

Radio Test Report

Equipment : WiFi 6E mini PCIe module
Brand Name : AsiaRF Co., Ltd.
Model No. : AW7916-NPD, AW7916-AED
Applicant : AsiaRF Co., Ltd.
1F, 7, Houde Street, Yonghe Dist. New Taipei City
Taiwan 23455
Manufacturer : AsiaRF Co., Ltd.
1F, 7, Houde Street, Yonghe Dist. New Taipei City
Taiwan 23455
Standard : EN 300 440 V2.2.1 (2018-07)

The product was received on Apr. 07, 2023, and testing was started from Jun. 08, 2023 and completed on Aug. 12, 2023. We, SPORTON INTERNATIONAL INC. Hsinhua Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in EN 300 440 V2.2.1 (2018-07) and shown compliance with the applicable technical standards.

The test results in this variant report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. Hsinhua Laboratory, the test report shall not be reproduced except in full.



Approved by: Jordan Hsiao

SPORTON INTERNATIONAL INC. Hsinhua Laboratory

No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan (R.O.C.)

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History of this test report

[illegible]

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	4.2.3	Emission Bandwidth	PASS	-
3.2	4.2.2	Equivalent Isotropically Radiated Power(e.i.r.p.)	PASS	-
3.4	4.2.4	Unwanted emissions in the spurious domain	PASS	-
-	4.2.5	Duty Cycle	PASS	-
-	4.2.6	Additional Requirements for FHSS Equipment	Not Required	-
4.1	4.3.5	Spurious Radiations	PASS	-
4.2	4.3.3	Adjacent Channel Selectivity	PASS	-
4.3	4.3.4	Blocking or Desensitization	PASS	-

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

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.

Reviewed by: Barry Hsiao

Report Producer: Amber Chiu

1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	IEEE Std. 802.11	Ch. Frequency (MHz)	Channel Number
5.725-5.875GHz	a, n (HT20), ac (VHT20), ax (HEW20)	5745-5825	149-165 [5]
5.725-5.875GHz	n (HT40), ac (VHT40), ax (HEW40)	5755-5795	151-159 [2]
5.725-5.875GHz	ac (VHT80), ax (HEW80)	5775	155 [1]

<Non-Beamforming>

Band	Mode	BWch (MHz)	Nant
5.725-5.875GHz	802.11a	20	2TX
5.725-5.875GHz	802.11ax HEW20	20	2TX
5.725-5.875GHz	802.11ax HEW40	40	2TX
5.725-5.875GHz	802.11ax HEW80	80	2TX

<Beamforming>

Band	Mode	BWch (MHz)	Nant
5.725-5.875GHz	802.11ax HEW20-BF	20	2TX
5.725-5.875GHz	802.11ax HEW40-BF	40	2TX
5.725-5.875GHz	802.11ax HEW80-BF	80	2TX

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

1.1.2 Antenna Information

Ant.	Brand	Model Name	Antenna Type	Connector
1	AsiaRF Co., Ltd.	ANTS0WF602M02001	Dipole antenna	I-PEX
2	AsiaRF Co., Ltd.	ANTS0WF602M02001	Dipole antenna	I-PEX
3	AsiaRF Co., Ltd.	ANTS0WF602M02001	Dipole antenna	I-PEX

Ant.	Port	Gain (dBi)		
		2.4G	5G	6G
1	1	5	5	5
2	2	5	5	5
3	3	-	5	5

Note 1: The EUT has three antennas.

Note 2: The Ant. 3 is only for DFS RX and MRC function.

For 2.4GHz function:

For IEEE 802.11 b/g/n/VHT/ax mode (2TX/2RX)

Ant. 1 (port 1) and Ant. 2 (port 2) could transmit/receive simultaneously.

For 5GHz function:

For IEEE 802.11 a/n/ac/ax mode (2TX/3RX)

Ant. 1 (port 1) and Ant. 2 (port 2) could transmit simultaneously.

Ant. 1 (port 1) and Ant. 2 (port 2) and Ant.3 (port 3) could receive simultaneously.

For 6GHz function:

For IEEE 802.11 ax mode (2TX/3RX)

Ant. 1 (port 1) and Ant. 2 (port 2) could transmit simultaneously.

Ant. 1 (port 1) and Ant. 2 (port 2) and Ant.3 (port 3) could receive simultaneously.

1.1.3 Test Signal Duty Cycle

<Non-Beamforming>

Mode	DC	DCF (dB)
802.11a_Nss1,(6Mbps)_2TX	0.96	0.18
802.11ax HEW20_Nss1,(MCS0)_2TX	0.949	0.23
802.11ax HEW40_Nss1,(MCS0)_2TX	0.904	0.44
802.11ax HEW80_Nss1,(MCS0)_2TX	0.841	0.75

<Beamforming>

Mode	DC	DCF (dB)
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	0.949	0.23
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	0.904	0.44
802.11ax HEW80-BF_Nss1,(MCS0)_2TX	0.841	0.75

1.1.4 Type of EUT

Type of EUT	
<input checked="" type="checkbox"/>	Stand-alone
<input type="checkbox"/>	Combined (EUT where the radio part is fully integrated within another device) Combined Equipment - Brand Name / Model No.: ...
<input type="checkbox"/>	Plug-in radio (EUT intended for a variety of host systems) Host System - Brand Name / Model No.: ...
<input type="checkbox"/>	Other:

1.1.5 EUT Information

EUT Power Type	From Test fixture		
Beamforming Function	<input checked="" type="checkbox"/> With beamforming	<input type="checkbox"/> Without beamforming	
Resource Unit(802.11ax)	<input checked="" type="checkbox"/> Full RU	<input type="checkbox"/> Partial RU	
Software / Firmware Version for Adaptivity & Receiver Blocking		OpenWrt 21.02-SNAPSHOT r16859-7576fe5669 / LuCI Master git-23.139.28955-5d7f46c	

1.1.6 Table for Multiple Listing

The model names in the following table are all refer to the identical product.

Model Name	Description
AW7916-NPD, AW7916-AED	AW7916-AED is M.2 AE key interface module and AW7619-NPD is Mini PCIe interface module.

1.1.7 Table for Permissive Change

This product is an extension of original one reported under Sporton project number: EQ2D0804.

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

Modifications	Performance Checking
1. Add Model Name. (AW7916-AED) 2. Photographs Of EUT was update.	The worst case of Radiated Unwanted Emissions was evaluated, and the test result of original report was found to be the worst case scenario.

1.1.8 Receiver Category

Receiver Category	
<input checked="" type="checkbox"/>	1 Highly reliable SRD communication media; e.g. serving human life inherent systems (may result in a physical risk to a person).
<input type="checkbox"/>	2 Medium reliability SRD communication media e.g. causing inconvenience to persons, which cannot simply be overcome by other means.
<input type="checkbox"/>	3 Standard reliability SRD communication media and radiodetermination devices. E.g. Inconvenience to persons, which can simply be overcome by other means(e.g. manual).

1.2 Testing Applied Standards

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

- ♦ EN 300 440 V2.2.1 (2018-07)

1.3 Testing Location Information

Test Lab. : Sporton International Inc. Hsinhua Laboratory				
<input checked="" type="checkbox"/> Hsinhua (TAF: 3785)	ADD: No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan (R.O.C.)			
	TEL: 886-3-327-3456		FAX: 886-3-327-0973	
Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
RF Conducted	TH01-HY	Johnny Yu	22.5~22.9°C / 56~59%	12/Jun/2023~13/Jun/2023
Radiated	05CH01-HY	Wayne Chiu	22.5~23.3°C / 55~57%	08/Jun/2023
Adjacent channel selectivity	DFS03-HY	CHUN-YI WU	22.7~24.6°C / 51~54%	11/Aug/2023~12/Aug/2023
Receiver Blocking	DFS03-HY	CHUN-YI WU	22.7~24.6°C / 51~54%	11/Aug/2023~12/Aug/2023
<input type="checkbox"/> Wen 33rd. St. (TAF: 3785)	ADD: No.14-1, Ln. 19, Wen 33rd St., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.)			
	TEL: 886-3-318-0787		FAX: 886-3-318-0287	

Note : The tested sample of the new test item was received on 21/Mar/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
Emission Bandwidth	0.3 MHz	Confidence levels of 95%
Equivalent Isotropically Radiated Power (e.i.r.p.)	1.2 dB	Confidence levels of 95%
Receiver Blocking	1.2 dB	Confidence levels of 95%
Radiated Spurious Emissions	4.8 dB	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Condition

Condition Item	Abbreviation/Remark	Remark
TnomVnom	Tnom	20°C
TminVmax	Tmin	0°C
TminVmin	Tmax	70°C
-	Vnom	230V

2.2 Test Channel Mode

Test Software Version	QATool_Dbg V 0.0.2.73
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<Non-Beamforming>




Mode	PowerSetting
802.11a_Nss1,(6Mbps)_2TX	-
5745MHz	11
5825MHz	11
802.11ax HEW20_Nss1,(MCS0)_2TX	-
5745MHz	11.5
5825MHz	11.5
802.11ax HEW40_Nss1,(MCS0)_2TX	-
5755MHz	11.5
5795MHz	11
802.11ax HEW80_Nss1,(MCS0)_2TX	-
5775MHz	11.5

<Beamforming>

Mode	PowerSetting
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	-
5745MHz	9.5
5825MHz	9.5
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	-
5755MHz	9.5
5795MHz	9
802.11ax HEW80-BF_Nss1,(MCS0)_2TX	-
5775MHz	9.5

2.3 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	Emission Bandwidth, Permitted Range of Operating Frequencies
Test Condition	Conducted measurement at transmit chains

The Worst Case Mode for Following Conformance Tests			
Tests Item	Equivalent Isotropically Radiated Power Transmitter Unwanted Emissions, Receiver Spurious Emissions		
Test Condition	Radiated measurement		
Operating Mode	<input checked="" type="checkbox"/> 1. Transmit / Receive		
1	Adapter Mode		
Orthogonal Planes of EUT	X Plane	Y Plane	Z Plane
			
Worst Planes of EUT			V

The Worst Case Mode for Following Conformance Tests	
Tests Item	Blocking or desensitization & Adjacent channel selectivity
Test Condition	Conducted measurement at transmit chains

2.4 Support Equipment

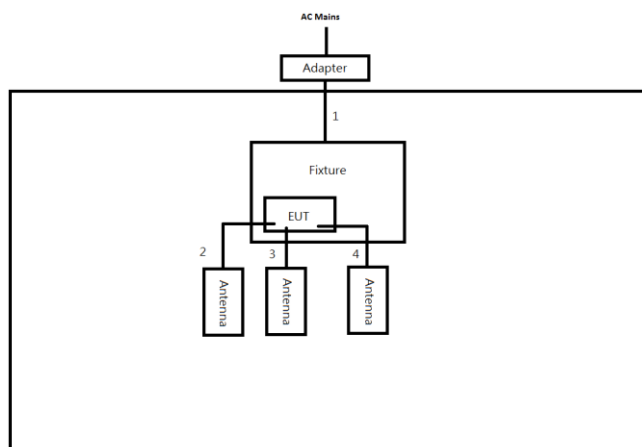
Support Equipment - RF Conducted				
No.	Equipment	Brand Name	Model Name	Remark
1	Notebook	DELL	E5410	-
2	Adapter for NB	DELL	HA65NM130	-
3	Adapter	iDRC	CW1201000	Provided by Customer
4	PCB fixture	N/A	N/A	Provided by Customer

Support Equipment - Radiated Emission				
No.	Equipment	Brand Name	Model Name	Remark
1	Adapter	iDRC	CW1201000	Provided by Customer
2	PCB fixture	N/A	N/A	Provided by Customer
3	Antenna*3	AsiaRF Co., Ltd.	ANTS0WF602M02001	Provided by Customer

Support Equipment - Receiver Blocking & Adjacent channel selectivity				
No.	Equipment	Brand Name	Model Name	Remark
1	Notebook	Lenovo	ThinkBook15 G4 IAP	-
2	Shielding Box	EMEC	EM-SHB-650550250-M	-
3	Adapter	iDRC	CW1201000	Provided by Customer

2.5 Test Setup Diagram

Test Setup Diagram - Radiated Test



Item	Connection	Shielded	Length(m)	Remark
1	ADC Power cable	No	2.0	-
2	DC Power cable	No	1.5	-
3	Antenna Cable	No	0.1	-
4	Antenna Cable	No	0.1	-
5	Antenna Cable	No	0.1	-

3 Transmitter Test Result

3.1 Emission Bandwidth

3.1.1 Emission Bandwidth Limit

Emission Bandwidth Limit
Fall in band (5725 - 5875 MHz)

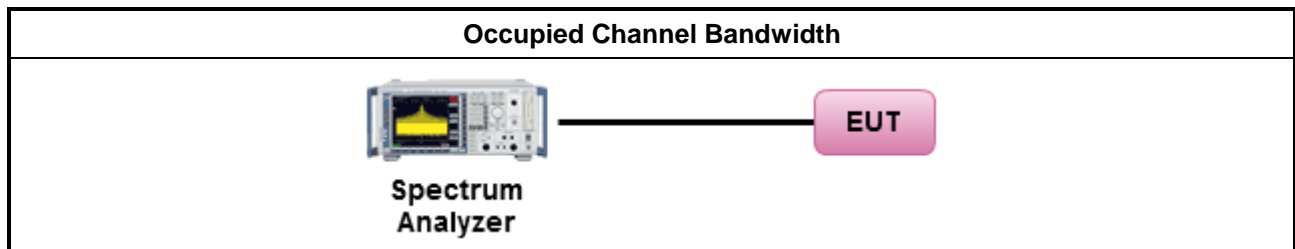
3.1.2 Measuring Instruments

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 EN 300 440, clause 4.2.3.3 for conducted measurement.
<input checked="" type="checkbox"/>	The EUT supports single transmit chain and measurements performed on this transmit chain.
<input type="checkbox"/>	The EUT supports diversity transmitting and the results on transmit chain port 1 is the worst case.
<input type="checkbox"/>	For conducted measurements on smart antenna systems (equipment with multiple transmit chains) measurements need only to be performed on one of the active transmit chains (antenna outputs). All measurement had be performed on transmit chains 1.
<input type="checkbox"/>	Refer as EN 300 440, clause 4.2.3.3 for radiated measurement.

3.1.4 Test Setup



3.1.5 Test Result of Emission Bandwidth

Refer as Appendix A

3.2 Equivalent Isotropically Radiated Power (e.i.r.p.)

3.2.1 Equivalent Isotropically Radiated Power Limit

Frequency Bands (MHz)	Power	Applications
2 400 MHz to 2 483,5 MHz	10 mW e.i.r.p.	Non-specific short range devices
2 400 MHz to 2 483,5 MHz	25 mW e.i.r.p.	Radio determination devices
(a) 2 446 MHz to 2 454 MHz	500 mW e.i.r.p.	RFID
(b) 2 446 MHz to 2 454 MHz	4 W e.i.r.p.	RFID
5 725 MHz to 5 875 MHz	25 mW e.i.r.p.	Non-specific short range devices
9 200 MHz to 9 500 MHz	25 mW e.i.r.p.	Radio determination devices
9 500 MHz to 9 975 MHz	25 mW e.i.r.p.	Radio determination devices
10,5 GHz to 10,6 GHz	500 mW e.i.r.p.	Radio determination devices
13,4 GHz to 14,0 GHz	25 mW e.i.r.p.	Radio determination devices
17,1 GHz to 17,3 GHz	400 mW e.i.r.p.	Radio determination devices
24,00 GHz to 24,25 GHz	100 mW e.i.r.p.	Non-specific short range devices Radio determination devices

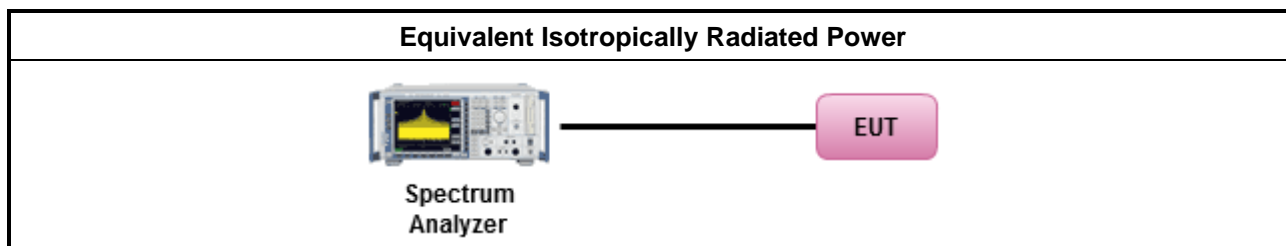
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

Test Method
<input checked="" type="checkbox"/> The measurements shall be performed at both normal environmental conditions and at the extremes of the operating temperature range.
<input type="checkbox"/> For the effective radiated power shall be referred as EN 300 440, clause 4.2.2.3, for equivalent isotropically radiated power measurement.
<input checked="" type="checkbox"/> For extremes conditions, the EUT with conducted measurement shall be related to the equivalent isotropically radiated power (normal condition) measured in radiated condition. The compensation calculation will be used to calculate the absolute level of the extremes conditions refer as radiated normal condition.

3.2.4 Test Setup



3.2.5 Test Result of Equivalent Isotropically Radiated Power

Refer as Appendix B

3.3 Permitted Range of Operating Frequencies

3.3.1 Permitted Range of Operating Frequencies Limit

Permitted Range of Operating Frequencies Limit
For all equipment the frequency range (f_L and f_H) shall lie within the band 5725 - 5875 MHz.

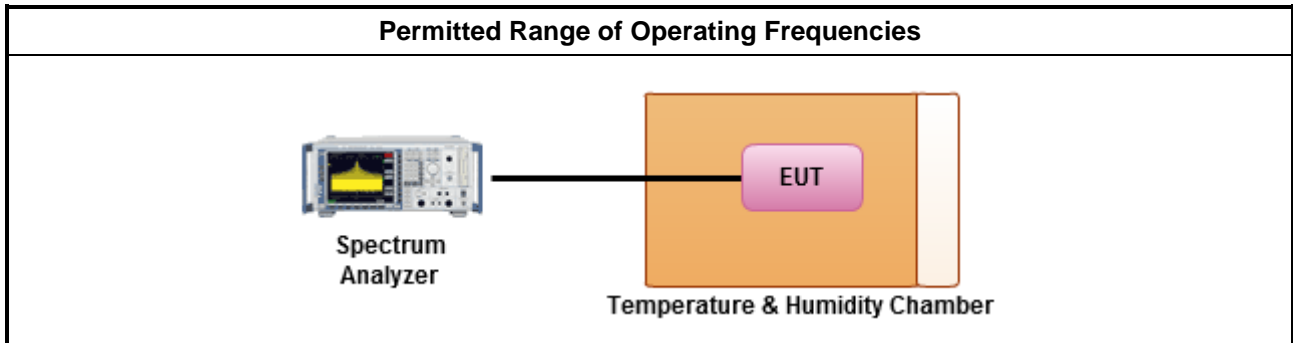
3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

Test Method	
<input checked="" type="checkbox"/>	The measurements shall be performed at both normal environmental conditions and at the extremes of the operating temperature range.
<input checked="" type="checkbox"/>	For the operating frequencies ranges shall be referred as EN 300 440, clause 4.2.3.3 for the operating frequencies ranges shall be measured.
<input checked="" type="checkbox"/>	For extremes conditions, the EUT with conducted measurement shall be related to the equivalent isotropically radiated power (normal condition) measured in radiated condition. The compensation calculation will be used to calculate the absolute level of the extremes conditions refer as radiated normal condition.
<input checked="" type="checkbox"/>	For conducted measurement.
<input checked="" type="checkbox"/>	The EUT supports single transmit chain and measurements performed on this transmit chain.
<input type="checkbox"/>	The EUT supports diversity transmitting and the results on transmit chain port 1 is the worst case.
<input type="checkbox"/>	The EUT supports multiple transmit chains using options given below:
<input type="checkbox"/>	Option 1: 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 N_{TX} output to obtain the value for the first frequency bin of the summed spectrum.)
<input type="checkbox"/>	Option 2: Smart antenna systems using symmetrical power distribution across the available transmit chains. If only one transmit chain was tested, the result for the active transmit chain shall be corrected to be valid for the whole system (all transmit chains). The results for only one transmit chain shall be compared with the frequency range level that limit have been reduced with $10 \times \log_{10} (A_{ch})$. (Number of active transmit chains). All measurement had be performed on transmit chains 1.
<input type="checkbox"/>	Option 3: Smart antenna systems using asymmetrical power distribution across the available transmit chains. A power splitter/combiner shall be used to combine all the transmit chains (antenna outputs) into a single test point. The insertion loss of the power splitter/combiner shall be taken into account.
<input type="checkbox"/>	Refer as EN 300 440, clause 4.2.2.3 radiated measurement.

3.3.4 Test Setup



3.3.5 Test Result of Permitted Range of Operating Frequencies

Refer as Appendix A

3.4 Unwanted Emissions in the Spurious Domain

3.4.1 Unwanted Emissions in the Spurious Domain Limit

Frequency State	47 MHz to 74 MHz 87,5 MHz to 108 MHz 174 MHz to 230 MHz 470 MHz to 862 MHz	Other frequencies below 1000 MHz	Frequencies above 1000 MHz
Operating	4 nW (-54 dBm)	250 nW (-36 dBm)	1 µW (-30 dBm)
Standby	2 nW (-57 dBm)	2 nW (-57 dBm)	20 nW (-47 dBm)

For radiated measurement, the measuring receiver shall be tuned over the frequency range:

a) 25 MHz to 10 times the carrier frequency, not exceeding 40 GHz, for equipment operating on frequencies below 20 GHz; or

b) 25 MHz to 66 GHz, for equipment operating on frequencies above 20 GHz.

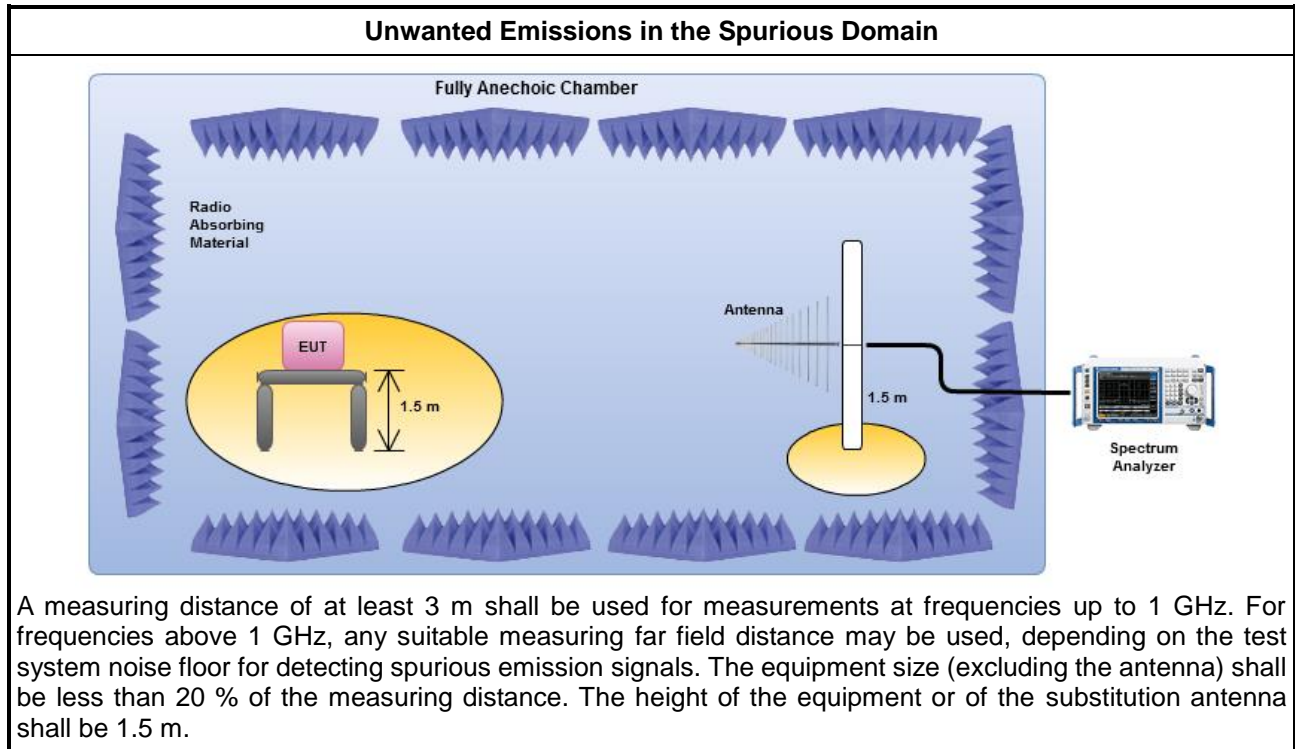
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

Test Method	
<input type="checkbox"/>	Refer as EN 300 440, clause 4.2.4.3.1 and clause 4.2.4.3.2 for conducted measurement and cabinet measurement. Conducted spurious emissions and radiated by the cabinet with the antenna connector(s) terminated by a specified load (cabinet radiation).
<input type="checkbox"/>	The EUT supports single transmit chain and measurements performed on this transmit chain.
<input type="checkbox"/>	The EUT supports diversity transmitting and the results on transmit chain port 1 is the worst case.
<input type="checkbox"/>	The EUT supports multiple transmit chains using options given below:
<input type="checkbox"/>	Option 1: The trace data for each transmit chain has to be individually recorded and each transmit chain trace data shall be added and compared with the transmitter spurious emissions limit.
<input type="checkbox"/>	Option 2: the results for each of the transmit chains shall be individually compared with the transmitter spurious emissions limit. After that these limits have been reduced with $10 \times \log_{10}(A_{ch})$. (Number of active transmit chains).
<input checked="" type="checkbox"/>	Refer as EN 300 440, clause 4.2.4.3.3 for radiated measurement.

