



RADIO TEST REPORT

FCC ID : Z8H-89FT0067
Equipment : XE3-4 Wi-Fi 6e Indoor Access Point
Brand Name : Cambium Networks
Model Name : XE3-4
Applicant : Cambium Networks Inc.
3800 Golf Road, Suite 360 Rolling Meadows, IL
60008, USA
Manufacturer : Cambium Networks, Ltd.
Ashburton, TQ13 7UP, UK
Standard : 47 CFR FCC Part 15.407

The product was received on Aug. 11, 2022, and testing was started from Aug. 11, 2022 and completed on Aug. 18, 2022. We, Sporton International Inc. Hsinchu Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

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

Approved by: Sam Chen

Sporton International Inc. Hsinchu Laboratory

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



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History of this test report

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

Page Number : 3 of 25
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Report Version : 01



Summary of Test Result

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

Declaration of Conformity:

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

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

Reviewed by: Sam Chen

Report Producer: Penny Kao



1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	IEEE Std. 802.11	Ch. Frequency (MHz)	Channel Number
5725-5895	a, n (HT20), ac (VHT20), ax (HEW20)	5845-5885	169-177[3]
5725-5895	n (HT40), ac (VHT40), ax (HEW40)	5835-5875	167-175[2]
5725-5895	ac (VHT80), ax (HEW80)	5855	171[1]
5725-5895	ac (VHT160), ax (HEW160)	5815	163[1]

Radio 2

Band	Mode	BWch (MHz)	Nant
5.725-5.895GHz	802.11a	20	4TX
5.725-5.895GHz	802.11n HT20	20	4TX
5.725-5.895GHz	802.11n HT20-BF	20	4TX
5.725-5.895GHz	802.11ac VHT20	20	4TX
5.725-5.895GHz	802.11ac VHT20-BF	20	4TX
5.725-5.895GHz	802.11ax HEW20	20	4TX
5.725-5.895GHz	802.11ax HEW20-BF	20	4TX
5.725-5.895GHz	802.11n HT40	40	4TX
5.725-5.895GHz	802.11n HT40-BF	40	4TX
5.725-5.895GHz	802.11ac VHT40	40	4TX
5.725-5.895GHz	802.11ac VHT40-BF	40	4TX
5.725-5.895GHz	802.11ax HEW40	40	4TX
5.725-5.895GHz	802.11ax HEW40-BF	40	4TX
5.725-5.895GHz	802.11ac VHT80	80	4TX
5.725-5.895GHz	802.11ac VHT80-BF	80	4TX
5.725-5.895GHz	802.11ax HEW80	80	4TX
5.725-5.895GHz	802.11ax HEW80-BF	80	4TX
5.725-5.895GHz	802.11ac VHT160	160	4TX
5.725-5.895GHz	802.11ac VHT160-BF	160	4TX
5.725-5.895GHz	802.11ax HEW160	160	4TX
5.725-5.895GHz	802.11ax HEW160-BF	160	4TX


Note:

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

1.1.2 Antenna Information

Ant.	Port				Brand	Model Name	Antenna Type	Connector	Gain (dBi)				Remark
	WLAN 2.4GHz	WLAN 5GHz	WLAN 6GHz	Blue tooth					WLAN 2.4GHz	WLAN 5GHz	WLAN 6GHz	Blue-tooth	
1	2	2	-	-	Accton	EAP9219A-6 E-1120-CAM	PIFA	I-PEX	4.85	5.60	-		Radio 1
2	1	1	-	-	Accton	EAP9219A-6 E-1120-CAM	PIFA	I-PEX	4.85	5.40	-		Radio 1
3	-	4	4	-	Accton	EAP9219A-6 E-1120-CAM	PIFA	I-PEX	-	Note 1	5.84		Radio 2
4	-	2	2	-	Accton	EAP9219A-6 E-1120-CAM	PIFA	I-PEX	-		6.29		Radio 2
5	-	3	3	-	Accton	EAP9219A-6 E-1120-CAM	PIFA	I-PEX	-		6.06		Radio 2
6	-	1	1	-	Accton	EAP9219A-6 E-1120-CAM	PIFA	I-PEX	-		5.99		Radio 2
7	-	-	-	1	Accton	EAP9219A-6 E-1120-CAM	Chip	N/A	-	-	-	3.39	Radio 3

Note1:

Ant.	Port	Antenna Gain (dBi)							Remark
	WLAN 5GHz	UNII 1	UNII 2A	UNII 2C	UNII 3	UNII 4			
						5.85G	5.885G	5.895G	
3	4	2.3	4.22	3.57	5.21	5.49	5.29	5.44	Radio 2
4	2	4.12	4.62	3.15	4.93	5.08	4.77	4.82	Radio 2
5	3	2.91	3.22	2.85	2.81	3.85	3.73	3.9	Radio 2
6	1	3.88	4.46	2.58	4.24	4.6	4.69	4.77	Radio 2

Radio 2 / Directional Gain (dBi)							
Item	WLAN 5GHz UNII 1	WLAN 5GHz UNII 2A	WLAN 5GHz UNII 2C	WLAN 5GHz UNII 3	WLAN 5GHz UNII 4		
					5.85G	5.885G	5.895G
4T1S	4.55	4.78	5.38	5.95	6.84	7.07	7.37

Note2: The above information was declared by manufacturer.

WLAN 2.4GHz, 5GHz (Radio 1), 6GHz: The directional gain is calculated which follows the procedure of KDB 662911 D01.

WLAN 5GHz (Radio 2): The directional gain is measured which follows the procedure of KDB 662911 D03.

For Radio 1:
For 2.4GHz function:
For IEEE 802.11b/g/n/VHT/ax (2TX/2RX):

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

Port 1 and Port 2 could transmit/receive simultaneously.

For 5GHz function:
For IEEE 802.11a/n/ac/ax (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:
For 5GHz function:
For IEEE 802.11a/n/ac/ax (4TX/4RX):

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

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

For 6GHz function:
For IEEE 802.11ax (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 Bluetooth Function:
For Bluetooth mode (1TX/1RX)

Only Port 1 can be use as transmit and receive antenna.

Note3: WLAN 2.4GHz, 5GHz (Radio 1) Directional gain information

Type	Maximum Output Power	Power Spectral Density
Non-BF	Directional gain = Max.gain + array gain. For power measurements on IEEE 802.11 devices Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$	$Directional\ IGain = 10 \cdot \log \left[\frac{\sum_{i=1}^{N_{ANT}} \left\{ \sum_{k=1}^{N_{ANT}} g_{i,k} \right\}^2}{N_{ANT}} \right]$
BF	$Directional\ IGain = 10 \cdot \log \left[\frac{\sum_{i=1}^{N_{ANT}} \left\{ \sum_{k=1}^{N_{ANT}} g_{i,k} \right\}^2}{N_{ANT}} \right]$	$Directional\ IGain = 10 \cdot \log \left[\frac{\sum_{i=1}^{N_{ANT}} \left\{ \sum_{k=1}^{N_{ANT}} g_{i,k} \right\}^2}{N_{ANT}} \right]$

Ex.

Directional Gain (NSS1) formula :

$$Directional\ IGain = 10 \cdot \log \left[\frac{\sum_{i=1}^{N_{ANT}} \left\{ \sum_{k=1}^{N_{ANT}} g_{i,k} \right\}^2}{N_{ANT}} \right]$$

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

$$g_{j,k} = (NSS1(g1,1) + NSS1(g1,2))^2$$

$$DG = 10 \log[(NSS1(g1,1) + NSS1(g1,2) / N_{ANT})] \Rightarrow 10 \log[(10^{G1/20} + 10^{G2/20})^2 / N_{ANT}]$$

Where ;

G1 = Ant 1 Gain ; G2 = Ant 2 Gain

(Radio1)

2.4GHz DG = 7.86 dBi

5 GHz U-NII-1 DG = 8.51 dBi

5 GHz U-NII-2A DG = 8.51 dBi

5 GHz U-NII-2C DG = 8.51 dBi

5 GHz U-NII-3 DG = 8.51 dBi



1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11a	0.955	0.2	1.977m	1k
802.11ax HEW20	0.866	0.62	5.444m	300
802.11ax HEW40	0.864	0.63	5.444m	300
802.11ax HEW80	0.865	0.63	5.445m	300
802.11ax HEW160	0.921	0.36	5.445m	300

Note:

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

1.1.4 EUT Operational Condition

EUT Power Type	From PoE			
Beamforming Function	<input checked="" type="checkbox"/>	With beamforming	<input type="checkbox"/>	Without beamforming
	The product has beamforming function for n/VHT/ax in 2.4GHz, n/ac/ax in 5GHz and ax 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
Device Type (UNII 4)	<input checked="" type="checkbox"/>	Indoor Access Point	<input checked="" type="checkbox"/>	Subordinate
	<input type="checkbox"/>	Indoor Client		
Test Software Version	QSPR.exe Version 5.0-00197			

Note: The above information was declared by manufacturer.

1.1.5 Table for Permissive Change

This product is an extension of original one reported under Sporton project number: FR140924-02.

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

Modifications	Performance Checking
Adding UNII 4 (5725-5895 MHz) for Radio 2 of this device.	<ol style="list-style-type: none">1. Emission Bandwidth2. Maximum Conducted Output Power3. Peak Power Spectral Density4. Unwanted Emissions <Above 1GHz>



1.2 Applicable Standards

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

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

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

- ♦ FCC KDB 662911 D03 v01
- ♦ FCC KDB 412172 D01 v01r01
- ♦ FCC KDB 291074 D02 v01

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 ISCED.

Test Condition	Test Site No.	Test Engineer	Test Environment (°C / %)	Test Date
RF Conducted	TH03-CB	Brian Sun	23.5-24.1 / 52-58	Aug. 18, 2022
Radiated	03CH06-CB	Stim Sung	24.4-25.5 / 55-58	Aug. 11, 2022~ Aug. 12, 2022

1.4 Measurement Uncertainty

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

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

2 Test Configuration of EUT

2.1 Test Channel Mode

For Non-beamforming mode

Mode	Power Setting
802.11a_Nss1,(6Mbps)_4TX	-
5845MHz	19.5
5865MHz	19.5
5885MHz	19.5
802.11ax HEW20_Nss1,(MCS0)_4TX	-
5845MHz	20.5
5865MHz	20.5
5885MHz	14.5
802.11ax HEW40_Nss1,(MCS0)_4TX	-
5835MHz	24
5875MHz	22.5
802.11ax HEW80_Nss1,(MCS0)_4TX	-
5855MHz	21.5
802.11ax HEW160_Nss1,(MCS0)_4TX	-
5815MHz	18

For beamforming mode

Mode	Power Setting
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-
5845MHz	20.5
5865MHz	20.5
5885MHz	14.5
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-
5835MHz	24
5875MHz	22.5
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-
5855MHz	21.5
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	-
5815MHz	18

Note:

- ♦ Evaluated HEW20/HEW40/HEW80/HEW160 mode only due to the similar modulation. The power setting of HT20/HT40/VHT20/VHT40/VHT80/VHT160 mode are the same or lower than HEW20/HEW40/HEW80/HEW160.
- ♦ The EUT supports non-beamforming and beamforming modes, after evaluating, the non-beamforming mode has been evaluated to be the worst case, so it was selected to test. The beamforming mode evaluates the output power only.



2.2 The Worst Case Measurement Configuration

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

The Worst Case Mode for Following Conformance Tests	
Tests Item	Unwanted Emissions
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.
Operating Mode > 1GHz	CTX
	The EUT was performed at X axis, Y axis and Z axis position, and the worst case was found at Y axis. So the measurement will follow this same test configuration.
1	EUT in Y axis

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 + WLAN 5GHz UNII 1~3 + Radio 2: WLAN 5GHz UNII 1~4 + WLAN 6GHz + Radio 3: Bluetooth
Refer to Sporton Test Report No.: FA140924-05 for Co-location RF Exposure Evaluation.	

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

Support Unit	Brand	Model
PoE	Cambium	NET-P60-56IN



2.3 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

2.4 Accessories

Others
Wall Bracket*1

2.5 Support Equipment

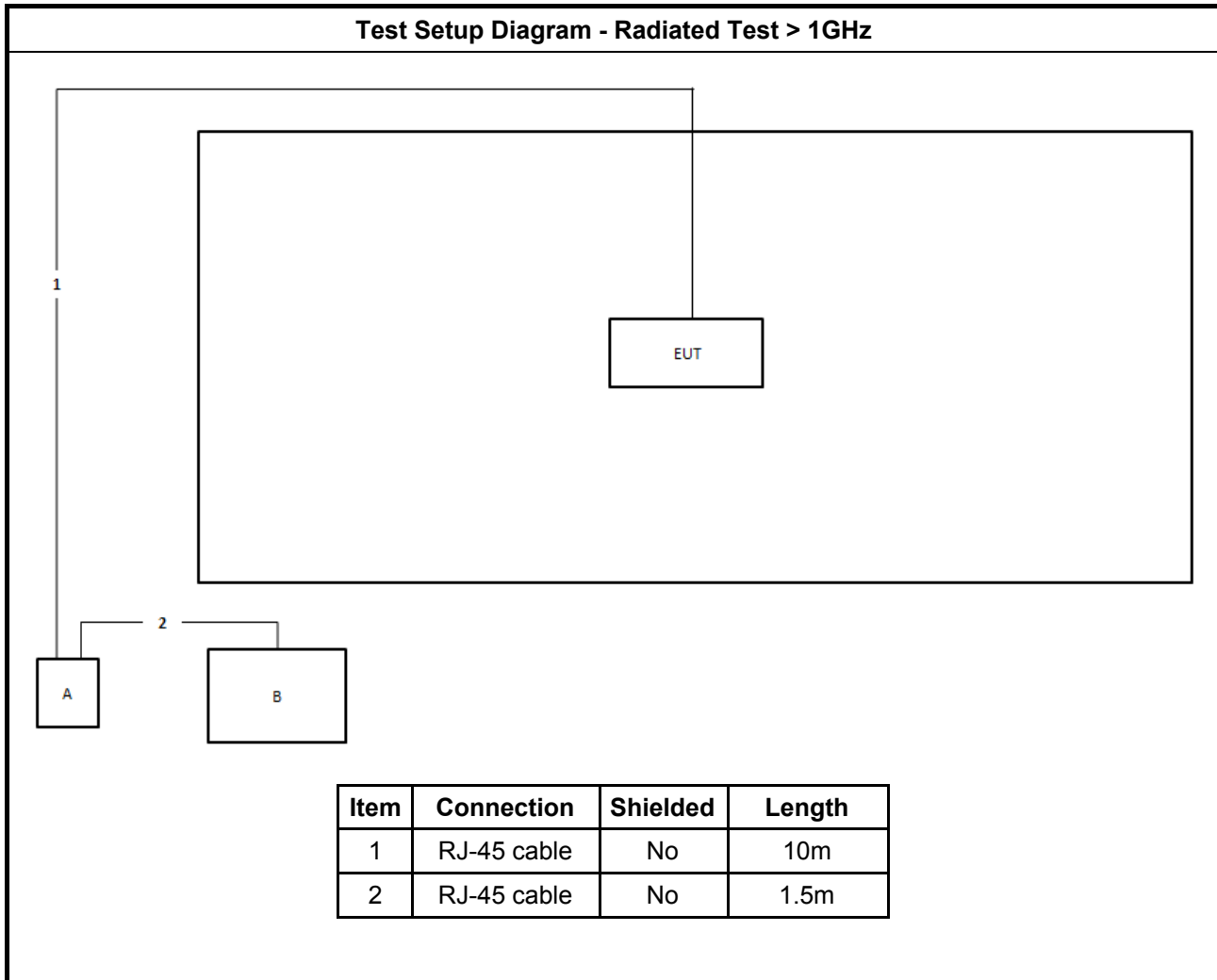
For Radiated (above 1GHz):

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	PoE	Cambium Networks	NET-P60-56IN	N/A
B	Notebook	DELL	E4300	N/A

For RF Conducted:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Notebook	DELL	E4300	N/A
B	PoE	Cambium Networks	NET-P60-56IN	N/A

2.6 Test Setup Diagram





3 Transmitter Test Result

3.1 Emission Bandwidth

3.1.1 Emission Bandwidth Limit

Emission Bandwidth Limit	
UNII Devices	
<input 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 type="checkbox"/>	For the 5.725-5.85 GHz band, 26 dB emission bandwidth ,N/A. 6 dB emission bandwidth \geq 500kHz.
<input checked="" type="checkbox"/>	For the 5.85-5.895 GHz band, 26 dB emission bandwidth ,N/A. 6 dB emission bandwidth \geq 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 \geq 500kHz.

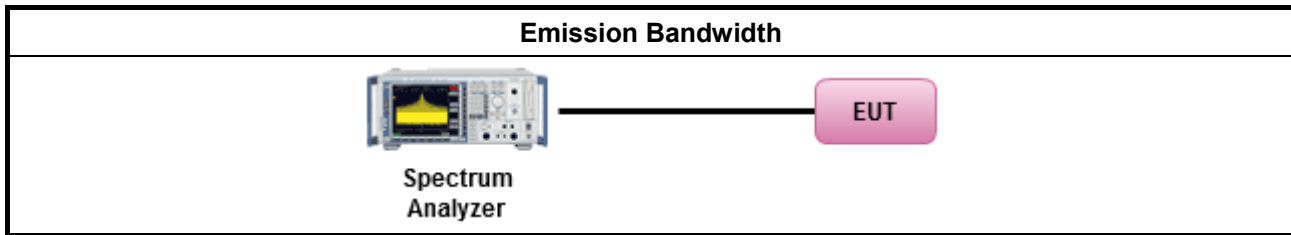
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

Test Method	
▪ For the emission bandwidth shall be measured using one of the options below:	
<input checked="" type="checkbox"/>	Refer as FCC KDB 789033 D02, clause C for EBW and clause D for OBW measurement.
<input type="checkbox"/>	Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.
<input type="checkbox"/>	Refer as IC RSS-Gen, clause 4.6 for bandwidth testing.

3.1.4 Test Setup



3.1.5 Test Result of Emission Bandwidth

Refer as Appendix A



3.2 Maximum Output Power

3.2.1 Limit

Maximum Output Power Limit	
UNII Devices	
<input 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 ≤ 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 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.
Maximum EIRP Limit	
<input checked="" type="checkbox"/> For the 5.85-5.895 GHz band:	
<input checked="" type="checkbox"/>	<ul style="list-style-type: none">Indoor AP & subordinate device < 36 dBmClient device < 30 dBm
LE-LAN Devices	
<input type="checkbox"/> For the 5.15-5.25 GHz band, the maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz.	
<input type="checkbox"/> For the 5.25-5.35 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz	
<input type="checkbox"/> For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz	
<input type="checkbox"/> For the 5.725-5.85 GHz band:	
<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.

P_{Out} = maximum conducted output power in dBm,

G_{TX} = the maximum transmitting antenna directional gain in dBi.

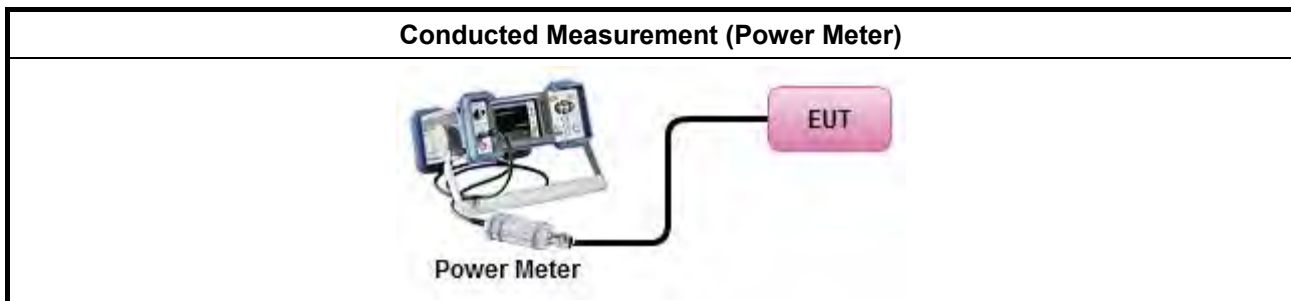
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

Test Method	
	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. 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.

3.2.4 Test Setup



3.2.5 Test Result of Maximum Output Power

Refer as Appendix B



3.3 Power Spectral Density

3.3.1 Limit

Peak Power Spectral Density Limit	
UNII Devices	
<input type="checkbox"/> For the 5.15-5.25 GHz band:	
	<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 type="checkbox"/> For the 5.725-5.85 GHz band:	
	<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.
EIRP Power Spectral Density Limit	
<input checked="" type="checkbox"/> For the 5.85-5.895 GHz band:	
	<ul style="list-style-type: none">Indoor AP & subordinate device < 20dBm/MHzClient device < 14dBm/MHz
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.	
	<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 (θ-8) dBW/MHz for $8^\circ \leq \theta < 40^\circ$ -35.9 - 1.22 (θ-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:	
	<ul style="list-style-type: none">Point-to-multipoint systems (P2M): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz. If $G_{TX} > 6$ dBi, then $PPSD = 30 - (G_{TX} - 6)$.Point-to-point systems (P2P): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz.
PPSD = peak power spectral density that he same method as used to determine the conducted output	



power shall be used to determine the power spectral density. And power spectral density in dBm/MHz
 G_{TX} = the maximum transmitting antenna directional gain in dBi.

3.3.2 Measuring Instruments

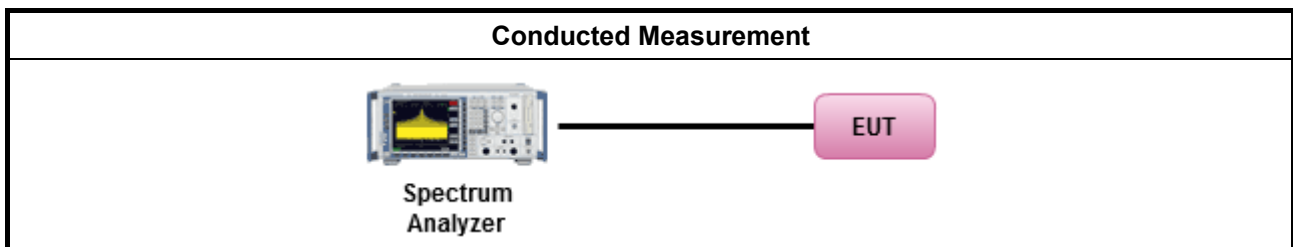
Refer a test equipment and calibration data table in this test report.

3.3.3 Test Procedures

Test Method	
<ul style="list-style-type: none">Peak power spectral density procedures that the same method as used to determine the conducted output power shall be used to determine the peak power spectral density and use the peak search function on the spectrum analyzer to find the peak of the spectrum. For the peak power spectral density shall be measured using below options:	
<input type="checkbox"/>	Refer as FCC KDB 789033 D02, 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])	

Test Method	
	$EIRP_{total} = PPSD_{total} + DG$
<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"
	<ul style="list-style-type: none"> Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz.
	<ul style="list-style-type: none"> Refer as FCC KDB 412172 D01 clause 2.2 for EIRP calculation.

3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Refer as Appendix C



3.4 Unwanted Emissions

3.4.1 Transmitter Unwanted Emissions Limit

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

Note 1: Test distance for frequencies at or above 30 MHz, measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

Note 2: Test distance for frequencies at below 30 MHz, measurements may be performed at a distance closer than the EUT limit distance; however, an attempt should be made to avoid making measurements in the near field. When performing measurements below 30 MHz at a closer distance than the limit distance, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two or more distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade). The test report shall specify the extrapolation method used to determine compliance of the EUT.

Note 3: Using the distance of 1m during the test for above 18 GHz, and the test value to correct for the distance factor at 3m.

Un-restricted band emissions above 1GHz Limit	
Operating Band	Limit
<input 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 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.
<input checked="" type="checkbox"/> 5.85 - 5.895 GHz	(i) For an indoor access point or subordinate device, all emissions at or above 5.895 GHz shall not exceed an e.i.r.p. of 15 dBm/MHz and shall decrease linearly to an e.i.r.p. of - 7 dBm/MHz at or above 5.925 GHz. (ii) For a client device, all emissions at or above 5.895 GHz shall not exceed an



	e.i.r.p. of -5 dBm/MHz and shall decrease linearly to an e.i.r.p. of -27 dBm/MHz at or above 5.925 GHz. (iii) For a client device or indoor access point or subordinate device, all emissions below 5.725 GHz shall not exceed an e.i.r.p. of -27 dBm/MHz at 5.65 GHz increasing linearly to 10 dBm/ MHz at 5.7 GHz, and from 5.7 GHz increasing linearly to a level of 15.6 dBm/MHz at 5.72 GHz, and from 5.72 GHz increasing linearly to a level of 27 dBm/MHz at 5.725 GHz.
Note 1: Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).	

