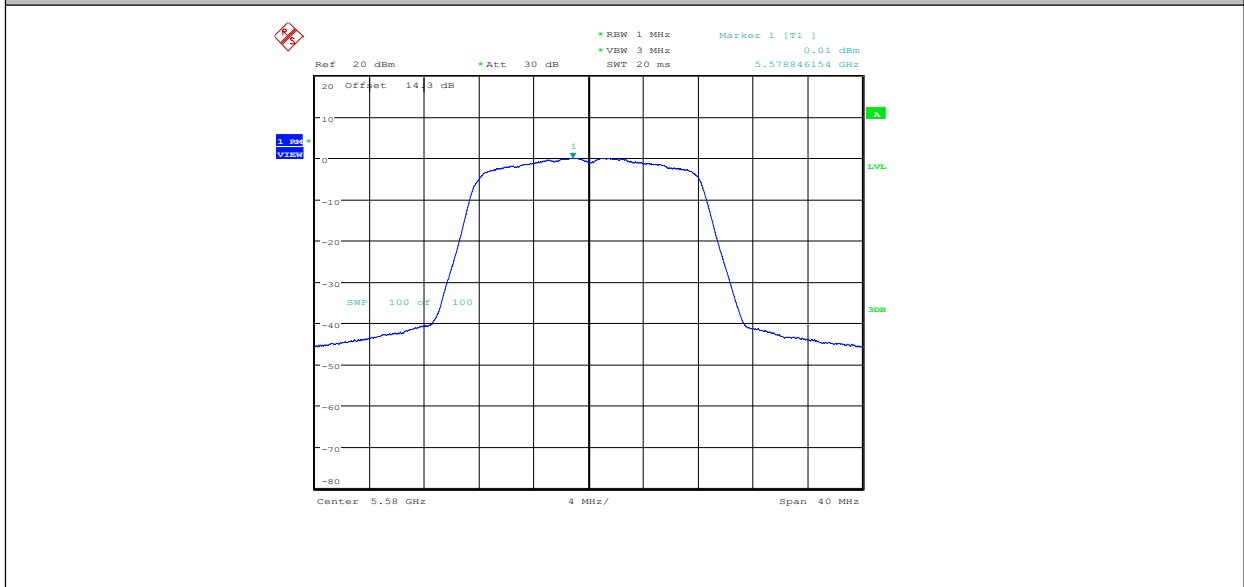
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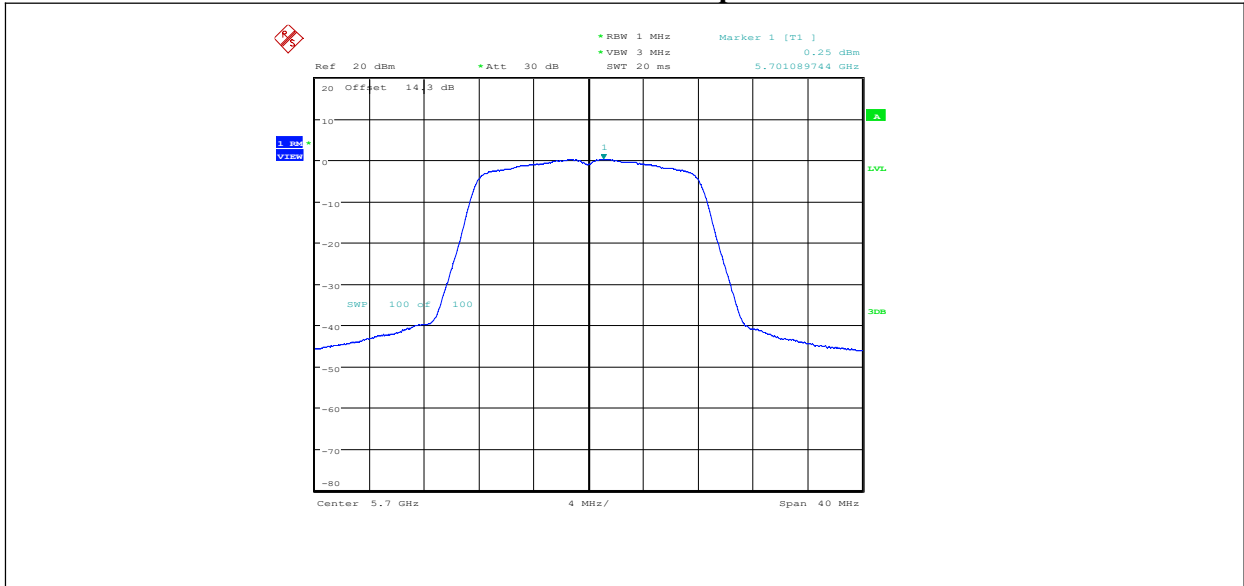




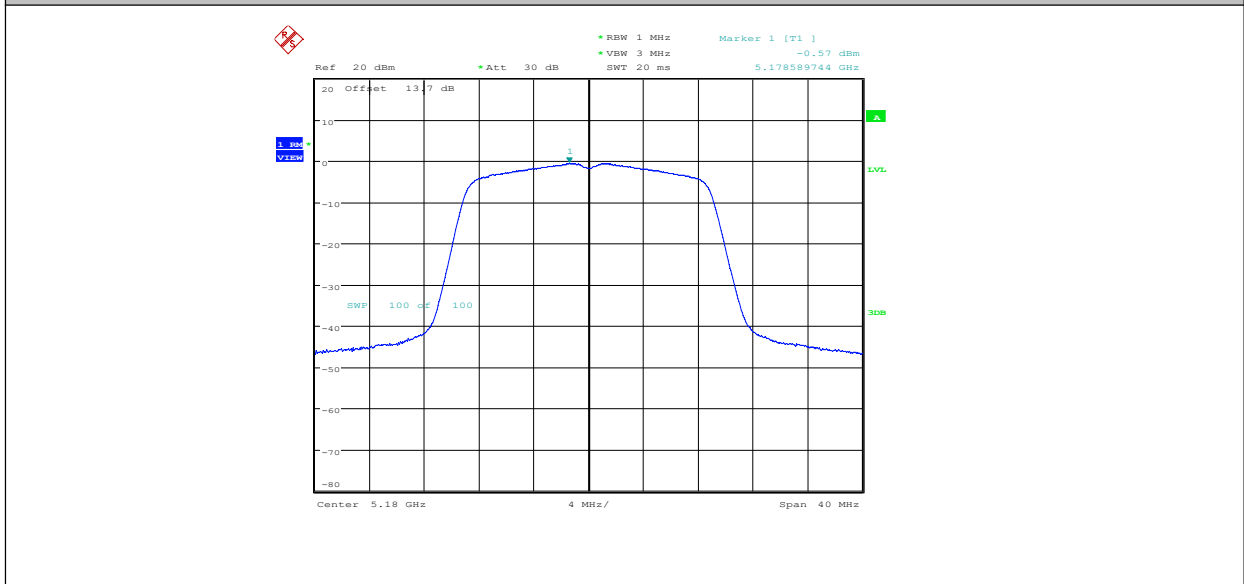
11A\_Ant1\_5580



11A\_Ant1\_5700



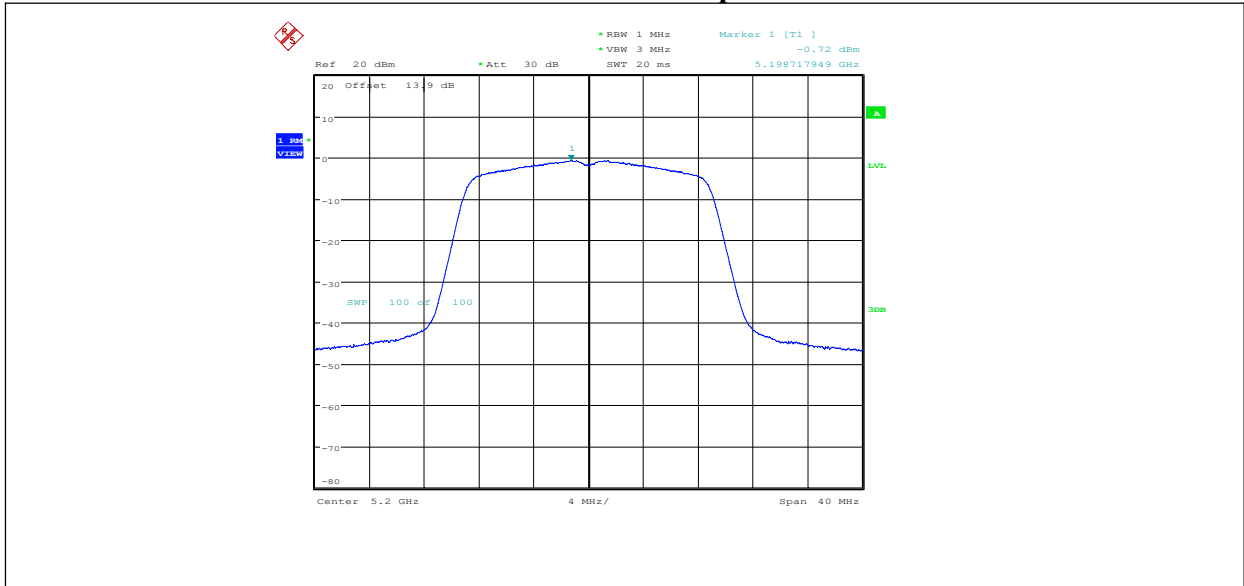
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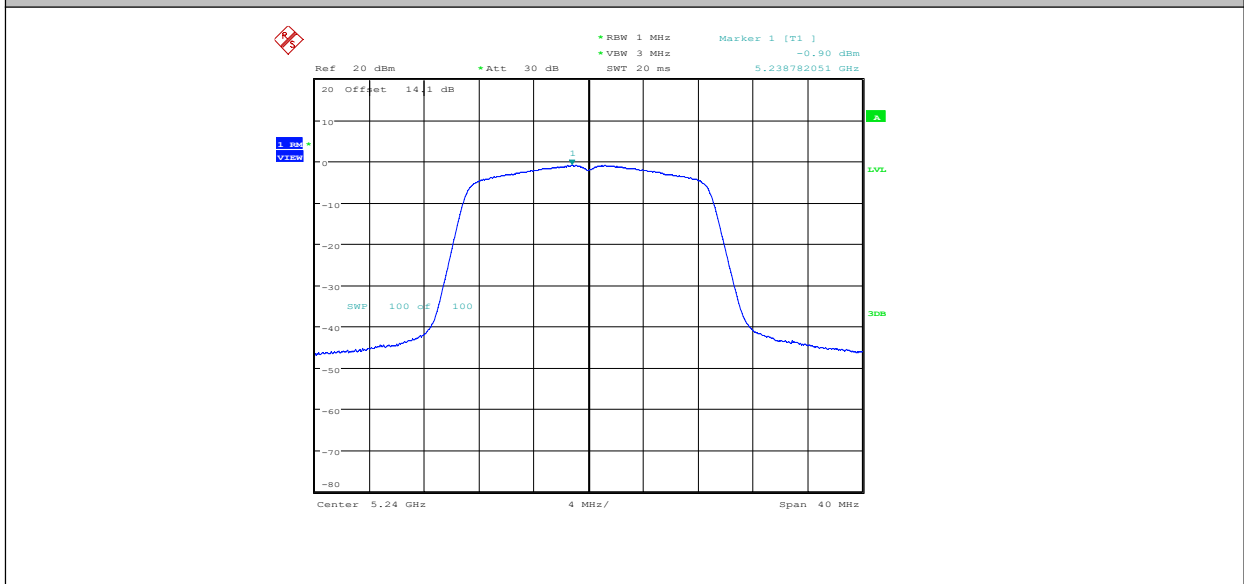
11N20SISO\_Ant1\_5200

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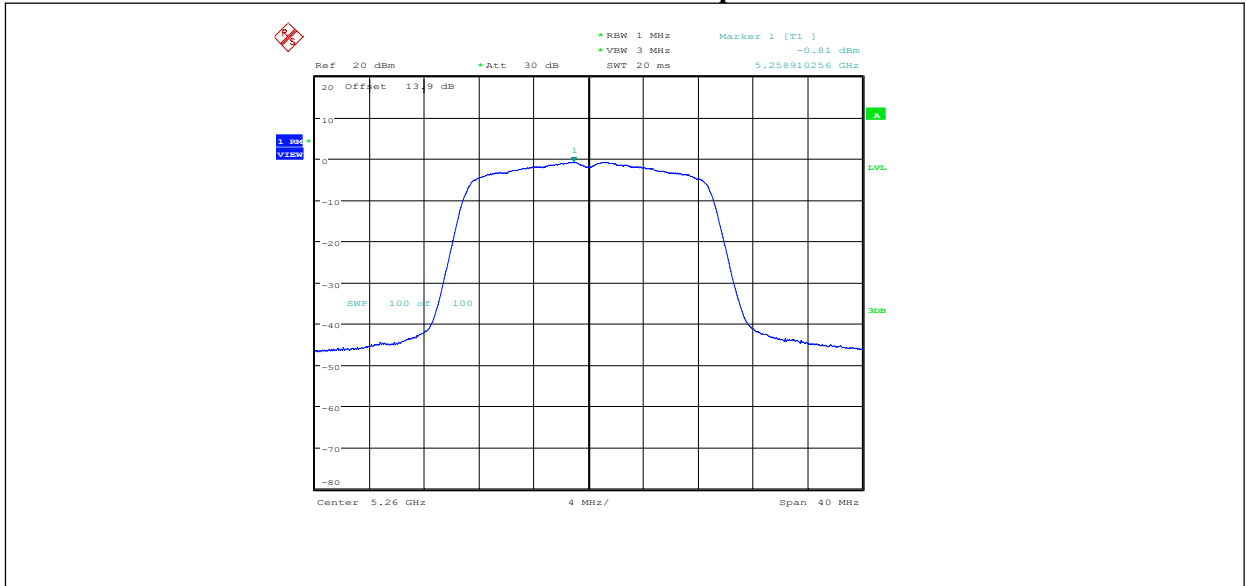
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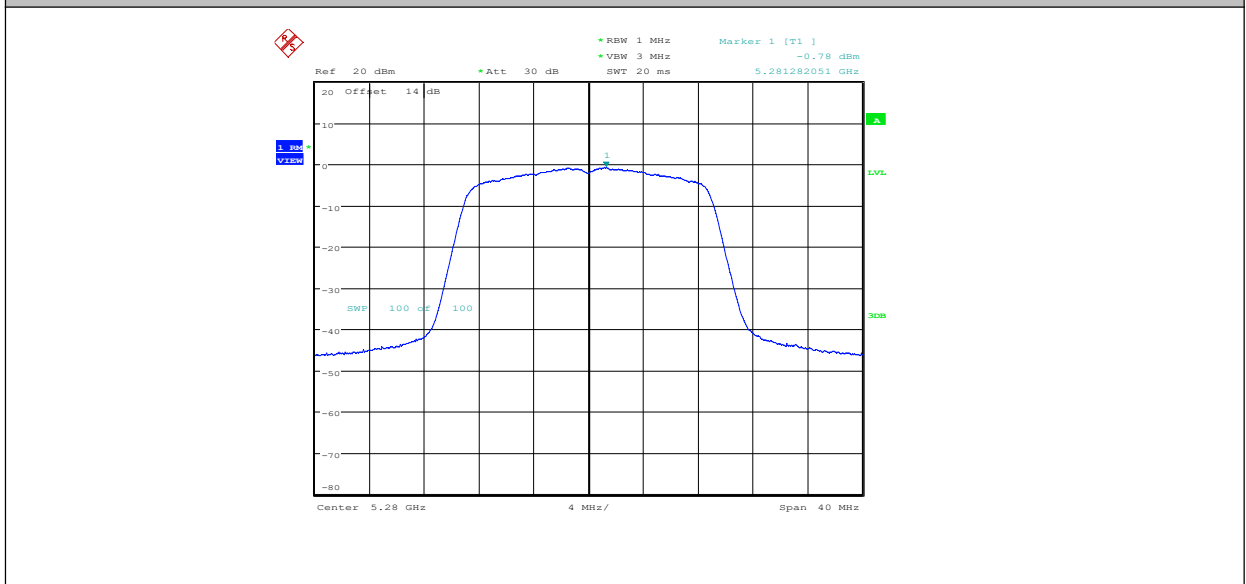
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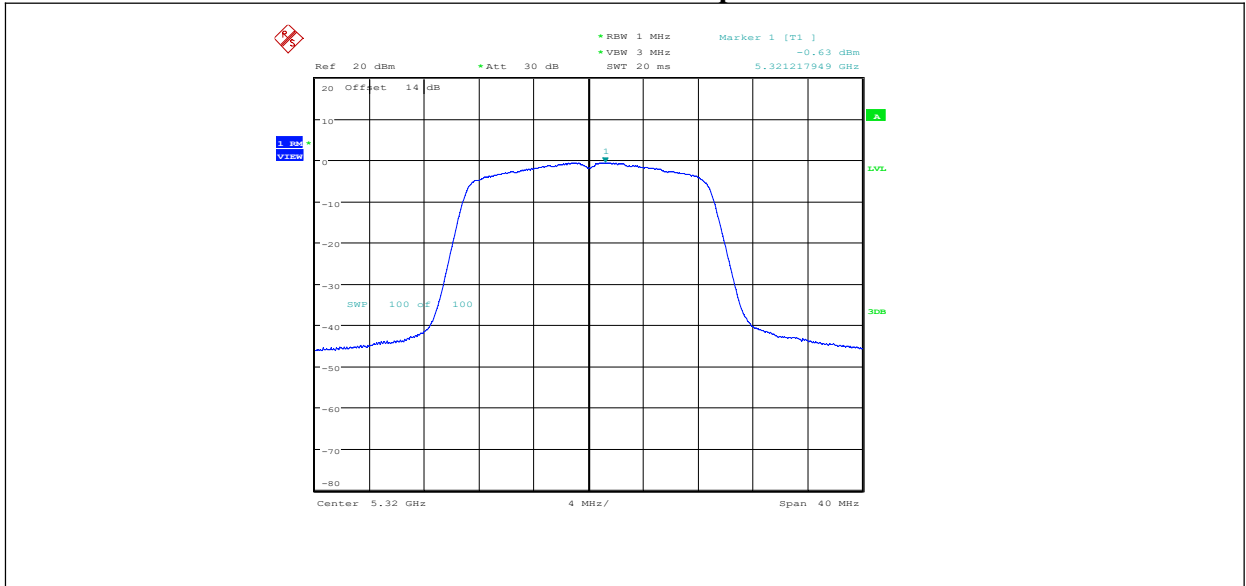


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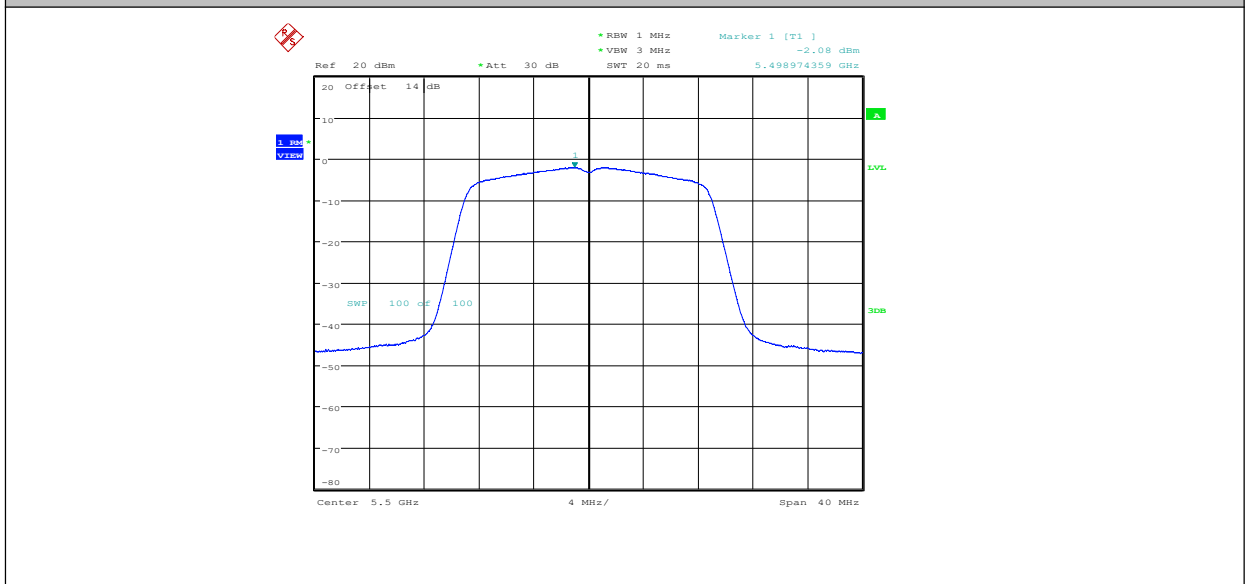


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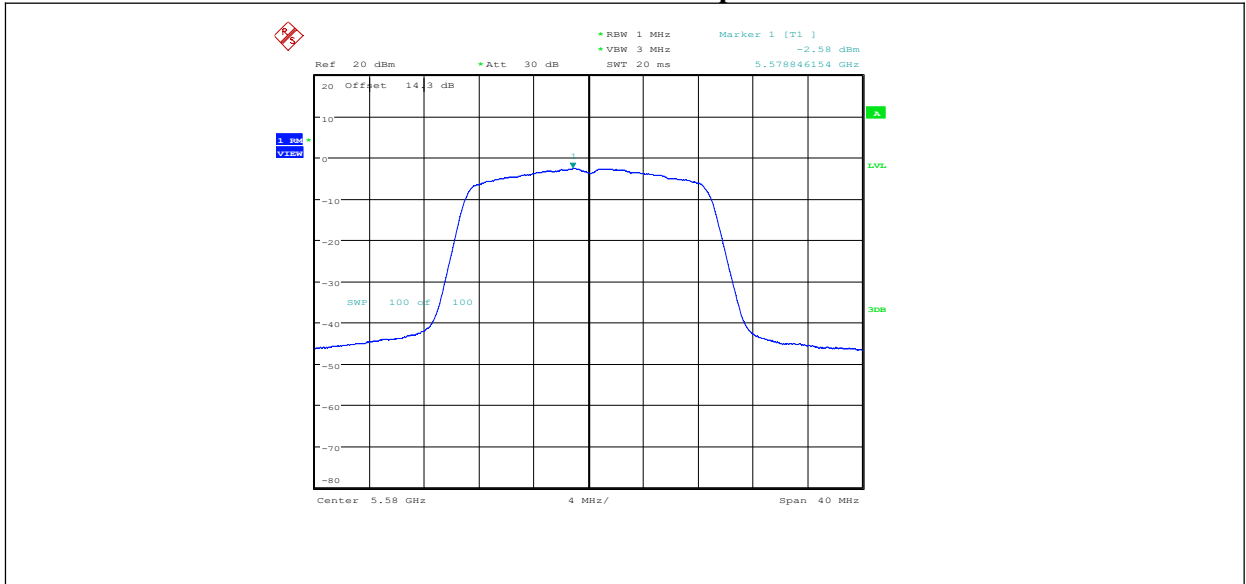
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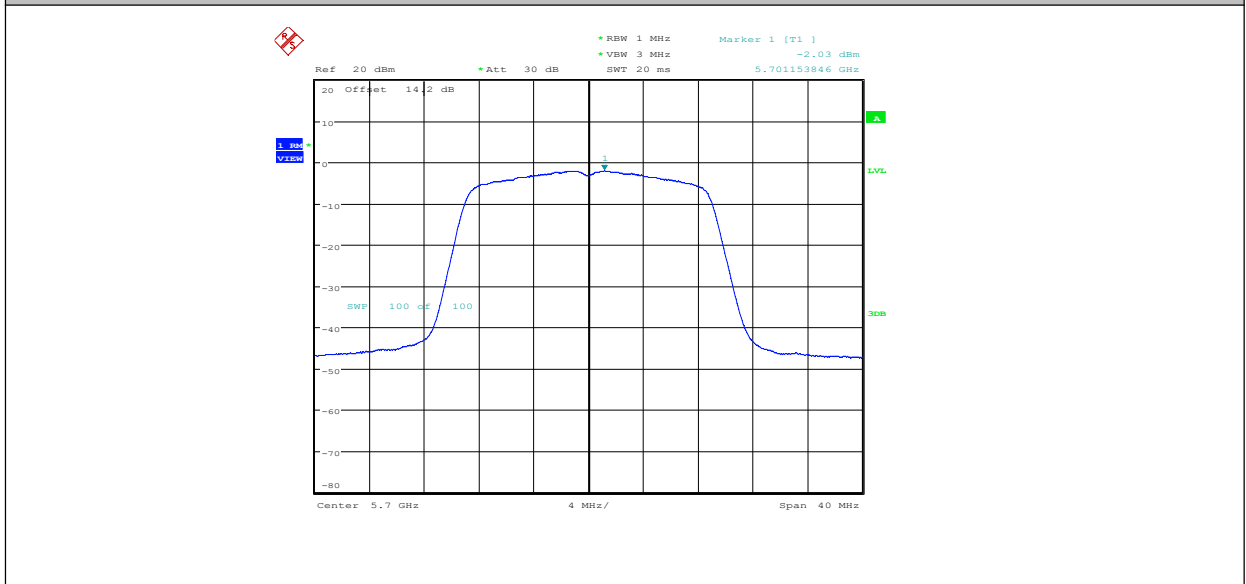
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### Chongqing Academy of Information and Communication Technology

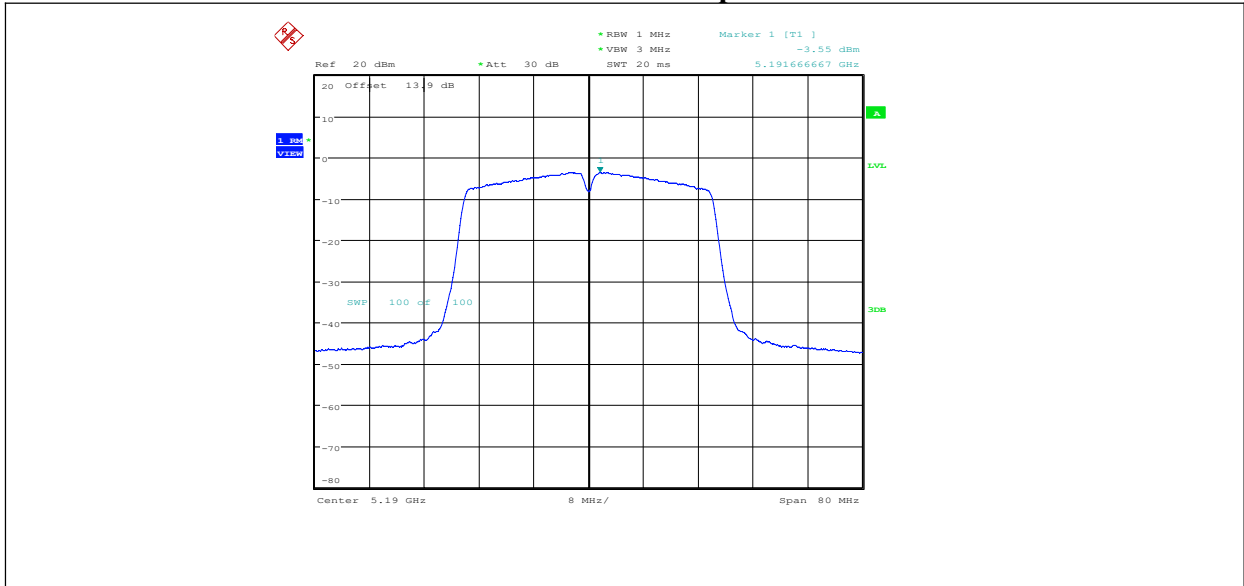
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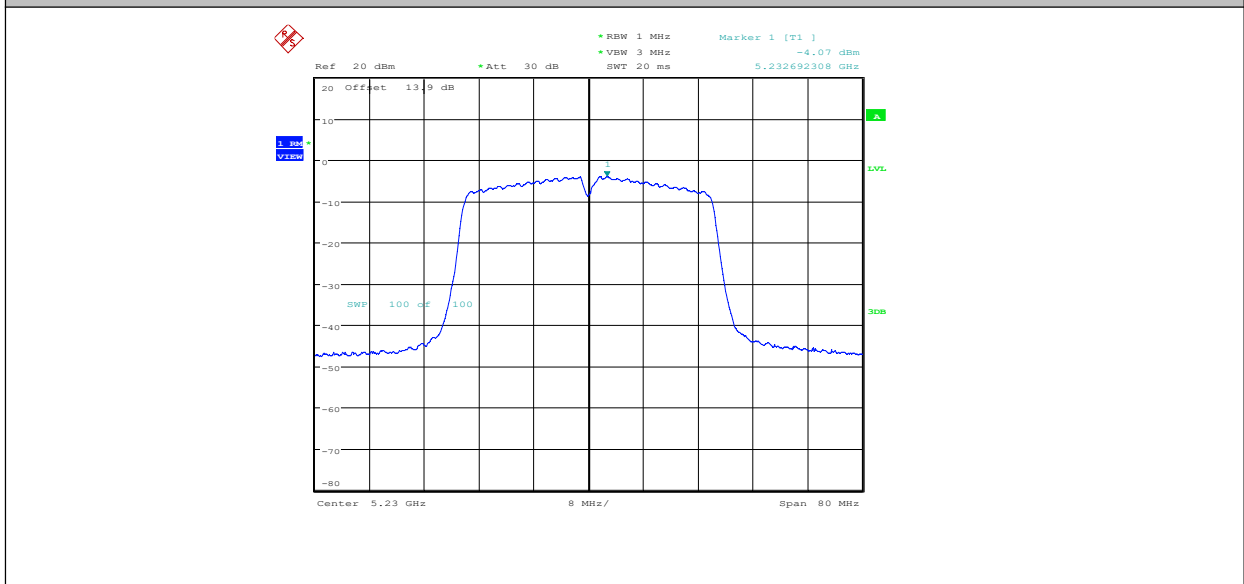
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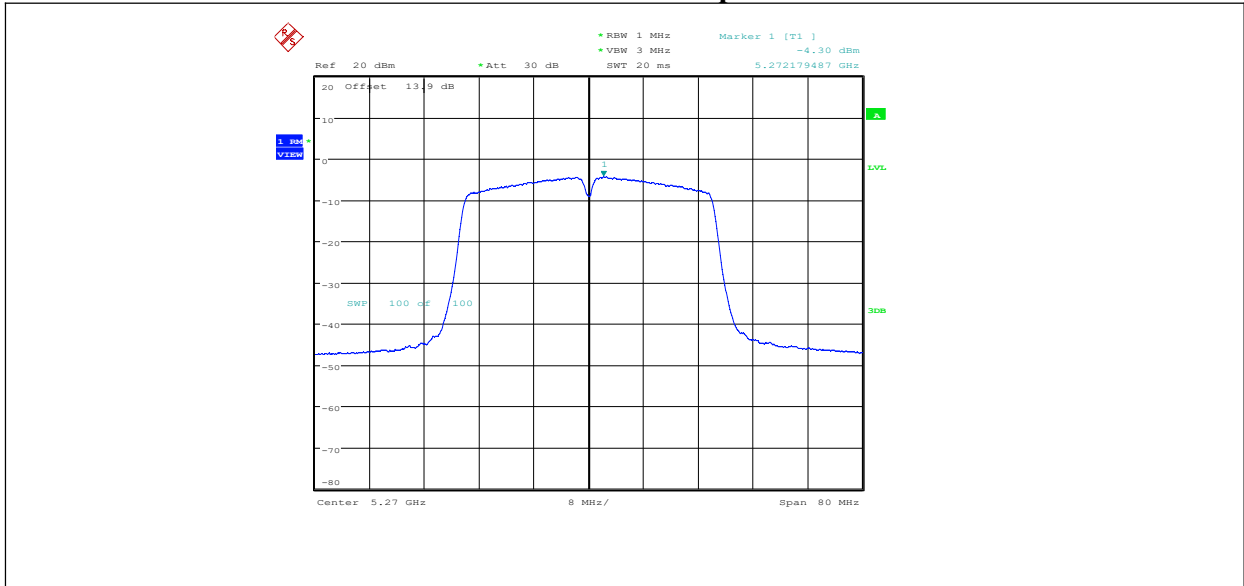
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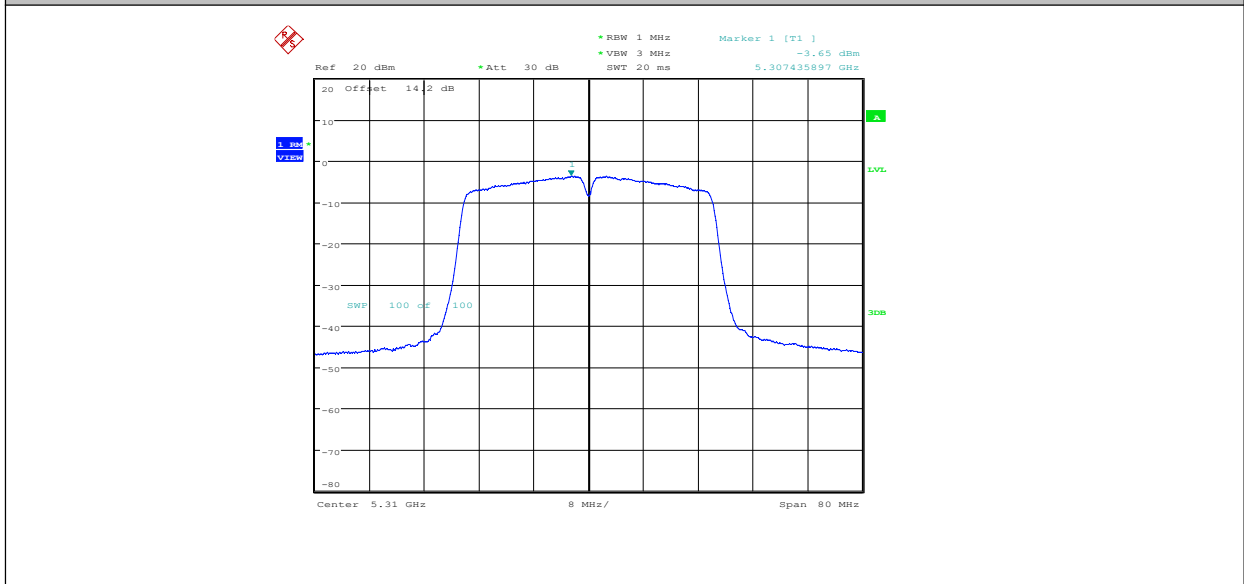
11N40SISO\_Ant1\_5230



