



FCC LISTED, REGISTRATION  
NUMBER: 2764.01

ISED LISTED REGISTRATION  
NUMBER: 23595-1

Test Report No:  
**4552ERM.021A1**

## Test report

**USA FCC Part 15.407 (U-NII), 15.209; & CANADA RSS-247, RSS-Gen**  
Unlicensed National Information Infrastructure Devices. General technical requirements.  
License-Exempt Radio Apparatus (All Frequency Bands): Category I Equipment.  
General Requirements and Information for the Certification of Radio Apparatus.

|                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (*) Identification of item tested         | Display Audio Infotainment Unit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| (*) Trademark                             | Visteon                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| (*) Model and /or type reference          | VW REGIO FLOAT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Other identification of the product       | FCC ID: NT8-VWREGIOFLOAT<br>IC: 3043A-VWREGIOFLOAT<br>HVIN: H04.1<br>FVIN: 0850                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| (*) Features                              | Features: a. USB 3.0 / USB Video, USB Video, USB Hub b. Bluetooth EDR 2.4GHz, Version 4.2 c. Audio BT streaming music, control and browsing d. Wireless 2.4GHz and 5GHz bands e. GNSS Receiver - GPS f. AM/FM single tuner, seek, scan and manual tuning g. Smartphone integration (Apple Car Play and Android Auto), Capability to run local APPs, e-Call                                                                                                                                                                                                        |
| Manufacturer                              | Visteon Corporation<br>One Village Center Drive, Van Buren Township,<br>MI 48111, USA                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Test method requested, standard           | USA FCC Part 15.407 07-1-24 Edition : Unlicensed National Information Infrastructure Devices. General technical requirements.<br>USA FCC Part 15.209 06-28-21 Edition: Radiated emission limits; general requirements.<br>CANADA RSS-247 Issue 3 (August 2023).<br>CANADA RSS-Gen Issue 5 (March 2019).<br>789033 D02 General UNII Test Procedures New Rules v02r01<br>Guidance for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices<br>ANSI C63.10-2013: American National Standard for Testing Unlicensed Wireless Devices. |
| Summary                                   | IN COMPLIANCE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Approved by (name / position & signature) | Domingo Galvez<br>EMC&RF Lab Manager                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Date of issue                             | 01-10-2025                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Report template No                        | FDT08_23<br>(*) "Data provided by the client"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

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## Acronyms

| Acronym ID     | Acronym Description                    |
|----------------|----------------------------------------|
|                | Emission Bandwidth                     |
| # of Tx Chains | Number of Transmission Chains          |
| Avg Power      | Maximum Average Conducted Output Power |
| DC             | Duty Cycle                             |
| Freq           | Frequency                              |
| Max EIRP       | Maximum Burst EIRP                     |
| Mod            | Modulation                             |
| Mode           | Mode                                   |
| Occ Ch BW      | Occupied Channel Bandwidth             |
| Operation Band | Operation Band                         |
| PSD            | Power Spectrum Density                 |
| Port           | Active Port                            |
| TPC            | TPC                                    |

## Competences and guarantees

DEKRA Certification Inc. is a testing laboratory accredited by A2LA (The American Association for Laboratory Accreditation), to perform the tests indicated in the Certificate 2764.01 and CAB ID US0215.

DEKRA Certification Inc. is a testing laboratory competent to carry out the tests described in this report.

In order to assure the traceability to other national and international laboratories, DEKRA Certification Inc. has a calibration and maintenance program for its measurement equipment.

DEKRA Certification Inc. guarantees the reliability of the data presented in this report, which is the result of the measurements and the tests performed to the item under test on the date and under the conditions stated on the report and, it is based on the knowledge and technical facilities available at DEKRA Certification at the time of performance of the test.

DEKRA Certification Inc. 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.

The results presented in this Test Report apply only to the particular item under test established in this document.

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## General conditions

1. This report is only referred to the item that has undergone the test.
2. This report does not constitute or imply on its own an approval of the product by the Certification Bodies or competent Authorities.
3. This document is only valid if complete; no partial reproduction can be made without previous written permission of DEKRA Certification Inc.
4. This test report cannot be used partially or in full for publicity and/or promotional purposes without previous written permission of DEKRA Certification Inc. and the Accreditation Bodies.

## Uncertainty

Uncertainty (factor  $k=2$ ) was calculated according to the DEKRA Certification internal document PODT000.

| Test case                  | Frequency (MHz) | U ( $k=2$ ) | Units |
|----------------------------|-----------------|-------------|-------|
| RF Power and PSD           | 5150-5850       | 0.88        | dB    |
| Occupied Bandwidth         |                 | 1.87        | %     |
| Band Edge                  |                 | 0.64        | dB    |
| Radiated Spurious Emission | 30-180          | 4.27        | dB    |
|                            | 180-1000        | 3.14        | dB    |
|                            | 1000-18000      | 3.30        | dB    |
|                            | 18000-40000     | 3.49        | dB    |

## Data provided by the client

The following data has been provided by the client:

1. Information relating to the description of the sample ("Identification of the item tested", "Trademark", "Model and/or type reference tested").
2. The sample consists of a Display audio Infotainment Unit with capacitive touch screen with the following functionalities: USB 3.0 / USB Video, USB Video, USB Hub, Bluetooth EDR 2.4GHz, Version 4.2, Audio BT streaming music, control and browsing, Wireless 2.4GHz and 5GHz bands, GNSS Receiver - GPS, AM/FM single tuner, seek, scan and manual tuning, Smartphone integration (Apple Car Play and Android Auto), Capability to run local APPs, e-Call.

DEKRA declines any responsibility with respect to the information provided by the client and that may affect the validity of results.

## Usage of samples

Samples undergoing test have been selected by: The client.

Sample S/01 is composed of the following elements, accessories and auxiliary equipment:

| Id   | Control Number | Description                                  | Manufacturer / Model      | Serial N°      | Date of Reception | Application        |
|------|----------------|----------------------------------------------|---------------------------|----------------|-------------------|--------------------|
| S/01 | 4552/02        | Volkswagen Infotainment 10" Unit (Conducted) | Visteon / MIB Regio Float | VWZ7Z2C9203361 | 2024-09-30        | Element Under Test |
| S/01 | 4555/06        | Fakra USB Cable                              | -                         |                | 2024-09-09        | Accessory          |
| S/01 | 4555/09        | Visteon Skoda Test Panel 1                   | -                         | -              | 2024-09-09        | Accessory          |
| S/01 | 1482           | Laptop                                       | LENOVO / V14 G2 ITL       | PF3QAFFH       | -                 | Auxiliary          |

1. Sample S/01, was used for the following test(s): All Conducted tests indicated in appendix A.

Sample S/02 is composed of the following elements, accessories and auxiliary equipment:

| Id   | Control Number | Description                      | Manufacturer / Model      | Serial N°      | Date of Reception | Application        |
|------|----------------|----------------------------------|---------------------------|----------------|-------------------|--------------------|
| S/02 | 4552/09        | Volkswagen Infotainment 10" Unit | Visteon / MIB Regio Float | VWZ7Z2C9134311 | 2024-09-30        | Element Under Test |
| S/02 | 4555/06        | Fakra USB Cable                  | -                         |                | 2024-09-09        | Accessory          |
| S/02 | 4555/09        | Visteon Skoda Test Panel 1       | -                         | -              | 2024-09-09        | Accessory          |
| S/01 | 1482           | Laptop                           | LENOVO / V14 G2 ITL       | PF3QAFFH       | -                 | Auxiliary          |

2. Sample S/02, was used for the following test(s): All Radiated tests indicated in appendix A.

## Test sample description

Test Sample description (compulsory information for EMC and RF testing services)

|                                               |                                                          |                                |                      |          |                                   |              |     |  |  |  |  |  |
|-----------------------------------------------|----------------------------------------------------------|--------------------------------|----------------------|----------|-----------------------------------|--------------|-----|--|--|--|--|--|
| Ports..... :                                  | Port name and description                                | Cable                          |                      |          |                                   |              |     |  |  |  |  |  |
|                                               |                                                          | Specified max length [m]       | Attached during test | Shielded | Coupled to patient <sup>(3)</sup> |              |     |  |  |  |  |  |
|                                               | AM/FM Antenna connector (FAKRA)                          | 1.5                            | [ ]                  | [ ]      | [ ]                               |              |     |  |  |  |  |  |
|                                               | GPS Antenna connector (FAKRA)                            | 1.0                            | [ ]                  | [ ]      | [ ]                               |              |     |  |  |  |  |  |
|                                               | USB Video Port                                           | 0.1                            | [ ]                  | [ ]      | [ ]                               |              |     |  |  |  |  |  |
|                                               | USB 3.0                                                  | 0.1                            | [ ]                  | [ ]      | [ ]                               |              |     |  |  |  |  |  |
|                                               | Main connector                                           | -                              | [ ]                  | [ ]      | [ ]                               |              |     |  |  |  |  |  |
|                                               | -                                                        | -                              | [ ]                  | [ ]      | [ ]                               |              |     |  |  |  |  |  |
| Supplementary information to the ports..... : | No Data Provided                                         |                                |                      |          |                                   |              |     |  |  |  |  |  |
| Rated power supply ..... :                    | Voltage and Frequency                                    |                                | Reference poles      |          |                                   |              |     |  |  |  |  |  |
|                                               |                                                          |                                | L1                   | L2       | L3                                | N            | PE  |  |  |  |  |  |
|                                               | [ ]                                                      | AC: .....                      | [ ]                  | [ ]      | [ ]                               | [ ]          | [ ] |  |  |  |  |  |
|                                               | [ ]                                                      | AC: .....                      | [ ]                  | [ ]      | [ ]                               | [ ]          | [ ] |  |  |  |  |  |
|                                               | [ ]                                                      | DC: .....                      |                      |          |                                   |              |     |  |  |  |  |  |
|                                               | [ X]                                                     | DC: 12V, 12A (vehicle battery) |                      |          |                                   |              |     |  |  |  |  |  |
| Rated Power .....                             | sleep current: 350uA +-30uA; current in normal mode: 10A |                                |                      |          |                                   |              |     |  |  |  |  |  |
| Clock frequencies .....                       | LVDS/TFT:76.8MHz / LPDDR4: 1.333GHz eMMC: 197MHz         |                                |                      |          |                                   |              |     |  |  |  |  |  |
| Other parameters.....                         | No Data Provided                                         |                                |                      |          |                                   |              |     |  |  |  |  |  |
| Software version .....                        | 0850                                                     |                                |                      |          |                                   |              |     |  |  |  |  |  |
| Hardware version.....                         | H04.1                                                    |                                |                      |          |                                   |              |     |  |  |  |  |  |
| Dimensions in cm (W x H x D) .....            | 153.5x146.3x275.4 mm                                     |                                |                      |          |                                   |              |     |  |  |  |  |  |
| Mounting position..... :                      | [ ]                                                      | Table top equipment            |                      |          |                                   |              |     |  |  |  |  |  |
|                                               | [ ]                                                      | Wall/Ceiling mounted equipment |                      |          |                                   |              |     |  |  |  |  |  |
|                                               | [ ]                                                      | Floor standing equipment       |                      |          |                                   |              |     |  |  |  |  |  |
|                                               | [ ]                                                      | Hand-held equipment            |                      |          |                                   |              |     |  |  |  |  |  |
|                                               | [ X]                                                     | Other: Built into vehicle      |                      |          |                                   |              |     |  |  |  |  |  |
| Modules/parts .....                           | Module/parts of test item                                |                                |                      | Type     |                                   | Manufacturer |     |  |  |  |  |  |
|                                               | No Data Provided                                         |                                |                      |          |                                   |              |     |  |  |  |  |  |
|                                               |                                                          |                                |                      |          |                                   |              |     |  |  |  |  |  |
| Accessories (not part of the test item) ..... | Description                                              |                                |                      | Type     |                                   | Manufacturer |     |  |  |  |  |  |
|                                               | AM/FM/GPS Antenna                                        |                                |                      |          |                                   |              |     |  |  |  |  |  |
|                                               | SMA Connector                                            |                                |                      |          |                                   |              |     |  |  |  |  |  |
|                                               | USB Cable                                                |                                |                      |          |                                   |              |     |  |  |  |  |  |
|                                               | Harness                                                  |                                |                      |          |                                   |              |     |  |  |  |  |  |

| Documents as provided by the applicant ..... | Description                                  | File name | Issue date |
|----------------------------------------------|----------------------------------------------|-----------|------------|
|                                              | Test instructions                            |           |            |
|                                              | Technical Files                              |           |            |
|                                              | DUT Manual                                   |           |            |
|                                              | FDT30_18 Declaration Equipment Data - R1 (1) |           | 11/13/2024 |

**Marking Label**

**Visteon®**  
VW REGIO FLOAT  
- DISPLAY AUDIO INFOTAINMENT UNIT

IFT: XXXX-XXXXXX-XXXX  
Marca: Visteon  
Modelo(s): VW REGIO FLOAT  
DISPLAY AUDIO INFOTAINMENT UNIT

**NOM** **NYCE** **TP BY** **ANATEL**  
Agência Nacional de Telecomunicações  
XXXXX-XX-XXXXX

**R** X-XXXX

**CONATEL**  
NR: XXXX-XX-X-XXXX

**E24** XXXXX XXXX

**Bluetooth** **CE**

**FCC ID: NT8-VWREGIOFLOAT**  
**IC: 3043A-VWREGIOFLOAT**  
**HVIN: H04.1**

Este equipamento opera em caráter secundário, isto é, não tem direito a proteção contra interferência prejudicial, mesmo de estações do mesmo tipo, e não pode causar interferência a sistemas operando em caráter primário

PRODUCT COMPLIES WITH DHHS RULES \*21 CHAPTER CFR1, SUBCHAPTER J\* APPLICABLE AT DATE OF MANUFACTURE.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:  
(1) This device may not cause harmful interference;  
(2) this device must accept any interference received, including interference that may cause undesired operation.

## Identification of the client

Visteon Corporation  
One Village Center Drive, Van Buren Township,  
MI 48111, USA

## Testing period and place

|               |                          |
|---------------|--------------------------|
| Test Location | DEKRA Certification Inc. |
| Date (start)  | 10-08-2024               |
| Date (finish) | 10-16-2024               |

## Document history

| Report number | Date       | Description                                                                                                                                                                                                                                                                                                                                                                                        |
|---------------|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4552ERM.021   | 11-20-2024 | First release.                                                                                                                                                                                                                                                                                                                                                                                     |
| 4552ERM.021A1 | 01-10-2025 | Second release. The “Test method requested, standard” line (Pag.01) is updated according to the new version of the Standard.<br>The information for worst case for radiated spurious emission test result for Wi-Fi 5GHz is updated in the description of test conditions on page 15 and test result section on page 133.<br>This modified test report cancels and replaces the report 4552ERM.021 |

## Environmental conditions

In the control chamber, the following limits were not exceeded during the test:

|                   |                                     |
|-------------------|-------------------------------------|
| Temperature       | Min. = 15 °C<br>Max. = 35 °C        |
| Relative humidity | Min. = 30 %<br>Max. = 75 %          |
| Air pressure      | Min. = 860 mbar<br>Max. = 1060 mbar |

In the semi anechoic chamber, the following limits were not exceeded during the test.

|                   |                                     |
|-------------------|-------------------------------------|
| Temperature       | Min. = 15 °C<br>Max. = 35 °C        |
| Relative humidity | Min. = 30 %<br>Max. = 75 %          |
| Air pressure      | Min. = 860 mbar<br>Max. = 1060 mbar |

In the chamber for conducted measurements, the following limits were not exceeded during the test:

|                   |                                     |
|-------------------|-------------------------------------|
| Temperature       | Min. = 15 °C<br>Max. = 35 °C        |
| Relative humidity | Min. = 30 %<br>Max. = 60 %          |
| Air pressure      | Min. = 860 mbar<br>Max. = 1060 mbar |

## Remarks and comments

The tests have been performed by the technical personnel: Juliana Cherry, Ivy Yousuf Moutushi, Prudhvi Kothapalli, Fahim Tahiree, Yuqi Wang, Madhava Gooduru and Yuri Barone.



## List of equipment used during the test

### Conducted Measurements

| Control Number | Description                             | Serial No  | Last Calibration | Next Calibration |
|----------------|-----------------------------------------|------------|------------------|------------------|
| 897            | Power supply (AMETEK / PROG-DC-PS)      | 1707A01906 | N/A              | N/A              |
| 1039           | FSV40 Signal Analyzer 40GHz             | 101627     | 2022-11-01       | 2024-11-01       |
| 1042           | SMBV 100A Vector Signal Generator       | 262575     | 2022-11-01       | 2024-11-01       |
| 1313           | Wireless Measurement Software R&S EMC32 | -          | N/A              | N/A              |
| 1375           | BT/WIFI WIRELESS COMMUNICATION TESTER   | 102629     | 2022-10-26       | 2024-10-26       |
| 1491           | SMB 100B Signal Generator               | 17-1018070 | 2021-12-15       | 2024-12-15       |
| 1497           | Espec Chamber UNIT                      | R21868-04  | 2022-12-20       | 2024-12-20       |

### Radiated Measurements

| Control Number | Description                                        | Serial No   | Last Calibration | Next Calibration |
|----------------|----------------------------------------------------|-------------|------------------|------------------|
| 878            | Power supply (AMETEK / PROG-DC-PS)                 | 1707A01783  | N/A              | N/A              |
| 1012           | ESR26 EMI Test Receiver                            | 101478      | 2023-01-18       | 2025-01-18       |
| 1039           | FSV40 Signal Analyzer 40GHz                        | 101627      | 2022-11-01       | 2024-11-01       |
| 1056           | 3115 Double-Ridged Waveguide Horn Antenna 1-18 GHz | 213179      | 2024-07-01       | 2027-07-01       |
| 1057           | 3115 Double-Ridged Waveguide Horn Antenna 1-18 GHz | 211373      | 2023-07-18       | 2026-07-18       |
| 1064           | 3142E Biconilog Antenna                            | 208600      | 2021-12-13       | 2024-12-13       |
| 1108           | Ethernet SNMP Thermometer- CR Room                 | 60038026954 | 2022-10-18       | 2024-10-18       |
| 1111           | Ethernet SNMP Thermometer- SAC                     | 60038026577 | 2022-10-18       | 2024-10-18       |
| 1179           | Semi anechoic Absorber Lined Chamber               | F169021     | N/A              | N/A              |
| 1314           | Wireless Measurement Software R&S EMC32            | -           | N/A              | N/A              |
| 1461           | Low Noise Preamplifier (1-18GHz)                   | 2213857B    | 2024-06-06       | 2026-06-06       |

## Testing verdicts

|                |     |
|----------------|-----|
| Fail           | F   |
| Not applicable | N/A |
| Not measured   | N/M |
| Pass           | P   |

## Summary

| FCC PART 15 PARAGRAPH / RSS-247                                                                                       |                                    |         |         |
|-----------------------------------------------------------------------------------------------------------------------|------------------------------------|---------|---------|
| Requirement                                                                                                           | Test case                          | Verdict | Remark  |
| FCC 15.407 (a) / RSS-247 6.2                                                                                          | Power Limits. Maximum Output Power | P       |         |
| FCC 15.407 (a) / RSS-247 6.2                                                                                          | Maximum Power Spectral Density     | P       |         |
| FCC 2.1049 / RSS-Gen 6.7                                                                                              | 99% Occupied Bandwidth             | P       |         |
| FCC 15.403 / RSS-Gen 6.7                                                                                              | 26 dB Emission Bandwidth           | P       |         |
| FCC 15.407 (b) / RSS-247 6.2                                                                                          | Band-edge Conducted Emissions      | P       |         |
| FCC 15.407 (e) / RSS 247 6.2.4.1                                                                                      | 6 dB Emission Bandwidth            | P       | Refer 1 |
| FCC 15.407 (b), 15.205 & 15.209 / RSS-Gen 8.9 & 8.10                                                                  | Undesirable radiated emissions     | P       |         |
| <p><u>Supplementary information and remarks:</u></p> <p>1. Only applicable to sub-band U-NII-3: 5.725 - 5.85 GHz.</p> |                                    |         |         |

## Appendix A: Test results

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## PRODUCT INFORMATION

(\*): The following information is provided by the client

| Information               | Description                                                                                       |
|---------------------------|---------------------------------------------------------------------------------------------------|
| Equipment type            | Wi-Fi 5 GHz a/n                                                                                   |
| TPC Function              | No                                                                                                |
| Operating Frequency Range | 5150 - 5250 MHz<br>5250 – 5350 MHz<br>5470 – 5725 MHz<br>5725 – 5825 MHz                          |
| Nominal Channel Bandwidth | 20/ 40 MHz                                                                                        |
| Antenna type              | Internal                                                                                          |
| RF Output Power           | 18 dBm                                                                                            |
| Antenna gain              | 0 dBi                                                                                             |
| Supply Voltage            | 12 Vdc                                                                                            |
|                           |                                                                                                   |
| Modulation:               | OFDM (QPSK, BPSK,16QAM,64QAM,256QAM,1024QAM)                                                      |
| Transmit Data Rate:       | 802 .11 a/n Rates:<br><br>IEEE 802.11a: 6, 9, 12, 18, 24, 36, 48, 54 Mbps<br>IEEE 802.11n: MCS0-7 |
| Geo-location capability   | No                                                                                                |

# TEST CONDITIONS

(\*): Data provided by the client.

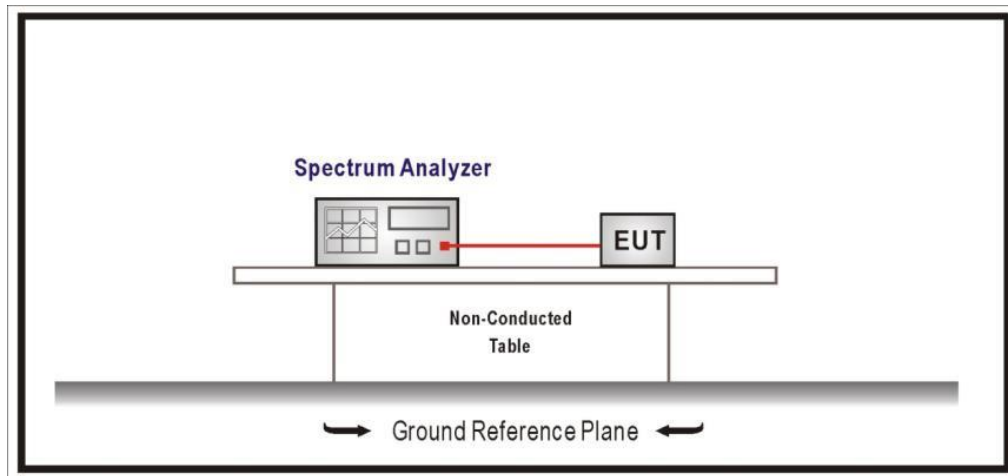
| TEST CONDITIONS                  | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TC#01 <sup>(1)</sup><br>(a mode) | <p>Power supply (V):</p> <p><math>V_{nominal} = 12 \text{ Vdc}</math></p> <p>Channel Bandwidth: 20 MHz</p> <p>Test Frequencies for Conducted/Radiated tests: (Radio A)</p> <p><u>UNII-1:</u></p> <p>Lowest channel: 5180 MHz<br/>Middle channel: 5200 MHz<br/>Highest channel: 5240 MHz</p> <p><u>UNII-2A:</u></p> <p>Lowest channel: 5260 MHz<br/>Middle channel: 5280 MHz<br/>Highest channel: 5320 MHz</p> <p><u>UNII-2C:</u></p> <p>Lowest channel: 5500 MHz<br/>Middle channel: 5580 MHz<br/>Highest channel: 5700 MHz</p> <p><u>UNII-3:</u></p> <p>Lowest channel: 5745 MHz<br/>Middle channel: 5785 MHz<br/>Highest channel: 5825 MHz</p> |

| TEST CONDITIONS                  | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TC#02 <sup>(1)</sup><br>(n mode) | <p><u>Power supply (V):</u><br/> <math>V_{\text{nominal}} = 12 \text{ Vdc}</math></p> <p><u>Channel Bandwidth: 20 MHz</u></p> <p><u>Test Frequencies for Conducted tests: (Radio A)</u><br/> <u>UNII-1:</u><br/> Lowest channel: 5180 MHz<br/> Middle channel: 5200 MHz<br/> Highest channel: 5240 MHz<br/> <u>UNII-2A:</u><br/> Lowest channel: 5260 MHz<br/> Middle channel: 5280 MHz<br/> Highest channel: 5320 MHz<br/> <u>UNII-2C:</u><br/> Lowest channel: 5500 MHz<br/> Middle channel: 5580 MHz<br/> Highest channel: 5700 MHz<br/> <u>UNII-3:</u><br/> Lowest channel: 5745 MHz<br/> Middle channel: 5785 MHz<br/> Highest channel: 5825 MHz</p> <p><u>Channel Bandwidth: 40 MHz</u></p> <p><u>Test Frequencies for Conducted/Radiated tests: (Radio A)</u><br/> <u>UNII-1:</u><br/> Lowest channel: 5190 MHz<br/> Highest channel: 5230 MHz<br/> <u>UNII-2A:</u><br/> Lowest channel: 5270 MHz<br/> Highest channel: 5310 MHz<br/> <u>UNII-2C:</u><br/> Lowest channel: 5510 MHz<br/> Middle channel: 5550 MHz<br/> Highest channel: 5670 MHz<br/> <u>UNII-3:</u><br/> Lowest channel: 5755 MHz<br/> Highest channel: 5795 MHz</p> |

Note (1): For spurious emissions for OFDM modes 802.11a, 802.11n20 and 802.11n40 a preliminary scan was performed to determine the worst case. The following tables and plots show the worst case for the modulation of 802.11a and 802.11n40, hence 802.11n20 is not shown.

The data rates of 6Mb/s for 802.11a and MCS0 for 802.11n40 were selected based on preliminary testing that identified those rates corresponding to the worst cases.

#### CONDUCTED MEASUREMENTS:



#### RADIATED MEASUREMENTS:

All radiated tests were performed in a semi-anechoic chamber. The measurement antenna is situated at 3 m for the frequency range 30-1000 MHz (Bilog antenna) and 1-18 GHz Double ridge horn antennas, and 1m for the frequency range 18 GHz- 40 GHz Double ridge horn antenna.

For radiated emissions in the range 18 - 40 GHz that is performed at a distance closer than the specified distance, an inverse proportionality factor of 20 dB per decade is used to normalize the measured data for determining compliance.

The equipment under test was set up on a non-conductive platform above the ground plane and the situation and orientation was varied to find the maximum radiated emission. It was also rotated 360° and the antenna height was varied from 1 to 4 meters to find the maximum radiated emission.

Measurements were made in both horizontal and vertical planes of polarization.

The field strength is calculated by adding correction factor to the measured level from the spectrum analyzer. This correction factor includes antenna factor, cable loss and pre-amplifiers gain.



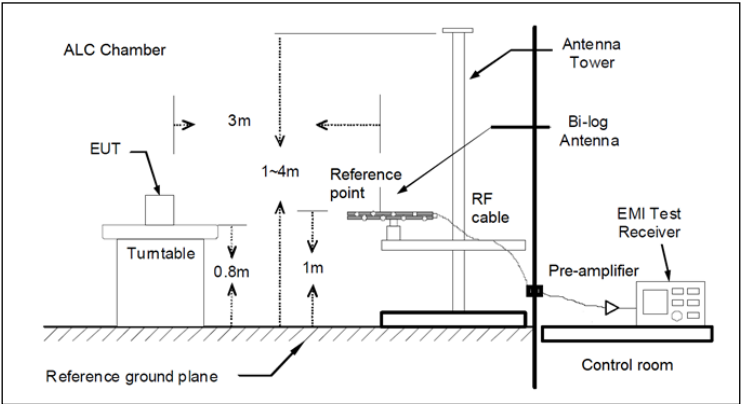


Fig A1: Radiated measurements Setup  $f < 1$  GHz

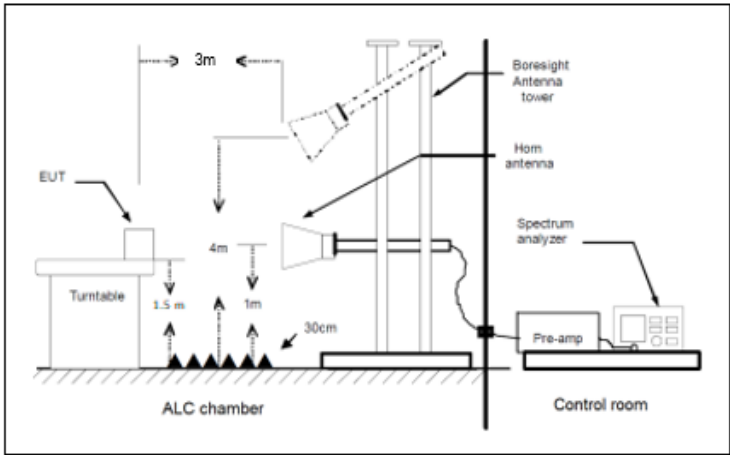


Fig A2: Radiated measurements setup  $f > 1-18$  GHz

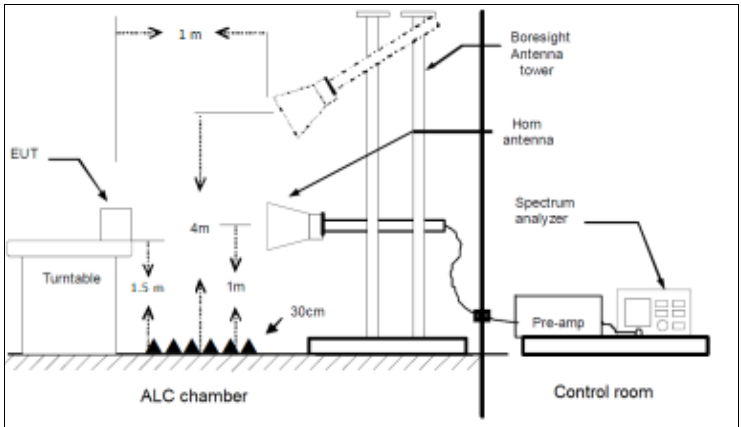


Fig A3: Radiated measurements setup  $f > 18$  GHz

## TEST CASES DETAILS

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### FCC 15.407 (a) / RSS-247 6.2 Power Limits. Maximum Output Power

#### Limits

##### FCC 15.407:

For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or  $11 \text{ dBm} + 10 \log B$ , where B is the 26 dB emission bandwidth in megahertz. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the band 5.725-5.850 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

##### RSS-247:

For OEM devices installed in vehicles, the maximum e.i.r.p. shall not exceed 30 mW or  $1.76 + 10 \log_{10} B$ , dBm, whichever is less. Devices shall implement TPC in order to have the capability to operate at least 3 dB below the maximum permitted e.i.r.p. of 30 mW.

For devices other than devices installed in vehicles:

For the band 5.15-5.25 GHz, the maximum e.i.r.p. shall not exceed 200 mW (23 dBm) or  $10 + 10 \log_{10} B$ , dBm, whichever power is less. B is the 99% emission bandwidth in MHz.

For the 5.25-5.35 GHz, 5.470-5.6 GHz, and 5.650-5.725 GHz bands, the maximum conducted output power shall not exceed 250 mW (24 dBm) or  $11 + 10 \log_{10} B$ , dBm, whichever power is less. The maximum e.i.r.p. shall not exceed 1.0 W or  $17 + 10 \log_{10} B$ , dBm, whichever is less.

For the band 5.725-5.850 GHz, the maximum conducted output power shall not exceed 1 W. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the output power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Modulation: 802.11a (OFDM 6 Mbit/s)

Results

Antenna Gain: 0 dBi

Pigtail loss: 0.8 dB

| Freq (MHz) | Avg Power (dBm) | Max EIRP (dBm) |
|------------|-----------------|----------------|
| 5180.00000 | 12.4            | 13.2           |
| 5200.00000 | 12.2            | 13.0           |
| 5240.00000 | 13.6            | 14.4           |
| 5260.00000 | 11.0            | 11.8           |
| 5280.00000 | 10.6            | 11.4           |
| 5320.00000 | 11.4            | 12.2           |
| 5500.00000 | 12.2            | 13.0           |
| 5580.00000 | 11.4            | 12.2           |
| 5700.00000 | 8.4             | 9.2            |
| 5745.00000 | 13.8            | 14.6           |
| 5785.00000 | 12.9            | 13.7           |
| 5825.00000 | 11.7            | 12.5           |

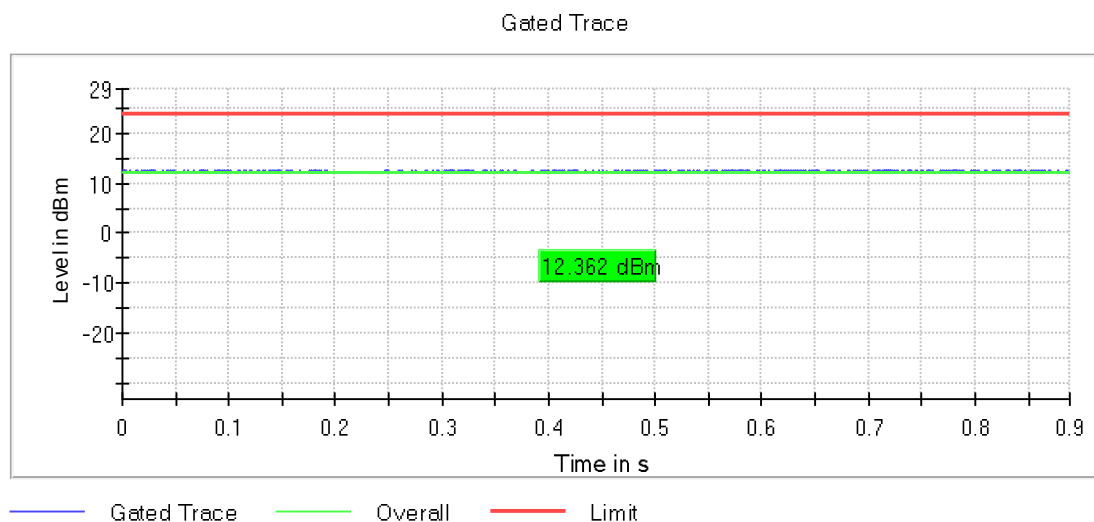
Verdict

Pass

## Attachments

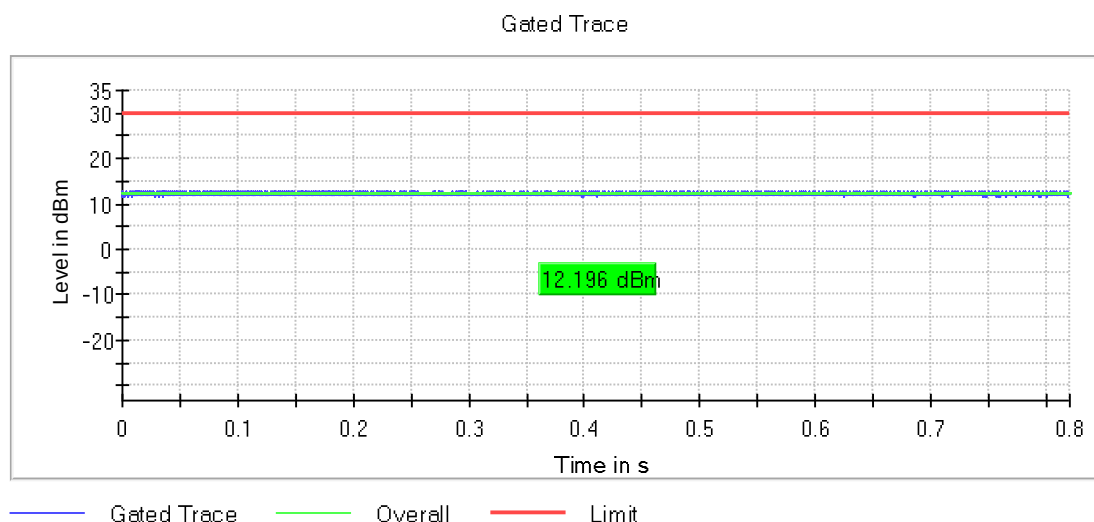
Frequency MHz = 5180.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Number of Transmission Chains = 1

## Images:



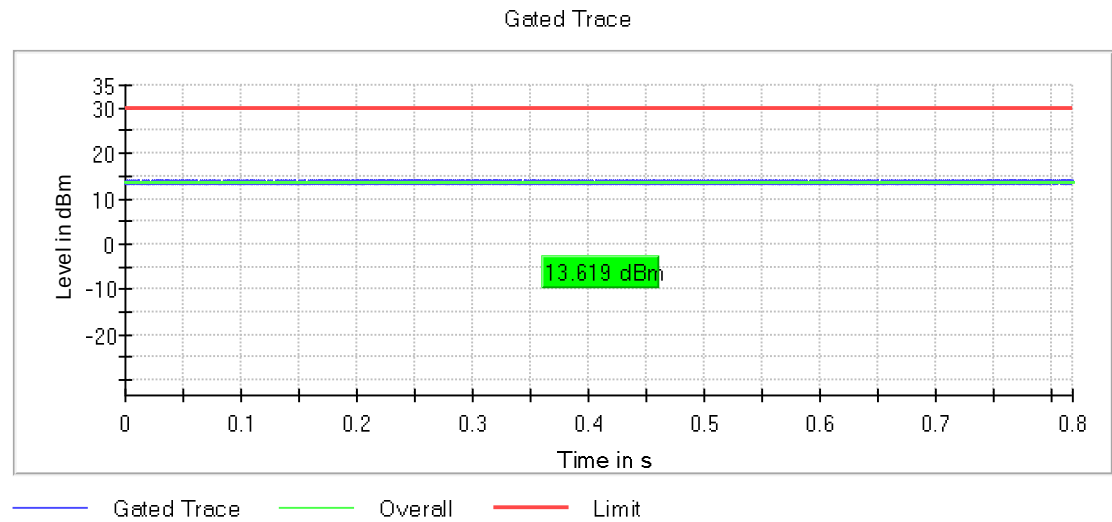
Frequency MHz = 5200.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Number of Transmission Chains = 1

## Images:



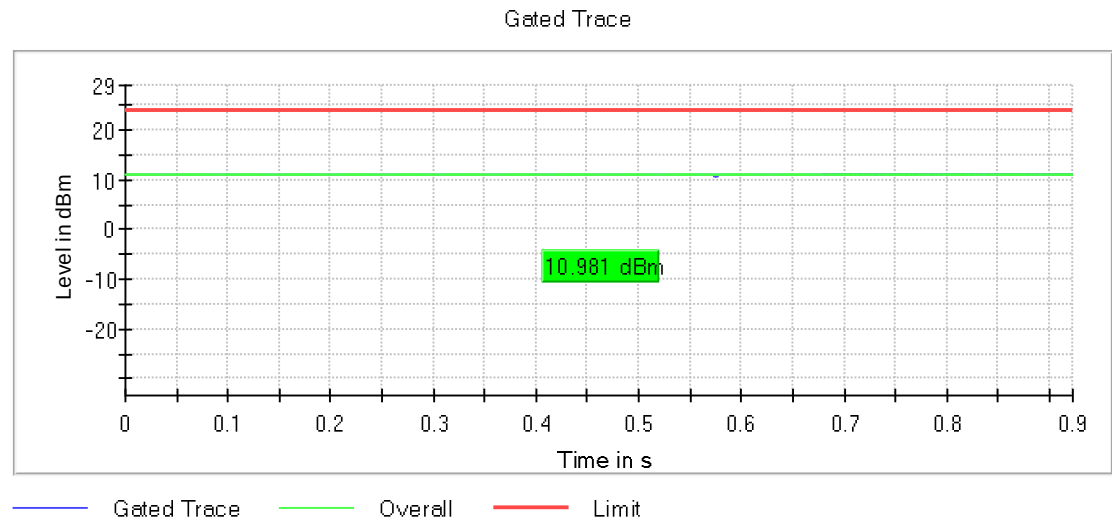
Frequency MHz = 5240.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Number of Transmission Chains = 1

Images:



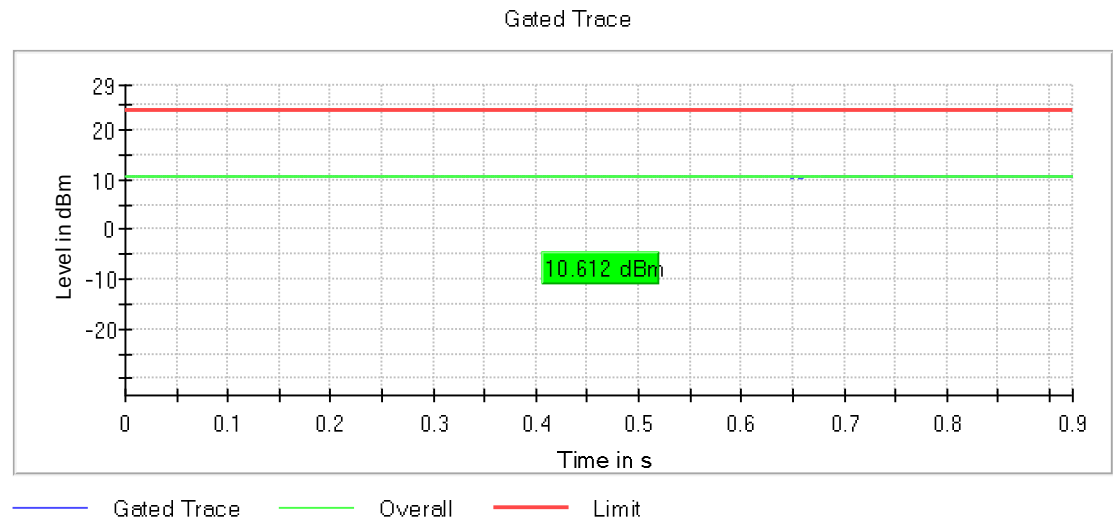
Frequency MHz = 5260.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Number of Transmission Chains = 1

Images:



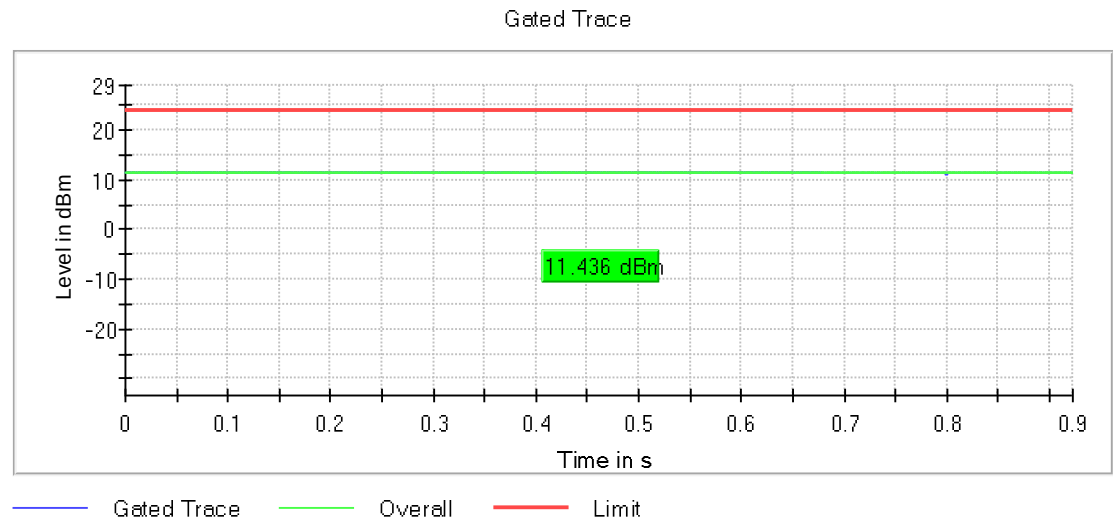
Frequency MHz = 5280.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Number of Transmission Chains = 1

Images:



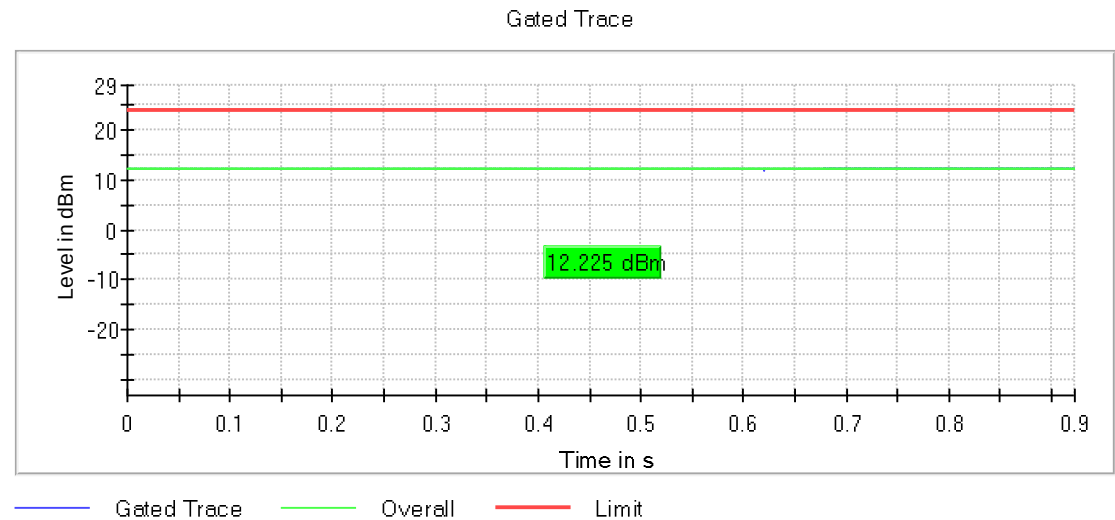
Frequency MHz = 5320.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Number of Transmission Chains = 1

Images:



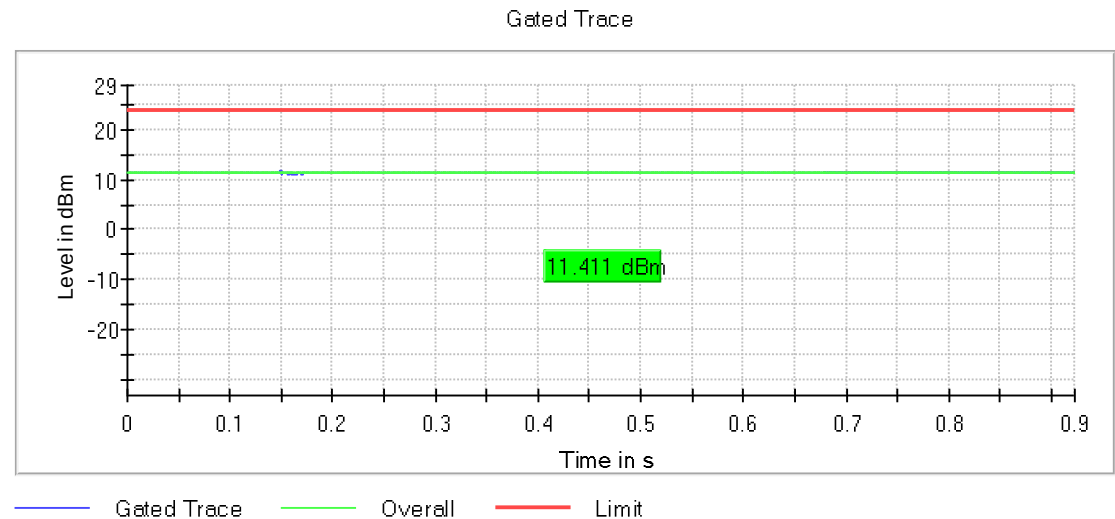
Frequency MHz = 5500.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Number of Transmission Chains = 1

Images:



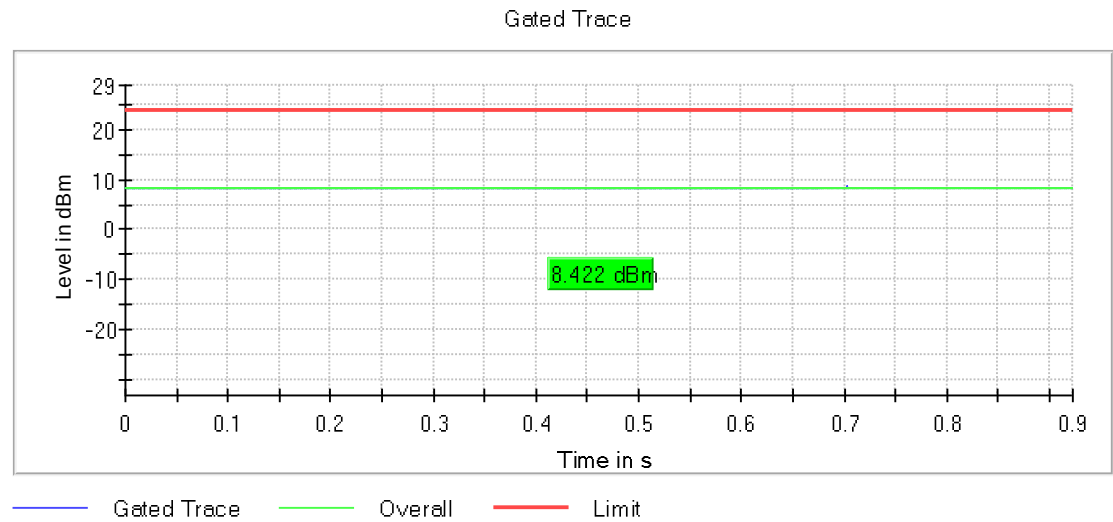
Frequency MHz = 5580.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Number of Transmission Chains = 1

Images:



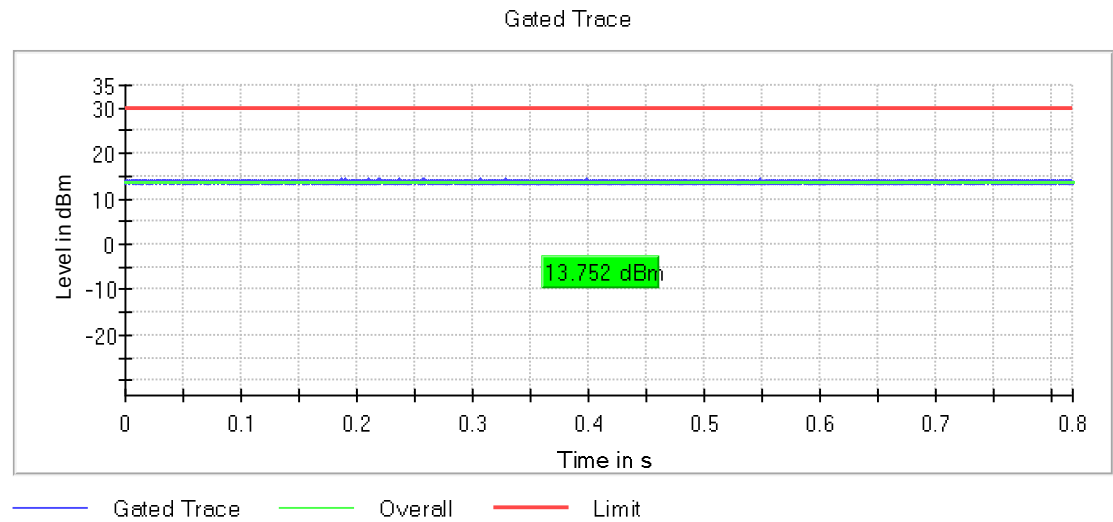
Frequency MHz = 5700.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Number of Transmission Chains = 1

Images:



Frequency MHz = 5745.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Number of Transmission Chains = 1

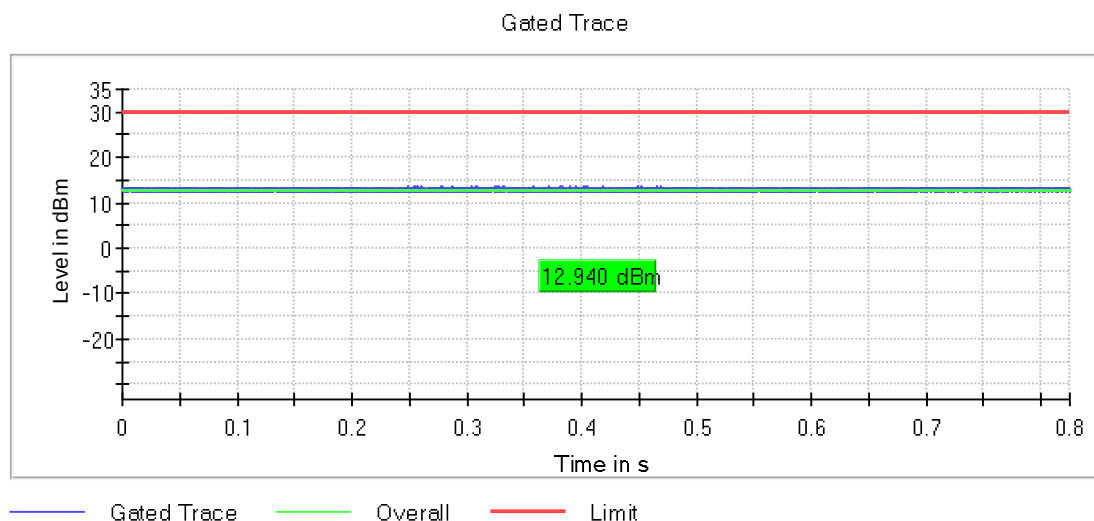
Images:





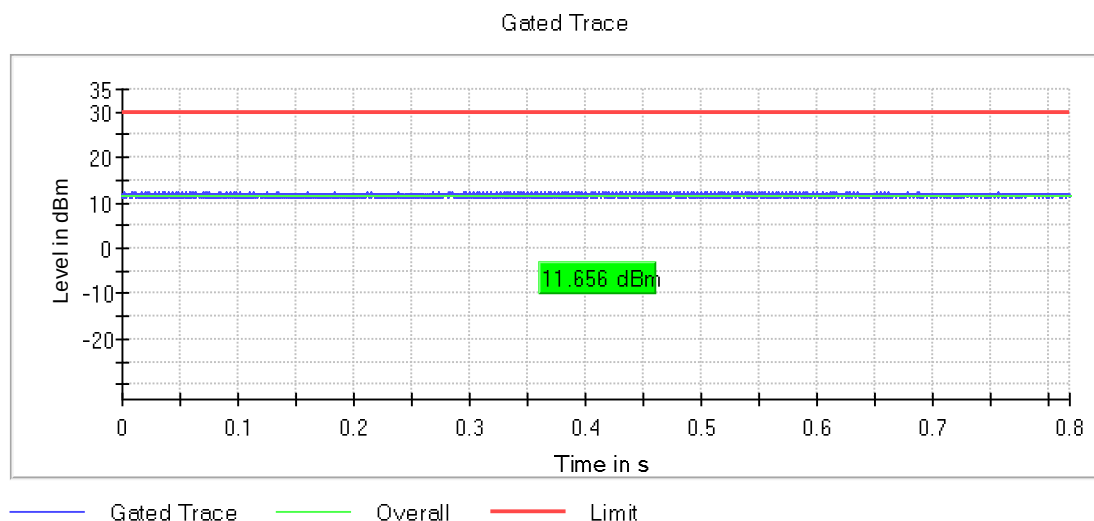
Frequency MHz = 5785.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Number of Transmission Chains = 1

Images:



Frequency MHz = 5825.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Number of Transmission Chains = 1

Images:



Modulation: 802.11n HT20 (OFDM MCS0)  
**Results**

Antenna Gain: 0 dBi

Pigtail loss: 0.8 dB

| Freq (MHz) | Avg Power (dBm) | Max EIRP (dBm) |
|------------|-----------------|----------------|
| 5180.00000 | 6.0             | 6.8            |
| 5200.00000 | 5.4             | 6.2            |
| 5240.00000 | 6.6             | 7.4            |
| 5260.00000 | 7.2             | 8.0            |
| 5280.00000 | 6.7             | 7.5            |
| 5320.00000 | 7.6             | 8.4            |
| 5500.00000 | 8.5             | 9.3            |
| 5580.00000 | 8.4             | 9.2            |
| 5700.00000 | 6.6             | 7.4            |
| 5745.00000 | 6.5             | 7.3            |
| 5785.00000 | 7.6             | 8.4            |
| 5825.00000 | 6.5             | 7.3            |

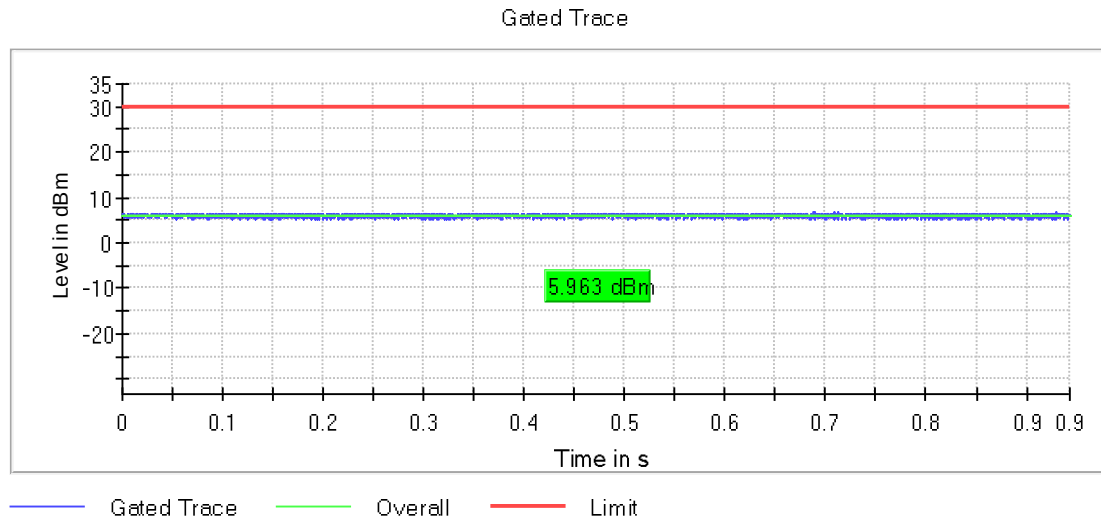
**Verdict**

Pass

## Attachments

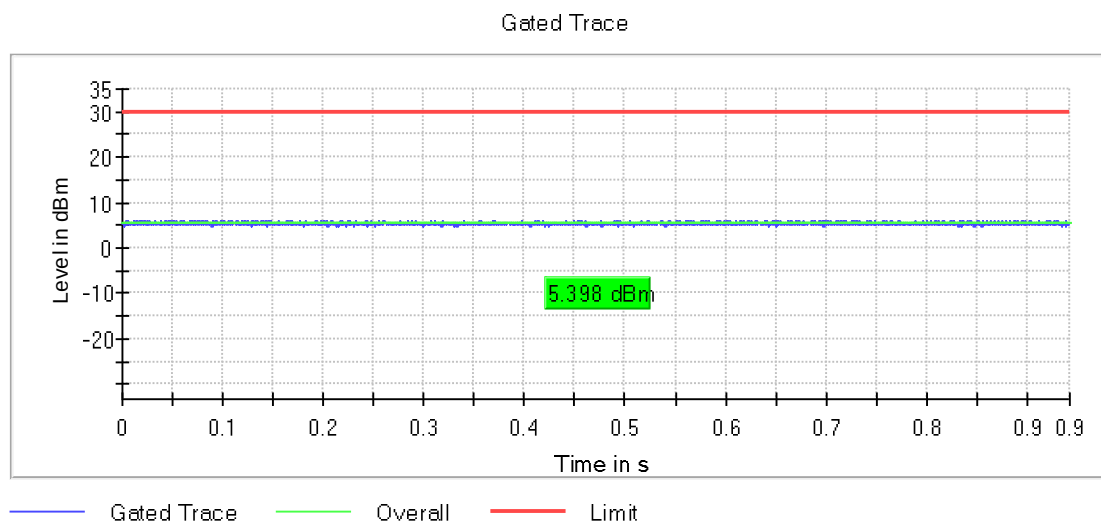
Frequency MHz = 5180.00000, Modulation = 802.11n HT20 (OFDM MCS0), Number of Transmission Chains = 1