3.4.4 Test Setup



3.4.5 Transmitter Radiated Unwanted Emissions

Refer as Appendix C

4 Receiver Test Result

4.1 Spurious Radiations

4.1.1 Spurious Radiations Limit

Frequency State	Frequencies below 1000 MHz	Frequencies above 1000 MHz
Receiver	2 nW (-57 dBm)	20 nW (-47 dBm)
For radiated measurement, the measuring receiver shall be tuned over the frequency range: a) 25 MHz to 10 times the carrier frequency, not exceeding 40 GHz, for equipment operating on frequencies below 20 GHz; or b) 25 MHz to 66 GHz, for equipment operating on frequencies above 20 GHz.		

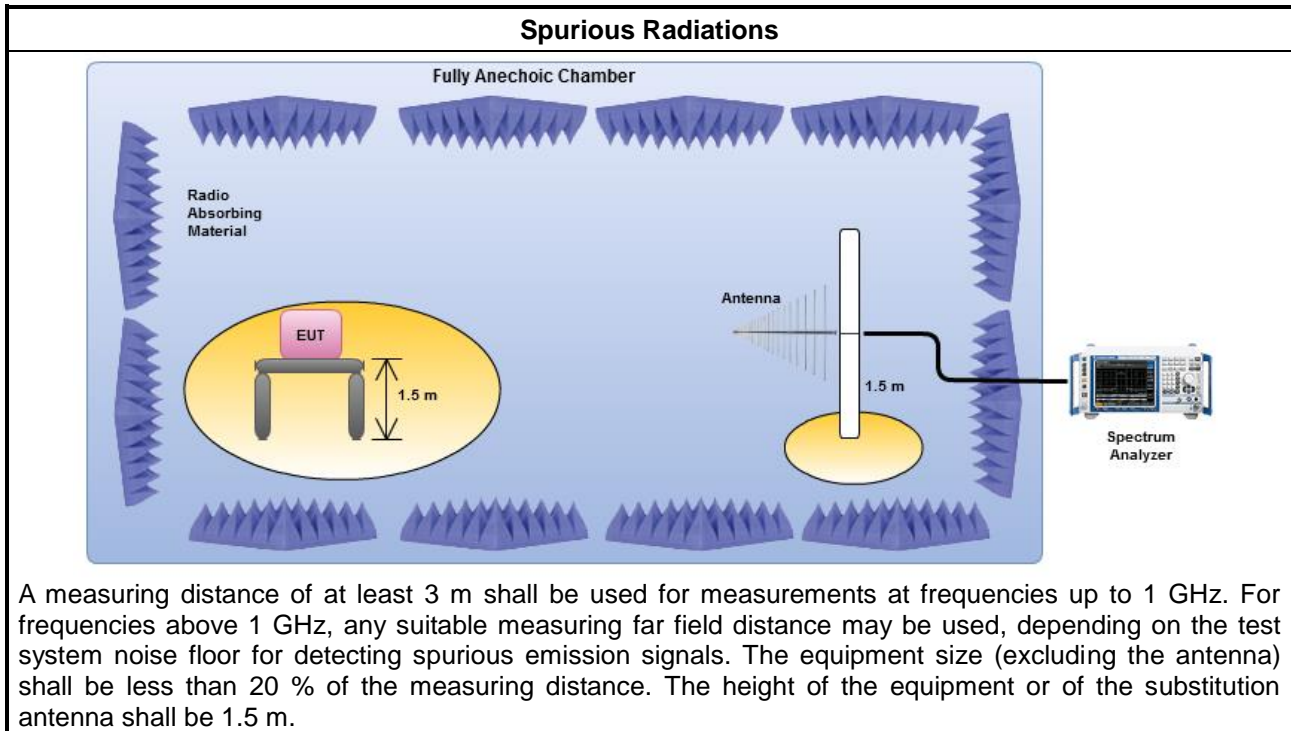
4.1.2 Measuring Instruments

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

4.1.3 Test Procedures

Test Method	
<input type="checkbox"/>	Refer as EN 300 440, clause 4.3.5.3.1 and 4.3.5.3.2 for conducted and cabinet measurement. Conducted spurious emissions and radiated by the cabinet with the antenna connector(s) terminated by a specified load (cabinet radiation).
<input type="checkbox"/>	The EUT supports single receive chain and measurements performed on this receive chain.
<input type="checkbox"/>	The EUT supports diversity receiving and the results on receive chain port 1 is the worst case.
<input type="checkbox"/>	The EUT supports multiple receive chains using options given below:
<input type="checkbox"/>	Option 1: The trace data for each receive chain has to be individually recorded and each receive chain trace data shall be added and compared with the receiver spurious emissions limit.
<input type="checkbox"/>	Option 2: the results for each of the receive chains shall be individually compared with the receiver spurious emissions limit. After that these limits have been reduced with $10 \times \log_{10}(A_{ch})$. (Number of active receive chains).
<input type="checkbox"/>	Option 3: A power splitter/combiner shall be used to combine all the receive chains (antenna outputs) into a single test point. The insertion loss of the power splitter/combiner shall be taken into account.
<input checked="" type="checkbox"/>	Refer as EN 300 440, clause 4.3.5.3.3 for radiated measurement.

4.1.4 Test Setup



4.1.5 Receiver Radiated Spurious Emissions

Refer as Appendix D

4.2 Adjacent channel selectivity

4.2.1 Adjacent channel selectivity Limit

Receiver Category	Limit
1	-30 dBm + k
2	No Limit
3	No Limit

The correction factor, k, is as follows: $k = -20\log f - 10\log BW$
 Where: f is the frequency in GHz; BW is the channel bandwidth in MHz.
 The factor k is limited within the following: $0 > k > -40 \text{ dB}$.

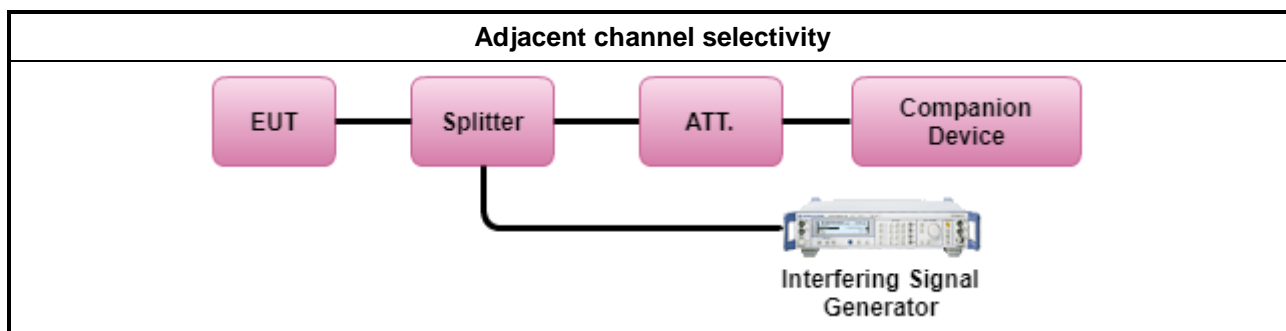
4.2.2 Measuring Instruments

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

4.2.3 Test Procedures

Test Method
<input checked="" type="checkbox"/> Refer as EN 300 440 V2.2.1 (2018-07), clause 4.3.3.3 for conducted measurement.

4.2.4 Test Setup



4.2.5 Test Result of Adjacent channel selectivity

Refer as Appendix E

4.3 Blocking or desensitization

4.3.1 Blocking or desensitization Limit

Receiver Category	Limit
1	-30 dBm + k
2	-45 dBm + k
3	-60 dBm + k
The correction factor, k, is as follows: $k = -20\log f - 10\log BW$ Where: f is the frequency in GHz; BW is the channel bandwidth in MHz. The factor k is limited within the following: $0 > k > -40 \text{ dB}$.	

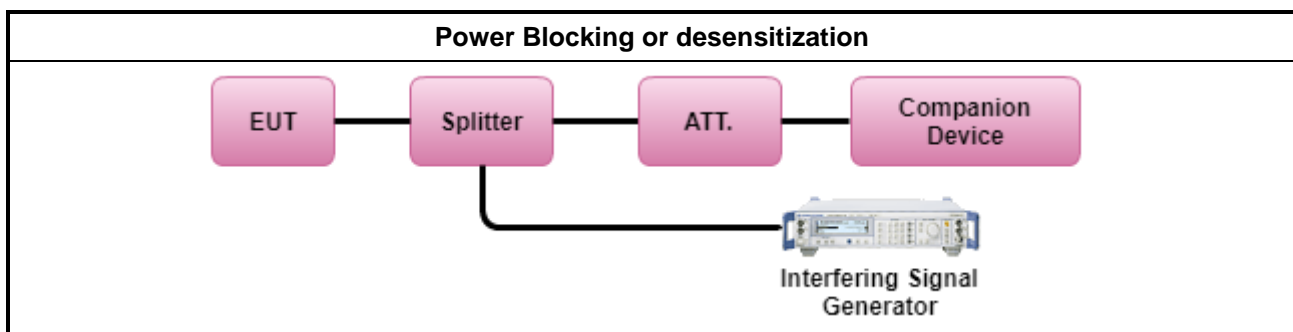
4.3.2 Measuring Instruments

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

4.3.3 Test Procedures

Test Method
<input checked="" type="checkbox"/> Refer as EN 300 440 V2.2.1 (2018-07), clause 4.3.4.3 for conducted measurement.

4.3.4 Test Setup



4.3.5 Test Result of Blocking

Refer as Appendix E

5 Test Equipment and Calibration Data

Instrument for Conducted

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Signal Analyzer	R&S	FSV 40	101013	10Hz~40GHz	10/Apr/2023	09/Apr/2024
Programmable Temp. & Humi. Chamber	Giant Force	GTH-225-20-SP-SD	MAA1112-007	-20~100℃	17/May/2023	16/May/2024
SMB100A Signal Generator	R&S	SMB100A	181147	100kHz~40GHz	21/Oct/2022	20/Oct/2023
USB Wideband Power Sensor	Agilent	U2021XA	MY54320011	50MHz~18GHz	17/Aug/2022	16/Aug/2023
USB Wideband Power Sensor	Agilent	U2021XA	MY54320013	50MHz~18GHz	17/Aug/2022	16/Aug/2023
SENSE-301893_NII	Sporton	V5.11.3	N/A	N/A	N/A	N/A

NCR: No Calibration Required

Instrument for Radiated Test

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Signal Analyzer	R&S	FSV40	101514	10Hz~40GHz	26/Apr/2023	25/Apr/2024
Amplifier	Agilent	8447D	2944A11146	100kHz~1.3GHz	01/Sep/2022	31/Aug/2023
Microwave Preamplifier	EMC INSTRUMENT	EMC051845BE	980241	1GHz~18GHz	12/Dec/2022	11/Dec/2023
Bilog Antenna & 6dB Attenuator	SCHAFFNER	CBL6111C & N-6-06	2737 & AT-N0603	30MHz~1GHz	28/Aug/2022	27/Aug/2023
Double Ridged Guide Horn Antenna	ETS-LINDGREN	3117	00091920	1GHz~18GHz	15/Dec/2022	14/Dec/2023
RF Cable	HUBER+SUHNER	SUOFLEX 104	05CH01-cable-01	1GHz ~ 40GHz	17/Jan/2023	16/Jan/2024
RF Cable	Jye Bao	SUOFLEX 104	05CH01-cable-02	25MHz ~ 1GHz	06/Sep/2022	05/Sep/2023
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA 9170221	18GHz~40GHz	25/Mar/2023	24/Mar/2024
Microwave Premplifier	EMC INSTRUMENTS	EM18G40G	060604	18GHz ~ 40GHz	25/Mar/2023	24/Mar/2024
SENSE-301893_N II	Sporton	V5.11.4	N/A	N/A	N/A	N/A

Instrument for Receiver Blocking and Adjacent channel selectivity

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
SMB100A Signal Generator	R&S	SMB100A	181147	100kHz~40GHz	21/Oct/2022	20/Oct/2023
Wireless connectivity tester	R&S	CMW270+CMW-Z800A	102633+100394	70MHz ~7.125GHz	22/Mar/2022	21/Mar/2024



Summary

Mode	Result	Limit (Hz)	fl-OBW (Hz)	fh-OBW (Hz)	OBW (Hz)	N dB (Hz)
5.725-5.875GHz	-	-	-	-	-	-
802.11a_Nss1,(6Mbps)_2TX	Pass	5.725-5.875G	5.736821G	5.833459G	16.488M	16.375M
802.11ax HEW20_Nss1,(MCS0)_2TX	Pass	5.725-5.875G	5.735566G	5.834604G	18.968M	18.73M
802.11ax HEW40_Nss1,(MCS0)_2TX	Pass	5.725-5.875G	5.736232G	5.813938G	37.695M	36.28M
802.11ax HEW80_Nss1,(MCS0)_2TX	Pass	5.725-5.875G	5.736665G	5.813575G	76.87M	75.78M

fl-OBW = fl lower edge 99% occupied bandwidth; fh-OBW = fh higher edge 99% occupied bandwidth; OBW = 99% occupied bandwidth;
N dB = 6dB down bandwidth

Result

Mode	Result	Limit (Hz)	fl-OBW (Hz)	fh-OBW (Hz)	OBW (Hz)	N dB (Hz)
802.11a_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
5745MHz_TnomVnom	Pass	5.725-5.875G	5.736831G	5.753279G	16.448M	16.315M
5745MHz_TminVmax	Pass	5.725-5.875G	5.736836G	5.753274G	16.438M	16.34M
5745MHz_TminVmin	Pass	5.725-5.875G	5.736821G	5.753299G	16.478M	16.375M
5745MHz_TmaxVmax	Pass	5.725-5.875G	5.737016G	5.753464G	16.448M	16.325M
5745MHz_TmaxVmin	Pass	5.725-5.875G	5.737026G	5.753479G	16.453M	16.34M
5825MHz_TnomVnom	Pass	5.725-5.875G	5.816781G	5.833269G	16.488M	16.345M
5825MHz_TminVmax	Pass	5.725-5.875G	5.816796G	5.833264G	16.468M	16.355M
5825MHz_TminVmin	Pass	5.725-5.875G	5.816796G	5.833279G	16.483M	16.35M
5825MHz_TmaxVmax	Pass	5.725-5.875G	5.817016G	5.833459G	16.443M	16.32M
5825MHz_TmaxVmin	Pass	5.725-5.875G	5.816996G	5.833449G	16.453M	16.325M
802.11ax HEW20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5745MHz_TnomVnom	Pass	5.725-5.875G	5.735566G	5.754519G	18.953M	18.545M
5745MHz_TminVmax	Pass	5.725-5.875G	5.735571G	5.754539G	18.968M	18.525M
5745MHz_TminVmin	Pass	5.725-5.875G	5.735596G	5.754534G	18.938M	18.115M
5745MHz_TmaxVmax	Pass	5.725-5.875G	5.735706G	5.754639G	18.933M	18.52M
5745MHz_TmaxVmin	Pass	5.725-5.875G	5.735686G	5.754624G	18.938M	18.26M
5825MHz_TnomVnom	Pass	5.725-5.875G	5.815536G	5.834504G	18.968M	18.73M
5825MHz_TminVmax	Pass	5.725-5.875G	5.815551G	5.834519G	18.968M	18.51M
5825MHz_TminVmin	Pass	5.725-5.875G	5.815566G	5.834509G	18.943M	18.46M
5825MHz_TmaxVmax	Pass	5.725-5.875G	5.815651G	5.834584G	18.933M	18.51M
5825MHz_TmaxVmin	Pass	5.725-5.875G	5.815666G	5.834604G	18.938M	18.405M
802.11ax HEW40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5755MHz_TnomVnom	Pass	5.725-5.875G	5.736232G	5.773908G	37.675M	35.52M
5755MHz_TminVmax	Pass	5.725-5.875G	5.736252G	5.773918G	37.665M	35.05M
5755MHz_TminVmin	Pass	5.725-5.875G	5.736242G	5.773908G	37.665M	35.04M
5755MHz_TmaxVmax	Pass	5.725-5.875G	5.736282G	5.773958G	37.675M	35M
5755MHz_TmaxVmin	Pass	5.725-5.875G	5.736262G	5.773958G	37.695M	35.02M
5795MHz_TnomVnom	Pass	5.725-5.875G	5.776252G	5.813828G	37.575M	36.28M
5795MHz_TminVmax	Pass	5.725-5.875G	5.776262G	5.813838G	37.575M	35.07M
5795MHz_TminVmin	Pass	5.725-5.875G	5.776252G	5.813848G	37.595M	36.21M
5795MHz_TmaxVmax	Pass	5.725-5.875G	5.776422G	5.813938G	37.515M	35M
5795MHz_TmaxVmin	Pass	5.725-5.875G	5.776352G	5.813878G	37.525M	34.97M
802.11ax HEW80_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5775MHz_TnomVnom	Pass	5.725-5.875G	5.736665G	5.813535G	76.87M	75.44M
5775MHz_TminVmax	Pass	5.725-5.875G	5.736725G	5.813395G	76.67M	75.78M
5775MHz_TminVmin	Pass	5.725-5.875G	5.736705G	5.813435G	76.73M	75.76M
5775MHz_TmaxVmax	Pass	5.725-5.875G	5.736805G	5.813575G	76.77M	75.56M
5775MHz_TmaxVmin	Pass	5.725-5.875G	5.736745G	5.813375G	76.63M	75.02M

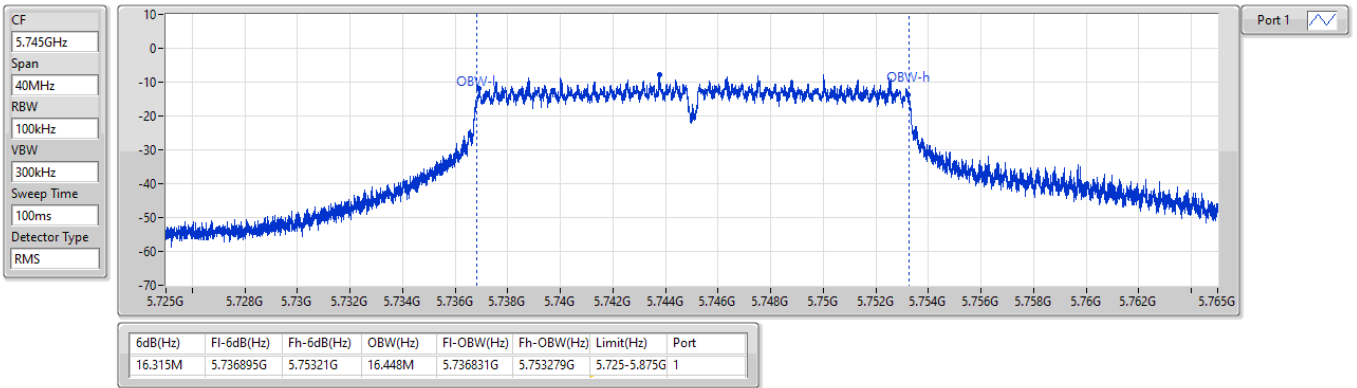
fl-OBW = fl lower edge 99% occupied bandwidth; fh-OBW = fh higher edge 99% occupied bandwidth; OBW = 99% occupied bandwidth;
N dB = 6dB down bandwidth

