




RADIO TEST REPORT

FCC ID : QXO-AP410NB
Equipment : Wireless Access Point
Brand Name :  or Extreme Networks
Model Name : AP410i
Applicant : Extreme Networks, Inc.
6480 Via Del Oro, San Jose, CA 95119, United States
Manufacturer : Extreme Networks, Inc.
6480 Via Del Oro, San Jose, CA 95119, United States
Standard : 47 CFR FCC Part 15.247

The product was received on Sep. 23, 2019, and testing was started from Sep. 23, 2019 and completed on Oct. 26, 2021. We, Sporton International Inc. Hsinchu Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. Hsinchu Laboratory, the test report shall not be reproduced except in full.



Approved by: Sam Chen

Sporton International Inc. Hsinchu Laboratory
No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.)



Table of Contents

History of this test report.....3

Summary of Test Result.....4

1 General Description5

1.1 Information.....5

1.2 Applicable Standards10

1.3 Testing Location Information10

1.4 Measurement Uncertainty11

2 Test Configuration of EUT12

2.1 Test Channel Mode12

2.2 The Worst Case Measurement Configuration18

2.3 EUT Operation during Test21

2.4 Accessories21

2.5 Support Equipment.....22

2.6 Test Setup Diagram23

3 Transmitter Test Result27

3.1 AC Power-line Conducted Emissions27

3.2 DTS Bandwidth29

3.3 Maximum Conducted Output Power30

3.4 Power Spectral Density33

3.5 Emissions in Non-restricted Frequency Bands35

3.6 Emissions in Restricted Frequency Bands.....36

4 Test Equipment and Calibration Data40

Appendix A. Test Results of AC Power-line Conducted Emissions

Appendix B. Test Results of DTS Bandwidth

Appendix C. Test Results of Maximum Conducted Output Power

Appendix D. Test Results of Power Spectral Density

Appendix E. Test Results of Emissions in Non-restricted Frequency Bands

Appendix F. Test Results of Emissions in Restricted Frequency Bands

Appendix G. Test Photos

Photographs of EUT v01



History of this test report

| Report No. | Version | Description | Issued Date |
|---------------|---------|-------------------------|---------------|
| FR970232-06AA | 01 | Initial issue of report | Nov. 15, 2021 |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |



Summary of Test Result

| Report Clause | Ref Std. Clause | Test Items | Result (PASS/FAIL) | Remark |
|---------------|-----------------|---------------------------------------------|--------------------|--------|
| 1.1.2 | 15.203 | Antenna Requirement | PASS | - |
| 3.1 | 15.207 | AC Power-line Conducted Emissions | PASS | - |
| 3.2 | 15.247(a) | DTS Bandwidth | PASS | - |
| 3.3 | 15.247(b) | Maximum Conducted Output Power | PASS | - |
| 3.4 | 15.247(e) | Power Spectral Density | PASS | - |
| 3.5 | 15.247(d) | Emissions in Non-restricted Frequency Bands | PASS | - |
| 3.6 | 15.247(d) | Emissions in Restricted Frequency Bands | PASS | - |

Note1: Reference to Sporton Project No.: FR970232AC.
Note2: This is a variant report by removing the external antenna, BT/Thread module. AC Conduction and Unwanted Emission below 1GHz was verified.

| |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Declaration of Conformity: |
| The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers. |
| Comments and Explanations: |
| 1. The test configuration, test mode and test software were written in this test report are declared by the manufacturer. 2. The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification. |

Reviewed by: Sam Chen
Report Producer: Wendy Pan



1 General Description

1.1 Information

1.1.1 RF General Information

| Frequency Range (MHz) | IEEE Std. 802.11 | Ch. Frequency (MHz) | Channel Number |
|-----------------------|--------------------------------------|---------------------|----------------|
| 2400-2483.5 | b, g, n (HT20), VHT20, ax (HEW20) | 2412-2462 | 1-11 [11] |
| 2400-2483.5 | n (HT40), VHT40, ax (HEW40) | 2422-2452 | 3-9 [7] |

| Band | Mode | BWch (MHz) | Nant |
|---------------|-------------------|------------|----------|
| 2.4-2.4835GHz | 802.11b | 20 | 1TX, 2TX |
| 2.4-2.4835GHz | 802.11g | 20 | 1TX, 2TX |
| 2.4-2.4835GHz | 802.11n HT20 | 20 | 1TX, 2TX |
| 2.4-2.4835GHz | 802.11n HT20-BF | 20 | 2TX |
| 2.4-2.4835GHz | VHT20 | 20 | 1TX, 2TX |
| 2.4-2.4835GHz | VHT20-BF | 20 | 2TX |
| 2.4-2.4835GHz | 802.11ax HEW20 | 20 | 1TX, 2TX |
| 2.4-2.4835GHz | 802.11ax HEW20-BF | 20 | 2TX |
| 2.4-2.4835GHz | 802.11n HT40 | 40 | 1TX, 2TX |
| 2.4-2.4835GHz | 802.11n HT40-BF | 40 | 2TX |
| 2.4-2.4835GHz | VHT40 | 40 | 1TX, 2TX |
| 2.4-2.4835GHz | VHT40-BF | 40 | 2TX |
| 2.4-2.4835GHz | 802.11ax HEW40 | 40 | 1TX, 2TX |
| 2.4-2.4835GHz | 802.11ax HEW40-BF | 40 | 2TX |

Note:

- ♦ 11b mode uses a combination of DSSS-DBPSK, DQPSK, CCK modulation.
- ♦ 11g, HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- ♦ VHT20, VHT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM modulation.
- ♦ HEW20, HEW40 use a combination of OFDMA-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM modulation.
- ♦ BWch is the nominal channel bandwidth.



1.1.2 Antenna Information

| Ant. | Brand | Model Number (P/N) | Antenna Type | Connector | Antenna Gain (dBi) | | Remark |
|------|-------|--------------------|--------------|-----------|--------------------|-----------|---------|
| | | | | | WLAN 2.4GHz | WLAN 5GHz | |
| 1 | SENAO | 5718A0474300 | PIFA | IPEX | 4.56 | - | Radio 1 |
| 2 | SENAO | 5718A0475300 | PIFA | IPEX | 4.56 | - | Radio 1 |
| 3 | SENAO | 5718A0476300 | PIFA | IPEX | 4.47 | 5.02 | Radio 3 |
| 4 | SENAO | 5718A0477300 | PIFA | IPEX | 4.47 | 5.02 | Radio 3 |
| 5 | SENAO | 5718A0478300 | PIFA | IPEX | - | 5.36 | Radio 2 |
| 6 | SENAO | 5718A0479300 | PIFA | IPEX | - | 5.36 | Radio 2 |
| 7 | SENAO | 5718A0480300 | PIFA | IPEX | - | 5.36 | Radio 2 |
| 8 | SENAO | 5718A0481300 | PIFA | IPEX | - | 5.36 | Radio 2 |

| Beamforming Gain (dBi) | | | |
|------------------------|-----------|-----------|--|
| 2TX | | 4TX | |
| WLAN 2.4GHz | WLAN 5GHz | WLAN 5GHz | |
| 3.01 | | 6.02 | |

Note: The above information was declared by manufacturer.

For Radio 1:

For IEEE 802.11/b/g/n/ac/ax mode (1TX, 2TX/2RX):

For 1TX

Only Port 1 can be use as transmitting antenna.

For 2TX

Port 1 and Port 2 can be use as transmitting antenna.

Port 1 and Port 2 could transmit simultaneously.

For Radio 2:

For IEEE 802.11a/n/ac/ax mode (1TX, 2TX, 4TX/4RX):

For 1TX

Only Port 1 can be use as transmitting antenna.

For 2TX

Port 1 and Port 2 can be use as transmitting antenna.

Port 1 and Port 2 could transmit simultaneously.

For 4TX

Port 1, Port 2, Port 3 and Port 4 can be use as transmitting antenna.

Port 1, Port 2, Port 3 and Port 4 could transmit simultaneously.

For 4RX

Port 1, Port 2, Port 3 and Port 4 can be used as receiving antennas.

Port 1, Port 2, Port 3 and Port 4 could receive simultaneously.



For Radio 3:

For IEEE 802.11a/b/g/n/ac/ax mode (1TX, 2TX/2RX):

For 1TX

Only Port 1 can be use as transmitting antenna.

For 2TX

Port 1 and Port 2 can be use as transmitting antenna.

Port 1 and Port 2 could transmit simultaneously.

**1.1.3 Mode Test Duty Cycle**

For Radio 1

For 1TX Mode:

| Mode | DC | DCF(dB) | T(s) | VBW(Hz) $\geq 1/T$ |
|----------------|-------|---------|----------------------|----------------------|
| 802.11b | 0.952 | 0.21 | 12.425m | 100 |
| 802.11g | 0.953 | 0.21 | 2.075m | 1k |
| VHT20 | 0.986 | 0.06 | n/a (DC \geq 0.98) | n/a (DC \geq 0.98) |
| VHT40 | 0.972 | 0.12 | 953.75u | 3k |
| 802.11ax HEW20 | 0.981 | 0.08 | n/a (DC \geq 0.98) | n/a (DC \geq 0.98) |
| 802.11ax HEW40 | 0.964 | 0.16 | 775u | 3k |

For 2TX Mode:

| Mode | DC | DCF(dB) | T(s) | VBW(Hz) $\geq 1/T$ |
|----------------|-------|---------|----------|--------------------|
| 802.11b | 0.952 | 0.21 | 12.42m | 100 |
| 802.11g | 0.952 | 0.21 | 2.075m | 1k |
| VHT20 | 0.927 | 0.33 | 362.5u | 3k |
| VHT40 | 0.873 | 0.59 | 196.875u | 10k |
| 802.11ax HEW20 | 0.964 | 0.16 | 782.5u | 3k |
| 802.11ax HEW40 | 0.93 | 0.32 | 422.5u | 3k |

For 2TXBF Mode:

| Mode | DC | DCF(dB) | T(s) | VBW(Hz) $\geq 1/T$ |
|-------------------|-------|---------|----------------------|----------------------|
| VHT20-BF | 0.986 | 0.06 | n/a (DC \geq 0.98) | n/a (DC \geq 0.98) |
| VHT40-BF | 0.973 | 0.12 | 1.935m | 1k |
| 802.11ax HEW20-BF | 0.879 | 0.56 | 1.505m | 1k |
| 802.11ax HEW40-BF | 0.874 | 0.58 | 2.225m | 1k |



**For Radio 3
For 1TX Mode:**

| Mode | DC | DCF(dB) | T(s) | VBW(Hz) ≥ 1/T |
|----------------|-------|---------|----------------|----------------|
| 802.11b | 0.957 | 0.19 | 12.424m | 100 |
| 802.11g | 0.954 | 0.2 | 2.075m | 1k |
| VHT20 | 0.983 | 0.07 | n/a (DC>=0.98) | n/a (DC>=0.98) |
| VHT40 | 0.969 | 0.14 | 953.75u | 3k |
| 802.11ax HEW20 | 0.979 | 0.09 | 1.489m | 1k |
| 802.11ax HEW40 | 0.961 | 0.17 | 773.75u | 3k |

For 2TX Mode:

| Mode | DC | DCF(dB) | T(s) | VBW(Hz) ≥ 1/T |
|----------------|-------|---------|----------|---------------|
| 802.11b | 0.936 | 0.29 | 12.42m | 100 |
| 802.11g | 0.95 | 0.22 | 2.066m | 1k |
| VHT20 | 0.974 | 0.11 | 990u | 3k |
| VHT40 | 0.947 | 0.24 | 502.5u | 3k |
| 802.11ax HEW20 | 0.965 | 0.15 | 781.875u | 3k |
| 802.11ax HEW40 | 0.934 | 0.3 | 425u | 3k |

For 2TXBF Mode:

| Mode | DC | DCF(dB) | T(s) | VBW(Hz) ≥ 1/T |
|-------------------|-------|---------|----------------|----------------|
| VHT20-BF | 0.986 | 0.06 | n/a (DC>=0.98) | n/a (DC>=0.98) |
| VHT40-BF | 0.973 | 0.12 | 1.935m | 1k |
| 802.11ax HEW20-BF | 0.911 | 0.4 | 1.655m | 1k |
| 802.11ax HEW40-BF | 0.92 | 0.36 | 2.503m | 1k |

Note:

- ♦ DC is Duty Cycle.
- ♦ DCF is Duty Cycle Factor.

1.1.4 EUT Operational Condition

| | | | | |
|------------------------------|------------------------------------------------------------------|----------------------------------------------|--|--|
| EUT Power Type | From Power Adapter or PoE | | | |
| Beamforming Function | <input checked="" type="checkbox"/> With beamforming | <input type="checkbox"/> Without beamforming | | |
| | For VHT20/40 and 802.11n/ax in 2.4GHz and 802.11n/ac/ax in 5GHz. | | | |
| Function | <input checked="" type="checkbox"/> Point-to-multipoint | <input type="checkbox"/> Point-to-point | | |
| Test Software Version | Mtool V3.1.0.1 | | | |

Note: The above information was declared by manufacturer.



1.2 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ◆ 47 CFR FCC Part 15.247
- ◆ ANSI C63.10-2013

The following reference test guidance is not within the scope of accreditation of TAF.

- ◆ FCC KDB 558074 D01 v05r02
- ◆ FCC KDB 662911 D01 v02r01
- ◆ FCC KDB 414788 D01 v01r01

1.3 Testing Location Information

| Testing Location Information | |
|-----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Lab. : Sporton International Inc. Hsinchu Laboratory | |
| Hsinchu (TAF: 3787) | ADD: No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.) TEL: 886-3-656-9065 FAX: 886-3-656-9085 Test site Designation No. TW3787 with FCC. Conformity Assessment Body Identifier (CABID) TW3787 with ISED. |

| Test Condition | Test Site No. | Test Engineer | Test Environment (°C / %) | Test Date |
|----------------|---------------|---------------|---------------------------|-------------------------------|
| RF Conducted | TH01-CB | Owen Hsu | 24.4~25.2 / 61~62 | Sep. 26, 2019 ~ Oct. 30, 2019 |
| Radiated<1GHz | 03CH05-CB | Ken Yeh | 23.9-24.8 / 55-59 | Oct. 21, 2021 |
| Radiated>1GHz | 03CH04-CB | Bruce Yang | 24.2~24.9 / 52~55 | Sep. 23, 2019 ~ Oct. 25, 2019 |
| AC Conduction | CO02-CB | Peter Wu | 22~23 / 55~57 | Oct. 26, 2021 |



1.4 Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2))

For Other test items:

| Test Items | Uncertainty | Remark |
|-----------------------------------|-------------|--------------------------|
| Radiated Emission (1GHz ~ 18GHz) | 4.3 dB | Confidence levels of 95% |
| Radiated Emission (18GHz ~ 40GHz) | 5.1 dB | Confidence levels of 95% |
| Conducted Emission | 2.4 dB | Confidence levels of 95% |
| Output Power Measurement | 1.5 dB | Confidence levels of 95% |
| Power Density Measurement | 2.4 dB | Confidence levels of 95% |
| Bandwidth Measurement | 2% | Confidence levels of 95% |

For AC Conduction and Radiated<1GHz:

| Test Items | Uncertainty | Remark |
|--------------------------------------|-------------|--------------------------|
| Conducted Emission (150kHz ~ 30MHz) | 2.0 dB | Confidence levels of 95% |
| Radiated Emission (9kHz ~ 30MHz) | 4.2 dB | Confidence levels of 95% |
| Radiated Emission (30MHz ~ 1,000MHz) | 5.5 dB | Confidence levels of 95% |



2 Test Configuration of EUT

2.1 Test Channel Mode

For Radio 1

For 1TX Mode:

| Mode | PowerSetting | PowerSetting (dBm) |
|--------------------------------|--------------|--------------------|
| 802.11b_Nss1,(1Mbps)_1TX | - | - |
| 2412MHz | 88 | 22 |
| 2417MHz | 106 | 26.5 |
| 2437MHz | 120 | 30 |
| 2457MHz | 104 | 26 |
| 2462MHz | 88 | 22 |
| 802.11g_Nss1,(6Mbps)_1TX | - | - |
| 2412MHz | 84 | 21 |
| 2417MHz | 96 | 24 |
| 2437MHz | 113 | 28.25 |
| 2457MHz | 90 | 22.5 |
| 2462MHz | 82 | 20.5 |
| VHT20_Nss1,(MCS0)_1TX | - | - |
| 2412MHz | 83 | 20.75 |
| 2417MHz | 93 | 23.25 |
| 2437MHz | 106 | 26.5 |
| 2457MHz | 88 | 22 |
| 2462MHz | 75 | 18.75 |
| VHT40_Nss1,(MCS0)_1TX | - | - |
| 2422MHz | 75 | 18.75 |
| 2437MHz | 82 | 20.5 |
| 2452MHz | 76 | 19 |
| 802.11ax HEW20_Nss1,(MCS0)_1TX | - | - |
| 2412MHz | 83 | 20.75 |
| 2417MHz | 93 | 23.25 |
| 2437MHz | 106 | 26.5 |
| 2457MHz | 88 | 22 |
| 2462MHz | 75 | 18.75 |
| 802.11ax HEW40_Nss1,(MCS0)_1TX | - | - |
| 2422MHz | 75 | 18.75 |
| 2437MHz | 82 | 20.5 |
| 2452MHz | 76 | 19 |



For 2TX Mode:

| Mode | PowerSetting | PowerSetting (dBm) |
|--------------------------------|--------------|--------------------|
| 802.11b_Nss1,(1Mbps)_2TX | - | - |
| 2412MHz | 99 | 24.75 |
| 2437MHz | 105 | 26.25 |
| 2462MHz | 98 | 24.5 |
| 802.11g_Nss1,(6Mbps)_2TX | - | - |
| 2412MHz | 79 | 19.75 |
| 2417MHz | 83 | 20.75 |
| 2437MHz | 103 | 25.75 |
| 2457MHz | 82 | 20.5 |
| 2462MHz | 76 | 19 |
| VHT20_Nss2,(MCS0)_2TX | - | - |
| 2412MHz | 74 | 18.5 |
| 2417MHz | 83 | 20.75 |
| 2437MHz | 96 | 24 |
| 2457MHz | 83 | 20.75 |
| 2462MHz | 80 | 20 |
| VHT40_Nss2,(MCS0)_2TX | - | - |
| 2422MHz | 70 | 17.5 |
| 2437MHz | 78 | 19.5 |
| 2452MHz | 70 | 17.5 |
| 802.11ax HEW20_Nss2,(MCS0)_2TX | - | - |
| 2412MHz | 74 | 18.5 |
| 2417MHz | 83 | 20.75 |
| 2437MHz | 96 | 24 |
| 2457MHz | 83 | 20.75 |
| 2462MHz | 80 | 20 |
| 802.11ax HEW40_Nss2,(MCS0)_2TX | - | - |
| 2422MHz | 70 | 17.5 |
| 2437MHz | 78 | 19.5 |
| 2452MHz | 70 | 17.5 |
| VHT20-BF_Nss1,(MCS0)_2TX | - | - |
| 2412MHz | 80 | 20 |
| 2417MHz | 82 | 20.5 |
| 2437MHz | 97 | 24.25 |
| 2457MHz | 75 | 18.75 |
| 2462MHz | 78 | 19.5 |
| VHT40-BF_Nss1,(MCS0)_2TX | - | - |
| 2422MHz | 73 | 18.25 |
| 2437MHz | 77 | 19.25 |



| Mode | PowerSetting | PowerSetting (dBm) |
|-----------------------------------|--------------|--------------------|
| 2452MHz | 71 | 17.75 |
| 802.11ax HEW20-BF_Nss1,(MCS0)_2TX | - | - |
| 2412MHz | 80 | 20 |
| 2417MHz | 82 | 20.5 |
| 2437MHz | 97 | 24.25 |
| 2457MHz | 75 | 18.75 |
| 2462MHz | 78 | 19.5 |
| 802.11ax HEW40-BF_Nss1,(MCS0)_2TX | - | - |
| 2422MHz | 73 | 18.25 |
| 2437MHz | 77 | 19.25 |
| 2452MHz | 71 | 17.75 |



**For Radio 3
For 1TX Mode:**

| Mode | PowerSetting | PowerSetting (dBm) |
|--------------------------------|--------------|--------------------|
| 802.11b_Nss1,(1Mbps)_1TX | - | - |
| 2412MHz | 88 | 22 |
| 2437MHz | 89 | 22.25 |
| 2462MHz | 91 | 22.75 |
| 802.11g_Nss1,(6Mbps)_1TX | - | - |
| 2412MHz | 74 | 18.5 |
| 2417MHz | 86 | 21.5 |
| 2437MHz | 98 | 24.5 |
| 2457MHz | 83 | 20.75 |
| 2462MHz | 72 | 18 |
| VHT20_Nss1,(MCS0)_1TX | - | - |
| 2412MHz | 73 | 18.25 |
| 2417MHz | 81 | 20.25 |
| 2437MHz | 94 | 23.5 |
| 2457MHz | 82 | 20.5 |
| 2462MHz | 64 | 16 |
| VHT40_Nss1,(MCS0)_1TX | - | - |
| 2422MHz | 67 | 16.75 |
| 2437MHz | 74 | 18.5 |
| 2452MHz | 69 | 17.25 |
| 802.11ax HEW20_Nss1,(MCS0)_1TX | - | - |
| 2412MHz | 73 | 18.25 |
| 2417MHz | 81 | 20.25 |
| 2437MHz | 94 | 23.5 |
| 2457MHz | 82 | 20.5 |
| 2462MHz | 64 | 16 |
| 802.11ax HEW40_Nss1,(MCS0)_1TX | - | - |
| 2422MHz | 67 | 16.75 |
| 2437MHz | 74 | 18.5 |
| 2452MHz | 69 | 17.25 |



For 2TX Mode:

| Mode | PowerSetting | PowerSetting (dBm) |
|--------------------------------|--------------|--------------------|
| 802.11b_Nss1,(1Mbps)_2TX | - | - |
| 2412MHz | 86 | 21.5 |
| 2437MHz | 92 | 23 |
| 2462MHz | 83 | 20.75 |
| 802.11g_Nss1,(6Mbps)_2TX | - | - |
| 2412MHz | 66 | 16.5 |
| 2417MHz | 74 | 18.5 |
| 2437MHz | 89 | 22.25 |
| 2457MHz | 77 | 19.25 |
| 2462MHz | 65 | 16.25 |
| VHT20_Nss2,(MCS0)_2TX | - | - |
| 2412MHz | 64 | 16 |
| 2417MHz | 76 | 19 |
| 2437MHz | 87 | 21.75 |
| 2457MHz | 73 | 18.25 |
| 2462MHz | 68 | 17 |
| VHT40_Nss2,(MCS0)_2TX | - | - |
| 2422MHz | 59 | 14.75 |
| 2437MHz | 68 | 17 |
| 2452MHz | 61 | 15.25 |
| 802.11ax HEW20_Nss2,(MCS0)_2TX | - | - |
| 2412MHz | 64 | 16 |
| 2417MHz | 76 | 19 |
| 2437MHz | 87 | 21.75 |
| 2457MHz | 73 | 18.25 |
| 2462MHz | 68 | 17 |
| 802.11ax HEW40_Nss2,(MCS0)_2TX | - | - |
| 2422MHz | 59 | 14.75 |
| 2437MHz | 68 | 17 |
| 2452MHz | 61 | 15.25 |
| VHT20-BF_Nss1,(MCS0)_2TX | - | - |
| 2412MHz | 65 | 16.25 |
| 2417MHz | 71 | 17.75 |
| 2437MHz | 88 | 22 |
| 2457MHz | 71 | 17.75 |
| 2462MHz | 66 | 16.5 |
| VHT40-BF_Nss1,(MCS0)_2TX | - | - |
| 2422MHz | 60 | 15 |
| 2437MHz | 66 | 16.5 |



| Mode | PowerSetting | PowerSetting (dBm) |
|-----------------------------------|--------------|--------------------|
| 2452MHz | 60 | 15 |
| 802.11ax HEW20-BF_Nss1,(MCS0)_2TX | - | - |
| 2412MHz | 65 | 16.25 |
| 2417MHz | 71 | 17.75 |
| 2437MHz | 88 | 22 |
| 2457MHz | 71 | 17.75 |
| 2462MHz | 66 | 16.5 |
| 802.11ax HEW40-BF_Nss1,(MCS0)_2TX | - | - |
| 2422MHz | 60 | 15 |
| 2437MHz | 66 | 16.5 |
| 2452MHz | 60 | 15 |



2.2 The Worst Case Measurement Configuration

| The Worst Case Mode for Following Conformance Tests | |
|-----------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| Tests Item | AC power-line conducted emissions |
| Condition | AC power-line conducted measurement for line and neutral Test Voltage: 120Vac / 60Hz |
| Operating Mode | CTX |
| 1 | EUT + Radio 1 (WLAN 2.4GHz) + Adapter |
| 2 | EUT + Radio 2 (WLAN 5GHz) + Adapter |
| 3 | EUT + Radio 3 (WLAN 2.4GHz) + Adapter |
| 4 | EUT + Radio 3 (WLAN 5GHz) + Adapter |
| Mode 2 has been evaluated to be the worst case among Mode 1~4, thus measurement for Mode 5 will follow this same test mode. | |
| 5 | EUT + Radio 2 (WLAN 5GHz) + PoE |
| For operating mode 2 is the worst case and it was record in this test report. | |

| The Worst Case Mode for Following Conformance Tests | |
|-----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| Tests Item | DTS Bandwidth Maximum Conducted Output Power Power Spectral Density Emissions in Non-restricted Frequency Bands |
| Test Condition | Conducted measurement at transmit chains |
| Operating Mode | Note 1 |



| The Worst Case Mode for Following Conformance Tests | | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------|
| Tests Item | Emissions in Restricted Frequency Bands | | |
| Test Condition | Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type. | | |
| Operating Mode < 1GHz | CTX | | |
| | The EUT was performed at X axis, Y axis and Z axis position Emissions in Restricted Frequency Bands above 1GHz test, and the worst case was found at Z axis. So the measurement will follow this same test configuration. | | |
| 1 | EUT at Z axis + Radio 1 (WLAN 2.4GHz) + Adapter | | |
| 2 | EUT at Z axis + Radio 2 (WLAN 5GHz) + Adapter | | |
| 3 | EUT at Z axis + Radio 3 (WLAN 2.4GHz) + Adapter | | |
| 4 | EUT at Z axis + Radio 3 (WLAN 5GHz) + Adapter | | |
| Mode 1 has been evaluated to be the worst case among Mode 1~4, thus measurement for Mode 5 will follow this same test mode. | | | |
| 5 | EUT at Z axis + Radio 1 (WLAN 2.4GHz) + PoE | | |
| For operating mode 5 is the worst case and it was record in this test report. | | | |
| Operating Mode > 1GHz | CTX(for more details refer note 1) | | |
| The EUT was performed at X axis, Y axis and Z axis position for Emissions in Restricted Frequency Bands test. And the worst case were found as below: | | | |
| | Item | 1TX | 2TX |
| Radio 1 | Radiated | X axis | Z axis |
| | Bandedge | | X axis |
| Radio 3 | Radiated | Y axis | Z axis |
| | Bandedge | | Y axis |



| The Worst Case Mode for Following Conformance Tests | |
|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| Tests Item | Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation |
| Operating Mode | |
| 1 | Radio 1 + Radio 2 + Radio 3 (2.4GHz) |
| 2 | Radio 1 + Radio 2 + Radio 3 (5GHz) |
| Refer to Sporton Test Report No.: FA970232-06 for Co-location RF Exposure Evaluation. | |

Note: 1. Test Mode:

| Test Item | Radio 1 / Radio 3 | | | | | | | | | |
|---------------------------------------------|-------------------|-------------|---------|-------------|------------------|------------------|-------------------|------|-------------|--------------|
| | 802.11b | | 802.11g | | VHT20/40 | | 802.11ax HEW20/40 | | | |
| | 1T1S | CDD 2T1S | 1T1S | CDD 2T1S | 1T1S | SDM 2T2S | TXBF 2T1S | 1T1S | SDM 2T2S | TXBF 2T1S |
| Maximum Conducted Output Power | V | V | V | V | V | V | V | V | V | V |
| DTS Bandwidth | V | V | V | V | Cover by 11ax | Cover by 11ax | Cover by 11ax | V | V | V |
| Power Spectral Density | V | V | V | V | V | V | V | V | V | V |
| Emissions in Non-restricted Frequency Bands | V | V | V | V | Cover by 11ax | Cover by 11ax | Cover by 11ax | V | V | V |
| Emissions in Restricted Frequency Bands | V | V | V | V | Cover by 11ax | Cover by 11ax | Cover by 11ax | V | V | V |

2. HEW20/HEW40 covers HT20/HT40. The power setting 11n HT20 and HT40 are the same or lower than 802.11ax HEW20 and HEW40.
3. There are two modes of EUT for 802.11n/ax, VHT20, VHT40 in 2.4GHz and 802.11n/ac/ax in 5GHz. One is beamforming mode, and the other is non-beamforming mode. Both modes have been tested and recorded in this test report.
4. The Adapter and PoE is for measurement only, would not be marketed.

Adapter and PoE information as below:

| Power | Brand Holder | Model |
|---------|-----------------------------|-----------------|
| Adapter | Powertron Electronics Corp. | PA1024-120IB200 |
| Power | Brand | Model |
| PoE | EnGenius | EPA5006GP |



2.3 EUT Operation during Test

For CTX Mode:

non-beamforming mode:

The EUT was programmed to be in continuously transmitting mode.

beamforming mode:

For Conducted Mode:

The EUT was programmed to be in continuously transmitting mode.

For Radiated Mode:

During the test, the following programs under WIN 7 were executed.

The program was executed as follows:

1. During the test, the EUT operation to normal function.
2. Executed command fixed test channel under Telnet.
3. Executed " Lan Test (2.0.0.2) " to link with the remote workstation to transmit and receive packet by Wireless AP and transmit duty cycle no less than 98%.

2.4 Accessories

Wall-mounted rack*1



2.5 Support Equipment

For AC Conduction:

| Support Equipment | | | | |
|-------------------|---------------|-----------------------|-----------------|--------|
| No. | Equipment | Brand Name | Model Name | FCC ID |
| A | LAN NB | DELL | E6430 | N/A |
| B | Flash disk3.0 | Transcend | 639205 7755 | N/A |
| C | Adapter | Powertron Electronics | PA1024-120IB200 | N/A |

For Radiated (below 1GHz):

| Support Equipment | | | | |
|-------------------|-----------|------------|------------|--------|
| No. | Equipment | Brand Name | Model Name | FCC ID |
| A | Notebook | DELL | E4300 | N/A |
| B | PoE | EnGenius | EPA5006GP | N/A |

For Radiated (above 1GHz):

<For Non-Beamforming Mode>

| Support Equipment | | | | |
|-------------------|-----------|-----------------------------|-----------------|--------|
| No. | Equipment | Brand | Model Name | FCC ID |
| A | Notebook | DELL | E4300 | N/A |
| E | Adapter | Powertron Electronics Corp. | PA1024-120IB200 | N/A |

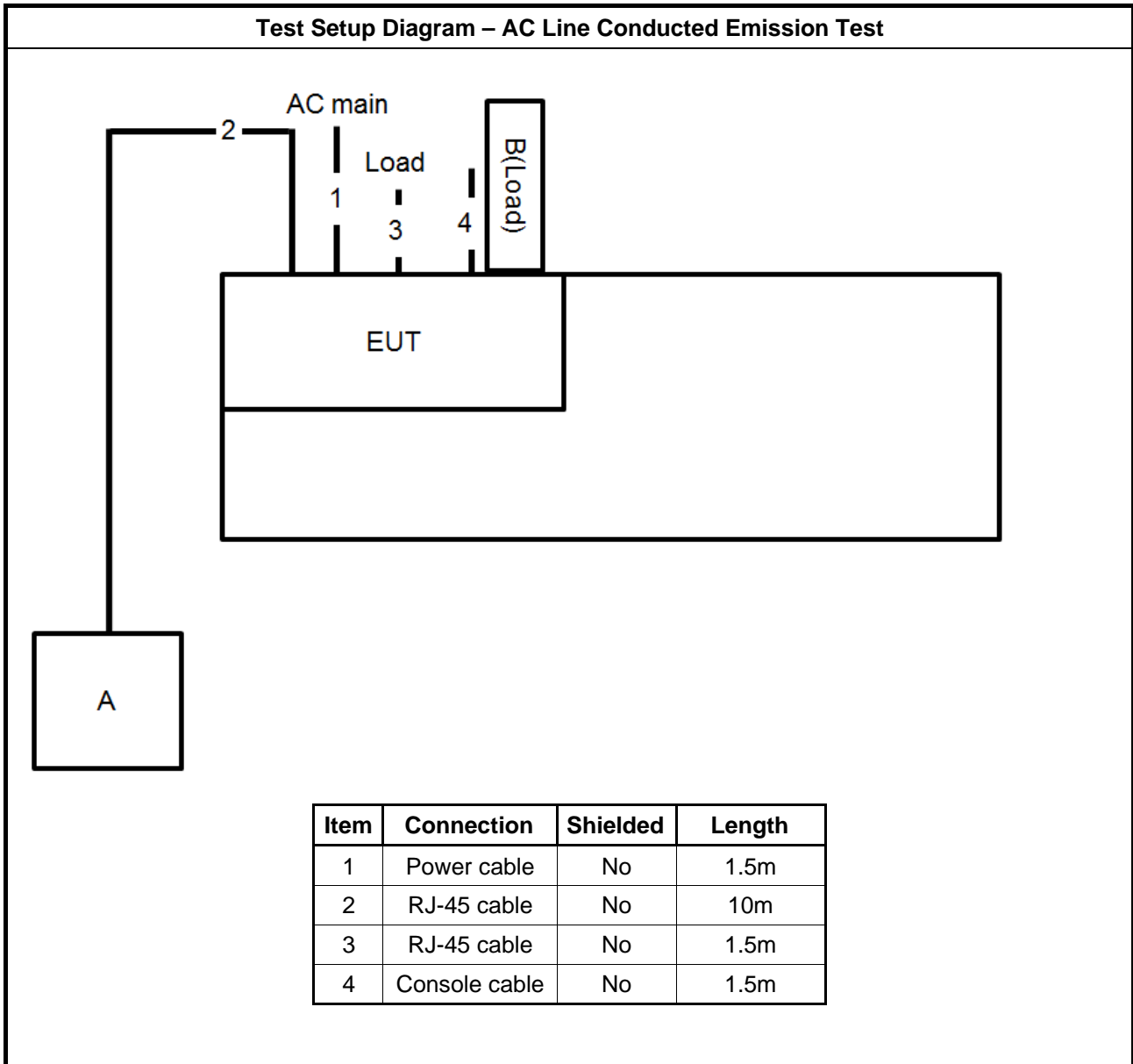
<For Beamforming Mode>

| Support Equipment | | | | |
|-------------------|-----------|-----------------------------|-----------------|--------|
| No. | Equipment | Brand | Model Name | FCC ID |
| A | Notebook | DELL | E4300 | N/A |
| B | WLAN AP | Extreme Networks, Inc. | AP460i/e | N/A |
| C | Notebook | DELL | E4300 | N/A |
| E | Adapter | Powertron Electronics Corp. | PA1024-120IB200 | N/A |

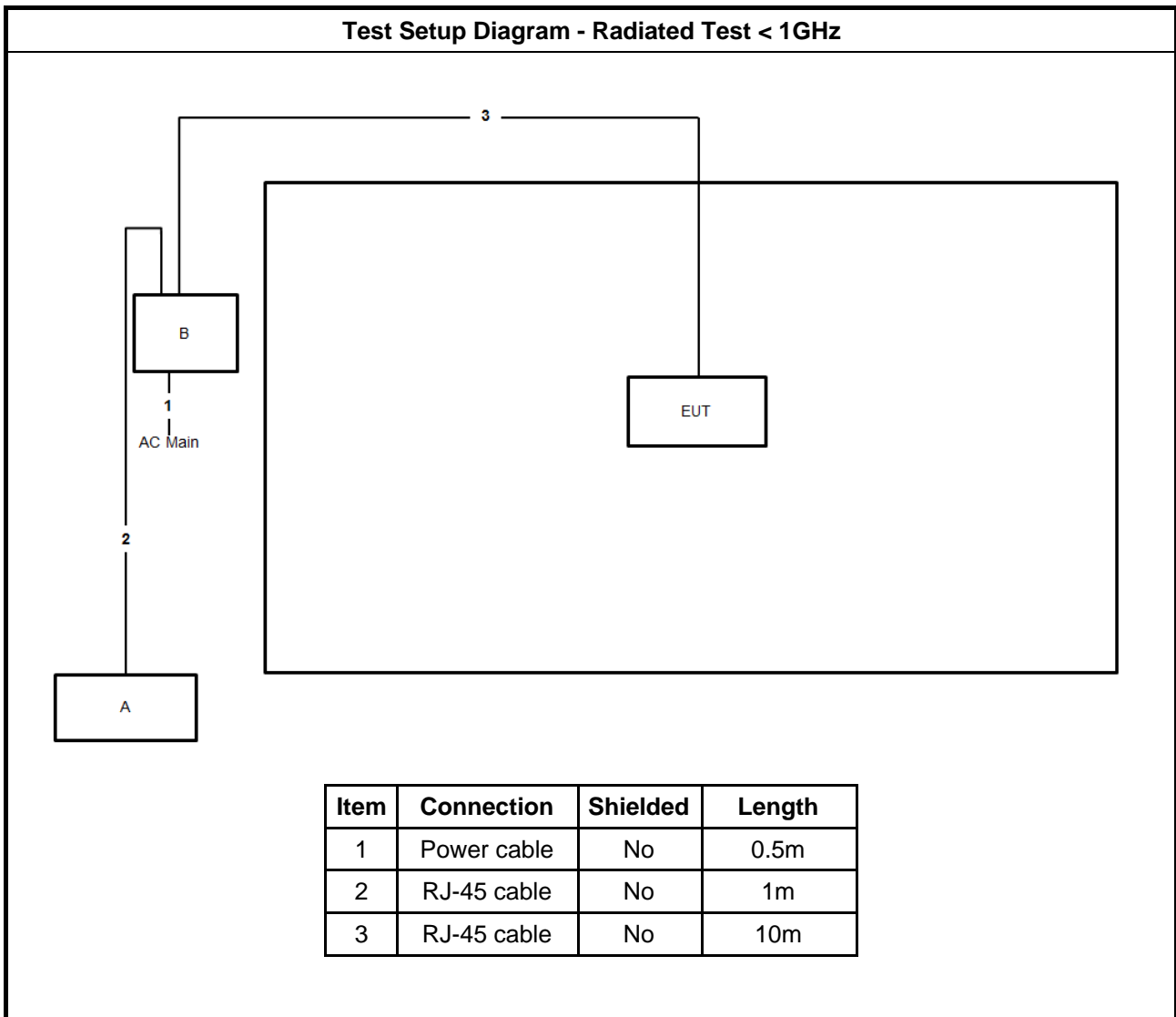
For RF Conducted:

| Support Equipment | | | | |
|-------------------|-----------|-----------------------------|-----------------|--------|
| No. | Equipment | Brand Name | Model Name | FCC ID |
| A | Notebook | DELL | E4300 | N/A |
| B | Adapter | Powertron Electronics Corp. | PA1024-120IB200 | N/A |

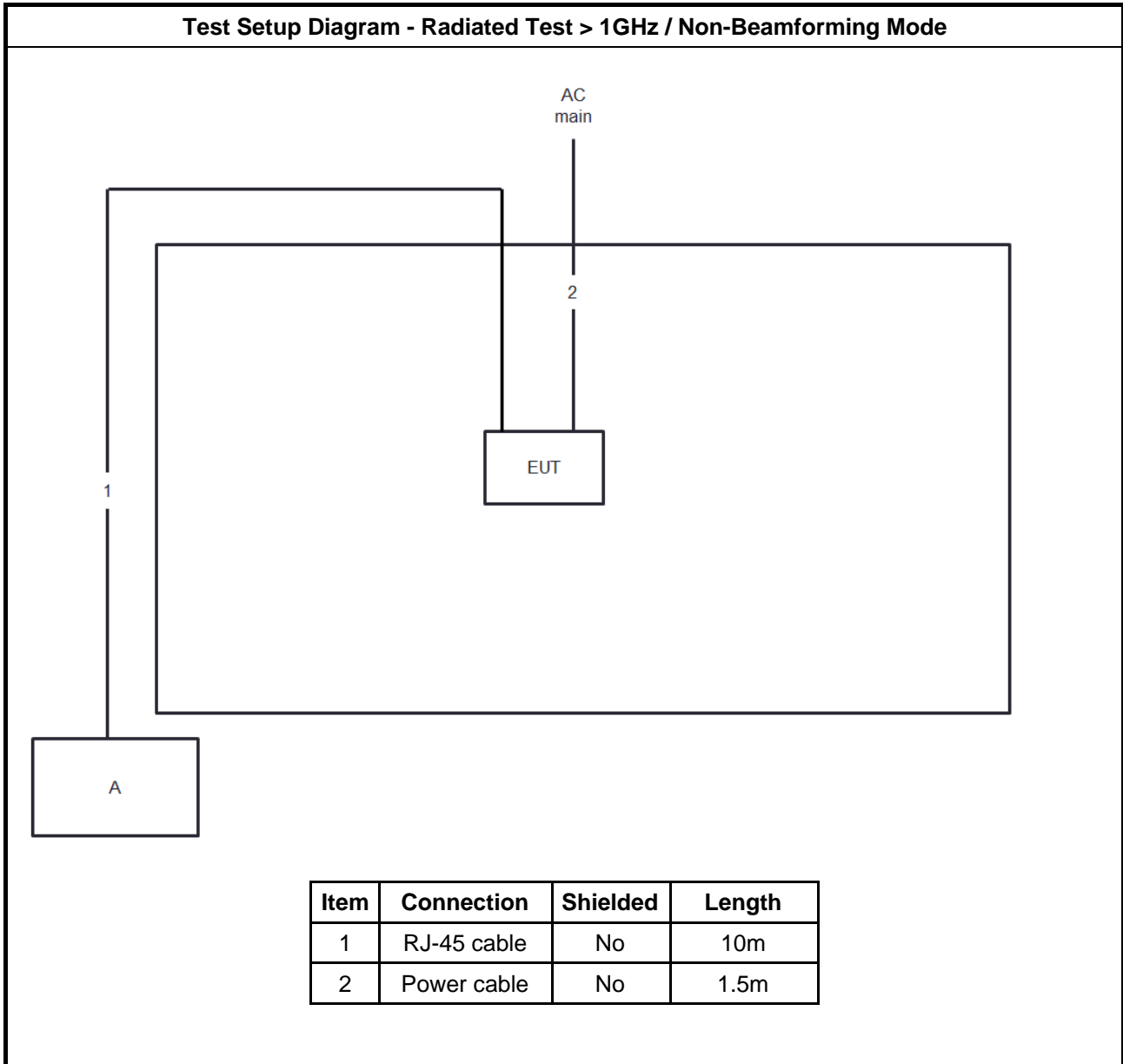
2.6 Test Setup Diagram



Test Setup Diagram - Radiated Test < 1GHz

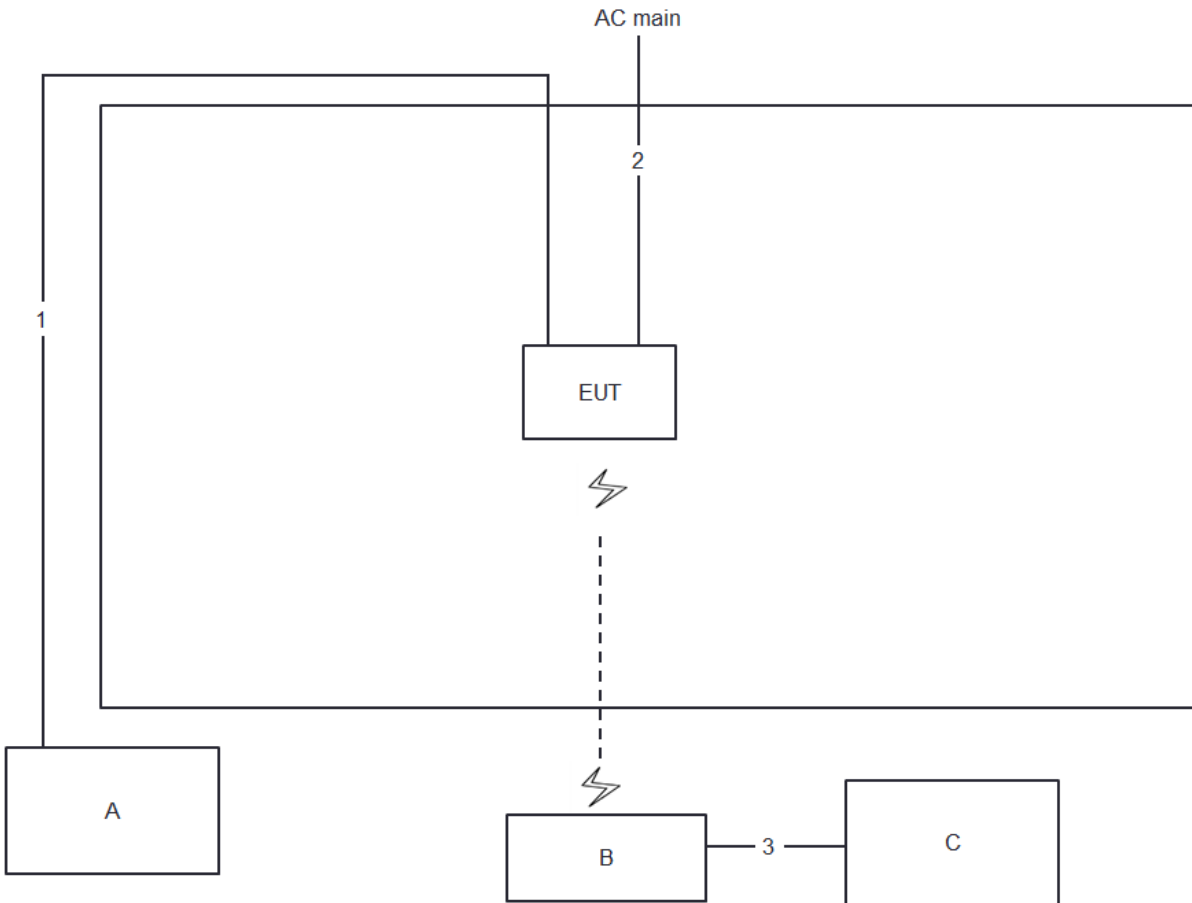


Test Setup Diagram - Radiated Test > 1GHz / Non-Beamforming Mode



| Item | Connection | Shielded | Length |
|------|-------------|----------|--------|
| 1 | RJ-45 cable | No | 10m |
| 2 | Power cable | No | 1.5m |

Test Setup Diagram - Radiated Test > 1GHz / Beamforming Mode



| Item | Connection | Shielded | Length |
|------|-------------|----------|--------|
| 1 | RJ-45 cable | No | 10m |
| 2 | Power cable | No | 1.5m |
| 3 | RJ-45 cable | No | 1.5m |



3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

| AC Power-line Conducted Emissions Limit | | |
|-----------------------------------------|------------|-----------|
| Frequency Emission (MHz) | Quasi-Peak | Average |
| 0.15-0.5 | 66 - 56 * | 56 - 46 * |
| 0.5-5 | 56 | 46 |
| 5-30 | 60 | 50 |

Note 1: * Decreases with the logarithm of the frequency.

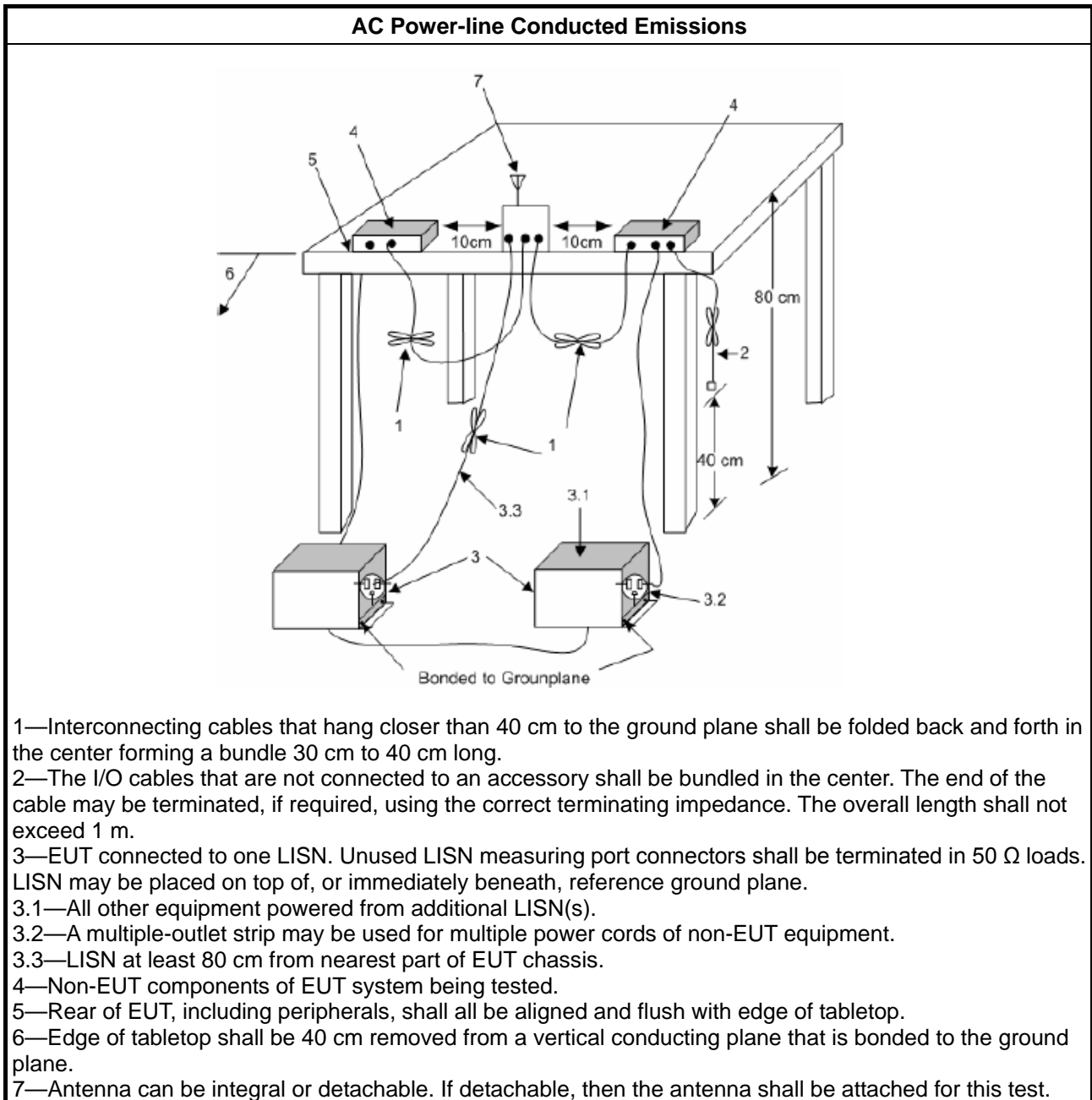
3.1.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.1.3 Test Procedures

| Test Method |
|------------------------------------------------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> Refer as ANSI C63.10-2013, clause 6.2 for AC power-line conducted emissions. |

3.1.4 Test Setup



3.1.5 Measurement Results Calculation

The measured Level is calculated using:

- a. Corrected Reading: LISN Factor (LISN) + Attenuator (AT/AUX) + Cable Loss (CL) + Read Level (Raw) = Level
- b. Margin = -Limit + Level

3.1.6 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A

3.2 DTS Bandwidth

3.2.1 6dB Bandwidth Limit

| 6dB Bandwidth Limit |
|-----------------------------------------------------------------------------------------------|
| Systems using digital modulation techniques: |
| <ul style="list-style-type: none"> ▪ 6 dB bandwidth \geq 500 kHz. |

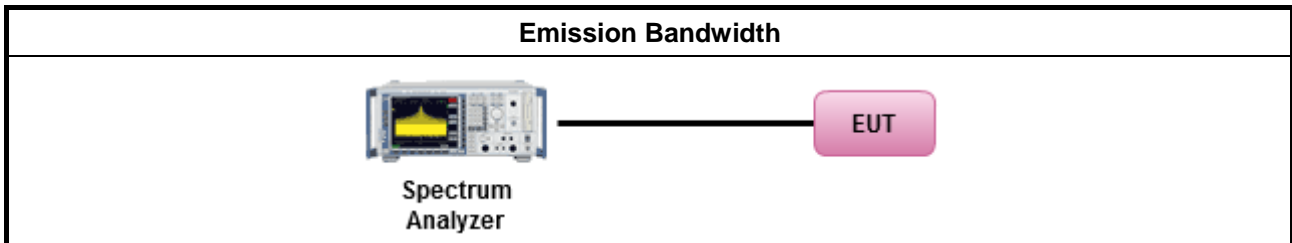
3.2.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.2.3 Test Procedures

| Test Method |
|-----------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> ▪ For the emission bandwidth shall be measured using one of the options below: |
| <input checked="" type="checkbox"/> Refer as FCC KDB 558074, clause 8.2 & C63.10 clause 11.8.1 Option 1 for 6 dB bandwidth measurement. |
| <input type="checkbox"/> Refer as FCC KDB 558074, clause 8.2 & C63.10 clause 11.8.2 Option 2 for 6 dB bandwidth measurement. |
| <input type="checkbox"/> Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing. |

3.2.4 Test Setup



3.2.5 Test Result of Emission Bandwidth

Refer as Appendix B



3.3 Maximum Conducted Output Power

3.3.1 Maximum Conducted Output Power Limit

| Maximum Conducted Output Power Limit | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | <ul style="list-style-type: none"> ▪ If $G_{TX} \leq 6$ dBi, then $P_{Out} \leq 30$ dBm (1 W) |
| | <ul style="list-style-type: none"> ▪ Point-to-multipoint systems (P2M): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$ dBm |
| | <ul style="list-style-type: none"> ▪ Point-to-point systems (P2P): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm |
| | <ul style="list-style-type: none"> ▪ Smart antenna system (SAS): |
| | <ul style="list-style-type: none"> - Single beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm |
| | <ul style="list-style-type: none"> - Overlap beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm |
| | <ul style="list-style-type: none"> - Aggregate power on all beams: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3 + 8$ dB dBm |
| <p>P_{Out} = maximum peak conducted output power or maximum conducted output power in dBm, G_{TX} = the maximum transmitting antenna directional gain in dBi.</p> | |

3.3.2 Measuring Instruments

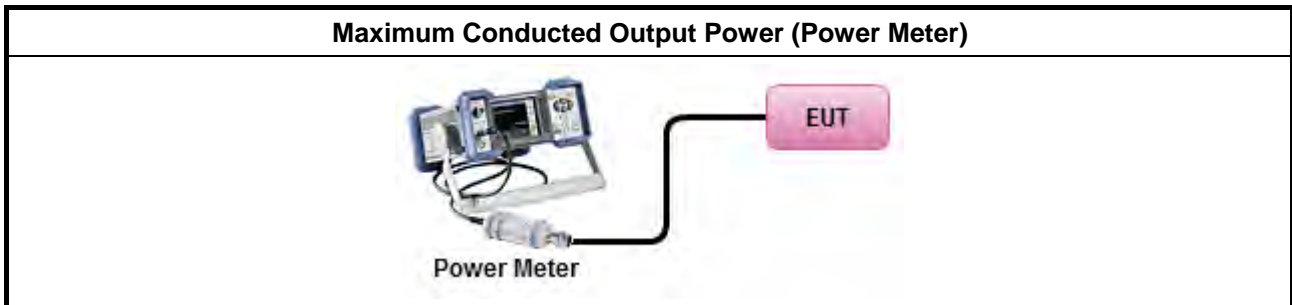
Refer a test equipment and calibration data table in this test report.



3.3.3 Test Procedures

| Test Method | |
|-----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> ▪ Maximum Peak Conducted Output Power | |
| | <input type="checkbox"/> Refer as FCC KDB 558074, clause 8.3.1.1 & C63.10 clause 11.9.1.1 (RBW ≥ EBW method). |
| | <input type="checkbox"/> Refer as FCC KDB 558074, clause 8.3.1.3 & C63.10 clause 11.9.1.3 (peak power meter). |
| <ul style="list-style-type: none"> ▪ Maximum Conducted Output Power | |
| [duty cycle ≥ 98% or external video / power trigger] | |
| | <input type="checkbox"/> Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.2 Method AVGSA-1. |
| | <input type="checkbox"/> Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.3 Method AVGSA-1A. (alternative) |
| duty cycle < 98% and average over on/off periods with duty factor | |
| | <input type="checkbox"/> Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.4 Method AVGSA-2. |
| | <input type="checkbox"/> Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.5 Method AVGSA-2A (alternative) |
| | <input type="checkbox"/> Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.6 Method AVGSA-3 |
| | <input type="checkbox"/> Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.7 Method AVGSA-3A (alternative) |
| Measurement using a power meter (PM) | |
| | <input type="checkbox"/> Refer as FCC KDB 558074, clause 8.3.2.3 & C63.10 clause 11.9.2.3.1 Method AVGPM (using an RF average power meter). |
| | <input checked="" type="checkbox"/> Refer as FCC KDB 558074, clause 8.3.2.3 & C63.10 clause 11.9.2.3.2 Method AVGPM-G (using an gate RF average power meter). |
| <ul style="list-style-type: none"> ▪ For conducted measurement. | |
| | <ul style="list-style-type: none"> ▪ If the EUT supports multiple transmit chains using options given below: Refer as FCC KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them. |
| | <ul style="list-style-type: none"> ▪ If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + \dots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$ |

3.3.4 Test Setup



3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C



3.4 Power Spectral Density

3.4.1 Power Spectral Density Limit

| Power Spectral Density Limit |
|-------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> Power Spectral Density (PSD) \leq 8 dBm/3kHz |

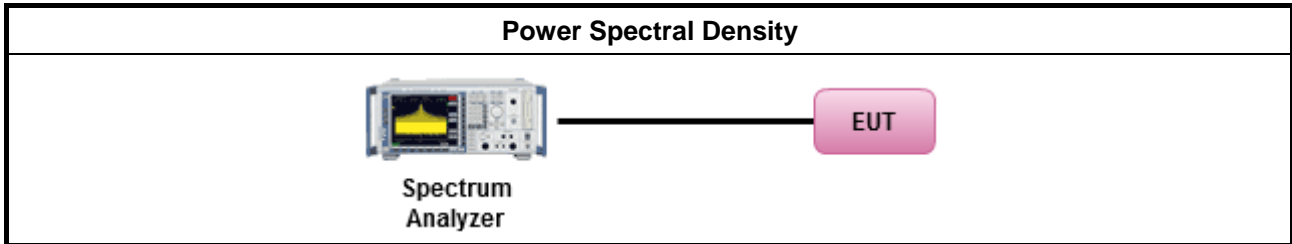
3.4.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.4.3 Test Procedures

| Test Method | | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> Peak power spectral density procedures that the same method as used to determine the conducted output power. If maximum peak conducted output power was measured to demonstrate compliance to the output power limit, then the peak PSD procedure below (Method PKPSD) shall be used. If maximum conducted output power was measured to demonstrate compliance to the output power limit, then one of the average PSD procedures shall be used, as applicable based on the following criteria (the peak PSD procedure is also an acceptable option). | | | |
| <input checked="" type="checkbox"/> Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10 Method Max. PSD. | | | |
| <ul style="list-style-type: none"> For conducted measurement. <ul style="list-style-type: none"> If The EUT supports multiple transmit chains using options given below: <table border="1"> <tbody> <tr> <td> <input checked="" type="checkbox"/> Option 1: Measure and sum the spectra across the outputs. Refer as FCC KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the NTX output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace. </td> </tr> <tr> <td> <input type="checkbox"/> Option 2: Measure and sum spectral maxima across the outputs. With this technique, spectra are measured at each output of the device at the required resolution bandwidth. The maximum value (peak) of each spectrum is determined. These maximum values are then summed mathematically in linear power units across the outputs. These operations shall be performed separately over frequency spans that have different out-of-band or spurious emission limits, </td> </tr> <tr> <td> <input type="checkbox"/> Option 3: Measure and add 10 log(N) dB, where N is the number of transmit chains. Refer as FCC KDB 662911, In-band power spectral density (PSD). Performed at each transmit chains and each transmit chains shall be compared with the limit have been reduced with 10 log(N). Or each transmit chains shall be add 10 log(N) to compared with the limit. </td> </tr> </tbody> </table> | <input checked="" type="checkbox"/> Option 1: Measure and sum the spectra across the outputs. Refer as FCC KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the NTX output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace. | <input type="checkbox"/> Option 2: Measure and sum spectral maxima across the outputs. With this technique, spectra are measured at each output of the device at the required resolution bandwidth. The maximum value (peak) of each spectrum is determined. These maximum values are then summed mathematically in linear power units across the outputs. These operations shall be performed separately over frequency spans that have different out-of-band or spurious emission limits, | <input type="checkbox"/> Option 3: Measure and add 10 log(N) dB, where N is the number of transmit chains. Refer as FCC KDB 662911, In-band power spectral density (PSD). Performed at each transmit chains and each transmit chains shall be compared with the limit have been reduced with 10 log(N). Or each transmit chains shall be add 10 log(N) to compared with the limit. |
| <input checked="" type="checkbox"/> Option 1: Measure and sum the spectra across the outputs. Refer as FCC KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the NTX output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace. | | | |
| <input type="checkbox"/> Option 2: Measure and sum spectral maxima across the outputs. With this technique, spectra are measured at each output of the device at the required resolution bandwidth. The maximum value (peak) of each spectrum is determined. These maximum values are then summed mathematically in linear power units across the outputs. These operations shall be performed separately over frequency spans that have different out-of-band or spurious emission limits, | | | |
| <input type="checkbox"/> Option 3: Measure and add 10 log(N) dB, where N is the number of transmit chains. Refer as FCC KDB 662911, In-band power spectral density (PSD). Performed at each transmit chains and each transmit chains shall be compared with the limit have been reduced with 10 log(N). Or each transmit chains shall be add 10 log(N) to compared with the limit. | | | |

3.4.4 Test Setup



3.4.5 Test Result of Power Spectral Density

Refer as Appendix D

3.5 Emissions in Non-restricted Frequency Bands

3.5.1 Emissions in Non-restricted Frequency Bands Limit

| Un-restricted Band Emissions Limit | |
|------------------------------------|-------------|
| RF output power procedure | Limit (dBc) |
| Peak output power procedure | 20 |
| Average output power procedure | 30 |

Note 1: If the peak output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the peak conducted output power measured within any 100 kHz outside the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum measured in-band peak PSD level.

Note 2: If the average output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the power in any 100 kHz outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum measured in-band average PSD level.

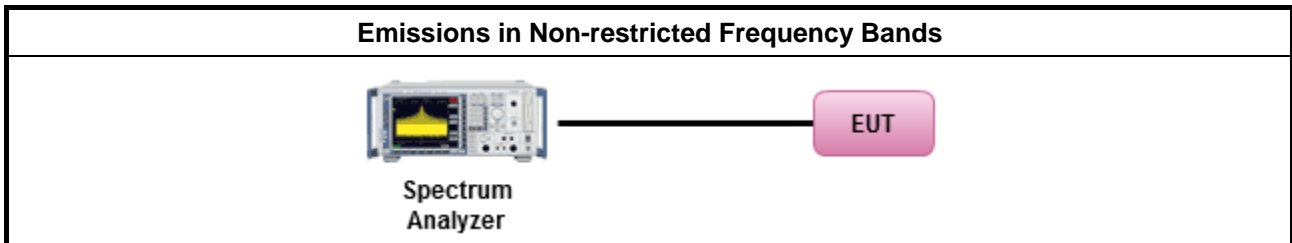
3.5.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.5.3 Test Procedures

| Test Method |
|-----------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> Refer as FCC KDB 558074, clause 8.5 for unwanted emissions into non-restricted bands. |

3.5.4 Test Setup



3.5.5 Test Result of Emissions in Non-restricted Frequency Bands

Refer as Appendix E



3.6 Emissions in Restricted Frequency Bands

3.6.1 Emissions in Restricted Frequency Bands Limit

| Restricted Band Emissions Limit | | | |
|---------------------------------|-----------------------|-------------------------|----------------------|
| Frequency Range (MHz) | Field Strength (uV/m) | Field Strength (dBuV/m) | Measure Distance (m) |
| 0.009~0.490 | 2400/F(kHz) | 48.5 - 13.8 | 300 |
| 0.490~1.705 | 24000/F(kHz) | 33.8 - 23 | 30 |
| 1.705~30.0 | 30 | 29 | 30 |
| 30~88 | 100 | 40 | 3 |
| 88~216 | 150 | 43.5 | 3 |
| 216~960 | 200 | 46 | 3 |
| Above 960 | 500 | 54 | 3 |

Note 1: Test distance for frequencies at or above 30 MHz, measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

Note 2: Test distance for frequencies at below 30 MHz, measurements may be performed at a distance closer than the EUT limit distance; however, an attempt should be made to avoid making measurements in the near field. When performing measurements below 30 MHz at a closer distance than the limit distance, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two or more distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade). The test report shall specify the extrapolation method used to determine compliance of the EUT.

Note 3: Using the distance of 1m during the test for above 18 GHz, and the test value to correct for the distance factor at 3m.

3.6.2 Measuring Instruments

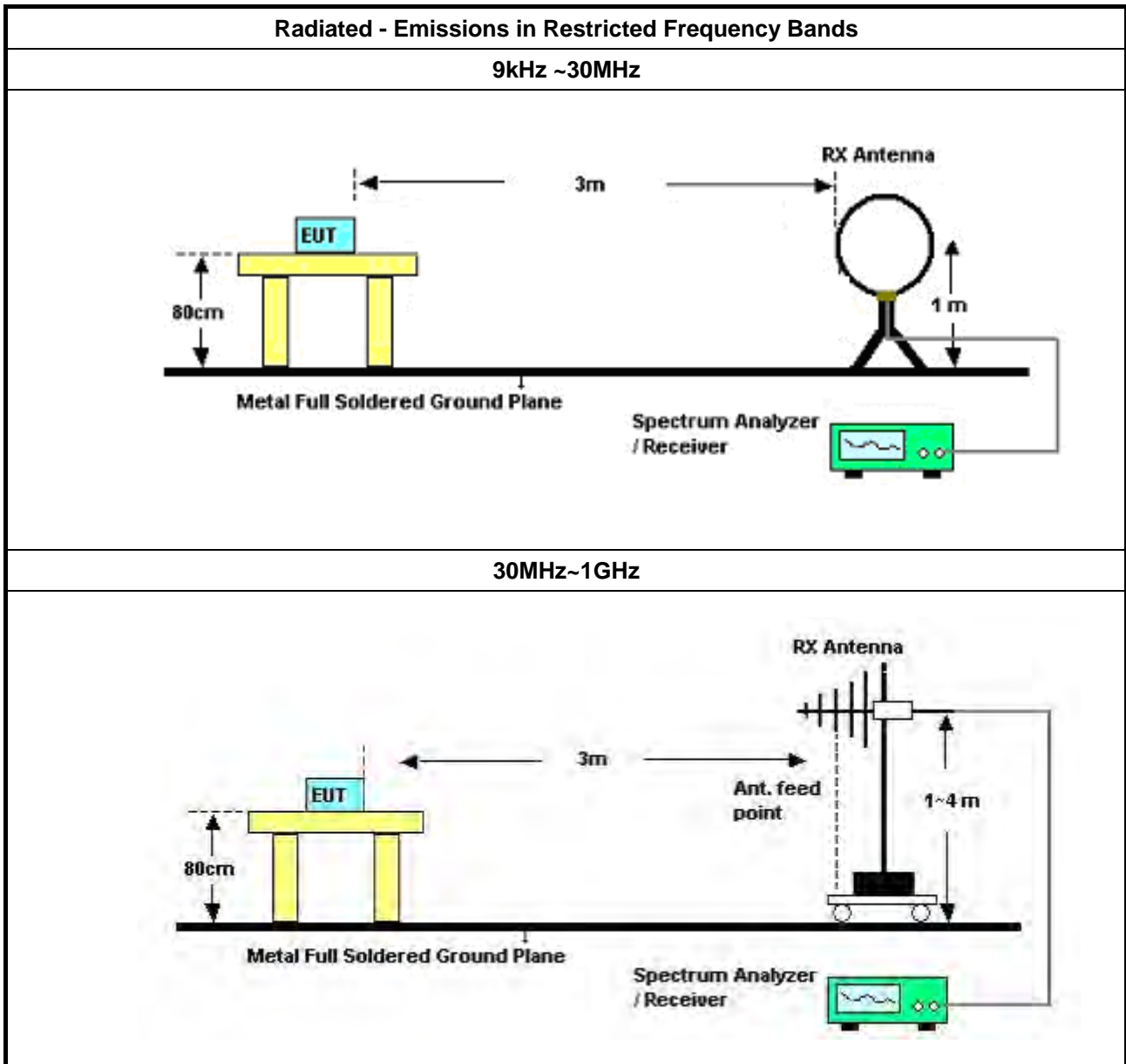
Refer a test equipment and calibration data table in this test report.

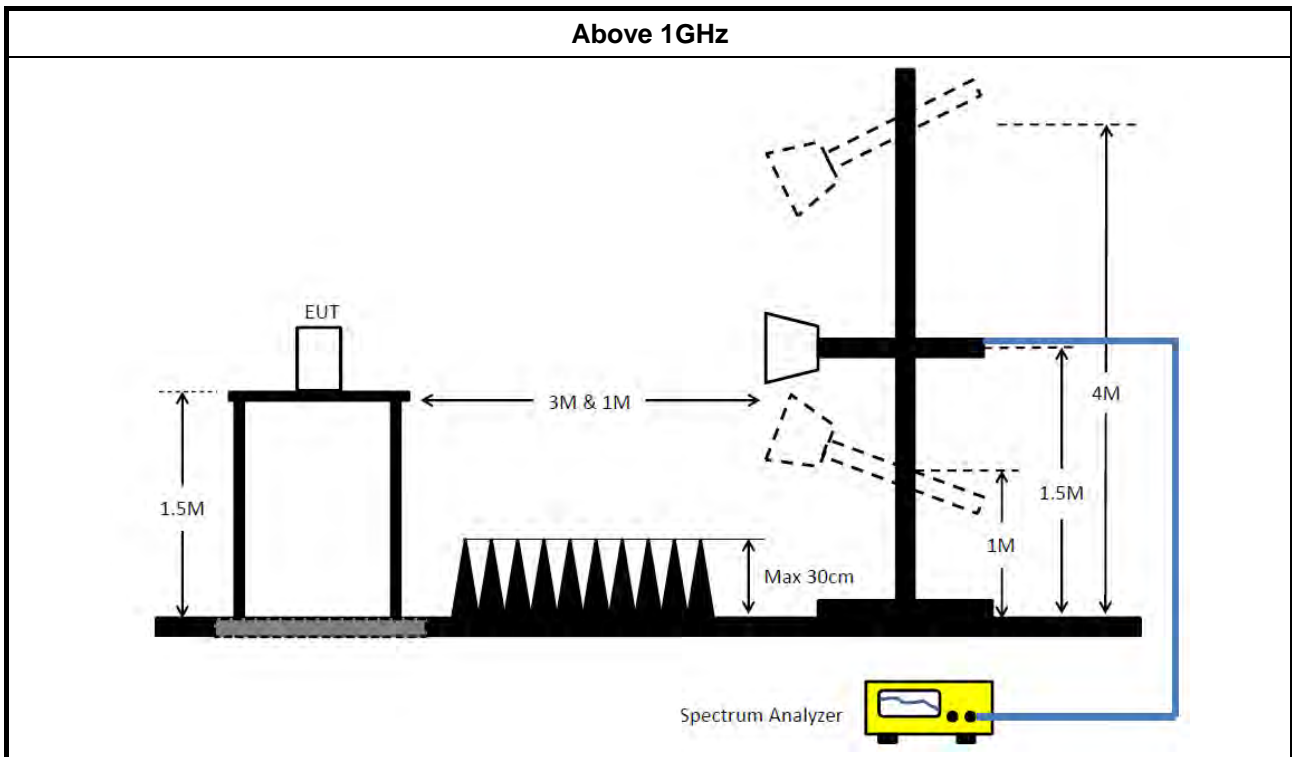


3.6.3 Test Procedures

| Test Method | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> ▪ The average emission levels shall be measured in [duty cycle \geq 98 or duty factor]. | |
| <ul style="list-style-type: none"> ▪ Refer as ANSI C63.10, clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band. | |
| <ul style="list-style-type: none"> ▪ For the transmitter unwanted emissions shall be measured using following options below: | |
| | <ul style="list-style-type: none"> ▪ Refer as FCC KDB 558074, clause 8.6 for unwanted emissions into restricted bands. |
| | <input type="checkbox"/> Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.1(trace averaging for duty cycle \geq 98%). |
| | <input type="checkbox"/> Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.2(trace averaging + duty factor). |
| | <input checked="" type="checkbox"/> Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.3(Reduced VBW \geq 1/T). |
| | <input type="checkbox"/> Refer as ANSI C63.10, clause 11.12.2.5.3 (Reduced VBW). VBW \geq 1/T, where T is pulse time. |
| | <input type="checkbox"/> Refer as ANSI C63.10, clause 7.5 average value of pulsed emissions. |
| | <input checked="" type="checkbox"/> Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.4 measurement procedure peak limit. |
| <ul style="list-style-type: none"> ▪ For the transmitter band-edge emissions shall be measured using following options below: | |
| | <ul style="list-style-type: none"> ▪ Refer as FCC KDB 558074 clause 8.7 & C63.10 clause 11.13.1, When the performing peak or average radiated measurements, emissions within 2 MHz of the authorized band edge may be measured using the marker-delta method described below. |
| | <ul style="list-style-type: none"> ▪ Refer as FCC KDB 558074, clause 8.7 (ANSI C63.10, clause 6.10.6) for marker-delta method for band-edge measurements. |
| | <ul style="list-style-type: none"> ▪ Refer as FCC KDB 558074, clause 8.7 for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels (i.e., 1 MHz). |
| | <ul style="list-style-type: none"> ▪ For conducted unwanted emissions into restricted bands (absolute emission limits). Devices with multiple transmit chains using options given below: (1) Measure and sum the spectra across the outputs or (2) Measure and add 10 log(N) dB |
| | <ul style="list-style-type: none"> ▪ For FCC KDB 662911 The methodology described here may overestimate array gain, thereby resulting in apparent failures to satisfy the out-of-band limits even if the device is actually compliant. In such cases, compliance may be demonstrated by performing radiated tests around the frequencies at which the apparent failures occurred. |

3.6.4 Test Setup





3.6.5 Measurement Results Calculation

The measured Level is calculated using:

Corrected Reading: Antenna factor (AF) + Cable loss (CL) + Read level (Raw) - Preamp factor (PA)(if applicable) = Level.