11N40SISO\_Ant1\_5270



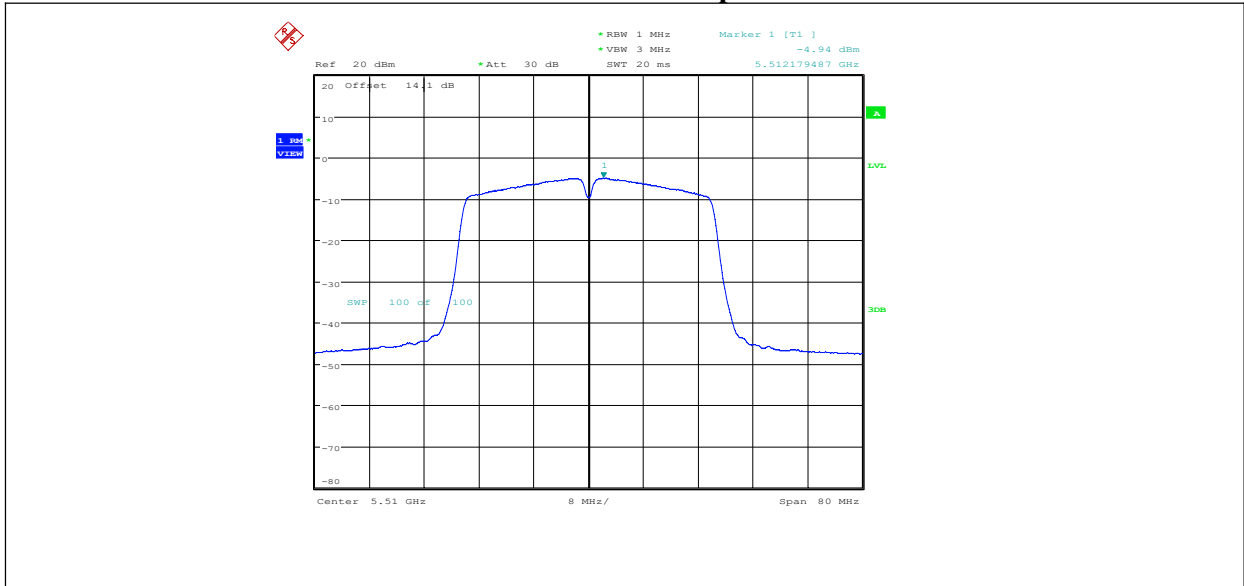
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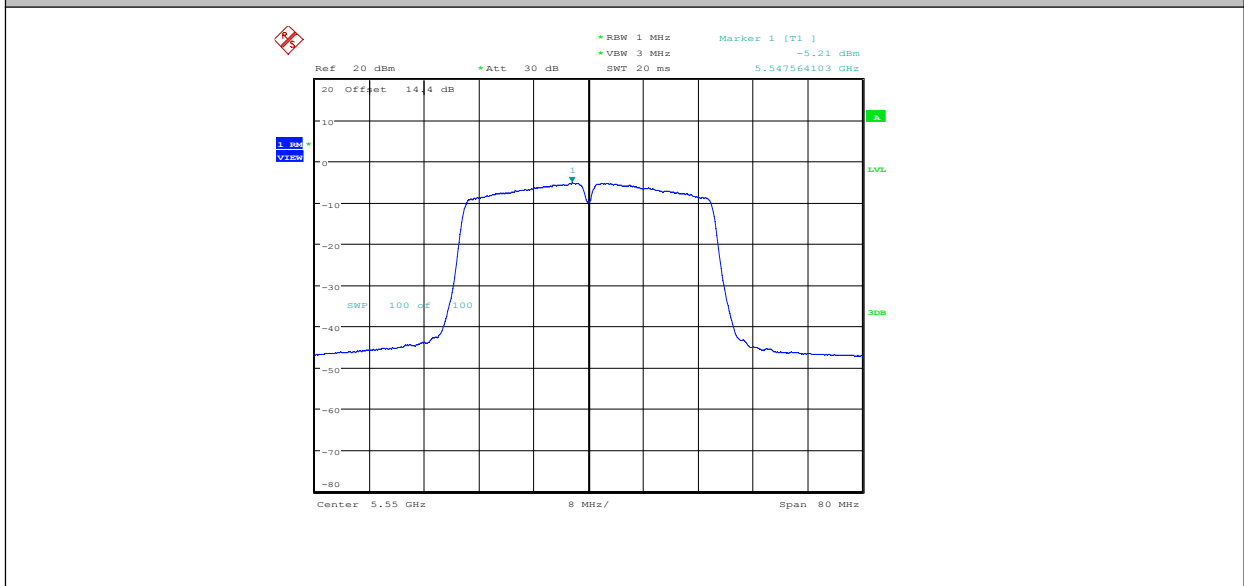
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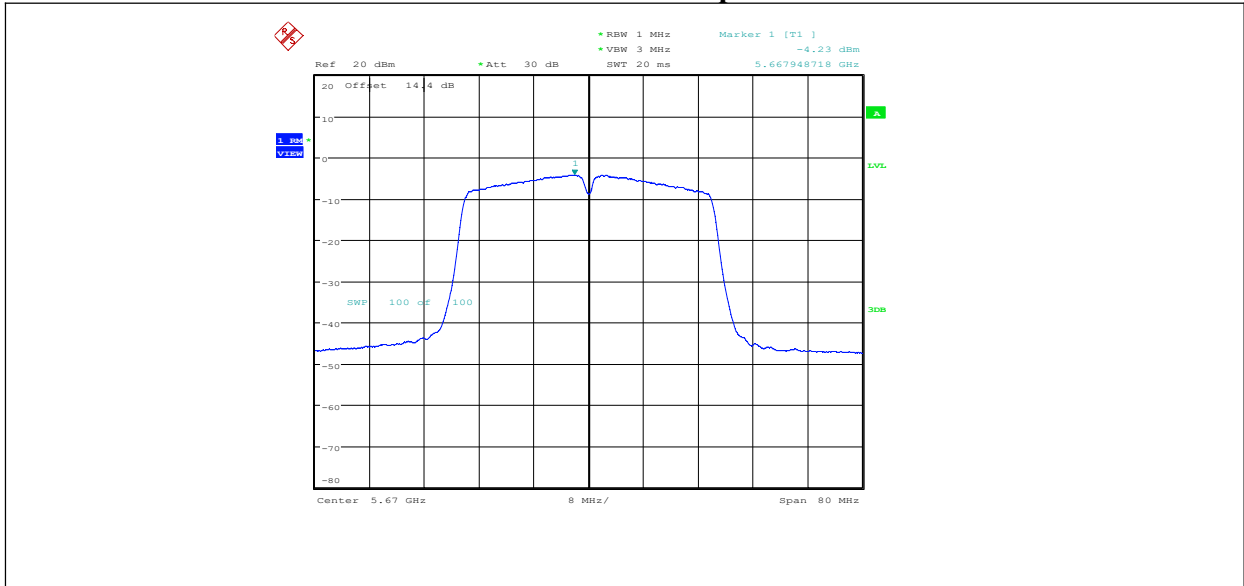
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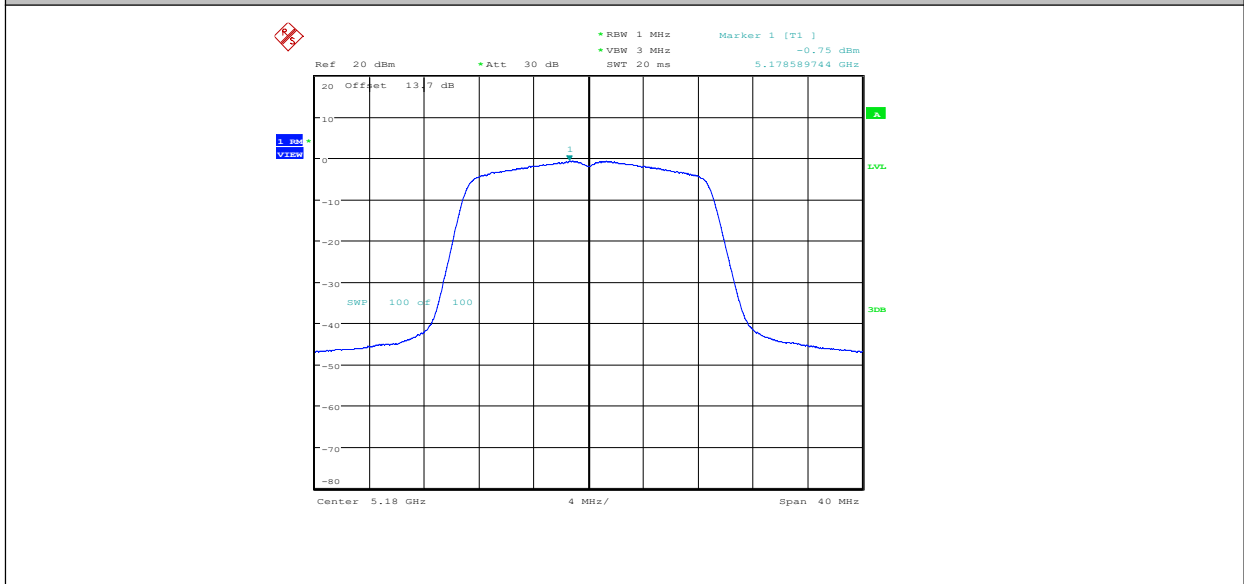
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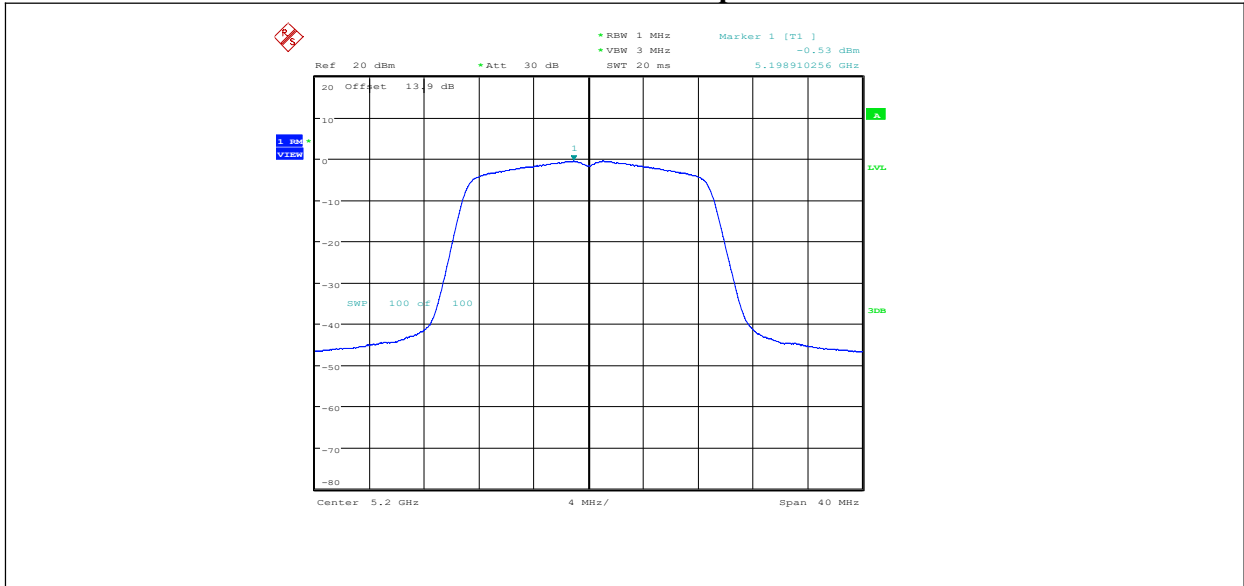
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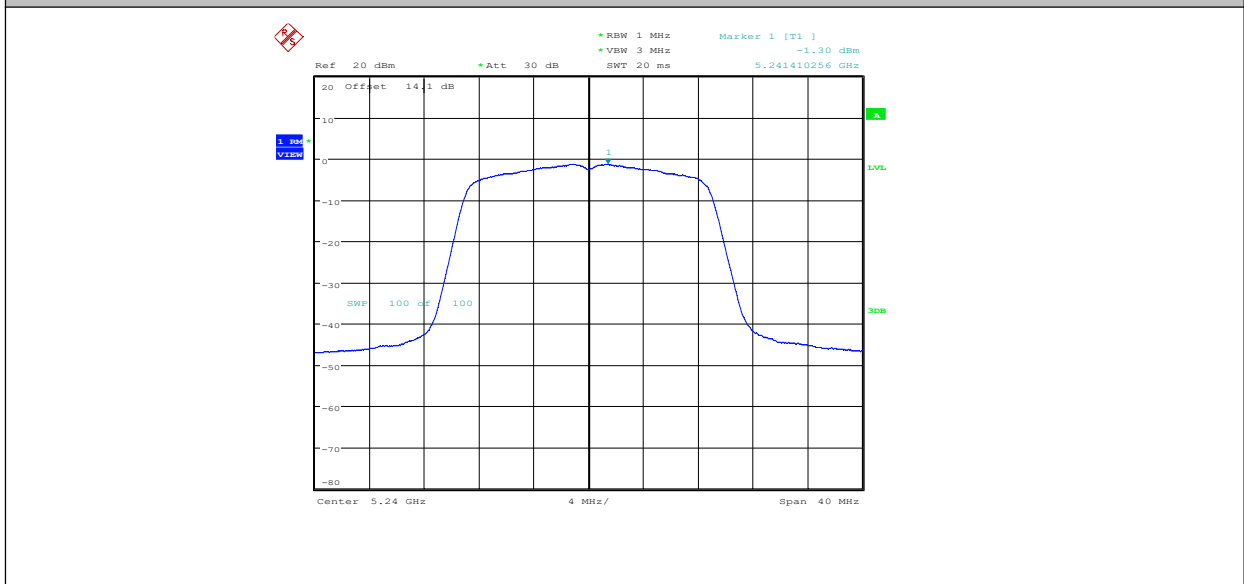
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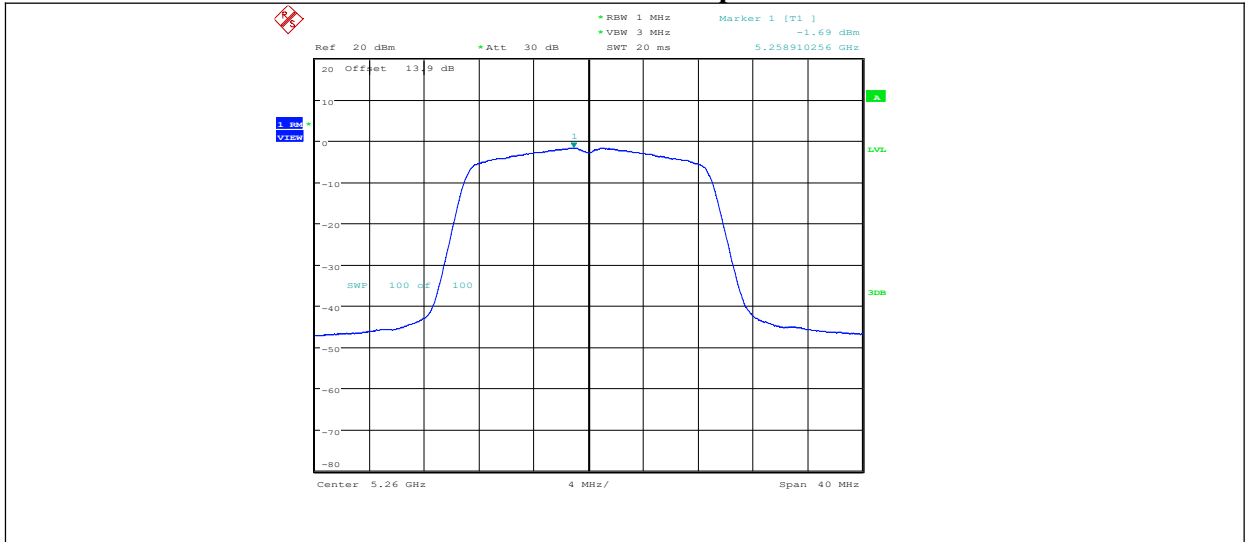
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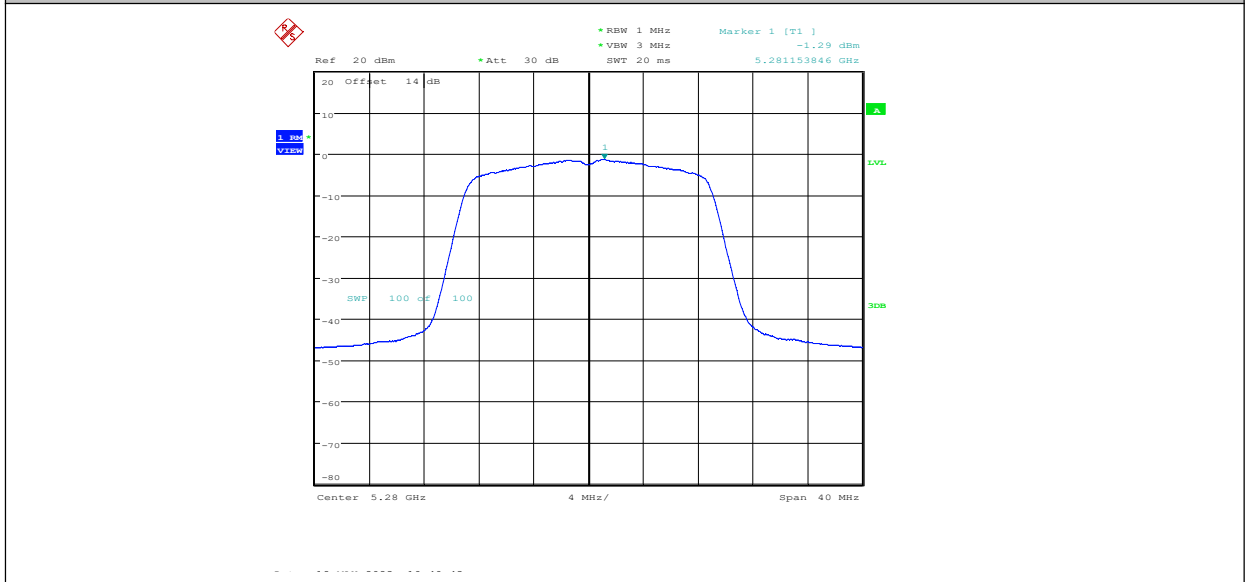
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11AC20SISO\_Ant1\_5260

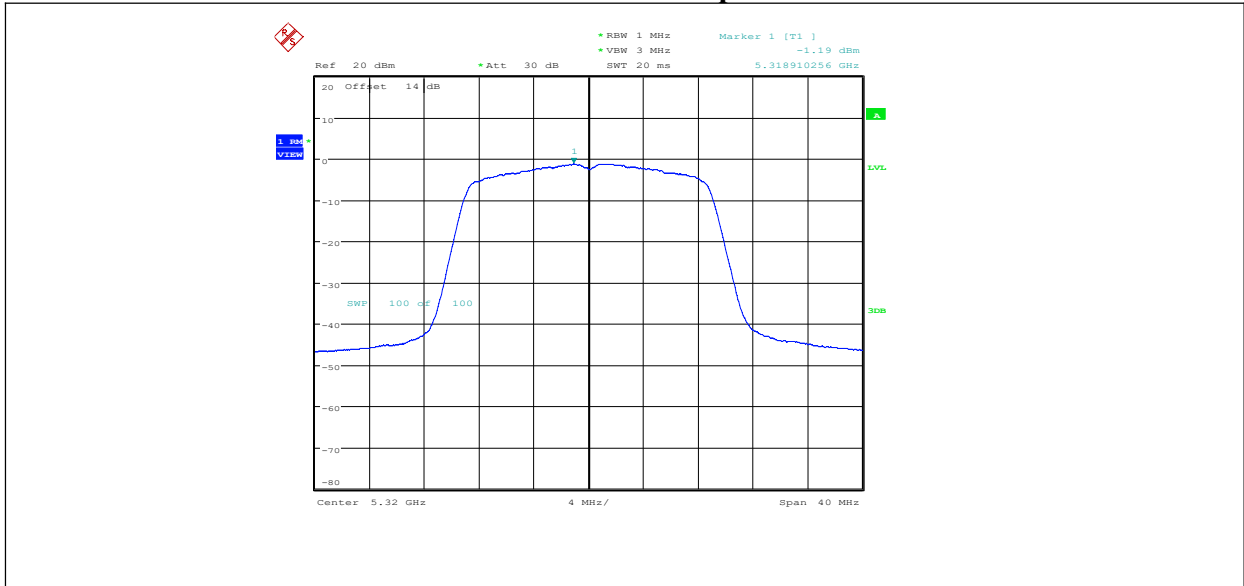


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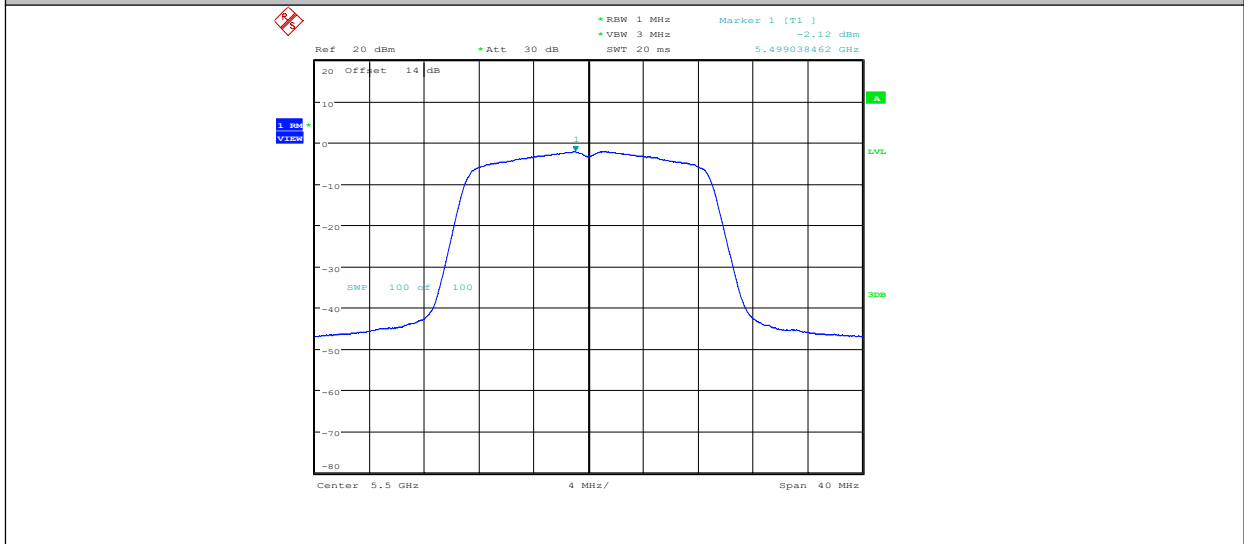


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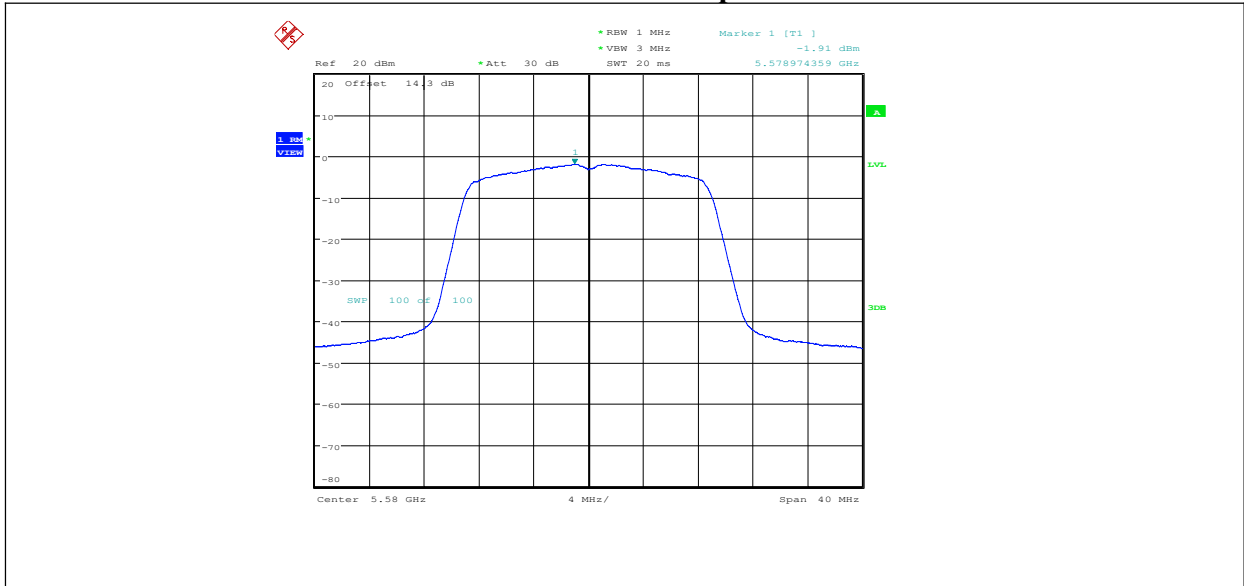




