




RADIO TEST REPORT

FCC ID : QXO-AP5020
Equipment : Access Point
Brand Name : Extreme Networks
Model Name : AP5020
Applicant : Extreme Networks, Inc.
2121 RDU Center Drive Morrisville North Carolina
United States 27560
Manufacturer : Extreme Networks, Inc.
2121 RDU Center Drive Morrisville North Carolina
United States 27560
Standard : 47 CFR FCC Part 15.407

The product was received on Dec. 14, 2023, and testing was started from Jan. 11, 2024 and completed on Apr. 03, 2024. We, Sporton International Inc. Hsinchu Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

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



Approved by: Sam Chen

Sporton International Inc. Hsinchu Laboratory

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



Table of Contents

History of this test report.....3

Summary of Test Result.....4

1 General Description5

1.1 Information.....5

1.2 Applicable Standards14

1.3 Testing Location Information14

1.4 Measurement Uncertainty15

2 Test Configuration of EUT16

2.1 Test Channel Mode16

2.2 The Worst Case Measurement Configuration20

2.3 EUT Operation during Test23

2.4 Accessories23

2.5 Support Equipment.....23

2.6 Test Setup Diagram24

3 Transmitter Test Result26

3.1 AC Power-line Conducted Emissions26

3.2 Emission Bandwidth28

3.3 Maximum Output Power29

3.4 Power Spectral Density32

3.5 Unwanted Emissions.....35

4 Test Equipment and Calibration Data39

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

Appendix B. Test Results of Emission Bandwidth

Appendix C. Test Results of Maximum Output Power

Appendix D. Test Results of Power Spectral Density

Appendix E. Test Results of Unwanted Emissions

Appendix F. Test Results of Radiated Emission Co-location

Appendix G. Test Photos

Photographs of EUT v01



History of this test report

Report No.	Version	Description	Issued Date
FR410321AB	01	Initial issue of report	Apr. 30, 2024



Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
1.1.2	15.203	Antenna Requirement	PASS	-
3.1	15.207	AC Power-line Conducted Emissions	PASS	-
3.2	15.407(a)	Emission Bandwidth	PASS	-
3.3	15.407(a)	Maximum Output Power	PASS	-
3.4	15.407(a)	Power Spectral Density	PASS	-
3.5	15.407(b)	Unwanted Emissions	PASS	-

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: Lavender Zeng



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]
5725-5850		5745-5825	149-165 [5]
5150-5250	n (HT40), ac (VHT40), ax (HEW40), be (EHT40)	5190-5230	38-46 [2]
5725-5850		5755-5795	151-159 [2]
5150-5250	ac (VHT80), ax (HEW80), be (EHT80)	5210	42 [1]
5725-5850		5775	155 [1]

For Radio 1

Band	Mode	BWch	Nant
5.15-5.25GHz	802.11a	20	2TX
5.15-5.25GHz	802.11n HT20	20	2TX
5.15-5.25GHz	802.11n HT20-BF	20	2TX
5.15-5.25GHz	802.11ac VHT20	20	2TX
5.15-5.25GHz	802.11ac VHT20-BF	20	2TX
5.15-5.25GHz	802.11ax HEW20	20	2TX
5.15-5.25GHz	802.11ax HEW20-BF	20	2TX
5.15-5.25GHz	802.11be EHT20	20	2TX
5.15-5.25GHz	802.11be EHT20-BF	20	2TX
5.15-5.25GHz	802.11n HT40	40	2TX
5.15-5.25GHz	802.11n HT40-BF	40	2TX
5.15-5.25GHz	802.11ac VHT40	40	2TX
5.15-5.25GHz	802.11ac VHT40-BF	40	2TX
5.15-5.25GHz	802.11ax HEW40	40	2TX
5.15-5.25GHz	802.11ax HEW40-BF	40	2TX
5.15-5.25GHz	802.11be EHT40	40	2TX
5.15-5.25GHz	802.11be EHT40-BF	40	2TX
5.15-5.25GHz	802.11ac VHT80	80	2TX
5.15-5.25GHz	802.11ac VHT80-BF	80	2TX
5.15-5.25GHz	802.11ax HEW80	80	2TX
5.15-5.25GHz	802.11ax HEW80-BF	80	2TX
5.15-5.25GHz	802.11be EHT80	80	2TX
5.15-5.25GHz	802.11be EHT80-BF	80	2TX

For Radio 2

Band	Mode	BWch	Nant
5.15-5.25GHz	802.11a	20	2TX/4TX
5.15-5.25GHz	802.11n HT20	20	2TX/4TX
5.15-5.25GHz	802.11n HT20-BF	20	2TX/4TX
5.15-5.25GHz	802.11ac VHT20	20	2TX/4TX
5.15-5.25GHz	802.11ac VHT20-BF	20	2TX/4TX
5.15-5.25GHz	802.11ax HEW20	20	2TX/4TX
5.15-5.25GHz	802.11ax HEW20-BF	20	2TX/4TX



5.15-5.25GHz	802.11be EHT20	20	2TX/4TX
5.15-5.25GHz	802.11be EHT20-BF	20	2TX/4TX
5.15-5.25GHz	802.11n HT40	40	2TX/4TX
5.15-5.25GHz	802.11n HT40-BF	40	2TX/4TX
5.15-5.25GHz	802.11ac VHT40	40	2TX/4TX
5.15-5.25GHz	802.11ac VHT40-BF	40	2TX/4TX
5.15-5.25GHz	802.11ax HEW40	40	2TX/4TX
5.15-5.25GHz	802.11ax HEW40-BF	40	2TX/4TX
5.15-5.25GHz	802.11be EHT40	40	2TX/4TX
5.15-5.25GHz	802.11be EHT40-BF	40	2TX/4TX
5.15-5.25GHz	802.11ac VHT80	80	2TX/4TX
5.15-5.25GHz	802.11ac VHT80-BF	80	2TX/4TX
5.15-5.25GHz	802.11ax HEW80	80	2TX/4TX
5.15-5.25GHz	802.11ax HEW80-BF	80	2TX/4TX
5.15-5.25GHz	802.11be EHT80	80	2TX/4TX
5.15-5.25GHz	802.11be EHT80-BF	80	2TX/4TX
5.725-5.85GHz	802.11a	20	2TX/4TX
5.725-5.85GHz	802.11n HT20	20	2TX/4TX
5.725-5.85GHz	802.11n HT20-BF	20	2TX/4TX
5.725-5.85GHz	802.11ac VHT20	20	2TX/4TX
5.725-5.85GHz	802.11ac VHT20-BF	20	2TX/4TX
5.725-5.85GHz	802.11ax HEW20	20	2TX/4TX
5.725-5.85GHz	802.11ax HEW20-BF	20	2TX/4TX
5.725-5.85GHz	802.11be EHT20	20	2TX/4TX
5.725-5.85GHz	802.11be EHT20-BF	20	2TX/4TX
5.725-5.85GHz	802.11n HT40	40	2TX/4TX
5.725-5.85GHz	802.11n HT40-BF	40	2TX/4TX
5.725-5.85GHz	802.11ac VHT40	40	2TX/4TX
5.725-5.85GHz	802.11ac VHT40-BF	40	2TX/4TX
5.725-5.85GHz	802.11ax HEW40	40	2TX/4TX
5.725-5.85GHz	802.11ax HEW40-BF	40	2TX/4TX
5.725-5.85GHz	802.11be EHT40	40	2TX/4TX
5.725-5.85GHz	802.11be EHT40-BF	40	2TX/4TX
5.725-5.85GHz	802.11ac VHT80	80	2TX/4TX
5.725-5.85GHz	802.11ac VHT80-BF	80	2TX/4TX
5.725-5.85GHz	802.11ax HEW80	80	2TX/4TX
5.725-5.85GHz	802.11ax HEW80-BF	80	2TX/4TX
5.725-5.85GHz	802.11be EHT80	80	2TX/4TX
5.725-5.85GHz	802.11be EHT80-BF	80	2TX/4TX

Note:

- ♦ 11a, HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- ♦ VHT20, VHT40, VHT80 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM modulation.
- ♦ HEW20, HEW40, HEW80 use a combination of OFDMA-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM modulation.
- ♦ EHT20, EHT40, EHT80 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.	Operating Band	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	WLAN 2.4GHz / 5GHz	Sercomm	6172001TJH.20	PIFA	I-PEX	Note 1
2	WLAN 2.4GHz / 5GHz	Sercomm	6172001TJH.21	PIFA	I-PEX	
3	WLAN 2.4GHz / 5GHz	Sercomm	6172001TJH.22	PIFA	I-PEX	
4	WLAN 2.4GHz / 5GHz	Sercomm	6172001TJH.23	PIFA	I-PEX	
5	WLAN 6GHz	Sercomm	6172001TJH.24	PIFA	I-PEX	
6	WLAN 6GHz	Sercomm	6172001TJH.25	PIFA	I-PEX	
7	WLAN 6GHz	Sercomm	6172001TJH.26	PIFA	I-PEX	
8	WLAN 6GHz	Sercomm	6172001TJH.27	PIFA	I-PEX	
9	WLAN 5GHz / 6GHz	Sercomm	6172001TJH.28	PIFA	I-PEX	
10	WLAN 5GHz / 6GHz	Sercomm	6172001TJH.29	PIFA	I-PEX	
11	Bluetooth / Zigbee	Sercomm	6172001TJH.30	PIFA	I-PEX	4.22
12	Bluetooth / Zigbee	Sercomm	6172001TJH.31	PIFA	I-PEX	4.12
13	Bluetooth / Zigbee	Sercomm	6172001TJH.32	PIFA	I-PEX	4.19
14	GPS	Sercomm	6172001TJH.33	PIFA	I-PEX	1.176GHz: 4.50 1.575GHz: 4.20

Ant.	Port							
	2.4GHz (Radio 1)	2.4GHz (Radio 3)	5GHz (Radio 1)	5GHz (Radio 2)	6GHz (Radio 1)	6GHz (Radio 3)	Bluetooth / Zigbee	GPS
1	1	-	-	1	-	-	-	-
2	2	-	-	2	-	-	-	-
3	3	1	-	3	-	-	-	-
4	4	2	-	4	-	-	-	-
5	-	-	-	-	-	1	-	-
6	-	-	-	-	-	2	-	-
7	-	-	-	-	-	3	-	-
8	-	-	-	-	-	4	-	-
9	-	-	1	-	1	-	-	-
10	-	-	2	-	2	-	-	-
11	-	-	-	-	-	-	1	-
12	-	-	-	-	-	-	2	-
13	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	1



Note 1:

Ant.	Antenna Gain (dBi)								
	2.4GHz	5GHz UNII 1	5GHz UNII 2A	5GHz UNII 2C	5GHz UNII 3	6GHz UNII 5	6GHz UNII 6	6GHz UNII 7	6GHz UNII 8
1	2.91	4.88	4.99	5.07	5.29	-	-	-	-
2	3.17	3.95	3.41	5.00	5.07	-	-	-	-
3	2.98	4.49	4.06	4.40	3.93	-	-	-	-
4	2.64	4.75	4.07	4.71	4.40	-	-	-	-
5	-	-	-	-	-	5.33	4.93	5.50	4.83
6	-	-	-	-	-	5.41	4.54	5.26	5.39
7	-	-	-	-	-	5.95	5.96	4.82	4.77
8	-	-	-	-	-	5.79	5.88	5.89	5.91
9	-	3.07	2.35	2.59	3.21	2.71	2.66	4.37	3.21
10	-	3.01	2.66	3.88	4.23	4.41	3.82	3.37	4.42
11	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-

Ant.	Item	Directional gain (dBi)								
		2.4GHz	5GHz UNII 1	5GHz UNII 2A	5GHz UNII 2C	5GHz UNII 3	6GHz UNII 5	6GHz UNII 6	6GHz UNII 7	6GHz UNII 8
1~4 (4TX)	4T1S	6.00	8.49	7.89	8.04	7.52	-	-	-	-
	4T2S	3.17	5.49	4.99	5.07	5.29	-	-	-	-
	4T3S	3.17	4.88	4.99	5.07	5.29	-	-	-	-
1~2 (2TX)	2T1S	3.9	7.09	6.19	6.33	5.81	-	-	-	-
	2T2S	3.17	4.88	4.99	5.07	5.29	-	-	-	-
3~4 (2TX)	2T1S	3.05	5.48	5.79	6.26	5.87	-	-	-	-
	2T2S	2.98	4.75	4.07	4.71	4.40	-	-	-	-
5~8 (4TX)	4T1S	-	-	-	-	-	9.23	8.77	9.49	9.13
	4T2S	-	-	-	-	-	6.23	5.96	6.49	6.13
	4T3S	-	-	-	-	-	5.95	5.96	5.89	5.91
5~6 (2TX)	2T1S	-	-	-	-	-	7.38	6.63	8.00	7.03
	2T2S	-	-	-	-	-	5.41	4.93	5.50	5.39
9~10 (2TX)	2T1S	-	4.51	4.52	6.00	5.95	5.82	4.82	5.36	5.47
	2T2S	-	3.07	2.66	3.88	4.23	4.41	3.82	4.37	4.42

Note 2: The above information (excepting WLAN gain) was declared by manufacturer.



Note 3: The antenna gain (WLAN) and directional gain (WLAN) are measured which follow the procedure of KDB 662911 D03.

Note 4: The Bluetooth / Zigbee function of Antenna 13 is not enabled at this time.

Note 5: The DFS band is not enabled at this time.

Note 6:

<For Radio 1>

2.4GHz Function

IEEE 802.11b/g/n/VHT/ax/be

For 2TX/2RX:

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

Port 1 and Port 2 could transmit/receive simultaneously.

For 2TX/4RX:

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

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

For 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.

5GHz Function

IEEE 802.11a/n/ac/ax/be

UNII 1~UNII 3:

For 2RX:

Port 1 and Port 2 can be used as receiving antenna.

Port 1 and Port 2 could receive simultaneously.

UNII1~UNII 2A:

For 2TX/2RX:

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

Port 1 and Port 2 could transmit/receive simultaneously.

6GHz Function

IEEE 802.11ax/be

For 2TX/2RX:

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

Port 1 and Port 2 could transmit/receive simultaneously.

<For Radio 2>

5GHz Function

IEEE 802.11a/n/ac/ax/be

For 2TX/4RX:

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

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

For 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 Radio 3>

2.4GHz Function

IEEE 802.11b/g/n/VHT/ax/be

For 1TX/2RX:

Port 1 and Port 2 can be used as receiving antenna, but only Port 1 can be used as transmitting antenna.

Port 1 and Port 2 could receive simultaneously.

For 2TX/2RX:

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

Port 1 and Port 2 could transmit/receive simultaneously.

6GHz Function

IEEE 802.11ax/be

For 2TX/4RX:

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

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

For 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 Radio 4>

Bluetooth/Zigbee Functions

For 1TX/1RX:

The EUT supports the antenna with TX and RX diversity functions.

Both Port 1 and Port 2 support transmit and receive functions, but only one of them will be used at one time.

The Port 1 generated the worst case, so it was selected to test and record in the report.



1.1.3 Mode Test Duty Cycle

<For Radio 1>

Mode	DC	DCF (dB)	T (s)	VBW (Hz)_1/T
802.11a_Nss 1,(6D)	0.983	0.07	n/a (DC>=0.98)	n/a (DC>=0.98)
802.11be EHT20_Nss 1,(M0)	0.978	0.1	1.496m	1k
802.11be EHT40_Nss 1,(M0)	0.959	0.18	780.937u	3k
802.11be EHT80_Nss 1,(M0)	0.925	0.34	409.687u	3k
802.11be EHT20_Nss 2,(M0)	0.958	0.19	788.437u	3k
802.11be EHT40_Nss 2,(M0)	0.928	0.32	431.25u	3k
802.11be EHT80_Nss 2,(M0)	0.883	0.54	248.437u	10k
802.11be EHT20-BF_Nss 1,(M0)	0.978	0.1	1.496m	1k
802.11be EHT40-BF_Nss 1,(M0)	0.959	0.18	780.937u	3k
802.11be EHT80-BF_Nss 1,(M0)	0.925	0.34	409.687u	3k

<For Radio 2>

2TX

Mode	DC	DCF (dB)	T (s)	VBW (Hz)_1/T
802.11a_Nss 1,(6D)	0.944	0.25	2.064m	1k
802.11be EHT20_Nss 1,(M0)	0.979	0.09	1.496m	1k
802.11be EHT40_Nss 1,(M0)	0.96	0.18	780.313u	3k
802.11be EHT80_Nss 1,(M0)	0.923	0.35	409.375u	3k
802.11be EHT20_Nss 2,(M0)	0.959	0.18	787.5u	3k
802.11be EHT40_Nss 2,(M0)	0.929	0.32	430u	3k
802.11be EHT80_Nss 2,(M0)	0.884	0.54	247.813u	10k
802.11be EHT20-BF_Nss 1,(M0)	0.979	0.09	1.496m	1k
802.11be EHT40-BF_Nss 1,(M0)	0.96	0.18	780.313u	3k
802.11be EHT80-BF_Nss 1,(M0)	0.923	0.35	409.375u	3k

4TX

Mode	DC	DCF (dB)	T (s)	VBW (Hz)_1/T
802.11a_Nss 1,(6D)	0.983	0.07	n/a (DC>=0.98)	n/a (DC>=0.98)
802.11be EHT20_Nss 1,(M0)	0.976	0.11	1.496m	1k
802.11be EHT40_Nss 1,(M0)	0.96	0.18	780.625u	3k
802.11be EHT80_Nss 1,(M0)	0.924	0.34	409.375u	3k
802.11be EHT20_Nss 4,(M0)	0.928	0.32	444.375u	3k
802.11be EHT40_Nss 4,(M0)	0.889	0.51	267.5u	10k
802.11be EHT80_Nss 4,(M0)	0.84	0.76	176.563u	10k
802.11be EHT20-BF_Nss 1,(M0)	0.976	0.11	1.496m	1k
802.11be EHT40-BF_Nss 1,(M0)	0.96	0.18	780.625u	3k
802.11be EHT80-BF_Nss 1,(M0)	0.924	0.34	409.375u	3k

Note:

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



1.1.4 EUT Operational Condition

EUT Power Type	From Power Adapter / PoE			
Beamforming Function	<input checked="" type="checkbox"/>	With beamforming	<input type="checkbox"/>	Without beamforming
	The product has beamforming function for 11n/VHT/11ax/11be in 2.4GHz, 11n/11ac/11ax/11be in 5GHz and 11ax/11be in 6GHz.			
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
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 Information

EUT	GPS Integrated Module
1	With
2	Without

Note 1: From the above EUTs, EUT 1 was selected as representative model for the test and its data was recorded in this report.

Note 2: The above information was declared by manufacturer.

1.1.6 Table for Radio Function

Radio	Support Band		
	2.4GHz	5GHz	6GHz
1	BW: 20MHz	2TX: UNII 1, 2RX: UNII 1&3 (scan) BW: 20/40/80MHz	UNII 5 or UNII 5~8 (scan) BW: 20/40/80/160MHz
2	-	UNII 3 or UNII 1&3 BW: 20/40/80MHz	-
3	BW: 20MHz	-	UNII 7~8 or UNII 5~8 BW: 20/40/80/160/320MHz
4	Bluetooth / Zigbee		
5	GPS		

Note: The above information was declared by manufacturer.



1.1.7 Table for EUT Operation Mode

Mode	Radio 1	Radio 2	Radio 3	Radio 4	Radio 5	Note
1	2.4GHz 4x4	5GHz (UNII 1&3) 4x4	6GHz (UNII 5~8) 4x4	Bluetooth or Zigbee	GPS	Tri Radio
2	2.4GHz 2x2 (TX) / 5GHz (2RX) / 6GHz (2RX)	5GHz (UNII 1&3) 4x4	6GHz (UNII 5~8) 4x4	Bluetooth or Zigbee	GPS	Full Band w/Scan
3	5GHz (UNII 1) 2x2	5GHz (UNII 3) 4x4	6GHz (UNII 5~8) 4x4	Bluetooth or Zigbee	GPS	Dual 5GHz w/6GHz
4	6GHz 2x2 (TX) / 2.4GHz (2RX) / 5GHz (2RX)	5GHz (UNII 1&3) 4x4	2.4GHz 2x2	Bluetooth or Zigbee	GPS	DBDC w/Scan
5	5GHz (UNII 1) 2x2	5GHz (UNII 3) 4x4	2.4GHz 2x2	Bluetooth or Zigbee	GPS	Dual 5GHz w/2.4GHz
6	6GHz (UNII 5) 2x2	5GHz (UNII 1&3) 4x4	6GHz (UNII 7~8) 4x4	Bluetooth or Zigbee	GPS	Dual 6GHz w/5GHz

Note: The above information was declared by manufacturer.



1.2 Applicable Standards

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

- ♦ 47 CFR FCC Part 15
- ♦ 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	TH01-CB	KJ Chang	21.7~23.2 / 65~69	Jan. 15, 2024 ~ Mar. 28, 2024
Radiated below 1GHz	03CH06-CB	George Fan	21.4-22.5 / 55-58	Jan. 11, 2024 ~ Apr. 02, 2024
Radiated above 1GHz	03CH01-CB	George Fan	21.2-22.3 / 56-59	Jan. 11, 2024 ~ Apr. 02, 2024
	03CH02-CB	George Fan	21.9-22.4 / 55-58	Jan. 11, 2024 ~ Apr. 02, 2024
	03CH03-CB	George Fan	21.5-22.5 / 55-58	Jan. 11, 2024 ~ Apr. 02, 2024
Radiated above 1GHz (For Co-location test)	03CH06-CB	George Fan	21.4-22.5 / 55-58	Jan. 11, 2024 ~ Apr. 02, 2024
AC Conduction	CO01-CB	Gray Lee	23~24 / 60~61	Apr. 03, 2024



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))

Parameter	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	3.4 dB	Confidence levels of 95%
Radiated Emission (9kHz ~ 30MHz)	3.7 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	5.1 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	4.1 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	4.2 dB	Confidence levels of 95%
Conducted Emission	3.1 dB	Confidence levels of 95%
Output Power Measurement	0.8 dB	Confidence levels of 95%
Power Density Measurement	3.1 dB	Confidence levels of 95%
Bandwidth Measurement	2.2%	Confidence levels of 95%



2 Test Configuration of EUT

2.1 Test Channel Mode

<For Radio 1>

Mode
802.11a_Nss1,(6Mbps)_2TX
5180MHz
5200MHz
5240MHz
802.11be EHT20_Nss1,(MCS0)_2TX
5180MHz
5200MHz
5240MHz
802.11be EHT40_Nss1,(MCS0)_2TX
5190MHz
5230MHz
802.11be EHT80_Nss1,(MCS0)_2TX
5210MHz
802.11be EHT20_Nss2,(MCS0)_2TX
5180MHz
5200MHz
5240MHz
802.11be EHT40_Nss2,(MCS0)_2TX
5190MHz
5230MHz
802.11be EHT80_Nss2,(MCS0)_2TX
5210MHz
802.11be EHT20-BF_Nss1,(MCS0)_2TX
5180MHz
5200MHz
5240MHz
802.11be EHT40-BF_Nss1,(MCS0)_2TX
5190MHz
5230MHz
802.11be EHT80-BF_Nss1,(MCS0)_2TX
5210MHz

<For Radio 2>

2TX:

Mode
802.11a_Nss1,(6Mbps)_2TX
5180MHz
5200MHz
5240MHz
5745MHz
5785MHz
5825MHz
802.11be EHT20_Nss1,(MCS0)_2TX



5180MHz
5200MHz
5240MHz
5745MHz
5785MHz
5825MHz
802.11be EHT40_Nss1,(MCS0)_2TX
5190MHz
5230MHz
5755MHz
5795MHz
802.11be EHT80_Nss1,(MCS0)_2TX
5210MHz
5775MHz
802.11be EHT20_Nss2,(MCS0)_2TX
5180MHz
5200MHz
5240MHz
5745MHz
5785MHz
5825MHz
802.11be EHT40_Nss2,(MCS0)_2TX
5190MHz
5230MHz
5755MHz
5795MHz
802.11be EHT80_Nss2,(MCS0)_2TX
5210MHz
5775MHz
802.11be EHT20-BF_Nss1,(MCS0)_2TX
5180MHz
5200MHz
5240MHz
5745MHz
5785MHz
5825MHz
802.11be EHT40-BF_Nss1,(MCS0)_2TX
5190MHz
5230MHz
5755MHz
5795MHz
802.11be EHT80-BF_Nss1,(MCS0)_2TX
5210MHz
5775MHz

4TX:

Mode
802.11a_Nss1,(6Mbps)_4TX
5180MHz
5200MHz



5240MHz
5745MHz
5785MHz
5825MHz
802.11be EHT20_Nss1,(MCS0)_4TX
5180MHz
5200MHz
5240MHz
5745MHz
5785MHz
5825MHz
802.11be EHT40_Nss1,(MCS0)_4TX
5190MHz
5230MHz
5755MHz
5795MHz
802.11be EHT80_Nss1,(MCS0)_4TX
5210MHz
5775MHz
802.11be EHT20_Nss4,(MCS0)_4TX
5180MHz
5200MHz
5240MHz
5745MHz
5785MHz
5825MHz
802.11be EHT40_Nss4,(MCS0)_4TX
5190MHz
5230MHz
5755MHz
5795MHz
802.11be EHT80_Nss4,(MCS0)_4TX
5210MHz
5775MHz
802.11be EHT20-BF_Nss1,(MCS0)_4TX
5180MHz
5200MHz
5240MHz
5745MHz
5785MHz
5825MHz
802.11be EHT40-BF_Nss1,(MCS0)_4TX
5190MHz
5230MHz
5755MHz
5795MHz
802.11be EHT80-BF_Nss1,(MCS0)_4TX
5210MHz
5775MHz



Note:

- ♦ EHT20 / EHT40 / EHT80 covers HT20 / HT40 / VHT20 / VHT40 / VHT80 / HEW20 / HEW40 / HEW80 due to similar modulation. The power setting for HT20 / HT40 / VHT20 / VHT40 / VHT80 / HEW20 / HEW40 / HEW80 is the same or lower than EHT20 / EHT40 / EHT80.
- ♦ The EUT supports beamforming and CDD modes, and the CDD mode is the worst case. Therefore, all test items are evaluated in the report. The beamforming mode only evaluates the output power.



2.2 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	AC power-line conducted emissions
Condition	AC power-line conducted measurement for line and neutral Test Voltage: 120Vac / 60Hz
Operating Mode	CTX
1	EUT 1 + Radio 1 (WLAN 2.4GHz) + Adapter
2	EUT 1 + Radio 1 (WLAN 2.4GHz) + PoE
Mode 2 has been evaluated to be the worst case among Mode 1~2, thus measurement for Mode 3 ~ 9 will follow this same test mode.	
3	EUT 1 + Radio 1 (WLAN 5GHz) + PoE
4	EUT 1 + Radio 1 (WLAN 6GHz) + PoE
5	EUT 1 + Radio 2 (WLAN 5GHz) + PoE
6	EUT 1 + Radio 3 (WLAN 2.4GHz) + PoE
7	EUT 1 + Radio 3 (WLAN 6GHz) + PoE
8	EUT 1 + Radio 4 (Bluetooth) + PoE
9	EUT 1 + Radio 4 (Zigbee) + PoE
For operating mode 8 is the worst case and it was record in this test report.	

The Worst Case Mode for Following Conformance Tests	
Tests Item	Emission Bandwidth Maximum Output Power Power Spectral Density
Test Condition	Conducted measurement at transmit chains
1	EUT 1 + Radio 1
2	EUT 1 + Radio 2_2TX
3	EUT 1 + Radio 2_4TX



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
	The EUT was performed at X axis, Y axis and Z axis position, and the worst case as below for Unwanted Emissions above 1GHz. Thus, the measurement will follow this same test configuration.
1	EUT 1 in X axis + Radio 1 (WLAN 2.4GHz) + Adapter
2	EUT 1 in X axis + Radio 1 (WLAN 2.4GHz) + PoE
Mode 1 has been evaluated to be the worst case among Mode 1~2, thus measurement for Mode 3 ~ 9 will follow this same test mode.	
3	EUT 1 in Z axis + Radio 1 (WLAN 5GHz) + Adapter
4	EUT 1 in Z axis + Radio 1 (WLAN 6GHz) + Adapter
5	EUT 1 in Y axis + Radio 2 (WLAN 5GHz) + Adapter
6	EUT 1 in Y axis + Radio 3 (WLAN 2.4GHz) + Adapter
7	EUT 1 in Z axis + Radio 3 (WLAN 6GHz) + Adapter
8	EUT 1 in Z axis + Radio 4 (Bluetooth) + Adapter
9	EUT 1 in Z axis + Radio 4 (Zigbee) + Adapter
For operating mode 1 is the worst case and it was record in this test report.	
Operating Mode > 1GHz	CTX
	The EUT was performed at X axis, Y axis and Z axis position, and the worst case was found at Z axis in Radio 1 and Radio 2_2TX and Y axis in Radio 2_4TX. So, the measurement will follow this same test configuration
1	EUT 1 in Z axis + Radio 1
2	EUT 1 in Z axis + Radio 2_2TX
3	EUT 1 in Y axis + Radio 2_4TX



The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Radiated Emission Co-location
Test Condition	Radiated measurement
Operating Mode	Normal Link
	After evaluating, the worst case was found at Y axis. So the measurement will follow this same test configuration.
1	EUT 1 in Y axis + Radio 1 (WLAN 2.4GHz) + Radio 2 (WLAN 5GHz)
2	EUT 1 in Y axis + Radio 2 (WLAN 5GHz) + Radio 3 (WLAN 2.4GHz)
For operating mode 2 is the worst case and it was record in this test report.	
Refer to Appendix F for Radiated Emission Co-location.	

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	Radio 1 (WLAN 2.4GHz) + Radio 2 (WLAN 5GHz/UNII 1&3) + Radio 3 (WLAN 6GHz/UNII 5~8) + Radio 4 (Zigbee)
2	Radio 1 (WLAN 2.4GHz) + Radio 2 (WLAN 5GHz/UNII 1&3) + Radio 3 (WLAN 6GHz/UNII 5~8) + Radio 4 (Bluetooth)
3	Radio 1 (WLAN 5GHz/UNII 1) + Radio 2 (WLAN 5GHz/UNII 3) + Radio 3 (WLAN 6GHz/UNII 5~8) + Radio 4 (Zigbee)
4	Radio 1 (WLAN 5GHz/UNII 1) + Radio 2 (WLAN 5GHz/UNII 3) + Radio 3 (WLAN 6GHz/UNII 5~8) + Radio 4 (Bluetooth)
5	Radio 1 (WLAN 6GHz/UNII 5~8) + Radio 2 (WLAN 5GHz/UNII 1&3) + Radio 3 (WLAN 2.4GHz) + Radio 4 (Zigbee)
6	Radio 1 (WLAN 6GHz/UNII 5~8) + Radio 2 (WLAN 5GHz/UNII 1&3) + Radio 3 (WLAN 2.4GHz) + Radio 4 (Bluetooth)
7	Radio 1 (WLAN 5GHz/UNII 1) + Radio 2 (WLAN 5GHz/UNII 3) + Radio 3 (WLAN 2.4GHz) + Radio 4 (Zigbee)
8	Radio 1 (WLAN 5GHz/UNII 1) + Radio 2 (WLAN 5GHz/UNII 3) + Radio 3 (WLAN 2.4GHz) + Radio 4 (Bluetooth)
9	Radio 1 (WLAN 6GHz/UNII 5) + Radio 2 (WLAN 5GHz/UNII 1&3) + Radio 3 (WLAN 6GHz/UNII 7~8) + Radio 4 (Zigbee)
10	Radio 1 (WLAN 6GHz/UNII 5) + Radio 2 (WLAN 5GHz/UNII 1&3) + Radio 3 (WLAN 6GHz/UNII 7~8) + Radio 4 (Bluetooth)
Refer to Sporton Test Report No.: FA410321 for Co-location RF Exposure Evaluation.	



Note: The PoE and adapter are for measurement only, would not be marketed.
PoE and adapter information as below:

Power	Brand Name	Model Name
PoE	PHIHONG	POE60U-1BT-X
Adapter	Powertron	PA1045-120HIB300

2.3 EUT Operation during Test

For CTX Mode:

The EUT was programmed to be in continuously transmitting mode.

For Normal Link:

During the test, the EUT operation to normal function.

2.4 Accessories

Accessories
Mount bracket *1

2.5 Support Equipment

For AC Conduction:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	PoE	PHIHONG	POE60U-1BT-X	N/A
B	PC	ASUS	S300TA	TX2-RTL8821CE
C	Flash disk3.0	Transcend	JetFlash-703	N/A

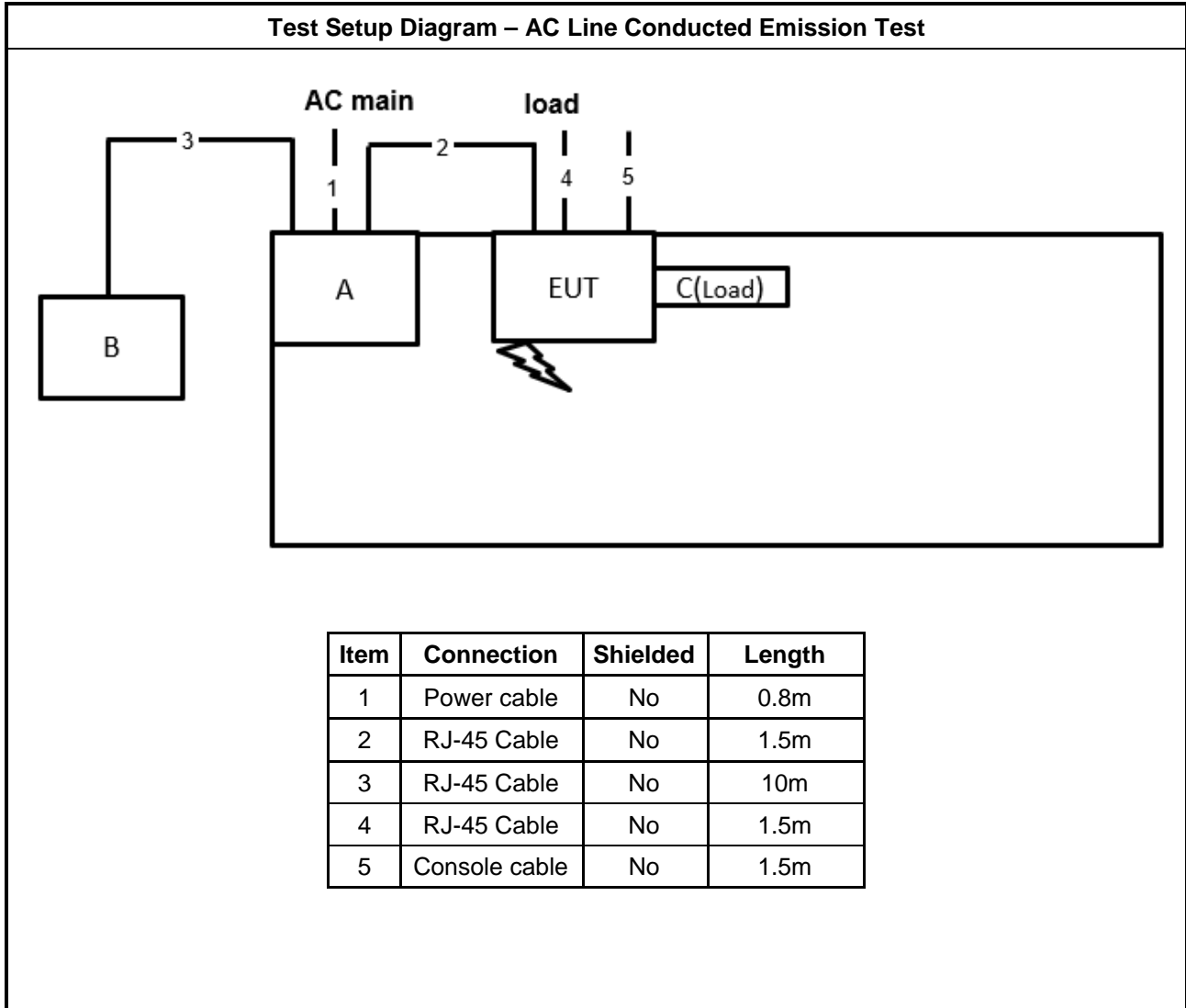
For Radiated:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Notebook	DELL	E4300	N/A
B	AC Adapter	Powertron	PA1045-120HIB300	N/A

For RF Conducted:

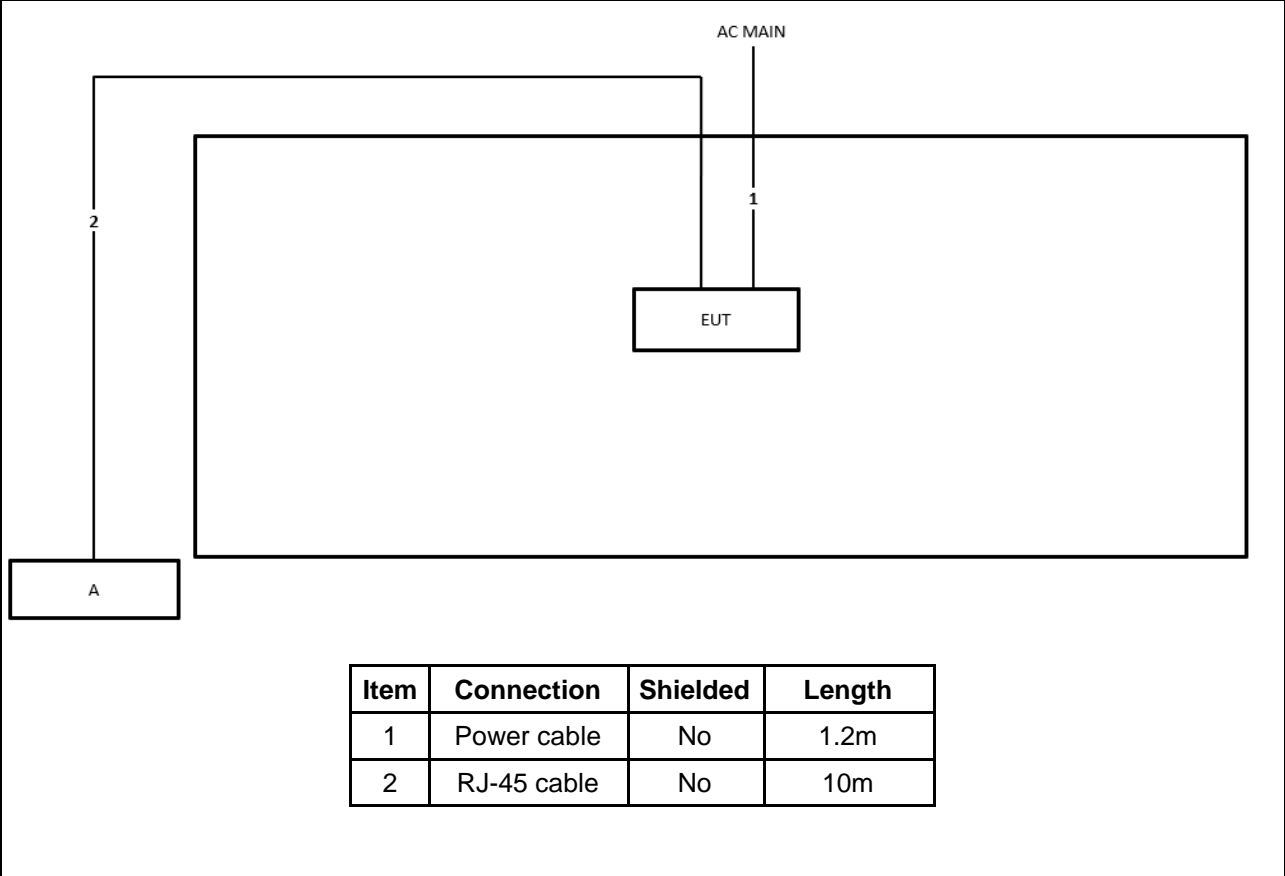
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Notebook	DELL	E4300	N/A
B	AC Adapter	Powertron	PA1045-120HIB300	N/A

2.6 Test Setup Diagram





Test Setup Diagram - Radiated Test



Item	Connection	Shielded	Length
1	Power cable	No	1.2m
2	RJ-45 cable	No	10m



3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

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

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

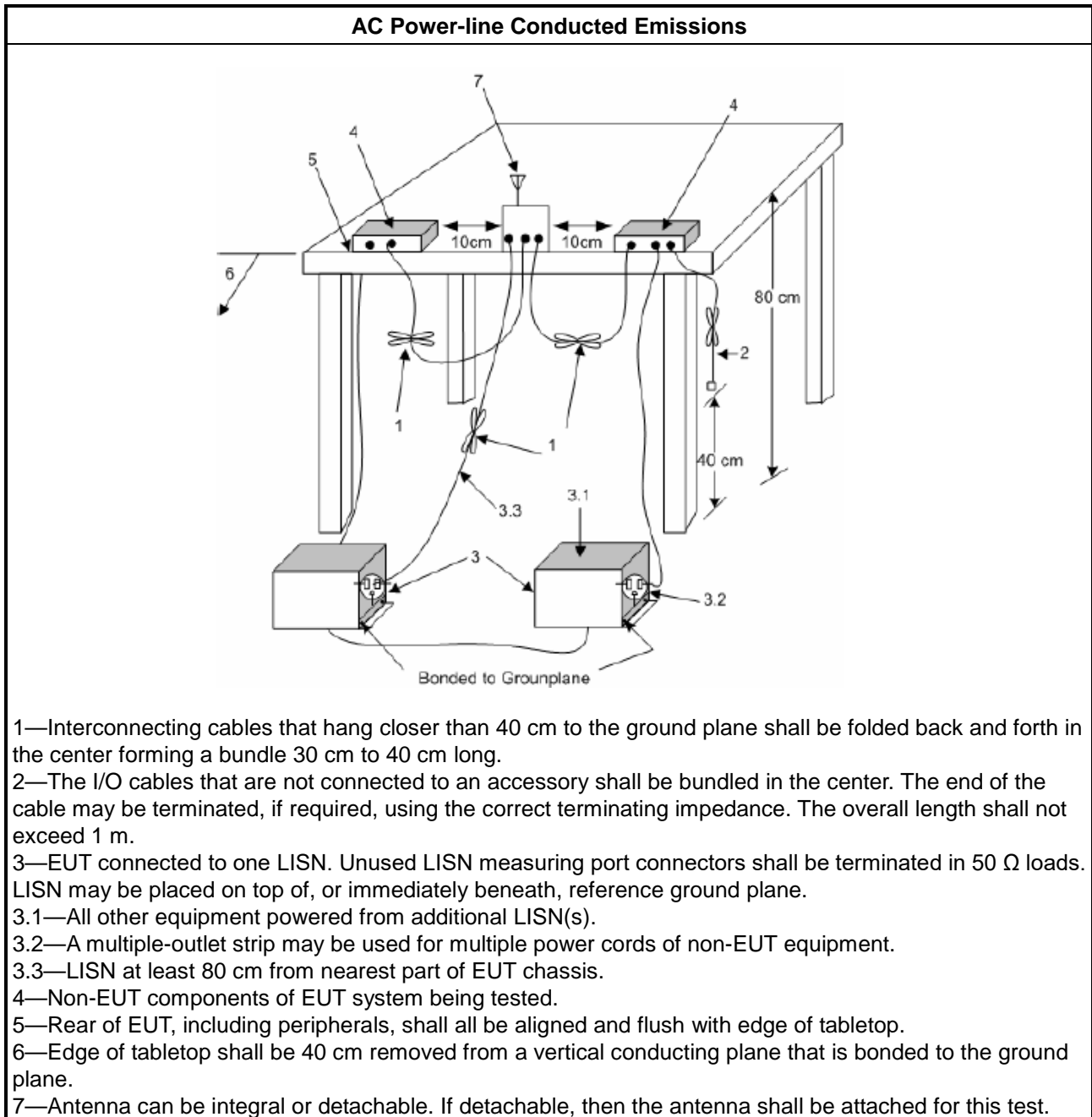
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

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

3.1.4 Test Setup



3.1.5 Measurement Results Calculation

The measured Level is calculated using:

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

3.1.6 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A

3.2 Emission Bandwidth

3.2.1 Emission Bandwidth Limit

Emission Bandwidth Limit	
UNII Devices	
<input checked="" type="checkbox"/>	For the 5.15-5.25 GHz band, N/A
<input 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 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.

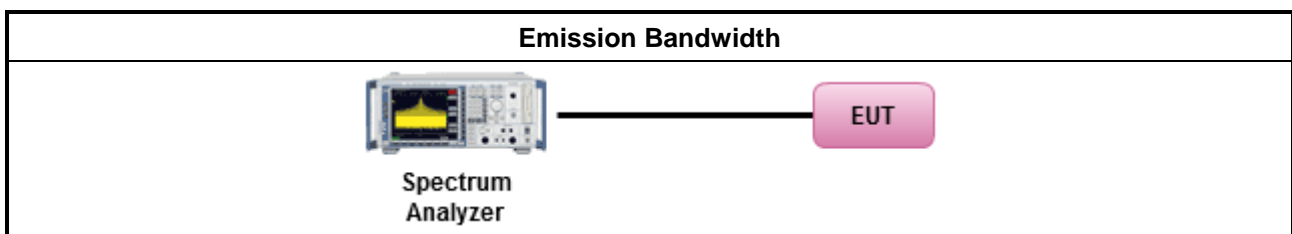
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

Test Method							
<ul style="list-style-type: none"> ▪ For the emission bandwidth shall be measured using one of the options below: <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30px;"><input checked="" type="checkbox"/></td> <td>Refer as FCC KDB 789033 D02, clause C for EBW and clause D for OBW measurement.</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Refer as IC RSS-Gen, clause 4.6 for bandwidth testing.</td> </tr> </table> 		<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.
<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.						

3.2.4 Test Setup



3.2.5 Test Result of Emission Bandwidth

Refer as Appendix B



3.3 Maximum Output Power

3.3.1 Limit

Maximum Output Power 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 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 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 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 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 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:	
<input type="checkbox"/>	<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:	
<input type="checkbox"/>	<ul style="list-style-type: none"> For other devices: 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. Vehicles devices: The maximum e.i.r.p. shall not exceed 30 mW or 1.76 + 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:	
<input type="checkbox"/>	<ul style="list-style-type: none"> For other devices: The maximum conducted output power shall not exceed 250 mW or 11 + 10 log 10 B, dBm, and 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 Vehicles devices: The maximum e.i.r.p. shall not exceed 30 mW or 1.76 + 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 conducted output power shall not exceed 250 mW or 11 + 10 log 10 B, dBm, and 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>P_{Out} = maximum conducted output power in dBm, G_{TX} = the maximum transmitting antenna directional gain in dBi.</p>	

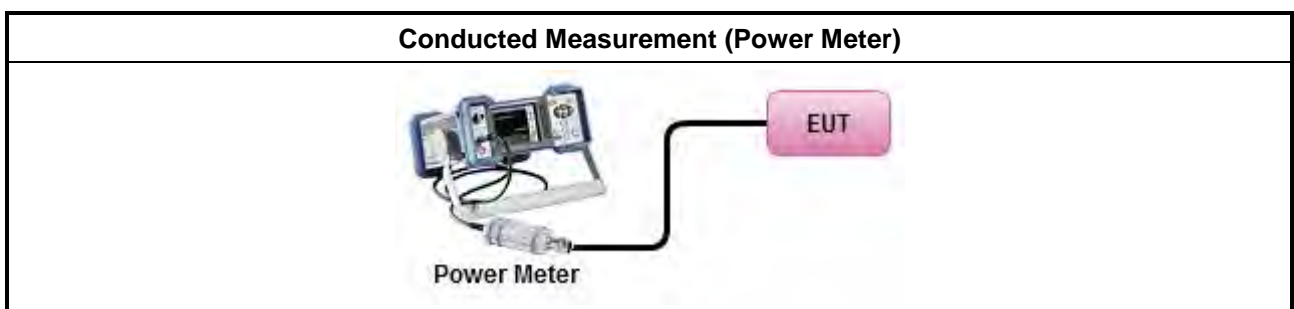
3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

Test Method	
	Average over on/off periods with duty factor
<input 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)
	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.
	<ul style="list-style-type: none"> ▪ If the EUT supports multiple transmit chains using options given below: Refer as FCC KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them.
	<ul style="list-style-type: none"> ▪ If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + \dots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$
<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 Maximum Output Power

Refer as Appendix C



3.4 Power Spectral Density

3.4.1 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 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 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.	

3.4.2 Measuring Instruments

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

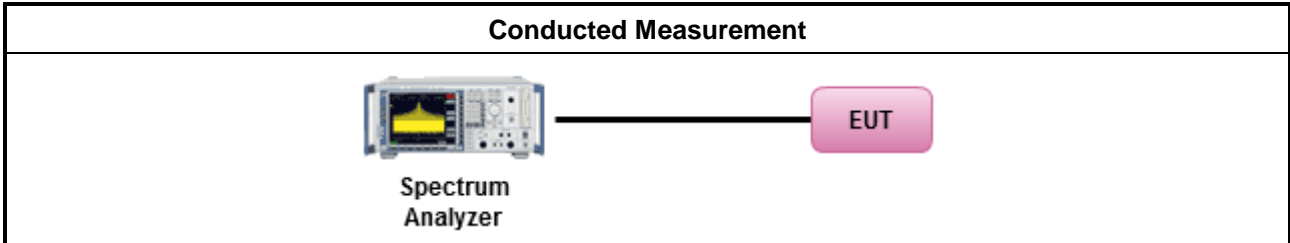


3.4.3 Test Procedures

Test Method	
<ul style="list-style-type: none"> ▪ Peak power spectral density procedures that the same method as used to determine the conducted output power 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, F)5) power spectral density can be measured using resolution bandwidths < 1 MHz provided that the results are integrated over 1 MHz bandwidth
[duty cycle ≥ 98% or external video / power trigger]	
<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. 	

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

3.4.4 Test Setup



3.4.5 Test Result of Power Spectral Density

Refer as Appendix D



3.5 Unwanted Emissions

3.5.1 Transmitter Unwanted Emissions Limit

Unwanted emissions below 1 GHz and restricted band emissions above 1GHz limit			
Frequency Range (MHz)	Field Strength (uV/m)	Field Strength (dBuV/m)	Measure Distance (m)
0.009~0.490	2400/F(kHz)	48.5 - 13.8	300
0.490~1.705	24000/F(kHz)	33.8 - 23	30
1.705~30.0	30	29	30
30~88	100	40	3
88~216	150	43.5	3
216~960	200	46	3
Above 960	500	54	3

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 type="checkbox"/> 5.25 - 5.35 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m @3m]
<input 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).