3.6.6 Emissions in Restricted Frequency Bands (Below 30MHz)

There is a comparison data of both open-field test site and alternative test site - semi-Anechoic chamber according to KDB414788 Radiated Test Site, and the result came out very similar.

All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.

The radiated emissions were investigated from 9 kHz or the lowest frequency generated within the device, up to the 10th harmonic or 40 GHz, whichever is appropriate.

3.6.7 Test Result of Emissions in Restricted Frequency Bands

Refer as Appendix F



4 Test Equipment and Calibration Data

| Instrument | Brand | Model No. | Serial No. | Characteristics | Calibration Date | Calibration Due Date | Remark |
|-----------------------------------|----------------|--------------------|------------------|------------------|------------------|----------------------|-----------------------|
| LISN | Schwarzbeck | NSLK 8127 | 8127650 | 9kHz ~ 30MHz | Dec. 04, 2020 | Dec. 03, 2021 | Conduction (CO02-CB) |
| LISN | Schwarzbeck | NSLK 8127 | 8127478 | 9kHz ~ 30MHz | Nov. 20, 2020 | Nov. 19, 2021 | Conduction (CO02-CB) |
| EMI Receiver | Agilent | N9038A | MY52260140 | 9kHz ~ 8.4GHz | May 05, 2021 | May 04, 2022 | Conduction (CO02-CB) |
| Pulse Limiter | Schwarzbeck | VTSD 9561F-N | 00378 | 9kHz ~ 30MHz | Mar. 18, 2021 | Mar. 17, 2022 | Conduction (CO02-CB) |
| COND Cable | Woken | Cable | 2 | 0.15MHz ~ 30MHz | Oct. 19, 2021 | Oct. 18, 2022 | Conduction (CO02-CB) |
| Software | SPORTON | SENSE | V5.10 | - | N.C.R. | N.C.R. | Conduction (CO02-CB) |
| Loop Antenna | Teseq | HLA 6120 | 24155 | 9kHz - 30 MHz | Apr. 14, 2021 | Apr. 13, 2022 | Radiation (03CH05-CB) |
| 3m Semi Anechoic Chamber NSA | TDK | SAC-3M | 03CH05-CB | 30 MHz ~ 1 GHz | Aug. 09, 2021 | Aug. 08, 2022 | Radiation (03CH05-CB) |
| Bilog Antenna with 6dB Attenuator | TESEQ & EMCI | CBL 6112D & N-6-06 | 35236 & AT-N0610 | 30MHz ~ 2GHz | Mar. 26, 2021 | Mar. 25, 2022 | Radiation (03CH05-CB) |
| Pre-Amplifier | EMCI | EMC330N | 980331 | 20MHz ~ 3GHz | Apr. 27, 2021 | Apr. 26, 2022 | Radiation (03CH05-CB) |
| Spectrum Analyzer | R&S | FSP40 | 100304 | 9kHz ~ 40GHz | Nov. 10, 2020 | Nov. 09, 2021 | Radiation (03CH05-CB) |
| EMI Test Receiver | R&S | ESCS | 826547/017 | 9kHz ~ 2.75GHz | Jun. 21, 2021 | Jun. 20, 2022 | Radiation (03CH05-CB) |
| RF Cable-low | Woken | RG402 | Low Cable-04+23 | 30MHz~1GHz | Oct. 04, 2021 | Oct. 03, 2022 | Radiation (03CH05-CB) |
| Test Software | SPORTON | SENSE | V5.10 | - | N.C.R. | N.C.R. | Radiation (03CH05-CB) |
| Horn Antenna | ETS · Lindgren | 3115 | 00143147 | 750MHz~18GHz | Oct. 26, 2018 | Oct. 25, 2019 | Radiation (03CH04-CB) |
| Horn Antenna | SCHWARZBECK | BBHA 9170 | BBHA9170507 | 15GHz ~ 40GHz | Jun. 12, 2019 | Jun. 11, 2020 | Radiation (03CH04-CB) |
| Pre-Amplifier | Agilent | 83017A | MY53270063 | 0.5GHz ~ 26.5GHz | Mar. 19, 2019 | Mar. 18, 2020 | Radiation (03CH04-CB) |
| Pre-Amplifier | MITEQ | TTA1840-35-HG | 1864479 | 18GHz ~ 40GHz | Jul. 03, 2019 | Jul. 02, 2020 | Radiation (03CH04-CB) |
| Spectrum Analyzer | R&S | FSP40 | 100142 | 9kHz~40GHz | Dec. 26, 2018 | Dec. 25, 2019 | Radiation (03CH04-CB) |
| RF Cable-high | Woken | RG402 | High Cable-21 | 1GHz - 18GHz | Oct. 08, 2018 | Oct. 07, 2019 | Radiation (03CH04-CB) |
| RF Cable-high | Woken | RG402 | High Cable-21 | 1GHz - 18GHz | Oct. 07, 2019 | Oct. 06, 2020 | Radiation (03CH04-CB) |
| RF Cable-high | Woken | RG402 | High Cable-21+22 | 1GHz - 18GHz | Oct. 08, 2018 | Oct. 07, 2019 | Radiation (03CH04-CB) |



| Instrument | Brand | Model No. | Serial No. | Characteristics | Calibration Date | Calibration Due Date | Remark |
|-------------------|---------|-----------|------------------|------------------|------------------|----------------------|-----------------------|
| RF Cable-high | Woken | RG402 | High Cable-21+22 | 1GHz - 18GHz | Oct. 07, 2019 | Oct. 06, 2020 | Radiation (03CH04-CB) |
| RF Cable-high | Woken | RG402 | High Cable-40G#1 | 18GHz ~ 40 GHz | Jul. 24, 2019 | Jul. 23, 2020 | Radiation (03CH04-CB) |
| RF Cable-high | Woken | RG402 | High Cable-40G#2 | 18GHz ~ 40 GHz | Jul. 24, 2019 | Jul. 23, 2020 | Radiation (03CH04-CB) |
| Test Software | SPORTON | SENSE | V5.10 | - | N.C.R. | N.C.R. | Radiation (03CH04-CB) |
| Spectrum analyzer | R&S | FSV40 | 100979 | 9kHz~40GHz | Feb. 25, 2019 | Feb. 24, 2020 | Conducted (TH01-CB) |
| RF Cable-high | Woken | RG402 | High Cable-06 | 1 GHz – 26.5 GHz | Oct. 08, 2018 | Oct. 07, 2019 | Conducted (TH01-CB) |
| RF Cable-high | Woken | RG402 | High Cable-06 | 1 GHz – 26.5 GHz | Oct. 07, 2019 | Oct. 06, 2020 | Conducted (TH01-CB) |
| RF Cable-high | Woken | RG402 | High Cable-07 | 1 GHz –26.5 GHz | Oct. 08, 2018 | Oct. 07, 2019 | Conducted (TH01-CB) |
| RF Cable-high | Woken | RG402 | High Cable-07 | 1 GHz –26.5 GHz | Oct. 07, 2019 | Oct. 06, 2020 | Conducted (TH01-CB) |
| RF Cable-high | Woken | RG402 | High Cable-08 | 1 GHz –26.5 GHz | Oct. 08, 2018 | Oct. 07, 2019 | Conducted (TH01-CB) |
| RF Cable-high | Woken | RG402 | High Cable-08 | 1 GHz –26.5 GHz | Oct. 07, 2019 | Oct. 06, 2020 | Conducted (TH01-CB) |
| RF Cable-high | Woken | RG402 | High Cable-09 | 1 GHz –26.5 GHz | Oct. 08, 2018 | Oct. 07, 2019 | Conducted (TH01-CB) |
| RF Cable-high | Woken | RG402 | High Cable-09 | 1 GHz –26.5 GHz | Oct. 07, 2019 | Oct. 06, 2020 | Conducted (TH01-CB) |
| RF Cable-high | Woken | RG402 | High Cable-10 | 1 GHz –26.5 GHz | Oct. 08, 2018 | Oct. 07, 2019 | Conducted (TH01-CB) |
| RF Cable-high | Woken | RG402 | High Cable-10 | 1 GHz –26.5 GHz | Oct. 07, 2019 | Oct. 06, 2020 | Conducted (TH01-CB) |
| RF Cable-high | Woken | RG402 | High Cable-28 | 1 GHz –26.5 GHz | Nov. 19, 2018 | Nov. 18, 2019 | Conducted (TH01-CB) |
| RF Cable-high | Woken | RG402 | High Cable-28 | 1 GHz –26.5 GHz | Nov. 19, 2018 | Nov. 18, 2019 | Conducted (TH01-CB) |
| Power Sensor | Agilent | E9327A | US40442088 | 50MHz~18GHz | Jan. 15, 2019 | Jan. 14, 2020 | Conducted (TH01-CB) |
| Power Meter | Agilent | E4416A | GB41291199 | 50MHz~18GHz | Jan. 15, 2019 | Jan. 14, 2020 | Conducted (TH01-CB) |
| Test Software | SPORTON | SENSE | V5.10 | - | N.C.R. | N.C.R. | Conducted (TH01-CB) |

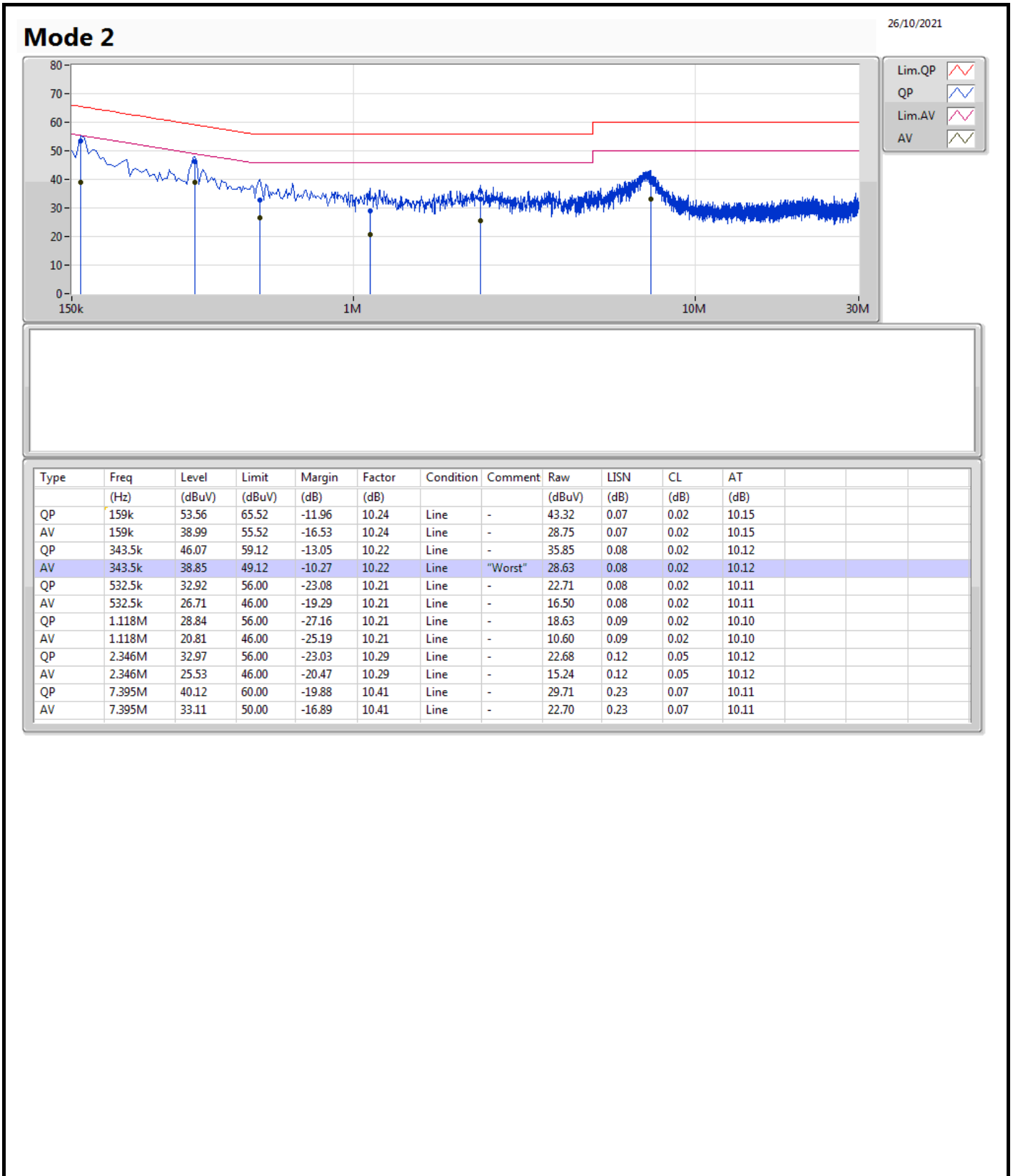
Note: Calibration Interval of instruments listed above is one year.

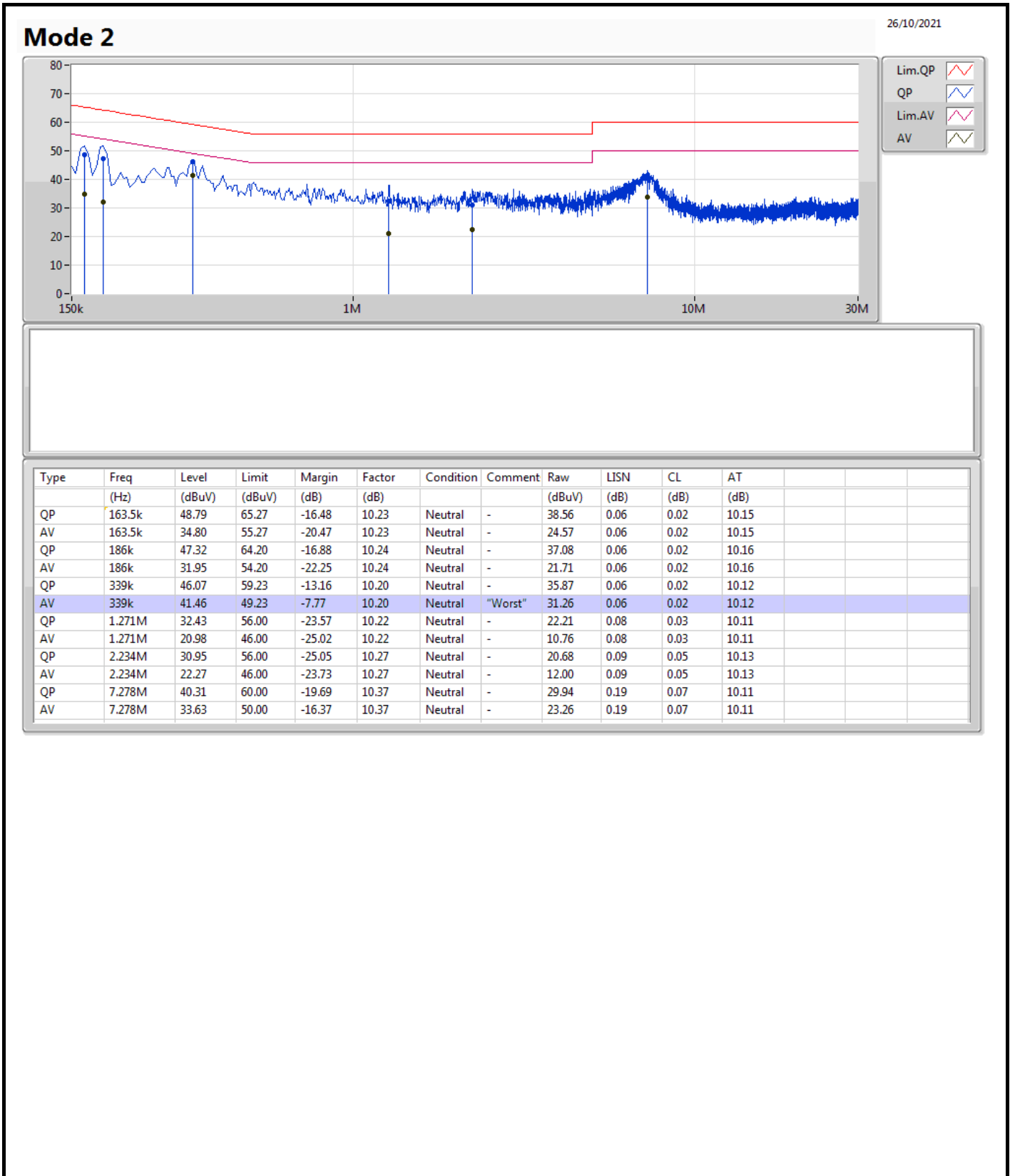
N.C.R. means Non-Calibration required.



Summary

| Mode | Result | Type | Freq (Hz) | Level (dBuV) | Limit (dBuV) | Margin (dB) | Condition |
|--------|--------|------|-----------|--------------|--------------|-------------|-----------|
| Mode 2 | Pass | AV | 339k | 41.46 | 49.23 | -7.77 | Neutral |







Summary

| Mode | Max-N dB (Hz) | Max-OBW (Hz) | ITU-Code | Min-N dB (Hz) | Min-OBW (Hz) |
|--------------------------------|------------------|-----------------|----------|------------------|-----------------|
| 2.4-2.4835GHz | - | - | - | - | - |
| 802.11b_Nss1,(1Mbps)_1TX | 9.025M | 14.493M | 14M5G1D | 7M | 10.17M |
| 802.11g_Nss1,(6Mbps)_1TX | 16.325M | 19.115M | 19M1D1D | 16.325M | 16.617M |
| 802.11ax HEW20_Nss1,(MCS0)_1TX | 18.975M | 19.19M | 19M2D1D | 18.925M | 18.966M |
| 802.11ax HEW40_Nss1,(MCS0)_1TX | 37.5M | 37.631M | 37M6D1D | 37.45M | 37.531M |

Max-N dB = Maximum 6dB down bandwidth; **Max-OBW** = Maximum 99% occupied bandwidth;
Min-N dB = Minimum 6dB down bandwidth; **Min-OBW** = Minimum 99% occupied bandwidth;

Result

| Mode | Result | Limit (Hz) | Port 1-N dB (Hz) | Port 1-OBW (Hz) |
|--------------------------------|--------|------------|------------------|-----------------|
| 802.11b_Nss1,(1Mbps)_1TX | - | - | - | - |
| 2412MHz | Pass | 500k | 7M | 10.17M |
| 2437MHz | Pass | 500k | 9.025M | 14.493M |
| 2462MHz | Pass | 500k | 7.525M | 10.22M |
| 802.11g_Nss1,(6Mbps)_1TX | - | - | - | - |
| 2412MHz | Pass | 500k | 16.325M | 16.617M |
| 2437MHz | Pass | 500k | 16.325M | 19.115M |
| 2462MHz | Pass | 500k | 16.325M | 16.617M |
| 802.11ax HEW20_Nss1,(MCS0)_1TX | - | - | - | - |
| 2412MHz | Pass | 500k | 18.925M | 18.991M |
| 2437MHz | Pass | 500k | 18.975M | 19.19M |
| 2462MHz | Pass | 500k | 18.975M | 18.966M |
| 802.11ax HEW40_Nss1,(MCS0)_1TX | - | - | - | - |
| 2422MHz | Pass | 500k | 37.5M | 37.581M |
| 2437MHz | Pass | 500k | 37.45M | 37.531M |
| 2452MHz | Pass | 500k | 37.45M | 37.631M |

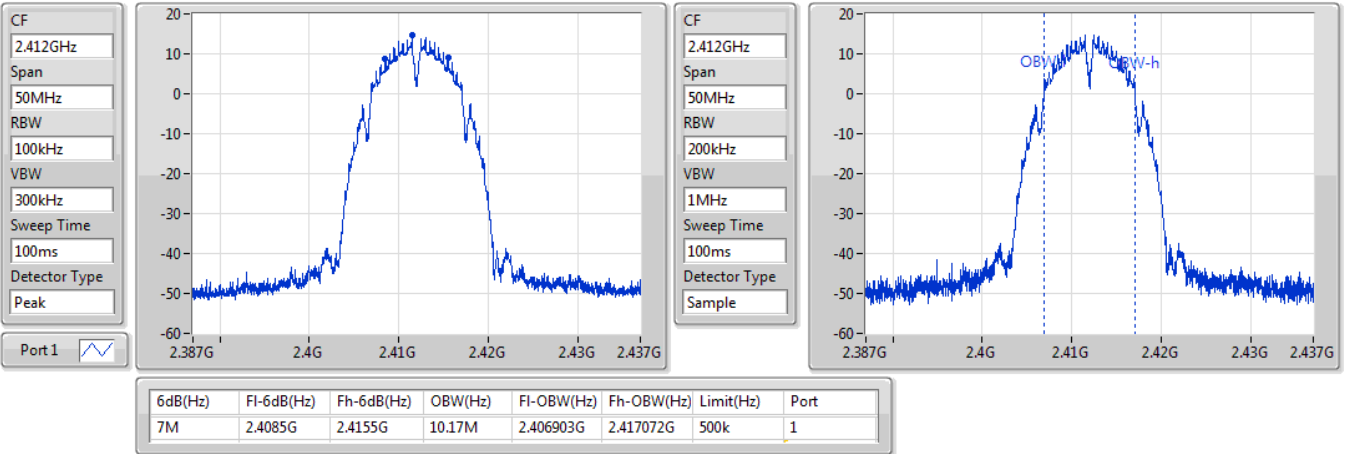
Port X-N dB = Port X 6dB down bandwidth; **Port X-OBW** = Port X 99% occupied bandwidth;

802.11b_Nss1,(1Mbps)_1TX

EBW

2412MHz

26/09/2019

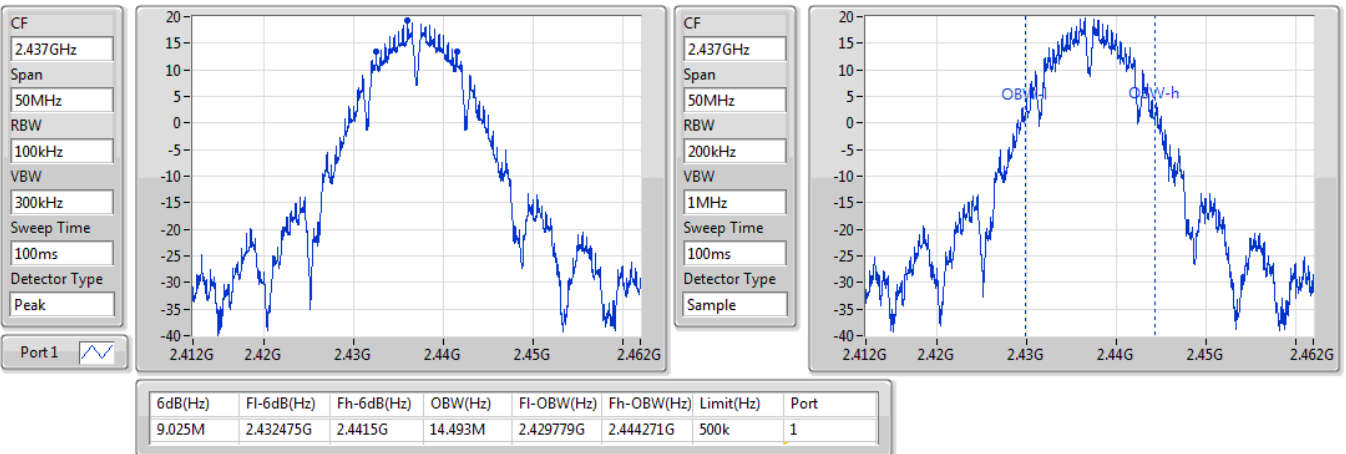


802.11b_Nss1,(1Mbps)_1TX

EBW

2437MHz

26/09/2019



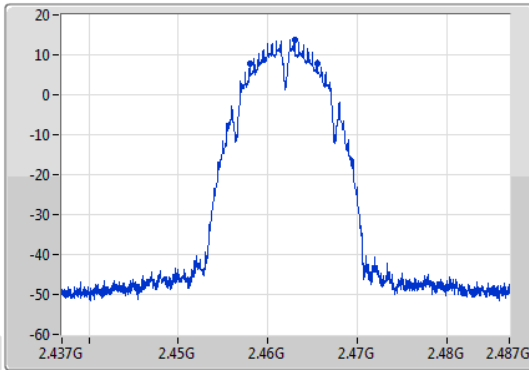
802.11b_Nss1,(1Mbps)_1TX

EBW

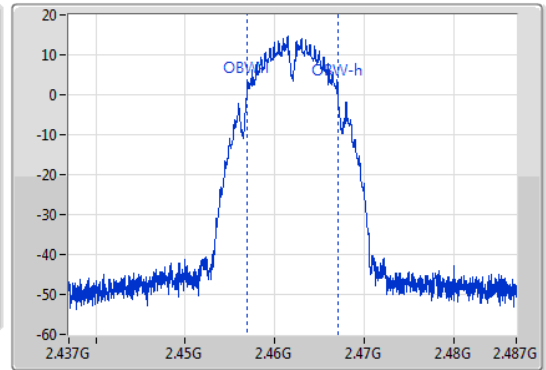
2462MHz

26/09/2019

CF
2.462GHz
Span
50MHz
RBW
100kHz
VBW
300kHz
Sweep Time
100ms
Detector Type
Peak
Port 1



CF
2.462GHz
Span
50MHz
RBW
200kHz
VBW
1MHz
Sweep Time
100ms
Detector Type
Sample



| 6dB(Hz) | Fl-6dB(Hz) | Fh-6dB(Hz) | OBW(Hz) | Fl-OBW(Hz) | Fh-OBW(Hz) | Limit(Hz) | Port |
|---------|------------|------------|---------|------------|------------|-----------|------|
| 7.525M | 2.458G | 2.465525G | 10.22M | 2.456878G | 2.467097G | 500k | 1 |

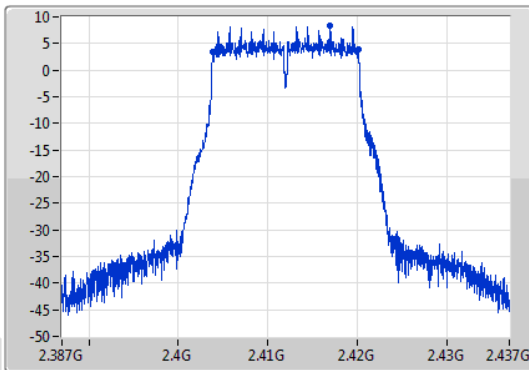
802.11g_Nss1,(6Mbps)_1TX

EBW

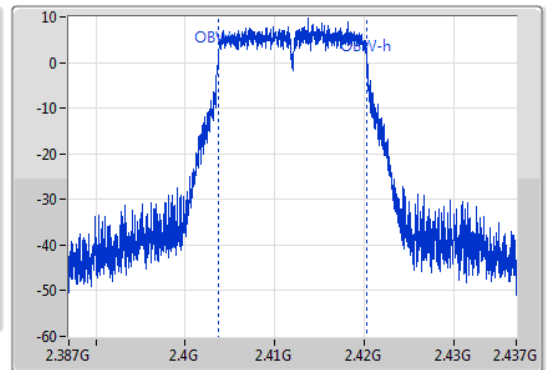
2412MHz

27/09/2019

CF
2.412GHz
Span
50MHz
RBW
100kHz
VBW
300kHz
Sweep Time
100ms
Detector Type
Peak
Port 1



CF
2.412GHz
Span
50MHz
RBW
200kHz
VBW
1MHz
Sweep Time
100ms
Detector Type
Sample



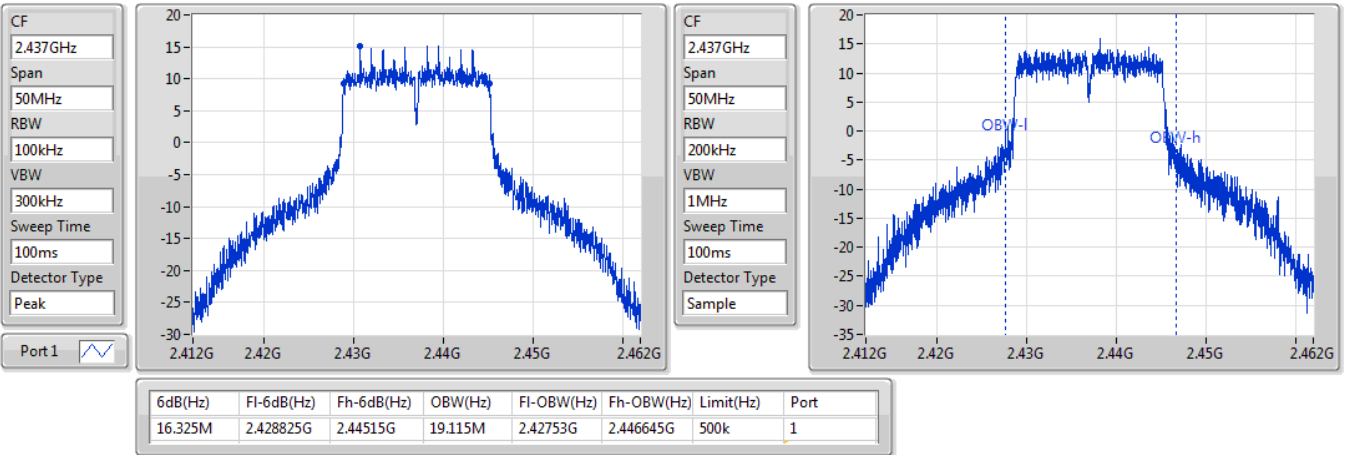
| 6dB(Hz) | Fl-6dB(Hz) | Fh-6dB(Hz) | OBW(Hz) | Fl-OBW(Hz) | Fh-OBW(Hz) | Limit(Hz) | Port |
|---------|------------|------------|---------|------------|------------|-----------|------|
| 16.325M | 2.403825G | 2.42015G | 16.617M | 2.403679G | 2.420296G | 500k | 1 |

802.11g_Nss1,(6Mbps)_1TX

EBW

2437MHz

27/09/2019

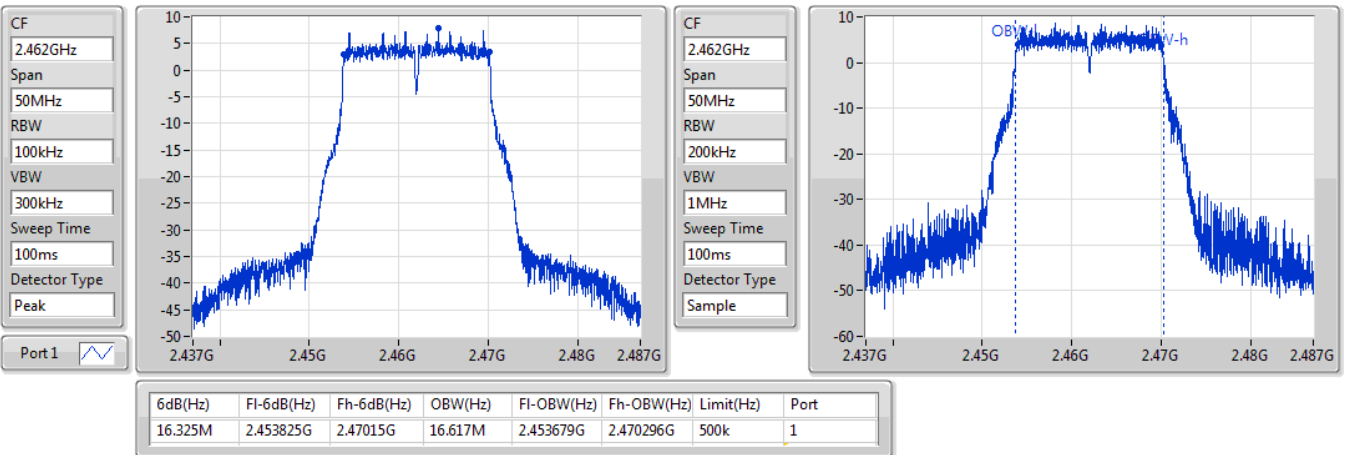


802.11g_Nss1,(6Mbps)_1TX

EBW

2462MHz

27/09/2019

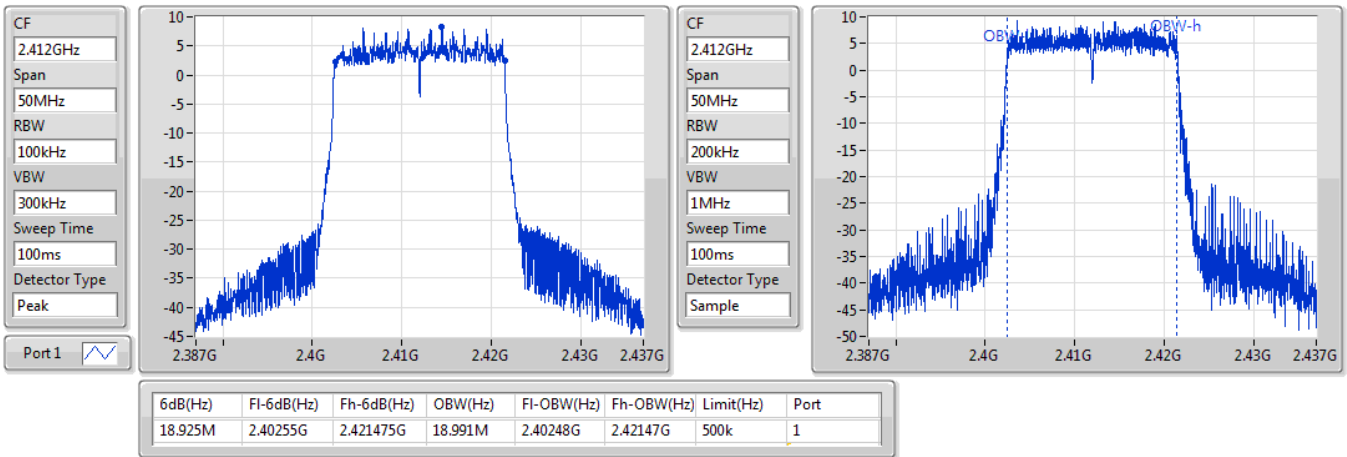


802.11ax HEW20_Nss1,(MCS0)_1TX

EBW

2412MHz

27/09/2019

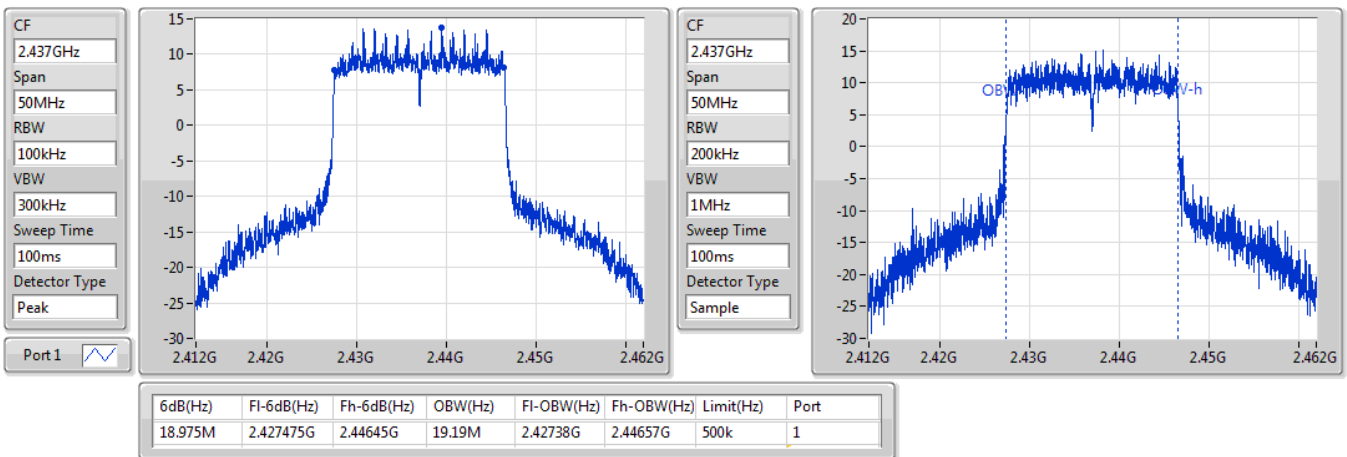


802.11ax HEW20_Nss1,(MCS0)_1TX

EBW

2437MHz

27/09/2019

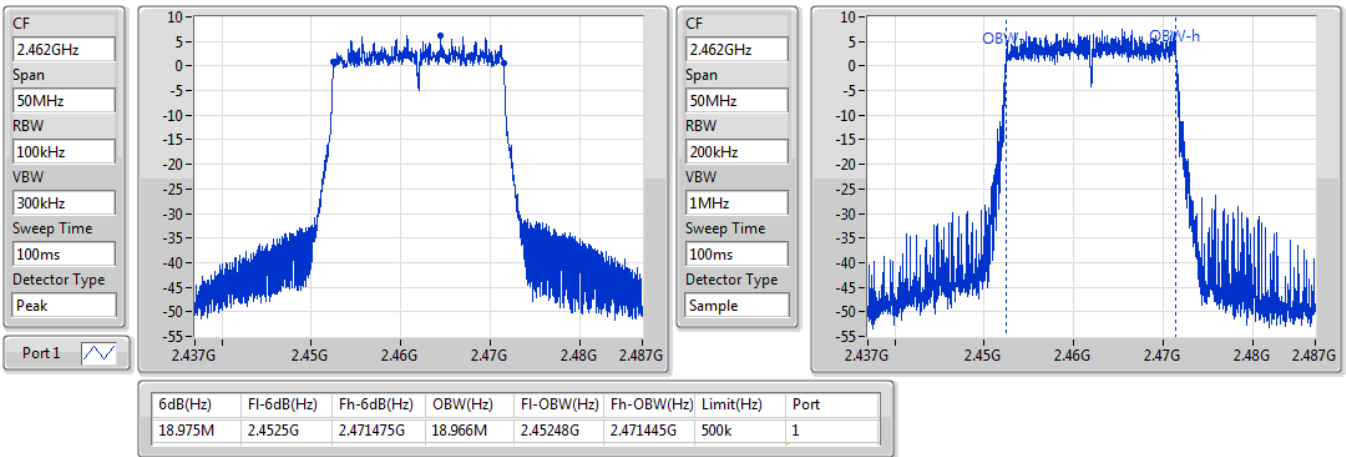


802.11ax HEW20_Nss1,(MCS0)_1TX

EBW

2462MHz

27/09/2019

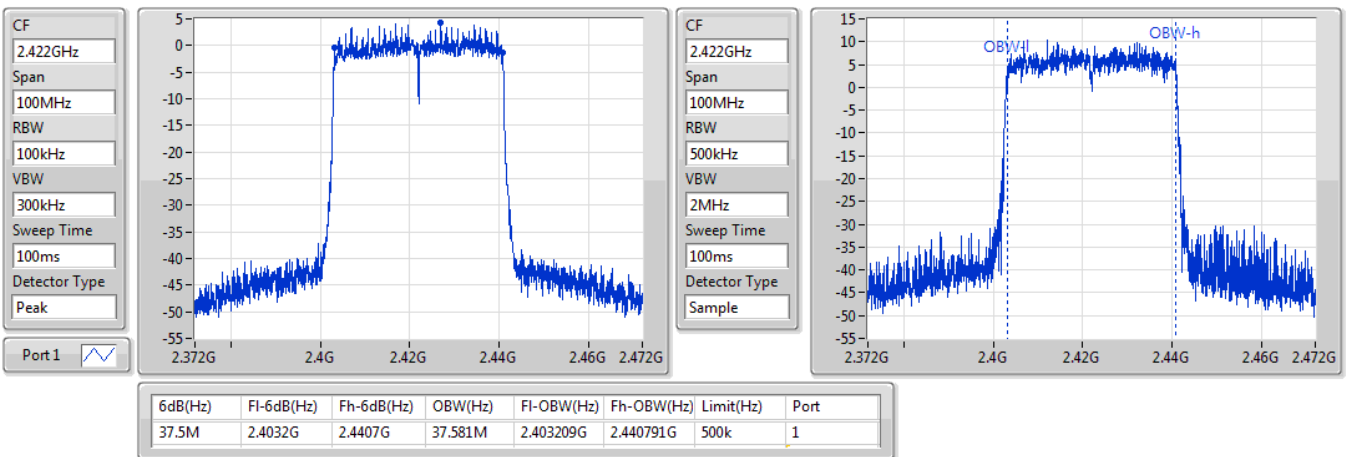


802.11ax HEW40_Nss1,(MCS0)_1TX

EBW

2422MHz

27/09/2019

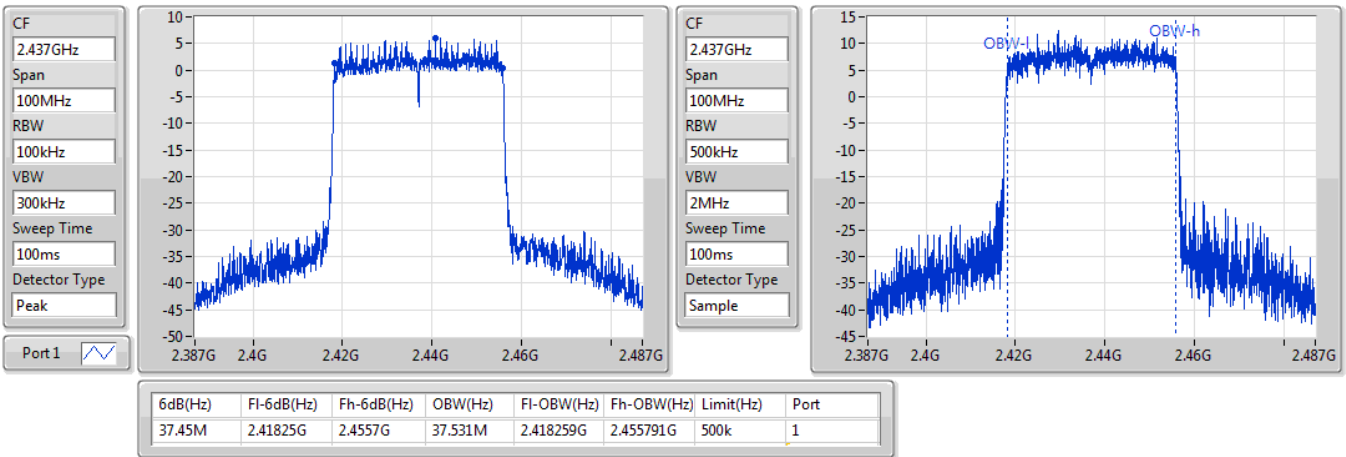


802.11ax HEW40_Nss1,(MCS0)_1TX

EBW

2437MHz

27/09/2019

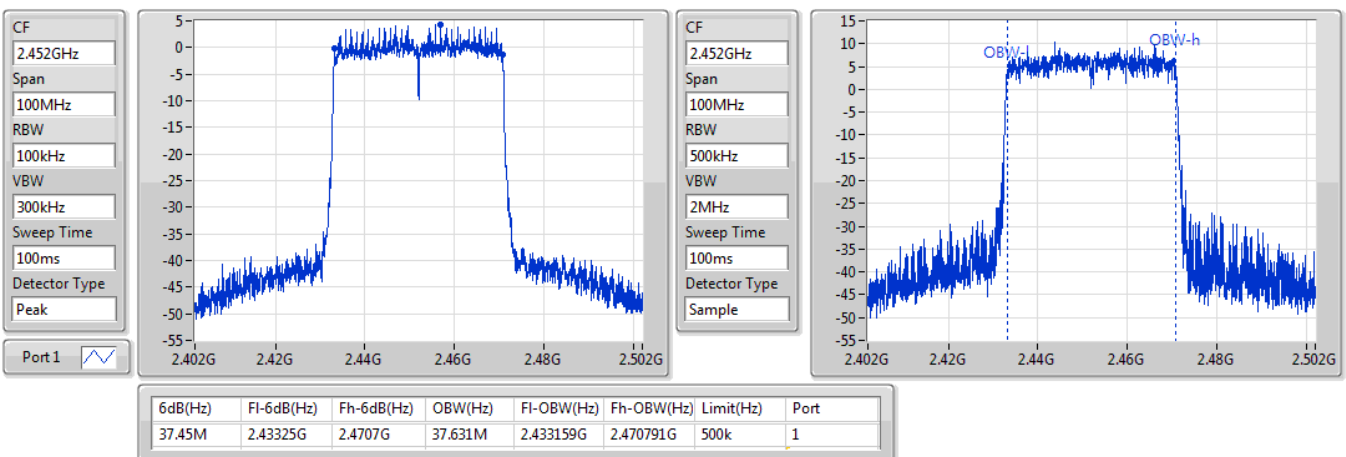


802.11ax HEW40_Nss1,(MCS0)_1TX

EBW

2452MHz

27/09/2019





Summary

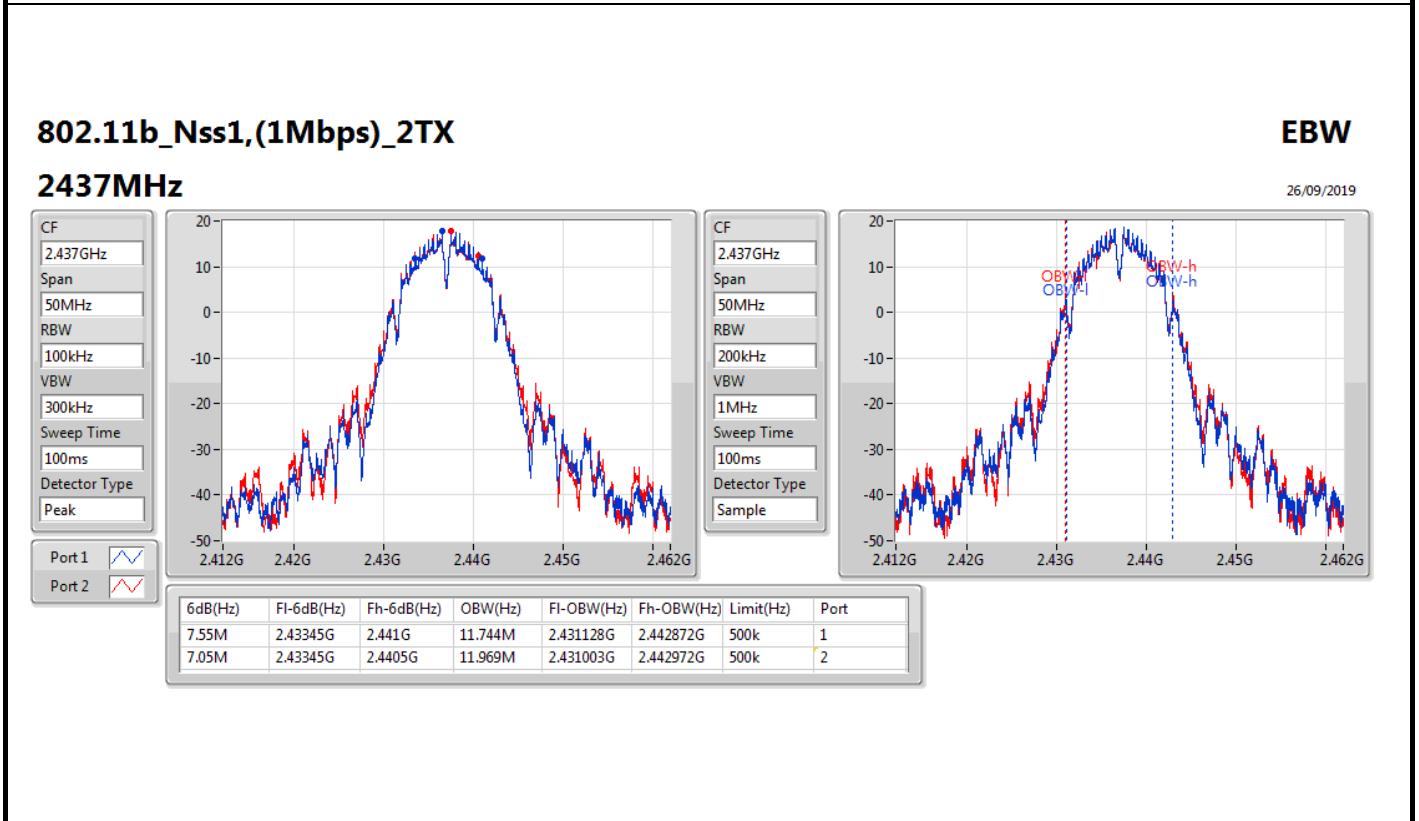
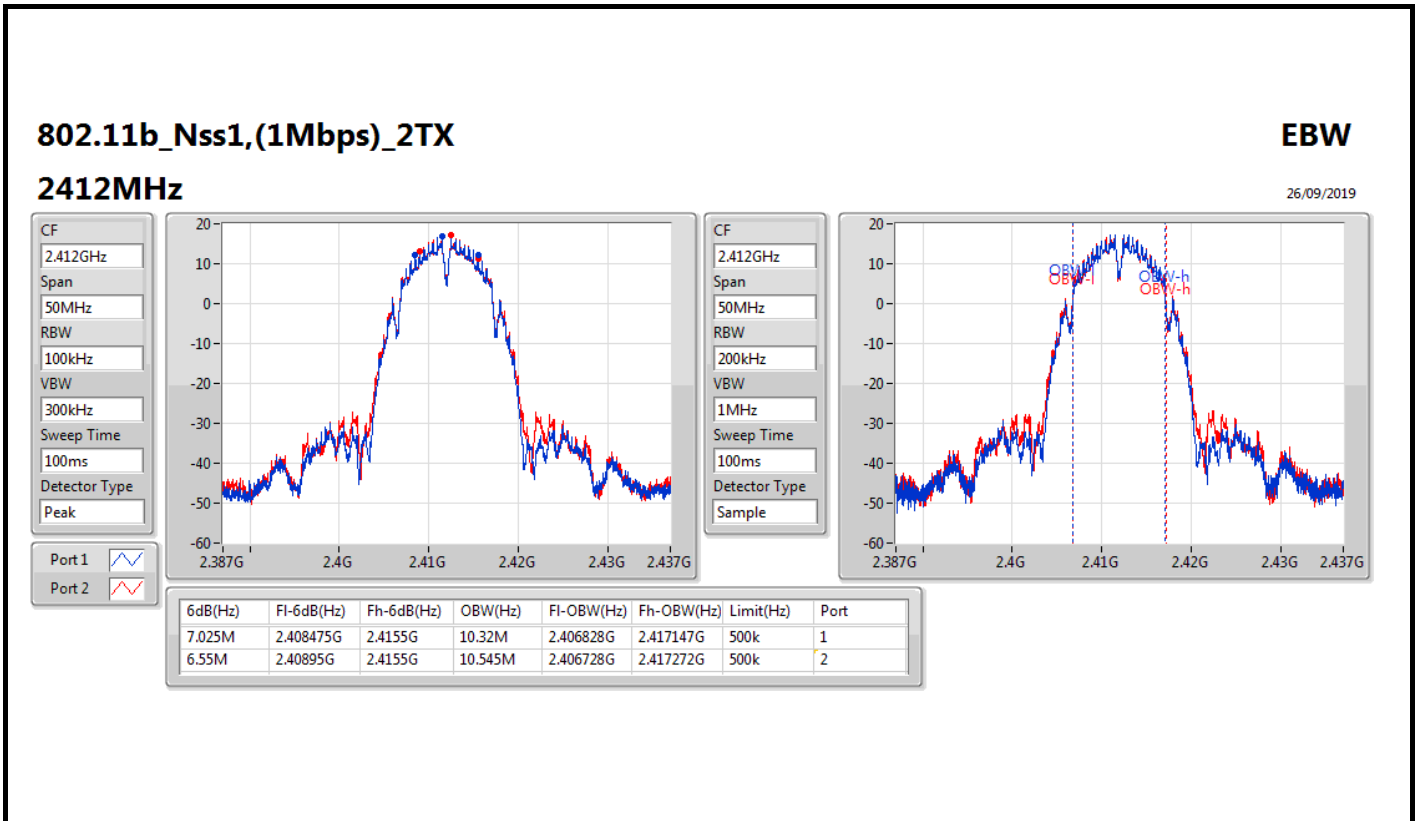
| Mode | Max-N dB (Hz) | Max-OBW (Hz) | ITU-Code | Min-N dB (Hz) | Min-OBW (Hz) |
|--------------------------------|------------------|-----------------|----------|------------------|-----------------|
| 2.4-2.4835GHz | - | - | - | - | - |
| 802.11b_Nss1,(1Mbps)_2TX | 7.55M | 11.969M | 12M0G1D | 6.55M | 10.32M |
| 802.11g_Nss1,(6Mbps)_2TX | 16.375M | 17.016M | 17M0D1D | 16.325M | 16.567M |
| 802.11ax HEW20_Nss2,(MCS0)_2TX | 18.95M | 19.04M | 19M0D1D | 18.8M | 18.941M |
| 802.11ax HEW40_Nss2,(MCS0)_2TX | 37.55M | 37.581M | 37M6D1D | 37M | 37.481M |

Max-N dB = Maximum 6dB down bandwidth; **Max-OBW** = Maximum 99% occupied bandwidth;
Min-N dB = Minimum 6dB down bandwidth; **Min-OBW** = Minimum 99% occupied bandwidth;

Result

| Mode | Result | Limit (Hz) | Port 1-N dB (Hz) | Port 1-OBW (Hz) | Port 2-N dB (Hz) | Port 2-OBW (Hz) |
|--------------------------------|--------|------------|------------------|-----------------|------------------|-----------------|
| 802.11b_Nss1,(1Mbps)_2TX | - | - | - | - | - | - |
| 2412MHz | Pass | 500k | 7.025M | 10.32M | 6.55M | 10.545M |
| 2437MHz | Pass | 500k | 7.55M | 11.744M | 7.05M | 11.969M |
| 2462MHz | Pass | 500k | 7.025M | 10.42M | 7.025M | 10.57M |
| 802.11g_Nss1,(6Mbps)_2TX | - | - | - | - | - | - |
| 2412MHz | Pass | 500k | 16.35M | 16.567M | 16.375M | 16.617M |
| 2437MHz | Pass | 500k | 16.325M | 16.867M | 16.325M | 17.016M |
| 2462MHz | Pass | 500k | 16.325M | 16.592M | 16.35M | 16.592M |
| 802.11ax HEW20_Nss2,(MCS0)_2TX | - | - | - | - | - | - |
| 2412MHz | Pass | 500k | 18.925M | 18.991M | 18.85M | 18.941M |
| 2437MHz | Pass | 500k | 18.95M | 19.04M | 18.8M | 19.04M |
| 2462MHz | Pass | 500k | 18.95M | 18.966M | 18.85M | 18.966M |
| 802.11ax HEW40_Nss2,(MCS0)_2TX | - | - | - | - | - | - |
| 2422MHz | Pass | 500k | 37.45M | 37.531M | 37M | 37.531M |
| 2437MHz | Pass | 500k | 37.55M | 37.581M | 37.05M | 37.531M |
| 2452MHz | Pass | 500k | 37.5M | 37.531M | 37.1M | 37.481M |

Port X-N dB = Port X 6dB down bandwidth; Port X-OBW = Port X 99% occupied bandwidth;

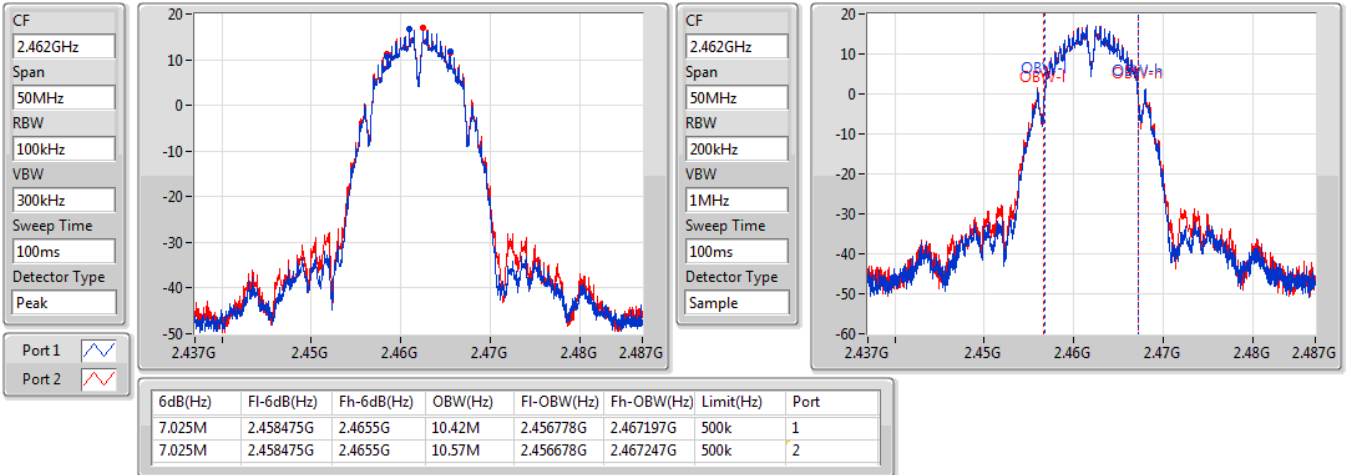


802.11b_Nss1,(1Mbps)_2TX

EBW

2462MHz

26/09/2019

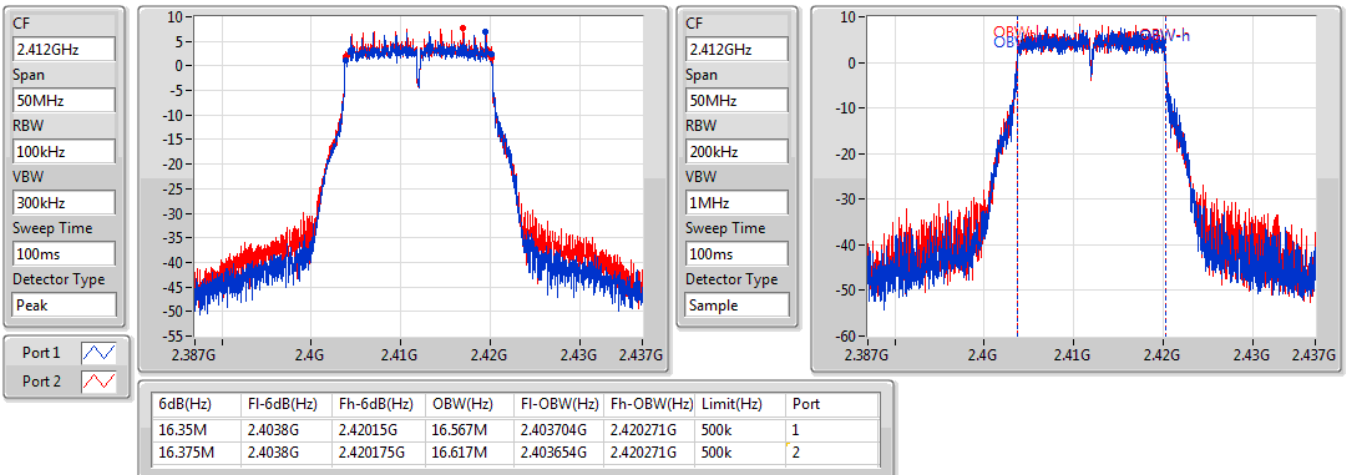


802.11g_Nss1,(6Mbps)_2TX

EBW

2412MHz

26/09/2019



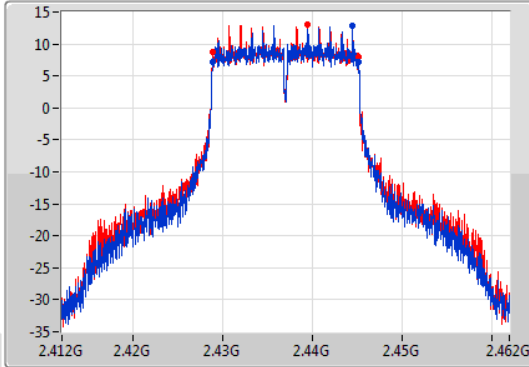
802.11g_Nss1,(6Mbps)_2TX

EBW

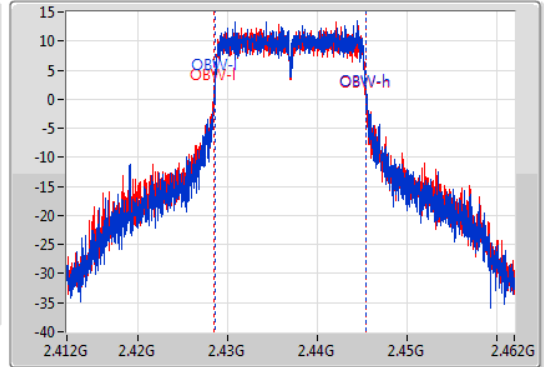
2437MHz

26/09/2019

CF
2.437GHz
Span
50MHz
RBW
100kHz
VBW
300kHz
Sweep Time
100ms
Detector Type
Peak
Port 1
Port 2



CF
2.437GHz
Span
50MHz
RBW
200kHz
VBW
1MHz
Sweep Time
100ms
Detector Type
Sample



| 6dB(Hz) | Fl-6dB(Hz) | Fh-6dB(Hz) | OBW(Hz) | Fl-OBW(Hz) | Fh-OBW(Hz) | Limit(Hz) | Port |
|---------|------------|------------|---------|------------|------------|-----------|------|
| 16.325M | 2.428825G | 2.44515G | 16.867M | 2.428579G | 2.445446G | 500k | 1 |
| 16.325M | 2.428825G | 2.44515G | 17.016M | 2.428454G | 2.445471G | 500k | 2 |

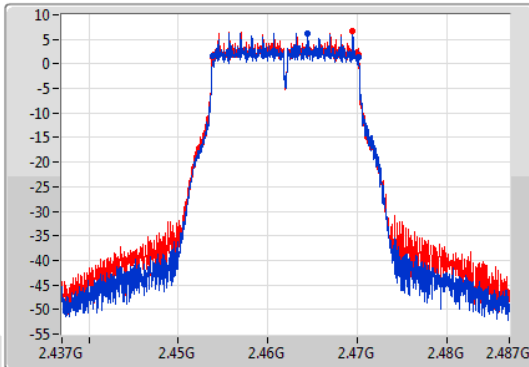
802.11g_Nss1,(6Mbps)_2TX

EBW

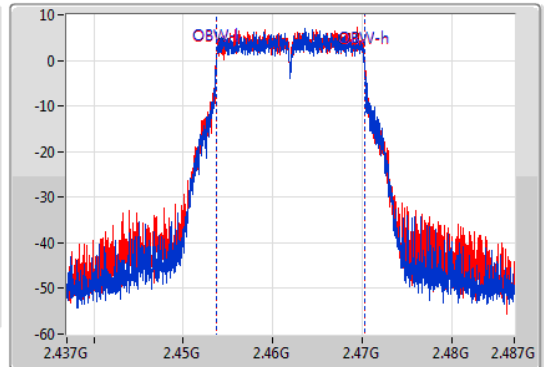
2462MHz

26/09/2019

CF
2.462GHz
Span
50MHz
RBW
100kHz
VBW
300kHz
Sweep Time
100ms
Detector Type
Peak
Port 1
Port 2



CF
2.462GHz
Span
50MHz
RBW
200kHz
VBW
1MHz
Sweep Time
100ms
Detector Type
Sample



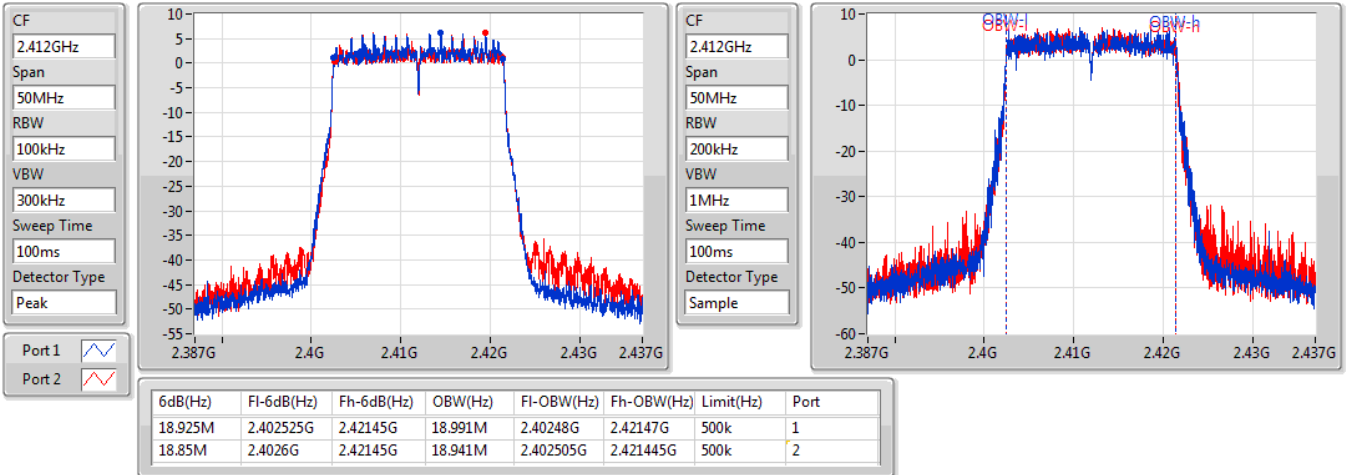
| 6dB(Hz) | Fl-6dB(Hz) | Fh-6dB(Hz) | OBW(Hz) | Fl-OBW(Hz) | Fh-OBW(Hz) | Limit(Hz) | Port |
|---------|------------|------------|---------|------------|------------|-----------|------|
| 16.325M | 2.453825G | 2.47015G | 16.592M | 2.453704G | 2.470296G | 500k | 1 |
| 16.35M | 2.4538G | 2.47015G | 16.592M | 2.453679G | 2.470271G | 500k | 2 |

802.11ax HEW20_Nss2,(MCS0)_2TX

EBW

2412MHz

26/09/2019

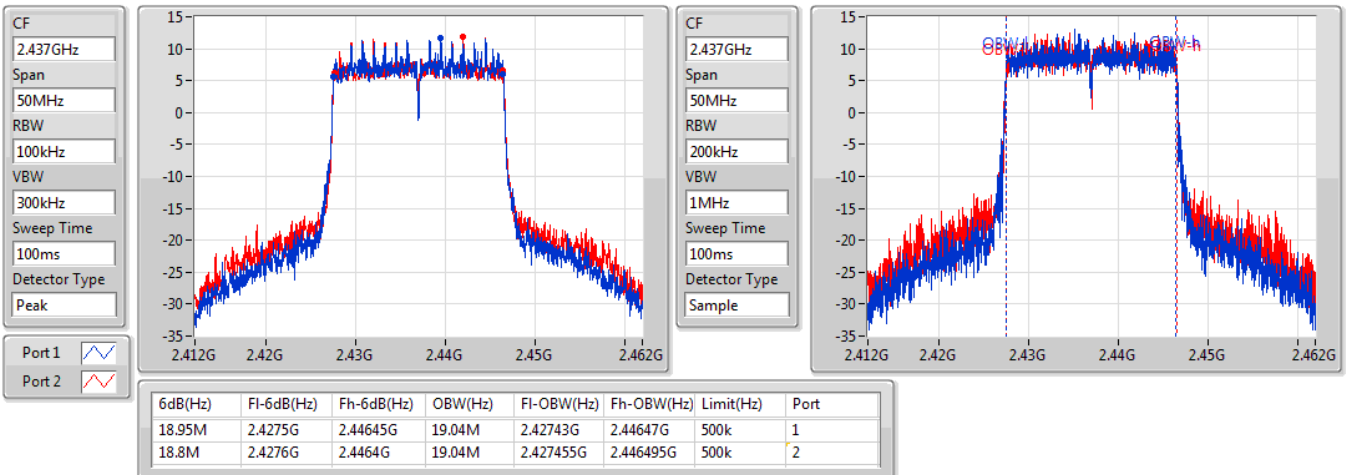


802.11ax HEW20_Nss2,(MCS0)_2TX

EBW

2437MHz

26/09/2019



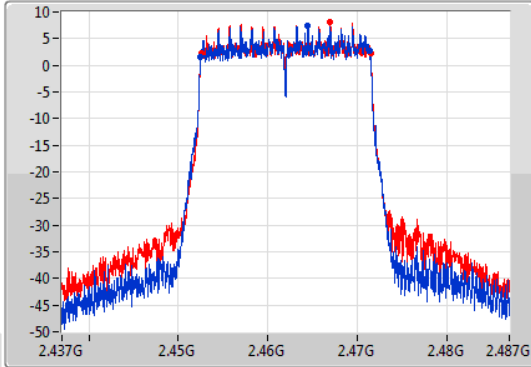
802.11ax HEW20_Nss2,(MCS0)_2TX

EBW

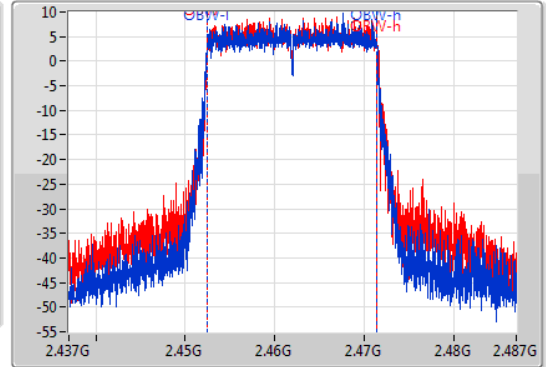
2462MHz

26/09/2019

CF
2.462GHz
Span
50MHz
RBW
100kHz
VBW
300kHz
Sweep Time
100ms
Detector Type
Peak



CF
2.462GHz
Span
50MHz
RBW
200kHz
VBW
1MHz
Sweep Time
100ms
Detector Type
Sample



| 6dB(Hz) | Fl-6dB(Hz) | Fh-6dB(Hz) | OBW(Hz) | Fl-OBW(Hz) | Fh-OBW(Hz) | Limit(Hz) | Port |
|---------|------------|------------|---------|------------|------------|-----------|------|
| 18.95M | 2.4525G | 2.47145G | 18.966M | 2.45248G | 2.471445G | 500k | 1 |
| 18.85M | 2.452625G | 2.471475G | 18.966M | 2.452505G | 2.47147G | 500k | 2 |

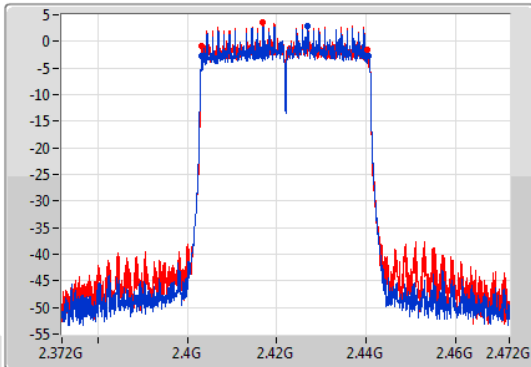
802.11ax HEW40_Nss2,(MCS0)_2TX

EBW

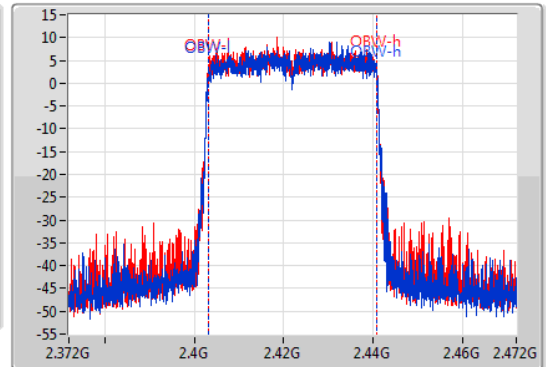
2422MHz

26/09/2019

CF
2.422GHz
Span
100MHz
RBW
100kHz
VBW
300kHz
Sweep Time
100ms
Detector Type
Peak



CF
2.422GHz
Span
100MHz
RBW
500kHz
VBW
2MHz
Sweep Time
100ms
Detector Type
Sample



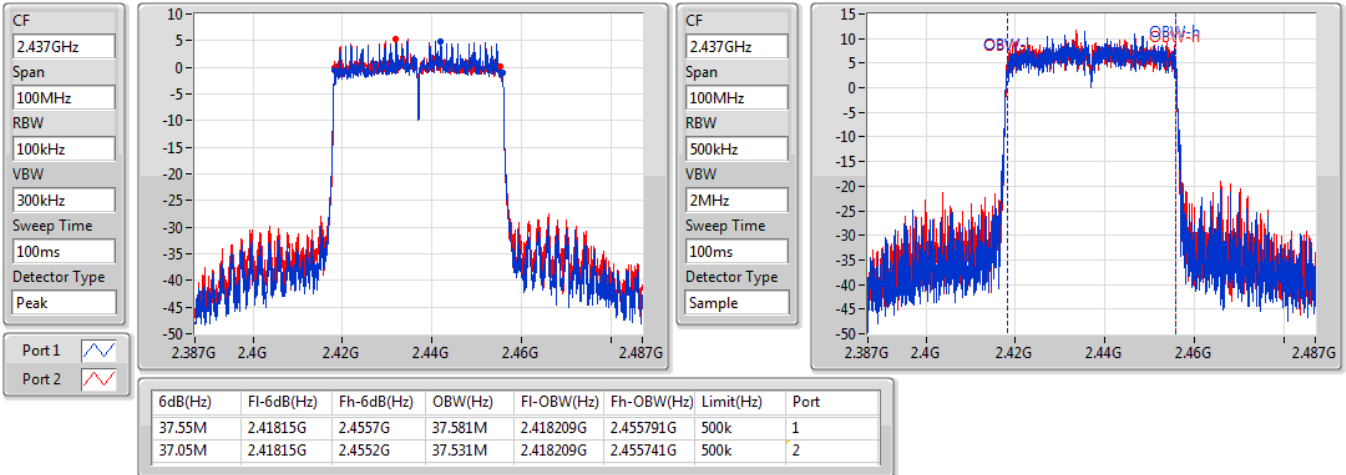
| 6dB(Hz) | Fl-6dB(Hz) | Fh-6dB(Hz) | OBW(Hz) | Fl-OBW(Hz) | Fh-OBW(Hz) | Limit(Hz) | Port |
|---------|------------|------------|---------|------------|------------|-----------|------|
| 37.45M | 2.4032G | 2.44065G | 37.531M | 2.403209G | 2.440741G | 500k | 1 |
| 37M | 2.4032G | 2.4402G | 37.531M | 2.403209G | 2.440741G | 500k | 2 |