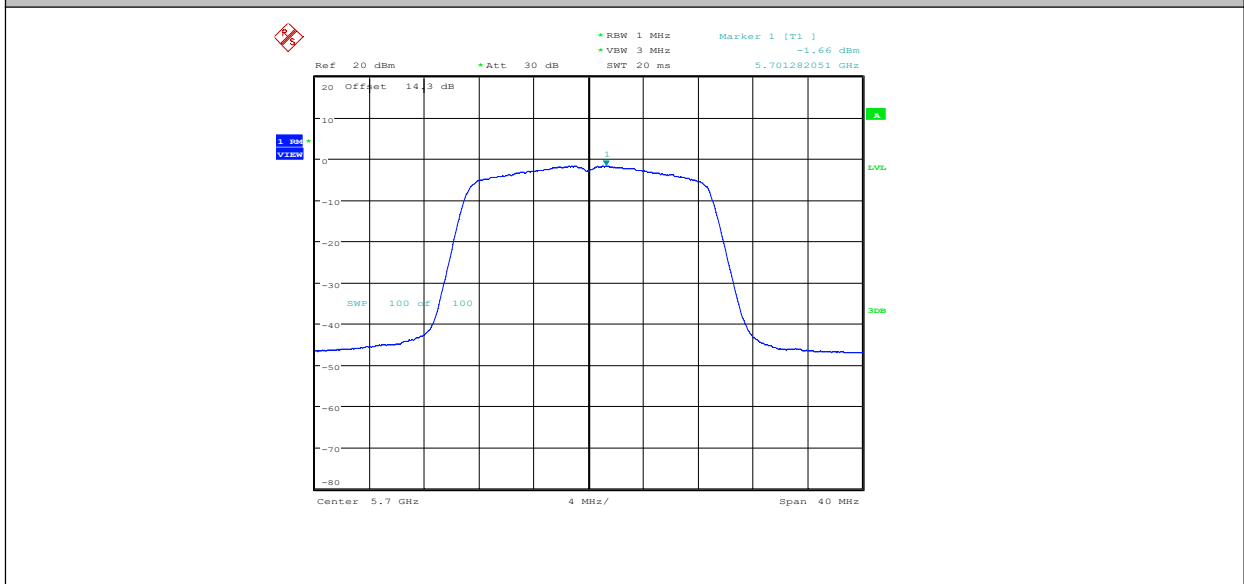
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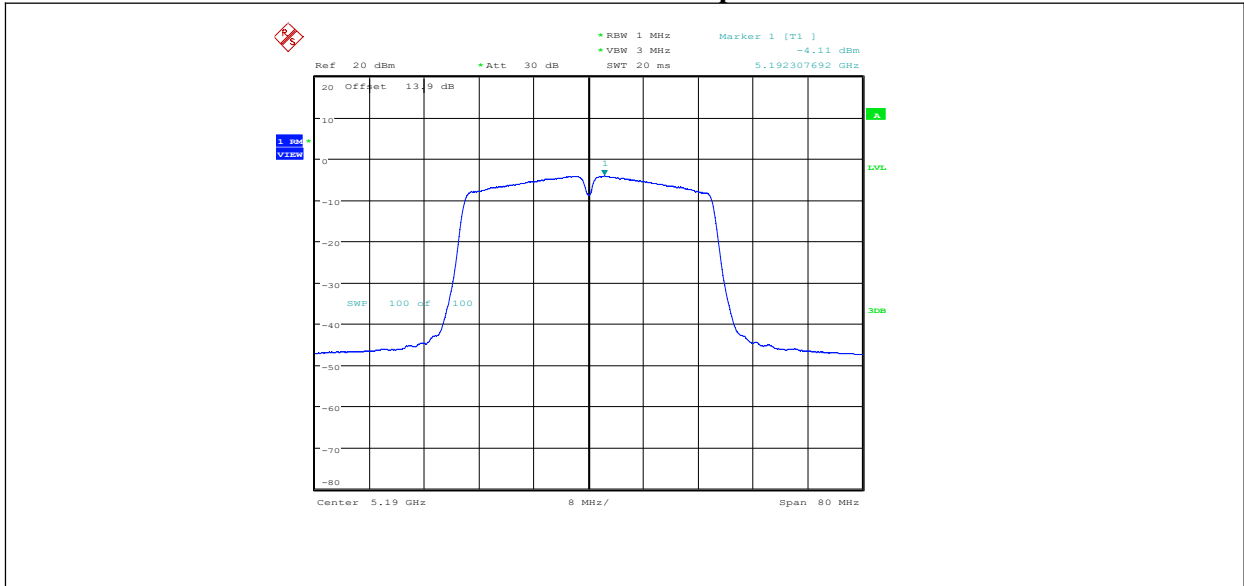
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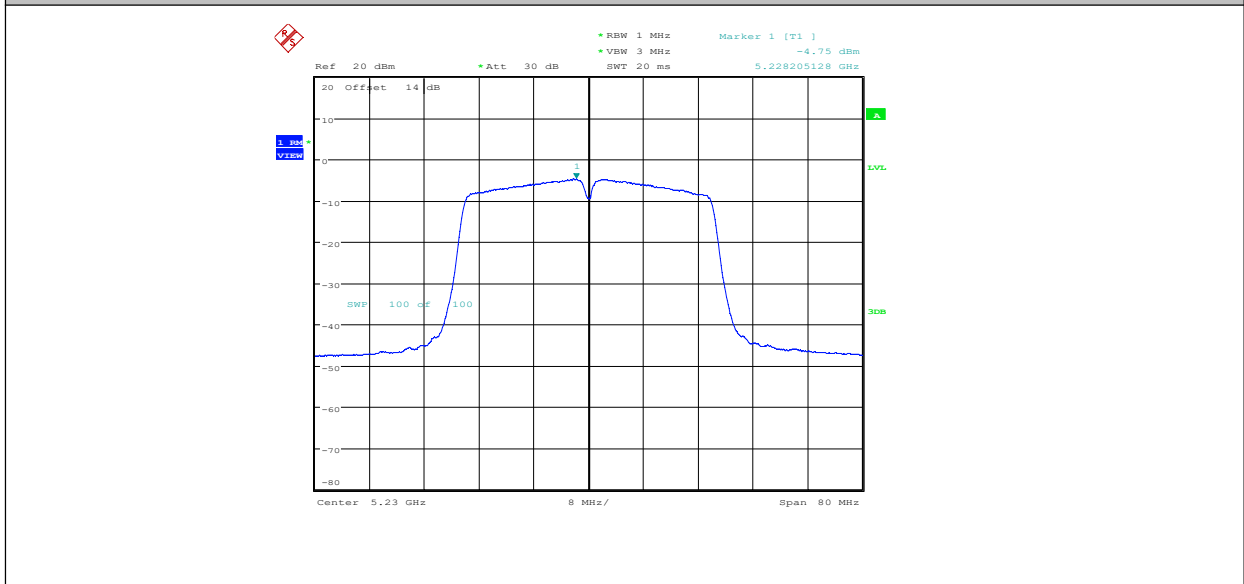
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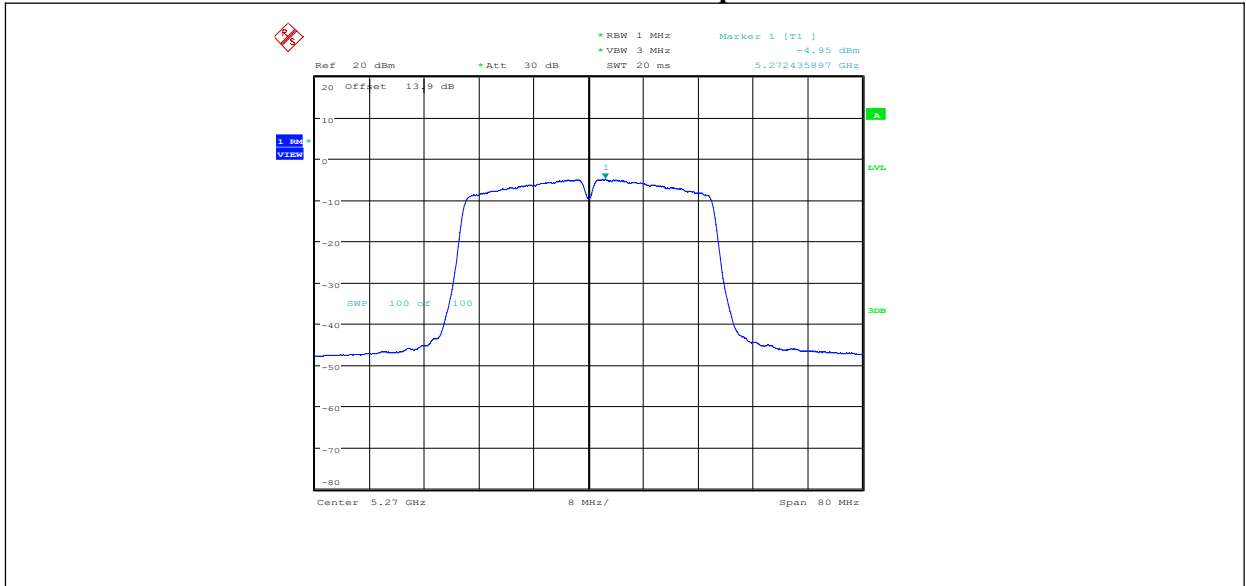
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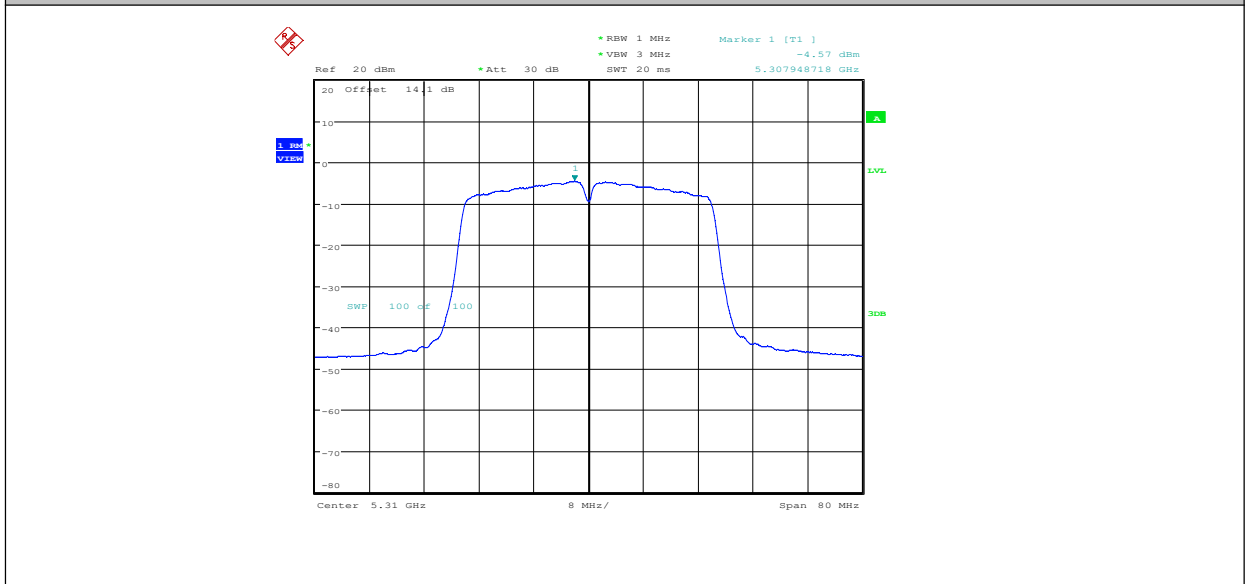
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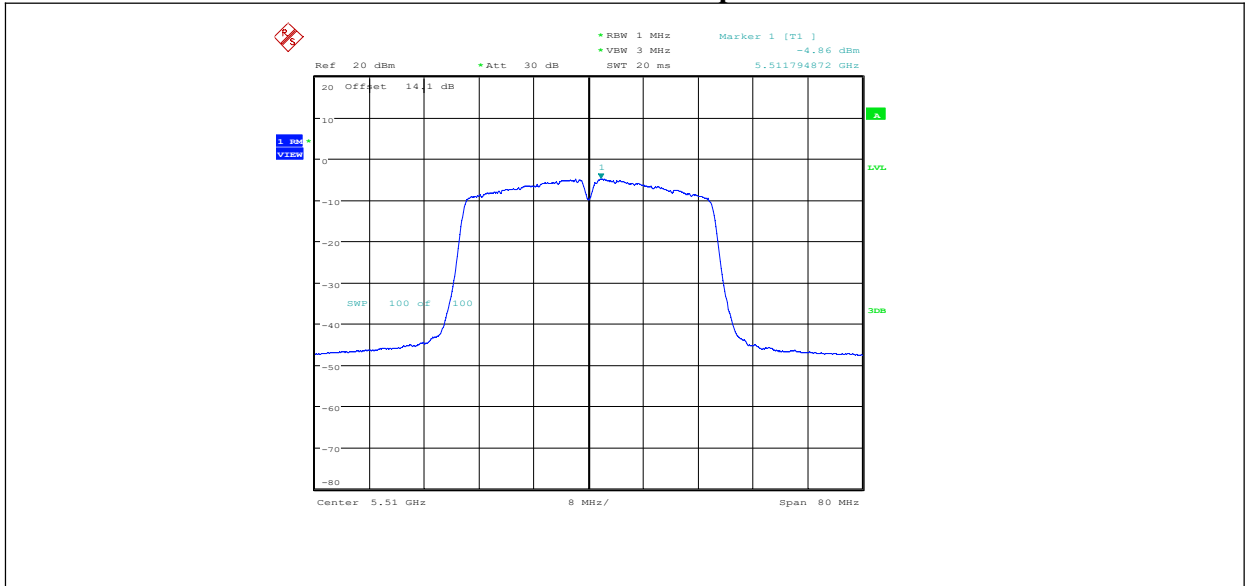
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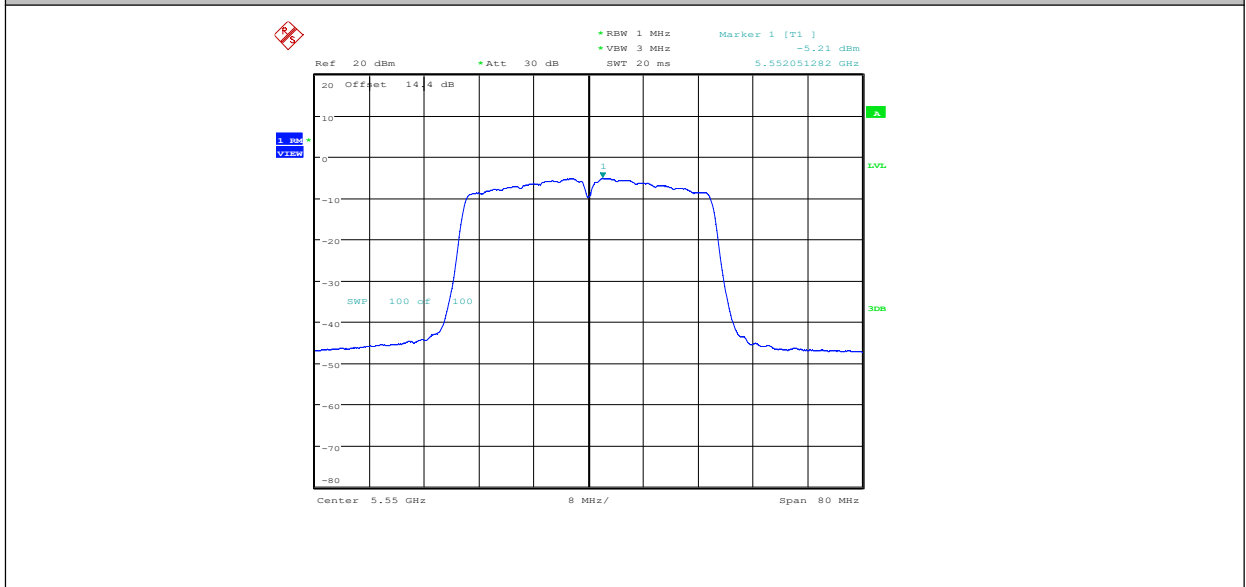
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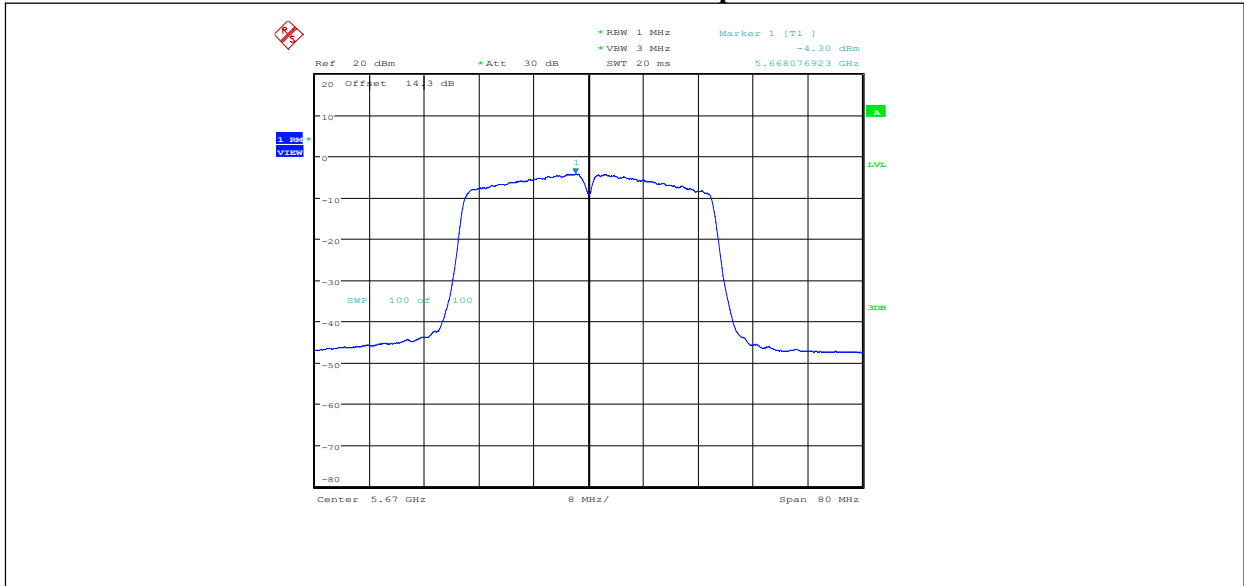
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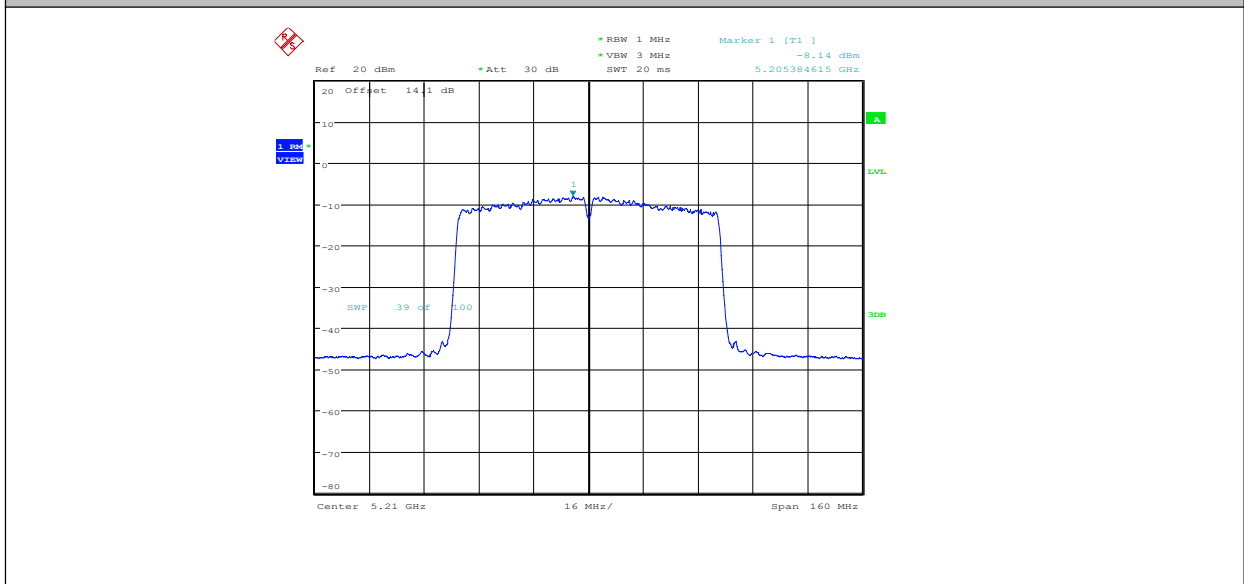
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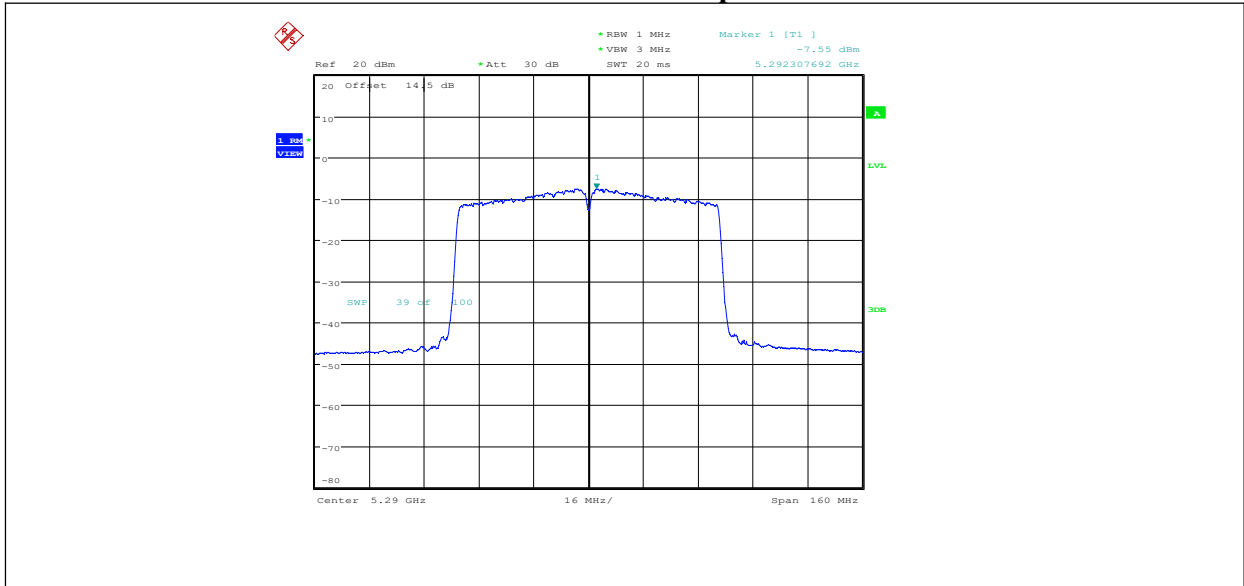
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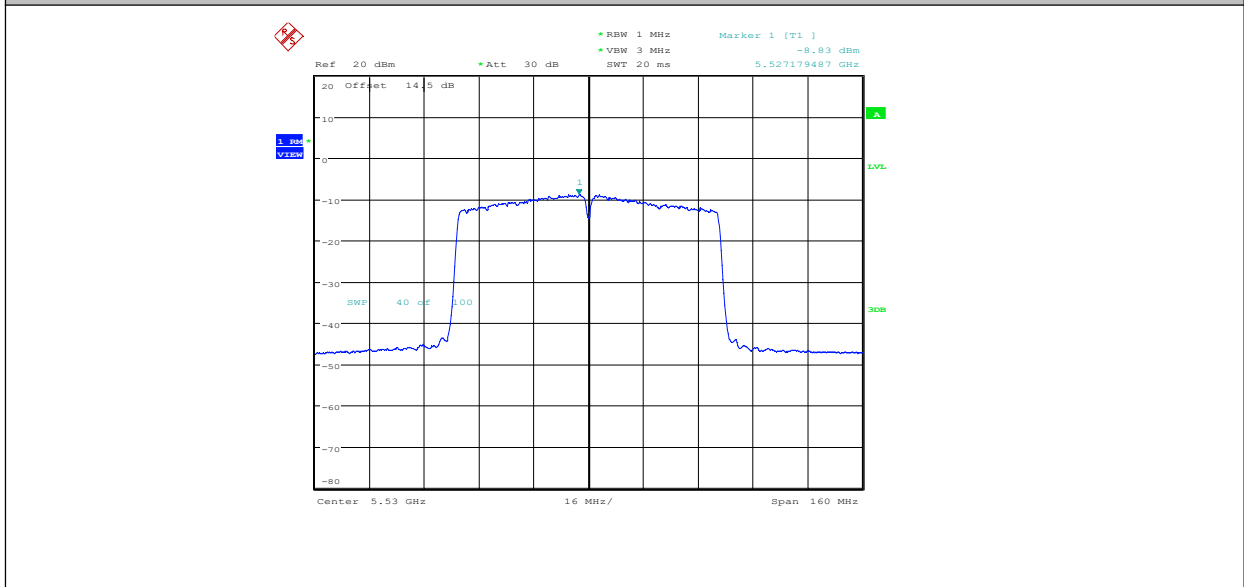
11AC80SISO\_Ant1\_5210



11AC80SISO\_Ant1\_5290



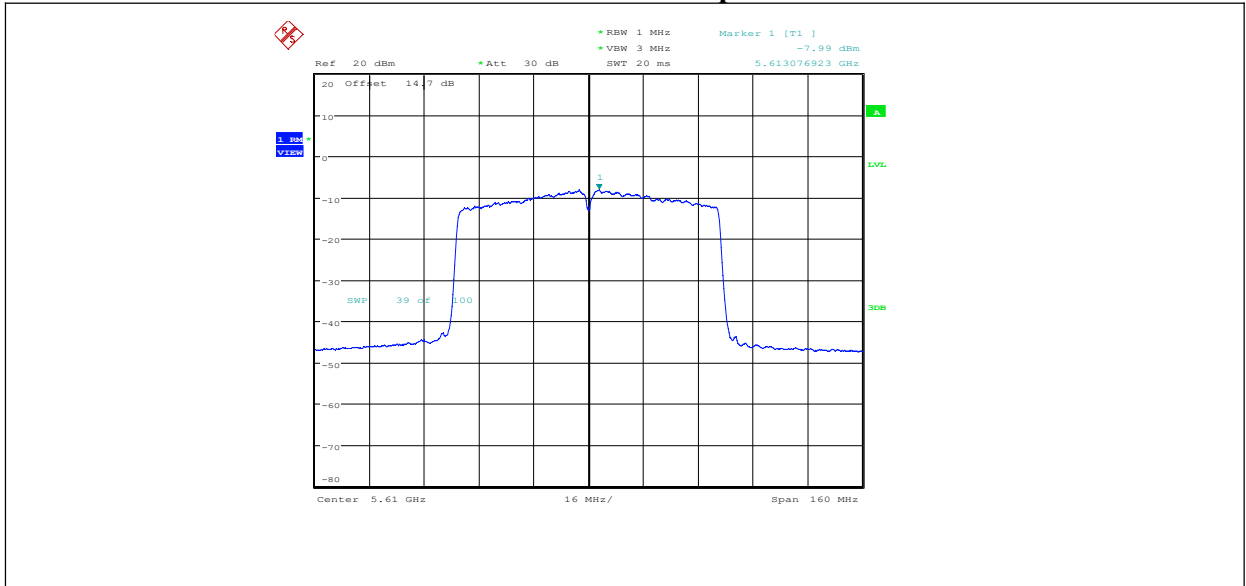
11AC80SISO\_Ant1\_5530



11AC80SISO\_Ant1\_5610

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### 6.5 99% Occupied Bandwidth

|                           |  |
|---------------------------|--|
| <b>Specifications:</b>    | FCC 47 CFR Part 15.407(a)  |
| <b>DUT Serial Number:</b> | S4   |
| <b>Test conditions:</b>   | Ambient Temperature:20°C<br>Relative Humidity:40%<br>Air pressure: 90kPa |
| <b>Test Results:</b>      | Pass   |

#### Measurement Limit and Method

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

#### Measurement Uncertainty:

|                         |       |
|-------------------------|-------|
| Measurement Uncertainty | 20kHz |
|-------------------------|-------|

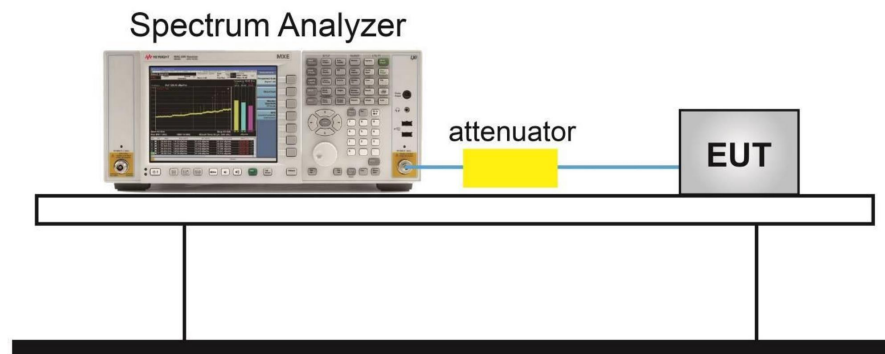
measurement method is made according to KDB 789033 D

2. Set center frequency to the nominal EUT channel center frequency.
3. Set span = 1.5 times to 5.0 times the OBW.
4. Set RBW = 1 % to 5 % of the OBW
5. Set VBW  $\geq 3 \cdot$  RBW
6. Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
7. Use the 99 % power bandwidth function of the instrument (if available).
8. If the instrument does not have a 99 % power bandwidth function, the trace data points are recovered and directly summed in power units. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 % of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5 % of the total is reached; that frequency is recorded as the upper frequency. The 99% occupied bandwidth is the difference between these two frequencies.

#### Test Setup

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Report No.: 123W00020-WIFI 5G RF

Test Result

| TestMode   | Antenna | Frequency[MHz] | OCB [MHz] | FL[MHz]   | FH[MHz]   | Limit[MHz] | Verdict |
|------------|---------|----------------|-----------|-----------|-----------|------------|---------|
| 11A        | Ant1    | 5180           | 17.32     | 5171.2800 | 5188.6000 | ---        | ---     |
|            |         | 5200           | 17.44     | 5191.2400 | 5208.6800 | ---        | ---     |
|            |         | 5240           | 17.44     | 5231.2400 | 5248.6800 | ---        | ---     |
|            |         | 5260           | 17.44     | 5251.2400 | 5268.6800 | ---        | ---     |
|            |         | 5280           | 17.4      | 5271.2800 | 5288.6800 | ---        | ---     |
|            |         | 5320           | 17.4      | 5311.2800 | 5328.6800 | ---        | ---     |
|            |         | 5500           | 17.48     | 5491.2800 | 5508.7600 | ---        | ---     |
|            |         | 5580           | 17.48     | 5571.2800 | 5588.7600 | ---        | ---     |
|            |         | 5700           | 17.4      | 5691.2400 | 5708.6400 | ---        | ---     |
| 11N20SISO  | Ant1    | 5180           | 18.36     | 5170.7600 | 5189.1200 | ---        | ---     |
|            |         | 5200           | 18.4      | 5190.7600 | 5209.1600 | ---        | ---     |
|            |         | 5240           | 18.28     | 5230.8400 | 5249.1200 | ---        | ---     |
|            |         | 5260           | 18.4      | 5250.7600 | 5269.1600 | ---        | ---     |
|            |         | 5280           | 18.36     | 5270.8000 | 5289.1600 | ---        | ---     |
|            |         | 5320           | 18.36     | 5310.8000 | 5329.1600 | ---        | ---     |
|            |         | 5500           | 18.48     | 5490.8000 | 5509.2800 | ---        | ---     |
|            |         | 5580           | 18.4      | 5570.8400 | 5589.2400 | ---        | ---     |
|            |         | 5700           | 18.36     | 5690.7600 | 5709.1200 | ---        | ---     |
| 11N40SISO  | Ant1    | 5190           | 36.96     | 5171.4400 | 5208.4000 | ---        | ---     |
|            |         | 5230           | 36.96     | 5211.5200 | 5248.4800 | ---        | ---     |
|            |         | 5270           | 37.04     | 5251.4400 | 5288.4800 | ---        | ---     |
|            |         | 5310           | 36.96     | 5291.5200 | 5328.4800 | ---        | ---     |
|            |         | 5510           | 37.04     | 5491.6000 | 5528.6400 | ---        | ---     |
|            |         | 5550           | 37.04     | 5531.5200 | 5568.5600 | ---        | ---     |
|            |         | 5670           | 36.96     | 5651.4400 | 5688.4000 | ---        | ---     |
| 11AC20SISO | Ant1    | 5180           | 18.24     | 5170.8800 | 5189.1200 | ---        | ---     |
|            |         | 5200           | 18.24     | 5190.8400 | 5209.0800 | ---        | ---     |
|            |         | 5240           | 18.16     | 5230.9200 | 5249.0800 | ---        | ---     |
|            |         | 5260           | 18.28     | 5250.8000 | 5269.0800 | ---        | ---     |
|            |         | 5280           | 18.2      | 5270.9200 | 5289.1200 | ---        | ---     |
|            |         | 5320           | 18.2      | 5310.9200 | 5329.1200 | ---        | ---     |
|            |         | 5500           | 18.28     | 5490.8800 | 5509.1600 | ---        | ---     |
|            |         | 5580           | 18.28     | 5570.8800 | 5589.1600 | ---        | ---     |
|            |         | 5700           | 18.2      | 5690.8800 | 5709.0800 | ---        | ---     |
| 11AC40SISO | Ant1    | 5190           | 36.64     | 5171.6000 | 5208.2400 | ---        | ---     |
|            |         | 5230           | 36.72     | 5211.6000 | 5248.3200 | ---        | ---     |
|            |         | 5270           | 36.72     | 5251.6000 | 5288.3200 | ---        | ---     |
|            |         | 5310           | 36.72     | 5291.6000 | 5328.3200 | ---        | ---     |

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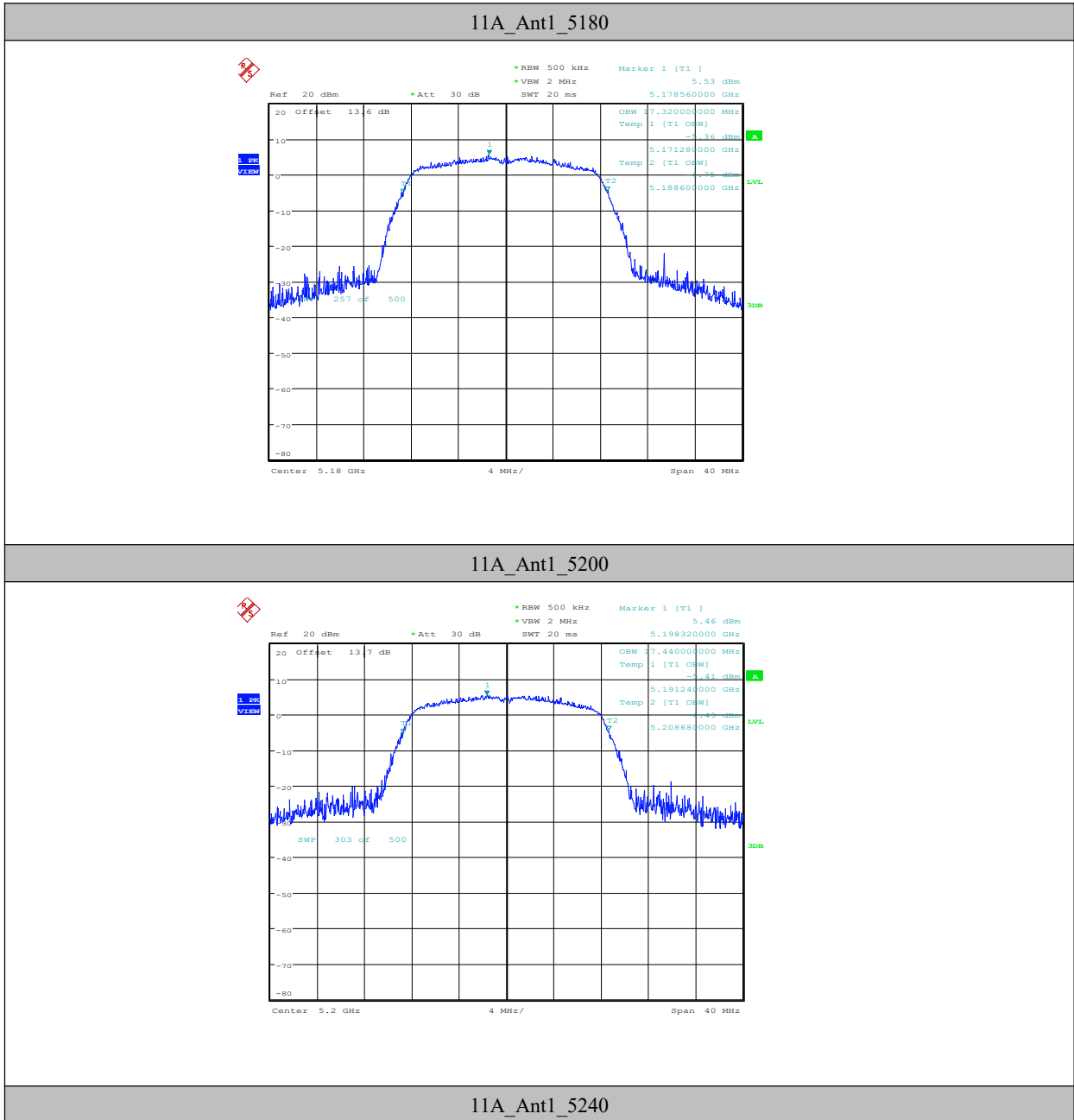
**Report No.: 123W00020-WIFI 5G RF**

|            |      |      |       |           |           |     |     |
|------------|------|------|-------|-----------|-----------|-----|-----|
|            |      | 5510 | 36.64 | 5491.6800 | 5528.3200 | --- | --- |
|            |      | 5550 | 36.72 | 5531.6800 | 5568.4000 | --- | --- |
|            |      | 5670 | 36.64 | 5651.6800 | 5688.3200 | --- | --- |
| 11AC80SISO | Ant1 | 5210 | 75.68 | 5172.0800 | 5247.7600 | --- | --- |
|            |      | 5290 | 75.84 | 5252.0800 | 5327.9200 | --- | --- |
|            |      | 5530 | 75.68 | 5492.2400 | 5567.9200 | --- | --- |
|            |      | 5610 | 75.52 | 5572.4000 | 5647.9200 | --- | --- |

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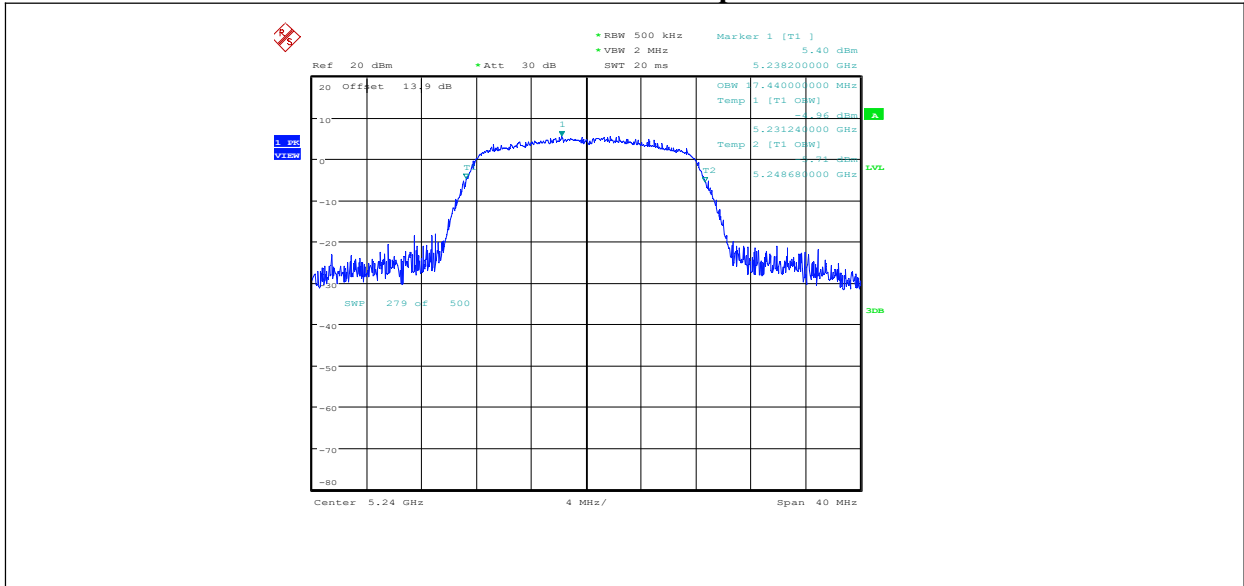
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Test Graphs

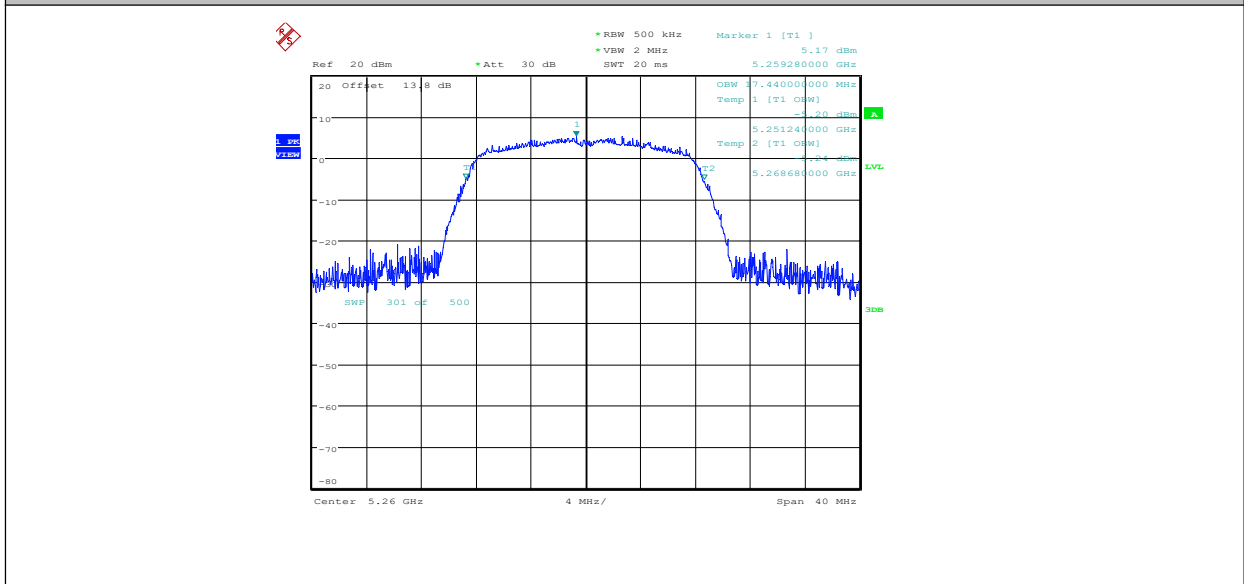


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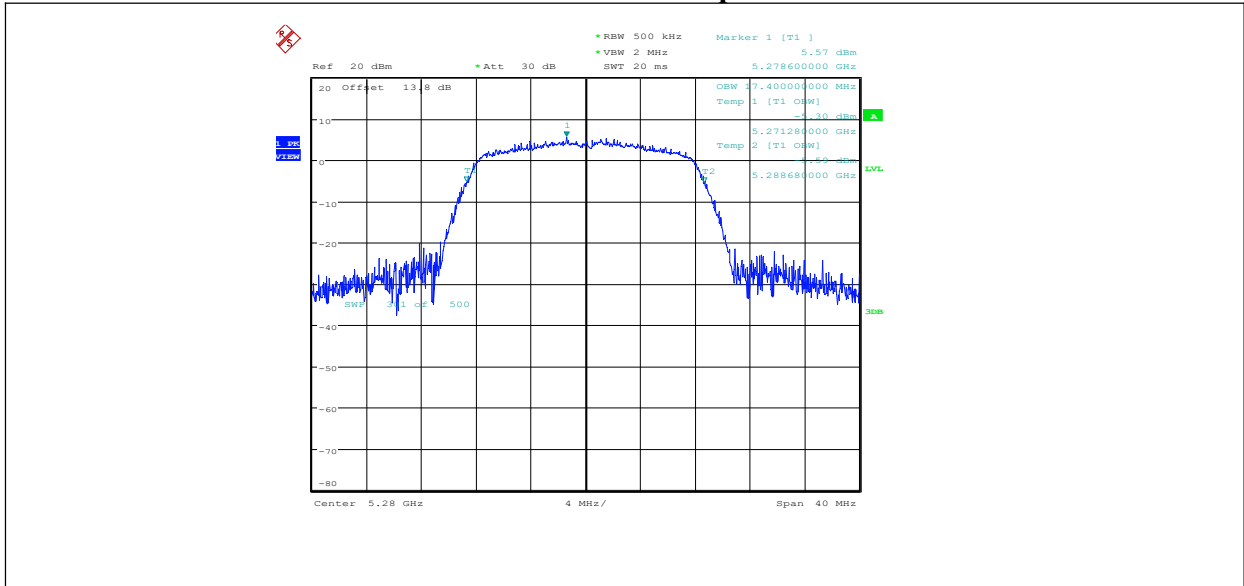
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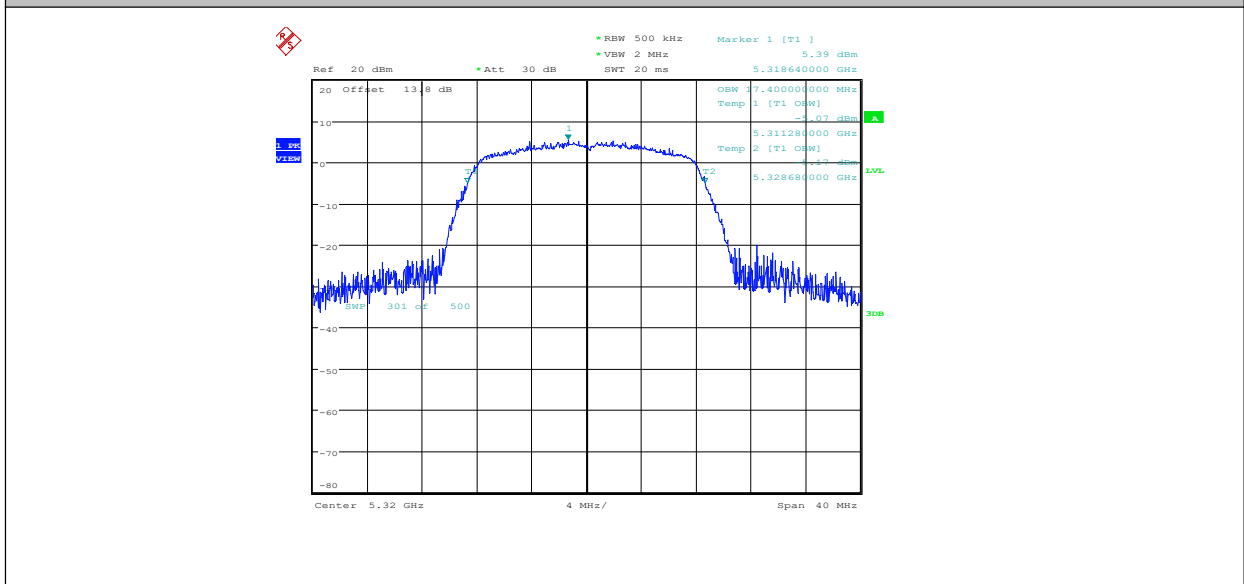
11A\_Ant1\_5280

