

# TEST REPORT

|                        |                                                                  |
|------------------------|------------------------------------------------------------------|
| EUT Description        | WLAN and BT, 2x2 PCIe M.2 1216 SD adapter card,                  |
| Brand Name             | Intel® Wireless-AC 9560                                          |
| Model Name             | 9560D2W                                                          |
| FCC ID                 | PD99560D2                                                        |
| ISED ID                | 1000M-9560D2                                                     |
| Date of Test Start/End | 2017-10-05 / 2017-12-01                                          |
| Features               | 802.11ac, Dual Band, 2x2 Wi-Fi + Bluetooth® 5<br>(see section 5) |

|                      |                                                                             |
|----------------------|-----------------------------------------------------------------------------|
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|                     |                                                                                   |
|---------------------|-----------------------------------------------------------------------------------|
| Reference Standards | FCC CFR Title 47 Part 15 C<br>RSS-247 issue 2, RSS-Gen issue 4<br>(see section 1) |
|---------------------|-----------------------------------------------------------------------------------|

|                            |                                                                                                    |
|----------------------------|----------------------------------------------------------------------------------------------------|
| Test Report identification | 170919-03.TR04                                                                                     |
| Revision Control           | Rev. 00<br>This test report revision replaces any previous test report revision<br>(see section 8) |

The test results relate only to the samples tested.

The test report shall not be reproduced in full, without written approval of the laboratory.

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## 1. Standards, reference documents and applicable test methods

1. FCC 47 CFR part 15 - Subpart C – §15.247 Operation within the bands 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz.
2. FCC 47 CFR part 15 - Subpart C – §15.209 Radiated emission limits; general requirements.
3. FCC OET KDB 558074 D01 DTS Meas Guidance v04 – Guidance for Performing Compliance Measurements on Digital Transmission Systems (DTS) Operating Under §15.247.
4. FCC OET KDB 662911 D01 Multiple Transmitter Output v02r01.
5. RSS-247 Issue 2 – Digital Transmission Systems (DTSs), Frequency Hopping Systems (FHSs) and Licence-Exempt Local Area Network (LE-LAN) Devices
6. RSS-Gen Issue 4 – General Requirements for Compliance of Radio Apparatus.
7. ANSI C63.10-2013 – American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices.

## 2. General conditions, competences and guarantees

- ✓ Intel Mobile Communications France SAS Wireless RF Lab (Intel WRF Lab) is an ISO/IEC 17025:2005 testing laboratory accredited by the American Association for Laboratory Accreditation (A2LA) with the certificate number 3478.01.
- ✓ Intel Mobile Communications France SAS Wireless RF Lab (Intel WRF Lab) is an Accredited Test Firm recognized by the FCC, with Designation Number FR0011.
- ✓ Intel Mobile Communications France SAS Wireless RF Lab (Intel WRF Lab) is a Registered Test Site listed by ISED, with ISED Assigned Code 1000Y.
- ✓ Intel WRF Lab only provides testing services and is committed to providing reliable, unbiased test results and interpretations.
- ✓ Intel WRF Lab is liable to the client for the maintenance of the confidentiality of all information related to the item under test and the results of the test.
- ✓ Intel WRF Lab has developed calibration and proficiency programs for its measurement equipment to ensure correlated and reliable results to its customers.
- ✓ This report is only referred to the item that has undergone the test.
- ✓ This report does not imply an approval of the product by the Certification Bodies or competent Authorities.

## 3. Environmental Conditions

- ✓ At the site where the measurements were performed the following limits were not exceeded during the tests:

|             |             |
|-------------|-------------|
| Temperature | 23 °C ±3 °C |
| Humidity    | 40 % ± 10 % |

## 4. Test samples

| Sample | Control #     | Description           | Model          | Serial #          | Date of receipt | Note                     |
|--------|---------------|-----------------------|----------------|-------------------|-----------------|--------------------------|
| #01    | 170919-03.S29 | Module                | 9560D2W        | WFM: 3413E8702821 | 2017-10-02      | Used for conducted tests |
|        | 170524-02.S15 | Extender Board        | PCB00609_01    | 6092416-442       | 2017-05-30      |                          |
|        | 170000-01.S01 | Laptop                | Latitude E5470 | DPBLMC2           | 2017-03-28      |                          |
| #02    | 170919-03.S22 | Module                | 9560D2W        | WFM:3413 E870281C | 2017-10-02      | Used for radiated tests  |
|        | 170220-02.S03 | Extender Board        | PCB00609_01    | 6092416-446       | 2017-02-20      |                          |
|        | 170000-01.S13 | Laptop                | Latitude E5470 | FT6LMC2           | 2017-05-30      |                          |
|        | 170727-02.S11 | Adapter 1216SD to M.2 | JfP Adapter M2 | N/A               | 2017-08-09      |                          |
| #03    | 170919-03.S21 | Module                | 9560D2W        | WFM:3413 E8702826 | 2017-10-02      |                          |
|        | 170220-02.S04 | Extender Board        | PCB00609_01    | 6092416-493       | 2017-02-20      |                          |
|        | 170801-01.S10 | Laptop                | Latitude E7470 | 7KNOXF2           | 2017-09-13      |                          |
|        | 170727-02.S13 | Adapter 1216SD to M.2 | JfP Adapter M2 | N/A               | 2017-08-09      |                          |

## 5. EUT Features

|                        |                                                                                               |                              |  |
|------------------------|-----------------------------------------------------------------------------------------------|------------------------------|--|
| Brand Name             | Intel® Wireless-AC 9560                                                                       |                              |  |
| Model Name             | 9560D2W                                                                                       |                              |  |
| FCC ID                 | PD99560D2                                                                                     |                              |  |
| ISED ID                | 1000M-9560D2                                                                                  |                              |  |
| Software Version       | 10.1739.0-06012                                                                               |                              |  |
| Driver Version         | 99.0.28.6                                                                                     |                              |  |
| Prototype / Production | Production                                                                                    |                              |  |
| Supported Radios       | 802.11b/g/n                                                                                   | 2.4GHz (2400.0 – 2483.5 MHz) |  |
|                        | 802.11a/n/ac                                                                                  | 5.2GHz (5150.0 – 5350.0 MHz) |  |
|                        |                                                                                               | 5.6GHz (5470.0 – 5725.0 MHz) |  |
|                        |                                                                                               | 5.8GHz (5725.0 – 5850.0 MHz) |  |
|                        | Bluetooth 5                                                                                   | 2.4GHz (2400.0 – 2483.5 MHz) |  |
| Antenna Information    | CHAIN A: PIFA antenna. WiFi 2.4GHz & 5GHz and BT<br>CHAIN B: PIFA antenna. WiFi 2.4GHz & 5GHz |                              |  |
| Additional Information |                                                                                               |                              |  |

## 6. Remarks and comments

N/A

## 7. Test Verdicts summary

### 7.1. 802.11 b/g/n 2.4GHz

| FCC part             | RSS part                                 | Test name                        | Verdict |
|----------------------|------------------------------------------|----------------------------------|---------|
| 15.247 (a) (2)       | RSS-247 Clause 5.2 (a)                   | 6dB Bandwidth                    | P       |
| 15.247 (b) (3)       | RSS-247 Clause 5.4 (d)                   | Maximum output power and E.I.R.P | P       |
| 15.247 (e)           | RSS-247 Clause 5.2 (b)                   | Power spectral density           | P       |
| 15.247 (d)<br>15.209 | RSS-247 Clause 5.5<br>RSS-Gen Clause 8.9 | Out-of-band Emission (conducted) | P       |
| 15.247 (d)<br>15.209 | RSS-247 Clause 5.5<br>RSS-Gen Clause 8.9 | Out-of-band Emission (radiated)  | P       |

### 7.2. BLE

| FCC part             | RSS part                                 | Test name                         | Verdict |
|----------------------|------------------------------------------|-----------------------------------|---------|
| 15.247 (a) (2)       | RSS-247 Clause 5.2 (a)                   | 6dB Bandwidth                     | P       |
| 15.247 (b) (3)       | RSS-247 Clause 5.4 (d)                   | Maximum output power and E.I.R.P. | P       |
| 15.247 (e)           | RSS-247 Clause 5.2 (b)                   | Power spectral density            | P       |
| 15.247 (d)<br>15.209 | RSS-247 Clause 5.5<br>RSS-Gen Clause 8.9 | Out-of-band Emissions (conducted) | P       |
| 15.247 (d)<br>15.209 | RSS-247 Clause 5.5<br>RSS-Gen Clause 8.9 | Out-of-band Emissions (radiated)  | P       |

P: Pass  
F: Fail  
NM: Not Measured  
NA: Not Applicable

## 8. Document Revision History

| Revision # | Date       | Modified by | Revision Details |
|------------|------------|-------------|------------------|
| Rev.00     | 2017-11-30 | A.Sayoud    | First Issue      |

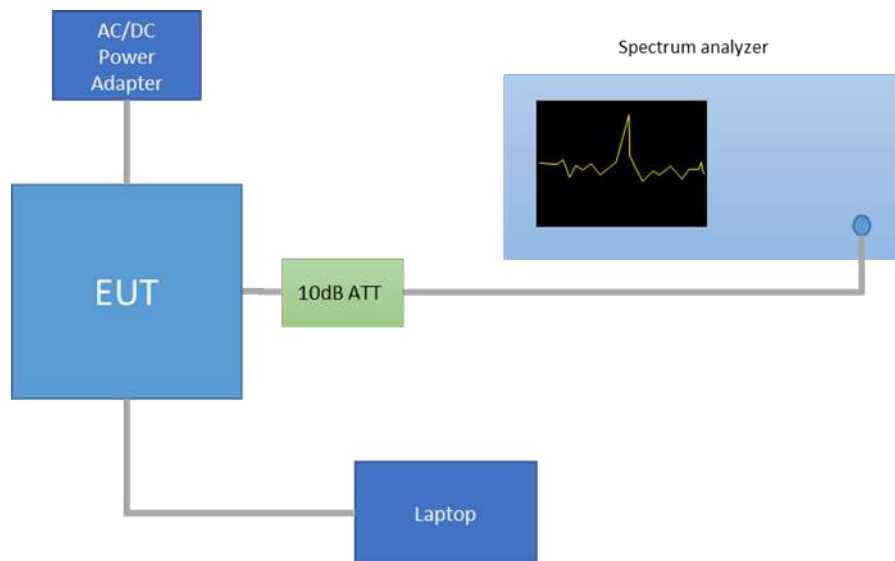
# Annex A. Test & System Description

## A.1 Measurement System

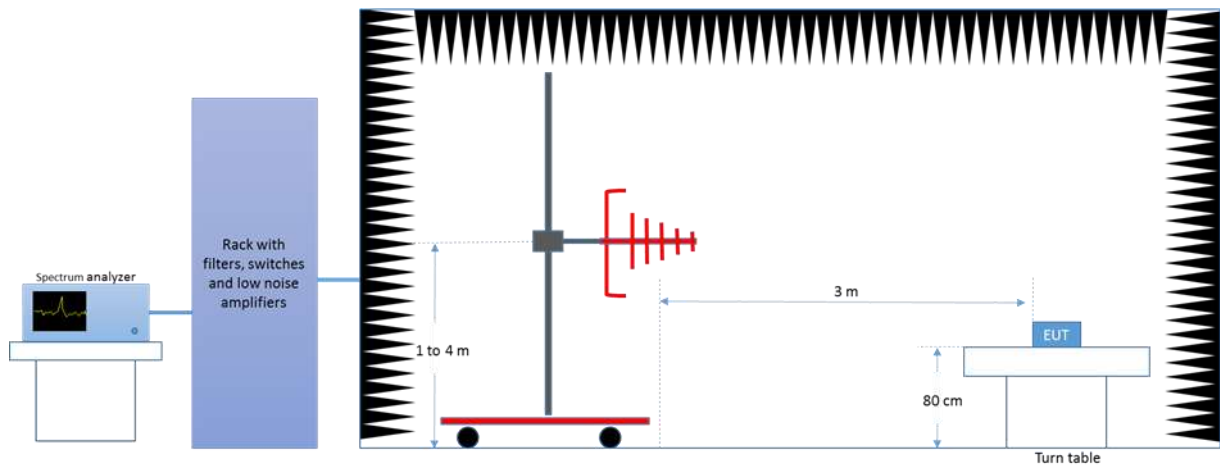
Measurements were performed using the following setups, made in accordance to the general provisions of FCC DTS Measurement KDB 558074 D01 DTS Meas Guidance.

The DUT was installed in a test fixture and this test fixture is connected to a laptop computer and AC/DC power adapter. The laptop computer was used to configure the EUT to continuously transmit at a specified output power using all different modes and modulation schemes, using the Intel proprietary tool DRTU.

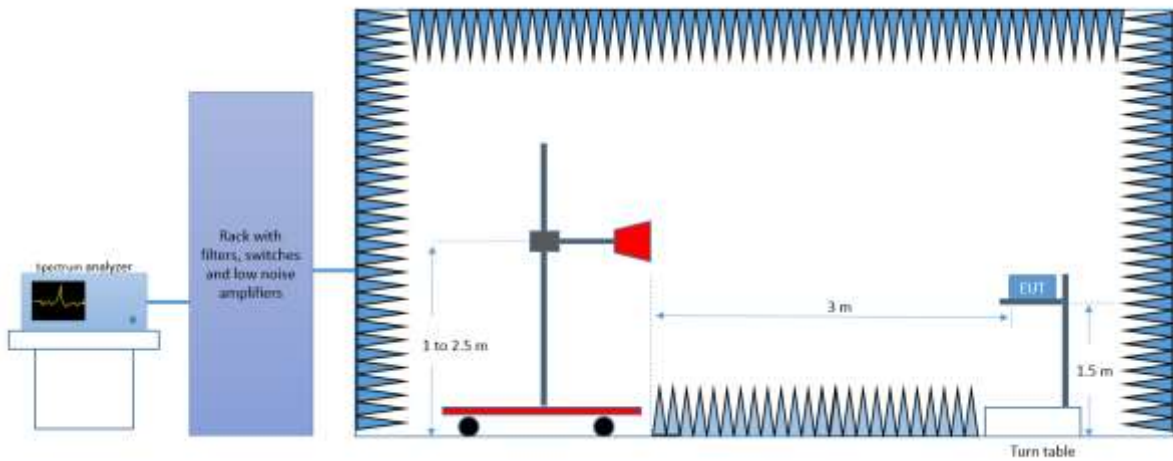
### Conducted Setup



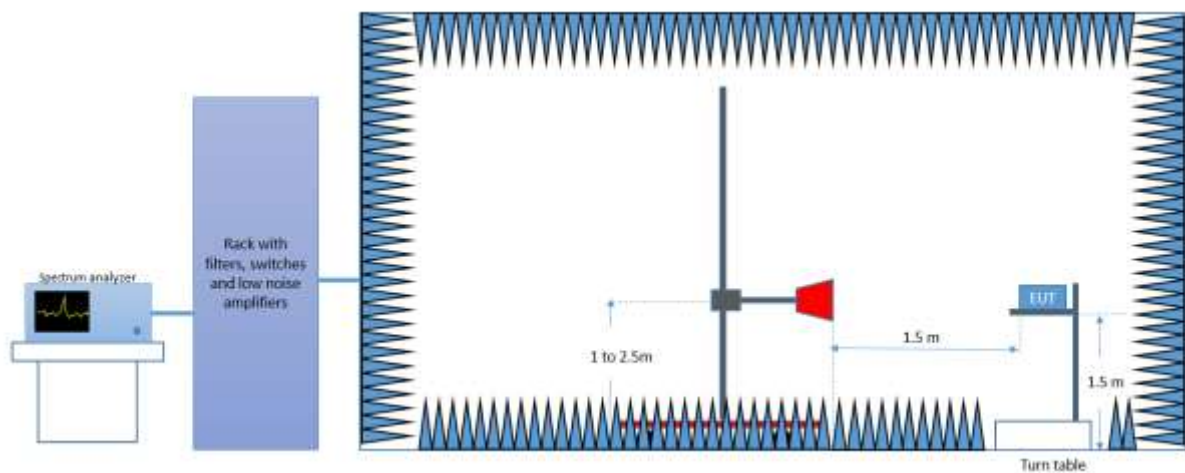
### Radiated Setup < 1GHz



### Radiated Setup 1 GHz – 18 GHz



### Radiated Setup > 18 GHz



## A.2 Test Equipment List

### Conducted Setup

| ID#  | Device            | Type/Model | Serial # | Manufacturer    | Cal. Date  | Cal. Due Date |
|------|-------------------|------------|----------|-----------------|------------|---------------|
| 0316 | Spectrum analyzer | FSV30      | 103309   | Rohde & Schwarz | 2017-09-22 | 2019-09-22    |

### Radiated Setup-1

| ID#  | Device                        | Type/Model | Serial #   | Manufacturer    | Cal. Date  | Cal. Due Date |
|------|-------------------------------|------------|------------|-----------------|------------|---------------|
| 0133 | Spectrum analyzer             | FSV40      | 101358     | Rohde & Schwarz | 2016-04-15 | 2018-04-15    |
| 0137 | Log antenna<br>30 MHz – 1 GHz | 3142E      | 00156946   | ETS Lindgren    | 2015-12-11 | 2017-12-11    |
| 0135 | Semi Anechoic chamber         | FACT 3     | 5720       | ETS Lindgren    | 2016-04-28 | 2018-04-28    |
| 0530 | Measurement Software          | EMC32      | 100623     | Rohde & Schwarz | N/A        | N/A           |
| 0296 | Power Supply                  | 6673A      | MY41000318 | Agilent         | N/A        | N/A           |
| 0346 | Multimeter                    | 34401A     | US36054685 | HP              | 2016-02-04 | 2018-02-04    |

N/A: Not Applicable

### Radiated Setup-2

| ID#  | Device                                        | Type/Model | Serial # | Manufacturer    | Cal. Date  | Cal. Due Date |
|------|-----------------------------------------------|------------|----------|-----------------|------------|---------------|
| 0420 | Spectrum analyzer                             | FSV40      | 101556   | Rohde & Schwarz | 2016-04-15 | 2018-04-15    |
| 0138 | Horn antenna<br>1 GHz – 6.4 GHz               | 3117       | 00152266 | ETS Lindgren    | 2016-03-14 | 2018-03-14    |
| 0141 | Double Ridged Horn Antenna<br>1 GHz – 18 GHz  | 3117       | 00157736 | ETS Lindgren    | 2016-04-13 | 2018-04-13    |
| 0409 | PreAmplifier                                  | 3117-PA    | 00157993 | ETS Lindgren    | N/A        | N/A           |
| 0334 | Double Ridged Horn Antenna<br>18 GHz – 40 GHz | 3116C-PA   | 00196308 | ETS Lindgren    | 2017-08-22 | 2019-08-22    |
| 0337 | Full Anechoic chamber                         | RFD_FA_100 | 5996     | ETS Lindgren    | 2016-04-28 | 2018-04-28    |
| 0329 | Measurement Software                          | EMC32      | 100401   | Rohde & Schwarz | N/A        | N/A           |

N/A: Not Applicable

### Radiated Setup - shared equipments

| ID#  | Device                                            | Type/Model | Serial # | Manufacturer    | Cal. Date  | Cal. Due Date |
|------|---------------------------------------------------|------------|----------|-----------------|------------|---------------|
| 0617 | Power Sensor<br>50MHz-18GHz<br>(Peak and average) | NRP-Z81    | 104386   | Rohde & Schwarz | 2017-05-24 | 2019-05-24    |
| 0618 | Power Sensor<br>50MHz-18GHz<br>(Peak and average) | NRP-Z81    | 104382   | Rohde & Schwarz | 2017-05-24 | 2019-05-24    |



### A.3 Measurement Uncertainty Evaluation

The system uncertainty evaluation is shown in the below table:

| Measurement type             | Uncertainty [ ±dB] |
|------------------------------|--------------------|
| Conducted Power              | ±1.0               |
| Conducted Spurious Emission  | ±2.9               |
| Radiated tests <1GHz         | ±3.8               |
| Radiated tests 1GHz - 40 GHz | ±4.7               |

# Annex B. Test Results DTS

## B.1 Test Conditions

For 802.11b/g modes the EUT can transmit at both CHAIN A and CHAIN B RF outputs individually, but not simultaneously.

For 802.11n20 (20 MHz channel bandwidth), 802.11n40 (40MHz channel bandwidth) modes the EUT can transmit at both CHAIN A and CHAIN B RF outputs individually, and also simultaneously.

For Bluetooth Low Energy mode the EUT can transmit only at CHAIN A RF output.

The conducted RF output power at each chain was adjusted according to the client's supplied Target values (see following table) using the Intel DRTU tool and measuring the power by using a spectrum analyzer with the channel integration method according to point 9.2.2.2 (Method AVGSA-1) of KDB 558074 D01.

Measured values for adjustment were within +/-0.25 dB from the declared Target values.

| 2.4GHz DTS & BLE     |          |           |      |             | Conducted Power, Target Value (dBm) |              |                            |
|----------------------|----------|-----------|------|-------------|-------------------------------------|--------------|----------------------------|
| Mode                 | BW (MHz) | Data Rate | CH # | Freq. (MHz) | SISO Chain A                        | SISO Chain B | MIMO at both ports A and B |
| 802.11b              | 20       | 1Mbps     | 1    | 2412        | 18.50                               | 19.00        | -                          |
|                      |          |           | 7    | 2442        | 21.00                               | 20.50        | -                          |
|                      |          |           | 11   | 2462        | 19.50                               | 19.50        | -                          |
|                      |          |           | 12   | 2467        | 17.00                               | 17.00        | -                          |
|                      |          |           | 13   | 2472        | 15.00                               | 15.00        | -                          |
| 802.11g              | 20       | 6Mbps     | 1    | 2412        | 16.00                               | 16.50        | -                          |
|                      |          |           | 7    | 2442        | 20.50                               | 20.00        | -                          |
|                      |          |           | 11   | 2462        | 16.50                               | 16.50        | -                          |
|                      |          |           | 12   | 2467        | 13.50                               | 13.50        | -                          |
|                      |          |           | 13   | 2472        | -5.50                               | -6.00        | -                          |
| 802.11n              | 20       | HT0 HT8*  | 1    | 2412        | 16.00                               | 16.00        | 18.50                      |
|                      |          |           | 7    | 2442        | 20.50                               | 19.50        | 20.50                      |
|                      |          |           | 11   | 2462        | 15.50                               | 16.00        | 18.00                      |
|                      |          |           | 12   | 2467        | 13.50                               | 13.00        | 15.50                      |
|                      |          |           | 13   | 2472        | -5.50                               | -6.50        | -5.50                      |
| 802.11n              | 40       | HT0 HT8*  | 3F   | 2422        | 14.50                               | 14.50        | 16.50                      |
|                      |          |           | 7F   | 2442        | 15.00                               | 14.50        | 17.50                      |
|                      |          |           | 9F   | 2452        | 14.00                               | 14.00        | 16.50                      |
|                      |          |           | 10F  | 2457        | 10.00                               | 9.50         | 12.00                      |
|                      |          |           | 11F  | 2462        | 3.50                                | 5.00         | 4.50                       |
| Bluetooth Low Energy | 2        | 1Mbps     | 0    | 2412        | -                                   | 8.00         | -                          |
|                      |          |           | 19   | 2440        | -                                   | 8.00         | -                          |
|                      |          |           | 39   | 2462        | -                                   | 8.50         | -                          |

The following data rates were selected based on preliminary testing that identified those rates as the worst cases for output power and spurious levels at the band edges:

802.11b → 1Mbps

802.11g → 6Mbps

802.11n20 and 802.11n40 (SISO) → HT0

802.11n20 and 802.11n40 (MIMO) → HT8

Alternative channels to the lowest and highest channels per band have been also tested for Band Edge compliance.

## B.2 Test Results Tables

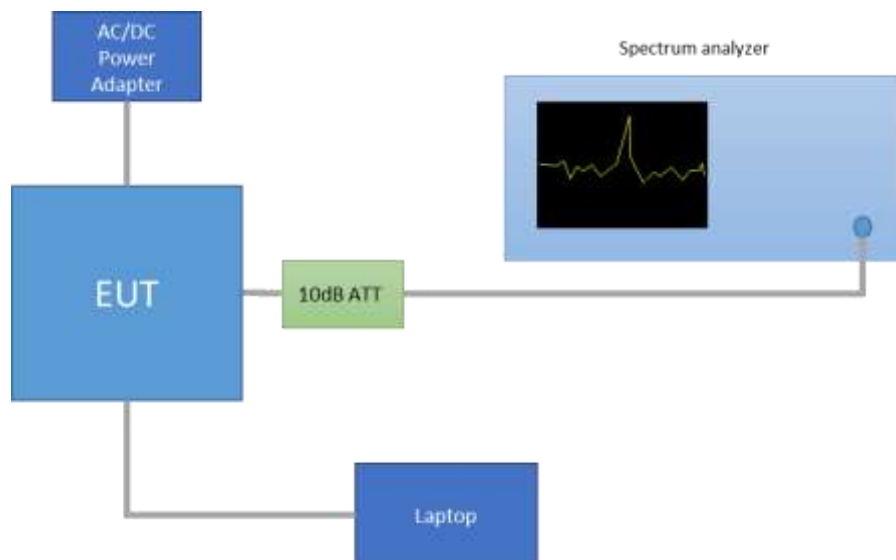
### B.2.1 6dB & 99% Bandwidth

#### Test limits

| FCC part       | RSS part                  | Limits                                                                                                                                                                      |
|----------------|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 15.247 (a) (2) | RSS-247<br>Clause 5.2 (a) | Systems using digital modulation techniques may operate in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz. |

#### Test procedure

The setup below was used to measure the 6dB & 99% Bandwidth. The antenna terminal of the EUT is connected to the spectrum through an attenuator, and the spectrum analyzer reading is compensated to include the RF path loss.



## Results tables

| Mode      | Rate  | Antenna      | Channel | Frequency [MHz] | 6dB BW [MHz] | 99% BW [MHz] |
|-----------|-------|--------------|---------|-----------------|--------------|--------------|
| 802.11b   | 1Mbps | SISO CHAIN A | 1       | 2412            | 10.10        | 13.81        |
|           |       |              | 7       | 2442            | 10.04        | 14.94        |
|           |       |              | 11      | 2462            | 10.10        | 13.91        |
|           |       |              | 12      | 2467            | 10.11        | 13.81        |
|           |       |              | 13      | 2472            | 10.11        | 13.44        |
|           |       | SISO CHAIN B | 1       | 2412            | 10.11        | 13.82        |
|           |       |              | 7       | 2442            | 10.11        | 14.53        |
|           |       |              | 11      | 2462            | 10.11        | 13.83        |
|           |       |              | 12      | 2467            | 10.11        | 13.79        |
|           |       |              | 13      | 2472            | 10.11        | 13.42        |
| 802.11g   | 6Mbps | SISO CHAIN A | 1       | 2412            | 16.34        | 16.81        |
|           |       |              | 7       | 2442            | 16.34        | 24.79        |
|           |       |              | 11      | 2462            | 16.35        | 16.82        |
|           |       |              | 12      | 2467            | 16.34        | 16.77        |
|           |       |              | 13      | 2472            | 16.35        | 16.85        |
|           |       | SISO CHAIN B | 1       | 2412            | 16.35        | 16.82        |
|           |       |              | 7       | 2442            | 16.34        | 20.87        |
|           |       |              | 11      | 2462            | 16.34        | 16.81        |
|           |       |              | 12      | 2467            | 16.35        | 16.79        |
|           |       |              | 13      | 2472            | 16.35        | 16.87        |
| 802.11n20 | HT0   | SISO CHAIN A | 1       | 2412            | 17.59        | 17.91        |
|           |       |              | 7       | 2442            | 17.57        | 25.10        |
|           |       |              | 11      | 2462            | 17.58        | 17.89        |
|           |       |              | 12      | 2467            | 17.58        | 17.89        |
|           |       |              | 13      | 2472            | 17.57        | 17.95        |
|           |       | SISO CHAIN B | 1       | 2412            | 17.59        | 17.89        |
|           |       |              | 7       | 2442            | 17.57        | 19.71        |
|           |       |              | 11      | 2462            | 17.59        | 17.92        |
|           |       |              | 12      | 2467            | 17.58        | 17.89        |
|           |       |              | 13      | 2472            | 17.57        | 17.95        |
|           | HT8   | MIMO CHAIN A | 1       | 2412            | 17.58        | 17.87        |
|           |       |              | 7       | 2442            | 17.58        | 18.03        |
|           |       |              | 11      | 2462            | 17.60        | 17.88        |
|           |       |              | 12      | 2467            | 17.59        | 17.86        |
|           |       |              | 13      | 2472            | 17.59        | 17.93        |
|           |       | MIMO CHAIN B | 1       | 2412            | 17.59        | 17.87        |
|           |       |              | 7       | 2442            | 17.58        | 18.11        |
|           |       |              | 11      | 2462            | 17.60        | 17.85        |
|           |       |              | 12      | 2467            | 17.59        | 17.83        |
|           |       |              | 13      | 2472            | 17.60        | 17.93        |

| Mode      | Rate | Antenna      | Channel | Frequency [MHz] | 6dB BW [MHz] | 99% BW [MHz] |
|-----------|------|--------------|---------|-----------------|--------------|--------------|
| 802.11n40 | HT0  | SISO CHAIN A | 3F      | 2422            | 36.34        | 36.50        |
|           |      |              | 7F      | 2442            | 36.11        | 36.50        |
|           |      |              | 9F      | 2452            | 36.33        | 36.50        |
|           |      |              | 10F     | 2457            | 36.35        | 36.46        |
|           |      |              | 11F     | 2462            | 36.11        | 36.48        |
|           |      | SISO CHAIN B | 3F      | 2422            | 36.35        | 36.51        |
|           |      |              | 7F      | 2442            | 36.18        | 36.51        |
|           |      |              | 9F      | 2452            | 36.10        | 36.51        |
|           |      |              | 10F     | 2457            | 36.11        | 36.46        |
|           |      |              | 11F     | 2462            | 36.18        | 36.51        |
|           | HT8  | MIMO CHAIN A | 3F      | 2422            | 36.11        | 36.52        |
|           |      |              | 7F      | 2442            | 36.15        | 36.53        |
|           |      |              | 9F      | 2452            | 36.10        | 36.53        |
|           |      |              | 10F     | 2457            | 36.13        | 36.49        |
|           |      |              | 11F     | 2462            | 36.34        | 36.46        |
|           |      | MIMO CHAIN B | 3F      | 2422            | 36.36        | 36.34        |
|           |      |              | 7F      | 2442            | 36.36        | 36.35        |
|           |      |              | 9F      | 2452            | 36.37        | 36.34        |
|           |      |              | 10F     | 2457            | 36.29        | 36.29        |
|           |      |              | 11F     | 2462            | 36.36        | 36.30        |

Max Value

See Section B.3.1 and Section B.3.2 for the screenshot results.

## B.2.2 Maximum Output Power and antenna gain

### Test limits

|                            | Limits                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| FCC Part 15.247<br>(b) (3) | <p>(b) The maximum peak conducted output power of the intentional radiator shall not exceed the following:</p> <p>(3) For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level.</p> <p>(4) The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi.</p> |
| RSS-247 Clause 5.4 (d)     | <p>For DTSs employing digital modulation techniques operating in the bands 902-928 MHz and 2400-2483.5 MHz, the maximum peak conducted output power shall not exceed 1W. The e.i.r.p. shall not exceed 4 W, except as provided in section 5.4(e).</p> <p>As an alternative to a peak power measurement, compliance can be based on a measurement of the maximum conducted output power. The maximum conducted output power is the total transmit power delivered to all antennas and antenna elements, averaged across all symbols in the signalling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or transmitting at a reduced power level. If multiple modes of operation are implemented, the maximum conducted output power is the highest total transmit power occurring in any mode.</p>                                   |

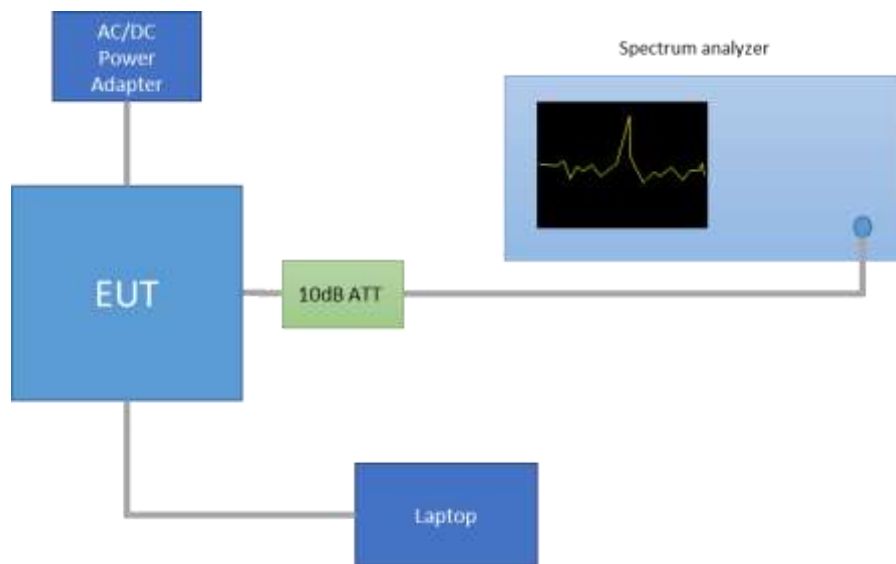
### Test procedure

The Maximum Peak Conducted Output Power was measured using the channel integration method as authorized in chapter 2.0 “*Power limits, definitions and device configuration*” of FCC KDB 558074 D01.

For MIMO mode, according to the measure-and-sum approach defined in FCC KDB 662911 - Guidance for Emission Testing of Transmitters with Multiple Outputs in the Same Band, the conducted emission level (e.g., transmit power or power in specified bandwidth) is measured at each antenna port. The measured results at the various antenna ports are then summed mathematically in linear power units to determine the total emission level from the device.

The EIRP power (dBm) is calculated by adding the declared maximum antenna gain to the measured conducted power. The declared maximum antenna gain is 3.24dBi.

The setup below was used to measure the maximum conducted output power. The antenna terminal of the EUT is connected to the spectrum through an attenuator, and the spectrum analyzer reading is compensated to include the RF path loss.



## Results tables

### Maximum peak conducted output power

| Mode      | Rate  | CH | Freq [MHz] | Antenna | Measured Conducted Output power [dBm] | EIRP [dBm] | EIRP [mW] | Conducted power [mW] |
|-----------|-------|----|------------|---------|---------------------------------------|------------|-----------|----------------------|
| 802.11b   | 1Mbps | 1  | 2412       | SISO A  | 21.65                                 | 24.89      | 308.32    | 146.22               |
|           |       |    |            | SISO B  | 21.73                                 | 24.97      | 314.05    | 148.94               |
|           |       | 7  | 2442       | SISO A  | 24.15                                 | 27.39      | 548.28    | 260.02               |
|           |       |    |            | SISO B  | 23.80                                 | 27.04      | 505.82    | 239.88               |
|           |       | 11 | 2462       | SISO A  | 22.35                                 | 25.59      | 362.24    | 171.79               |
|           |       |    |            | SISO B  | 22.68                                 | 25.92      | 390.84    | 185.35               |
|           |       | 12 | 2467       | SISO A  | 19.99                                 | 23.23      | 210.38    | 99.77                |
|           |       |    |            | SISO B  | 19.88                                 | 23.12      | 205.12    | 97.27                |
|           |       | 13 | 2472       | SISO A  | 18.08                                 | 21.32      | 135.52    | 64.27                |
|           |       |    |            | SISO B  | 17.96                                 | 21.20      | 131.83    | 62.52                |
| 802.11g   | 6Mbps | 1  | 2412       | SISO A  | 24.60                                 | 27.84      | 608.14    | 288.40               |
|           |       |    |            | SISO B  | 24.80                                 | 28.04      | 636.80    | 302.00               |
|           |       | 7  | 2442       | SISO A  | 29.72                                 | 32.96      | 1976.97   | 937.56               |
|           |       |    |            | SISO B  | 28.70                                 | 31.94      | 1563.15   | 741.31               |
|           |       | 11 | 2462       | SISO A  | 24.85                                 | 28.09      | 644.17    | 305.49               |
|           |       |    |            | SISO B  | 25.16                                 | 28.40      | 691.83    | 328.10               |
|           |       | 12 | 2467       | SISO A  | 22.11                                 | 25.35      | 342.77    | 162.55               |
|           |       |    |            | SISO B  | 21.93                                 | 25.17      | 328.85    | 155.96               |
|           |       | 13 | 2472       | SISO A  | 3.18                                  | 6.42       | 4.39      | 2.08                 |
|           |       |    |            | SISO B  | 2.43                                  | 5.67       | 3.69      | 1.75                 |
| 802.11n20 | HT0   | 1  | 2412       | SISO A  | 24.29                                 | 27.53      | 566.24    | 268.53               |
|           |       |    |            | SISO B  | 24.48                                 | 27.72      | 591.56    | 280.54               |
|           |       | 7  | 2442       | SISO A  | 29.45                                 | 32.69      | 1857.80   | 881.05               |
|           |       |    |            | SISO B  | 28.21                                 | 31.45      | 1396.37   | 662.22               |
|           |       | 11 | 2462       | SISO A  | 24.32                                 | 27.56      | 570.16    | 270.40               |
|           |       |    |            | SISO B  | 24.53                                 | 27.77      | 598.41    | 283.79               |
|           |       | 12 | 2467       | SISO A  | 21.95                                 | 25.19      | 330.37    | 156.68               |
|           |       |    |            | SISO B  | 21.57                                 | 24.81      | 302.69    | 143.55               |
|           |       | 13 | 2472       | SISO A  | 3.06                                  | 6.30       | 4.27      | 2.02                 |
|           |       |    |            | SISO B  | 2.32                                  | 5.56       | 3.60      | 1.71                 |

Max Value

Min Value



| Mode      | Rate | CH | Freq [MHz] | Antenna      | Measured Conducted Output power [dBm] | EIRP [dBm] | EIRP [mW] | Conducted power [mW] |
|-----------|------|----|------------|--------------|---------------------------------------|------------|-----------|----------------------|
| 802.11n20 | HT8  | 1  | 2412       | MIMO A       | 23.66                                 | 26.90      | 489.78    | 232.27               |
|           |      |    |            | MIMO B       | 24.36                                 | 27.60      | 575.44    | 272.90               |
|           |      |    |            | Combined A+B | 27.03                                 | 30.27      | 1065.22   | 505.17               |
|           |      | 7  | 2442       | MIMO A       | 26.12                                 | 29.36      | 862.98    | 409.26               |
|           |      |    |            | MIMO B       | 26.84                                 | 30.08      | 1018.59   | 483.06               |
|           |      |    |            | Combined A+B | 29.51                                 | 32.75      | 1881.57   | 892.32               |
|           |      | 11 | 2462       | MIMO A       | 23.64                                 | 26.88      | 487.53    | 231.21               |
|           |      |    |            | MIMO B       | 23.84                                 | 27.08      | 510.50    | 242.10               |
|           |      |    |            | Combined A+B | 26.75                                 | 29.99      | 998.03    | 473.31               |
|           |      | 12 | 2467       | MIMO A       | 21.25                                 | 24.49      | 281.19    | 133.35               |
|           |      |    |            | MIMO B       | 21.46                                 | 24.70      | 295.12    | 139.96               |
|           |      |    |            | Combined A+B | 24.37                                 | 27.61      | 576.31    | 273.31               |
|           |      | 13 | 2472       | MIMO A       | 0.33                                  | 3.57       | 2.28      | 1.08                 |
|           |      |    |            | MIMO B       | -0.06                                 | 3.18       | 2.08      | 0.99                 |
|           |      |    |            | Combined A+B | 3.15                                  | 6.39       | 4.35      | 2.07                 |

Max Value

Min Value

| Mode      | Rate | CH  | Freq [MHz] | Antenna      | Measured Conducted Output power [dBm] | EIRP [dBm] | EIRP [mW] | Conducted power [mW] |
|-----------|------|-----|------------|--------------|---------------------------------------|------------|-----------|----------------------|
| 802.11n40 | HT0  | 3F  | 2422       | SISO A       | 22.94                                 | 26.18      | 414.95    | 196.79               |
|           |      |     |            | SISO B       | 22.97                                 | 26.21      | 417.83    | 198.15               |
|           |      | 7F  | 2442       | SISO A       | 23.85                                 | 27.09      | 511.68    | 242.66               |
|           |      |     |            | SISO B       | 24.06                                 | 27.30      | 537.03    | 254.68               |
|           |      | 9F  | 2452       | SISO A       | 22.71                                 | 25.95      | 393.55    | 186.64               |
|           |      |     |            | SISO B       | 22.52                                 | 25.76      | 376.70    | 178.65               |
|           |      | 10F | 2457       | SISO A       | 18.14                                 | 21.38      | 137.40    | 65.16                |
|           |      |     |            | SISO B       | 17.70                                 | 20.94      | 124.17    | 58.88                |
|           |      | 11F | 2462       | SISO A       | 11.78                                 | 15.02      | 31.77     | 15.07                |
|           |      |     |            | SISO B       | 13.11                                 | 16.35      | 43.15     | 20.46                |
|           | HT8  | 3F  | 2422       | MIMO A       | 22.36                                 | 25.60      | 363.08    | 172.19               |
|           |      |     |            | MIMO B       | 22.49                                 | 25.73      | 374.11    | 177.42               |
|           |      |     |            | Combined A+B | 25.44                                 | 28.68      | 737.19    | 349.61               |
|           |      | 7F  | 2442       | MIMO A       | 23.21                                 | 26.45      | 441.57    | 209.41               |
|           |      |     |            | MIMO B       | 23.70                                 | 26.94      | 494.31    | 234.42               |
|           |      |     |            | Combined A+B | 26.47                                 | 29.71      | 935.88    | 443.83               |
|           |      | 9F  | 2452       | MIMO A       | 22.31                                 | 25.55      | 358.92    | 170.22               |
|           |      |     |            | MIMO B       | 22.44                                 | 25.68      | 369.83    | 175.39               |
|           |      |     |            | Combined A+B | 25.39                                 | 28.63      | 728.75    | 345.60               |
|           |      | 10F | 2457       | MIMO A       | 17.84                                 | 21.08      | 128.23    | 60.81                |
|           |      |     |            | MIMO B       | 17.92                                 | 21.16      | 130.62    | 61.94                |
|           |      |     |            | Combined A+B | 20.89                                 | 24.13      | 258.85    | 122.76               |
|           |      | 11F | 2462       | MIMO A       | 9.77                                  | 13.01      | 20.00     | 9.48                 |
|           |      |     |            | MIMO B       | 10.52                                 | 13.76      | 23.77     | 11.27                |
|           |      |     |            | Combined A+B | 13.17                                 | 16.41      | 43.77     | 20.76                |

