

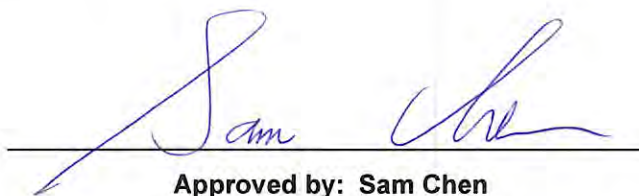


RADIO TEST REPORT

FCC ID : MSQ-RTBE6G00
Equipment : BE19000 Tri-band WiFi Router
Brand Name : ASUS
Model Name : RT-BE96U
Applicant : ASUSTeK COMPUTER INC.
1F., No. 15, Lide Rd., Beitou, Taipei City 112, Taiwan
Standard : 47 CFR FCC Part 15.407

The product was received on Dec. 26, 2022, and testing was started from Jan. 18, 2023 and completed on May 31, 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 variant report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. Hsinchu Laboratory, the test report shall not be reproduced except in full.



Approved by: Sam Chen

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



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History of this test report

| Report No. | Version | Description | Issued Date |
|-------------------|----------------|-------------------------|--------------------|
| FR262427-05AB | 01 | Initial issue of report | Sep. 07, 2023 |
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Summary of Test Result

| Report Clause | Ref Std. Clause | Test Items | Result (PASS/FAIL) | Remark |
|---------------|-----------------|------------------------|--------------------|--------|
| 1.1.2 | 15.203 | Antenna Requirement | PASS | - |
| 3.1 | 15.407(a) | Emission Bandwidth | PASS | - |
| 3.2 | 15.407(a) | Maximum Output Power | PASS | - |
| 3.3 | 15.407(a) | Power Spectral Density | PASS | - |
| 3.4 | 15.407(b) | Unwanted Emissions | PASS | - |

Note: Reference to Sporton Project No.: 262427-02.

Conformity Assessment Condition:

1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacturer who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
2. The measurement uncertainty please refer to each test result in the chapter "Measurement Uncertainty".

Disclaimer:

The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.

Reviewed by: Sam Chen
Report Producer: Sandy Chuang



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), ax (HEW20), be (EHT20) | 5180-5240 | 36-48 [4] |
| 5250-5350 | | 5260-5320 | 52-64 [4] |
| 5470-5725 | | 5500-5720 | 100-144 [12] |
| 5725-5850 | | 5745-5825 | 149-165 [5] |
| 5150-5250 | n (HT40), ac (VHT40), ax (HEW40), be (EHT40) | 5190-5230 | 38-46 [2] |
| 5250-5350 | | 5270-5310 | 54-62 [2] |
| 5470-5725 | | 5510-5710 | 102-142 [6] |
| 5725-5850 | | 5755-5795 | 151-159 [2] |
| 5150-5250 | ac (VHT80), ax (HEW80), be (EHT80) | 5210 | 42 [1] |
| 5250-5350 | | 5290 | 58 [1] |
| 5470-5725 | | 5530-5690 | 106-138 [3] |
| 5725-5850 | | 5775 | 155 [1] |
| 5150-5350 | ac (VHT160), ax (HEW160), be (EHT160) | 5250 | 50 [1] |
| 5470-5725 | | 5570 | 114 [1] |

| 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 | 802.11be EHT20 | 20 | 4TX |
| 5.15-5.25GHz | 802.11be EHT20-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 | 802.11be EHT40 | 40 | 4TX |



| Band | Mode | BWch (MHz) | Nant |
|---------------|--------------------|-------------------|-------------|
| 5.15-5.25GHz | 802.11be EHT40-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 |
| 5.15-5.25GHz | 802.11be EHT80 | 80 | 4TX |
| 5.15-5.25GHz | 802.11be EHT80-BF | 80 | 4TX |
| 5.15-5.35GHz | 802.11ac VHT160 | 160 | 4TX |
| 5.15-5.35GHz | 802.11ac VHT160-BF | 160 | 4TX |
| 5.15-5.35GHz | 802.11ax HEW160 | 160 | 4TX |
| 5.15-5.35GHz | 802.11ax HEW160-BF | 160 | 4TX |
| 5.15-5.35GHz | 802.11be EHT160 | 160 | 4TX |
| 5.15-5.35GHz | 802.11be EHT160-BF | 160 | 4TX |
| 5.25-5.35GHz | 802.11a | 20 | 4TX |
| 5.25-5.35GHz | 802.11n HT20 | 20 | 4TX |
| 5.25-5.35GHz | 802.11n HT20-BF | 20 | 4TX |
| 5.25-5.35GHz | 802.11ac VHT20 | 20 | 4TX |
| 5.25-5.35GHz | 802.11ac VHT20-BF | 20 | 4TX |
| 5.25-5.35GHz | 802.11ax HEW20 | 20 | 4TX |
| 5.25-5.35GHz | 802.11ax HEW20-BF | 20 | 4TX |
| 5.25-5.35GHz | 802.11be EHT20 | 20 | 4TX |
| 5.25-5.35GHz | 802.11be EHT20-BF | 20 | 4TX |
| 5.25-5.35GHz | 802.11n HT40 | 40 | 4TX |
| 5.25-5.35GHz | 802.11n HT40-BF | 40 | 4TX |
| 5.25-5.35GHz | 802.11ac VHT40 | 40 | 4TX |
| 5.25-5.35GHz | 802.11ac VHT40-BF | 40 | 4TX |
| 5.25-5.35GHz | 802.11ax HEW40 | 40 | 4TX |
| 5.25-5.35GHz | 802.11ax HEW40-BF | 40 | 4TX |
| 5.25-5.35GHz | 802.11be EHT40 | 40 | 4TX |
| 5.25-5.35GHz | 802.11be EHT40-BF | 40 | 4TX |
| 5.25-5.35GHz | 802.11ac VHT80 | 80 | 4TX |
| 5.25-5.35GHz | 802.11ac VHT80-BF | 80 | 4TX |
| 5.25-5.35GHz | 802.11ax HEW80 | 80 | 4TX |
| 5.25-5.35GHz | 802.11ax HEW80-BF | 80 | 4TX |
| 5.25-5.35GHz | 802.11be EHT80 | 80 | 4TX |
| 5.25-5.35GHz | 802.11be EHT80-BF | 80 | 4TX |
| 5.47-5.725GHz | 802.11a | 20 | 4TX |
| 5.47-5.725GHz | 802.11n HT20 | 20 | 4TX |
| 5.47-5.725GHz | 802.11n HT20-BF | 20 | 4TX |
| 5.47-5.725GHz | 802.11ac VHT20 | 20 | 4TX |



| Band | Mode | BWch (MHz) | Nant |
|---------------|--------------------|-------------------|-------------|
| 5.47-5.725GHz | 802.11ac VHT20-BF | 20 | 4TX |
| 5.47-5.725GHz | 802.11ax HEW20 | 20 | 4TX |
| 5.47-5.725GHz | 802.11ax HEW20-BF | 20 | 4TX |
| 5.47-5.725GHz | 802.11be EHT20 | 20 | 4TX |
| 5.47-5.725GHz | 802.11be EHT20-BF | 20 | 4TX |
| 5.47-5.725GHz | 802.11n HT40 | 40 | 4TX |
| 5.47-5.725GHz | 802.11n HT40-BF | 40 | 4TX |
| 5.47-5.725GHz | 802.11ac VHT40 | 40 | 4TX |
| 5.47-5.725GHz | 802.11ac VHT40-BF | 40 | 4TX |
| 5.47-5.725GHz | 802.11ax HEW40 | 40 | 4TX |
| 5.47-5.725GHz | 802.11ax HEW40-BF | 40 | 4TX |
| 5.47-5.725GHz | 802.11be EHT40 | 40 | 4TX |
| 5.47-5.725GHz | 802.11be EHT40-BF | 40 | 4TX |
| 5.47-5.725GHz | 802.11ac VHT80 | 80 | 4TX |
| 5.47-5.725GHz | 802.11ac VHT80-BF | 80 | 4TX |
| 5.47-5.725GHz | 802.11ax HEW80 | 80 | 4TX |
| 5.47-5.725GHz | 802.11ax HEW80-BF | 80 | 4TX |
| 5.47-5.725GHz | 802.11be EHT80 | 80 | 4TX |
| 5.47-5.725GHz | 802.11be EHT80-BF | 80 | 4TX |
| 5.47-5.725GHz | 802.11ac VHT160 | 160 | 4TX |
| 5.47-5.725GHz | 802.11ac VHT160-BF | 160 | 4TX |
| 5.47-5.725GHz | 802.11ax HEW160 | 160 | 4TX |
| 5.47-5.725GHz | 802.11ax HEW160-BF | 160 | 4TX |
| 5.47-5.725GHz | 802.11be EHT160 | 160 | 4TX |
| 5.47-5.725GHz | 802.11be EHT160-BF | 160 | 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 | 802.11be EHT20 | 20 | 4TX |
| 5.725-5.85GHz | 802.11be EHT20-BF | 20 | 4TX |
| 5.725-5.85GHz | 802.11n HT40 | 40 | 4TX |
| 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 |



| Band | Mode | BWch (MHz) | Nant |
|---------------|-------------------|-------------------|-------------|
| 5.725-5.85GHz | 802.11be EHT40 | 40 | 4TX |
| 5.725-5.85GHz | 802.11be EHT40-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 |
| 5.725-5.85GHz | 802.11be EHT80 | 80 | 4TX |
| 5.725-5.85GHz | 802.11be EHT80-BF | 80 | 4TX |

Note:

- ♦ 11a, HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- ♦ VHT20, VHT40, VHT80 and VHT160 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM modulation.
- ♦ HEW20, HEW40, HEW80 and HEW160 use a combination of OFDMA-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM modulation.
- ♦ EHT20, EHT40, EHT80 and EHT160 use a combination of OFDMA-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM, 4096QAM modulation.
- ♦ BWch is the nominal channel bandwidth.



1.1.2 Antenna Information

| Ant. | Port | | | Brand | Model Name | Antenna Type | Connector | Gain (dBi) |
|------|-----------|-------------|-----------|--------|---------------|----------------|-----------|------------|
| | WLAN 6GHz | WLAN 2.4GHz | WLAN 5GHz | | | | | |
| 1 | 1 | - | - | WHA Yu | C660-510587-A | Dipole Antenna | I-PEX | Note 1 |
| 2 | 2 | - | - | WHA Yu | C660-510588-A | Dipole Antenna | I-PEX | |
| 3 | 3 | - | - | WHA Yu | C660-510589-A | Dipole Antenna | I-PEX | |
| 4 | 4 | - | - | WHA Yu | C660-510590-A | Dipole Antenna | I-PEX | |
| 5 | - | 1 | 1 | WHA Yu | C660-510591-A | Dipole Antenna | I-PEX | |
| 6 | - | 4 | 4 | WHA Yu | C660-510592-A | Dipole Antenna | I-PEX | |
| 7 | - | 3 | 3 | WHA Yu | C660-510593-A | Dipole Antenna | I-PEX | |
| 8 | - | 2 | 2 | WHA Yu | C660-510594-A | Dipole Antenna | I-PEX | |

Note 1

| Ant. | Antenna Gain (dBi) | | | | | |
|------|--------------------|------------------|-------------------|-------------------|------------------|-----------|
| | WLAN 2.4GHz | WLAN 5GHz UNII 1 | WLAN 5GHz UNII 2A | WLAN 5GHz UNII 2C | WLAN 5GHz UNII 3 | WLAN 6GHz |
| 1 | - | - | - | - | - | 2.44 |
| 2 | - | - | - | - | - | 2.39 |
| 3 | - | - | - | - | - | 2.44 |
| 4 | - | - | - | - | - | 2.43 |
| 5 | 2.09 | 1.52 | 1.17 | 1.98 | 1.08 | - |
| 6 | 1.84 | 2.29 | 2.9 | 3.09 | 2.51 | - |
| 7 | 2.91 | 2.7 | 3.04 | 2.48 | 3.39 | - |
| 8 | 2.14 | 1.21 | 1.19 | 3.23 | 1.87 | - |

| Item | Directional gain (dBi) | | | | |
|------|------------------------|------------------|-------------------|-------------------|------------------|
| | WLAN 2.4GHz | WLAN 5GHz | | | |
| | | WLAN 5GHz UNII 1 | WLAN 5GHz UNII 2A | WLAN 5GHz UNII 2C | WLAN 5GHz UNII 3 |
| 4T1S | 5.99 | 4.72 | 5.97 | 5.72 | 5.64 |
| 4T2S | 2.99 | 2.7 | 3.04 | 3.23 | 3.39 |
| 4T4S | 2.91 | 2.7 | 3.04 | 3.23 | 3.39 |

Note 2: The above information (except antenna 5~8 gain and directional gain) was declared by manufacturer.

Note 3: For 2.4GHz/5GHz, the antenna gain and directional gain are measured which follow the procedure of KDB 662911 D03.

Note 4: **For 2.4GHz function:**

For IEEE 802.11 b/g/n/VHT/ax/be (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.

For 5GHz function:

For IEEE 802.11a/n/ac/ax/be (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.

For 6GHz function:

For IEEE 802.11ax/be 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.



1.1.3 Mode Test Duty Cycle

| Mode | DC | DCF(dB) | T(s) | VBW(Hz) ≥ 1/T |
|--------------------|-------|---------|----------------|----------------|
| 802.11a | 0.99 | 0.04 | n/a (DC>=0.98) | n/a (DC>=0.98) |
| 802.11be EHT20-BF | 0.929 | 0.32 | 3.105m | 1k |
| 802.11be EHT40-BF | 0.976 | 0.11 | 4.77m | 300 |
| 802.11be EHT80-BF | 0.966 | 0.15 | 4.41m | 300 |
| 802.11be EHT160-BF | 0.98 | 0.09 | n/a (DC>=0.98) | n/a (DC>=0.98) |

Note:

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

1.1.4 EUT Operational Condition

| | | | | |
|------------------------------------|---|---------------------|-------------------------------------|----------------------|
| EUT Power Type | From Power Adapter | | | |
| Beamforming Function | <input checked="" type="checkbox"/> | With beamforming | <input type="checkbox"/> | Without beamforming |
| | The product has beamforming function for n/VHT/ax/be in 2.4GHz, n/ac/ax/be in 5GHz and ax/be in 6GHz. | | | |
| Weather Band | <input checked="" type="checkbox"/> | With 5600~5650MHz | <input type="checkbox"/> | Without 5600~5650MHz |
| Function | <input type="checkbox"/> | Outdoor P2M | <input checked="" type="checkbox"/> | Indoor P2M |
| | <input type="checkbox"/> | Fixed P2P | <input type="checkbox"/> | Client |
| | <input checked="" type="checkbox"/> | Point-to-multipoint | <input type="checkbox"/> | Point-to-point |
| TPC Function | <input checked="" type="checkbox"/> | With TPC | <input type="checkbox"/> | Without TPC |
| Channel Puncturing Function | <input type="checkbox"/> | Supported | <input checked="" type="checkbox"/> | Unsupported |
| Support RU | <input checked="" type="checkbox"/> | Full RU | <input type="checkbox"/> | Partial RU |
| Test Software Version | accessMtool 3.3.0.4 | | | |

Note: The above information was declared by manufacturer.

1.1.5 Table for EUT supports functions

| Function | Support Type |
|-----------|-------------------------------|
| AP Router | Master |
| Bridge | Slave without radar detection |
| Extender | Master |
| Mesh | Master |

Note: The above information was declared by manufacturer.



1.1.6 Table for Radio function

| Radio 1 | Radio 2 | Radio 3 |
|-------------|--------------------|--------------------|
| WLAN 2.4GHz | WLAN 5GHz UNII 1~3 | WLAN 6GHz UNII 5~8 |

Note: The above information was declared by manufacturer.

1.1.7 Table for Permissive Change

This product is an extension of original one reported under Sporton project number: FR262427-01AB.

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

| Modifications | Performance Checking |
|---|--|
| 1. Adding the second source for capacitance and resistance on path of CPU. | 1. DTS Bandwidth 2. Maximum Conducted Output Power 3. Power Spectral Density |
| 2. Changing the EUT hardware version to "R1.20" from "R1.00". The difference with R1.00 is listed below: (1) Revising enclosure design for device and antennas. (2) Revising the heatsink of the bottom of EUT. (3) Revising the shape of the PCB board to fit the new enclosure. | Unwanted Emissions below 1GHz. |
| 3. Adding accessory: RJ-45 cable 2*1 (Shielded, 1.5m). | |
| 4. Removing manufacturers' company names and addresses in the report. | After evaluation, it does not need to re-test. |



1.2 Applicable Standards

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

- ◆ 47 CFR FCC Part 15
- ◆ ANSI C63.10-2013
- ◆ FCC KDB 789033 D02 v02r01

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

- ◆ FCC KDB 662911 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 (TAF: 3787) | ADD: No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.) TEL: 886-3-656-9065 FAX: 886-3-656-9085 Test site Designation No. TW3787 with FCC. Conformity Assessment Body Identifier (CABID) TW3787 with ISED. |

| Test Condition | Test Site No. | Test Engineer | Test Environment (°C / %) | Test Date |
|-----------------|---------------|---------------|---------------------------|--------------------------------|
| RF Conducted | TH02-CB | Mason Chan | 23.6-24.1 / 63-67 | Jan. 18, 2023~ May 31, 2023 |
| Radiated < 1GHz | 03CH06-CB | Alex Kuo | 21.7~22.9 / 58~62 | Apr. 24, 2023 |

1.4 Measurement Uncertainty

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

| Test Items | Uncertainty | Remark |
|--------------------------------------|-------------|--------------------------|
| Radiated Emission (9kHz ~ 30MHz) | 3.4 dB | Confidence levels of 95% |
| Radiated Emission (30MHz ~ 1,000MHz) | 5.6 dB | Confidence levels of 95% |
| Conducted Emission | 3.2 dB | Confidence levels of 95% |
| Output Power Measurement | 0.8 dB | Confidence levels of 95% |
| Power Density Measurement | 3.2 dB | Confidence levels of 95% |
| Bandwidth Measurement | 2.0 % | Confidence levels of 95% |



2 Test Configuration of EUT

2.1 Test Channel Mode

| Mode | Power Setting |
|-----------------------------------|---------------|
| 802.11a_Nss1,(6Mbps)_4TX | - |
| 5180MHz | 88 |
| 5200MHz | 94 |
| 5240MHz | 95 |
| 5260MHz | 69 |
| 5300MHz | 70 |
| 5320MHz | 72 |
| 5500MHz | 72 |
| 5580MHz | 71 |
| 5700MHz | 70 |
| 5720MHz Straddle 5.47-5.725GHz | 70 |
| 5720MHz Straddle 5.725-5.85GHz | 70 |
| 5745MHz | 93 |
| 5785MHz | 95 |
| 5825MHz | 101 |
| 802.11be EHT20-BF_Nss1,(MCS0)_4TX | - |
| 5180MHz | 82 |
| 5200MHz | 93 |
| 5240MHz | 94 |
| 5260MHz | 67 |
| 5300MHz | 69 |
| 5320MHz | 72 |
| 5500MHz | 71 |
| 5580MHz | 70 |
| 5700MHz | 61 |
| 5720MHz Straddle 5.47-5.725GHz | 68 |
| 5720MHz Straddle 5.725-5.85GHz | 68 |
| 5745MHz | 92 |
| 5785MHz | 94 |
| 5825MHz | 100 |
| 802.11be EHT40-BF_Nss1,(MCS0)_4TX | - |
| 5190MHz | 70 |
| 5230MHz | 93 |
| 5270MHz | 68 |
| 5310MHz | 70 |
| 5510MHz | 71 |



| Mode | Power Setting |
|------------------------------------|---------------|
| 5550MHz | 69 |
| 5670MHz | 67 |
| 5710MHz Straddle 5.47-5.725GHz | 69 |
| 5710MHz Straddle 5.725-5.85GHz | 69 |
| 5755MHz | 95 |
| 5795MHz | 99 |
| 802.11be EHT80-BF_Nss1,(MCS0)_4TX | - |
| 5210MHz | 76 |
| 5290MHz | 72 |
| 5530MHz | 72 |
| 5610MHz | 68 |
| 5690MHz Straddle 5.47-5.725GHz | 68 |
| 5690MHz Straddle 5.725-5.85GHz | 68 |
| 5775MHz | 93 |
| 802.11be EHT160-BF_Nss1,(MCS0)_4TX | - |
| 5250MHz Straddle 5.15-5.25GHz | 72 |
| 5250MHz Straddle 5.25-5.35GHz | 72 |
| 5570MHz | 68 |

Note:

- ♦ EHT20 / EHT40 / EHT80 / EHT160 covers HT20 / HT40 / VHT20 / VHT40 / VHT80 / VHT160 / HEW20 / HEW40 / HEW80 / HEW160 due to similar modulation. The power setting for HT20 / HT40 / VHT20 / VHT40 / VHT80 / VHT160 / HEW20 / HEW40 / HEW80 / HEW160 is the same or lower than EHT20 / EHT40 / EHT80 / EHT160.
- ♦ The EUT supports non-beamforming and beamforming modes, after evaluating, the beamforming mode has been selected to test.



2.2 The Worst Case Measurement Configuration

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

| 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. |
| Operating Mode < 1GHz | CTX |
| | <ol style="list-style-type: none"> The EUT performed the testing with Adapter 1 and Adapter 3. "Adapter 3" generated the worst case. Consequently, measurement will follow this same test mode. After evaluating, the worst case was found at Z axis, thus the measurement will follow this same test configuration. |
| 1 | EUT in Z axis_WLAN 2.4GHz + Adapter 3 + RJ-45 cable 1 |
| 2 | EUT in Z axis_WLAN 5GHz + Adapter 3 + RJ-45 cable 1 |
| 3 | EUT in Z axis_WLAN 6GHz + Adapter 3 + RJ-45 cable 1 |
| Mode 2 has been evaluated to be the worst case among Mode 1~3, so measurement for Mode 4 will follow this same test mode. | |
| 4 | EUT in Z axis_WLAN 5GHz + Adapter 3 + RJ-45 cable 2 |
| For operating, Mode 4 is the worst case and it was record in this test report. | |

| 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 + WLAN 6GHz |
| Refer to Sporton Test Report No.: FA262427-05 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

| Power | Brand | Model | Rating | Remark |
|---|-------|------------|---|--|
| Adapter 1 | DELTA | ADP-65DE B | INPUT: 100-240V~1.5A, 50-60Hz OUTPUT: 19.0V, 3.42A, 65.0W | With the DC cable: Non-shielded, 1.5m |
| Adapter 2 | DELTA | ADP-65DE B | INPUT: 100-240V~1.5A, 50-60Hz OUTPUT: 19.0V, 3.42A, 65.0W | With the DC cable: Non-shielded, 1.5m |
| Adapter 3 | AcBel | ADD011 | INPUT: 100-240V~ 1.7A, 50-60Hz OUTPUT: +19.5V, 3.33A, 65.0W MAX. | With the DC cable: Non-shielded, 1.5m |
| Adapter 4 | AcBel | ADD011 | INPUT: 100-240V~ 1.7A, 50-60Hz OUTPUT: +19.5V, 3.33A, 65.0W MAX. | With the DC cable: Non-shielded, 1.5m |
| Others | | | | |
| RJ-45 cable 1*1: Shielded, 1.5m | | | | |
| RJ-45 cable 2*1: Shielded, 1.5m | | | | |
| Power cord*1: Non-shielded, 0.9m Power cord*1: Non-shielded, 0.9m | | | | |

Note1: Adapter 1 & Adapter 2 and Adapter 3 & Adapter 4 are identical.

Note2: Refer to photographs of EUT for the detail information of difference between Adapter 1 & Adapter 2 and Adapter 3 & Adapter 4.

2.5 Support Equipment

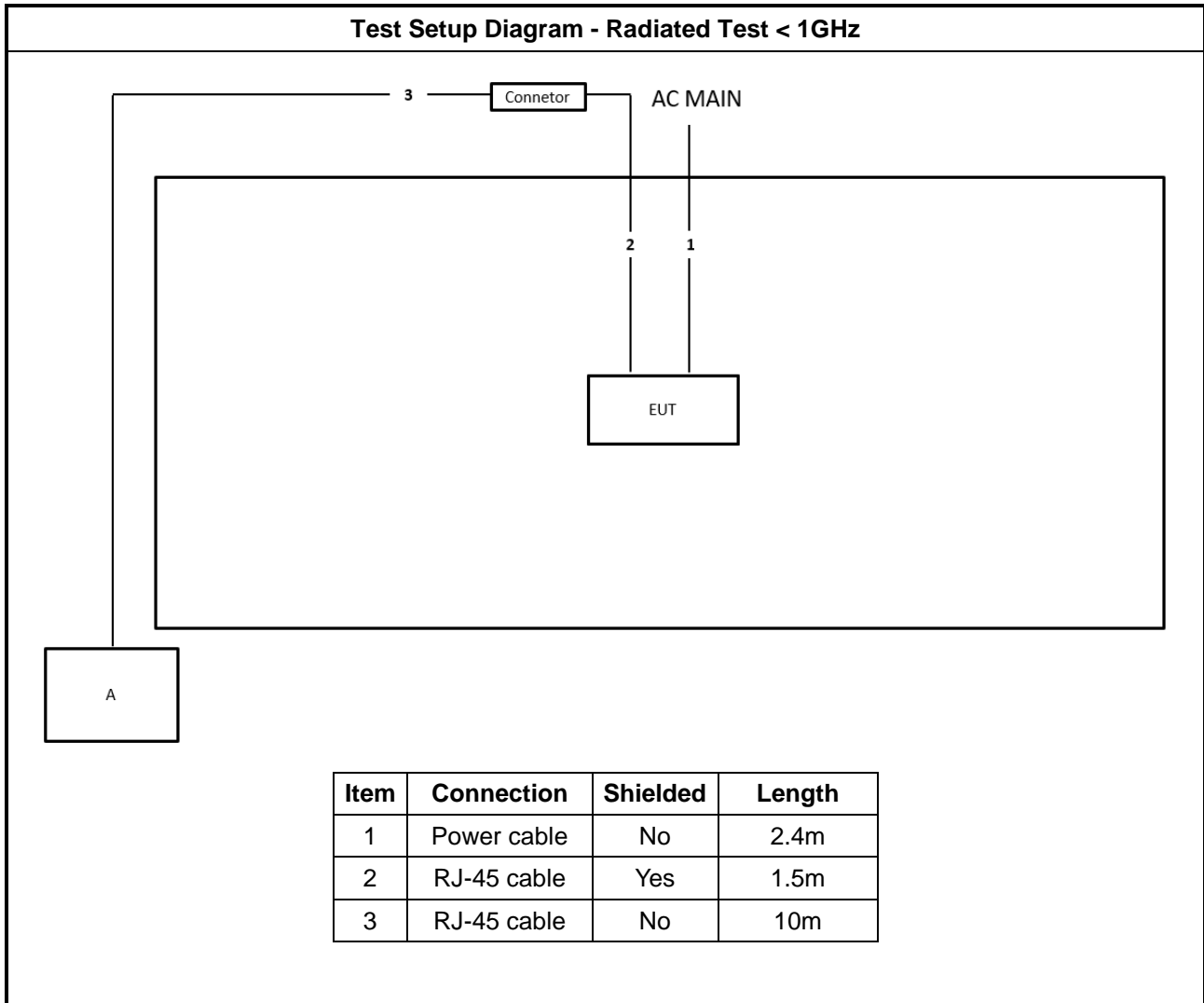
For Radiated (below 1GHz):

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

For RF Conducted:

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

2.6 Test Setup Diagram



3 Transmitter Test Result

3.1 Emission Bandwidth

3.1.1 Emission Bandwidth Limit

| Emission Bandwidth Limit | |
|-------------------------------------|---|
| UNII Devices | |
| <input checked="" type="checkbox"/> | For the 5.15-5.25 GHz band, N/A |
| <input checked="" type="checkbox"/> | 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. |
| <input checked="" type="checkbox"/> | 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. |
| <input checked="" type="checkbox"/> | For the 5.725-5.85 GHz band, 26 dB emission bandwidth ,N/A. 6 dB emission bandwidth ≥ 500kHz. |
| LE-LAN Devices | |
| <input type="checkbox"/> | 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. |
| <input type="checkbox"/> | 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 |
| <input type="checkbox"/> | 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 |
| <input type="checkbox"/> | For the 5.725-5.85 GHz band, 6 dB emission bandwidth ≥ 500kHz. |

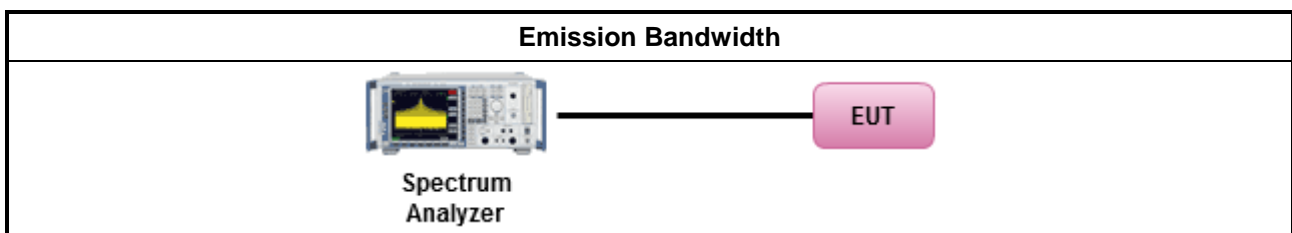
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

| Test Method | |
|--|---|
| <ul style="list-style-type: none"> ▪ For the emission bandwidth shall be measured using one of the options below: | |
| <input checked="" type="checkbox"/> | Refer as FCC KDB 789033 D02, clause C for EBW and clause D for OBW measurement. |
| <input type="checkbox"/> | Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing. |
| <input type="checkbox"/> | Refer as IC RSS-Gen, clause 4.6 for bandwidth testing. |

3.1.4 Test Setup





3.1.5 Test Result of Emission Bandwidth

Refer as Appendix A



3.2 Maximum Output Power

3.2.1 Limit

| Maximum Output Power Limit | |
|---|--|
| UNII Devices | |
| <input checked="" type="checkbox"/> For the 5.15-5.25 GHz band: | |
| | <ul style="list-style-type: none"> ▪ 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 $P_{Out} = 24 - (G_{TX} - 6)$. |
| <input checked="" type="checkbox"/> For the 5.25-5.35 GHz band, the maximum conducted output power (P_{Out}) shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 24 - (G_{TX} - 6)$. | |
| <input checked="" type="checkbox"/> For the 5.47-5.725 GHz band, the maximum conducted output power (P_{Out}) shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 24 - (G_{TX} - 6)$. | |
| <input checked="" type="checkbox"/> For the 5.725-5.85 GHz band: | |
| | <ul style="list-style-type: none"> ▪ 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 | |
| <input type="checkbox"/> 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. | |
| <input type="checkbox"/> 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 | |
| <input type="checkbox"/> 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 | |
| <input type="checkbox"/> For the 5.725-5.85 GHz band: | |
| | <ul style="list-style-type: none"> ▪ 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. |
| P_{Out} = maximum conducted output power in dBm, G_{TX} = the maximum transmitting antenna directional gain in dBi. | |

3.2.2 Measuring Instruments

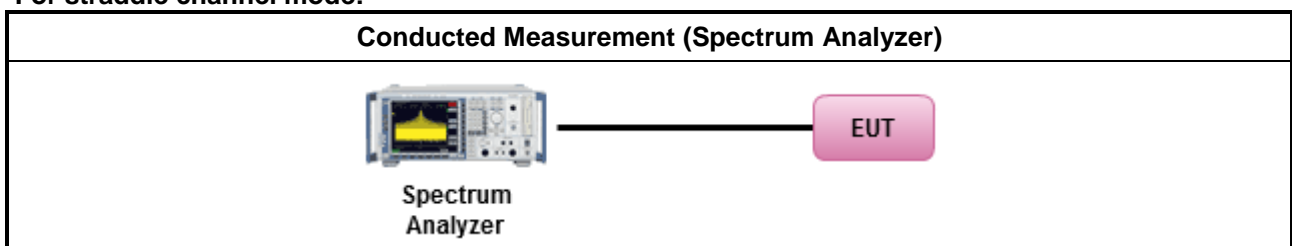
Refer a test equipment and calibration data table in this test report.

3.2.3 Test Procedures

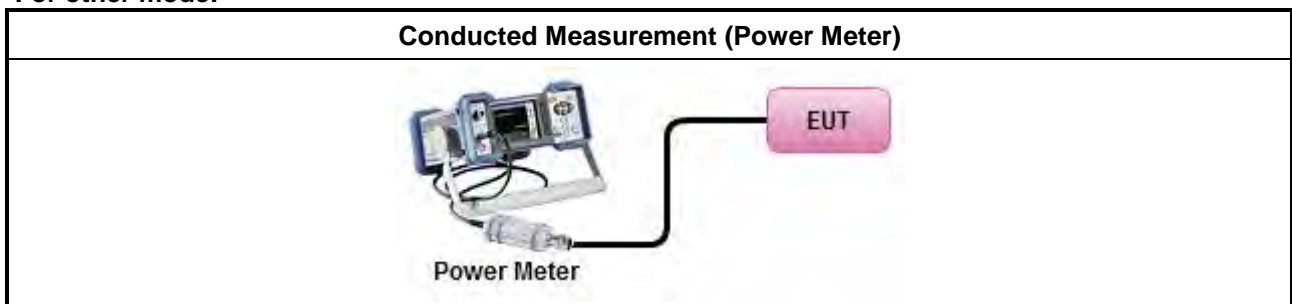
| Test Method | |
|-------------------------------------|--|
| <input type="checkbox"/> | Average over on/off periods with duty factor |
| <input checked="" type="checkbox"/> | Refer as FCC KDB 789033 D02, clause E Method SA-2 (spectral trace averaging). |
| <input type="checkbox"/> | Refer as FCC KDB 789033 D02, clause E Method SA-2 Alt. (RMS detection with slow sweep speed) |
| <input type="checkbox"/> | Wideband RF power meter and average over on/off periods with duty factor |
| <input checked="" type="checkbox"/> | Refer as FCC KDB 789033 D02, clause E Method PM-G (using an RF average power meter). |
| <input checked="" type="checkbox"/> | For conducted measurement. |
| <input type="checkbox"/> | <ul style="list-style-type: none"> If the EUT supports multiple transmit chains using options given below: Refer as FCC KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them. If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + \dots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$ |
| <input type="checkbox"/> | For radiated measurement. |
| <input type="checkbox"/> | <ul style="list-style-type: none"> Refer as FCC KDB 789033 D02 clause II A.1.F "Antenna-port Conducted versus Radiated Testing" Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz. Refer as FCC KDB 412172 D01 clause 2.2 for EIRP calculation. |

3.2.4 Test Setup

For straddle channel mode:



For other mode:





3.2.5 Test Result of Maximum Output Power

Refer as Appendix B



3.3 Power Spectral Density

3.3.1 Limit

| Peak Power Spectral Density Limit | |
|---|--|
| UNII Devices | |
| <input checked="" type="checkbox"/> For the 5.15-5.25 GHz band: | |
| <input type="checkbox"/> | <ul style="list-style-type: none"> ▪ 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 $PPSD = 11 - (G_{TX} - 6)$. |
| <input checked="" type="checkbox"/> For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If $G_{TX} > 6$ dBi, then $PPSD = 11 - (G_{TX} - 6)$. | |
| <input checked="" type="checkbox"/> For the 5.47-5.725 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If $G_{TX} > 6$ dBi, then $PPSD = 11 - (G_{TX} - 6)$. | |
| <input checked="" type="checkbox"/> For the 5.725-5.85 GHz band: | |
| <input type="checkbox"/> | <ul style="list-style-type: none"> ▪ 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 | |
| <input type="checkbox"/> For the 5.15-5.25 GHz band, the e.i.r.p. peak power spectral density (PPSD) ≤ 10 dBm/MHz. | |
| <input type="checkbox"/> For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz. | |
| <input type="checkbox"/> | <ul style="list-style-type: none"> ▪ 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 $0^\circ \leq \theta < 8^\circ$; -13 - 0.716 ($\theta-8$) dBW/MHz for $8^\circ \leq \theta < 40^\circ$ -35.9 - 1.22 ($\theta-40$) dBW/MHz for $40^\circ \leq \theta \leq 45^\circ$; -42 dBW/MHz for $\theta > 45^\circ$ |
| <input type="checkbox"/> For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz. | |
| <input type="checkbox"/> For the 5.725-5.85 GHz band: | |
| <input type="checkbox"/> | <ul style="list-style-type: none"> ▪ 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. |
| PPSD = peak power spectral density that he same method as used to determine the conducted output power shall be used to determine the power spectral density. And power spectral density in dBm/MHz G_{TX} = the maximum transmitting antenna directional gain in dBi. | |

3.3.2 Measuring Instruments

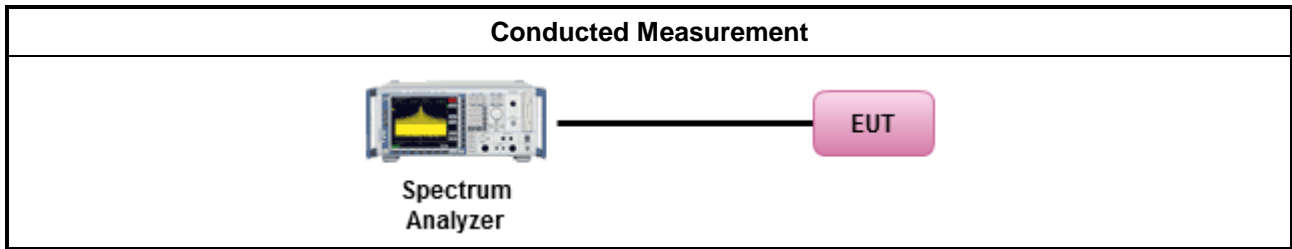
Refer a test equipment and calibration data table in this test report.



3.3.3 Test Procedures

| Test Method | |
|---|--|
| <ul style="list-style-type: none"> ▪ Peak power spectral density procedures that the same method as used to determine the conducted output power shall be used to determine the peak power spectral density and use the peak search function on the spectrum analyzer to find the peak of the spectrum. For the peak power spectral density shall be measured using below options: | |
| <input type="checkbox"/> | Refer as FCC KDB 789033 D02, F5) 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] | |
| <input checked="" type="checkbox"/> | Refer as FCC KDB 789033 D02, clause E Method SA-1 (spectral trace averaging). |
| <input type="checkbox"/> | 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 | |
| <input checked="" type="checkbox"/> | Refer as FCC KDB 789033 D02, clause E Method SA-2 (spectral trace averaging). |
| <input type="checkbox"/> | Refer as FCC KDB 789033 D02, clause E Method SA-2 Alt. (RMS detection with slow sweep speed) |
| <input checked="" type="checkbox"/> For conducted measurement. | |
| <ul style="list-style-type: none"> ▪ If the EUT supports multiple transmit chains using options given below: | |
| <input checked="" type="checkbox"/> | Option 1: Measure and sum the spectra across the outputs. Refer as FCC KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the NTX output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace. |
| <input type="checkbox"/> | Option 2: Measure and sum spectral maxima across the outputs. With this technique, spectra are measured at each output of the device at the required resolution bandwidth. The maximum value (peak) of each spectrum is determined. These maximum values are then summed mathematically in linear power units across the outputs. These operations shall be performed separately over frequency spans that have different out-of-band or spurious emission limits, |
| <input type="checkbox"/> | Option 3: Measure and add 10 log(N) dB, where N is the number of transmit chains. Refer as FCC KDB 662911, In-band power spectral density (PSD). Performed at each transmit chains and each transmit chains shall be compared with the limit have been reduced with 10 log(N). Or each transmit chains shall be add 10 log(N) to compared with the limit. |
| <ul style="list-style-type: none"> ▪ If multiple transmit chains, EIRP PPSD calculation could be following as methods: $PPSD_{total} = PPSD_1 + PPSD_2 + \dots + PPSD_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = PPSD_{total} + DG$ | |
| <input type="checkbox"/> For radiated measurement. | |
| <ul style="list-style-type: none"> ▪ Refer as FCC KDB 789033 D02 clause II A.1.F "Antenna-port Conducted versus Radiated Testing" ▪ Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz. ▪ Refer as FCC KDB 412172 D01 clause 2.2 for EIRP calculation. | |

3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Refer as Appendix C



3.4 Unwanted Emissions

3.4.1 Transmitter Unwanted Emissions Limit

| Unwanted 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 |

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 |
| <input checked="" type="checkbox"/> 5.15 - 5.25 GHz | e.i.r.p. -27 dBm [68.2 dBuV/m@3m] |
| <input checked="" type="checkbox"/> 5.25 - 5.35 GHz | e.i.r.p. -27 dBm [68.2 dBuV/m@3m] |
| <input checked="" type="checkbox"/> 5.47 - 5.725 GHz | e.i.r.p. -27 dBm [68.2 dBuV/m@3m] |
| <input checked="" type="checkbox"/> 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 linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

3.4.2 Measuring Instruments

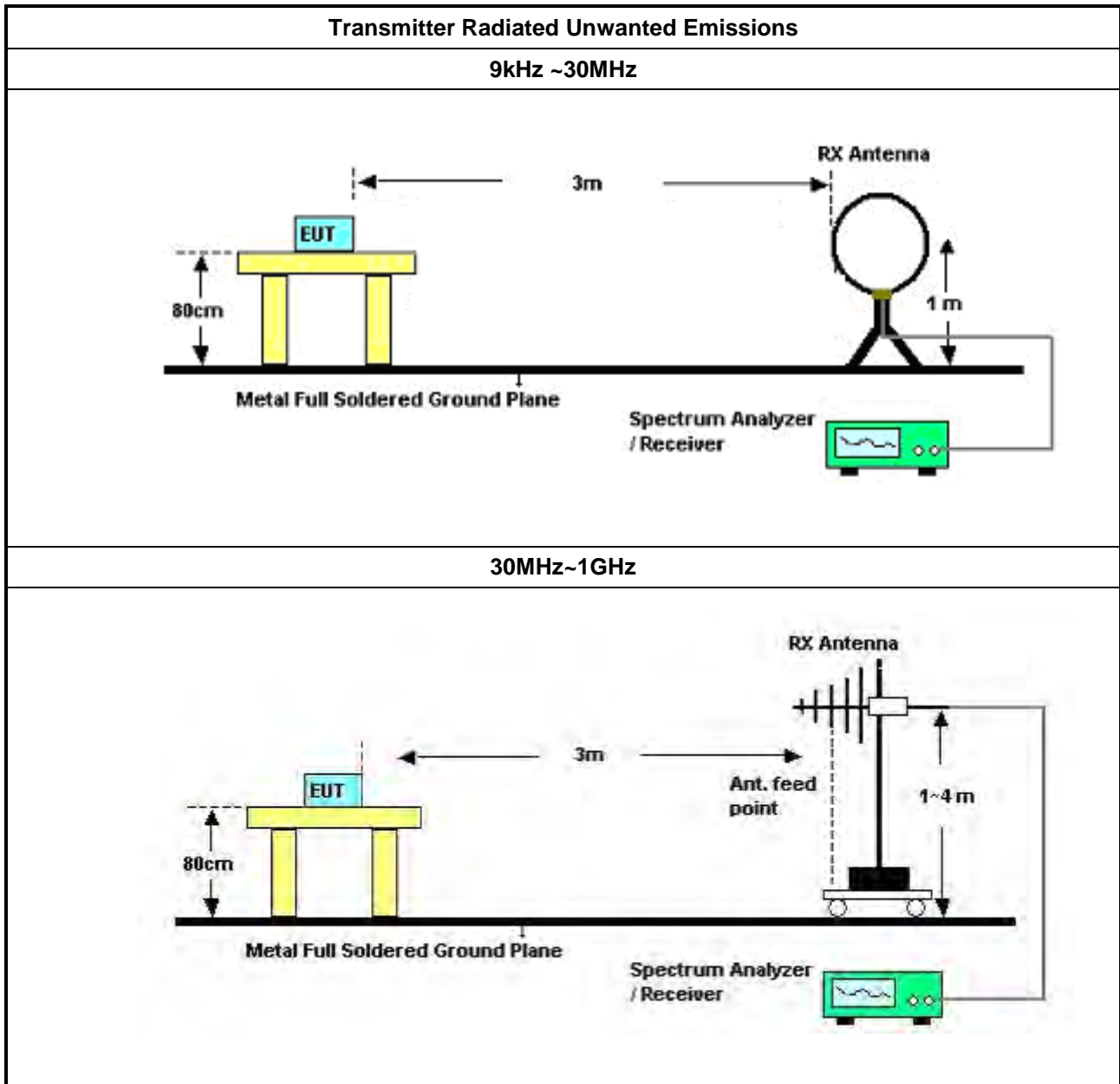
Refer a test equipment and calibration data table in this test report.



3.4.3 Test Procedures

| Test Method | |
|--|--|
| <ul style="list-style-type: none"> 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). | |
| <ul style="list-style-type: none"> The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor]. | |
| <ul style="list-style-type: none"> For the transmitter unwanted emissions shall be measured using following options below: | |
| | <ul style="list-style-type: none"> Refer as FCC KDB 789033 D02, clause G)2) for unwanted emissions into non-restricted bands. |
| | <ul style="list-style-type: none"> Refer as FCC KDB 789033 D02, clause G)1) for unwanted emissions into restricted bands. |
| <input type="checkbox"/> | Refer as FCC KDB 789033 D02, G)6) Method AD (Trace Averaging). |
| <input checked="" type="checkbox"/> | Refer as FCC KDB 789033 D02, G)6) Method VB (Reduced VBW). |
| <input type="checkbox"/> | Refer as ANSI C63.10, clause 11.12.2.5.3 (Reduced VBW). VBW ≥ 1/T, where T is pulse time. |
| <input type="checkbox"/> | Refer as ANSI C63.10, clause 7.5 average value of pulsed emissions. |
| <input checked="" type="checkbox"/> | Refer as FCC KDB 789033 D02, clause G)5) measurement procedure peak limit. |
| <input type="checkbox"/> | Refer as ANSI C63.10, clause 4.1.4.2.2 measurement procedure peak limit. |
| <ul style="list-style-type: none"> For radiated measurement. | |
| | <ul style="list-style-type: none"> Refer as ANSI C63.10, clause 6.4 for radiated emissions below 30 MHz and test distance is 3m. |
| | <ul style="list-style-type: none"> Refer as ANSI C63.10, clause 6.5 for radiated emissions 30 MHz to 1 GHz and test distance is 3m. |
| | <ul style="list-style-type: none"> Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz. |
| <ul style="list-style-type: none"> The any unwanted emissions level shall not exceed the fundamental emission level. | |
| <ul style="list-style-type: none"> All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported. | |

3.4.4 Test Setup





3.4.5 Measurement Results Calculation

The measured Level is calculated using:

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

3.4.6 Transmitter Unwanted Emissions (Below 30MHz)

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

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

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

3.4.7 Test Result of Transmitter Unwanted Emissions

Refer as Appendix D



4 Test Equipment and Calibration Data

| Instrument | Brand | Model No. | Serial No. | Characteristics | Calibration Date | Calibration Due Date | Remark |
|------------------------------------|--------------|-------------------|------------------|------------------|------------------|----------------------|-----------------------|
| Loop Antenna | Teseq | HLA 6120 | 24155 | 9kHz - 30 MHz | May 14, 2022 | May 13, 2023 | Radiation (03CH06-CB) |
| 3m Semi Anechoic Chamber NSA | TDK | SAC-3M | 03CH06-CB | 30 MHz ~ 1 GHz | Aug. 04, 2022 | Aug. 03, 2023 | Radiation (03CH06-CB) |
| Bilog Antenna with 6 dB attenuator | TESEQ & EMC1 | CBL6112D & N-6-06 | 37878 & AT-N0606 | 20MHz ~ 2GHz | Jul. 31, 2022 | Jul. 30, 2023 | Radiation (03CH06-CB) |
| Pre-Amplifier | Agilent | 310N | 187290 | 0.1MHz ~ 1GHz | Nov. 04, 2022 | Nov. 03, 2023 | Radiation (03CH06-CB) |
| Spectrum analyzer | R&S | FSP40 | 100080 | 9kHz~40GHz | Dec. 21, 2022 | Dec. 20, 2023 | Radiation (03CH06-CB) |
| EMI Test Receiver | R&S | ESCS | 826547/017 | 9kHz ~ 2.75GHz | Jun. 17, 2022 | Jun. 16, 2023 | Radiation (03CH06-CB) |
| RF Cable-low | Woken | RG402 | Low Cable-24+68 | 30MHz~1GHz | Oct. 03, 2022 | Oct. 02, 2023 | Radiation (03CH06-CB) |
| Test Software | SPORTON | SENSE | V5.10 | - | N.C.R. | N.C.R. | Radiation (03CH06-CB) |
| Spectrum analyzer | R&S | FSV40 | 101027 | 9kHz~40GHz | Aug. 15, 2022 | Aug. 14, 2023 | Conducted (TH02-CB) |
| Power Sensor | Anritsu | MA2411B | 1126203 | 300MHz~40GHz | Oct. 17, 2022 | Oct. 16, 2023 | Conducted (TH02-CB) |
| Power Meter | Anritsu | ML2495A | 1210004 | 300MHz~40GHz | Oct. 17, 2022 | Oct. 16, 2023 | Conducted (TH02-CB) |
| RF Cable-high | Woken | RG402 | High Cable-01 | 1 GHz – 18 GHz | Oct. 03, 2022 | Oct. 02, 2023 | Conducted (TH02-CB) |
| RF Cable-high | Woken | RG402 | High Cable-02 | 1 GHz – 18 GHz | Oct. 03, 2022 | Oct. 02, 2023 | Conducted (TH02-CB) |
| RF Cable-high | Woken | RG402 | High Cable-03 | 1 GHz – 18 GHz | Oct. 03, 2022 | Oct. 02, 2023 | Conducted (TH02-CB) |
| RF Cable-high | Woken | RG402 | High Cable-04 | 1 GHz – 18 GHz | Oct. 03, 2022 | Oct. 02, 2023 | Conducted (TH02-CB) |
| RF Cable-high | Woken | RG402 | High Cable-05 | 1 GHz – 18 GHz | Oct. 03, 2022 | Oct. 02, 2023 | Conducted (TH02-CB) |
| Switch | SPTCB | SP-SWI | SWI-02 | 1 GHz – 26.5 GHz | Oct. 04, 2022 | Oct. 03, 2023 | Conducted (TH02-CB) |
| Test Software | SPORTON | SENSE | V5.10 | - | N.C.R. | N.C.R. | Conducted (TH02-CB) |

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

NCR means Non-Calibration required.