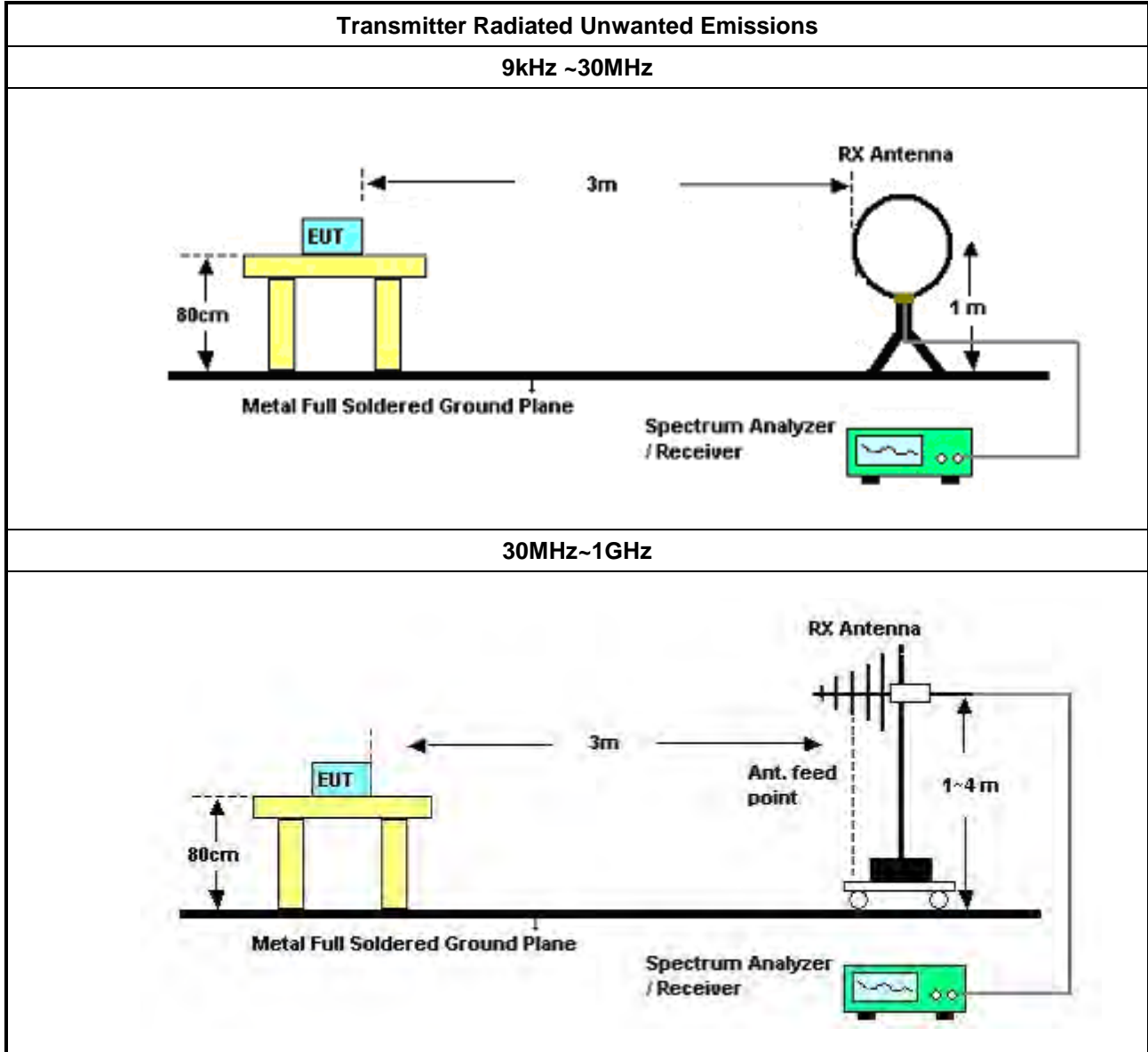
3.5.2 Measuring Instruments

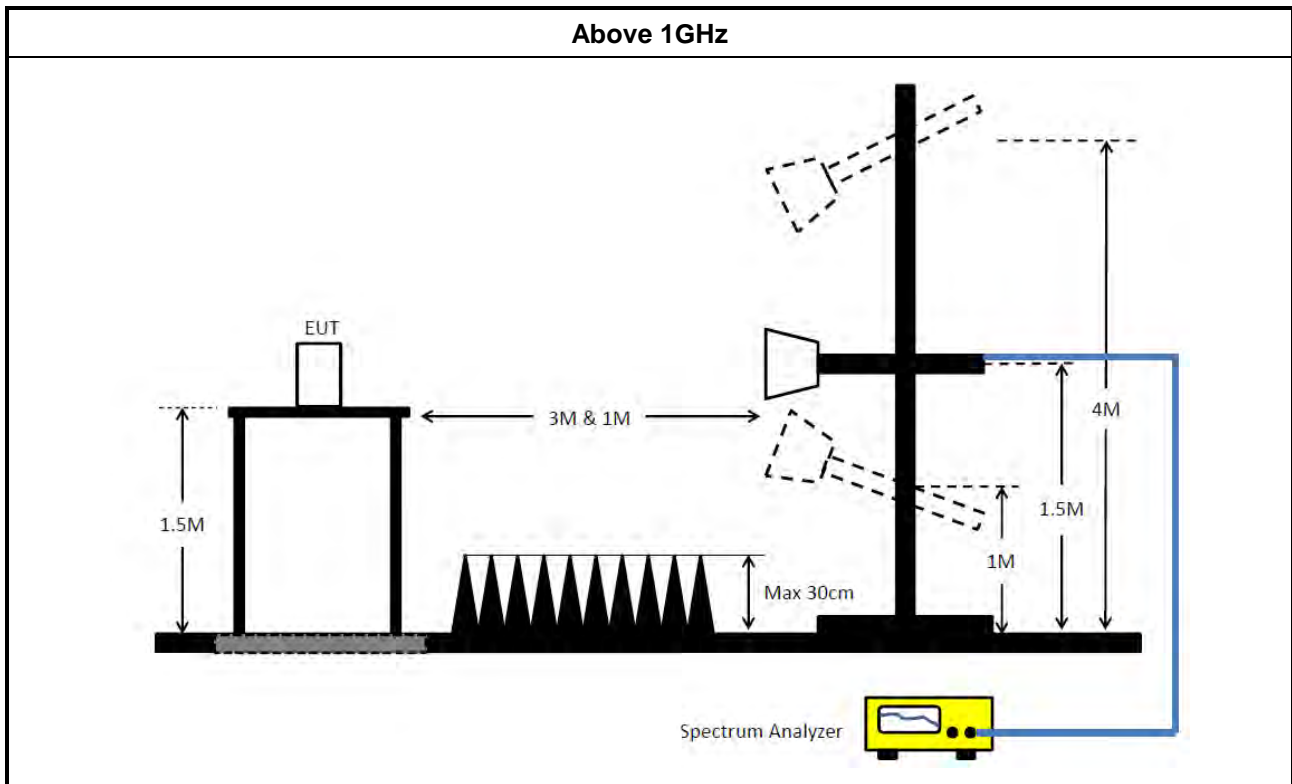
Refer a test equipment and calibration data table in this test report.

3.5.3 Test Procedures

Test Method															
	<ul style="list-style-type: none"> ▪ 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: <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <tr> <td style="width: 5%;"></td> <td> <ul style="list-style-type: none"> ▪ Refer as FCC KDB 789033 D02, clause G)2) for unwanted emissions into non-restricted bands. ▪ Refer as FCC KDB 789033 D02, clause G)1) for unwanted emissions into restricted bands. </td> </tr> <tr> <td style="width: 5%;"></td> <td> <input type="checkbox"/> Refer as FCC KDB 789033 D02, G)6) Method AD (Trace Averaging). </td> </tr> <tr> <td></td> <td> <input checked="" type="checkbox"/> Refer as FCC KDB 789033 D02, G)6) Method VB (Reduced VBW). </td> </tr> <tr> <td></td> <td> <input type="checkbox"/> Refer as ANSI C63.10, clause 11.12.2.5.3 (Reduced VBW). VBW ≥ 1/T, where T is pulse time. </td> </tr> <tr> <td></td> <td> <input type="checkbox"/> Refer as ANSI C63.10, clause 7.5 average value of pulsed emissions. </td> </tr> <tr> <td></td> <td> <input checked="" type="checkbox"/> Refer as FCC KDB 789033 D02, clause G)5) measurement procedure peak limit. </td> </tr> <tr> <td></td> <td> <input type="checkbox"/> Refer as ANSI C63.10, clause 4.1.4.2.2 measurement procedure peak limit. </td> </tr> </table> 		<ul style="list-style-type: none"> ▪ Refer as FCC KDB 789033 D02, clause G)2) for unwanted emissions into non-restricted bands. ▪ Refer as FCC KDB 789033 D02, clause G)1) for unwanted emissions into restricted bands. 		<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"> ▪ Refer as FCC KDB 789033 D02, clause G)2) for unwanted emissions into non-restricted bands. ▪ Refer as FCC KDB 789033 D02, clause G)1) for unwanted emissions into restricted bands. 														
	<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. <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <tr> <td style="width: 5%;"></td> <td> <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. ▪ Refer as ANSI C63.10, clause 6.5 for radiated emissions 30 MHz to 1 GHz and test distance is 3m. ▪ Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz. </td> </tr> </table> 		<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. ▪ Refer as ANSI C63.10, clause 6.5 for radiated emissions 30 MHz to 1 GHz and test distance is 3m. ▪ Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz. 												
	<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. ▪ Refer as ANSI C63.10, clause 6.5 for radiated emissions 30 MHz to 1 GHz and test distance is 3m. ▪ Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz. 														
	<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. 														

3.5.4 Test Setup





3.5.5 Measurement Results Calculation

The measured Level is calculated using:

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

3.5.6 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.

3.5.7 Test Result of Transmitter Unwanted Emissions

Refer as Appendix E



4 Test Equipment and Calibration Data

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.4GHz	Mar. 01, 2024	Feb. 28, 2025	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	Feb. 19, 2024	Feb. 18, 2025	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Apr. 27, 2023	Apr. 26, 2024	Conduction (CO01-CB)
Pulse Limiter	Rohde&Schwarz	ESH3-Z2	100430	9kHz ~ 30MHz	Feb. 08, 2024	Feb. 07, 2025	Conduction (CO01-CB)
COND Cable	Woken	Cable	Low cable-CO01	9kHz ~ 30MHz	Oct. 17, 2023	Oct. 16, 2024	Conduction (CO01-CB)
Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conduction (CO01-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH01-CB	1GHz ~18GHz 3m	May 05, 2023	May 04, 2024	Radiation (03CH01-CB)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	BBHA 9120D-01816	1GHz~18GHz	Dec. 20, 2023	Dec. 19, 2024	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Sep. 04, 2023	Sep. 03, 2024	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02121	1GHz ~ 26.5GHz	May 18, 2023	May 17, 2024	Radiation (03CH01-CB)
Pre-Amplifier	SGH	SGH184	20221107-3	18GHz ~ 40GHz	Nov. 24, 2023	Nov. 23, 2024	Radiation (03CH01-CB)
Signal Analyzer	R&S	FSV3044	101437	10kHz ~ 44GHz	Nov. 28, 2023	Nov. 27, 2024	Radiation (03CH01-CB)
RF Cable-high	Woken	RG402	High Cable-16	1 GHz ~ 18 GHz	Nov. 06, 2023	Nov. 05, 2024	Radiation (03CH01-CB)
RF Cable-high	Woken	RG402	High Cable-16+17	1 GHz ~ 18 GHz	Nov. 06, 2023	Nov. 05, 2024	Radiation (03CH01-CB)
High Cable	Woken	WCA0929M	40G#5+6	1GHz ~ 40 GHz	Jan. 11, 2024	Jan. 10, 2025	Radiation (03CH01-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH01-CB)
3m Semi Anechoic Chamber VSWR	RIKEN	SAC-3M	03CH02-CB	1GHz ~18GHz	Mar. 25, 2023	Mar. 24, 2024	Radiation (03CH02-CB)
3m Semi Anechoic Chamber VSWR	RIKEN	SAC-3M	03CH02-CB	1GHz ~18GHz	Mar. 24, 2024	Mar. 23, 2025	Radiation (03CH02-CB)
Horn Antenna	EMCO	3115	9610-4976	1GHz ~ 18GHz	Apr. 18, 2023	Apr. 17, 2024	Radiation (03CH02-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Sep. 04, 2023	Sep. 03, 2024	Radiation (03CH02-CB)
Pre-Amplifier	Agilent	83017A	MY39501305	1GHz ~ 26.5GHz	Jun. 30, 2023	Jun. 29, 2024	Radiation (03CH02-CB)
Pre-Amplifier	SGH	SGH184	20221107-3	18GHz ~ 40GHz	Nov. 24, 2023	Nov. 23, 2024	Radiation (03CH02-CB)



Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
Signal Analyzer	R&S	FSV40	101903	9kHz ~ 40GHz	May 29, 2023	May 28, 2024	Radiation (03CH02-CB)
RF Cable-high	Woken	RG402	High Cable-18	1GHz ~ 18GHz	Oct. 02, 2023	Oct. 01, 2024	Radiation (03CH02-CB)
RF Cable-high	Woken	RG402	High Cable-18+19	1GHz ~ 18GHz	Oct. 02, 2023	Oct. 01, 2024	Radiation (03CH02-CB)
High Cable	Woken	WCA0929M	40G#5+6	1GHz ~ 40 GHz	Jan. 11, 2024	Jan. 10, 2025	Radiation (03CH02-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH02-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH03-CB	1GHz ~18GHz 3m	May 04, 2023	May 03, 2024	Radiation (03CH03-CB)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1370	1GHz~18GHz	Jun. 30, 2023	Jun. 29, 2024	Radiation (03CH03-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Sep. 04, 2023	Sep. 03, 2024	Radiation (03CH03-CB)
Pre-Amplifier	Agilent	8449B	3008A02097	1GHz ~ 26.5GHz	Jun. 30, 2023	Jun. 29, 2024	Radiation (03CH03-CB)
Pre-Amplifier	SGH	SGH184	20221107-3	18GHz ~ 40GHz	Nov. 24, 2023	Nov. 23, 2024	Radiation (03CH03-CB)
Spectrum Analyzer	R&S	FSP40	100019	9kHz ~ 40GHz	Jun. 12, 2023	Jun. 11, 2024	Radiation (03CH03-CB)
RF Cable-high	Woken	RG402	High Cable-20+29	1GHz ~ 18GHz	Nov. 07, 2023	Nov. 06, 2024	Radiation (03CH03-CB)
RF Cable-high	Woken	RG402	High Cable-29	1GHz ~ 18GHz	Nov. 07, 2023	Nov. 06, 2024	Radiation (03CH03-CB)
High Cable	Woken	WCA0929M	40G#5+6	1GHz ~ 40 GHz	Jan. 11, 2024	Jan. 10, 2025	Radiation (03CH03-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH03-CB)
Loop Antenna	Teseq	HLA 6121	65417	9kHz - 30 MHz	Oct. 13, 2023	Oct. 12, 2024	Radiation (03CH06-CB)
3m Semi Anechoic Chamber NSA	TDK	SAC-3M	03CH06-CB	30 MHz ~ 1 GHz	Aug. 03, 2023	Aug. 02, 2024	Radiation (03CH06-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH06-CB	1GHz ~18GHz 3m	Oct. 02, 2023	Oct. 01, 2024	Radiation (03CH06-CB)
Bilog Antenna with 6 dB attenuator	TESEQ & EMCI	CBL6112D & N-6-06	37878 & AT-N0606	20MHz ~ 2GHz	Jul. 30, 2023	Jul. 29, 2024	Radiation (03CH06-CB)
Horn Antenna	SCHWARZBECK	BBHA9120D	BBHA 9120D-1292	1GHz~18GHz	Jul. 31, 2023	Jul. 30, 2024	Radiation (03CH06-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Sep. 04, 2023	Sep. 03, 2024	Radiation (03CH06-CB)
Pre-Amplifier	Agilent	310N	187290	0.1MHz ~ 1GHz	Nov. 03, 2023	Nov. 02, 2024	Radiation (03CH06-CB)
Pre-Amplifier	Agilent	83017A	MY53270064	0.5GHz ~ 26.5GHz	Aug. 01, 2023	Jul. 31, 2024	Radiation (03CH06-CB)



Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
Pre-Amplifier	SGH	SGH184	20221107-3	18GHz ~ 40GHz	Nov. 24, 2023	Nov. 23, 2024	Radiation (03CH06-CB)
Signal Analyzer	R&S	FSV40	101904	9kHz ~ 40GHz	Apr. 21, 2023	Apr. 20, 2024	Radiation (03CH06-CB)
EMI Test Receiver	R&S	ESCS	826547/017	9kHz ~ 2.75GHz	Jun. 13, 2023	Jun. 12, 2024	Radiation (03CH06-CB)
RF Cable-low	Woken	RG402	Low Cable-24+68	30MHz~1GHz	Oct. 02, 2023	Oct. 01, 2024	Radiation (03CH06-CB)
RF Cable-high	Woken	RG402	High Cable-05+68	1GHz~18GHz	Oct. 02, 2023	Oct. 01, 2024	Radiation (03CH06-CB)
High Cable	Woken	WCA0929M	40G#5+6	1GHz ~ 40 GHz	Jan. 11, 2024	Jan. 10, 2025	Radiation (03CH06-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH06-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	May 29, 2023	May 28, 2024	Conducted (TH01-CB)
Band Rejector	MTJ	6G Band Rejector	6G-BRJ-01	1 ~ 18GHz	Oct. 03, 2023	Oct. 02, 2024	Conducted (TH01-CB)
Band Rejector	MTJ	6G Band Rejector	6G-BRJ-02	1~ 18GHz	Oct. 03, 2023	Oct. 02, 2024	Conducted (TH01-CB)
Switch	SPTCB	SP-SWI	SWI-01	1~26.5 GHz	Oct. 03, 2023	Oct. 02, 2024	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-06	1 GHz – 18 GHz	Oct. 02, 2023	Oct. 01, 2024	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-07	1 GHz – 18 GHz	Oct. 02, 2023	Oct. 01, 2024	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-08	1 GHz – 18 GHz	Oct. 02, 2023	Oct. 01, 2024	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-09	1 GHz – 18 GHz	Oct. 02, 2023	Oct. 01, 2024	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz – 18 GHz	Oct. 02, 2023	Oct. 01, 2024	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-30	1 GHz – 18 GHz	Oct. 02, 2023	Oct. 01, 2024	Conducted (TH01-CB)
Power Sensor	Anritsu	MA2411B	1339408	300MHz~40GHz	Sep. 12, 2023	Sep. 11, 2024	Conducted (TH01-CB)
Power Meter	Anritsu	ML2495A	1517009	300MHz~40GHz	Sep. 12, 2023	Sep. 11, 2024	Conducted (TH01-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conducted (TH01-CB)

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

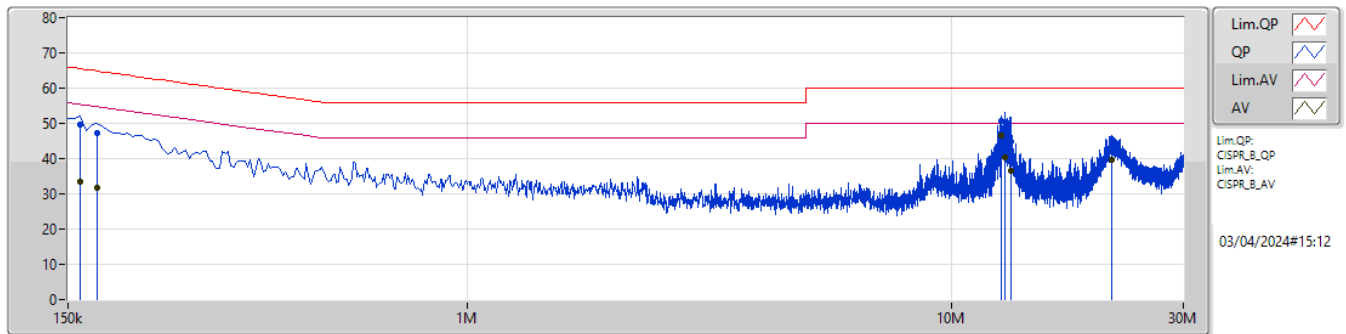
N.C.R means Non-Calibration required.



Summary

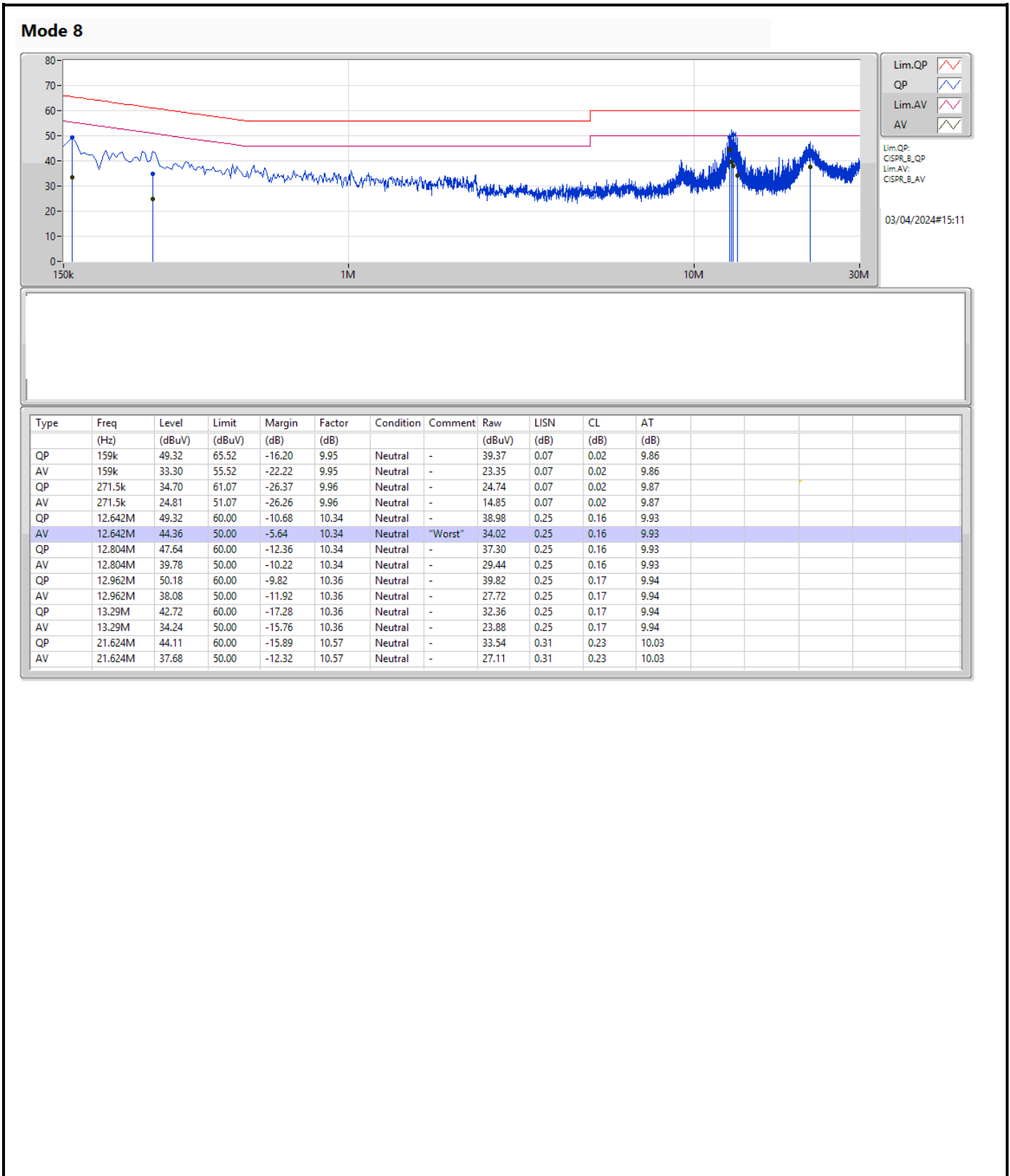
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 8	Pass	AV	12.638M	46.38	50.00	-3.62	Line

Mode 8



Lim.QP
QP
Lim.AV
AV
Lim.QP: CISPR_B_QP
Lim.AV: CISPR_B_AV
03/04/2024#15:12

Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)
QP	159k	49.59	65.52	-15.93	9.97	Line	-	39.62	0.09	0.02	9.86
AV	159k	33.52	55.52	-22.00	9.97	Line	-	23.55	0.09	0.02	9.86
QP	172.5k	47.33	64.83	-17.50	9.97	Line	-	37.36	0.09	0.02	9.86
AV	172.5k	31.73	54.83	-23.10	9.97	Line	-	21.76	0.09	0.02	9.86
QP	12.638M	50.77	60.00	-9.23	10.36	Line	-	40.41	0.27	0.16	9.93
AV	12.638M	46.38	50.00	-3.62	10.36	Line	"Worst"	36.02	0.27	0.16	9.93
QP	12.854M	50.27	60.00	-9.73	10.36	Line	-	39.91	0.27	0.16	9.93
AV	12.854M	40.39	50.00	-9.61	10.36	Line	-	30.03	0.27	0.16	9.93
QP	13.236M	44.91	60.00	-15.09	10.38	Line	-	34.53	0.27	0.17	9.94
AV	13.236M	36.68	50.00	-13.32	10.38	Line	-	26.30	0.27	0.17	9.94
QP	21.404M	45.61	60.00	-14.39	10.56	Line	-	35.05	0.30	0.23	10.03
AV	21.404M	39.67	50.00	-10.33	10.56	Line	-	29.11	0.30	0.23	10.03





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)_2TX	37.51M	19.198M	19M2D1D	21.78M	16.776M
802.11be EHT20_Nss1,(MCS0)_2TX	37.015M	19.581M	19M6D1D	21.395M	19.092M
802.11be EHT20_Nss2,(MCS0)_2TX	42.515M	19.61M	19M6D1D	21.45M	19.127M
802.11be EHT40_Nss1,(MCS0)_2TX	65.56M	38.118M	38M1D1D	40.04M	37.771M
802.11be EHT40_Nss2,(MCS0)_2TX	64.13M	38.099M	38M1D1D	41.14M	37.637M
802.11be EHT80_Nss1,(MCS0)_2TX	82.28M	77.547M	77M5D1D	81.18M	77.497M
802.11be EHT80_Nss2,(MCS0)_2TX	84.04M	77.39M	77M4D1D	83.6M	77.344M

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)
802.11a_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	21.78M	16.929M	22M	16.776M
5200MHz	Pass	Inf	36.575M	18.326M	33.44M	17.739M
5240MHz	Pass	Inf	30.855M	17.161M	37.51M	19.198M
802.11be EHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	21.395M	19.104M	21.395M	19.092M
5200MHz	Pass	Inf	33M	19.229M	28.985M	19.188M
5240MHz	Pass	Inf	32.725M	19.164M	37.015M	19.581M
802.11be EHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5190MHz	Pass	Inf	46.86M	37.856M	40.04M	37.771M
5230MHz	Pass	Inf	48.18M	37.811M	65.56M	38.118M
802.11be EHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5210MHz	Pass	Inf	81.18M	77.547M	82.28M	77.497M
802.11be EHT20_Nss2,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	21.89M	19.132M	21.45M	19.127M
5200MHz	Pass	Inf	31.02M	19.247M	31.515M	19.205M
5240MHz	Pass	Inf	28.655M	19.197M	42.515M	19.61M
802.11be EHT40_Nss2,(MCS0)_2TX	-	-	-	-	-	-
5190MHz	Pass	Inf	41.14M	37.696M	48.4M	37.637M
5230MHz	Pass	Inf	47.52M	37.914M	64.13M	38.099M
802.11be EHT80_Nss2,(MCS0)_2TX	-	-	-	-	-	-
5210MHz	Pass	Inf	84.04M	77.39M	83.6M	77.344M

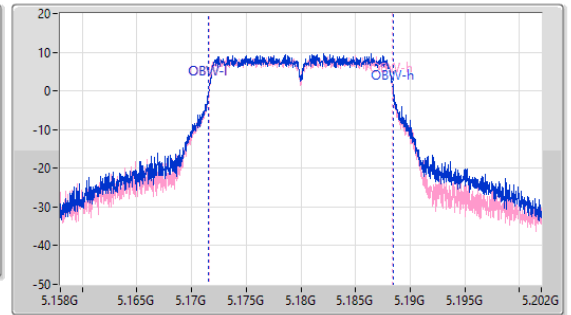
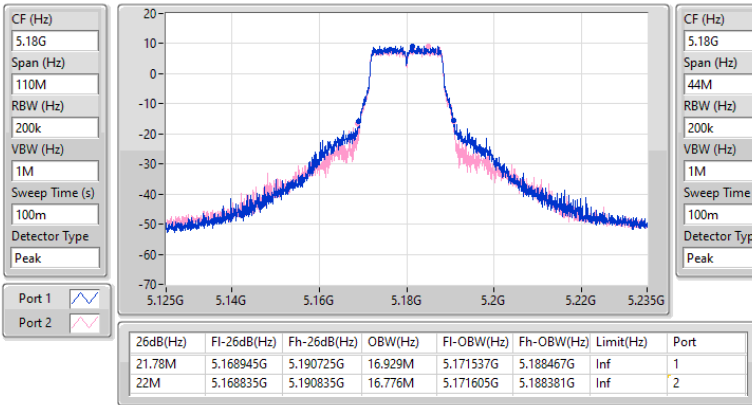
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
 Port X-OBW = Port X 99% occupied bandwidth

5.15-5.25GHz_802.11a_Nss1,(6Mbps)_2TX

EBW

5180MHz

27/01/2024

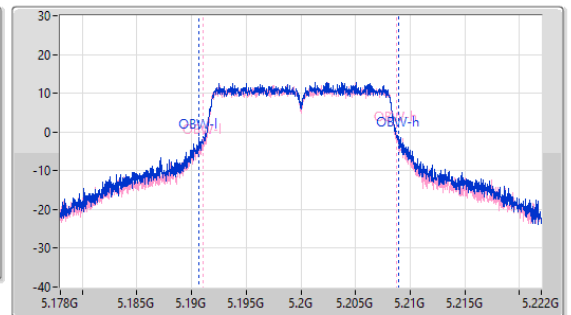
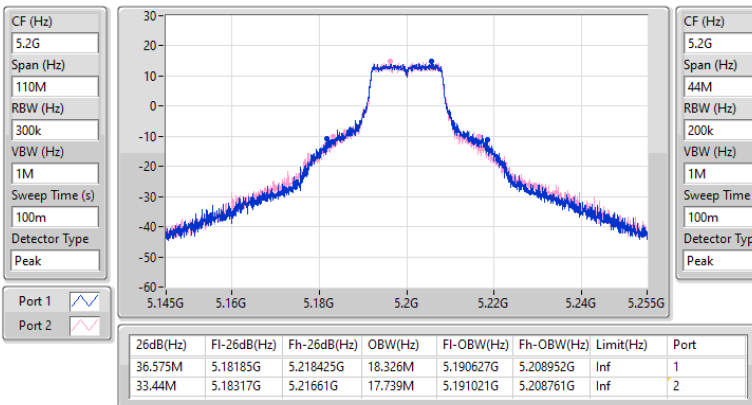


5.15-5.25GHz_802.11a_Nss1,(6Mbps)_2TX

EBW

5200MHz

27/01/2024

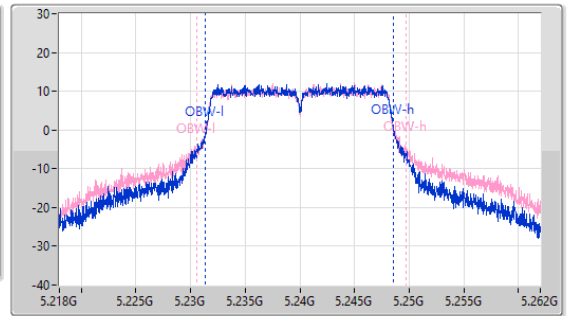
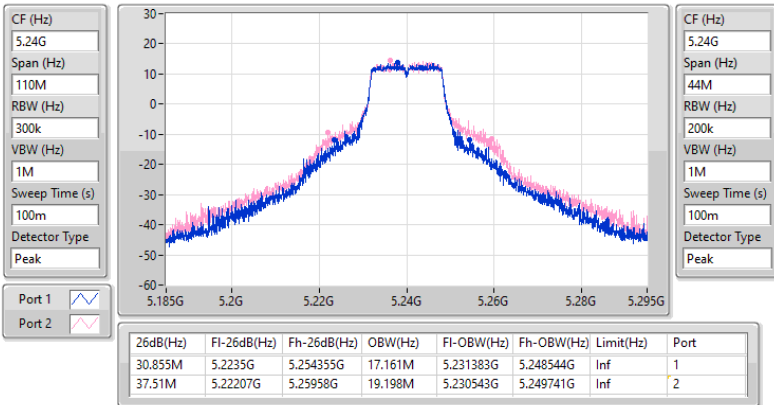


5.15-5.25GHz_802.11a_Nss1,(6Mbps)_2TX

EBW

5240MHz

27/01/2024

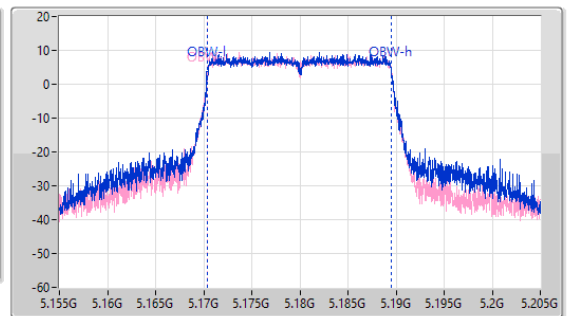
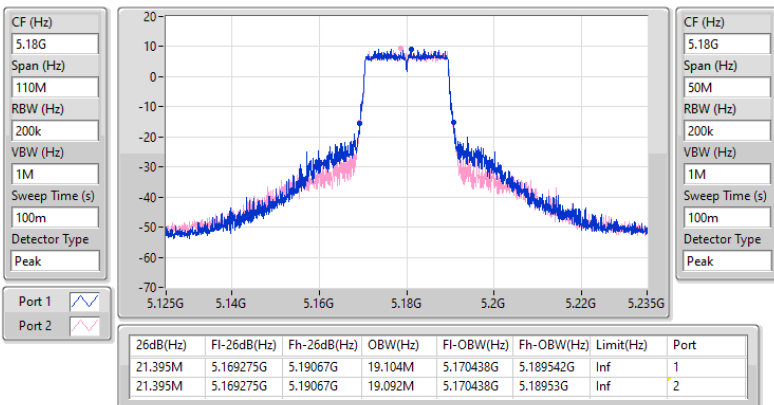


5.15-5.25GHz_802.11be EHT20_Nss1,(MCS0)_2TX

EBW

5180MHz

27/01/2024

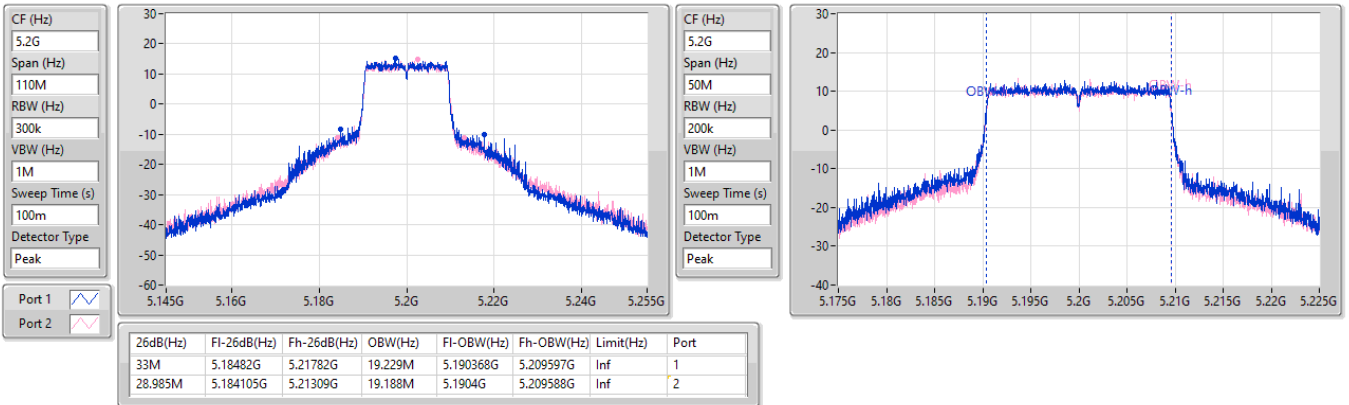


5.15-5.25GHz_802.11be EHT20_Nss1,(MCS0)_2TX

EBW

5200MHz

27/01/2024

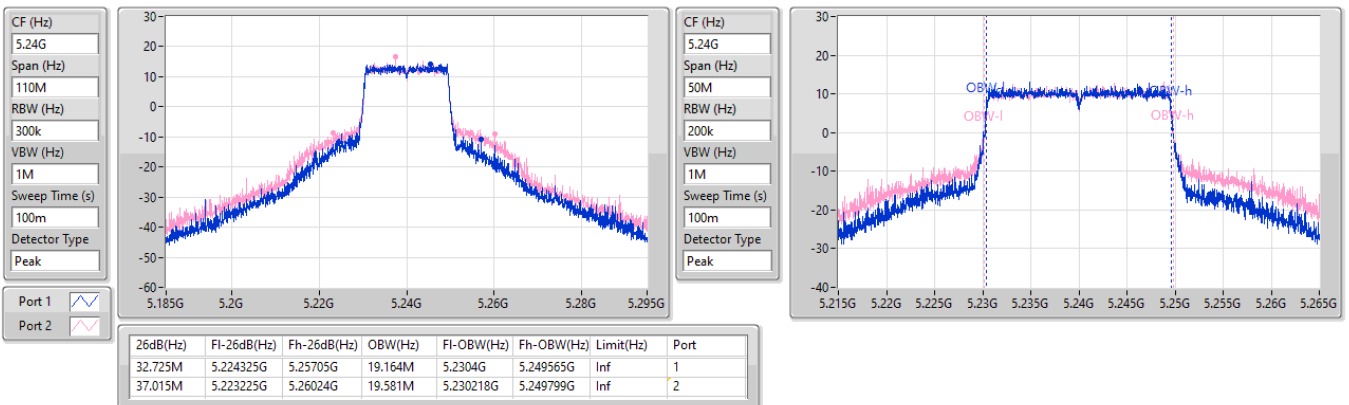


5.15-5.25GHz_802.11be EHT20_Nss1,(MCS0)_2TX

EBW

5240MHz

27/01/2024

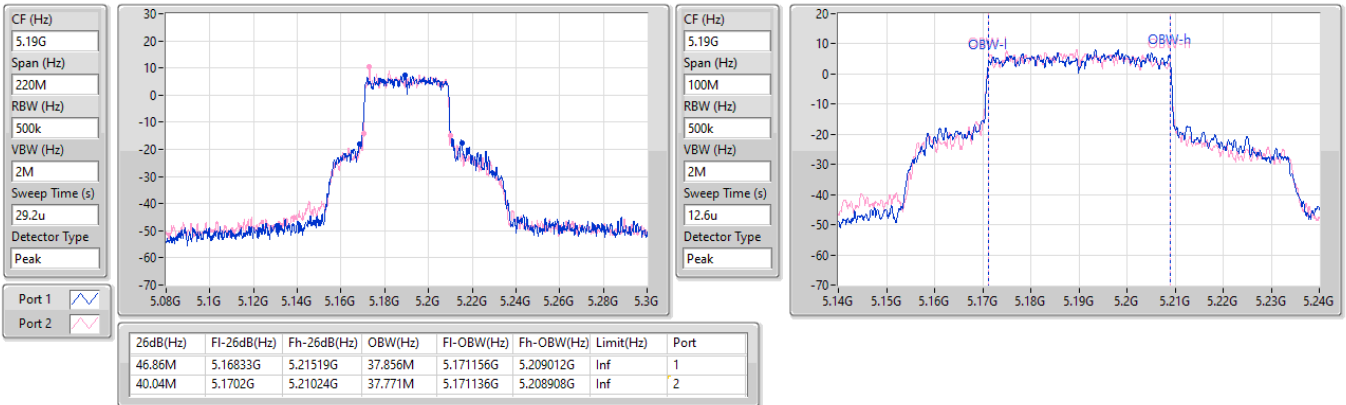


5.15-5.25GHz_802.11be EHT40_Nss1,(MCS0)_2TX

EBW

5190MHz

29/03/2024

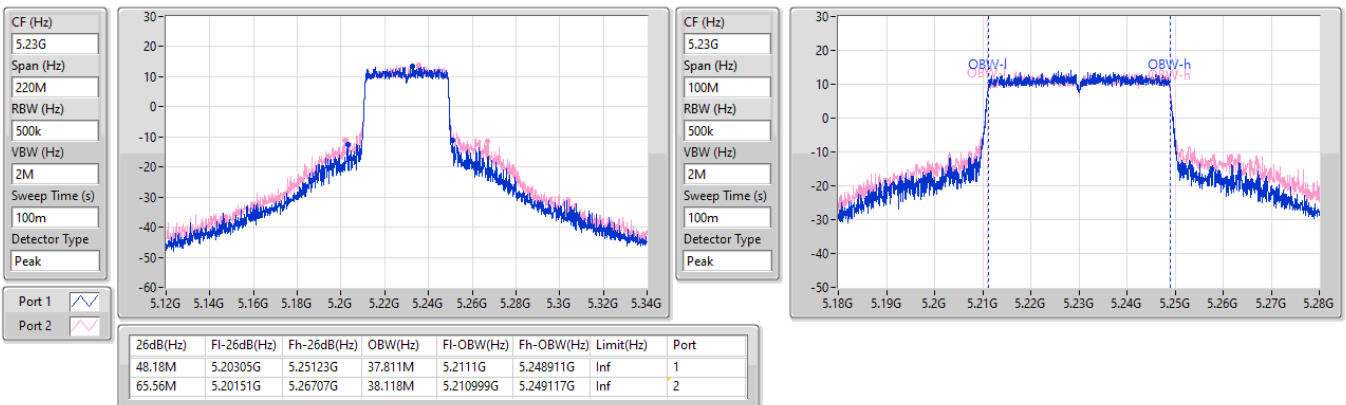


5.15-5.25GHz_802.11be EHT40_Nss1,(MCS0)_2TX

EBW

5230MHz

27/01/2024

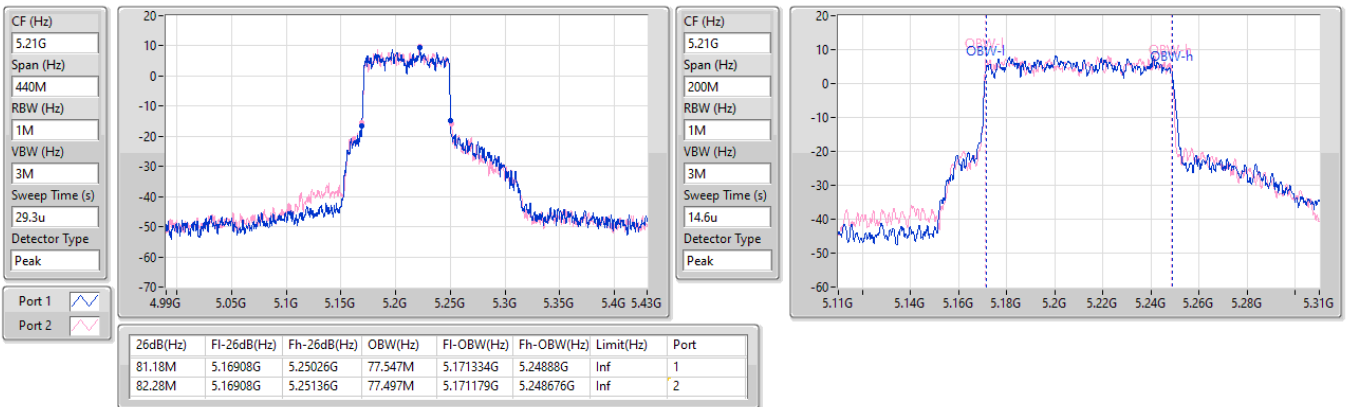


5.15-5.25GHz_802.11be EHT80_Nss1,(MCS0)_2TX

EBW

5210MHz

29/03/2024

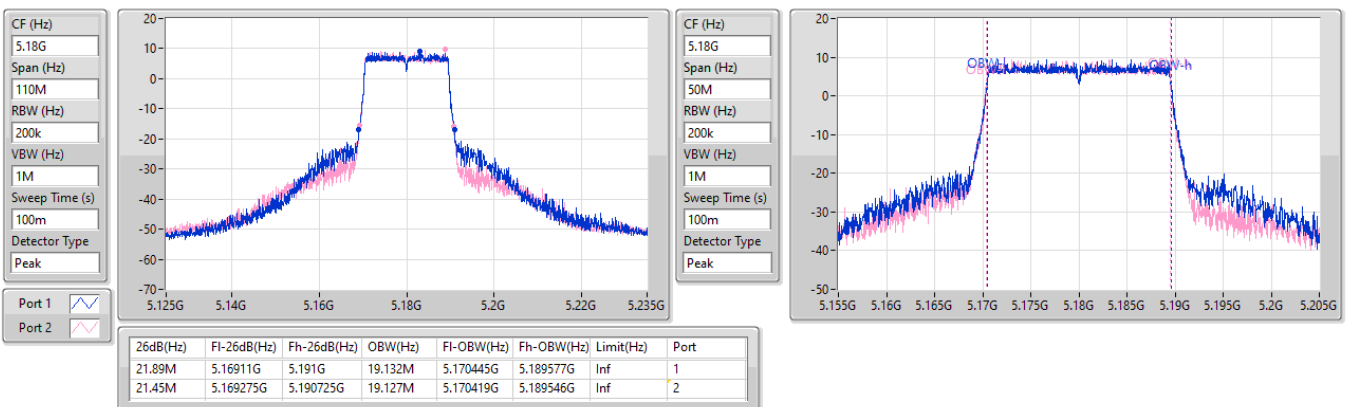


5.15-5.25GHz_802.11be EHT20_Nss2,(MCS0)_2TX

EBW

5180MHz

27/01/2024

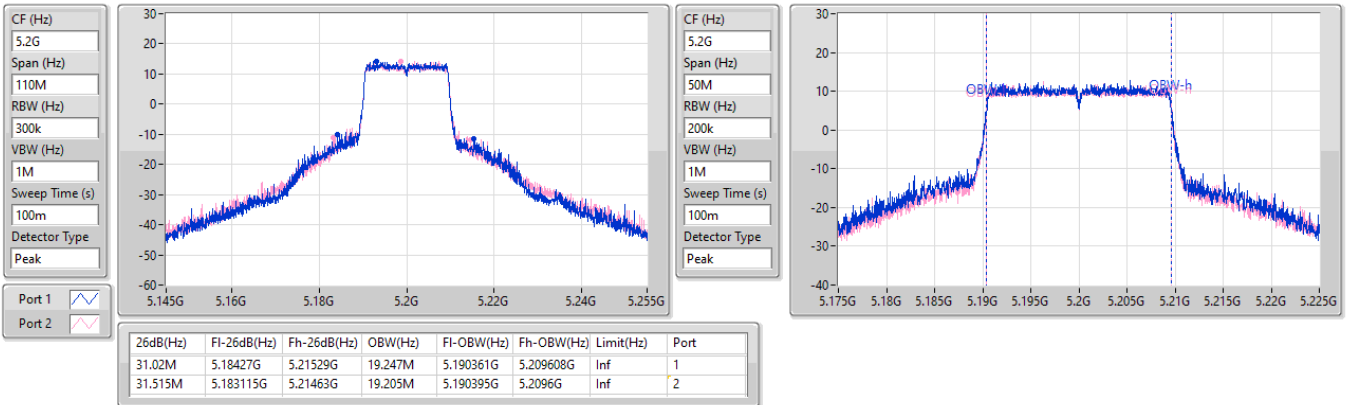


5.15-5.25GHz_802.11be EHT20_Nss2,(MCS0)_2TX

EBW

5200MHz

27/01/2024

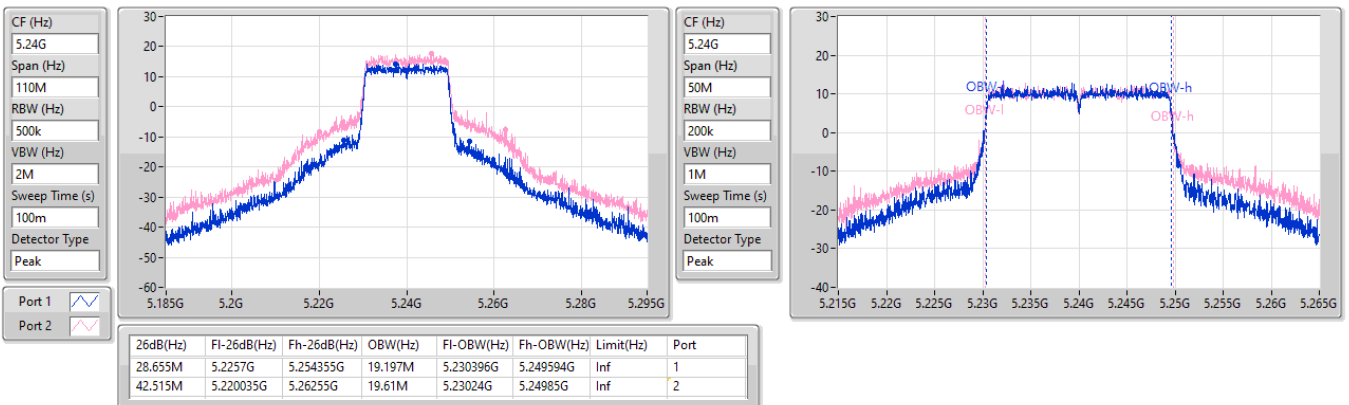


5.15-5.25GHz_802.11be EHT20_Nss2,(MCS0)_2TX

EBW

5240MHz

27/01/2024

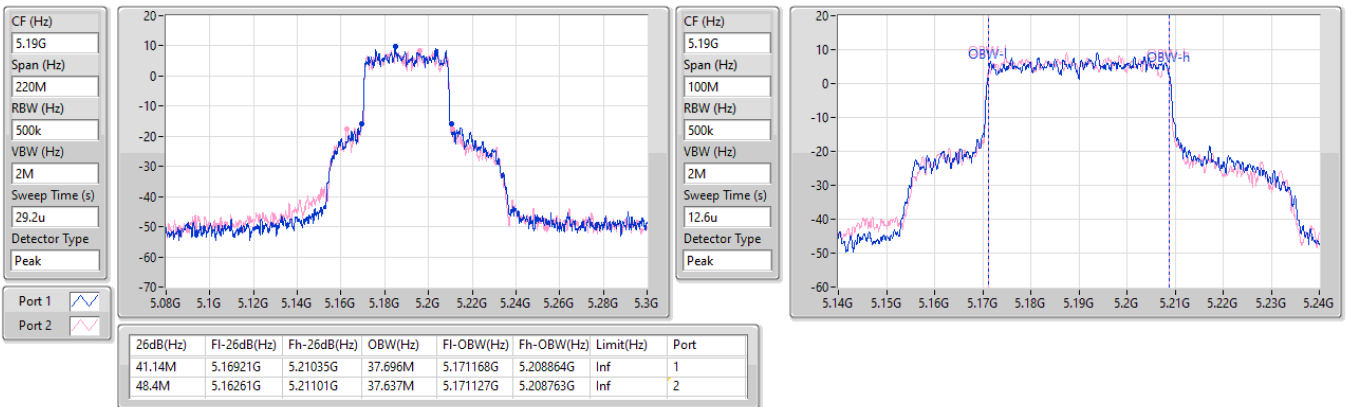


5.15-5.25GHz_802.11be EHT40_Nss2,(MCS0)_2TX

EBW

5190MHz

29/03/2024

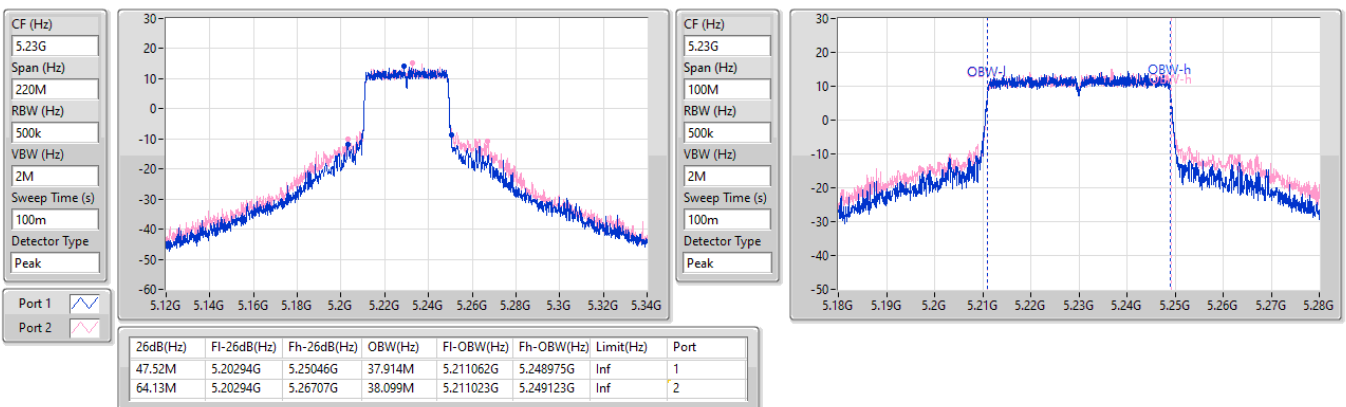


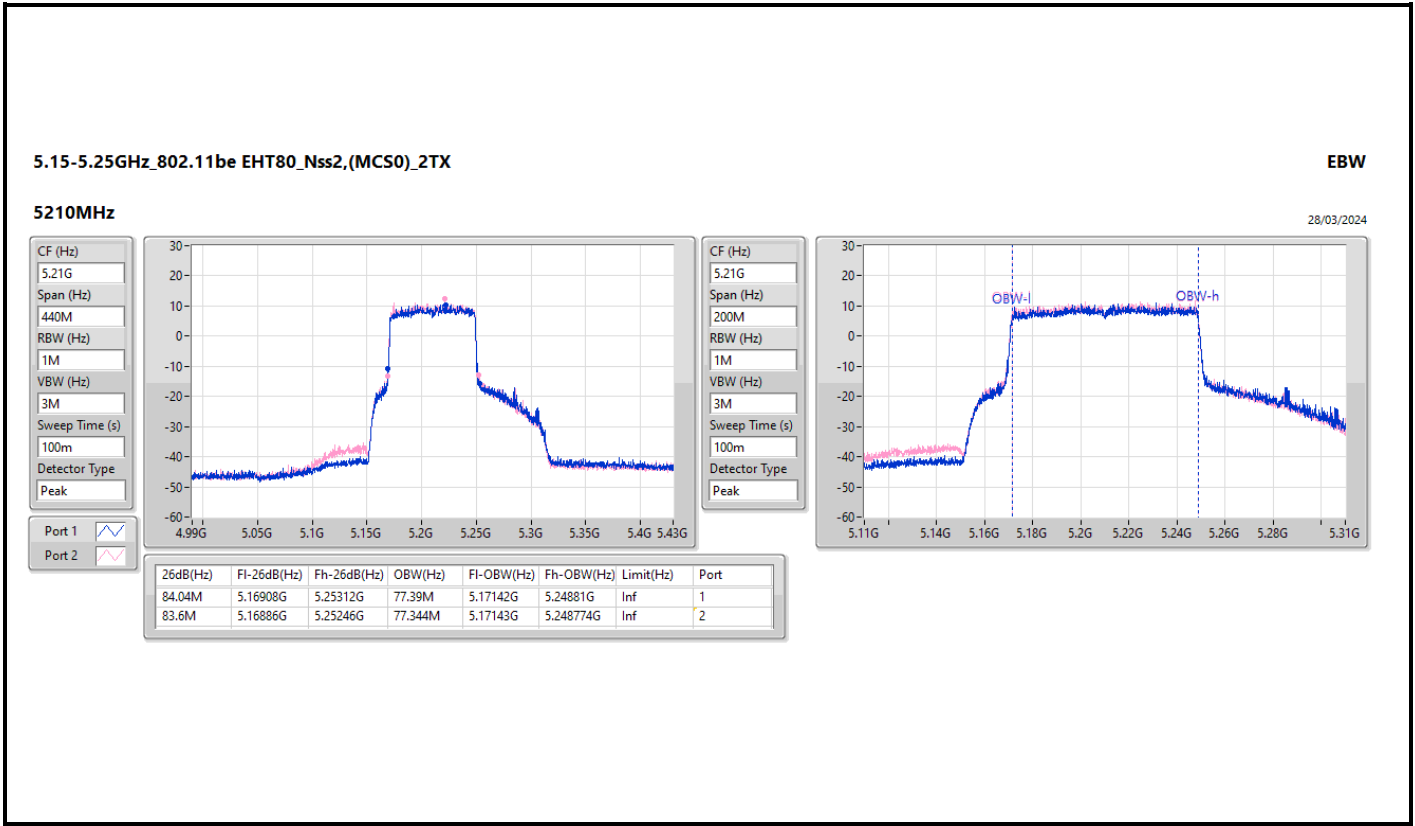
5.15-5.25GHz_802.11be EHT40_Nss2,(MCS0)_2TX