### Images:



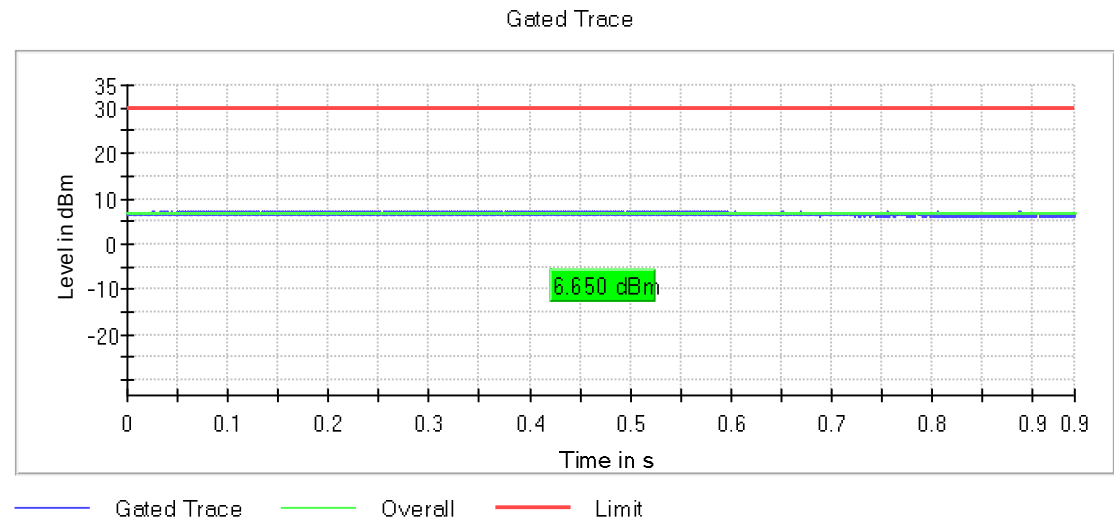
Frequency MHz = 5200.00000, Modulation = 802.11n HT20 (OFDM MCS0), Number of Transmission Chains = 1

### Images:



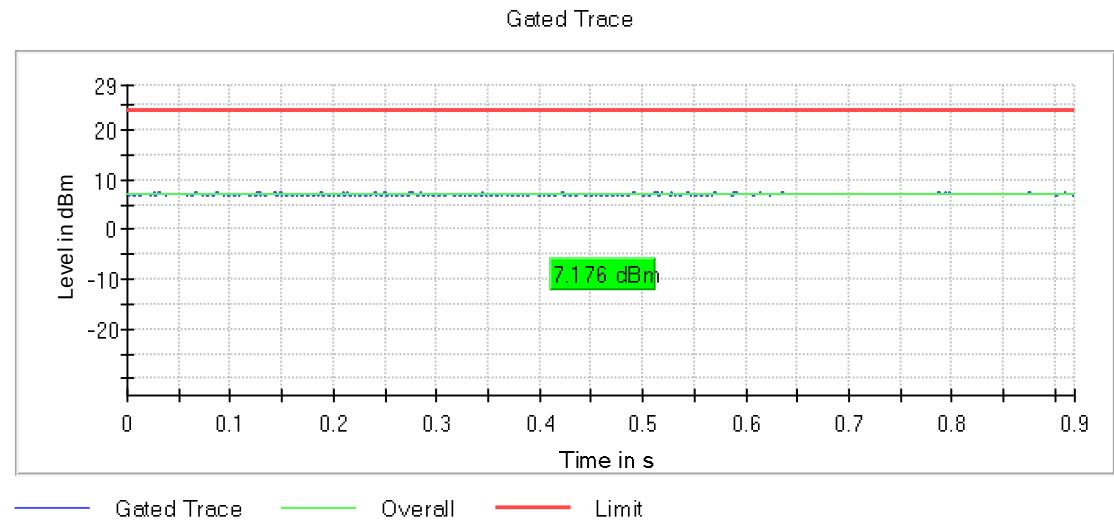
Frequency MHz = 5240.00000, Modulation = 802.11n HT20 (OFDM MCS0), Number of Transmission Chains = 1

Images:



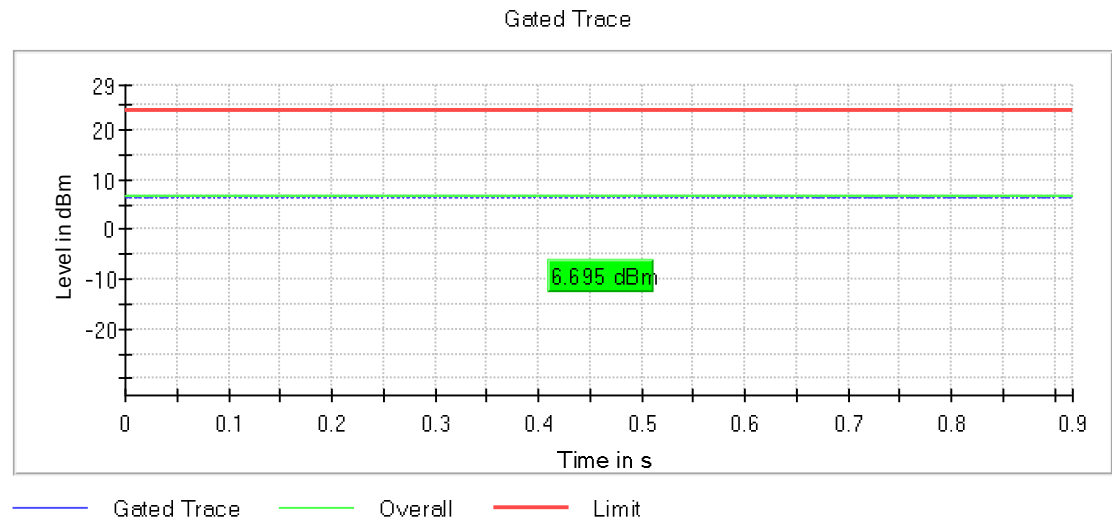
Frequency MHz = 5260.00000, Modulation = 802.11n HT20 (OFDM MCS0), Number of Transmission Chains = 1

Images:



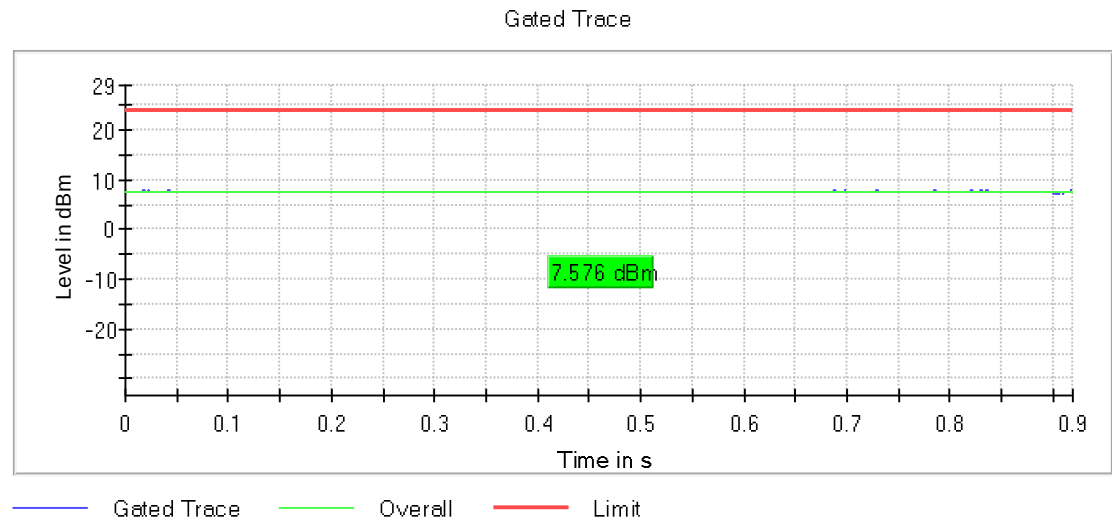
Frequency MHz = 5280.00000, Modulation = 802.11n HT20 (OFDM MCS0), Number of Transmission Chains = 1

Images:



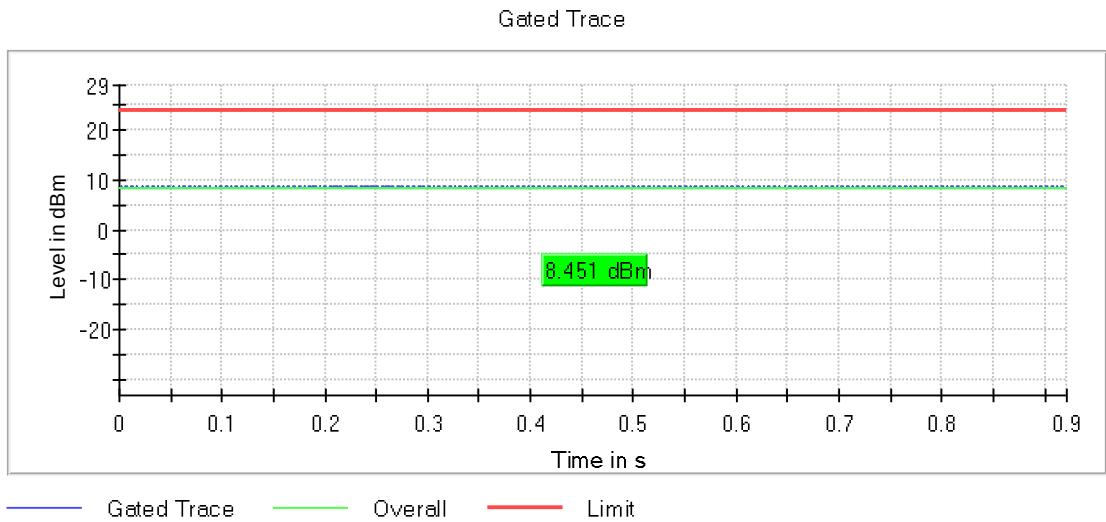
Frequency MHz = 5320.00000, Modulation = 802.11n HT20 (OFDM MCS0), Number of Transmission Chains = 1

Images:



Frequency MHz = 5500.00000, Modulation = 802.11n HT20 (OFDM MCS0), Number of Transmission Chains = 1

Images:



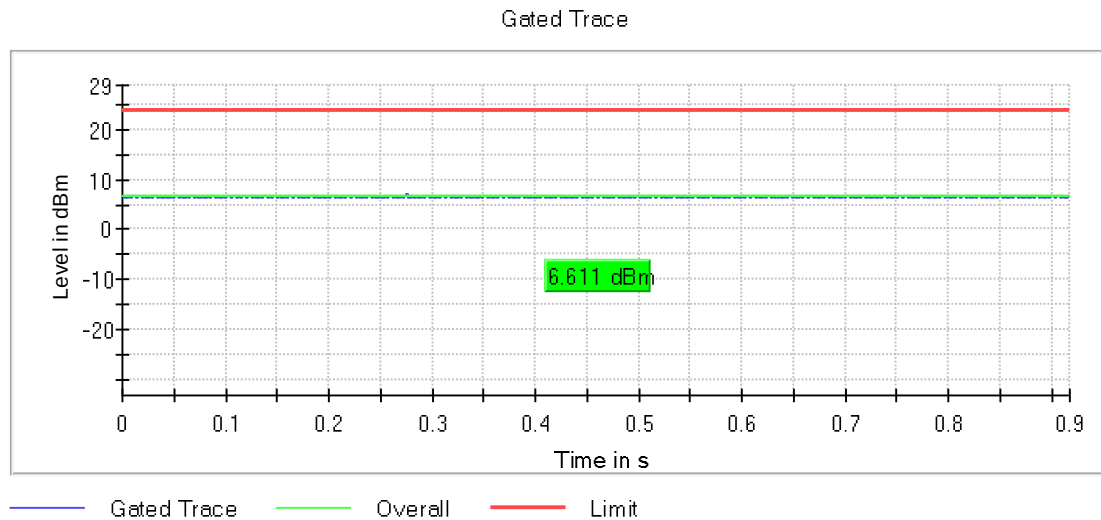
Frequency MHz = 5580.00000, Modulation = 802.11n HT20 (OFDM MCS0), Number of Transmission Chains = 1

Images:



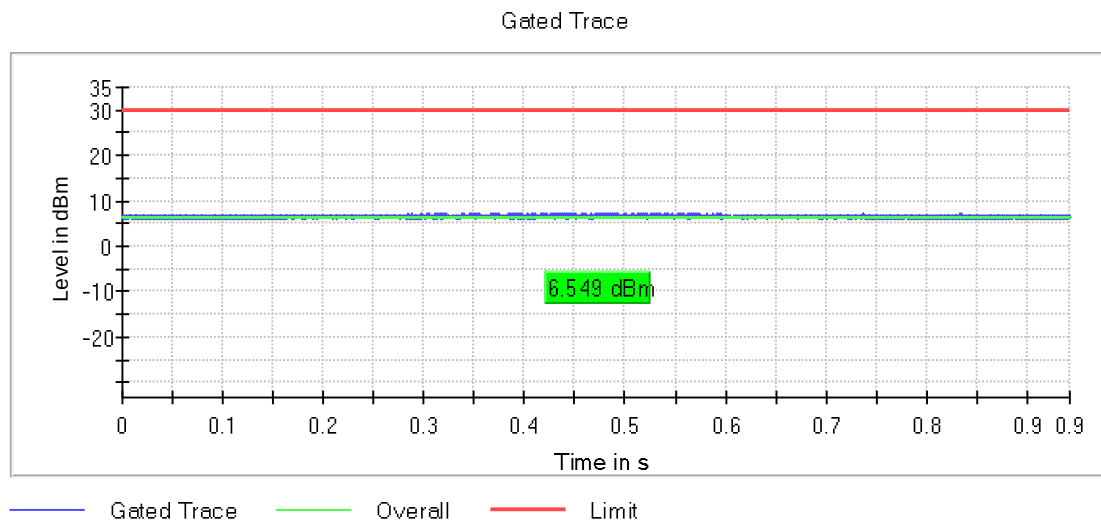
Frequency MHz = 5700.00000, Modulation = 802.11n HT20 (OFDM MCS0), Number of Transmission Chains = 1

Images:



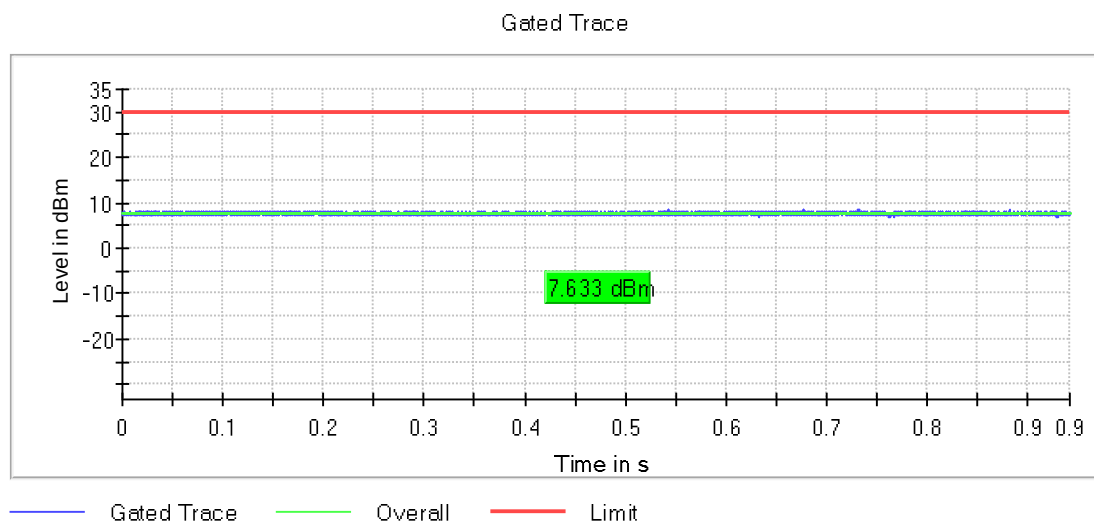
Frequency MHz = 5745.00000, Modulation = 802.11n HT20 (OFDM MCS0), Number of Transmission Chains = 1

Images:



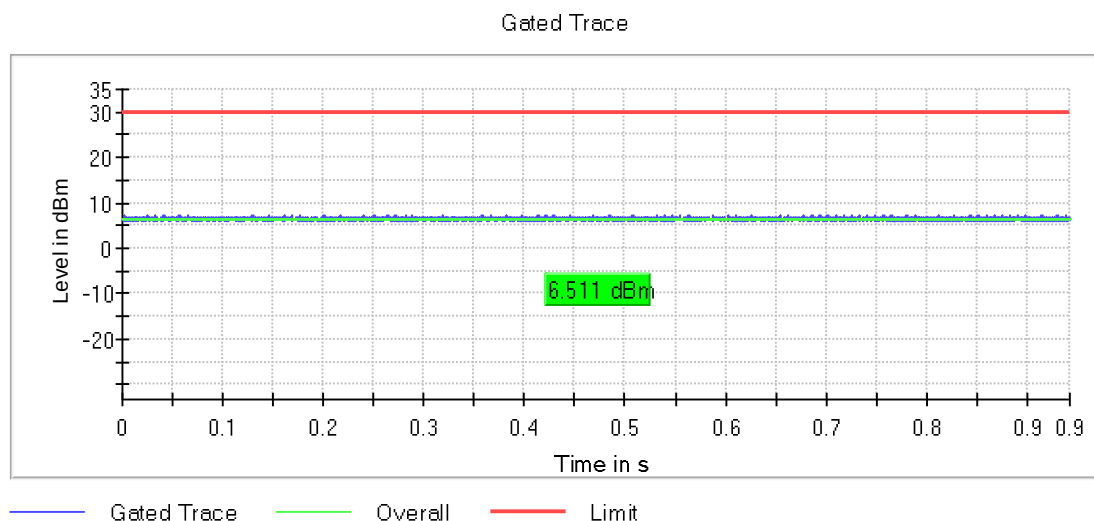
Frequency MHz = 5785.00000, Modulation = 802.11n HT20 (OFDM MCS0), Number of Transmission Chains = 1

Images:



Frequency MHz = 5825.00000, Modulation = 802.11n HT20 (OFDM MCS0), Number of Transmission Chains = 1

Images:





Modulation: 802.11n HT40 (OFDM MCS0)  
**Results**

| Freq (MHz) | Avg Power (dBm) | Max EIRP (dBm) |
|------------|-----------------|----------------|
| 5190.00000 | 2.9             | 3.7            |
| 5230.00000 | 5.5             | 6.3            |
| 5270.00000 | 6.2             | 7.0            |
| 5310.00000 | 6.5             | 7.3            |
| 5510.00000 | 8.1             | 8.9            |
| 5550.00000 | 8.4             | 9.2            |
| 5670.00000 | 7.9             | 8.7            |
| 5755.00000 | 6.1             | 6.9            |
| 5795.00000 | 6.8             | 7.6            |

**Verdict**  
  
Pass

Attachments

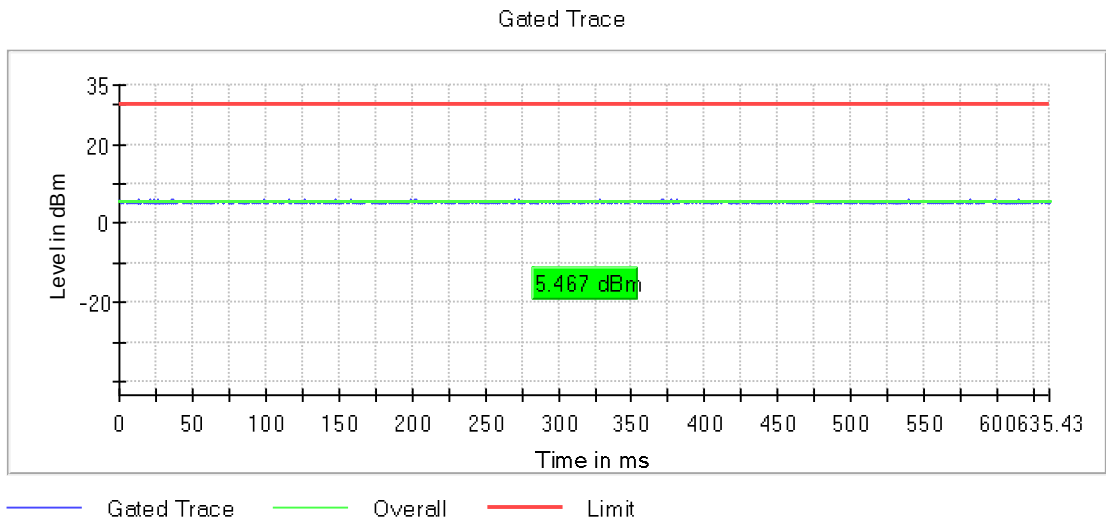
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Images:



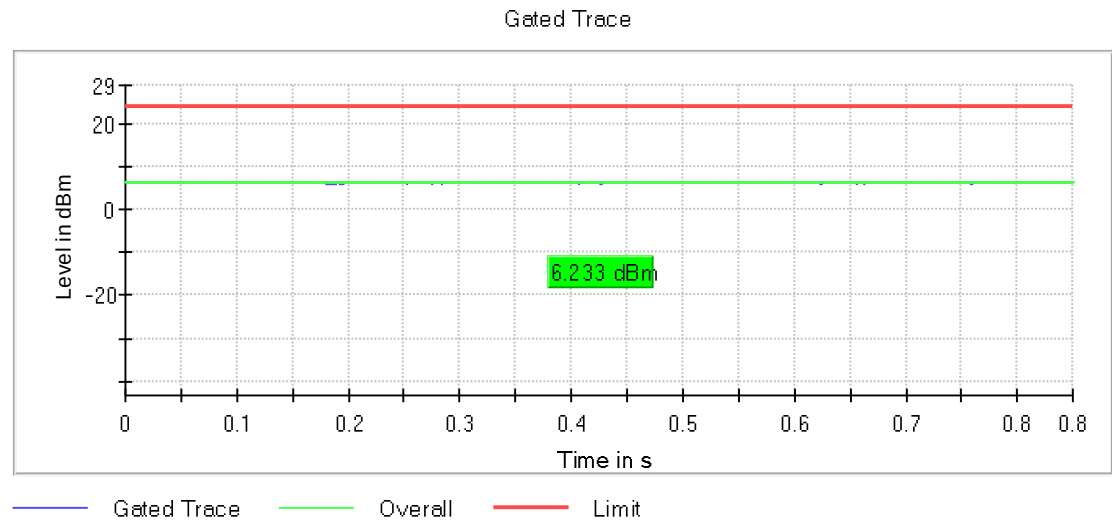
Frequency MHz = 5230.00000, Modulation = 802.11n HT40 (OFDM MCS0), Number of Transmission Chains = 1

Images:



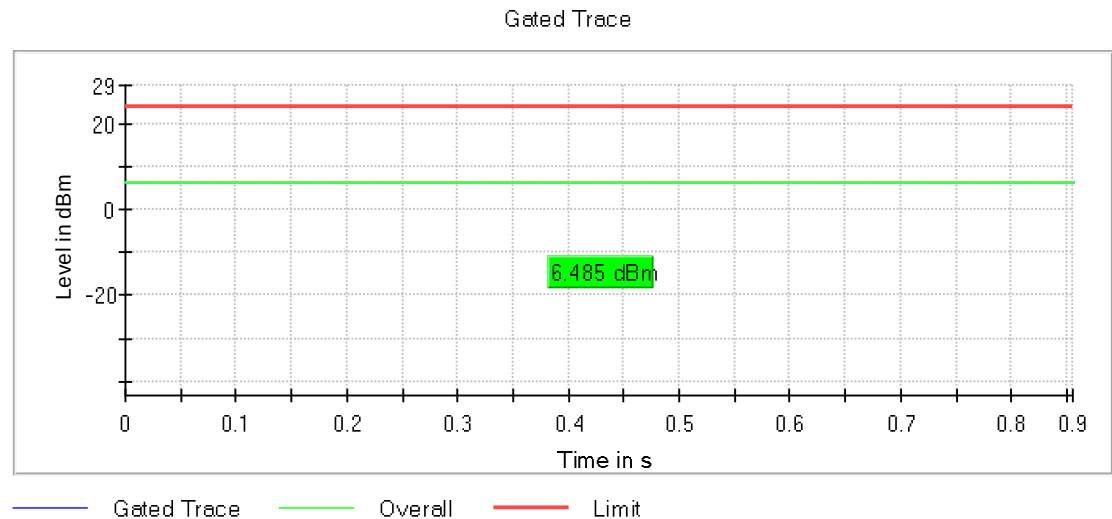
Frequency MHz = 5270.00000, Modulation = 802.11n HT40 (OFDM MCS0), Number of Transmission Chains = 1

Images:



Frequency MHz = 5310.00000, Modulation = 802.11n HT40 (OFDM MCS0), Number of Transmission Chains = 1

Images:



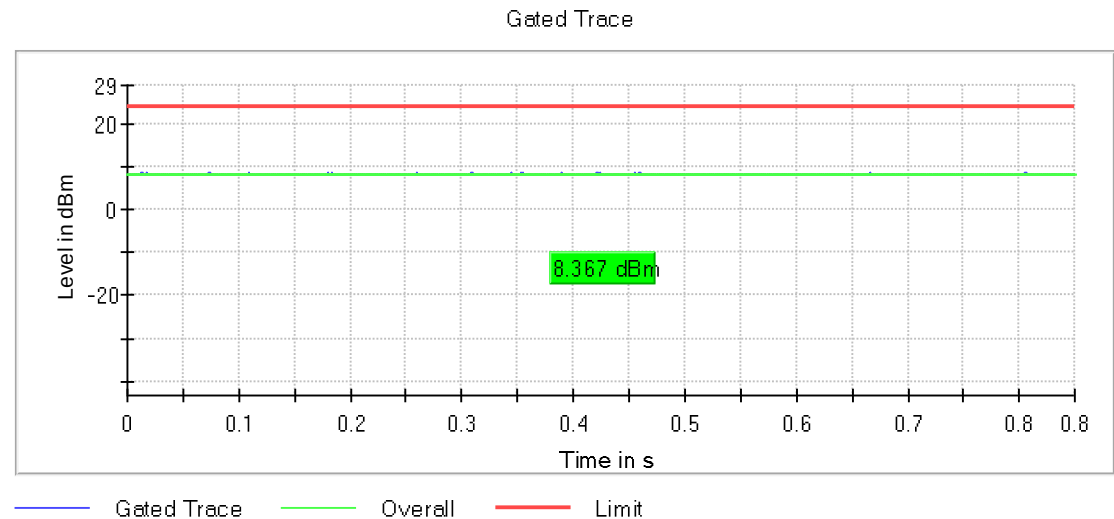
Frequency MHz = 5510.00000, Modulation = 802.11n HT40 (OFDM MCS0), Number of Transmission Chains = 1

Images:



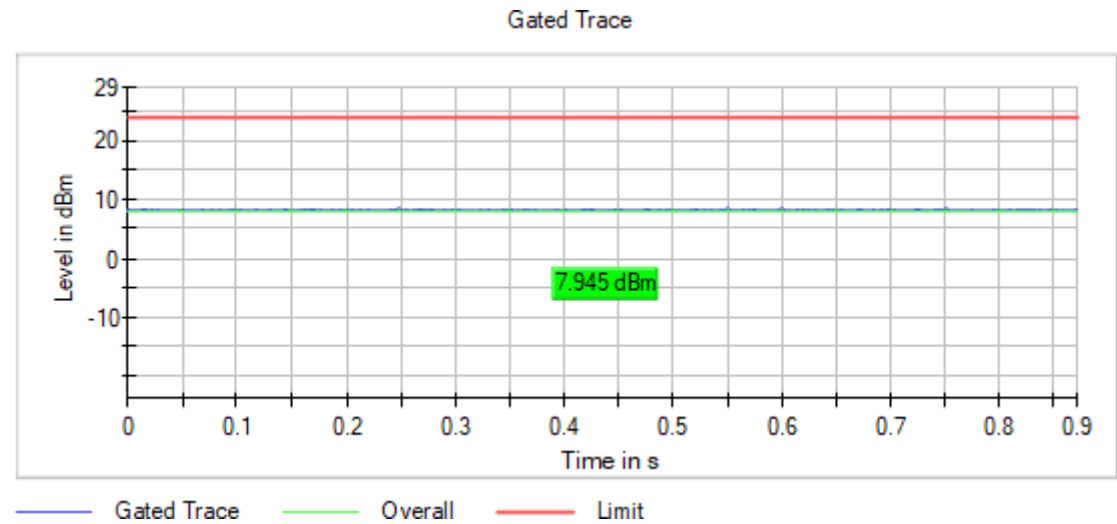
Frequency MHz = 5550.00000, Modulation = 802.11n HT40 (OFDM MCS0), Number of Transmission Chains = 1

Images:



Frequency MHz = 5670.00000, Modulation = 802.11n HT40 (OFDM MCS0), Number of Transmission Chains = 1

Images:



Frequency MHz = 5755.00000, Modulation = 802.11n HT40 (OFDM MCS0), Number of Transmission Chains = 1

Images:



Frequency MHz = 5795.00000, Modulation = 802.11n HT40 (OFDM MCS0), Number of Transmission Chains = 1

Images:



Tables:  
Spectrum Analyzer Parameters

| Setting          | Instrument Value | Target Value |
|------------------|------------------|--------------|
| Measurement Time | 1.000 s          | 1.000 s      |
| Points           | 1000000          | 1000000      |
| Time resolution  | 1.000 μs         | 1.000 μs     |

FCC 15.407 (a) / RSS-247 6.2 Maximum Power Spectral Density

Limits

FCC 15.407:

The maximum power spectral density shall not exceed 17 dBm in any 1-megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

RSS-247: For the 5.25-5.35 GHz, 5.470-5.6 GHz, and 5.650-5.725 GHz bands, the power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

For the band 5.725-5.850 GHz, the output power spectral density shall not exceed 30 dBm in any 500 kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the output power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Modulation: 802.11a (OFDM 6 Mbit/s)

Results

| Test Freq (MHz) | Marker Freq (MHz) | PSD (dBm) |
|-----------------|-------------------|-----------|
| 5180.00000      | 5178.811881       | 3.120     |
| 5200.00000      | 5200.990099       | 3.444     |
| 5240.00000      | 5241.188119       | 4.877     |
| 5260.00000      | 5259.009901       | 1.167     |
| 5280.00000      | 5281.386139       | 0.844     |
| 5320.00000      | 5321.188119       | 1.706     |
| 5500.00000      | 5501.584158       | 3.367     |
| 5580.00000      | 5579.009901       | 5.345     |
| 5700.00000      | 5701.188119       | -1.063    |
| 5745.00000      | 5746.188119       | 2.948     |
| 5785.00000      | 5785.594059       | 2.060     |
| 5825.00000      | 5825.594059       | 0.656     |

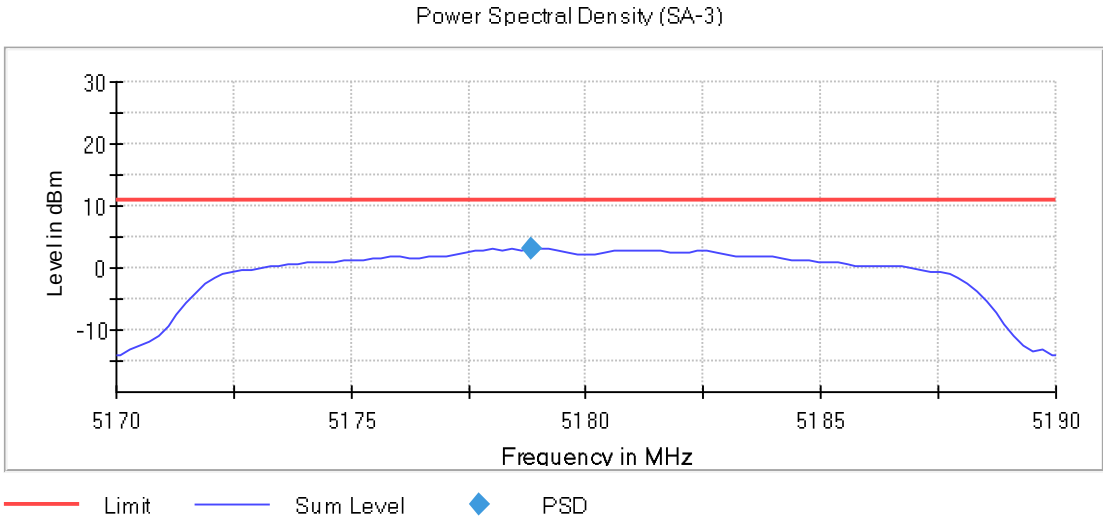
Verdict

Pass

Attachments

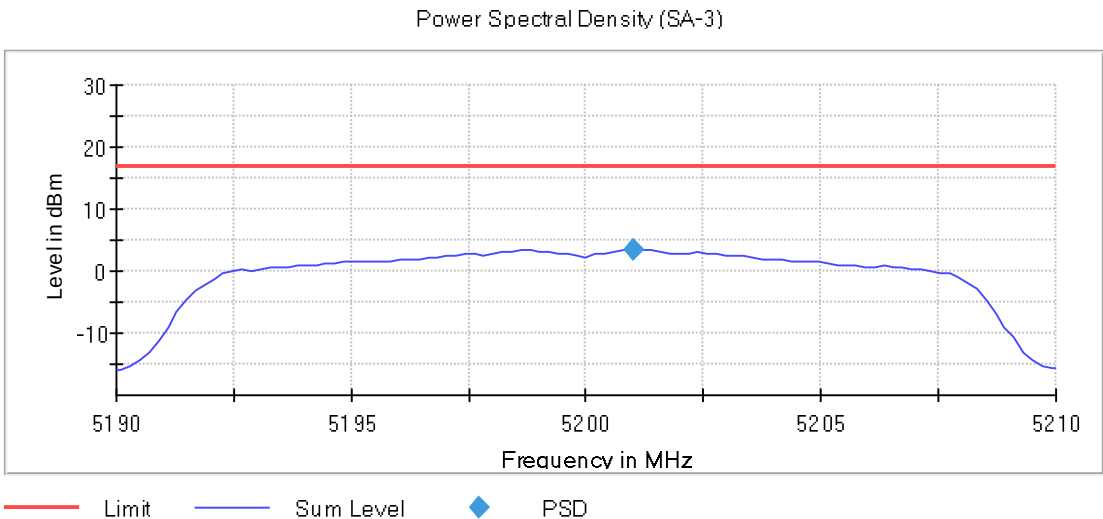
Frequency MHz = 5180.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Number of Transmission Chains = 1

Images:



Frequency MHz = 5200.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Number of Transmission Chains = 1

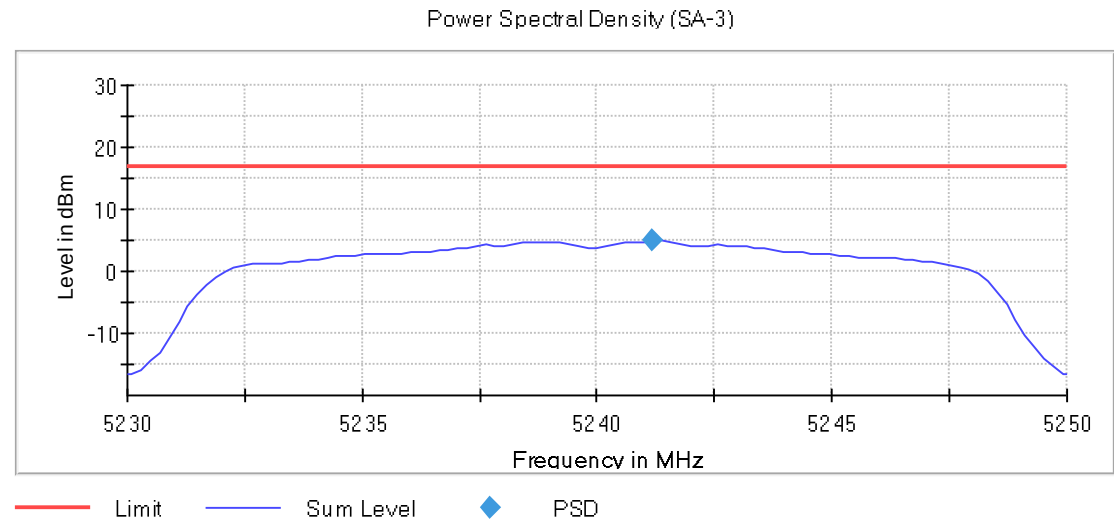
Images:





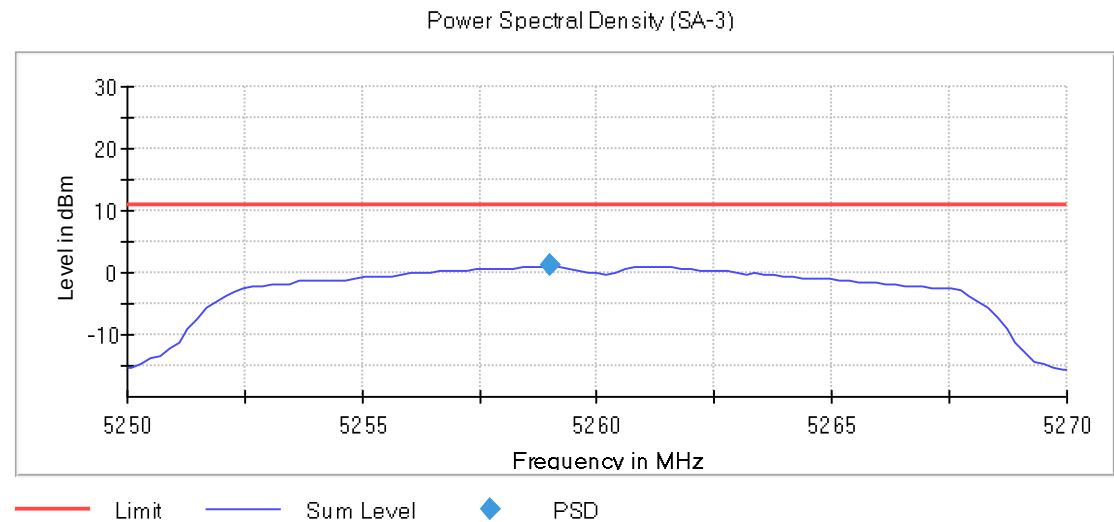
Frequency MHz = 5240.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Number of Transmission Chains = 1

Images:



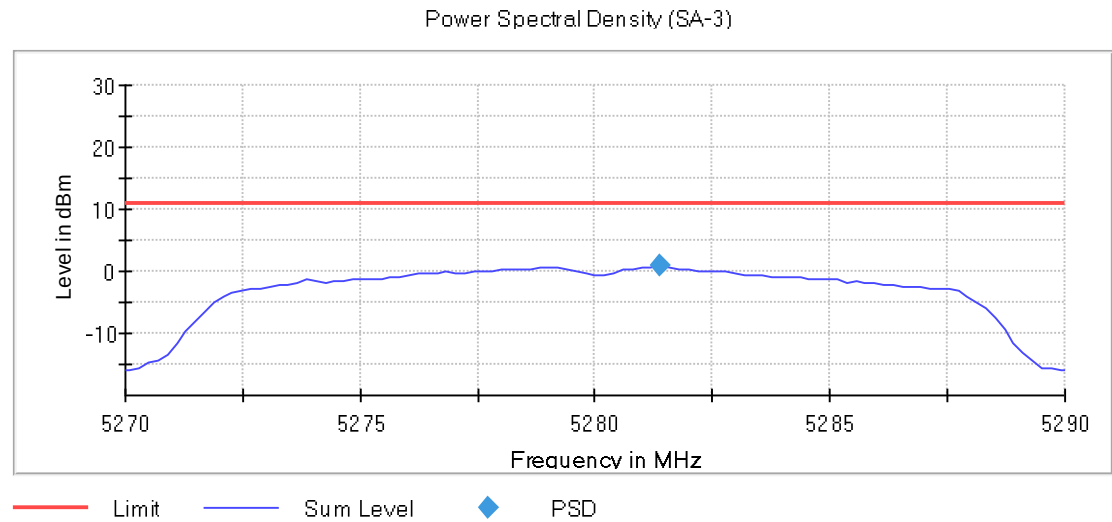
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Images:



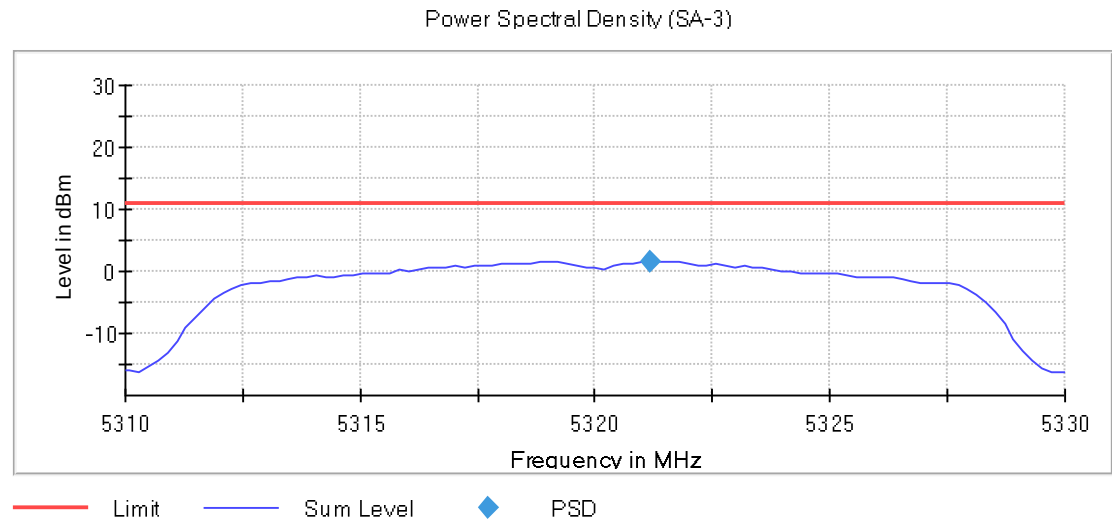
Frequency MHz = 5280.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Number of Transmission Chains = 1

Images:



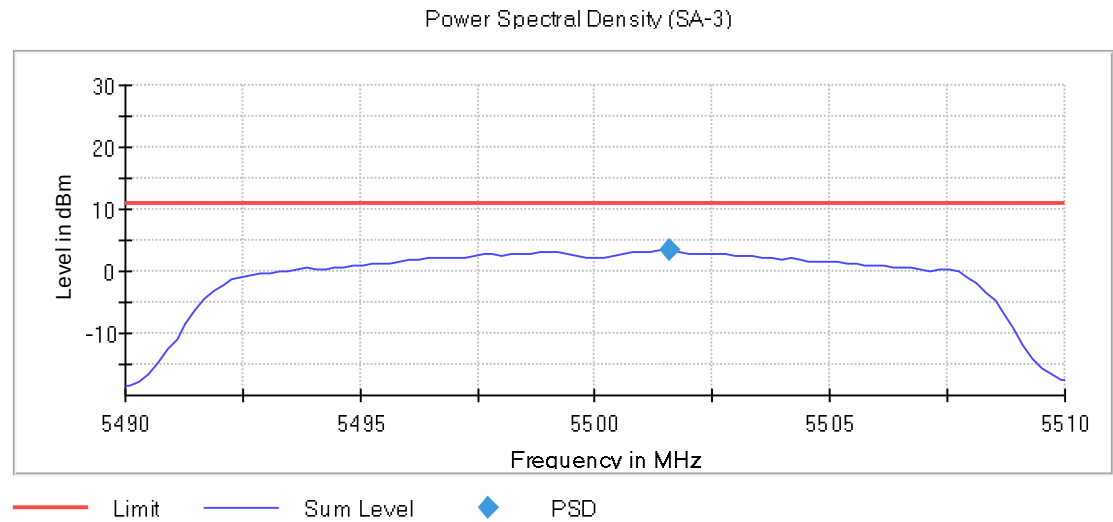
Frequency MHz = 5320.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Number of Transmission Chains = 1

Images:



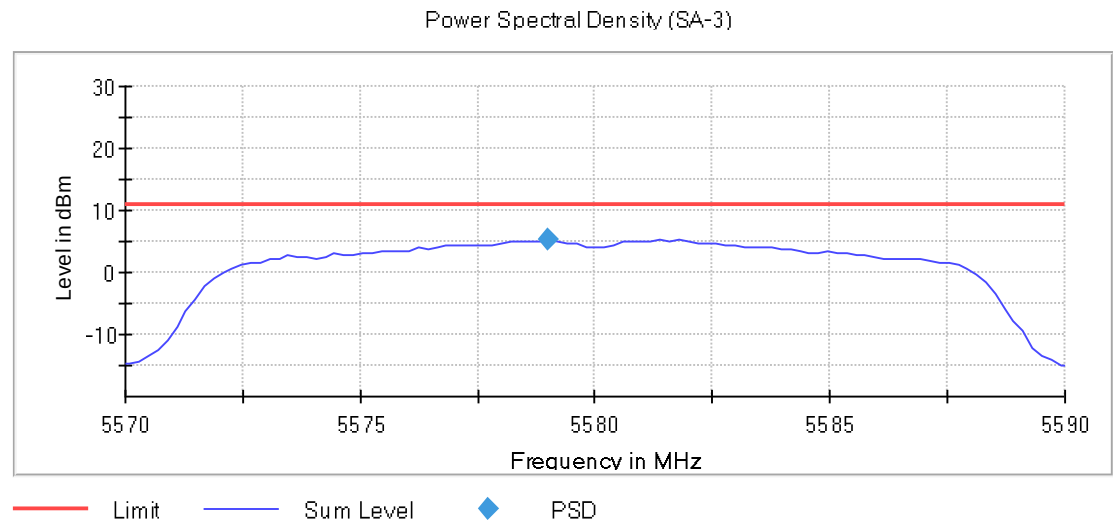
Frequency MHz = 5500.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Number of Transmission Chains = 1

Images:



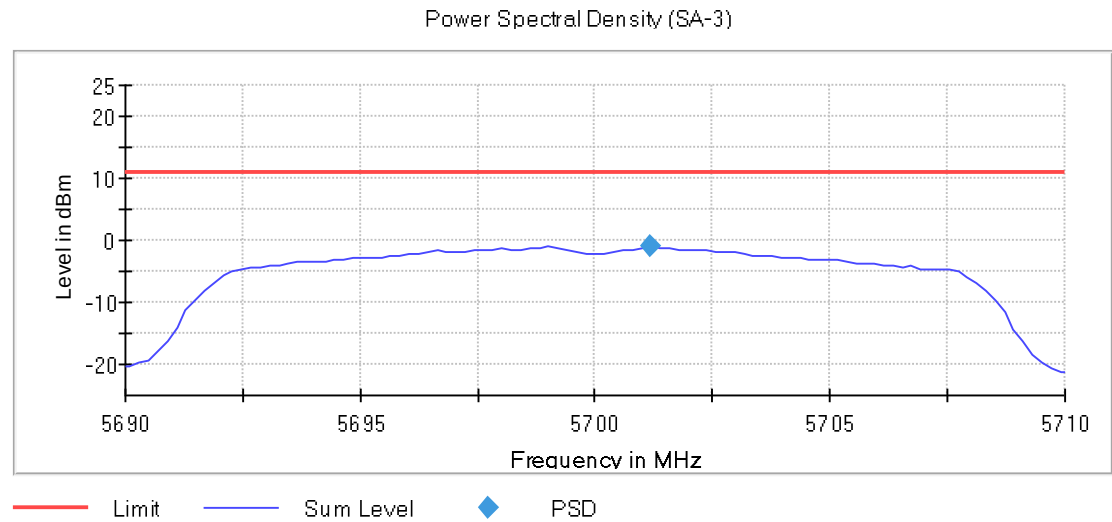
Frequency MHz = 5580.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Number of Transmission Chains = 1

Images:



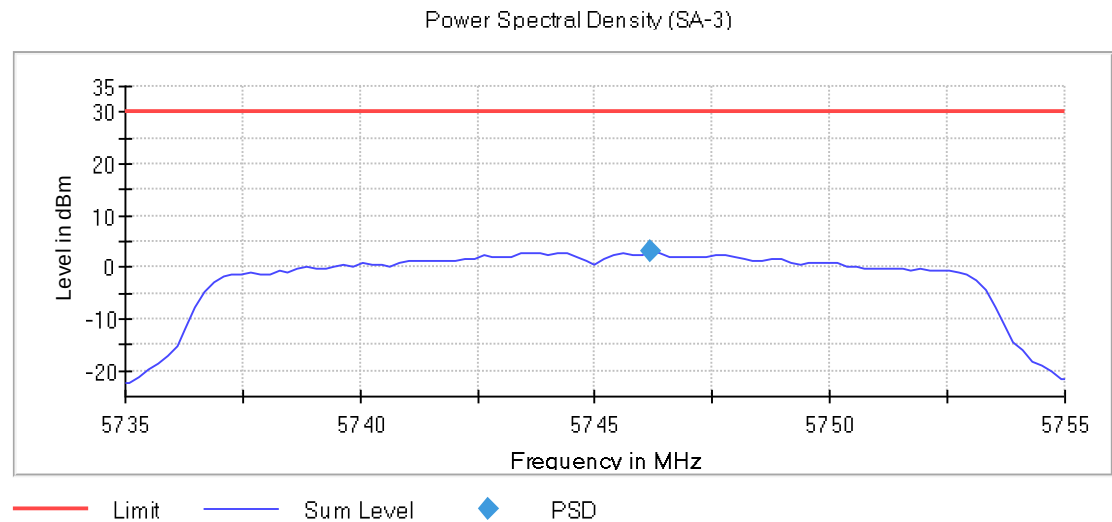
Frequency MHz = 5700.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Number of Transmission Chains = 1

Images:



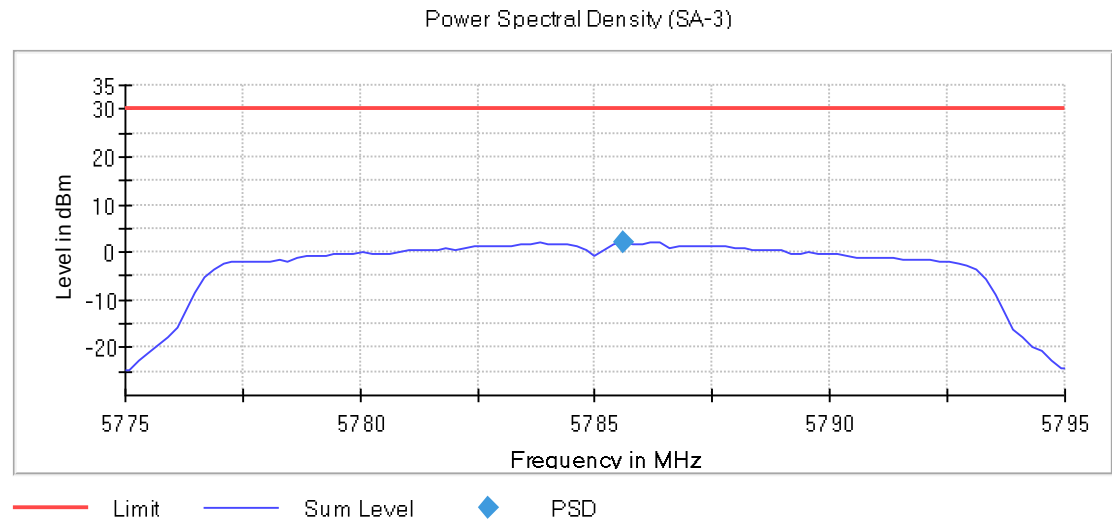
Frequency MHz = 5745.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Number of Transmission Chains = 1

Images:



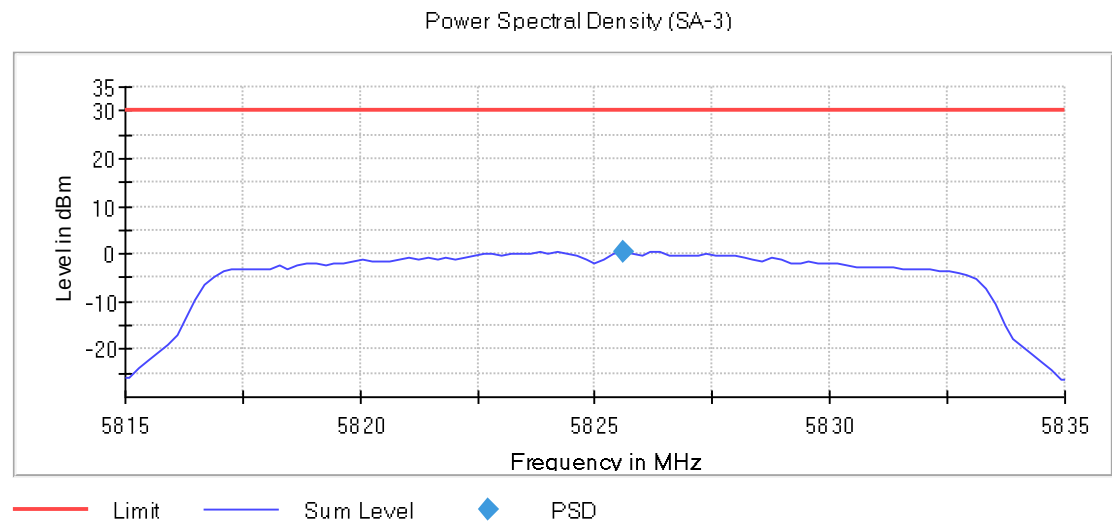
Frequency MHz = 5785.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Number of Transmission Chains = 1

Images:



Frequency MHz = 5825.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Number of Transmission Chains = 1

Images:



**Tables:**  
Spectrum Analyzer Parameters

| Setting               | Instrument Value | Target Value |
|-----------------------|------------------|--------------|
| Start Frequency       | 5.23000 GHz      | 5.23000 GHz  |
| Stop Frequency        | 5.25000 GHz      | 5.25000 GHz  |
| Span                  | 20.000 MHz       | 20.000 MHz   |
| RBW                   | 1.000 MHz        | <= 1.000 MHz |
| VBW                   | 3.000 MHz        | >= 3.000 MHz |
| SweepPoints           | 101              | ~ 40         |
| SweepTime             | 2.020 ms         | 2.020 ms     |
| Reference Level       | 10.000 dBm       | 10.000 dBm   |
| Attenuation           | 30.000 dB        | AUTO         |
| Detector              | RMS              | RMS          |
| SweepCount            | 29703            | 29703        |
| Filter                | 3 dB             | 3 dB         |
| Trace Mode            | Max Hold         | Max Hold     |
| SweepType             | Sweep            | Sweep        |
| Preamplifier          | off              | off          |
| Stablemode            | Trace            | Trace        |
| Stablevalue           | 0.50 dB          | 0.50 dB      |
| Run                   | 2 / max. 15      | max. 15      |
| Stable                | 1 / 1            | 1            |
| Max Stable Difference | 0.28 dB          | 0.50 dB      |

Modulation: 802.11n HT20 (OFDM MCS0)  
**Results**

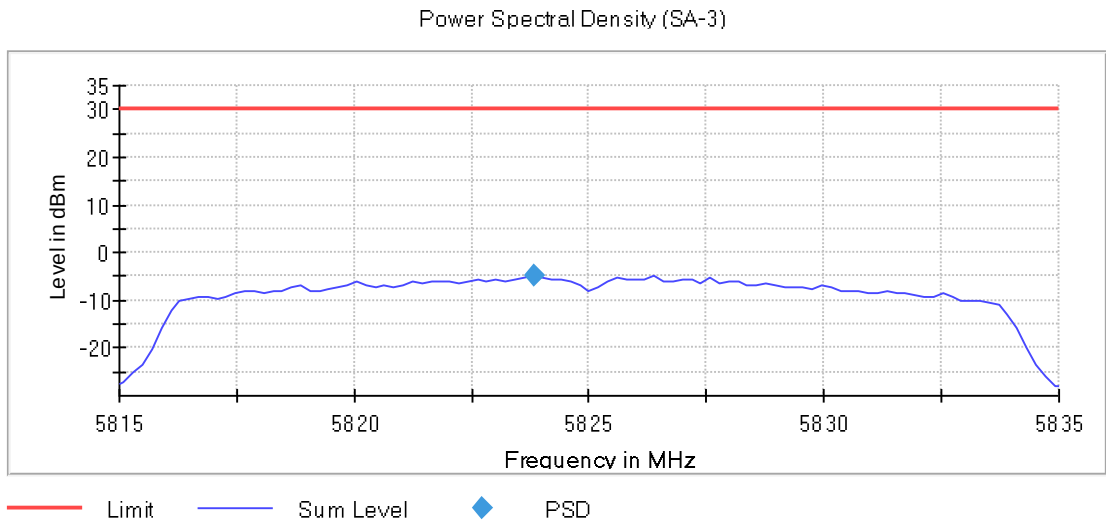
| Test Freq (MHz) | Marker Freq (MHz) | PSD (dBm) |
|-----------------|-------------------|-----------|
| 5180.00000      | 5823.811881       | -4.782    |
| 5200.00000      | 5200.990099       | -3.882    |
| 5240.00000      | 5241.584158       | -2.452    |
| 5260.00000      | 5261.386139       | -2.744    |
| 5280.00000      | 5280.990099       | -3.436    |
| 5320.00000      | 5320.990099       | -2.434    |
| 5500.00000      | 5500.792079       | -0.502    |
| 5580.00000      | 5579.009901       | -0.696    |
| 5700.00000      | 5700.990099       | -3.133    |
| 5745.00000      | 5743.811881       | -4.445    |
| 5785.00000      | 5786.386139       | -2.974    |
| 5825.00000      | 5823.811881       | -4.782    |

**Verdict**  
  
Pass

Attachments

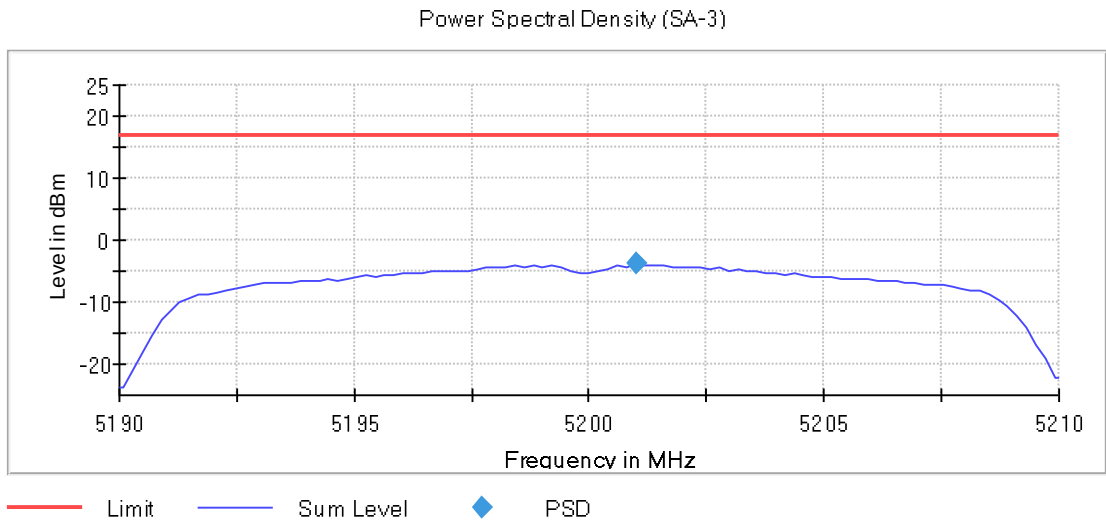
Frequency MHz = 5180.00000, Modulation = 802.11n HT20 (OFDM MCS0), Number of Transmission Chains = 1

Images:



Frequency MHz = 5200.00000, Modulation = 802.11n HT20 (OFDM MCS0), Number of Transmission Chains = 1

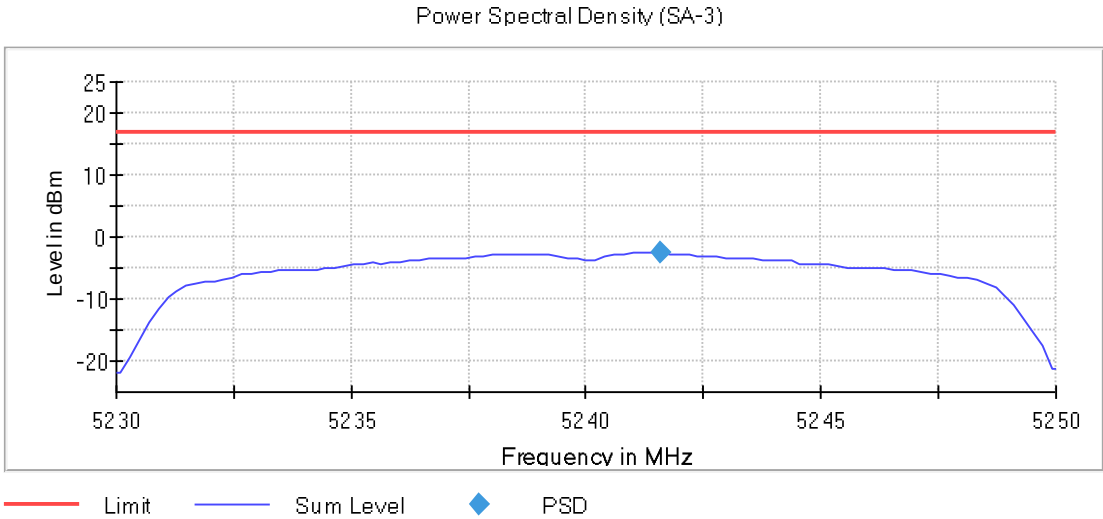
Images:





