Report No.: FR170737-06AB



RADIO TEST REPORT

FCC ID

: VW3FAST399V2

Equipment

: Wireless Home Router

Brand Name

: SAGEMCOM

Model Name

: FAST 399

Applicant

: SAGEMCOM BROADBAND SAS

250 Route de l'Empereur - 92848 RUEIL

MALMAISON CEDEX- FRANCE

Manufacturer

: SAGEMOOM BROADBAND SAS

250 Route de l'Empereur - 92848 RUEIL

MALMAISON CEDEX- FRANCE

Standard

: 47 CFR FCC Part 15.407

The product was received on Nov. 07, 2022, and testing was started from Nov. 08, 2022 and completed on Jan. 05, 2023. 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.)

TEL: 886-3-656-9065 FAX: 886-3-656-9085

Report Template No.: CB-A12_1 Ver1.4

Page Number

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Issued Date

: Jan. 11, 2023

Report Version : 01

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Photographs of EUT v01

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Report Version : 01

History of this test report

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| Report No. | Version | Description | Issued Date |
|---------------|---------|-------------------------|---------------|
| FR170737-06AB | 01 | Initial issue of report | Jan. 11, 2023 |
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Summary of Test Result

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| 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 | 15.407(a) | Emission Bandwidth | PASS | - |
| 3.3 | 15.407(a) | Maximum Output Power | PASS | - |
| 3.4 | 15.407(a) | Power Spectral Density | PASS | - |
| 3.5 | 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: Penny Kao

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1 General Description

1.1 Information

1.1.1 RF General Information

| Frequency Range (MHz) | IEEE Std. 802.11 | Ch. Frequency (MHz) | Channel Number |
|-----------------------|--------------------------|---------------------|----------------|
| 5150-5250 | a, n (HT20), ac (VHT20), | 5180-5240 | 36-48 [4] |
| 5725-5850 | ax (HEW20) | 5745-5825 | 149-165 [5] |
| 5150-5250 | n (HT40), ac (VHT40), | 5190-5230 | 38-46 [2] |
| 5725-5850 | ax (HEW40) | 5755-5795 | 151-159 [2] |
| 5150-5250 | ac (VHT80), ax (HEW80) | 5210 | 42 [1] |
| 5725-5850 | | 5775 | 155 [1] |

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| Band | Mode | BWch (MHz) | Nant |
|---------------|-------------------|------------|------|
| 5.15-5.25GHz | 802.11a | 20 | 4TX |
| 5.15-5.25GHz | 802.11n HT20 | 20 | 4TX |
| 5.15-5.25GHz | 802.11n HT20-BF | 20 | 4TX |
| 5.15-5.25GHz | 802.11ac VHT20 | 20 | 4TX |
| 5.15-5.25GHz | 802.11ac VHT20-BF | 20 | 4TX |
| 5.15-5.25GHz | 802.11ax HEW20 | 20 | 4TX |
| 5.15-5.25GHz | 802.11ax HEW20-BF | 20 | 4TX |
| 5.15-5.25GHz | 802.11n HT40 | 40 | 4TX |
| 5.15-5.25GHz | 802.11n HT40-BF | 40 | 4TX |
| 5.15-5.25GHz | 802.11ac VHT40 | 40 | 4TX |
| 5.15-5.25GHz | 802.11ac VHT40-BF | 40 | 4TX |
| 5.15-5.25GHz | 802.11ax HEW40 | 40 | 4TX |
| 5.15-5.25GHz | 802.11ax HEW40-BF | 40 | 4TX |
| 5.15-5.25GHz | 802.11ac VHT80 | 80 | 4TX |
| 5.15-5.25GHz | 802.11ac VHT80-BF | 80 | 4TX |
| 5.15-5.25GHz | 802.11ax HEW80 | 80 | 4TX |
| 5.15-5.25GHz | 802.11ax HEW80-BF | 80 | 4TX |
| 5.725-5.85GHz | 802.11a | 20 | 4TX |
| 5.725-5.85GHz | 802.11n HT20 | 20 | 4TX |
| 5.725-5.85GHz | 802.11n HT20-BF | 20 | 4TX |
| 5.725-5.85GHz | 802.11ac VHT20 | 20 | 4TX |
| 5.725-5.85GHz | 802.11ac VHT20-BF | 20 | 4TX |
| 5.725-5.85GHz | 802.11ax HEW20 | 20 | 4TX |
| 5.725-5.85GHz | 802.11ax HEW20-BF | 20 | 4TX |
| 5.725-5.85GHz | 802.11n HT40 | 40 | 4TX |

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| Band | Mode | BWch (MHz) | Nant |
|---------------|-------------------|------------|------|
| 5.725-5.85GHz | 802.11n HT40-BF | 40 | 4TX |
| 5.725-5.85GHz | 802.11ac VHT40 | 40 | 4TX |
| 5.725-5.85GHz | 802.11ac VHT40-BF | 40 | 4TX |
| 5.725-5.85GHz | 802.11ax HEW40 | 40 | 4TX |
| 5.725-5.85GHz | 802.11ax HEW40-BF | 40 | 4TX |
| 5.725-5.85GHz | 802.11ac VHT80 | 80 | 4TX |
| 5.725-5.85GHz | 802.11ac VHT80-BF | 80 | 4TX |
| 5.725-5.85GHz | 802.11ax HEW80 | 80 | 4TX |
| 5.725-5.85GHz | 802.11ax HEW80-BF | 80 | 4TX |

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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, 1024QAM modulation.
- HEW20, HEW40, HEW80 use a combination of OFDMA-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM modulation.
- BWch is the nominal channel bandwidth.

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1.1.2 Antenna Information

| | | Port | | | | | | Gain | |
|------|----------------|--------------|--------------|------------|------------------------------------|-----|-----------|-------|-------------------------------------|
| Ant. | WLAN 2.4GHz | WLAN 5GHz | WLAN 6GHz | Brand | Model Name T | | Connector | (dBi) | Remark |
| 1 | 3 | 3 | - | Galtronics | 02102140-07501-1 DB1 | РСВ | I-Pex | | WLAN 2.4GHz, WLAN 5GHz UNII 1, 3 |
| 2 | 2 | 2 | - | Galtronics | 02102140-07501-2 DB2 | РСВ | I-Pex | | WLAN 2.4GHz, WLAN 5GHz UNII 1, 3 |
| 3 | 1 | 1 | - | Galtronics | 02102140-07501-3 DB3 | РСВ | I-Pex | | WLAN 2.4GHz, WLAN 5GHz UNII 1, 3 |
| 4 | - | 4 | - | Galtronics | 02102142-07501 5G | PCB | I-Pex | | WLAN 5GHz UNII 1, 3 |
| 5 | - | - | 1 | Galtronics | 02102475-07501B1 6G1 (HPOLOMNI) | РСВ | I-Pex | Note1 | WLAN 6GHz UNII 5~8 |
| 6 | - | - | 2 | Galtronics | 02102475-07501B2 6G2 (HPOLOMNI) | РСВ | I-Pex | | WLAN 6GHz UNII 5~8 |
| 7 | - | - | 3 | Galtronics | 02102475-07501A1 6G3 | РСВ | I-Pex | | WLAN 6GHz UNII 5~8 |
| 8 | - | - | 4 | Galtronics | 02102475-07501A2 6G4 | РСВ | I-Pex | | WLAN 6GHz UNII 5~8 |

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Note1:

| Note 1. | Gain (dBi) | | | | | | | | |
|----------------------------------|-------------|---------------------|----------------------|----------------------|---------------------|-----------------------|--|--|--|
| Ant. | WLAN 2.4GHz | WLAN 5GHz UNII 1 | WLAN 5GHz UNII 2A | WLAN 5GHz UNII 2C | WLAN 5GHz UNII 3 | WLAN 6GHz UNII 5~8 | | | |
| 1 | 3.12 | 3.32 | 3.31 | 2.65 | 3.66 | - | | | |
| 2 | 1.24 | 2.27 | 1.97 | 2.31 | 2.46 | 1 | | | |
| 3 | 3.18 | 3.33 | 2.68 | 2.36 | 2.01 | 1 | | | |
| 4 | - | 4.9 | 3.67 | 3.24 | 3.22 | ı | | | |
| 5 | - | - | ı | ı | ı | 5.519 | | | |
| 6 | - | - | - | - | - | 3.588 | | | |
| 7 | - | - | - | - | - | 4.972 | | | |
| 8 | - | - | - | - | - | 6.680 | | | |
| Directional Gain (dBi) (3T1S) | 3.41 | - | - | - | - | - | | | |
| Directional Gain (dBi) (4T1S) | - | 5.13 | 4.03 | 4.01 | 4.42 | - | | | |

Note2: The above information (except Ant.1~4 gain) was declared by manufacturer.

Note3: The directional gain of WLAN 2.4GHz,5GHz is measured which follows the procedure of KDB 662911 D03.

Note4: The DFS band doesn't enable at this time.

Note5: <WLAN 2.4GHz function>

802.11 b/g/n/VHT/ax mode (3TX/3RX):

Port 1, Port 2 and Port 3 can be used as transmitting/receiving antenna.

Port 1, Port 2 and Port 3 could transmit/receive simultaneously.

<WLAN 5GHz function>

802.11a/n/ac/ax mode (4TX/4RX):

Port 1, Port 2, Port 3 and Port 4 can be used as transmitting/receiving antenna.

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

<WLAN 6GHz function>

802.11ax mode (4TX/4RX):

Port 1, Port 2, Port 3 and Port 4 can be used as transmitting/receiving antenna.

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

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1.1.3 Mode Test Duty Cycle

| Mode | DC | DCF(dB) | T(s) | VBW(Hz) ≥ 1/T |
|----------------|-------|---------|---------|---------------|
| 802.11a | 0.947 | 0.24 | 2.066m | 1k |
| 802.11ax HEW20 | 0.978 | 0.1 | 1.489m | 1k |
| 802.11ax HEW40 | 0.961 | 0.17 | 781.25u | 3k |
| 802.11ax HEW80 | 0.928 | 0.32 | 415u | 3k |

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| NI | ^ | + | Δ | • |
|----|---|---|---|---|
| N | u | ι | ᆫ | |

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

1.1.4 EUT Operational Condition

| EUT Power Type | From Power Adapter | | | | |
|------------------------------------|--|------------------------------|-------------|---------------------|--|
| | \boxtimes | With beamforming | | Without beamforming | |
| Beamforming Function | The product has beamforming function for 802.11n/VHT/ax in 2.4GHz, 802.11n/ac/ax in 5GHz and 802.11ax in 6GHz. | | | | |
| | | Outdoor P2M | \boxtimes | Indoor P2M | |
| Function | | Fixed P2P | | Client | |
| | \boxtimes | Point-to-multipoint | | Point-to-point | |
| Channel Puncturing Function | | Supported | \boxtimes | Unsupported | |
| Support RU | \boxtimes | Full RU | | Partial RU | |
| Test Software Version | | accessMtool(version 3.2.1.3) | | | |

Note: The above information was declared by manufacturer.

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1.2 Applicable Standards

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

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- 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 D03 v01
- FCC KDB 412172 D01 v01r01
- FCC KDB 414788 D01 v01r01

1.3 Testing Location Information

Testing Location Information

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 | TH03-CB | Owen Hsu | 23.6-24.1 / 58-64 | Nov. 12, 2022~ Nov. 26, 2022 |
| Radiated > 1GHz | 03CH06-CB | Ederson Huang | 22.9~24 / 54~57 | Nov. 08, 2022~ Jan. 05, 2023 |
| Radiated < 1GHz | 03CH03-CB | Ederson Huang | 22.1~23.8 / 63~67 | Nov. 08, 2022~ Jan. 05, 2023 |
| Radiated (Co-location) | 03CH06-CB | Ederson Huang | 22.9~24 / 54~57 | Nov. 08, 2022~ Jan. 05, 2023 |
| AC Conduction | CO01-CB | Peter Wu | 22~23 / 57~58 | Dec. 29, 2022 |

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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)

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| Test Items | Uncertainty | Remark |
|--------------------------------------|-------------|--------------------------|
| Conducted Emission (150kHz ~ 30MHz) | 3.4 dB | Confidence levels of 95% |
| Radiated Emission (9kHz ~ 30MHz) | 3.4 dB | Confidence levels of 95% |
| Radiated Emission (30MHz ~ 1,000MHz) | 5.6 dB | Confidence levels of 95% |
| 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% |

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2 Test Configuration of EUT

2.1 Test Channel Mode

| Mode | Power Setting |
|-----------------------------------|---------------|
| 802.11a_Nss1,(6Mbps)_4TX | - |
| 5180MHz | 85 |
| 5200MHz | 97 |
| 5240MHz | 96 |
| 5745MHz | 96 |
| 5785MHz | 91 |
| 5825MHz | 90 |
| 802.11ax HEW20_Nss1,(MCS0)_4TX | - |
| 5180MHz | 79 |
| 5200MHz | 98 |
| 5240MHz | 95 |
| 5745MHz | 94 |
| 5785MHz | 90 |
| 5825MHz | 91 |
| 802.11ax HEW40_Nss1,(MCS0)_4TX | - |
| 5190MHz | 73 |
| 5230MHz | 90 |
| 5755MHz | 101 |
| 5795MHz | 98 |
| 802.11ax HEW80_Nss1,(MCS0)_4TX | - |
| 5210MHz | 73 |
| 5775MHz | 85 |
| 802.11ax HEW20-BF_Nss1,(MCS0)_4TX | - |
| 5180MHz | 79 |
| 5200MHz | 98 |
| 5240MHz | 95 |
| 5745MHz | 94 |
| 5785MHz | 90 |
| 5825MHz | 91 |
| 802.11ax HEW40-BF_Nss1,(MCS0)_4TX | - |
| 5190MHz | 73 |
| 5230MHz | 90 |
| 5755MHz | 101 |
| 5795MHz | 98 |
| 802.11ax HEW80-BF_Nss1,(MCS0)_4TX | - |
| 5210MHz | 73 |

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| Mode | Power Setting |
|---------|---------------|
| 5775MHz | 85 |

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Note:

- 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.
- The EUT supports non-beamforming and beamforming modes, after evaluating, the non-beamforming mode has been selected to execute all tests. The beamforming mode evaluates the output power only

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2.2 The Worst Case Measurement Configuration

| The Worst Case Mode for Following Conformance Tests | | |
|--|--|--|
| Tests Item | 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_WLAN 2.4GHz + Adapter | |
| 2 | EUT_WLAN 5GHz + Adapter | |
| 3 EUT_WLAN 6GHz + Adapter | | |
| For operating mode 1 is the worst case and it was record in this test report. | | |

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| 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 | |

| 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. | |
| | CTX | |
| Operating Mode < 1GHz | After evaluating, the worst case was found at Y axis, thus the measurement will follow this same test configuration. | |
| 1 | EUT in Y axis_WLAN 2.4GHz + Adapter | |
| 2 | EUT in Y axis_WLAN 5GHz + Adapter | |
| 3 | EUT in Y axis_WLAN 6GHz + Adapter | |
| For operating mode 2 is th | e worst case and it was record in this test report. | |
| | CTX | |
| Operating Mode > 1GHz | After evaluating, the worst case was found at Y axis, thus the measurement will follow this same test configuration. | |
| 1 | EUT in Y axis_WLAN 5GHz UNII 1, 3 | |

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| The Worst Case Mode for Following Conformance Tests | | |
|---|---|--|
| Tests Item Simultaneous Transmission Analysis - Radiated Emission Co-location | | |
| Test Condition Radiated measurement | | |
| | СТХ | |
| Operating Mode After evaluating, the worst case was found at Y axis, thus the measurement follow this same test configuration. | | |
| 1 | 1 EUT in Y axis_WLAN 2.4GHz + WLAN 5GHz | |
| Refer to Appendix F for Radiated Emission Co-location. | | |

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| The Worst Case Mode for Following Conformance Tests | | |
|---|--|--|
| Tests Item Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation | | |
| Operating Mode | | |
| 1 WLAN 2.4GHz + WLAN 5GHz UNII 1, 3 + WLAN 6GHz UNII 5~8 | | |
| Refer to Sporton Test Report No.: FA170737-06 for Co-location RF Exposure Evaluation. | | |

2.3 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

2.4 Accessories

| Accessories | | | |
|---------------------------------|------|-------------------------|--|
| Equipment Brand Model Name Name | | | Rating |
| Adapter | MOSO | MSG-V2500NR120-030E0-US | INPUT: 100-127V~ 50/60Hz, 1.0A Max. OUTPUT: 12.0V, 2.5A |

2.5 Support Equipment

For AC Conduction:

| Support Equipment | | | | |
|-------------------|--|------|-------|-----|
| No. | No. Equipment Brand Name Model Name FCC ID | | | |
| Α | Notebook | DELL | PP13S | N/A |

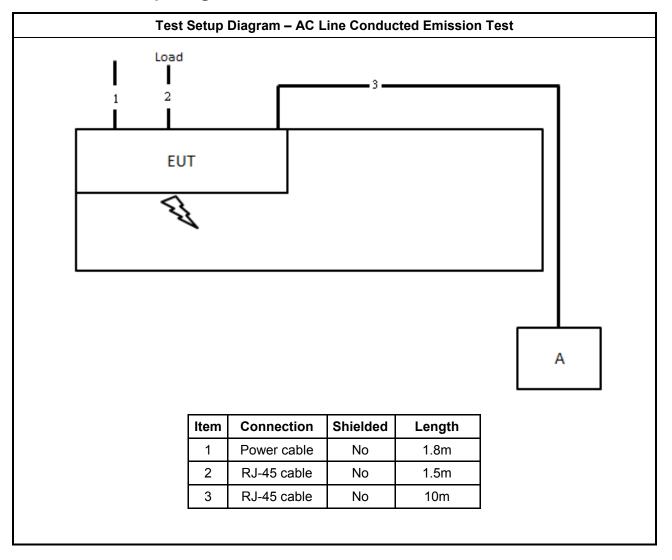
For Radiated and RF Conducted:

| | Support Equipment | | | |
|-----|---|------|-------|-----|
| No. | o. Equipment Brand Name Model Name FCC ID | | | |
| Α | Notebook | DELL | E4300 | N/A |

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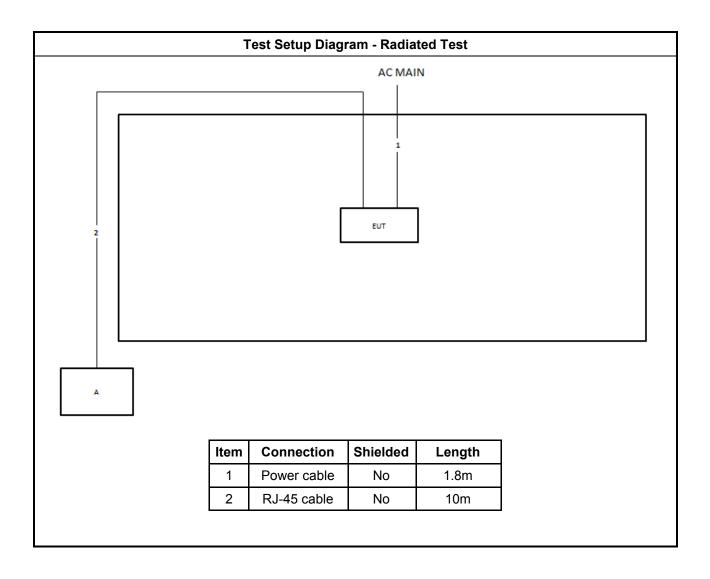


2.6 Test Setup Diagram



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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. | | | |

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3.1.2 Measuring Instruments

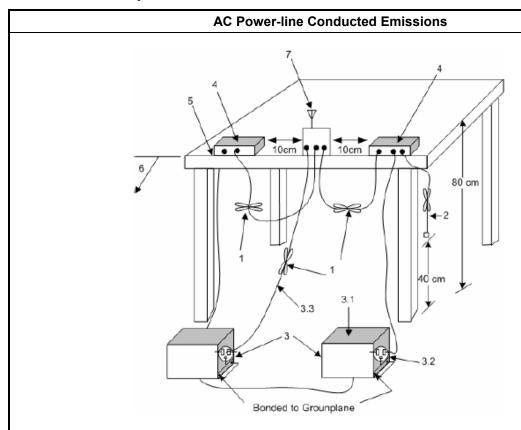
Refer a test equipment and calibration data table in this test report.

3.1.3 Test Procedures

| | Test Method |
|-------------|--|
| \boxtimes | Refer as ANSI C63.10-2013, clause 6.2 for AC power-line conducted emissions. |

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3.1.4 Test Setup



1—Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 cm to 40 cm long.

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- 2—The I/O cables that are not connected to an accessory shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- 3—EUT connected to one LISN. Unused LISN measuring port connectors shall be terminated in 50 Ω loads. LISN may be placed on top of, or immediately beneath, reference ground plane.
- 3.1—All other equipment powered from additional LISN(s).
- 3.2—A multiple-outlet strip may be used for multiple power cords of non-EUT equipment.
- 3.3—LISN at least 80 cm from nearest part of EUT chassis.
- 4—Non-EUT components of EUT system being tested.
- 5—Rear of EUT, including peripherals, shall all be aligned and flush with edge of tabletop.
- 6—Edge of tabletop shall be 40 cm removed from a vertical conducting plane that is bonded to the ground plane.
- 7—Antenna can be integral or detachable. If detachable, then the antenna shall be attached for this test.

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

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3.2 Emission Bandwidth

3.2.1 Emission Bandwidth Limit

| | Emission Bandwidth Limit |
|-------------|---|
| UNI | I Devices |
| \boxtimes | 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. |
| \boxtimes | For the 5.725-5.85 GHz band, 26 dB emission bandwidth ,N/A. 6 dB emission bandwidth ≥ 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. |

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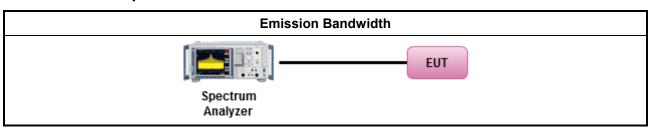
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

| | Test Method | | | | | | | | | |
|---|---|--|--|--|--|--|--|--|--|--|
| • | For the emission bandwidth shall be measured using one of the options below: | | | | | | | | | |
| | 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. | | | | | | | | |

3.2.4 Test Setup



3.2.5 Test Result of Emission Bandwidth

Refer as Appendix B

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3.3 Maximum Output Power

3.3.1 Limit

| | Maximum Output Power Limit |
|-------------|---|
| UNI | I Devices |
| \boxtimes | 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 \leq 125mW [21dBm] |
| | Indoor 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) |
| | 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 (P _{Out}) shall not exceed the lesser of 250 mW. If G _{TX} > 6 dBi, then P _{Out} = 24 – (G _{TX} – 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). |
| \boxtimes | 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. |
| 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. |
| | = maximum conducted output power in dBm, = the maximum transmitting antenna directional gain in dBi. |

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3.3.2 Measuring Instruments

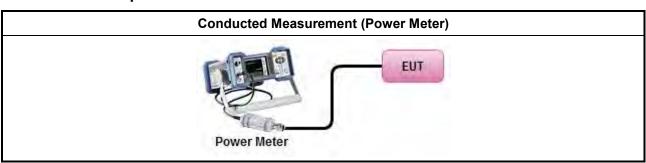
Refer a test equipment and calibration data table in this test report.

3.3.3 Test Procedures

| | Test Method | | | | | | | | | |
|-------------|--|--|--|--|--|--|--|--|--|--|
| | Average over on/off periods with duty factor | | | | | | | | | |
| Ī | 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) | | | | | | | | | |
| | Wideband RF power meter and average over on/off periods with duty factor | | | | | | | | | |
| | 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. | | | | | | | | | |

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3.3.4 Test Setup



3.3.5 Test Result of Maximum Output Power

Refer as Appendix C

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3.4 Power Spectral Density

3.4.1 Limit

| | Peak Power Spectral Density Limit |
|-------------|---|
| UNI | I Devices |
| \boxtimes | 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). |
| \boxtimes | 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. |
| LE- | LAN Devices |
| | For the 5.15-5.25 GHz band, the e.i.r.p. peak power spectral density (PPSD) ≤ 10 dBm/MHz. |
| | For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) ≤ 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) \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. |
| 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. |

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3.4.2 Measuring Instruments

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

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3.4.3 Test Procedures

| | | Test Method | | | | | | | | |
|-------------|---|--|--|--|--|--|--|--|--|--|
| • | outp func | k power spectral density procedures that the same method as used to determine the conducted ut power shall be used to determine the peak power spectral density and use the peak search tion on the spectrum analyzer to find the peak of the spectrum. For the peak power spectral density libe 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 | | | | | | | | |
| | [duty | / cycle ≥ 98% or external video / power trigger] | | | | | | | | |
| | 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) | | | | | | | | |
| | duty | cycle < 98% and average over on/off periods with duty factor | | | | | | | | |
| | \boxtimes | 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) | | | | | | | | |
| \boxtimes | 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. | | | | | | | | |

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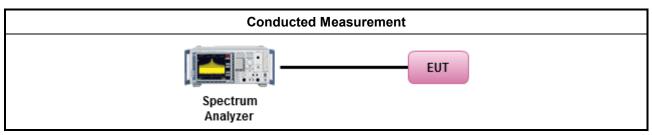
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Test Method Refer as FCC KDB 412172 D01 clause 2.2 for EIRP calculation.