EBW

5230MHz

27/01/2024







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)_2TX	35.805M	17.873M	17M9D1D	21.285M	16.779M
802.11be EHT20_Nss1,(MCS0)_2TX	34.375M	19.357M	19M4D1D	23.1M	19.131M
802.11be EHT20_Nss2,(MCS0)_2TX	38.005M	19.339M	19M3D1D	24.53M	19.128M
802.11be EHT40_Nss1,(MCS0)_2TX	49.06M	37.889M	37M9D1D	42.79M	37.856M
802.11be EHT40_Nss2,(MCS0)_2TX	53.02M	37.974M	38M0D1D	45.43M	37.887M
802.11be EHT80_Nss1,(MCS0)_2TX	90.42M	77.255M	77M3D1D	81.62M	77.251M
802.11be EHT80_Nss2,(MCS0)_2TX	84.26M	77.312M	77M3D1D	82.5M	77.253M
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_2TX	16.39M	27.249M	27M2D1D	16.335M	20.708M
802.11be EHT20_Nss1,(MCS0)_2TX	18.975M	27.568M	27M6D1D	18.645M	21.493M
802.11be EHT20_Nss2,(MCS0)_2TX	19.03M	36.382M	36M4D1D	18.755M	22.858M
802.11be EHT40_Nss1,(MCS0)_2TX	37.73M	40.534M	40M5D1D	37.18M	38.312M
802.11be EHT40_Nss2,(MCS0)_2TX	37.84M	43.077M	43M1D1D	37.4M	38.424M
802.11be EHT80_Nss1,(MCS0)_2TX	77.44M	77.524M	77M5D1D	77M	77.402M
802.11be EHT80_Nss2,(MCS0)_2TX	77M	77.328M	77M3D1D	76.56M	77.3M

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)
802.11a_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	21.285M	16.896M	21.78M	16.779M
5200MHz	Pass	Inf	35.365M	17.571M	33.77M	17.561M
5240MHz	Pass	Inf	35.805M	17.873M	34.65M	17.529M
5745MHz	Pass	500k	16.335M	20.708M	16.335M	21.317M
5785MHz	Pass	500k	16.335M	21.834M	16.335M	23.28M
5825MHz	Pass	500k	16.39M	27.249M	16.335M	24.735M
802.11be EHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	29.645M	19.262M	25.795M	19.253M
5200MHz	Pass	Inf	33.66M	19.357M	34.375M	19.331M
5240MHz	Pass	Inf	25.96M	19.131M	23.1M	19.171M
5745MHz	Pass	500k	18.865M	21.493M	18.81M	22.532M
5785MHz	Pass	500k	18.975M	23.704M	18.755M	25.17M
5825MHz	Pass	500k	18.92M	27.568M	18.645M	24.089M
802.11be EHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5190MHz	Pass	Inf	48.73M	37.888M	49.06M	37.886M
5230MHz	Pass	Inf	47.19M	37.889M	42.79M	37.856M
5755MHz	Pass	500k	37.73M	38.312M	37.18M	38.489M
5795MHz	Pass	500k	37.73M	39.815M	37.29M	40.534M
802.11be EHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5210MHz	Pass	Inf	90.42M	77.255M	81.62M	77.251M
5775MHz	Pass	500k	77.44M	77.402M	77M	77.524M
802.11be EHT20_Nss2,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	32.725M	19.277M	30.525M	19.269M
5200MHz	Pass	Inf	31.9M	19.329M	38.005M	19.339M
5240MHz	Pass	Inf	29.26M	19.128M	24.53M	19.153M
5745MHz	Pass	500k	18.92M	24.624M	18.81M	24.547M
5785MHz	Pass	500k	19.03M	22.858M	18.755M	24.43M
5825MHz	Pass	500k	18.92M	36.382M	18.755M	31.412M
802.11be EHT40_Nss2,(MCS0)_2TX	-	-	-	-	-	-
5190MHz	Pass	Inf	49.72M	37.907M	45.43M	37.887M
5230MHz	Pass	Inf	53.02M	37.974M	46.09M	37.901M
5755MHz	Pass	500k	37.51M	38.424M	37.73M	38.439M
5795MHz	Pass	500k	37.4M	43.077M	37.84M	42.038M
802.11be EHT80_Nss2,(MCS0)_2TX	-	-	-	-	-	-
5210MHz	Pass	Inf	84.26M	77.312M	82.5M	77.253M
5775MHz	Pass	500k	76.56M	77.3M	77M	77.328M

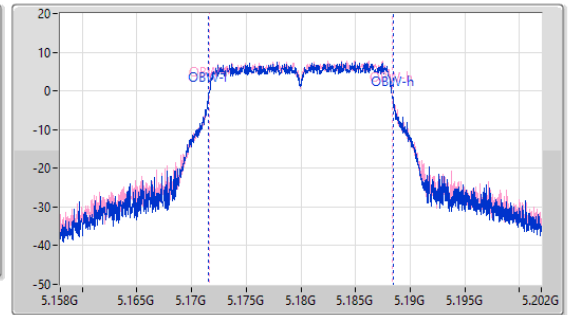
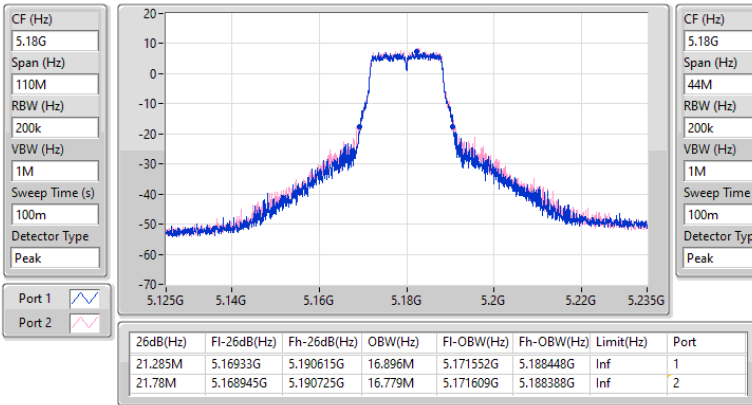
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
 Port X-OBW = Port X 99% occupied bandwidth

5.15-5.25GHz_802.11a_Nss1,(6Mbps)_2TX

EBW

5180MHz

27/01/2024

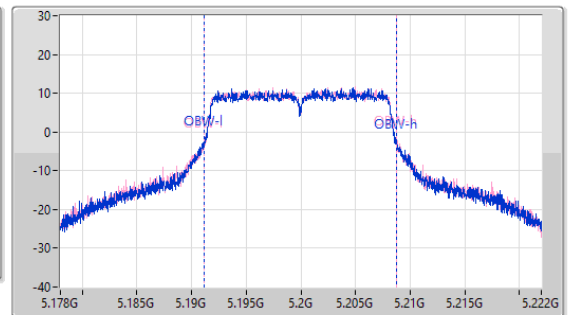
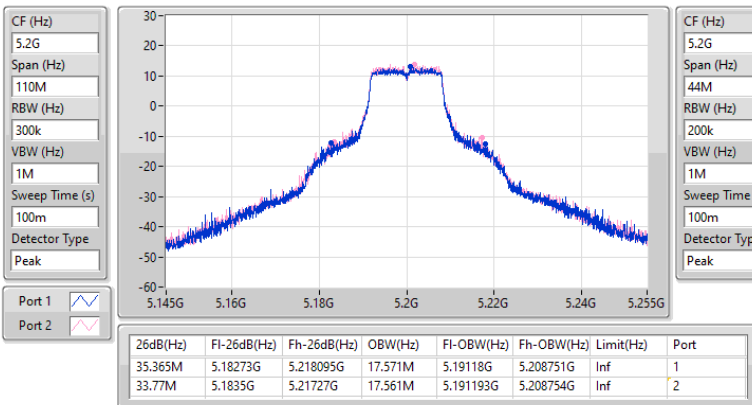


5.15-5.25GHz_802.11a_Nss1,(6Mbps)_2TX

EBW

5200MHz

27/01/2024

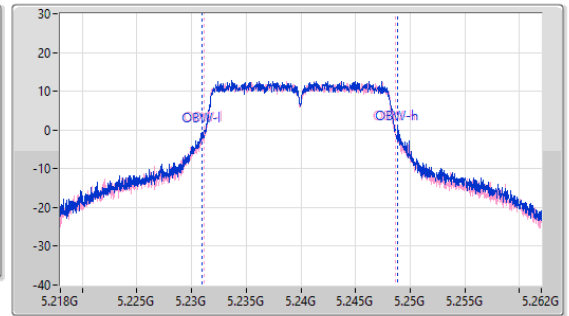
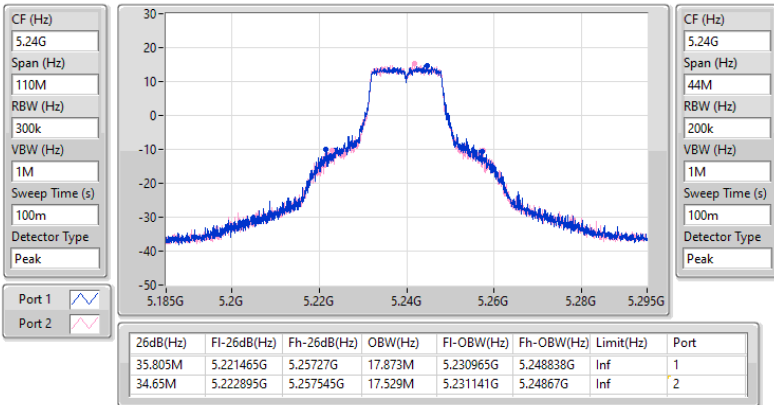


5.15-5.25GHz_802.11a_Nss1,(6Mbps)_2TX

EBW

5240MHz

28/03/2024

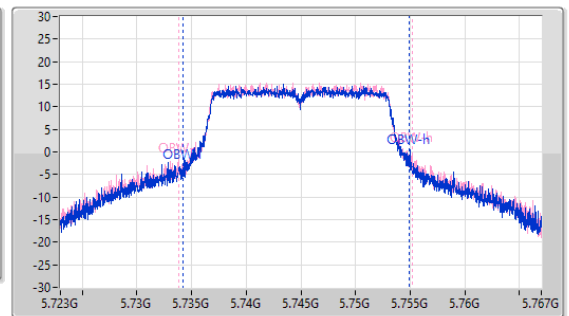
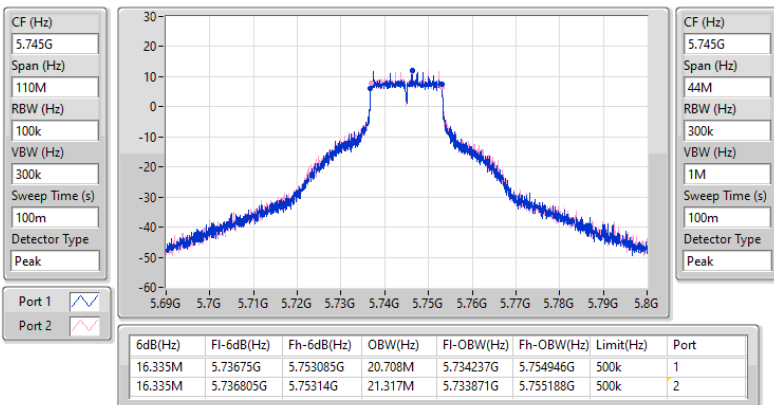


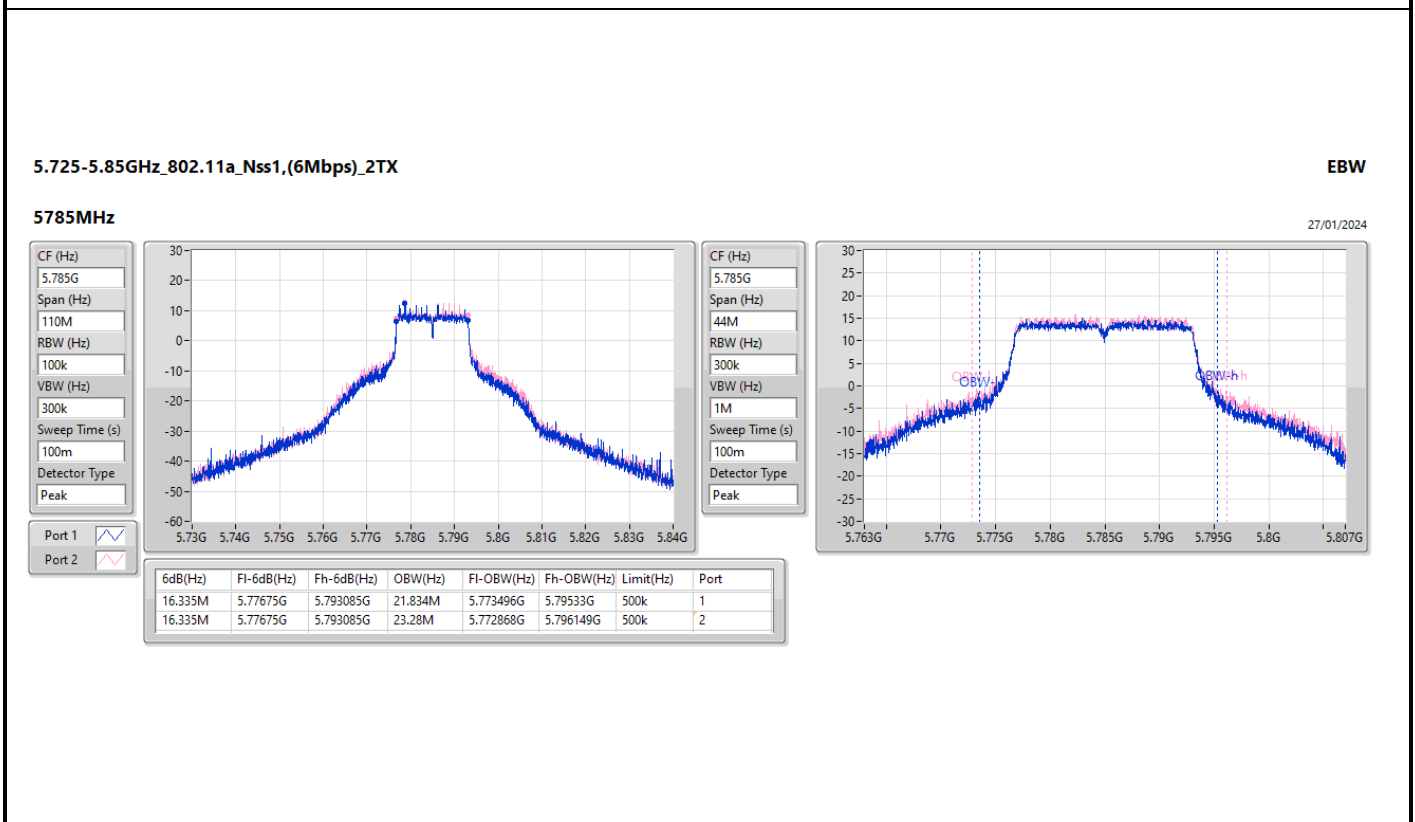
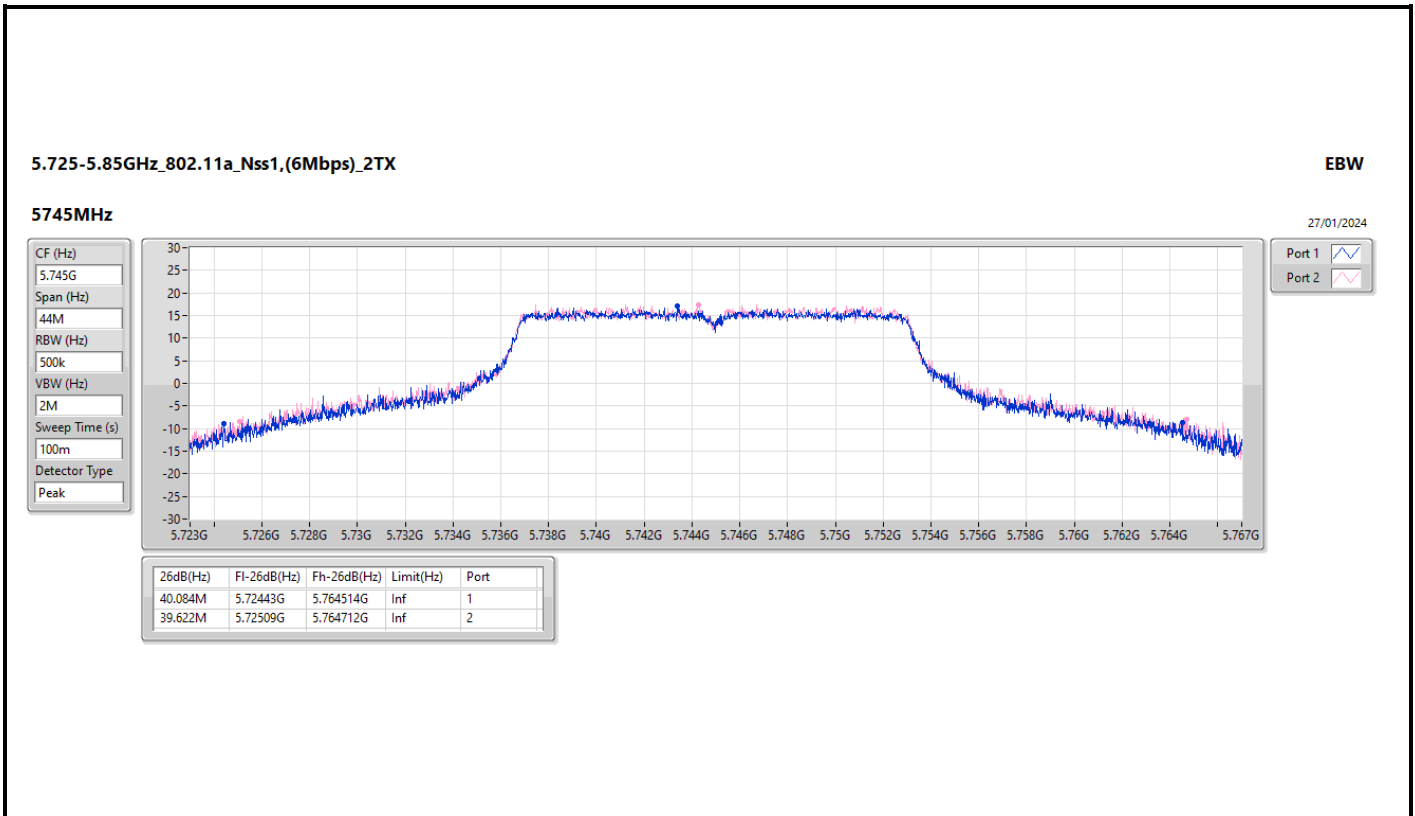
5.725-5.85GHz_802.11a_Nss1,(6Mbps)_2TX

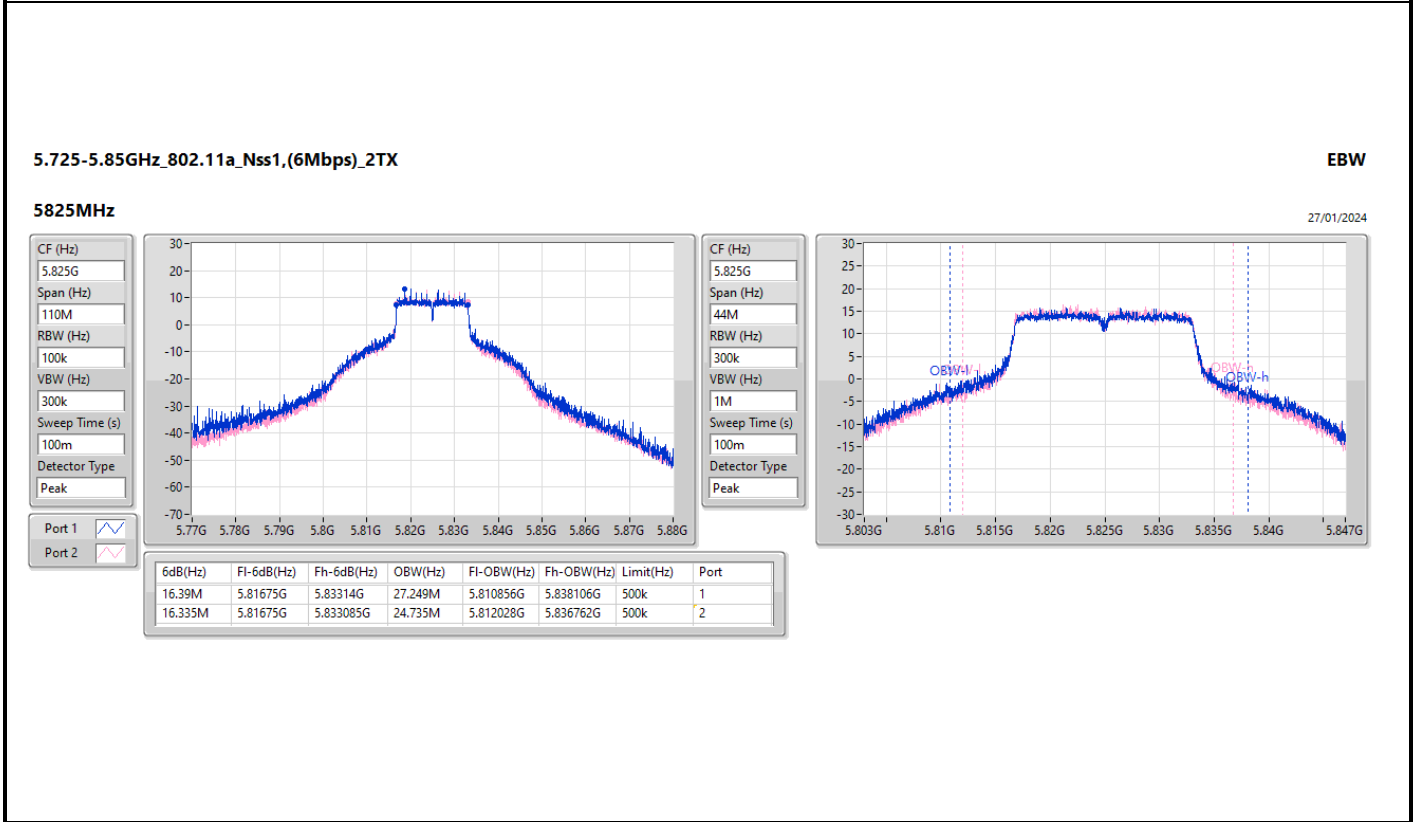
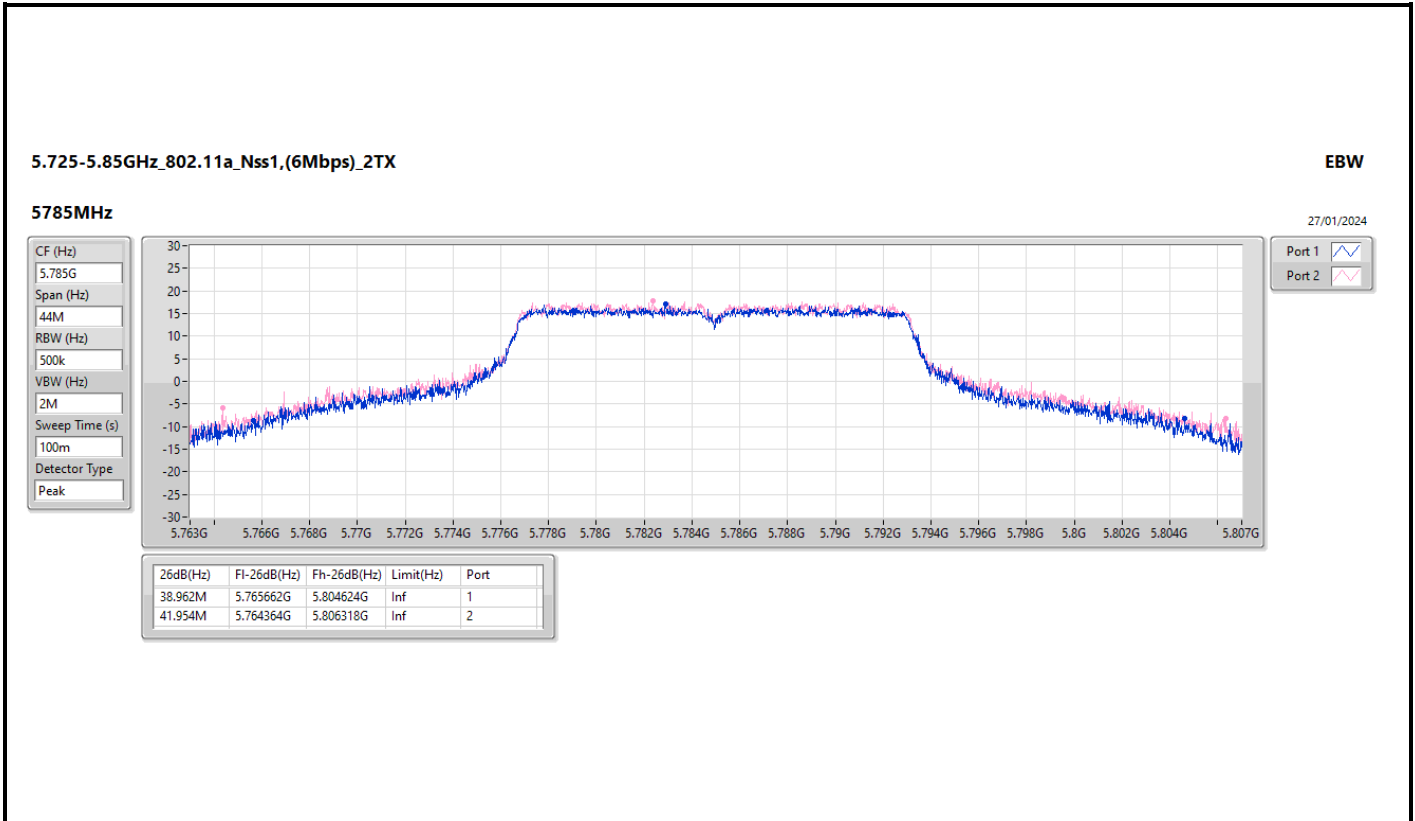
EBW

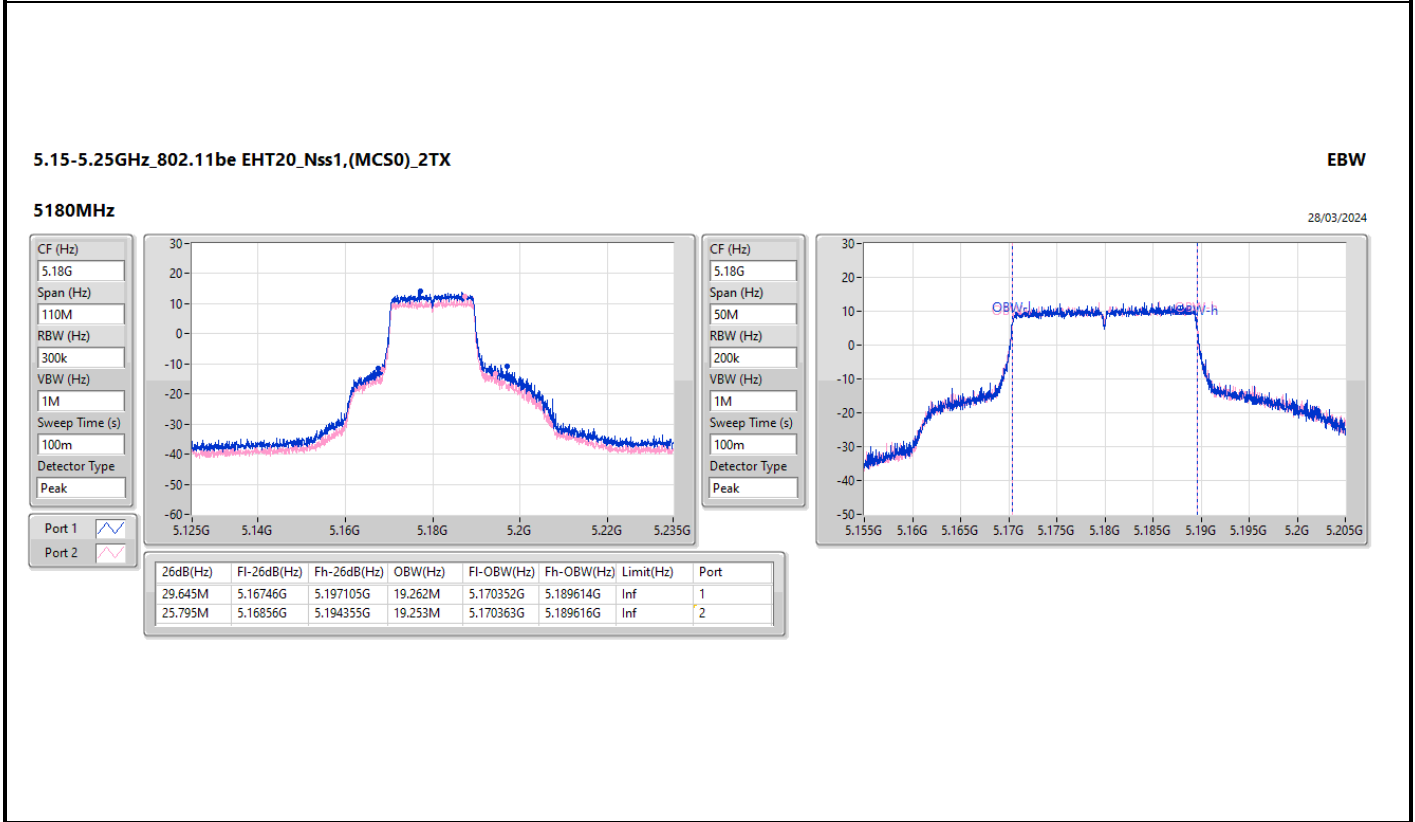
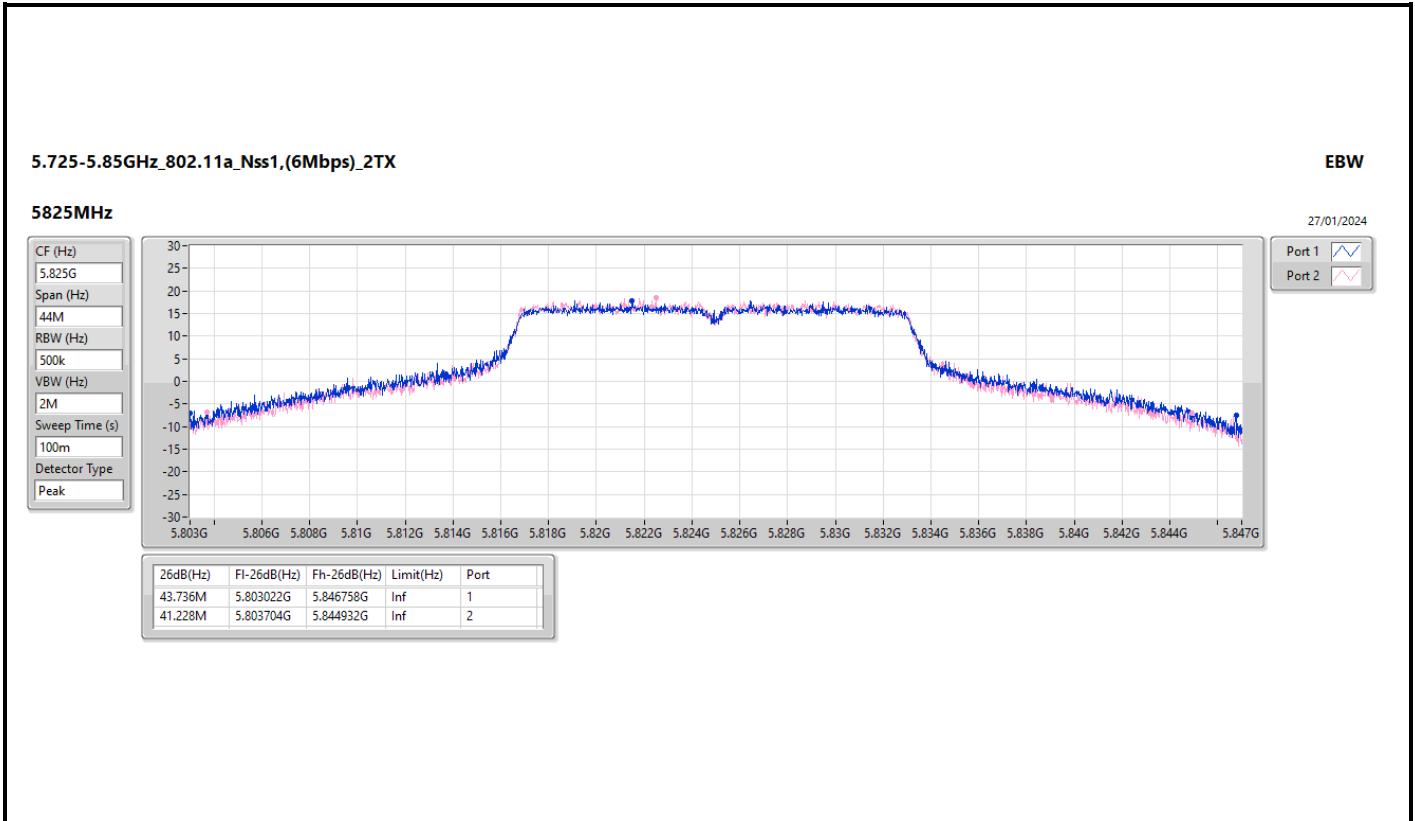
5745MHz

27/01/2024







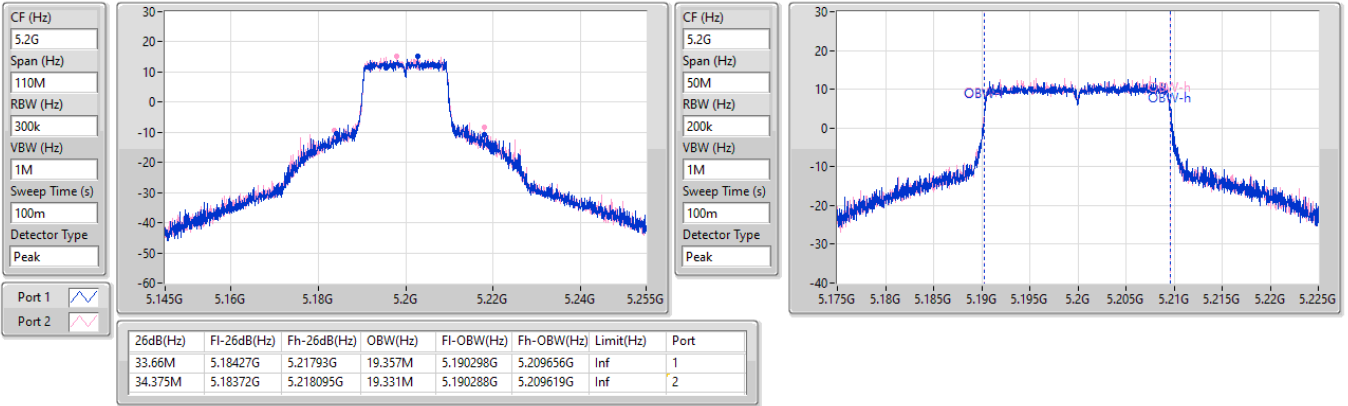


5.15-5.25GHz_802.11be EHT20_Nss1,(MCS0)_2TX

EBW

5200MHz

27/01/2024

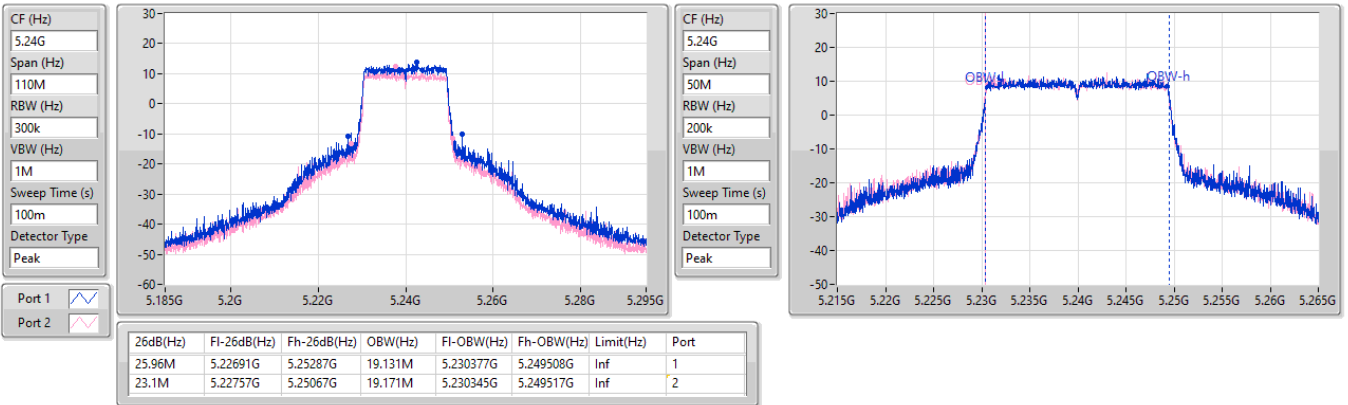


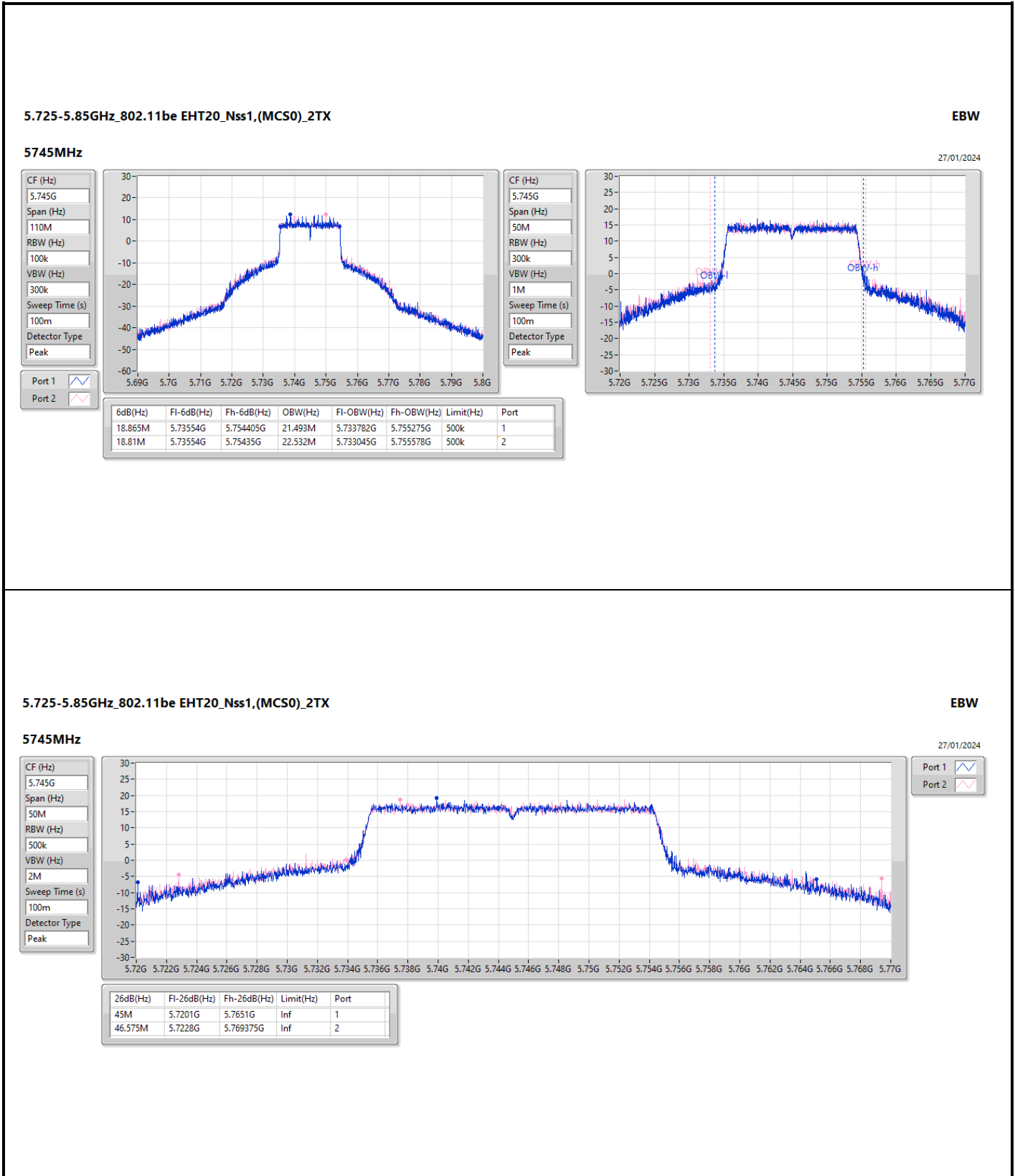
5.15-5.25GHz_802.11be EHT20_Nss1,(MCS0)_2TX

EBW

5240MHz

27/01/2024





CF (Hz) 5.745G

Span (Hz) 50M

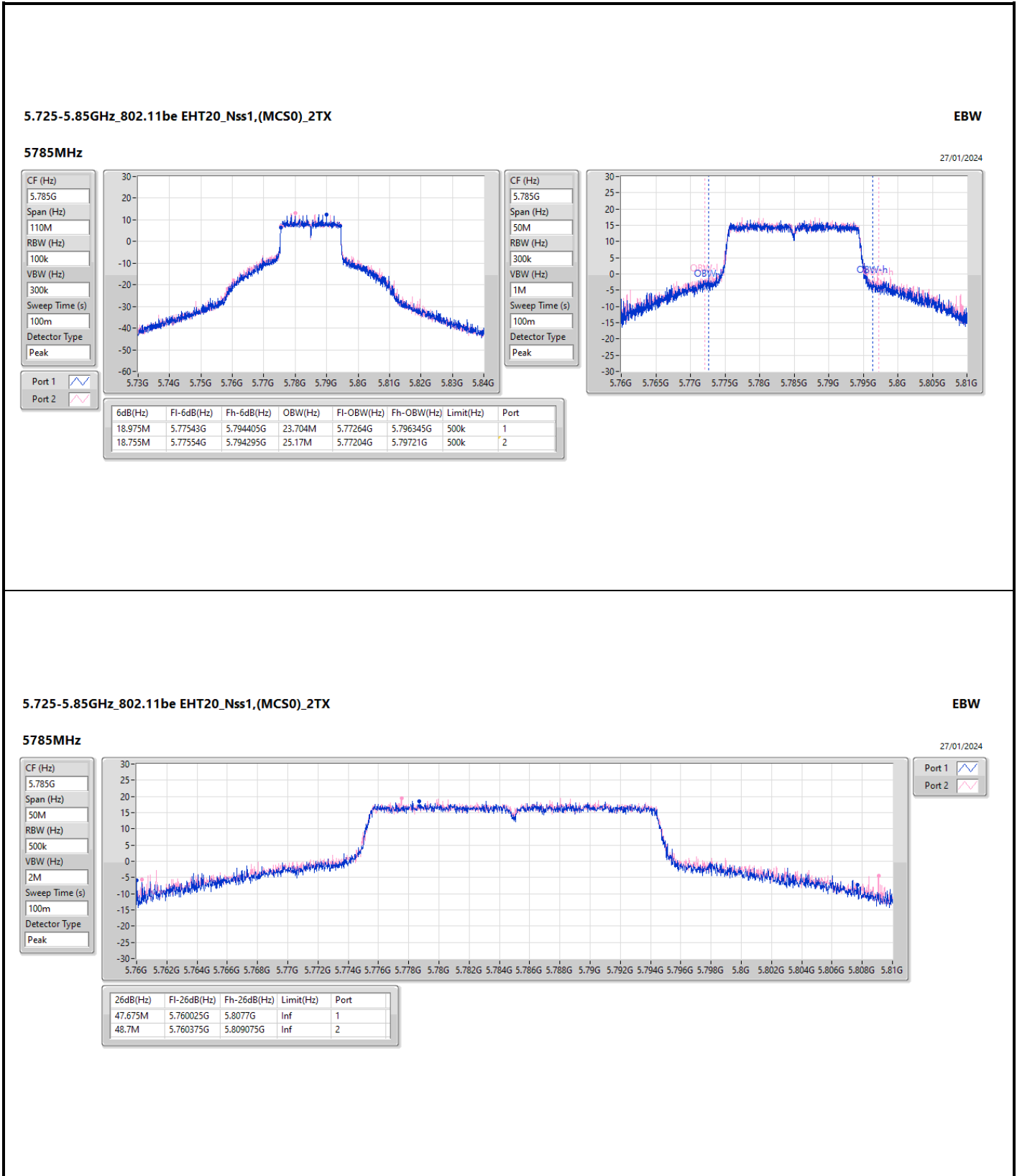
RBW (Hz) 500k

VBW (Hz) 2M

Sweep Time (s) 100m

Detector Type Peak



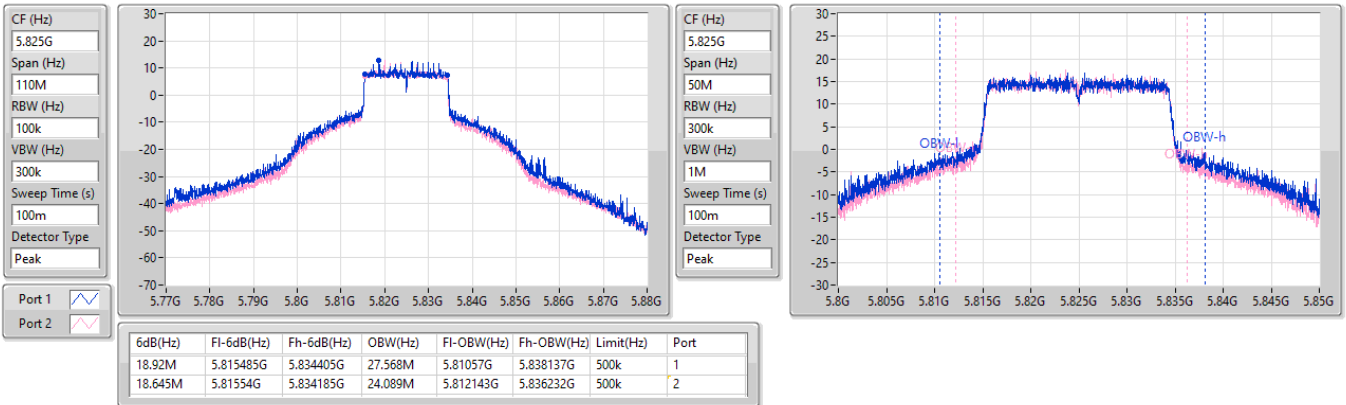


5.725-5.85GHz_802.11be EHT20_Nss1,(MCS0)_2TX

EBW

5825MHz

27/01/2024

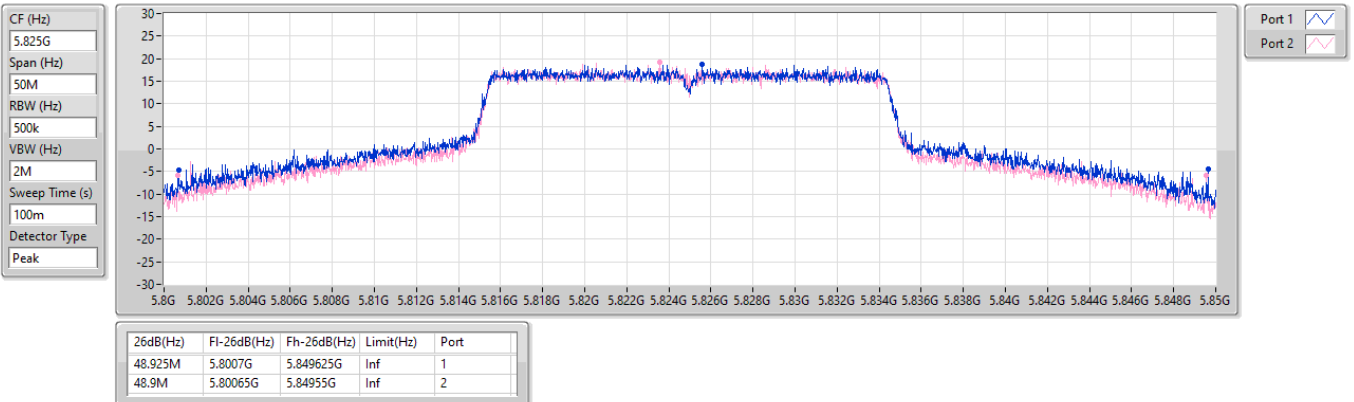


5.725-5.85GHz_802.11be EHT20_Nss1,(MCS0)_2TX

EBW

5825MHz

27/01/2024

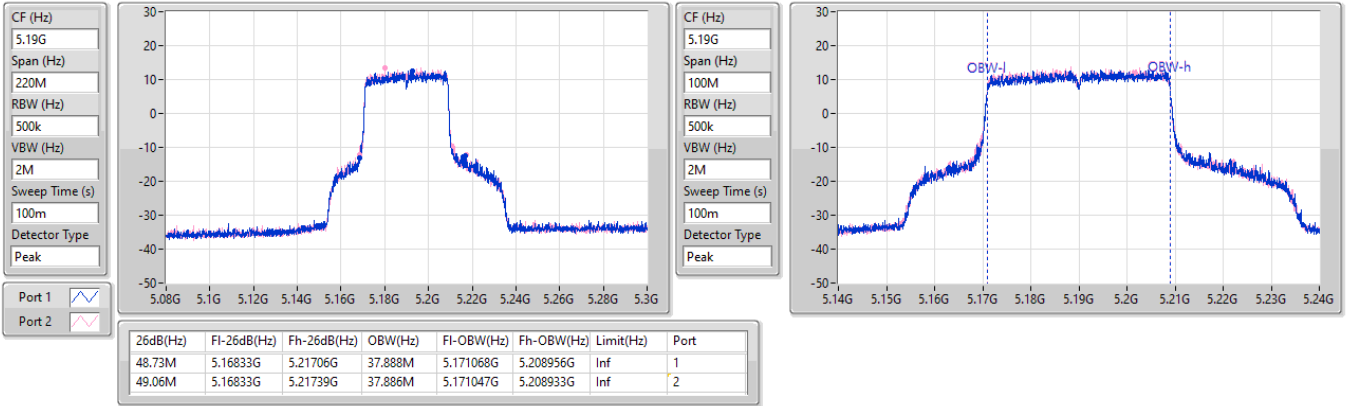


5.15-5.25GHz_802.11be EHT40_Nss1,(MCS0)_2TX

EBW

5190MHz

28/03/2024

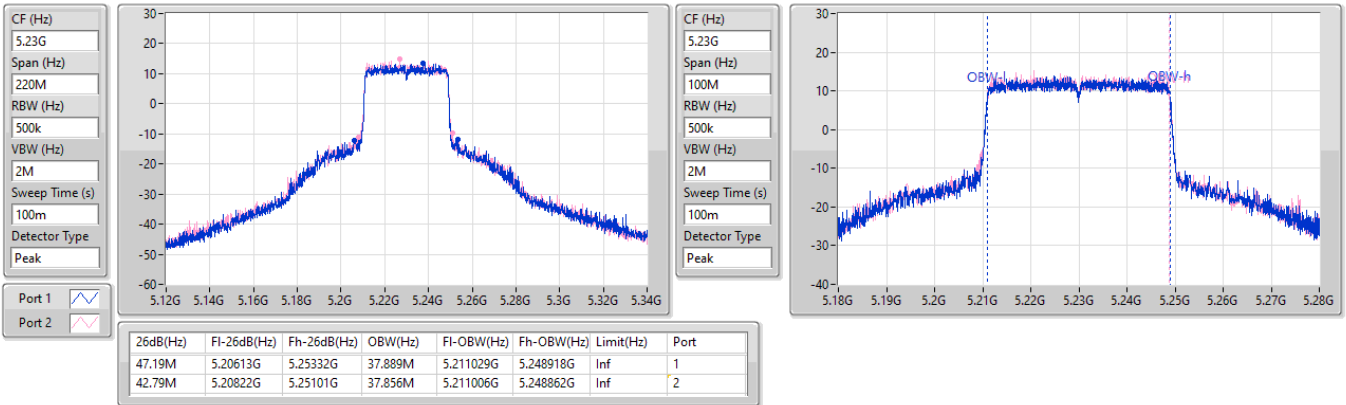


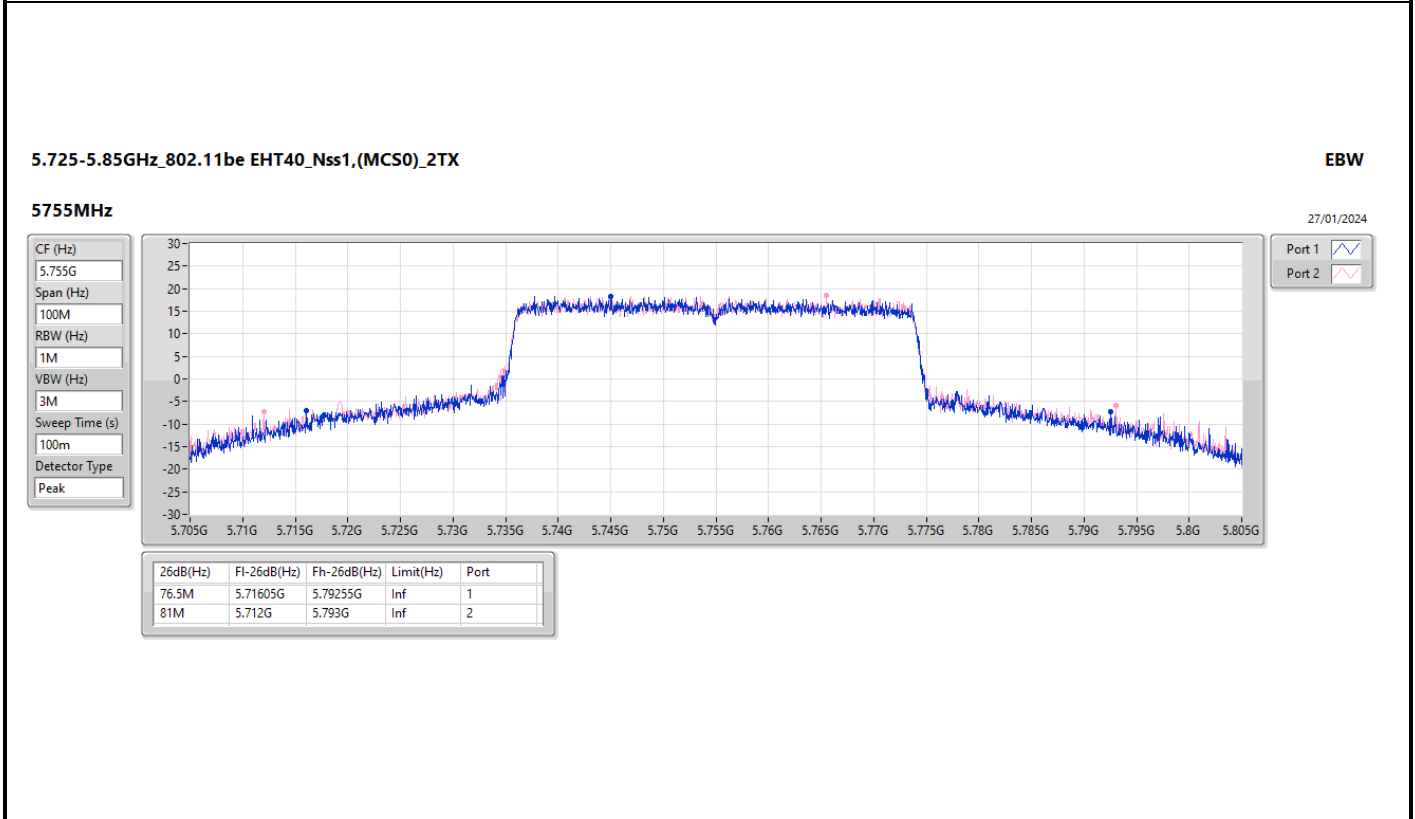
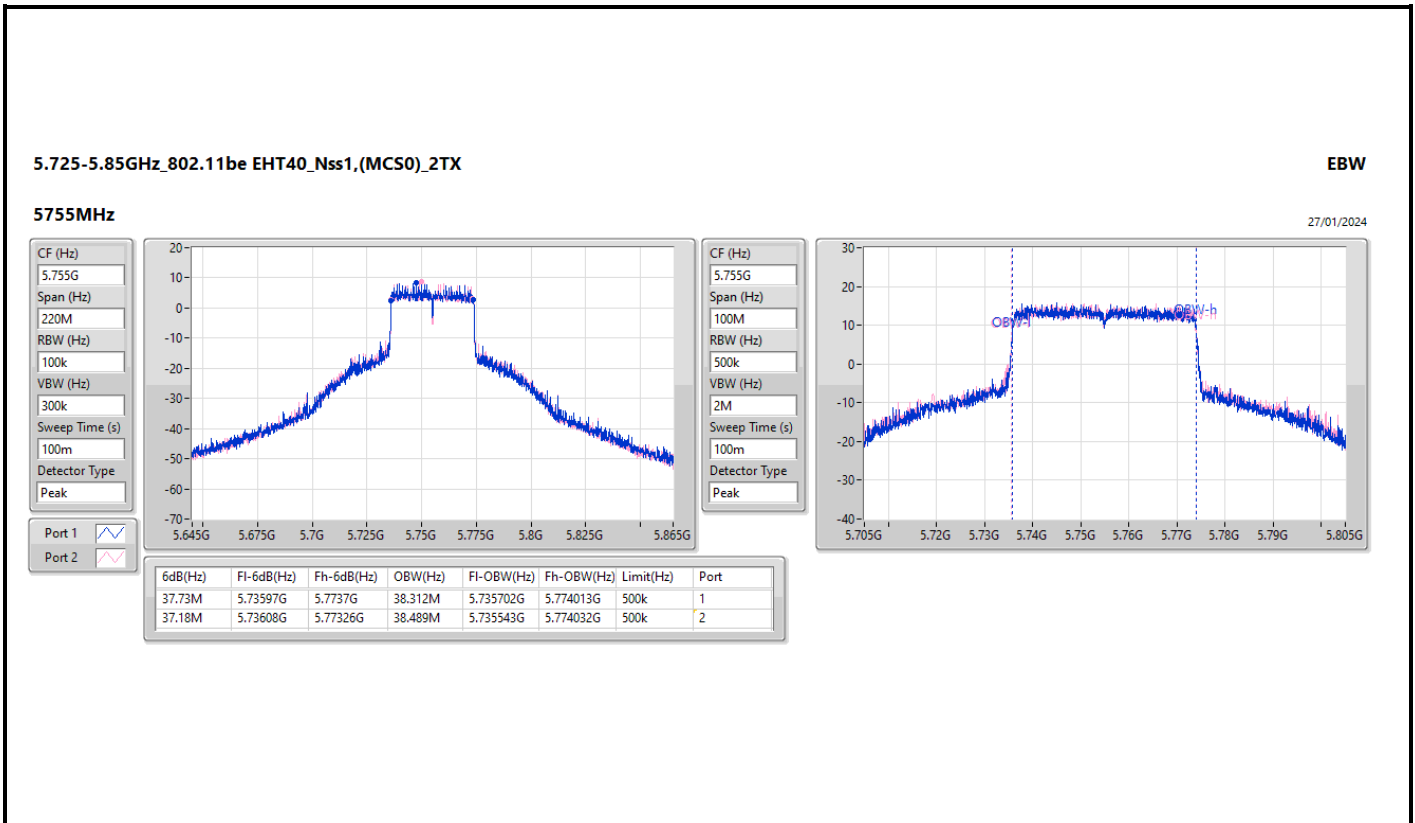
5.15-5.25GHz_802.11be EHT40_Nss1,(MCS0)_2TX