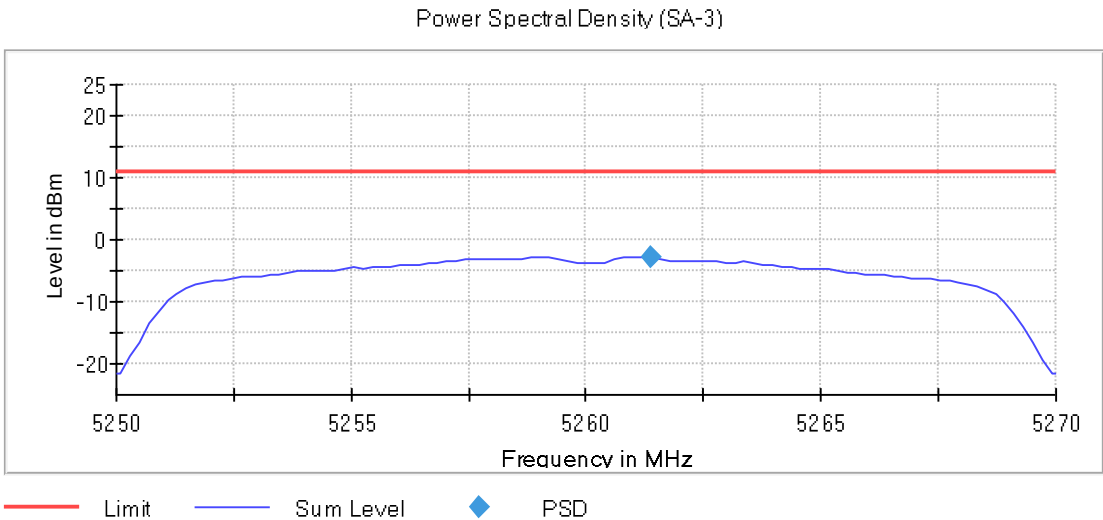
Frequency MHz = 5240.00000, Modulation = 802.11n HT20 (OFDM MCS0), Number of Transmission Chains = 1

Images:



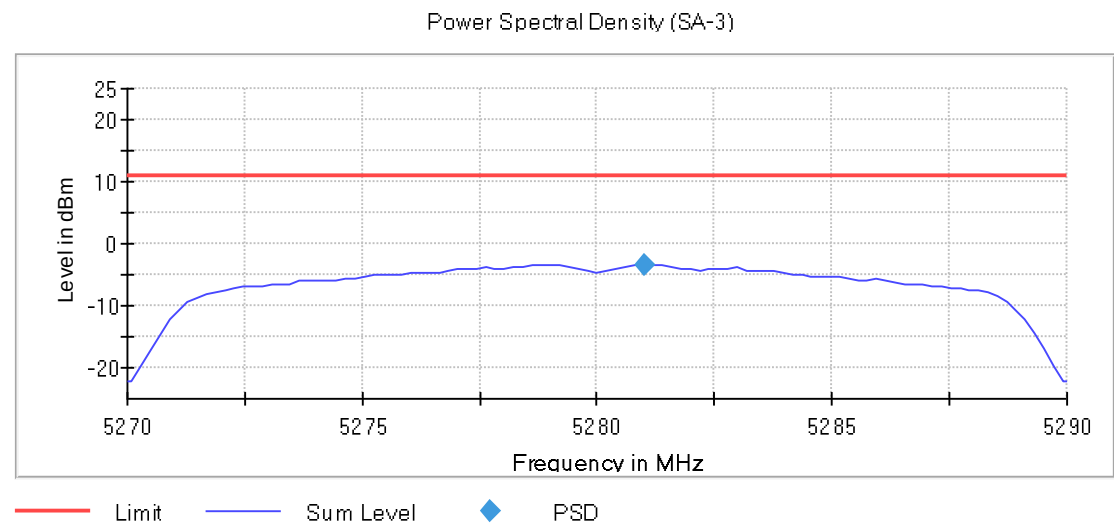
Frequency MHz = 5260.00000, Modulation = 802.11n HT20 (OFDM MCS0), Number of Transmission Chains = 1

Images:



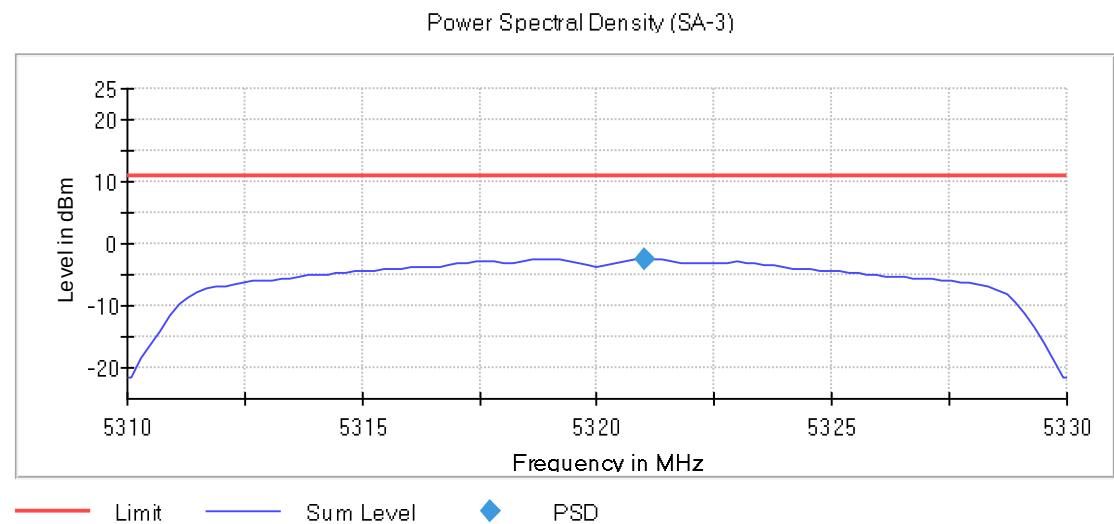
Frequency MHz = 5280.00000, Modulation = 802.11n HT20 (OFDM MCS0), Number of Transmission Chains = 1

Images:



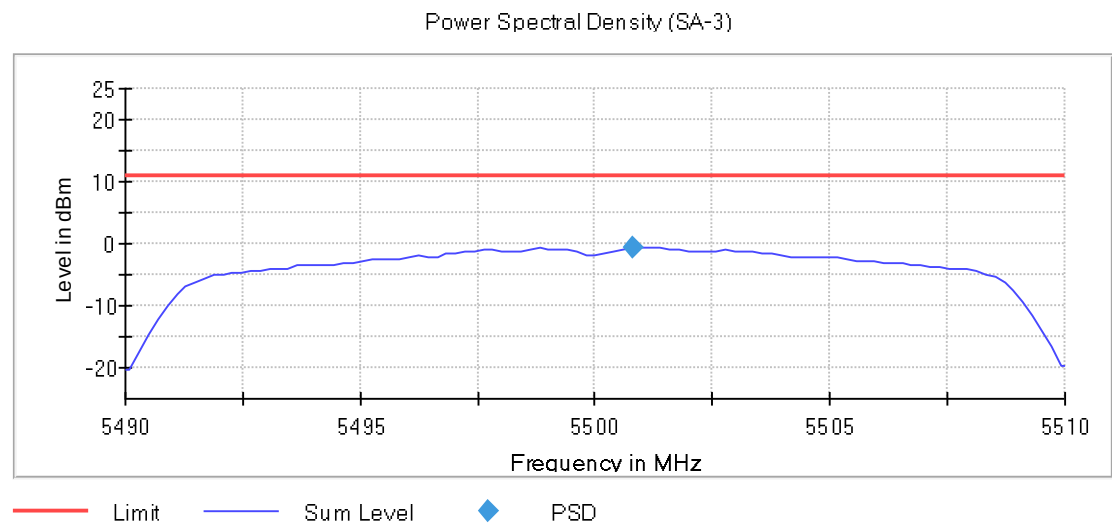
Frequency MHz = 5320.00000, Modulation = 802.11n HT20 (OFDM MCS0), Number of Transmission Chains = 1

Images:



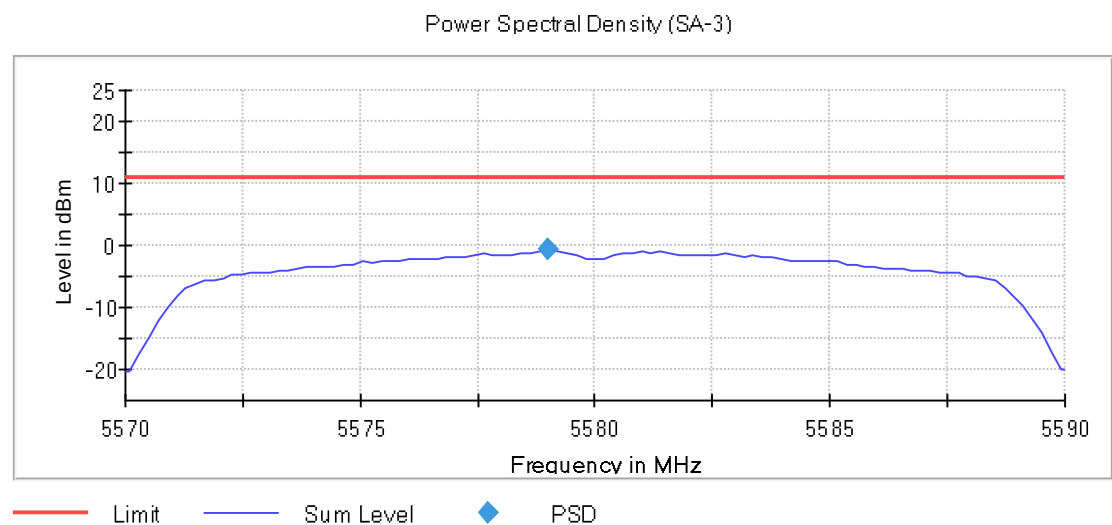
Frequency MHz = 5500.00000, Modulation = 802.11n HT20 (OFDM MCS0), Number of Transmission Chains = 1

Images:



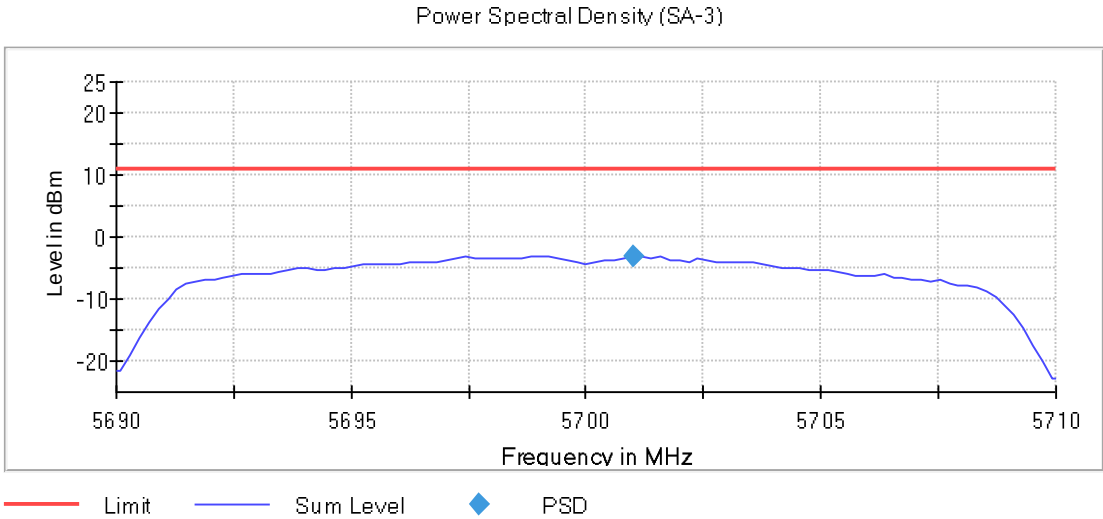
Frequency MHz = 5580.00000, Modulation = 802.11n HT20 (OFDM MCS0), Number of Transmission Chains = 1

Images:



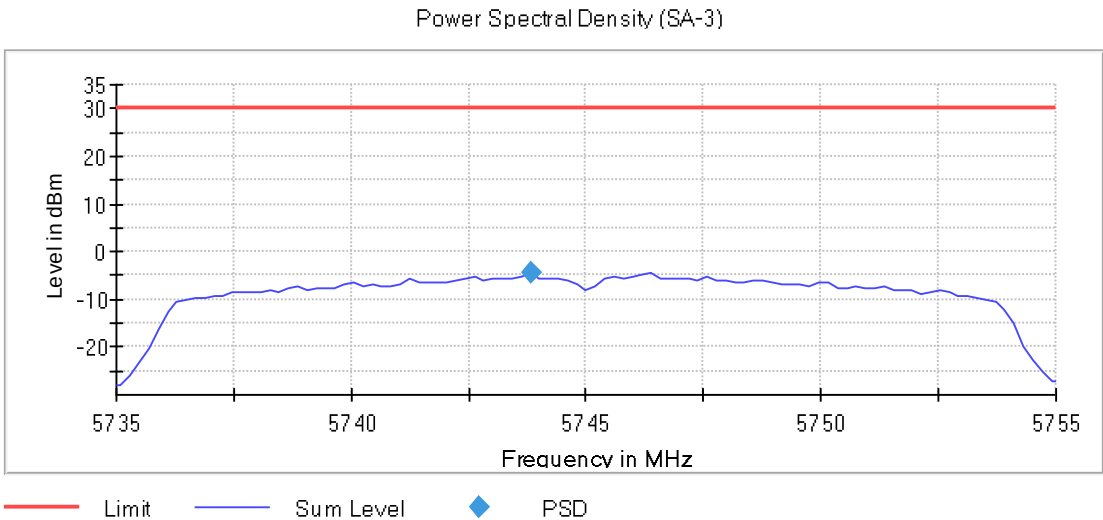
Frequency MHz = 5700.00000, Modulation = 802.11n HT20 (OFDM MCS0), Number of Transmission Chains = 1

Images:



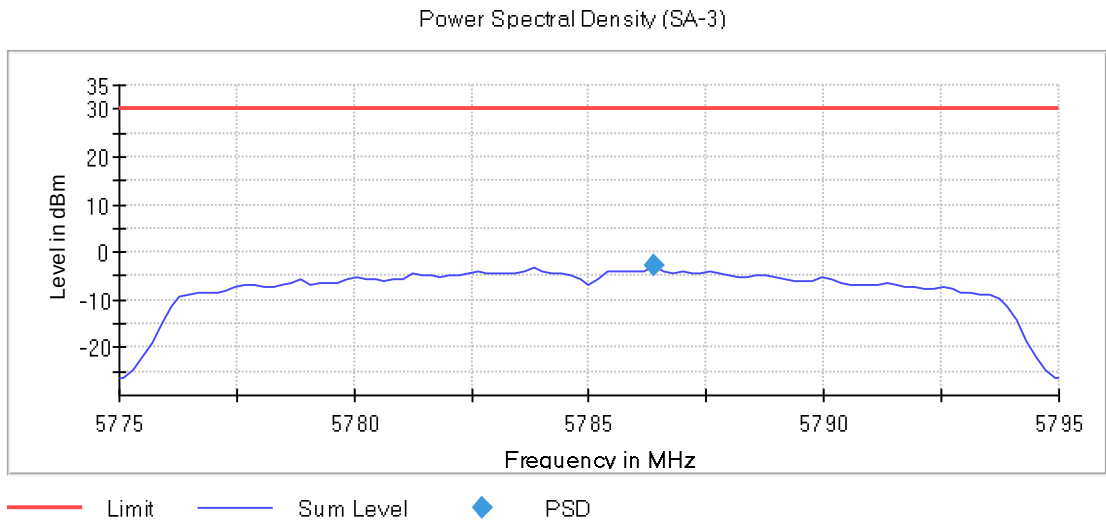
Frequency MHz = 5745.00000, Modulation = 802.11n HT20 (OFDM MCS0), Number of Transmission Chains = 1

Images:



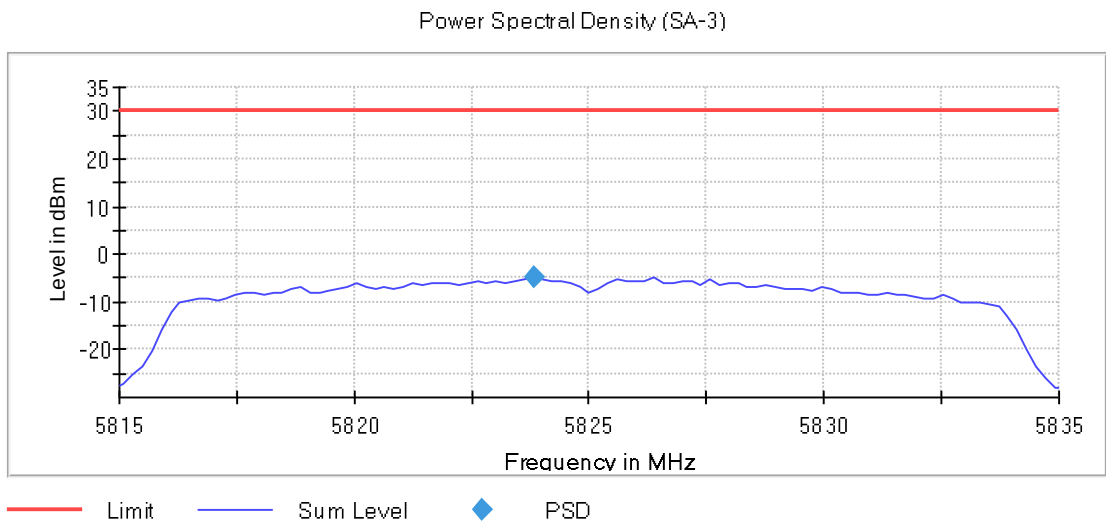
Frequency MHz = 5785.00000, Modulation = 802.11n HT20 (OFDM MCS0), Number of Transmission Chains = 1

Images:



Frequency MHz = 5825.00000, Modulation = 802.11n HT20 (OFDM MCS0), Number of Transmission Chains = 1

Images:



**Tables:**  
Spectrum Analyzer Parameters

| Setting               | Instrument Value | Target Value |
|-----------------------|------------------|--------------|
| Start Frequency       | 5.23000 GHz      | 5.23000 GHz  |
| Stop Frequency        | 5.25000 GHz      | 5.25000 GHz  |
| Span                  | 20.000 MHz       | 20.000 MHz   |
| RBW                   | 1.000 MHz        | <= 1.000 MHz |
| VBW                   | 3.000 MHz        | >= 3.000 MHz |
| SweepPoints           | 101              | ~ 40         |
| SweepTime             | 2.020 ms         | 2.020 ms     |
| Reference Level       | 0.000 dBm        | 0.000 dBm    |
| Attenuation           | 20.000 dB        | AUTO         |
| Detector              | RMS              | RMS          |
| SweepCount            | 29703            | 29703        |
| Filter                | 3 dB             | 3 dB         |
| Trace Mode            | Max Hold         | Max Hold     |
| SweepType             | Sweep            | Sweep        |
| Preamplifier          | off              | off          |
| Stablemode            | Trace            | Trace        |
| Stablevalue           | 0.50 dB          | 0.50 dB      |
| Run                   | 2 / max. 15      | max. 15      |
| Stable                | 1 / 1            | 1            |
| Max Stable Difference | 0.34 dB          | 0.50 dB      |

Modulation: 802.11n HT40 (OFDM MCS0)  
**Results**

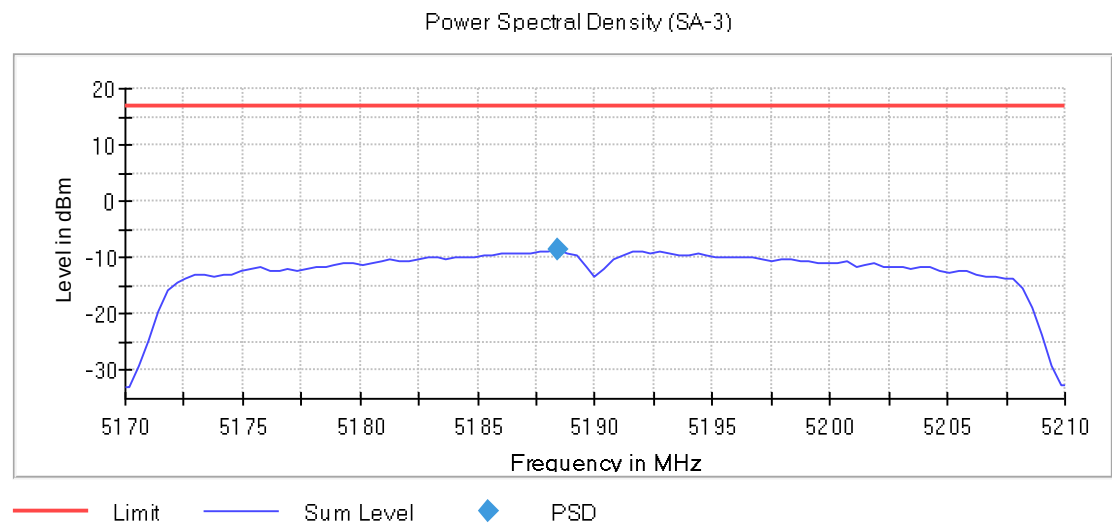
| Test Freq (MHz) | Marker Freq (MHz) | PSD (dBm) |
|-----------------|-------------------|-----------|
| 5190.00000      | 5188.415842       | -8.639    |
| 5230.00000      | 5231.980198       | -5.835    |
| 5270.00000      | 5273.168317       | -6.812    |
| 5310.00000      | 5308.019802       | -6.459    |
| 5510.00000      | 5512.772277       | -3.845    |
| 5550.00000      | 5547.623762       | -3.614    |
| 5670.00000      | 5667.623762       | -5.373    |
| 5755.00000      | 5752.625000       | -7.508    |
| 5795.00000      | 5792.625000       | -6.607    |

**Verdict**  
  
Pass

Attachments

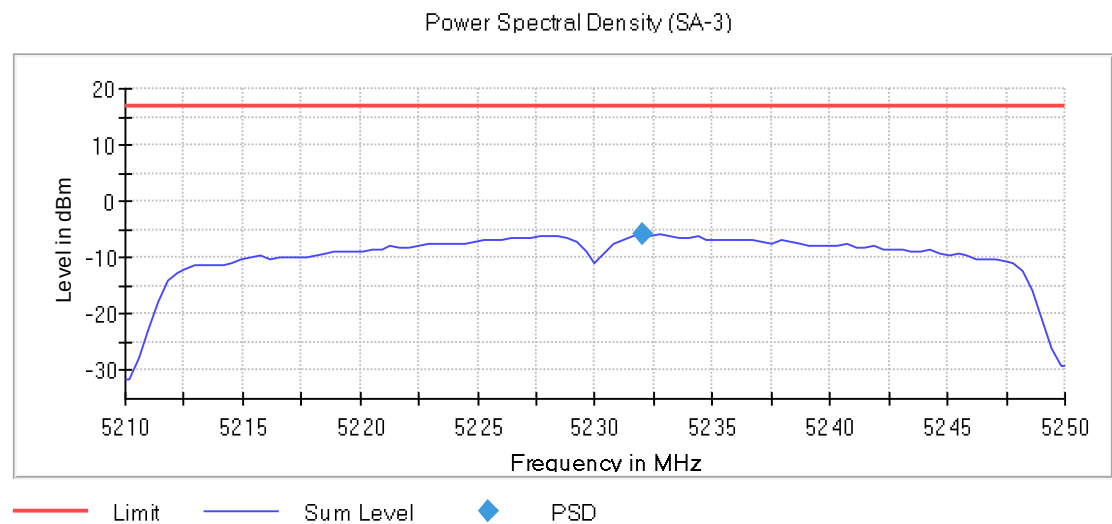
Frequency MHz = 5190.00000, Modulation = 802.11n HT40 (OFDM MCS0), Number of Transmission Chains = 1

Images:



Frequency MHz = 5230.00000, Modulation = 802.11n HT40 (OFDM MCS0), Number of Transmission Chains = 1

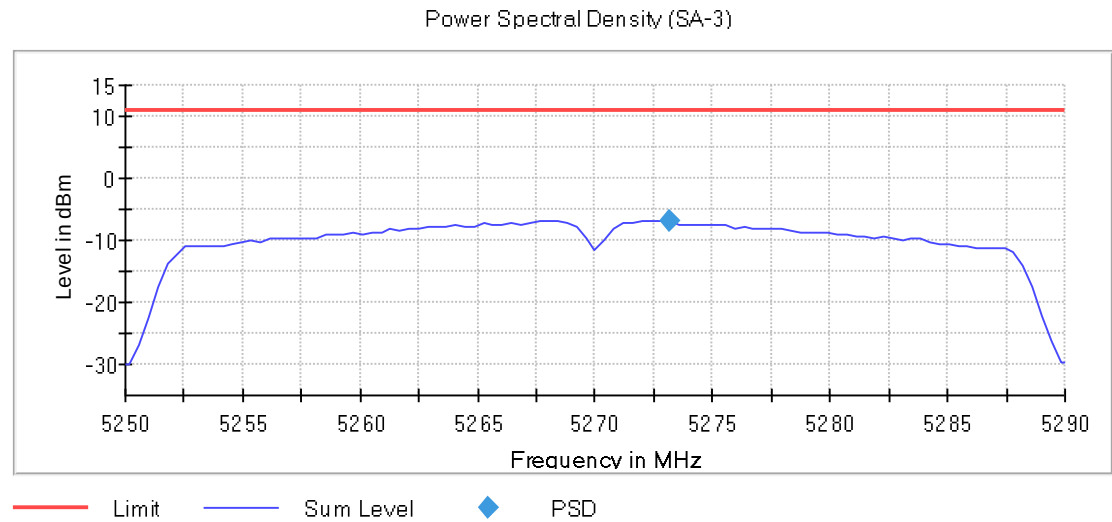
Images:





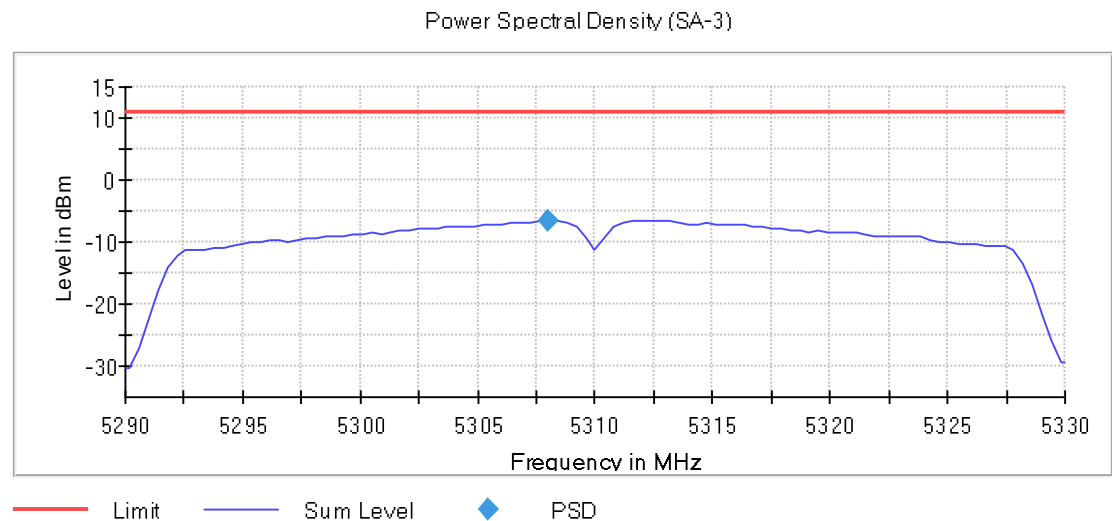
Frequency MHz = 5270.00000, Modulation = 802.11n HT40 (OFDM MCS0), Number of Transmission Chains = 1

Images:



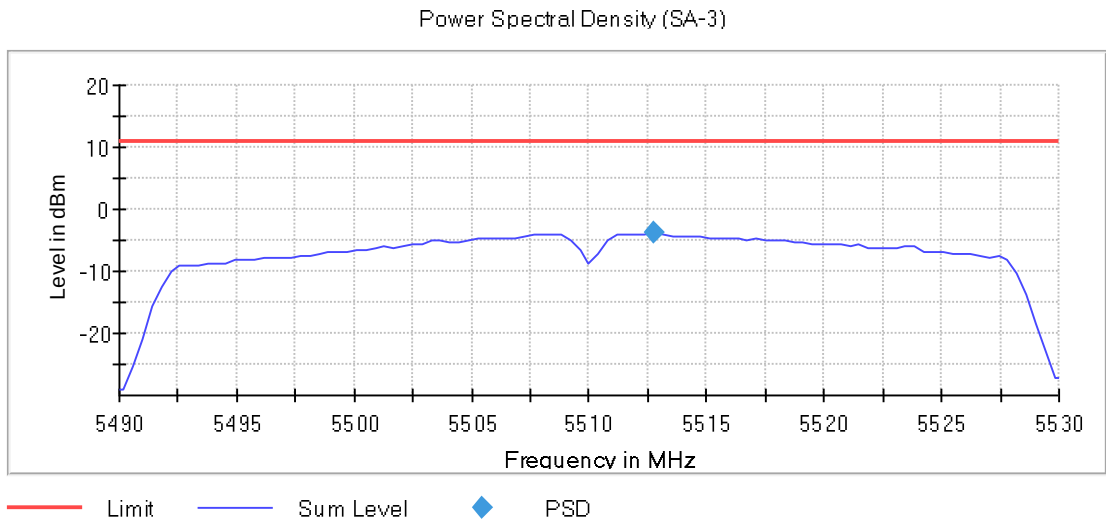
Frequency MHz = 5310.00000, Modulation = 802.11n HT40 (OFDM MCS0), Number of Transmission Chains = 1

Images:



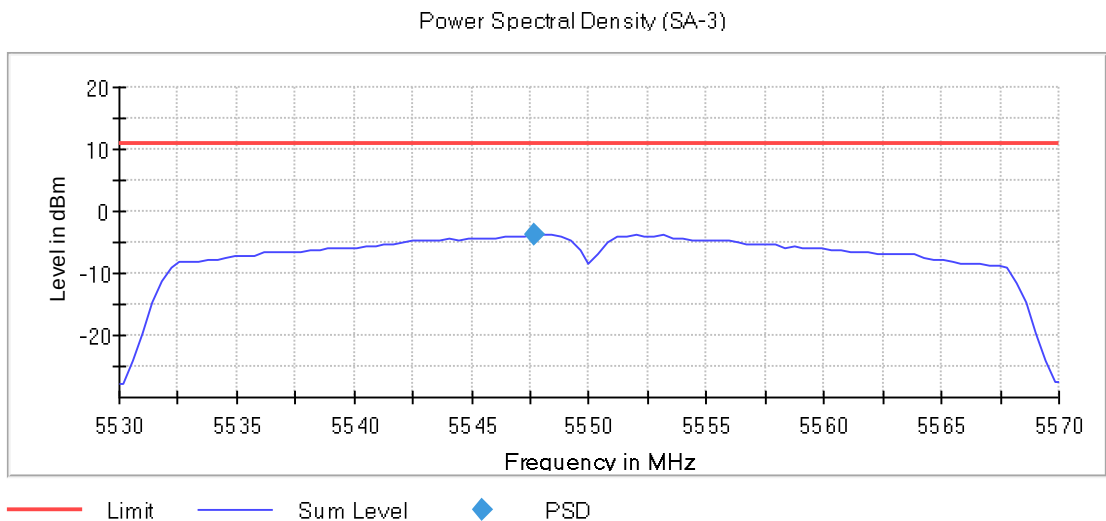
Frequency MHz = 5510.00000, Modulation = 802.11n HT40 (OFDM MCS0), Number of Transmission Chains = 1

Images:



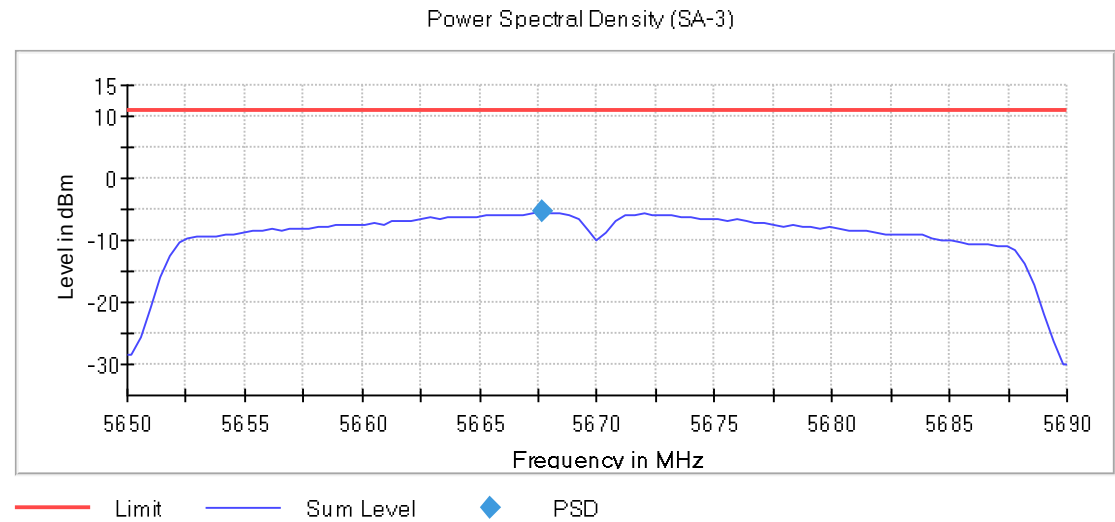
Frequency MHz = 5550.00000, Modulation = 802.11n HT40 (OFDM MCS0), Number of Transmission Chains = 1

Images:



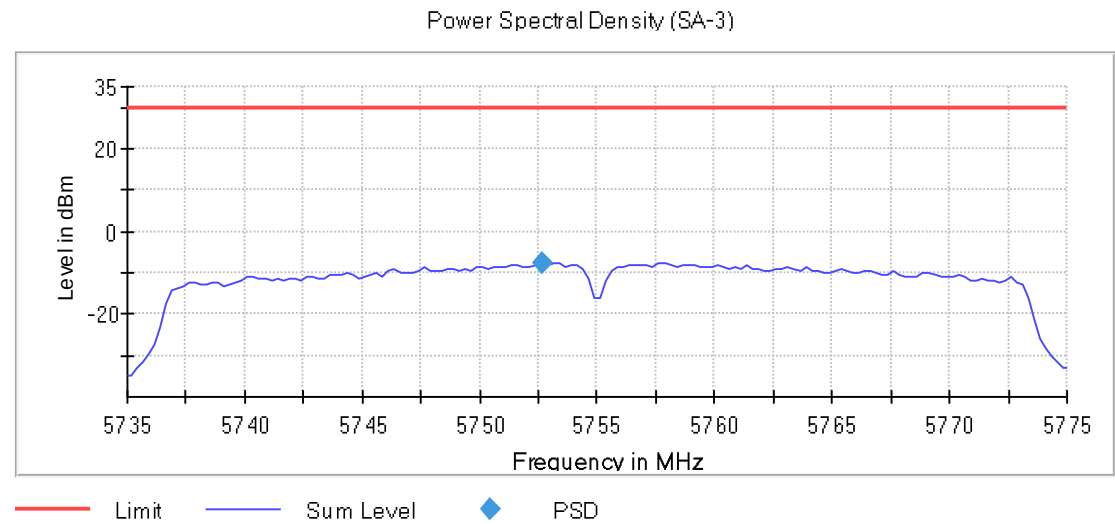
Frequency MHz = 5670.00000, Modulation = 802.11n HT40 (OFDM MCS0), Number of Transmission Chains = 1

Images:



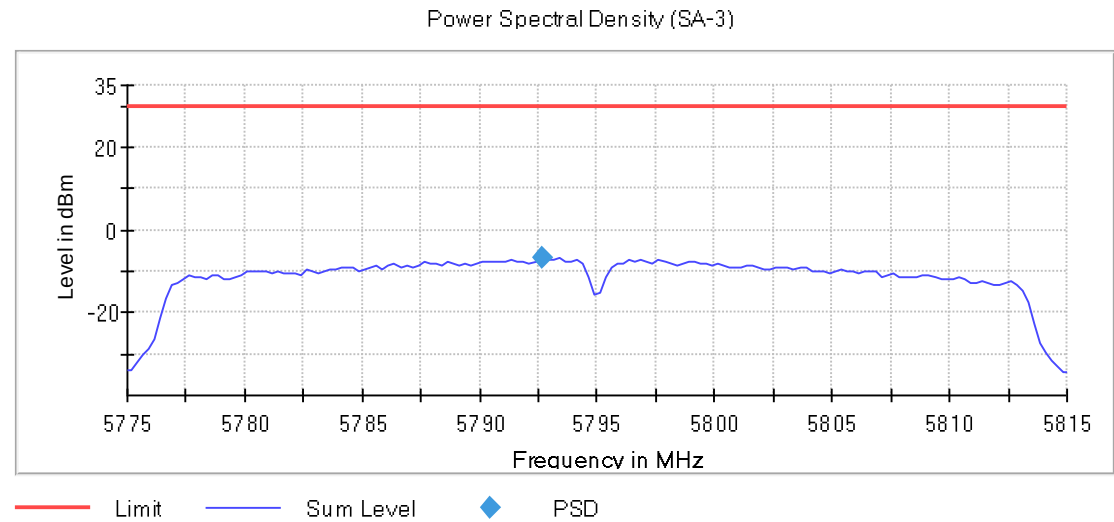
Frequency MHz = 5755.00000, Modulation = 802.11n HT40 (OFDM MCS0), Number of Transmission Chains = 1

Images:



Frequency MHz = 5795.00000, Modulation = 802.11n HT40 (OFDM MCS0), Number of Transmission Chains = 1

Images:



Tables:  
Spectrum Analyzer Parameters

| Setting               | Instrument Value | Target Value |
|-----------------------|------------------|--------------|
| Start Frequency       | 5.21000 GHz      | 5.21000 GHz  |
| Stop Frequency        | 5.25000 GHz      | 5.25000 GHz  |
| Span                  | 40.000 MHz       | 40.000 MHz   |
| RBW                   | 1.000 MHz        | <= 1.000 MHz |
| VBW                   | 3.000 MHz        | >= 3.000 MHz |
| SweepPoints           | 101              | ~ 80         |
| SweepTime             | 2.020 ms         | 2.020 ms     |
| Reference Level       | 0.000 dBm        | 0.000 dBm    |
| Attenuation           | 20.000 dB        | AUTO         |
| Detector              | RMS              | RMS          |
| SweepCount            | 29703            | 29703        |
| Filter                | 3 dB             | 3 dB         |
| Trace Mode            | Max Hold         | Max Hold     |
| SweepType             | Sweep            | Sweep        |
| Preamp                | off              | off          |
| Stablemode            | Trace            | Trace        |
| Stablevalue           | 0.50 dB          | 0.50 dB      |
| Run                   | 2 / max. 15      | max. 15      |
| Stable                | 1 / 1            | 1            |
| Max Stable Difference | 0.40 dB          | 0.50 dB      |

FCC 2.1049 / RSS-Gen 6.7 99% Occupied Bandwidth

Limits

No Limit has been set to this test case

Modulation: 802.11a (OFDM 6 Mbit/s)

Results

| Freq (MHz) | Occ Ch BW (MHz) |
|------------|-----------------|
| 5180.00000 | 18.500          |
| 5200.00000 | 19.000          |
| 5240.00000 | 16.800          |
| 5260.00000 | 23.800          |
| 5280.00000 | 24.100          |
| 5320.00000 | 21.200          |
| 5500.00000 | 16.900          |
| 5580.00000 | 20.800          |
| 5700.00000 | 18.300          |
| 5745.00000 | 16.500          |
| 5785.00000 | 16.400          |
| 5825.00000 | 16.400          |

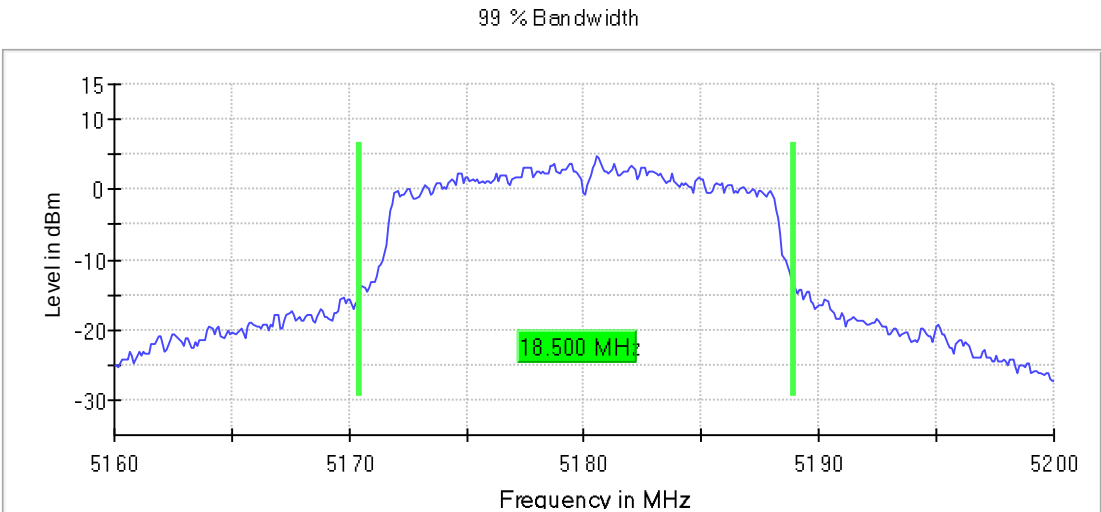
Verdict

Pass

Attachments

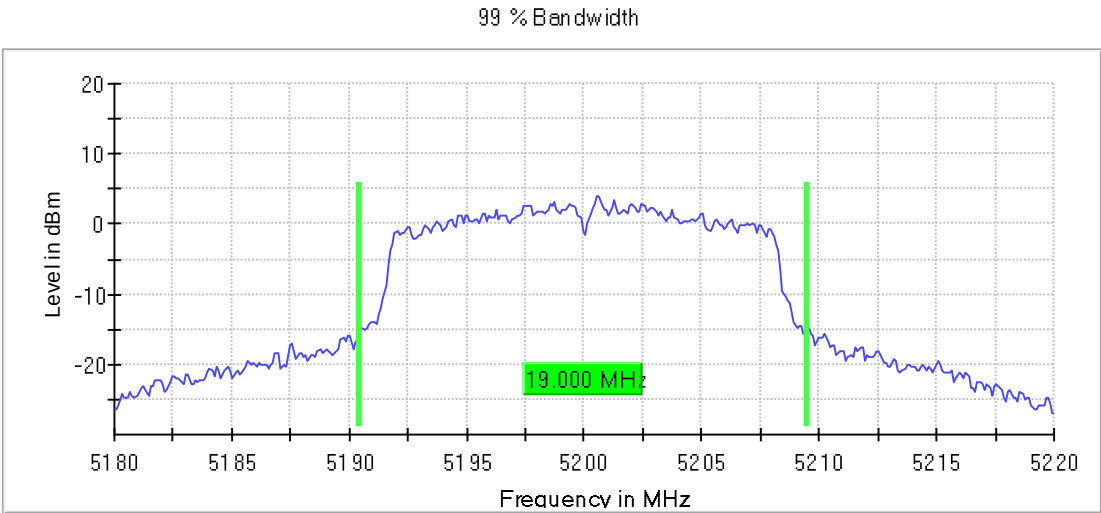
Frequency MHz = 5180.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Number of Transmission Chains = 1

Images:



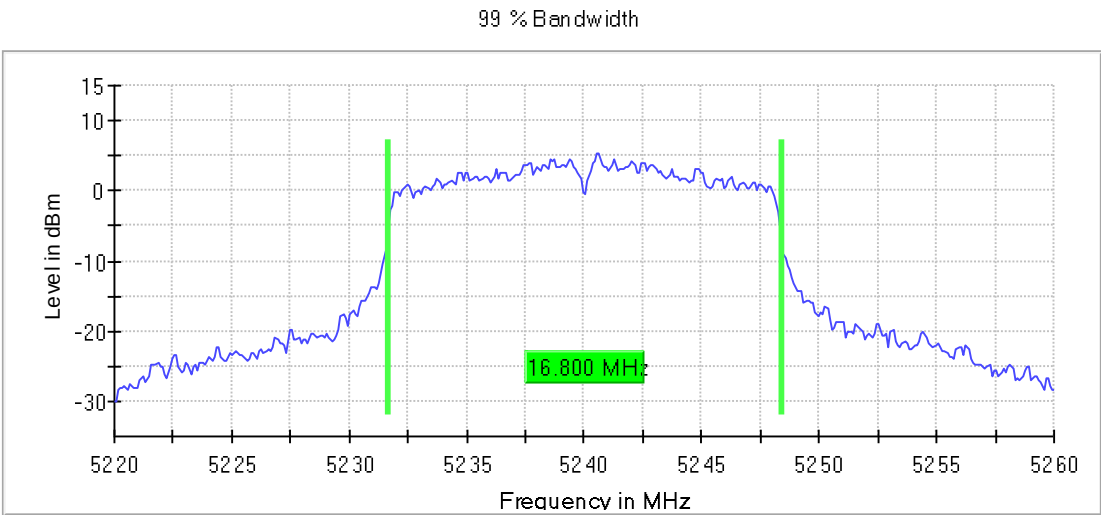
Frequency MHz = 5200.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Number of Transmission Chains = 1

Images:



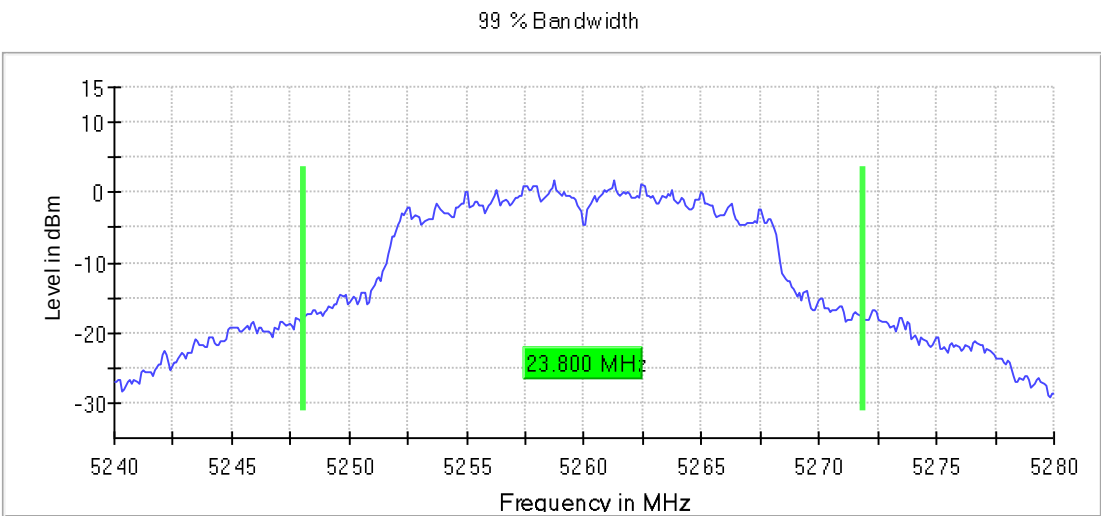
Frequency MHz = 5240.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Number of Transmission Chains = 1

Images:



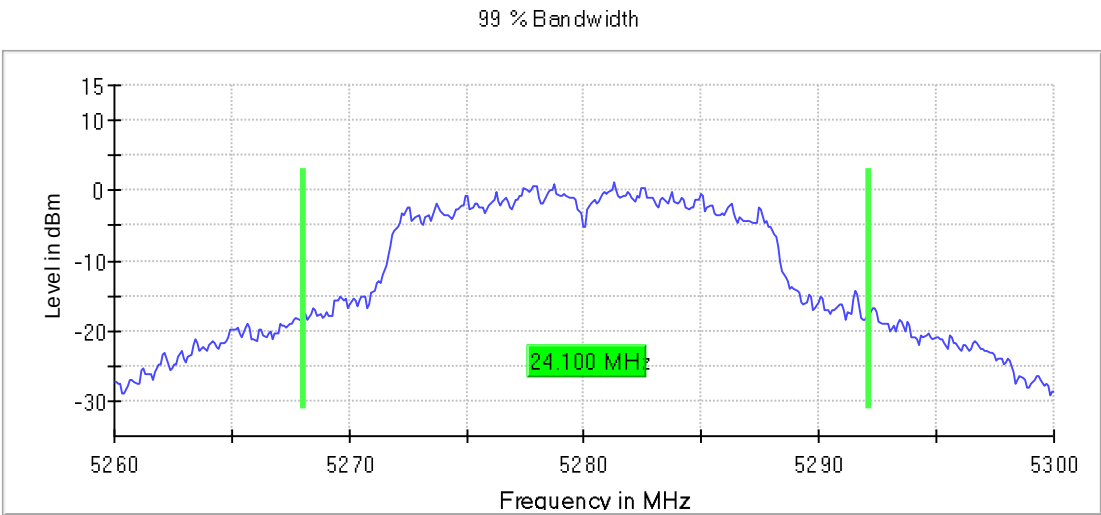
Frequency MHz = 5260.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Number of Transmission Chains = 1

Images:



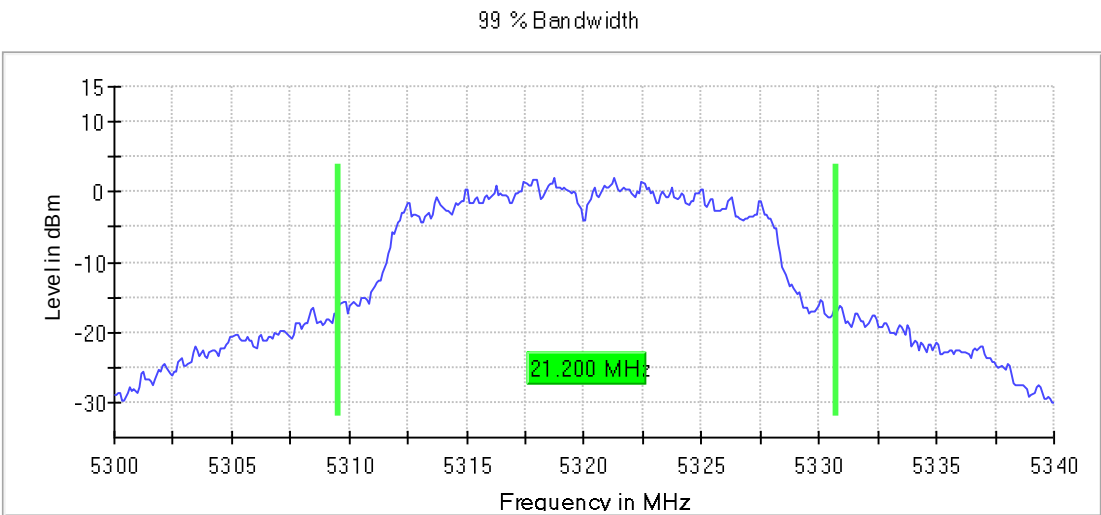
Frequency MHz = 5280.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Number of Transmission Chains = 1

Images:



Frequency MHz = 5320.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Number of Transmission Chains = 1

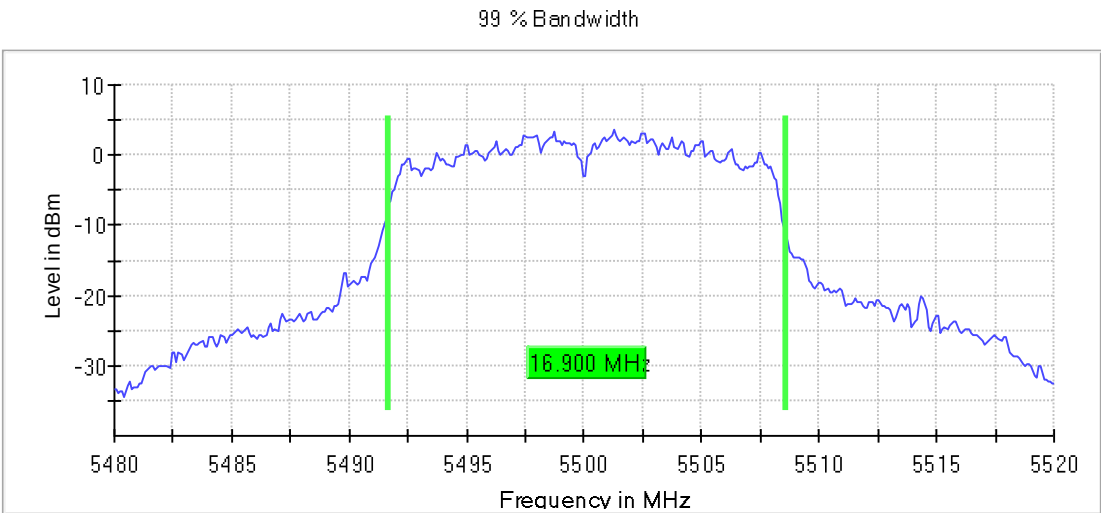
Images:





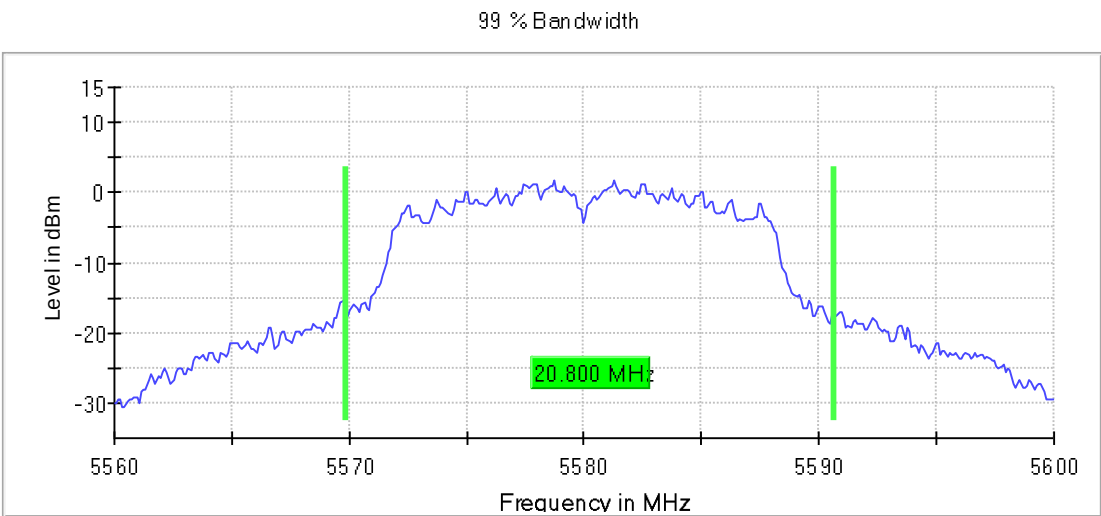
Frequency MHz = 5500.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Number of Transmission Chains = 1

Images:



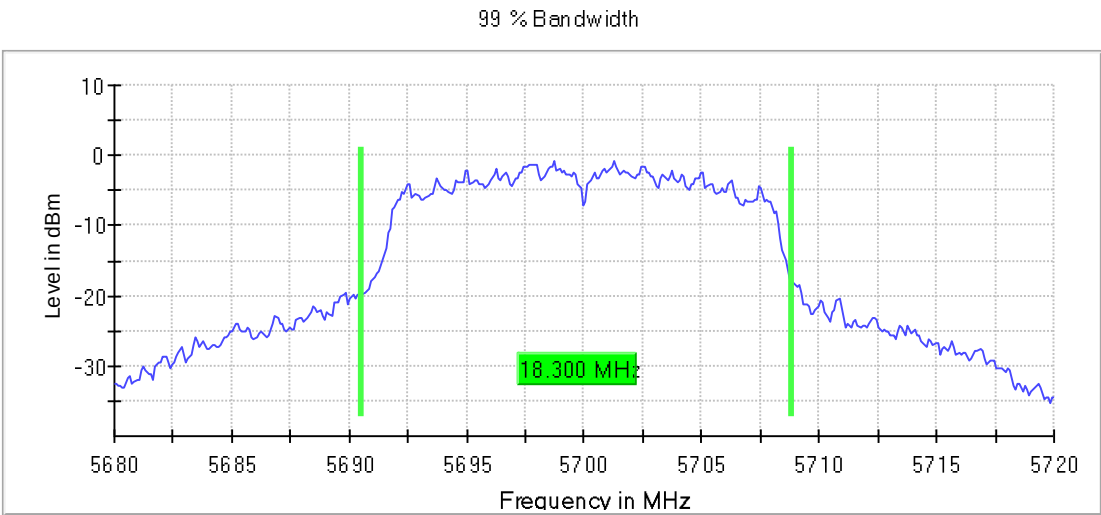
Frequency MHz = 5580.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Number of Transmission Chains = 1

Images:



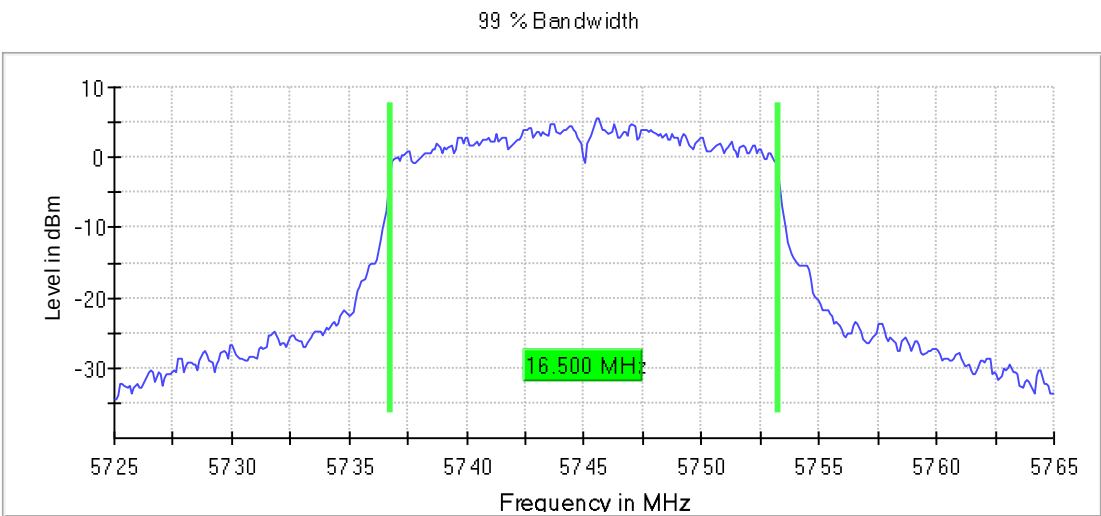
Frequency MHz = 5700.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Number of Transmission Chains = 1

Images:



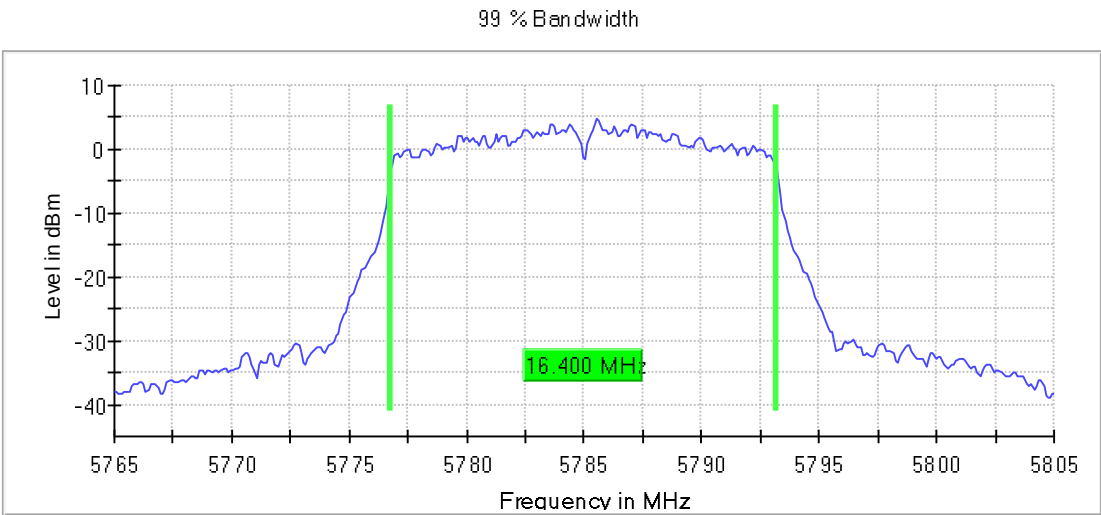
Frequency MHz = 5745.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Number of Transmission Chains = 1

