Report No. : FR231713-02





RADIO TEST REPORT

| FCC ID | : | Z8H89FT0074 |
|--------------|---|--|
| Equipment | : | ePMP 5GHz Force 4525 SM |
| Brand Name | : | Cambium Networks |
| Model Name | 1 | ePMP 5GHz Force 4525 SM |
| Applicant | • | Cambium Networks Inc. 3800 Golf Road, Suite 360 Rolling Meadows, IL 60008, USA |
| Manufacturer | 4 | Cambium Networks, Ltd. Ashburton, TQ13 7UP, UK |
| Standard | ŝ | 47 CFR FCC Part 15.407 |

The product was received on Sep. 09, 2022, and testing was started from Sep. 09, 2022 and completed on Oct. 04, 2022. 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 variant 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

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TEL : 886-3-656-9065 FAX : 886-3-656-9085 Report Template No.: CB-A12_1 Ver1.4



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Photographs of EUT v01



History of this test report

| Report No. | Version | Description | Issued Date |
|-------------|---------|-------------------------|---------------|
| FR231713-02 | 01 | Initial issue of report | Feb. 05, 2024 |
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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 | 15.407(a) | Emission Bandwidth | PASS | - |
| 3.2 | 15.407(a) | Maximum Output Power | PASS | - |
| 3.3 | 15.407(a) | Power Spectral Density | PASS | - |
| 3.4 | 15.407(b) | Unwanted Emissions | PASS | - |

Declaration of Conformity:

 The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers. It's means measurement values may risk exceeding the limit of regulation standards, if measurement uncertainty is include in test results.

2. The measurement uncertainty please refer to report "Measurement Uncertainty".

Comments and Explanations:

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: Viola Huang



1 General Description

1.1 Information

1.1.1 **RF General Information**

| Frequency Range (MHz) | IEEE Std. 802.11 | Ch. Frequency (MHz) | Channel Number |
|-----------------------|--------------------------|---------------------|----------------|
| 5250-5350 | a, n (HT20), ac (VHT20), | 5260-5320 | 52-64 [4] |
| 5470-5725 | ax (HEW20) | 5500-5700 | 100-140 [8] |
| 5250-5350 | n (HT40), ac (VHT40), | 5270-5310 | 54-62 [2] |
| 5470-5725 | ax (HEW40) | 5510-5670 | 102-134 [3] |
| 5250-5350 | | 5290 | 58 [1] |
| 5470-5725 | ac (VHT80), ax (HEW80) | 5530 | 106 [1] |

| Band | Mode | BWch (MHz) | Nant |
|---------------|----------------|------------|------|
| 5.25-5.35GHz | 802.11a | 20 | 2TX |
| 5.25-5.35GHz | 802.11n HT20 | 20 | 2TX |
| 5.25-5.35GHz | 802.11ac VHT20 | 20 | 2TX |
| 5.25-5.35GHz | 802.11ax HEW20 | 20 | 2TX |
| 5.25-5.35GHz | 802.11n HT40 | 40 | 2TX |
| 5.25-5.35GHz | 802.11ac VHT40 | 40 | 2TX |
| 5.25-5.35GHz | 802.11ax HEW40 | 40 | 2TX |
| 5.25-5.35GHz | 802.11ac VHT80 | 80 | 2TX |
| 5.25-5.35GHz | 802.11ax HEW80 | 80 | 2TX |
| 5.47-5.725GHz | 802.11a | 20 | 2TX |
| 5.47-5.725GHz | 802.11n HT20 | 20 | 2TX |
| 5.47-5.725GHz | 802.11ac VHT20 | 20 | 2TX |
| 5.47-5.725GHz | 802.11ax HEW20 | 20 | 2TX |
| 5.47-5.725GHz | 802.11n HT40 | 40 | 2TX |
| 5.47-5.725GHz | 802.11ac VHT40 | 40 | 2TX |
| 5.47-5.725GHz | 802.11ax HEW40 | 40 | 2TX |
| 5.47-5.725GHz | 802.11ac VHT80 | 80 | 2TX |
| 5.47-5.725GHz | 802.11ax HEW80 | 80 | 2TX |



Note:

- 11a, HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- VHT20, VHT40, VHT80 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM modulation.
- HEW20, HEW40, HEW80 use a combination of OFDMA-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM modulation.
- BWch is the nominal channel bandwidth.



1.1.2 Antenna Information

| Set | Port | Brand | Model Name | Antenna Type | Connector | Gain (dBi) | Support Band | |
|-----|---------------------|---------|---------------|----------------|-----------|------------|--------------|--|
| 1 | 1 | Combium | ePMP 5GHz | Dish Antenna | N/A | 24.57 | | |
| | Cambium 2 Force 452 | | Force 4525 SM | DISH Antenna | IN/A | 24.37 | UNII 1~3 | |
| 2 | 1 | Cambium | ePMP 5GHz | Dinala Antonna | N1/A | 0 | | |
| 2 | 2 | Camblum | Force 4525 SM | Dipole Antenna | N/A | 2 | UNII 1, 3 | |

| Set. | Point-to-Multipoint | Point-to-Point |
|------|---------------------|----------------|
| 1 | No | Yes |
| 2 | Yes | No |

Note1: The above information was declared by manufacturer.

Note2: Directional gain information

| Туре | Maximum Output Power | Power Spectral Density |
|--------|--|---|
| Non-BF | Directional gain = Max.gain + array gain. For power measurements on IEEE 802.11 devices Array Gain = 0 dB (i.e., no array gain) for N ANT ≤ 4 | $DirectionalGain = 10 \cdot \log \left[\frac{\sum_{k=1}^{N_{w}} \left(\sum_{k=1}^{N_{w}} \sigma_{j,k}\right)^{2}}{N_{star}}\right]$ |
| BF | $DirectionalGain = 10 \cdot \log \left[\frac{N_{eff}}{\sum_{k=1}^{N_{eff}} \left\{ \sum_{k=1}^{N_{eff}} g_{i,k} \right\}^2}{N_{eff}} \right]$ | $DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{n_{eff}} \left(\sum_{k=1}^{n_{eff}} g_{j,k} \right)^2}{N_{4kT}} \right]^2$ |

Ex.

Directional Gain (NSS1) formula :

$$DirectionalGain = 10 \cdot \log \left[\frac{N_{w}}{\sum_{j=1}^{N_{w}} \left[\sum_{k=1}^{N_{w}} \tilde{S}_{j,k} \right]^{2}}{N_{w\pi}} \right]$$

NSS1(g1,1) = $10^{G1/20}$; NSS1(g1,2)= $10^{G2/20}$;

gj,k =(Nss1(g1,1) + Nss1(g1,2))²

DG = 10 log[(Nss1(g1,1) + Nss1(g1,2))² / N_{ANT}] => 10 log[($10^{G1/20} + 10^{G2/20}$)² / N_{ANT}] Where ;

Dipole 5G G1= 2 dBi ;5G G2= 2 dBi ;DG= 5.01dBi

Printed Cross-Polarized Antenna 5G G1= 24.57 dBi ;5G G2= 24.57 dBi ;DG= 24.57dBi



For 5GHz function:

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

Port 1 and Port 2 can be used as transmitting/receiving antenna. Port 1 and Port 2 could transmit/receive simultaneously.

1.1.3 Mode Test Duty Cycle

| Mode | DC | DCF(dB) | T(s) | VBW(Hz) ≥ 1/T |
|----------------|-------|---------|--------|---------------|
| 802.11a | 0.64 | 1.94 | 1.978m | 1k |
| 802.11ax HEW20 | 0.934 | 0.3 | 5.455m | 300 |
| 802.11ax HEW40 | 0.93 | 0.32 | 5.453m | 300 |
| 802.11ax HEW80 | 0.933 | 0.3 | 5.453m | 300 |

Note:

• DC is Duty Cycle.

DCF is Duty Cycle Factor.

1.1.4 EUT Operational Condition

| EUT Power Type | | From PoE | | | | |
|-----------------------------|-------------|---------------------------------------|-------------|----------------------|--|--|
| Beamforming Function | | With beamforming | \square | Without beamforming | | |
| Weather Band | | With 5600~5650MHz | \boxtimes | Without 5600~5650MHz | | |
| | | Outdoor P2M for antenna set 2 | | Indoor P2M | | |
| Function | \boxtimes | Fixed P2P for antenna set 1 | | Client | | |
| | \boxtimes | Point-to-multipoint for antenna set 2 | | Point-to-point | | |
| TPC Function | \boxtimes | With TPC | | Without TPC | | |
| Channel Puncturing Function | | Supported | \boxtimes | Unsupported | | |
| Support RU | \boxtimes | Full RU | | Partial RU | | |
| Test Software Version | | PR V5.0-00199 | | | | |

Note: The above information was declared by manufacturer.



1.1.5 Table for Permissive Change

This product is an extension of original one reported under Sporton project number: FR231713-01

Below is the table for the change of the product with respect to the original one.

| Modifications | Performance Checking |
|---|----------------------------------|
| | 1. Emission Bandwidth |
| Add UNII 2A and UNII 2C (5250~5350MHz and | 2. Maximum Output Power |
| 5470~5725MHz) in antenna set 1 for this device. | 3. Power Spectral Density |
| | 4. Unwanted Emissions above 1GHz |



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
- ANSI C63.10-2013
- FCC KDB 789033 D02 v02r01
- The following reference test guidance is not within the scope of accreditation of TAF.
- FCC KDB 662911 D01 v02r01
- FCC KDB 412172 D01 v01r01

1.3 Testing Location Information

| | Testing Location Information | | |
|---------------------|--|--|--|
| Test Lab. : Sportor | Test Lab. : Sporton International Inc. Hsinchu Laboratory | | |
| Hsinchu | ADD: No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.) | | |
| (TAF: 3787) | 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 | Lance Wu | 23.6-24.5 / 62-67 | Sep. 14, 2022~Oct. 04, 2022 |
| Radiated | 03CH02-CB | Gordon Humg | 20-21 / 55-58 | Sep. 09, 2022 ~ Sep. 13, 2022 |

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)

| Test Items | Uncertainty | Remark |
|-----------------------------------|-------------|--------------------------|
| Radiated Emission (1GHz ~ 18GHz) | 5.2 dB | Confidence levels of 95% |
| Radiated Emission (18GHz ~ 40GHz) | 4.7 dB | Confidence levels of 95% |
| Conducted Emission | 3.2 dB | Confidence levels of 95% |
| Output Power Measurement | 0.8 dB | Confidence levels of 95% |
| Power Density Measurement | 3.2 dB | Confidence levels of 95% |
| Bandwidth Measurement | 2.0 % | Confidence levels of 95% |



2 Test Configuration of EUT

2.1 Test Channel Mode

| Mode | Power Setting |
|--------------------------------|---------------|
| 802.11a_Nss1,(6Mbps)_2TX | - |
| 5260MHz | -0.5 |
| 5300MHz | 1.5 |
| 5320MHz | 2 |
| 5500MHz | 1.5 |
| 5580MHz | 1 |
| 5700MHz | 0.5 |
| 802.11ax HEW20_Nss1,(MCS0)_2TX | - |
| 5260MHz | 0.5 |
| 5300MHz | 2.5 |
| 5320MHz | 3 |
| 5500MHz | 2.5 |
| 5580MHz | 2.5 |
| 5700MHz | 1.5 |
| 802.11ax HEW40_Nss1,(MCS0)_2TX | - |
| 5270MHz | 3 |
| 5310MHz | 2.5 |
| 5510MHz | 3.5 |
| 5550MHz | 3.5 |
| 5670MHz | 3 |
| 802.11ax HEW80_Nss1,(MCS0)_2TX | - |
| 5290MHz | 2.5 |
| 5530MHz | 3 |

Note:

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Evaluated HEW20/HEW40/HEW80 mode only due to the similar modulation. The power setting of HT20/HT40/VHT20/VHT40/VHT80 mode are the same or lower than HEW20/HEW40/HEW80.



2.2 The Worst Case Measurement Configuration

| The Worst Case Mode for Following Conformance Tests | |
|---|--|
| Tests Item | Emission Bandwidth Maximum Output Power Power Spectral Density |
| Test Condition | Conducted measurement at transmit chains |
| 1 | EUT + Ant. Set 1 |

| Th | The Worst Case Mode for Following Conformance Tests | |
|-------------------------------|---|--|
| Tests Item Unwanted Emissions | | |
| 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. | |
| | СТХ | |
| Operating Mode > 1GHz | The EUT was performed at X axis, Y axis and Z axis position, and the worst case was found as below, thus the measurement will follow this same test configuration. | |
| 1 | EUT in X axis + Ant. Set 1 | |

Note: The PoE below is for measurement only, would not be marketed.

The PoE information as below:

| Support Unit | Brand Name | Model Number |
|--------------|------------|--------------|
| PoE | CWT | P015U06 |

2.3 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

2.4 Accessories

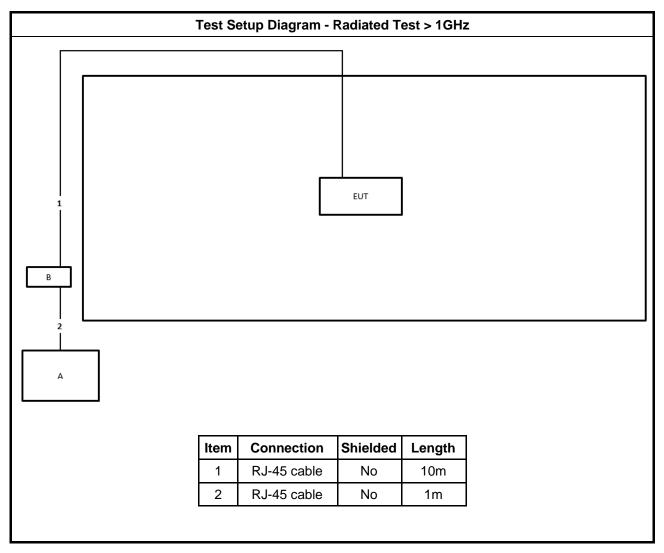
N/A

2.5 Support Equipment

| | Support Equipment | | | |
|-----|-------------------|------------|------------|--------|
| No. | Equipment | Brand Name | Model Name | FCC ID |
| А | Notebook | DELL | E4300 | N/A |
| В | PoE | CWT | P015U06 | N/A |



2.6 Test Setup Diagram





3 Transmitter Test Result

3.1 Emission Bandwidth

3.1.1 Emission Bandwidth Limit

| Emission Bandwidth Limit | | |
|---|--|--|
| UNII Devices | | |
| For the 5.15-5.25 GHz band, N/A | | |
| For the 5.25-5.35 GHz band, the maximum conducted output power shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz. | | |
| For the 5.47-5.725 GHz band, the maximum conducted output power shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz. | | |
| For the 5.725-5.85 GHz band, 26 dB emission bandwidth ,N/A. 6 dB emission bandwidth \ge 500kHz. | | |
| LE-LAN Devices | | |
| For the band 5.15-5.25 GHz, the maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. | | |
| For the 5.25-5.35 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz | | |
| For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz | | |
| For the 5.725-5.85 GHz band, 6 dB emission bandwidth ≥ 500kHz. | | |
| | | |

3.1.2 Measuring Instruments

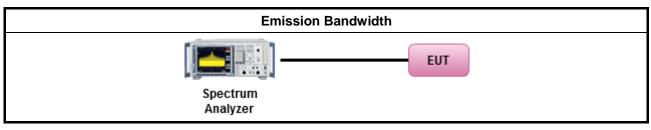
Refer a test equipment and calibration data table in this test report.

3.1.3 Test Procedures

| | Test Method | | |
|---|--|---|--|
| • | For the emission bandwidth shall be measured using one of the options below: | | |
| | \boxtimes | Refer as FCC KDB 789033 D02, clause C for EBW and clause D for OBW measurement. | |
| | | Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing. | |
| | | Refer as IC RSS-Gen, clause 4.6 for bandwidth testing. | |



3.1.4 Test Setup



3.1.5 Test Result of Emission Bandwidth

Refer as Appendix A



3.2 Maximum Output Power

3.2.1 Limit

| | Maximum Output Power Limit |
|-----|---|
| UN | II Devices |
| | For the 5.15-5.25 GHz band: |
| | Outdoor AP: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If G_{TX} > 6 dBi, then P_{Out} = 30 − (G_{TX} − 6). e.i.r.p. at any elevation angle above 30 degrees ≤ 125mW [21dBm] |
| | Indoor AP: the maximum conducted output power (Pout) shall not exceed the lesser of 1 W. If GTX > 6 dBi, then Pout = 30 - (GTX - 6) |
| | Point-to-point AP: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W If G_{TX} > 23 dBi, then P_{Out} = 30 - (G_{TX} - 23). |
| | Mobile or Portable Client: the maximum conducted output power (Pout) shall not exceed the lesser of 250 mW. If GTX > 6 dBi, then Pout = 24 - (GTX - 6). |
| | For the 5.25-5.35 GHz band, the maximum conducted output power (P _{out}) shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 24 - (G_{TX} - 6)$. |
| | For the 5.47-5.725 GHz band, the maximum conducted output power (P_{Out}) shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz. If G_{TX} > 6 dBi, then $P_{Out} = 24 - (G_{TX} - 6)$. |
| | For the 5.725-5.85 GHz band: |
| | Point-to-multipoint systems (P2M): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If G_{TX} > 6 dBi, then P_{Out} = 30 - (G_{TX} - 6). |
| | Point-to-point systems (P2P): the maximum conducted output power (Pout) shall not exceed the lesser of 1 W. |
| LE- | LAN Devices |
| | For the 5.15-5.25 GHz band, the maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. |
| | For the 5.25-5.35 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz |
| | For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz |
| | For the 5.725-5.85 GHz band: |
| | Point-to-multipoint systems (P2M): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If G_{TX} > 6 dBi, then P_{Out} = 30 - (G_{TX} - 6). |
| | Point-to-point systems (P2P): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. |
| | t = maximum conducted output power in dBm, t = the maximum transmitting antenna directional gain in dBi. |



3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

| | Test Method | | |
|-------------|--|---|--|
| | Average over on/off periods with duty factor | | |
| | | Refer as FCC KDB 789033 D02, clause E Method SA-2 (spectral trace averaging). | |
| | | Refer as FCC KDB 789033 D02, clause E Method SA-2 Alt. (RMS detection with slow sweep speed) | |
| | Wid | eband RF power meter and average over on/off periods with duty factor | |
| | \square | Refer as FCC KDB 789033 D02, clause E Method PM-G (using an RF average power meter). | |
| \boxtimes | For | conducted measurement. | |
| | • | 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. | |
| | • | If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) EIRP _{total} = P _{total} + DG | |
| | For | radiated measurement. | |
| | • | Refer as FCC KDB 789033 D02 clause II A.1.F "Antenna-port Conducted versus Radiated Testing" | |
| | • | Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz. | |
| | • | Refer as FCC KDB 412172 D01 clause 2.2 for EIRP calculation. | |
| | | | |

3.2.4 Test Setup

| Conducted Measurement (Power Meter) | |
|---|--|
| EUT Power Meter | |

3.2.5 Test Result of Maximum Output Power

Refer as Appendix B

3.3 Power Spectral Density

3.3.1 Limit

| | Peak Power Spectral Density Limit |
|-----|---|
| UNI | I Devices |
| | For the 5.15-5.25 GHz band: |
| | • Outdoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 17 - (G_{TX} - 6)$. |
| | Indoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If G_{TX} > 6 dBi, then P_{Out} = 17 - (G_{TX} - 6). |
| | Point-to-point AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If G_{TX} > 23 dBi, then P_{Out} = 17 – (G_{TX} – 23). |
| | Mobile or Portable Client: the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If G_{TX} > 6 dBi, then PPSD= 11 - (G_{TX} - 6) |
| | For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) \leq 11 dBm/MHz. If G _{TX} > 6 dBi, then PPSD= 11 - (G _{TX} - 6). |
| | For the 5.47-5.725 GHz band, the peak power spectral density (PPSD) \leq 11 dBm/MHz. If G _{TX} > 6 dBi, then PPSD= 11 - (G _{TX} - 6). |
| | For the 5.725-5.85 GHz band: |
| | • Point-to-multipoint systems (P2M): the peak power spectral density (PPSD) \leq 30 dBm/500kHz. If $G_{TX} > 6$ dBi, then PPSD= 30 - ($G_{TX} - 6$). |
| | Point-to-point systems (P2P): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz. |
| LE- | LAN Devices |
| | For the 5.15-5.25 GHz band, the e.i.r.p. peak power spectral density (PPSD) \leq 10 dBm/MHz. |
| | For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) \leq 11 dBm/MHz. |
| | e.i.r.p. greater than 200 mW shall comply with the following e.i.r.p. at different elevations, where θ is the angle above the local horizontal plane (of the Earth) as shown below: -13 dBW/MHz for 0° ≤ θ < 8°; -13 - 0.716 (θ-8) dBW/MHz for 8° ≤ θ < 40° -35.9 - 1.22 (θ-40) dBW/MHz for 40° ≤ θ ≤ 45°; -42 dBW/MHz for θ > 45° |
| | For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the peak power spectral density (PPSD) \leq 11 dBm/MHz. |
| | For the 5.725-5.85 GHz band: |
| | Point-to-multipoint systems (P2M): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz. If G_{TX} > 6 dBi, then PPSD= 30 - (G_{TX} - 6). |
| | Point-to-point systems (P2P): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz. |
| pow | SD = peak power spectral density that he same method as used to determine the conducted output ver shall be used to determine the power spectral density. And power spectral density in dBm/MHz = the maximum transmitting antenna directional gain in dBi. |

3.3.2 Measuring Instruments

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



3.3.3 Test Procedures

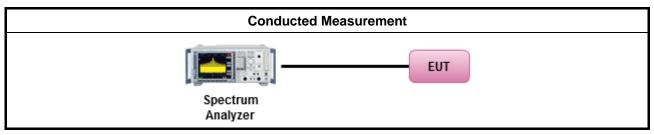
| | Test Method |
|------------|---|
| out fun | ak power spectral density procedures that the same method as used to determine the conducted put power shall be used to determine the peak power spectral density and use the peak search ction on the spectrum analyzer to find the peak of the spectrum. For the peak power spectral density all be measured using below options: |
| | Refer as FCC KDB 789033 D02, F)5) power spectral density can be measured using resolution bandwidths < 1 MHz provided that the results are integrated over 1 MHz bandwidth |
| [du | ty cycle ≥ 98% or external video / power trigger] |
| \square | Refer as FCC KDB 789033 D02, clause E Method SA-1 (spectral trace averaging). |
| | Refer as FCC KDB 789033 D02, clause E Method SA-1 Alt. (RMS detection with slow sweep speed) |
| dut | y cycle < 98% and average over on/off periods with duty factor |
| \square | Refer as FCC KDB 789033 D02, clause E Method SA-2 (spectral trace averaging). |
| | Refer as FCC KDB 789033 D02, clause E Method SA-2 Alt. (RMS detection with slow sweep speed) |
| 🛛 For | conducted measurement. |
| • | If the EUT supports multiple transmit chains using options given below: |
| | 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. |
| | 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, |
| | 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. |
| • | If multiple transmit chains, EIRP PPSD calculation could be following as methods: PPSD _{total} = PPSD ₁ + PPSD ₂ + + PPSD _n (calculated in linear unit [mW] and transfer to log unit [dBm]) EIRP _{total} = PPSD _{total} + DG |
| For | radiated measurement. |
| • | Refer as FCC KDB 789033 D02 clause II A.1.F "Antenna-port Conducted versus Radiated Testing" |
| | Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz. |



Test Method

• Refer as FCC KDB 412172 D01 clause 2.2 for EIRP calculation.