Summary

| Mode | Max-N dB (Hz) | Max-OBW (Hz) | ITU-Code | Min-N dB (Hz) | Min-OBW (Hz) |
|------------------------------------|------------------|-----------------|----------|------------------|-----------------|
| 5.15-5.25GHz | - | - | - | - | - |
| 802.11a_Nss1,(6Mbps)_4TX | 37.35M | 17.841M | 17M8D1D | 25.14M | 17.204M |
| 802.11be EHT20-BF_Nss1,(MCS0)_4TX | 40.26M | 19.394M | 19M4D1D | 24.39M | 19.189M |
| 802.11be EHT40-BF_Nss1,(MCS0)_4TX | 73.92M | 38.201M | 38M2D1D | 41.36M | 37.881M |
| 802.11be EHT80-BF_Nss1,(MCS0)_4TX | 86.02M | 77.561M | 77M6D1D | 84.26M | 77.261M |
| 802.11be EHT160-BF_Nss1,(MCS0)_4TX | 83.2M | 77.801M | 77M8D1D | 82.88M | 77.641M |
| 5.25-5.35GHz | - | - | - | - | - |
| 802.11a_Nss1,(6Mbps)_4TX | 26.73M | 17.102M | 17M1D1D | 21.45M | 16.694M |
| 802.11be EHT20-BF_Nss1,(MCS0)_4TX | 28.8M | 19.218M | 19M2D1D | 21.48M | 19.012M |
| 802.11be EHT40-BF_Nss1,(MCS0)_4TX | 46.92M | 37.907M | 37M9D1D | 40.44M | 37.731M |
| 802.11be EHT80-BF_Nss1,(MCS0)_4TX | 85.92M | 77.342M | 77M3D1D | 82.68M | 77.342M |
| 802.11be EHT160-BF_Nss1,(MCS0)_4TX | 83.68M | 77.721M | 77M7D1D | 82.96M | 77.641M |
| 5.47-5.725GHz | - | - | - | - | - |
| 802.11a_Nss1,(6Mbps)_4TX | 25.44M | 17.076M | 17M1D1D | 15.81M | 13.418M |
| 802.11be EHT20-BF_Nss1,(MCS0)_4TX | 29.07M | 19.218M | 19M2D1D | 15.84M | 14.573M |
| 802.11be EHT40-BF_Nss1,(MCS0)_4TX | 49.86M | 37.907M | 37M9D1D | 35.21M | 33.723M |
| 802.11be EHT80-BF_Nss1,(MCS0)_4TX | 85.2M | 77.46M | 77M5D1D | 75.675M | 73.163M |
| 802.11be EHT160-BF_Nss1,(MCS0)_4TX | 166.56M | 156.33M | 156MD1D | 166.08M | 155.86M |
| 5.725-5.85GHz | - | - | - | - | - |
| 802.11a_Nss1,(6Mbps)_4TX | 16.335M | 25.221M | 25M2D1D | 3.14M | 4.038M |
| 802.11be EHT20-BF_Nss1,(MCS0)_4TX | 18.92M | 26.062M | 26M1D1D | 4.38M | 4.538M |
| 802.11be EHT40-BF_Nss1,(MCS0)_4TX | 37.62M | 38.231M | 38M2D1D | 3.9M | 4.018M |
| 802.11be EHT80-BF_Nss1,(MCS0)_4TX | 76.78M | 77.461M | 77M5D1D | 3.8M | 4.038M |

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

Result

| Mode | Result | Limit (Hz) | Port 1-N dB (Hz) | Port 1-OBW (Hz) | Port 2-N dB (Hz) | Port 2-OBW (Hz) | Port 3-N dB (Hz) | Port 3-OBW (Hz) | Port 4-N dB (Hz) | Port 4-OBW (Hz) |
|------------------------------------|--------|------------|------------------|-----------------|------------------|-----------------|------------------|-----------------|------------------|-----------------|
| 802.11a_Nss1,(6Mbps)_4TX | - | - | - | - | - | - | - | - | - | - |
| 5180MHz | Pass | Inf | 25.14M | 17.229M | 29.91M | 17.433M | 28.65M | 17.28M | 28.23M | 17.28M |
| 5200MHz | Pass | Inf | 30.6M | 17.28M | 34.77M | 17.663M | 33.51M | 17.306M | 29.52M | 17.204M |
| 5240MHz | Pass | Inf | 37.35M | 17.51M | 36.45M | 17.841M | 37.2M | 17.79M | 35.07M | 17.484M |
| 5260MHz | Pass | Inf | 21.81M | 16.796M | 21.45M | 16.771M | 21.63M | 16.72M | 21.57M | 16.72M |
| 5300MHz | Pass | Inf | 21.63M | 16.796M | 21.6M | 16.822M | 21.66M | 16.694M | 21.6M | 16.745M |
| 5320MHz | Pass | Inf | 23.22M | 17.051M | 23.01M | 17.076M | 26.73M | 17.051M | 25.35M | 17.102M |
| 5500MHz | Pass | Inf | 25.08M | 17.025M | 23.79M | 17.025M | 23.88M | 17.076M | 25.44M | 17.076M |
| 5580MHz | Pass | Inf | 21.63M | 16.771M | 21.57M | 16.771M | 21.57M | 16.72M | 21.48M | 16.694M |
| 5700MHz | Pass | Inf | 21.81M | 16.796M | 21.48M | 16.745M | 21.57M | 16.745M | 21.45M | 16.72M |
| 5720MHz Straddle 5.47-5.725GHz | Pass | Inf | 15.885M | 13.478M | 15.855M | 13.463M | 15.81M | 13.418M | 15.825M | 13.433M |
| 5720MHz Straddle 5.725-5.85GHz | Pass | 500k | 3.14M | 4.038M | 3.18M | 4.078M | 3.14M | 4.078M | 3.14M | 4.058M |
| 5745MHz | Pass | 500k | 16.28M | 17.239M | 16.335M | 17.591M | 16.28M | 17.261M | 16.28M | 17.217M |
| 5785MHz | Pass | 500k | 16.335M | 17.437M | 16.335M | 17.547M | 16.335M | 17.261M | 16.335M | 17.261M |
| 5825MHz | Pass | 500k | 16.335M | 25.221M | 16.28M | 23.044M | 16.335M | 23.594M | 16.28M | 24.21M |
| 802.11be EHT20-BF_Nss1,(MCS0)_4TX | - | - | - | - | - | - | - | - | - | - |
| 5180MHz | Pass | Inf | 29.85M | 19.189M | 28.56M | 19.189M | 24.39M | 19.218M | 27.69M | 19.189M |
| 5200MHz | Pass | Inf | 33.51M | 19.189M | 33.66M | 19.394M | 33.12M | 19.247M | 34.14M | 19.218M |
| 5240MHz | Pass | Inf | 40.26M | 19.277M | 38.76M | 19.365M | 35.07M | 19.365M | 33.09M | 19.247M |
| 5260MHz | Pass | Inf | 21.96M | 19.1M | 21.57M | 19.071M | 21.81M | 19.071M | 21.6M | 19.012M |
| 5300MHz | Pass | Inf | 21.6M | 19.1M | 21.69M | 19.071M | 21.48M | 19.1M | 21.63M | 19.071M |
| 5320MHz | Pass | Inf | 28.8M | 19.218M | 23.7M | 19.159M | 26.13M | 19.189M | 27.69M | 19.159M |
| 5500MHz | Pass | Inf | 23.37M | 19.159M | 23.1M | 19.218M | 29.07M | 19.189M | 22.2M | 19.13M |
| 5580MHz | Pass | Inf | 21.84M | 19.071M | 21.54M | 19.071M | 21.75M | 19.071M | 21.75M | 19.042M |
| 5700MHz | Pass | Inf | 21.66M | 19.1M | 21.54M | 19.13M | 21.54M | 19.1M | 21.66M | 19.071M |
| 5720MHz Straddle 5.47-5.725GHz | Pass | Inf | 16.125M | 14.573M | 15.915M | 14.588M | 15.93M | 14.573M | 15.84M | 14.588M |
| 5720MHz Straddle 5.725-5.85GHz | Pass | 500k | 4.46M | 4.538M | 4.38M | 4.538M | 4.48M | 4.538M | 4.44M | 4.538M |
| 5745MHz | Pass | 500k | 18.92M | 19.265M | 18.81M | 19.29M | 18.92M | 19.265M | 18.92M | 19.24M |
| 5785MHz | Pass | 500k | 18.92M | 19.39M | 18.81M | 19.365M | 18.92M | 19.34M | 18.92M | 19.29M |
| 5825MHz | Pass | 500k | 18.865M | 26.062M | 18.48M | 23.663M | 18.59M | 23.788M | 18.81M | 25.162M |
| 802.11be EHT40-BF_Nss1,(MCS0)_4TX | - | - | - | - | - | - | - | - | - | - |
| 5190MHz | Pass | Inf | 48.29M | 37.931M | 47.74M | 37.881M | 41.36M | 37.881M | 43.45M | 37.881M |
| 5230MHz | Pass | Inf | 70.14M | 37.907M | 73.92M | 38.083M | 71.52M | 38.201M | 70.62M | 38.025M |
| 5270MHz | Pass | Inf | 40.74M | 37.731M | 40.44M | 37.731M | 40.68M | 37.731M | 40.56M | 37.731M |
| 5310MHz | Pass | Inf | 46.92M | 37.848M | 42.78M | 37.848M | 44.1M | 37.848M | 44.76M | 37.907M |
| 5510MHz | Pass | Inf | 47.4M | 37.79M | 44.64M | 37.848M | 45.54M | 37.848M | 49.86M | 37.907M |
| 5550MHz | Pass | Inf | 40.62M | 37.672M | 40.38M | 37.731M | 40.32M | 37.672M | 40.26M | 37.672M |
| 5670MHz | Pass | Inf | 40.68M | 37.672M | 40.32M | 37.731M | 40.5M | 37.731M | 40.44M | 37.79M |
| 5710MHz Straddle 5.47-5.725GHz | Pass | Inf | 35.595M | 33.723M | 35.21M | 33.828M | 35.245M | 33.723M | 35.245M | 33.723M |
| 5710MHz Straddle 5.725-5.85GHz | Pass | 500k | 3.9M | 4.058M | 4M | 4.038M | 3.9M | 4.058M | 4.04M | 4.018M |
| 5755MHz | Pass | 500k | 37.18M | 37.881M | 37.51M | 38.031M | 36.85M | 37.881M | 37.4M | 37.881M |
| 5795MHz | Pass | 500k | 37.62M | 38.231M | 37.07M | 38.231M | 37.18M | 38.081M | 37.07M | 38.031M |
| 802.11be EHT80-BF_Nss1,(MCS0)_4TX | - | - | - | - | - | - | - | - | - | - |
| 5210MHz | Pass | Inf | 84.26M | 77.561M | 86.02M | 77.361M | 84.26M | 77.361M | 84.92M | 77.261M |
| 5290MHz | Pass | Inf | 83.16M | 77.342M | 82.68M | 77.342M | 83.04M | 77.342M | 85.92M | 77.342M |
| 5530MHz | Pass | Inf | 82.2M | 77.225M | 84.48M | 77.342M | 85.08M | 77.342M | 85.2M | 77.46M |
| 5610MHz | Pass | Inf | 81.84M | 77.107M | 81.72M | 76.99M | 81.96M | 77.107M | 81.48M | 77.107M |
| 5690MHz Straddle 5.47-5.725GHz | Pass | Inf | 76.125M | 73.163M | 75.675M | 73.238M | 75.75M | 73.163M | 75.825M | 73.238M |
| 5690MHz Straddle 5.725-5.85GHz | Pass | 500k | 3.94M | 4.038M | 3.84M | 4.058M | 3.8M | 4.058M | 3.88M | 4.038M |
| 5775MHz | Pass | 500k | 74.36M | 77.261M | 75.24M | 77.461M | 76.34M | 77.361M | 76.78M | 77.461M |
| 802.11be EHT160-BF_Nss1,(MCS0)_4TX | - | - | - | - | - | - | - | - | - | - |
| 5250MHz Straddle 5.15-5.25GHz | Pass | Inf | 83.2M | 77.721M | 82.96M | 77.801M | 82.88M | 77.641M | 83.04M | 77.721M |
| 5250MHz Straddle 5.25-5.35GHz | Pass | Inf | 82.96M | 77.721M | 83.44M | 77.641M | 83.12M | 77.721M | 83.68M | 77.721M |
| 5570MHz | Pass | Inf | 166.56M | 156.095M | 166.32M | 156.33M | 166.32M | 156.095M | 166.08M | 155.86M |



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

5.15-5.25GHz_802.11a_Nss1,(6Mbps)_4TX

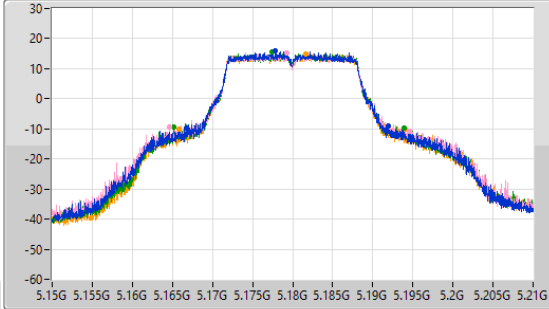
EBW

5180MHz

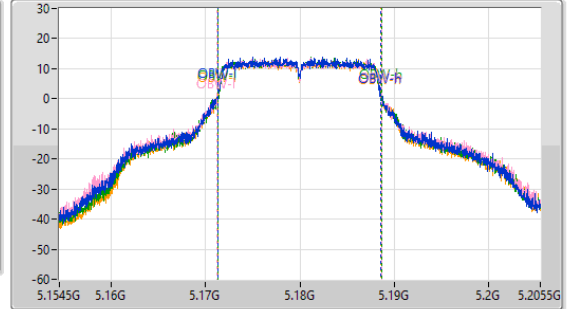
18/01/2023

CF: 5.18GHz
 Span: 60MHz
 RBW: 300kHz
 VBW: 1MHz
 Sweep Time: 100ms
 Detector Type: Peak

Port 1:
 Port 2:
 Port 3:
 Port 4:



CF: 5.18GHz
 Span: 51MHz
 RBW: 200kHz
 VBW: 1MHz
 Sweep Time: 100ms
 Detector Type: Peak



| 26dB(Hz) | Fl-26dB(Hz) | Fh-26dB(Hz) | OBW(Hz) | Fl-OBW(Hz) | Fh-OBW(Hz) | Limit(Hz) | Port |
|----------|-------------|-------------|---------|------------|------------|-----------|------|
| 25.14M | 5.16674G | 5.19188G | 17.229M | 5.171309G | 5.188538G | Inf | 1 |
| 29.91M | 5.16464G | 5.19455G | 17.433M | 5.171232G | 5.188666G | Inf | 2 |
| 28.65M | 5.16521G | 5.19386G | 17.28M | 5.17136G | 5.18864G | Inf | 3 |
| 28.23M | 5.16578G | 5.19401G | 17.28M | 5.171334G | 5.188615G | Inf | 4 |

5.15-5.25GHz_802.11a_Nss1,(6Mbps)_4TX

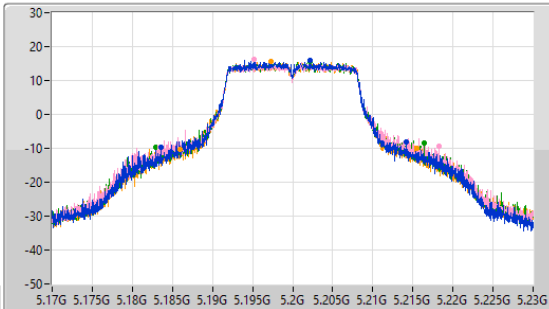
EBW

5200MHz

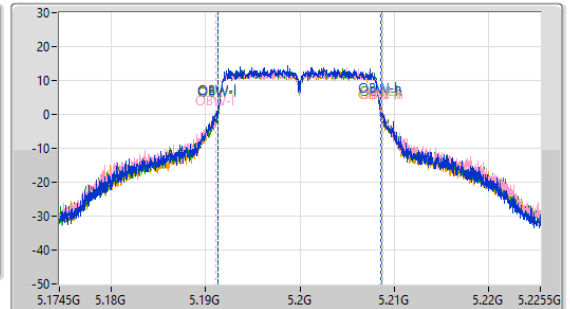
18/01/2023

CF: 5.2GHz
 Span: 60MHz
 RBW: 300kHz
 VBW: 1MHz
 Sweep Time: 100ms
 Detector Type: Peak

Port 1:
 Port 2:
 Port 3:
 Port 4:



CF: 5.2GHz
 Span: 51MHz
 RBW: 200kHz
 VBW: 1MHz
 Sweep Time: 100ms
 Detector Type: Peak



| 26dB(Hz) | Fl-26dB(Hz) | Fh-26dB(Hz) | OBW(Hz) | Fl-OBW(Hz) | Fh-OBW(Hz) | Limit(Hz) | Port |
|----------|-------------|-------------|---------|------------|------------|-----------|------|
| 30.6M | 5.18356G | 5.21416G | 17.28M | 5.191258G | 5.208538G | Inf | 1 |
| 34.77M | 5.18347G | 5.21824G | 17.663M | 5.19113G | 5.208793G | Inf | 2 |
| 33.51M | 5.18296G | 5.21647G | 17.306M | 5.191334G | 5.20864G | Inf | 3 |
| 29.52M | 5.18599G | 5.21551G | 17.204M | 5.191334G | 5.208538G | Inf | 4 |

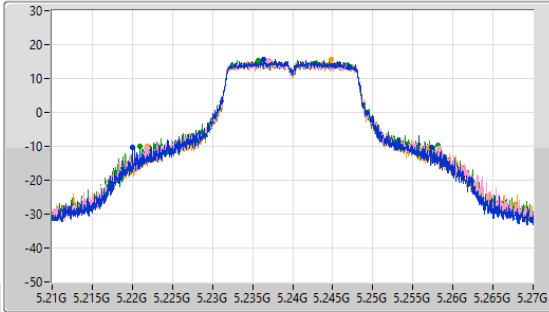
5.15-5.25GHz_802.11a_Nss1,(6Mbps)_4TX

EBW

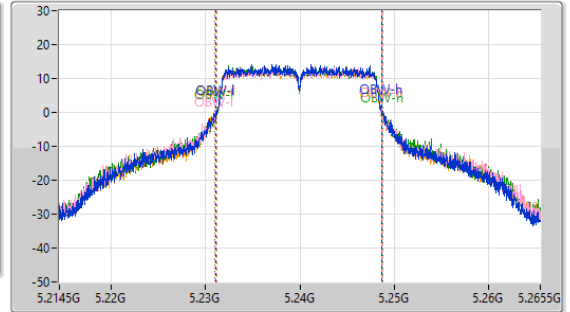
5240MHz

18/01/2023

CF: 5.24GHz
 Span: 60MHz
 RBW: 300kHz
 VBW: 1MHz
 Sweep Time: 100ms
 Detector Type: Peak



CF: 5.24GHz
 Span: 51MHz
 RBW: 200kHz
 VBW: 1MHz
 Sweep Time: 100ms
 Detector Type: Peak



| 26dB(Hz) | Fl-26dB(Hz) | Fh-26dB(Hz) | OBW(Hz) | Fl-OBW(Hz) | Fh-OBW(Hz) | Limit(Hz) | Port |
|----------|-------------|-------------|---------|------------|------------|-----------|------|
| 37.35M | 5.22005G | 5.2574G | 17.51M | 5.23113G | 5.24864G | Inf | 1 |
| 36.45M | 5.22176G | 5.25821G | 17.841M | 5.230978G | 5.248819G | Inf | 2 |
| 37.2M | 5.22092G | 5.25812G | 17.79M | 5.231028G | 5.248819G | Inf | 3 |
| 35.07M | 5.22191G | 5.25698G | 17.484M | 5.231181G | 5.248666G | Inf | 4 |

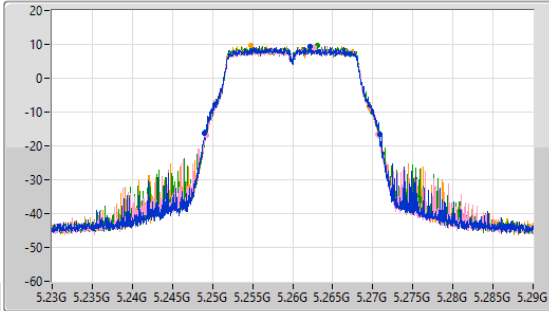
5.25-5.35GHz_802.11a_Nss1,(6Mbps)_4TX

EBW

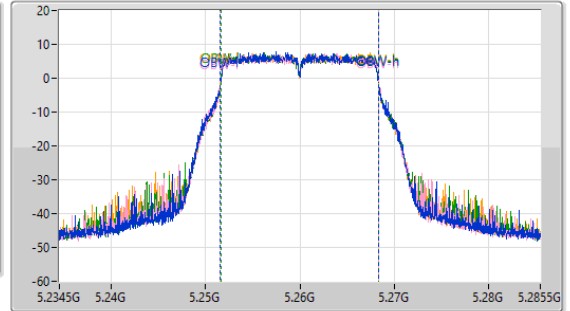
5260MHz

18/01/2023

CF: 5.26GHz
 Span: 60MHz
 RBW: 300kHz
 VBW: 1MHz
 Sweep Time: 100ms
 Detector Type: Peak



CF: 5.26GHz
 Span: 51MHz
 RBW: 200kHz
 VBW: 1MHz
 Sweep Time: 100ms
 Detector Type: Peak



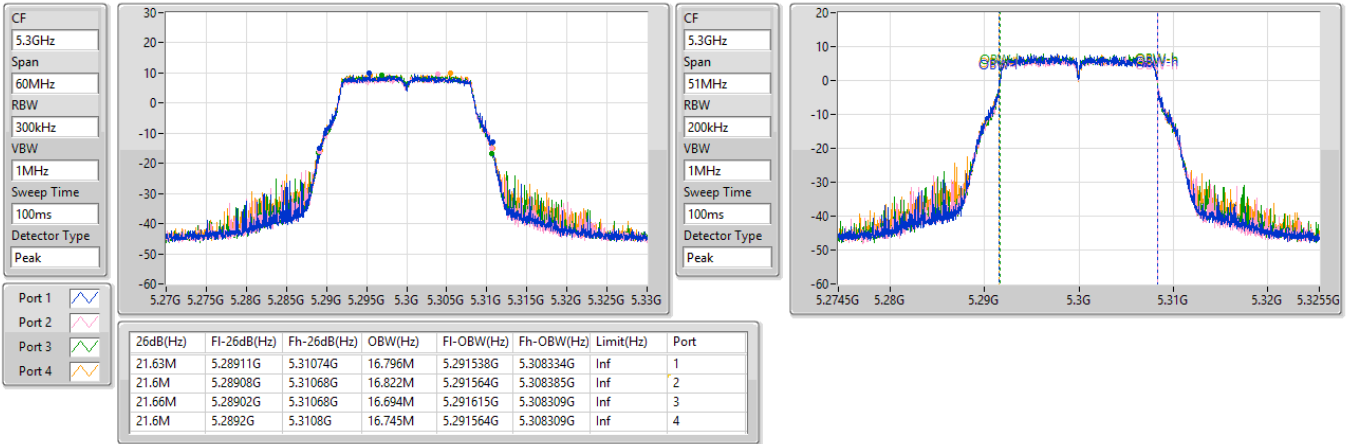
| 26dB(Hz) | Fl-26dB(Hz) | Fh-26dB(Hz) | OBW(Hz) | Fl-OBW(Hz) | Fh-OBW(Hz) | Limit(Hz) | Port |
|----------|-------------|-------------|---------|------------|------------|-----------|------|
| 21.81M | 5.24902G | 5.27083G | 16.796M | 5.251538G | 5.268334G | Inf | 1 |
| 21.45M | 5.24923G | 5.27068G | 16.771M | 5.251564G | 5.268334G | Inf | 2 |
| 21.63M | 5.24917G | 5.2708G | 16.72M | 5.251615G | 5.268334G | Inf | 3 |
| 21.57M | 5.24914G | 5.27071G | 16.72M | 5.251589G | 5.268309G | Inf | 4 |

5.25-5.35GHz_802.11a_Nss1,(6Mbps)_4TX

EBW

5300MHz

18/01/2023

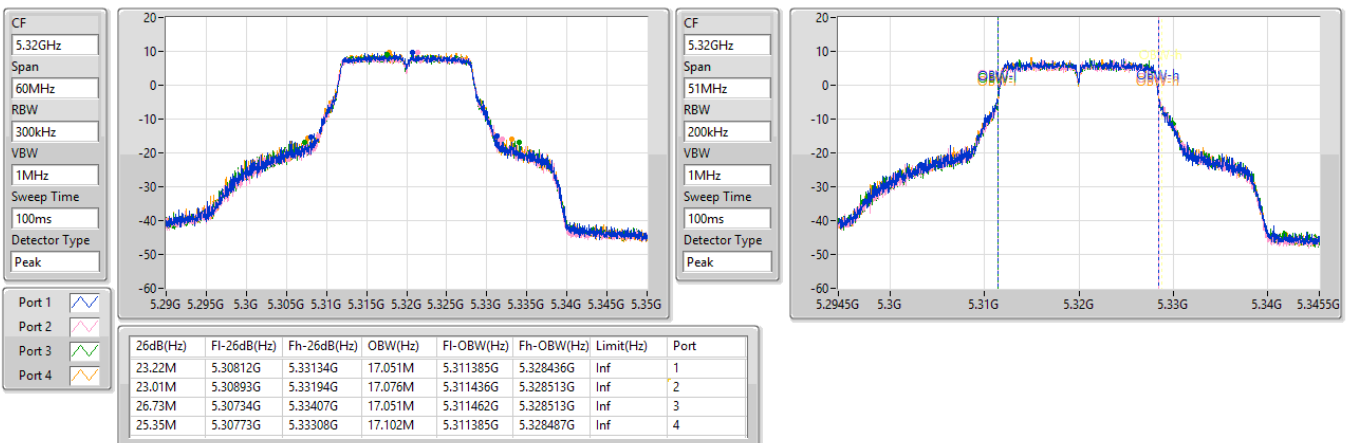


5.25-5.35GHz_802.11a_Nss1,(6Mbps)_4TX

EBW

5320MHz

18/01/2023

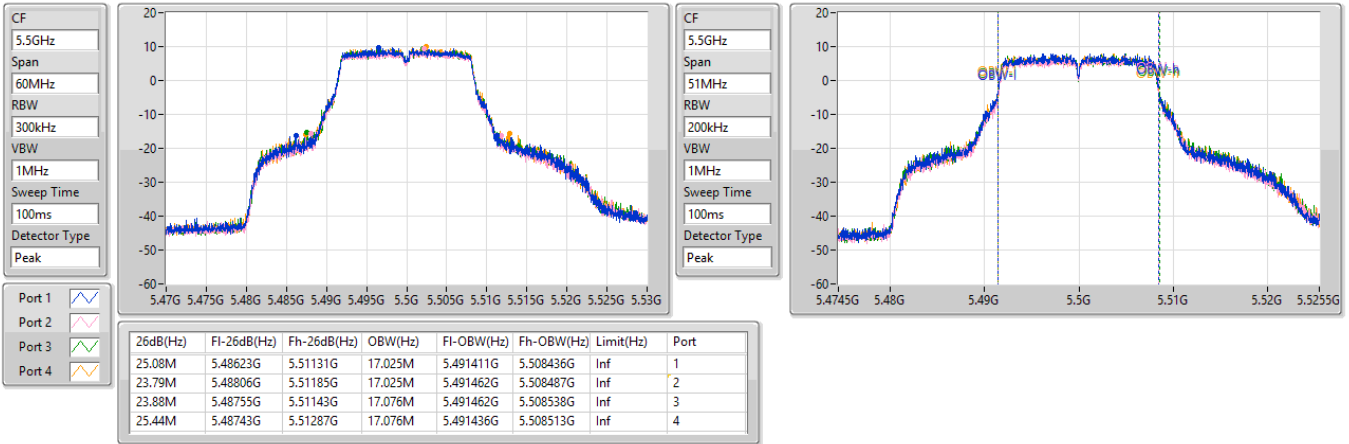


5.47-5.725GHz_802.11a_Nss1,(6Mbps)_4TX

EBW

5500MHz

18/01/2023

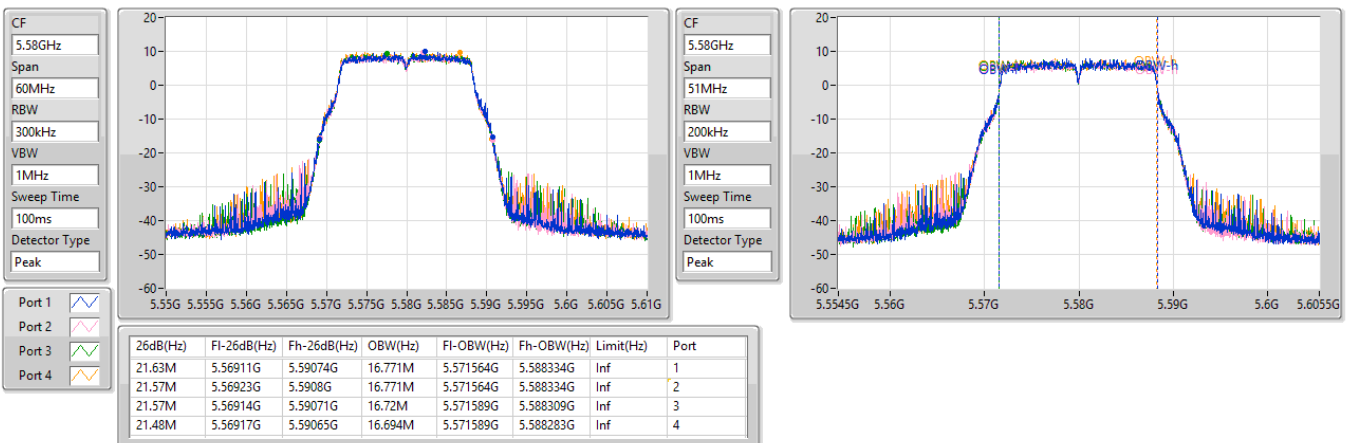


5.47-5.725GHz_802.11a_Nss1,(6Mbps)_4TX

EBW

5580MHz

18/01/2023

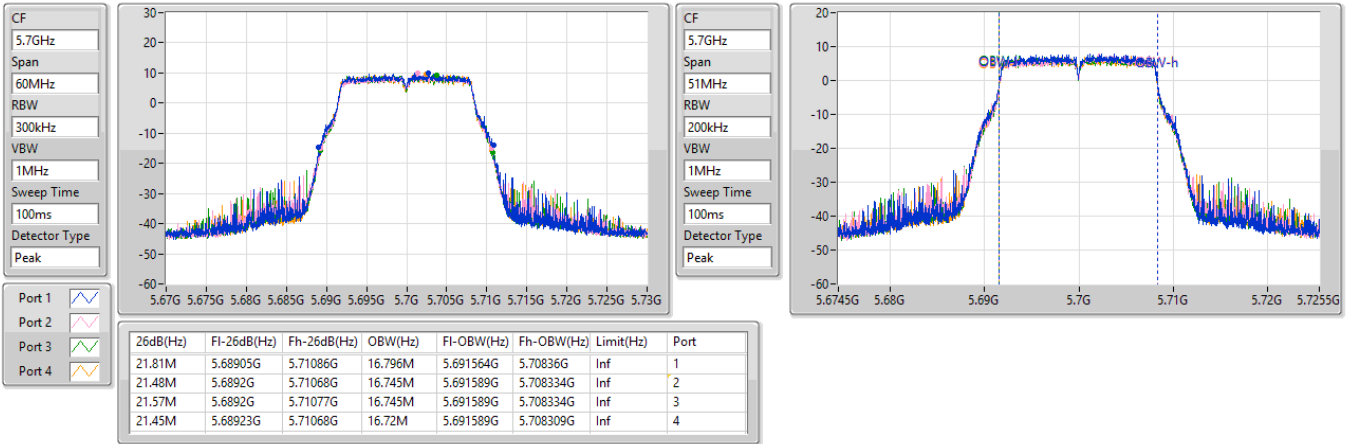


5.47-5.725GHz_802.11a_Nss1,(6Mbps)_4TX

EBW

5700MHz

18/01/2023

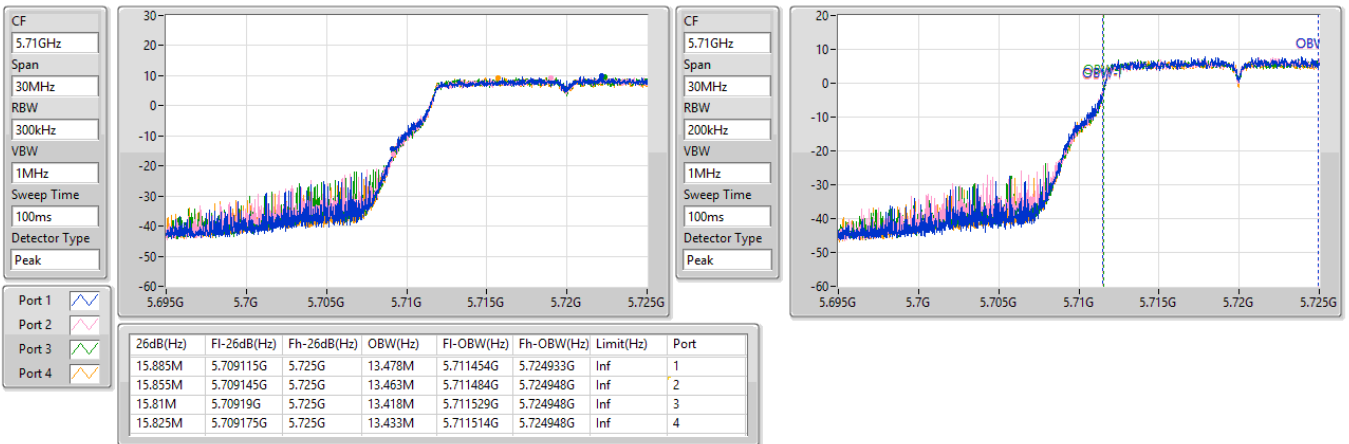


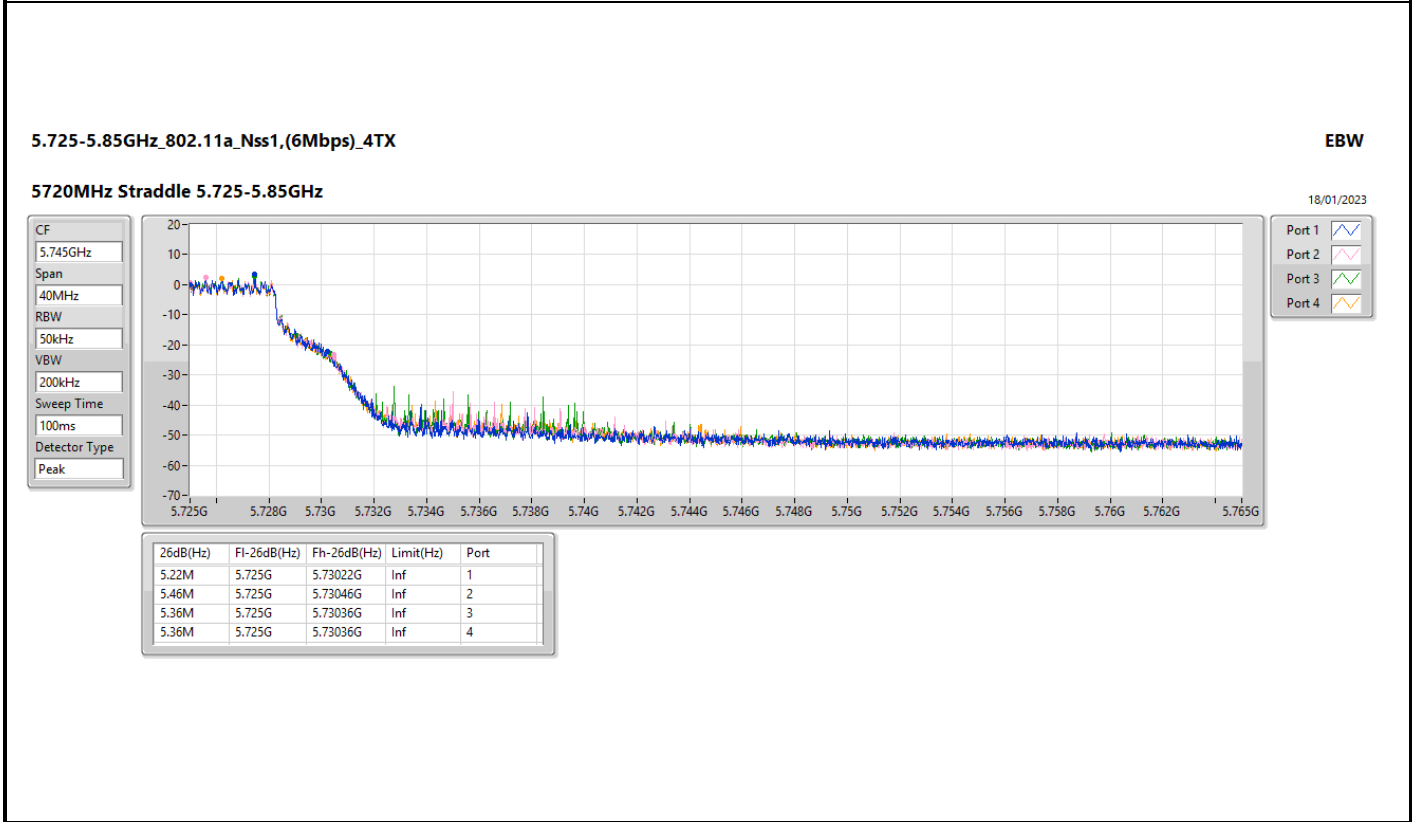
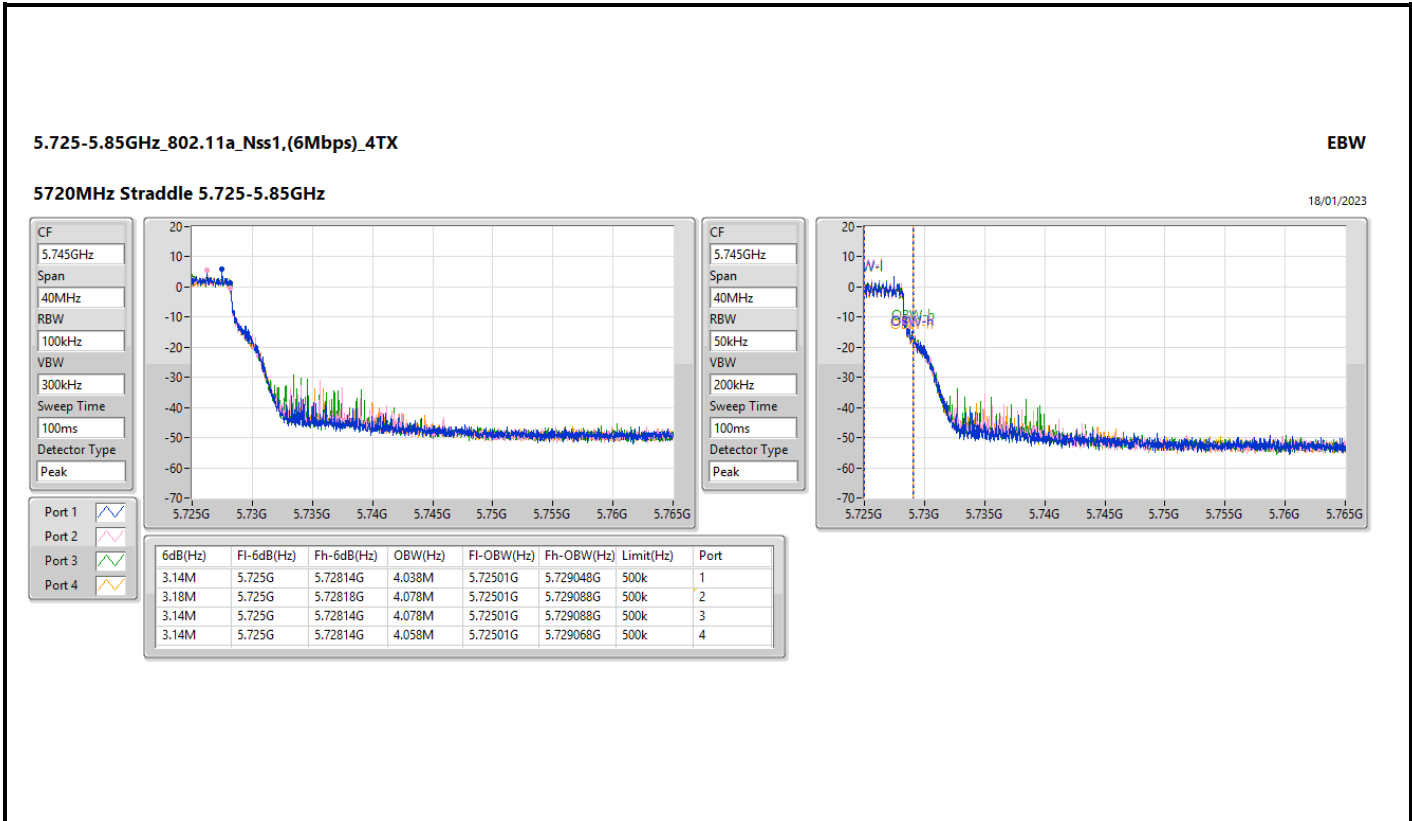
5.47-5.725GHz_802.11a_Nss1,(6Mbps)_4TX

EBW

5720MHz Straddle 5.47-5.725GHz

18/01/2023



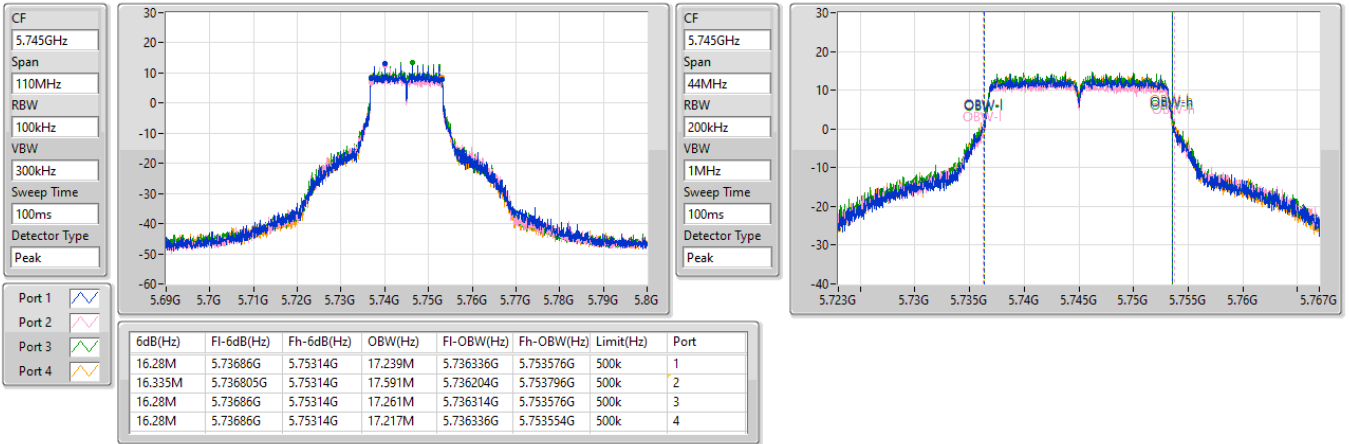


5.725-5.85GHz_802.11a_Nss1,(6Mbps)_4TX

EBW

5745MHz

22/02/2023

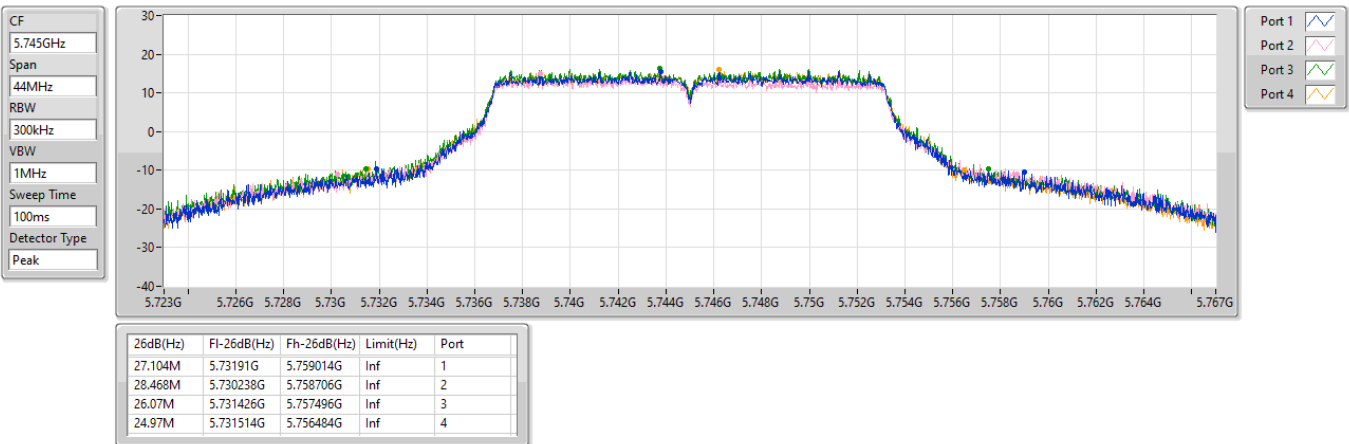


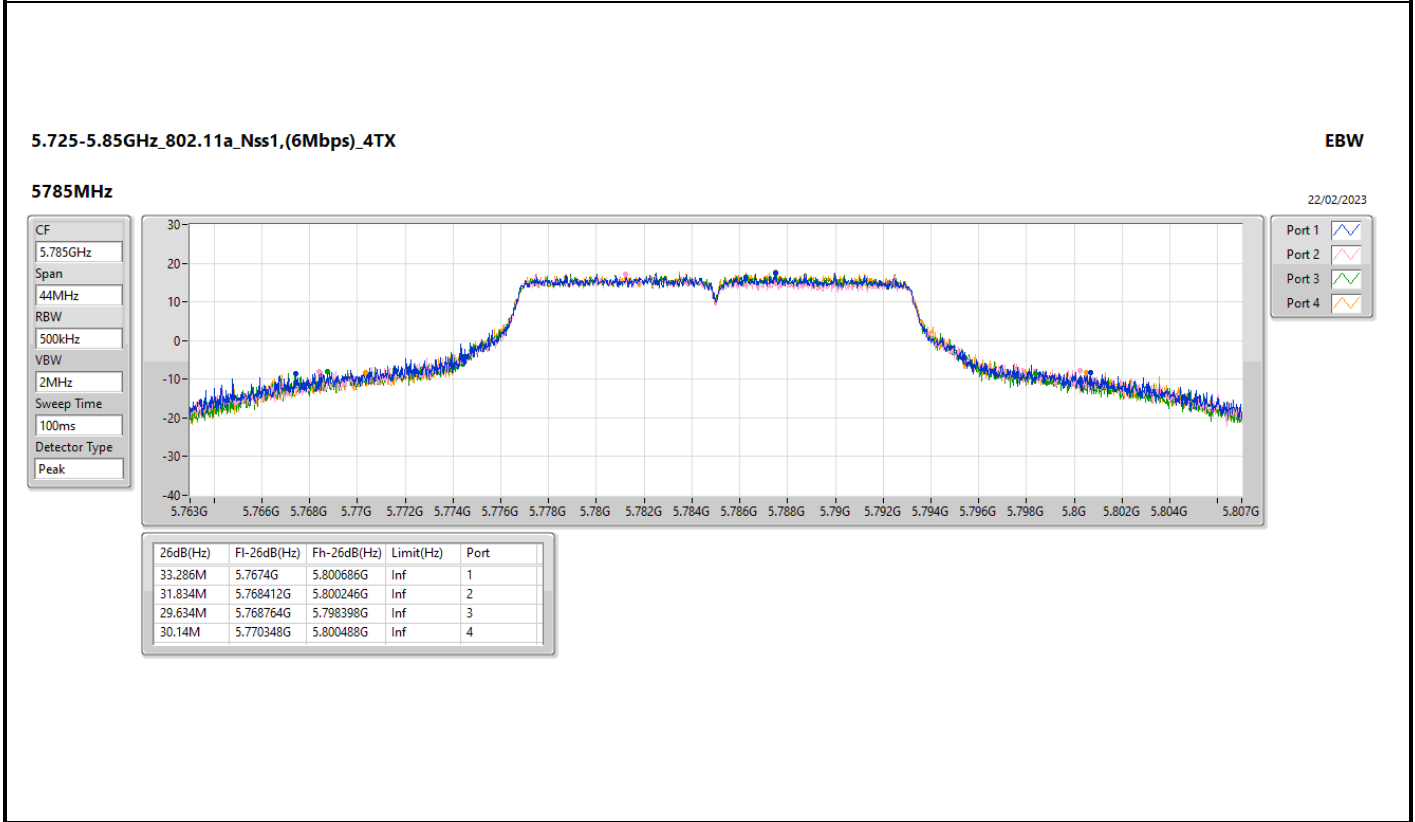
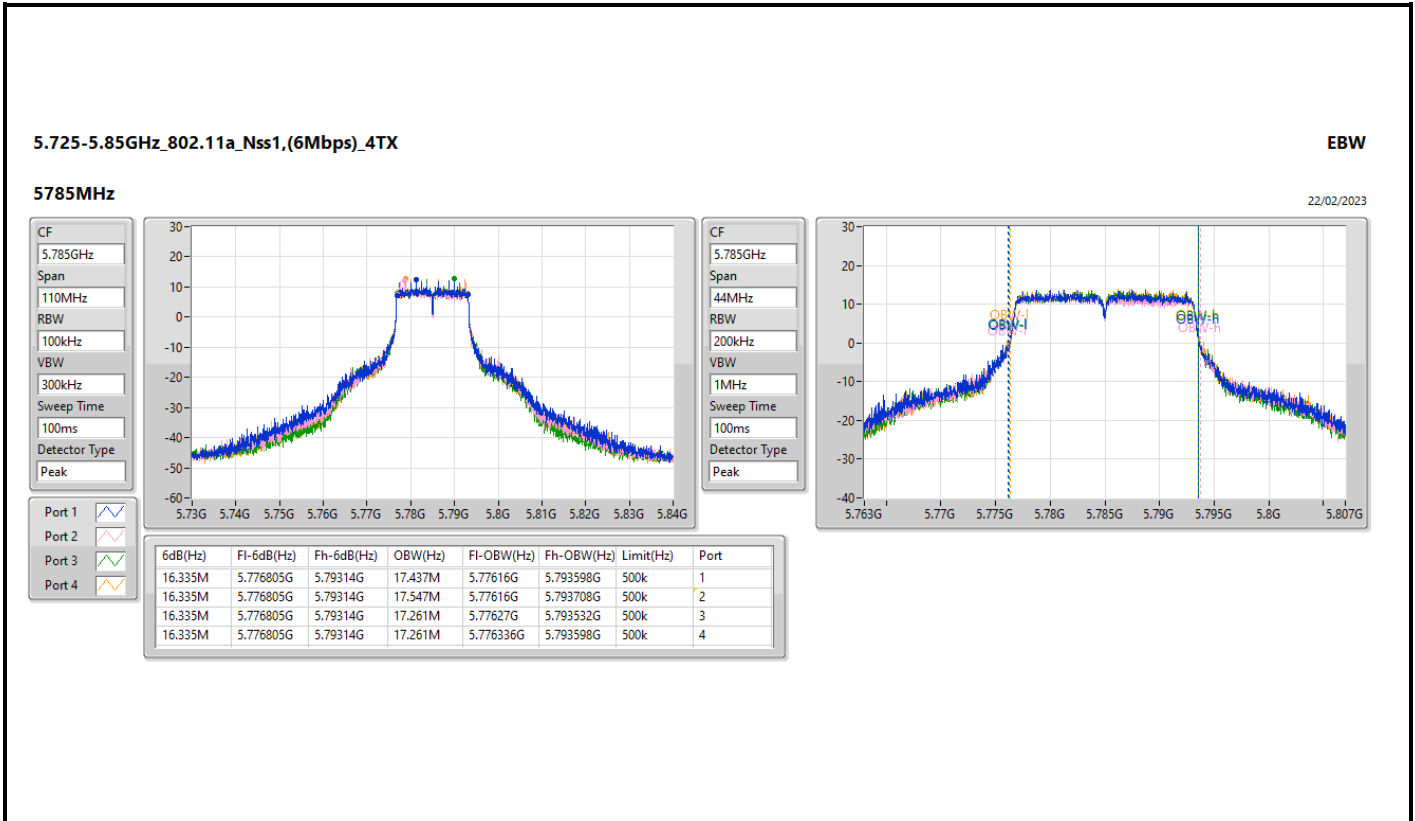
5.725-5.85GHz_802.11a_Nss1,(6Mbps)_4TX