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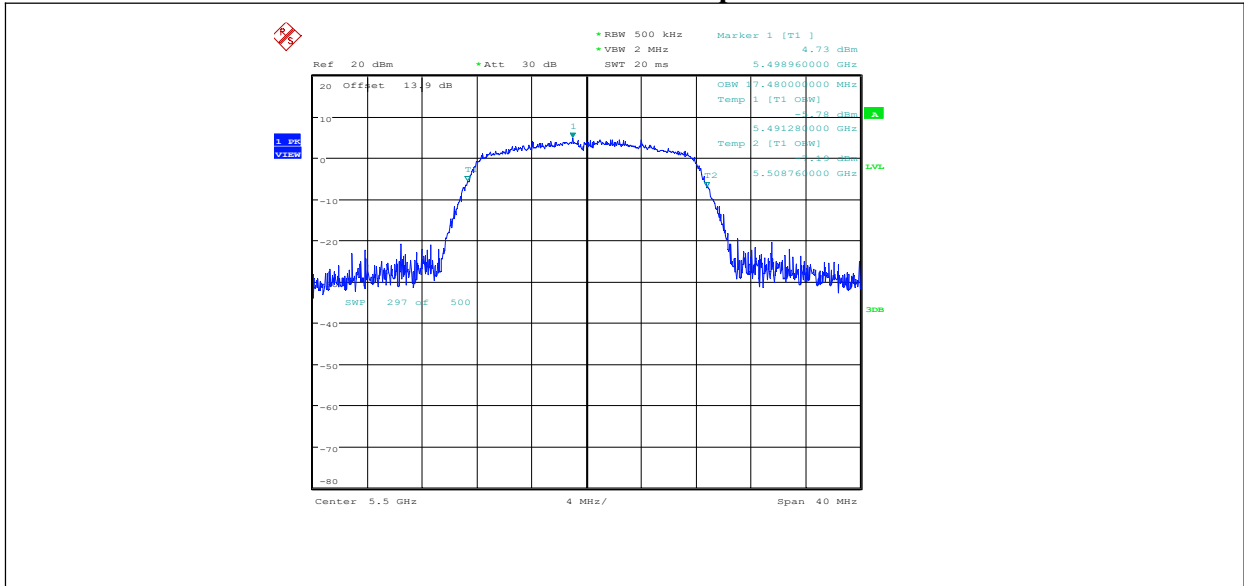
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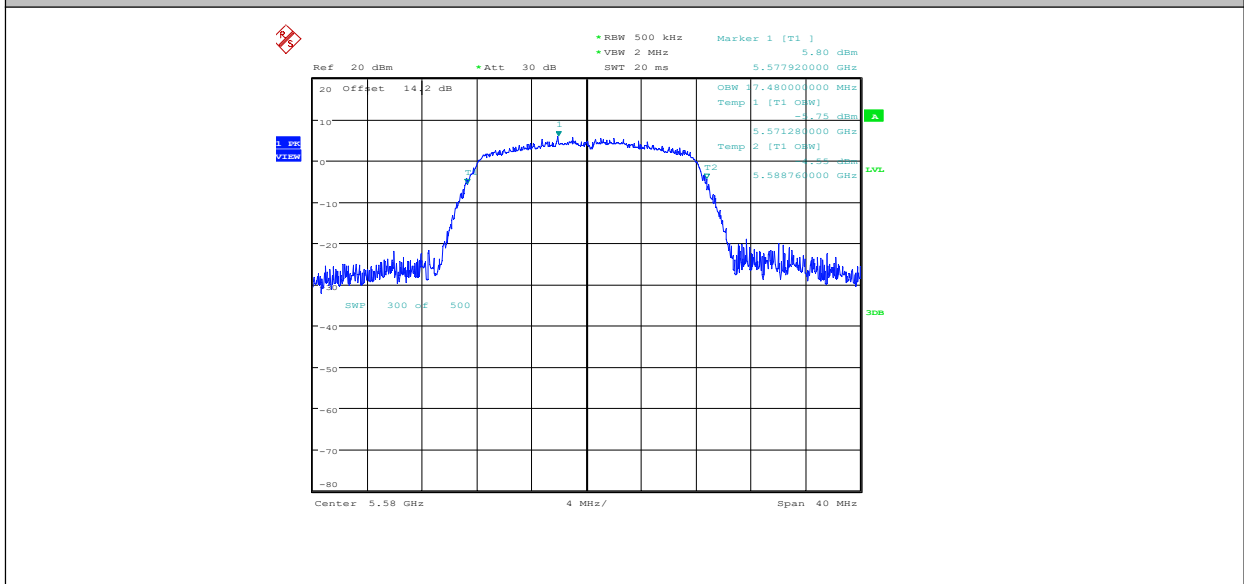
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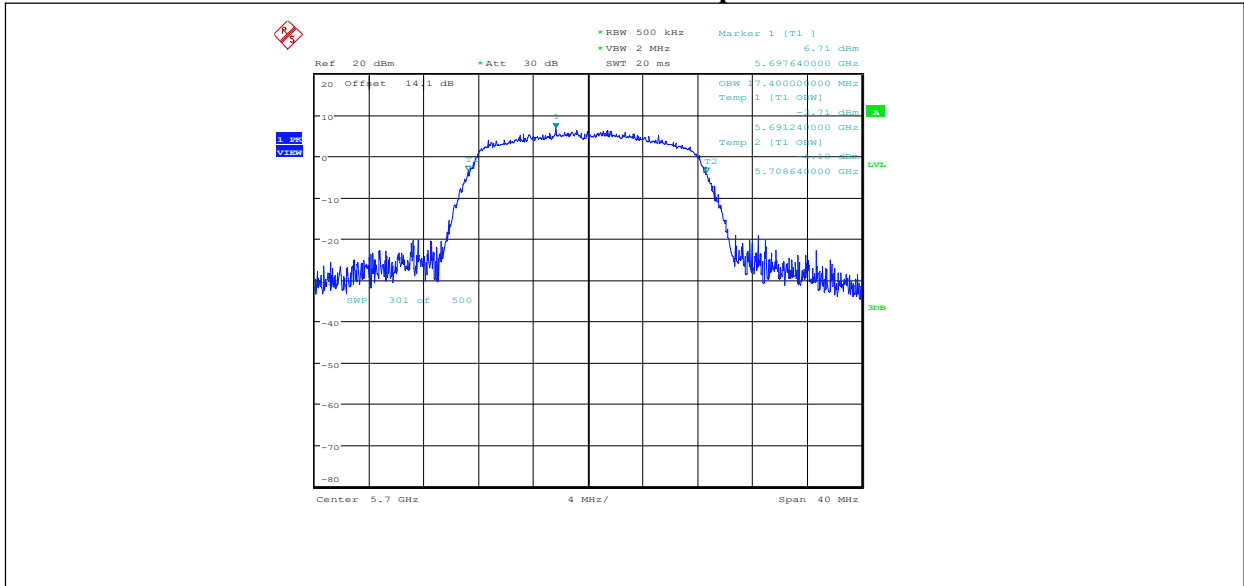


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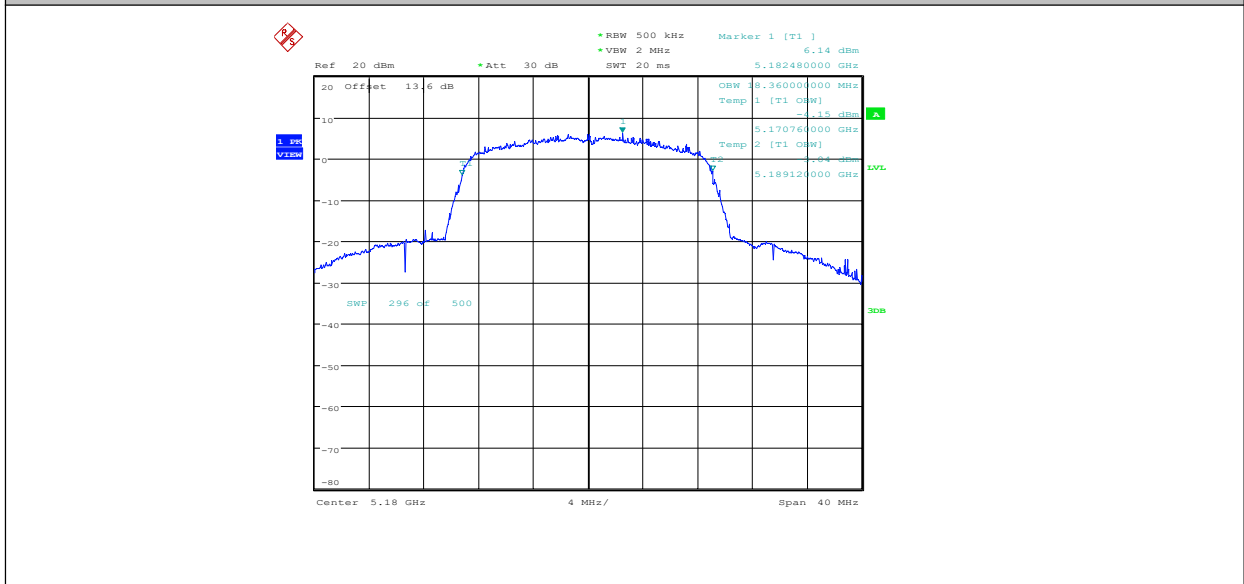


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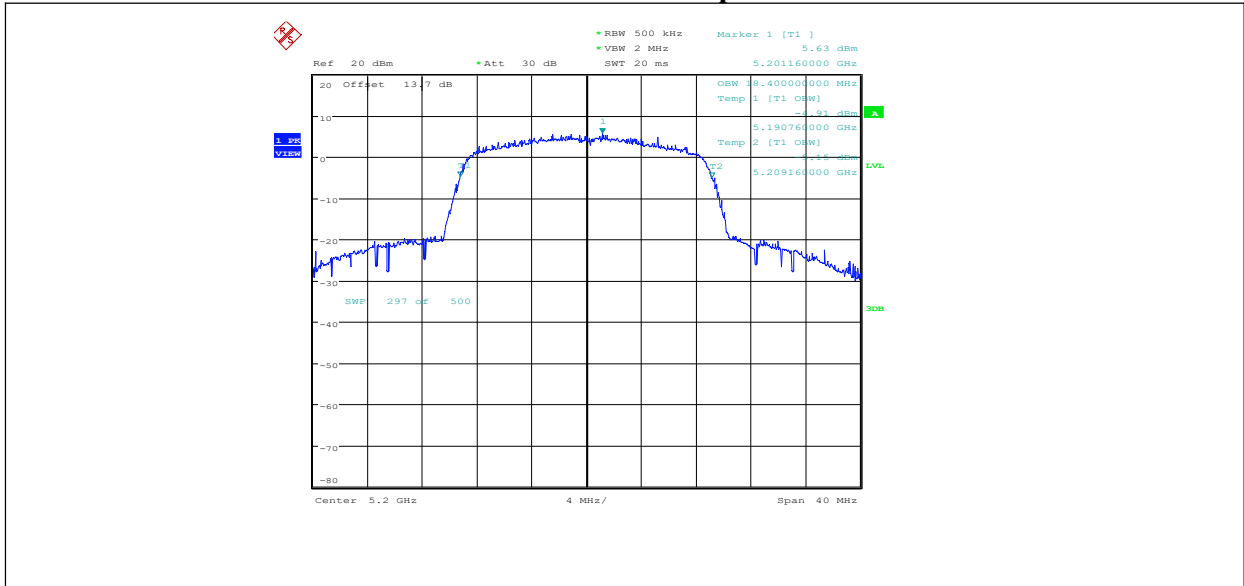




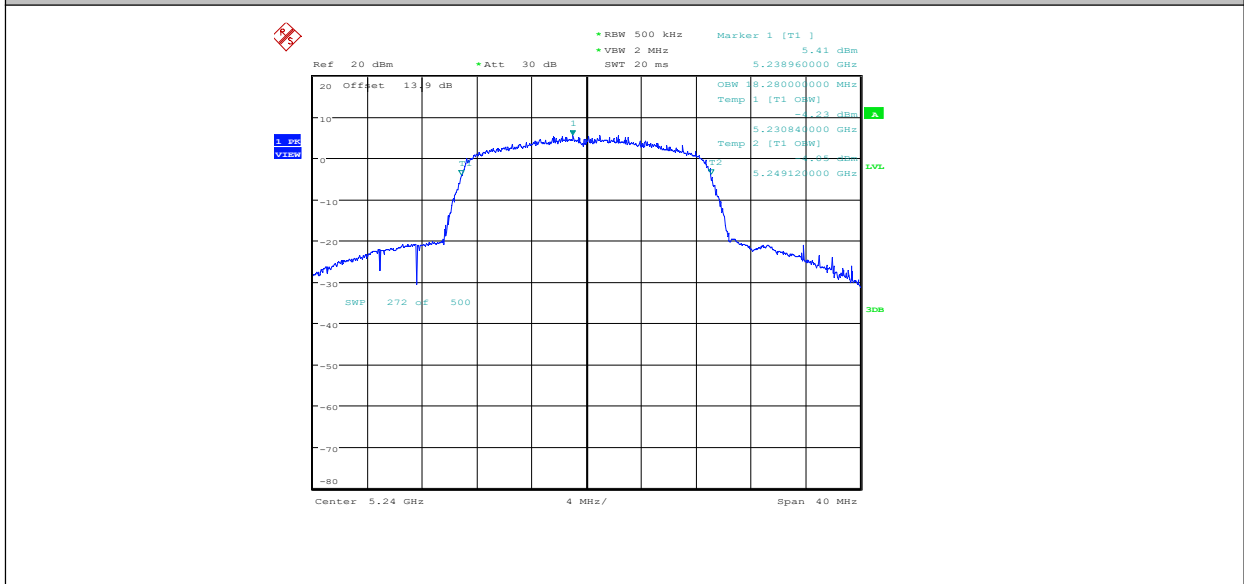
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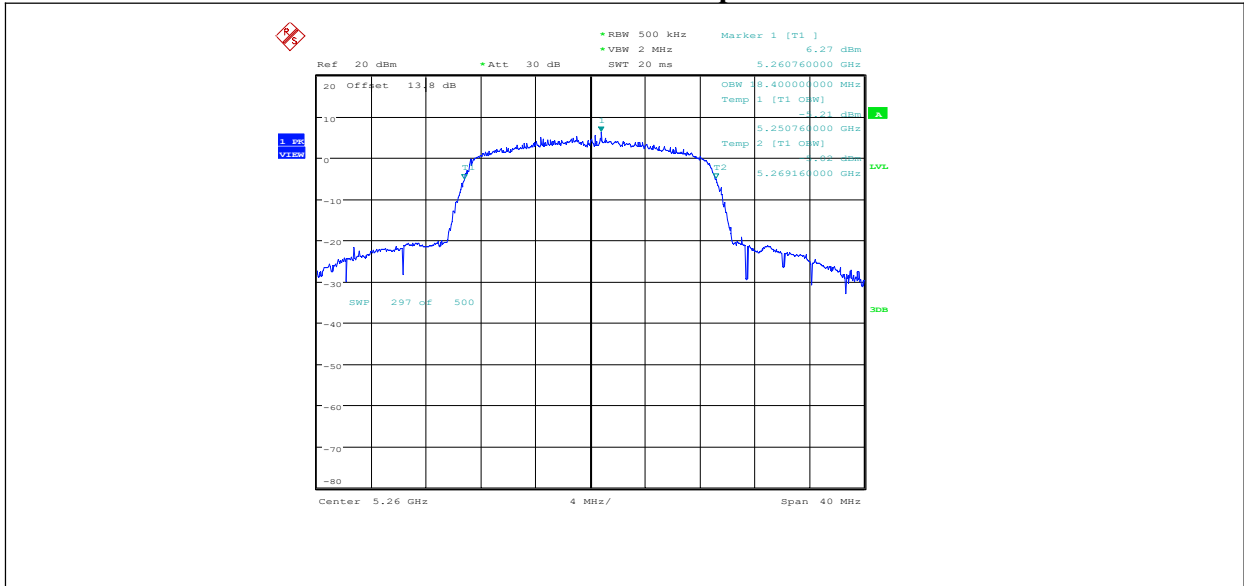
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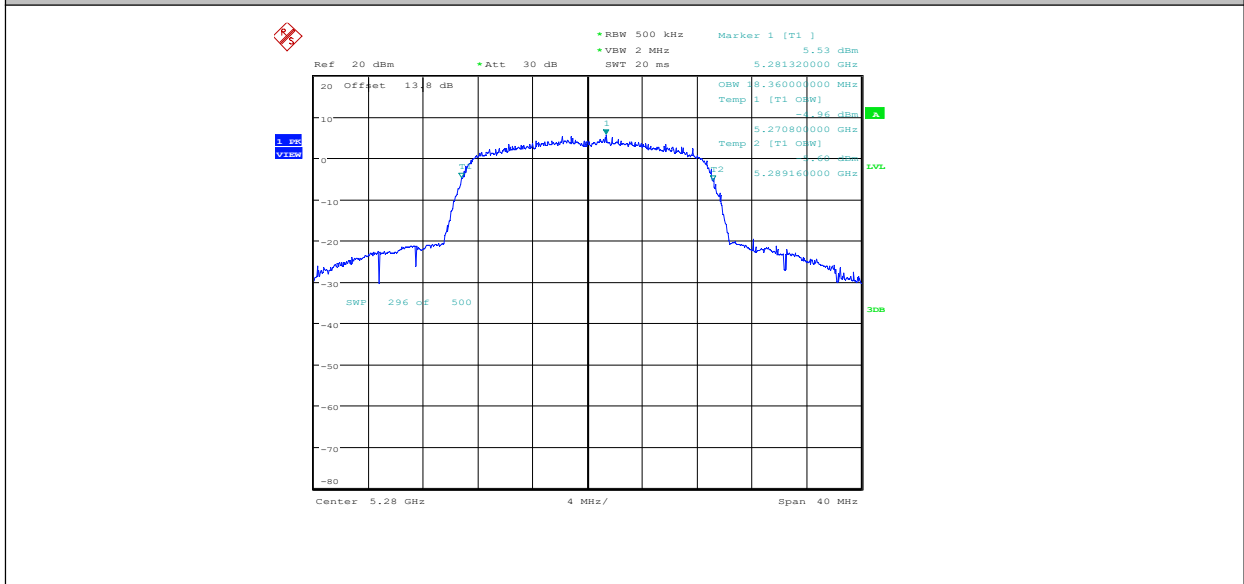
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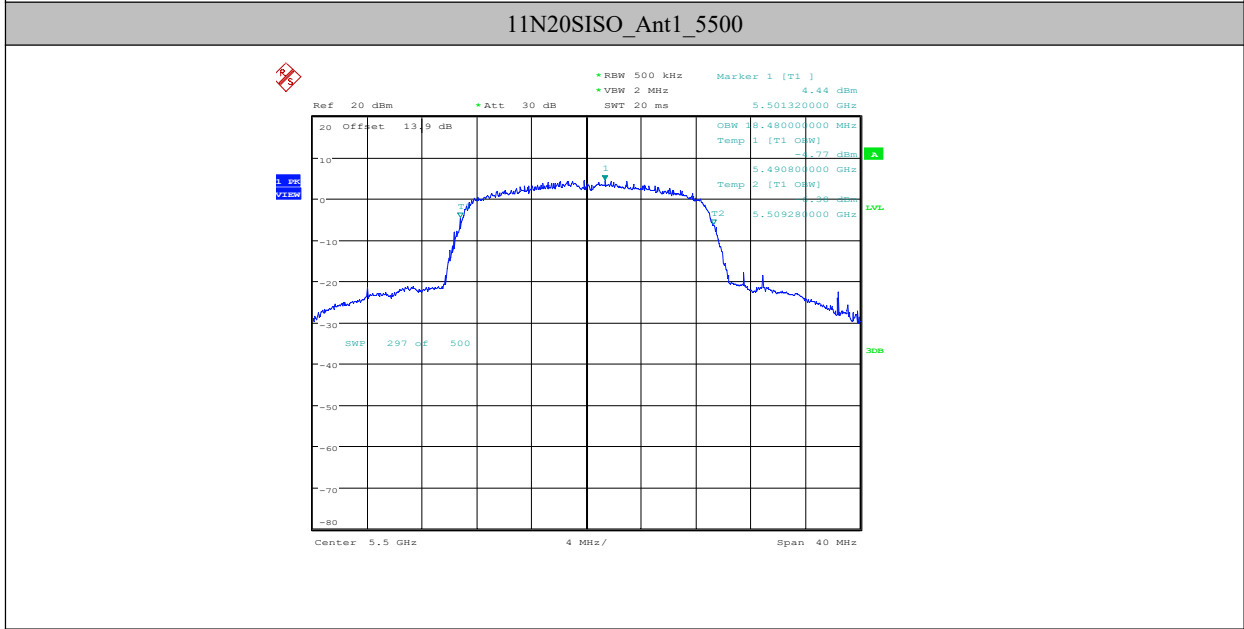
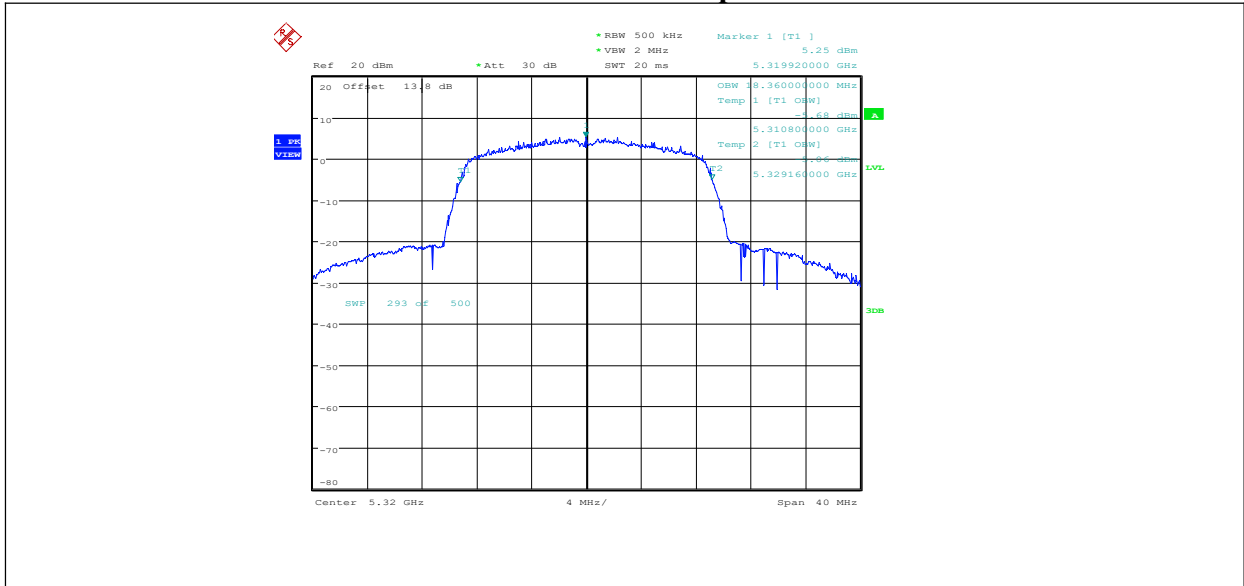
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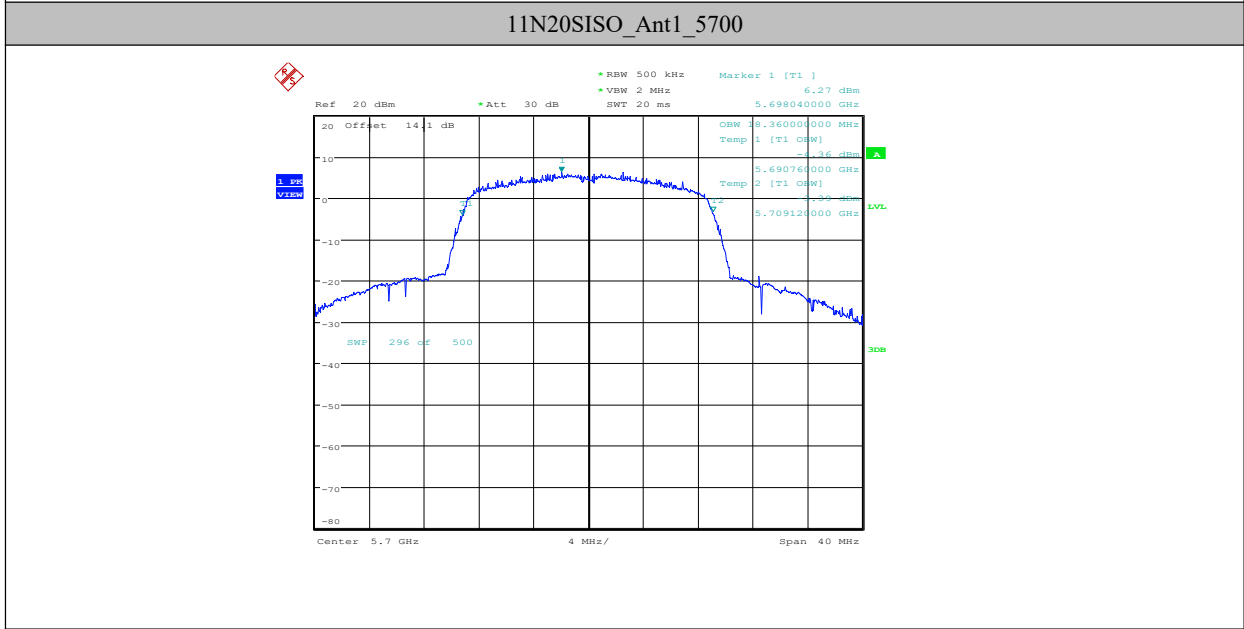
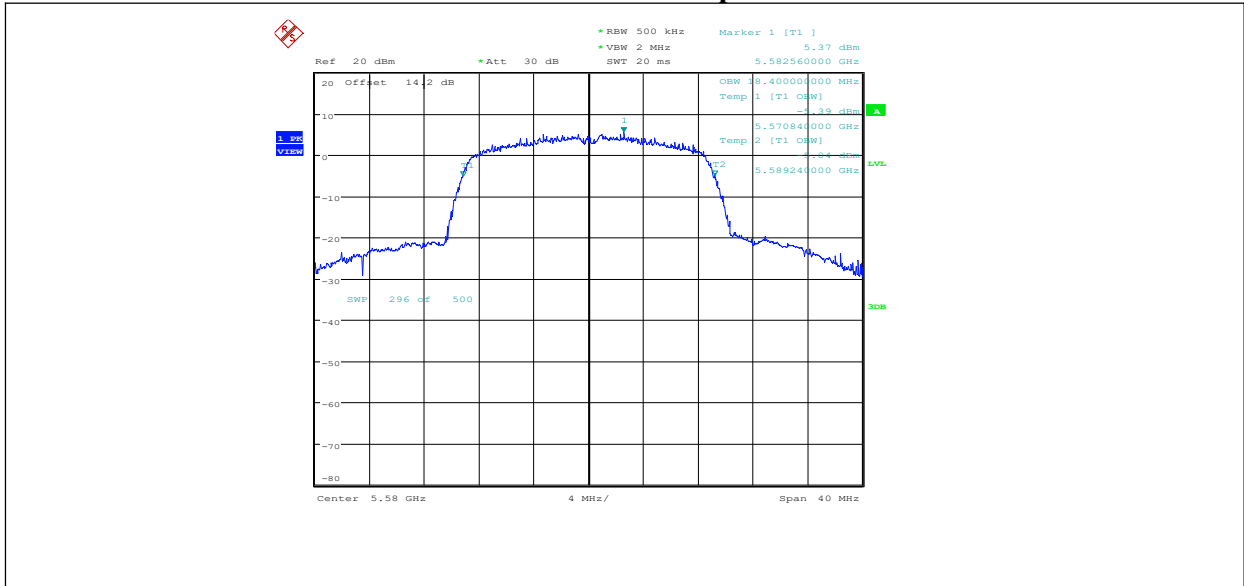


11N20SISO\_Ant1\_5280



11N20SISO\_Ant1\_5320

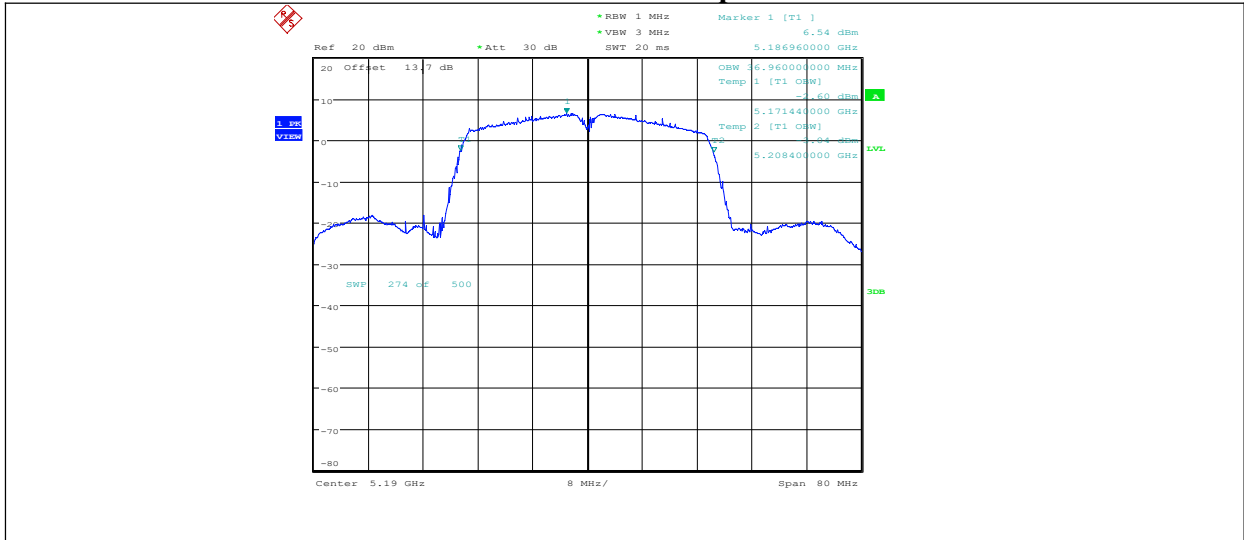




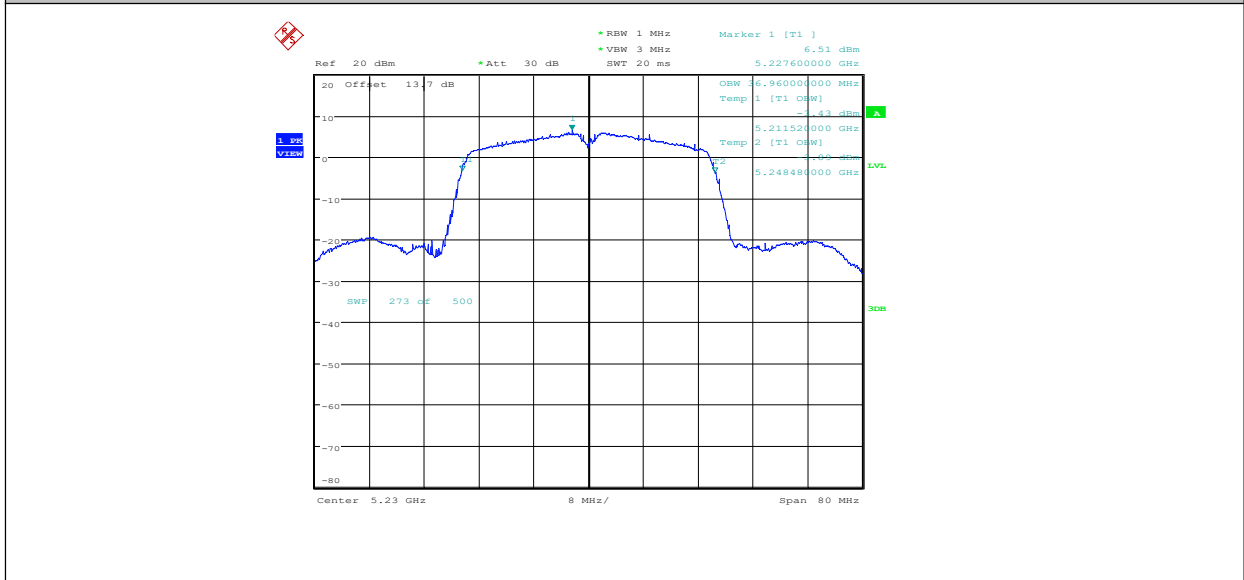
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### Report No.: 123W00020-WIFI 5G RF