3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Refer as Appendix C



3.4 Unwanted Emissions

3.4.1 Transmitter Unwanted Emissions Limit

| Unwanted emiss | sions below 1 GHz and re | estricted band emissions a | bove 1GHz 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.

| | Un-restricted band emissions above 1GHz Limit | | | | | | |
|--|--|--|--|--|--|--|--|
| Operating Band | Limit | | | | | | |
| 🔲 5.15 - 5.25 GHz | e.i.r.p27 dBm [68.2 dBuV/m@3m] | | | | | | |
| 🔀 5.25 - 5.35 GHz | e.i.r.p27 dBm [68.2 dBuV/m@3m] | | | | | | |
| 🔀 5.47 - 5.725 GHz | e.i.r.p27 dBm [68.2 dBuV/m@3m] | | | | | | |
| ☐ 5.725 - 5.85 GHz | all emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge. | | | | | | |
| Note 1: 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 | | | | | | | |

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linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

3.4.2 **Measuring Instruments**

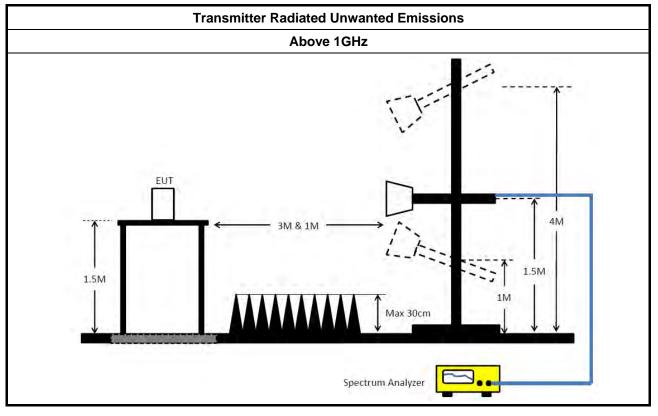
Refer a test equipment and calibration data table in this test report.

3.4.3 **Test Procedures**

| | | Test Method |
|---|---|---|
| • | perfor equip above are in be ex distar | urements may be performed at a distance other than the limit distance provided they are not rmed in the near field and the emissions to be measured can be detected by the measurement ment. Measurements shall not be performed at a distance greater than 30 m for frequencies a 30 MHz, unless it can be further demonstrated that measurements at a distance of 30 m or less inpractical. When performing measurements at a distance other than that specified, the results shall trapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear nee for field-strength measurements, inverse of linear distance-squared for power-density urements). |
| | The a | verage emission levels shall be measured in [duty cycle \geq 98 or duty factor]. |
| • | For th | e transmitter unwanted emissions shall be measured using following options below: |
| | • 1 | Refer as FCC KDB 789033 D02, clause G)2) for unwanted emissions into non-restricted bands. |
| | • | Refer as FCC KDB 789033 D02, clause G)1) for unwanted emissions into restricted bands. |
| | | Refer as FCC KDB 789033 D02, G)6) Method AD (Trace Averaging). |
| | | Refer as FCC KDB 789033 D02, G)6) Method VB (Reduced VBW). |
| | | Refer as ANSI C63.10, clause 11.12.2.5.3 (Reduced VBW). VBW ≥ 1/T, where T is pulse time. |
| | [| Refer as ANSI C63.10, clause 7.5 average value of pulsed emissions. |
| | [| Refer as FCC KDB 789033 D02, clause G)5) measurement procedure peak limit. |
| | [| Refer as ANSI C63.10, clause 4.1.4.2.2 measurement procedure peak limit. |
| • | For ra | idiated measurement. |
| | • | Refer as ANSI C63.10, clause 6.4 for radiated emissions below 30 MHz and test distance is 3m. |
| | • | Refer as ANSI C63.10, clause 6.5 for radiated emissions 30 MHz to 1 GHz and test distance is 3m. |
| | • | Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz. |
| • | The a | ny unwanted emissions level shall not exceed the fundamental emission level. |
| • | | nplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value o need to be reported. |



3.4.4 Test Setup



3.4.5 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.

3.4.6 Transmitter Unwanted Emissions (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.

3.4.7 Test Result of Transmitter Unwanted Emissions

Refer as Appendix D



Test Equipment and Calibration Data 4

| Instrument | Brand | Model No. | Serial No. | Characteristics | Calibration Date | Calibration Due Date | Remark |
|-------------------------------------|-------------|-------------------|---------------------|------------------|---------------------|-------------------------|--------------------------|
| 3m Semi Anechoic Chamber VSWR | RIKEN | SAC-3M | 03CH02-CB | 1GHz ~18GHz | Mar. 26, 2022 | Mar. 25, 2023 | Radiation (03CH02-CB) |
| Horn Antenna | EMCO | 3115 | 9610-4976 | 1GHz ~ 18GHz | Apr. 19, 2022 | Apr. 18, 2023 | Radiation (03CH02-CB) |
| Horn Antenna | Schwarzbeck | BBHA 9170 | BBHA9170252 | 15GHz ~ 40GHz | Aug. 22, 2022 | Aug. 21, 2023 | Radiation (03CH02-CB) |
| Pre-Amplifier | Agilent | 83017A | MY39501305 | 1GHz ~ 26.5GHz | Jul. 01, 2022 | Jun. 30, 2023 | Radiation (03CH02-CB) |
| Pre-Amplifier | MITEQ | TTA1840-35- HG | 1864479 | 18GHz ~ 40GHz | Jul. 20, 2022 | Jul. 19, 2023 | Radiation (03CH02-CB) |
| Spectrum analyzer | R&S | FSU | 100015 | 9kHz~26GHz | Oct. 25, 2021 | Oct. 24, 2022 | Radiation (03CH02-CB) |
| RF Cable-high | Woken | RG402 | High Cable-18 | 1GHz ~ 18GHz | Oct. 04, 2021 | Oct. 03, 2022 | Radiation (03CH02-CB) |
| RF Cable-high | Woken | RG402 | High Cable-18+19 | 1GHz ~ 18GHz | Oct. 04, 2021 | Oct. 03, 2022 | Radiation (03CH02-CB) |
| High Cable | Woken | WCA0929M | 40G#5+7 | 1GHz ~ 40 GHz | Dec. 14, 2021 | Dec. 13, 2022 | Radiation (03CH02-CB) |
| High Cable | Woken | WCA0929M | 40G#5 | 1GHz ~ 40 GHz | Dec. 08, 2021 | Dec. 07, 2022 | Radiation (03CH02-CB) |
| High Cable | Woken | WCA0929M | 40G#7 | 1GHz ~ 40 GHz | Dec. 14, 2021 | Dec. 13, 2022 | Radiation (03CH02-CB) |
| Test Software | SPORTON | SENSE | V5.10 | - | N.C.R. | N.C.R. | Radiation (03CH02-CB) |
| Spectrum analyzer | R&S | FSV40 | 100979 | 9kHz~40GHz | May 27, 2022 | May 26, 2023 | Conducted (TH01-CB) |
| Temp. and Humidity Chamber | Ten Billion | TTH-D3SP | TBN-931011 | -30~100 degree | May 23, 2022 | May 22, 2023 | Conducted (TH01-CB) |
| RF Cable-high | Woken | RG402 | High Cable-06 | 1 GHz – 26.5 GHz | Oct. 04, 2021 | Oct. 03, 2022 | Conducted (TH01-CB) |
| RF Cable-high | Woken | RG402 | High Cable-06 | 1 GHz – 26.5 GHz | Oct. 03, 2022 | Oct. 02, 2023 | Conducted (TH01-CB) |
| RF Cable-high | Woken | RG402 | High Cable-07 | 1 GHz –26.5 GHz | Oct. 04, 2021 | Oct. 03, 2022 | Conducted (TH01-CB) |
| RF Cable-high | Woken | RG402 | High Cable-07 | 1 GHz –26.5 GHz | Oct. 03, 2022 | Oct. 02, 2023 | Conducted (TH01-CB) |
| RF Cable-high | Woken | RG402 | High Cable-08 | 1 GHz –26.5 GHz | Oct. 04, 2021 | Oct. 03, 2022 | Conducted (TH01-CB) |
| RF Cable-high | Woken | RG402 | High Cable-08 | 1 GHz –26.5 GHz | Oct. 03, 2022 | Oct. 02, 2023 | Conducted (TH01-CB) |



| Instrument | Brand | Model No. | Serial No. | Characteristics | Calibration Date | Calibration Due Date | Remark |
|---------------|---------|-----------|---------------|-----------------|---------------------|-------------------------|------------------------|
| RF Cable-high | Woken | RG402 | High Cable-09 | 1 GHz –26.5 GHz | Oct. 04, 2021 | Oct. 03, 2022 | Conducted (TH01-CB) |
| RF Cable-high | Woken | RG402 | High Cable-09 | 1 GHz –26.5 GHz | Oct. 03, 2022 | Oct. 02, 2023 | Conducted (TH01-CB) |
| RF Cable-high | Woken | RG402 | High Cable-10 | 1 GHz –26.5 GHz | Oct. 04, 2021 | Oct. 03, 2022 | Conducted (TH01-CB) |
| RF Cable-high | Woken | RG402 | High Cable-10 | 1 GHz –26.5 GHz | Oct. 03, 2022 | Oct. 02, 2023 | Conducted (TH01-CB) |
| RF Cable-high | Woken | RG402 | High Cable-30 | 1 GHz –26.5 GHz | Oct. 04, 2021 | Oct. 03, 2022 | Conducted (TH01-CB) |
| RF Cable-high | Woken | RG402 | High Cable-30 | 1 GHz –26.5 GHz | Oct. 03, 2022 | Oct. 02, 2023 | Conducted (TH01-CB) |
| Switch | SPTCB | SP-SWI | SWI-01 | 1 GHz –26.5 GHz | Dec. 13, 2021 | Dec. 12, 2022 | Conducted (TH01-CB) |
| RF Cable-high | Woken | RG402 | SWI-01-P1 | 1 GHz –26.5 GHz | Dec. 13, 2021 | Dec. 12, 2022 | Conducted (TH01-CB) |
| RF Cable-high | Woken | RG402 | SWI-01-P2 | 1 GHz –26.5 GHz | Dec. 13, 2021 | Dec. 12, 2022 | Conducted (TH01-CB) |
| RF Cable-high | Woken | RG402 | SWI-01-P3 | 1 GHz –26.5 GHz | Dec. 13, 2021 | Dec. 12, 2022 | Conducted (TH01-CB) |
| RF Cable-high | Woken | RG402 | SWI-01-P4 | 1 GHz –26.5 GHz | Dec. 13, 2021 | Dec. 12, 2022 | Conducted (TH01-CB) |
| RF Cable-high | Woken | RG402 | SWI-01-P5 | 1 GHz –26.5 GHz | Dec. 13, 2021 | Dec. 12, 2022 | Conducted (TH01-CB) |
| Power Sensor | Agilent | E9327A | US40442088 | 50MHz~18GHz | Feb. 21, 2022 | Feb. 20, 2023 | Conducted (TH01-CB) |
| Power Meter | Agilent | E4416A | GB41291199 | 50MHz~18GHz | Feb. 21, 2022 | Feb. 20, 2023 | 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 | Max-N dB | Max-OBW | ITU-Code | Min-N dB | Min-OBW |
|--------------------------------|----------|---------|----------|----------|---------|
| | (Hz) | (Hz) | | (Hz) | (Hz) |
| 5.25-5.35GHz | - | - | - | - | - |
| 802.11a_Nss1,(6Mbps)_2TX | 19.95M | 16.432M | 16M4D1D | 19.44M | 16.273M |
| 802.11ax HEW20_Nss1,(MCS0)_2TX | 21.03M | 18.921M | 18M9D1D | 20.79M | 18.891M |
| 802.11ax HEW40_Nss1,(MCS0)_2TX | 40.44M | 37.901M | 37M9D1D | 40.08M | 37.781M |
| 802.11ax HEW80_Nss1,(MCS0)_2TX | 81.36M | 77.001M | 77M0D1D | 81.36M | 76.882M |
| 5.47-5.725GHz | - | - | - | - | - |
| 802.11a_Nss1,(6Mbps)_2TX | 20.1M | 16.492M | 16M5D1D | 19.05M | 16.372M |
| 802.11ax HEW20_Nss1,(MCS0)_2TX | 21.06M | 18.951M | 19M0D1D | 20.73M | 18.771M |
| 802.11ax HEW40_Nss1,(MCS0)_2TX | 40.26M | 37.901M | 37M9D1D | 39.96M | 37.661M |
| 802.11ax HEW80_Nss1,(MCS0)_2TX | 81.48M | 77.001M | 77M0D1D | 81.24M | 77.001M |

Max-N dB = Maximum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band; Max-OBW = Maximum 99% occupied bandwidth; Min-N dB = Minimum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band; Min-OBW = Minimum 99% occupied bandwidth



Result

| Mode | Result | Limit | Port 1-N dB | Port 1-OBW | Port 2-N dB | Port 2-OBW |
|--------------------------------|--------|-------|-------------|------------|-------------|------------|
| | | (Hz) | (Hz) | (Hz) | (Hz) | (Hz) |
| 802.11a_Nss1,(6Mbps)_2TX | - | - | - | - | - | - |
| 5260MHz | Pass | Inf | 19.53M | 16.323M | 19.5M | 16.273M |
| 5300MHz | Pass | Inf | 19.44M | 16.372M | 19.83M | 16.402M |
| 5320MHz | Pass | Inf | 19.65M | 16.402M | 19.95M | 16.432M |
| 5500MHz | Pass | Inf | 20.1M | 16.372M | 19.05M | 16.432M |
| 5580MHz | Pass | Inf | 19.68M | 16.402M | 19.26M | 16.492M |
| 5700MHz | Pass | Inf | 19.05M | 16.432M | 19.77M | 16.432M |
| 802.11ax HEW20_Nss1,(MCS0)_2TX | - | - | - | - | - | - |
| 5260MHz | Pass | Inf | 20.85M | 18.891M | 21.03M | 18.921M |
| 5300MHz | Pass | Inf | 20.88M | 18.891M | 21.03M | 18.891M |
| 5320MHz | Pass | Inf | 20.79M | 18.891M | 21M | 18.891M |
| 5500MHz | Pass | Inf | 21.06M | 18.951M | 20.79M | 18.831M |
| 5580MHz | Pass | Inf | 20.91M | 18.891M | 20.73M | 18.831M |
| 5700MHz | Pass | Inf | 20.79M | 18.771M | 20.91M | 18.861M |
| 802.11ax HEW40_Nss1,(MCS0)_2TX | - | - | - | - | - | - |
| 5270MHz | Pass | Inf | 40.08M | 37.841M | 40.44M | 37.901M |
| 5310MHz | Pass | Inf | 40.26M | 37.781M | 40.08M | 37.841M |
| 5510MHz | Pass | Inf | 40.26M | 37.901M | 39.96M | 37.661M |
| 5550MHz | Pass | Inf | 40.26M | 37.841M | 40.14M | 37.781M |
| 5670MHz | Pass | Inf | 40.26M | 37.661M | 40.26M | 37.721M |
| 802.11ax HEW80_Nss1,(MCS0)_2TX | - | - | - | - | - | - |
| 5290MHz | Pass | Inf | 81.36M | 77.001M | 81.36M | 76.882M |
| 5530MHz | Pass | Inf | 81.24M | 77.001M | 81.48M | 77.001M |

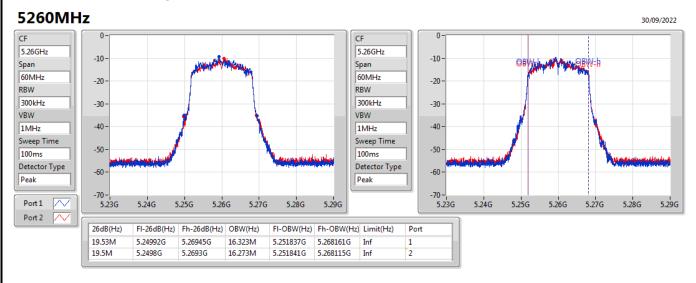
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band Port X-OBW = Port X 99% occupied bandwidth

EBW



EBW

802.11a_Nss1,(6Mbps)_2TX



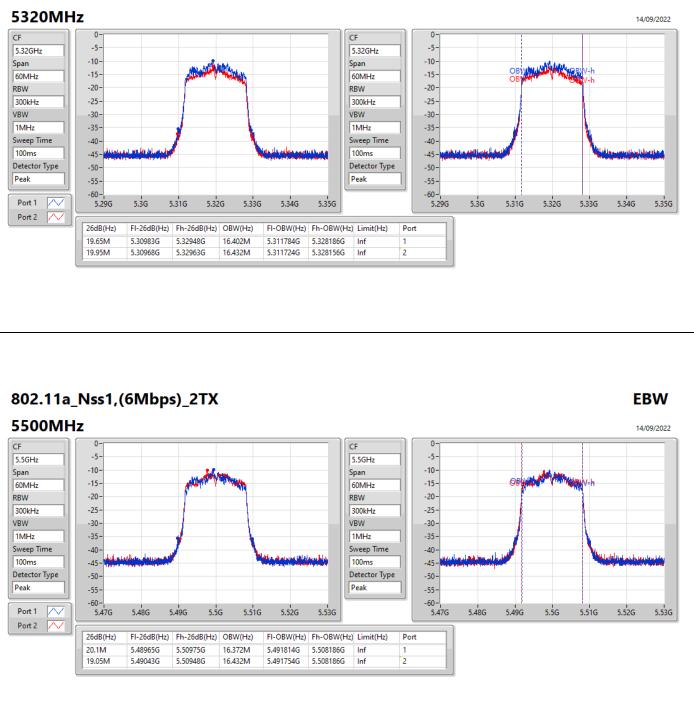
802.11a_Nss1,(6Mbps)_2TX

5300MHz 14/09/2022 CF 0 0 CF -5--5-5.3GHz 5.3GHz -10--10-. MANY Span Span MALOB -15--15-60MHz 60MHz RBW -20-RBW -20--25-300kHz -25-300kHz VBW -30-VBW -30-1MHz -35-1MHz -35-Sweep Time -40-Sweep Time -40-100ms والالا 100ms -45--45-Detector Type Detector Type -50 -50-Peak Peak -55--55--60-5.27G -60· 5.3G \sim 5.29G 5.33G Port 1 5.27G 5.28G 5.29G 5.3G 5.31G 5.32G 5.33G 5.28G 5.31G 5.32G Port 2 \sim 26dB(Hz) FI-26dB(Hz) Fh-26dB(Hz) OBW(Hz) FI-OBW(Hz) Fh-OBW(Hz) Limit(Hz) Port 19.44M 5.29001G 5.30945G 16.372M 5.291784G 5.308156G Inf 19.83M 5.28971G 5.30954G 16.402M 5.291754G 5.308156G Inf 2