5.725-5.875GHz_802.11a_Nss1,(6Mbps)_2TX

Operating Freq

5745MHz_TnomVnom

12/06/2023

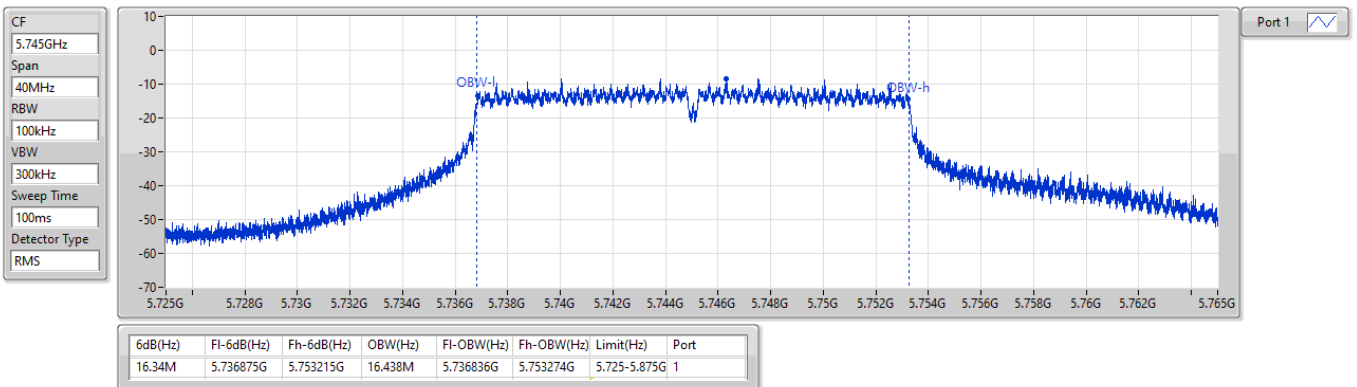


5.725-5.875GHz_802.11a_Nss1,(6Mbps)_2TX

Operating Freq

5745MHz_TminVmax

13/06/2023

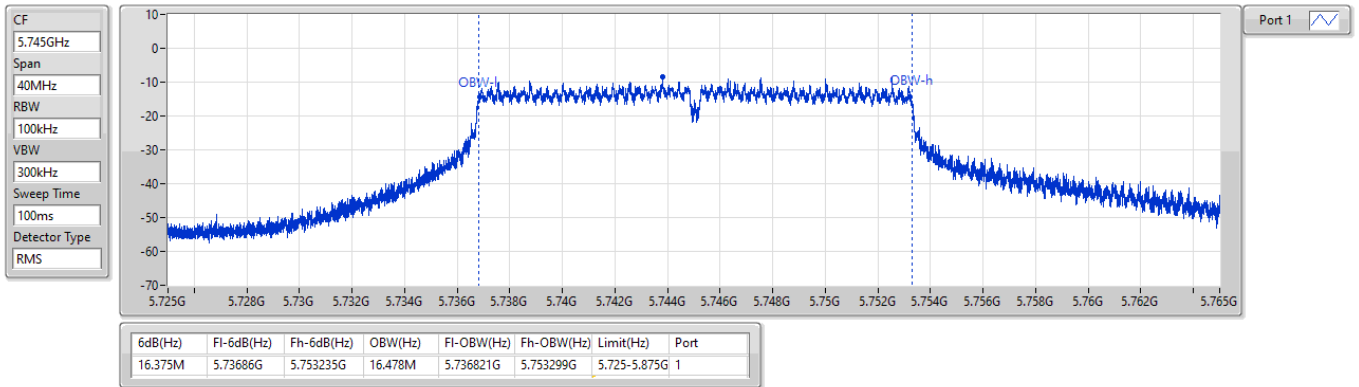


5.725-5.875GHz_802.11a_Nss1,(6Mbps)_2TX

Operating Freq

5745MHz_TminVmin

13/06/2023

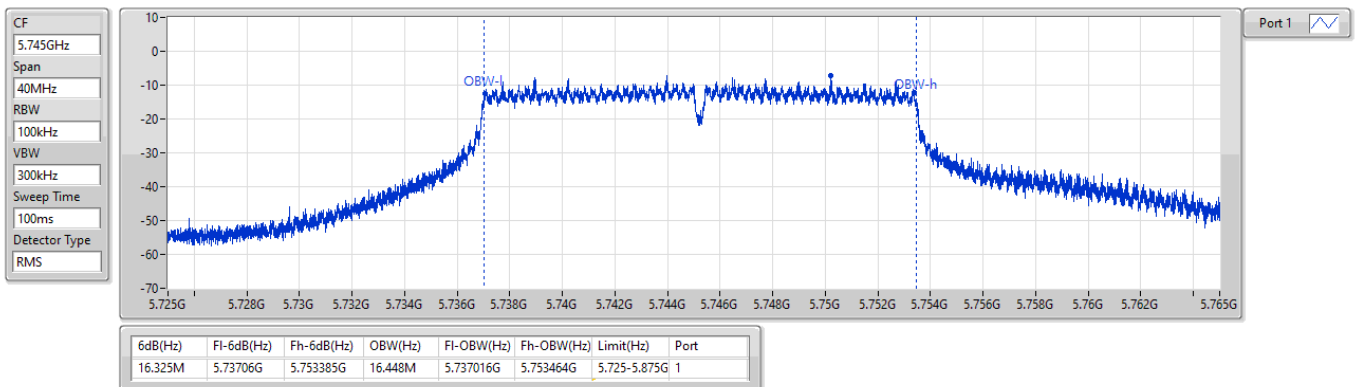


5.725-5.875GHz_802.11a_Nss1,(6Mbps)_2TX

Operating Freq

5745MHz_TmaxVmax

12/06/2023

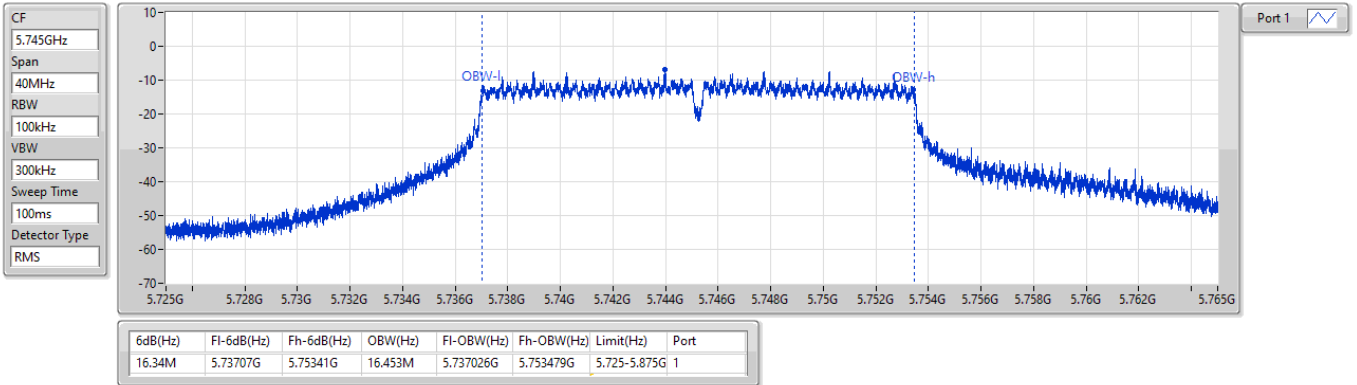


5.725-5.875GHz_802.11a_Nss1,(6Mbps)_2TX

Operating Freq

5745MHz_TmaxVmin

12/06/2023

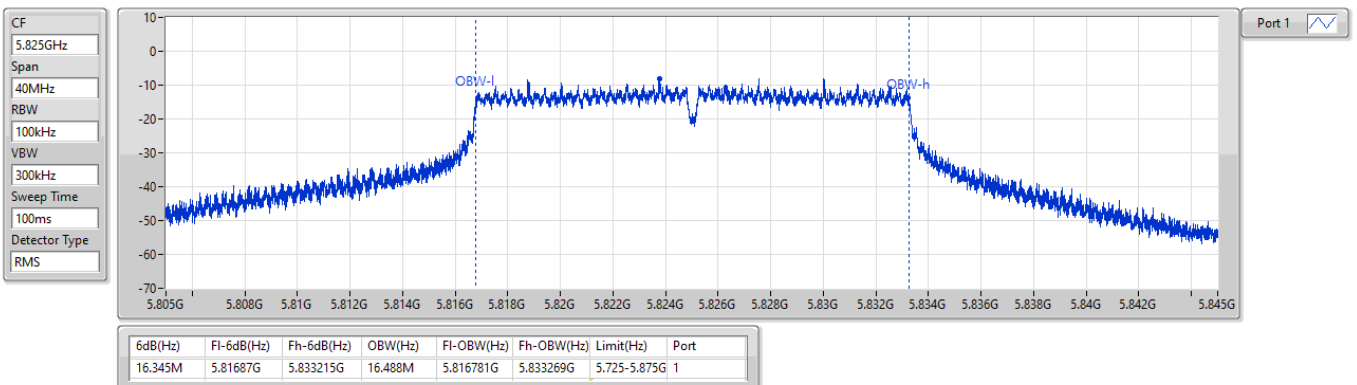


5.725-5.875GHz_802.11a_Nss1,(6Mbps)_2TX

Operating Freq

5825MHz_TnomVnom

12/06/2023



5.725-5.875GHz_802.11a_Nss1,(6Mbps)_2TX

Operating Freq

5825MHz_TminVmax

13/06/2023

CF
5.825GHz

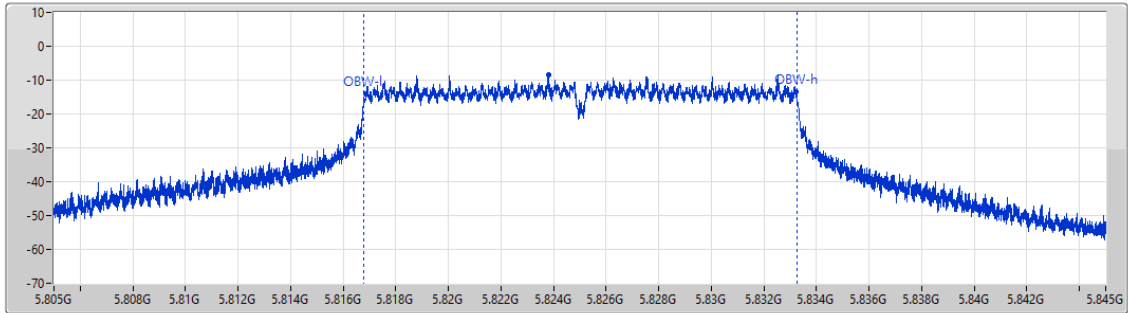
Span
40MHz

RBW
100kHz

VBW
300kHz

Sweep Time
100ms

Detector Type
RMS



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.355M	5.816875G	5.83323G	16.468M	5.816796G	5.833264G	5.725-5.875G	1

5.725-5.875GHz_802.11a_Nss1,(6Mbps)_2TX

Operating Freq

5825MHz_TminVmin

13/06/2023

CF
5.825GHz

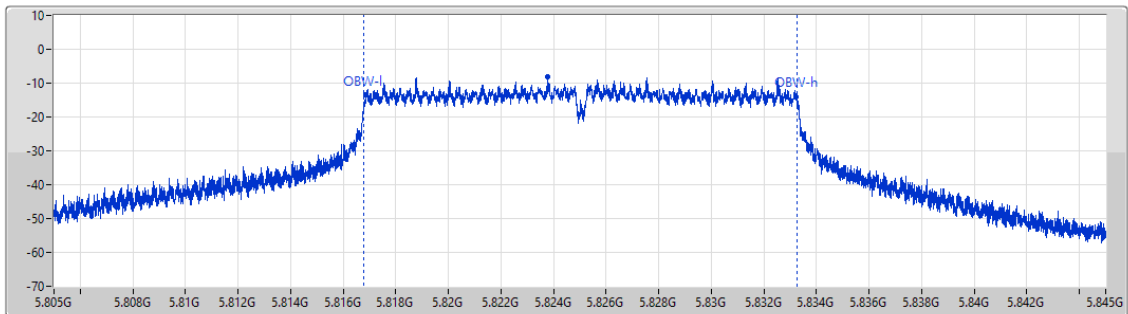
Span
40MHz

RBW
100kHz

VBW
300kHz

Sweep Time
100ms

Detector Type
RMS



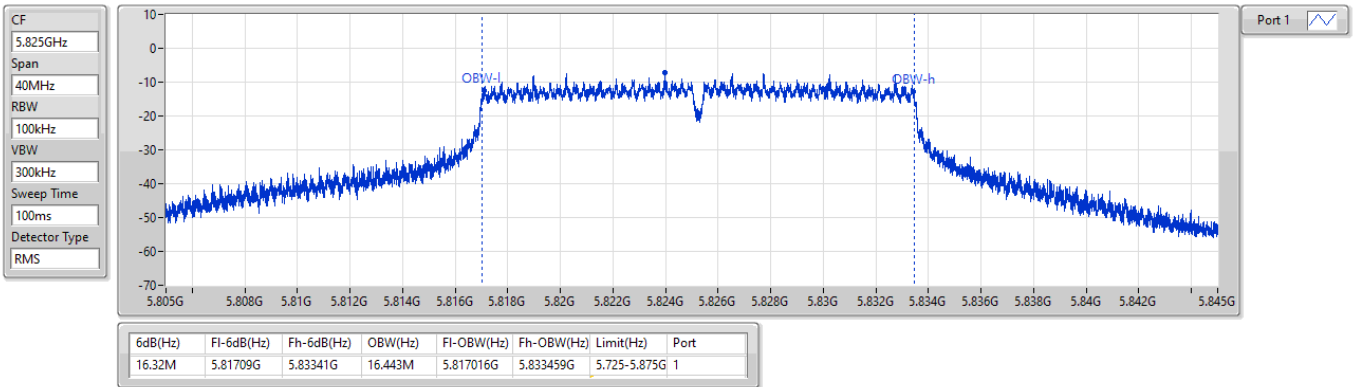
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.35M	5.816875G	5.833225G	16.483M	5.816796G	5.833279G	5.725-5.875G	1