3.4.2 Measuring Instruments

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

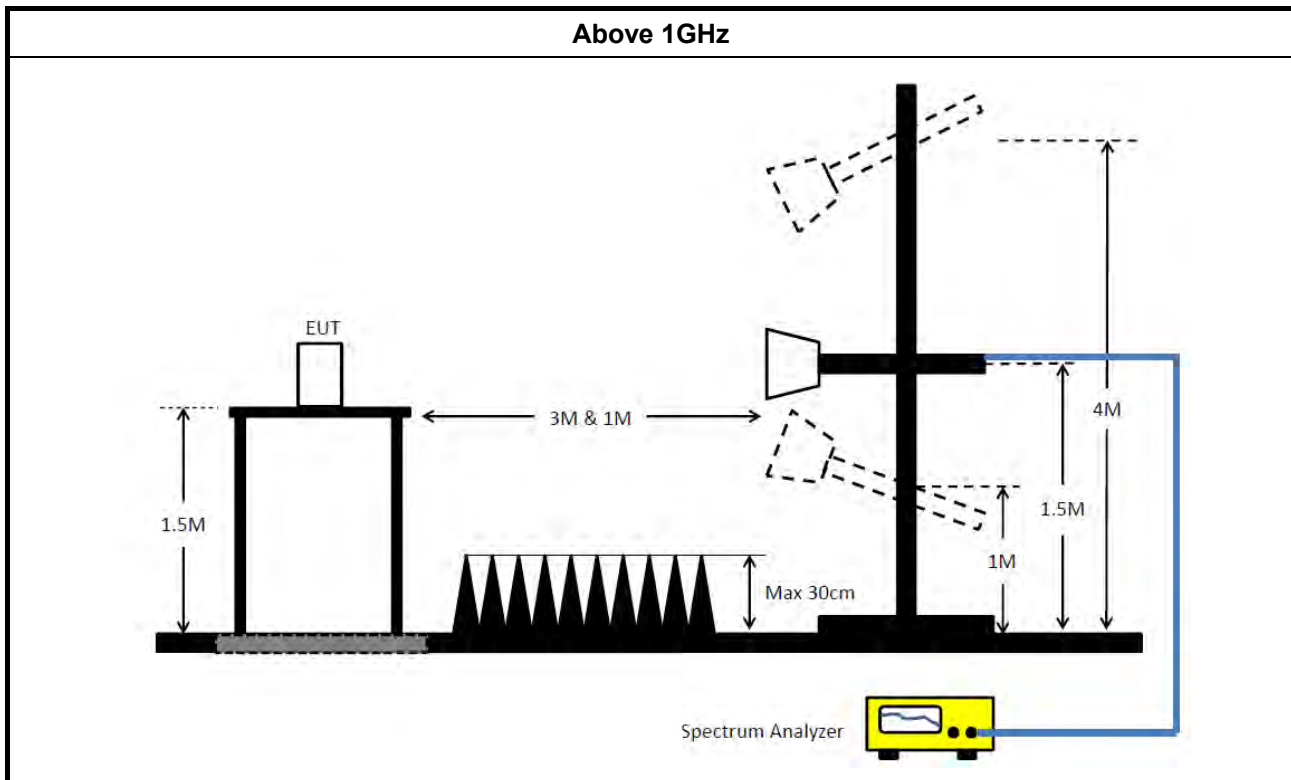
3.4.3 Test Procedures

Test Method	
<ul style="list-style-type: none">Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 m for frequencies above 30 MHz, unless it can be further demonstrated that measurements at a distance of 30 m or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).	
<ul style="list-style-type: none">The average emission levels shall be measured in [duty cycle \geq 98 or duty factor].	
<ul style="list-style-type: none">For the transmitter unwanted emissions shall be measured using following options below:	
<ul style="list-style-type: none">For radiated measurement.	<ul style="list-style-type: none">Refer as FCC KDB 789033 D02, clause G)2) for unwanted emissions into non-restricted bands.
	<ul style="list-style-type: none">Refer as FCC KDB 789033 D02, clause G)1) for unwanted emissions into restricted bands.
	<input type="checkbox"/> Refer as FCC KDB 789033 D02, G)6) Method AD (Trace Averaging).
	<input checked="" type="checkbox"/> Refer as FCC KDB 789033 D02, G)6) Method VB (Reduced VBW).
	<input type="checkbox"/> Refer as ANSI C63.10, clause 11.12.2.5.3 (Reduced VBW). VBW \geq 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.
<ul style="list-style-type: none">The any unwanted emissions level shall not exceed the fundamental emission level.	<input type="checkbox"/> Refer as ANSI C63.10, clause 4.1.4.2.2 measurement procedure peak limit.

Test Method

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

3.4.4 Test Setup



3.4.5 Measurement Results Calculation

The measured Level is calculated using:

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

3.4.6 Test Result of Transmitter Unwanted Emissions

Refer as Appendix D



4 Test Equipment and Calibration Data

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH06-CB	1GHz ~18GHz 3m	Oct. 01, 2021	Sep. 30, 2022	Radiation (03CH06-CB)
Horn Antenna	SCHWARZBECK	BBHA9120D	BBHA 9120D-1292	1GHz~18GHz	Aug. 09, 2022	Aug. 08, 2023	Radiation (03CH06-CB)
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170507	15GHz ~ 40GHz	Jul. 05, 2022	Jul. 04, 2023	Radiation (03CH06-CB)
Pre-Amplifier	Agilent	83017A	MY53270064	0.5GHz ~ 26.5GHz	Aug 02, 2022	Aug 01, 2023	Radiation (03CH06-CB)
Pre-Amplifier	MITEQ	TTA1840-35-H G	1864479	18GHz ~ 40GHz	Jul. 20, 2022	Jul. 19, 2023	Radiation (03CH06-CB)
Spectrum analyzer	R&S	FSP40	100080	9kHz~40GHz	Dec. 24, 2021	Dec. 23, 2022	Radiation (03CH06-CB)
RF Cable-high	Woken	RG402	High Cable-67	1GHz~18GHz	Feb. 24, 2022	Feb. 23, 2023	Radiation (03CH06-CB)
RF Cable-high	Woken	RG402	High Cable-05+67	1GHz~18GHz	Feb. 24, 2022	Feb. 23, 2023	Radiation (03CH06-CB)
High Cable	Woken	WCA0929M	40G#5+7	1GHz ~ 40 GHz	Dec. 14, 2021	Dec. 13, 2022	Radiation (03CH06-CB)
High Cable	Woken	WCA0929M	40G#5	1GHz ~ 40 GHz	Dec. 08, 2021	Dec. 07, 2022	Radiation (03CH06-CB)
High Cable	Woken	WCA0929M	40G#7	1GHz ~ 40 GHz	Dec. 14, 2021	Dec. 13, 2022	Radiation (03CH06-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH06-CB)
Spectrum analyzer	R&S	FSV40	101028	9kHz~40GHz	Jan. 07, 2022	Jan. 06, 2023	Conducted (TH03-CB)
Power Sensor	Anritsu	MA2411B	1726195	300MHz~40GHz	Aug. 22, 2021	Aug. 21, 2022	Conducted (TH03-CB)
Power Meter	Anritsu	ML2495A	1035008	300MHz~40GHz	Aug. 22, 2021	Aug. 21, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-11	1 GHz ~18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-12	1 GHz ~18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-13	1 GHz ~18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-14	1 GHz ~18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-15	1 GHz ~18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH03-CB)
Switch	SPTCB	SP-SWI	SWI-03	1 GHz ~26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	SWI-03-P1	1 GHz ~26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH03-CB)



Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	SWI-03-P2	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	SWI-03-P3	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	SWI-03-P4	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	SWI-03-P5	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH03-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conducted (TH03-CB)

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

NCR means Non-Calibration required.

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.725-5.895GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	16.38M	16.762M	16M8D1D	16.32M	16.672M
802.11ax HEW20_Nss1,(MCS0)_4TX	19.11M	19.22M	19M2D1D	18.96M	19.07M
802.11ax HEW40_Nss1,(MCS0)_4TX	37.98M	49.835M	49M8D1D	37.26M	38.381M
802.11ax HEW80_Nss1,(MCS0)_4TX	78.12M	78.561M	78M6D1D	71.28M	78.201M
802.11ax HEW160_Nss1,(MCS0)_4TX	156.96M	155.682M	156MD1D	148.8M	154.963M

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

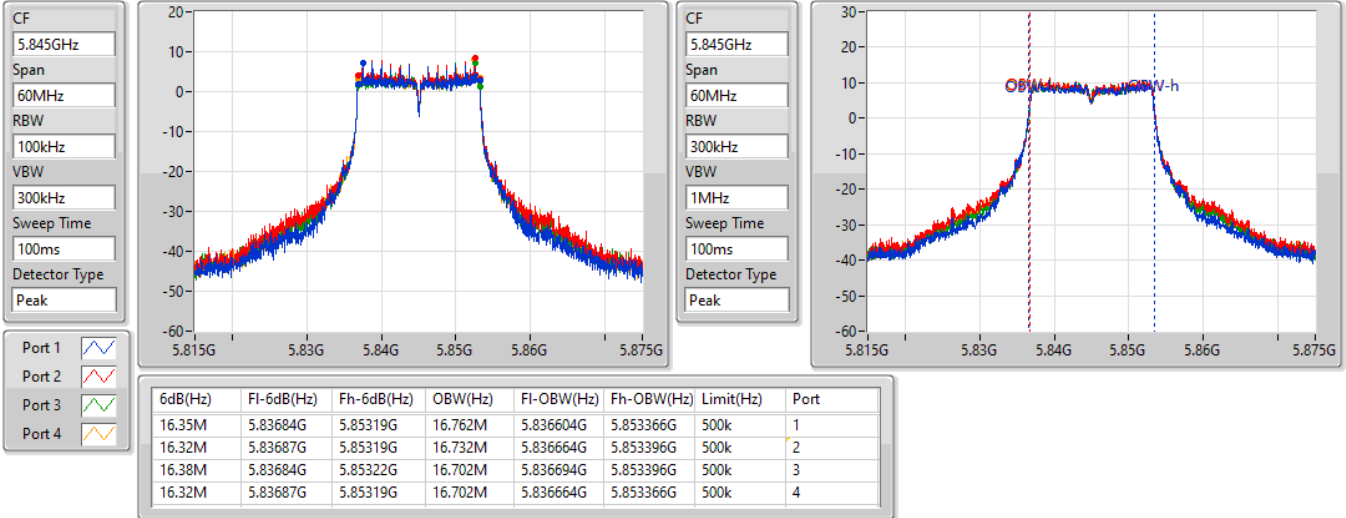
Result

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	-	-	-	-	-	-	-	-	-	-
5845MHz	Pass	500k	16.35M	16.762M	16.32M	16.732M	16.38M	16.702M	16.32M	16.702M
5865MHz	Pass	500k	16.32M	16.762M	16.32M	16.732M	16.35M	16.702M	16.32M	16.672M
5885MHz	Pass	500k	16.32M	16.732M	16.35M	16.732M	16.35M	16.702M	16.32M	16.672M
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5845MHz	Pass	500k	19.05M	19.1M	19.05M	19.19M	19.05M	19.13M	19.11M	19.13M
5865MHz	Pass	500k	19.02M	19.1M	19.05M	19.22M	18.99M	19.16M	19.02M	19.19M
5885MHz	Pass	500k	18.96M	19.07M	19.05M	19.13M	19.02M	19.07M	19.02M	19.1M
802.11ax HEW40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5835MHz	Pass	500k	37.92M	43.238M	37.26M	49.835M	37.86M	46.477M	37.44M	40.48M
5875MHz	Pass	500k	37.92M	38.381M	37.38M	39.28M	37.98M	38.801M	37.8M	38.561M
802.11ax HEW80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5855MHz	Pass	500k	71.28M	78.201M	78.12M	78.561M	77.64M	78.561M	76.8M	78.441M
802.11ax HEW160_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5815MHz	Pass	500k	148.8M	155.442M	152.4M	155.442M	156.96M	155.682M	154.08M	154.963M

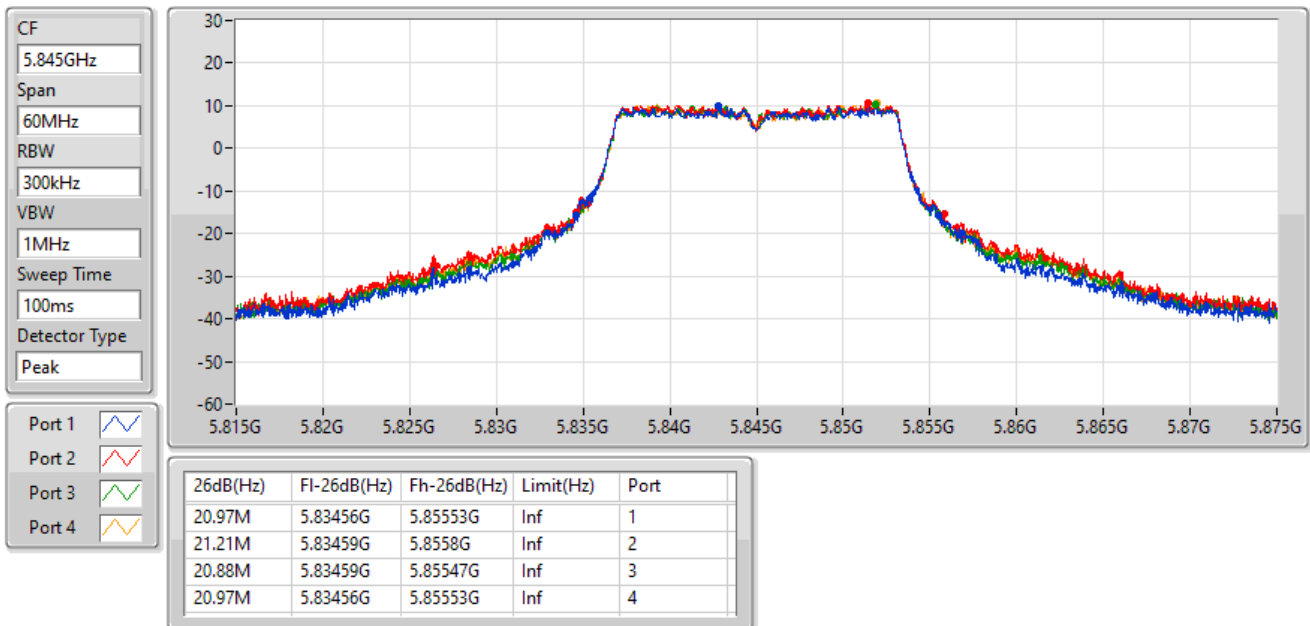
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth

802.11a_Nss1,(6Mbps)_4TX
EBW
5845MHz

18/08/2022

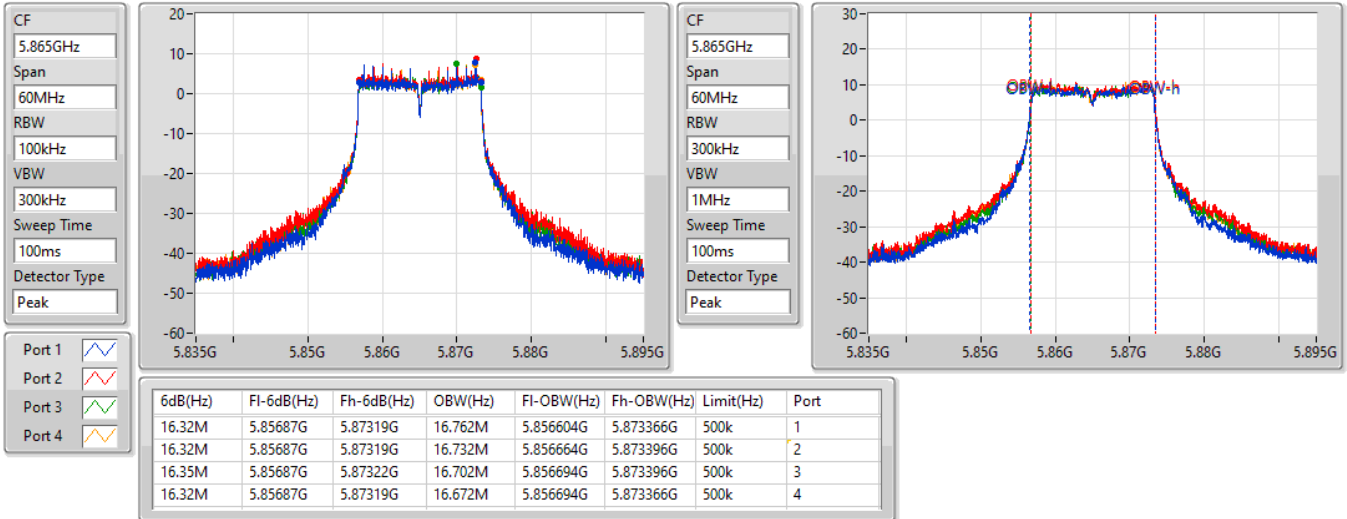

802.11a_Nss1,(6Mbps)_4TX
EBW
5845MHz

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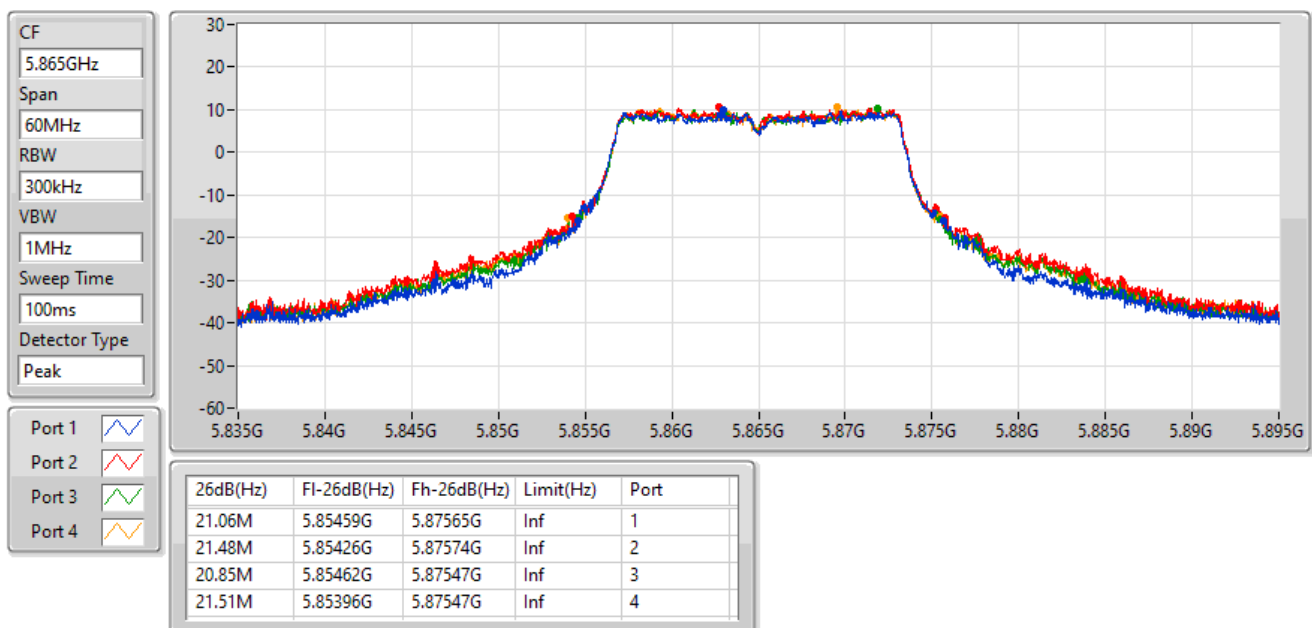


802.11a_Nss1,(6Mbps)_4TX
EBW
5865MHz

18/08/2022

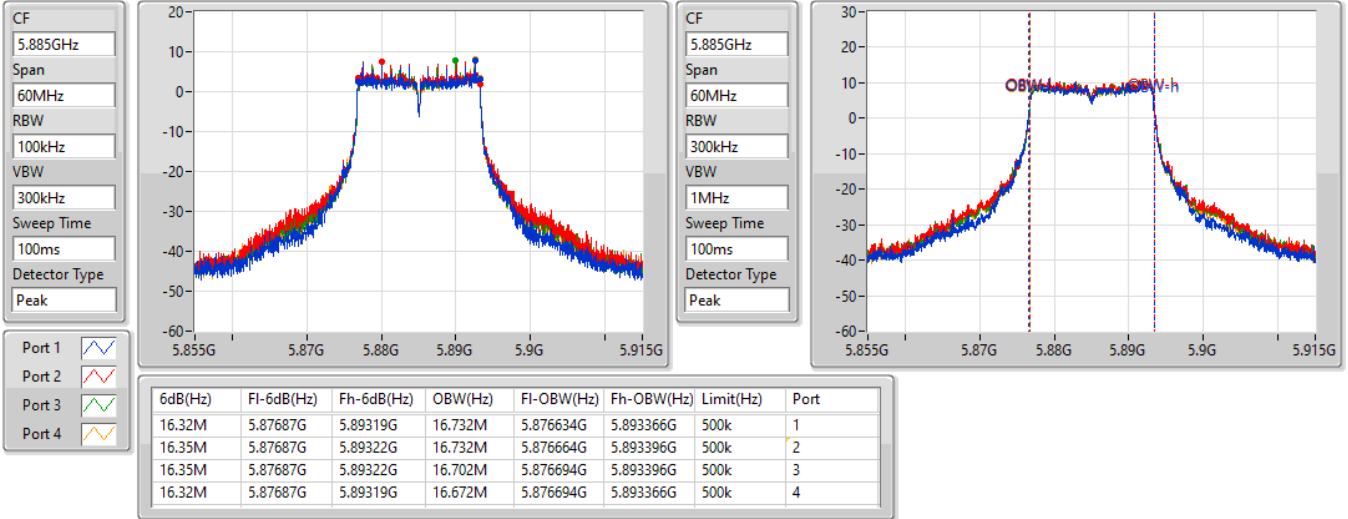

802.11a_Nss1,(6Mbps)_4TX
EBW
5865MHz

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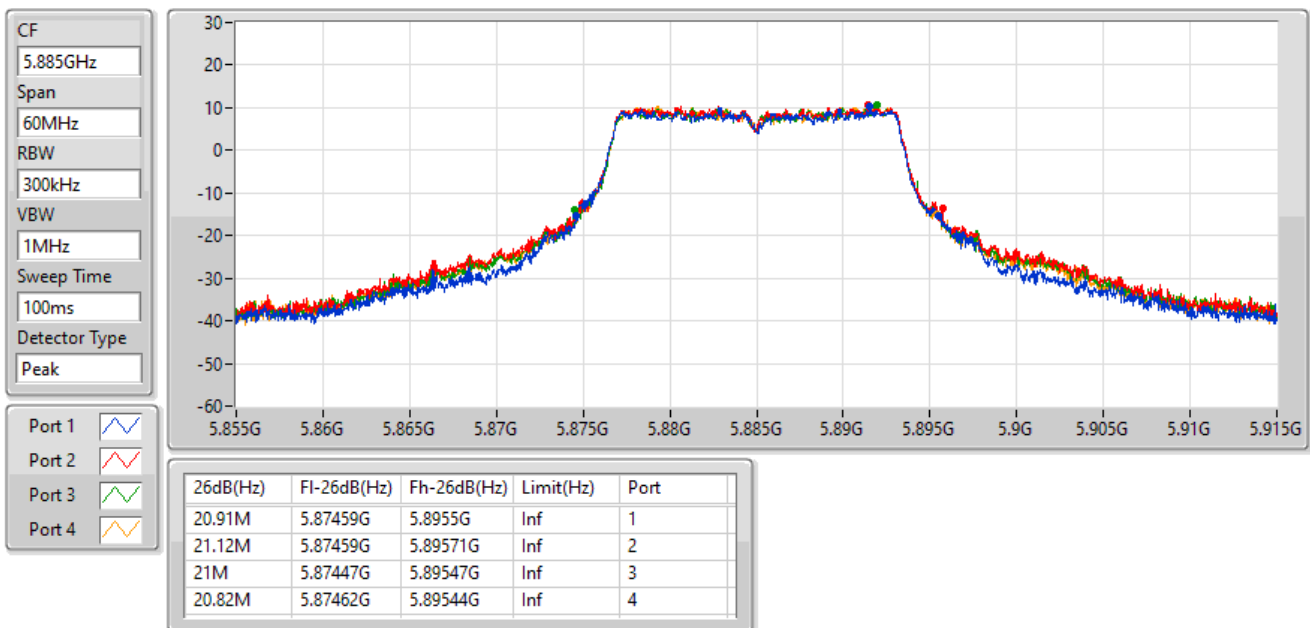