802.11ax HEW40_Nss2,(MCS0)_2TX

EBW

2437MHz

26/09/2019

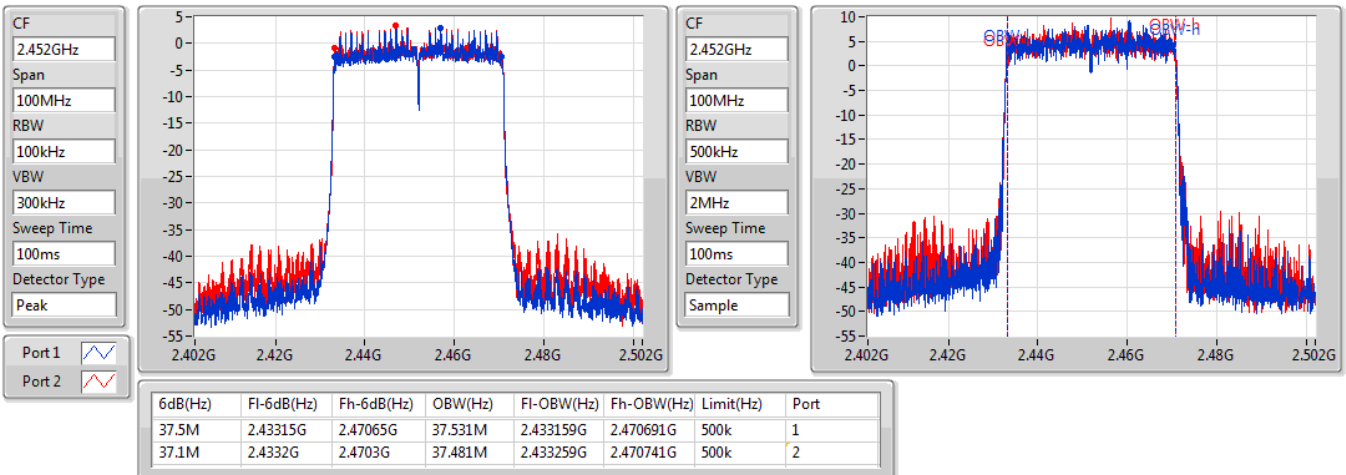


802.11ax HEW40_Nss2,(MCS0)_2TX

EBW

2452MHz

26/09/2019





Summary

| Mode | Max-N dB (Hz) | Max-OBW (Hz) | ITU-Code | Min-N dB (Hz) | Min-OBW (Hz) |
|-----------------------------------|------------------|-----------------|----------|------------------|-----------------|
| 2.4-2.4835GHz | - | - | - | - | - |
| 802.11ax HEW20-BF_Nss1,(MCS0)_2TX | 18.975M | 19.115M | 19M1D1D | 18.9M | 18.941M |
| 802.11ax HEW40-BF_Nss1,(MCS0)_2TX | 37.6M | 37.631M | 37M6D1D | 37.45M | 37.431M |

Max-N dB = Maximum 6dB down bandwidth; **Max-OBW** = Maximum 99% occupied bandwidth;
Min-N dB = Minimum 6dB down bandwidth; **Min-OBW** = Minimum 99% occupied bandwidth;



Result

| Mode | Result | Limit (Hz) | Port 1-N dB (Hz) | Port 1-OBW (Hz) | Port 2-N dB (Hz) | Port 2-OBW (Hz) |
|-----------------------------------|--------|------------|------------------|-----------------|------------------|-----------------|
| 802.11ax HEW20-BF_Nss1,(MCS0)_2TX | - | - | - | - | - | - |
| 2412MHz | Pass | 500k | 18.975M | 19.015M | 18.95M | 18.991M |
| 2437MHz | Pass | 500k | 18.9M | 19.015M | 18.9M | 19.115M |
| 2462MHz | Pass | 500k | 18.975M | 18.941M | 18.95M | 19.015M |
| 802.11ax HEW40-BF_Nss1,(MCS0)_2TX | - | - | - | - | - | - |
| 2422MHz | Pass | 500k | 37.45M | 37.481M | 37.6M | 37.581M |
| 2437MHz | Pass | 500k | 37.45M | 37.631M | 37.55M | 37.431M |
| 2452MHz | Pass | 500k | 37.5M | 37.531M | 37.55M | 37.581M |

Port X-N dB = Port X 6dB down bandwidth; Port X-OBW = Port X 99% occupied bandwidth;

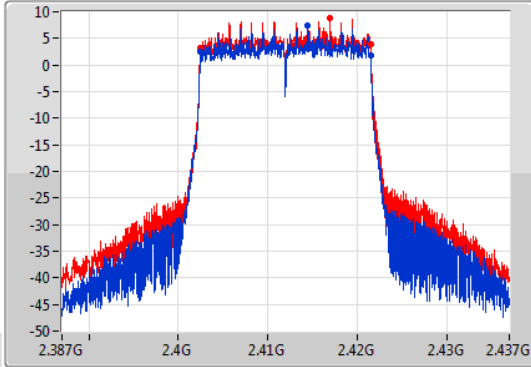
802.11ax HEW20-BF_Nss1,(MCS0)_2TX

EBW

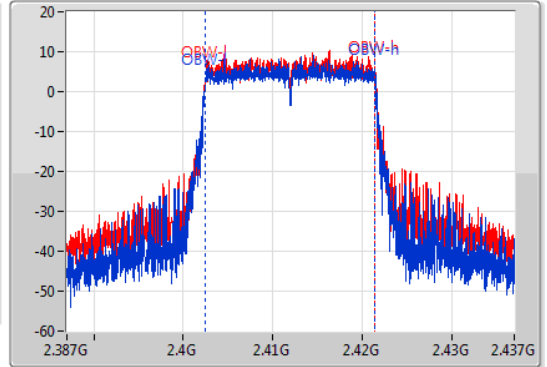
2412MHz

13/10/2019

CF
2.412GHz
Span
50MHz
RBW
100kHz
VBW
300kHz
Sweep Time
100ms
Detector Type
Peak



CF
2.412GHz
Span
50MHz
RBW
200kHz
VBW
1MHz
Sweep Time
100ms
Detector Type
Sample



| 6dB(Hz) | Fl-6dB(Hz) | Fh-6dB(Hz) | OBW(Hz) | Fl-OBW(Hz) | Fh-OBW(Hz) | Limit(Hz) | Port |
|---------|------------|------------|---------|------------|------------|-----------|------|
| 18.975M | 2.4025G | 2.421475G | 19.015M | 2.402455G | 2.42147G | 500k | 1 |
| 18.95M | 2.402525G | 2.421475G | 18.991M | 2.40248G | 2.42147G | 500k | 2 |

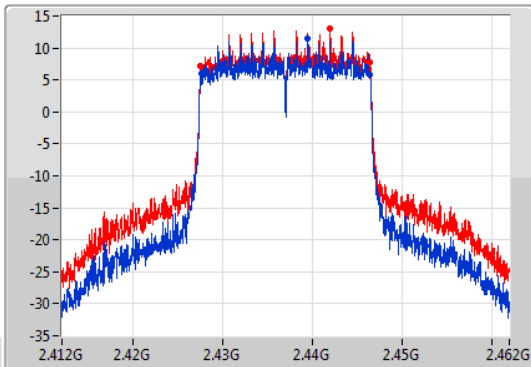
802.11ax HEW20-BF_Nss1,(MCS0)_2TX

EBW

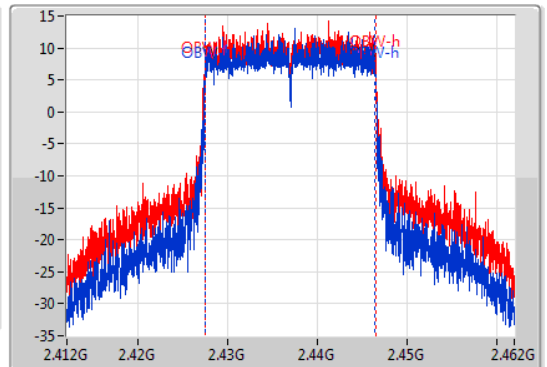
2437MHz

13/10/2019

CF
2.437GHz
Span
50MHz
RBW
100kHz
VBW
300kHz
Sweep Time
100ms
Detector Type
Peak



CF
2.437GHz
Span
50MHz
RBW
200kHz
VBW
1MHz
Sweep Time
100ms
Detector Type
Sample



| 6dB(Hz) | Fl-6dB(Hz) | Fh-6dB(Hz) | OBW(Hz) | Fl-OBW(Hz) | Fh-OBW(Hz) | Limit(Hz) | Port |
|---------|------------|------------|---------|------------|------------|-----------|------|
| 18.9M | 2.42755G | 2.44645G | 19.015M | 2.427455G | 2.44647G | 500k | 1 |
| 18.9M | 2.427525G | 2.446425G | 19.115M | 2.427405G | 2.44652G | 500k | 2 |

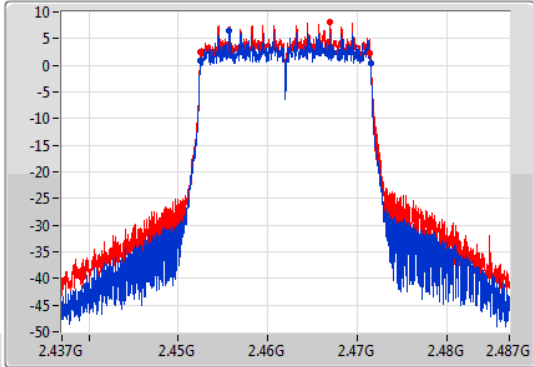
802.11ax HEW20-BF_Nss1,(MCS0)_2TX

EBW

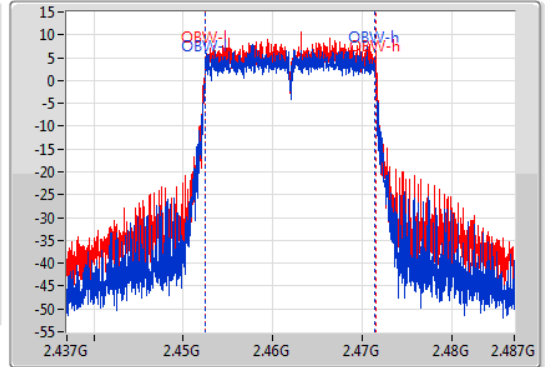
2462MHz

13/10/2019

CF
2.462GHz
Span
50MHz
RBW
100kHz
VBW
300kHz
Sweep Time
100ms
Detector Type
Peak



CF
2.462GHz
Span
50MHz
RBW
200kHz
VBW
1MHz
Sweep Time
100ms
Detector Type
Sample



| 6dB(Hz) | Fl-6dB(Hz) | Fh-6dB(Hz) | OBW(Hz) | Fl-OBW(Hz) | Fh-OBW(Hz) | Limit(Hz) | Port |
|---------|------------|------------|---------|------------|------------|-----------|------|
| 18.975M | 2.4525G | 2.471475G | 18.941M | 2.45248G | 2.47142G | 500k | 1 |
| 18.95M | 2.4525G | 2.47145G | 19.015M | 2.45248G | 2.471495G | 500k | 2 |

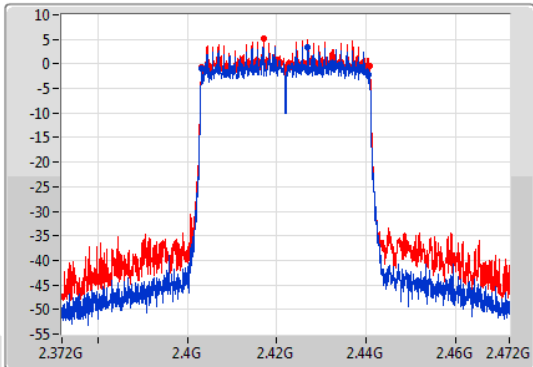
802.11ax HEW40-BF_Nss1,(MCS0)_2TX

EBW

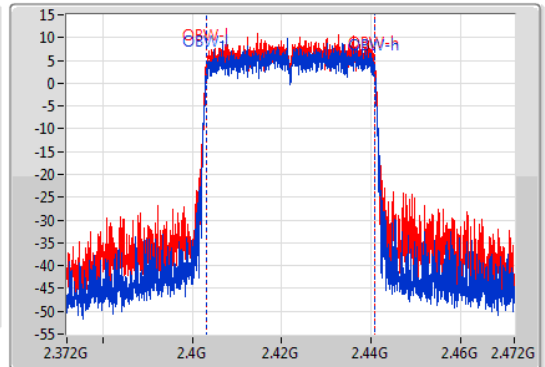
2422MHz

13/10/2019

CF
2.422GHz
Span
100MHz
RBW
100kHz
VBW
300kHz
Sweep Time
100ms
Detector Type
Peak



CF
2.422GHz
Span
100MHz
RBW
500kHz
VBW
2MHz
Sweep Time
100ms
Detector Type
Sample



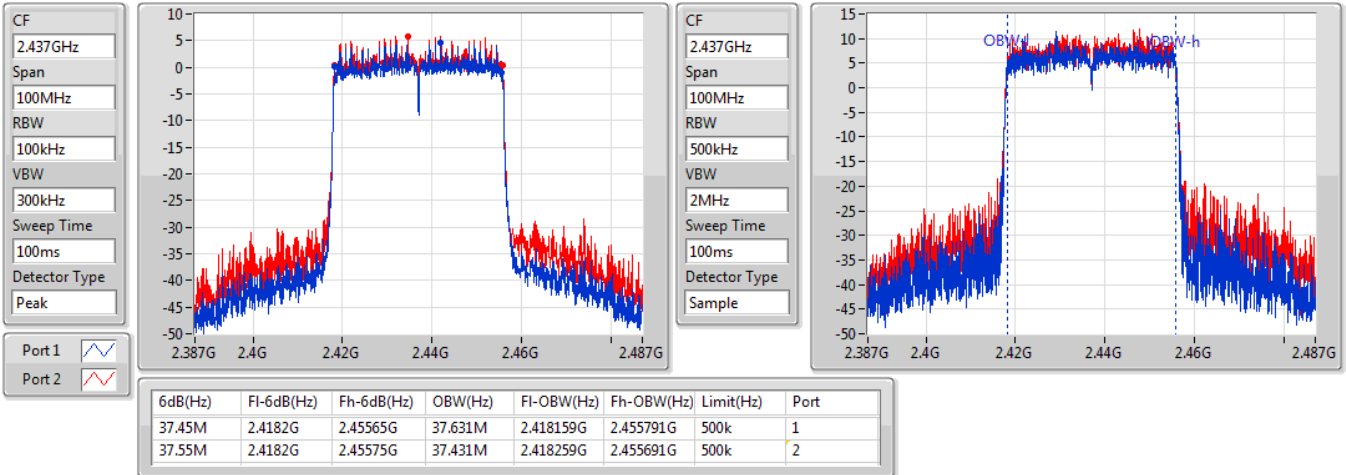
| 6dB(Hz) | Fl-6dB(Hz) | Fh-6dB(Hz) | OBW(Hz) | Fl-OBW(Hz) | Fh-OBW(Hz) | Limit(Hz) | Port |
|---------|------------|------------|---------|------------|------------|-----------|------|
| 37.45M | 2.4032G | 2.44065G | 37.481M | 2.403259G | 2.440741G | 500k | 1 |
| 37.6M | 2.4032G | 2.4408G | 37.581M | 2.403159G | 2.440741G | 500k | 2 |

802.11ax HEW40-BF_Nss1,(MCS0)_2TX

EBW

2437MHz

13/10/2019

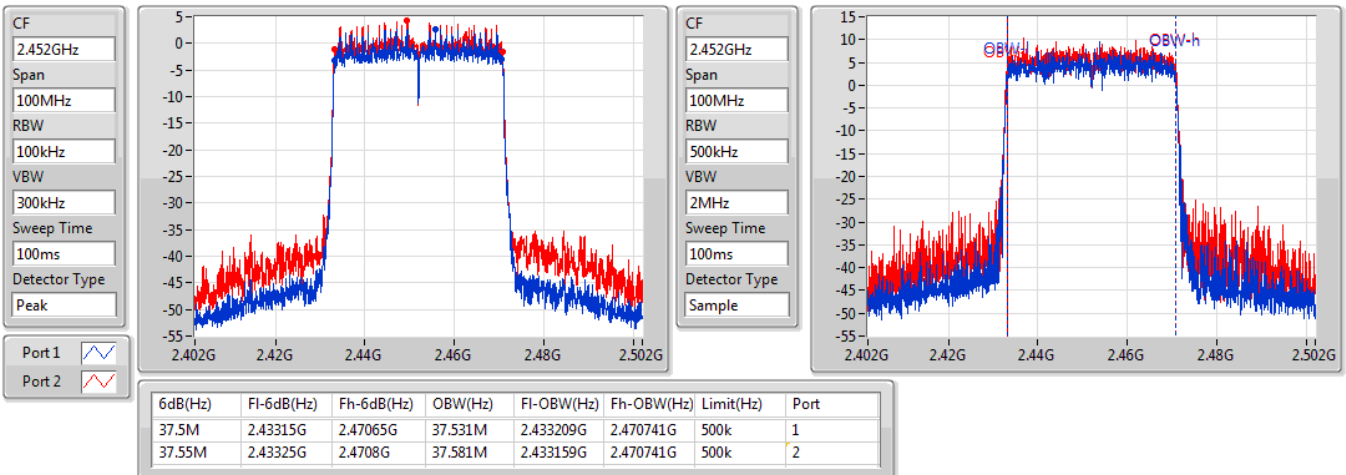


802.11ax HEW40-BF_Nss1,(MCS0)_2TX

EBW

2452MHz

13/10/2019





Summary

| Mode | Max-N dB (Hz) | Max-OBW (Hz) | ITU-Code | Min-N dB (Hz) | Min-OBW (Hz) |
|--------------------------------|------------------|-----------------|----------|------------------|-----------------|
| 2.4-2.4835GHz | - | - | - | - | - |
| 802.11b_Nss1,(1Mbps)_1TX | 7.05M | 11.894M | 11M9G1D | 7.025M | 10.72M |
| 802.11g_Nss1,(6Mbps)_1TX | 16.35M | 19.49M | 19M5D1D | 16.325M | 16.617M |
| 802.11ax HEW20_Nss1,(MCS0)_1TX | 19M | 19.265M | 19M3D1D | 18.9M | 18.991M |
| 802.11ax HEW40_Nss1,(MCS0)_1TX | 37.3M | 37.581M | 37M6D1D | 37.25M | 37.531M |

Max-N dB = Maximum 6dB down bandwidth; **Max-OBW** = Maximum 99% occupied bandwidth;
Min-N dB = Minimum 6dB down bandwidth; **Min-OBW** = Minimum 99% occupied bandwidth;

Result

| Mode | Result | Limit (Hz) | Port 1-N dB (Hz) | Port 1-OBW (Hz) |
|--------------------------------|--------|---------------|---------------------|--------------------|
| 802.11b_Nss1,(1Mbps)_1TX | - | - | - | - |
| 2412MHz | Pass | 500k | 7.05M | 10.72M |
| 2437MHz | Pass | 500k | 7.025M | 11.844M |
| 2462MHz | Pass | 500k | 7.05M | 11.894M |
| 802.11g_Nss1,(6Mbps)_1TX | - | - | - | - |
| 2412MHz | Pass | 500k | 16.325M | 16.617M |
| 2437MHz | Pass | 500k | 16.35M | 19.49M |
| 2462MHz | Pass | 500k | 16.35M | 16.642M |
| 802.11ax HEW20_Nss1,(MCS0)_1TX | - | - | - | - |
| 2412MHz | Pass | 500k | 19M | 18.991M |
| 2437MHz | Pass | 500k | 18.9M | 19.265M |
| 2462MHz | Pass | 500k | 18.975M | 18.991M |
| 802.11ax HEW40_Nss1,(MCS0)_1TX | - | - | - | - |
| 2422MHz | Pass | 500k | 37.25M | 37.531M |
| 2437MHz | Pass | 500k | 37.3M | 37.581M |
| 2452MHz | Pass | 500k | 37.3M | 37.581M |

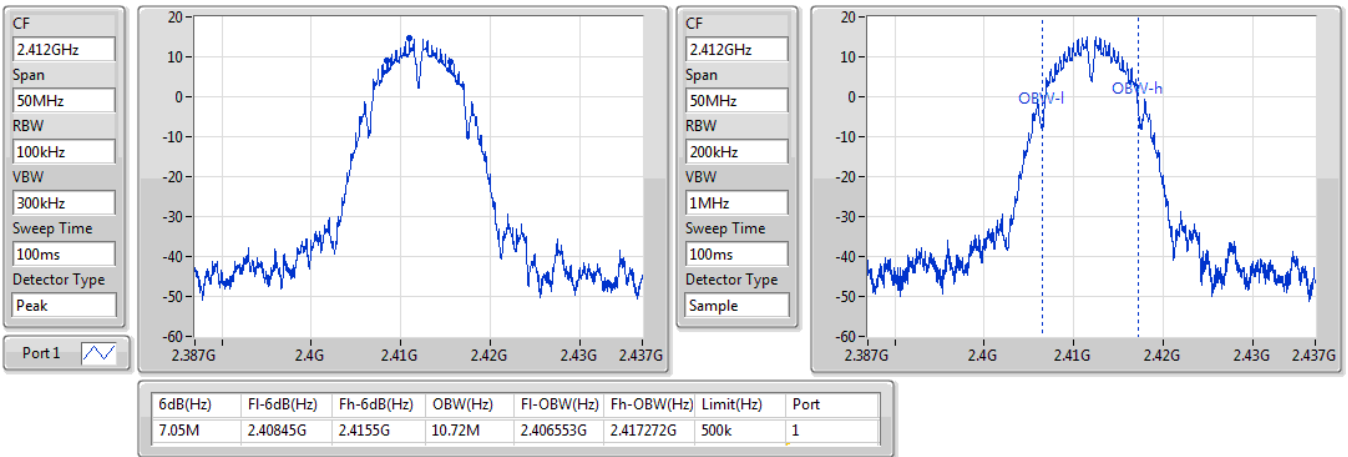
Port X-N dB = Port X 6dB down bandwidth; **Port X-OBW** = Port X 99% occupied bandwidth;

802.11b_Nss1,(1Mbps)_1TX

EBW

2412MHz

03/10/2019

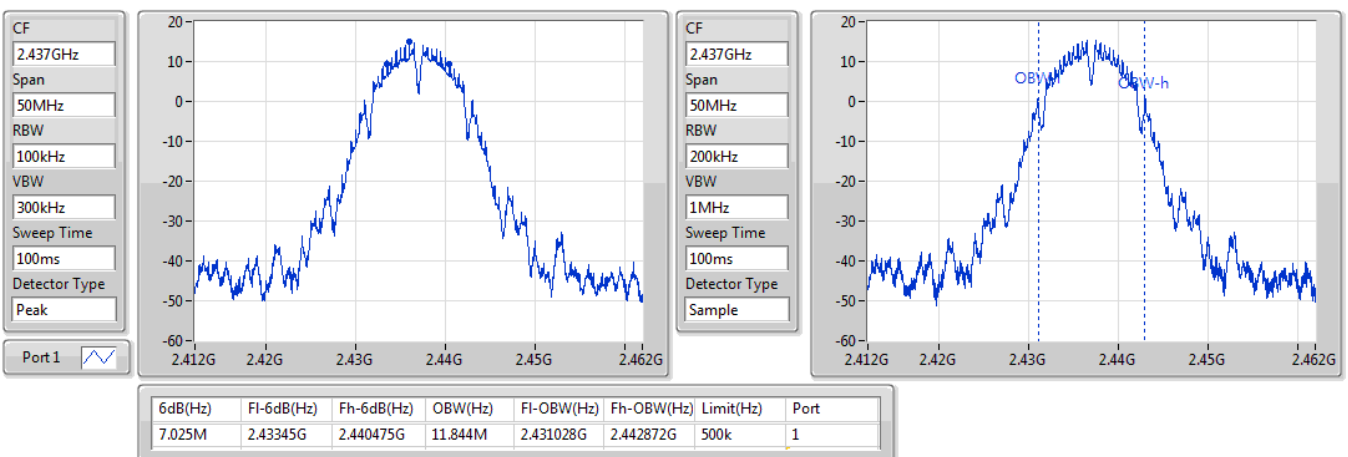


802.11b_Nss1,(1Mbps)_1TX

EBW

2437MHz

03/10/2019



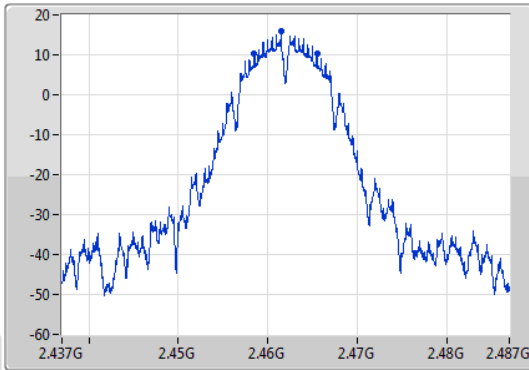
802.11b_Nss1,(1Mbps)_1TX

EBW

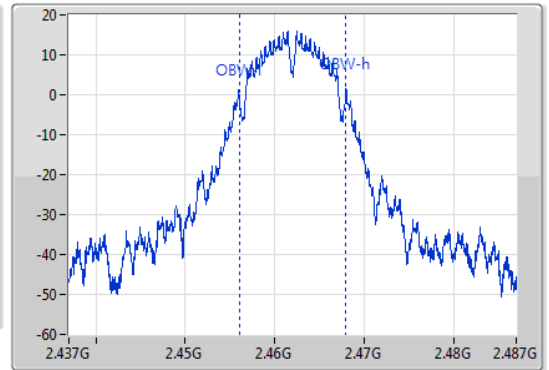
2462MHz

03/10/2019

CF
2.462GHz
Span
50MHz
RBW
100kHz
VBW
300kHz
Sweep Time
100ms
Detector Type
Peak
Port 1



CF
2.462GHz
Span
50MHz
RBW
200kHz
VBW
1MHz
Sweep Time
100ms
Detector Type
Sample



| 6dB(Hz) | Fl-6dB(Hz) | Fh-6dB(Hz) | OBW(Hz) | Fl-OBW(Hz) | Fh-OBW(Hz) | Limit(Hz) | Port |
|---------|------------|------------|---------|------------|------------|-----------|------|
| 7.05M | 2.45845G | 2.4655G | 11.894M | 2.456028G | 2.467922G | 500k | 1 |

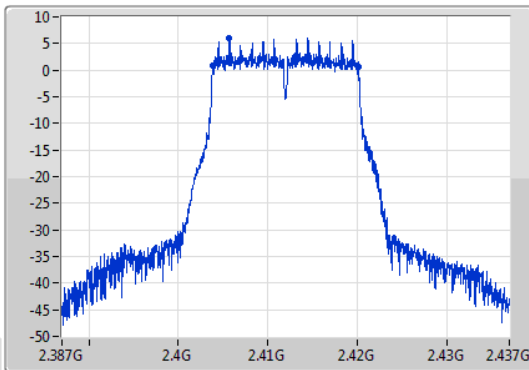
802.11g_Nss1,(6Mbps)_1TX

EBW

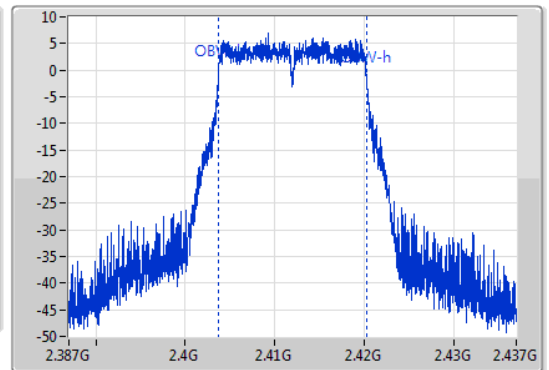
2412MHz

03/10/2019

CF
2.412GHz
Span
50MHz
RBW
100kHz
VBW
300kHz
Sweep Time
100ms
Detector Type
Peak
Port 1



CF
2.412GHz
Span
50MHz
RBW
200kHz
VBW
1MHz
Sweep Time
100ms
Detector Type
Sample



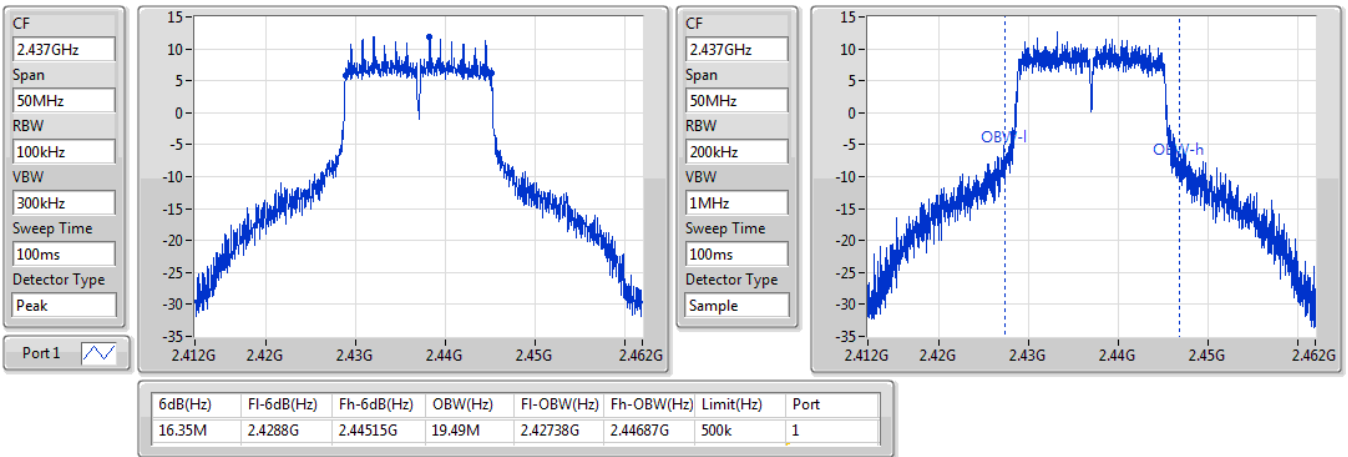
| 6dB(Hz) | Fl-6dB(Hz) | Fh-6dB(Hz) | OBW(Hz) | Fl-OBW(Hz) | Fh-OBW(Hz) | Limit(Hz) | Port |
|---------|------------|------------|---------|------------|------------|-----------|------|
| 16.325M | 2.403825G | 2.42015G | 16.617M | 2.403679G | 2.420296G | 500k | 1 |

802.11g_Nss1,(6Mbps)_1TX

EBW

2437MHz

03/10/2019

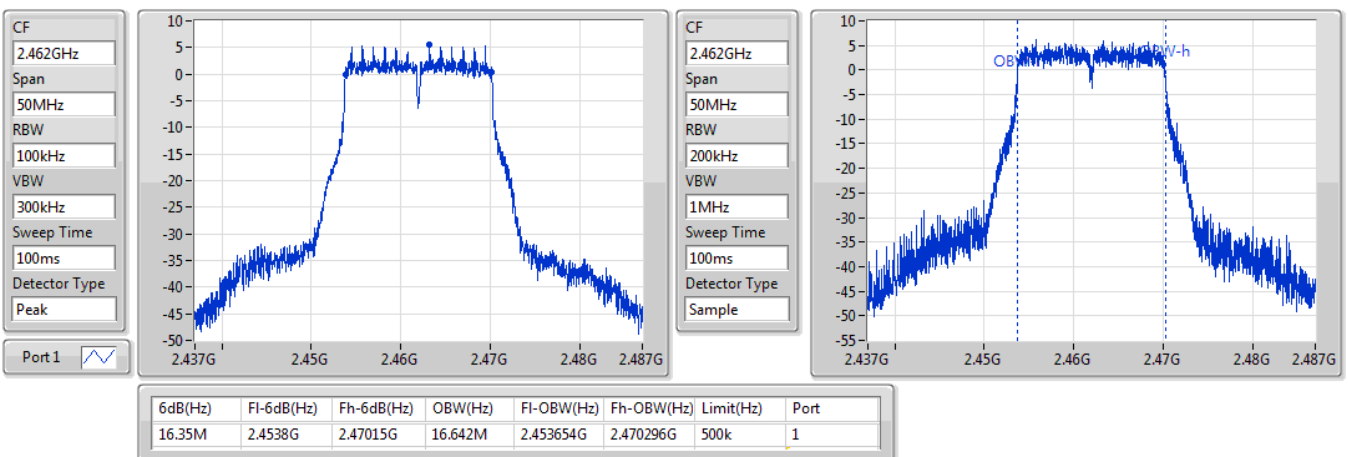


802.11g_Nss1,(6Mbps)_1TX

EBW

2462MHz

03/10/2019

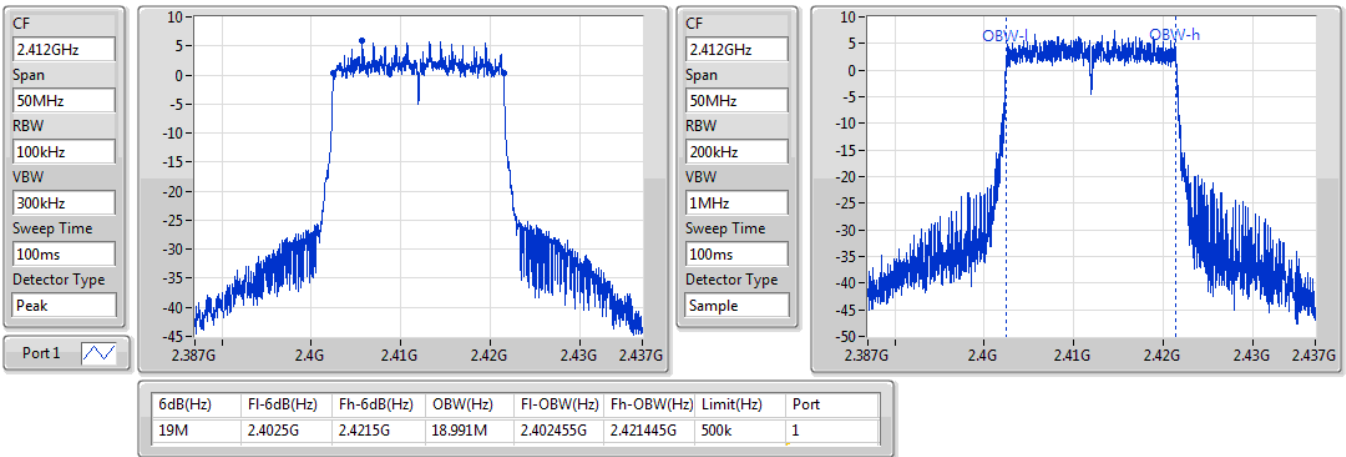


802.11ax HEW20_Nss1,(MCS0)_1TX

EBW

2412MHz

03/10/2019

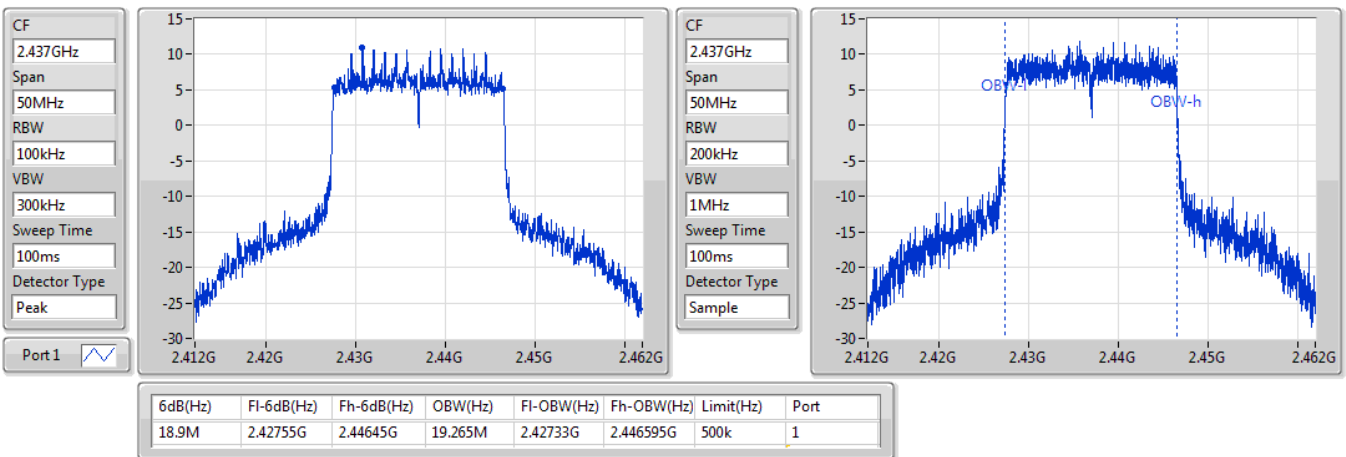


802.11ax HEW20_Nss1,(MCS0)_1TX

EBW

2437MHz

03/10/2019

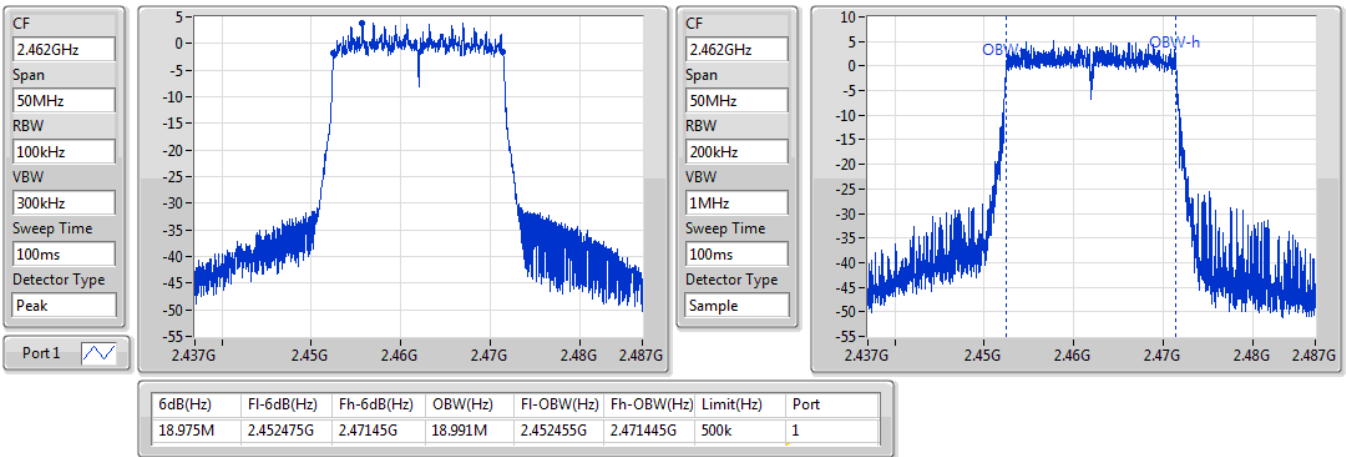


802.11ax HEW20_Nss1,(MCS0)_1TX

EBW

2462MHz

03/10/2019

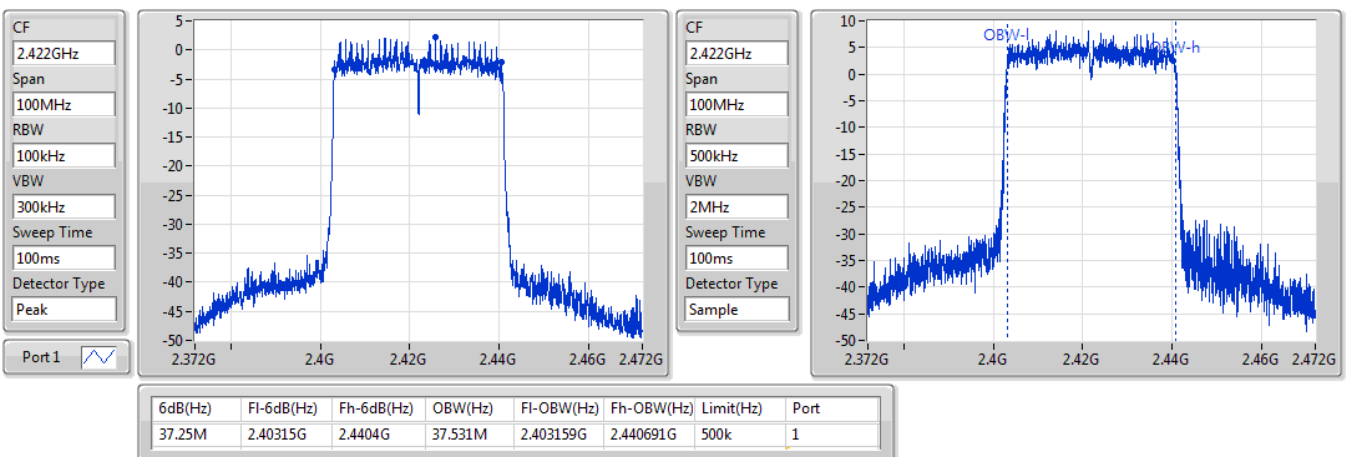


802.11ax HEW40_Nss1,(MCS0)_1TX

EBW

2422MHz

03/10/2019

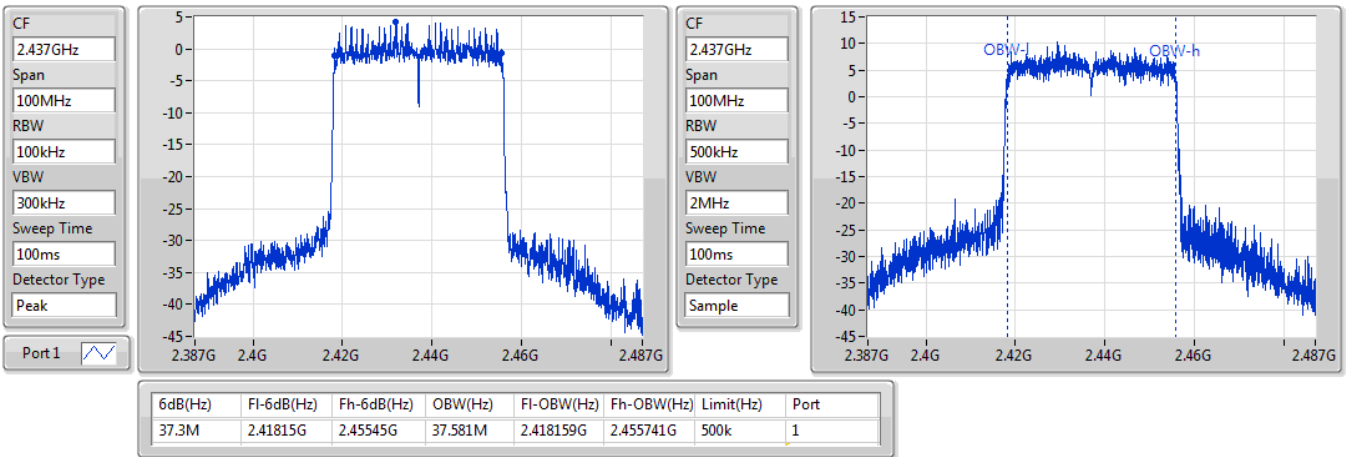


802.11ax HEW40_Nss1,(MCS0)_1TX

EBW

2437MHz

03/10/2019

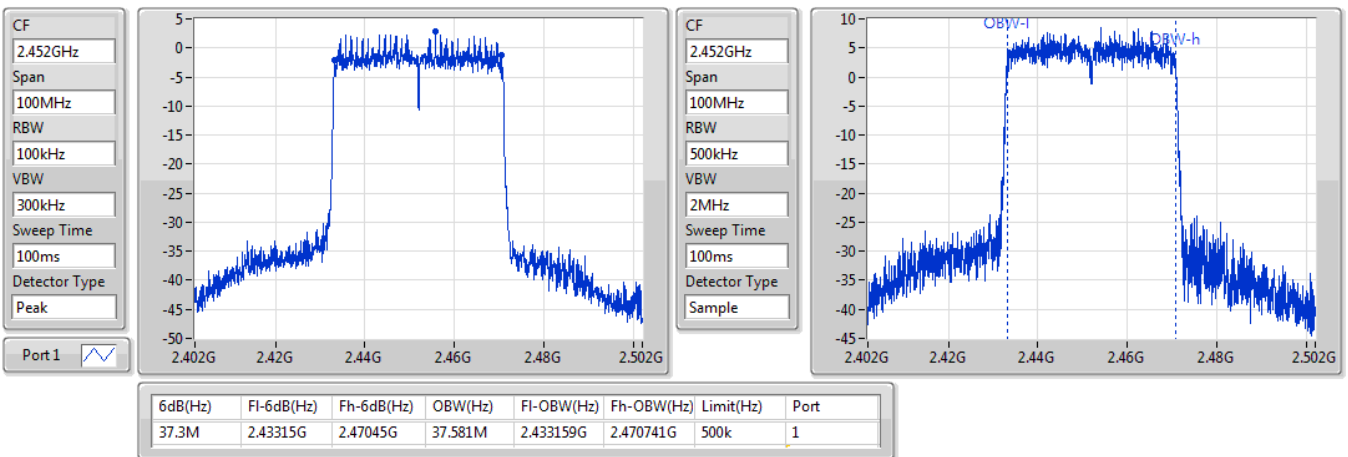


802.11ax HEW40_Nss1,(MCS0)_1TX

EBW

2452MHz

03/10/2019





Summary

| Mode | Max-N dB (Hz) | Max-OBW (Hz) | ITU-Code | Min-N dB (Hz) | Min-OBW (Hz) |
|--------------------------------|------------------|-----------------|----------|------------------|-----------------|
| 2.4-2.4835GHz | - | - | - | - | - |
| 802.11b_Nss1,(1Mbps)_2TX | 7.05M | 12.994M | 13M0G1D | 7.025M | 10.295M |
| 802.11g_Nss1,(6Mbps)_2TX | 16.35M | 17.241M | 17M2D1D | 16.325M | 16.592M |
| 802.11ax HEW20_Nss2,(MCS0)_2TX | 18.975M | 19.115M | 19M1D1D | 18.725M | 18.991M |
| 802.11ax HEW40_Nss2,(MCS0)_2TX | 37.6M | 37.631M | 37M6D1D | 36.95M | 37.481M |

Max-N dB = Maximum 6dB down bandwidth; **Max-OBW** = Maximum 99% occupied bandwidth;
Min-N dB = Minimum 6dB down bandwidth; **Min-OBW** = Minimum 99% occupied bandwidth;

Result

| Mode | Result | Limit (Hz) | Port 1-N dB (Hz) | Port 1-OBW (Hz) | Port 2-N dB (Hz) | Port 2-OBW (Hz) |
|--------------------------------|--------|------------|------------------|-----------------|------------------|-----------------|
| 802.11b_Nss1,(1Mbps)_2TX | - | - | - | - | - | - |
| 2412MHz | Pass | 500k | 7.025M | 10.37M | 7.025M | 10.295M |
| 2437MHz | Pass | 500k | 7.05M | 12.019M | 7.05M | 12.994M |
| 2462MHz | Pass | 500k | 7.05M | 10.445M | 7.025M | 10.295M |
| 802.11g_Nss1,(6Mbps)_2TX | - | - | - | - | - | - |
| 2412MHz | Pass | 500k | 16.35M | 16.642M | 16.35M | 16.592M |
| 2437MHz | Pass | 500k | 16.35M | 16.842M | 16.325M | 17.241M |
| 2462MHz | Pass | 500k | 16.35M | 16.592M | 16.35M | 16.592M |
| 802.11ax HEW20_Nss2,(MCS0)_2TX | - | - | - | - | - | - |
| 2412MHz | Pass | 500k | 18.95M | 19.015M | 18.875M | 19.015M |
| 2437MHz | Pass | 500k | 18.975M | 19.04M | 18.725M | 19.115M |
| 2462MHz | Pass | 500k | 18.95M | 18.991M | 18.85M | 18.991M |
| 802.11ax HEW40_Nss2,(MCS0)_2TX | - | - | - | - | - | - |
| 2422MHz | Pass | 500k | 37.35M | 37.631M | 36.95M | 37.581M |
| 2437MHz | Pass | 500k | 37.35M | 37.581M | 37.6M | 37.581M |
| 2452MHz | Pass | 500k | 37.35M | 37.631M | 37.05M | 37.481M |

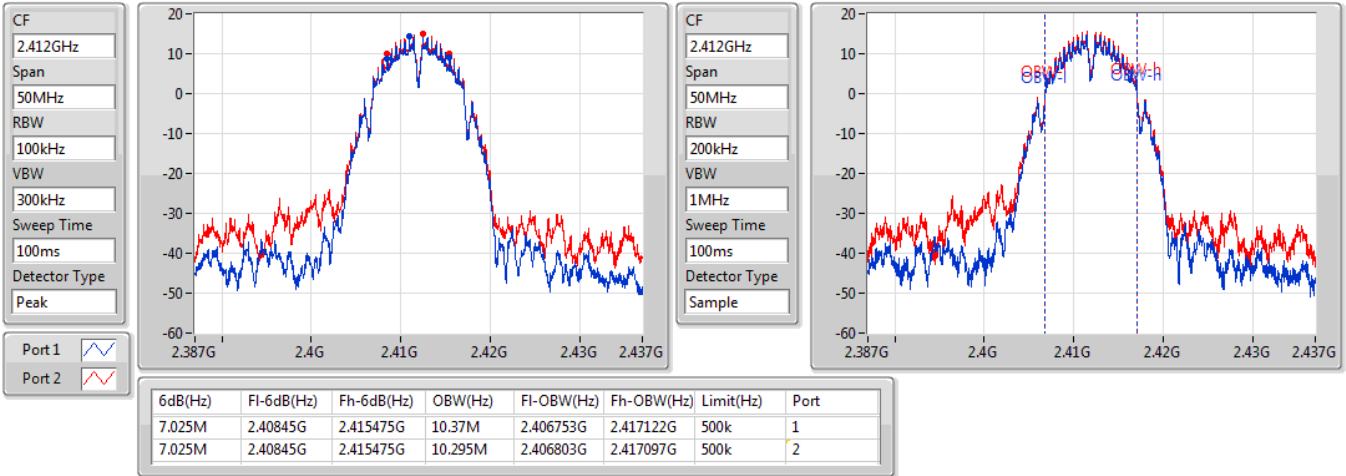
Port X-N dB = Port X 6dB down bandwidth; Port X-OBW = Port X 99% occupied bandwidth;

802.11b_Nss1,(1Mbps)_2TX

EBW

2412MHz

03/10/2019

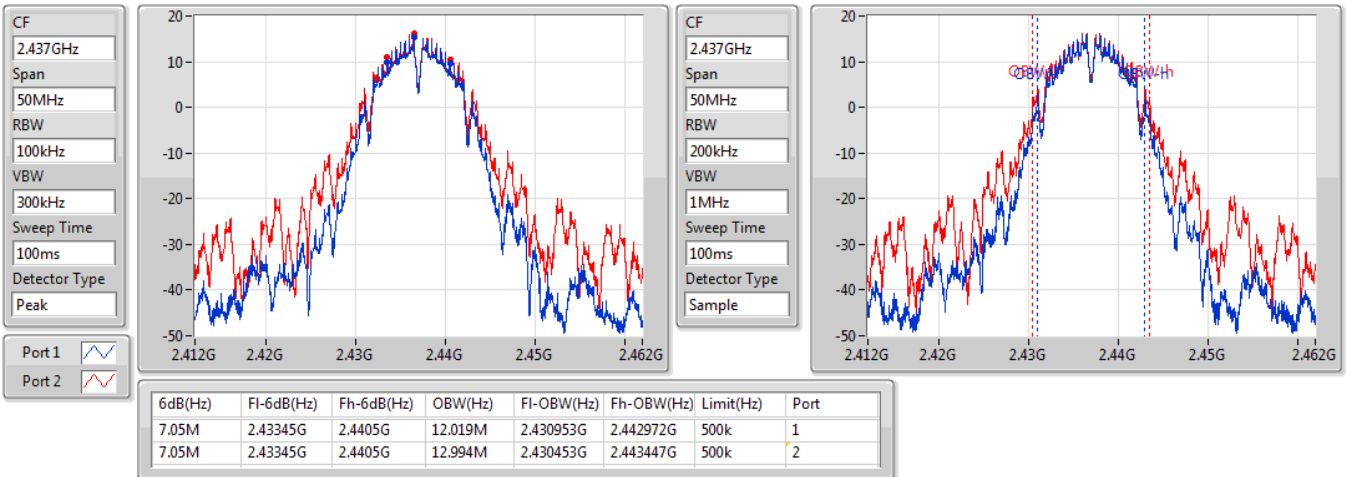


802.11b_Nss1,(1Mbps)_2TX

EBW

2437MHz

03/10/2019



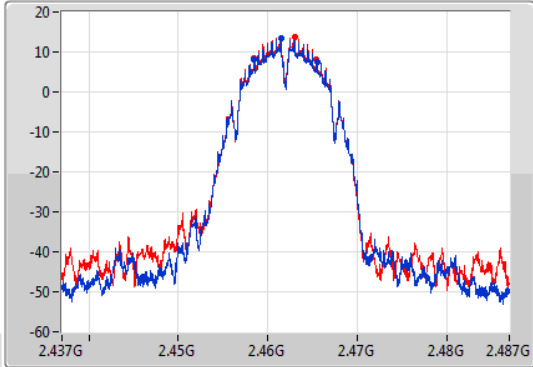
802.11b_Nss1,(1Mbps)_2TX

EBW

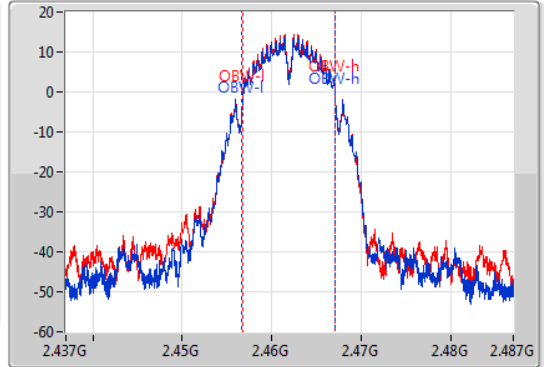
2462MHz

03/10/2019

CF
2.462GHz
Span
50MHz
RBW
100kHz
VBW
300kHz
Sweep Time
100ms
Detector Type
Peak



CF
2.462GHz
Span
50MHz
RBW
200kHz
VBW
1MHz
Sweep Time
100ms
Detector Type
Sample



| 6dB(Hz) | Fl-6dB(Hz) | Fh-6dB(Hz) | OBW(Hz) | Fl-OBW(Hz) | Fh-OBW(Hz) | Limit(Hz) | Port |
|---------|------------|------------|---------|------------|------------|-----------|------|
| 7.05M | 2.45845G | 2.4655G | 10.445M | 2.456703G | 2.467147G | 500k | 1 |
| 7.025M | 2.45845G | 2.465475G | 10.295M | 2.456778G | 2.467072G | 500k | 2 |

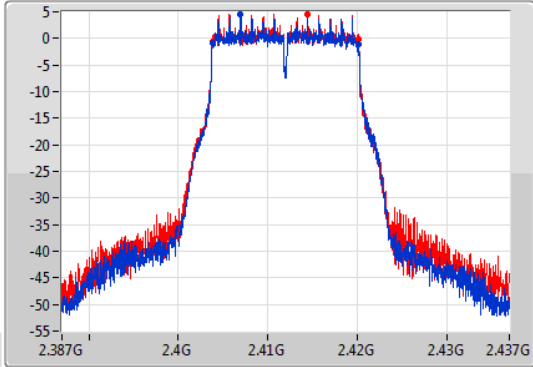
802.11g_Nss1,(6Mbps)_2TX

EBW

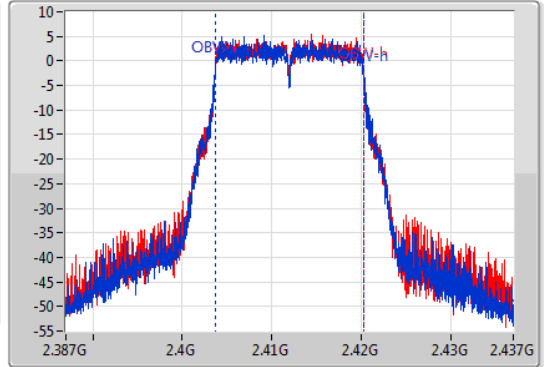
2412MHz

03/10/2019

CF
2.412GHz
Span
50MHz
RBW
100kHz
VBW
300kHz
Sweep Time
100ms
Detector Type
Peak



CF
2.412GHz
Span
50MHz
RBW
200kHz
VBW
1MHz
Sweep Time
100ms
Detector Type
Sample



| 6dB(Hz) | Fl-6dB(Hz) | Fh-6dB(Hz) | OBW(Hz) | Fl-OBW(Hz) | Fh-OBW(Hz) | Limit(Hz) | Port |
|---------|------------|------------|---------|------------|------------|-----------|------|
| 16.35M | 2.4038G | 2.42015G | 16.642M | 2.403654G | 2.420296G | 500k | 1 |
| 16.35M | 2.4038G | 2.42015G | 16.592M | 2.403654G | 2.420246G | 500k | 2 |

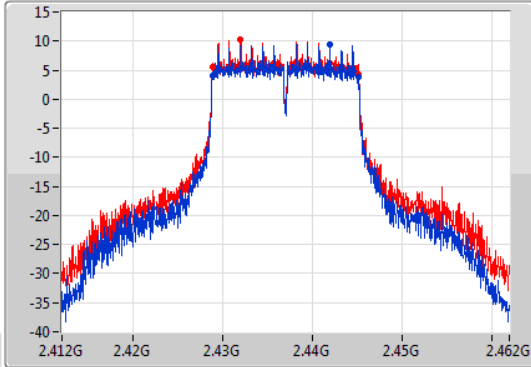
802.11g_Nss1,(6Mbps)_2TX

EBW

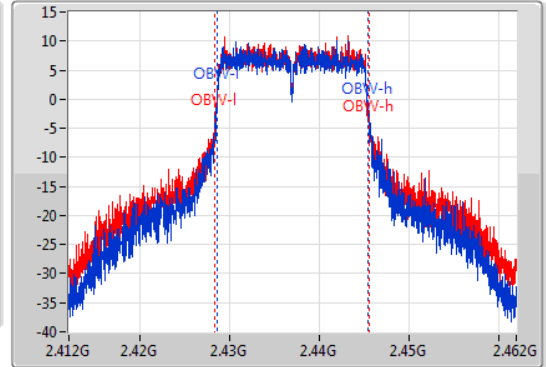
2437MHz

03/10/2019

CF
2.437GHz
Span
50MHz
RBW
100kHz
VBW
300kHz
Sweep Time
100ms
Detector Type
Peak



CF
2.437GHz
Span
50MHz
RBW
200kHz
VBW
1MHz
Sweep Time
100ms
Detector Type
Sample



| 6dB(Hz) | Fl-6dB(Hz) | Fh-6dB(Hz) | OBW(Hz) | Fl-OBW(Hz) | Fh-OBW(Hz) | Limit(Hz) | Port |
|---------|------------|------------|---------|------------|------------|-----------|------|
| 16.35M | 2.4288G | 2.44515G | 16.842M | 2.428554G | 2.445396G | 500k | 1 |
| 16.325M | 2.428825G | 2.44515G | 17.241M | 2.428304G | 2.445546G | 500k | 2 |

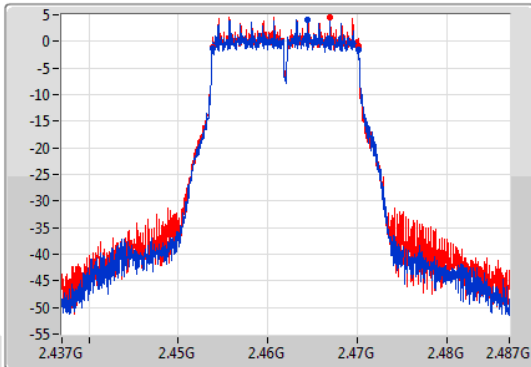
802.11g_Nss1,(6Mbps)_2TX

EBW

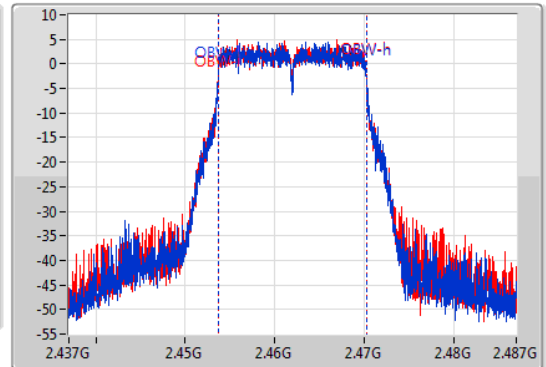
2462MHz

03/10/2019

CF
2.462GHz
Span
50MHz
RBW
100kHz
VBW
300kHz
Sweep Time
100ms
Detector Type
Peak



CF
2.462GHz
Span
50MHz
RBW
200kHz
VBW
1MHz
Sweep Time
100ms
Detector Type
Sample



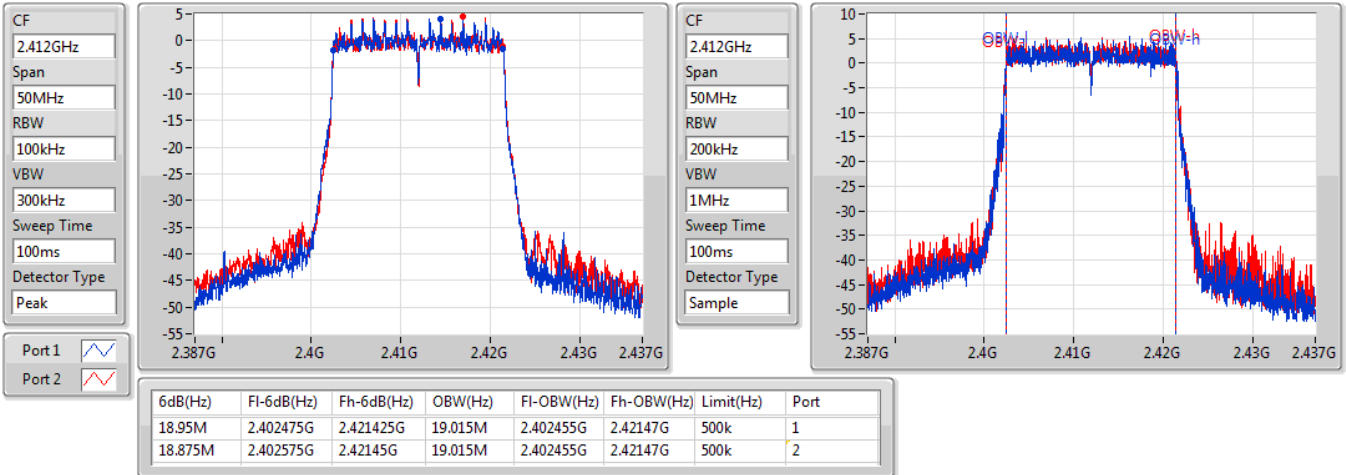
| 6dB(Hz) | Fl-6dB(Hz) | Fh-6dB(Hz) | OBW(Hz) | Fl-OBW(Hz) | Fh-OBW(Hz) | Limit(Hz) | Port |
|---------|------------|------------|---------|------------|------------|-----------|------|
| 16.35M | 2.4538G | 2.47015G | 16.592M | 2.453679G | 2.470271G | 500k | 1 |
| 16.35M | 2.4538G | 2.47015G | 16.592M | 2.453654G | 2.470246G | 500k | 2 |

802.11ax HEW20_Nss2,(MCS0)_2TX

EBW

2412MHz

03/10/2019

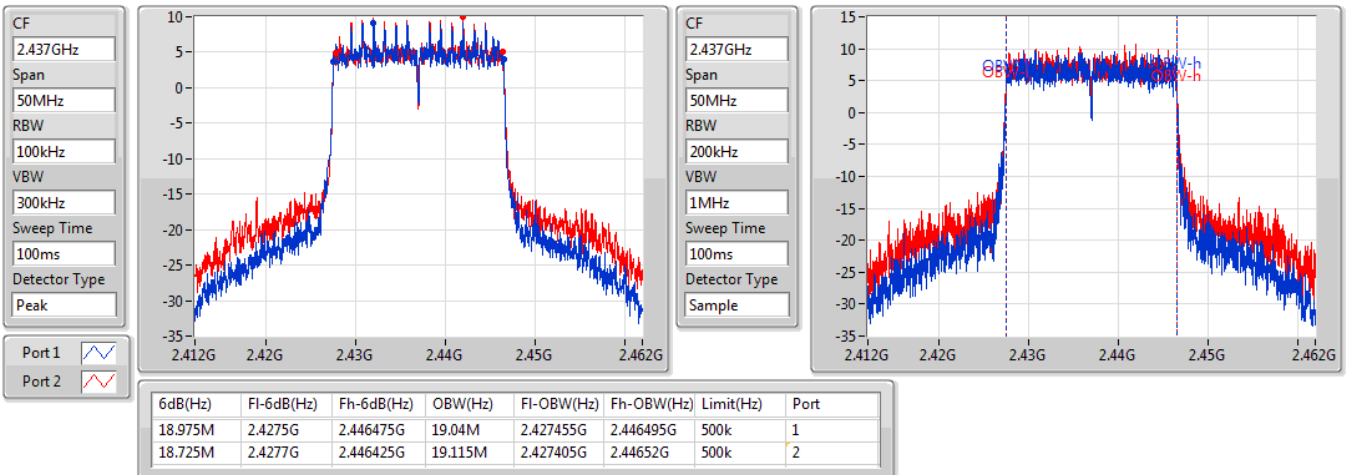


802.11ax HEW20_Nss2,(MCS0)_2TX

EBW

2437MHz

03/10/2019



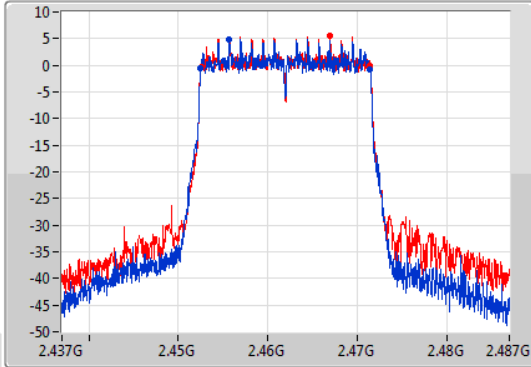
802.11ax HEW20_Nss2,(MCS0)_2TX

EBW

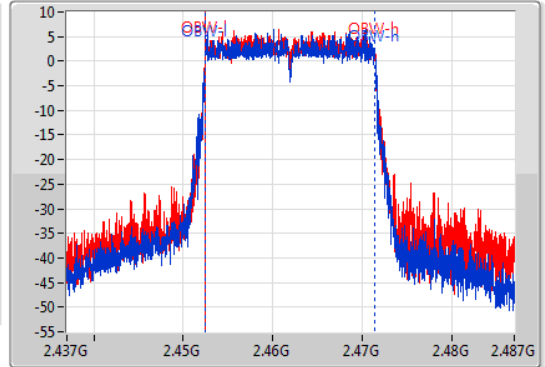
2462MHz

03/10/2019

CF
2.462GHz
Span
50MHz
RBW
100kHz
VBW
300kHz
Sweep Time
100ms
Detector Type
Peak



CF
2.462GHz
Span
50MHz
RBW
200kHz
VBW
1MHz
Sweep Time
100ms
Detector Type
Sample



| 6dB(Hz) | Fl-6dB(Hz) | Fh-6dB(Hz) | OBW(Hz) | Fl-OBW(Hz) | Fh-OBW(Hz) | Limit(Hz) | Port |
|---------|------------|------------|---------|------------|------------|-----------|------|
| 18.95M | 2.4525G | 2.47145G | 18.991M | 2.45248G | 2.47147G | 500k | 1 |
| 18.85M | 2.4526G | 2.47145G | 18.991M | 2.45248G | 2.47147G | 500k | 2 |

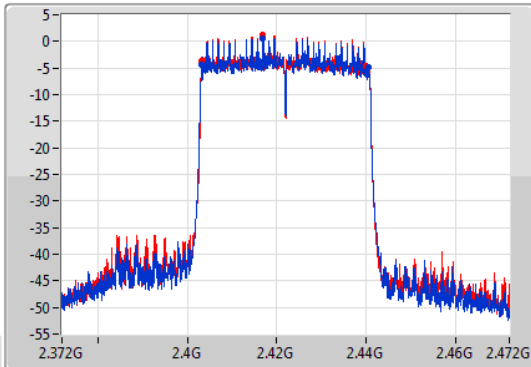
802.11ax HEW40_Nss2,(MCS0)_2TX

EBW

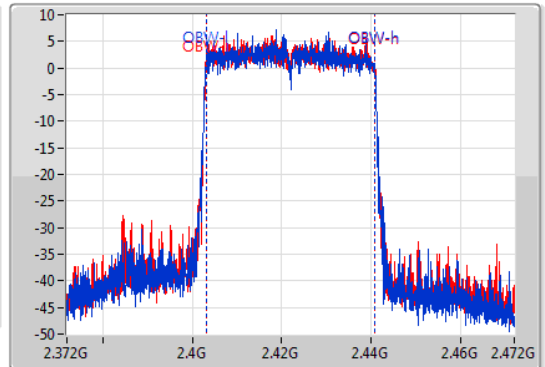
2422MHz

03/10/2019

CF
2.422GHz
Span
100MHz
RBW
100kHz
VBW
300kHz
Sweep Time
100ms
Detector Type
Peak



CF
2.422GHz
Span
100MHz
RBW
500kHz
VBW
2MHz
Sweep Time
100ms
Detector Type
Sample



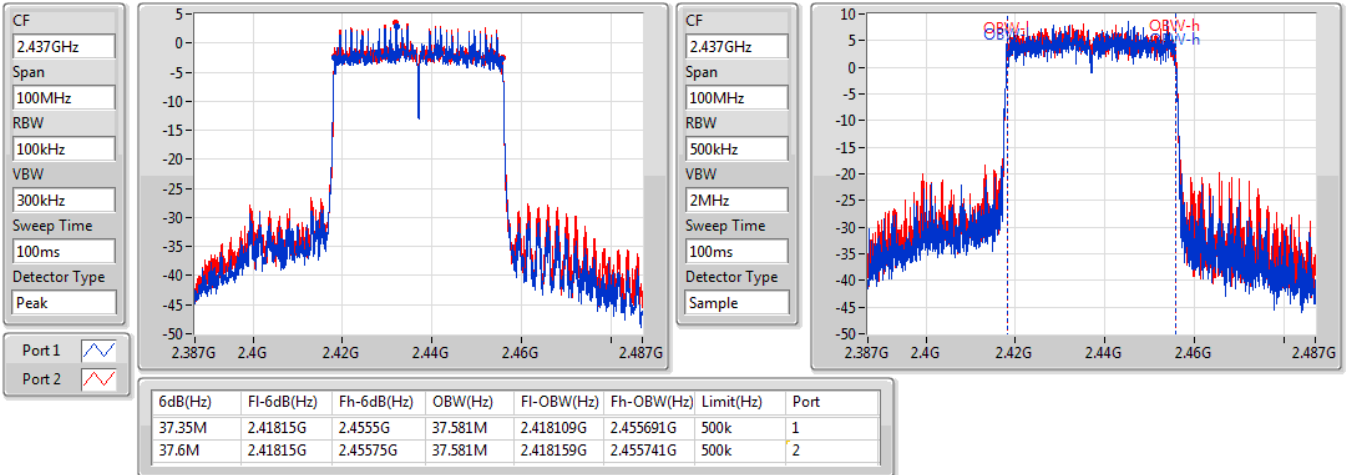
| 6dB(Hz) | Fl-6dB(Hz) | Fh-6dB(Hz) | OBW(Hz) | Fl-OBW(Hz) | Fh-OBW(Hz) | Limit(Hz) | Port |
|---------|------------|------------|---------|------------|------------|-----------|------|
| 37.35M | 2.40315G | 2.4405G | 37.631M | 2.403109G | 2.440741G | 500k | 1 |
| 36.95M | 2.40315G | 2.4401G | 37.581M | 2.403159G | 2.440741G | 500k | 2 |

802.11ax HEW40_Nss2,(MCS0)_2TX

EBW

2437MHz

03/10/2019

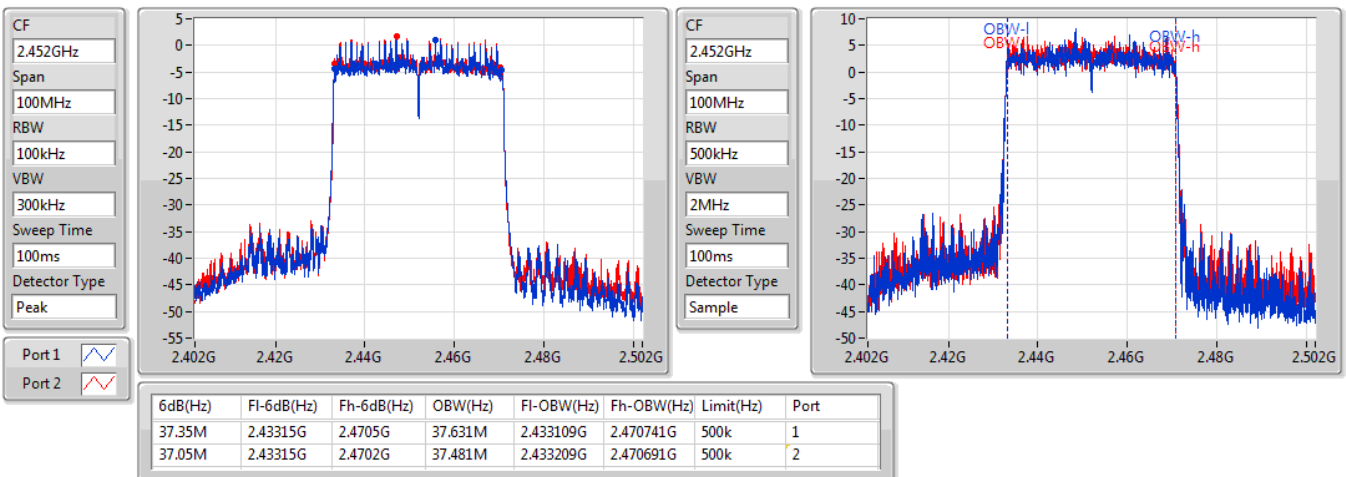


802.11ax HEW40_Nss2,(MCS0)_2TX

EBW

2452MHz

03/10/2019





Summary

| Mode | Max-N dB (Hz) | Max-OBW (Hz) | ITU-Code | Min-N dB (Hz) | Min-OBW (Hz) |
|-----------------------------------|------------------|-----------------|----------|------------------|-----------------|
| 2.4-2.4835GHz | - | - | - | - | - |
| 802.11ax HEW20-BF_Nss1,(MCS0)_2TX | 18.975M | 19.14M | 19M1D1D | 18.85M | 18.991M |
| 802.11ax HEW40-BF_Nss1,(MCS0)_2TX | 37.6M | 37.631M | 37M6D1D | 36.8M | 37.481M |