5.725-5.875GHz_802.11a_Nss1,(6Mbps)_2TX

Operating Freq

5825MHz_TmaxVmax

12/06/2023

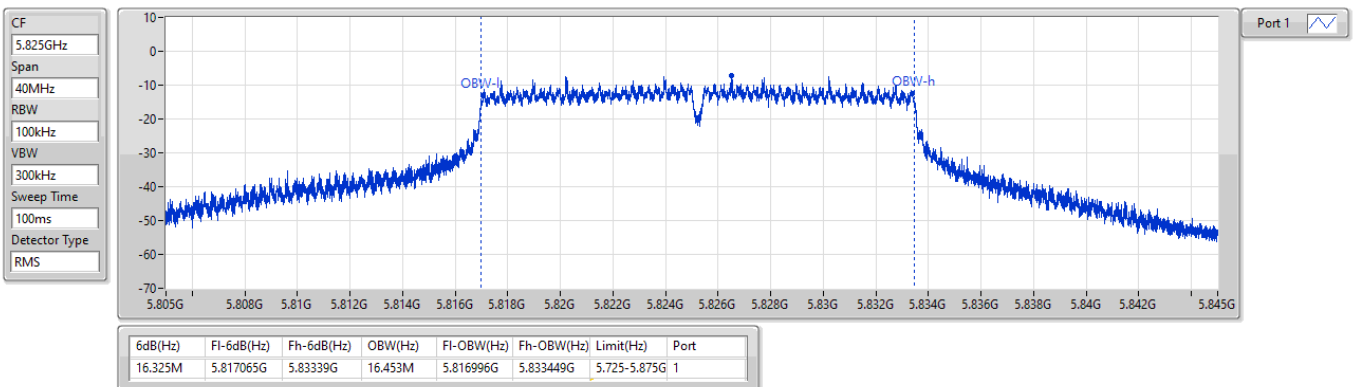


5.725-5.875GHz_802.11a_Nss1,(6Mbps)_2TX

Operating Freq

5825MHz_TmaxVmin

12/06/2023

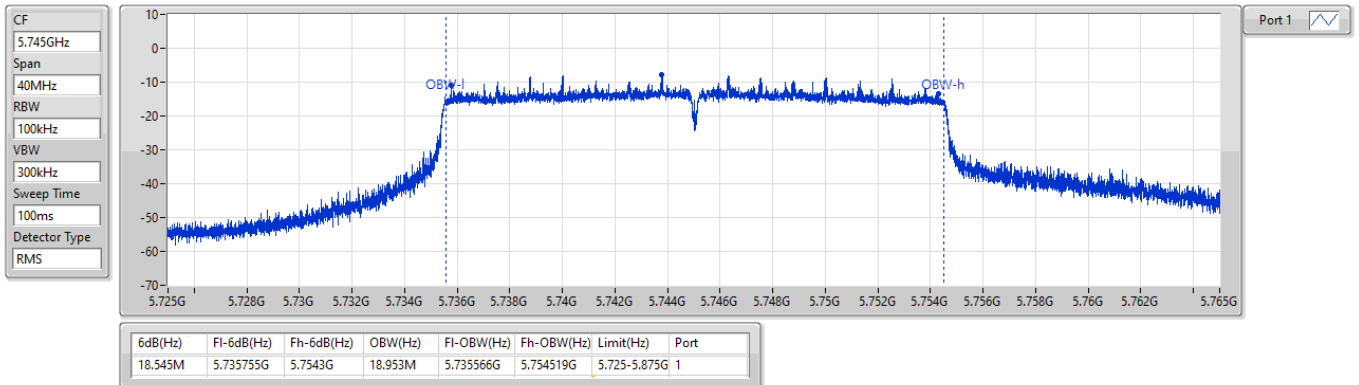


5.725-5.875GHz_802.11ax HEW20_Nss1,(MCS0)_2TX

Operating Freq

5745MHz_TnomVnom

12/06/2023

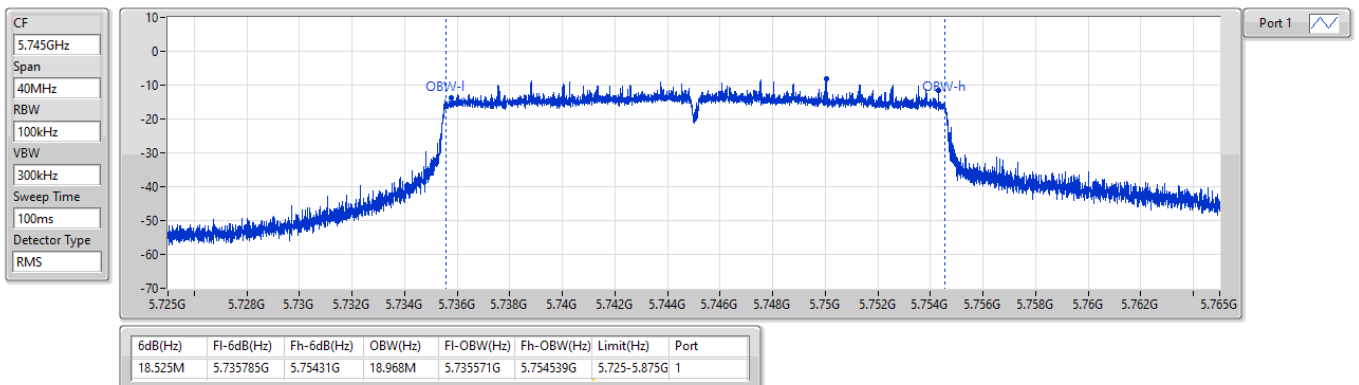


5.725-5.875GHz_802.11ax HEW20_Nss1,(MCS0)_2TX

Operating Freq

5745MHz_TminVmax

13/06/2023

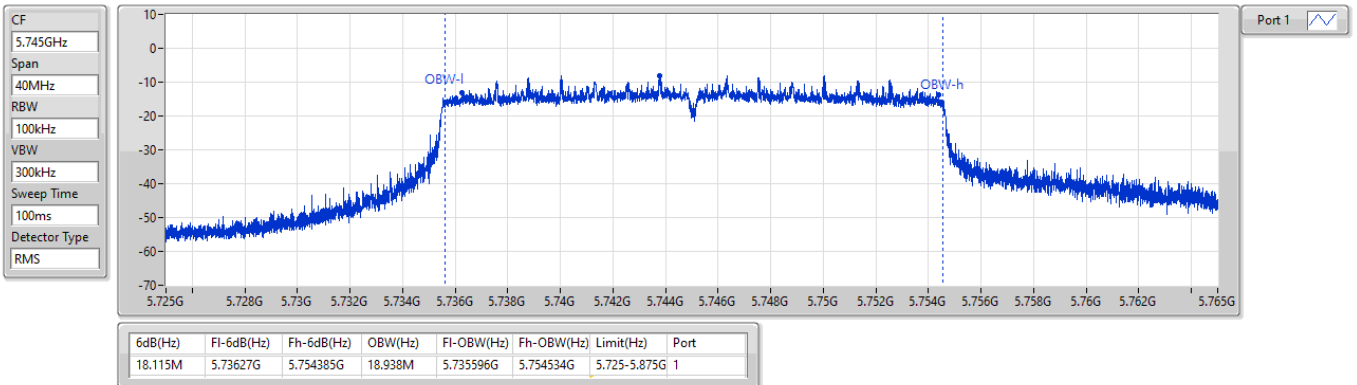


5.725-5.875GHz_802.11ax HEW20_Nss1,(MCS0)_2TX

Operating Freq

5745MHz_TminVmin

13/06/2023

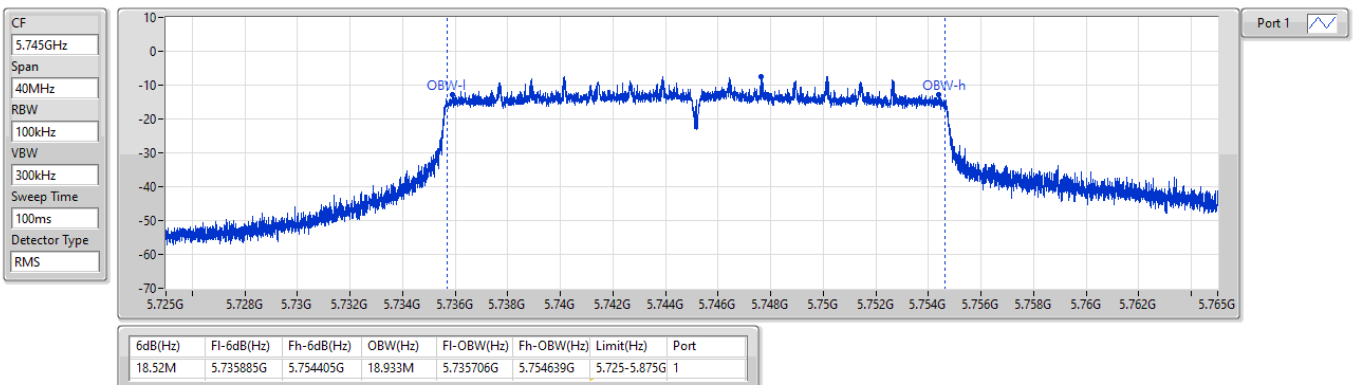


5.725-5.875GHz_802.11ax HEW20_Nss1,(MCS0)_2TX

Operating Freq

5745MHz_TmaxVmax

12/06/2023

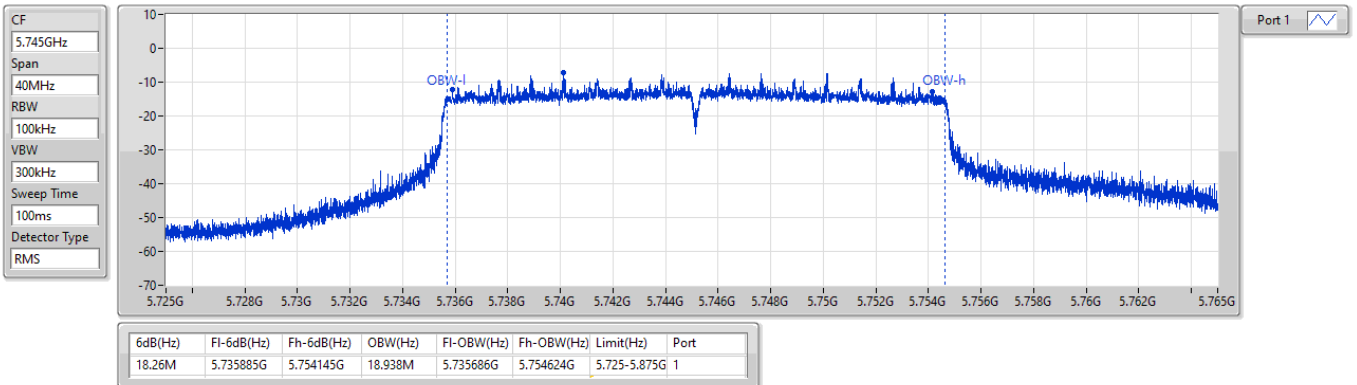


5.725-5.875GHz_802.11ax HEW20_Nss1,(MCS0)_2TX

Operating Freq

5745MHz_TmaxVmin

12/06/2023

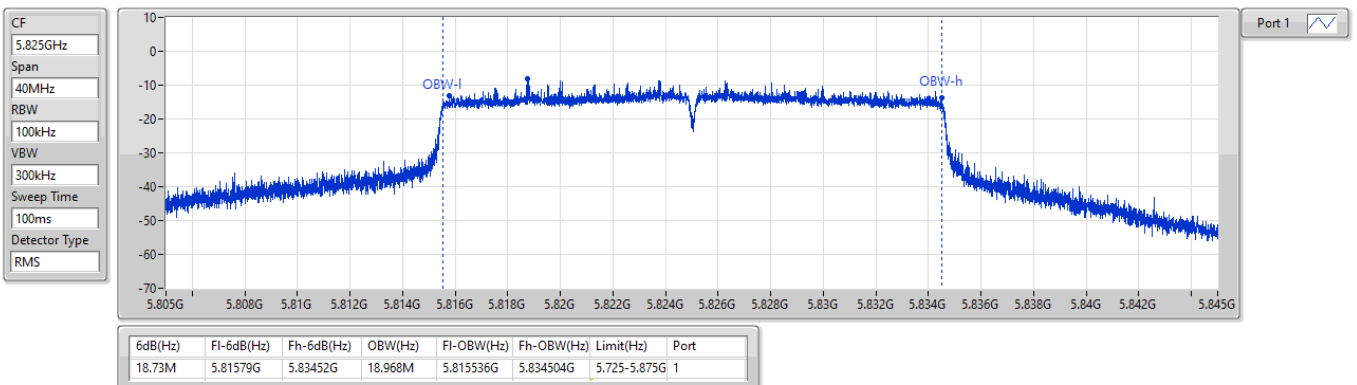


5.725-5.875GHz_802.11ax HEW20_Nss1,(MCS0)_2TX

Operating Freq

5825MHz_TnomVnom

12/06/2023

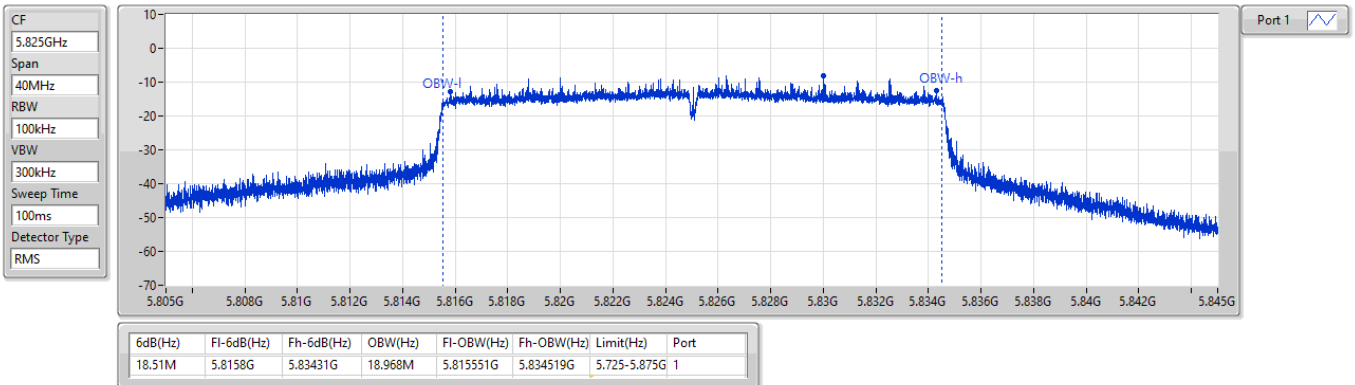


5.725-5.875GHz_802.11ax HEW20_Nss1,(MCS0)_2TX

Operating Freq

5825MHz_TminVmax

13/06/2023

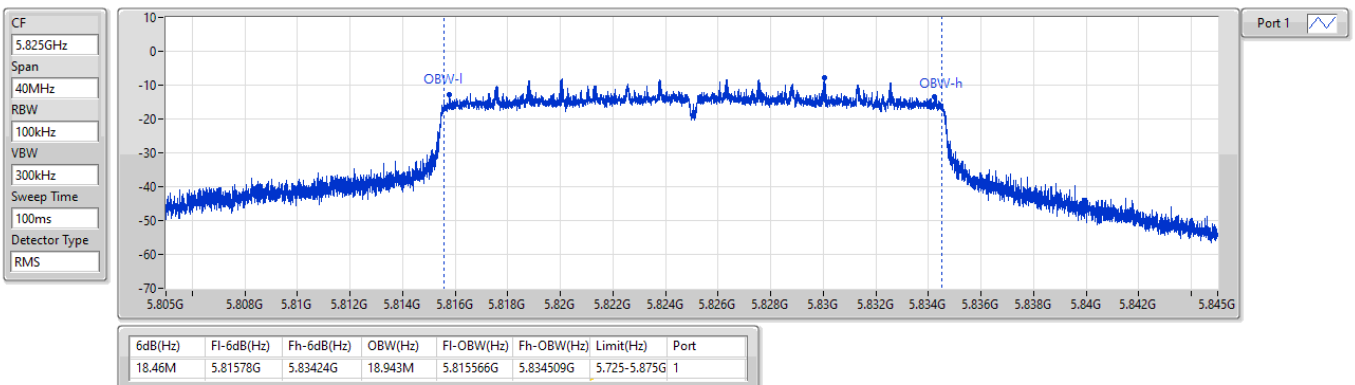


5.725-5.875GHz_802.11ax HEW20_Nss1,(MCS0)_2TX

Operating Freq

5825MHz_TminVmin

13/06/2023

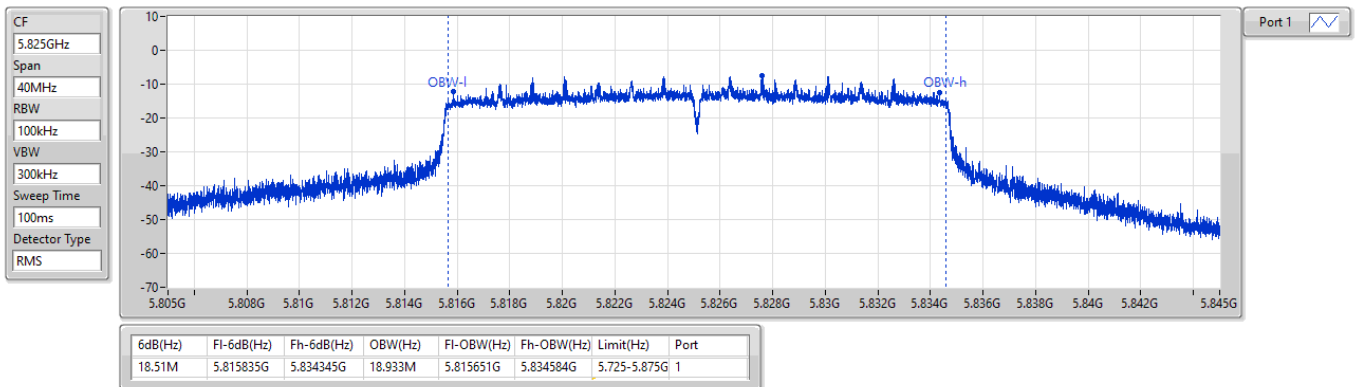


5.725-5.875GHz_802.11ax HEW20_Nss1,(MCS0)_2TX

Operating Freq

5825MHz_TmaxVmax

12/06/2023

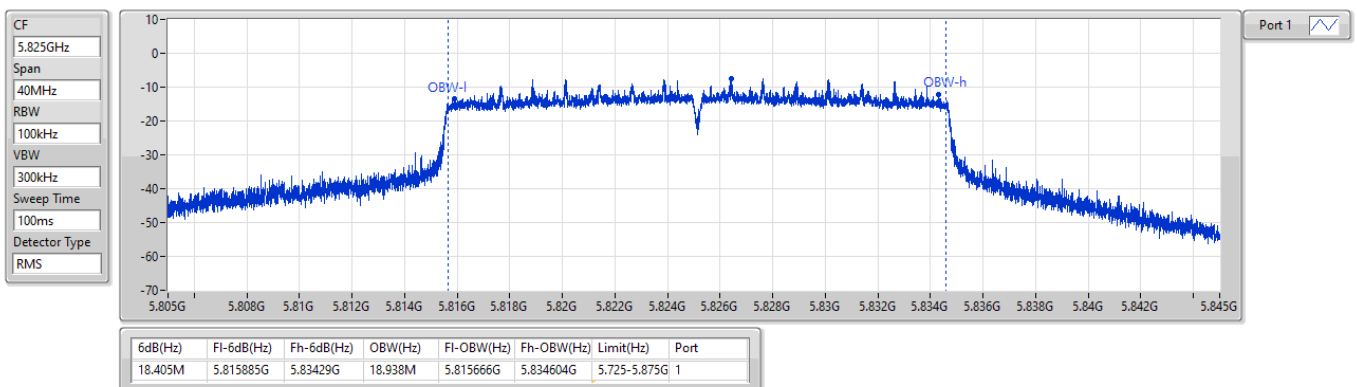


5.725-5.875GHz_802.11ax HEW20_Nss1,(MCS0)_2TX

Operating Freq

5825MHz_TmaxVmin

12/06/2023

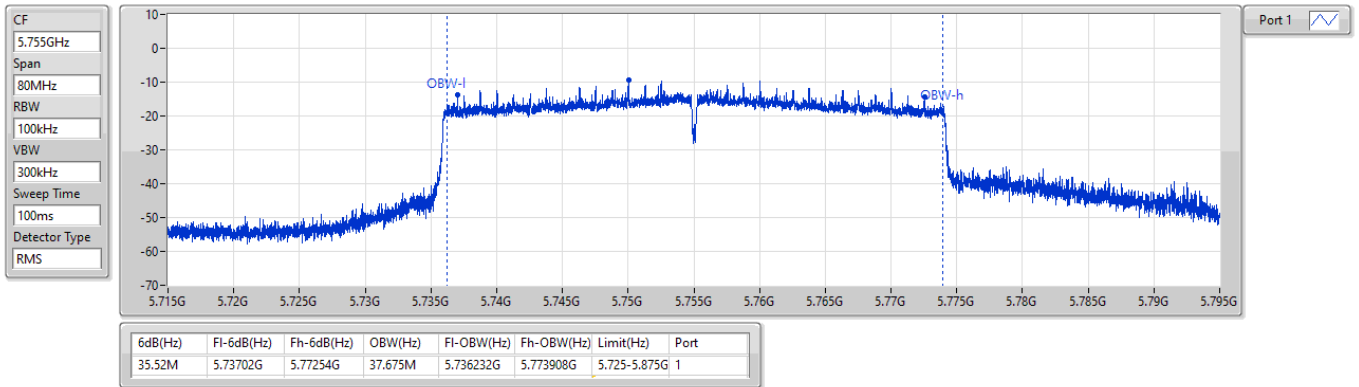


5.725-5.875GHz_802.11ax HEW40_Nss1,(MCS0)_2TX

Operating Freq

5755MHz_TnomVnom

12/06/2023

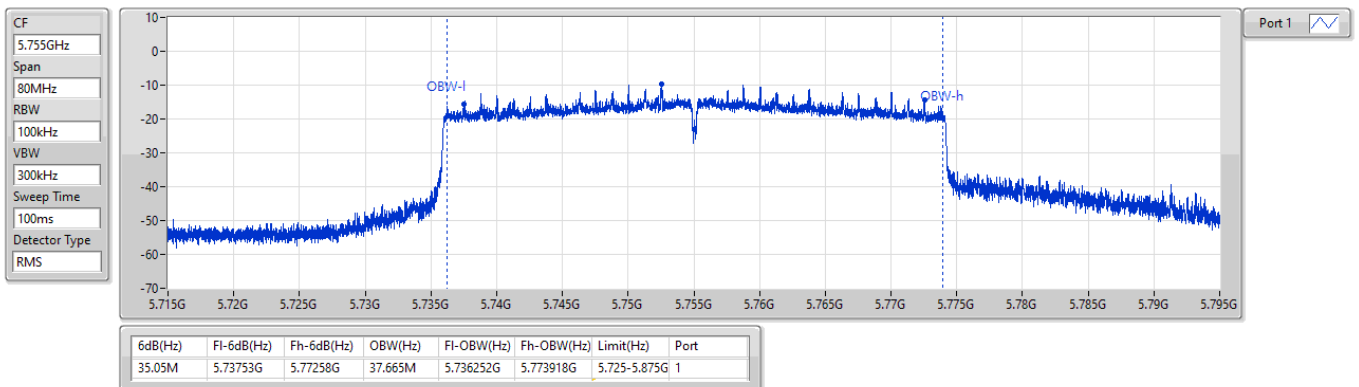


5.725-5.875GHz_802.11ax HEW40_Nss1,(MCS0)_2TX

Operating Freq

5755MHz_TminVmax

13/06/2023

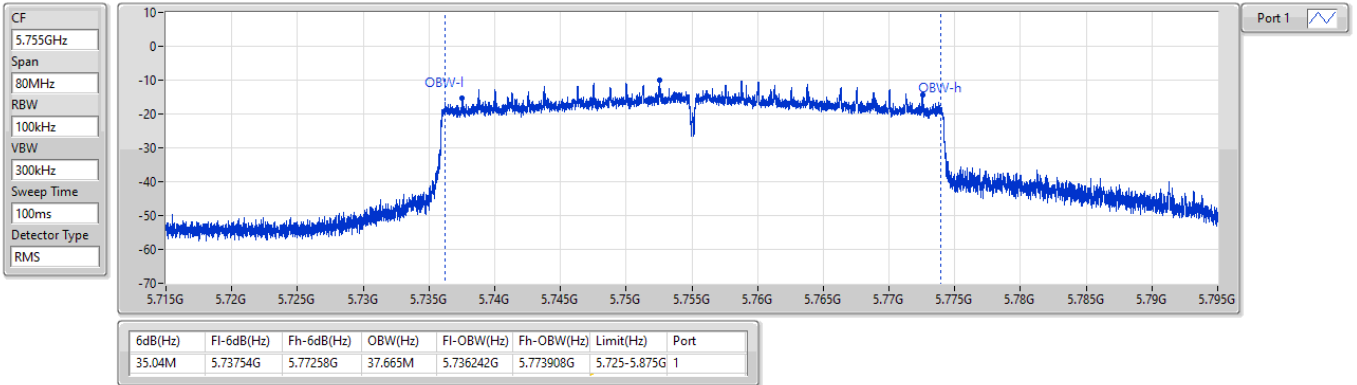


5.725-5.875GHz_802.11ax HEW40_Nss1,(MCS0)_2TX

Operating Freq

5755MHz_TminVmin

13/06/2023

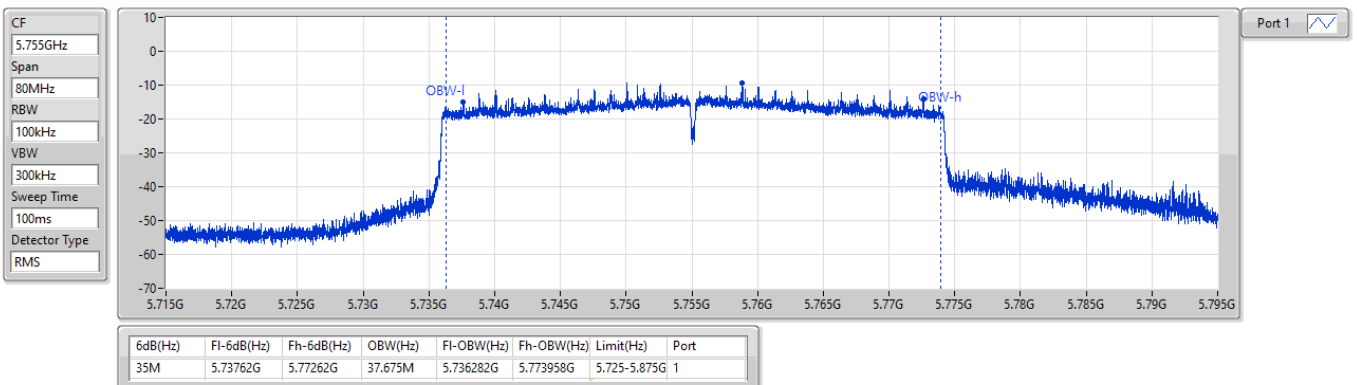


5.725-5.875GHz_802.11ax HEW40_Nss1,(MCS0)_2TX

Operating Freq

5755MHz_TmaxVmax

12/06/2023

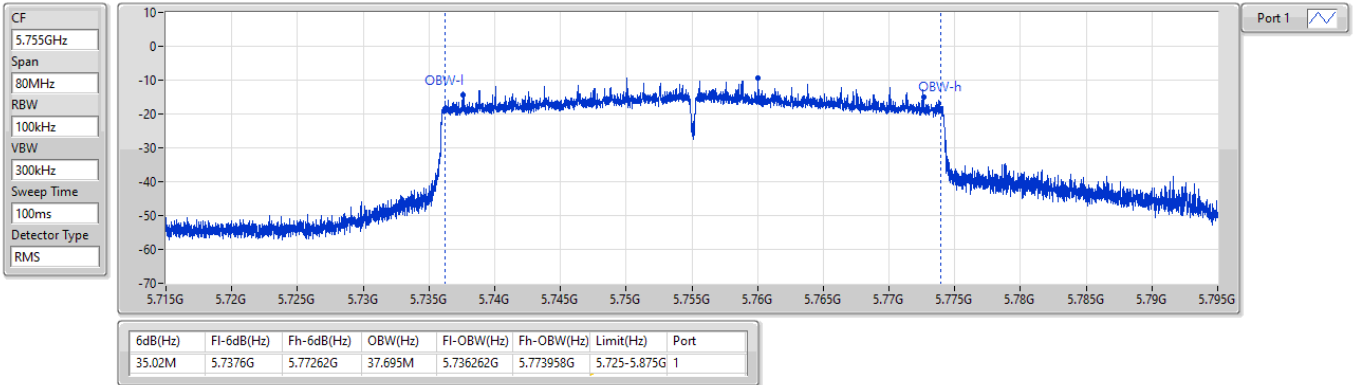


5.725-5.875GHz_802.11ax HEW40_Nss1,(MCS0)_2TX

Operating Freq

5755MHz_TmaxVmin

12/06/2023

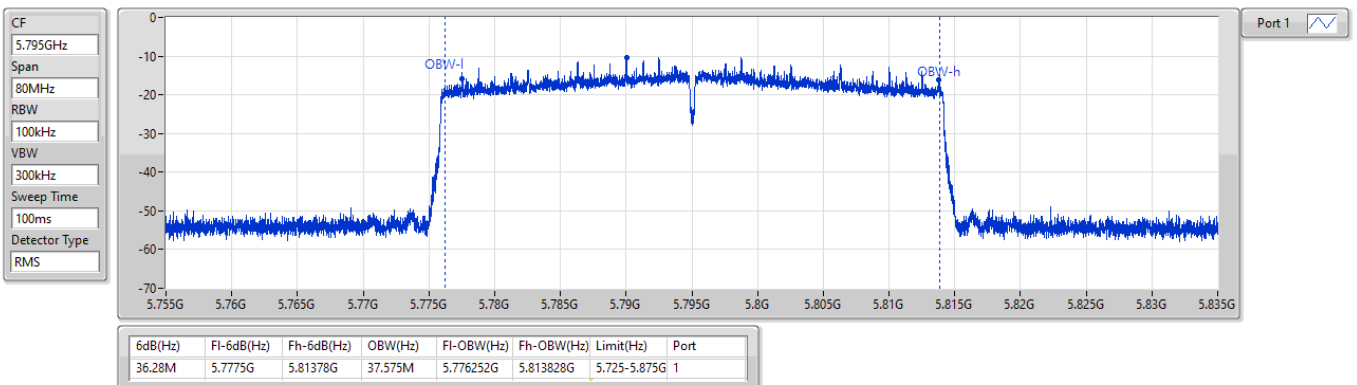


5.725-5.875GHz_802.11ax HEW40_Nss1,(MCS0)_2TX

Operating Freq

5795MHz_TnomVnom

12/06/2023

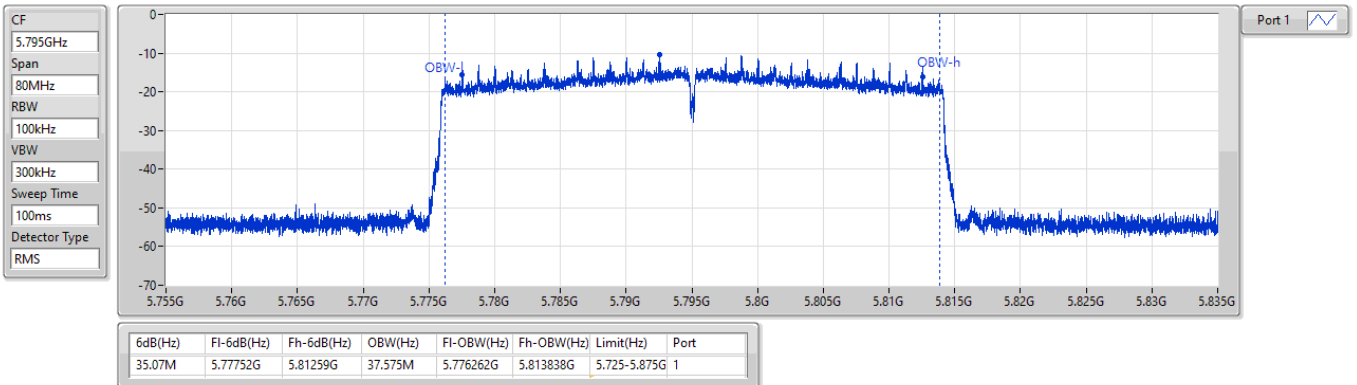


5.725-5.875GHz_802.11ax HEW40_Nss1,(MCS0)_2TX

Operating Freq

5795MHz_TminVmax

13/06/2023

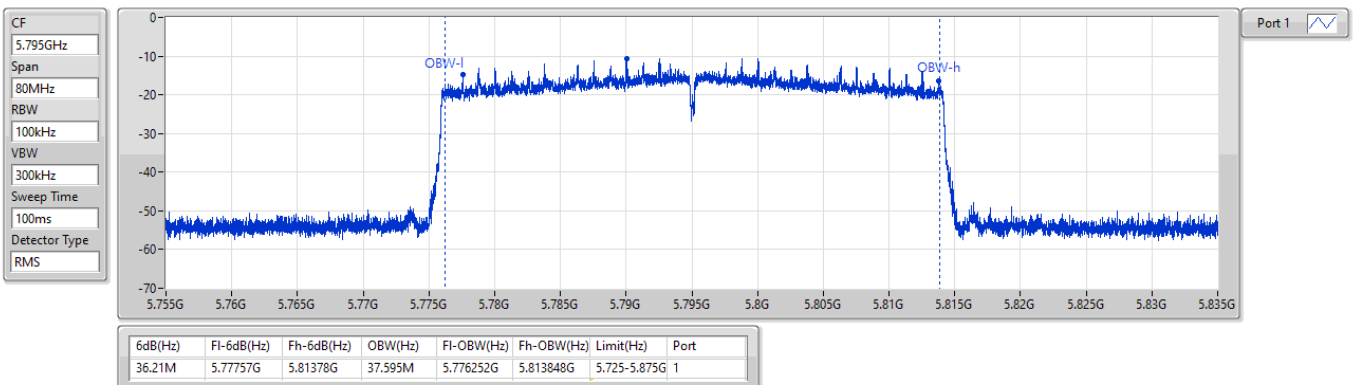


5.725-5.875GHz_802.11ax HEW40_Nss1,(MCS0)_2TX

Operating Freq

5795MHz_TminVmin

13/06/2023

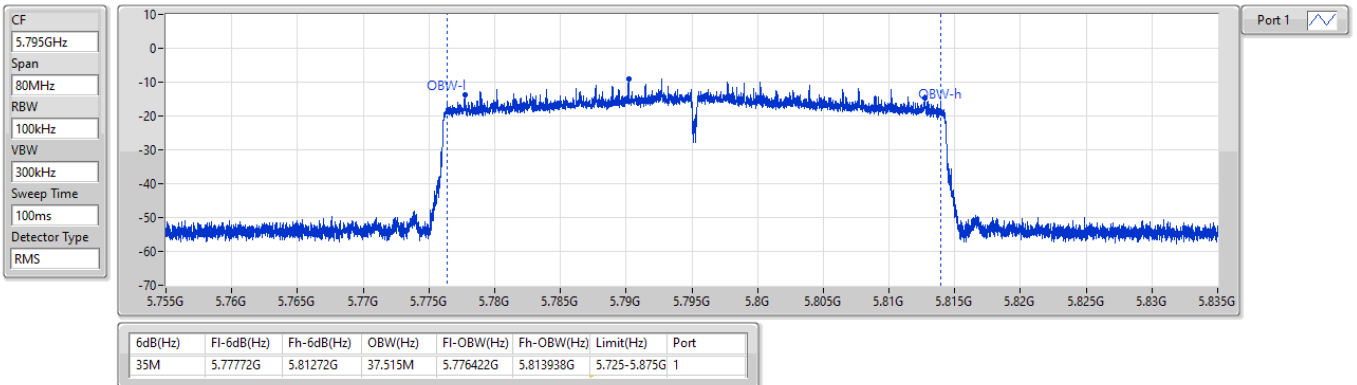


5.725-5.875GHz_802.11ax_HEW40_Nss1,(MCS0)_2TX

Operating Freq

5795MHz_TmaxVmax

12/06/2023

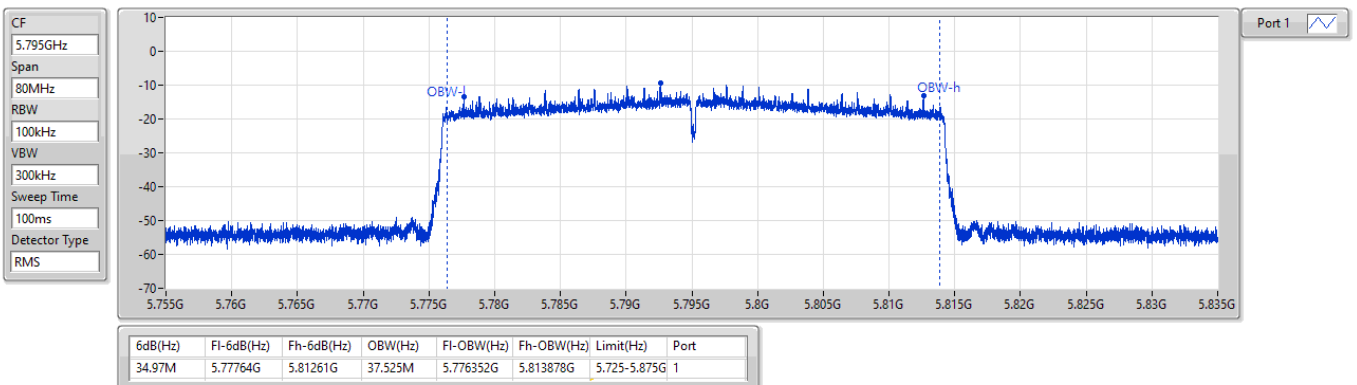


5.725-5.875GHz_802.11ax_HEW40_Nss1,(MCS0)_2TX

Operating Freq

5795MHz_TmaxVmin

12/06/2023

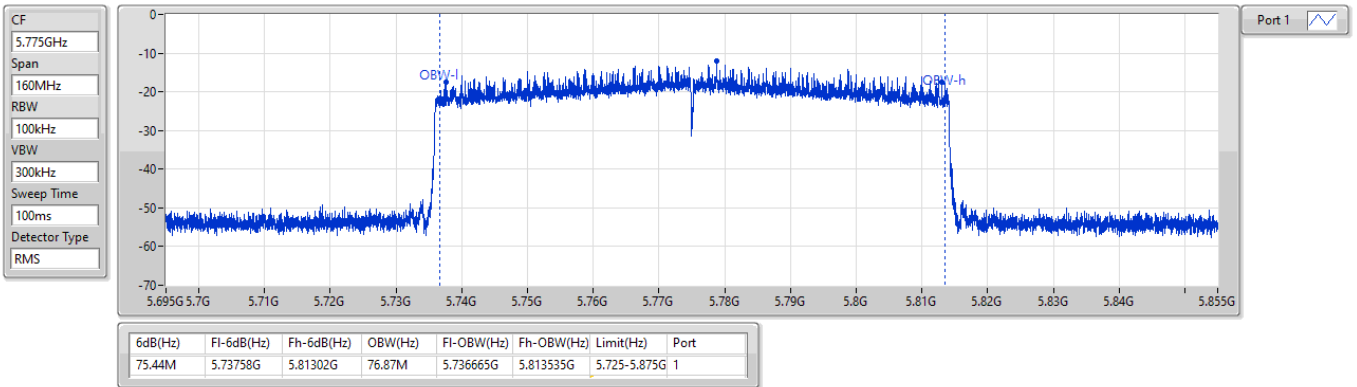


5.725-5.875GHz_802.11ax HEW80_Nss1,(MCS0)_2TX

Operating Freq

5775MHz_TnomVnom

12/06/2023

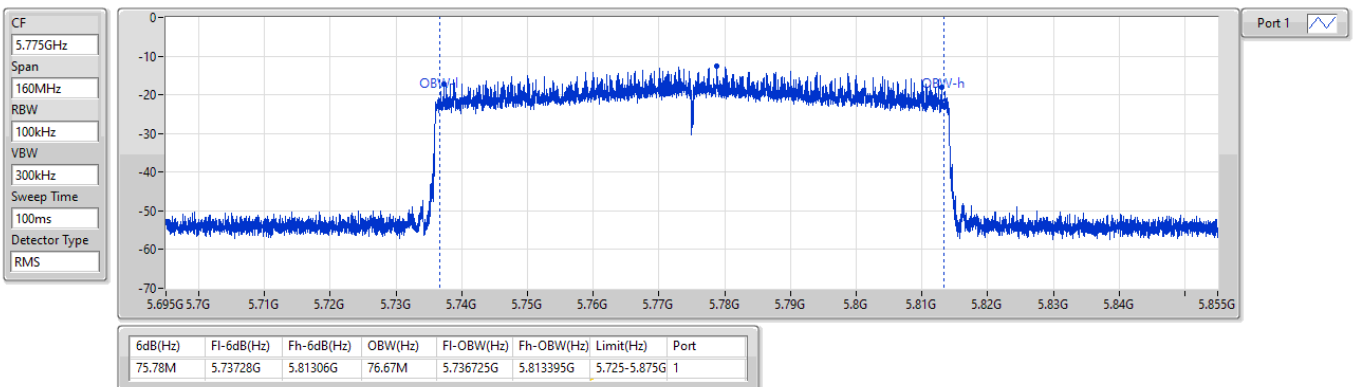


5.725-5.875GHz_802.11ax HEW80_Nss1,(MCS0)_2TX

Operating Freq

5775MHz_TminVmax

13/06/2023

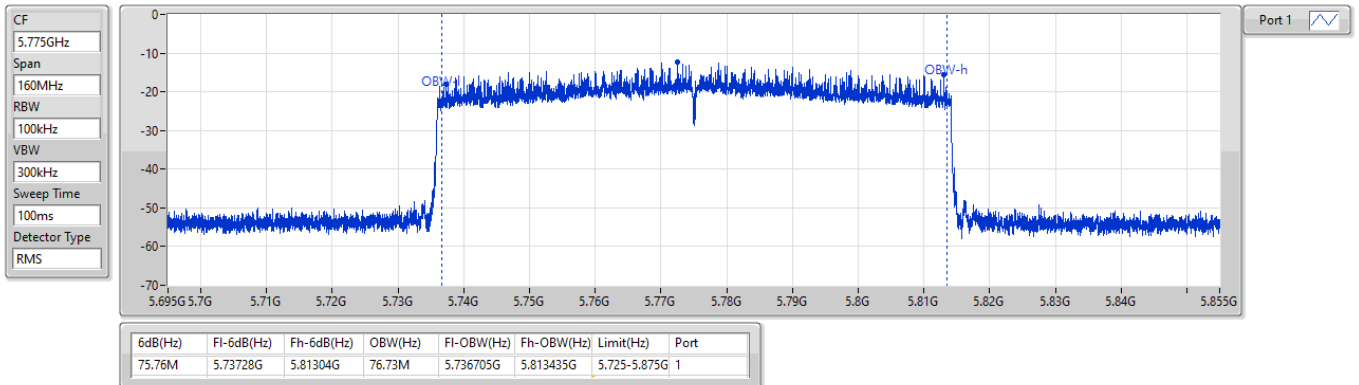


5.725-5.875GHz_802.11ax HEW80_Nss1,(MCS0)_2TX

Operating Freq

5775MHz_TminVmin

13/06/2023

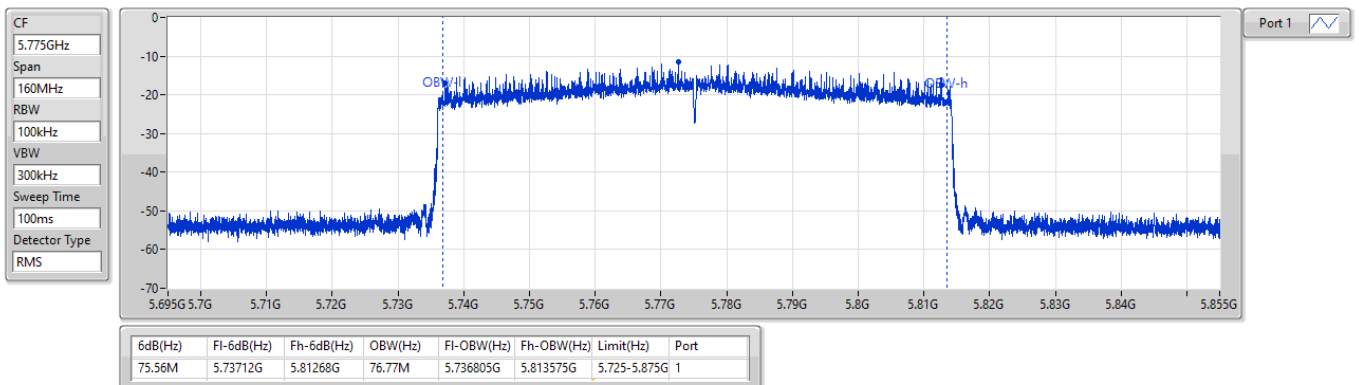


5.725-5.875GHz_802.11ax HEW80_Nss1,(MCS0)_2TX

Operating Freq

5775MHz_TmaxVmax

12/06/2023

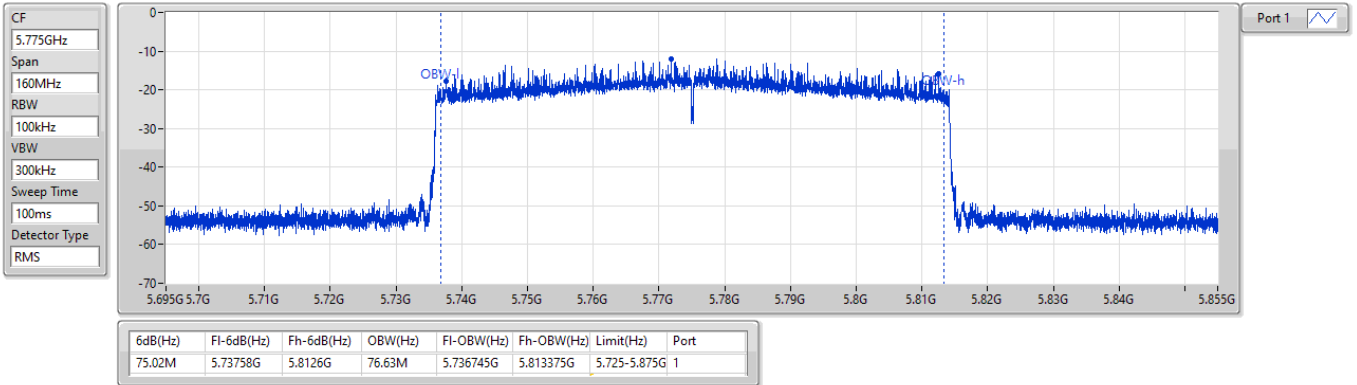


5.725-5.875GHz_802.11ax HEW80_Nss1,(MCS0)_2TX

Operating Freq

5775MHz_TmaxVmin

12/06/2023





Summary

Mode	EIRP (dBm)	EIRP (W)
5.725-5.875GHz	-	-
802.11a_Nss1,(6Mbps)_2TX	13.81	0.02404
802.11ax HEW20_Nss1,(MCS0)_2TX	13.96	0.02489
802.11ax HEW40_Nss1,(MCS0)_2TX	13.96	0.02489
802.11ax HEW80_Nss1,(MCS0)_2TX	13.73	0.02360

Result

Mode	Result	Gain (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11a_Nss1,(6Mbps)_2TX	-	-	-	-	-	-	-
5745MHz_TnomVnom	Pass	5.00	5.56	5.59	8.59	13.59	13.98
5745MHz_TminVmax	Pass	5.00	5.56	5.63	8.61	13.61	13.98
5745MHz_TminVmin	Pass	5.00	5.44	5.69	8.58	13.58	13.98
5745MHz_TmaxVmax	Pass	5.00	6.29	5.25	8.81	13.81	13.98
5745MHz_TmaxVmin	Pass	5.00	6.17	5.17	8.71	13.71	13.98
5825MHz_TnomVnom	Pass	5.00	5.85	5.50	8.69	13.69	13.98
5825MHz_TminVmax	Pass	5.00	5.19	5.38	8.30	13.30	13.98
5825MHz_TminVmin	Pass	5.00	5.33	5.44	8.40	13.40	13.98
5825MHz_TmaxVmax	Pass	5.00	6.03	5.20	8.65	13.65	13.98
5825MHz_TmaxVmin	Pass	5.00	6.10	4.93	8.56	13.56	13.98