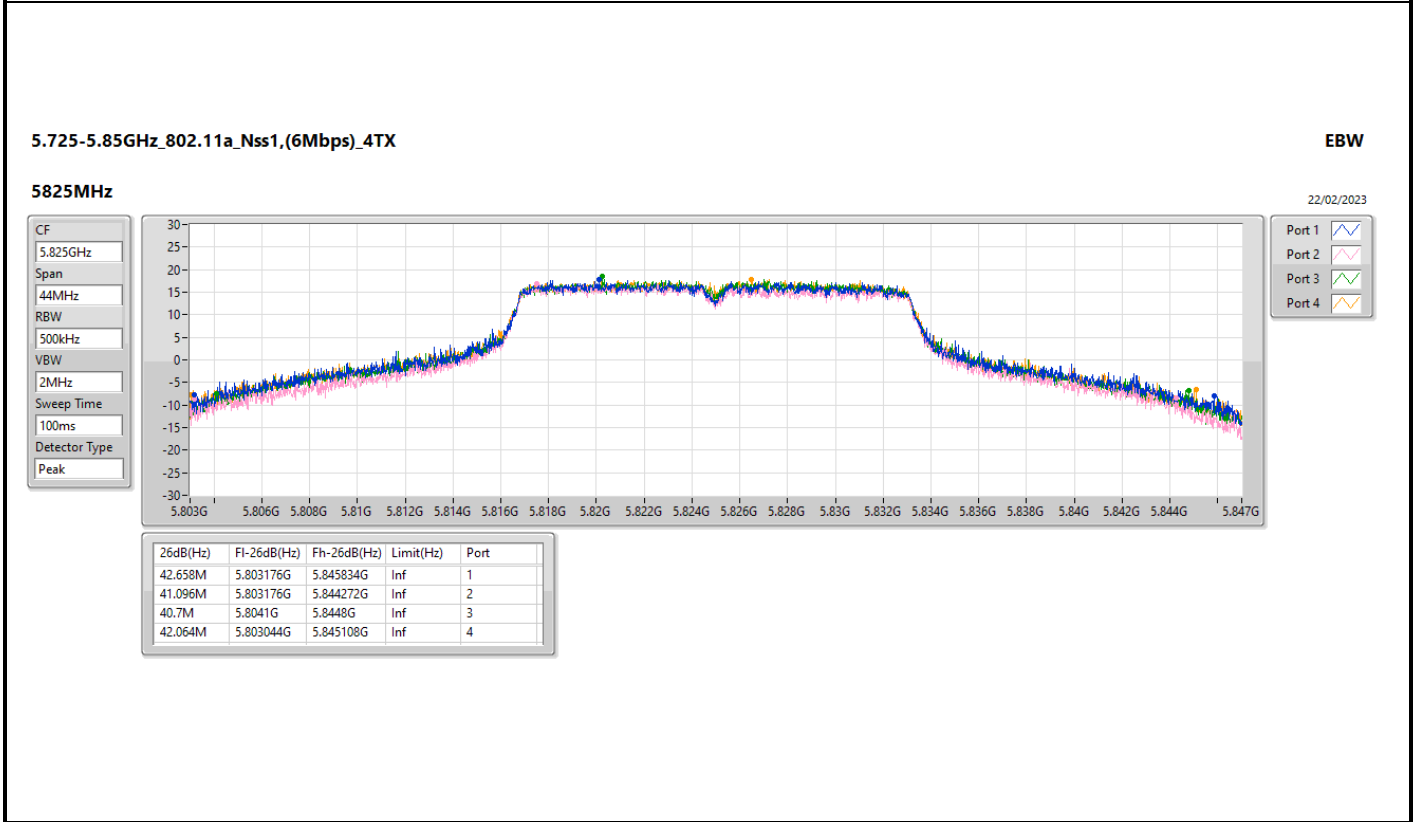
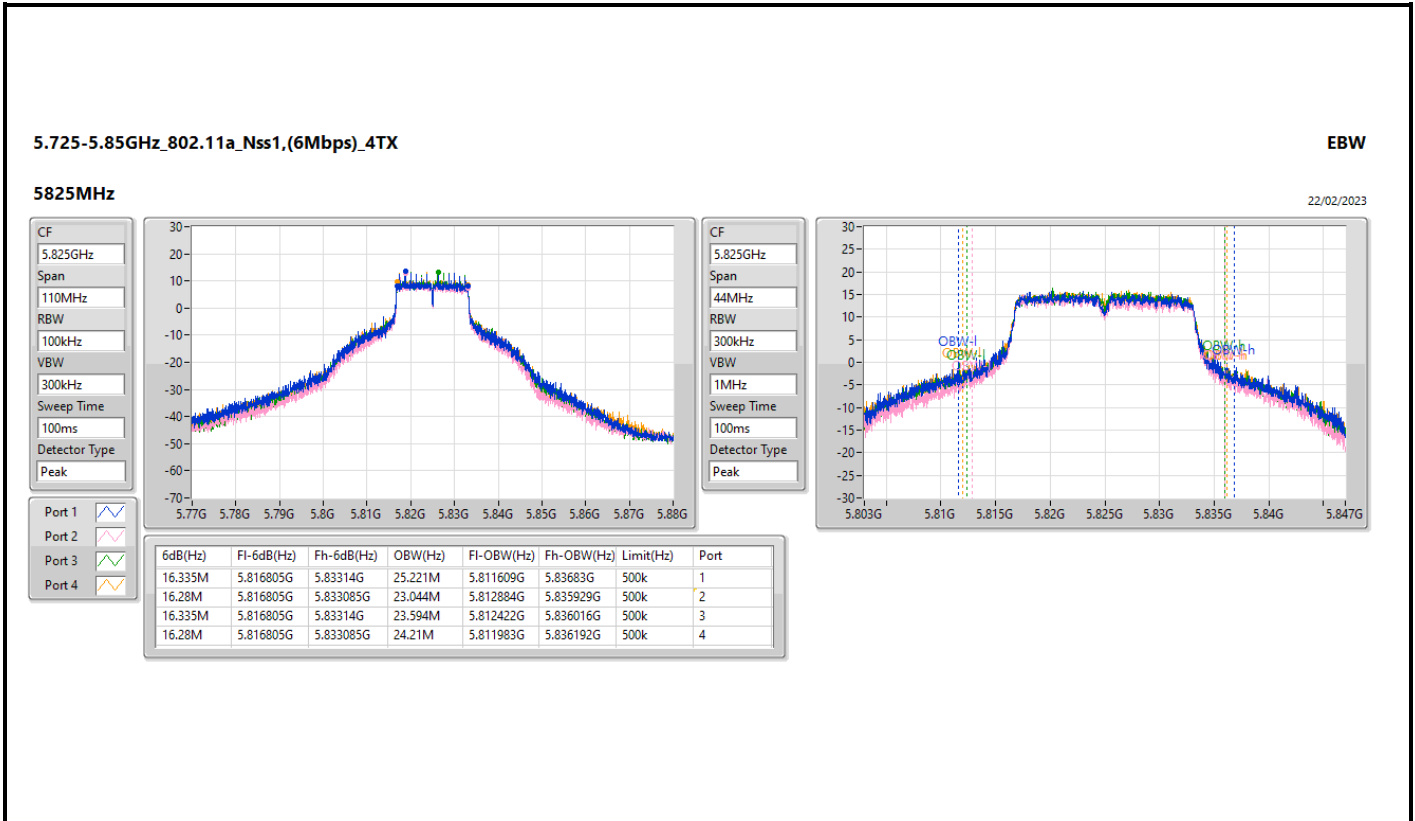
EBW

5745MHz

22/02/2023







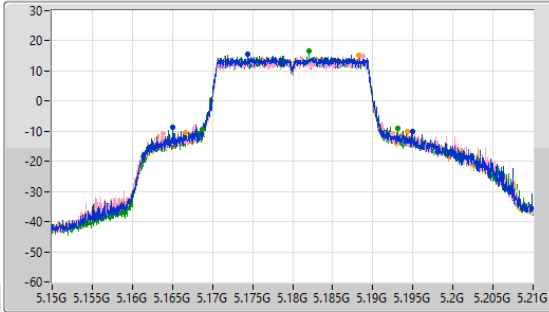
5.15-5.25GHz_802.11be EHT20-BF_Nss1,(MCS0)_4TX

EBW

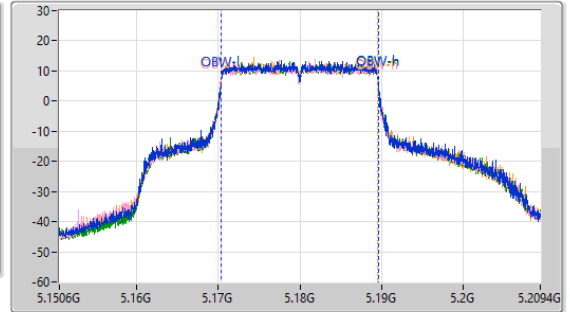
5180MHz

18/01/2023

CF
5.18GHz
Span
60MHz
RBW
300kHz
VBW
1MHz
Sweep Time
100ms
Detector Type
Peak



CF
5.18GHz
Span
58.8MHz
RBW
200kHz
VBW
1MHz
Sweep Time
100ms
Detector Type
Peak



| 26dB(Hz) | Fl-26dB(Hz) | Fh-26dB(Hz) | OBW(Hz) | Fl-OBW(Hz) | Fh-OBW(Hz) | Limit(Hz) | Port |
|----------|-------------|-------------|---------|------------|------------|-----------|------|
| 29.85M | 5.16509G | 5.19494G | 19.189M | 5.170391G | 5.18958G | Inf | 1 |
| 28.56M | 5.16389G | 5.19245G | 19.189M | 5.170362G | 5.18955G | Inf | 2 |
| 24.39M | 5.16872G | 5.19311G | 19.218M | 5.170362G | 5.18958G | Inf | 3 |
| 27.69M | 5.16668G | 5.19437G | 19.189M | 5.170362G | 5.18955G | Inf | 4 |

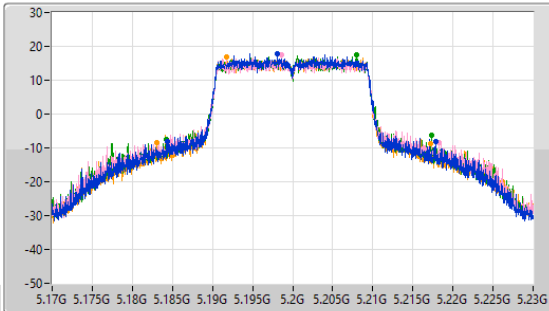
5.15-5.25GHz_802.11be EHT20-BF_Nss1,(MCS0)_4TX

EBW

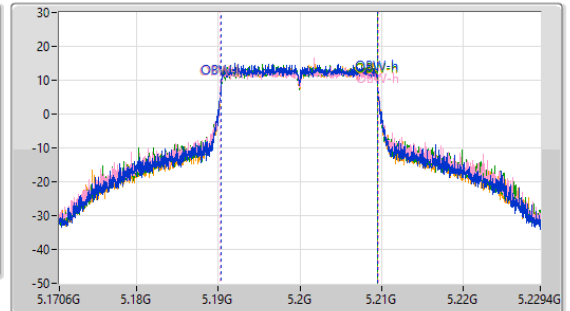
5200MHz

18/01/2023

CF
5.2GHz
Span
60MHz
RBW
300kHz
VBW
1MHz
Sweep Time
100ms
Detector Type
Peak



CF
5.2GHz
Span
58.8MHz
RBW
200kHz
VBW
1MHz
Sweep Time
100ms
Detector Type
Peak



| 26dB(Hz) | Fl-26dB(Hz) | Fh-26dB(Hz) | OBW(Hz) | Fl-OBW(Hz) | Fh-OBW(Hz) | Limit(Hz) | Port |
|----------|-------------|-------------|---------|------------|------------|-----------|------|
| 33.51M | 5.18434G | 5.21785G | 19.189M | 5.190362G | 5.20955G | Inf | 1 |
| 33.66M | 5.18458G | 5.21824G | 19.394M | 5.190244G | 5.209638G | Inf | 2 |
| 33.12M | 5.18425G | 5.21737G | 19.247M | 5.190303G | 5.20955G | Inf | 3 |
| 34.14M | 5.18302G | 5.21716G | 19.218M | 5.190332G | 5.20955G | Inf | 4 |

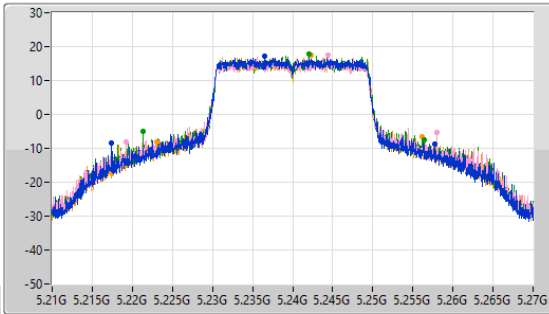
5.15-5.25GHz_802.11be EHT20-BF_Nss1,(MCS0)_4TX

EBW

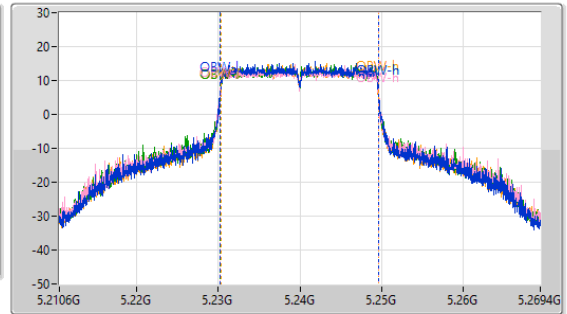
5240MHz

18/01/2023

CF: 5.24GHz
 Span: 60MHz
 RBW: 300kHz
 VBW: 1MHz
 Sweep Time: 100ms
 Detector Type: Peak



CF: 5.24GHz
 Span: 58.8MHz
 RBW: 200kHz
 VBW: 1MHz
 Sweep Time: 100ms
 Detector Type: Peak



| 26dB(Hz) | Fl-26dB(Hz) | Fh-26dB(Hz) | OBW(Hz) | Fl-OBW(Hz) | Fh-OBW(Hz) | Limit(Hz) | Port |
|----------|-------------|-------------|---------|------------|------------|-----------|------|
| 40.26M | 5.21744G | 5.2577G | 19.277M | 5.230303G | 5.24958G | Inf | 1 |
| 38.76M | 5.21921G | 5.25797G | 19.365M | 5.230244G | 5.249609G | Inf | 2 |
| 35.07M | 5.2214G | 5.25647G | 19.365M | 5.230244G | 5.249609G | Inf | 3 |
| 33.09M | 5.22311G | 5.2562G | 19.247M | 5.230332G | 5.24958G | Inf | 4 |

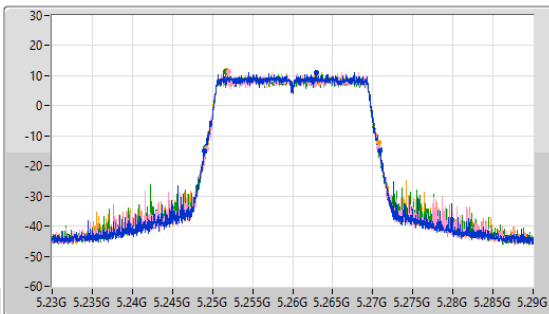
5.25-5.35GHz_802.11be EHT20-BF_Nss1,(MCS0)_4TX

EBW

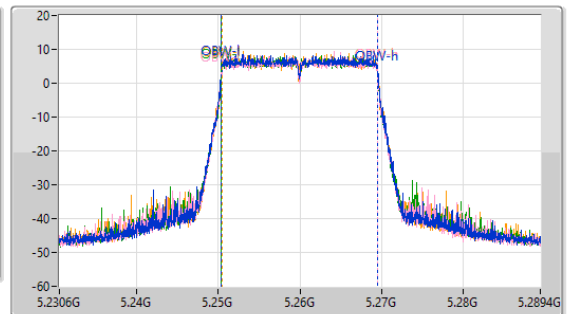
5260MHz

18/01/2023

CF: 5.26GHz
 Span: 60MHz
 RBW: 300kHz
 VBW: 1MHz
 Sweep Time: 100ms
 Detector Type: Peak



CF: 5.26GHz
 Span: 58.8MHz
 RBW: 200kHz
 VBW: 1MHz
 Sweep Time: 100ms
 Detector Type: Peak



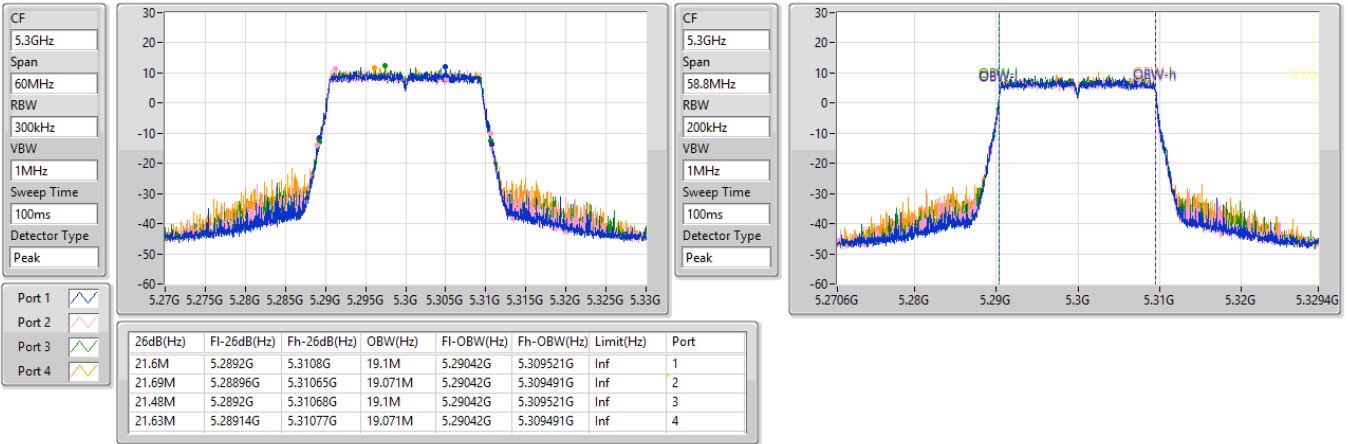
| 26dB(Hz) | Fl-26dB(Hz) | Fh-26dB(Hz) | OBW(Hz) | Fl-OBW(Hz) | Fh-OBW(Hz) | Limit(Hz) | Port |
|----------|-------------|-------------|---------|------------|------------|-----------|------|
| 21.96M | 5.24893G | 5.27089G | 19.1M | 5.25042G | 5.269521G | Inf | 1 |
| 21.57M | 5.2492G | 5.27077G | 19.071M | 5.250391G | 5.269462G | Inf | 2 |
| 21.81M | 5.24911G | 5.27092G | 19.071M | 5.25042G | 5.269491G | Inf | 3 |
| 21.6M | 5.24911G | 5.27071G | 19.012M | 5.25045G | 5.269462G | Inf | 4 |

5.25-5.35GHz_802.11be EHT20-BF_Nss1,(MCS0)_4TX

EBW

5300MHz

18/01/2023

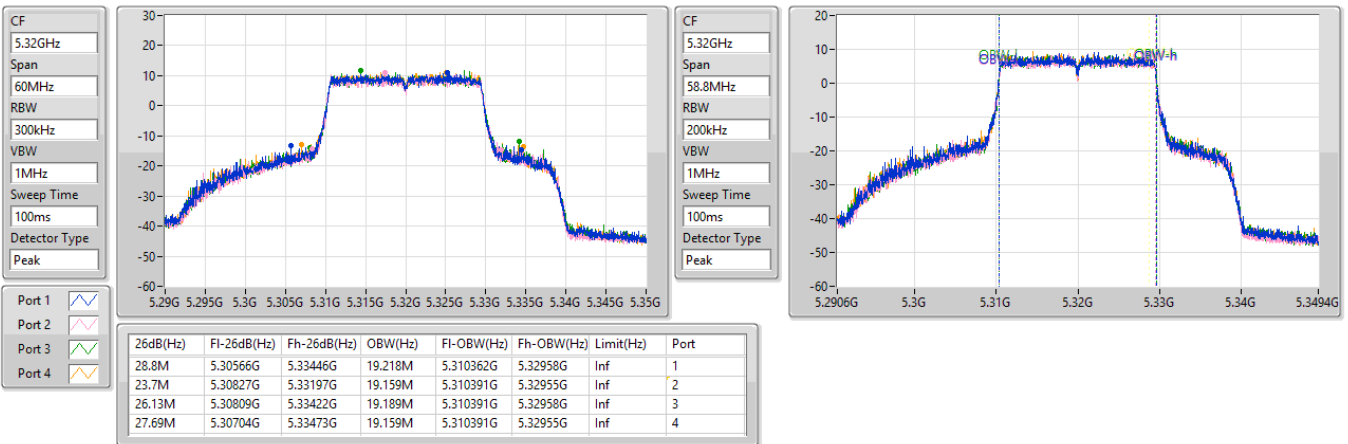


5.25-5.35GHz_802.11be EHT20-BF_Nss1,(MCS0)_4TX

EBW

5320MHz

18/01/2023

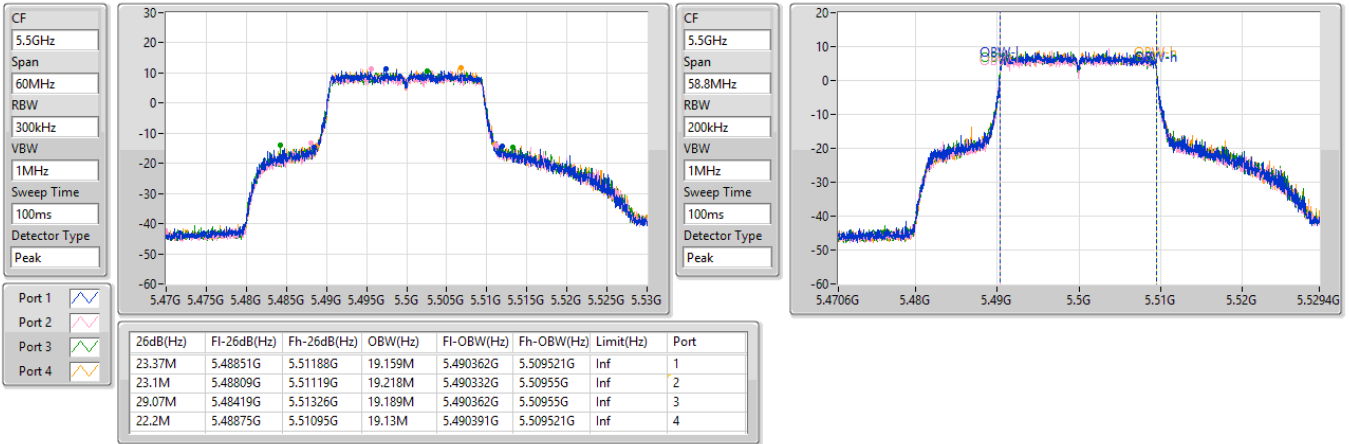


5.47-5.725GHz_802.11be EHT20-BF_Nss1,(MCS0)_4TX

EBW

5500MHz

18/01/2023

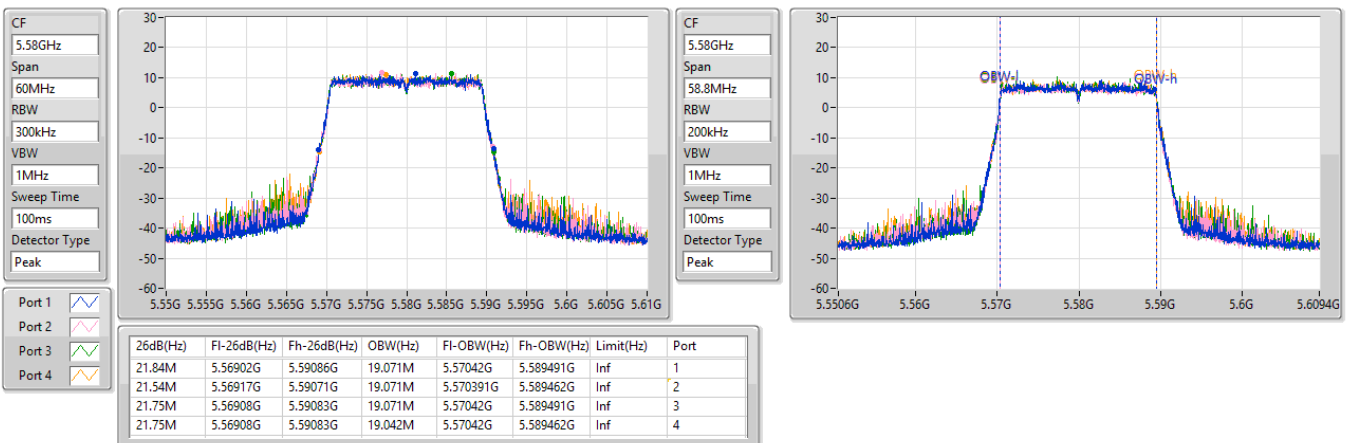


5.47-5.725GHz_802.11be EHT20-BF_Nss1,(MCS0)_4TX

EBW

5580MHz

18/01/2023

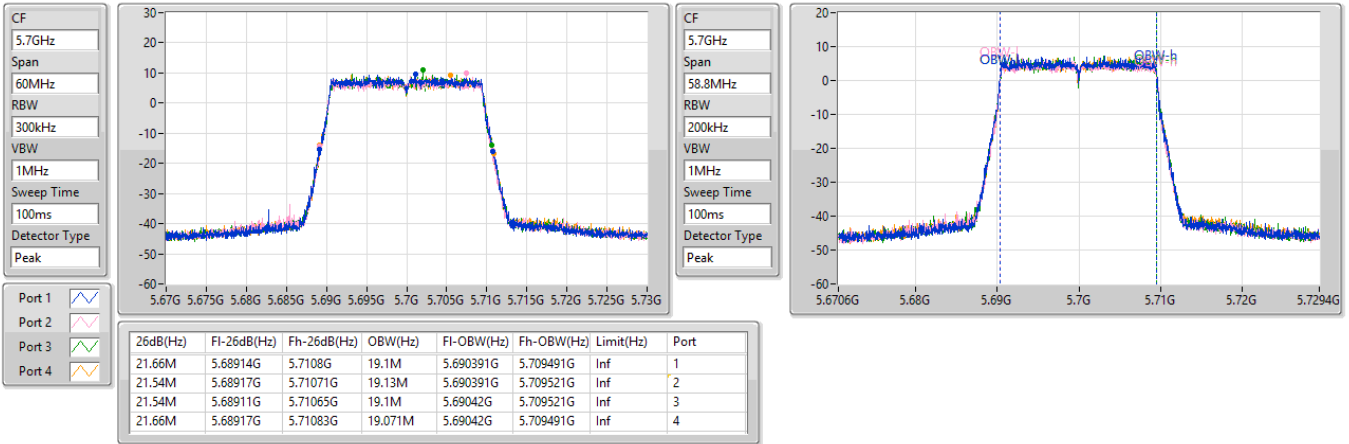


5.47-5.725GHz_802.11be EHT20-BF_Nss1,(MCS0)_4TX

EBW

5700MHz

18/01/2023

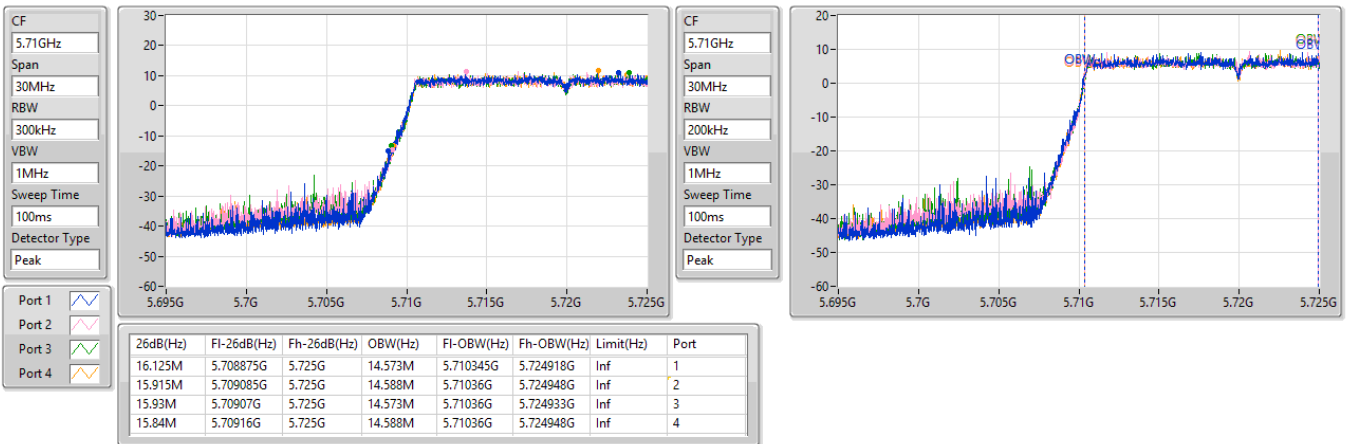


5.47-5.725GHz_802.11be EHT20-BF_Nss1,(MCS0)_4TX

EBW

5720MHz Straddle 5.47-5.725GHz

18/01/2023

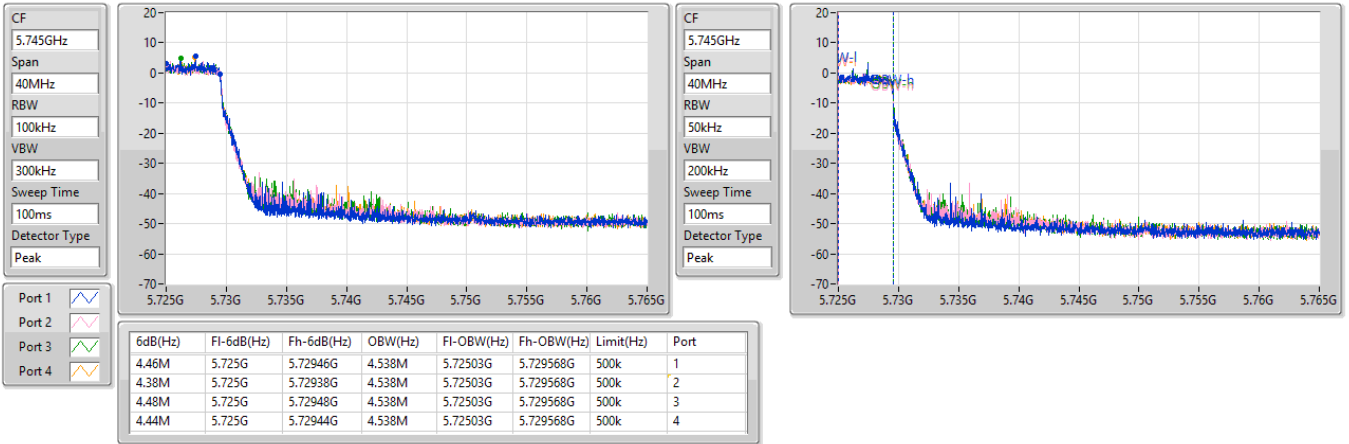


5.725-5.85GHz_802.11be EHT20-BF_Nss1,(MCS0)_4TX

EBW

5720MHz Straddle 5.725-5.85GHz

18/01/2023

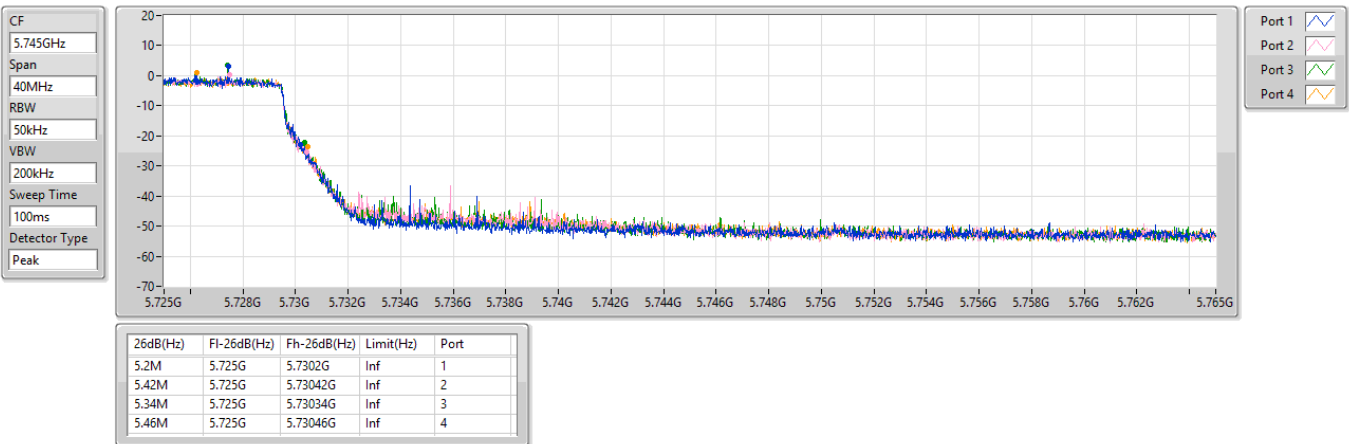


5.725-5.85GHz_802.11be EHT20-BF_Nss1,(MCS0)_4TX

EBW

5720MHz Straddle 5.725-5.85GHz

18/01/2023

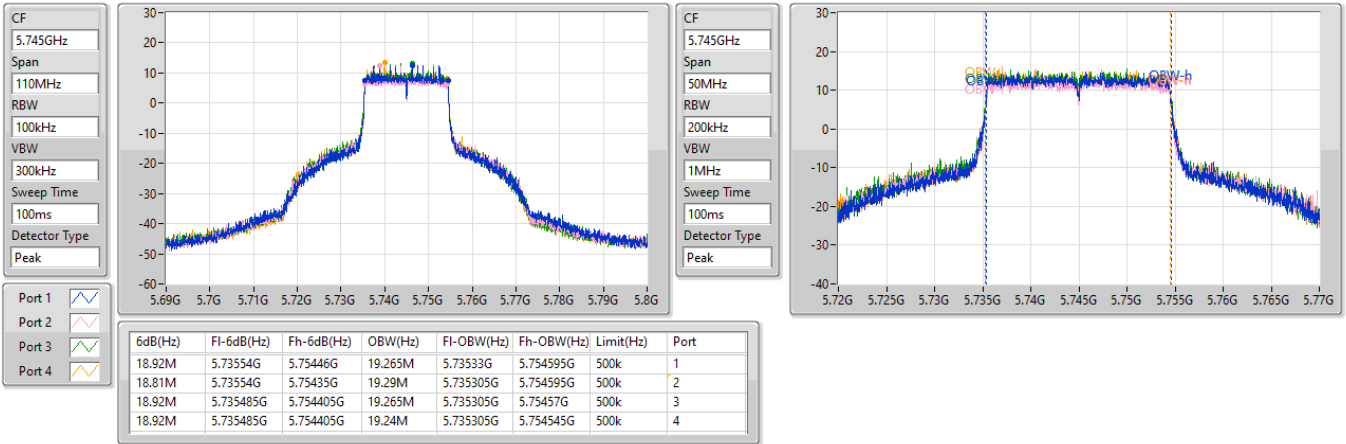


5.725-5.85GHz_802.11be EHT20-BF_Nss1,(MCS0)_4TX

EBW

5745MHz

22/02/2023



5.725-5.85GHz_802.11be EHT20-BF_Nss1,(MCS0)_4TX

EBW

5745MHz

22/02/2023

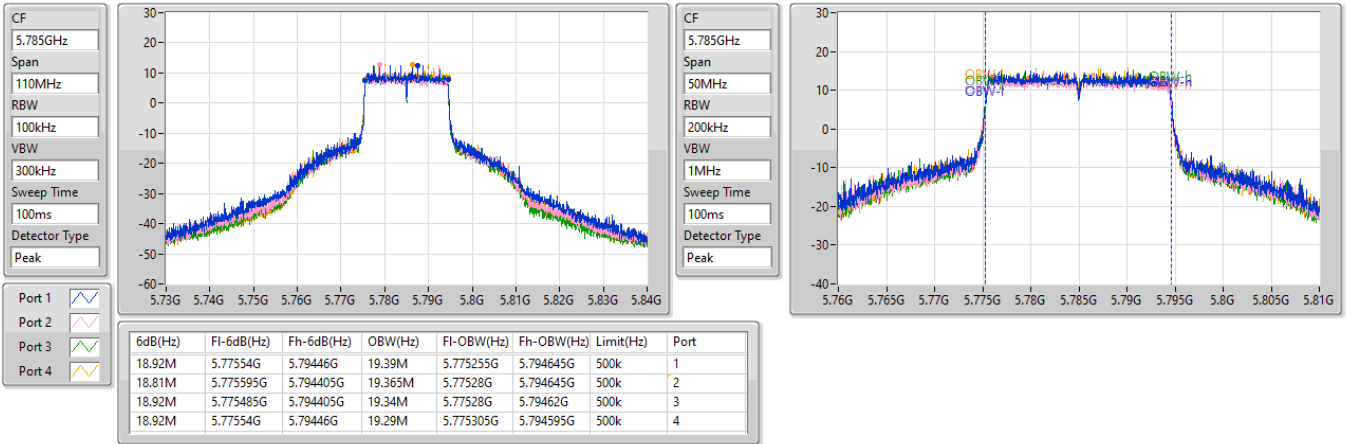


5.725-5.85GHz_802.11be EHT20-BF_Nss1,(MCS0)_4TX

EBW

5785MHz

22/02/2023

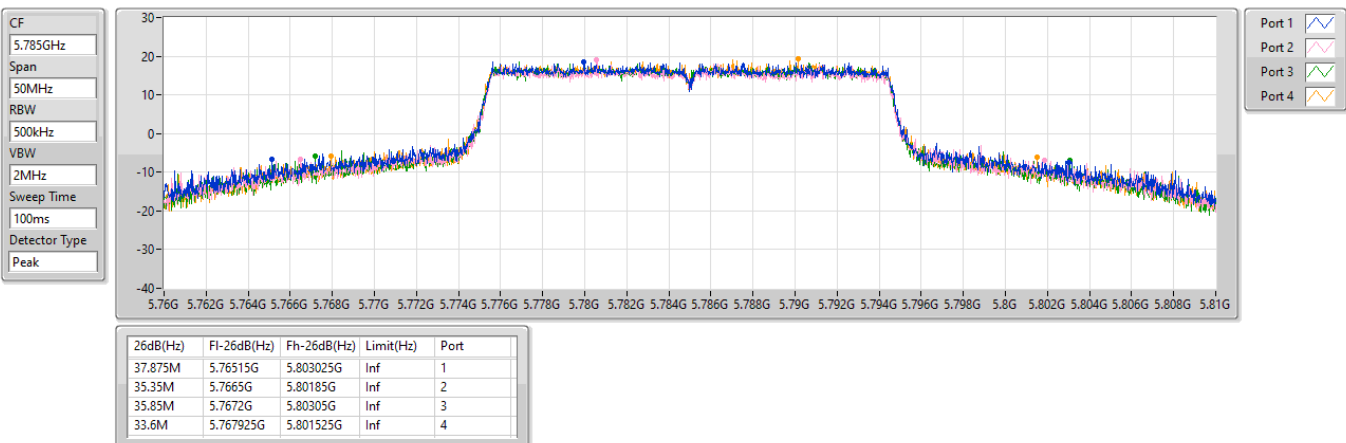


5.725-5.85GHz_802.11be EHT20-BF_Nss1,(MCS0)_4TX

EBW

5785MHz

22/02/2023

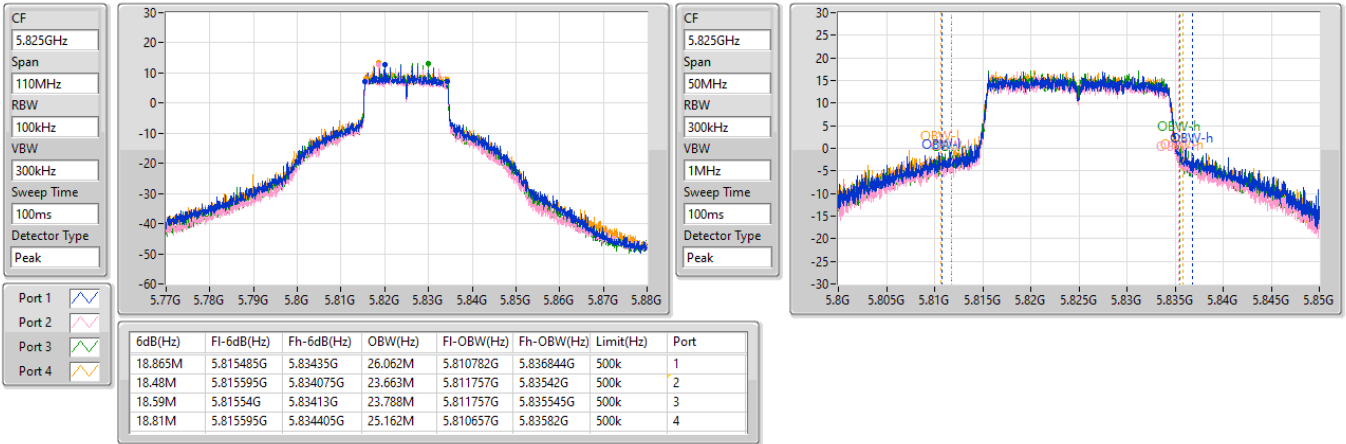


5.725-5.85GHz_802.11be EHT20-BF_Nss1,(MCS0)_4TX

EBW

5825MHz

22/02/2023



5.725-5.85GHz_802.11be EHT20-BF_Nss1,(MCS0)_4TX

EBW

5825MHz

22/02/2023

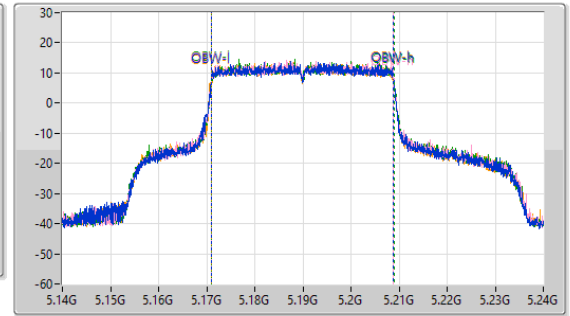
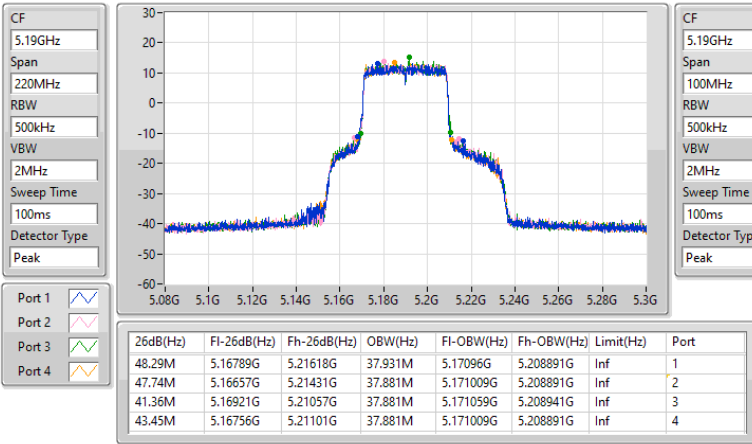


5.15-5.25GHz_802.11be EHT40-BF_Nss1,(MCS0)_4TX

EBW

5190MHz

22/02/2023

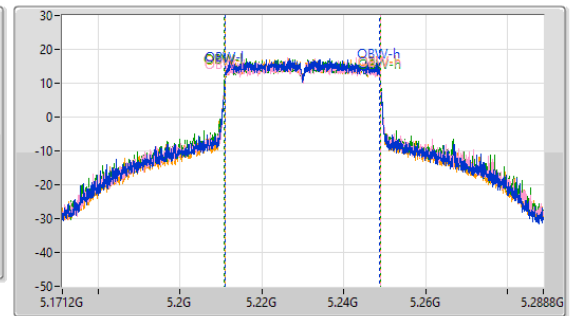
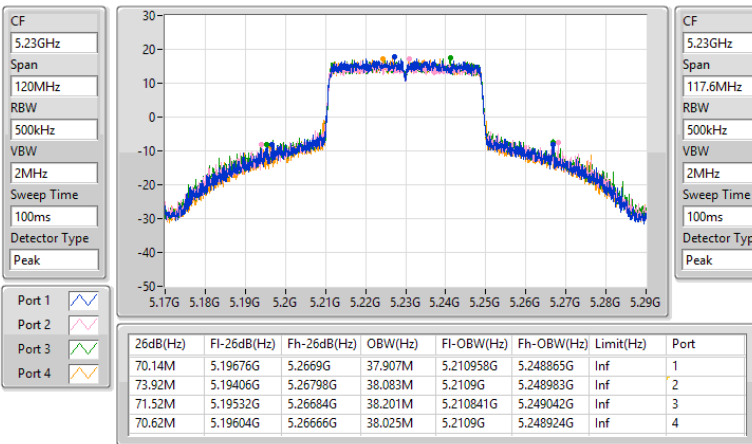


5.15-5.25GHz_802.11be EHT40-BF_Nss1,(MCS0)_4TX

EBW

5230MHz

18/01/2023



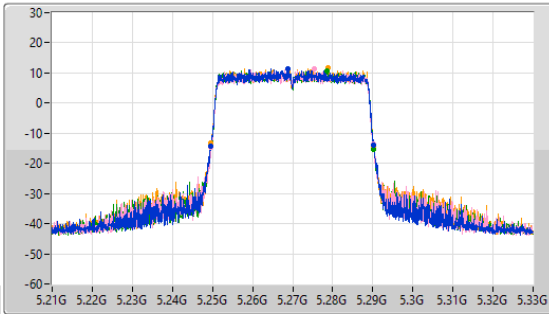
5.25-5.35GHz_802.11be EHT40-BF_Nss1,(MCS0)_4TX

EBW

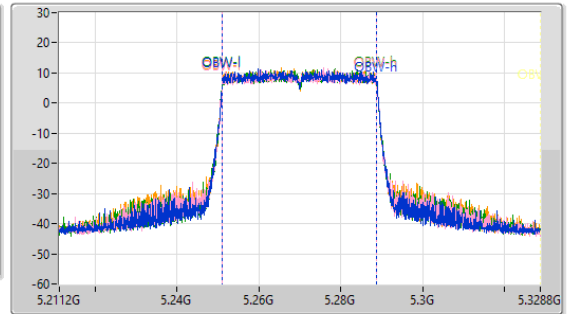
5270MHz

18/01/2023

CF
5.27GHz
Span
120MHz
RBW
500kHz
VBW
2MHz
Sweep Time
100ms
Detector Type
Peak



CF
5.27GHz
Span
117.6MHz
RBW
500kHz
VBW
2MHz
Sweep Time
100ms
Detector Type
Peak



Port 1
Port 2
Port 3
Port 4

| 26dB(Hz) | Fl-26dB(Hz) | Fh-26dB(Hz) | OBW(Hz) | Fl-OBW(Hz) | Fh-OBW(Hz) | Limit(Hz) | Port |
|----------|-------------|-------------|---------|------------|------------|-----------|------|
| 40.74M | 5.24948G | 5.29022G | 37.731M | 5.251076G | 5.288807G | Inf | 1 |
| 40.44M | 5.24966G | 5.2901G | 37.731M | 5.251076G | 5.288807G | Inf | 2 |
| 40.68M | 5.2496G | 5.29028G | 37.731M | 5.251076G | 5.288807G | Inf | 3 |
| 40.56M | 5.24966G | 5.29022G | 37.731M | 5.251076G | 5.288807G | Inf | 4 |