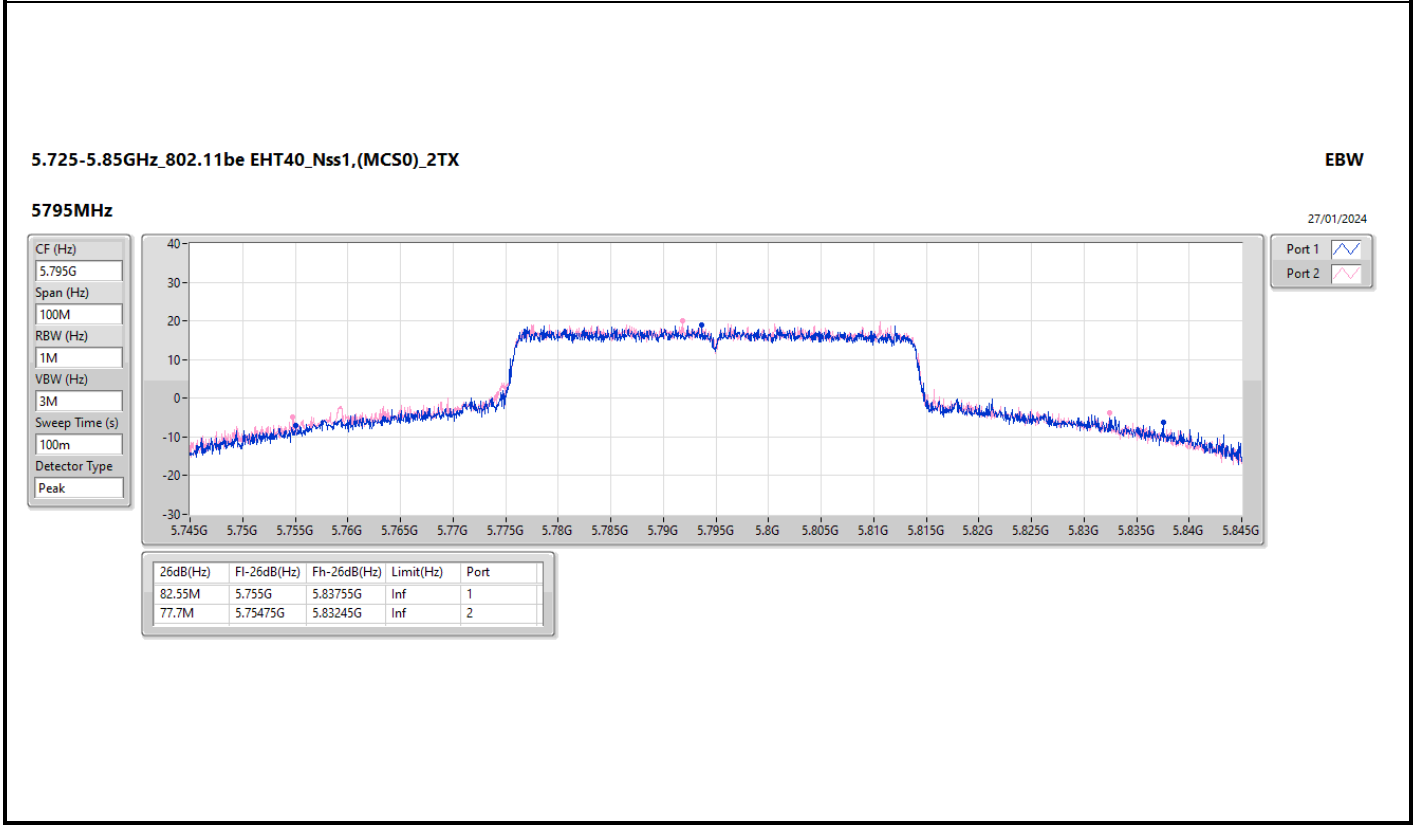
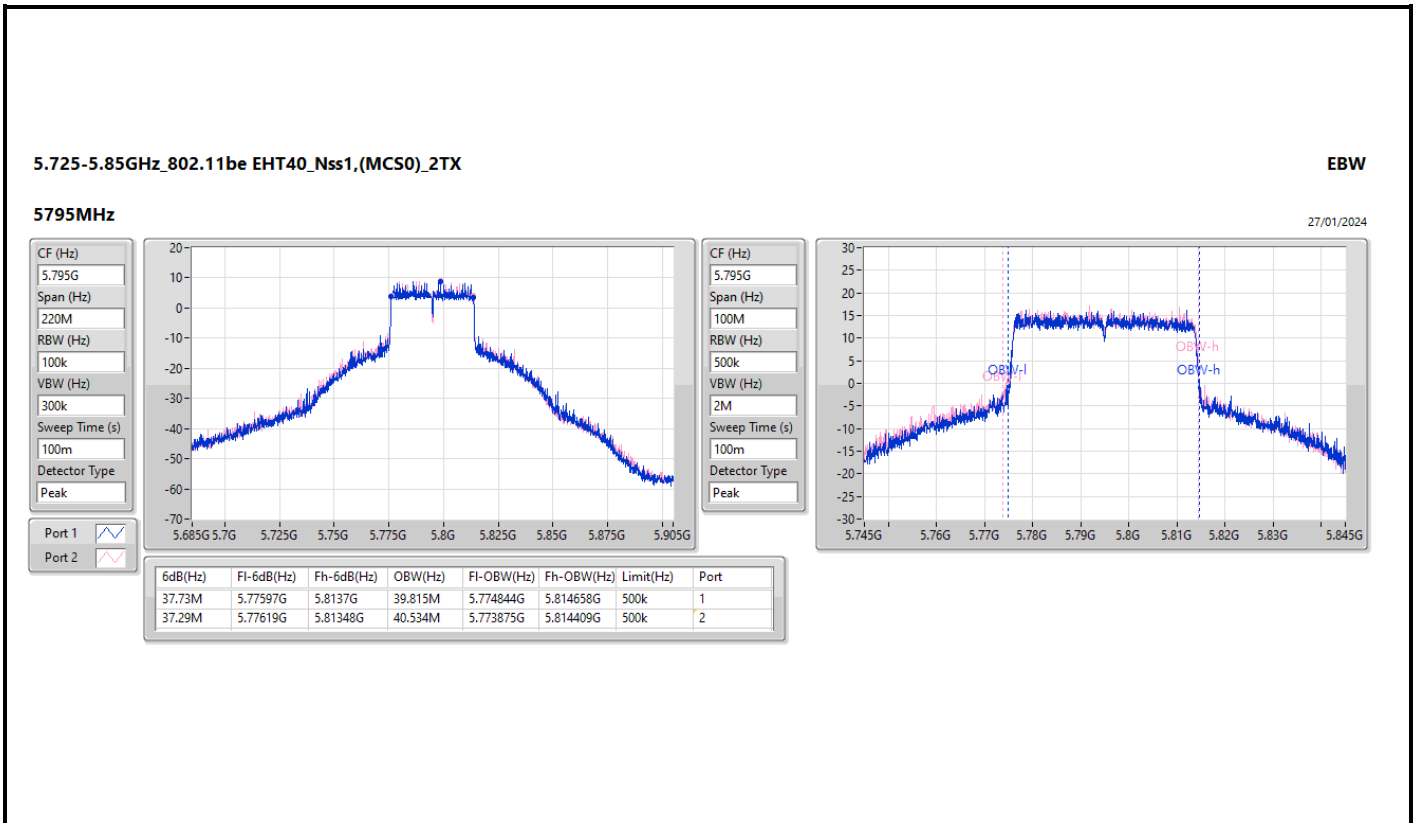
EBW

5230MHz

27/01/2024





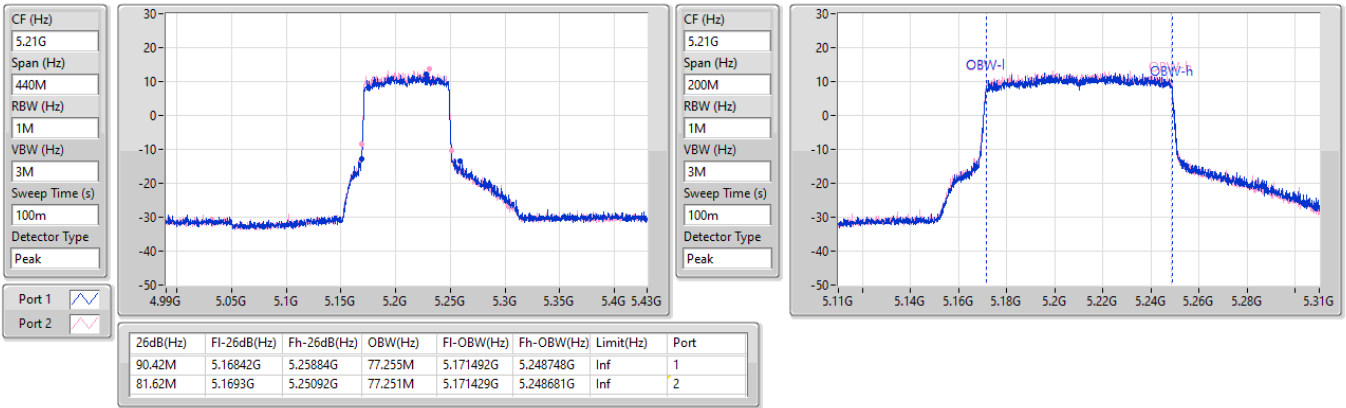


5.15-5.25GHz_802.11be EHT80_Nss1,(MCS0)_2TX

EBW

5210MHz

28/03/2024

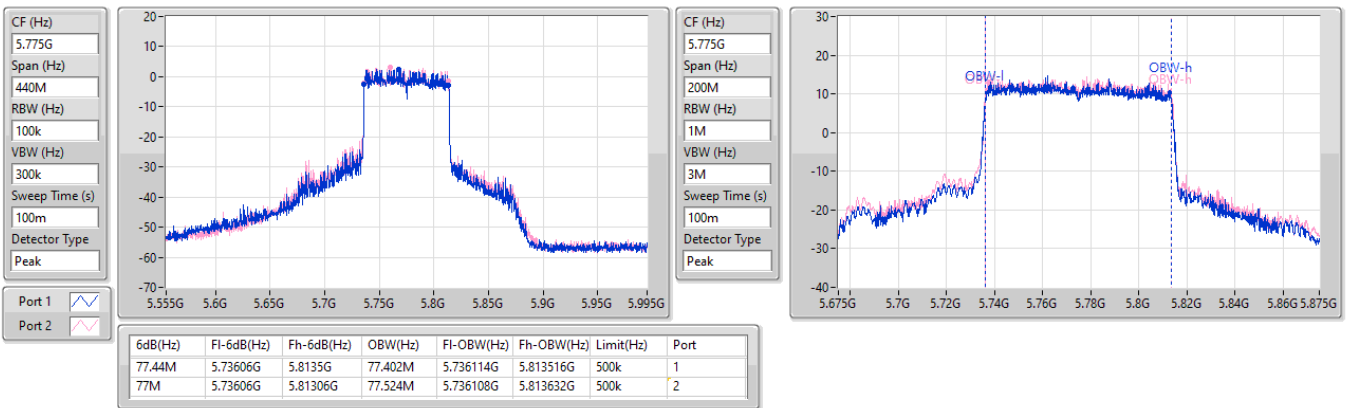


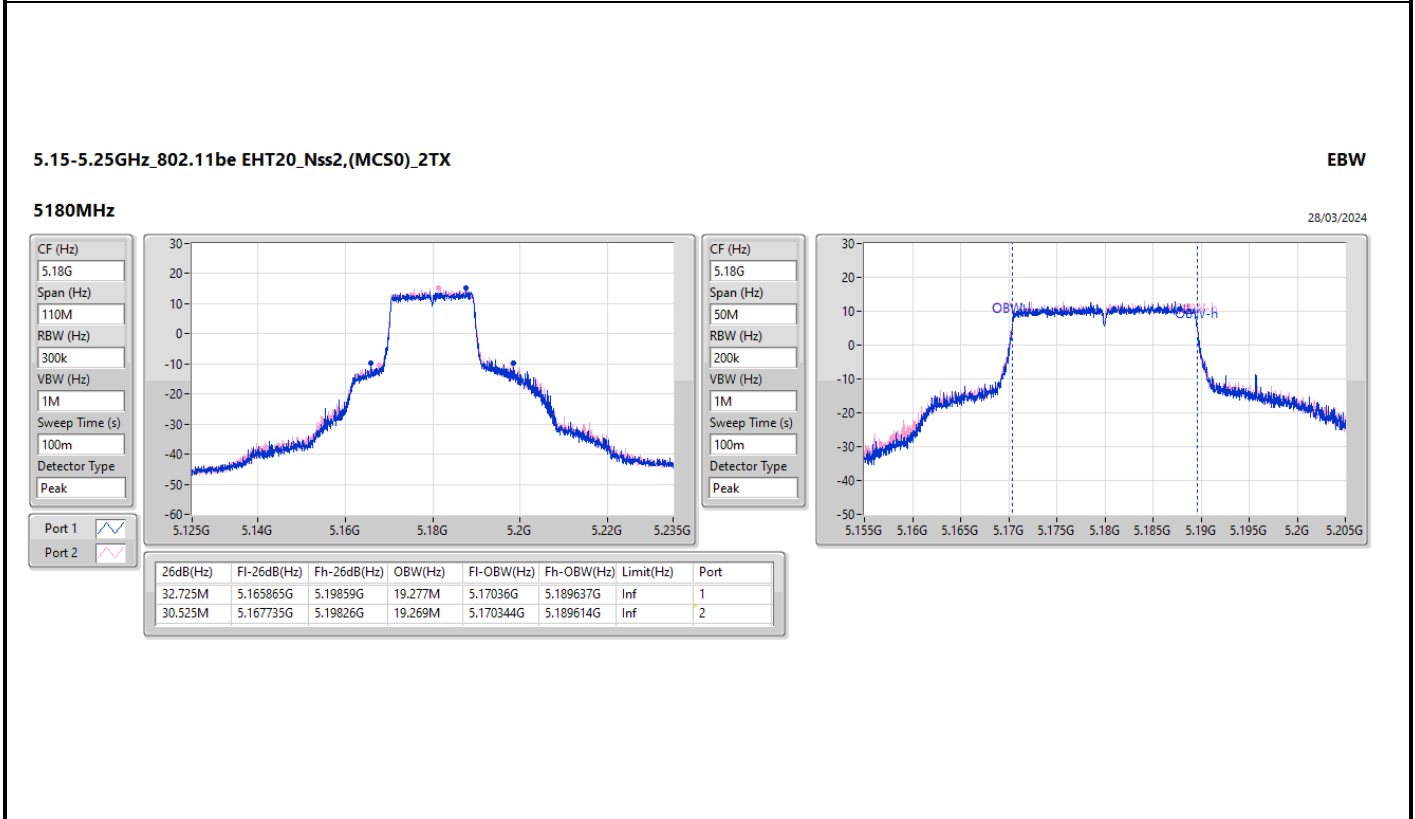
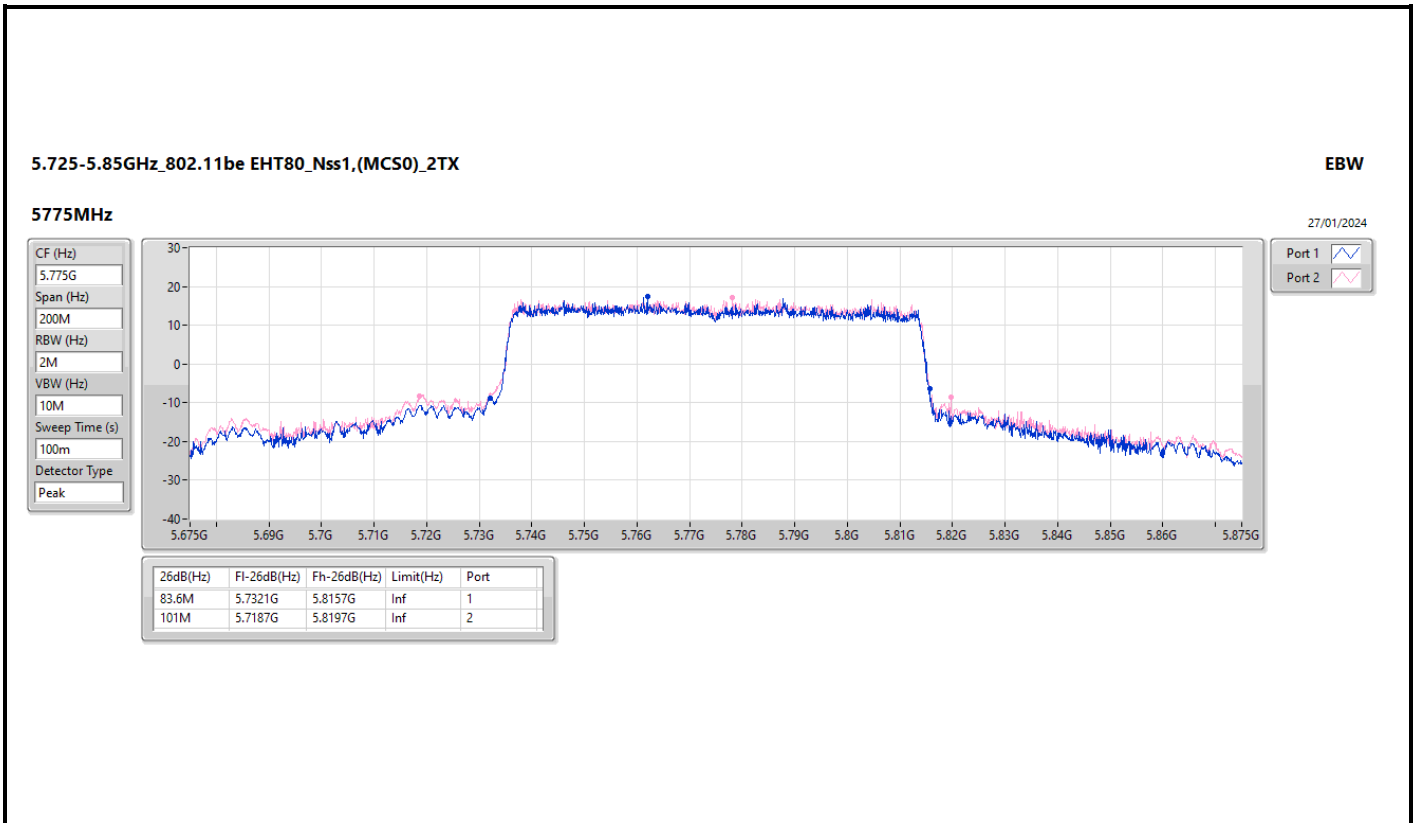
5.725-5.85GHz_802.11be EHT80_Nss1,(MCS0)_2TX

EBW

5775MHz

27/01/2024



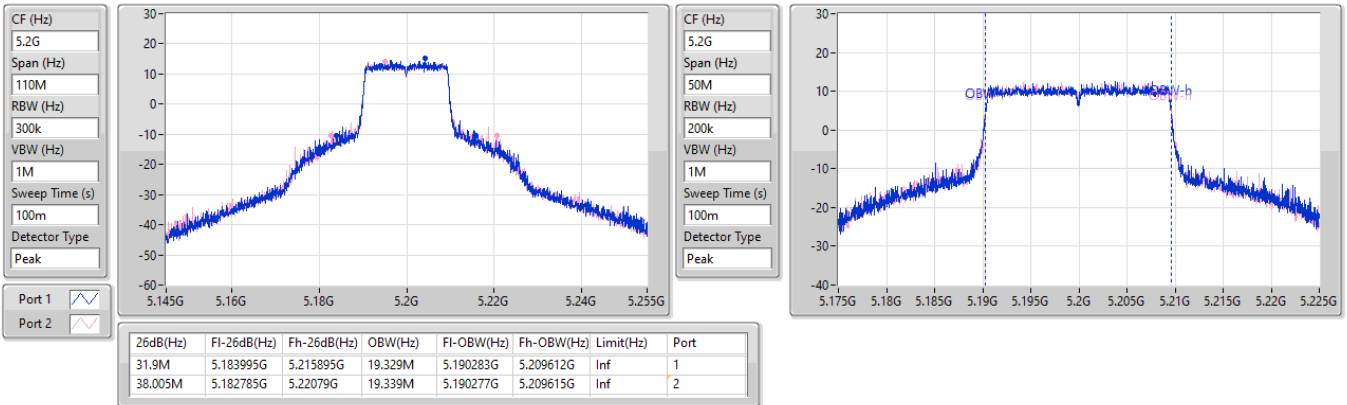


5.15-5.25GHz_802.11be EHT20_Nss2,(MCS0)_2TX

EBW

5200MHz

27/01/2024

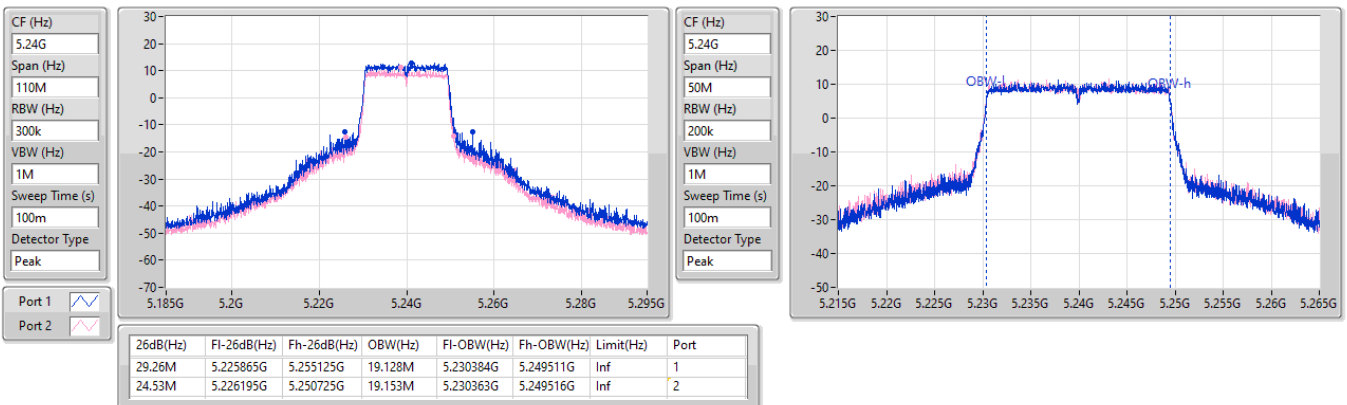


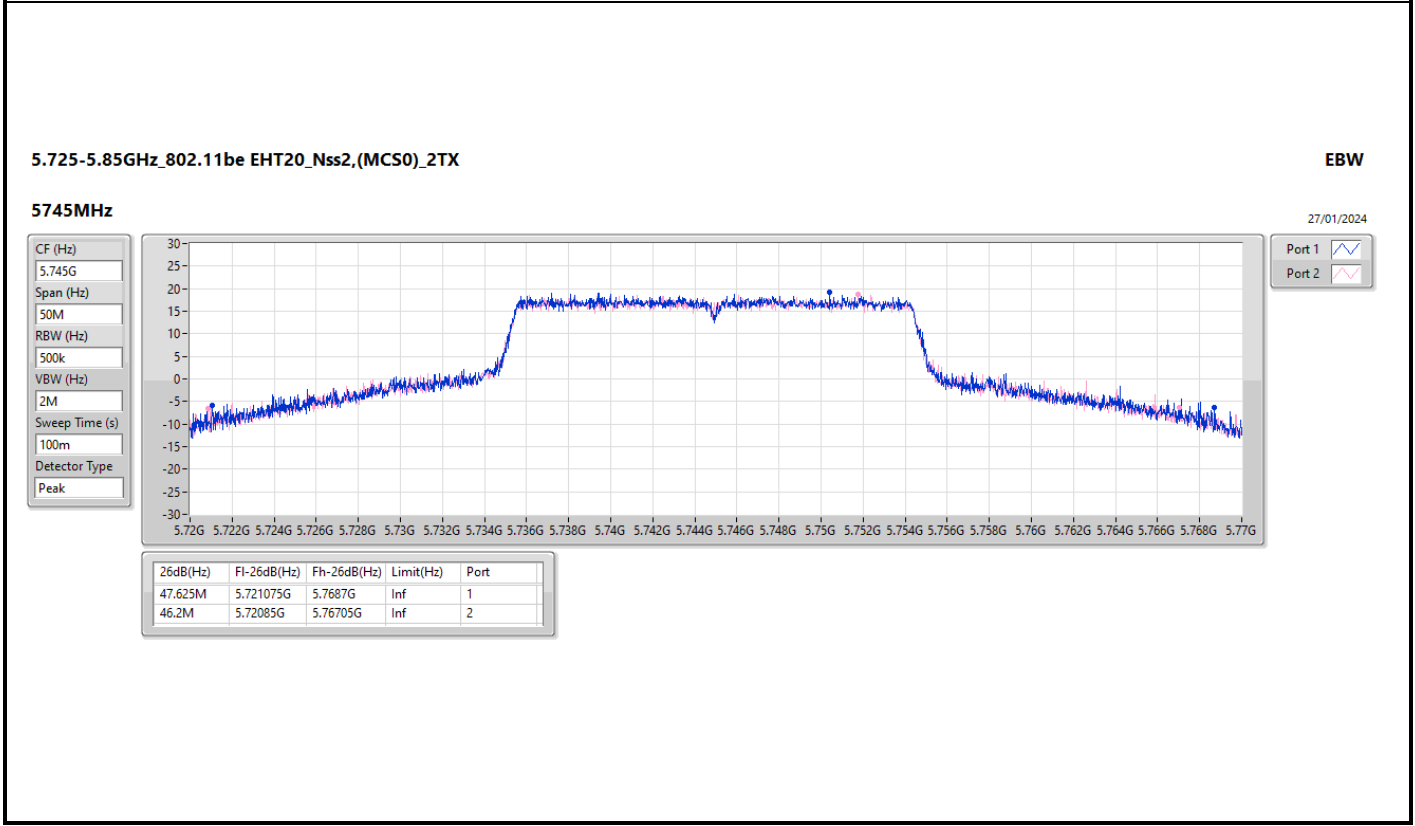
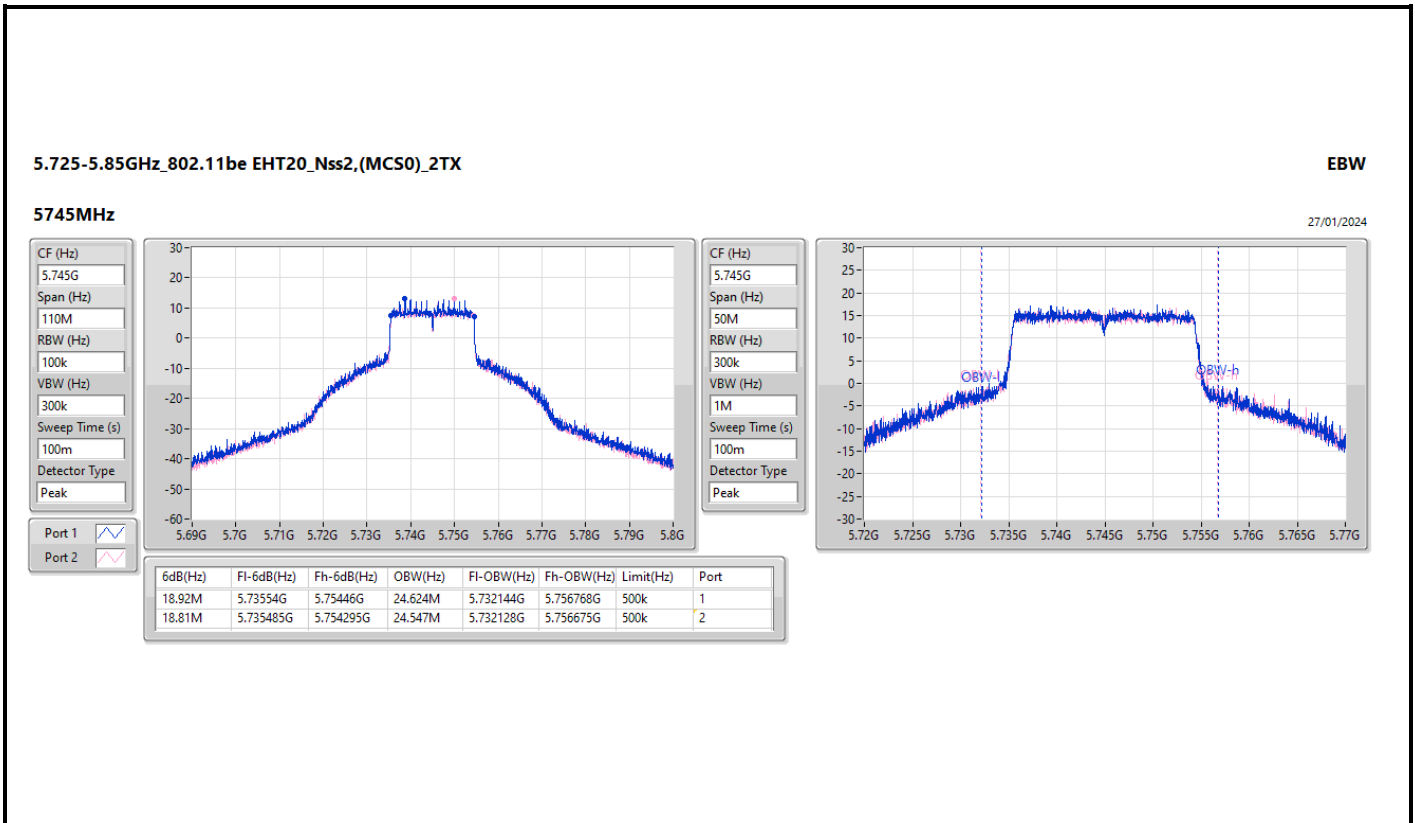
5.15-5.25GHz_802.11be EHT20_Nss2,(MCS0)_2TX

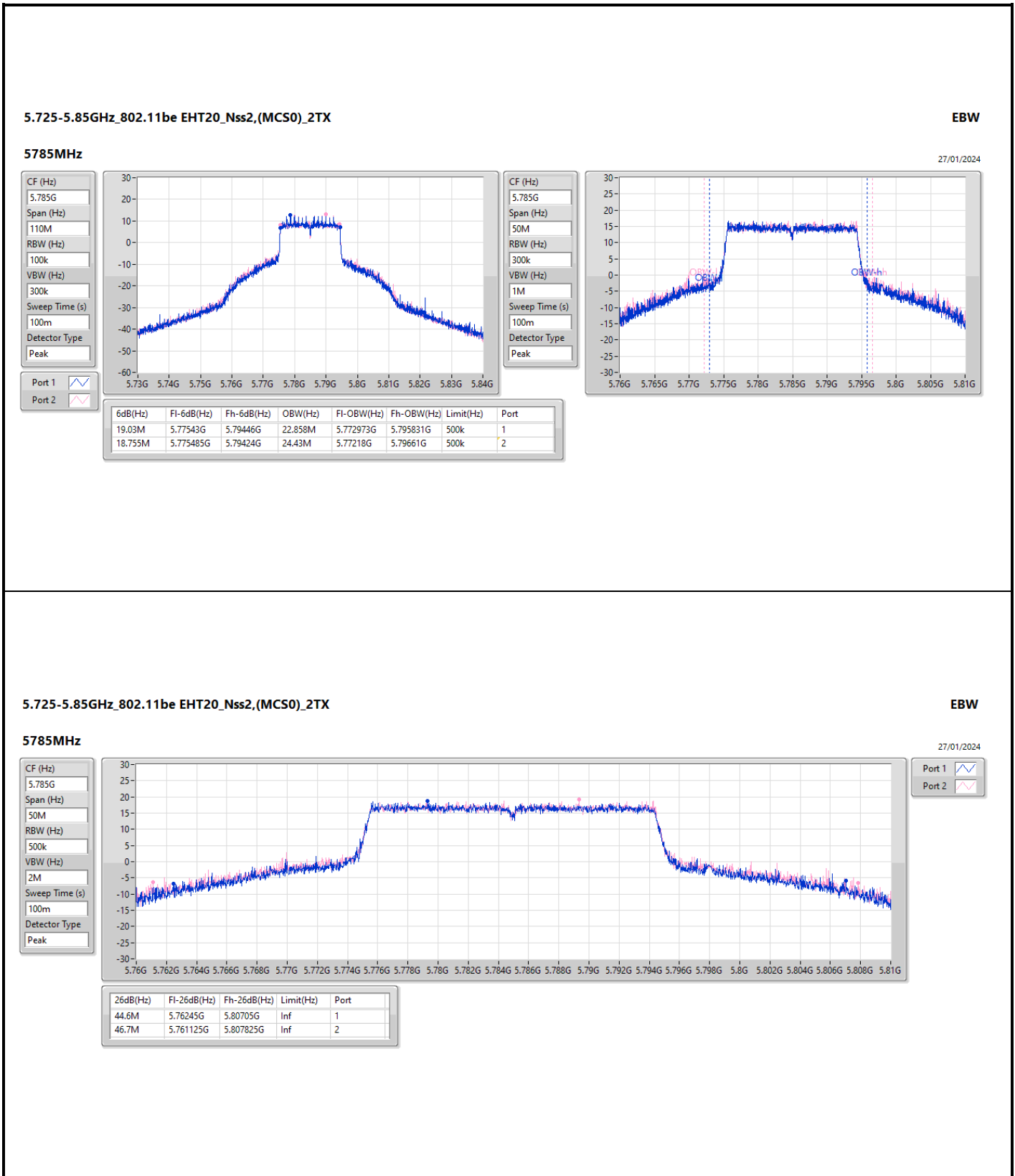
EBW

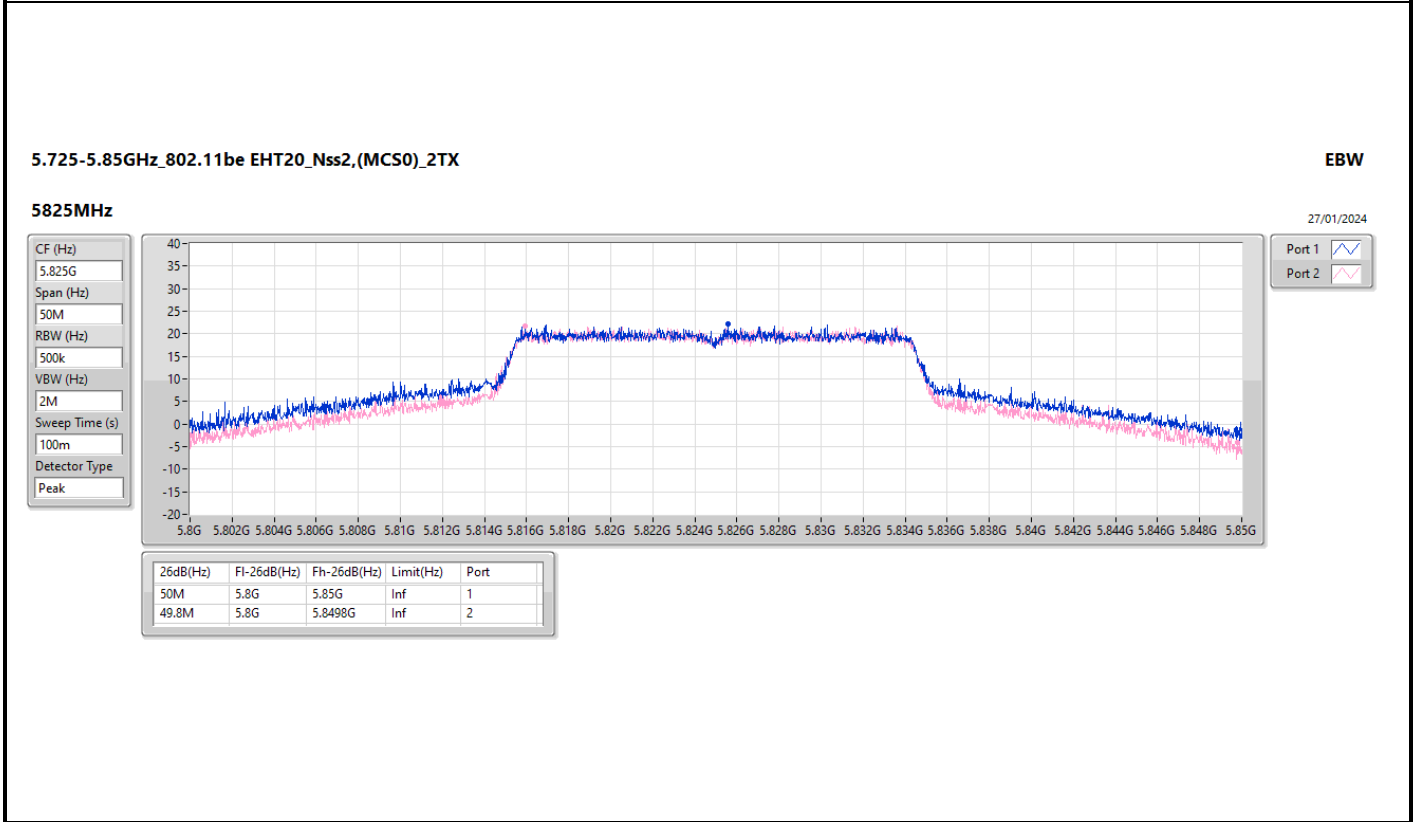
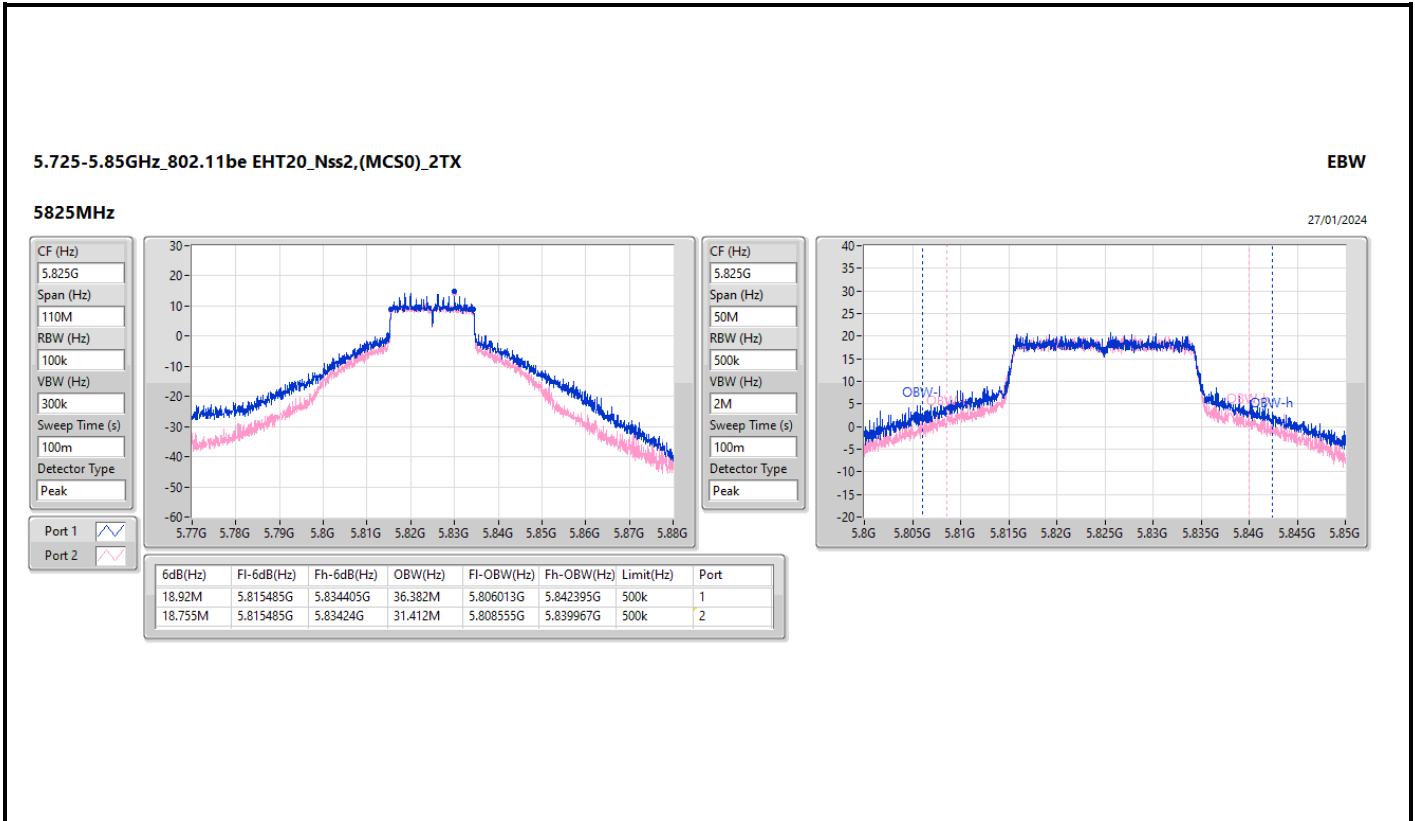
5240MHz

27/01/2024







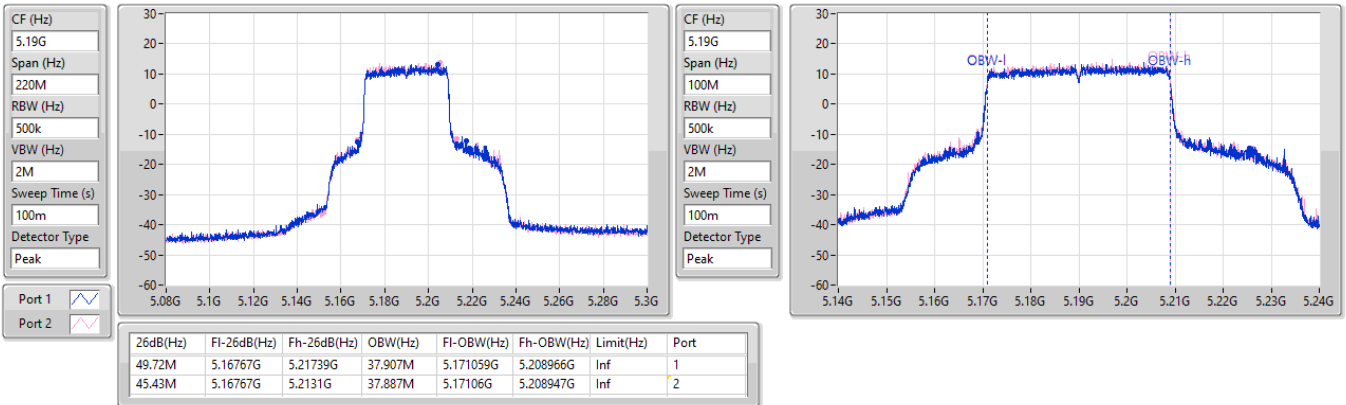


5.15-5.25GHz_802.11be EHT40_Nss2,(MCS0)_2TX

EBW

5190MHz

28/03/2024

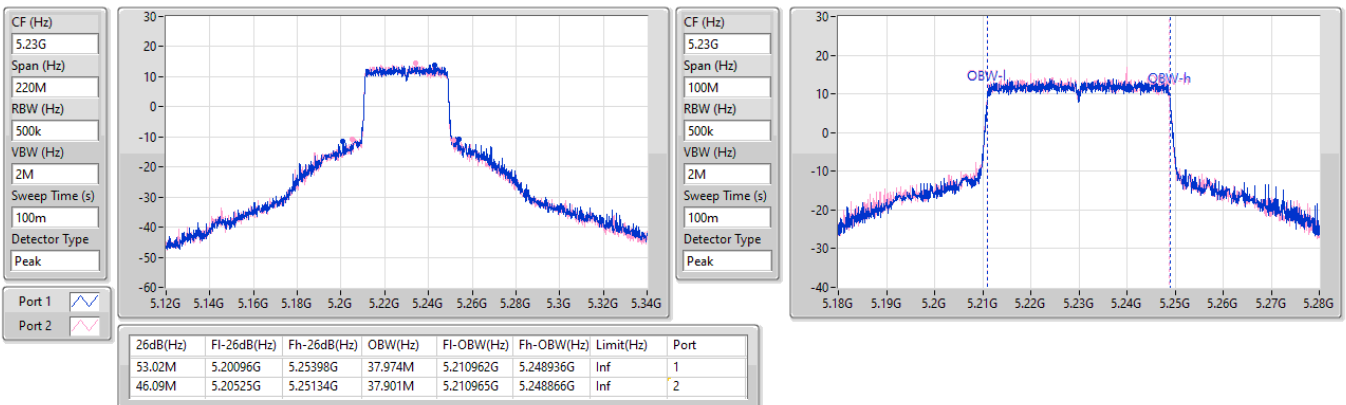


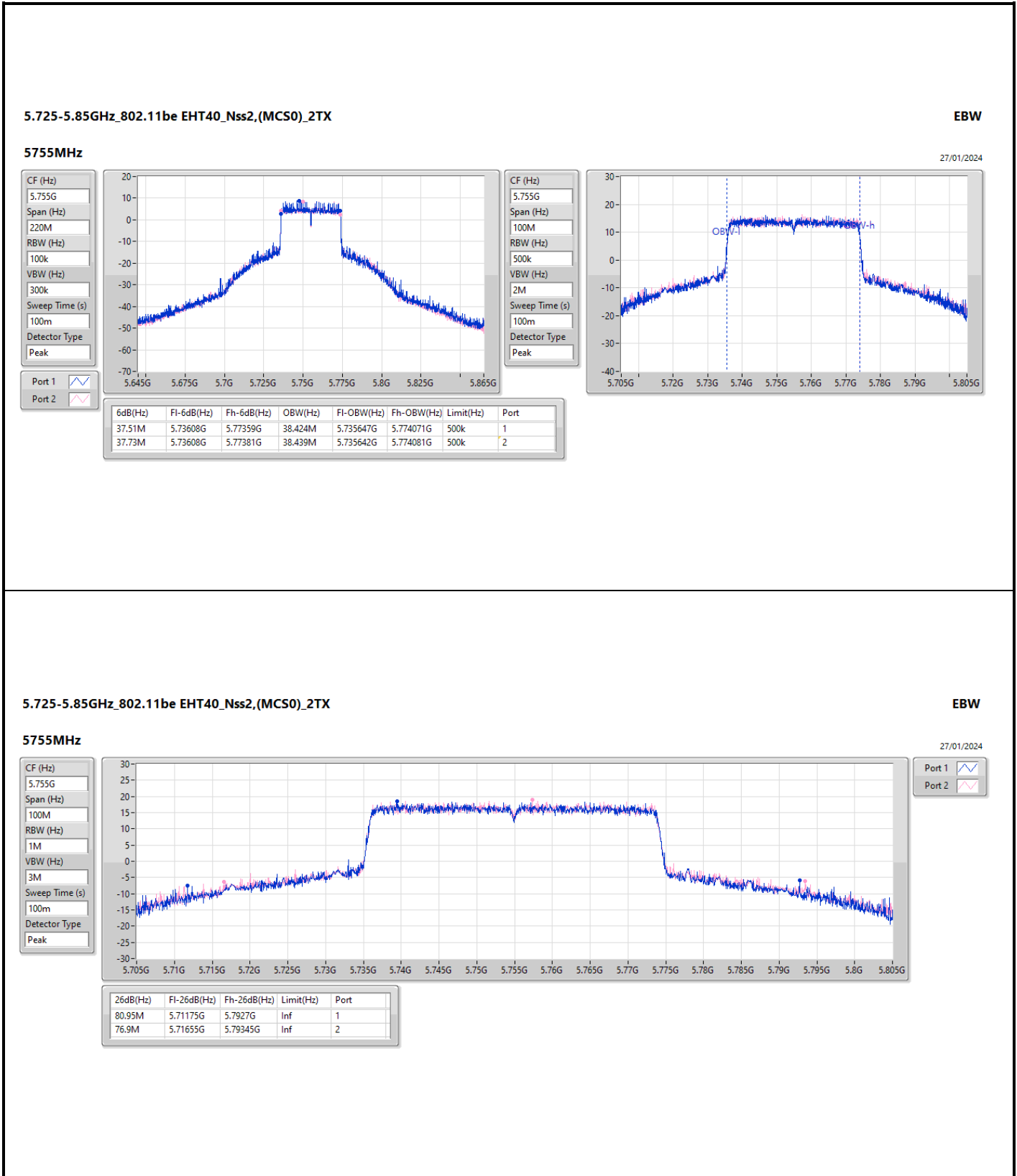
5.15-5.25GHz_802.11be EHT40_Nss2,(MCS0)_2TX