802.11a_Nss1,(6Mbps)_4TX
EBW
5885MHz

18/08/2022


802.11a_Nss1,(6Mbps)_4TX
EBW
5885MHz

18/08/2022

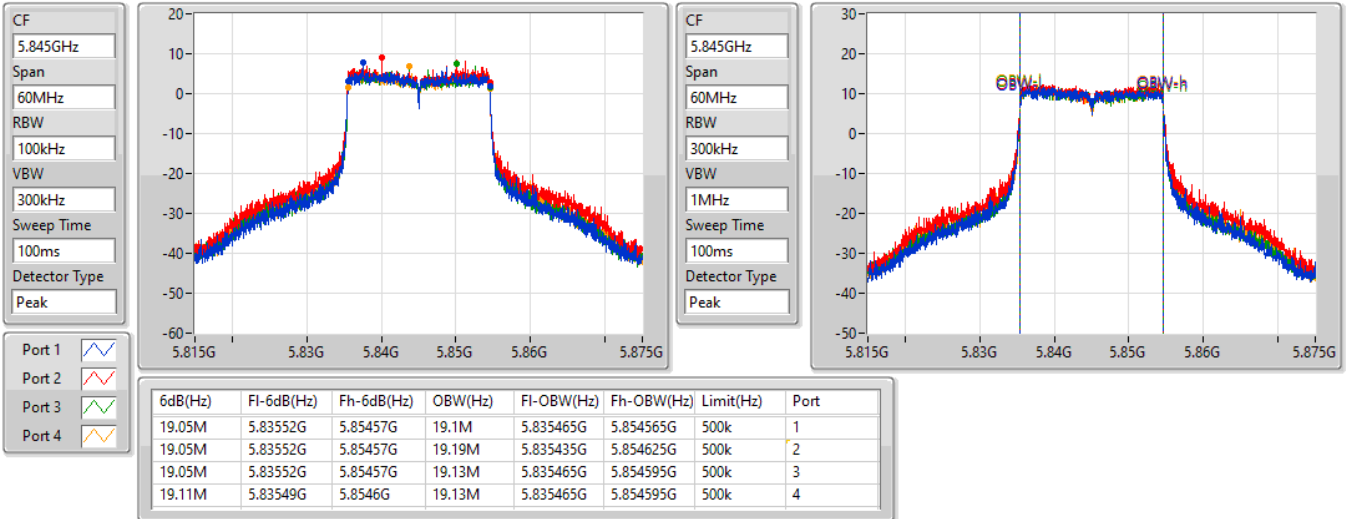


802.11ax HEW20_Nss1,(MCS0)_4TX

EBW

5845MHz

18/08/2022

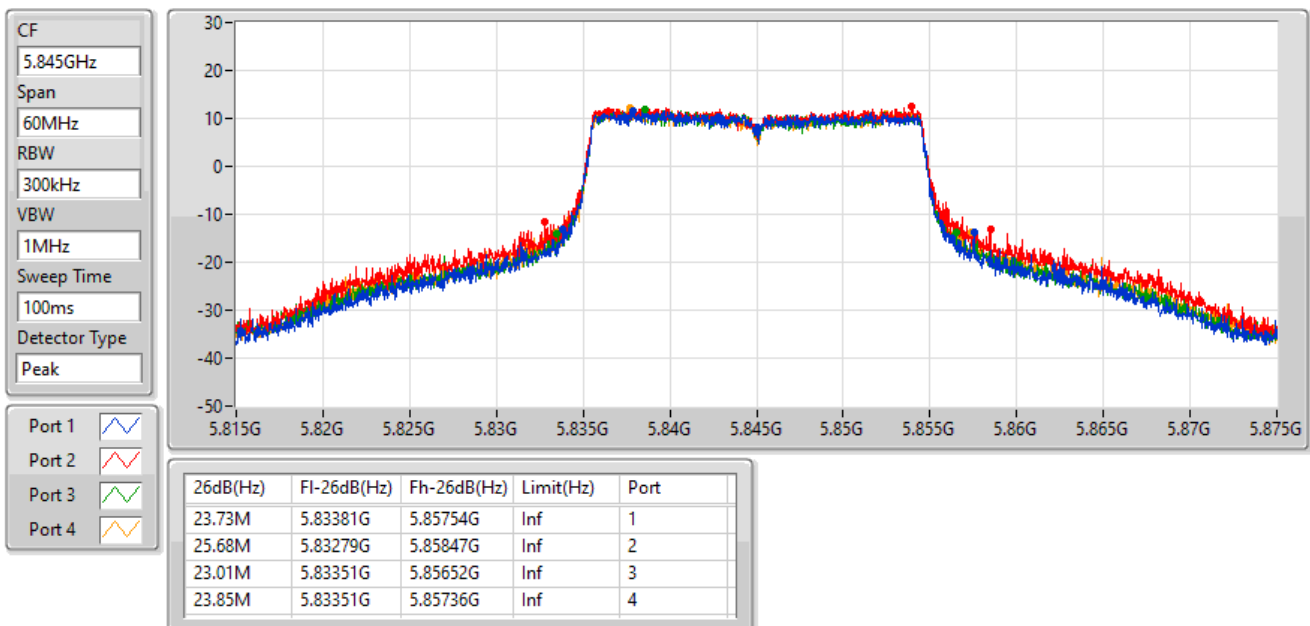


802.11ax HEW20_Nss1,(MCS0)_4TX

EBW

5845MHz

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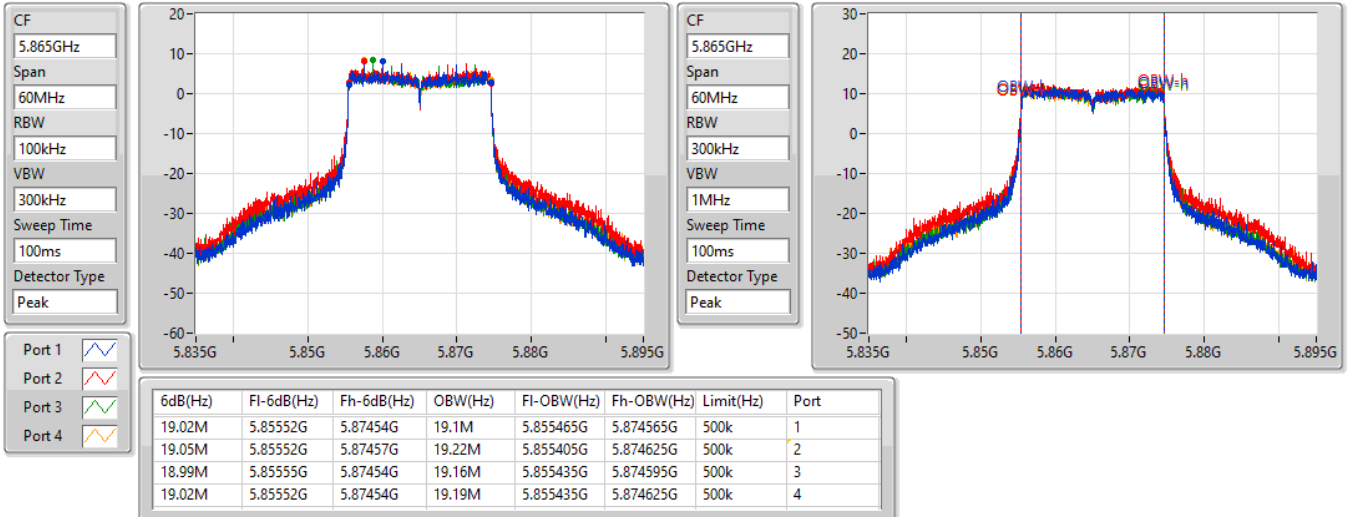