Max-N dB = Maximum 6dB down bandwidth; **Max-OBW** = Maximum 99% occupied bandwidth;
Min-N dB = Minimum 6dB down bandwidth; **Min-OBW** = Minimum 99% occupied bandwidth;



Result

| Mode | Result | Limit (Hz) | Port 1-N dB (Hz) | Port 1-OBW (Hz) | Port 2-N dB (Hz) | Port 2-OBW (Hz) |
|-----------------------------------|--------|------------|------------------|-----------------|------------------|-----------------|
| 802.11ax HEW20-BF_Nss1,(MCS0)_2TX | - | - | - | - | - | - |
| 2412MHz | Pass | 500k | 18.975M | 18.991M | 18.875M | 18.991M |
| 2437MHz | Pass | 500k | 18.875M | 19.09M | 18.85M | 19.14M |
| 2462MHz | Pass | 500k | 18.975M | 18.991M | 18.975M | 18.991M |
| 802.11ax HEW40-BF_Nss1,(MCS0)_2TX | - | - | - | - | - | - |
| 2422MHz | Pass | 500k | 37.6M | 37.481M | 37.25M | 37.531M |
| 2437MHz | Pass | 500k | 37.55M | 37.631M | 37.15M | 37.531M |
| 2452MHz | Pass | 500k | 37.2M | 37.531M | 36.8M | 37.631M |

Port X-N dB = Port X 6dB down bandwidth; Port X-OBW = Port X 99% occupied bandwidth;

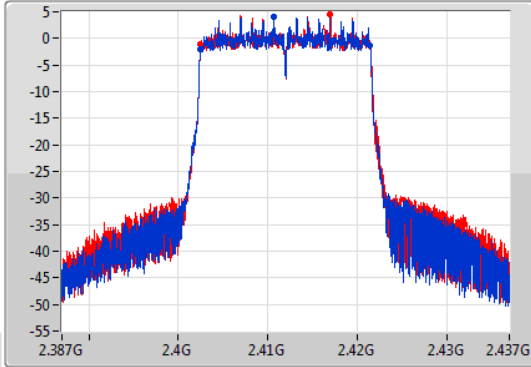
802.11ax HEW20-BF_Nss1,(MCS0)_2TX

EBW

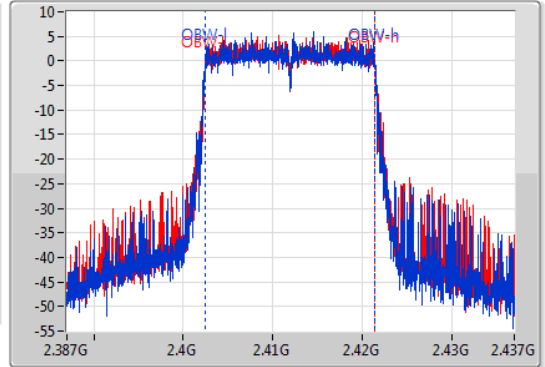
2412MHz

13/10/2019

CF
2.412GHz
Span
50MHz
RBW
100kHz
VBW
300kHz
Sweep Time
100ms
Detector Type
Peak



CF
2.412GHz
Span
50MHz
RBW
200kHz
VBW
1MHz
Sweep Time
100ms
Detector Type
Sample



| 6dB(Hz) | Fl-6dB(Hz) | Fh-6dB(Hz) | OBW(Hz) | Fl-OBW(Hz) | Fh-OBW(Hz) | Limit(Hz) | Port |
|---------|------------|------------|---------|------------|------------|-----------|------|
| 18.975M | 2.402475G | 2.42145G | 18.991M | 2.402455G | 2.421445G | 500k | 1 |
| 18.875M | 2.4025G | 2.421375G | 18.991M | 2.402455G | 2.421445G | 500k | 2 |

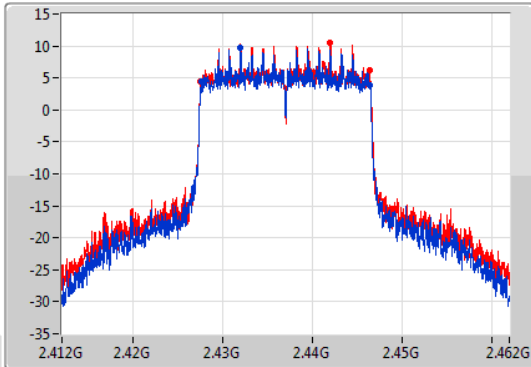
802.11ax HEW20-BF_Nss1,(MCS0)_2TX

EBW

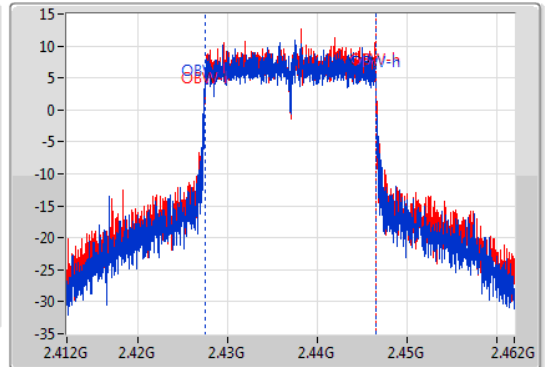
2437MHz

13/10/2019

CF
2.437GHz
Span
50MHz
RBW
100kHz
VBW
300kHz
Sweep Time
100ms
Detector Type
Peak



CF
2.437GHz
Span
50MHz
RBW
200kHz
VBW
1MHz
Sweep Time
100ms
Detector Type
Sample



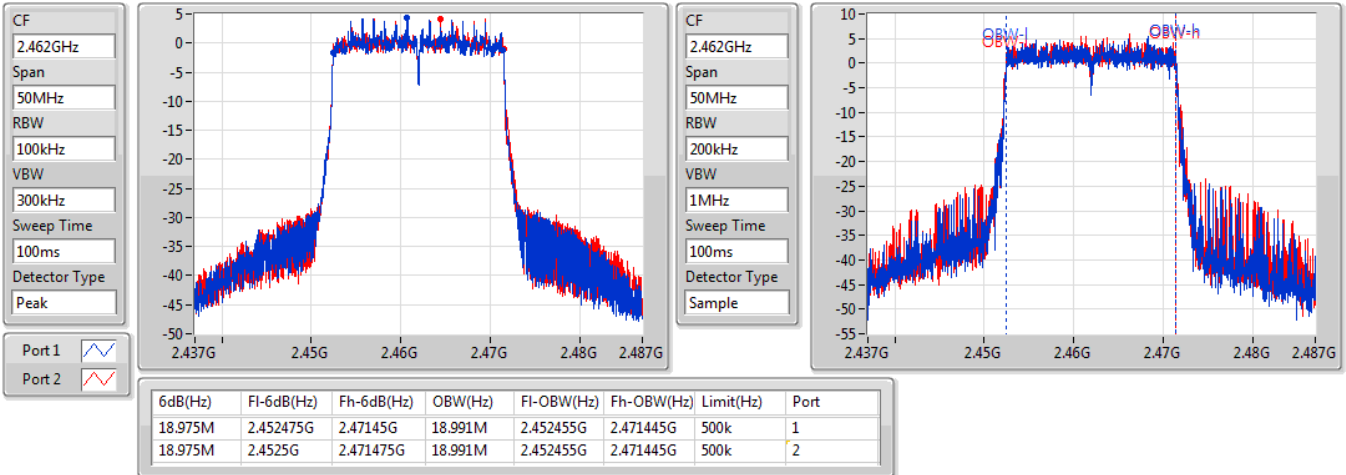
| 6dB(Hz) | Fl-6dB(Hz) | Fh-6dB(Hz) | OBW(Hz) | Fl-OBW(Hz) | Fh-OBW(Hz) | Limit(Hz) | Port |
|---------|------------|------------|---------|------------|------------|-----------|------|
| 18.875M | 2.427575G | 2.44645G | 19.09M | 2.427405G | 2.446495G | 500k | 1 |
| 18.85M | 2.427525G | 2.446375G | 19.14M | 2.427405G | 2.446545G | 500k | 2 |

802.11ax HEW20-BF_Nss1,(MCS0)_2TX

EBW

2462MHz

13/10/2019

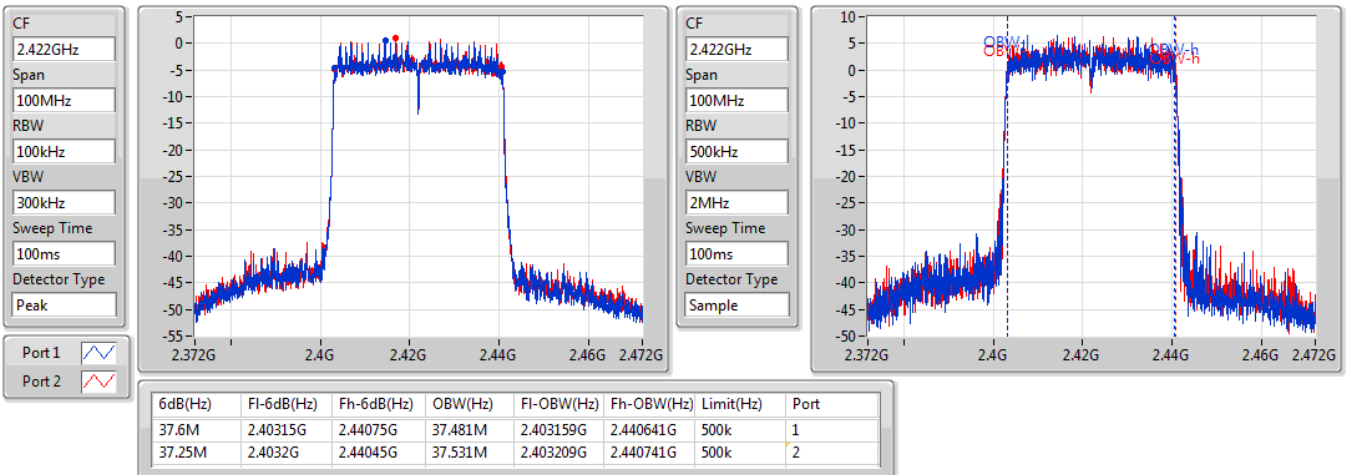


802.11ax HEW40-BF_Nss1,(MCS0)_2TX

EBW

2422MHz

13/10/2019

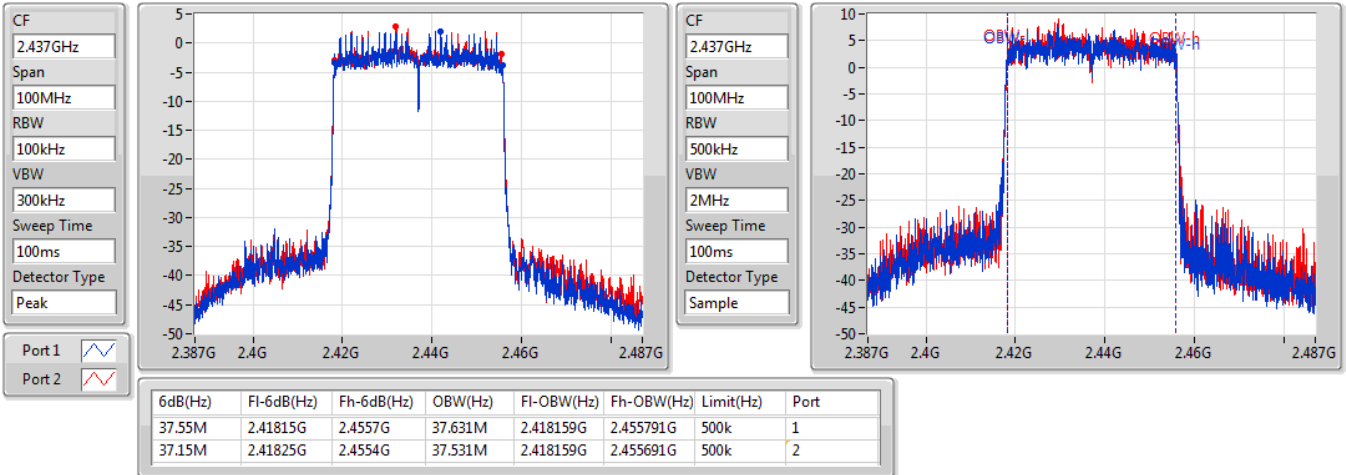


802.11ax HEW40-BF_Nss1,(MCS0)_2TX

EBW

2437MHz

13/10/2019

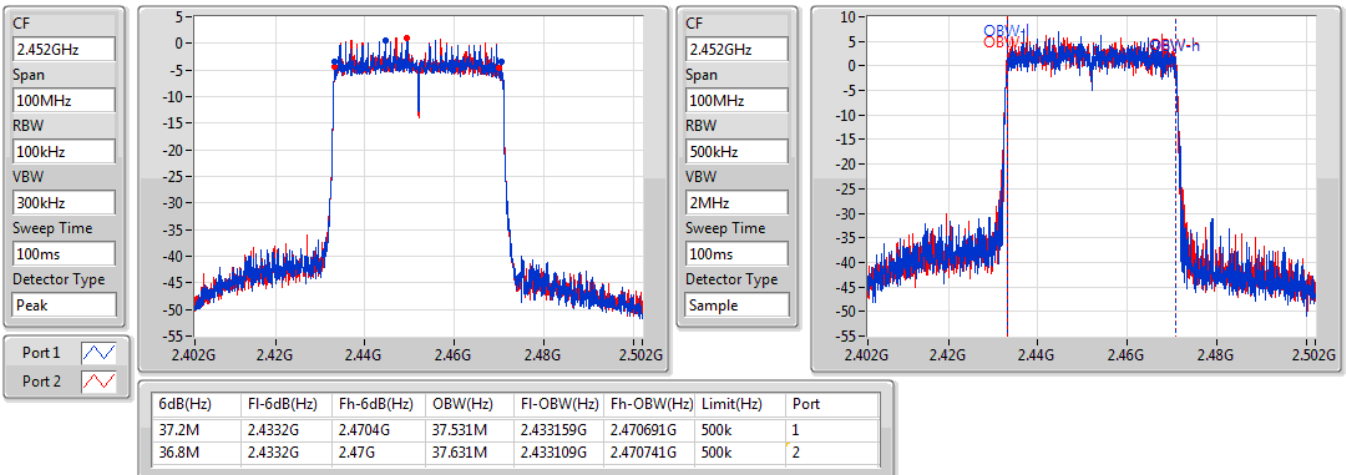


802.11ax HEW40-BF_Nss1,(MCS0)_2TX

EBW

2452MHz

13/10/2019





Summary

| Mode | Total Power (dBm) | Total Power (W) |
|--------------------------------|-------------------|-----------------|
| 2.4-2.4835GHz | - | - |
| 802.11b_Nss1,(1Mbps)_1TX | 27.91 | 0.61802 |
| 802.11g_Nss1,(6Mbps)_1TX | 26.24 | 0.42073 |
| VHT20_Nss1,(MCS0)_1TX | 24.96 | 0.31333 |
| VHT40_Nss1,(MCS0)_1TX | 20.54 | 0.11324 |
| 802.11ax HEW20_Nss1,(MCS0)_1TX | 25.26 | 0.33574 |
| 802.11ax HEW40_Nss1,(MCS0)_1TX | 20.67 | 0.11668 |



Result

| Mode | Result | DG (dBi) | Port 1 (dBm) | Total Power (dBm) | Power Limit (dBm) | Conducted setting |
|--------------------------------|--------|-------------|-----------------|----------------------|----------------------|----------------------|
| 802.11b_Nss1,(1Mbps)_1TX | - | - | - | - | - | |
| 2412MHz | Pass | 4.56 | 22.12 | 22.12 | 30.00 | 22 |
| 2437MHz | Pass | 4.56 | 27.91 | 27.91 | 30.00 | 26.5 |
| 2462MHz | Pass | 4.56 | 22.15 | 22.15 | 30.00 | 30 |
| 2417MHz | Pass | 4.56 | 26.05 | 26.05 | 30.00 | 26 |
| 2457MHz | Pass | 4.56 | 25.76 | 25.76 | 30.00 | 22 |
| 802.11g_Nss1,(6Mbps)_1TX | - | - | - | - | - | |
| 2412MHz | Pass | 4.56 | 20.10 | 20.10 | 30.00 | 21 |
| 2437MHz | Pass | 4.56 | 26.24 | 26.24 | 30.00 | 24 |
| 2462MHz | Pass | 4.56 | 19.62 | 19.62 | 30.00 | 28.25 |
| 2417MHz | Pass | 4.56 | 23.15 | 23.15 | 30.00 | 22.5 |
| 2457MHz | Pass | 4.56 | 21.59 | 21.59 | 30.00 | 20.5 |
| VHT20_Nss1,(MCS0)_1TX | - | - | - | - | - | |
| 2412MHz | Pass | 4.56 | 19.99 | 19.99 | 30.00 | 20.75 |
| 2437MHz | Pass | 4.56 | 24.96 | 24.96 | 30.00 | 23.25 |
| 2462MHz | Pass | 4.56 | 18.11 | 18.11 | 30.00 | 26.5 |
| 2417MHz | Pass | 4.56 | 22.50 | 22.50 | 30.00 | 22 |
| 2457MHz | Pass | 4.56 | 21.31 | 21.31 | 30.00 | 18.75 |
| VHT40_Nss1,(MCS0)_1TX | - | - | - | - | - | |
| 2422MHz | Pass | 4.56 | 18.66 | 18.66 | 30.00 | 18.75 |
| 2437MHz | Pass | 4.56 | 20.54 | 20.54 | 30.00 | 20.5 |
| 2452MHz | Pass | 4.56 | 18.86 | 18.86 | 30.00 | 19 |
| 802.11ax HEW20_Nss1,(MCS0)_1TX | - | - | - | - | - | |
| 2412MHz | Pass | 4.56 | 20.29 | 20.29 | 30.00 | 20.75 |
| 2437MHz | Pass | 4.56 | 25.26 | 25.26 | 30.00 | 23.25 |
| 2462MHz | Pass | 4.56 | 18.21 | 18.21 | 30.00 | 26.5 |
| 2417MHz | Pass | 4.56 | 22.84 | 22.84 | 30.00 | 22 |
| 2457MHz | Pass | 4.56 | 21.39 | 21.39 | 30.00 | 18.75 |
| 802.11ax HEW40_Nss1,(MCS0)_1TX | - | - | - | - | - | |
| 2422MHz | Pass | 4.56 | 18.89 | 18.89 | 30.00 | 18.75 |
| 2437MHz | Pass | 4.56 | 20.67 | 20.67 | 30.00 | 20.5 |
| 2452MHz | Pass | 4.56 | 18.88 | 18.88 | 30.00 | 19 |

DG = Directional Gain; Port X = Port X output power

Note: Conducted setting = Pass conducted setting division 4



Summary

| Mode | Total Power (dBm) | Total Power (W) |
|--------------------------------|-------------------|-----------------|
| 2.4-2.4835GHz | - | - |
| 802.11b_Nss1,(1Mbps)_2TX | 28.86 | 0.76913 |
| 802.11g_Nss1,(6Mbps)_2TX | 27.51 | 0.56364 |
| VHT20_Nss2,(MCS0)_2TX | 26.08 | 0.40551 |
| VHT40_Nss2,(MCS0)_2TX | 22.35 | 0.17179 |
| 802.11ax HEW20_Nss2,(MCS0)_2TX | 26.42 | 0.43853 |
| 802.11ax HEW40_Nss2,(MCS0)_2TX | 22.80 | 0.19055 |



Result

| Mode | Result | DG (dBi) | Port 1 (dBm) | Port 2 (dBm) | Total Power (dBm) | Power Limit (dBm) | Conducted setting |
|--------------------------------|--------|----------|--------------|--------------|-------------------|-------------------|-------------------|
| 802.11b_Nss1,(1Mbps)_2TX | - | - | - | - | - | - | |
| 2412MHz | Pass | 4.56 | 24.87 | 24.96 | 27.93 | 30.00 | 24.75 |
| 2437MHz | Pass | 4.56 | 25.89 | 25.81 | 28.86 | 30.00 | 26.25 |
| 2462MHz | Pass | 4.56 | 24.37 | 24.70 | 27.55 | 30.00 | 24.5 |
| 802.11g_Nss1,(6Mbps)_2TX | - | - | - | - | - | - | |
| 2412MHz | Pass | 4.56 | 19.03 | 19.52 | 22.29 | 30.00 | 19.75 |
| 2417MHz | Pass | 4.56 | 19.78 | 20.22 | 23.02 | 30.00 | 20.75 |
| 2437MHz | Pass | 4.56 | 24.52 | 24.48 | 27.51 | 30.00 | 25.75 |
| 2457MHz | Pass | 4.56 | 19.67 | 20.22 | 22.96 | 30.00 | 20.5 |
| 2462MHz | Pass | 4.56 | 18.40 | 18.79 | 21.61 | 30.00 | 19 |
| VHT20_Nss2,(MCS0)_2TX | - | - | - | - | - | - | |
| 2412MHz | Pass | 4.56 | 17.81 | 18.03 | 20.93 | 30.00 | 18.5 |
| 2417MHz | Pass | 4.56 | 19.83 | 20.17 | 23.01 | 30.00 | 20.75 |
| 2437MHz | Pass | 4.56 | 23.02 | 23.11 | 26.08 | 30.00 | 24 |
| 2457MHz | Pass | 4.56 | 19.92 | 20.35 | 23.15 | 30.00 | 20.75 |
| 2462MHz | Pass | 4.56 | 19.16 | 19.66 | 22.43 | 30.00 | 20 |
| VHT40_Nss2,(MCS0)_2TX | - | - | - | - | - | - | |
| 2422MHz | Pass | 4.56 | 17.01 | 17.60 | 20.33 | 30.00 | 17.5 |
| 2437MHz | Pass | 4.56 | 19.21 | 19.46 | 22.35 | 30.00 | 19.5 |
| 2452MHz | Pass | 4.56 | 16.96 | 17.40 | 20.20 | 30.00 | 17.5 |
| 802.11ax HEW20_Nss2,(MCS0)_2TX | - | - | - | - | - | - | |
| 2412MHz | Pass | 4.56 | 18.19 | 18.23 | 21.22 | 30.00 | 18.5 |
| 2417MHz | Pass | 4.56 | 20.14 | 20.37 | 23.27 | 30.00 | 20.75 |
| 2437MHz | Pass | 4.56 | 23.37 | 23.44 | 26.42 | 30.00 | 24 |
| 2457MHz | Pass | 4.56 | 20.18 | 20.48 | 23.34 | 30.00 | 20.75 |
| 2462MHz | Pass | 4.56 | 19.50 | 19.90 | 22.71 | 30.00 | 20 |
| 802.11ax HEW40_Nss2,(MCS0)_2TX | - | - | - | - | - | - | |
| 2422MHz | Pass | 4.56 | 17.49 | 18.01 | 20.77 | 30.00 | 17.5 |
| 2437MHz | Pass | 4.56 | 19.74 | 19.84 | 22.80 | 30.00 | 19.5 |
| 2452MHz | Pass | 4.56 | 17.40 | 17.98 | 20.71 | 30.00 | 17.5 |

DG = Directional Gain; Port X = Port X output power

Note : Conducted setting = Pass conducted setting division 4



Summary

| Mode | Total Power (dBm) | Total Power (W) |
|-----------------------------------|-------------------|-----------------|
| 2.4-2.4835GHz | - | - |
| VHT20-BF_Nss1,(MCS0)_2TX | 25.97 | 0.39537 |
| VHT40-BF_Nss1,(MCS0)_2TX | 22.16 | 0.16444 |
| 802.11ax HEW20-BF_Nss1,(MCS0)_2TX | 26.01 | 0.39902 |
| 802.11ax HEW40-BF_Nss1,(MCS0)_2TX | 22.26 | 0.16827 |



Result

| Mode | Result | DG (dBi) | Port 1 (dBm) | Port 2 (dBm) | Total Power (dBm) | Power Limit (dBm) | Conducted setting |
|-----------------------------------|--------|-------------|-----------------|-----------------|----------------------|----------------------|----------------------|
| VHT20-BF_Nss1,(MCS0)_2TX | - | - | - | - | - | - | |
| 2412MHz | Pass | 7.57 | 17.98 | 19.67 | 21.92 | 28.43 | 20 |
| 2417MHz | Pass | 7.57 | 18.72 | 20.28 | 22.58 | 28.43 | 20.5 |
| 2437MHz | Pass | 7.57 | 22.21 | 23.60 | 25.97 | 28.43 | 24.25 |
| 2457MHz | Pass | 7.57 | 17.03 | 18.30 | 20.72 | 28.43 | 18.75 |
| 2462MHz | Pass | 7.57 | 17.70 | 19.13 | 21.48 | 28.43 | 19.5 |
| VHT40-BF_Nss1,(MCS0)_2TX | - | - | - | - | - | - | |
| 2422MHz | Pass | 7.57 | 17.38 | 18.76 | 21.13 | 28.43 | 18.25 |
| 2437MHz | Pass | 7.57 | 18.49 | 19.72 | 22.16 | 28.43 | 19.25 |
| 2452MHz | Pass | 7.57 | 16.83 | 18.12 | 20.53 | 28.43 | 17.75 |
| 802.11ax HEW20-BF_Nss1,(MCS0)_2TX | - | - | - | - | - | - | |
| 2412MHz | Pass | 7.57 | 18.50 | 19.82 | 22.22 | 28.43 | 20 |
| 2417MHz | Pass | 7.57 | 18.82 | 20.41 | 22.70 | 28.43 | 20.5 |
| 2437MHz | Pass | 7.57 | 22.27 | 23.62 | 26.01 | 28.43 | 24.25 |
| 2457MHz | Pass | 7.57 | 17.29 | 18.48 | 20.94 | 28.43 | 18.75 |
| 2462MHz | Pass | 7.57 | 17.78 | 19.31 | 21.62 | 28.43 | 19.5 |
| 802.11ax HEW40-BF_Nss1,(MCS0)_2TX | - | - | - | - | - | - | |
| 2422MHz | Pass | 7.57 | 17.52 | 18.89 | 21.27 | 28.43 | 18.25 |
| 2437MHz | Pass | 7.57 | 18.67 | 19.76 | 22.26 | 28.43 | 19.25 |
| 2452MHz | Pass | 7.57 | 16.96 | 18.35 | 20.72 | 28.43 | 17.75 |

DG = Directional Gain; Port X = Port X output power

Note : Conducted setting = Pass conducted setting division 4



Summary

| Mode | Total Power (dBm) | Total Power (W) |
|--------------------------------|-------------------|-----------------|
| 2.4-2.4835GHz | - | - |
| 802.11b_Nss1,(1Mbps)_1TX | 23.28 | 0.21281 |
| 802.11g_Nss1,(6Mbps)_1TX | 22.74 | 0.18793 |
| VHT20_Nss1,(MCS0)_1TX | 22.07 | 0.16106 |
| VHT40_Nss1,(MCS0)_1TX | 18.24 | 0.06668 |
| 802.11ax HEW20_Nss1,(MCS0)_1TX | 22.23 | 0.16711 |
| 802.11ax HEW40_Nss1,(MCS0)_1TX | 18.42 | 0.06950 |



Result

| Mode | Result | DG (dBi) | Port 1 (dBm) | Total Power (dBm) | Power Limit (dBm) | Conducted setting |
|--------------------------------|--------|----------|--------------|-------------------|-------------------|-------------------|
| 802.11b_Nss1,(1Mbps)_1TX | - | - | - | - | - | |
| 2412MHz | Pass | 4.47 | 22.42 | 22.42 | 30.00 | 22 |
| 2437MHz | Pass | 4.47 | 22.61 | 22.61 | 30.00 | 22.25 |
| 2462MHz | Pass | 4.47 | 23.28 | 23.28 | 30.00 | 22.75 |
| 802.11g_Nss1,(6Mbps)_1TX | - | - | - | - | - | |
| 2412MHz | Pass | 4.47 | 17.66 | 17.66 | 30.00 | 18.5 |
| 2417MHz | Pass | 4.47 | 20.08 | 20.08 | 30.00 | 21.5 |
| 2437MHz | Pass | 4.47 | 22.74 | 22.74 | 30.00 | 24.5 |
| 2457MHz | Pass | 4.47 | 19.56 | 19.56 | 30.00 | 20.75 |
| 2462MHz | Pass | 4.47 | 17.36 | 17.36 | 30.00 | 18 |
| VHT20_Nss1,(MCS0)_1TX | - | - | - | - | - | |
| 2412MHz | Pass | 4.47 | 17.53 | 17.53 | 30.00 | 18.25 |
| 2417MHz | Pass | 4.47 | 19.36 | 19.36 | 30.00 | 20.25 |
| 2437MHz | Pass | 4.47 | 22.07 | 22.07 | 30.00 | 23.5 |
| 2457MHz | Pass | 4.47 | 19.51 | 19.51 | 30.00 | 20.5 |
| 2462MHz | Pass | 4.47 | 15.72 | 15.72 | 30.00 | 16 |
| VHT40_Nss1,(MCS0)_1TX | - | - | - | - | - | |
| 2422MHz | Pass | 4.47 | 16.65 | 16.65 | 30.00 | 16.75 |
| 2437MHz | Pass | 4.47 | 18.24 | 18.24 | 30.00 | 18.5 |
| 2452MHz | Pass | 4.47 | 17.01 | 17.01 | 30.00 | 17.25 |
| 802.11ax HEW20_Nss1,(MCS0)_1TX | - | - | - | - | - | |
| 2412MHz | Pass | 4.47 | 17.72 | 17.72 | 30.00 | 18.25 |
| 2417MHz | Pass | 4.47 | 19.57 | 19.57 | 30.00 | 20.25 |
| 2437MHz | Pass | 4.47 | 22.23 | 22.23 | 30.00 | 23.5 |
| 2457MHz | Pass | 4.47 | 19.75 | 19.75 | 30.00 | 20.5 |
| 2462MHz | Pass | 4.47 | 15.85 | 15.85 | 30.00 | 16 |
| 802.11ax HEW40_Nss1,(MCS0)_1TX | - | - | - | - | - | |
| 2422MHz | Pass | 4.47 | 16.71 | 16.71 | 30.00 | 16.75 |
| 2437MHz | Pass | 4.47 | 18.42 | 18.42 | 30.00 | 18.5 |
| 2452MHz | Pass | 4.47 | 17.15 | 17.15 | 30.00 | 17.25 |

DG = Directional Gain; Port X = Port X output power

Note : Conducted setting = Pass conducted setting division 4



Summary

| Mode | Total Power (dBm) | Total Power (W) |
|--------------------------------|-------------------|-----------------|
| 2.4-2.4835GHz | - | - |
| 802.11b_Nss1,(1Mbps)_2TX | 26.58 | 0.45499 |
| 802.11g_Nss1,(6Mbps)_2TX | 24.28 | 0.26792 |
| VHT20_Nss2,(MCS0)_2TX | 23.84 | 0.24210 |
| VHT40_Nss2,(MCS0)_2TX | 20.02 | 0.10046 |
| 802.11ax HEW20_Nss2,(MCS0)_2TX | 24.04 | 0.25351 |
| 802.11ax HEW40_Nss2,(MCS0)_2TX | 20.25 | 0.10593 |



Result

| Mode | Result | DG (dBi) | Port 1 (dBm) | Port 2 (dBm) | Total Power (dBm) | Power Limit (dBm) | Conducted setting |
|--------------------------------|--------|----------|--------------|--------------|-------------------|-------------------|-------------------|
| 802.11b_Nss1,(1Mbps)_2TX | - | - | - | - | - | - | |
| 2412MHz | Pass | 4.47 | 22.11 | 22.63 | 25.39 | 30.00 | 21.5 |
| 2437MHz | Pass | 4.47 | 23.35 | 23.78 | 26.58 | 30.00 | 23 |
| 2462MHz | Pass | 4.47 | 21.23 | 21.86 | 24.57 | 30.00 | 20.75 |
| 802.11g_Nss1,(6Mbps)_2TX | - | - | - | - | - | - | |
| 2412MHz | Pass | 4.47 | 16.07 | 16.31 | 19.20 | 30.00 | 16.5 |
| 2417MHz | Pass | 4.47 | 17.85 | 18.15 | 21.01 | 30.00 | 18.5 |
| 2437MHz | Pass | 4.47 | 21.04 | 21.49 | 24.28 | 30.00 | 22.25 |
| 2457MHz | Pass | 4.47 | 18.46 | 18.83 | 21.66 | 30.00 | 19.25 |
| 2462MHz | Pass | 4.47 | 15.86 | 16.17 | 19.03 | 30.00 | 16.25 |
| VHT20_Nss2,(MCS0)_2TX | - | - | - | - | - | - | |
| 2412MHz | Pass | 4.47 | 15.73 | 15.95 | 18.85 | 30.00 | 16 |
| 2417MHz | Pass | 4.47 | 18.23 | 18.47 | 21.36 | 30.00 | 19 |
| 2437MHz | Pass | 4.47 | 20.64 | 21.01 | 23.84 | 30.00 | 21.75 |
| 2457MHz | Pass | 4.47 | 17.61 | 18.07 | 20.86 | 30.00 | 18.25 |
| 2462MHz | Pass | 4.47 | 16.59 | 16.92 | 19.77 | 30.00 | 17 |
| VHT40_Nss2,(MCS0)_2TX | - | - | - | - | - | - | |
| 2422MHz | Pass | 4.47 | 14.67 | 14.96 | 17.83 | 30.00 | 14.75 |
| 2437MHz | Pass | 4.47 | 16.84 | 17.17 | 20.02 | 30.00 | 17 |
| 2452MHz | Pass | 4.47 | 15.19 | 15.56 | 18.39 | 30.00 | 15.25 |
| 802.11ax HEW20_Nss2,(MCS0)_2TX | - | - | - | - | - | - | |
| 2412MHz | Pass | 4.47 | 15.83 | 16.18 | 19.02 | 30.00 | 16 |
| 2417MHz | Pass | 4.47 | 18.52 | 18.68 | 21.61 | 30.00 | 19 |
| 2437MHz | Pass | 4.47 | 20.78 | 21.26 | 24.04 | 30.00 | 21.75 |
| 2457MHz | Pass | 4.47 | 17.86 | 18.23 | 21.06 | 30.00 | 18.25 |
| 2462MHz | Pass | 4.47 | 16.81 | 17.09 | 19.96 | 30.00 | 17 |
| 802.11ax HEW40_Nss2,(MCS0)_2TX | - | - | - | - | - | - | |
| 2422MHz | Pass | 4.47 | 14.93 | 15.21 | 18.08 | 30.00 | 14.75 |
| 2437MHz | Pass | 4.47 | 17.06 | 17.42 | 20.25 | 30.00 | 17 |
| 2452MHz | Pass | 4.47 | 15.32 | 15.76 | 18.56 | 30.00 | 15.25 |

DG = Directional Gain; Port X = Port X output power

Note : Conducted setting = Pass conducted setting division 4



Summary

| Mode | Total Power (dBm) | Total Power (W) |
|-----------------------------------|-------------------|-----------------|
| 2.4-2.4835GHz | - | - |
| VHT20-BF_Nss1,(MCS0)_2TX | 23.73 | 0.23605 |
| VHT40-BF_Nss1,(MCS0)_2TX | 19.24 | 0.08395 |
| 802.11ax HEW20-BF_Nss1,(MCS0)_2TX | 23.99 | 0.25061 |
| 802.11ax HEW40-BF_Nss1,(MCS0)_2TX | 19.39 | 0.08690 |



Result

| Mode | Result | DG (dBi) | Port 1 (dBm) | Port 2 (dBm) | Total Power (dBm) | Power Limit (dBm) | Conducted setting |
|-----------------------------------|--------|-------------|-----------------|-----------------|----------------------|----------------------|----------------------|
| VHT20-BF_Nss1,(MCS0)_2TX | - | - | - | - | - | - | |
| 2412MHz | Pass | 7.48 | 15.36 | 15.66 | 18.52 | 28.52 | 16.25 |
| 2417MHz | Pass | 7.48 | 16.76 | 16.92 | 19.85 | 28.52 | 17.75 |
| 2437MHz | Pass | 7.48 | 20.47 | 20.96 | 23.73 | 28.52 | 22 |
| 2457MHz | Pass | 7.48 | 16.54 | 16.92 | 19.74 | 28.52 | 17.75 |
| 2462MHz | Pass | 7.48 | 15.53 | 15.89 | 18.72 | 28.52 | 16.5 |
| VHT40-BF_Nss1,(MCS0)_2TX | - | - | - | - | - | - | |
| 2422MHz | Pass | 7.48 | 14.49 | 14.96 | 17.74 | 28.52 | 15 |
| 2437MHz | Pass | 7.48 | 16.10 | 16.35 | 19.24 | 28.52 | 16.5 |
| 2452MHz | Pass | 7.48 | 14.48 | 14.84 | 17.67 | 28.52 | 15 |
| 802.11ax HEW20-BF_Nss1,(MCS0)_2TX | - | - | - | - | - | - | |
| 2412MHz | Pass | 7.48 | 15.60 | 15.95 | 18.79 | 28.52 | 16.25 |
| 2417MHz | Pass | 7.48 | 17.05 | 17.17 | 20.12 | 28.52 | 17.75 |
| 2437MHz | Pass | 7.48 | 20.63 | 21.31 | 23.99 | 28.52 | 22 |
| 2457MHz | Pass | 7.48 | 16.93 | 17.21 | 20.08 | 28.52 | 17.75 |
| 2462MHz | Pass | 7.48 | 15.93 | 16.04 | 19.00 | 28.52 | 16.5 |
| 802.11ax HEW40-BF_Nss1,(MCS0)_2TX | - | - | - | - | - | - | |
| 2422MHz | Pass | 7.48 | 14.79 | 15.11 | 17.96 | 28.52 | 15 |
| 2437MHz | Pass | 7.48 | 16.22 | 16.54 | 19.39 | 28.52 | 16.5 |
| 2452MHz | Pass | 7.48 | 14.77 | 15.09 | 17.94 | 28.52 | 15 |

DG = Directional Gain; Port X = Port X output power

Note : Conducted setting = Pass conducted setting division 4



Summary

| Mode | PD (dBm/RBW) |
|--------------------------------|-----------------|
| 2.4-2.4835GHz | - |
| 802.11b_Nss1,(1Mbps)_1TX | 6.28 |
| 802.11g_Nss1,(6Mbps)_1TX | 0.87 |
| VHT20_Nss1,(MCS0)_1TX | -0.48 |
| VHT40_Nss1,(MCS0)_1TX | -7.61 |
| 802.11ax HEW20_Nss1,(MCS0)_1TX | -0.57 |
| 802.11ax HEW40_Nss1,(MCS0)_1TX | -7.83 |

RBW=3 kHz.

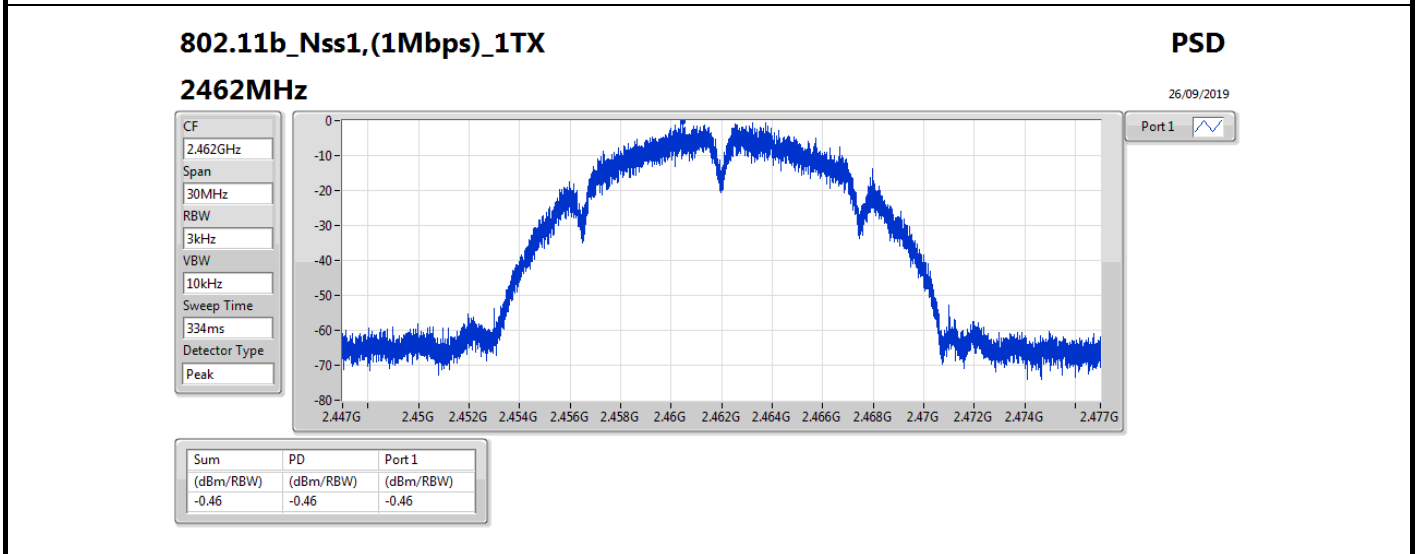
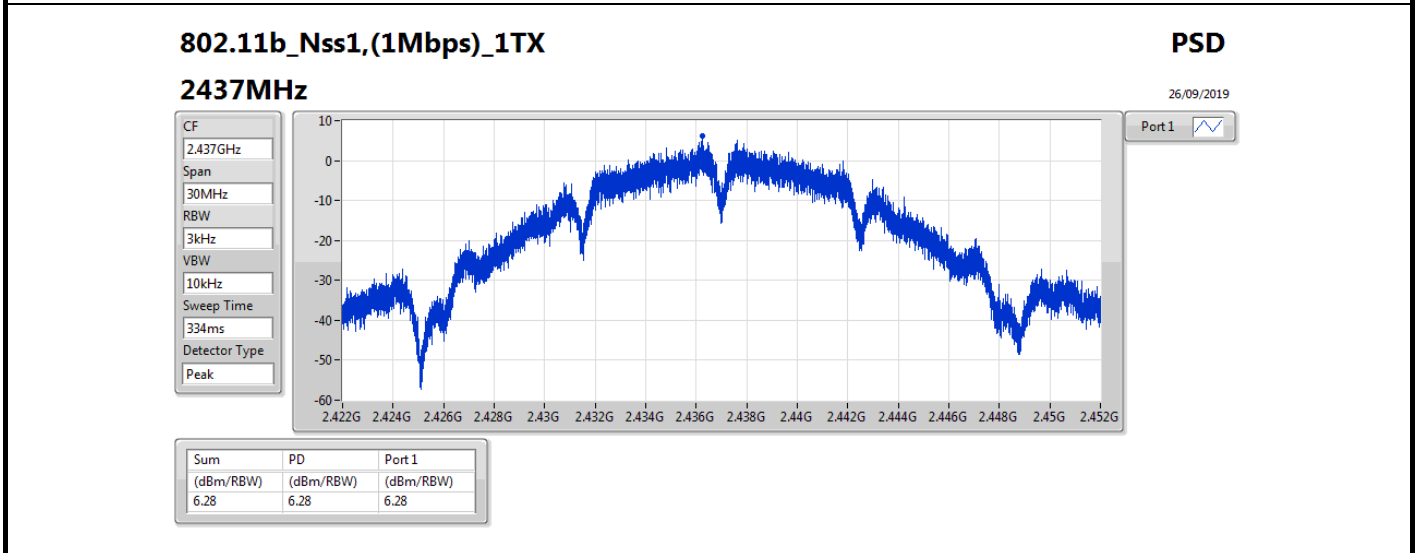
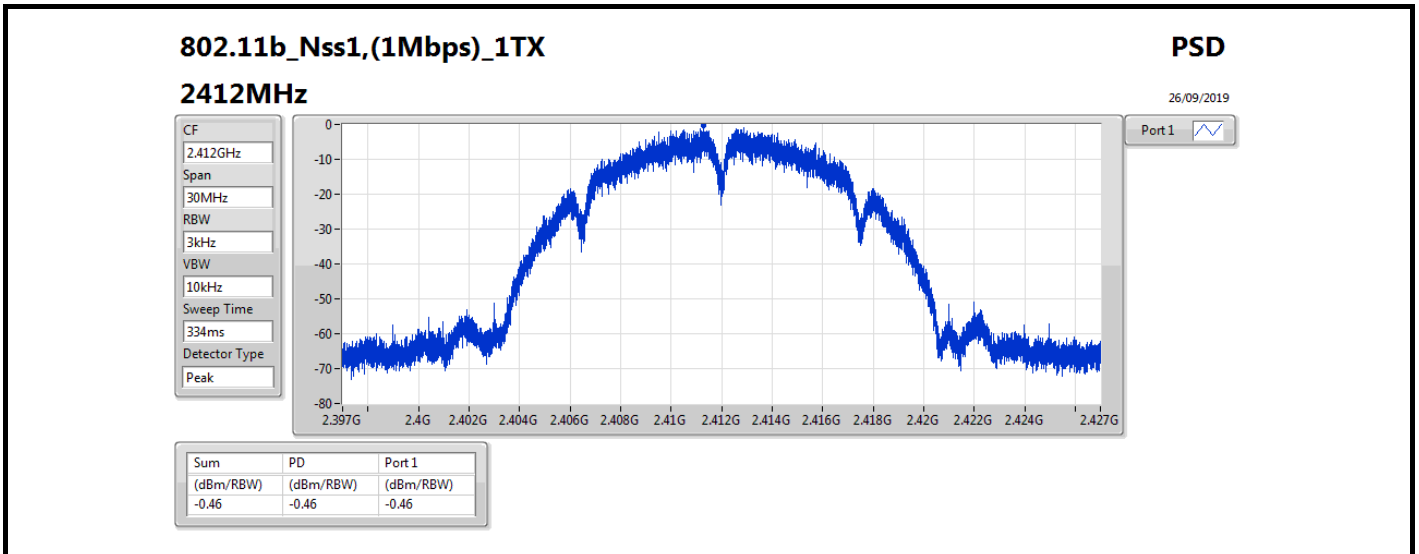


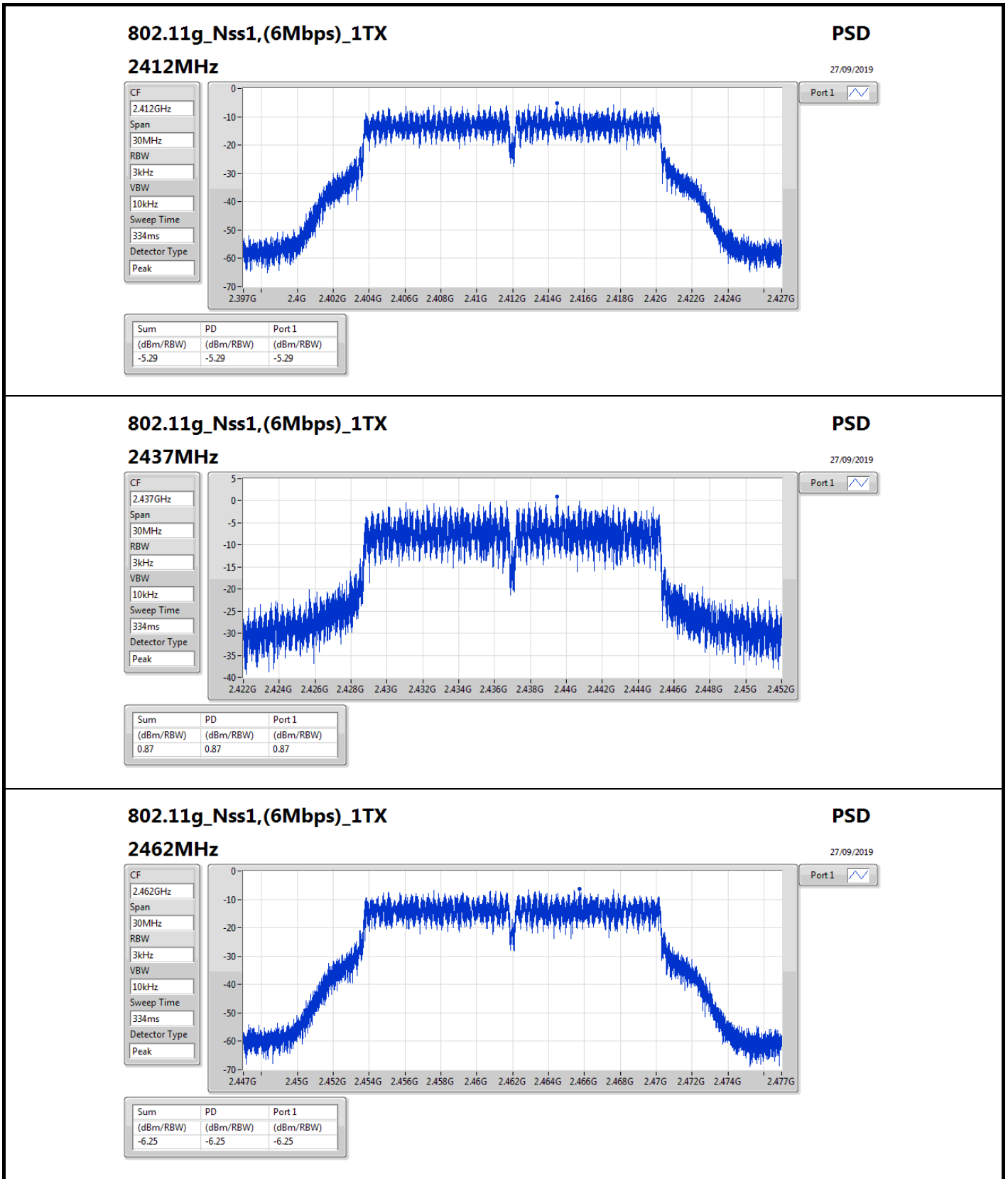
Result

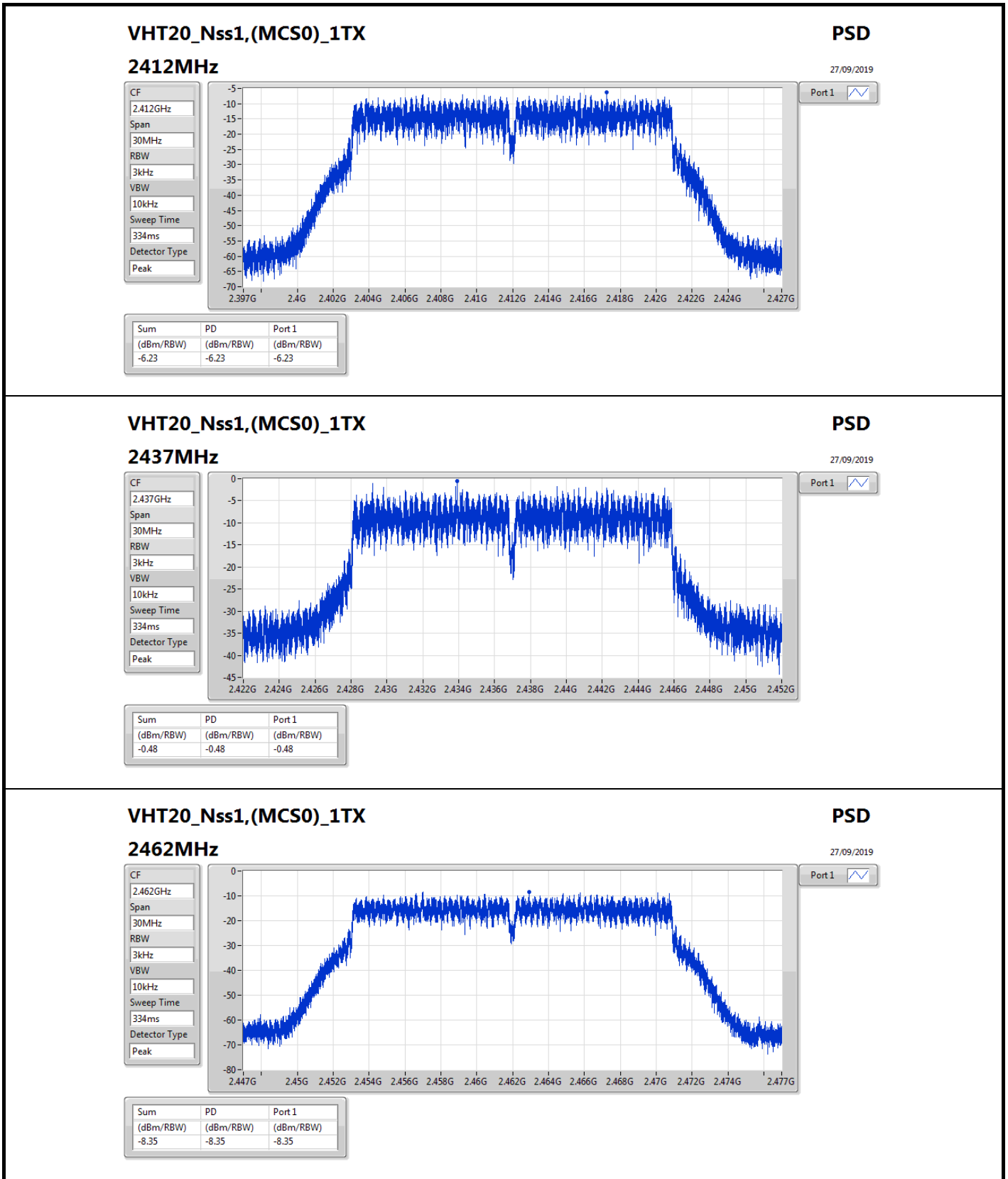
| Mode | Result | DG (dBi) | Port 1 (dBm/RBW) | PD (dBm/RBW) | PD Limit (dBm/RBW) |
|--------------------------------|--------|-------------|---------------------|-----------------|-----------------------|
| 802.11b_Nss1,(1Mbps)_1TX | - | - | - | - | - |
| 2412MHz | Pass | 4.56 | -0.46 | -0.46 | 8.00 |
| 2437MHz | Pass | 4.56 | 6.28 | 6.28 | 8.00 |
| 2462MHz | Pass | 4.56 | -0.46 | -0.46 | 8.00 |
| 802.11g_Nss1,(6Mbps)_1TX | - | - | - | - | - |
| 2412MHz | Pass | 4.56 | -5.29 | -5.29 | 8.00 |
| 2437MHz | Pass | 4.56 | 0.87 | 0.87 | 8.00 |
| 2462MHz | Pass | 4.56 | -6.25 | -6.25 | 8.00 |
| VHT20_Nss1,(MCS0)_1TX | - | - | - | - | - |
| 2412MHz | Pass | 4.56 | -6.23 | -6.23 | 8.00 |
| 2437MHz | Pass | 4.56 | -0.48 | -0.48 | 8.00 |
| 2462MHz | Pass | 4.56 | -8.35 | -8.35 | 8.00 |
| VHT40_Nss1,(MCS0)_1TX | - | - | - | - | - |
| 2422MHz | Pass | 4.56 | -8.93 | -8.93 | 8.00 |
| 2437MHz | Pass | 4.56 | -7.61 | -7.61 | 8.00 |
| 2452MHz | Pass | 4.56 | -9.76 | -9.76 | 8.00 |
| 802.11ax HEW20_Nss1,(MCS0)_1TX | - | - | - | - | - |
| 2412MHz | Pass | 4.56 | -5.03 | -5.03 | 8.00 |
| 2437MHz | Pass | 4.56 | -0.57 | -0.57 | 8.00 |
| 2462MHz | Pass | 4.56 | -6.76 | -6.76 | 8.00 |
| 802.11ax HEW40_Nss1,(MCS0)_1TX | - | - | - | - | - |
| 2422MHz | Pass | 4.56 | -8.74 | -8.74 | 8.00 |
| 2437MHz | Pass | 4.56 | -7.83 | -7.83 | 8.00 |
| 2452MHz | Pass | 4.56 | -9.47 | -9.47 | 8.00 |

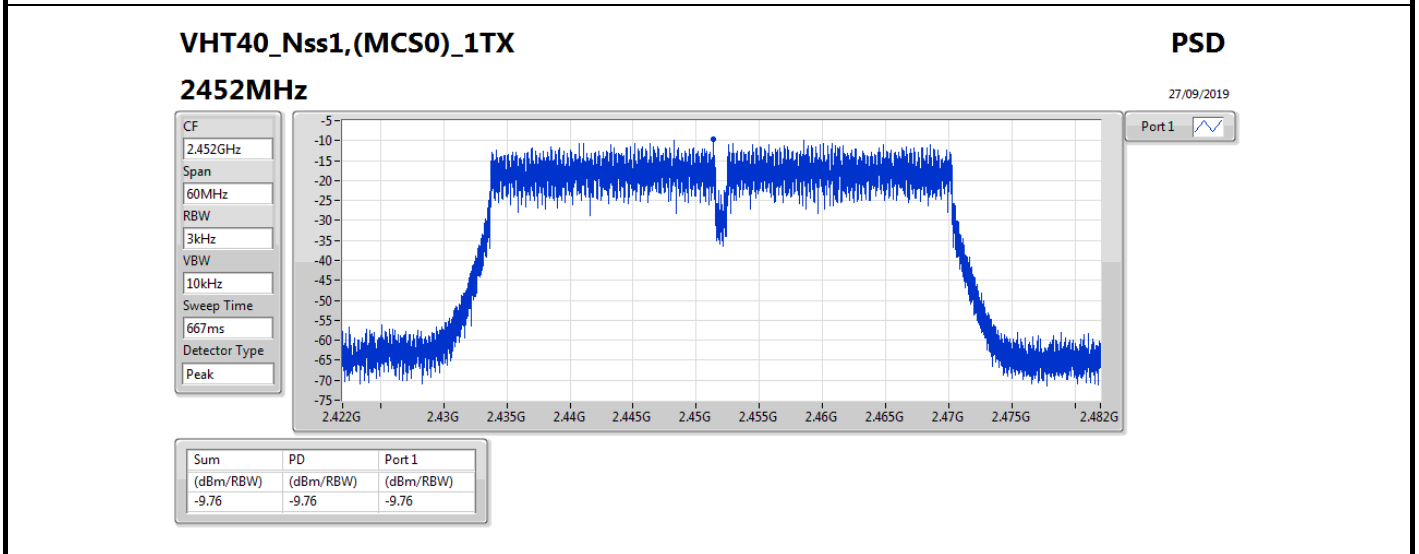
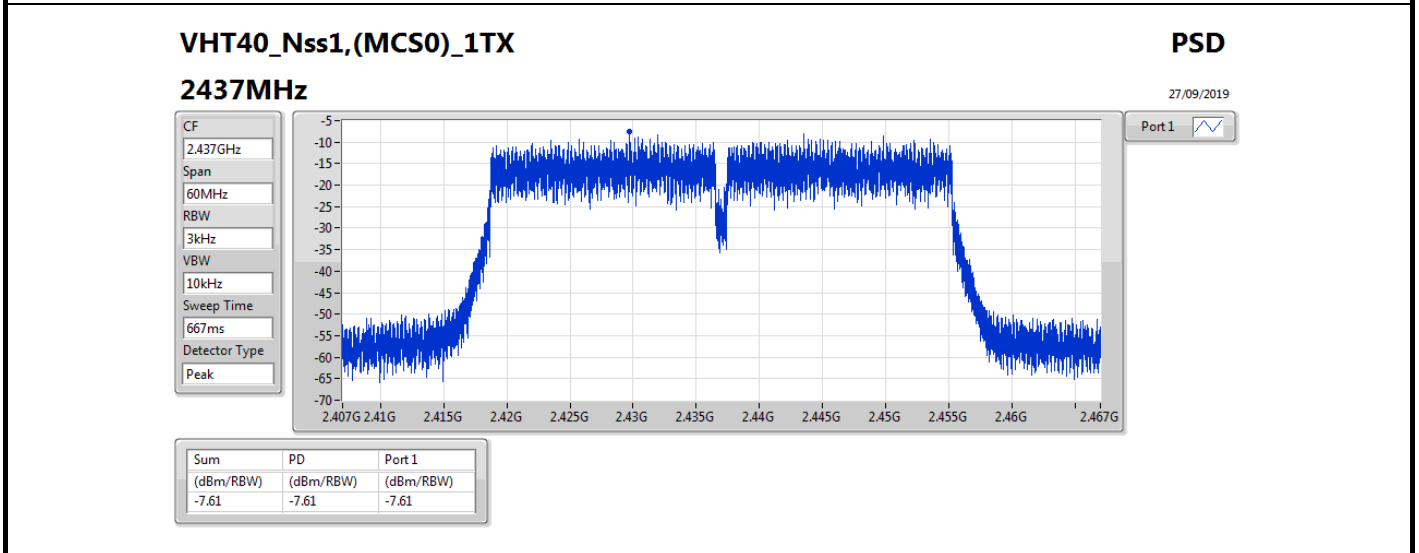
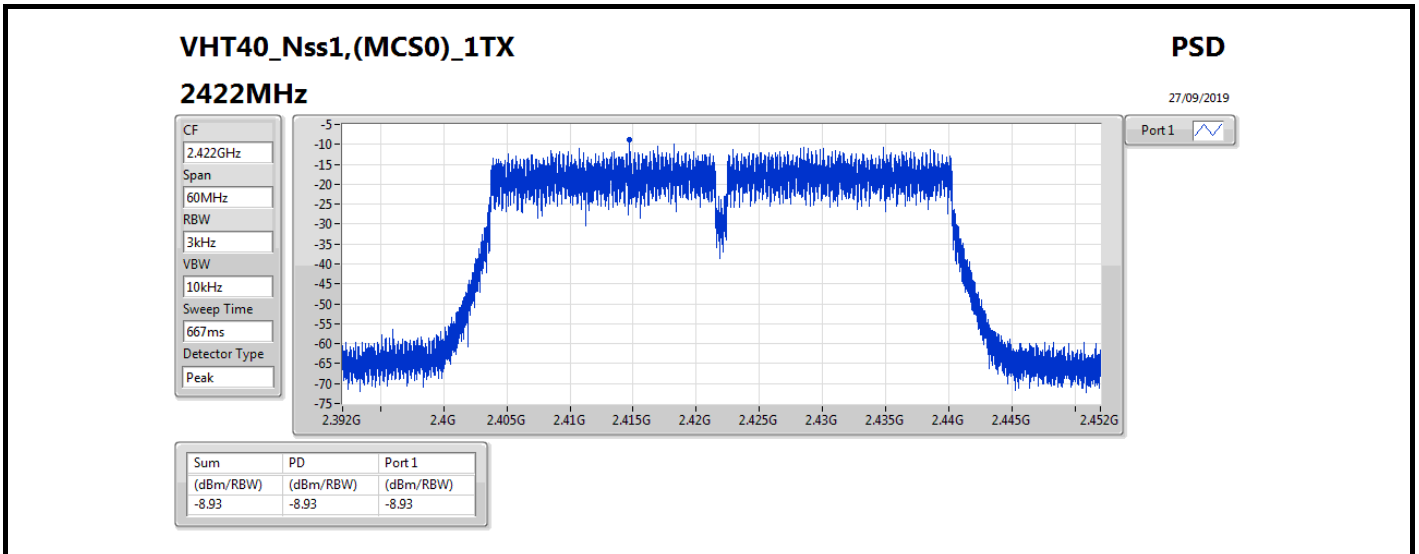
DG = Directional Gain; RBW=3 kHz;

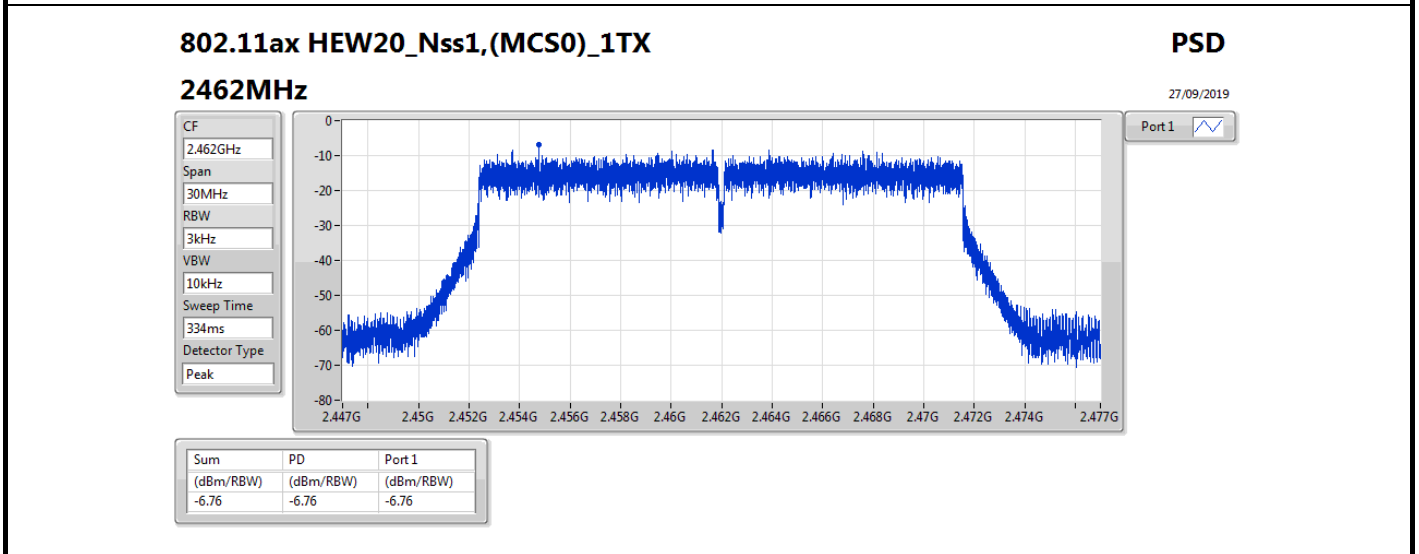
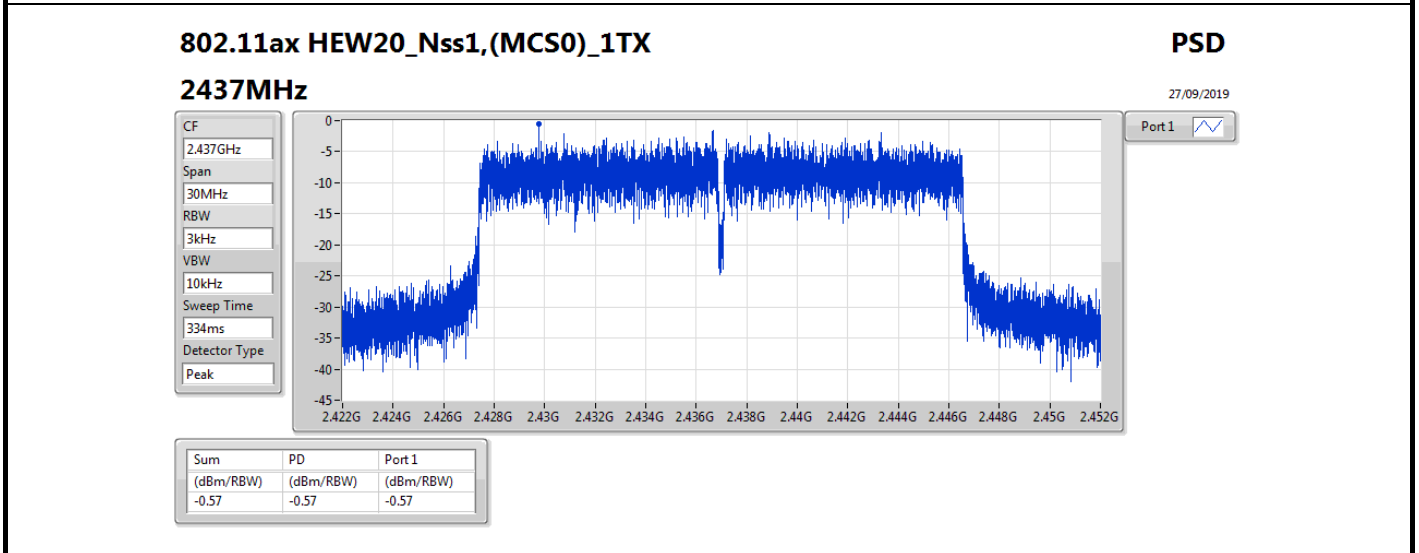
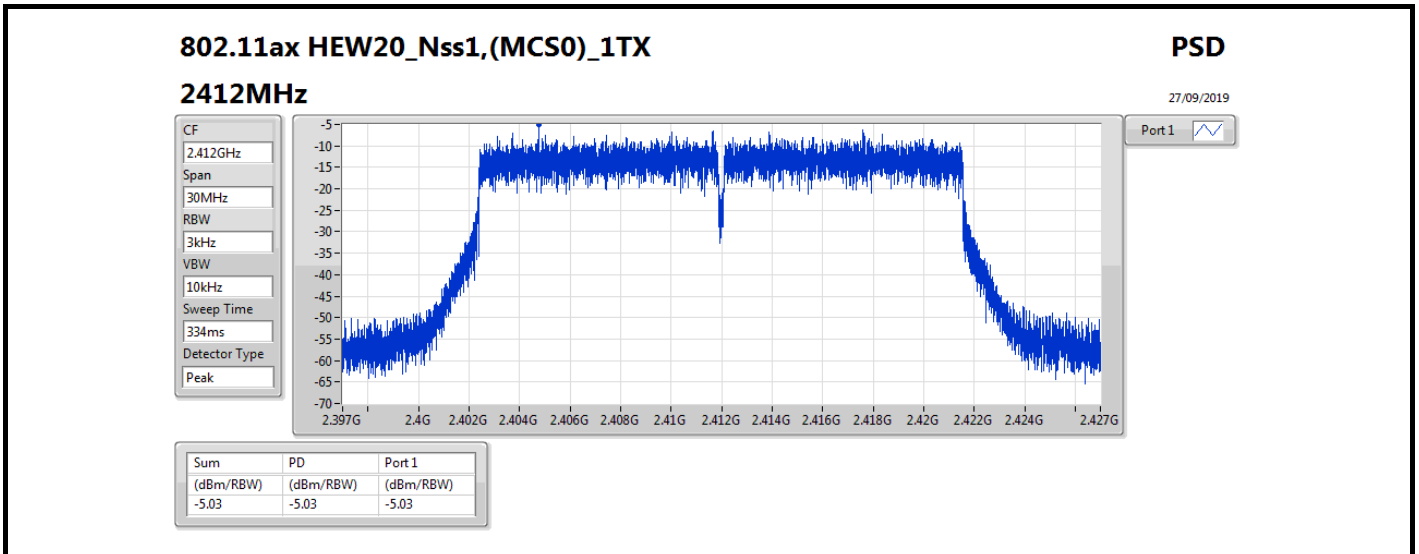
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X power density;