EBW

5230MHz

27/01/2024



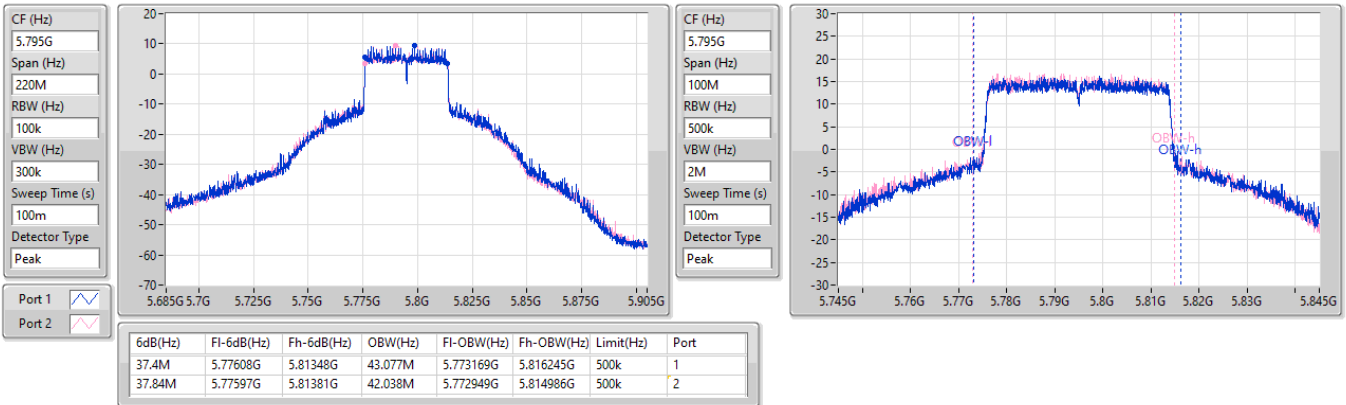


5.725-5.85GHz_802.11be EHT40_Nss2,(MCS0)_2TX

EBW

5795MHz

27/01/2024

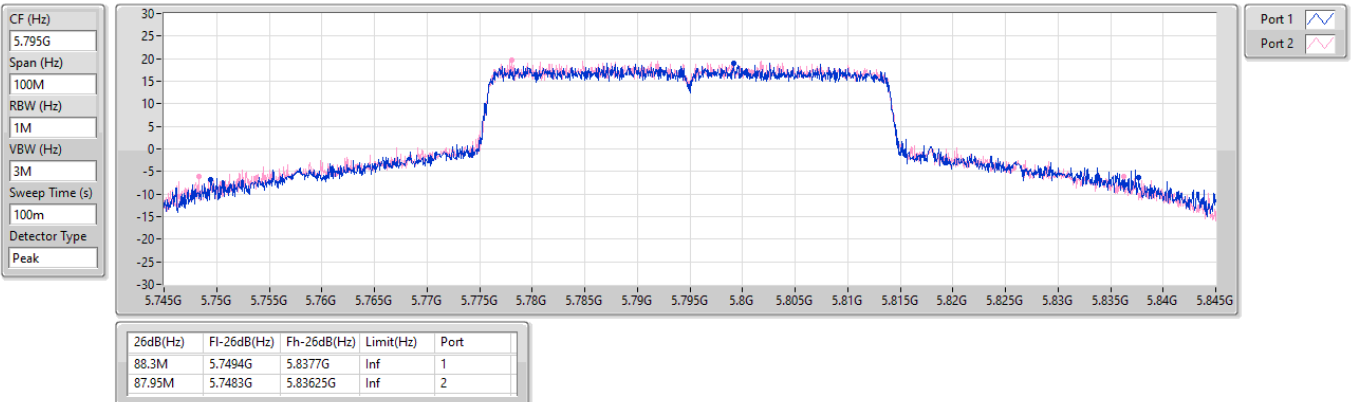


5.725-5.85GHz_802.11be EHT40_Nss2,(MCS0)_2TX

EBW

5795MHz

27/01/2024



5.15-5.25GHz_802.11be EHT80_Nss2,(MCS0)_2TX

EBW

5210MHz

28/03/2024

CF (Hz)
5.21G

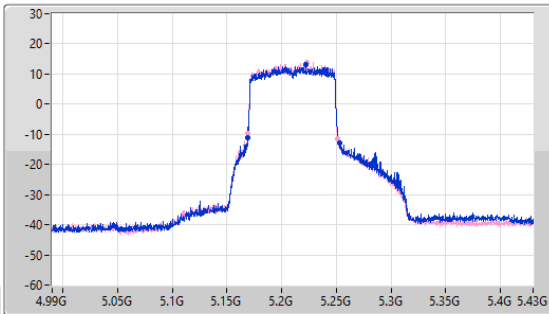
Span (Hz)
440M

RBW (Hz)
1M

VBW (Hz)
3M

Sweep Time (s)
100m

Detector Type
Peak



CF (Hz)
5.21G

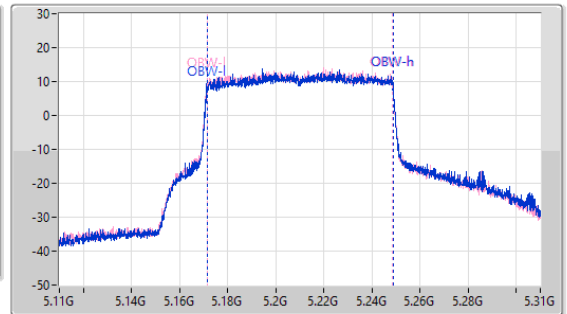
Span (Hz)
200M

RBW (Hz)
1M

VBW (Hz)
3M

Sweep Time (s)
100m

Detector Type
Peak



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
84.26M	5.16908G	5.25334G	77.312M	5.17142G	5.248731G	Inf	1
82.5M	5.16864G	5.25114G	77.253M	5.171361G	5.248614G	Inf	2

5.725-5.85GHz_802.11be EHT80_Nss2,(MCS0)_2TX

EBW

5775MHz

27/01/2024

CF (Hz)
5.775G

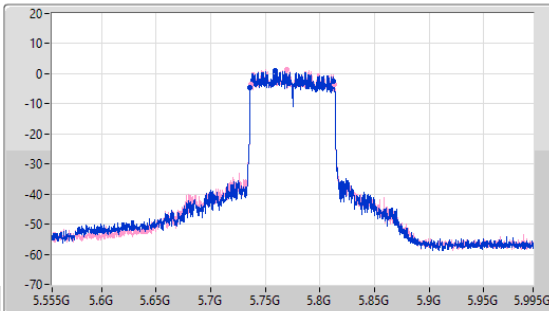
Span (Hz)
440M

RBW (Hz)
100k

VBW (Hz)
300k

Sweep Time (s)
100m

Detector Type
Peak



CF (Hz)
5.775G

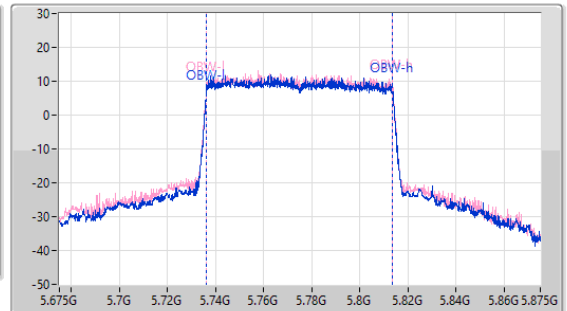
Span (Hz)
200M

RBW (Hz)
1M

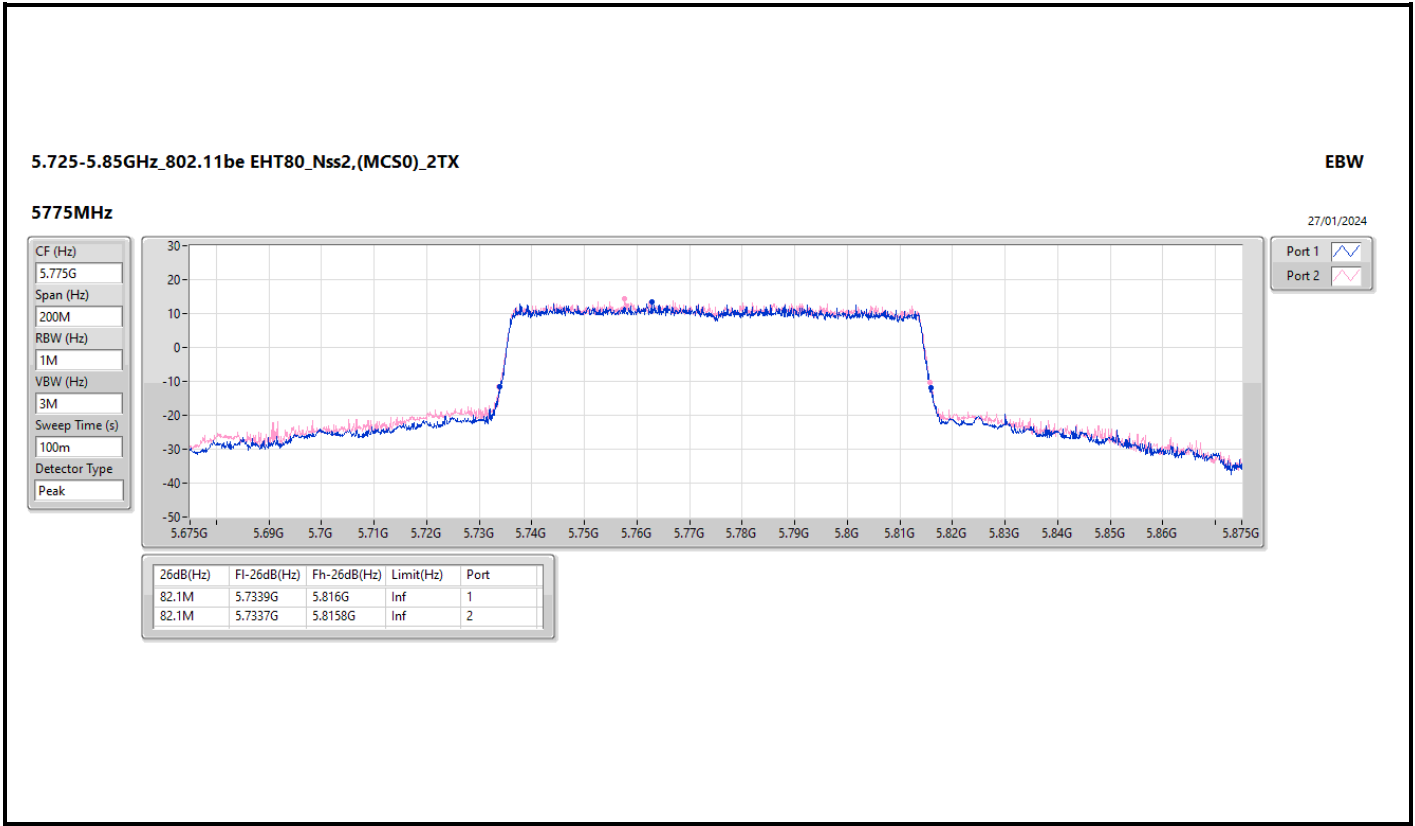
VBW (Hz)
3M

Sweep Time (s)
100m

Detector Type
Peak



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
76.56M	5.73606G	5.81262G	77.3M	5.736254G	5.813553G	500k	1
77M	5.7365G	5.8135G	77.328M	5.736252G	5.81358G	500k	2





Summary

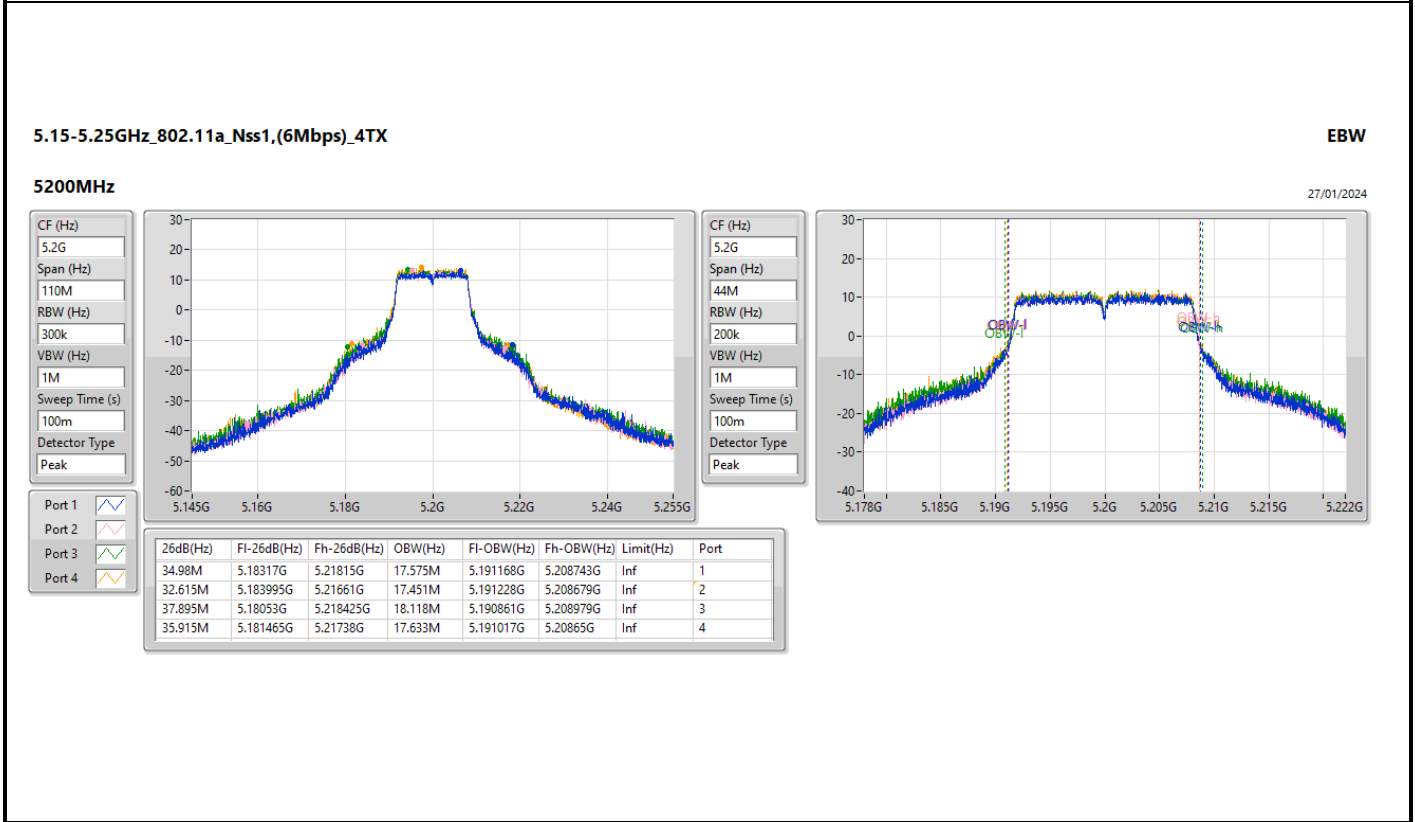
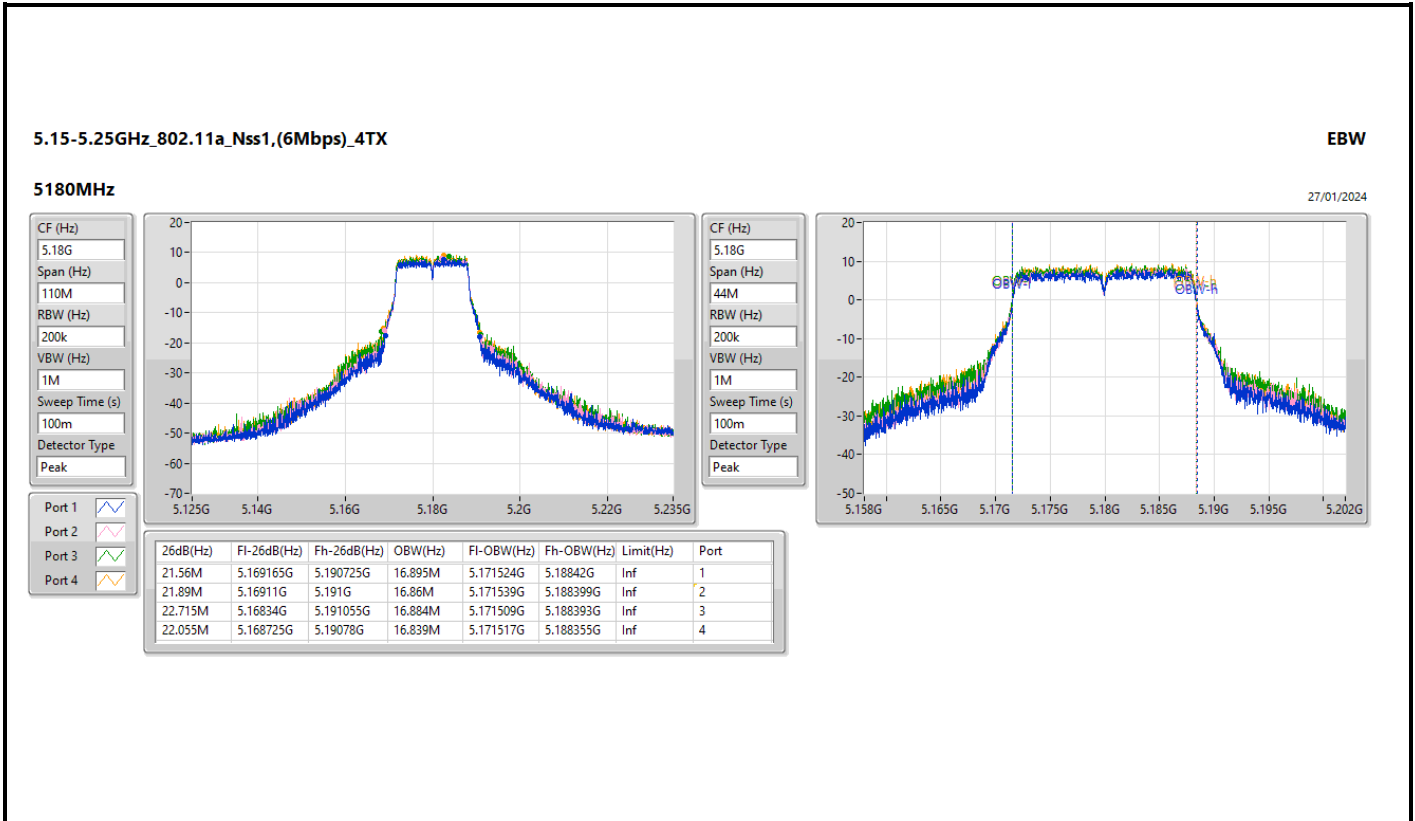
Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	37.895M	18.118M	18M1D1D	21.56M	16.631M
802.11be EHT20_Nss1,(MCS0)_4TX	40.865M	19.338M	19M3D1D	21.34M	19.007M
802.11be EHT20_Nss4,(MCS0)_4TX	46.86M	20.546M	20M5D1D	24.915M	19.013M
802.11be EHT40_Nss1,(MCS0)_4TX	50.71M	37.884M	37M9D1D	40.59M	37.672M
802.11be EHT40_Nss4,(MCS0)_4TX	48.18M	37.843M	37M8D1D	40.04M	37.782M
802.11be EHT80_Nss1,(MCS0)_4TX	81.84M	77.185M	77M2D1D	80.52M	76.695M
802.11be EHT80_Nss4,(MCS0)_4TX	82.72M	77.238M	77M2D1D	80.96M	76.712M
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	16.335M	28.818M	28M8D1D	16.335M	23.034M
802.11be EHT20_Nss1,(MCS0)_4TX	18.975M	28.312M	28M3D1D	18.755M	22.849M
802.11be EHT20_Nss4,(MCS0)_4TX	18.975M	31.437M	31M4D1D	18.425M	23.053M
802.11be EHT40_Nss1,(MCS0)_4TX	37.73M	49.539M	49M5D1D	37.07M	38.581M
802.11be EHT40_Nss4,(MCS0)_4TX	37.84M	48.688M	48M7D1D	37.29M	38.763M
802.11be EHT80_Nss1,(MCS0)_4TX	77.22M	77.608M	77M6D1D	76.12M	77.49M
802.11be EHT80_Nss4,(MCS0)_4TX	77.44M	77.567M	77M6D1D	76.12M	77.388M

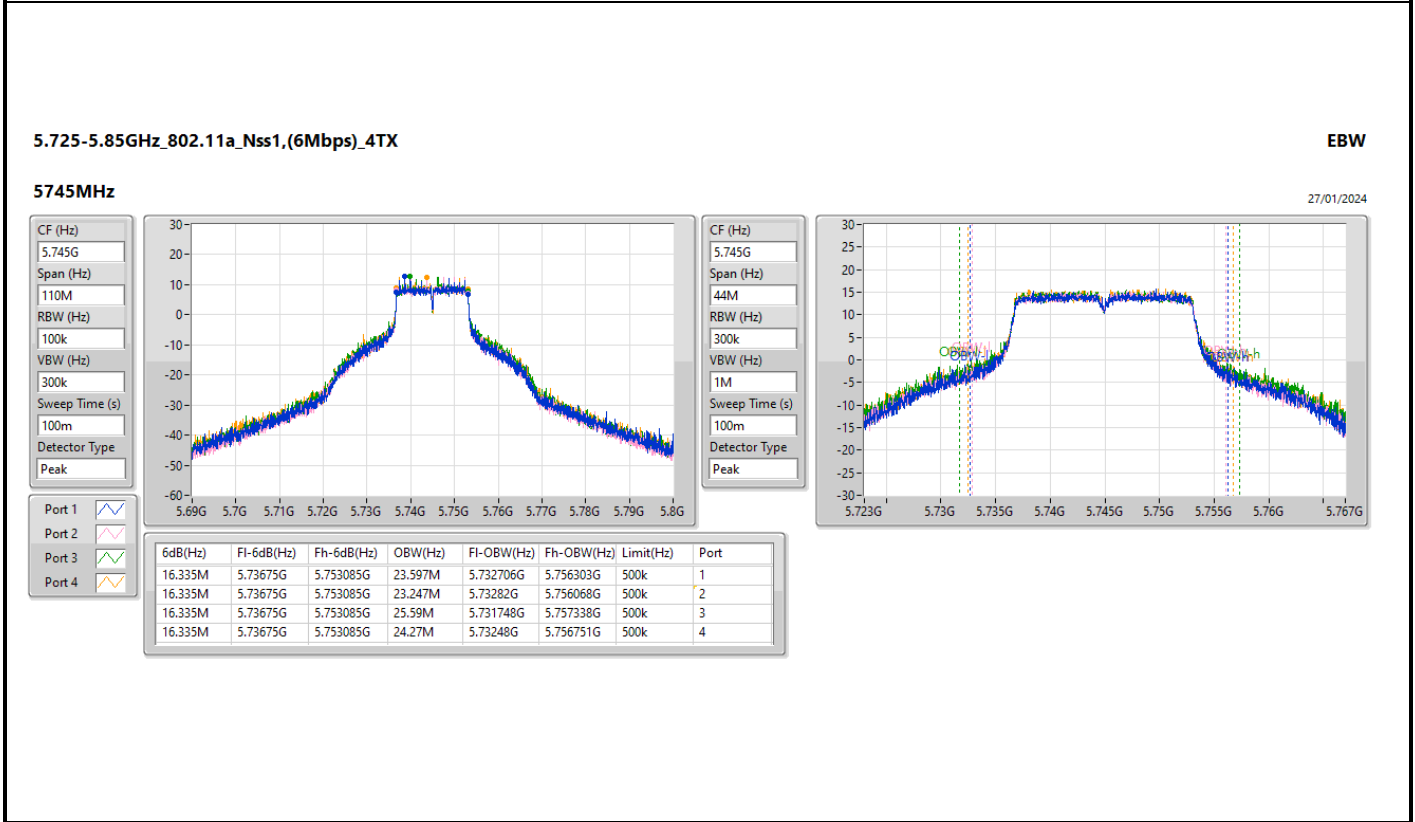
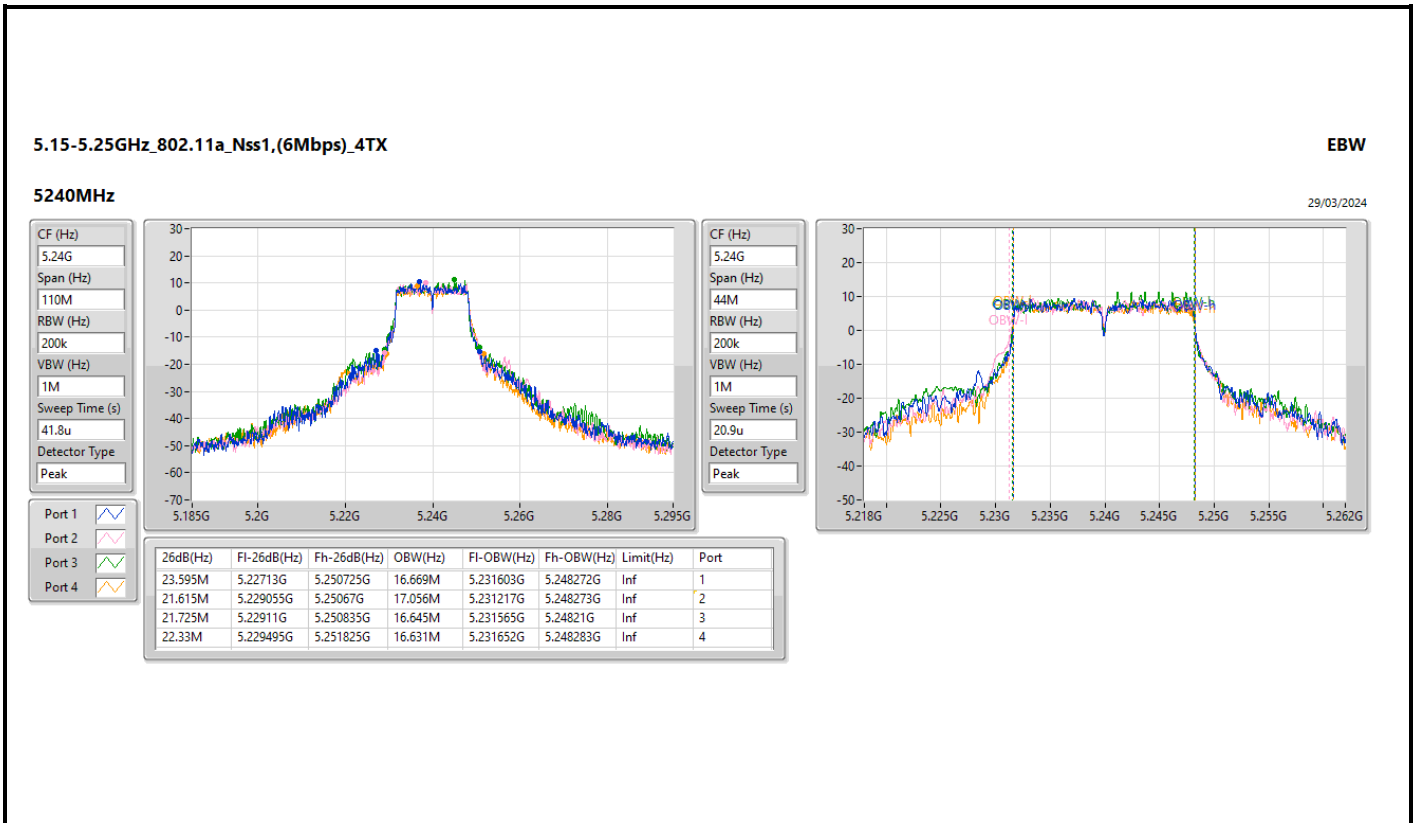
Max-N dB = Maximum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;
 Max-OBW = Maximum 99% occupied bandwidth;
 Min-N dB = Minimum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;
 Min-OBW = Minimum 99% occupied bandwidth

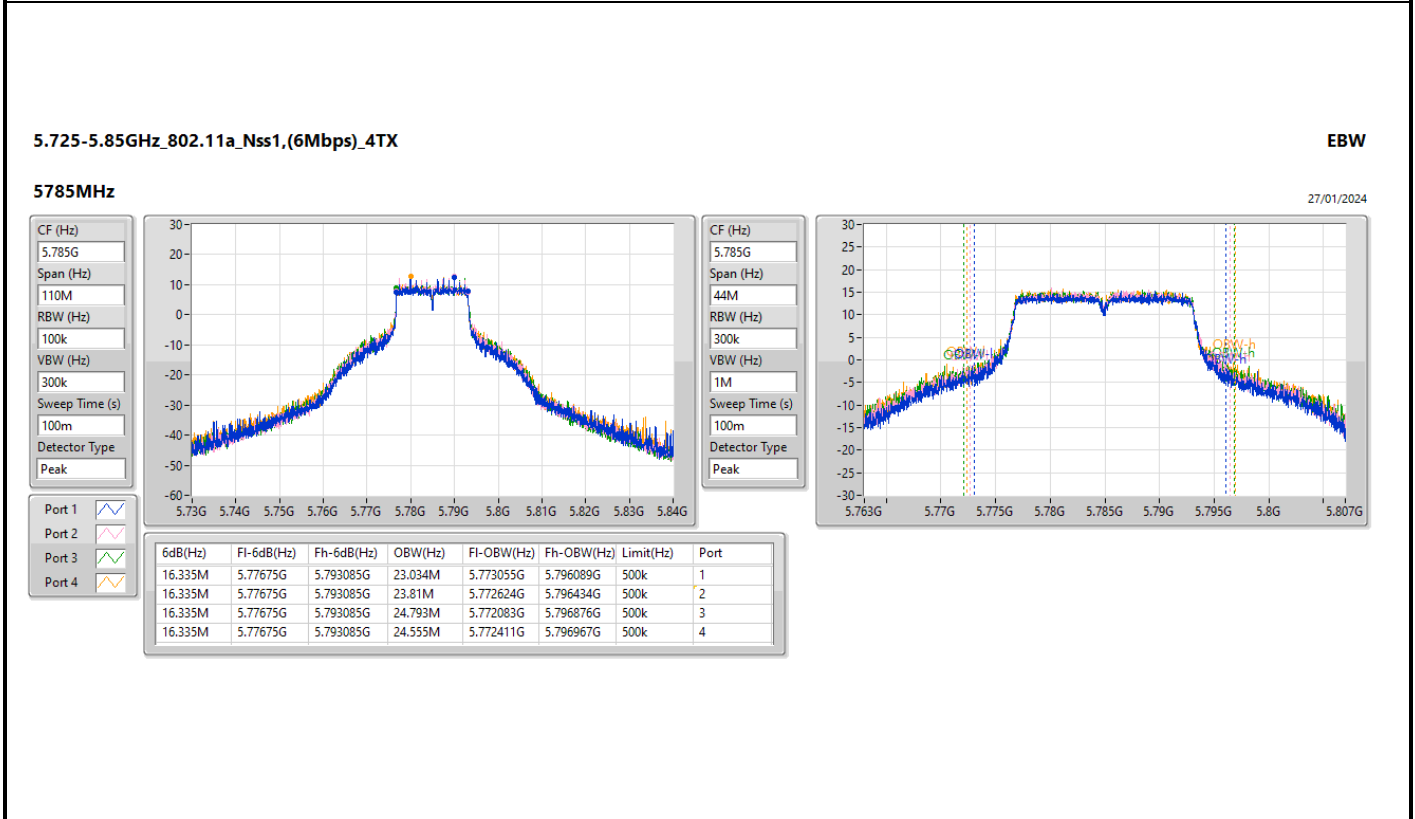
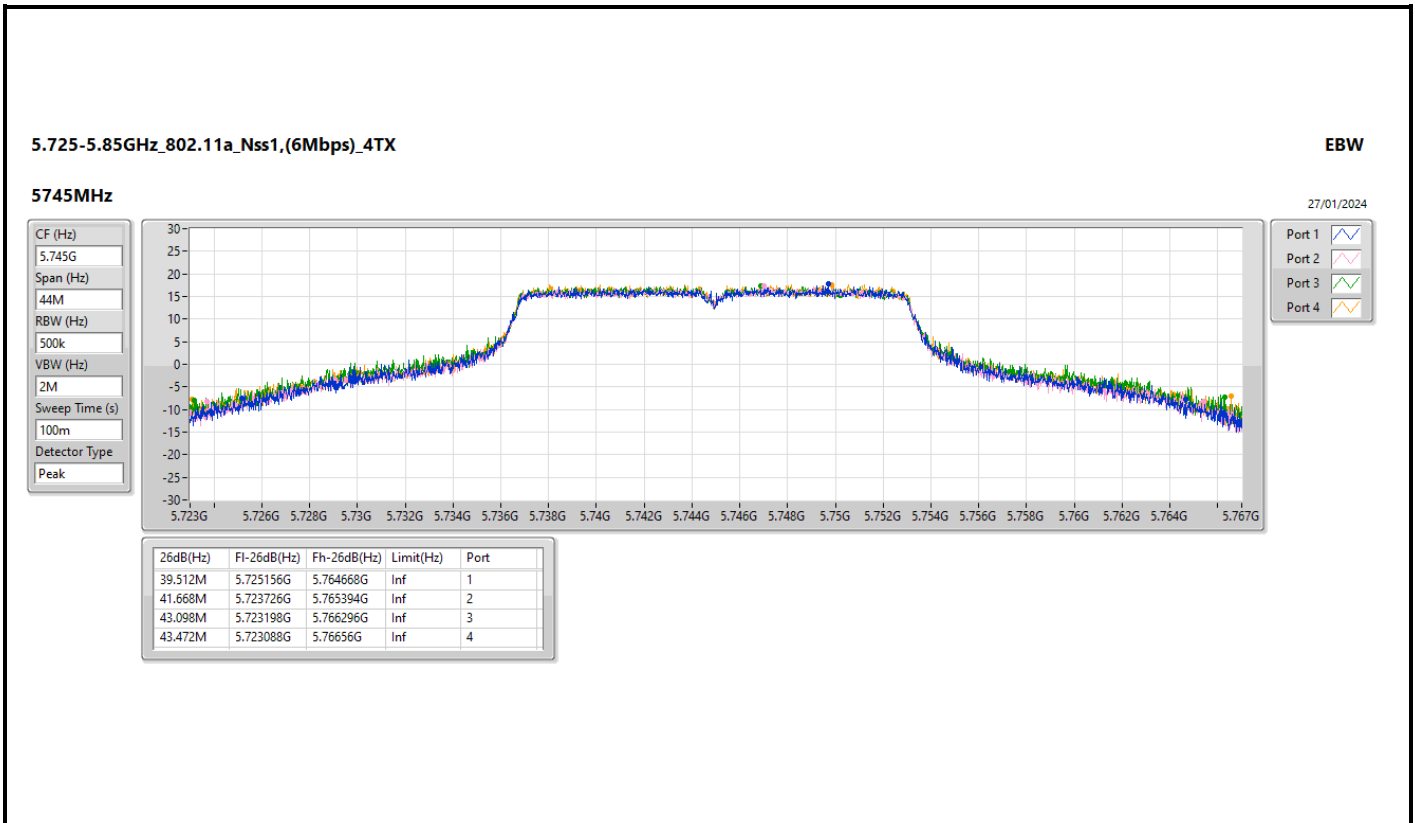
Result

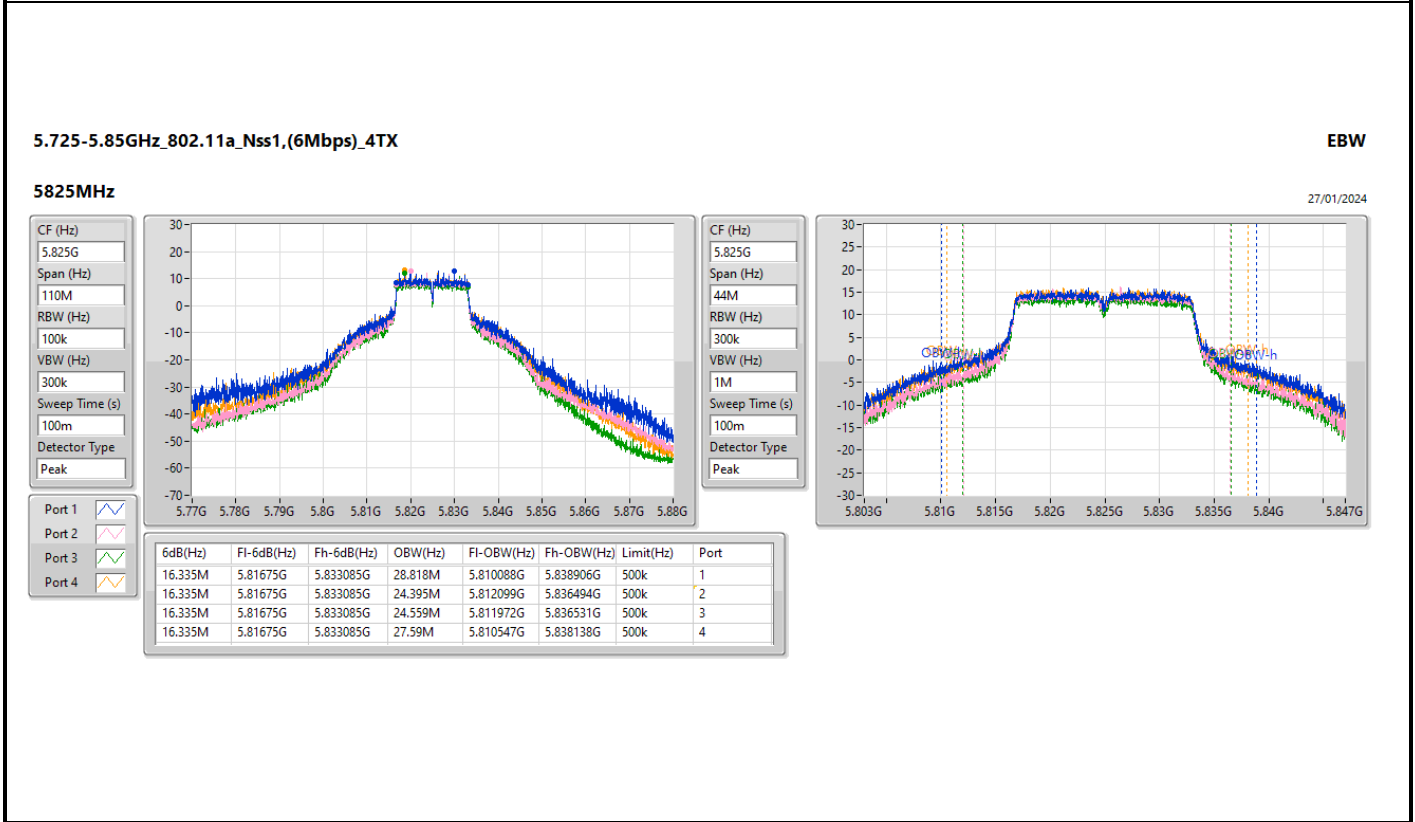
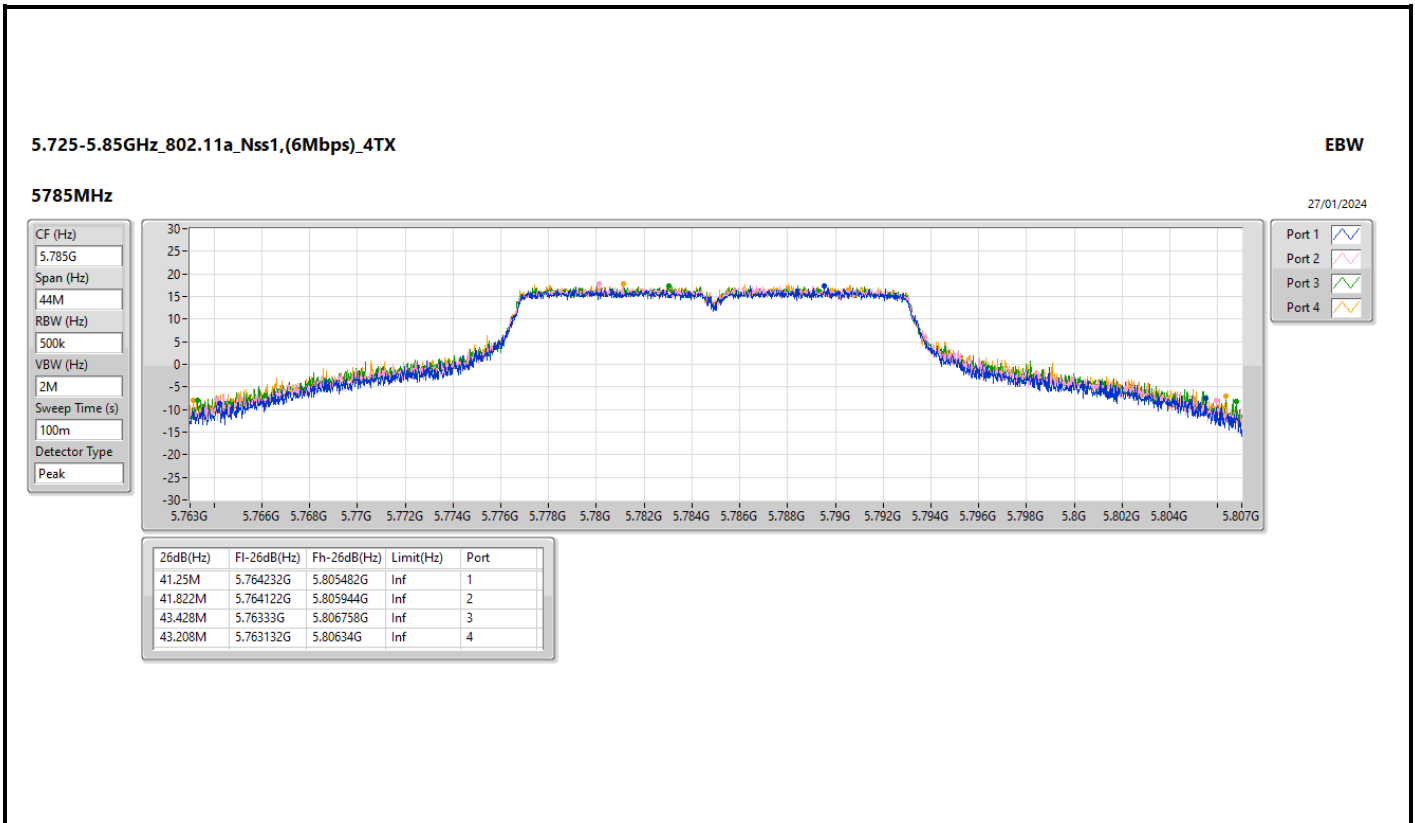
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	21.56M	16.895M	21.89M	16.86M	22.715M	16.884M	22.055M	16.839M
5200MHz	Pass	Inf	34.98M	17.575M	32.615M	17.451M	37.895M	18.118M	35.915M	17.633M
5240MHz	Pass	Inf	23.595M	16.669M	21.615M	17.056M	21.725M	16.645M	22.33M	16.631M
5745MHz	Pass	500k	16.335M	23.597M	16.335M	23.247M	16.335M	25.59M	16.335M	24.27M
5785MHz	Pass	500k	16.335M	23.034M	16.335M	23.81M	16.335M	24.793M	16.335M	24.555M
5825MHz	Pass	500k	16.335M	28.818M	16.335M	24.395M	16.335M	24.559M	16.335M	27.59M
802.11be EHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	21.34M	19.022M	21.34M	19.007M	27.72M	19.168M	31.075M	19.044M
5200MHz	Pass	Inf	40.865M	19.264M	33.11M	19.254M	39.765M	19.336M	33.11M	19.284M
5240MHz	Pass	Inf	34.21M	19.281M	30.745M	19.288M	32.725M	19.338M	31.24M	19.314M
5745MHz	Pass	500k	18.865M	22.849M	18.865M	24.026M	18.865M	26.267M	18.81M	25.431M
5785MHz	Pass	500k	18.92M	24.081M	18.865M	24.761M	18.81M	25.786M	18.865M	25.676M
5825MHz	Pass	500k	18.975M	28.312M	18.755M	25.705M	18.81M	26.386M	18.865M	27.742M
802.11be EHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	40.59M	37.672M	50.71M	37.705M	44.99M	37.743M	44.77M	37.817M
5230MHz	Pass	Inf	45.76M	37.835M	42.35M	37.85M	45.87M	37.874M	41.8M	37.884M
5755MHz	Pass	500k	37.73M	38.581M	37.62M	38.959M	37.51M	41.206M	37.62M	39.615M
5795MHz	Pass	500k	37.51M	40.696M	37.07M	43.032M	37.73M	49.023M	37.62M	49.539M
802.11be EHT80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	80.52M	77.032M	80.52M	76.695M	81.84M	76.809M	80.96M	77.185M
5775MHz	Pass	500k	76.34M	77.49M	76.12M	77.557M	77.22M	77.608M	76.78M	77.588M
802.11be EHT20_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	27.39M	19.013M	24.915M	19.081M	28.27M	19.287M	30.965M	19.092M
5200MHz	Pass	Inf	30.965M	19.269M	30.69M	19.256M	28.71M	19.277M	32.34M	19.283M
5240MHz	Pass	Inf	46.86M	20.195M	40.425M	20.083M	45.76M	20.433M	42.075M	20.546M
5745MHz	Pass	500k	18.92M	23.842M	18.865M	24.439M	18.92M	26.599M	18.975M	25.146M
5785MHz	Pass	500k	18.81M	23.053M	18.81M	24.049M	18.865M	24.988M	18.92M	24.405M
5825MHz	Pass	500k	18.7M	31.437M	18.7M	26.665M	18.92M	26.825M	18.425M	28.45M
802.11be EHT40_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	40.04M	37.82M	46.75M	37.804M	48.18M	37.843M	41.14M	37.84M
5230MHz	Pass	Inf	41.03M	37.792M	41.8M	37.786M	41.36M	37.838M	40.37M	37.782M
5755MHz	Pass	500k	37.51M	38.763M	37.62M	39.051M	37.62M	41.411M	37.62M	40.004M
5795MHz	Pass	500k	37.51M	42.587M	37.62M	45.203M	37.29M	48.462M	37.84M	48.688M
802.11be EHT80_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	80.96M	77.136M	81.4M	76.712M	81.4M	77.238M	82.72M	77.068M
5775MHz	Pass	500k	77.44M	77.47M	76.56M	77.547M	76.12M	77.388M	76.78M	77.567M

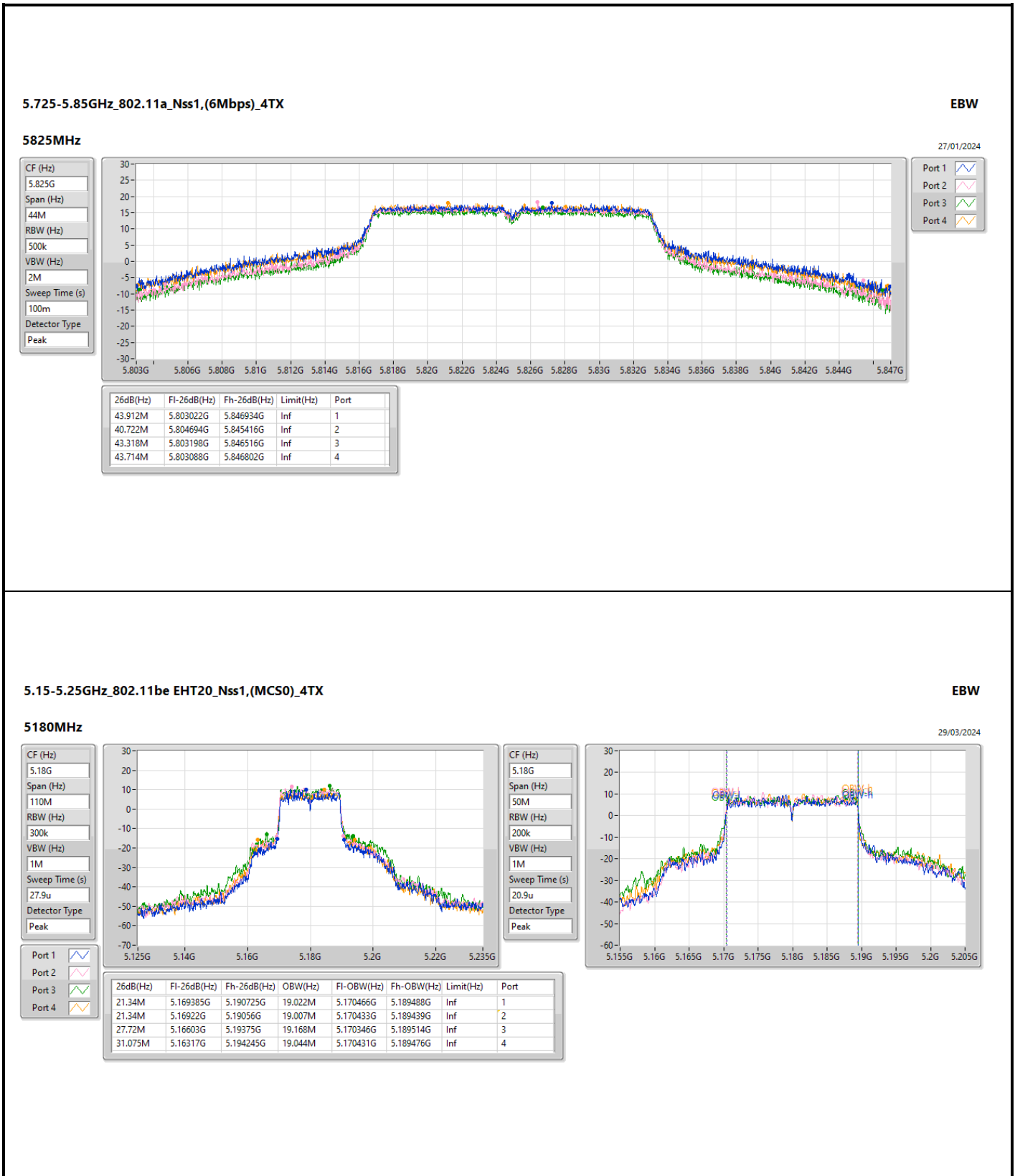
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
 Port X-OBW = Port X 99% occupied bandwidth