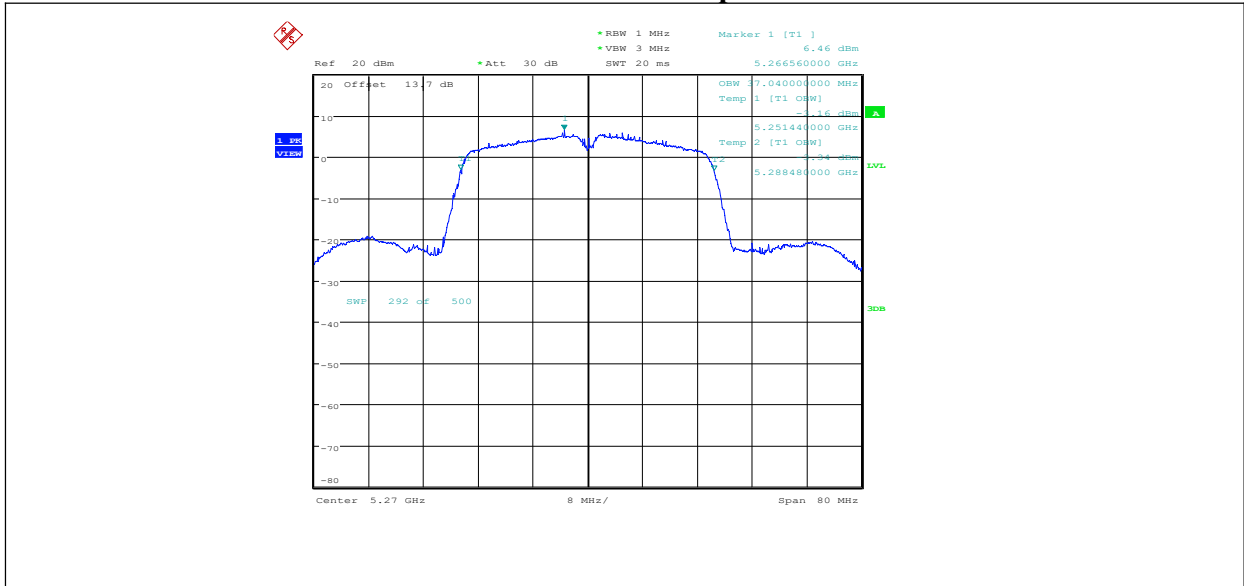
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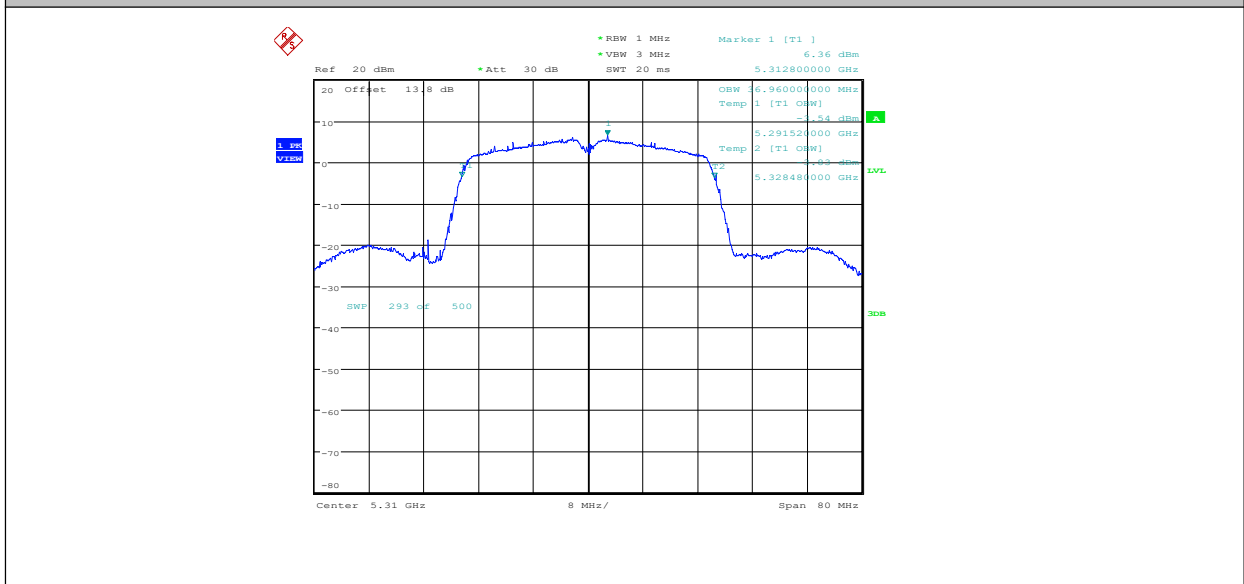
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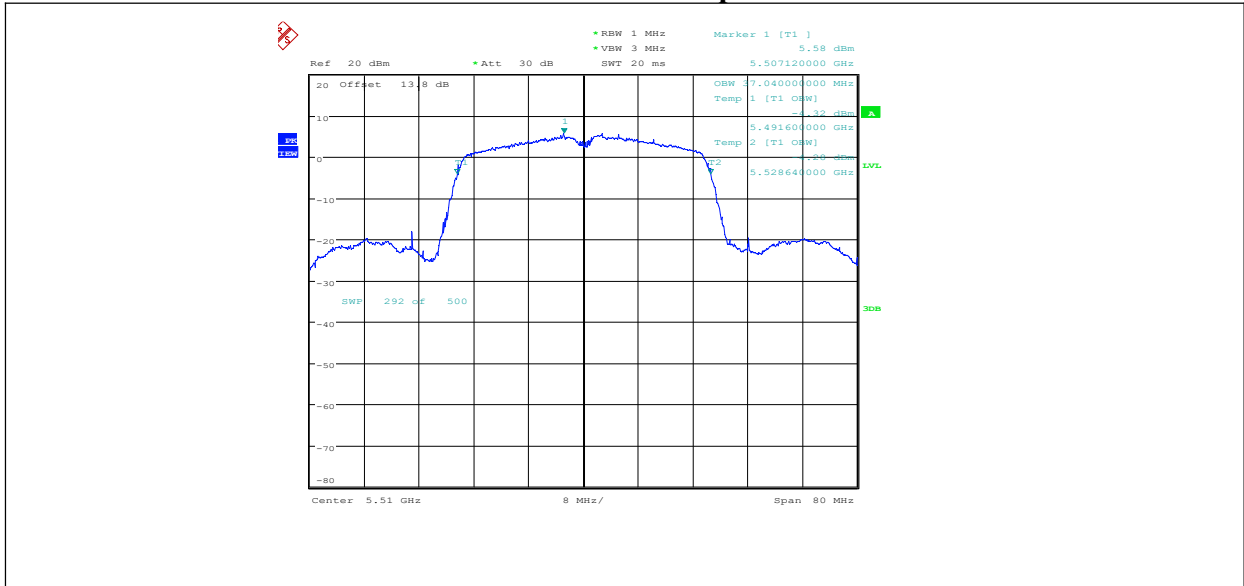
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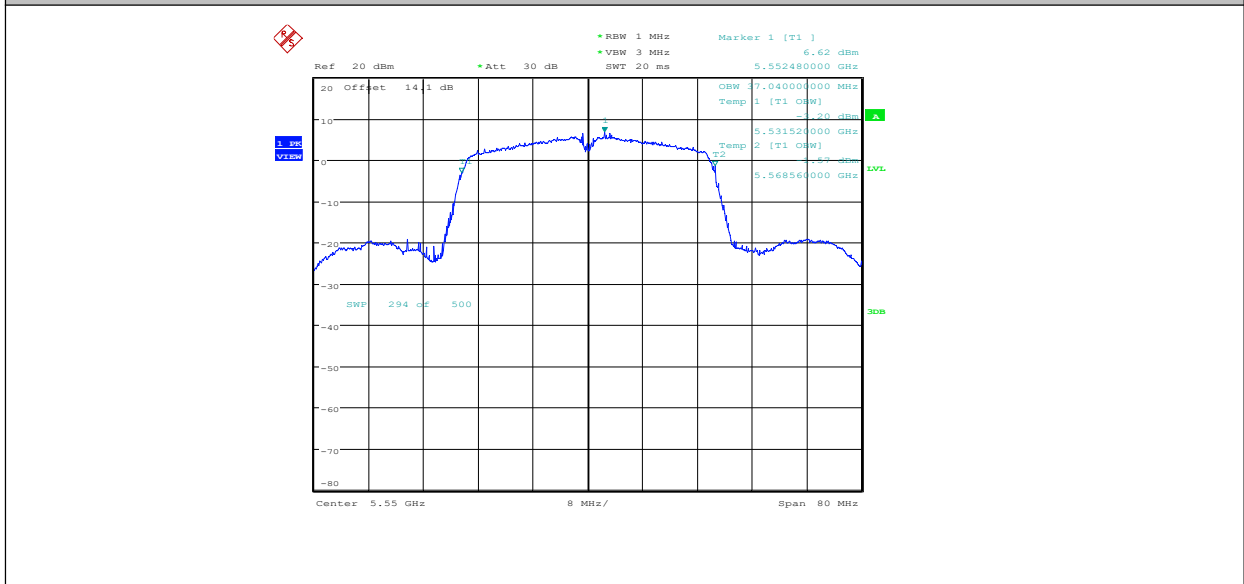
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11N40SISO\_Ant1\_5510

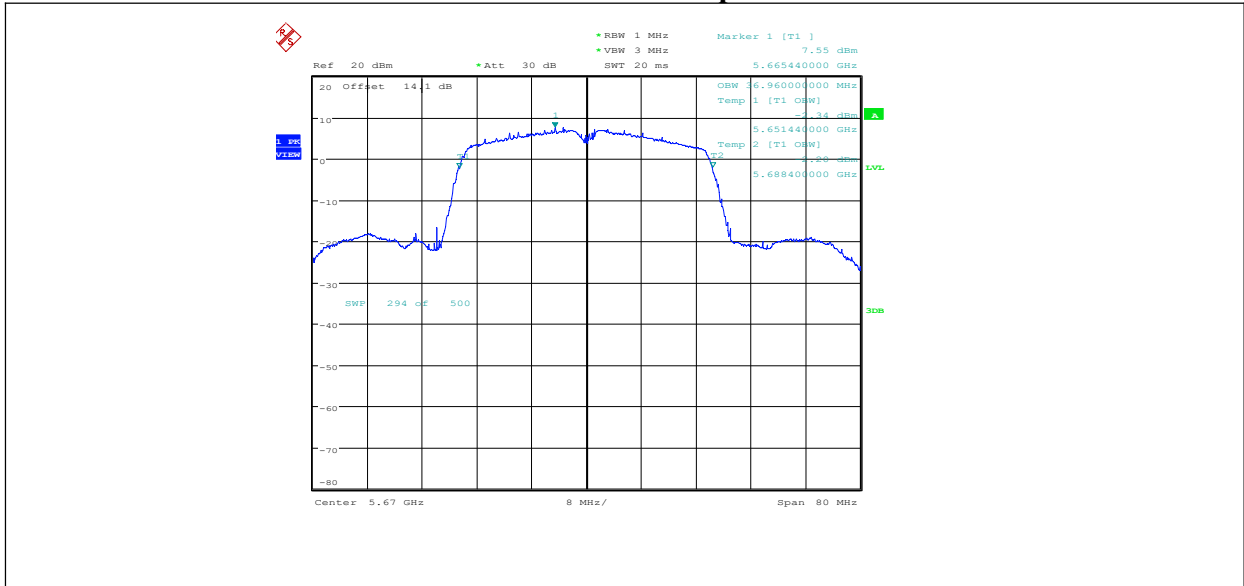


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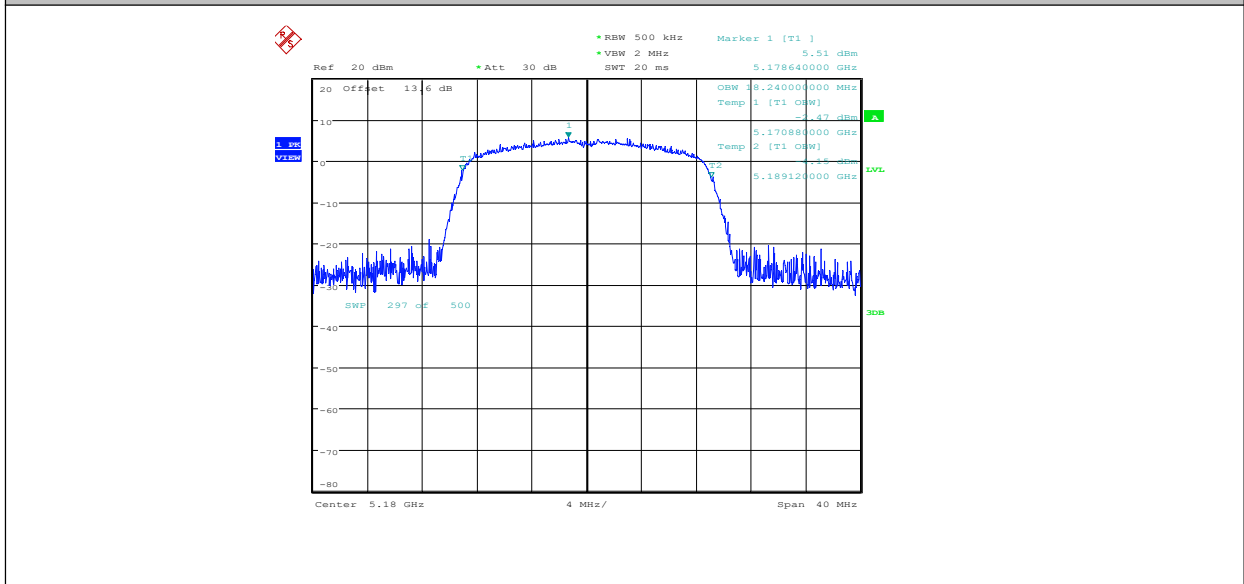


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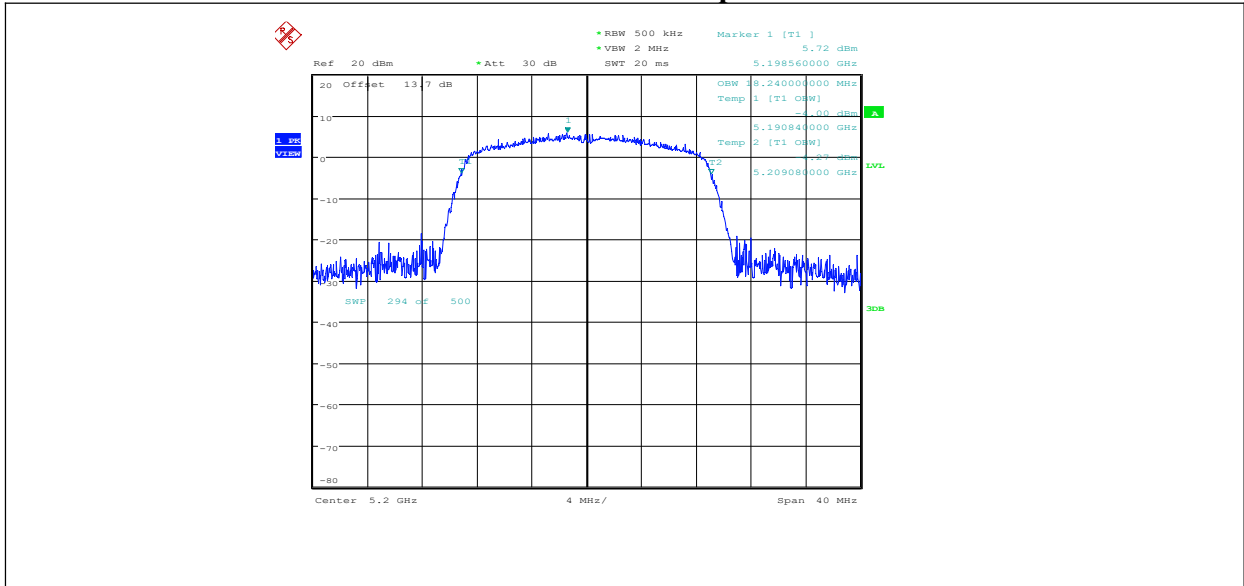




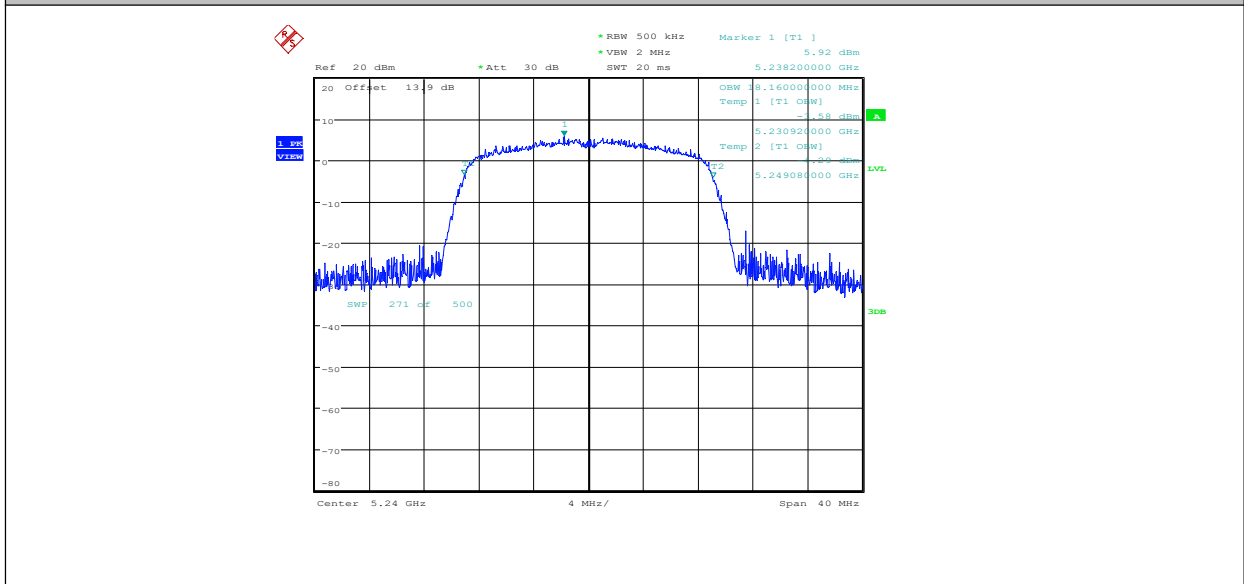
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11AC20SISO\_Ant1\_5200



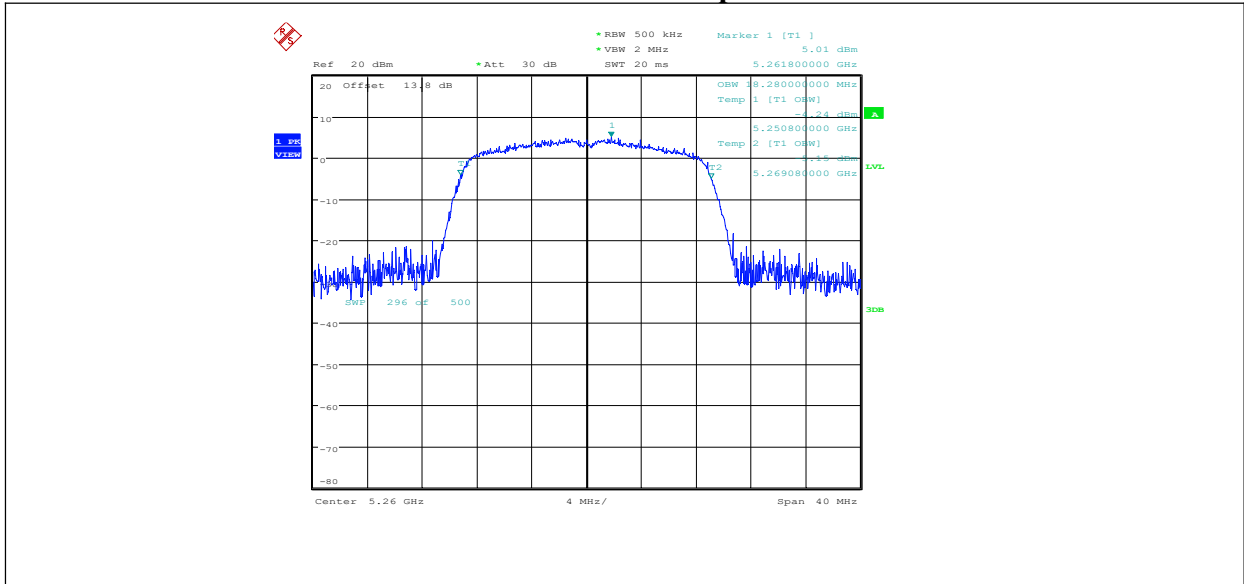
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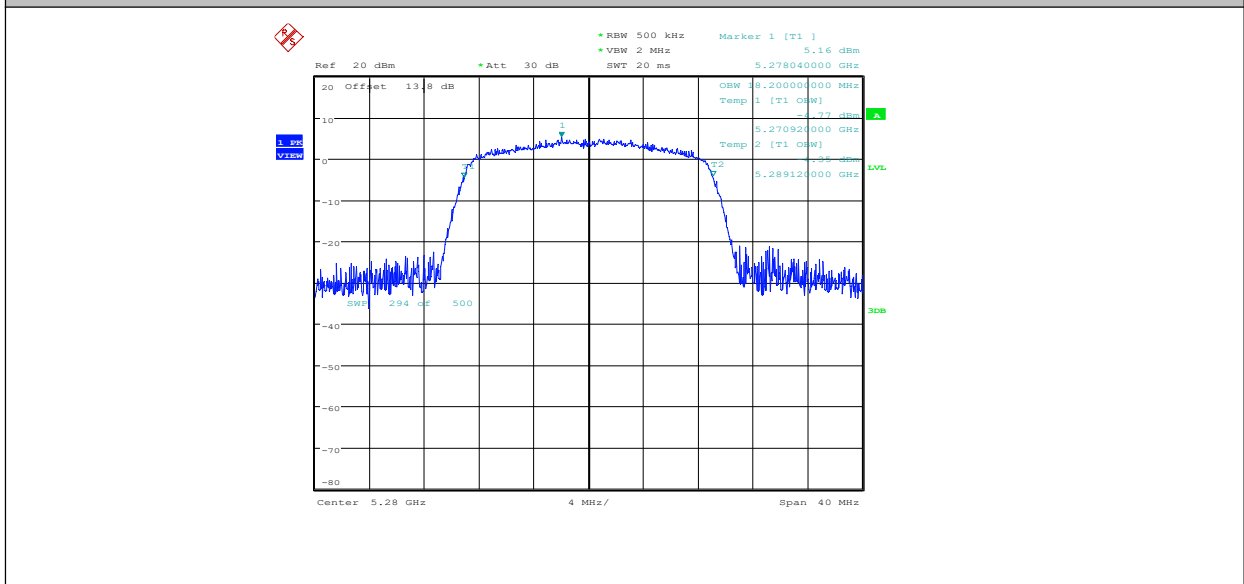
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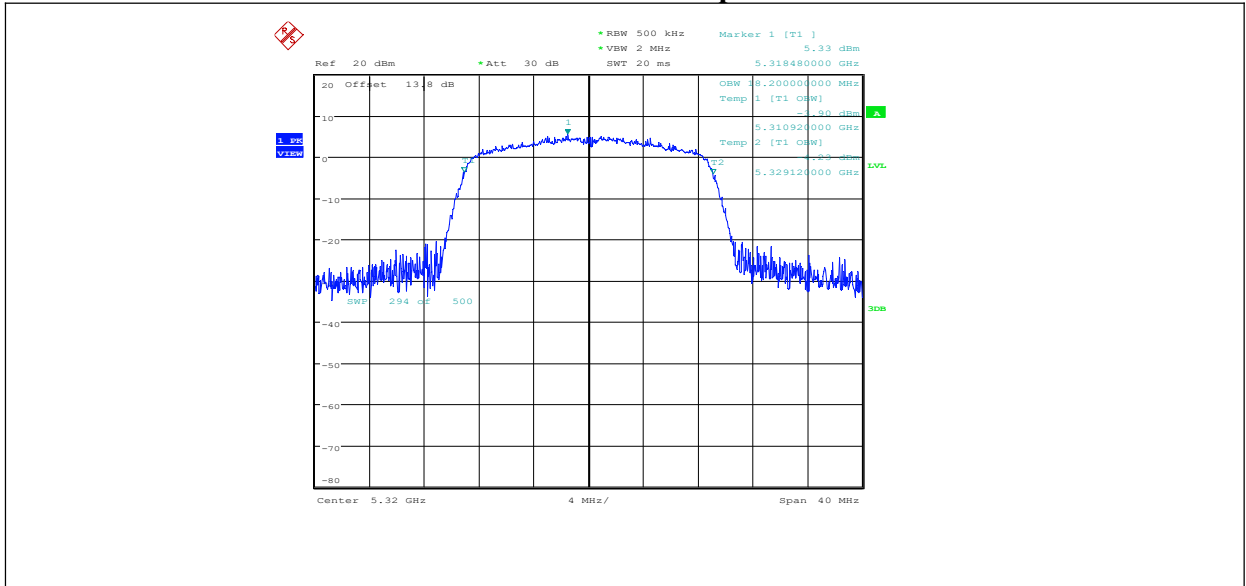
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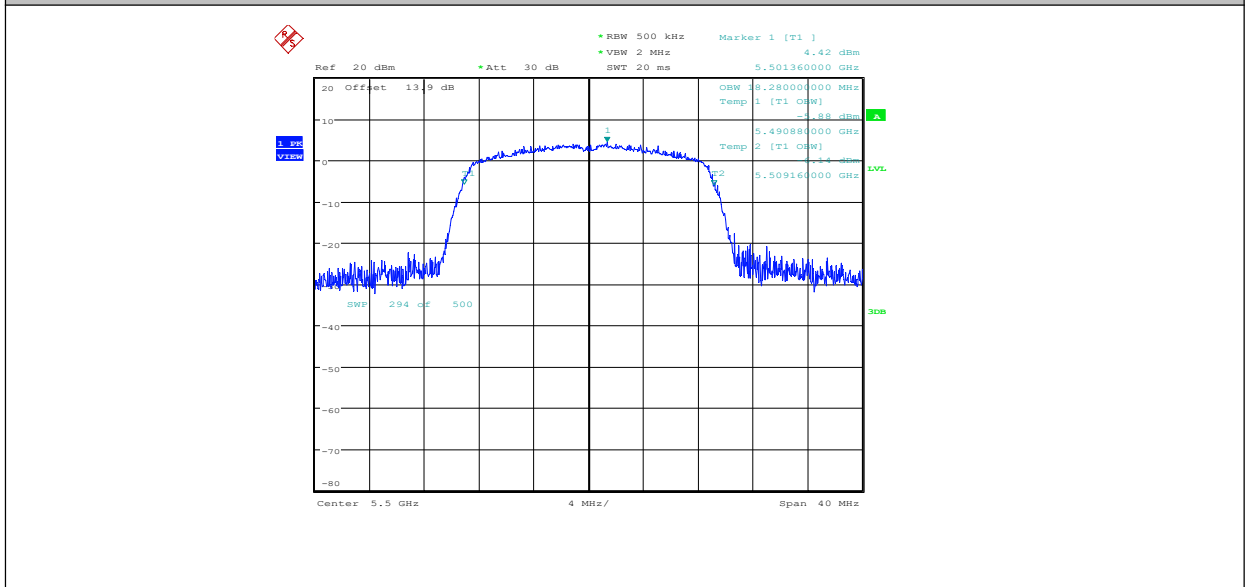
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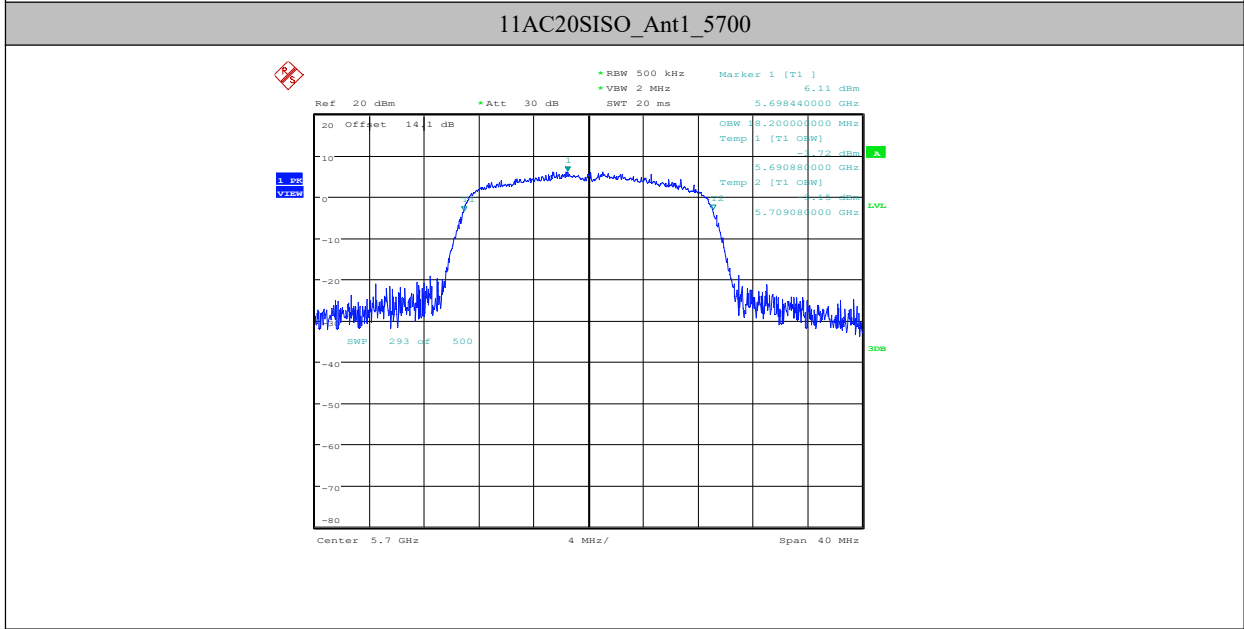
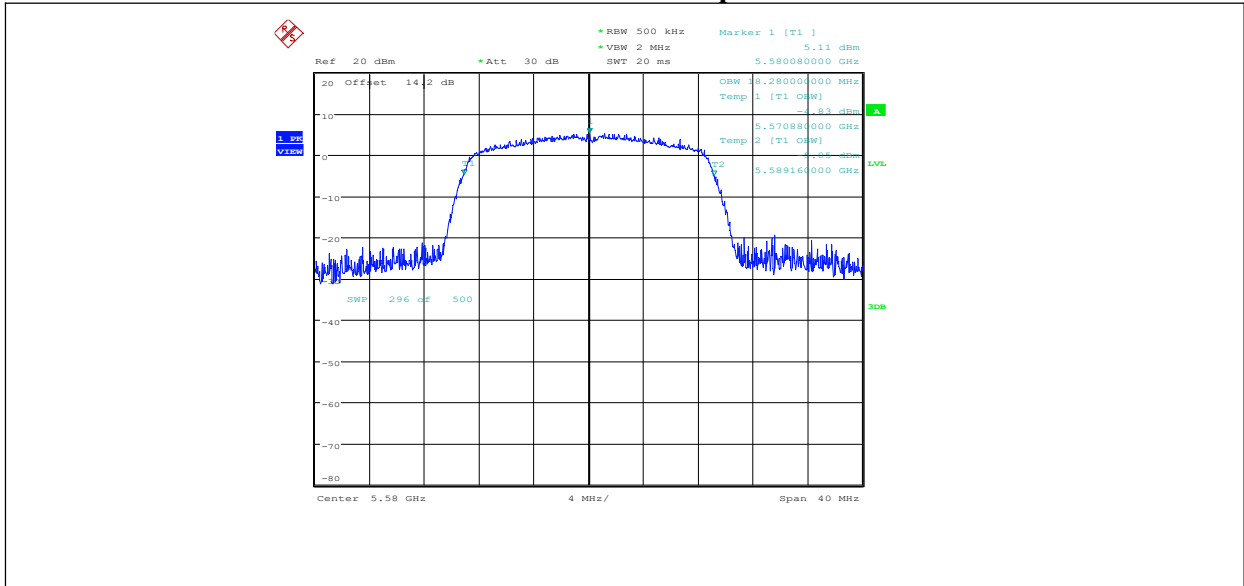
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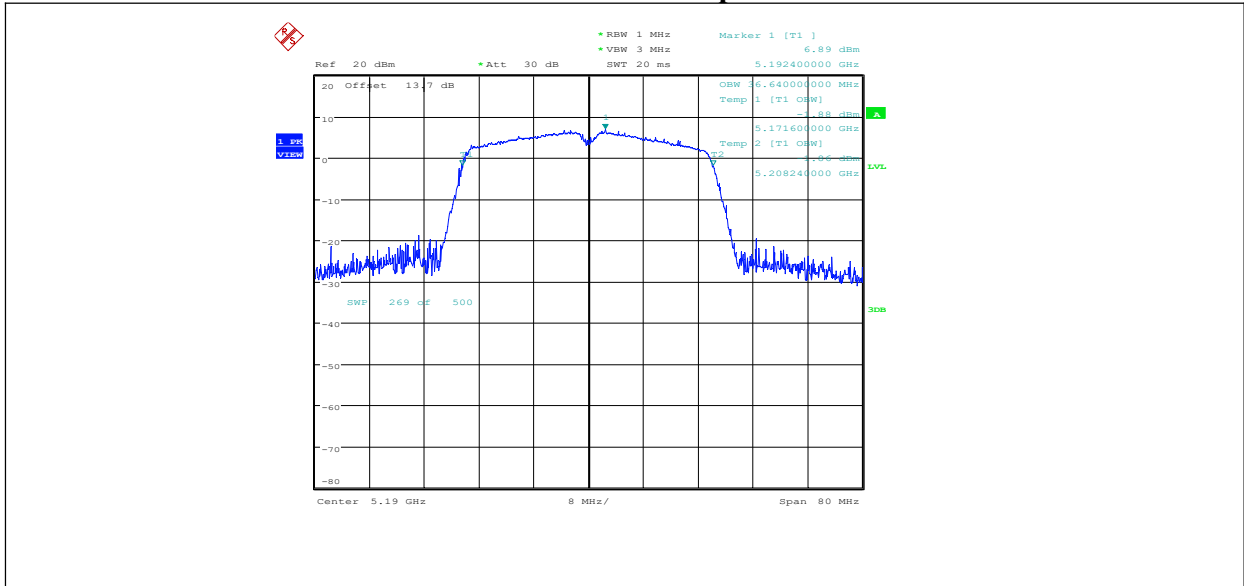