3.4.4 Test Setup



3.4.5 Test Result of Power Spectral Density

Refer as Appendix D

3.5 Unwanted Emissions

3.5.1 Transmitter Unwanted Emissions Limit

| Unwanted emissions below 1 GHz and restricted band emissions above 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 | | | | | |

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- 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).

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3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

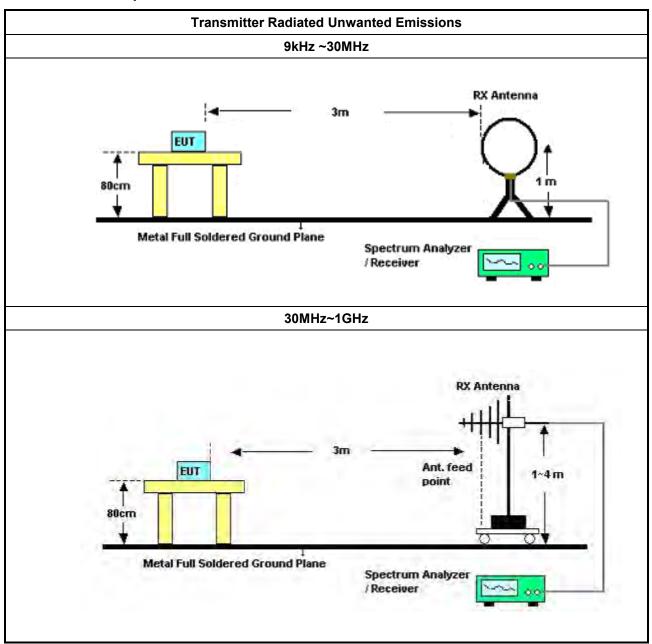
Test Method

- 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. Measurements shall not be performed at a distance greater than 30 m for frequencies above 30 MHz, unless it can be further demonstrated that measurements at a distance of 30 m or less are impractical. 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).
- The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].
- For the transmitter unwanted emissions shall be measured using following options below:
 - 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 radiated 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 any unwanted emissions level shall not exceed the fundamental emission level.
- All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.

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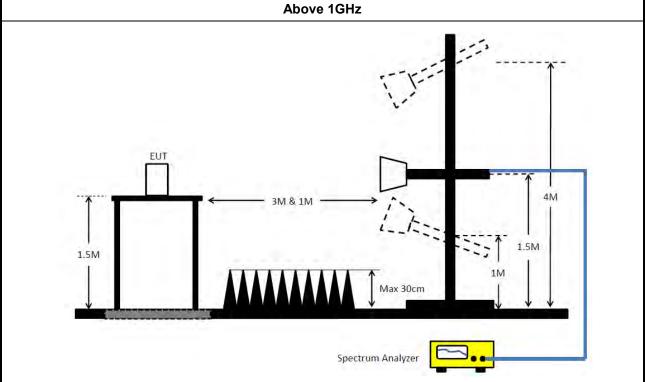
3.5.4 Test Setup



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Above 1GHz

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3.5.5 **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.

Transmitter Unwanted Emissions (Below 30MHz) 3.5.6

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.

3.5.7 **Test Result of Transmitter Unwanted Emissions**

Refer as Appendix E

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4 Test Equipment and Calibration Data

| Instrument | Brand | Model No. | Serial No. | Characteristics | Characteristics Calibration Date Calibration Date | | Remark |
|--|---------------------|----------------------|--------------------|---|---|-------------------------|--------------------------|
| EMI Receiver | Agilent | N9038A | My52260123 | 9kHz ~ 8.4GHz | Feb. 22, 2022 | Feb. 21, 2023 | Conduction (CO01-CB) |
| LISN | F.C.C. | FCC-LISN-50- 16-2 | 04083 | 150kHz ~ 100MHz | 1 Feb 09 2022 Feb 08 2023 | | Conduction (CO01-CB) |
| LISN | Schwarzbeck | NSLK 8127 | 8127647 | 9kHz ~ 30MHz Apr. 12, 2022 Apr. 11, 2023 | | Conduction (CO01-CB) | |
| Pulse Limiter | Rohde&Schwa rz | ESH3-Z2 | 100430 | 9kHz ~ 30MHz | Feb. 10, 2022 | Feb. 09, 2023 | Conduction (CO01-CB) |
| COND Cable | Woken | Cable | Low cable-CO01 | 9kHz ~ 30MHz | Oct. 18, 2022 | Oct. 17, 2023 | Conduction (CO01-CB) |
| Software | SPORTON | SENSE | V5.10 | - | N.C.R. | N.C.R. | Conduction (CO01-CB) |
| Loop Antenna | Teseq | HLA 6120 | 24155 | 9kHz - 30 MHz | May 14, 2022 | May 13, 2023 | Radiation (03CH03-CB) |
| 3m Semi Anechoic Chamber NSA | TDK | SAC-3M | 03CH03-CB | 30 MHz ~ 1 GHz | Jan. 26, 2022 | Jan. 25, 2023 | Radiation (03CH03-CB) |
| Bilog Antenna with 6 dB attenuator | Schaffner & EMCI | CBL6112B & N-6-06 | 2928 & AT-N0608 | 20MHz ~ 2GHz | OMHz ~ 2GHz Feb. 21, 2022 | | Radiation (03CH03-CB) |
| Pre-Amplifier | Agilent | 8447D | 2944A10259 | 9kHz ~ 1.3GHz | .3GHz Jan. 10, 2022 Jan. 09, | | Radiation (03CH03-CB) |
| Spectrum Analyzer | R&S | FSP40 | 100019 | 9kHz ~ 40GHz | Jun. 10, 2022 | Jun. 09, 2023 | Radiation (03CH03-CB) |
| EMI Test Receiver | R&S | ESCS | 826547/017 | 9kHz ~ 2.75GHz Jun. 17, 2022 | | Jun. 16, 2023 | Radiation (03CH03-CB) |
| RF Cable-low | Woken | RG402 | Low Cable-02+29 | 30MHz ~ 1GHz Oct. 03, 2022 Oct. | | Oct. 02, 2023 | Radiation (03CH03-CB) |
| Test Software | SPORTON | SENSE | V5.10 | - | N.C.R. N.C.R. | | Radiation (03CH03-CB) |
| 3m Semi Anechoic Chamber VSWR | TDK | SAC-3M | 03CH06-CB | 1GHz ~18GHz 3m | Sep. 30, 2022 | Sep. 29, 2023 | Radiation (03CH06-CB) |
| Horn Antenna | SCHWARZBE CK | BBHA9120D | BBHA 9120D-1292 | 1GHz~18GHz | Aug. 09, 2022 | Aug. 08, 2023 | Radiation (03CH06-CB) |
| Horn Antenna | Schwarzbeck | BBHA 9170 | BBHA9170252 | 15GHz ~ 40GHz Aug. 22, 2022 Aug. 21, | | Aug. 21, 2023 | Radiation (03CH06-CB) |
| Pre-Amplifier | Agilent | 83017A | MY53270064 | 0.5GHz ~ 26.5GHz Aug 02, 2022 Aug 01, 2023 | | Aug 01, 2023 | Radiation (03CH06-CB) |
| Pre-Amplifier | EM | EM18G40GA | 060874 | 18GHz ~ 40GHz Aug. 23 2022 Aug. 22 2023 | | Aug. 22 2023 | Radiation (03CH06-CB) |
| Signal Analyzer | R&S | FSV40 | 101904 | 9kHz ~ 40GHz | Apr. 26, 2022 | Apr. 25, 2023 | Radiation (03CH06-CB) |
| RF Cable-high | Woken | RG402 | High Cable-68 | 1GHz~18GHz | Oct. 03, 2022 | Oct. 02, 2023 | Radiation (03CH06-CB) |

TEL: 886-3-656-9065 FAX: 886-3-656-9085

Report Template No.: CB-A12_1 Ver1.4

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Report Version : 01

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| Instrument | Brand | Model No. | Serial No. | Characteristics | Calibration Date | Calibration Due Date | Remark |
|----------------------|---------|-----------|---------------------|-------------------------------|---------------------|-------------------------|--------------------------|
| RF Cable-high | Woken | RG402 | High Cable-05+67 | 1GHz~18GHz Oct. 03, 2022 Oct. | | Oct. 02, 2023 | Radiation (03CH06-CB) |
| High Cable | Woken | WCA0929M | 40G#5+7 | 1GHz ~ 40 GHz | Dec. 14, 2021 | Dec. 13, 2022 | Radiation (03CH06-CB) |
| High Cable | Woken | WCA0929M | 40G#5+6 | 1GHz ~ 40 GHz | Dec. 07, 2022 | Dec. 06, 2023 | Radiation (03CH06-CB) |
| High Cable | Woken | WCA0929M | 40G#5 | 1GHz ~ 40 GHz | Dec. 08, 2021 | Dec. 07, 2022 | Radiation (03CH06-CB) |
| High Cable | Woken | WCA0929M | 40G#5 | 1GHz ~ 40 GHz | Dec. 07, 2022 | Dec. 06, 2023 | Radiation (03CH06-CB) |
| High Cable | Woken | WCA0929M | 40G#7 | 1GHz ~ 40 GHz | Dec. 14, 2021 | Dec. 13, 2022 | Radiation (03CH06-CB) |
| High Cable | Woken | WCA0929M | 40G#6 | 1GHz ~ 40 GHz | Dec. 07, 2022 | Dec. 06, 2023 | Radiation (03CH06-CB) |
| Test Software | SPORTON | SENSE | V5.10 | - | N.C.R. | N.C.R. | Radiation (03CH06-CB) |
| Spectrum analyzer | R&S | FSV40 | 101028 | 9kHz~40GHz | Jan. 07, 2022 | Jan. 06, 2023 | Conducted (TH03-CB) |
| Power Sensor | Anritsu | MA2411B | 1531344 | 300MHz~40GHz | Jul. 31, 2022 | Jul. 30, 2023 | Conducted (TH03-CB) |
| Power Meter | Anritsu | ML2495A | 1728002 | 300MHz~40GHz | Jul. 31, 2022 | Jul. 30, 2023 | Conducted (TH03-CB) |
| RF Cable-high | Woken | RG402 | High Cable-11 | 1 GHz –18 GHz | Oct. 03, 2022 | Oct. 02, 2023 | Conducted (TH03-CB) |
| RF Cable-high | Woken | RG402 | High Cable-12 | 1 GHz –18 GHz | Oct. 03, 2022 | Oct. 02, 2023 | Conducted (TH03-CB) |
| RF Cable-high | Woken | RG402 | High Cable-13 | 1 GHz –18 GHz | Oct. 03, 2022 | Oct. 02, 2023 | Conducted (TH03-CB) |
| RF Cable-high | Woken | RG402 | High Cable-14 | 1 GHz –18 GHz | Oct. 03, 2022 | Oct. 02, 2023 | Conducted (TH03-CB) |
| RF Cable-high | Woken | RG402 | High Cable-15 | 1 GHz –18 GHz | Oct. 03, 2022 | Oct. 02, 2023 | Conducted (TH03-CB) |
| Switch | SPTCB | SP-SWI | SWI-03 | 1 GHz –26.5 GHz | Oct. 04, 2022 | Oct. 03, 2023 | Conducted (TH03-CB) |
| Test Software | SPORTON | SENSE | V5.10 | - | N.C.R. | N.C.R. | Conducted (TH03-CB) |

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

NCR means Non-Calibration required.

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Conducted Emissions at Powerline

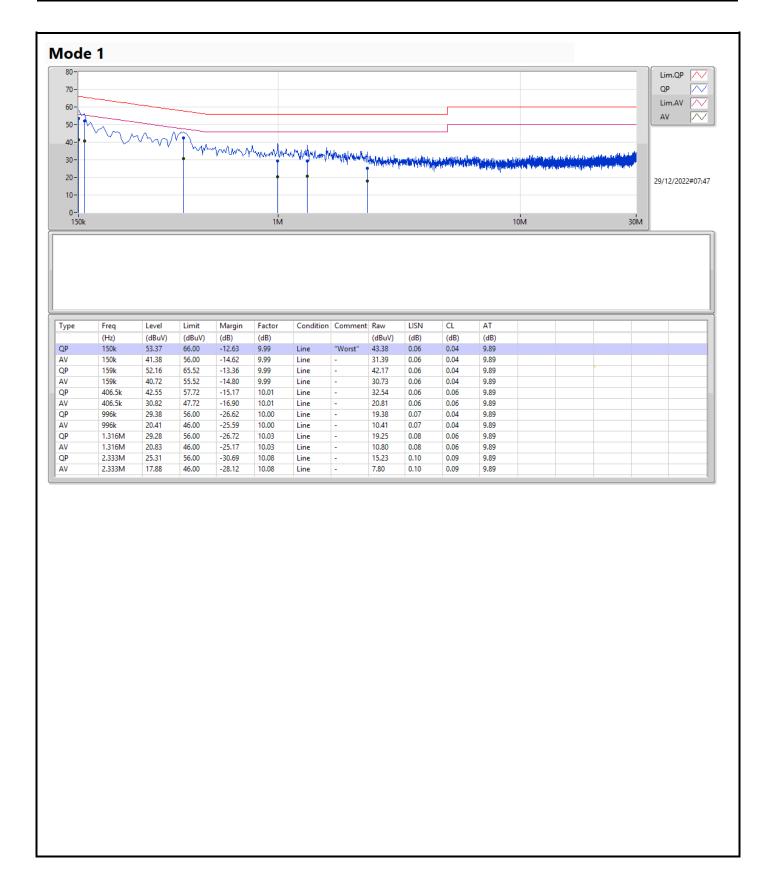
Appendix A

Summary

| Mode | Result | Туре | Freq (Hz) | Level (dBuV) | Limit (dBuV) | Margin (dB) | Condition |
|--------|--------|------|--------------|-----------------|-----------------|----------------|-----------|
| Mode 1 | Pass | QP | 154.5k | 53.95 | 65.75 | -11.80 | Neutral |

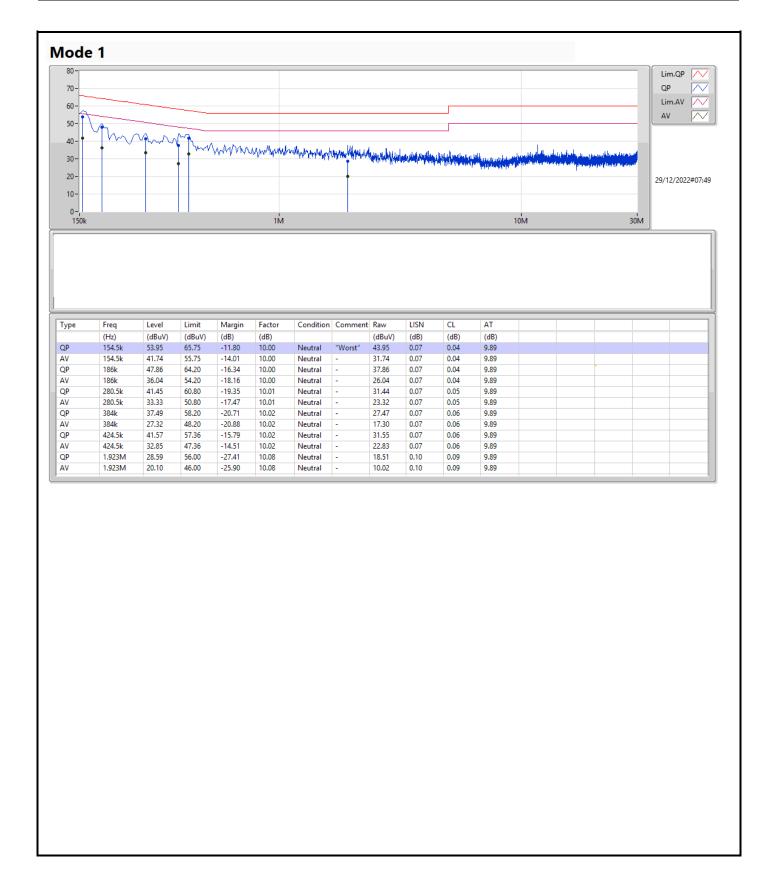
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Appendix B **EBW**

Summary

| Mode | Max-N dB | Max-OBW | ITU-Code | Min-N dB | Min-OBW |
|--------------------------------|----------|---------|----------|----------|---------|
| | (Hz) | (Hz) | | (Hz) | (Hz) |
| 5.15-5.25GHz | - | = | = | = | = |
| 802.11a_Nss1,(6Mbps)_4TX | 42.12M | 20.848M | 20M8D1D | 22.02M | 16.776M |
| 802.11ax HEW20_Nss1,(MCS0)_4TX | 42M | 21.469M | 21M5D1D | 21.75M | 19.041M |
| 802.11ax HEW40_Nss1,(MCS0)_4TX | 56.7M | 37.853M | 37M9D1D | 39.78M | 37.494M |
| 802.11ax HEW80_Nss1,(MCS0)_4TX | 81.48M | 76.777M | 76M8D1D | 81M | 76.691M |
| 5.725-5.85GHz | - | = | = | = | = |
| 802.11a_Nss1,(6Mbps)_4TX | 16.35M | 21.454M | 21M5D1D | 15.69M | 16.851M |
| 802.11ax HEW20_Nss1,(MCS0)_4TX | 18.93M | 20.921M | 20M9D1D | 18.54M | 19.228M |
| 802.11ax HEW40_Nss1,(MCS0)_4TX | 37.56M | 59.013M | 59M0D1D | 36.42M | 38.285M |
| 802.11ax HEW80_Nss1,(MCS0)_4TX | 76.2M | 77.057M | 77M1D1D | 75.12M | 76.916M |

 $\label{eq:max-NdB} Max - N \ dB = Maximum \ 6dB \ down \ bandwidth \ for \ 5.725-5.85 GHz \ band \ / \ Maximum \ 26dB \ down \ bandwidth \ for \ other \ band; \\ Max-OBW = Maximum \ 99\% \ occupied \ bandwidth \ for \ 5.725-5.85 GHz \ band \ / \ Maximum \ 26dB \ down \ bandwidth \ for \ other \ band; \\ Min-OBW = Minimum \ 99\% \ occupied \ bandwidth \ for \ other \ band; \\ Min-OBW = Minimum \ 99\% \ occupied \ bandwidth \ for \ other \ band; \\ Min-OBW = Minimum \ 99\% \ occupied \ bandwidth \ for \ other \ band; \\ Min-OBW = Minimum \ 99\% \ occupied \ bandwidth \ for \ other \ band; \\ Minimum \ 99\% \ occupied \ bandwidth \ for \ other \ band; \\ Minimum \ 99\% \ occupied \ bandwidth \ for \ other \ bandwidth \ for \$

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EBW Appendix B

Result

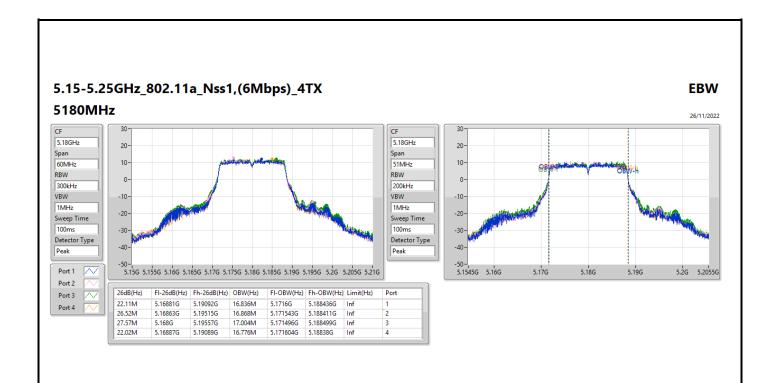
| Mode | Result | Limit | Port 1-N dB | Port 1-OBW | Port 2-N dB | Port 2-OBW | Port 3-N dB | Port 3-OBW | Port 4-N dB | Port 4-OBW |
|--------------------------------|--------|-------|-------------|------------|-------------|------------|-------------|------------|-------------|------------|
| | | (Hz) | (Hz) | (Hz) | (Hz) | (Hz) | (Hz) | (Hz) | (Hz) | (Hz) |
| 802.11a_Nss1,(6Mbps)_4TX | - | - | - | - | - | - | - | - | - | - |
| 5180MHz | Pass | Inf | 22.11M | 16.836M | 26.52M | 16.868M | 27.57M | 17.004M | 22.02M | 16.776M |
| 5200MHz | Pass | Inf | 37.89M | 18.694M | 38.85M | 19.347M | 42.12M | 20.848M | 40.23M | 19.11M |
| 5240MHz | Pass | Inf | 37.74M | 18.307M | 38.13M | 18.816M | 41.19M | 20.12M | 38.49M | 18.157M |
| 5745MHz | Pass | 500k | 16.29M | 20.863M | 16.32M | 21.454M | 16.29M | 20.529M | 16.32M | 20.128M |
| 5785MHz | Pass | 500k | 16.29M | 17.22M | 16.32M | 17.621M | 15.72M | 17.371M | 16.35M | 17.257M |
| 5825MHz | Pass | 500k | 16.32M | 16.926M | 16.32M | 17.312M | 15.69M | 17.259M | 16.32M | 16.851M |
| 802.11ax HEW20_Nss1,(MCS0)_4TX | - | - | - | - | - | - | - | - | - | - |
| 5180MHz | Pass | Inf | 22.53M | 19.041M | 22.5M | 19.06M | 22.71M | 19.094M | 21.75M | 19.12M |
| 5200MHz | Pass | Inf | 41.97M | 20.824M | 40.32M | 20.039M | 42M | 21.469M | 40.74M | 21.156M |
| 5240MHz | Pass | Inf | 39.12M | 19.453M | 38.1M | 19.49M | 40.5M | 19.788M | 36.87M | 19.462M |
| 5745MHz | Pass | 500k | 18.54M | 20.545M | 18.69M | 20.921M | 18.69M | 19.769M | 18.87M | 20.2M |
| 5785MHz | Pass | 500k | 18.66M | 19.235M | 18.9M | 19.256M | 18.54M | 19.269M | 18.93M | 19.312M |
| 5825MHz | Pass | 500k | 18.87M | 19.256M | 18.9M | 19.263M | 18.57M | 19.29M | 18.93M | 19.228M |
| 802.11ax HEW40_Nss1,(MCS0)_4TX | - | - | - | - | - | - | - | - | - | - |
| 5190MHz | Pass | Inf | 40.14M | 37.525M | 39.84M | 37.555M | 39.9M | 37.559M | 39.78M | 37.494M |
| 5230MHz | Pass | Inf | 56.4M | 37.853M | 50.64M | 37.806M | 56.7M | 37.832M | 41.1M | 37.716M |
| 5755MHz | Pass | 500k | 37.56M | 46.223M | 36.96M | 51.072M | 37.44M | 59.013M | 36.42M | 48.417M |
| 5795MHz | Pass | 500k | 37.32M | 38.285M | 36.66M | 39.494M | 36.6M | 45.136M | 36.78M | 38.351M |
| 802.11ax HEW80_Nss1,(MCS0)_4TX | - | - | - | - | - | - | - | - | - | - |
| 5210MHz | Pass | Inf | 81.24M | 76.691M | 81M | 76.777M | 81.48M | 76.704M | 81.48M | 76.697M |
| 5775MHz | Pass | 500k | 75.84M | 76.981M | 75.24M | 76.916M | 75.12M | 76.985M | 76.2M | 77.057M |

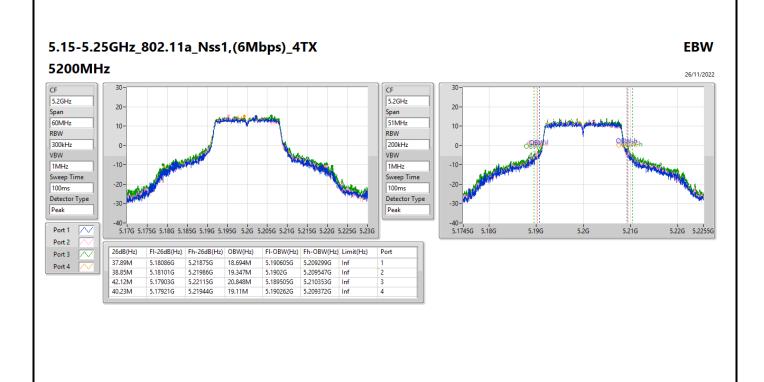
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band Port X-OBW = Port X 99% occupied bandwidth