802.11ax HEW20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-
5745MHz_TnomVnom	Pass	5.00	5.38	5.70	8.55	13.55	13.98
5745MHz_TminVmax	Pass	5.00	5.49	5.61	8.56	13.56	13.98
5745MHz_TminVmin	Pass	5.00	5.76	5.61	8.70	13.70	13.98
5745MHz_TmaxVmax	Pass	5.00	6.08	5.27	8.70	13.70	13.98
5745MHz_TmaxVmin	Pass	5.00	5.78	5.25	8.53	13.53	13.98
5825MHz_TnomVnom	Pass	5.00	5.91	5.98	8.96	13.96	13.98
5825MHz_TminVmax	Pass	5.00	5.54	5.57	8.57	13.57	13.98
5825MHz_TminVmin	Pass	5.00	5.36	5.46	8.42	13.42	13.98
5825MHz_TmaxVmax	Pass	5.00	6.11	5.09	8.64	13.64	13.98
5825MHz_TmaxVmin	Pass	5.00	5.97	5.39	8.70	13.70	13.98
802.11ax HEW40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-
5755MHz_TnomVnom	Pass	5.00	5.78	5.89	8.85	13.85	13.98
5755MHz_TminVmax	Pass	5.00	5.49	5.45	8.48	13.48	13.98
5755MHz_TminVmin	Pass	5.00	5.76	5.91	8.85	13.85	13.98
5755MHz_TmaxVmax	Pass	5.00	6.06	5.84	8.96	13.96	13.98
5755MHz_TmaxVmin	Pass	5.00	5.82	5.68	8.76	13.76	13.98
5795MHz_TnomVnom	Pass	5.00	5.61	5.64	8.64	13.64	13.98
5795MHz_TminVmax	Pass	5.00	5.45	5.60	8.54	13.54	13.98
5795MHz_TminVmin	Pass	5.00	5.32	5.59	8.47	13.47	13.98
5795MHz_TmaxVmax	Pass	5.00	6.40	5.39	8.93	13.93	13.98
5795MHz_TmaxVmin	Pass	5.00	5.87	5.12	8.52	13.52	13.98
802.11ax HEW80_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-
5775MHz_TnomVnom	Pass	5.00	5.63	5.80	8.73	13.73	13.98
5775MHz_TminVmax	Pass	5.00	5.34	5.51	8.44	13.44	13.98
5775MHz_TminVmin	Pass	5.00	5.24	5.56	8.41	13.41	13.98
5775MHz_TmaxVmax	Pass	5.00	6.13	5.09	8.65	13.65	13.98
5775MHz_TmaxVmin	Pass	5.00	5.91	5.21	8.58	13.58	13.98

Port X = Port X output power; Total Power = Total power measure all transmit ports simultaneously.



Summary

Mode	EIRP (dBm)	EIRP (W)
5.725-5.875GHz	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	13.92	0.02466
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	13.90	0.02455
802.11ax HEW80-BF_Nss1,(MCS0)_2TX	13.66	0.02323

Result

Mode	Result	Gain (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-
5745MHz_TnomVnom	Pass	8.01	2.28	2.60	5.45	13.46	13.98
5745MHz_TminVmax	Pass	8.01	2.46	2.58	5.53	13.54	13.98
5745MHz_TminVmin	Pass	8.01	2.67	2.52	5.61	13.62	13.98
5745MHz_TmaxVmax	Pass	8.01	3.02	2.21	5.64	13.65	13.98
5745MHz_TmaxVmin	Pass	8.01	2.68	2.15	5.43	13.44	13.98
5825MHz_TnomVnom	Pass	8.01	2.86	2.93	5.91	13.92	13.98
5825MHz_TminVmax	Pass	8.01	2.48	2.51	5.51	13.52	13.98
5825MHz_TminVmin	Pass	8.01	2.30	2.40	5.36	13.37	13.98
5825MHz_TmaxVmax	Pass	8.01	3.01	1.99	5.54	13.55	13.98
5825MHz_TmaxVmin	Pass	8.01	2.87	2.29	5.60	13.61	13.98
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-
5755MHz_TnomVnom	Pass	8.01	2.76	2.87	5.83	13.84	13.98
5755MHz_TminVmax	Pass	8.01	2.44	2.40	5.43	13.44	13.98
5755MHz_TminVmin	Pass	8.01	2.66	2.81	5.75	13.76	13.98
5755MHz_TmaxVmax	Pass	8.01	2.99	2.77	5.89	13.90	13.98
5755MHz_TmaxVmin	Pass	8.01	2.78	2.64	5.72	13.73	13.98
5795MHz_TnomVnom	Pass	8.01	2.53	2.56	5.56	13.57	13.98
5795MHz_TminVmax	Pass	8.01	2.40	2.55	5.49	13.50	13.98
5795MHz_TminVmin	Pass	8.01	2.29	2.56	5.44	13.45	13.98
5795MHz_TmaxVmax	Pass	8.01	3.32	2.31	5.85	13.86	13.98
5795MHz_TmaxVmin	Pass	8.01	2.83	2.08	5.48	13.49	13.98
802.11ax HEW80-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-
5775MHz_TnomVnom	Pass	8.01	2.55	2.72	5.65	13.66	13.98
5775MHz_TminVmax	Pass	8.01	2.30	2.47	5.40	13.41	13.98
5775MHz_TminVmin	Pass	8.01	2.20	2.52	5.37	13.38	13.98
5775MHz_TmaxVmax	Pass	8.01	3.07	2.03	5.59	13.60	13.98
5775MHz_TmaxVmin	Pass	8.01	2.84	2.14	5.51	13.52	13.98

Port X = Port X output power; Total Power = Total power measure all transmit ports simultaneously.



Summary

Mode	Result	Type	Freq (Hz)	Level (dBm)	Limit (dBm)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
5.725-5.875GHz	-	-	-	-	-	-	-	-	-	-	-	-
802.11ax HEW80_Nss1,(MCS0)_2TX	Pass	PK	213.89M	-64.21	-54.00	-10.21	0.17	3	Horizontal	360	1.5	-

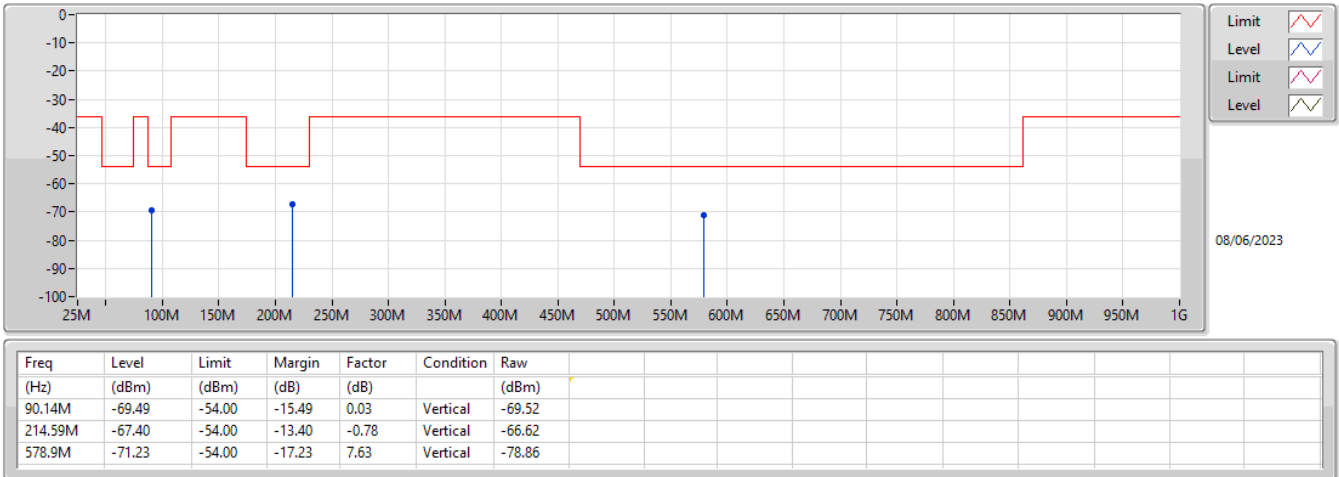


Result

Mode	Result	Type	Freq (Hz)	Level (dBm)	Limit (dBm)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
802.11ax HEW80_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-
5775MHz_TX	Pass	PK	90.14M	-69.49	-54.00	-15.49	0.03	3	Vertical	0	1.5	-
5775MHz_TX	Pass	PK	214.59M	-67.40	-54.00	-13.40	-0.78	3	Vertical	0	1.5	-
5775MHz_TX	Pass	PK	578.9M	-71.23	-54.00	-17.23	7.63	3	Vertical	0	1.5	-
5775MHz_TX	Pass	PK	213.89M	-64.21	-54.00	-10.21	0.17	3	Horizontal	360	1.5	-
5775MHz_TX	Pass	PK	591.56M	-69.29	-54.00	-15.29	8.92	3	Horizontal	360	1.5	-
5775MHz_TX	Pass	PK	799.95M	-65.44	-54.00	-11.44	11.91	3	Horizontal	360	1.5	-

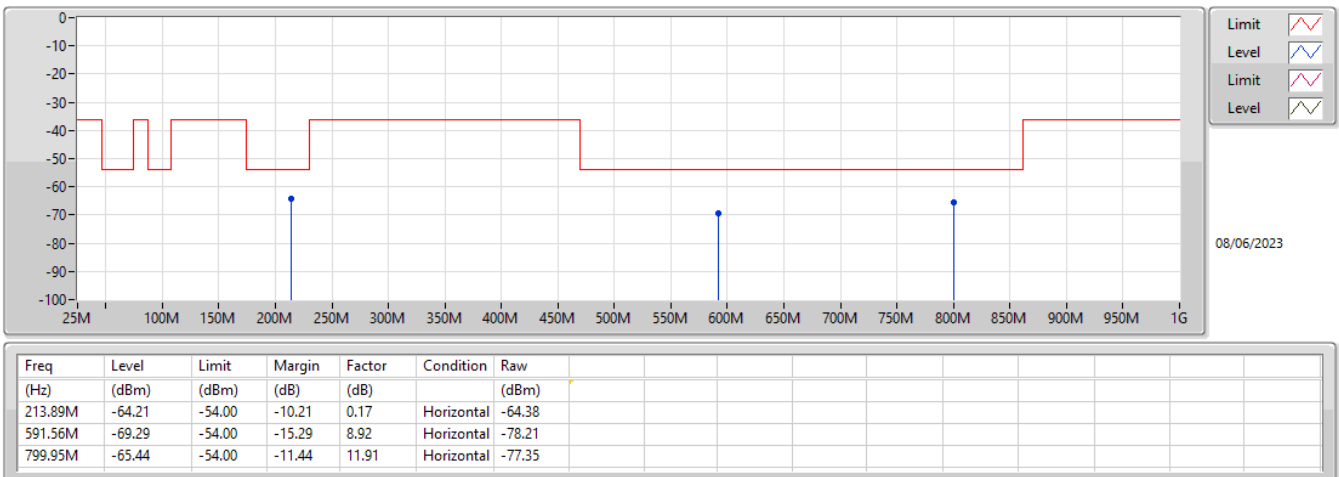
5.725-5.875GHz_802.11ax HEW80_Nss1,(MCS0)_2TX