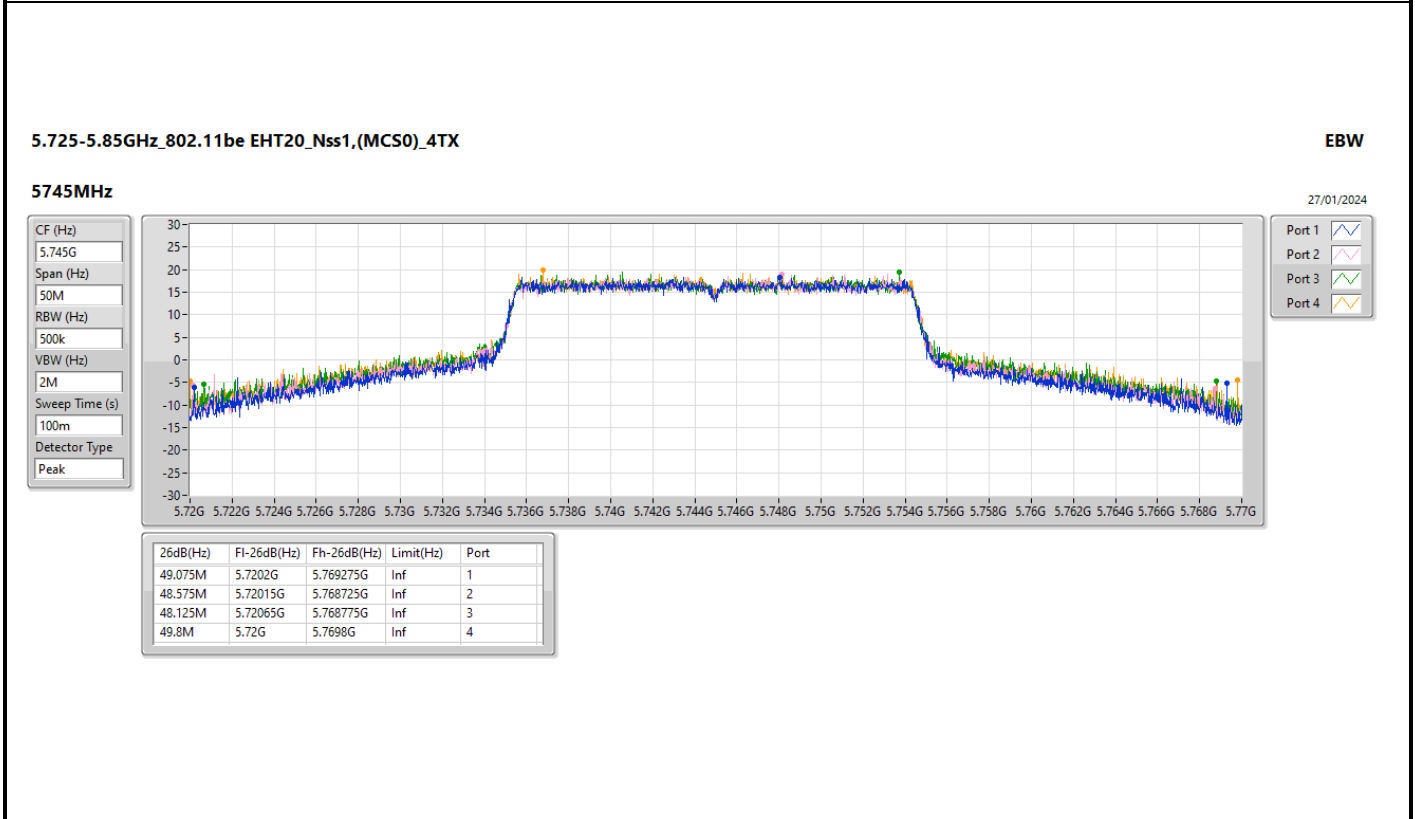
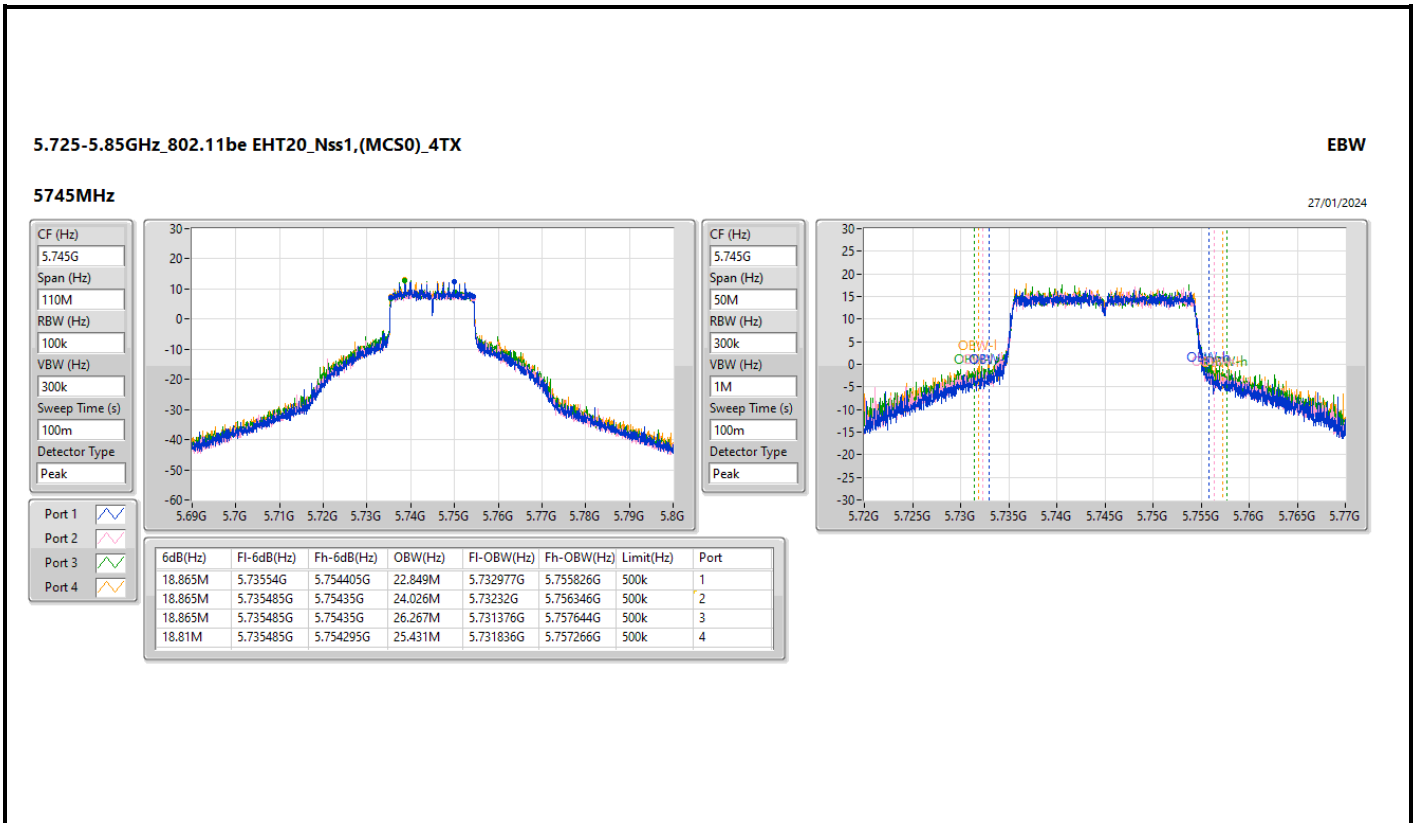


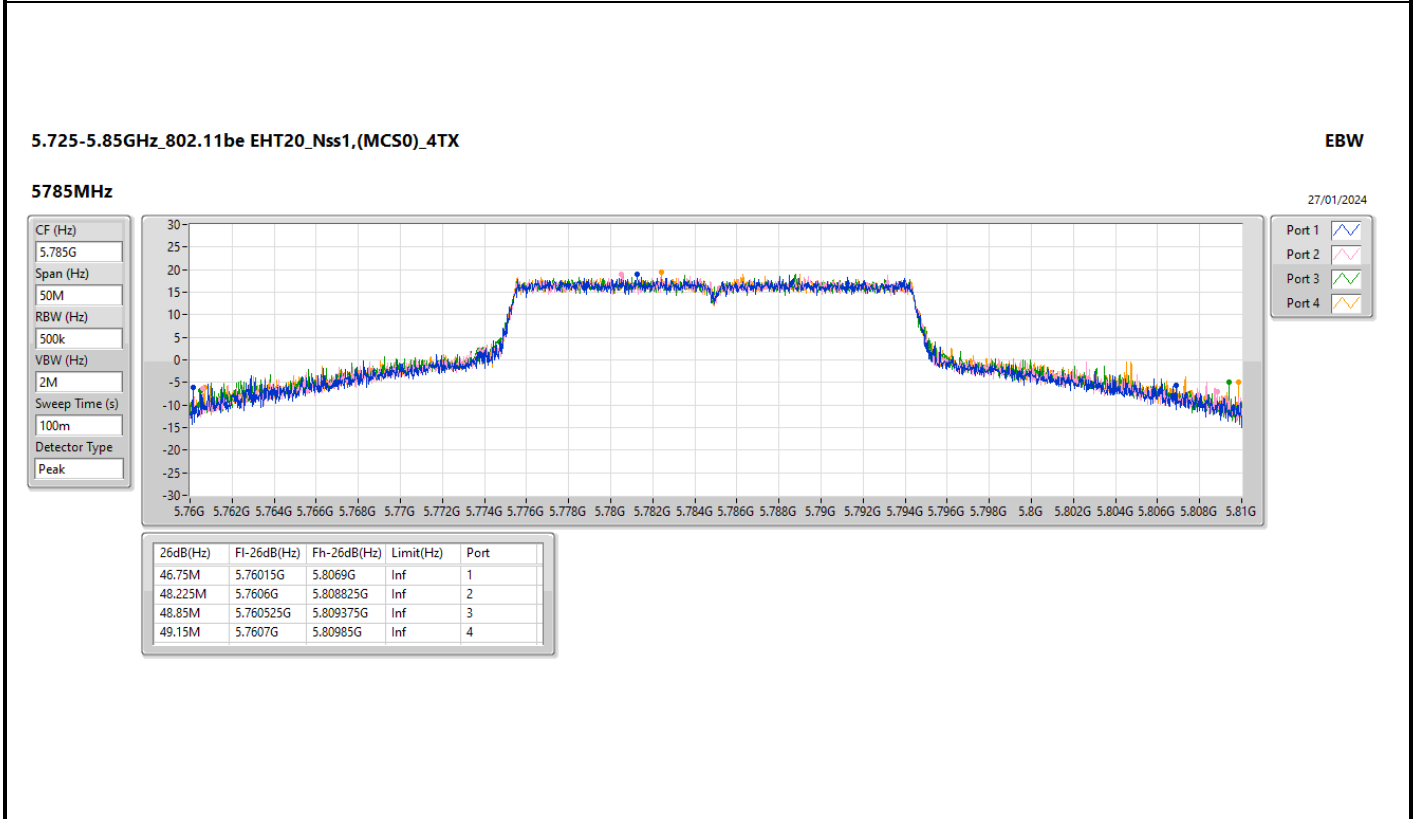
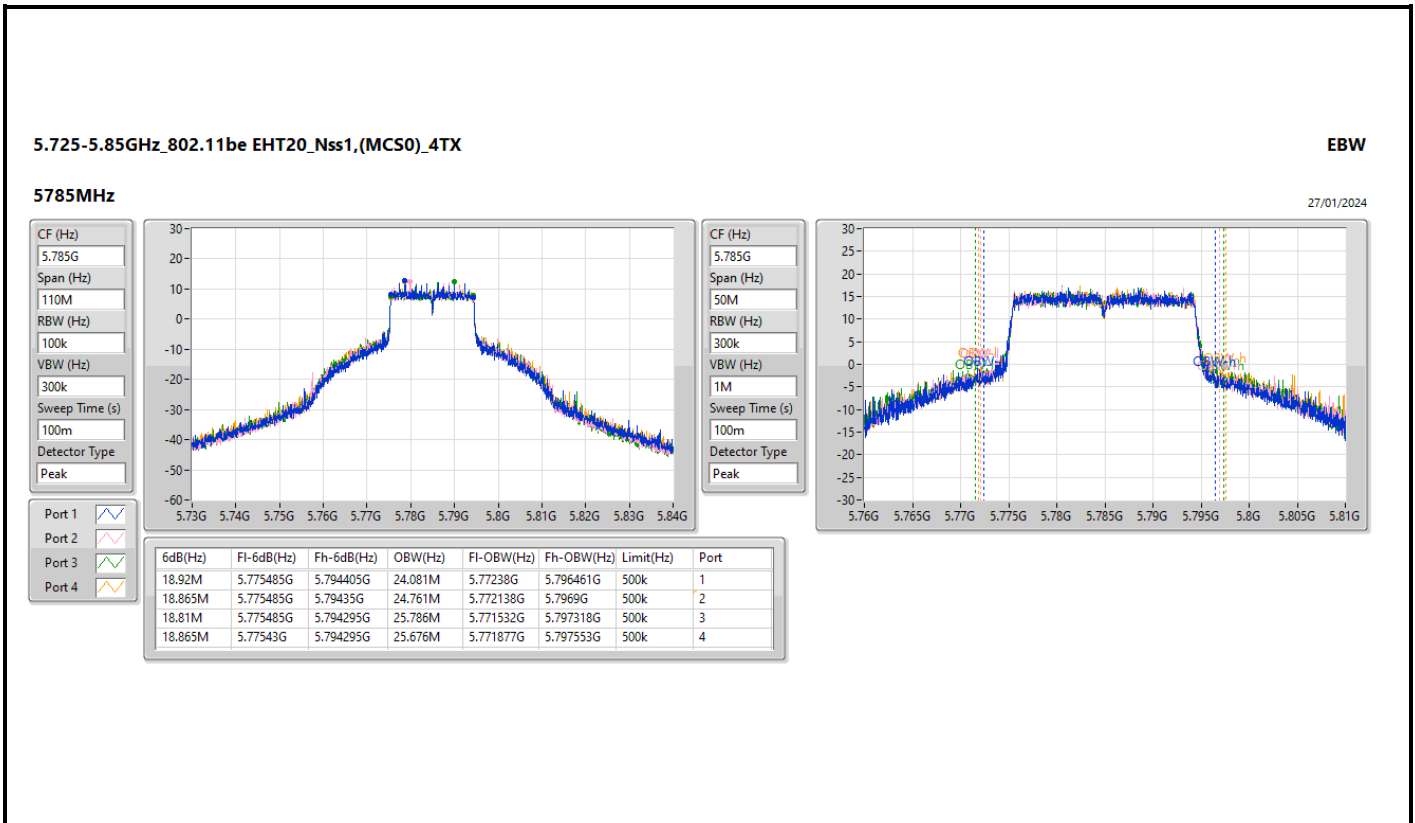


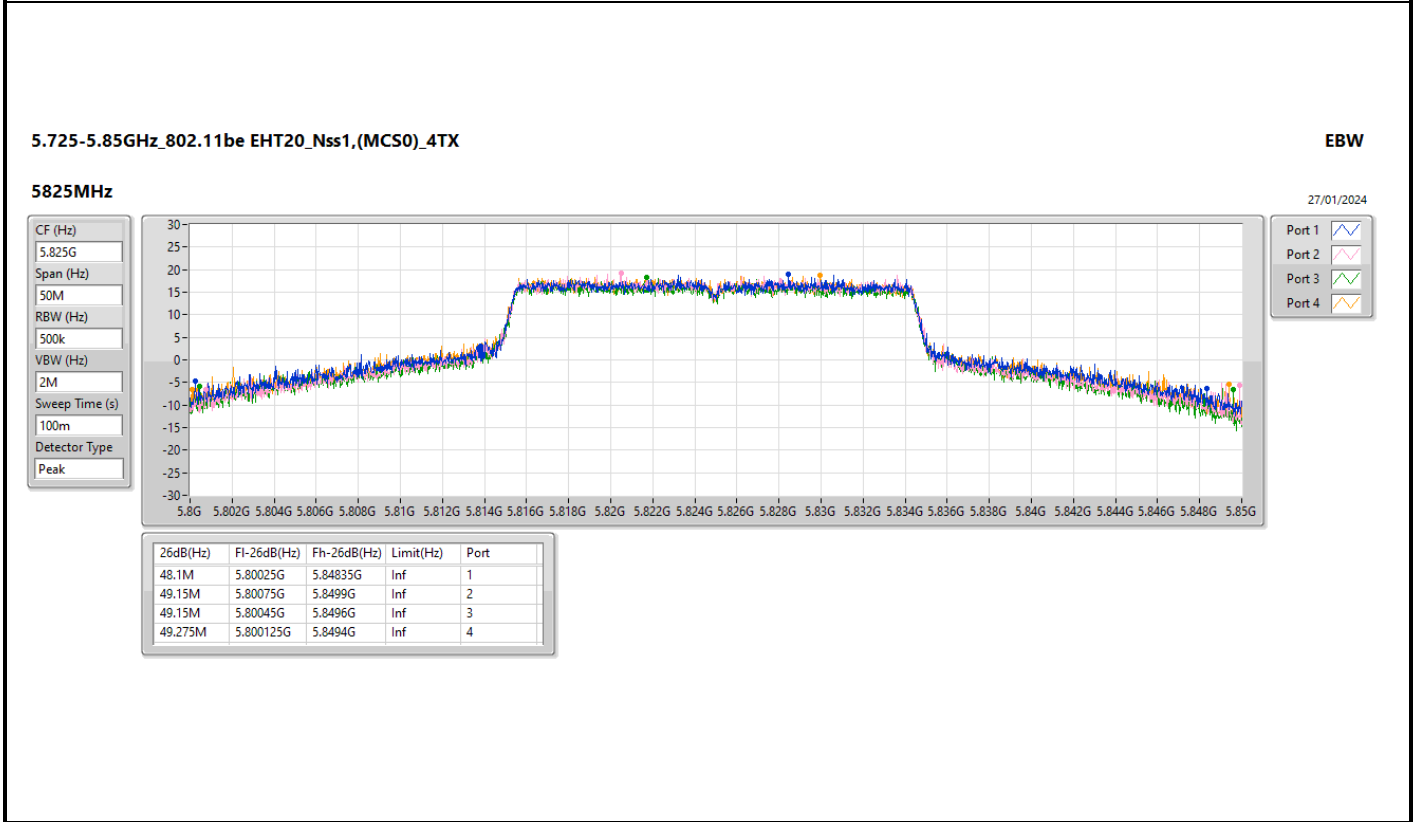
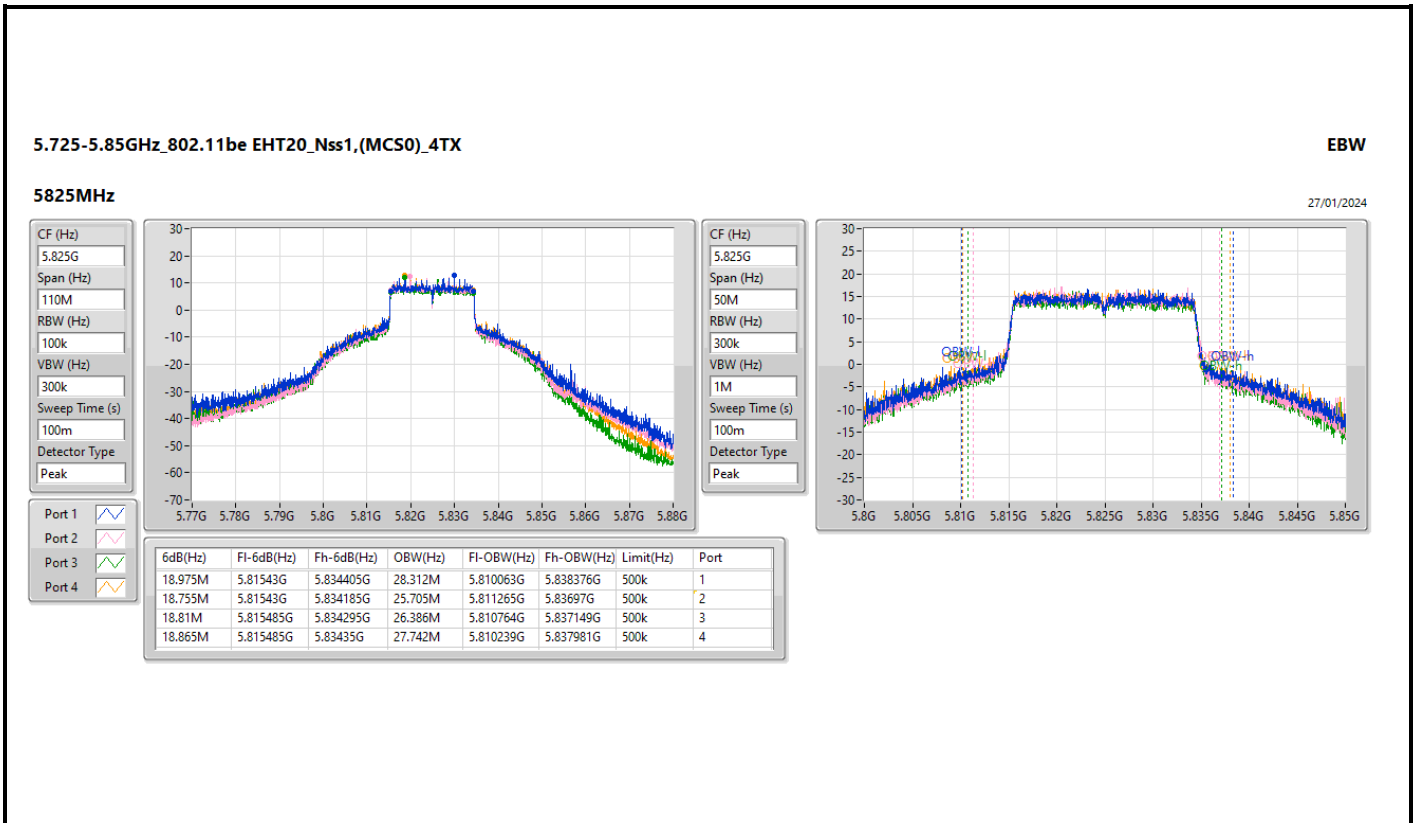










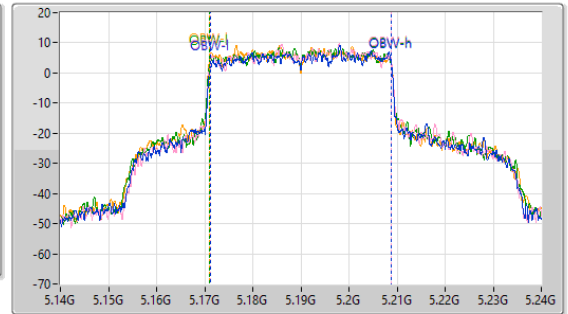
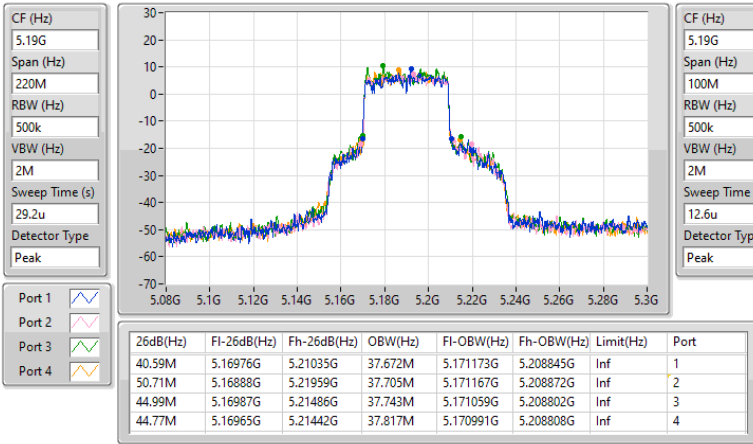


5.15-5.25GHz_802.11be EHT40_Nss1,(MCS0)_4TX

EBW

5190MHz

29/03/2024

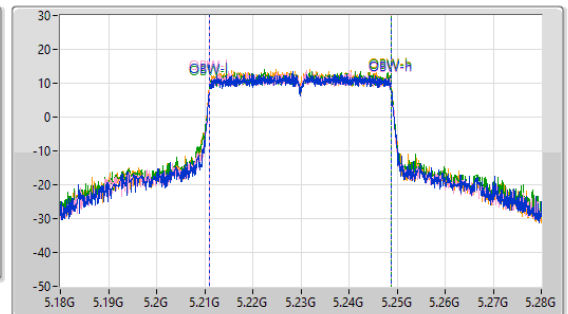
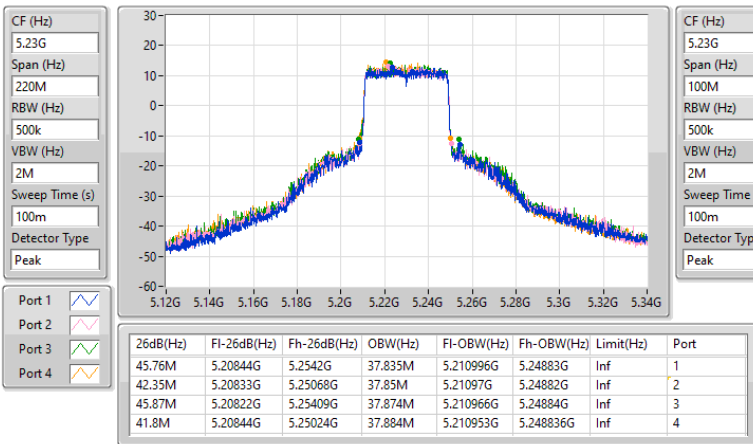


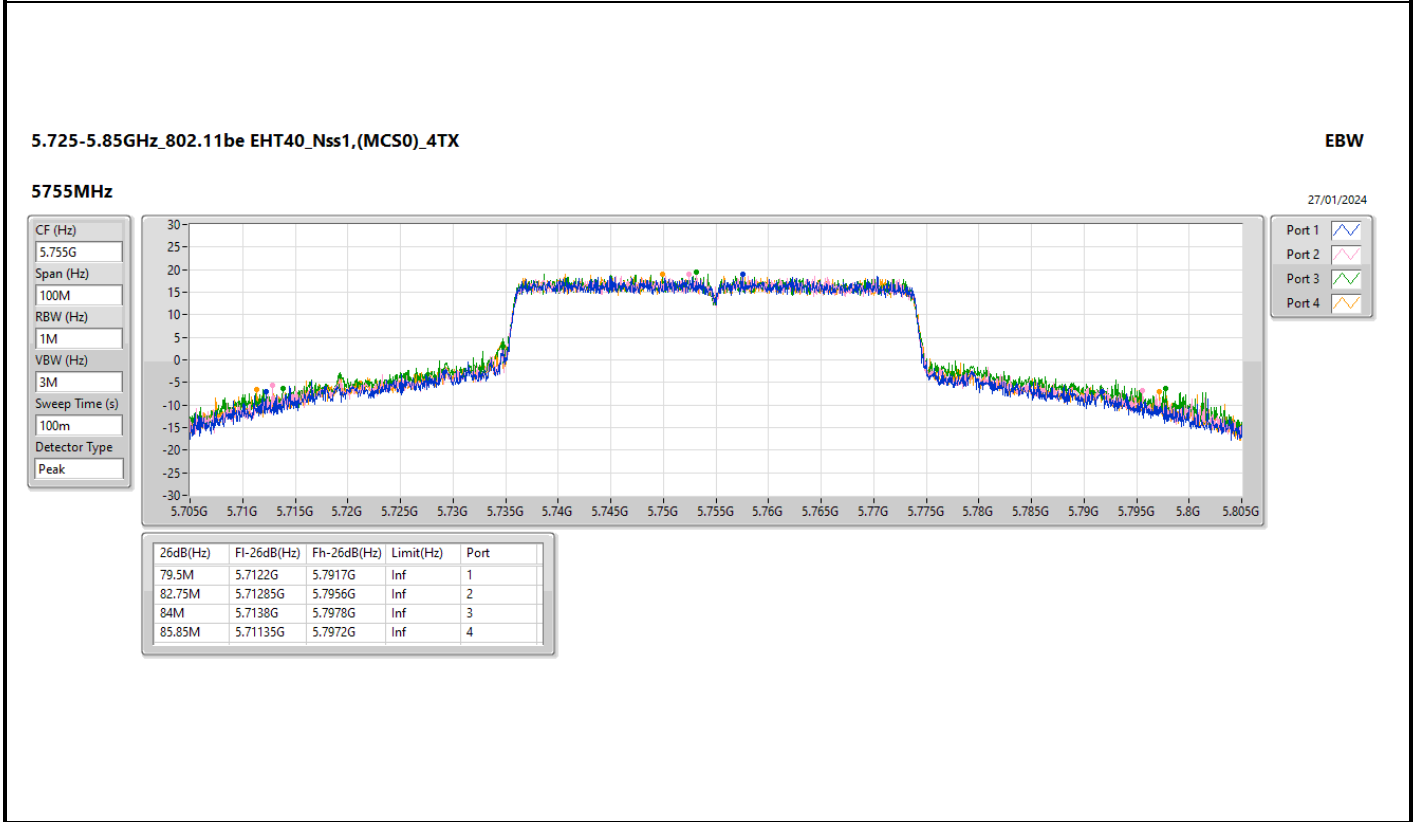
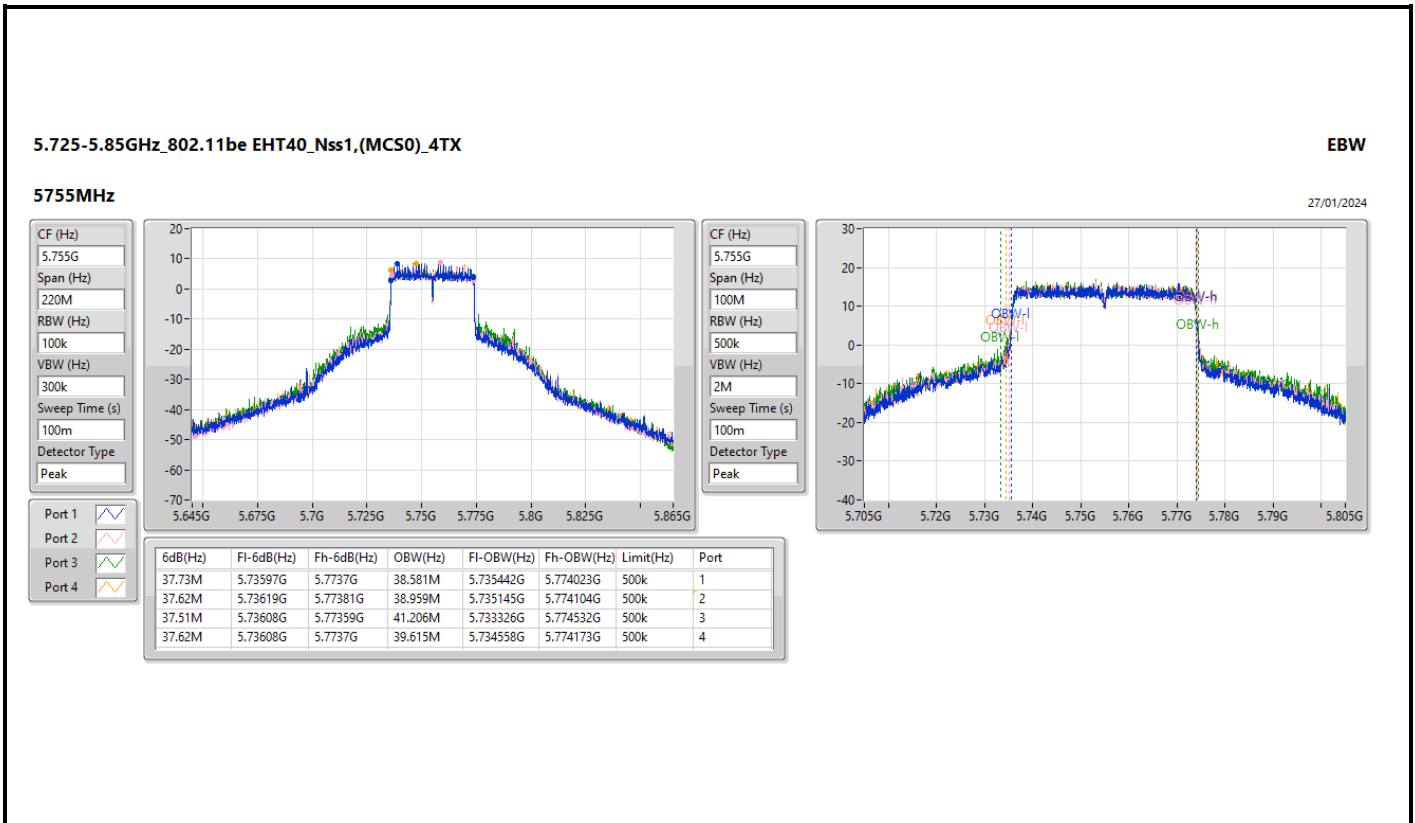
5.15-5.25GHz_802.11be EHT40_Nss1,(MCS0)_4TX

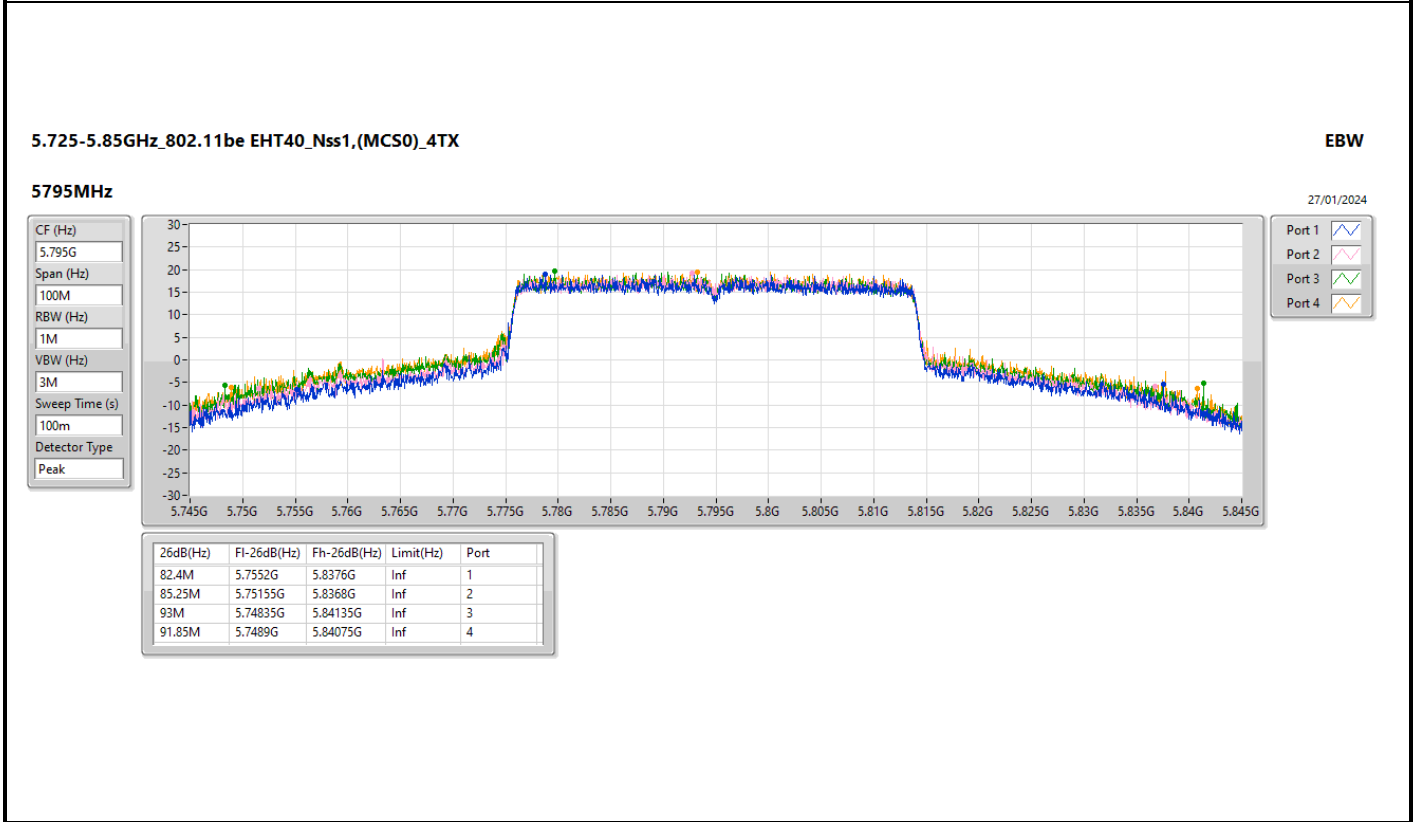
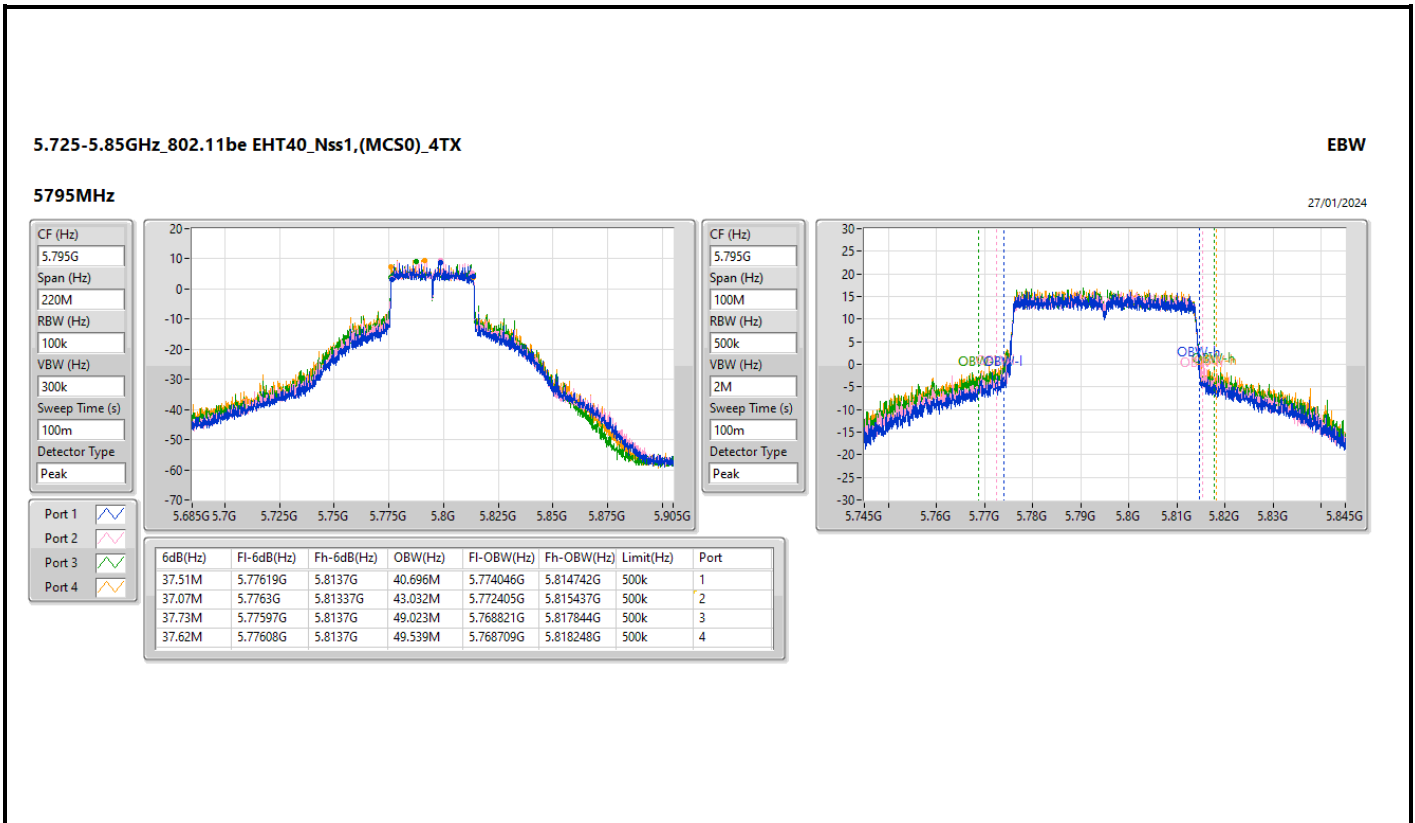
EBW

5230MHz

27/01/2024







5.15-5.25GHz_802.11be EHT80_Nss1,(MCS0)_4TX

EBW

5210MHz

29/03/2024

CF (Hz)
5.21G

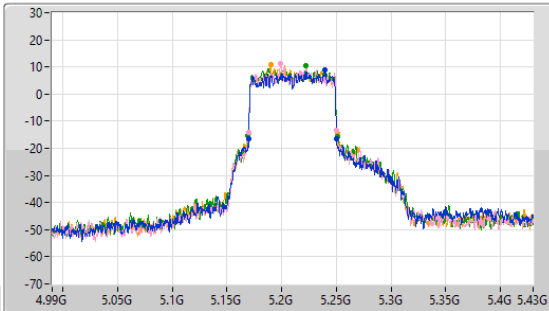
Span (Hz)
440M

RBW (Hz)
1M

VBW (Hz)
3M

Sweep Time (s)
29.3u

Detector Type
Peak



CF (Hz)
5.21G

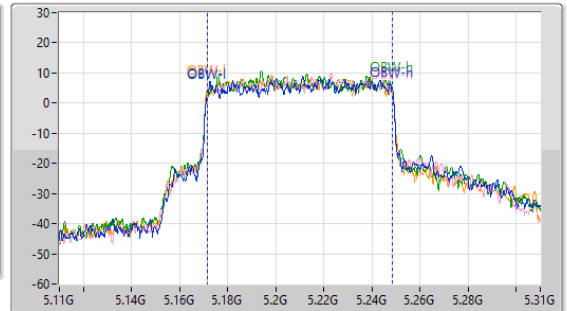
Span (Hz)
200M


RBW (Hz)
1M


VBW (Hz)
3M


Sweep Time (s)
14.6u


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
80.52M	5.16974G	5.25026G	77.032M	5.171551G	5.248584G	Inf	1
80.52M	5.16952G	5.25004G	76.695M	5.171681G	5.248376G	Inf	2
81.84M	5.16908G	5.25092G	76.809M	5.171661G	5.248471G	Inf	3
80.96M	5.16974G	5.2507G	77.185M	5.171321G	5.248505G	Inf	4

5.725-5.85GHz_802.11be EHT80_Nss1,(MCS0)_4TX

EBW

5775MHz

20/02/2024

CF (Hz)
5.775G

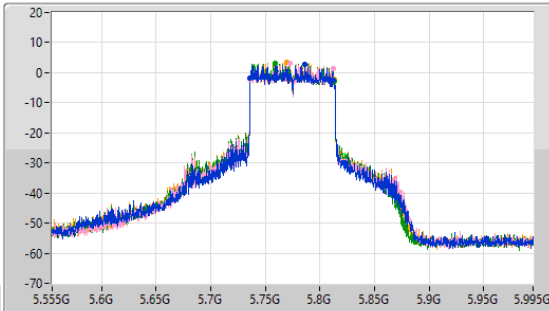
Span (Hz)
440M

RBW (Hz)
100k

VBW (Hz)
300k

Sweep Time (s)
100m

Detector Type
Peak



CF (Hz)
5.775G

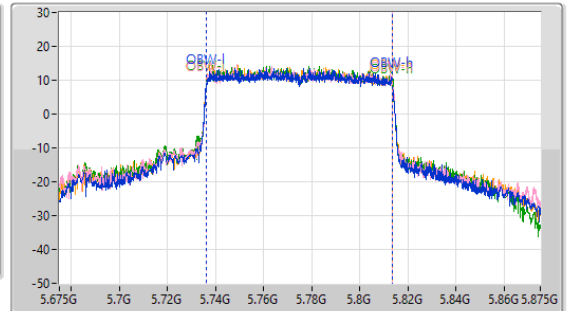
Span (Hz)
200M


RBW (Hz)
1M


VBW (Hz)
3M


Sweep Time (s)
100m


Detector Type
Peak



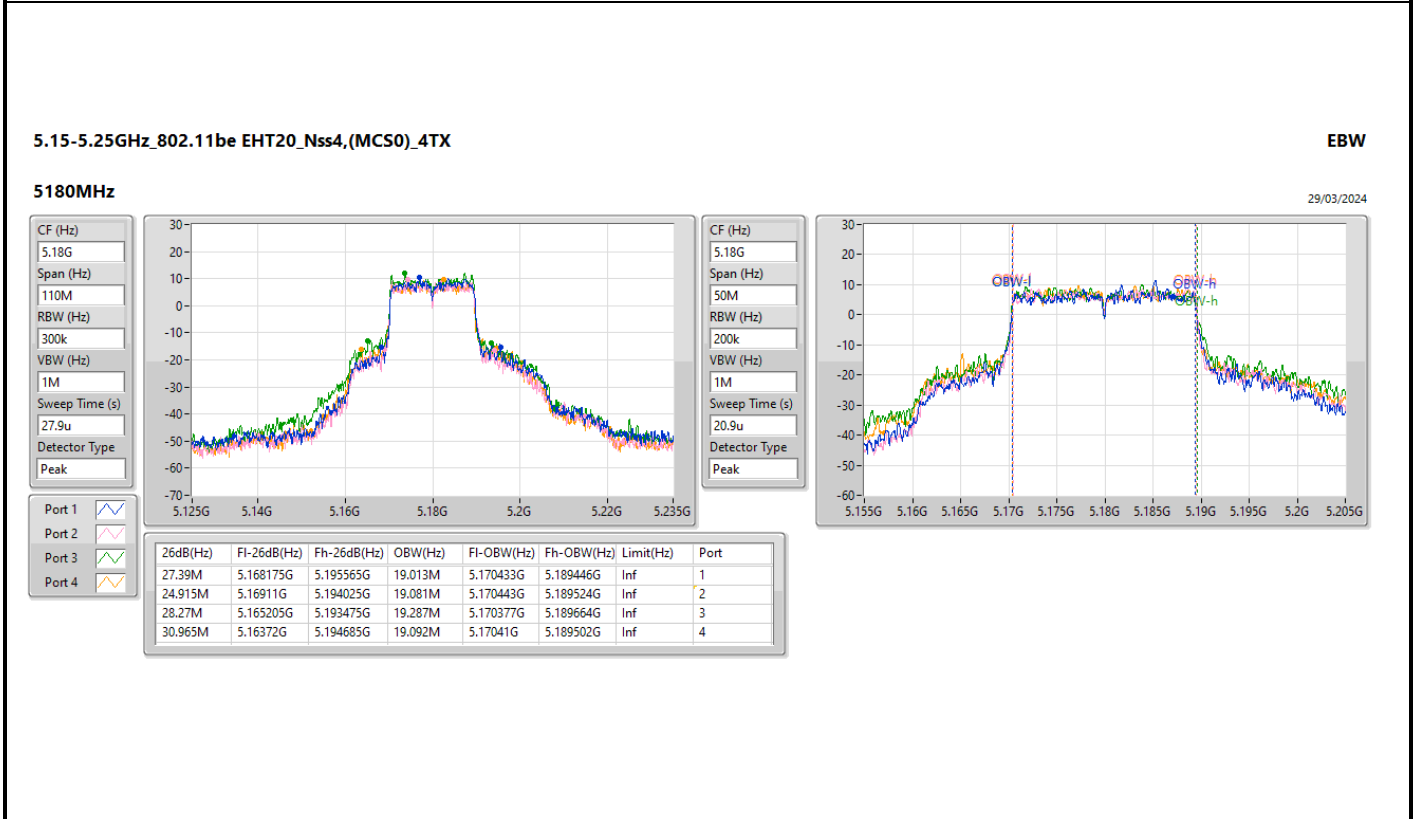
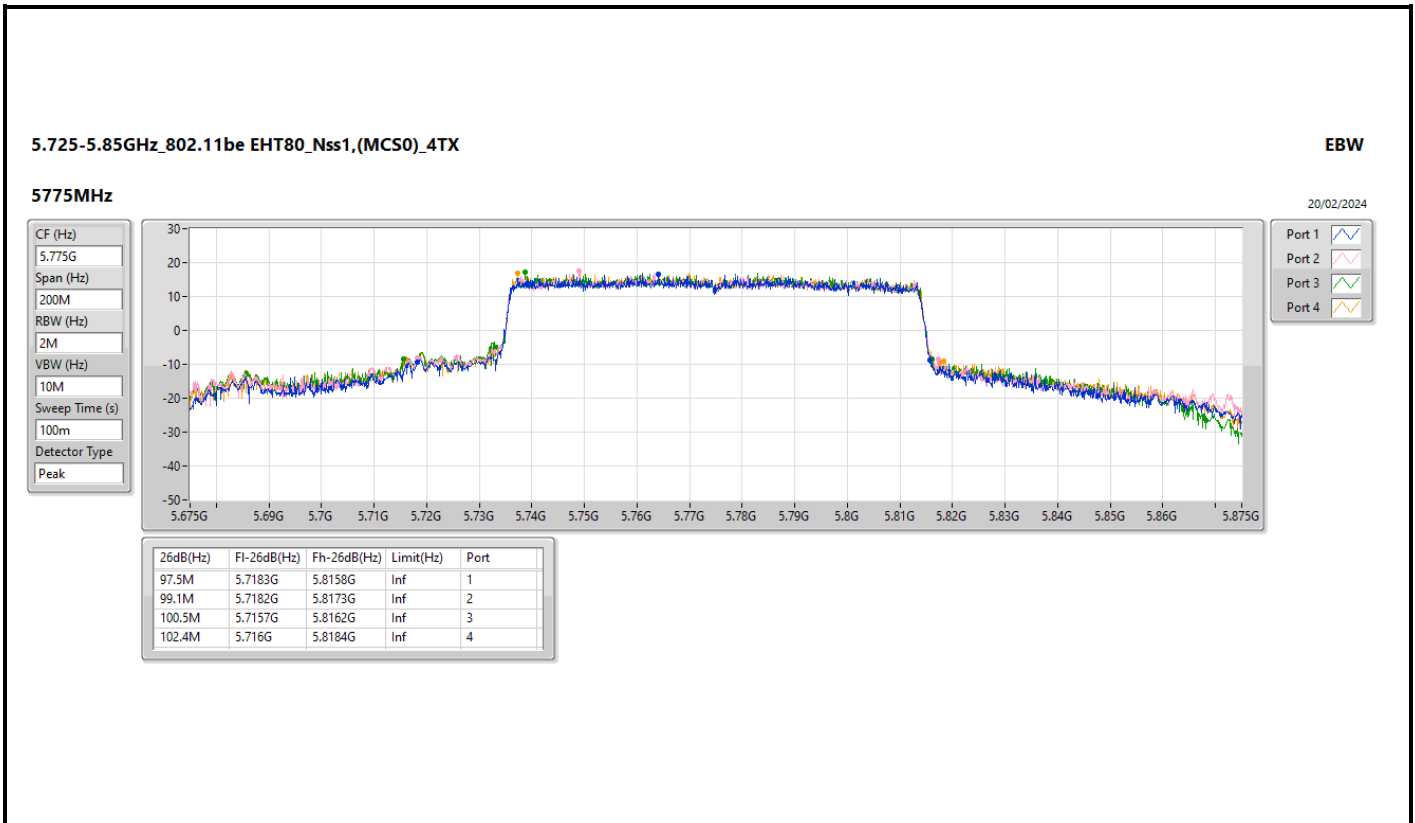
Port 1 