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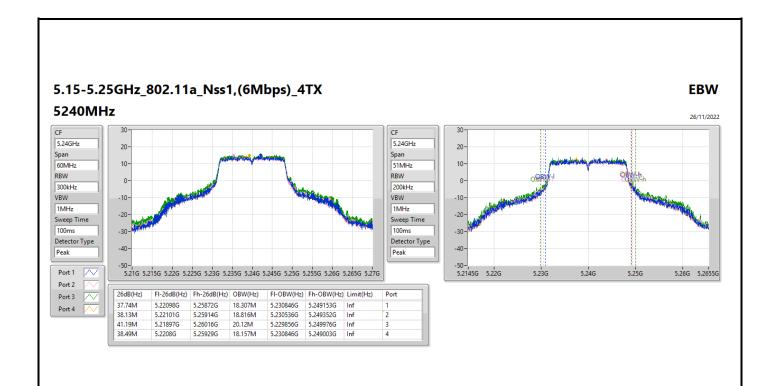
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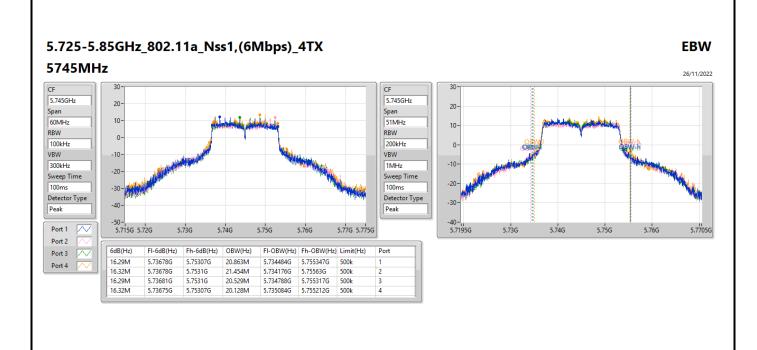
EBW Appendix B



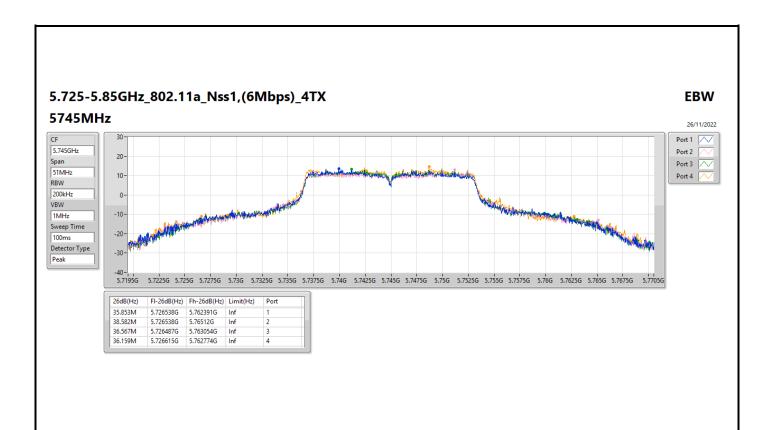


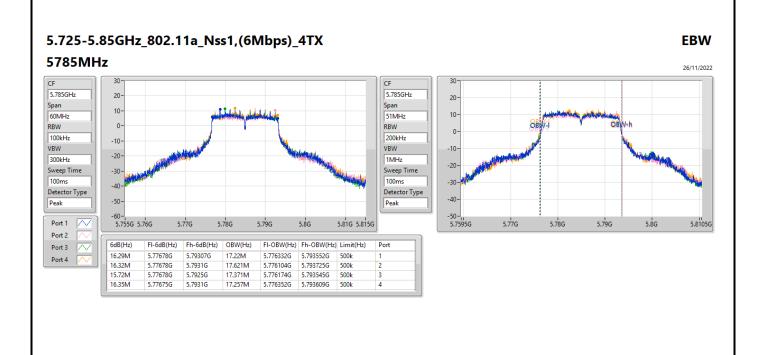
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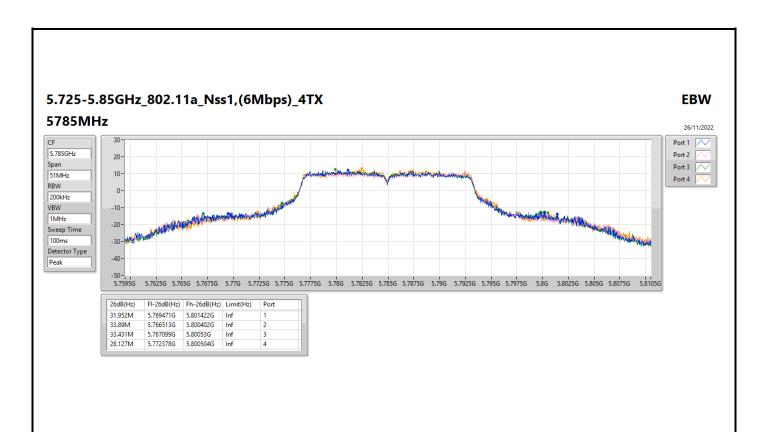
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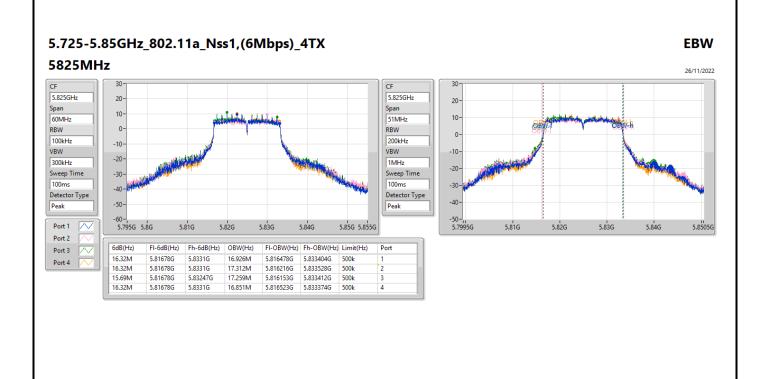




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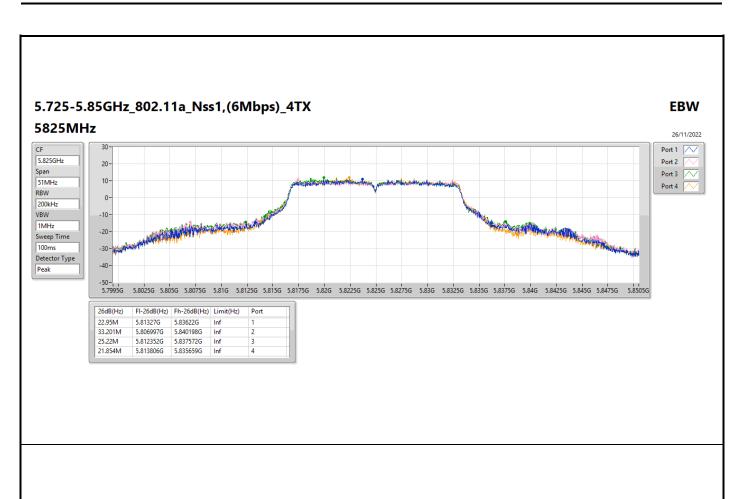
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5180MHz 26/11/2022 5.18GHz 5.18GHz 20-10-10-60MHz 58.8MHz RBW RBW 0-300kHz 200kHz -10 VBW -10-VBW -20-1MHz 1MHz -20-Sweep Time Sweep Time -30 100ms -30 Detector Type Detector Type -40--50 -50 - 5.15G 5.165G 5.165G 5.17G 5.175G 5.18G 5.185G 5.19G 5.195G 5.2G 5.205G 5.21G -60 -5.1506G Port 1 5.16G 5.17G 5.18G 5.19G 5.2G 5,20946 Port 2 FI-26dB(Hz) Fh-26dB(Hz) OBW(Hz)

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Port 3

22.53M

22.5M

21.75M

5.16911G

5.16926G

5.16917G

5.16917G

5.19164G

5.19176G

5.19188G

5.19092G

19.041M

19.06M

19.12M

19.094M

5.170421G

5.170431G

5.170421G

5.170443G

5.189462G

5.189491G

5.189516G

5.189562G

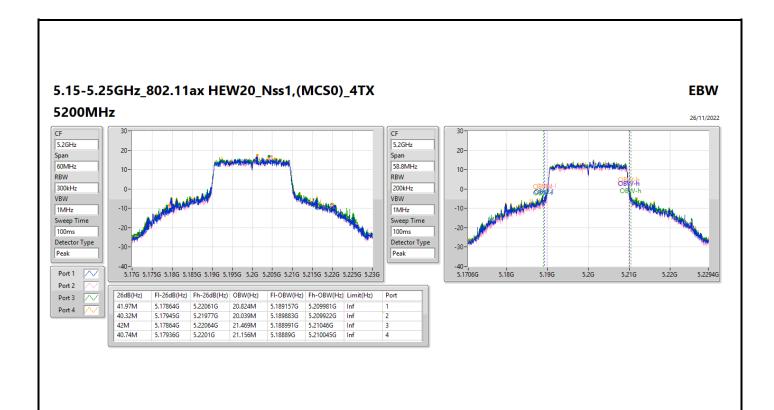
Inf

5.15-5.25GHz_802.11ax HEW20_Nss1,(MCS0)_4TX

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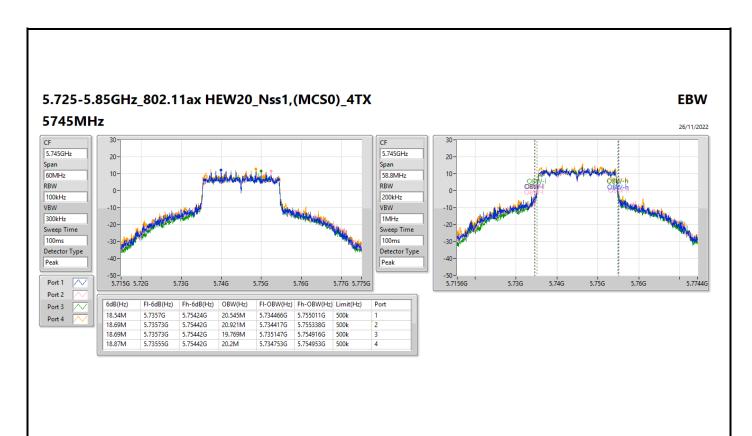
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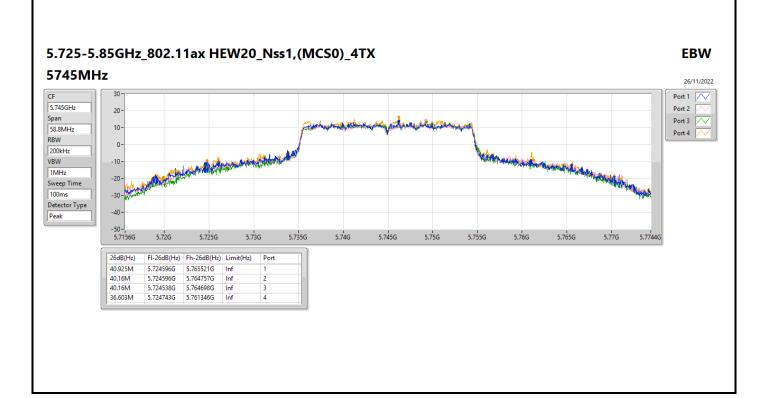
EBW



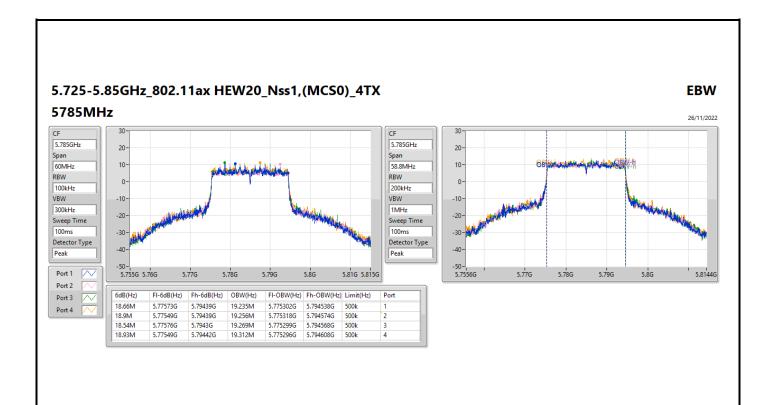
5.15-5.25GHz_802.11ax HEW20_Nss1,(MCS0)_4TX **EBW** 5240MHz 26/11/2022 5.24GHz 5.24GHz 20 20-10 60MHz 58.8MHz 10 RBW RBW 300kHz 0-200kHz VBW ALCOHOL: N VBW -10 -10-1MHz 1MHz Sweep Time Sweep Time Detector Type Detector Type -40 -5.21G 5.215G 5.22G 5.225G 5.23G 5.235G 5.24G 5.245G 5.25G 5.255G 5.26G 5.265G 5.27G -50-5.2106G Port 1 5.22G 5.23G 5.24G 5.25G 5.26G 5.26946 Port 2 FI-26dB(Hz) Fh-26dB(Hz) OBW(Hz) Port 3 39.12M 5.21942G 5.25854G 19.453M 5.230181G 5.249634G 38.1M 5.21951G 5.25761G 19.49M 5.230187G 5.249677G 40.5M 5.25992G 19.788M 5.230037G 5.249825G 36.87M 5.21948G 5.25635G 19.462M 5.230219G 5.24968G Inf

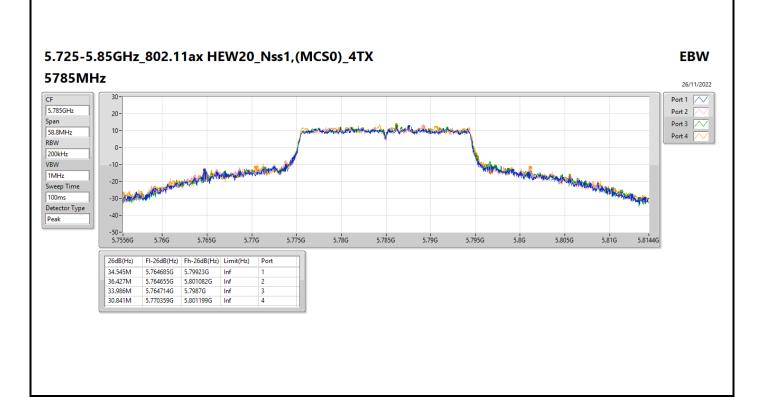
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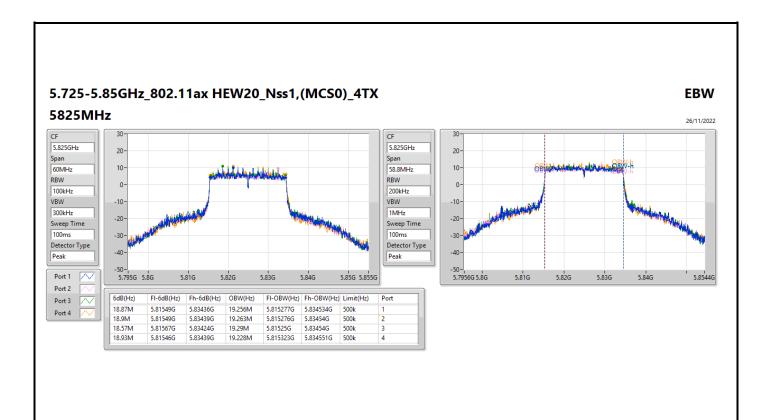
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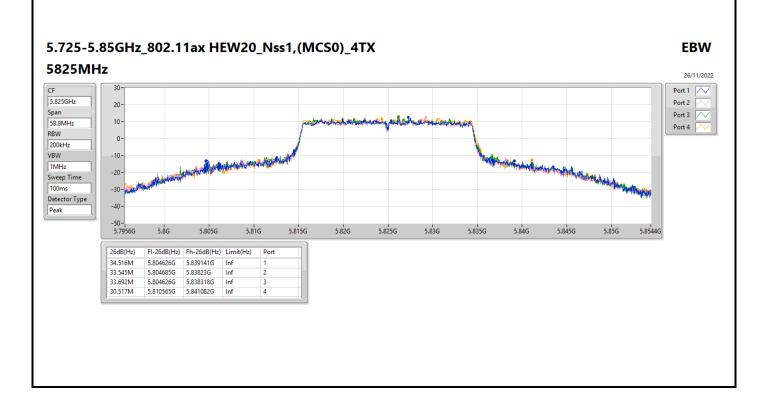




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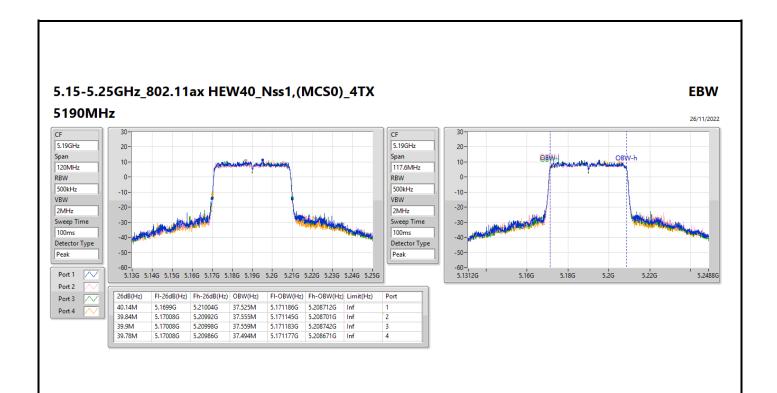
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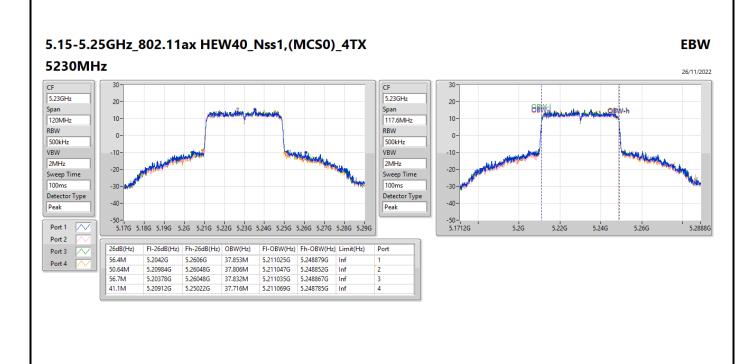




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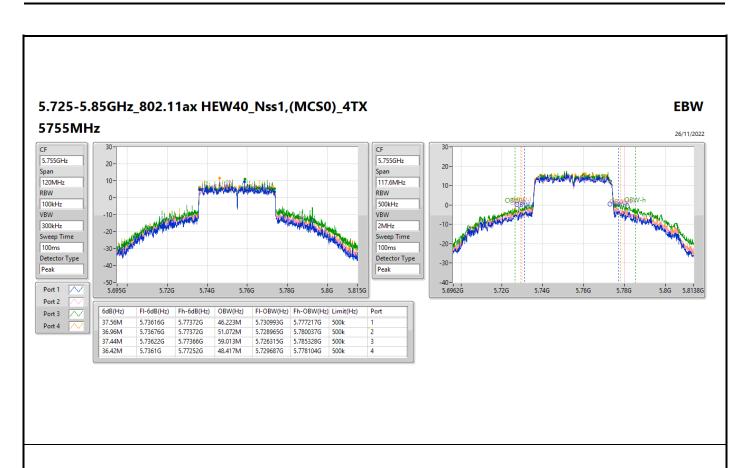
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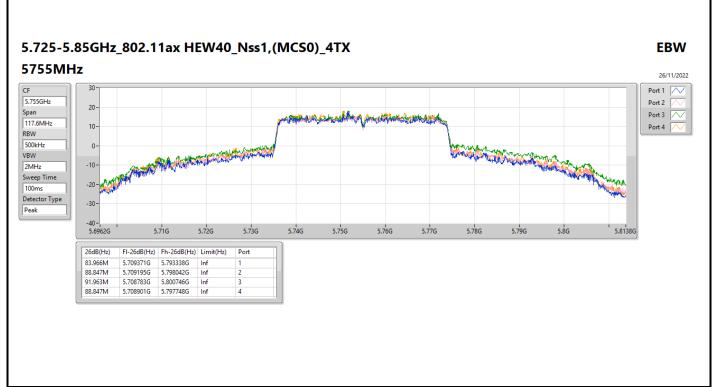




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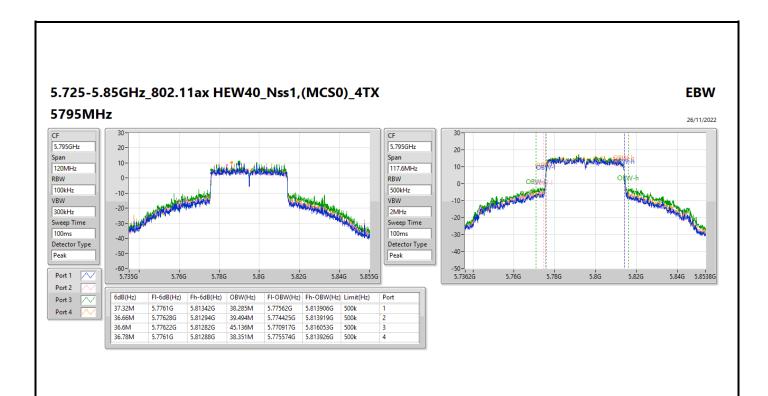
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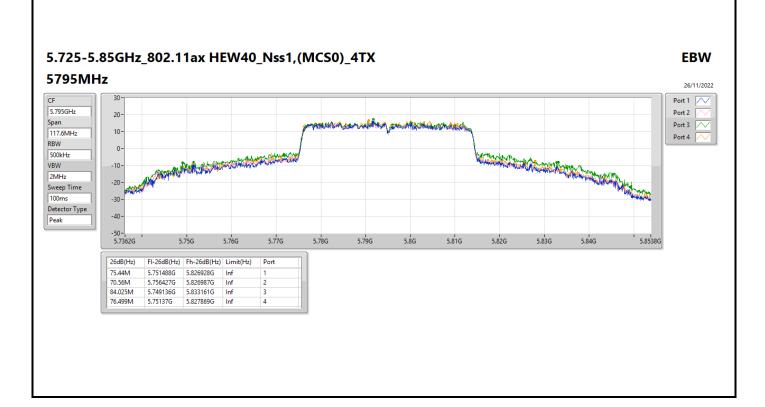




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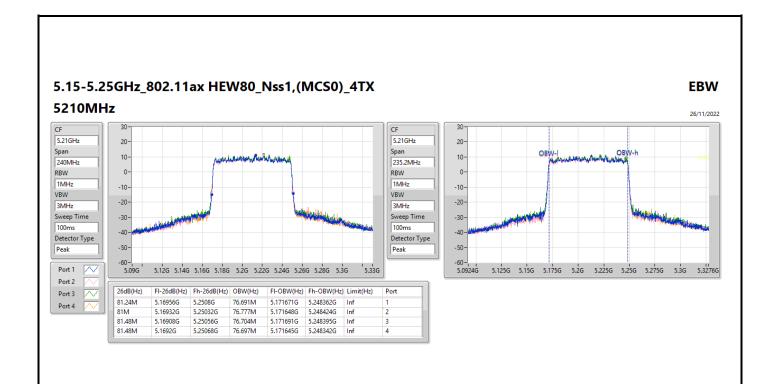
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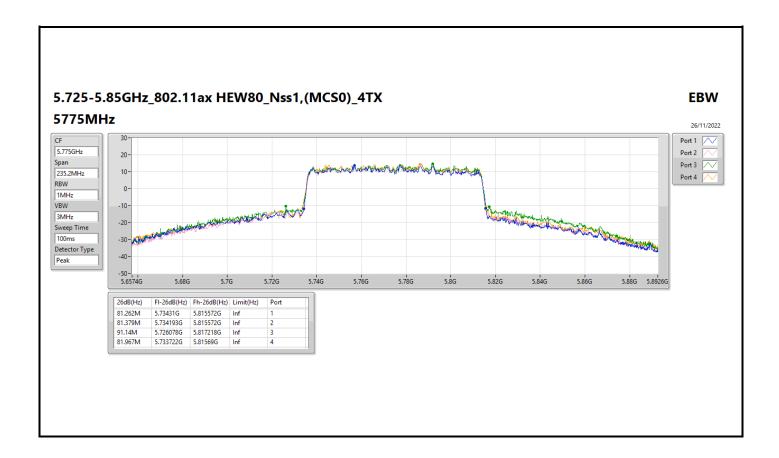
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5.725-5.85GHz_802.11ax HEW80_Nss1,(MCS0)_4TX **EBW** 5775MHz 26/11/2022 5.775GHz 5.775GHz 20 0-10 240MHz 235.2MHz -10-RBW RBW 0. 100kHz 1MHz -20 The state of the s VBW VBW -10--30-300kHz 3MHz -20 Sweep Time Sweep Time -40 -30 -50-Detector Type Detector Type -40 -60 -70 -5.655G 5.675G 5.7G 5.725G 5.75G 5.775G 5.8G 5.825G 5.85G 5.875G 5.895G -50-5.6574G 5.7G 5.725G 5.75G 5.775G 5.8G 5.825G 5.85G Port 1 Port 2 Fh-6dB(Hz) OBW(Hz) FI-OBW(Hz) Fh-OBW(Hz) Limit(Hz) Port 3 75.84M 5.73684G 5.81268G 76.981M 5.736306G 5.813287G 75.24M 5.73732G 5.81256G 76.916M 5.736463G 5.813378G 500k 75.12M 5.73732G 5.81244G 76.985M 5.736429G 5.813414G 76.2M 5.73624G 5.81244G 77.057M 5.736294G 5.813351G 500k