5775MHz_TX



5.725-5.875GHz_802.11ax HEW80_Nss1,(MCS0)_2TX

5775MHz_TX



**Summary**

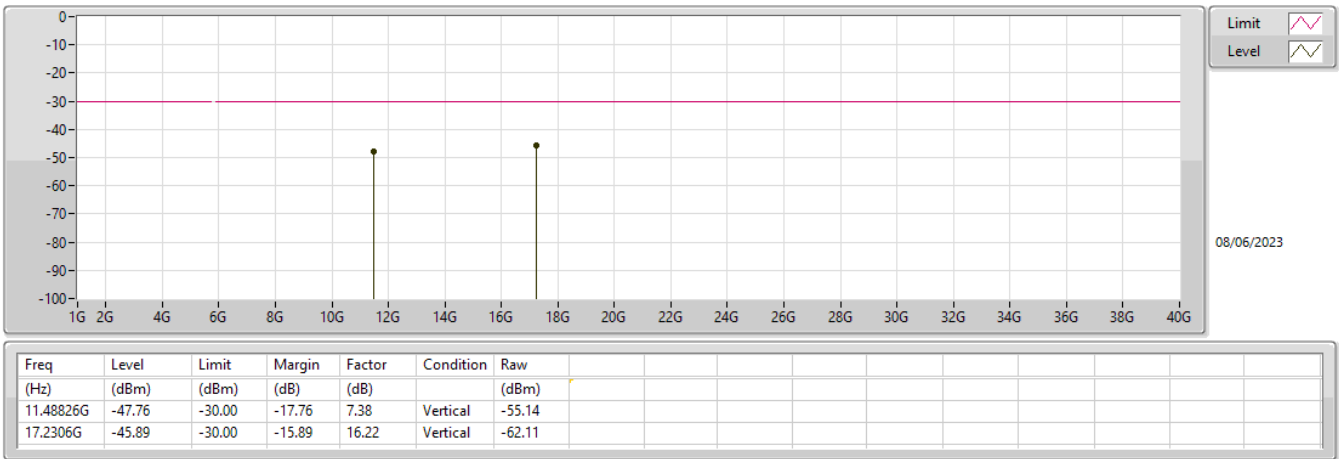
Mode	Result	Type	Freq (Hz)	Level (dBm)	Limit (dBm)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
5.725-5.875GHz	-	-	-	-	-	-	-	-	-	-	-	-
802.11a_Nss1,(6Mbps)_2TX	Pass	AV	17.47132G	-30.33	-30.00	-0.33	15.53	3	Vertical	360	1.5	-
802.11ax HEW20_Nss1,(MCS0)_2TX	Pass	AV	17.47585G	-33.14	-30.00	-3.14	15.52	3	Vertical	360	1.5	-
802.11ax HEW40_Nss1,(MCS0)_2TX	Pass	AV	17.3872G	-40.84	-30.00	-10.84	15.77	3	Vertical	360	1.5	-
802.11ax HEW80_Nss1,(MCS0)_2TX	Pass	AV	17.3872G	-46.93	-30.00	-16.93	15.77	3	Vertical	0	1.5	-

**Result**

Mode	Result	Type	Freq (Hz)	Level (dBm)	Limit (dBm)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
802.11a_Nss1,(6Mbps)_2TX	-	-	-	-	-	-	-	-	-	-	-	-
5745MHz_TX	Pass	AV	11.48826G	-47.76	-30.00	-17.76	7.38	3	Vertical	0	1.5	-
5745MHz_TX	Pass	AV	17.2306G	-45.89	-30.00	-15.89	16.22	3	Vertical	0	1.5	-
5745MHz_TX	Pass	AV	11.48697G	-52.20	-30.00	-22.20	7.37	3	Horizontal	360	1.5	-
5745MHz_TX	Pass	AV	17.2306G	-47.58	-30.00	-17.58	16.22	3	Horizontal	360	1.5	-
5825MHz_TX	Pass	AV	11.65133G	-46.49	-30.00	-16.49	7.53	3	Vertical	360	1.5	-
5825MHz_TX	Pass	AV	17.47132G	-30.33	-30.00	-0.33	15.53	3	Vertical	360	1.5	-
5825MHz_TX	Pass	AV	11.65198G	-46.68	-30.00	-16.68	7.53	3	Horizontal	0	1.5	-
5825MHz_TX	Pass	AV	17.47585G	-33.40	-30.00	-3.40	15.52	3	Horizontal	0	1.5	-
802.11ax HEW20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-
5745MHz_TX	Pass	AV	11.4915G	-47.93	-30.00	-17.93	7.40	3	Vertical	0	1.5	-
5745MHz_TX	Pass	AV	17.22995G	-45.68	-30.00	-15.68	16.22	3	Vertical	0	1.5	-
5745MHz_TX	Pass	AV	11.48891G	-52.65	-30.00	-22.65	7.38	3	Horizontal	360	1.5	-
5745MHz_TX	Pass	AV	17.25131G	-47.33	-30.00	-17.33	16.16	3	Horizontal	360	1.5	-
5825MHz_TX	Pass	AV	11.65133G	-48.19	-30.00	-18.19	7.53	3	Vertical	360	1.5	-
5825MHz_TX	Pass	AV	17.47585G	-33.14	-30.00	-3.14	15.52	3	Vertical	360	1.5	-
5825MHz_TX	Pass	AV	11.65457G	-49.07	-30.00	-19.07	7.53	3	Horizontal	0	1.5	-
5825MHz_TX	Pass	AV	17.48038G	-39.53	-30.00	-9.53	15.51	3	Horizontal	0	1.5	-
802.11ax HEW40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-
5755MHz_TX	Pass	AV	11.51156G	-48.13	-30.00	-18.13	7.46	3	Vertical	0	1.5	-
5755MHz_TX	Pass	AV	17.27978G	-46.59	-30.00	-16.59	16.08	3	Vertical	0	1.5	-
5755MHz_TX	Pass	AV	11.51738G	-54.04	-30.00	-24.04	7.46	3	Horizontal	360	1.5	-
5755MHz_TX	Pass	AV	17.27072G	-47.19	-30.00	-17.19	16.10	3	Horizontal	360	1.5	-
5795MHz_TX	Pass	AV	11.59374G	-48.45	-30.00	-18.45	7.50	3	Vertical	360	1.5	-
5795MHz_TX	Pass	AV	17.3872G	-40.84	-30.00	-10.84	15.77	3	Vertical	360	1.5	-
5795MHz_TX	Pass	AV	11.60021G	-52.30	-30.00	-22.30	7.50	3	Horizontal	0	1.5	-
5795MHz_TX	Pass	AV	17.39043G	-43.08	-30.00	-13.08	15.76	3	Horizontal	0	1.5	-
802.11ax HEW80_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-
5775MHz_TX	Pass	AV	11.5685G	-53.47	-30.00	-23.47	7.48	3	Vertical	0	1.5	-
5775MHz_TX	Pass	AV	17.3872G	-46.93	-30.00	-16.93	15.77	3	Vertical	0	1.5	-
5775MHz_TX	Pass	AV	11.60862G	-53.28	-30.00	-23.28	7.50	3	Horizontal	360	1.5	-
5775MHz_TX	Pass	AV	17.30761G	-47.26	-30.00	-17.26	16.00	3	Horizontal	360	1.5	-

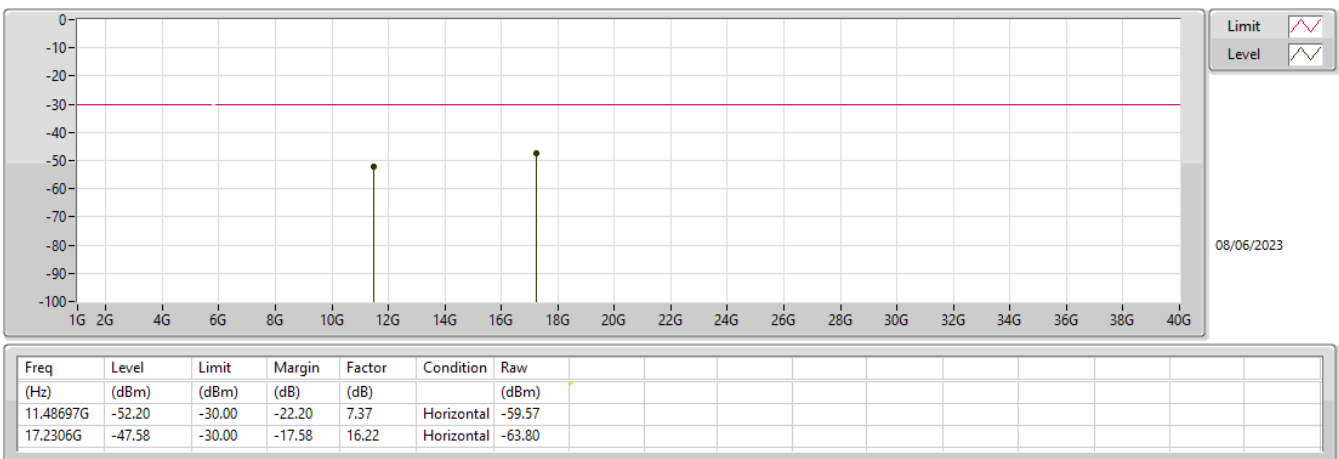
5.725-5.875GHz_802.11a_Nss1,(6Mbps)_2TX

5745MHz_TX



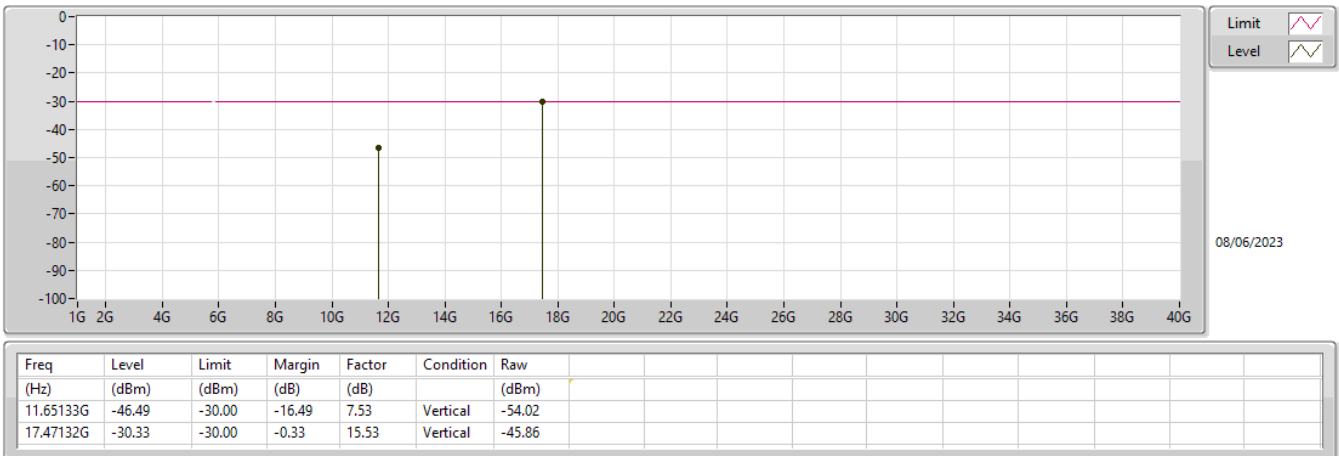
5.725-5.875GHz_802.11a_Nss1,(6Mbps)_2TX

5745MHz_TX



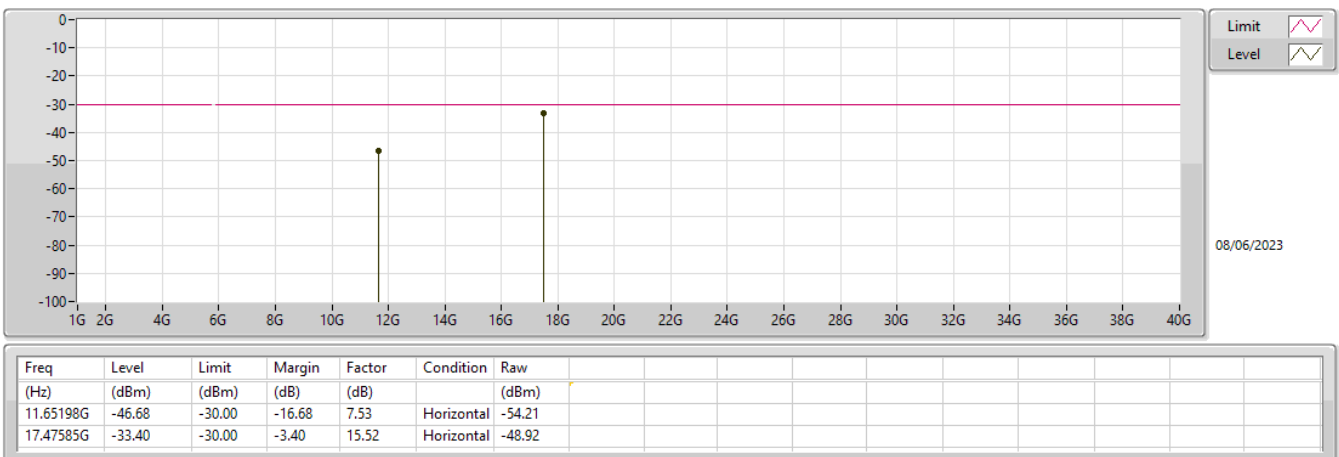
5.725-5.875GHz_802.11a_Nss1,(6Mbps)_2TX

5825MHz_TX



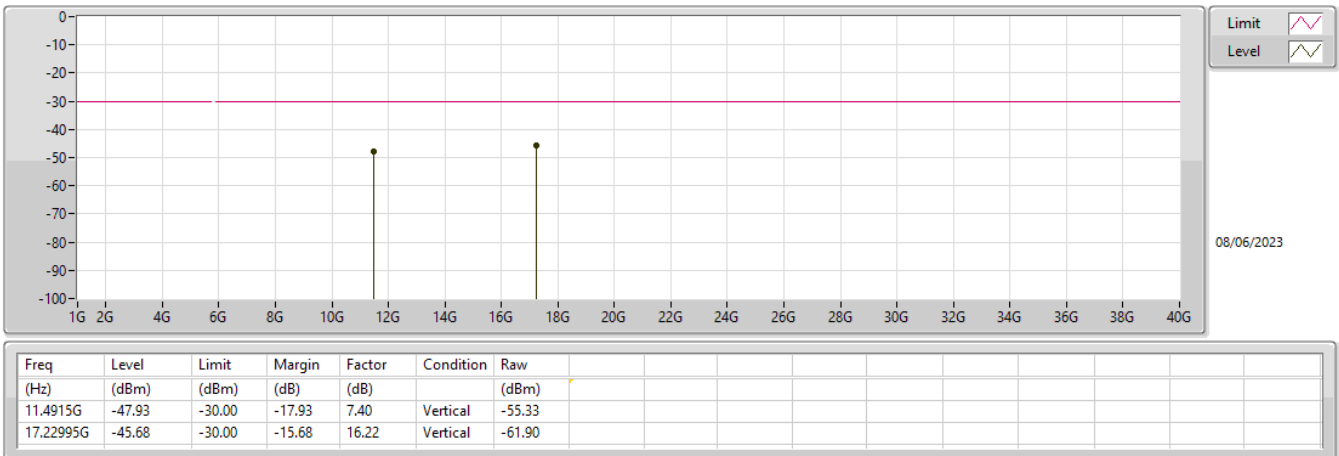
5.725-5.875GHz_802.11a_Nss1,(6Mbps)_2TX

5825MHz_TX



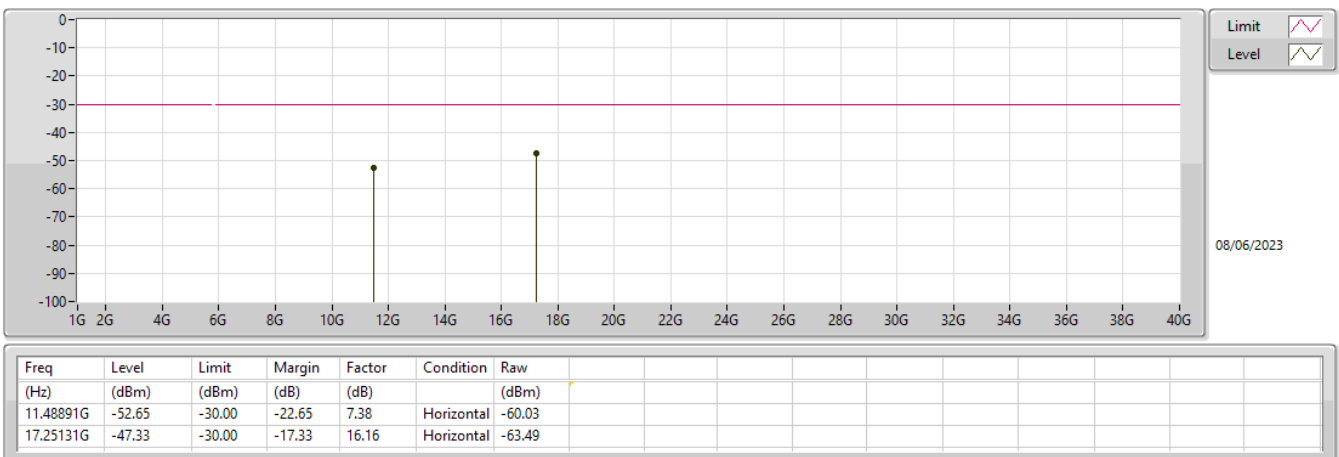
5.725-5.875GHz_802.11ax HEW20_Nss1,(MCS0)_2TX

5745MHz_TX



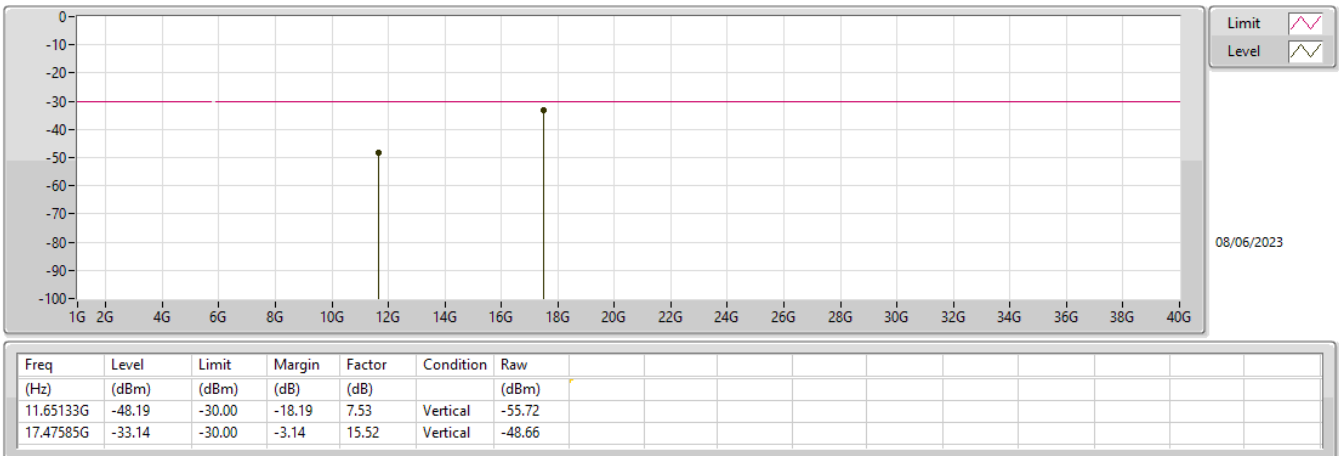
5.725-5.875GHz_802.11ax HEW20_Nss1,(MCS0)_2TX

5745MHz_TX



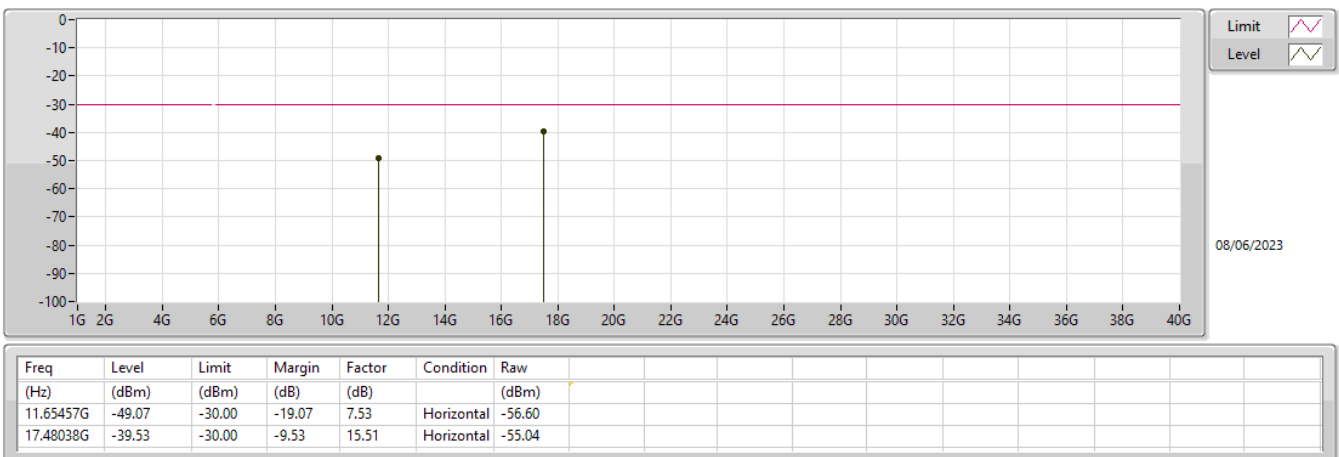
5.725-5.875GHz_802.11ax HEW20_Nss1,(MCS0)_2TX

5825MHz_TX



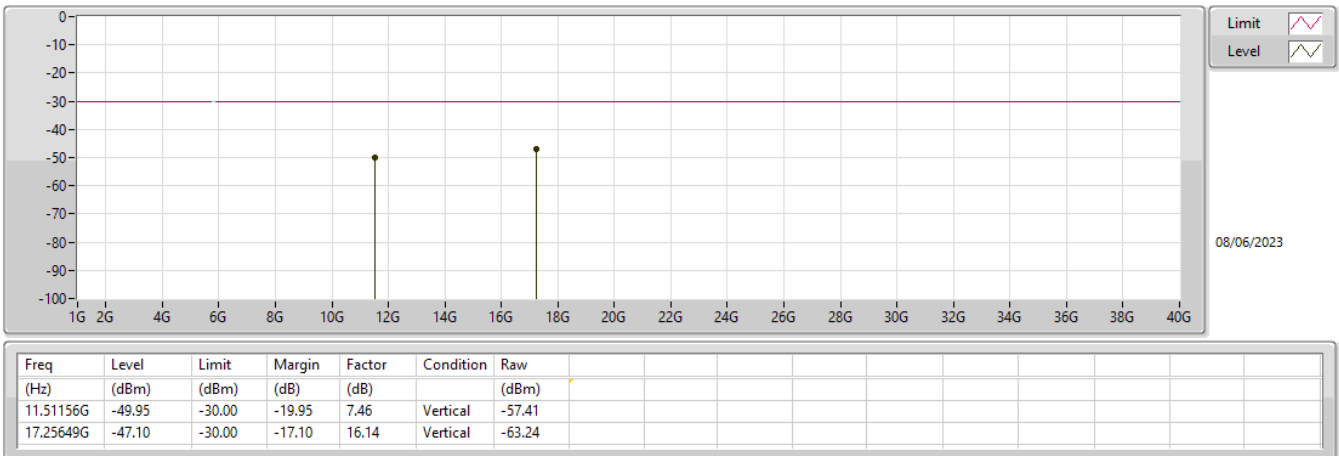
5.725-5.875GHz_802.11ax HEW20_Nss1,(MCS0)_2TX

5825MHz_TX



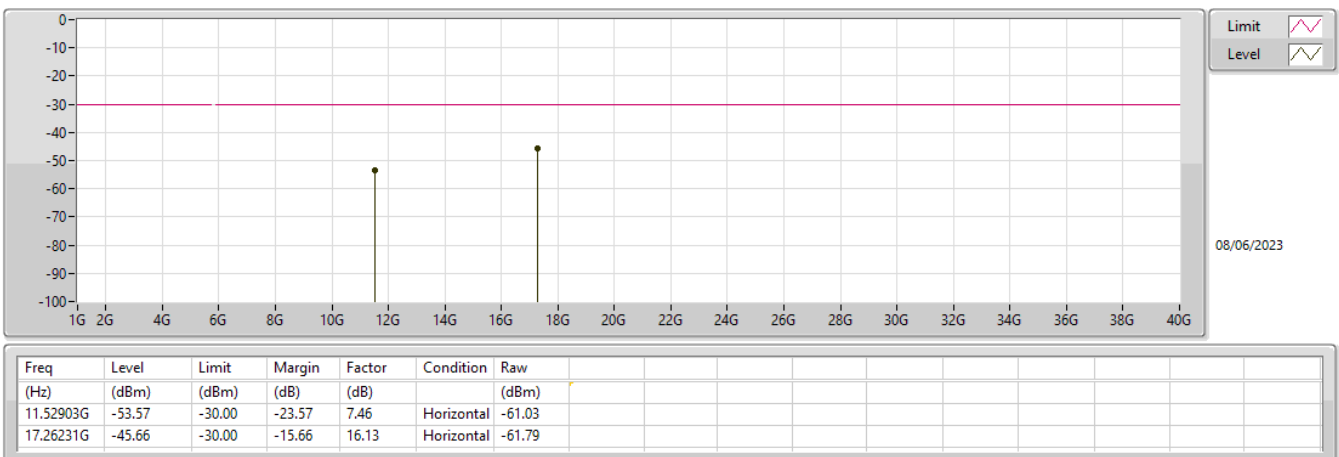
5.725-5.875GHz_802.11ax HEW40_Nss1,(MCS0)_2TX