Sporton International Inc. Hsinchu Laboratory

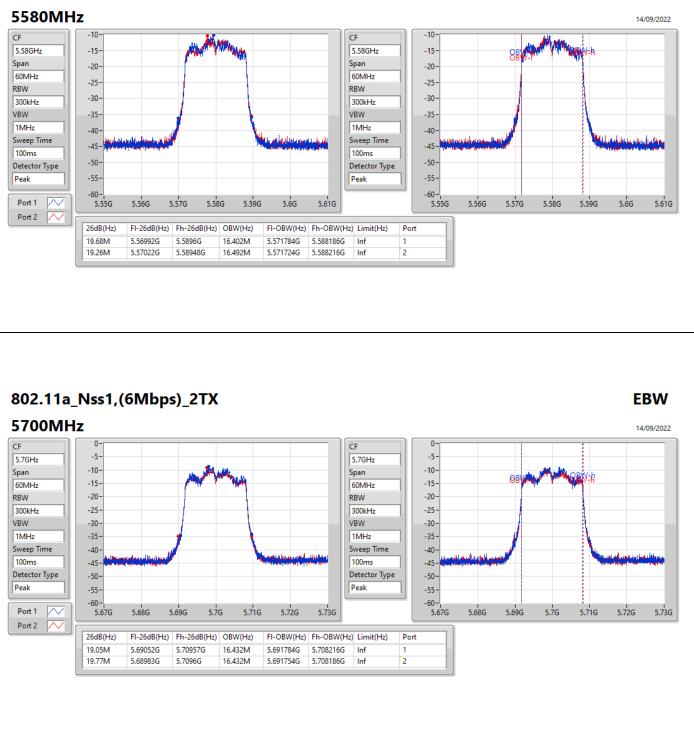


802.11a_Nss1,(6Mbps)_2TX



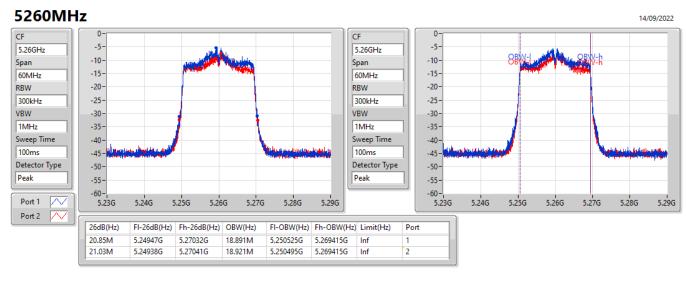


802.11a_Nss1,(6Mbps)_2TX

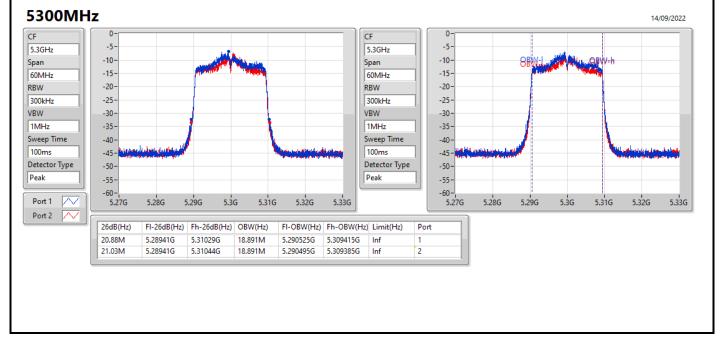




802.11ax HEW20_Nss1,(MCS0)_2TX



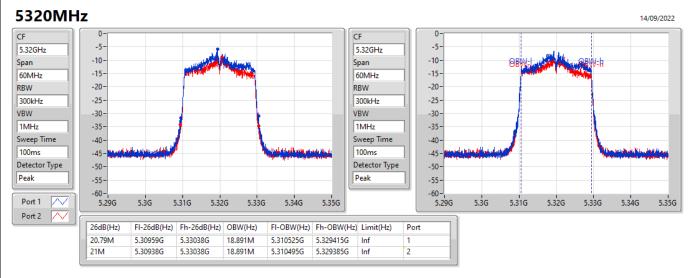
802.11ax HEW20_Nss1,(MCS0)_2TX



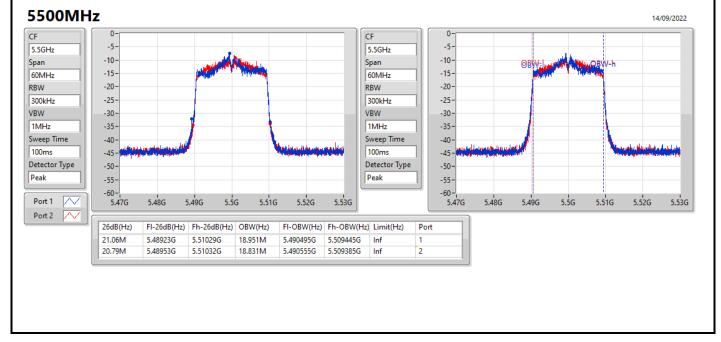


EBW

802.11ax HEW20_Nss1,(MCS0)_2TX

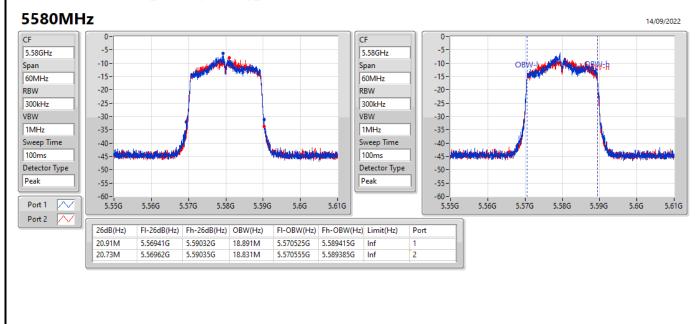


802.11ax HEW20_Nss1,(MCS0)_2TX

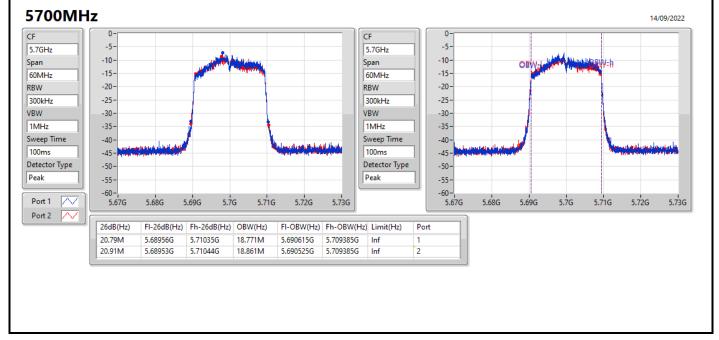




802.11ax HEW20_Nss1,(MCS0)_2TX



802.11ax HEW20_Nss1,(MCS0)_2TX

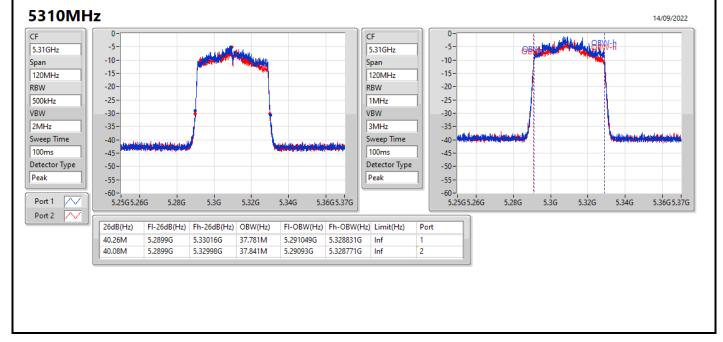




802.11ax HEW40_Nss1,(MCS0)_2TX



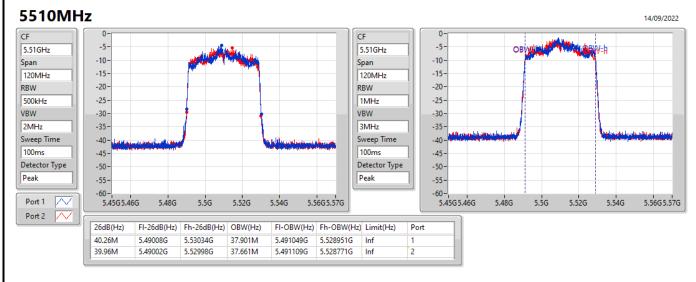
802.11ax HEW40_Nss1,(MCS0)_2TX



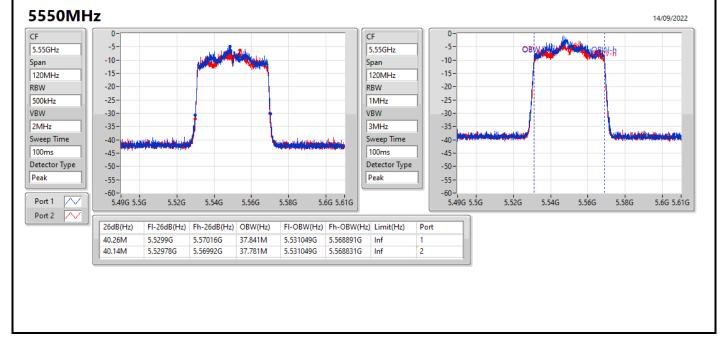


EBW

802.11ax HEW40_Nss1,(MCS0)_2TX



802.11ax HEW40_Nss1,(MCS0)_2TX

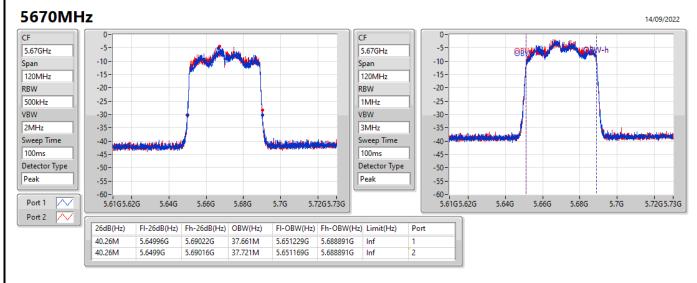


EBW

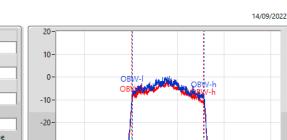


EBW

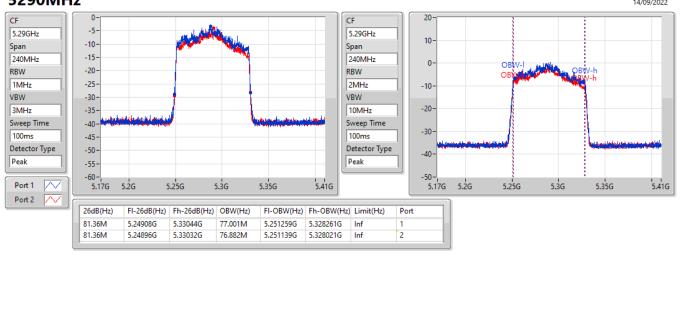
802.11ax HEW40_Nss1,(MCS0)_2TX



802.11ax HEW80_Nss1,(MCS0)_2TX



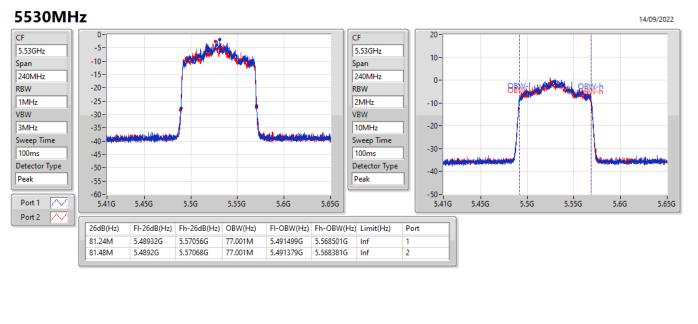
5290MHz



EBW



802.11ax HEW80_Nss1,(MCS0)_2TX





Summary

| Mode | Total Power | Total Power |
|--------------------------------|-------------|-------------|
| | (dBm) | (W) |
| 5.25-5.35GHz | - | - |
| 802.11a_Nss1,(6Mbps)_2TX | 3.48 | 0.00223 |
| 802.11ax HEW20_Nss1,(MCS0)_2TX | 4.29 | 0.00269 |
| 802.11ax HEW40_Nss1,(MCS0)_2TX | 5.32 | 0.00340 |
| 802.11ax HEW80_Nss1,(MCS0)_2TX | 5.02 | 0.00318 |
| 5.47-5.725GHz | - | - |
| 802.11a_Nss1,(6Mbps)_2TX | 3.43 | 0.00220 |
| 802.11ax HEW20_Nss1,(MCS0)_2TX | 4.51 | 0.00282 |
| 802.11ax HEW40_Nss1,(MCS0)_2TX | 5.38 | 0.00345 |
| 802.11ax HEW80_Nss1,(MCS0)_2TX | 5.16 | 0.00328 |



Average Power

Appendix B

Result

| Mode | Result | DG | Port 1 | Port 2 | Total Power | Power Limit |
|--------------------------------|--------|-------|--------|--------|-------------|-------------|
| | | (dBi) | (dBm) | (dBm) | (dBm) | (dBm) |
| 802.11a_Nss1,(6Mbps)_2TX | - | - | - | - | - | - |
| 5260MHz | Pass | 24.57 | 0.45 | -0.87 | 2.85 | 5.33 |
| 5300MHz | Pass | 24.57 | 0.87 | 0.02 | 3.48 | 5.32 |
| 5320MHz | Pass | 24.57 | 1.02 | -0.56 | 3.31 | 5.36 |
| 5500MHz | Pass | 24.57 | 0.11 | 0.32 | 3.23 | 5.23 |
| 5580MHz | Pass | 24.57 | 0.41 | 0.37 | 3.40 | 5.28 |
| 5700MHz | Pass | 24.57 | 0.58 | 0.25 | 3.43 | 5.23 |
| 802.11ax HEW20_Nss1,(MCS0)_2TX | - | - | - | - | - | - |
| 5260MHz | Pass | 24.57 | 1.48 | 0.21 | 3.90 | 5.41 |
| 5300MHz | Pass | 24.57 | 1.85 | 0.63 | 4.29 | 5.41 |
| 5320MHz | Pass | 24.57 | 1.64 | 0.37 | 4.06 | 5.41 |
| 5500MHz | Pass | 24.57 | 1.37 | 1.52 | 4.46 | 5.41 |
| 5580MHz | Pass | 24.57 | 1.48 | 1.51 | 4.51 | 5.41 |
| 5700MHz | Pass | 24.57 | 1.37 | 1.28 | 4.34 | 5.41 |
| 802.11ax HEW40_Nss1,(MCS0)_2TX | - | - | - | - | - | - |
| 5270MHz | Pass | 24.57 | 2.63 | 1.96 | 5.32 | 5.41 |
| 5310MHz | Pass | 24.57 | 2.56 | 1.87 | 5.24 | 5.41 |
| 5510MHz | Pass | 24.57 | 2.42 | 2.31 | 5.38 | 5.41 |
| 5550MHz | Pass | 24.57 | 1.96 | 1.95 | 4.97 | 5.41 |
| 5670MHz | Pass | 24.57 | 2.25 | 2.45 | 5.36 | 5.41 |
| 802.11ax HEW80_Nss1,(MCS0)_2TX | - | - | - | - | - | - |
| 5290MHz | Pass | 24.57 | 2.52 | 1.42 | 5.02 | 5.41 |
| 5530MHz | Pass | 24.57 | 2.34 | 1.95 | 5.16 | 5.41 |

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



Summary

| Mode | PD (dBm/RBW) |
|--------------------------------|-----------------|
| | (dBill/RBW) |
| 5.25-5.35GHz | - |
| 802.11a_Nss1,(6Mbps)_2TX | -7.58 |
| 802.11ax HEW20_Nss1,(MCS0)_2TX | -7.60 |
| 802.11ax HEW40_Nss1,(MCS0)_2TX | -9.02 |
| 802.11ax HEW80_Nss1,(MCS0)_2TX | -12.23 |
| 5.47-5.725GHz | - |
| 802.11a_Nss1,(6Mbps)_2TX | -7.60 |
| 802.11ax HEW20_Nss1,(MCS0)_2TX | -7.64 |
| 802.11ax HEW40_Nss1,(MCS0)_2TX | -9.38 |
| 802.11ax HEW80_Nss1,(MCS0)_2TX | -12.09 |

RBW = 500kHz for 5.725-5.85GHz band / 1MHz for other band;



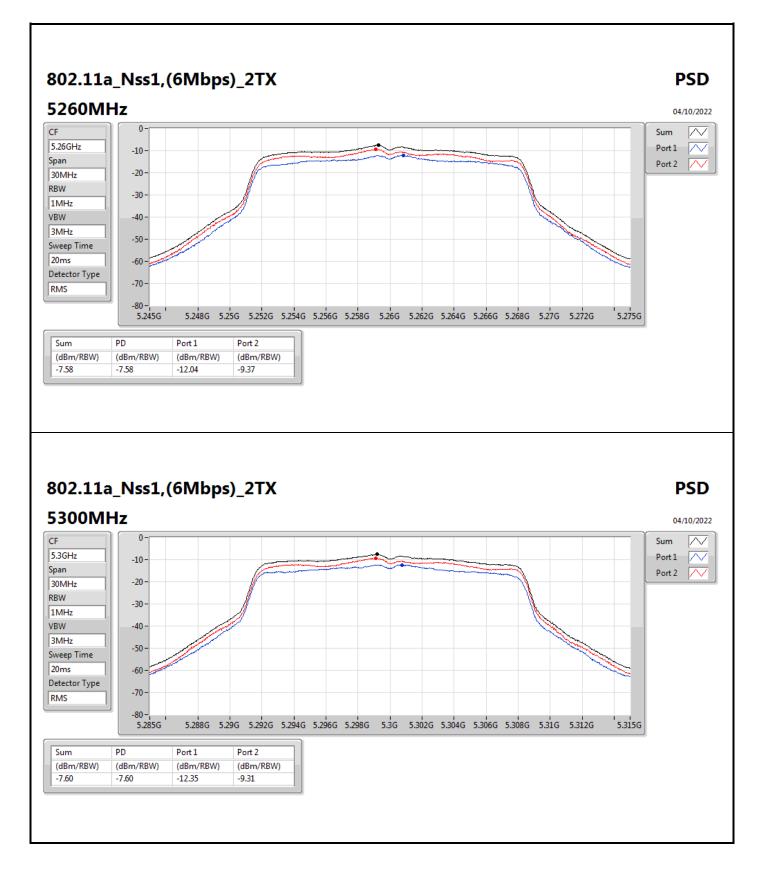
Result

| Mode | Result | DG | Port 1 | Port 2 | PD | PD Limit |
|--------------------------------|--------|-------|-----------|-----------|-----------|-----------|
| | | (dBi) | (dBm/RBW) | (dBm/RBW) | (dBm/RBW) | (dBm/RBW) |
| 802.11a_Nss1,(6Mbps)_2TX | - | - | - | - | - | - |
| 5260MHz | Pass | 24.57 | -12.04 | -9.37 | -7.58 | -7.57 |
| 5300MHz | Pass | 24.57 | -12.35 | -9.31 | -7.60 | -7.57 |
| 5320MHz | Pass | 24.57 | -12.42 | -9.23 | -7.65 | -7.57 |
| 5500MHz | Pass | 24.57 | -11.68 | -9.51 | -7.60 | -7.57 |
| 5580MHz | Pass | 24.57 | -12.47 | -9.80 | -7.98 | -7.57 |
| 5700MHz | Pass | 24.57 | -11.23 | -10.45 | -7.93 | -7.57 |
| 802.11ax HEW20_Nss1,(MCS0)_2TX | - | - | - | - | - | - |
| 5260MHz | Pass | 24.57 | -11.97 | -9.54 | -7.71 | -7.57 |
| 5300MHz | Pass | 24.57 | -12.15 | -9.51 | -7.69 | -7.57 |
| 5320MHz | Pass | 24.57 | -12.42 | -9.34 | -7.60 | -7.57 |
| 5500MHz | Pass | 24.57 | -12.23 | -9.79 | -7.95 | -7.57 |
| 5580MHz | Pass | 24.57 | -12.24 | -9.42 | -7.64 | -7.57 |
| 5700MHz | Pass | 24.57 | -10.96 | -10.18 | -7.65 | -7.57 |
| 802.11ax HEW40_Nss1,(MCS0)_2TX | - | - | - | - | - | - |
| 5270MHz | Pass | 24.57 | -13.33 | -11.30 | -9.36 | -7.57 |
| 5310MHz | Pass | 24.57 | -13.60 | -10.76 | -9.02 | -7.57 |
| 5510MHz | Pass | 24.57 | -13.30 | -11.34 | -9.38 | -7.57 |
| 5550MHz | Pass | 24.57 | -13.93 | -11.52 | -9.72 | -7.57 |
| 5670MHz | Pass | 24.57 | -13.26 | -11.67 | -9.41 | -7.57 |
| 802.11ax HEW80_Nss1,(MCS0)_2TX | - | - | - | - | - | - |
| 5290MHz | Pass | 24.57 | -15.03 | -15.32 | -12.23 | -7.57 |
| 5530MHz | Pass | 24.57 | -14.49 | -15.42 | -12.09 | -7.57 |

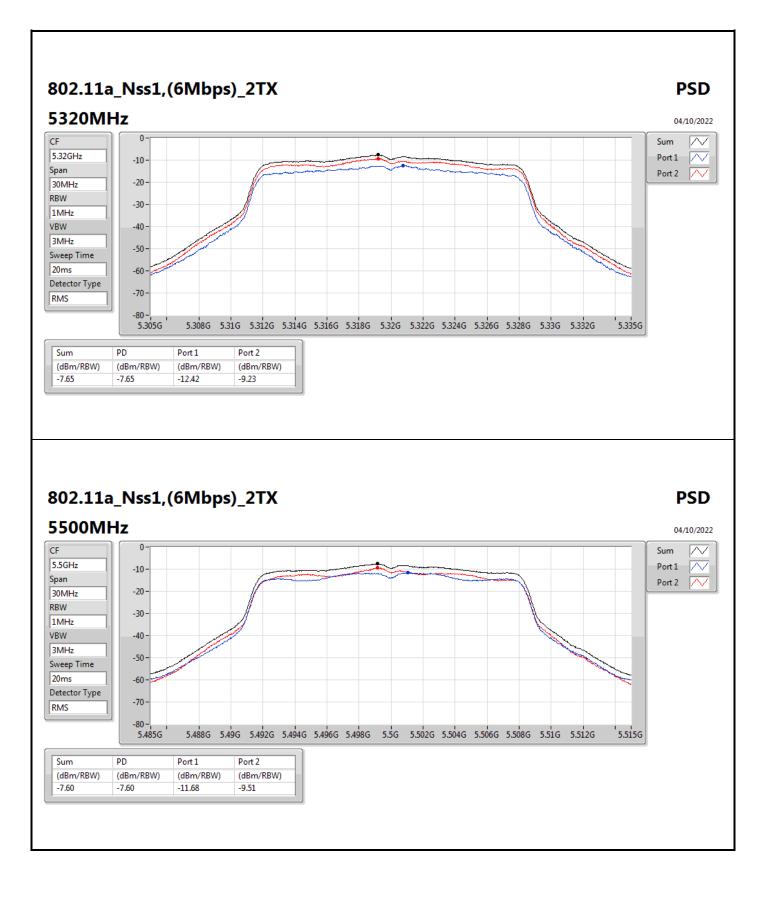
DG = Directional Gain; RBW = 500kHz for 5.725-5.85GHz band / 1MHz for other band; PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;