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Average Power Appendix C

Summary

| Mode | Total Power | Total Power |
|-----------------------------------|-------------|-------------|
| | (dBm) | (W) |
| 5.15-5.25GHz | - | - |
| 802.11a_Nss1,(6Mbps)_4TX | 29.37 | 0.86497 |
| 802.11ax HEW20_Nss1,(MCS0)_4TX | 29.55 | 0.90157 |
| 802.11ax HEW20-BF_Nss1,(MCS0)_4TX | 29.55 | 0.90157 |
| 802.11ax HEW40_Nss1,(MCS0)_4TX | 28.28 | 0.67298 |
| 802.11ax HEW40-BF_Nss1,(MCS0)_4TX | 28.28 | 0.67298 |
| 802.11ax HEW80_Nss1,(MCS0)_4TX | 23.67 | 0.23281 |
| 802.11ax HEW80-BF_Nss1,(MCS0)_4TX | 23.67 | 0.23281 |
| 5.725-5.85GHz | - | - |
| 802.11a_Nss1,(6Mbps)_4TX | 28.95 | 0.78524 |
| 802.11ax HEW20_Nss1,(MCS0)_4TX | 28.79 | 0.75683 |
| 802.11ax HEW20-BF_Nss1,(MCS0)_4TX | 28.79 | 0.75683 |
| 802.11ax HEW40_Nss1,(MCS0)_4TX | 29.98 | 0.99541 |
| 802.11ax HEW40-BF_Nss1,(MCS0)_4TX | 29.98 | 0.99541 |
| 802.11ax HEW80_Nss1,(MCS0)_4TX | 26.59 | 0.45604 |
| 802.11ax HEW80-BF_Nss1,(MCS0)_4TX | 26.59 | 0.45604 |

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Average Power Appendix C

Result

| Mode | Result | DG | Port 1 | Port 2 | Port 3 | Port 4 | Total Power | Power Limit |
|-----------------------------------|--------|-------|--------|--------|--------|--------|-------------|-------------|
| | | (dBi) | (dBm) | (dBm) | (dBm) | (dBm) | (dBm) | (dBm) |
| 802.11a_Nss1,(6Mbps)_4TX | - | - | - | - | - | - | - | - |
| 5180MHz | Pass | 4.90 | 20.49 | 20.44 | 20.83 | 20.94 | 26.70 | 30.00 |
| 5200MHz | Pass | 4.90 | 23.09 | 23.04 | 23.66 | 23.58 | 29.37 | 30.00 |
| 5240MHz | Pass | 4.90 | 22.93 | 22.77 | 23.69 | 23.65 | 29.30 | 30.00 |
| 5745MHz | Pass | 3.66 | 22.65 | 22.39 | 22.9 | 23.67 | 28.95 | 30.00 |
| 5785MHz | Pass | 3.66 | 21.86 | 21.4 | 21.91 | 22.56 | 27.97 | 30.00 |
| 5825MHz | Pass | 3.66 | 20.55 | 20.4 | 21.08 | 21.34 | 26.88 | 30.00 |
| 802.11ax HEW20_Nss1,(MCS0)_4TX | - | - | - | - | - | - | - | - |
| 5180MHz | Pass | 4.90 | 18.9 | 18.78 | 19.47 | 19.18 | 25.11 | 30.00 |
| 5200MHz | Pass | 4.90 | 23.36 | 22.99 | 23.81 | 23.9 | 29.55 | 30.00 |
| 5240MHz | Pass | 4.90 | 22.73 | 22.48 | 23.38 | 23.39 | 29.03 | 30.00 |
| 5745MHz | Pass | 3.66 | 22.47 | 22.43 | 22.49 | 23.57 | 28.79 | 30.00 |
| 5785MHz | Pass | 3.66 | 21.54 | 21.33 | 21.84 | 22.51 | 27.85 | 30.00 |
| 5825MHz | Pass | 3.66 | 20.98 | 21.04 | 21.33 | 21.99 | 27.37 | 30.00 |
| 802.11ax HEW40_Nss1,(MCS0)_4TX | - | - | - | - | - | - | - | - |
| 5190MHz | Pass | 4.90 | 18.07 | 17.87 | 18.2 | 18.22 | 24.11 | 30.00 |
| 5230MHz | Pass | 4.90 | 22.35 | 21.77 | 22.44 | 22.46 | 28.28 | 30.00 |
| 5755MHz | Pass | 3.66 | 23.28 | 23.32 | 24.4 | 24.66 | 29.98 | 30.00 |
| 5795MHz | Pass | 3.66 | 22.86 | 22.78 | 23.81 | 23.89 | 29.39 | 30.00 |
| 802.11ax HEW80_Nss1,(MCS0)_4TX | - | - | - | - | - | - | - | - |
| 5210MHz | Pass | 4.90 | 17.5 | 17.24 | 18 | 17.82 | 23.67 | 30.00 |
| 5775MHz | Pass | 3.66 | 20.07 | 19.91 | 21.04 | 21.12 | 26.59 | 30.00 |
| 802.11ax HEW20-BF_Nss1,(MCS0)_4TX | - | - | - | - | - | - | - | - |
| 5180MHz | Pass | 5.13 | 18.9 | 18.78 | 19.47 | 19.18 | 25.11 | 30.00 |
| 5200MHz | Pass | 5.13 | 23.36 | 22.99 | 23.81 | 23.9 | 29.55 | 30.00 |
| 5240MHz | Pass | 5.13 | 22.73 | 22.48 | 23.38 | 23.39 | 29.03 | 30.00 |
| 5745MHz | Pass | 4.42 | 22.47 | 22.43 | 22.49 | 23.57 | 28.79 | 30.00 |
| 5785MHz | Pass | 4.42 | 21.54 | 21.33 | 21.84 | 22.51 | 27.85 | 30.00 |
| 5825MHz | Pass | 4.42 | 20.98 | 21.04 | 21.33 | 21.99 | 27.37 | 30.00 |
| 802.11ax HEW40-BF_Nss1,(MCS0)_4TX | - | - | - | - | - | - | - | - |
| 5190MHz | Pass | 5.13 | 18.07 | 17.87 | 18.2 | 18.22 | 24.11 | 30.00 |
| 5230MHz | Pass | 5.13 | 22.35 | 21.77 | 22.44 | 22.46 | 28.28 | 30.00 |
| 5755MHz | Pass | 4.42 | 23.28 | 23.32 | 24.4 | 24.66 | 29.98 | 30.00 |
| 5795MHz | Pass | 4.42 | 22.86 | 22.78 | 23.81 | 23.89 | 29.39 | 30.00 |
| 802.11ax HEW80-BF_Nss1,(MCS0)_4TX | - | - | - | - | - | - | - | - |
| 5210MHz | Pass | 5.13 | 17.5 | 17.24 | 18 | 17.82 | 23.67 | 30.00 |
| 5775MHz | Pass | 4.42 | 20.07 | 19.91 | 21.04 | 21.12 | 26.59 | 30.00 |

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



Summary

| Mode | PD (dBm/RBW) |
|--------------------------------|-----------------|
| 5.15-5.25GHz | - |
| 802.11a_Nss1,(6Mbps)_4TX | 16.42 |
| 802.11ax HEW20_Nss1,(MCS0)_4TX | 15.98 |
| 802.11ax HEW40_Nss1,(MCS0)_4TX | 12.03 |
| 802.11ax HEW80_Nss1,(MCS0)_4TX | 4.84 |
| 5.725-5.85GHz | - |
| 802.11a_Nss1,(6Mbps)_4TX | 14.70 |
| 802.11ax HEW20_Nss1,(MCS0)_4TX | 14.15 |
| 802.11ax HEW40_Nss1,(MCS0)_4TX | 12.38 |
| 802.11ax HEW80_Nss1,(MCS0)_4TX | 6.48 |

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

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Appendix D **PSD**

Result

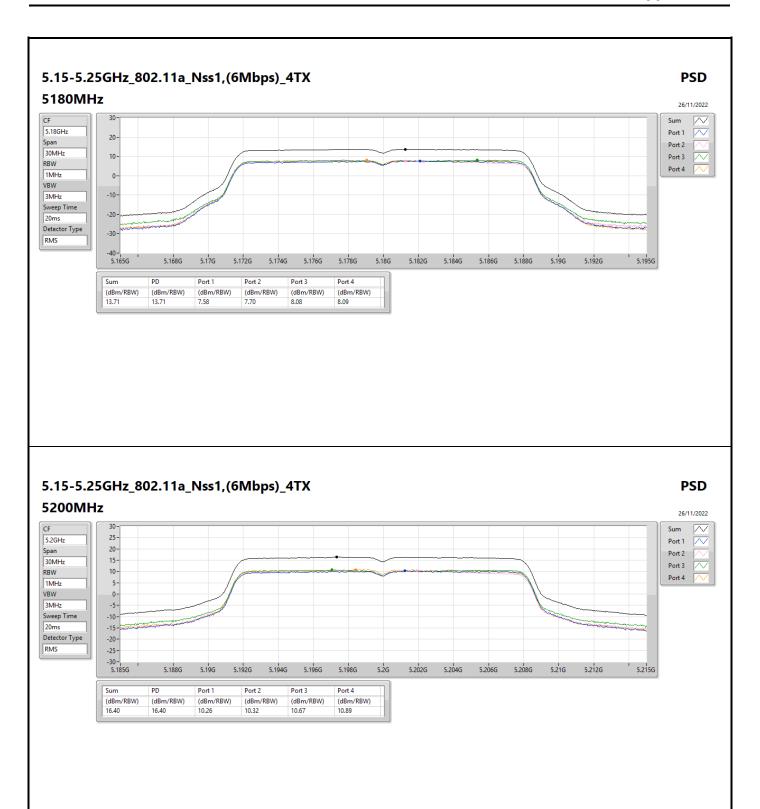
| Mode | Result | DG | Port 1 | Port 2 | Port 3 | Port 4 | PD | PD Limit |
|--------------------------------|--------|-------|-----------|-----------|-----------|-----------|-----------|-----------|
| | | (dBi) | (dBm/RBW) | (dBm/RBW) | (dBm/RBW) | (dBm/RBW) | (dBm/RBW) | (dBm/RBW) |
| 802.11a_Nss1,(6Mbps)_4TX | - | - | - | - | - | - | - | - |
| 5180MHz | Pass | 5.13 | 7.58 | 7.70 | 8.08 | 8.09 | 13.71 | 17.00 |
| 5200MHz | Pass | 5.13 | 10.26 | 10.32 | 10.67 | 10.89 | 16.40 | 17.00 |
| 5240MHz | Pass | 5.13 | 10.23 | 10.11 | 10.89 | 11.06 | 16.42 | 17.00 |
| 5745MHz | Pass | 4.42 | 9.01 | 8.08 | 8.88 | 10.42 | 14.70 | 30.00 |
| 5785MHz | Pass | 4.42 | 8.21 | 7.06 | 8.08 | 9.03 | 13.95 | 30.00 |
| 5825MHz | Pass | 4.42 | 6.95 | 6.23 | 7.44 | 7.82 | 12.87 | 30.00 |
| 802.11ax HEW20_Nss1,(MCS0)_4TX | - | - | - | - | - | - | - | - |
| 5180MHz | Pass | 5.13 | 5.44 | 5.54 | 6.08 | 5.86 | 11.55 | 17.00 |
| 5200MHz | Pass | 5.13 | 9.94 | 9.61 | 10.45 | 10.56 | 15.98 | 17.00 |
| 5240MHz | Pass | 5.13 | 9.38 | 9.11 | 10.01 | 10.14 | 15.57 | 17.00 |
| 5745MHz | Pass | 4.42 | 8.06 | 7.69 | 7.94 | 10.08 | 14.15 | 30.00 |
| 5785MHz | Pass | 4.42 | 7.28 | 6.92 | 7.44 | 8.32 | 12.95 | 30.00 |
| 5825MHz | Pass | 4.42 | 6.67 | 6.39 | 7.09 | 7.85 | 12.67 | 30.00 |
| 802.11ax HEW40_Nss1,(MCS0)_4TX | - | - | - | - | - | - | - | - |
| 5190MHz | Pass | 5.13 | 1.83 | 1.79 | 1.98 | 2.12 | 7.80 | 17.00 |
| 5230MHz | Pass | 5.13 | 6.19 | 5.70 | 6.41 | 6.44 | 12.03 | 17.00 |
| 5755MHz | Pass | 4.42 | 6.12 | 5.87 | 6.90 | 7.97 | 12.38 | 30.00 |
| 5795MHz | Pass | 4.42 | 5.80 | 5.59 | 6.42 | 6.86 | 11.77 | 30.00 |
| 802.11ax HEW80_Nss1,(MCS0)_4TX | - | - | - | - | = | = | - | - |
| 5210MHz | Pass | 5.13 | -1.22 | -1.46 | -0.59 | -0.87 | 4.84 | 17.00 |
| 5775MHz | Pass | 4.42 | 0.48 | 0.14 | 1.24 | 2.01 | 6.48 | 30.00 |

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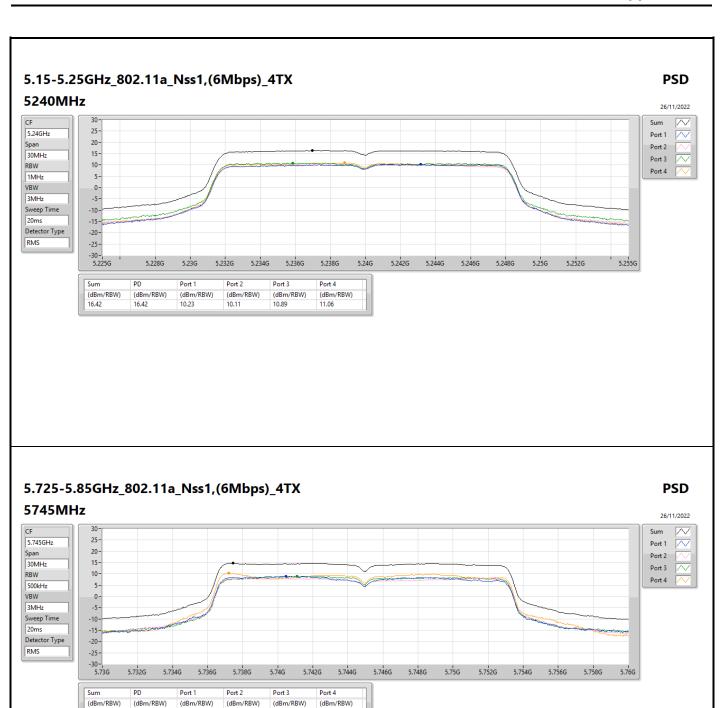
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DG = Directional Gain; RBW = 500kHz for 5.725-5.85GHz band / 1MHz for other band; PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;



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14.70

14.70

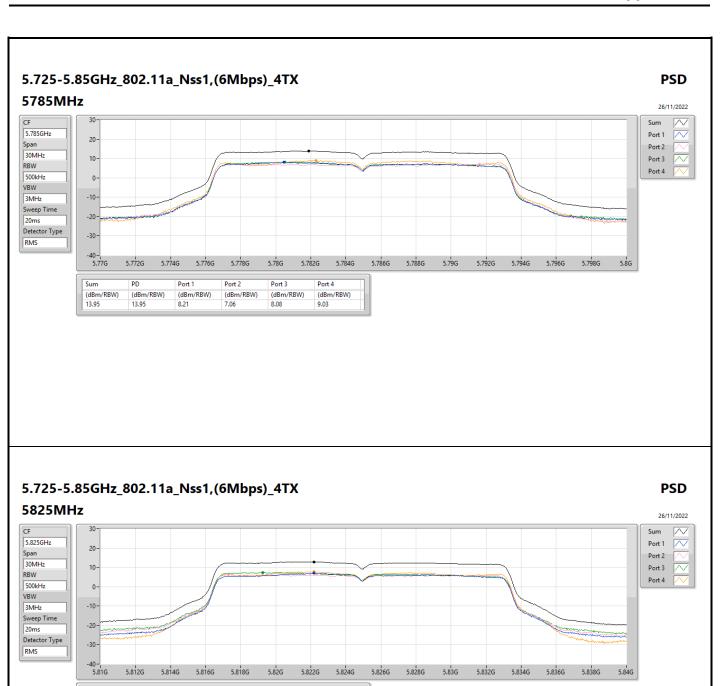
9.01

8.08

8.88

10.42

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Sum

12.87

Port 2

6.23

Port 3

(dBm/RBW) 7.44 Port 4

(dBm/RBW) 7.82

Port 1

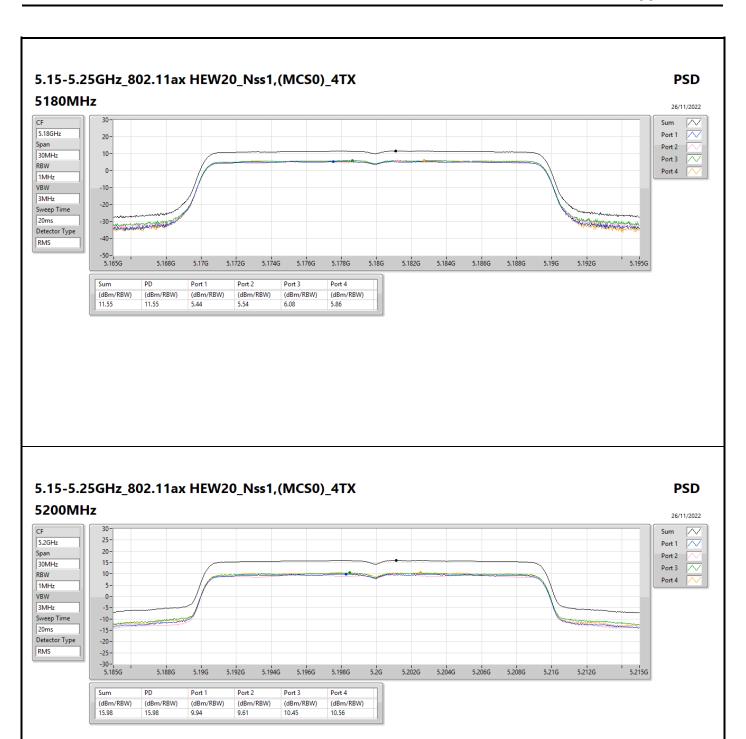
6.95

(dBm/RBW)

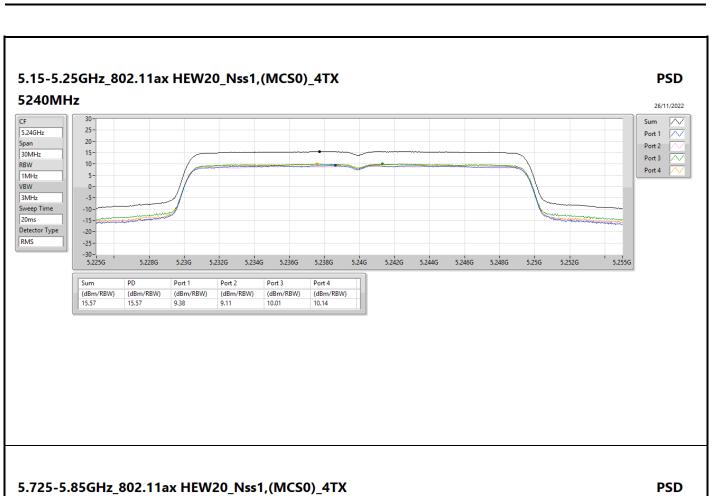
(dBm/RBW)

12.87

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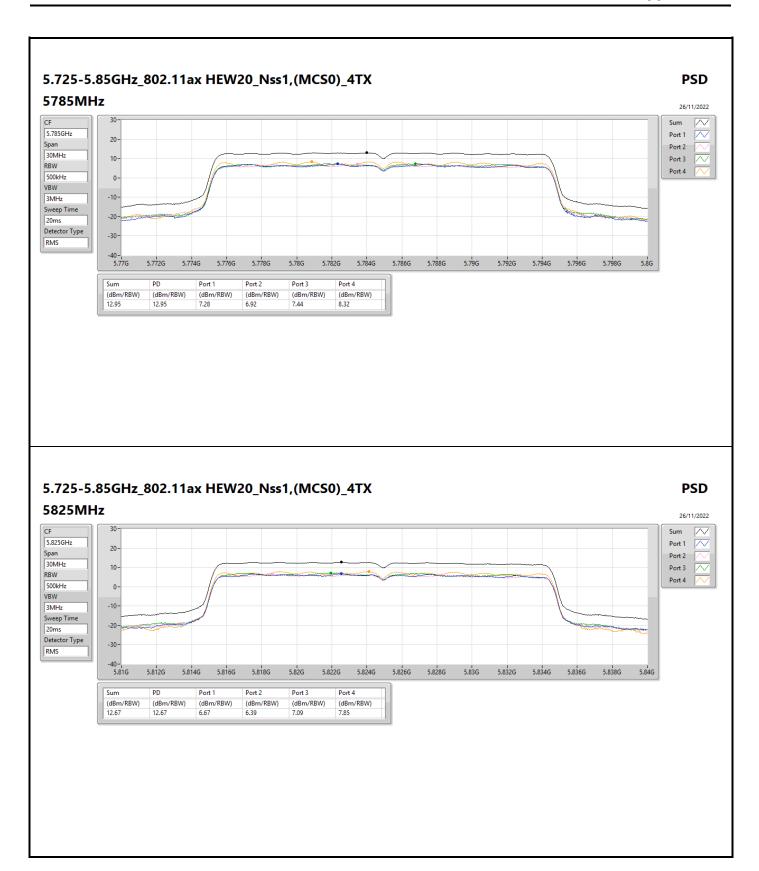


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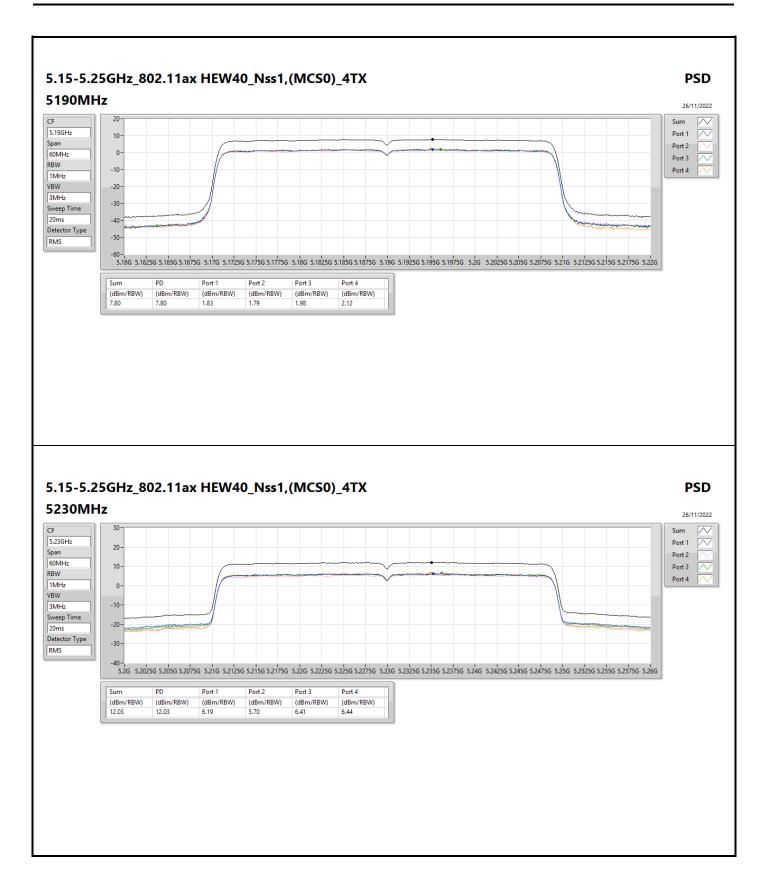


5745MHz 25-5.745GHz Port 1 20-Port 2 15-30MHz Port 3 10-RBW Port 4 500kHz VBW -5-3MHz Sweep Time -10-20ms -15-Detector Type -20-RMS -25--30-5.73G 5.734G 5.736G 5.738G 5.742G 5.744G 5.746G 5.748G 5.75G 5.752G 5.754G 5.756G 5.758G 5.732G 5.74G Port 2 Port 3 Sum Port 1 Port 4 (dBm/RBW) (dBm/RBW) (dBm/RBW) 14.15 14.15 7.69 7.94 10.08 8.06