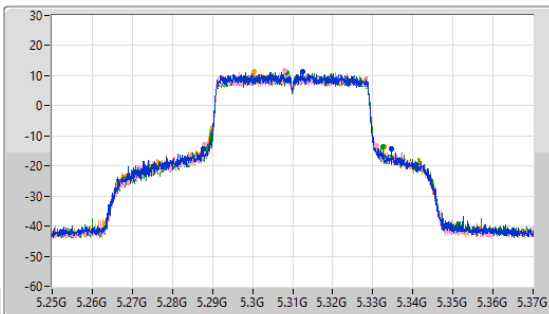
5.25-5.35GHz_802.11be EHT40-BF_Nss1,(MCS0)_4TX

EBW

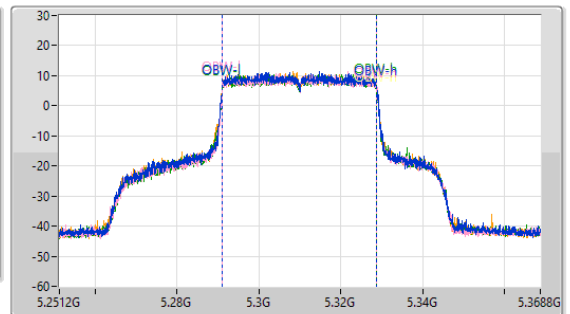
5310MHz

18/01/2023

CF
5.31GHz
Span
120MHz
RBW
500kHz
VBW
2MHz
Sweep Time
100ms
Detector Type
Peak



CF
5.31GHz
Span
117.6MHz
RBW
500kHz
VBW
2MHz
Sweep Time
100ms
Detector Type
Peak



Port 1
Port 2
Port 3
Port 4

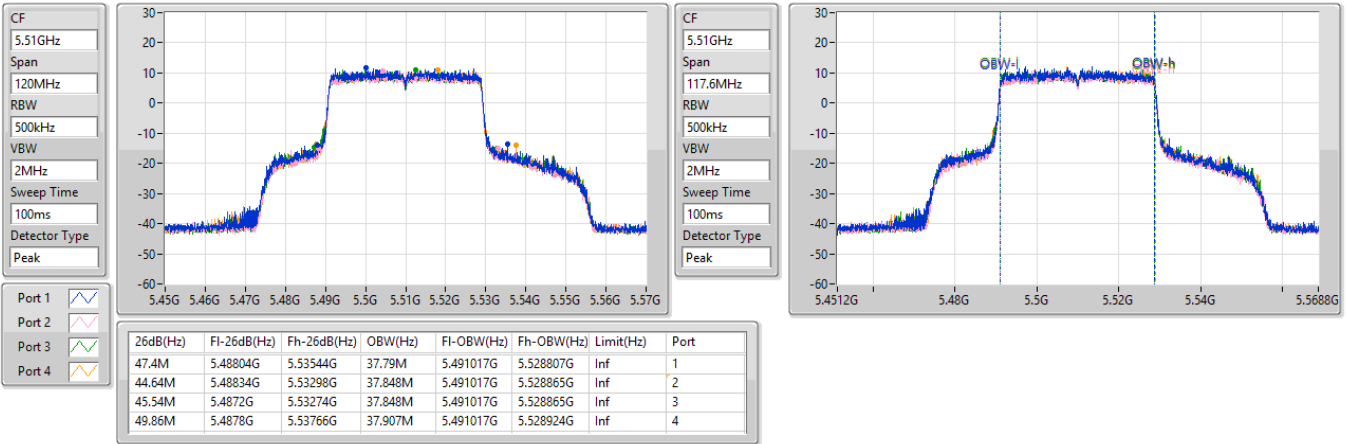
| 26dB(Hz) | Fl-26dB(Hz) | Fh-26dB(Hz) | OBW(Hz) | Fl-OBW(Hz) | Fh-OBW(Hz) | Limit(Hz) | Port |
|----------|-------------|-------------|---------|------------|------------|-----------|------|
| 46.92M | 5.28768G | 5.3346G | 37.848M | 5.291017G | 5.328865G | Inf | 1 |
| 42.78M | 5.2881G | 5.33088G | 37.848M | 5.291017G | 5.328865G | Inf | 2 |
| 44.1M | 5.28834G | 5.33244G | 37.848M | 5.291017G | 5.328865G | Inf | 3 |
| 44.76M | 5.2881G | 5.33286G | 37.907M | 5.290958G | 5.328865G | Inf | 4 |

5.47-5.725GHz_802.11be EHT40-BF_Nss1,(MCS0)_4TX

EBW

5510MHz

18/01/2023

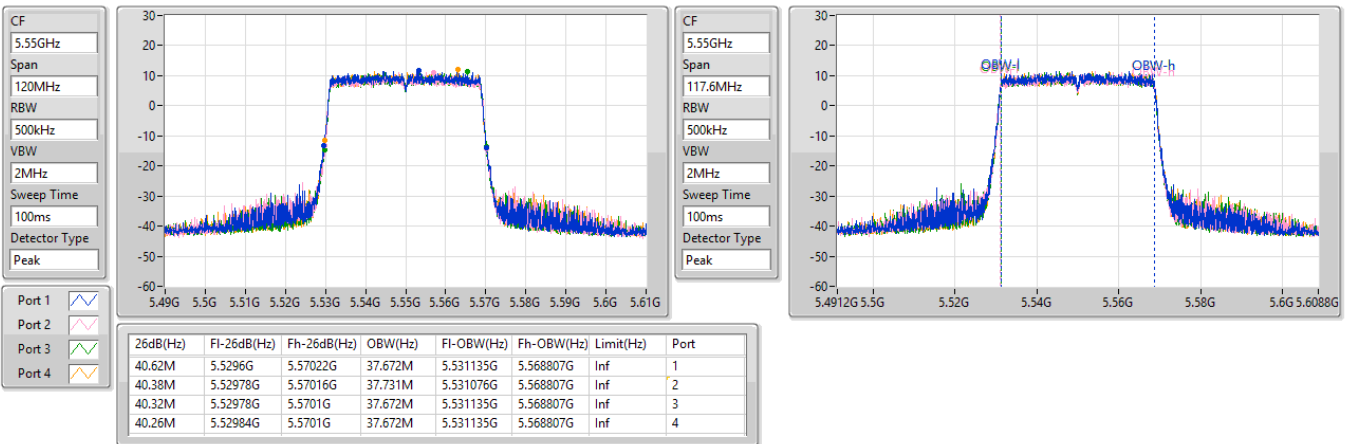


5.47-5.725GHz_802.11be EHT40-BF_Nss1,(MCS0)_4TX

EBW

5550MHz

18/01/2023

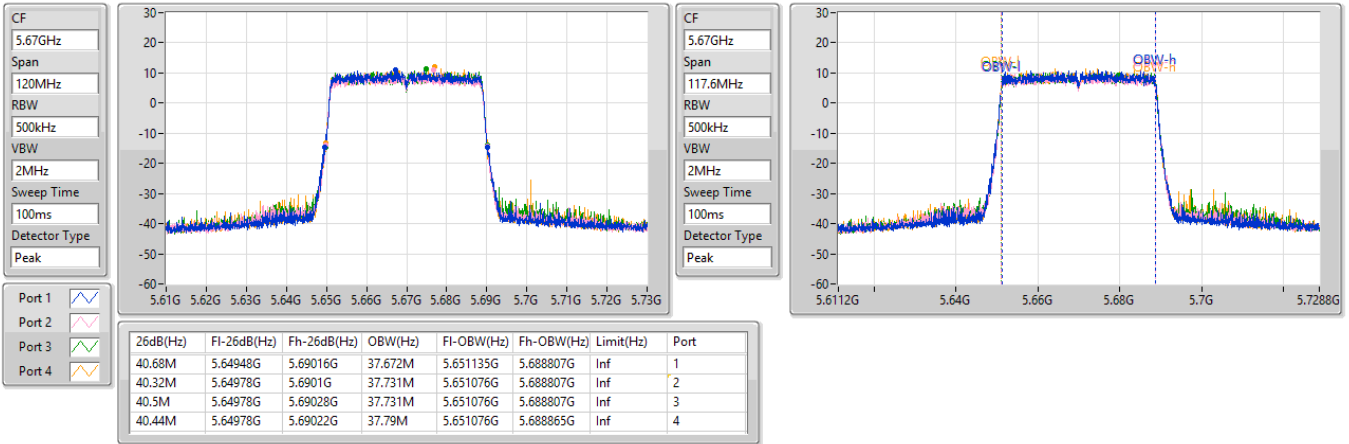


5.47-5.725GHz_802.11be EHT40-BF_Nss1,(MCS0)_4TX

EBW

5670MHz

18/01/2023

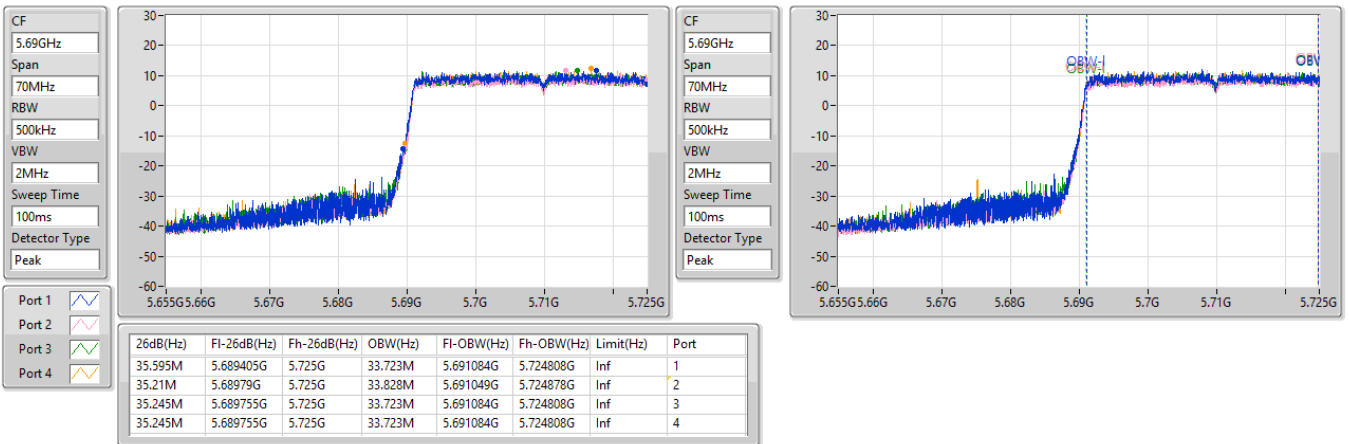


5.47-5.725GHz_802.11be EHT40-BF_Nss1,(MCS0)_4TX

EBW

5710MHz Straddle 5.47-5.725GHz

18/01/2023

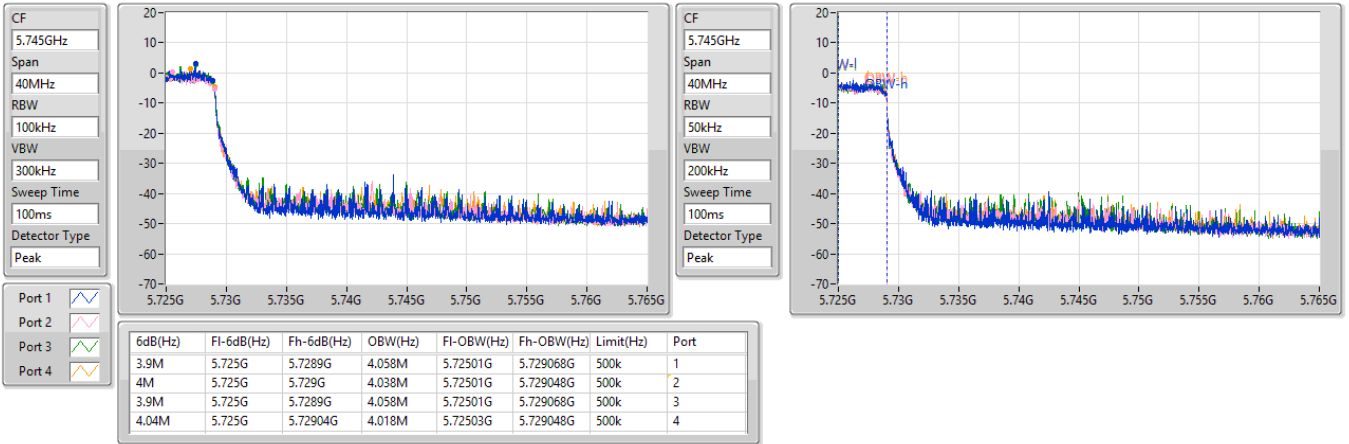


5.725-5.85GHz_802.11be EHT40-BF_Nss1,(MCS0)_4TX

EBW

5710MHz Straddle 5.725-5.85GHz

18/01/2023

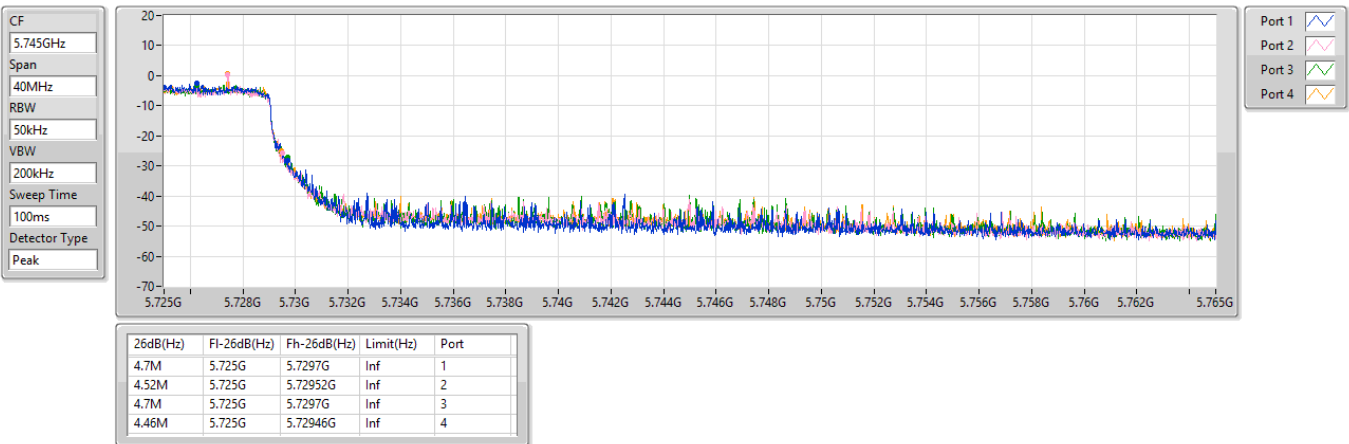


5.725-5.85GHz_802.11be EHT40-BF_Nss1,(MCS0)_4TX

EBW

5710MHz Straddle 5.725-5.85GHz

18/01/2023

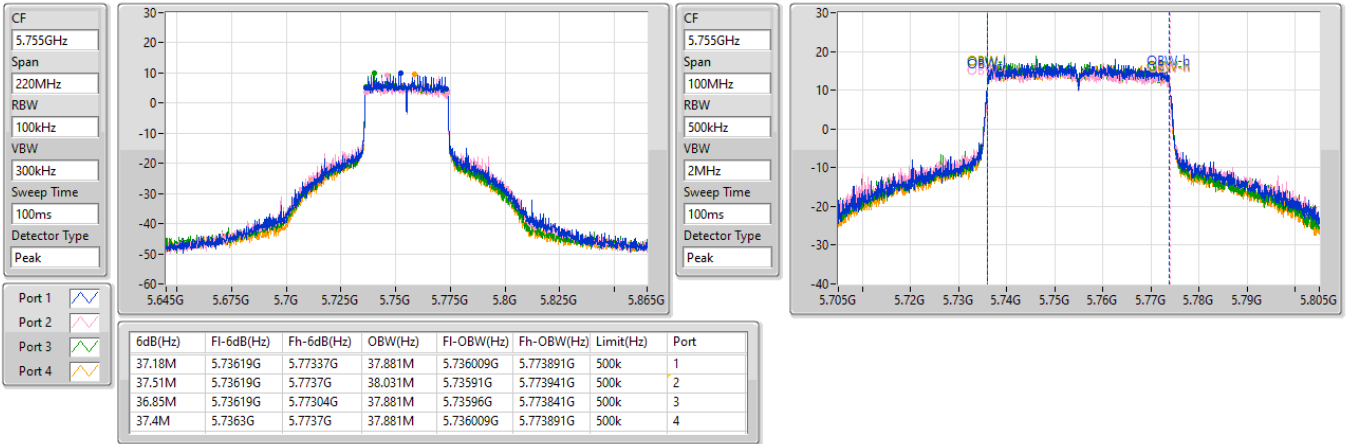


5.725-5.85GHz_802.11be EHT40-BF_Nss1,(MCS0)_4TX

EBW

5755MHz

22/02/2023

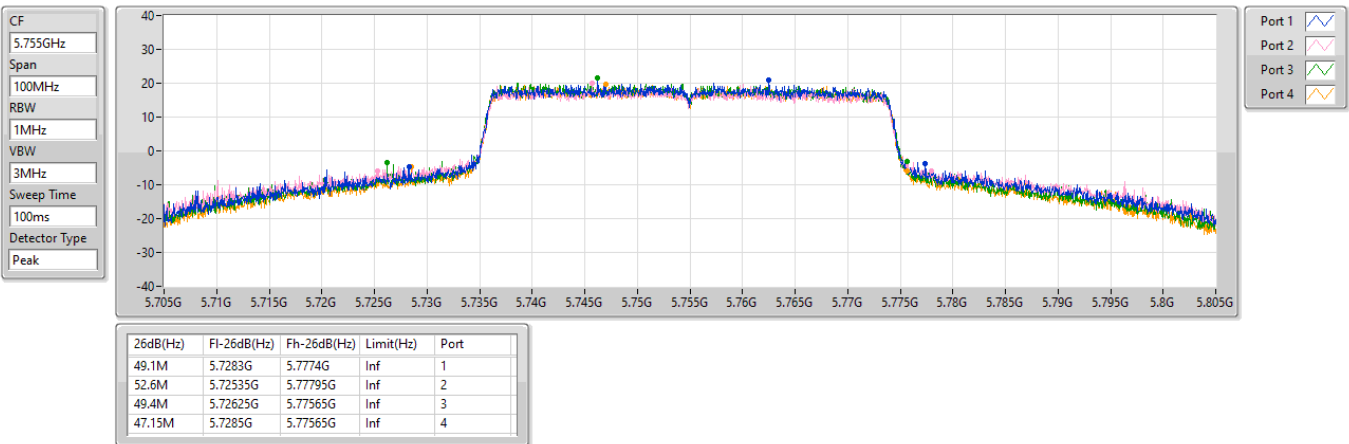


5.725-5.85GHz_802.11be EHT40-BF_Nss1,(MCS0)_4TX

EBW

5755MHz

22/02/2023

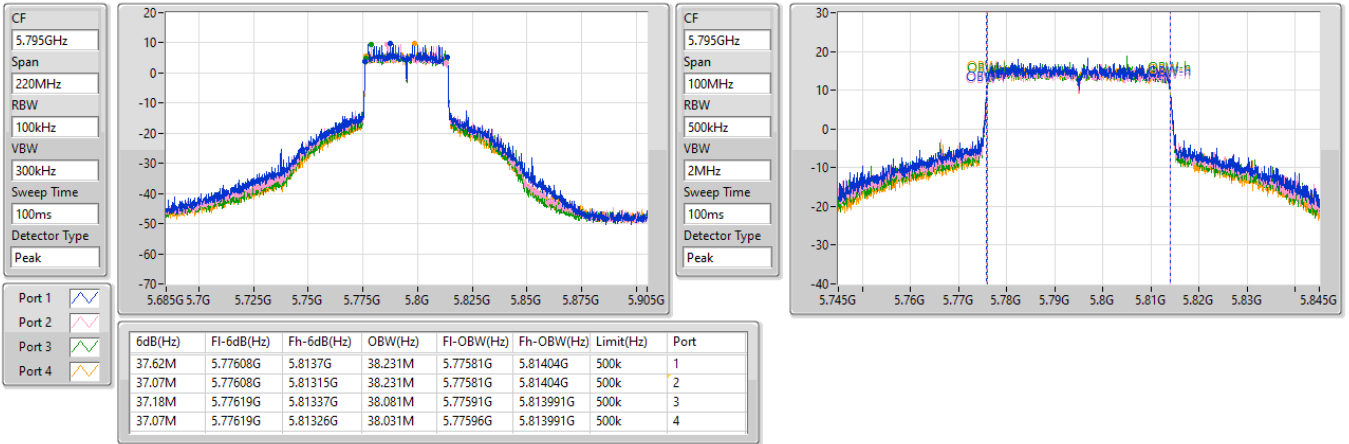


5.725-5.85GHz_802.11be EHT40-BF_Nss1,(MCS0)_4TX

EBW

5795MHz

22/02/2023

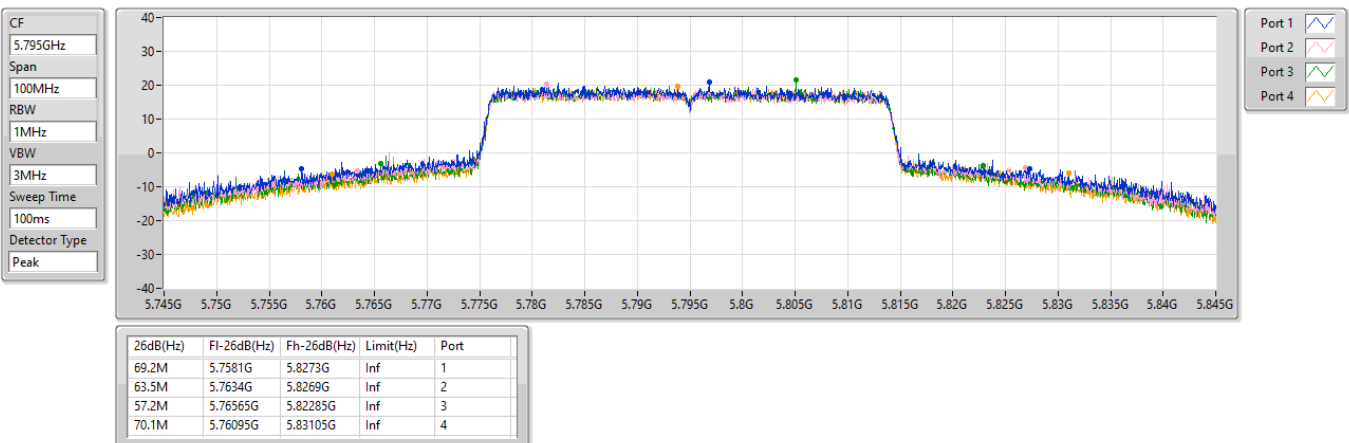


5.725-5.85GHz_802.11be EHT40-BF_Nss1,(MCS0)_4TX

EBW

5795MHz

22/02/2023



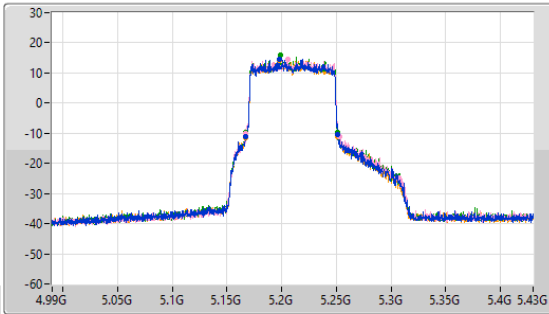
5.15-5.25GHz_802.11be EHT80-BF_Nss1,(MCS0)_4TX

EBW

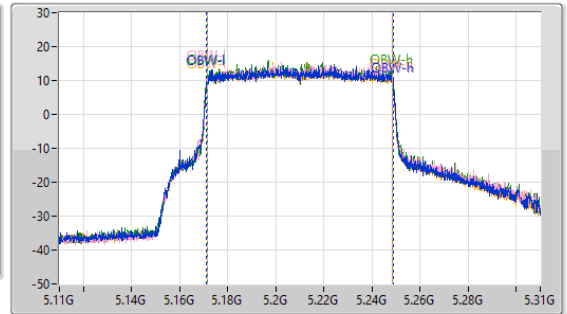
5210MHz

22/02/2023

CF: 5.21GHz
 Span: 440MHz
 RBW: 1MHz
 VBW: 3MHz
 Sweep Time: 100ms
 Detector Type: Peak



CF: 5.21GHz
 Span: 200MHz
 RBW: 1MHz
 VBW: 3MHz
 Sweep Time: 100ms
 Detector Type: Peak



Port 1: [Waveform]
 Port 2: [Waveform]
 Port 3: [Waveform]
 Port 4: [Waveform]

| 26dB(Hz) | Fl-26dB(Hz) | Fh-26dB(Hz) | OBW(Hz) | Fl-OBW(Hz) | Fh-OBW(Hz) | Limit(Hz) | Port |
|----------|-------------|-------------|---------|------------|------------|-----------|------|
| 84.26M | 5.1671G | 5.25136G | 77.561M | 5.171219G | 5.248781G | Inf | 1 |
| 86.02M | 5.16688G | 5.2529G | 77.361M | 5.171319G | 5.248681G | Inf | 2 |
| 84.26M | 5.16732G | 5.25158G | 77.361M | 5.171319G | 5.248681G | Inf | 3 |
| 84.92M | 5.16666G | 5.25158G | 77.261M | 5.171319G | 5.248581G | Inf | 4 |

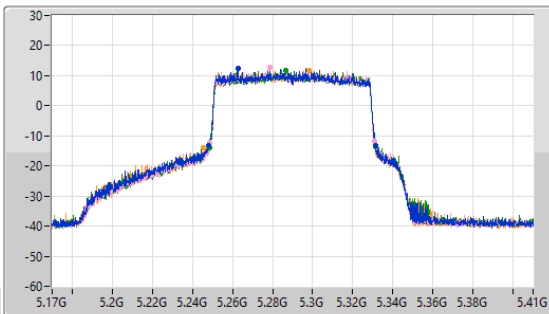
5.25-5.35GHz_802.11be EHT80-BF_Nss1,(MCS0)_4TX

EBW

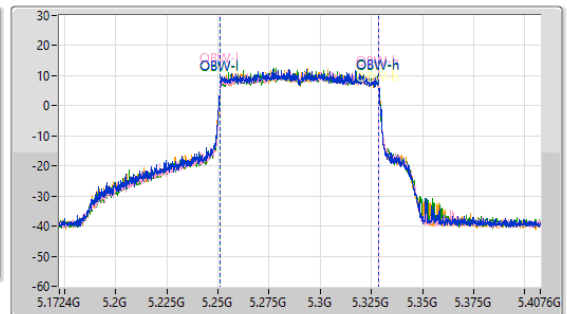
5290MHz

18/01/2023

CF: 5.29GHz
 Span: 240MHz
 RBW: 1MHz
 VBW: 3MHz
 Sweep Time: 100ms
 Detector Type: Peak



CF: 5.29GHz
 Span: 235.2MHz
 RBW: 1MHz
 VBW: 3MHz
 Sweep Time: 100ms
 Detector Type: Peak



Port 1: [Waveform]
 Port 2: [Waveform]
 Port 3: [Waveform]
 Port 4: [Waveform]

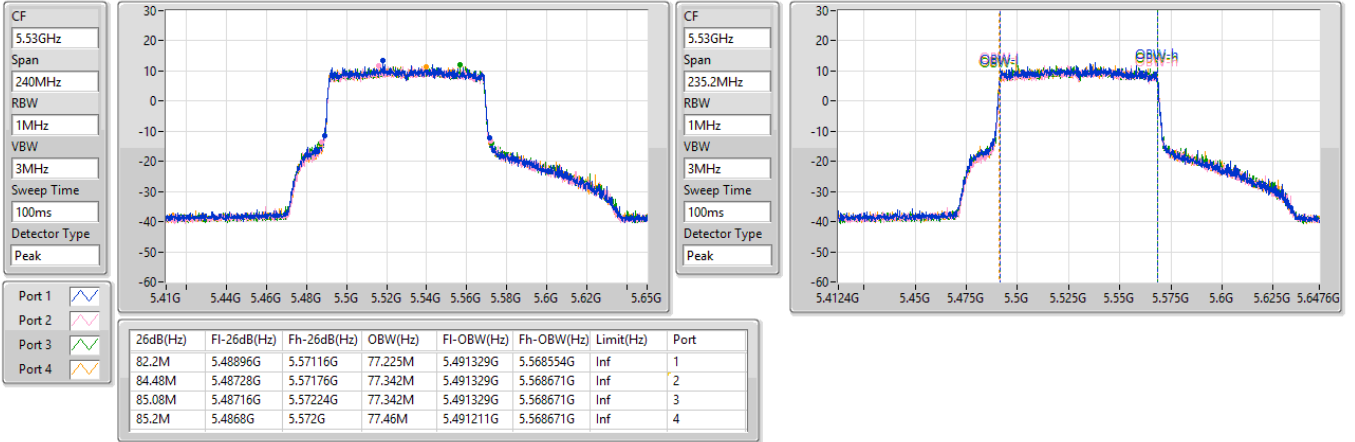
| 26dB(Hz) | Fl-26dB(Hz) | Fh-26dB(Hz) | OBW(Hz) | Fl-OBW(Hz) | Fh-OBW(Hz) | Limit(Hz) | Port |
|----------|-------------|-------------|---------|------------|------------|-----------|------|
| 83.16M | 5.248G | 5.33116G | 77.342M | 5.251211G | 5.328554G | Inf | 1 |
| 82.68M | 5.24836G | 5.33104G | 77.342M | 5.251211G | 5.328554G | Inf | 2 |
| 83.04M | 5.24848G | 5.33152G | 77.342M | 5.251211G | 5.328554G | Inf | 3 |
| 85.92M | 5.24524G | 5.33116G | 77.342M | 5.251211G | 5.328554G | Inf | 4 |

5.47-5.725GHz_802.11be EHT80-BF_Nss1,(MCS0)_4TX

EBW

5530MHz

18/01/2023

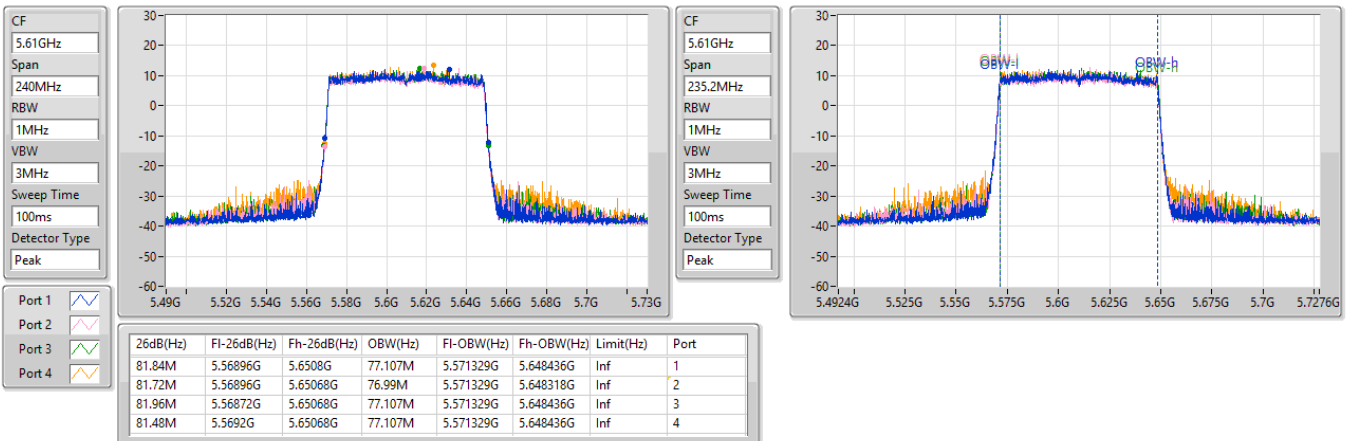


5.47-5.725GHz_802.11be EHT80-BF_Nss1,(MCS0)_4TX

EBW

5610MHz

18/01/2023

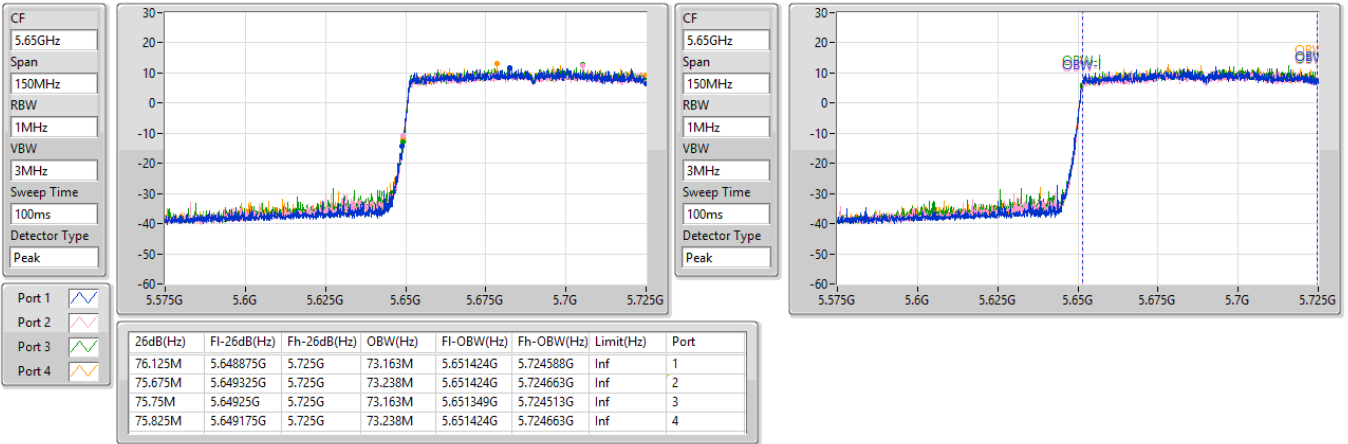


5.47-5.725GHz_802.11be EHT80-BF_Nss1,(MCS0)_4TX

EBW

5690MHz Straddle 5.47-5.725GHz

18/01/2023

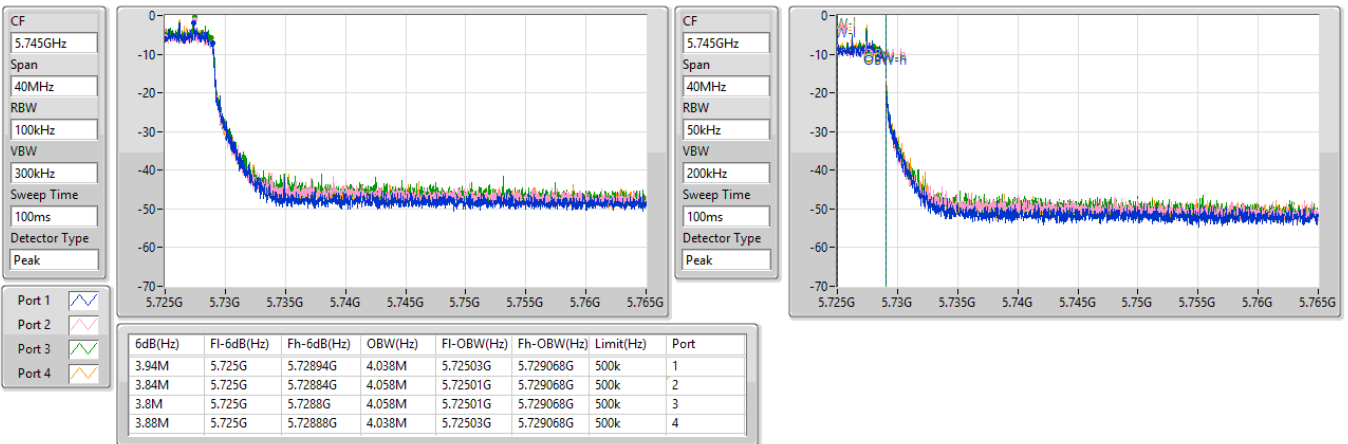


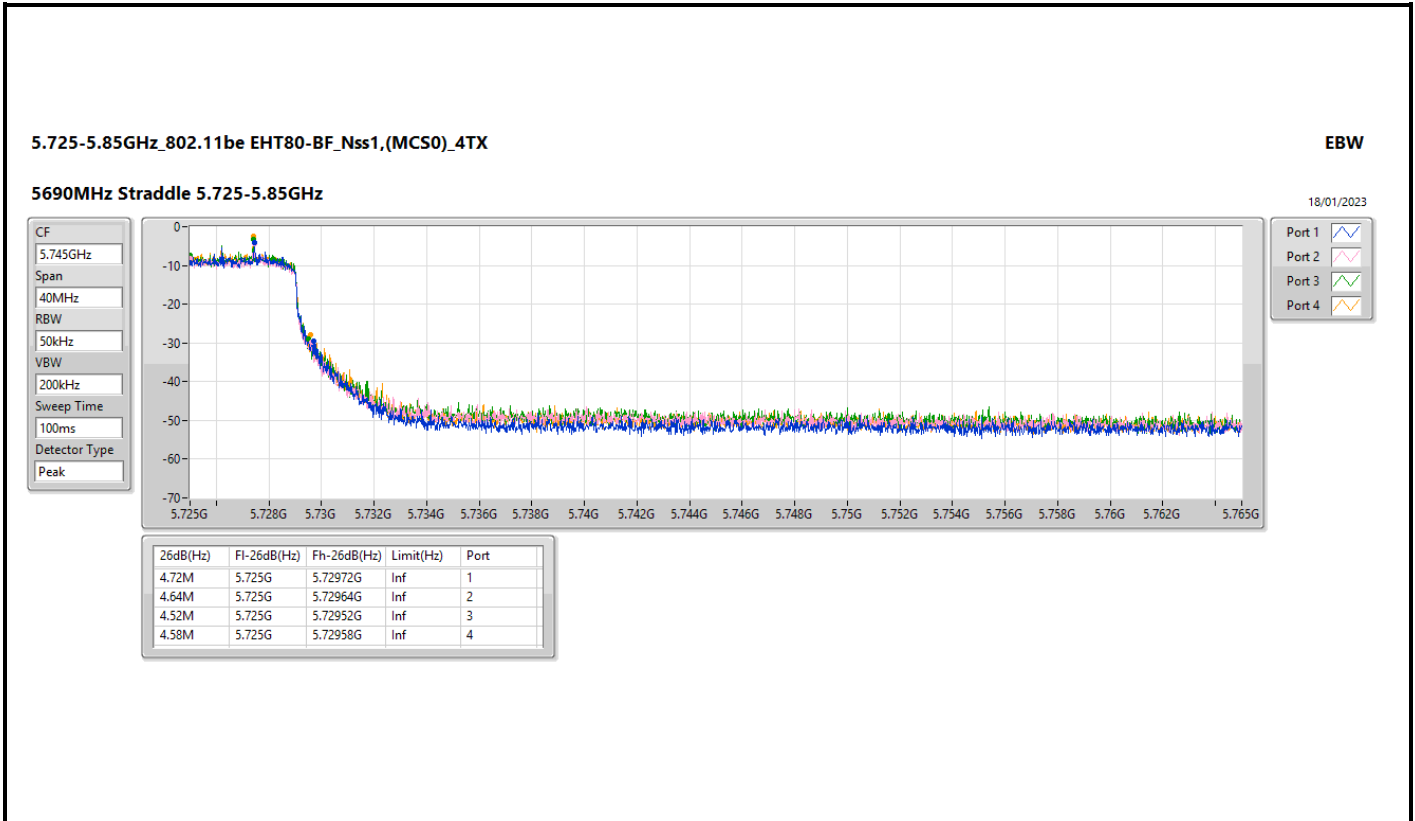
5.725-5.85GHz_802.11be EHT80-BF_Nss1,(MCS0)_4TX

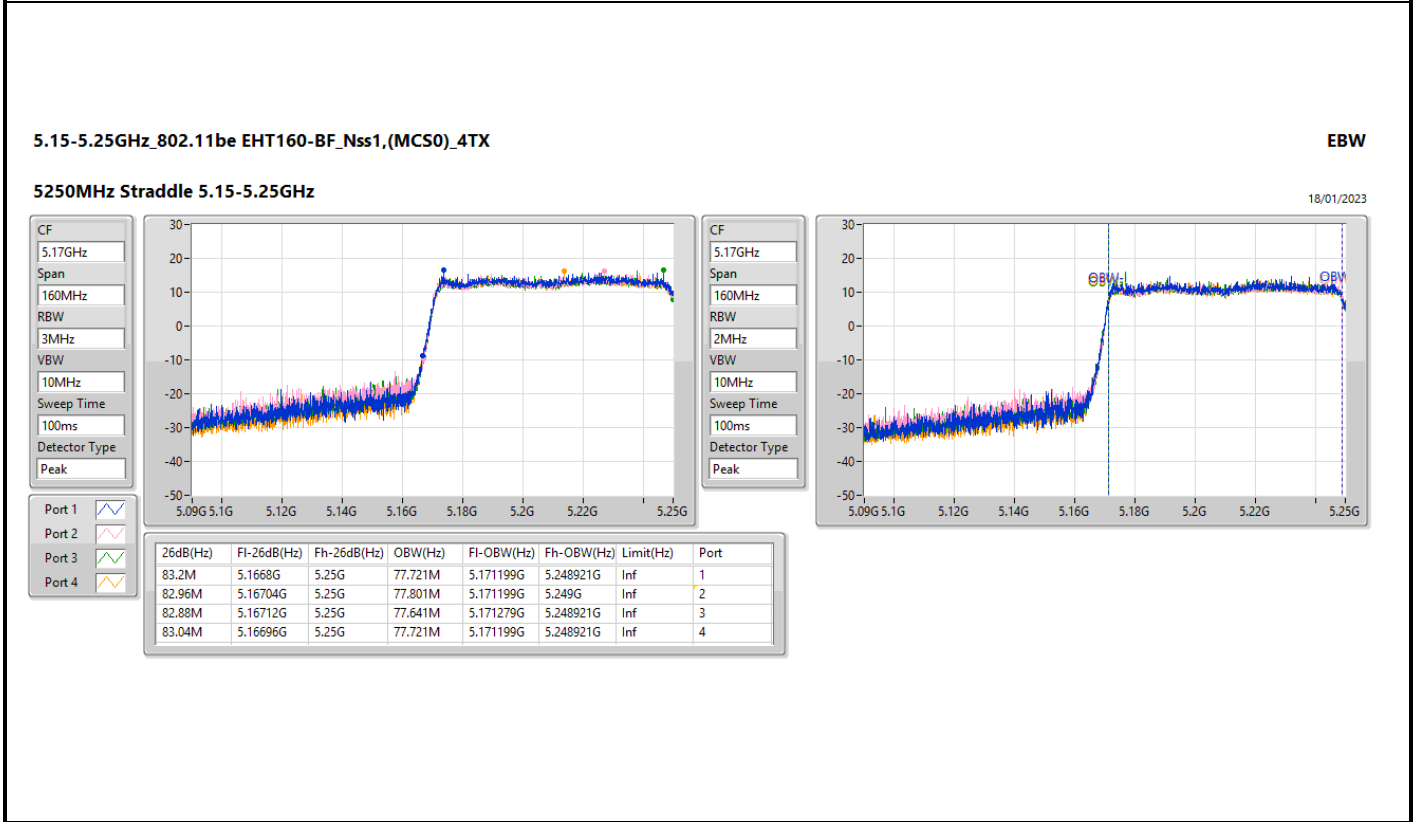
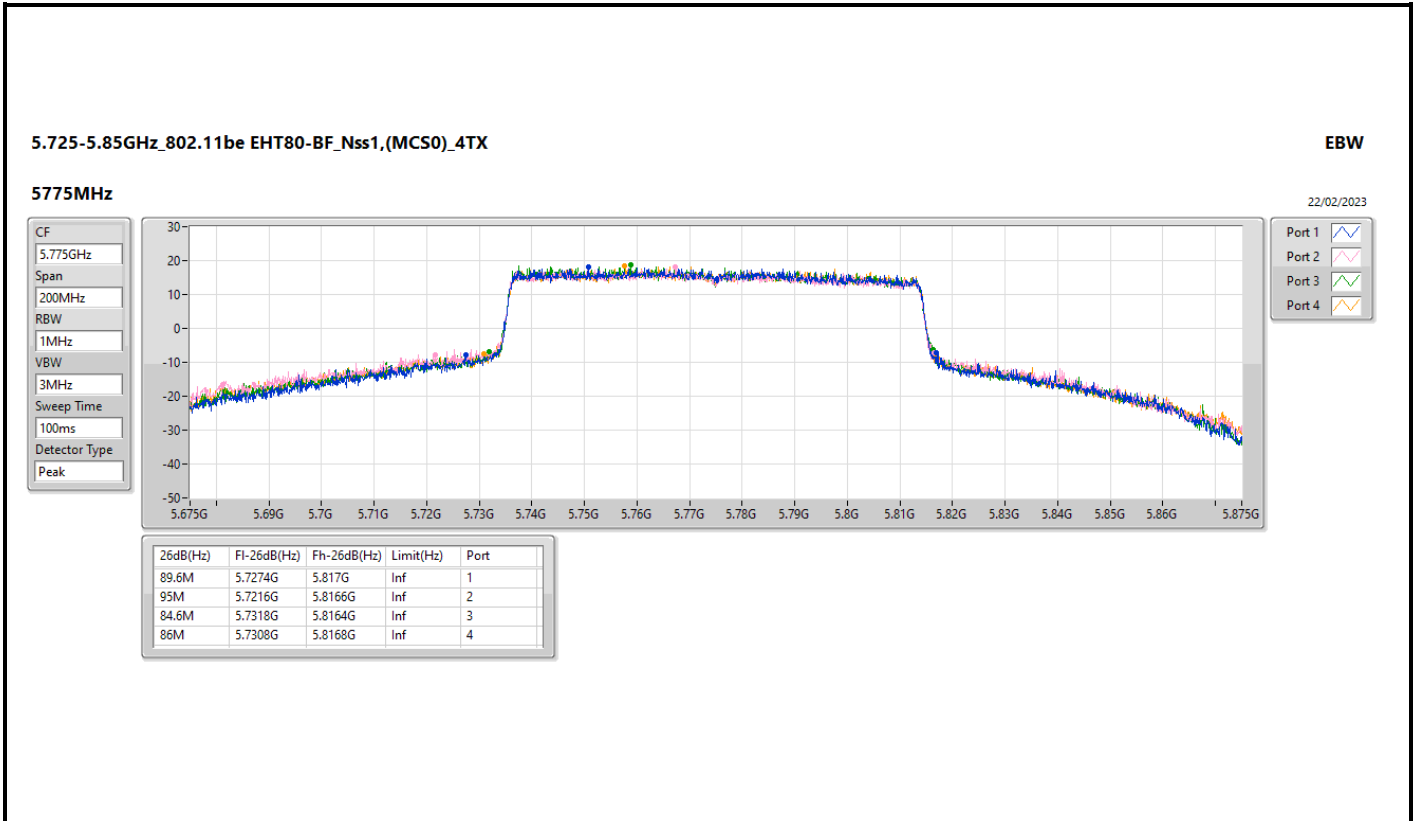
EBW