Max Value

Min Value

Maximum (Average) conducted output power\*

| Mode      | Rate  | CH | Freq [MHz] | Antenna | Measured average conducted power [dBm] | Maximum** (average) conducted output power [dBm] | EIRP [dBm] | Average Output Power [mW] |
|-----------|-------|----|------------|---------|----------------------------------------|--------------------------------------------------|------------|---------------------------|
| 802.11b   | 1Mbps | 1  | 2412       | SISO A  | 18.67                                  | 18.67                                            | 21.91      | 73.62                     |
|           |       |    |            | SISO B  | 18.77                                  | 18.77                                            | 22.01      | 75.34                     |
|           |       | 7  | 2442       | SISO A  | 21.12                                  | 21.12                                            | 24.36      | 129.42                    |
|           |       |    |            | SISO B  | 20.71                                  | 20.71                                            | 23.95      | 117.76                    |
|           |       | 11 | 2462       | SISO A  | 19.30                                  | 19.30                                            | 22.54      | 85.11                     |
|           |       |    |            | SISO B  | 19.65                                  | 19.65                                            | 22.89      | 92.26                     |
|           |       | 12 | 2467       | SISO A  | 16.96                                  | 16.96                                            | 20.20      | 49.66                     |
|           |       |    |            | SISO B  | 16.85                                  | 16.85                                            | 20.09      | 48.42                     |
|           |       | 13 | 2472       | SISO A  | 15.05                                  | 15.05                                            | 18.29      | 31.99                     |
|           |       |    |            | SISO B  | 14.91                                  | 14.91                                            | 18.15      | 30.97                     |
| 802.11g   | 6Mbps | 1  | 2412       | SISO A  | 16.12                                  | 16.12                                            | 19.36      | 40.93                     |
|           |       |    |            | SISO B  | 16.32                                  | 16.32                                            | 19.56      | 42.85                     |
|           |       | 7  | 2442       | SISO A  | 20.67                                  | 20.67                                            | 23.91      | 116.68                    |
|           |       |    |            | SISO B  | 19.88                                  | 19.88                                            | 23.12      | 97.27                     |
|           |       | 11 | 2462       | SISO A  | 16.33                                  | 16.33                                            | 19.57      | 42.95                     |
|           |       |    |            | SISO B  | 16.63                                  | 16.63                                            | 19.87      | 46.03                     |
|           |       | 12 | 2467       | SISO A  | 13.61                                  | 13.61                                            | 16.85      | 22.96                     |
|           |       |    |            | SISO B  | 13.37                                  | 13.37                                            | 16.61      | 21.73                     |
|           |       | 13 | 2472       | SISO A  | -5.35                                  | -5.35                                            | -2.11      | 0.29                      |
|           |       |    |            | SISO B  | -6.12                                  | -6.12                                            | -2.88      | 0.24                      |
| 802.11n20 | HT0   | 1  | 2412       | SISO A  | 15.80                                  | 15.80                                            | 19.04      | 38.02                     |
|           |       |    |            | SISO B  | 16.00                                  | 16.00                                            | 19.24      | 39.81                     |
|           |       | 7  | 2442       | SISO A  | 20.56                                  | 20.56                                            | 23.80      | 113.76                    |
|           |       |    |            | SISO B  | 19.50                                  | 19.50                                            | 22.74      | 89.13                     |
|           |       | 11 | 2462       | SISO A  | 15.73                                  | 15.73                                            | 18.97      | 37.41                     |
|           |       |    |            | SISO B  | 15.99                                  | 15.99                                            | 19.23      | 39.72                     |
|           |       | 12 | 2467       | SISO A  | 13.39                                  | 13.39                                            | 16.63      | 21.83                     |
|           |       |    |            | SISO B  | 13.10                                  | 13.10                                            | 16.34      | 20.42                     |
|           |       | 13 | 2472       | SISO A  | -5.51                                  | -5.51                                            | -2.27      | 0.28                      |
|           |       |    |            | SISO B  | -6.26                                  | -6.26                                            | -3.02      | 0.24                      |

| Mode      | Rate | CH | Freq [MHz] | Antenna      | Measured average conducted power [dBm] | Maximum** (average) conducted output power [dBm] | EIRP [dBm] | Average Output Power [mW] |
|-----------|------|----|------------|--------------|----------------------------------------|--------------------------------------------------|------------|---------------------------|
| 802.11n20 | HT8  | 1  | 2412       | MIMO A       | 15.04                                  | 15.13                                            | 18.37      | 32.61                     |
|           |      |    |            | MIMO B       | 15.28                                  | 15.37                                            | 18.61      | 34.46                     |
|           |      |    |            | Combined A+B | 18.17                                  | 18.26                                            | 21.50      | 67.06                     |
|           |      | 7  | 2442       | MIMO A       | 17.38                                  | 17.47                                            | 20.71      | 55.88                     |
|           |      |    |            | MIMO B       | 17.71                                  | 17.80                                            | 21.04      | 60.30                     |
|           |      |    |            | Combined A+B | 20.56                                  | 20.65                                            | 23.89      | 116.18                    |
|           |      | 11 | 2462       | MIMO A       | 14.97                                  | 15.06                                            | 18.30      | 32.08                     |
|           |      |    |            | MIMO B       | 14.73                                  | 14.82                                            | 18.06      | 30.36                     |
|           |      |    |            | Combined A+B | 17.86                                  | 17.95                                            | 21.19      | 62.44                     |
|           |      | 12 | 2467       | MIMO A       | 12.60                                  | 12.69                                            | 15.93      | 18.59                     |
|           |      |    |            | MIMO B       | 12.35                                  | 12.44                                            | 15.68      | 17.55                     |
|           |      |    |            | Combined A+B | 15.49                                  | 15.58                                            | 18.82      | 36.14                     |
|           |      | 13 | 2472       | MIMO A       | -8.33                                  | -8.24                                            | -5.00      | 0.15                      |
|           |      |    |            | MIMO B       | -9.20                                  | -9.11                                            | -5.87      | 0.12                      |
|           |      |    |            | Combined A+B | -5.73                                  | -5.64                                            | -2.40      | 0.27                      |

| Mode      | Rate | CH  | Freq [MHz] | Antenna      | Measured average conducted power [dBm] | Maximum** (average) conducted output power [dBm] | EIRP [dBm] | Average Output Power [mW] |
|-----------|------|-----|------------|--------------|----------------------------------------|--------------------------------------------------|------------|---------------------------|
| 802.11n40 | HT0  | 3F  | 2422       | SISO A       | 14.15                                  | 14.31                                            | 17.55      | 26.95                     |
|           |      |     |            | SISO B       | 14.18                                  | 14.34                                            | 17.58      | 27.13                     |
|           |      | 7F  | 2442       | SISO A       | 15.01                                  | 15.17                                            | 18.41      | 32.85                     |
|           |      |     |            | SISO B       | 14.18                                  | 14.34                                            | 17.58      | 27.13                     |
|           |      | 9F  | 2452       | SISO A       | 13.92                                  | 14.08                                            | 17.32      | 25.56                     |
|           |      |     |            | SISO B       | 13.74                                  | 13.90                                            | 17.14      | 24.52                     |
|           |      | 10F | 2457       | SISO A       | 9.19                                   | 9.35                                             | 12.59      | 8.60                      |
|           |      |     |            | SISO B       | 9.61                                   | 9.77                                             | 13.01      | 9.47                      |
|           |      | 11F | 2462       | SISO A       | 4.66                                   | 4.82                                             | 8.06       | 3.03                      |
|           |      |     |            | SISO B       | 3.29                                   | 3.45                                             | 6.69       | 2.21                      |
|           | HT8  | 3F  | 2422       | MIMO A       | 13.44                                  | 13.64                                            | 16.88      | 23.10                     |
|           |      |     |            | MIMO B       | 13.07                                  | 13.27                                            | 16.51      | 21.21                     |
|           |      |     |            | Combined A+B | 16.27                                  | 16.46                                            | 19.70      | 44.30                     |
|           |      | 7F  | 2442       | MIMO A       | 14.29                                  | 14.49                                            | 17.73      | 28.09                     |
|           |      |     |            | MIMO B       | 14.30                                  | 14.50                                            | 17.74      | 28.15                     |
|           |      |     |            | Combined A+B | 17.31                                  | 17.50                                            | 20.74      | 56.24                     |
|           |      | 9F  | 2452       | MIMO A       | 13.41                                  | 13.61                                            | 16.85      | 22.94                     |
|           |      |     |            | MIMO B       | 13.04                                  | 13.24                                            | 16.48      | 21.06                     |
|           |      |     |            | Combined A+B | 16.24                                  | 16.43                                            | 19.67      | 44.00                     |
|           |      | 10F | 2457       | MIMO A       | 9.18                                   | 9.38                                             | 12.62      | 8.66                      |
|           |      |     |            | MIMO B       | 8.65                                   | 8.85                                             | 12.09      | 7.67                      |
|           |      |     |            | Combined A+B | 11.93                                  | 12.13                                            | 15.37      | 16.33                     |
|           |      | 11F | 2462       | MIMO A       | 1.12                                   | 1.32                                             | 4.56       | 1.35                      |
|           |      |     |            | MIMO B       | 1.30                                   | 1.50                                             | 4.74       | 1.41                      |
|           |      |     |            | Combined A+B | 4.22                                   | 4.42                                             | 7.66       | 2.76                      |

\* Maximum (average) conducted output power are shown for indicative purpose only.

\*\* Duty cycle compensated

**See Section B.3.3 for the screenshot results.**

## B.2.3 Power Spectral Density

### Test limits

| FCC part   | RSS part                  | Limits                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------------|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 15.247 (e) | RSS-247<br>Clause 5.2 (b) | For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density. |

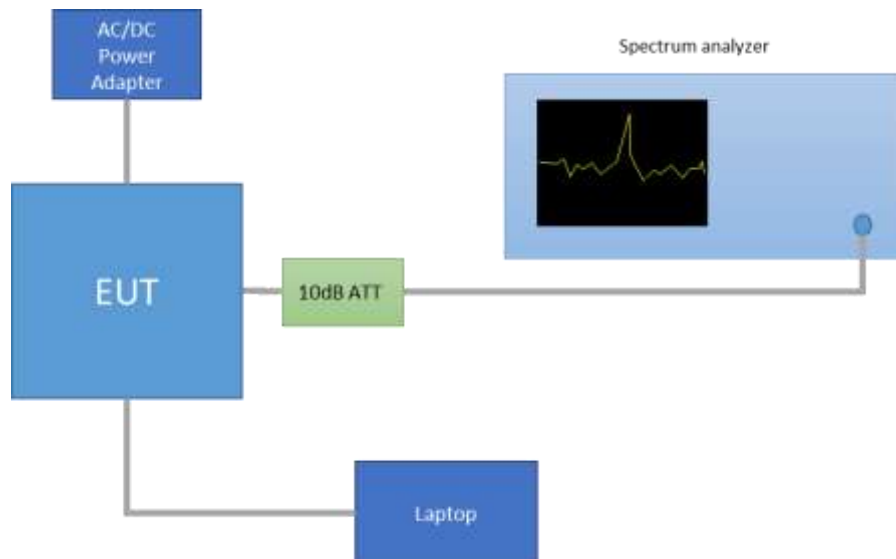
### Test procedure

The peak power spectral density level in the fundamental emission was measured using the *Method PKPSD (peak PSD)* according to point 10.2 of KDB 558074 D01 DTS Meas Guidance. This method was used for 802.11b, 802.11g, 802.11n20 and 802.11n40 modes.

For MIMO mode, the *Measure and add  $10 \log(N_{ANT})$  dB*, (where  $N_{ANT}$  is the number of outputs) technique was used according to the Guidance for Emission Testing of Transmitters with Multiple Outputs in the Same Band 662911 D01 Multiple Transmitter Output v02r01.

With this technique, spectrum measurements are performed at each output of the device, and the quantity  $10 \log(N_{ANT})$  dB is added to each spectrum value before comparing to the emission limit. Number of outputs = 2.

The setup below was used to measure the power spectral density. The antenna terminal of the EUT is connected to the spectrum through an attenuator, and the spectrum analyzer reading is compensated to include the RF path loss.



# Results tables

| Mode      | Rate  | Channel | Frequency [MHz] | Antenna      | PSD Peak [dBm] |
|-----------|-------|---------|-----------------|--------------|----------------|
| 802.11b   | 1Mbps | 1       | 2412            | SISO CHAIN A | -3.95          |
|           |       |         |                 | SISO CHAIN B | -3.86          |
|           |       | 7       | 2442            | SISO CHAIN A | -1.61          |
|           |       |         |                 | SISO CHAIN B | -2.01          |
|           |       | 11      | 2462            | SISO CHAIN A | -3.37          |
|           |       |         |                 | SISO CHAIN B | -3.02          |
|           |       | 12      | 2467            | SISO CHAIN A | -5.70          |
|           |       |         |                 | SISO CHAIN B | -5.83          |
| 802.11g   | 6Mbps | 1       | 2412            | SISO CHAIN A | -7.56          |
|           |       |         |                 | SISO CHAIN B | -7.68          |
|           |       | 7       | 2442            | SISO CHAIN A | -8.55          |
|           |       |         |                 | SISO CHAIN B | -8.40          |
|           |       | 11      | 2462            | SISO CHAIN A | -3.37          |
|           |       |         |                 | SISO CHAIN B | -4.67          |
|           |       | 12      | 2467            | SISO CHAIN A | -8.20          |
|           |       |         |                 | SISO CHAIN B | -8.01          |
| 802.11n20 | HT0   | 1       | 2412            | SISO CHAIN A | -11.18         |
|           |       |         |                 | SISO CHAIN B | -11.17         |
|           |       | 7       | 2442            | SISO CHAIN A | -29.89         |
|           |       |         |                 | SISO CHAIN B | -30.62         |
|           |       | 11      | 2462            | SISO CHAIN A | -8.47          |
|           |       |         |                 | SISO CHAIN B | -7.71          |
|           |       | 12      | 2467            | SISO CHAIN A | -3.37          |
|           |       |         |                 | SISO CHAIN B | -4.62          |
| 802.11n40 | HT0   | 3F      | 2422            | SISO CHAIN A | -8.17          |
|           |       |         |                 | SISO CHAIN B | -7.89          |
|           |       | 7F      | 2442            | SISO CHAIN A | -10.37         |
|           |       |         |                 | SISO CHAIN B | -11.02         |
|           |       | 9F      | 2452            | SISO CHAIN A | -11.02         |
|           |       |         |                 | SISO CHAIN B | -10.37         |
|           |       | 10F     | 2457            | SISO CHAIN A | -29.27         |
|           |       |         |                 | SISO CHAIN B | -30.09         |
| 802.11n40 | HT0   | 11F     | 2462            | SISO CHAIN A | -13.40         |
|           |       |         |                 | SISO CHAIN B | -13.00         |
|           |       | 7F      | 2442            | SISO CHAIN A | -11.61         |
|           |       |         |                 | SISO CHAIN B | -11.81         |
|           |       | 9F      | 2452            | SISO CHAIN A | -13.35         |
|           |       |         |                 | SISO CHAIN B | -12.57         |
|           |       | 10F     | 2457            | SISO CHAIN A | -18.31         |
|           |       |         |                 | SISO CHAIN B | -17.37         |
| 802.11n40 | HT0   | 11F     | 2462            | SISO CHAIN A | -22.86         |
|           |       |         |                 | SISO CHAIN B | -10.82         |

| MIMO modes |      |     |             |         | PSD Peak [dBm]     |                                                |
|------------|------|-----|-------------|---------|--------------------|------------------------------------------------|
| Mode       | Rate | CH  | Freq. [MHz] | Antenna | Measured Conducted | MIMO Combined $+10 \cdot \log(N_{\text{ant}})$ |
| 802.11n20  | HT8  | 1   | 2412        | CHAIN A | -9.64              | -6.63                                          |
|            |      |     |             | CHAIN B | -9.04              | -6.03                                          |
|            |      | 7   | 2442        | CHAIN A | -7.41              | -4.40                                          |
|            |      |     |             | CHAIN B | -7.00              | -3.99                                          |
|            |      | 11  | 2462        | CHAIN A | -9.86              | -6.85                                          |
|            |      |     |             | CHAIN B | -9.74              | -6.73                                          |
|            |      | 12  | 2467        | CHAIN A | -12.24             | -9.23                                          |
|            |      |     |             | CHAIN B | -11.78             | -8.77                                          |
|            |      | 13  | 2472        | CHAIN A | -33.19             | -30.18                                         |
|            |      |     |             | CHAIN B | -33.47             | -30.46                                         |
| 802.11n40  | HT8  | 3F  | 2422        | CHAIN A | -13.94             | -10.93                                         |
|            |      |     |             | CHAIN B | -13.68             | -10.67                                         |
|            |      | 7F  | 2442        | CHAIN A | -13.04             | -10.03                                         |
|            |      |     |             | CHAIN B | -12.53             | -9.52                                          |
|            |      | 9F  | 2452        | CHAIN A | -14.08             | -11.07                                         |
|            |      |     |             | CHAIN B | -13.70             | -10.69                                         |
|            |      | 10F | 2457        | CHAIN A | -18.13             | -15.12                                         |
|            |      |     |             | CHAIN B | -17.81             | -14.80                                         |
|            |      | 11F | 2462        | CHAIN A | -26.32             | 5.47                                           |
|            |      |     |             | CHAIN B | -25.11             | -22.10                                         |

Max Value

See Section B.3.4 for the screenshot results



## B.2.4 Out-of-band emission (conducted)

### Test Limits

| FCC part         | RSS part              | Limits                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                    |                       |                         |                    |       |     |    |   |        |     |      |   |         |     |    |   |           |     |    |   |
|------------------|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-----------------------|-------------------------|--------------------|-------|-----|----|---|--------|-----|------|---|---------|-----|----|---|-----------|-----|----|---|
| 15.247 (d)       | RSS-247<br>Clause 5.5 | In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |                       |                         |                    |       |     |    |   |        |     |      |   |         |     |    |   |           |     |    |   |
| 15.209           | RSS-Gen<br>Clause 8.9 | <p>Radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a):</p> <table><tr><th>Freq Range (MHz)</th><th>Field Strength (μV/m)</th><th>Field Strength (dBμV/m)</th><th>Meas. Distance (m)</th></tr><tr><td>30-88</td><td>100</td><td>40</td><td>3</td></tr><tr><td>88-216</td><td>150</td><td>43.5</td><td>3</td></tr><tr><td>216-960</td><td>200</td><td>46</td><td>3</td></tr><tr><td>Above 960</td><td>500</td><td>54</td><td>3</td></tr></table> <p>The emission limits shown in the above table are based on measurements employing CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.</p> <p>For average radiated emission measurements above 1000 MHz, there is also a limit specified when measuring with peak detector function, corresponding to 20 dB above the indicated values in the table.</p> | Freq Range (MHz)   | Field Strength (μV/m) | Field Strength (dBμV/m) | Meas. Distance (m) | 30-88 | 100 | 40 | 3 | 88-216 | 150 | 43.5 | 3 | 216-960 | 200 | 46 | 3 | Above 960 | 500 | 54 | 3 |
| Freq Range (MHz) | Field Strength (μV/m) | Field Strength (dBμV/m)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Meas. Distance (m) |                       |                         |                    |       |     |    |   |        |     |      |   |         |     |    |   |           |     |    |   |
| 30-88            | 100                   | 40                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 3                  |                       |                         |                    |       |     |    |   |        |     |      |   |         |     |    |   |           |     |    |   |
| 88-216           | 150                   | 43.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 3                  |                       |                         |                    |       |     |    |   |        |     |      |   |         |     |    |   |           |     |    |   |
| 216-960          | 200                   | 46                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 3                  |                       |                         |                    |       |     |    |   |        |     |      |   |         |     |    |   |           |     |    |   |
| Above 960        | 500                   | 54                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 3                  |                       |                         |                    |       |     |    |   |        |     |      |   |         |     |    |   |           |     |    |   |

### Test procedure

The setup below was used to measure the out-of-band emissions. The antenna terminal of the EUT is connected to the spectrum analyzer through an attenuator, and the spectrum analyzer reading is compensated to include the RF path loss.

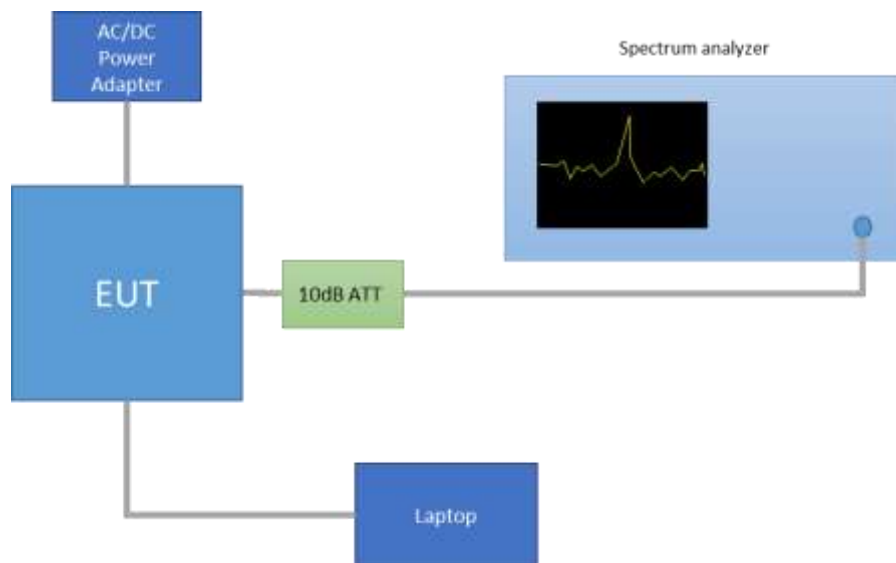
The Band Edge High, was measured using the method according to point 13.3 (Integration Method) of KDB 558074 D01 DTS Meas Guidance v04.

In case of Band Edge measurements falling in restricted bands, the declared Antenna Gain is also compensated in the graph. The declared maximum antenna gain is 3.24dBi.

For Band Edge measurements falling in restricted bands, the following limits in dBm were applied for the average detector after the conversion from the limits detailed above in dBμV/m, according to FCC 47 CFR part 15 - Subpart C – §15.209(a). The limits in dBm for peak detector are 20dB above the indicated values in the table.

| §15.209(a)       |              |                                   | Converted values                     |             |
|------------------|--------------|-----------------------------------|--------------------------------------|-------------|
| Freq Range (MHz) | Distance (m) | Field strength (microvolts/meter) | Field strength (dB microvolts/meter) | Power (dBm) |
| Above 960        | 3            | 500                               | 54.0                                 | -41.2       |

The setup below was used to measure the out-of-band emissions. The antenna terminal of the EUT is connected to the spectrum through an attenuator, and the spectrum analyzer reading is compensated to include the RF path loss.



Note: these PSD<sub>Peak</sub> values are shown just as a reference for the compliance of the Out-of-band Measurements. Thus the RBW used for these measurements was 100kHz.

| Mode    | Rate  | Measured Duty Cycle [%] | Channel | Frequency [MHz] | Antenna      | PSD Peak [dBm] |
|---------|-------|-------------------------|---------|-----------------|--------------|----------------|
| 802.11b | 1Mbps | 98.77%                  | 1       | 2412            | SISO CHAIN A | 9.49           |
|         |       |                         |         |                 | SISO CHAIN B | 9.36           |
|         |       |                         | 7       | 2437            | SISO CHAIN A | 11.88          |
|         |       |                         |         |                 | SISO CHAIN B | 11.47          |
|         |       |                         | 11      | 2462            | SISO CHAIN A | 10.01          |
|         |       |                         |         |                 | SISO CHAIN B | 10.38          |
|         |       |                         | 12      | 2467            | SISO CHAIN A | 7.68           |
|         |       |                         |         |                 | SISO CHAIN B | 7.57           |
|         |       |                         | 13      | 2472            | SISO CHAIN A | 5.82           |
|         |       |                         |         |                 | SISO CHAIN B | 5.68           |

| Mode      | Rate  | Measured Duty Cycle [%] | Channel | Frequency [MHz] | Antenna      | PSD Peak [dBm] |
|-----------|-------|-------------------------|---------|-----------------|--------------|----------------|
| 802.11g   | 6Mbps | 98.14%                  | 1       | 2412            | SISO CHAIN A | 5.20           |
|           |       |                         |         |                 | SISO CHAIN B | 5.42           |
|           |       |                         | 7       | 2437            | SISO CHAIN A | 10.42          |
|           |       |                         |         |                 | SISO CHAIN B | 9.54           |
|           |       |                         | 11      | 2462            | SISO CHAIN A | 5.56           |
|           |       |                         |         |                 | SISO CHAIN B | 5.81           |
|           |       |                         | 12      | 2467            | SISO CHAIN A | 2.80           |
|           |       |                         |         |                 | SISO CHAIN B | 2.55           |
| 802.11n20 | HT0   | 98.26%                  | 1       | 2412            | SISO CHAIN A | 4.92           |
|           |       |                         |         |                 | SISO CHAIN B | 5.03           |
|           |       |                         | 7       | 2442            | SISO CHAIN A | 10.46          |
|           |       |                         |         |                 | SISO CHAIN B | 9.06           |
|           |       |                         | 11      | 2462            | SISO CHAIN A | 5.08           |
|           |       |                         |         |                 | SISO CHAIN B | 5.24           |
|           |       |                         | 12      | 2467            | SISO CHAIN A | 2.62           |
|           |       |                         |         |                 | SISO CHAIN B | 2.35           |
|           | HT8   | 97.88%                  | 13      | 2472            | SISO CHAIN A | -16.27         |
|           |       |                         |         |                 | SISO CHAIN B | -17.01         |
|           |       |                         | 1       | 2412            | MIMO CHAIN A | 4.24           |
|           |       |                         |         |                 | MIMO CHAIN B | 4.51           |
|           |       |                         | 7       | 2442            | MIMO CHAIN A | 6.88           |
|           |       |                         |         |                 | MIMO CHAIN B | 7.26           |
|           |       |                         | 11      | 2462            | MIMO CHAIN A | 4.33           |
|           |       |                         |         |                 | MIMO CHAIN B | 4.25           |
|           |       |                         | 12      | 2467            | MIMO CHAIN A | 1.92           |
|           |       |                         |         |                 | MIMO CHAIN B | 1.77           |
|           |       |                         | 13      | 2472            | MIMO CHAIN A | -18.90         |
|           |       |                         |         |                 | MIMO CHAIN B | -19.68         |

| Mode      | Rate | Measured Duty Cycle [%] | Channel | Frequency [MHz] | Antenna      | PSD Peak [dBm] |
|-----------|------|-------------------------|---------|-----------------|--------------|----------------|
| 802.11n40 | HT0  | 96.49%                  | 3F      | 2422            | SISO CHAIN A | 0.02           |
|           |      |                         |         |                 | SISO CHAIN B | 0.14           |
|           |      |                         | 7F      | 2442            | SISO CHAIN A | 1.22           |
|           |      |                         |         |                 | SISO CHAIN B | 1.43           |
|           |      |                         | 9F      | 2452            | SISO CHAIN A | 0.04           |
|           |      |                         |         |                 | SISO CHAIN B | -0.11          |
|           |      |                         | 10F     | 2457            | SISO CHAIN A | -4.96          |
|           |      |                         |         |                 | SISO CHAIN B | -4.38          |
|           |      |                         | 11F     | 2462            | SISO CHAIN A | -9.56          |
|           |      |                         |         |                 | SISO CHAIN B | -10.82         |
|           | HT8  | 95.60%                  | 3F      | 2422            | MIMO CHAIN A | -0.36          |
|           |      |                         |         |                 | MIMO CHAIN B | -1.00          |
|           |      |                         | 7F      | 2442            | MIMO CHAIN A | 0.72           |
|           |      |                         |         |                 | MIMO CHAIN B | 0.67           |
|           |      |                         | 9F      | 2452            | MIMO CHAIN A | -0.22          |
|           |      |                         |         |                 | MIMO CHAIN B | -0.61          |
|           |      |                         | 10F     | 2457            | MIMO CHAIN A | -4.81          |
|           |      |                         |         |                 | MIMO CHAIN B | -5.14          |
|           |      |                         | 11F     | 2462            | MIMO CHAIN A | -12.86         |
|           |      |                         |         |                 | MIMO CHAIN B | -12.47         |

See Section B.3.5, Section B.3.6 and Section B.3.7 for the screenshot results.

## B.2.5 Radiated spurious emission

### Standard references

| FCC part             | RSS part                                       | Limits                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                          |                            |                       |
|----------------------|------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|----------------------------|-----------------------|
| 15.247 (d)<br>15.209 | RSS-247<br>Clause 5.5<br>RSS-Gen<br>Clause 8.9 | Radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a):                                                                                                                                                                                                                                                                                                                                     |                          |                            |                       |
|                      |                                                | Freq Range<br>(MHz)                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Field Streghth<br>(μV/m) | Field Streghth<br>(dBμV/m) | Meas. Distance<br>(m) |
|                      |                                                | 30-88                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 100                      | 40                         | 3                     |
|                      |                                                | 88-216                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 150                      | 43.5                       | 3                     |
|                      |                                                | 216-960                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 200                      | 46                         | 3                     |
|                      |                                                | Above 960                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 500                      | 54                         | 3                     |
|                      |                                                | The emission limits shown in the above table are based on measurements employing CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector. For average radiated emission measurements above 1000 MHz, there is also a limit specified when measuring with peak detector function corresponding to 20 dB above the indicated values in the table. |                          |                            |                       |

### Test procedure

The setups below were used to measure the radiated spurious emissions.

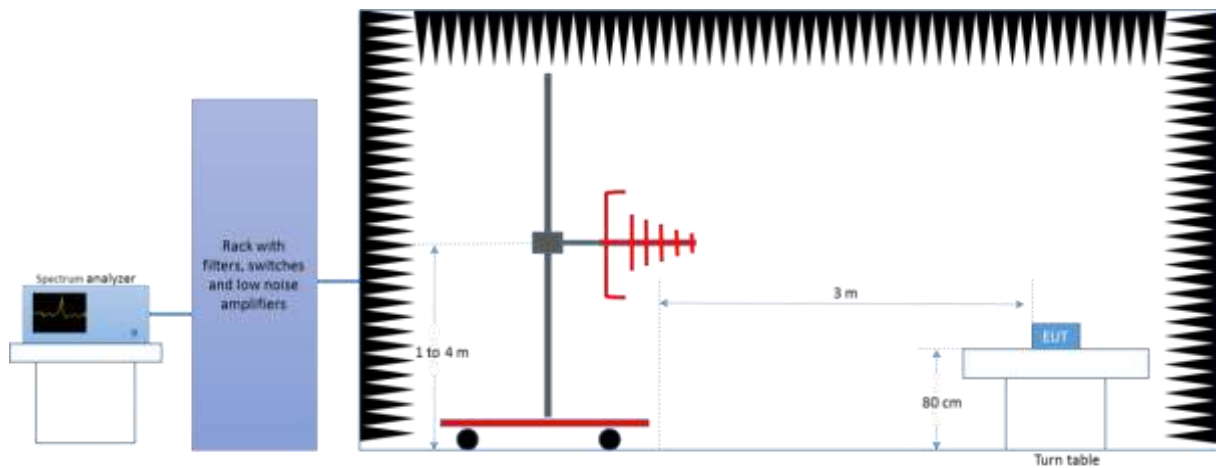
Depending of the frequency range and bands being tested, different antennas and filters were used.

The final measurement is done by varying the antenna height from 1 to 4 meters, the EUT azimuth over 360° and for both Vertical and Horizontal polarizations.

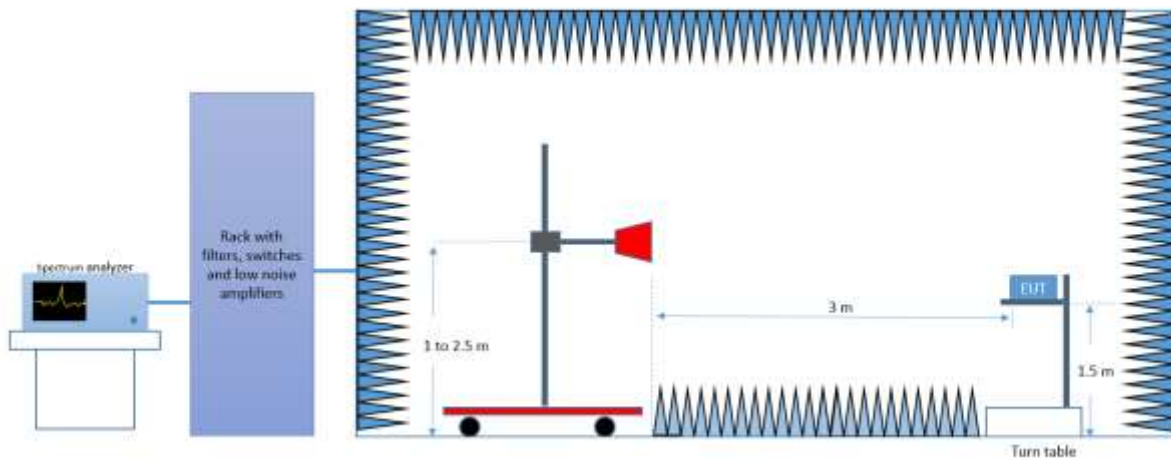
The radiated spurious emissions were measured on the worst case configuration selected from the chapter B.2.2 and using the lowest, middle and highest channels.

For technologies 802.n20, 802.n40 the worst case in terms of spurious emissions found among the low, mid and high channels were tested on chain A and B separately is used to perform the test in MIMO mode (Chain A+B).

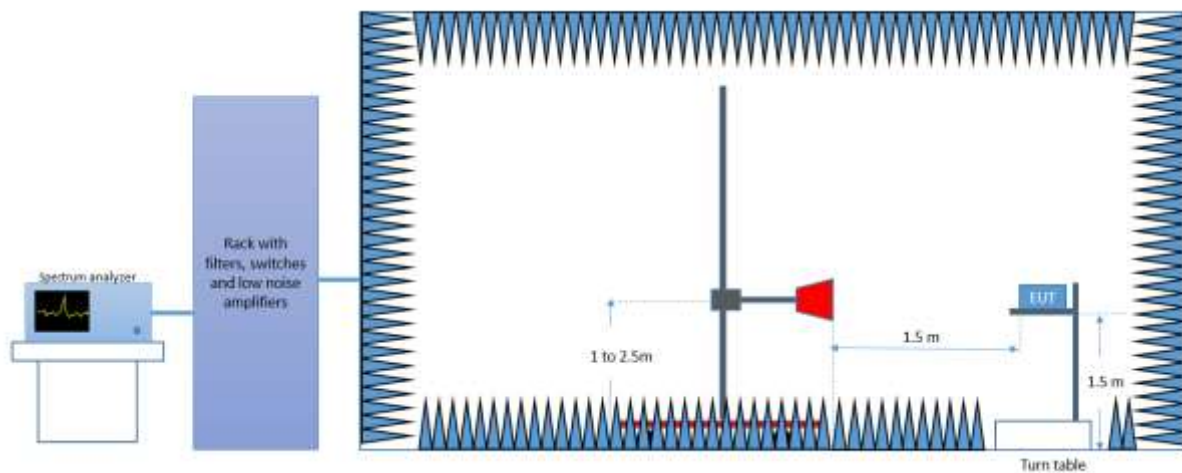
### Radiated Setup < 1GHz



### Radiated Setup 1 GHz - 18 GHz



### Radiated Setup > 18GHz



Sample Calculation

The field strength is deduced from the radiated measurement using the following equation:

$$E = 126.8 - 20\log(\lambda) + P - G$$

where

*E* is the field strength of the emission at the measurement distance, in dBμV/m

*P* is the power measured at the output of the test antenna, in dBm

*λ* is the wavelength of the emission under investigation  $[300/f_{MHz}]$ , in m

*G* is the gain of the test antenna, in dBi

NOTE – The measured power *P* includes all applicable instrument correction factors up to the connection to the test Antenna e.g. cable losses, amplifier gains.

For field strength measurements made at other than the distance at which the applicable limit is specified, the field strength of the emission at the distance specified by the limit is deduced as follows:

$$E_{SpecLimit} = E_{Meas} + 20\log(D_{Meas}/D_{SpecLimit})$$

where

*E<sub>SpecLimit</sub>* is the field strength of the emission at the distance specified by the limit, in dBμV/m

*E<sub>Meas</sub>* is the field strength of the emission at the measurement distance, in dBμV/m

*D<sub>Meas</sub>* is the measurement distance, in m

*D<sub>SpecLimit</sub>* is the distance specified by the limit, in m

# Test Results

## 30 MHz – 26.5 GHz, 802.11b, 1Mbps, Chain A

### Radiated Spurious – CH1

| Frequency | MaxPeak | Avg    | Limit  | Margin |
|-----------|---------|--------|--------|--------|
| MHz       | dBuV/m  | dBuV/m | dBuV/m | dB     |
| 31.2      | 35.2    | ---    | 40.0   | 4.8    |
| 37.5      | 32.3    | ---    | 40.0   | 7.7    |
| 72.0      | 28.8    | ---    | 40.0   | 11.3   |
| 208.0     | 36.3    | ---    | 43.5   | 7.2    |
| 220.4     | 36.3    | ---    | 46.0   | 9.7    |
| 640.0     | 35.2    | ---    | 46.0   | 10.8   |
| 3474.7    | ---     | 46.7   | 54.0   | 7.3    |
| 3483.4    | 58.9    | ---    | 74.0   | 15.1   |
| 4823.9    | ---     | 49.3   | 54.0   | 4.7    |
| 4824.2    | 55.5    | ---    | 74.0   | 18.5   |
| 10579.6   | 48.4    | ---    | 74.0   | 25.6   |
| 10675.0   | ---     | 36.8   | 54.0   | 17.2   |
| 22891.8   | ---     | 38.7   | 54.0   | 15.3   |
| 25234.1   | 49.1    | ---    | 74.0   | 24.9   |
| 25917.0   | 49.1    | ---    | 74.0   | 24.9   |
| 25921.5   | ---     | 39.2   | 54.0   | 14.8   |



**Radiated Spurious – CH7**

| Frequency | MaxPeak | Avg    | Limit  | Margin |
|-----------|---------|--------|--------|--------|
| MHz       | dBuV/m  | dBuV/m | dBuV/m | dB     |
| 30.9      | 35.0    | ---    | 40.0   | 5.0    |
| 37.5      | 31.0    | ---    | 40.0   | 9.0    |
| 208.0     | 34.9    | ---    | 43.5   | 8.6    |
| 220.4     | 35.4    | ---    | 46.0   | 10.6   |
| 794.2     | 39.1    | ---    | 46.0   | 6.9    |
| 826.4     | 40.4    | ---    | 46.0   | 5.6    |
| 3470.6    | ---     | 46.8   | 54.0   | 7.3    |
| 3471.3    | 58.8    | ---    | 74.0   | 15.2   |
| 4884.0    | ---     | 49.6   | 54.0   | 4.4    |
| 4884.0    | 54.7    | ---    | 74.0   | 19.4   |
| 10542.5   | 48.0    | ---    | 74.0   | 26.0   |
| 10689.8   | ---     | 36.5   | 54.0   | 17.5   |
| 22890.4   | ---     | 37.6   | 54.0   | 16.4   |
| 22902.5   | 48.3    | ---    | 74.0   | 25.7   |
| 25985.3   | ---     | 38.5   | 54.0   | 15.5   |
| 25998.3   | 48.9    | ---    | 74.0   | 25.1   |

**Radiated Spurious – CH11**

| Frequency | MaxPeak | Avg    | Limit  | Margin |
|-----------|---------|--------|--------|--------|
| MHz       | dBuV/m  | dBuV/m | dBuV/m | dB     |
| 31.1      | 35.6    | ---    | 40.0   | 4.4    |
| 37.5      | 33.4    | ---    | 40.0   | 6.6    |
| 199.7     | 35.9    | ---    | 43.5   | 7.6    |
| 208.0     | 35.8    | ---    | 43.5   | 7.7    |
| 807.4     | 40.0    | ---    | 46.0   | 6.0    |
| 838.8     | 40.5    | ---    | 46.0   | 5.6    |
| 1190.3    | ---     | 42.2   | 54.0   | 11.8   |
| 3456.3    | 60.7    | ---    | 74.0   | 13.3   |
| 4923.9    | ---     | 42.6   | 54.0   | 11.4   |
| 6374.6    | 58.1    | ---    | 74.0   | 15.9   |
| 10580.0   | 48.6    | ---    | 74.0   | 25.4   |
| 10672.8   | ---     | 36.6   | 54.0   | 17.5   |
| 22877.5   | ---     | 37.5   | 54.0   | 16.6   |
| 22898.0   | 48.1    | ---    | 74.0   | 25.9   |
| 25919.5   | 48.9    | ---    | 74.0   | 25.1   |
| 25930.5   | ---     | 38.2   | 54.0   | 15.8   |

# 30 MHz – 26.5 GHz, 802.11b, 1Mbps, Chain B

## Radiated Spurious – CH1

| Frequency | MaxPeak | Avg    | Limit  | Margin |
|-----------|---------|--------|--------|--------|
| MHz       | dBuV/m  | dBuV/m | dBuV/m | dB     |
| 31.1      | 34.9    | ---    | 40.0   | 5.1    |
| 37.5      | 31.5    | ---    | 40.0   | 8.5    |
| 208.0     | 31.3    | ---    | 43.5   | 12.2   |
| 220.4     | 32.6    | ---    | 46.0   | 13.4   |
| 224.6     | 32.7    | ---    | 46.0   | 13.3   |
| 843.1     | 39.9    | ---    | 46.0   | 6.1    |
| 3459.4    | 59.6    | ---    | 74.0   | 14.4   |
| 3484.1    | ---     | 46.8   | 54.0   | 7.2    |
| 4822.0    | 52.5    | ---    | 74.0   | 21.5   |
| 4823.9    | ---     | 43.9   | 54.0   | 10.1   |
| 10677.7   | ---     | 36.7   | 54.0   | 17.3   |
| 10702.7   | 48.9    | ---    | 74.0   | 25.1   |
| 19247.7   | 47.3    | ---    | 74.0   | 26.7   |
| 19296.1   | ---     | 38.2   | 54.0   | 15.8   |
| 25936.1   | ---     | 38.5   | 54.0   | 15.5   |
| 25937.8   | 48.1    | ---    | 74.0   | 25.9   |

### Radiated Spurious – CH7

| Frequency | MaxPeak | Avg    | Limit  | Margin |
|-----------|---------|--------|--------|--------|
| MHz       | dBuV/m  | dBuV/m | dBuV/m | dB     |
| 31.0      | 35.2    | ---    | 40.0   | 4.8    |
| 37.5      | 33.4    | ---    | 40.0   | 6.6    |
| 195.5     | 35.3    | ---    | 43.5   | 8.2    |
| 208.0     | 35.5    | ---    | 43.5   | 8.0    |
| 839.5     | 39.8    | ---    | 46.0   | 6.2    |
| 858.6     | 39.7    | ---    | 46.0   | 6.3    |
| 1190.3    | ---     | 42.9   | 54.0   | 11.1   |
| 3349.7    | 59.3    | ---    | 74.0   | 14.7   |
| 4884.0    | ---     | 46.2   | 54.0   | 10.4   |
| 6380.4    | 58.0    | ---    | 74.0   | 16.0   |
| 10673.3   | ---     | 36.4   | 54.0   | 17.6   |
| 10691.6   | 47.9    | ---    | 74.0   | 26.1   |
| 23015.6   | 48.2    | ---    | 74.0   | 25.8   |
| 23022.3   | ---     | 37.2   | 54.0   | 16.8   |
| 25941.4   | ---     | 38.2   | 54.0   | 15.8   |
| 25973.2   | 48.8    | ---    | 74.0   | 25.2   |

**Radiated Spurious – CH11**

| Frequency | MaxPeak | Avg    | Limit  | Margin |
|-----------|---------|--------|--------|--------|
| MHz       | dBuV/m  | dBuV/m | dBuV/m | dB     |
| 31.3      | 35.0    | ---    | 40.0   | 5.0    |
| 37.5      | 33.5    | ---    | 40.0   | 6.5    |
| 195.5     | 30.5    | ---    | 43.5   | 13.0   |
| 208.0     | 31.8    | ---    | 43.5   | 11.7   |
| 640.0     | 36.9    | ---    | 46.0   | 9.1    |
| 924.8     | 40.6    | ---    | 46.0   | 5.4    |
| 1190.3    | ---     | 41.7   | 54.0   | 12.3   |
| 3459.7    | 59.3    | ---    | 74.0   | 14.7   |
| 4924.3    | ---     | 43.1   | 54.0   | 10.9   |
| 6363.0    | 56.4    | ---    | 74.0   | 17.6   |
| 10576.4   | 48.0    | ---    | 74.0   | 26.0   |
| 10686.6   | ---     | 36.3   | 54.0   | 17.7   |
| 23935.6   | 49.5    | ---    | 74.0   | 24.5   |
| 23949.3   | ---     | 37.5   | 54.0   | 16.5   |
| 25920.3   | 48.6    | ---    | 74.0   | 25.4   |
| 25930.8   | ---     | 38.5   | 54.0   | 15.5   |