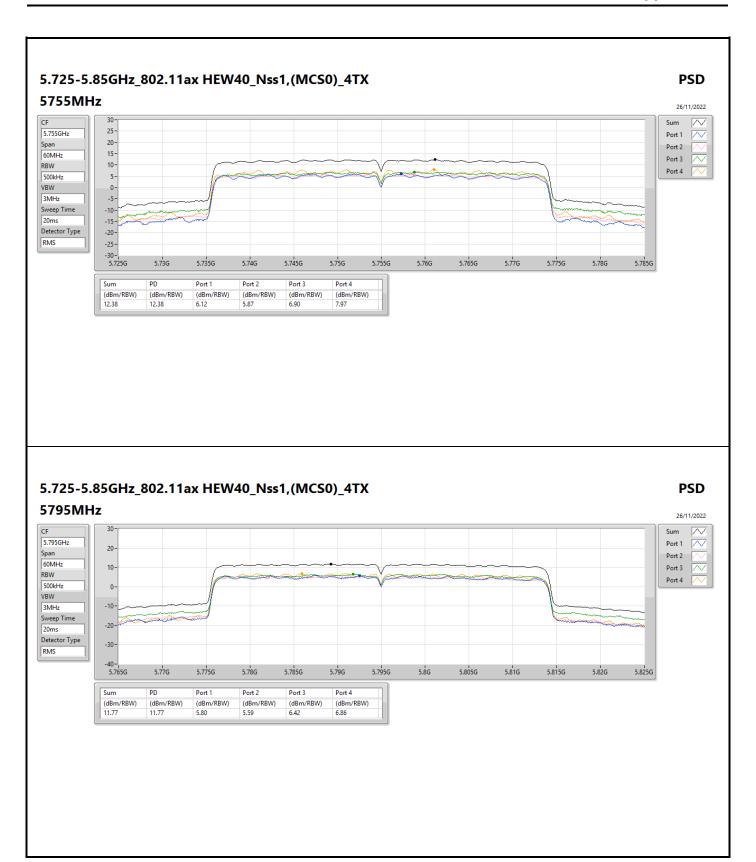
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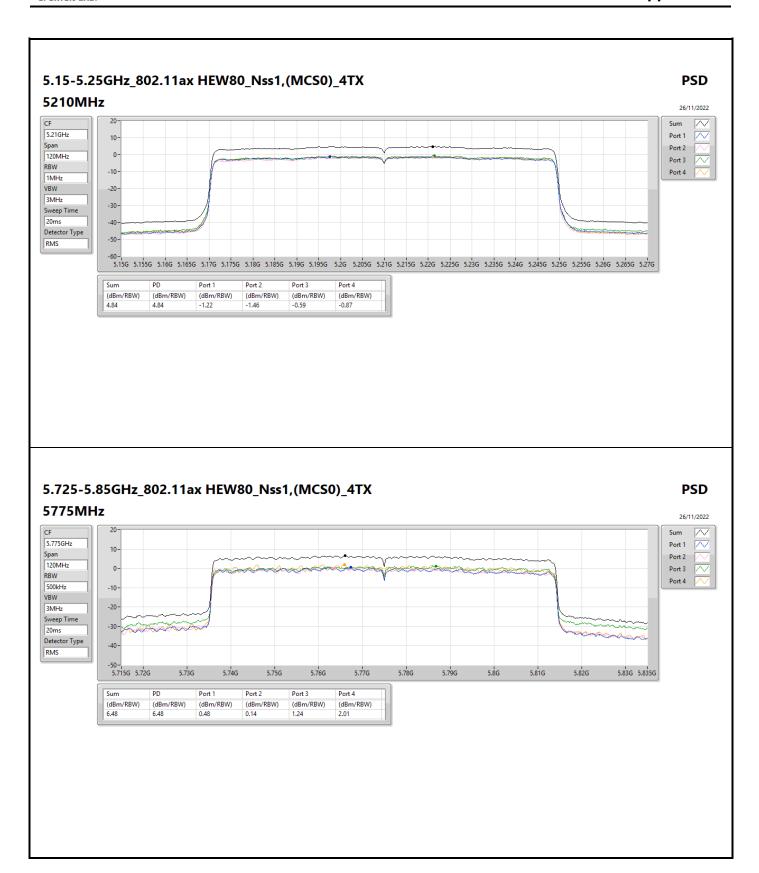
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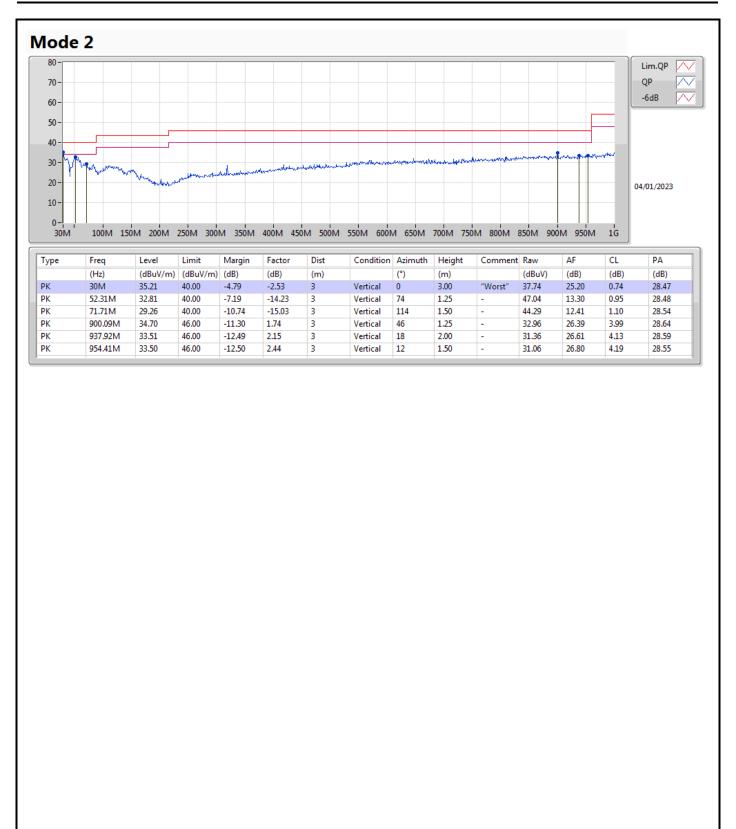
Radiated Emissions below 1GHz

Appendix E.1

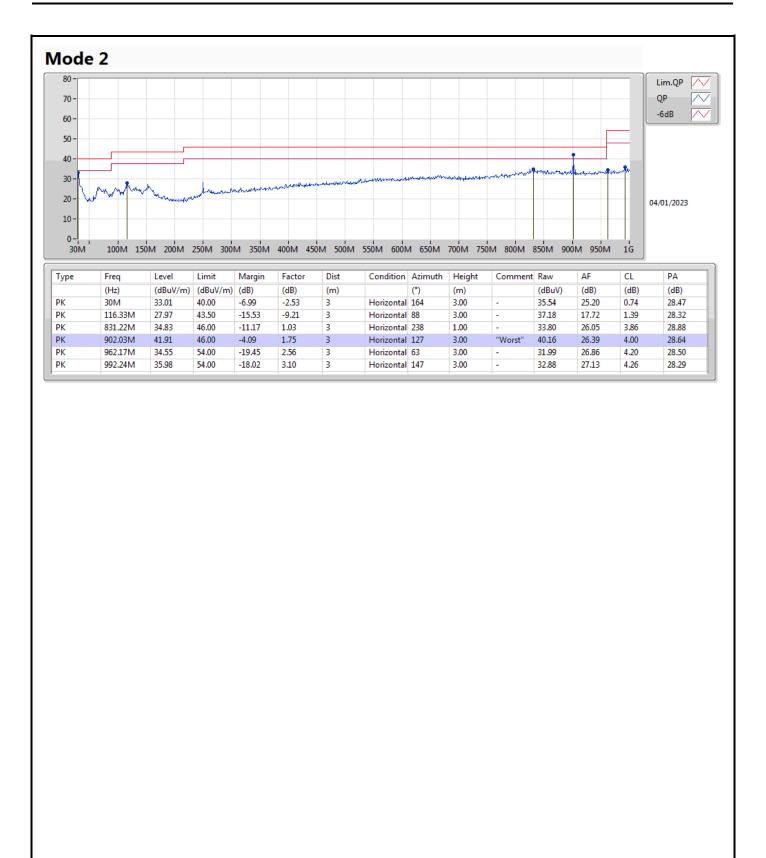
Summary

| Mode | Result | Туре | Freq (Hz) | Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Condition |
|--------|--------|------|--------------|-------------------|-------------------|----------------|------------|
| Mode 2 | Pass | PK | 902.03M | 41.91 | 46.00 | -4.09 | Horizontal |

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RSE TX above 1GHz

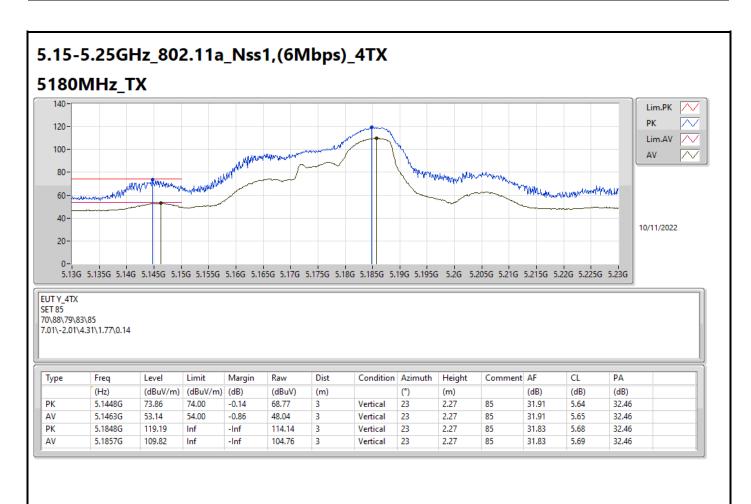
Appendix E.2

Summary

| Mode | Result | Туре | Freq (Hz) | Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Dist (m) | Condition | Azimuth (°) | Height (m) | Comments |
|--------------------------|--------|------|--------------|-------------------|-------------------|----------------|-------------|------------|----------------|---------------|----------|
| 5.725-5.85GHz | - | - | | - | - | - | - | - | - | - | |
| 802.11a_Nss1,(6Mbps)_4TX | Pass | PK | 5.65G | 68.19 | 68.20 | -0.01 | 3 | Horizontal | 193 | 2.43 | 102 |

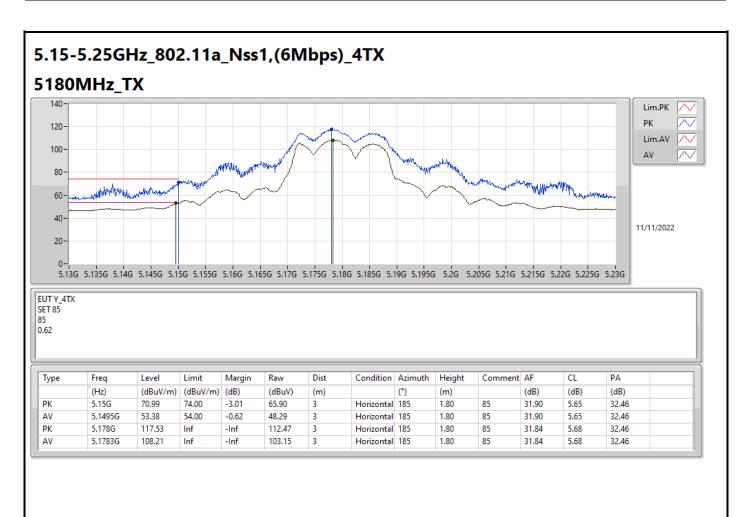
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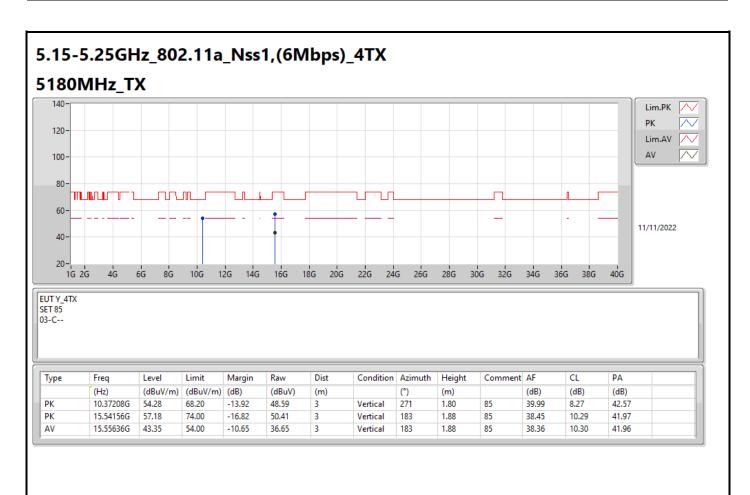
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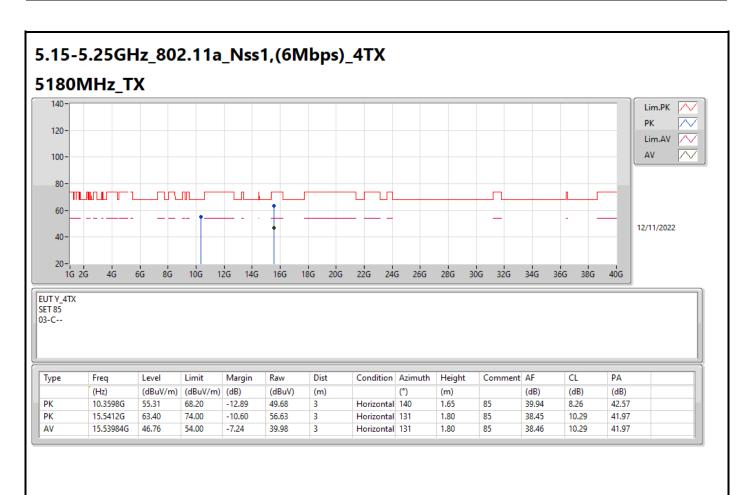
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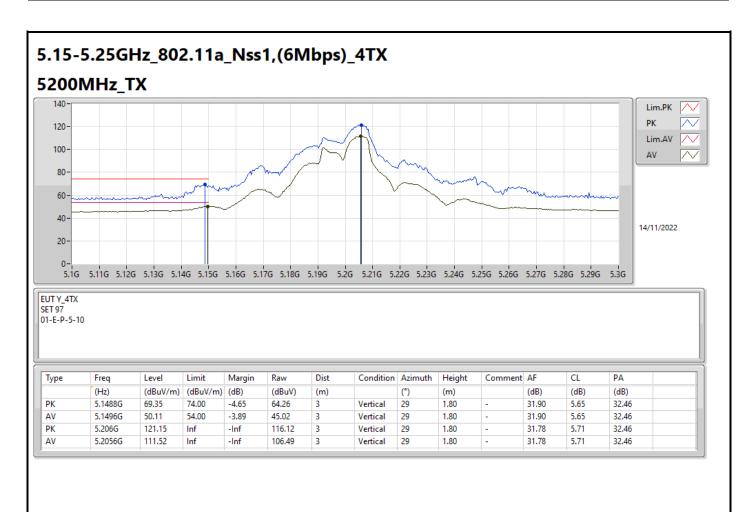
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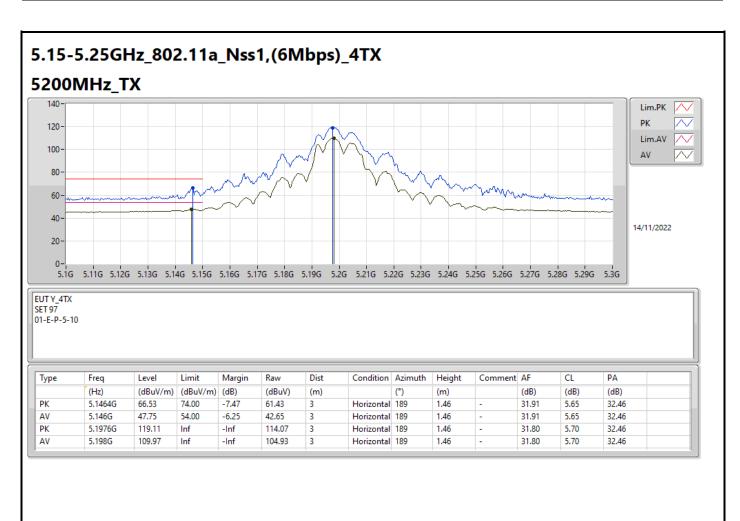
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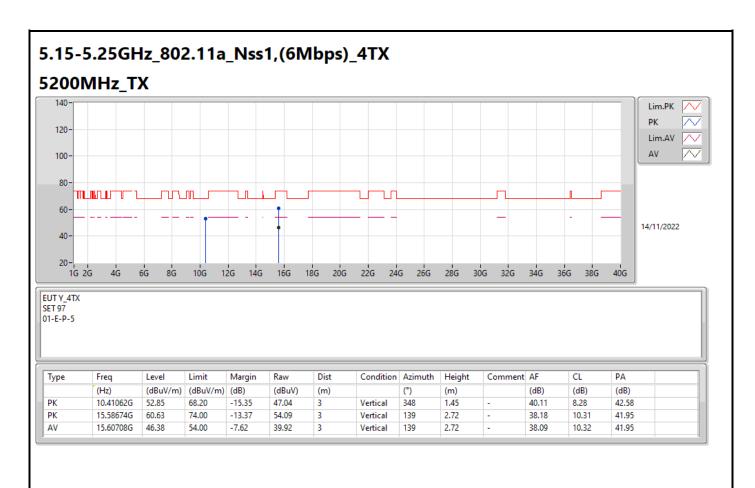
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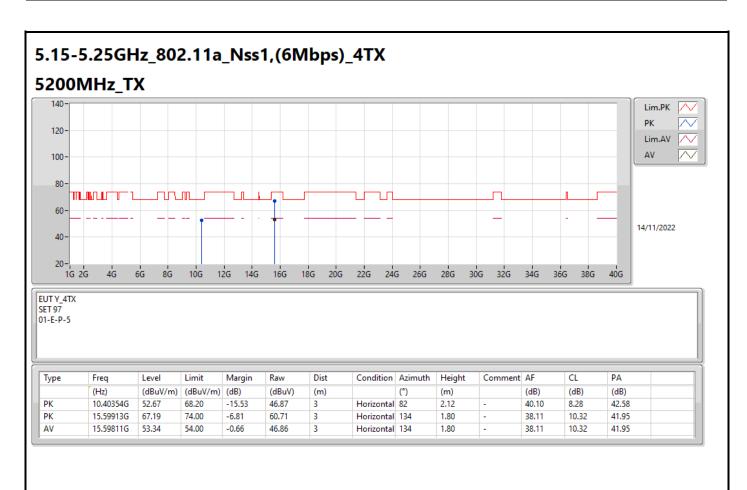
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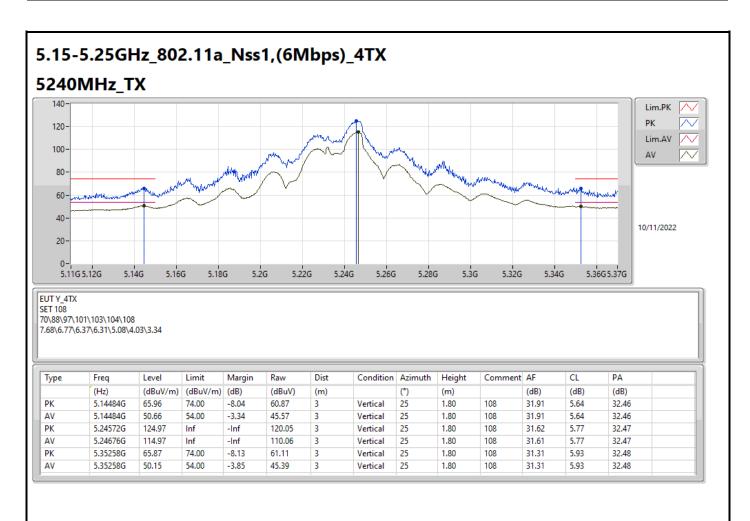
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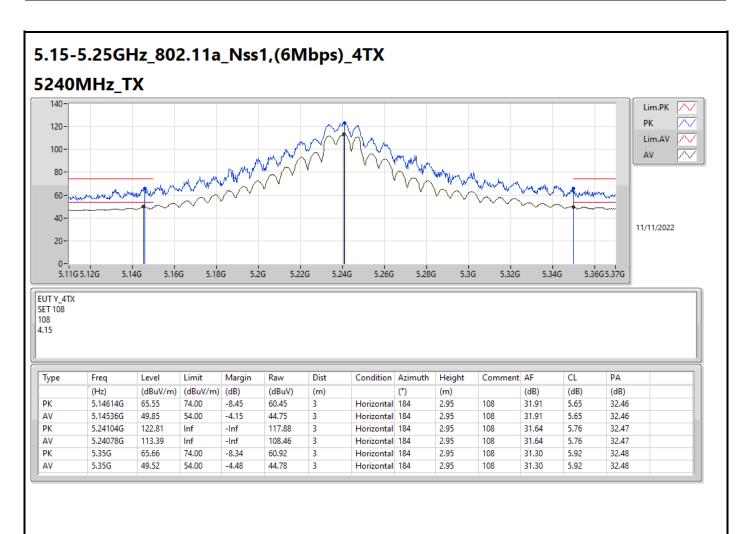
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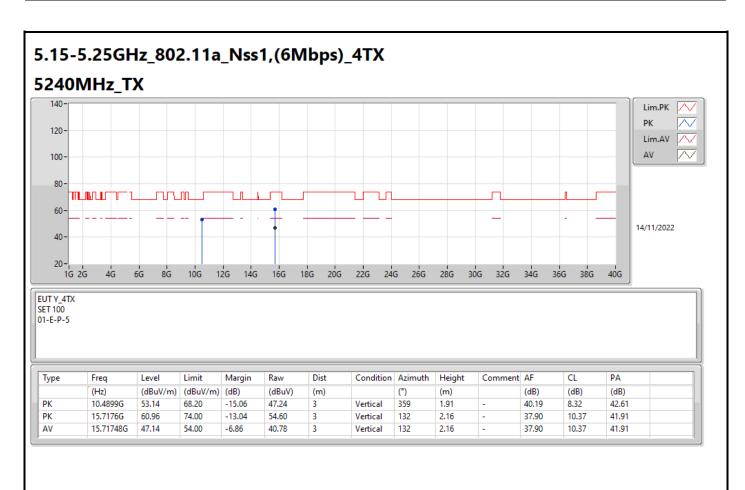
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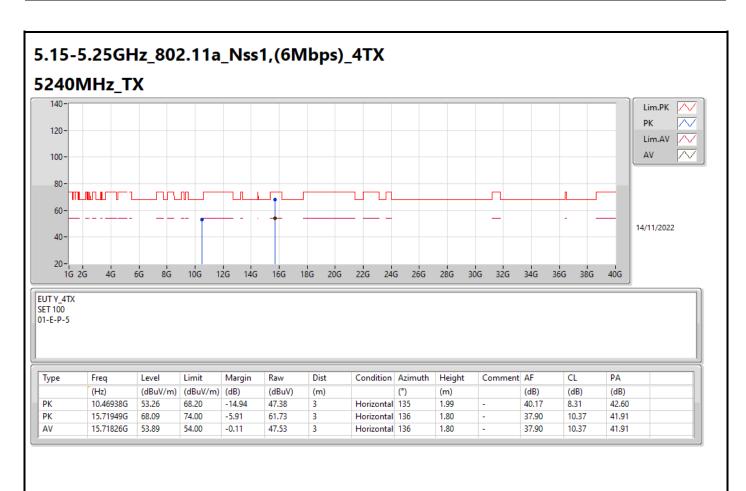
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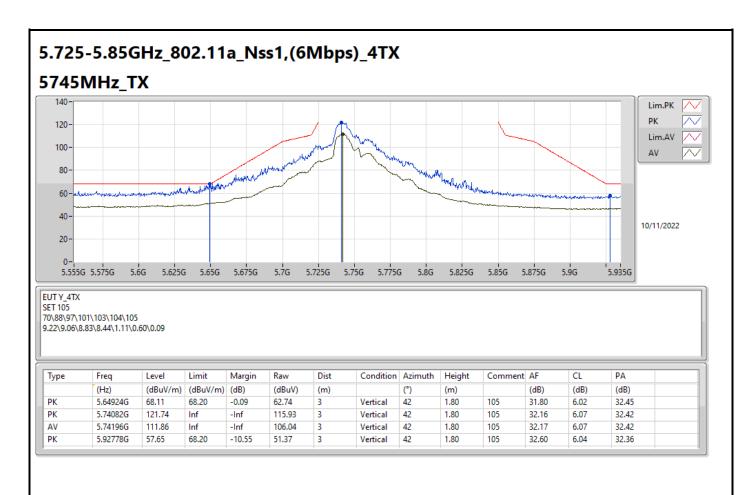
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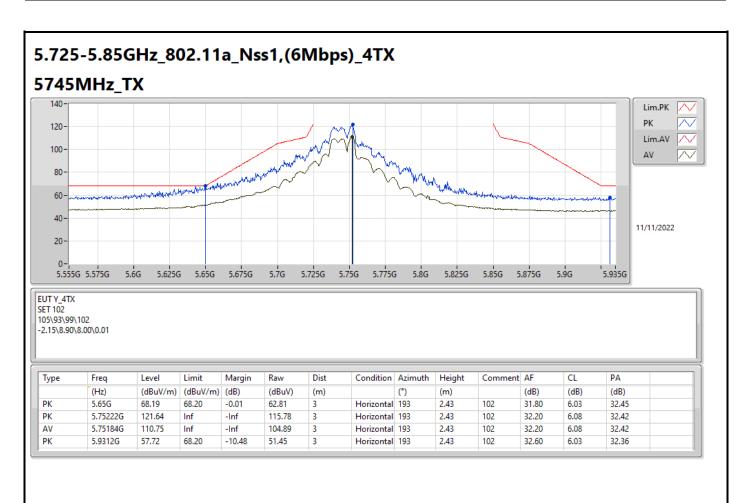