5690MHz Straddle 5.725-5.85GHz

18/01/2023





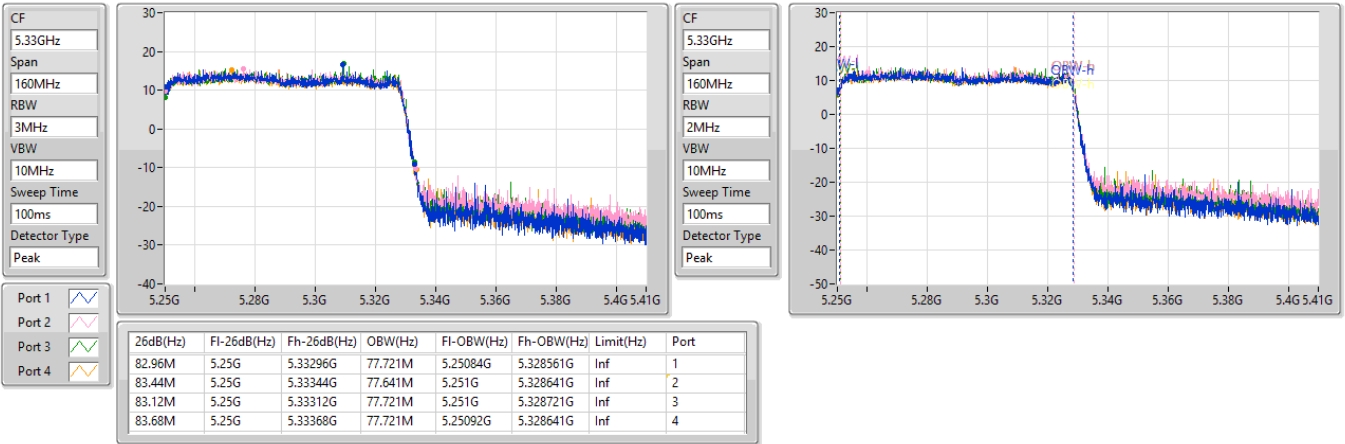


5.25-5.35GHz_802.11be EHT160-BF_Nss1,(MCS0)_4TX

EBW

5250MHz Straddle 5.25-5.35GHz

18/01/2023

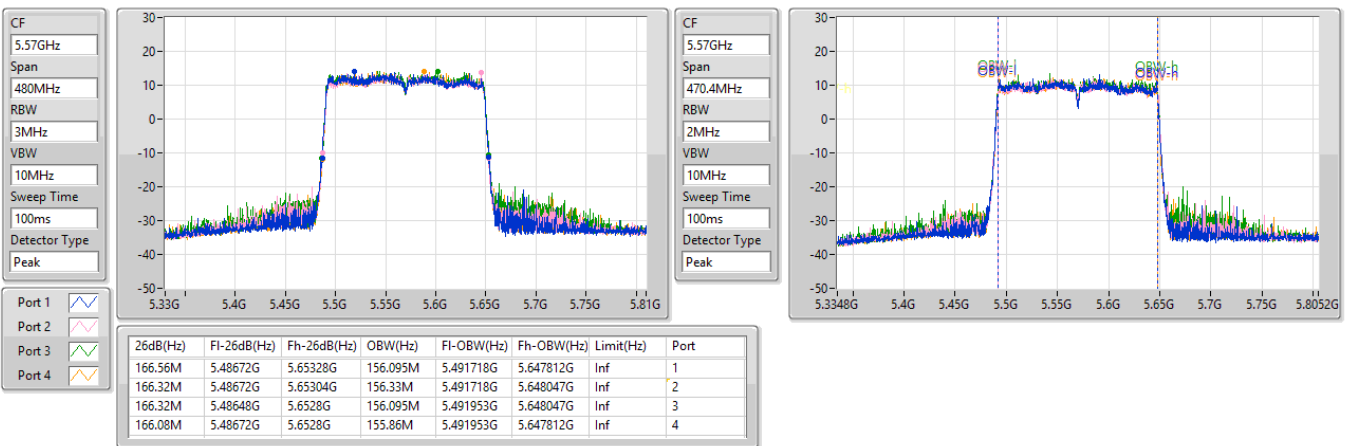


5.47-5.725GHz_802.11be EHT160-BF_Nss1,(MCS0)_4TX

EBW

5570MHz

18/01/2023





Summary

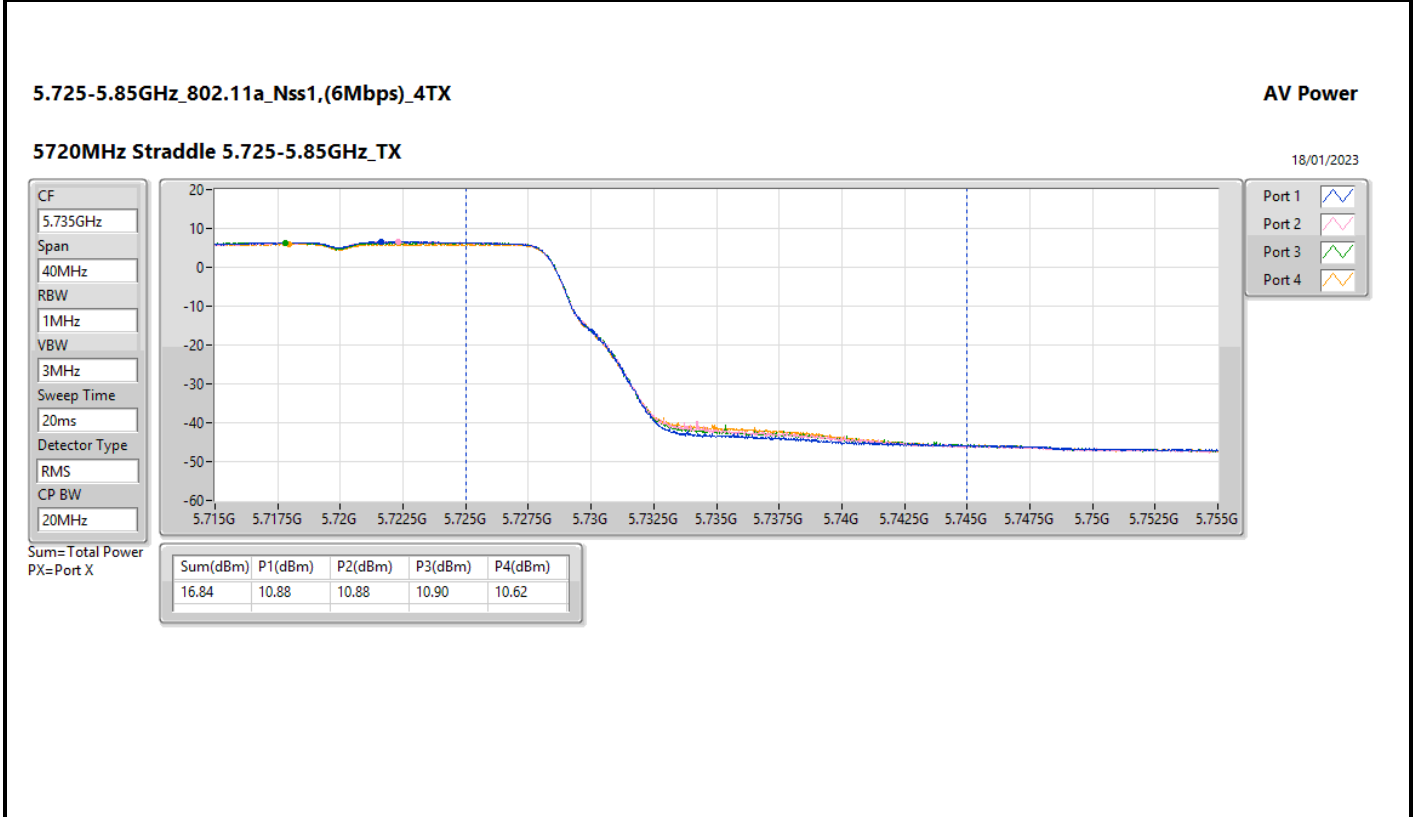
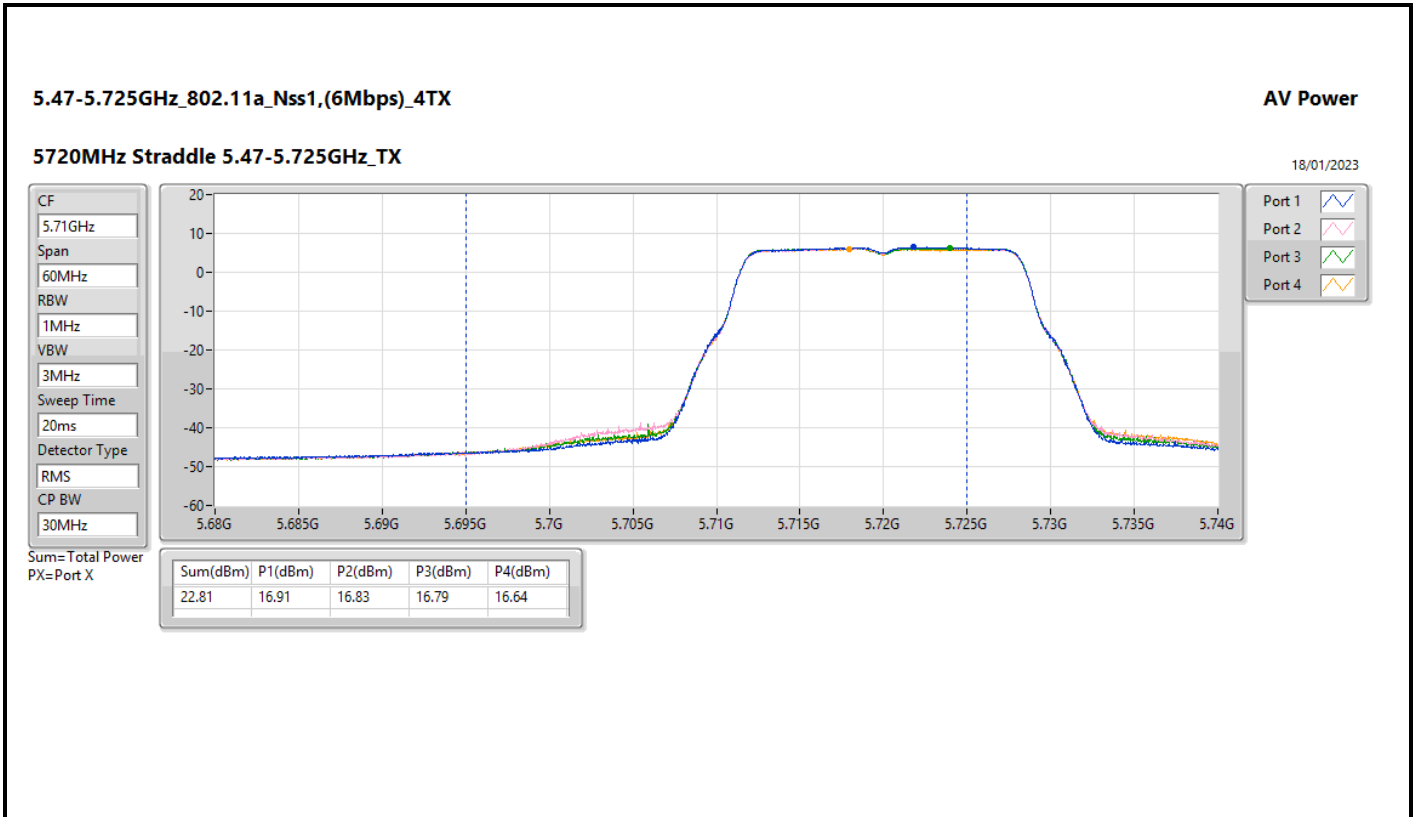
| Mode | Total Power (dBm) | Total Power (W) |
|------------------------------------|-------------------|-----------------|
| 5.15-5.25GHz | - | - |
| 802.11a_Nss1,(6Mbps)_4TX | 29.88 | 0.97275 |
| 802.11be EHT20-BF_Nss1,(MCS0)_4TX | 29.98 | 0.99541 |
| 802.11be EHT40-BF_Nss1,(MCS0)_4TX | 29.90 | 0.97724 |
| 802.11be EHT80-BF_Nss1,(MCS0)_4TX | 25.27 | 0.33651 |
| 802.11be EHT160-BF_Nss1,(MCS0)_4TX | 21.91 | 0.15524 |
| 5.25-5.35GHz | - | - |
| 802.11a_Nss1,(6Mbps)_4TX | 23.95 | 0.24831 |
| 802.11be EHT20-BF_Nss1,(MCS0)_4TX | 23.95 | 0.24831 |
| 802.11be EHT40-BF_Nss1,(MCS0)_4TX | 23.83 | 0.24155 |
| 802.11be EHT80-BF_Nss1,(MCS0)_4TX | 23.95 | 0.24831 |
| 802.11be EHT160-BF_Nss1,(MCS0)_4TX | 21.70 | 0.14791 |
| 5.47-5.725GHz | - | - |
| 802.11a_Nss1,(6Mbps)_4TX | 23.95 | 0.24831 |
| 802.11be EHT20-BF_Nss1,(MCS0)_4TX | 23.88 | 0.24434 |
| 802.11be EHT40-BF_Nss1,(MCS0)_4TX | 23.93 | 0.24717 |
| 802.11be EHT80-BF_Nss1,(MCS0)_4TX | 23.91 | 0.24604 |
| 802.11be EHT160-BF_Nss1,(MCS0)_4TX | 23.91 | 0.24604 |
| 5.725-5.85GHz | - | - |
| 802.11a_Nss1,(6Mbps)_4TX | 29.82 | 0.95940 |
| 802.11be EHT20-BF_Nss1,(MCS0)_4TX | 29.97 | 0.99312 |
| 802.11be EHT40-BF_Nss1,(MCS0)_4TX | 29.95 | 0.98855 |
| 802.11be EHT80-BF_Nss1,(MCS0)_4TX | 29.07 | 0.80724 |

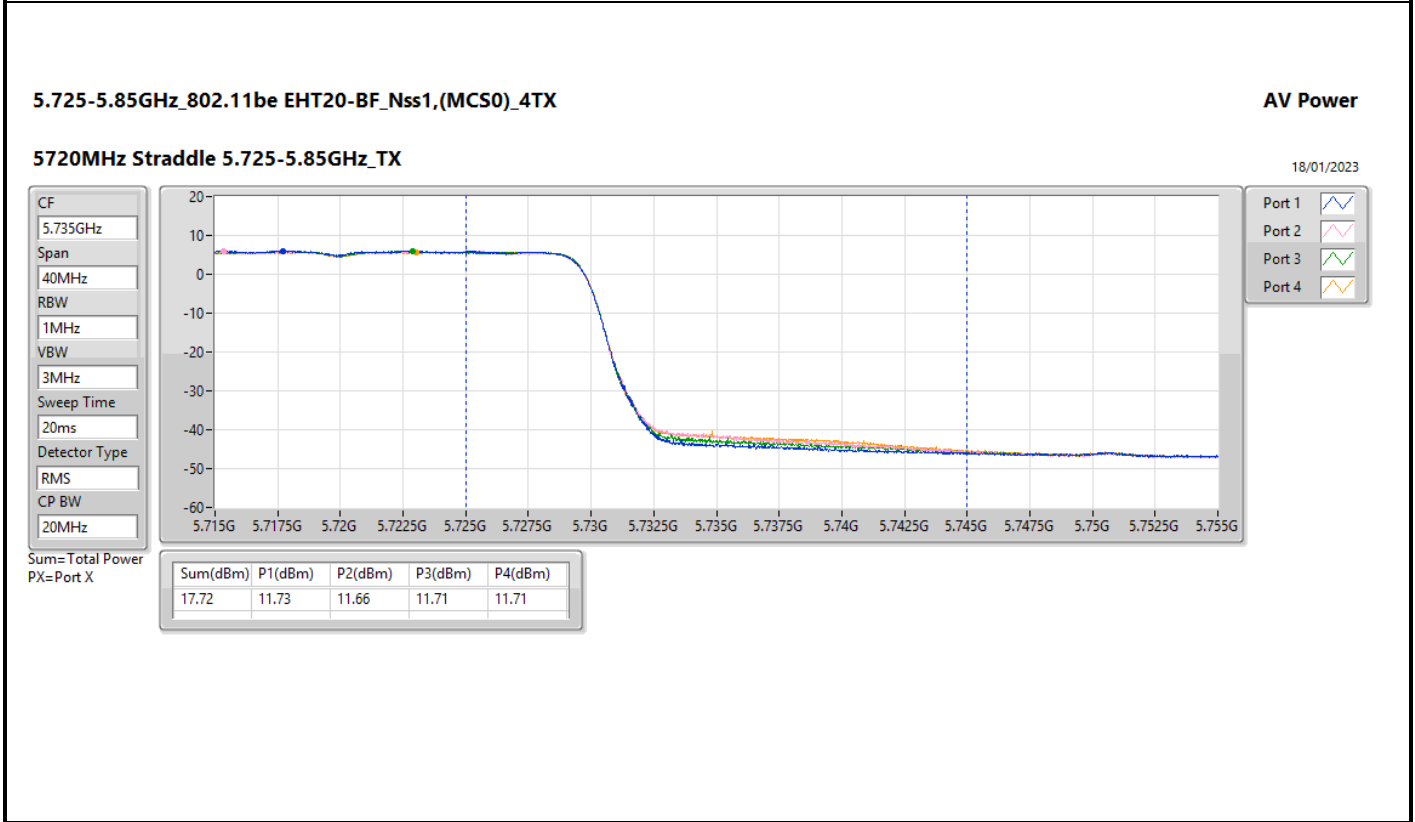
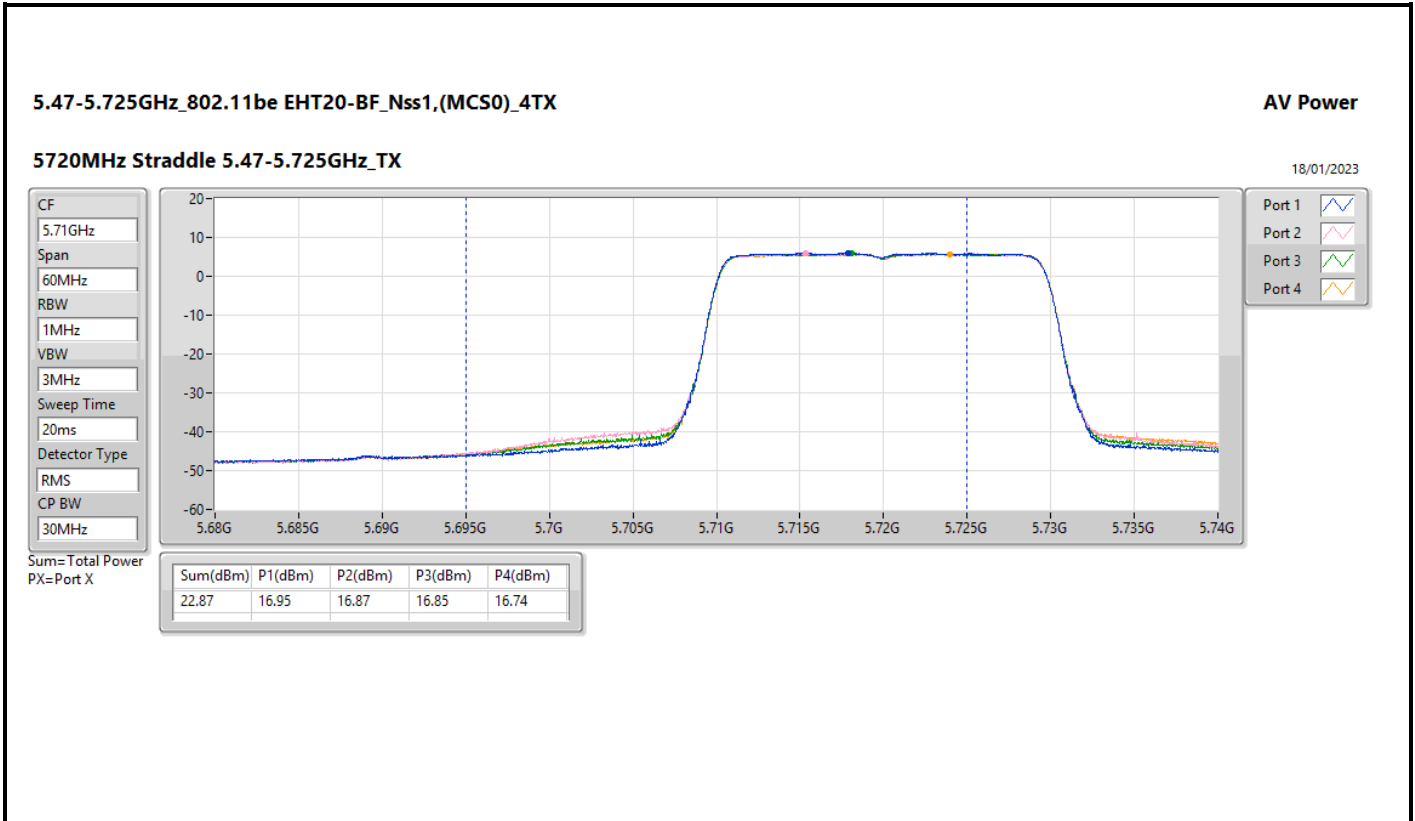


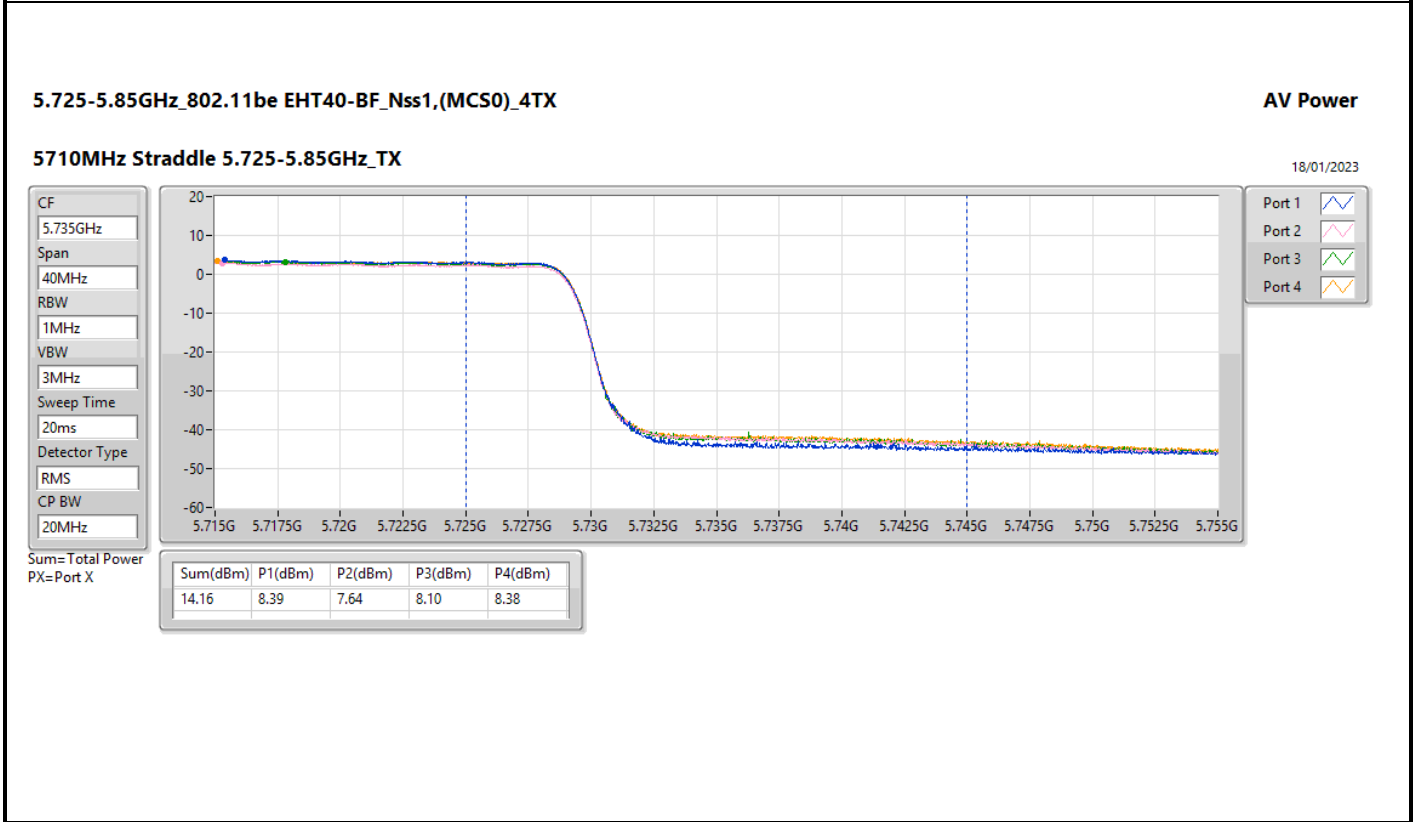
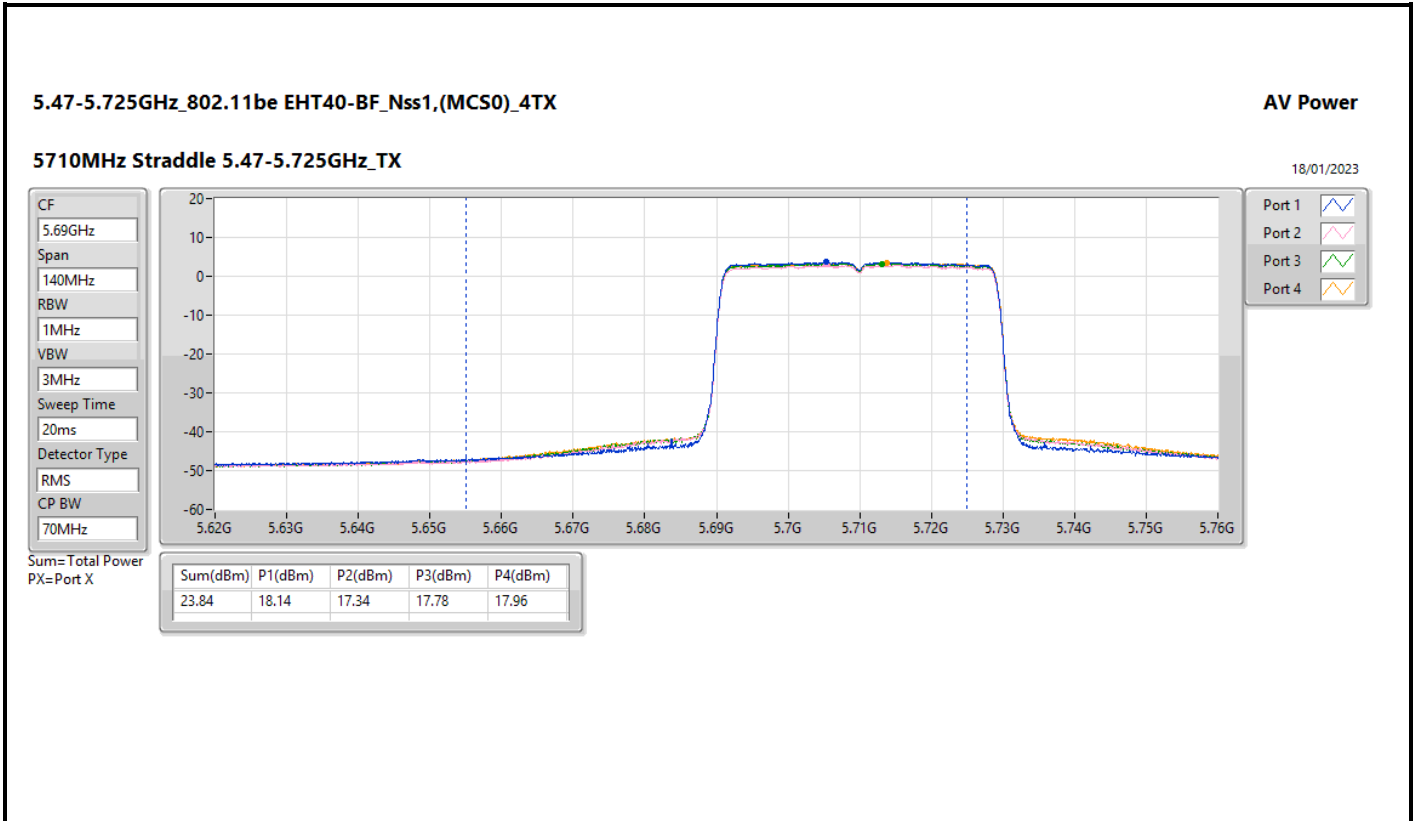
Result

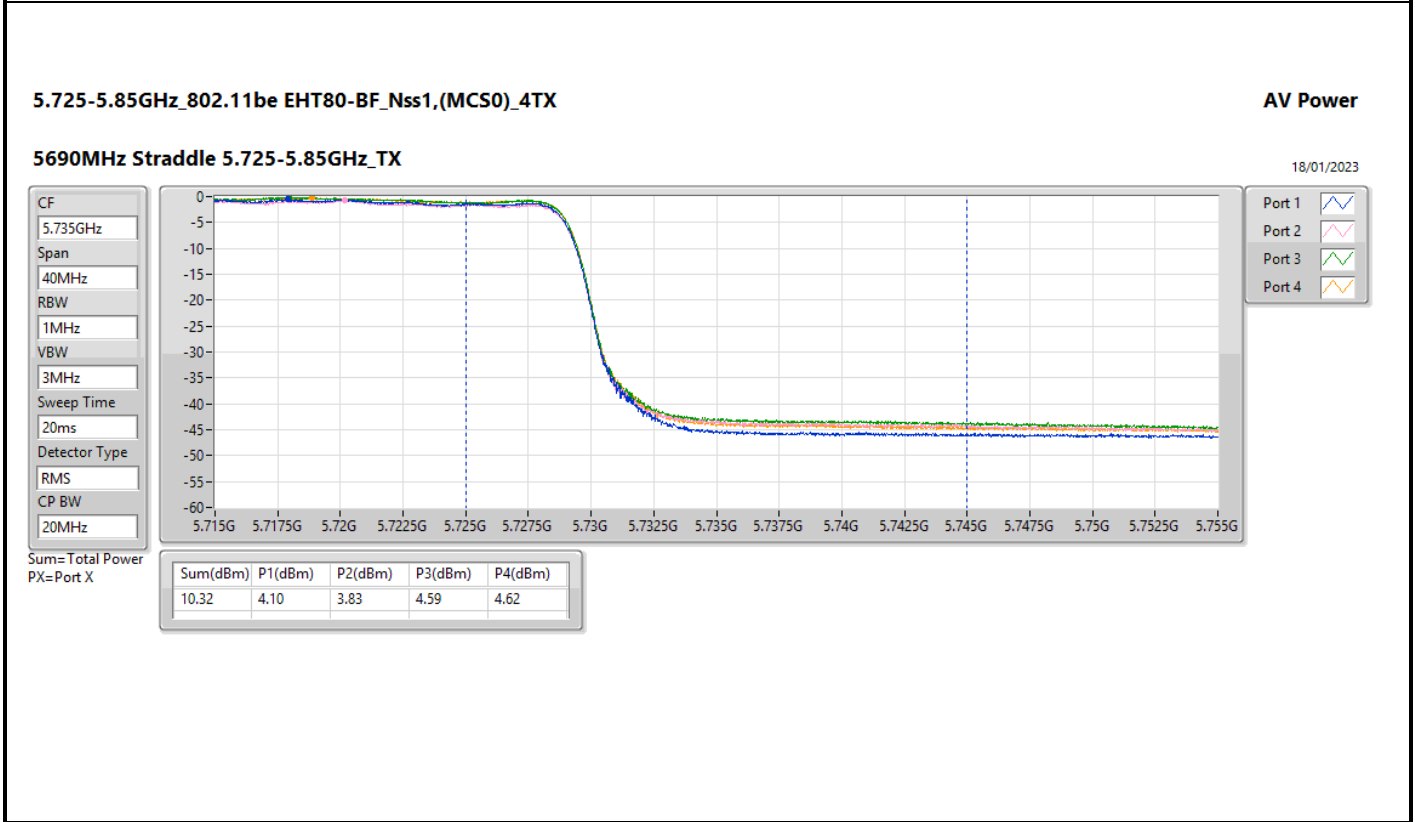
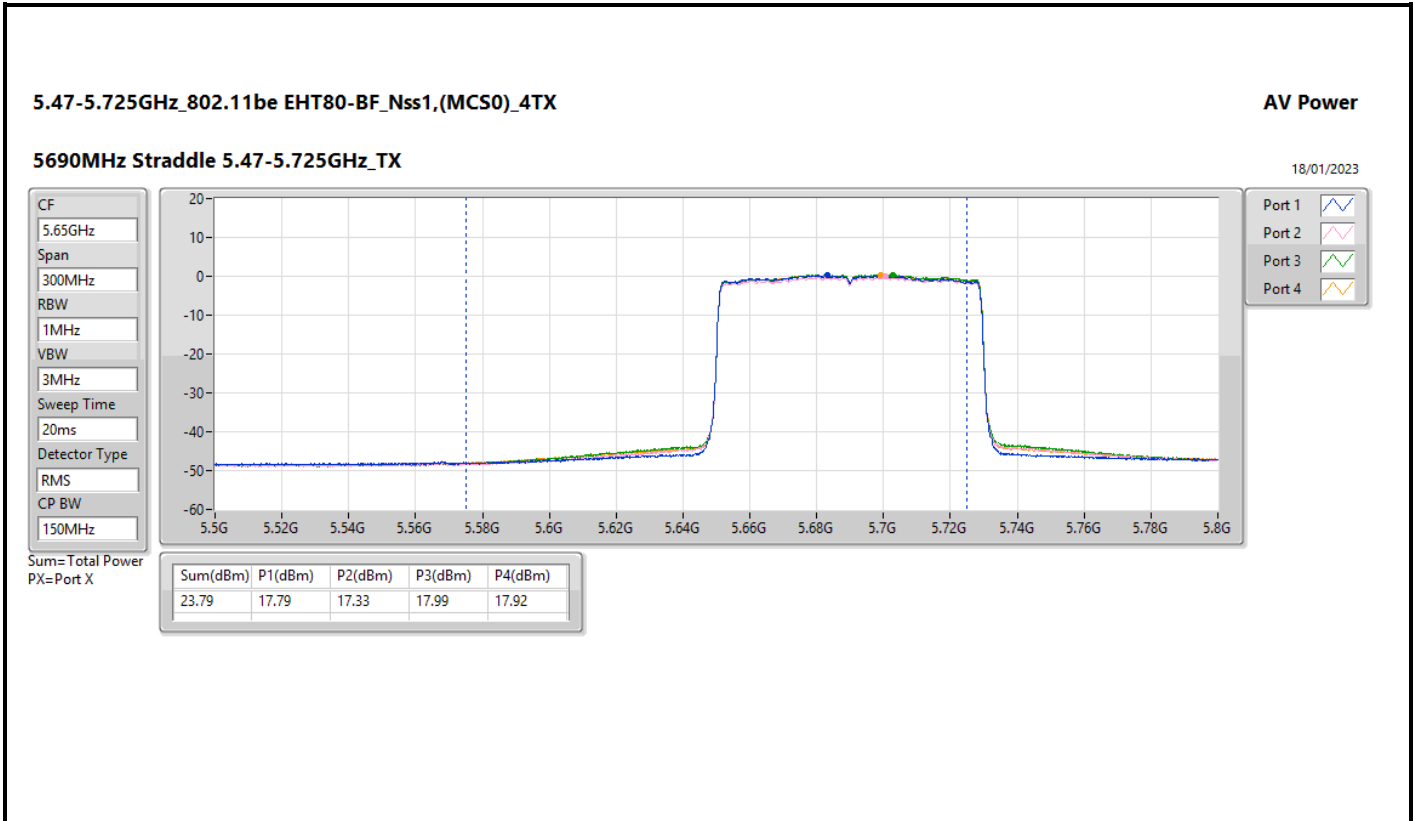
| Mode | Result | DG (dBi) | Port 1 (dBm) | Port 2 (dBm) | Port 3 (dBm) | Port 4 (dBm) | Total Power (dBm) | Power Limit (dBm) |
|------------------------------------|--------|----------|--------------|--------------|--------------|--------------|-------------------|-------------------|
| 802.11a_Nss1,(6Mbps)_4TX | - | - | - | - | - | - | - | - |
| 5180MHz | Pass | 2.70 | 22.25 | 21.97 | 22.19 | 22.05 | 28.14 | 30.00 |
| 5200MHz | Pass | 2.70 | 23.67 | 23.85 | 24.14 | 23.76 | 29.88 | 30.00 |
| 5240MHz | Pass | 2.70 | 24.09 | 23.53 | 23.91 | 23.77 | 29.85 | 30.00 |
| 5260MHz | Pass | 3.04 | 17.85 | 17.75 | 18.13 | 17.97 | 23.95 | 23.98 |
| 5300MHz | Pass | 3.04 | 17.79 | 17.73 | 17.90 | 18.00 | 23.88 | 23.98 |
| 5320MHz | Pass | 3.04 | 18.19 | 17.53 | 17.76 | 18.06 | 23.91 | 23.98 |
| 5500MHz | Pass | 3.23 | 18.00 | 17.65 | 17.99 | 18.08 | 23.95 | 23.98 |
| 5580MHz | Pass | 3.23 | 18.02 | 17.75 | 18.16 | 17.55 | 23.90 | 23.98 |
| 5700MHz | Pass | 3.23 | 18.03 | 17.66 | 17.74 | 18.14 | 23.92 | 23.98 |
| 5720MHz Straddle 5.47-5.725GHz | Pass | 3.23 | 16.91 | 16.83 | 16.79 | 16.64 | 22.81 | 22.99 |
| 5720MHz Straddle 5.725-5.85GHz | Pass | 3.39 | 10.88 | 10.88 | 10.90 | 10.62 | 16.84 | 30.00 |
| 5745MHz | Pass | 3.39 | 23.73 | 22.82 | 24.29 | 24.13 | 29.80 | 30.00 |
| 5785MHz | Pass | 3.39 | 23.87 | 23.35 | 23.86 | 24.05 | 29.81 | 30.00 |
| 5825MHz | Pass | 3.39 | 23.83 | 23.18 | 24.07 | 24.06 | 29.82 | 30.00 |
| 802.11be EHT20-BF_Nss1,(MCS0)_4TX | - | - | - | - | - | - | - | - |
| 5180MHz | Pass | 4.72 | 21.14 | 20.01 | 20.47 | 20.86 | 26.66 | 30.00 |
| 5200MHz | Pass | 4.72 | 24.08 | 23.37 | 23.79 | 23.83 | 29.80 | 30.00 |
| 5240MHz | Pass | 4.72 | 24.12 | 23.90 | 23.88 | 23.92 | 29.98 | 30.00 |
| 5260MHz | Pass | 5.97 | 17.69 | 17.64 | 17.66 | 17.93 | 23.75 | 23.98 |
| 5300MHz | Pass | 5.97 | 17.87 | 17.70 | 18.16 | 17.98 | 23.95 | 23.98 |
| 5320MHz | Pass | 5.97 | 18.03 | 17.55 | 17.87 | 18.13 | 23.92 | 23.98 |
| 5500MHz | Pass | 5.72 | 17.96 | 17.29 | 17.62 | 18.35 | 23.84 | 23.98 |
| 5580MHz | Pass | 5.72 | 17.77 | 17.72 | 17.83 | 18.11 | 23.88 | 23.98 |
| 5700MHz | Pass | 5.72 | 16.11 | 15.45 | 15.72 | 15.91 | 21.82 | 23.98 |
| 5720MHz Straddle 5.47-5.725GHz | Pass | 5.72 | 16.95 | 16.87 | 16.85 | 16.74 | 22.87 | 23.00 |
| 5720MHz Straddle 5.725-5.85GHz | Pass | 5.64 | 11.73 | 11.66 | 11.71 | 11.71 | 17.72 | 30.00 |
| 5745MHz | Pass | 5.64 | 23.86 | 23.12 | 24.50 | 24.19 | 29.97 | 30.00 |
| 5785MHz | Pass | 5.64 | 24.14 | 23.39 | 23.89 | 24.16 | 29.93 | 30.00 |
| 5825MHz | Pass | 5.64 | 23.76 | 23.29 | 23.99 | 24.12 | 29.82 | 30.00 |
| 802.11be EHT40-BF_Nss1,(MCS0)_4TX | - | - | - | - | - | - | - | - |
| 5190MHz | Pass | 4.72 | 18.28 | 17.99 | 18.12 | 18.03 | 24.13 | 30.00 |
| 5230MHz | Pass | 4.72 | 24.26 | 23.51 | 23.88 | 23.82 | 29.90 | 30.00 |
| 5270MHz | Pass | 5.97 | 18.13 | 17.39 | 17.72 | 17.96 | 23.83 | 23.98 |
| 5310MHz | Pass | 5.97 | 18.03 | 17.69 | 17.56 | 17.78 | 23.79 | 23.98 |
| 5510MHz | Pass | 5.72 | 18.35 | 17.32 | 17.95 | 17.96 | 23.93 | 23.98 |
| 5550MHz | Pass | 5.72 | 17.99 | 17.15 | 17.71 | 18.36 | 23.85 | 23.98 |
| 5670MHz | Pass | 5.72 | 17.66 | 16.94 | 17.52 | 17.80 | 23.51 | 23.98 |
| 5710MHz Straddle 5.47-5.725GHz | Pass | 5.72 | 18.14 | 17.34 | 17.78 | 17.96 | 23.84 | 23.98 |
| 5710MHz Straddle 5.725-5.85GHz | Pass | 5.64 | 8.39 | 7.64 | 8.10 | 8.38 | 14.16 | 30.00 |
| 5755MHz | Pass | 5.64 | 24.28 | 23.41 | 24.24 | 23.74 | 29.95 | 30.00 |
| 5795MHz | Pass | 5.64 | 24.24 | 23.72 | 23.72 | 23.68 | 29.87 | 30.00 |
| 802.11be EHT80-BF_Nss1,(MCS0)_4TX | - | - | - | - | - | - | - | - |
| 5210MHz | Pass | 4.72 | 19.33 | 19.32 | 19.27 | 19.08 | 25.27 | 30.00 |
| 5290MHz | Pass | 5.97 | 18.07 | 17.70 | 18.07 | 17.87 | 23.95 | 23.98 |
| 5530MHz | Pass | 5.72 | 18.09 | 17.61 | 17.84 | 18.00 | 23.91 | 23.98 |
| 5610MHz | Pass | 5.72 | 18.03 | 17.39 | 17.78 | 18.24 | 23.89 | 23.98 |
| 5690MHz Straddle 5.47-5.725GHz | Pass | 5.72 | 17.79 | 17.33 | 17.99 | 17.92 | 23.79 | 23.98 |
| 5690MHz Straddle 5.725-5.85GHz | Pass | 5.64 | 4.10 | 3.83 | 4.59 | 4.62 | 10.32 | 30.00 |
| 5775MHz | Pass | 5.64 | 23.20 | 22.64 | 23.18 | 23.16 | 29.07 | 30.00 |
| 802.11be EHT160-BF_Nss1,(MCS0)_4TX | - | - | - | - | - | - | - | - |
| 5250MHz Straddle 5.15-5.25GHz | Pass | 4.72 | 15.73 | 15.66 | 16.23 | 15.93 | 21.91 | 30.00 |
| 5250MHz Straddle 5.25-5.35GHz | Pass | 5.97 | 15.40 | 15.78 | 16.26 | 15.20 | 21.70 | 23.98 |
| 5570MHz | Pass | 5.72 | 17.74 | 17.67 | 18.04 | 18.08 | 23.91 | 23.98 |

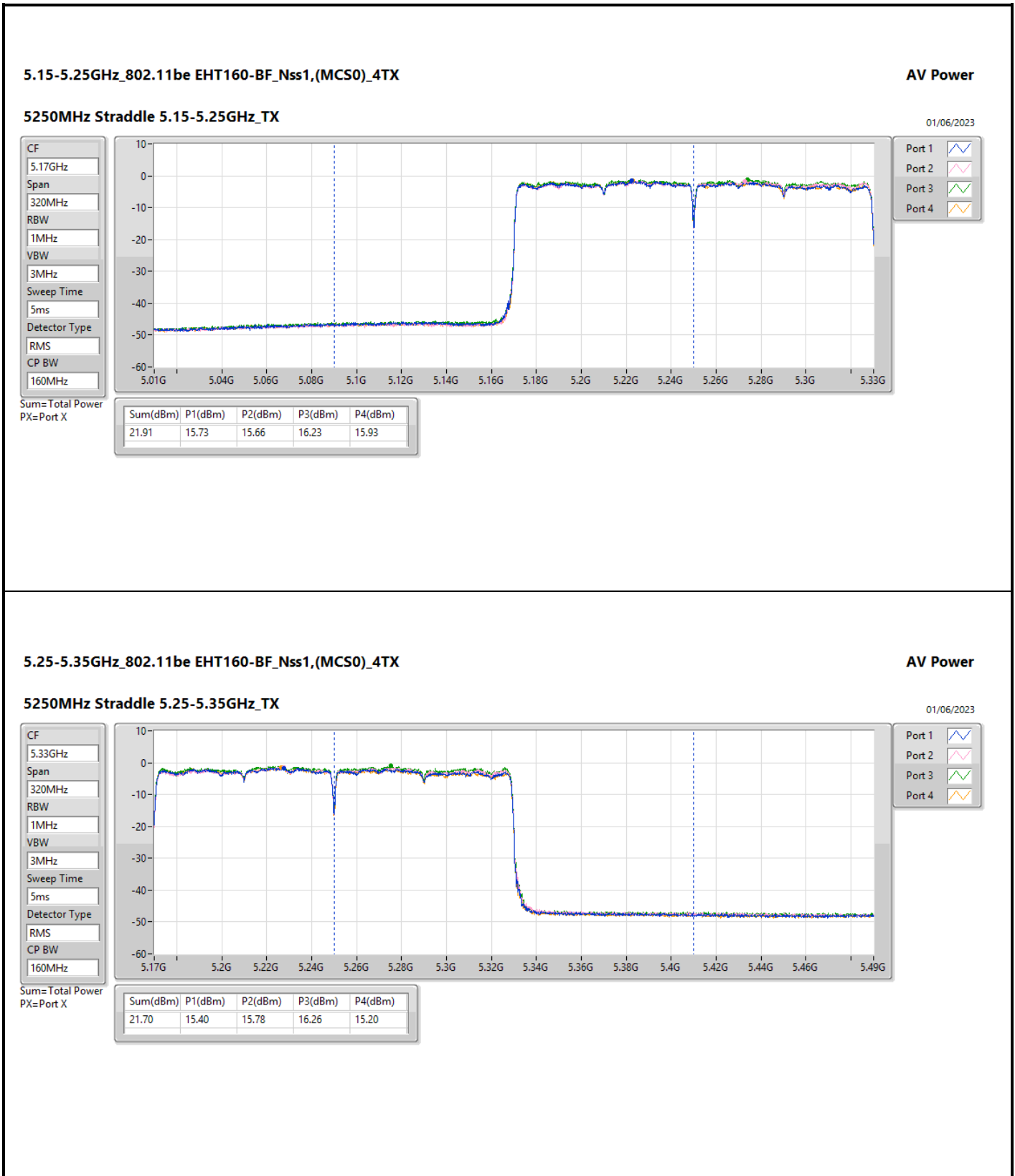
DG = Directional Gain; Port X = Port X output power











5.25-5.35GHz_802.11be EHT160-BF_Nss1,(MCS0)_4TX

AV Power

5250MHz Straddle 5.25-5.35GHz_TX

01/06/2023

CF

5.33GHz

Span

320MHz

RBW

1MHz

VBW

3MHz

Sweep Time

5ms

Detector Type

RMS

CP BW

160MHz



Port 1

Port 2

Port 3

Port 4

Sum=Total Power
PX=Port X

| Sum(dBm) | P1(dBm) | P2(dBm) | P3(dBm) | P4(dBm) |
|----------|---------|---------|---------|---------|
| 21.70 | 15.40 | 15.78 | 16.26 | 15.20 |

Summary

| Mode | PD (dBm/RBW) |
|------------------------------------|-----------------|
| 5.15-5.25GHz | - |
| 802.11a_Nss1,(6Mbps)_4TX | 16.82 |
| 802.11be EHT20-BF_Nss1,(MCS0)_4TX | 16.62 |
| 802.11be EHT40-BF_Nss1,(MCS0)_4TX | 13.72 |
| 802.11be EHT80-BF_Nss1,(MCS0)_4TX | 6.30 |
| 802.11be EHT160-BF_Nss1,(MCS0)_4TX | 2.78 |
| 5.25-5.35GHz | - |
| 802.11a_Nss1,(6Mbps)_4TX | 10.87 |
| 802.11be EHT20-BF_Nss1,(MCS0)_4TX | 10.70 |
| 802.11be EHT40-BF_Nss1,(MCS0)_4TX | 7.68 |
| 802.11be EHT80-BF_Nss1,(MCS0)_4TX | 5.09 |
| 802.11be EHT160-BF_Nss1,(MCS0)_4TX | 2.77 |
| 5.47-5.725GHz | - |
| 802.11a_Nss1,(6Mbps)_4TX | 10.96 |
| 802.11be EHT20-BF_Nss1,(MCS0)_4TX | 10.78 |
| 802.11be EHT40-BF_Nss1,(MCS0)_4TX | 7.86 |
| 802.11be EHT80-BF_Nss1,(MCS0)_4TX | 5.15 |
| 802.11be EHT160-BF_Nss1,(MCS0)_4TX | 2.20 |
| 5.725-5.85GHz | - |
| 802.11a_Nss1,(6Mbps)_4TX | 15.17 |
| 802.11be EHT20-BF_Nss1,(MCS0)_4TX | 15.13 |
| 802.11be EHT40-BF_Nss1,(MCS0)_4TX | 12.17 |
| 802.11be EHT80-BF_Nss1,(MCS0)_4TX | 8.69 |

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

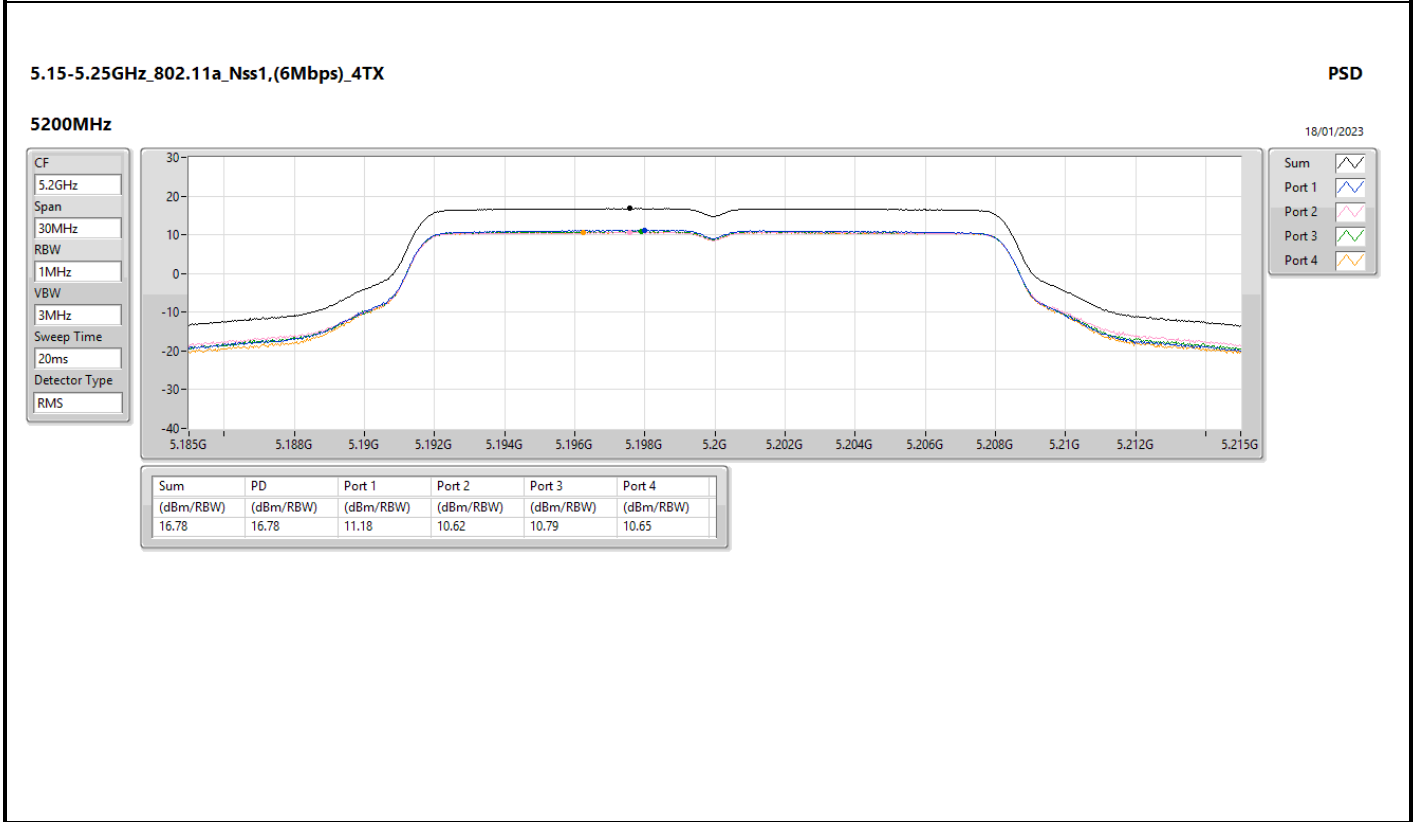
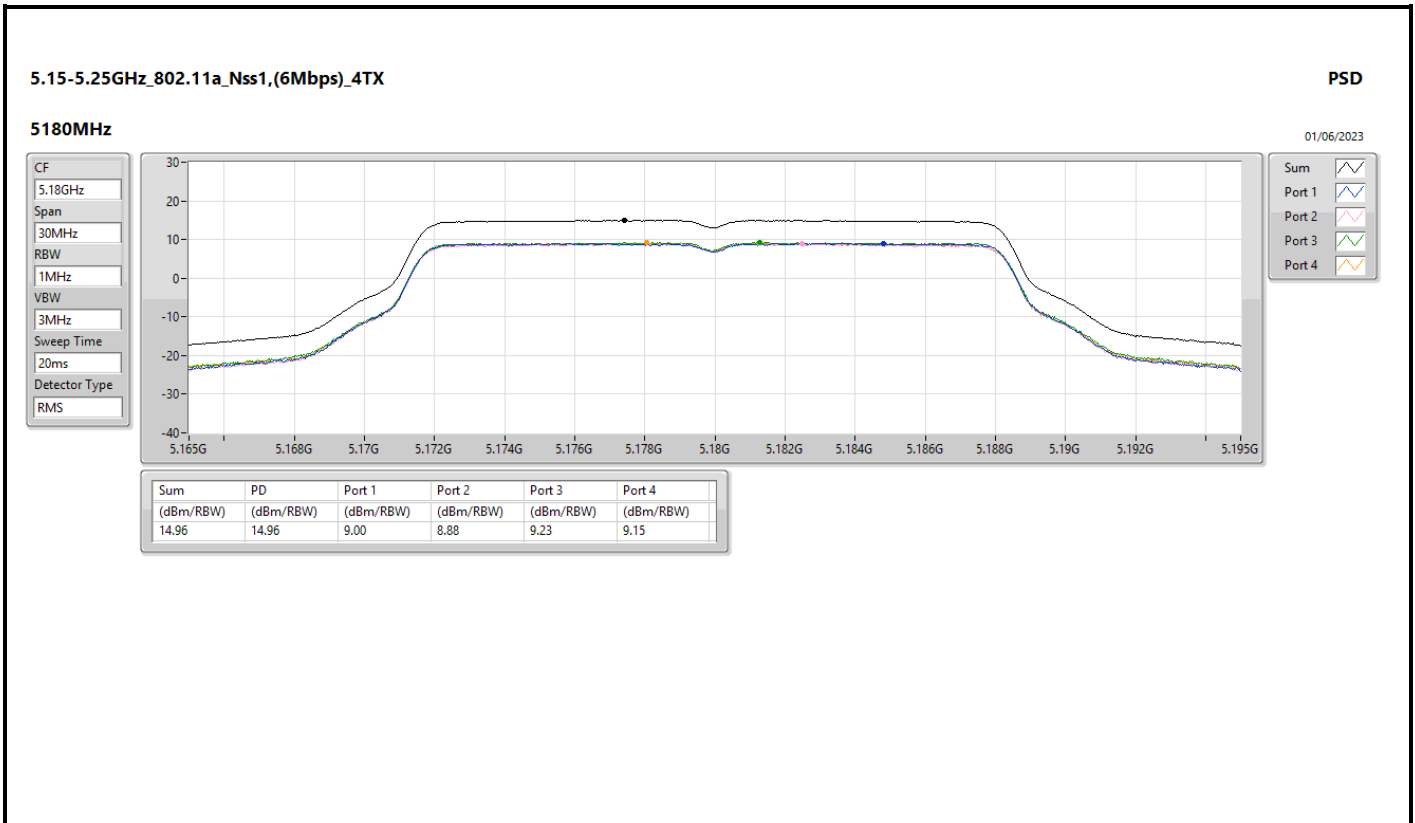
Result