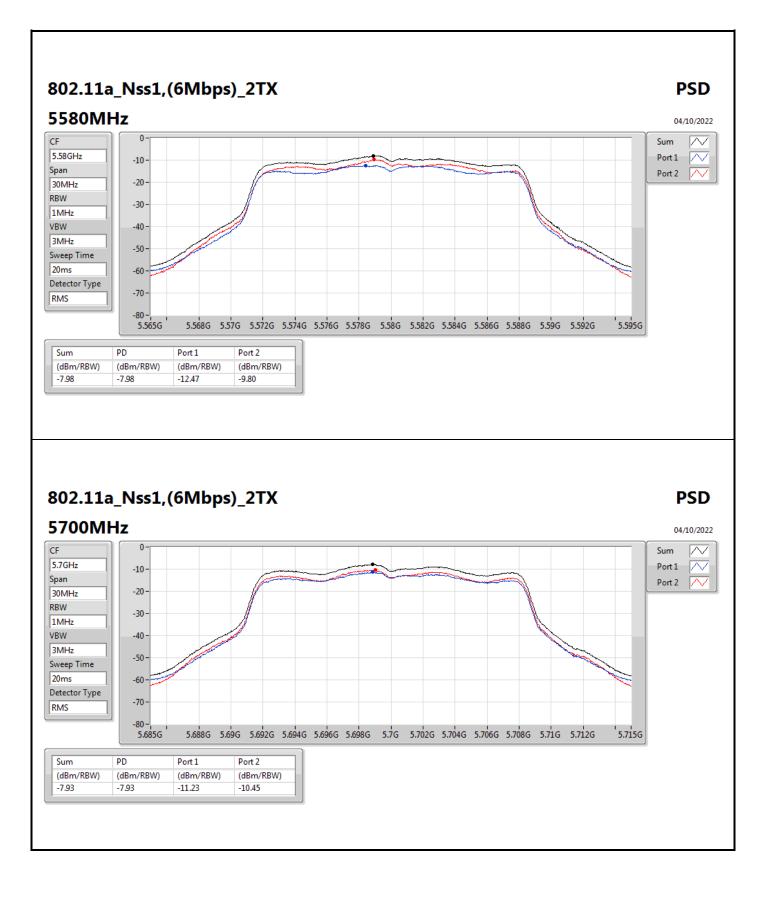
PSD





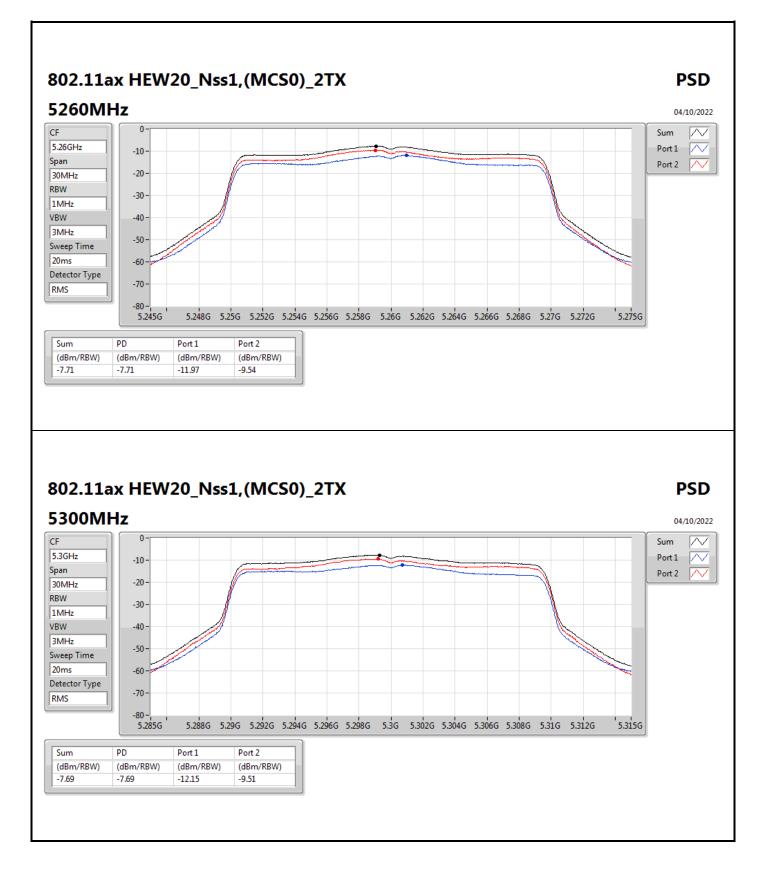




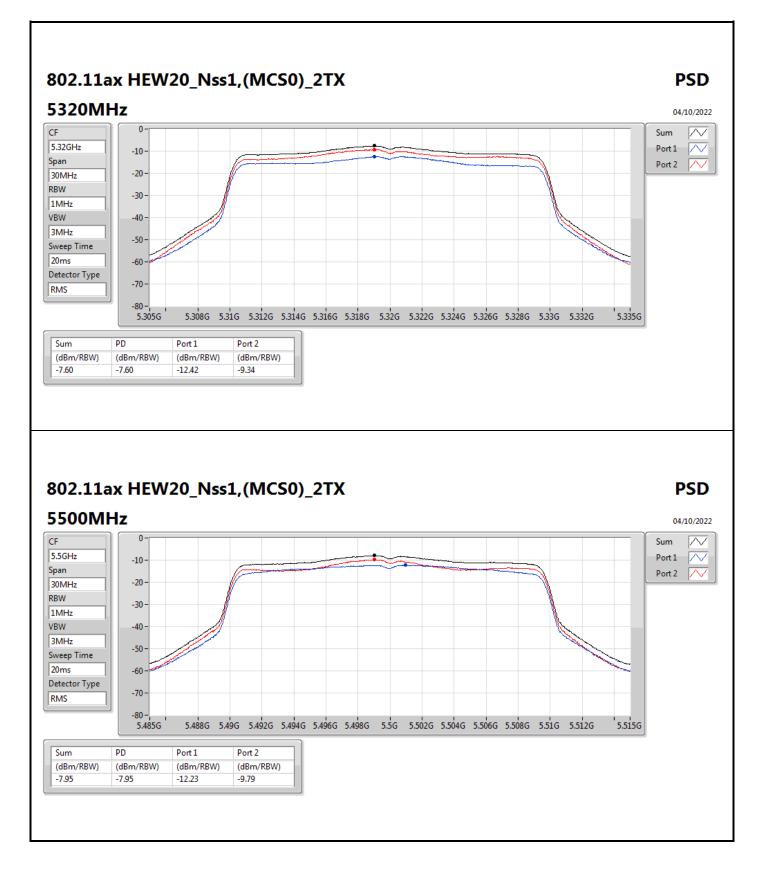




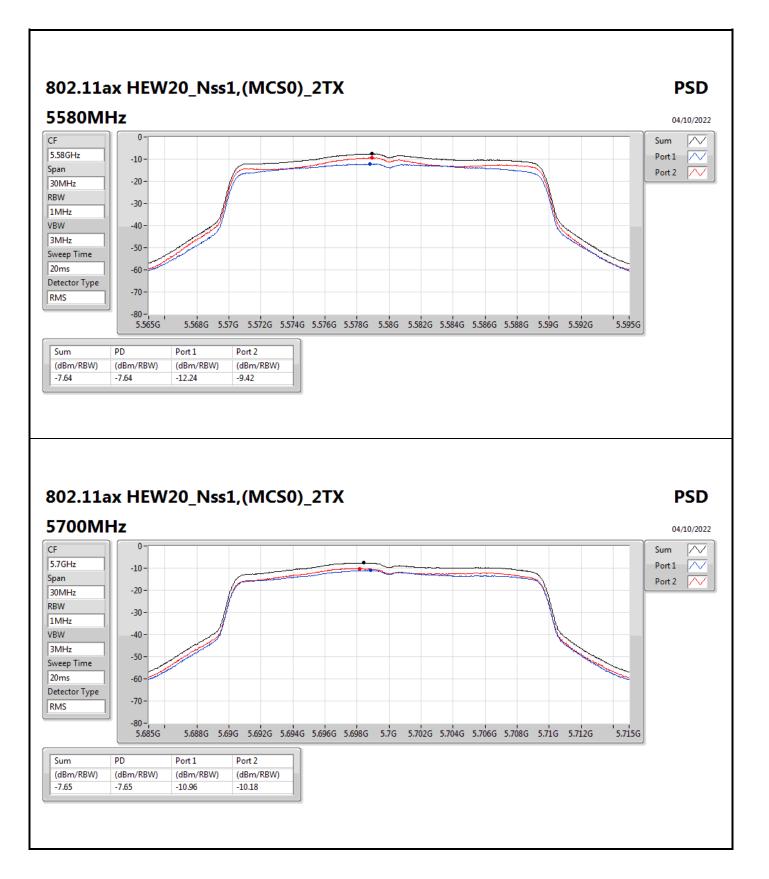




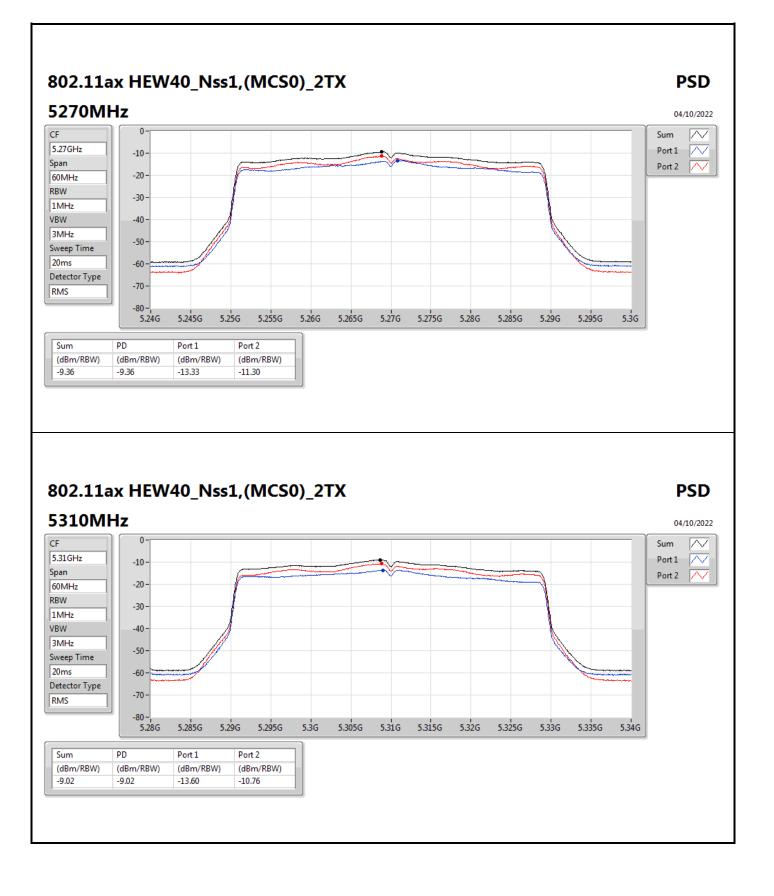




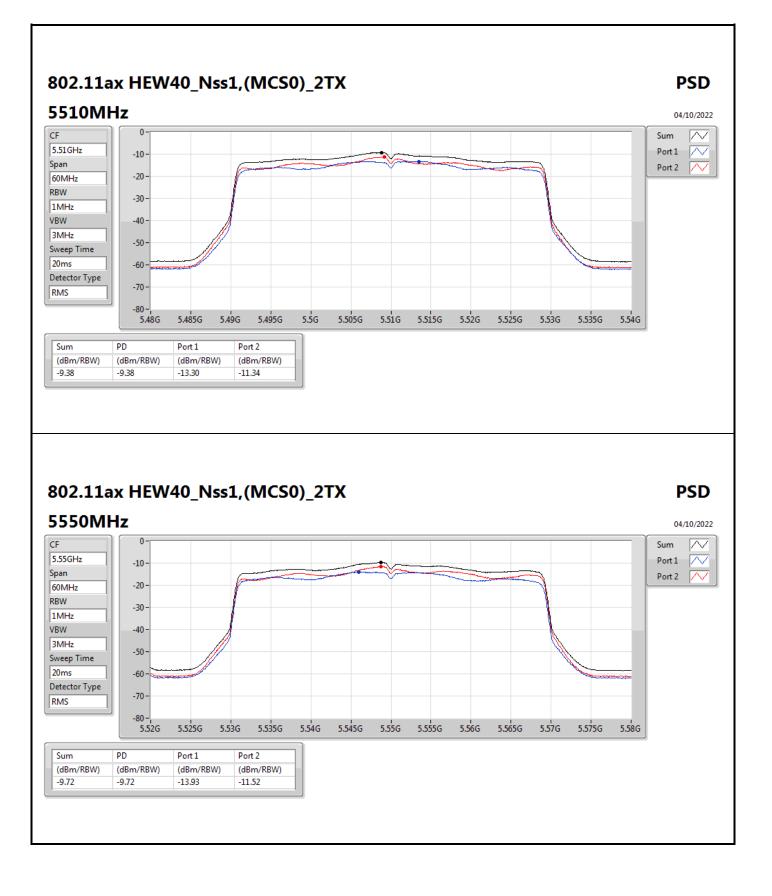






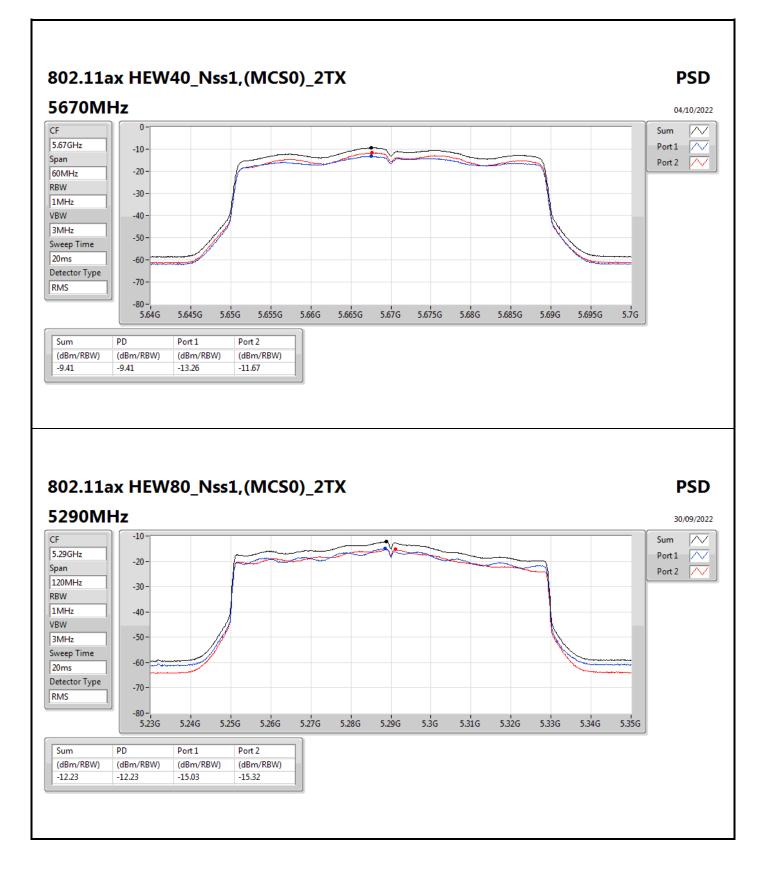








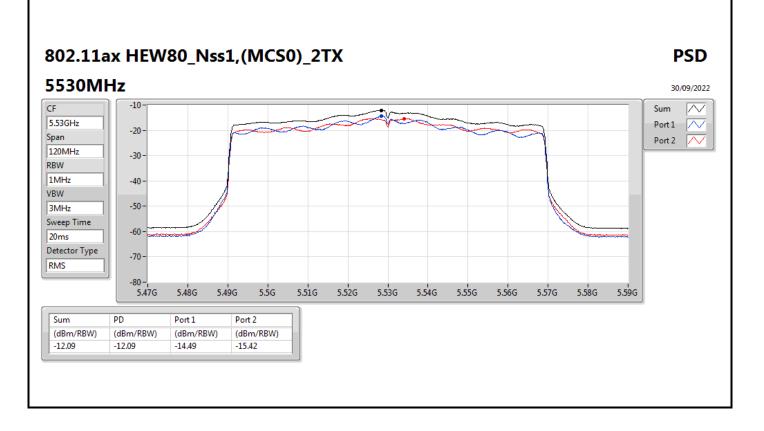














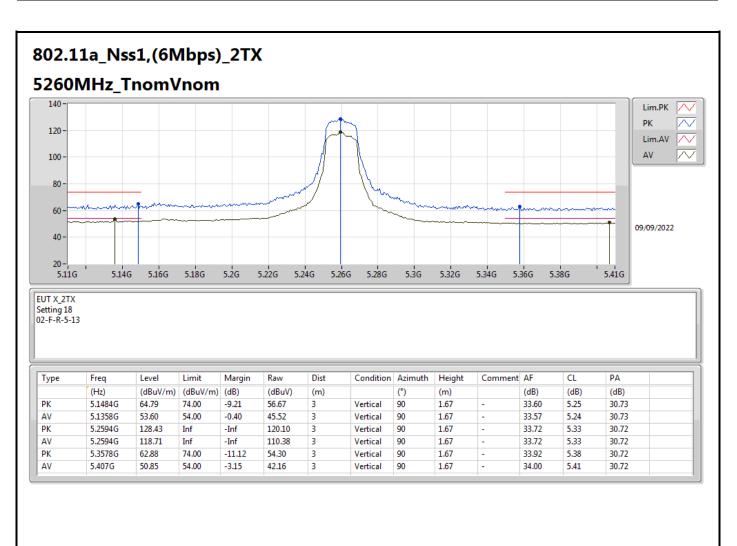
RSE TX above 1GHz

Appendix D

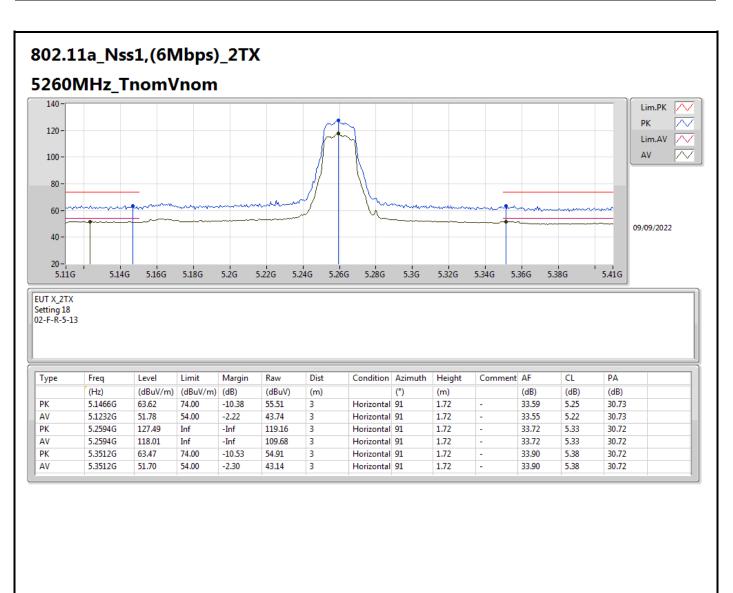
Summary

| Mode | Result | Туре | Freq (Hz) | Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Dist (m) | Condition | Azimuth (°) | Height (m) | Comments |
|--------------------------------|--------|------|--------------|-------------------|-------------------|----------------|-------------|-----------|----------------|---------------|----------|
| 5.47-5.725GHz | - | - | | | | - | - | - | - | - | - |
| 802.11ax HEW40_Nss1,(MCS0)_2TX | Pass | AV | 5.4486G | 53.97 | 54.00 | -0.03 | 3 | Vertical | 90 | 1.77 | - |

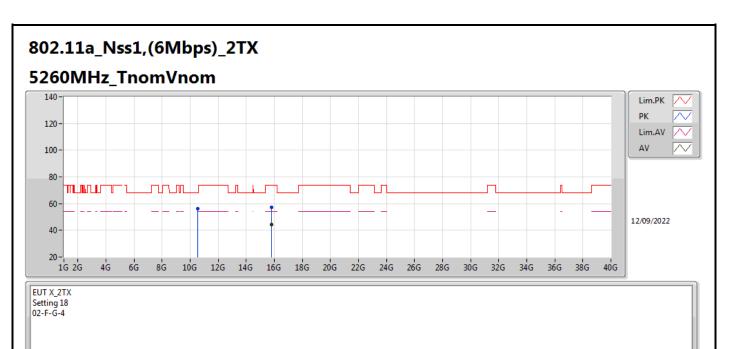






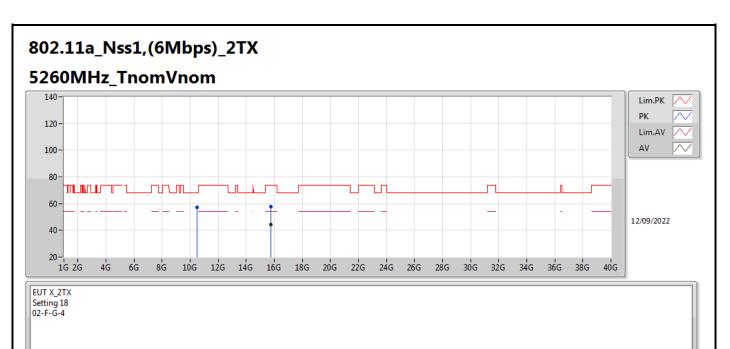






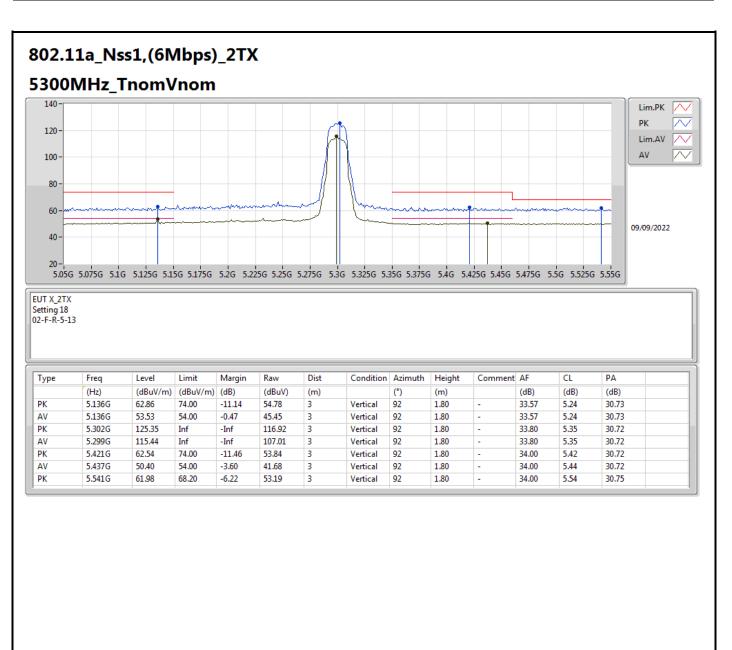
| Туре | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|------|-----------|----------|----------|--------|--------|------|-----------|---------|--------|---------|-------|------|-------|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| РК | 10.52294G | 56.14 | 68.20 | -12.06 | 41.90 | 3 | Vertical | 91 | 2.20 | - | 38.58 | 7.51 | 31.85 |
| РК | 15.78234G | 57.37 | 74.00 | -16.63 | 41.45 | 3 | Vertical | 170 | 1.95 | - | 37.50 | 9.90 | 31.48 |
| AV | 15.77906G | 44.21 | 54.00 | -9.79 | 28.29 | 3 | Vertical | 170 | 1.95 | - | 37.50 | 9.90 | 31.48 |



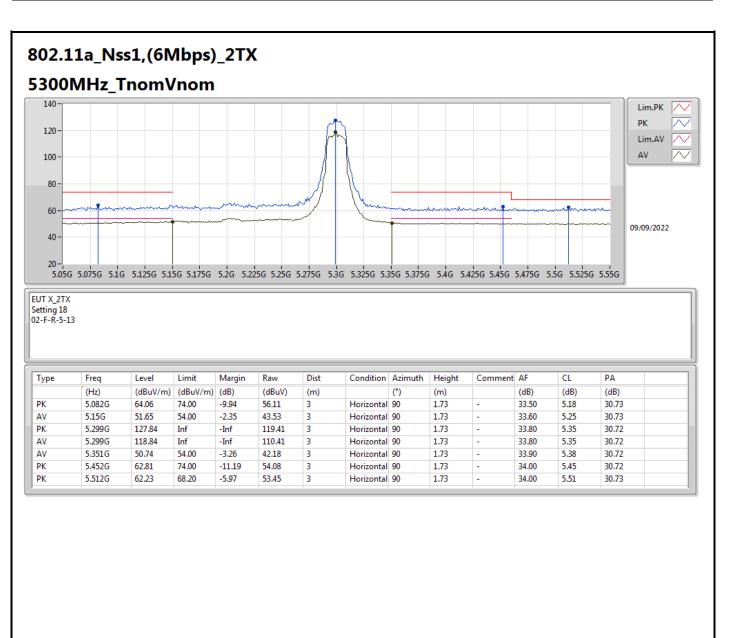


| Туре | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|------|-----------|----------|----------|--------|--------|------|------------|---------|--------|---------|-------|------|-------|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 10.5143G | 57.18 | 68.20 | -11.02 | 42.93 | 3 | Horizontal | 87 | 1.78 | - | 38.59 | 7.51 | 31.85 |
| PK | 15.77616G | 57.88 | 74.00 | -16.12 | 41.95 | 3 | Horizontal | 317 | 2.67 | - | 37.50 | 9.90 | 31.47 |
| AV | 15.77636G | 44.21 | 54.00 | -9.79 | 28.28 | 3 | Horizontal | 317 | 2.67 | - | 37.50 | 9.90 | 31.47 |