Images:



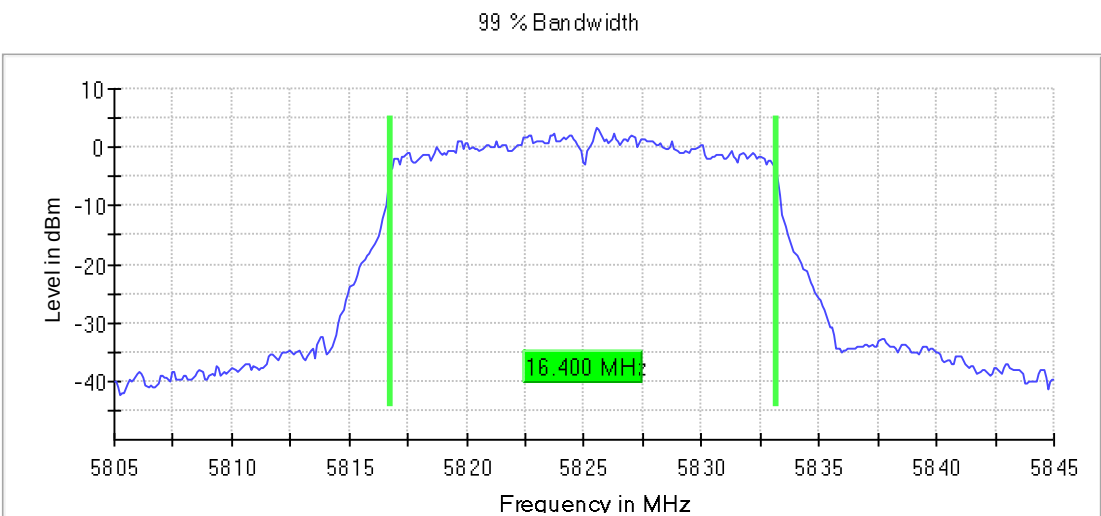
Frequency MHz = 5785.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Number of Transmission Chains = 1

Images:



Frequency MHz = 5825.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Number of Transmission Chains = 1

Images:



**Tables:**  
Spectrum Analyzer Parameters

| Setting               | Instrument Value | Target Value   |
|-----------------------|------------------|----------------|
| Start Frequency       | 5.22000 GHz      | 5.22000 GHz    |
| Stop Frequency        | 5.26000 GHz      | 5.26000 GHz    |
| Span                  | 40.000 MHz       | 40.000 MHz     |
| RBW                   | 200.000 kHz      | >= 200.000 kHz |
| VBW                   | 1.000 MHz        | >= 600.000 kHz |
| SweepPoints           | 400              | ~ 400          |
| SweepTime             | 28.477 $\mu$ s   | AUTO           |
| Reference Level       | 10.000 dBm       | 10.000 dBm     |
| Attenuation           | 30.000 dB        | AUTO           |
| Detector              | MaxPeak          | MaxPeak        |
| SweepCount            | 200              | 200            |
| Filter                | 3 dB             | 3 dB           |
| Trace Mode            | Max Hold         | Max Hold       |
| SweepType             | FFT              | AUTO           |
| Preamplifier          | off              | off            |
| Stablemode            | Trace            | Trace          |
| Stablevalue           | 0.30 dB          | 0.30 dB        |
| Run                   | 42 / max. 150    | max. 150       |
| Stable                | 5 / 5            | 5              |
| Max Stable Difference | 0.07 dB          | 0.30 dB        |

Modulation: 802.11n HT20 (OFDM MCS0)  
**Results**

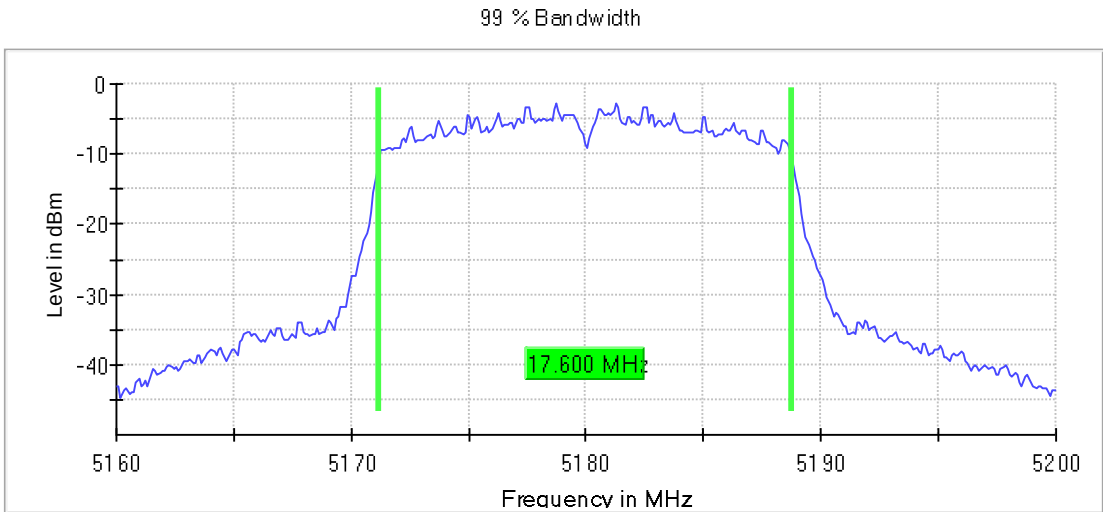
| Freq (MHz) | Occ Ch BW (MHz) |
|------------|-----------------|
| 5180.00000 | 17.600          |
| 5200.00000 | 17.600          |
| 5240.00000 | 17.600          |
| 5260.00000 | 17.700          |
| 5280.00000 | 17.700          |
| 5320.00000 | 17.600          |
| 5500.00000 | 17.500          |
| 5580.00000 | 17.600          |
| 5700.00000 | 17.600          |
| 5745.00000 | 17.600          |
| 5785.00000 | 17.500          |
| 5825.00000 | 17.600          |

**Verdict**  
  
Pass

Attachments

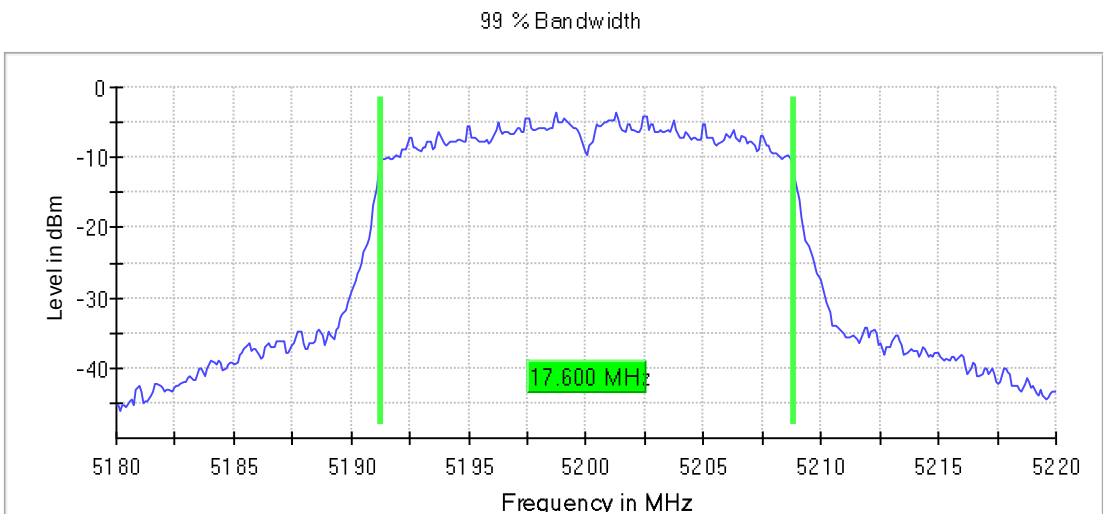
Frequency MHz = 5180.00000, Modulation = 802.11n HT20 (OFDM MCS0), Number of Transmission Chains = 1

Images:



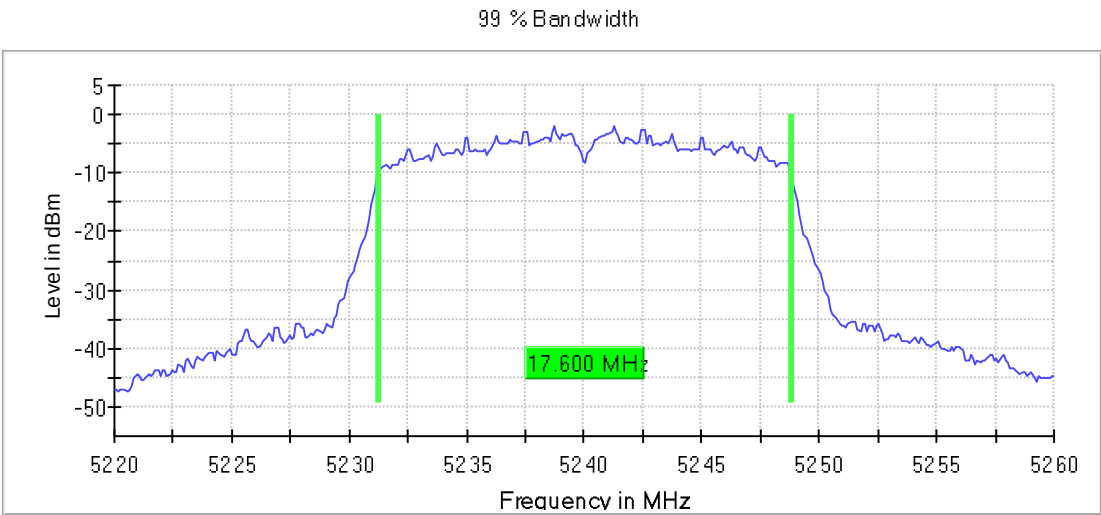
Frequency MHz = 5200.00000, Modulation = 802.11n HT20 (OFDM MCS0), Number of Transmission Chains = 1

Images:



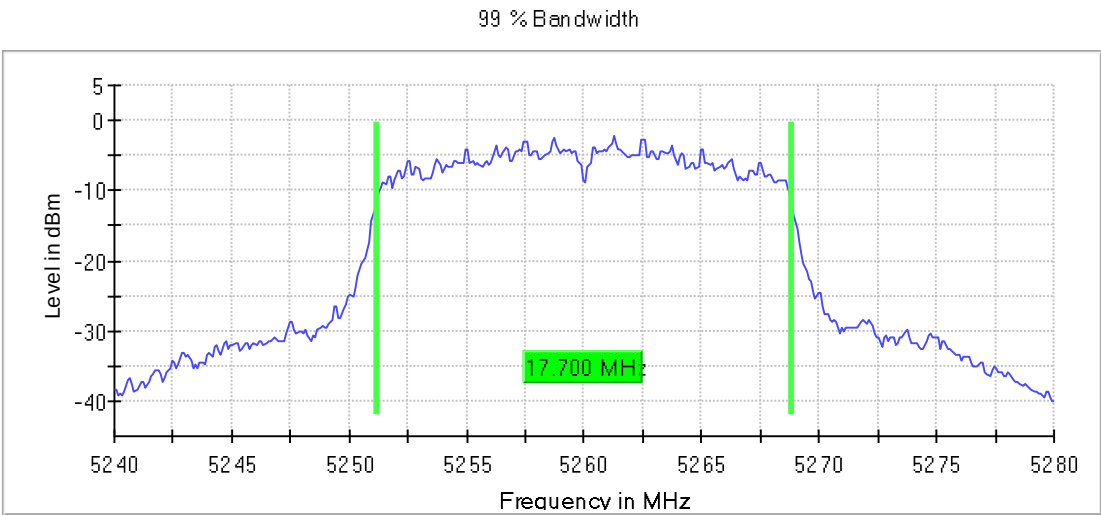
Frequency MHz = 5240.00000, Modulation = 802.11n HT20 (OFDM MCS0), Number of Transmission Chains = 1

Images:



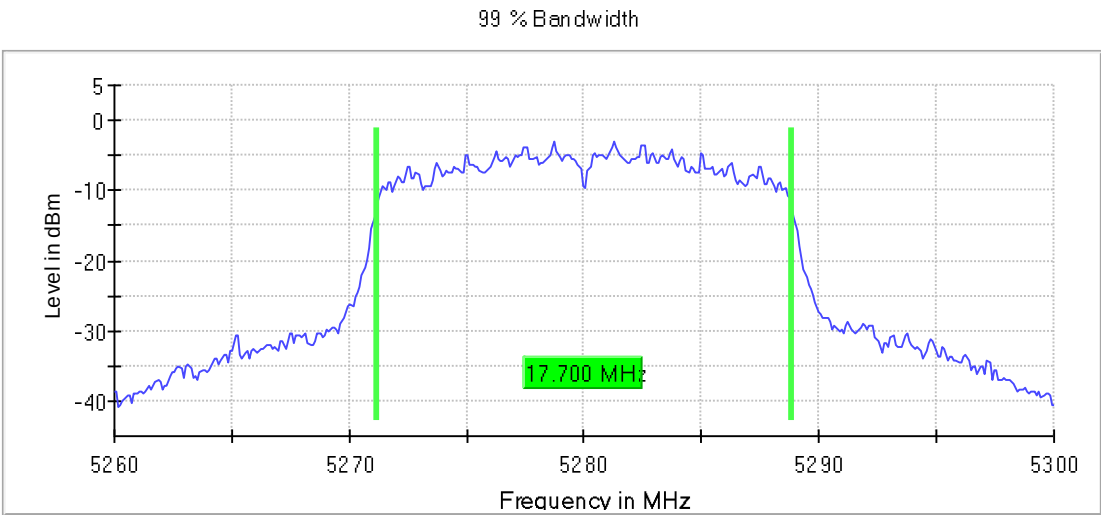
Frequency MHz = 5260.00000, Modulation = 802.11n HT20 (OFDM MCS0), Number of Transmission Chains = 1

Images:



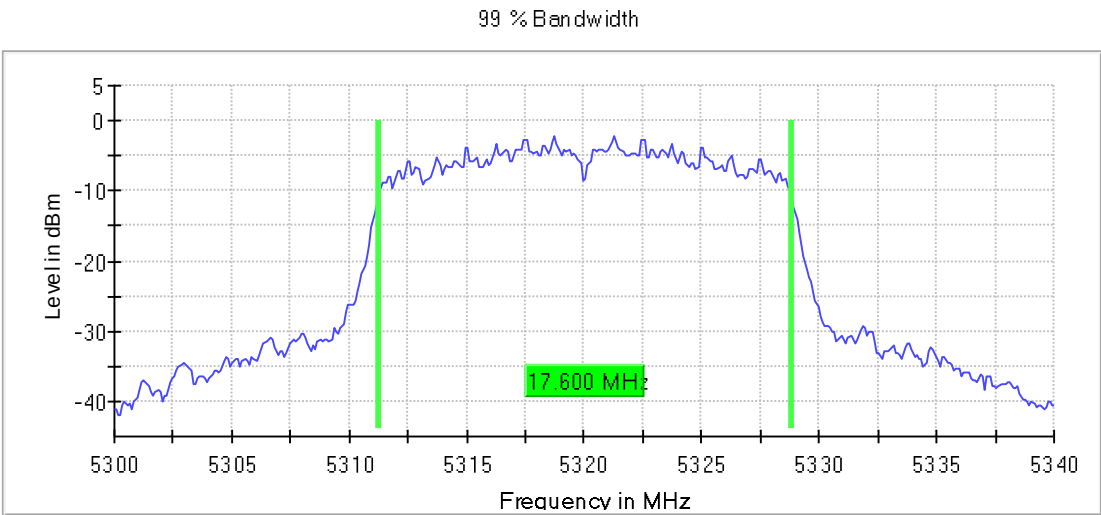
Frequency MHz = 5280.00000, Modulation = 802.11n HT20 (OFDM MCS0), Number of Transmission Chains = 1

Images:



Frequency MHz = 5320.00000, Modulation = 802.11n HT20 (OFDM MCS0), Number of Transmission Chains = 1

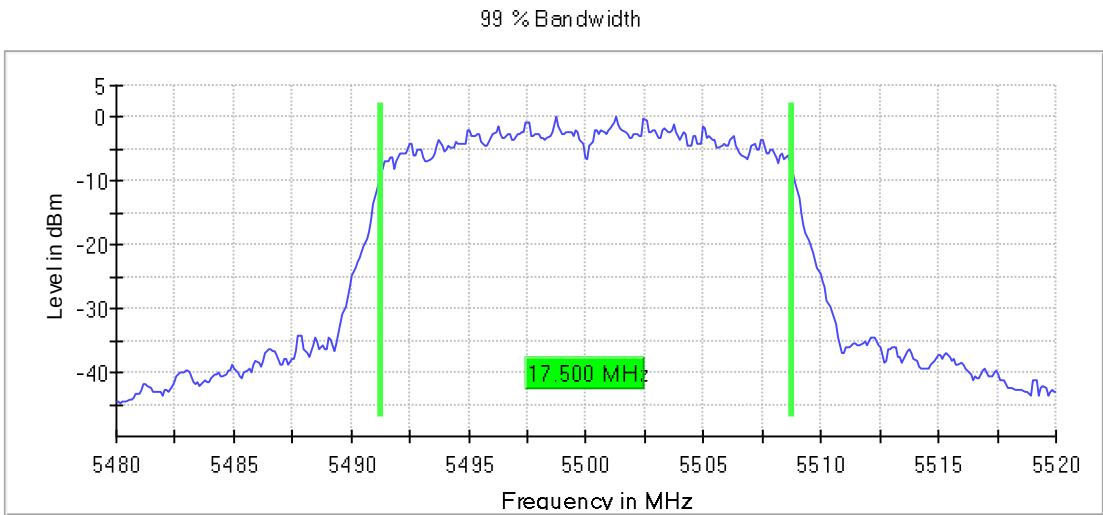
Images:





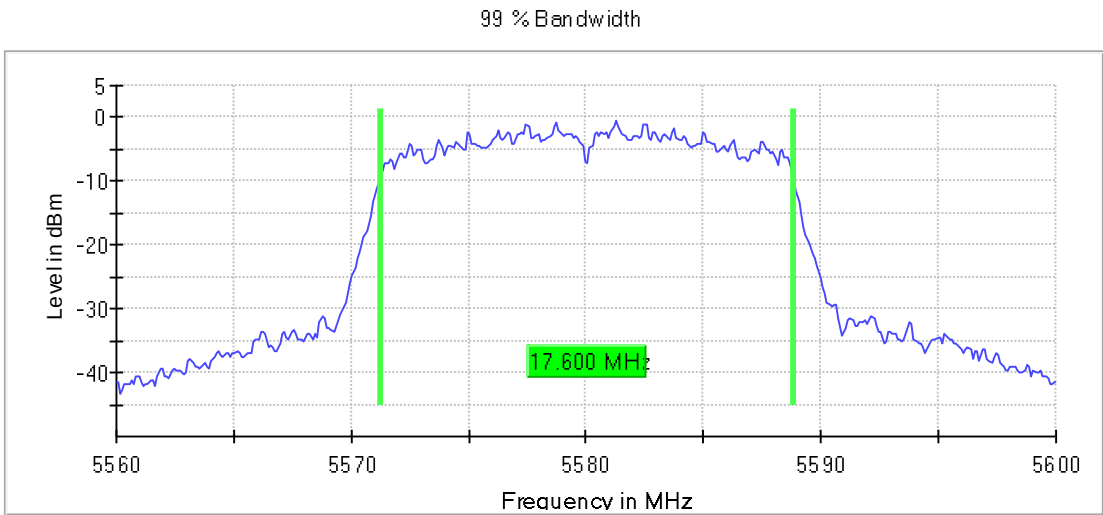
Frequency MHz = 5500.00000, Modulation = 802.11n HT20 (OFDM MCS0), Number of Transmission Chains = 1

Images:



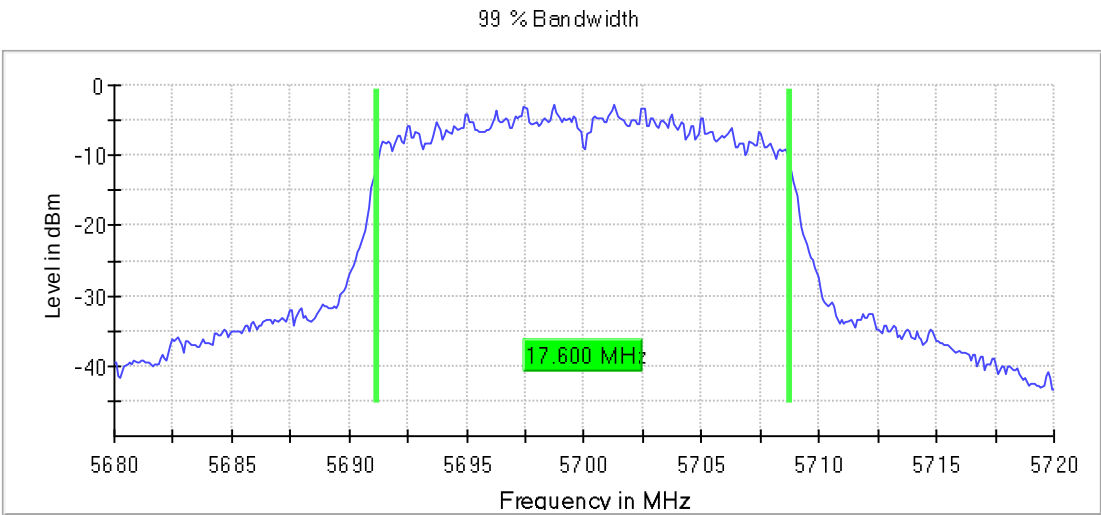
Frequency MHz = 5580.00000, Modulation = 802.11n HT20 (OFDM MCS0), Number of Transmission Chains = 1

Images:



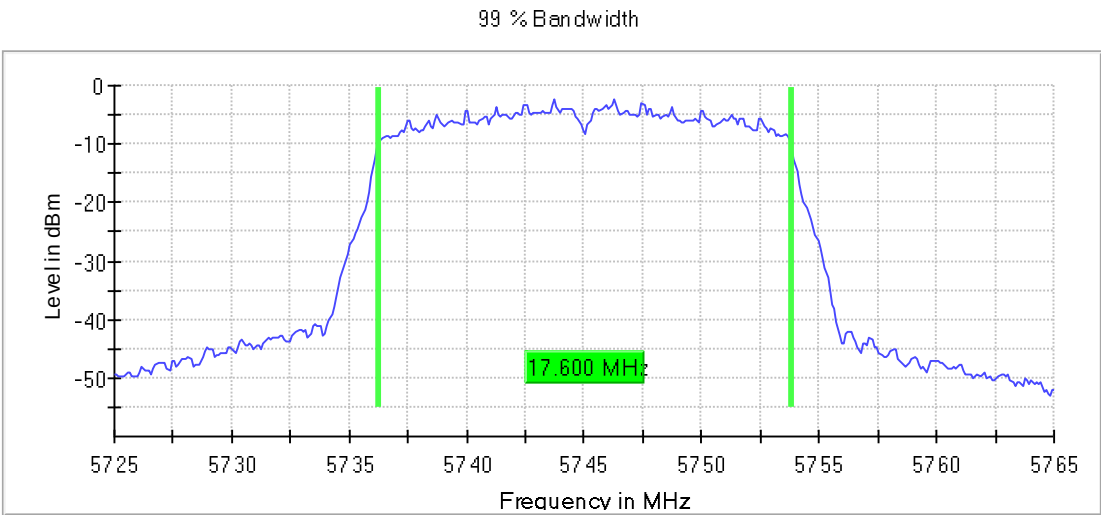
Frequency MHz = 5700.00000, Modulation = 802.11n HT20 (OFDM MCS0), Number of Transmission Chains = 1

Images:



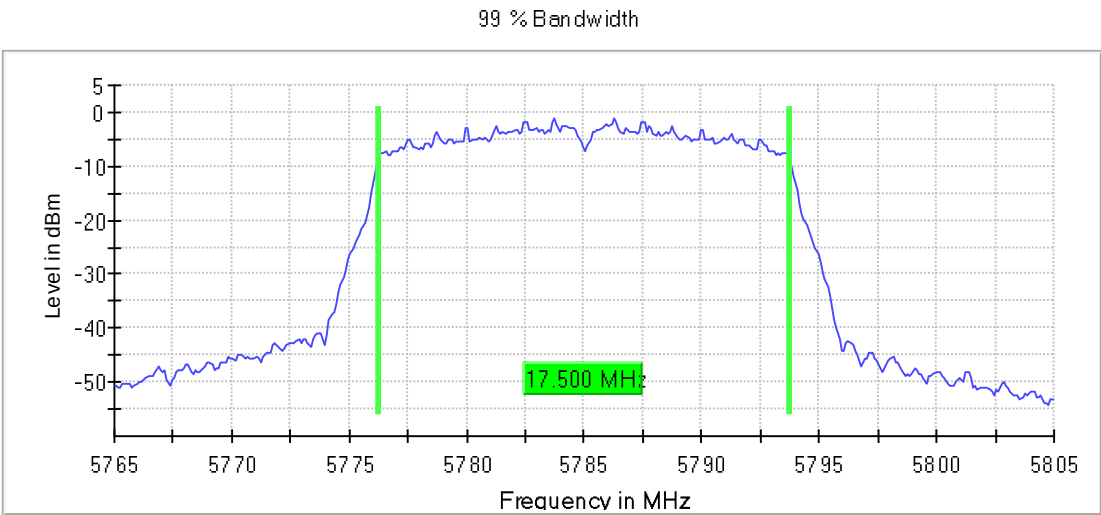
Frequency MHz = 5745.00000, Modulation = 802.11n HT20 (OFDM MCS0), Number of Transmission Chains = 1

Images:



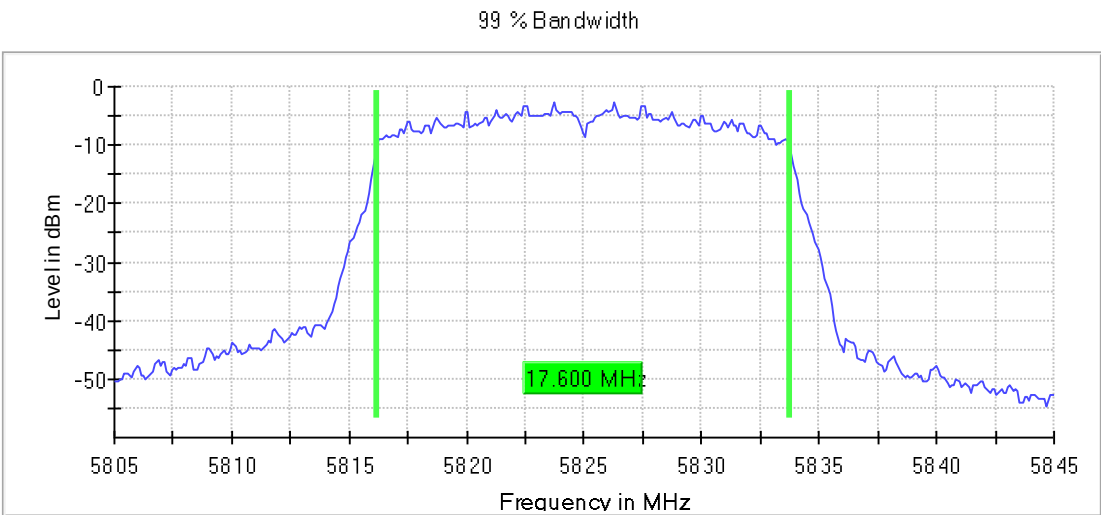
Frequency MHz = 5785.00000, Modulation = 802.11n HT20 (OFDM MCS0), Number of Transmission Chains = 1

Images:



Frequency MHz = 5825.00000, Modulation = 802.11n HT20 (OFDM MCS0), Number of Transmission Chains = 1

Images:



**Tables:**  
Spectrum Analyzer Parameters

| Setting               | Instrument Value | Target Value   |
|-----------------------|------------------|----------------|
| Start Frequency       | 5.22000 GHz      | 5.22000 GHz    |
| Stop Frequency        | 5.26000 GHz      | 5.26000 GHz    |
| Span                  | 40.000 MHz       | 40.000 MHz     |
| RBW                   | 200.000 kHz      | >= 200.000 kHz |
| VBW                   | 1.000 MHz        | >= 600.000 kHz |
| SweepPoints           | 400              | ~ 400          |
| SweepTime             | 28.477 $\mu$ s   | AUTO           |
| Reference Level       | 0.000 dBm        | 0.000 dBm      |
| Attenuation           | 20.000 dB        | AUTO           |
| Detector              | MaxPeak          | MaxPeak        |
| SweepCount            | 200              | 200            |
| Filter                | 3 dB             | 3 dB           |
| Trace Mode            | Max Hold         | Max Hold       |
| SweepType             | FFT              | AUTO           |
| Preamplifier          | off              | off            |
| Stablemode            | Trace            | Trace          |
| Stablevalue           | 0.30 dB          | 0.30 dB        |
| Run                   | 24 / max. 150    | max. 150       |
| Stable                | 5 / 5            | 5              |
| Max Stable Difference | 0.26 dB          | 0.30 dB        |

Modulation: 802.11n HT40 (OFDM MCS0)  
**Results**

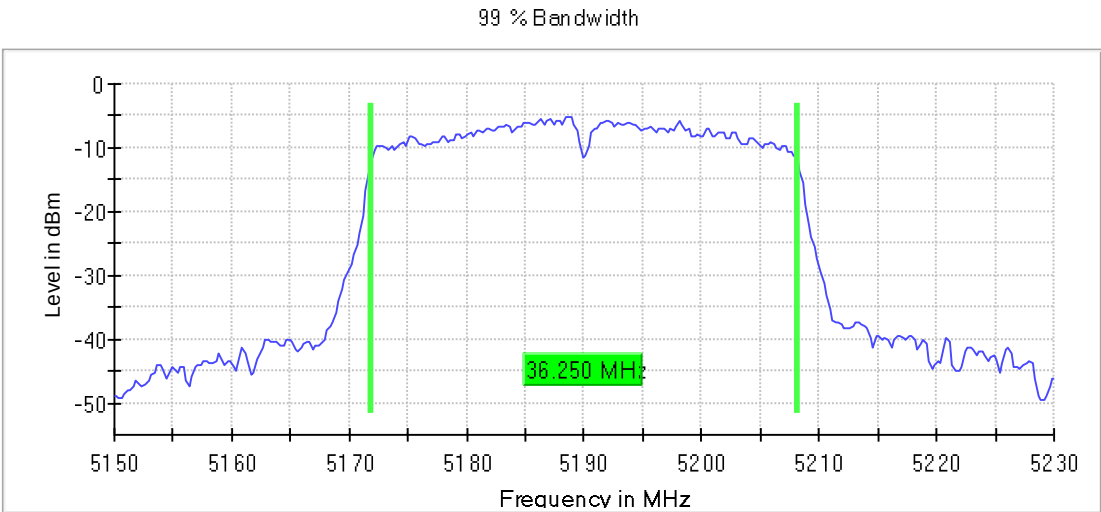
| Freq (MHz) | Occ Ch BW (MHz) |
|------------|-----------------|
| 5190.00000 | 36.250          |
| 5230.00000 | 36.250          |
| 5270.00000 | 36.500          |
| 5310.00000 | 36.500          |
| 5510.00000 | 36.250          |
| 5550.00000 | 36.250          |
| 5670.00000 | 36.250          |
| 5755.00000 | 36.250          |
| 5795.00000 | 36.250          |

**Verdict**  
  
Pass

Attachments

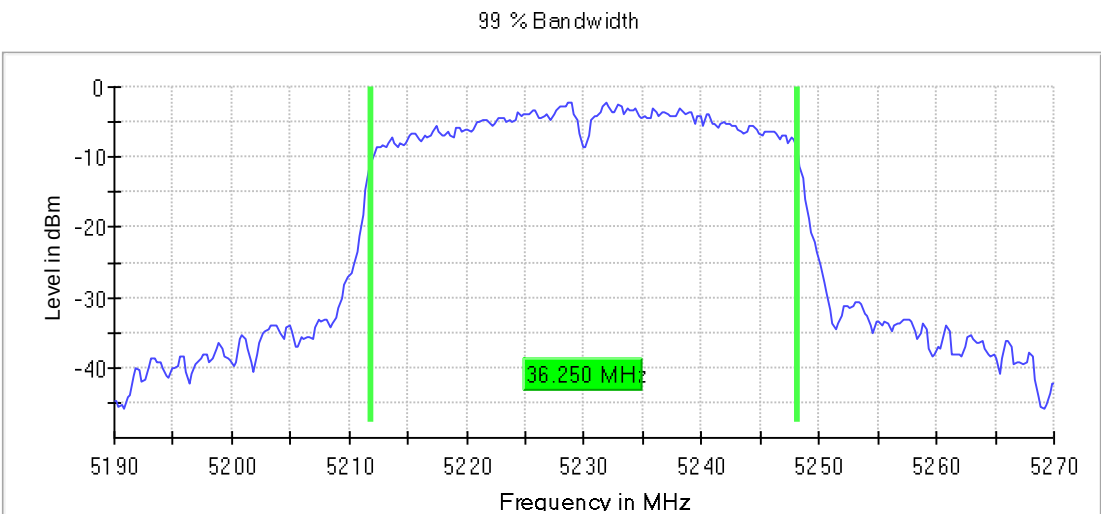
Frequency MHz = 5190.00000, Modulation = 802.11n HT40 (OFDM MCS0), Number of Transmission Chains = 1

Images:



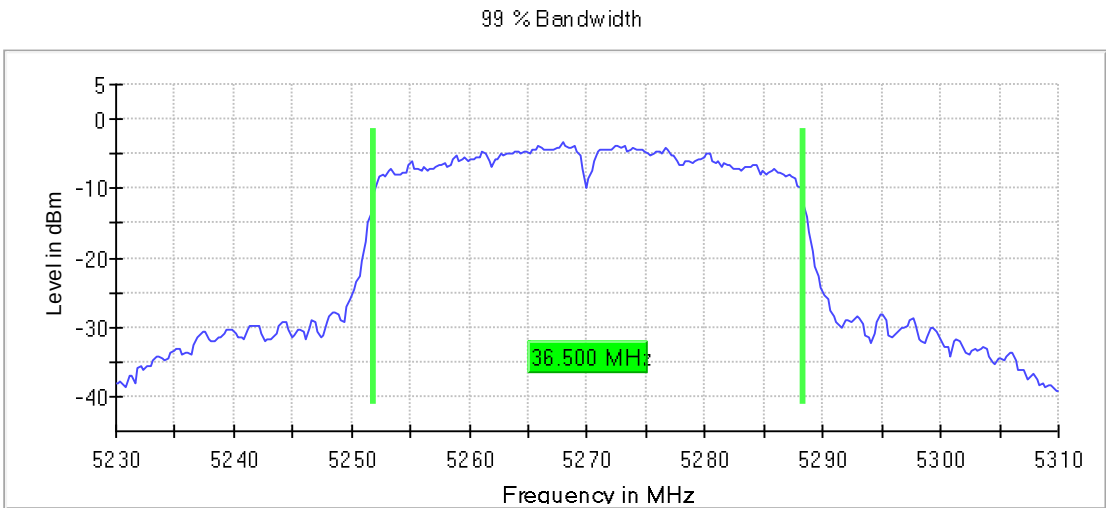
Frequency MHz = 5230.00000, Modulation = 802.11n HT40 (OFDM MCS0), Number of Transmission Chains = 1

Images:



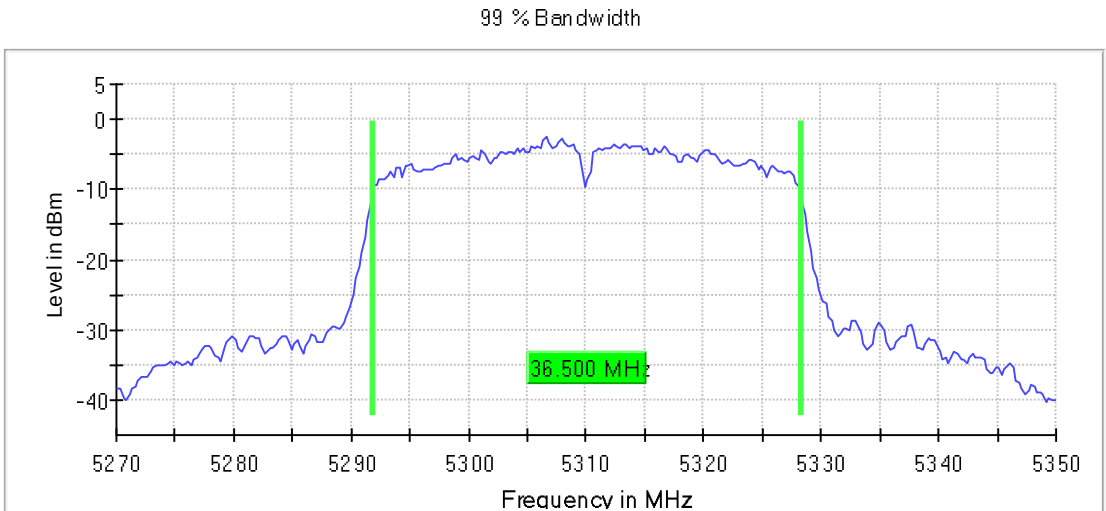
Frequency MHz = 5270.00000, Modulation = 802.11n HT40 (OFDM MCS0), Number of Transmission Chains = 1

Images:



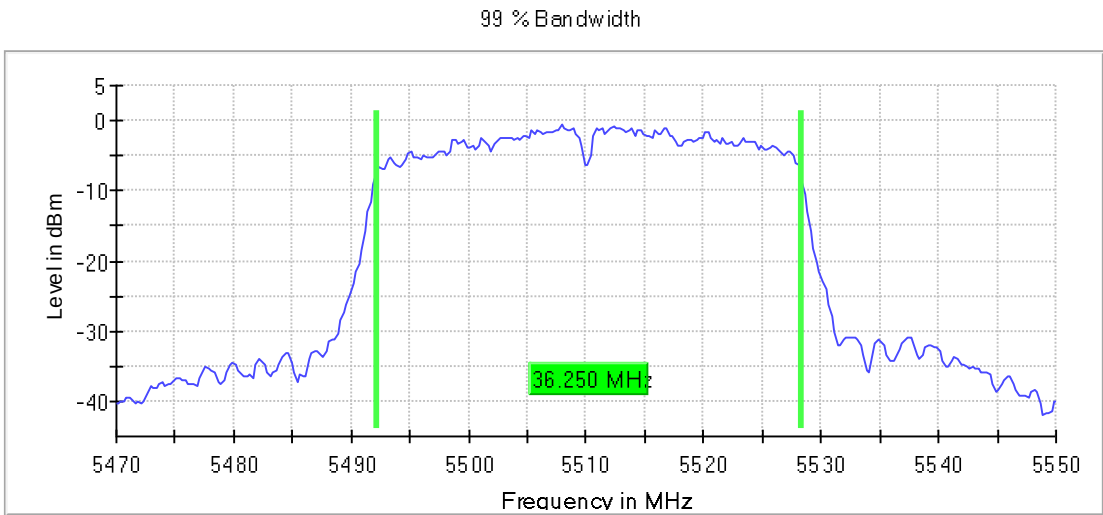
Frequency MHz = 5310.00000, Modulation = 802.11n HT40 (OFDM MCS0), Number of Transmission Chains = 1

Images:



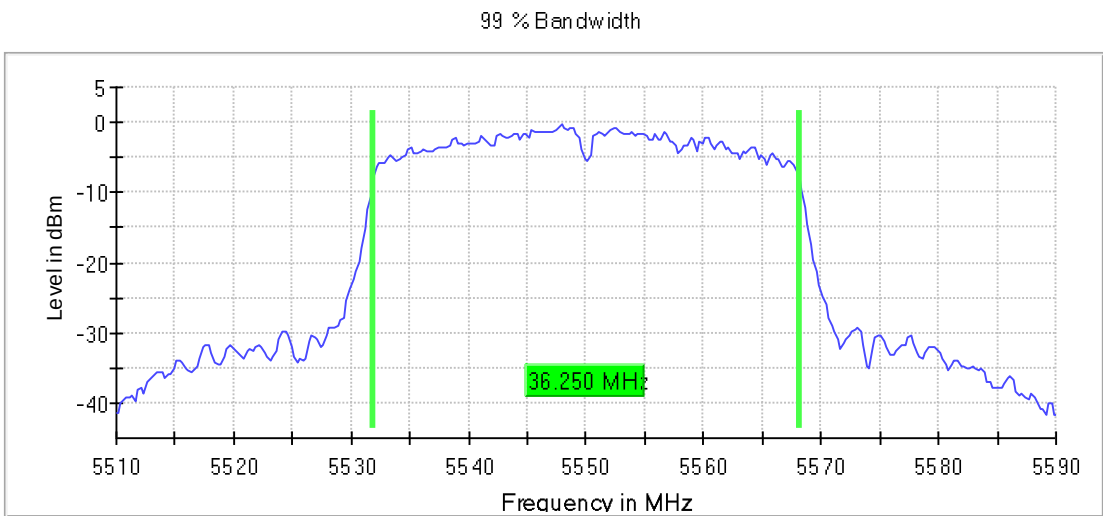
Frequency MHz = 5510.00000, Modulation = 802.11n HT40 (OFDM MCS0), Number of Transmission Chains = 1

Images:



Frequency MHz = 5550.00000, Modulation = 802.11n HT40 (OFDM MCS0), Number of Transmission Chains = 1

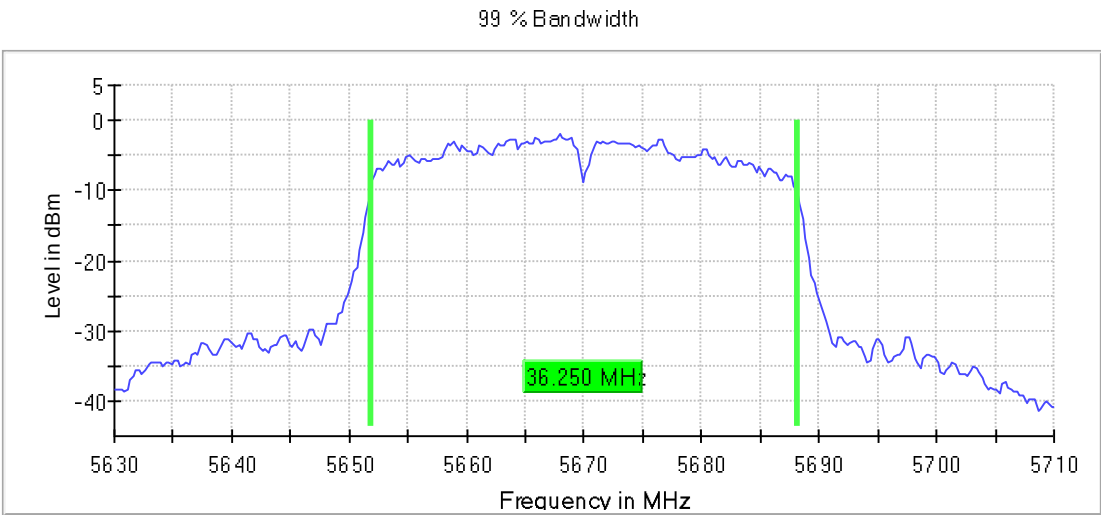
Images:





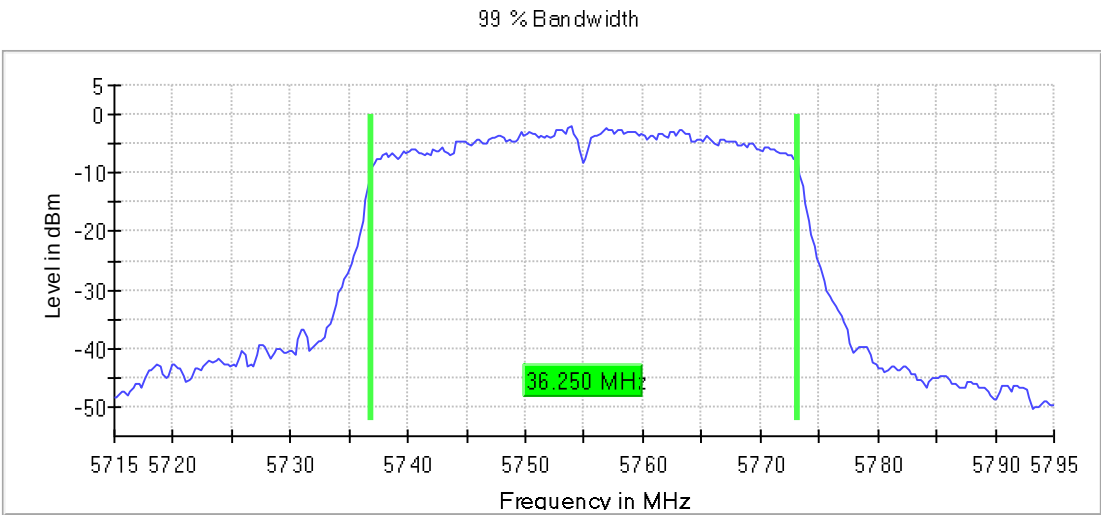
Frequency MHz = 5670.00000, Modulation = 802.11n HT40 (OFDM MCS0), Number of Transmission Chains = 1

Images:



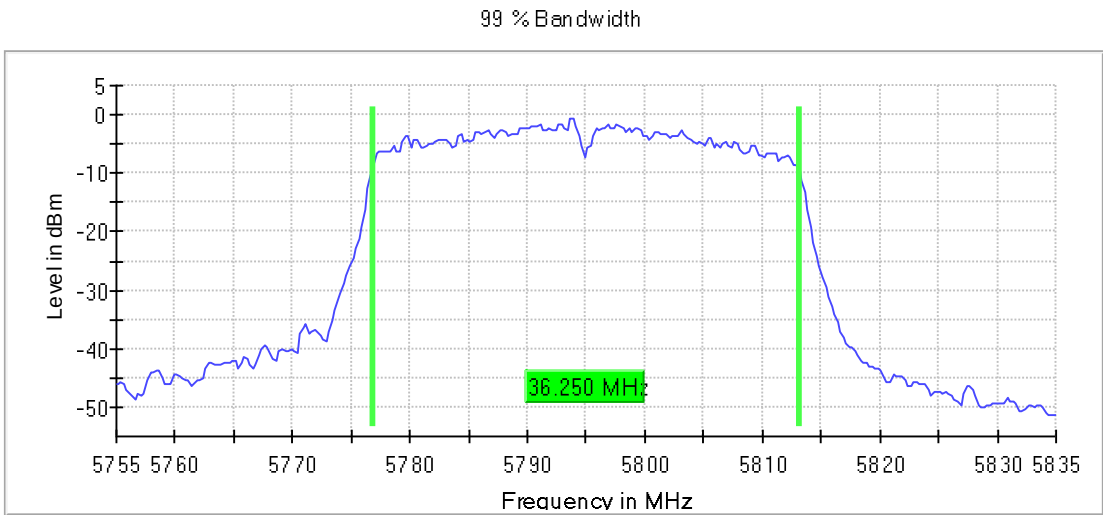
Frequency MHz = 5755.00000, Modulation = 802.11n HT40 (OFDM MCS0), Number of Transmission Chains = 1

Images:



Frequency MHz = 5795.00000, Modulation = 802.11n HT40 (OFDM MCS0), Number of Transmission Chains = 1

Images:



Tables:  
Spectrum Analyzer Parameters

| Setting               | Instrument Value | Target Value   |
|-----------------------|------------------|----------------|
| Start Frequency       | 5.19000 GHz      | 5.19000 GHz    |
| Stop Frequency        | 5.27000 GHz      | 5.27000 GHz    |
| Span                  | 80.000 MHz       | 80.000 MHz     |
| RBW                   | 500.000 kHz      | >= 400.000 kHz |
| VBW                   | 2.000 MHz        | >= 1.500 MHz   |
| SweepPoints           | 320              | ~ 320          |
| SweepTime             | 18.906 µs        | AUTO           |
| Reference Level       | 0.000 dBm        | 0.000 dBm      |
| Attenuation           | 20.000 dB        | AUTO           |
| Detector              | MaxPeak          | MaxPeak        |
| SweepCount            | 200              | 200            |
| Filter                | 3 dB             | 3 dB           |
| Trace Mode            | Max Hold         | Max Hold       |
| SweepType             | FFT              | AUTO           |
| Preamplifier          | off              | off            |
| Stablemode            | Trace            | Trace          |
| Stablevalue           | 0.30 dB          | 0.30 dB        |
| Run                   | 56 / max. 150    | max. 150       |
| Stable                | 5 / 5            | 5              |
| Max Stable Difference | 0.27 dB          | 0.30 dB        |

FCC 15.403 / RSS-Gen 6.7 26 dB Emission Bandwidth

Limits

No Limit has been set to this test case

Modulation: 802.11a (OFDM 6 Mbit/s)

Results

| Freq (MHz) | Emission Bandwidth (MHz) |
|------------|--------------------------|
| 5180.00000 | 33.100                   |
| 5200.00000 | 35.700                   |
| 5240.00000 | 27.000                   |
| 5260.00000 | 37.100                   |
| 5280.00000 | 36.500                   |
| 5320.00000 | 35.000                   |
| 5500.00000 | 26.400                   |
| 5580.00000 | 34.000                   |
| 5700.00000 | 31.100                   |
| 5745.00000 | 19.700                   |
| 5785.00000 | 19.500                   |
| 5825.00000 | 19.500                   |

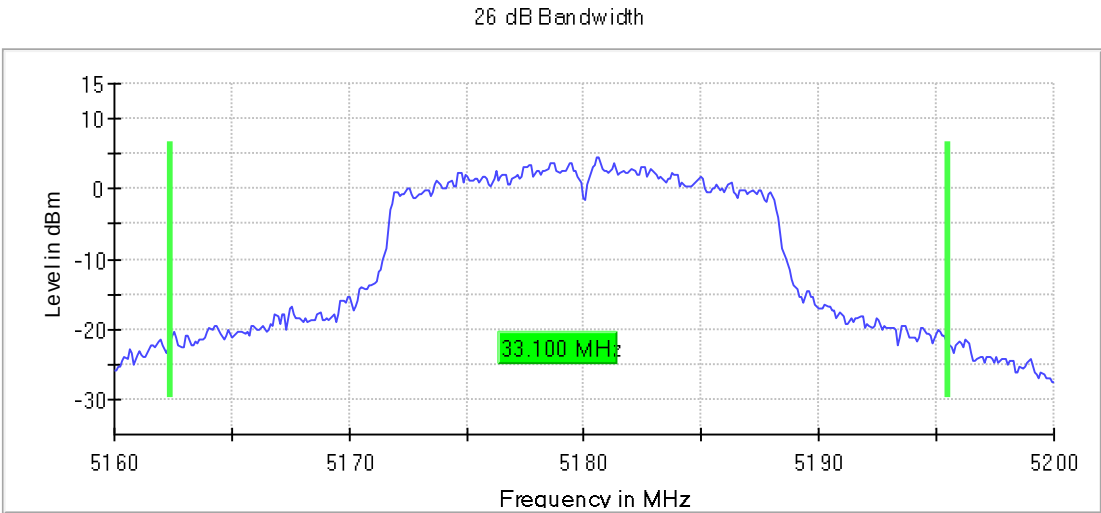
Verdict

Pass

Attachments

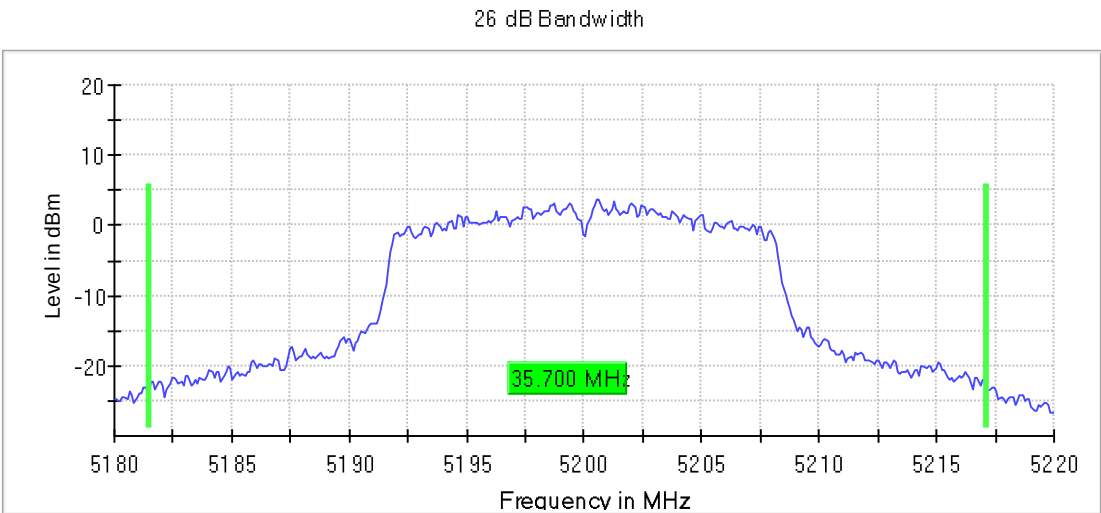
Frequency MHz = 5180.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Number of Transmission Chains = 1

Images:



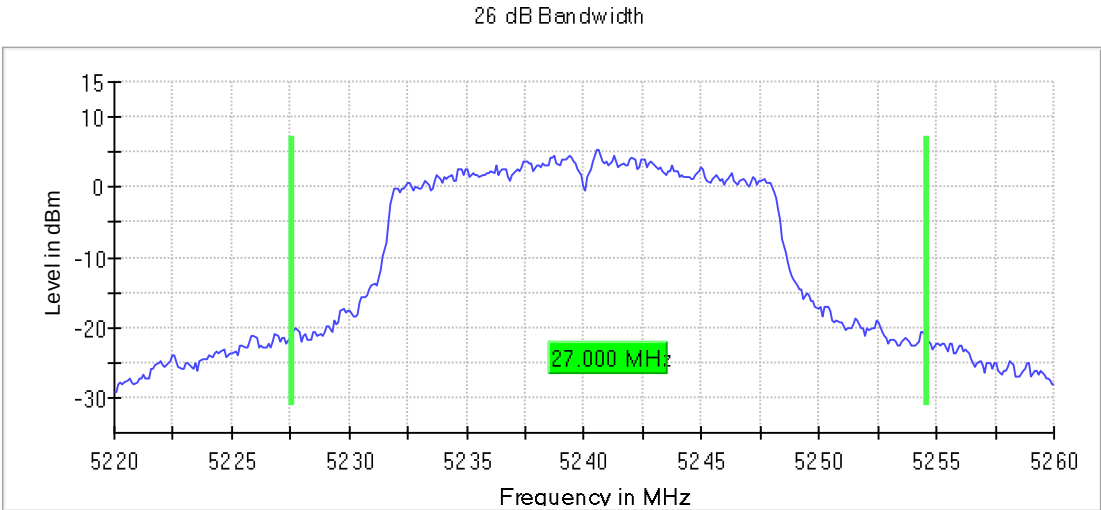
Frequency MHz = 5200.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Number of Transmission Chains = 1

Images:



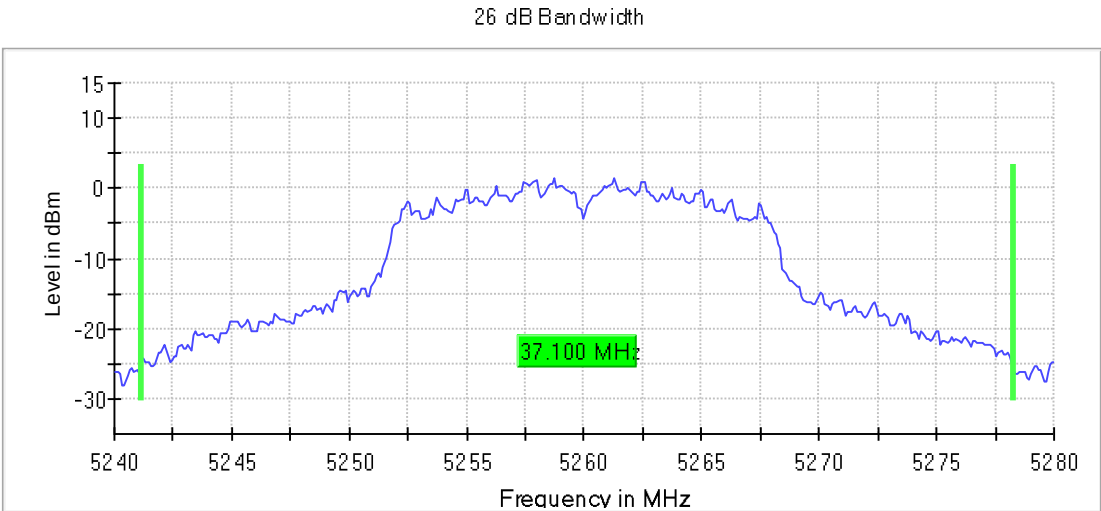
Frequency MHz = 5240.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Number of Transmission Chains = 1

Images:



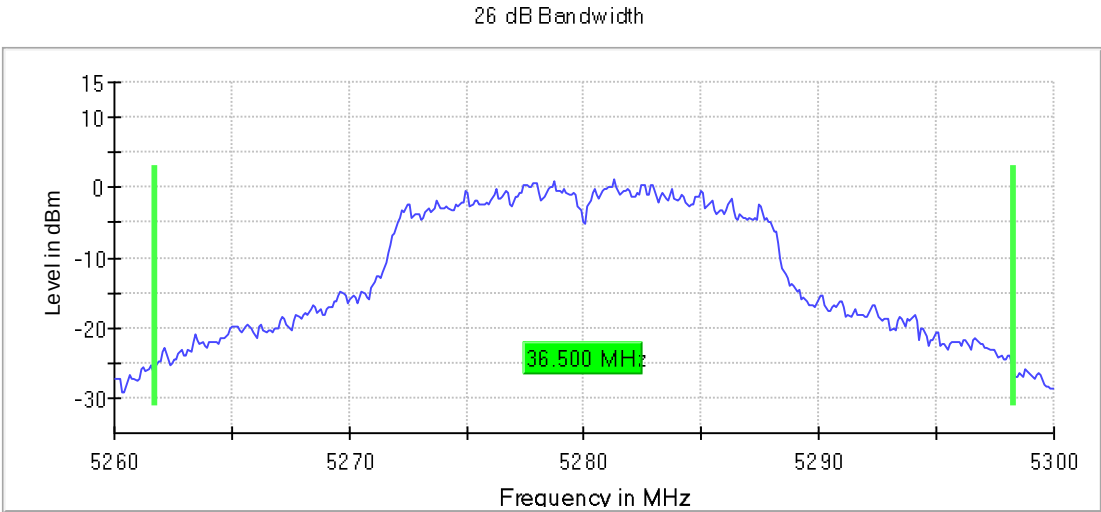
Frequency MHz = 5260.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Number of Transmission Chains = 1

Images:



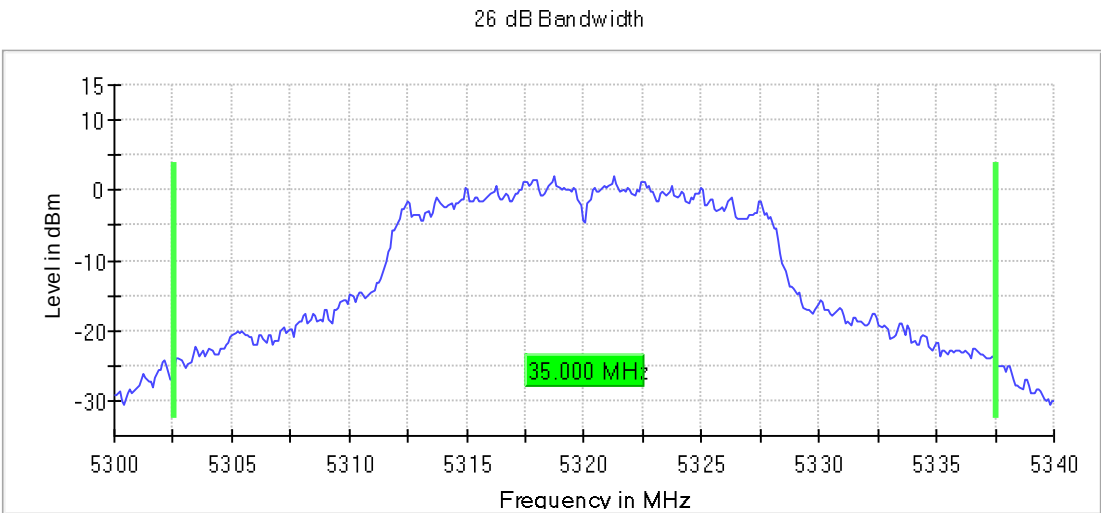
Frequency MHz = 5280.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Number of Transmission Chains = 1