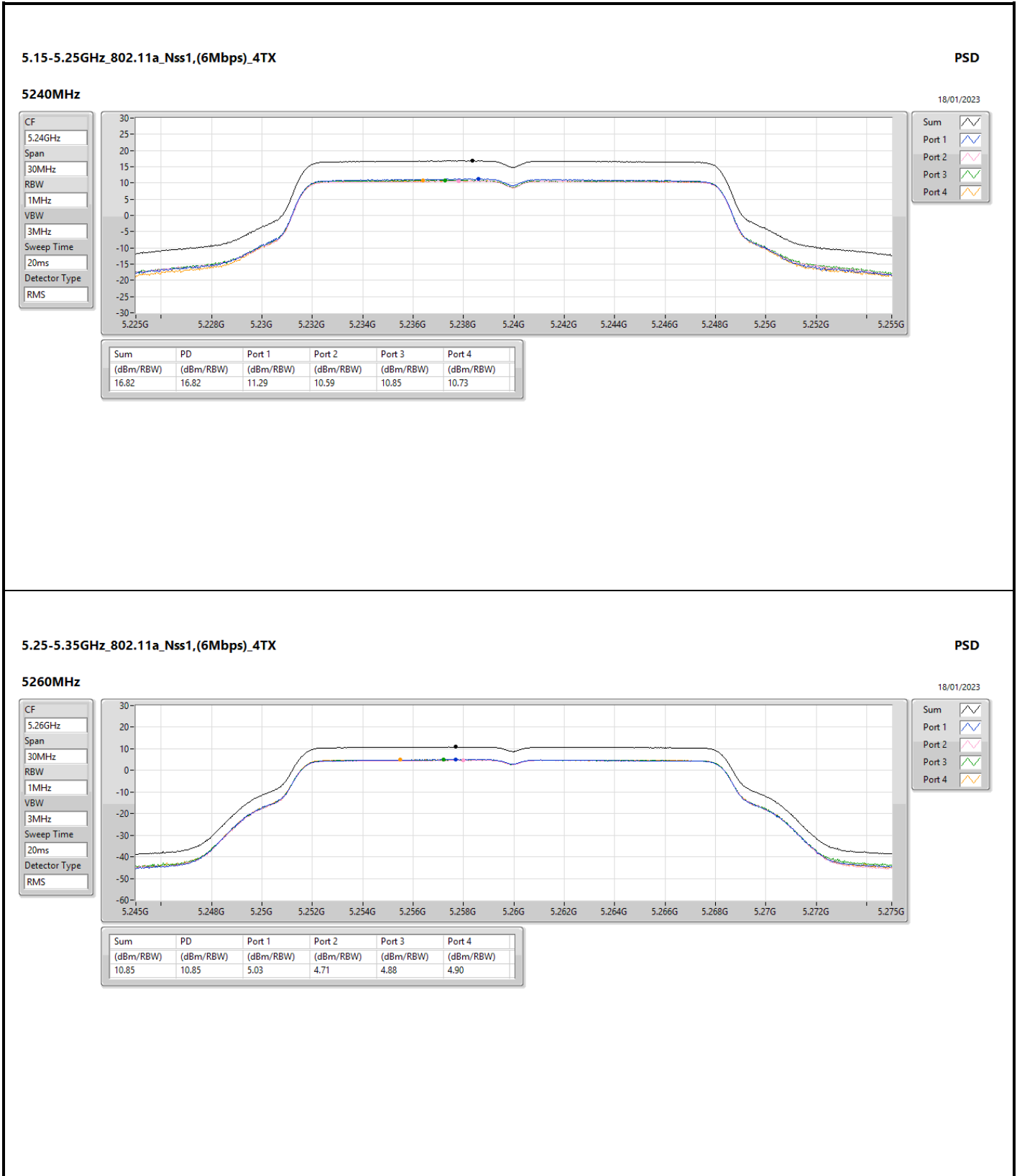
| Mode | Result | DG (dBi) | Port 1 (dBm/RBW) | Port 2 (dBm/RBW) | Port 3 (dBm/RBW) | Port 4 (dBm/RBW) | PD (dBm/RBW) | PD Limit (dBm/RBW) |
|-----------------------------------|--------|----------|------------------|------------------|------------------|------------------|--------------|--------------------|
| 802.11a_Nss1,(6Mbps)_4TX | - | - | - | - | - | - | - | - |
| 5180MHz | Pass | 4.72 | 9.00 | 8.88 | 9.23 | 9.15 | 14.96 | 17.00 |
| 5200MHz | Pass | 4.72 | 11.18 | 10.62 | 10.79 | 10.65 | 16.78 | 17.00 |
| 5240MHz | Pass | 4.72 | 11.29 | 10.59 | 10.85 | 10.73 | 16.82 | 17.00 |
| 5260MHz | Pass | 5.97 | 5.03 | 4.71 | 4.88 | 4.90 | 10.85 | 11.00 |
| 5300MHz | Pass | 5.97 | 4.99 | 4.64 | 5.04 | 5.05 | 10.87 | 11.00 |
| 5320MHz | Pass | 5.97 | 4.96 | 4.47 | 4.70 | 4.79 | 10.66 | 11.00 |
| 5500MHz | Pass | 5.72 | 5.13 | 4.62 | 4.93 | 4.90 | 10.82 | 11.00 |
| 5580MHz | Pass | 5.72 | 5.12 | 4.87 | 5.07 | 5.08 | 10.96 | 11.00 |
| 5700MHz | Pass | 5.72 | 5.33 | 5.07 | 4.75 | 4.65 | 10.88 | 11.00 |
| 5720MHz Straddle 5.47-5.725GHz | Pass | 5.72 | 4.94 | 4.91 | 4.66 | 4.56 | 10.72 | 11.00 |
| 5720MHz Straddle 5.725-5.85GHz | Pass | 5.64 | 3.34 | 3.32 | 3.26 | 2.92 | 9.17 | 30.00 |
| 5745MHz | Pass | 5.64 | 8.95 | 8.62 | 9.73 | 9.69 | 15.09 | 30.00 |
| 5785MHz | Pass | 5.64 | 9.25 | 8.99 | 9.43 | 9.59 | 15.13 | 30.00 |
| 5825MHz | Pass | 5.64 | 9.17 | 8.82 | 9.65 | 9.59 | 15.17 | 30.00 |
| 802.11be EHT20-BF_Nss1,(MCS0)_4TX | - | - | - | - | - | - | - | - |
| 5180MHz | Pass | 4.72 | 7.46 | 7.36 | 7.77 | 7.50 | 13.40 | 17.00 |
| 5200MHz | Pass | 4.72 | 11.09 | 10.47 | 10.59 | 10.58 | 16.61 | 17.00 |
| 5240MHz | Pass | 4.72 | 11.06 | 10.54 | 10.67 | 10.69 | 16.62 | 17.00 |
| 5260MHz | Pass | 5.97 | 4.63 | 4.26 | 4.40 | 4.47 | 10.35 | 11.00 |
| 5300MHz | Pass | 5.97 | 4.78 | 4.48 | 4.79 | 5.05 | 10.70 | 11.00 |
| 5320MHz | Pass | 5.97 | 4.80 | 4.44 | 4.58 | 4.79 | 10.57 | 11.00 |
| 5500MHz | Pass | 5.72 | 4.76 | 4.26 | 4.60 | 4.55 | 10.42 | 11.00 |
| 5580MHz | Pass | 5.72 | 5.02 | 4.73 | 4.89 | 4.98 | 10.78 | 11.00 |
| 5700MHz | Pass | 5.72 | 3.08 | 2.57 | 2.75 | 2.59 | 8.66 | 11.00 |
| 5720MHz Straddle 5.47-5.725GHz | Pass | 5.72 | 4.48 | 4.46 | 4.46 | 4.19 | 10.34 | 11.00 |
| 5720MHz Straddle 5.725-5.85GHz | Pass | 5.64 | 2.88 | 2.88 | 2.78 | 2.59 | 8.71 | 30.00 |
| 5745MHz | Pass | 5.64 | 9.07 | 8.36 | 9.83 | 9.51 | 15.13 | 30.00 |
| 5785MHz | Pass | 5.64 | 9.27 | 8.67 | 9.25 | 9.31 | 15.01 | 30.00 |
| 5825MHz | Pass | 5.64 | 8.87 | 8.54 | 9.42 | 9.59 | 15.00 | 30.00 |
| 802.11be EHT40-BF_Nss1,(MCS0)_4TX | - | - | - | - | - | - | - | - |
| 5190MHz | Pass | 4.72 | 1.79 | 1.91 | 1.97 | 1.82 | 7.73 | 17.00 |
| 5230MHz | Pass | 4.72 | 8.17 | 7.55 | 7.74 | 7.68 | 13.72 | 17.00 |
| 5270MHz | Pass | 5.97 | 1.90 | 1.58 | 1.76 | 1.92 | 7.68 | 11.00 |
| 5310MHz | Pass | 5.97 | 1.98 | 1.41 | 1.50 | 1.64 | 7.55 | 11.00 |
| 5510MHz | Pass | 5.72 | 2.40 | 1.58 | 1.86 | 1.74 | 7.86 | 11.00 |
| 5550MHz | Pass | 5.72 | 2.12 | 1.58 | 1.58 | 1.80 | 7.68 | 11.00 |
| 5670MHz | Pass | 5.72 | 1.51 | 1.09 | 1.29 | 1.45 | 7.30 | 11.00 |
| 5710MHz Straddle 5.47-5.725GHz | Pass | 5.72 | 2.18 | 1.50 | 1.66 | 1.87 | 7.74 | 11.00 |
| 5710MHz Straddle 5.725-5.85GHz | Pass | 5.64 | 0.09 | -0.47 | -0.29 | -0.06 | 5.78 | 30.00 |
| 5755MHz | Pass | 5.64 | 6.44 | 5.79 | 6.55 | 6.20 | 12.17 | 30.00 |
| 5795MHz | Pass | 5.64 | 6.33 | 5.95 | 6.12 | 6.10 | 12.02 | 30.00 |
| 802.11be EHT80-BF_Nss1,(MCS0)_4TX | - | - | - | - | - | - | - | - |
| 5210MHz | Pass | 4.72 | 0.36 | 0.57 | 0.41 | 0.05 | 6.30 | 17.00 |
| 5290MHz | Pass | 5.97 | -0.60 | -0.91 | -0.83 | -0.95 | 5.09 | 11.00 |
| 5530MHz | Pass | 5.72 | -0.55 | -0.95 | -0.99 | -1.02 | 5.05 | 11.00 |
| 5610MHz | Pass | 5.72 | -0.62 | -1.01 | -0.83 | -0.56 | 5.15 | 11.00 |
| 5690MHz Straddle 5.47-5.725GHz | Pass | 5.72 | -1.27 | -1.59 | -1.17 | -1.28 | 4.61 | 11.00 |
| 5690MHz Straddle 5.725-5.85GHz | Pass | 5.64 | -4.10 | -4.54 | -3.70 | -3.71 | 1.98 | 30.00 |
| 5775MHz | Pass | 5.64 | 2.89 | 2.48 | 2.97 | 2.72 | 8.69 | 30.00 |

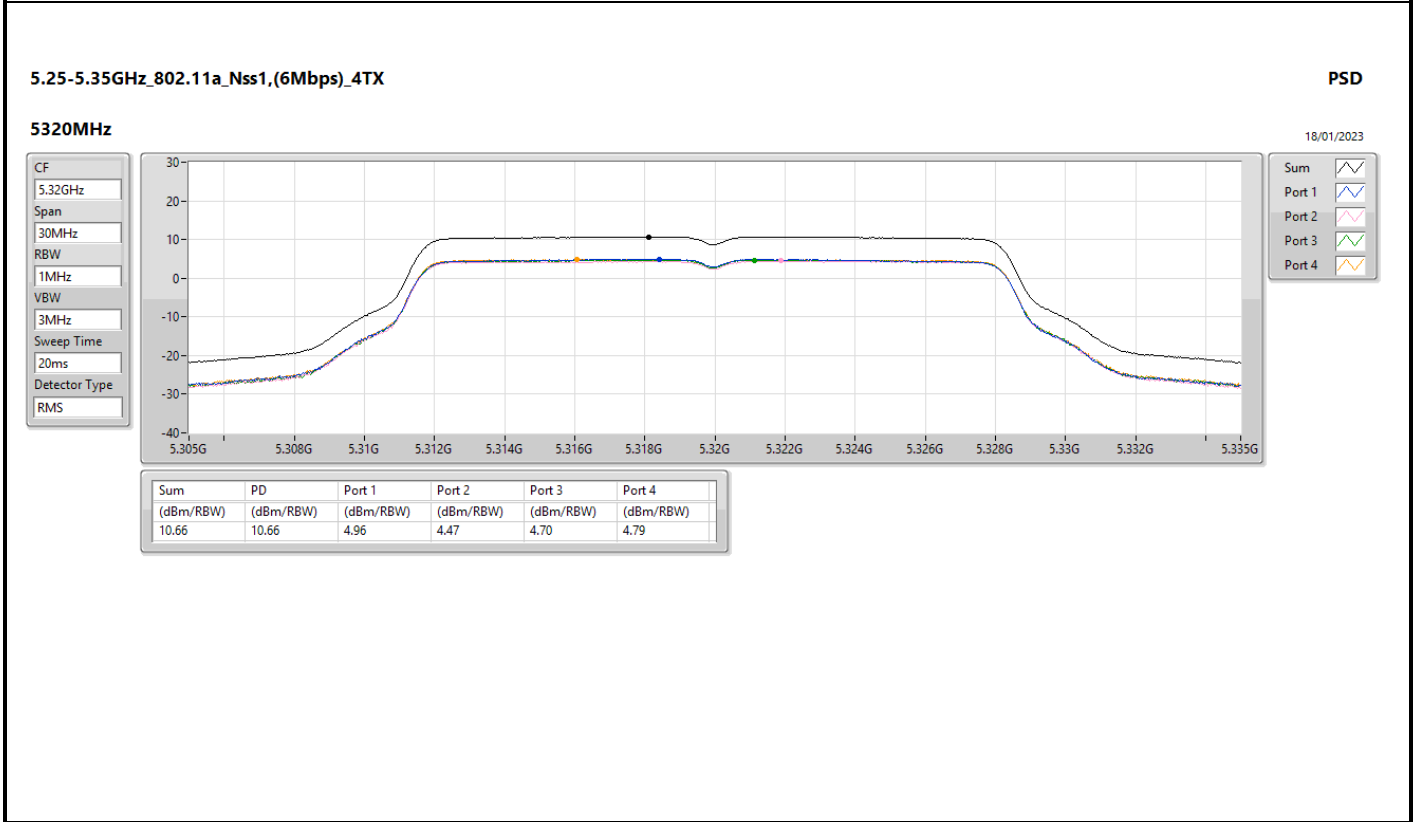
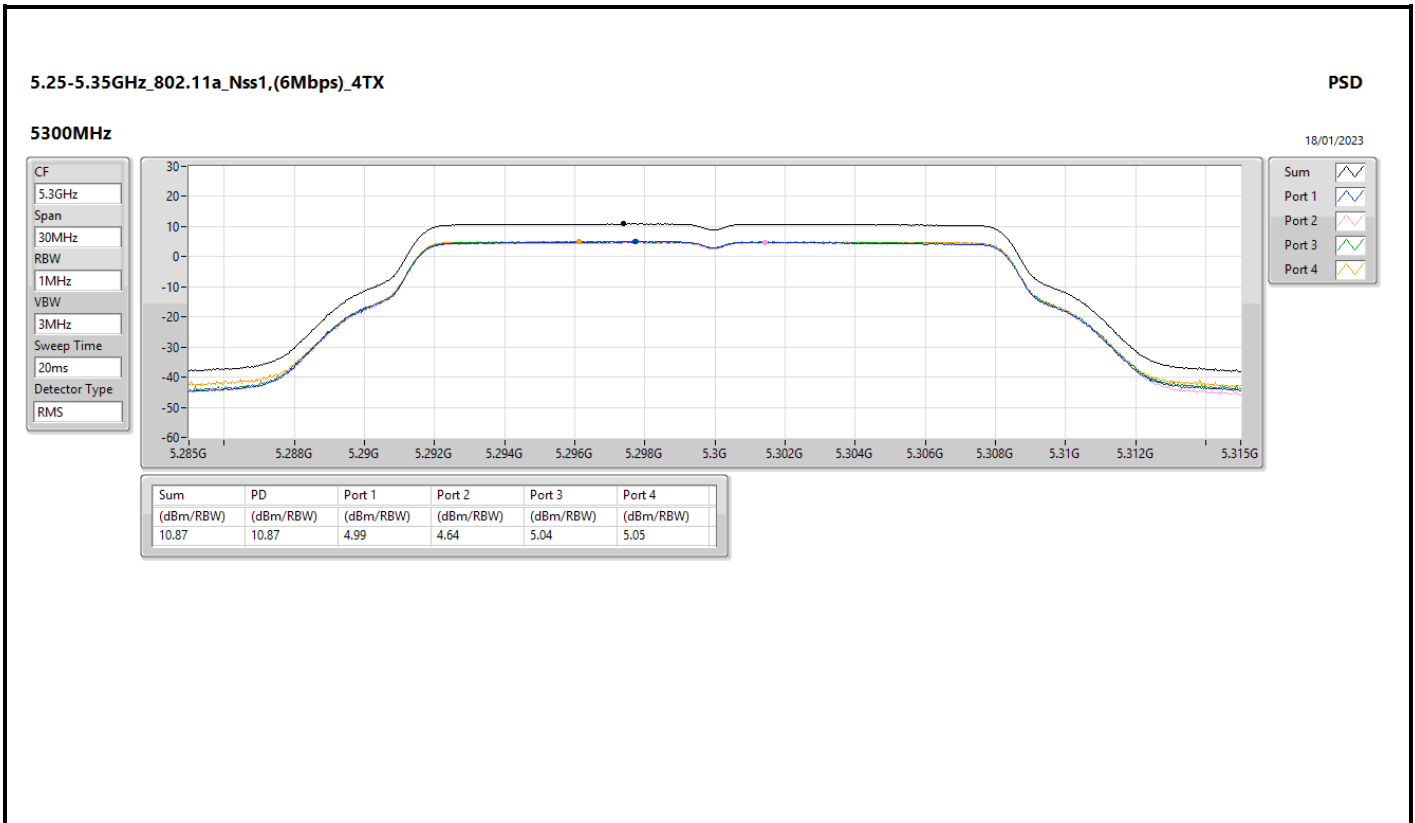


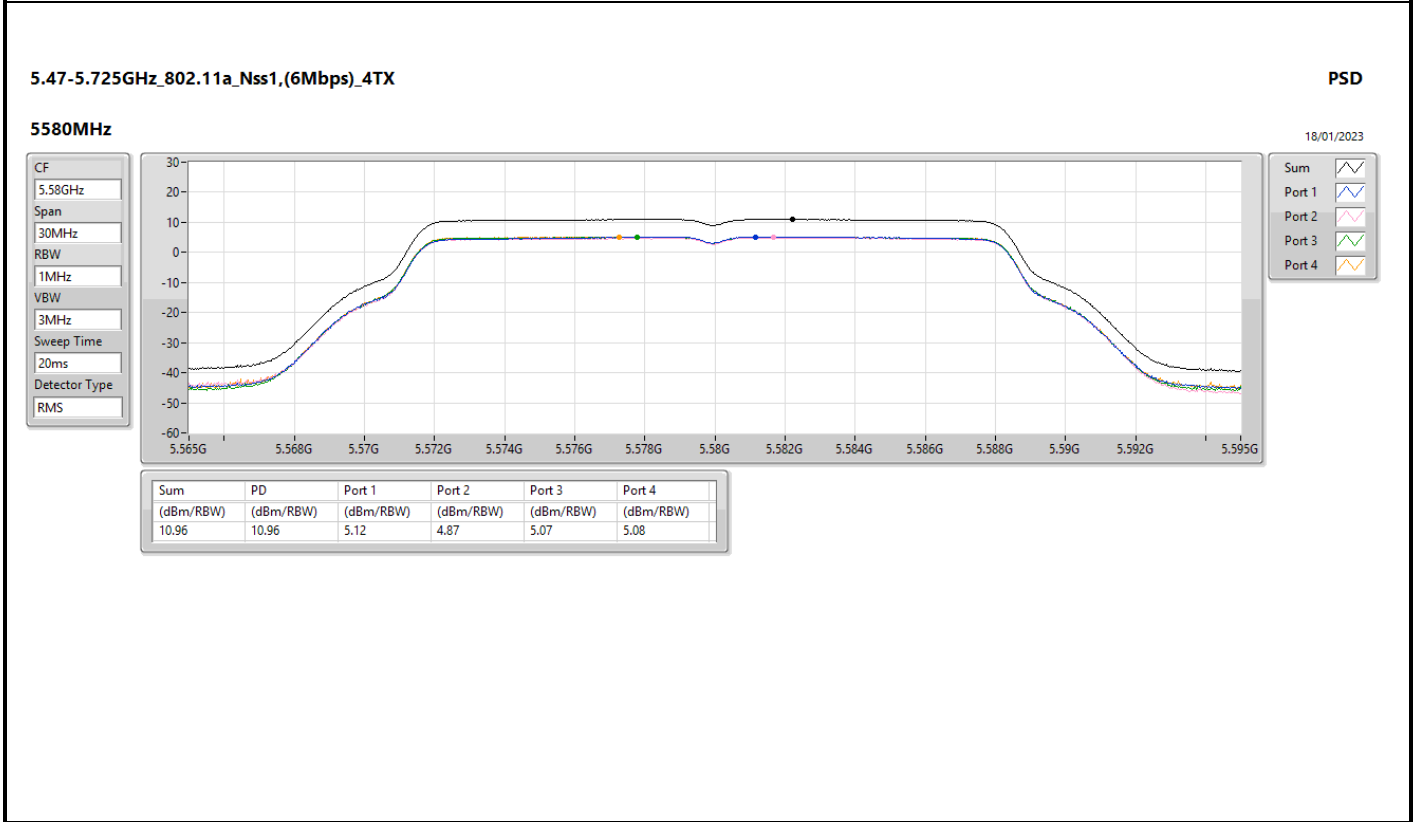
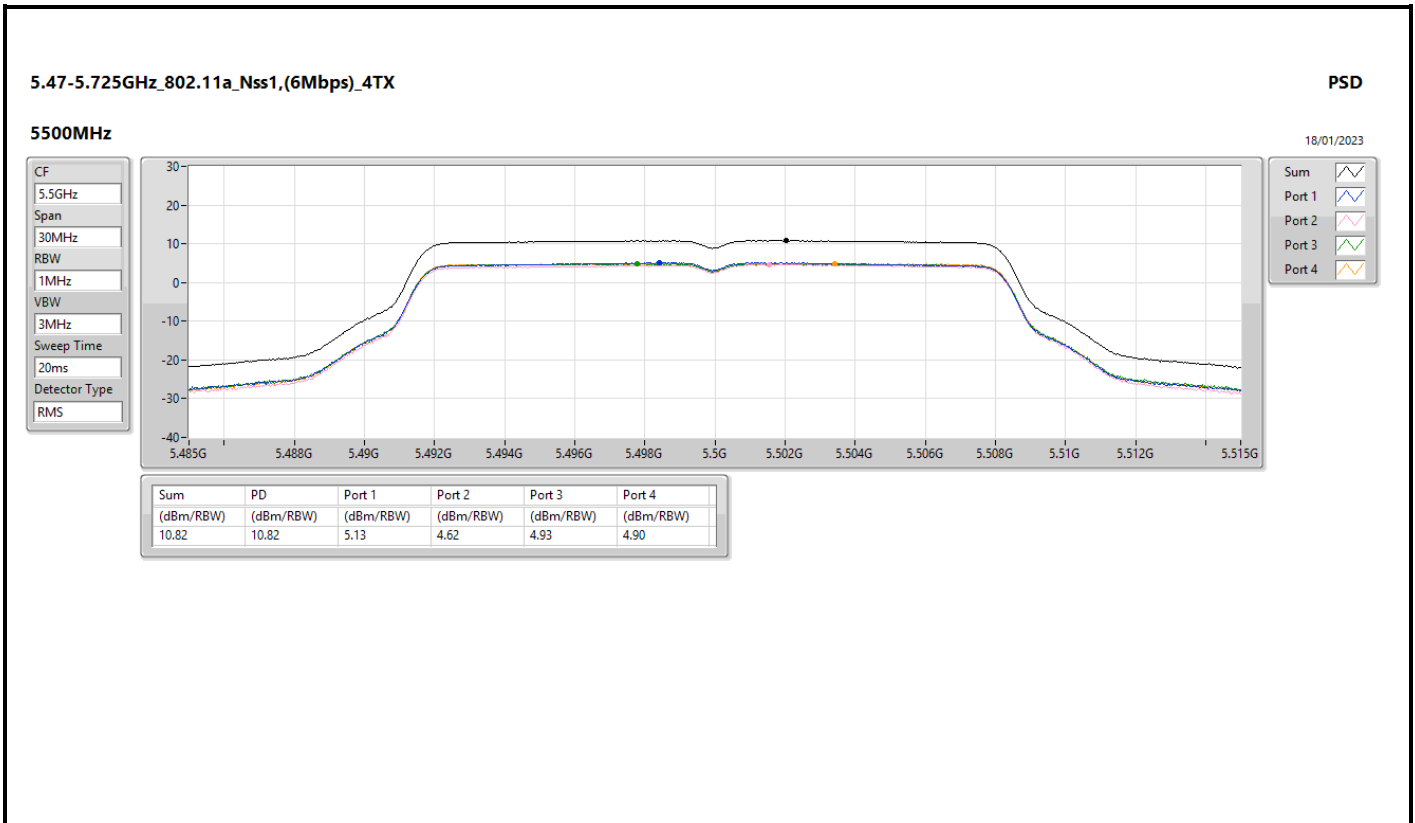
| Mode | Result | DG (dBi) | Port 1 (dBm/RBW) | Port 2 (dBm/RBW) | Port 3 (dBm/RBW) | Port 4 (dBm/RBW) | PD (dBm/RBW) | PD Limit (dBm/RBW) |
|------------------------------------|--------|----------|------------------|------------------|------------------|------------------|--------------|--------------------|
| 802.11be EHT160-BF_Nss1,(MCS0)_4TX | - | - | - | - | - | - | - | - |
| 5250MHz Straddle 5.15-5.25GHz | Pass | 4.72 | -3.38 | -3.21 | -2.86 | -3.15 | 2.78 | 17.00 |
| 5250MHz Straddle 5.25-5.35GHz | Pass | 5.97 | -3.55 | -3.14 | -2.64 | -3.45 | 2.77 | 11.00 |
| 5570MHz | Pass | 5.72 | -3.67 | -3.86 | -3.61 | -3.68 | 2.20 | 11.00 |

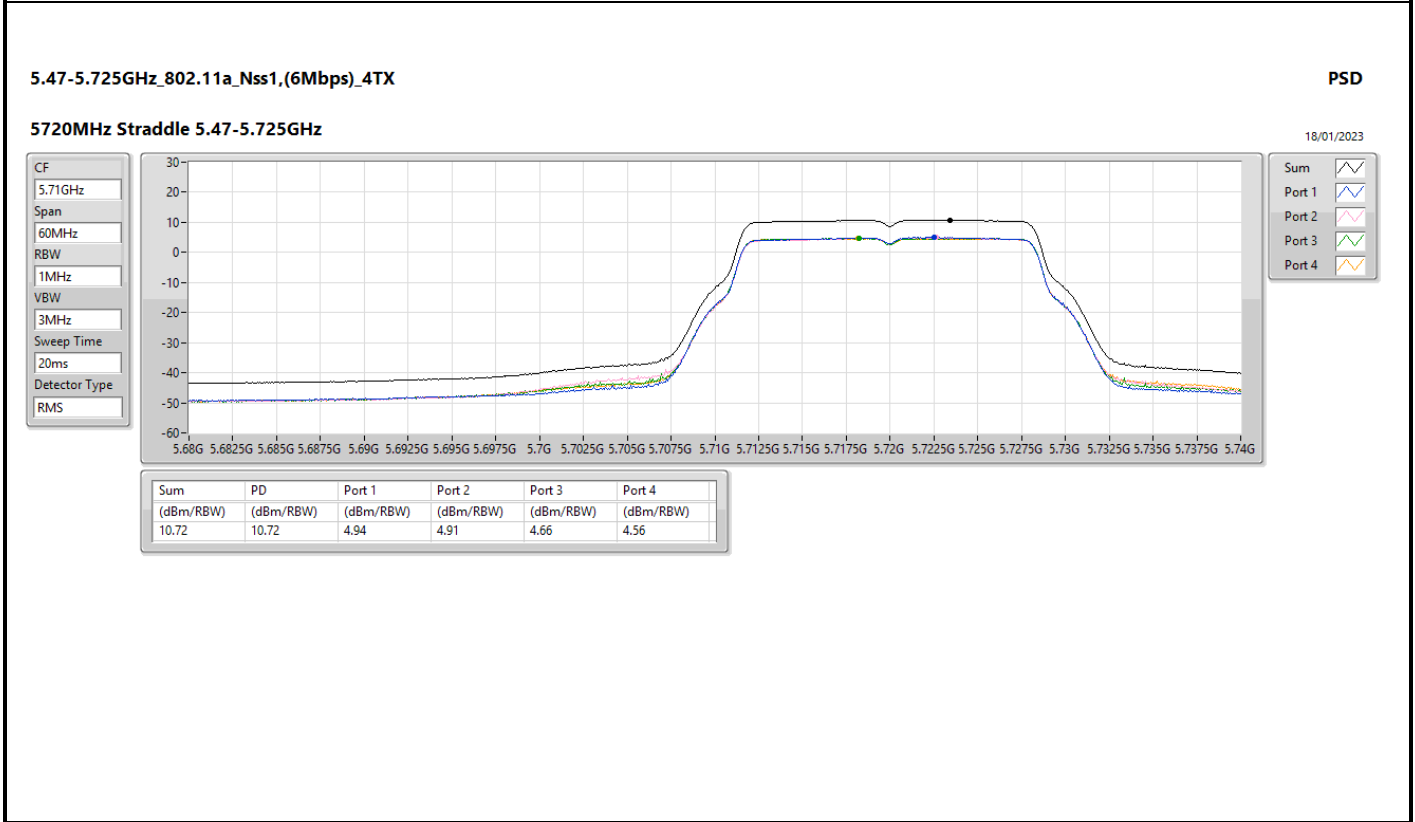
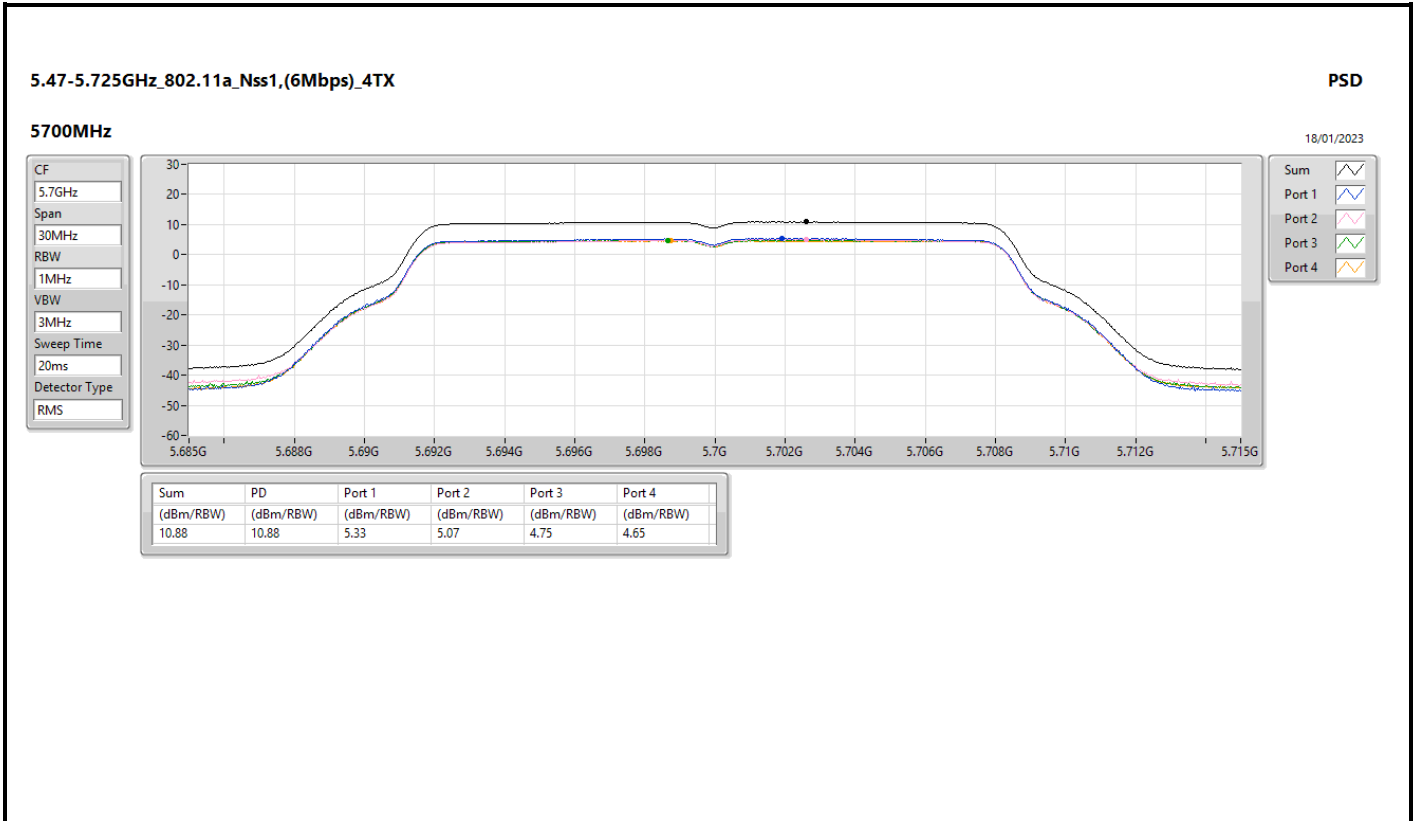
DG = Directional Gain; RBW = 500kHz for 5.725-5.85GHz band / 1MHz for other band;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;

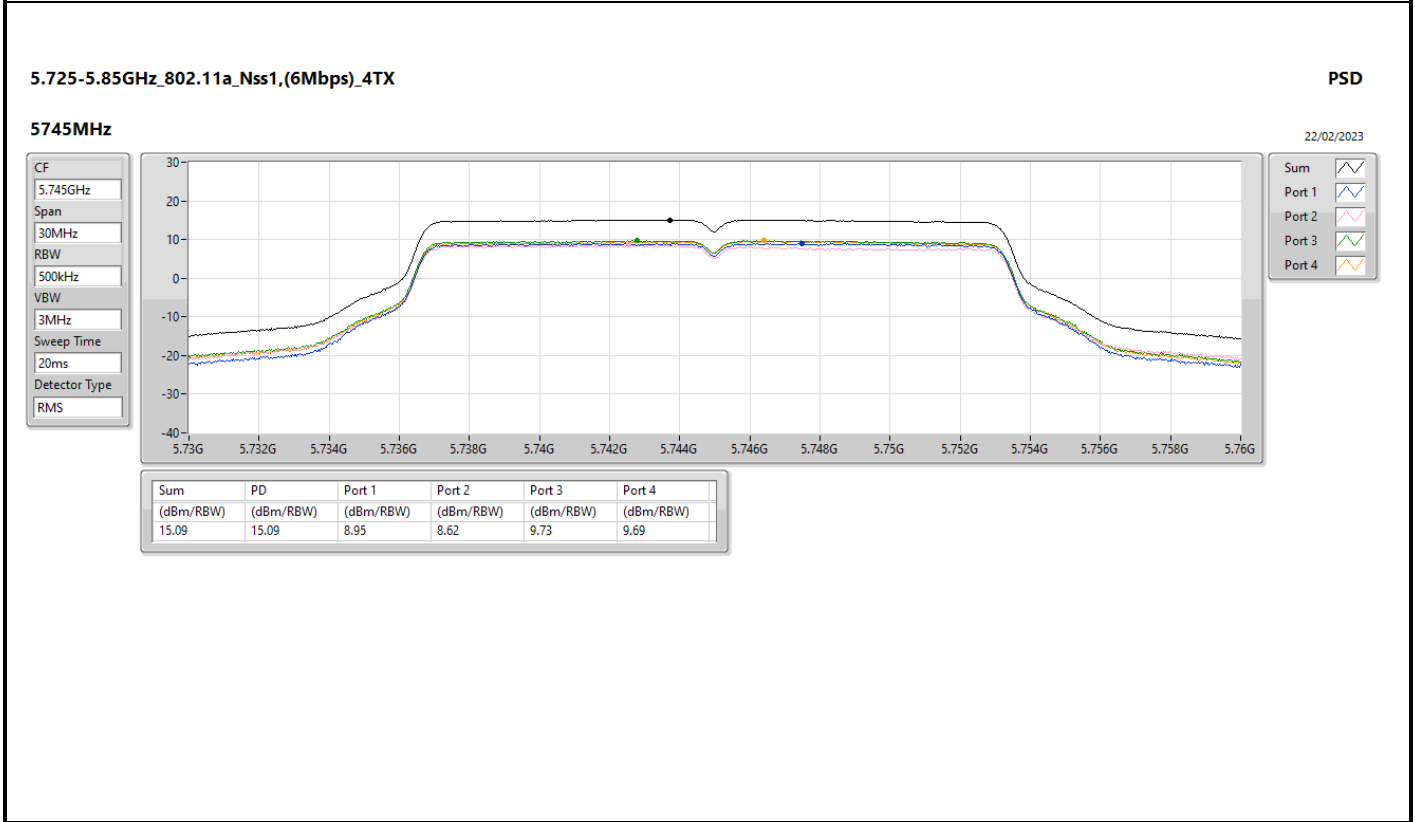
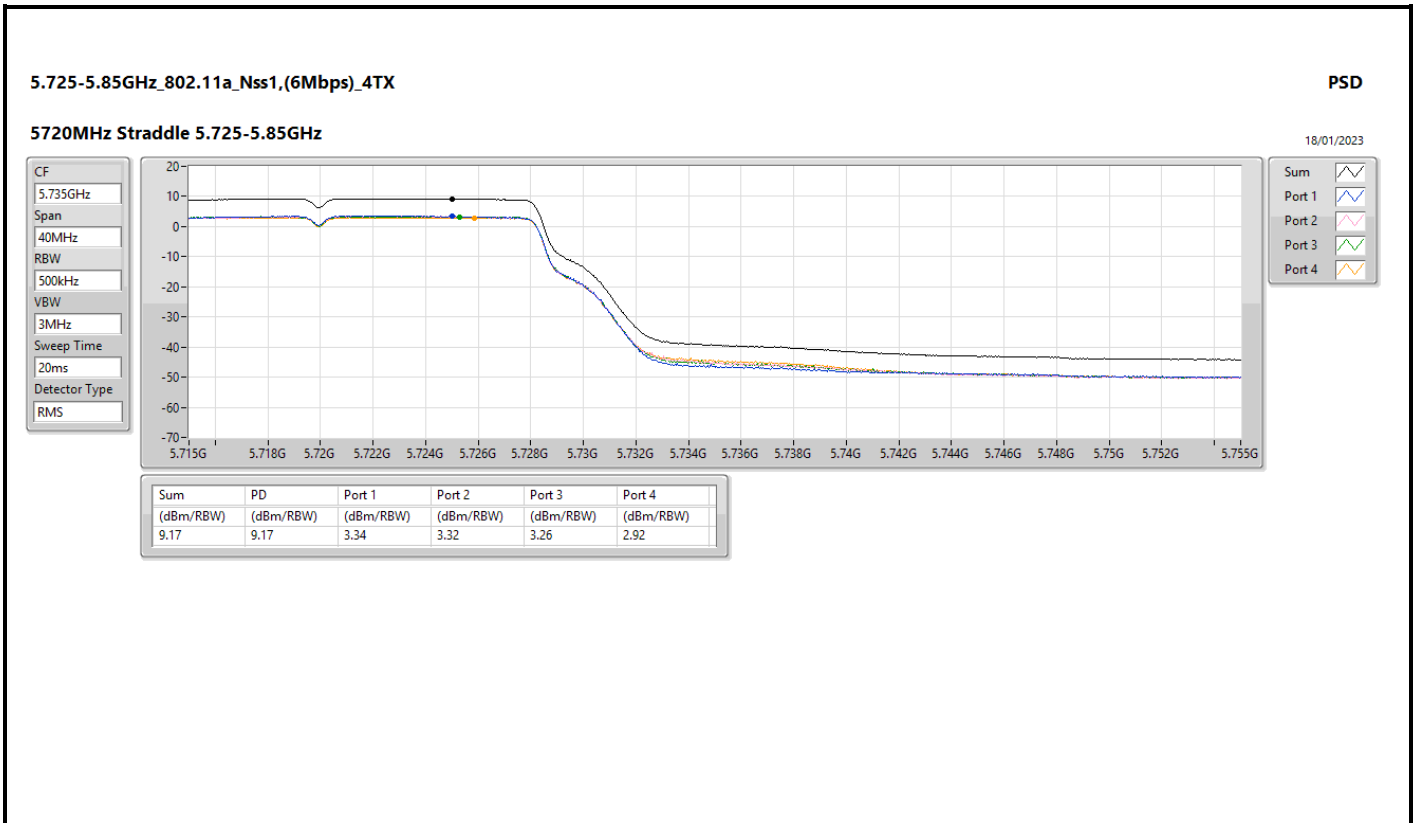


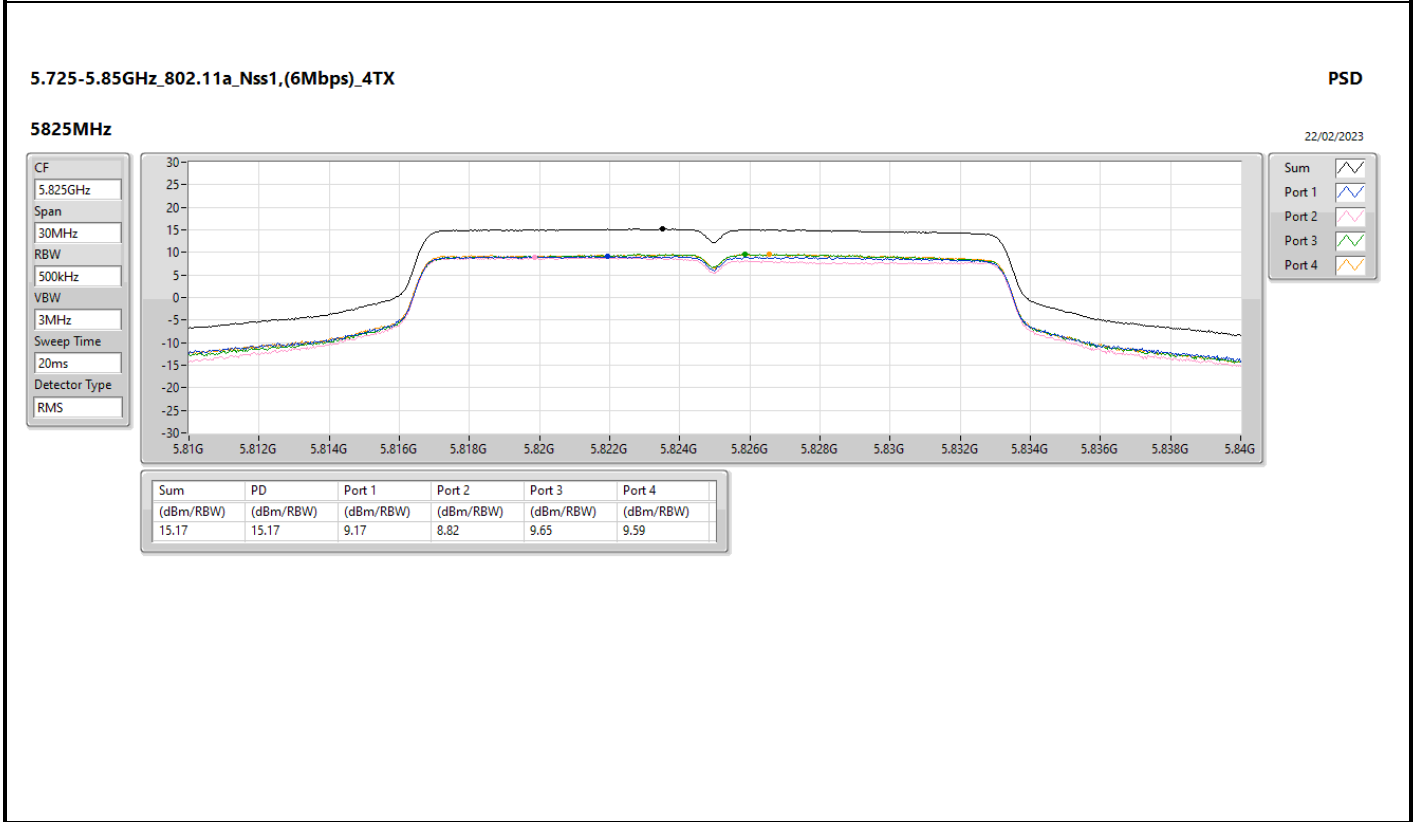
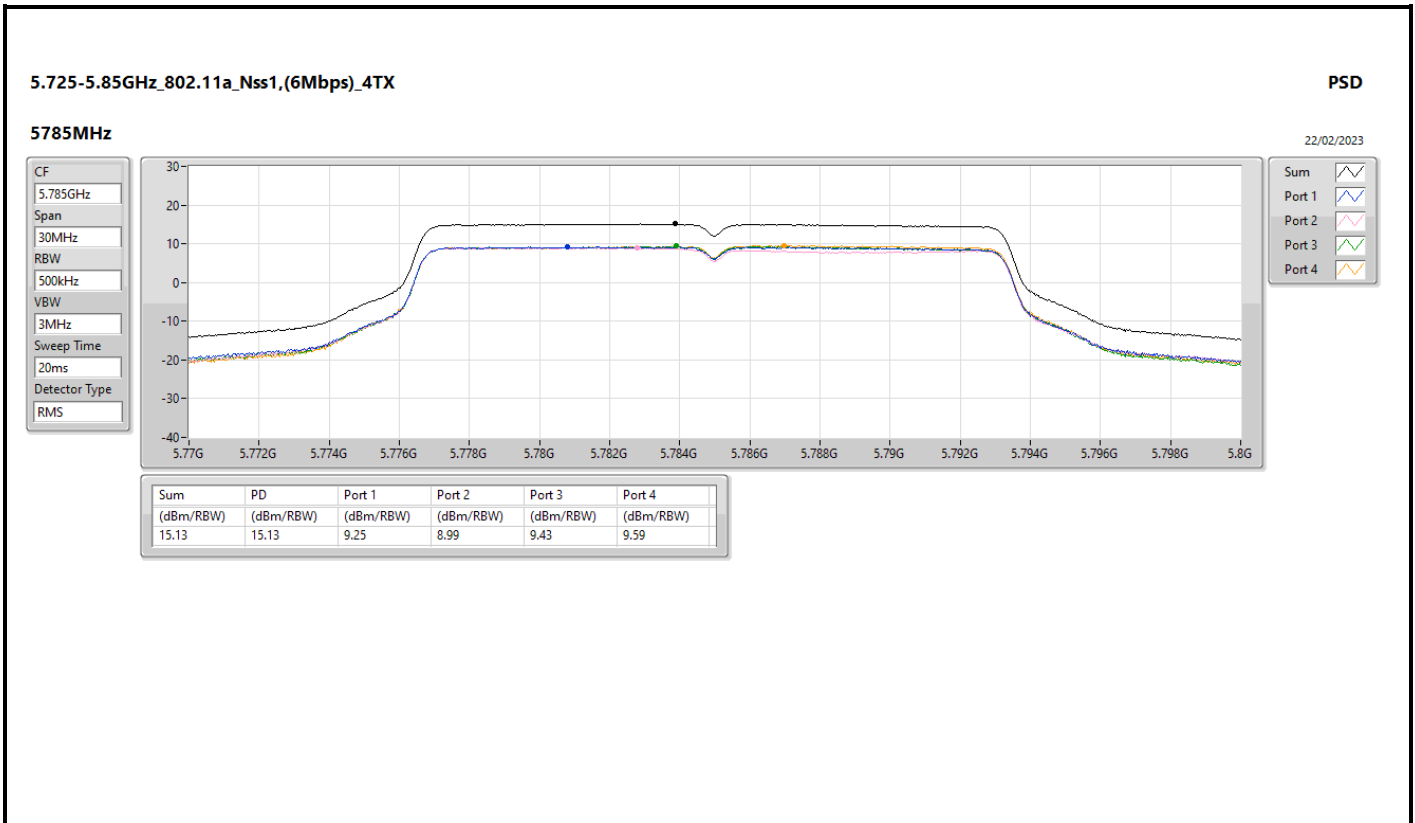