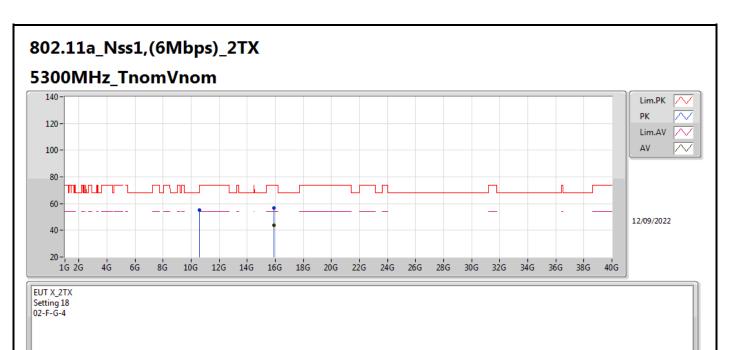






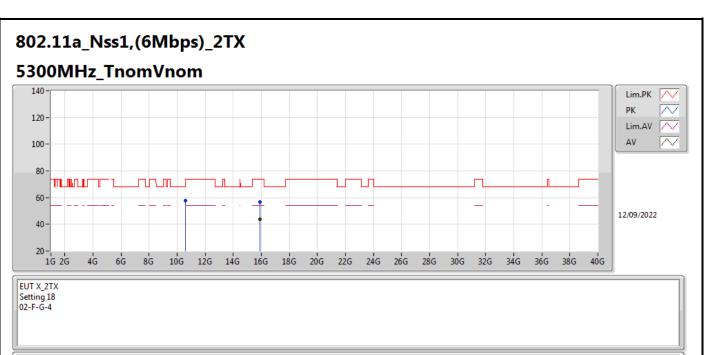






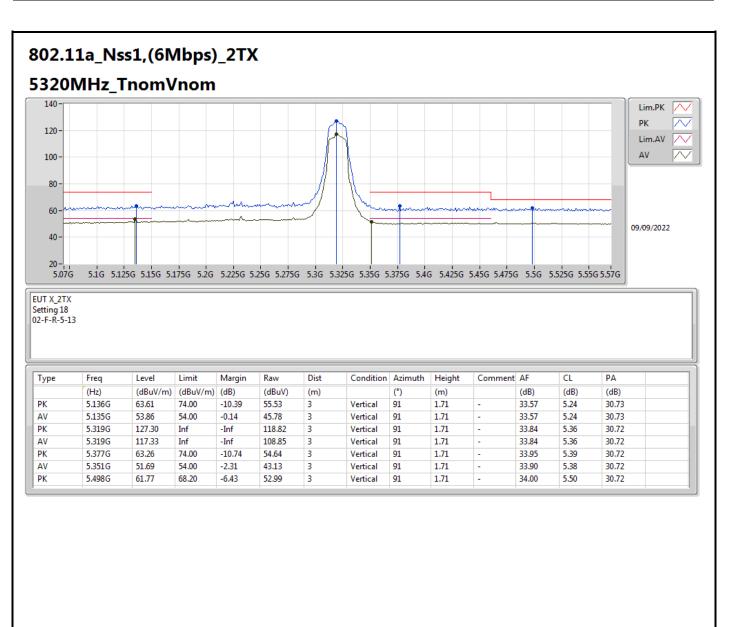
| Туре | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|------|-----------|----------|----------|--------|--------|------|-----------|---------|--------|---------|-------|------|-------|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| РК | 10.60282G | 55.09 | 74.00 | -18.91 | 40.91 | 3 | Vertical | 68 | 2.12 | - | 38.50 | 7.54 | 31.86 |
| РК | 15.9022G | 56.63 | 74.00 | -17.37 | 40.91 | 3 | Vertical | 198 | 1.44 | - | 37.30 | 9.96 | 31.54 |
| AV | 15.89692G | 43.59 | 54.00 | -10.41 | 27.87 | 3 | Vertical | 198 | 1.44 | - | 37.31 | 9.95 | 31.54 |



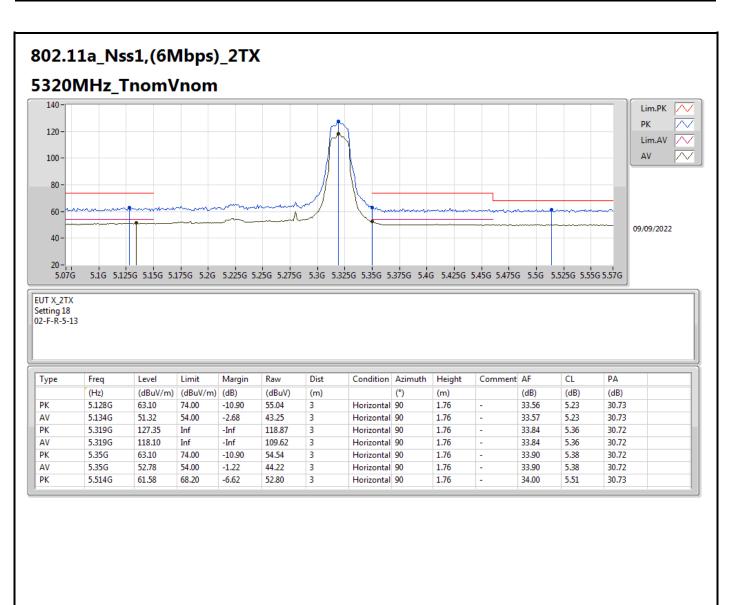


| Туре | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA | |
|------|-----------|----------|----------|--------|--------|------|------------|---------|--------|---------|-------|------|-------|--|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) | |
| РК | 10.59742G | 57.56 | 68.20 | -10.64 | 43.38 | 3 | Horizontal | 86 | 1.80 | - | 38.50 | 7.54 | 31.86 | |
| РК | 15.90034G | 56.76 | 74.00 | -17.24 | 41.04 | 3 | Horizontal | 165 | 2.79 | - | 37.30 | 9.96 | 31.54 | |
| AV | 15.89742G | 43.62 | 54.00 | -10.38 | 27.90 | 3 | Horizontal | 165 | 2.79 | - | 37.31 | 9.95 | 31.54 | |

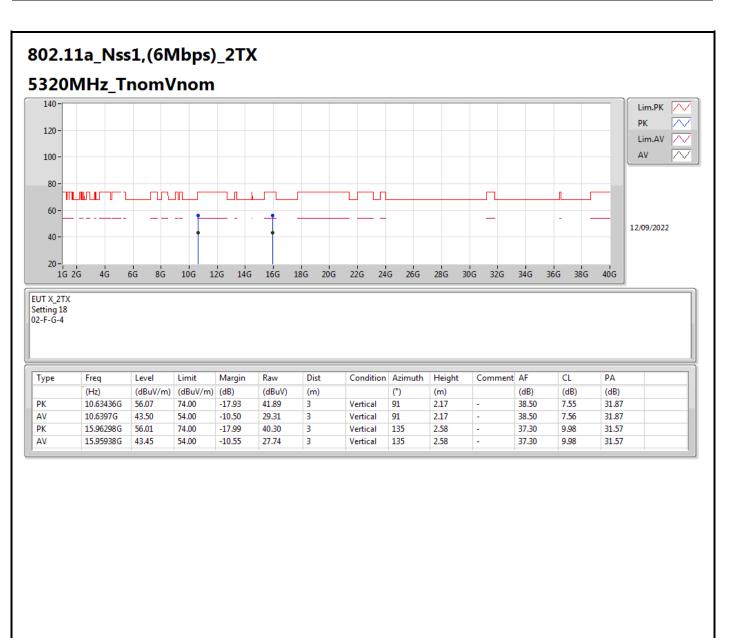




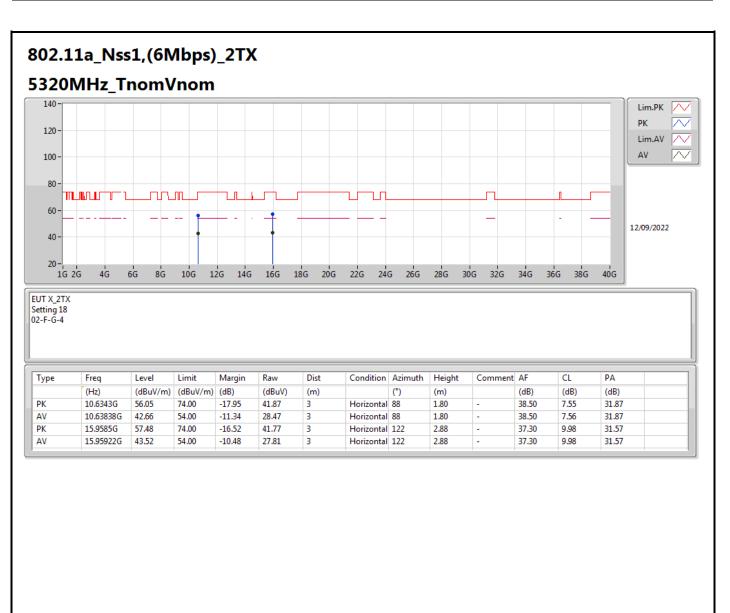




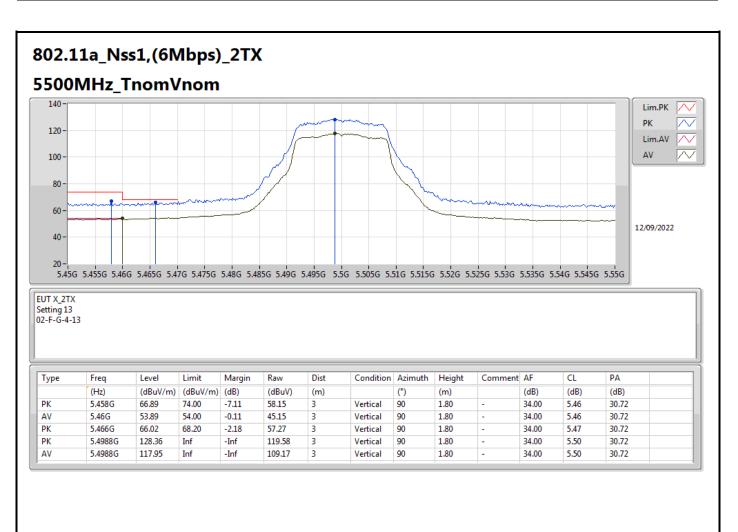




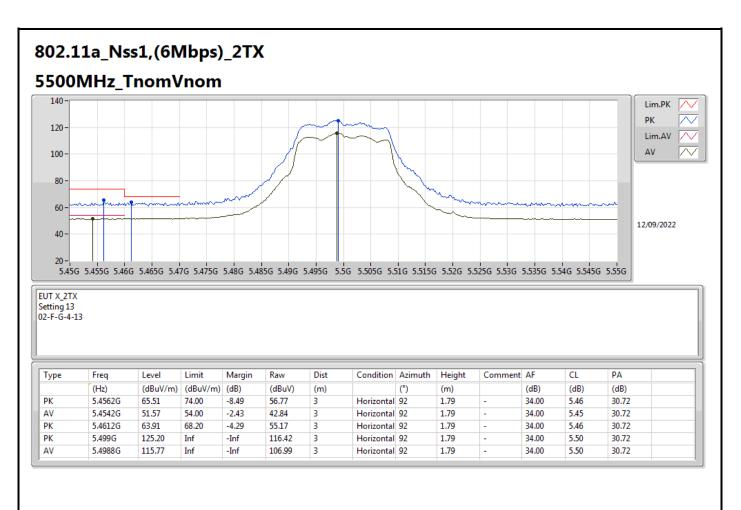




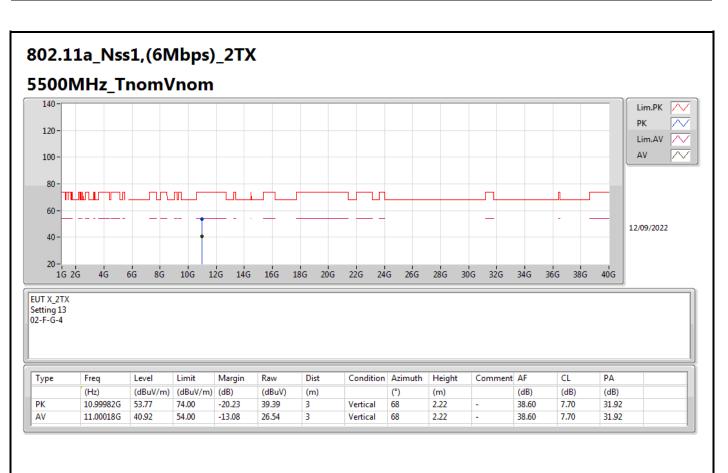




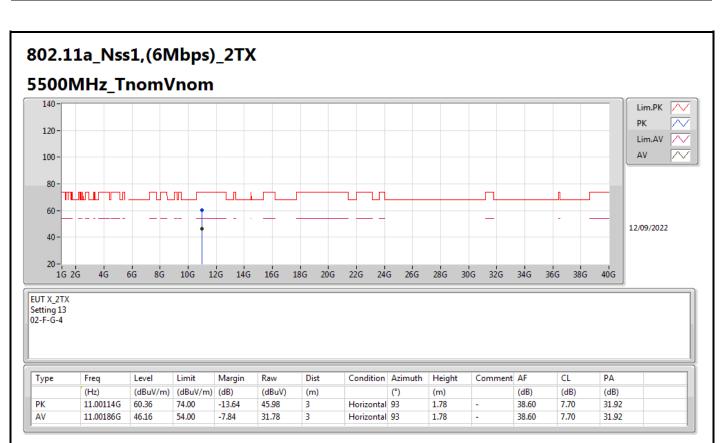




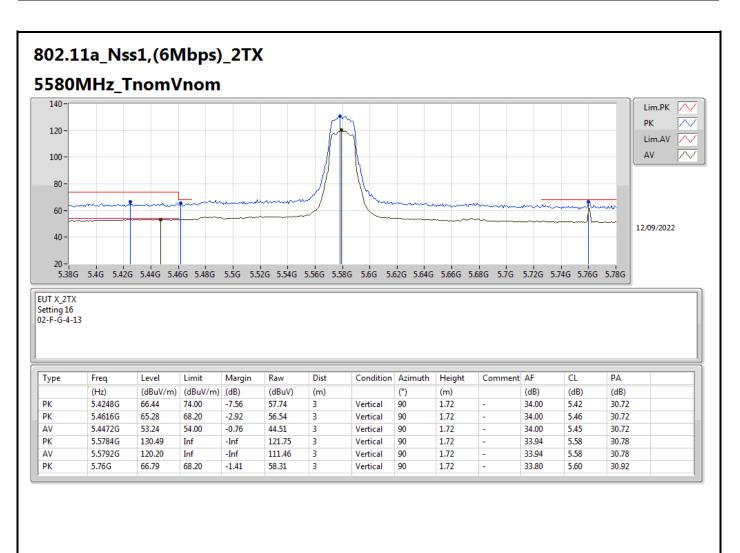




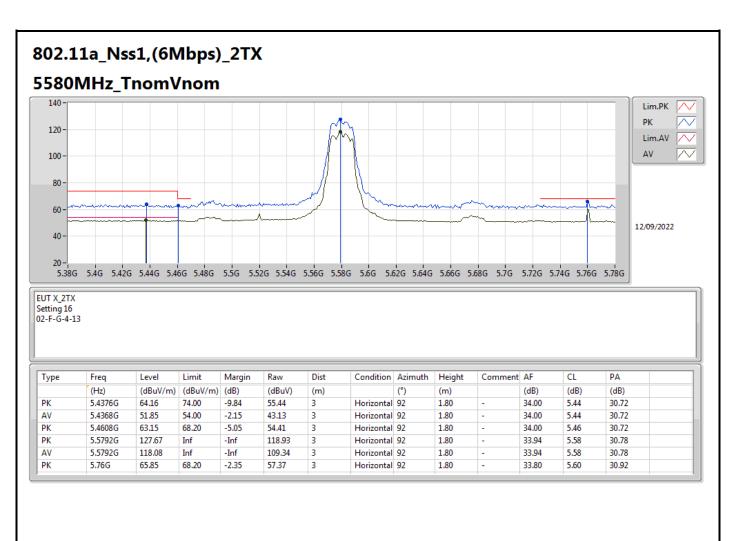




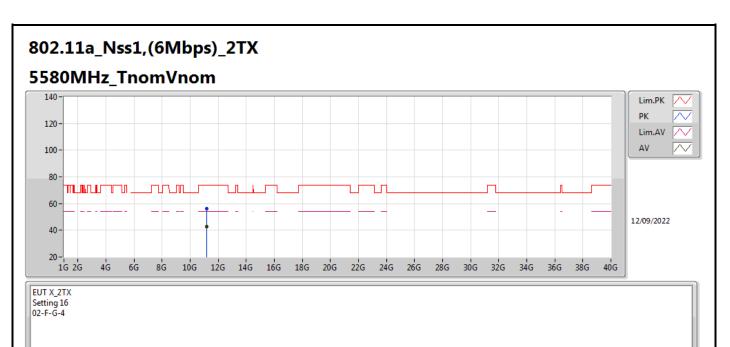






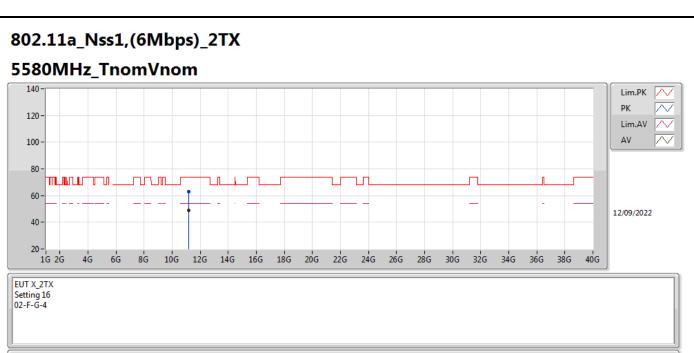






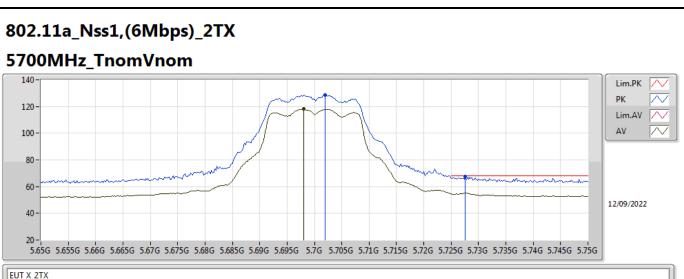
| Туре | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|------|-----------|----------|----------|--------|--------|------|-----------|---------|--------|---------|-------|------|-------|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| РК | 11.16144G | 56.17 | 74.00 | -17.83 | 41.63 | 3 | Vertical | 66 | 1.80 | - | 38.76 | 7.76 | 31.98 |
| AV | 11.1603G | 42.83 | 54.00 | -11.17 | 28.29 | 3 | Vertical | 66 | 1.80 | - | 38.76 | 7.76 | 31.98 |





| Туре | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|------|-----------|----------|----------|--------|--------|------|------------|---------|--------|---------|-------|------|-------|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| РК | 11.16138G | 62.71 | 74.00 | -11.29 | 48.17 | 3 | Horizontal | 93 | 1.76 | - | 38.76 | 7.76 | 31.98 |
| AV | 11.16156G | 48.88 | 54.00 | -5.12 | 34.34 | 3 | Horizontal | 93 | 1.76 | - | 38.76 | 7.76 | 31.98 |

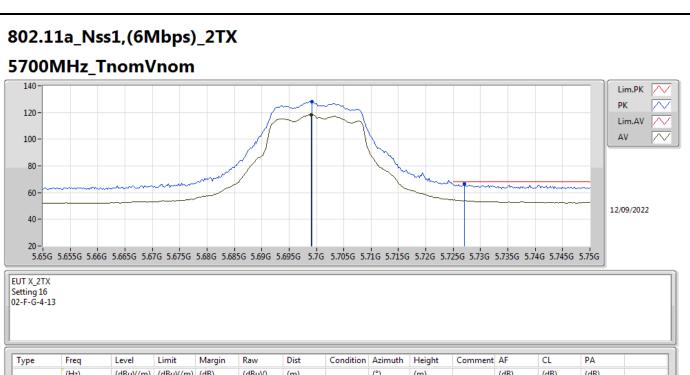




EUT X_2TX Setting 16 02-F-G-4-13

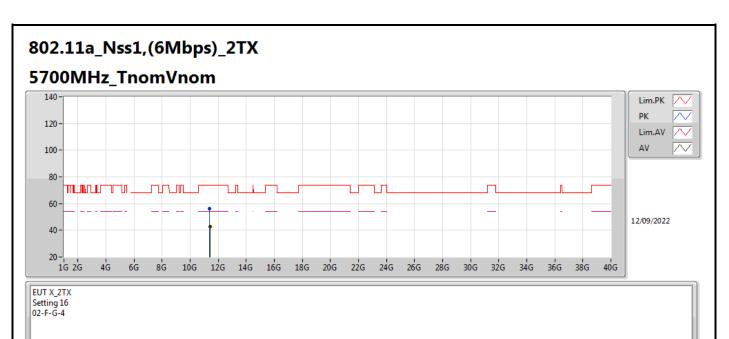
| Туре | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|------|---------|----------|----------|--------|--------|------|-----------|---------|--------|---------|-------|------|-------|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 5.702G | 128.75 | Inf | -Inf | 120.12 | 3 | Vertical | 90 | 1.75 | - | 33.90 | 5.60 | 30.87 |
| AV | 5.698G | 118.05 | Inf | -Inf | 109.42 | 3 | Vertical | 90 | 1.75 | - | 33.90 | 5.60 | 30.87 |
| РК | 5.7276G | 67.67 | 68.20 | -0.53 | 59.12 | 3 | Vertical | 90 | 1.75 | - | 33.84 | 5.60 | 30.89 |