## 30 MHz – 26.5 GHz, 802.11g, 6Mbps, Chain A

### Radiated Spurious – CH1

| Frequency | MaxPeak | Avg    | Limit  | Margin |
|-----------|---------|--------|--------|--------|
| MHz       | dBuV/m  | dBuV/m | dBuV/m | dB     |
| 31.2      | 35.4    | ---    | 40.0   | 4.7    |
| 37.5      | 32.3    | ---    | 40.0   | 7.7    |
| 115.2     | 27.7    | ---    | 43.5   | 15.8   |
| 208.0     | 30.6    | ---    | 43.5   | 12.9   |
| 212.2     | 30.9    | ---    | 43.5   | 12.7   |
| 828.0     | 40.5    | ---    | 46.0   | 5.5    |
| 931.1     | 40.7    | ---    | 46.0   | 5.3    |
| 1190.3    | ---     | 41.8   | 54.0   | 12.2   |
| 3376.3    | 59.3    | ---    | 74.0   | 14.7   |
| 4824.6    | ---     | 41.8   | 54.0   | 12.2   |
| 6325.3    | 56.3    | ---    | 74.0   | 17.7   |
| 10576.4   | 48.0    | ---    | 74.0   | 26.0   |
| 10686.6   | ---     | 36.3   | 54.0   | 17.7   |
| 22861.8   | ---     | 37.7   | 54.0   | 16.3   |
| 22877.8   | 48.0    | ---    | 74.0   | 26.0   |
| 25910.8   | 49.0    | ---    | 74.0   | 25.0   |
| 25949.6   | ---     | 38.4   | 54.0   | 15.6   |

### Radiated Spurious – CH7

| Frequency | MaxPeak | Avg    | Limit  | Margin |
|-----------|---------|--------|--------|--------|
| MHz       | dBuV/m  | dBuV/m | dBuV/m | dB     |
| 48.9      | 35.1    | ---    | 40.0   | 4.9    |
| 115.2     | 26.6    | ---    | 43.5   | 16.9   |
| 245.4     | 32.8    | ---    | 46.0   | 13.3   |
| 640.0     | 40.0    | ---    | 46.0   | 6.0    |
| 901.2     | 40.2    | ---    | 46.0   | 5.8    |
| 1190.3    | ---     | 42.2   | 54.0   | 11.8   |
| 3385.0    | 59.6    | ---    | 74.0   | 14.4   |
| 3446.9    | ---     | 46.8   | 54.0   | 7.2    |
| 6397.1    | 56.4    | ---    | 74.0   | 17.6   |
| 10041.1   | 48.2    | ---    | 74.0   | 25.8   |
| 10687.5   | ---     | 36.7   | 54.0   | 17.3   |
| 22880.0   | ---     | 37.9   | 54.0   | 16.1   |
| 22903.4   | 47.7    | ---    | 74.0   | 26.3   |
| 25954.7   | ---     | 38.5   | 54.0   | 15.5   |
| 26002.8   | 49.2    | ---    | 74.0   | 24.8   |

**Radiated Spurious – CH11**

| Frequency | MaxPeak | Avg    | Limit  | Margin |
|-----------|---------|--------|--------|--------|
| MHz       | dBuV/m  | dBuV/m | dBuV/m | dB     |
| 31.1      | 35.6    | ---    | 40.0   | 4.4    |
| 37.5      | 33.4    | ---    | 40.0   | 6.6    |
| 199.7     | 35.9    | ---    | 43.5   | 7.6    |
| 208.0     | 35.8    | ---    | 43.5   | 7.7    |
| 807.4     | 40.0    | ---    | 46.0   | 6.0    |
| 838.8     | 40.5    | ---    | 46.0   | 5.6    |
| 1190.3    | ---     | 41.8   | 54.0   | 12.2   |
| 3406.6    | ---     | 47.0   | 54.0   | 7.0    |
| 3409.7    | 59.7    | ---    | 74.0   | 14.3   |
| 6256.8    | 55.8    | ---    | 74.0   | 18.2   |
| 10679.1   | 47.8    | ---    | 74.0   | 26.2   |
| 10682.6   | ---     | 36.8   | 54.0   | 17.2   |
| 23865.3   | 48.8    | ---    | 74.0   | 25.2   |
| 23883.0   | ---     | 37.5   | 54.0   | 16.5   |
| 25957.5   | ---     | 38.5   | 54.0   | 15.5   |
| 25958.9   | 48.8    | ---    | 74.0   | 25.2   |



## 30 MHz – 26.5 GHz, 802.11g, 6Mbps, Chain B

### Radiated Spurious – CH1

| Frequency | MaxPeak | Avg    | Limit  | Margin |
|-----------|---------|--------|--------|--------|
| MHz       | dBuV/m  | dBuV/m | dBuV/m | dB     |
| 31.2      | 34.5    | ---    | 40.0   | 5.5    |
| 37.4      | 31.3    | ---    | 40.0   | 8.7    |
| 195.5     | 31.4    | ---    | 43.5   | 12.1   |
| 208.0     | 32.5    | ---    | 43.5   | 11.0   |
| 640.0     | 36.9    | ---    | 46.0   | 9.1    |
| 892.3     | 41.0    | ---    | 46.0   | 5.0    |
| 1190.3    | ---     | 41.9   | 54.0   | 12.1   |
| 3415.6    | 59.5    | ---    | 74.0   | 14.5   |
| 6353.6    | 56.5    | ---    | 74.0   | 17.5   |
| 6368.1    | ---     | 43.9   | 54.0   | 10.1   |
| 10596.5   | ---     | 36.5   | 54.0   | 17.5   |
| 10659.0   | 48.0    | ---    | 74.0   | 26.0   |
| 22889.6   | ---     | 37.5   | 54.0   | 16.5   |
| 22897.2   | 47.8    | ---    | 74.0   | 26.2   |
| 25926.0   | ---     | 38.2   | 54.0   | 15.8   |
| 25968.7   | 49.2    | ---    | 74.0   | 24.8   |

### Radiated Spurious – CH7

| Frequency | MaxPeak | Avg    | Limit  | Margin |
|-----------|---------|--------|--------|--------|
| MHz       | dBuV/m  | dBuV/m | dBuV/m | dB     |
| 40.6      | 29.3    | ---    | 40.0   | 10.7   |
| 115.2     | 29.1    | ---    | 43.5   | 14.4   |
| 195.5     | 35.0    | ---    | 43.5   | 8.5    |
| 208.0     | 34.7    | ---    | 43.5   | 8.8    |
| 908.6     | 41.4    | ---    | 46.0   | 4.6    |
| 1190.3    | ---     | 42.1   | 54.0   | 11.9   |
| 3402.8    | ---     | 46.8   | 54.0   | 7.2    |
| 3405.6    | 59.3    | ---    | 74.0   | 14.7   |
| 6383.3    | 57.1    | ---    | 74.0   | 16.9   |
| 8838.7    | 47.6    | ---    | 74.0   | 26.4   |
| 10675.5   | ---     | 36.5   | 54.0   | 17.5   |
| 24261.3   | ---     | 37.3   | 54.0   | 16.7   |
| 24286.6   | 47.7    | ---    | 74.0   | 26.3   |
| 25947.9   | ---     | 38.3   | 54.0   | 15.7   |
| 25986.7   | 49.2    | ---    | 74.0   | 24.8   |

**Radiated Spurious – CH11**

| Frequency | MaxPeak | Avg    | Limit  | Margin |
|-----------|---------|--------|--------|--------|
| MHz       | dBuV/m  | dBuV/m | dBuV/m | dB     |
| 31.3      | 35.0    | ---    | 40.0   | 5.0    |
| 37.5      | 33.5    | ---    | 40.0   | 6.6    |
| 195.5     | 30.5    | ---    | 43.5   | 13.0   |
| 208.0     | 31.8    | ---    | 43.5   | 11.7   |
| 640.0     | 36.9    | ---    | 46.0   | 9.1    |
| 924.8     | 40.6    | ---    | 46.0   | 5.4    |
| 1190.3    | ---     | 42.2   | 54.0   | 11.8   |
| 3386.3    | 59.3    | ---    | 74.0   | 14.7   |
| 3423.4    | ---     | 46.9   | 54.0   | 7.1    |
| 6373.2    | 57.0    | ---    | 74.0   | 17.0   |
| 10493.5   | 48.2    | ---    | 74.0   | 25.8   |
| 10684.9   | ---     | 36.7   | 54.0   | 17.3   |
| 22878.1   | ---     | 38.1   | 54.0   | 16.0   |
| 22886.5   | 48.2    | ---    | 74.0   | 25.8   |
| 25930.5   | ---     | 38.5   | 54.0   | 15.5   |
| 25939.8   | 49.1    | ---    | 74.0   | 24.9   |

# 30 MHz – 26.5 GHz, 802.11n20, HT0, Chain A

## Radiated Spurious – CH1

| Frequency | MaxPeak | Avg    | Limit  | Margin |
|-----------|---------|--------|--------|--------|
| MHz       | dBuV/m  | dBuV/m | dBuV/m | dB     |
| 32.6      | 30.5    | ---    | 40.0   | 9.6    |
| 62.5      | 25.4    | ---    | 40.0   | 14.7   |
| 115.2     | 25.8    | ---    | 43.5   | 17.7   |
| 220.4     | 37.3    | ---    | 46.0   | 8.7    |
| 375.0     | 29.5    | ---    | 46.0   | 16.5   |
| 500.0     | 33.4    | ---    | 46.0   | 12.6   |
| 640.0     | 36.5    | ---    | 46.0   | 9.6    |
| 1190.3    | ---     | 41.9   | 54.0   | 12.1   |
| 3450.6    | 59.7    | ---    | 74.0   | 14.3   |
| 4824.2    | ---     | 41.9   | 54.0   | 12.1   |
| 6373.2    | 56.7    | ---    | 74.0   | 17.3   |
| 10680.4   | ---     | 36.6   | 54.0   | 17.4   |
| 10702.7   | 48.3    | ---    | 74.0   | 25.7   |
| 22868.2   | ---     | 37.5   | 54.0   | 16.5   |
| 22919.7   | 49.3    | ---    | 74.0   | 24.8   |
| 25954.7   | 48.7    | ---    | 74.0   | 25.3   |
| 25974.9   | ---     | 38.7   | 54.0   | 15.3   |

### Radiated Spurious – CH7

| Frequency | MaxPeak | Avg    | Limit  | Margin |
|-----------|---------|--------|--------|--------|
| MHz       | dBuV/m  | dBuV/m | dBuV/m | dB     |
| 32.6      | 29.6    | ---    | 40.0   | 10.4   |
| 62.5      | 22.0    | ---    | 40.0   | 18.1   |
| 115.2     | 24.9    | ---    | 43.5   | 18.6   |
| 220.5     | 32.1    | ---    | 46.0   | 13.9   |
| 299.3     | 33.3    | ---    | 46.0   | 12.7   |
| 375.0     | 29.8    | ---    | 46.0   | 16.2   |
| 640.0     | 38.8    | ---    | 46.0   | 7.2    |
| 1113.4    | ---     | 40.8   | 54.0   | 13.2   |
| 1190.3    | ---     | 42.0   | 54.0   | 12.0   |
| 6354.0    | 56.5    | ---    | 74.0   | 17.6   |
| 6385.1    | ---     | 43.8   | 54.0   | 10.2   |
| 9948.7    | 47.9    | ---    | 74.0   | 26.1   |
| 10687.1   | ---     | 36.7   | 54.0   | 17.3   |
| 22828.6   | 47.8    | ---    | 74.0   | 26.2   |
| 22858.7   | ---     | 37.7   | 54.0   | 16.3   |
| 25928.2   | 48.8    | ---    | 74.0   | 25.2   |
| 25942.8   | ---     | 38.4   | 54.0   | 15.6   |

**Radiated Spurious – CH11**

| Frequency | MaxPeak | Avg    | Limit  | Margin |
|-----------|---------|--------|--------|--------|
| MHz       | dBuV/m  | dBuV/m | dBuV/m | dB     |
| 71.9      | 23.5    | ---    | 40.0   | 16.5   |
| 115.2     | 24.5    | ---    | 43.5   | 19.0   |
| 191.4     | 26.9    | ---    | 43.5   | 16.6   |
| 195.5     | 29.1    | ---    | 43.5   | 14.4   |
| 199.7     | 30.6    | ---    | 43.5   | 12.9   |
| 220.5     | 32.0    | ---    | 46.0   | 14.1   |
| 640.1     | 36.6    | ---    | 46.0   | 9.4    |
| 1190.3    | ---     | 42.4   | 54.0   | 11.6   |
| 3393.4    | ---     | 47.0   | 54.0   | 7.0    |
| 3493.8    | 59.4    | ---    | 74.0   | 14.6   |
| 6393.5    | 57.2    | ---    | 74.0   | 16.8   |
| 10557.7   | ---     | 36.7   | 54.0   | 17.3   |
| 10672.4   | 48.0    | ---    | 74.0   | 26.0   |
| 22869.6   | 47.8    | ---    | 74.0   | 26.2   |
| 22884.8   | ---     | 37.3   | 54.0   | 16.7   |
| 25957.5   | 49.0    | ---    | 74.0   | 25.0   |
| 25959.4   | ---     | 38.4   | 54.0   | 15.6   |

# 30 MHz – 26.5 GHz, 802.11n20, HT0, Chain B

## Radiated Spurious – CH1

| Frequency | MaxPeak | Avg    | Limit  | Margin |
|-----------|---------|--------|--------|--------|
| MHz       | dBuV/m  | dBuV/m | dBuV/m | dB     |
| 32.5      | 28.5    | ---    | 40.0   | 11.5   |
| 62.5      | 28.2    | ---    | 40.0   | 11.8   |
| 115.2     | 25.6    | ---    | 43.5   | 17.9   |
| 220.5     | 33.0    | ---    | 46.0   | 13.0   |
| 375.0     | 31.3    | ---    | 46.0   | 14.7   |
| 500.1     | 34.6    | ---    | 46.0   | 11.4   |
| 640.0     | 35.8    | ---    | 46.0   | 10.2   |
| 1113.8    | ---     | 40.4   | 54.0   | 13.6   |
| 1190.3    | ---     | 42.6   | 54.0   | 11.4   |
| 6375.7    | ---     | 43.5   | 54.0   | 10.5   |
| 6389.9    | 57.3    | ---    | 74.0   | 16.7   |
| 10648.7   | 47.9    | ---    | 74.0   | 26.1   |
| 10651.0   | ---     | 36.6   | 54.0   | 17.4   |
| 22891.3   | ---     | 37.5   | 54.0   | 16.5   |
| 22896.1   | 48.1    | ---    | 74.0   | 25.9   |
| 25929.9   | ---     | 38.4   | 54.0   | 15.6   |
| 25956.6   | 48.5    | ---    | 74.0   | 25.5   |

### Radiated Spurious – CH7

| Frequency | MaxPeak | Avg    | Limit  | Margin |
|-----------|---------|--------|--------|--------|
| MHz       | dBuV/m  | dBuV/m | dBuV/m | dB     |
| 32.5      | 29.2    | ---    | 40.0   | 10.8   |
| 62.5      | 27.4    | ---    | 40.0   | 12.6   |
| 115.1     | 24.8    | ---    | 43.5   | 18.7   |
| 220.5     | 32.9    | ---    | 46.0   | 13.1   |
| 288.0     | 30.6    | ---    | 46.0   | 15.4   |
| 298.7     | 30.7    | ---    | 46.0   | 15.3   |
| 640.0     | 40.0    | ---    | 46.0   | 6.1    |
| 1113.4    | ---     | 40.4   | 54.0   | 13.6   |
| 1190.3    | ---     | 42.4   | 54.0   | 11.6   |
| 6363.0    | ---     | 43.9   | 54.0   | 10.1   |
| 6373.9    | 56.1    | ---    | 74.0   | 17.9   |
| 10638.0   | 47.8    | ---    | 74.0   | 26.2   |
| 10678.2   | ---     | 36.7   | 54.0   | 17.3   |
| 23902.4   | ---     | 37.4   | 54.0   | 16.6   |
| 23950.8   | 48.7    | ---    | 74.0   | 25.3   |
| 25968.2   | 48.7    | ---    | 74.0   | 25.4   |
| 25987.8   | ---     | 38.0   | 54.0   | 16.0   |



**Radiated Spurious – CH11**

| Frequency | MaxPeak | Avg    | Limit  | Margin |
|-----------|---------|--------|--------|--------|
| MHz       | dBuV/m  | dBuV/m | dBuV/m | dB     |
| 72.0      | 22.0    | ---    | 40.0   | 18.0   |
| 115.1     | 25.0    | ---    | 43.5   | 18.5   |
| 191.3     | 27.9    | ---    | 43.5   | 15.6   |
| 195.5     | 30.6    | ---    | 43.5   | 12.9   |
| 199.7     | 31.9    | ---    | 43.5   | 11.6   |
| 220.4     | 32.5    | ---    | 46.0   | 13.5   |
| 640.0     | 40.1    | ---    | 46.0   | 5.9    |
| 1113.4    | ---     | 40.7   | 54.0   | 13.3   |
| 1190.3    | ---     | 42.1   | 54.0   | 11.9   |
| 6323.5    | 56.4    | ---    | 74.0   | 17.6   |
| 6329.3    | ---     | 43.6   | 54.0   | 10.4   |
| 10687.5   | ---     | 36.7   | 54.0   | 17.3   |
| 10689.8   | 48.4    | ---    | 74.0   | 25.6   |
| 22210.1   | 47.8    | ---    | 74.0   | 26.2   |
| 22234.6   | ---     | 37.7   | 54.0   | 16.3   |
| 25926.5   | 49.3    | ---    | 74.0   | 24.7   |
| 25940.0   | ---     | 38.4   | 54.0   | 15.6   |

# 30 MHz – 26.5 GHz, 802.11n20, HT0, Chain A+B

## Radiated Spurious – CH7

| Frequency | MaxPeak | Avg    | Limit  | Margin |
|-----------|---------|--------|--------|--------|
| MHz       | dBuV/m  | dBuV/m | dBuV/m | dB     |
| 112.3     | 30.0    | ---    | 43.5   | 13.5   |
| 216.0     | 33.5    | ---    | 43.5   | 10.0   |
| 228.8     | 36.3    | ---    | 46.0   | 9.7    |
| 264.0     | 36.5    | ---    | 46.0   | 9.5    |
| 312.0     | 40.5    | ---    | 46.0   | 5.5    |
| 624.0     | 38.7    | ---    | 46.0   | 7.3    |
| 3440.6    | 59.5    | ---    | 74.0   | 14.5   |
| 3448.1    | ---     | 46.6   | 54.0   | 7.4    |
| 6290.2    | 56.4    | ---    | 74.0   | 17.6   |
| 6298.5    | ---     | 43.5   | 54.0   | 10.5   |
| 6400.0    | 48.8    | ---    | 74.0   | 25.2   |
| 10688.4   | ---     | 36.6   | 54.0   | 17.4   |
| 22858.7   | 48.1    | ---    | 74.0   | 25.9   |
| 22877.8   | ---     | 37.5   | 54.0   | 16.5   |
| 25919.8   | ---     | 38.6   | 54.0   | 15.4   |
| 25979.7   | 49.1    | ---    | 74.0   | 24.9   |

# 30 MHz – 26.5 GHz, 802.11n40, HT0, Chain A

## Radiated Spurious – CH3F

| Frequency | MaxPeak | Avg    | Limit  | Margin |
|-----------|---------|--------|--------|--------|
| MHz       | dBuV/m  | dBuV/m | dBuV/m | dB     |
| 112.3     | 30.0    | ---    | 43.5   | 13.5   |
| 216.0     | 33.5    | ---    | 43.5   | 10.0   |
| 228.8     | 36.3    | ---    | 46.0   | 9.7    |
| 264.0     | 36.5    | ---    | 46.0   | 9.5    |
| 312.0     | 40.5    | ---    | 46.0   | 5.5    |
| 624.0     | 38.7    | ---    | 46.0   | 7.3    |
| 3440.6    | 59.5    | ---    | 74.0   | 14.5   |
| 3448.1    | ---     | 46.6   | 54.0   | 7.4    |
| 6290.2    | 56.4    | ---    | 74.0   | 17.6   |
| 6298.5    | ---     | 43.5   | 54.0   | 10.5   |
| 6400.0    | 48.8    | ---    | 74.0   | 25.2   |
| 10688.4   | ---     | 36.6   | 54.0   | 17.4   |
| 22858.7   | 48.1    | ---    | 74.0   | 25.9   |
| 22877.8   | ---     | 37.5   | 54.0   | 16.5   |
| 25919.8   | ---     | 38.6   | 54.0   | 15.4   |
| 25979.7   | 49.1    | ---    | 74.0   | 24.9   |

**Radiated Spurious – CH6F**

| Frequency | MaxPeak | Avg    | Limit  | Margin |
|-----------|---------|--------|--------|--------|
| MHz       | dBuV/m  | dBuV/m | dBuV/m | dB     |
| 71.9      | 22.6    | ---    | 40.0   | 17.4   |
| 115.2     | 25.7    | ---    | 43.5   | 17.8   |
| 191.3     | 25.5    | ---    | 43.5   | 18.0   |
| 195.5     | 27.5    | ---    | 43.5   | 16.0   |
| 199.7     | 29.0    | ---    | 43.5   | 14.5   |
| 220.5     | 34.9    | ---    | 46.0   | 11.1   |
| 640.0     | 39.9    | ---    | 46.0   | 6.1    |
| 3469.4    | 59.2    | ---    | 74.0   | 14.8   |
| 3472.5    | ---     | 46.6   | 54.0   | 7.4    |
| 6234.0    | 56.7    | ---    | 74.0   | 17.3   |
| 6259.4    | ---     | 43.6   | 54.0   | 10.4   |
| 10678.2   | ---     | 36.6   | 54.0   | 17.4   |
| 10696.5   | 47.7    | ---    | 74.0   | 26.3   |
| 22884.8   | 48.3    | ---    | 74.0   | 25.7   |
| 22889.0   | ---     | 37.7   | 54.0   | 16.3   |
| 25954.4   | ---     | 38.3   | 54.0   | 15.7   |
| 25994.0   | 48.7    | ---    | 74.0   | 25.3   |

**Radiated Spurious – CH9F**

| Frequency | MaxPeak | Avg    | Limit  | Margin |
|-----------|---------|--------|--------|--------|
| MHz       | dBuV/m  | dBuV/m | dBuV/m | dB     |
| 74.9      | 23.8    | ---    | 40.0   | 16.2   |
| 115.2     | 25.3    | ---    | 43.5   | 18.2   |
| 191.3     | 29.2    | ---    | 43.5   | 14.3   |
| 195.5     | 29.5    | ---    | 43.5   | 14.0   |
| 199.7     | 31.6    | ---    | 43.5   | 11.9   |
| 220.5     | 31.7    | ---    | 46.0   | 14.3   |
| 640.0     | 40.6    | ---    | 46.0   | 5.4    |
| 3464.7    | 59.4    | ---    | 74.0   | 14.6   |
| 3471.3    | ---     | 46.7   | 54.0   | 7.3    |
| 6365.9    | ---     | 43.7   | 54.0   | 10.4   |
| 6376.8    | 57.4    | ---    | 74.0   | 16.6   |
| 10683.5   | ---     | 36.6   | 54.0   | 17.4   |
| 10692.4   | 48.0    | ---    | 74.0   | 26.0   |
| 22231.5   | 47.7    | ---    | 74.0   | 26.3   |
| 22239.1   | ---     | 36.9   | 54.0   | 17.1   |
| 25949.6   | 48.3    | ---    | 74.0   | 25.7   |
| 25959.7   | ---     | 38.2   | 54.0   | 15.8   |

# 30 MHz – 26.5 GHz, 802.11n40, HT0, Chain B

## Radiated Spurious – CH3F

| Frequency | MaxPeak | Avg    | Limit  | Margin |
|-----------|---------|--------|--------|--------|
| MHz       | dBuV/m  | dBuV/m | dBuV/m | dB     |
| 74.8      | 24.9    | ---    | 40.0   | 15.1   |
| 115.2     | 24.8    | ---    | 43.5   | 18.7   |
| 191.3     | 28.5    | ---    | 43.5   | 15.0   |
| 195.5     | 31.1    | ---    | 43.5   | 12.4   |
| 199.7     | 32.7    | ---    | 43.5   | 10.8   |
| 220.5     | 33.1    | ---    | 46.0   | 12.9   |
| 640.0     | 41.5    | ---    | 46.0   | 4.6    |
| 3457.2    | 59.9    | ---    | 74.0   | 14.1   |
| 3470.0    | ---     | 46.6   | 54.0   | 7.4    |
| 6292.3    | ---     | 43.5   | 54.0   | 10.5   |
| 6294.9    | 56.0    | ---    | 74.0   | 18.0   |
| 10679.1   | ---     | 36.7   | 54.0   | 17.3   |
| 10693.8   | 48.3    | ---    | 74.0   | 25.8   |
| 22850.8   | 49.1    | ---    | 74.0   | 24.9   |
| 22854.4   | ---     | 37.5   | 54.0   | 16.5   |
| 25936.9   | ---     | 38.2   | 54.0   | 15.8   |
| 25947.3   | 48.9    | ---    | 74.0   | 25.1   |

**Radiated Spurious – CH6F**

| Frequency | MaxPeak | Avg    | Limit  | Margin |
|-----------|---------|--------|--------|--------|
| MHz       | dBuV/m  | dBuV/m | dBuV/m | dB     |
| 74.8      | 24.8    | ---    | 40.0   | 15.2   |
| 115.2     | 24.8    | ---    | 43.5   | 18.7   |
| 191.4     | 32.6    | ---    | 43.5   | 10.9   |
| 195.5     | 34.9    | ---    | 43.5   | 8.6    |
| 199.7     | 32.3    | ---    | 43.5   | 11.2   |
| 220.5     | 34.4    | ---    | 46.0   | 11.6   |
| 640.0     | 40.5    | ---    | 46.0   | 5.5    |
| 3455.0    | 59.6    | ---    | 74.0   | 14.4   |
| 3472.5    | ---     | 46.6   | 54.0   | 7.4    |
| 6375.7    | ---     | 43.7   | 54.0   | 10.4   |
| 6390.6    | 56.7    | ---    | 74.0   | 17.3   |
| 10673.7   | ---     | 36.9   | 54.0   | 17.1   |
| 10679.1   | 48.3    | ---    | 74.0   | 25.7   |
| 22883.1   | ---     | 38.0   | 54.0   | 16.0   |
| 22889.3   | 47.9    | ---    | 74.0   | 26.1   |
| 25926.5   | ---     | 38.1   | 54.0   | 15.9   |
| 25928.8   | 48.7    | ---    | 74.0   | 25.3   |

## Radiated Spurious – CH9F

| Frequency | MaxPeak | Avg    | Limit  | Margin |
|-----------|---------|--------|--------|--------|
| MHz       | dBuV/m  | dBuV/m | dBuV/m | dB     |
| 74.9      | 22.6    | ---    | 40.0   | 17.4   |
| 115.2     | 25.5    | ---    | 43.5   | 18.0   |
| 191.3     | 30.4    | ---    | 43.5   | 13.1   |
| 195.5     | 30.8    | ---    | 43.5   | 12.7   |
| 199.7     | 32.8    | ---    | 43.5   | 10.7   |
| 220.5     | 32.9    | ---    | 46.0   | 13.1   |
| 640.0     | 42.0    | ---    | 46.0   | 4.0    |
| 3477.5    | ---     | 46.6   | 54.0   | 7.4    |
| 3490.3    | 59.0    | ---    | 74.0   | 15.0   |
| 6375.4    | ---     | 43.8   | 54.0   | 10.2   |
| 6377.5    | 57.4    | ---    | 74.0   | 16.6   |
| 6400.0    | 49.1    | ---    | 74.0   | 24.9   |
| 10671.9   | ---     | 36.8   | 54.0   | 17.2   |
| 22265.5   | ---     | 36.9   | 54.0   | 17.1   |
| 22282.9   | 48.1    | ---    | 74.0   | 25.9   |
| 25925.4   | 48.7    | ---    | 74.0   | 25.3   |
| 25934.7   | ---     | 38.1   | 54.0   | 15.9   |



# 30 MHz – 26.5 GHz, 802.11n40, HT0, Chain A+B

## Radiated Spurious – CH9F

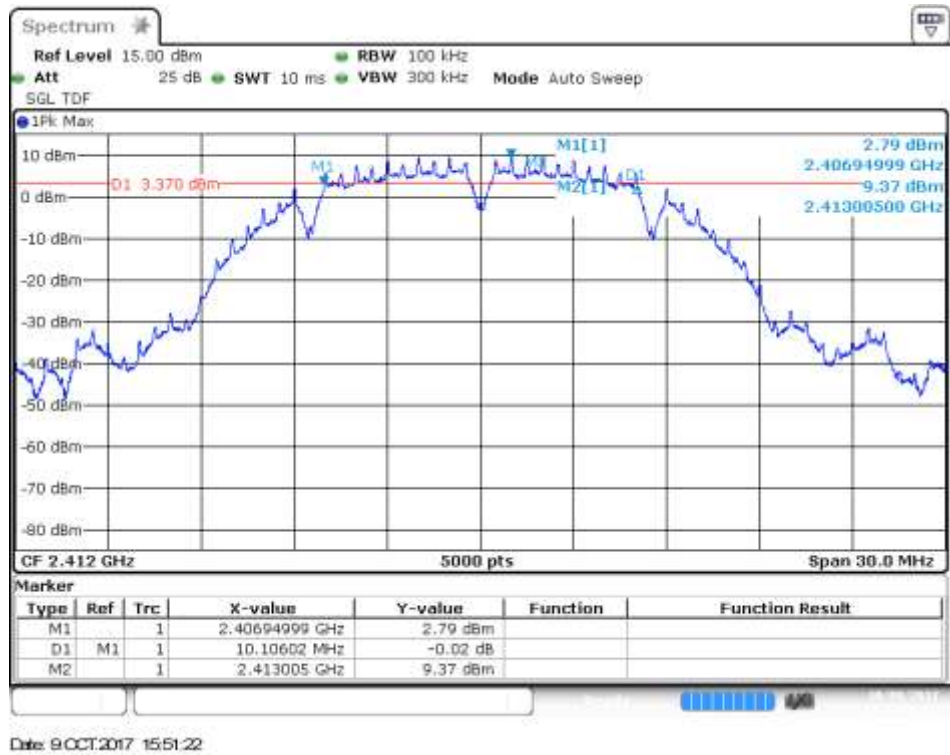
| Frequency | MaxPeak | Avg    | Limit  | Margin |
|-----------|---------|--------|--------|--------|
| MHz       | dBuV/m  | dBuV/m | dBuV/m | dB     |
| 112.3     | 26.5    | ---    | 43.5   | 17.0   |
| 115.2     | 28.4    | ---    | 43.5   | 15.1   |
| 178.9     | 33.7    | ---    | 43.5   | 9.8    |
| 183.0     | 32.8    | ---    | 43.5   | 10.7   |
| 576.0     | 34.6    | ---    | 46.0   | 11.4   |
| 640.0     | 41.5    | ---    | 46.0   | 4.5    |
| 3465.3    | ---     | 46.8   | 54.0   | 7.2    |
| 3488.8    | 59.2    | ---    | 74.0   | 14.8   |
| 6300.0    | ---     | 43.7   | 54.0   | 10.3   |
| 6326.4    | 56.1    | ---    | 74.0   | 17.9   |
| 10666.1   | ---     | 36.4   | 54.0   | 17.6   |
| 10688.9   | 47.7    | ---    | 74.0   | 26.3   |
| 17010.4   | ---     | 45.0   | 54.0   | 9.0    |
| 17025.6   | 55.9    | ---    | 74.0   | 18.1   |
| 22006.5   | 47.0    | ---    | 74.0   | 27.0   |
| 22013.8   | ---     | 36.5   | 54.0   | 17.5   |
| 25956.6   | ---     | 38.1   | 54.0   | 15.9   |
| 26006.7   | 49.0    | ---    | 74.0   | 25.1   |