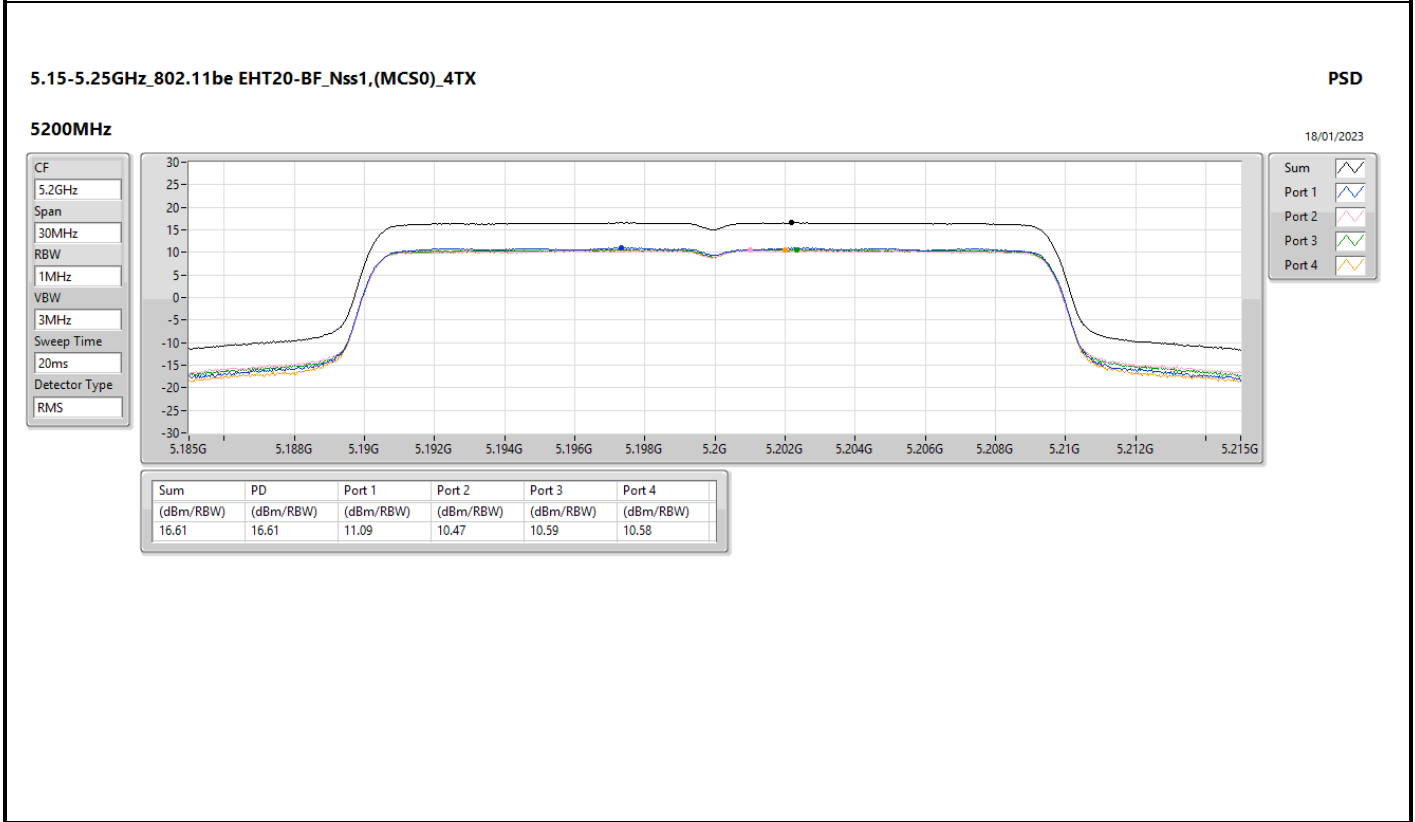
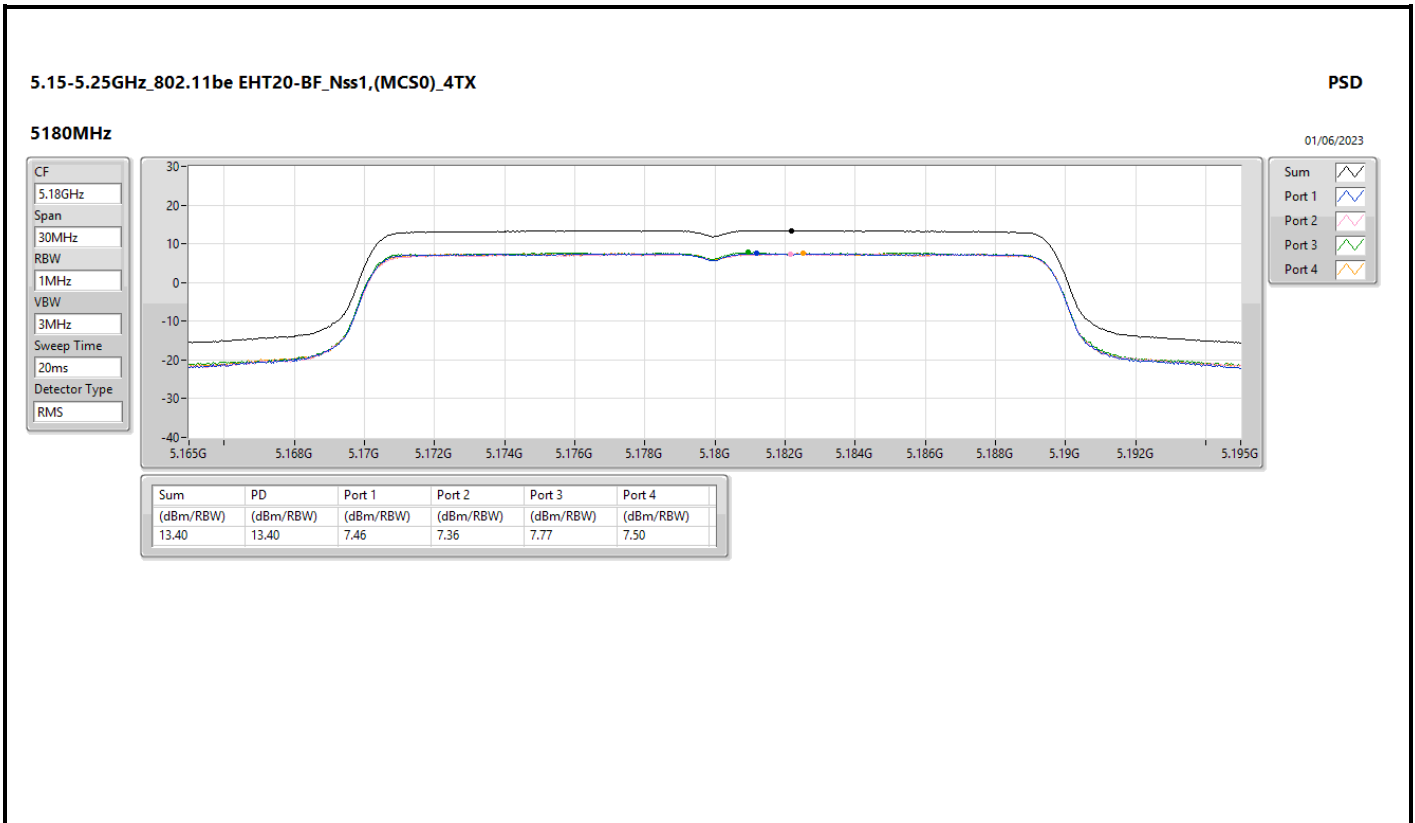


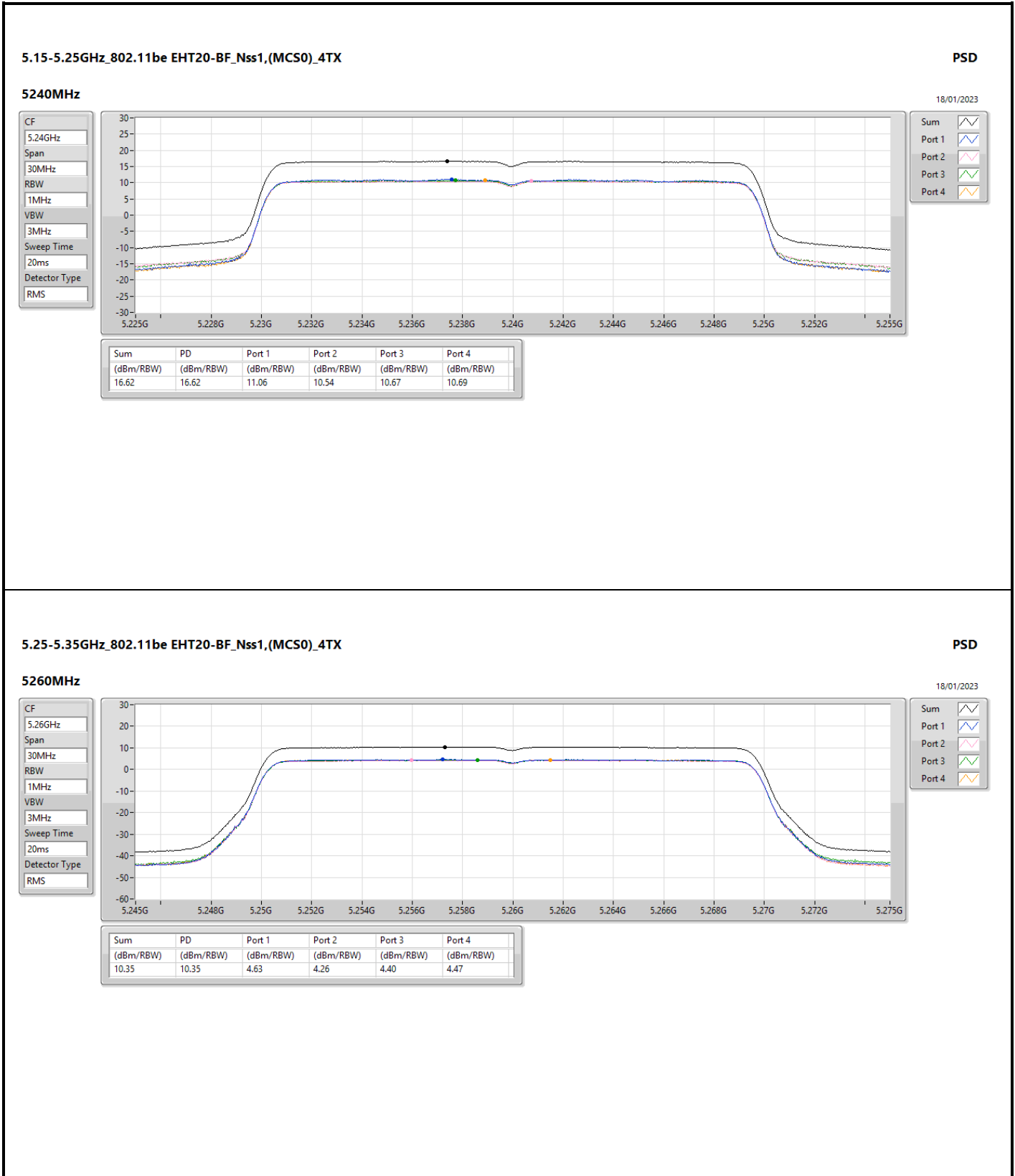


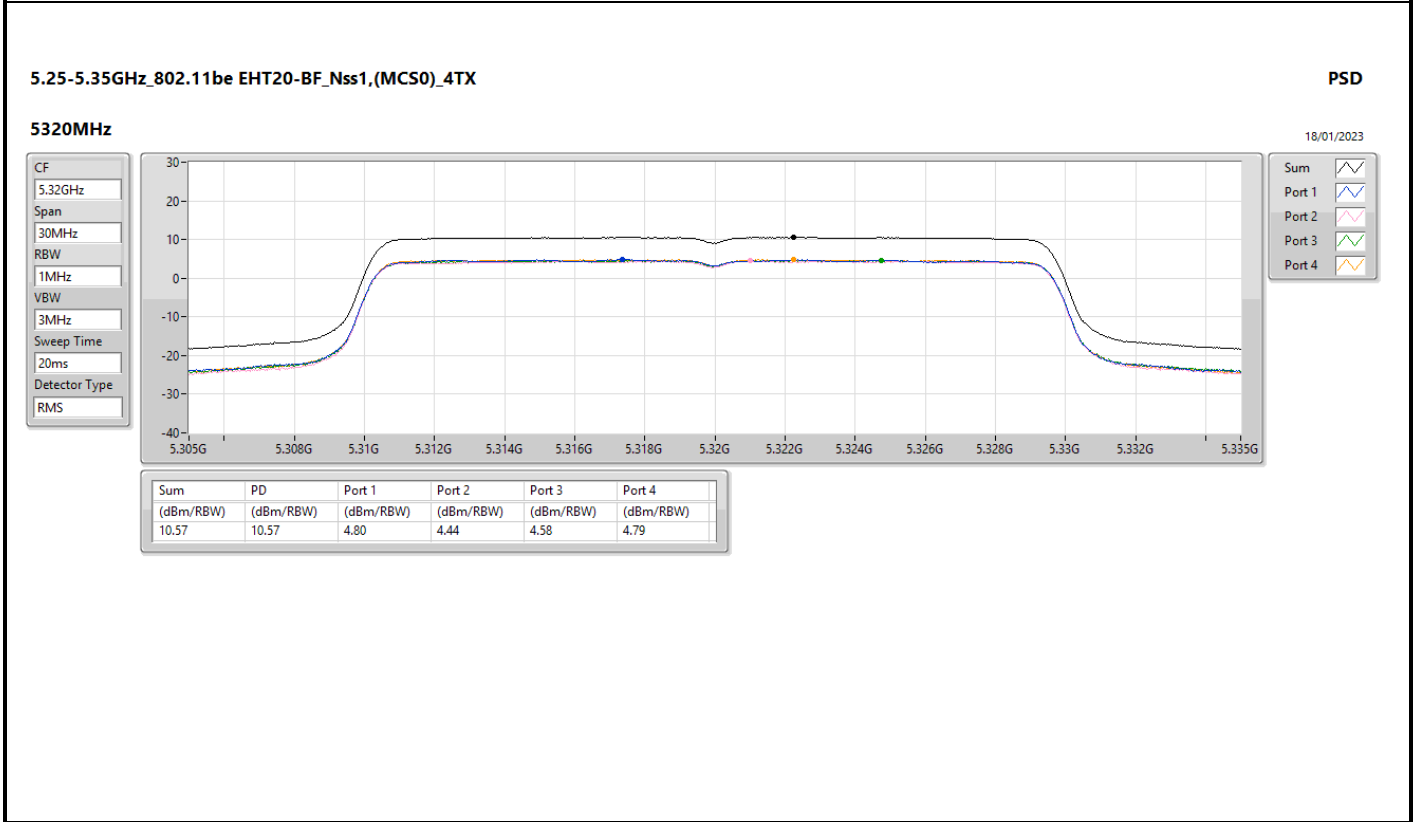
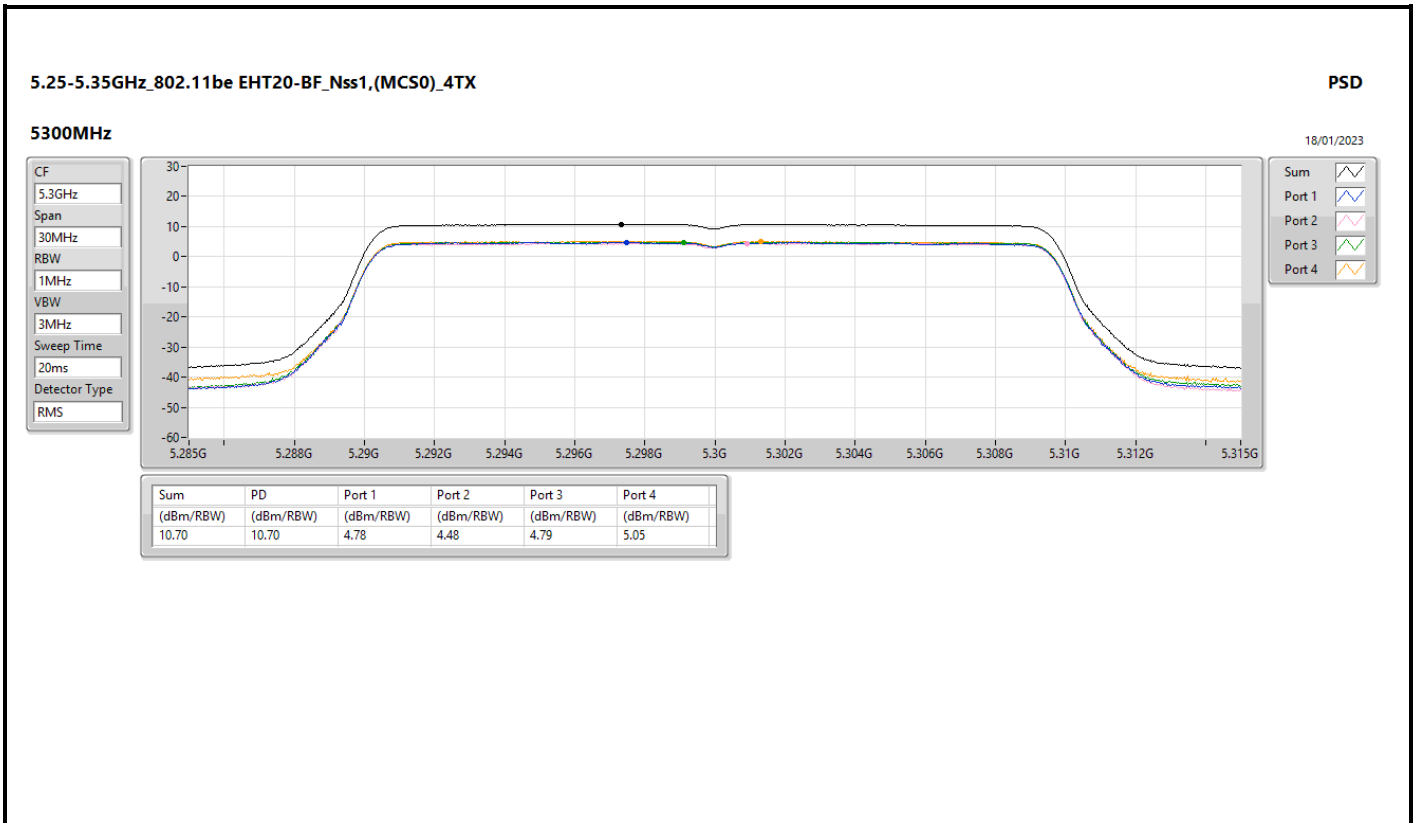


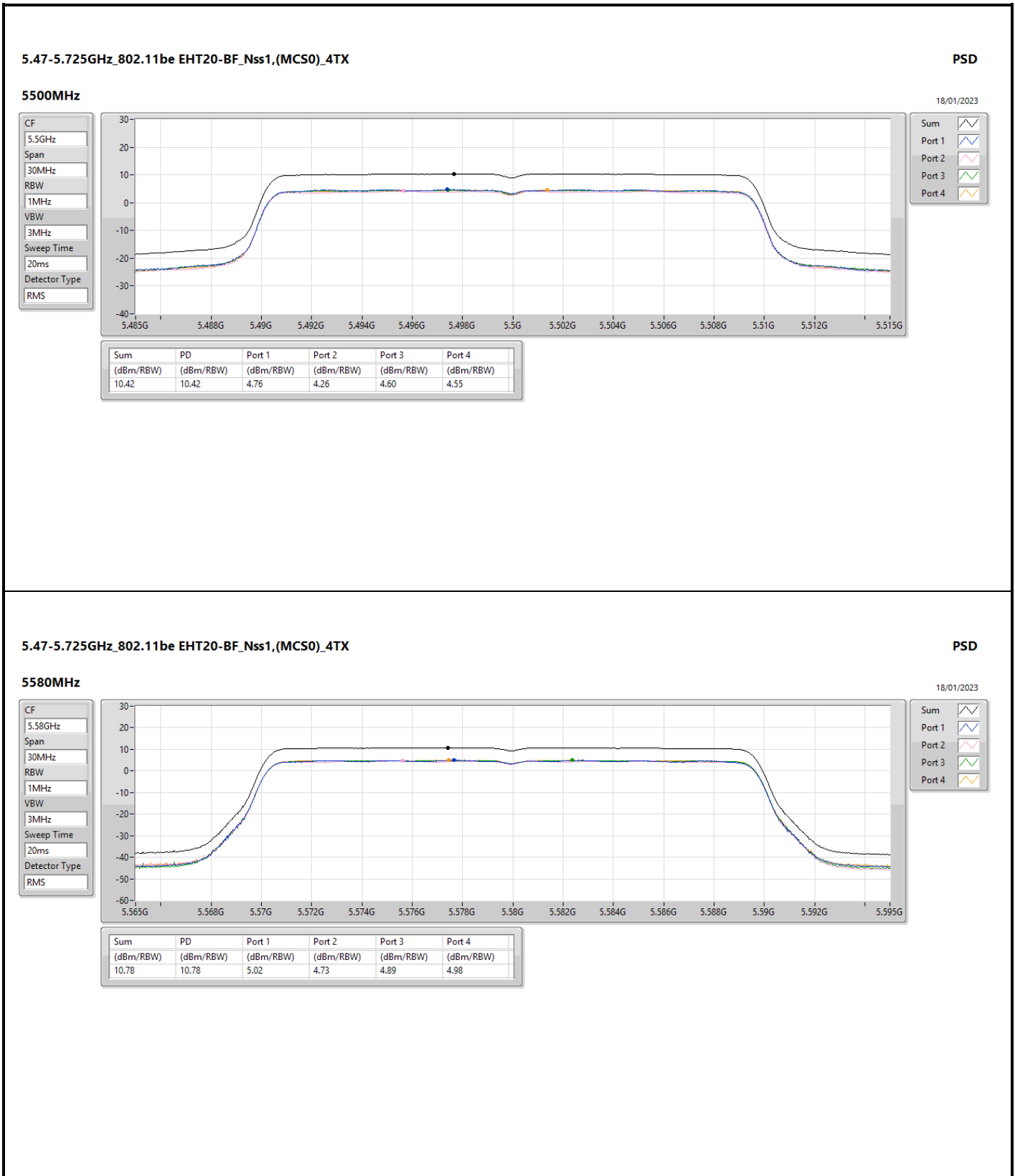


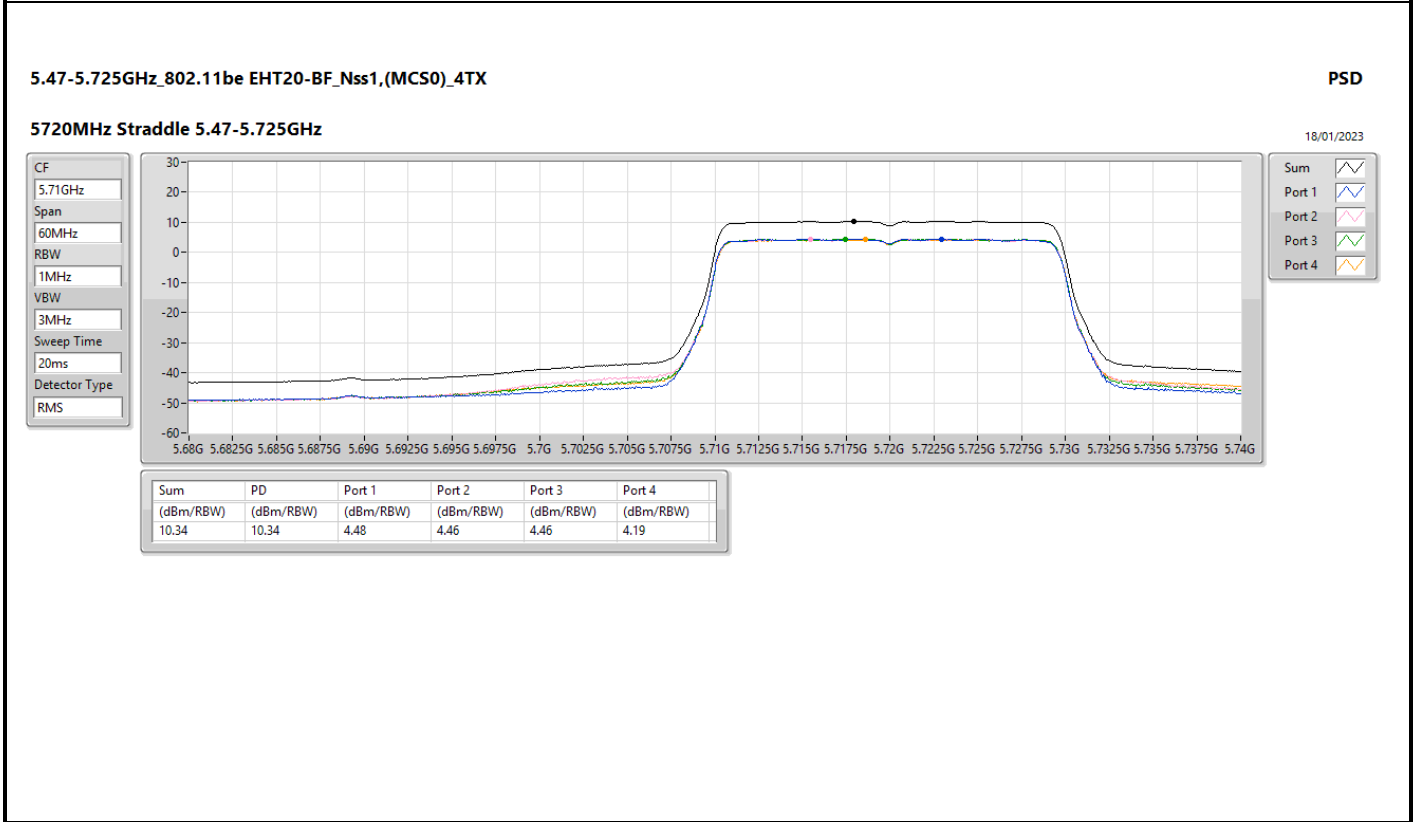
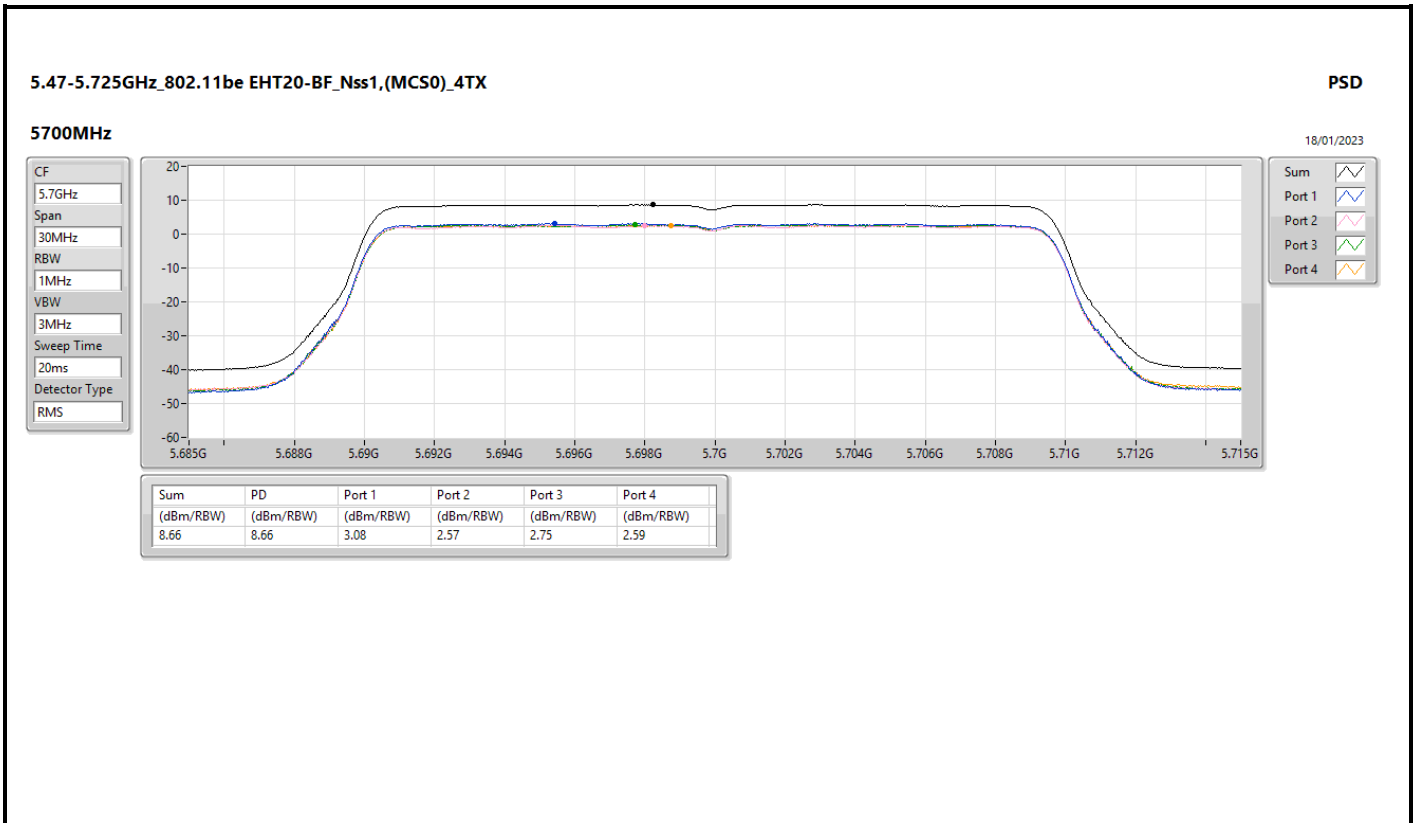


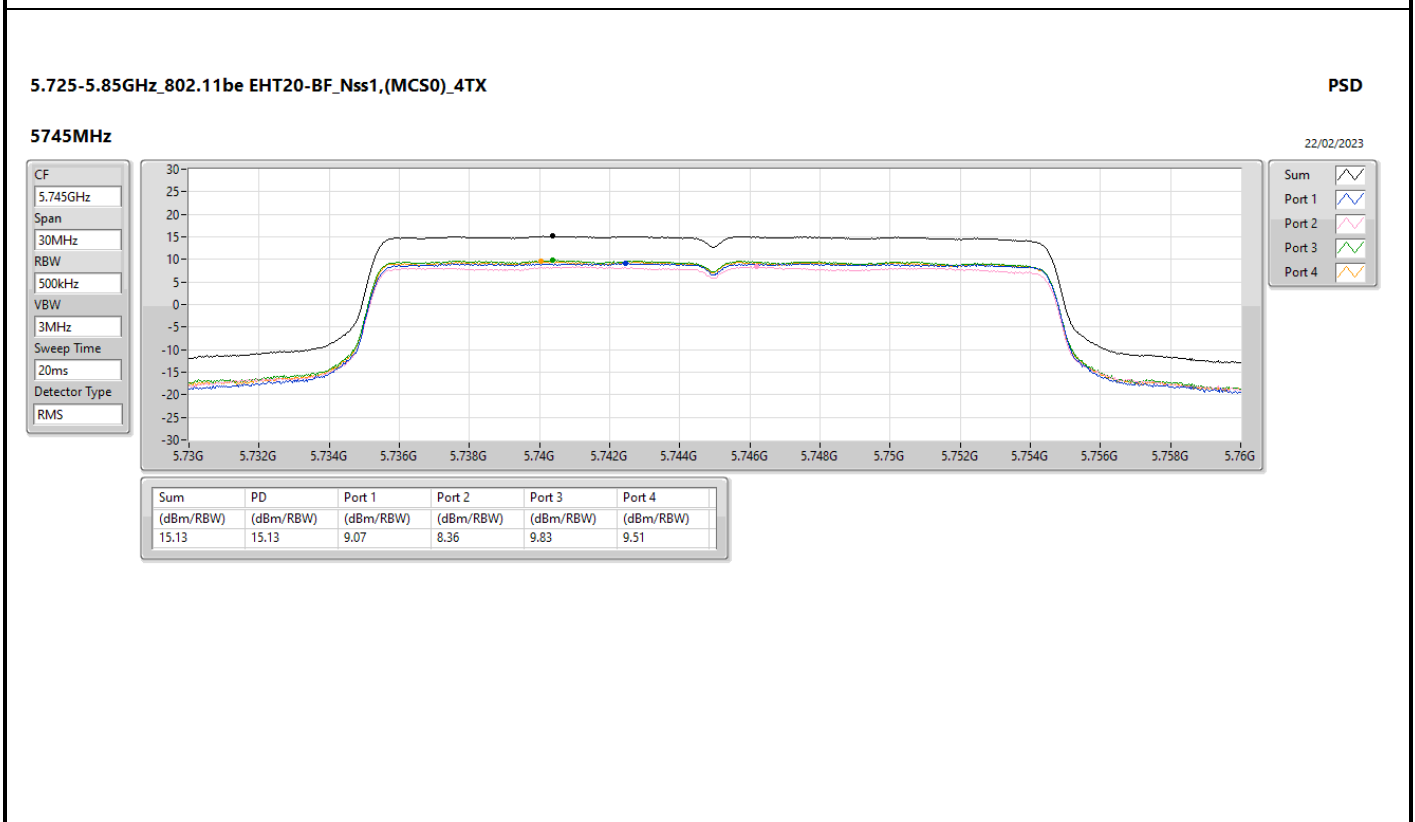
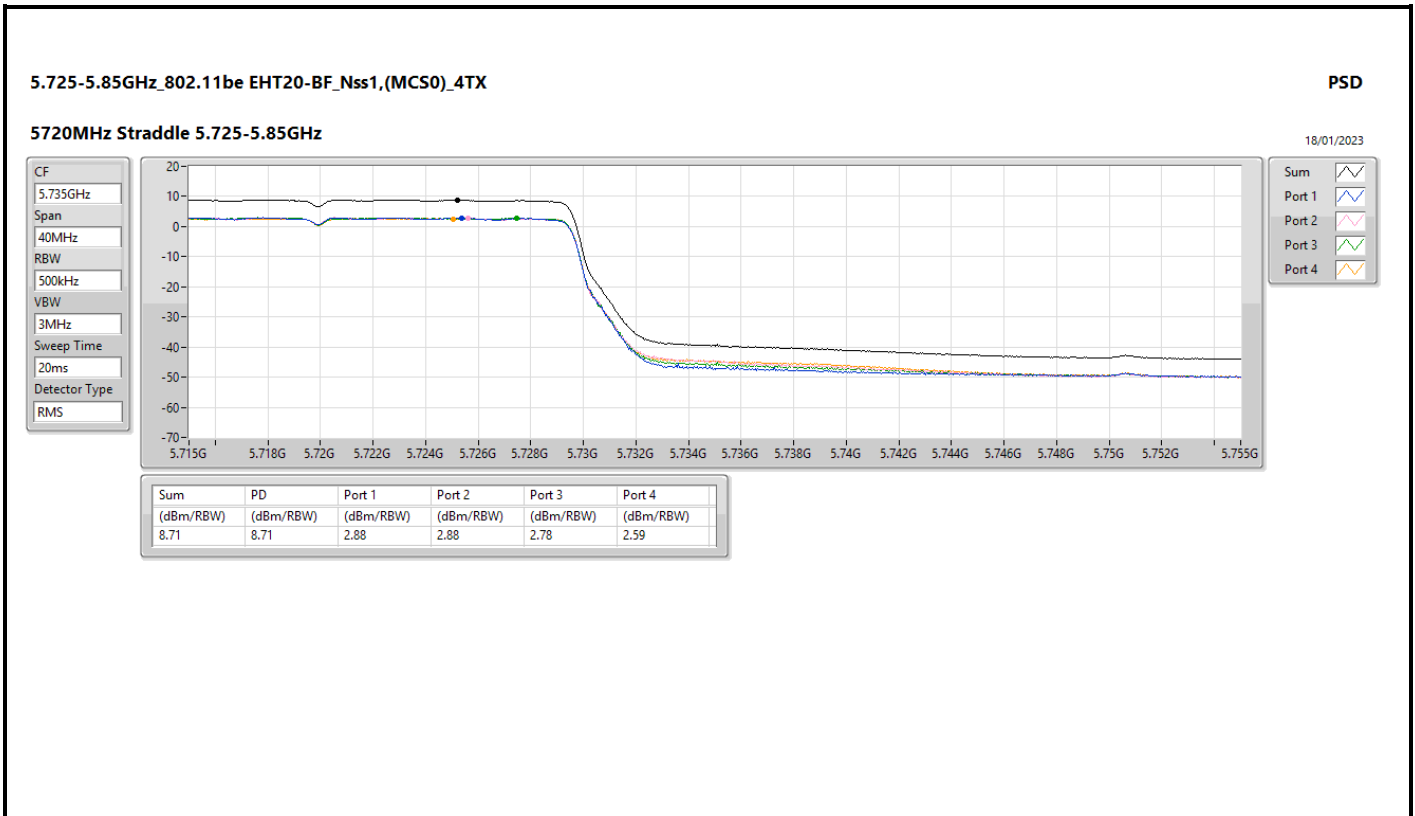


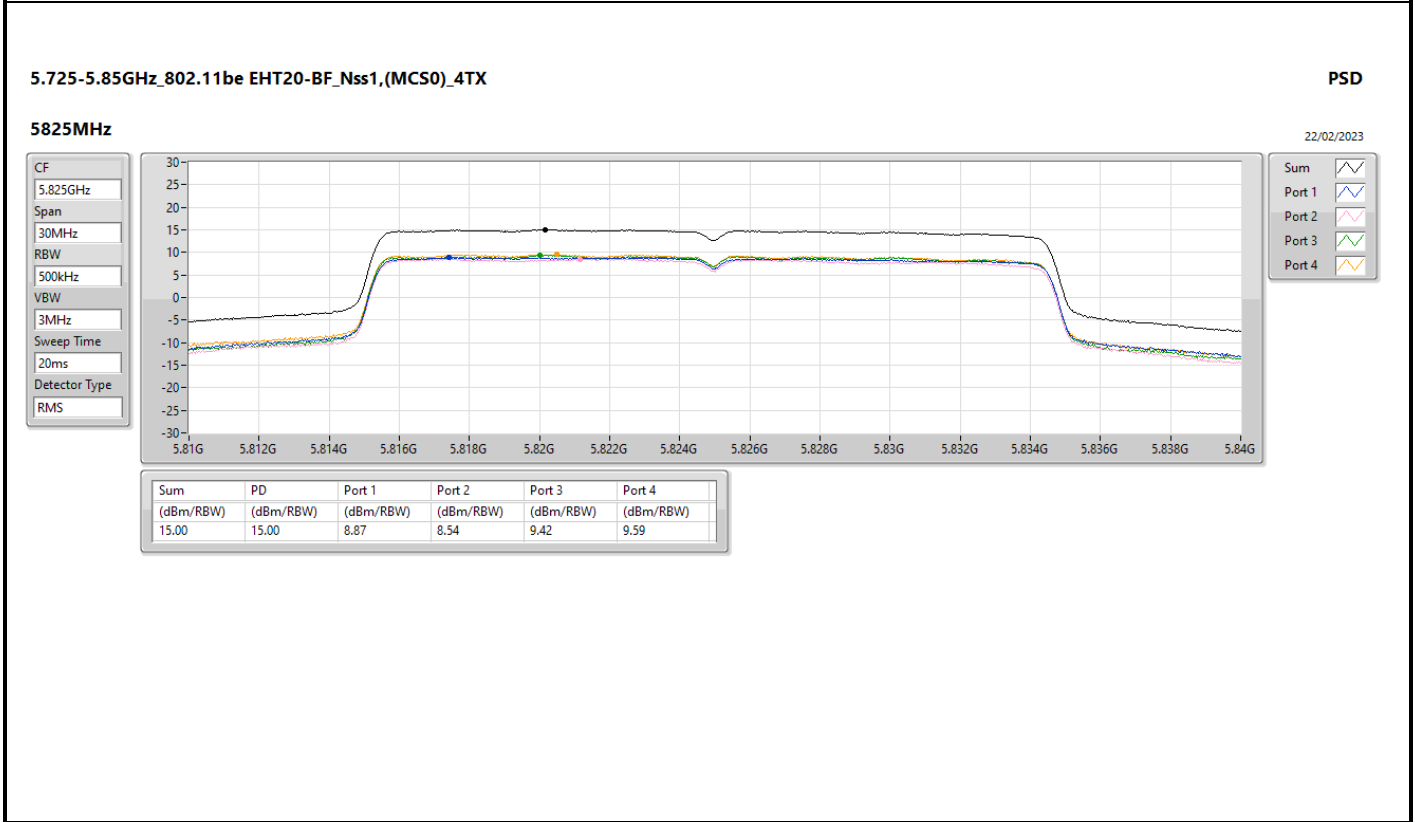
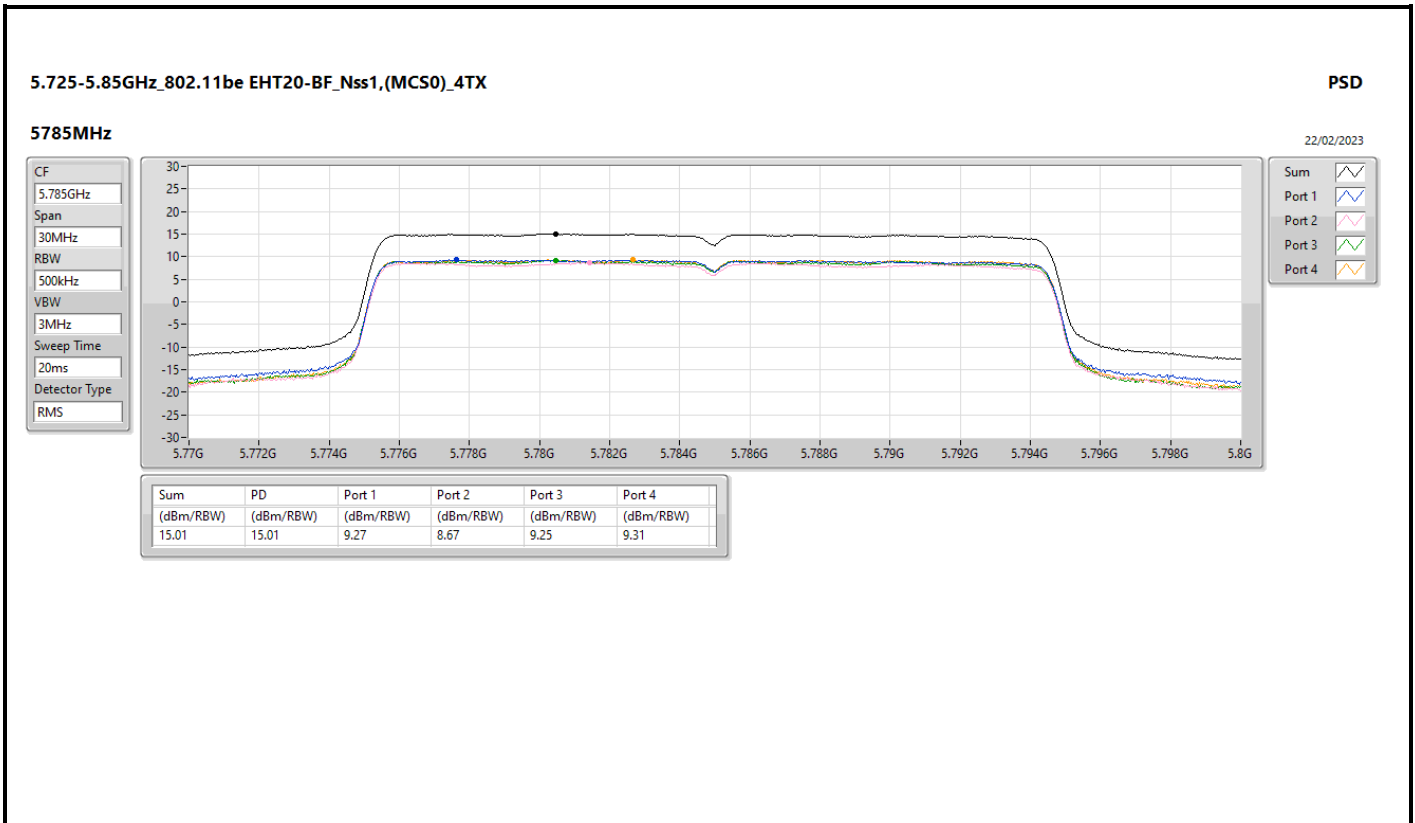