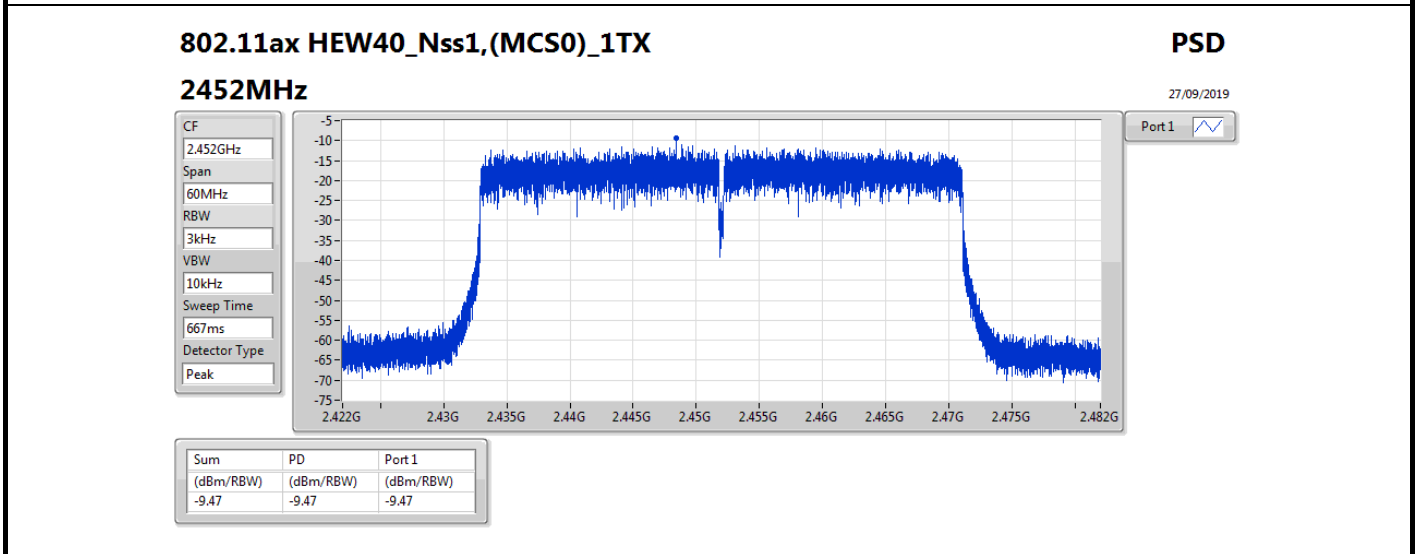
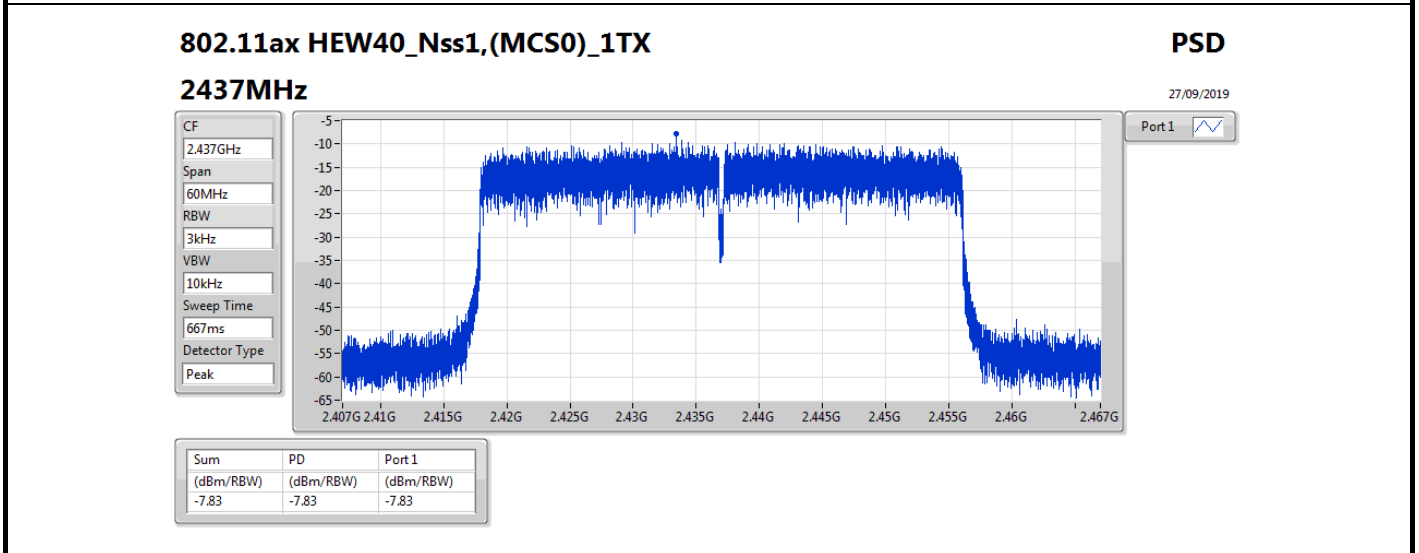
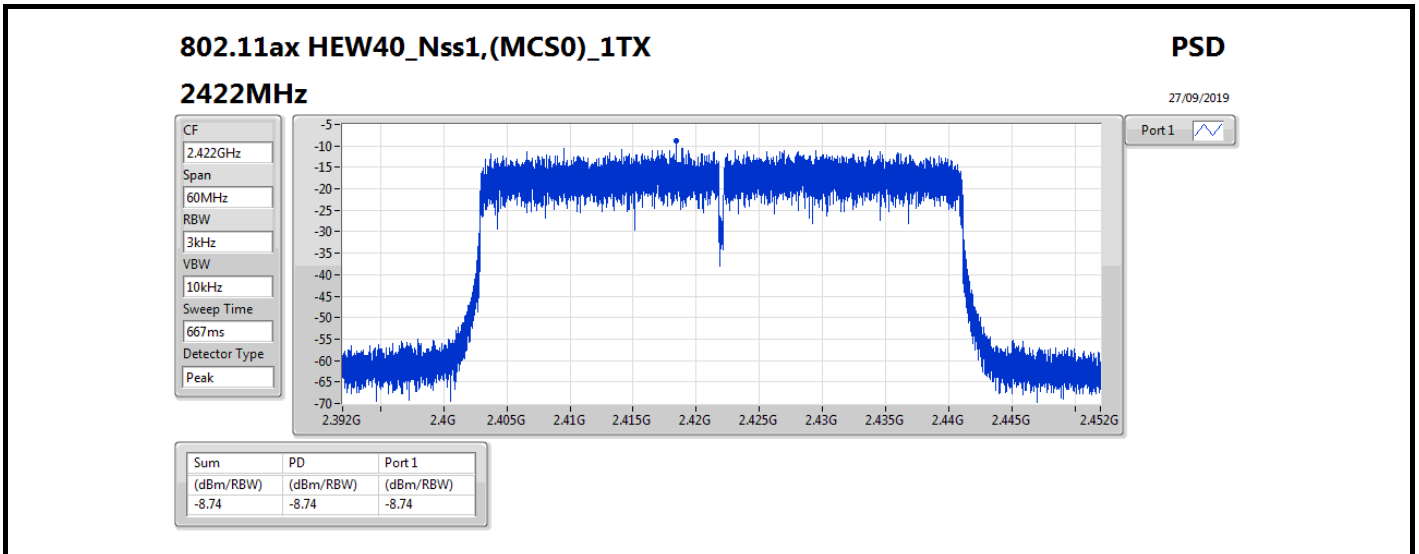














Summary

| Mode | PD (dBm/RBW) |
|--------------------------------|-----------------|
| 2.4-2.4835GHz | - |
| 802.11b_Nss1,(1Mbps)_2TX | 4.96 |
| 802.11g_Nss1,(6Mbps)_2TX | 2.70 |
| VHT20_Nss2,(MCS0)_2TX | -1.22 |
| VHT40_Nss2,(MCS0)_2TX | -6.15 |
| 802.11ax HEW20_Nss2,(MCS0)_2TX | -0.92 |
| 802.11ax HEW40_Nss2,(MCS0)_2TX | -7.47 |

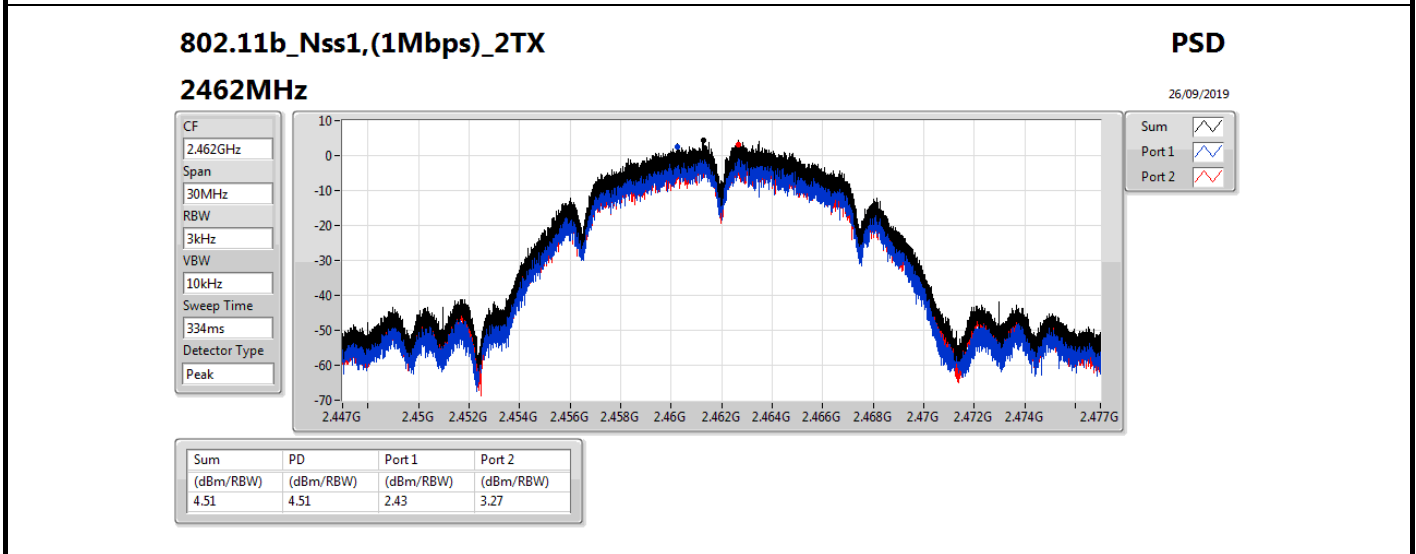
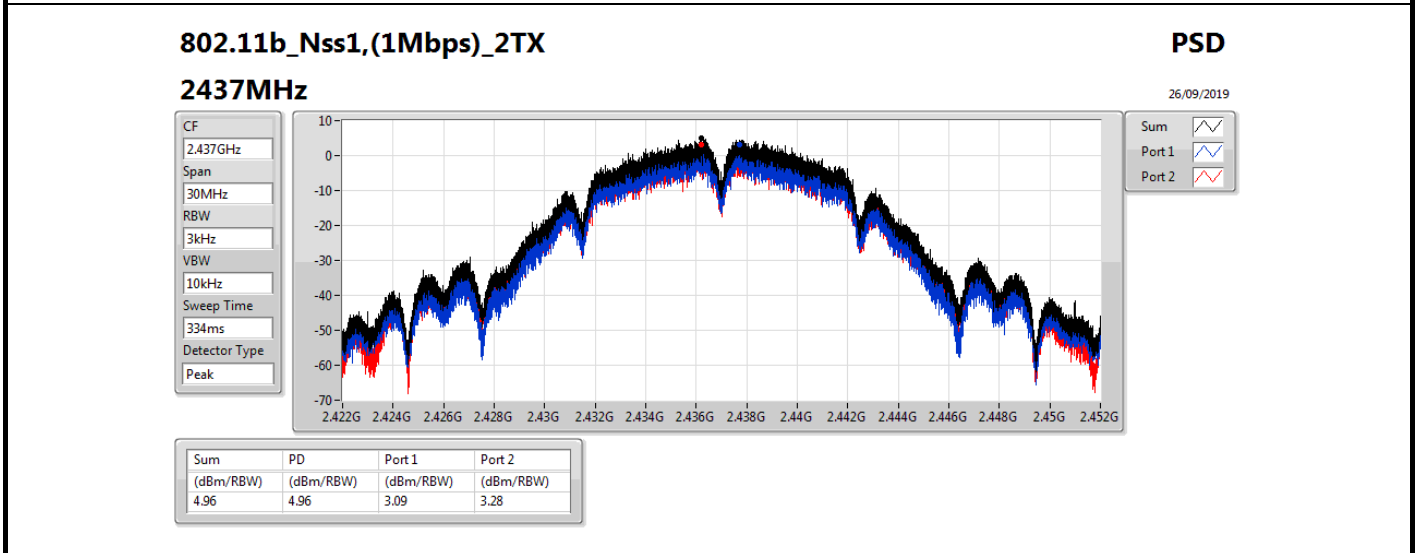
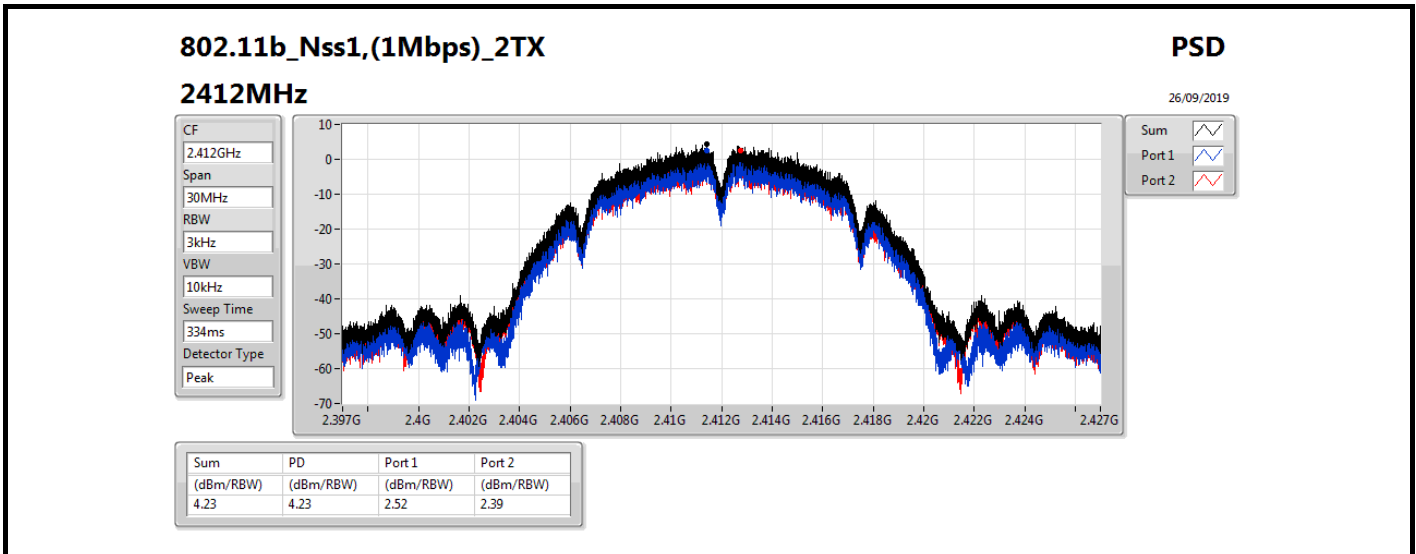
RBW=3 kHz.

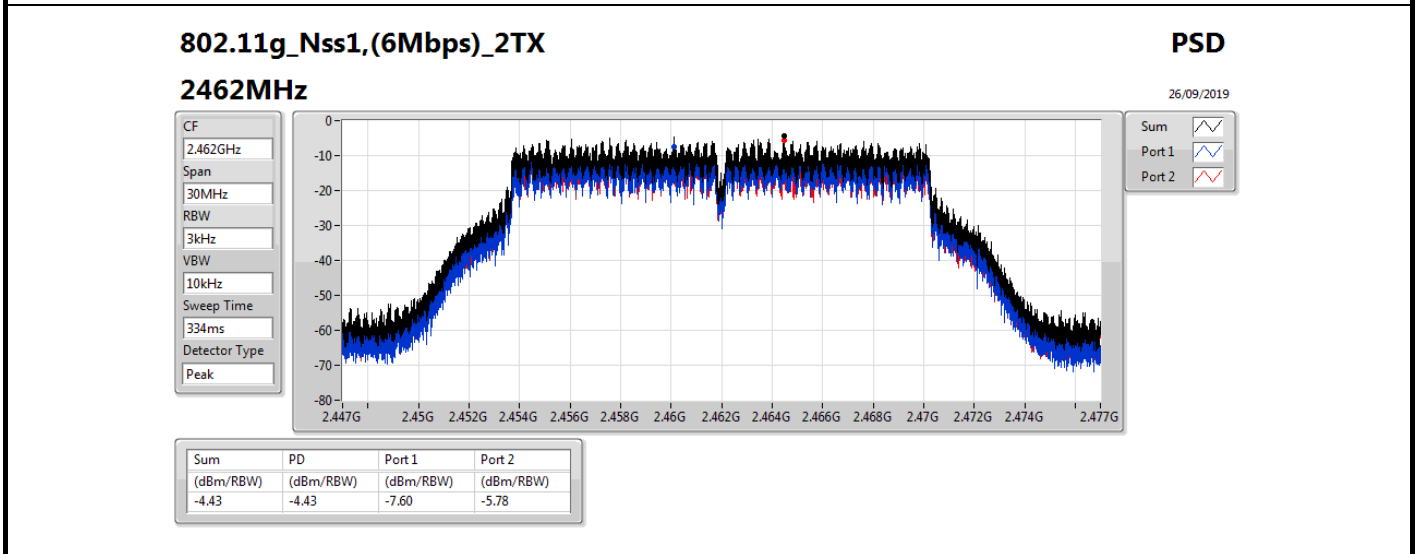
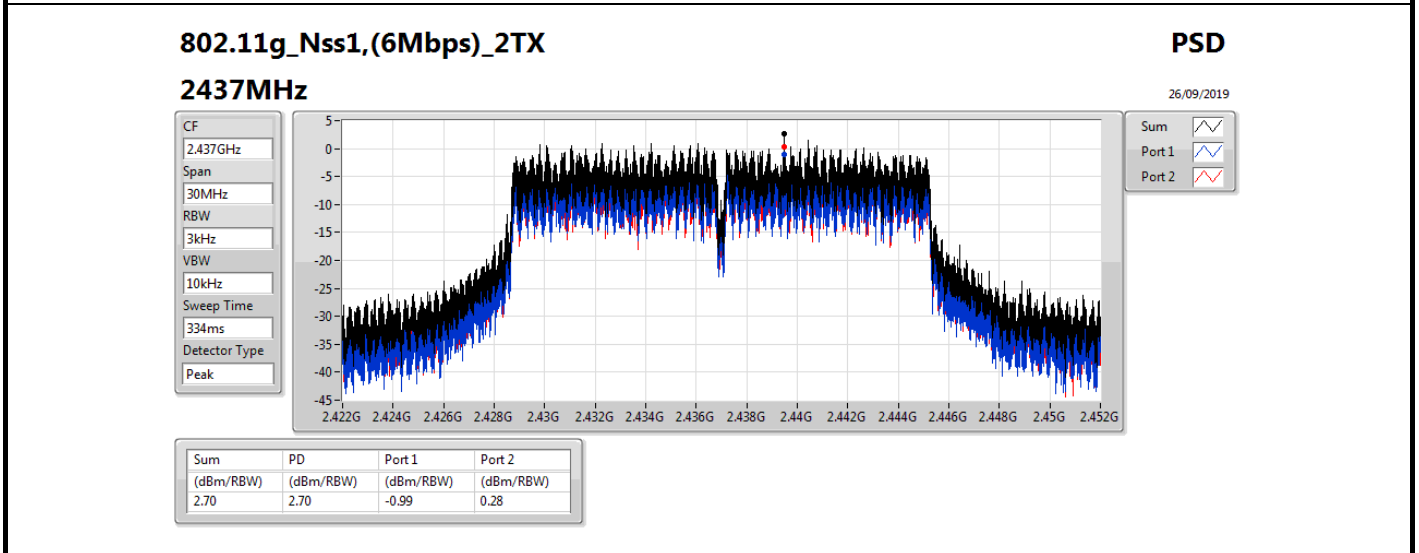
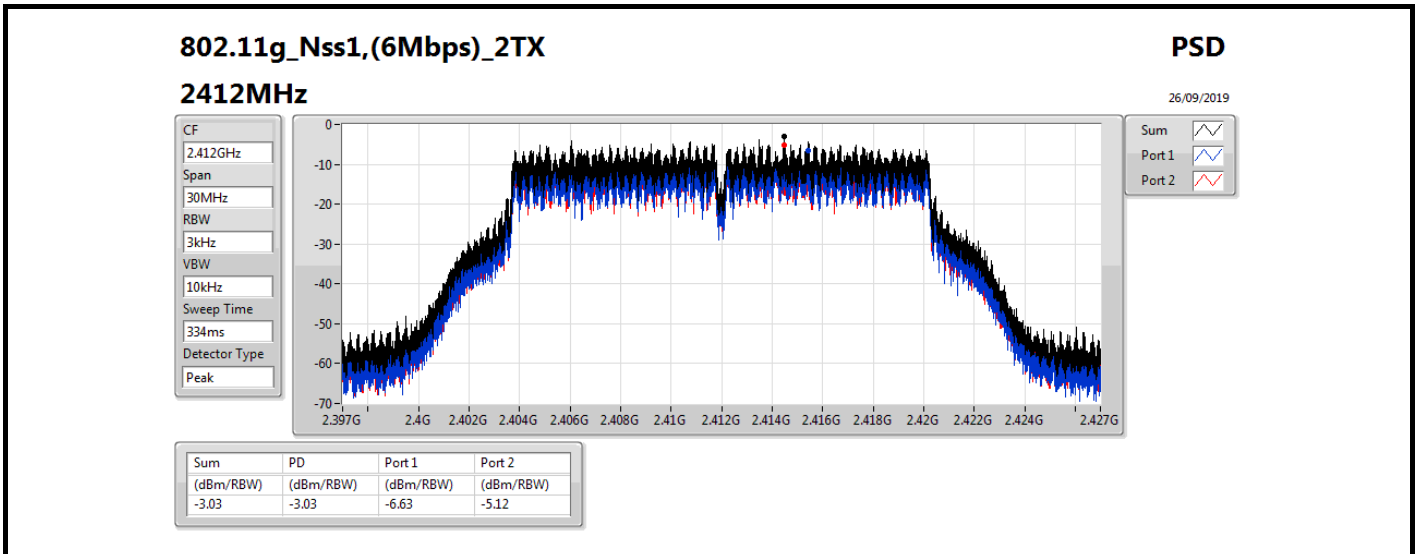
Result

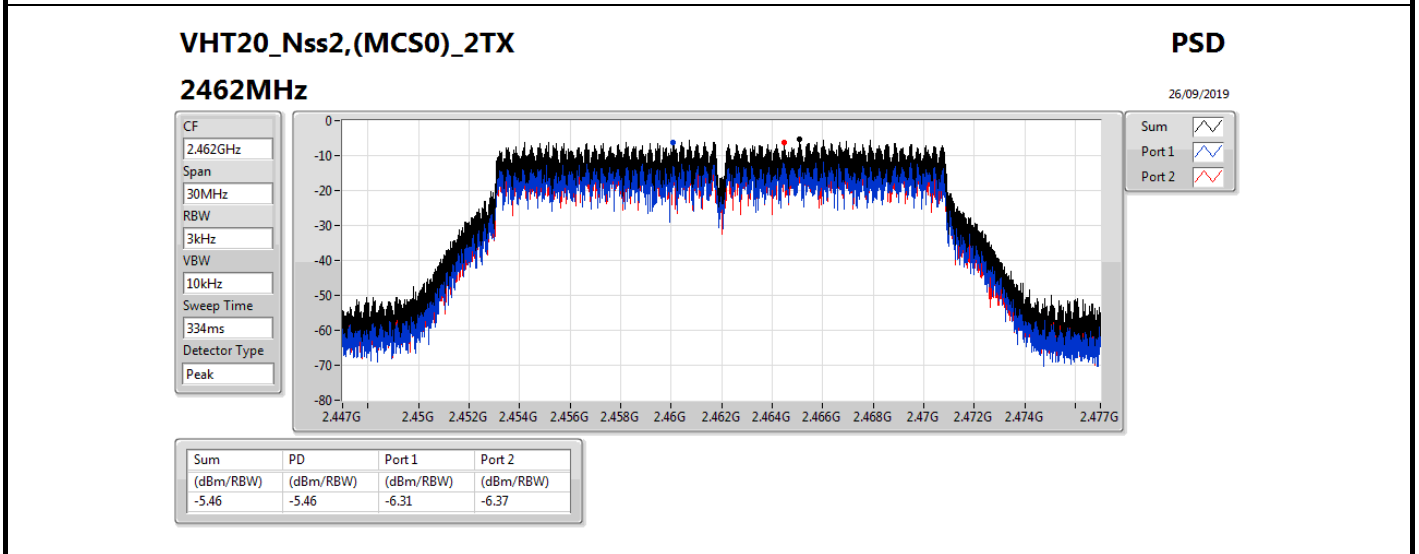
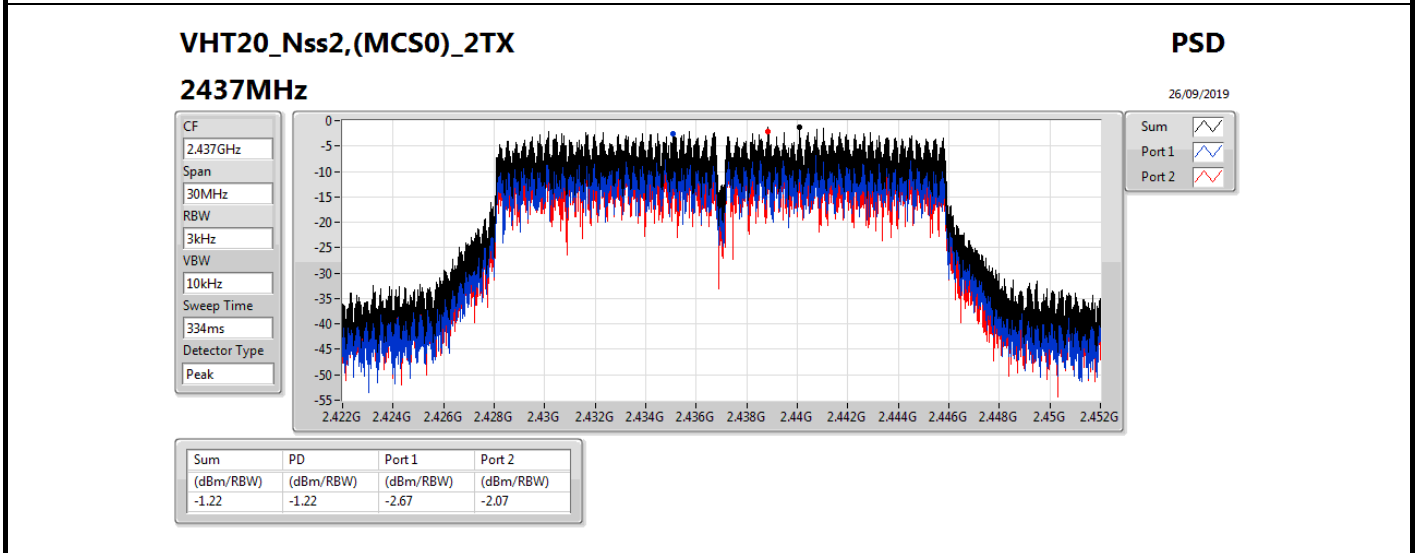
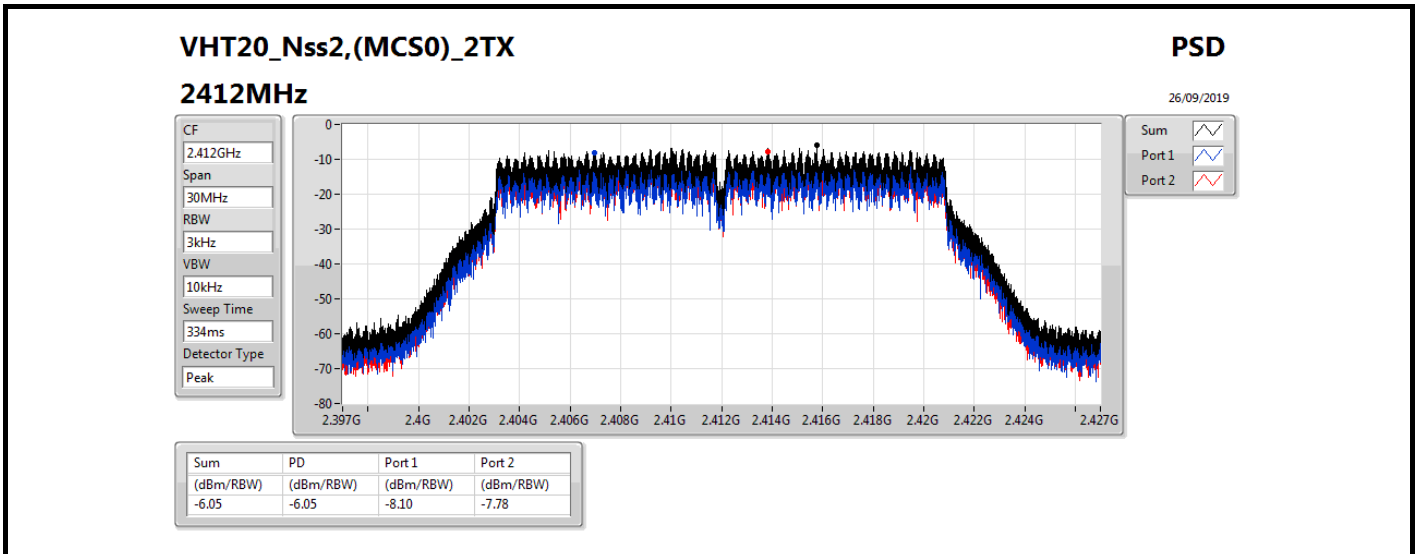
| Mode | Result | DG (dBi) | Port 1 (dBm/RBW) | Port 2 (dBm/RBW) | PD (dBm/RBW) | PD Limit (dBm/RBW) |
|--------------------------------|--------|-------------|---------------------|---------------------|-----------------|-----------------------|
| 802.11b_Nss1,(1Mbps)_2TX | - | - | - | - | - | - |
| 2412MHz | Pass | 7.57 | 2.52 | 2.39 | 4.23 | 6.43 |
| 2437MHz | Pass | 7.57 | 3.09 | 3.28 | 4.96 | 6.43 |
| 2462MHz | Pass | 7.57 | 2.43 | 3.27 | 4.51 | 6.43 |
| 802.11g_Nss1,(6Mbps)_2TX | - | - | - | - | - | - |
| 2412MHz | Pass | 7.57 | -6.63 | -5.12 | -3.03 | 6.43 |
| 2437MHz | Pass | 7.57 | -0.99 | 0.28 | 2.70 | 6.43 |
| 2462MHz | Pass | 7.57 | -7.60 | -5.78 | -4.43 | 6.43 |
| VHT20_Nss2,(MCS0)_2TX | - | - | - | - | - | - |
| 2412MHz | Pass | 4.56 | -8.10 | -7.78 | -6.05 | 8.00 |
| 2437MHz | Pass | 4.56 | -2.67 | -2.07 | -1.22 | 8.00 |
| 2462MHz | Pass | 4.56 | -6.31 | -6.37 | -5.46 | 8.00 |
| VHT40_Nss2,(MCS0)_2TX | - | - | - | - | - | - |
| 2422MHz | Pass | 4.56 | -11.47 | -10.43 | -8.51 | 8.00 |
| 2437MHz | Pass | 4.56 | -8.20 | -8.18 | -6.15 | 8.00 |
| 2452MHz | Pass | 4.56 | -11.11 | -10.76 | -9.84 | 8.00 |
| 802.11ax HEW20_Nss2,(MCS0)_2TX | - | - | - | - | - | - |
| 2412MHz | Pass | 4.56 | -9.16 | -8.69 | -6.43 | 8.00 |
| 2437MHz | Pass | 4.56 | -3.75 | -3.62 | -0.92 | 8.00 |
| 2462MHz | Pass | 4.56 | -7.39 | -7.15 | -4.80 | 8.00 |
| 802.11ax HEW40_Nss2,(MCS0)_2TX | - | - | - | - | - | - |
| 2422MHz | Pass | 4.56 | -10.93 | -11.43 | -8.21 | 8.00 |
| 2437MHz | Pass | 4.56 | -8.67 | -8.55 | -7.47 | 8.00 |
| 2452MHz | Pass | 4.56 | -10.91 | -12.02 | -8.48 | 8.00 |

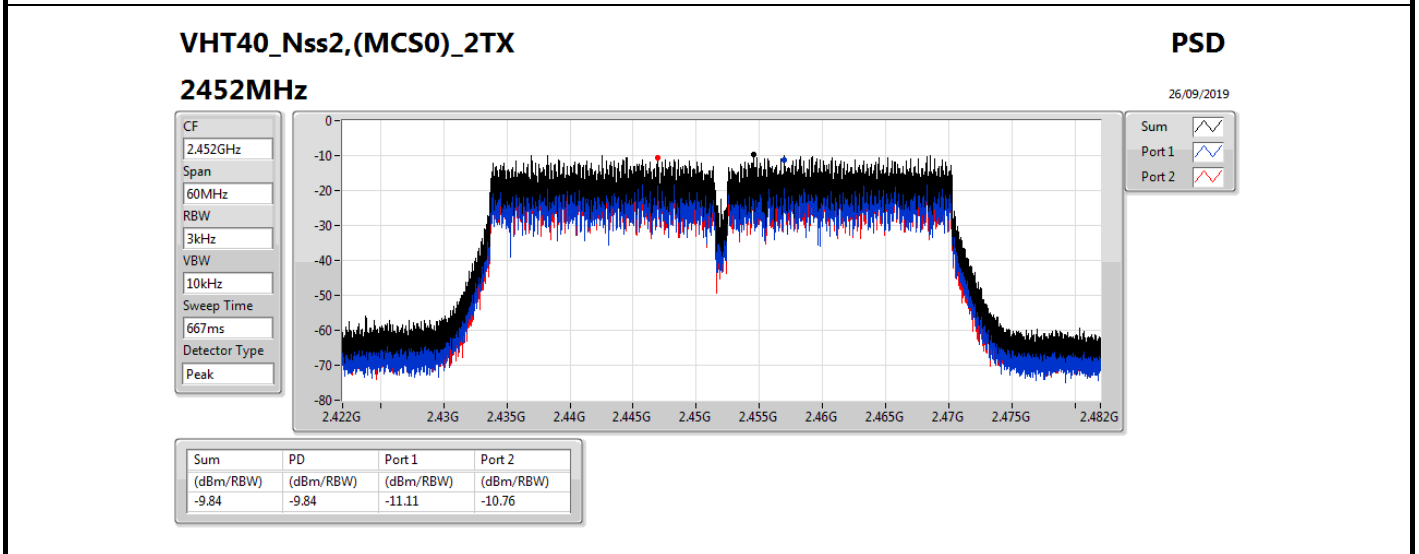
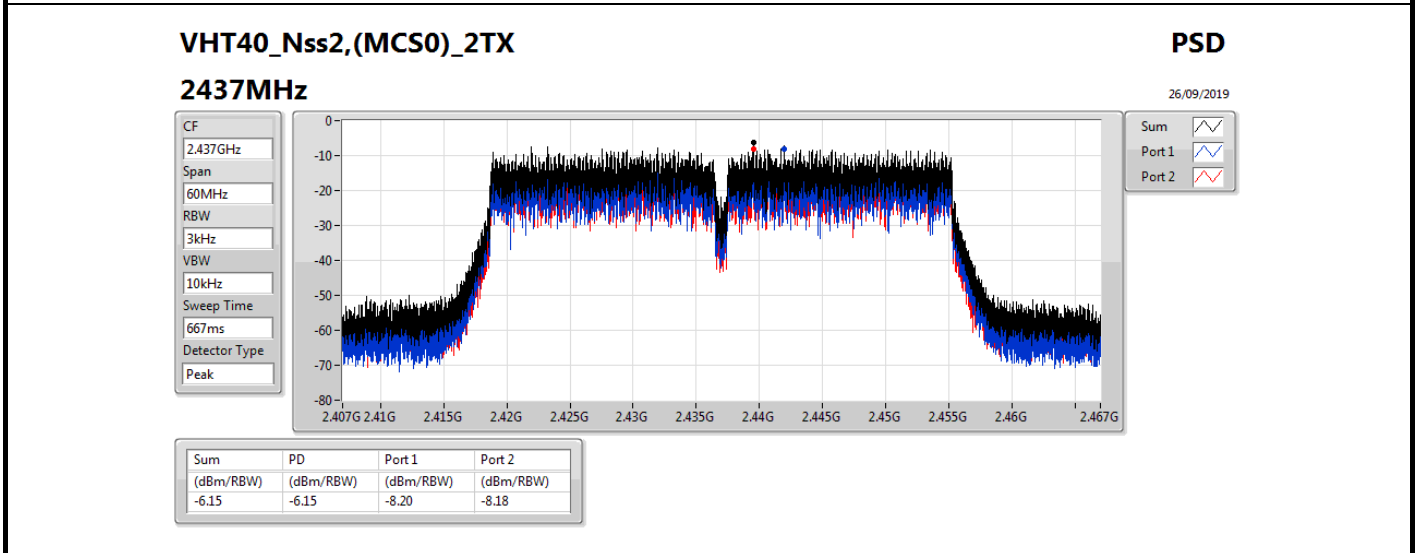
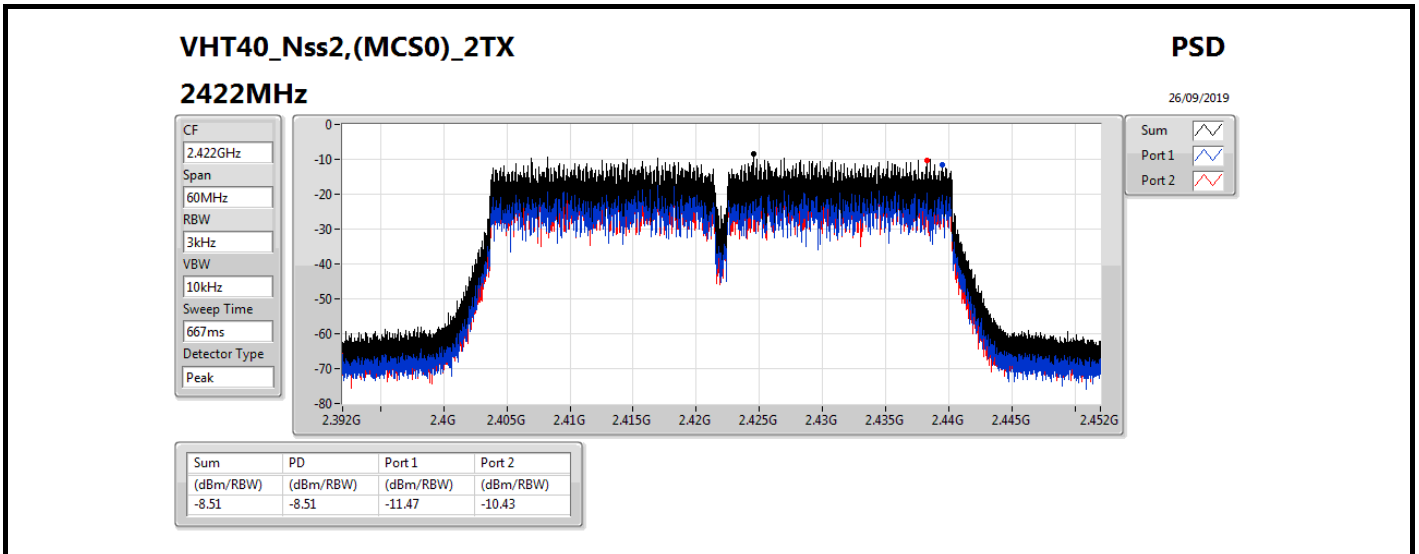
DG = Directional Gain; RBW=3 kHz;

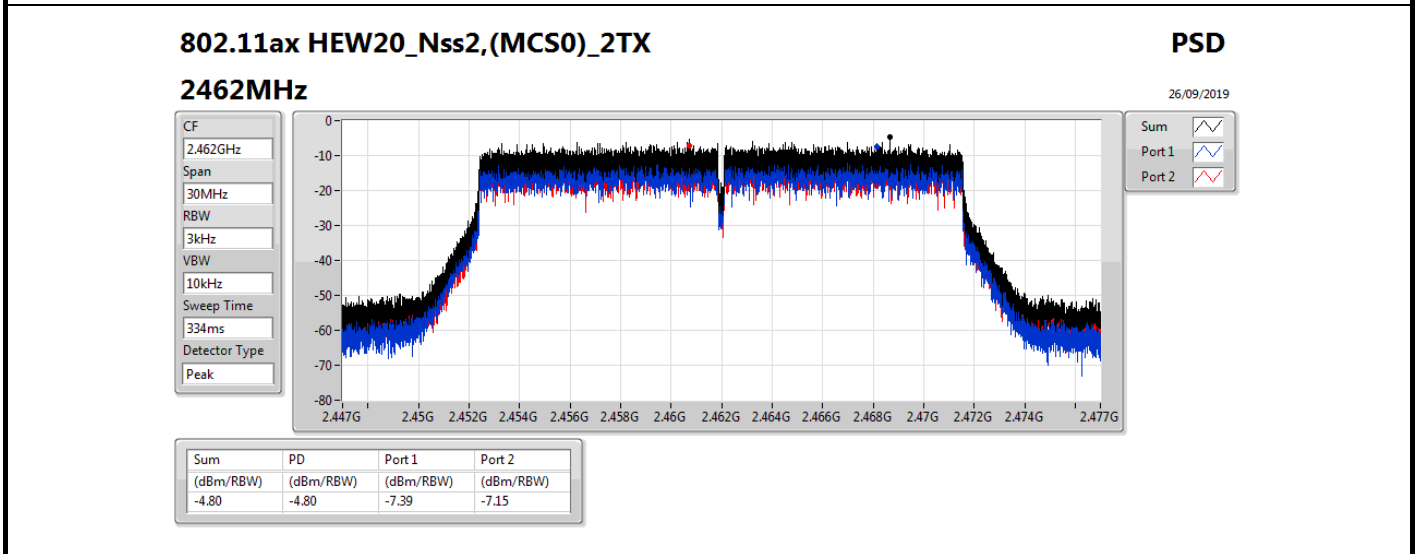
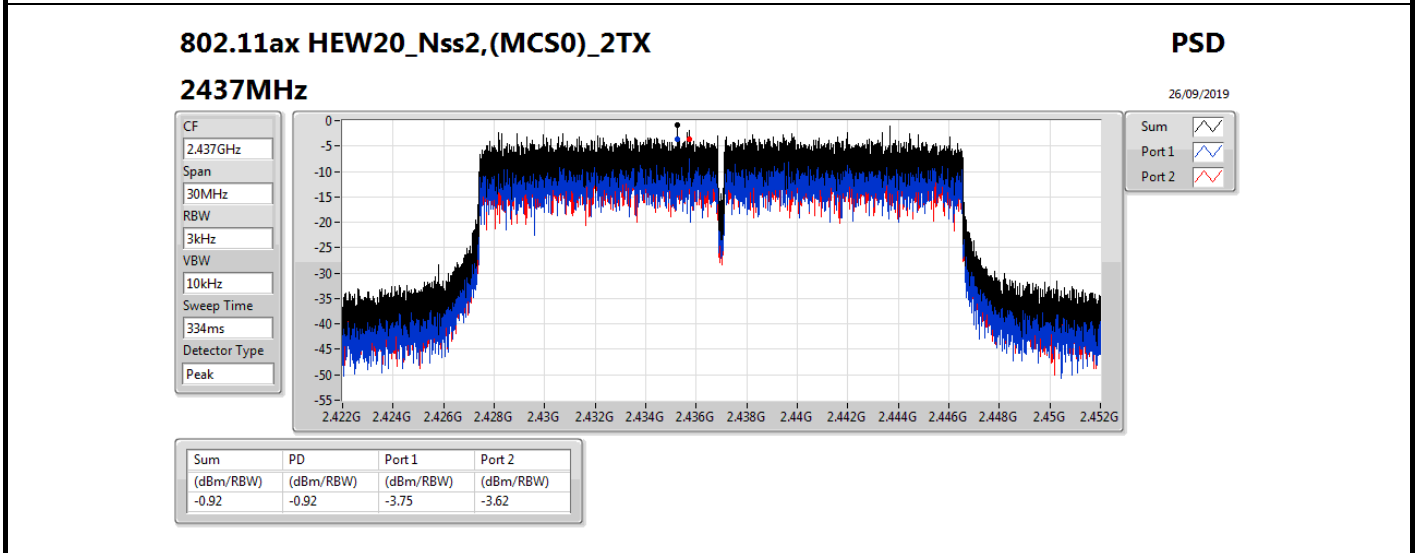
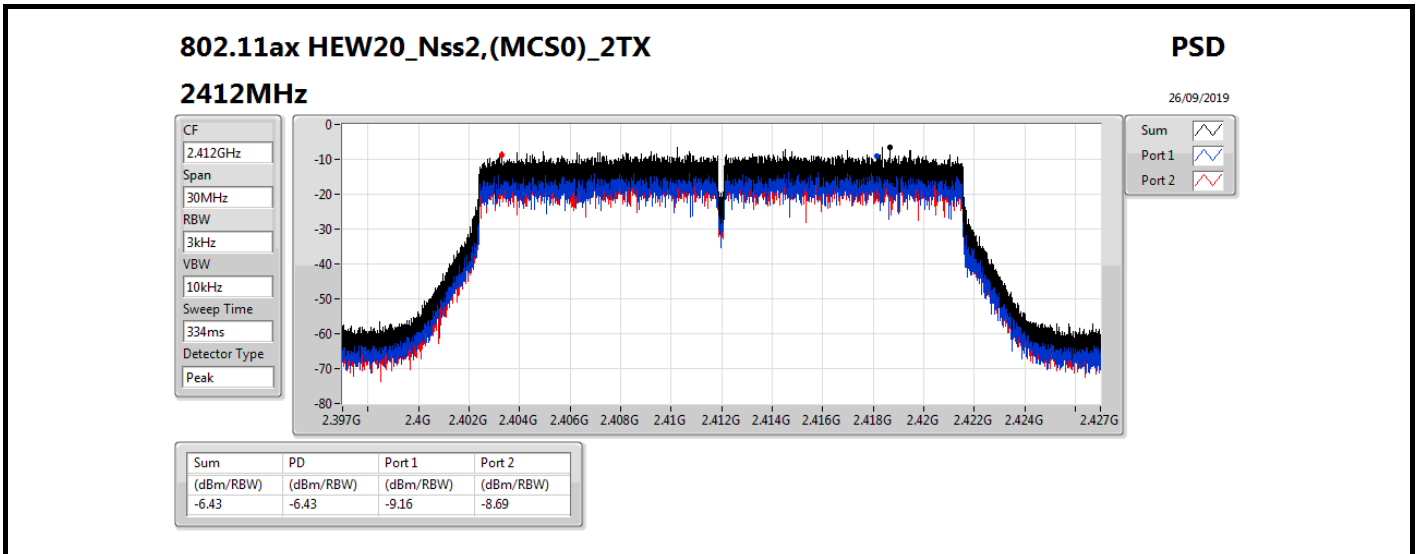
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X power density;

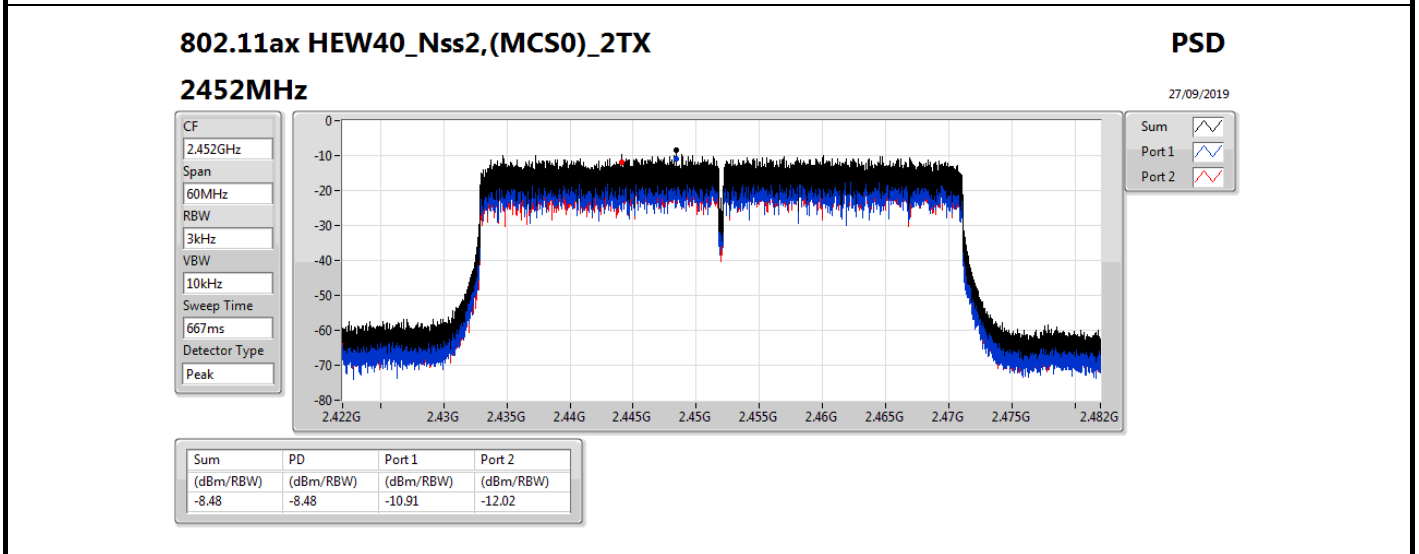
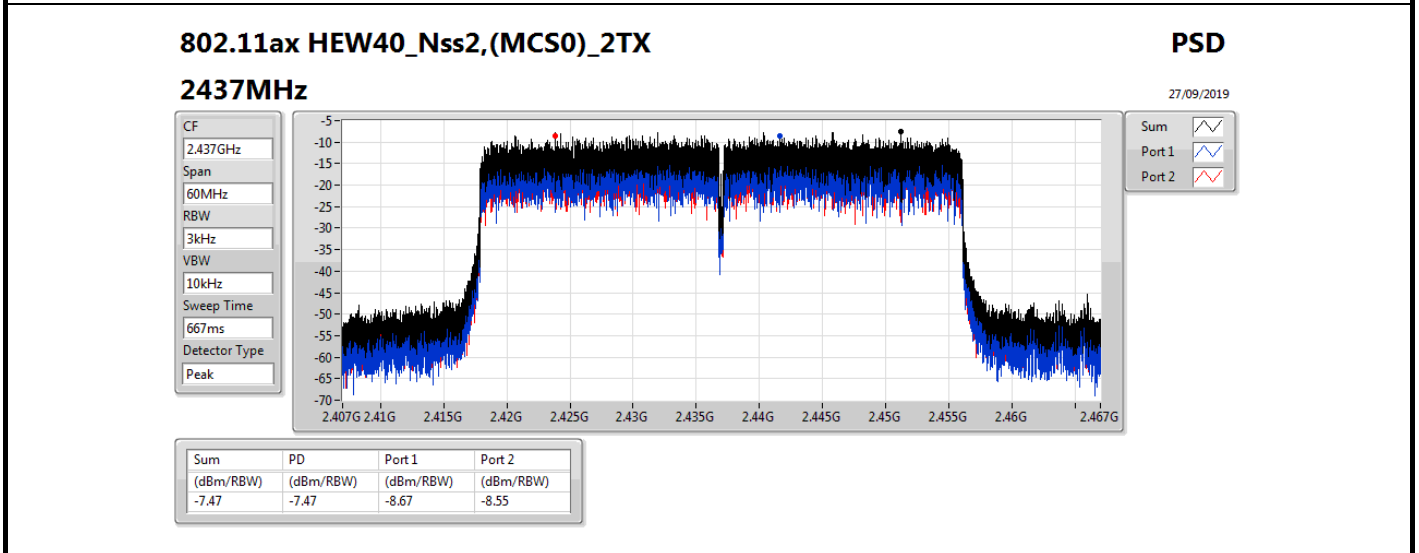
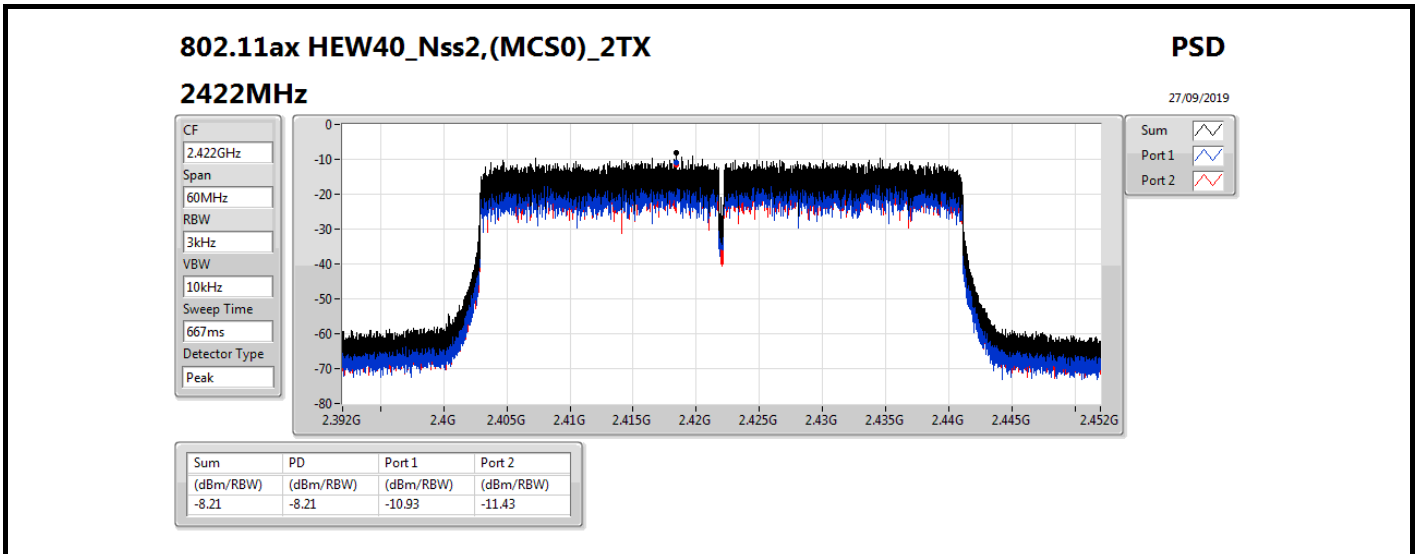














Summary

| Mode | PD (dBm/RBW) |
|-----------------------------------|-----------------|
| 2.4-2.4835GHz | - |
| VHT20-BF_Nss1,(MCS0)_2TX | 0.72 |
| VHT40-BF_Nss1,(MCS0)_2TX | -5.12 |
| 802.11ax HEW20-BF_Nss1,(MCS0)_2TX | -0.11 |
| 802.11ax HEW40-BF_Nss1,(MCS0)_2TX | -5.47 |

RBW=3 kHz.

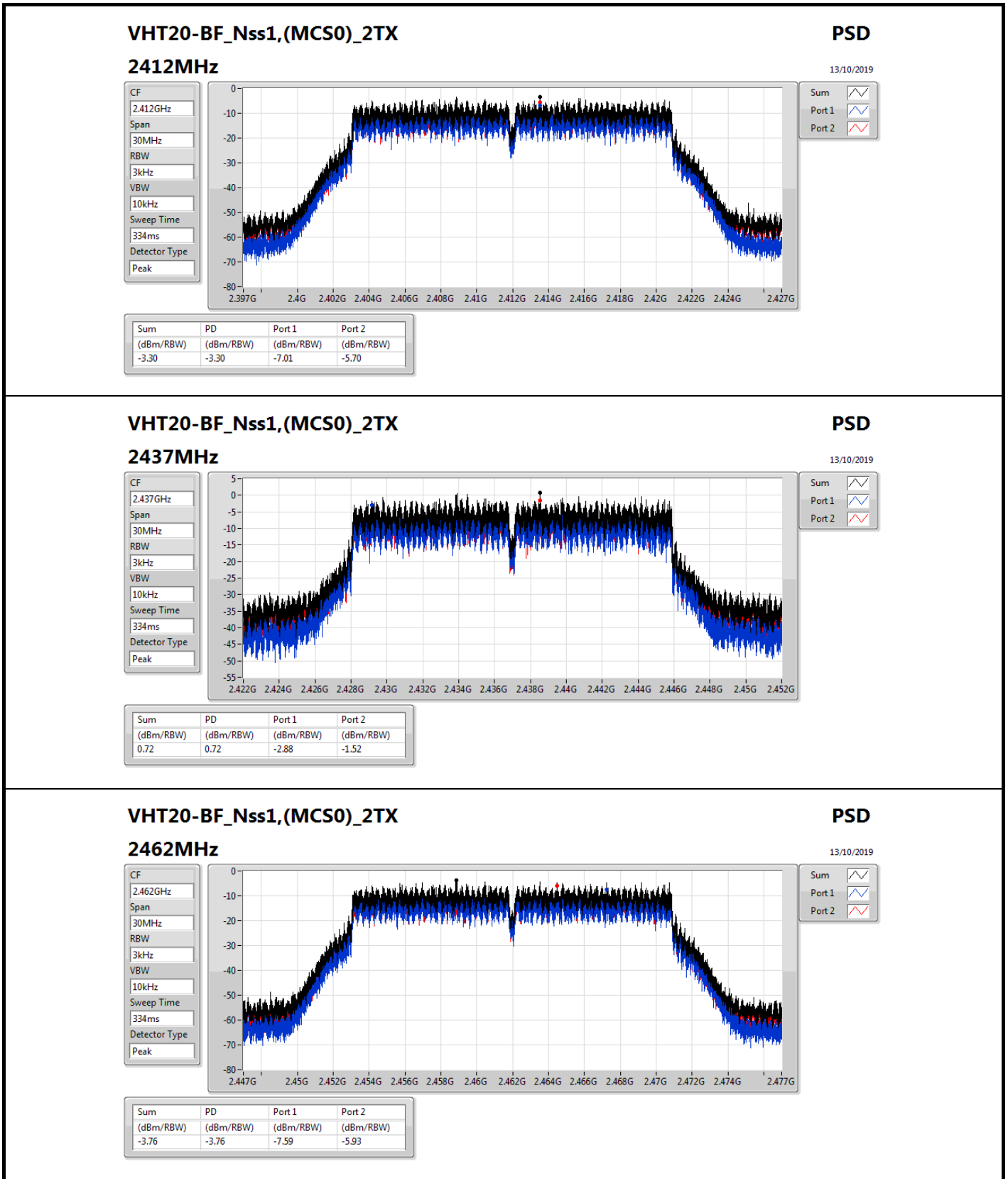


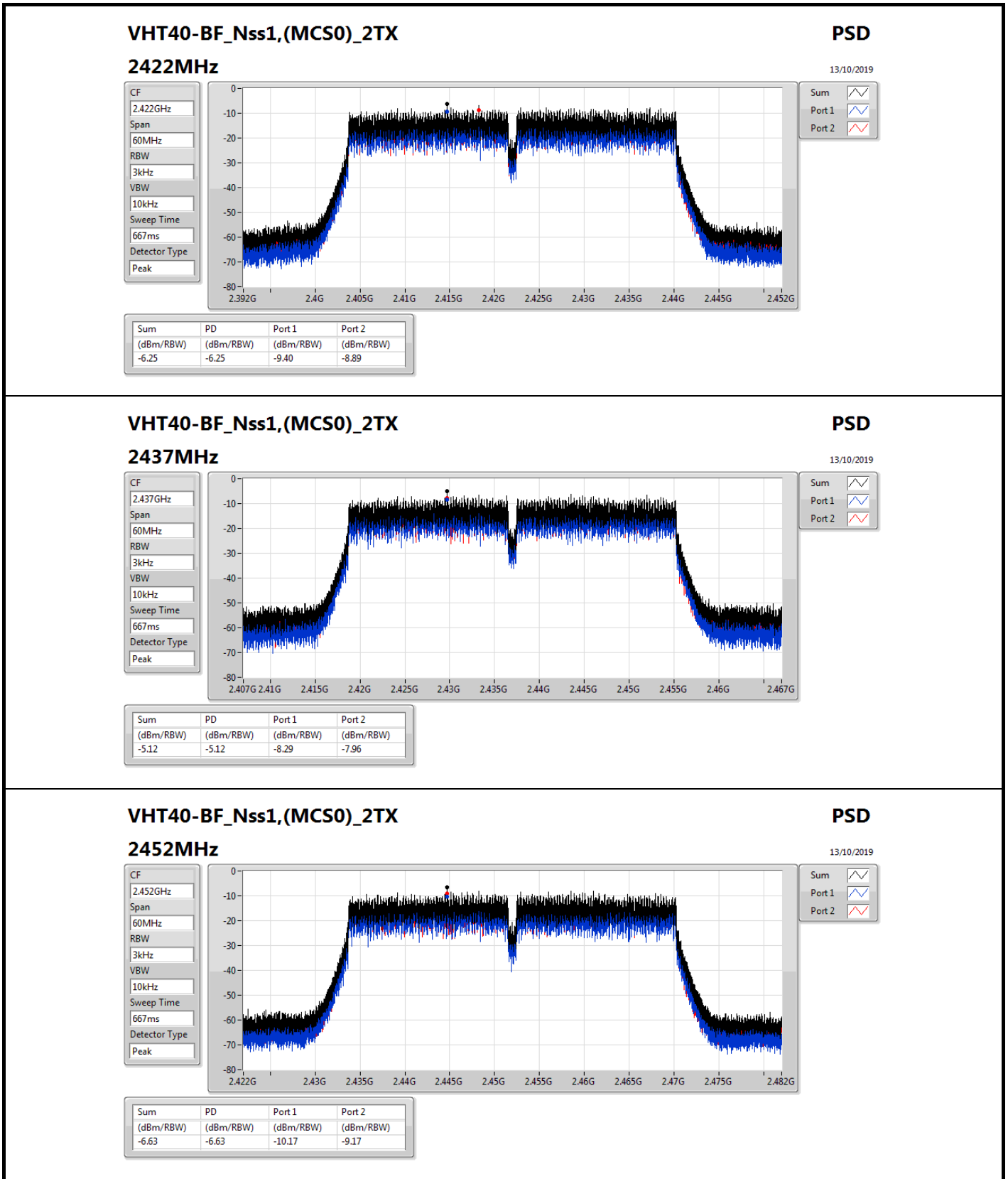
Result

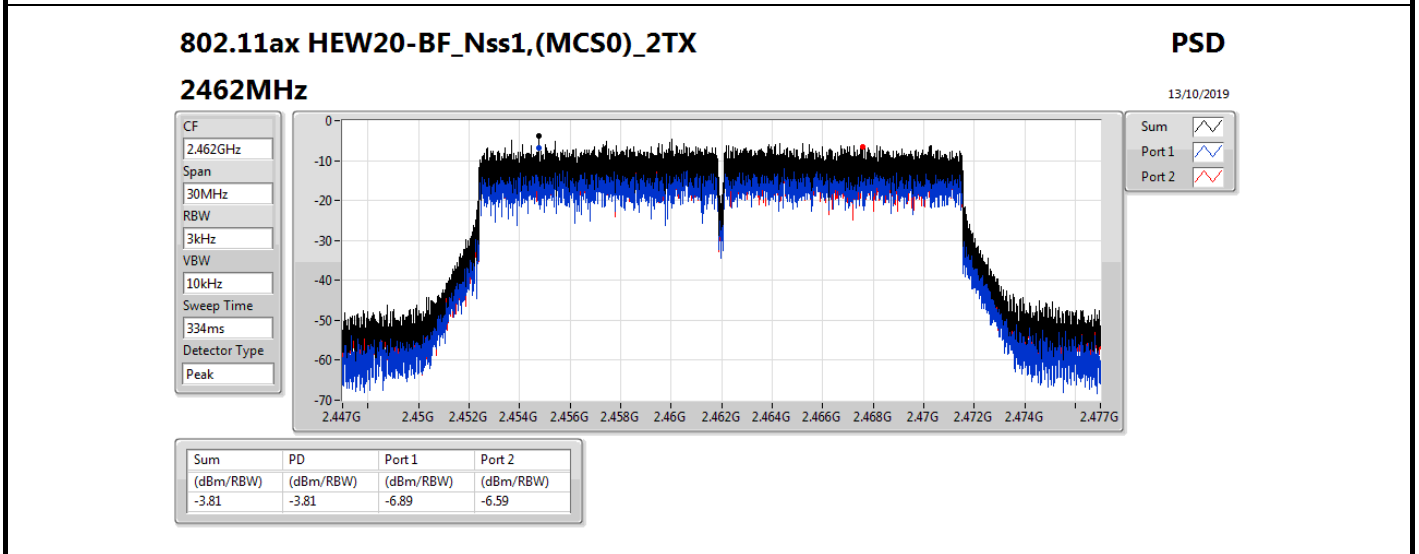
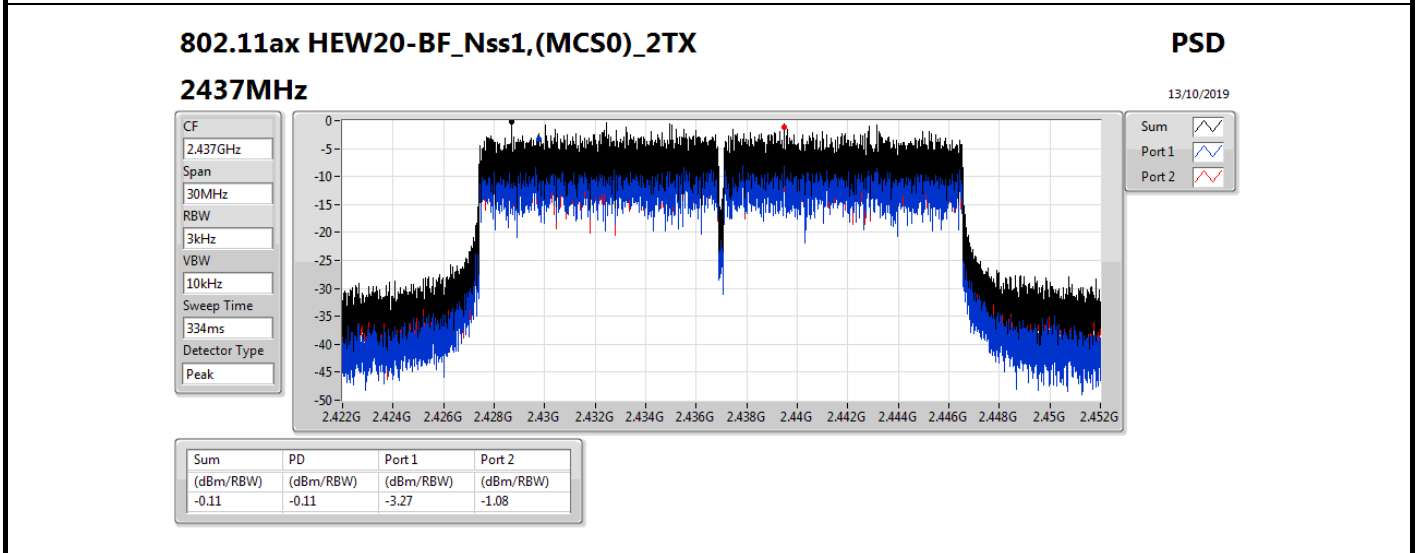
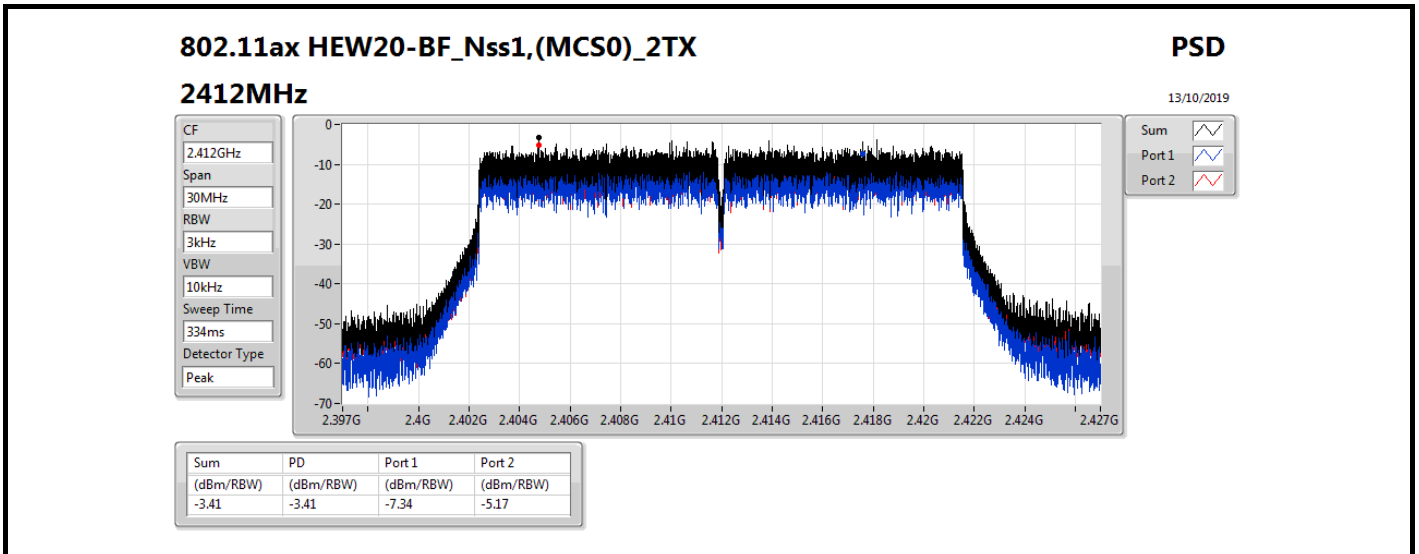
| Mode | Result | DG (dBi) | Port 1 (dBm/RBW) | Port 2 (dBm/RBW) | PD (dBm/RBW) | PD Limit (dBm/RBW) |
|-----------------------------------|--------|-------------|---------------------|---------------------|-----------------|-----------------------|
| VHT20-BF_Nss1,(MCS0)_2TX | - | - | - | - | - | - |
| 2412MHz | Pass | 7.57 | -7.01 | -5.70 | -3.30 | 6.43 |
| 2437MHz | Pass | 7.57 | -2.88 | -1.52 | 0.72 | 6.43 |
| 2462MHz | Pass | 7.57 | -7.59 | -5.93 | -3.76 | 6.43 |
| VHT40-BF_Nss1,(MCS0)_2TX | - | - | - | - | - | - |
| 2422MHz | Pass | 7.57 | -9.40 | -8.89 | -6.25 | 6.43 |
| 2437MHz | Pass | 7.57 | -8.29 | -7.96 | -5.12 | 6.43 |
| 2452MHz | Pass | 7.57 | -10.17 | -9.17 | -6.63 | 6.43 |
| 802.11ax HEW20-BF_Nss1,(MCS0)_2TX | - | - | - | - | - | - |
| 2412MHz | Pass | 7.57 | -7.34 | -5.17 | -3.41 | 6.43 |
| 2437MHz | Pass | 7.57 | -3.27 | -1.08 | -0.11 | 6.43 |
| 2462MHz | Pass | 7.57 | -6.89 | -6.59 | -3.81 | 6.43 |
| 802.11ax HEW40-BF_Nss1,(MCS0)_2TX | - | - | - | - | - | - |
| 2422MHz | Pass | 7.57 | -10.64 | -9.30 | -6.91 | 6.43 |
| 2437MHz | Pass | 7.57 | -9.29 | -7.79 | -5.47 | 6.43 |
| 2452MHz | Pass | 7.57 | -11.04 | -9.58 | -7.24 | 6.43 |

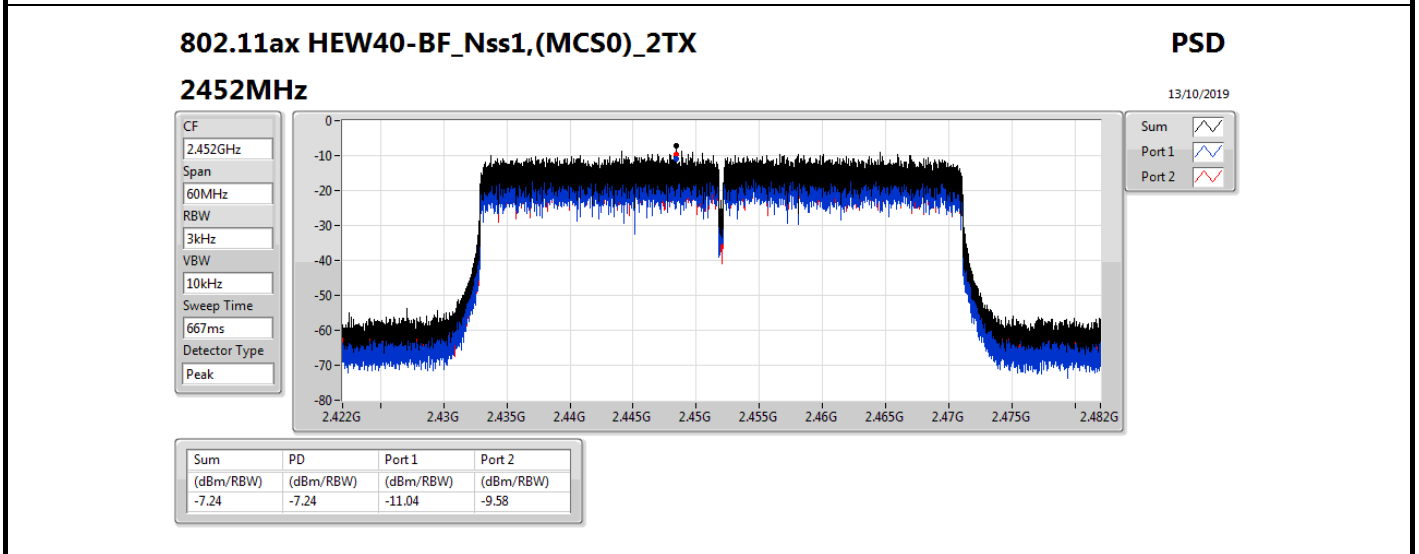
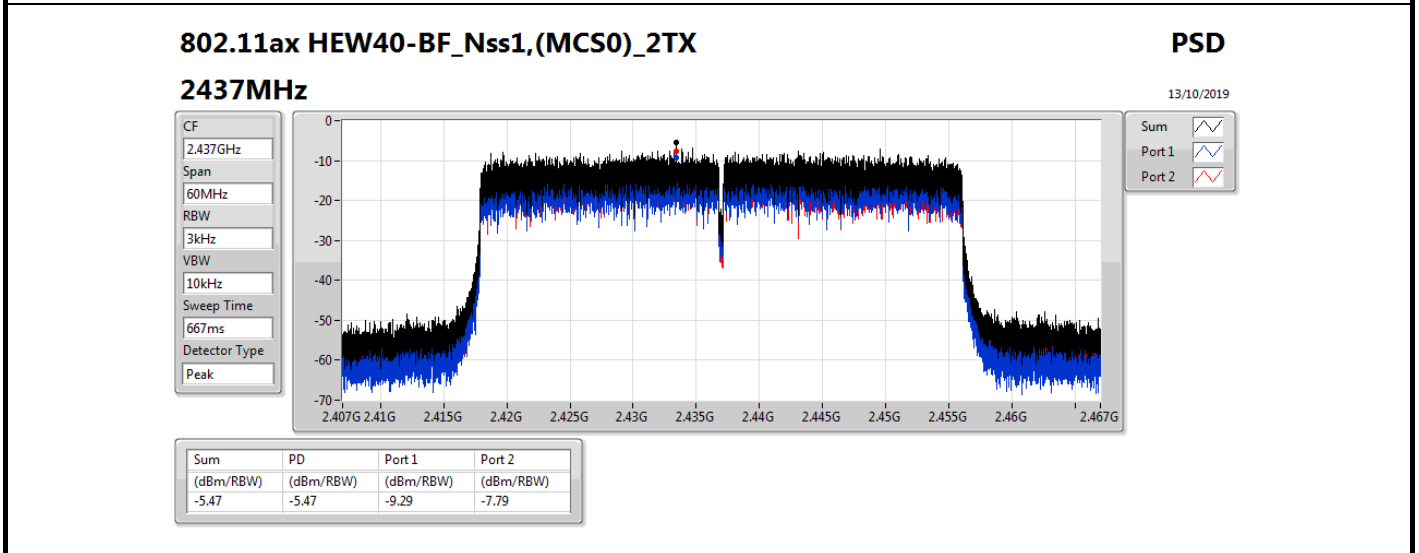
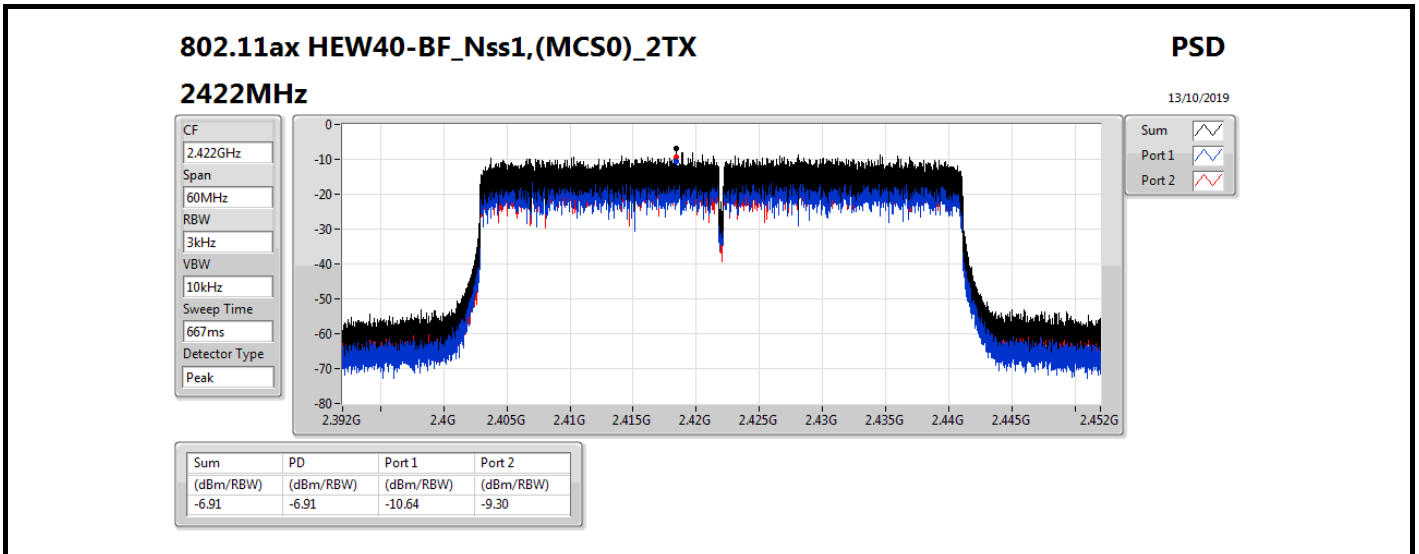
DG = Directional Gain; RBW=3 kHz;

PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X power density;











Summary

| Mode | PD (dBm/RBW) |
|--------------------------------|-----------------|
| 2.4-2.4835GHz | - |
| 802.11b_Nss1,(1Mbps)_1TX | 2.05 |
| 802.11g_Nss1,(6Mbps)_1TX | -2.45 |
| VHT20_Nss1,(MCS0)_1TX | -3.64 |
| VHT40_Nss1,(MCS0)_1TX | -9.01 |
| 802.11ax HEW20_Nss1,(MCS0)_1TX | -2.88 |
| 802.11ax HEW40_Nss1,(MCS0)_1TX | -9.91 |

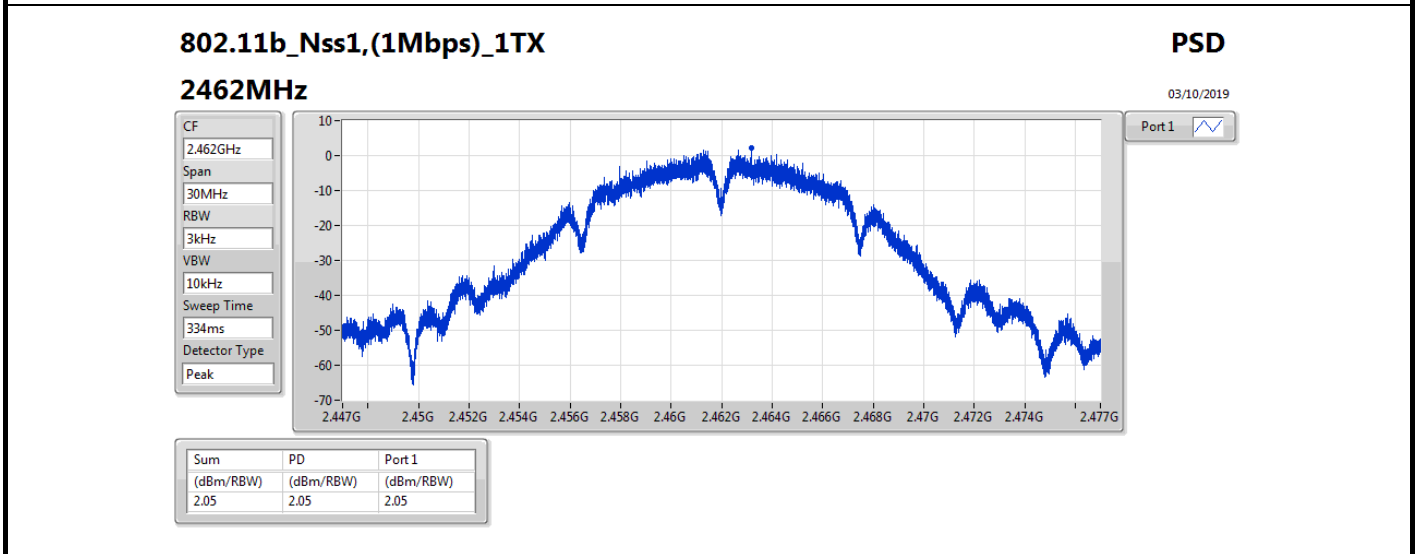
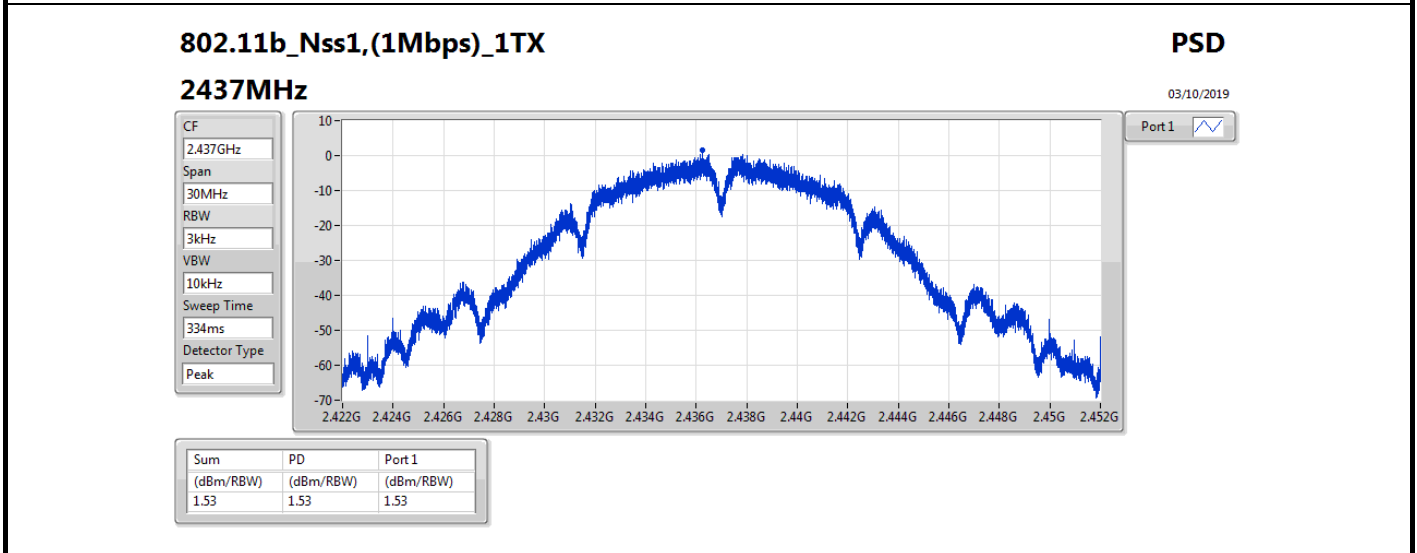
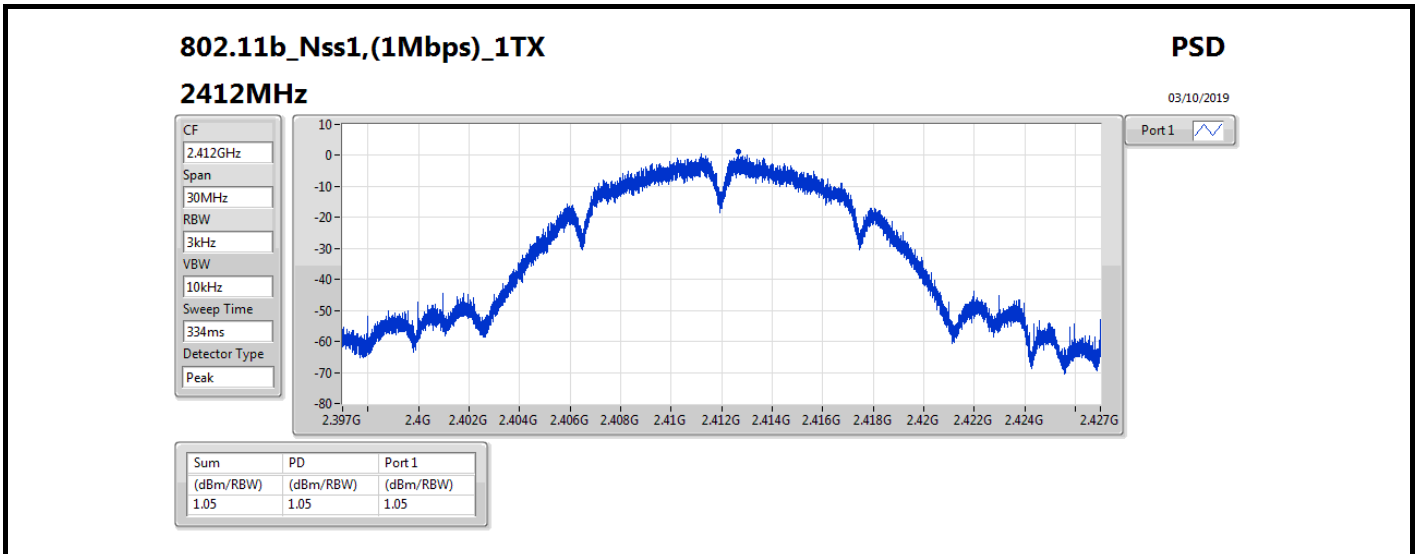
RBW=3 kHz.