### B.3 Test Results Screenshot

#### B.3.1 6dB Bandwidth

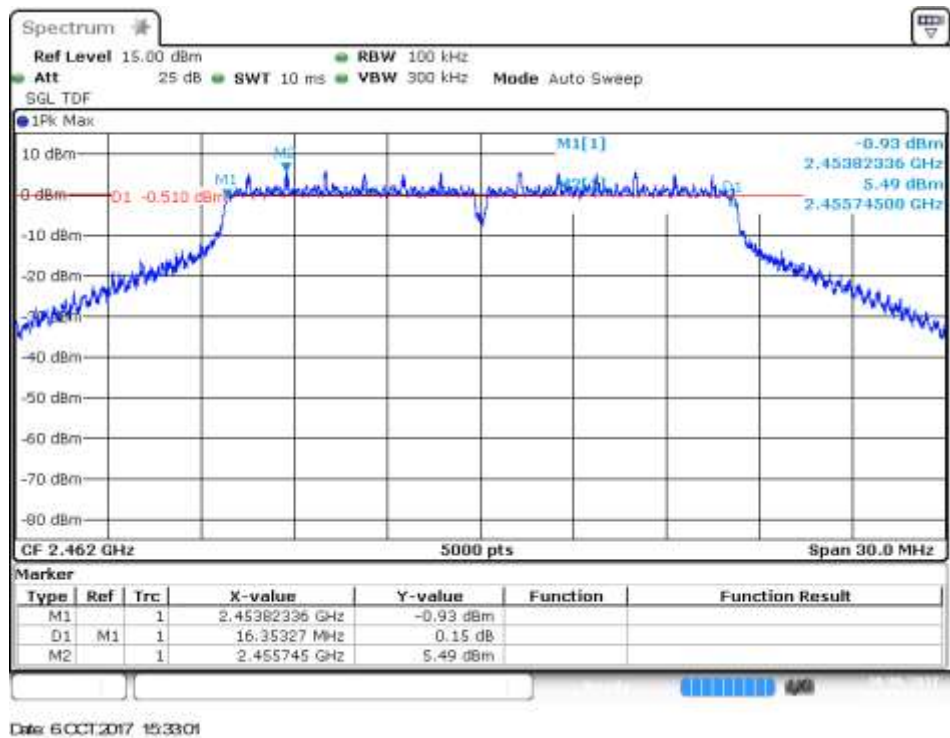
## SISO-B, 802.11b, 1Mbps

Channel 1



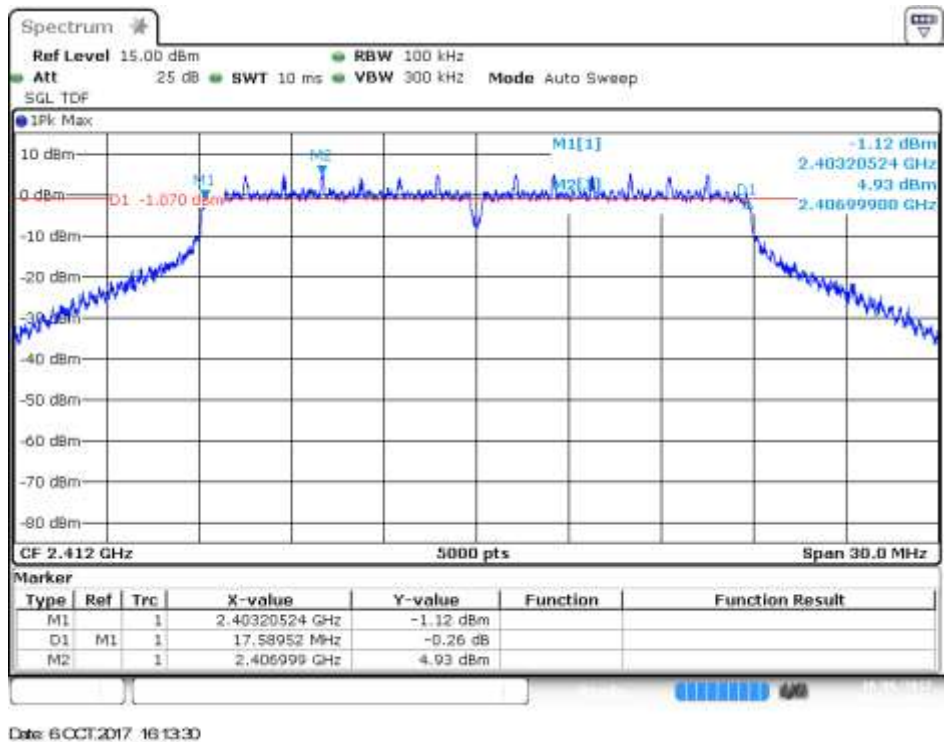
## SISO-A, 802.11g, 6Mbps

Channel 11



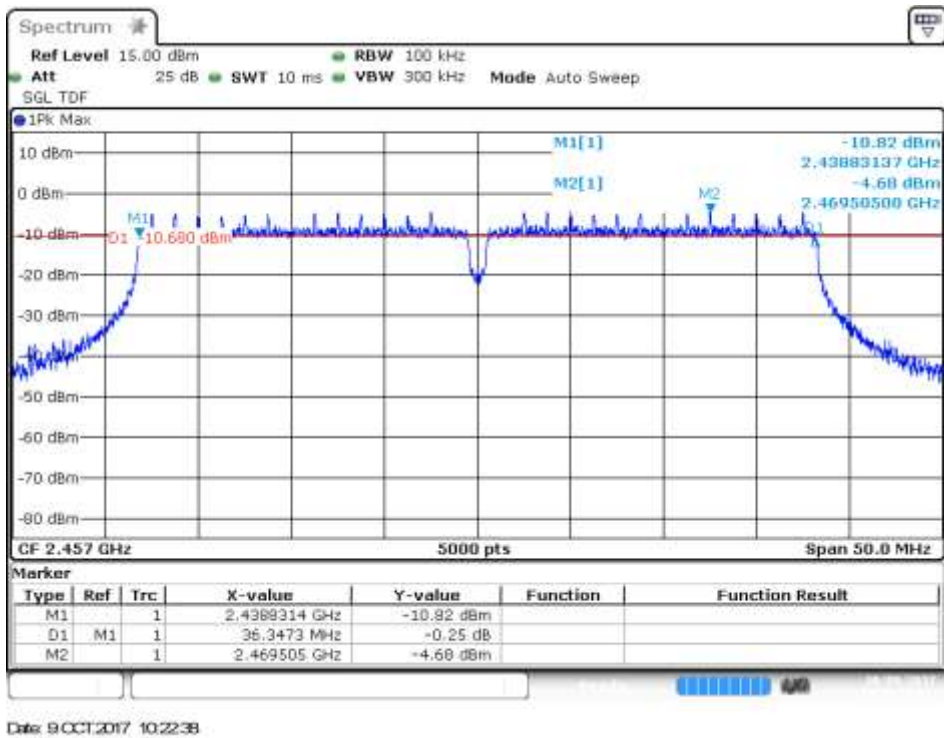
# SISO-A, 802.11n20, HT0

Channel 1



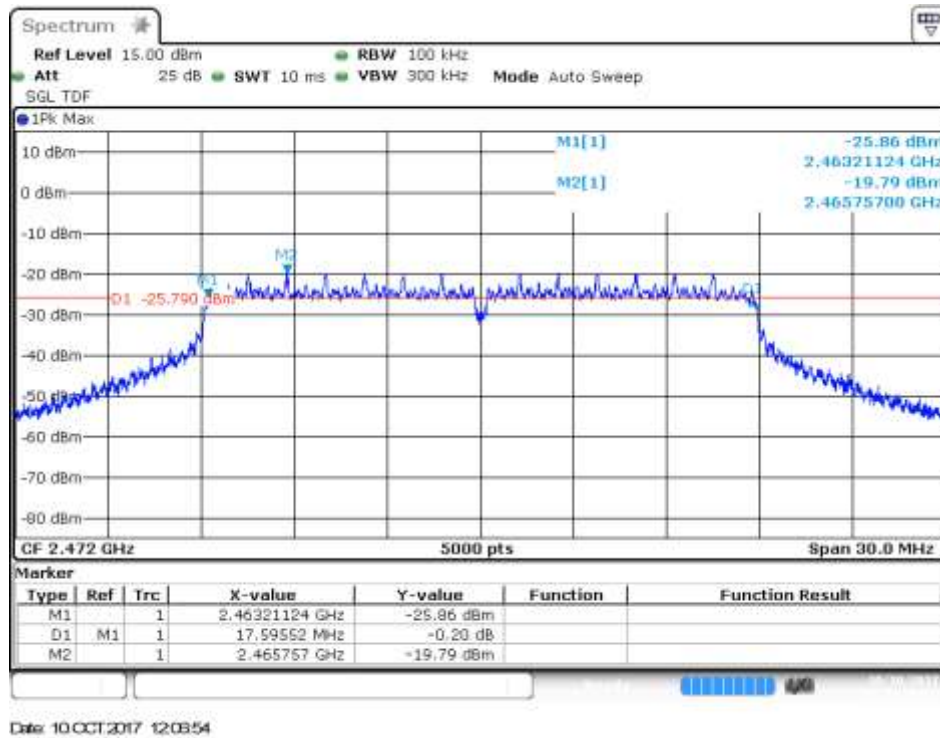
# SISO-A, 802.11n40, HT0

Channel 10F



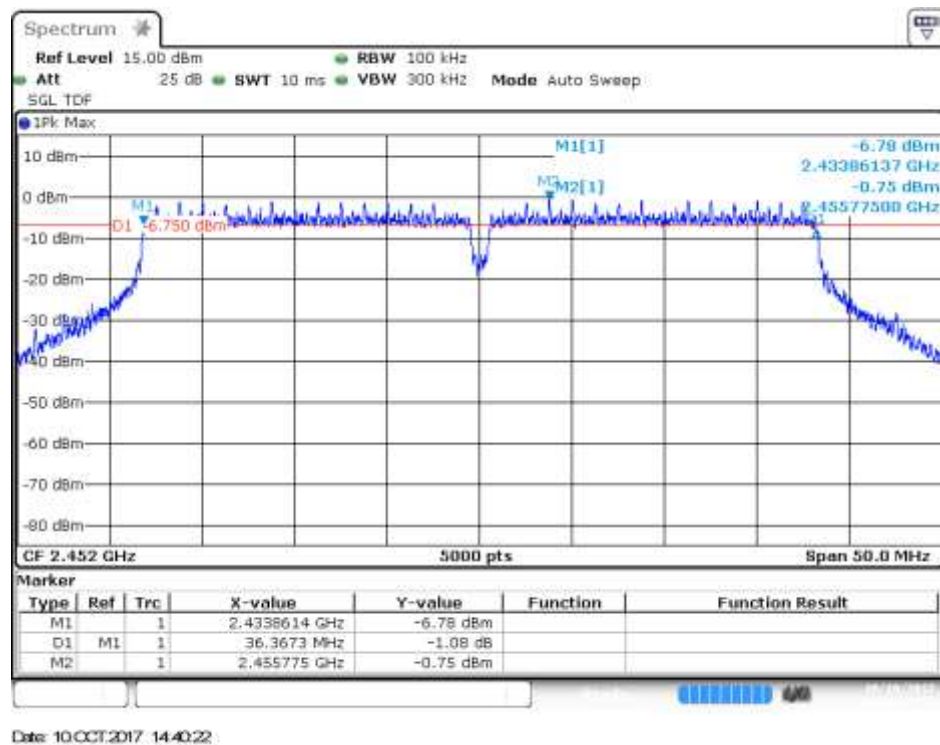
## MIMO-B, 802.11n20, HT8

Channel 13



## MIMO-B, 802.11n40, HT8

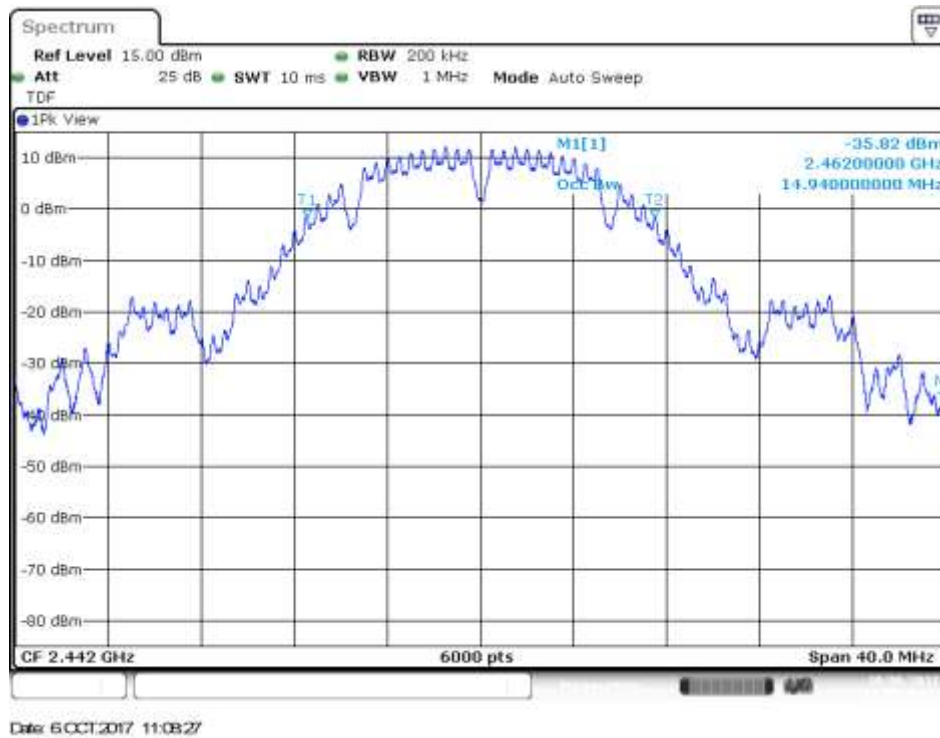
Channel 9F



### B.3.2 99% Bandwidth

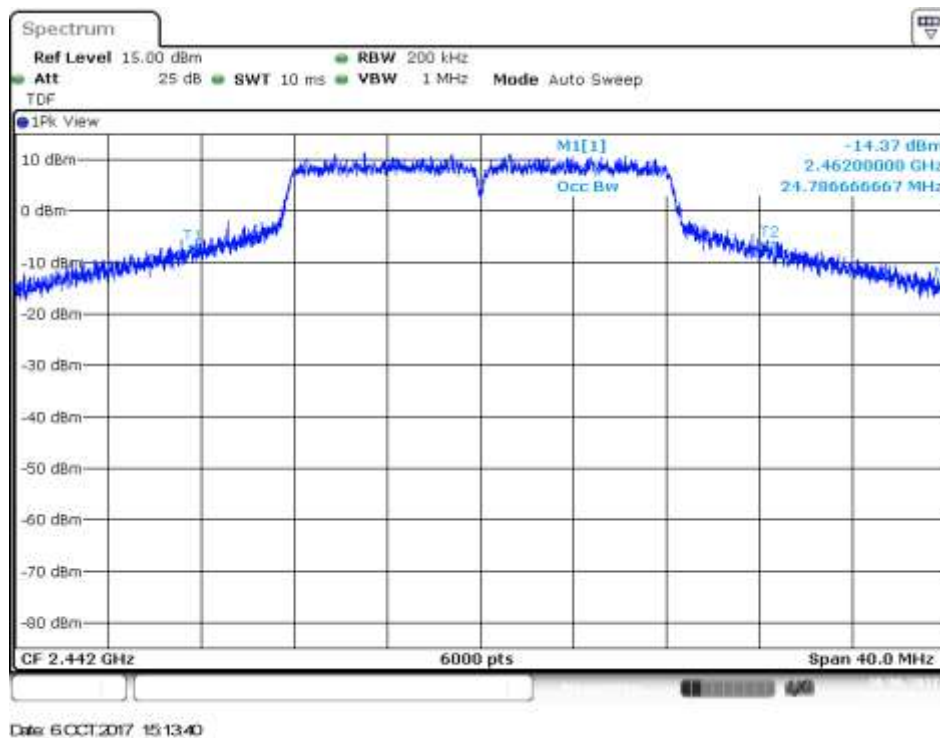
## SISO-A, 802.11b, 1Mbps

Channel 7



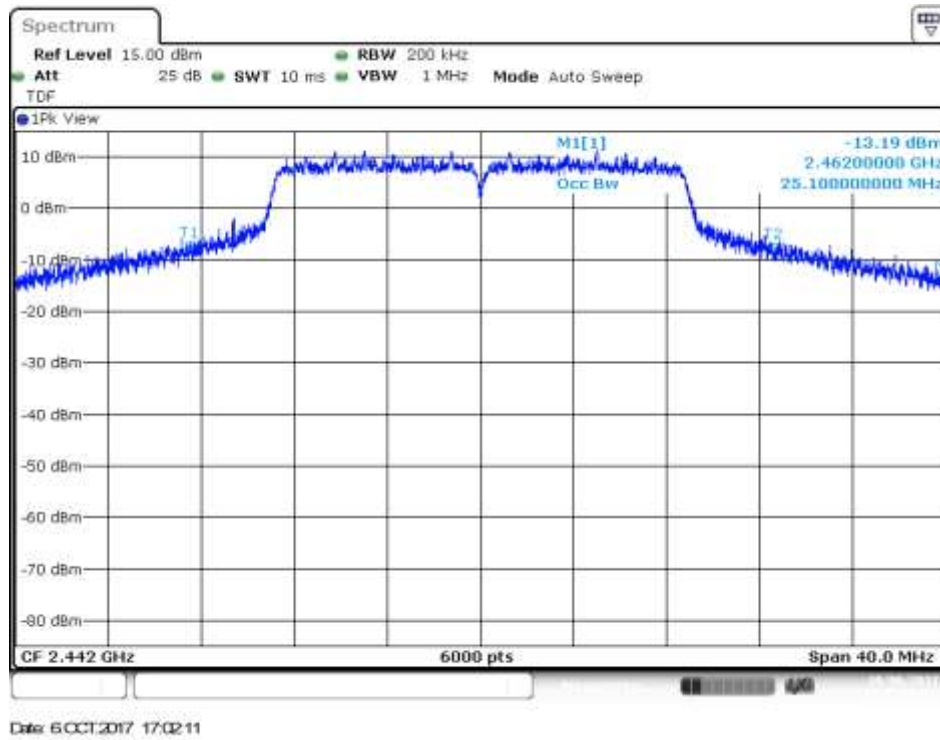
## SISO-A, 802.11g, 6Mbps

Channel 7



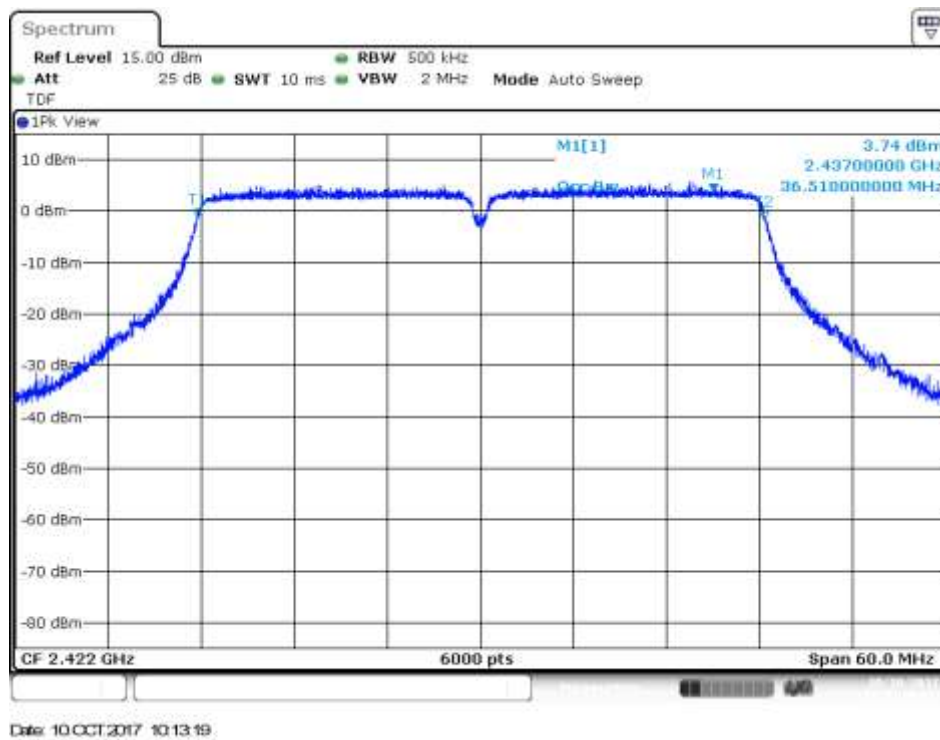
## SISO-B, 802.11n20, HT0

Channel 7



## SISO-B, 802.11n40, HT0

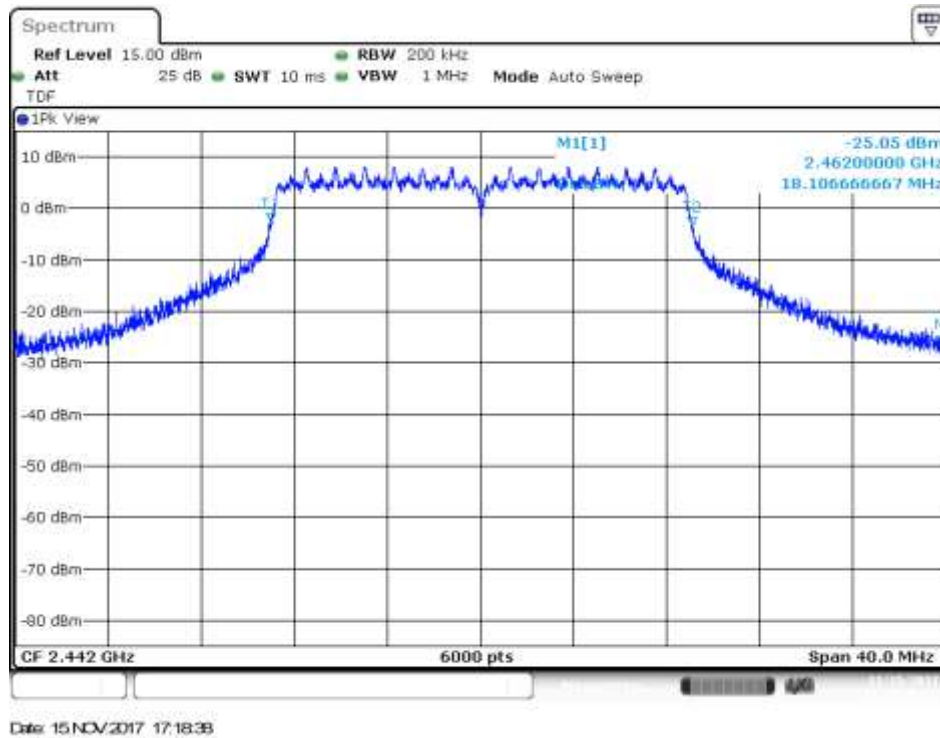
Channel 3F





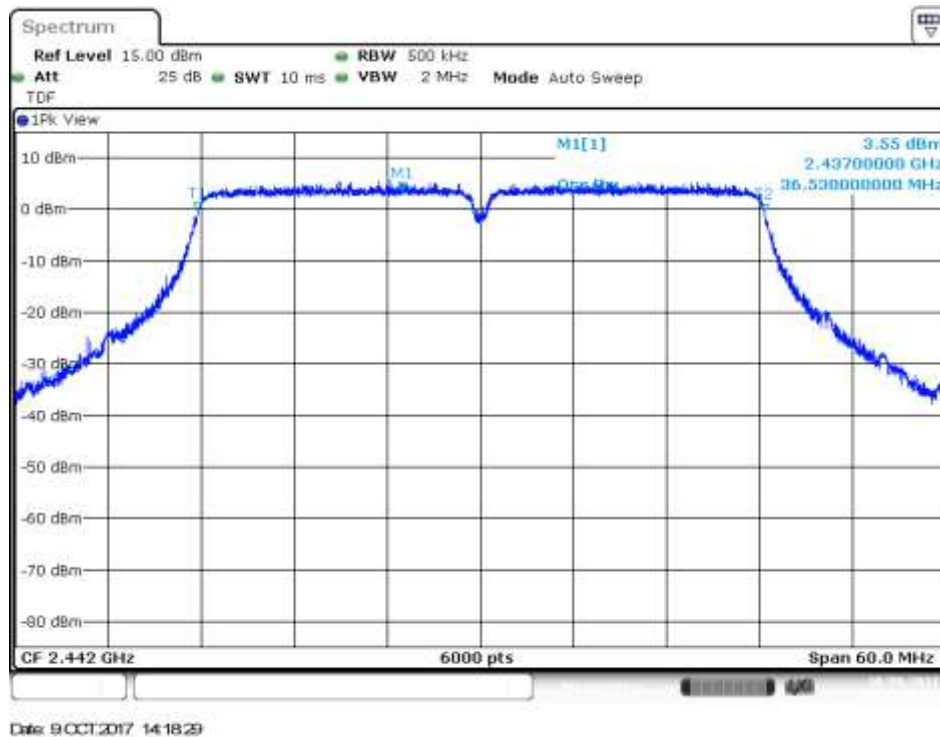
## MIMO-A, 802.11n20, HT8

Channel 7



## MIMO-A, 802.11n40, HT8

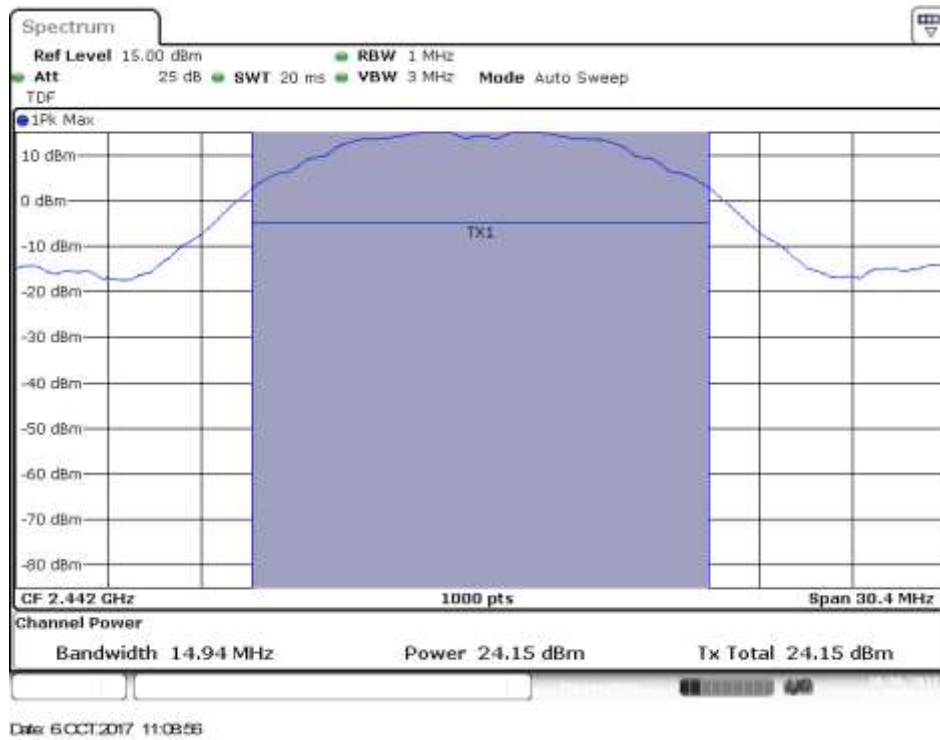
Channel 7F



### B.3.3 Maximum output power and antenna gain

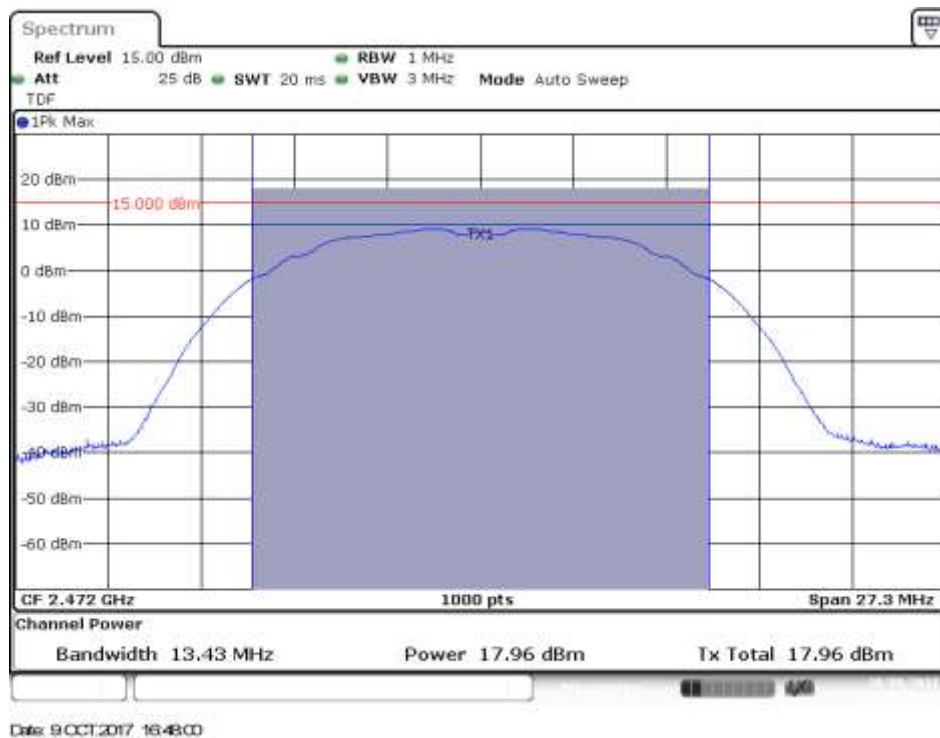
#### SISO-A, 802.11b, 1Mbps

Channel 7



#### SISO-B, 802.11b, 1Mbps

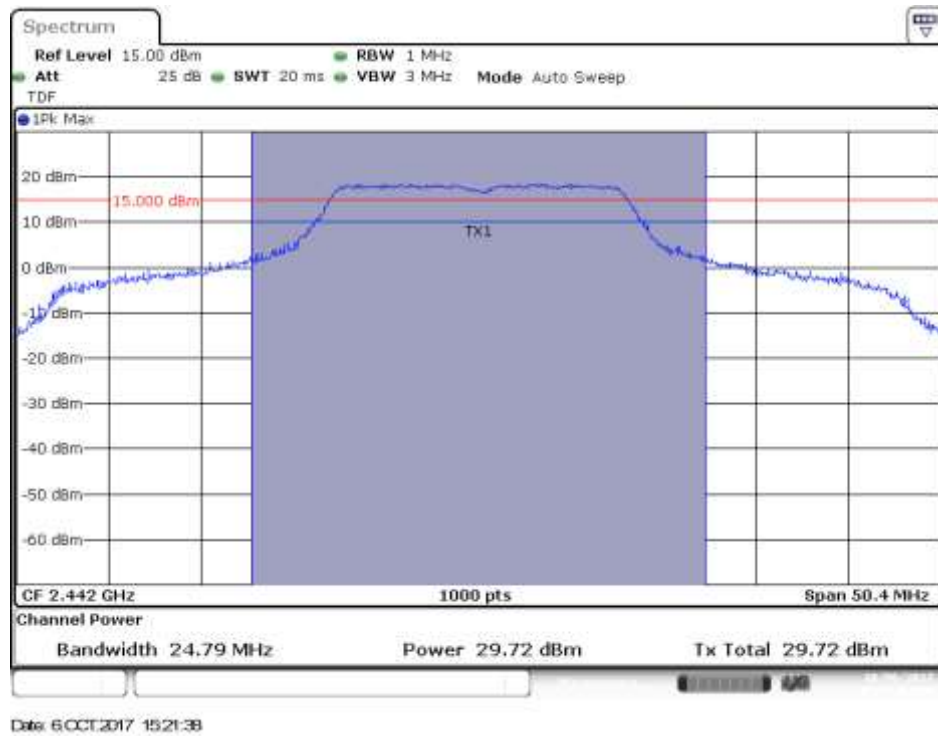
Channel 13





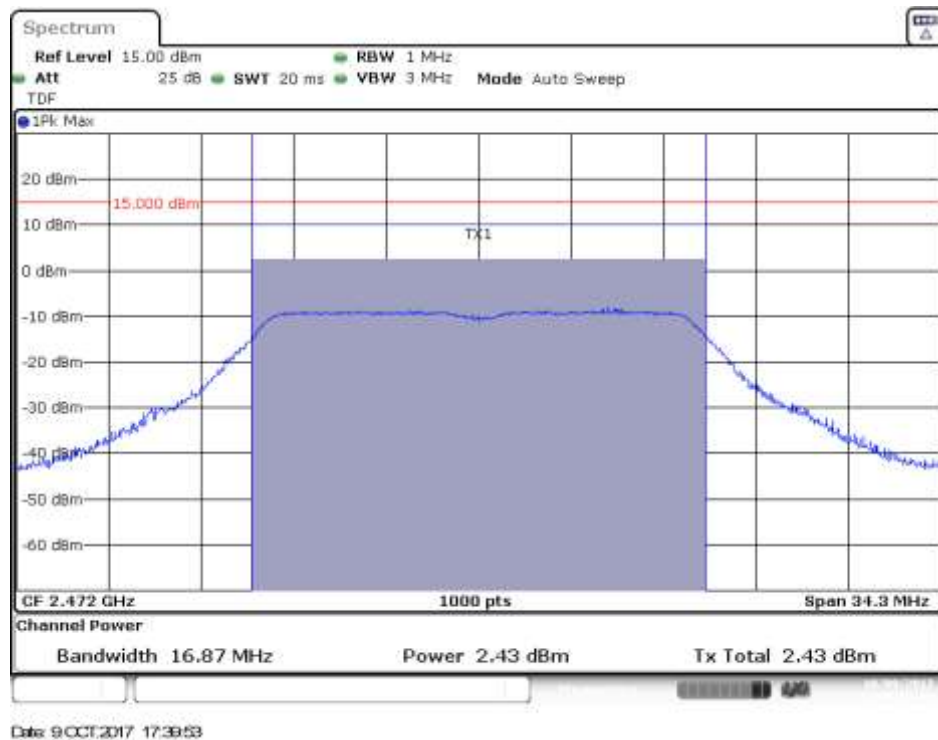
## SISO-A, 802.11g, 6Mbps

Channel 7



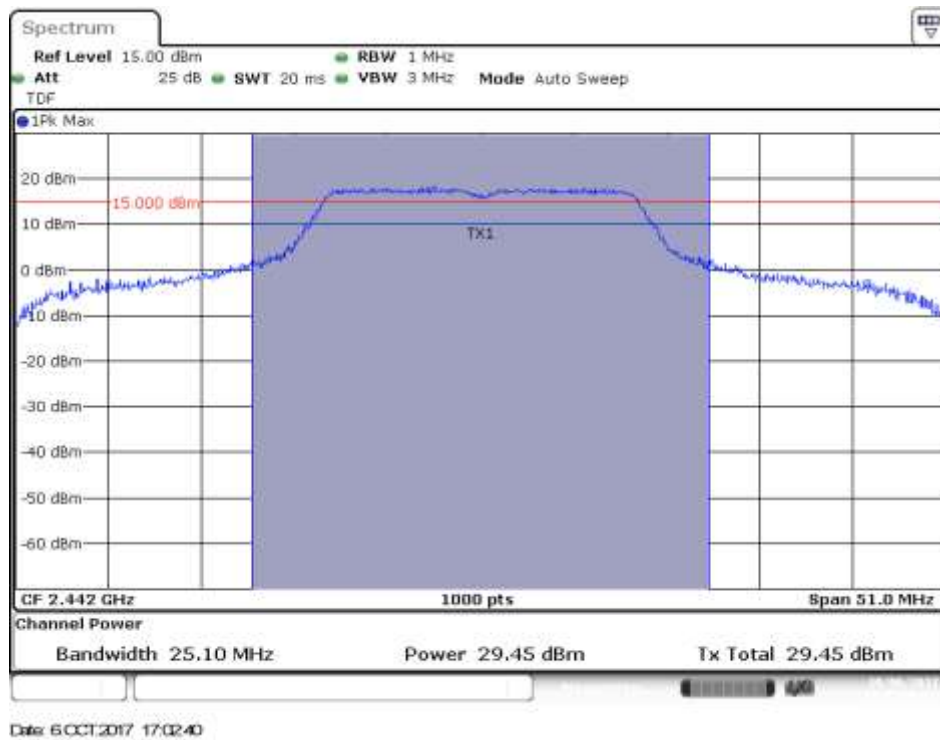
## SISO-B, 802.11g, 6Mbps

Channel 13

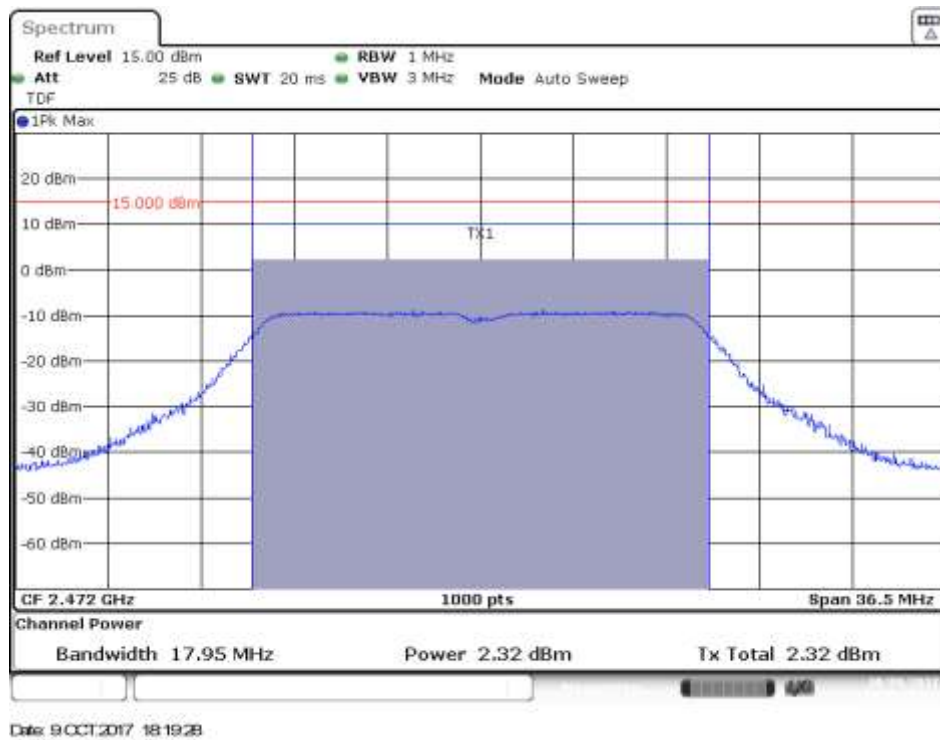


## SISO-B, 802.11n20, HT0

Channel 7

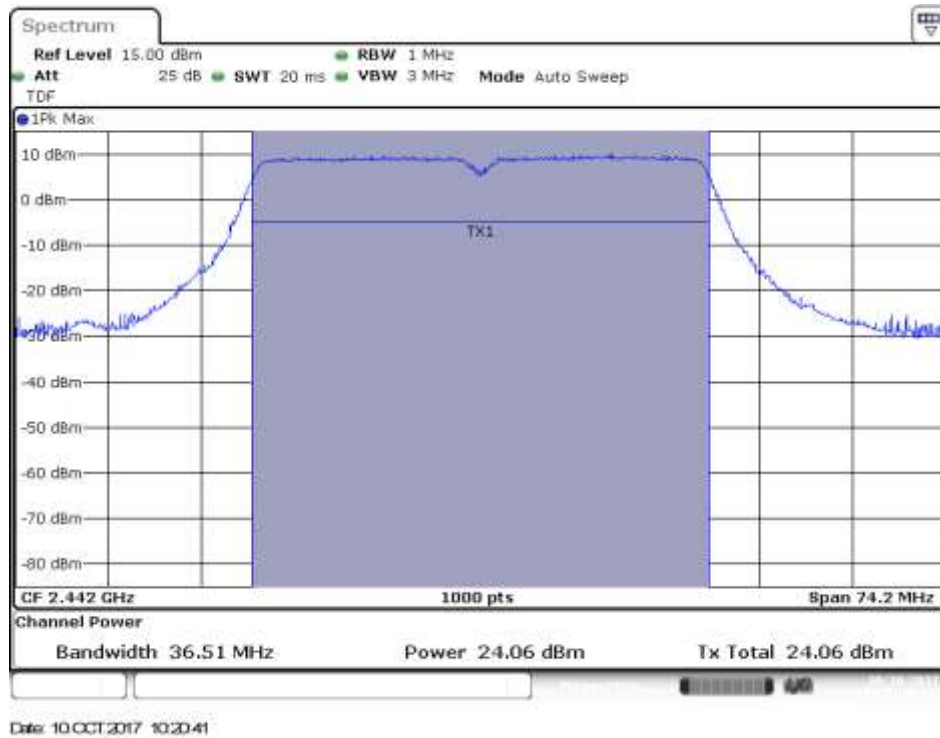


Channel 13



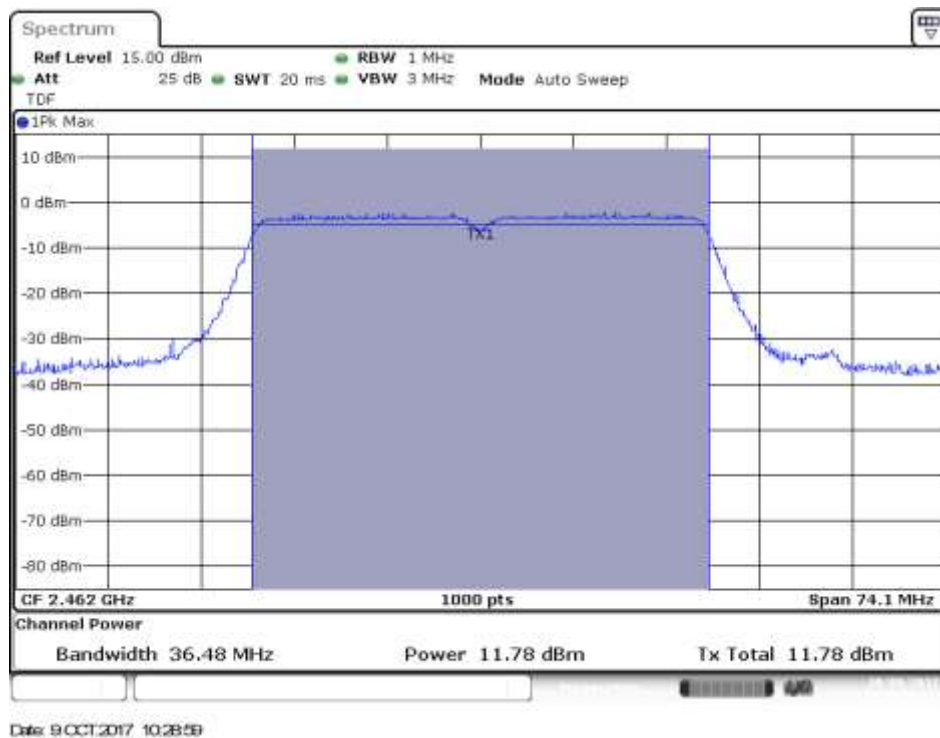
## SISO-B, 802.11n40, HT0

Channel 7F



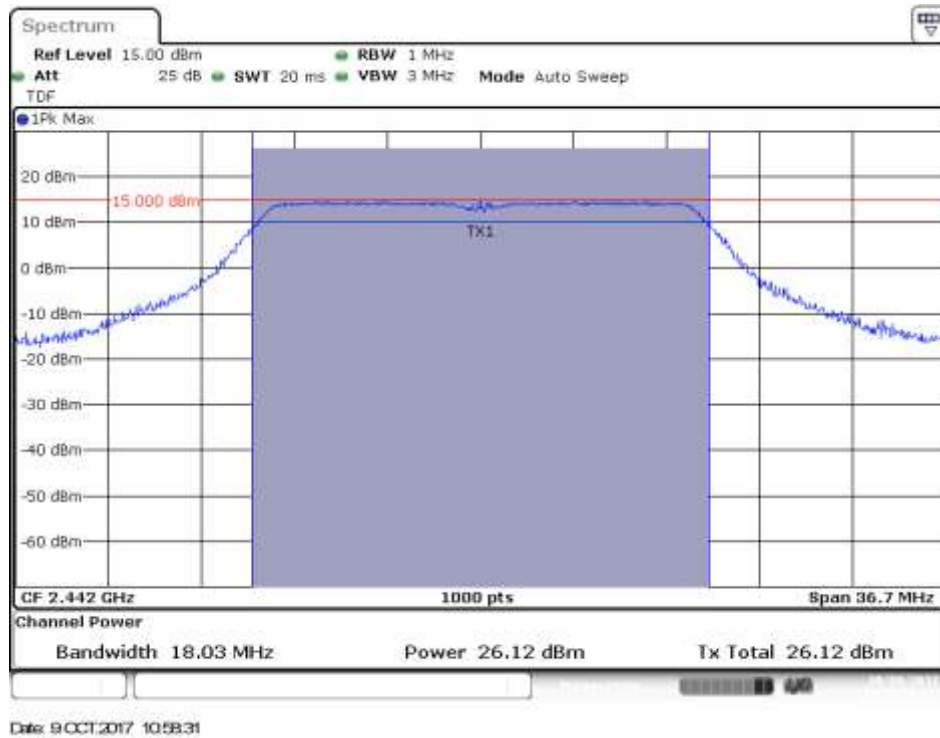
## SISO-A, 802.11n40, HT0

Channel 11F



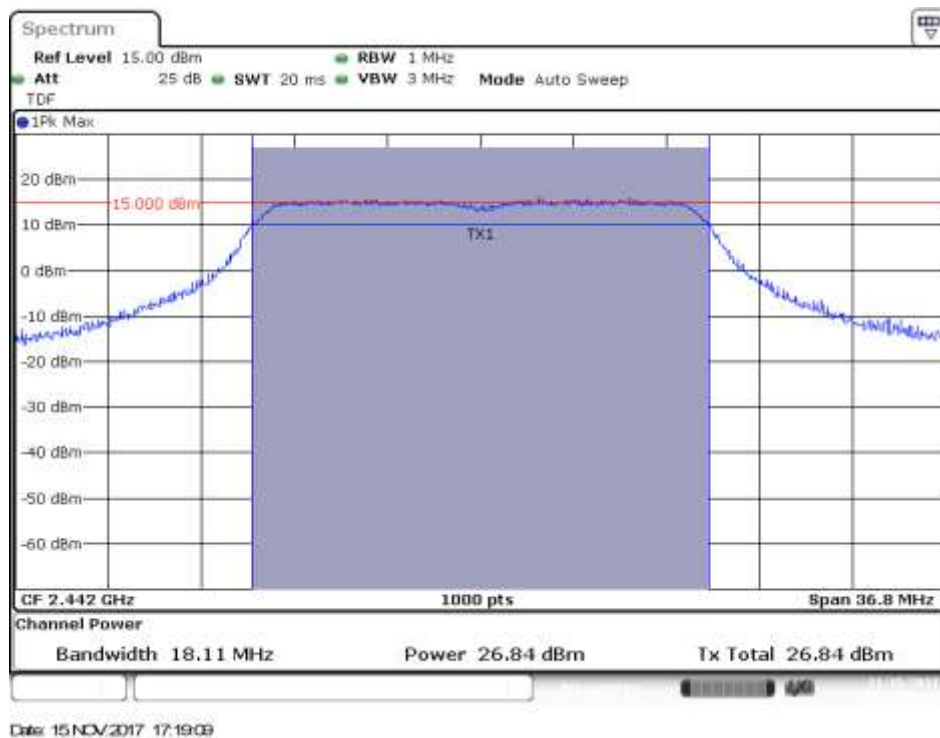
## MIMO-A, 802.11n20, HT8

Channel 7



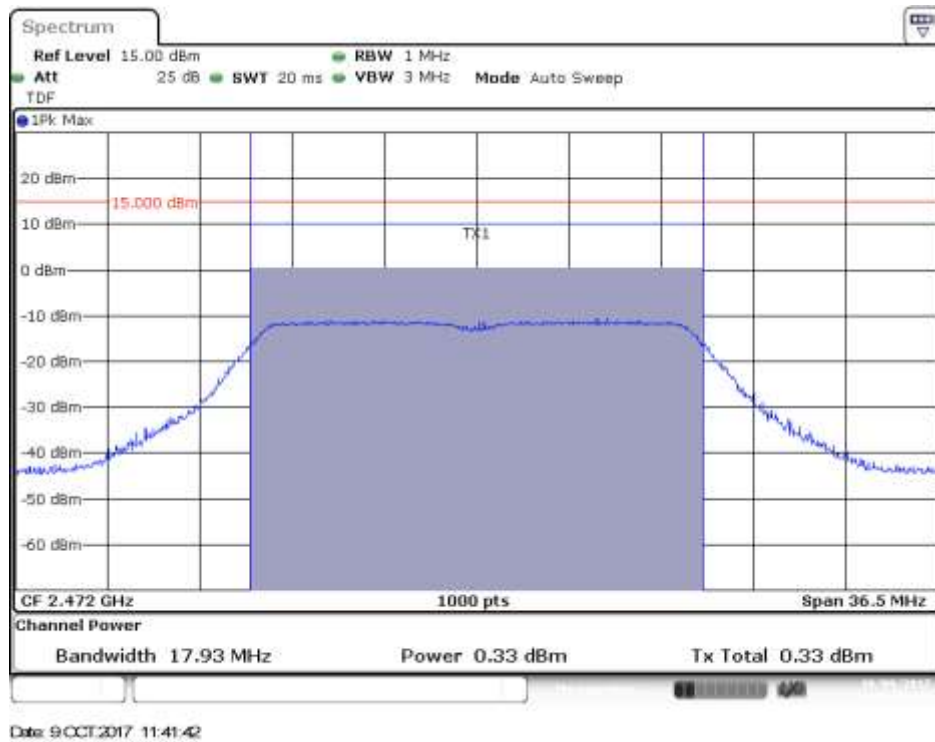
## MIMO-B, 802.11n20, HT8

Channel 7



