



RADIO TEST REPORT

FCC ID : Z8H89FT0068
Equipment : ePMP 4600 6 GHz 4x4 Access Point
Brand Name : Cambium Networks
Model Name : ePMP 4600 6 GHz 4x4 Access Point
Model Number : C060940P021A
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 Jul. 13, 2022, and testing was started from Jul. 14, 2022 and completed on Jul. 25, 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 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
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TEL : 886-3-656-9065
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Report Template No.: CB-A12_1 Ver1.4



Summary of Test Result

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

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: Viola Huang**

1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	IEEE Std. 802.11	Ch. Frequency (MHz)	Channel Number
5725-5850	a, n (HT20), ac (VHT20), ax (HEW20)	5745-5825	149-165 [5]
5725-5850	n (HT40), ac (VHT40), ax (HEW40)	5755-5795	151-159 [2]
5725-5850	ac (VHT80), ax (HEW80)	5775	155 [1]

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

Note:

- 11a, HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- VHT20, VHT40, VHT80 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM 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.	Port	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	1	Cabmium Networks	ePMP 4x4 6GHz MU-MIMO Sector Antenna	Sector Antenna	Reversed-SMA	18
	2	Cabmium Networks	ePMP 4x4 6GHz MU-MIMO Sector Antenna	Sector Antenna	Reversed-SMA	18
	3	Cabmium Networks	ePMP 4x4 6GHz MU-MIMO Sector Antenna	Sector Antenna	Reversed-SMA	18
	4	Cabmium Networks	ePMP 4x4 6GHz MU-MIMO Sector Antenna	Sector Antenna	Reversed-SMA	18

Note 1: The above information was declared by manufacturer.

Note 2: Antenna polarization: 2 Vertical (port 1, 3) and 2 Horizontal (port 2, 4).

Note 3: 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 ≤ 4	$DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{ANT}} \left(\sum_{k=1}^{N_{ANT}} g_{j,k} \right)^2}{N_{ANT}} \right]$
BF	$DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{ANT}} \left(\sum_{k=1}^{N_{ANT}} g_{j,k} \right)^2}{N_{ANT}} \right]$	$DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{ANT}} \left(\sum_{k=1}^{N_{ANT}} g_{j,k} \right)^2}{N_{ANT}} \right]$

Ex.

Directional Gain (NSS1) formula :

$$DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{ANT}} \left(\sum_{k=1}^{N_{ANT}} g_{j,k} \right)^2}{N_{ANT}} \right]$$

$$NSS1(g1,1) = 10^{G1/20} ; NSS1(g1,2) = 10^{G2/20} ; NSS1(g1,3) = 10^{G3/20} ; NSS1(g1,4) = 10^{G4/20}$$

$$g_{j,k} = (NSS1(g1,1) + NSS1(g1,2) + NSS1(g1,3) + NSS1(g1,4))^2$$

$$DG = 10 \log[(NSS1(g1,1) + NSS1(g1,2) + NSS1(g1,3) + NSS1(g1,4))^2 / N_{ANT}] \Rightarrow 10$$

$$\log[(10^{G1/20} + 10^{G2/20} + 10^{G3/20} + 10^{G4/20})^2 / N_{ANT}]$$

Where ;

$$G1 = 10 ; G2 = 10 ; G3 = 10 ; G4 = 10 ;$$

Two polarization, port 1, 3 for vertical polarization and port 2, 4 for horizontal polarization

$$5G \quad G1 = 18 \text{ dBi} ; G2 = 18 \text{ dBi} ; G3 = 18 \text{ dBi} ; G4 = 18 \text{ dBi} ; DG = 21.01 \text{ dBi}$$

For 5GHz:

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

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

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

**1.1.3 Mode Test Duty Cycle**

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11a	0.874	0.58	1.98m	1k
802.11ax HEW20	0.866	0.62	5.458m	300
802.11ax HEW40	0.866	0.62	5.458m	300
802.11ax HEW80	0.864	0.63	5.458m	300

Note:

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

1.1.4 EUT Operational Condition

EUT Power Type	From PoE			
Beamforming Function	☐	With beamforming	☒	Without beamforming
Function	☐	Outdoor P2M	☐	Indoor P2M
	☒	Fixed P2P	☐	Client
	☐	Point-to-multipoint	☒	Point-to-point
Test Software Version	Qualcomn Radio Control Toolkit V4.0.00192.0			

Note: The above information was declared by manufacturer.



1.2 Applicable Standards

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

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

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

- ♦ FCC KDB 662911 D01 v02r01
- ♦ FCC KDB 412172 D01 v01r01
- ♦ FCC KDB 414788 D01 v01r01

1.3 Testing Location Information

Testing Location Information	
Test Lab. : Sporton International Inc. Hsinchu Laboratory	
Hsinchu (TAF: 3787)	ADD: No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.) TEL: 886-3-656-9065 FAX: 886-3-656-9085 Test site Designation No. TW3787 with FCC. Conformity Assessment Body Identifier (CABID) TW3787 with ISCED.