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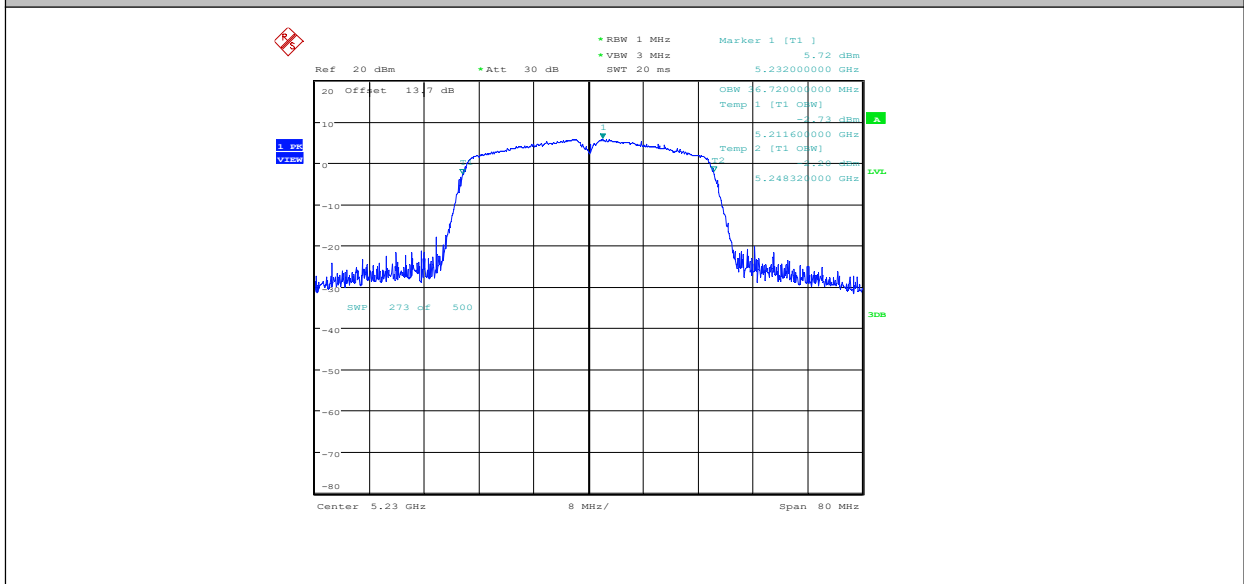


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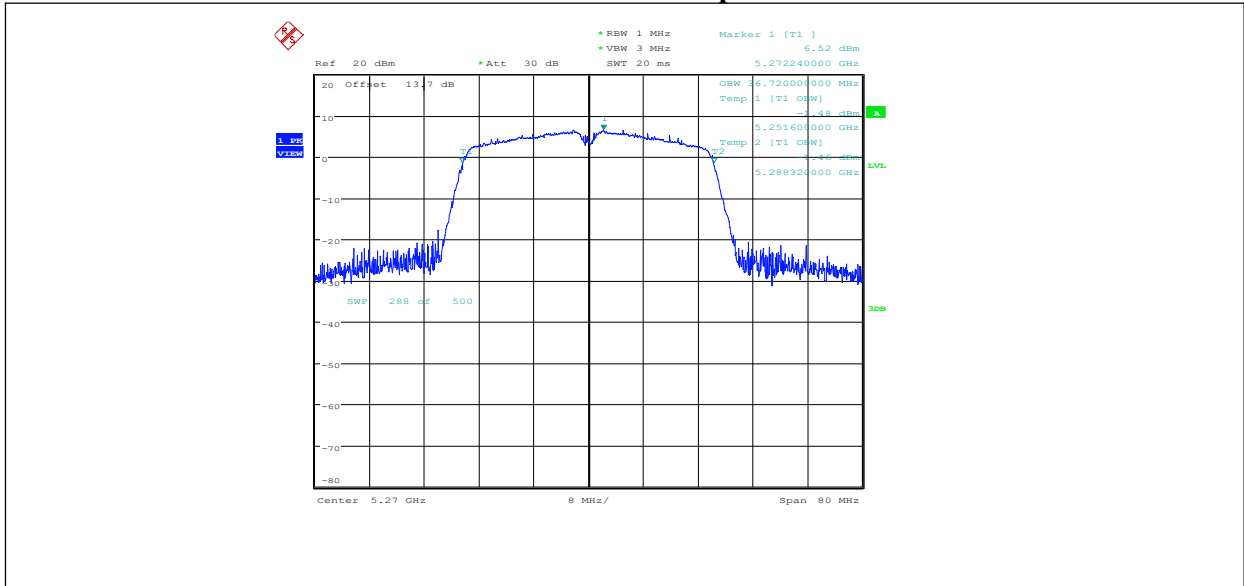




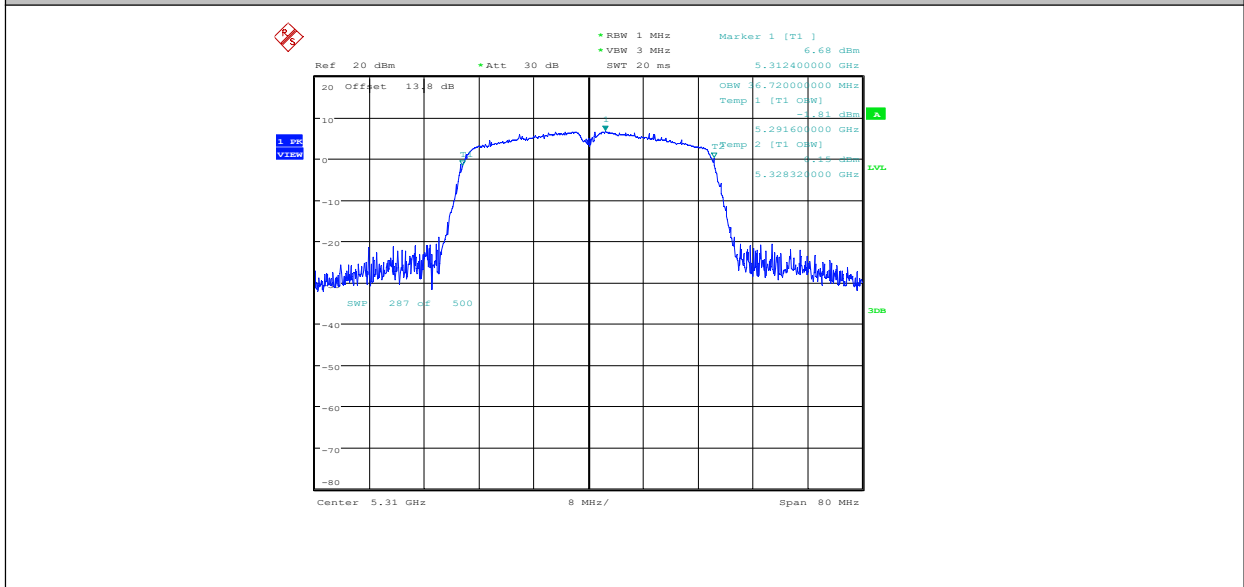
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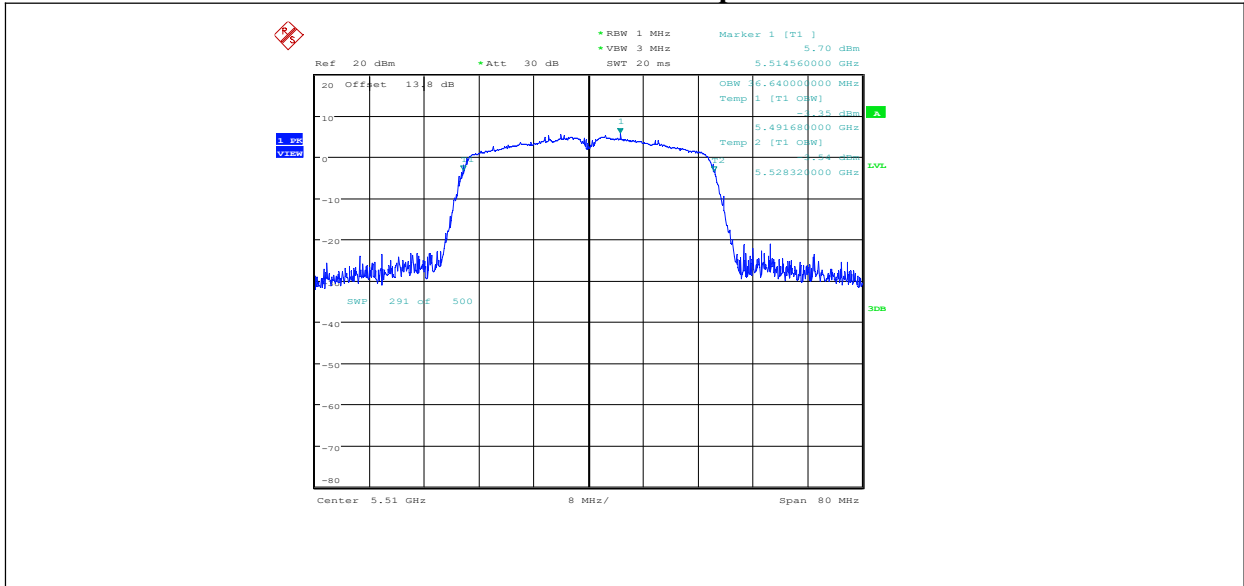
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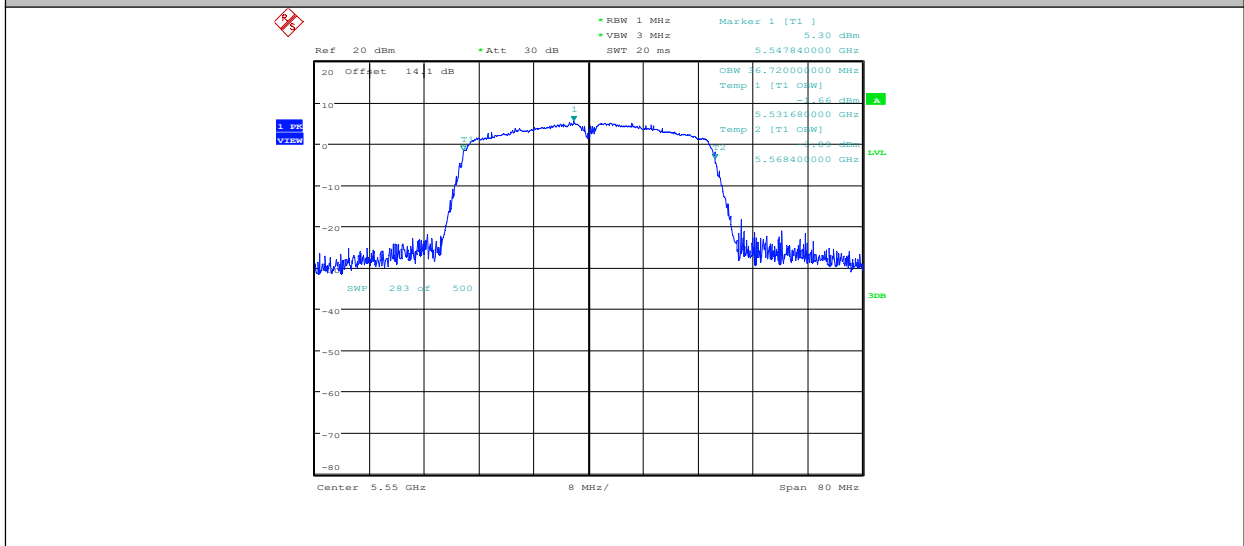
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11AC40SISO\_Ant1\_5510

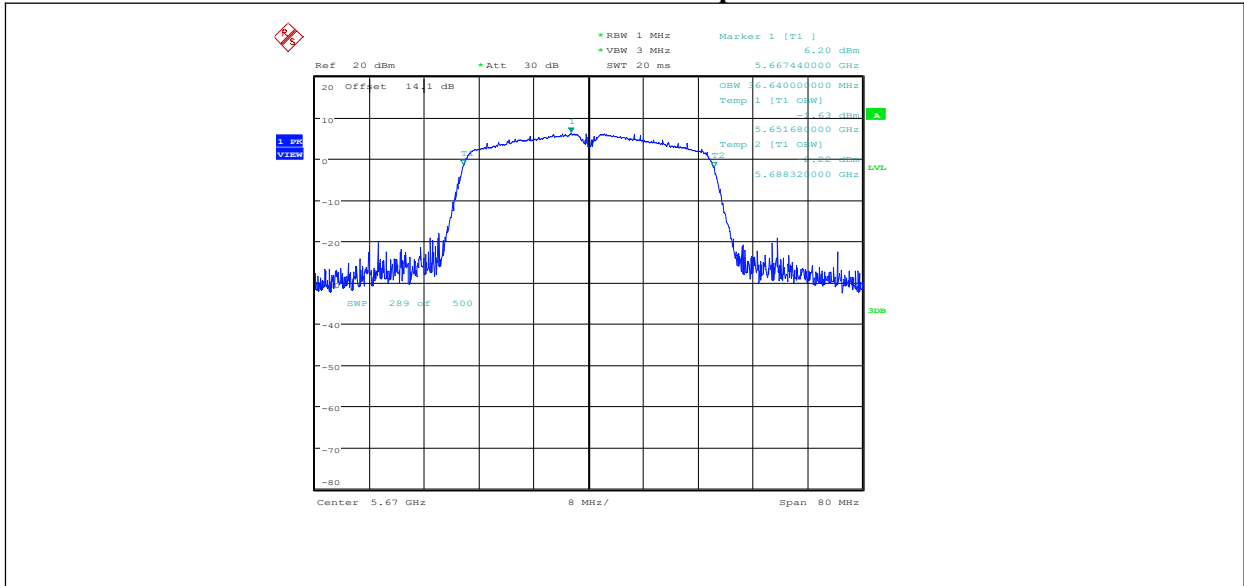


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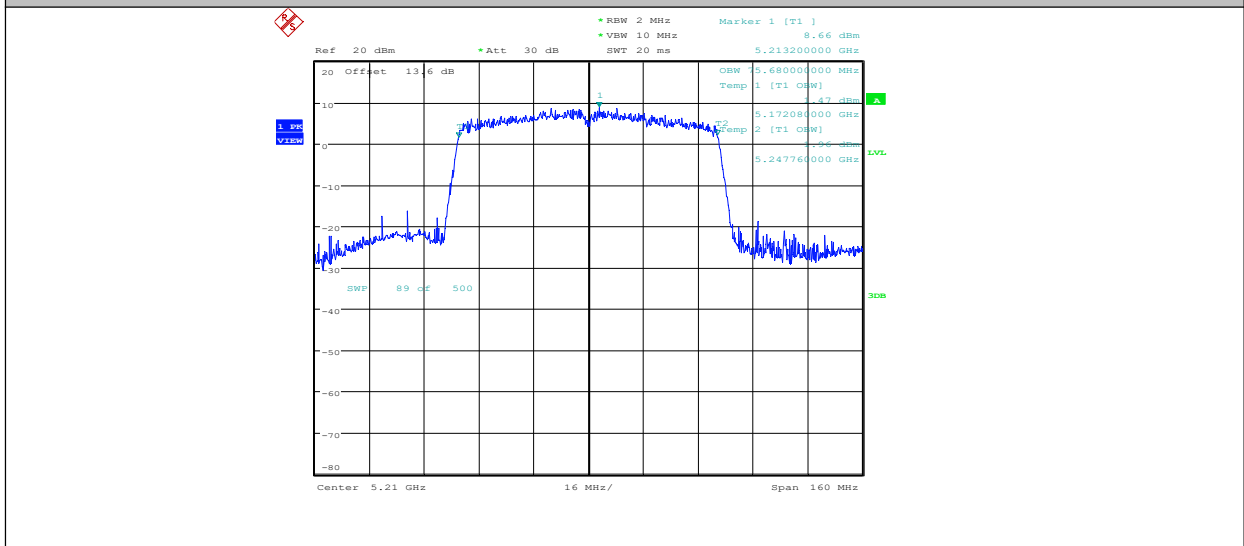


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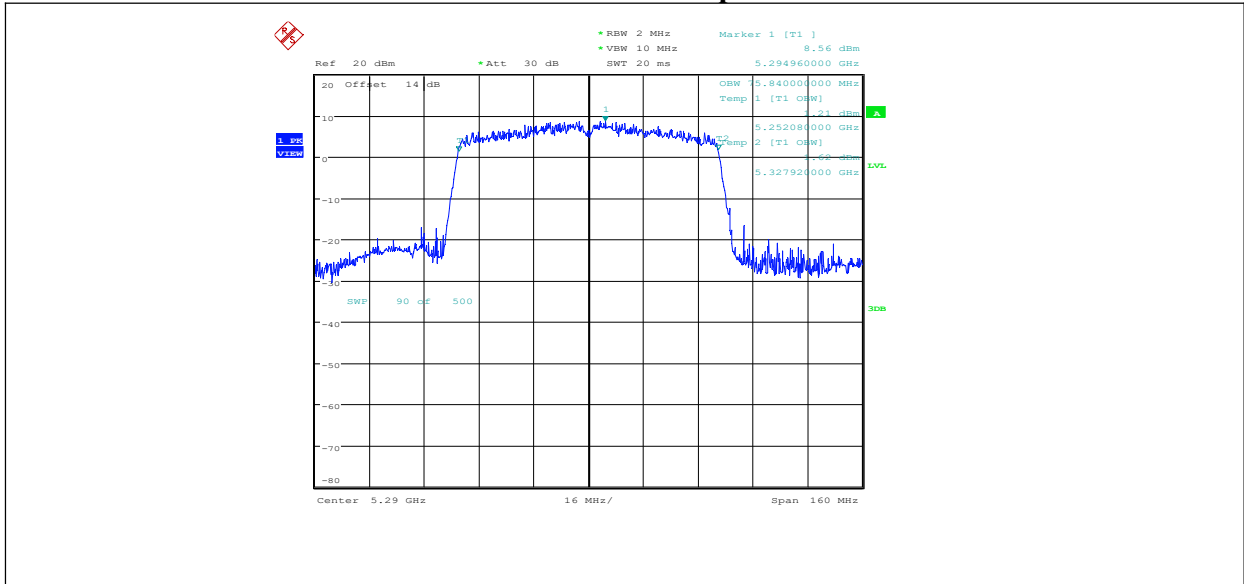




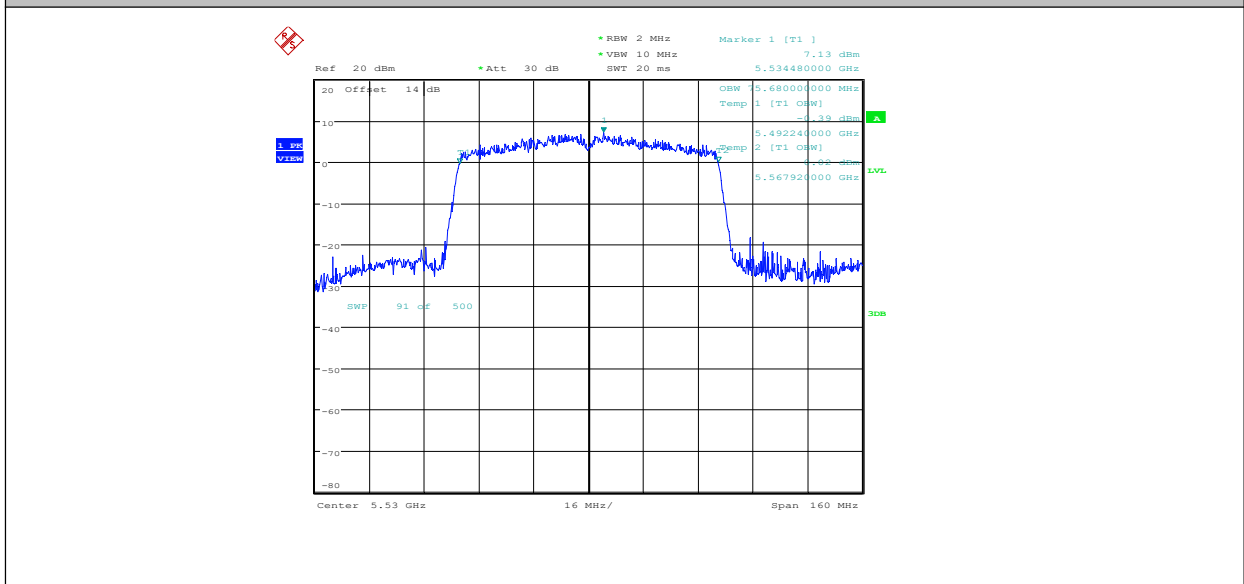
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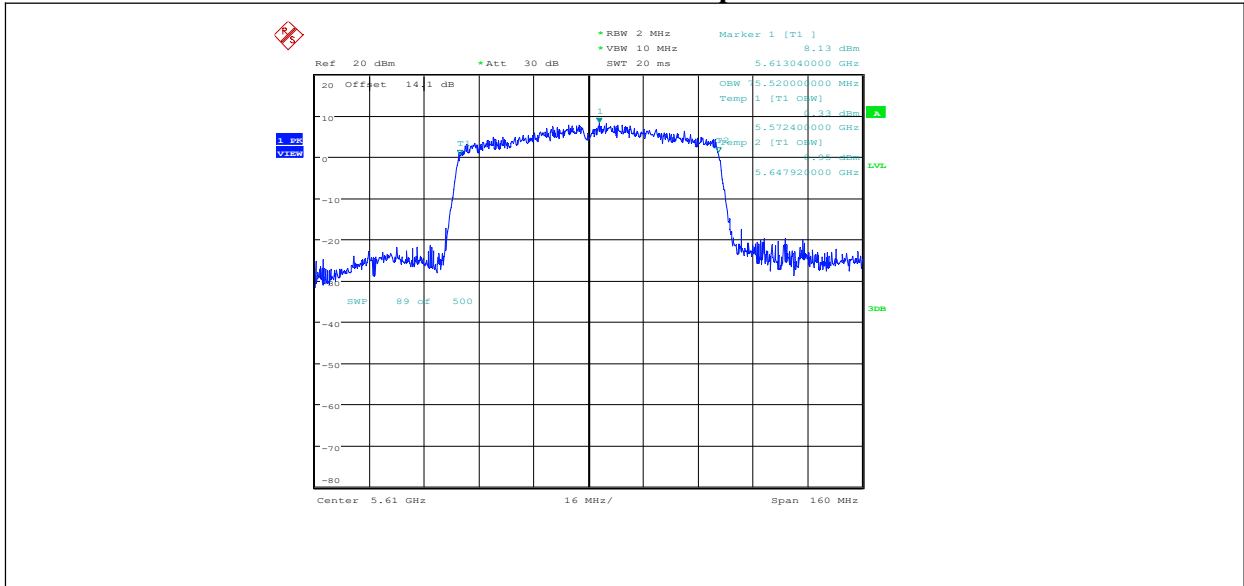
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11AC80SISO\_Ant1\_5530



11AC80SISO\_Ant1\_5610



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### 6.6 Occupied 26dB Bandwidth

|                           |  |
|---------------------------|--|
| <b>Specifications:</b>    | FCC 47 CFR Part 15.407(a)  |
| <b>DUT Serial Number:</b> | S4   |
| <b>Test conditions:</b>   | Ambient Temperature:20°C<br>Relative Humidity:40%<br>Air pressure: 90kPa |
| <b>Test Results:</b>      | Pass   |

#### Measurement Limit and Method

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

#### Measurement Uncertainty:

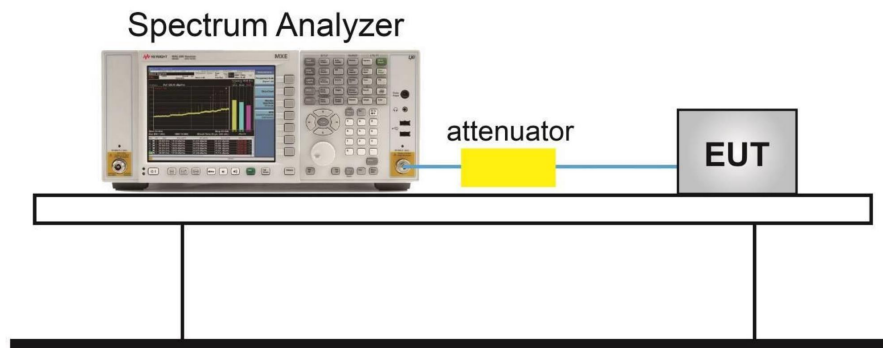
|                         |       |
|-------------------------|-------|
| Measurement Uncertainty | 20kHz |
|-------------------------|-------|

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%.

#### Test Setup



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Test Result

| TestMode   | Antenna | Frequency[MHz] | 26db EBW [MHz] | FL[MHz] | FH[MHz] | Limit[MHz] | Verdict |
|------------|---------|----------------|----------------|---------|---------|------------|---------|
| 11A        | Ant1    | 5180           | 20.20          | 5169.92 | 5190.12 | ---        | ---     |
|            |         | 5200           | 20.04          | 5189.92 | 5209.96 | ---        | ---     |
|            |         | 5240           | 20.04          | 5230.00 | 5250.04 | ---        | ---     |
|            |         | 5260           | 20.08          | 5249.92 | 5270.00 | ---        | ---     |
|            |         | 5280           | 20.04          | 5269.96 | 5290.00 | ---        | ---     |
|            |         | 5320           | 20.20          | 5309.88 | 5330.08 | ---        | ---     |
|            |         | 5500           | 20.40          | 5489.96 | 5510.36 | ---        | ---     |
|            |         | 5580           | 20.24          | 5569.92 | 5590.16 | ---        | ---     |
|            |         | 5700           | 20.08          | 5689.92 | 5710.00 | ---        | ---     |
| 11N20SISO  | Ant1    | 5180           | 20.32          | 5169.84 | 5190.16 | ---        | ---     |
|            |         | 5200           | 20.32          | 5189.80 | 5210.12 | ---        | ---     |
|            |         | 5240           | 20.32          | 5229.84 | 5250.16 | ---        | ---     |
|            |         | 5260           | 20.36          | 5249.76 | 5270.12 | ---        | ---     |
|            |         | 5280           | 20.36          | 5269.84 | 5290.20 | ---        | ---     |
|            |         | 5320           | 20.40          | 5309.76 | 5330.16 | ---        | ---     |
|            |         | 5500           | 20.52          | 5489.80 | 5510.32 | ---        | ---     |
|            |         | 5580           | 20.44          | 5569.84 | 5590.28 | ---        | ---     |
|            |         | 5700           | 20.48          | 5689.76 | 5710.24 | ---        | ---     |
| 11N40SISO  | Ant1    | 5190           | 40.96          | 5169.44 | 5210.40 | ---        | ---     |
|            |         | 5230           | 41.20          | 5209.44 | 5250.64 | ---        | ---     |
|            |         | 5270           | 41.44          | 5249.36 | 5290.80 | ---        | ---     |
|            |         | 5310           | 40.96          | 5289.44 | 5330.40 | ---        | ---     |
|            |         | 5510           | 41.12          | 5489.44 | 5530.56 | ---        | ---     |
|            |         | 5550           | 41.36          | 5529.36 | 5570.72 | ---        | ---     |
|            |         | 5670           | 41.04          | 5649.52 | 5690.56 | ---        | ---     |
| 11AC20SISO | Ant1    | 5180           | 20.44          | 5169.80 | 5190.24 | ---        | ---     |
|            |         | 5200           | 20.48          | 5189.68 | 5210.16 | ---        | ---     |
|            |         | 5240           | 20.56          | 5229.72 | 5250.28 | ---        | ---     |
|            |         | 5260           | 20.68          | 5249.64 | 5270.32 | ---        | ---     |
|            |         | 5280           | 20.40          | 5269.76 | 5290.16 | ---        | ---     |
|            |         | 5320           | 20.40          | 5309.84 | 5330.24 | ---        | ---     |
|            |         | 5500           | 20.44          | 5489.80 | 5510.24 | ---        | ---     |
|            |         | 5580           | 20.52          | 5569.76 | 5590.28 | ---        | ---     |
|            |         | 5700           | 20.44          | 5689.76 | 5710.20 | ---        | ---     |
| 11AC40SISO | Ant1    | 5190           | 41.20          | 5169.36 | 5210.56 | ---        | ---     |
|            |         | 5230           | 41.12          | 5209.44 | 5250.56 | ---        | ---     |
|            |         | 5270           | 41.44          | 5249.20 | 5290.64 | ---        | ---     |
|            |         | 5310           | 43.36          | 5289.52 | 5332.88 | ---        | ---     |

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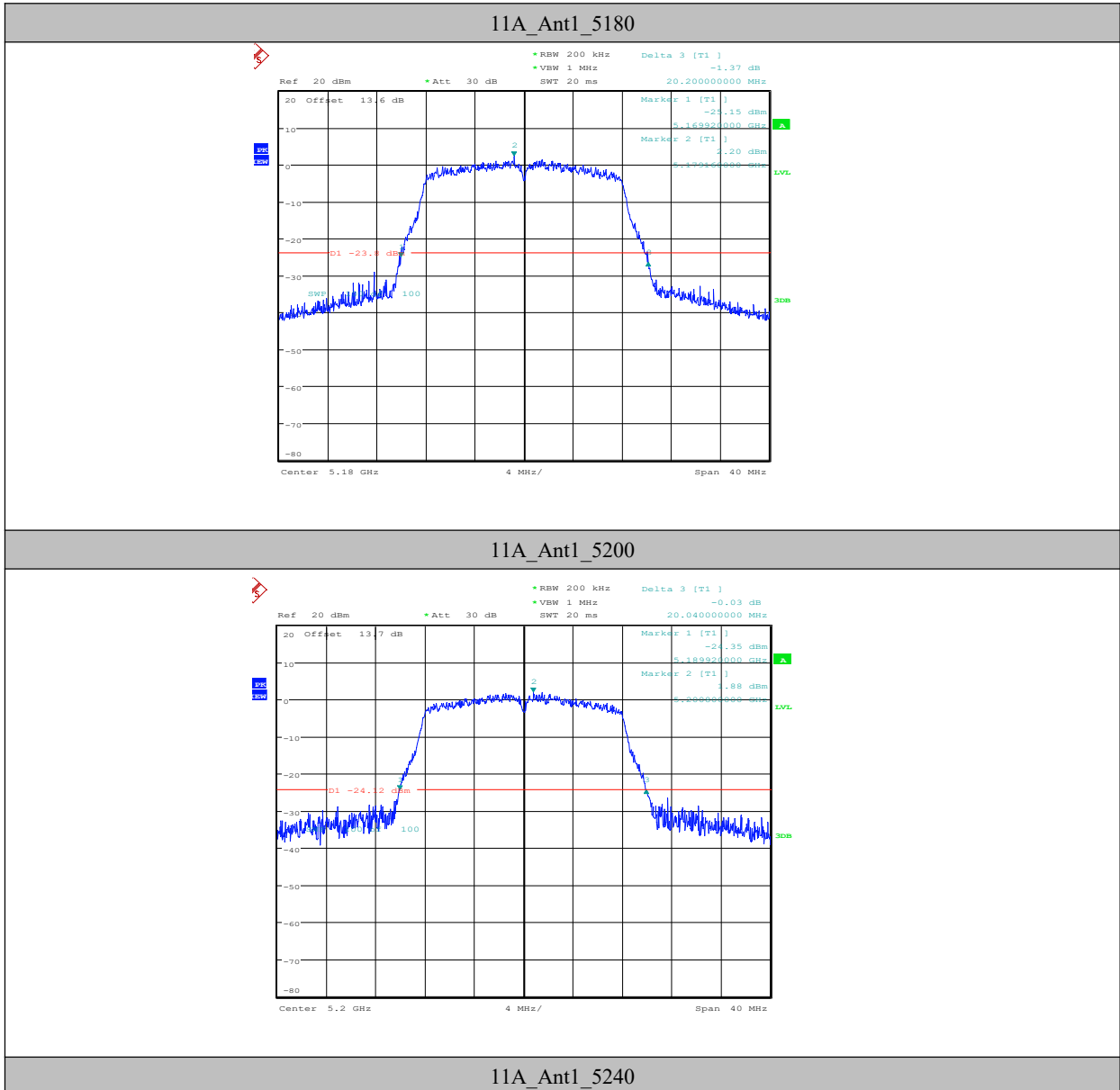
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|            |      |      |       |         |         |     |     |
|------------|------|------|-------|---------|---------|-----|-----|
|            |      | 5510 | 45.36 | 5489.20 | 5534.56 | --- | --- |
|            |      | 5550 | 41.04 | 5529.60 | 5570.64 | --- | --- |
|            |      | 5670 | 40.88 | 5649.52 | 5690.40 | --- | --- |
| 11AC80SISO | Ant1 | 5210 | 81.92 | 5169.04 | 5250.96 | --- | --- |
|            |      | 5290 | 81.44 | 5249.20 | 5330.64 | --- | --- |
|            |      | 5530 | 82.56 | 5488.40 | 5570.96 | --- | --- |
|            |      | 5610 | 81.28 | 5569.52 | 5650.80 | --- | --- |

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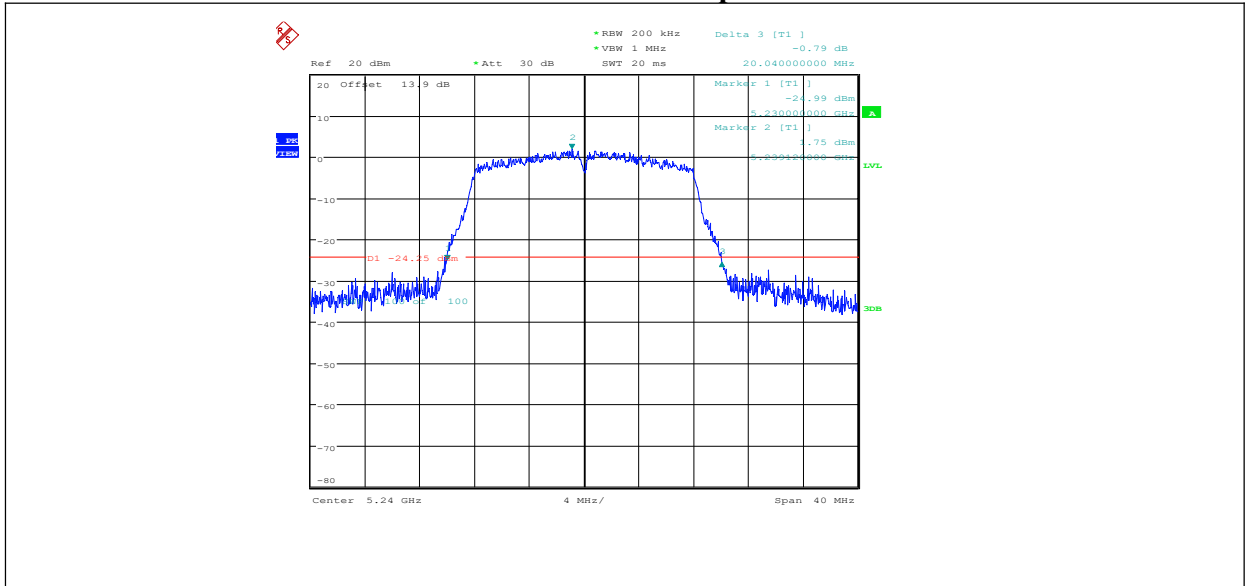
Test Graphs