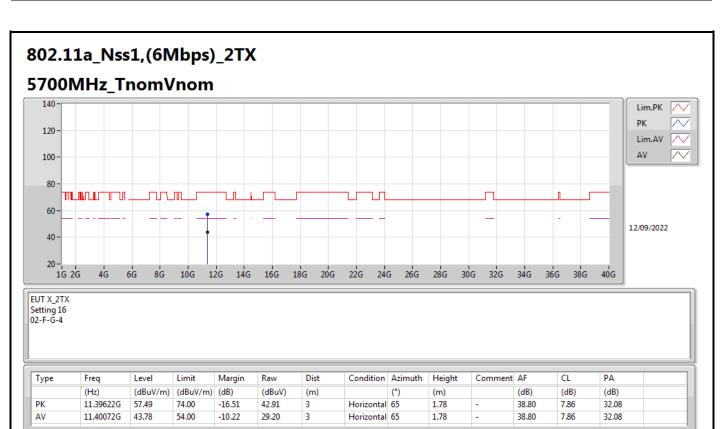
| Туре | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|------|---------|----------|----------|--------|--------|------|------------|---------|--------|---------|-------|------|-------|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 5.6992G | 128.22 | Inf | -Inf | 119.59 | 3 | Horizontal | 91 | 1.80 | - | 33.90 | 5.60 | 30.87 |
| AV | 5.699G | 118.52 | Inf | -Inf | 109.89 | 3 | Horizontal | 91 | 1.80 | - | 33.90 | 5.60 | 30.87 |
| PK | 5.727G | 66.55 | 68.20 | -1.65 | 57.99 | 3 | Horizontal | 91 | 1.80 | - | 33.85 | 5.60 | 30.89 |
| | | | | | | | | | | | | | |



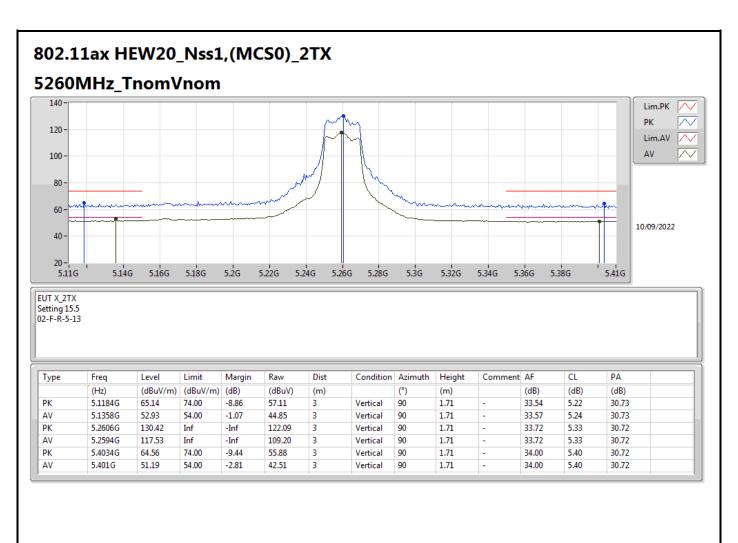


| Туре | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|------|-----------|----------|----------|--------|--------|------|-----------|---------|--------|---------|-------|------|-------|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 11.39718G | 56.31 | 74.00 | -17.69 | 41.73 | 3 | Vertical | 114 | 1.84 | - | 38.80 | 7.86 | 32.08 |
| AV | 11.40222G | 42.88 | 54.00 | -11.12 | 28.30 | 3 | Vertical | 114 | 1.84 | - | 38.80 | 7.86 | 32.08 |

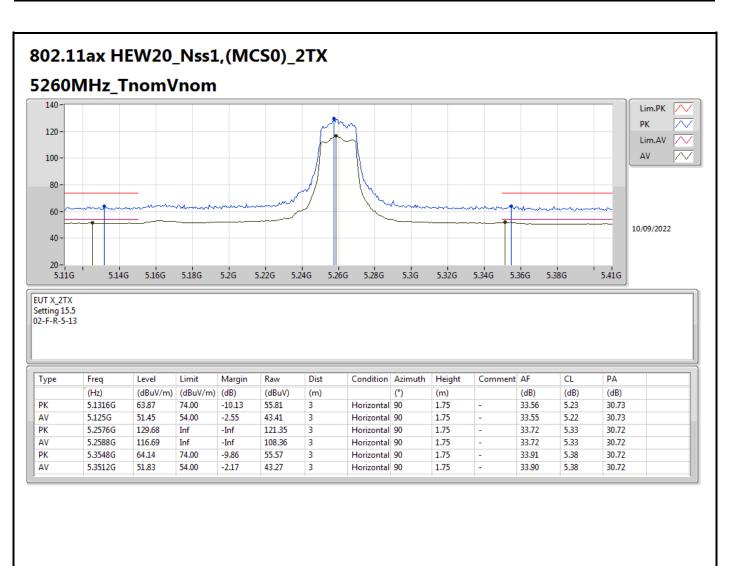




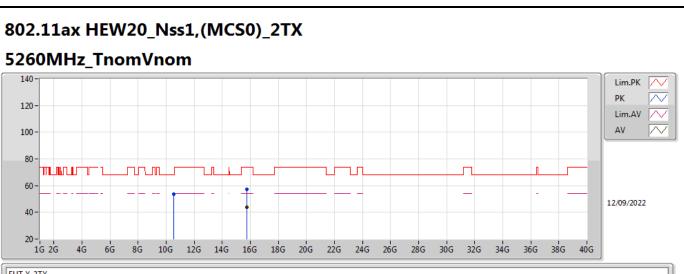








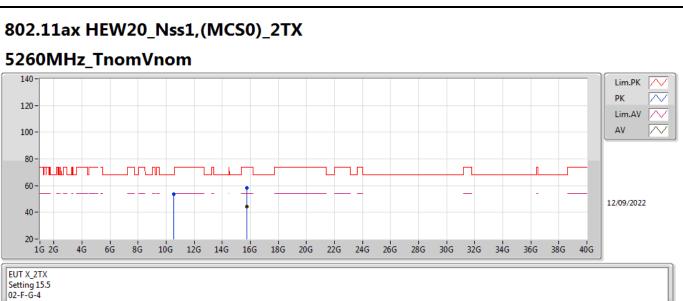




EUT X_2TX Setting 15.5 02-F-G-4

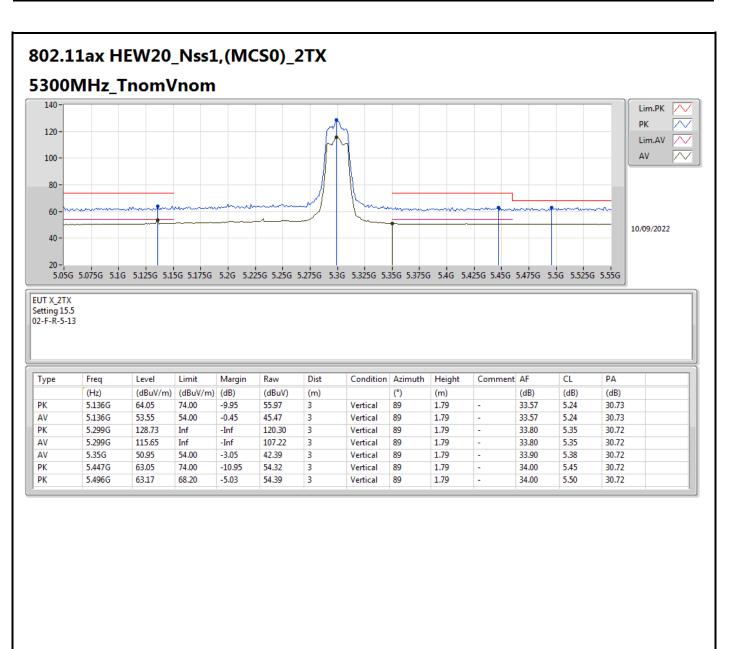
| Туре | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|------|-----------|----------|----------|--------|--------|------|-----------|---------|--------|---------|-------|------|-------|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 10.52392G | 53.59 | 68.20 | -14.61 | 39.35 | 3 | Vertical | 83 | 1.95 | - | 38.58 | 7.51 | 31.85 |
| PK | 15.77676G | 57.18 | 74.00 | -16.82 | 41.25 | 3 | Vertical | 112 | 1.02 | - | 37.50 | 9.90 | 31.47 |
| AV | 15.77032G | 43.88 | 54.00 | -10.12 | 27.95 | 3 | Vertical | 112 | 1.02 | - | 37.50 | 9.90 | 31.47 |



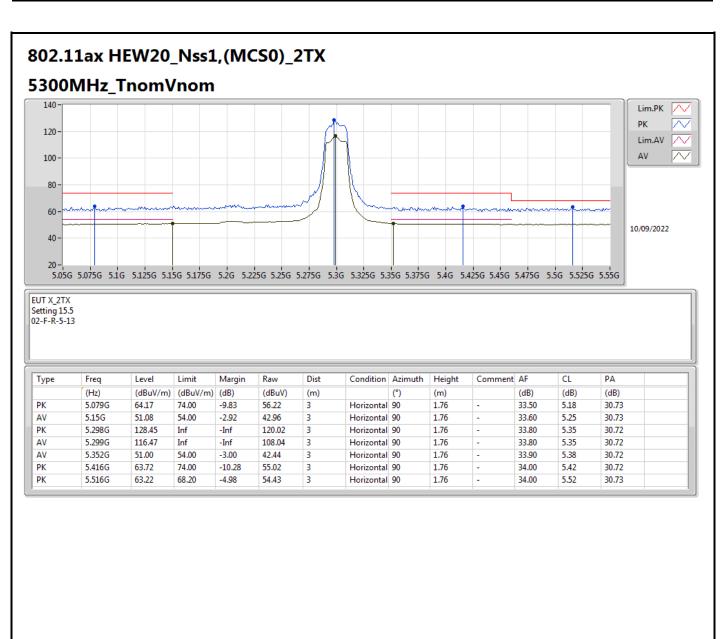


| Туре | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|------|-----------|----------|----------|--------|--------|------|------------|---------|--------|---------|-------|------|-------|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| РК | 10.51672G | 53.59 | 68.20 | -14.61 | 39.35 | 3 | Horizontal | 253 | 1.99 | - | 38.58 | 7.51 | 31.85 |
| PK | 15.77608G | 58.10 | 74.00 | -15.90 | 42.17 | 3 | Horizontal | 26 | 2.85 | - | 37.50 | 9.90 | 31.47 |
| AV | 15.7772G | 44.10 | 54.00 | -9.90 | 28.17 | 3 | Horizontal | 26 | 2.85 | - | 37.50 | 9.90 | 31.47 |

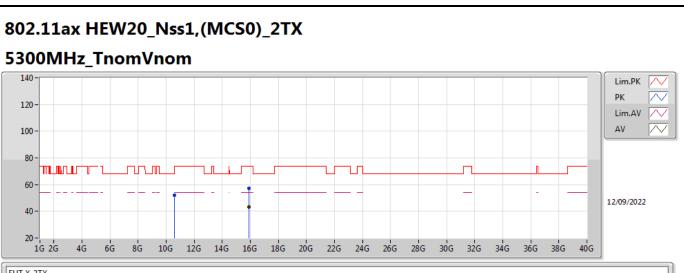








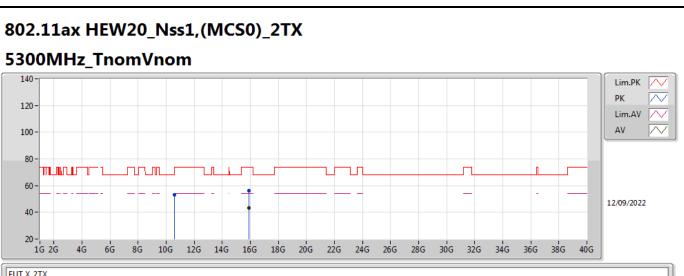




EUT X_2TX Setting 15.5 02-F-G-4

| Туре | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|------|-----------|----------|----------|--------|--------|------|-----------|---------|--------|---------|-------|------|-------|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| РК | 10.59598G | 52.23 | 68.20 | -15.97 | 38.05 | 3 | Vertical | 351 | 2.17 | - | 38.50 | 7.54 | 31.86 |
| РК | 15.89918G | 57.36 | 74.00 | -16.64 | 41.65 | 3 | Vertical | 132 | 1.94 | - | 37.30 | 9.95 | 31.54 |
| AV | 15.8999G | 43.13 | 54.00 | -10.87 | 27.42 | 3 | Vertical | 132 | 1.94 | - | 37.30 | 9.95 | 31.54 |

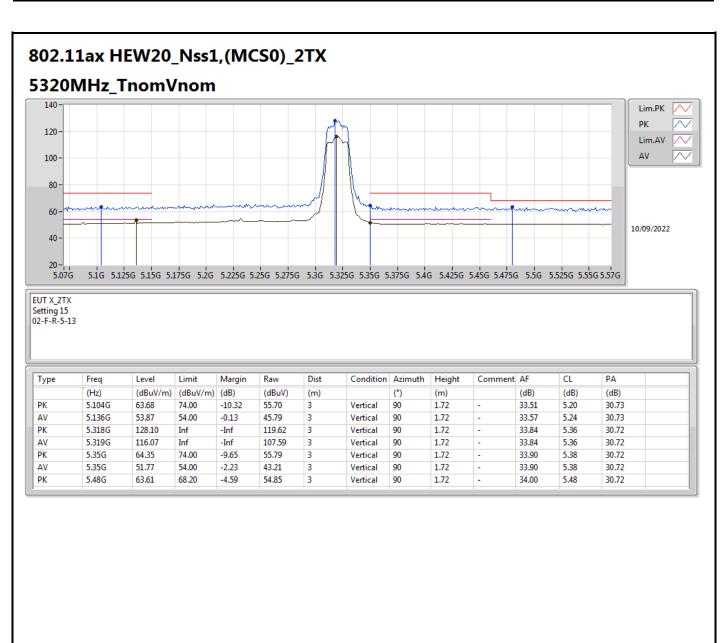




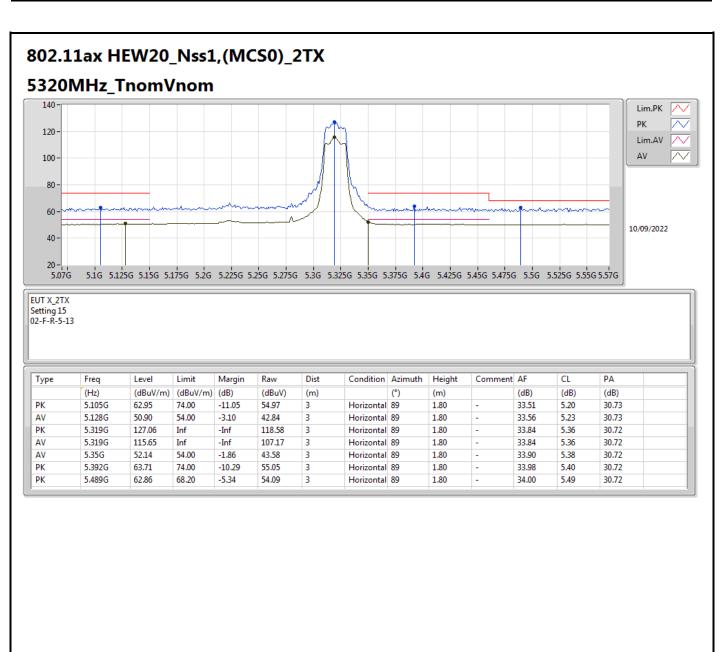
EUT X_2TX Setting 15.5 02-F-G-4

| Туре | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA | |
|------|-----------|----------|----------|--------|--------|------|------------|---------|--------|---------|-------|------|-------|--|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) | |
| PK | 10.59832G | 53.01 | 68.20 | -15.19 | 38.83 | 3 | Horizontal | 110 | 1.03 | - | 38.50 | 7.54 | 31.86 | |
| PK | 15.90092G | 56.28 | 74.00 | -17.72 | 40.56 | 3 | Horizontal | 0 | 1.37 | - | 37.30 | 9.96 | 31.54 | |
| AV | 15.9012G | 43.10 | 54.00 | -10.90 | 27.38 | 3 | Horizontal | 0 | 1.37 | - | 37.30 | 9.96 | 31.54 | |

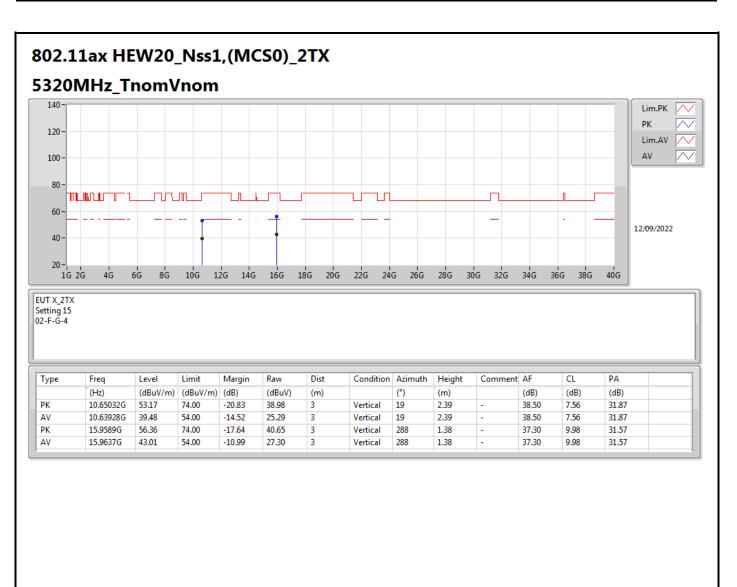




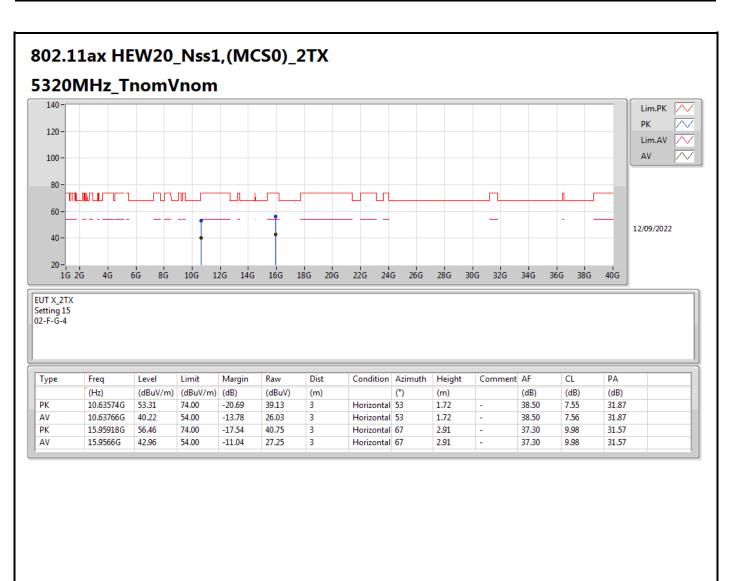




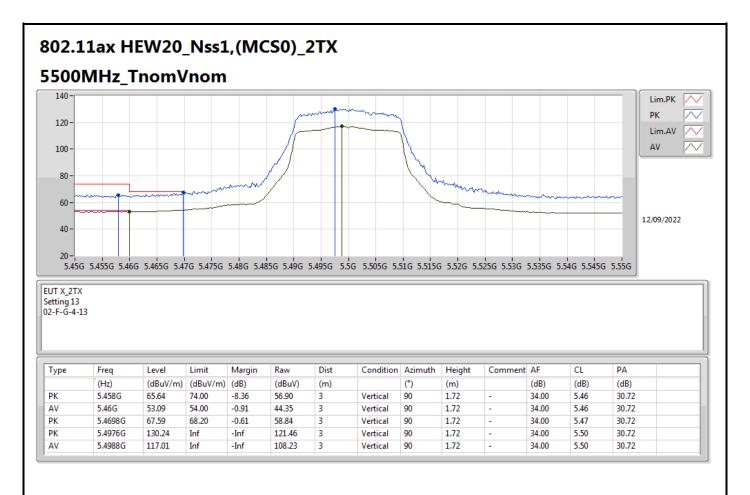




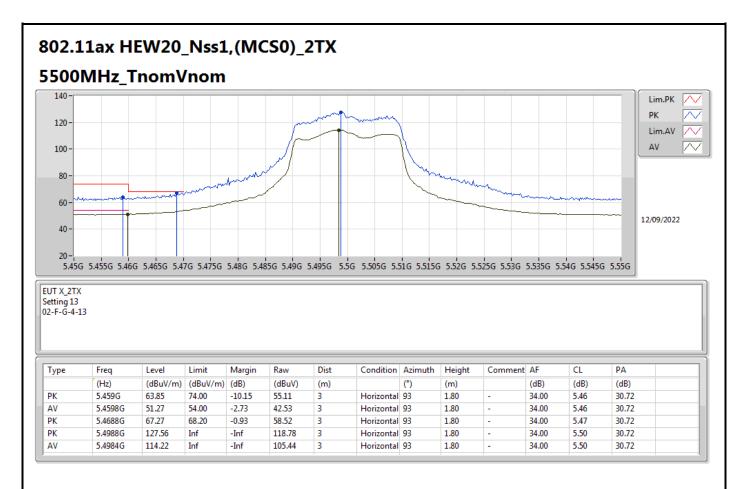




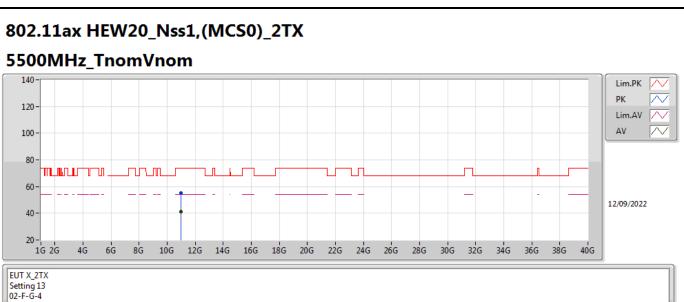






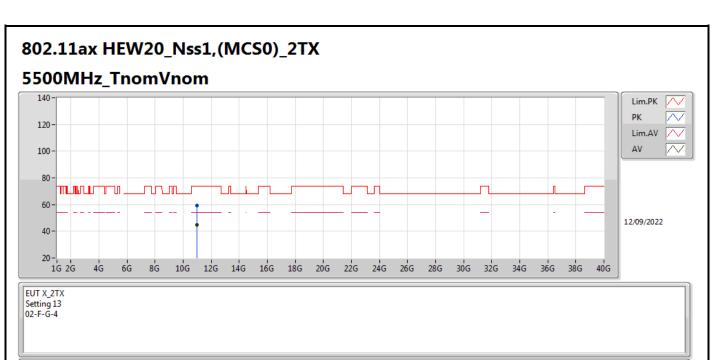






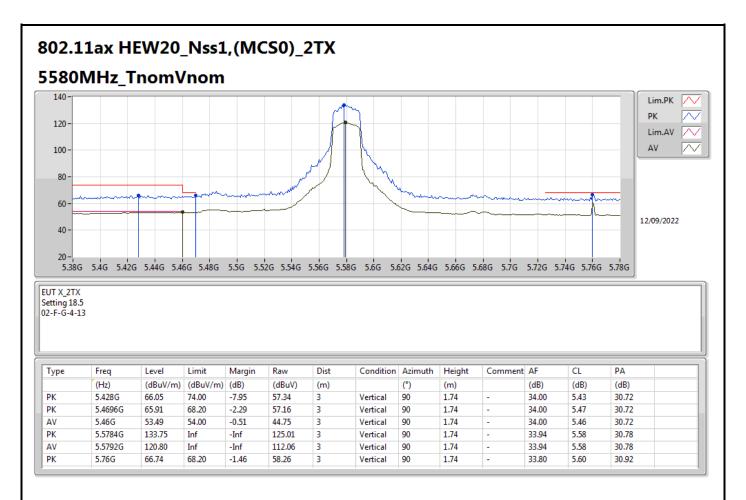
| Туре | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|------|-----------|----------|----------|--------|--------|------|-----------|---------|--------|---------|-------|------|-------|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 11.00264G | 55.09 | 74.00 | -18.91 | 40.71 | 3 | Vertical | 90 | 1.86 | - | 38.60 | 7.70 | 31.92 |
| AV | 11.00378G | 41.27 | 54.00 | -12.73 | 26.89 | 3 | Vertical | 90 | 1.86 | - | 38.60 | 7.70 | 31.92 |