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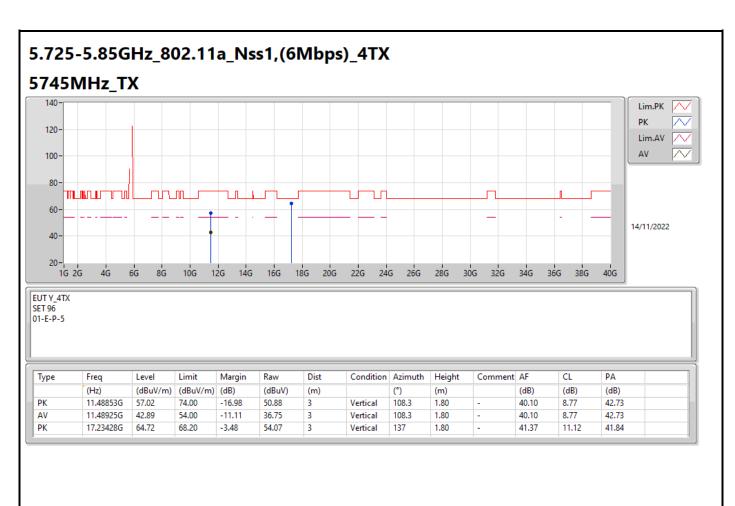
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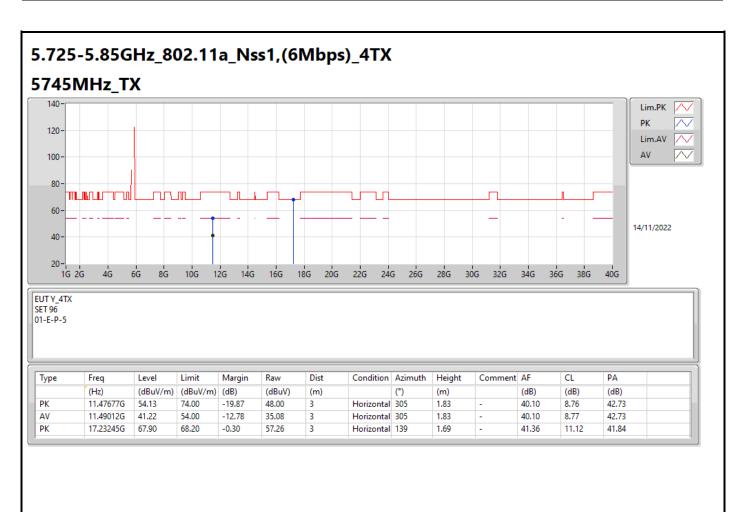
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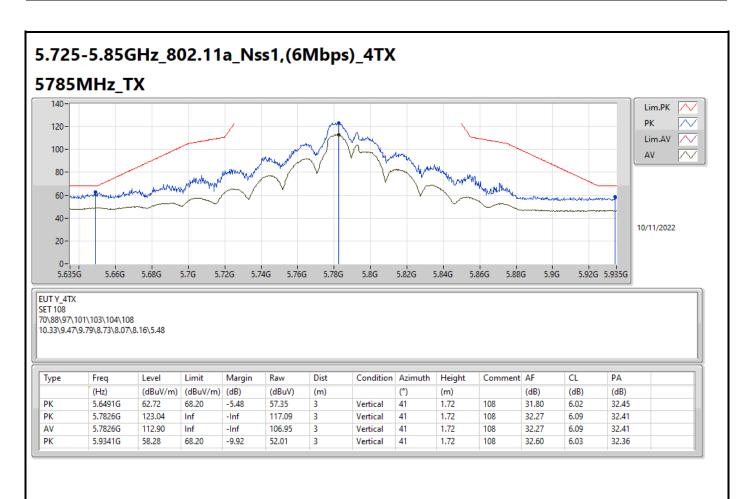
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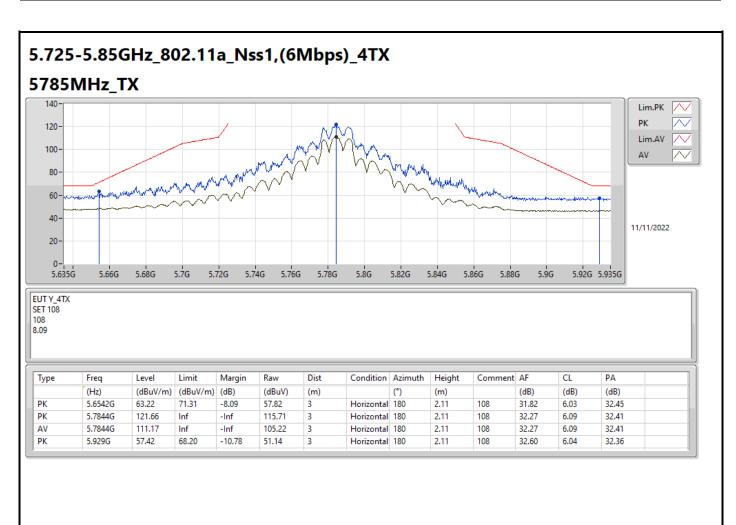
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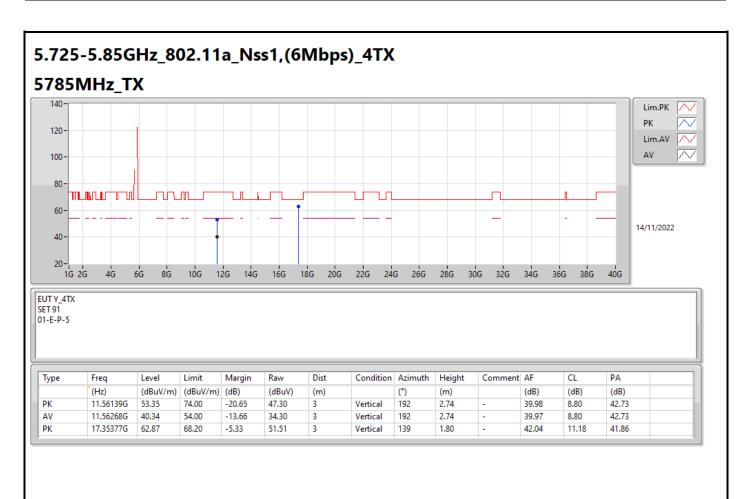
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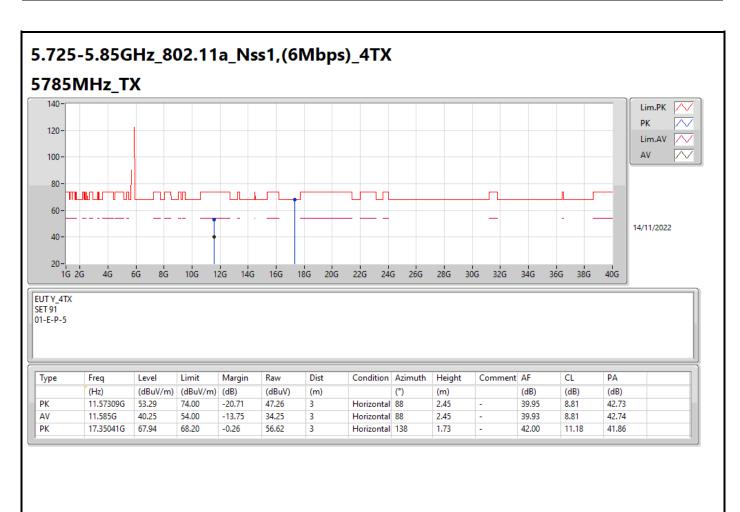




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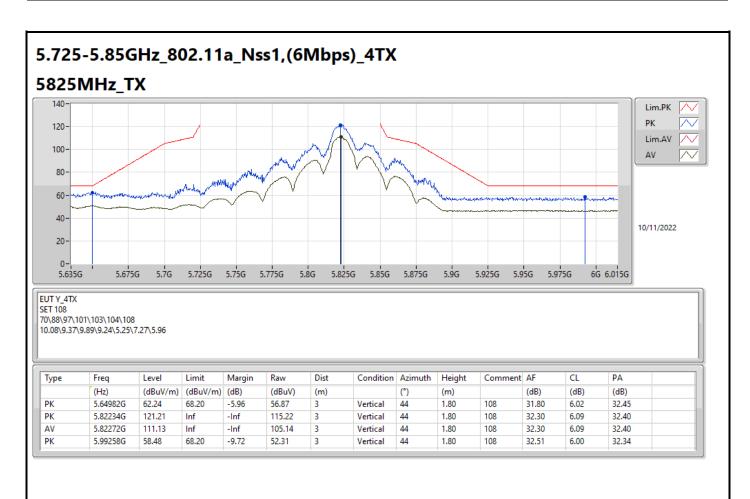




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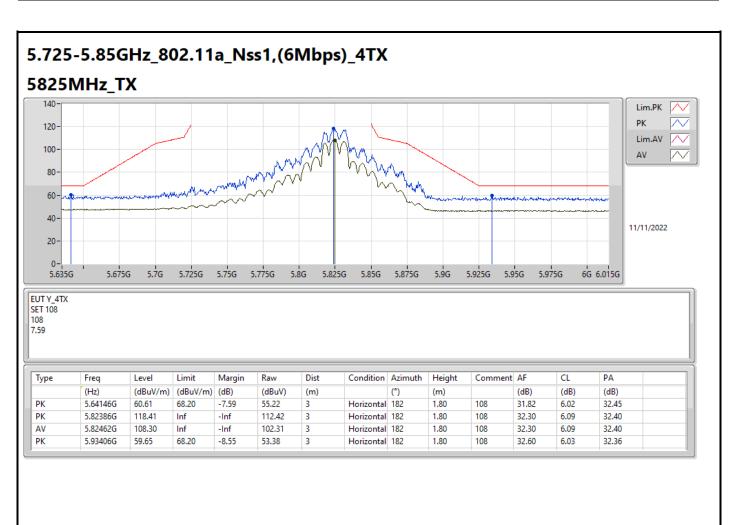
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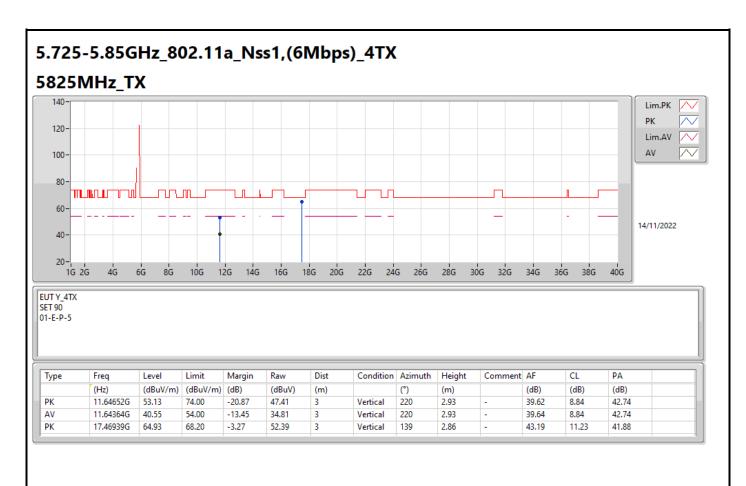




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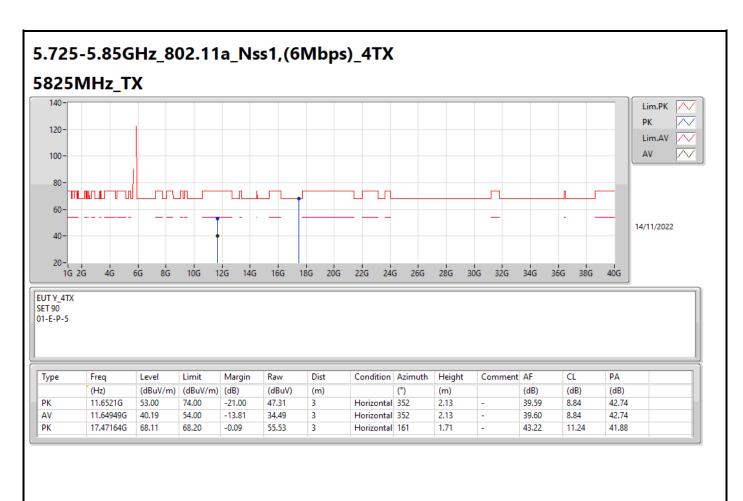




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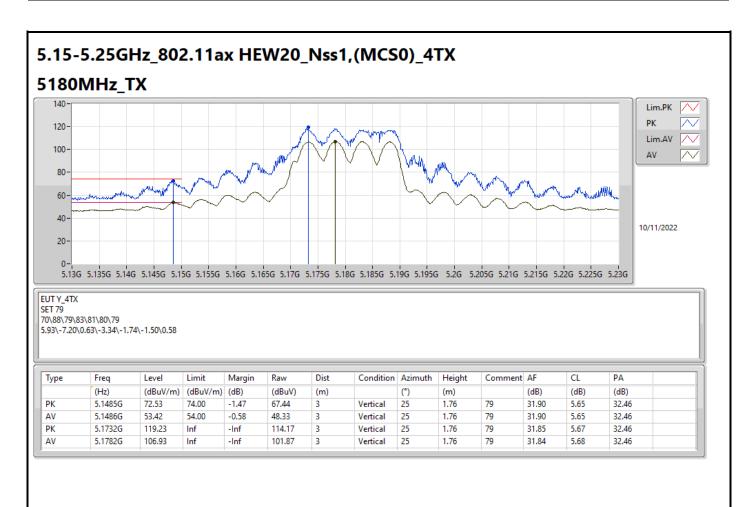




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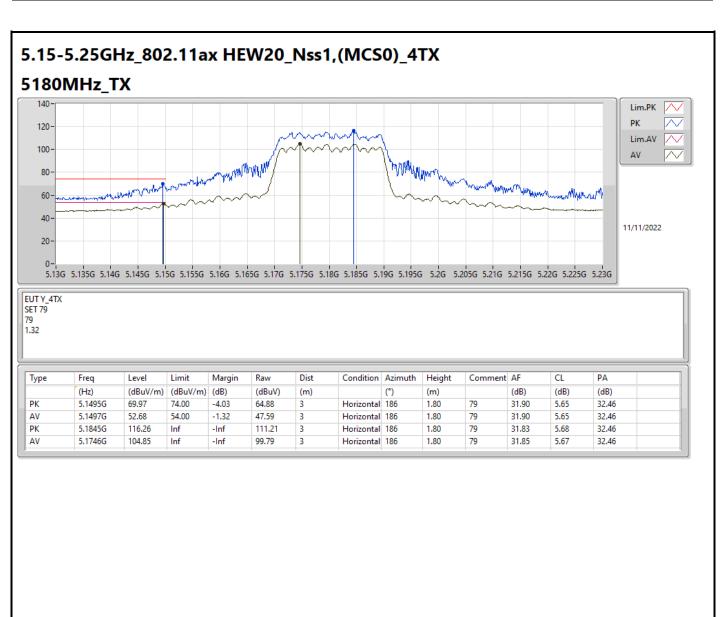




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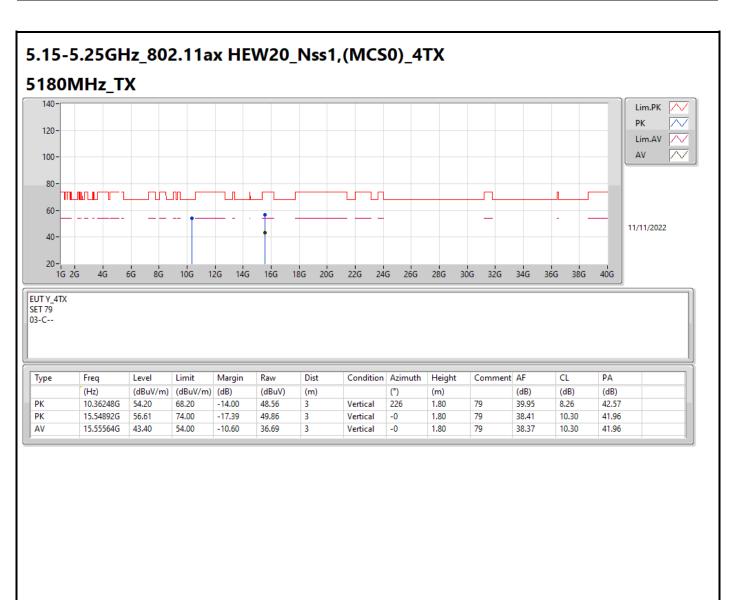
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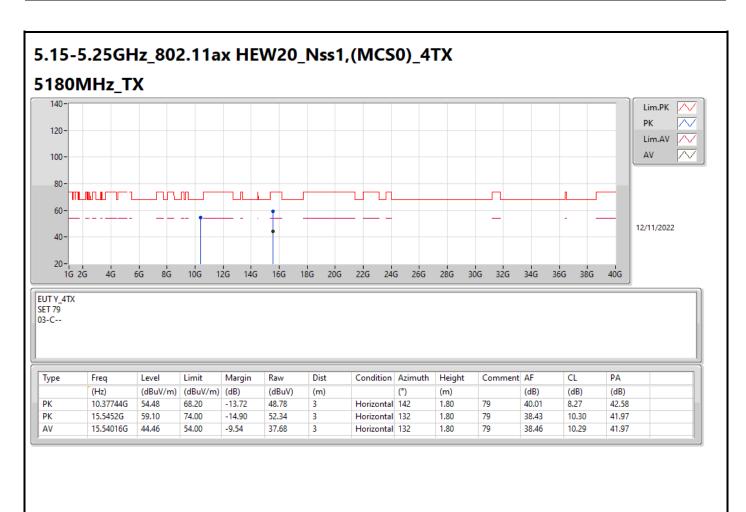
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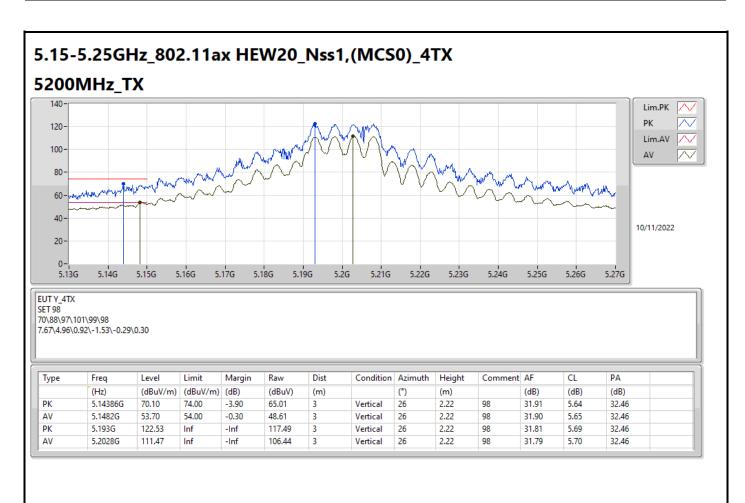
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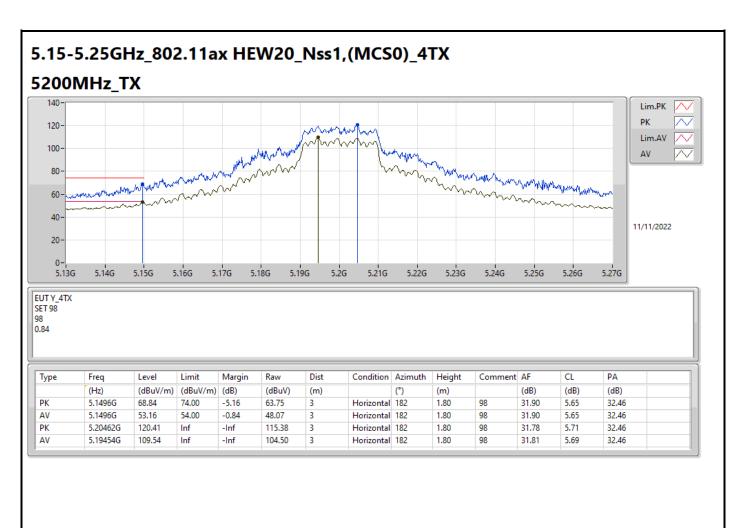




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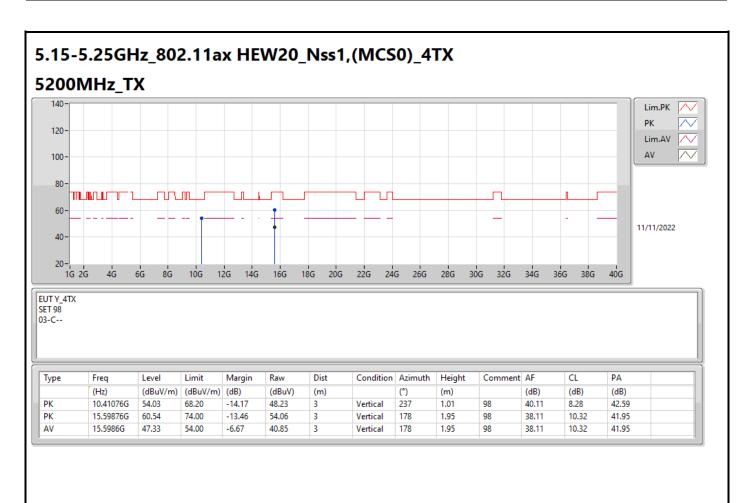
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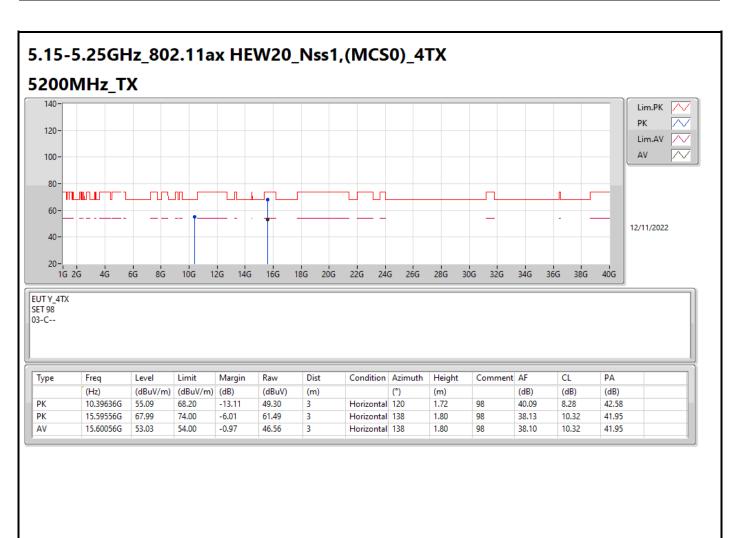




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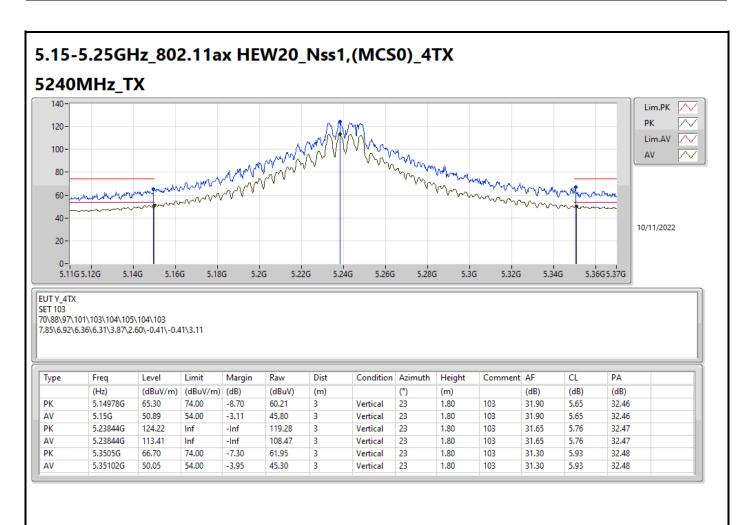
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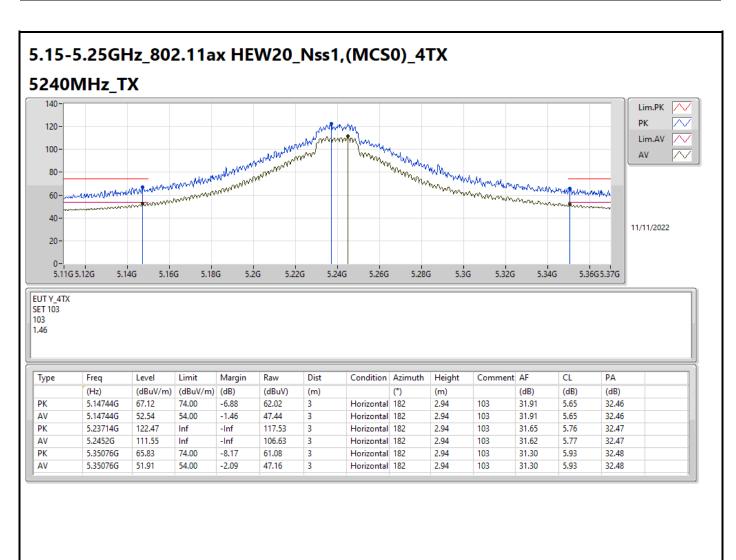