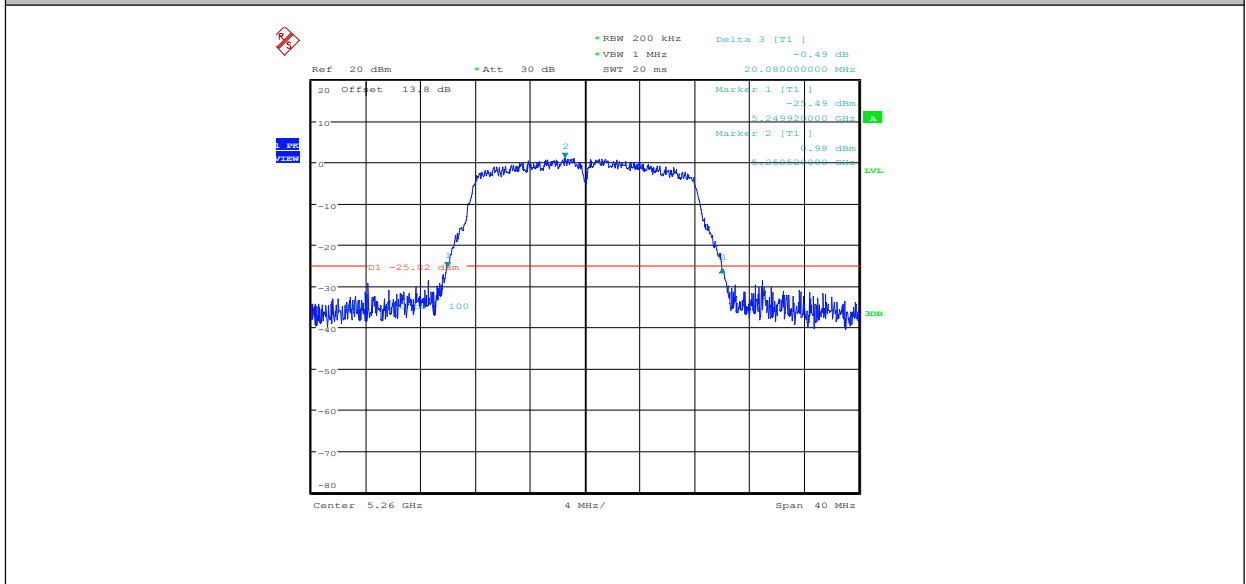
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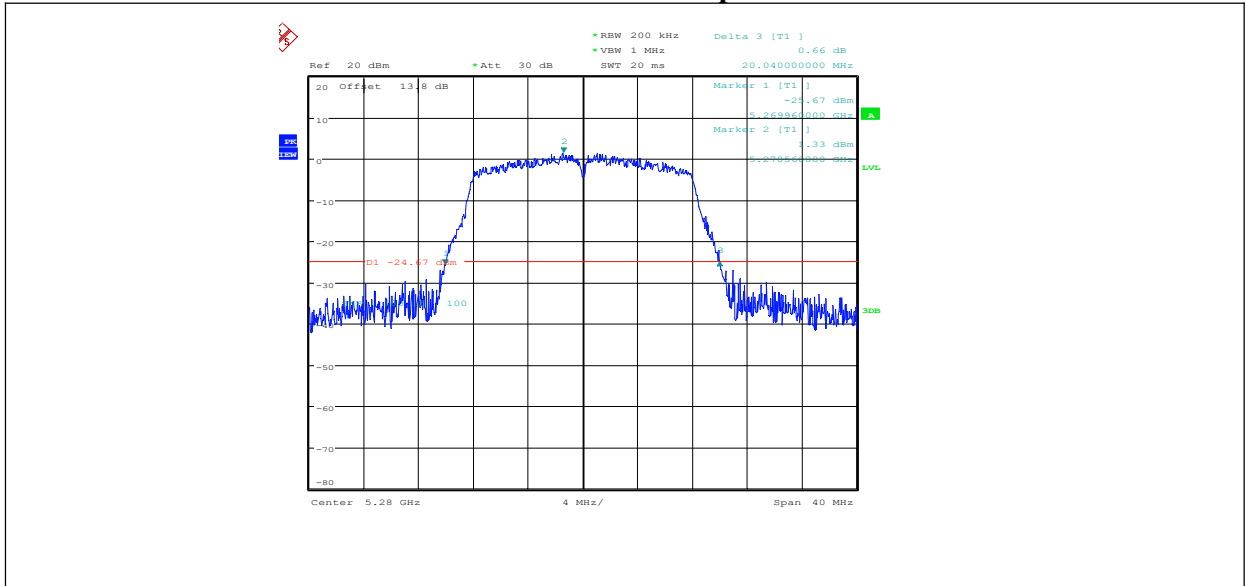
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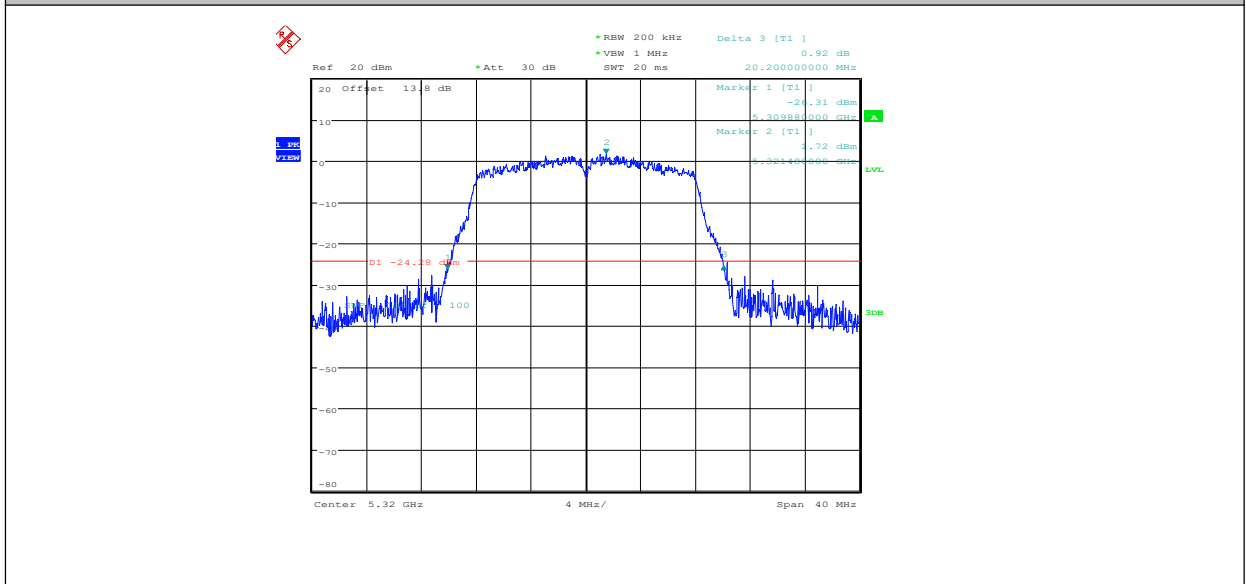
11A\_Ant1\_5280

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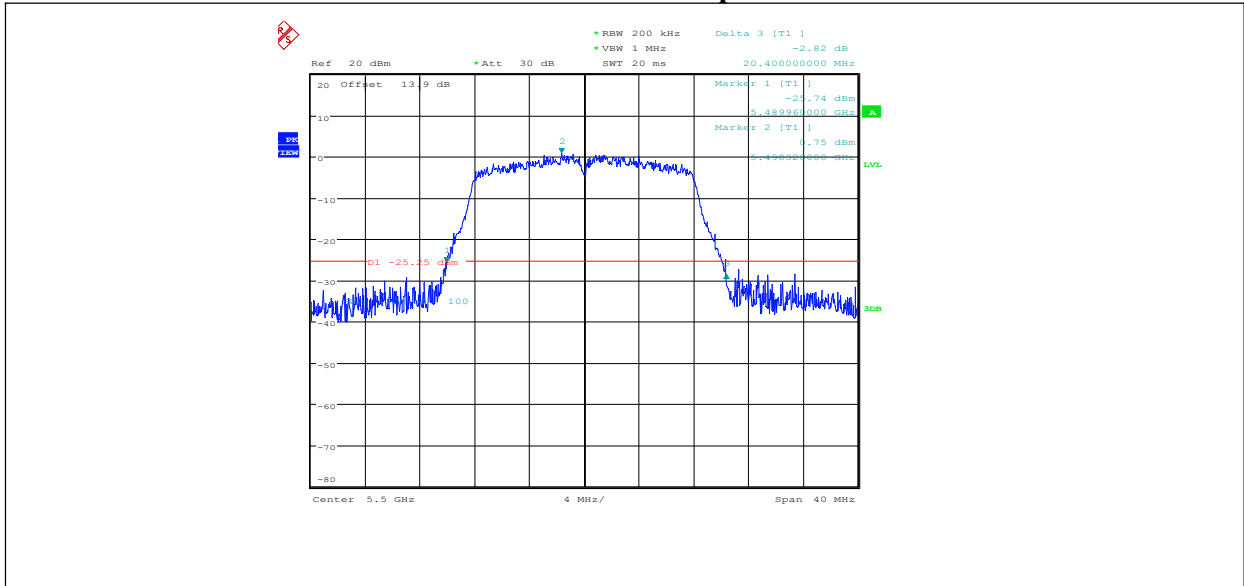
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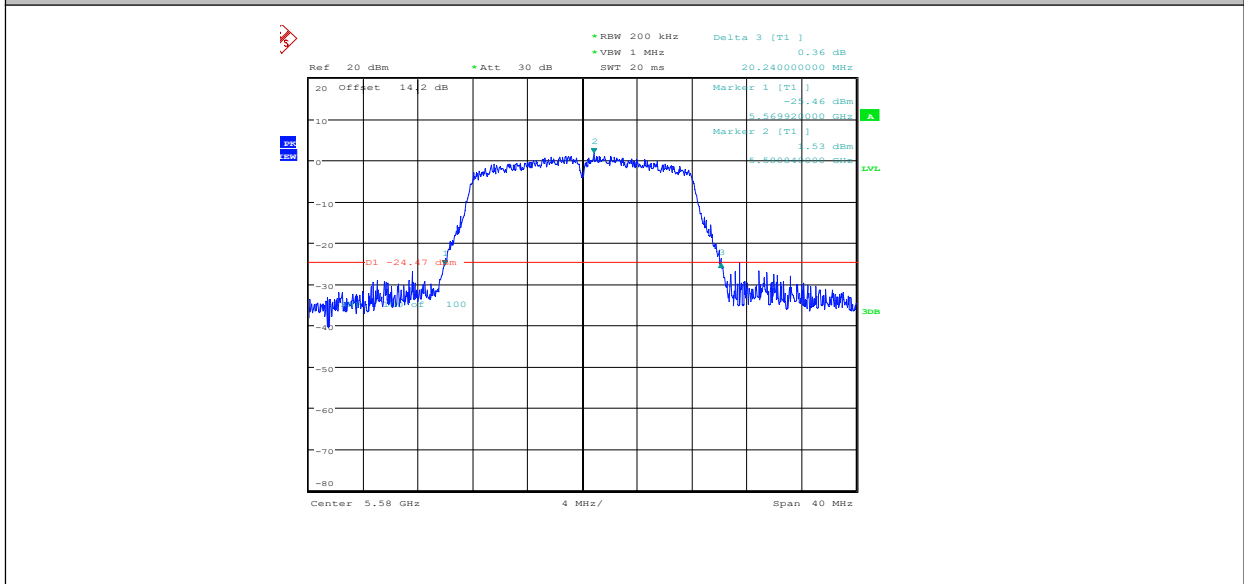
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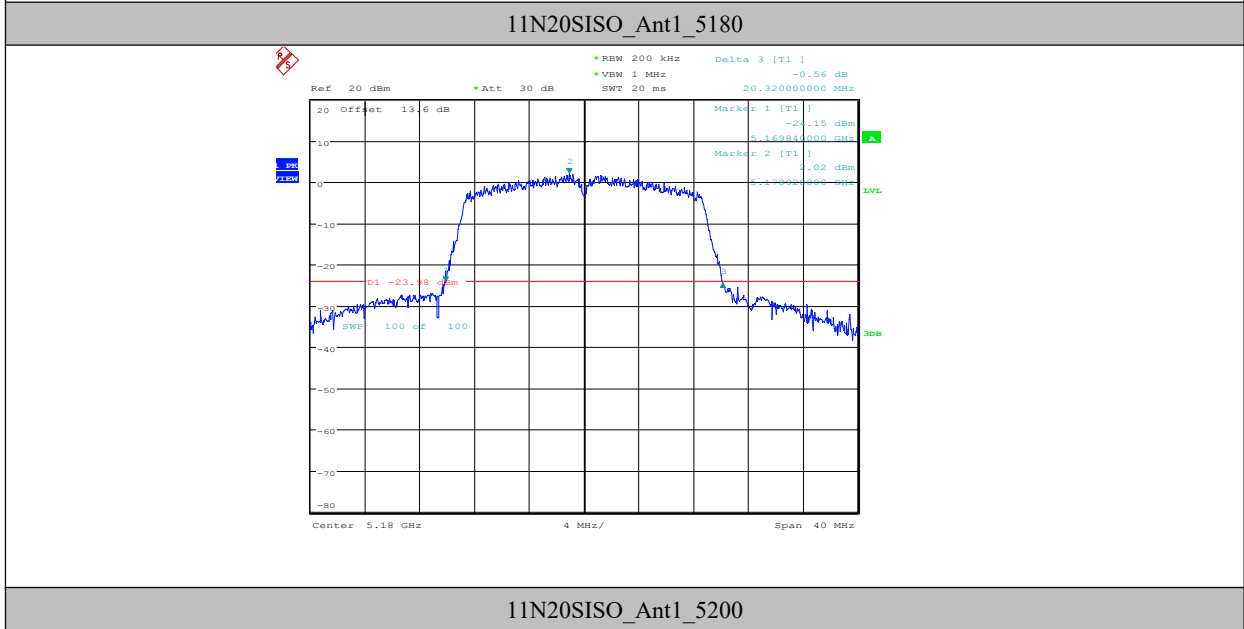
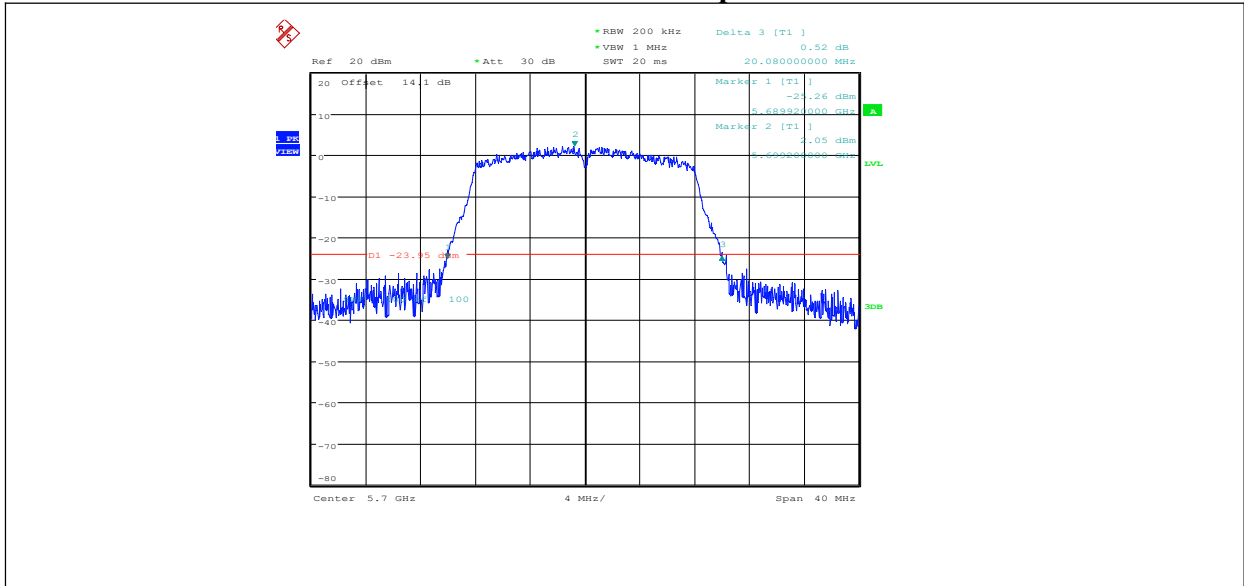
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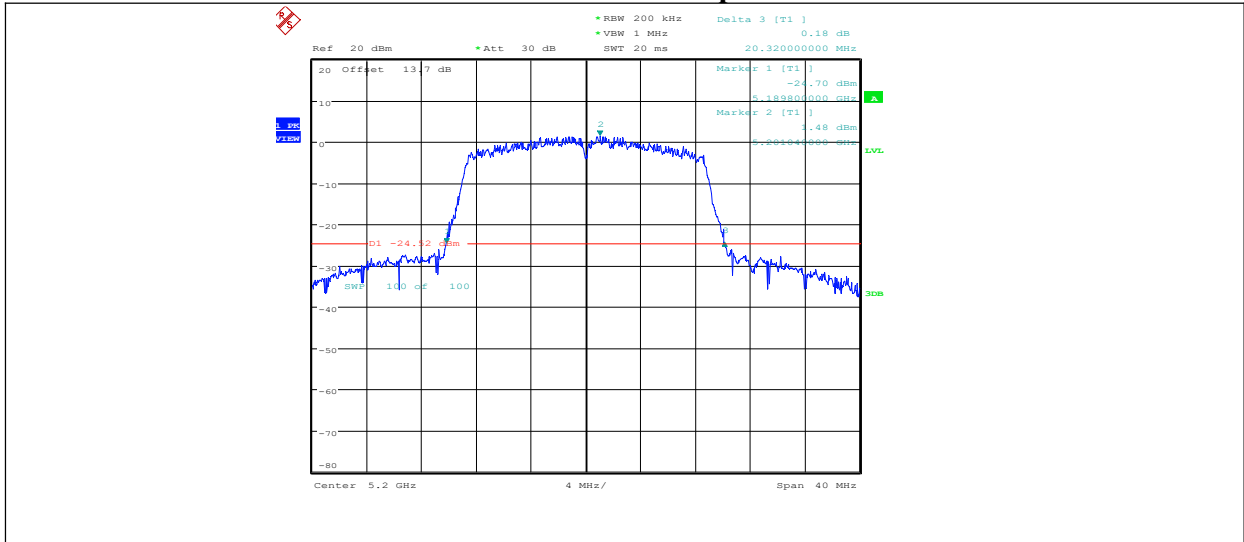


11A\_Ant1\_5580

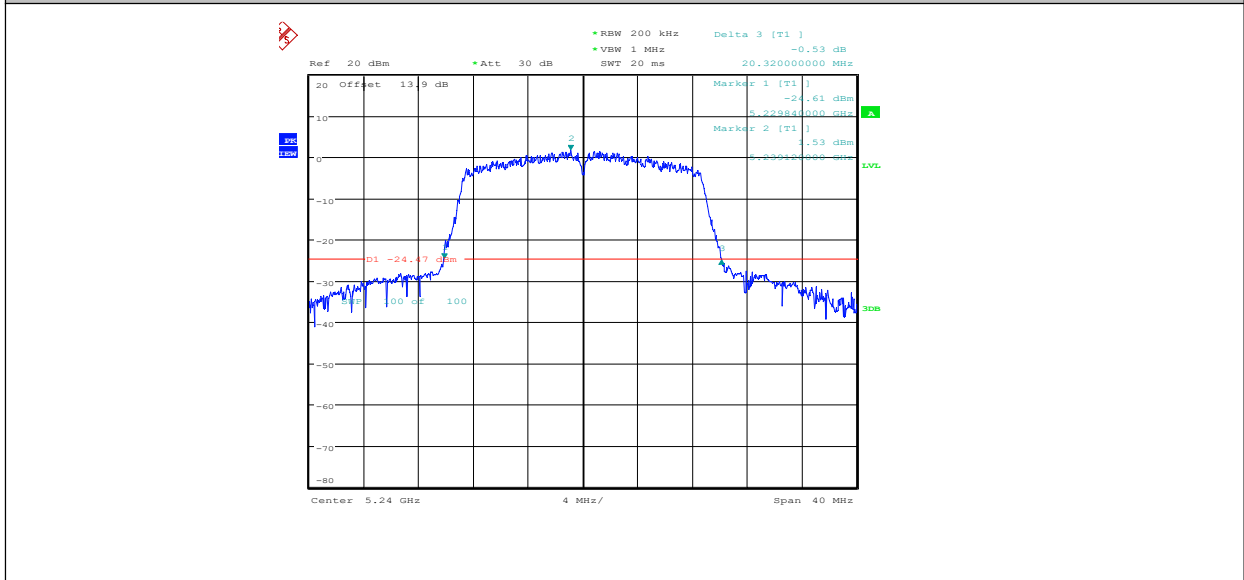


11A\_Ant1\_5700





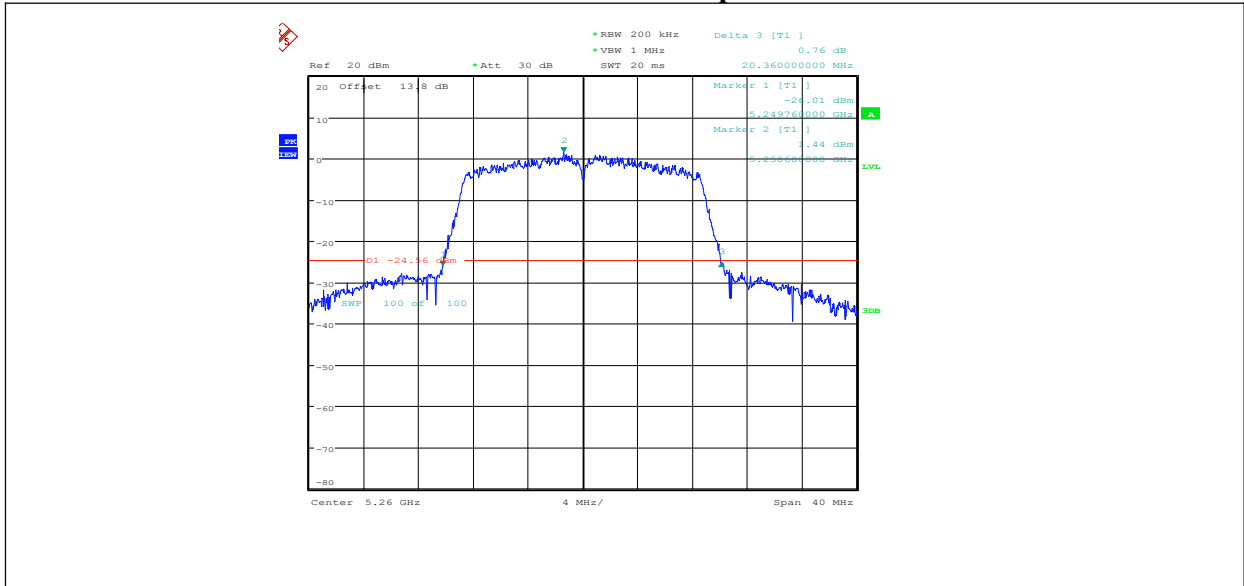
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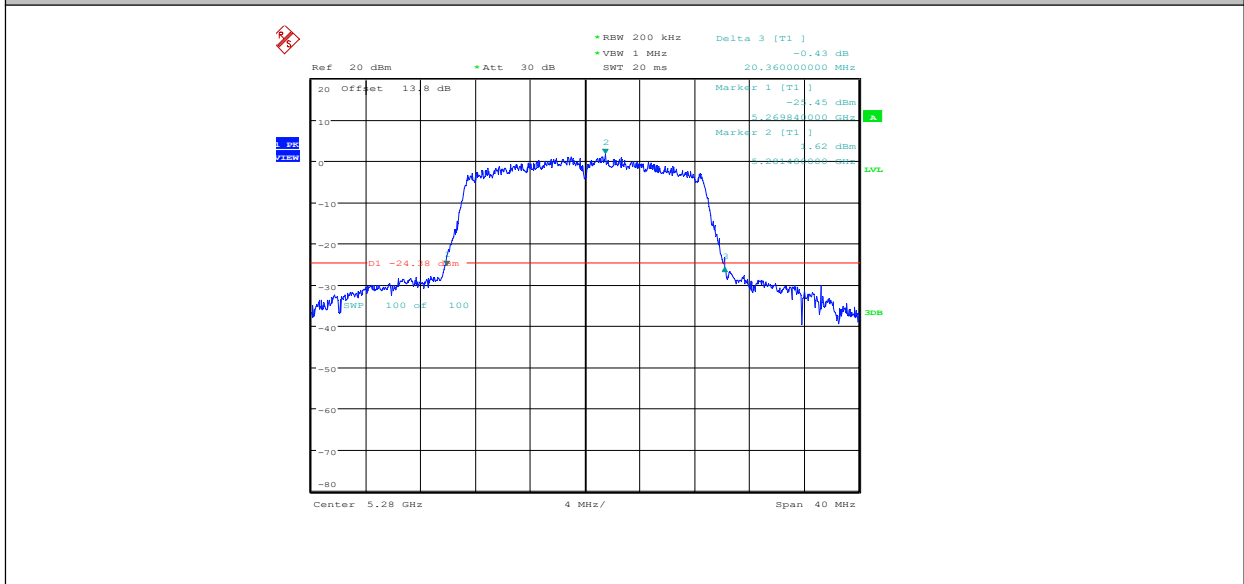
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11N20SISO\_Ant1\_5280

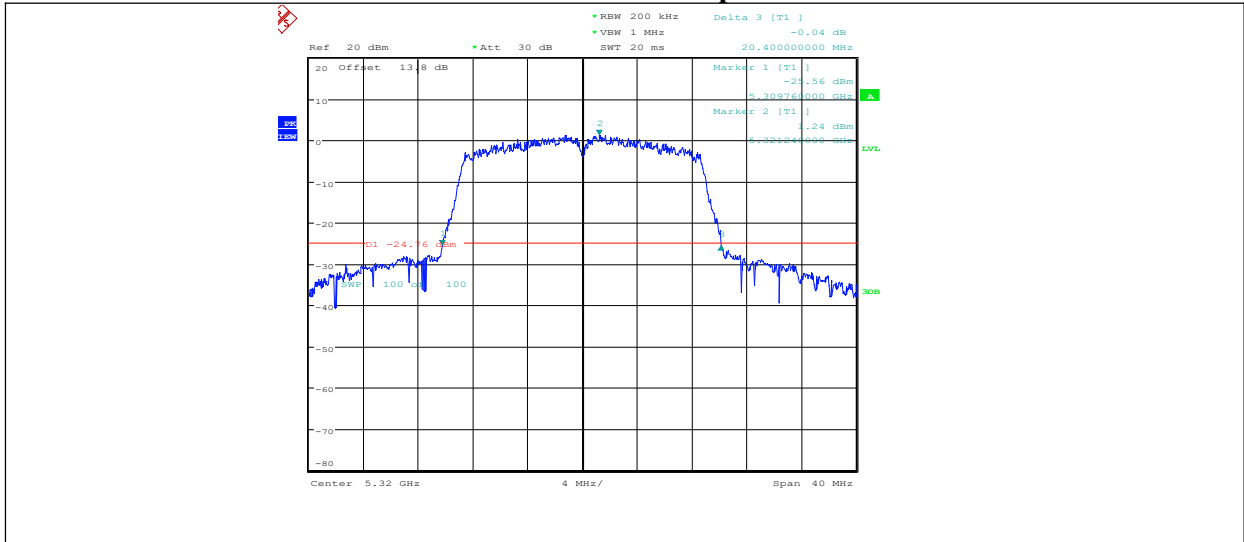


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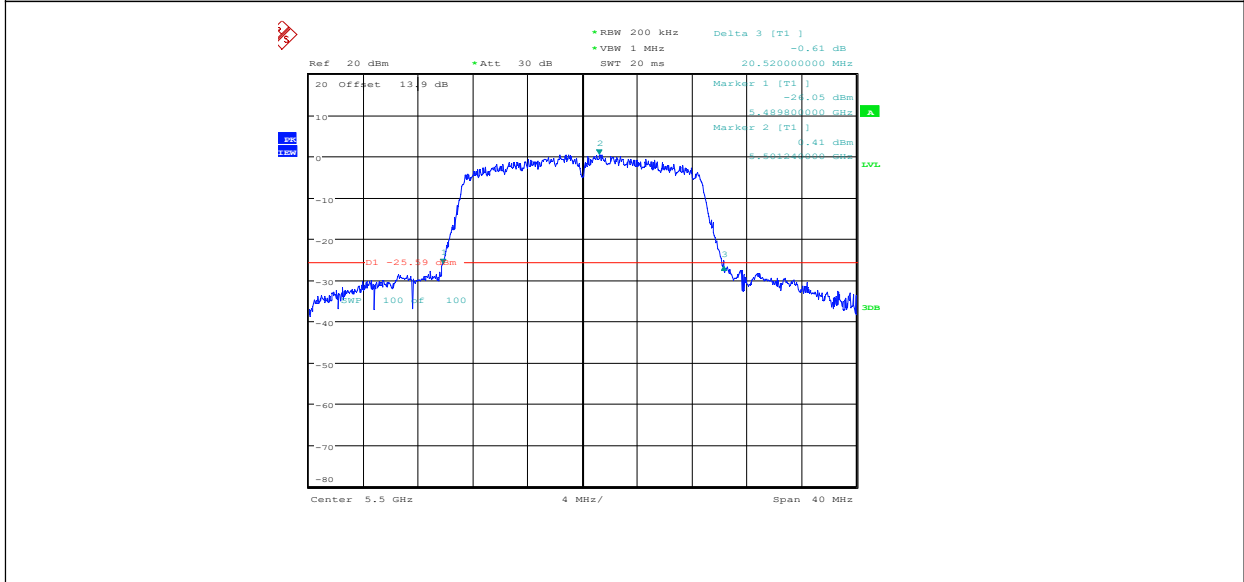
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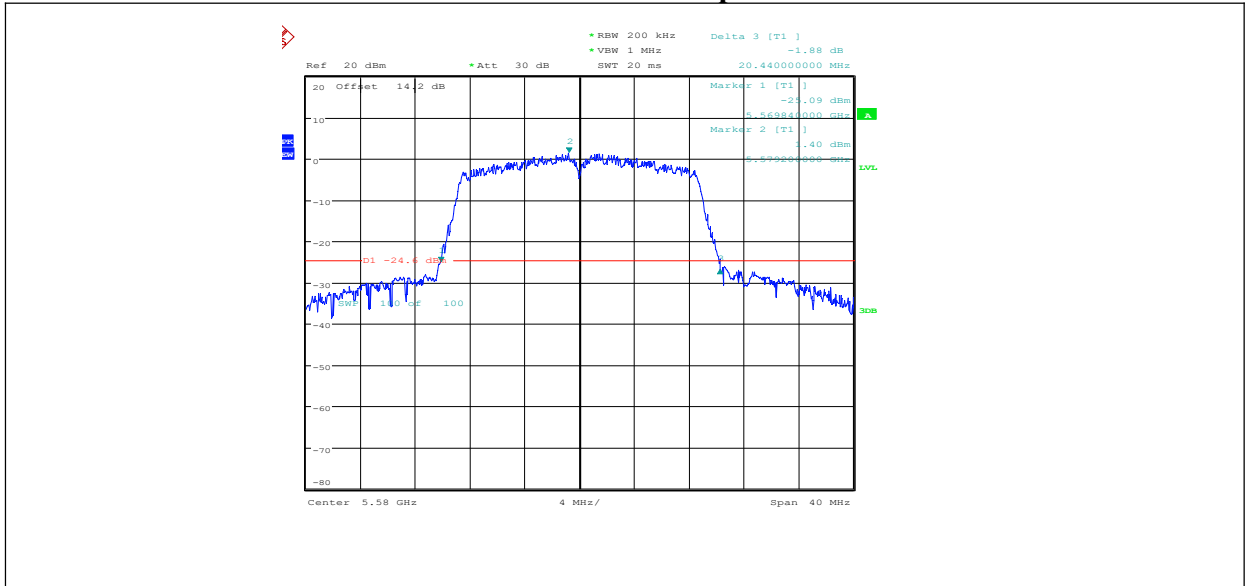
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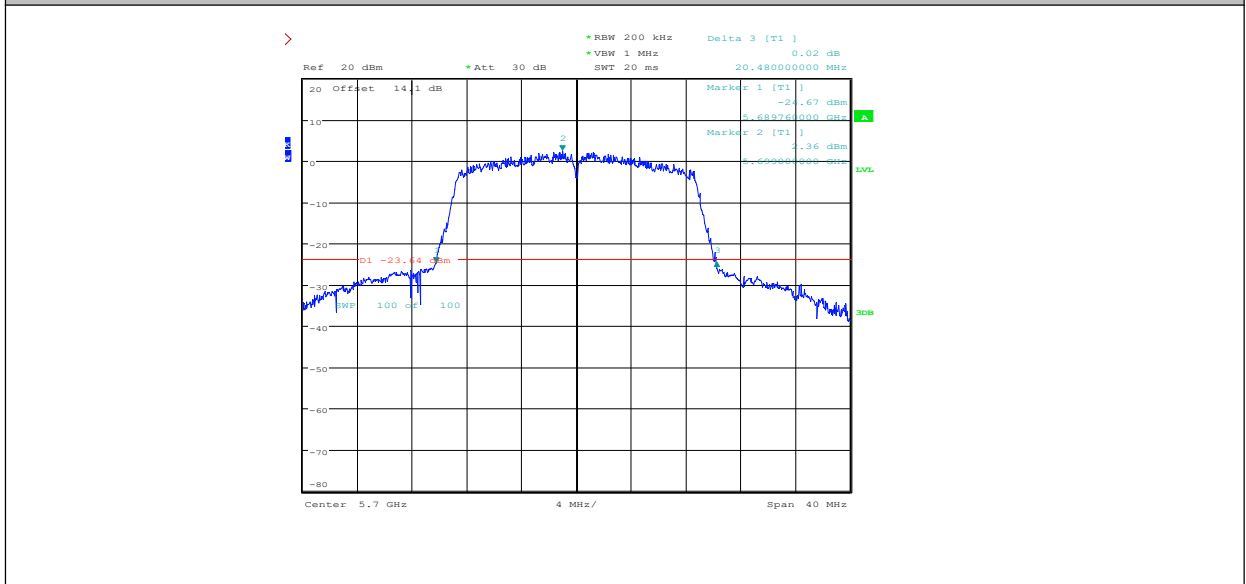
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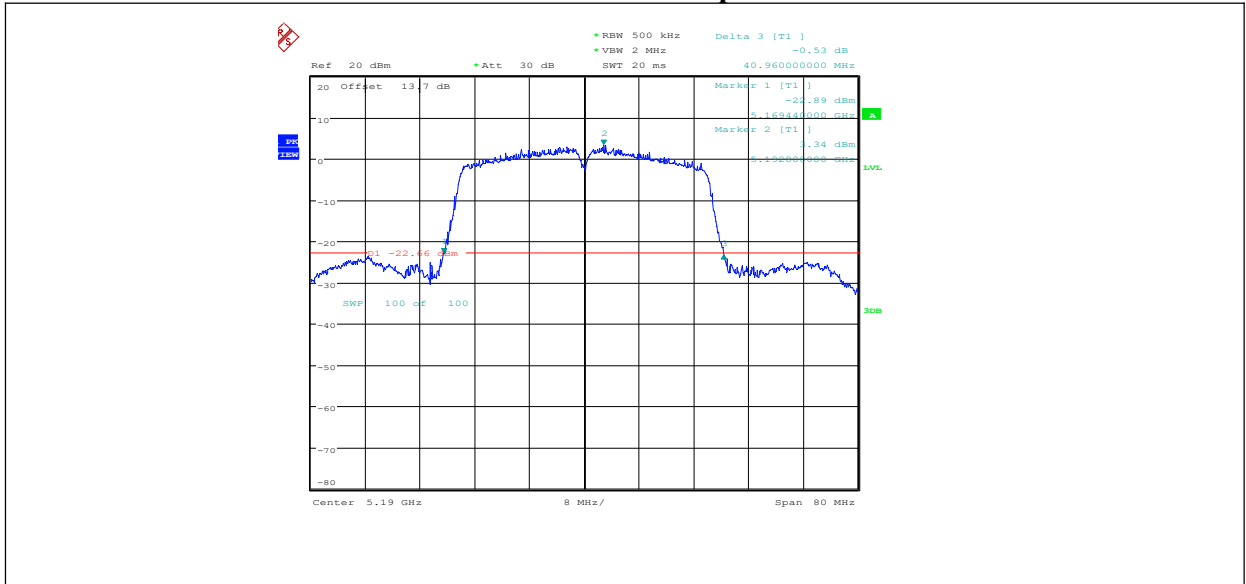