Images:



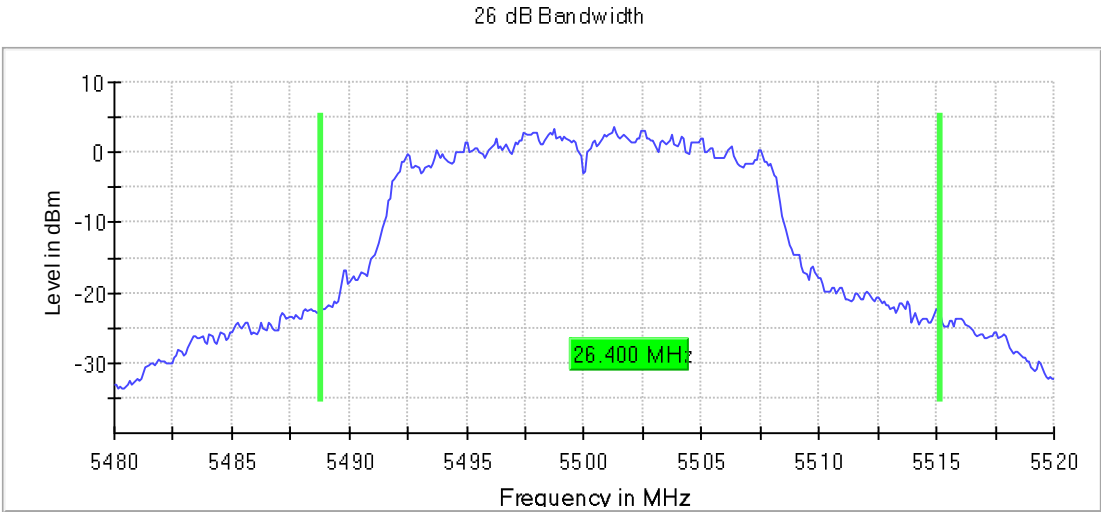
Frequency MHz = 5320.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Number of Transmission Chains = 1

Images:



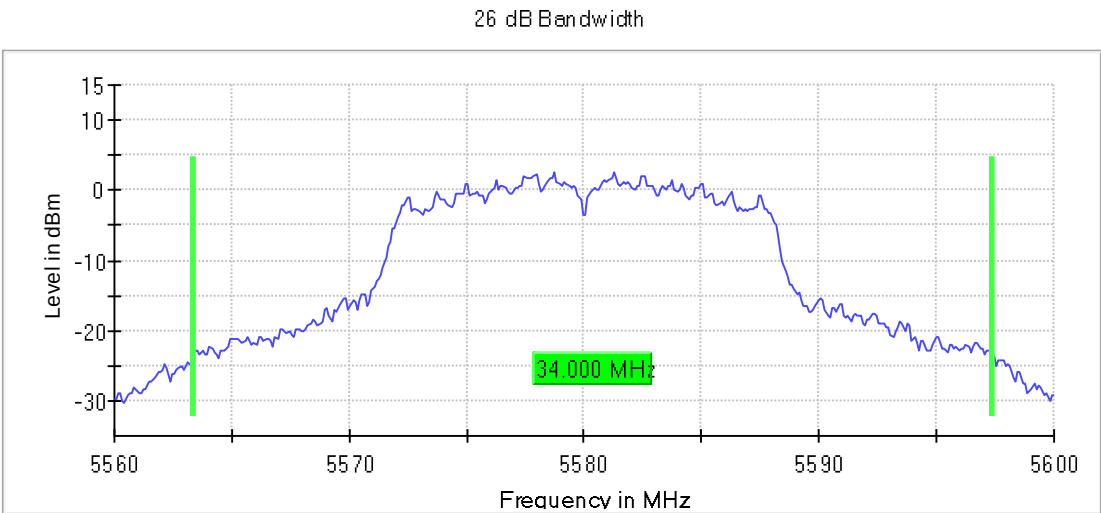
Frequency MHz = 5500.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Number of Transmission Chains = 1

Images:



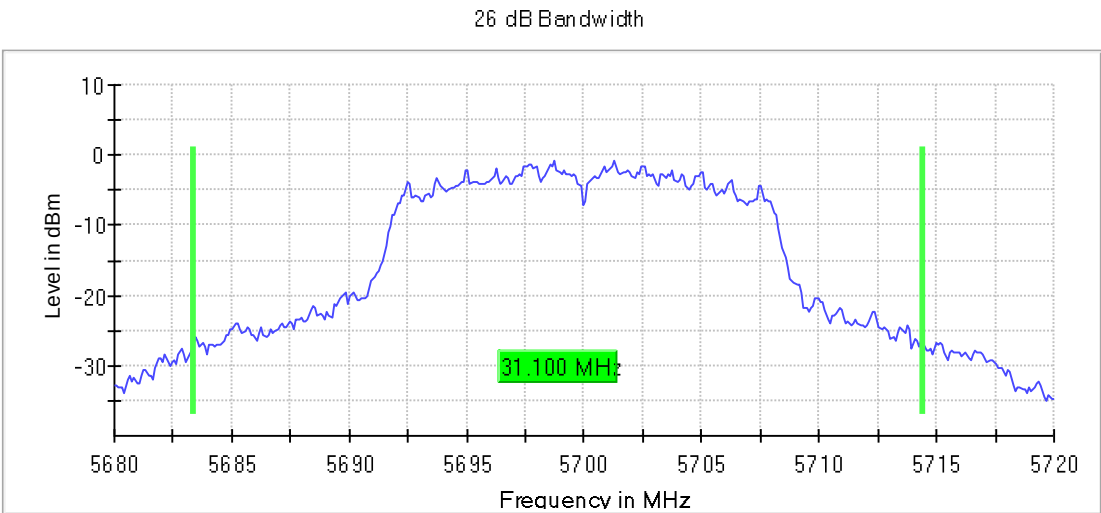
Frequency MHz = 5580.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Number of Transmission Chains = 1

Images:



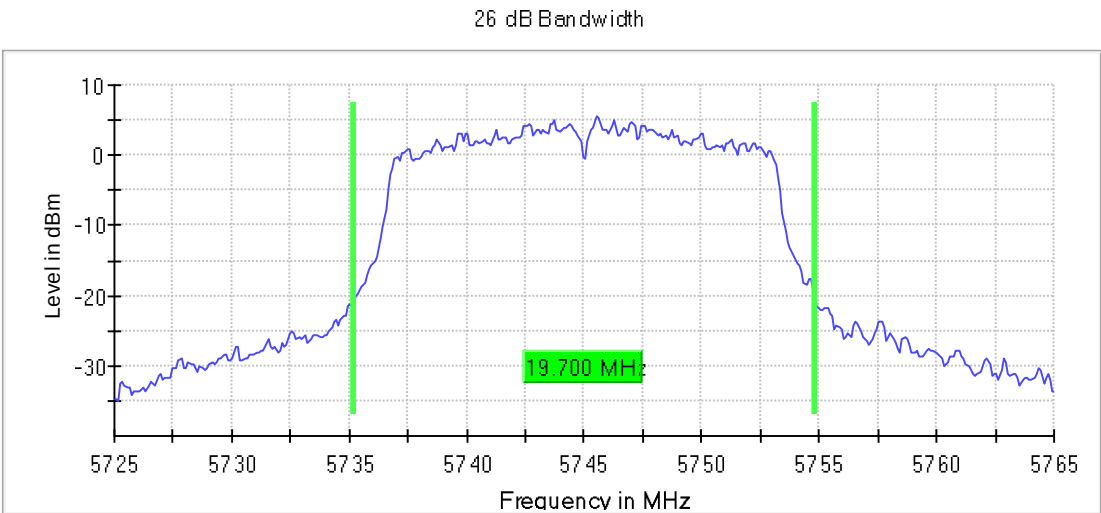
Frequency MHz = 5700.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Number of Transmission Chains = 1

Images:



Frequency MHz = 5745.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Number of Transmission Chains = 1

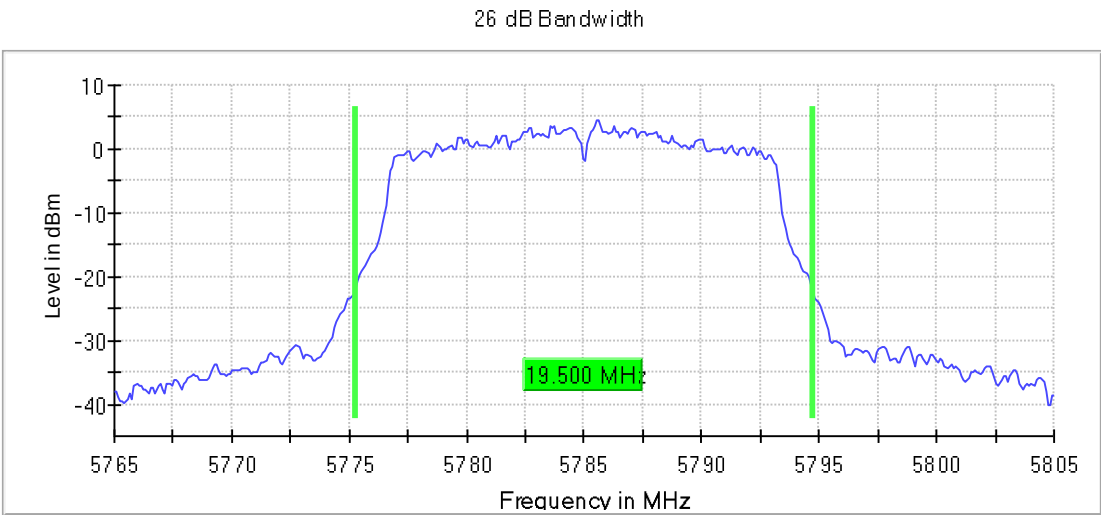
Images:





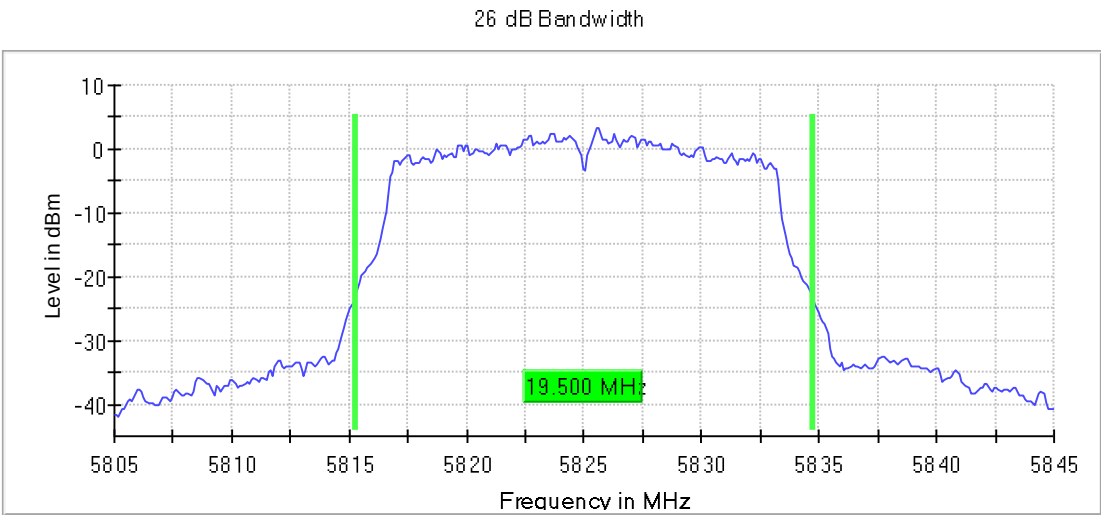
Frequency MHz = 5785.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Number of Transmission Chains = 1

Images:



Frequency MHz = 5825.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Number of Transmission Chains = 1

Images:



**Tables:**  
Spectrum Analyzer Parameters

| Setting               | Instrument Value | Target Value   |
|-----------------------|------------------|----------------|
| Start Frequency       | 5.22000 GHz      | 5.22000 GHz    |
| Stop Frequency        | 5.26000 GHz      | 5.26000 GHz    |
| Span                  | 40.000 MHz       | 40.000 MHz     |
| RBW                   | 200.000 kHz      | ~ 200.000 kHz  |
| VBW                   | 1.000 MHz        | >= 600.000 kHz |
| SweepPoints           | 400              | ~ 400          |
| SweepTime             | 28.477 µs        | AUTO           |
| Reference Level       | 10.000 dBm       | 10.000 dBm     |
| Attenuation           | 30.000 dB        | AUTO           |
| Detector              | MaxPeak          | MaxPeak        |
| SweepCount            | 200              | 200            |
| Filter                | 3 dB             | 3 dB           |
| Trace Mode            | Max Hold         | Max Hold       |
| SweepType             | FFT              | AUTO           |
| Preamplifier          | off              | off            |
| Stablemode            | Trace            | Trace          |
| Stablevalue           | 0.30 dB          | 0.30 dB        |
| Run                   | 56 / max. 150    | max. 150       |
| Stable                | 5 / 5            | 5              |
| Max Stable Difference | 0.03 dB          | 0.30 dB        |

Modulation: 802.11n HT20 (OFDM MCS0)  
**Results**

| Freq (MHz) | Emission Bandwidth (MHz) |
|------------|--------------------------|
| 5180.00000 | 20.200                   |
| 5200.00000 | 20.200                   |
| 5240.00000 | 20.200                   |
| 5260.00000 | 23.200                   |
| 5280.00000 | 22.300                   |
| 5320.00000 | 20.400                   |
| 5500.00000 | 20.100                   |
| 5580.00000 | 20.100                   |
| 5700.00000 | 20.300                   |
| 5745.00000 | 20.200                   |
| 5785.00000 | 20.100                   |
| 5825.00000 | 20.100                   |

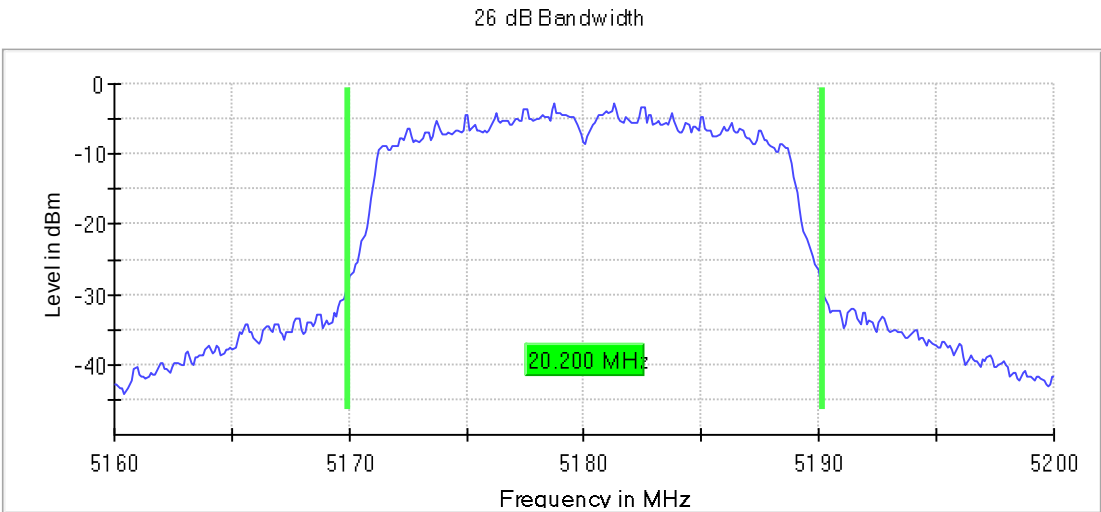
**Verdict**

Pass

Attachments

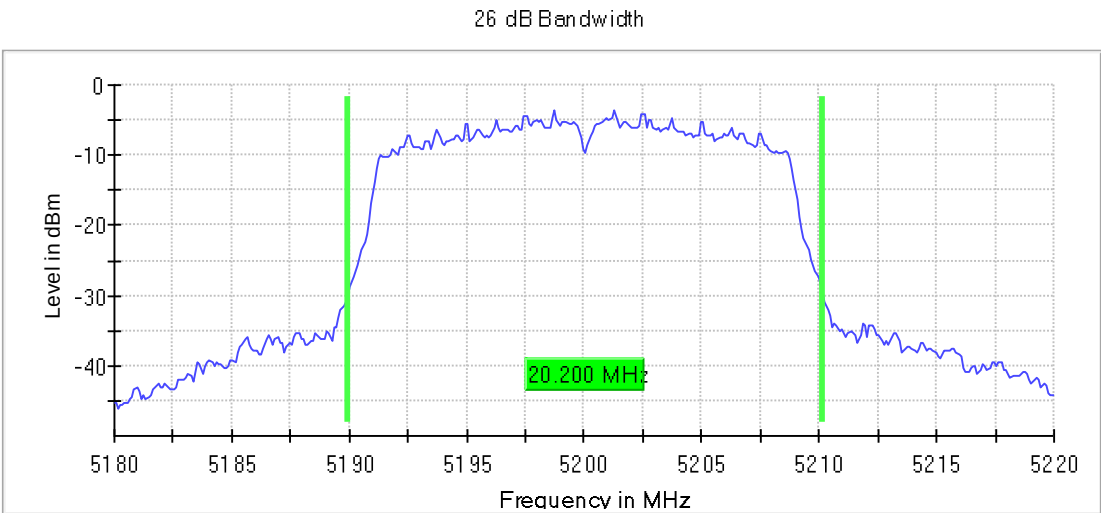
Frequency MHz = 5180.00000, Modulation = 802.11n HT20 (OFDM MCS0), Number of Transmission Chains = 1

Images:



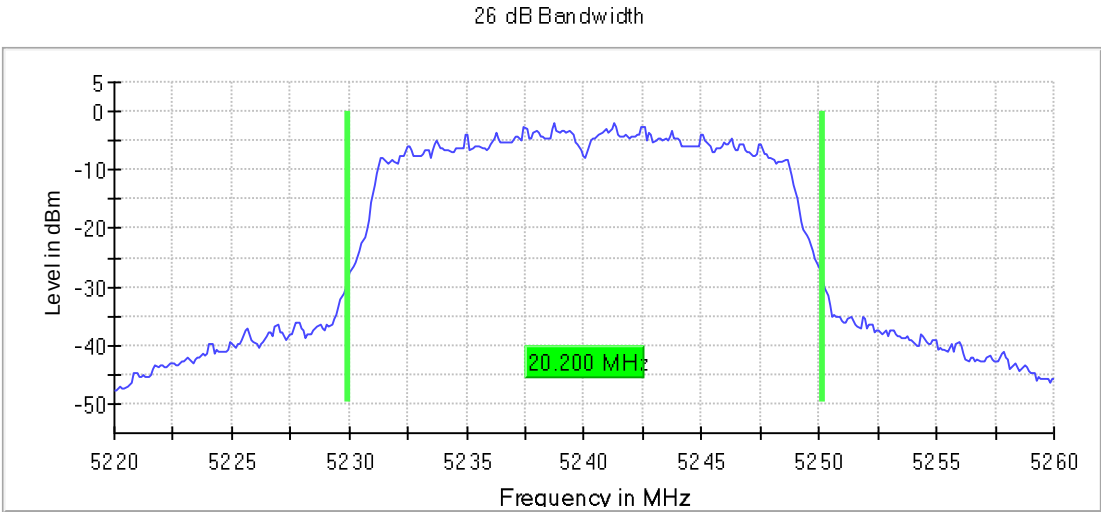
Frequency MHz = 5200.00000, Modulation = 802.11n HT20 (OFDM MCS0), Number of Transmission Chains = 1

Images:



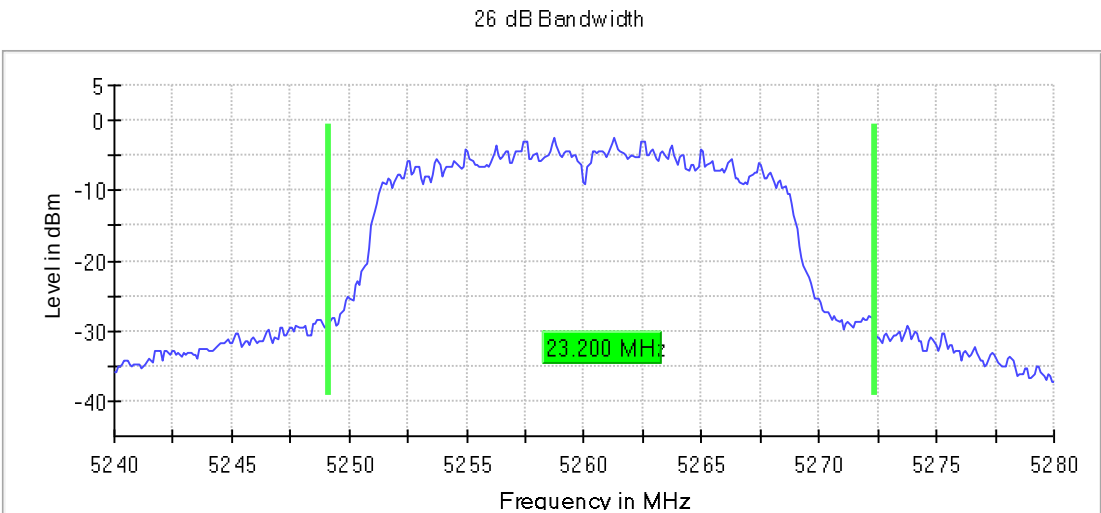
Frequency MHz = 5240.00000, Modulation = 802.11n HT20 (OFDM MCS0), Number of Transmission Chains = 1

Images:



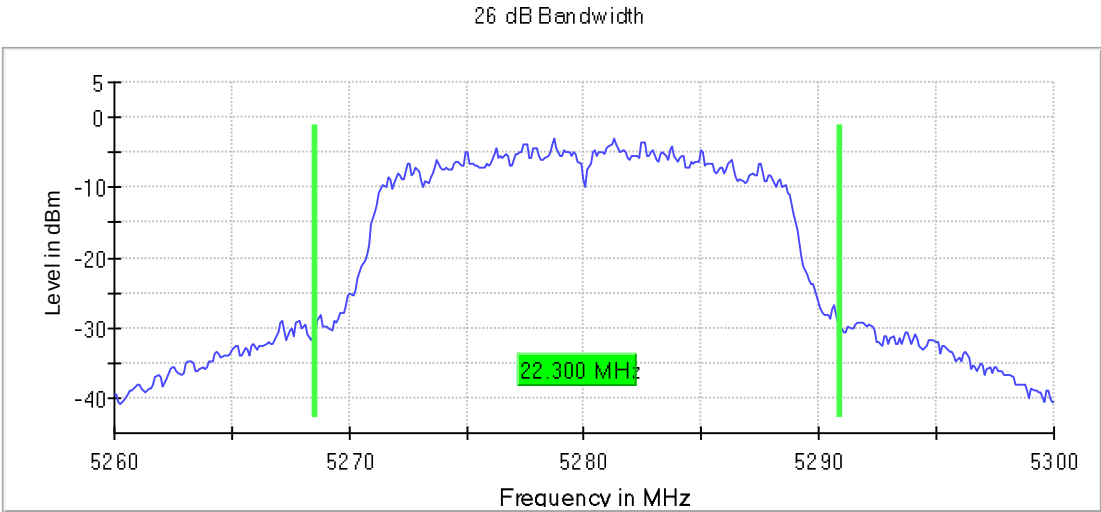
Frequency MHz = 5260.00000, Modulation = 802.11n HT20 (OFDM MCS0), Number of Transmission Chains = 1

Images:



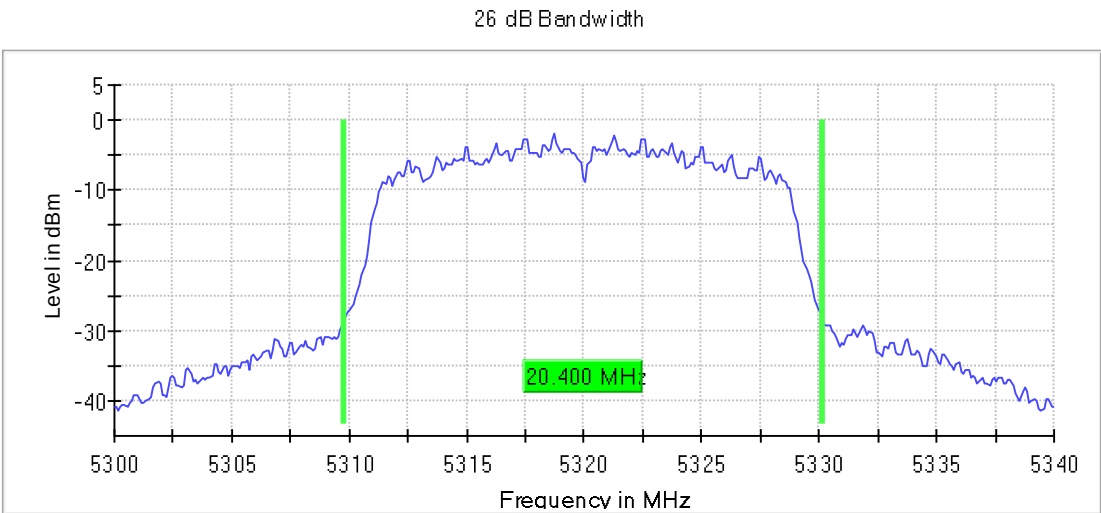
Frequency MHz = 5280.00000, Modulation = 802.11n HT20 (OFDM MCS0), Number of Transmission Chains = 1

Images:



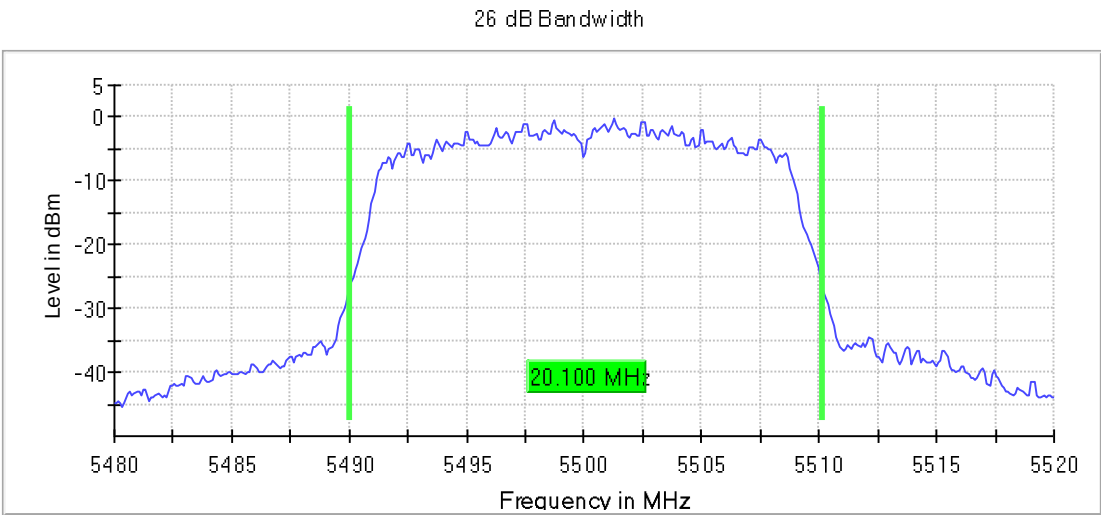
Frequency MHz = 5320.00000, Modulation = 802.11n HT20 (OFDM MCS0), Number of Transmission Chains = 1

Images:



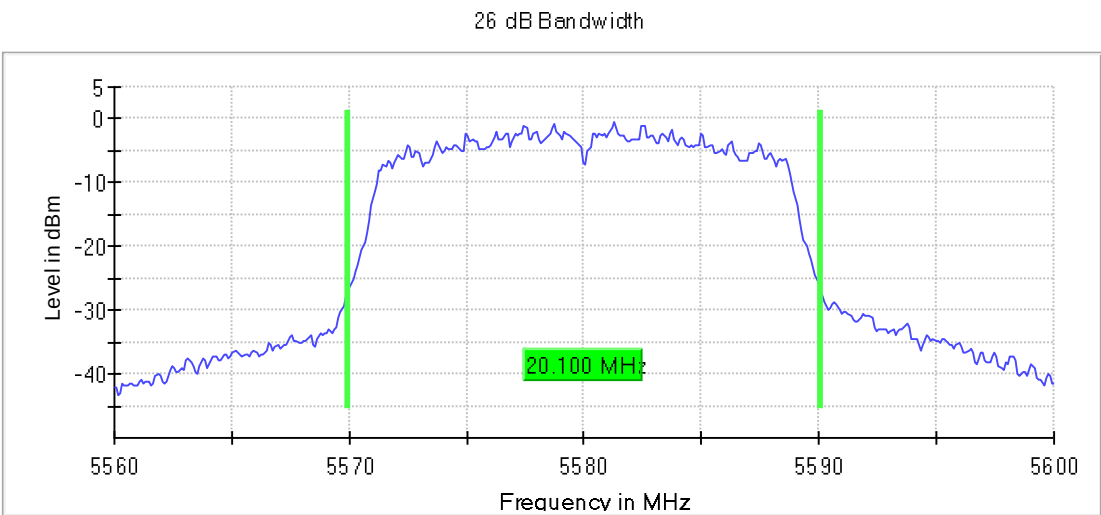
Frequency MHz = 5500.00000, Modulation = 802.11n HT20 (OFDM MCS0), Number of Transmission Chains = 1

Images:



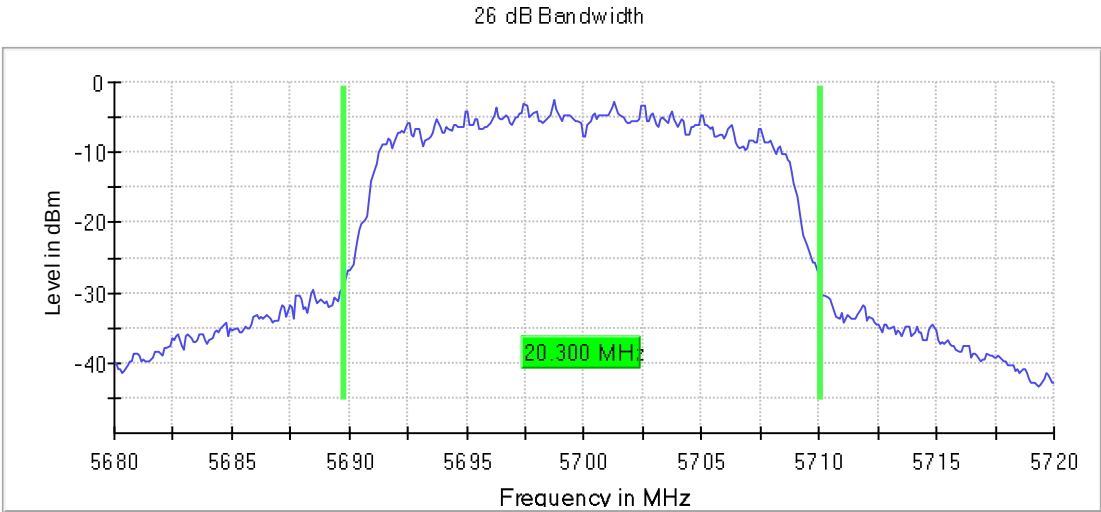
Frequency MHz = 5580.00000, Modulation = 802.11n HT20 (OFDM MCS0), Number of Transmission Chains = 1

Images:



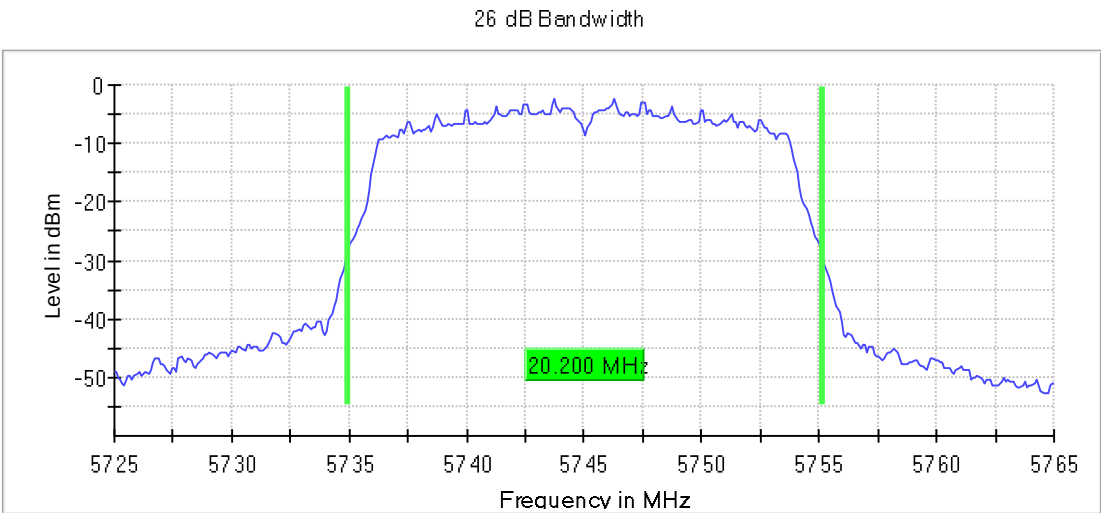
**Frequency MHz = 5700.00000, Modulation = 802.11n HT20 (OFDM MCS0), Number of Transmission Chains = 1**

**Images:**



**Frequency MHz = 5745.00000, Modulation = 802.11n HT20 (OFDM MCS0), Number of Transmission Chains = 1**

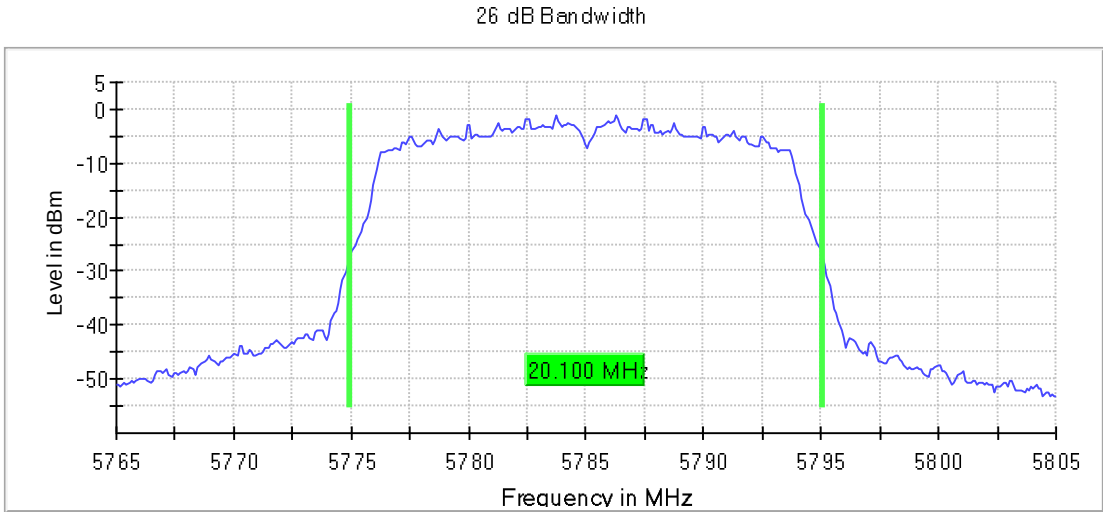
**Images:**





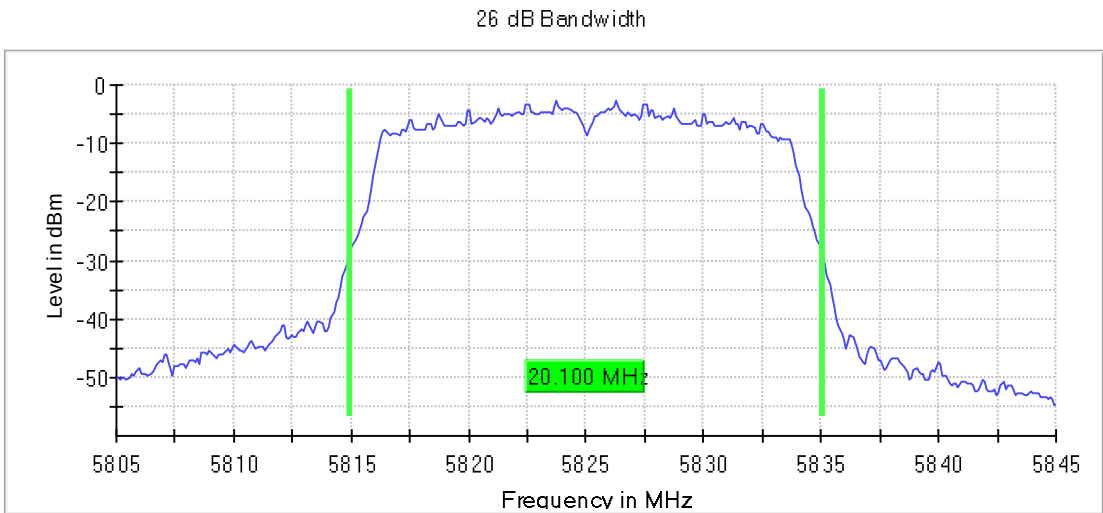
Frequency MHz = 5785.00000, Modulation = 802.11n HT20 (OFDM MCS0), Number of Transmission Chains = 1

Images:



Frequency MHz = 5825.00000, Modulation = 802.11n HT20 (OFDM MCS0), Number of Transmission Chains = 1

Images:



**Tables:**  
Spectrum Analyzer Parameters

| Setting               | Instrument Value | Target Value   |
|-----------------------|------------------|----------------|
| Start Frequency       | 5.22000 GHz      | 5.22000 GHz    |
| Stop Frequency        | 5.26000 GHz      | 5.26000 GHz    |
| Span                  | 40.000 MHz       | 40.000 MHz     |
| RBW                   | 200.000 kHz      | ~ 200.000 kHz  |
| VBW                   | 1.000 MHz        | >= 600.000 kHz |
| SweepPoints           | 400              | ~ 400          |
| SweepTime             | 28.477 $\mu$ s   | AUTO           |
| Reference Level       | 0.000 dBm        | 0.000 dBm      |
| Attenuation           | 20.000 dB        | AUTO           |
| Detector              | MaxPeak          | MaxPeak        |
| SweepCount            | 200              | 200            |
| Filter                | 3 dB             | 3 dB           |
| Trace Mode            | Max Hold         | Max Hold       |
| SweepType             | FFT              | AUTO           |
| Preamplifier          | off              | off            |
| Stablemode            | Trace            | Trace          |
| Stablevalue           | 0.30 dB          | 0.30 dB        |
| Run                   | 38 / max. 150    | max. 150       |
| Stable                | 5 / 5            | 5              |
| Max Stable Difference | 0.16 dB          | 0.30 dB        |

Modulation: 802.11n HT40 (OFDM MCS0)

Results

| Freq (MHz) | Emission Bandwidth (MHz) |
|------------|--------------------------|
| 5190.00000 | 40.075                   |
| 5230.00000 | 39.775                   |
| 5270.00000 | 53.734                   |
| 5310.00000 | 40.375                   |
| 5510.00000 | 40.375                   |
| 5550.00000 | 40.225                   |
| 5670.00000 | 40.976                   |
| 5755.00000 | 39.925                   |
| 5795.00000 | 39.625                   |

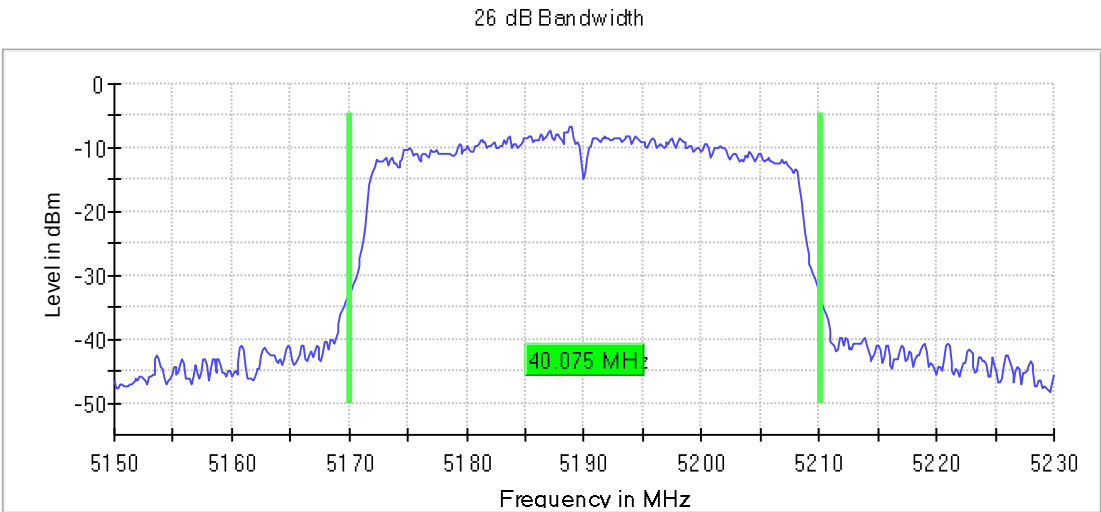
Verdict

Pass

**Attachments**

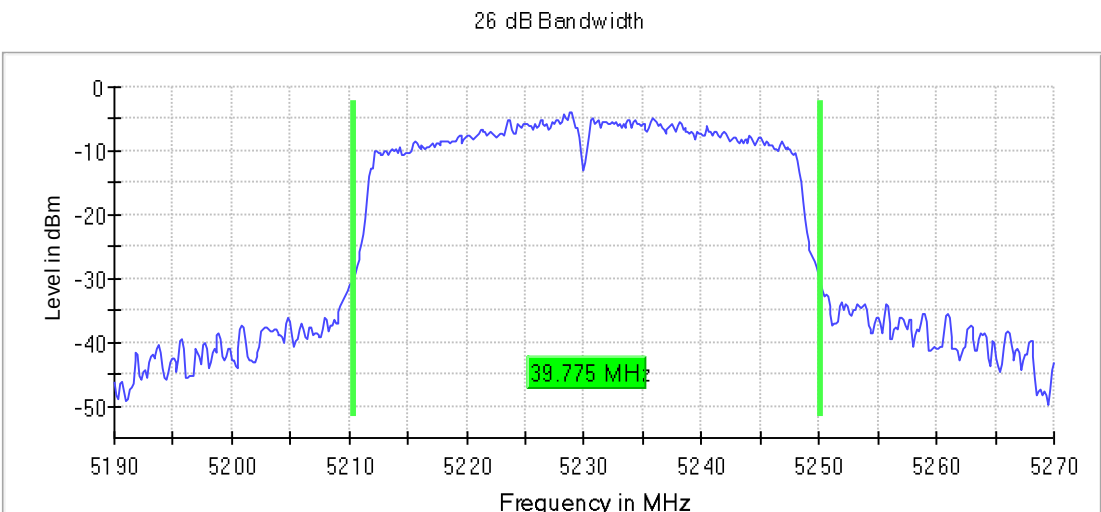
**Frequency MHz = 5190.00000, Modulation = 802.11n HT40 (OFDM MCS0), Number of Transmission Chains = 1**

**Images:**



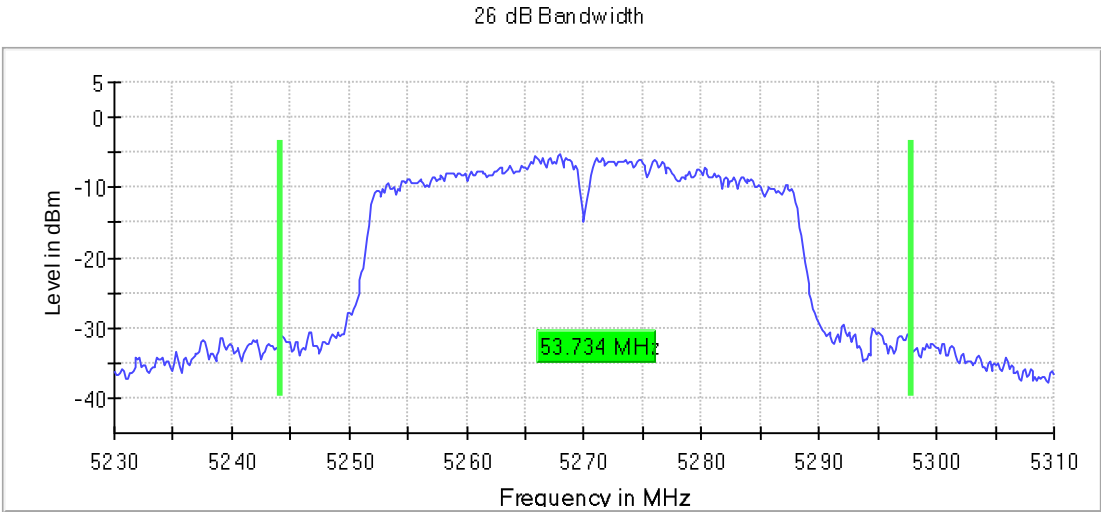
**Frequency MHz = 5230.00000, Modulation = 802.11n HT40 (OFDM MCS0), Number of Transmission Chains = 1**

**Images:**



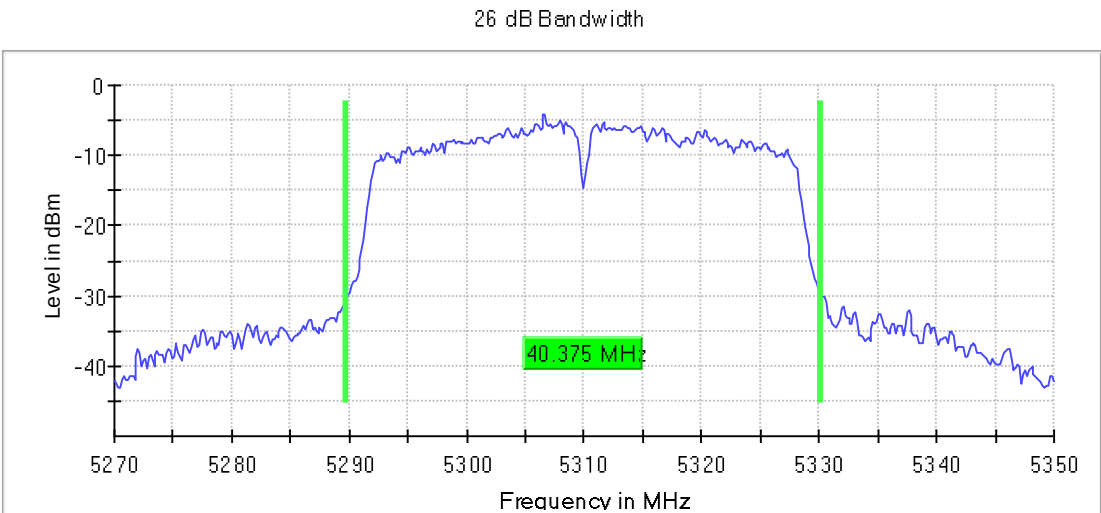
Frequency MHz = 5270.00000, Modulation = 802.11n HT40 (OFDM MCS0), Number of Transmission Chains = 1

Images:



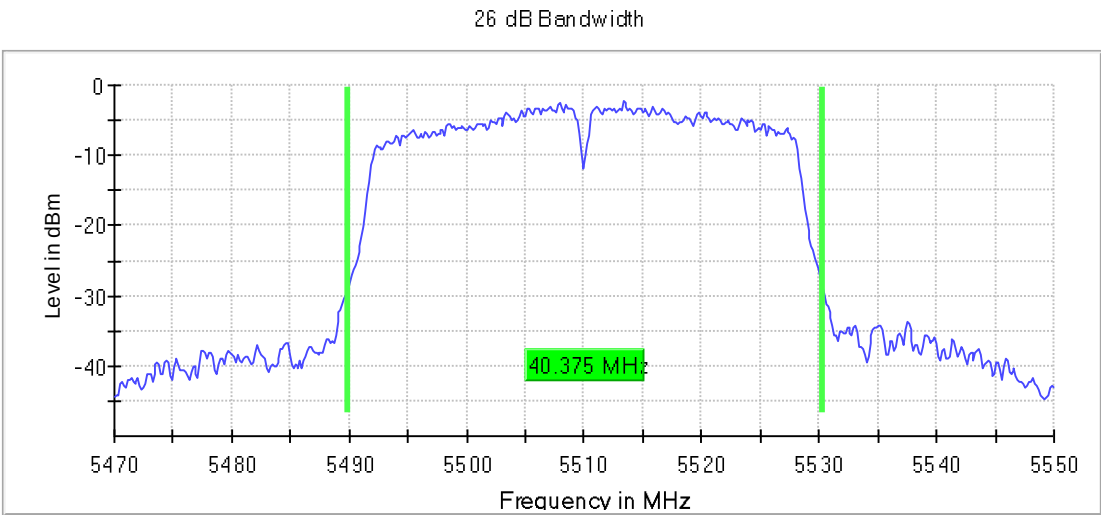
Frequency MHz = 5310.00000, Modulation = 802.11n HT40 (OFDM MCS0), Number of Transmission Chains = 1

Images:



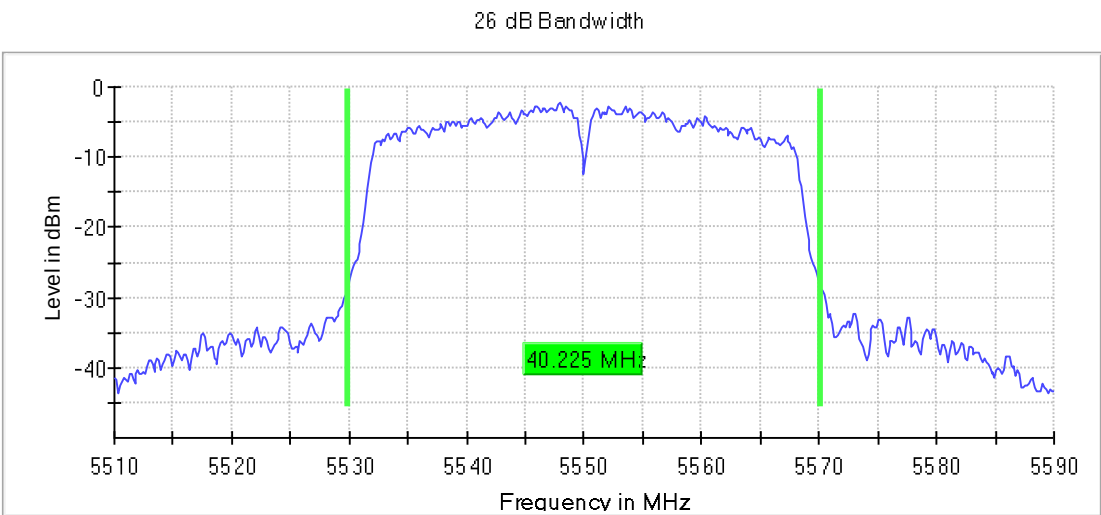
Frequency MHz = 5510.00000, Modulation = 802.11n HT40 (OFDM MCS0), Number of Transmission Chains = 1

Images:



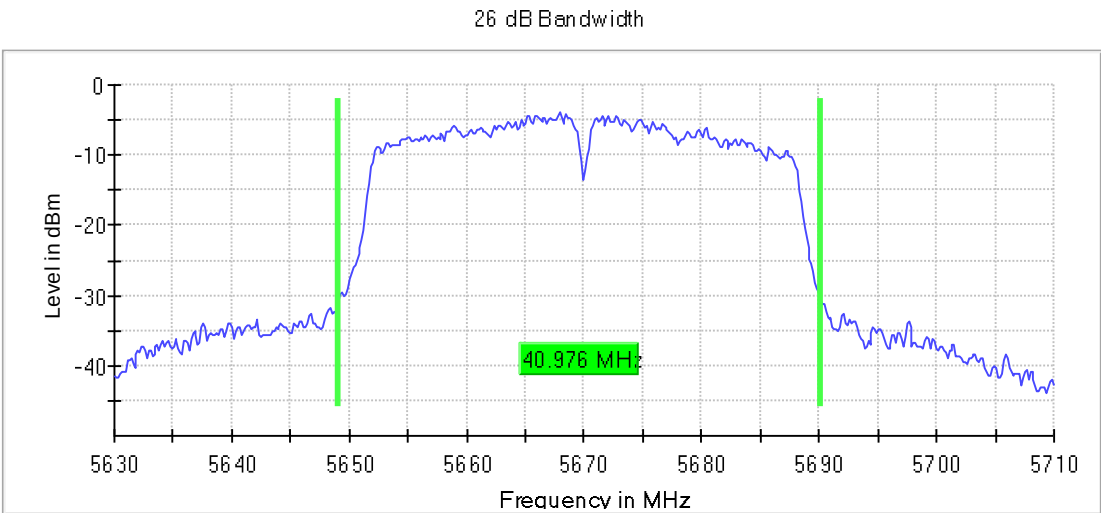
Frequency MHz = 5550.00000, Modulation = 802.11n HT40 (OFDM MCS0), Number of Transmission Chains = 1

Images:



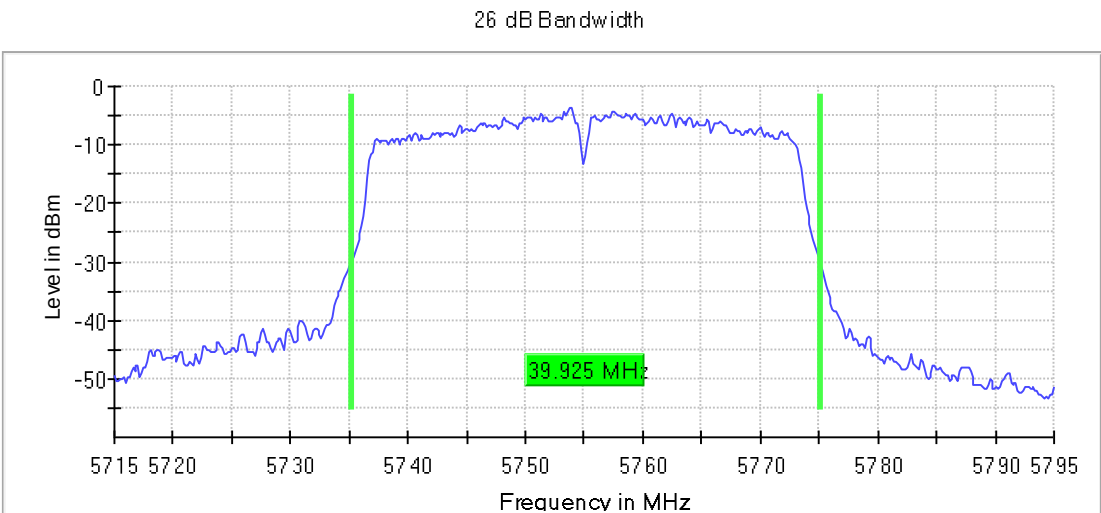
Frequency MHz = 5670.00000, Modulation = 802.11n HT40 (OFDM MCS0), Number of Transmission Chains = 1

Images:



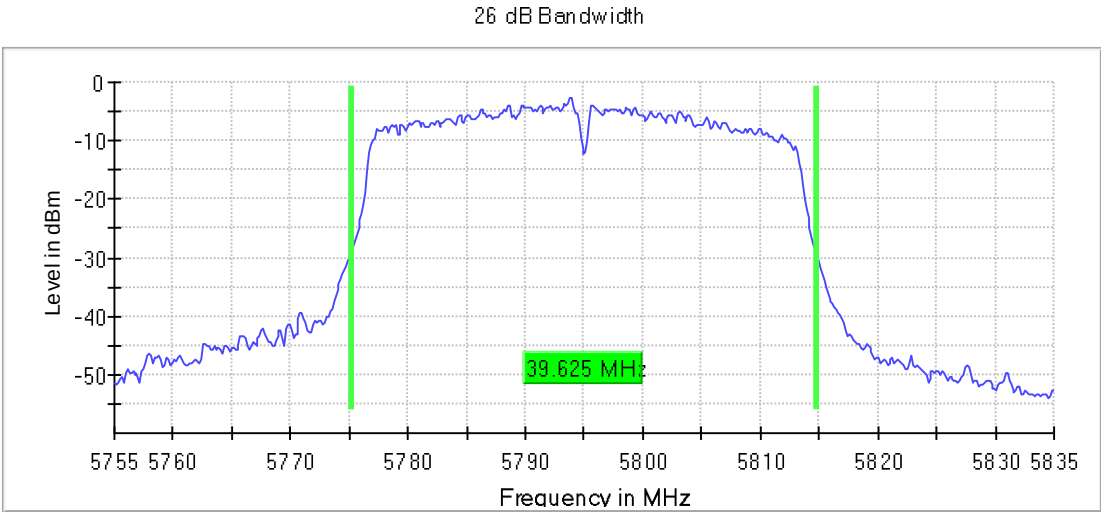
Frequency MHz = 5755.00000, Modulation = 802.11n HT40 (OFDM MCS0), Number of Transmission Chains = 1

Images:



Frequency MHz = 5795.00000, Modulation = 802.11n HT40 (OFDM MCS0), Number of Transmission Chains = 1

Images:



Tables:

Spectrum Analyzer Parameters

| Setting               | Instrument Value | Target Value   |
|-----------------------|------------------|----------------|
| Start Frequency       | 5.19000 GHz      | 5.19000 GHz    |
| Stop Frequency        | 5.27000 GHz      | 5.27000 GHz    |
| Span                  | 80.000 MHz       | 80.000 MHz     |
| RBW                   | 300.000 kHz      | ~ 400.000 kHz  |
| VBW                   | 1.000 MHz        | >= 900.000 kHz |
| SweepPoints           | 533              | ~ 533          |
| Sweeptime             | 31.621 µs        | AUTO           |
| Reference Level       | 0.000 dBm        | 0.000 dBm      |
| Attenuation           | 20.000 dB        | AUTO           |
| Detector              | MaxPeak          | MaxPeak        |
| SweepCount            | 200              | 200            |
| Filter                | 3 dB             | 3 dB           |
| Trace Mode            | Max Hold         | Max Hold       |
| Sweeptype             | FFT              | AUTO           |
| Preamp                | off              | off            |
| Stablemode            | Trace            | Trace          |
| Stablevalue           | 0.30 dB          | 0.30 dB        |
| Run                   | 87 / max. 150    | max. 150       |
| Stable                | 5 / 5            | 5              |
| Max Stable Difference | 0.06 dB          | 0.30 dB        |



## FCC 15.407 (b) / RSS-247 6.2 Band-edge Conducted Emissions

### Limits

For transmitters operating in the 5.15–5.25 and 5.25–5.35 GHz band: all emissions outside of the 5.15–5.35 GHz band shall not exceed an EIRP of –27 dBm/MHz (68.20 dBμV/m at 3 m distance).

For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of –27 dBm/MHz.

For transmitters operating solely in the 5.725-5.850 GHz band: All emissions shall be limited to a level of –27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

### RSS 247:

For transmitters with operating frequencies in the band 5150-5250 MHz, all emissions outside the band 5150-5350 MHz shall not exceed -27 dBm/MHz e.i.r.p. Any unwanted emissions that fall into the band 5250-5350 MHz shall be attenuated below the channel power by at least 26 dB, when measured using a resolution bandwidth between 1 and 5% of the occupied bandwidth (i.e. 99% bandwidth), above 5250 MHz.

Emissions outside the band 5470-5725 MHz shall not exceed -27 dBm/MHz e.i.r.p.

Devices operating in the band 5725-5850 MHz shall have e.i.r.p. of unwanted emissions comply with the following:

- a. 27 dBm/MHz at frequencies from the band edges decreasing linearly to 15.6 dBm/MHz at 5 MHz above or below the band edges;
- b. 15.6 dBm/MHz at 5 MHz above or below the band edges decreasing linearly to 10 dBm/MHz at 25 MHz above or below the band edges;
- c. 10 dBm/MHz at 25 MHz above or below the band edges decreasing linearly to -27 dBm/MHz at 75 MHz above or below the band edges; and
- d. -27 dBm/MHz at frequencies more than 75 MHz above or below the band edges.