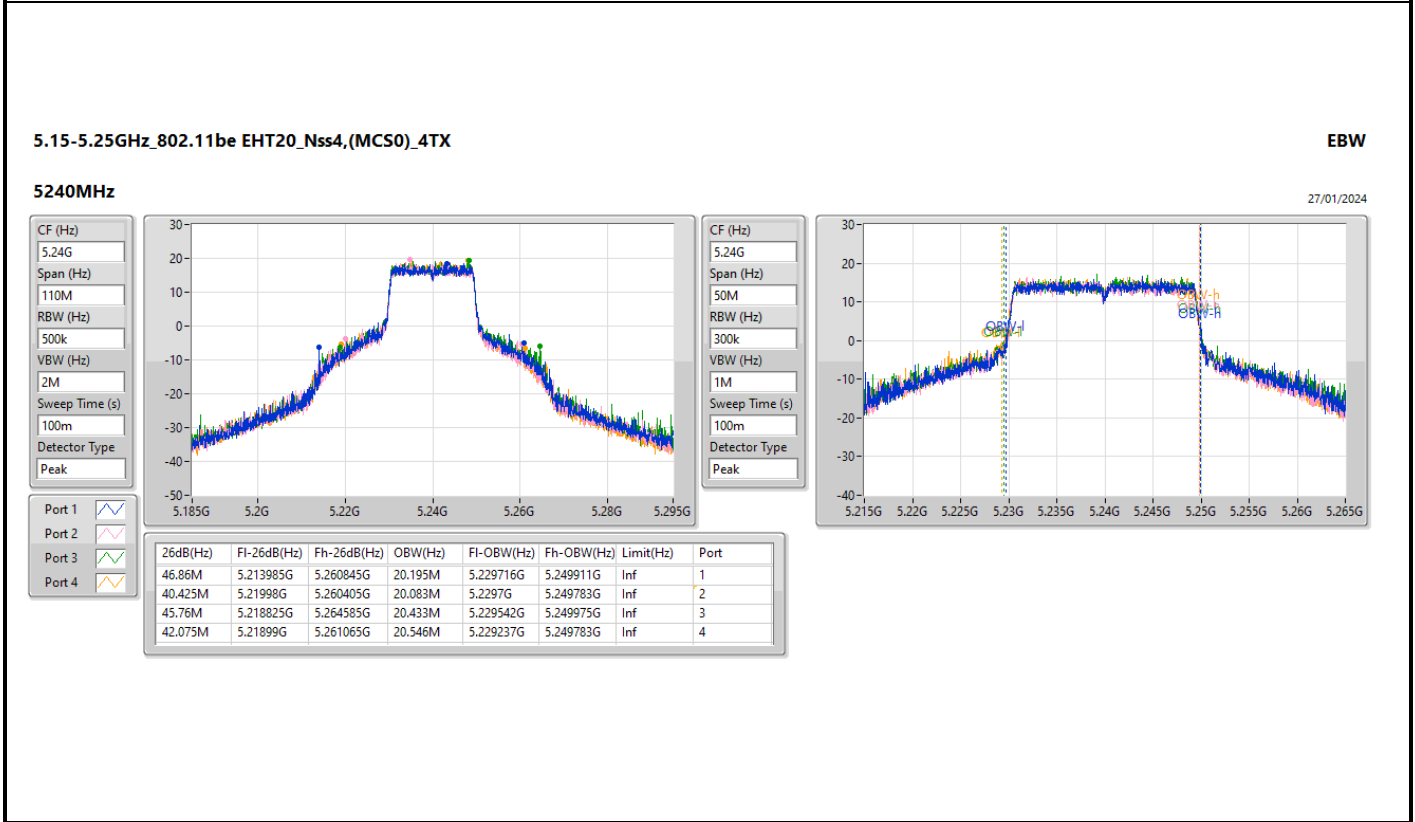
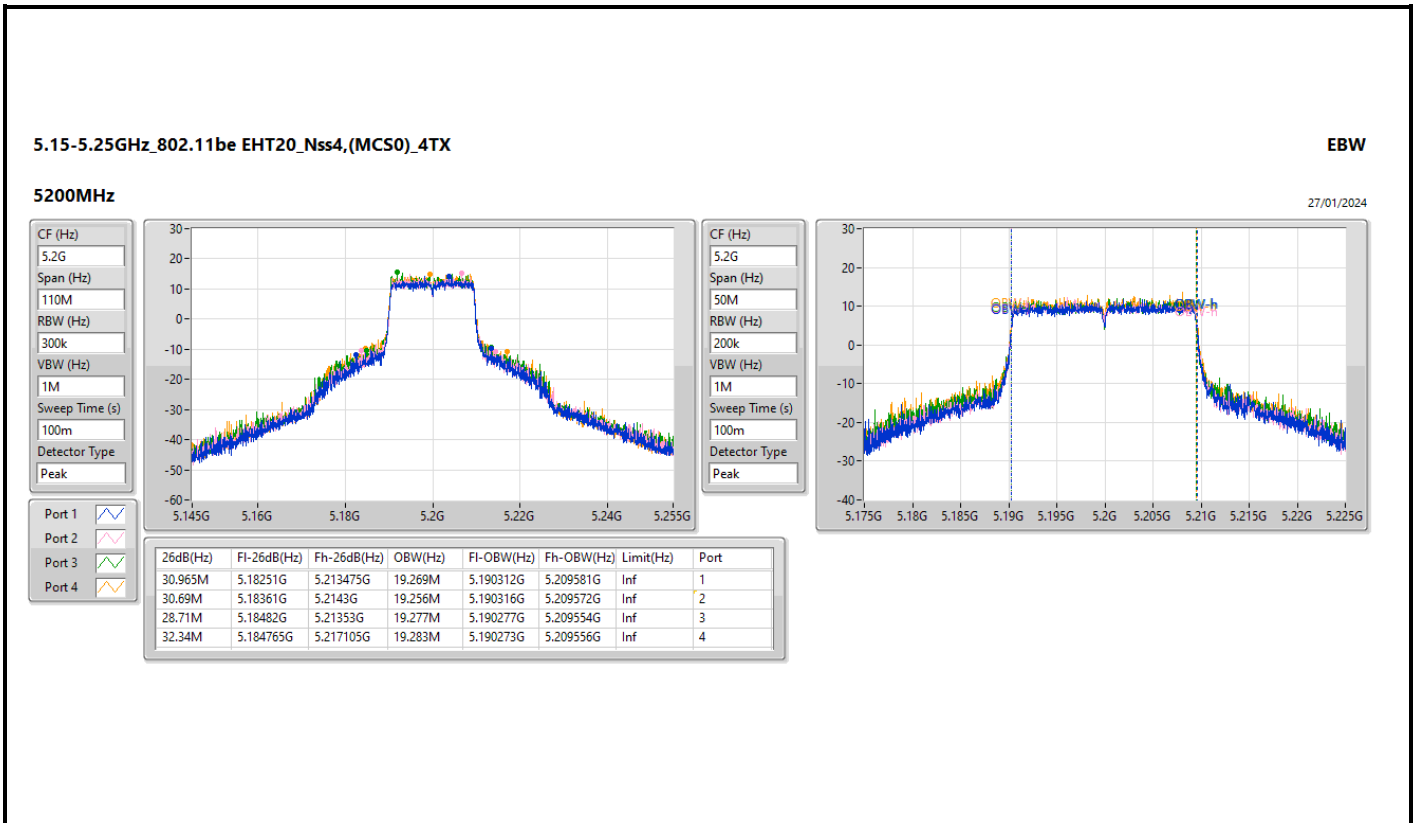
Port 2 

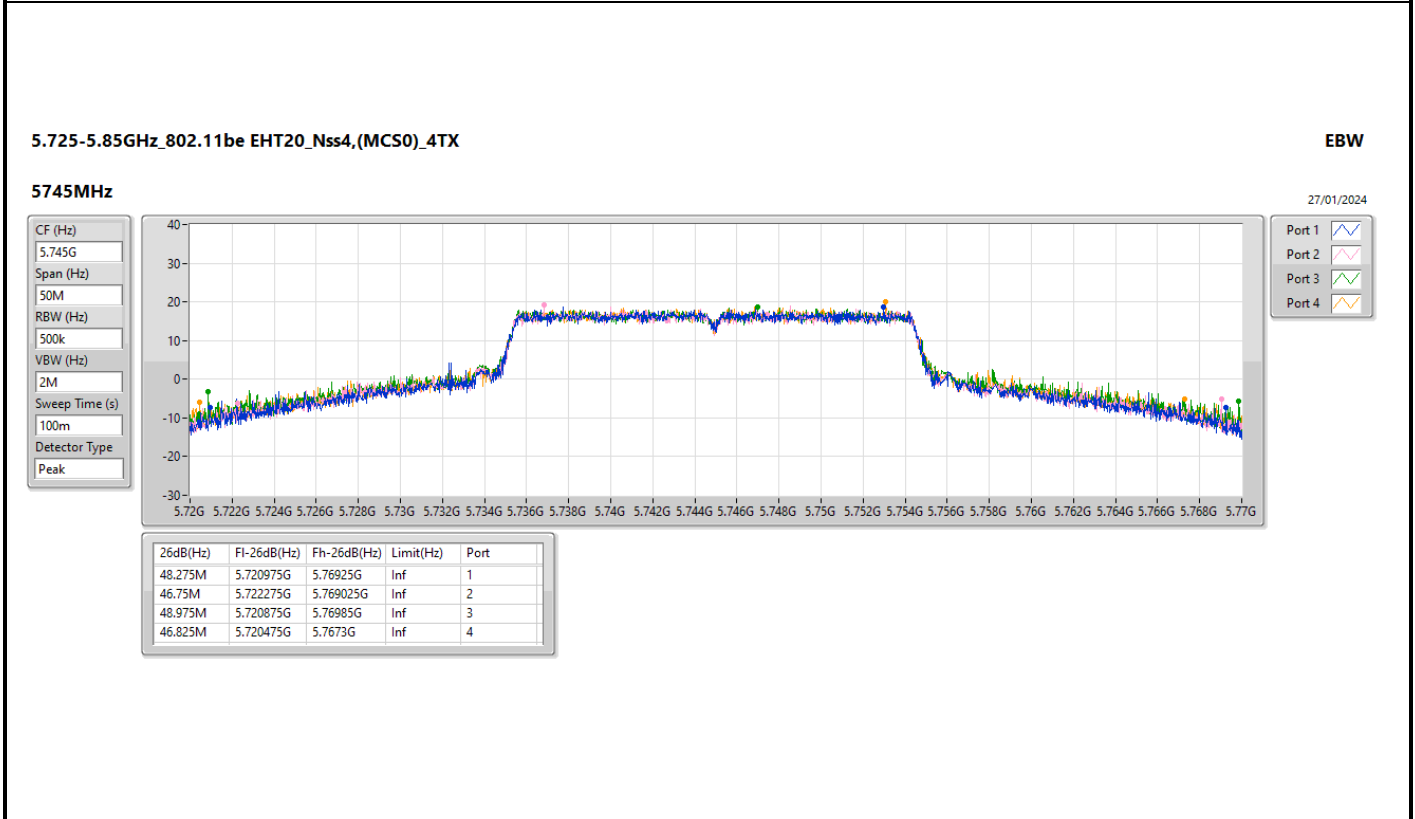
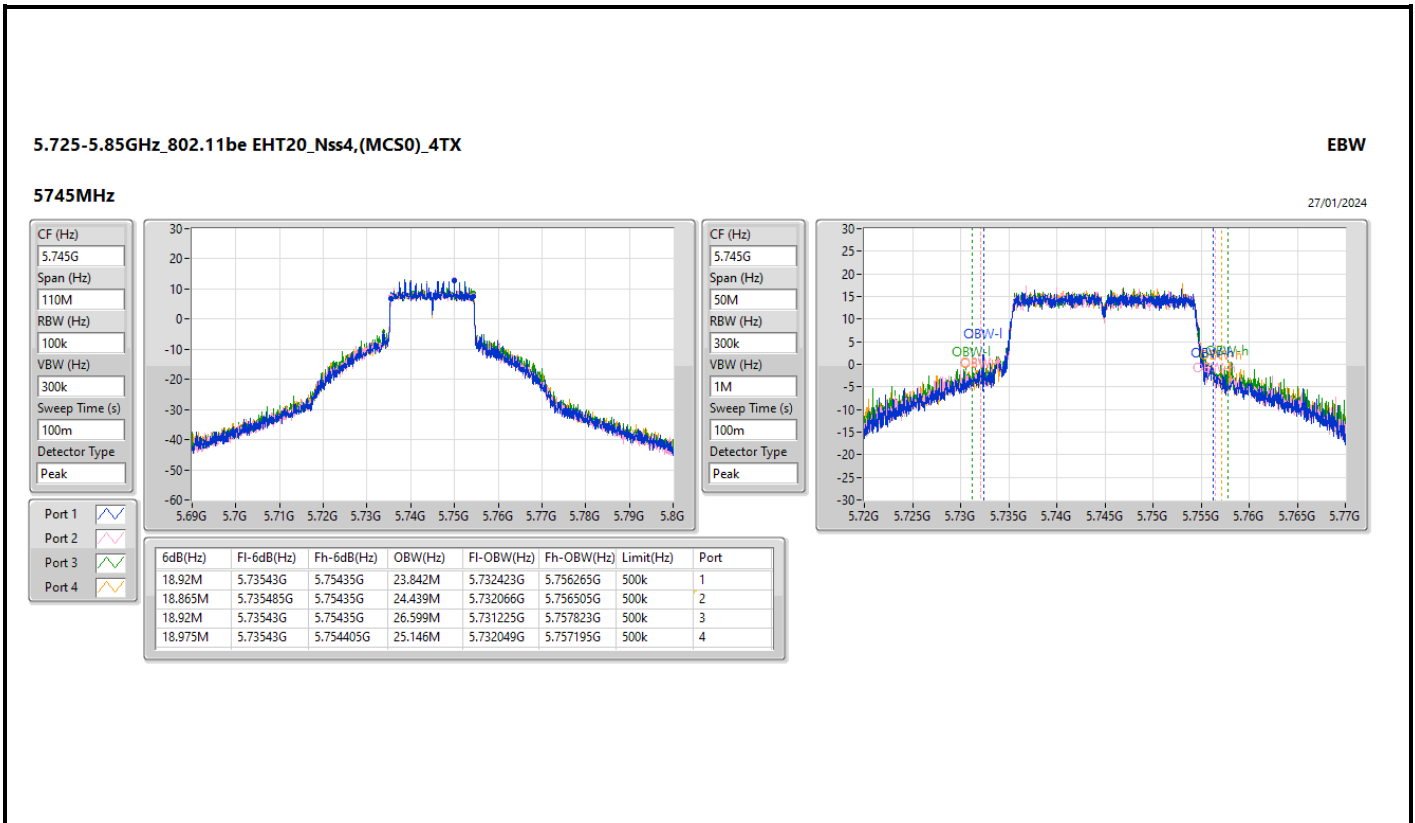
Port 3 

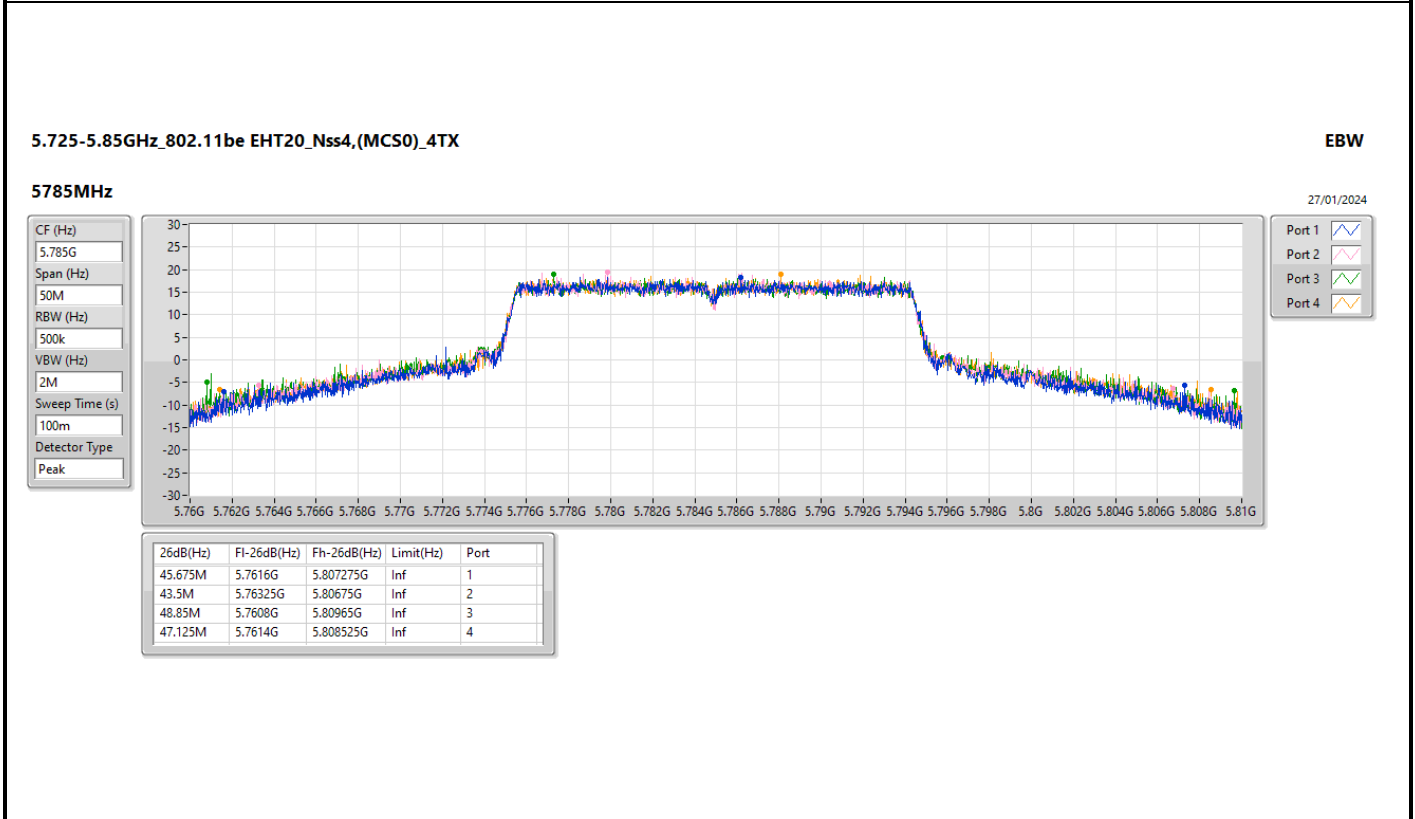
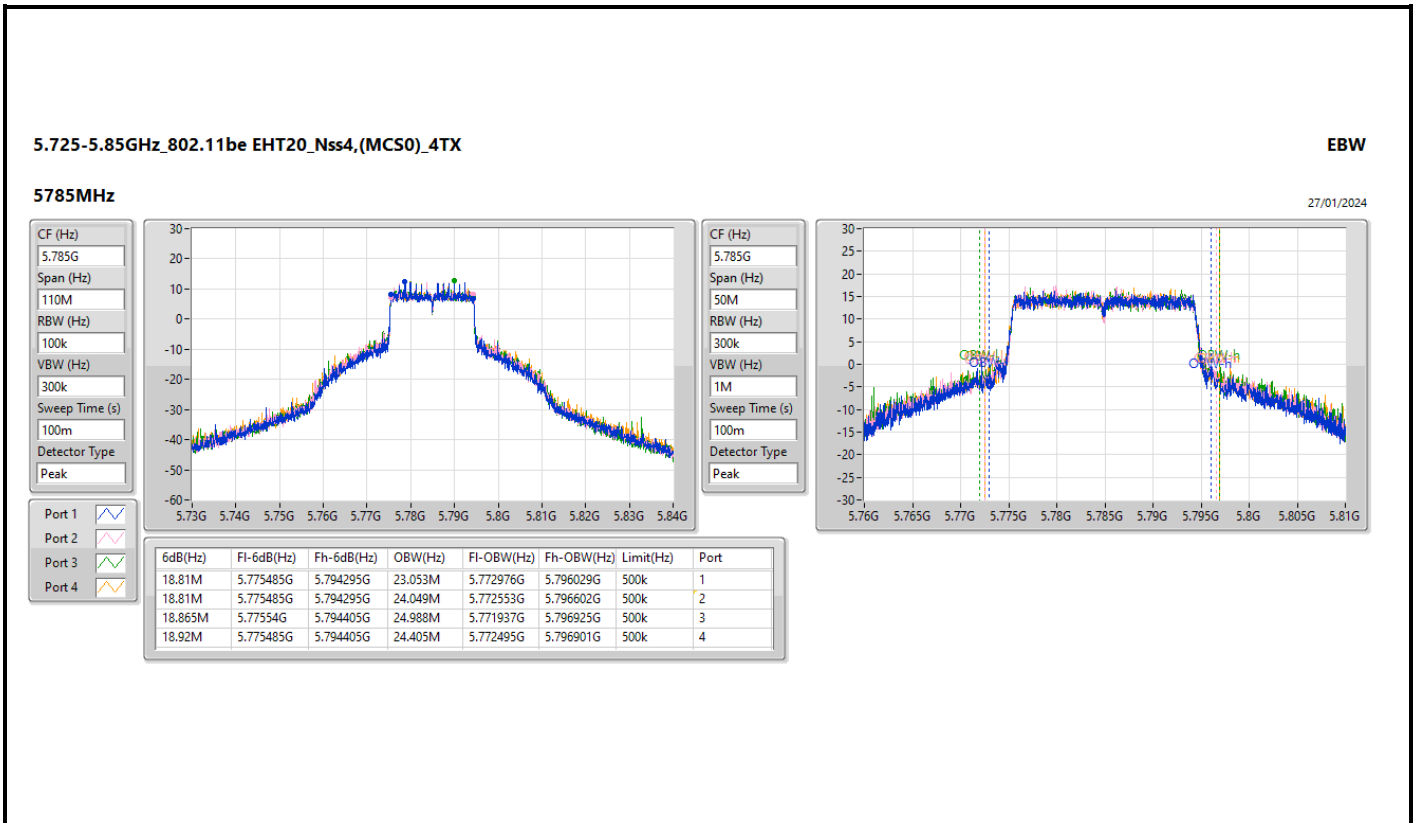
Port 4 

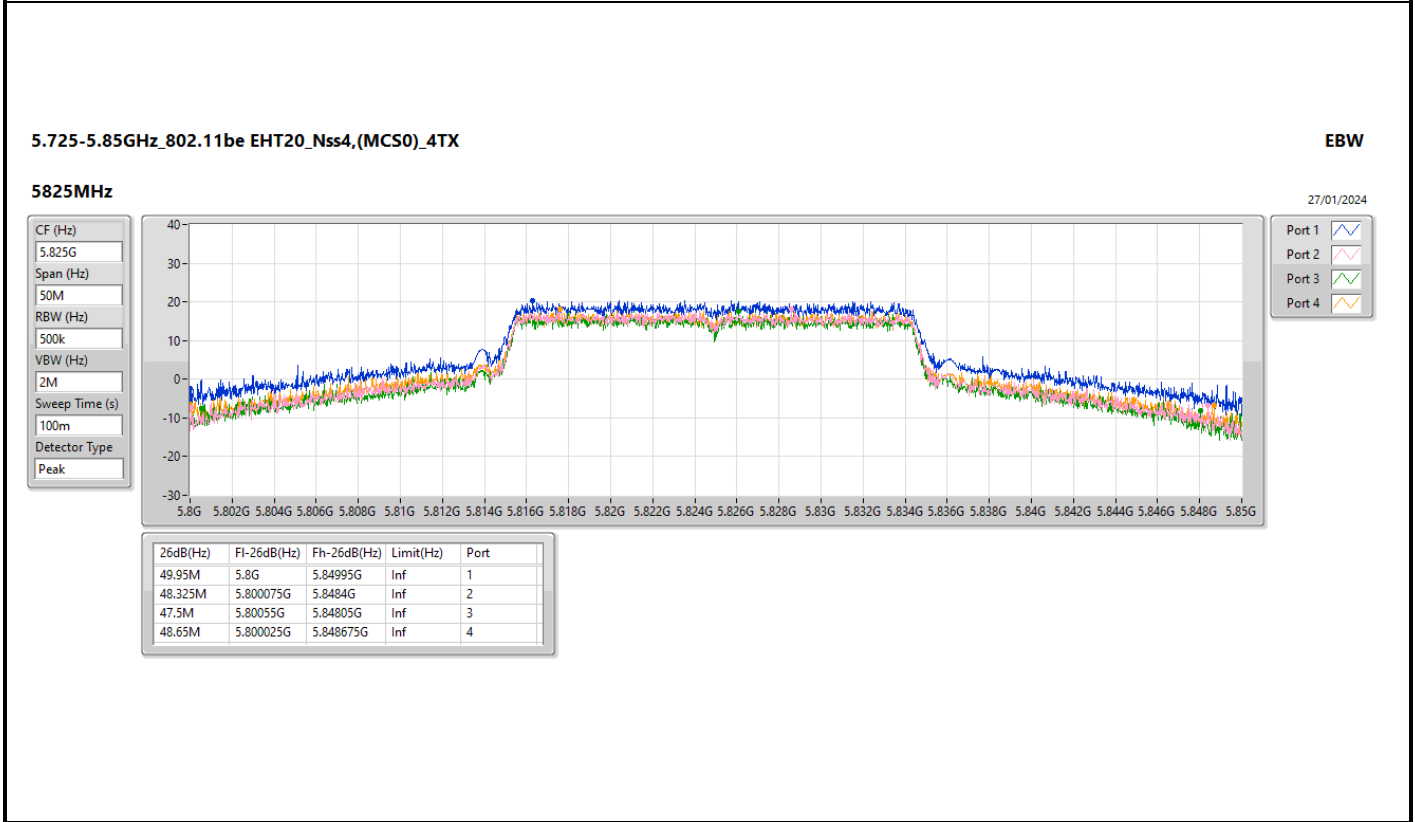
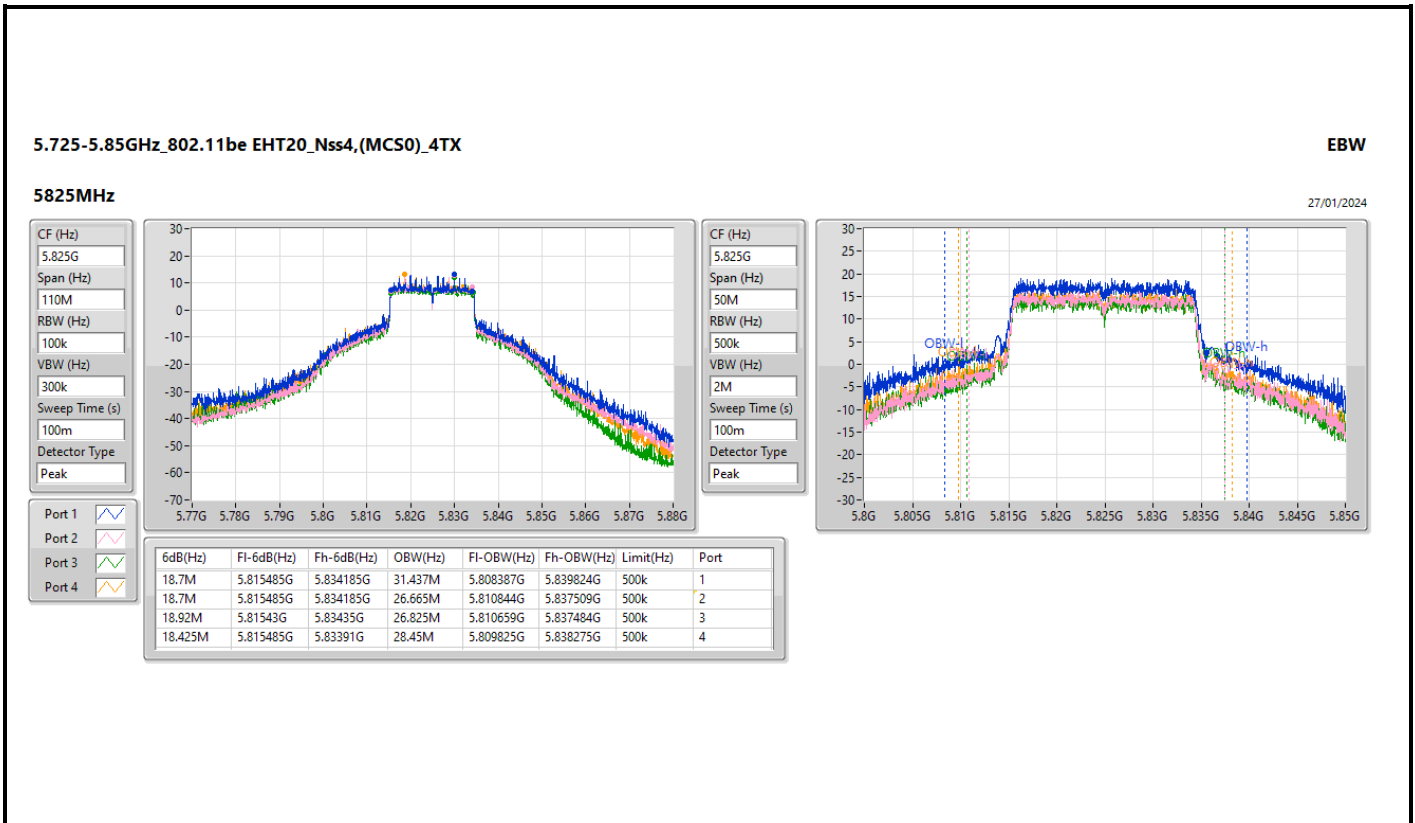
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
76.34M	5.73628G	5.81262G	77.49M	5.736019G	5.813509G	500k	1
76.12M	5.73628G	5.8124G	77.557M	5.735997G	5.813554G	500k	2
77.22M	5.73606G	5.81328G	77.608M	5.735974G	5.813582G	500k	3
76.78M	5.73606G	5.81284G	77.588M	5.735997G	5.813585G	500k	4









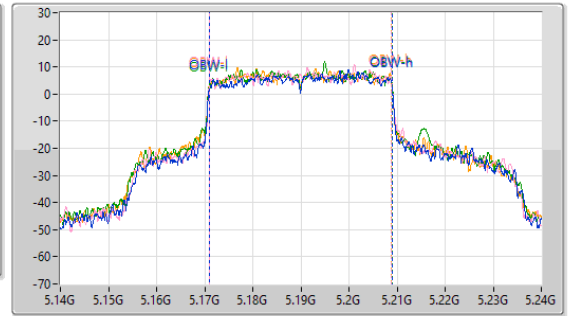
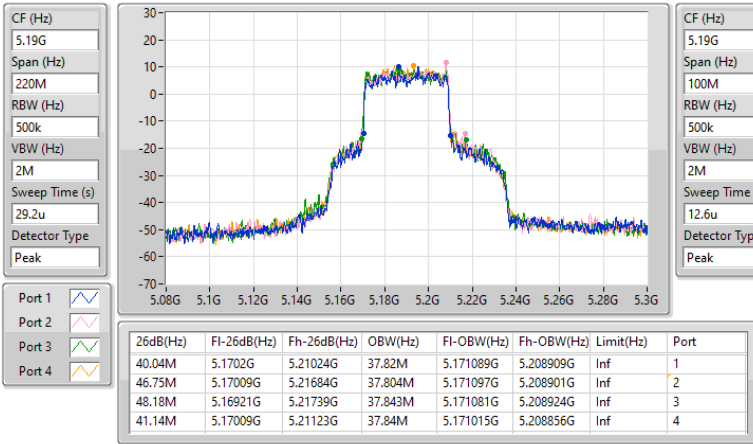


5.15-5.25GHz_802.11be EHT40_Nss4,(MCS0)_4TX

EBW

5190MHz

29/03/2024

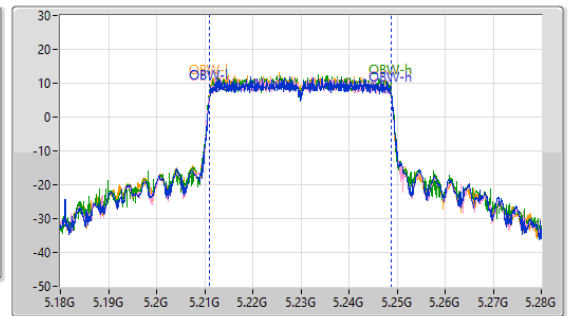
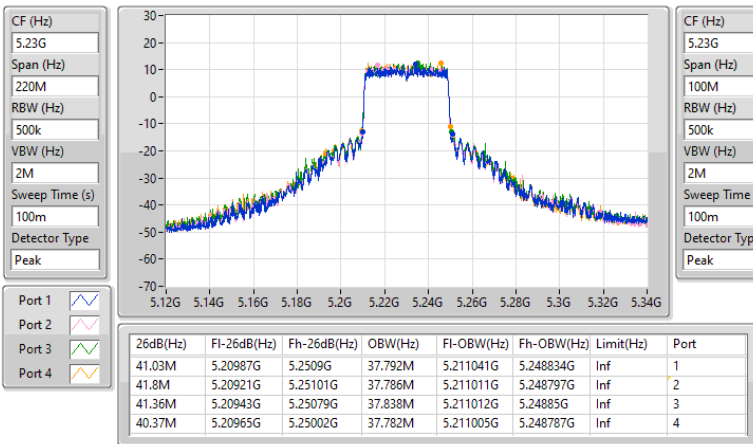


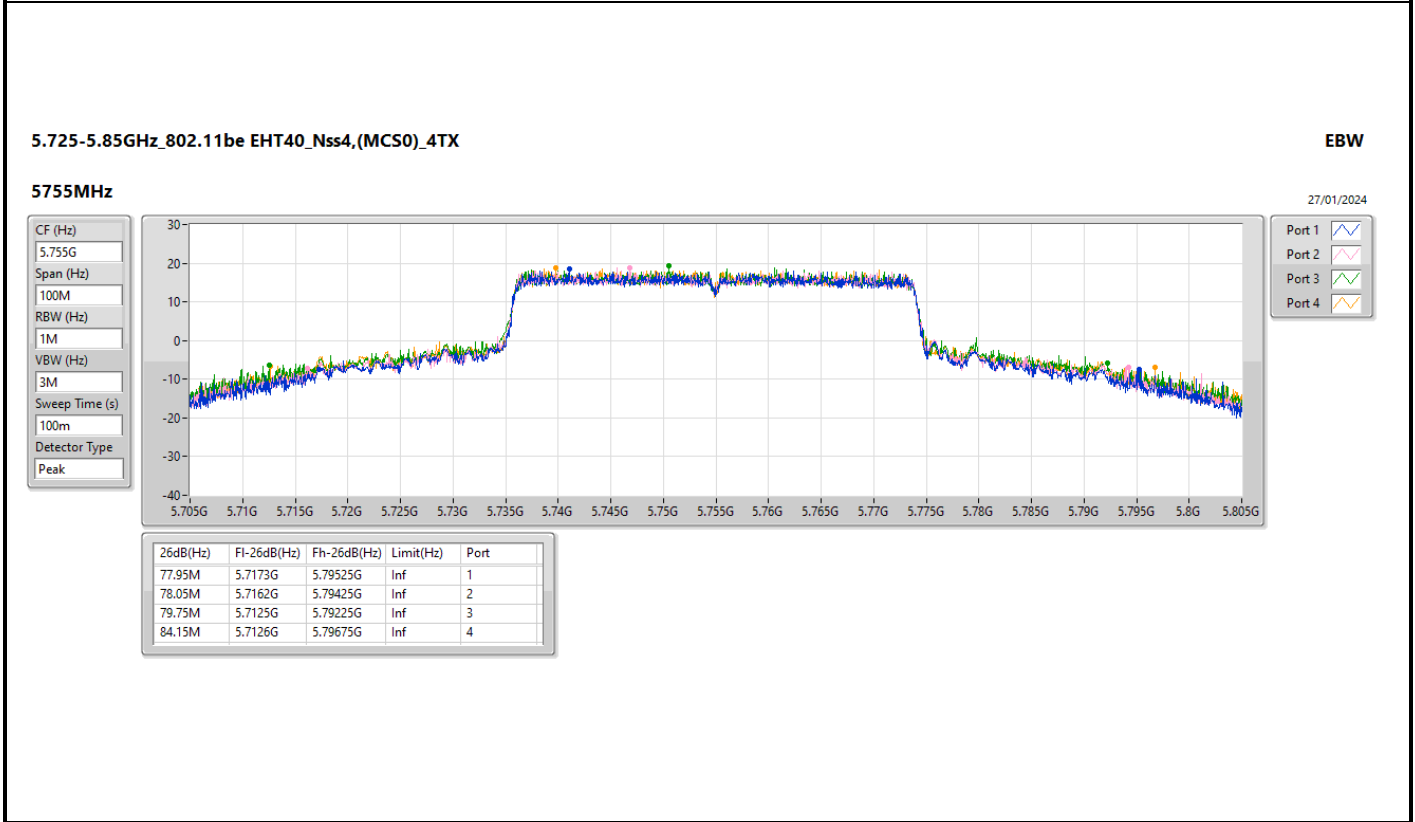
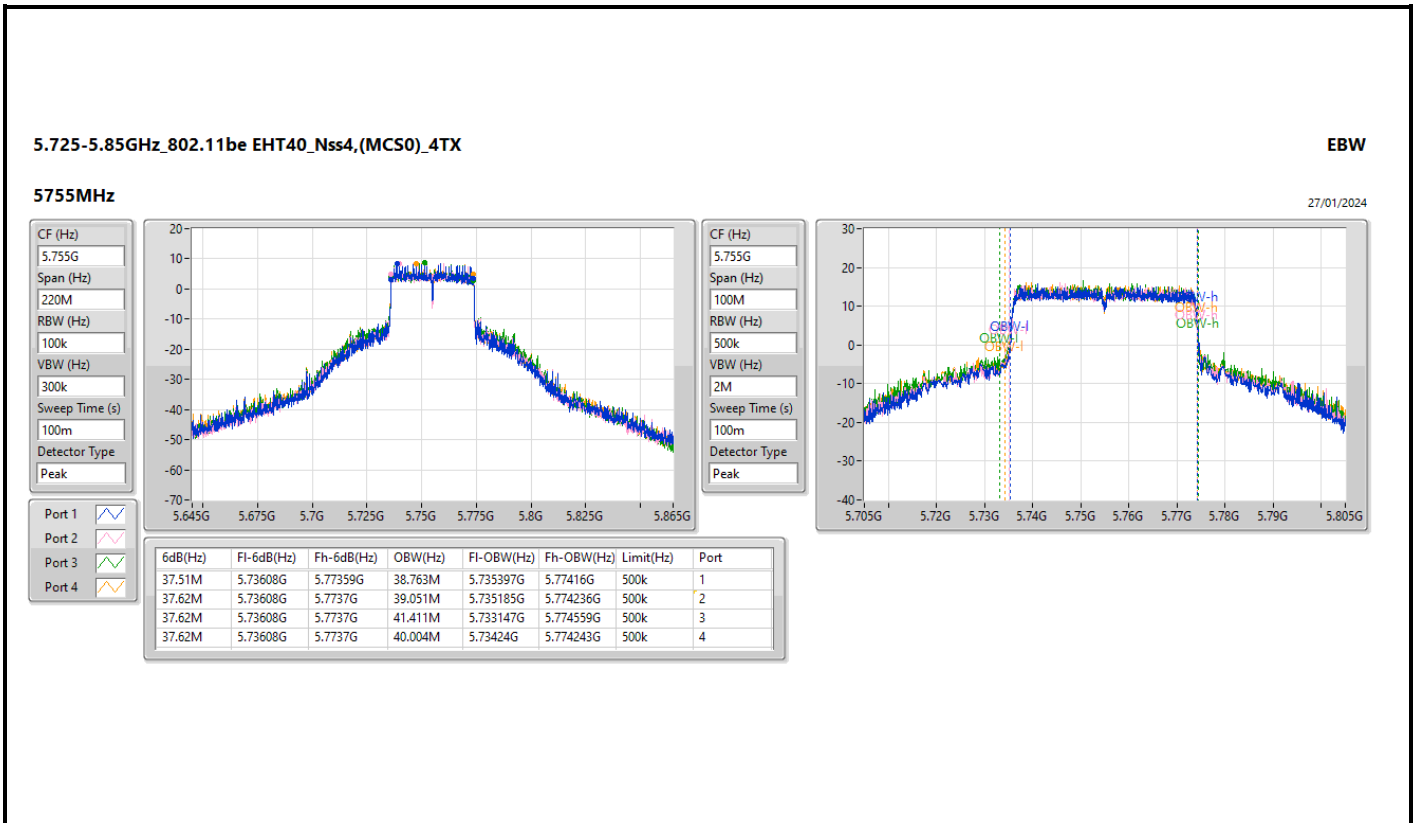
5.15-5.25GHz_802.11be EHT40_Nss4,(MCS0)_4TX

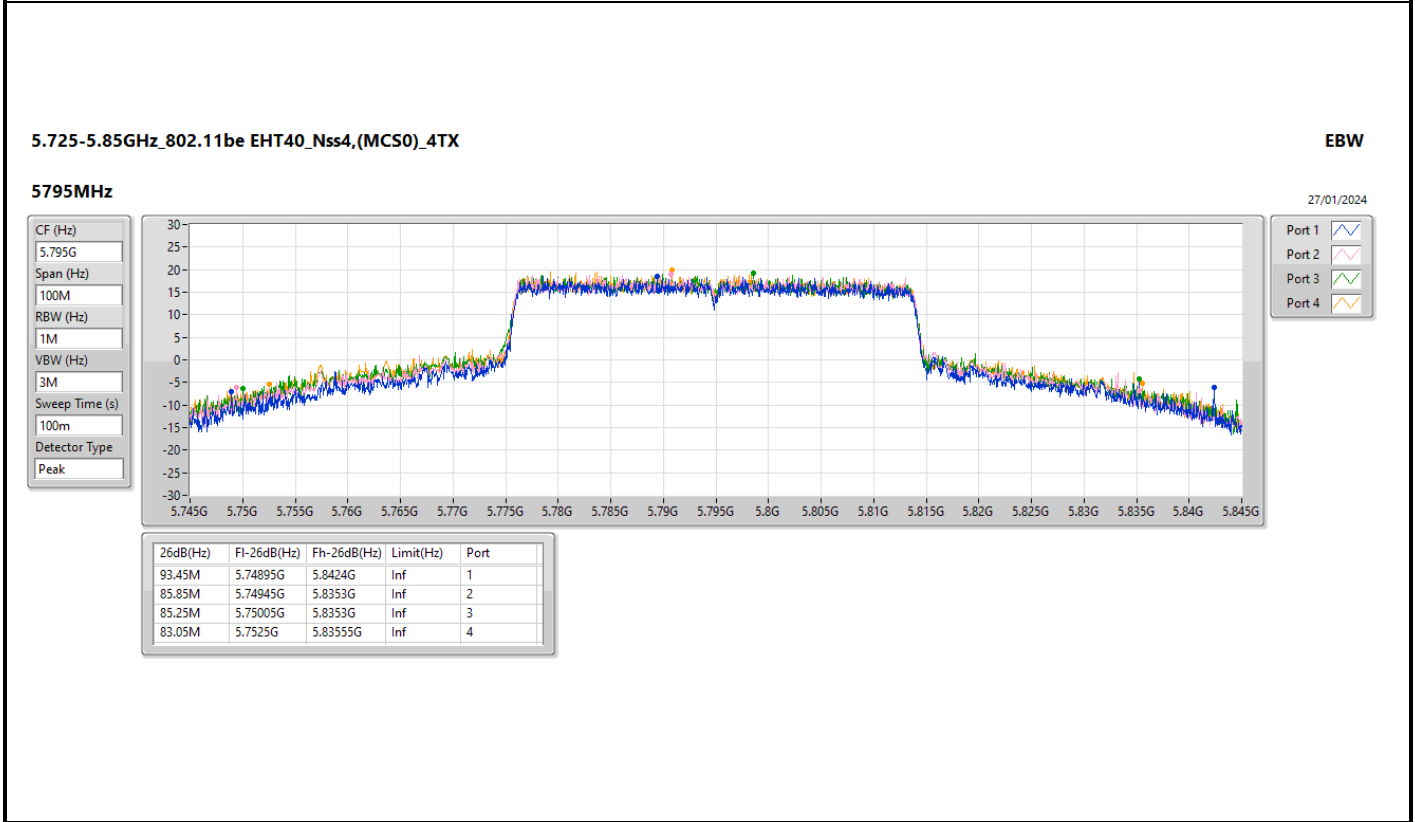
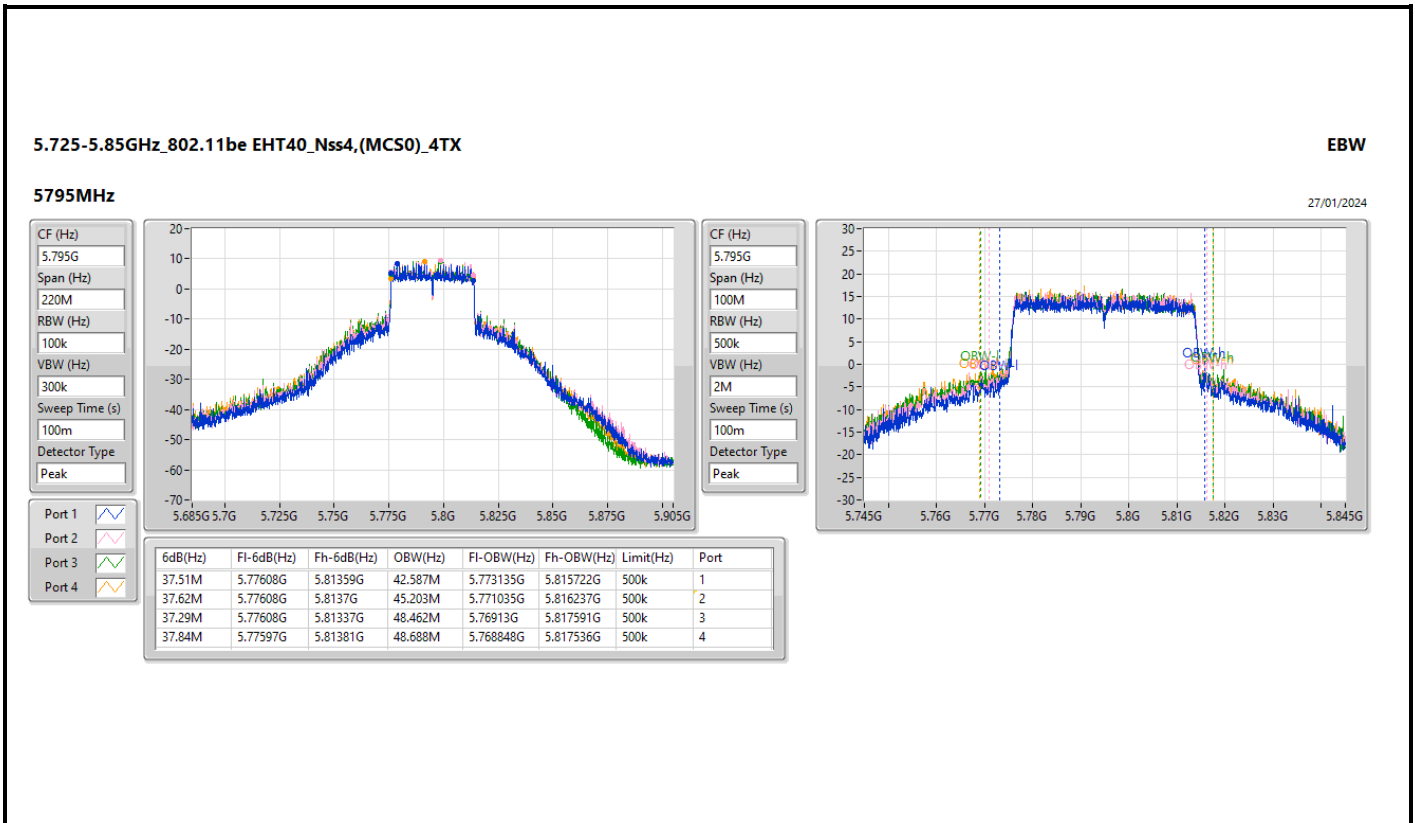
EBW

5230MHz

27/01/2024







5.15-5.25GHz_802.11be EHT80_Nss4,(MCS0)_4TX

EBW

5210MHz

29/03/2024

CF (Hz)
5.21G

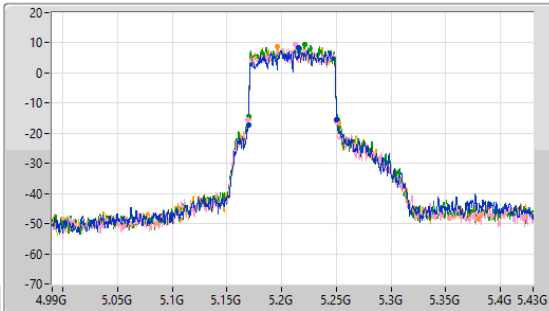
Span (Hz)
440M

RBW (Hz)
1M

VBW (Hz)
3M

Sweep Time (s)
29.3u

Detector Type
Peak



CF (Hz)
5.21G

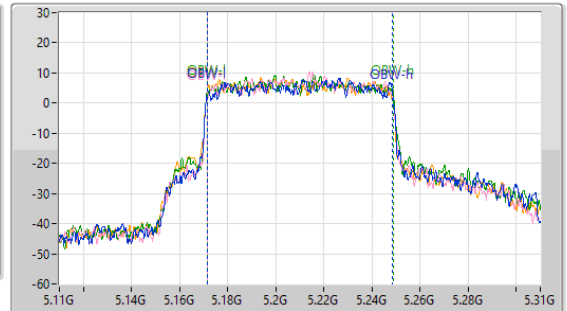
Span (Hz)
200M

RBW (Hz)
1M

VBW (Hz)
3M

Sweep Time (s)
14.6u

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
80.96M	5.16952G	5.25048G	77.136M	5.171446G	5.248582G	Inf	1
81.4M	5.16908G	5.25048G	76.712M	5.171637G	5.248349G	Inf	2
81.4M	5.16952G	5.25092G	77.238M	5.171495G	5.248733G	Inf	3
82.72M	5.16974G	5.25246G	77.068M	5.171405G	5.248473G	Inf	4

5.725-5.85GHz_802.11be EHT80_Nss4,(MCS0)_4TX

EBW

5775MHz

20/02/2024

CF (Hz)
5.775G

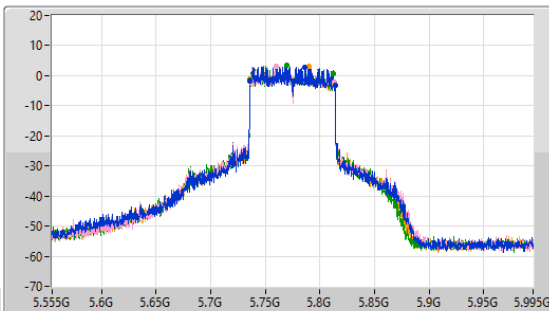
Span (Hz)
440M

RBW (Hz)
100k

VBW (Hz)
300k

Sweep Time (s)
100m

Detector Type
Peak



CF (Hz)
5.775G

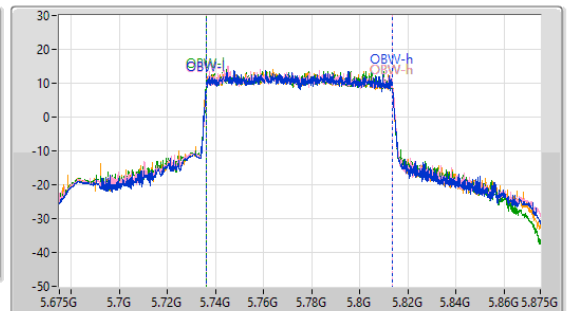
Span (Hz)
200M

RBW (Hz)
1M

VBW (Hz)
3M

Sweep Time (s)
100m

Detector Type
Peak



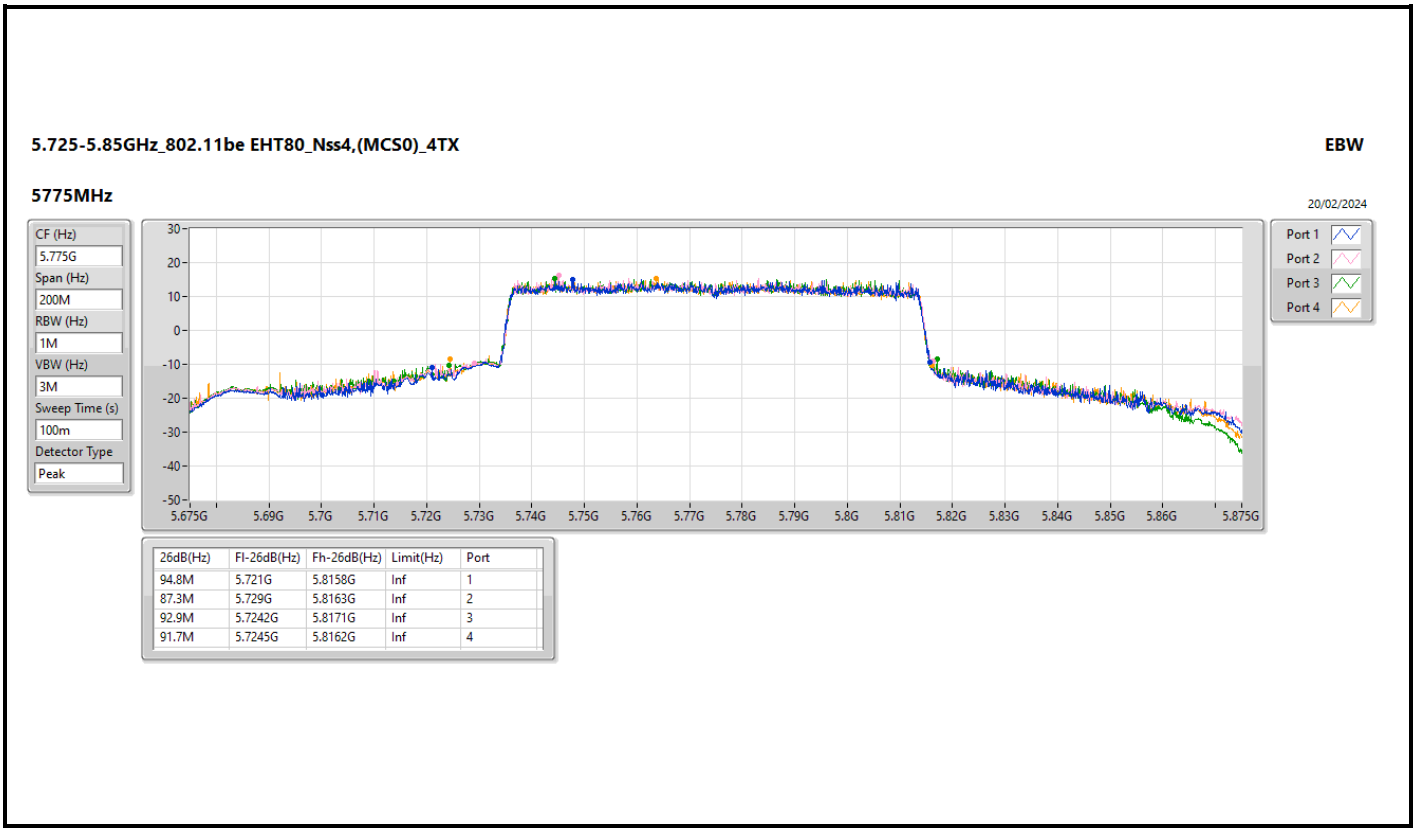
Port 1

Port 2

Port 3

Port 4

6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
77.44M	5.73628G	5.81372G	77.47M	5.736021G	5.813491G	500k	1
76.56M	5.73672G	5.81328G	77.547M	5.736077G	5.813624G	500k	2
76.12M	5.73628G	5.8124G	77.388M	5.736081G	5.813469G	500k	3
76.78M	5.73606G	5.81284G	77.567M	5.735957G	5.813524G	500k	4