5755MHz_TX



5.725-5.875GHz_802.11ax HEW40_Nss1,(MCS0)_2TX

5755MHz_TX



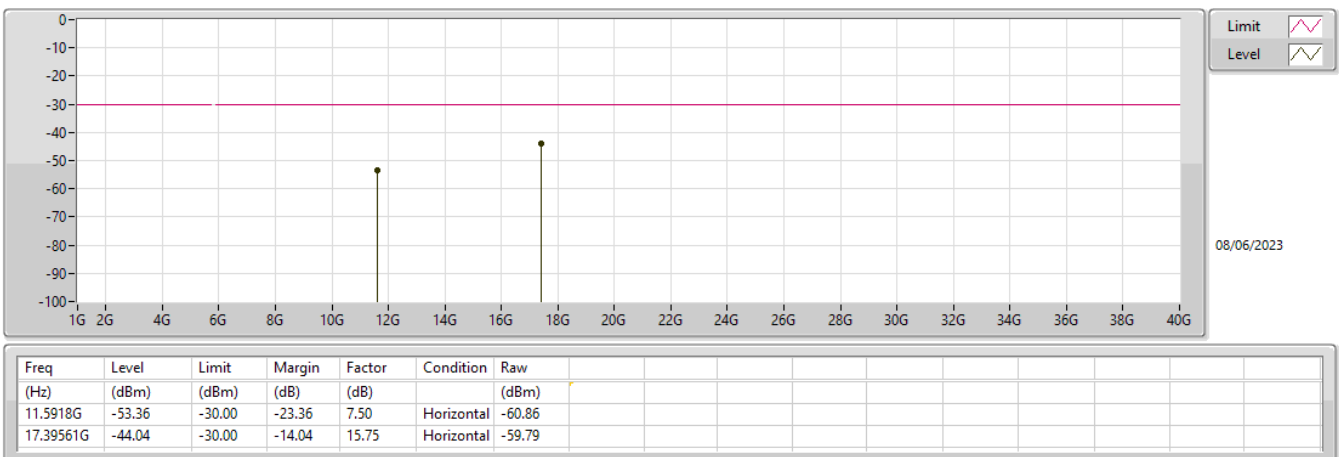
5.725-5.875GHz_802.11ax HEW40_Nss1,(MCS0)_2TX

5795MHz_TX



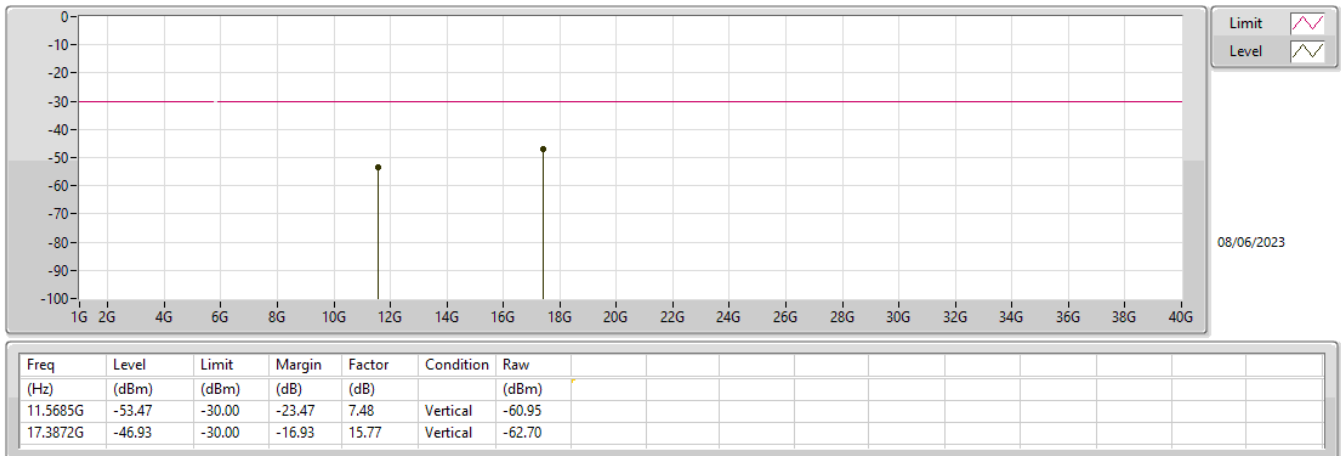
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5795MHz_TX



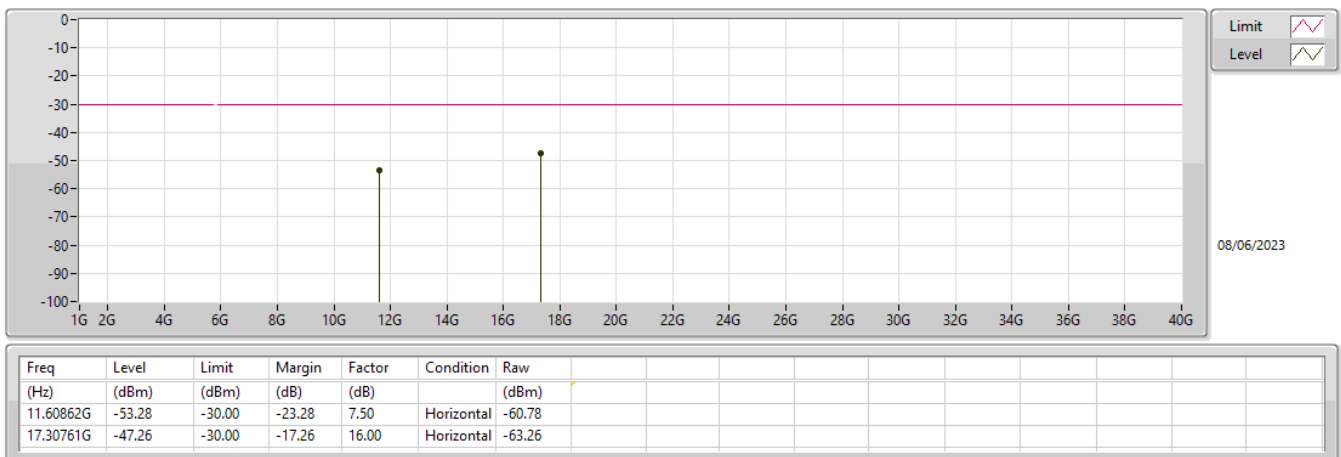
5.725-5.875GHz_802.11ax HEW80_Nss1,(MCS0)_2TX

5775MHz_TX



5.725-5.875GHz_802.11ax HEW80_Nss1,(MCS0)_2TX

5775MHz_TX





Summary

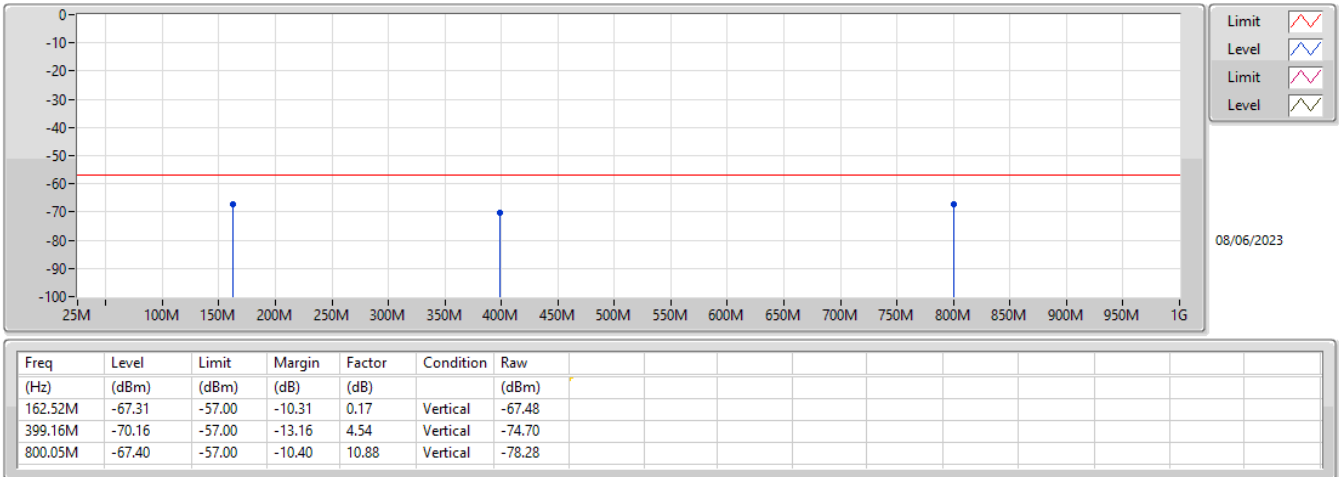
Mode	Result	Type	Freq (Hz)	Level (dBm)	Limit (dBm)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
5.725-5.875GHz	-	-	-	-	-	-	-	-	-	-	-	-
802.11ax HEW80_(MCS0)_RX	Pass	PK	325.57M	-65.86	-57.00	-8.86	3.85	3	Horizontal	360	1.5	-

Result

Mode	Result	Type	Freq (Hz)	Level (dBm)	Limit (dBm)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
802.11ax HEW80_(MCS0)_RX	-	-	-	-	-	-	-	-	-	-	-	-
5775MHz_RX	Pass	PK	162.52M	-67.31	-57.00	-10.31	0.17	3	Vertical	0	1.5	-
5775MHz_RX	Pass	PK	399.16M	-70.16	-57.00	-13.16	4.54	3	Vertical	0	1.5	-
5775MHz_RX	Pass	PK	800.05M	-67.40	-57.00	-10.40	10.88	3	Vertical	0	1.5	-
5775MHz_RX	Pass	PK	210.57M	-66.99	-57.00	-9.99	0.04	3	Horizontal	360	1.5	-
5775MHz_RX	Pass	PK	325.57M	-65.86	-57.00	-8.86	3.85	3	Horizontal	360	1.5	-
5775MHz_RX	Pass	PK	574.98M	-68.29	-57.00	-11.29	8.62	3	Horizontal	360	1.5	-

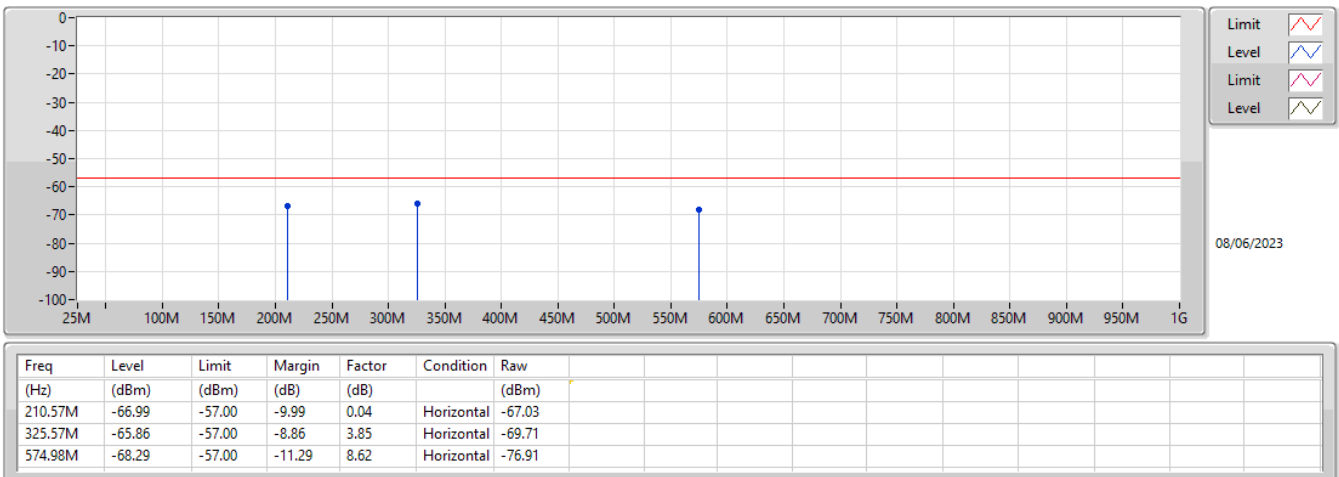
5.725-5.875GHz_802.11ax HEW80_(MCS0)_RX

5775MHz_RX



5.725-5.875GHz_802.11ax HEW80_(MCS0)_RX

5775MHz_RX





Summary

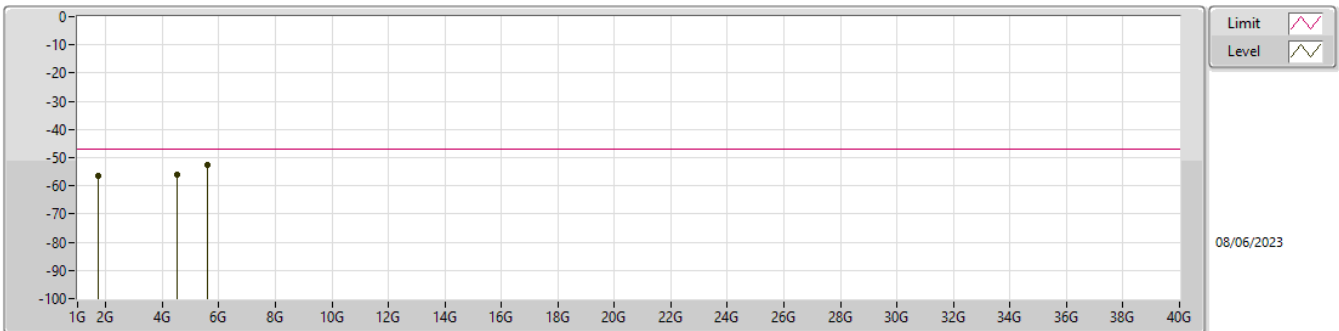
Mode	Result	Type	Freq (Hz)	Level (dBm)	Limit (dBm)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
5.725-5.875GHz	-	-	-	-	-	-	-	-	-	-	-	-
802.11ax HEW20_(MCS0)_RX	Pass	AV	5.6G	-52.68	-47.00	-5.68	4.00	3	Vertical	360	1.5	-
802.11ax HEW80_(MCS0)_RX	Pass	AV	5.599G	-52.78	-47.00	-5.78	4.00	3	Vertical	0	1.5	-

**Result**

Mode	Result	Type	Freq (Hz)	Level (dBm)	Limit (dBm)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
802.11ax HEW20_(MCS0)_RX	-	-	-	-	-	-	-	-	-	-	-	-
5745MHz_RX	Pass	AV	1.718G	-56.29	-47.00	-9.29	-5.21	3	Vertical	360	1.5	-
5745MHz_RX	Pass	AV	4.531G	-56.15	-47.00	-9.15	2.76	3	Vertical	360	1.5	-
5745MHz_RX	Pass	AV	5.6G	-52.68	-47.00	-5.68	4.00	3	Vertical	360	1.5	-
5745MHz_RX	Pass	AV	1.718G	-59.37	-47.00	-12.37	-5.21	3	Horizontal	0	1.5	-
5745MHz_RX	Pass	AV	2.399G	-60.16	-47.00	-13.16	-2.17	3	Horizontal	0	1.5	-
5745MHz_RX	Pass	AV	4.998G	-57.44	-47.00	-10.44	2.96	3	Horizontal	0	1.5	-
5825MHz_RX	Pass	AV	1.718G	-57.08	-47.00	-10.08	-5.21	3	Vertical	360	1.5	-
5825MHz_RX	Pass	AV	4.531G	-55.80	-47.00	-8.80	2.76	3	Vertical	360	1.5	-
5825MHz_RX	Pass	AV	5.599G	-53.15	-47.00	-6.15	4.00	3	Vertical	360	1.5	-
5825MHz_RX	Pass	AV	1.718G	-59.18	-47.00	-12.18	-5.21	3	Horizontal	0	1.5	-
5825MHz_RX	Pass	AV	4.483G	-57.96	-47.00	-10.96	2.69	3	Horizontal	0	1.5	-
5825MHz_RX	Pass	AV	5.584G	-56.49	-47.00	-9.49	3.99	3	Horizontal	0	1.5	-
802.11ax HEW80_(MCS0)_RX	-	-	-	-	-	-	-	-	-	-	-	-
5775MHz_RX	Pass	AV	1.718G	-56.27	-47.00	-9.27	-5.21	3	Vertical	0	1.5	-
5775MHz_RX	Pass	AV	4.531G	-55.23	-47.00	-8.23	2.76	3	Vertical	0	1.5	-
5775MHz_RX	Pass	AV	5.599G	-52.78	-47.00	-5.78	4.00	3	Vertical	0	1.5	-
5775MHz_RX	Pass	AV	1.718G	-59.27	-47.00	-12.27	-5.21	3	Horizontal	360	1.5	-
5775MHz_RX	Pass	AV	4.288G	-58.72	-47.00	-11.72	2.00	3	Horizontal	360	1.5	-
5775MHz_RX	Pass	AV	6.543G	-55.90	-47.00	-8.90	4.23	3	Horizontal	360	1.5	-

5.725-5.875GHz_802.11ax HEW20_(MCS0)_RX

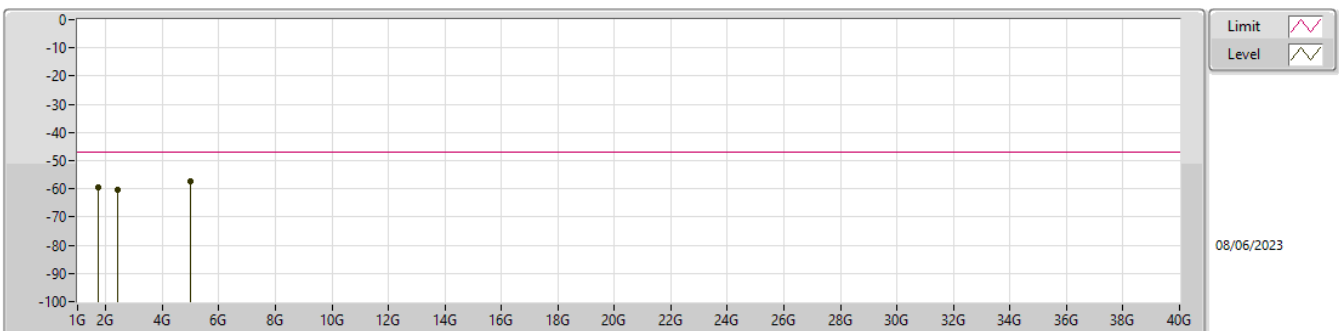
5745MHz_RX



Freq (Hz)	Level (dBm)	Limit (dBm)	Margin (dB)	Factor (dB)	Condition	Raw (dBm)
1.718G	-56.29	-47.00	-9.29	-5.21	Vertical	-51.08
4.531G	-56.15	-47.00	-9.15	2.76	Vertical	-58.91
5.6G	-52.68	-47.00	-5.68	4.00	Vertical	-56.68

5.725-5.875GHz_802.11ax HEW20_(MCS0)_RX

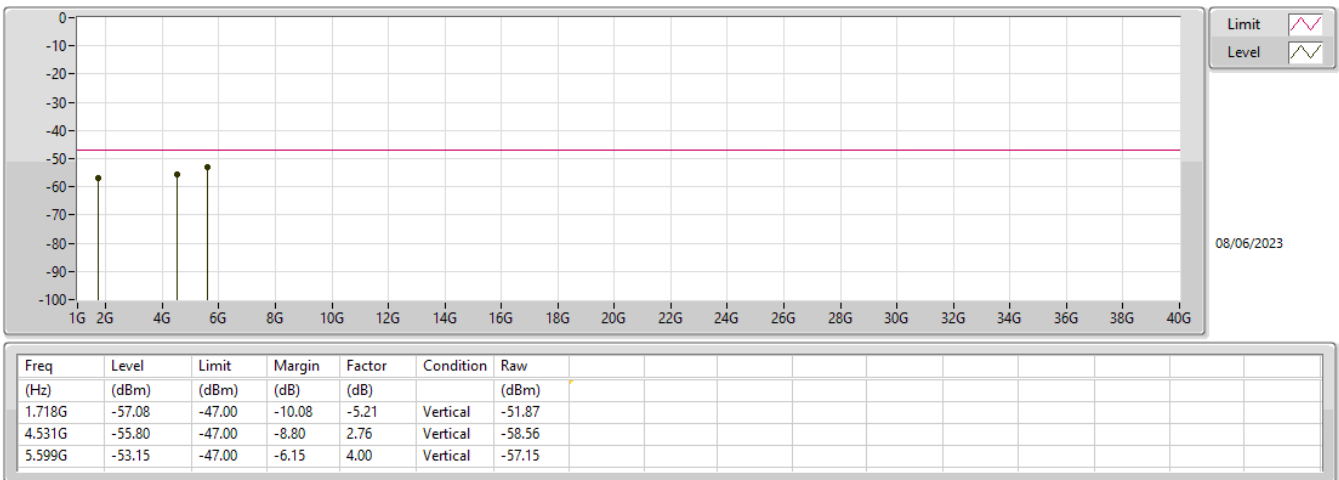
5745MHz_RX



Freq (Hz)	Level (dBm)	Limit (dBm)	Margin (dB)	Factor (dB)	Condition	Raw (dBm)
1.718G	-59.37	-47.00	-12.37	-5.21	Horizontal	-54.16
2.399G	-60.16	-47.00	-13.16	-2.17	Horizontal	-57.99
4.998G	-57.44	-47.00	-10.44	2.96	Horizontal	-60.40

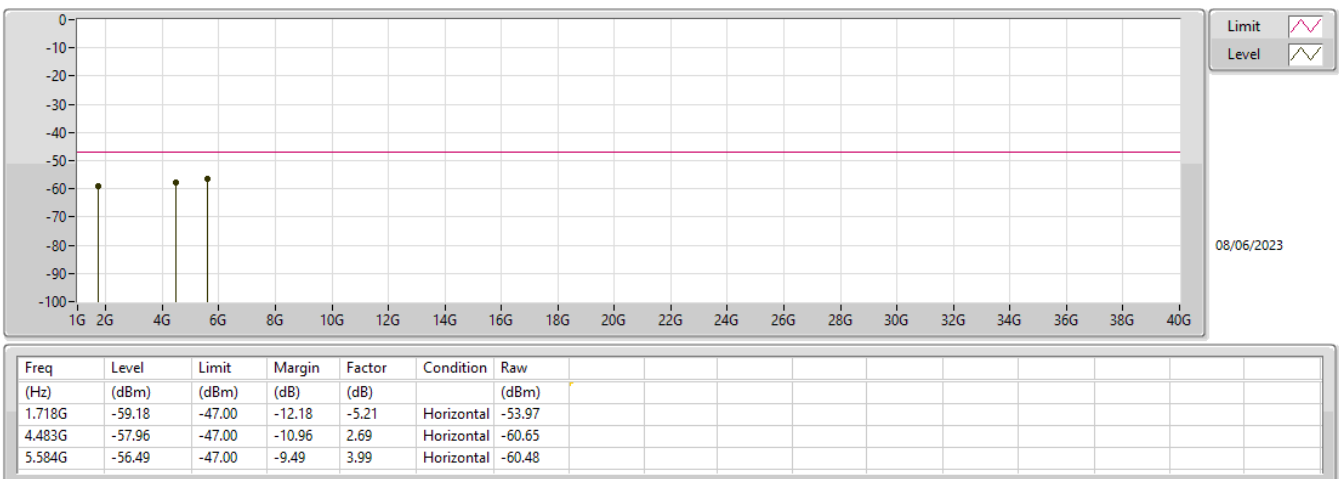
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5825MHz_RX