Modulation: 802.11a (OFDM 6 Mbit/s)

## Results

U-NII-1

| DUT Frequency | Result |
|---------------|--------|
| 5180.000000   | PASS   |

| DUT Frequency | Result |
|---------------|--------|
| 5240.000000   | PASS   |

| Frequency (MHz) | Level (dBm) | Margin (dB) | Limit (dBm) | Result |
|-----------------|-------------|-------------|-------------|--------|
| 5148.750000     | -34.1       | 7.1         | -27.0       | PASS   |
| 5149.250000     | -34.7       | 7.7         | -27.0       | PASS   |
| 5149.750000     | -35.0       | 8.0         | -27.0       | PASS   |
| 5148.250000     | -35.6       | 8.6         | -27.0       | PASS   |
| 5147.250000     | -35.8       | 8.8         | -27.0       | PASS   |
| 5146.750000     | -36.3       | 9.3         | -27.0       | PASS   |
| 5147.750000     | -36.9       | 9.9         | -27.0       | PASS   |
| 5145.750000     | -38.2       | 11.2        | -27.0       | PASS   |
| 5146.250000     | -38.6       | 11.6        | -27.0       | PASS   |
| 5143.250000     | -38.9       | 11.9        | -27.0       | PASS   |
| 5145.250000     | -38.9       | 11.9        | -27.0       | PASS   |
| 5144.750000     | -39.1       | 12.1        | -27.0       | PASS   |
| 5144.250000     | -39.4       | 12.4        | -27.0       | PASS   |
| 5143.750000     | -40.2       | 13.2        | -27.0       | PASS   |
| 5141.750000     | -40.4       | 13.4        | -27.0       | PASS   |

| Frequency (MHz) | Level (dBm) | Margin (dB) | Limit (dBm) | Result |
|-----------------|-------------|-------------|-------------|--------|
| 5366.750000     | -44.8       | 17.8        | -27.0       | PASS   |
| 5352.750000     | -45.0       | 18.0        | -27.0       | PASS   |
| 5355.250000     | -45.4       | 18.4        | -27.0       | PASS   |
| 5356.750000     | -45.5       | 18.5        | -27.0       | PASS   |
| 5356.250000     | -45.5       | 18.5        | -27.0       | PASS   |
| 5368.750000     | -45.5       | 18.5        | -27.0       | PASS   |
| 5350.250000     | -45.5       | 18.5        | -27.0       | PASS   |
| 5355.750000     | -45.5       | 18.5        | -27.0       | PASS   |
| 5353.750000     | -45.7       | 18.7        | -27.0       | PASS   |
| 5357.250000     | -45.8       | 18.8        | -27.0       | PASS   |
| 5363.250000     | -45.9       | 18.9        | -27.0       | PASS   |
| 5376.750000     | -45.9       | 18.9        | -27.0       | PASS   |
| 5363.750000     | -45.9       | 18.9        | -27.0       | PASS   |
| 5367.250000     | -45.9       | 18.9        | -27.0       | PASS   |
| 5362.750000     | -46.0       | 19.0        | -27.0       | PASS   |

U-NII-2A

| DUT Frequency | Result |
|---------------|--------|
| 5260.000000   | PASS   |

| DUT Frequency | Result |
|---------------|--------|
| 5320.000000   | PASS   |

| Frequency (MHz) | Level (dBm) | Margin (dB) | Limit (dBm) | Result |
|-----------------|-------------|-------------|-------------|--------|
| 5146.250000     | -48.3       | 21.3        | -27.0       | PASS   |
| 5125.750000     | -48.4       | 21.4        | -27.0       | PASS   |
| 5127.750000     | -48.8       | 21.8        | -27.0       | PASS   |
| 5136.750000     | -48.8       | 21.8        | -27.0       | PASS   |
| 5132.250000     | -48.8       | 21.8        | -27.0       | PASS   |
| 5144.750000     | -48.9       | 21.9        | -27.0       | PASS   |
| 5146.750000     | -48.9       | 21.9        | -27.0       | PASS   |
| 5145.250000     | -48.9       | 21.9        | -27.0       | PASS   |
| 5130.250000     | -48.9       | 21.9        | -27.0       | PASS   |
| 5131.750000     | -48.9       | 21.9        | -27.0       | PASS   |
| 5142.750000     | -49.0       | 22.0        | -27.0       | PASS   |
| 5134.750000     | -49.0       | 22.0        | -27.0       | PASS   |
| 5129.250000     | -49.0       | 22.0        | -27.0       | PASS   |
| 5132.750000     | -49.0       | 22.0        | -27.0       | PASS   |
| 5149.750000     | -49.1       | 22.1        | -27.0       | PASS   |

| Frequency (MHz) | Level (dBm) | Margin (dB) | Limit (dBm) | Result |
|-----------------|-------------|-------------|-------------|--------|
| 5350.250000     | -32.0       | 5.0         | -27.0       | PASS   |
| 5351.750000     | -32.1       | 5.1         | -27.0       | PASS   |
| 5352.250000     | -32.5       | 5.5         | -27.0       | PASS   |
| 5352.750000     | -32.7       | 5.7         | -27.0       | PASS   |
| 5353.250000     | -33.3       | 6.3         | -27.0       | PASS   |
| 5350.750000     | -34.1       | 7.1         | -27.0       | PASS   |
| 5353.750000     | -34.8       | 7.8         | -27.0       | PASS   |
| 5351.250000     | -34.8       | 7.8         | -27.0       | PASS   |
| 5354.250000     | -38.0       | 11.0        | -27.0       | PASS   |
| 5355.750000     | -38.2       | 11.2        | -27.0       | PASS   |
| 5357.250000     | -38.5       | 11.5        | -27.0       | PASS   |
| 5356.250000     | -38.9       | 11.9        | -27.0       | PASS   |
| 5358.250000     | -39.1       | 12.1        | -27.0       | PASS   |
| 5356.750000     | -39.7       | 12.7        | -27.0       | PASS   |
| 5354.750000     | -40.3       | 13.3        | -27.0       | PASS   |

## U-NII-2C

| DUT Frequency | Result |
|---------------|--------|
| 5500.000000   | PASS   |

| DUT Frequency | Result |
|---------------|--------|
| 5700.000000   | PASS   |

| Frequency (MHz) | Level (dBm) | Margin (dB) | Limit (dBm) | Result |
|-----------------|-------------|-------------|-------------|--------|
| 5469.250000     | -34.7       | 7.7         | -27.0       | PASS   |
| 5468.750000     | -35.5       | 8.5         | -27.0       | PASS   |
| 5469.750000     | -36.1       | 9.1         | -27.0       | PASS   |
| 5468.250000     | -36.3       | 9.3         | -27.0       | PASS   |
| 5466.250000     | -37.2       | 10.2        | -27.0       | PASS   |
| 5466.750000     | -37.3       | 10.3        | -27.0       | PASS   |
| 5467.250000     | -37.3       | 10.3        | -27.0       | PASS   |
| 5465.250000     | -37.9       | 10.9        | -27.0       | PASS   |
| 5467.750000     | -37.9       | 10.9        | -27.0       | PASS   |
| 5464.750000     | -38.3       | 11.3        | -27.0       | PASS   |
| 5465.750000     | -38.8       | 11.8        | -27.0       | PASS   |
| 5463.250000     | -39.5       | 12.5        | -27.0       | PASS   |
| 5462.750000     | -40.3       | 13.3        | -27.0       | PASS   |
| 5464.250000     | -40.3       | 13.3        | -27.0       | PASS   |
| 5462.250000     | -40.4       | 13.4        | -27.0       | PASS   |

| Frequency (MHz) | Level (dBm) | Margin (dB) | Limit (dBm) | Result |
|-----------------|-------------|-------------|-------------|--------|
| 5726.750000     | -32.8       | 5.8         | -27.0       | PASS   |
| 5725.250000     | -33.2       | 6.2         | -27.0       | PASS   |
| 5726.250000     | -33.9       | 6.9         | -27.0       | PASS   |
| 5725.750000     | -34.8       | 7.8         | -27.0       | PASS   |
| 5728.750000     | -36.6       | 9.6         | -27.0       | PASS   |
| 5728.250000     | -36.7       | 9.7         | -27.0       | PASS   |
| 5727.750000     | -36.8       | 9.8         | -27.0       | PASS   |
| 5727.250000     | -36.8       | 9.8         | -27.0       | PASS   |
| 5729.250000     | -39.7       | 12.7        | -27.0       | PASS   |
| 5730.750000     | -39.7       | 12.7        | -27.0       | PASS   |
| 5732.250000     | -41.0       | 14.0        | -27.0       | PASS   |
| 5731.750000     | -41.0       | 14.0        | -27.0       | PASS   |
| 5731.250000     | -41.1       | 14.1        | -27.0       | PASS   |
| 5729.750000     | -41.4       | 14.4        | -27.0       | PASS   |
| 5730.250000     | -42.0       | 15.0        | -27.0       | PASS   |

## U-NII-3

| DUT Frequency | Result |
|---------------|--------|
| 5745.000000   | PASS   |

| DUT Frequency | Result |
|---------------|--------|
| 5825.000000   | PASS   |

| Frequency (MHz) | Level (dBm) | Margin (dB) | Limit (dBm) | Result |
|-----------------|-------------|-------------|-------------|--------|
| 5613.750000     | -42.5       | 15.5        | -27.0       | PASS   |
| 5618.750000     | -42.8       | 15.8        | -27.0       | PASS   |
| 5630.750000     | -42.9       | 15.9        | -27.0       | PASS   |
| 5632.750000     | -43.0       | 16.0        | -27.0       | PASS   |
| 5608.250000     | -43.1       | 16.1        | -27.0       | PASS   |
| 5610.250000     | -43.1       | 16.1        | -27.0       | PASS   |
| 5615.750000     | -43.2       | 16.2        | -27.0       | PASS   |
| 5612.750000     | -43.2       | 16.2        | -27.0       | PASS   |
| 5610.750000     | -43.2       | 16.2        | -27.0       | PASS   |
| 5619.750000     | -43.3       | 16.3        | -27.0       | PASS   |
| 5645.250000     | -43.3       | 16.3        | -27.0       | PASS   |
| 5622.250000     | -43.3       | 16.3        | -27.0       | PASS   |
| 5618.250000     | -43.3       | 16.3        | -27.0       | PASS   |
| 5606.250000     | -43.3       | 16.3        | -27.0       | PASS   |
| 5552.250000     | -43.3       | 16.3        | -27.0       | PASS   |

| Frequency (MHz) | Level (dBm) | Margin (dB) | Limit (dBm) | Result |
|-----------------|-------------|-------------|-------------|--------|
| 5967.750000     | -33.3       | 6.3         | -27.0       | PASS   |
| 6010.750000     | -36.1       | 9.1         | -27.0       | PASS   |
| 5913.750000     | -31.2       | 12.6        | -18.7       | PASS   |
| 6074.250000     | -43.9       | 16.9        | -27.0       | PASS   |
| 5984.750000     | -44.5       | 17.5        | -27.0       | PASS   |
| 5950.250000     | -44.8       | 17.8        | -27.0       | PASS   |
| 5960.250000     | -45.1       | 18.1        | -27.0       | PASS   |
| 5927.250000     | -45.3       | 18.3        | -27.0       | PASS   |
| 6021.750000     | -45.4       | 18.4        | -27.0       | PASS   |
| 5925.250000     | -45.4       | 18.4        | -27.0       | PASS   |
| 5981.250000     | -45.4       | 18.4        | -27.0       | PASS   |
| 5945.750000     | -45.4       | 18.4        | -27.0       | PASS   |
| 5978.250000     | -45.4       | 18.4        | -27.0       | PASS   |
| 5981.750000     | -45.4       | 18.4        | -27.0       | PASS   |
| 5985.250000     | -45.5       | 18.5        | -27.0       | PASS   |

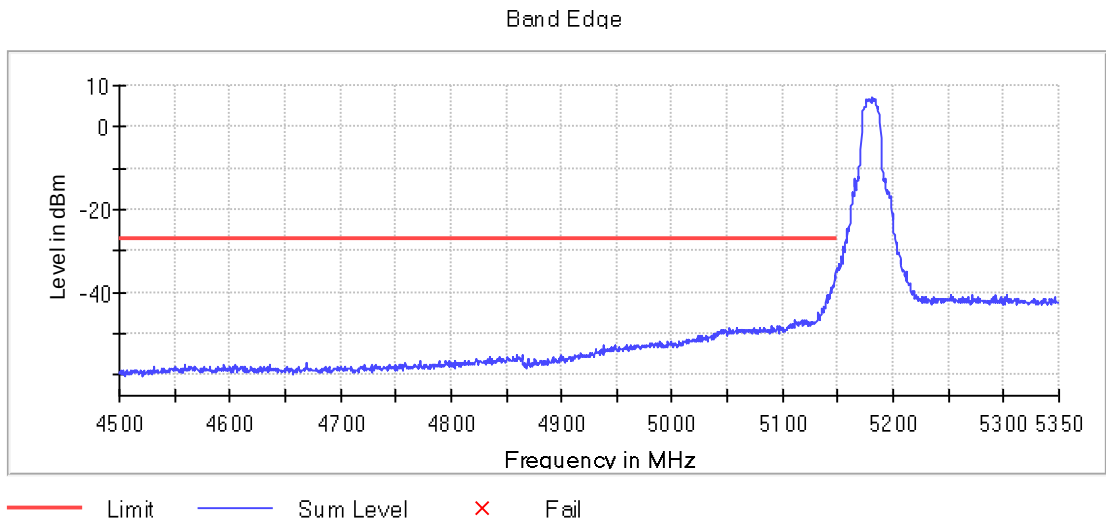
## Verdict

Pass

Attachments

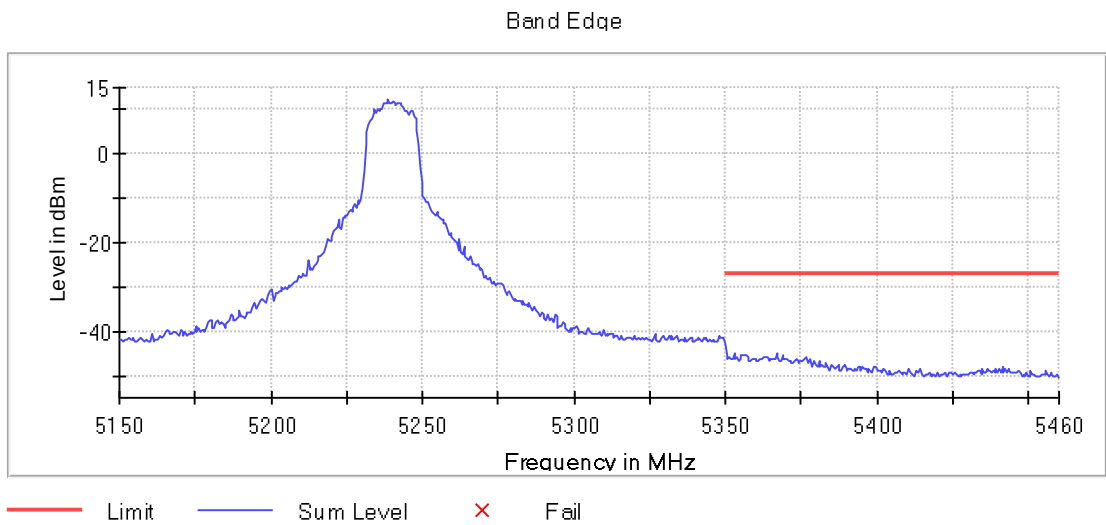
Frequency MHz = 5180.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Mode = SISO A, Measurement Point = 1

Images:



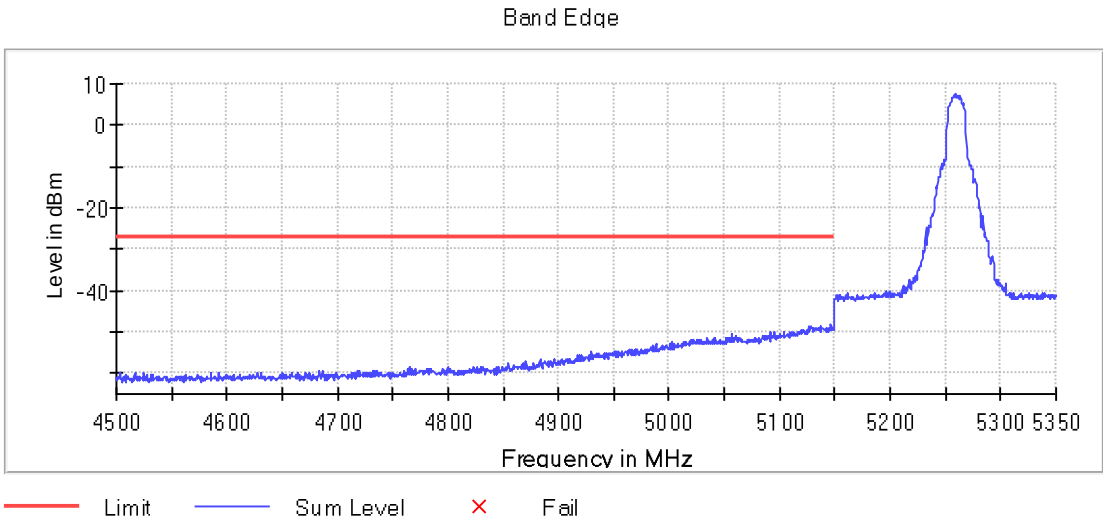
Frequency MHz = 5240.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Mode = SISO A, Measurement Point = 1

Images:



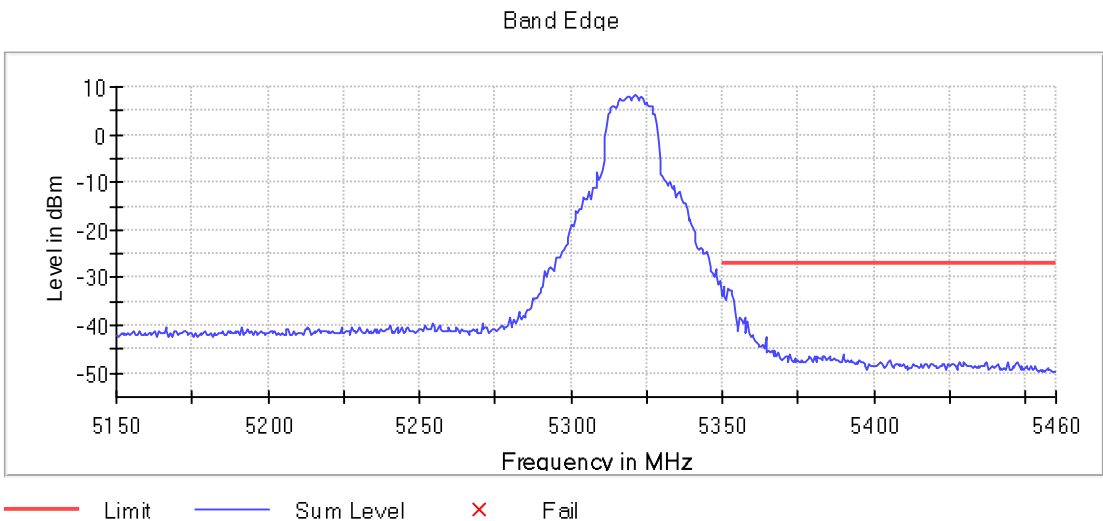
Frequency MHz = 5260.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Mode = SISO A, Measurement Point = 1

Images:



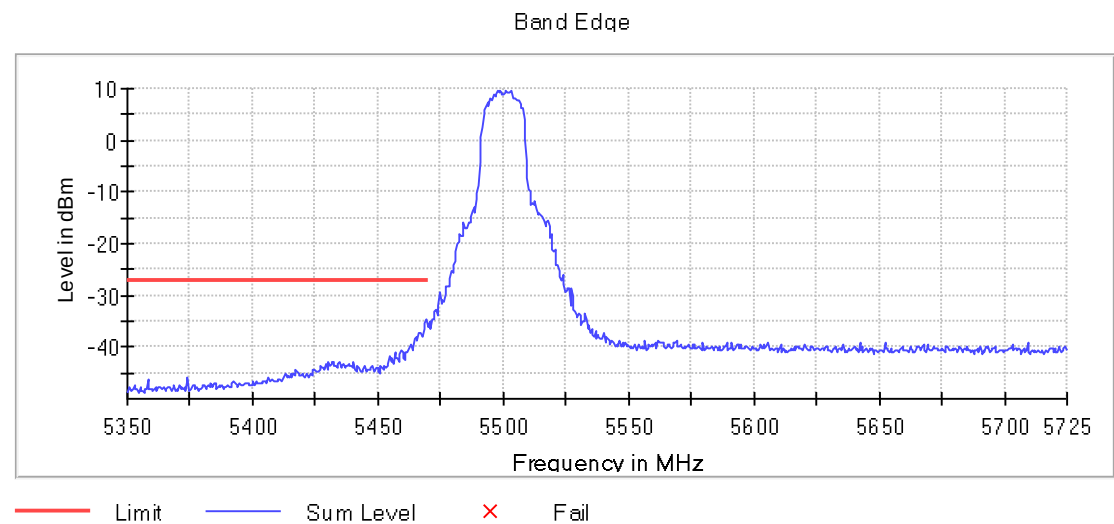
Frequency MHz = 5320.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Mode = SISO A, Measurement Point = 1

Images:



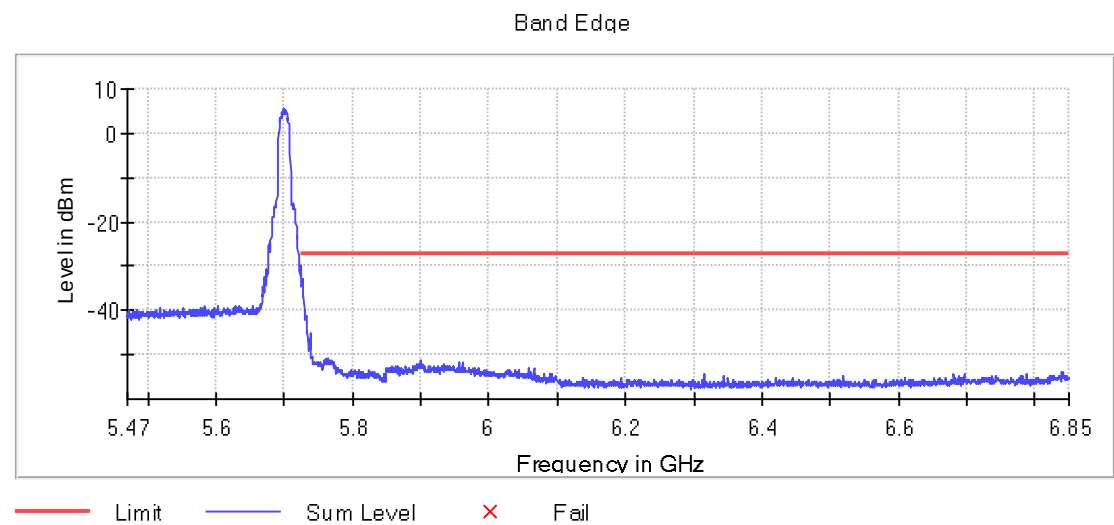
Frequency MHz = 5500.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Mode = SISO A, Measurement Point = 1

Images:



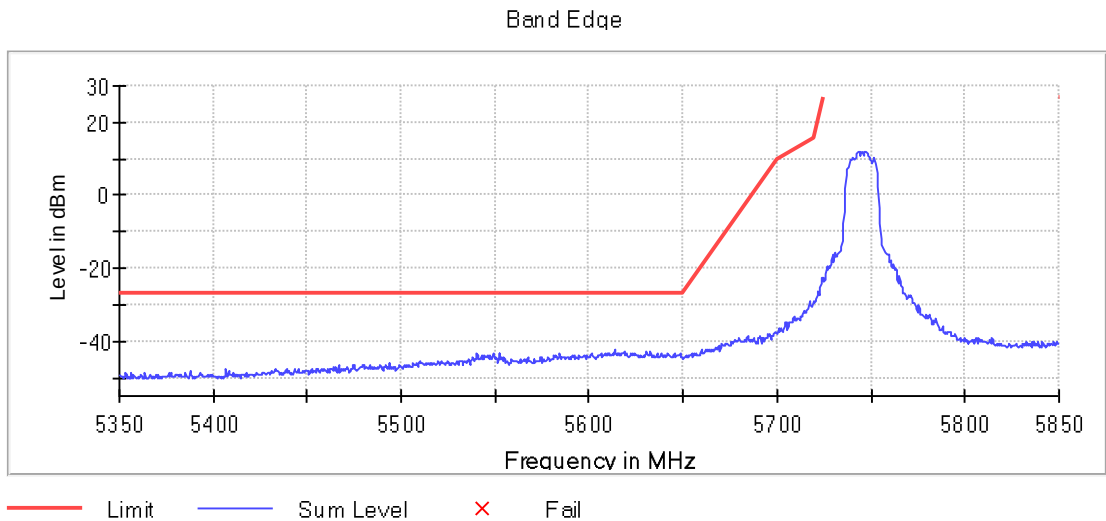
Frequency MHz = 5700.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Mode = SISO A, Measurement Point = 1

Images:



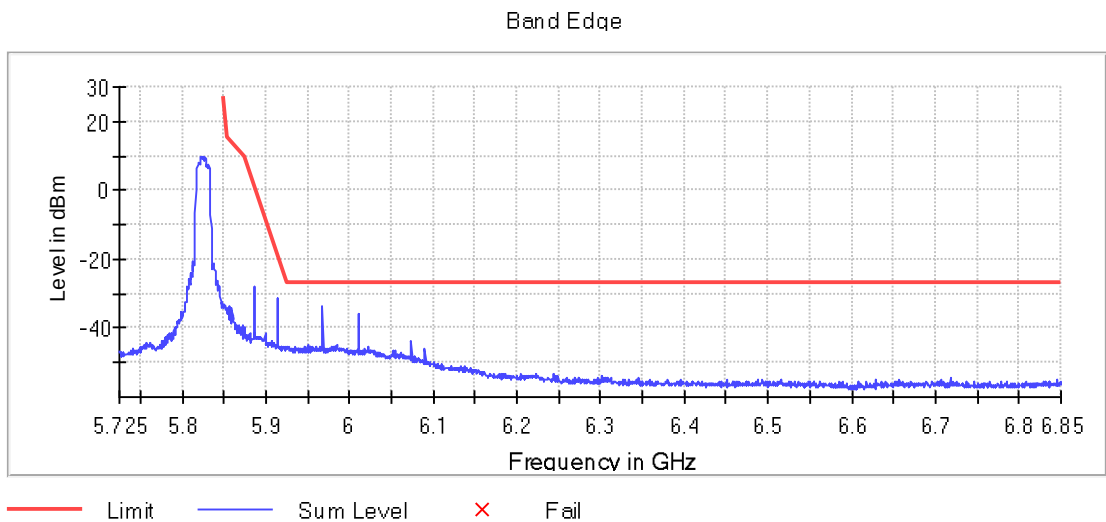
Frequency MHz = 5745.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Mode = SISO A, Measurement Point = 1

Images:



Frequency MHz = 5825.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Mode = SISO A, Measurement Point = 1

Images:



Modulation: 802.11n HT20 (OFDM MCS0)

## Results

U-NII-1

| DUT Frequency | Result |
|---------------|--------|
| 5180.000000   | PASS   |

| DUT Frequency | Result |
|---------------|--------|
| 5240.000000   | PASS   |

| Frequency (MHz) | Level (dBm) | Margin (dB) | Limit (dBm) | Result |
|-----------------|-------------|-------------|-------------|--------|
| 5092.250000     | -38.2       | 11.2        | -27.0       | PASS   |
| 5148.250000     | -44.5       | 17.5        | -27.0       | PASS   |
| 5147.750000     | -45.0       | 18.0        | -27.0       | PASS   |
| 5149.750000     | -45.7       | 18.7        | -27.0       | PASS   |
| 5149.250000     | -45.7       | 18.7        | -27.0       | PASS   |
| 5147.250000     | -46.1       | 19.1        | -27.0       | PASS   |
| 5146.250000     | -46.2       | 19.2        | -27.0       | PASS   |
| 5138.250000     | -46.3       | 19.3        | -27.0       | PASS   |
| 5148.750000     | -46.4       | 19.4        | -27.0       | PASS   |
| 5144.750000     | -46.5       | 19.5        | -27.0       | PASS   |
| 5145.250000     | -46.5       | 19.5        | -27.0       | PASS   |
| 4972.250000     | -46.5       | 19.5        | -27.0       | PASS   |
| 5145.750000     | -46.6       | 19.6        | -27.0       | PASS   |
| 5146.750000     | -46.6       | 19.6        | -27.0       | PASS   |
| 5143.750000     | -46.7       | 19.7        | -27.0       | PASS   |

| Frequency (MHz) | Level (dBm) | Margin (dB) | Limit (dBm) | Result |
|-----------------|-------------|-------------|-------------|--------|
| 5360.250000     | -51.5       | 24.5        | -27.0       | PASS   |
| 5350.750000     | -51.6       | 24.6        | -27.0       | PASS   |
| 5361.250000     | -51.6       | 24.6        | -27.0       | PASS   |
| 5367.750000     | -51.7       | 24.7        | -27.0       | PASS   |
| 5364.250000     | -51.9       | 24.9        | -27.0       | PASS   |
| 5367.250000     | -52.0       | 25.0        | -27.0       | PASS   |
| 5351.750000     | -52.0       | 25.0        | -27.0       | PASS   |
| 5366.750000     | -52.0       | 25.0        | -27.0       | PASS   |
| 5366.250000     | -52.2       | 25.2        | -27.0       | PASS   |
| 5377.250000     | -52.2       | 25.2        | -27.0       | PASS   |
| 5357.750000     | -52.2       | 25.2        | -27.0       | PASS   |
| 5352.250000     | -52.3       | 25.3        | -27.0       | PASS   |
| 5351.250000     | -52.3       | 25.3        | -27.0       | PASS   |
| 5359.750000     | -52.3       | 25.3        | -27.0       | PASS   |
| 5356.250000     | -52.4       | 25.4        | -27.0       | PASS   |

U-NII-2A

| DUT Frequency | Result |
|---------------|--------|
| 5260.000000   | PASS   |

| DUT Frequency | Result |
|---------------|--------|
| 5320.000000   | PASS   |

| Frequency (MHz) | Level (dBm) | Margin (dB) | Limit (dBm) | Result |
|-----------------|-------------|-------------|-------------|--------|
| 5143.750000     | -48.3       | 21.3        | -27.0       | PASS   |
| 5146.750000     | -48.4       | 21.4        | -27.0       | PASS   |
| 5148.250000     | -48.4       | 21.4        | -27.0       | PASS   |
| 5144.750000     | -48.7       | 21.7        | -27.0       | PASS   |
| 5148.750000     | -48.9       | 21.9        | -27.0       | PASS   |
| 5133.750000     | -49.0       | 22.0        | -27.0       | PASS   |
| 5143.250000     | -49.0       | 22.0        | -27.0       | PASS   |
| 5135.750000     | -49.0       | 22.0        | -27.0       | PASS   |
| 5147.750000     | -49.1       | 22.1        | -27.0       | PASS   |
| 5145.250000     | -49.1       | 22.1        | -27.0       | PASS   |
| 5144.250000     | -49.1       | 22.1        | -27.0       | PASS   |
| 5130.250000     | -49.1       | 22.1        | -27.0       | PASS   |
| 5149.750000     | -49.1       | 22.1        | -27.0       | PASS   |
| 5140.250000     | -49.1       | 22.1        | -27.0       | PASS   |
| 5137.750000     | -49.1       | 22.1        | -27.0       | PASS   |

| Frequency (MHz) | Level (dBm) | Margin (dB) | Limit (dBm) | Result |
|-----------------|-------------|-------------|-------------|--------|
| 5351.250000     | -45.1       | 18.1        | -27.0       | PASS   |
| 5389.250000     | -45.4       | 18.4        | -27.0       | PASS   |
| 5353.250000     | -45.5       | 18.5        | -27.0       | PASS   |
| 5352.750000     | -45.5       | 18.5        | -27.0       | PASS   |
| 5350.750000     | -45.6       | 18.6        | -27.0       | PASS   |
| 5350.250000     | -45.6       | 18.6        | -27.0       | PASS   |
| 5364.250000     | -45.6       | 18.6        | -27.0       | PASS   |
| 5369.250000     | -45.7       | 18.7        | -27.0       | PASS   |
| 5355.250000     | -45.7       | 18.7        | -27.0       | PASS   |
| 5388.750000     | -45.8       | 18.8        | -27.0       | PASS   |
| 5352.250000     | -45.8       | 18.8        | -27.0       | PASS   |
| 5354.250000     | -45.9       | 18.9        | -27.0       | PASS   |
| 5351.750000     | -45.9       | 18.9        | -27.0       | PASS   |
| 5374.250000     | -46.0       | 19.0        | -27.0       | PASS   |
| 5357.250000     | -46.0       | 19.0        | -27.0       | PASS   |



## U-NII-2C

| DUT Frequency | Result |
|---------------|--------|
| 5500.000000   | PASS   |

| DUT Frequency | Result |
|---------------|--------|
| 5700.000000   | PASS   |

| Frequency (MHz) | Level (dBm) | Margin (dB) | Limit (dBm) | Result |
|-----------------|-------------|-------------|-------------|--------|
| 5442.750000     | -43.3       | 16.3        | -27.0       | PASS   |
| 5436.750000     | -43.4       | 16.4        | -27.0       | PASS   |
| 5441.750000     | -43.5       | 16.5        | -27.0       | PASS   |
| 5438.250000     | -43.8       | 16.8        | -27.0       | PASS   |
| 5436.250000     | -44.0       | 17.0        | -27.0       | PASS   |
| 5429.750000     | -44.0       | 17.0        | -27.0       | PASS   |
| 5452.750000     | -44.0       | 17.0        | -27.0       | PASS   |
| 5439.250000     | -44.1       | 17.1        | -27.0       | PASS   |
| 5428.250000     | -44.1       | 17.1        | -27.0       | PASS   |
| 5430.250000     | -44.2       | 17.2        | -27.0       | PASS   |
| 5442.250000     | -44.2       | 17.2        | -27.0       | PASS   |
| 5437.750000     | -44.2       | 17.2        | -27.0       | PASS   |
| 5428.750000     | -44.2       | 17.2        | -27.0       | PASS   |
| 5433.750000     | -44.3       | 17.3        | -27.0       | PASS   |
| 5462.250000     | -44.3       | 17.3        | -27.0       | PASS   |

| Frequency (MHz) | Level (dBm) | Margin (dB) | Limit (dBm) | Result |
|-----------------|-------------|-------------|-------------|--------|
| 5725.250000     | -46.4       | 19.4        | -27.0       | PASS   |
| 5725.750000     | -49.4       | 22.4        | -27.0       | PASS   |
| 5728.750000     | -49.7       | 22.7        | -27.0       | PASS   |
| 5728.250000     | -50.1       | 23.1        | -27.0       | PASS   |
| 5731.750000     | -50.2       | 23.2        | -27.0       | PASS   |
| 5733.750000     | -50.3       | 23.3        | -27.0       | PASS   |
| 5727.250000     | -50.4       | 23.4        | -27.0       | PASS   |
| 5729.750000     | -50.6       | 23.6        | -27.0       | PASS   |
| 5762.250000     | -50.6       | 23.6        | -27.0       | PASS   |
| 5726.750000     | -50.6       | 23.6        | -27.0       | PASS   |
| 5763.250000     | -50.8       | 23.8        | -27.0       | PASS   |
| 5768.750000     | -50.8       | 23.8        | -27.0       | PASS   |
| 5745.750000     | -50.9       | 23.9        | -27.0       | PASS   |
| 5726.250000     | -51.0       | 24.0        | -27.0       | PASS   |
| 5730.250000     | -51.0       | 24.0        | -27.0       | PASS   |

## U-NII-3

| DUT Frequency | Result |
|---------------|--------|
| 5745.000000   | PASS   |

| DUT Frequency | Result |
|---------------|--------|
| 5825.000000   | PASS   |

| Frequency (MHz) | Level (dBm) | Margin (dB) | Limit (dBm) | Result |
|-----------------|-------------|-------------|-------------|--------|
| 5619.250000     | -44.4       | 17.4        | -27.0       | PASS   |
| 5610.750000     | -44.6       | 17.6        | -27.0       | PASS   |
| 5623.250000     | -44.7       | 17.7        | -27.0       | PASS   |
| 5641.250000     | -44.7       | 17.7        | -27.0       | PASS   |
| 5612.750000     | -44.8       | 17.8        | -27.0       | PASS   |
| 5645.750000     | -44.8       | 17.8        | -27.0       | PASS   |
| 5615.750000     | -44.8       | 17.8        | -27.0       | PASS   |
| 5622.250000     | -44.8       | 17.8        | -27.0       | PASS   |
| 5649.250000     | -44.9       | 17.9        | -27.0       | PASS   |
| 5610.250000     | -44.9       | 17.9        | -27.0       | PASS   |
| 5616.250000     | -45.0       | 18.0        | -27.0       | PASS   |
| 5635.250000     | -45.0       | 18.0        | -27.0       | PASS   |
| 5628.750000     | -45.1       | 18.1        | -27.0       | PASS   |
| 5618.250000     | -45.1       | 18.1        | -27.0       | PASS   |
| 5617.750000     | -45.1       | 18.1        | -27.0       | PASS   |

| Frequency (MHz) | Level (dBm) | Margin (dB) | Limit (dBm) | Result |
|-----------------|-------------|-------------|-------------|--------|
| 5987.750000     | -47.2       | 20.2        | -27.0       | PASS   |
| 5959.250000     | -47.3       | 20.3        | -27.0       | PASS   |
| 5982.750000     | -47.4       | 20.4        | -27.0       | PASS   |
| 5966.250000     | -47.5       | 20.5        | -27.0       | PASS   |
| 5973.750000     | -47.6       | 20.6        | -27.0       | PASS   |
| 5925.250000     | -47.7       | 20.7        | -27.0       | PASS   |
| 5978.750000     | -47.8       | 20.8        | -27.0       | PASS   |
| 5995.250000     | -47.8       | 20.8        | -27.0       | PASS   |
| 5960.750000     | -47.8       | 20.8        | -27.0       | PASS   |
| 5977.750000     | -47.8       | 20.8        | -27.0       | PASS   |
| 6002.250000     | -47.9       | 20.9        | -27.0       | PASS   |
| 5928.750000     | -47.9       | 20.9        | -27.0       | PASS   |
| 5978.250000     | -47.9       | 20.9        | -27.0       | PASS   |
| 5979.250000     | -47.9       | 20.9        | -27.0       | PASS   |
| 5939.250000     | -47.9       | 20.9        | -27.0       | PASS   |

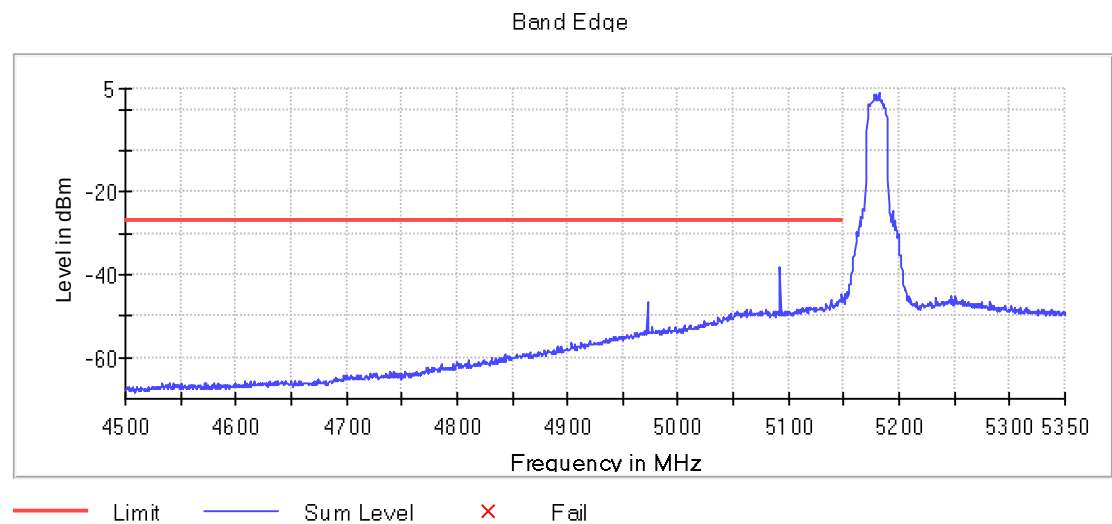
## Verdict

Pass

Attachments

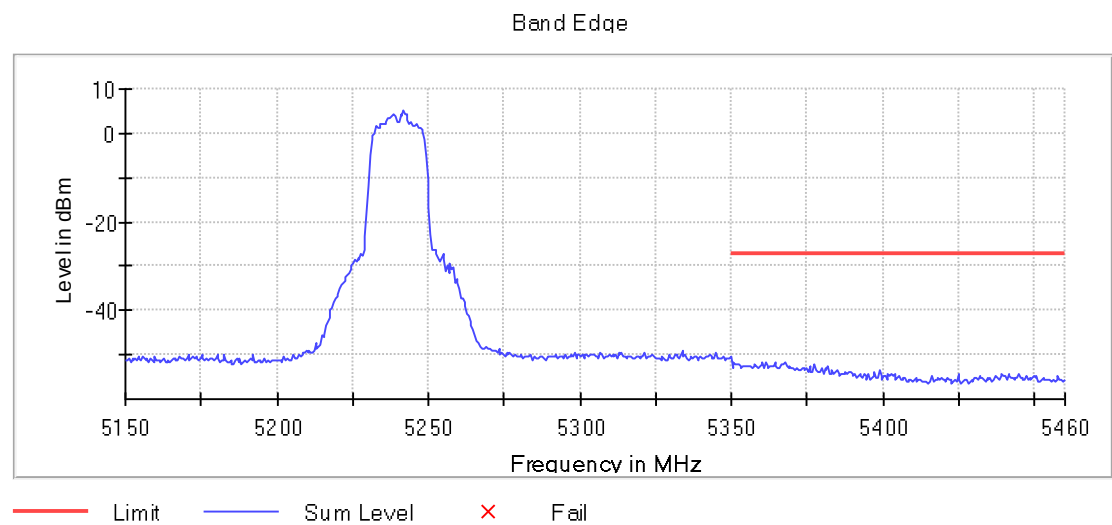
Frequency MHz = 5180.00000, Modulation = 802.11n HT20 (OFDM MCS0), Mode = SISO A, Measurement Point = 1

Images:



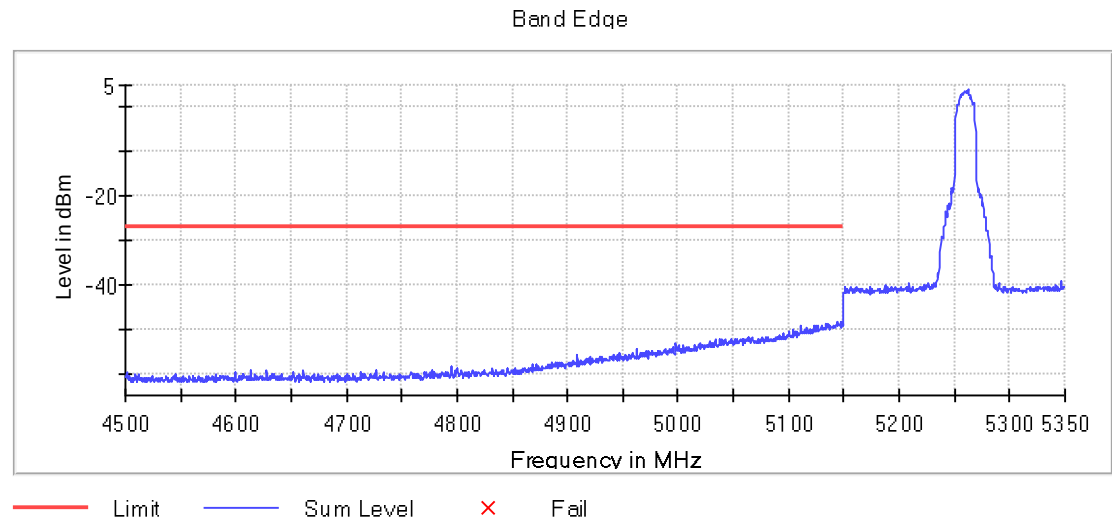
Frequency MHz = 5240.00000, Modulation = 802.11n HT20 (OFDM MCS0), Mode = SISO A, Measurement Point = 1

Images:



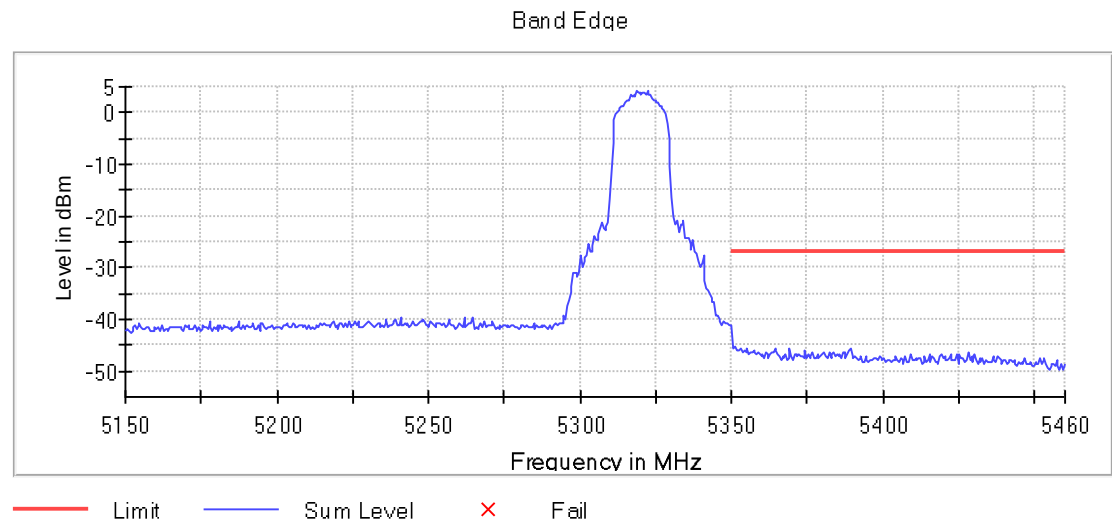
Frequency MHz = 5260.00000, Modulation = 802.11n HT20 (OFDM MCS0), Mode = SISO A, Measurement Point = 1

Images:



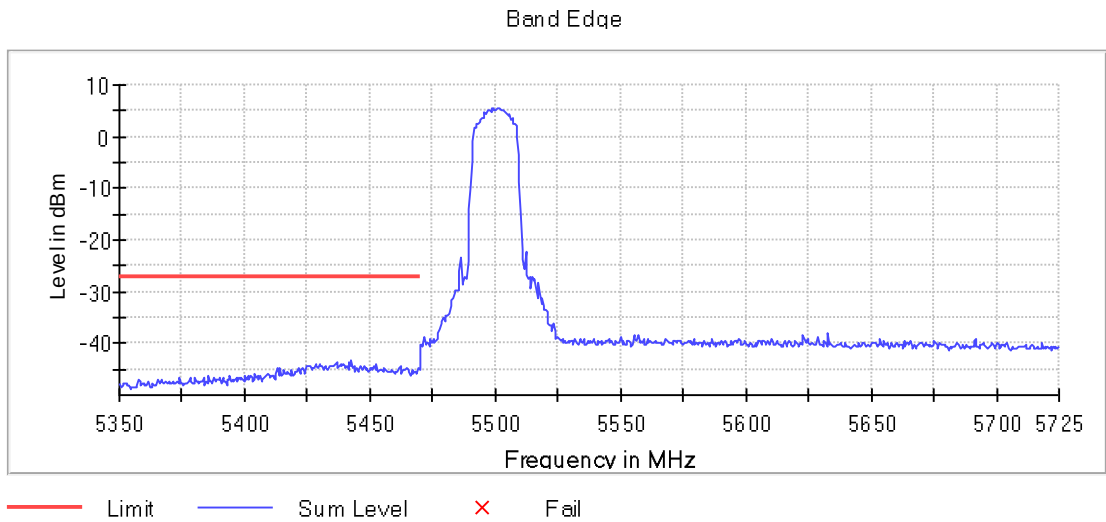
Frequency MHz = 5320.00000, Modulation = 802.11n HT20 (OFDM MCS0), Mode = SISO A, Measurement Point = 1

Images:



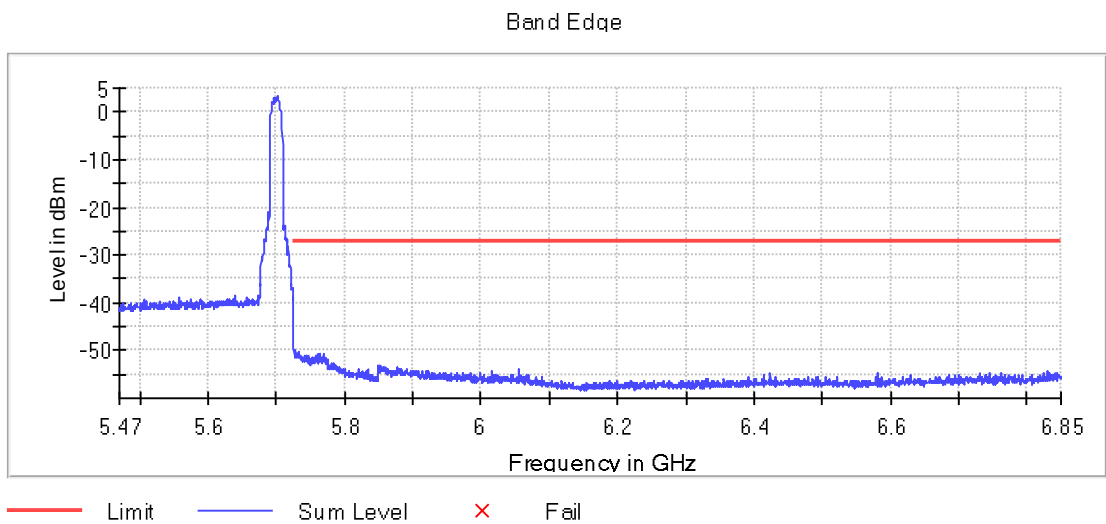
Frequency MHz = 5500.00000, Modulation = 802.11n HT20 (OFDM MCS0), Mode = SISO A, Measurement Point = 1

Images:



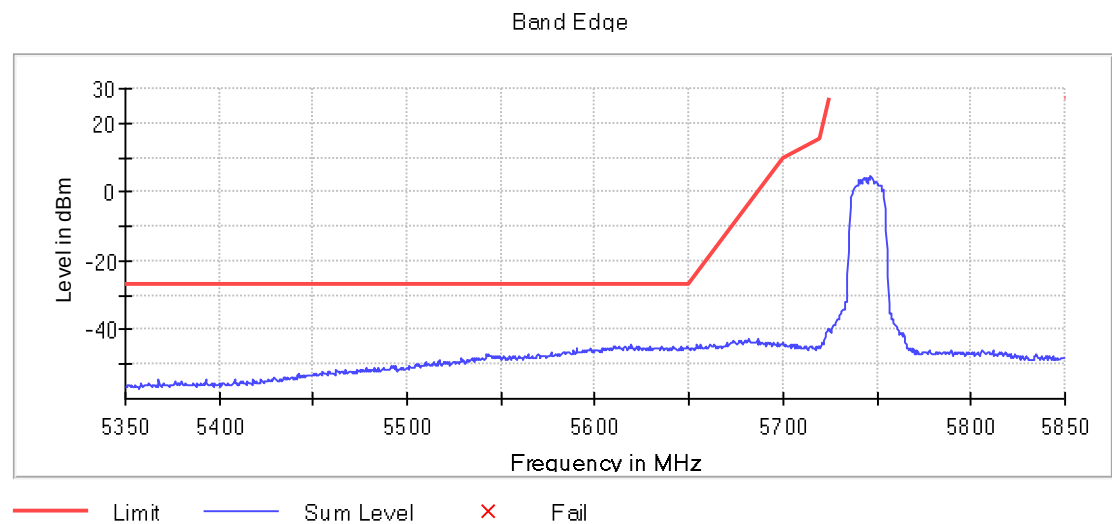
Frequency MHz = 5700.00000, Modulation = 802.11n HT20 (OFDM MCS0), Mode = SISO A, Measurement Point = 1

Images:



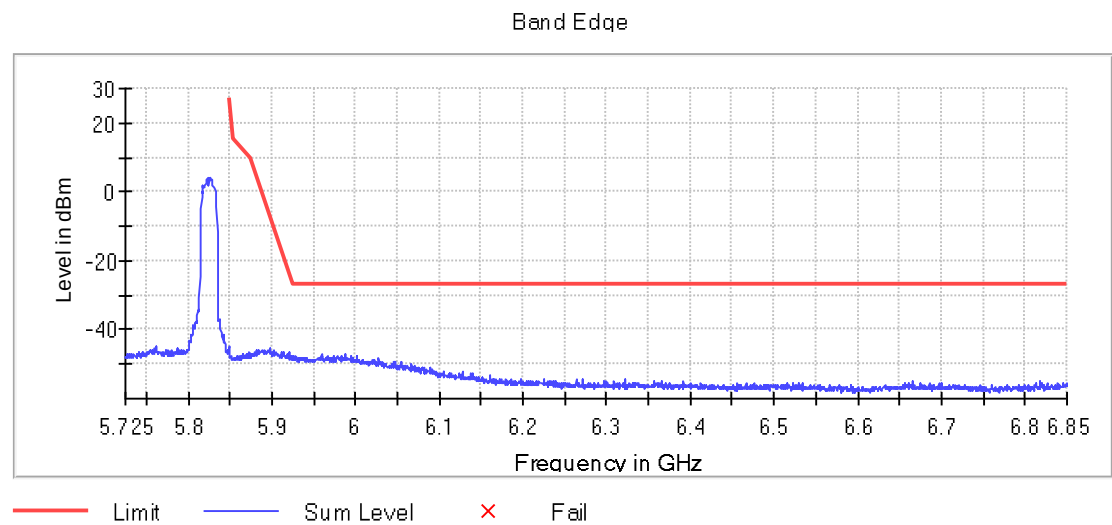
Frequency MHz = 5745.00000, Modulation = 802.11n HT20 (OFDM MCS0), Mode = SISO A, Measurement Point = 1

Images:



Frequency MHz = 5825.00000, Modulation = 802.11n HT20 (OFDM MCS0), Mode = SISO A, Measurement Point = 1

Images:



Modulation: 802.11n HT40 (OFDM MCS0)

## Results

U-NII-1

| DUT Frequency | Result |
|---------------|--------|
| 5190.000000   | PASS   |

| DUT Frequency | Result |
|---------------|--------|
| 5230.000000   | PASS   |

| Frequency (MHz) | Level (dBm) | Margin (dB) | Limit (dBm) | Result |
|-----------------|-------------|-------------|-------------|--------|
| 5118.250000     | -39.9       | 12.9        | -27.0       | PASS   |
| 5148.750000     | -42.8       | 15.8        | -27.0       | PASS   |
| 5149.750000     | -43.2       | 16.2        | -27.0       | PASS   |
| 5149.250000     | -44.0       | 17.0        | -27.0       | PASS   |
| 5148.250000     | -44.3       | 17.3        | -27.0       | PASS   |
| 5146.250000     | -44.3       | 17.3        | -27.0       | PASS   |
| 5147.750000     | -45.3       | 18.3        | -27.0       | PASS   |
| 5147.250000     | -46.1       | 19.1        | -27.0       | PASS   |
| 5146.750000     | -46.3       | 19.3        | -27.0       | PASS   |
| 5144.750000     | -46.5       | 19.5        | -27.0       | PASS   |
| 5145.750000     | -46.7       | 19.7        | -27.0       | PASS   |
| 5145.250000     | -47.0       | 20.0        | -27.0       | PASS   |
| 5144.250000     | -47.7       | 20.7        | -27.0       | PASS   |
| 5143.750000     | -48.1       | 21.1        | -27.0       | PASS   |
| 5142.750000     | -48.6       | 21.6        | -27.0       | PASS   |

| Frequency (MHz) | Level (dBm) | Margin (dB) | Limit (dBm) | Result |
|-----------------|-------------|-------------|-------------|--------|
| 5357.750000     | -51.3       | 24.3        | -27.0       | PASS   |
| 5351.750000     | -51.4       | 24.4        | -27.0       | PASS   |
| 5358.750000     | -51.4       | 24.4        | -27.0       | PASS   |
| 5361.750000     | -51.6       | 24.6        | -27.0       | PASS   |
| 5356.750000     | -51.7       | 24.7        | -27.0       | PASS   |
| 5355.250000     | -51.8       | 24.8        | -27.0       | PASS   |
| 5370.250000     | -51.9       | 24.9        | -27.0       | PASS   |
| 5356.250000     | -52.0       | 25.0        | -27.0       | PASS   |
| 5352.750000     | -52.0       | 25.0        | -27.0       | PASS   |
| 5354.750000     | -52.1       | 25.1        | -27.0       | PASS   |
| 5364.250000     | -52.1       | 25.1        | -27.0       | PASS   |
| 5360.750000     | -52.2       | 25.2        | -27.0       | PASS   |
| 5371.750000     | -52.2       | 25.2        | -27.0       | PASS   |
| 5363.750000     | -52.2       | 25.2        | -27.0       | PASS   |
| 5352.250000     | -52.2       | 25.2        | -27.0       | PASS   |

U-NII-2A

| DUT Frequency | Result |
|---------------|--------|
| 5270.000000   | PASS   |

| DUT Frequency | Result |
|---------------|--------|
| 5310.000000   | PASS   |

| Frequency (MHz) | Level (dBm) | Margin (dB) | Limit (dBm) | Result |
|-----------------|-------------|-------------|-------------|--------|
| 5136.250000     | -52.9       | 25.9        | -27.0       | PASS   |
| 5144.250000     | -52.9       | 25.9        | -27.0       | PASS   |
| 5141.750000     | -53.0       | 26.0        | -27.0       | PASS   |
| 5141.250000     | -53.1       | 26.1        | -27.0       | PASS   |
| 5147.250000     | -53.2       | 26.2        | -27.0       | PASS   |
| 5140.250000     | -53.3       | 26.3        | -27.0       | PASS   |
| 5149.250000     | -53.3       | 26.3        | -27.0       | PASS   |
| 5124.750000     | -53.3       | 26.3        | -27.0       | PASS   |
| 5127.750000     | -53.3       | 26.3        | -27.0       | PASS   |
| 5137.750000     | -53.4       | 26.4        | -27.0       | PASS   |
| 5135.750000     | -53.4       | 26.4        | -27.0       | PASS   |
| 5144.750000     | -53.4       | 26.4        | -27.0       | PASS   |
| 5130.250000     | -53.5       | 26.5        | -27.0       | PASS   |
| 5145.250000     | -53.5       | 26.5        | -27.0       | PASS   |
| 5129.750000     | -53.5       | 26.5        | -27.0       | PASS   |

| Frequency (MHz) | Level (dBm) | Margin (dB) | Limit (dBm) | Result |
|-----------------|-------------|-------------|-------------|--------|
| 5350.250000     | -33.0       | 6.0         | -27.0       | PASS   |
| 5351.250000     | -34.0       | 7.0         | -27.0       | PASS   |
| 5351.750000     | -35.3       | 8.3         | -27.0       | PASS   |
| 5353.750000     | -35.7       | 8.7         | -27.0       | PASS   |
| 5352.250000     | -35.7       | 8.7         | -27.0       | PASS   |
| 5353.250000     | -36.9       | 9.9         | -27.0       | PASS   |
| 5350.750000     | -37.1       | 10.1        | -27.0       | PASS   |
| 5354.750000     | -37.2       | 10.2        | -27.0       | PASS   |
| 5354.250000     | -38.5       | 11.5        | -27.0       | PASS   |
| 5352.750000     | -38.8       | 11.8        | -27.0       | PASS   |
| 5355.250000     | -39.0       | 12.0        | -27.0       | PASS   |
| 5356.750000     | -39.5       | 12.5        | -27.0       | PASS   |
| 5355.750000     | -40.0       | 13.0        | -27.0       | PASS   |
| 5357.250000     | -40.0       | 13.0        | -27.0       | PASS   |
| 5356.250000     | -40.4       | 13.4        | -27.0       | PASS   |