Summary

Mode	Total Power (dBm)	Total Power (W)
5.15-5.25GHz	-	-
802.11a_Nss1,(6Mbps)_2TX	25.85	0.38459
802.11be EHT20_Nss1,(MCS0)_2TX	25.10	0.32359
802.11be EHT20_Nss2,(MCS0)_2TX	24.99	0.31550
802.11be EHT20-BF_Nss1,(MCS0)_2TX	25.10	0.32359
802.11be EHT40_Nss1,(MCS0)_2TX	23.96	0.24889
802.11be EHT40_Nss2,(MCS0)_2TX	24.10	0.25704
802.11be EHT40-BF_Nss1,(MCS0)_2TX	23.96	0.24889
802.11be EHT80_Nss1,(MCS0)_2TX	21.27	0.13397
802.11be EHT80_Nss2,(MCS0)_2TX	20.66	0.11641
802.11be EHT80-BF_Nss1,(MCS0)_2TX	21.27	0.13397

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11a_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
5180MHz	Pass	3.07	19.97	19.70	22.85	30.00
5200MHz	Pass	3.07	23.12	22.55	25.85	30.00
5240MHz	Pass	3.07	22.28	22.01	25.16	30.00
802.11be EHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	3.07	18.65	18.50	21.59	30.00
5200MHz	Pass	3.07	22.19	21.99	25.10	30.00
5240MHz	Pass	3.07	22.06	21.98	25.03	30.00
802.11be EHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5190MHz	Pass	3.07	18.31	18.28	21.31	30.00
5230MHz	Pass	3.07	21.01	20.88	23.96	30.00
802.11be EHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5210MHz	Pass	3.07	18.19	18.33	21.27	30.00
802.11be EHT20_Nss2,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	3.07	18.29	18.23	21.27	30.00
5200MHz	Pass	3.07	21.42	21.19	24.32	30.00
5240MHz	Pass	3.07	21.86	22.09	24.99	30.00
802.11be EHT40_Nss2,(MCS0)_2TX	-	-	-	-	-	-
5190MHz	Pass	3.07	18.73	18.63	21.69	30.00
5230MHz	Pass	3.07	21.03	21.14	24.10	30.00
802.11be EHT80_Nss2,(MCS0)_2TX	-	-	-	-	-	-
5210MHz	Pass	3.07	17.23	18.03	20.66	30.00
802.11be EHT20-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	4.51	18.65	18.50	21.59	30.00
5200MHz	Pass	4.51	22.19	21.99	25.10	30.00
5240MHz	Pass	4.51	22.06	21.98	25.03	30.00
802.11be EHT40-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5190MHz	Pass	4.51	18.31	18.28	21.31	30.00
5230MHz	Pass	4.51	21.01	20.88	23.96	30.00
802.11be EHT80-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5210MHz	Pass	4.51	18.19	18.33	21.27	30.00

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



Summary

Mode	Total Power (dBm)	Total Power (W)
5.15-5.25GHz	-	-
802.11a_Nss1,(6Mbps)_2TX	25.79	0.37931
802.11be EHT20_Nss1,(MCS0)_2TX	24.81	0.30269
802.11be EHT20_Nss2,(MCS0)_2TX	24.63	0.29040
802.11be EHT20-BF_Nss1,(MCS0)_2TX	24.81	0.30269
802.11be EHT40_Nss1,(MCS0)_2TX	24.02	0.25235
802.11be EHT40_Nss2,(MCS0)_2TX	24.18	0.26182
802.11be EHT40-BF_Nss1,(MCS0)_2TX	24.02	0.25235
802.11be EHT80_Nss1,(MCS0)_2TX	21.86	0.15346
802.11be EHT80_Nss2,(MCS0)_2TX	22.44	0.17539
802.11be EHT80-BF_Nss1,(MCS0)_2TX	21.86	0.15346
5.725-5.85GHz	-	-
802.11a_Nss1,(6Mbps)_2TX	26.85	0.48417
802.11be EHT20_Nss1,(MCS0)_2TX	27.06	0.50816
802.11be EHT20_Nss2,(MCS0)_2TX	27.81	0.60395
802.11be EHT20-BF_Nss1,(MCS0)_2TX	27.06	0.50816
802.11be EHT40_Nss1,(MCS0)_2TX	26.47	0.44361
802.11be EHT40_Nss2,(MCS0)_2TX	26.63	0.46026
802.11be EHT40-BF_Nss1,(MCS0)_2TX	26.47	0.44361
802.11be EHT80_Nss1,(MCS0)_2TX	22.99	0.19907
802.11be EHT80_Nss2,(MCS0)_2TX	21.36	0.13677
802.11be EHT80-BF_Nss1,(MCS0)_2TX	22.99	0.19907



Average Power_Mode 2

Appendix C.2

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11a_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
5180MHz	Pass	4.88	17.99	18.27	21.14	30.00
5200MHz	Pass	4.88	21.50	21.81	24.67	30.00
5240MHz	Pass	4.88	22.92	22.63	25.79	30.00
5745MHz	Pass	5.29	23.33	23.16	26.26	30.00
5785MHz	Pass	5.29	23.52	23.92	26.73	30.00
5825MHz	Pass	5.29	23.70	23.97	26.85	30.00
802.11be EHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	4.88	20.82	21.22	24.03	30.00
5200MHz	Pass	4.88	21.68	21.92	24.81	30.00
5240MHz	Pass	4.88	20.86	20.76	23.82	30.00
5745MHz	Pass	5.29	23.41	23.66	26.55	30.00
5785MHz	Pass	5.29	24.09	24.01	27.06	30.00
5825MHz	Pass	5.29	23.63	23.77	26.71	30.00
802.11be EHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5190MHz	Pass	4.88	19.57	19.99	22.80	30.00
5230MHz	Pass	4.88	20.85	21.17	24.02	30.00
5755MHz	Pass	5.29	22.70	22.80	25.76	30.00
5795MHz	Pass	5.29	23.28	23.63	26.47	30.00
802.11be EHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5210MHz	Pass	4.88	18.62	19.06	21.86	30.00
5775MHz	Pass	5.29	19.69	20.25	22.99	30.00
802.11be EHT20_Nss2,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	4.88	21.36	21.66	24.52	30.00
5200MHz	Pass	4.88	21.44	21.80	24.63	30.00
5240MHz	Pass	4.88	20.19	20.26	23.24	30.00
5745MHz	Pass	5.29	23.94	23.90	26.93	30.00
5785MHz	Pass	5.29	23.84	24.06	26.96	30.00
5825MHz	Pass	5.29	24.85	24.75	27.81	30.00
802.11be EHT40_Nss2,(MCS0)_2TX	-	-	-	-	-	-
5190MHz	Pass	4.88	20.00	20.32	23.17	30.00
5230MHz	Pass	4.88	21.09	21.25	24.18	30.00
5755MHz	Pass	5.29	22.79	22.88	25.85	30.00
5795MHz	Pass	5.29	23.51	23.73	26.63	30.00
802.11be EHT80_Nss2,(MCS0)_2TX	-	-	-	-	-	-
5210MHz	Pass	4.88	19.25	19.61	22.44	30.00
5775MHz	Pass	5.29	18.12	18.57	21.36	30.00
802.11be EHT20-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	7.09	20.82	21.22	24.03	28.91
5200MHz	Pass	7.09	21.68	21.92	24.81	28.91
5240MHz	Pass	7.09	20.86	20.76	23.82	28.91
5745MHz	Pass	5.81	23.41	23.66	26.55	30.00
5785MHz	Pass	5.81	24.09	24.01	27.06	30.00
5825MHz	Pass	5.81	23.63	23.77	26.71	30.00
802.11be EHT40-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5190MHz	Pass	7.09	19.57	19.99	22.80	28.91
5230MHz	Pass	7.09	20.85	21.17	24.02	28.91
5755MHz	Pass	5.81	22.70	22.80	25.76	30.00
5795MHz	Pass	5.81	23.28	23.63	26.47	30.00
802.11be EHT80-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5210MHz	Pass	7.09	18.62	19.06	21.86	28.91
5775MHz	Pass	5.81	19.69	20.25	22.99	30.00

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



Summary

Mode	Total Power (dBm)	Total Power (W)
5.15-5.25GHz	-	-
802.11a_Nss1,(6Mbps)_4TX	27.94	0.62230
802.11be EHT20_Nss1,(MCS0)_4TX	28.42	0.69502
802.11be EHT20_Nss4,(MCS0)_4TX	29.51	0.89331
802.11be EHT20-BF_Nss1,(MCS0)_4TX	27.48	0.55976
802.11be EHT40_Nss1,(MCS0)_4TX	26.59	0.45604
802.11be EHT40_Nss4,(MCS0)_4TX	25.39	0.34594
802.11be EHT40-BF_Nss1,(MCS0)_4TX	26.59	0.45604
802.11be EHT80_Nss1,(MCS0)_4TX	24.99	0.31550
802.11be EHT80_Nss4,(MCS0)_4TX	24.54	0.28445
802.11be EHT80-BF_Nss1,(MCS0)_4TX	24.99	0.31550
5.725-5.85GHz	-	-
802.11a_Nss1,(6Mbps)_4TX	29.86	0.96828
802.11be EHT20_Nss1,(MCS0)_4TX	29.89	0.97499
802.11be EHT20_Nss4,(MCS0)_4TX	29.99	0.99770
802.11be EHT20-BF_Nss1,(MCS0)_4TX	28.46	0.70146
802.11be EHT40_Nss1,(MCS0)_4TX	29.86	0.96828
802.11be EHT40_Nss4,(MCS0)_4TX	29.78	0.95060
802.11be EHT40-BF_Nss1,(MCS0)_4TX	28.43	0.69663
802.11be EHT80_Nss1,(MCS0)_4TX	26.43	0.43954
802.11be EHT80_Nss4,(MCS0)_4TX	26.55	0.45186
802.11be EHT80-BF_Nss1,(MCS0)_4TX	26.43	0.43954



Average Power_Mode 3

Appendix C.3

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	4.88	18.39	18.72	19.39	19.70	25.10	30.00
5200MHz	Pass	4.88	21.44	21.61	21.97	22.42	27.90	30.00
5240MHz	Pass	4.88	21.83	21.92	22.17	21.75	27.94	30.00
5745MHz	Pass	5.29	23.76	23.65	23.98	23.97	29.86	30.00
5785MHz	Pass	5.29	23.58	23.85	23.87	23.75	29.78	30.00
5825MHz	Pass	5.29	23.94	23.49	22.83	23.99	29.61	30.00
802.11be EHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5180MHz	Pass	4.88	20.53	21.11	21.92	21.86	27.41	30.00
5200MHz	Pass	4.88	21.04	21.15	21.55	22.21	27.53	30.00
5240MHz	Pass	4.88	22.21	22.11	22.57	22.70	28.42	30.00
5745MHz	Pass	5.29	23.78	23.78	23.95	23.92	29.88	30.00
5785MHz	Pass	5.29	23.78	23.85	23.95	23.89	29.89	30.00
5825MHz	Pass	5.29	23.69	23.77	22.96	23.81	29.59	30.00
802.11be EHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5190MHz	Pass	4.88	18.28	18.64	19.22	19.24	24.88	30.00
5230MHz	Pass	4.88	19.99	20.47	20.88	20.89	26.59	30.00
5755MHz	Pass	5.29	23.00	22.98	23.37	23.24	29.17	30.00
5795MHz	Pass	5.29	23.56	23.84	23.89	24.04	29.86	30.00
802.11be EHT80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5210MHz	Pass	4.88	18.39	18.97	19.35	19.13	24.99	30.00
5775MHz	Pass	5.29	20.14	20.35	20.58	20.54	26.43	30.00
802.11be EHT20_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-
5180MHz	Pass	4.88	20.44	20.87	21.27	21.51	27.06	30.00
5200MHz	Pass	4.88	21.00	21.22	21.38	22.11	27.47	30.00
5240MHz	Pass	4.88	23.18	23.19	23.76	23.79	29.51	30.00
5745MHz	Pass	5.29	23.98	23.89	24.05	23.96	29.99	30.00
5785MHz	Pass	5.29	23.68	23.83	23.86	23.90	29.84	30.00
5825MHz	Pass	5.29	23.92	23.61	23.73	23.96	29.83	30.00
802.11be EHT40_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-
5190MHz	Pass	4.88	18.75	19.19	19.87	19.59	25.39	30.00
5230MHz	Pass	4.88	19.03	19.02	19.44	19.67	25.32	30.00
5755MHz	Pass	5.29	22.91	22.95	23.25	23.13	29.08	30.00
5795MHz	Pass	5.29	23.42	23.80	23.82	23.96	29.78	30.00
802.11be EHT80_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-
5210MHz	Pass	4.88	18.09	18.53	18.94	18.48	24.54	30.00
5775MHz	Pass	5.29	20.36	20.60	20.64	20.50	26.55	30.00
802.11be EHT20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5180MHz	Pass	8.49	20.53	21.11	21.92	21.86	27.41	27.51
5200MHz	Pass	8.49	20.77	20.88	21.32	21.97	27.28	27.51
5240MHz	Pass	8.49	21.25	21.14	21.49	21.90	27.48	27.51
5745MHz	Pass	7.52	22.37	22.36	22.53	22.50	28.46	28.48
5785MHz	Pass	7.52	22.10	22.42	22.19	22.44	28.31	28.48
5825MHz	Pass	7.52	22.09	22.38	22.08	22.41	28.26	28.48
802.11be EHT40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5190MHz	Pass	8.49	18.28	18.64	19.22	19.24	24.88	27.51
5230MHz	Pass	8.49	19.99	20.47	20.88	20.89	26.59	27.51
5755MHz	Pass	7.52	22.06	22.24	22.51	22.62	28.38	28.48
5795MHz	Pass	7.52	22.03	22.44	22.47	22.68	28.43	28.48
802.11be EHT80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5210MHz	Pass	8.49	18.39	18.97	19.35	19.13	24.99	27.51
5775MHz	Pass	7.52	20.14	20.35	20.58	20.54	26.43	28.48

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



Summary

Mode	PD (dBm/RBW)
5.15-5.25GHz	-
802.11a_Nss1,(6Mbps)_2TX	12.62
802.11be EHT20_Nss1,(MCS0)_2TX	11.19
802.11be EHT20_Nss2,(MCS0)_2TX	11.15
802.11be EHT40_Nss1,(MCS0)_2TX	7.33
802.11be EHT40_Nss2,(MCS0)_2TX	7.61
802.11be EHT80_Nss1,(MCS0)_2TX	1.96
802.11be EHT80_Nss2,(MCS0)_2TX	1.89

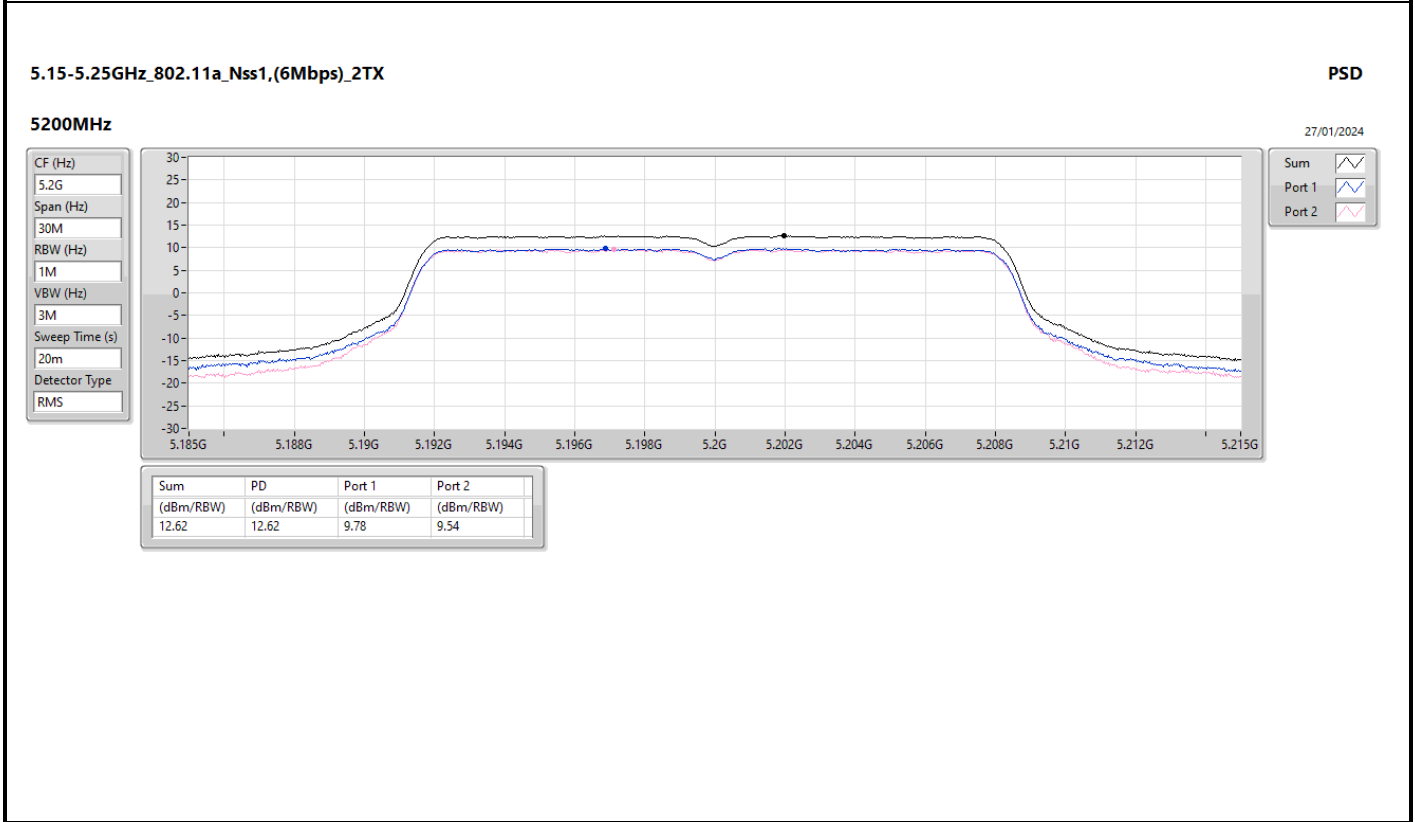
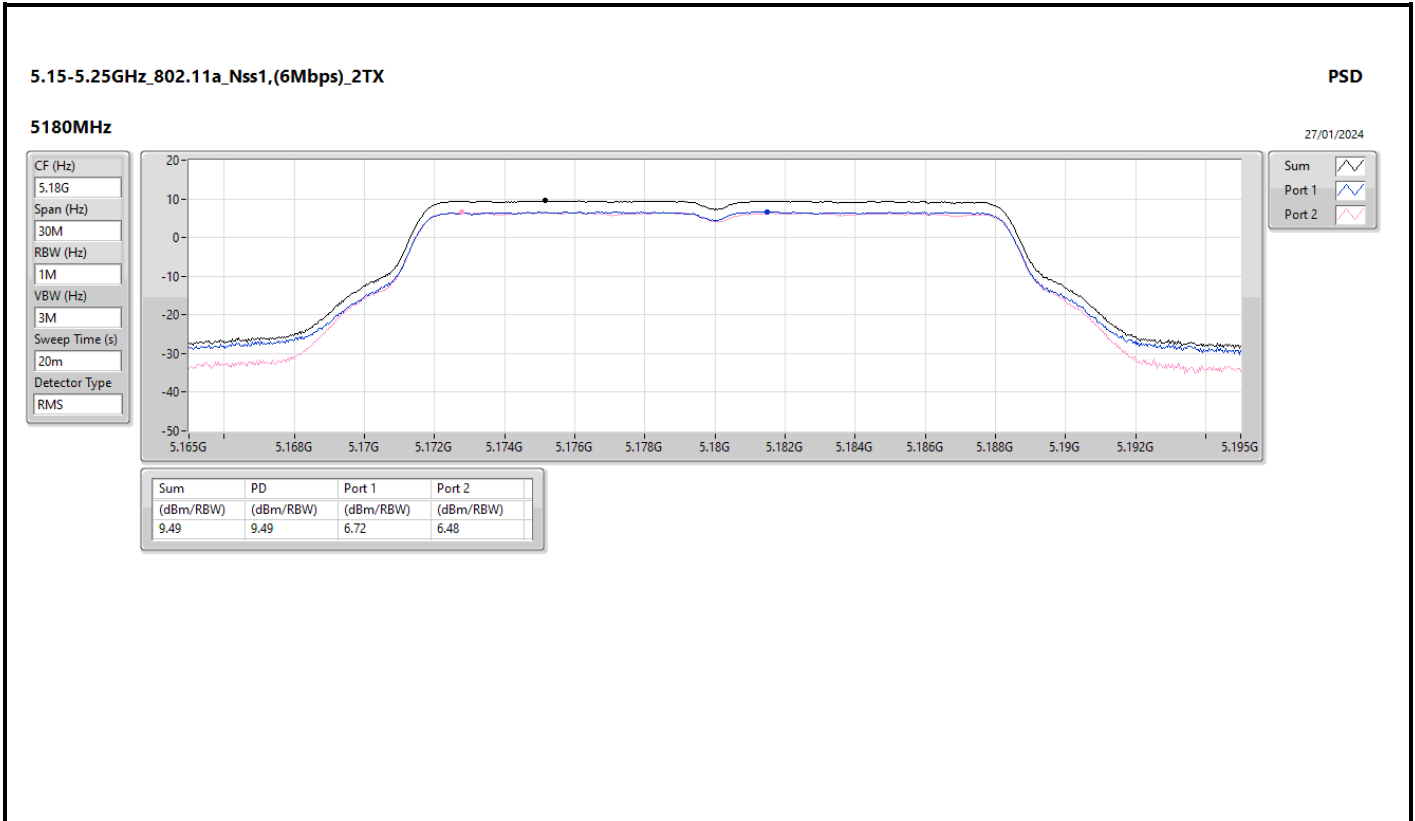
RBW = 500kHz for 5.725-5.85GHz band / 1MHz for other band;

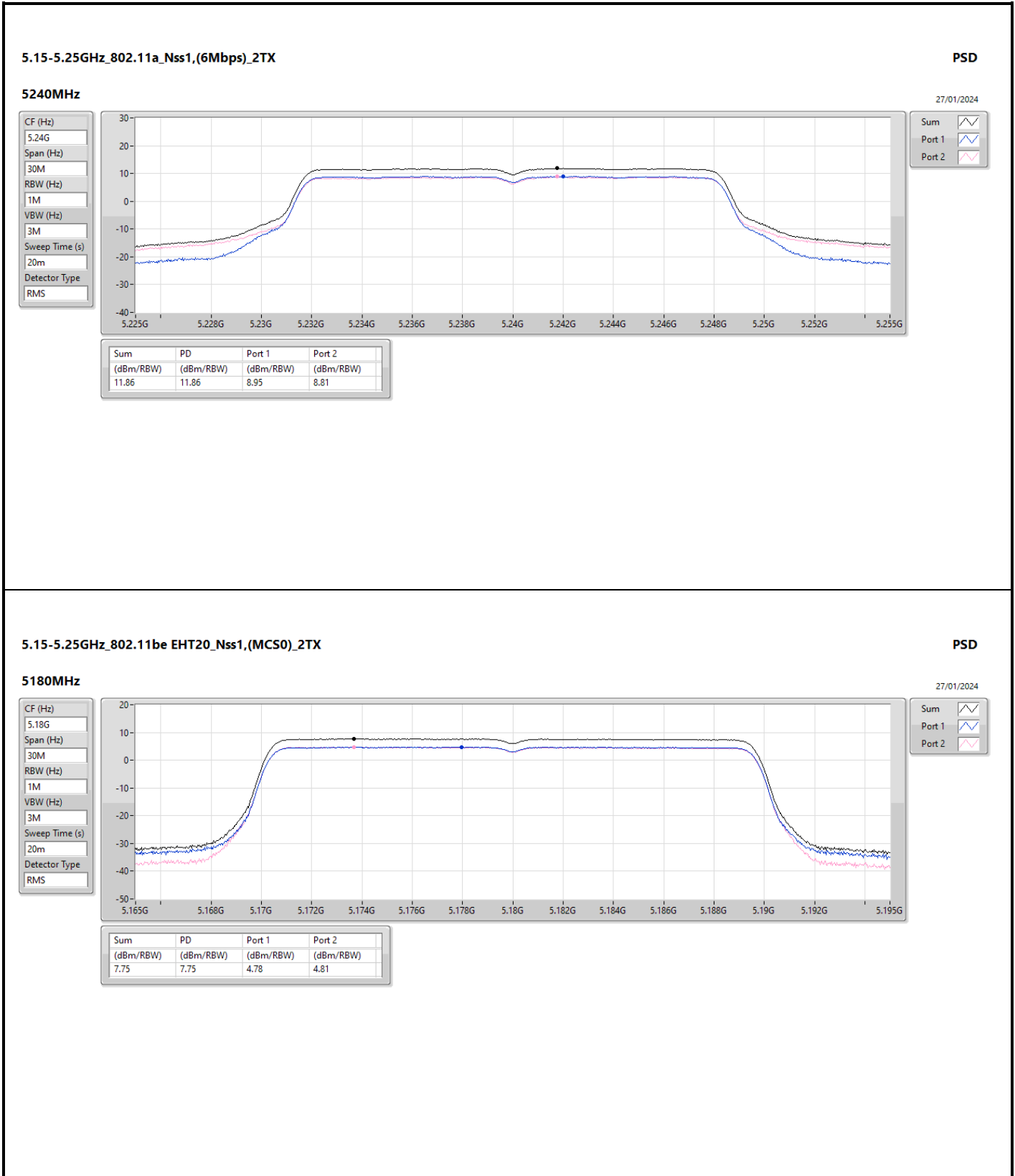


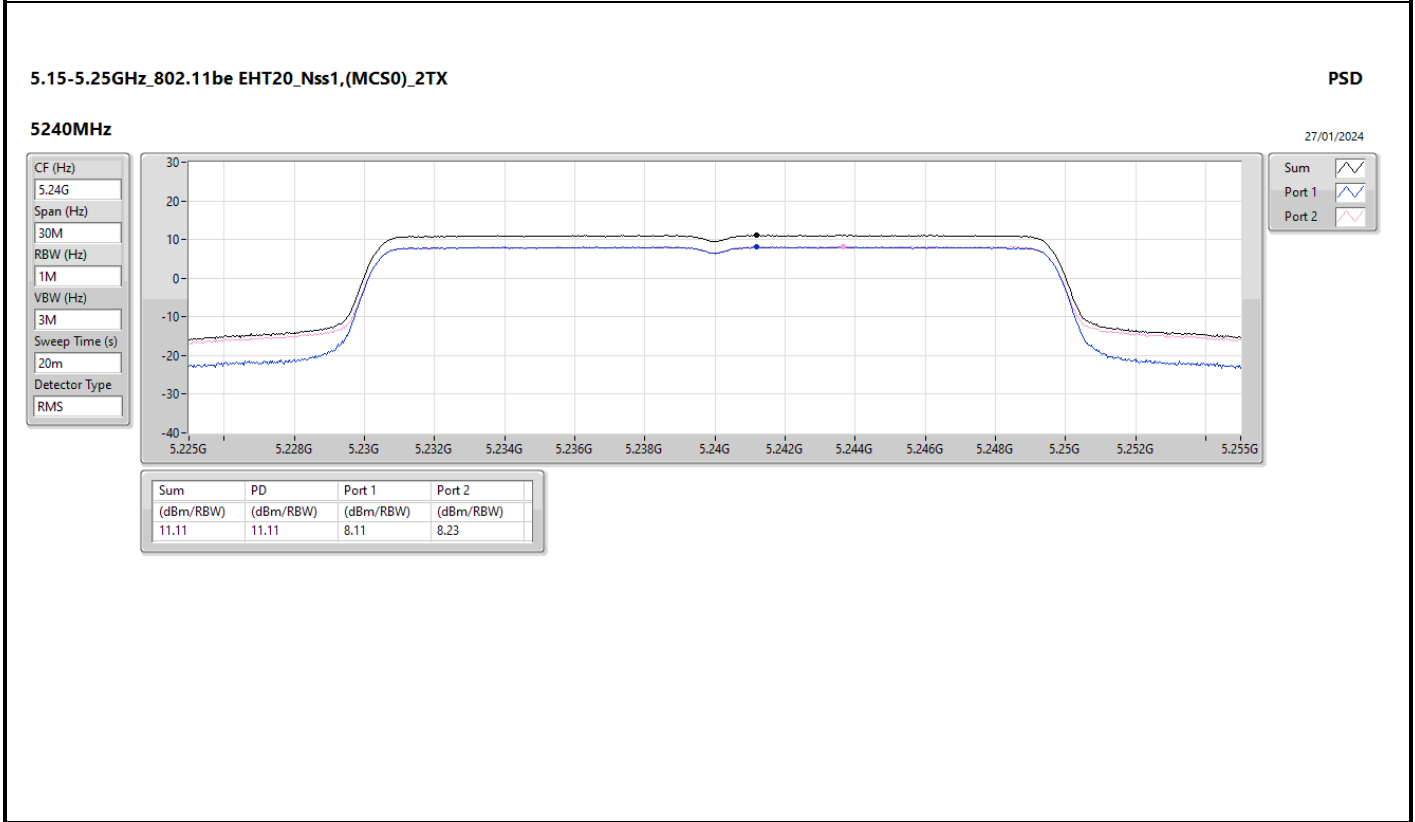
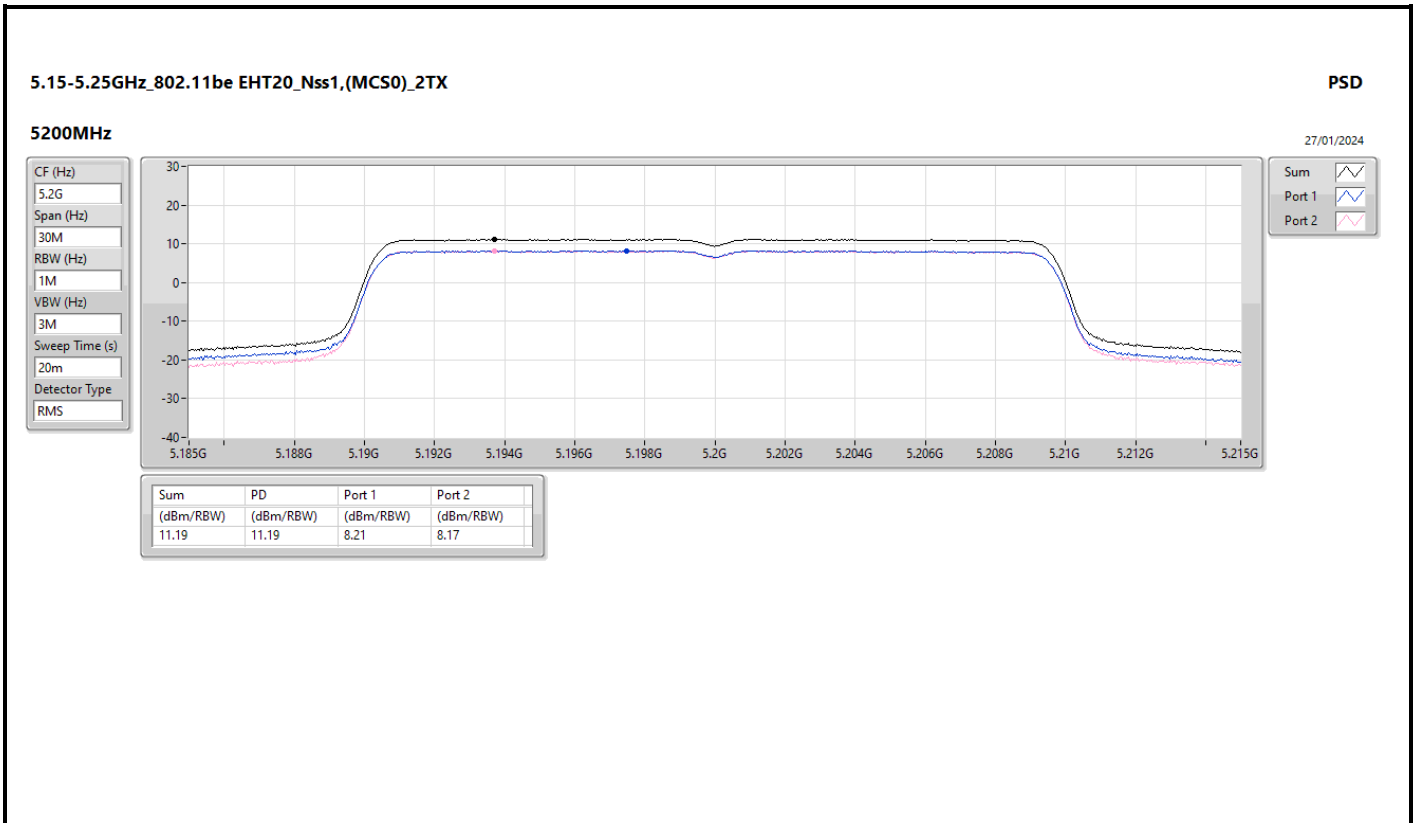
Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11a_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
5180MHz	Pass	4.51	6.72	6.48	9.49	17.00
5200MHz	Pass	4.51	9.78	9.54	12.62	17.00
5240MHz	Pass	4.51	8.95	8.81	11.86	17.00
802.11be EHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	4.51	4.78	4.81	7.75	17.00
5200MHz	Pass	4.51	8.21	8.17	11.19	17.00
5240MHz	Pass	4.51	8.11	8.23	11.11	17.00
802.11be EHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5190MHz	Pass	4.51	1.86	1.79	4.61	17.00
5230MHz	Pass	4.51	4.40	4.37	7.33	17.00
802.11be EHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5210MHz	Pass	4.51	-0.91	-1.15	1.96	17.00
802.11be EHT20_Nss2,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	3.07	4.55	4.52	7.47	17.00
5200MHz	Pass	3.07	7.70	7.43	10.55	17.00
5240MHz	Pass	3.07	8.10	8.36	11.15	17.00
802.11be EHT40_Nss2,(MCS0)_2TX	-	-	-	-	-	-
5190MHz	Pass	3.07	2.21	2.17	5.19	17.00
5230MHz	Pass	3.07	4.64	4.66	7.61	17.00
802.11be EHT80_Nss2,(MCS0)_2TX	-	-	-	-	-	-
5210MHz	Pass	3.07	-1.46	-0.70	1.89	17.00

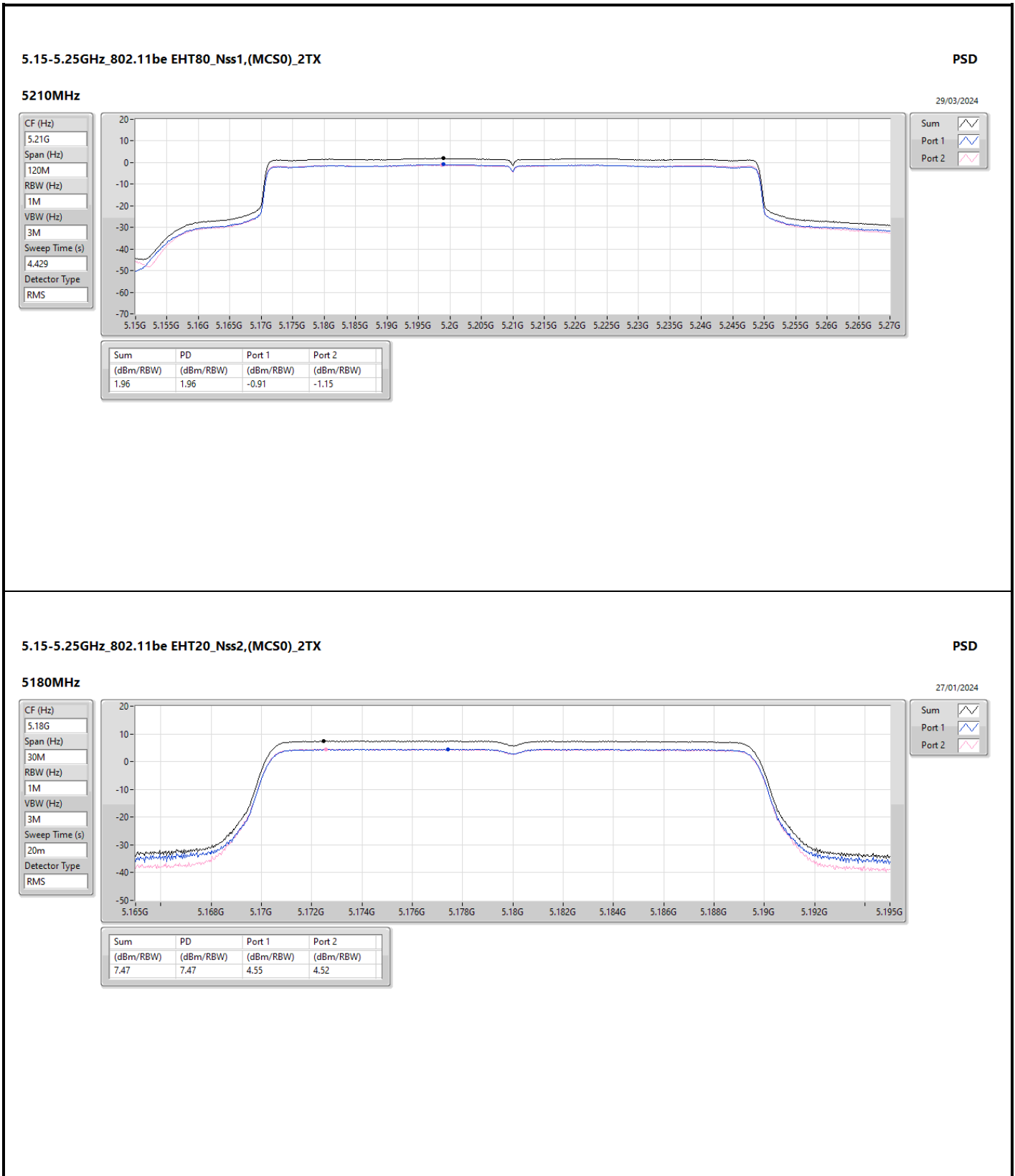
DG = Directional Gain; RBW = 500kHz for 5.725-5.85GHz band / 1MHz for other band;
 PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;



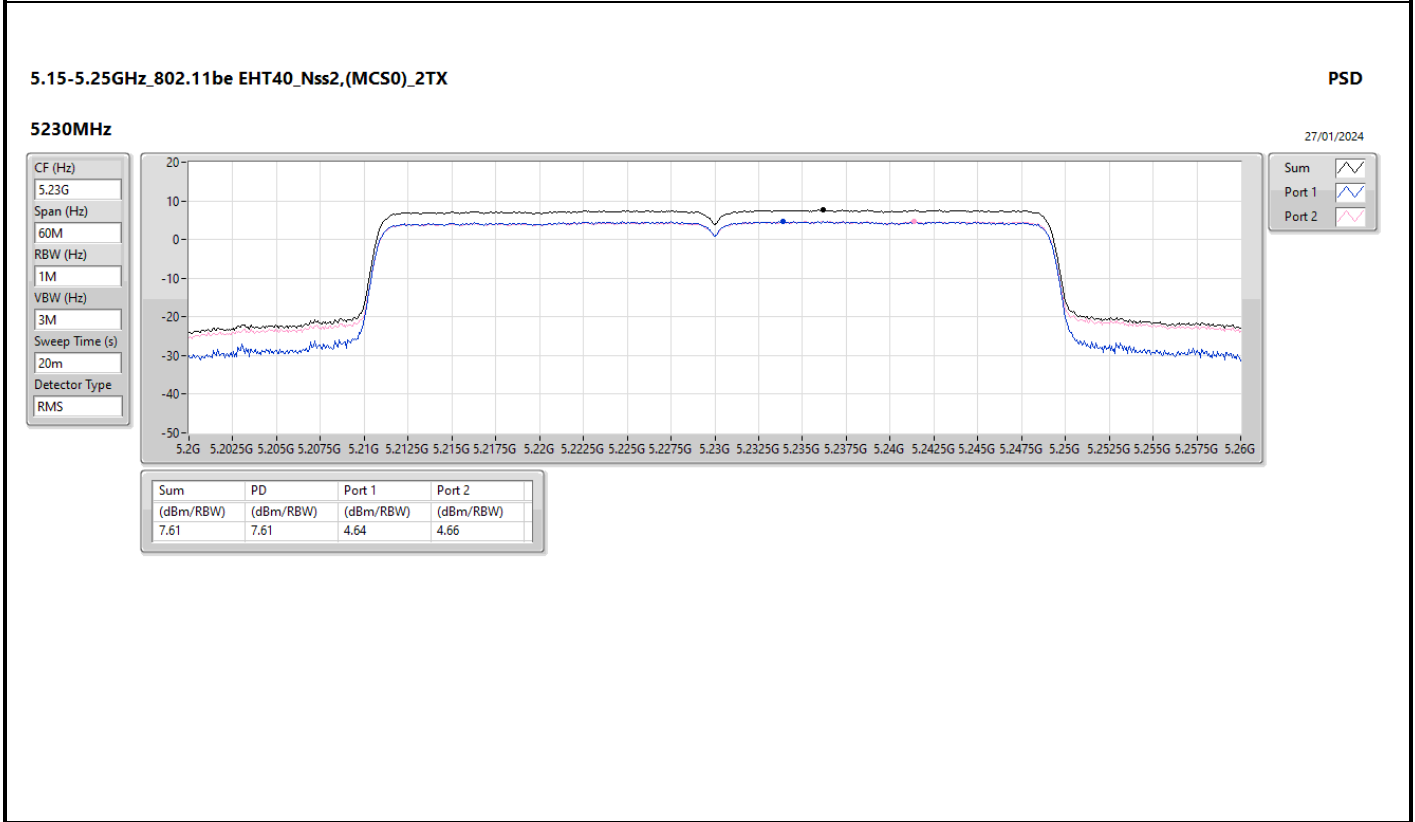
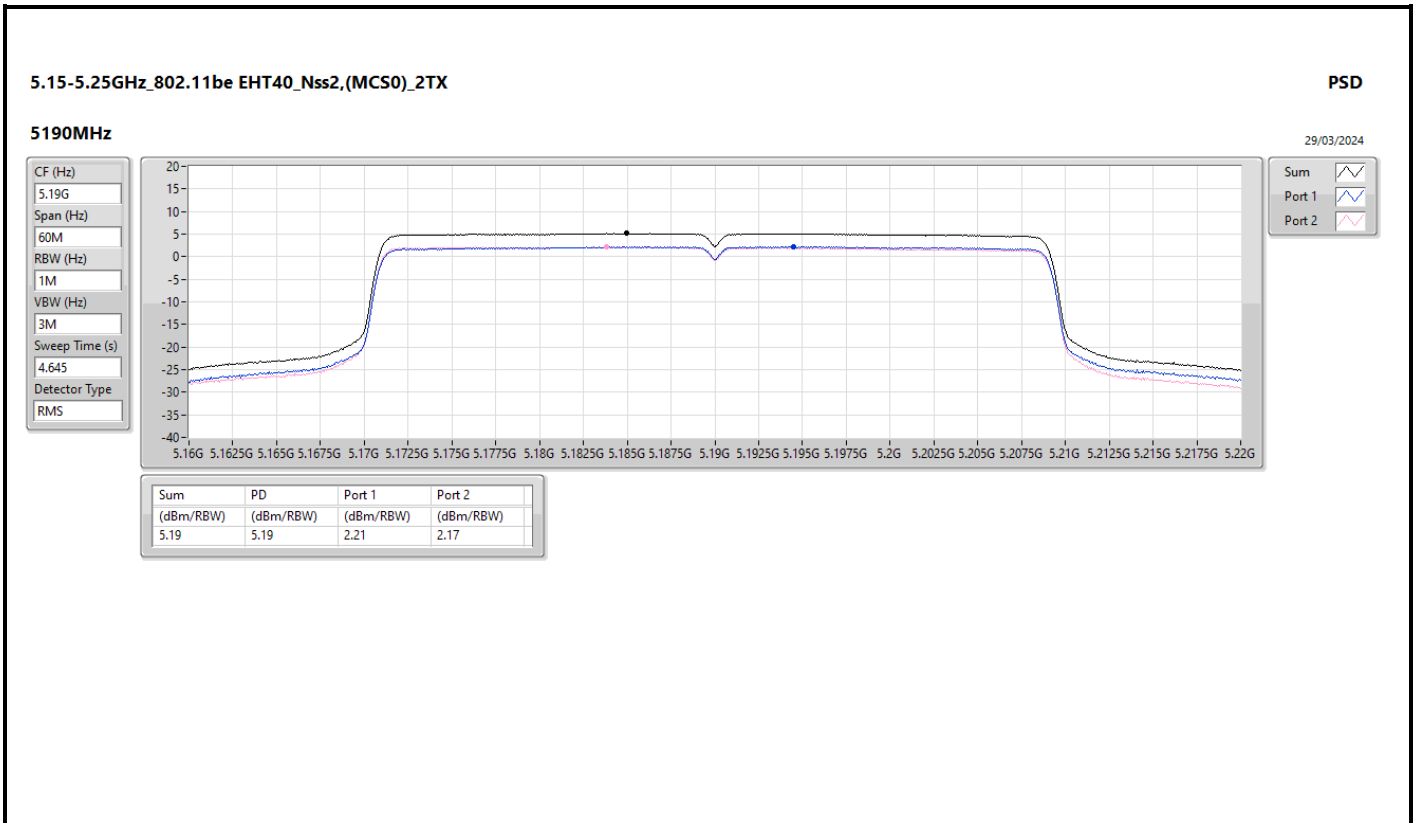


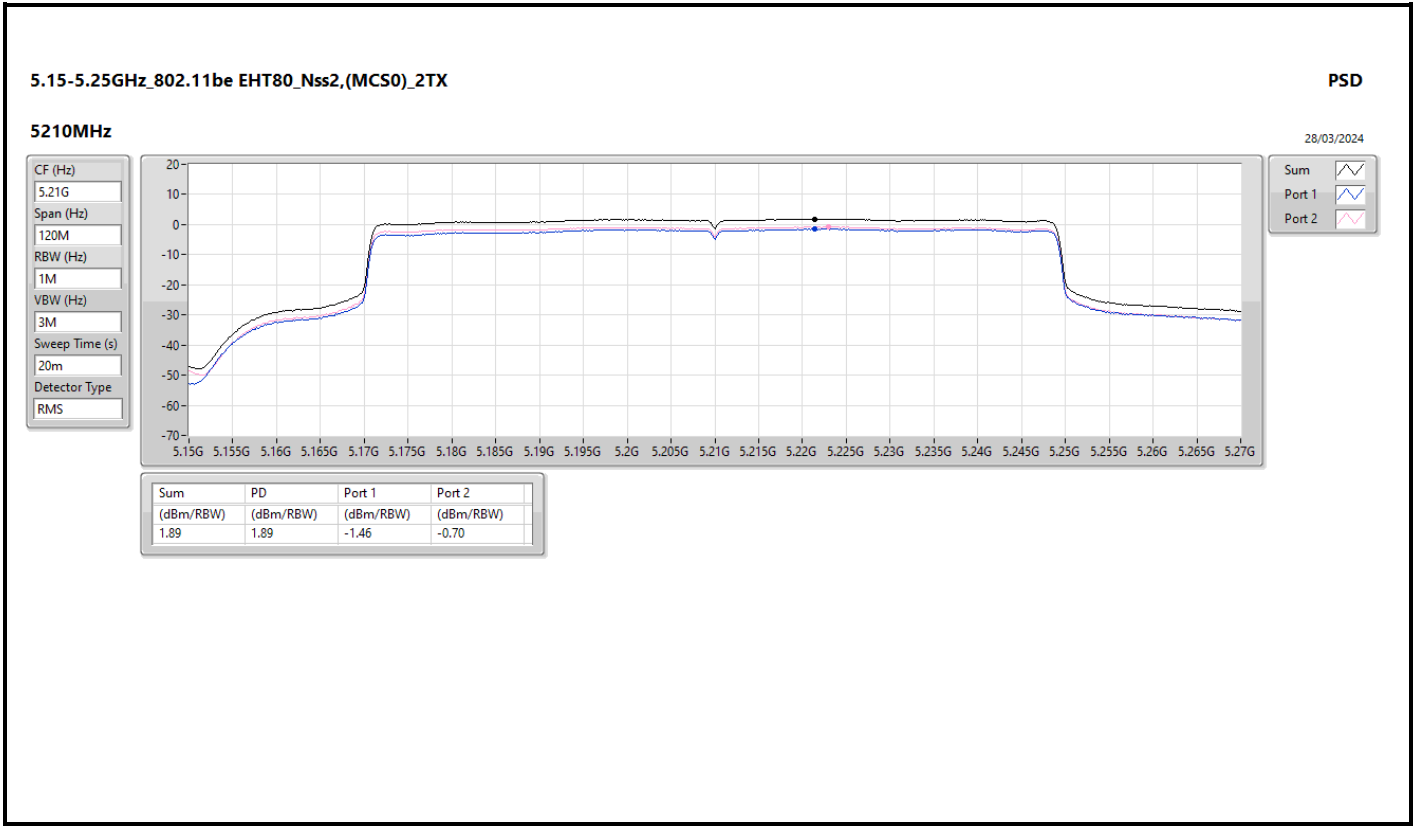














Summary

Mode	PD (dBm/RBW)
5.15-5.25GHz	-
802.11a_Nss1,(6Mbps)_2TX	12.89
802.11be EHT20_Nss1,(MCS0)_2TX	10.92
802.11be EHT20_Nss2,(MCS0)_2TX	11.06
802.11be EHT40_Nss1,(MCS0)_2TX	7.44
802.11be EHT40_Nss2,(MCS0)_2TX	7.78
802.11be EHT80_Nss1,(MCS0)_2TX	3.04
802.11be EHT80_Nss2,(MCS0)_2TX	3.83
5.725-5.85GHz	-
802.11a_Nss1,(6Mbps)_2TX	12.19
802.11be EHT20_Nss1,(MCS0)_2TX	11.69
802.11be EHT20_Nss2,(MCS0)_2TX	12.52
802.11be EHT40_Nss1,(MCS0)_2TX	8.24
802.11be EHT40_Nss2,(MCS0)_2TX	8.58
802.11be EHT80_Nss1,(MCS0)_2TX	2.41
802.11be EHT80_Nss2,(MCS0)_2TX	0.96

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)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11a_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
5180MHz	Pass	7.09	4.84	5.37	8.03	15.91
5200MHz	Pass	7.09	8.36	8.62	11.45	15.91
5240MHz	Pass	7.09	9.99	9.83	12.89	15.91
5745MHz	Pass	5.81	8.76	8.80	11.70	30.00
5785MHz	Pass	5.81	8.87	9.28	12.03	30.00
5825MHz	Pass	5.81	9.14	9.42	12.19	30.00
802.11be EHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	7.09	7.45	7.68	10.58	15.91
5200MHz	Pass	7.09	7.85	8.05	10.92	15.91
5240MHz	Pass	7.09	7.00	7.23	10.10	15.91
5745MHz	Pass	5.81	8.11	8.36	11.16	30.00
5785MHz	Pass	5.81	8.66	8.78	11.69	30.00
5825MHz	Pass	5.81	8.53	8.48	11.44	30.00
802.11be EHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5190MHz	Pass	7.09	3.42	3.83	6.59	15.91
5230MHz	Pass	7.09	4.28	4.76	7.44	15.91
5755MHz	Pass	5.81	4.65	4.78	7.70	30.00
5795MHz	Pass	5.81	5.05	5.53	8.24	30.00
802.11be EHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5210MHz	Pass	7.09	-0.11	0.21	3.04	15.91
5775MHz	Pass	5.81	-0.81	-0.37	2.41	30.00
802.11be EHT20_Nss2,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	4.88	7.98	8.27	11.06	17.00
5200MHz	Pass	4.88	7.83	7.99	10.82	17.00
5240MHz	Pass	4.88	6.41	6.59	9.47	17.00
5745MHz	Pass	5.29	8.86	8.74	11.73	30.00
5785MHz	Pass	5.29	8.56	8.75	11.63	30.00
5825MHz	Pass	5.29	9.59	9.63	12.52	30.00
802.11be EHT40_Nss2,(MCS0)_2TX	-	-	-	-	-	-
5190MHz	Pass	4.88	4.02	4.25	7.10	17.00
5230MHz	Pass	4.88	4.76	4.87	7.78	17.00
5755MHz	Pass	5.29	5.02	5.02	7.98	30.00
5795MHz	Pass	5.29	5.59	5.73	8.58	30.00
802.11be EHT80_Nss2,(MCS0)_2TX	-	-	-	-	-	-
5210MHz	Pass	4.88	0.69	0.97	3.83	17.00
5775MHz	Pass	5.29	-2.17	-1.75	0.96	30.00

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;