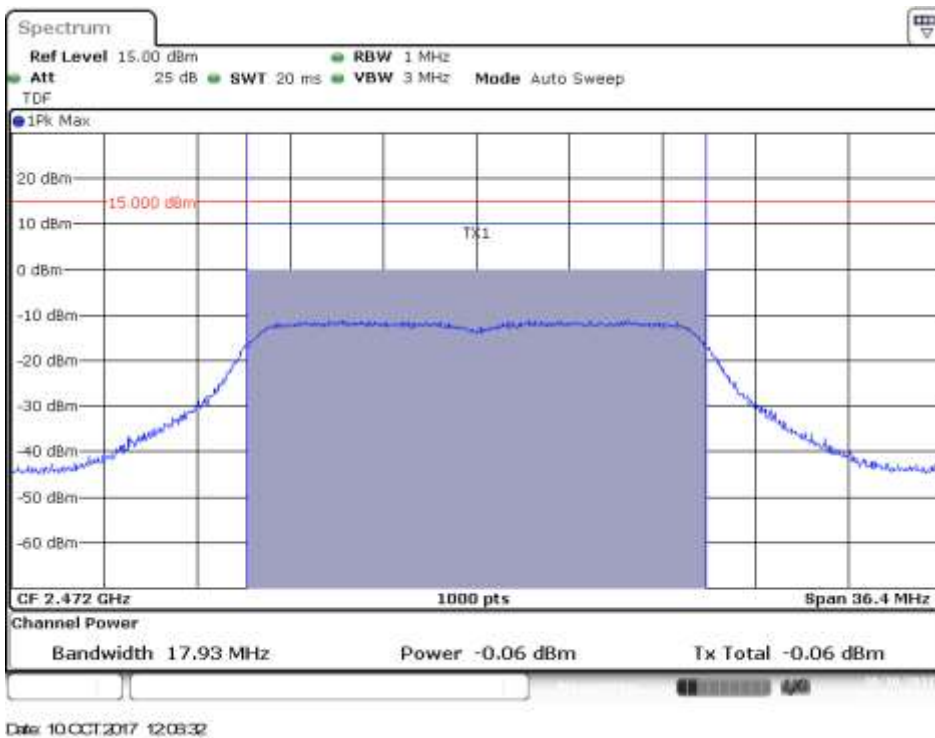
## MIMO-A, 802.11n20, HT8

Channel 13



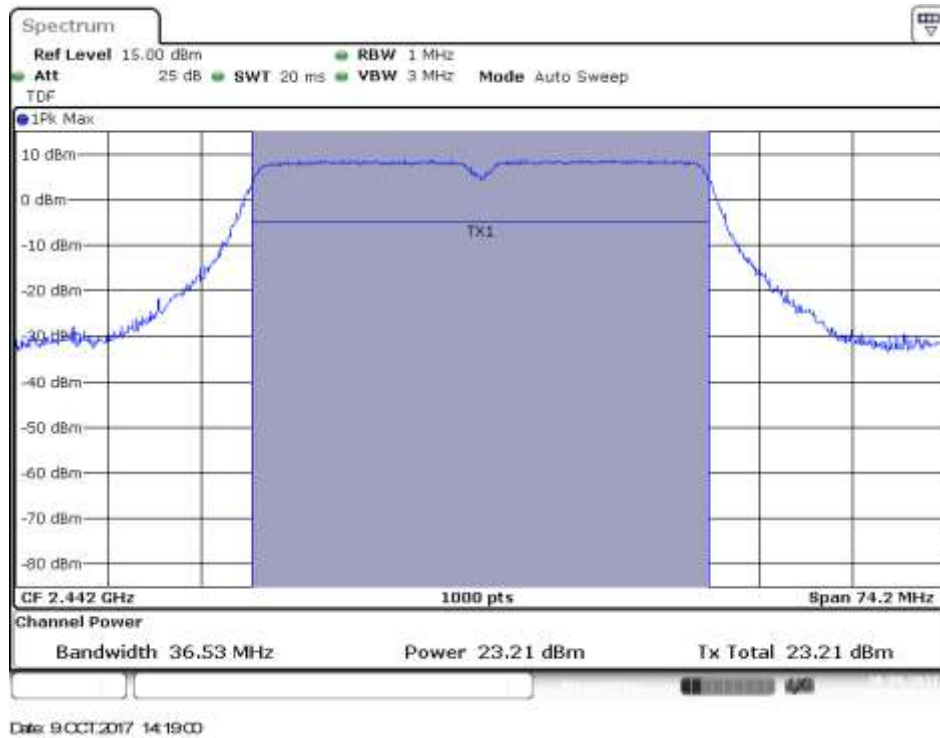
## MIMO-B, 802.11n20, HT8

Channel 13



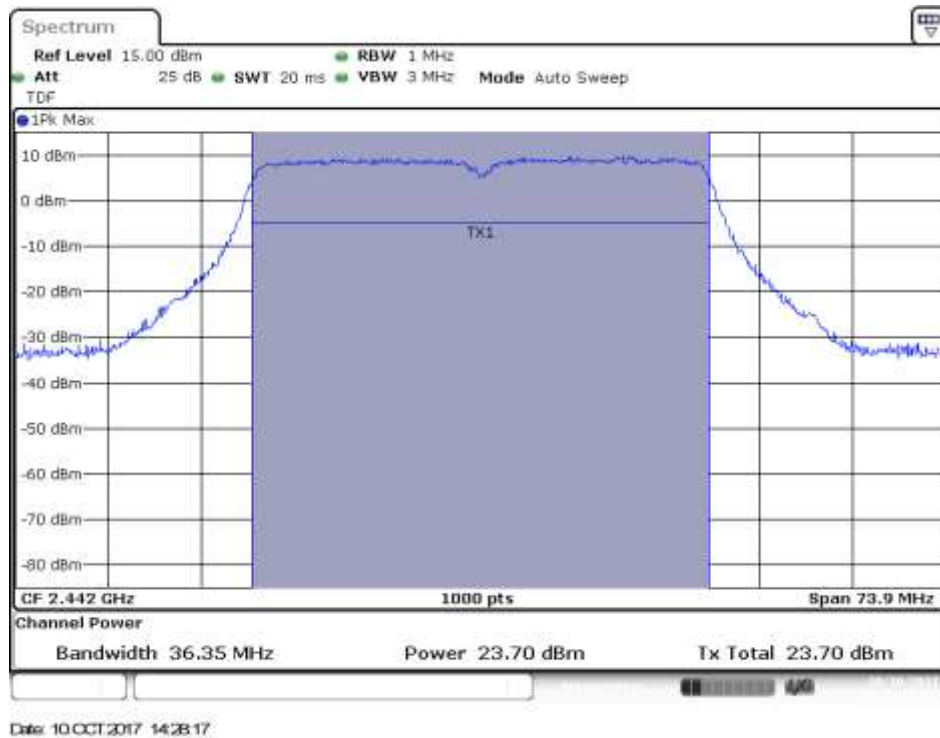
## MIMO-A, 802.11n40, HT8

Channel 7F



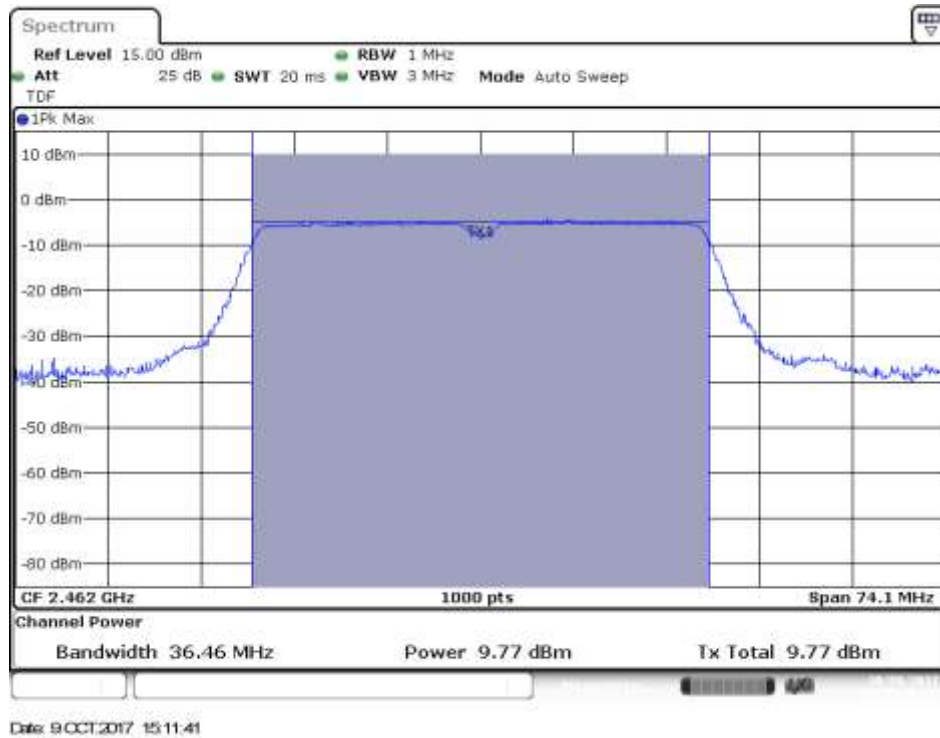
## MIMO-B, 802.11n40, HT8

Channel 7F



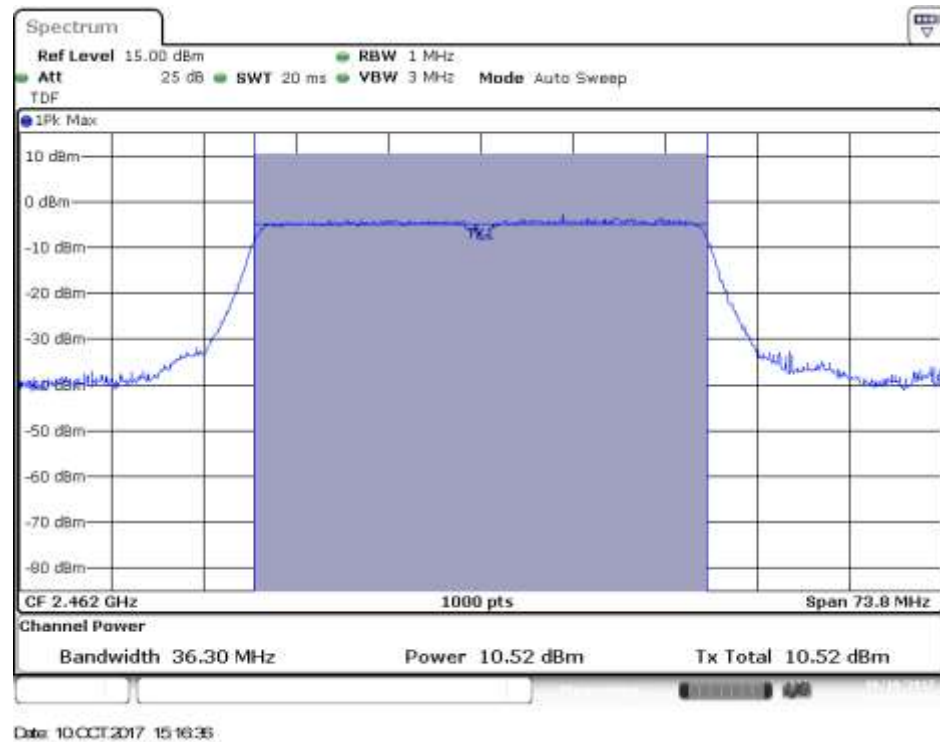
## MIMO-A, 802.11n40, HT8

Channel 11F



## MIMO-B, 802.11n40, HT8

Channel 11F

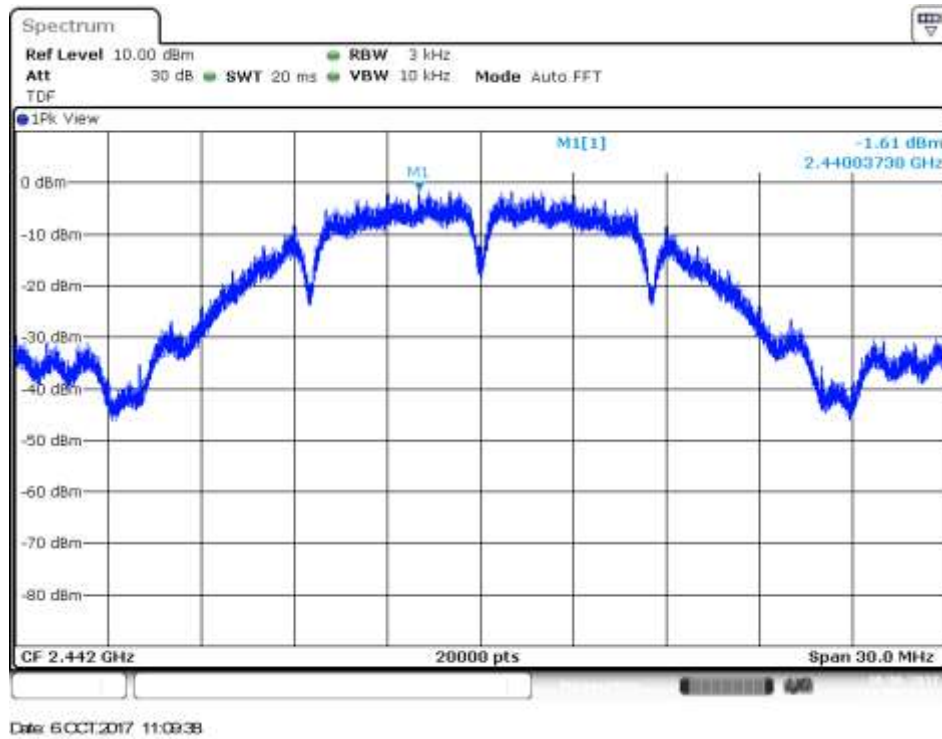




### B.3.4 Power spectral density

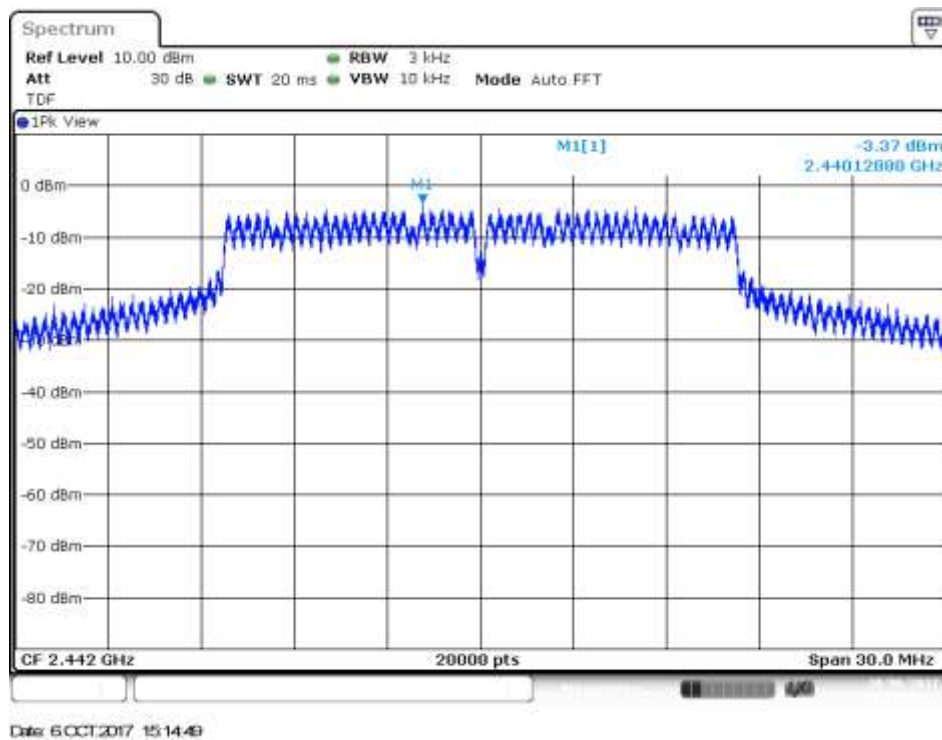
#### SISO-A, 802.11b, 1Mbps

Channel 7



#### SISO-A, 802.11g, 6Mbps

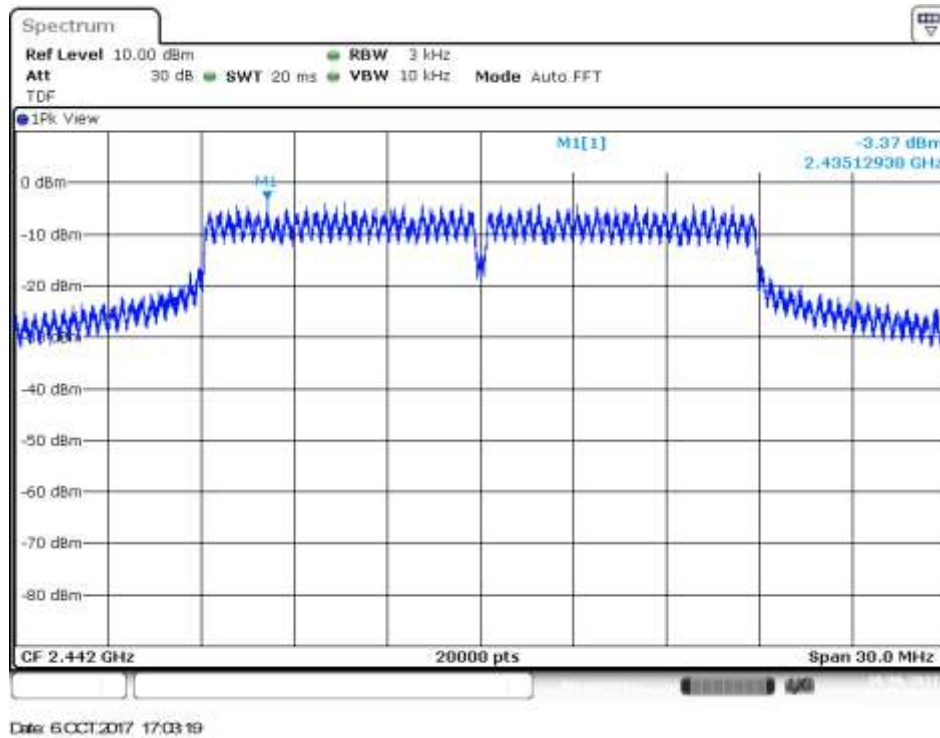
Channel 7





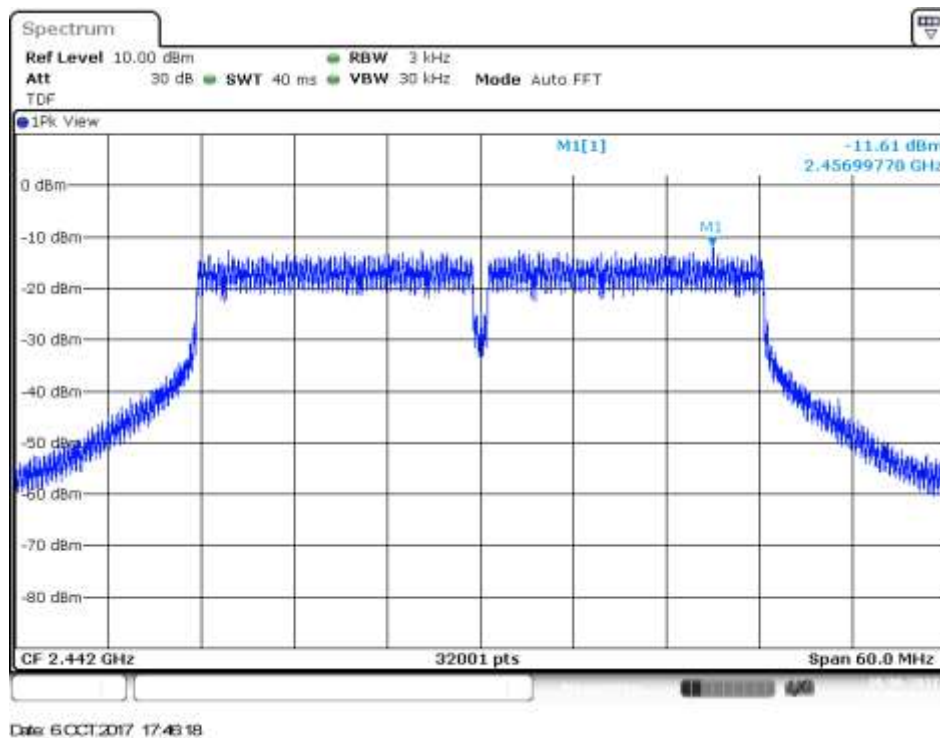
## SISO-B, 802.11n20, HT0

Channel 7



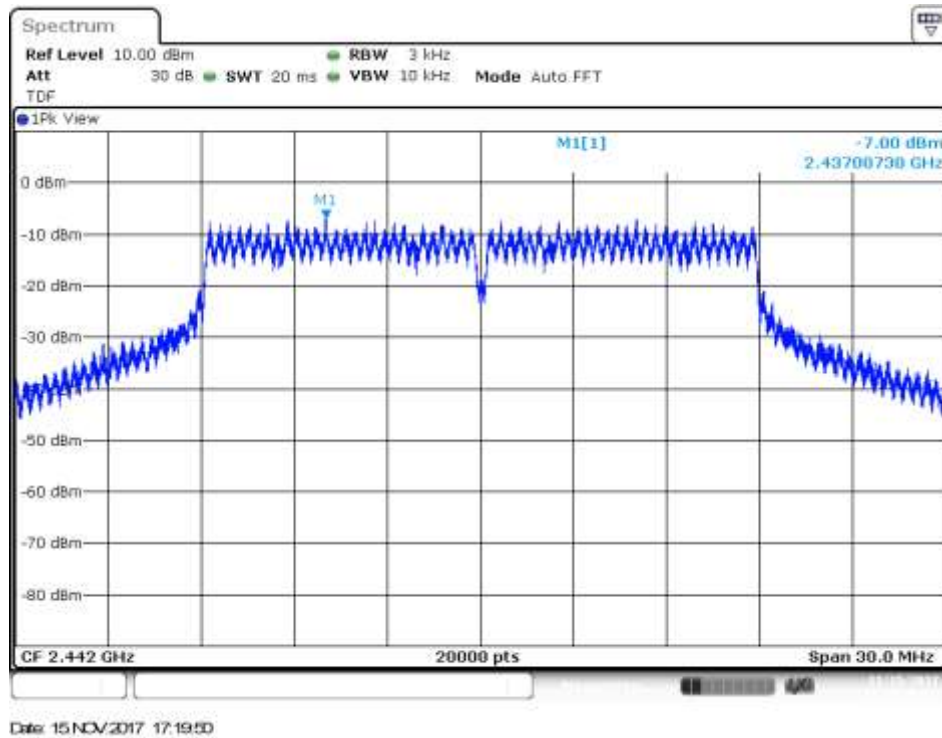
## SISO-A, 802.11n40, HT0

Channel 7F



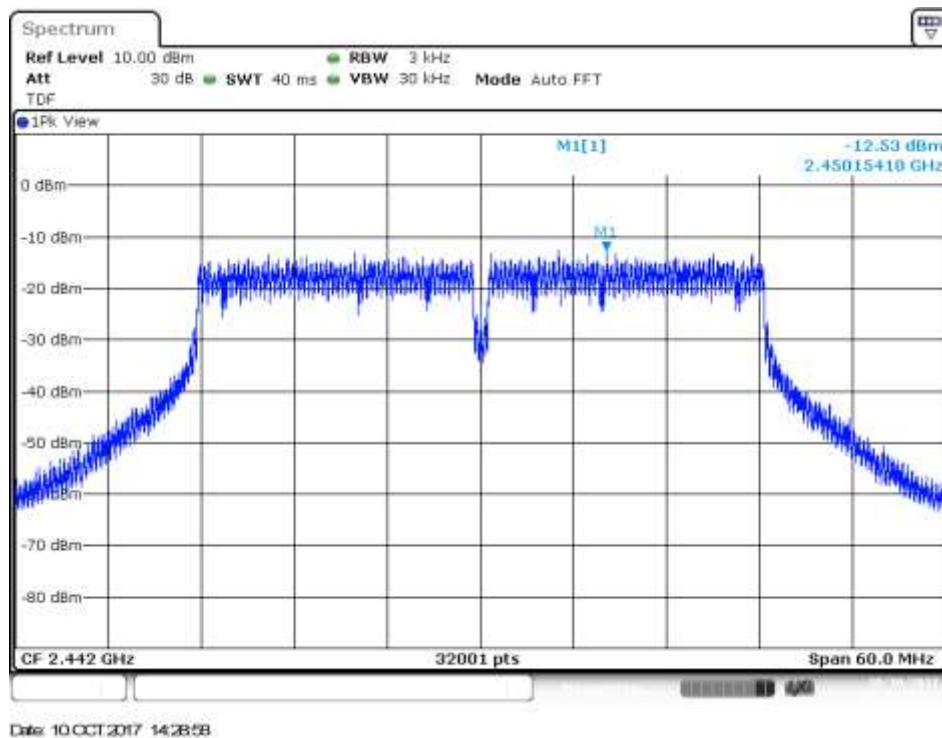
## MIMO-B, 802.11n20, HT8

Channel 7



## MIMO-B, 802.11n40, HT8

Channel 7F

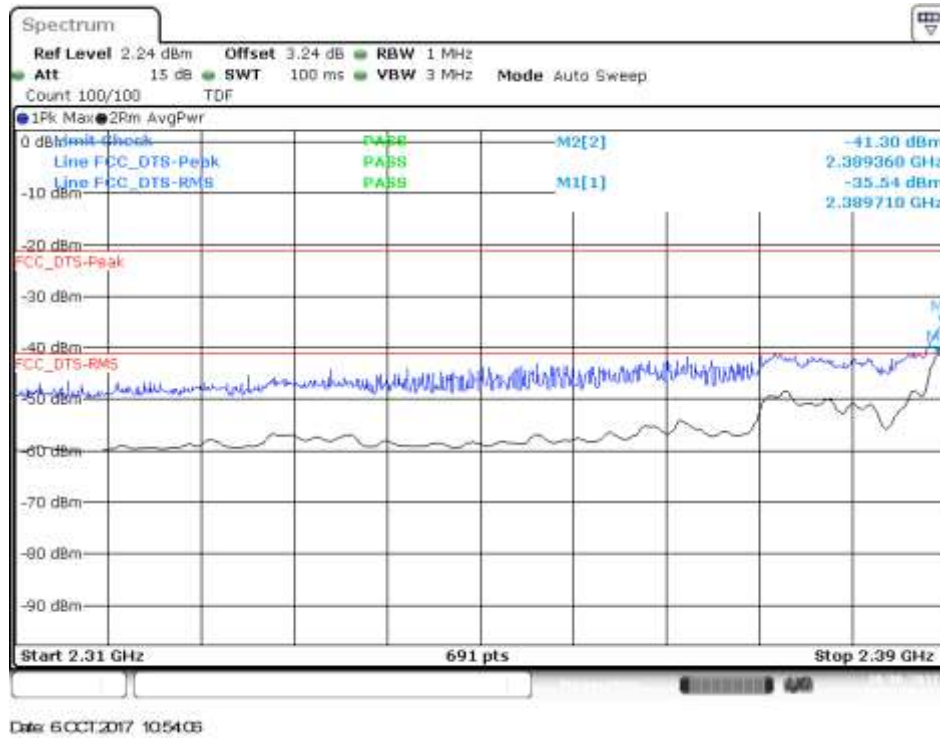


### B.3.5 Out of band emissions - band-edge low (conducted)

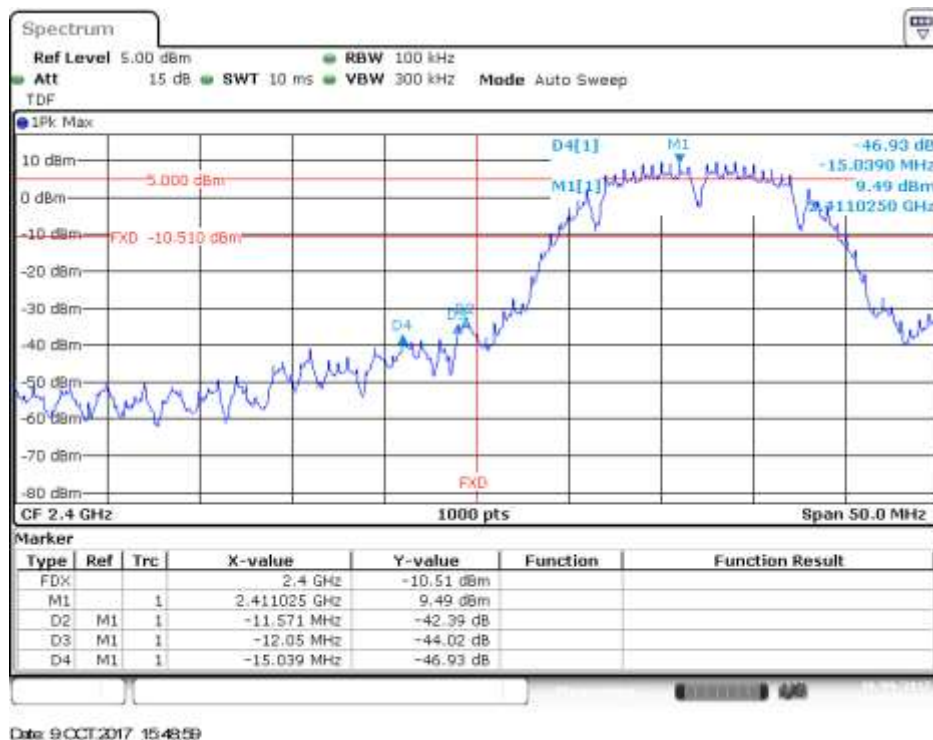
## SISO-A, 802.11b, 1Mbps

Channel 1

BE Low Freq Section



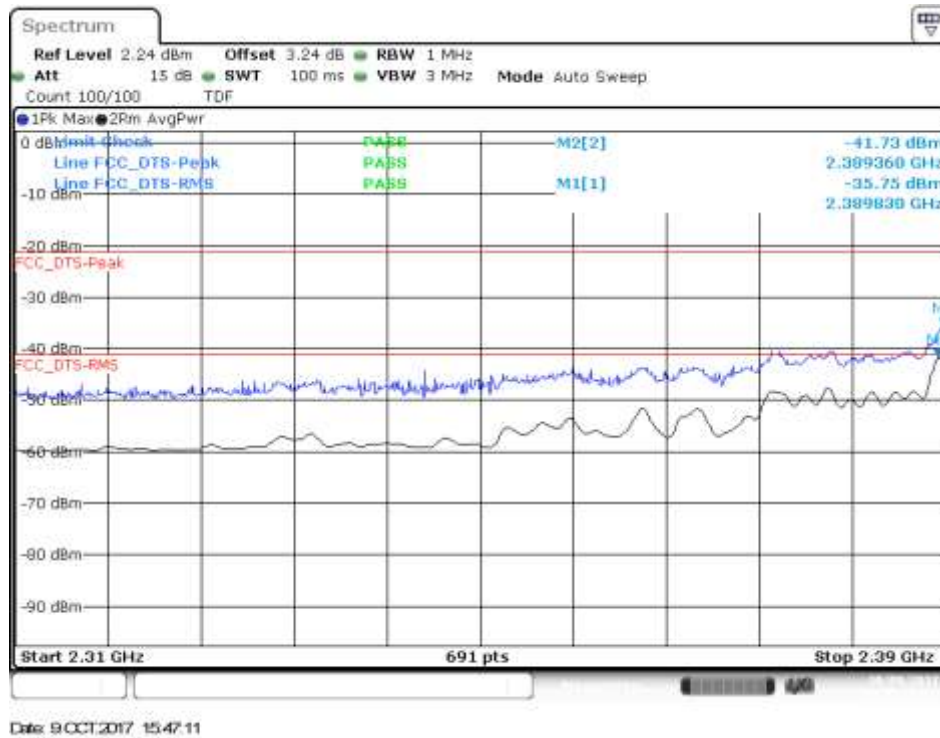
BE Low (Non Restricted)



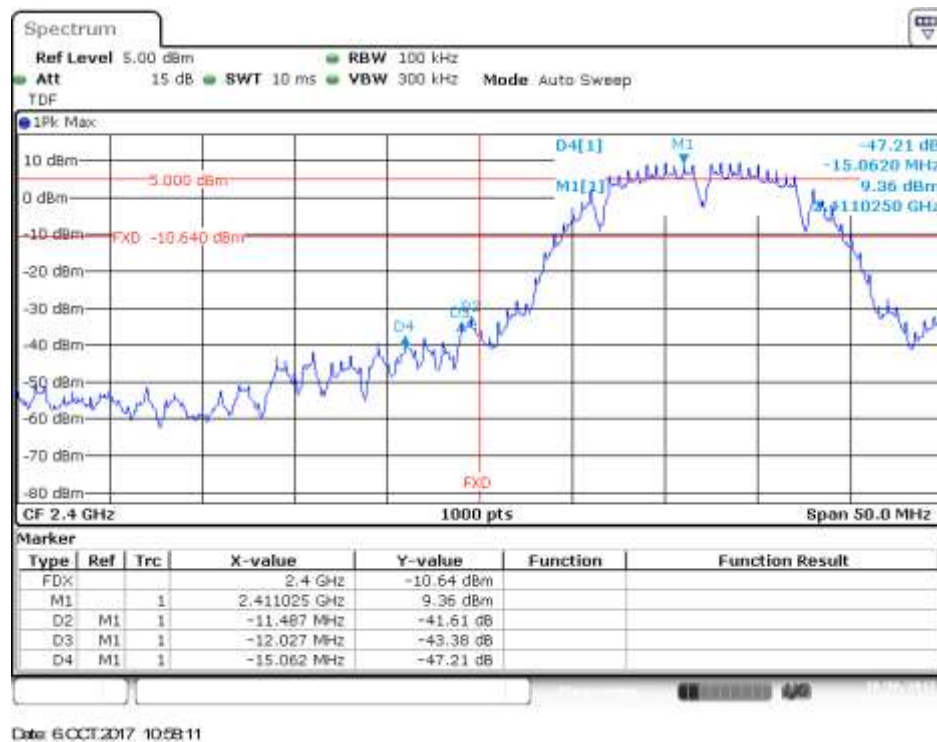
## SISO-B, 802.11b, 1Mbps

Channel 1

BE Low Freq Section



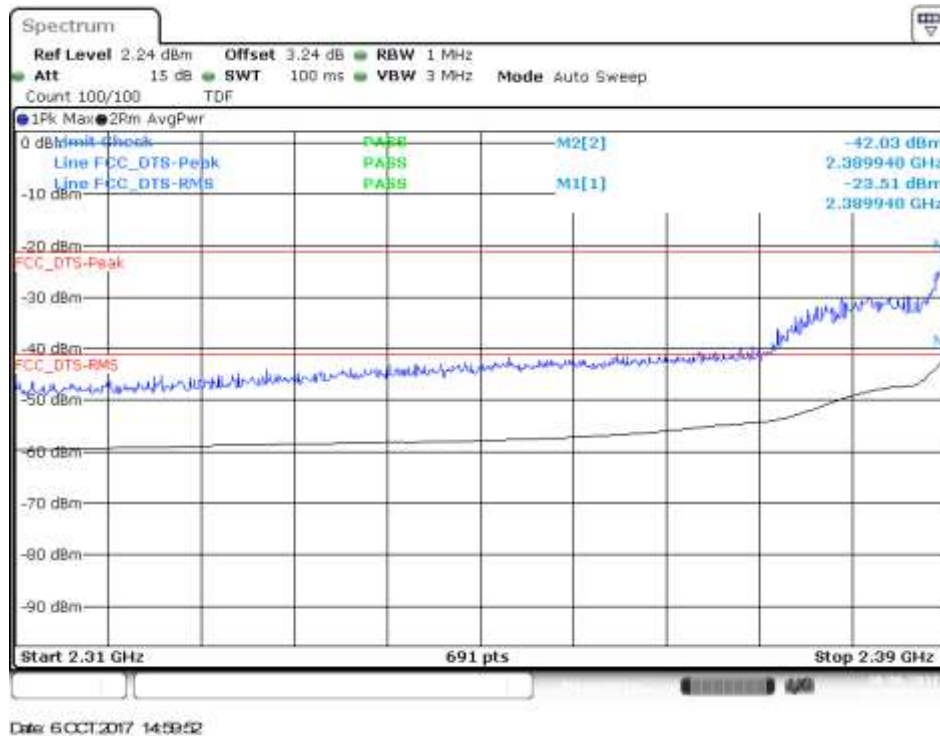
BE Low (Non Restricted)



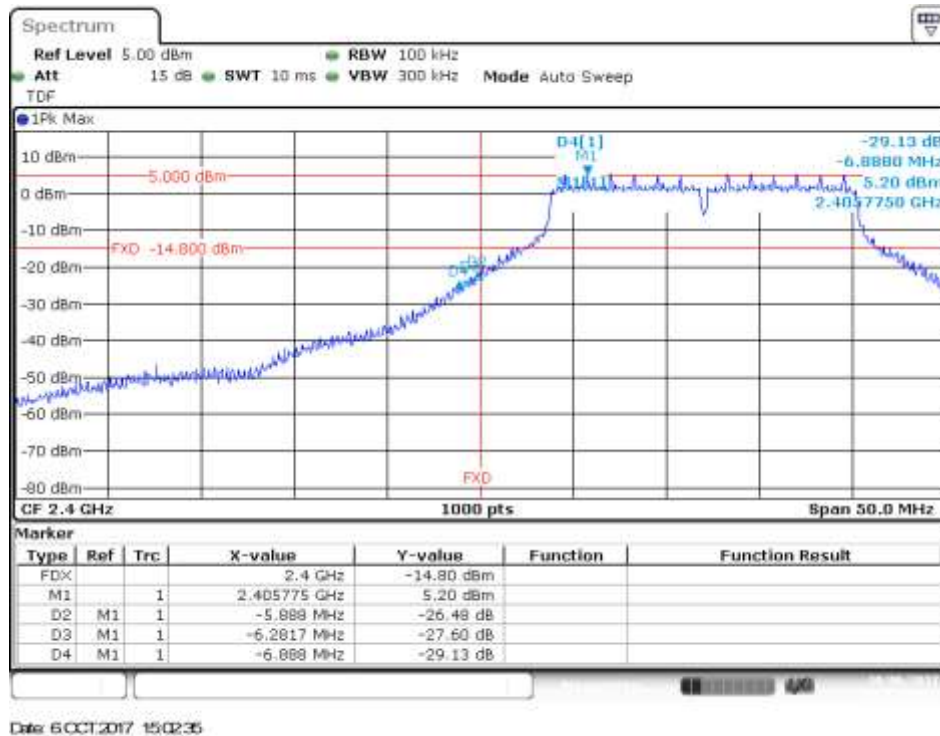
## SISO-A, 802.11g, 6Mbps

Channel 1

BE Low Freq Section



BE Low (Non Restricted)

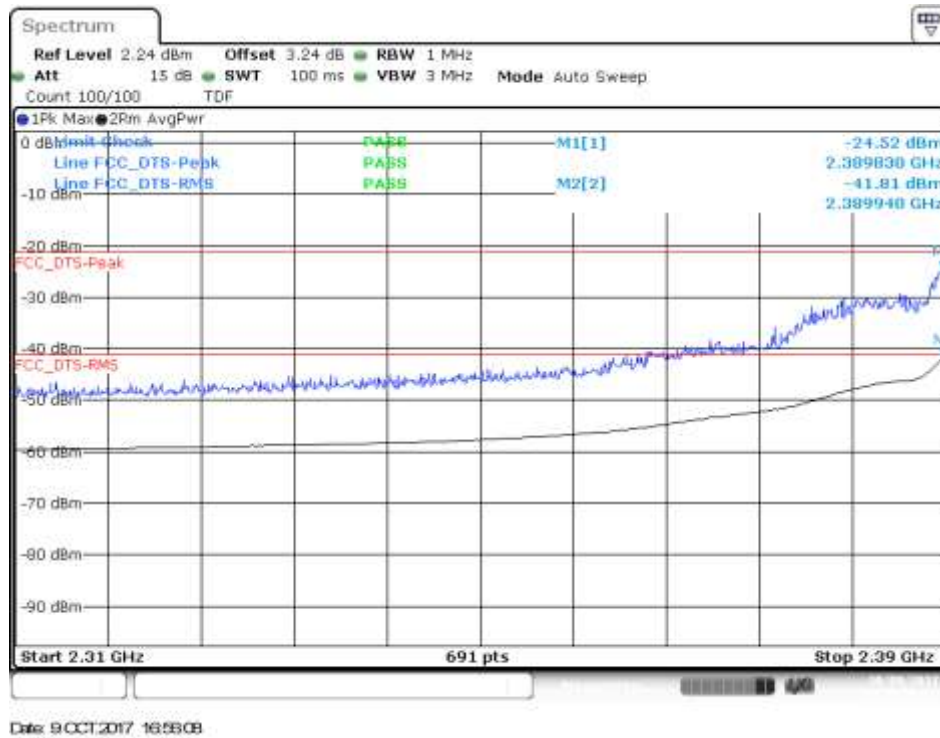




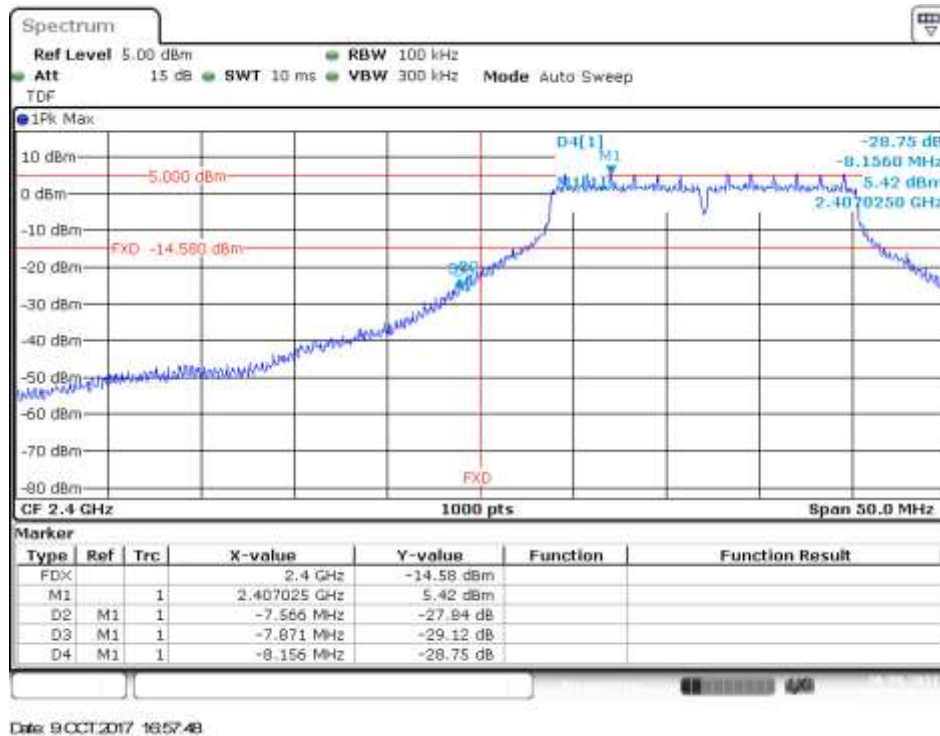
## SISO-B, 802.11g, 6Mbps

Channel 1

BE Low Freq Section



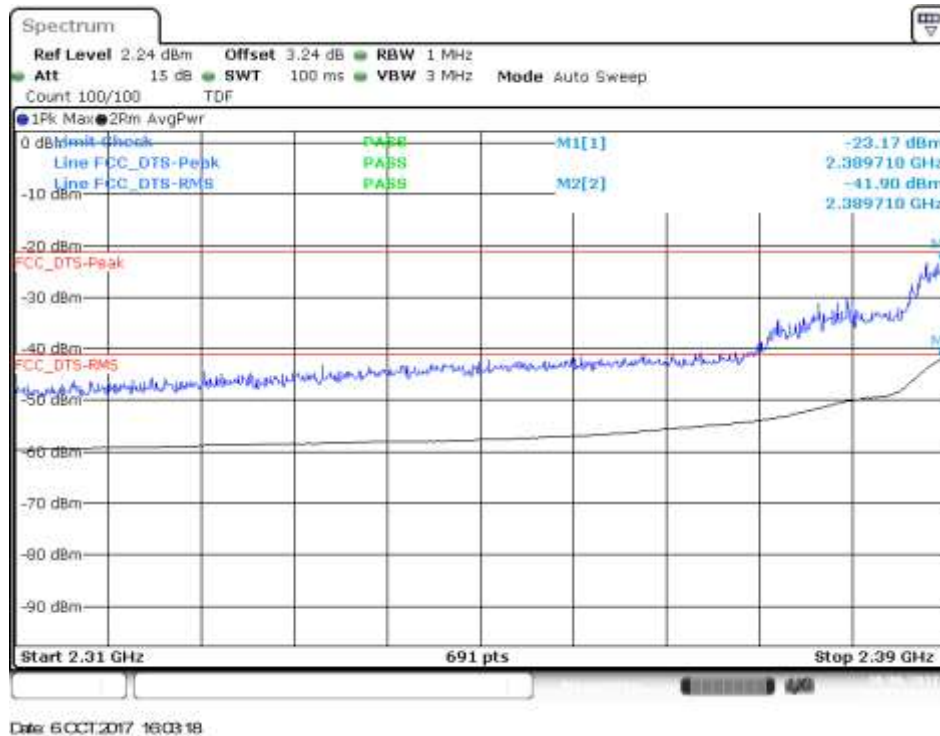
BE Low (Non Restricted)



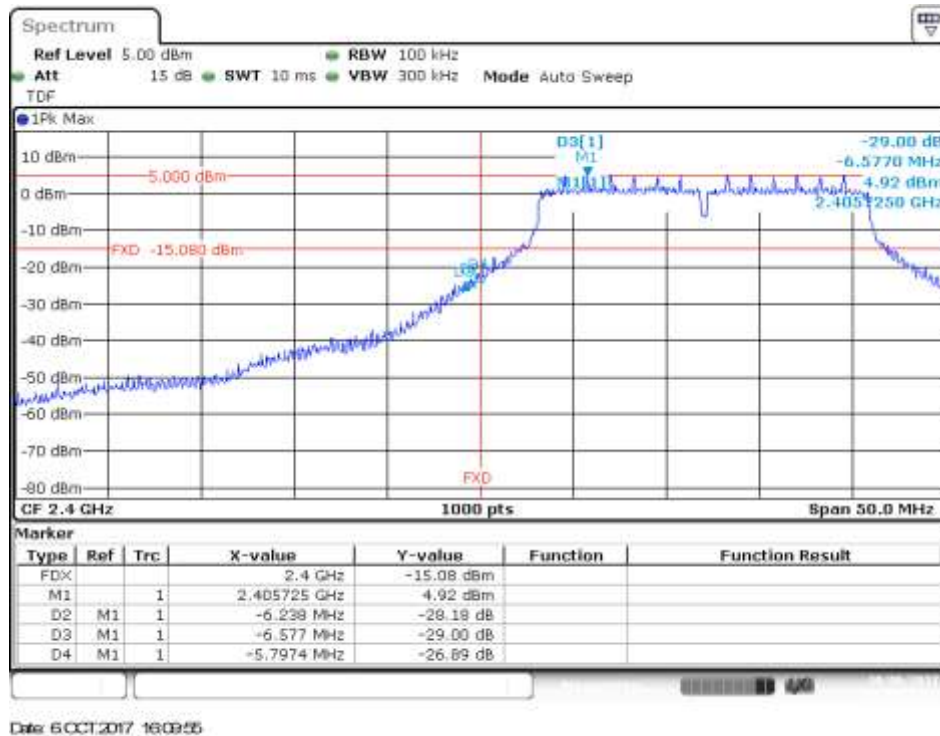
## SISO-A, 802.11n20, HT0

Channel 1

BE Low Freq Section



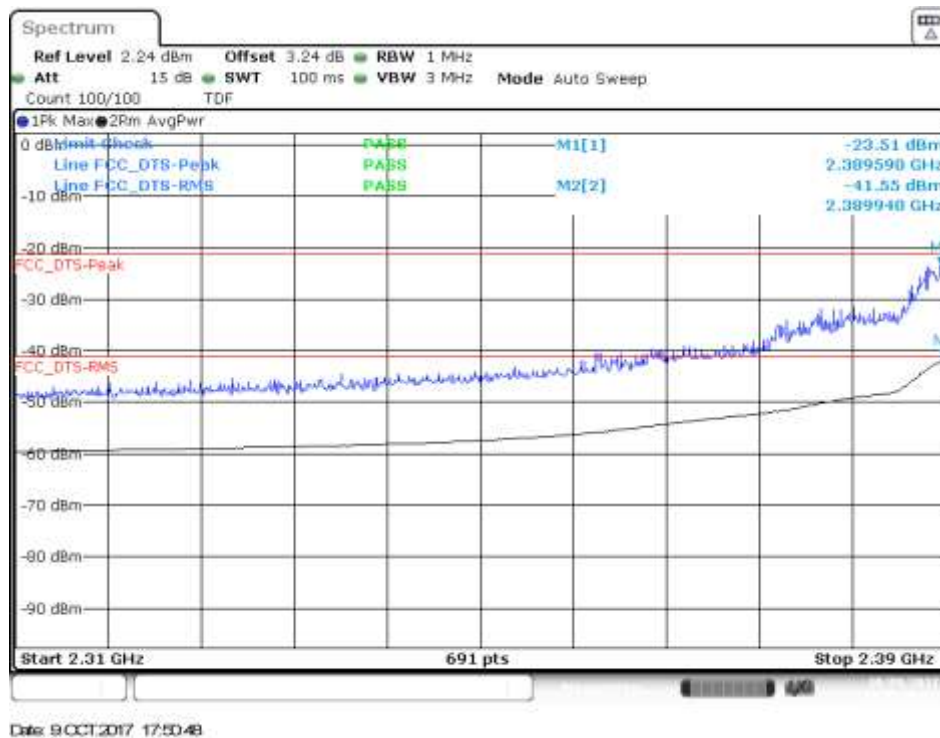
BE Low (Non Restricted)