## U-NII-2C

| DUT Frequency | Result |
|---------------|--------|
| 5510.000000   | PASS   |

| DUT Frequency | Result |
|---------------|--------|
| 5670.000000   | PASS   |

| Frequency (MHz) | Level (dBm) | Margin (dB) | Limit (dBm) | Result |
|-----------------|-------------|-------------|-------------|--------|
| 5469.750000     | -38.9       | 11.9        | -27.0       | PASS   |
| 5468.750000     | -38.9       | 11.9        | -27.0       | PASS   |
| 5469.250000     | -39.0       | 12.0        | -27.0       | PASS   |
| 5468.250000     | -39.7       | 12.7        | -27.0       | PASS   |
| 5466.750000     | -40.7       | 13.7        | -27.0       | PASS   |
| 5466.250000     | -41.8       | 14.8        | -27.0       | PASS   |
| 5467.250000     | -41.8       | 14.8        | -27.0       | PASS   |
| 5467.750000     | -42.0       | 15.0        | -27.0       | PASS   |
| 5465.750000     | -42.6       | 15.6        | -27.0       | PASS   |
| 5463.750000     | -42.7       | 15.7        | -27.0       | PASS   |
| 5464.750000     | -43.0       | 16.0        | -27.0       | PASS   |
| 5465.250000     | -43.5       | 16.5        | -27.0       | PASS   |
| 5463.250000     | -43.7       | 16.7        | -27.0       | PASS   |
| 5464.250000     | -43.8       | 16.8        | -27.0       | PASS   |
| 5461.750000     | -44.0       | 17.0        | -27.0       | PASS   |

| Frequency (MHz) | Level (dBm) | Margin (dB) | Limit (dBm) | Result |
|-----------------|-------------|-------------|-------------|--------|
| 5726.250000     | -49.7       | 22.7        | -27.0       | PASS   |
| 5750.250000     | -49.9       | 22.9        | -27.0       | PASS   |
| 5726.750000     | -50.1       | 23.1        | -27.0       | PASS   |
| 5725.750000     | -50.3       | 23.3        | -27.0       | PASS   |
| 5725.250000     | -50.5       | 23.5        | -27.0       | PASS   |
| 5746.250000     | -50.5       | 23.5        | -27.0       | PASS   |
| 5745.250000     | -50.6       | 23.6        | -27.0       | PASS   |
| 5741.750000     | -50.7       | 23.7        | -27.0       | PASS   |
| 5729.250000     | -50.7       | 23.7        | -27.0       | PASS   |
| 5739.750000     | -50.8       | 23.8        | -27.0       | PASS   |
| 5728.250000     | -50.8       | 23.8        | -27.0       | PASS   |
| 5731.750000     | -50.9       | 23.9        | -27.0       | PASS   |
| 5730.250000     | -50.9       | 23.9        | -27.0       | PASS   |
| 5737.750000     | -50.9       | 23.9        | -27.0       | PASS   |
| 5747.250000     | -51.0       | 24.0        | -27.0       | PASS   |

## U-NII-3

| DUT Frequency | Result |
|---------------|--------|
| 5755.000000   | PASS   |

| DUT Frequency | Result |
|---------------|--------|
| 5795.000000   | PASS   |

| Frequency (MHz) | Level (dBm) | Margin (dB) | Limit (dBm) | Result |
|-----------------|-------------|-------------|-------------|--------|
| 5617.750000     | -45.2       | 18.2        | -27.0       | PASS   |
| 5631.750000     | -45.5       | 18.5        | -27.0       | PASS   |
| 5620.750000     | -45.5       | 18.5        | -27.0       | PASS   |
| 5617.250000     | -45.6       | 18.6        | -27.0       | PASS   |
| 5639.250000     | -45.6       | 18.6        | -27.0       | PASS   |
| 5627.250000     | -45.6       | 18.6        | -27.0       | PASS   |
| 5602.250000     | -45.7       | 18.7        | -27.0       | PASS   |
| 5618.250000     | -45.7       | 18.7        | -27.0       | PASS   |
| 5606.750000     | -45.8       | 18.8        | -27.0       | PASS   |
| 5618.750000     | -45.8       | 18.8        | -27.0       | PASS   |
| 5621.250000     | -45.9       | 18.9        | -27.0       | PASS   |
| 5615.250000     | -45.9       | 18.9        | -27.0       | PASS   |
| 5622.250000     | -46.0       | 19.0        | -27.0       | PASS   |
| 5603.750000     | -46.0       | 19.0        | -27.0       | PASS   |
| 5620.250000     | -46.0       | 19.0        | -27.0       | PASS   |

| Frequency (MHz) | Level (dBm) | Margin (dB) | Limit (dBm) | Result |
|-----------------|-------------|-------------|-------------|--------|
| 5976.750000     | -48.1       | 21.1        | -27.0       | PASS   |
| 5979.250000     | -48.1       | 21.1        | -27.0       | PASS   |
| 5984.750000     | -48.3       | 21.3        | -27.0       | PASS   |
| 5992.250000     | -48.3       | 21.3        | -27.0       | PASS   |
| 5954.250000     | -48.4       | 21.4        | -27.0       | PASS   |
| 5988.750000     | -48.4       | 21.4        | -27.0       | PASS   |
| 5995.250000     | -48.6       | 21.6        | -27.0       | PASS   |
| 5978.250000     | -48.6       | 21.6        | -27.0       | PASS   |
| 5985.250000     | -48.6       | 21.6        | -27.0       | PASS   |
| 5989.750000     | -48.6       | 21.6        | -27.0       | PASS   |
| 5993.250000     | -48.6       | 21.6        | -27.0       | PASS   |
| 5932.750000     | -48.6       | 21.6        | -27.0       | PASS   |
| 5987.250000     | -48.6       | 21.6        | -27.0       | PASS   |
| 5925.750000     | -48.6       | 21.6        | -27.0       | PASS   |
| 5987.750000     | -48.7       | 21.7        | -27.0       | PASS   |

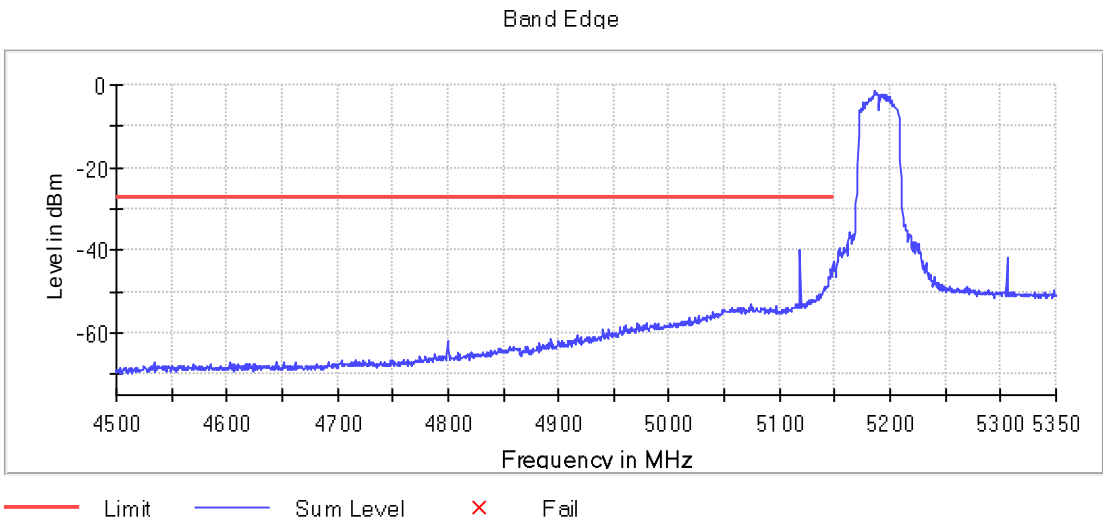
## Verdict

Pass

## Attachments

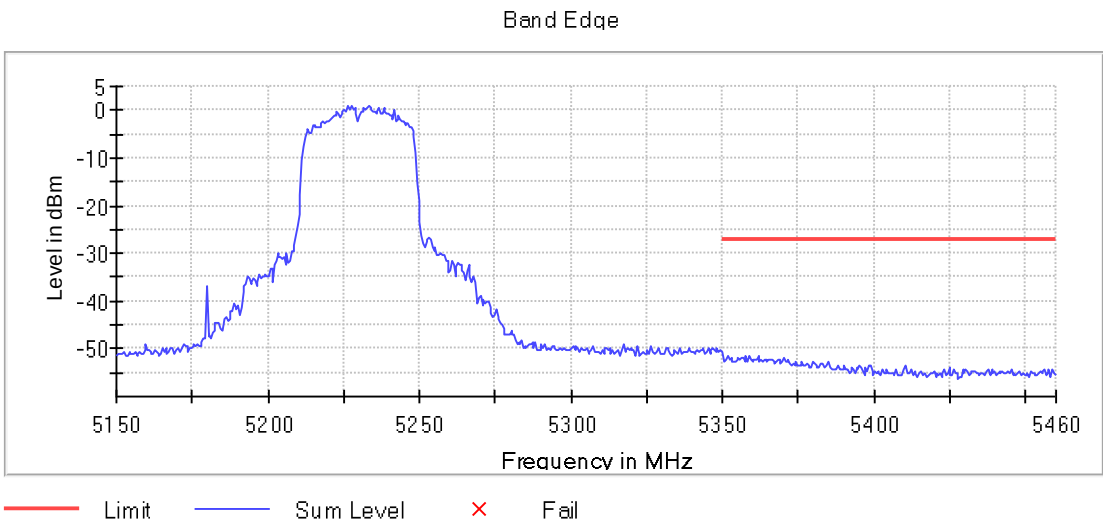
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Images:



Frequency MHz = 5230.00000, Modulation = 802.11n HT40 (OFDM MCS0), Mode = SISO A, Measurement Point = 1

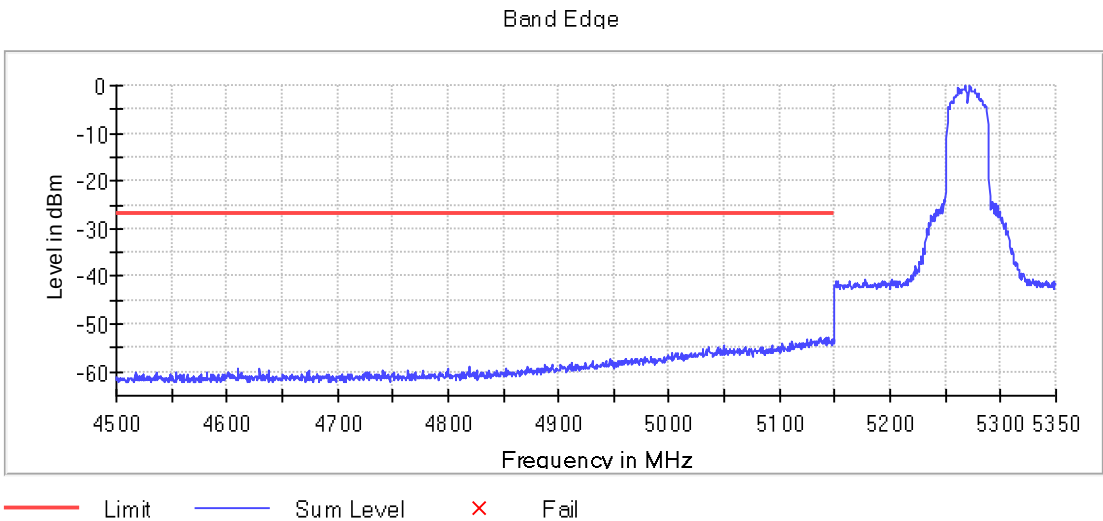
Images:





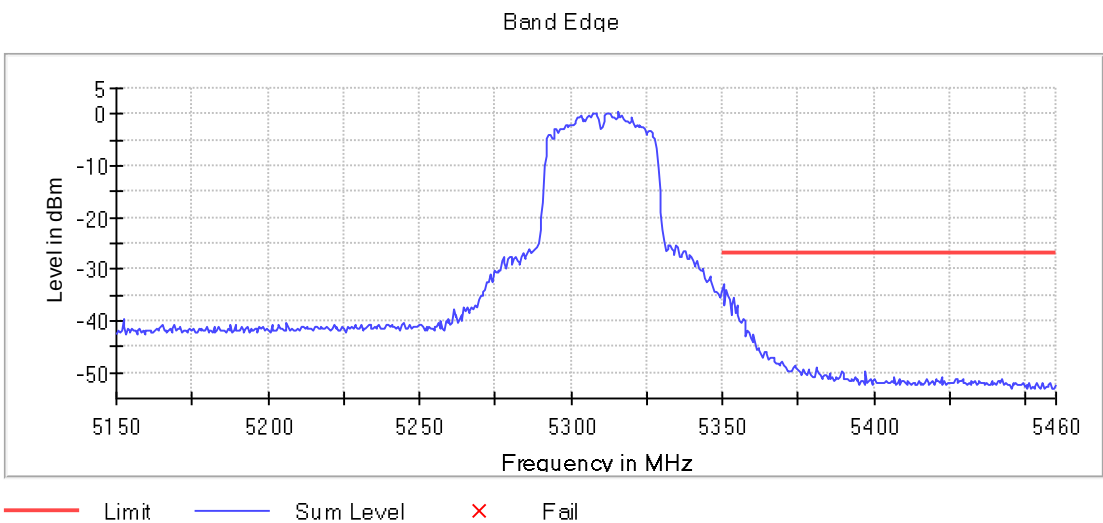
Frequency MHz = 5270.00000, Modulation = 802.11n HT40 (OFDM MCS0), Mode = SISO A, Measurement Point = 1

Images:



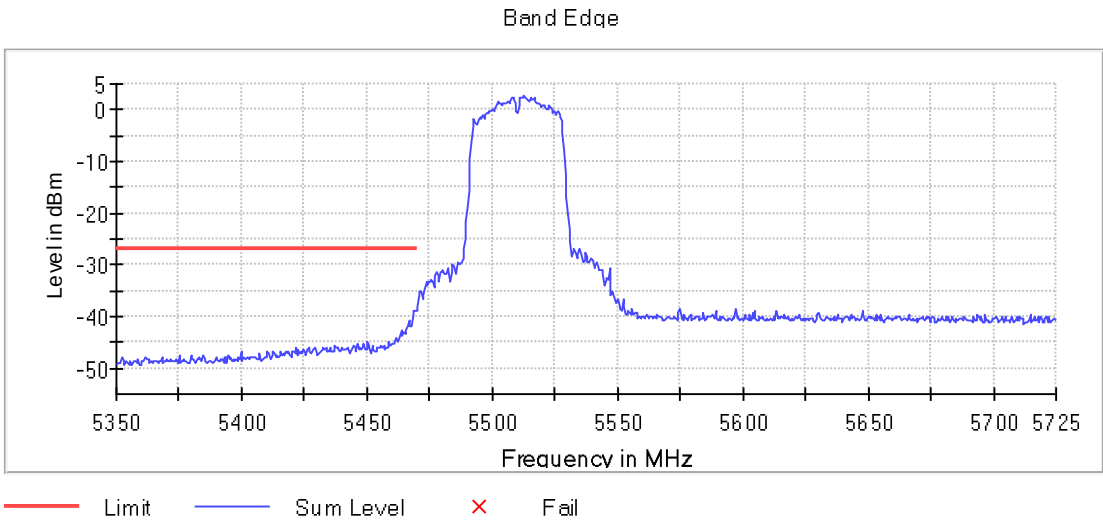
Frequency MHz = 5310.00000, Modulation = 802.11n HT40 (OFDM MCS0), Mode = SISO A, Measurement Point = 1

Images:



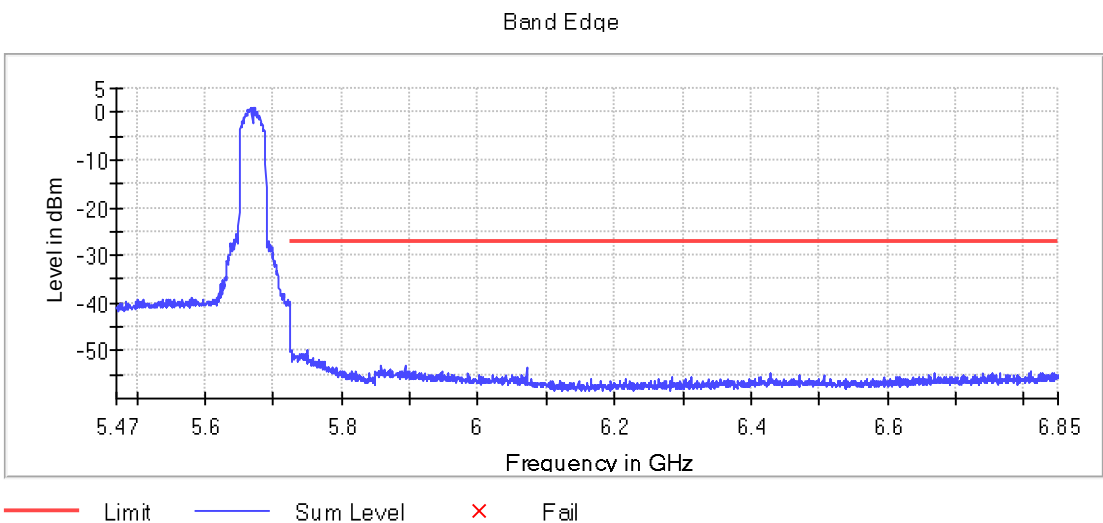
Frequency MHz = 5510.00000, Modulation = 802.11n HT40 (OFDM MCS0), Mode = SISO A, Measurement Point = 1

Images:



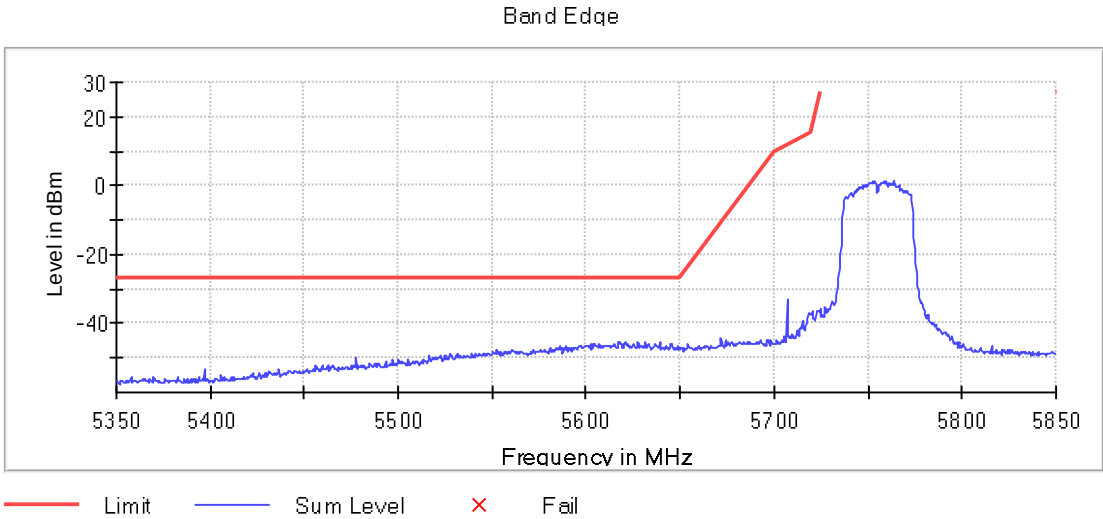
Frequency MHz = 5670.00000, Modulation = 802.11n HT40 (OFDM MCS0), Mode = SISO A, Measurement Point = 1

Images:



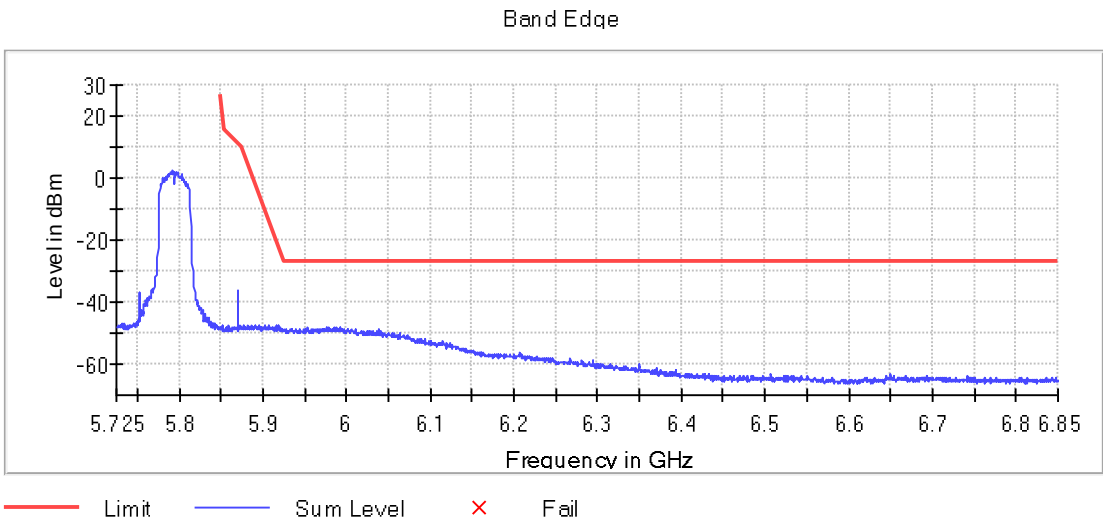
Frequency MHz = 5755.00000, Modulation = 802.11n HT40 (OFDM MCS0), Mode = SISO A, Measurement Point = 1

Images:



Frequency MHz = 5795.00000, Modulation = 802.11n HT40 (OFDM MCS0), Mode = SISO A, Measurement Point = 1

Images:



FCC 15.407 (e) / RSS-247 6.2.4.1 6 dB Emission Bandwidth

Limits

Within the 5.725-5.850 GHz and 5.850-5.895 GHz bands, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

RSS-247: For equipment operating in the band 5725-5850 MHz, the minimum 6 dB bandwidth shall be at least 500 kHz.

Modulation: 802.11a (OFDM 6 Mbit/s)

Results

| Freq (MHz) | Emission Bandwidth (MHz) |
|------------|--------------------------|
| 5745.00000 | 15.200                   |
| 5785.00000 | 15.450                   |
| 5825.00000 | 15.500                   |

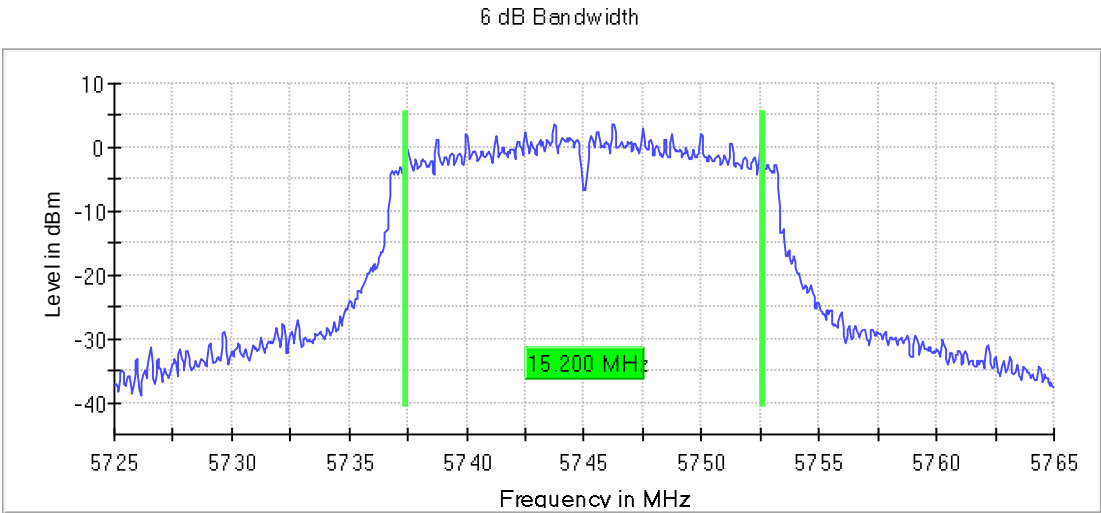
Verdict

Pass

Attachments

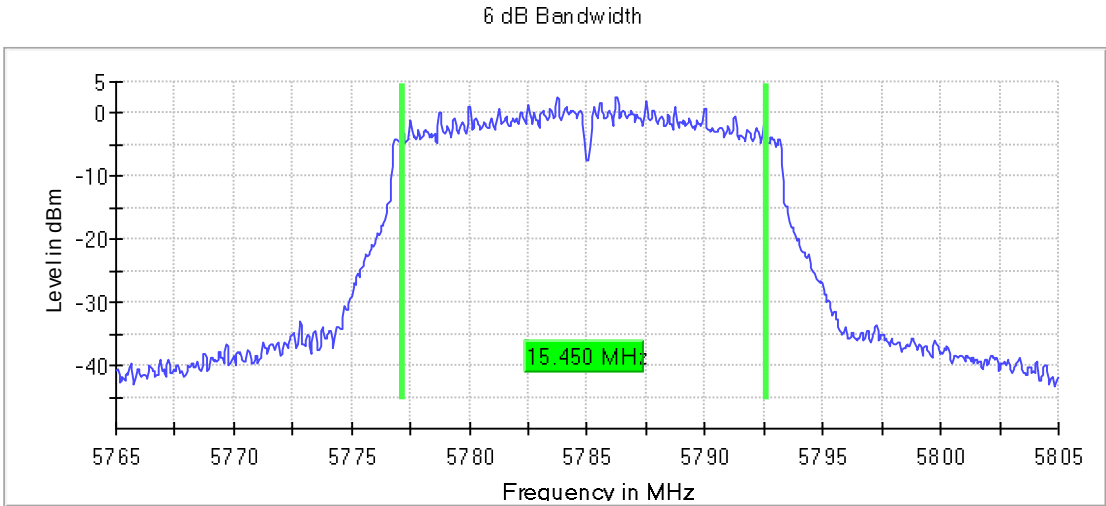
Frequency MHz = 5745.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Number of Transmission Chains = 1

Images:



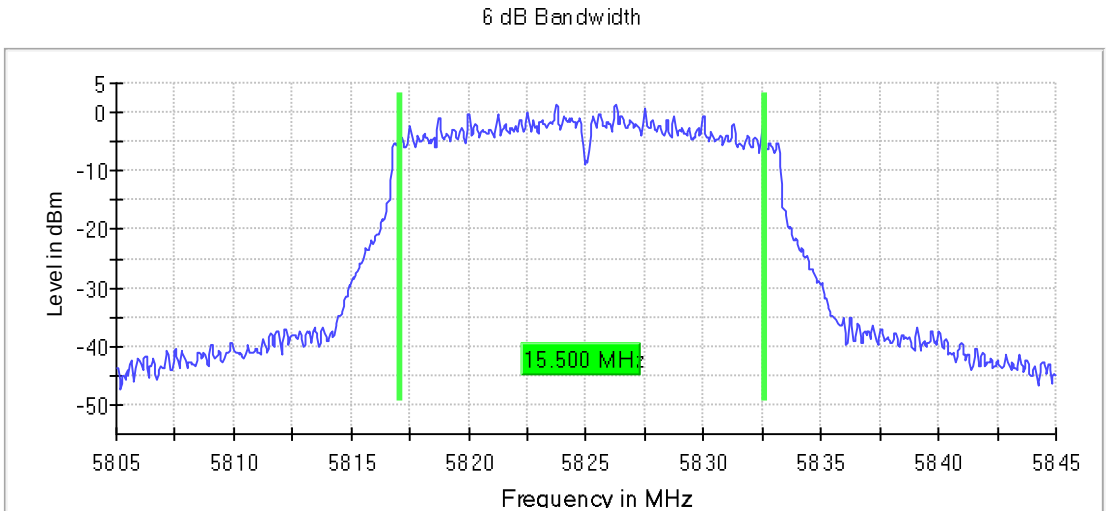
Frequency MHz = 5785.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Number of Transmission Chains = 1

Images:



Frequency MHz = 5825.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Number of Transmission Chains = 1

Images:



**Tables:**  
Spectrum Analyzer Parameters

| Setting               | Instrument Value | Target Value  |
|-----------------------|------------------|---------------|
| Start Frequency       | 5.80500 GHz      | 5.80500 GHz   |
| Stop Frequency        | 5.84500 GHz      | 5.84500 GHz   |
| Span                  | 40.000 MHz       | 40.000 MHz    |
| RBW                   | 100.000 kHz      | ~ 100.000 kHz |
| VBW                   | 300.000 kHz      | ~ 300.000 kHz |
| SweepPoints           | 800              | ~ 800         |
| SweepTime             | 56.836 $\mu$ s   | AUTO          |
| Reference Level       | 0.000 dBm        | 0.000 dBm     |
| Attenuation           | 20.000 dB        | AUTO          |
| Detector              | MaxPeak          | MaxPeak       |
| SweepCount            | 200              | 200           |
| Filter                | 3 dB             | 3 dB          |
| Trace Mode            | Max Hold         | Max Hold      |
| SweepType             | FFT              | AUTO          |
| Preamplifier          | off              | off           |
| Stablemode            | Trace            | Trace         |
| Stablevalue           | 0.30 dB          | 0.30 dB       |
| Run                   | 71 / max. 150    | max. 150      |
| Stable                | 5 / 5            | 5             |
| Max Stable Difference | 0.06 dB          | 0.30 dB       |

Modulation: 802.11n HT20 (OFDM MCS0)  
Results

| Freq (MHz) | Emission Bandwidth (MHz) |
|------------|--------------------------|
| 5745.00000 | 15.200                   |
| 5785.00000 | 15.150                   |
| 5825.00000 | 15.150                   |

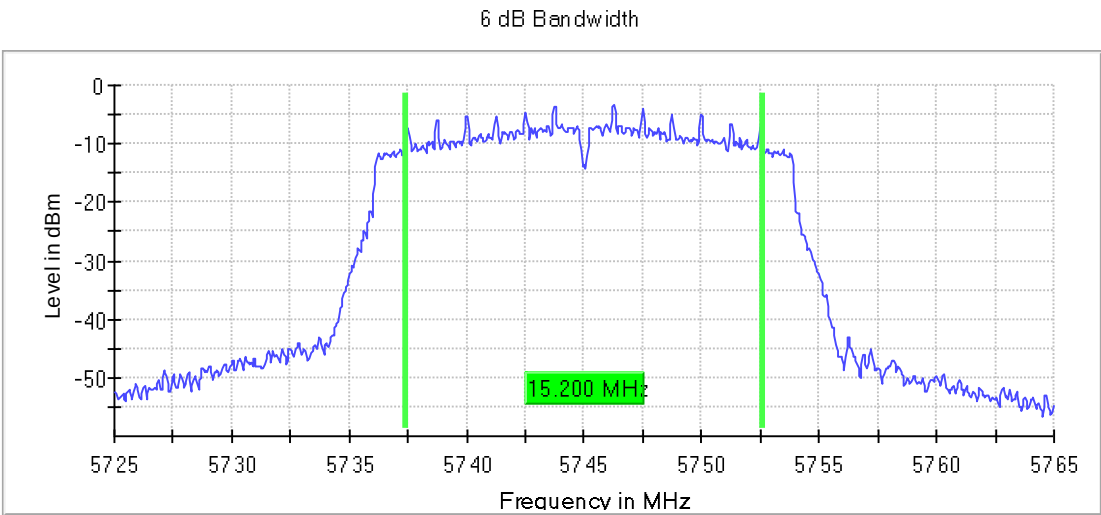
Verdict

Pass

Attachments

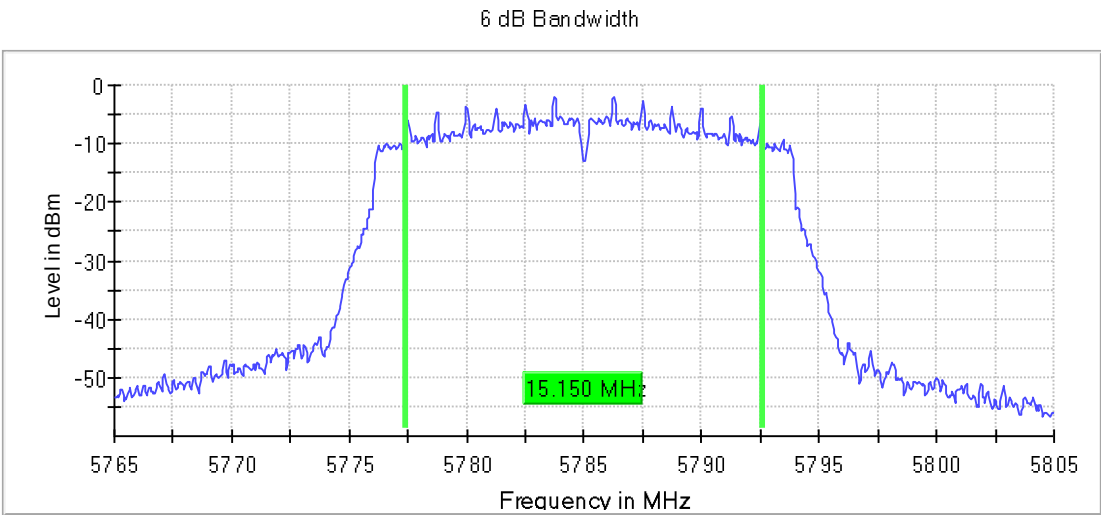
Frequency MHz = 5745.00000, Modulation = 802.11n HT20 (OFDM MCS0), Number of Transmission Chains = 1

Images:



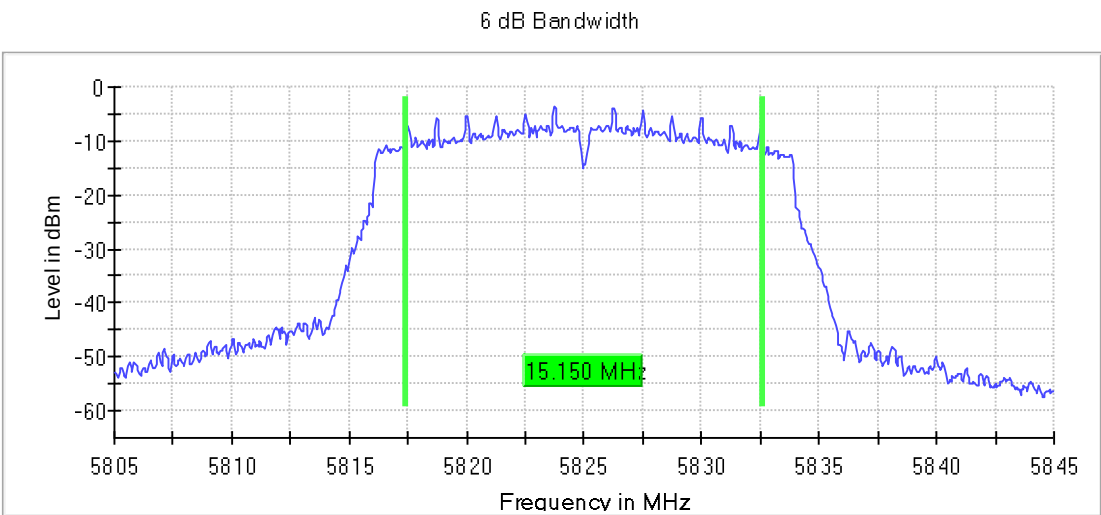
Frequency MHz = 5785.00000, Modulation = 802.11n HT20 (OFDM MCS0), Number of Transmission Chains = 1

Images:



Frequency MHz = 5825.00000, Modulation = 802.11n HT20 (OFDM MCS0), Number of Transmission Chains = 1

Images:





**Tables:**  
Spectrum Analyzer Parameters

| Setting               | Instrument Value | Target Value  |
|-----------------------|------------------|---------------|
| Start Frequency       | 5.80500 GHz      | 5.80500 GHz   |
| Stop Frequency        | 5.84500 GHz      | 5.84500 GHz   |
| Span                  | 40.000 MHz       | 40.000 MHz    |
| RBW                   | 100.000 kHz      | ~ 100.000 kHz |
| VBW                   | 300.000 kHz      | ~ 300.000 kHz |
| SweepPoints           | 800              | ~ 800         |
| SweepTime             | 56.836 $\mu$ s   | AUTO          |
| Reference Level       | 0.000 dBm        | 0.000 dBm     |
| Attenuation           | 20.000 dB        | AUTO          |
| Detector              | MaxPeak          | MaxPeak       |
| SweepCount            | 200              | 200           |
| Filter                | 3 dB             | 3 dB          |
| Trace Mode            | Max Hold         | Max Hold      |
| SweepType             | FFT              | AUTO          |
| Preamplifier          | off              | off           |
| Stablemode            | Trace            | Trace         |
| Stablevalue           | 0.30 dB          | 0.30 dB       |
| Run                   | 76 / max. 150    | max. 150      |
| Stable                | 5 / 5            | 5             |
| Max Stable Difference | 0.03 dB          | 0.30 dB       |

Modulation: 802.11n HT40 (OFDM MCS0)

Results

| Freq (MHz) | Emission Bandwidth (MHz) |
|------------|--------------------------|
| 5755.00000 | 35.200                   |
| 5795.00000 | 35.150                   |

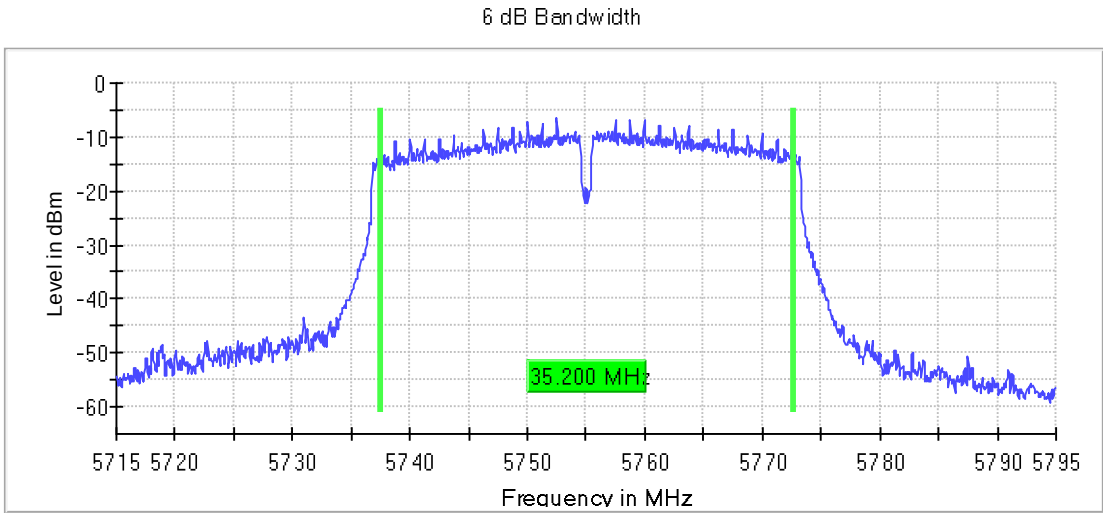
Verdict

Pass

Attachments

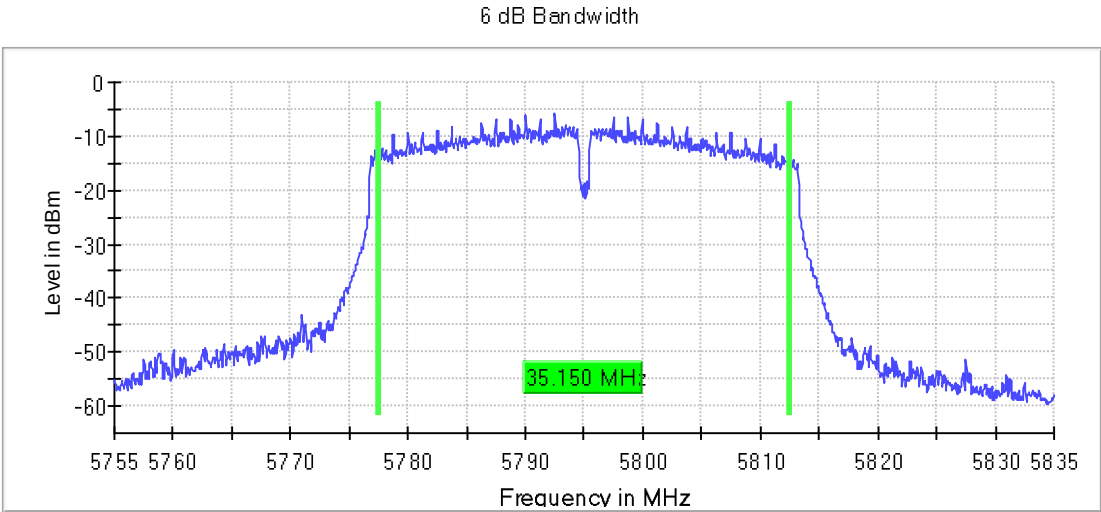
Frequency MHz = 5755.00000, Modulation = 802.11n HT40 (OFDM MCS0), Number of Transmission Chains = 1

Images:



Frequency MHz = 5795.00000, Modulation = 802.11n HT40 (OFDM MCS0), Number of Transmission Chains = 1

Images:



Tables:  
Spectrum Analyzer Parameters

| Setting               | Instrument Value | Target Value  |
|-----------------------|------------------|---------------|
| Start Frequency       | 5.75500 GHz      | 5.75500 GHz   |
| Stop Frequency        | 5.83500 GHz      | 5.83500 GHz   |
| Span                  | 80.000 MHz       | 80.000 MHz    |
| RBW                   | 100.000 kHz      | ~ 100.000 kHz |
| VBW                   | 300.000 kHz      | ~ 300.000 kHz |
| SweepPoints           | 1600             | ~ 1600        |
| Sweeptime             | 94.727 µs        | AUTO          |
| Reference Level       | 0.000 dBm        | 0.000 dBm     |
| Attenuation           | 20.000 dB        | AUTO          |
| Detector              | MaxPeak          | MaxPeak       |
| SweepCount            | 200              | 200           |
| Filter                | 3 dB             | 3 dB          |
| Trace Mode            | Max Hold         | Max Hold      |
| SweepType             | FFT              | AUTO          |
| Preamp                | off              | off           |
| Stablemode            | Trace            | Trace         |
| Stablevalue           | 0.30 dB          | 0.30 dB       |
| Run                   | 108 / max. 150   | max. 150      |
| Stable                | 5 / 5            | 5             |
| Max Stable Difference | 0.00 dB          | 0.30 dB       |

FCC 15.407 (b), 15.205 & 15.209 / RSS-Gen 8.9 & 8.10 Undesirable radiated emissions

Limits

Radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)):

| Frequency Range (MHz) | Field strength (µV/m) | Field strength (dBµV/m) | Measurement distance (m) |
|-----------------------|-----------------------|-------------------------|--------------------------|
| 0.009-0.490           | 2400/F(kHz)           | -                       | 300                      |
| 0.490-1.705           | 24000/F(kHz)          | -                       | 300                      |
| 1.705 - 30.0          | 30                    | -                       | 30                       |
| 30 - 88               | 100                   | 40                      | 3                        |
| 88 - 216              | 150                   | 43.5                    | 3                        |
| 216 - 960             | 200                   | 46                      | 3                        |
| 960 - 40000           | 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 corresponding to 20 dB above the indicated values in the table is specified when measuring with peak detector function.

UNII-1:

Modulation: 802.11a (OFDM 6 Mbit/s)

Frequency range 30 MHz – 1000 MHz

The spurious emissions below 1 GHz do not depend on the operating channel and modulation selected in the EUT.

Results

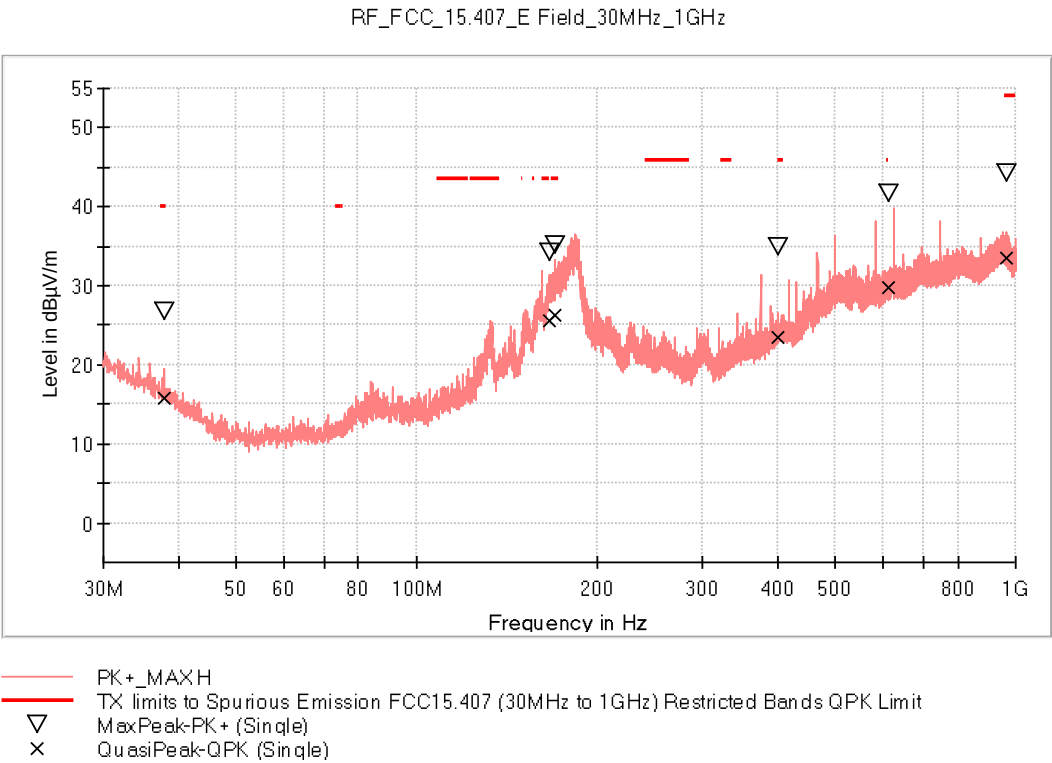
Verdict

Pass

Attachments

Frequency Range GHz = [0.03, 1], Frequency MHz = 5180.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Measurement Point = 1

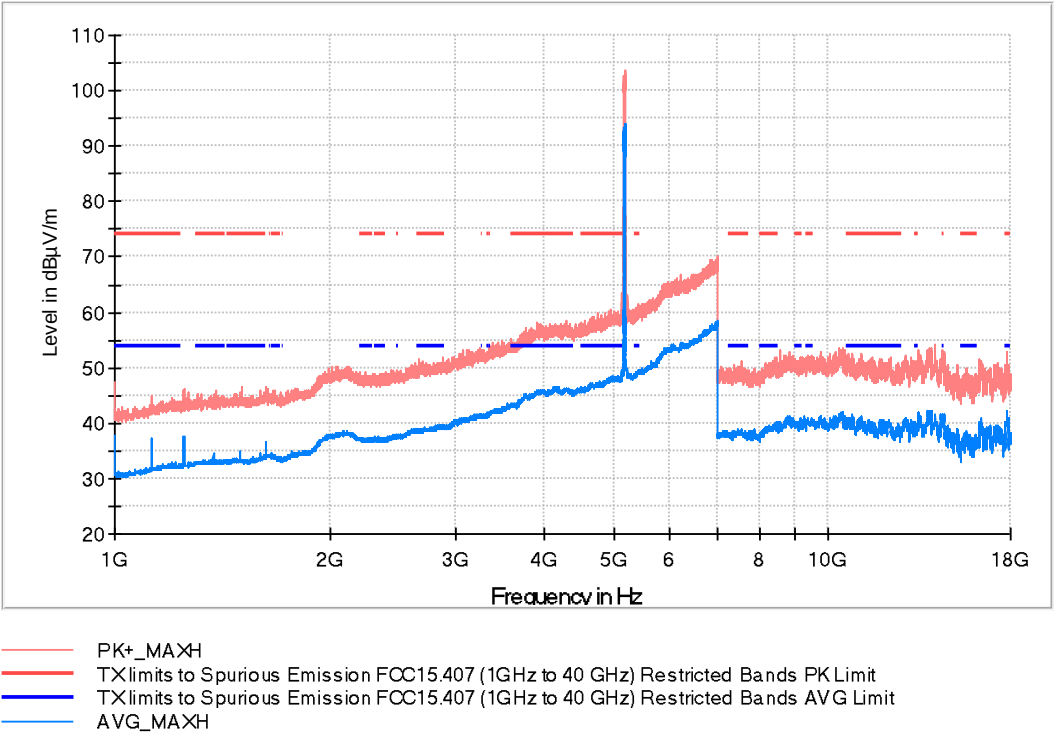
Images:



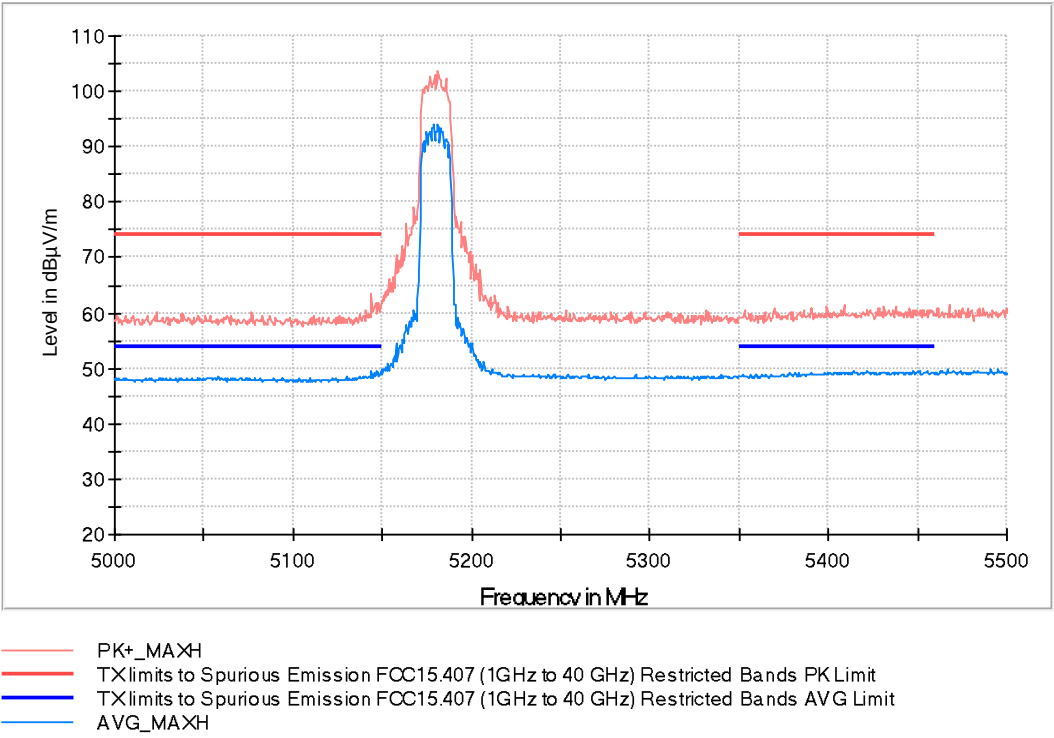
| Frequency (MHz) | MaxPeak (dBµV/m) | QuasiPeak (dBµV/m) | Pol | Margin - QPK (dB) | Limit - QPK (dBµV/m) |
|-----------------|------------------|--------------------|-----|-------------------|----------------------|
| 37.954000       | 26.8             | 15.8               | V   | 24.2              | 40.0                 |
| 167.158000      | 34.2             | 25.7               | V   | 17.8              | 43.5                 |
| 170.407500      | 35.1             | 26.3               | V   | 17.3              | 43.5                 |
| 400.152000      | 34.9             | 23.4               | H   | 22.6              | 46.0                 |
| 611.903000      | 41.8             | 29.9               | V   | 16.1              | 46.0                 |
| 963.382500      | 44.2             | 33.6               | V   | 20.4              | 54.0                 |

Frequency Range GHz = [1, 18], Frequency MHz = 5180.00000, Modulation = 802.11a (OFDM 6 Mbit/s), Measurement Point = 1

Images:

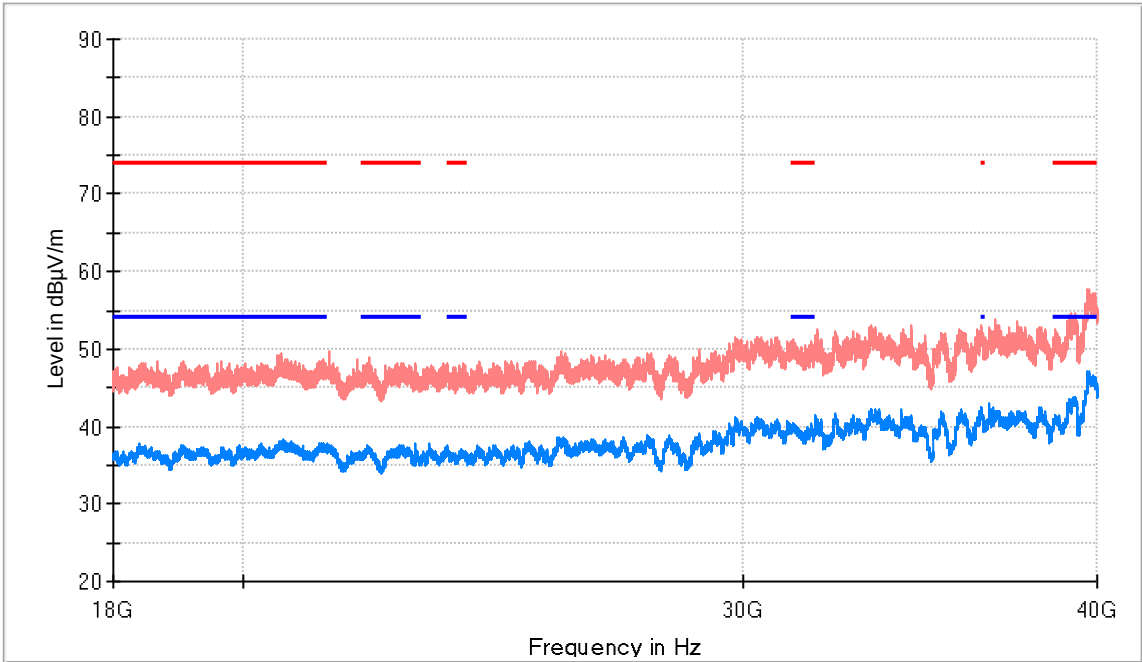


| Frequency (MHz) | PK+_MAXH (dBµV/m) | AVG_MAXH (dBµV/m) | Pol | Margin - AVG (dB) | Limit - AVG (dBµV/m) | Comment     |
|-----------------|-------------------|-------------------|-----|-------------------|----------------------|-------------|
| 1125.000000     | 44.5              | 36.6              | H   | 17.4              | 54.0                 |             |
| 5149.500000     | 62.1              | 49.7              | H   | 4.3               | 54.0                 |             |
| 5181.000000     | 103.8             | 94.1              | H   | ---               | ---                  | Fundamental |



Frequency Range GHz = [18, 40], Frequency MHz = 5180.00000, Modulation = 802.11a (OFDM 6 Mbit/s),  
Measurement Point = 1

Images:



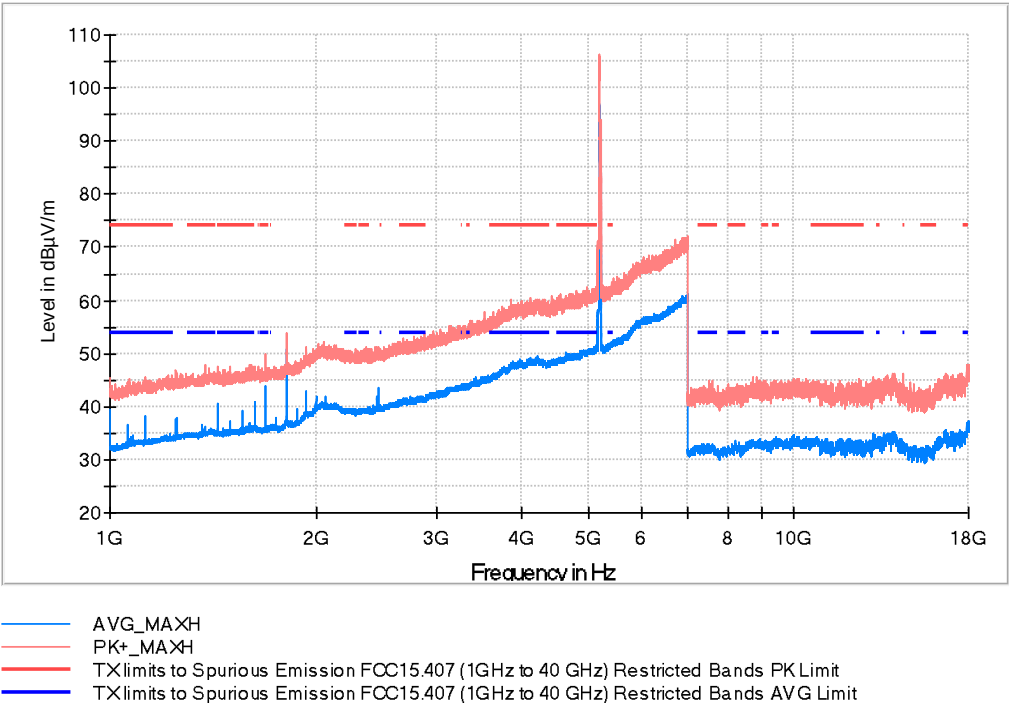
- AVG\_MAXH
- PK+\_MAXH
- TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

| Frequency (MHz) | PK+_MAXH (dBµV/m) | AVG_MAXH (dBµV/m) | Pol | Margin - AVG (dB) | Limit - AVG (dBµV/m) |
|-----------------|-------------------|-------------------|-----|-------------------|----------------------|
| 39731.187500    | 55.9              | 47.2              | H   | 6.8               | 54.0                 |

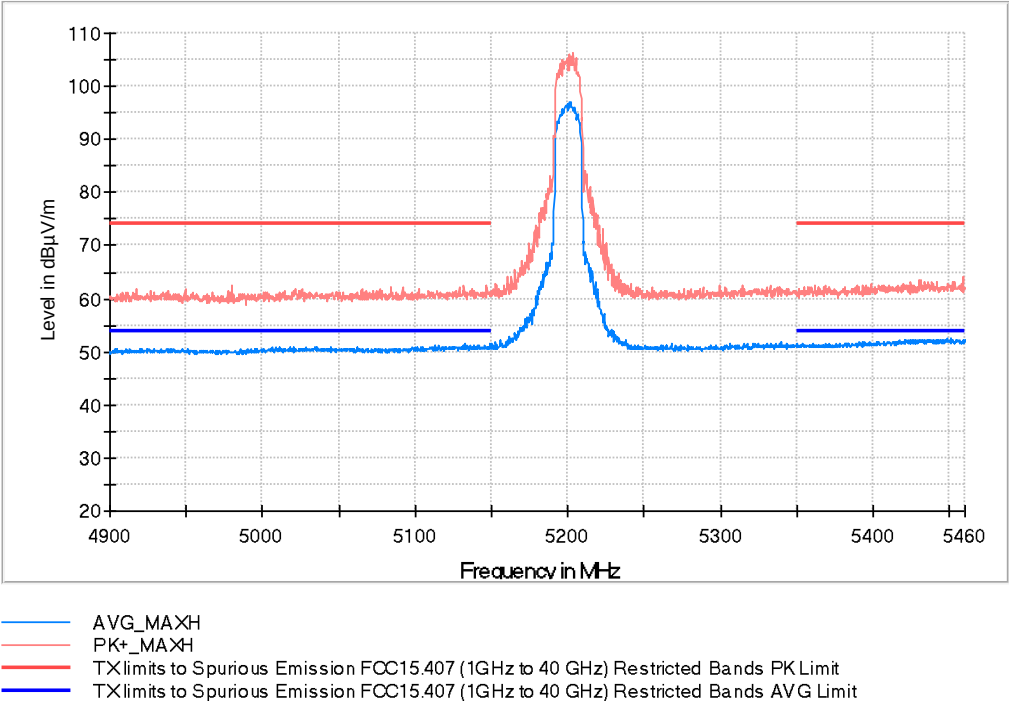


Frequency Range GHz = [1, 18], Frequency MHz = 5200.00000, Modulation = 802.11a (OFDM 6 Mbit/s),  
Measurement Point = 1

Images:

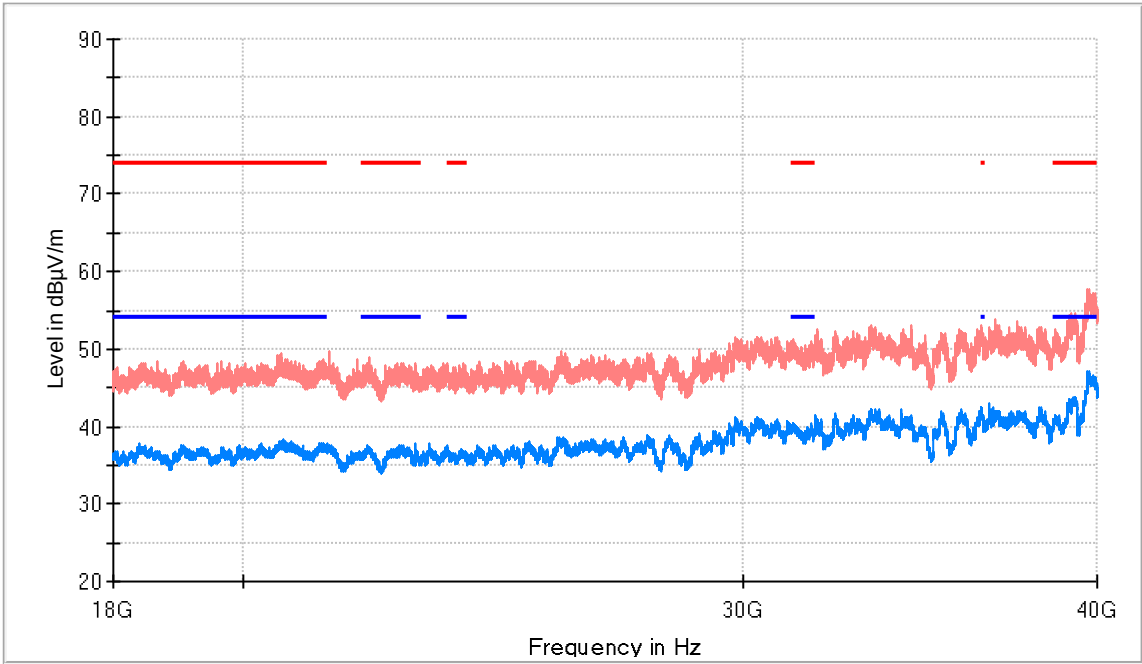


| Frequency (MHz) | PK+_MAXH (dBµV/m) | AVG_MAXH (dBµV/m) | Pol | Margin - AVG (dB) | Limit - AVG (dBµV/m) | Comment     |
|-----------------|-------------------|-------------------|-----|-------------------|----------------------|-------------|
| 1124.909091     | 45.4              | 38.1              | H   | 15.9              | 54.0                 |             |
| 1437.454546     | 47.3              | 40.5              | V   | 13.5              | 54.0                 |             |
| 1687.272727     | 49.5              | 44.0              | H   | 10.0              | 54.0                 |             |
| 5203.545455     | 106.2             | 95.5              | H   | ---               | ---                  | Fundamental |