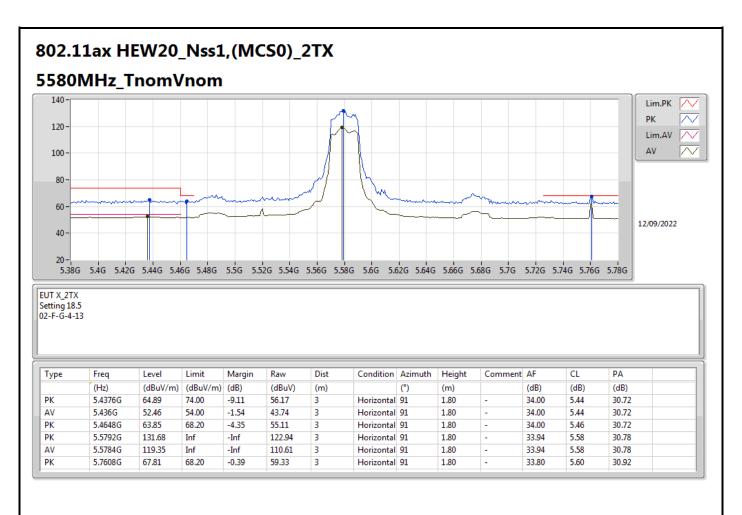


| Туре | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|------|-----------|----------|----------|--------|--------|------|------------|---------|--------|---------|-------|------|-------|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| РК | 11.00312G | 59.21 | 74.00 | -14.79 | 44.83 | 3 | Horizontal | 93 | 1.78 | - | 38.60 | 7.70 | 31.92 |
| AV | 11.00318G | 44.80 | 54.00 | -9.20 | 30.42 | 3 | Horizontal | 93 | 1.78 | - | 38.60 | 7.70 | 31.92 |

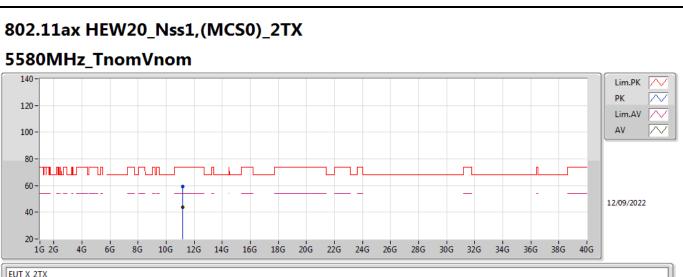








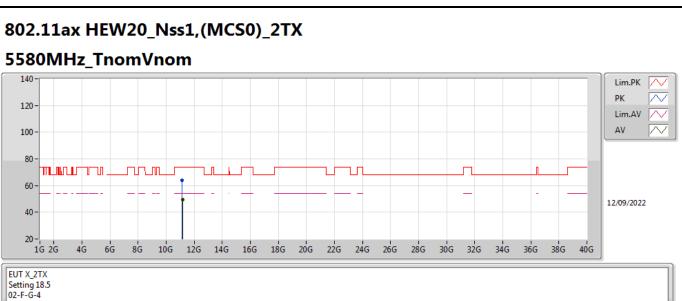




EUT X_2TX Setting 18.5 02-F-G-4

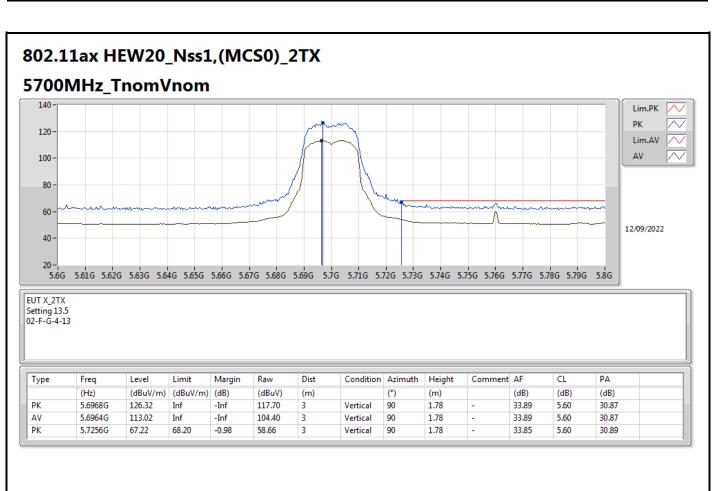
| Туре | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|------|-----------|----------|----------|--------|--------|------|-----------|---------|--------|---------|-------|------|-------|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 11.16204G | 59.07 | 74.00 | -14.93 | 44.53 | 3 | Vertical | 66 | 1.95 | - | 38.76 | 7.76 | 31.98 |
| AV | 11.1624G | 44.00 | 54.00 | -10.00 | 29.46 | 3 | Vertical | 66 | 1.95 | - | 38.76 | 7.76 | 31.98 |



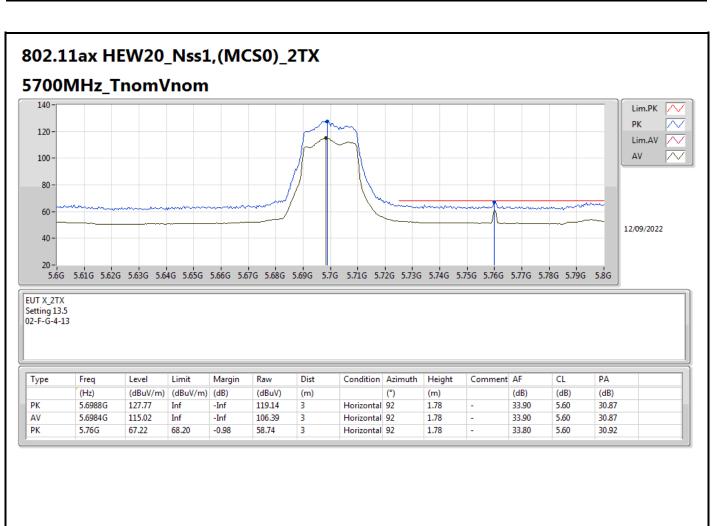


| Туре | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|------|-----------|----------|----------|--------|--------|------|------------|---------|--------|---------|-------|------|-------|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 11.15484G | 64.11 | 74.00 | -9.89 | 49.58 | 3 | Horizontal | 94 | 1.80 | - | 38.75 | 7.76 | 31.98 |
| AV | 11.1639G | 49.25 | 54.00 | -4.75 | 34.71 | 3 | Horizontal | 94 | 1.80 | - | 38.76 | 7.77 | 31.99 |

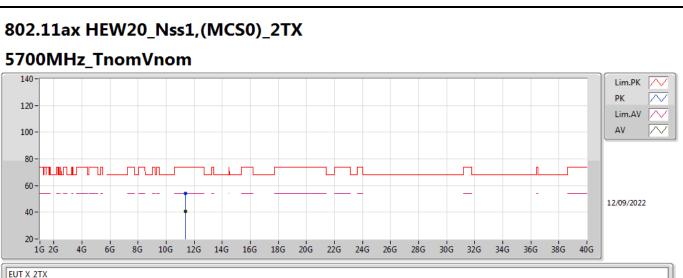








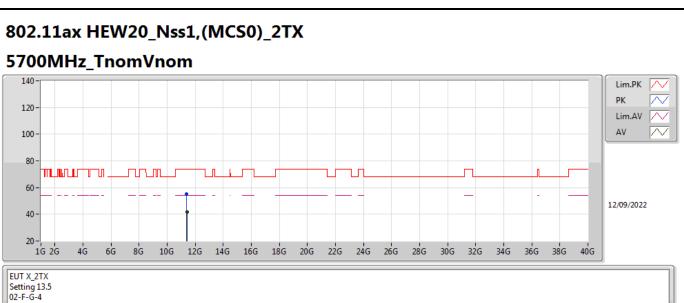




EUT X_2TX Setting 13.5 02-F-G-4

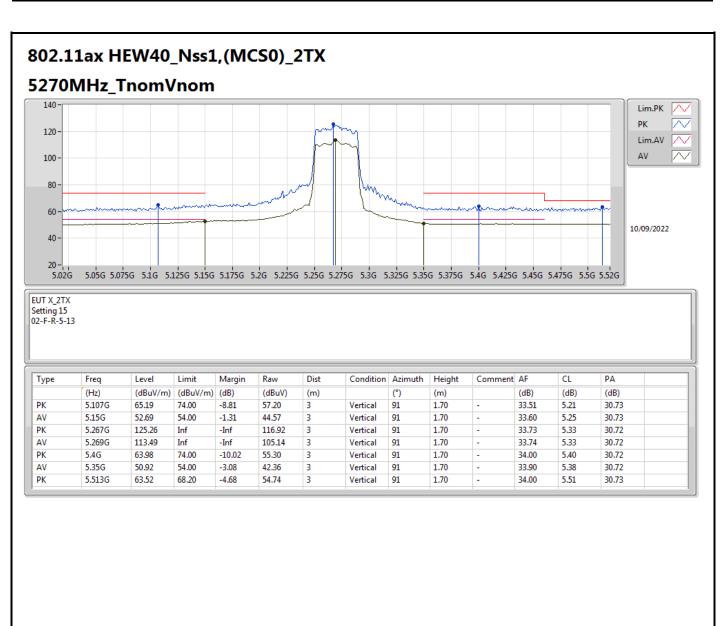
| Туре | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|------|-----------|----------|----------|--------|--------|------|-----------|---------|--------|---------|-------|------|-------|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 11.3949G | 54.15 | 74.00 | -19.85 | 39.57 | 3 | Vertical | 115 | 1.85 | - | 38.80 | 7.86 | 32.08 |
| AV | 11.39502G | 40.59 | 54.00 | -13.41 | 26.01 | 3 | Vertical | 115 | 1.85 | - | 38.80 | 7.86 | 32.08 |



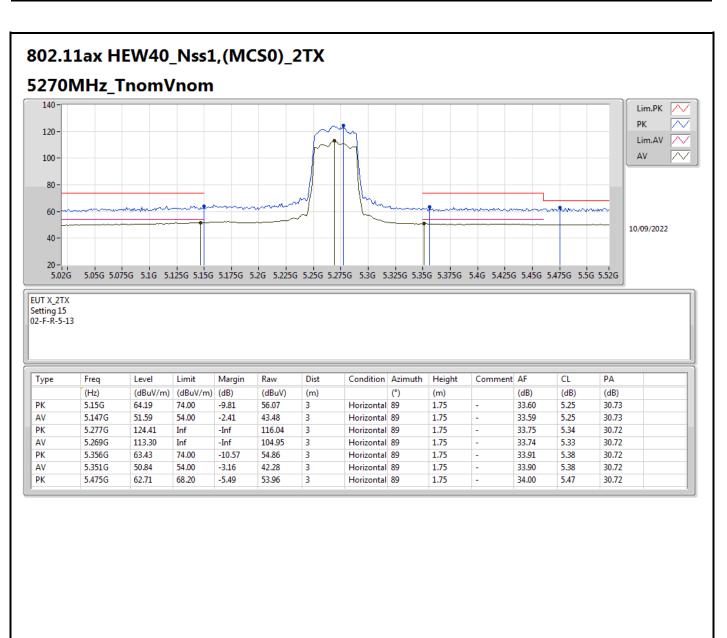


| Туре | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|------|-----------|----------|----------|--------|--------|------|------------|---------|--------|---------|-------|------|-------|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| РК | 11.39448G | 55.07 | 74.00 | -18.93 | 40.49 | 3 | Horizontal | 64 | 1.79 | - | 38.80 | 7.86 | 32.08 |
| AV | 11.40174G | 41.70 | 54.00 | -12.30 | 27.12 | 3 | Horizontal | 64 | 1.79 | - | 38.80 | 7.86 | 32.08 |

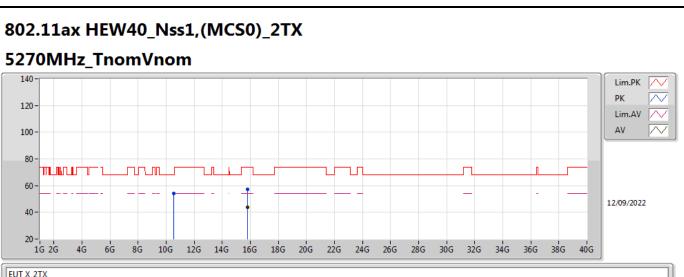








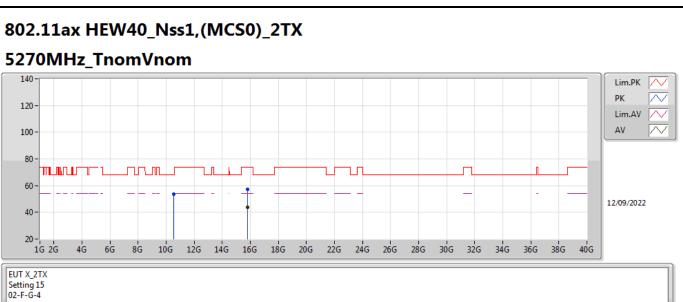




EUT X_2TX Setting 15 02-F-G-4

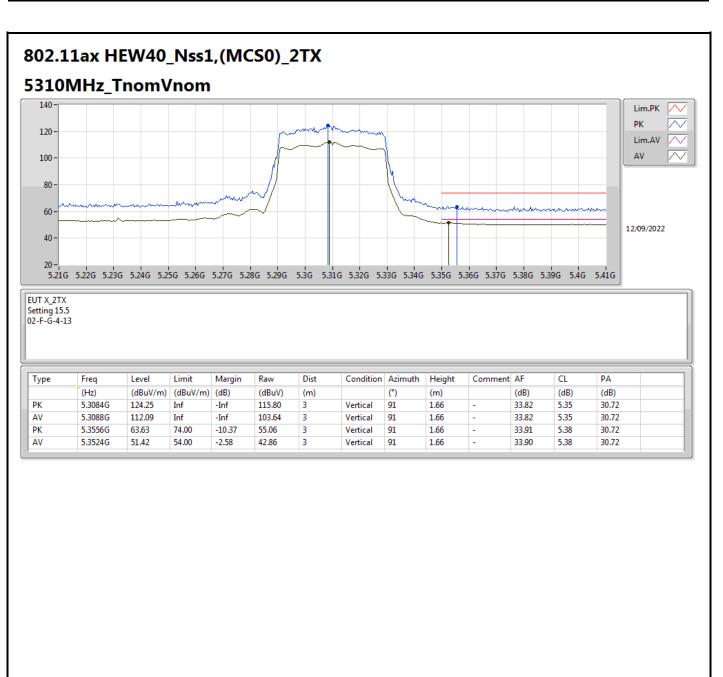
| Туре | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|------|-----------|----------|----------|--------|--------|------|-----------|---------|--------|---------|-------|------|-------|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| РК | 10.53572G | 53.98 | 68.20 | -14.22 | 39.77 | 3 | Vertical | 147 | 2.80 | - | 38.56 | 7.51 | 31.86 |
| PK | 15.80332G | 57.38 | 74.00 | -16.62 | 41.47 | 3 | Vertical | 207 | 2.18 | - | 37.49 | 9.91 | 31.49 |
| AV | 15.8108G | 43.81 | 54.00 | -10.19 | 27.91 | 3 | Vertical | 207 | 2.18 | - | 37.48 | 9.91 | 31.49 |



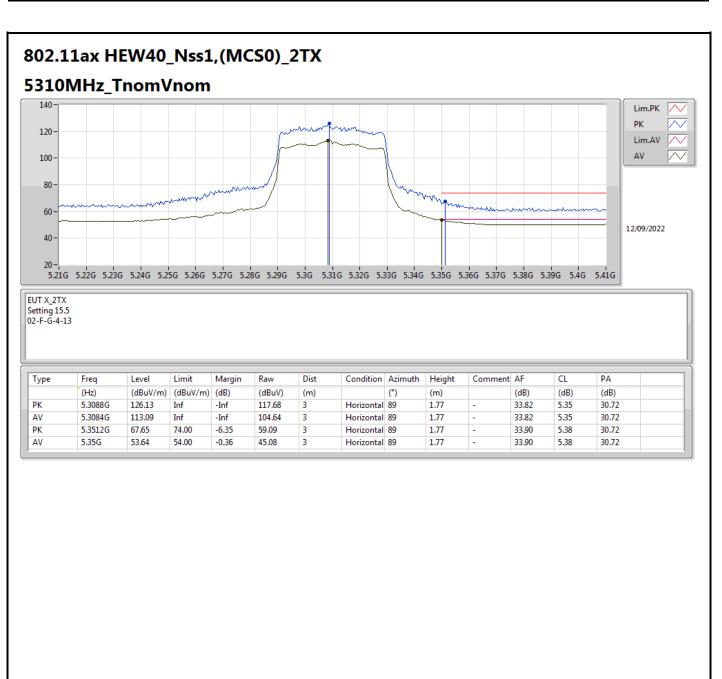


| Гуре | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|------|-----------|----------|----------|--------|--------|------|------------|---------|--------|---------|-------|------|-------|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 10.53004G | 53.53 | 68.20 | -14.67 | 39.30 | 3 | Horizontal | 136 | 2.14 | - | 38.57 | 7.51 | 31.85 |
| PK | 15.81596G | 57.08 | 74.00 | -16.92 | 41.18 | 3 | Horizontal | 216 | 1.71 | - | 37.47 | 9.92 | 31.49 |
| AV | 15.80648G | 43.71 | 54.00 | -10.29 | 27.80 | 3 | Horizontal | 216 | 1.71 | - | 37.49 | 9.91 | 31.49 |