802.11ax HEW20_Nss1,(MCS0)_4TX

EBW

5865MHz

18/08/2022

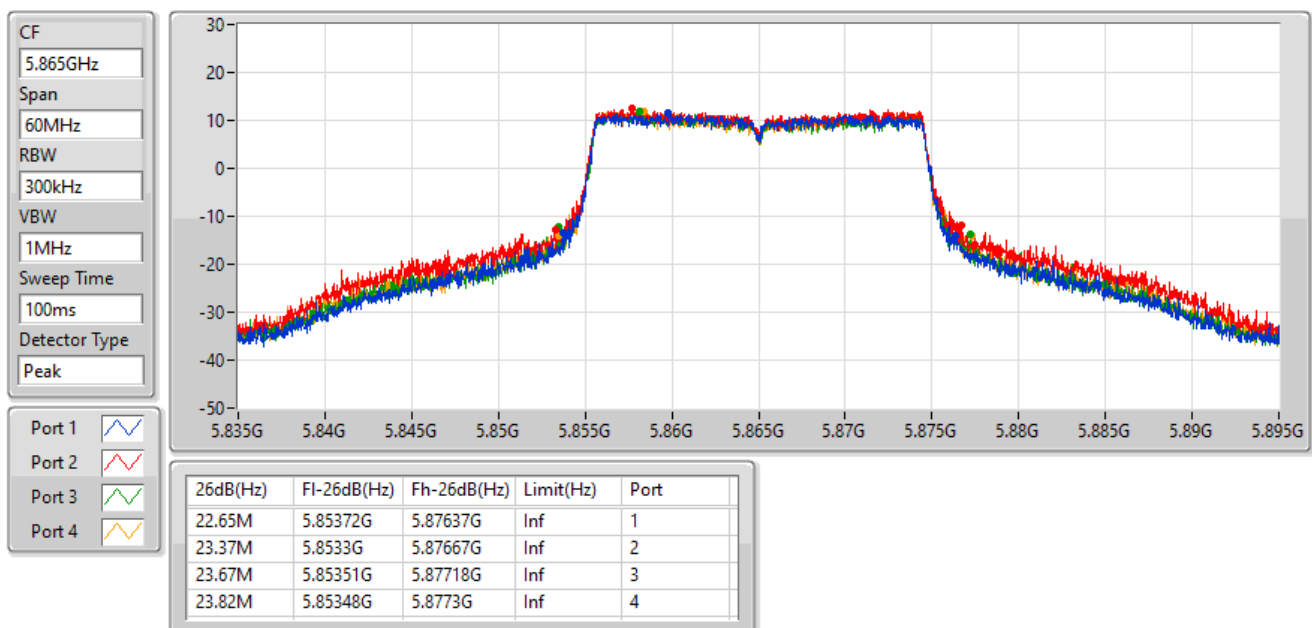


802.11ax HEW20_Nss1,(MCS0)_4TX

EBW

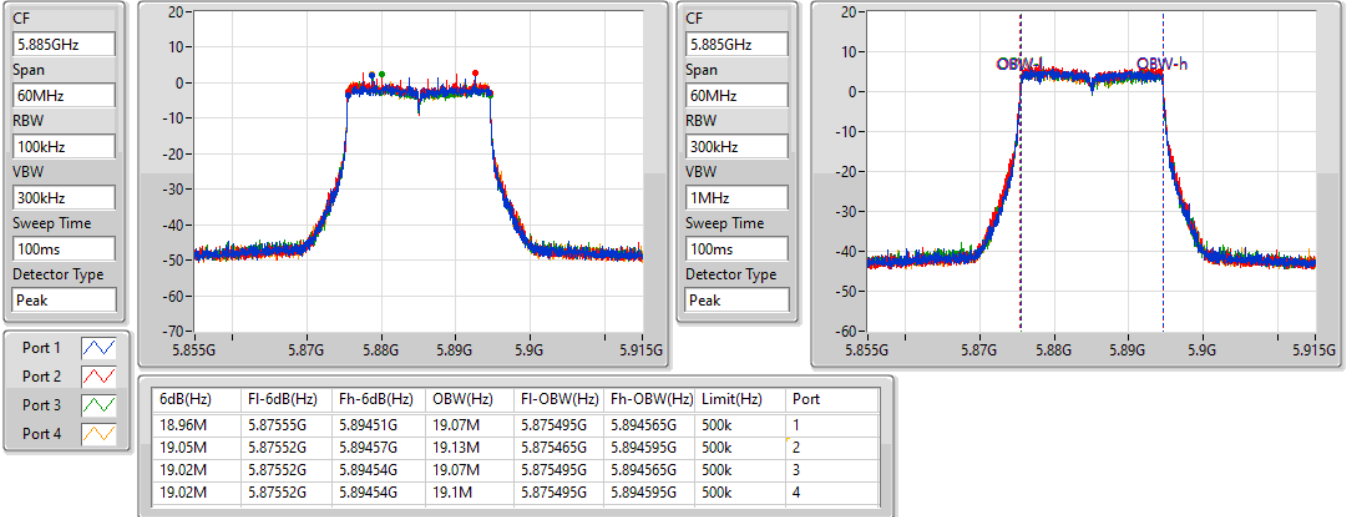
5865MHz

18/08/2022

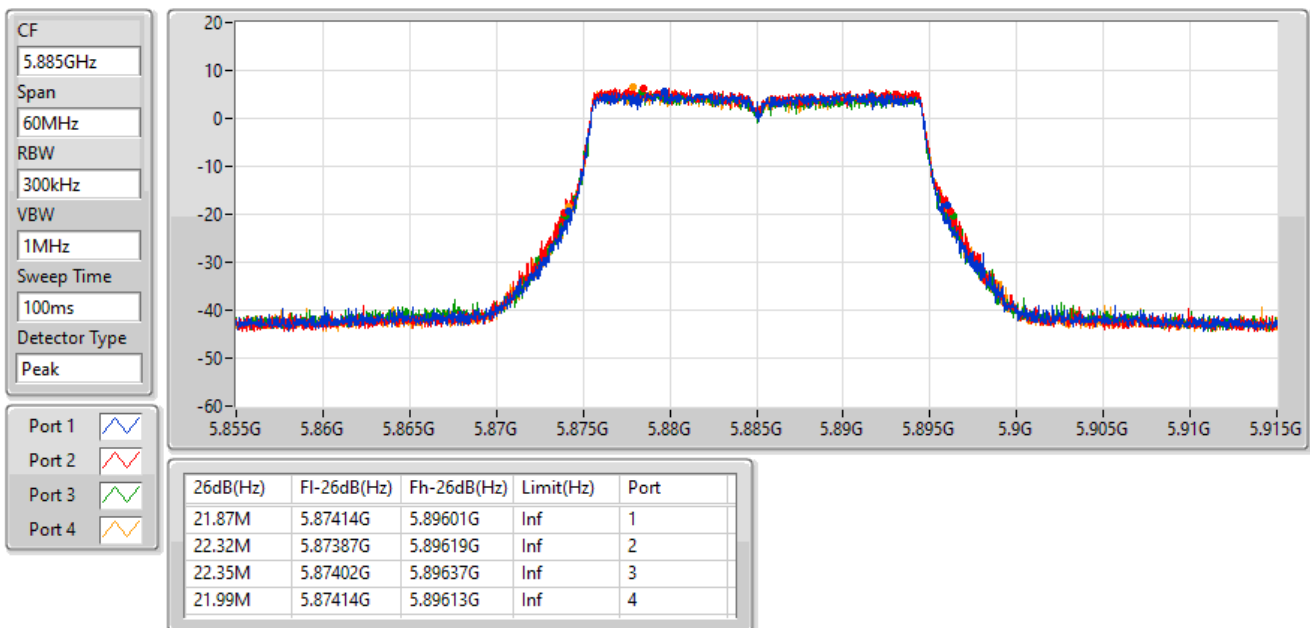


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5885MHz

18/08/2022

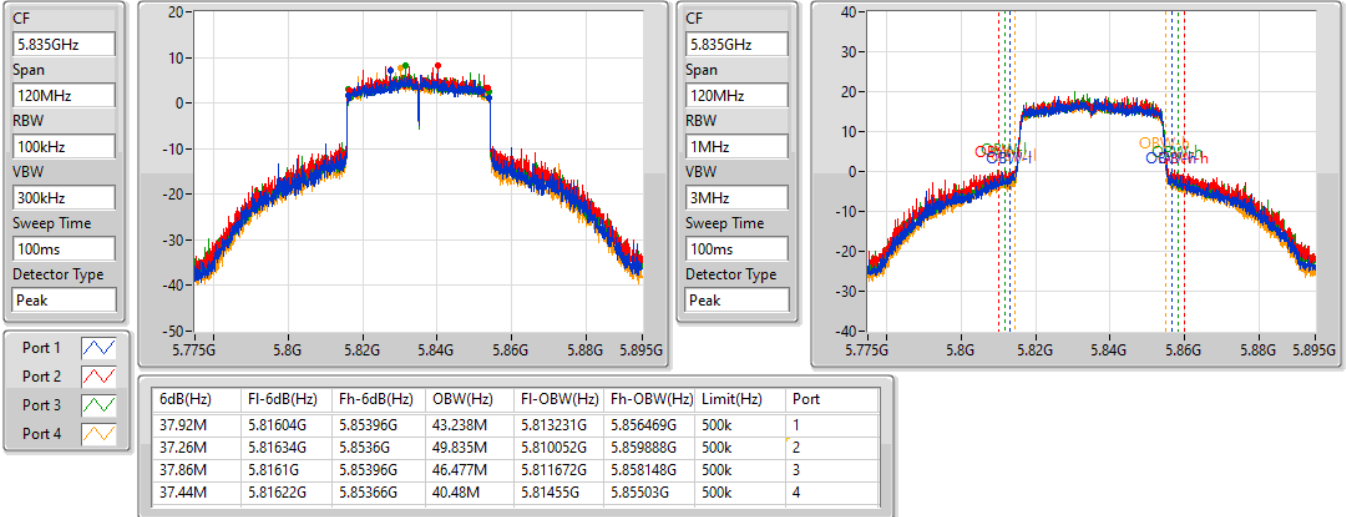

802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5885MHz

18/08/2022

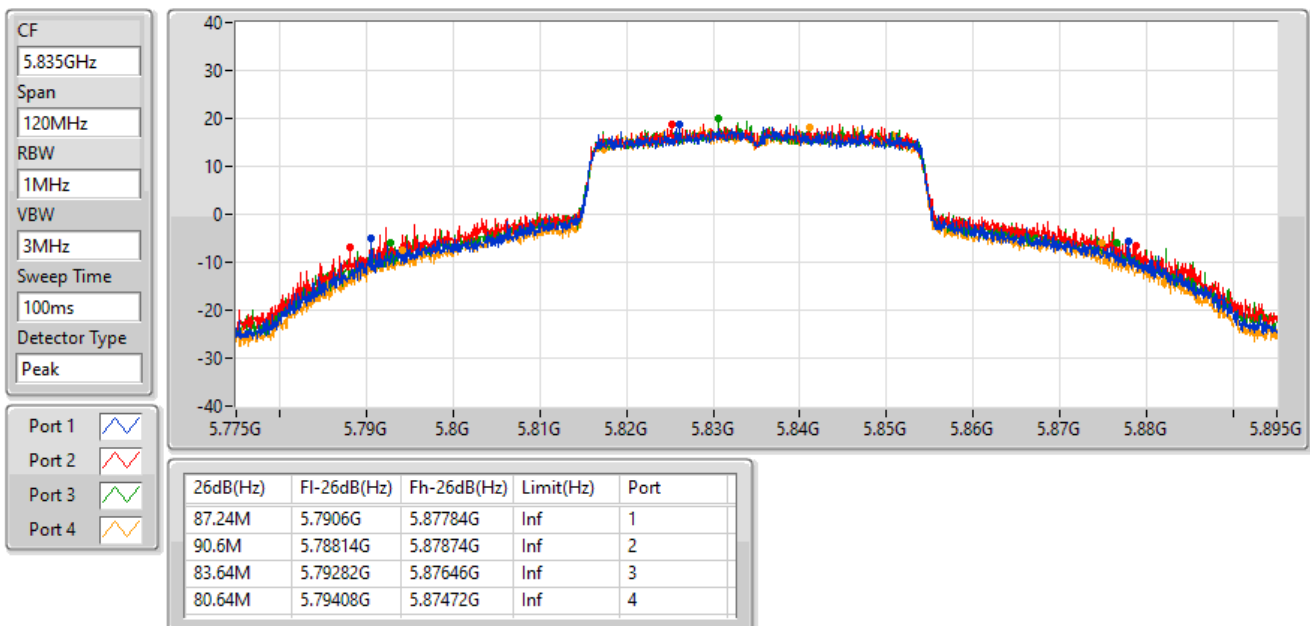


802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5835MHz

18/08/2022

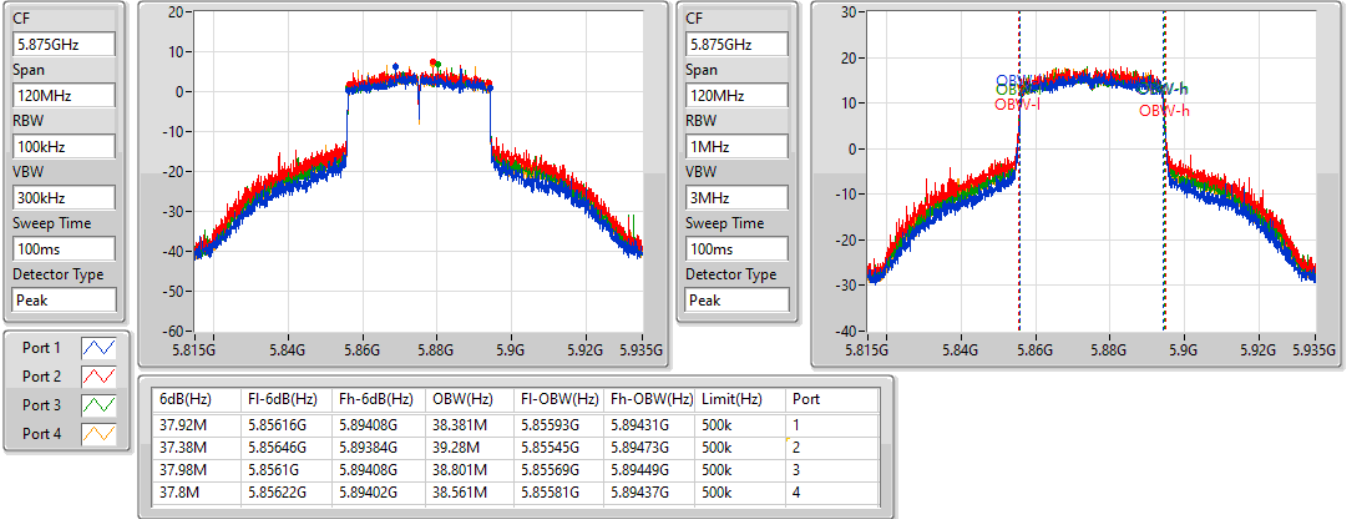

802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5835MHz

18/08/2022

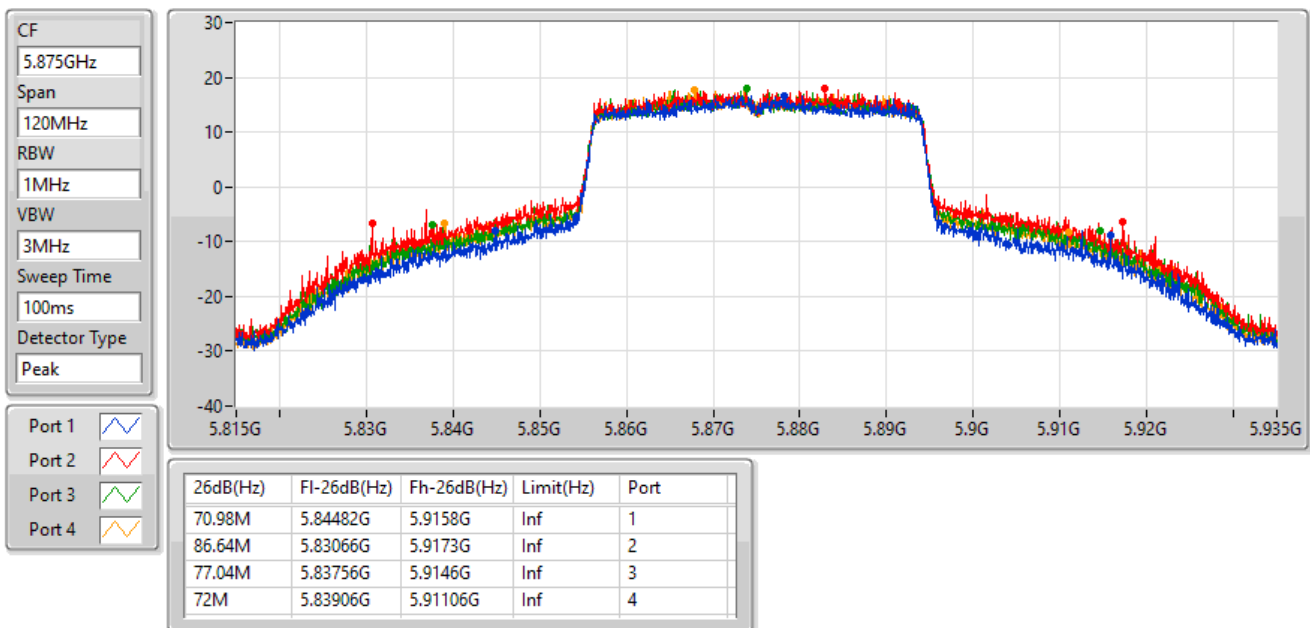


802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5875MHz

18/08/2022


802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5875MHz

18/08/2022

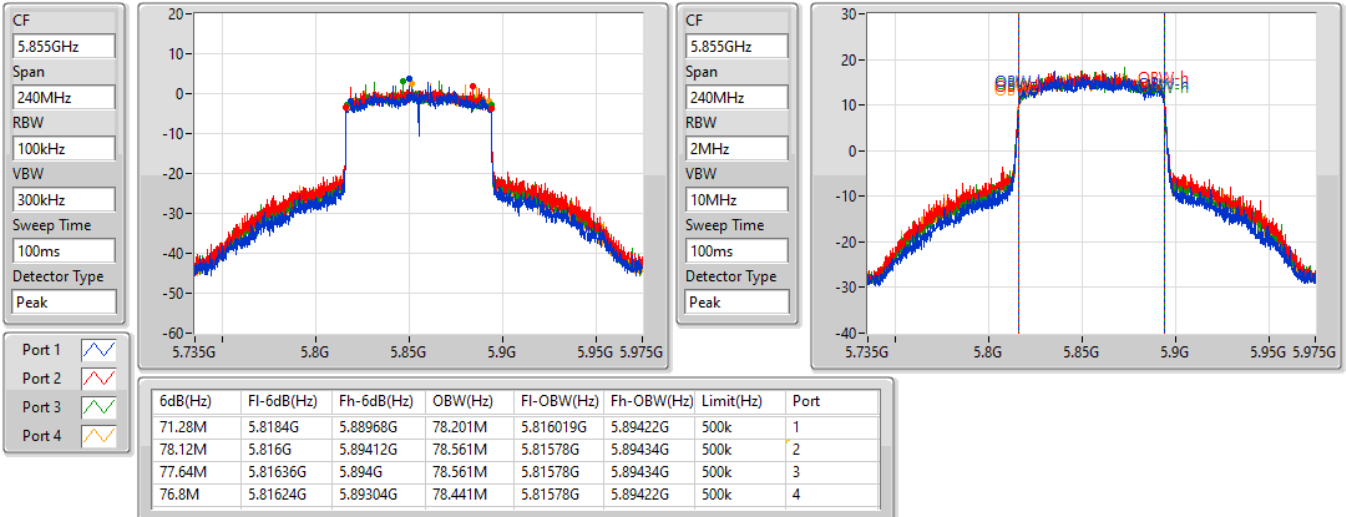


802.11ax HEW80_Nss1,(MCS0)_4TX

EBW

5855MHz

18/08/2022

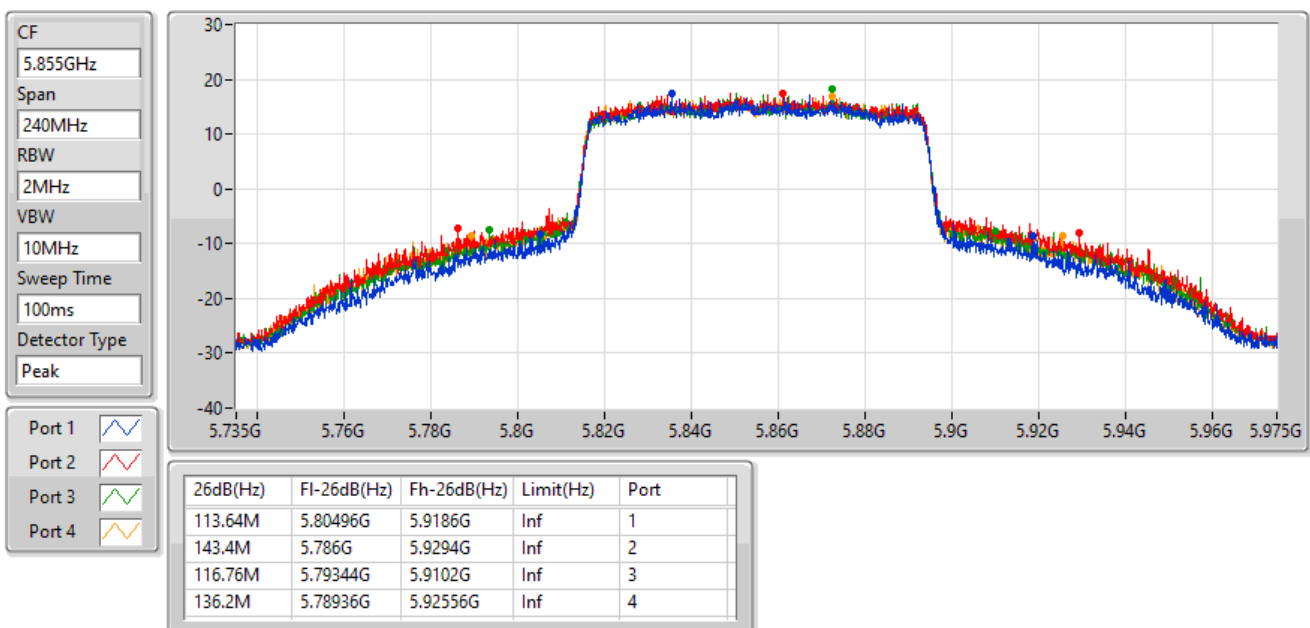


802.11ax HEW80_Nss1,(MCS0)_4TX

EBW

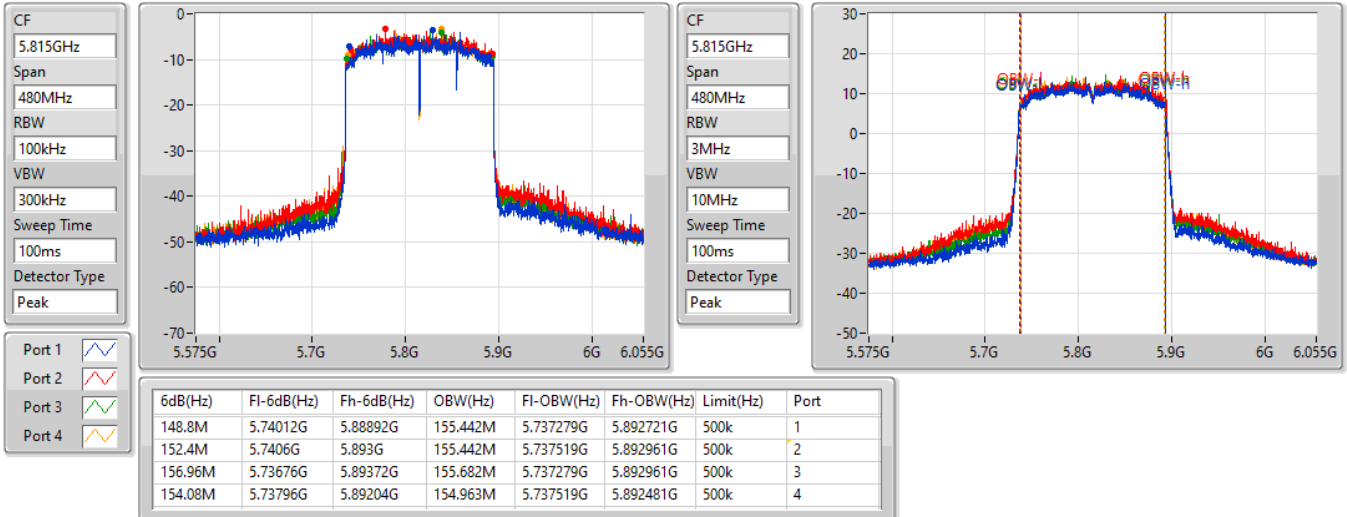
5855MHz

18/08/2022

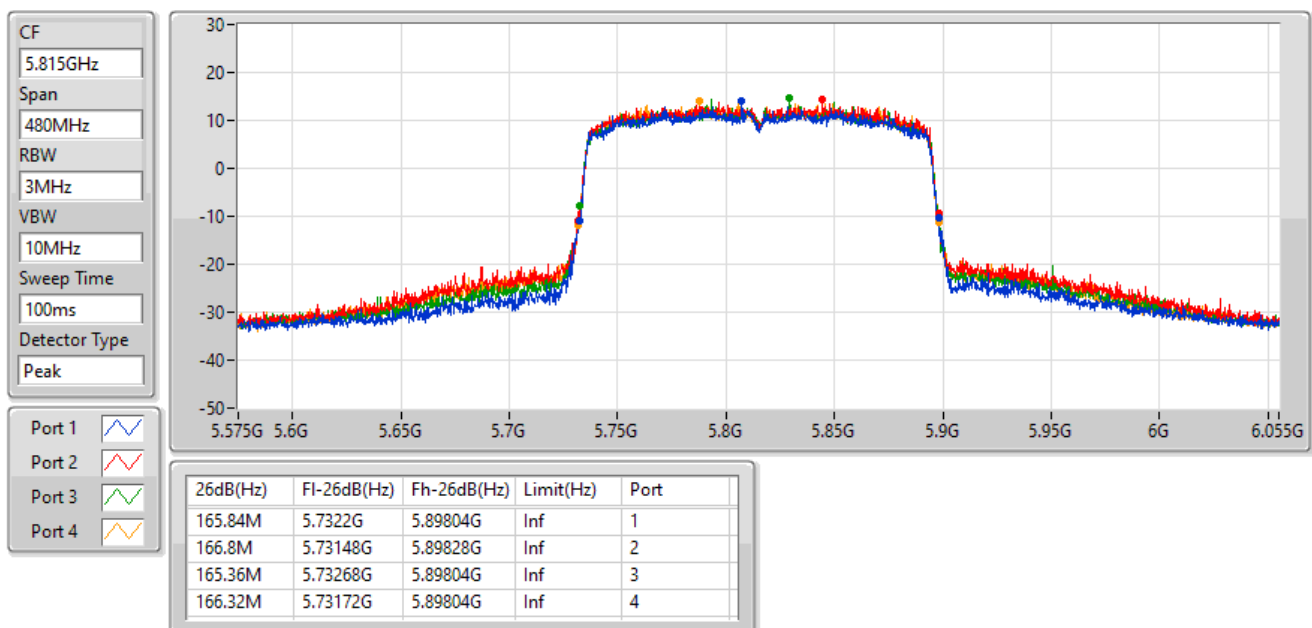


802.11ax HEW160_Nss1,(MCS0)_4TX
EBW
5815MHz

18/08/2022


802.11ax HEW160_Nss1,(MCS0)_4TX
EBW
5815MHz

18/08/2022





Summary

Mode	Total Power (dBm)	Total Power (W)	EIRP (dBm)	EIRP (W)
5.725-5.895GHz	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	24.78	0.30061	30.27	1.06414
802.11ax HEW20_Nss1,(MCS0)_4TX	25.85	0.38459	31.34	1.36144
802.11ax HEW40_Nss1,(MCS0)_4TX	28.53	0.71285	34.02	2.52348
802.11ax HEW80_Nss1,(MCS0)_4TX	26.66	0.46345	32.15	1.64059
802.11ax HEW160_Nss1,(MCS0)_4TX	23.92	0.24660	29.41	0.87297

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-
5845MHz	Pass	5.49	18.51	19.09	18.67	18.73	24.78	30.27	36.00
5865MHz	Pass	5.49	18.42	19.08	18.61	18.59	24.70	30.19	36.00
5885MHz	Pass	5.49	18.47	19.06	18.71	18.74	24.77	30.26	36.00
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-
5845MHz	Pass	5.49	19.66	20.26	19.67	19.70	25.85	31.34	36.00
5865MHz	Pass	5.49	19.59	20.26	19.52	19.64	25.78	31.27	36.00
5885MHz	Pass	5.49	14.03	14.43	13.87	14.02	20.11	25.60	36.00
802.11ax HEW40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-
5835MHz	Pass	5.49	22.37	22.93	22.57	22.14	28.53	34.02	36.00
5875MHz	Pass	5.49	21.12	22.12	21.47	21.56	27.60	33.09	36.00
802.11ax HEW80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-
5855MHz	Pass	5.49	20.28	21.03	20.52	20.69	26.66	32.15	36.00
802.11ax HEW160_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-
5815MHz	Pass	5.49	17.19	18.38	17.88	18.08	23.92	29.41	36.00

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



Summary

Mode	Total Power (dBm)	Total Power (W)	EIRP (dBm)	EIRP (W)
5.725-5.895GHz	-	-	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	25.85	0.38459	33.22	2.09894
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	28.53	0.71285	35.90	3.89045
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	26.66	0.46345	34.03	2.52930
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	23.92	0.24660	31.29	1.34586

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-
5845MHz	Pass	7.37	19.66	20.26	19.67	19.7	25.85	33.22	36.00
5865MHz	Pass	7.37	19.59	20.26	19.52	19.64	25.78	33.15	36.00
5885MHz	Pass	7.37	14.03	14.43	13.87	14.02	20.11	27.48	36.00
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-
5835MHz	Pass	7.37	22.37	22.93	22.57	22.14	28.53	35.90	36.00
5875MHz	Pass	7.37	21.12	22.12	21.47	21.56	27.60	34.97	36.00
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-
5855MHz	Pass	7.37	20.28	21.03	20.52	20.69	26.66	34.03	36.00
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-
5815MHz	Pass	7.37	17.19	18.38	17.88	18.08	23.92	31.29	36.00

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

Summary

Mode	PD (dBm/RBW)	EIRP PD (dBm/RBW)
5.725-5.895GHz	-	-
802.11a_Nss1,(6Mbps)_4TX	12.33	19.70
802.11ax HEW20_Nss1,(MCS0)_4TX	12.45	19.82
802.11ax HEW40_Nss1,(MCS0)_4TX	11.41	18.78
802.11ax HEW80_Nss1,(MCS0)_4TX	7.51	14.88
802.11ax HEW160_Nss1,(MCS0)_4TX	1.62	8.99

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

Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	Port 3 (dBm/RBW)	Port 4 (dBm/RBW)	PD (dBm/RBW)	EIRP PD (dBm/RBW)	EIRP PD Limit (dBm/RBW)
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-
5845MHz	Pass	7.37	6.06	6.78	6.34	6.35	12.29	19.66	20.00
5865MHz	Pass	7.37	6.07	6.61	6.25	6.19	12.18	19.55	20.00
5885MHz	Pass	7.37	6.01	6.69	6.44	6.29	12.33	19.70	20.00
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-
5845MHz	Pass	7.37	5.72	6.88	5.83	6.32	12.16	19.53	20.00
5865MHz	Pass	7.37	6.07	7.00	6.49	6.42	12.45	19.82	20.00
5885MHz	Pass	7.37	0.34	1.16	0.58	0.80	6.63	14.00	20.00
802.11ax HEW40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-
5835MHz	Pass	7.37	4.89	5.18	5.12	4.67	10.90	18.27	20.00
5875MHz	Pass	7.37	5.27	5.83	5.40	5.46	11.41	18.78	20.00
802.11ax HEW80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-
5855MHz	Pass	7.37	1.34	1.89	1.68	1.37	7.51	14.88	20.00
802.11ax HEW160_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-
5815MHz	Pass	7.37	-4.83	-3.95	-4.31	-4.30	1.62	8.99	20.00

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

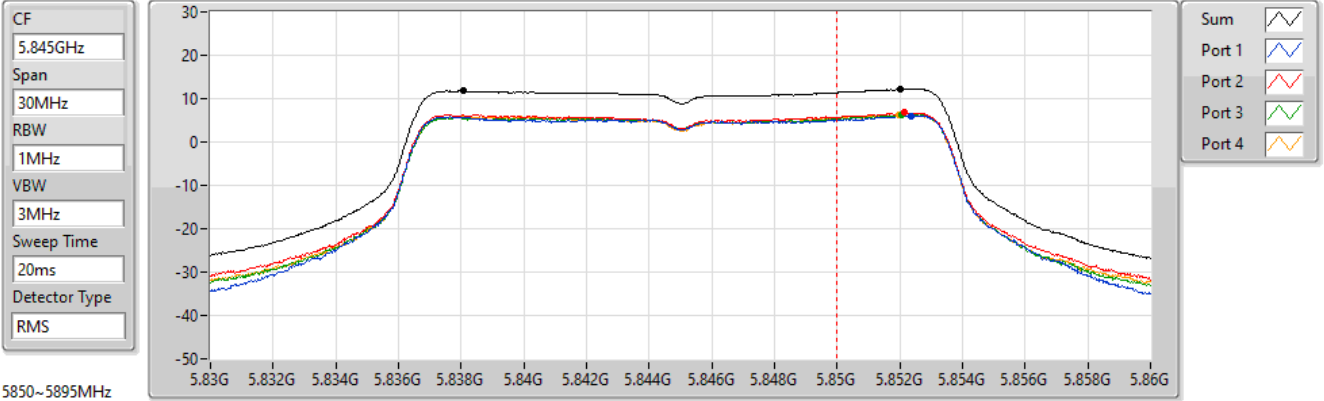
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;

802.11a_Nss1,(6Mbps)_4TX

PSD

5845MHz

18/08/2022



5725-5850MHz

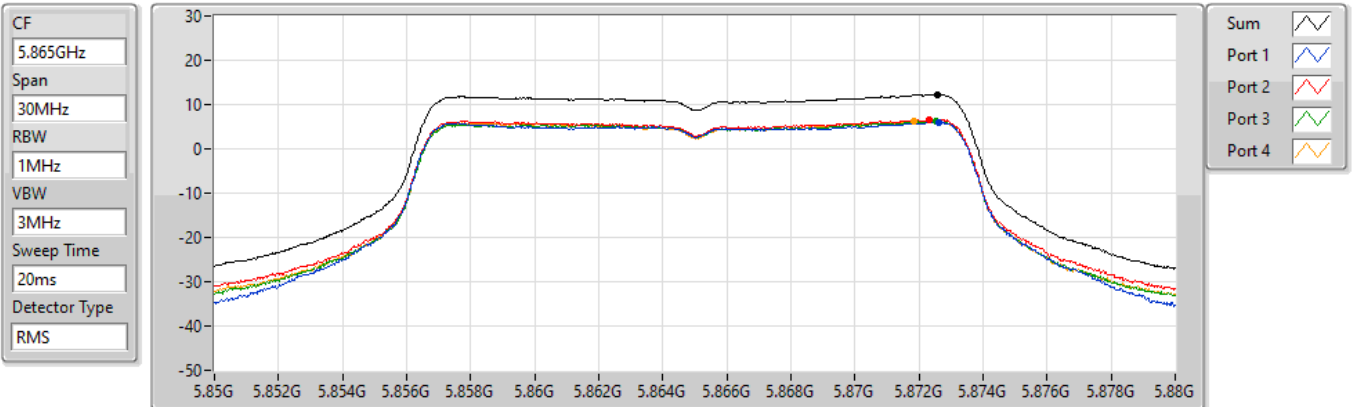
Sum	PD	Limit RBW	BWCF
(dBm)	(dBm)	(Hz)	(dB)
11.82	8.81	500k	-3.01

802.11a_Nss1,(6Mbps)_4TX

PSD

5865MHz

18/08/2022



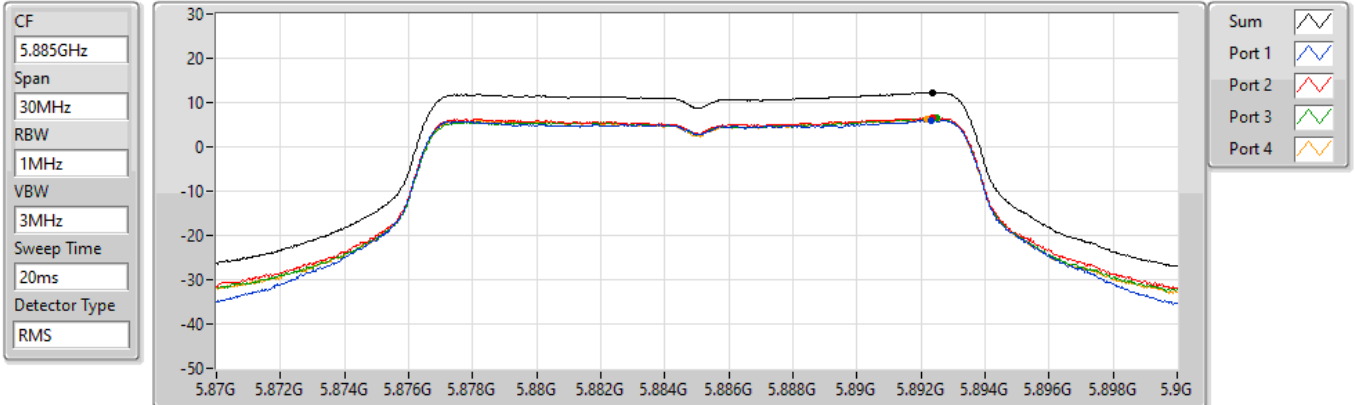
Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
12.18	12.18	6.07	6.61	6.25	6.19

802.11a_Nss1,(6Mbps)_4TX

PSD

5885MHz

18/08/2022



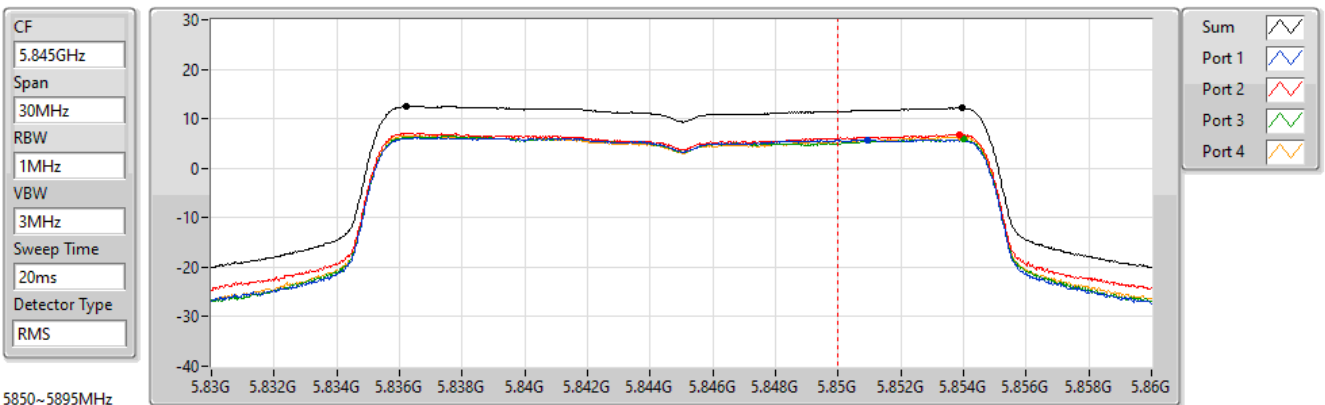
Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
12.33	12.33	6.01	6.69	6.44	6.29

802.11ax HEW20_Nss1,(MCS0)_4TX

PSD

5845MHz

18/08/2022



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
12.16	12.16	5.72	6.88	5.83	6.32

5725-5850MHz

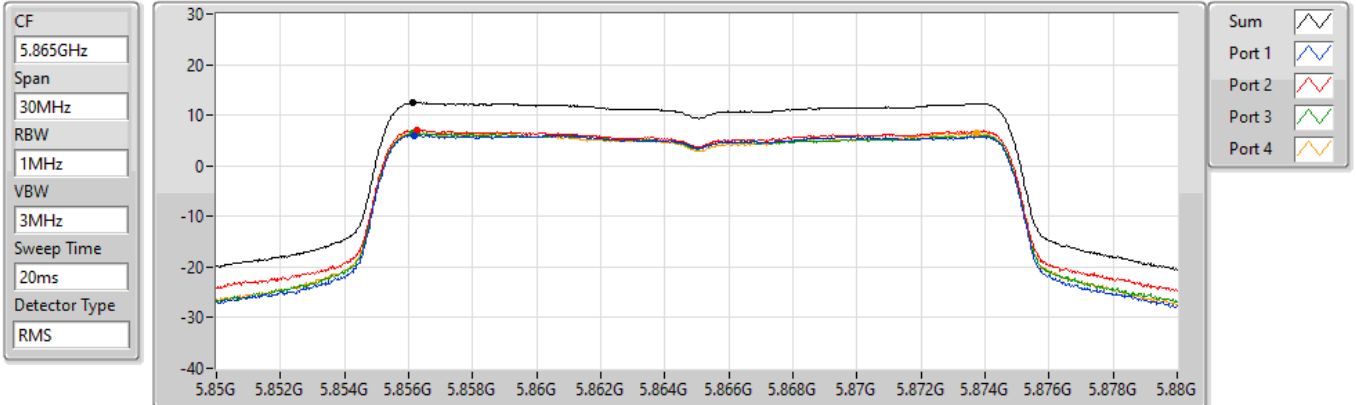
Sum	PD	Limit RBW	BWCF
(dBm)	(dBm)	(Hz)	(dB)
12.51	9.50	500k	-3.01