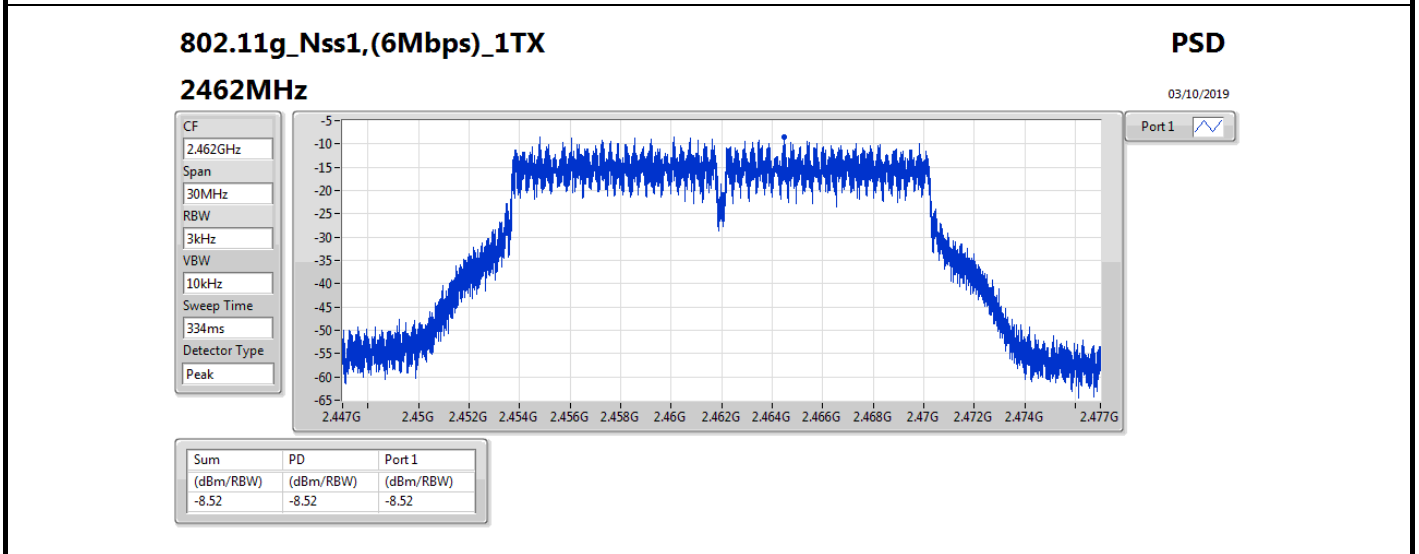
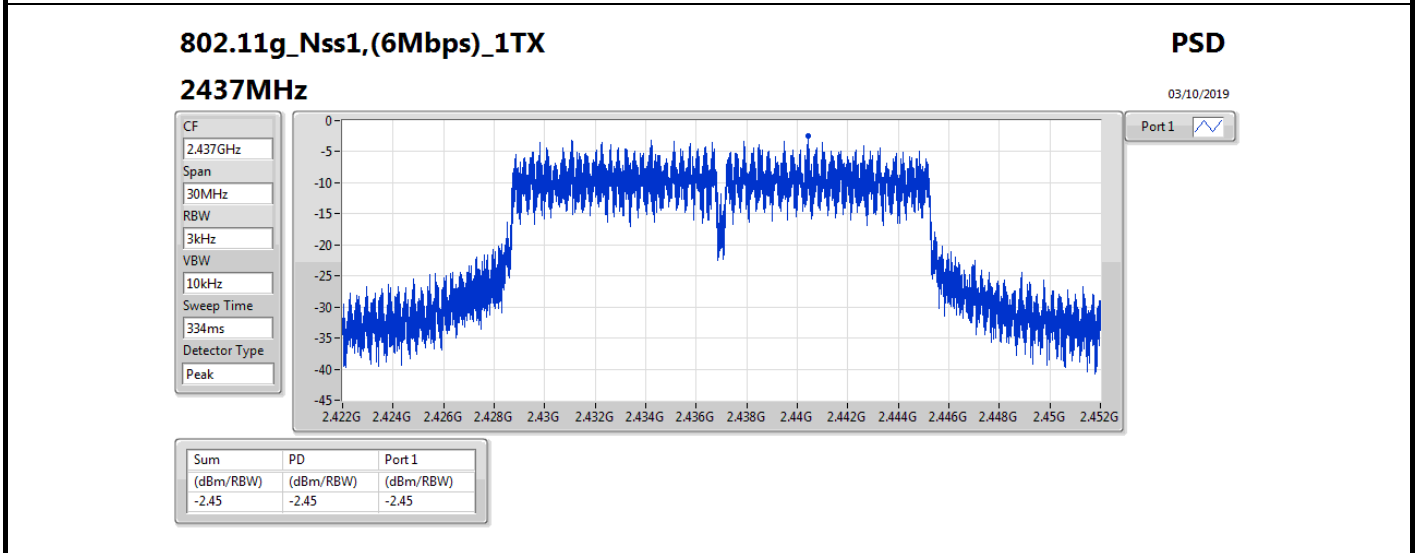
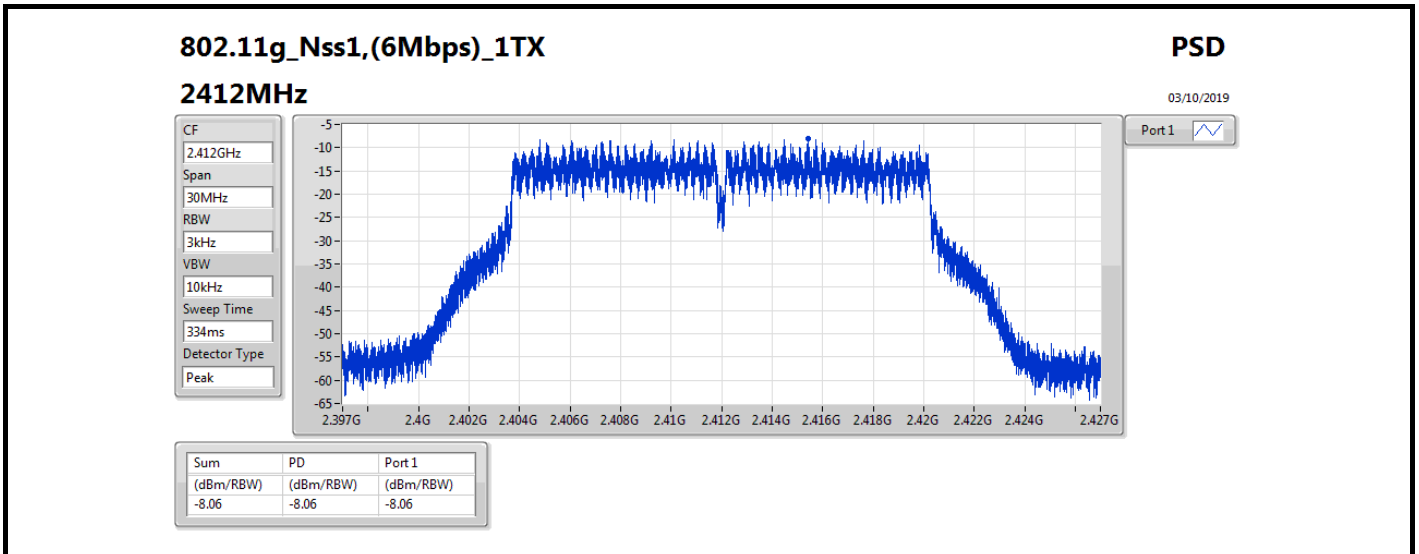
Result

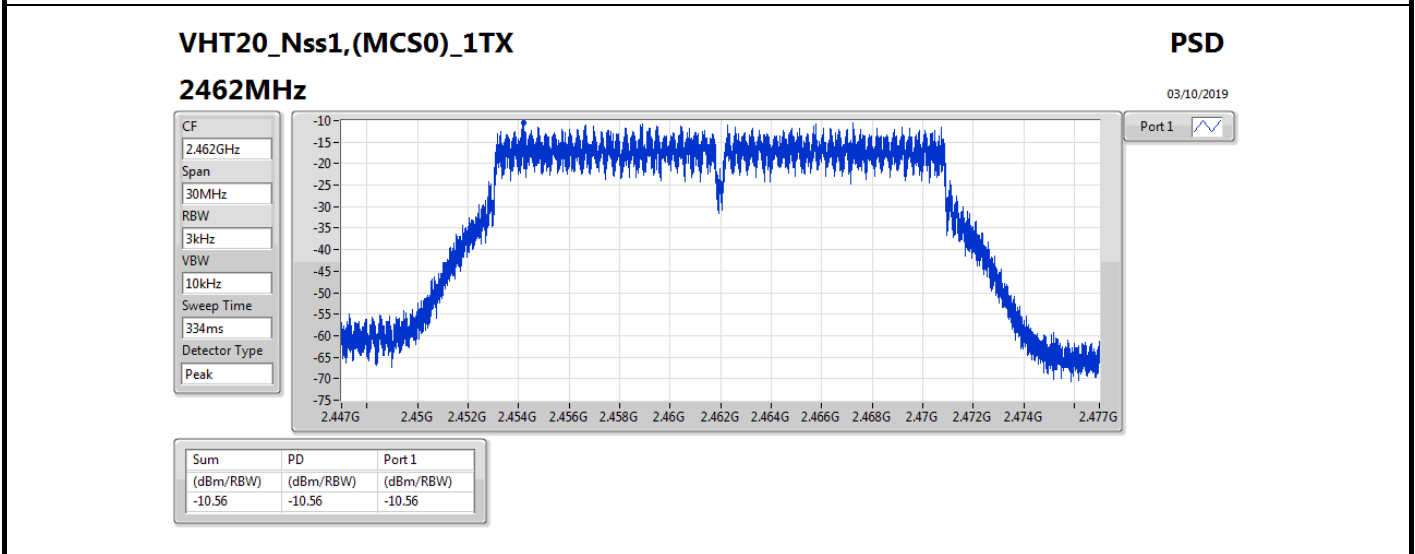
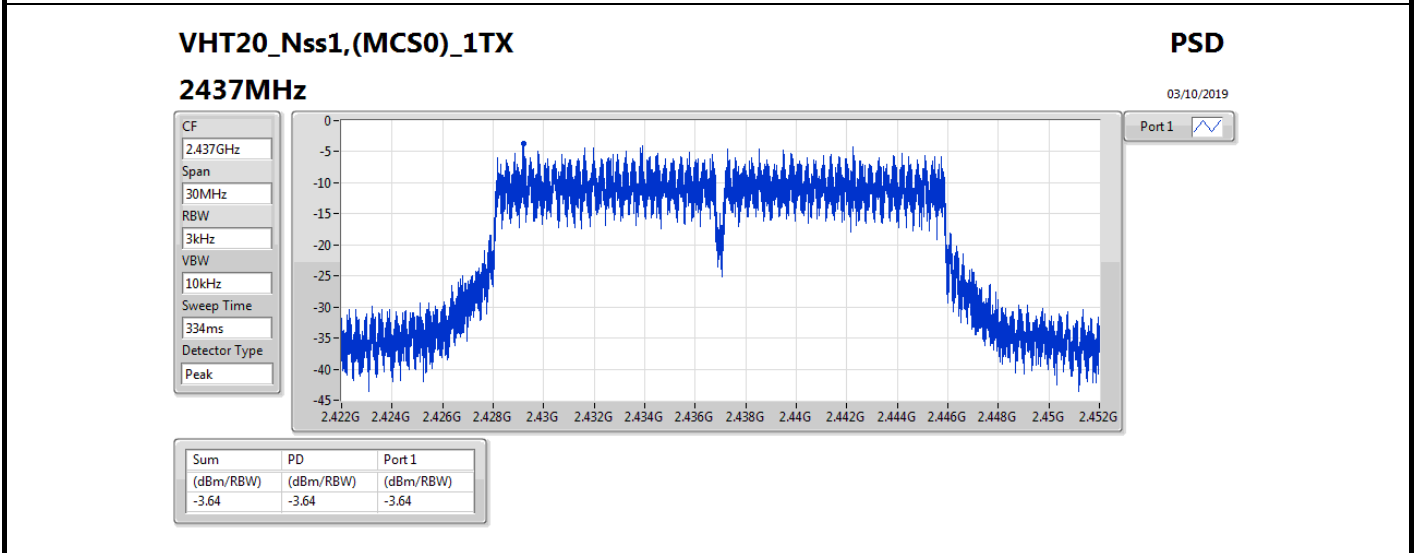
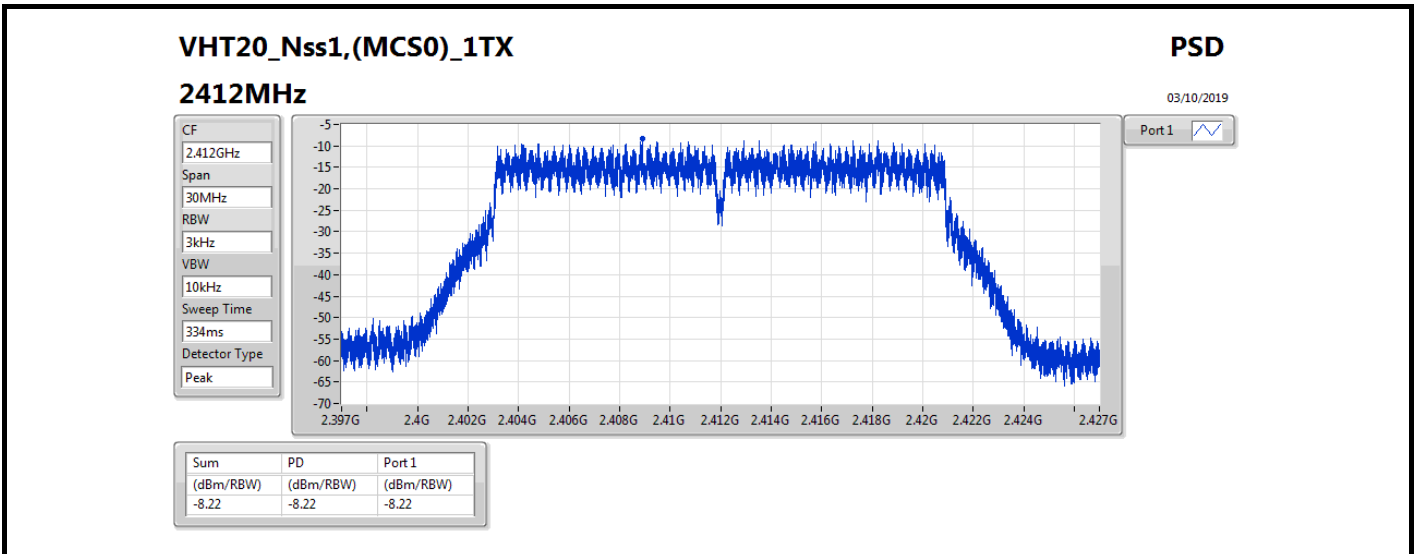
| Mode | Result | DG (dBi) | Port 1 (dBm/RBW) | PD (dBm/RBW) | PD Limit (dBm/RBW) |
|--------------------------------|--------|-------------|---------------------|-----------------|-----------------------|
| 802.11b_Nss1,(1Mbps)_1TX | - | - | - | - | - |
| 2412MHz | Pass | 4.47 | 1.05 | 1.05 | 8.00 |
| 2437MHz | Pass | 4.47 | 1.53 | 1.53 | 8.00 |
| 2462MHz | Pass | 4.47 | 2.05 | 2.05 | 8.00 |
| 802.11g_Nss1,(6Mbps)_1TX | - | - | - | - | - |
| 2412MHz | Pass | 4.47 | -8.06 | -8.06 | 8.00 |
| 2437MHz | Pass | 4.47 | -2.45 | -2.45 | 8.00 |
| 2462MHz | Pass | 4.47 | -8.52 | -8.52 | 8.00 |
| VHT20_Nss1,(MCS0)_1TX | - | - | - | - | - |
| 2412MHz | Pass | 4.47 | -8.22 | -8.22 | 8.00 |
| 2437MHz | Pass | 4.47 | -3.64 | -3.64 | 8.00 |
| 2462MHz | Pass | 4.47 | -10.56 | -10.56 | 8.00 |
| VHT40_Nss1,(MCS0)_1TX | - | - | - | - | - |
| 2422MHz | Pass | 4.47 | -10.45 | -10.45 | 8.00 |
| 2437MHz | Pass | 4.47 | -9.01 | -9.01 | 8.00 |
| 2452MHz | Pass | 4.47 | -10.34 | -10.34 | 8.00 |
| 802.11ax HEW20_Nss1,(MCS0)_1TX | - | - | - | - | - |
| 2412MHz | Pass | 4.47 | -7.26 | -7.26 | 8.00 |
| 2437MHz | Pass | 4.47 | -2.88 | -2.88 | 8.00 |
| 2462MHz | Pass | 4.47 | -9.45 | -9.45 | 8.00 |
| 802.11ax HEW40_Nss1,(MCS0)_1TX | - | - | - | - | - |
| 2422MHz | Pass | 4.47 | -11.54 | -11.54 | 8.00 |
| 2437MHz | Pass | 4.47 | -9.91 | -9.91 | 8.00 |
| 2452MHz | Pass | 4.47 | -11.31 | -11.31 | 8.00 |

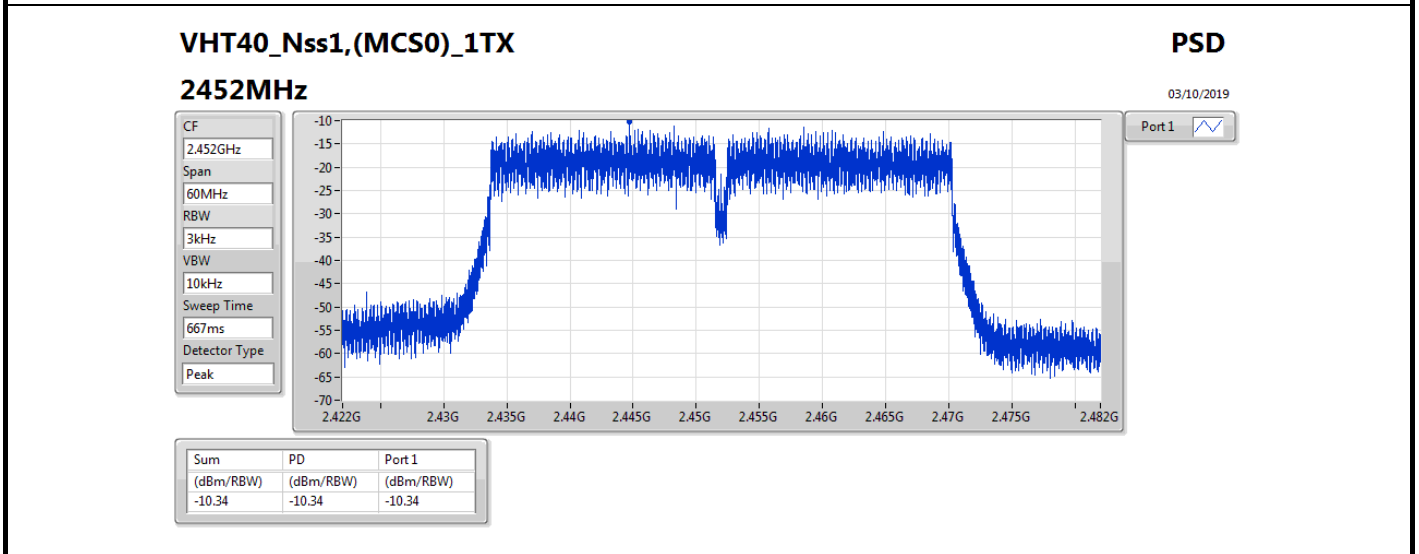
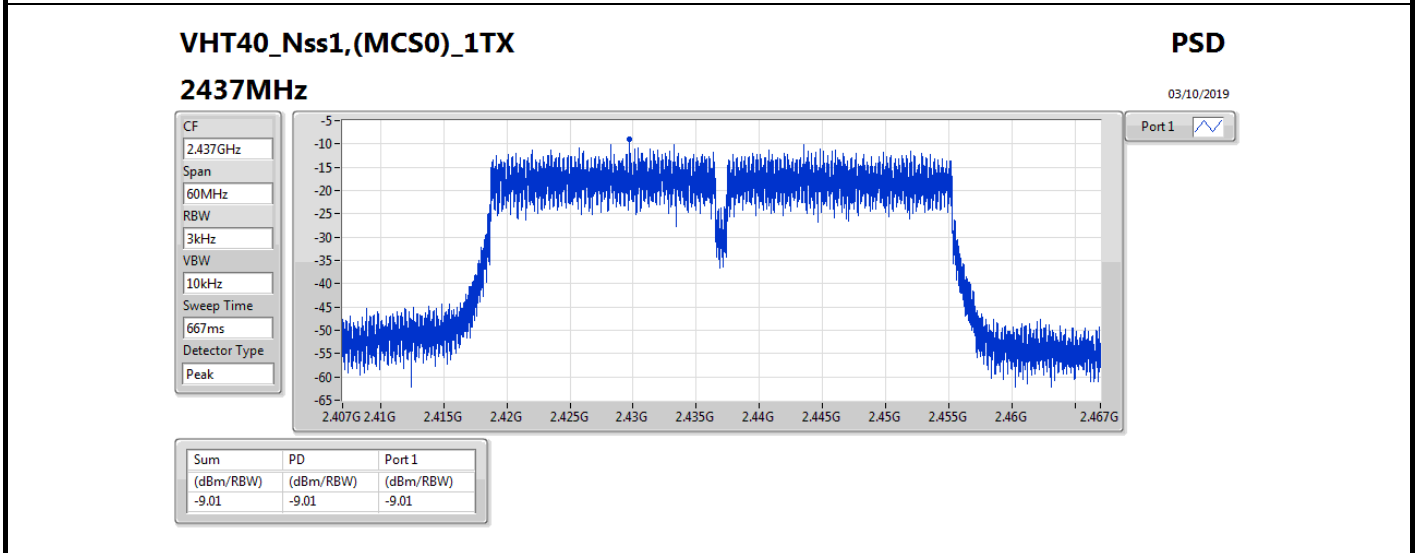
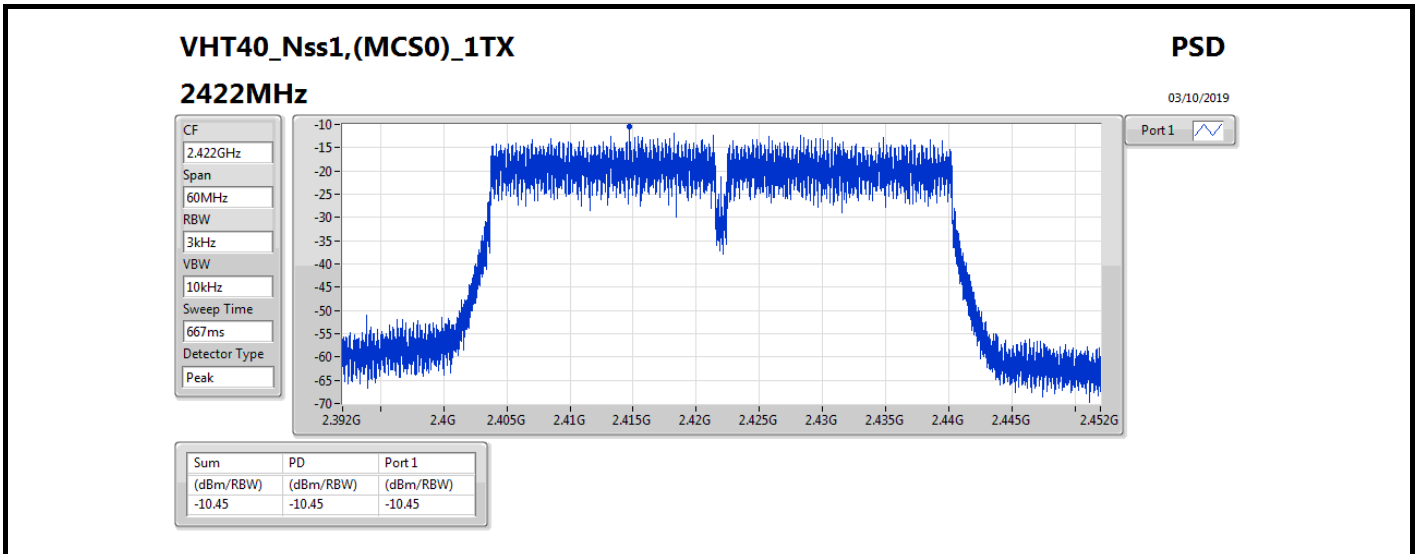
DG = Directional Gain; RBW=3 kHz;

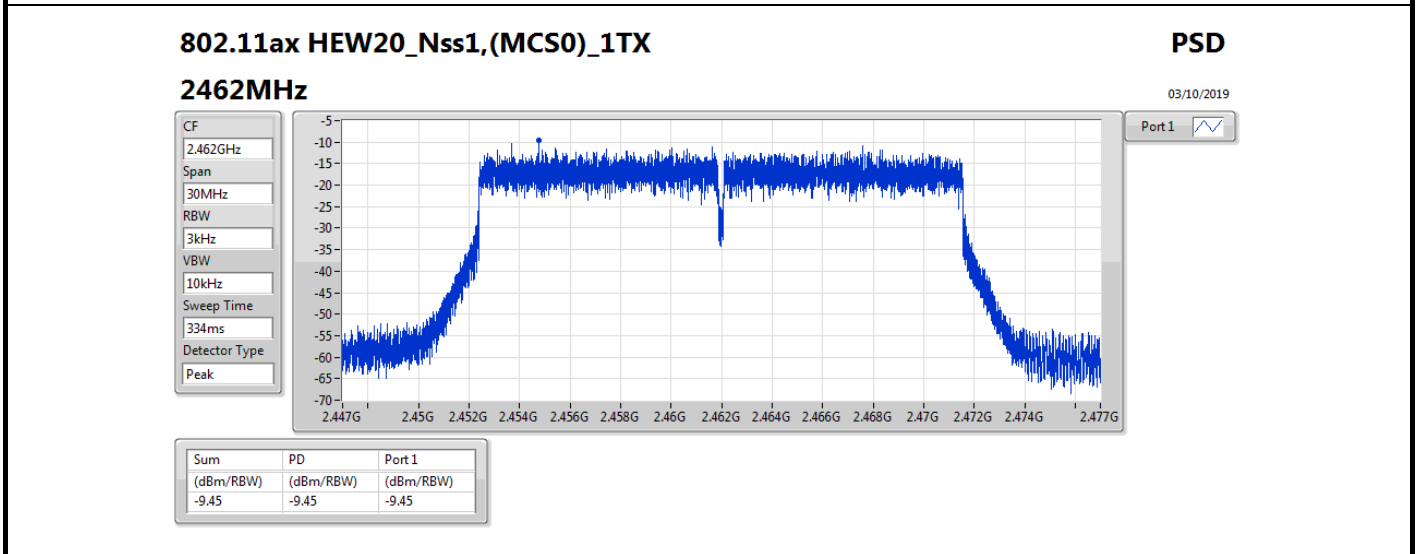
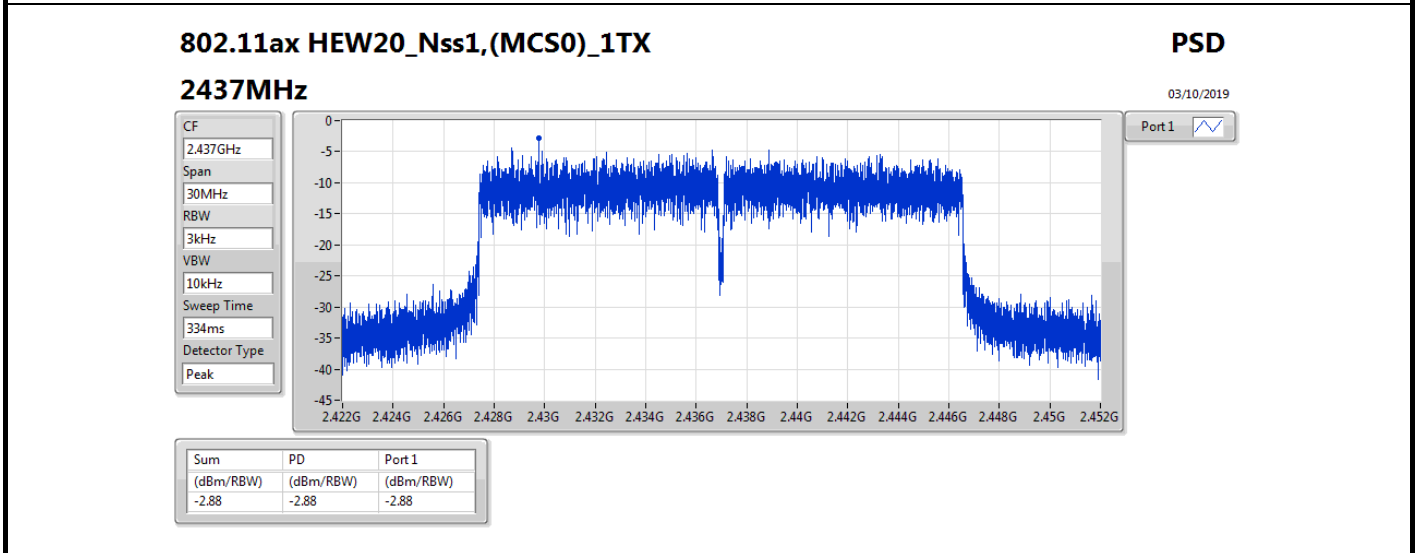
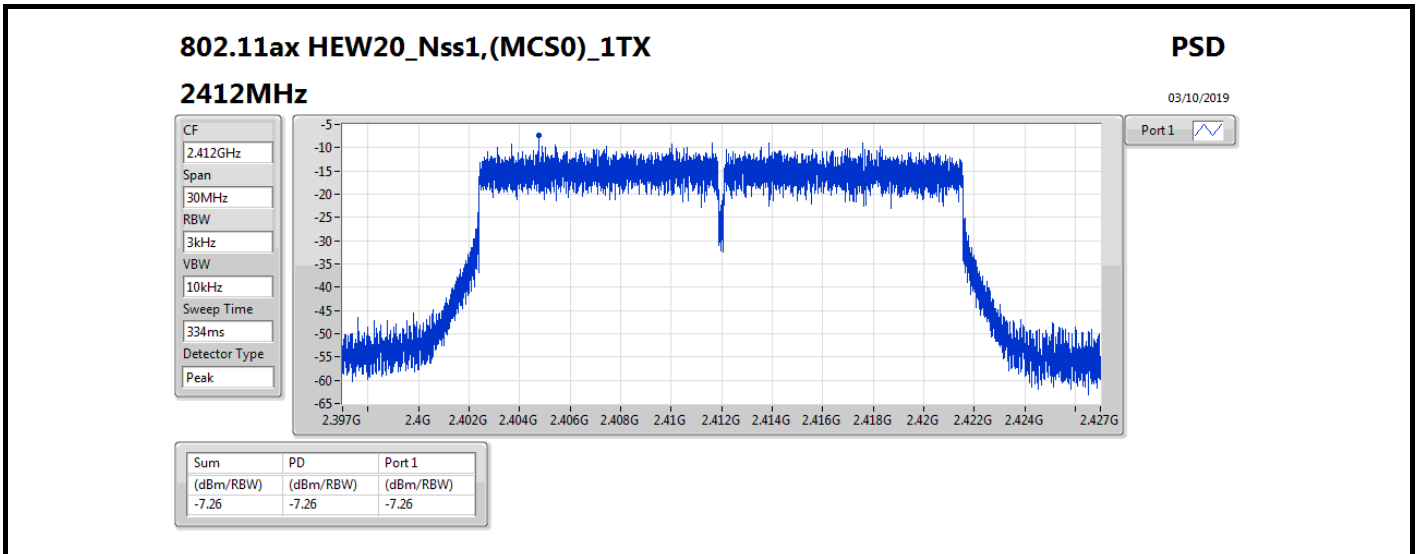
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X power density;

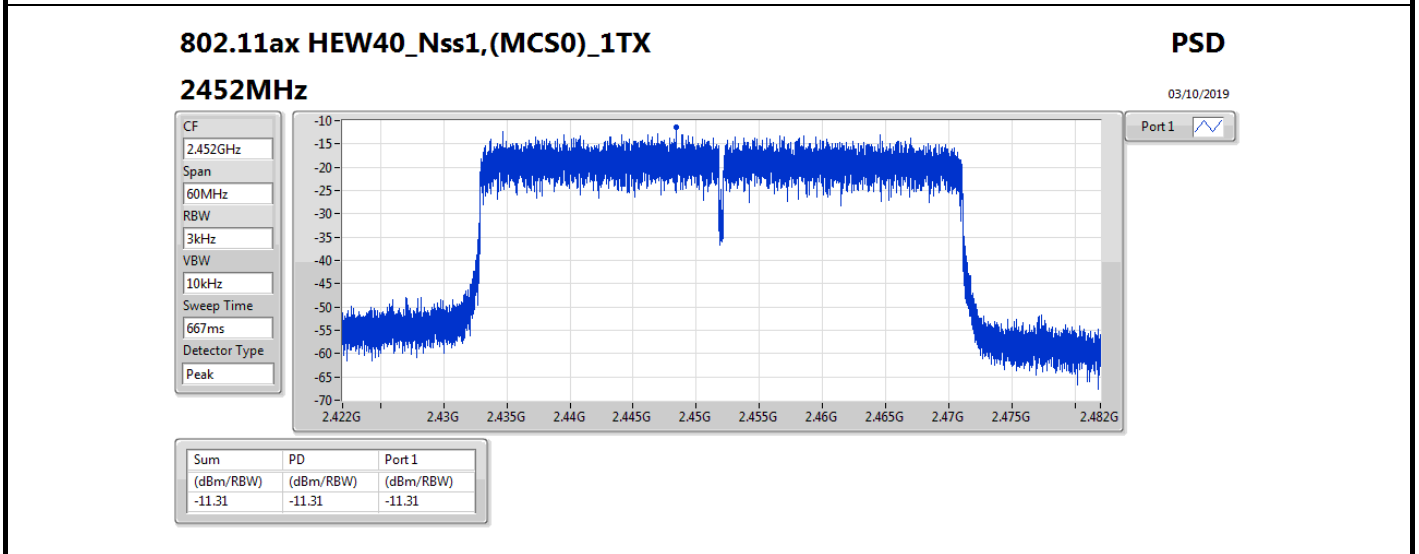
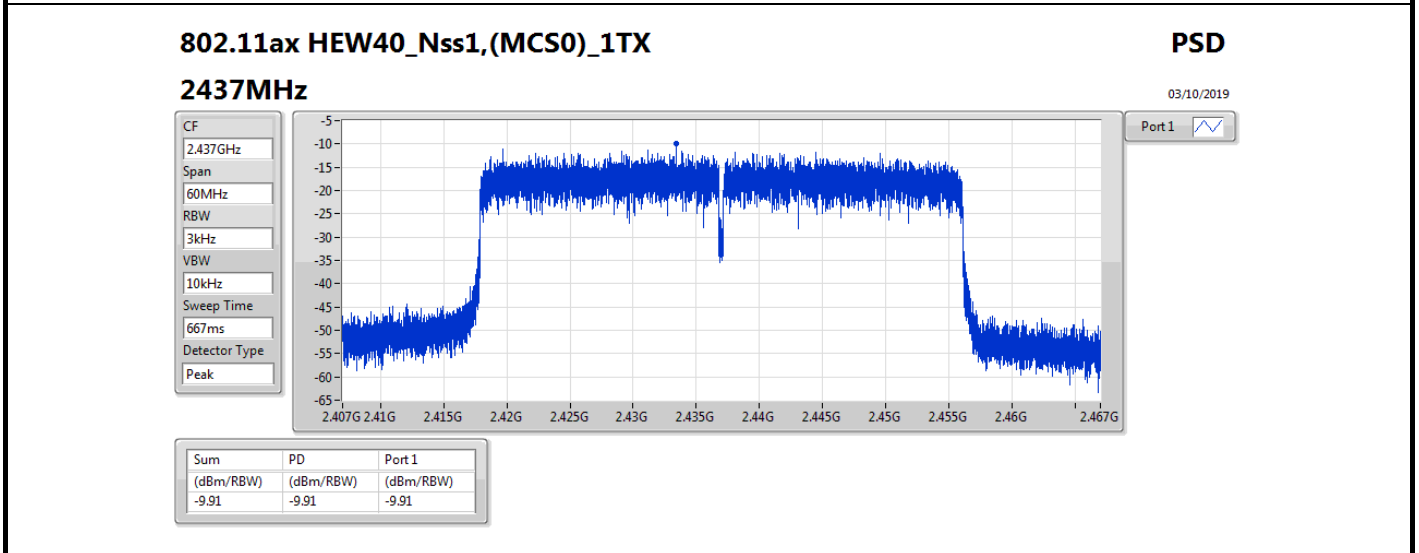
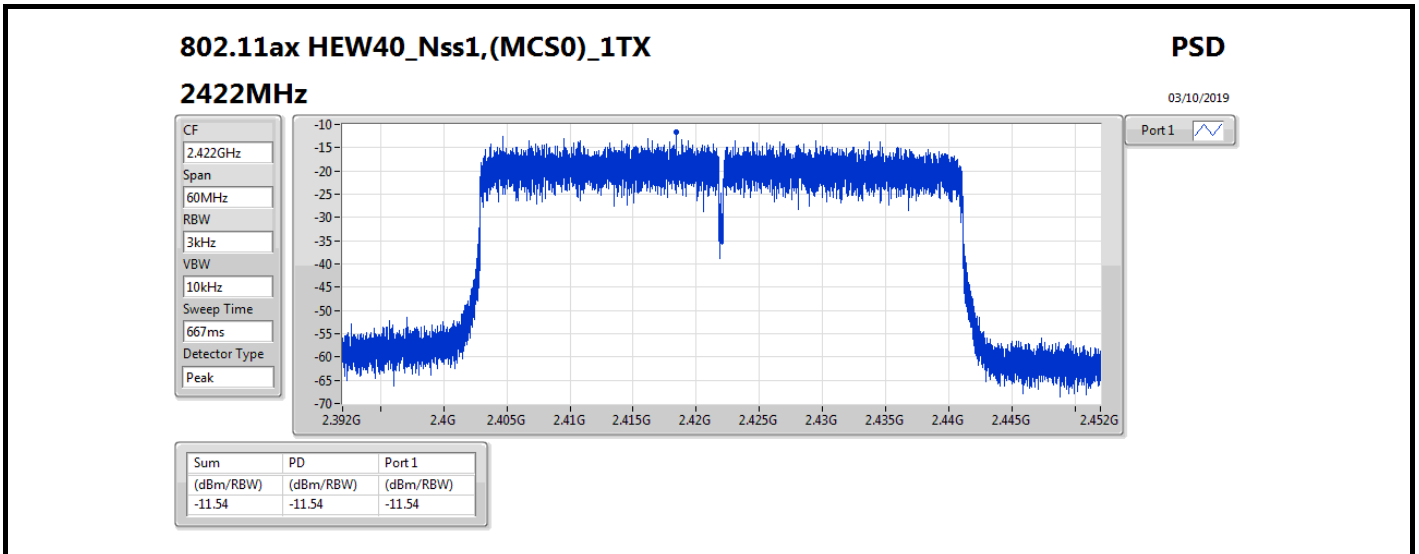














Summary

| Mode | PD (dBm/RBW) |
|--------------------------------|-----------------|
| 2.4-2.4835GHz | - |
| 802.11b_Nss1,(1Mbps)_2TX | 3.38 |
| 802.11g_Nss1,(6Mbps)_2TX | -1.32 |
| VHT20_Nss2,(MCS0)_2TX | -3.25 |
| VHT40_Nss2,(MCS0)_2TX | -9.68 |
| 802.11ax HEW20_Nss2,(MCS0)_2TX | -3.13 |
| 802.11ax HEW40_Nss2,(MCS0)_2TX | -10.15 |

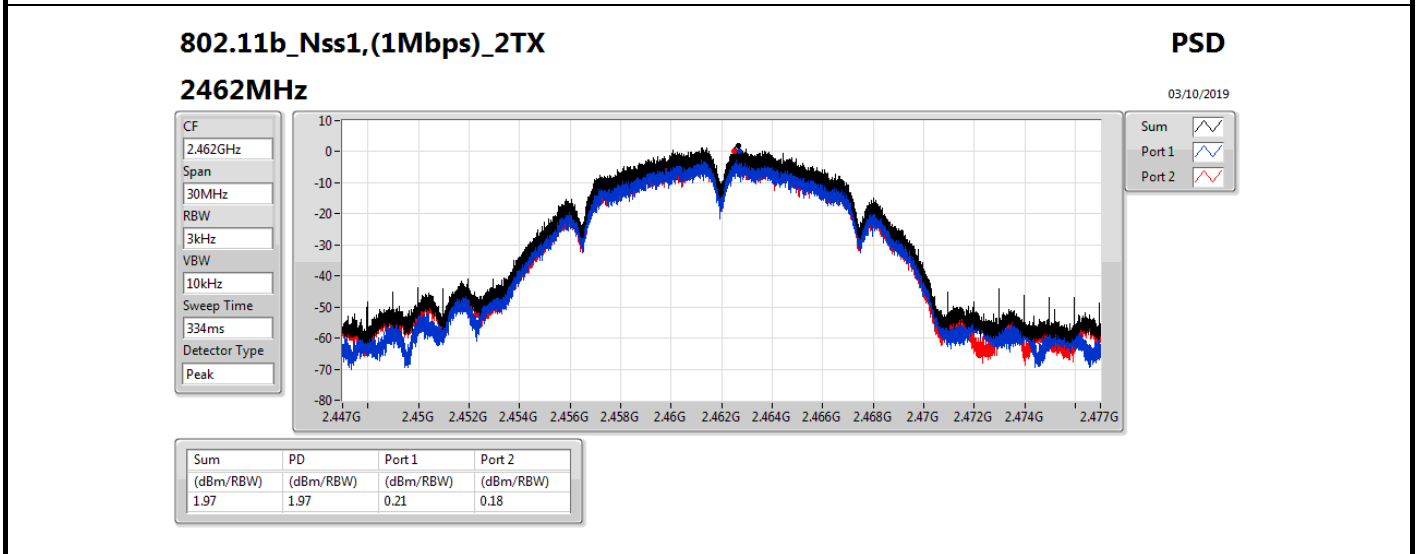
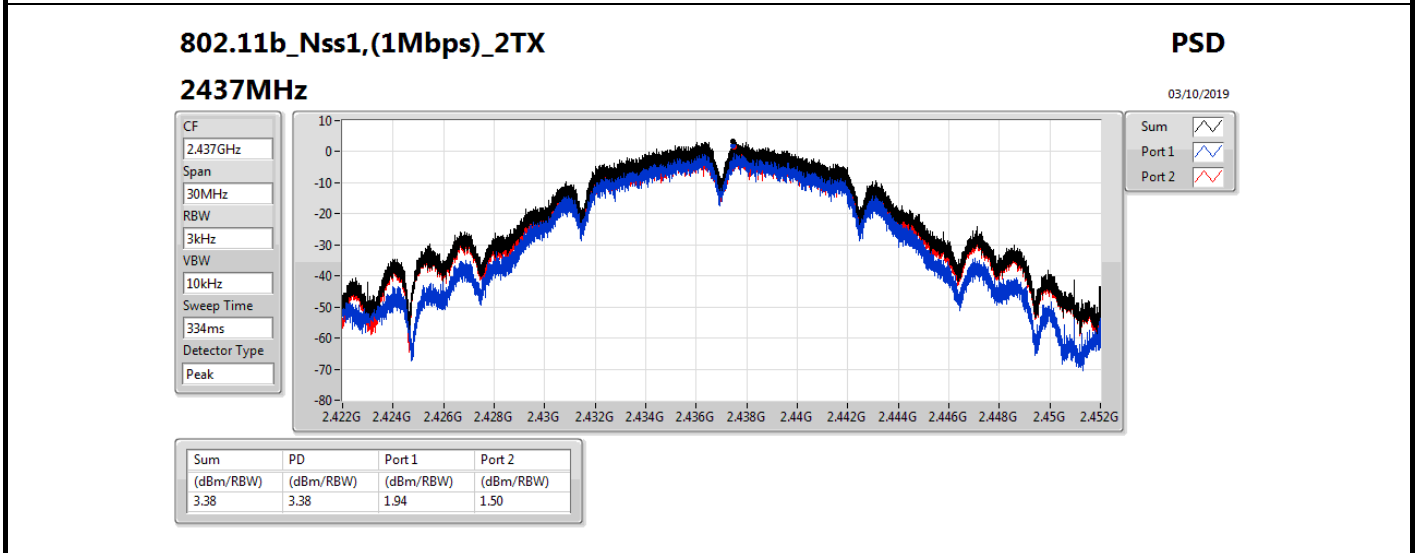
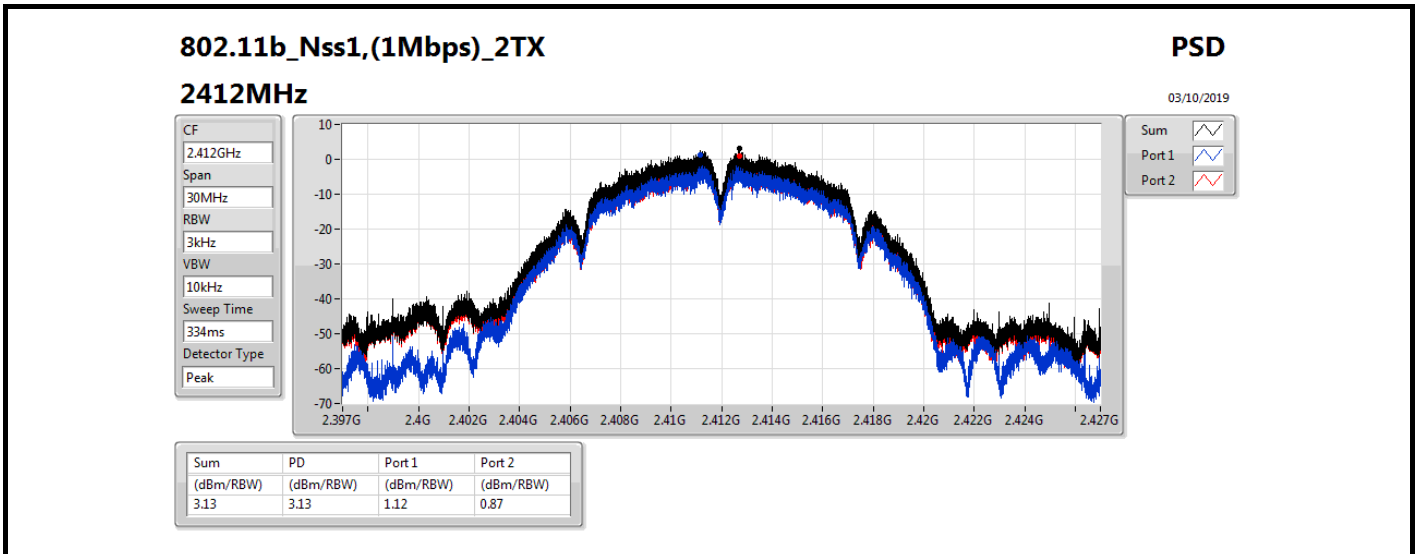
RBW=3 kHz.

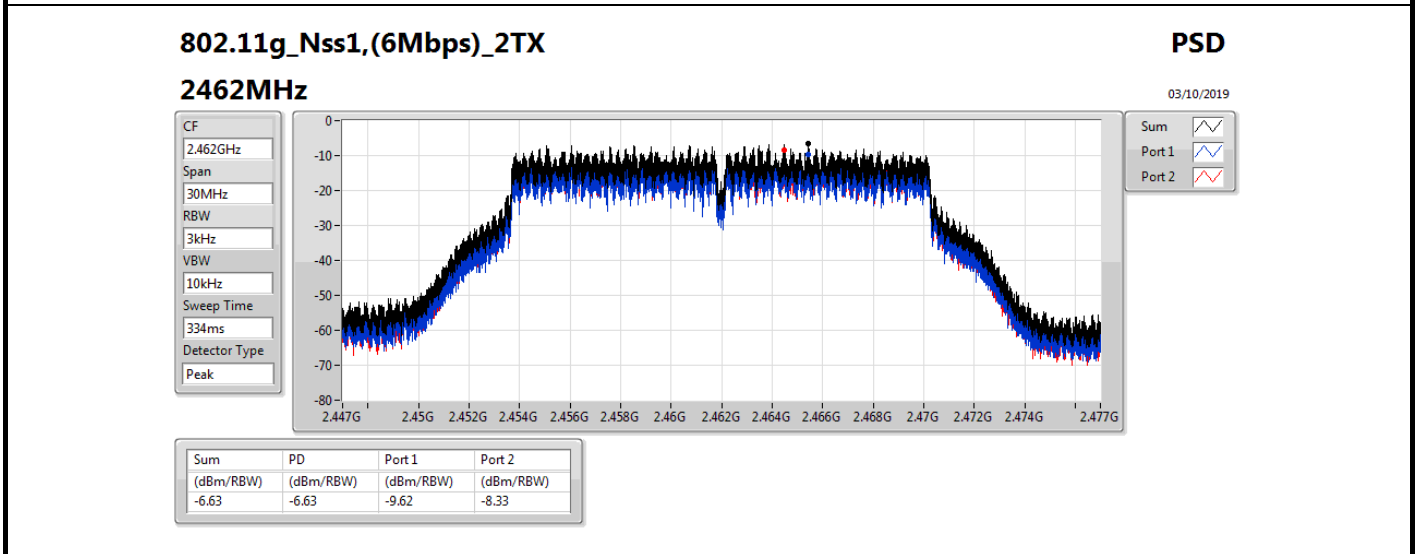
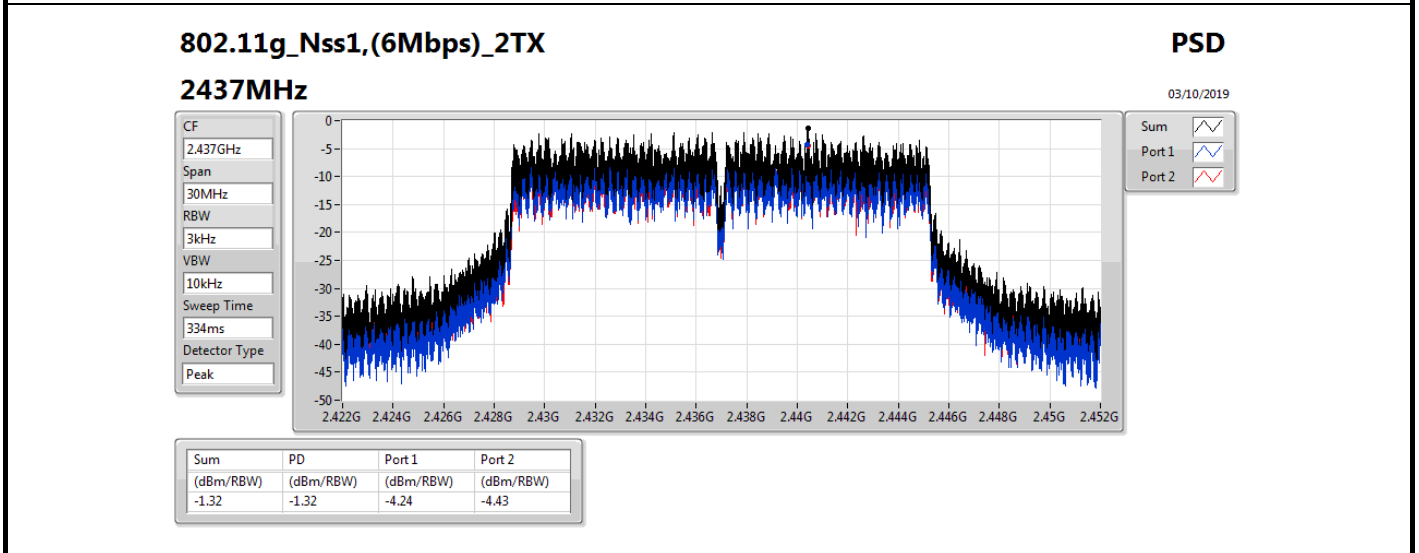
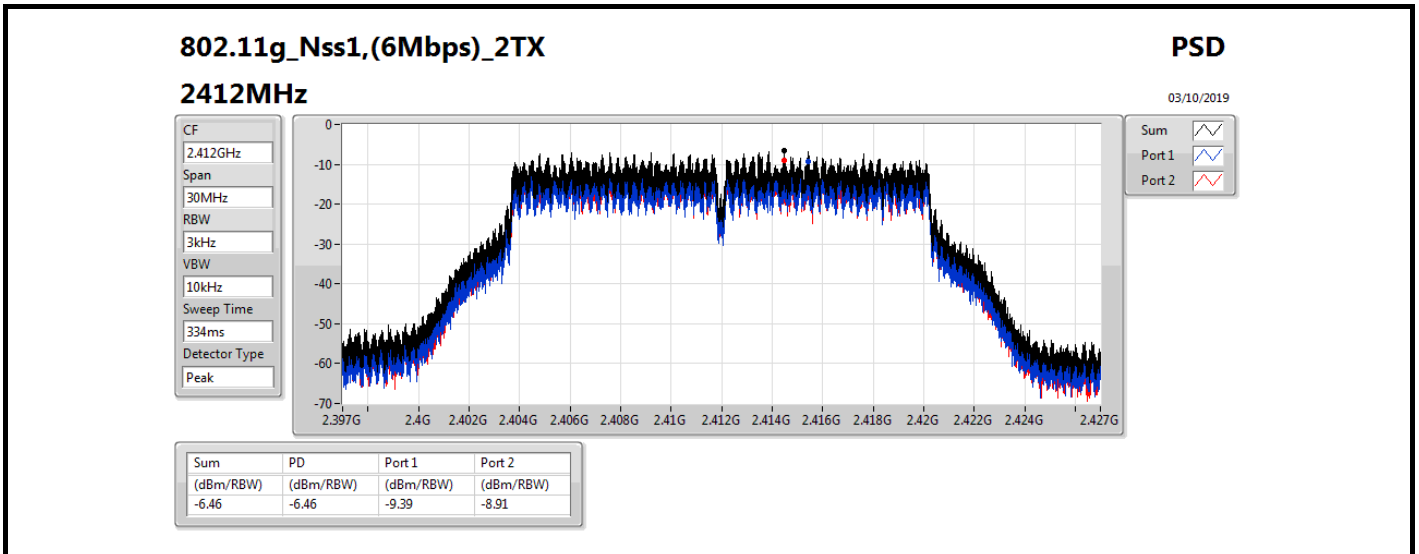
Result

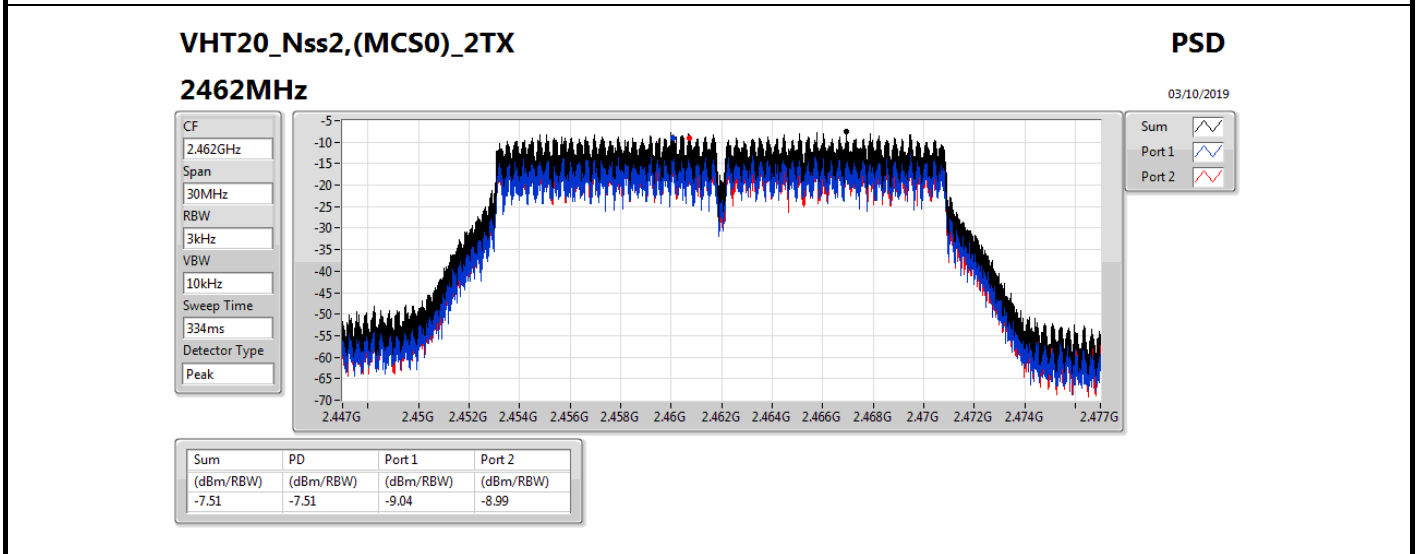
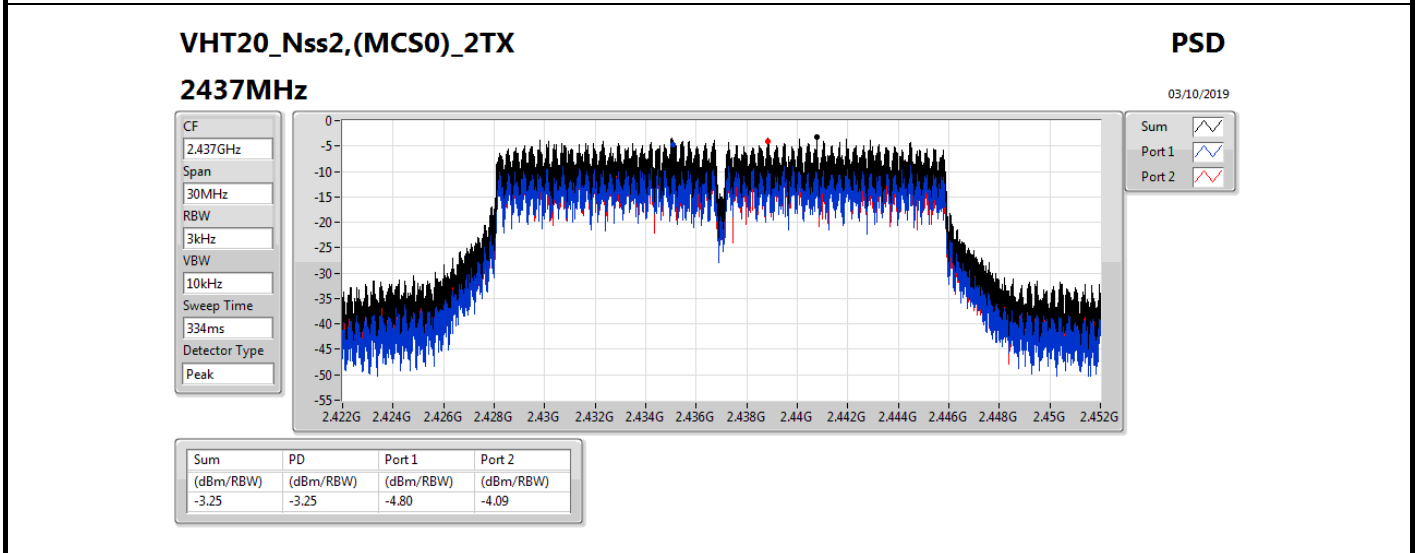
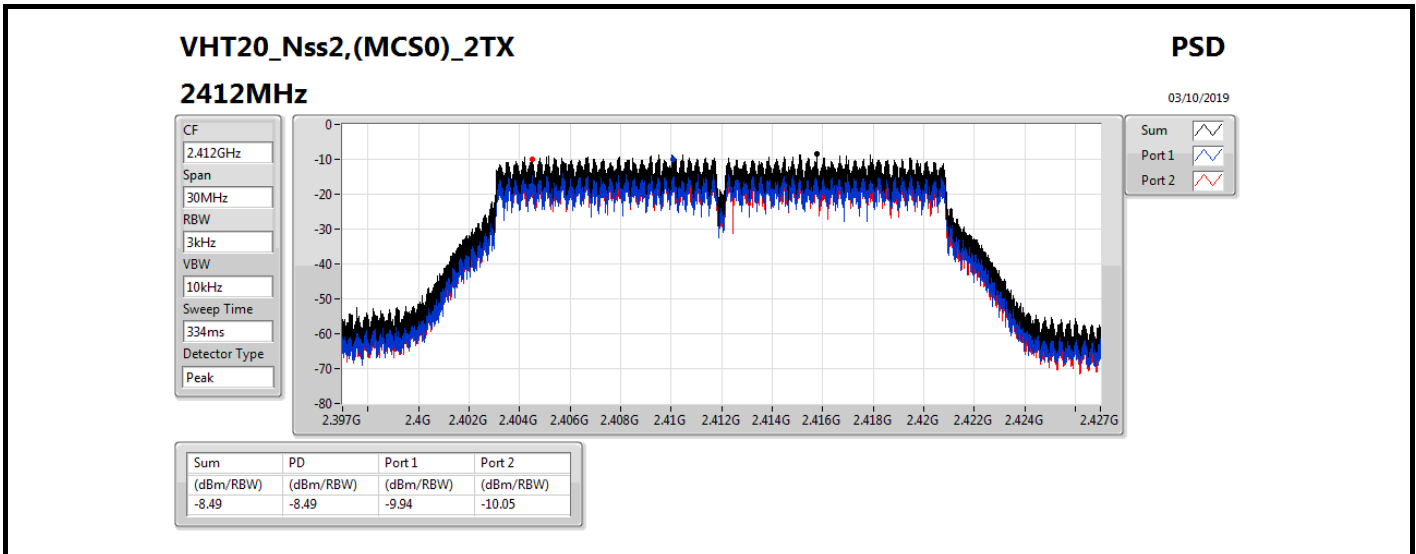
| Mode | Result | DG (dBi) | Port 1 (dBm/RBW) | Port 2 (dBm/RBW) | PD (dBm/RBW) | PD Limit (dBm/RBW) |
|--------------------------------|--------|-------------|---------------------|---------------------|-----------------|-----------------------|
| 802.11b_Nss1,(1Mbps)_2TX | - | - | - | - | - | - |
| 2412MHz | Pass | 7.48 | 1.12 | 0.87 | 3.13 | 6.52 |
| 2437MHz | Pass | 7.48 | 1.94 | 1.50 | 3.38 | 6.52 |
| 2462MHz | Pass | 7.48 | 0.21 | 0.18 | 1.97 | 6.52 |
| 802.11g_Nss1,(6Mbps)_2TX | - | - | - | - | - | - |
| 2412MHz | Pass | 7.48 | -9.39 | -8.91 | -6.46 | 6.52 |
| 2437MHz | Pass | 7.48 | -4.24 | -4.43 | -1.32 | 6.52 |
| 2462MHz | Pass | 7.48 | -9.62 | -8.33 | -6.63 | 6.52 |
| VHT20_Nss2,(MCS0)_2TX | - | - | - | - | - | - |
| 2412MHz | Pass | 4.47 | -9.94 | -10.05 | -8.49 | 8.00 |
| 2437MHz | Pass | 4.47 | -4.80 | -4.09 | -3.25 | 8.00 |
| 2462MHz | Pass | 4.47 | -9.04 | -8.99 | -7.51 | 8.00 |
| VHT40_Nss2,(MCS0)_2TX | - | - | - | - | - | - |
| 2422MHz | Pass | 4.47 | -13.20 | -12.79 | -11.71 | 8.00 |
| 2437MHz | Pass | 4.47 | -11.13 | -10.46 | -9.68 | 8.00 |
| 2452MHz | Pass | 4.47 | -13.19 | -12.31 | -11.05 | 8.00 |
| 802.11ax HEW20_Nss2,(MCS0)_2TX | - | - | - | - | - | - |
| 2412MHz | Pass | 4.47 | -11.26 | -10.31 | -8.07 | 8.00 |
| 2437MHz | Pass | 4.47 | -6.30 | -5.25 | -3.13 | 8.00 |
| 2462MHz | Pass | 4.47 | -10.38 | -9.40 | -7.14 | 8.00 |
| 802.11ax HEW40_Nss2,(MCS0)_2TX | - | - | - | - | - | - |
| 2422MHz | Pass | 4.47 | -14.17 | -13.56 | -12.75 | 8.00 |
| 2437MHz | Pass | 4.47 | -12.24 | -11.46 | -10.15 | 8.00 |
| 2452MHz | Pass | 4.47 | -13.70 | -13.10 | -12.35 | 8.00 |