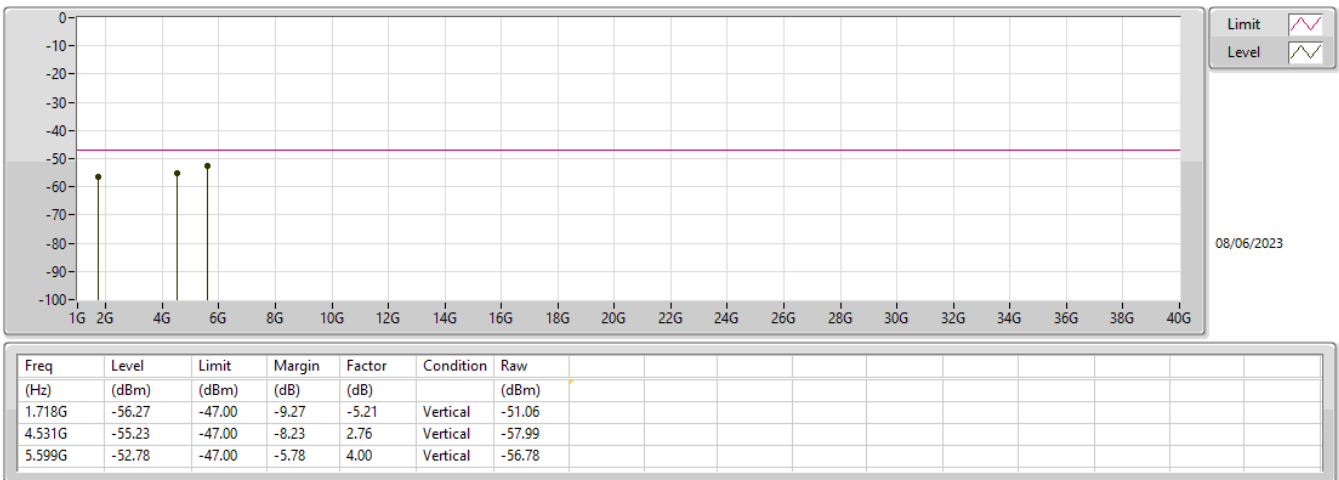
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5825MHz_RX



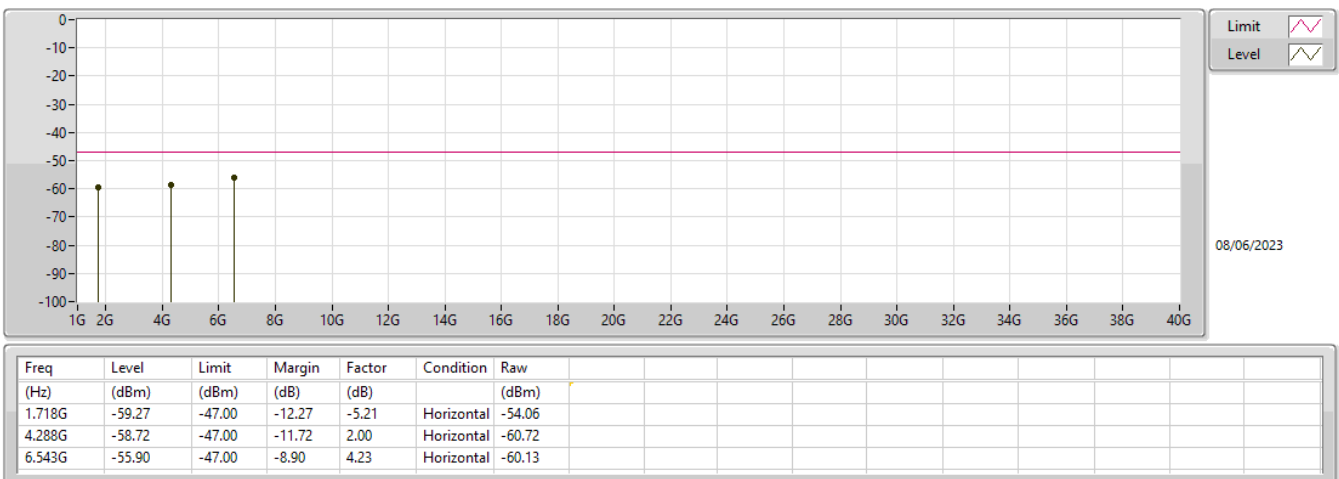
5.725-5.875GHz_802.11ax HEW80_(MCS0)_RX

5775MHz_RX



5.725-5.875GHz_802.11ax HEW80_(MCS0)_RX

5775MHz_RX



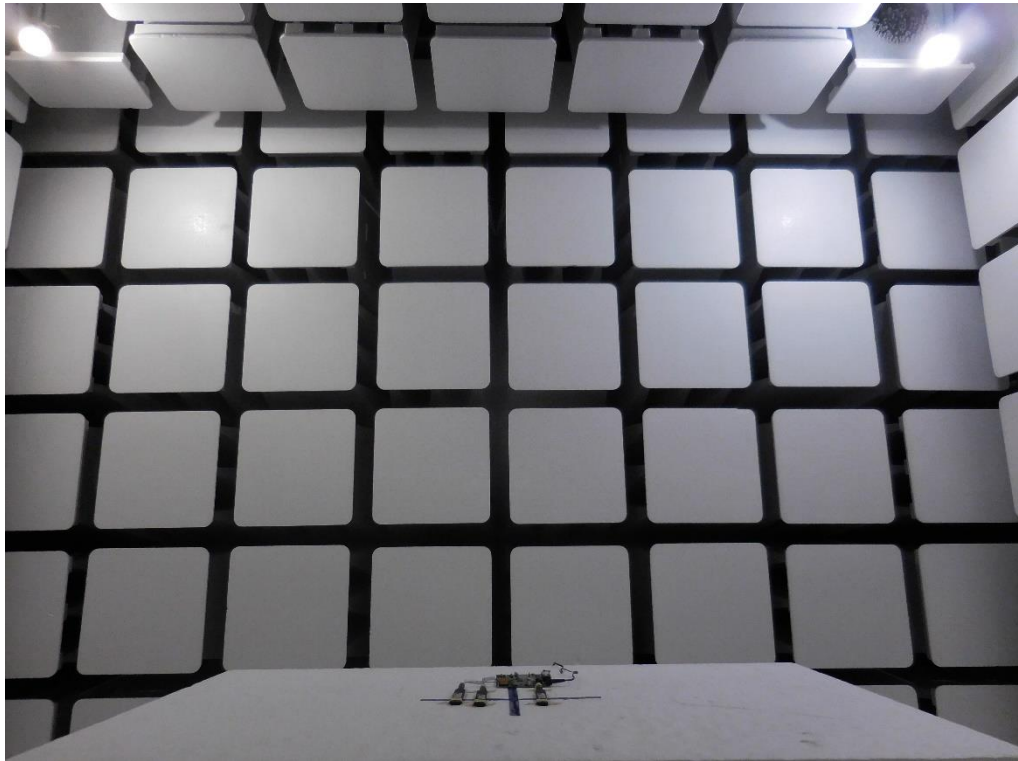
Receiver category 1									
Bandwidth (MHz)	20						k Factor (dB)	Blocking Limit(dBm)	
Test Frequency (GHz)	Pmin (dBm)	Pmin + 3dB(dBm)	Low Blocking Frequency (MHz)	Blocking Level (dBm)	Upper Blocking Frequency (MHz)	Blocking Level (dBm)			
5.745	-84	-81	-	-	5765	-42	-28.20	<	-58.20
5.785	-83	-80	5765	-45	5805	-43	-28.26	<	-58.26
5.825	-82	-79	5805	-41	-	-	-28.32	<	-58.32

Receiver category 1									
Bandwidth (MHz)	20								
Test Frequency (GHz)	PER(%)								
5.745	6.80%					-			
5.785	7.90%					4.80%			
5.825	4.80%					-			

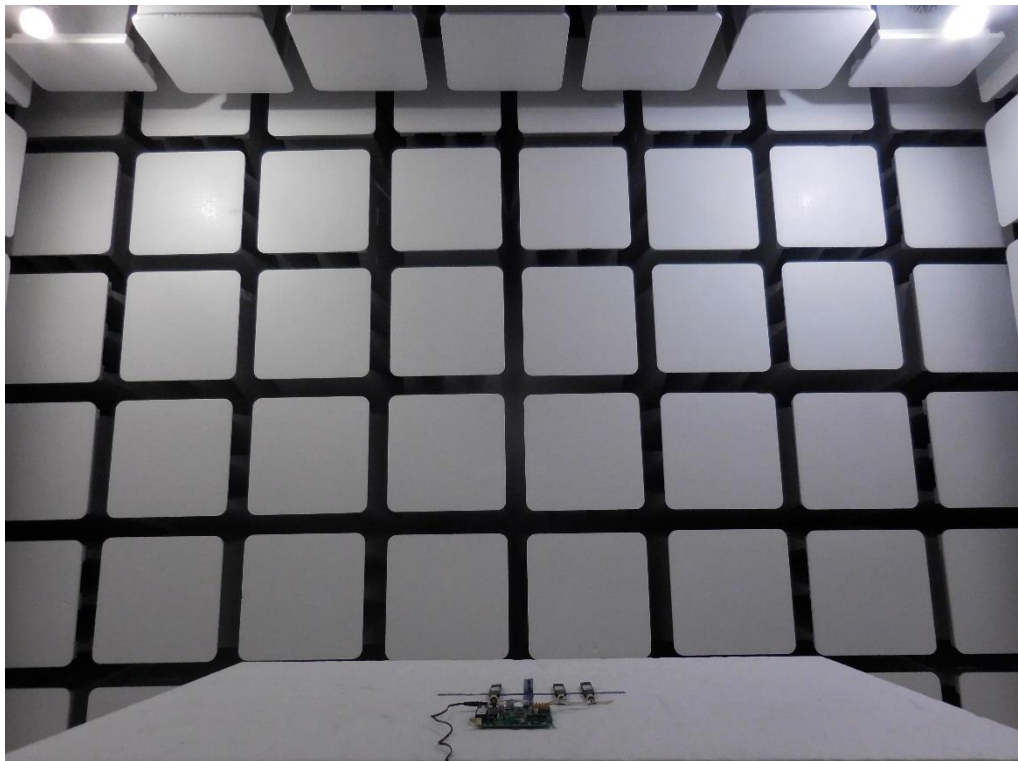
Receiver category 1									
Bandwidth (MHz)	20		10times Bandwidth (MHz)		200		k Factor (dB)	Blocking Limit(dBm)	
Test Frequency (GHz)	Pmin (dBm)	Pmin + 3dB(dBm)	Low Blocking Frequency (MHz)	Blocking Level (dBm)	Upper Blocking Frequency (MHz)	Blocking Level (dBm)			
5.745	-84	-81	5545	-28	5945	-27	-28.20	<	-58.20
5.785	-83	-80	5585	-28	5985	-27	-28.26	<	-58.26
5.825	-82	-79	5625	-26	6025	-25	-28.32	<	-58.32
Bandwidth (MHz)	20		20times Bandwidth (MHz)		400		k Factor (dB)	Blocking Limit(dBm)	
Test Frequency (GHz)	Pmin (dBm)	Pmin + 3dB(dBm)	Low Blocking Frequency (MHz)	Blocking Level (dBm)	Upper Blocking Frequency (MHz)	Blocking Level (dBm)			
5.745	-84	-81	5345	-18	6145	-18	-28.20	<	-58.20
5.785	-83	-80	5385	-17	6185	-16	-28.26	<	-58.26
5.825	-82	-79	5425	-16	6225	-15	-28.32	<	-58.32
Bandwidth (MHz)	20		50times Bandwidth (MHz)		1000		k Factor (dB)	Blocking Limit(dBm)	
Test Frequency (GHz)	Pmin (dBm)	Pmin + 3dB(dBm)	Low Blocking Frequency (MHz)	Blocking Level (dBm)	Upper Blocking Frequency (MHz)	Blocking Level (dBm)			
5.745	-84	-81	4745	-15	6745	-15	-28.20	<	-58.20
5.785	-83	-80	4785	-15	6785	-16	-28.26	<	-58.26
5.825	-82	-79	4825	-15	6825	-13	-28.32	<	-58.32

1. Photographs of Radiated Emissions Test Configuration

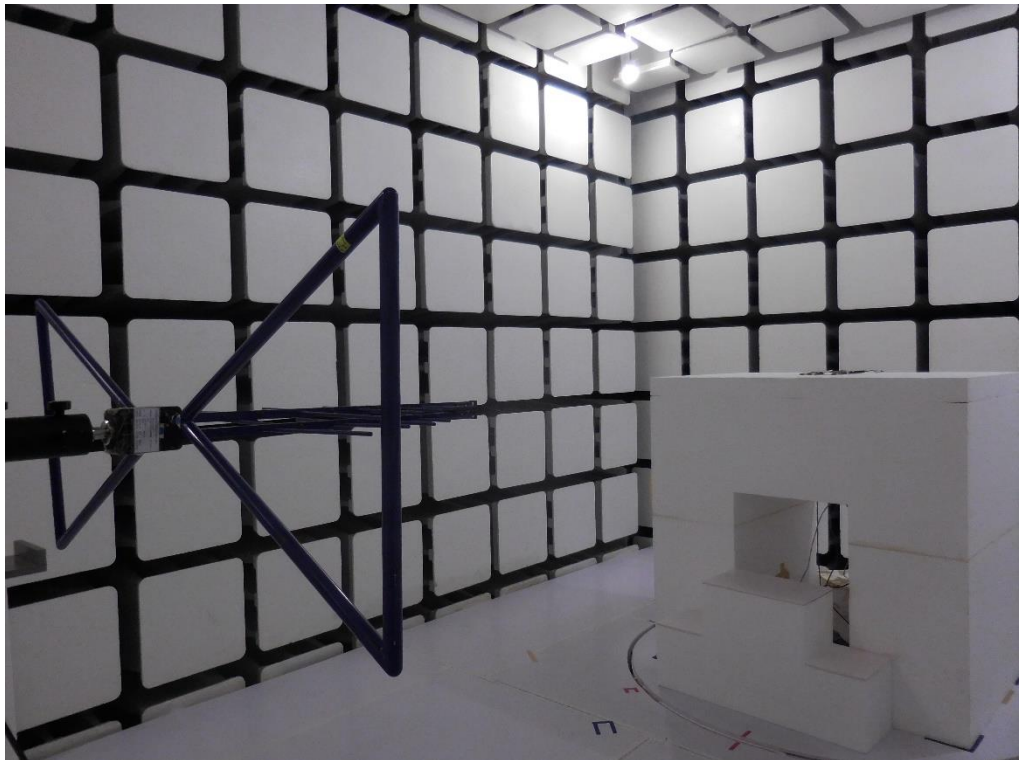
Front view



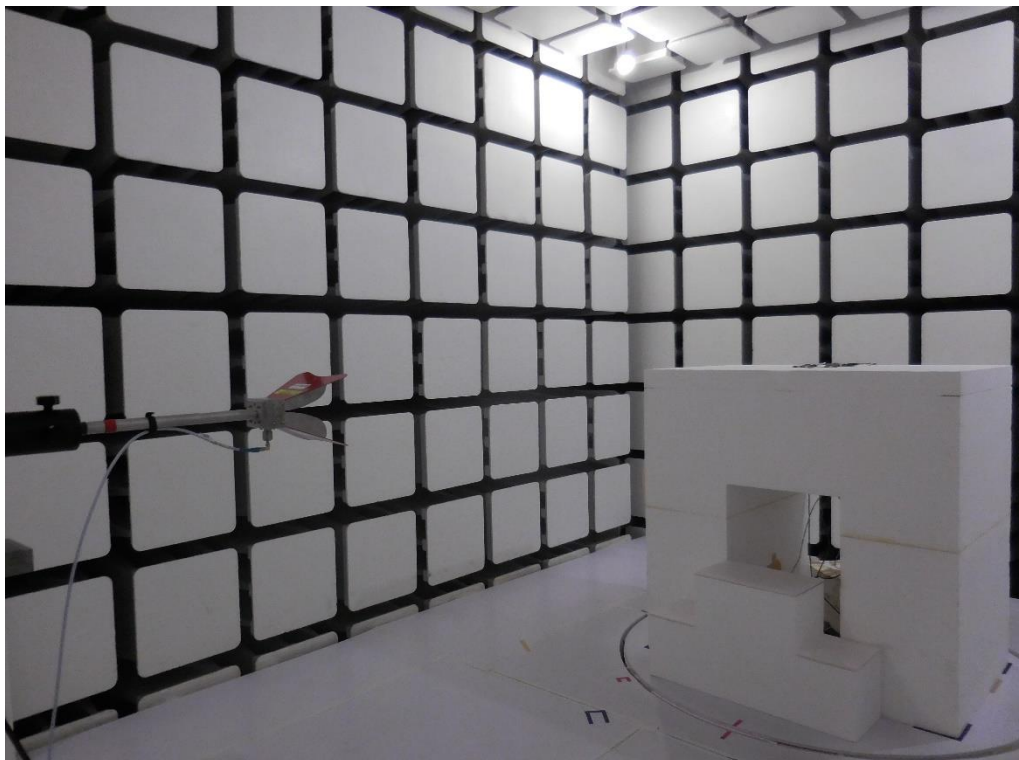
Rear view



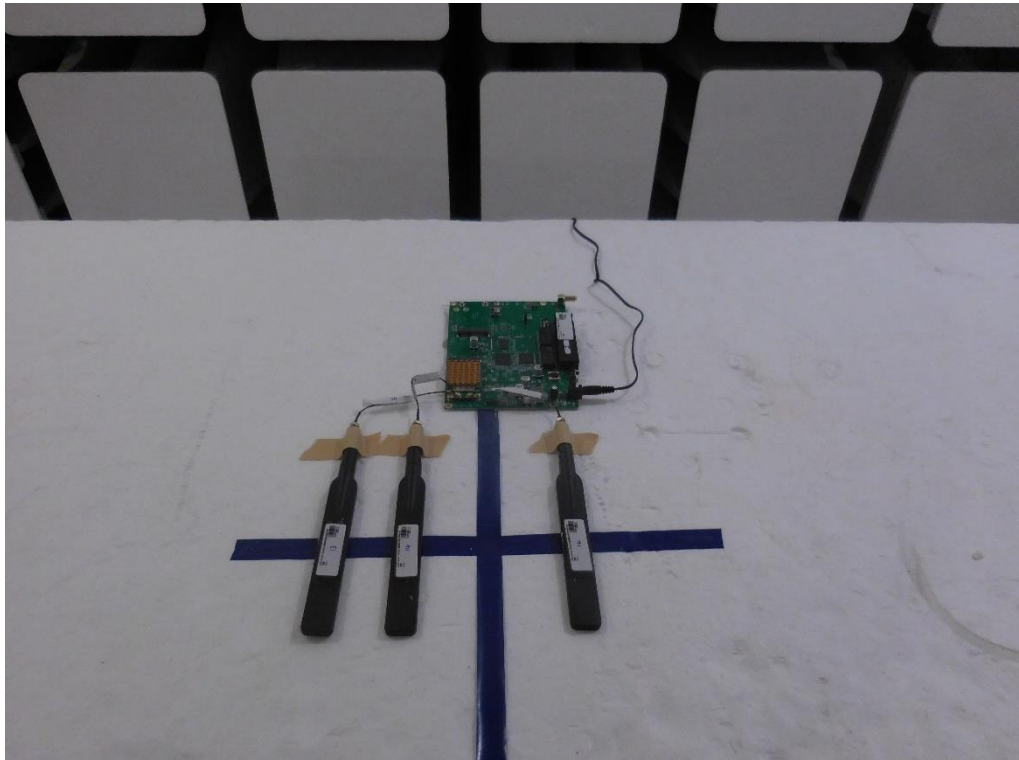
Bilog Antenna



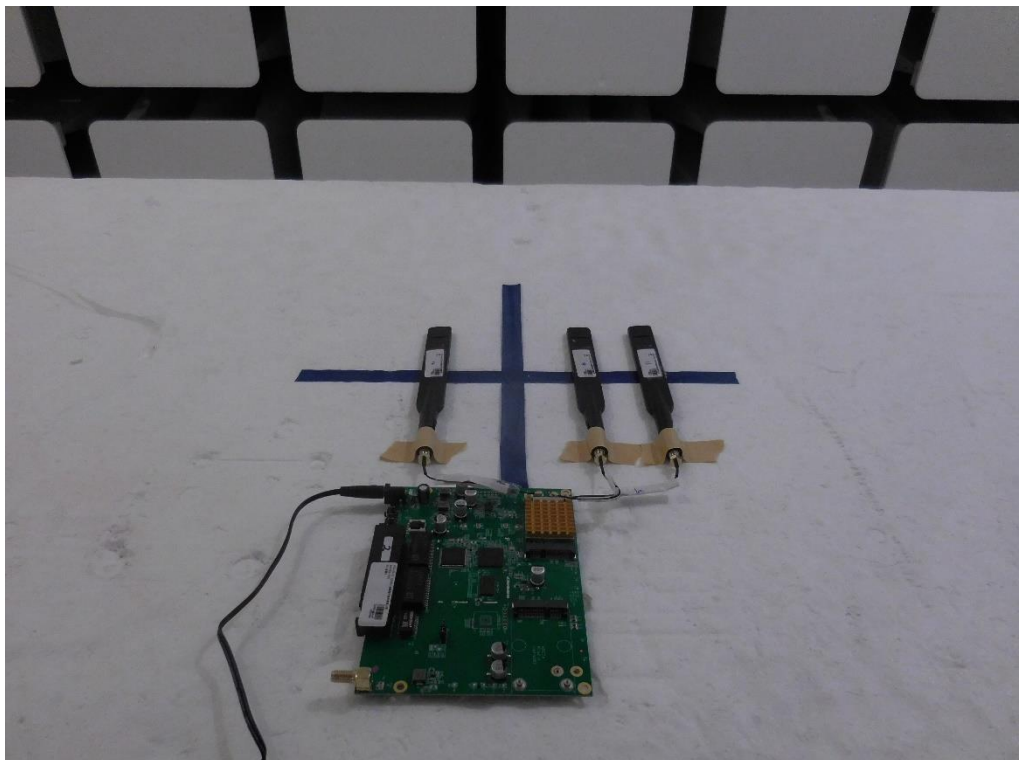
Horn Antenna



EUT take a close-up



EUT take a close-up

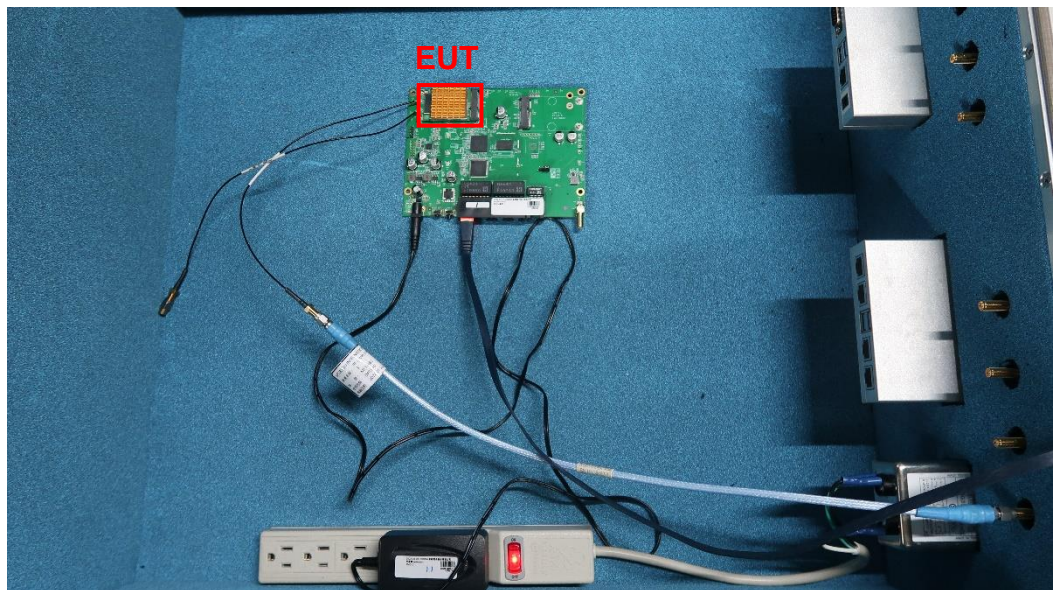


2. Photographs of Adjacent channel selectivity & Receiver Blocking Test Configuration

Front view



EUT take a close-up



THE END