802.11ax HEW20_Nss1,(MCS0)_4TX

PSD

5865MHz

18/08/2022



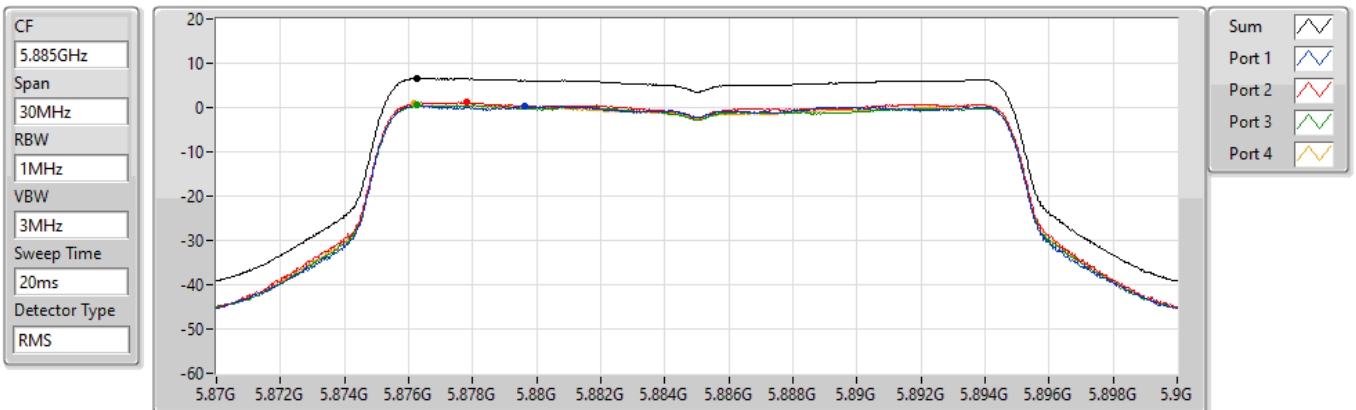
Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
12.45	12.45	6.07	7.00	6.49	6.42

802.11ax HEW20_Nss1,(MCS0)_4TX

PSD

5885MHz

18/08/2022



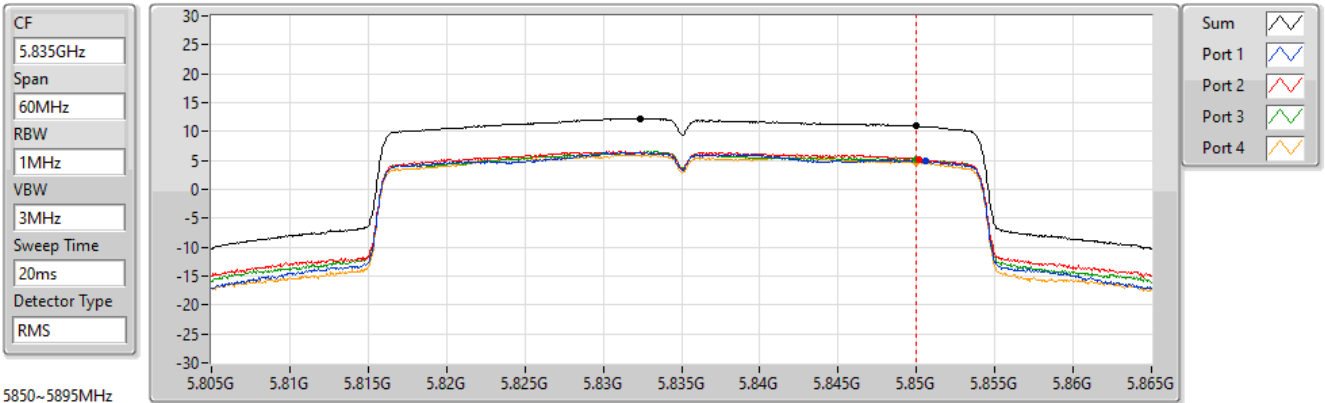
Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.63	6.63	0.34	1.16	0.58	0.80

802.11ax HEW40_Nss1,(MCS0)_4TX

PSD

5835MHz

18/08/2022



5850~5895MHz

Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
10.90	10.90	4.89	5.18	5.12	4.67

5725-5850MHz

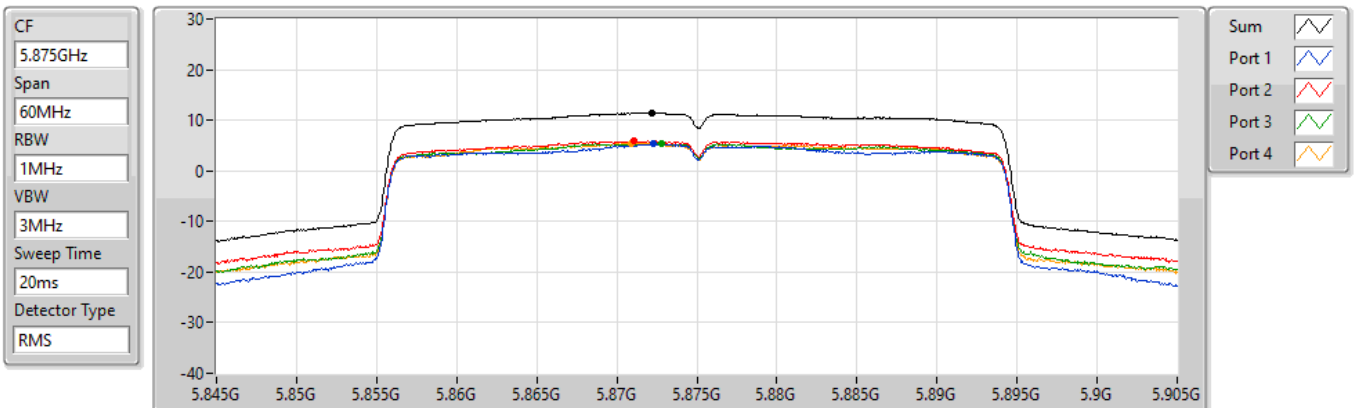
Sum	PD	Limit RBW	BWCF
(dBm)	(dBm)	(Hz)	(dB)
12.29	9.28	500k	-3.01

802.11ax HEW40_Nss1,(MCS0)_4TX

PSD

5875MHz

18/08/2022



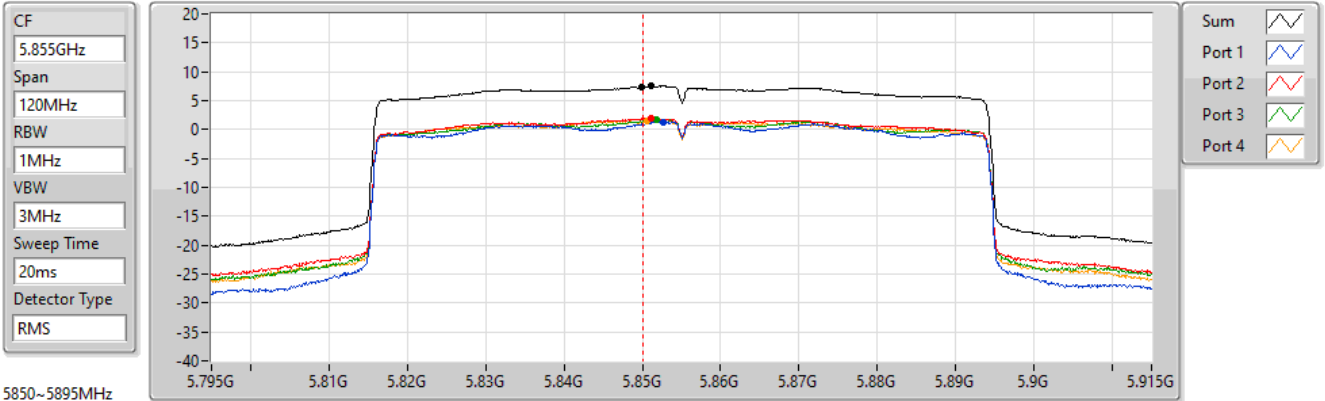
Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
11.41	11.41	5.27	5.83	5.40	5.46

802.11ax HEW80_Nss1,(MCS0)_4TX

PSD

5855MHz

18/08/2022



5850~5895MHz

Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
7.51	7.51	1.34	1.89	1.68	1.37

5725-5850MHz

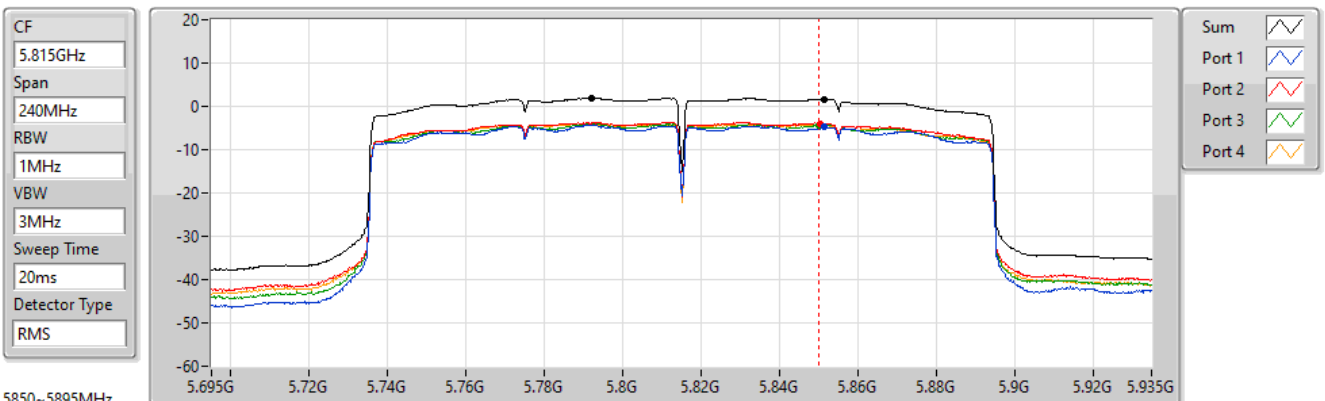
Sum	PD	Limit RBW	BWCF
(dBm)	(dBm)	(Hz)	(dB)
7.38	4.37	500k	-3.01

802.11ax HEW160_Nss1,(MCS0)_4TX

PSD

5815MHz

18/08/2022



5850~5895MHz

Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
1.62	1.62	-4.83	-3.95	-4.31	-4.30

5725-5850MHz

Sum	PD	Limit RBW	BWCF
(dBm)	(dBm)	(Hz)	(dB)
1.90	-1.11	500k	-3.01

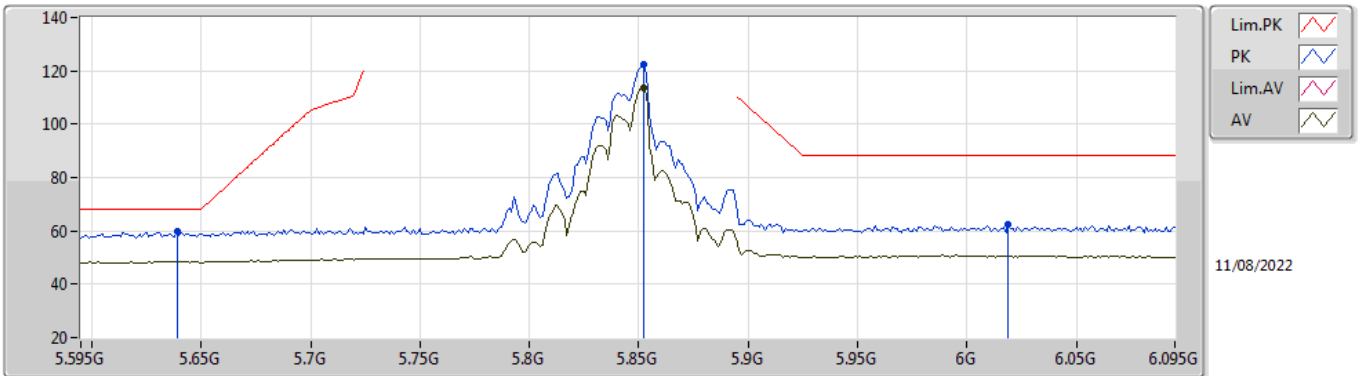


Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
5.725-5.895GHz	-	-	-	-	-	-	-	-	-	-	-
802.11ax HEW80_Nss1,(MCS0)_4TX	Pass	PK	5.929G	87.94	88.20	-0.26	3	Horizontal	75	1.80	-

802.11a_Nss1,(6Mbps)_4TX

5845MHz_TnomVnom

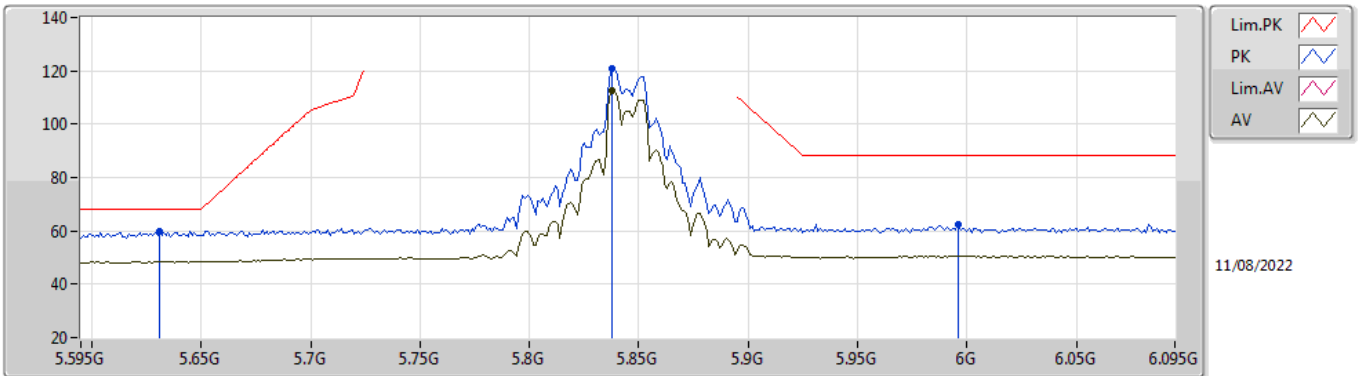


EUT_Y_4TX
Setting 24
06-L-S-5-10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	5.639G	59.59	68.20	-8.61	53.35	3	Vertical	326	2.10	-	32.80	5.90	32.46
PK	5.852G	122.38	Inf	-Inf	114.81	3	Vertical	326	2.10	-	34.01	5.95	32.39
AV	5.852G	113.63	Inf	-Inf	106.06	3	Vertical	326	2.10	-	34.01	5.95	32.39
PK	6.019G	62.55	88.20	-25.65	54.68	3	Vertical	326	2.10	-	34.14	6.10	32.37

802.11a_Nss1,(6Mbps)_4TX

5845MHz_TnomVnom

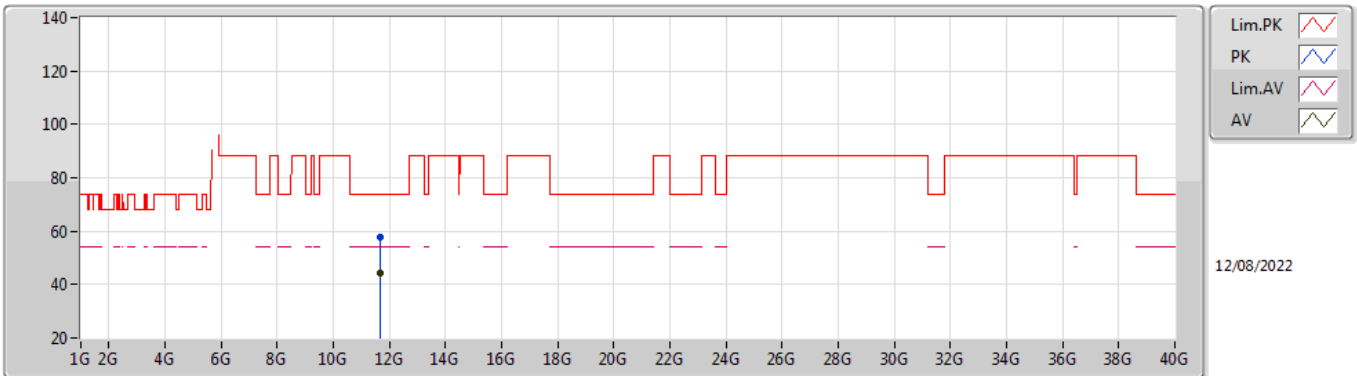


EUT_Y_4TX
Setting 24
06-L-S-5-10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	5.631G	59.68	68.20	-8.52	53.44	3	Horizontal	345	1.80	-	32.80	5.90	32.46
PK	5.838G	120.99	Inf	-Inf	113.46	3	Horizontal	345	1.80	-	33.98	5.94	32.39
AV	5.838G	112.71	Inf	-Inf	105.18	3	Horizontal	345	1.80	-	33.98	5.94	32.39
PK	5.996G	62.38	88.20	-25.82	54.52	3	Horizontal	345	1.80	-	34.10	6.10	32.34

802.11a_Nss1,(6Mbps)_4TX

5845MHz_TnomVnom

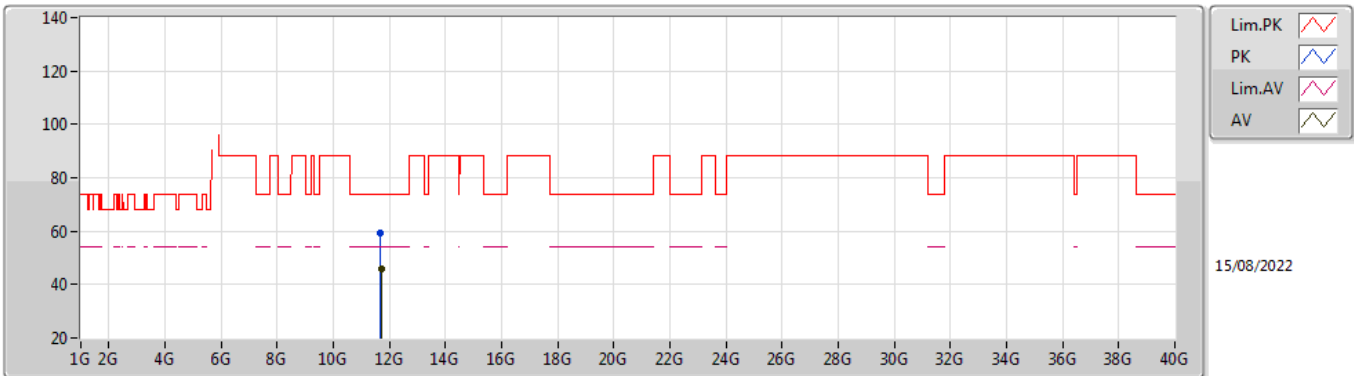


EUT Y_4TX
Setting 24
06-L-S-5

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	11.68848G	57.87	74.00	-16.13	44.50	3	Vertical	356	3.00	-	38.71	9.31	34.65
AV	11.69008G	44.07	54.00	-9.93	30.70	3	Vertical	356	3.00	-	38.71	9.31	34.65

802.11a_Nss1,(6Mbps)_4TX

5845MHz_TnomVnom

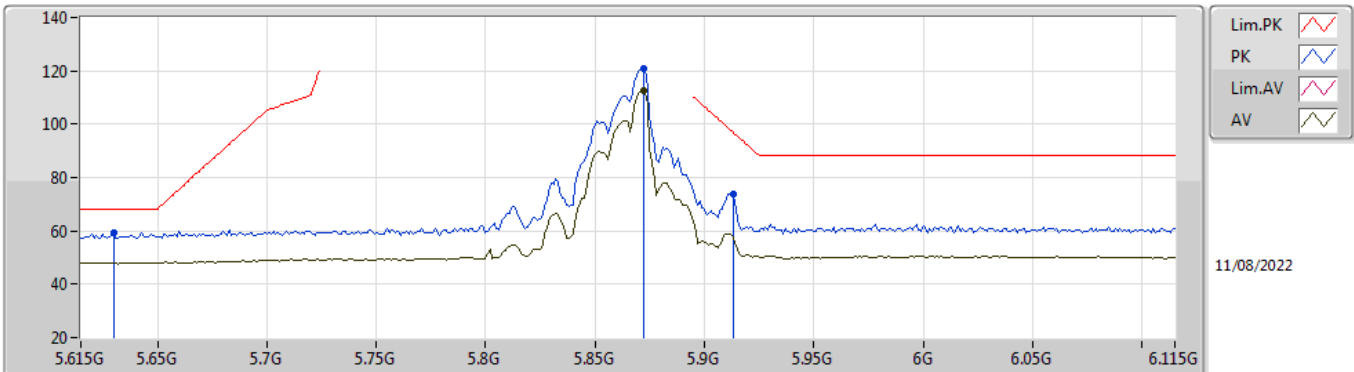


EUT Y_4TX
Setting 24
06-L-S-5

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	11.69616G	59.14	74.00	-14.86	45.77	3	Horizontal	283	1.71	-	38.70	9.32	34.65
AV	11.7G	45.68	54.00	-8.32	32.31	3	Horizontal	283	1.71	-	38.70	9.32	34.65

802.11a_Nss1,(6Mbps)_4TX

5865MHz_TnomVnom

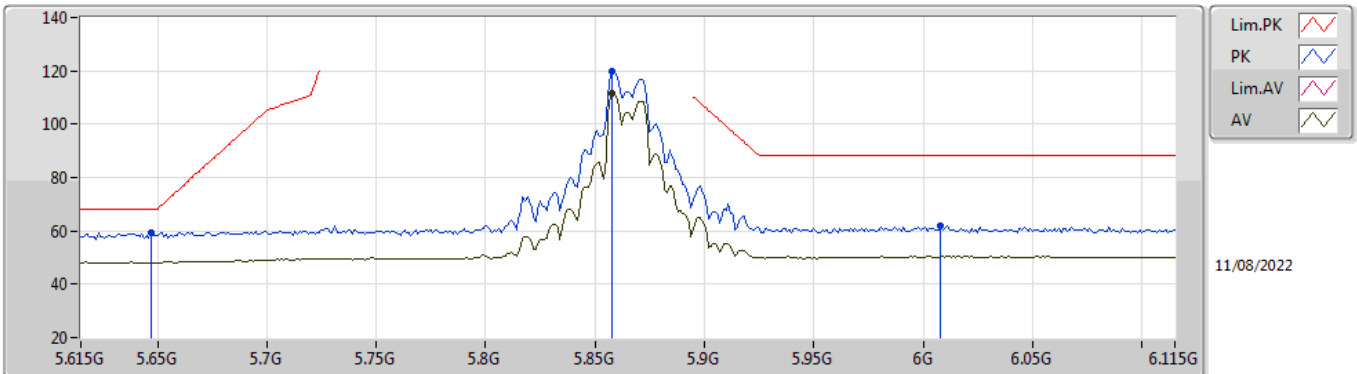


EUT_Y_4TX
Setting 24
06-L-S-5-10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	5.63G	59.31	68.20	-8.89	53.07	3	Vertical	327	2.17	-	32.80	5.90	32.46
PK	5.872G	121.06	Inf	-Inf	113.38	3	Vertical	327	2.17	-	34.09	5.97	32.38
AV	5.872G	112.71	Inf	-Inf	105.03	3	Vertical	327	2.17	-	34.09	5.97	32.38
PK	5.913G	73.74	97.00	-23.26	65.93	3	Vertical	327	2.17	-	34.17	6.01	32.37