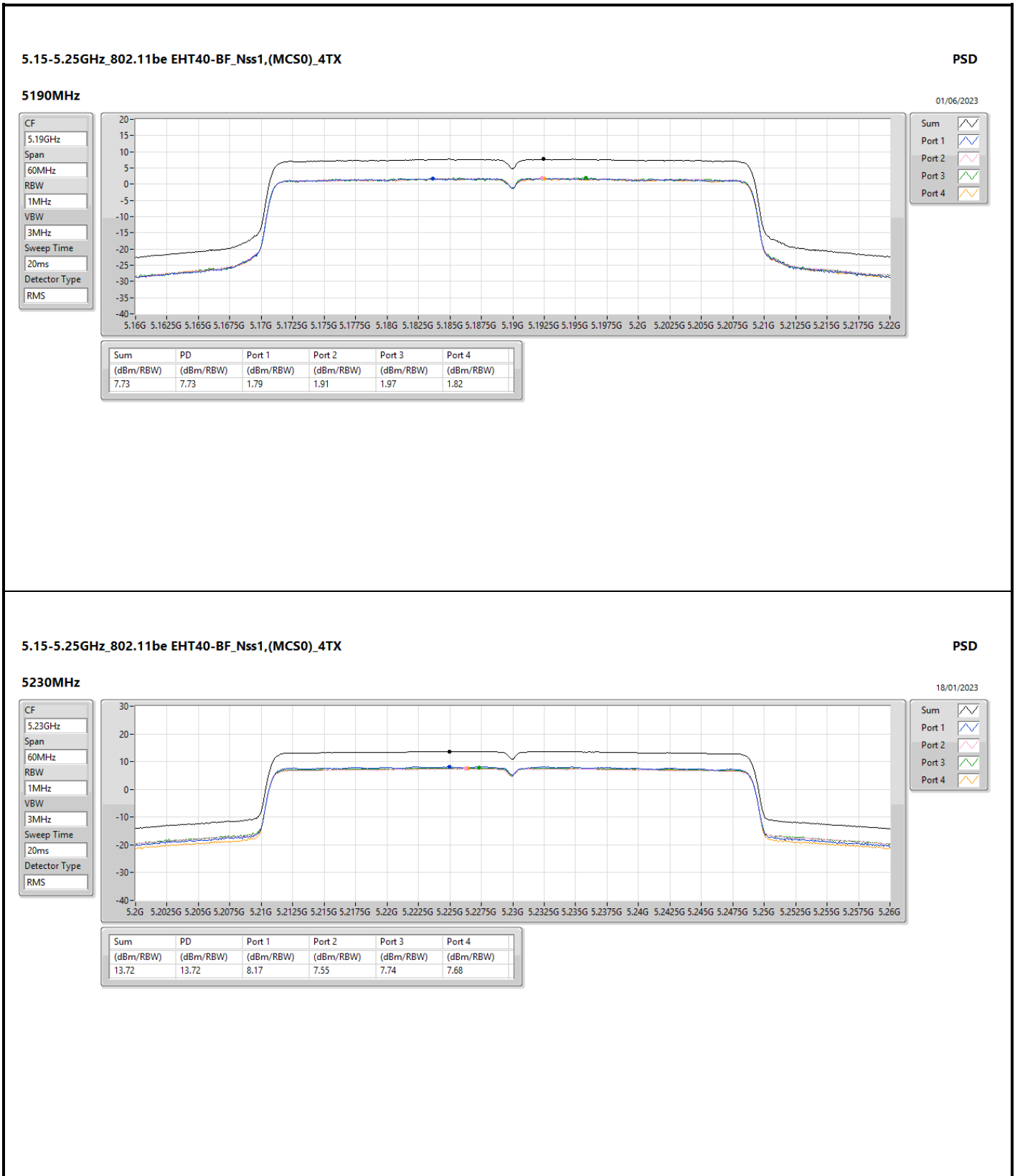


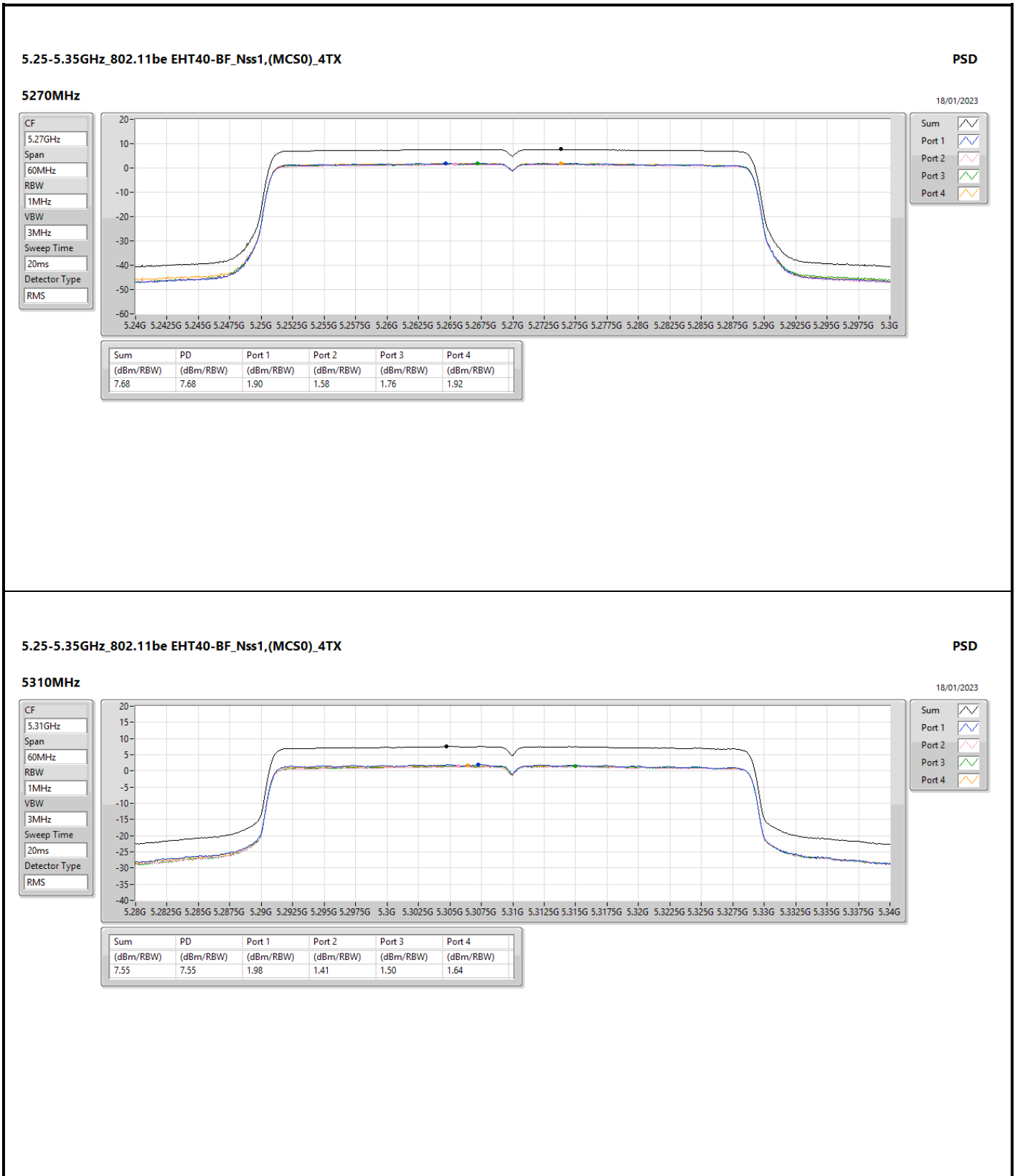


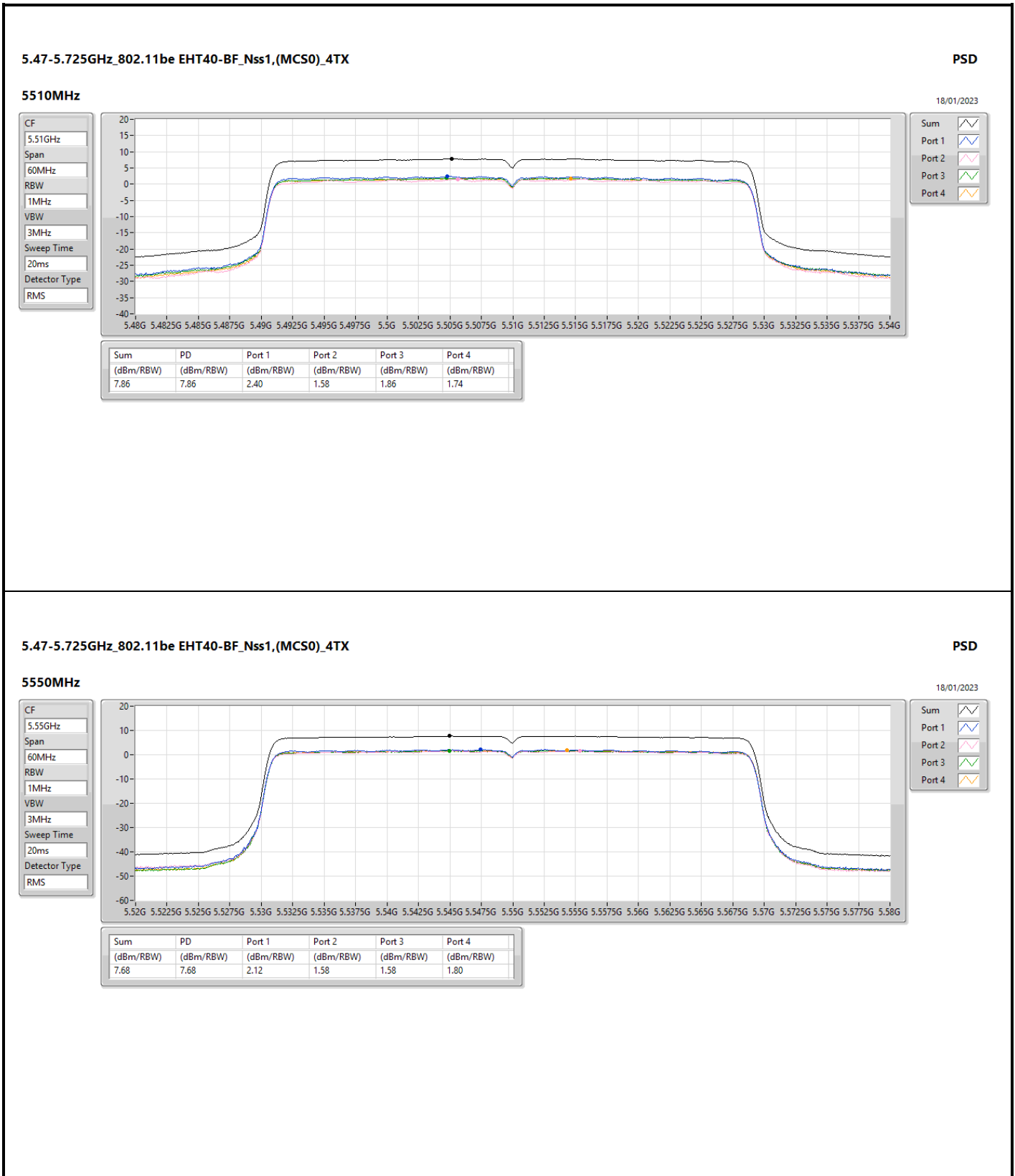


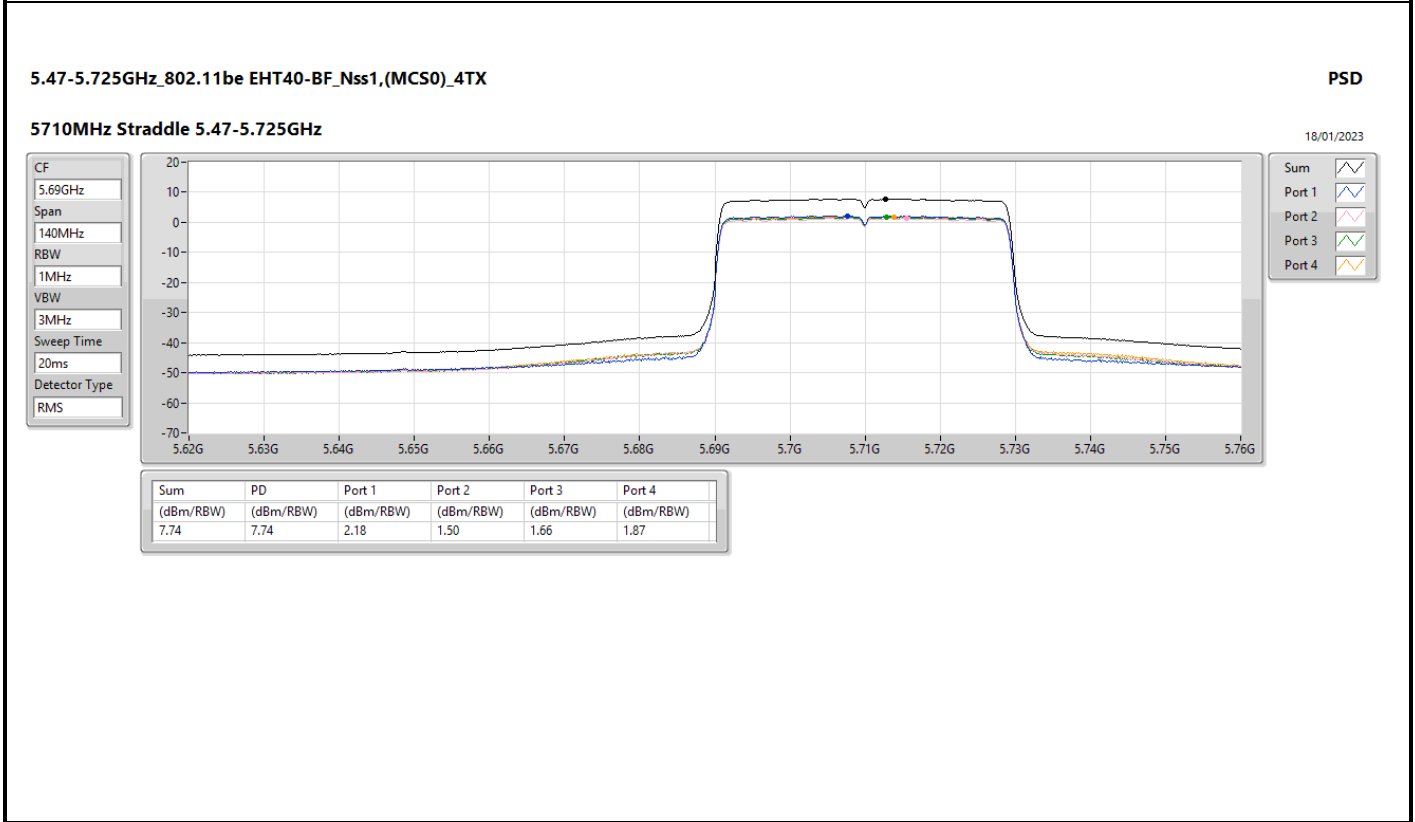
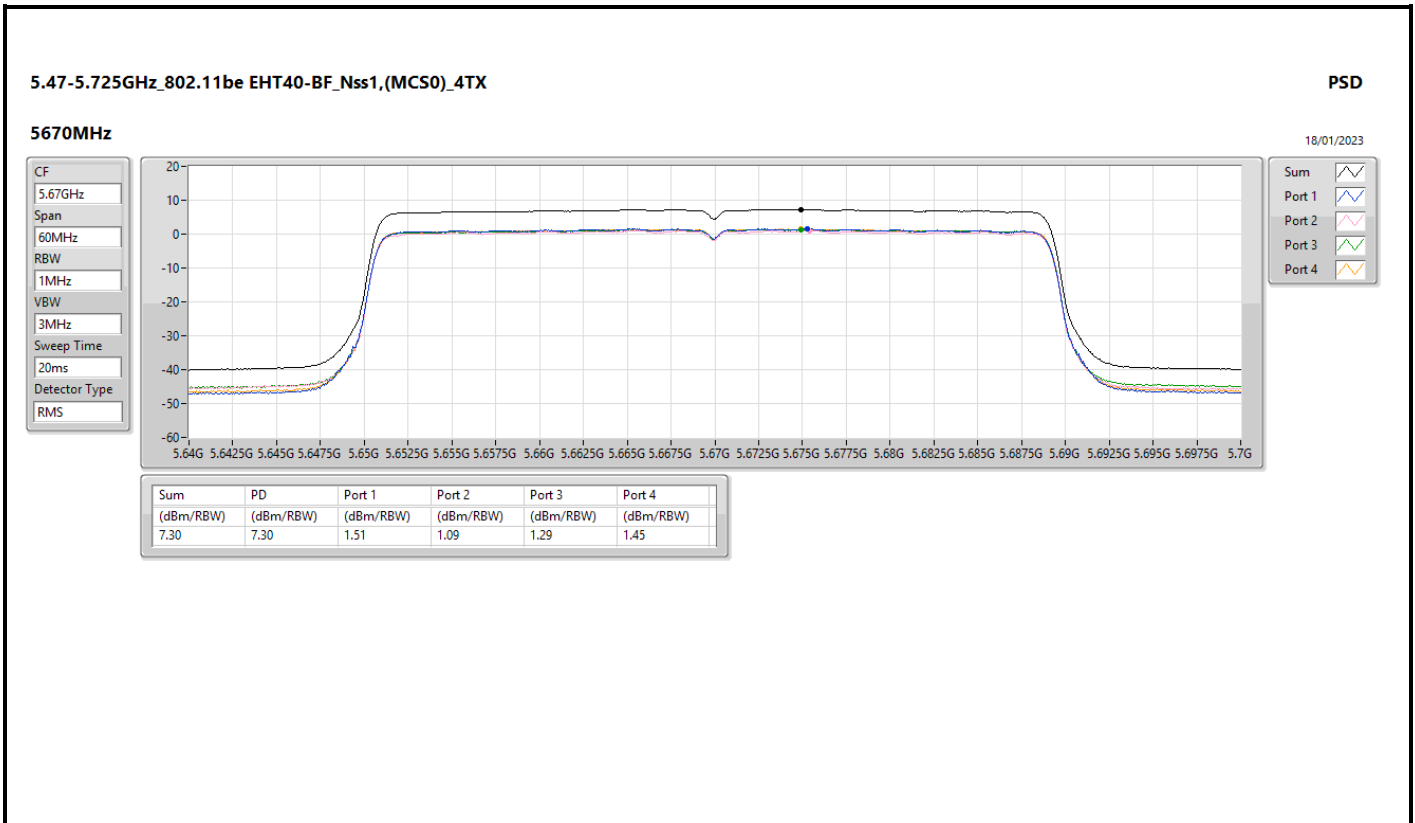


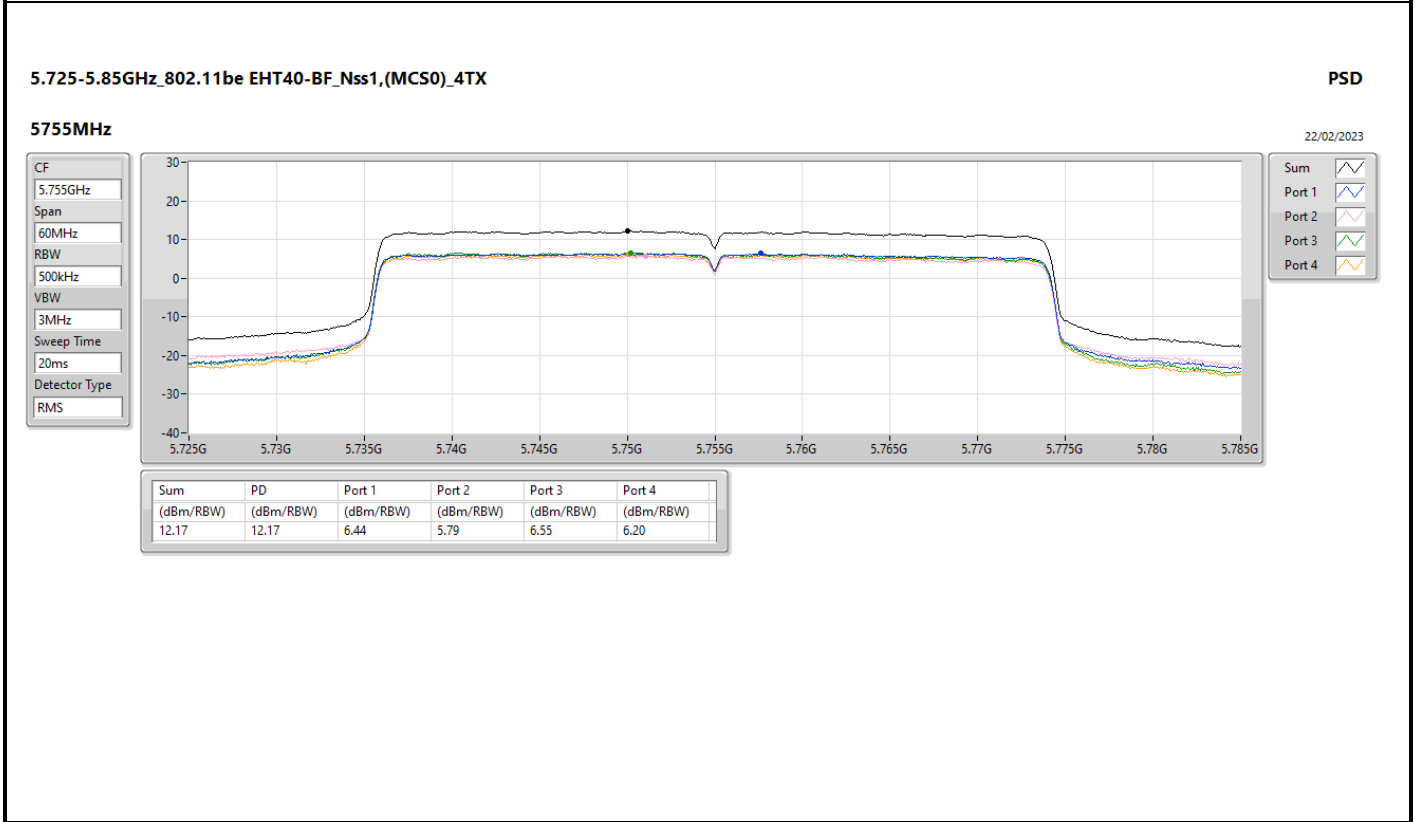
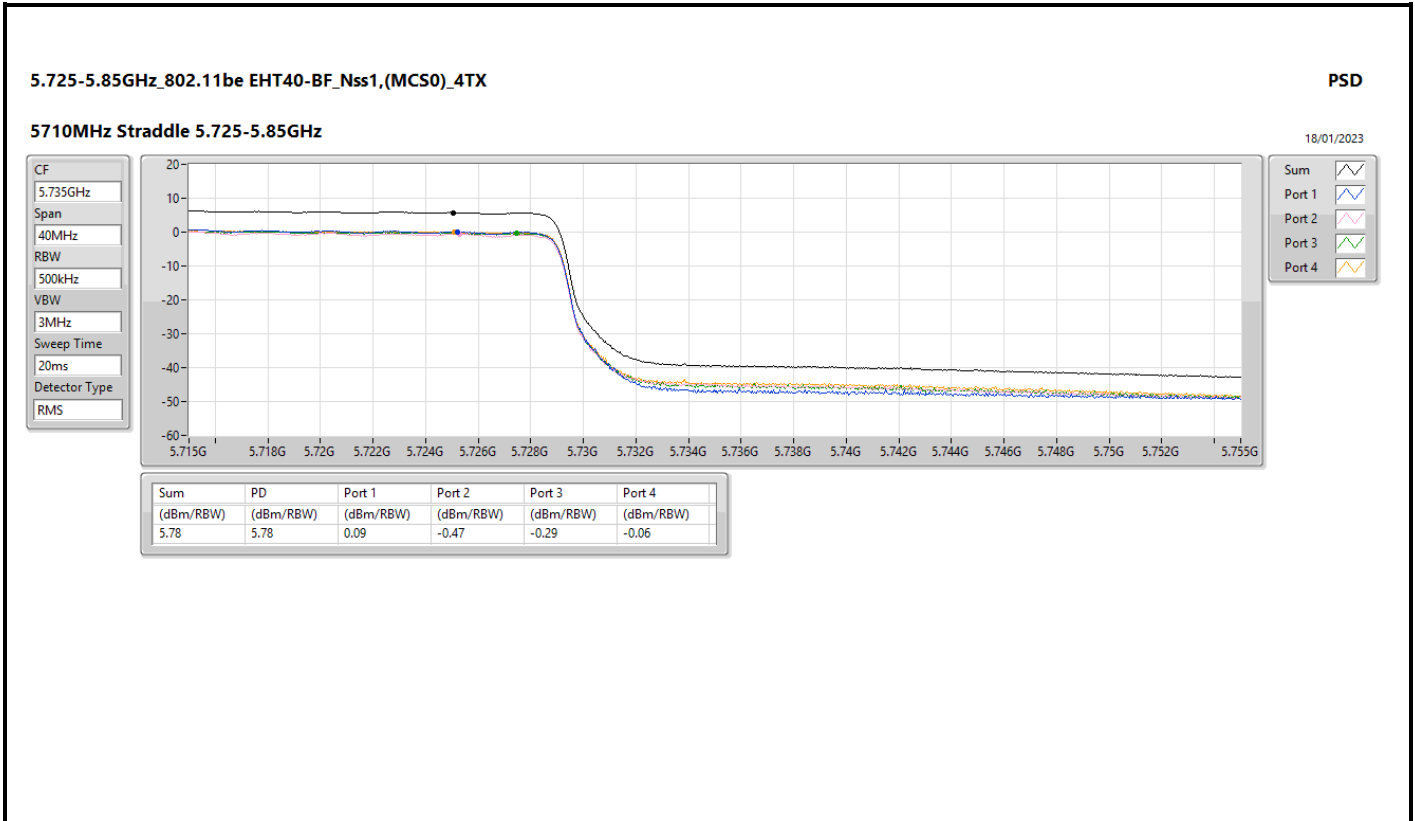


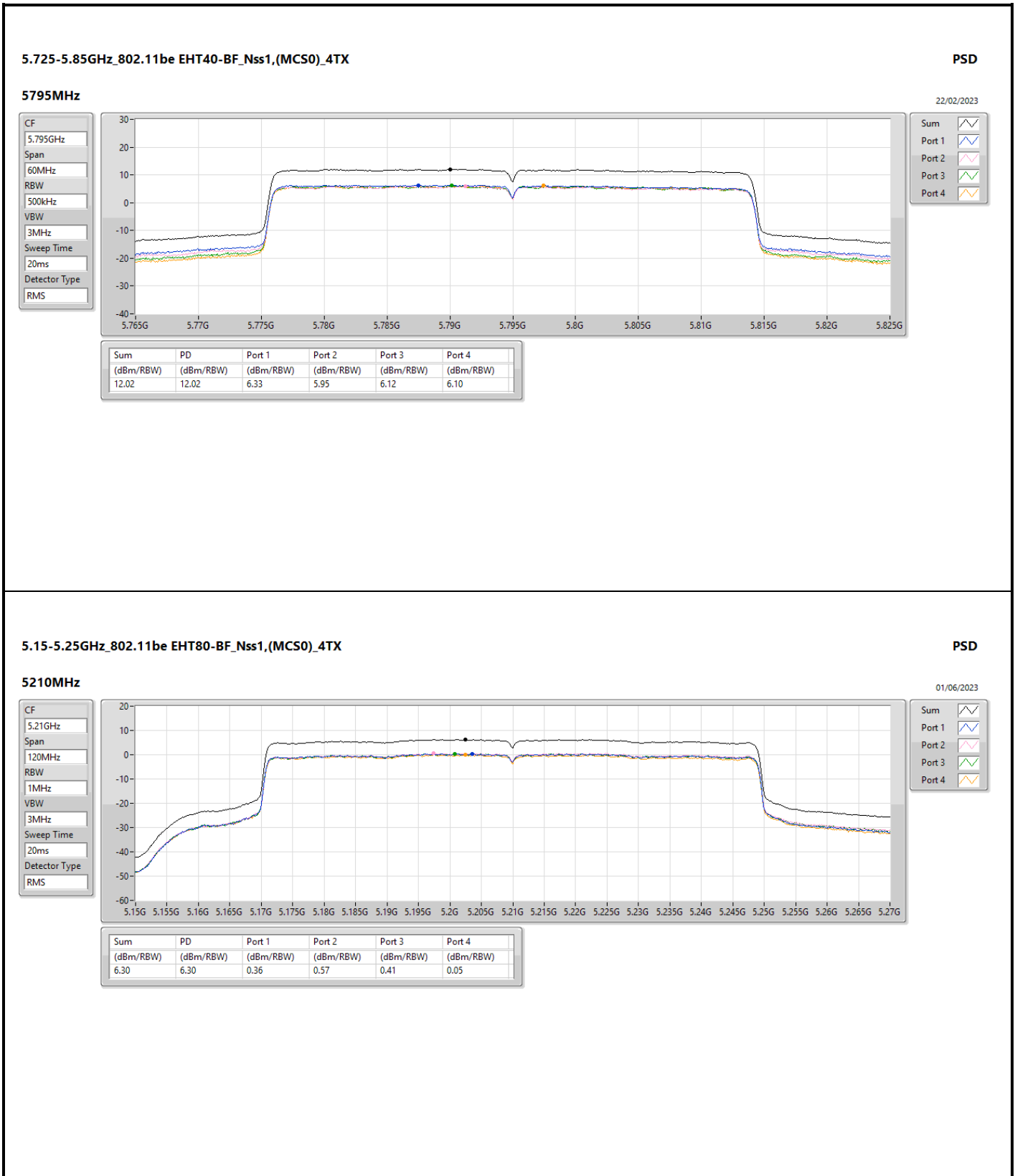


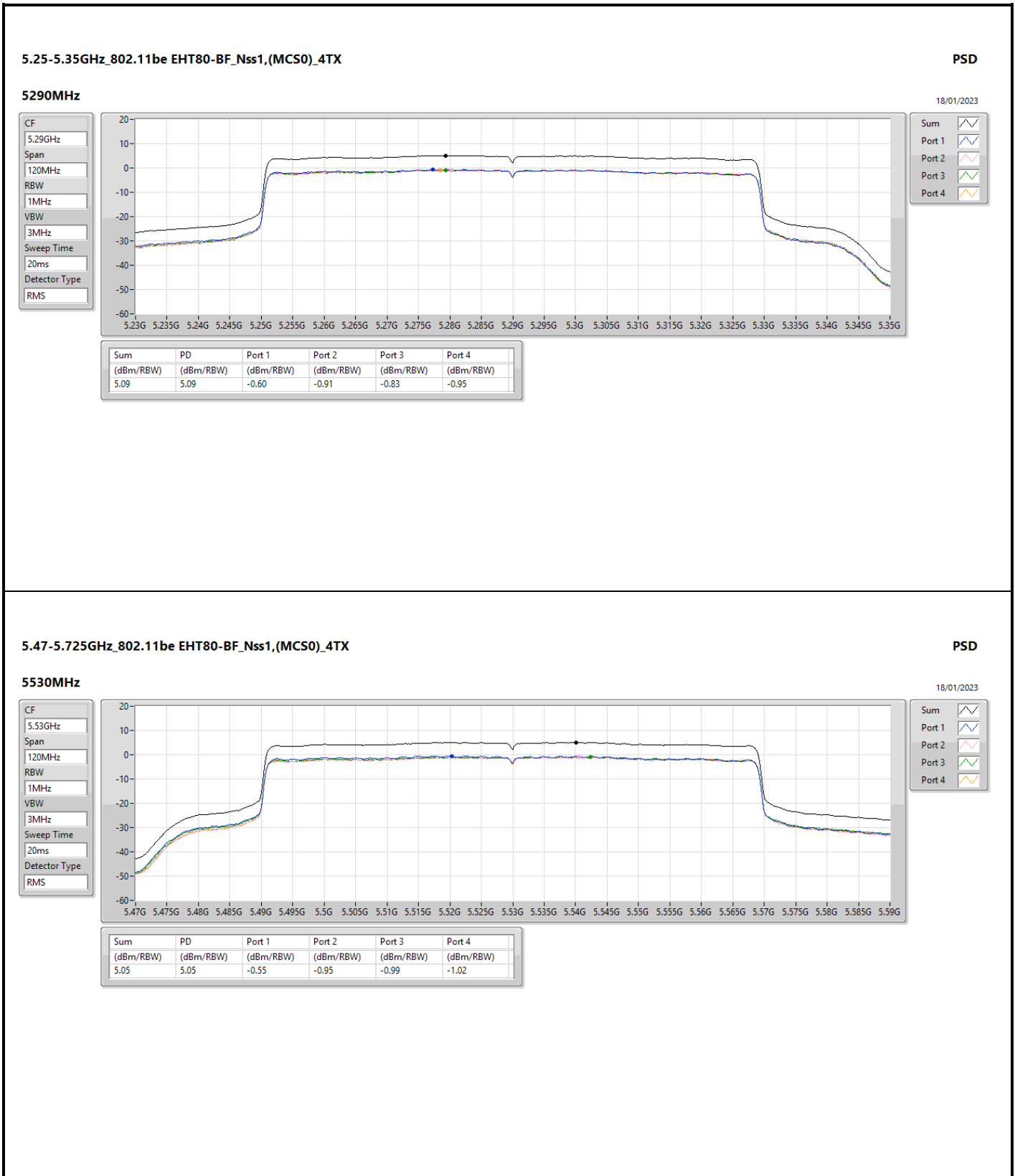




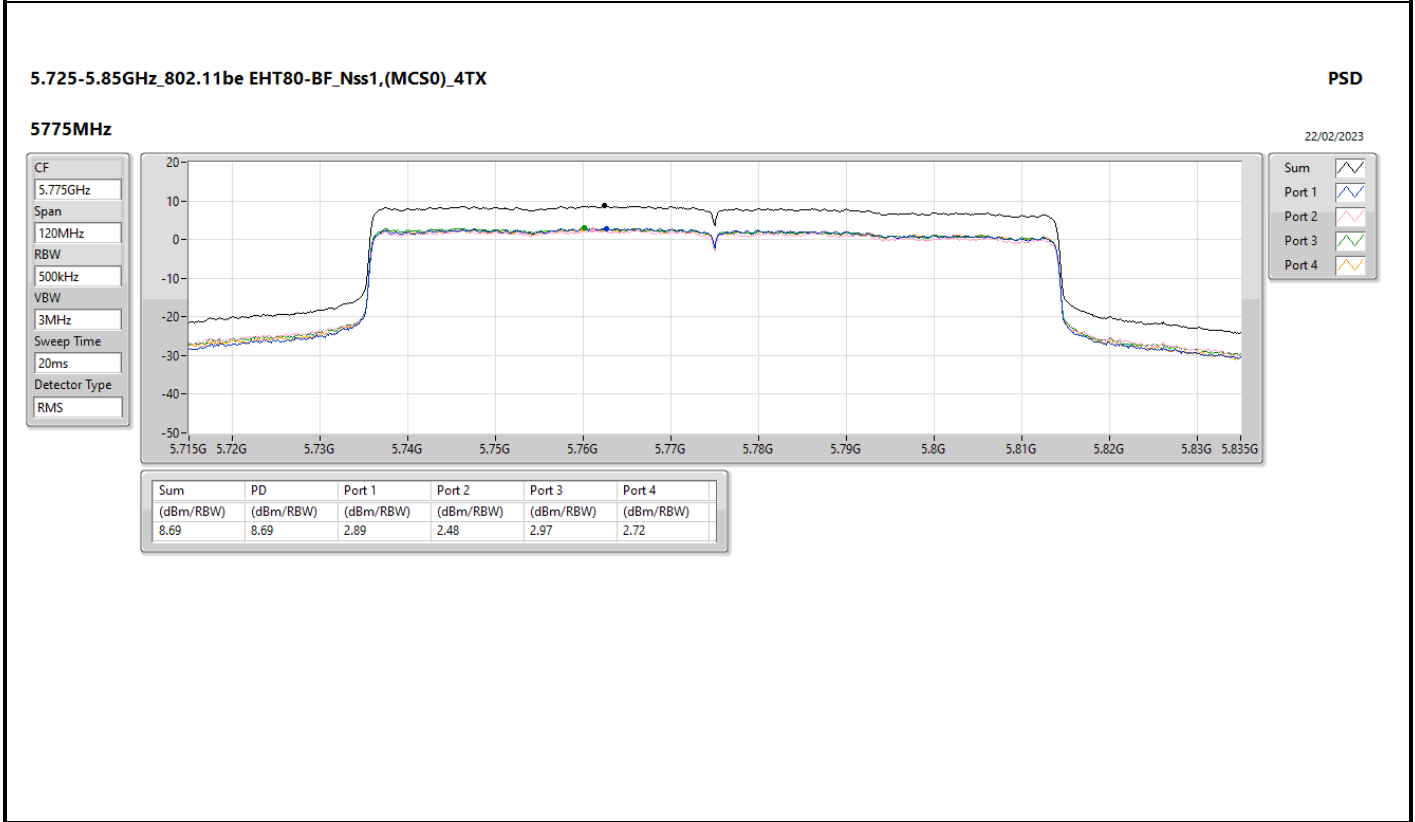
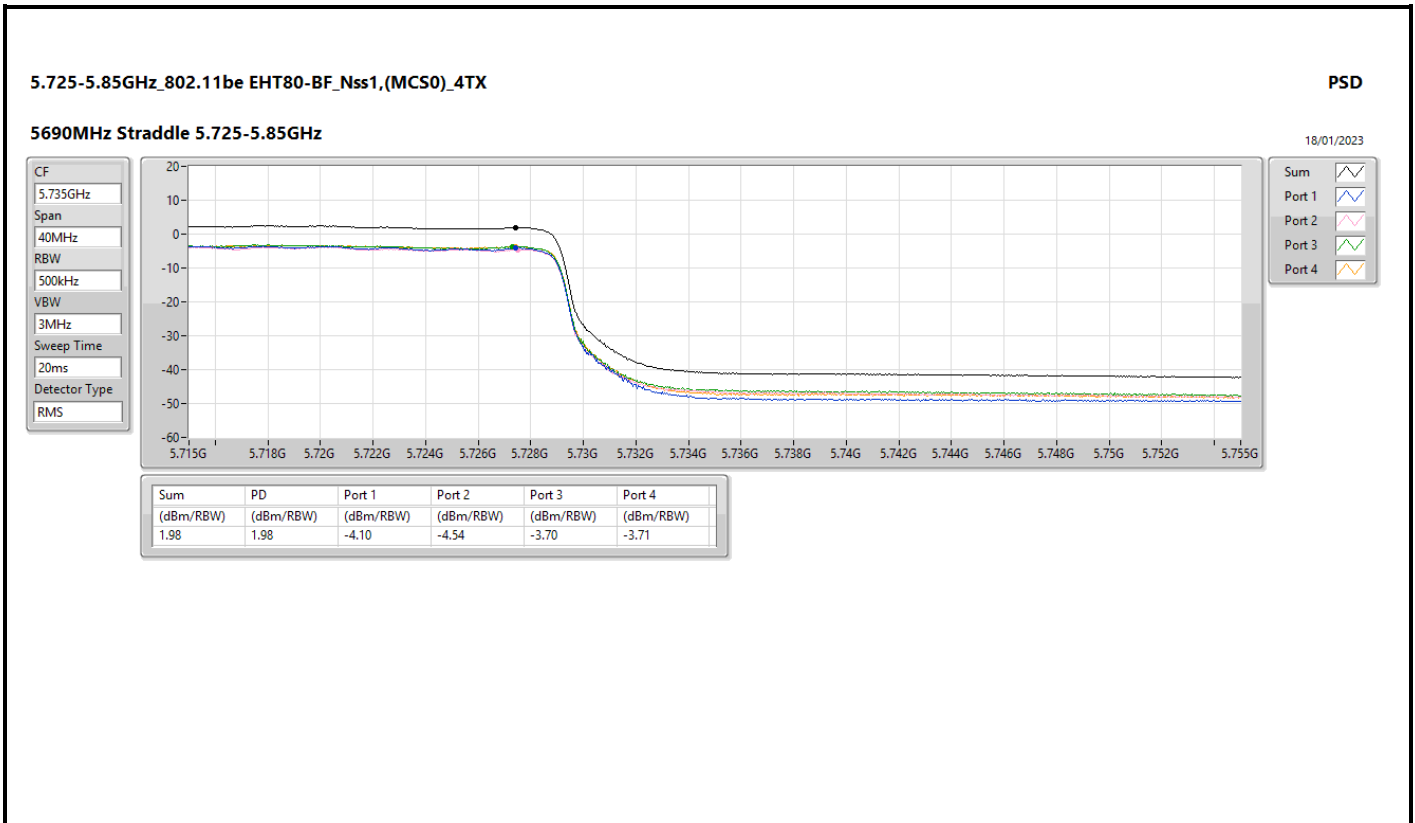


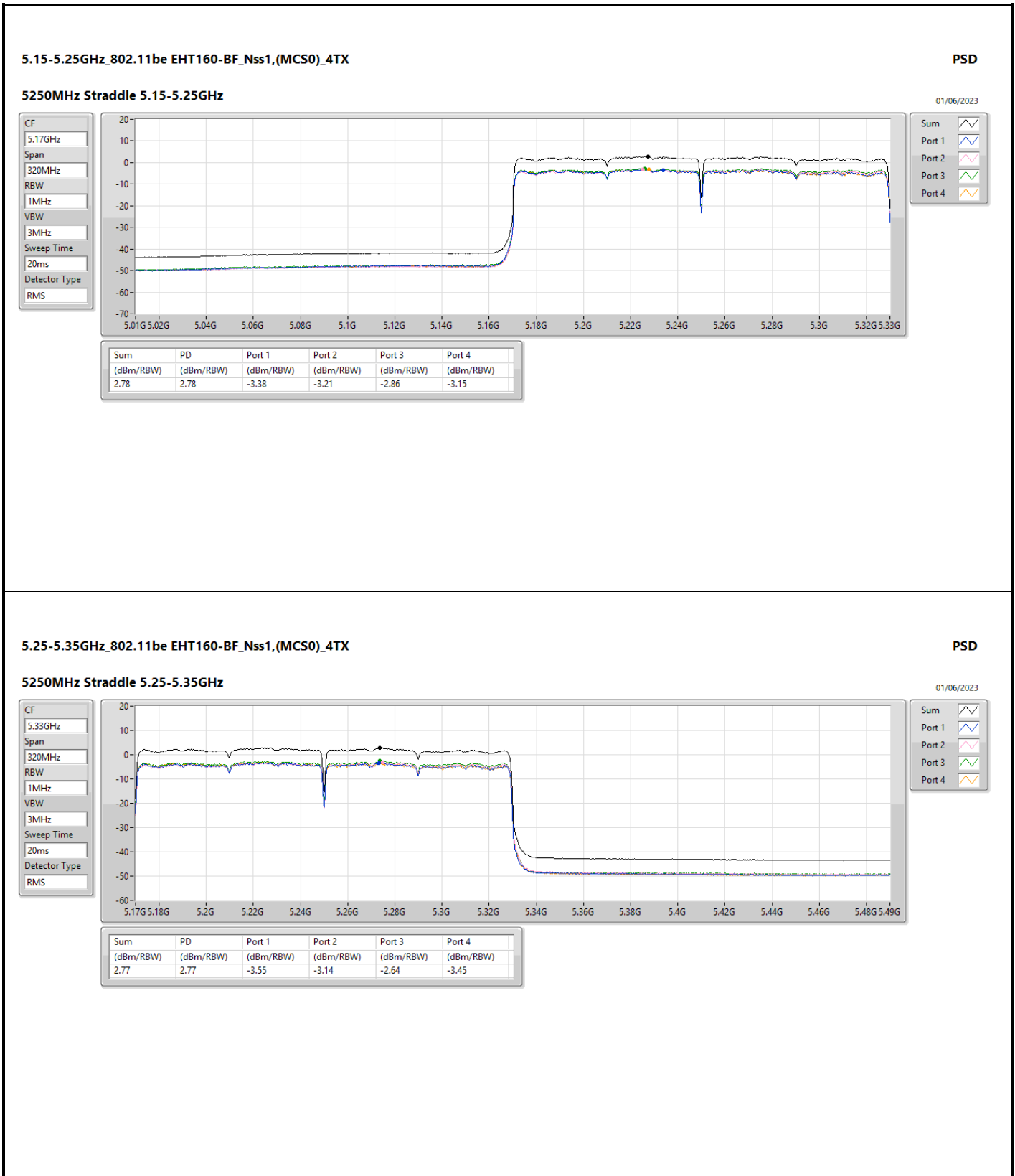


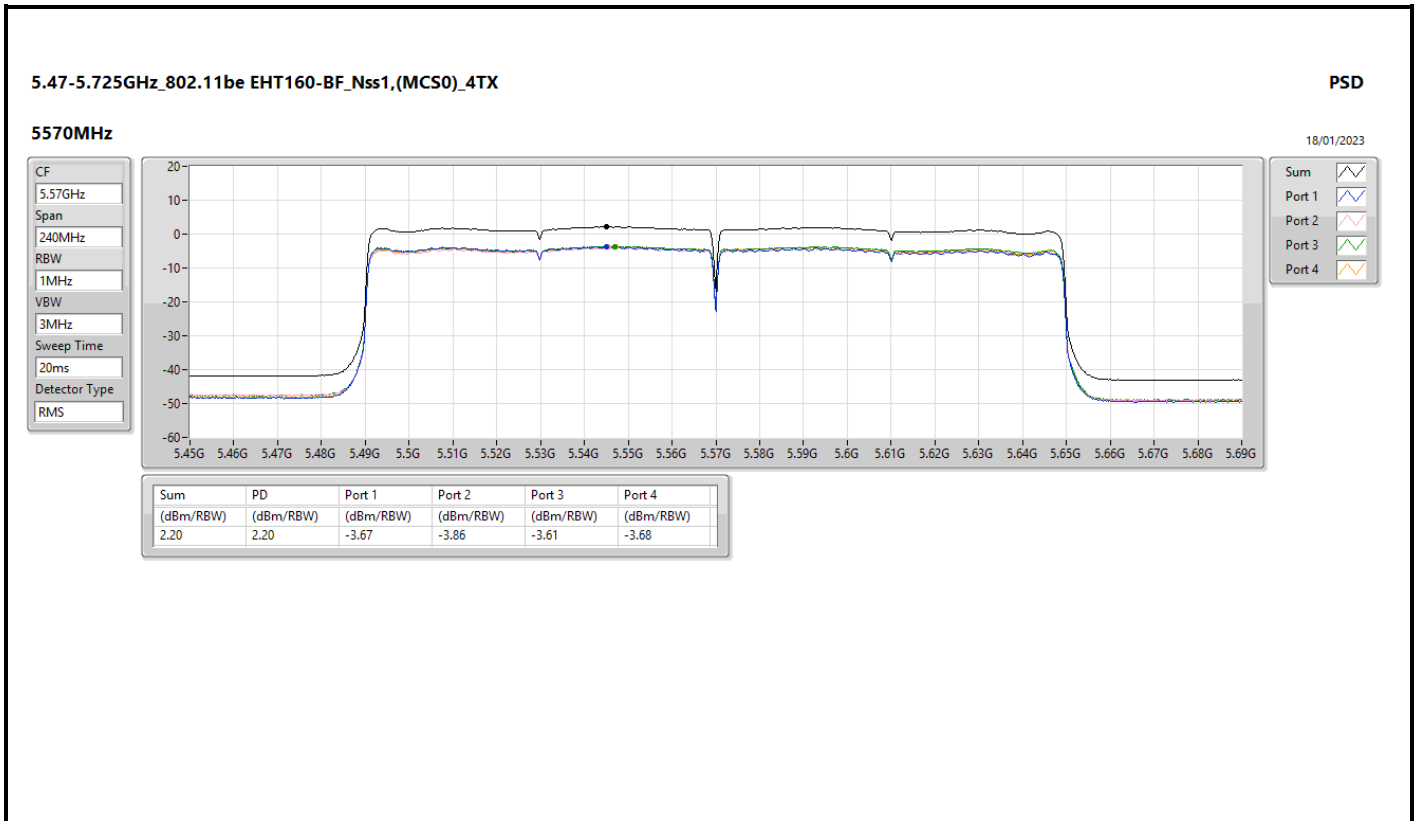










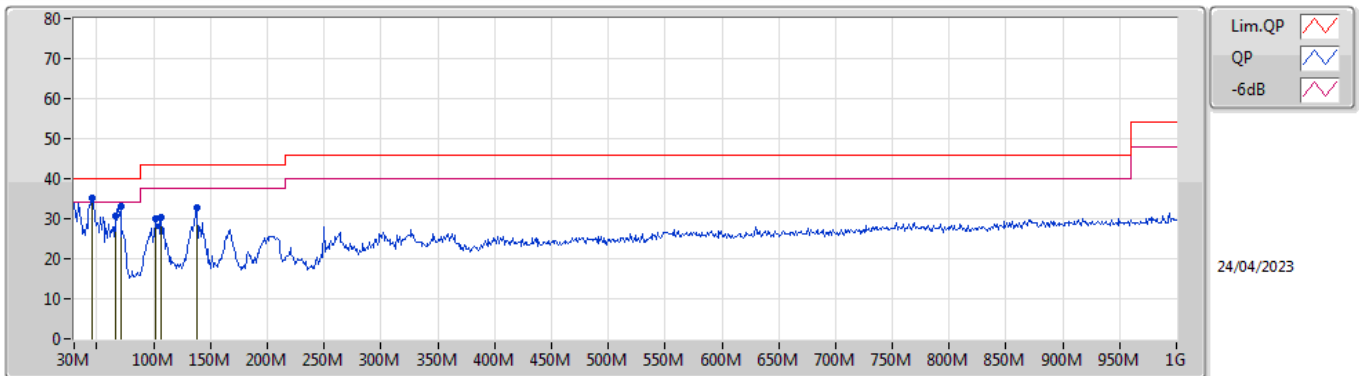




Summary

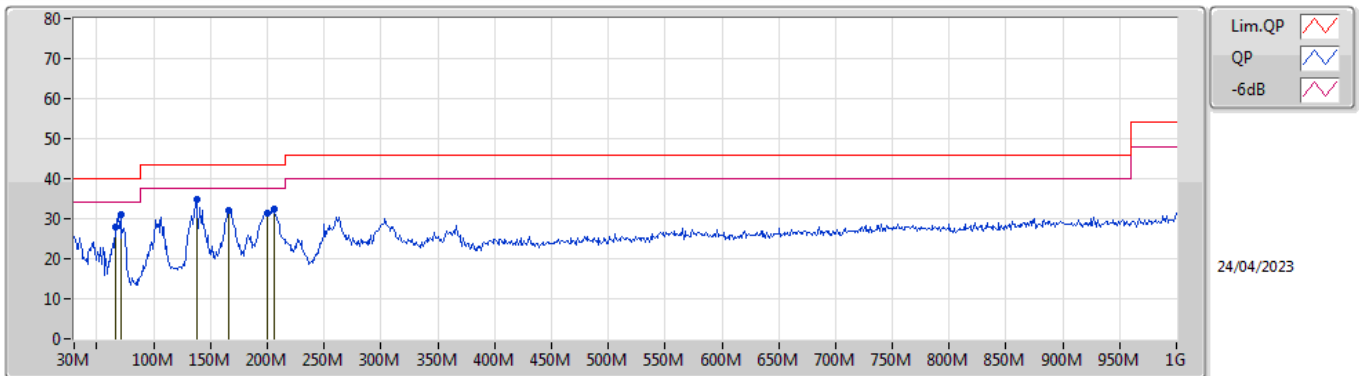
| Mode | Result | Type | Freq (Hz) | Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Condition |
|--------|--------|------|-----------|----------------|----------------|-------------|-----------|
| Mode 4 | Pass | PK | 45.52M | 35.23 | 40.00 | -4.77 | Vertical |

Mode 4



| Type | Freq (Hz) | Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Factor (dB/m) | Dist (m) | Condition | Azimuth (°) | Height (m) | Comment | Raw (dBuV/m) | AF (dB/m) | CL (dB) | PA (dB) |
|------|--------------|-------------------|-------------------|----------------|------------------|-------------|-----------|----------------|---------------|---------|-----------------|--------------|------------|------------|
| PK | 45.52M | 35.23 | 40.00 | -4.77 | -14.88 | 3 | Vertical | 358 | 1.00 | "Worst" | 50.11 | 16.34 | 0.95 | 32.17 |
| PK | 65.89M | 30.54 | 40.00 | -9.46 | -18.67 | 3 | Vertical | 149 | 3.00 | - | 49.21 | 12.32 | 1.12 | 32.11 |
| PK | 70.74M | 32.98 | 40.00 | -7.02 | -18.56 | 3 | Vertical | 202 | 1.50 | - | 51.54 | 12.33 | 1.14 | 32.03 |
| PK | 101.78M | 30.07 | 43.50 | -13.43 | -13.90 | 3 | Vertical | 158 | 1.25 | - | 43.97 | 16.91 | 1.34 | 32.15 |
| PK | 106.63M | 30.21 | 43.50 | -13.29 | -13.28 | 3 | Vertical | 202 | 1.25 | - | 43.49 | 17.41 | 1.39 | 32.08 |
| PK | 137.67M | 32.68 | 43.50 | -10.82 | -13.18 | 3 | Vertical | 217 | 1.00 | - | 45.86 | 17.30 | 1.52 | 32.00 |

Mode 4



| Type | Freq (Hz) | Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Factor (dB/m) | Dist (m) | Condition | Azimuth (°) | Height (m) | Comment | Raw (dBuV/m) | AF (dB/m) | CL (dB) | PA (dB) |
|------|--------------|-------------------|-------------------|----------------|------------------|-------------|------------|----------------|---------------|---------|-----------------|--------------|------------|------------|
| PK | 65.89M | 27.82 | 40.00 | -12.18 | -18.67 | 3 | Horizontal | 245 | 3.00 | - | 46.49 | 12.32 | 1.12 | 32.11 |
| PK | 70.74M | 31.07 | 40.00 | -8.93 | -18.56 | 3 | Horizontal | 97 | 2.00 | - | 49.63 | 12.33 | 1.14 | 32.03 |
| PK | 137.67M | 34.75 | 43.50 | -8.75 | -13.18 | 3 | Horizontal | 259 | 2.00 | "Worst" | 47.93 | 17.30 | 1.52 | 32.00 |
| PK | 165.8M | 32.10 | 43.50 | -11.40 | -14.45 | 3 | Horizontal | 272 | 1.50 | - | 46.55 | 15.88 | 1.70 | 32.03 |
| PK | 199.75M | 31.26 | 43.50 | -12.24 | -14.94 | 3 | Horizontal | 185 | 1.50 | - | 46.20 | 15.22 | 1.82 | 31.98 |
| PK | 205.57M | 32.47 | 43.50 | -11.03 | -14.81 | 3 | Horizontal | 220 | 1.50 | - | 47.28 | 15.31 | 1.85 | 31.97 |