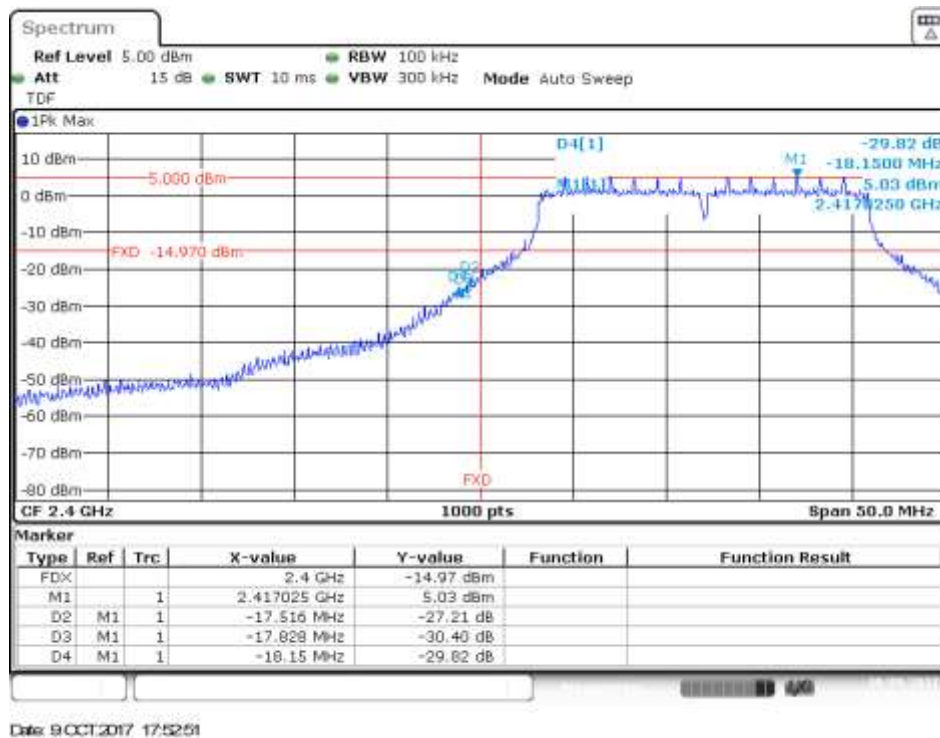
## SISO-B, 802.11n20, HT0

Channel 1

BE Low Freq Section



BE Low (Non Restricted)

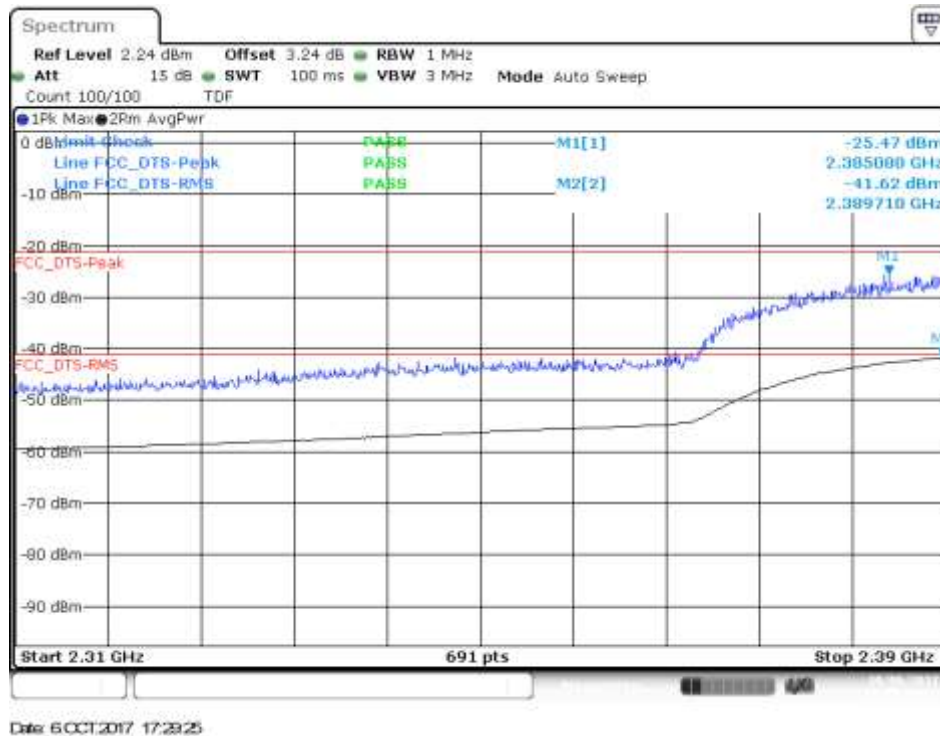




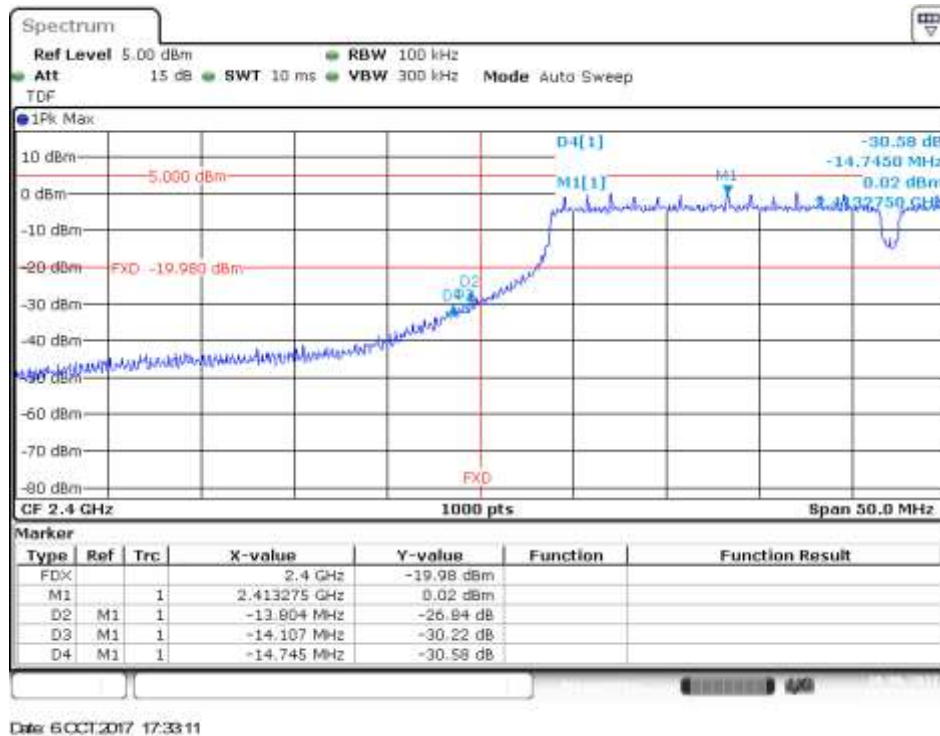
# SISO-A, 802.11n40, HT0

Channel 3F

BE Low Freq Section



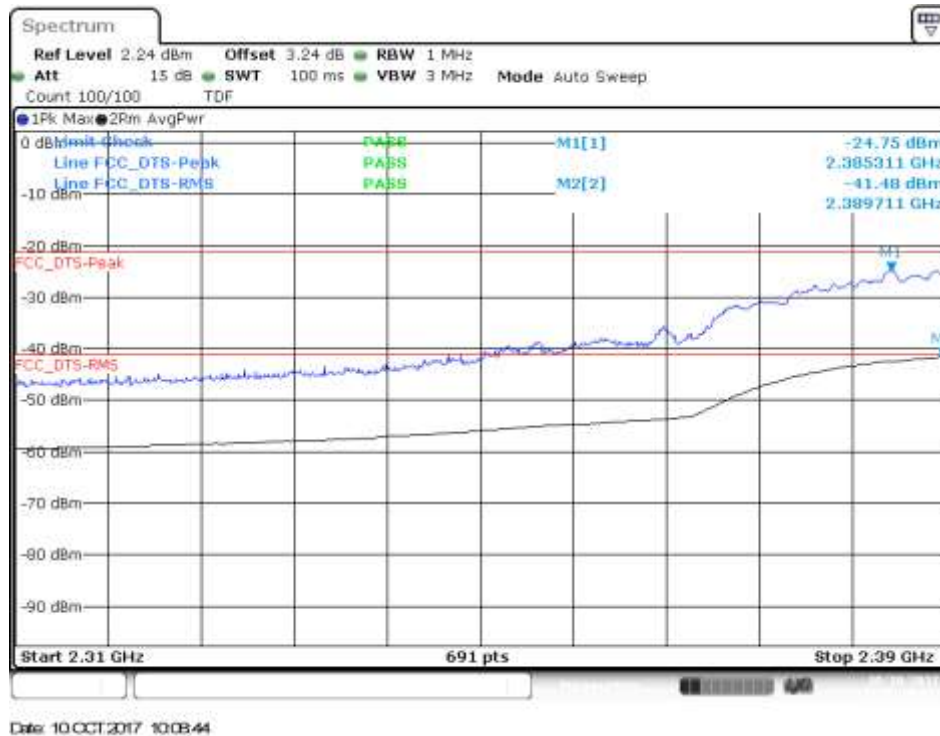
BE Low (Non Restricted)



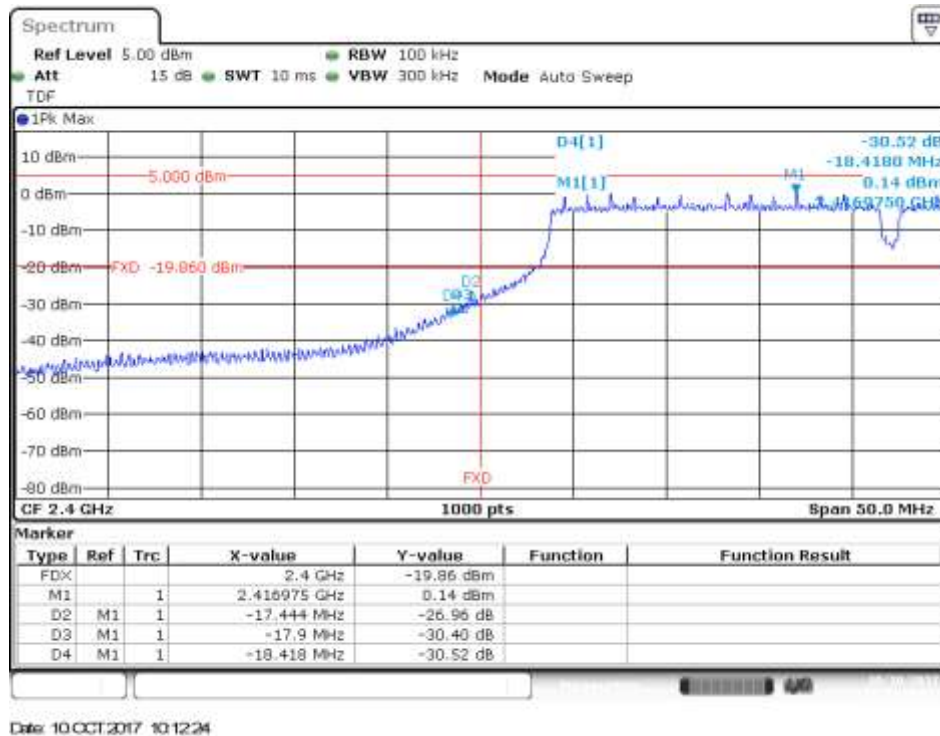
## SISO-B, 802.11n40, HT0

Channel 3F

BE Low Freq Section



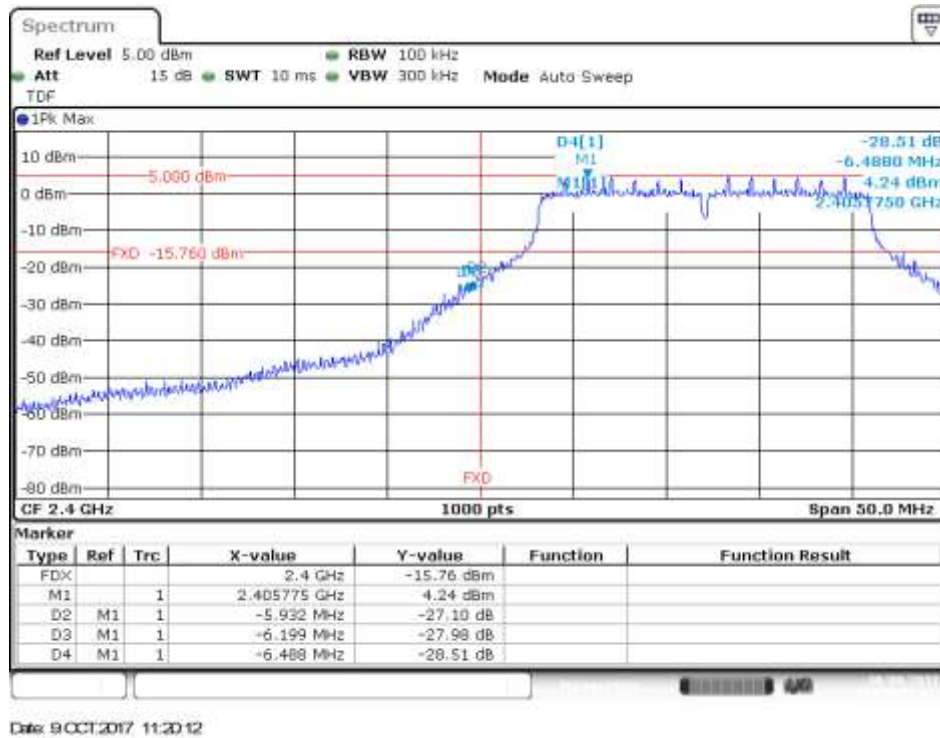
BE Low (Non Restricted)



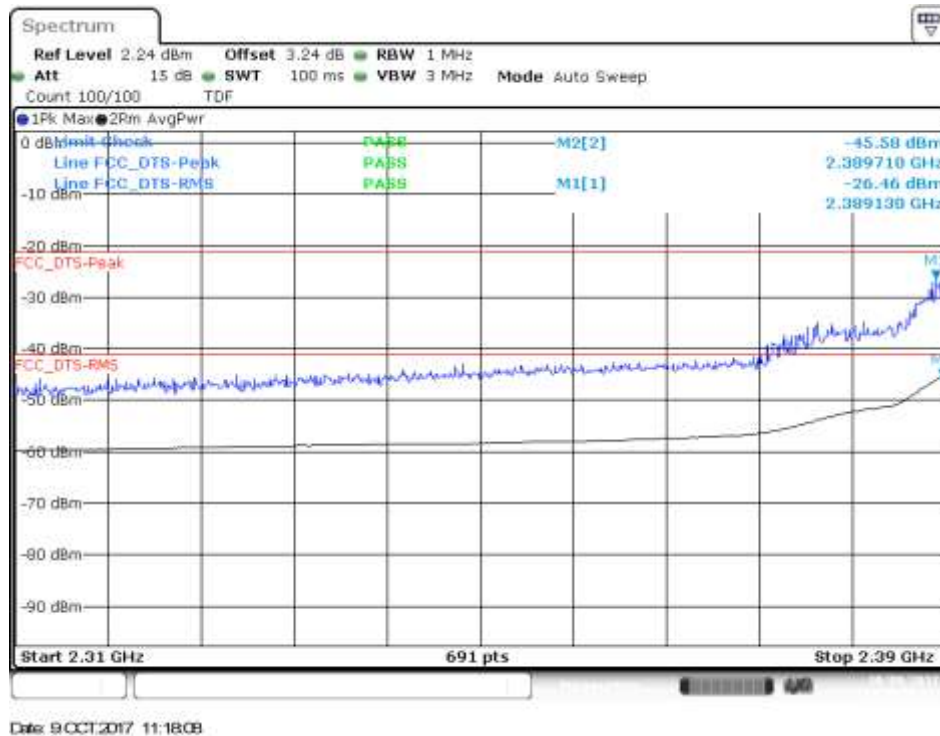
## MIMO-A, 802.11n20, HT8

Channel 1

BE Low Freq Section



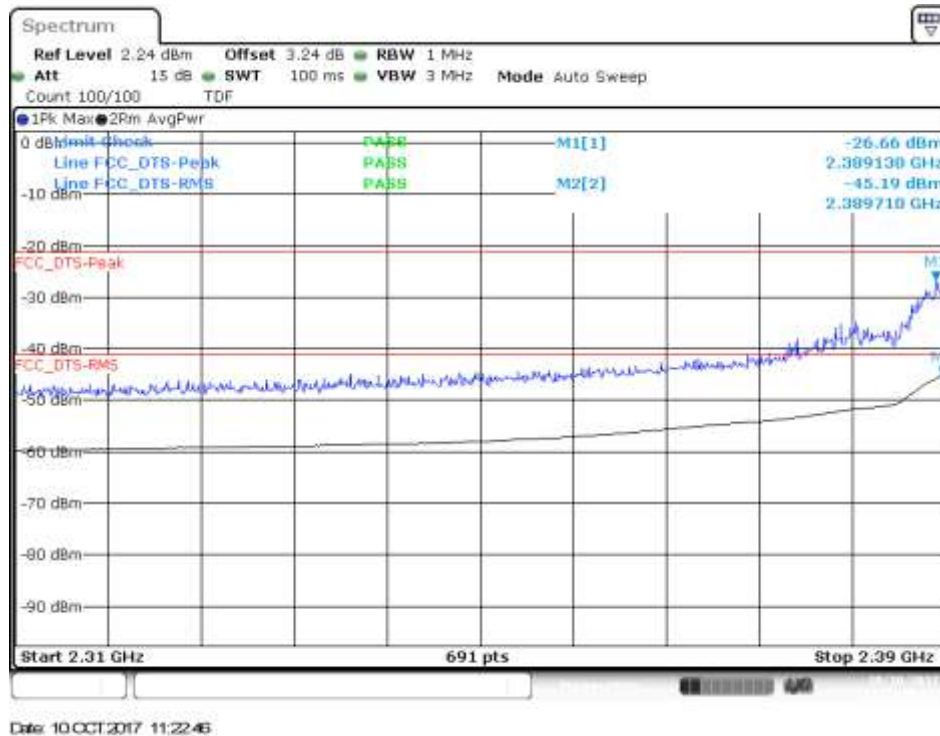
BE Low (Non Restricted)



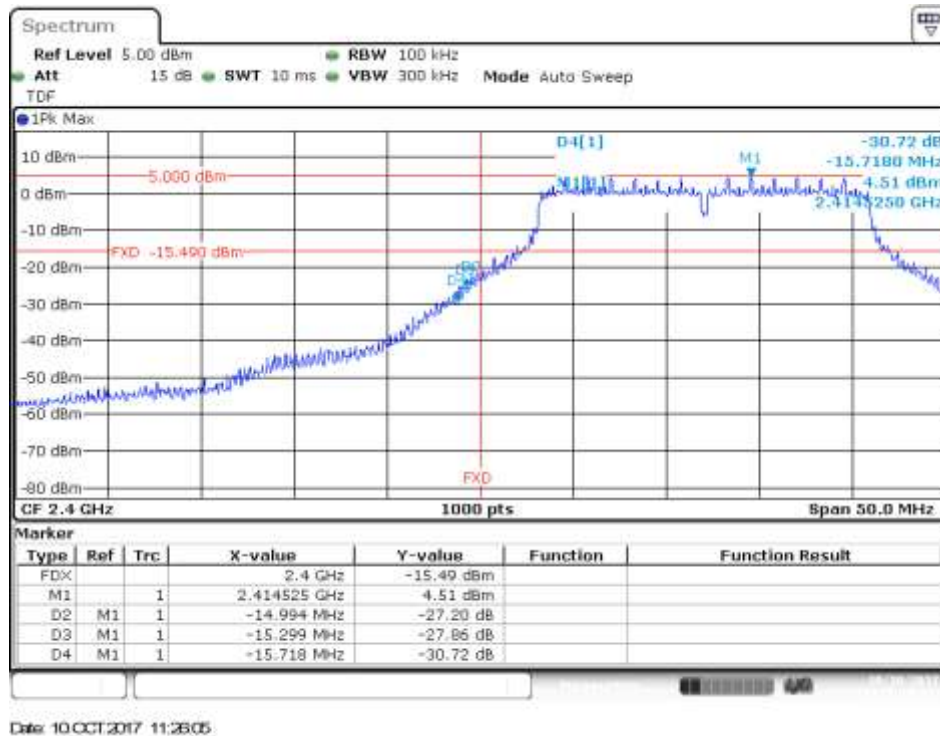
## MIMO-B, 802.11n20, HT8

Channel 1

BE Low Freq Section



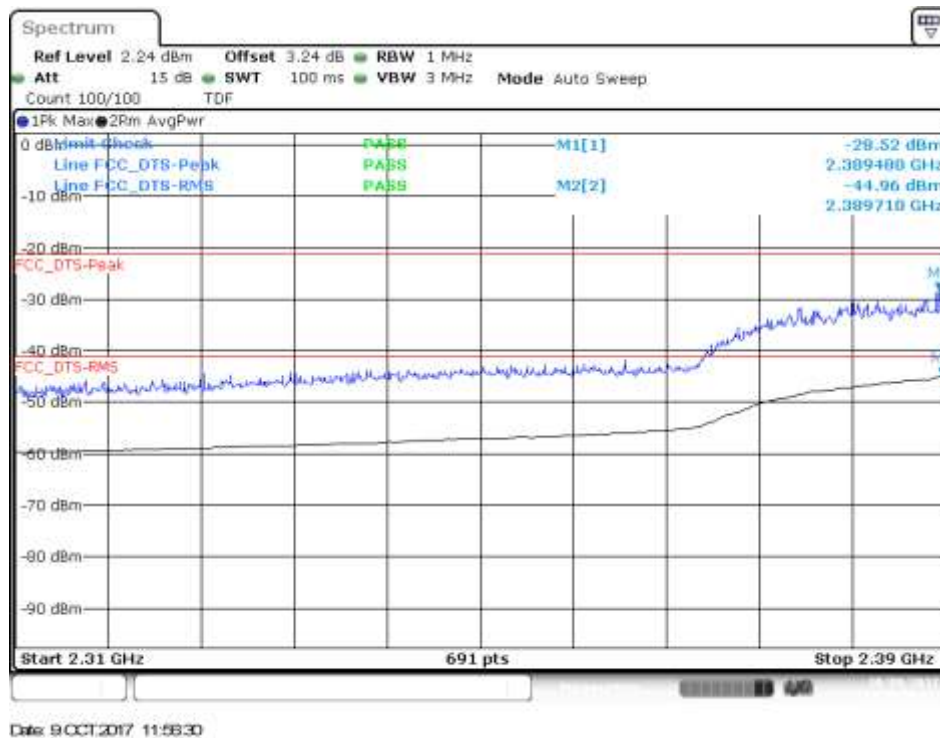
BE Low (Non Restricted)



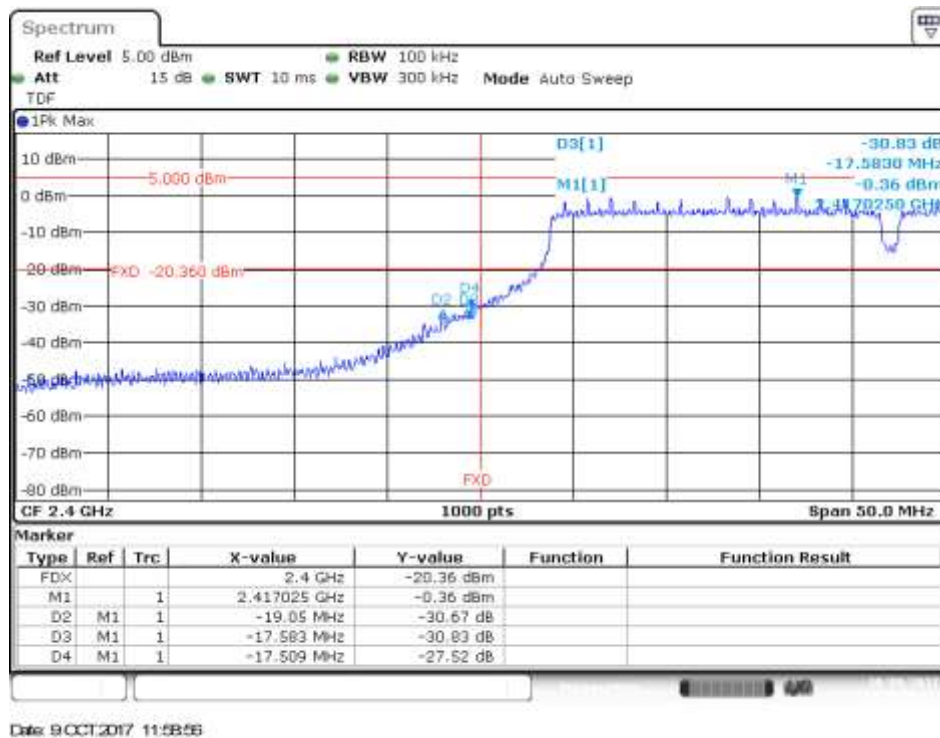
## MIMO-A, 802.11n40, HT8

Channel 3F

BE Low Freq Section



BE Low (Non Restricted)

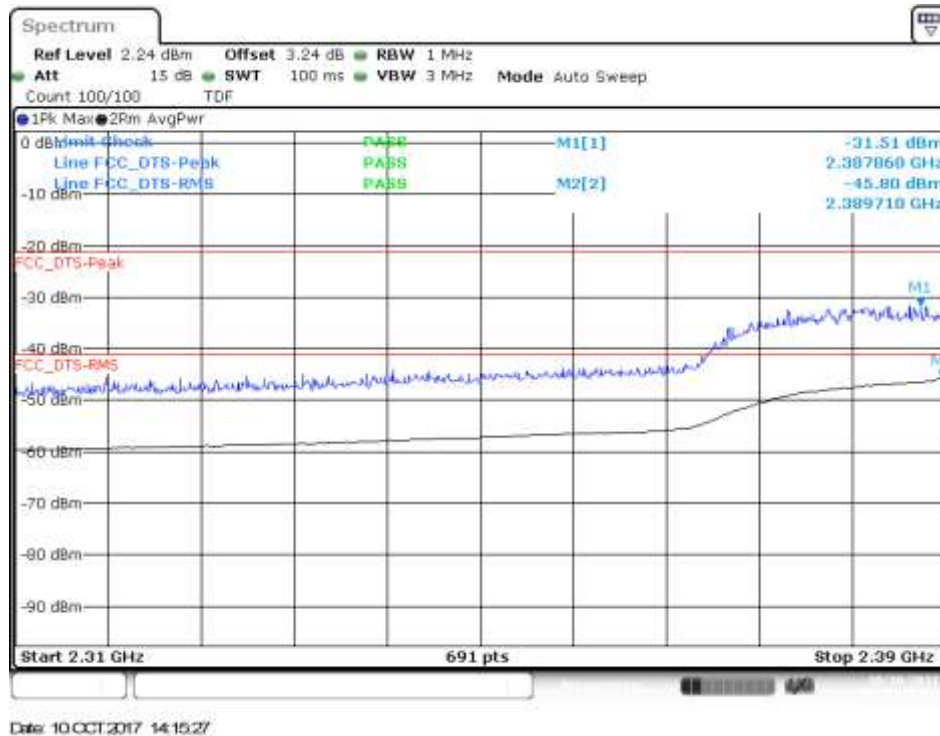




## MIMO-B, 802.11n40, HT8

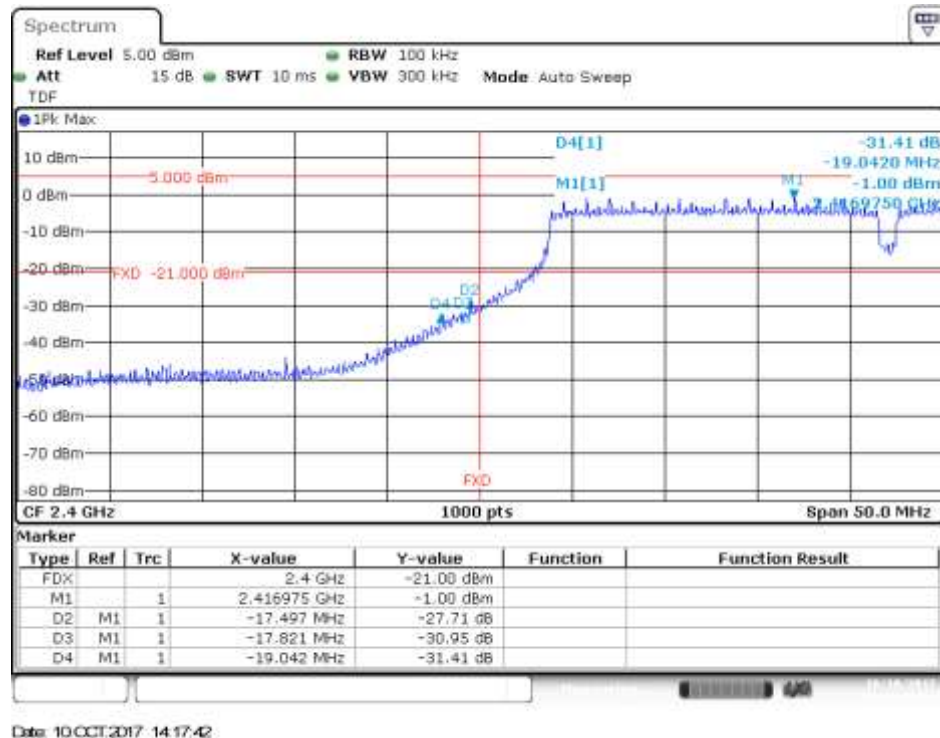
Channel 3F

BE Low Freq Section



Channel 3F

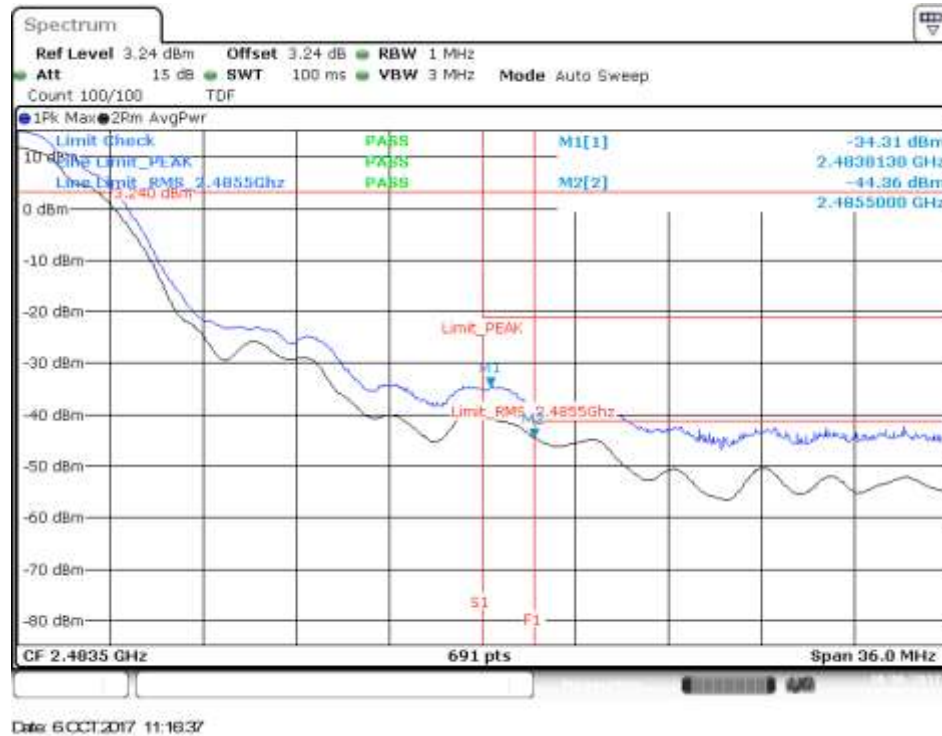
BE Low (Non Restricted)



### B.3.6 Out of band emissions - band-edge high (conducted)

## SISO-A, 802.11b, 1Mbps

Channel 11 - BE High Freq Section (restricted)



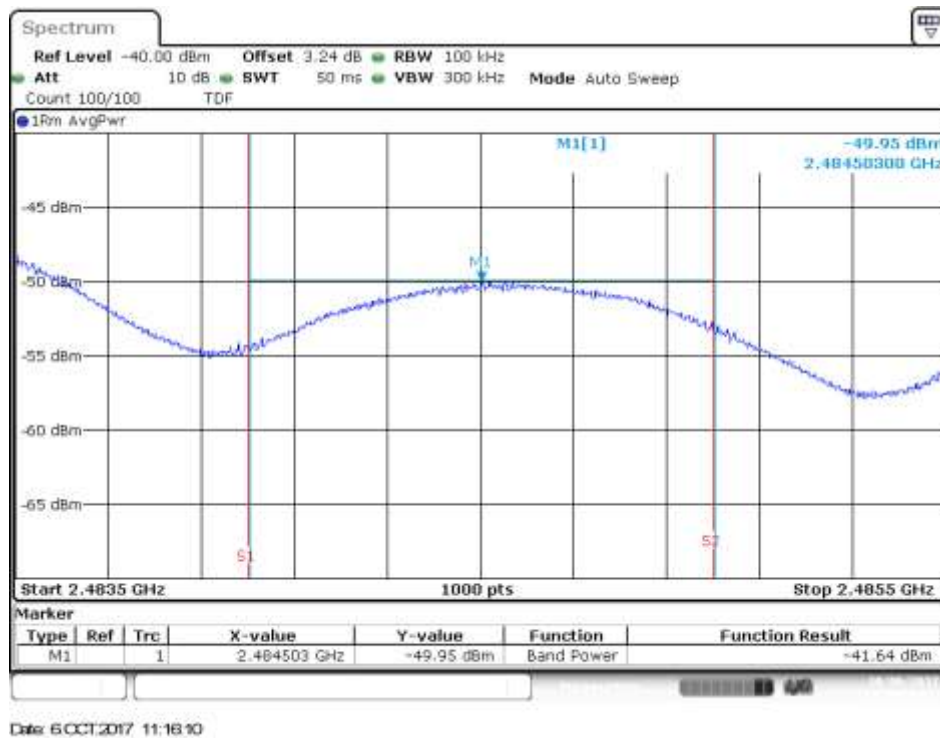
Channel 12 - BE High Freq Section (restricted)



Channel 13 - BE High Freq Section (restricted)



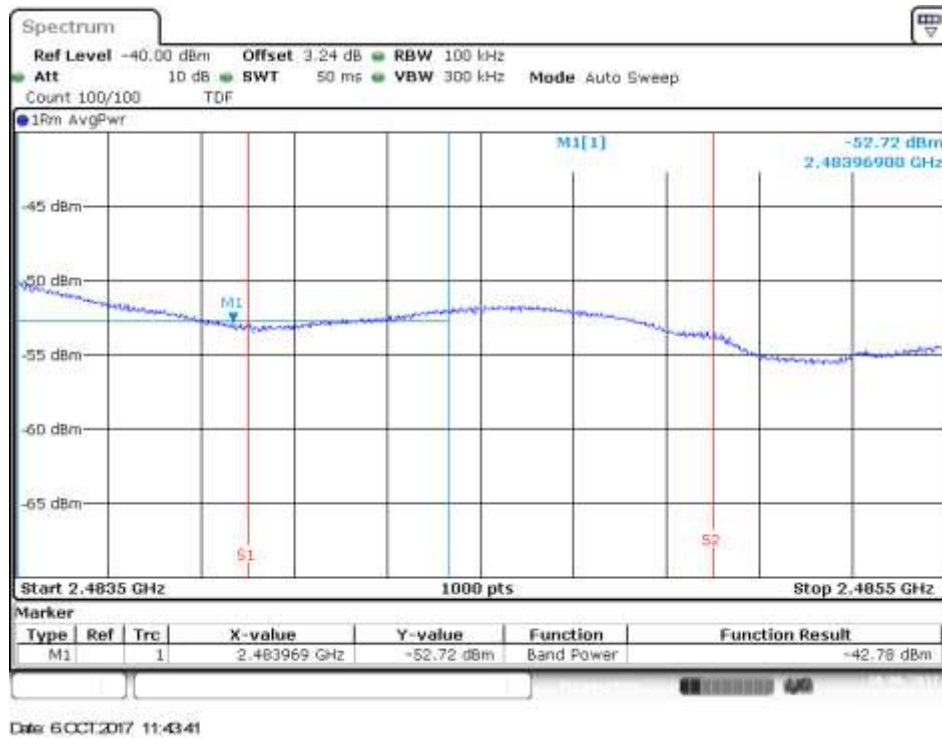
Channel 11 - BE High Freq Section RMS within 2MHz (restricted)



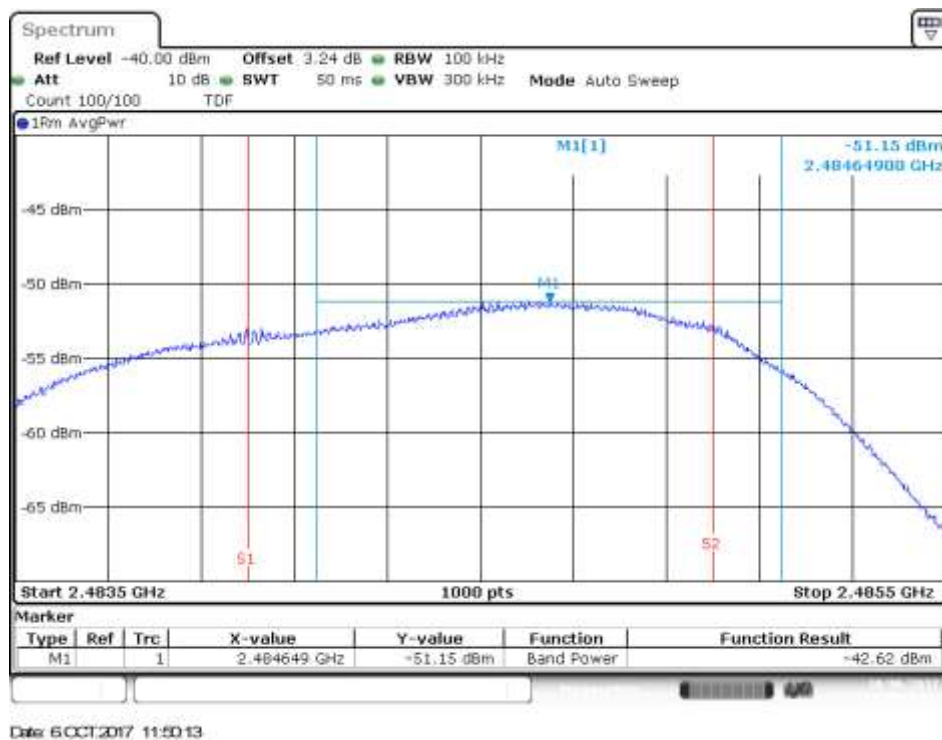


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## Channel 12 - BE High Freq Section RMS within 2MHz (restricted)

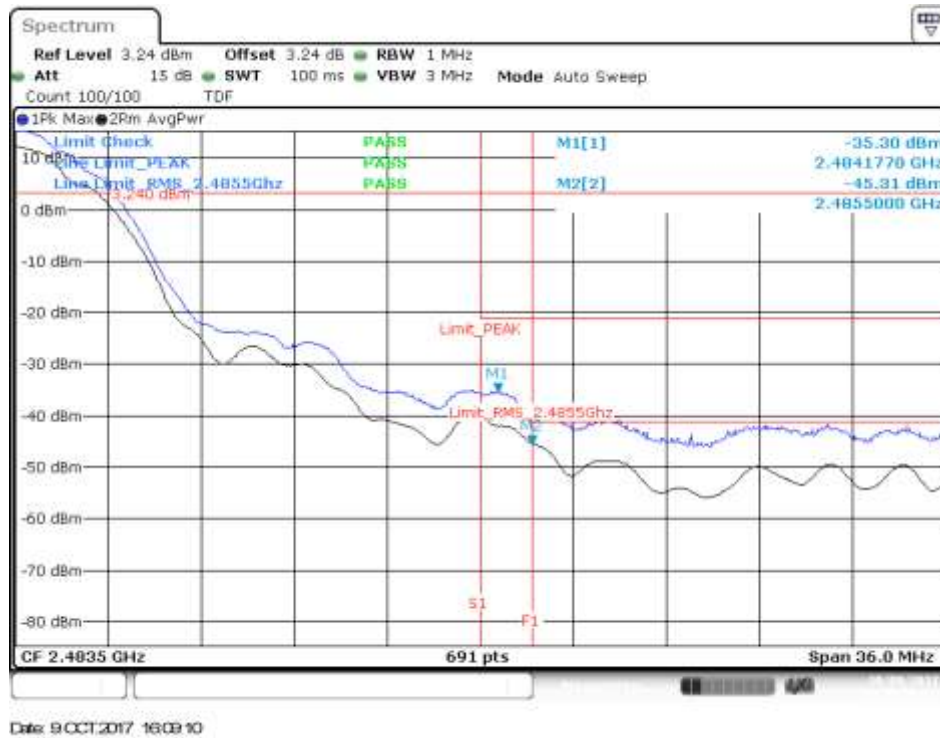


## Channel 13 - BE High Freq Section RMS within 2MHz (restricted)



## SISO-B, 802.11b, 1Mbps

Channel 11 - BE High Freq Section (restricted)



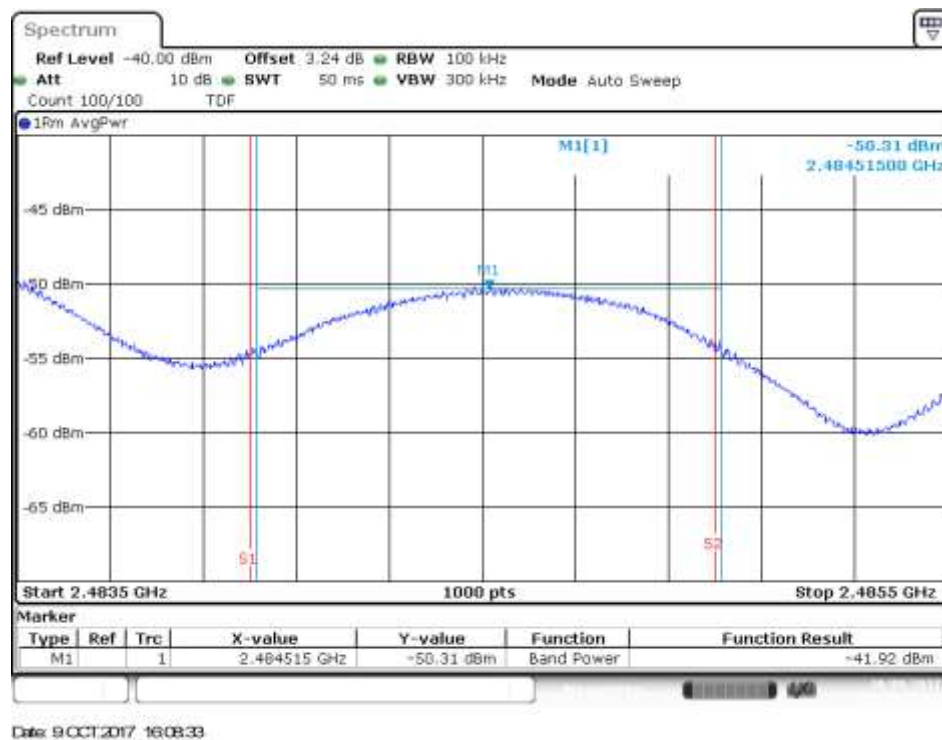
Channel 12 - BE High Freq Section (restricted)



Channel 13 - BE High Freq Section (restricted)

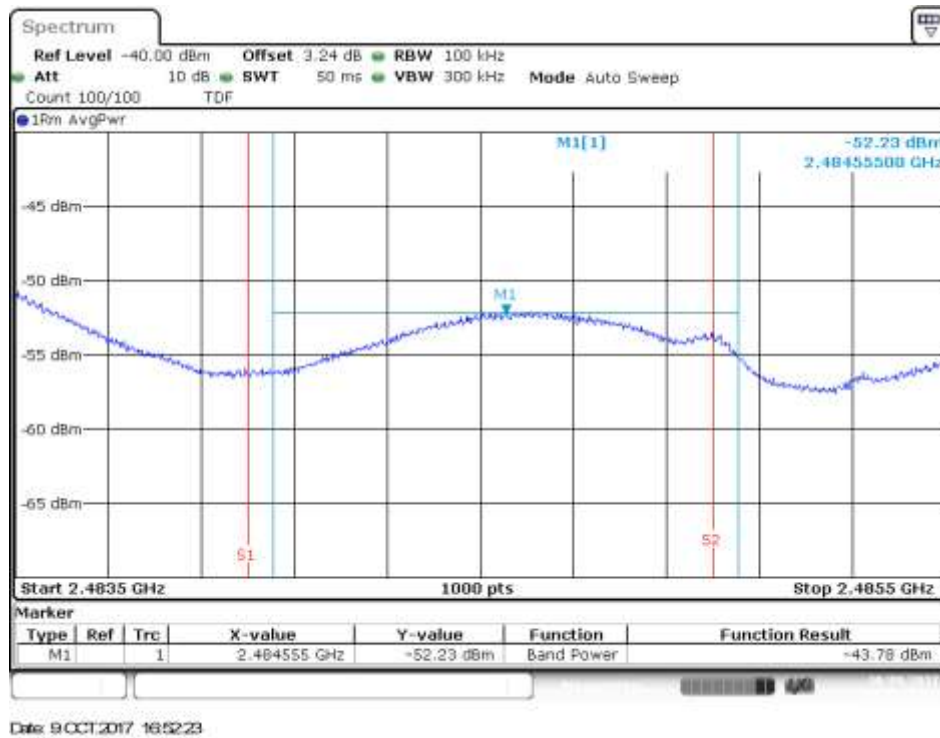


Channel 11 - BE High Freq Section RMS within 2MHz (restricted)