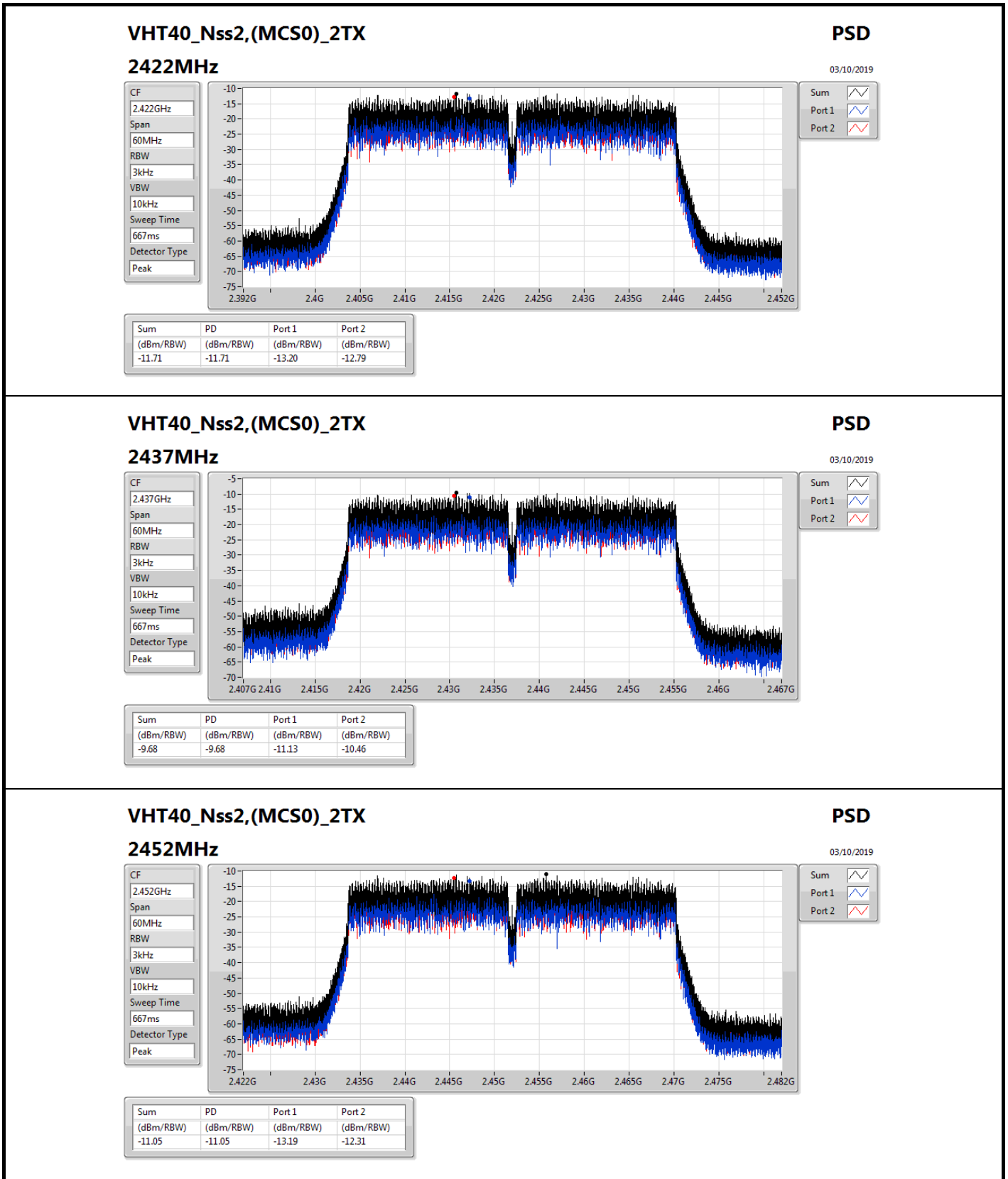
DG = Directional Gain; RBW=3 kHz;

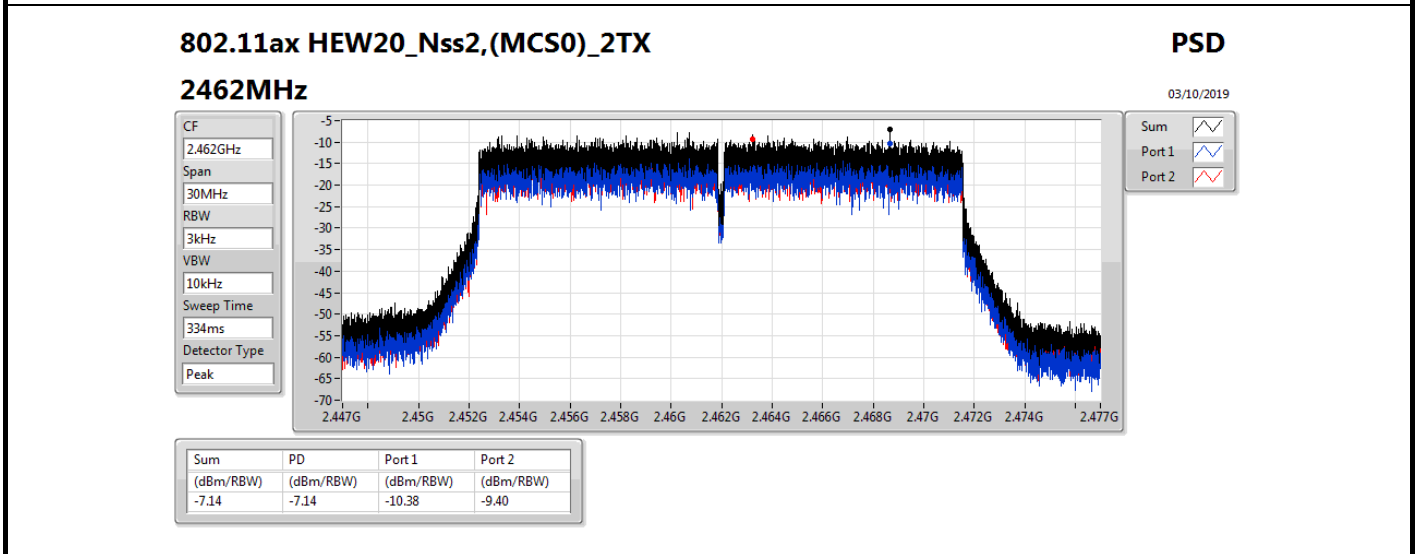
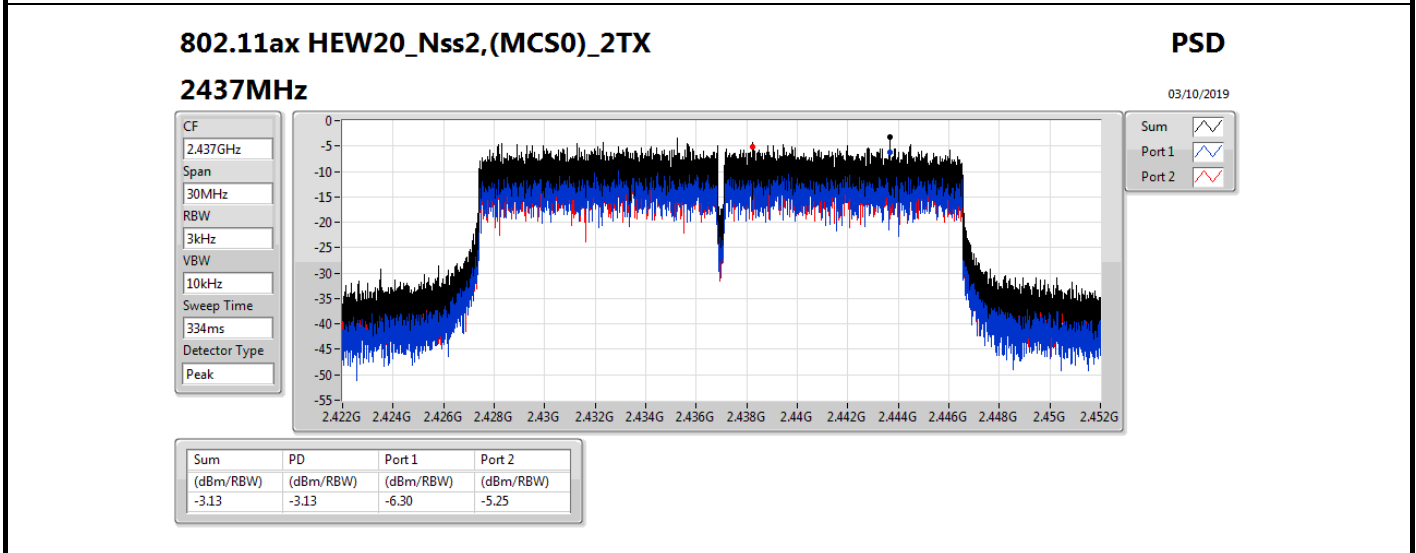
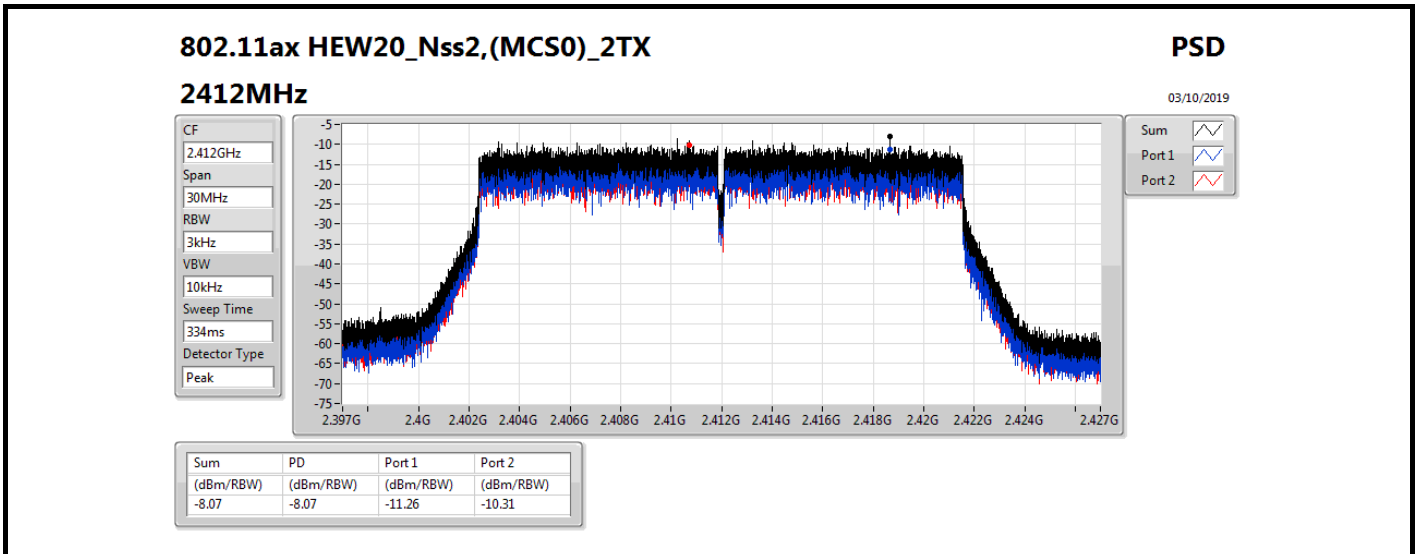
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X power density;

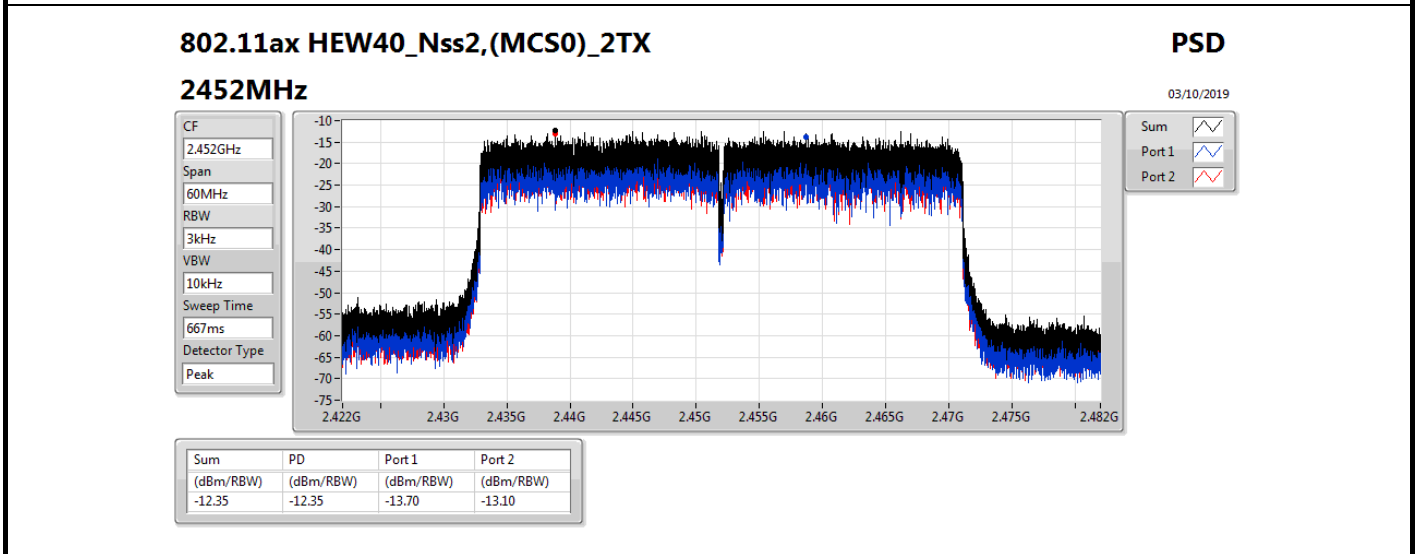
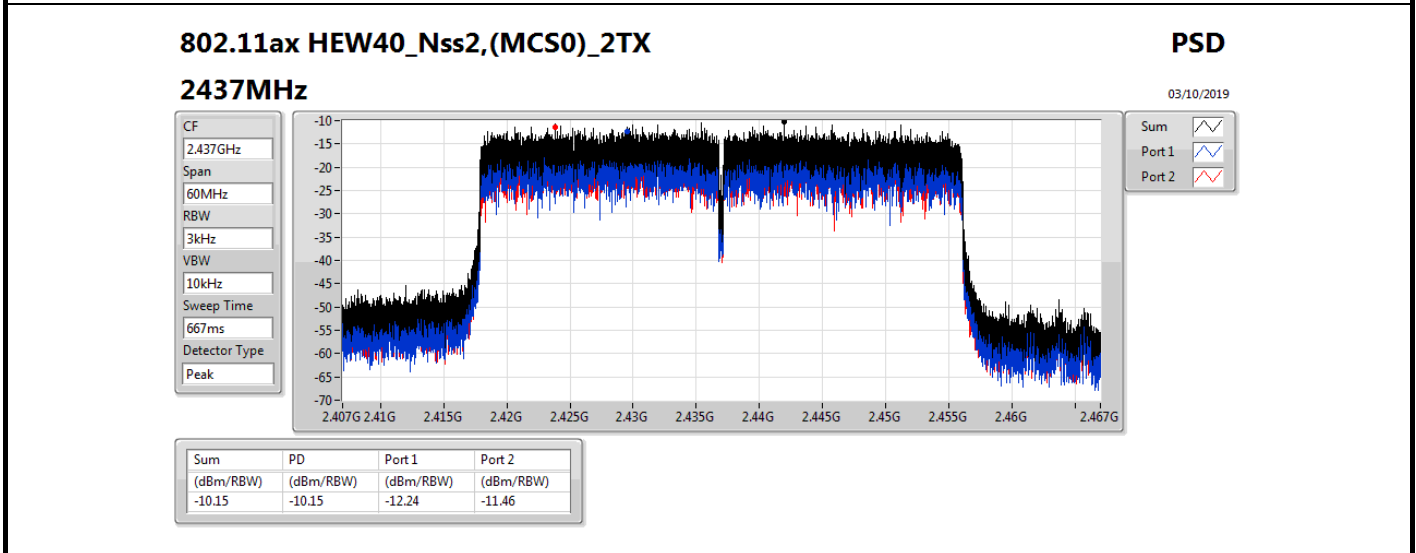
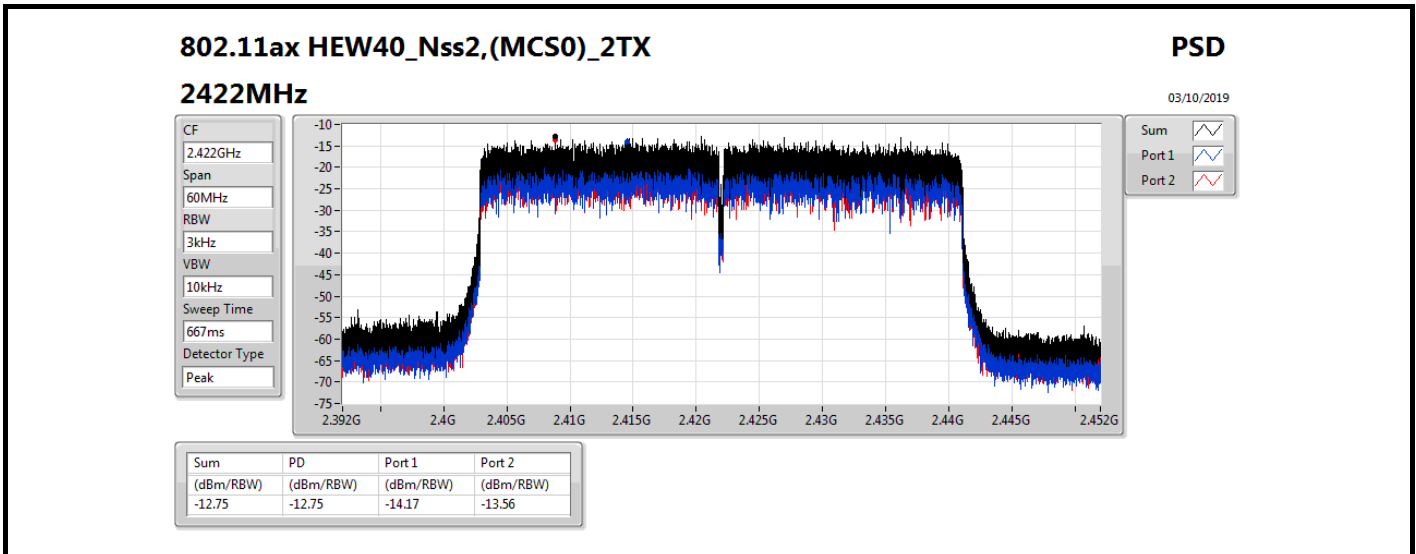














Summary

| Mode | PD (dBm/RBW) |
|-----------------------------------|-----------------|
| 2.4-2.4835GHz | - |
| VHT20-BF_Nss1,(MCS0)_2TX | -1.82 |
| VHT40-BF_Nss1,(MCS0)_2TX | -8.26 |
| 802.11ax HEW20-BF_Nss1,(MCS0)_2TX | -1.78 |
| 802.11ax HEW40-BF_Nss1,(MCS0)_2TX | -9.20 |

RBW=3 kHz.

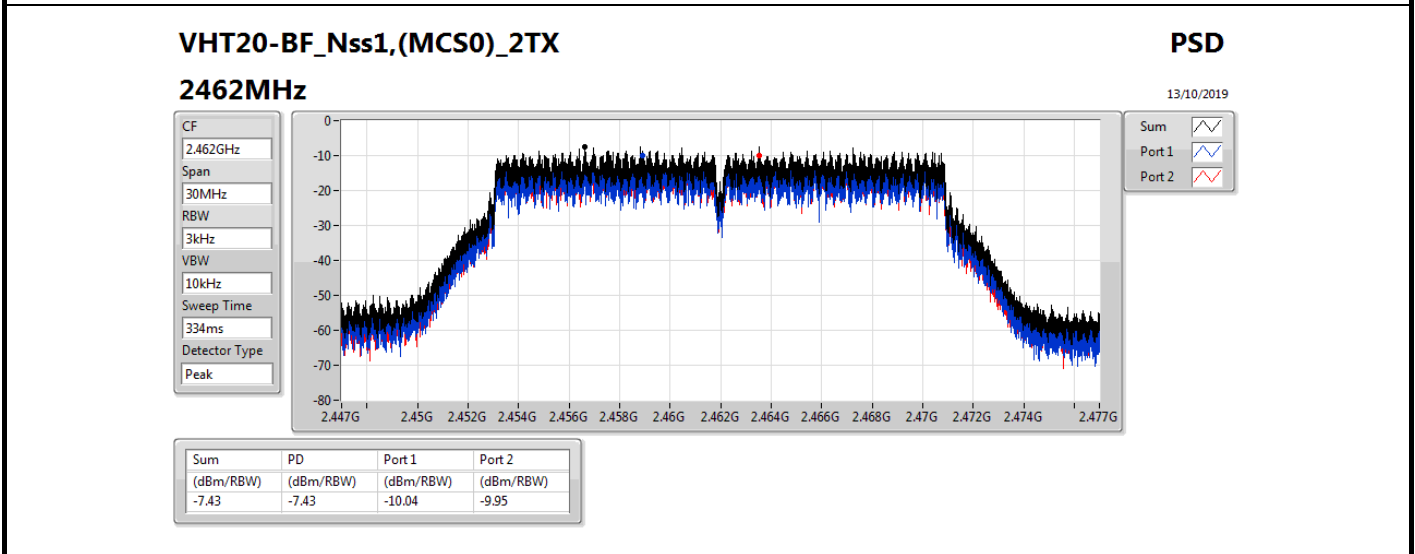
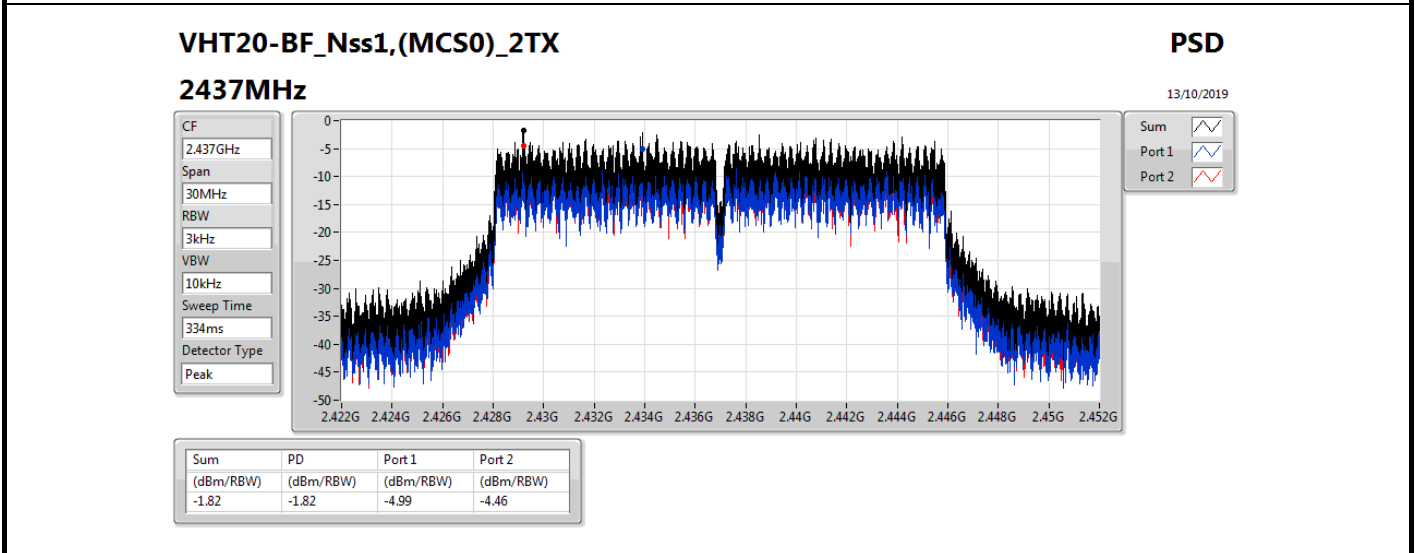
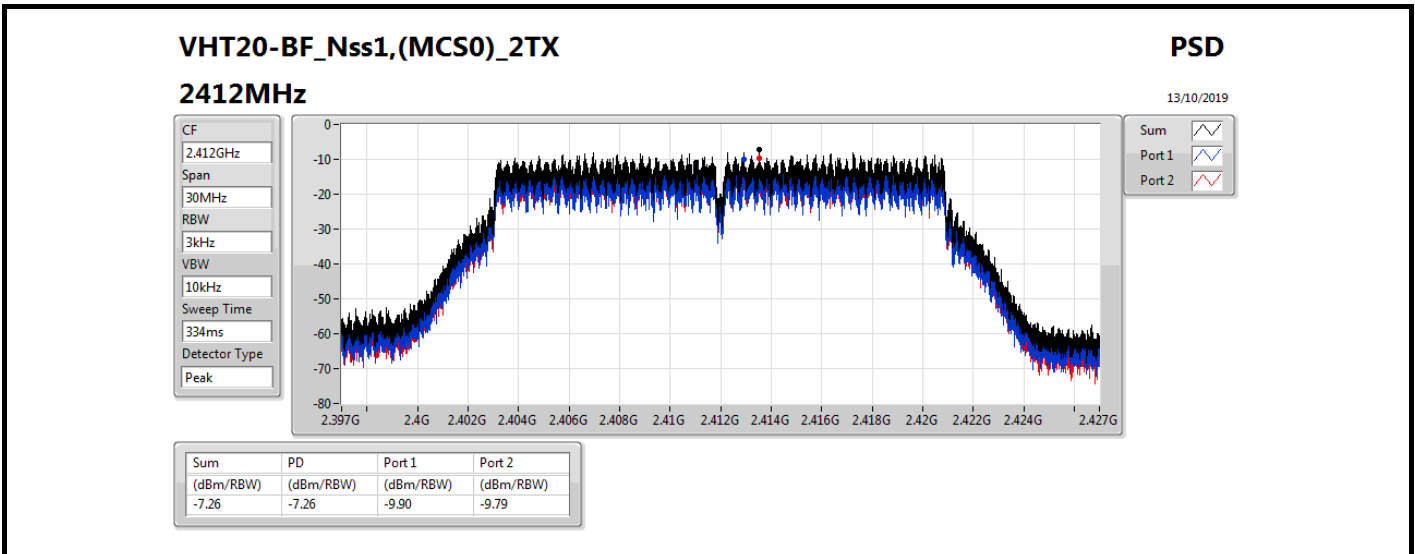


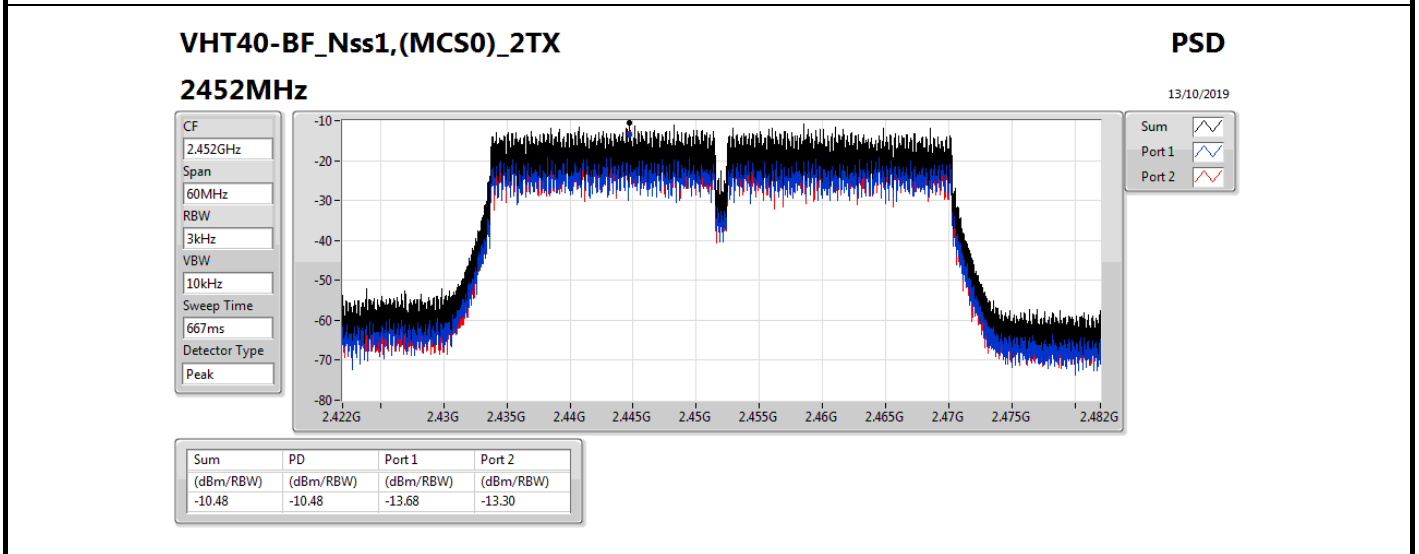
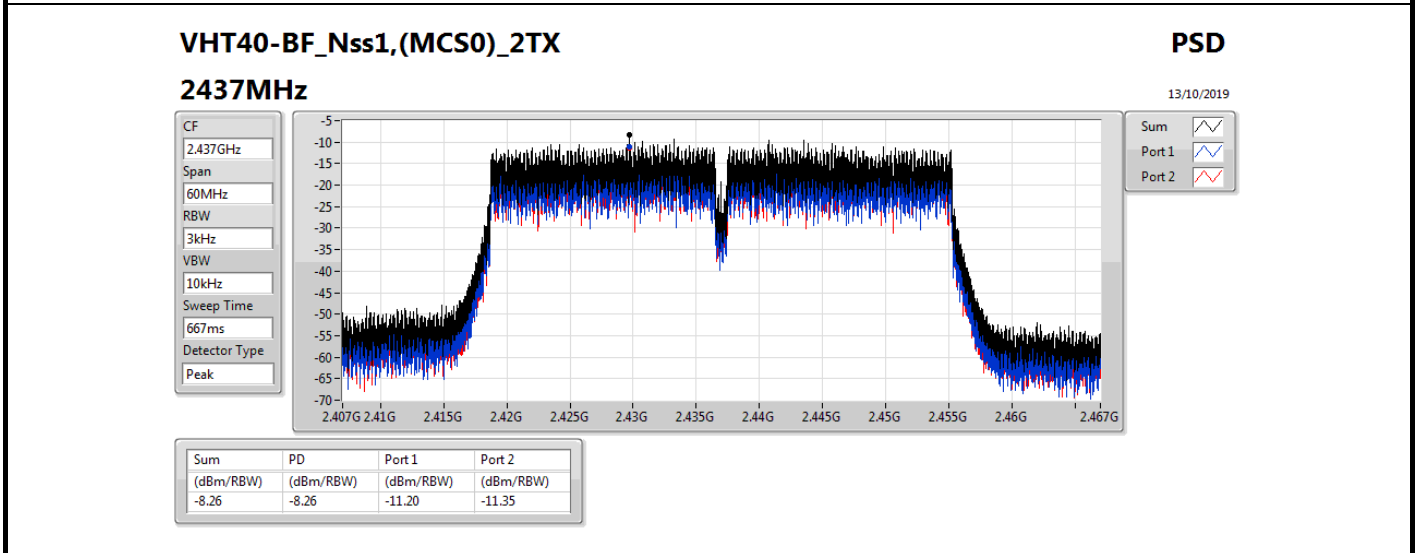
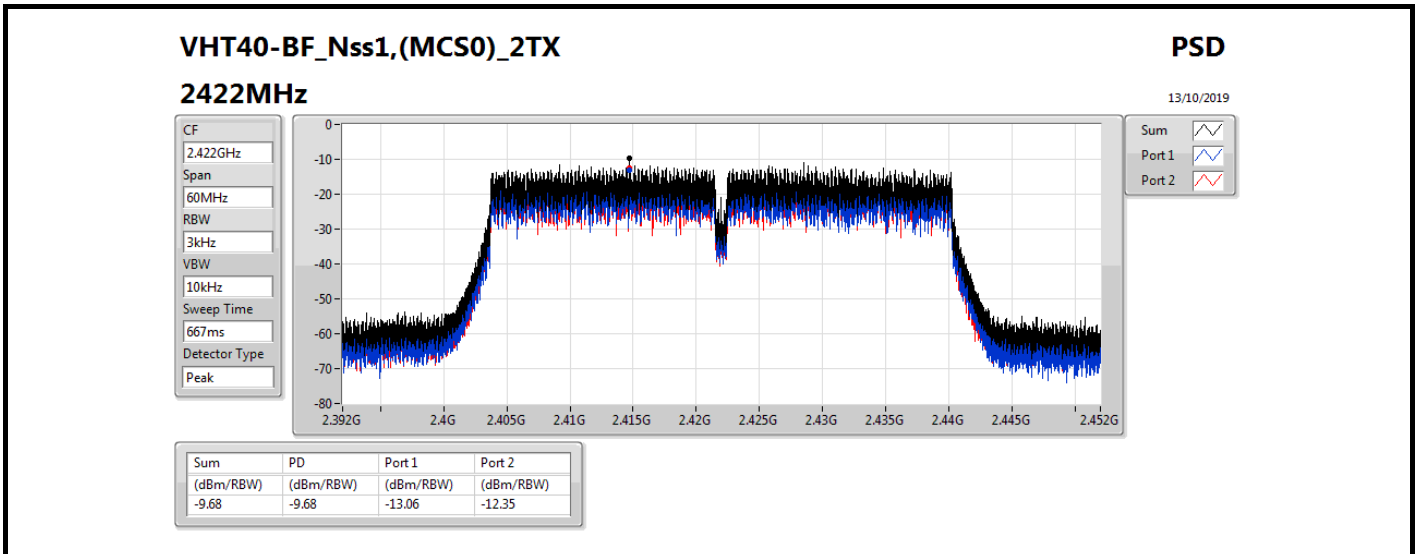
Result

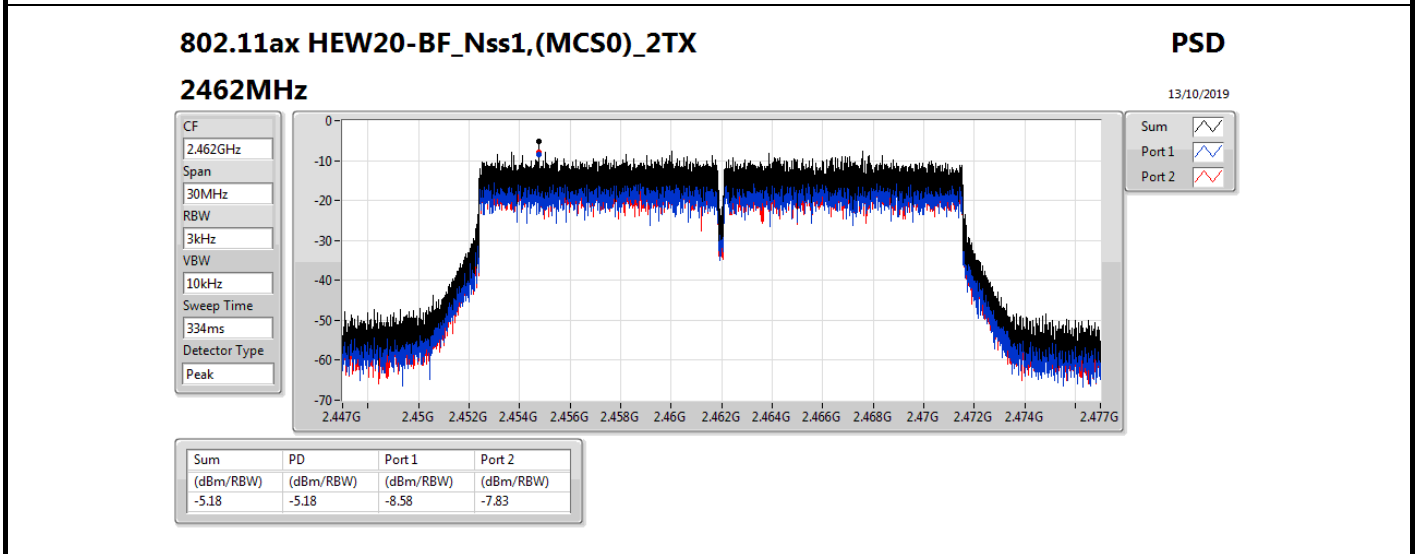
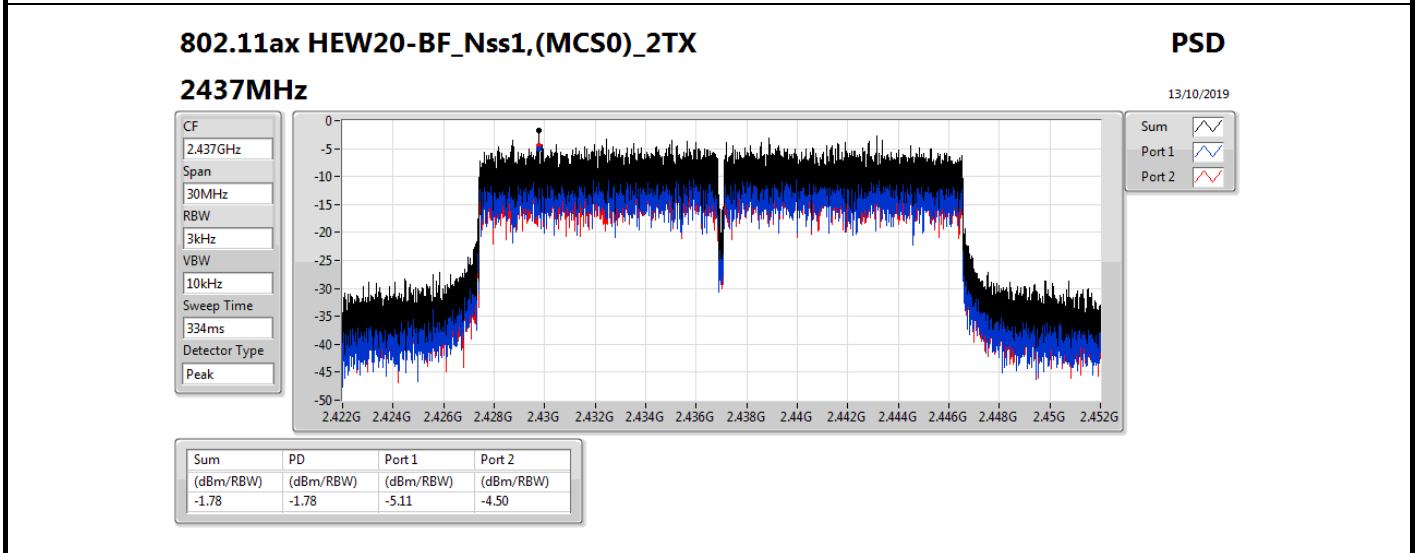
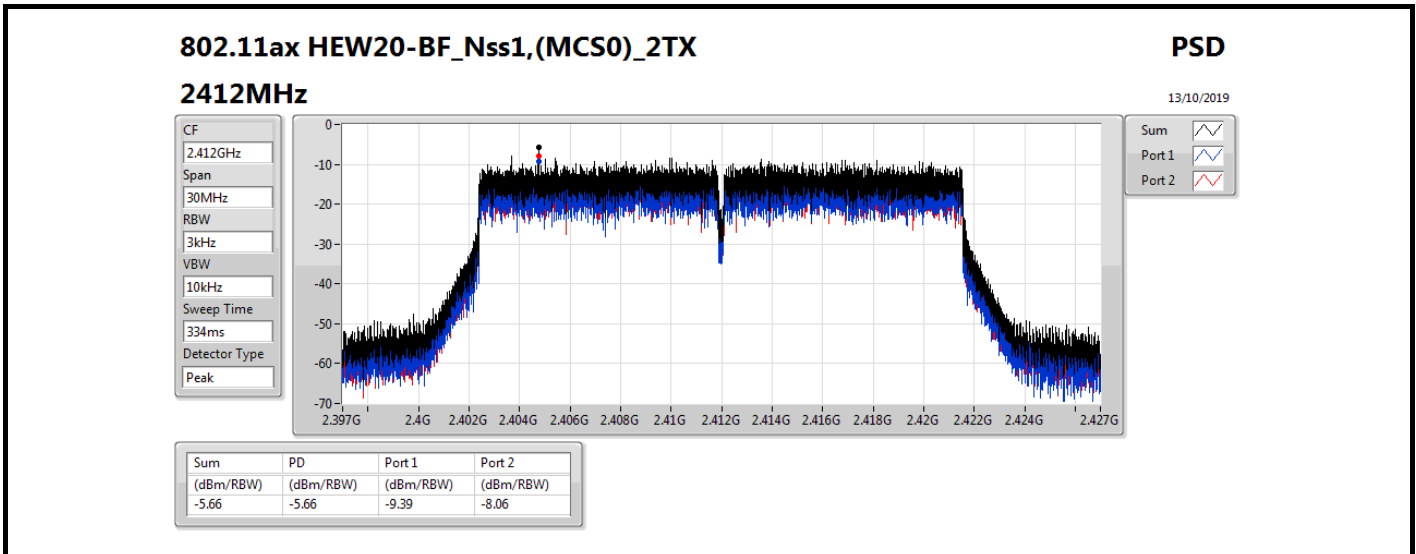
| Mode | Result | DG (dBi) | Port 1 (dBm/RBW) | Port 2 (dBm/RBW) | PD (dBm/RBW) | PD Limit (dBm/RBW) |
|-----------------------------------|--------|-------------|---------------------|---------------------|-----------------|-----------------------|
| VHT20-BF_Nss1,(MCS0)_2TX | - | - | - | - | - | - |
| 2412MHz | Pass | 7.48 | -9.90 | -9.79 | -7.26 | 6.52 |
| 2437MHz | Pass | 7.48 | -4.99 | -4.46 | -1.82 | 6.52 |
| 2462MHz | Pass | 7.48 | -10.04 | -9.95 | -7.43 | 6.52 |
| VHT40-BF_Nss1,(MCS0)_2TX | - | - | - | - | - | - |
| 2422MHz | Pass | 7.48 | -13.06 | -12.35 | -9.68 | 6.52 |
| 2437MHz | Pass | 7.48 | -11.20 | -11.35 | -8.26 | 6.52 |
| 2452MHz | Pass | 7.48 | -13.68 | -13.30 | -10.48 | 6.52 |
| 802.11ax HEW20-BF_Nss1,(MCS0)_2TX | - | - | - | - | - | - |
| 2412MHz | Pass | 7.48 | -9.39 | -8.06 | -5.66 | 6.52 |
| 2437MHz | Pass | 7.48 | -5.11 | -4.50 | -1.78 | 6.52 |
| 2462MHz | Pass | 7.48 | -8.58 | -7.83 | -5.18 | 6.52 |
| 802.11ax HEW40-BF_Nss1,(MCS0)_2TX | - | - | - | - | - | - |
| 2422MHz | Pass | 7.48 | -14.41 | -12.66 | -10.44 | 6.52 |
| 2437MHz | Pass | 7.48 | -12.20 | -12.13 | -9.20 | 6.52 |
| 2452MHz | Pass | 7.48 | -14.08 | -13.83 | -10.94 | 6.52 |

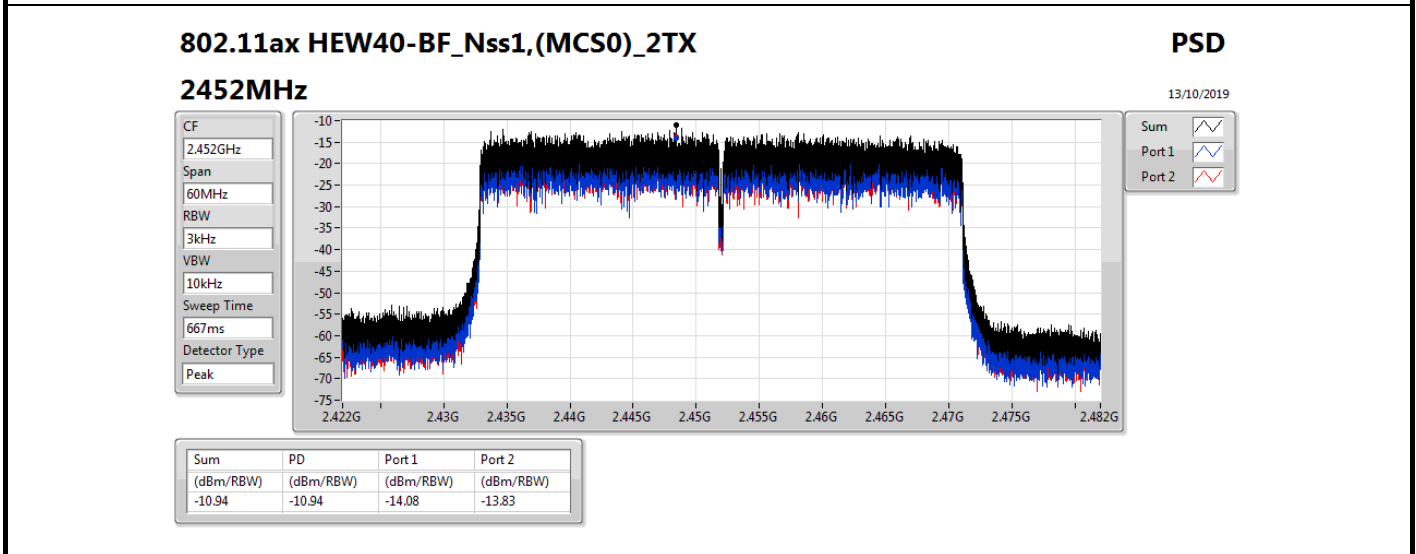
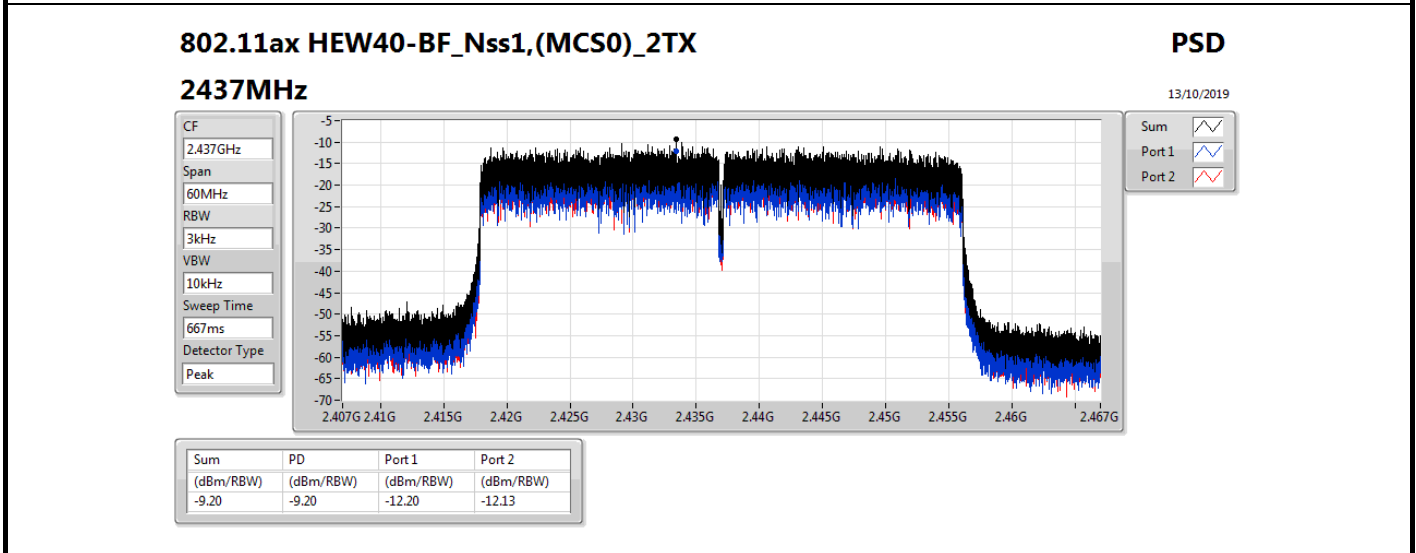
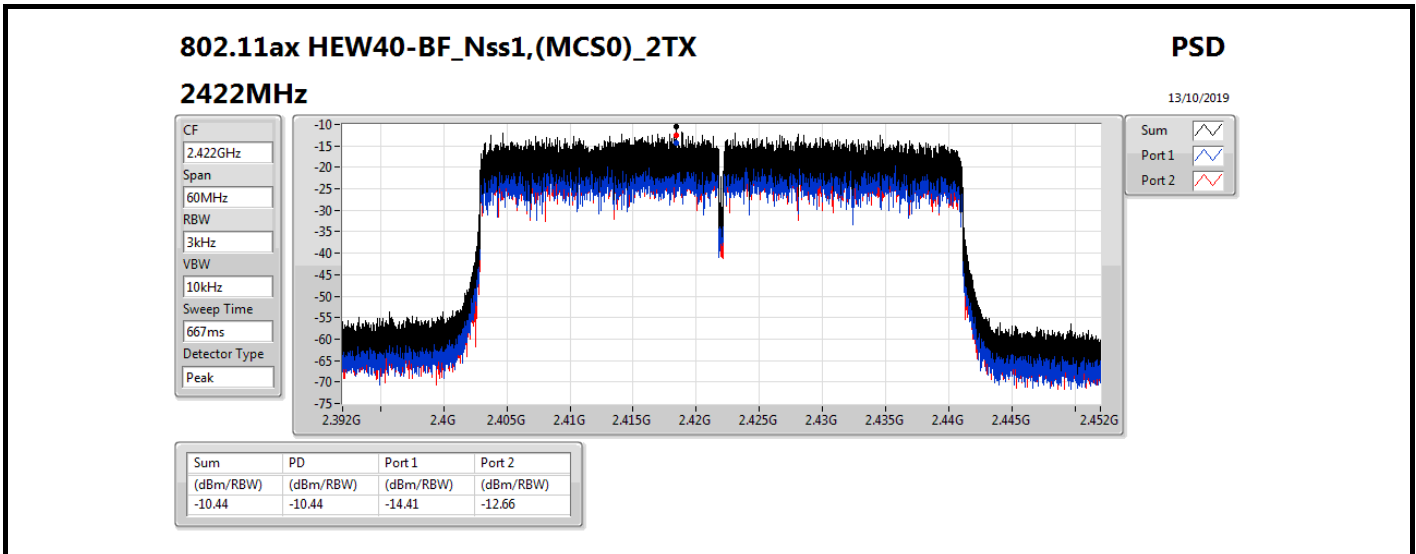
DG = Directional Gain; RBW=3 kHz;

PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X power density;









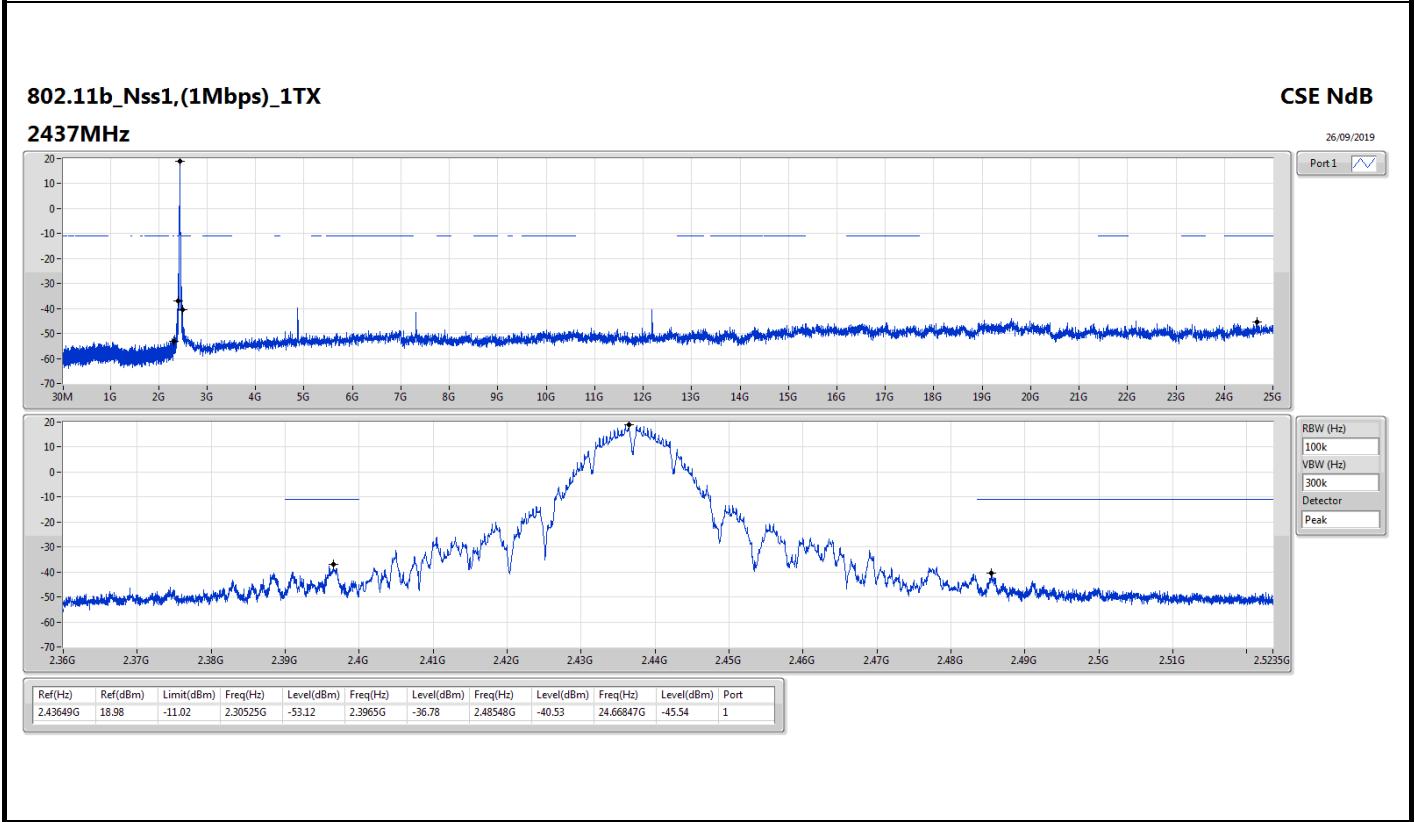
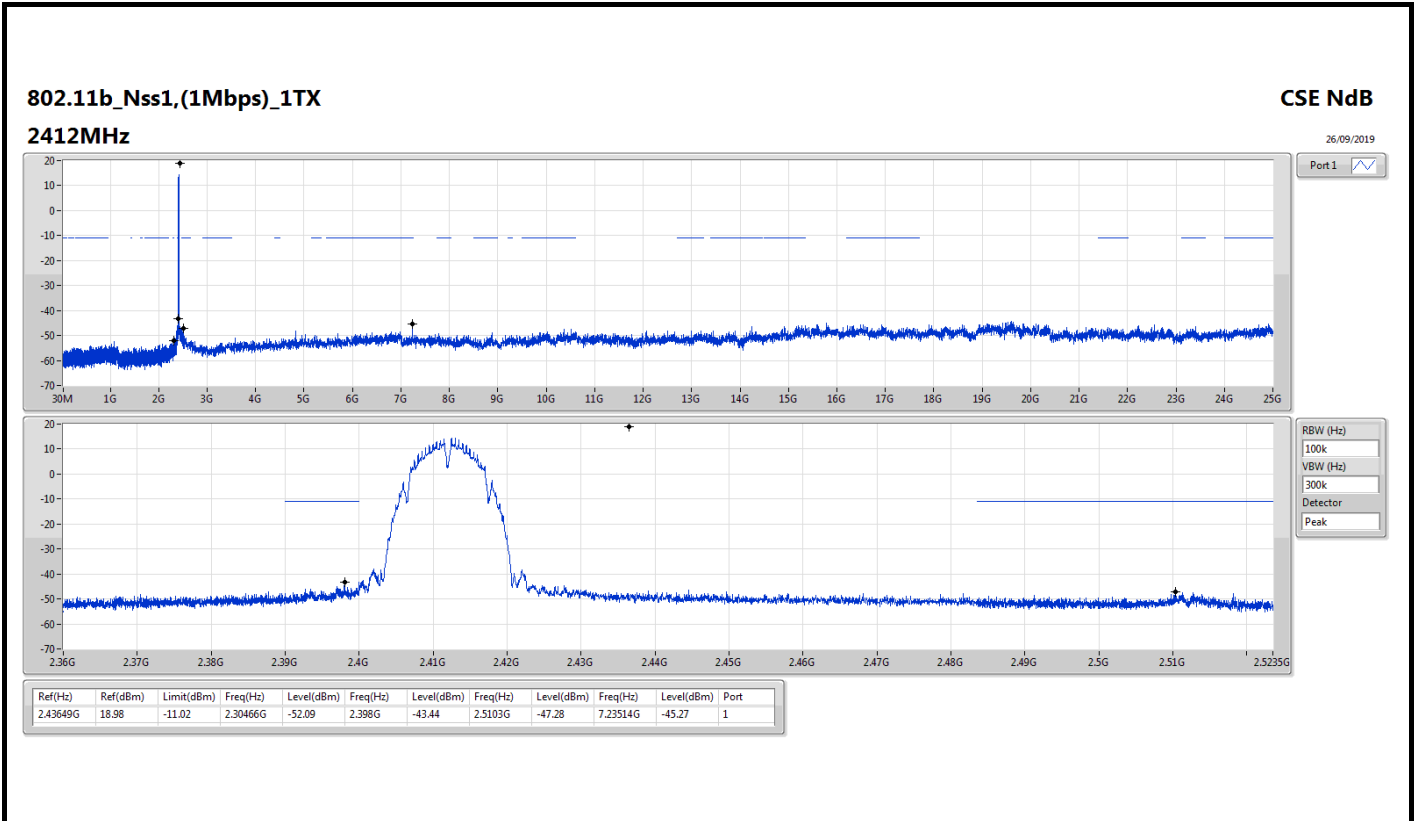


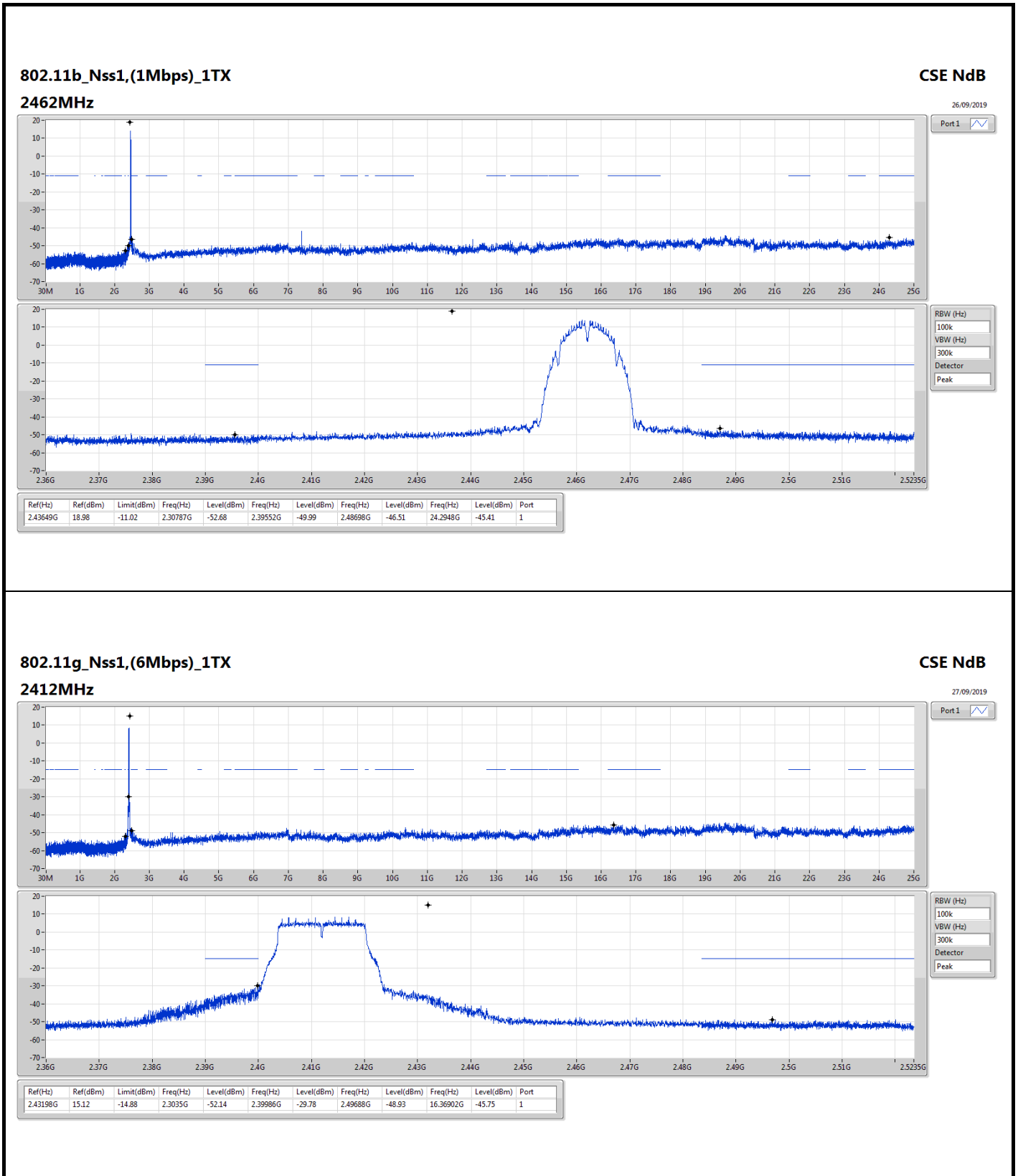
Summary

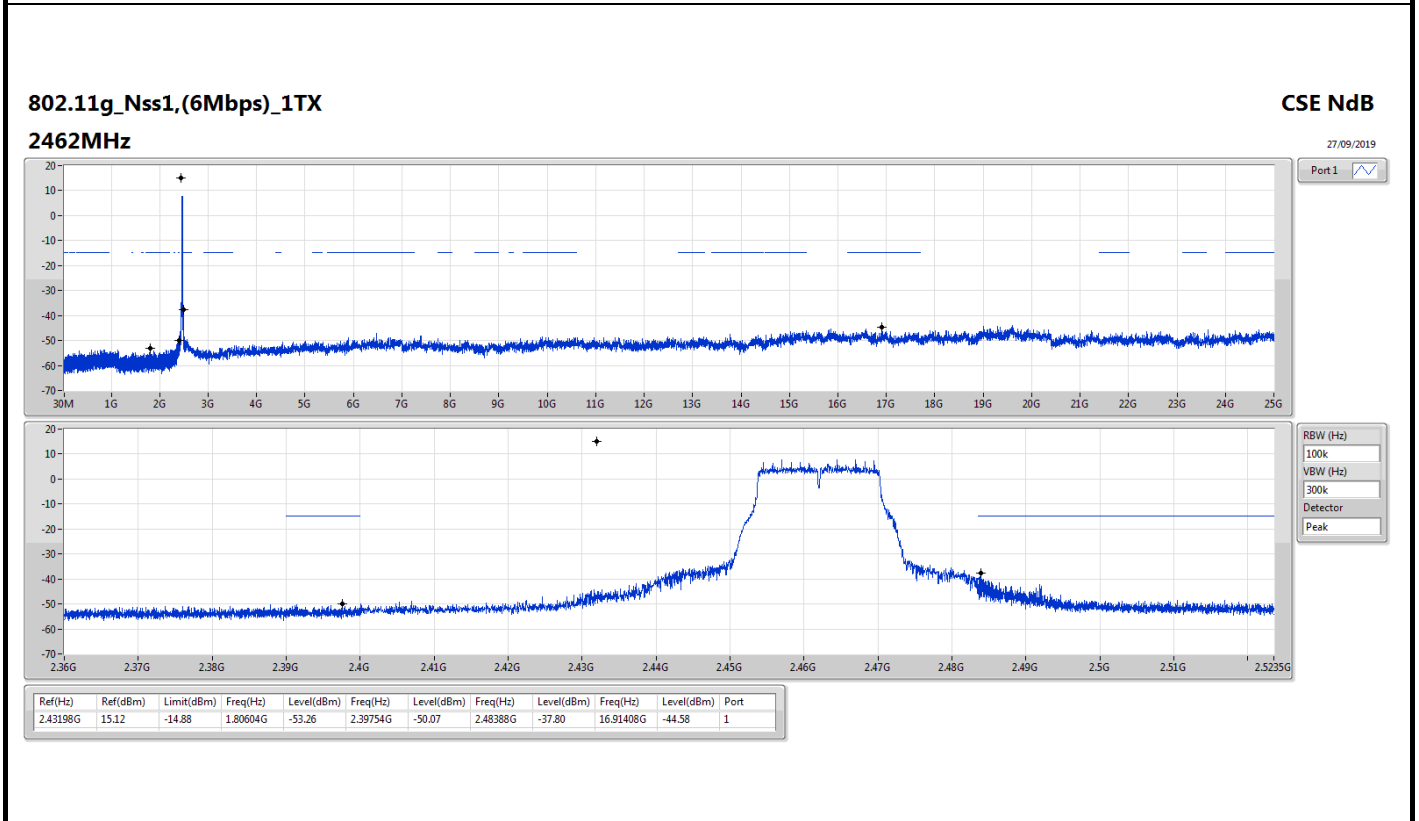
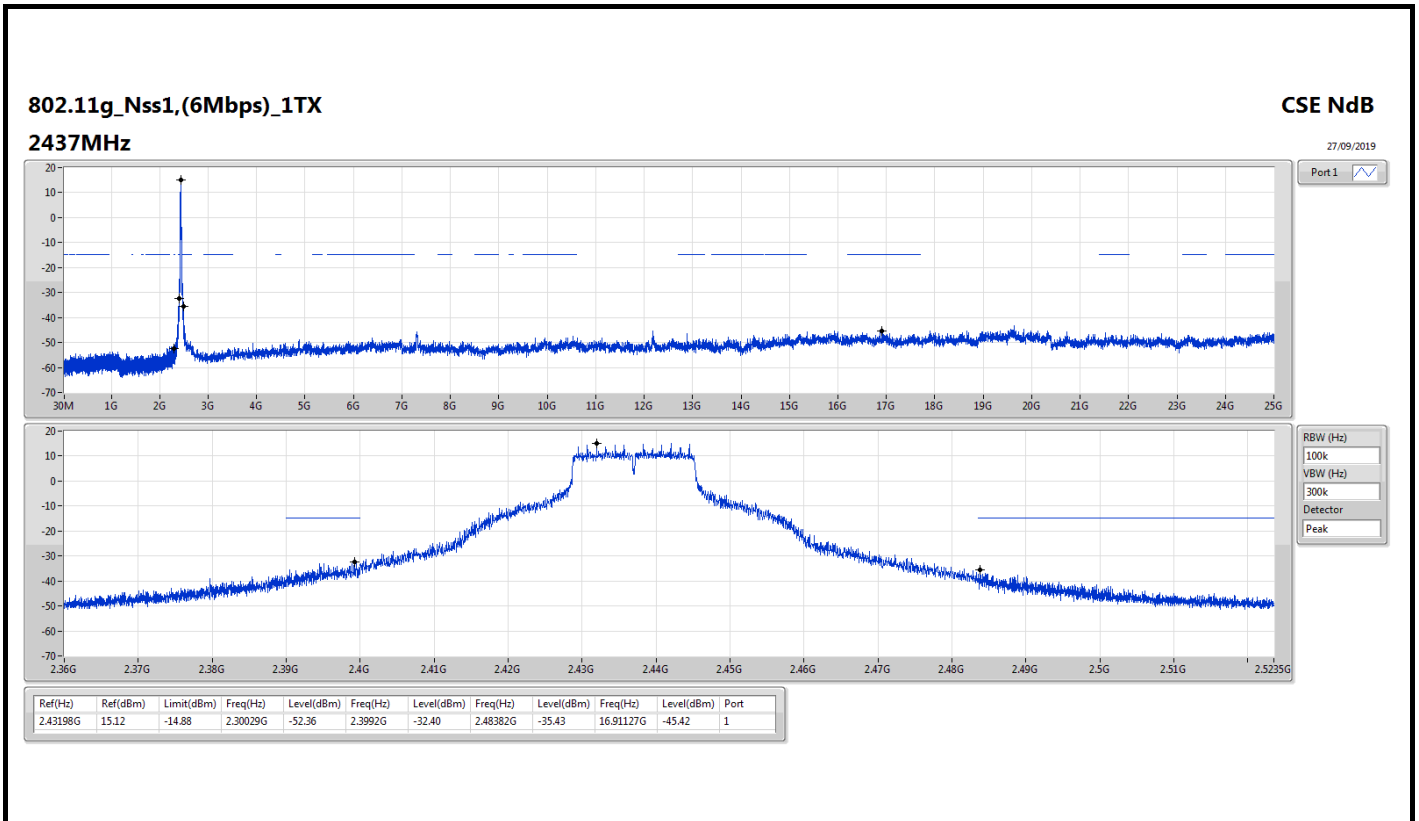
| Mode | Result | Ref (Hz) | Ref (dBm) | Limit (dBm) | Freq (Hz) | Level (dBm) | Freq (Hz) | Level (dBm) | Freq (Hz) | Level (dBm) | Freq (Hz) | Level (dBm) | Port |
|--------------------------------|--------|-------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|----------------|------|
| 2.4-2.4835GHz | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 802.11b_Nss1,(1Mbps)_1TX | Pass | 2.43649G | 18.98 | -11.02 | 2.30525G | -53.12 | 2.3965G | -36.78 | 2.48548G | -40.53 | 24.66847G | -45.54 | 1 |
| 802.11g_Nss1,(6Mbps)_1TX | Pass | 2.43198G | 15.12 | -14.88 | 2.3035G | -52.14 | 2.39986G | -29.78 | 2.49688G | -48.93 | 16.36902G | -45.75 | 1 |
| 802.11ax HEW20_Nss1,(MCS0)_1TX | Pass | 2.43945G | 13.61 | -16.39 | 2.30525G | -51.17 | 2.39996G | -26.89 | 2.48818G | -48.78 | 16.54322G | -45.60 | 1 |
| 802.11ax HEW40_Nss1,(MCS0)_1TX | Pass | 2.442G | 6.18 | -23.82 | 2.30712G | -52.49 | 2.39948G | -31.98 | 2.4847G | -36.69 | 16.98456G | -45.60 | 1 |