Frequency Range GHz = [18, 40], Frequency MHz = 5200.00000, Modulation = 802.11a (OFDM 6 Mbit/s),  
Measurement Point = 1

Images:

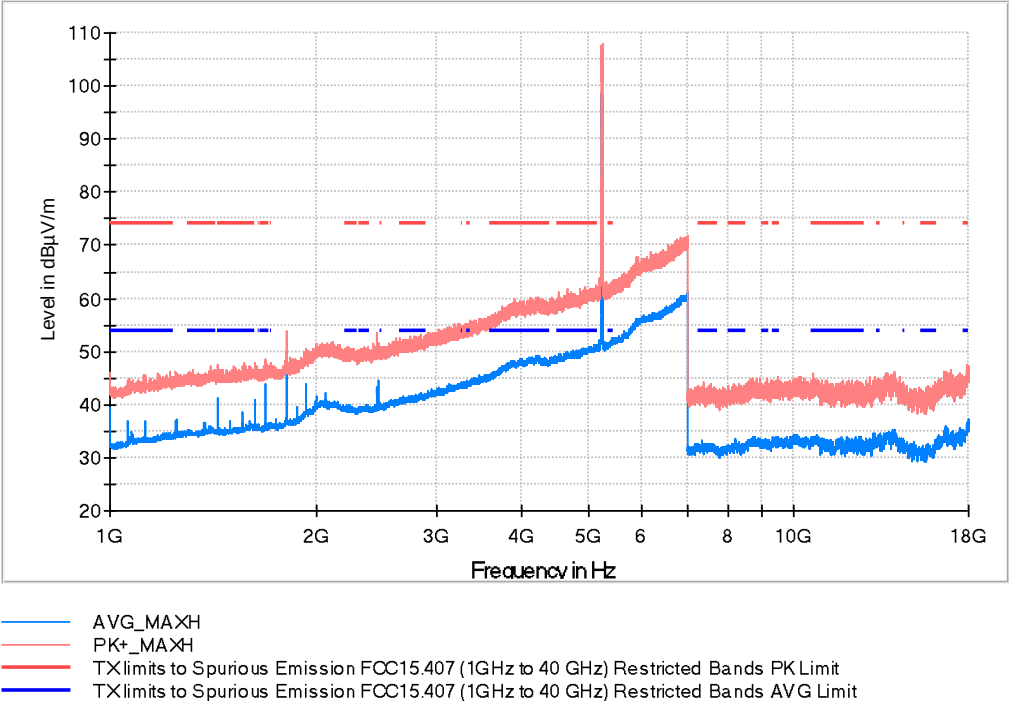


- AVG\_MAXH
- PK+\_MAXH
- TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

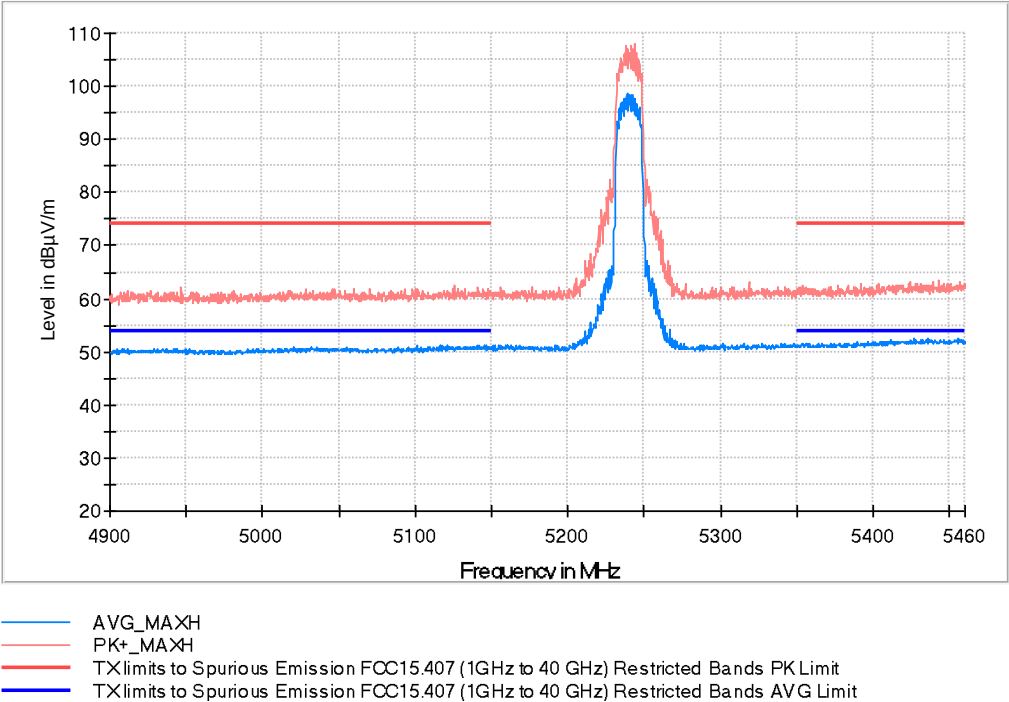
| Frequency (MHz) | PK+_MAXH (dBµV/m) | AVG_MAXH (dBµV/m) | PoI | Margin - AVG (dB) | Limit - AVG (dBµV/m) |
|-----------------|-------------------|-------------------|-----|-------------------|----------------------|
| 39731.187500    | 55.9              | 47.2              | H   | 6.8               | 54.0                 |

Frequency Range GHz = [1, 18], Frequency MHz = 5240.00000, Modulation = 802.11a (OFDM 6 Mbit/s),  
Measurement Point = 1

Images:

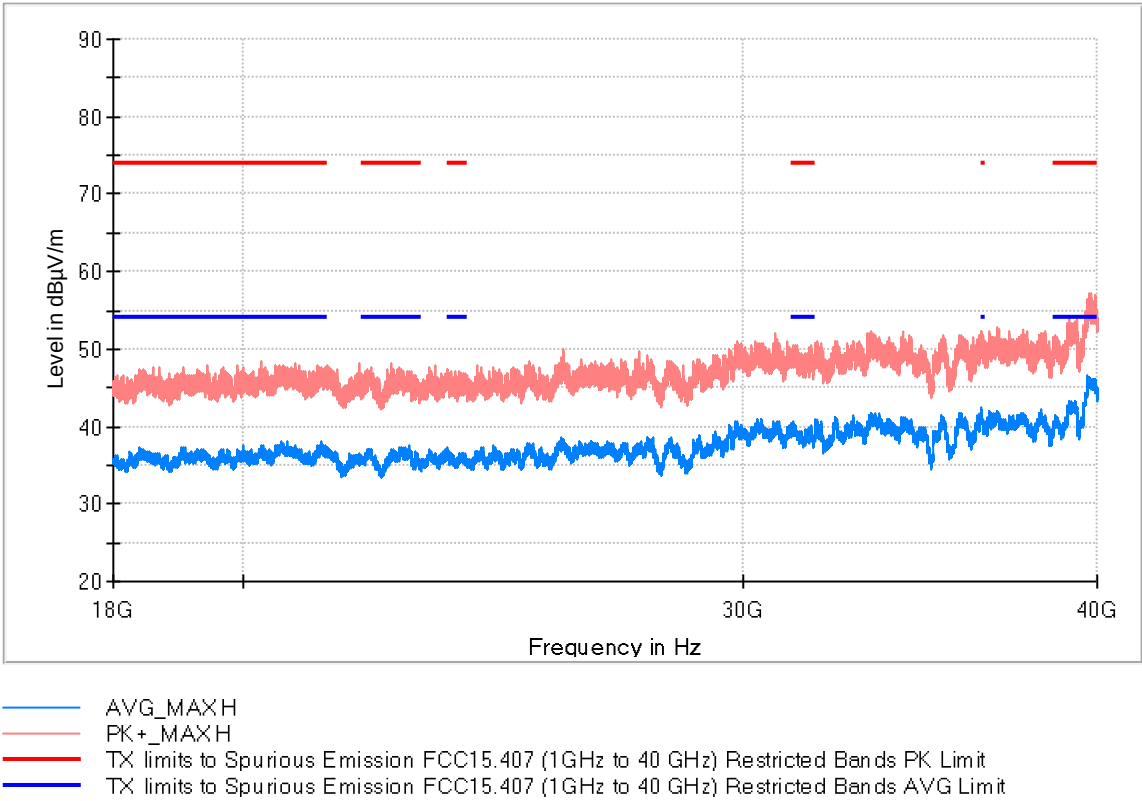


| Frequency (MHz) | PK+_MAXH (dBµV/m) | AVG_MAXH (dBµV/m) | Pol | Margin - AVG (dB) | Limit - AVG (dBµV/m) | Comment     |
|-----------------|-------------------|-------------------|-----|-------------------|----------------------|-------------|
| 1062.454546     | 44.4              | 37.0              | V   | 17.0              | 54.0                 |             |
| 1437.454546     | 46.9              | 41.3              | V   | 12.7              | 54.0                 |             |
| 1687.272727     | 48.4              | 43.9              | H   | 10.1              | 54.0                 |             |
| 5243.363636     | 108.1             | 97.6              | H   | ---               | ---                  | Fundamental |



Frequency Range GHz = [18, 40], Frequency MHz = 5240.00000, Modulation = 802.11a (OFDM 6 Mbit/s),  
Measurement Point = 1

Images:



| Frequency (MHz) | PK+_MAXH (dBµV/m) | AVG_MAXH (dBµV/m) | Pol | Margin - AVG (dB) | Limit - AVG (dBµV/m) |
|-----------------|-------------------|-------------------|-----|-------------------|----------------------|
| 39703.687500    | 56.4              | 46.5              | H   | 7.5               | 54.0                 |

Modulation: 802.11n HT40 (OFDM MCS0)

Results

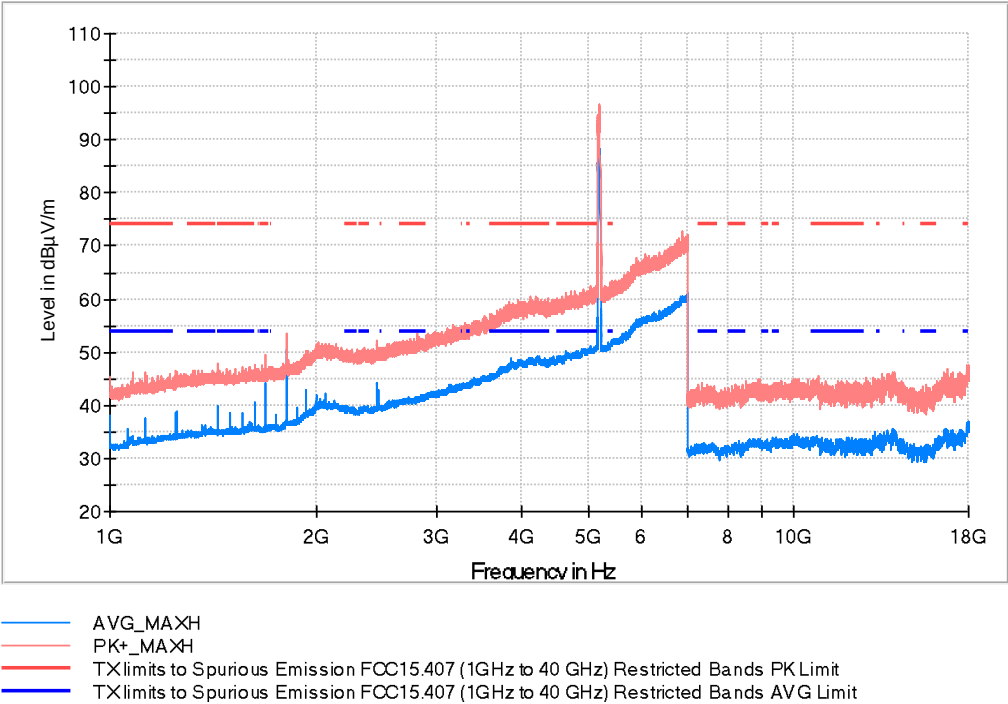
Verdict

Pass

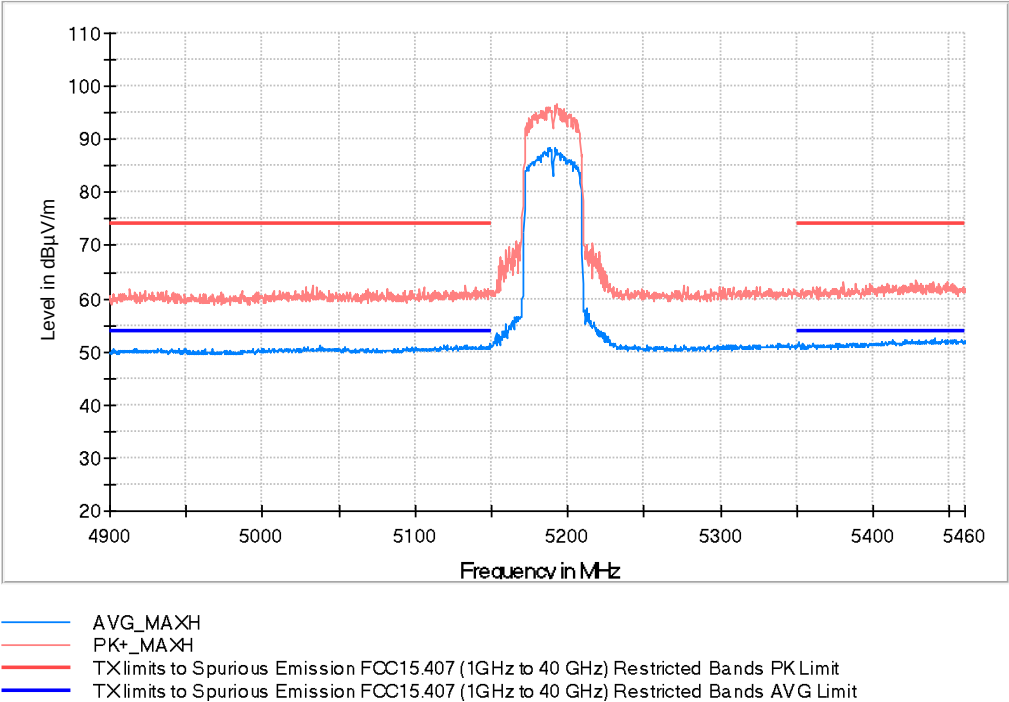
Attachments

Frequency Range GHz = [1, 18], Frequency MHz = 5190.00000, Modulation = 802.11n HT40 (OFDM MCS0),  
Measurement Point = 1

Images:



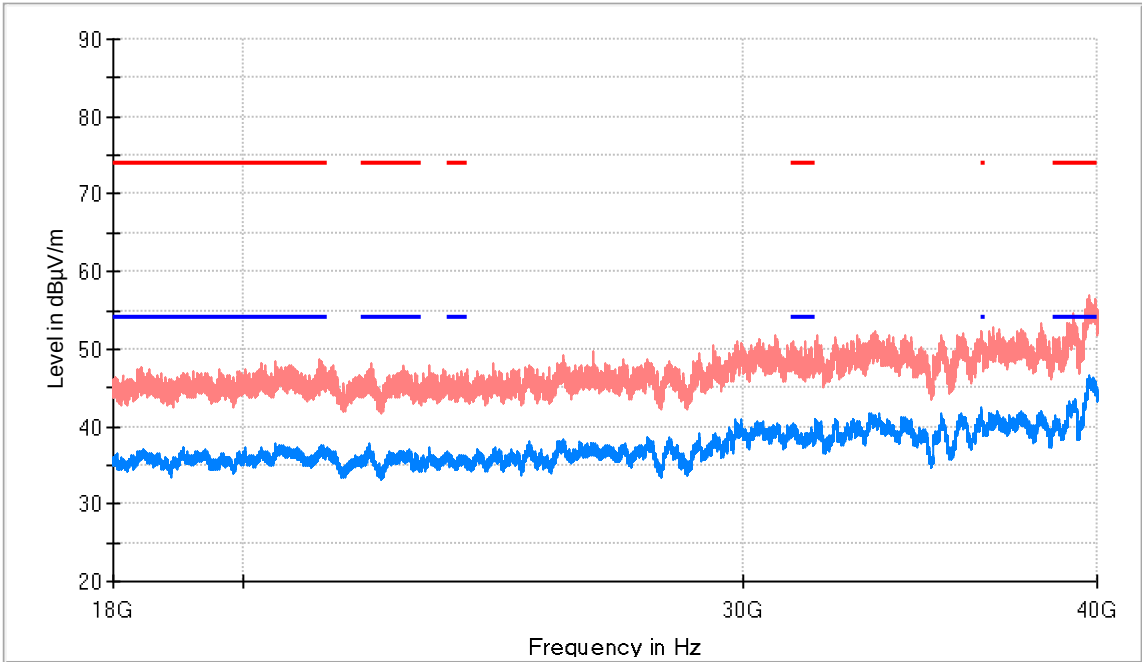
| Frequency (MHz) | PK+_MAXH (dBµV/m) | AVG_MAXH (dBµV/m) | Pol | Margin - AVG (dB) | Limit - AVG (dBµV/m) | Comment     |
|-----------------|-------------------|-------------------|-----|-------------------|----------------------|-------------|
| 1124.909091     | 45.3              | 37.4              | H   | 16.6              | 54.0                 |             |
| 1625.090909     | 46.2              | 40.7              | H   | 13.3              | 54.0                 |             |
| 1687.545455     | 49.5              | 43.9              | V   | 10.1              | 54.0                 |             |
| 5187.454546     | 95.5              | 88.4              | H   | ---               | ---                  | Fundamental |





Frequency Range GHz = [18, 40], Frequency MHz = 5190.00000, Modulation = 802.11n HT40 (OFDM MCS0),  
Measurement Point = 1

Images:

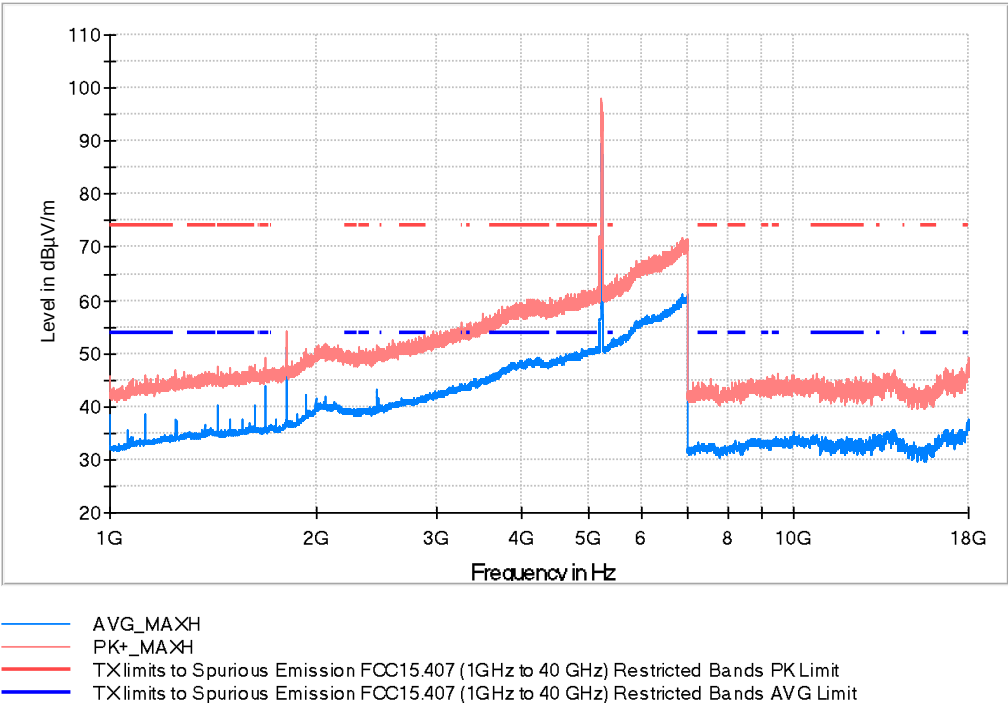


- AVG\_MAXH
- PK+\_MAXH
- TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

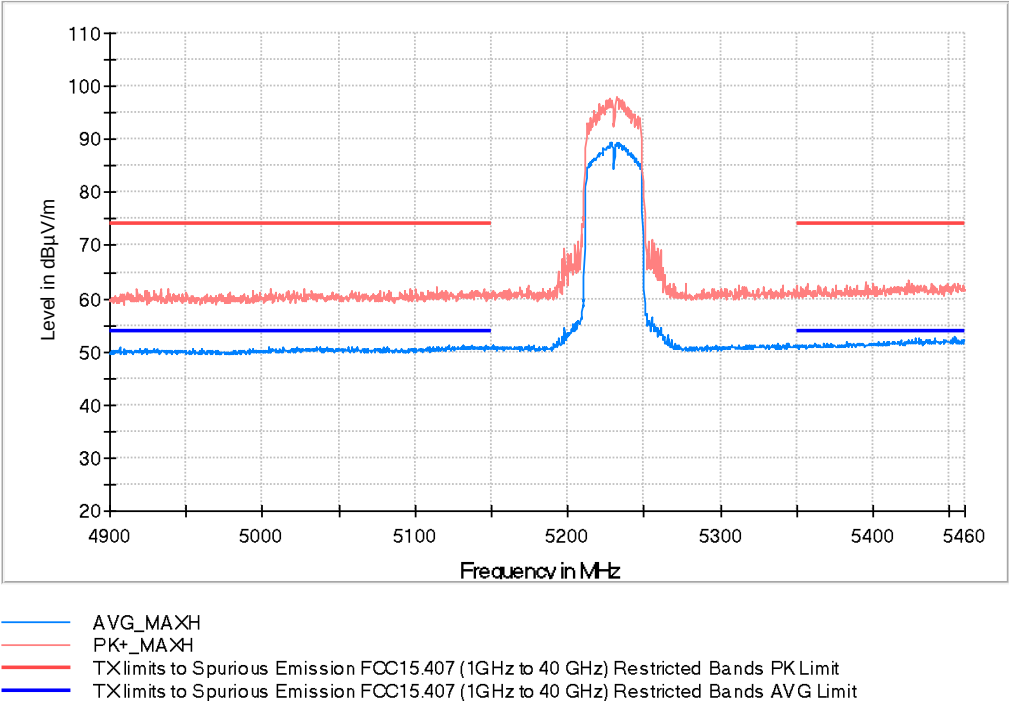
| Frequency (MHz) | PK+_MAXH (dBµV/m) | AVG_MAXH (dBµV/m) | Pol | Margin - AVG (dB) | Limit - AVG (dBµV/m) |
|-----------------|-------------------|-------------------|-----|-------------------|----------------------|
| 39718.812500    | 55.5              | 46.5              | V   | 7.5               | 54.0                 |

Frequency Range GHz = [1, 18], Frequency MHz = 5230.00000, Modulation = 802.11n HT40 (OFDM MCS0),  
Measurement Point = 1

Images:

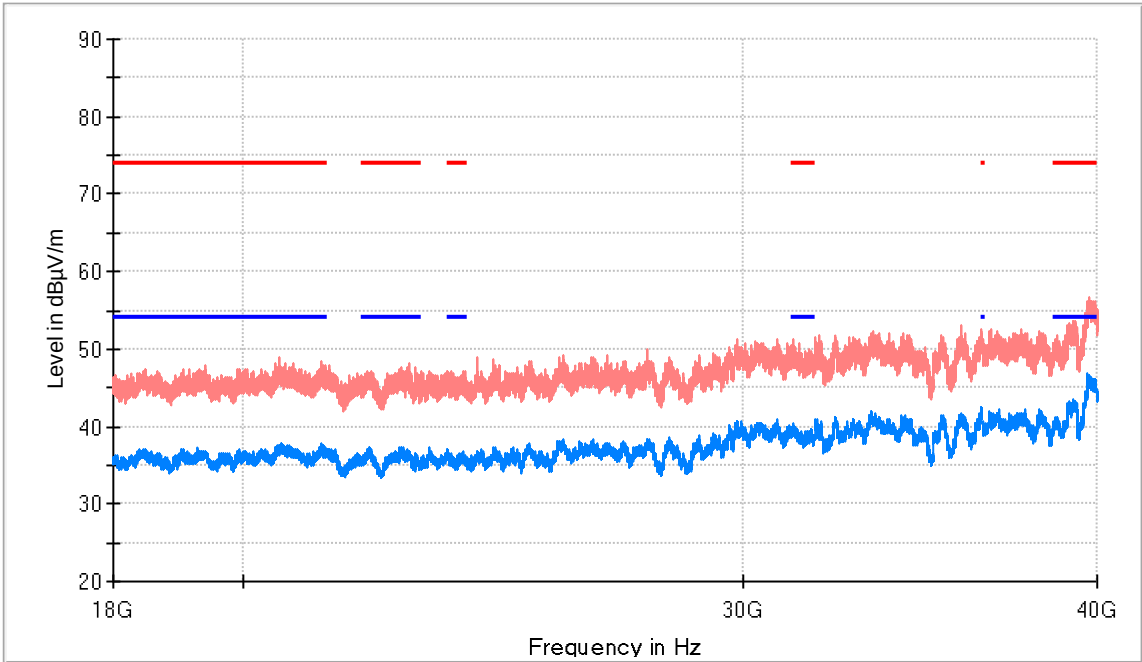


| Frequency (MHz) | PK+_MAXH (dBµV/m) | AVG_MAXH (dBµV/m) | Pol | Margin - AVG (dB) | Limit - AVG (dBµV/m) | Comment     |
|-----------------|-------------------|-------------------|-----|-------------------|----------------------|-------------|
| 1124.909091     | 45.0              | 38.5              | V   | 15.5              | 54.0                 |             |
| 1437.181818     | 47.5              | 40.2              | V   | 13.8              | 54.0                 |             |
| 1687.272727     | 48.9              | 43.9              | H   | 10.1              | 54.0                 |             |
| 5232.454546     | 97.4              | 89.3              | H   | ---               | ---                  | Fundamental |



Frequency Range GHz = [18, 40], Frequency MHz = 5230.00000, Modulation = 802.11n HT40 (OFDM MCS0),  
Measurement Point = 1

Images:



- AVG\_MAXH
- PK+\_MAXH
- TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

| Frequency (MHz) | PK+_ MAXH (dBµV/m) | AVG_MAXH (dBµV/m) | Pol | Margin - AVG (dB) | Limit - AVG (dBµV/m) |
|-----------------|--------------------|-------------------|-----|-------------------|----------------------|
| 39703.687500    | 54.7               | 46.8              | V   | 7.2               | 54.0                 |

UNII-2A:

Modulation: 802.11a (OFDM 6 Mbit/s)  
Results

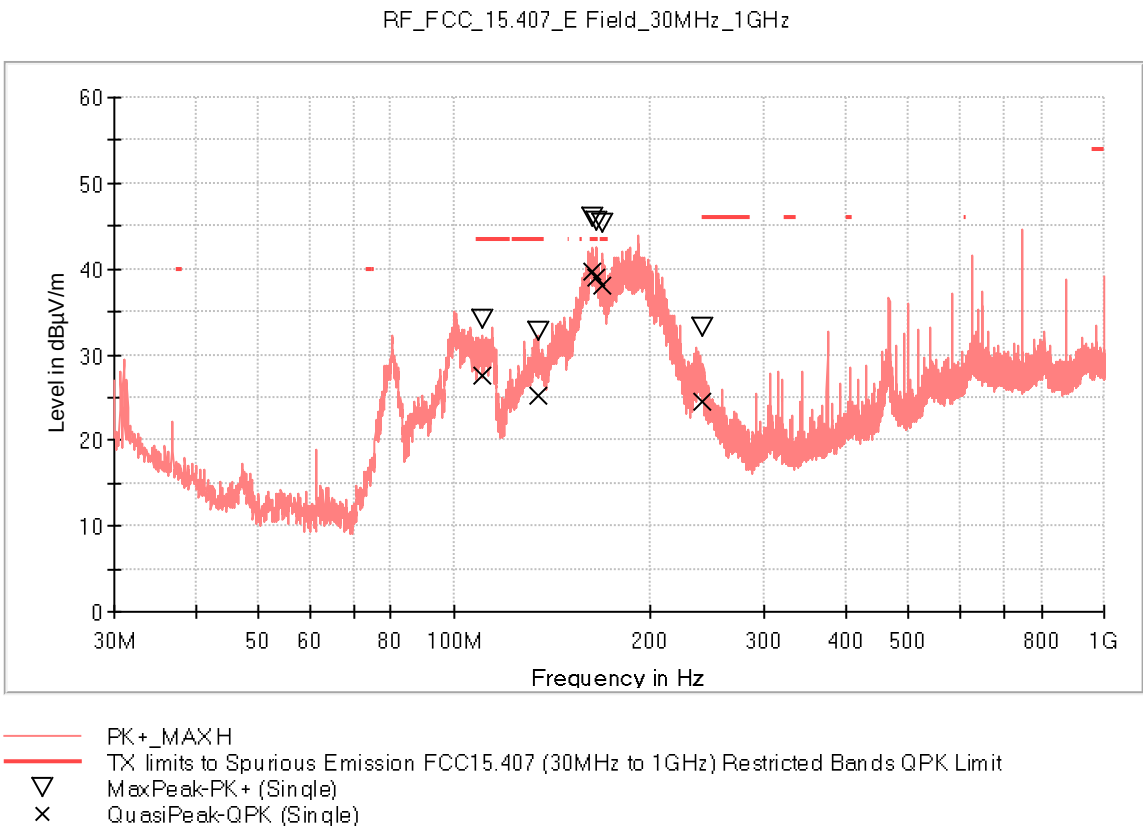
Verdict

Pass

Attachments

Frequency Range GHz = [0.03, 1], Frequency MHz = 5280.00000, Modulation = 802.11a (OFDM 6 Mbit/s),  
Measurement Point = 1

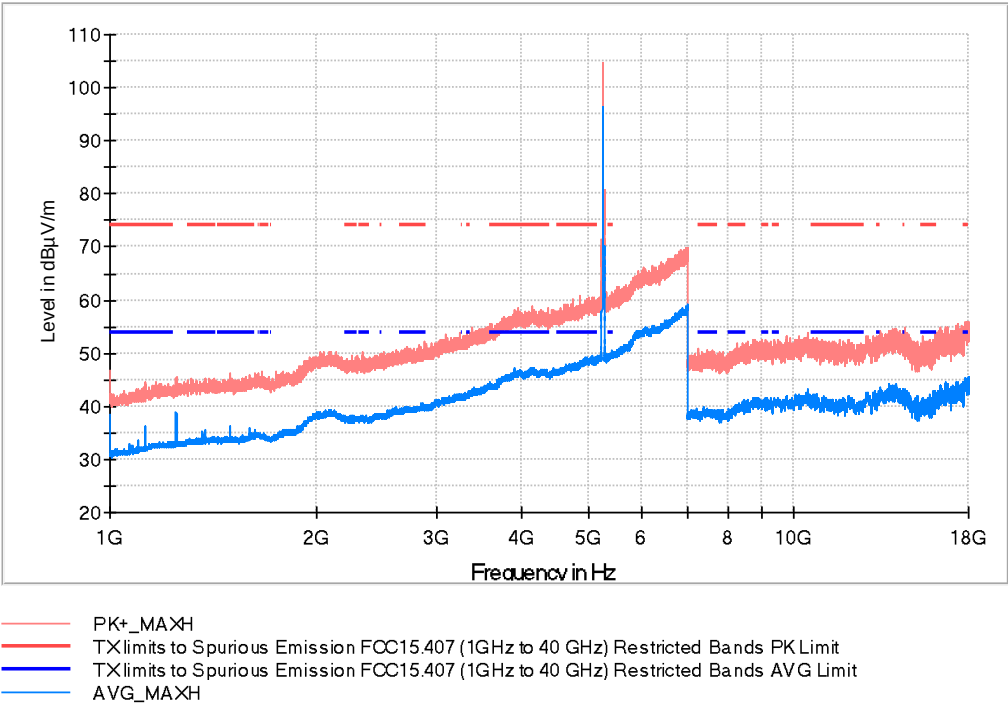
Images:



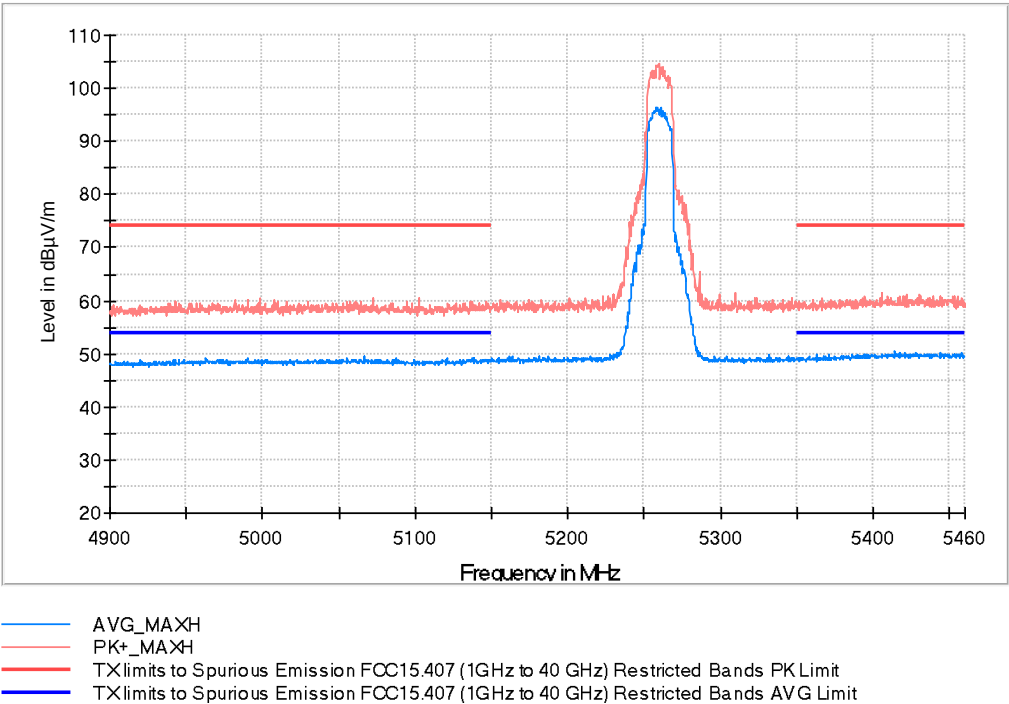
| Frequency (MHz) | MaxPeak (dBµV/m) | QuasiPeak (dBµV/m) | Pol | Margin - QPK (dB) | Limit - QPK (dBµV/m) |
|-----------------|------------------|--------------------|-----|-------------------|----------------------|
| 110.655500      | 34.1             | 27.6               | V   | 15.9              | 43.5                 |
| 134.517500      | 32.6             | 25.3               | V   | 18.2              | 43.5                 |
| 163.617500      | 46.0             | 39.6               | V   | 3.9               | 43.5                 |
| 165.315000      | 45.6             | 39.1               | V   | 4.4               | 43.5                 |
| 168.952500      | 45.2             | 38.1               | V   | 5.4               | 43.5                 |
| 241.605500      | 33.2             | 24.5               | V   | 21.5              | 46.0                 |

Frequency Range GHz = [1, 18], Frequency MHz = 5260.00000, Modulation = 802.11a (OFDM 6 Mbit/s),  
Measurement Point = 1

Images:

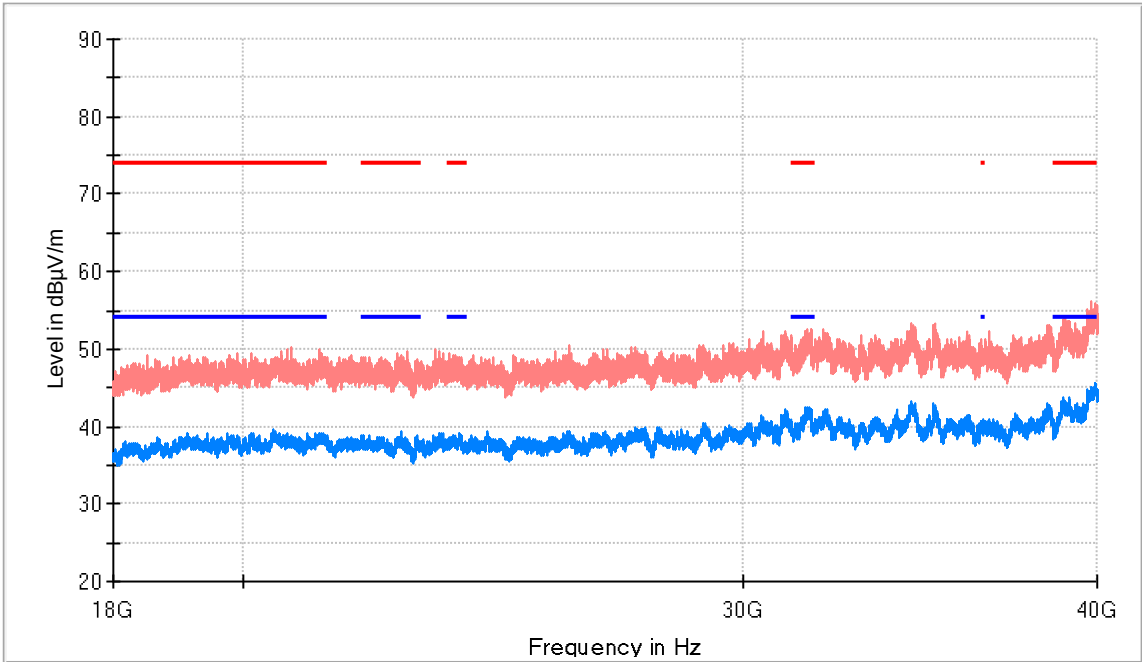


| Frequency (MHz) | PK+_MAXH (dBµV/m) | AVG_MAXH (dBµV/m) | Pol | Margin - AVG (dB) | Limit - AVG (dBµV/m) | Comment     |
|-----------------|-------------------|-------------------|-----|-------------------|----------------------|-------------|
| 1124.909091     | 44.6              | 36.3              | V   | 17.7              | 54.0                 |             |
| 1499.909091     | 46.2              | 36.3              | H   | 17.7              | 54.0                 |             |
| 5260.545455     | 104.0             | 95.3              | H   | ---               | ---                  | Fundamental |



Frequency Range GHz = [18, 40], Frequency MHz = 5260.00000, Modulation = 802.11a (OFDM 6 Mbit/s),  
Measurement Point = 1

Images:



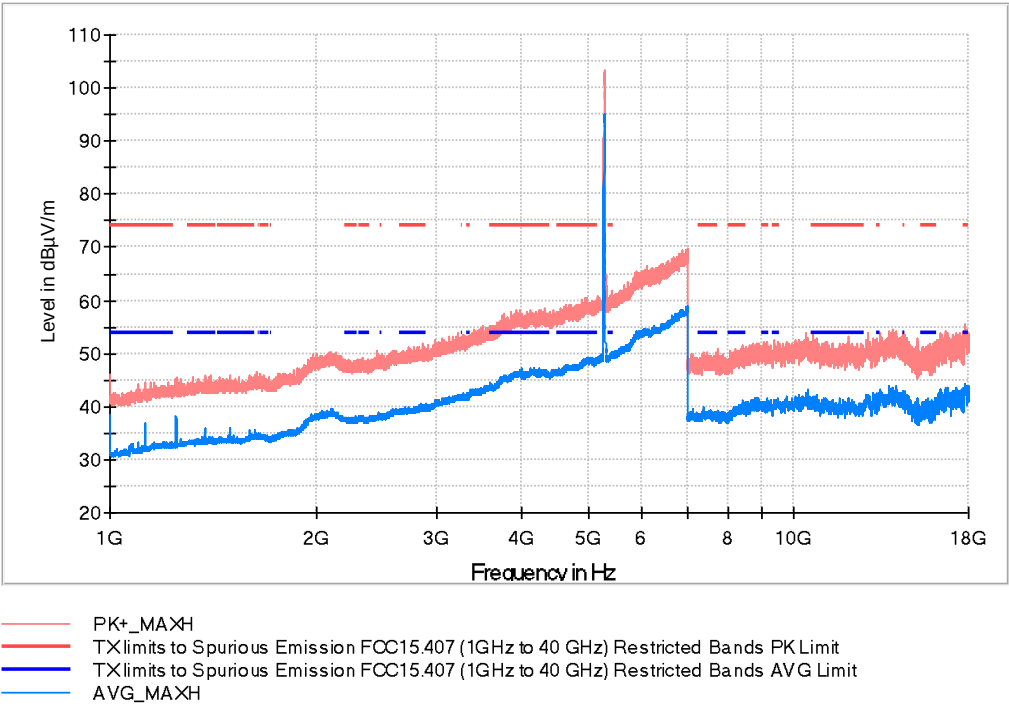
- AVG\_MAXH
- PK+\_MAXH
- TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

| Frequency (MHz) | PK+_MAXH (dBµV/m) | AVG_MAXH (dBµV/m) | Pol | Margin - AVG (dB) | Limit - AVG (dBµV/m) |
|-----------------|-------------------|-------------------|-----|-------------------|----------------------|
| 22736.187500    | 48.3              | 39.4              | H   | 14.6              | 54.0                 |

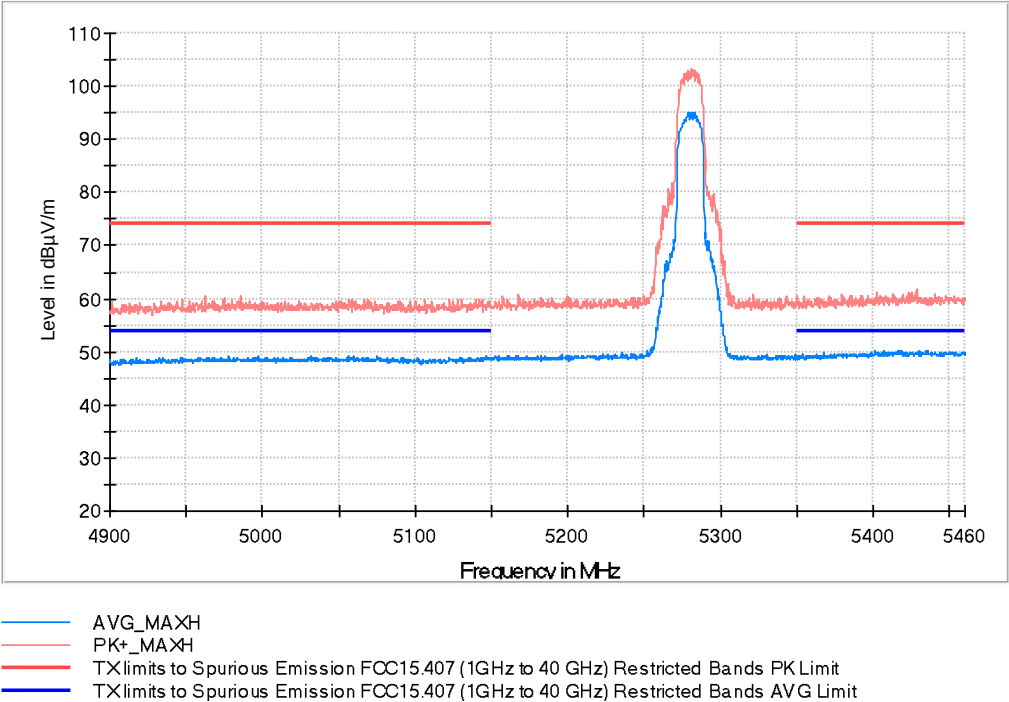


Frequency Range GHz = [1, 18], Frequency MHz = 5280.00000, Modulation = 802.11a (OFDM 6 Mbit/s),  
Measurement Point = 1

Images:

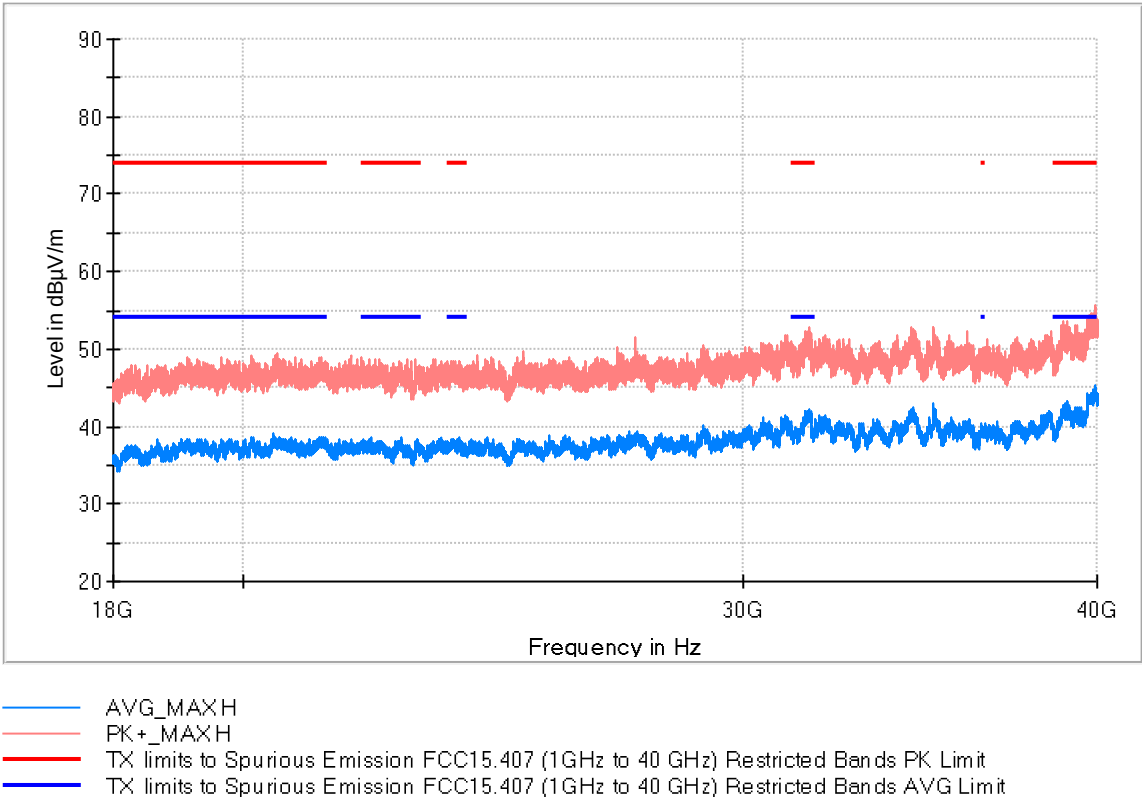


| Frequency (MHz) | PK+_MAXH (dBµV/m) | AVG_MAXH (dBµV/m) | Pol | Margin - AVG (dB) | Limit - AVG (dBµV/m) | Comment     |
|-----------------|-------------------|-------------------|-----|-------------------|----------------------|-------------|
| 1124.909091     | 44.2              | 36.8              | V   | 17.2              | 54.0                 |             |
| 1375.000000     | 44.0              | 36.0              | V   | 18.0              | 54.0                 |             |
| 5282.363636     | 103.1             | 95.1              | H   | ---               | ---                  | Fundamental |



Frequency Range GHz = [18, 40], Frequency MHz = 5280.00000, Modulation = 802.11a (OFDM 6 Mbit/s),  
Measurement Point = 1

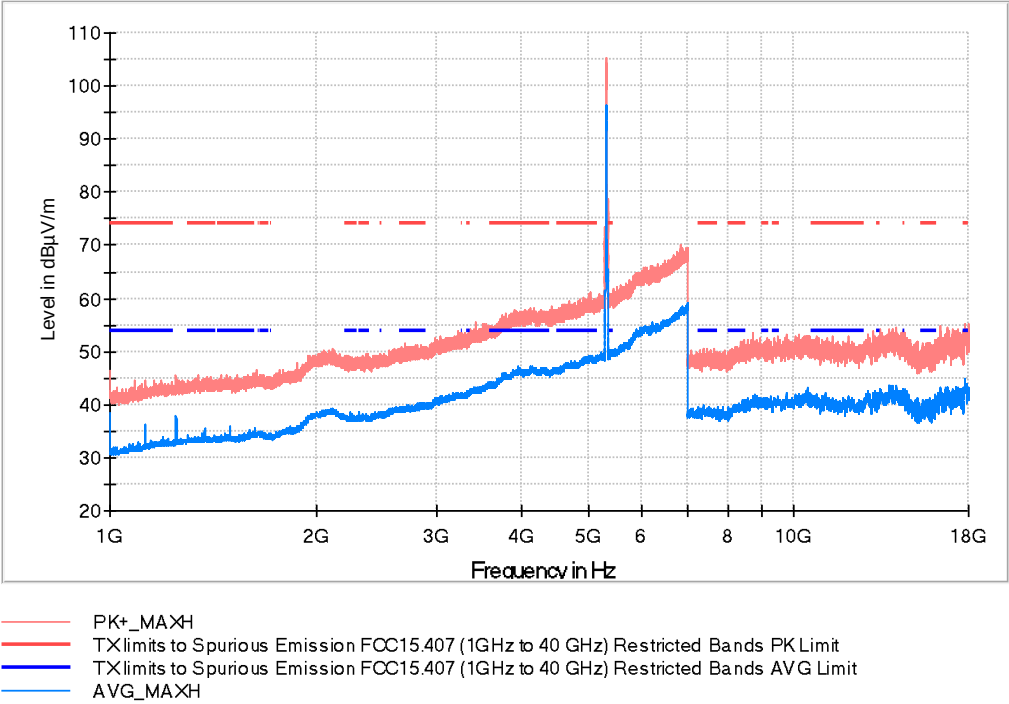
Images:



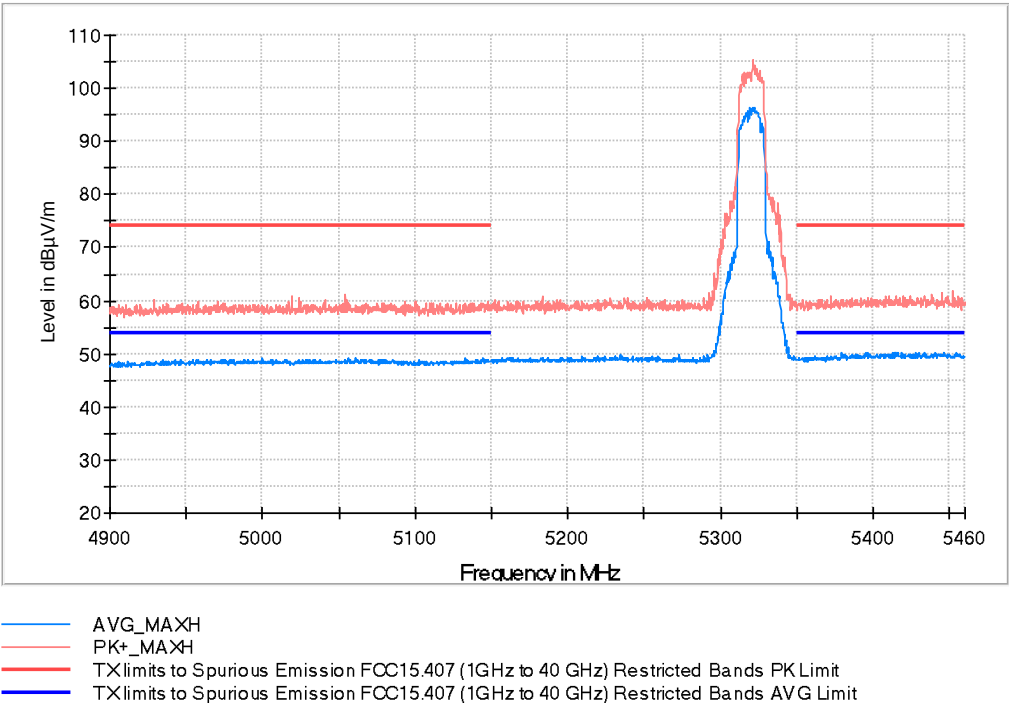
| Frequency (MHz) | PK+ _MAXH (dBµV/m) | AVG_MAXH (dBµV/m) | Pol | Margin - AVG (dB) | Limit - AVG (dBµV/m) |
|-----------------|--------------------|-------------------|-----|-------------------|----------------------|
| 20504.562500    | 47.7               | 39.1              | V   | 14.9              | 54.0                 |

Frequency Range GHz = [1, 18], Frequency MHz = 5320.00000, Modulation = 802.11a (OFDM 6 Mbit/s),  
Measurement Point = 1

Images:

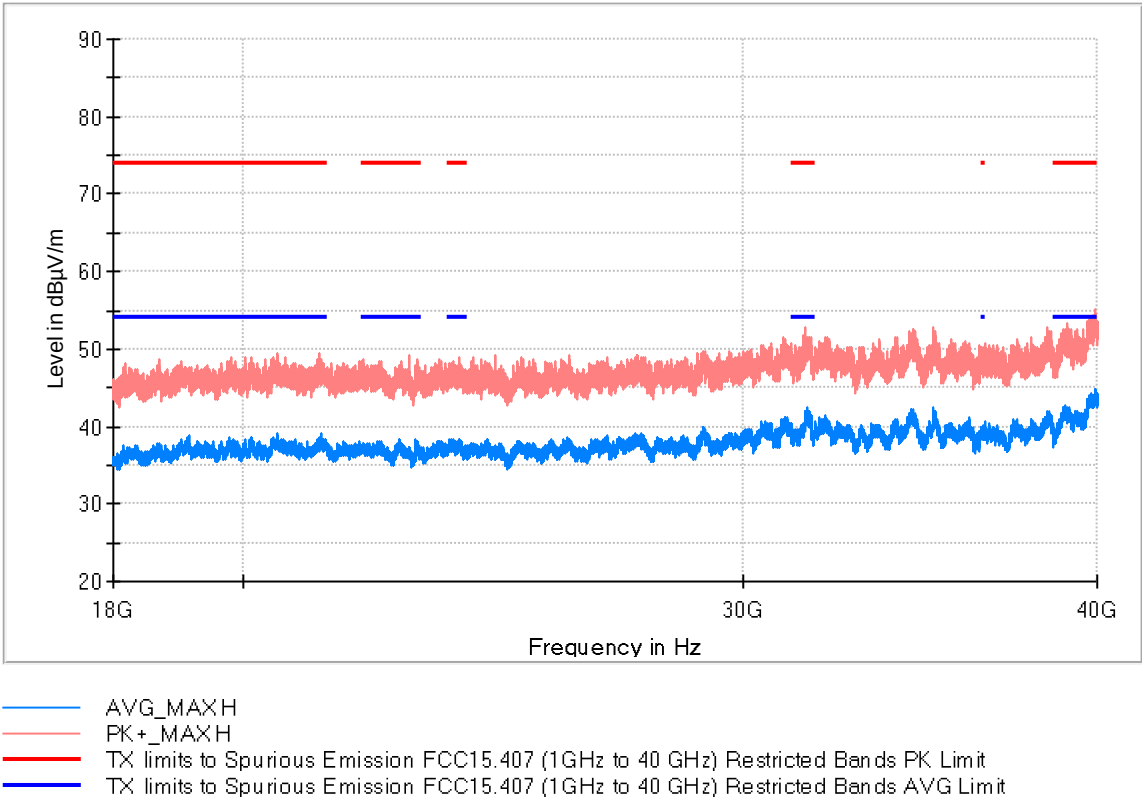


| Frequency (MHz) | PK+_MAXH (dBµV/m) | AVG_MAXH (dBµV/m) | Pol | Margin - AVG (dB) | Limit - AVG (dBµV/m) | Comment     |
|-----------------|-------------------|-------------------|-----|-------------------|----------------------|-------------|
| 1124.636364     | 44.6              | 36.1              | V   | 17.9              | 54.0                 |             |
| 1499.363636     | 44.7              | 35.4              | H   | 18.6              | 54.0                 |             |
| 5321.363636     | 105.2             | 95.7              | H   | ---               | ---                  | Fundamental |



Frequency Range GHz = [18, 40], Frequency MHz = 5320.00000, Modulation = 802.11a (OFDM 6 Mbit/s),  
Measurement Point = 1

Images:



| Frequency (MHz) | PK+_MAXH (dBµV/m) | AVG_MAXH (dBµV/m) | Pol | Margin - AVG (dB) | Limit - AVG (dBµV/m) |
|-----------------|-------------------|-------------------|-----|-------------------|----------------------|
| 19137.125000    | 47.0              | 38.9              | H   | 15.1              | 54.0                 |

Modulation: 802.11n HT40 (OFDM MCS0)

Results

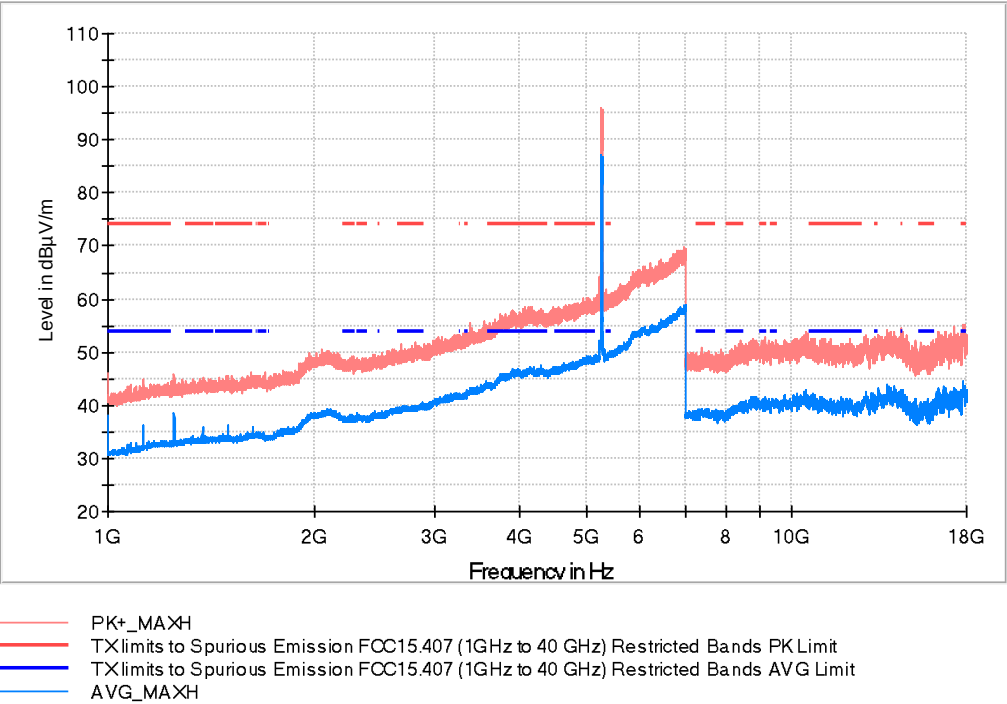
Verdict

Pass

Attachments

Frequency Range GHz = [1, 18], Frequency MHz = 5270.00000, Modulation = 802.11n HT40 (OFDM MCS0), Measurement Point = 1

Images:



| Frequency (MHz) | PK+_MAXH (dBµV/m) | AVG_MAXH (dBµV/m) | Pol | Margin - AVG (dB) | Limit - AVG (dBµV/m) | Comment     |
|-----------------|-------------------|-------------------|-----|-------------------|----------------------|-------------|
| 1124.636364     | 43.9              | 36.1              | V   | 17.9              | 54.0                 |             |
| 1375.000000     | 45.2              | 36.1              | V   | 17.9              | 54.0                 |             |
| 1499.909091     | 45.4              | 36.2              | V   | 17.8              | 54.0                 |             |
| 5268.454546     | 94.9              | 87.2              | H   | ---               | ---                  | Fundamental |