802.11a_Nss1,(6Mbps)_4TX

5865MHz_TnomVnom

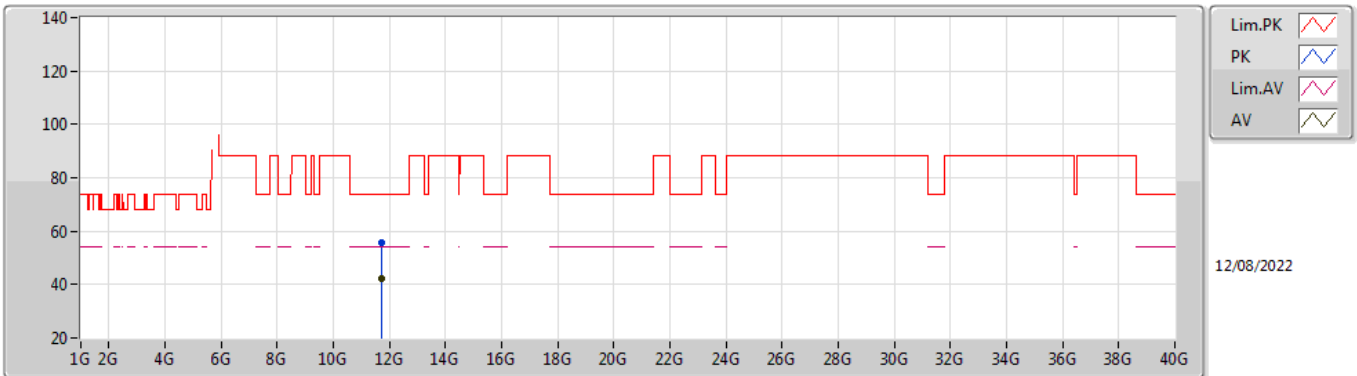


EUT Y_4TX
Setting 24
06-L-S-5-10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	5.647G	59.50	68.20	-8.70	53.25	3	Horizontal	345	1.80	-	32.80	5.90	32.45
PK	5.858G	119.79	Inf	-Inf	112.19	3	Horizontal	345	1.80	-	34.03	5.96	32.39
AV	5.858G	111.78	Inf	-Inf	104.18	3	Horizontal	345	1.80	-	34.03	5.96	32.39
PK	6.008G	62.01	88.20	-26.19	54.14	3	Horizontal	345	1.80	-	34.12	6.10	32.35

802.11a_Nss1,(6Mbps)_4TX

5865MHz_TnomVnom

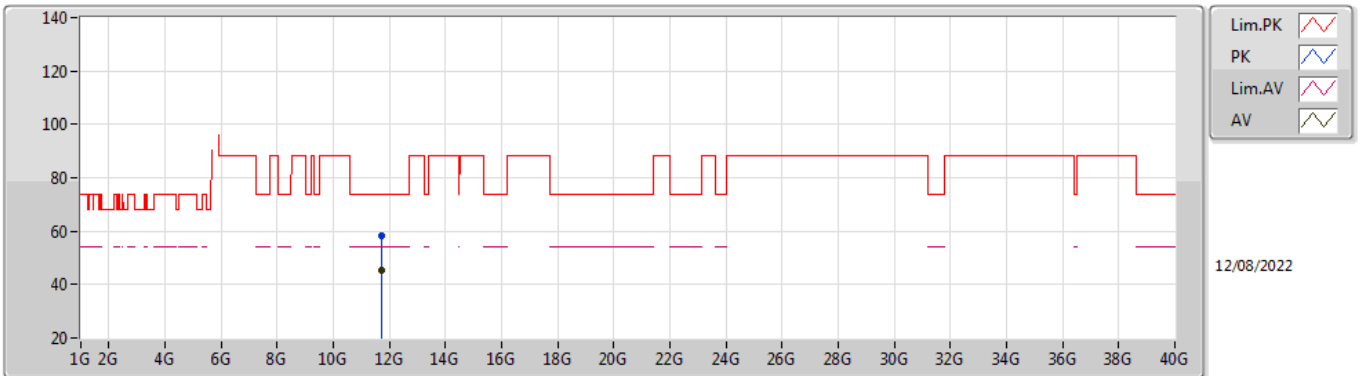


EUT Y_4TX
Setting 24
06-L-S-5

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	11.72692G	55.62	74.00	-18.38	42.26	3	Vertical	22	2.31	-	38.67	9.34	34.65
AV	11.72848G	42.48	54.00	-11.52	29.12	3	Vertical	22	2.31	-	38.67	9.34	34.65

802.11a_Nss1,(6Mbps)_4TX

5865MHz_TnomVnom

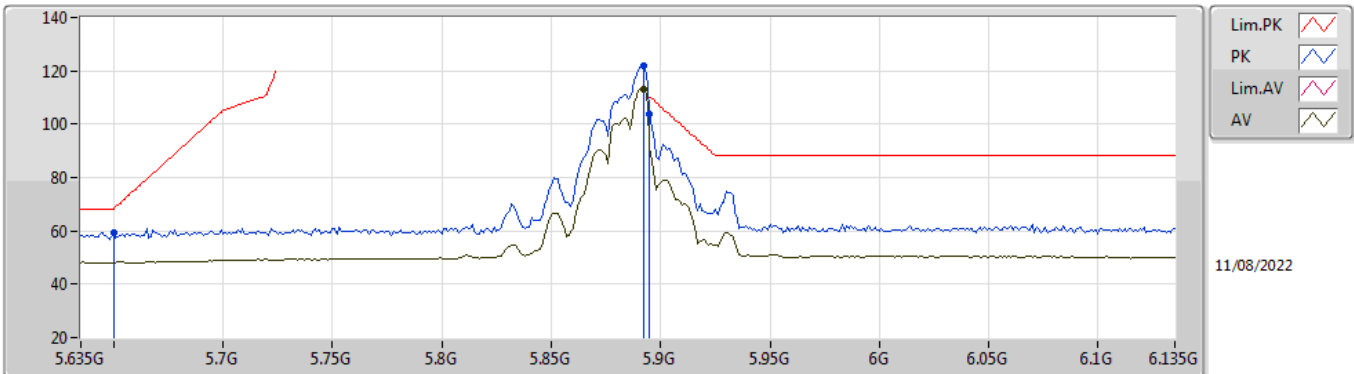


EUT Y_4TX
Setting 24
06-L-S-5

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	11.73076G	58.32	74.00	-15.68	44.96	3	Horizontal	0	1.80	-	38.67	9.34	34.65
AV	11.73196G	45.11	54.00	-8.89	31.75	3	Horizontal	0	1.80	-	38.67	9.34	34.65

802.11a_Nss1,(6Mbps)_4TX

5885MHz_TnomVnom

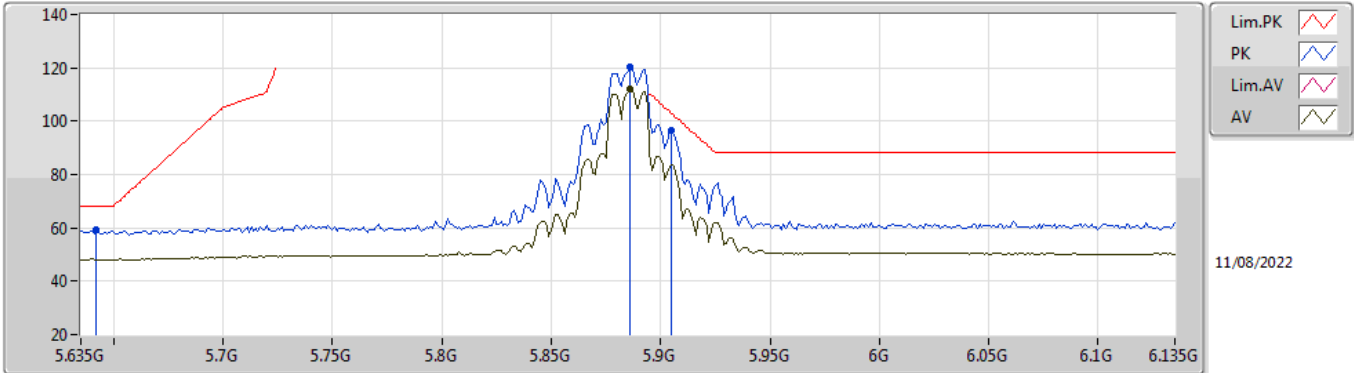


EUT Y_4TX
Setting 24
06-L-S-5-10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	5.65G	59.52	68.20	-8.68	53.27	3	Vertical	327	2.15	-	32.80	5.90	32.45
PK	5.892G	121.92	Inf	-Inf	114.13	3	Vertical	327	2.15	-	34.17	5.99	32.37
AV	5.892G	113.36	Inf	-Inf	105.57	3	Vertical	327	2.15	-	34.17	5.99	32.37
PK	5.895G	103.72	110.20	-6.48	95.91	3	Vertical	327	2.15	-	34.18	6.00	32.37

802.11a_Nss1,(6Mbps)_4TX

5885MHz_TnomVnom

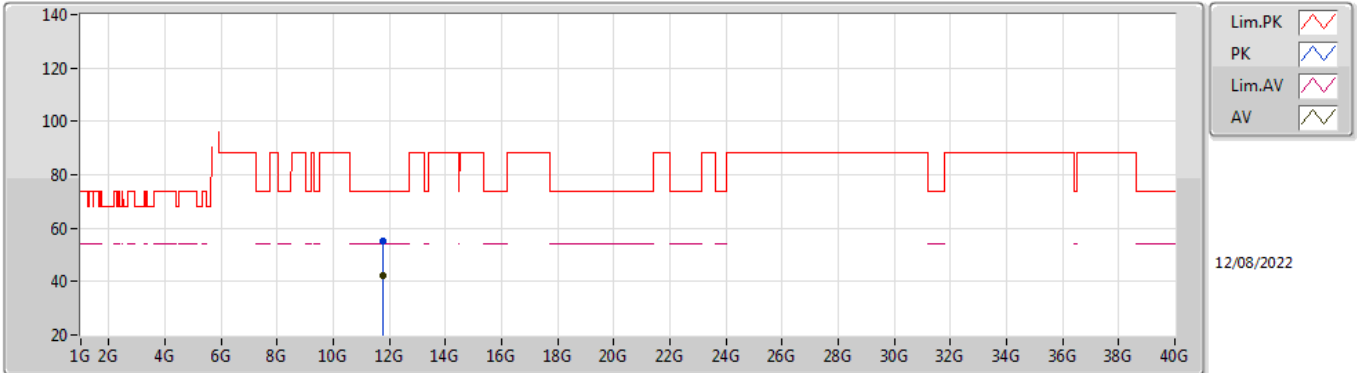


EUT Y_4TX
Setting 24
06-L-S-5-10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)	
PK	5.642G	59.20	68.20	-9.00	52.95	3	Horizontal	314	1.80	-	32.80	5.90	32.45	
PK	5.886G	120.19	Inf	-Inf	112.44	3	Horizontal	314	1.80	-	34.14	5.99	32.38	
AV	5.886G	112.06	Inf	-Inf	104.31	3	Horizontal	314	1.80	-	34.14	5.99	32.38	
PK	5.905G	96.60	102.87	-6.27	88.78	3	Horizontal	314	1.80	-	34.19	6.00	32.37	

802.11a_Nss1,(6Mbps)_4TX

5885MHz_TnomVnom

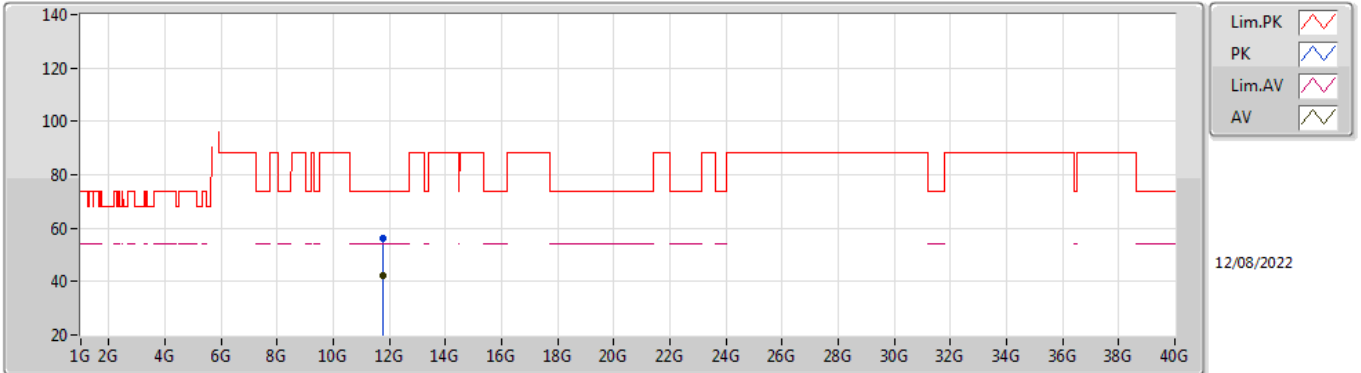


EUT Y_4TX
Setting 24
06-L-S-5

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	11.76966G	55.33	74.00	-18.67	42.00	3	Vertical	135	1.69	-	38.63	9.36	34.66
AV	11.76714G	42.17	54.00	-11.83	28.84	3	Vertical	135	1.69	-	38.63	9.36	34.66

802.11a_Nss1,(6Mbps)_4TX

5885MHz_TnomVnom

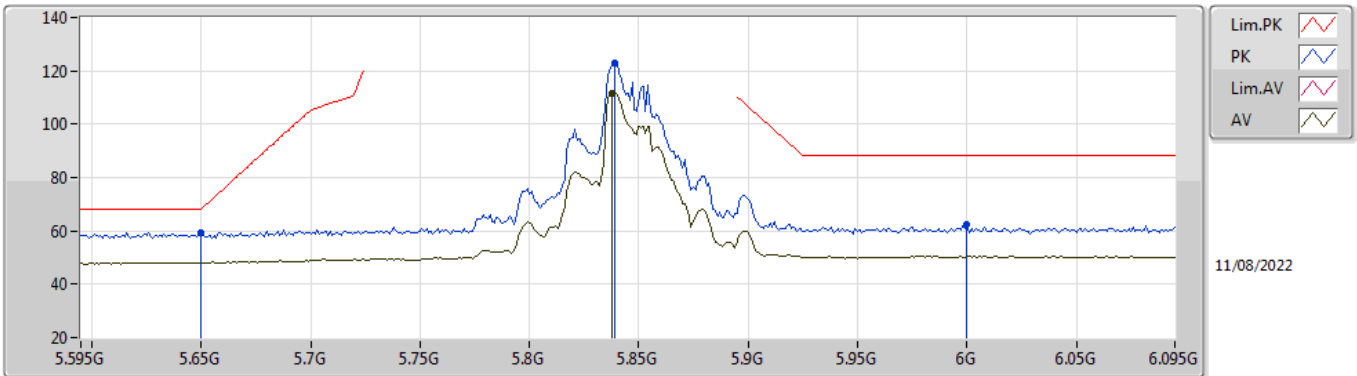


EUT Y_4TX
Setting 24
06-L-S-5

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	11.77276G	55.96	74.00	-18.04	42.63	3	Horizontal	333	1.60	-	38.63	9.36	34.66
AV	11.76996G	42.20	54.00	-11.80	28.87	3	Horizontal	333	1.60	-	38.63	9.36	34.66

802.11ax HEW20_Nss1,(MCS0)_4TX

5845MHz_TnomVnom

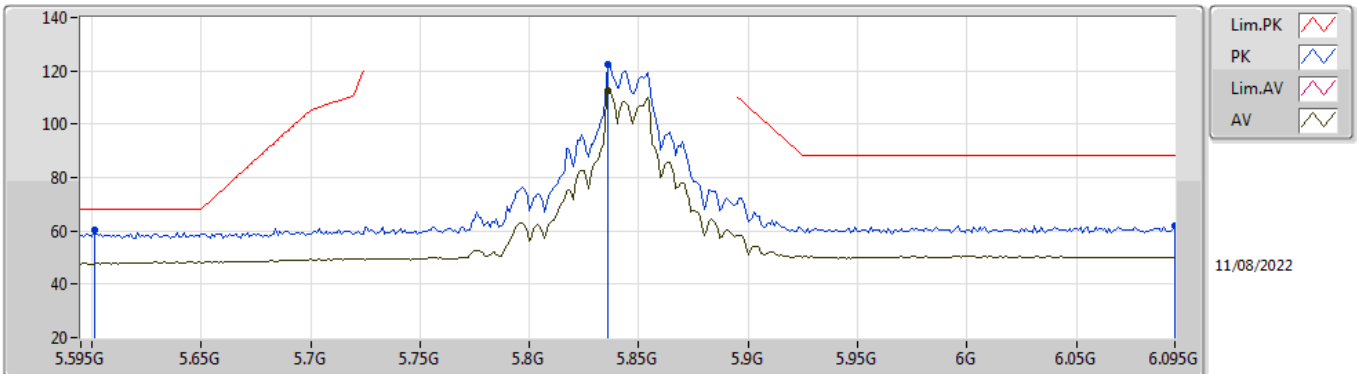


EUT Y_4TX
Setting 24
06-L-S-5-10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	5.65G	59.47	68.20	-8.73	53.22	3	Vertical	328	2.09	-	32.80	5.90	32.45
PK	5.839G	123.06	Inf	-Inf	115.53	3	Vertical	328	2.09	-	33.98	5.94	32.39
AV	5.838G	111.80	Inf	-Inf	104.27	3	Vertical	328	2.09	-	33.98	5.94	32.39
PK	6G	62.40	88.20	-25.80	54.54	3	Vertical	328	2.09	-	34.10	6.10	32.34

802.11ax HEW20_Nss1,(MCS0)_4TX

5845MHz_TnomVnom

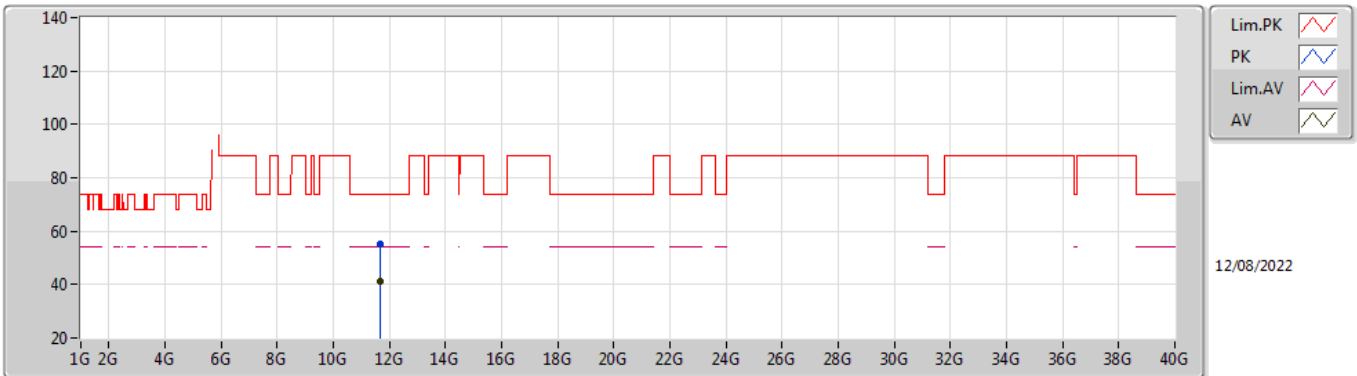


EUT Y_4TX
Setting 24
06-L-S-5-10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	5.601G	60.54	68.20	-7.66	54.31	3	Horizontal	60	2.08	-	32.80	5.90	32.47
PK	5.836G	122.26	Inf	-Inf	114.74	3	Horizontal	60	2.08	-	33.97	5.94	32.39
AV	5.836G	112.34	Inf	-Inf	104.82	3	Horizontal	60	2.08	-	33.97	5.94	32.39
PK	6.095G	61.71	88.20	-26.49	53.98	3	Horizontal	60	2.08	-	34.11	6.10	32.48

802.11ax HEW20_Nss1,(MCS0)_4TX

5845MHz_TnomVnom

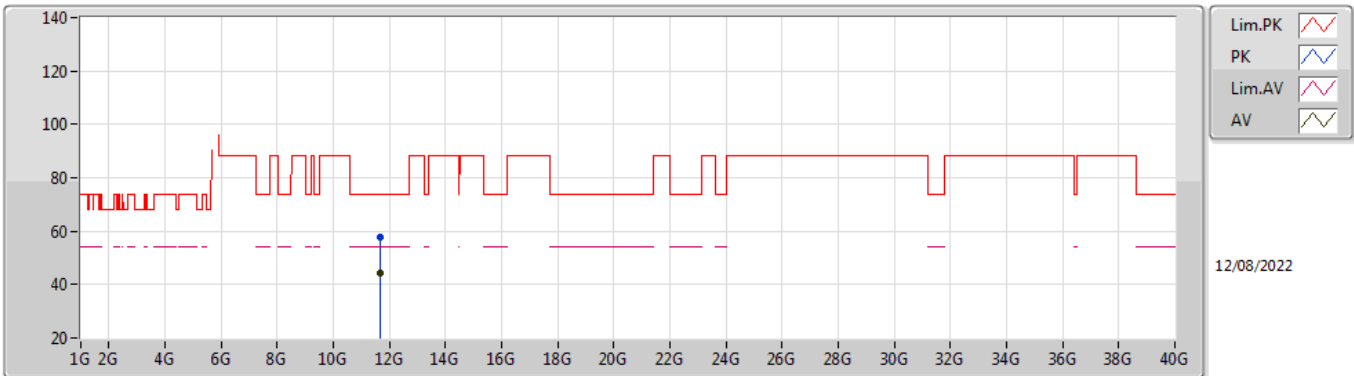


EUT Y_4TX
Setting 24
06-L-S-5

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	11.69436G	55.15	74.00	-18.85	41.77	3	Vertical	104	1.07	-	38.71	9.32	34.65
AV	11.68908G	41.42	54.00	-12.58	28.05	3	Vertical	104	1.07	-	38.71	9.31	34.65

802.11ax HEW20_Nss1,(MCS0)_4TX

5845MHz_TnomVnom

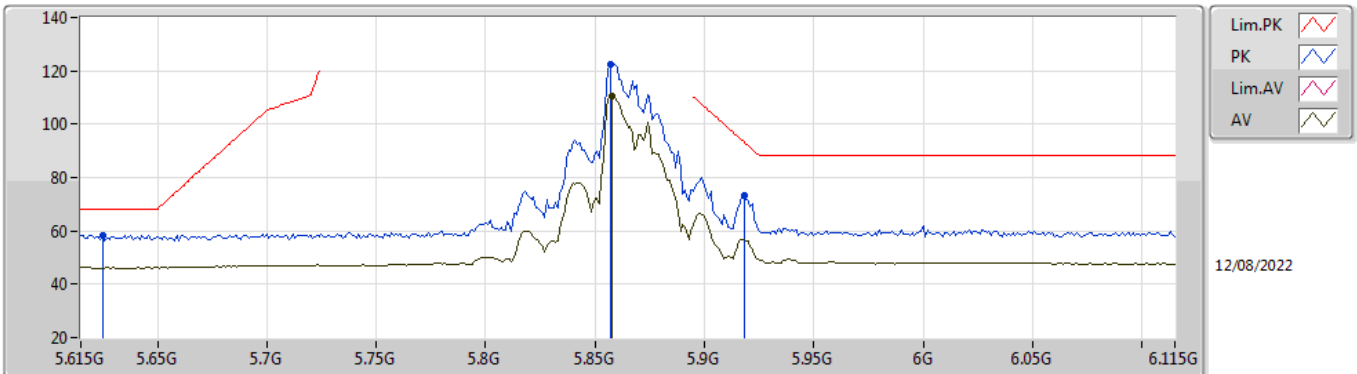


EUT Y_4TX
Setting 24
06-L-S-5

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	11.69124G	57.60	74.00	-16.40	44.23	3	Horizontal	0	1.80	-	38.71	9.31	34.65
AV	11.69G	44.08	54.00	-9.92	30.71	3	Horizontal	0	1.80	-	38.71	9.31	34.65

802.11ax HEW20_Nss1,(MCS0)_4TX

5865MHz_TnomVnom

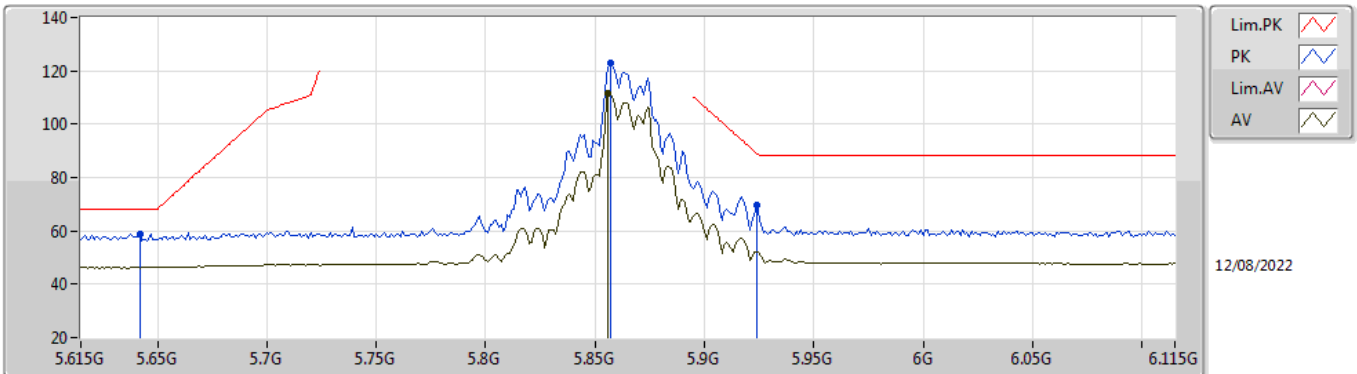


EUT Y_4TX
Setting 24
06-L-S-5-10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)	
PK	5.625G	58.53	68.20	-9.67	52.29	3	Vertical	328	2.16	-	32.80	5.90	32.46	
PK	5.857G	122.67	Inf	-Inf	115.07	3	Vertical	328	2.16	-	34.03	5.96	32.39	
AV	5.858G	110.73	Inf	-Inf	103.13	3	Vertical	328	2.16	-	34.03	5.96	32.39	
PK	5.918G	73.27	93.33	-20.06	65.46	3	Vertical	328	2.16	-	34.16	6.02	32.37	