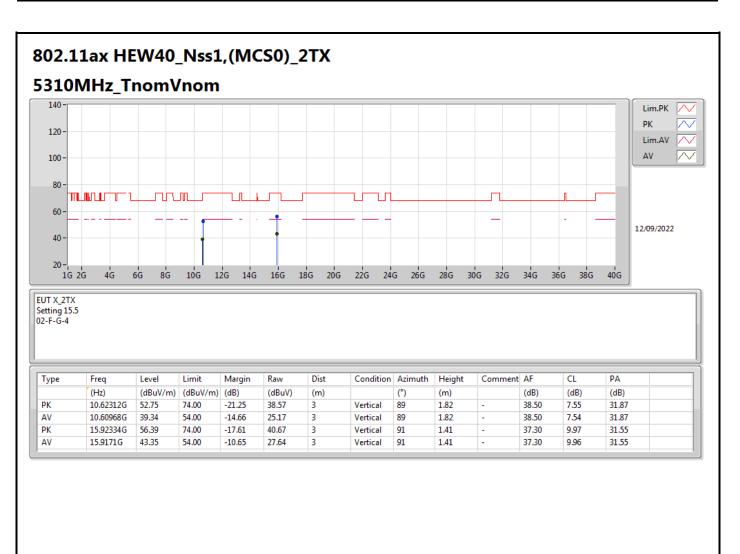




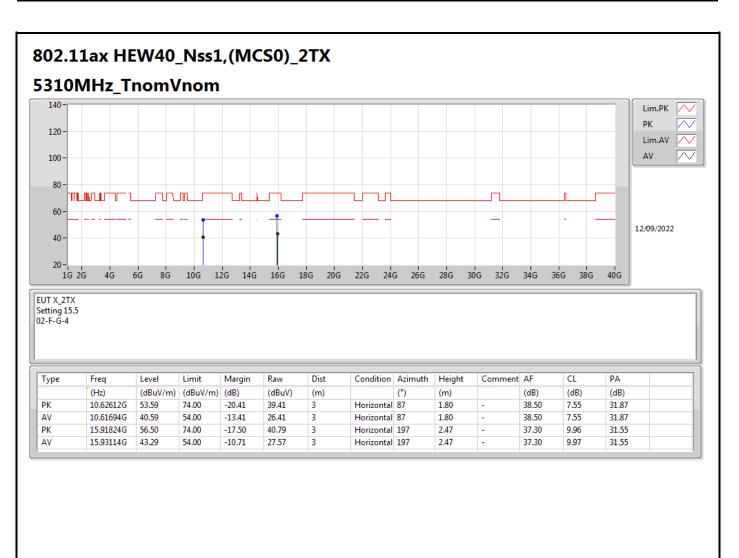




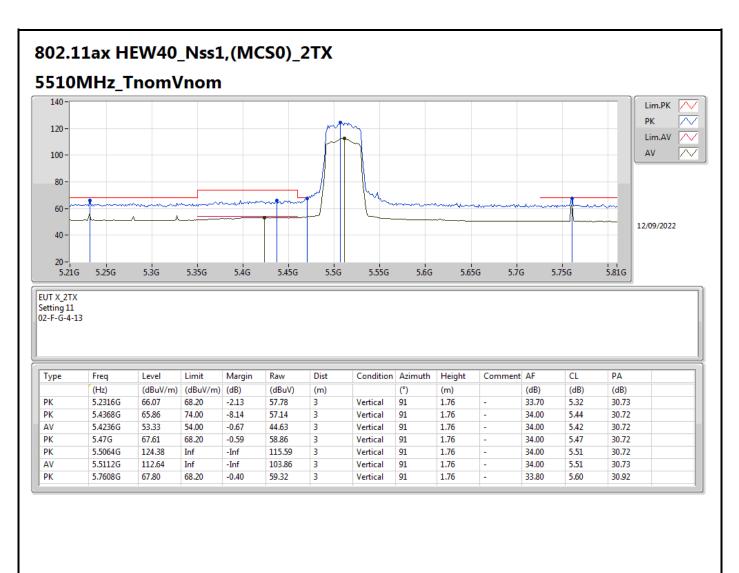




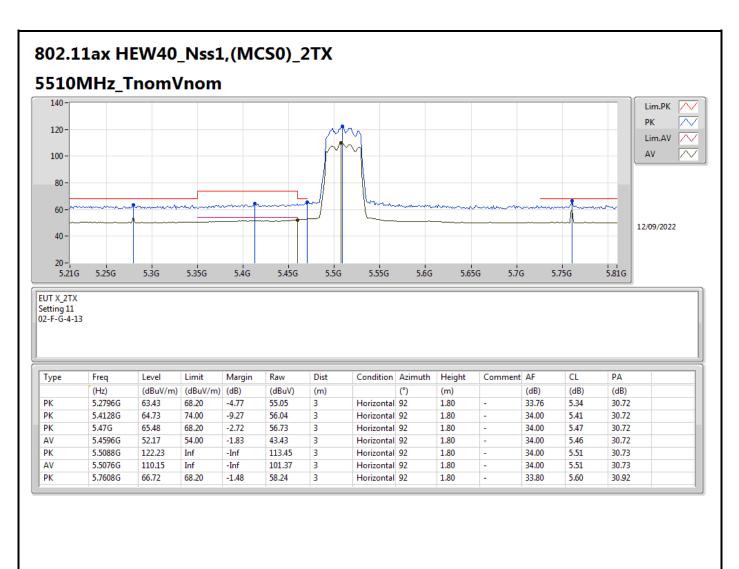




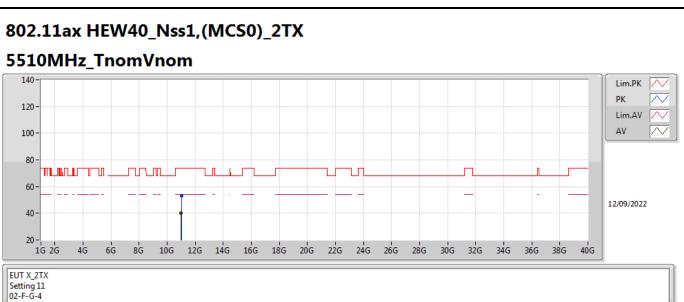






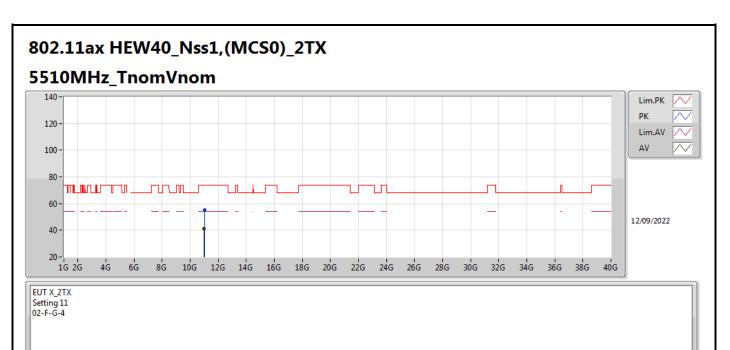






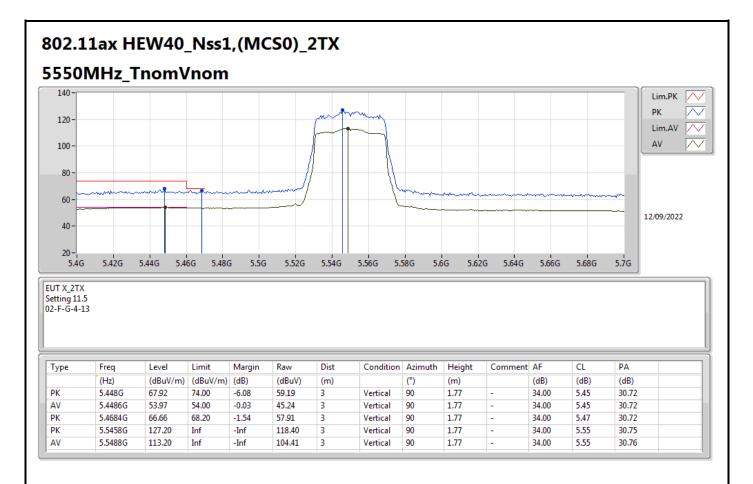
| Туре | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|------|-----------|----------|----------|--------|--------|------|-----------|---------|--------|---------|-------|------|-------|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 11.01682G | 53.25 | 74.00 | -20.75 | 38.85 | 3 | Vertical | 333 | 2.51 | - | 38.62 | 7.71 | 31.93 |
| AV | 11.00524G | 40.06 | 54.00 | -13.94 | 25.67 | 3 | Vertical | 333 | 2.51 | - | 38.61 | 7.70 | 31.92 |



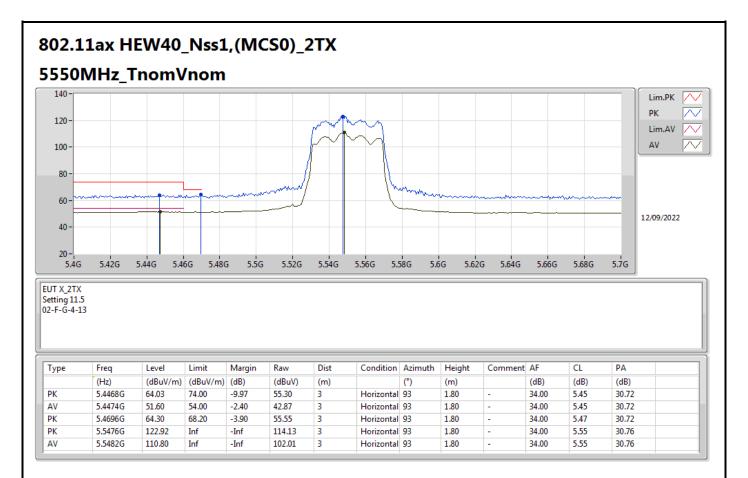


| Туре | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA | |
|------|-----------|----------|----------|--------|--------|------|------------|---------|--------|---------|-------|------|-------|--|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) | |
| РК | 11.01316G | 55.39 | 74.00 | -18.61 | 41.00 | 3 | Horizontal | 92 | 1.81 | - | 38.61 | 7.71 | 31.93 | |
| AV | 11.005G | 41.31 | 54.00 | -12.69 | 26.92 | 3 | Horizontal | 92 | 1.81 | - | 38.61 | 7.70 | 31.92 | |

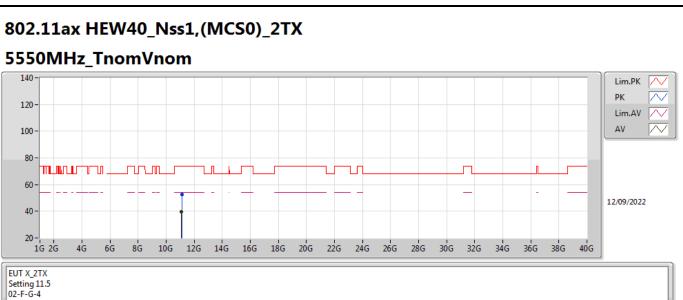






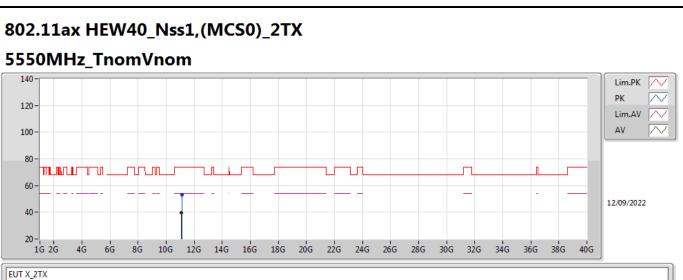






| Туре | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|------|-----------|----------|----------|--------|--------|------|-----------|---------|--------|---------|-------|------|-------|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 11.1147G | 52.74 | 74.00 | -21.26 | 38.25 | 3 | Vertical | 286 | 1.12 | - | 38.71 | 7.75 | 31.97 |
| AV | 11.10276G | 39.58 | 54.00 | -14.42 | 25.10 | 3 | Vertical | 286 | 1.12 | - | 38.70 | 7.74 | 31.96 |

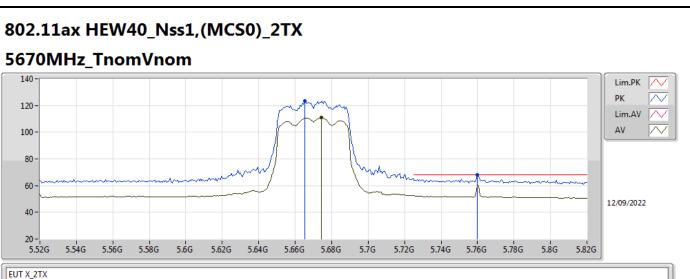




EUT X_2TX Setting 11.5 02-F-G-4

| Туре | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|------|-----------|----------|----------|--------|--------|------|------------|---------|--------|---------|-------|------|-------|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| РК | 11.11176G | 53.18 | 74.00 | -20.82 | 38.69 | 3 | Horizontal | 116 | 1.06 | - | 38.71 | 7.74 | 31.96 |
| AV | 11.10348G | 39.55 | 54.00 | -14.45 | 25.07 | 3 | Horizontal | 116 | 1.06 | - | 38.70 | 7.74 | 31.96 |

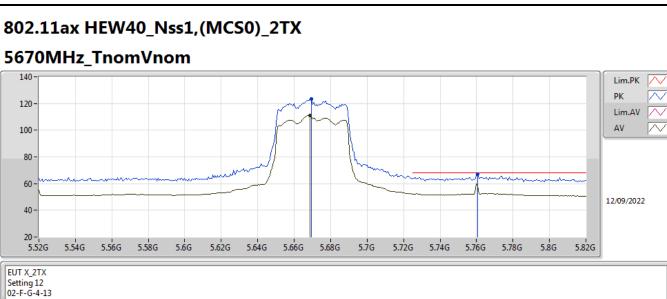




EUT X_2TX Setting 12 02-F-G-4-13

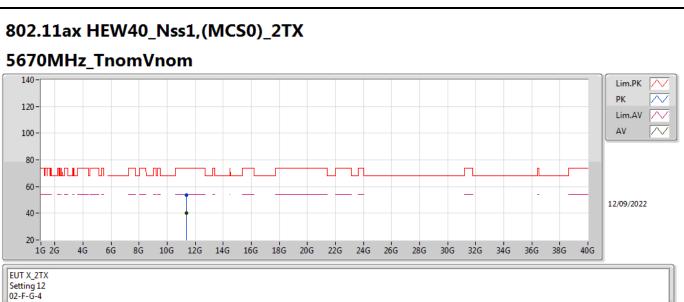
| Туре | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|------|---------|----------|----------|--------|--------|------|-----------|---------|--------|---------|-------|------|-------|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| РК | 5.6652G | 123.53 | Inf | -Inf | 114.95 | 3 | Vertical | 90 | 1.79 | - | 33.83 | 5.60 | 30.85 |
| AV | 5.6742G | 110.79 | Inf | -Inf | 102.19 | 3 | Vertical | 90 | 1.79 | - | 33.85 | 5.60 | 30.85 |
| PK | 5.76G | 68.09 | 68.20 | -0.11 | 59.61 | 3 | Vertical | 90 | 1.79 | - | 33.80 | 5.60 | 30.92 |





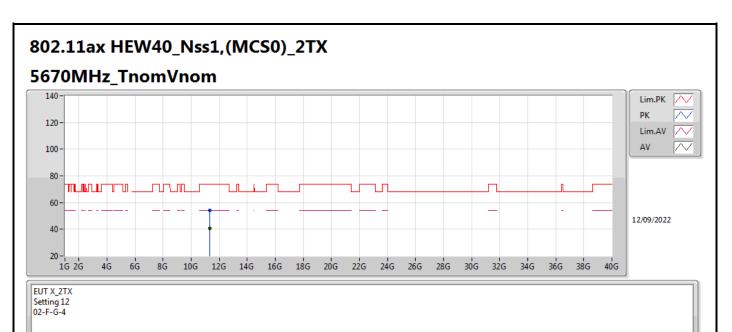
| Туре | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|------|---------|----------|----------|--------|--------|------|------------|---------|--------|---------|-------|------|-------|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 5.6694G | 123.51 | Inf | -Inf | 114.92 | 3 | Horizontal | 92 | 1.80 | - | 33.84 | 5.60 | 30.85 |
| AV | 5.6688G | 111.10 | Inf | -Inf | 102.51 | 3 | Horizontal | 92 | 1.80 | - | 33.84 | 5.60 | 30.85 |
| РК | 5.7606G | 67.31 | 68.20 | -0.89 | 58.83 | 3 | Horizontal | 92 | 1.80 | - | 33.80 | 5.60 | 30.92 |





| Туре | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA | |
|------|----------|----------|----------|--------|--------|------|-----------|---------|--------|---------|-------|------|-------|--|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) | |
| PK | 11.3649G | 53.74 | 74.00 | -20.26 | 39.16 | 3 | Vertical | 184 | 1.80 | - | 38.80 | 7.85 | 32.07 | |
| AV | 11.3549G | 40.02 | 54.00 | -13.98 | 25.44 | 3 | Vertical | 184 | 1.80 | - | 38.80 | 7.84 | 32.06 | |



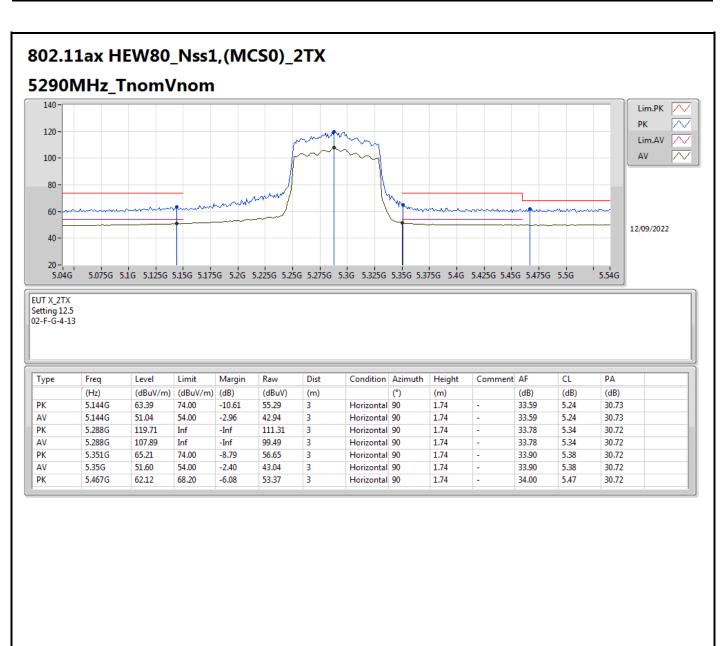


| Туре | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|------|----------|----------|----------|--------|--------|------|------------|---------|--------|---------|-------|------|-------|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 11.3259G | 54.25 | 74.00 | -19.75 | 39.67 | 3 | Horizontal | 95 | 2.15 | - | 38.80 | 7.83 | 32.05 |
| AV | 11.343G | 40.80 | 54.00 | -13.20 | 26.22 | 3 | Horizontal | 95 | 2.15 | - | 38.80 | 7.84 | 32.06 |

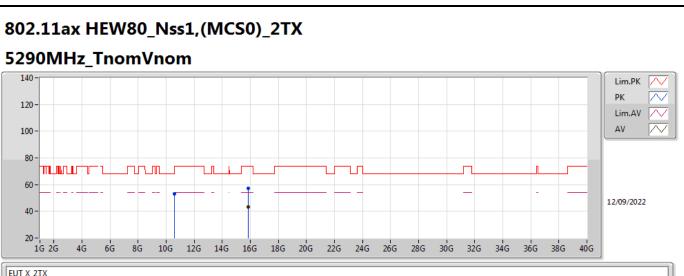








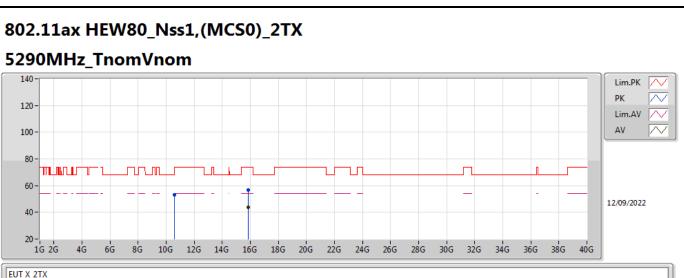




EUT X_2TX Setting 12.5 02-F-G-4

| Туре | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA | |
|------|-----------|----------|----------|--------|--------|------|-----------|---------|--------|---------|-------|------|-------|--|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) | |
| PK | 10.58928G | 53.08 | 68.20 | -15.12 | 38.89 | 3 | Vertical | 69 | 1.56 | - | 38.51 | 7.54 | 31.86 | |
| РК | 15.86252G | 57.36 | 74.00 | -16.64 | 41.57 | 3 | Vertical | 206 | 2.72 | - | 37.37 | 9.94 | 31.52 | |
| AV | 15.86G | 43.48 | 54.00 | -10.52 | 27.68 | 3 | Vertical | 206 | 2.72 | - | 37.38 | 9.94 | 31.52 | |

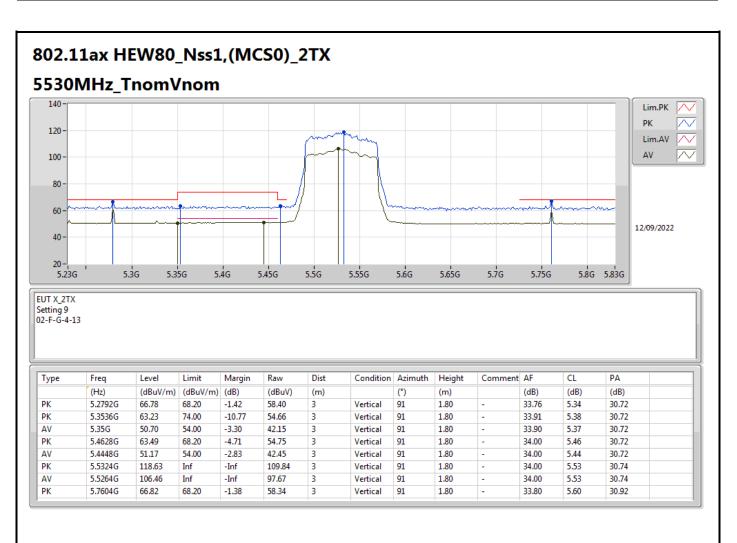




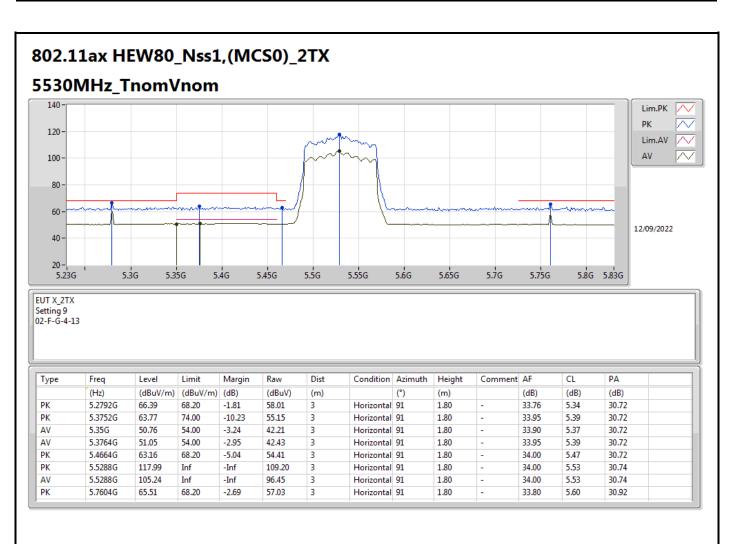
EUT X_2TX Setting 12.5 02-F-G-4

| Туре | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|------|-----------|----------|----------|--------|--------|------|------------|---------|--------|---------|-------|------|-------|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| PK | 10.58708G | 52.91 | 68.20 | -15.29 | 38.73 | 3 | Horizontal | 271 | 2.06 | - | 38.51 | 7.53 | 31.86 |
| PK | 15.87412G | 56.56 | 74.00 | -17.44 | 40.79 | 3 | Horizontal | 84 | 2.10 | - | 37.35 | 9.94 | 31.52 |
| AV | 15.86016G | 43.59 | 54.00 | -10.41 | 27.79 | 3 | Horizontal | 84 | 2.10 | - | 37.38 | 9.94 | 31.52 |

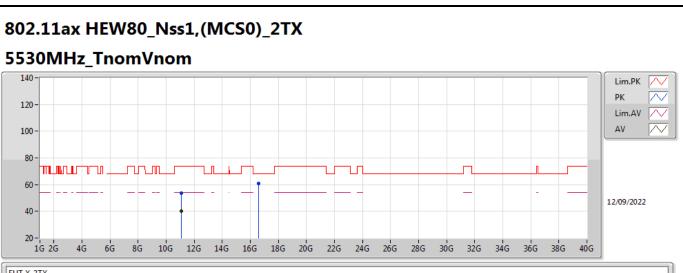








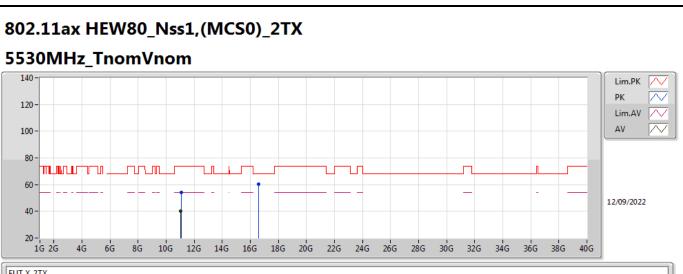




EUT X_2TX Setting 9 02-F-G-4

| уре | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA |
|-----|-----------|----------|----------|--------|--------|------|-----------|---------|--------|---------|-------|-------|-------|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) |
| РК | 11.06144G | 53.51 | 74.00 | -20.49 | 39.07 | 3 | Vertical | 168 | 1.33 | - | 38.66 | 7.72 | 31.94 |
| AV | 11.05996G | 39.95 | 54.00 | -14.05 | 25.51 | 3 | Vertical | 168 | 1.33 | - | 38.66 | 7.72 | 31.94 |
| PK | 16.58504G | 60.87 | 68.20 | -7.33 | 42.08 | 3 | Vertical | 302 | 2.48 | - | 39.36 | 10.29 | 30.86 |





EUT X_2TX Setting 9 02-F-G-4

| Туре | Freq | Level | Limit | Margin | Raw | Dist | Condition | Azimuth | Height | Comment | AF | CL | PA | |
|------|-----------|----------|----------|--------|--------|------|------------|---------|--------|---------|-------|-------|-------|--|
| | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV) | (m) | | (°) | (m) | | (dB) | (dB) | (dB) | |
| PK | 11.06012G | 53.94 | 74.00 | -20.06 | 39.50 | 3 | Horizontal | 282 | 2.89 | - | 38.66 | 7.72 | 31.94 | |
| AV | 11.05368G | 39.98 | 54.00 | -14.02 | 25.55 | 3 | Horizontal | 282 | 2.89 | - | 38.65 | 7.72 | 31.94 | |
| PK | 16.59432G | 60.56 | 68.20 | -7.64 | 41.72 | 3 | Horizontal | 240 | 1.88 | - | 39.38 | 10.30 | 30.84 | |