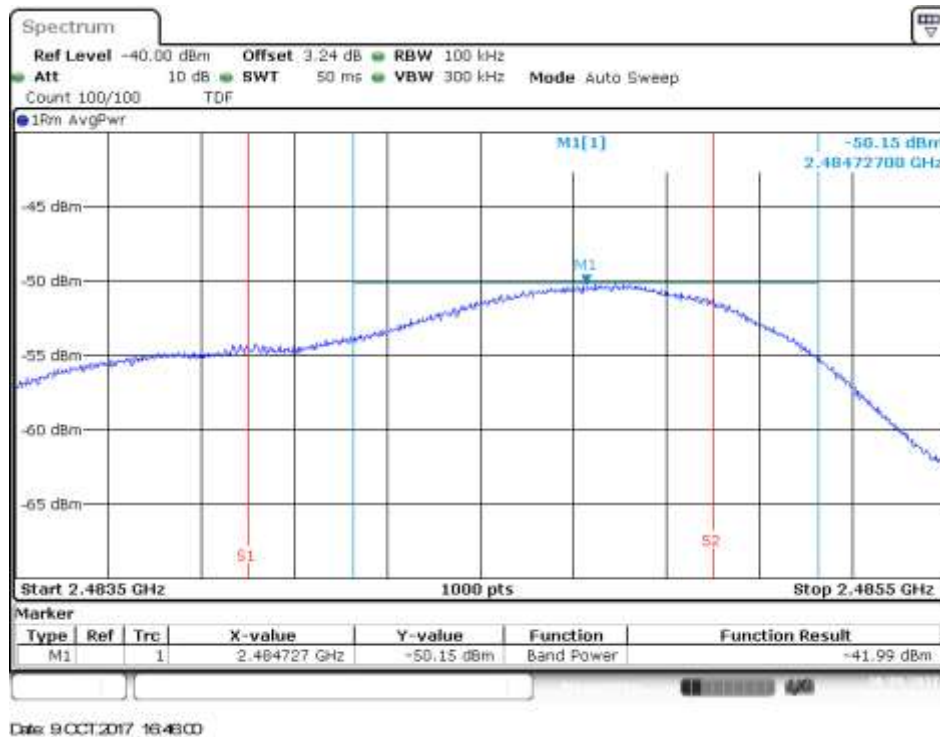


## Test Report N° 170919-03.TR04

## Channel 12 - BE High Freq Section RMS within 2MHz (restricted)

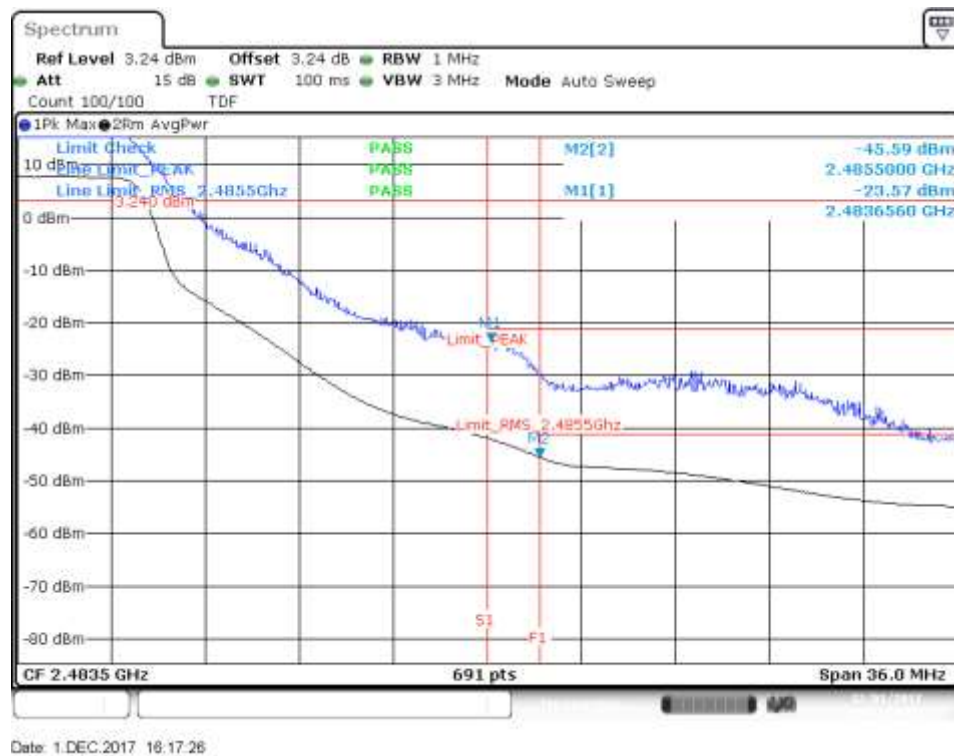


## Channel 13 - BE High Freq Section RMS within 2MHz (restricted)

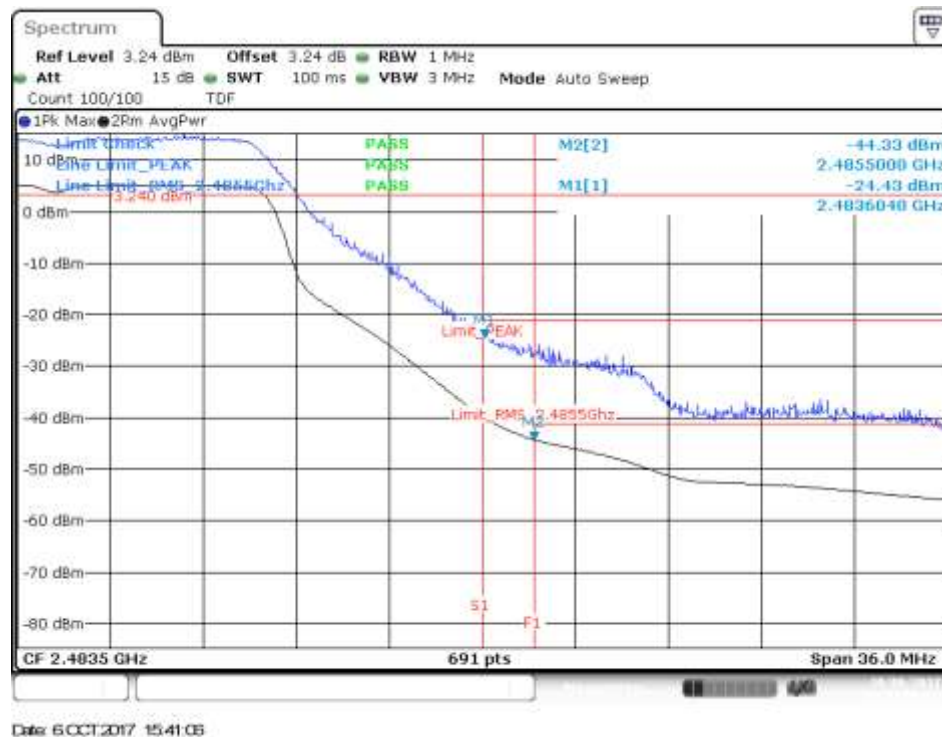


## SISO-A, 802.11g, 6Mbps

Channel 11 - BE High Freq Section (restricted)

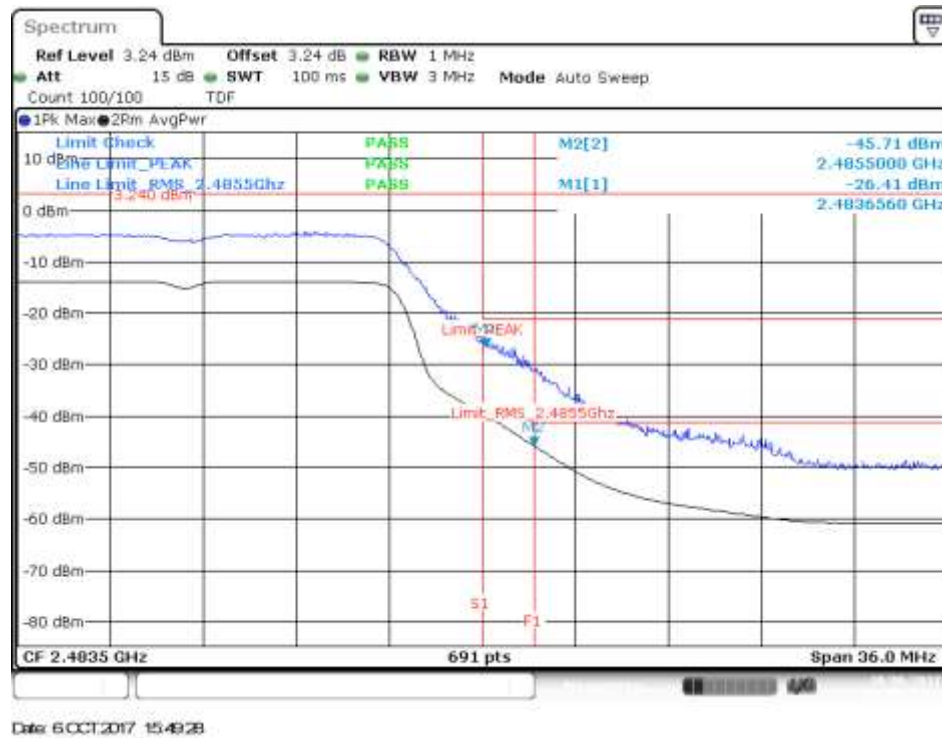


Channel 12 - BE High Freq Section (restricted)

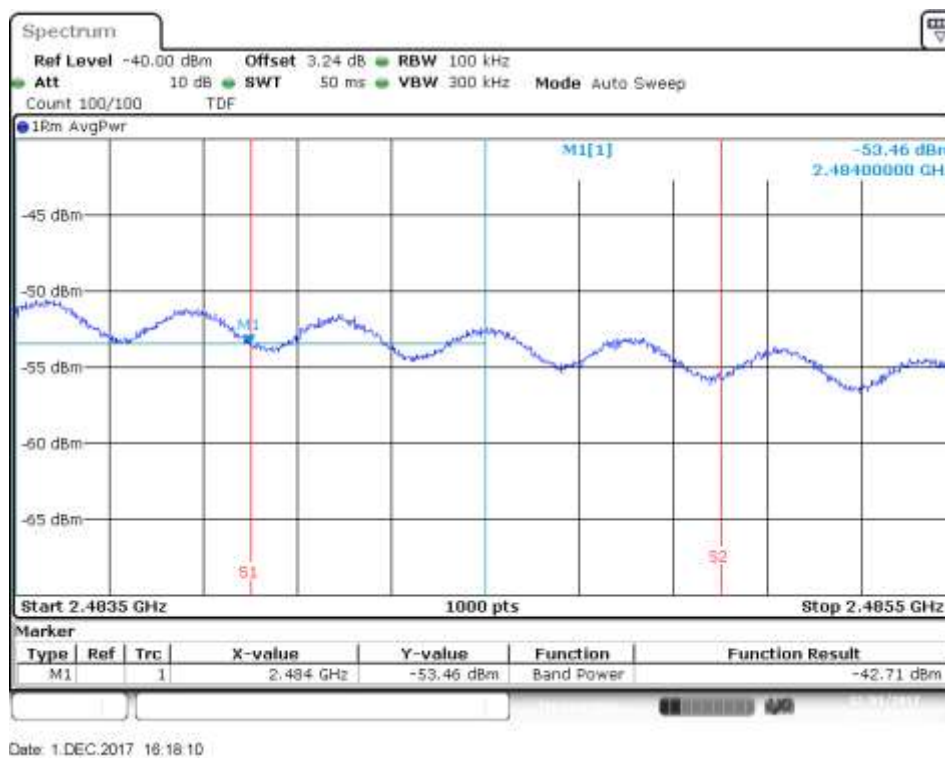




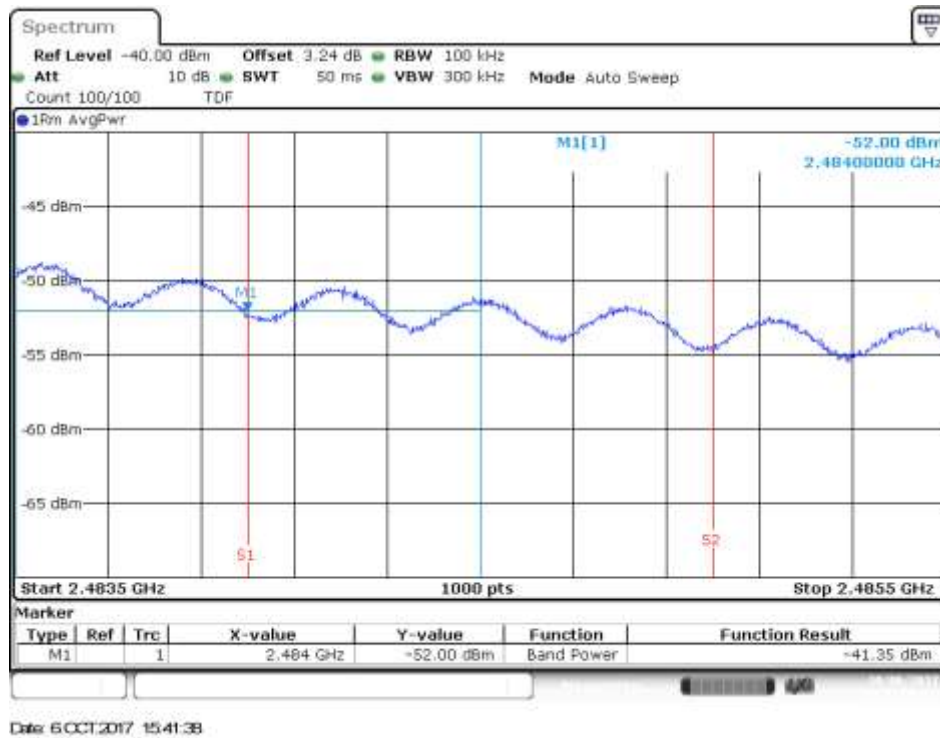
Channel 13 - BE High Freq Section (restricted)



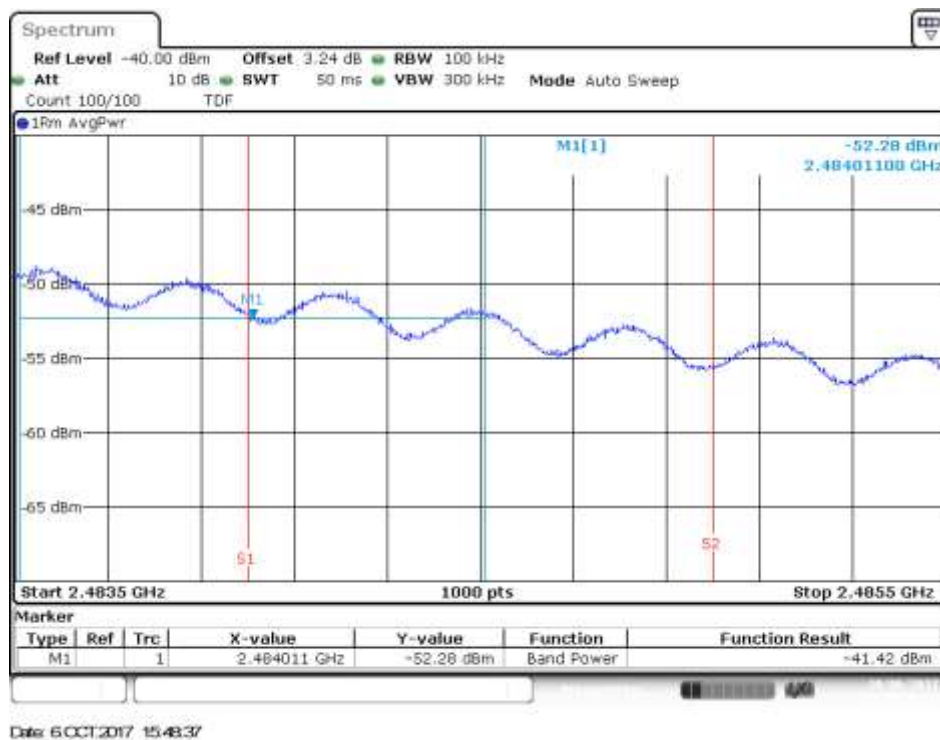
Channel 11 - BE High Freq Section RMS within 2MHz (restricted)



Channel 12 - BE High Freq Section RMS within 2MHz (restricted)

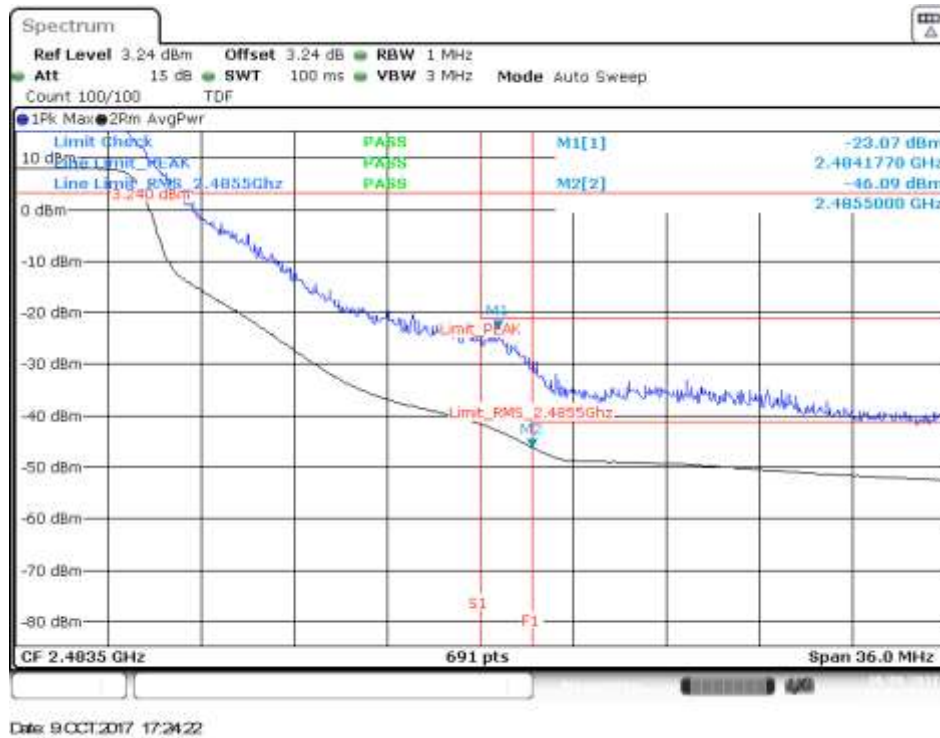


Channel 13 - BE High Freq Section RMS within 2MHz (restricted)



## SISO-B, 802.11g, 6Mbps

Channel 11 - BE High Freq Section (restricted)



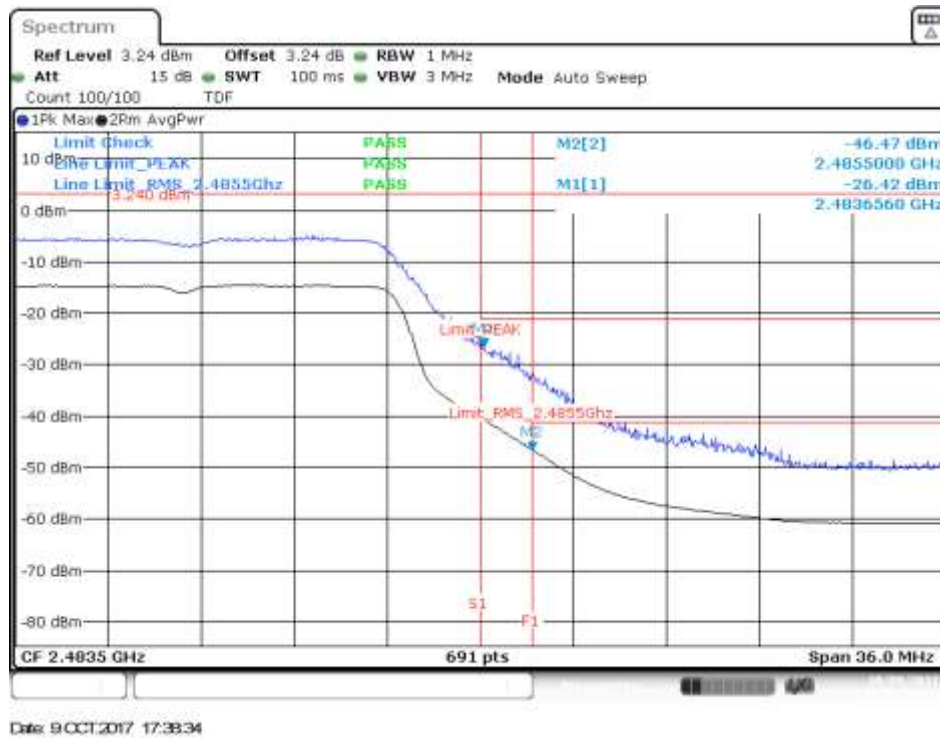
Channel 12 - BE High Freq Section (restricted)



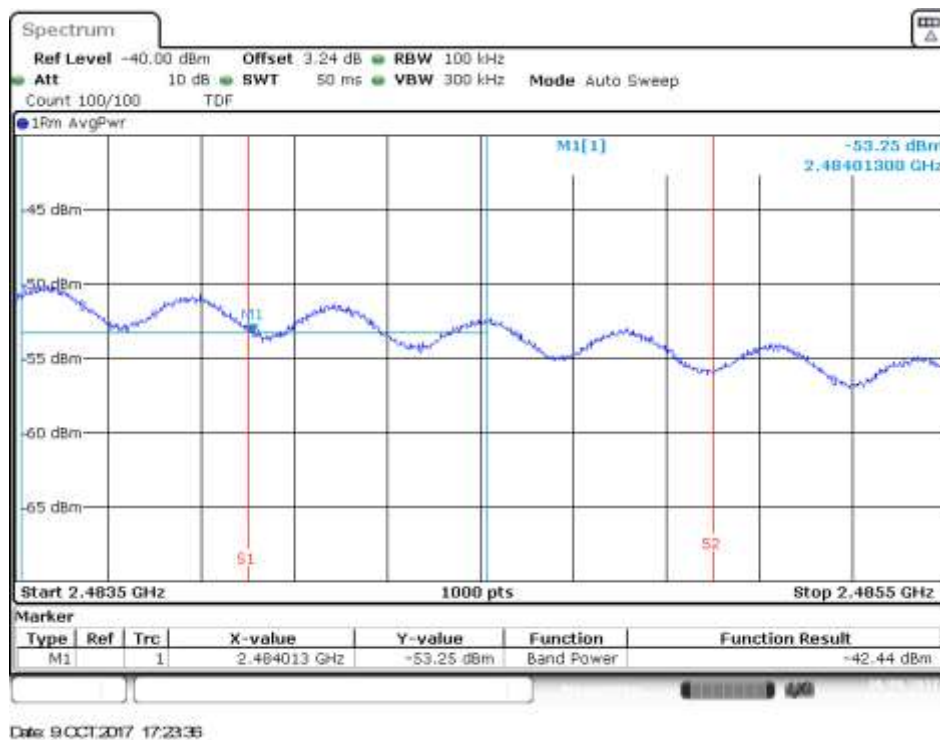


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Channel 13 - BE High Freq Section (restricted)

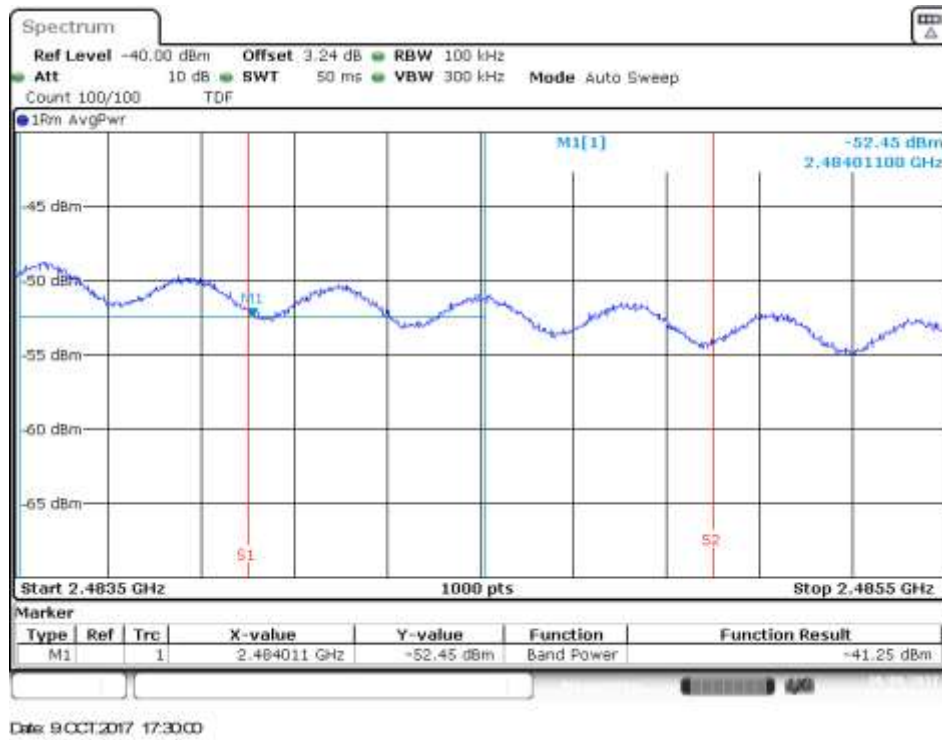


Channel 11 - BE High Freq Section RMS within 2MHz (restricted)

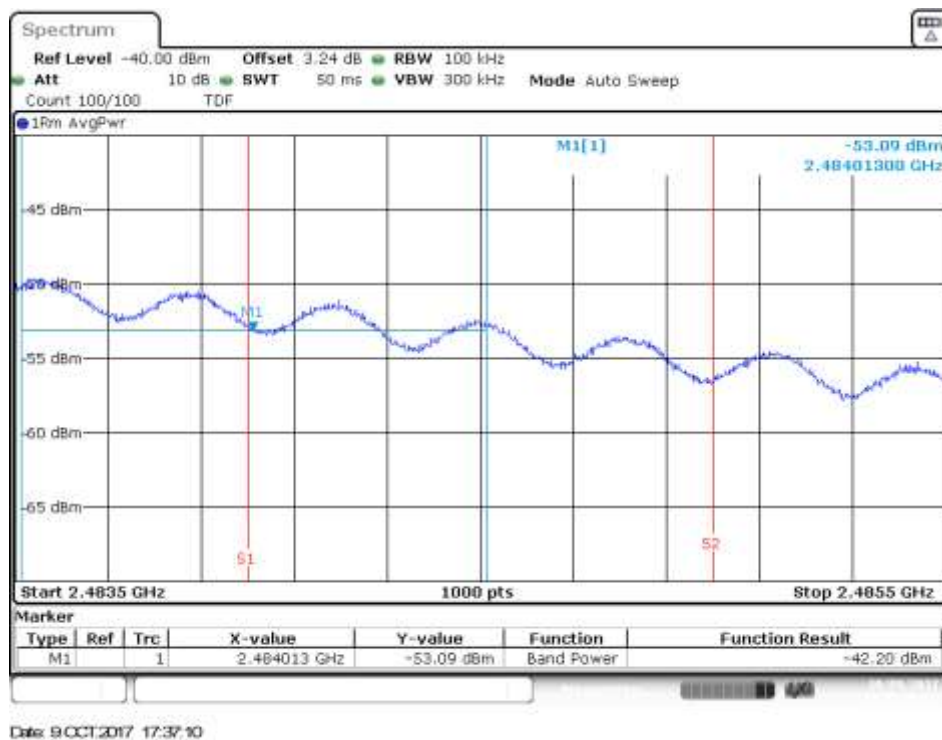


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Channel 12 - BE High Freq Section RMS within 2MHz (restricted)

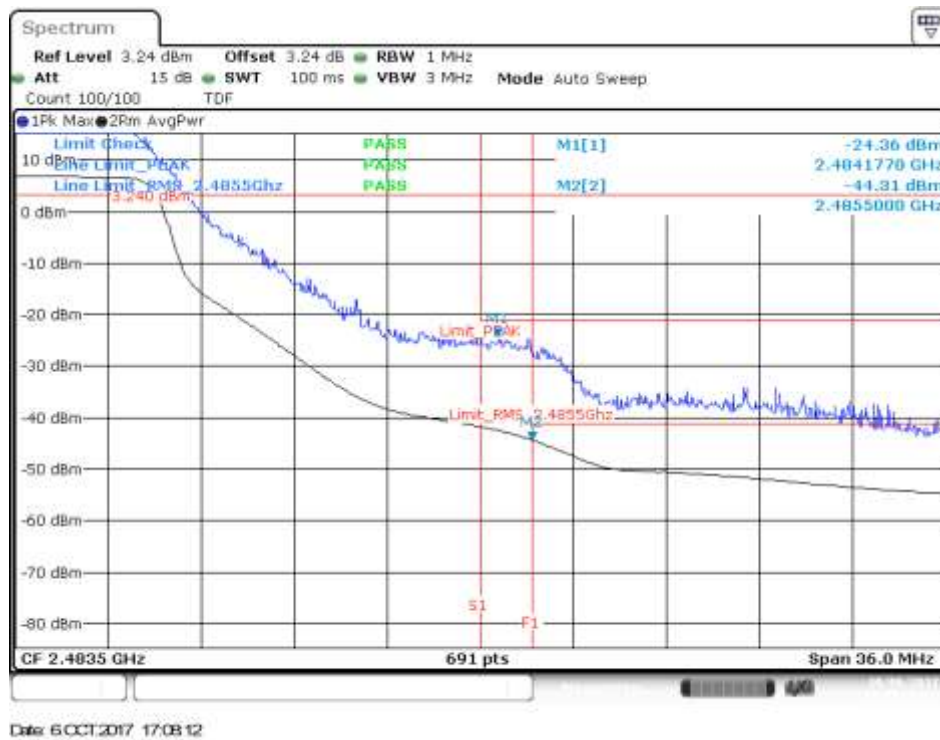


Channel 13 - BE High Freq Section RMS within 2MHz (restricted)

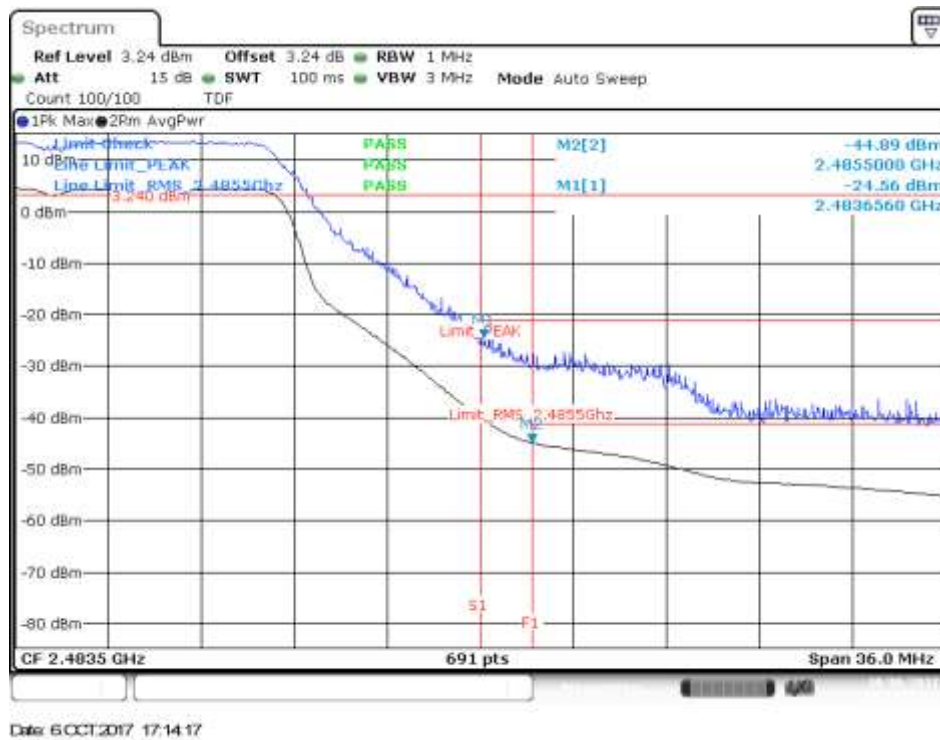


## SISO-A, 802.11n20, HT0

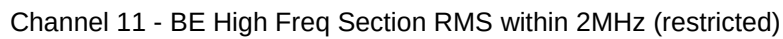
Channel 11 - BE High Freq Section (restricted)



Channel 12 - BE High Freq Section (restricted)

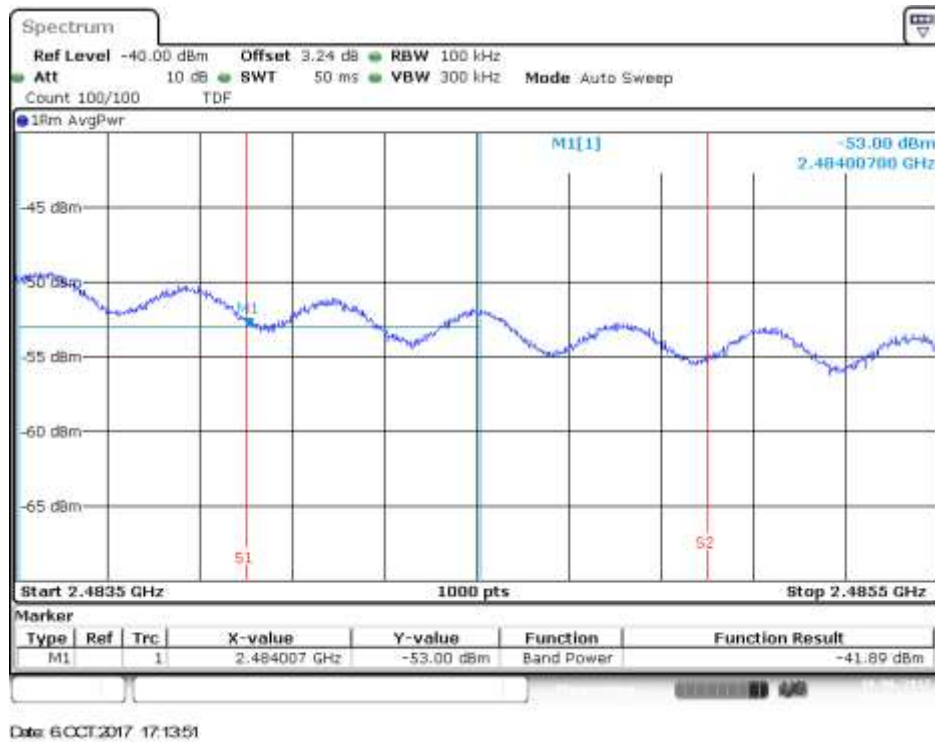


Channel 13 - BE High Freq Section (restricted)

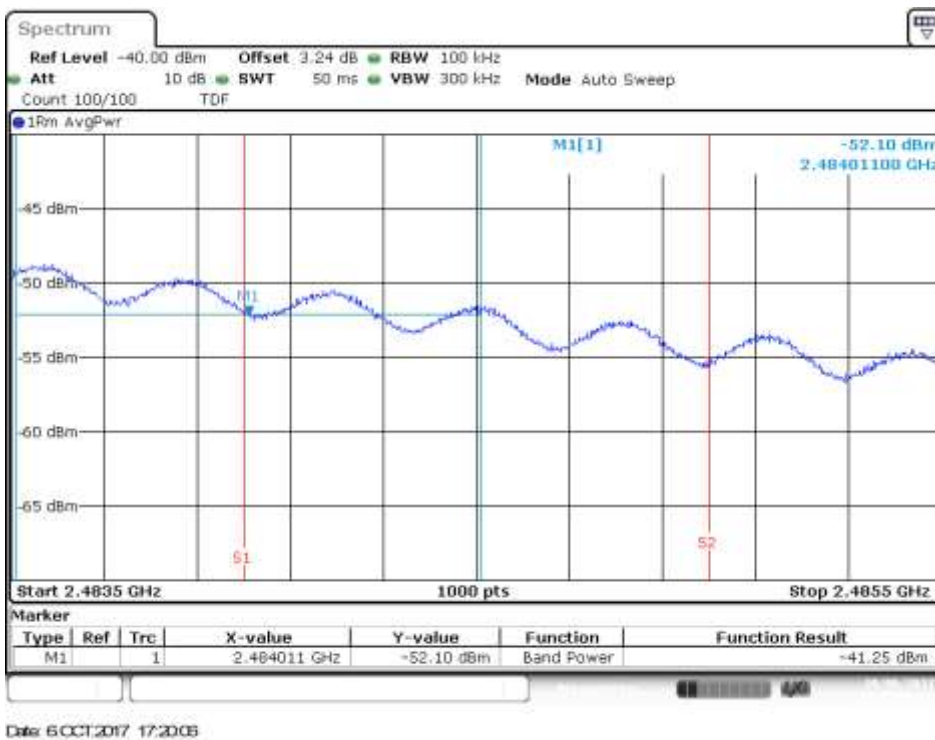


## Test Report N° 170919-03.TR04

## Channel 12 - BE High Freq Section RMS within 2MHz (restricted)



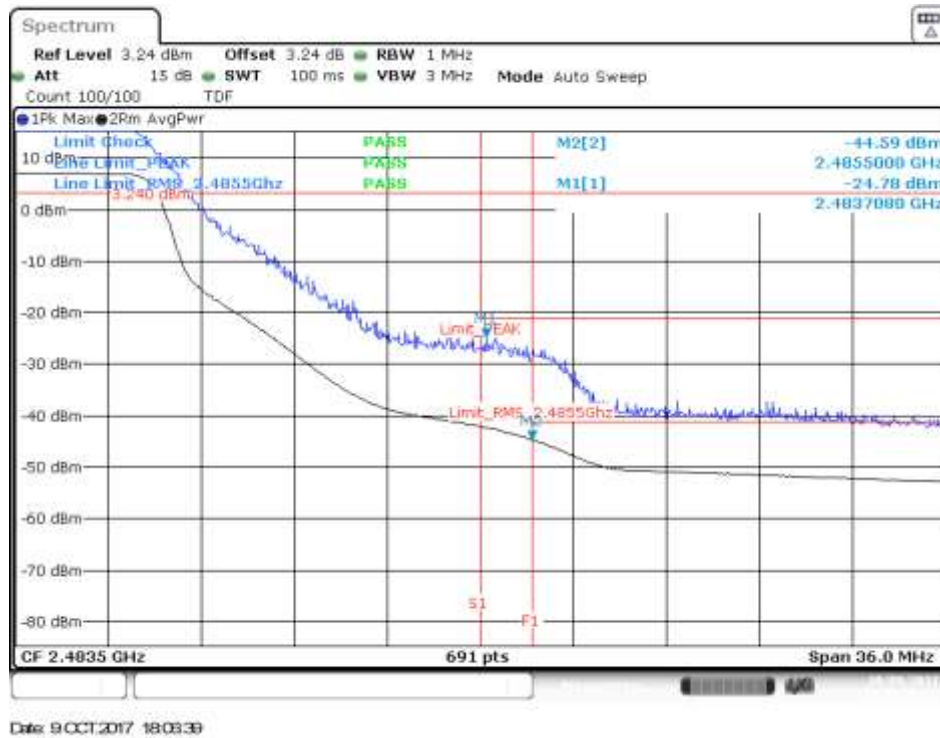
## Channel 13 - BE High Freq Section RMS within 2MHz (restricted)



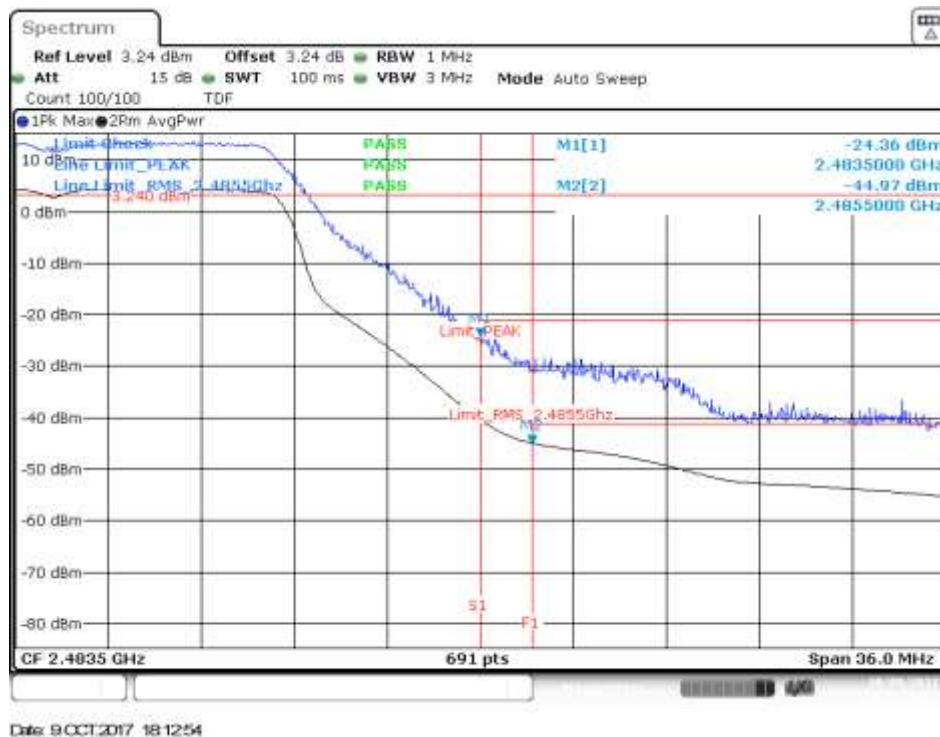


## SISO-B, 802.11n20, HT0

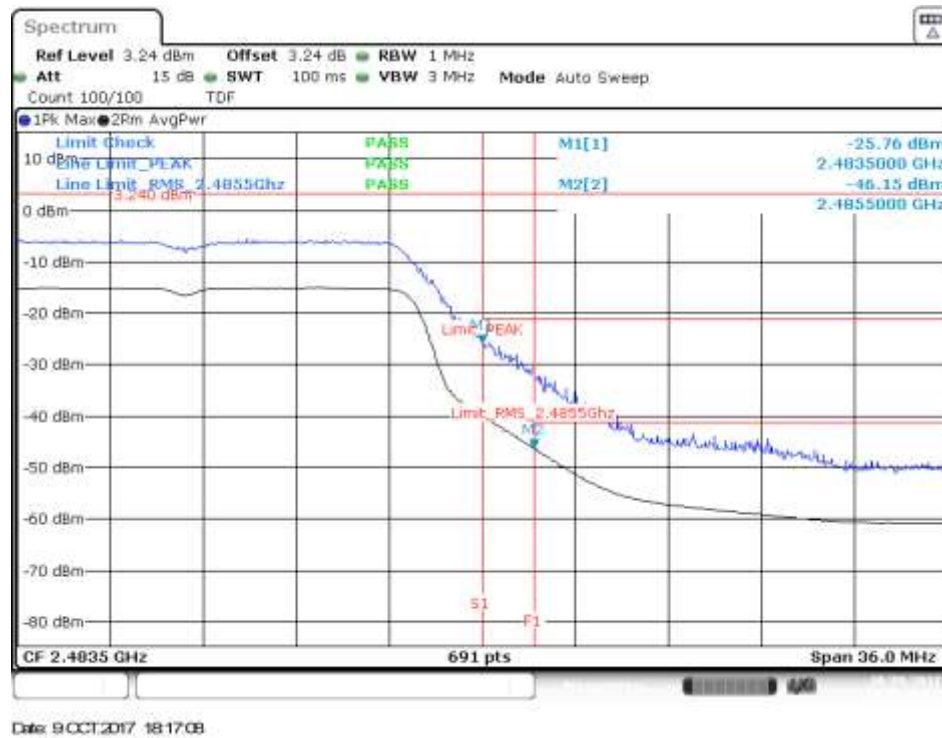
Channel 11 - BE High Freq Section (restricted)