802.11ax HEW20_Nss1,(MCS0)_4TX

5865MHz_TnomVnom

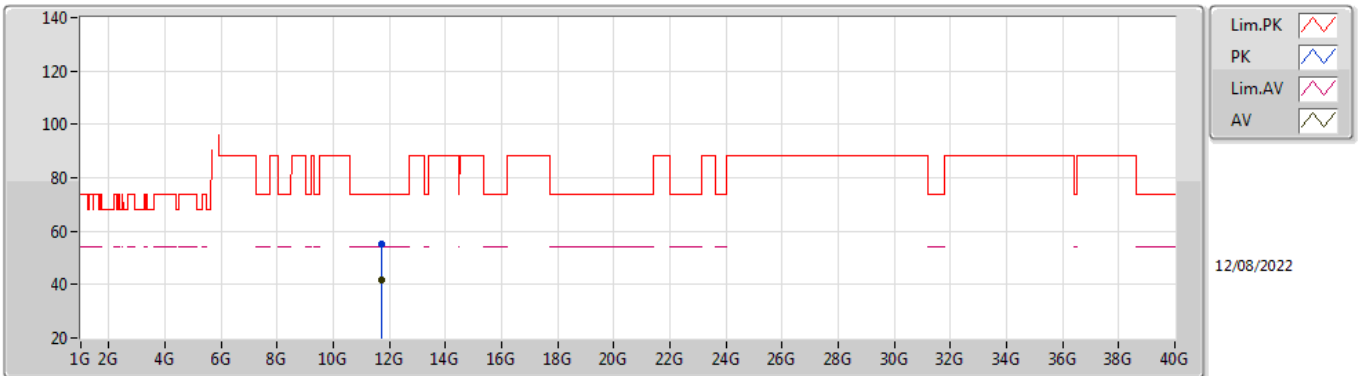


EUT Y_4TX
Setting 24
06-L-S-5-10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	5.642G	58.86	68.20	-9.34	52.61	3	Horizontal	70	2.08	-	32.80	5.90	32.45
PK	5.857G	123.05	Inf	-Inf	115.45	3	Horizontal	70	2.08	-	34.03	5.96	32.39
AV	5.856G	111.61	Inf	-Inf	104.02	3	Horizontal	70	2.08	-	34.02	5.96	32.39
PK	5.924G	69.53	88.93	-19.40	61.72	3	Horizontal	70	2.08	-	34.15	6.02	32.36

802.11ax HEW20_Nss1,(MCS0)_4TX

5865MHz_TnomVnom

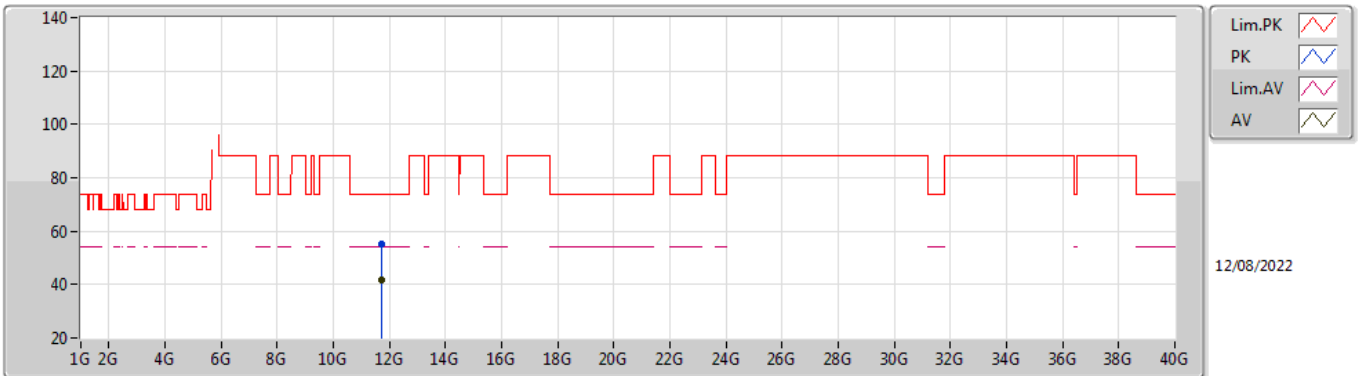


EUT Y_4TX
Setting 24
06-L-S-5

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	11.73412G	55.30	74.00	-18.70	41.94	3	Vertical	52	1.65	-	38.67	9.34	34.65
AV	11.72504G	41.82	54.00	-12.18	28.46	3	Vertical	52	1.65	-	38.67	9.34	34.65

802.11ax HEW20_Nss1,(MCS0)_4TX

5865MHz_TnomVnom

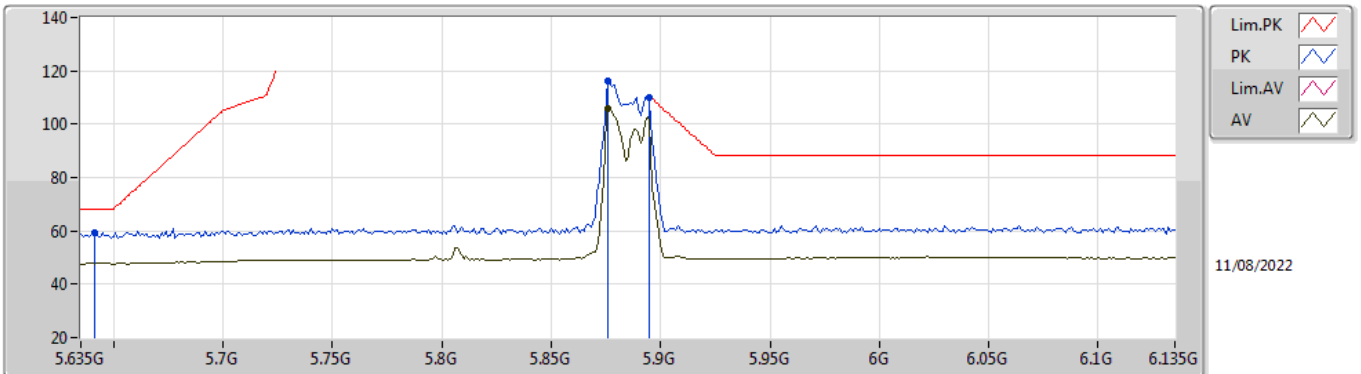


EUT Y_4TX
Setting 24
06-L-S-5

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	11.7332G	55.41	74.00	-18.59	42.05	3	Horizontal	227	1.15	-	38.67	9.34	34.65
AV	11.73296G	41.81	54.00	-12.19	28.45	3	Horizontal	227	1.15	-	38.67	9.34	34.65

802.11ax HEW20_Nss1,(MCS0)_4TX

5885MHz_TnomVnom

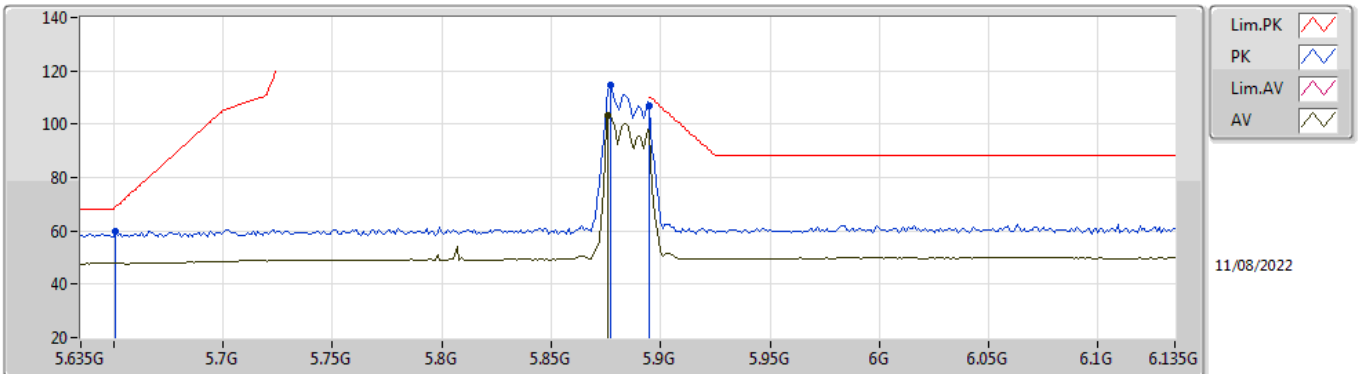


EUT Y_4TX
Setting 14.5
06-L-S-5-10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	5.641G	59.14	68.20	-9.06	52.89	3	Vertical	9	2.34	-	32.80	5.90	32.45
PK	5.876G	116.17	Inf	-Inf	108.47	3	Vertical	9	2.34	-	34.10	5.98	32.38
AV	5.876G	105.96	Inf	-Inf	98.26	3	Vertical	9	2.34	-	34.10	5.98	32.38
PK	5.895G	109.80	110.20	-0.40	101.99	3	Vertical	9	2.34	-	34.18	6.00	32.37

802.11ax HEW20_Nss1,(MCS0)_4TX

5885MHz_TnomVnom

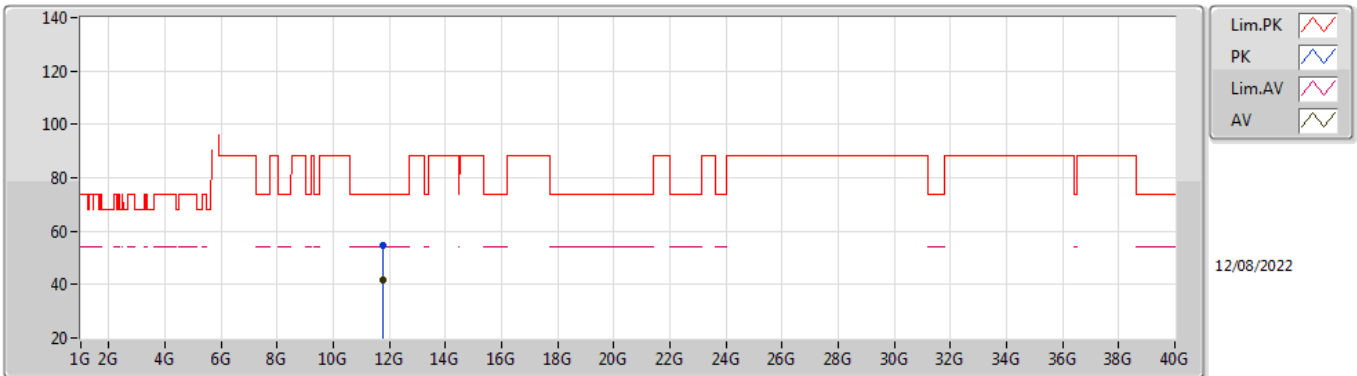


EUT Y_4TX
Setting 14.5
06-L-S-5-10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	5.651G	59.69	68.94	-9.25	53.43	3	Horizontal	70	2.08	-	32.81	5.90	32.45
PK	5.877G	114.76	Inf	-Inf	107.05	3	Horizontal	70	2.08	-	34.11	5.98	32.38
AV	5.876G	103.38	Inf	-Inf	95.68	3	Horizontal	70	2.08	-	34.10	5.98	32.38
PK	5.895G	106.87	110.20	-3.33	99.06	3	Horizontal	70	2.08	-	34.18	6.00	32.37

802.11ax HEW20_Nss1,(MCS0)_4TX

5885MHz_TnomVnom

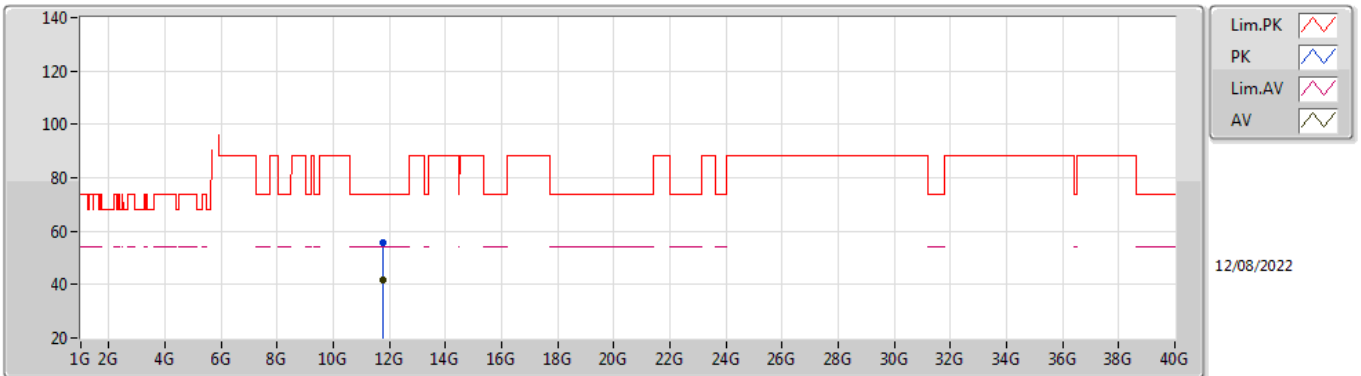


EUT Y_4TX
Setting 14.5
06-L-S-5

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	11.76666G	54.89	74.00	-19.11	41.56	3	Vertical	314	2.00	-	38.63	9.36	34.66
AV	11.77256G	41.53	54.00	-12.47	28.20	3	Vertical	314	2.00	-	38.63	9.36	34.66

802.11ax HEW20_Nss1,(MCS0)_4TX

5885MHz_TnomVnom

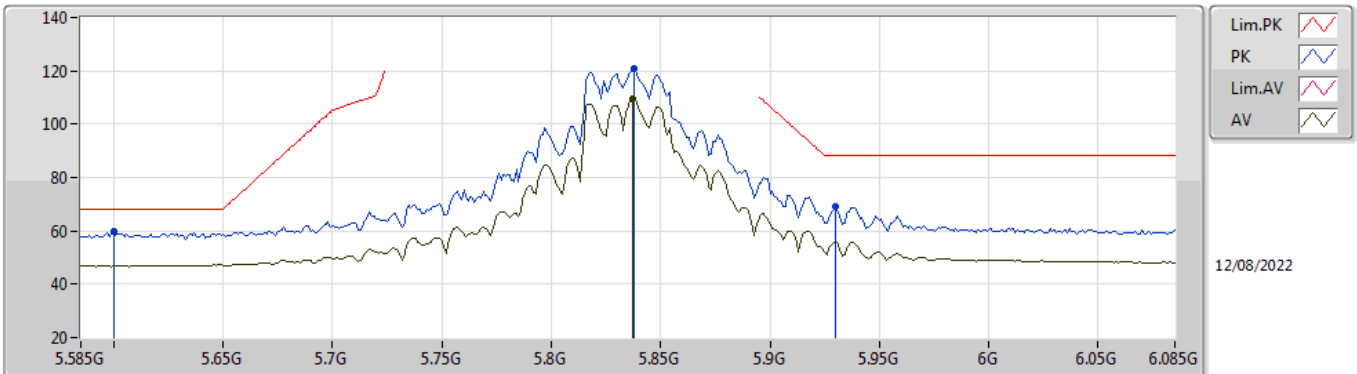


EUT Y_4TX
Setting 14.5
06-L-S-5

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	11.77452G	55.91	74.00	-18.09	42.58	3	Horizontal	176	1.48	-	38.63	9.36	34.66
AV	11.76676G	41.48	54.00	-12.52	28.15	3	Horizontal	176	1.48	-	38.63	9.36	34.66

802.11ax HEW40_Nss1,(MCS0)_4TX

5835MHz_TnomVnom

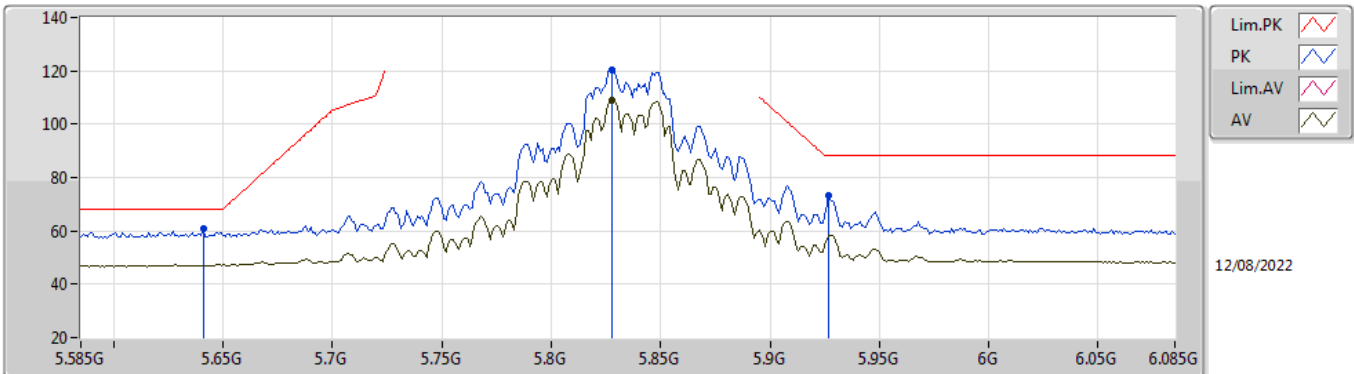


EUT Y_4TX
Setting 24
06-L-S-5-10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	5.6G	59.75	68.20	-8.45	53.52	3	Vertical	27	3.00	-	32.80	5.90	32.47
PK	5.838G	120.76	Inf	-Inf	113.23	3	Vertical	27	3.00	-	33.98	5.94	32.39
AV	5.837G	109.44	Inf	-Inf	101.92	3	Vertical	27	3.00	-	33.97	5.94	32.39
PK	5.93G	69.03	88.20	-19.17	61.22	3	Vertical	27	3.00	-	34.14	6.03	32.36

802.11ax HEW40_Nss1,(MCS0)_4TX

5835MHz_TnomVnom

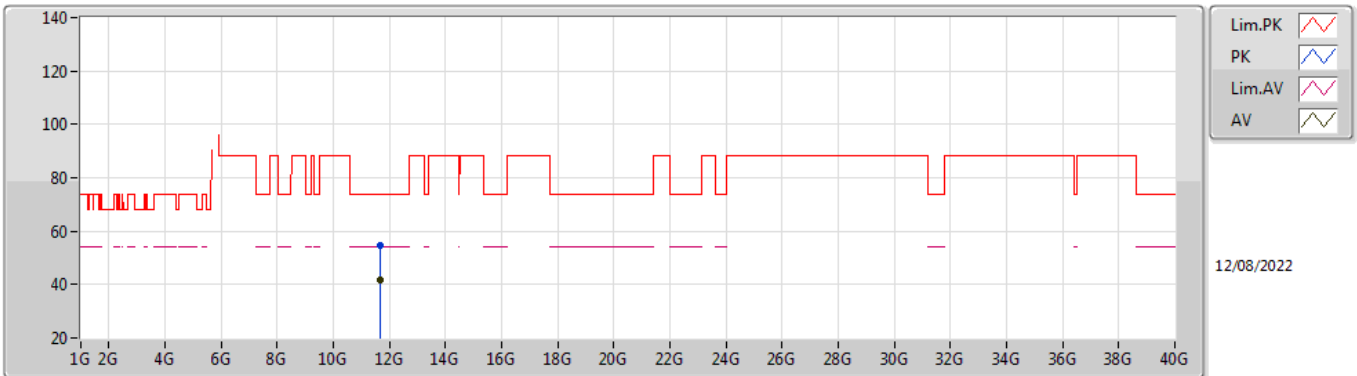


EUT Y_4TX
Setting 24
06-L-S-5-10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)	
PK	5.641G	60.68	68.20	-7.52	54.43	3	Horizontal	75	1.80	-	32.80	5.90	32.45	
PK	5.828G	120.50	Inf	-Inf	113.01	3	Horizontal	75	1.80	-	33.96	5.93	32.40	
AV	5.828G	109.02	Inf	-Inf	101.53	3	Horizontal	75	1.80	-	33.96	5.93	32.40	
PK	5.927G	73.02	88.20	-15.18	65.20	3	Horizontal	75	1.80	-	34.15	6.03	32.36	

802.11ax HEW40_Nss1,(MCS0)_4TX

5835MHz_TnomVnom

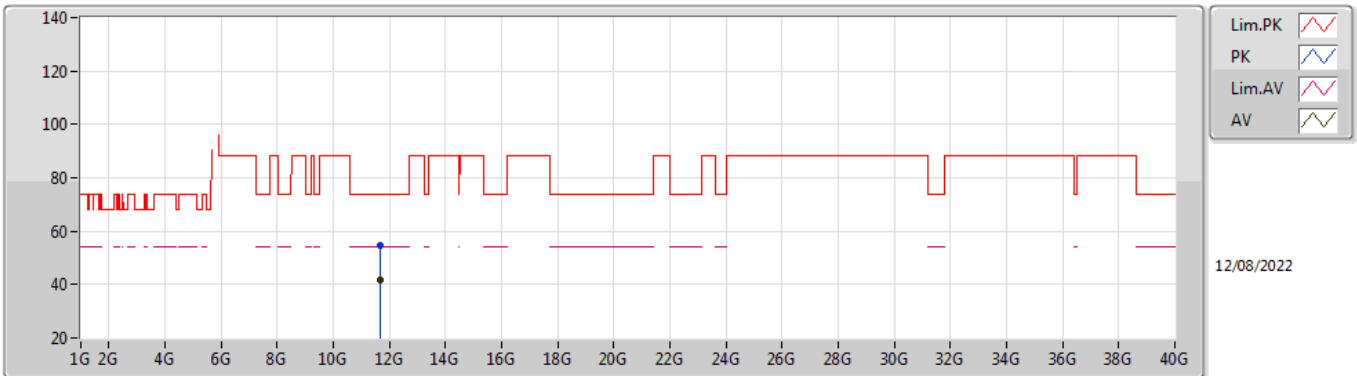


EUT Y_4TX
Setting 24
06-L-S-5

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)	
PK	11.66602G	54.55	74.00	-19.45	41.17	3	Vertical	312	1.24	-	38.73	9.30	34.65	
AV	11.6656G	41.83	54.00	-12.17	28.45	3	Vertical	312	1.24	-	38.73	9.30	34.65	

802.11ax HEW40_Nss1,(MCS0)_4TX

5835MHz_TnomVnom

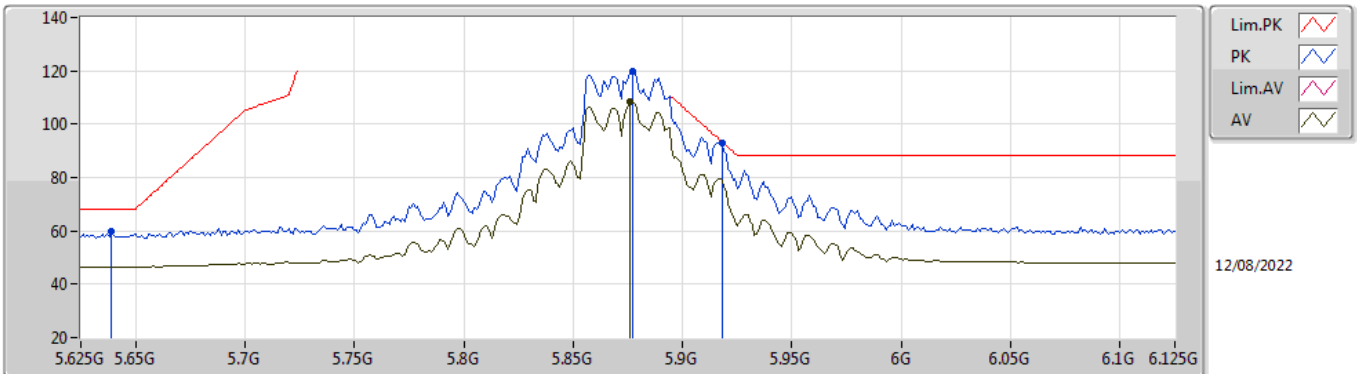


EUT Y_4TX
Setting 24
06-L-S-5

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	11.66626G	54.68	74.00	-19.32	41.30	3	Horizontal	24	1.11	-	38.73	9.30	34.65
AV	11.66884G	41.74	54.00	-12.26	28.36	3	Horizontal	24	1.11	-	38.73	9.30	34.65