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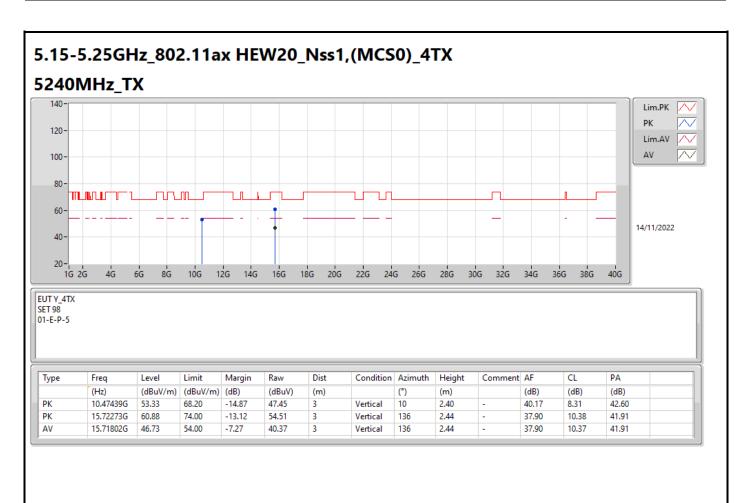
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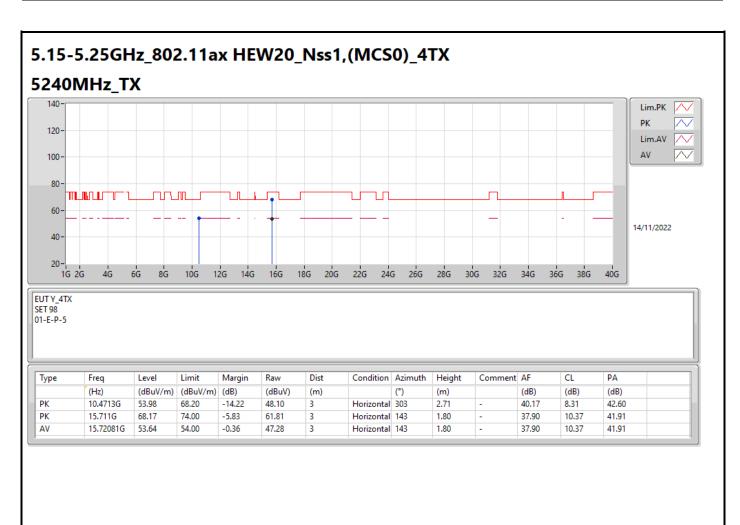




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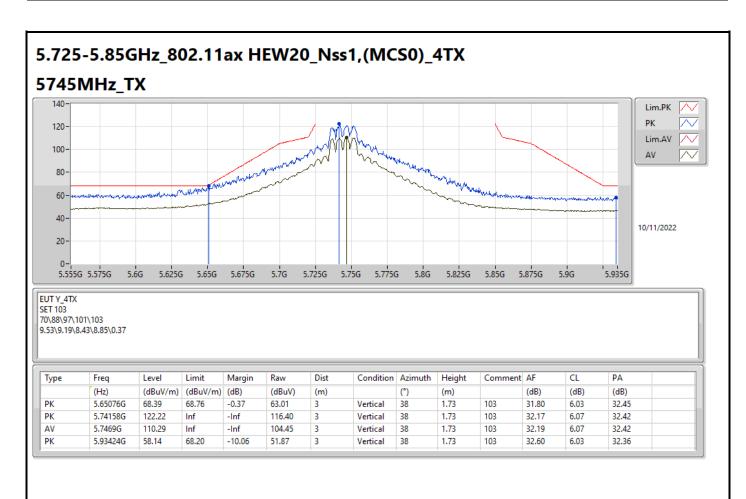
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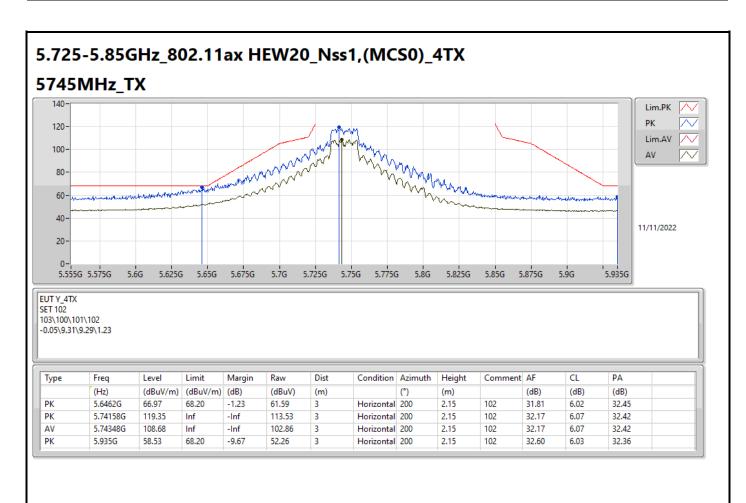
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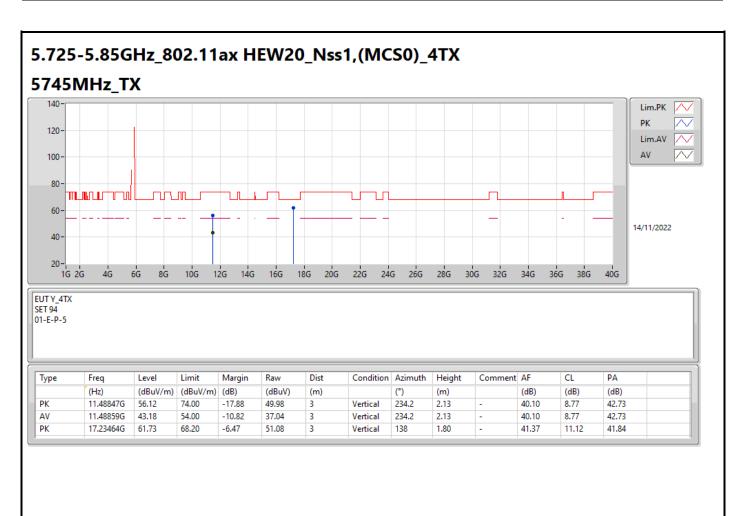
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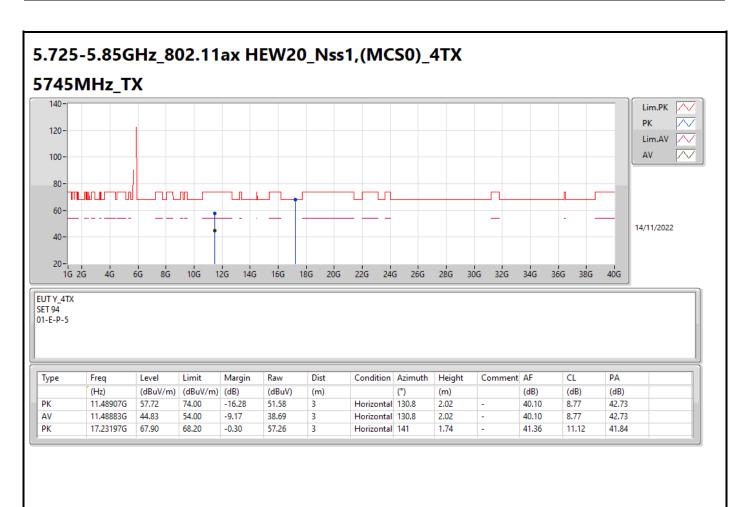
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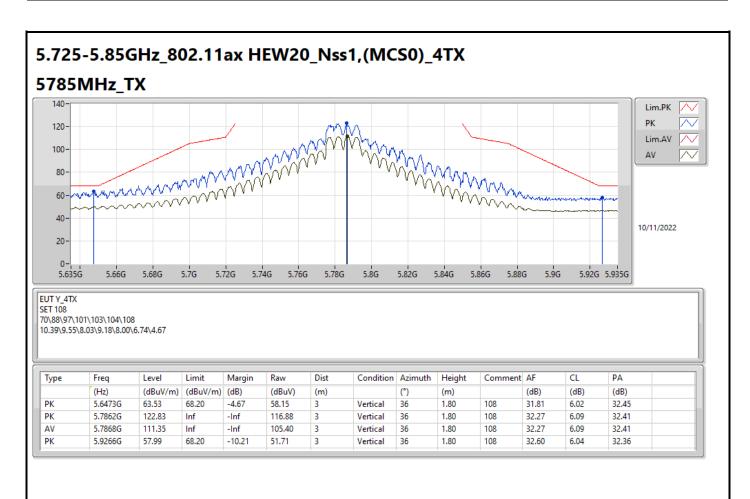




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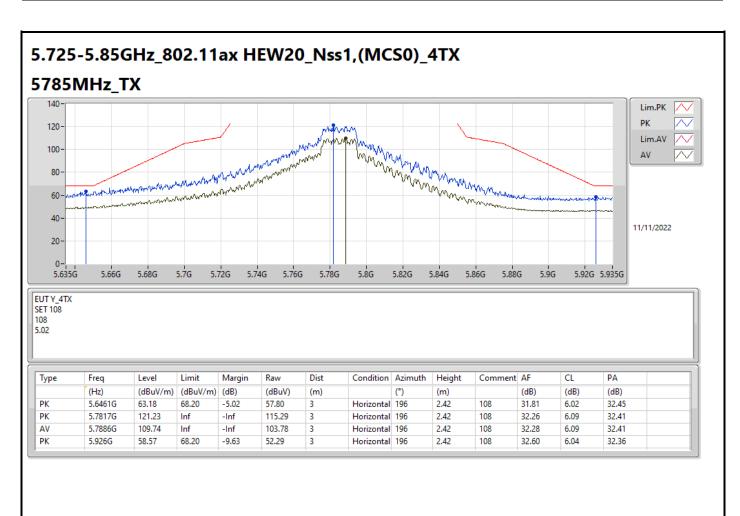
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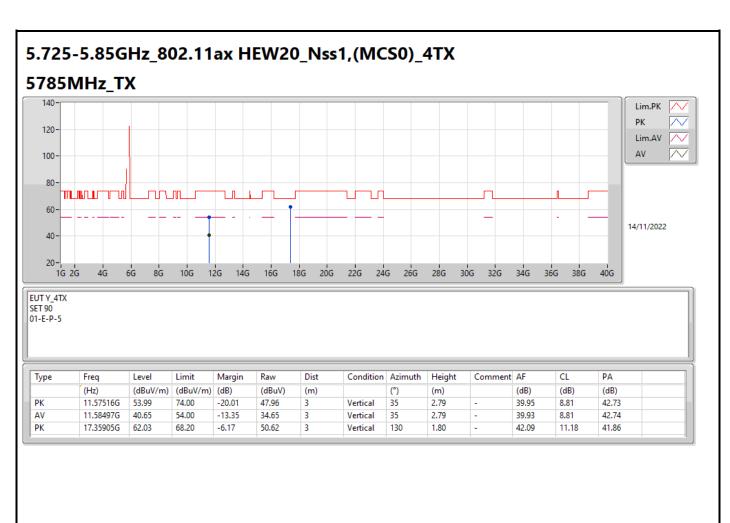
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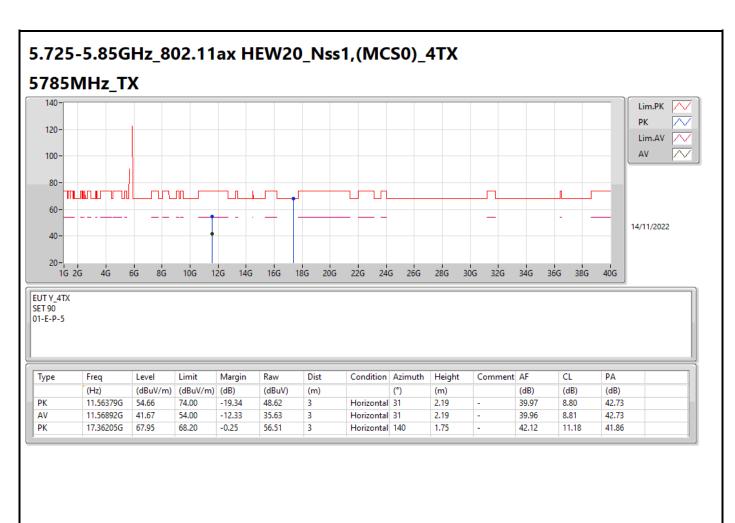




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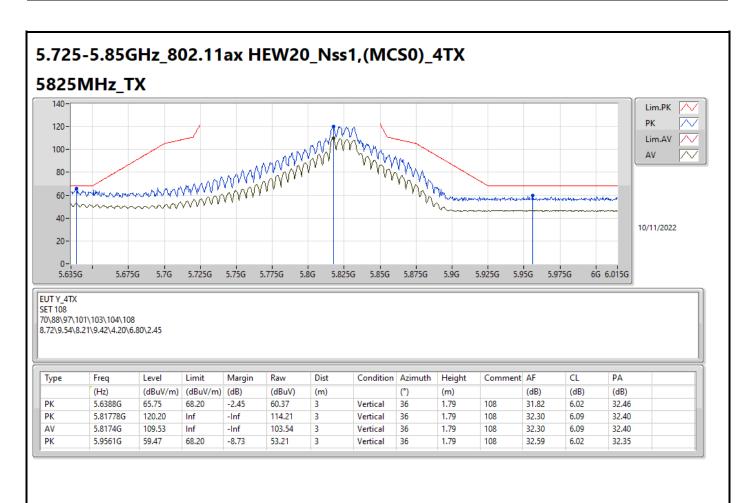
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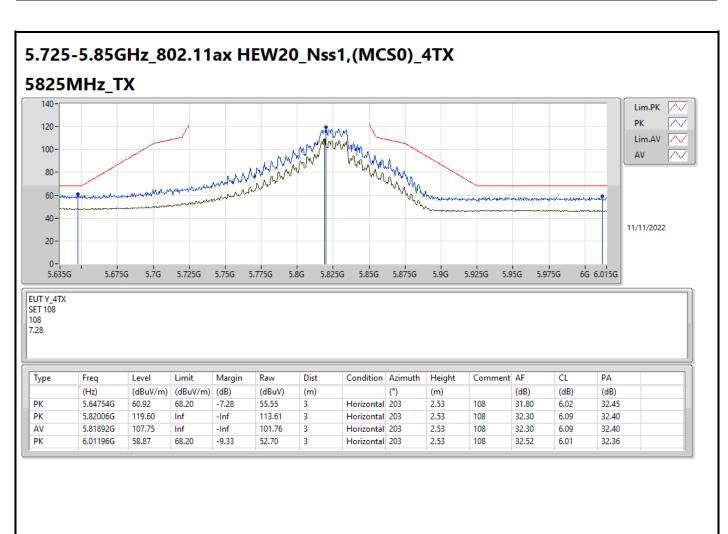
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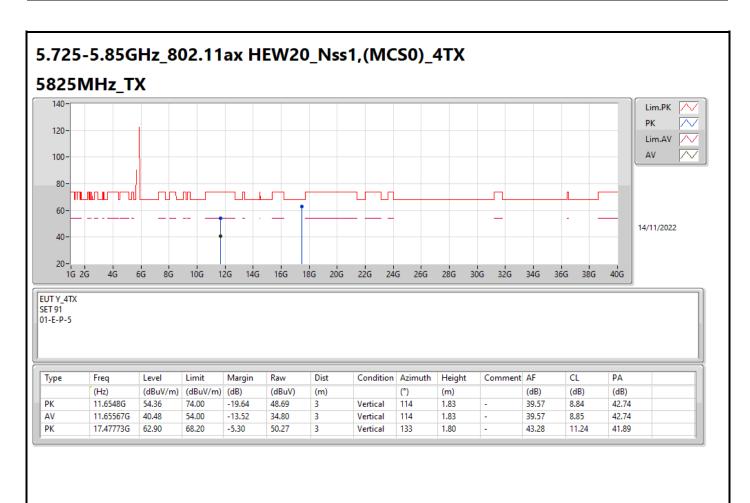
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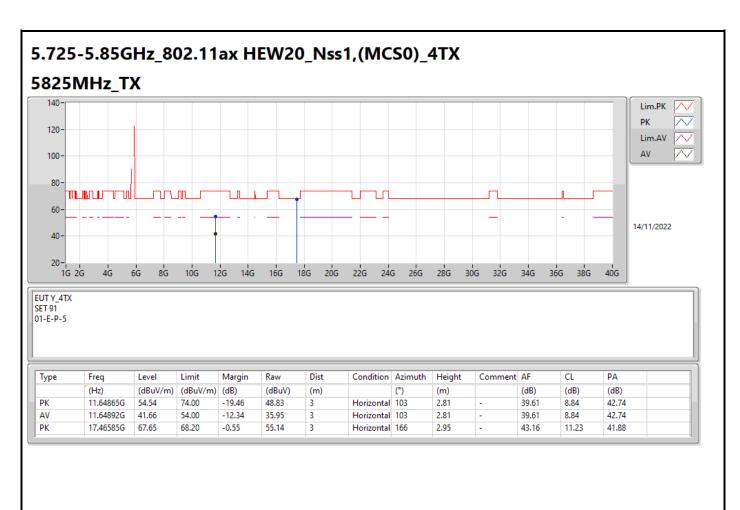




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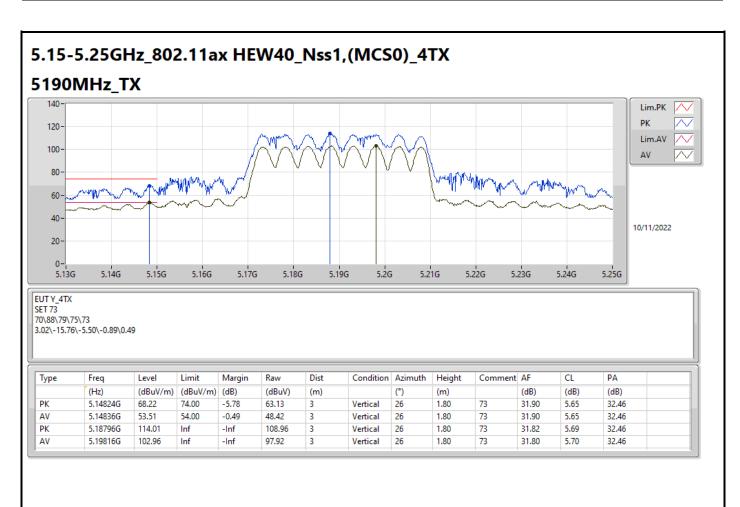
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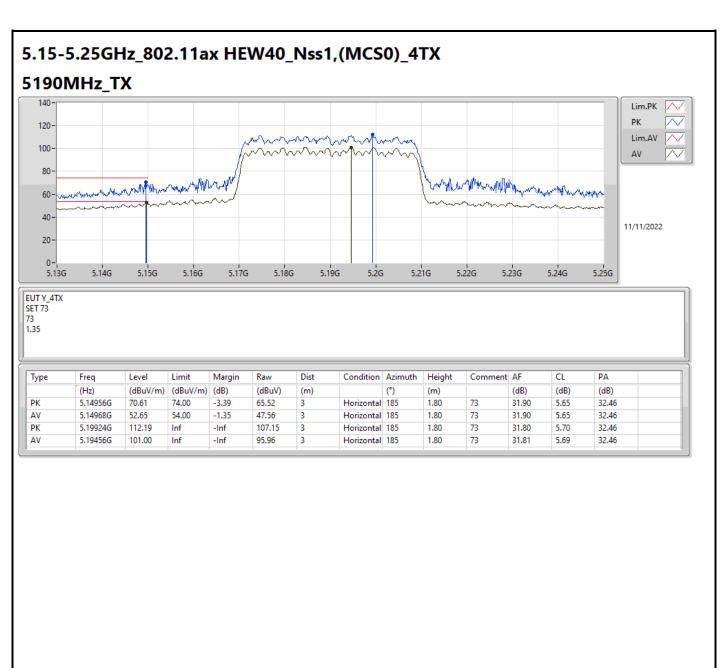




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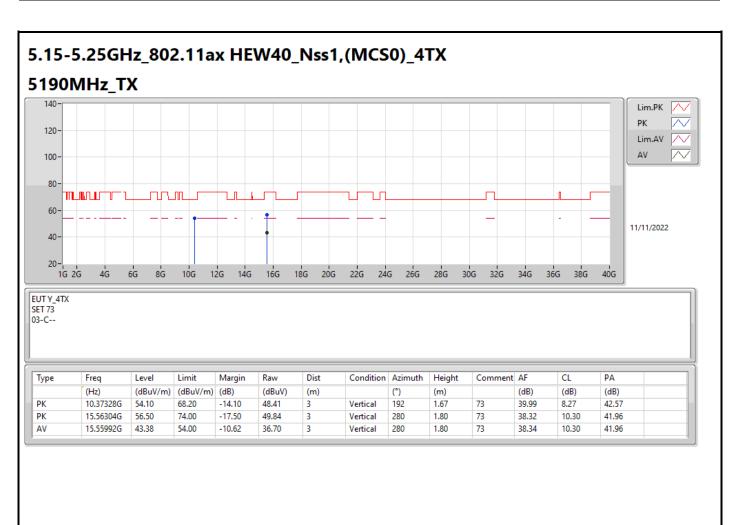
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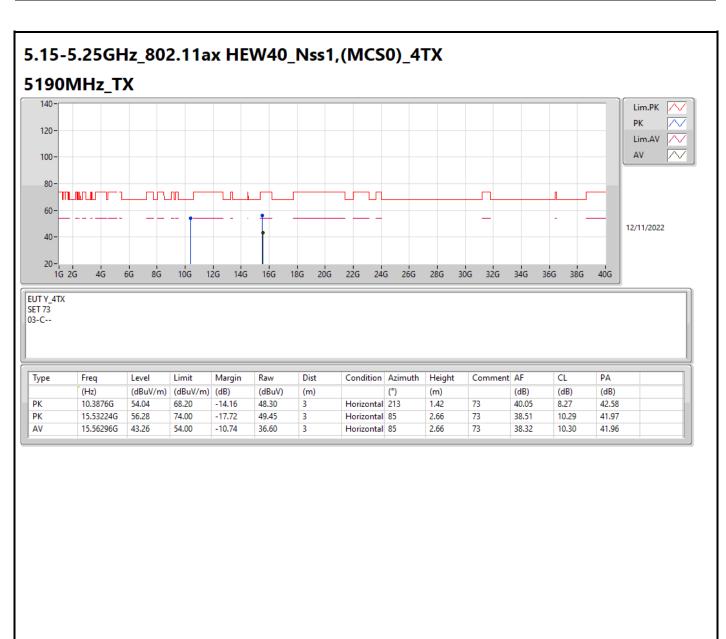
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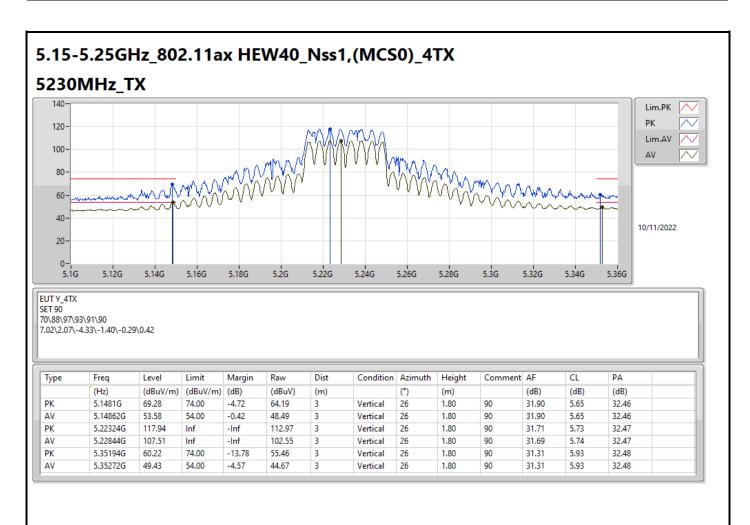
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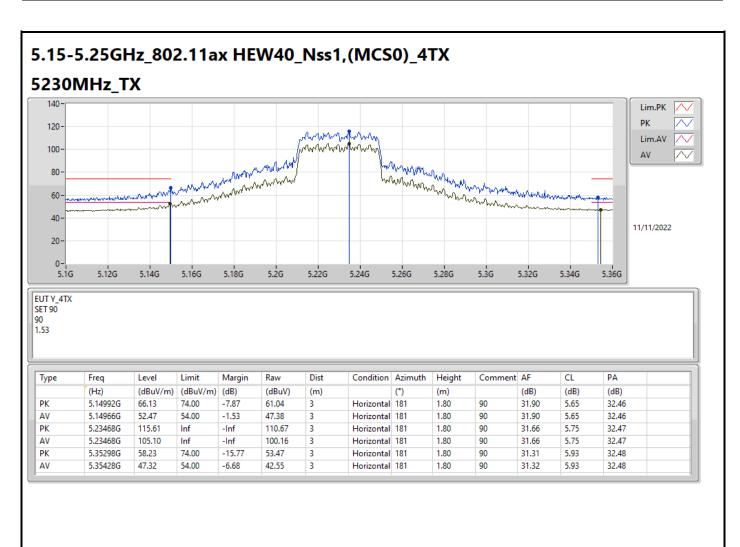