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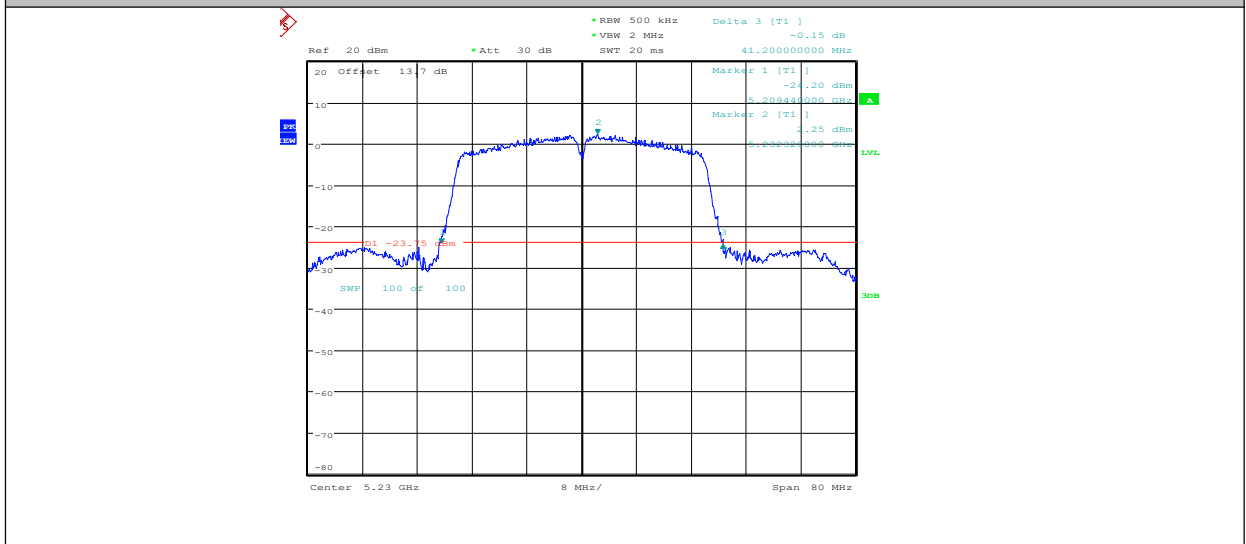
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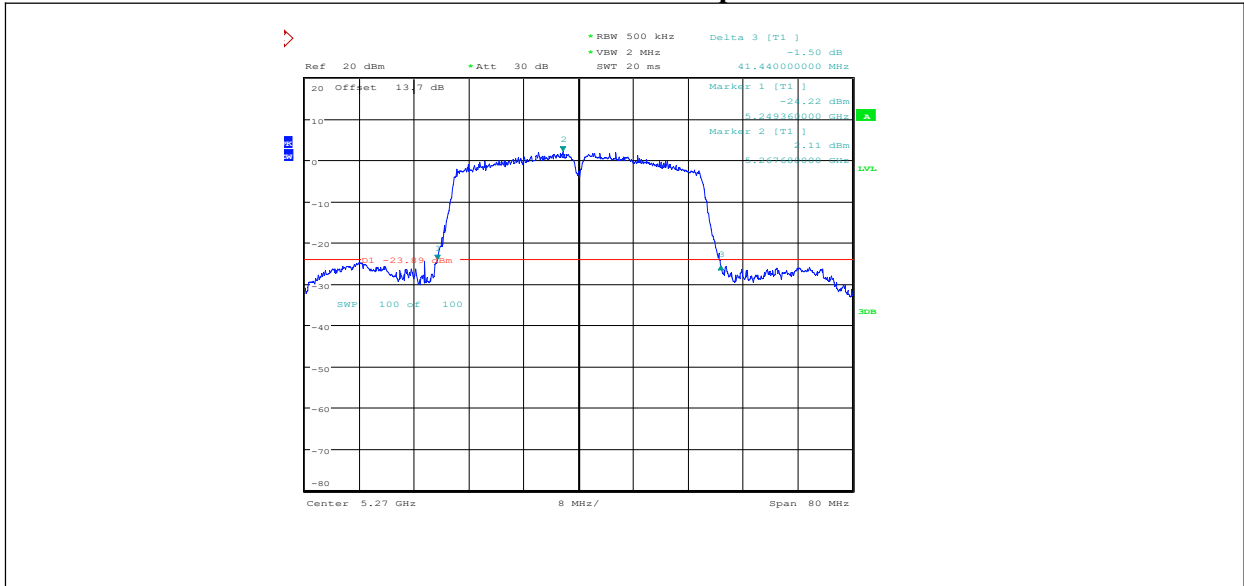
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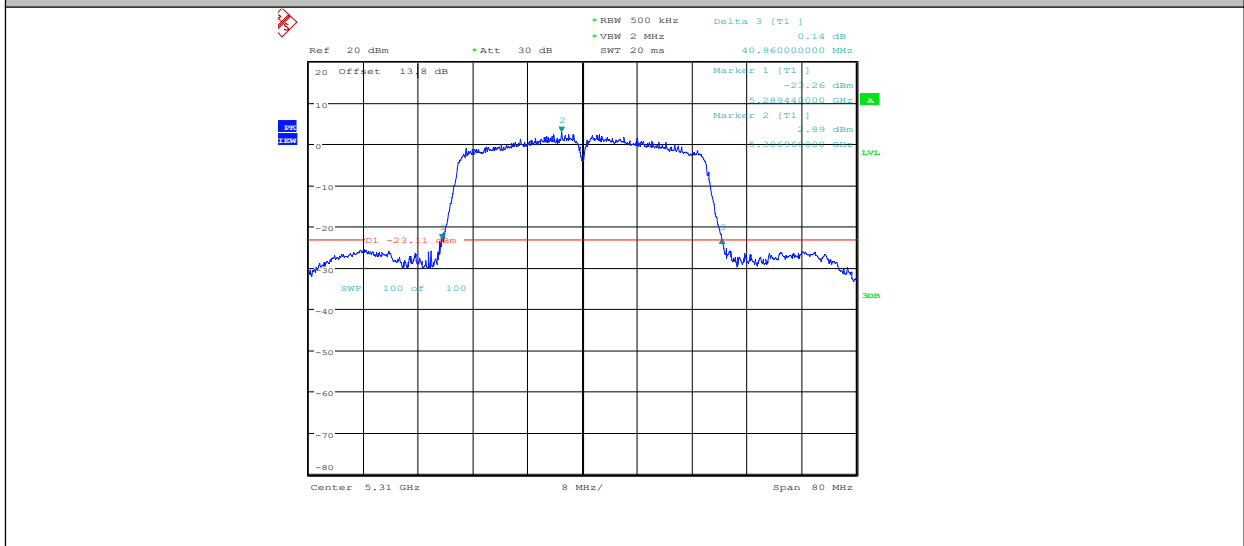
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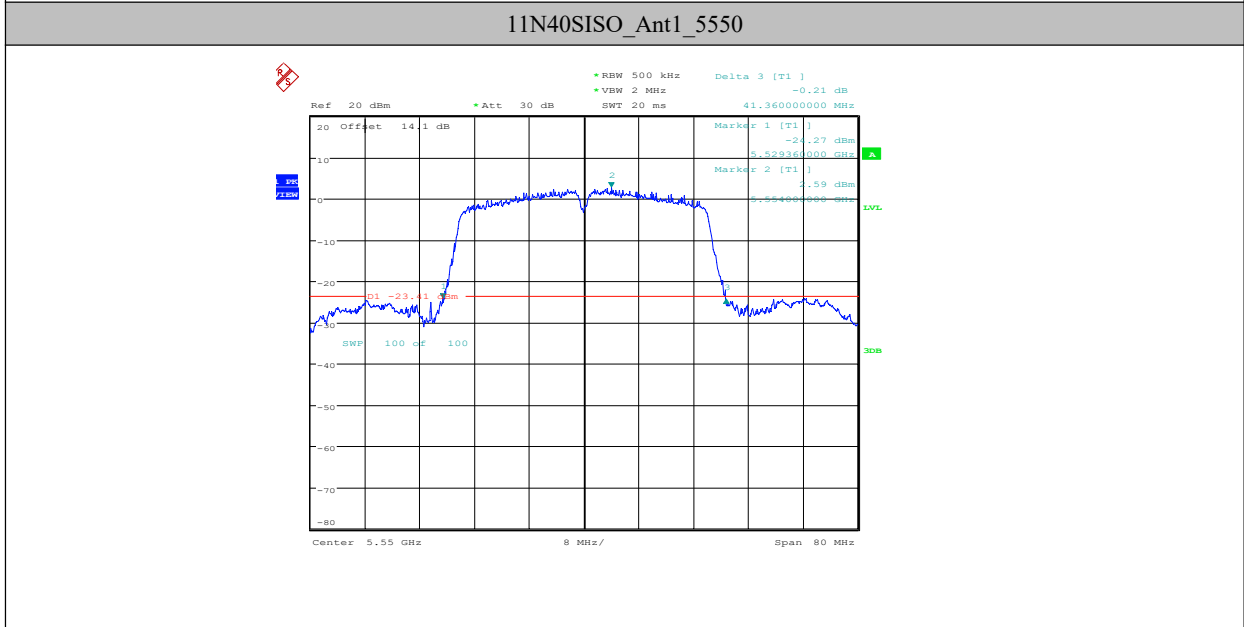
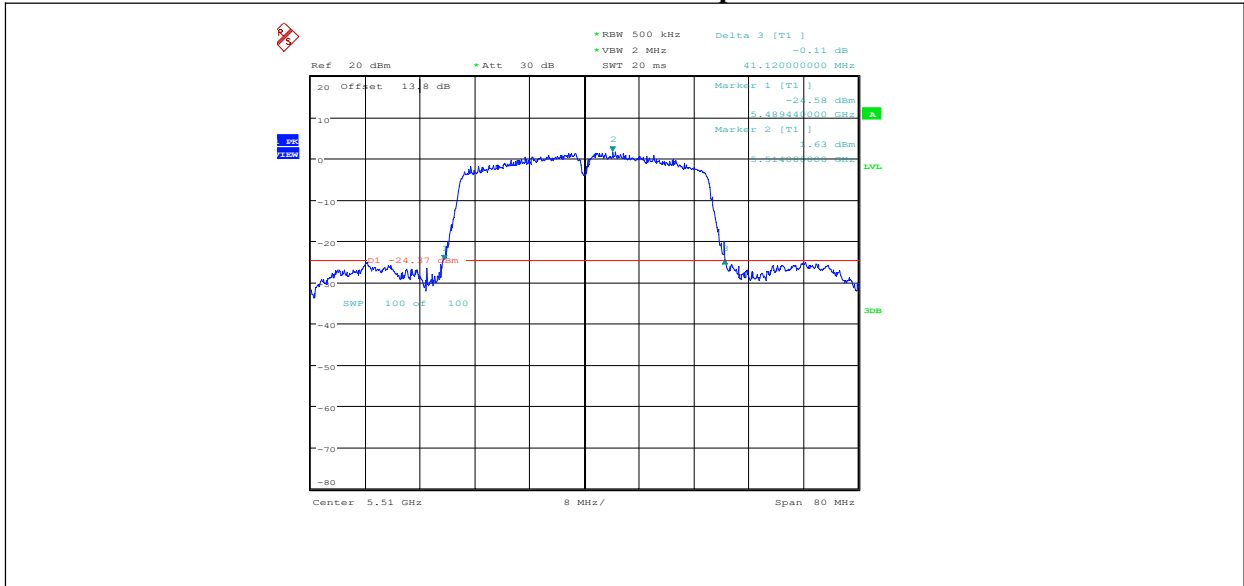
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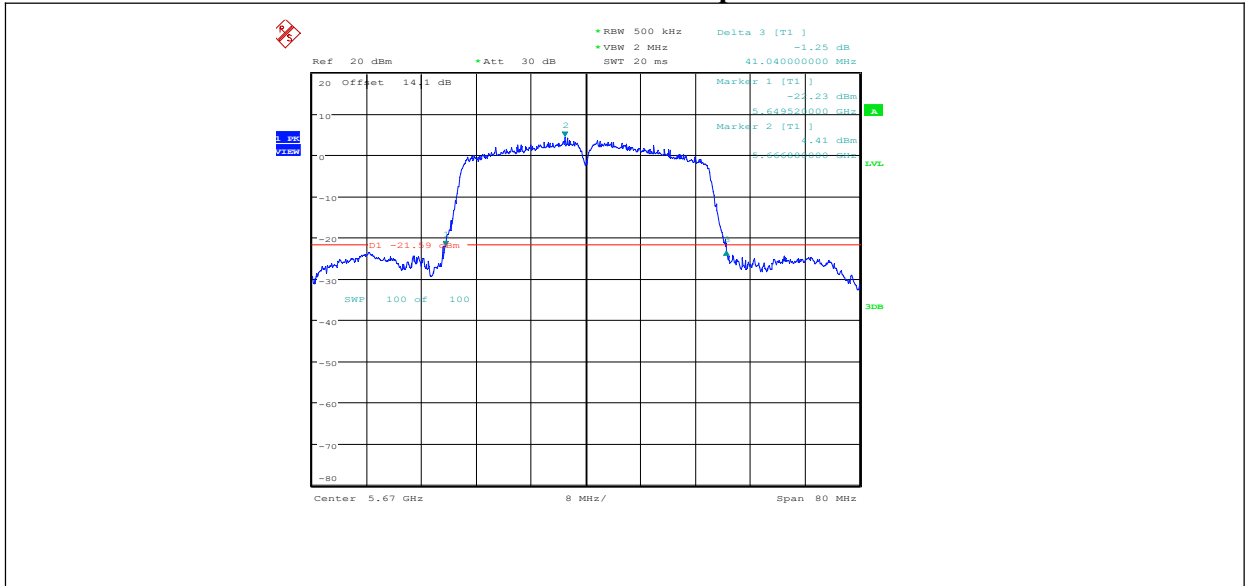
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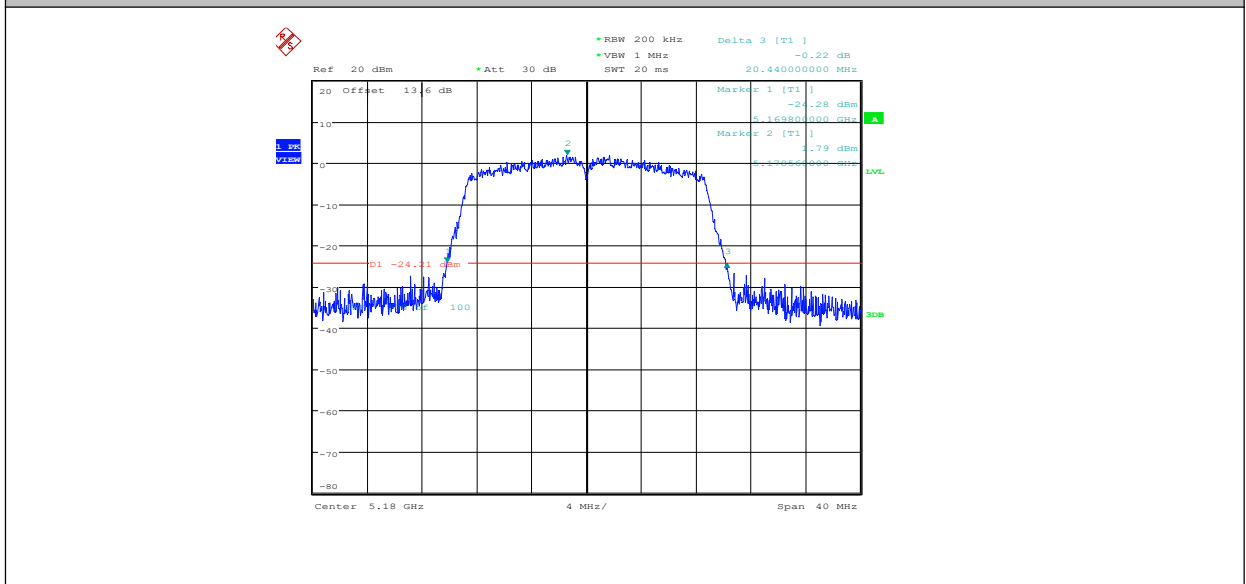


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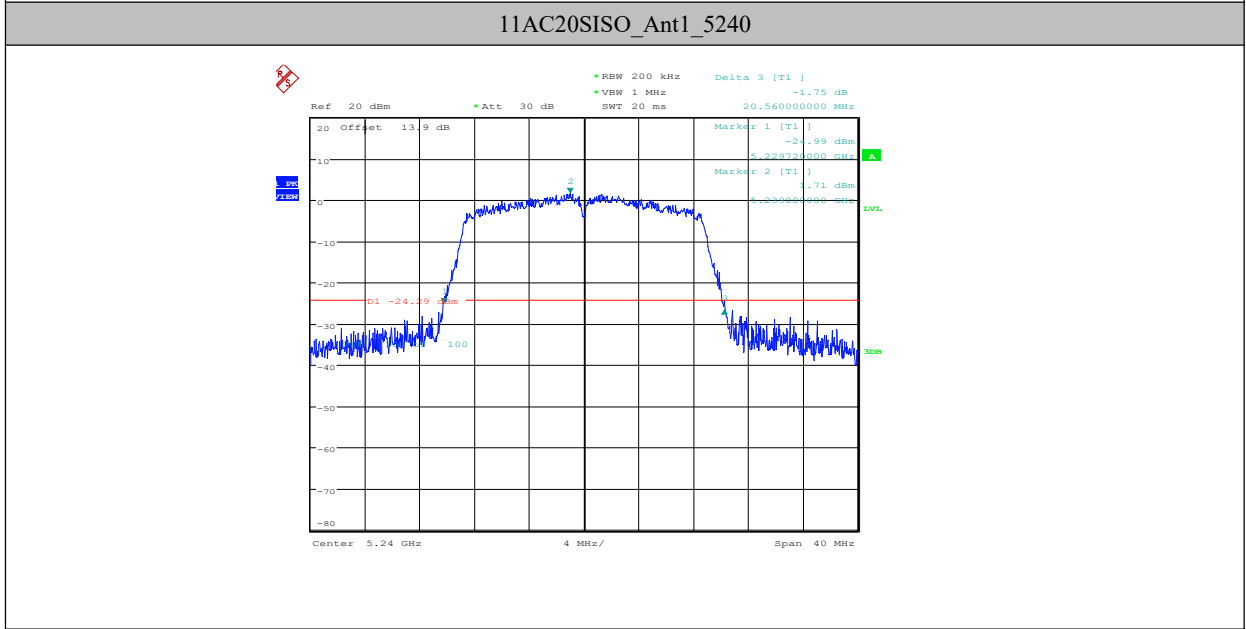
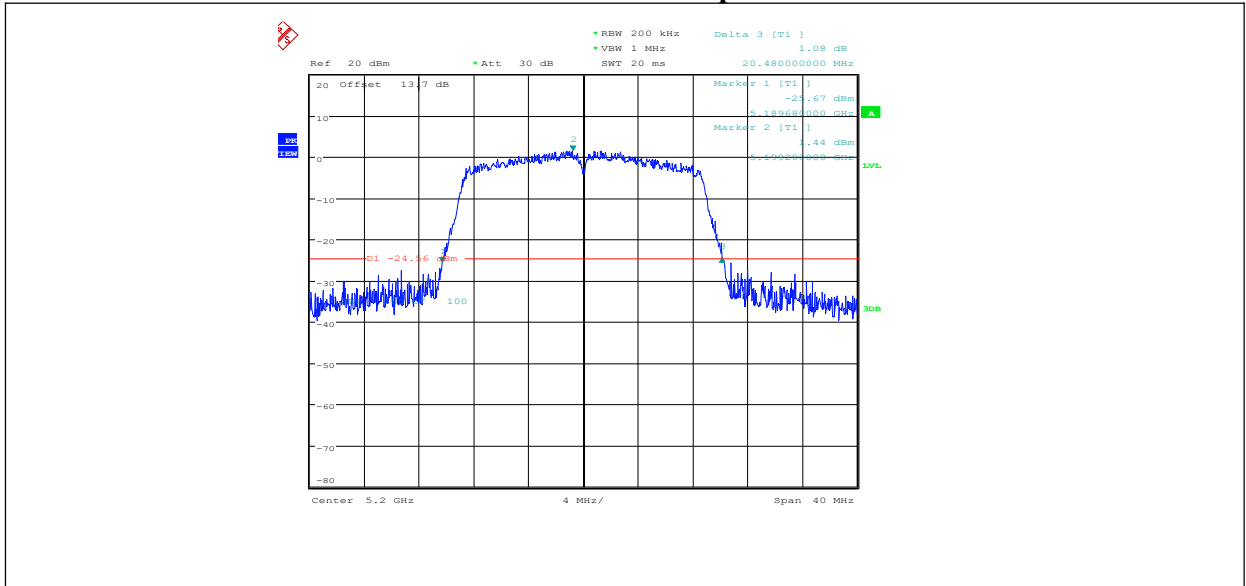
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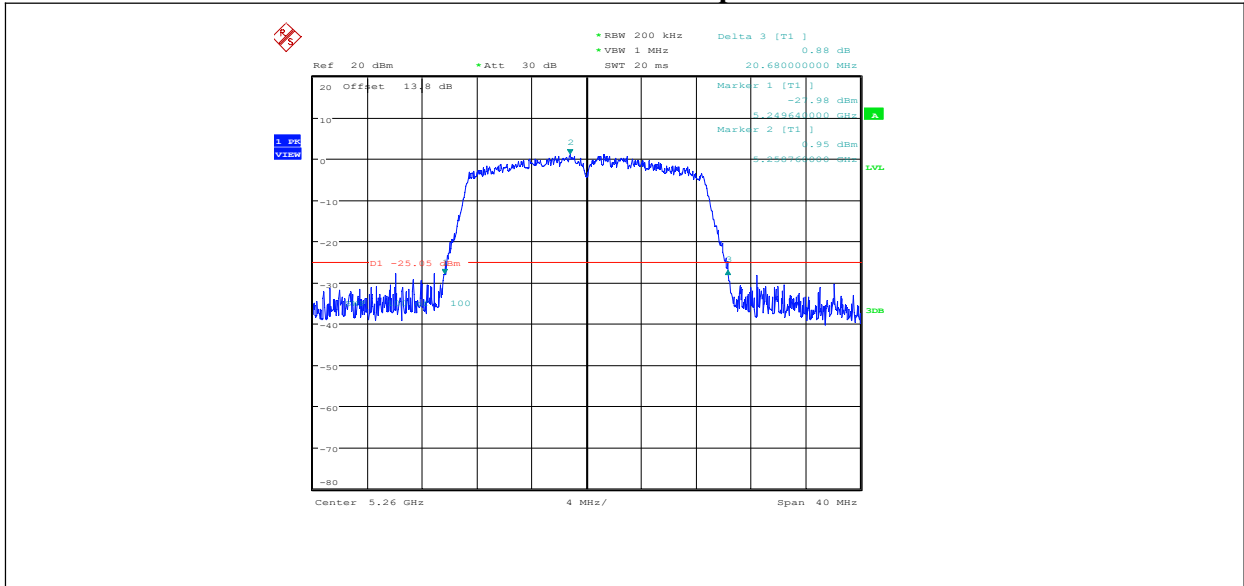


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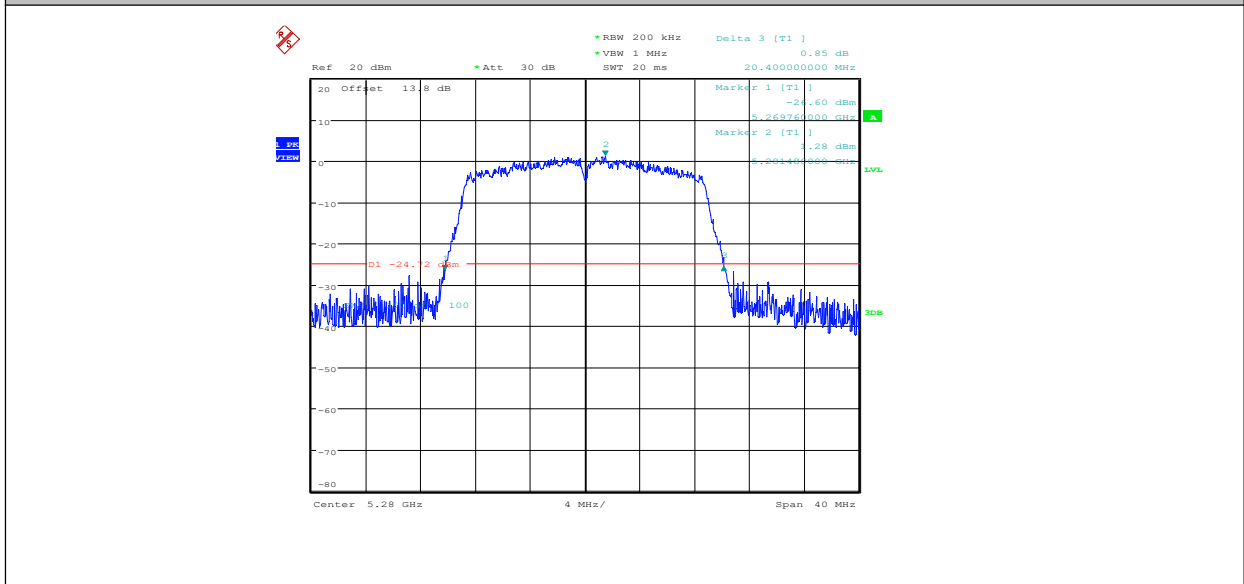


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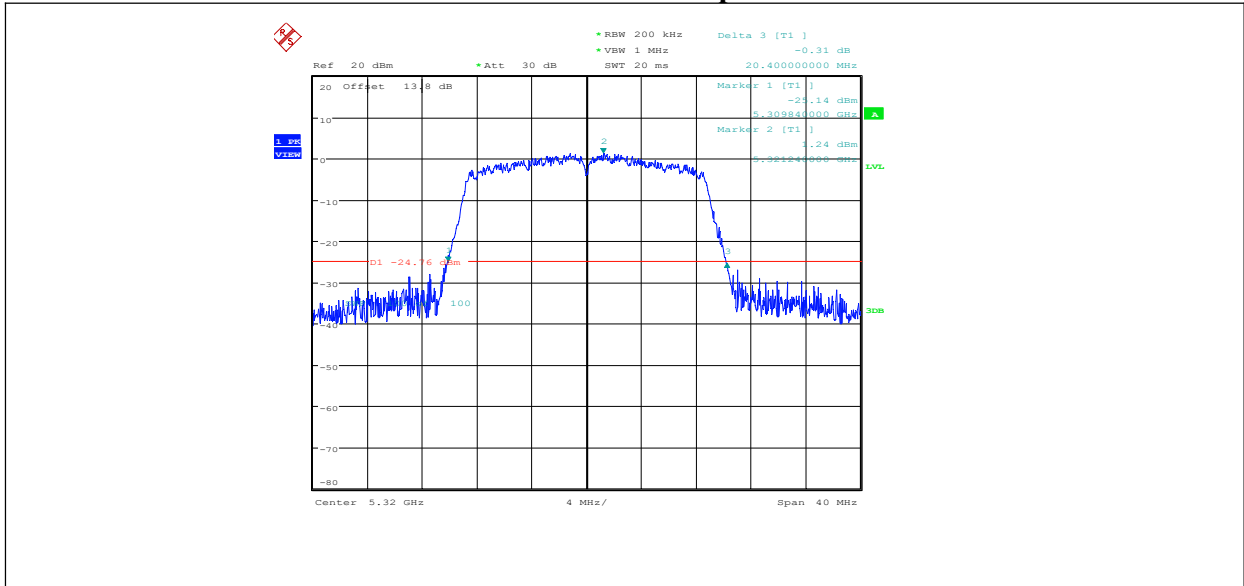
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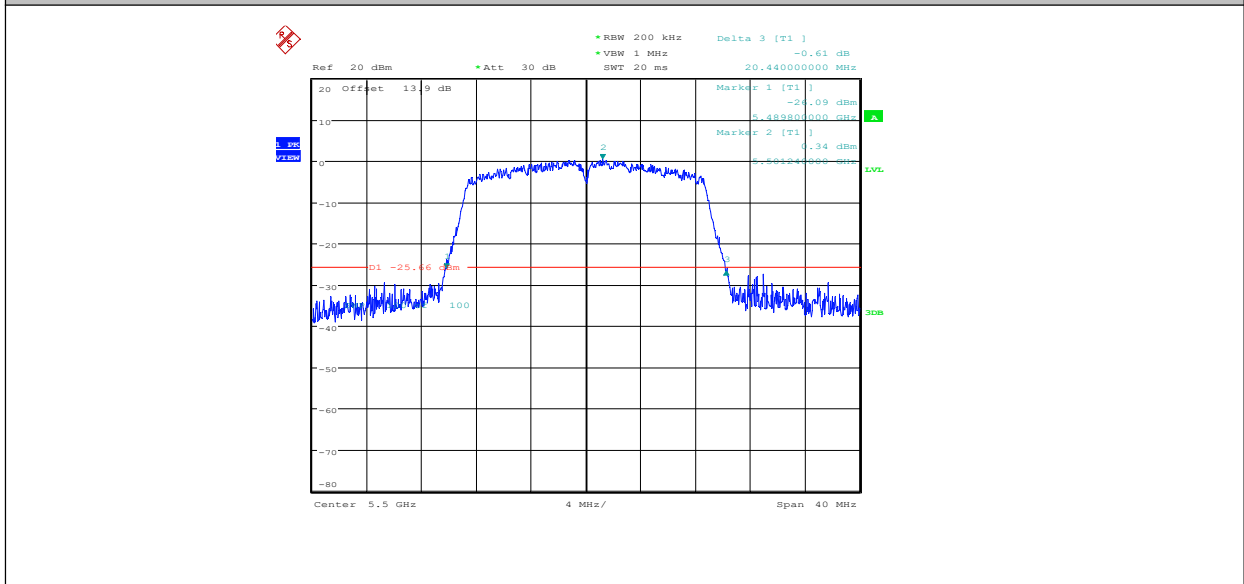
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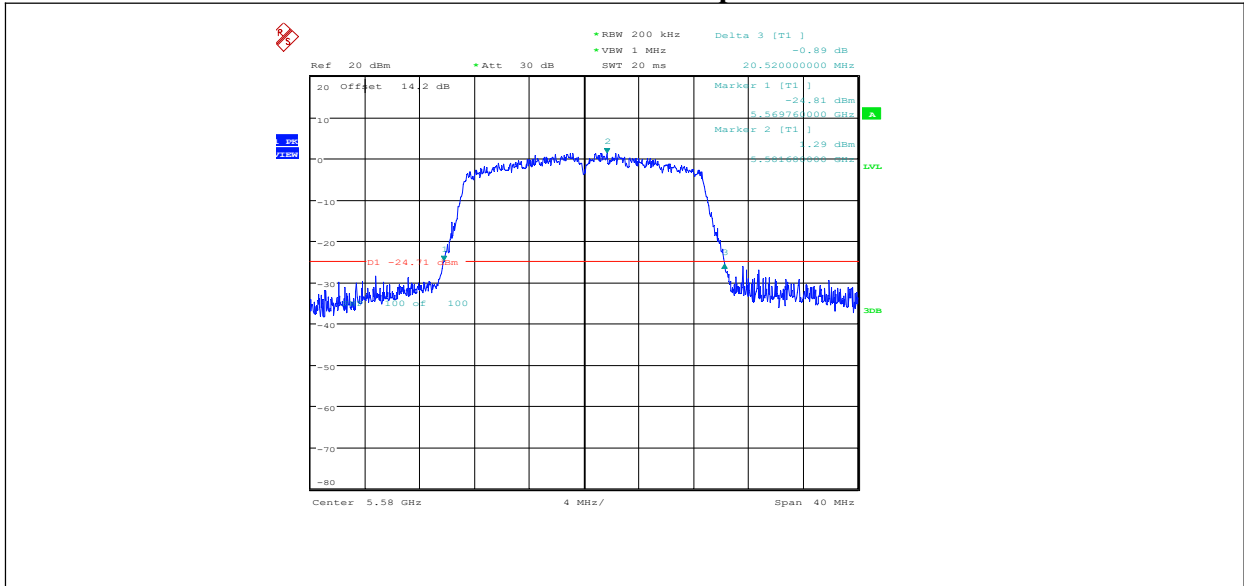
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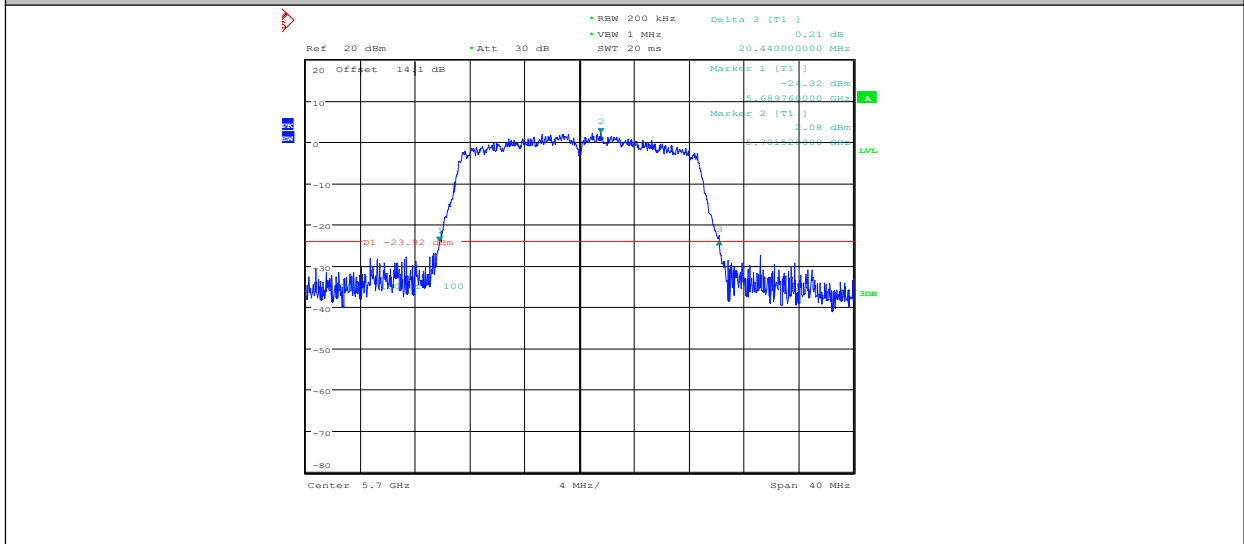
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