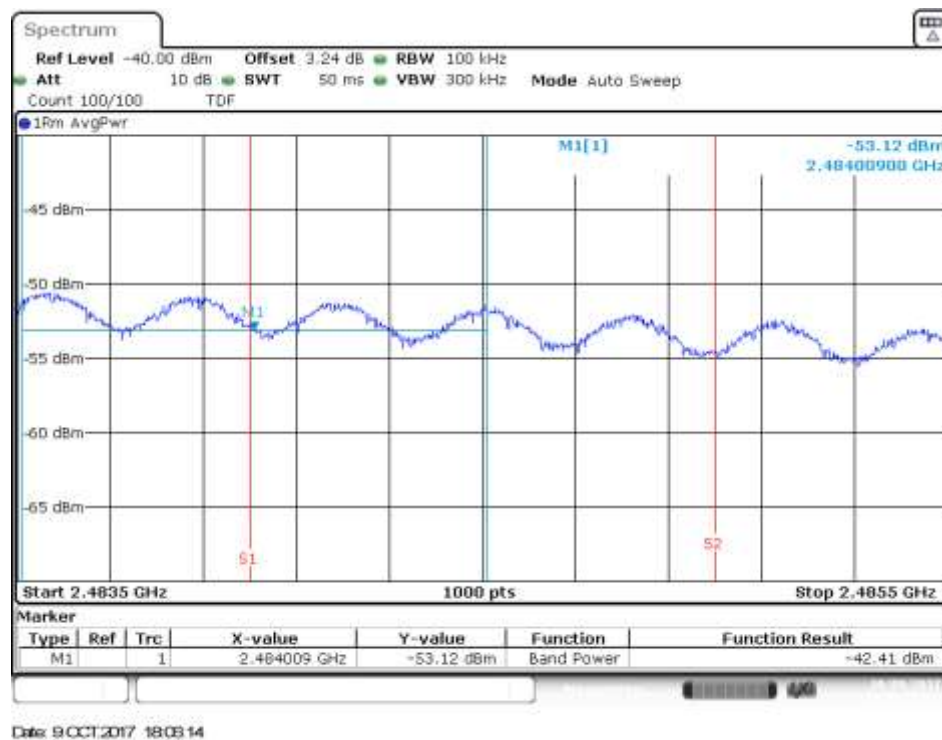
Channel 12 - BE High Freq Section (restricted)



Channel 13 - BE High Freq Section (restricted)

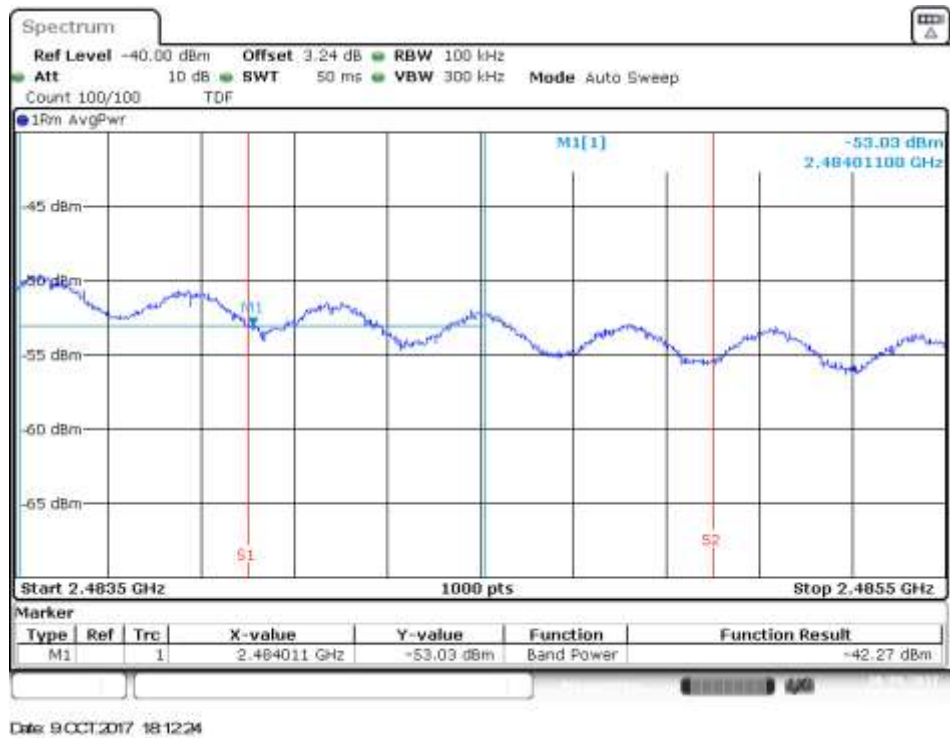


Channel 11 - BE High Freq Section RMS within 2MHz (restricted)

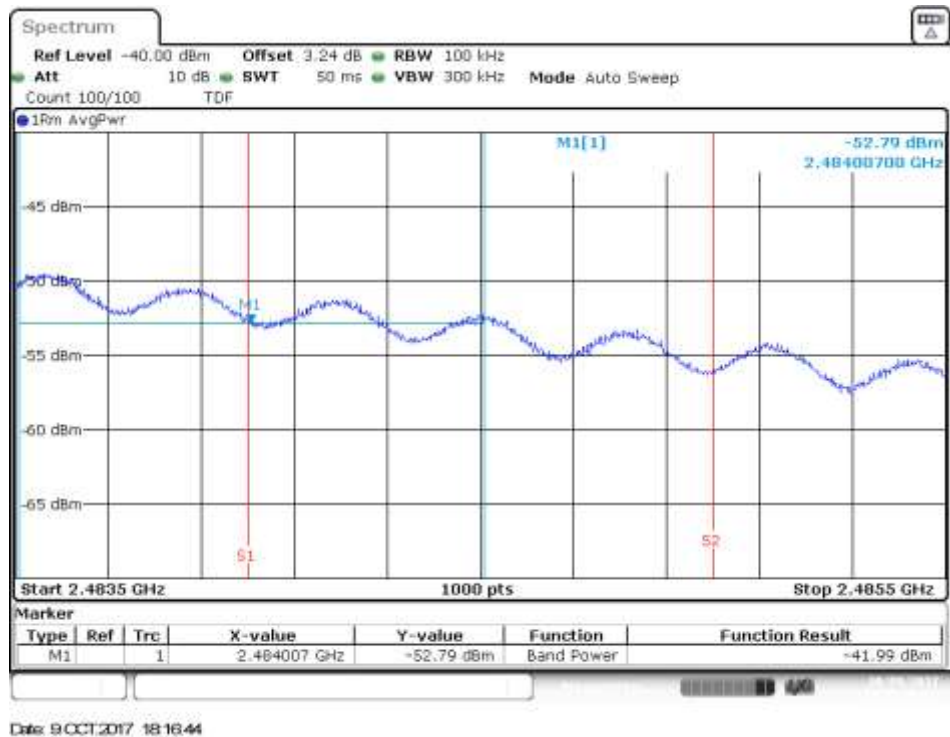


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Channel 12 - BE High Freq Section RMS within 2MHz (restricted)



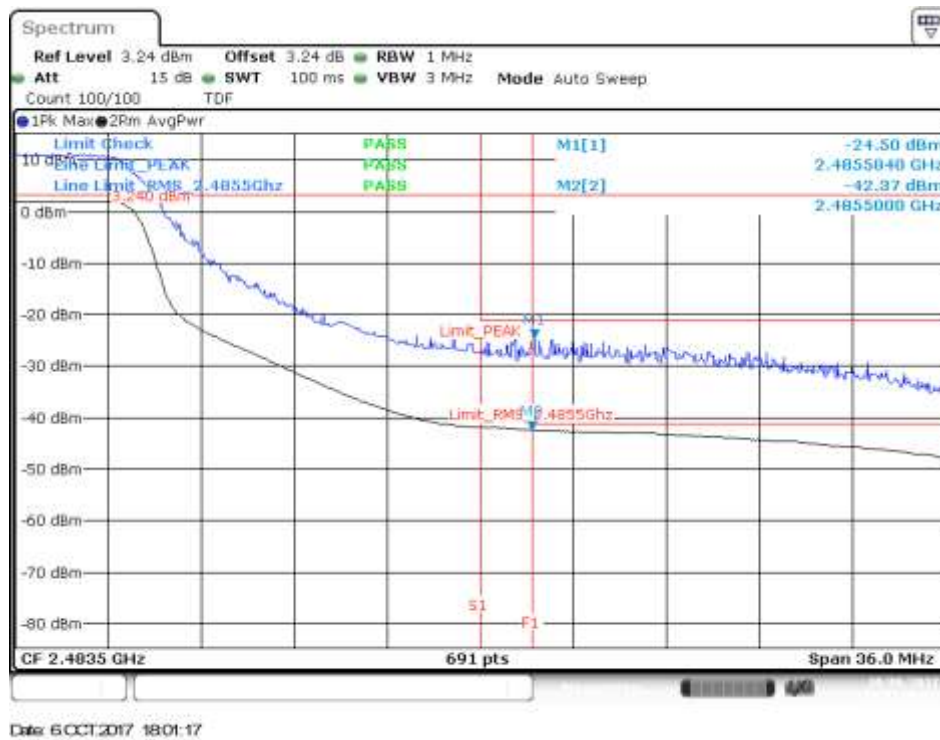
Channel 13 - BE High Freq Section RMS within 2MHz (restricted)



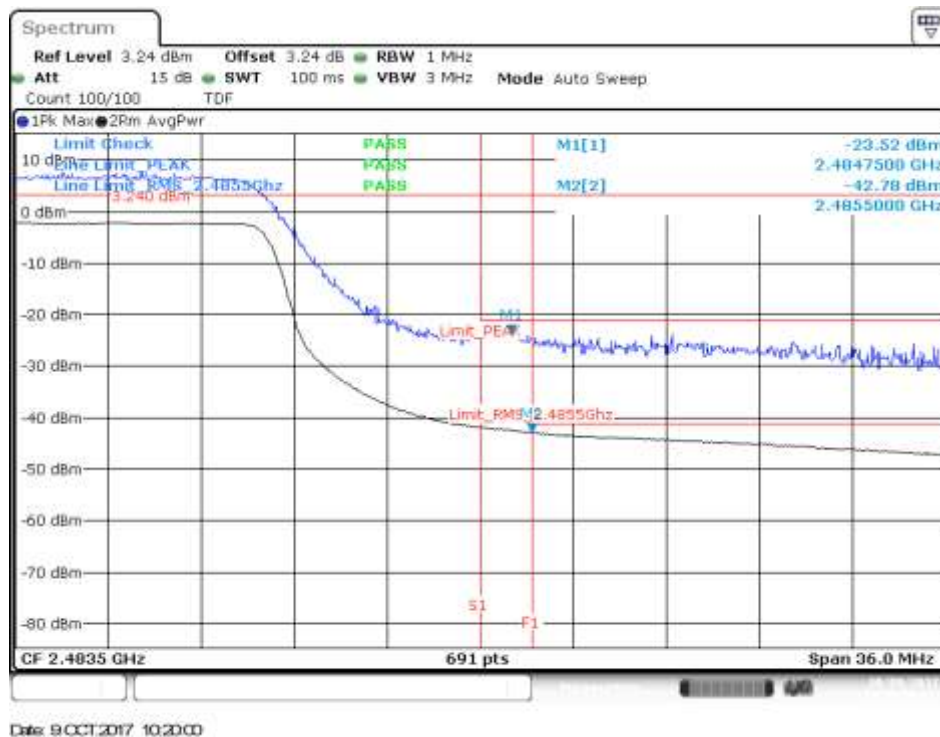


## SISO-A, 802.11n40, HT0

Channel 9F - BE High Freq Section (restricted)



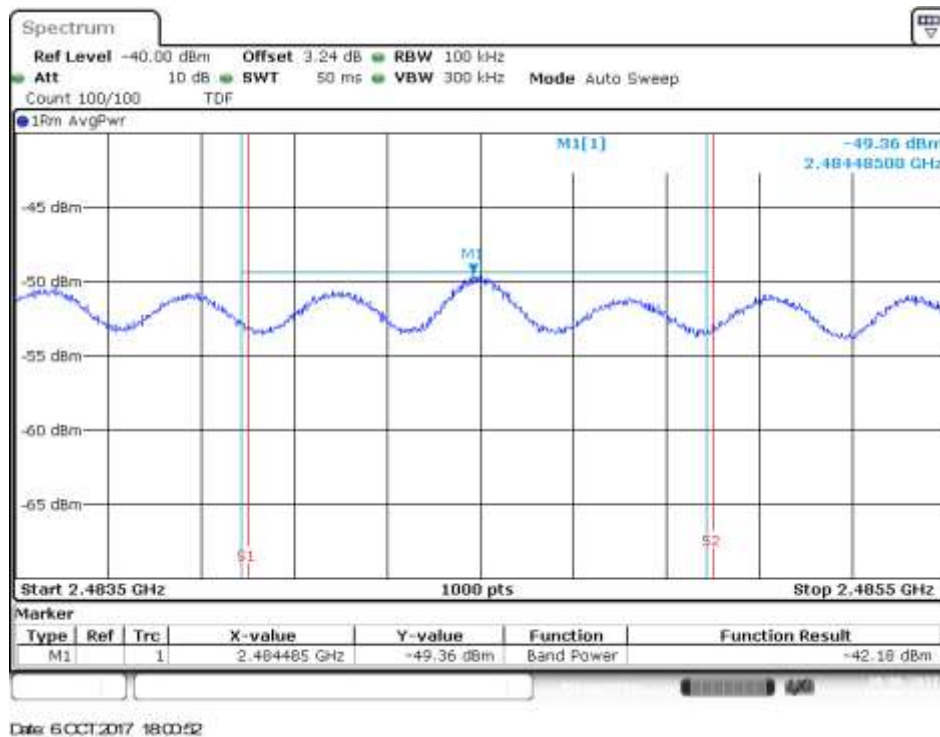
Channel 10F - BE High Freq Section (restricted)



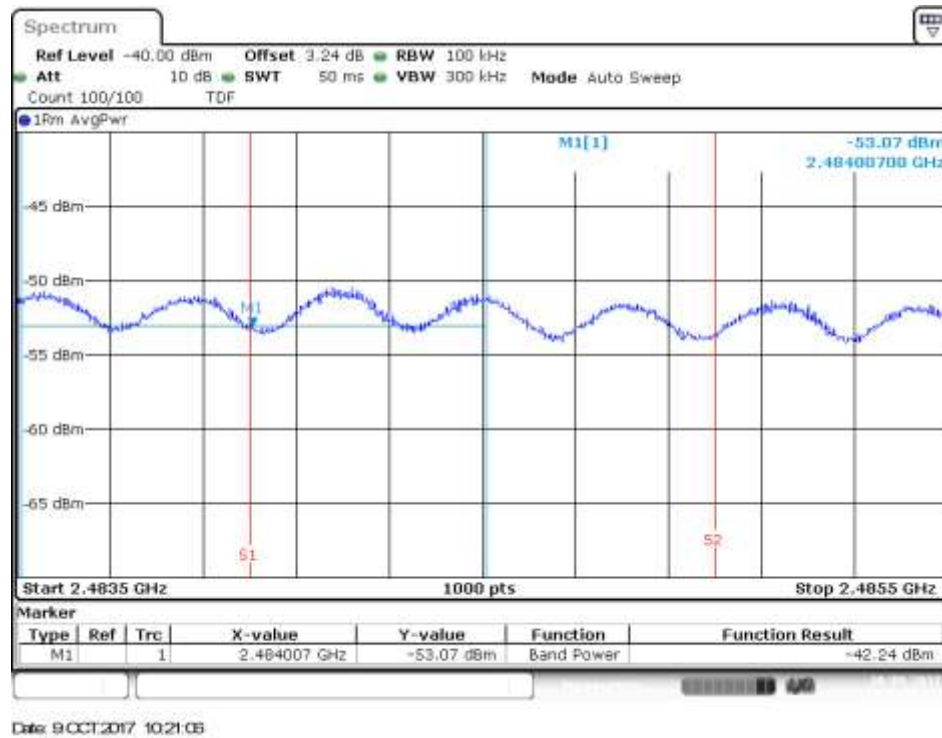
Channel 11F - BE High Freq Section (restricted)



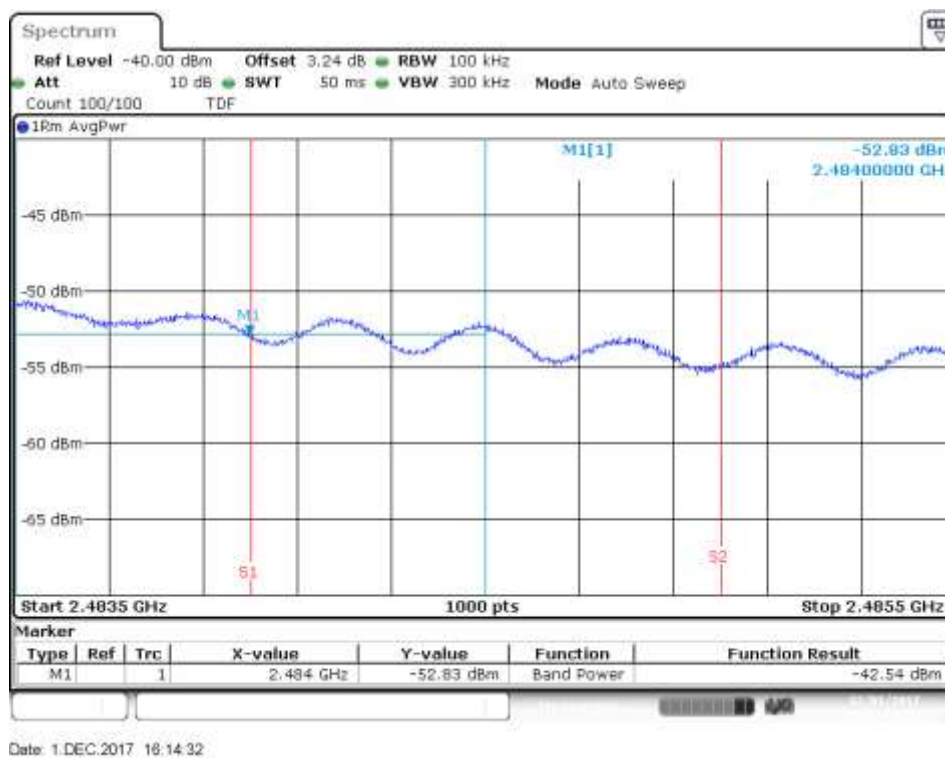
Channel 9F - BE High Freq Section RMS within 2MHz (restricted)



Channel 10F - BE High Freq Section RMS within 2MHz (restricted)

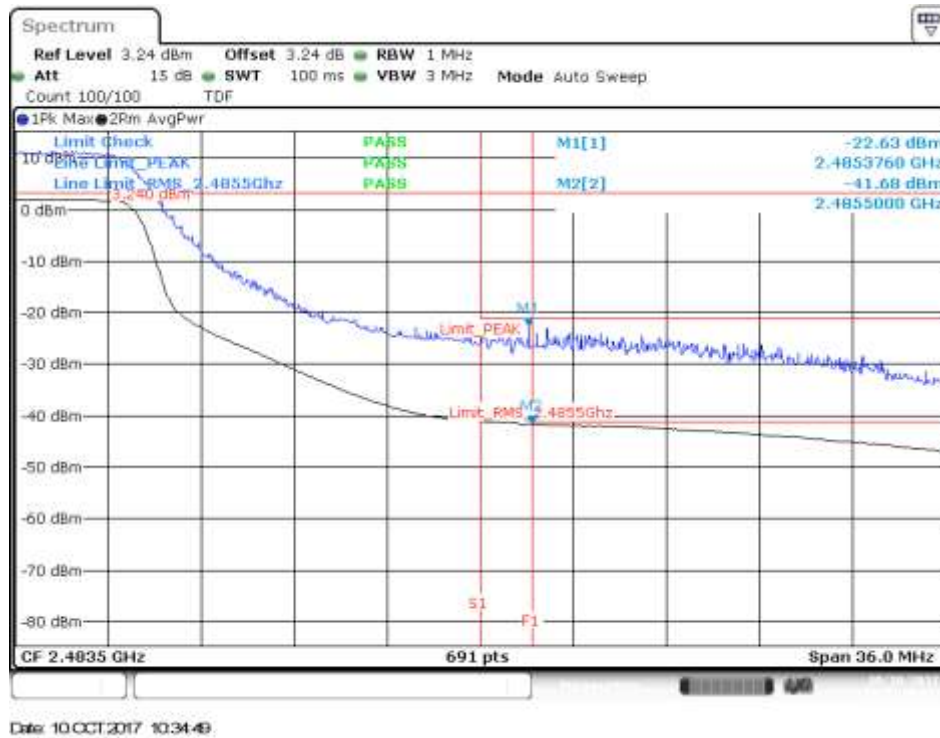


Channel 11F - BE High Freq Section RMS within 2MHz (restricted)

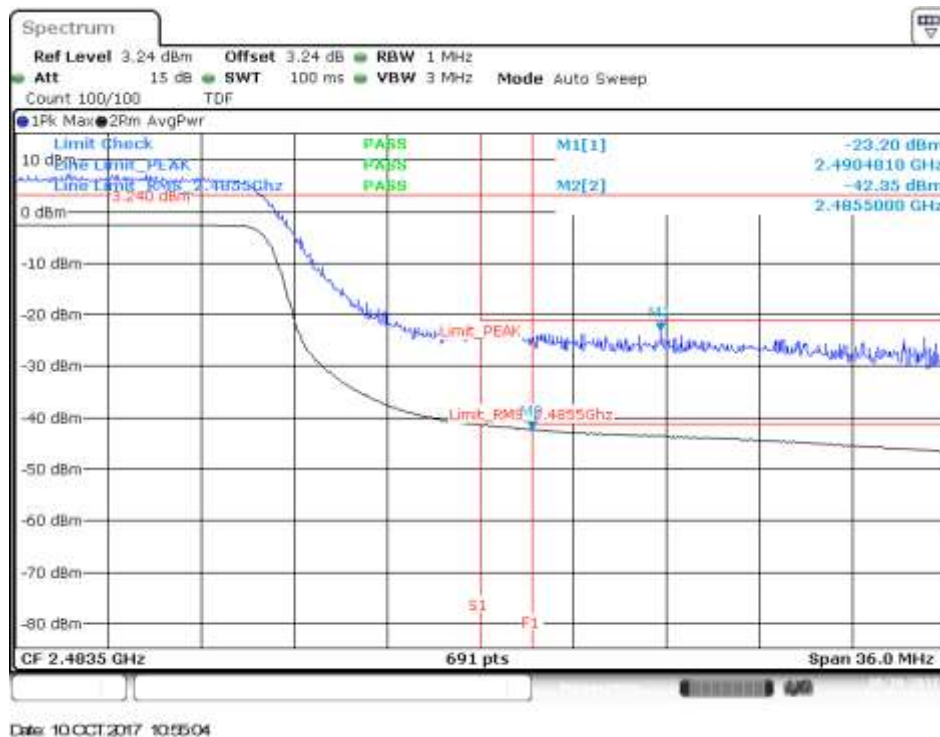


## SISO-B, 802.11n40, HT0

Channel 9F - BE High Freq Section (restricted)

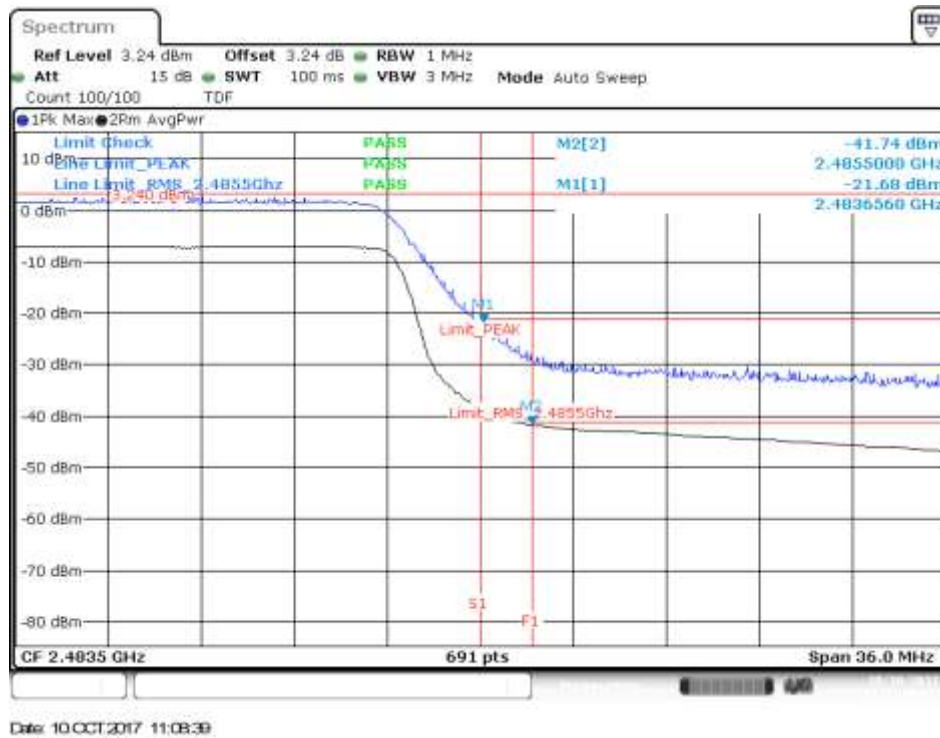


Channel 10F - BE High Freq Section (restricted)

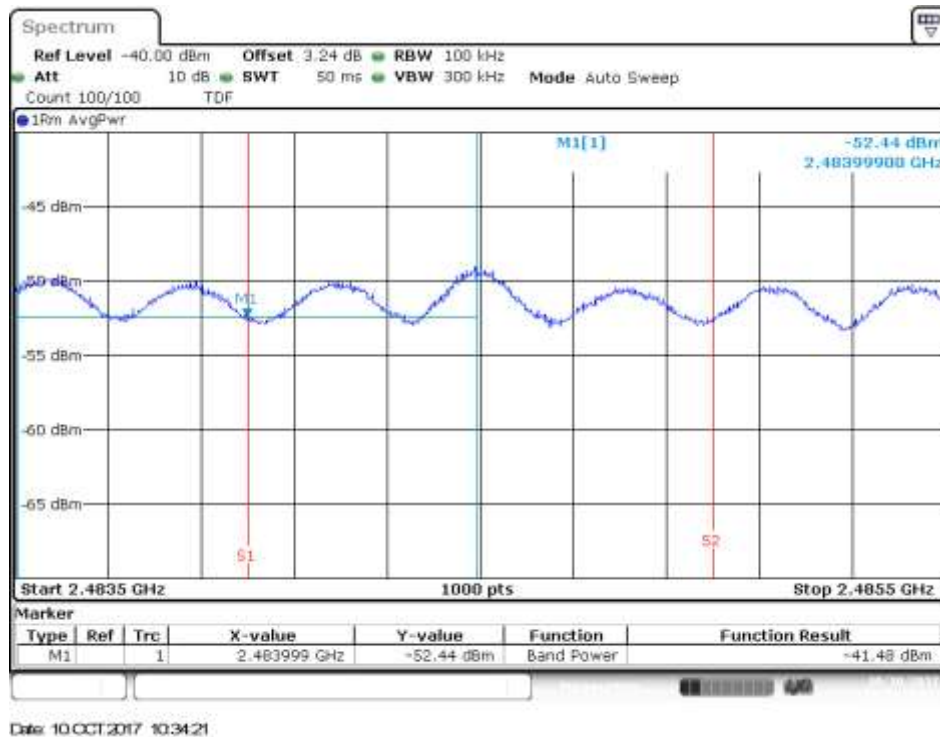


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Channel 11F - BE High Freq Section (restricted)

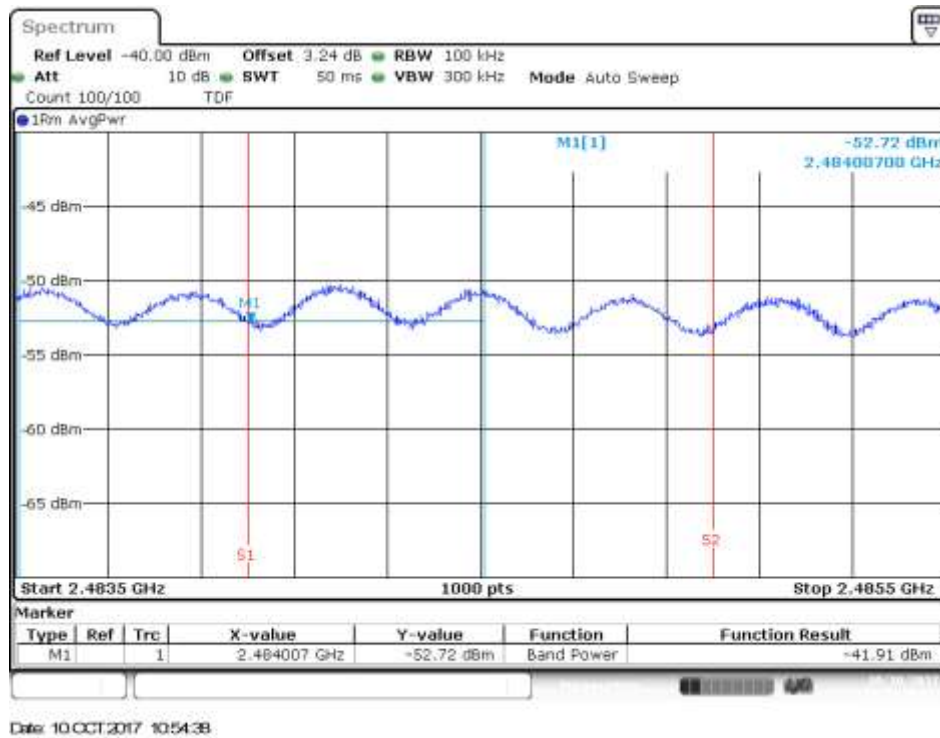


Channel 9F - BE High Freq Section RMS within 2MHz (restricted)

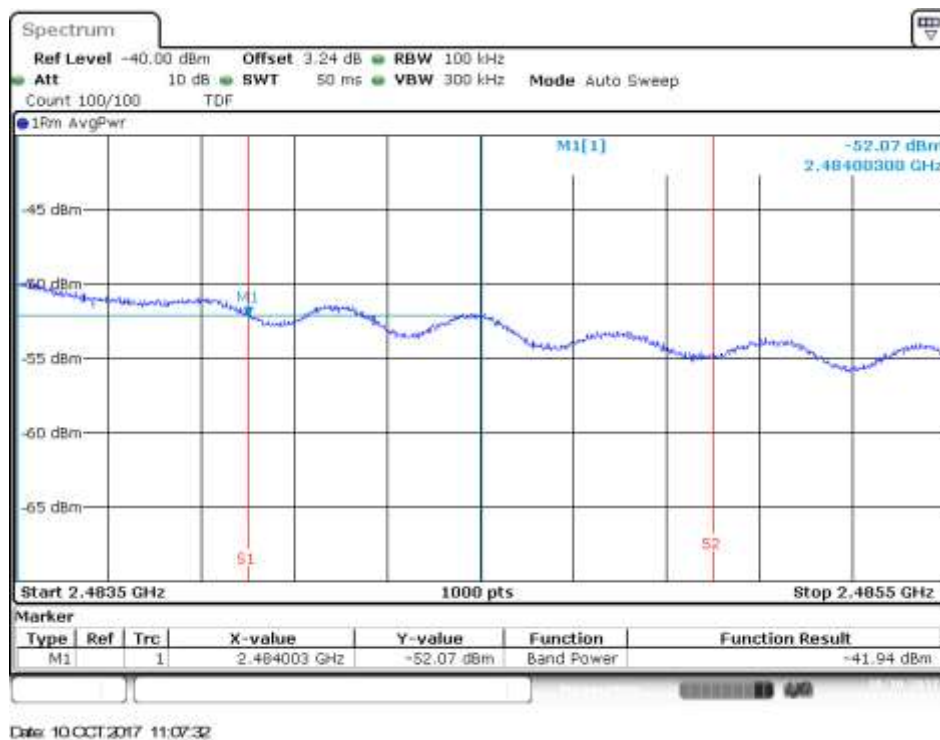




Channel 10F - BE High Freq Section RMS within 2MHz (restricted)

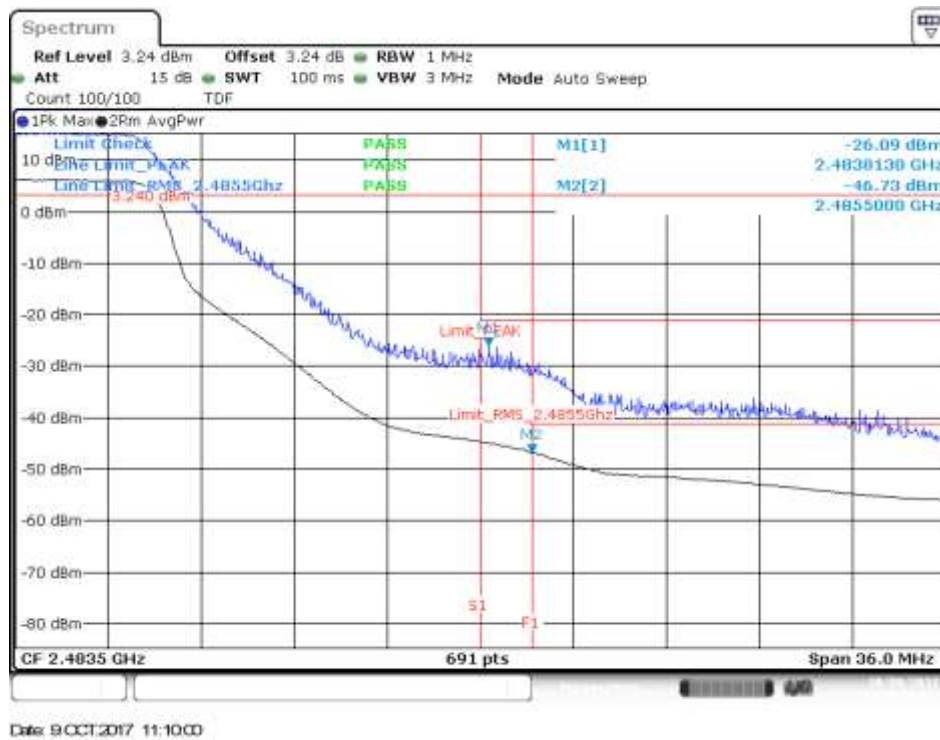


Channel 11F - BE High Freq Section RMS within 2MHz (restricted)

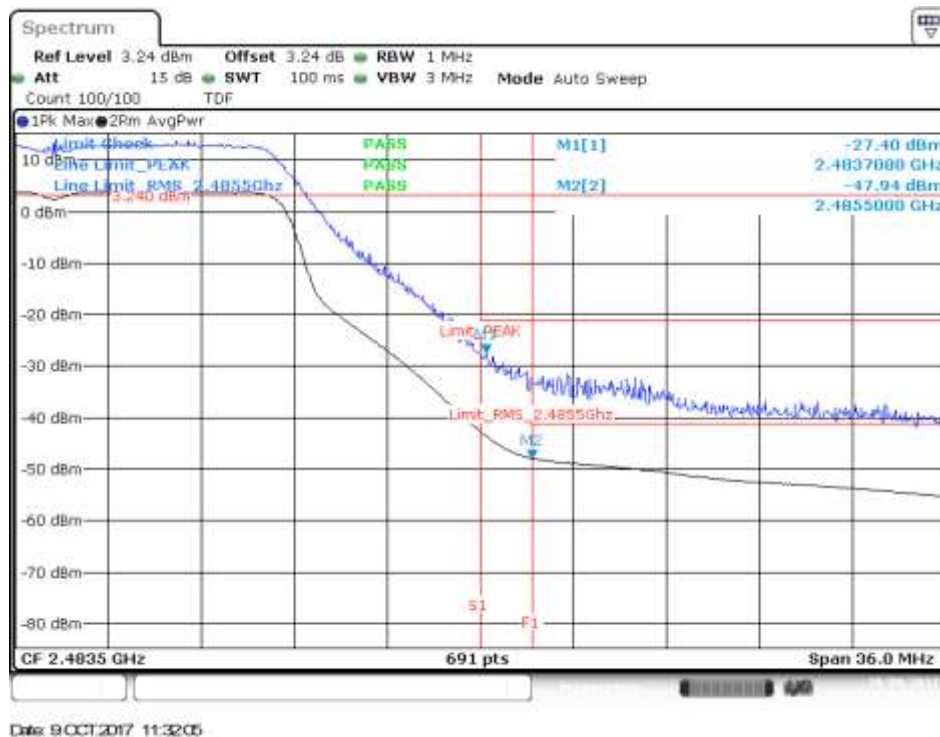


## MIMO-A, 802.11n20, HT8

Channel 11 - BE High Freq Section (restricted)

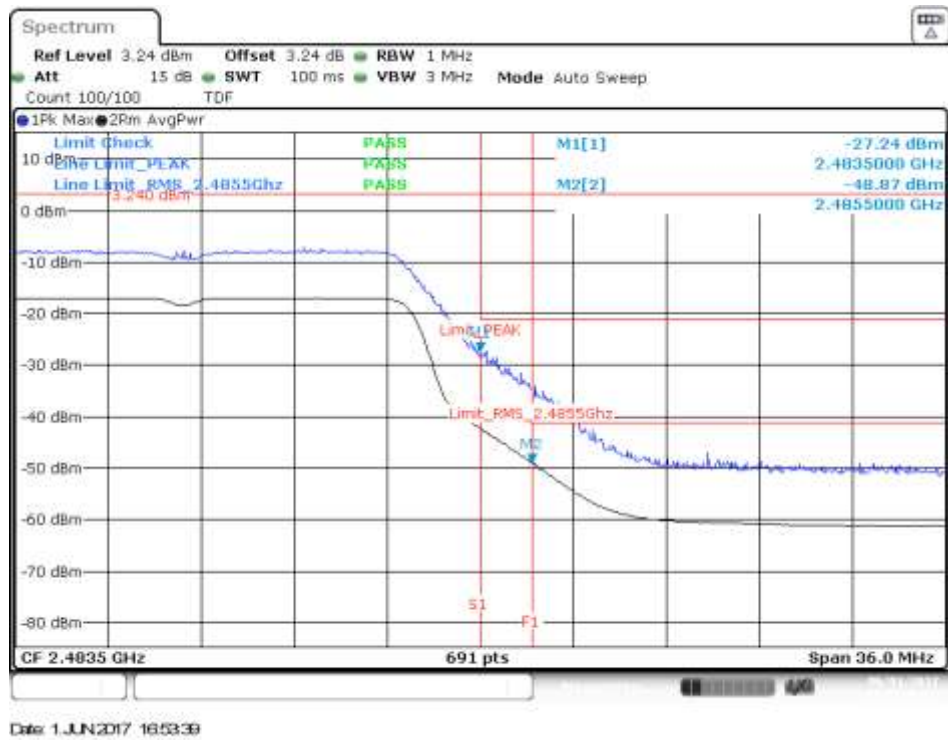


Channel 12 - BE High Freq Section (restricted)

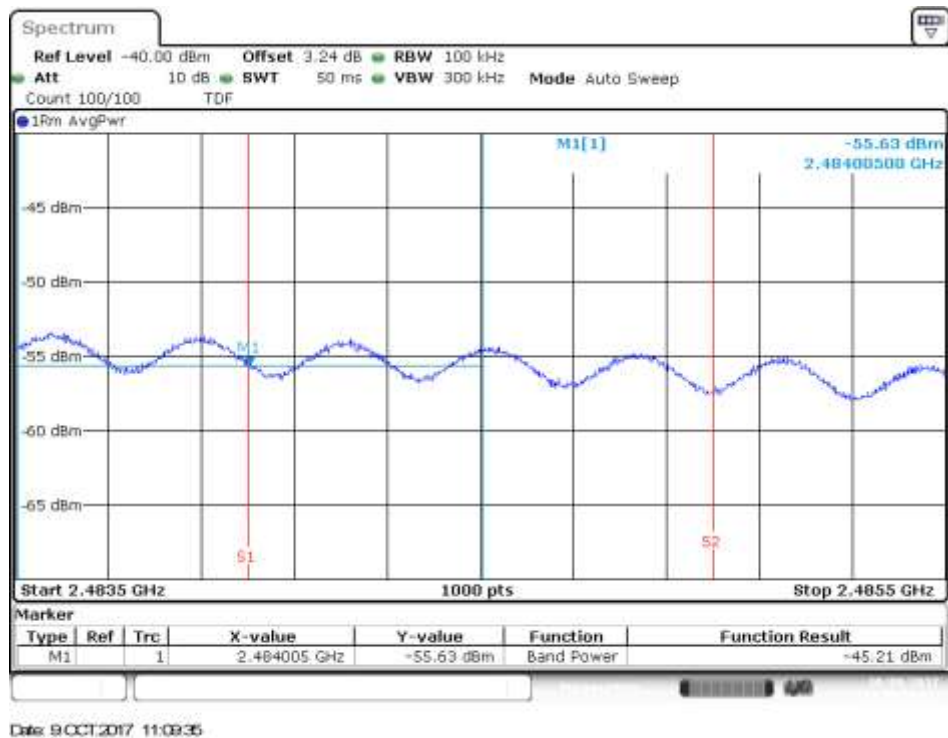


Test Report N° 170919-03.TR04

Channel 13 - BE High Freq Section (restricted)



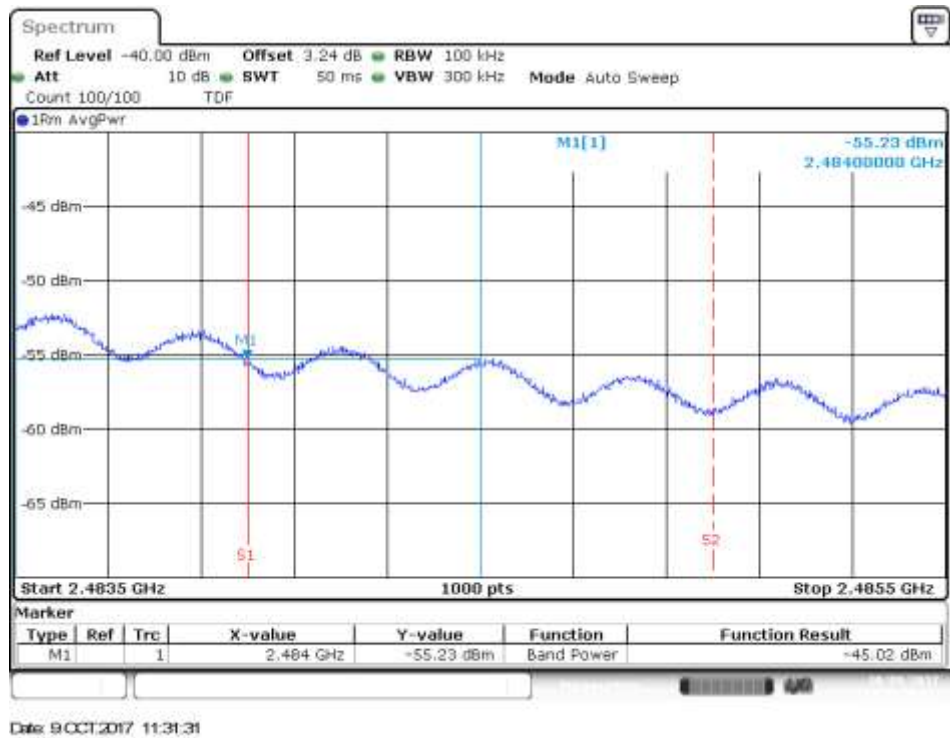
Channel 11 - BE High Freq Section RMS within 2MHz (restricted)





Test Report N° 170919-03.TR04

Channel 12 - BE High Freq Section RMS within 2MHz (restricted)



Channel 13 - BE High Freq Section RMS within 2MHz (restricted)