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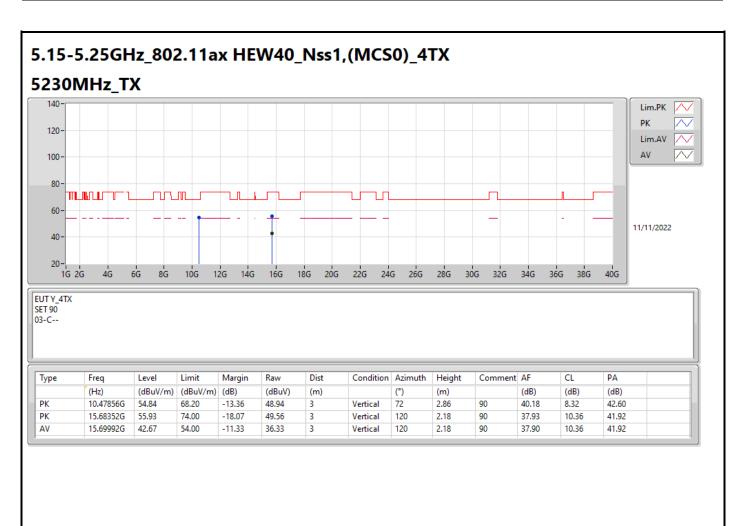
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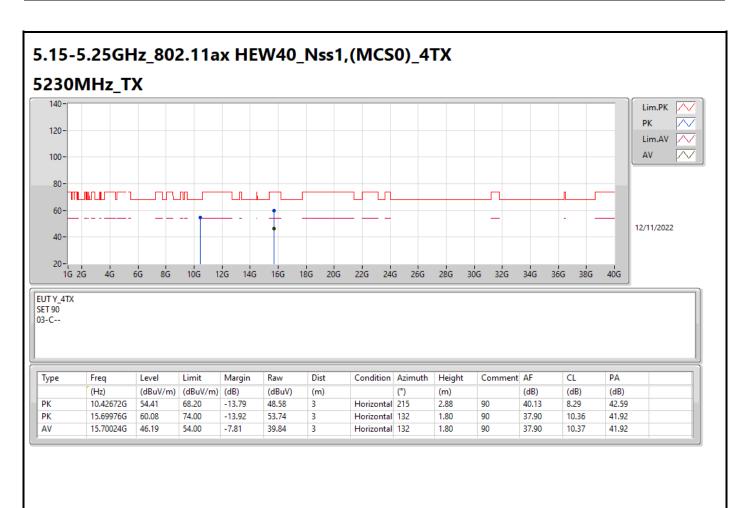




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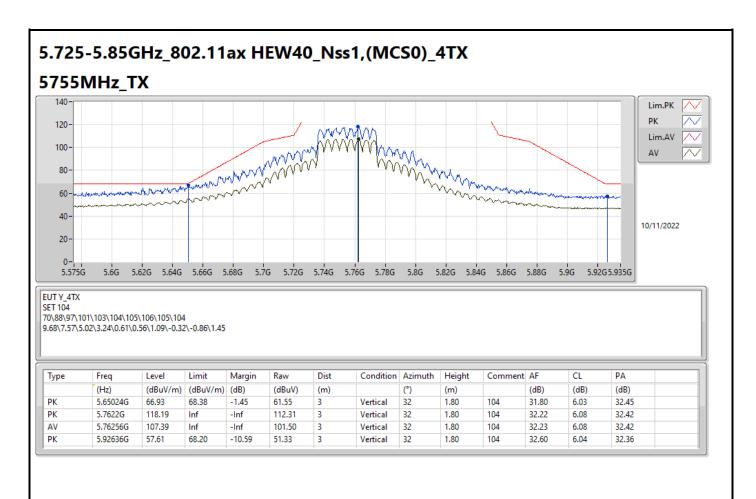
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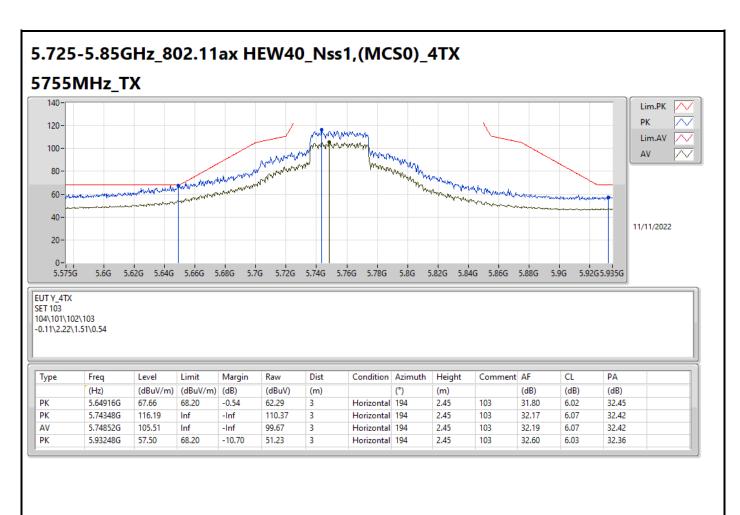
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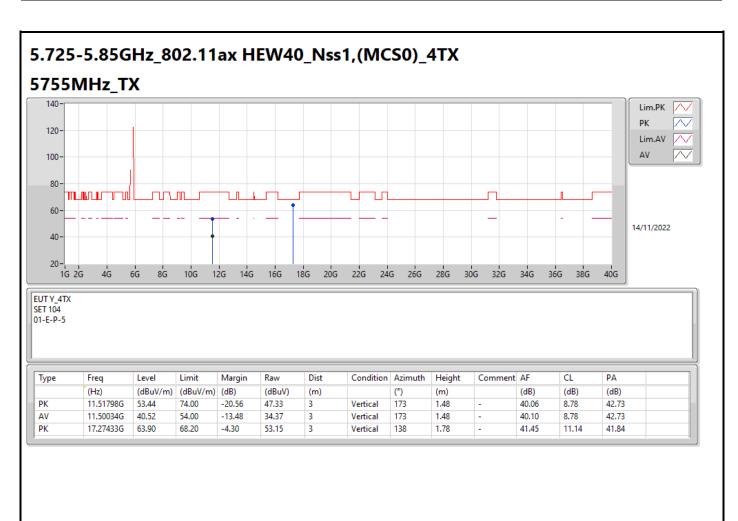
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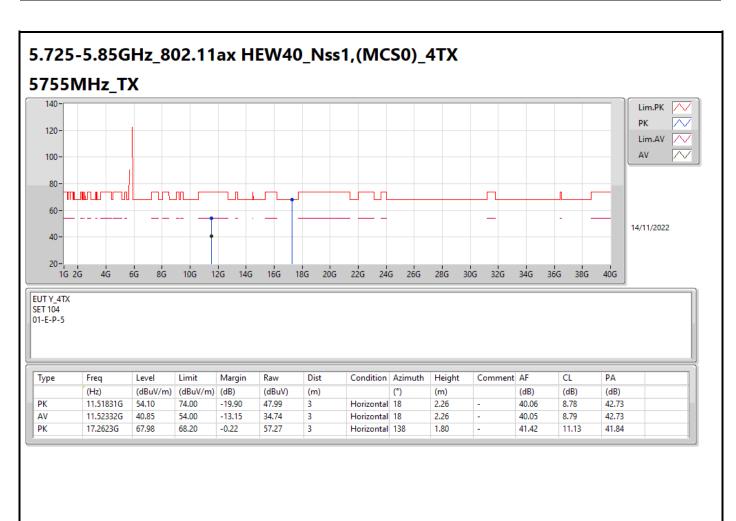




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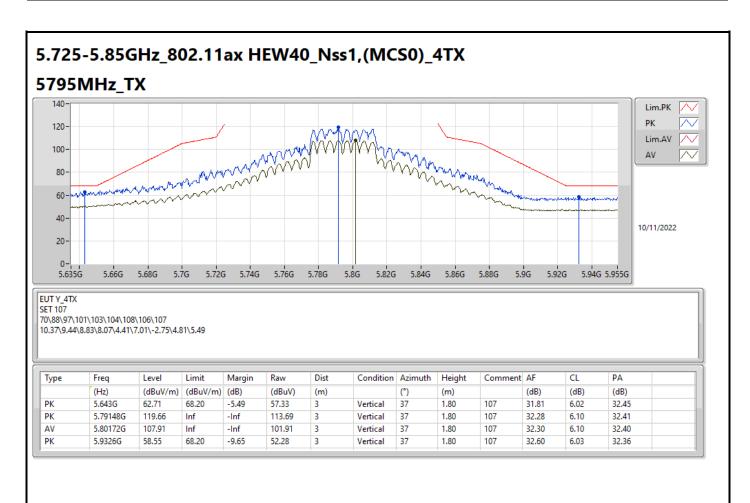
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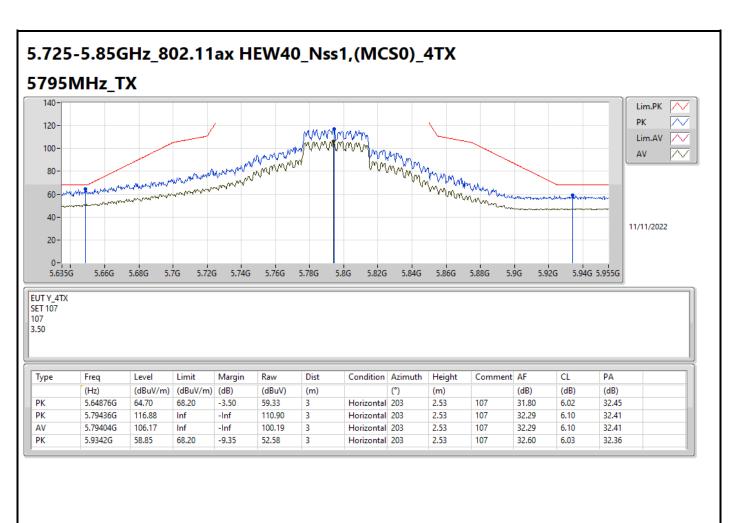
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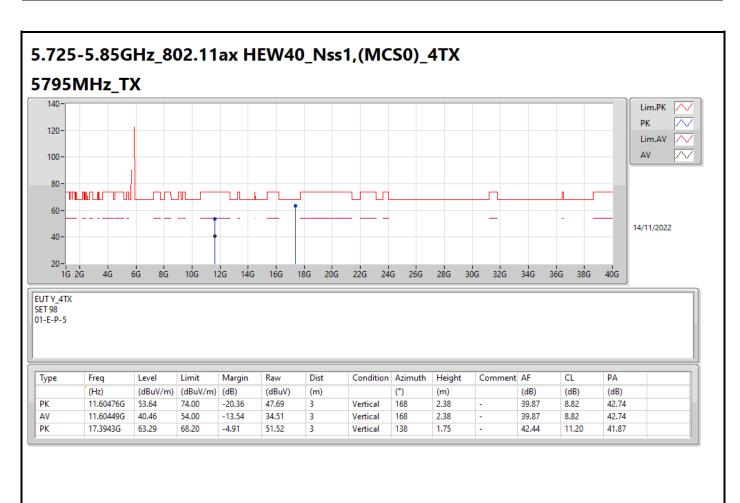
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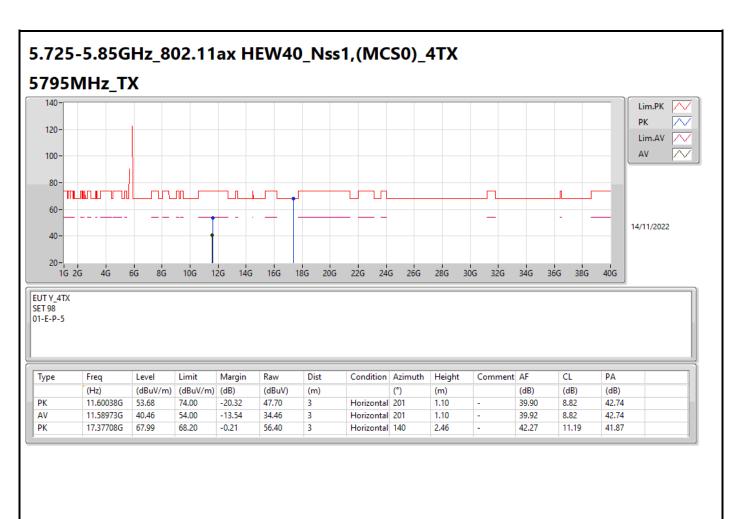




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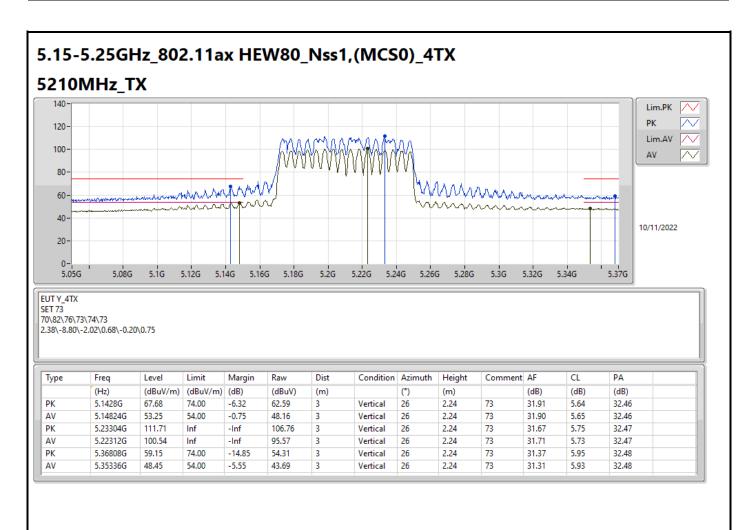




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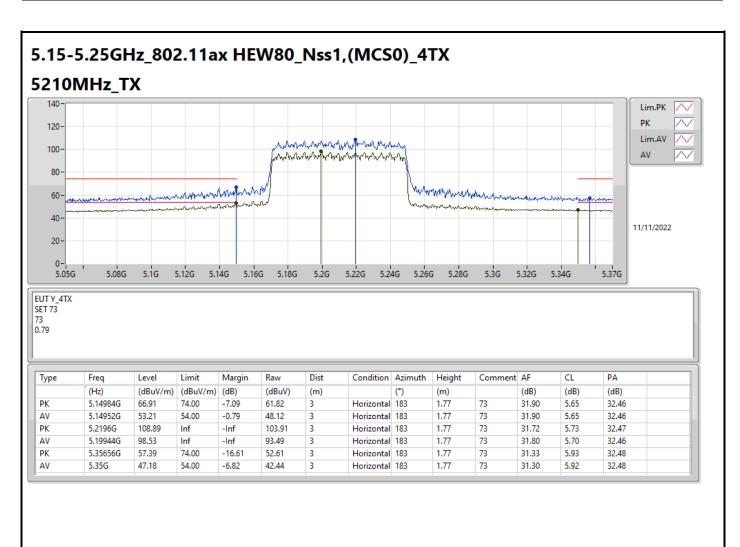




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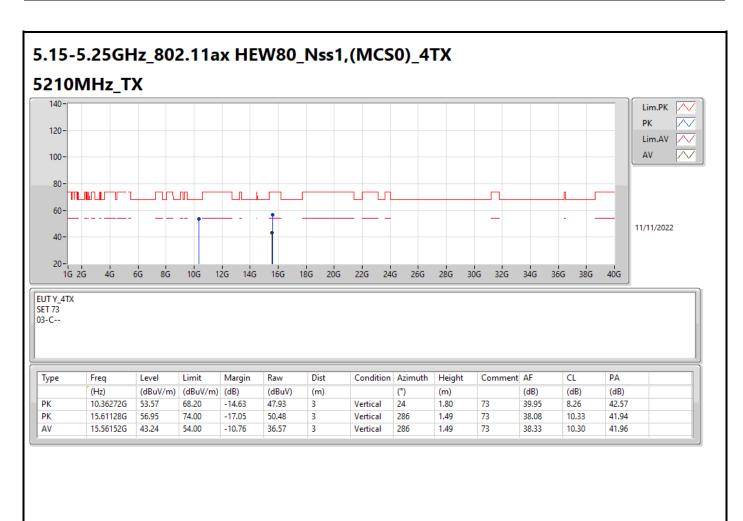
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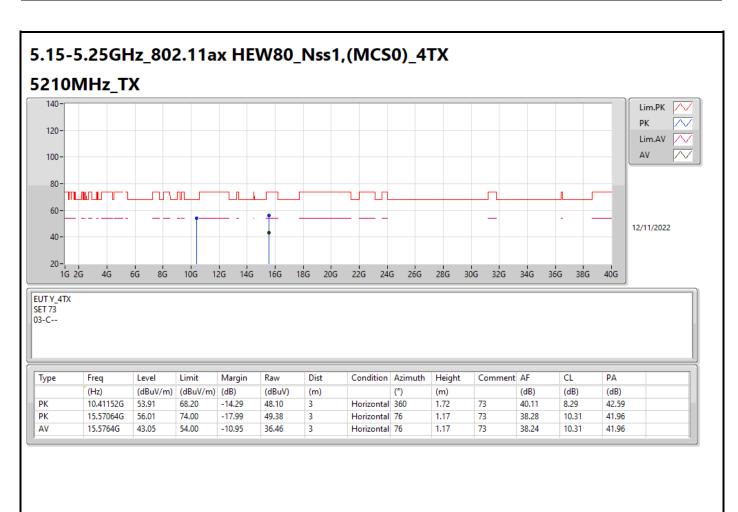
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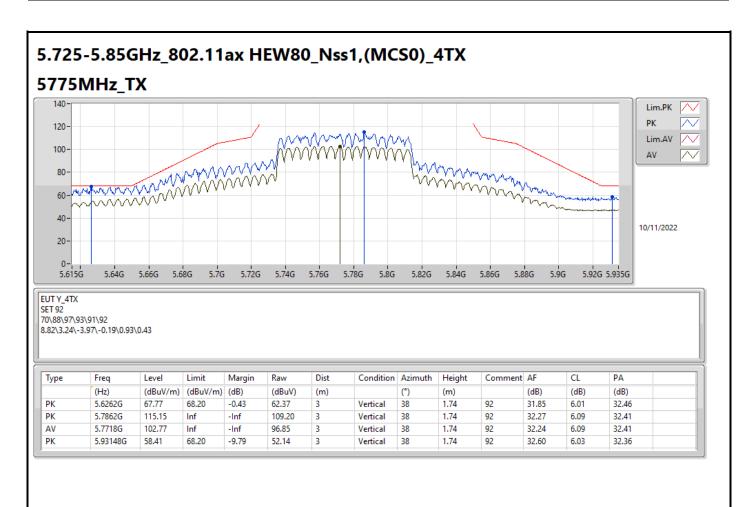
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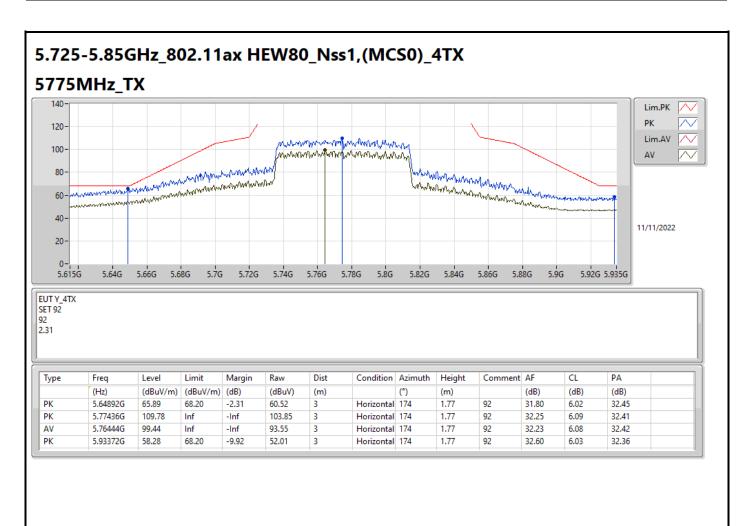




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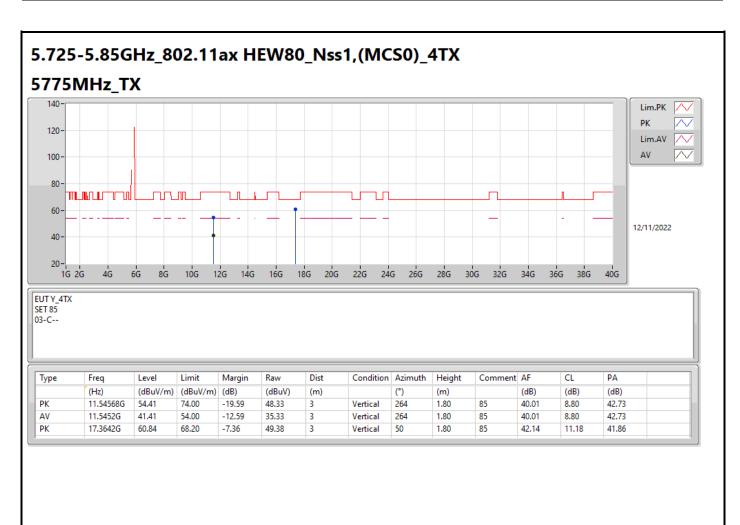




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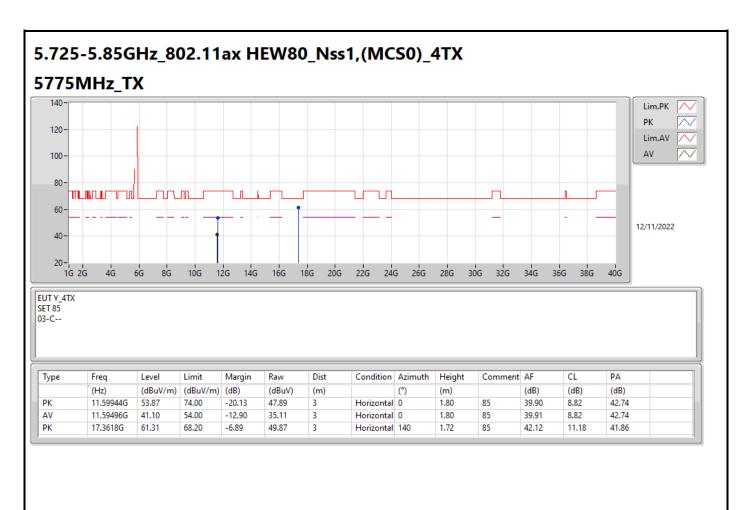




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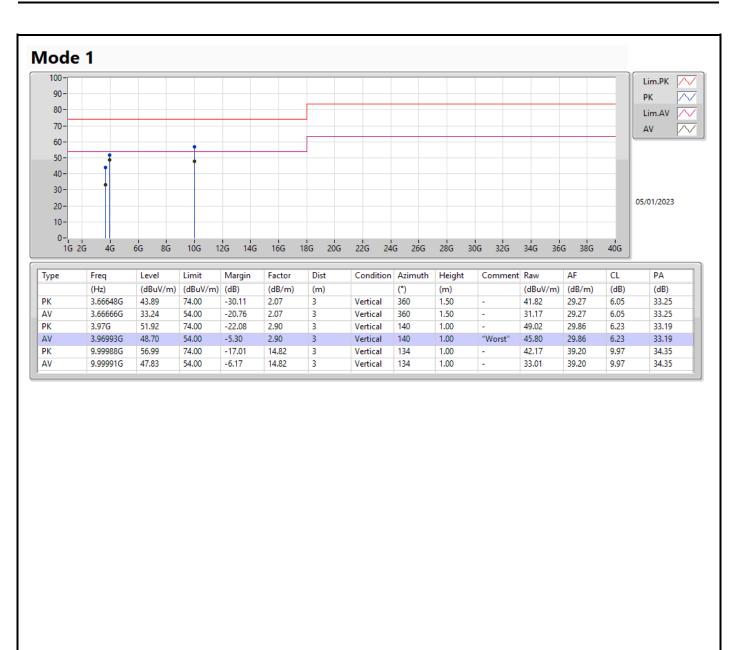
Radiated Emissions above 1GHz_Co-location

Appendix F

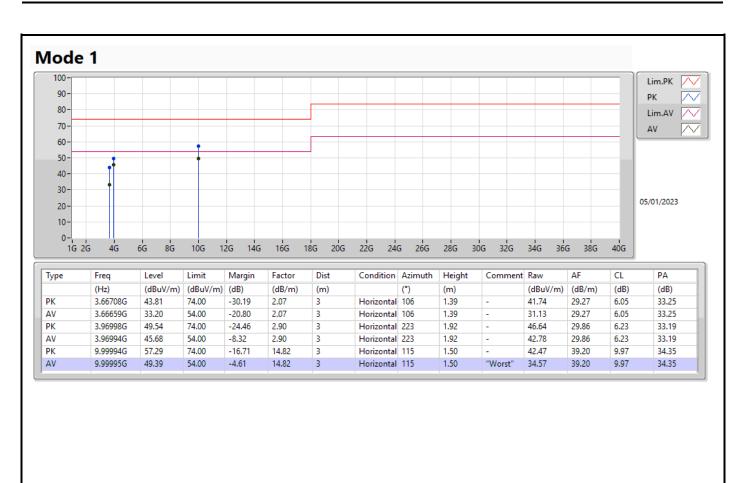
Summary

| Mode | Result | Туре | Freq (Hz) | Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Condition |
|--------|--------|------|--------------|-------------------|-------------------|----------------|------------|
| Mode 1 | Pass | AV | 9.99995G | 49.39 | 54.00 | -4.61 | Horizontal |

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