802.11ax HEW40_Nss1,(MCS0)_4TX

5875MHz_TnomVnom

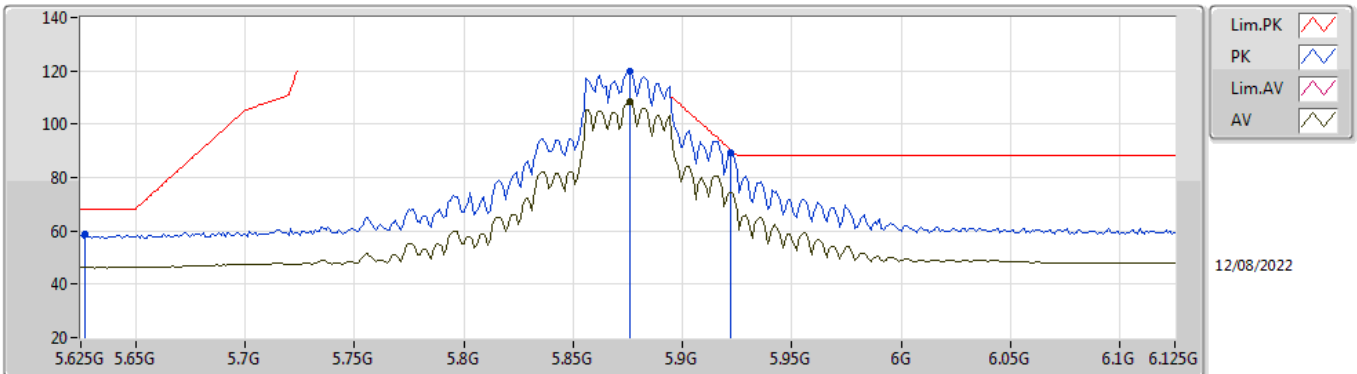


EUT Y_4TX
Setting 23.5
06-L-S-5-10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)	
PK	5.639G	59.91	68.20	-8.29	53.67	3	Vertical	28	3.00	-	32.80	5.90	32.46	
PK	5.877G	119.84	Inf	-Inf	112.13	3	Vertical	28	3.00	-	34.11	5.98	32.38	
AV	5.876G	108.26	Inf	-Inf	100.56	3	Vertical	28	3.00	-	34.10	5.98	32.38	
PK	5.918G	92.93	93.33	-0.40	85.12	3	Vertical	28	3.00	-	34.16	6.02	32.37	

802.11ax HEW40_Nss1,(MCS0)_4TX

5875MHz_TnomVnom

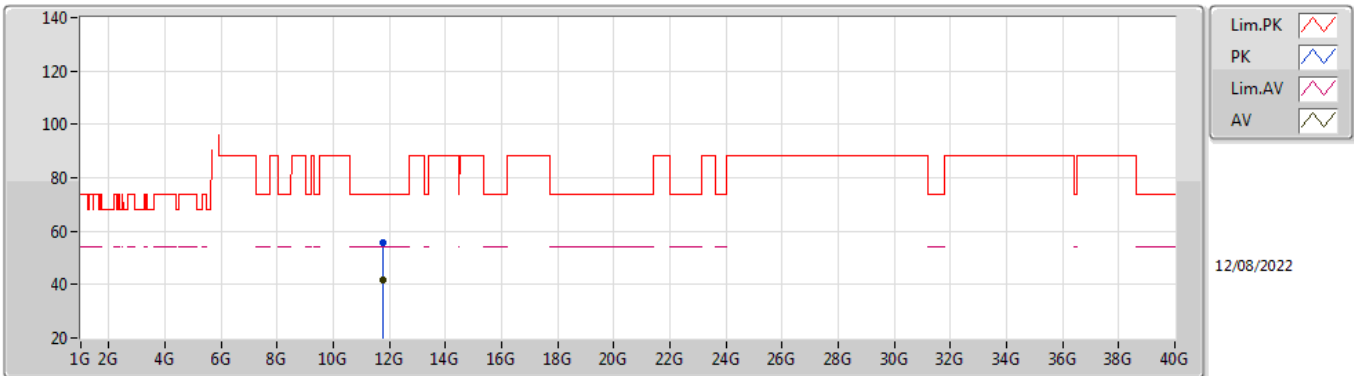


EUT V_4TX
Setting 23.5
06-L-S-5-10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	5.627G	59.04	68.20	-9.16	52.80	3	Horizontal	316	1.80	-	32.80	5.90	32.46
PK	5.876G	119.97	Inf	-Inf	112.27	3	Horizontal	316	1.80	-	34.10	5.98	32.38
AV	5.876G	108.23	Inf	-Inf	100.53	3	Horizontal	316	1.80	-	34.10	5.98	32.38
PK	5.922G	89.12	90.40	-1.28	81.30	3	Horizontal	316	1.80	-	34.16	6.02	32.36

802.11ax HEW40_Nss1,(MCS0)_4TX

5875MHz_TnomVnom

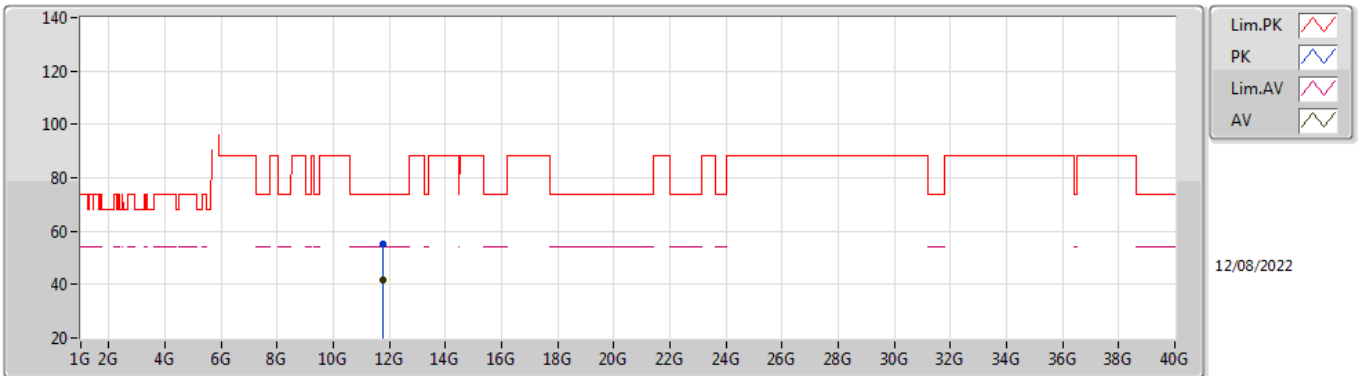


EUT Y_4TX
Setting 23.5
06-L-S-5

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	11.7542G	55.62	74.00	-18.38	42.28	3	Vertical	100	2.96	-	38.65	9.35	34.66
AV	11.75032G	41.54	54.00	-12.46	28.20	3	Vertical	100	2.96	-	38.65	9.35	34.66

802.11ax HEW40_Nss1,(MCS0)_4TX

5875MHz_TnomVnom

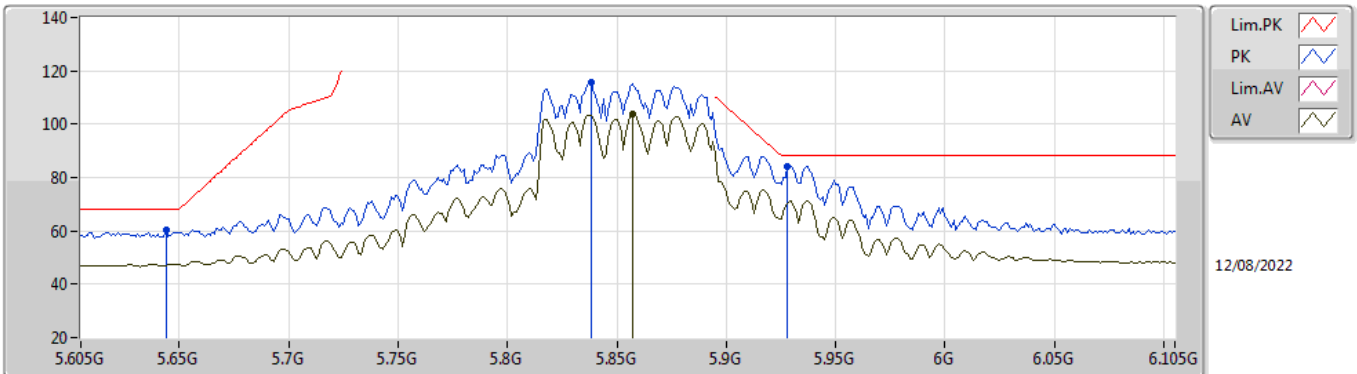


EUT Y_4TX
Setting 23.5
06-L-S-5

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	11.74898G	55.21	74.00	-18.79	41.86	3	Horizontal	116	1.04	-	38.65	9.35	34.65
AV	11.75014G	41.59	54.00	-12.41	28.25	3	Horizontal	116	1.04	-	38.65	9.35	34.66

802.11ax HEW80_Nss1,(MCS0)_4TX

5855MHz_TnomVnom

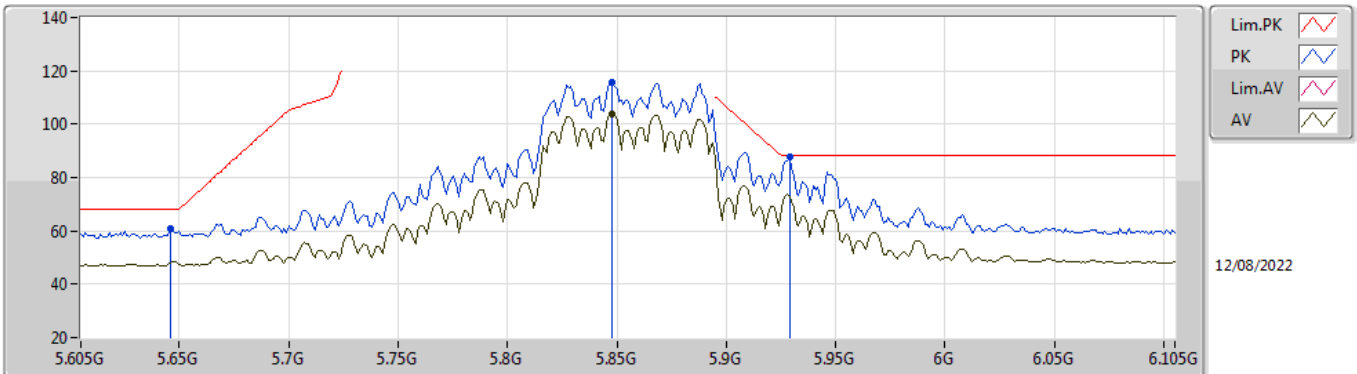


EUT Y_4TX
Setting 21.5
06-L-S-5-10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	5.644G	60.17	68.20	-8.03	53.92	3	Vertical	29	2.97	-	32.80	5.90	32.45
PK	5.838G	115.58	Inf	-Inf	108.05	3	Vertical	29	2.97	-	33.98	5.94	32.39
AV	5.857G	103.74	Inf	-Inf	96.14	3	Vertical	29	2.97	-	34.03	5.96	32.39
PK	5.928G	84.29	88.20	-3.91	76.48	3	Vertical	29	2.97	-	34.14	6.03	32.36

802.11ax HEW80_Nss1,(MCS0)_4TX

5855MHz_TnomVnom

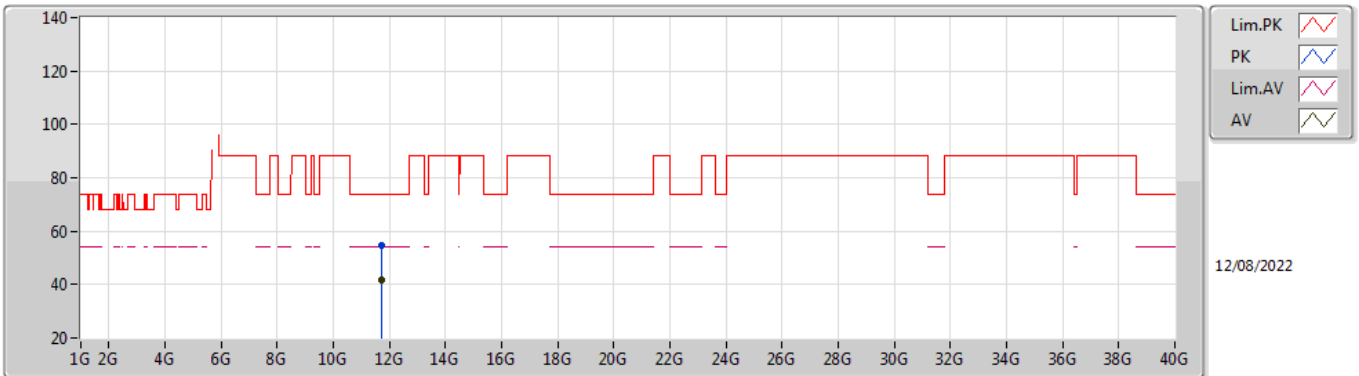


EUT_V_4TX
Setting 21.5
06-L-S-5-10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	5.646G	60.91	68.20	-7.29	54.66	3	Horizontal	75	1.80	-	32.80	5.90	32.45
PK	5.848G	115.73	Inf	-Inf	108.17	3	Horizontal	75	1.80	-	34.00	5.95	32.39
AV	5.848G	103.86	Inf	-Inf	96.30	3	Horizontal	75	1.80	-	34.00	5.95	32.39
PK	5.929G	87.94	88.20	-0.26	80.13	3	Horizontal	75	1.80	-	34.14	6.03	32.36

802.11ax HEW80_Nss1,(MCS0)_4TX

5855MHz_TnomVnom

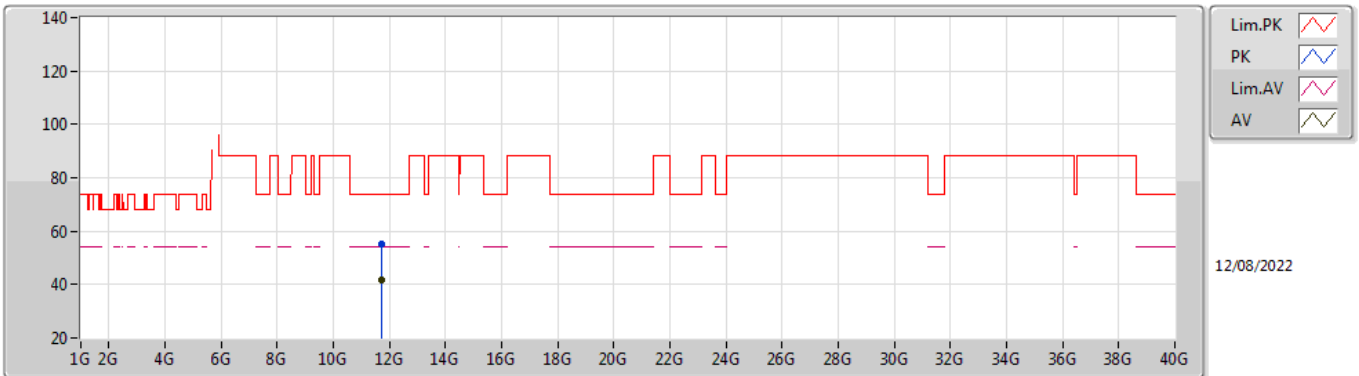


EUT Y_4TX
Setting 21.5
06-L-S-5

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	11.70558G	54.87	74.00	-19.13	41.51	3	Vertical	172	2.44	-	38.69	9.32	34.65
AV	11.7053G	41.79	54.00	-12.21	28.43	3	Vertical	172	2.44	-	38.69	9.32	34.65

802.11ax HEW80_Nss1,(MCS0)_4TX

5855MHz_TnomVnom

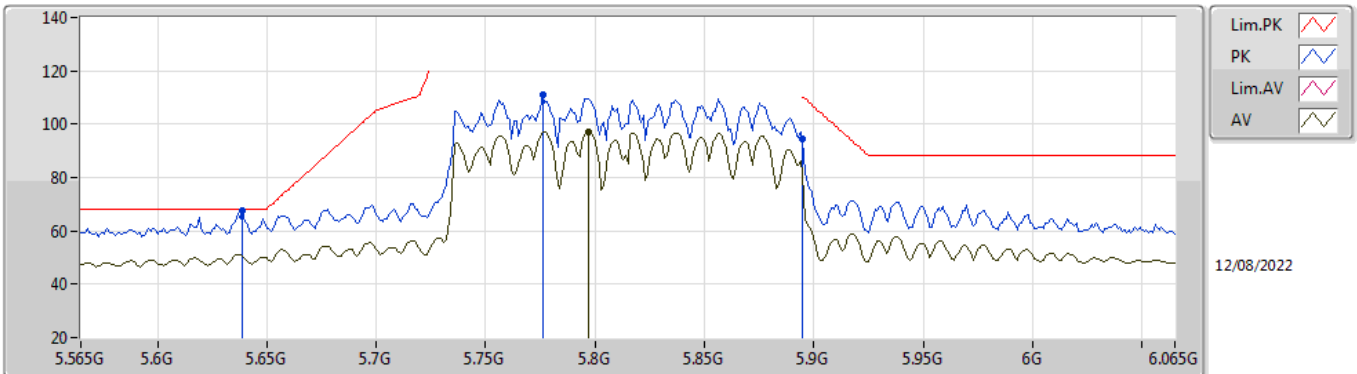


EUT Y_4TX
Setting 21.5
06-L-S-5

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	11.7098G	55.28	74.00	-18.72	41.91	3	Horizontal	97	2.66	-	38.69	9.33	34.65
AV	11.714G	41.85	54.00	-12.15	28.48	3	Horizontal	97	2.66	-	38.69	9.33	34.65

802.11ax HEW160_Nss1,(MCS0)_4TX

5815MHz_TnomVnom

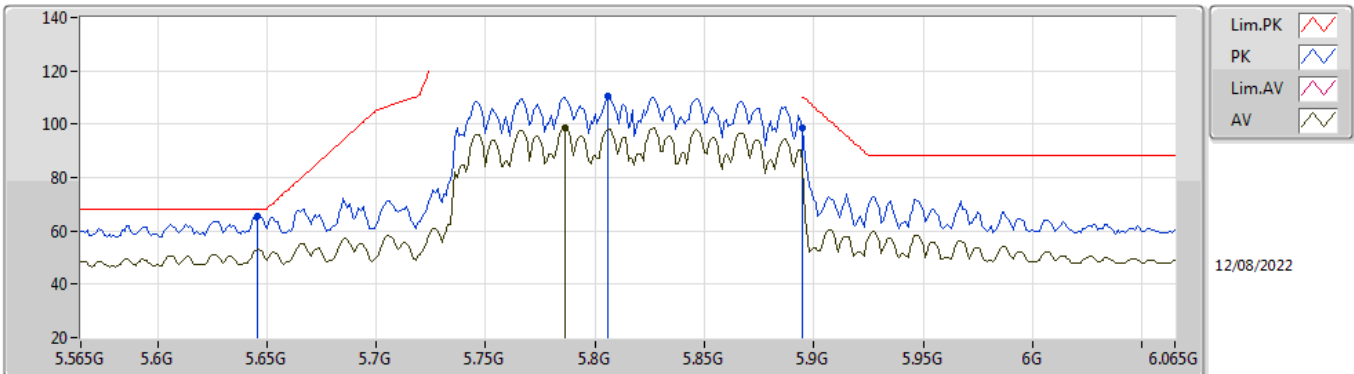


EUT_Y_4TX
Setting 18
06-L-S-5-10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	5.639G	67.81	68.20	-0.39	61.57	3	Vertical	33	3.00	-	32.80	5.90	32.46
PK	5.776G	111.15	Inf	-Inf	103.86	3	Vertical	33	3.00	-	33.80	5.90	32.41
AV	5.797G	97.08	Inf	-Inf	89.69	3	Vertical	33	3.00	-	33.89	5.90	32.40
PK	5.895G	94.70	110.20	-15.50	86.89	3	Vertical	33	3.00	-	34.18	6.00	32.37

802.11ax HEW160_Nss1,(MCS0)_4TX

5815MHz_TnomVnom

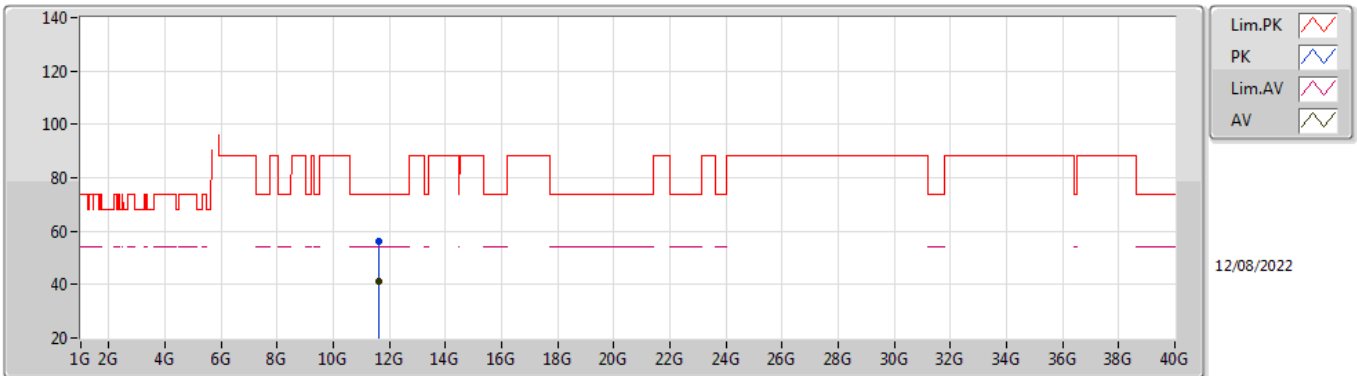


EUT Y_4TX
Setting 18
06-L-S-5-10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	5.646G	65.54	68.20	-2.66	59.29	3	Horizontal	74	2.09	-	32.80	5.90	32.45
PK	5.806G	110.53	Inf	-Inf	103.11	3	Horizontal	74	2.09	-	33.91	5.91	32.40
AV	5.786G	98.78	Inf	-Inf	91.45	3	Horizontal	74	2.09	-	33.84	5.90	32.41
PK	5.895G	98.70	110.20	-11.50	90.89	3	Horizontal	74	2.09	-	34.18	6.00	32.37

802.11ax HEW160_Nss1,(MCS0)_4TX

5815MHz_TnomVnom

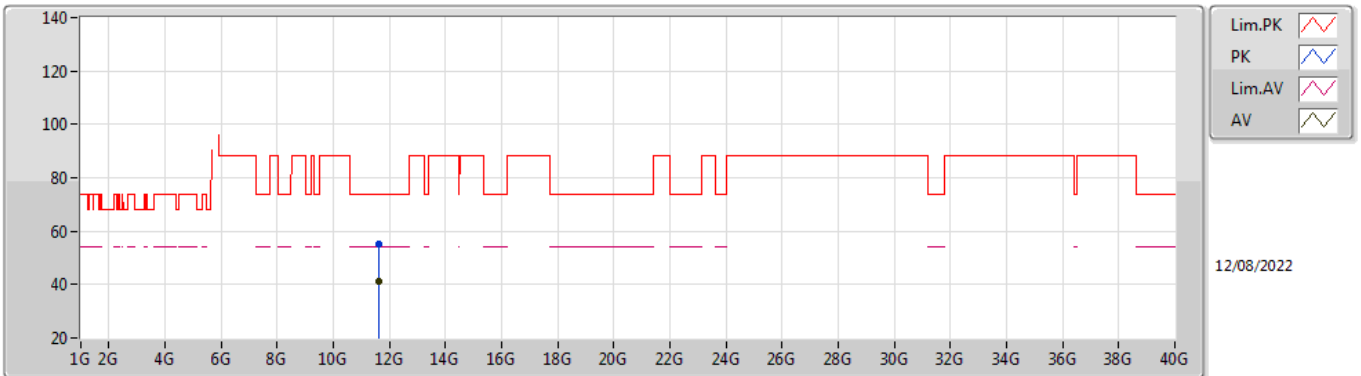


EUT Y_4TX
Setting 18
06-L-S-5

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	11.63448G	56.19	74.00	-17.81	42.78	3	Vertical	245	2.81	-	38.77	9.28	34.64
AV	11.63492G	41.23	54.00	-12.77	27.82	3	Vertical	245	2.81	-	38.77	9.28	34.64

802.11ax HEW160_Nss1,(MCS0)_4TX

5815MHz_TnomVnom



EUT Y_4TX
Setting 18
06-L-S-5

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	11.63482G	54.99	74.00	-19.01	41.58	3	Horizontal	80	1.95	-	38.77	9.28	34.64
AV	11.62628G	41.22	54.00	-12.78	27.81	3	Horizontal	80	1.95	-	38.77	9.28	34.64