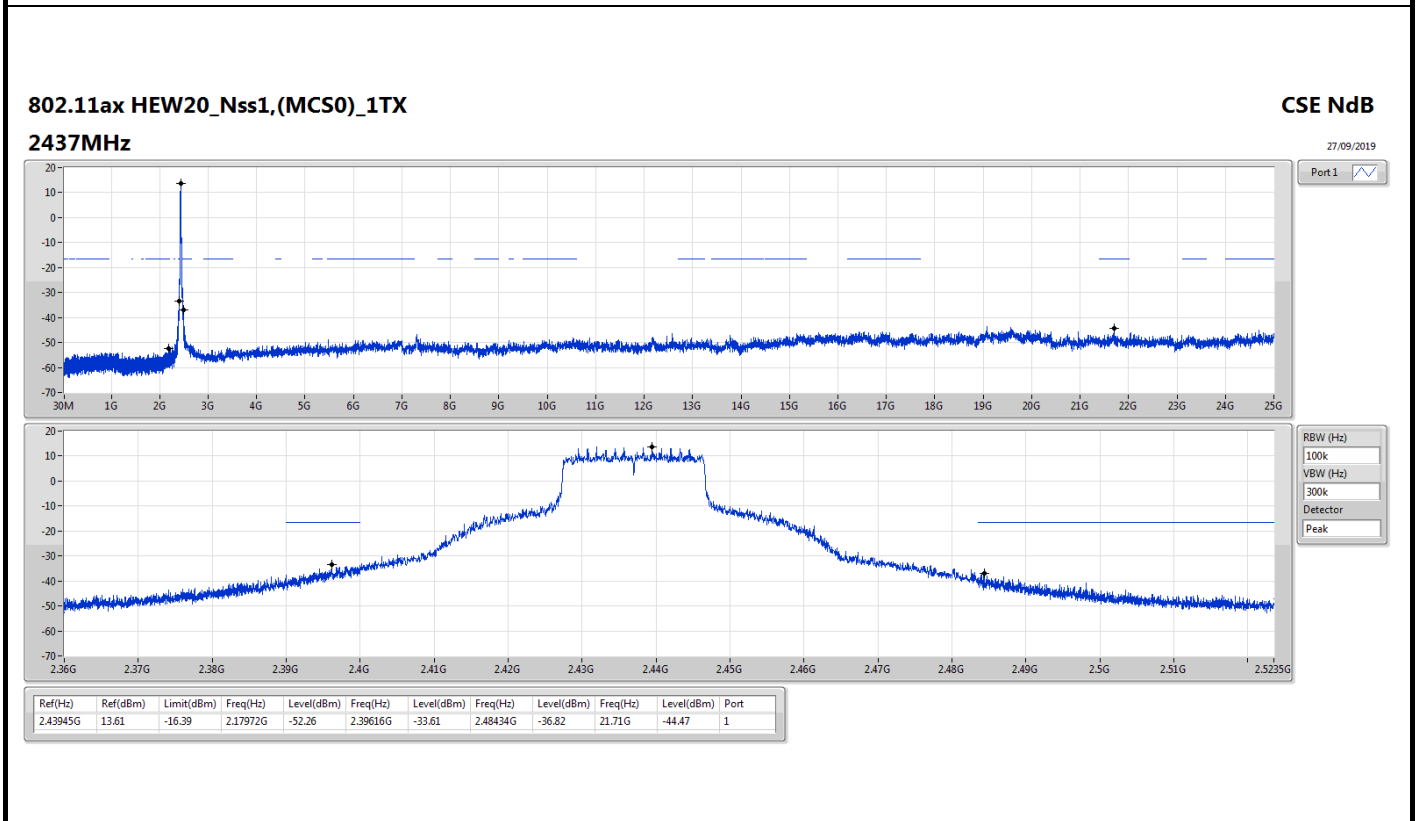
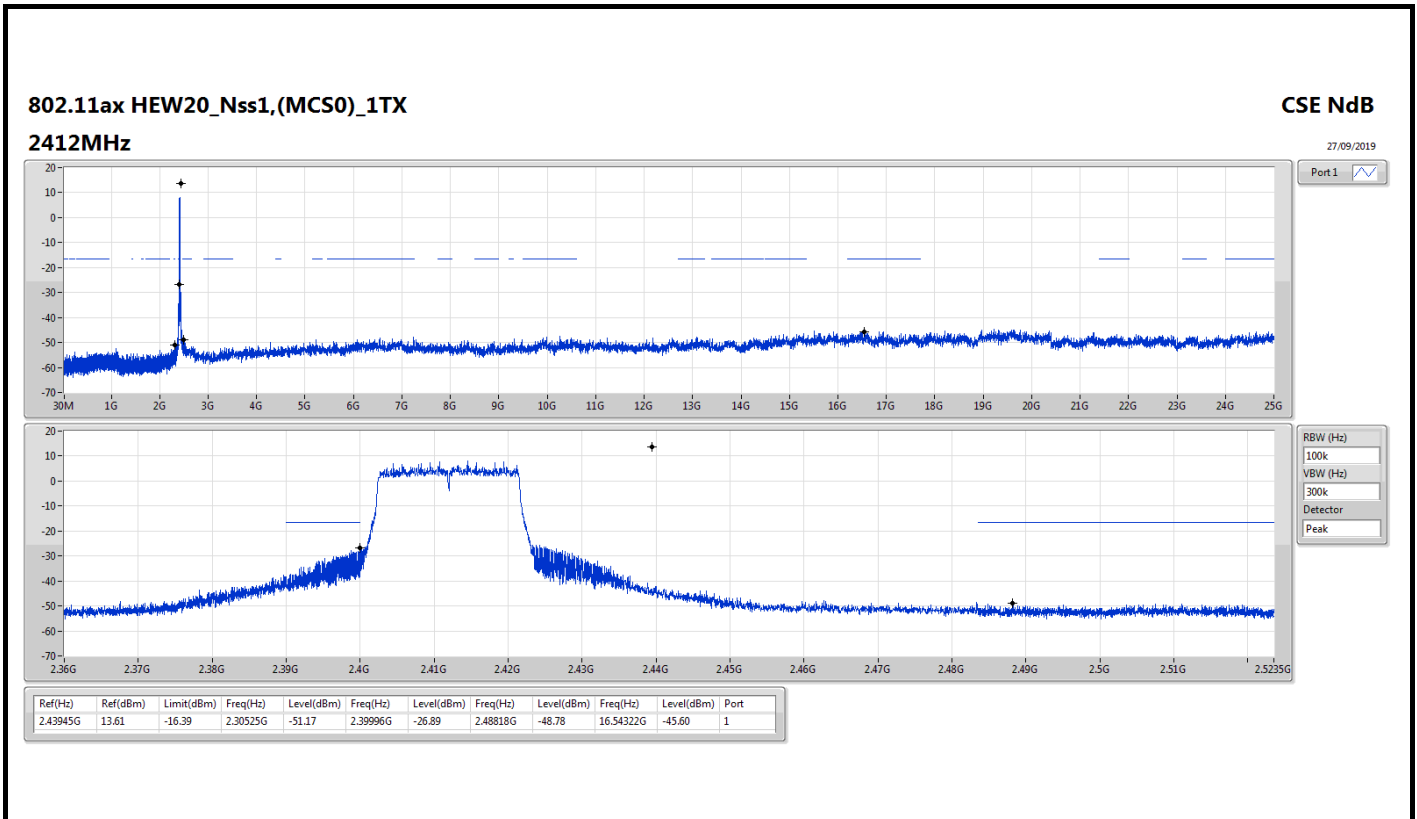
Result

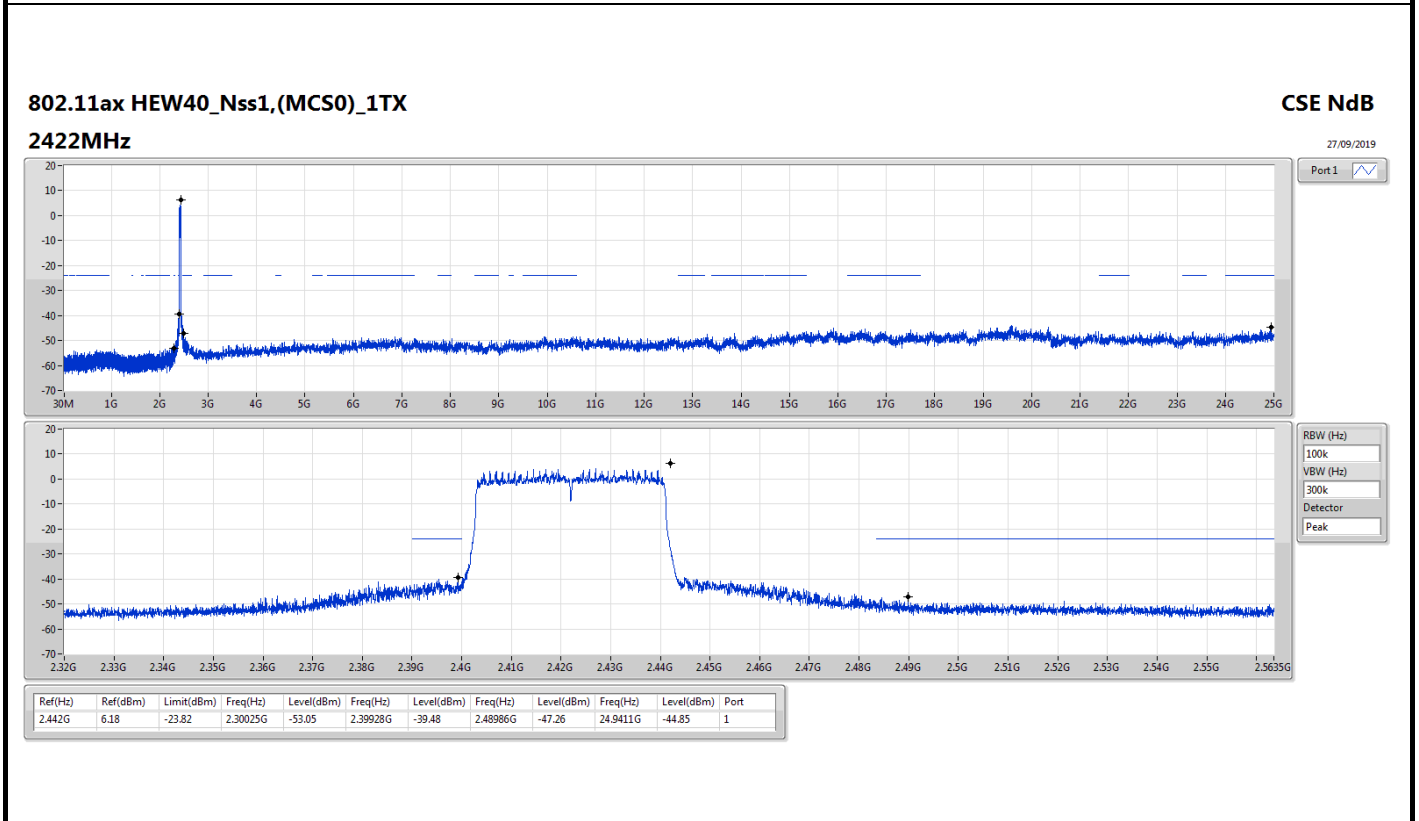
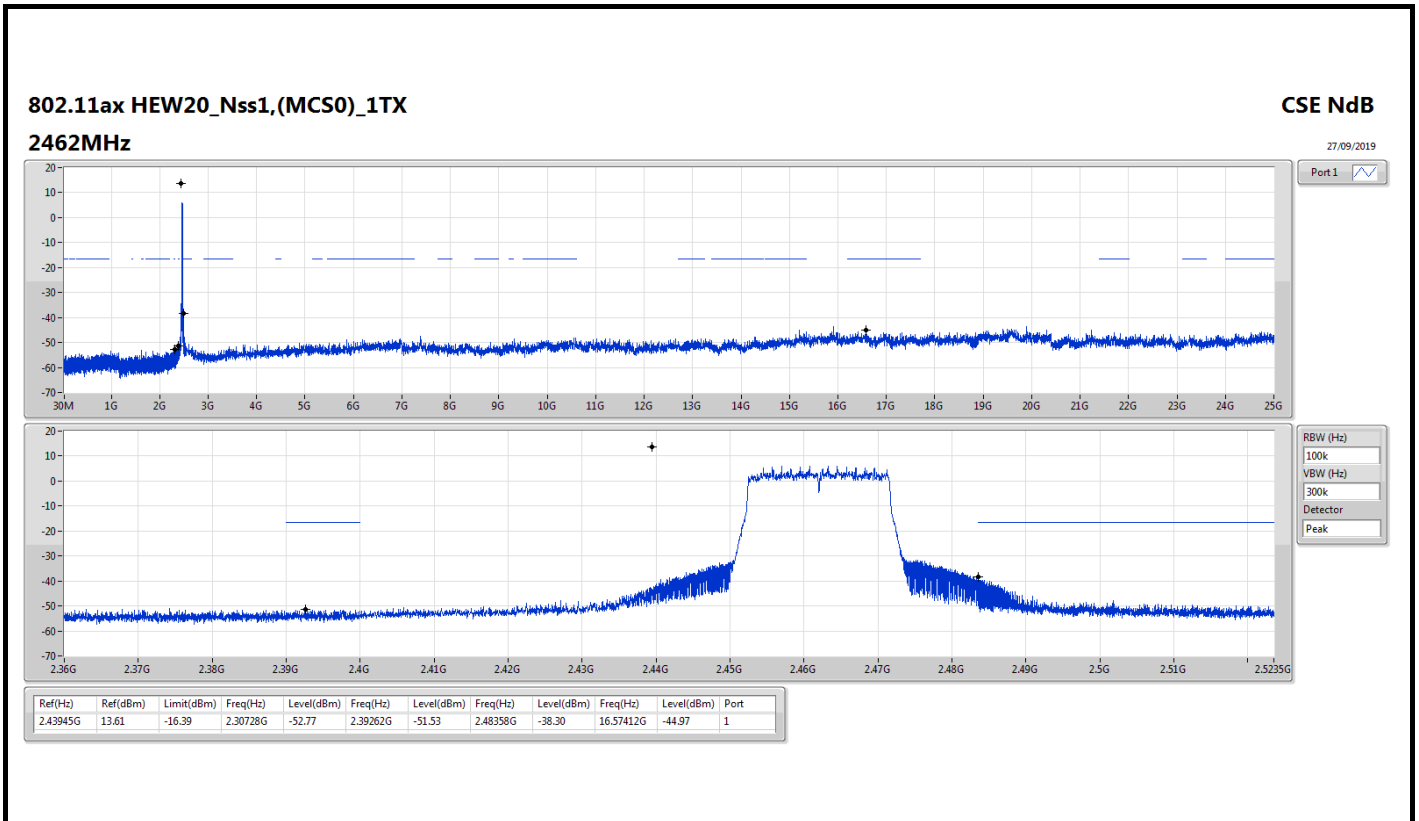
| Mode | Result | Ref (Hz) | Ref (dBm) | Limit (dBm) | Freq (Hz) | Level (dBm) | Freq (Hz) | Level (dBm) | Freq (Hz) | Level (dBm) | Freq (Hz) | Level (dBm) | Port |
|--------------------------------|--------|-------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|----------------|------|
| 802.11b_Nss1,(1Mbps)_1TX | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 2412MHz | Pass | 2.43649G | 18.98 | -11.02 | 2.30466G | -52.09 | 2.398G | -43.44 | 2.5103G | -47.28 | 7.23514G | -45.27 | 1 |
| 2437MHz | Pass | 2.43649G | 18.98 | -11.02 | 2.30525G | -53.12 | 2.3965G | -36.78 | 2.48548G | -40.53 | 24.66847G | -45.54 | 1 |
| 2462MHz | Pass | 2.43649G | 18.98 | -11.02 | 2.30787G | -52.68 | 2.39552G | -49.99 | 2.48698G | -46.51 | 24.2948G | -45.41 | 1 |
| 802.11g_Nss1,(6Mbps)_1TX | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 2412MHz | Pass | 2.43198G | 15.12 | -14.88 | 2.3035G | -52.14 | 2.39986G | -29.78 | 2.49688G | -48.93 | 16.36902G | -45.75 | 1 |
| 2437MHz | Pass | 2.43198G | 15.12 | -14.88 | 2.30029G | -52.36 | 2.3992G | -32.40 | 2.48382G | -35.43 | 16.91127G | -45.42 | 1 |
| 2462MHz | Pass | 2.43198G | 15.12 | -14.88 | 1.80604G | -53.26 | 2.39754G | -50.07 | 2.48388G | -37.80 | 16.91408G | -44.58 | 1 |
| 802.11ax HEW20_Nss1,(MCS0)_1TX | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 2412MHz | Pass | 2.43945G | 13.61 | -16.39 | 2.30525G | -51.17 | 2.39996G | -26.89 | 2.48818G | -48.78 | 16.54322G | -45.60 | 1 |
| 2437MHz | Pass | 2.43945G | 13.61 | -16.39 | 2.17972G | -52.26 | 2.39616G | -33.61 | 2.48434G | -36.82 | 21.71G | -44.47 | 1 |
| 2462MHz | Pass | 2.43945G | 13.61 | -16.39 | 2.30728G | -52.77 | 2.39262G | -51.53 | 2.48358G | -38.30 | 16.57412G | -44.97 | 1 |
| 802.11ax HEW40_Nss1,(MCS0)_1TX | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 2422MHz | Pass | 2.442G | 6.18 | -23.82 | 2.30025G | -53.05 | 2.39928G | -39.48 | 2.48986G | -47.26 | 24.9411G | -44.85 | 1 |
| 2437MHz | Pass | 2.442G | 6.18 | -23.82 | 2.30712G | -52.49 | 2.39948G | -31.98 | 2.4847G | -36.69 | 16.98456G | -45.60 | 1 |
| 2452MHz | Pass | 2.442G | 6.18 | -23.82 | 2.30712G | -53.33 | 2.39052G | -46.22 | 2.48418G | -38.40 | 16.49376G | -43.59 | 1 |

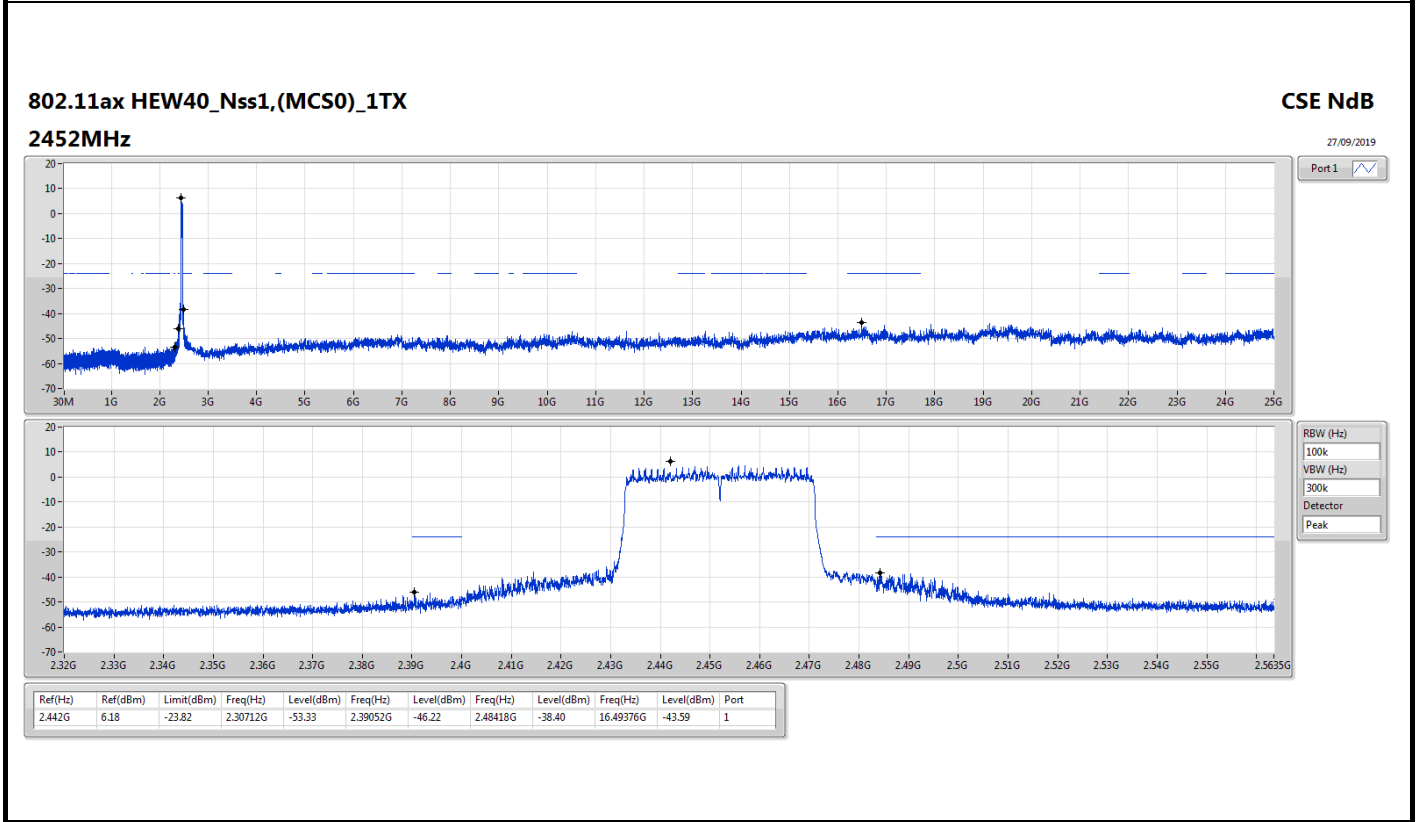
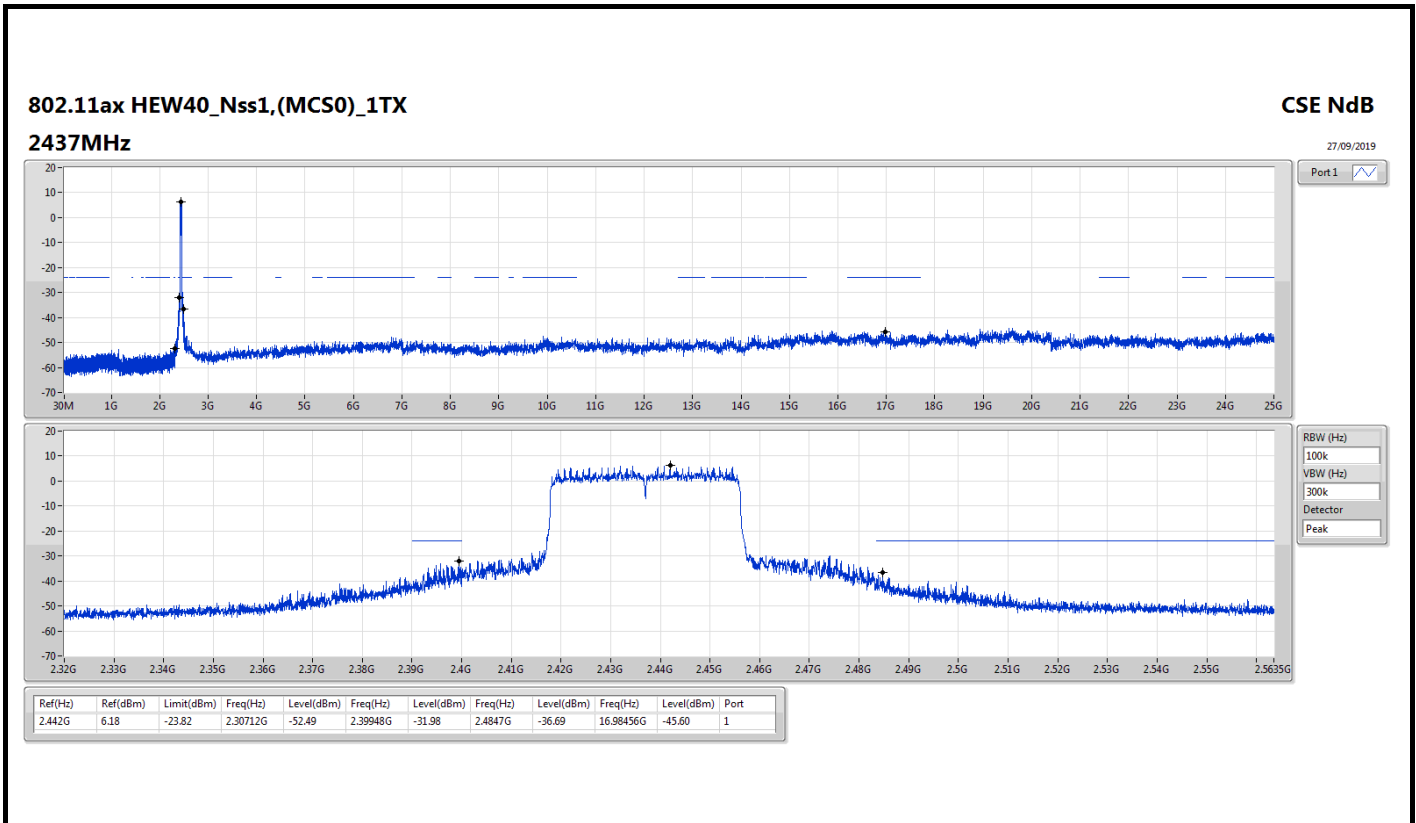














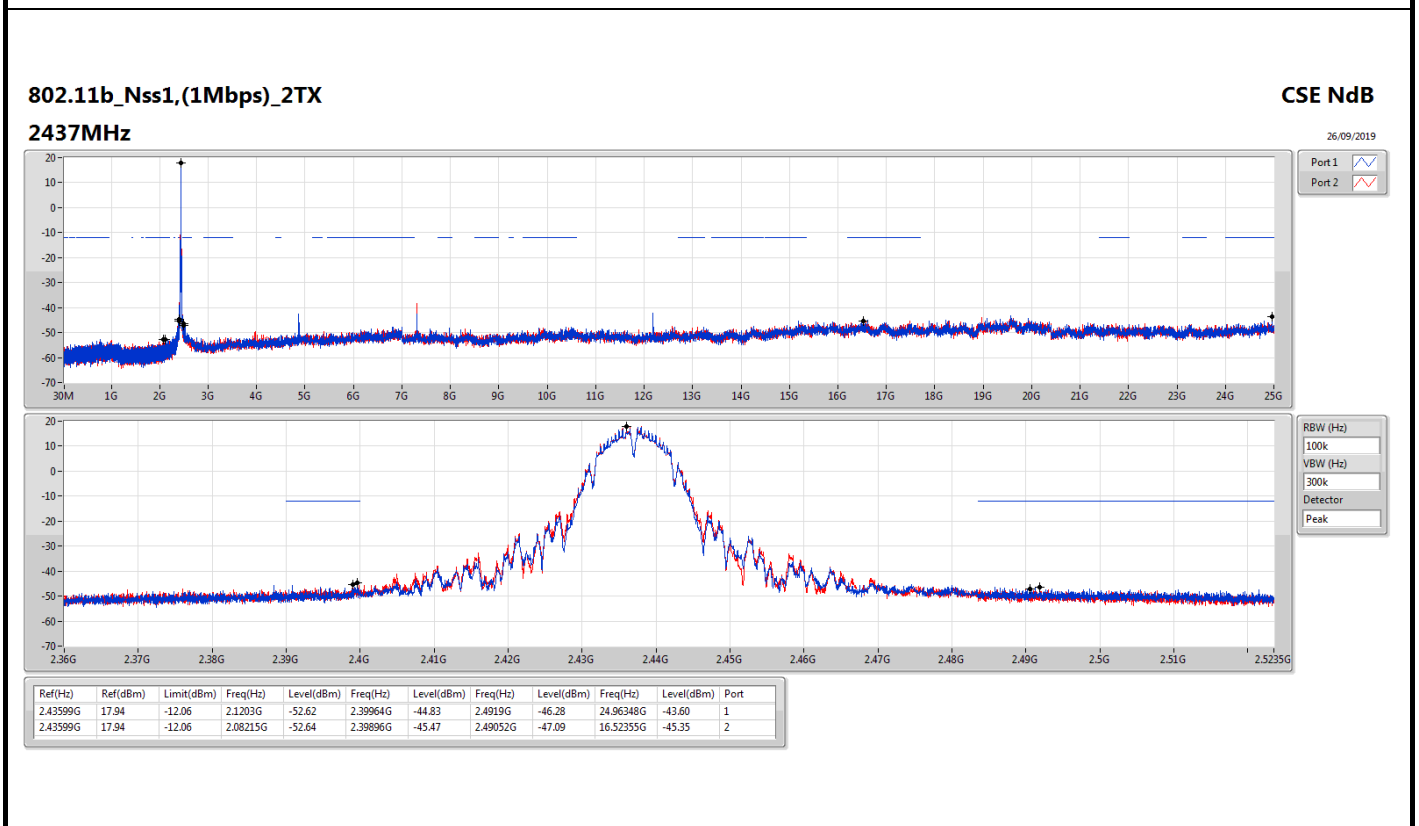
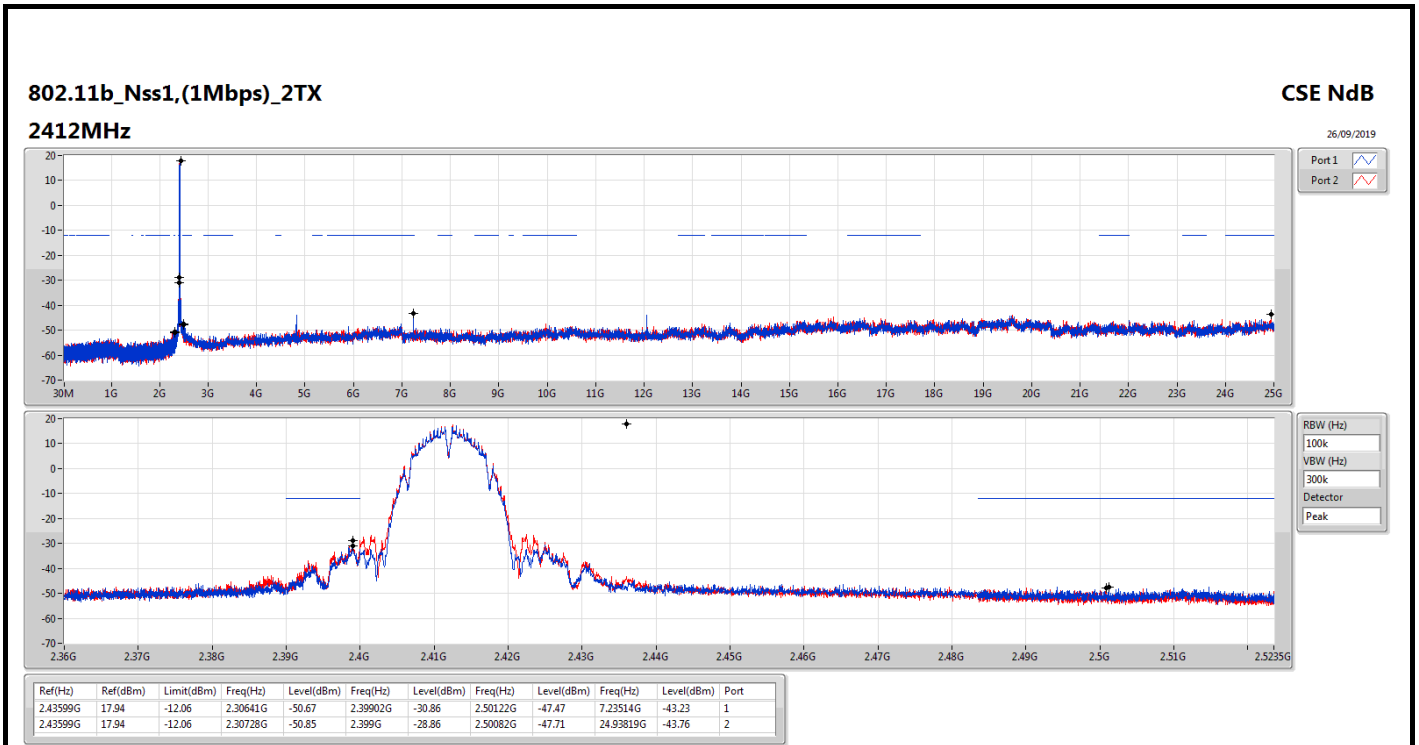
Summary

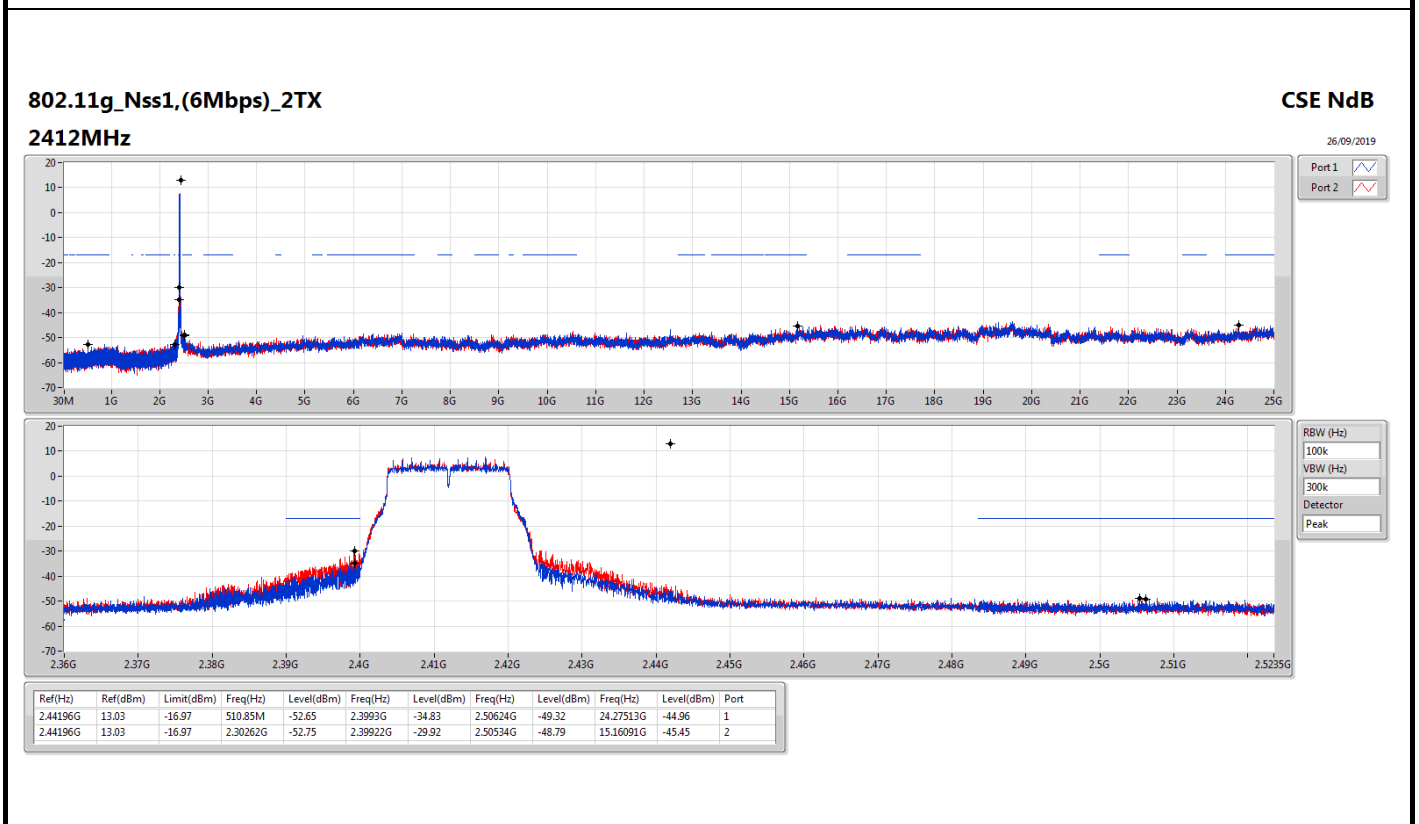
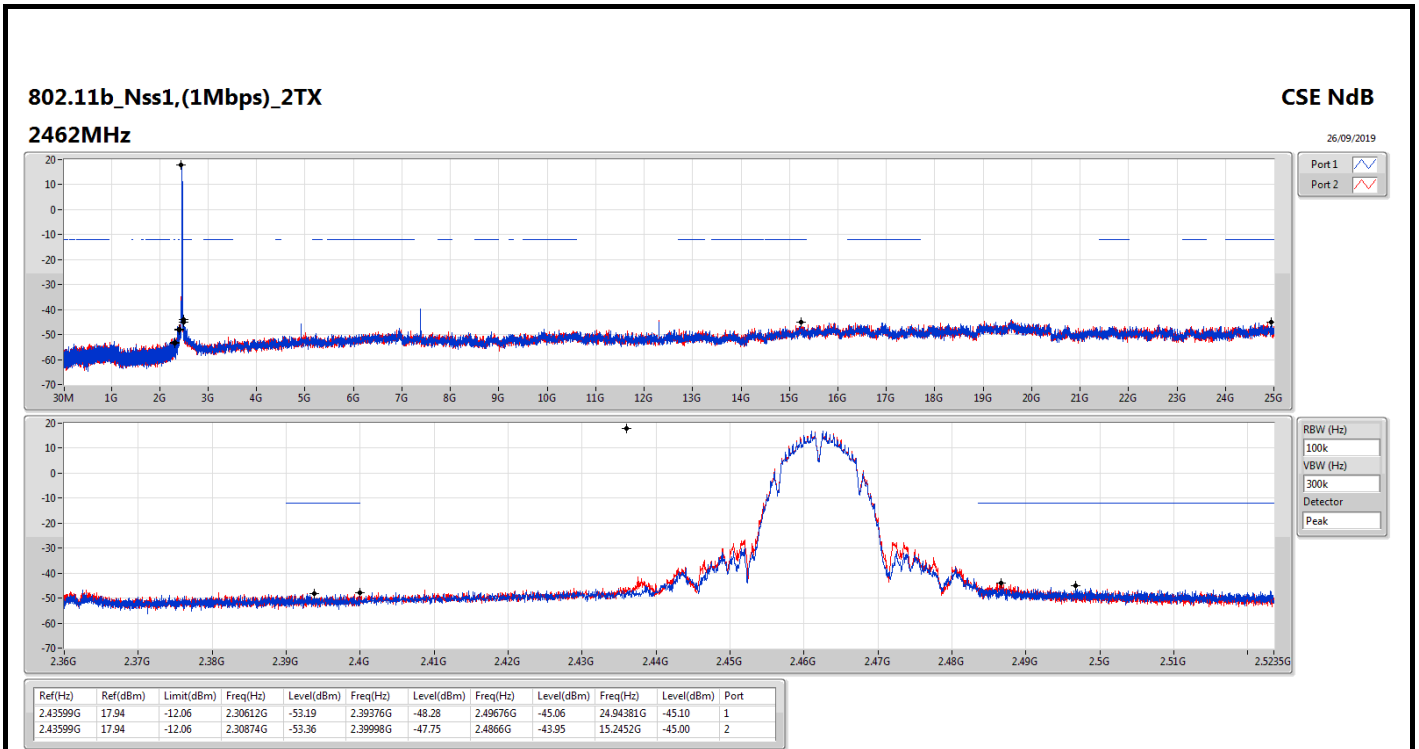
| Mode | Result | Ref (Hz) | Ref (dBm) | Limit (dBm) | Freq (Hz) | Level (dBm) | Freq (Hz) | Level (dBm) | Freq (Hz) | Level (dBm) | Freq (Hz) | Level (dBm) | Port |
|--------------------------------|--------|-------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|----------------|------|
| 2.4-2.4835GHz | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 802.11b_Nss1,(1Mbps)_2TX | Pass | 2.43599G | 17.94 | -12.06 | 2.30728G | -50.85 | 2.399G | -28.86 | 2.50082G | -47.71 | 24.93819G | -43.76 | 2 |
| 802.11g_Nss1,(6Mbps)_2TX | Pass | 2.44196G | 13.03 | -16.97 | 2.30262G | -52.75 | 2.39922G | -29.92 | 2.50534G | -48.79 | 15.16091G | -45.45 | 2 |
| 802.11ax HEW20_Nss2,(MCS0)_2TX | Pass | 2.44196G | 11.98 | -18.02 | 2.3035G | -53.05 | 2.3977G | -49.24 | 2.48436G | -36.71 | 16.45893G | -44.5 | 2 |
| 802.11ax HEW40_Nss2,(MCS0)_2TX | Pass | 2.43198G | 5.58 | -24.42 | 2.30483G | -52.83 | 2.39976G | -30.1 | 2.48534G | -36.42 | 16.53303G | -45.19 | 2 |

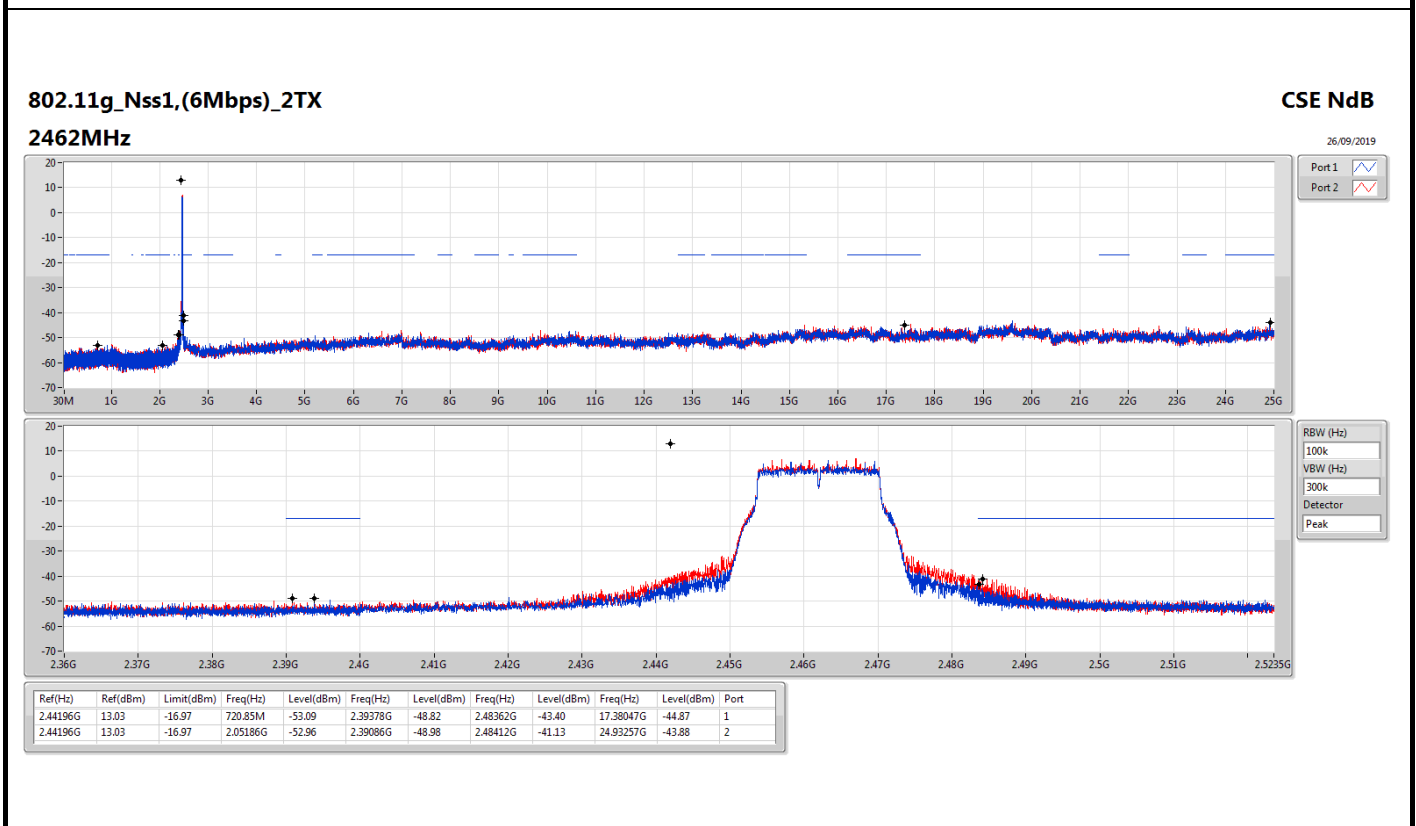
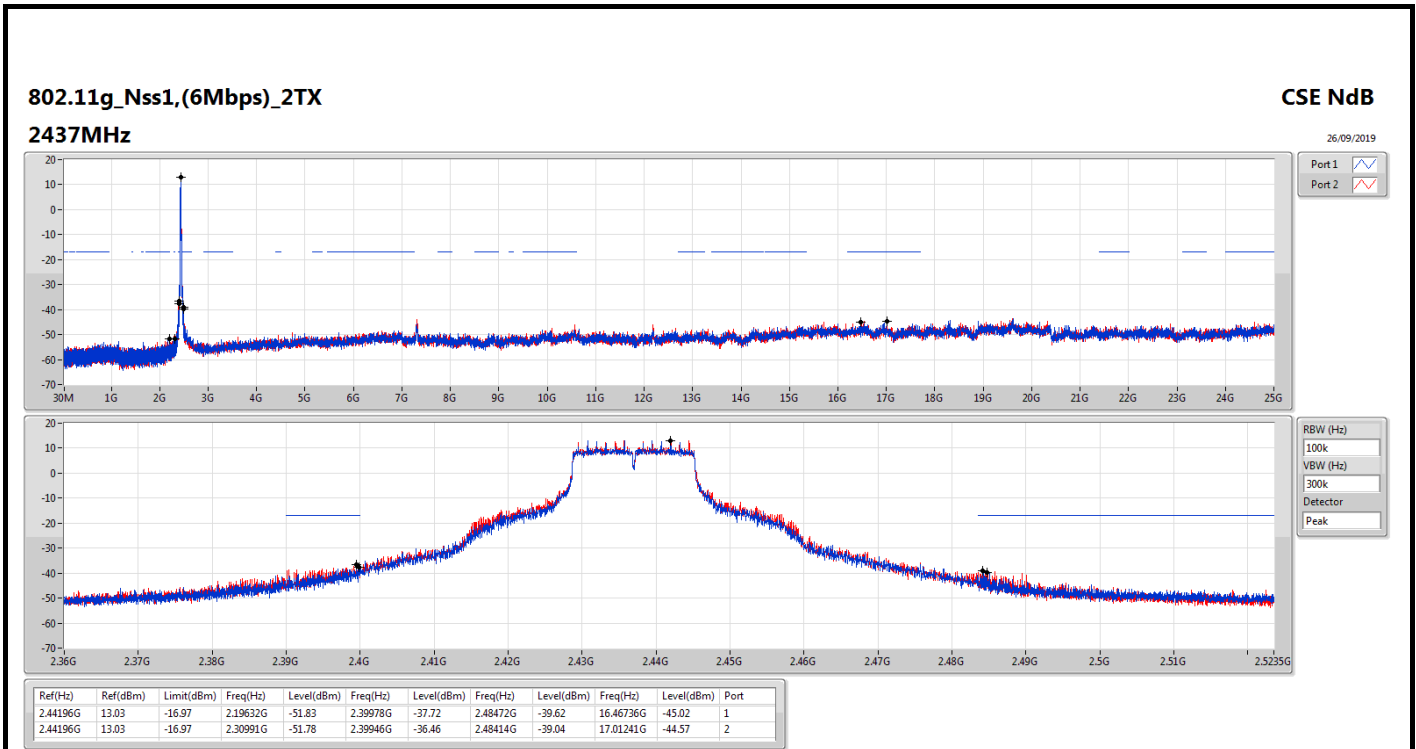


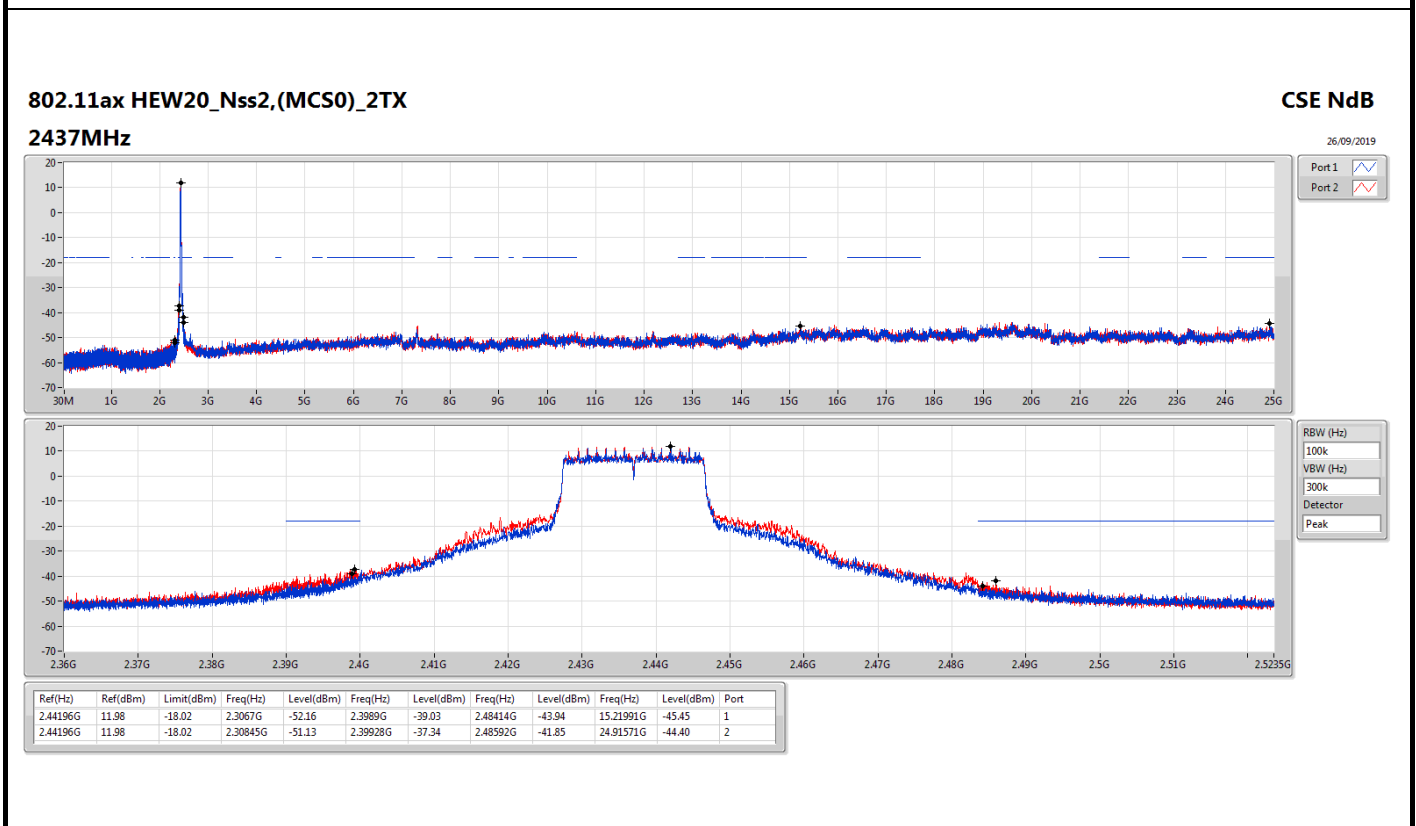
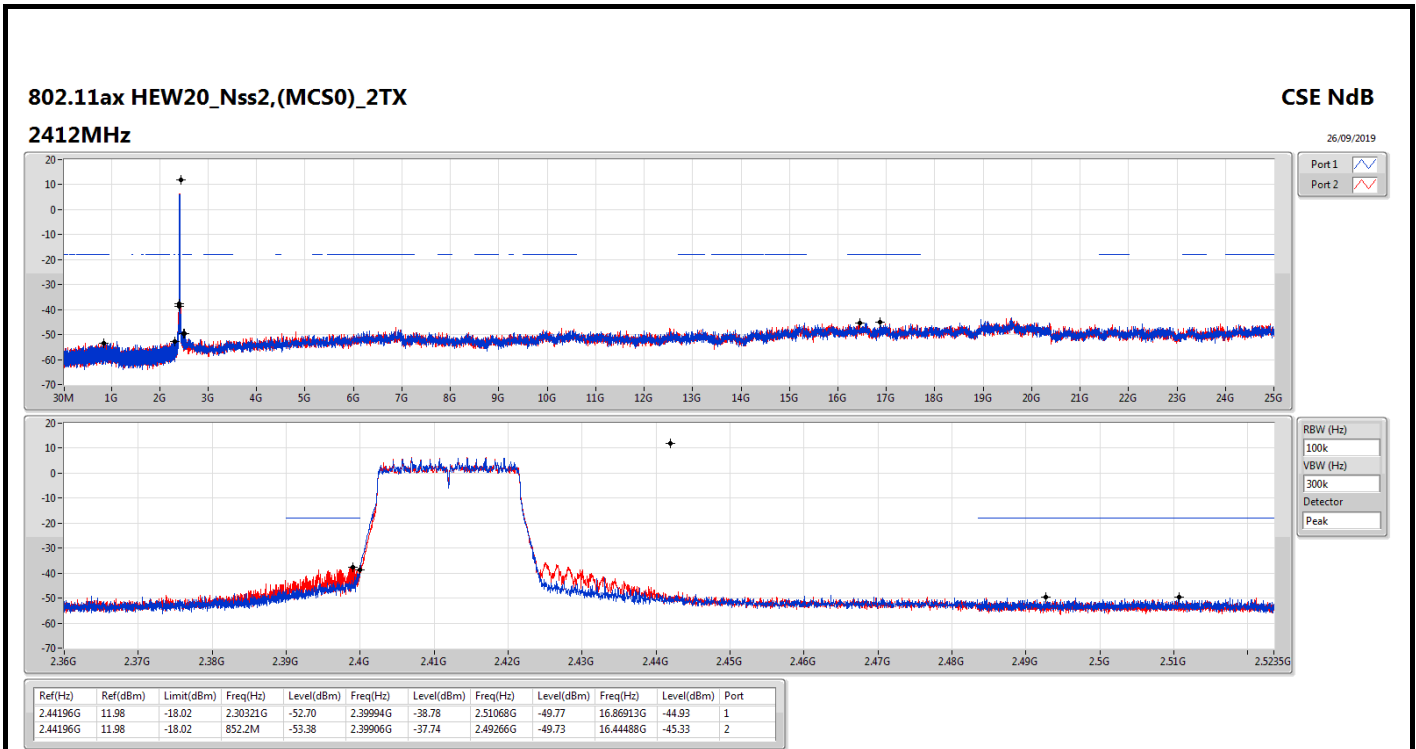
Result

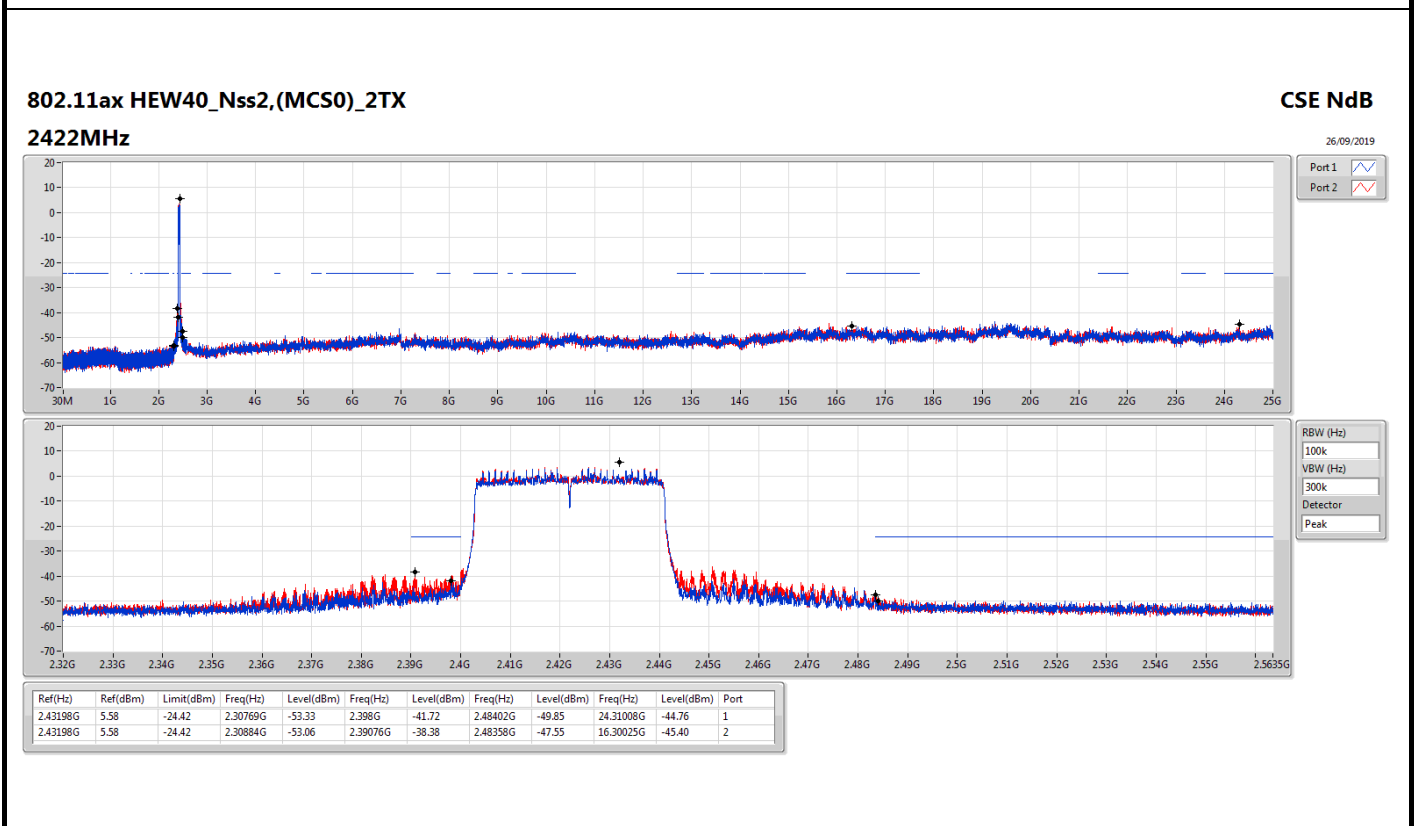
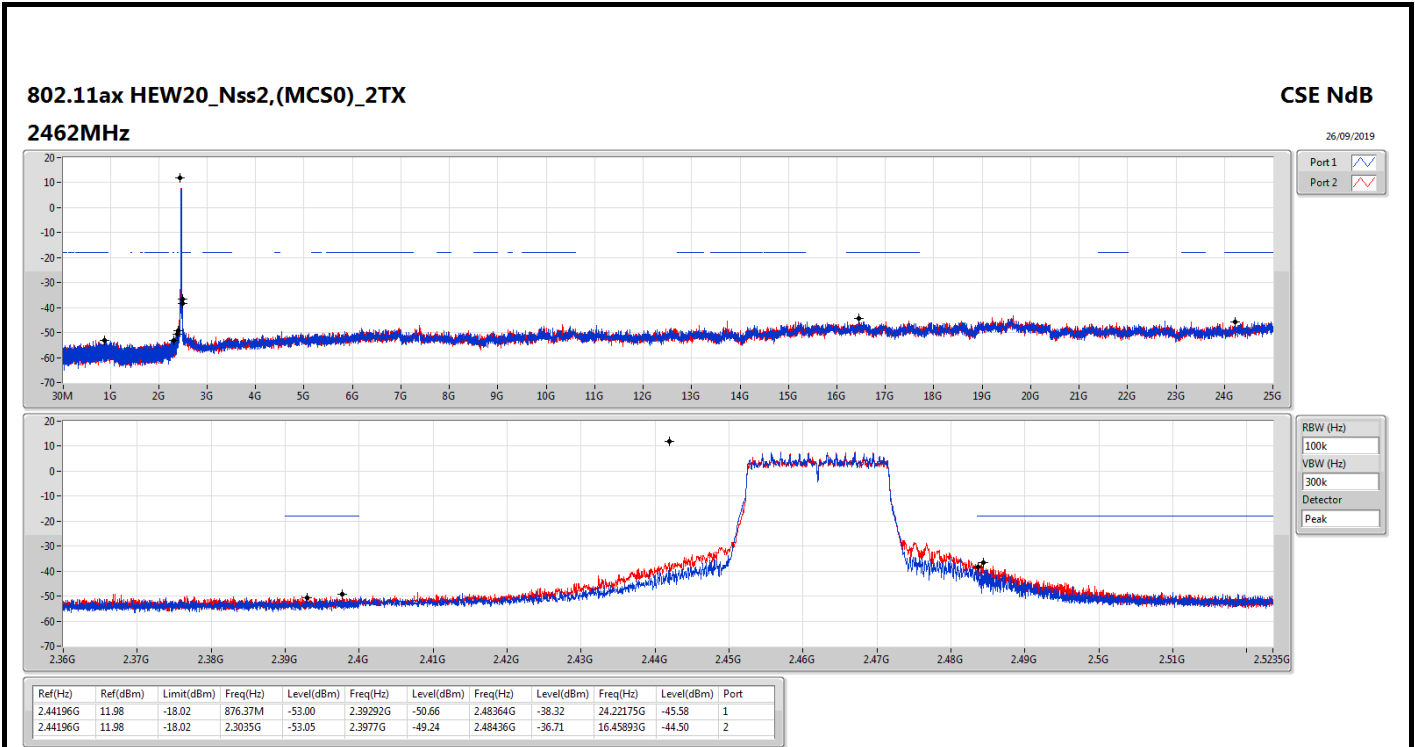
| Mode | Result | Ref (Hz) | Ref (dBm) | Limit (dBm) | Freq (Hz) | Level (dBm) | Freq (Hz) | Level (dBm) | Freq (Hz) | Level (dBm) | Freq (Hz) | Level (dBm) | Port |
|--------------------------------|--------|-------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|----------------|------|
| 802.11b_Nss1,(1Mbps)_2TX | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 2412MHz | Pass | 2.43599G | 17.94 | -12.06 | 2.30641G | -50.67 | 2.39902G | -30.86 | 2.50122G | -47.47 | 7.23514G | -43.23 | 1 |
| 2412MHz | Pass | 2.43599G | 17.94 | -12.06 | 2.30728G | -50.85 | 2.399G | -28.86 | 2.50082G | -47.71 | 24.93819G | -43.76 | 2 |
| 2437MHz | Pass | 2.43599G | 17.94 | -12.06 | 2.1203G | -52.62 | 2.39964G | -44.83 | 2.4919G | -46.28 | 24.96348G | -43.6 | 1 |
| 2437MHz | Pass | 2.43599G | 17.94 | -12.06 | 2.08215G | -52.64 | 2.39896G | -45.47 | 2.49052G | -47.09 | 16.52355G | -45.35 | 2 |
| 2462MHz | Pass | 2.43599G | 17.94 | -12.06 | 2.30612G | -53.19 | 2.39376G | -48.28 | 2.49676G | -45.06 | 24.94381G | -45.1 | 1 |
| 2462MHz | Pass | 2.43599G | 17.94 | -12.06 | 2.30874G | -53.36 | 2.39998G | -47.75 | 2.4866G | -43.95 | 15.2452G | -45 | 2 |
| 802.11g_Nss1,(6Mbps)_2TX | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 2412MHz | Pass | 2.44196G | 13.03 | -16.97 | 510.85M | -52.65 | 2.3993G | -34.83 | 2.50624G | -49.32 | 24.27513G | -44.96 | 1 |
| 2412MHz | Pass | 2.44196G | 13.03 | -16.97 | 2.30262G | -52.75 | 2.39922G | -29.92 | 2.50534G | -48.79 | 15.16091G | -45.45 | 2 |
| 2437MHz | Pass | 2.44196G | 13.03 | -16.97 | 2.19632G | -51.83 | 2.39978G | -37.72 | 2.48472G | -39.62 | 16.46736G | -45.02 | 1 |
| 2437MHz | Pass | 2.44196G | 13.03 | -16.97 | 2.30991G | -51.78 | 2.39946G | -36.46 | 2.48414G | -39.04 | 17.01241G | -44.57 | 2 |
| 2462MHz | Pass | 2.44196G | 13.03 | -16.97 | 720.85M | -53.09 | 2.39378G | -48.82 | 2.48362G | -43.4 | 17.38047G | -44.87 | 1 |
| 2462MHz | Pass | 2.44196G | 13.03 | -16.97 | 2.05186G | -52.96 | 2.39086G | -48.98 | 2.48412G | -41.13 | 24.93257G | -43.88 | 2 |
| 802.11ax HEW20_Nss2,(MCS0)_2TX | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 2412MHz | Pass | 2.44196G | 11.98 | -18.02 | 2.30321G | -52.7 | 2.39994G | -38.78 | 2.51068G | -49.77 | 16.86913G | -44.93 | 1 |
| 2412MHz | Pass | 2.44196G | 11.98 | -18.02 | 852.2M | -53.38 | 2.39906G | -37.74 | 2.49266G | -49.73 | 16.44488G | -45.33 | 2 |
| 2437MHz | Pass | 2.44196G | 11.98 | -18.02 | 2.3067G | -52.16 | 2.3989G | -39.03 | 2.48414G | -43.94 | 15.21991G | -45.45 | 1 |
| 2437MHz | Pass | 2.44196G | 11.98 | -18.02 | 2.30845G | -51.13 | 2.39928G | -37.34 | 2.48592G | -41.85 | 24.91571G | -44.4 | 2 |
| 2462MHz | Pass | 2.44196G | 11.98 | -18.02 | 876.37M | -53 | 2.39292G | -50.66 | 2.48364G | -38.32 | 24.22175G | -45.58 | 1 |
| 2462MHz | Pass | 2.44196G | 11.98 | -18.02 | 2.3035G | -53.05 | 2.3977G | -49.24 | 2.48436G | -36.71 | 16.45893G | -44.5 | 2 |
| 802.11ax HEW40_Nss2,(MCS0)_2TX | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 2422MHz | Pass | 2.43198G | 5.58 | -24.42 | 2.30769G | -53.33 | 2.398G | -41.72 | 2.48402G | -49.85 | 24.31008G | -44.76 | 1 |
| 2422MHz | Pass | 2.43198G | 5.58 | -24.42 | 2.30884G | -53.06 | 2.39076G | -38.38 | 2.48358G | -47.55 | 16.30025G | -45.4 | 2 |
| 2437MHz | Pass | 2.43198G | 5.58 | -24.42 | 1.95933G | -52.44 | 2.39976G | -32.37 | 2.48594G | -37.82 | 17.27904G | -45.45 | 1 |
| 2437MHz | Pass | 2.43198G | 5.58 | -24.42 | 2.30483G | -52.83 | 2.39976G | -30.1 | 2.48534G | -36.42 | 16.53303G | -45.19 | 2 |
| 2452MHz | Pass | 2.43198G | 5.58 | -24.42 | 2.30397G | -52.24 | 2.3988G | -47.39 | 2.48526G | -42.2 | 16.93969G | -45.37 | 1 |
| 2452MHz | Pass | 2.43198G | 5.58 | -24.42 | 937.7M | -53.28 | 2.39848G | -44.17 | 2.48498G | -37.26 | 24.8794G | -45.79 | 2 |

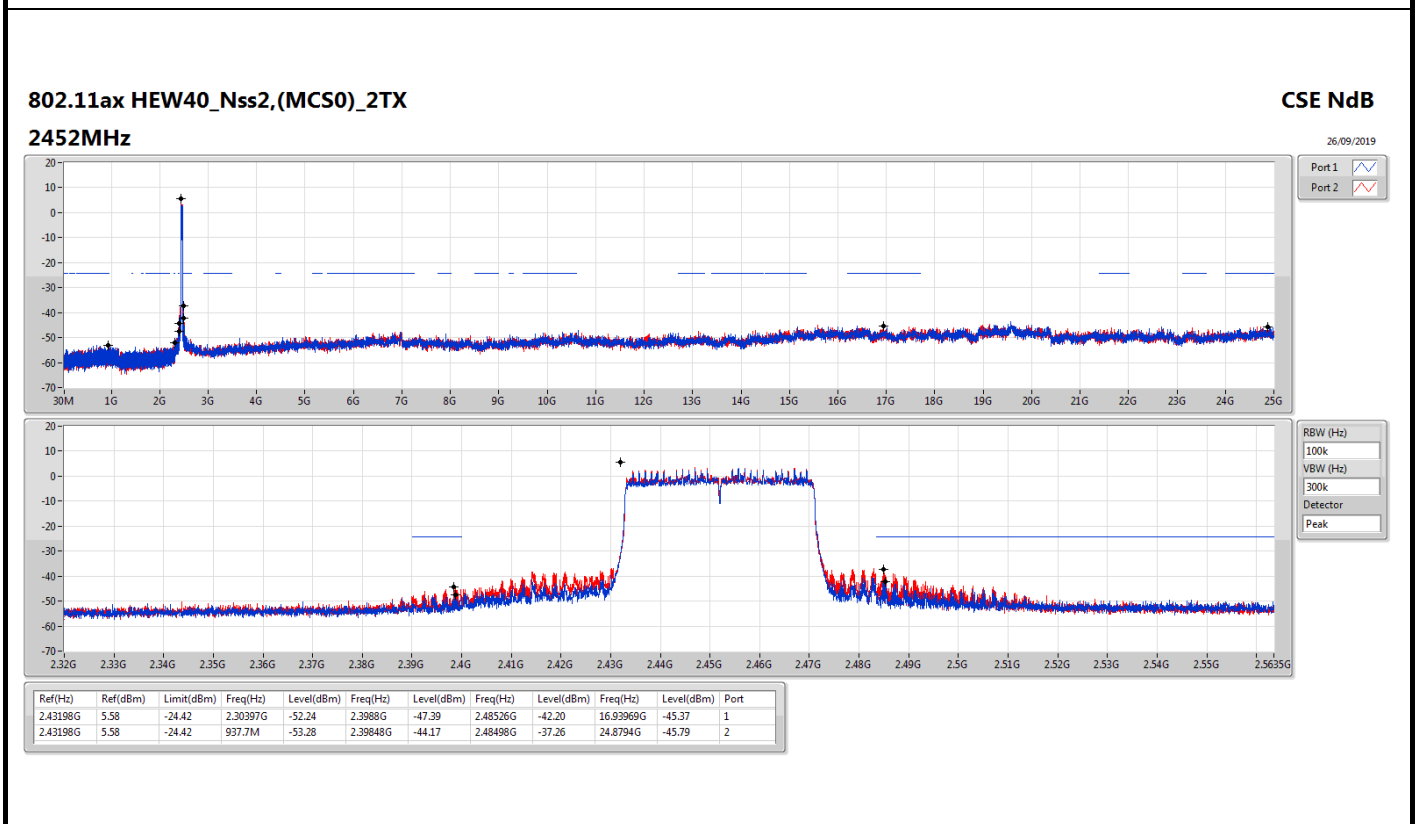
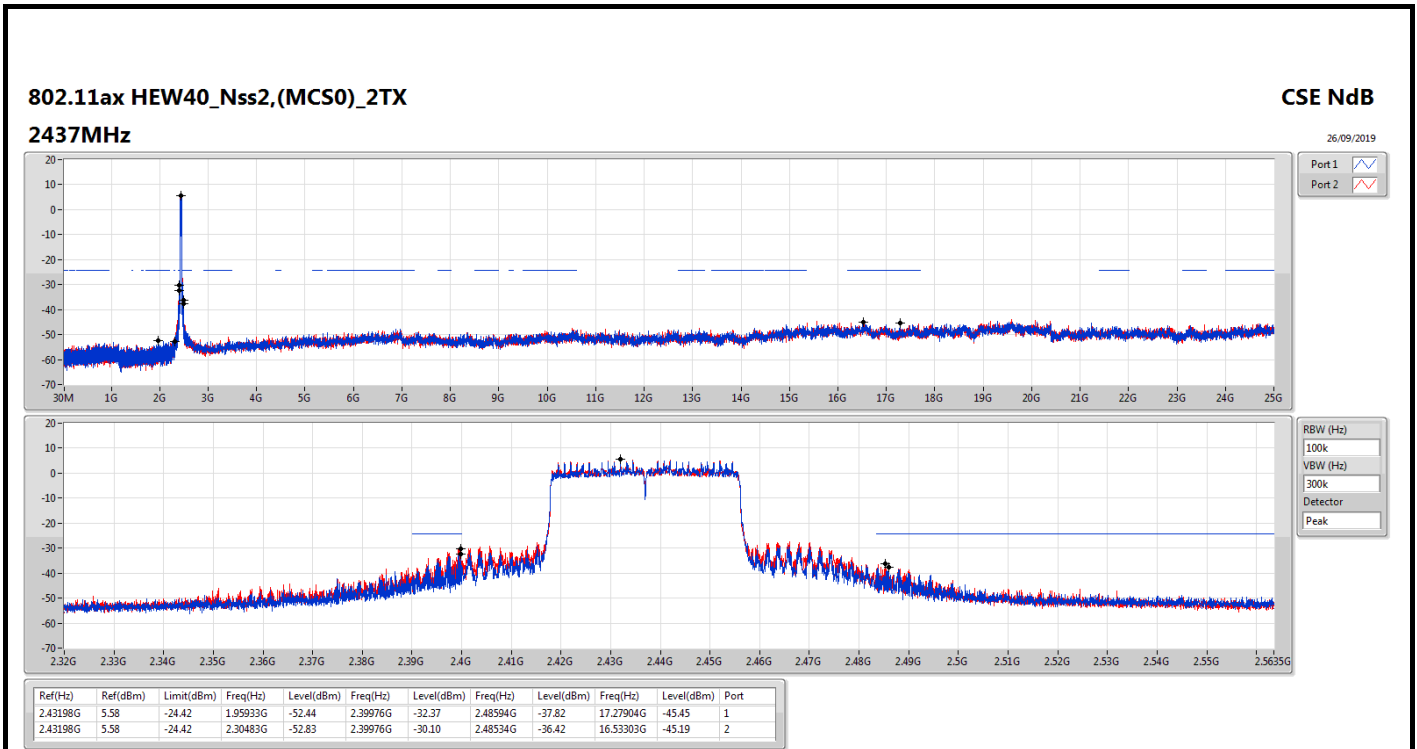














Summary

| Mode | Result | Ref (Hz) | Ref (dBm) | Limit (dBm) | Freq (Hz) | Level (dBm) | Freq (Hz) | Level (dBm) | Freq (Hz) | Level (dBm) | Freq (Hz) | Level (dBm) | Port |
|-----------------------------------|--------|-------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|----------------|------|
| 2.4-2.4835GHz | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 802.11ax HEW20-BF_Nss1,(MCS0)_2TX | Pass | 2.43198G | 12.98 | -17.02 | 2.30175G | -52.73 | 2.39996G | -24.41 | 2.52052G | -49.80 | 6.50746G | -47.04 | 2 |
| 802.11ax HEW40-BF_Nss1,(MCS0)_2TX | Pass | 2.43198G | 6.05 | -23.95 | 2.12363G | -52.80 | 2.39944G | -31.11 | 2.48478G | -36.61 | 16.8864G | -46.89 | 2 |

Result

| Mode | Result | Ref (Hz) | Ref (dBm) | Limit (dBm) | Freq (Hz) | Level (dBm) | Freq (Hz) | Level (dBm) | Freq (Hz) | Level (dBm) | Freq (Hz) | Level (dBm) | Port |
|-----------------------------------|--------|-------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|----------------|------|
| 802.11ax HEW20-BF_Nss1,(MCS0)_2TX | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 2412MHz | Pass | 2.43198G | 12.98 | -17.02 | 937.54M | -53.73 | 2.39986G | -29.66 | 2.51988G | -49.32 | 15.13001G | -46.96 | 1 |
| 2412MHz | Pass | 2.43198G | 12.98 | -17.02 | 2.30175G | -52.73 | 2.39996G | -24.41 | 2.52052G | -49.80 | 6.50746G | -47.04 | 2 |
| 2437MHz | Pass | 2.43198G | 12.98 | -17.02 | 2.30204G | -51.28 | 2.39994G | -38.92 | 2.48462G | -41.52 | 16.72584G | -47.02 | 1 |
| 2437MHz | Pass | 2.43198G | 12.98 | -17.02 | 2.30321G | -52.39 | 2.39582G | -35.16 | 2.48384G | -37.72 | 16.44488G | -46.94 | 2 |
| 2462MHz | Pass | 2.43198G | 12.98 | -17.02 | 1.71313G | -53.38 | 2.39828G | -49.92 | 2.48368G | -38.10 | 17.05456G | -46.76 | 1 |
| 2462MHz | Pass | 2.43198G | 12.98 | -17.02 | 2.18904G | -52.85 | 2.39008G | -49.81 | 2.4839G | -35.32 | 24.46337G | -47.26 | 2 |
| 802.11ax HEW40-BF_Nss1,(MCS0)_2TX | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 2422MHz | Pass | 2.43198G | 6.05 | -23.95 | 959.17M | -53.45 | 2.39324G | -40.37 | 2.55646G | -49.06 | 15.08587G | -45.87 | 1 |
| 2422MHz | Pass | 2.43198G | 6.05 | -23.95 | 2.30483G | -52.38 | 2.39924G | -34.64 | 2.48446G | -43.67 | 16.93408G | -47.33 | 2 |
| 2437MHz | Pass | 2.43198G | 6.05 | -23.95 | 2.10961G | -52.16 | 2.39952G | -36.66 | 2.4847G | -42.25 | 6.9891G | -46.75 | 1 |
| 2437MHz | Pass | 2.43198G | 6.05 | -23.95 | 2.12363G | -52.80 | 2.39944G | -31.11 | 2.48478G | -36.61 | 16.8864G | -46.89 | 2 |
| 2452MHz | Pass | 2.43198G | 6.05 | -23.95 | 2.16142G | -52.91 | 2.39732G | -50.29 | 2.48426G | -44.34 | 15.13635G | -47.31 | 1 |
| 2452MHz | Pass | 2.43198G | 6.05 | -23.95 | 2.05665G | -52.72 | 2.39444G | -45.97 | 2.48882G | -36.11 | 16.20209G | -47.42 | 2 |