Test Condition	Test Site No.	Test Engineer	Test Environment (°C / %)	Test Date
RF Conducted	TH01-CB	Owen Hsu	23.8~24.2 / 57~62	Jul. 16, 2022~Jul. 21, 2022
Radiated below 1GHz	03CH04-CB	Chris Li	23.8~24.9 / 55~58	Jul. 14, 2022~Jul. 21, 2022
Radiated above 1GHz	03CH05-CB	Chris Li	24.4~25.5 / 55~58	Jul. 14, 2022~Jul. 21, 2022
AC Conduction	CO01-CB	Dean Chang	21~23 / 52~53	Jul. 25, 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
Conducted Emission (150kHz ~ 30MHz)	3.4 dB	Confidence levels of 95%
Radiated Emission (9kHz ~ 30MHz)	3.4 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	5.6 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	5.2 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	4.7 dB	Confidence levels of 95%
Conducted Emission	3.2 dB	Confidence levels of 95%
Output Power Measurement	0.8 dB	Confidence levels of 95%
Power Density Measurement	3.2 dB	Confidence levels of 95%
Bandwidth Measurement	2.0 %	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Channel Mode

Mode	Power Setting
802.11a_Nss1,(6Mbps)_4TX	-
5745MHz	20
5785MHz	20
5825MHz	20
802.11ax HEW20_Nss1,(MCS0)_4TX	-
5745MHz	20
5785MHz	20
5825MHz	20
802.11ax HEW40_Nss1,(MCS0)_4TX	-
5755MHz	19.5
5795MHz	19.5
802.11ax HEW80_Nss1,(MCS0)_4TX	-
5775MHz	16

Note:

- ♦ Evaluated HEW20/HEW40/HEW80 mode only due to the similar modulation. The power setting of HT20/HT40/VHT20/VHT40/VHT80 mode are the same or lower than HEW20/HEW40/HEW80.

2.2 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	AC power-line conducted emissions
Condition	AC power-line conducted measurement for line and neutral Test Voltage: 120Vac / 60Hz
Operating Mode	CTX
1	EUT

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 for Unwanted Emissions above 1GHz test, and the worst case was found at Y axis. So the measurement will follow this same test configuration.
1	EUT in Y axis
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

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

PoE information as below:

Power	Brand	Model
PoE	Cambium	NET-P30-56IN



2.3 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

2.4 Accessories

Accessories
Wall Bracket*1

2.5 Support Equipment

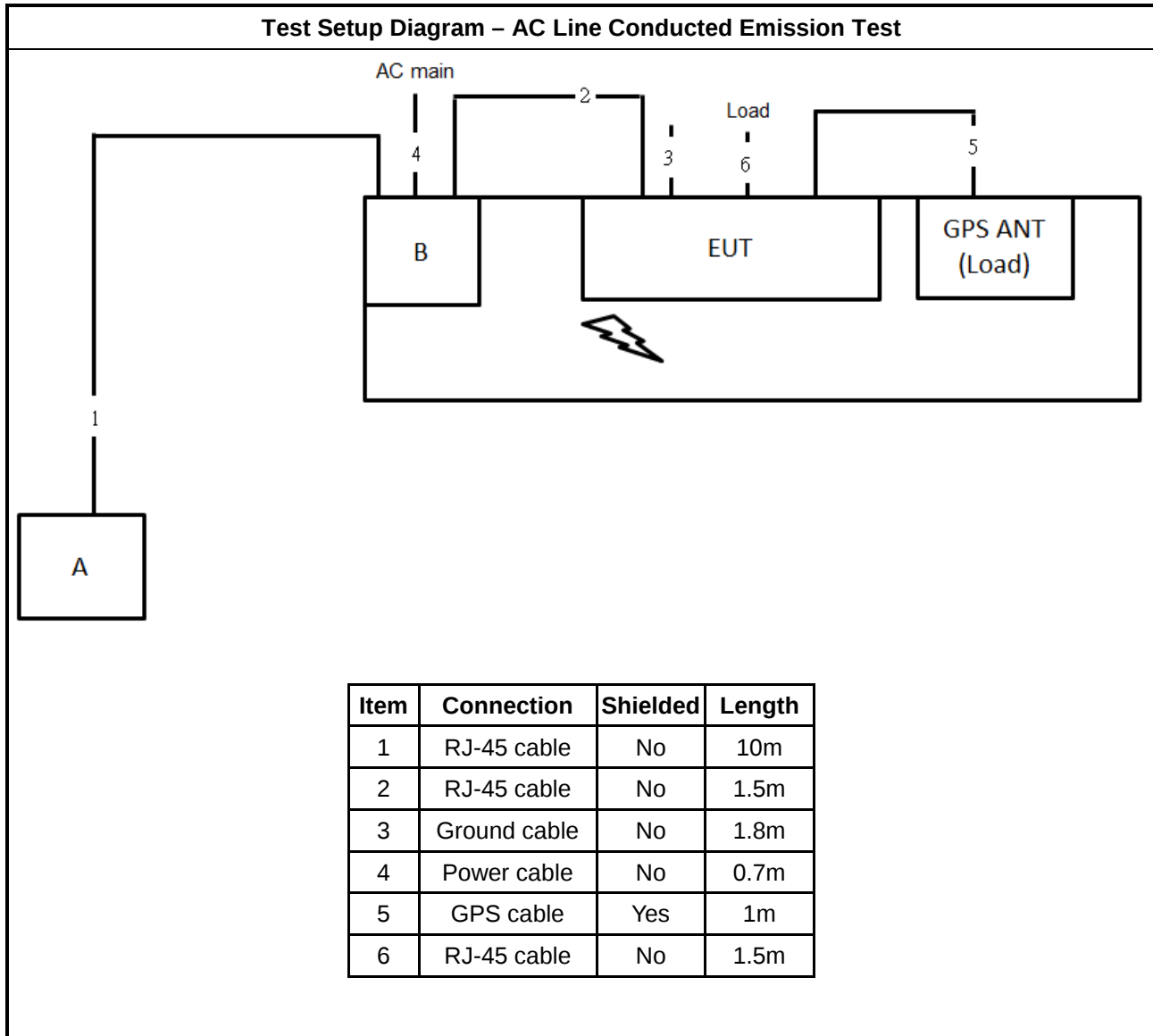
For AC Conduction:

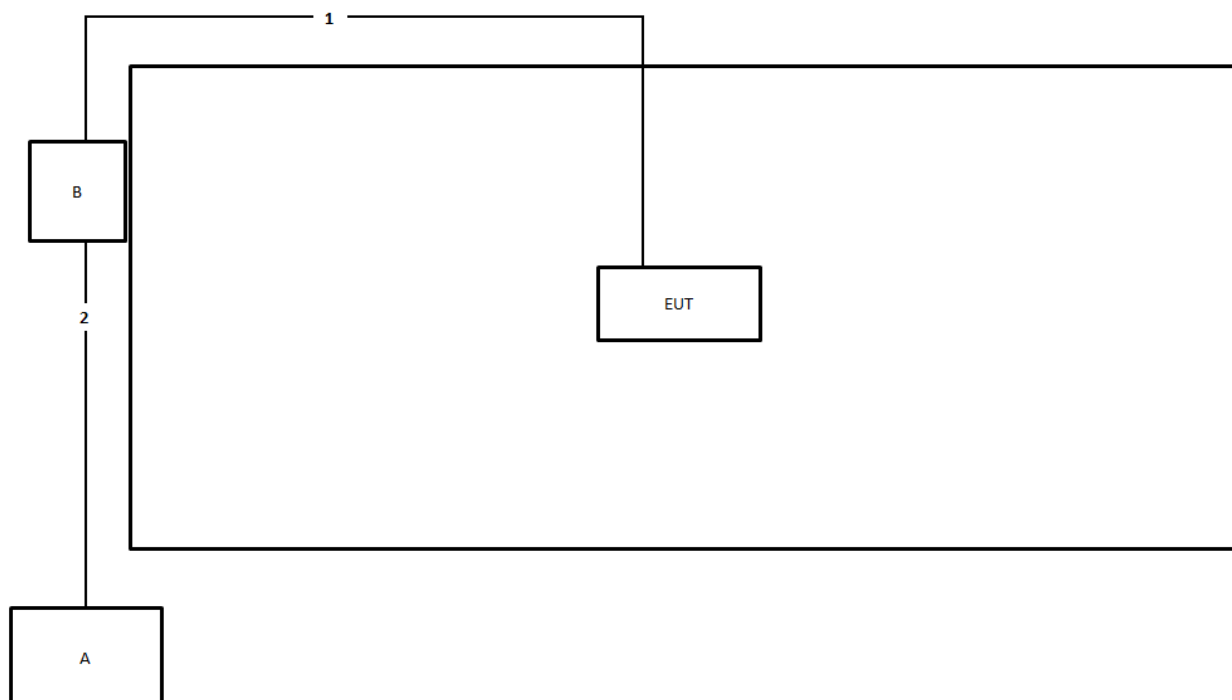
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Eth/Reset NB	DELL	E6430	N/A
B	PoE	Cambium	NET-P30-56IN	N/A

For Radiated and RF Conducted:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Notebook	DELL	E4300	N/A
B	PoE	Cambium	NET-P30-56IN	N/A

2.6 Test Setup Diagram



Test Setup Diagram - Radiated Test


Item	Connection	Shielded	Length
1	RJ-45 cable	No	10m
2	RJ-45 cable	No	1.5m



3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

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

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

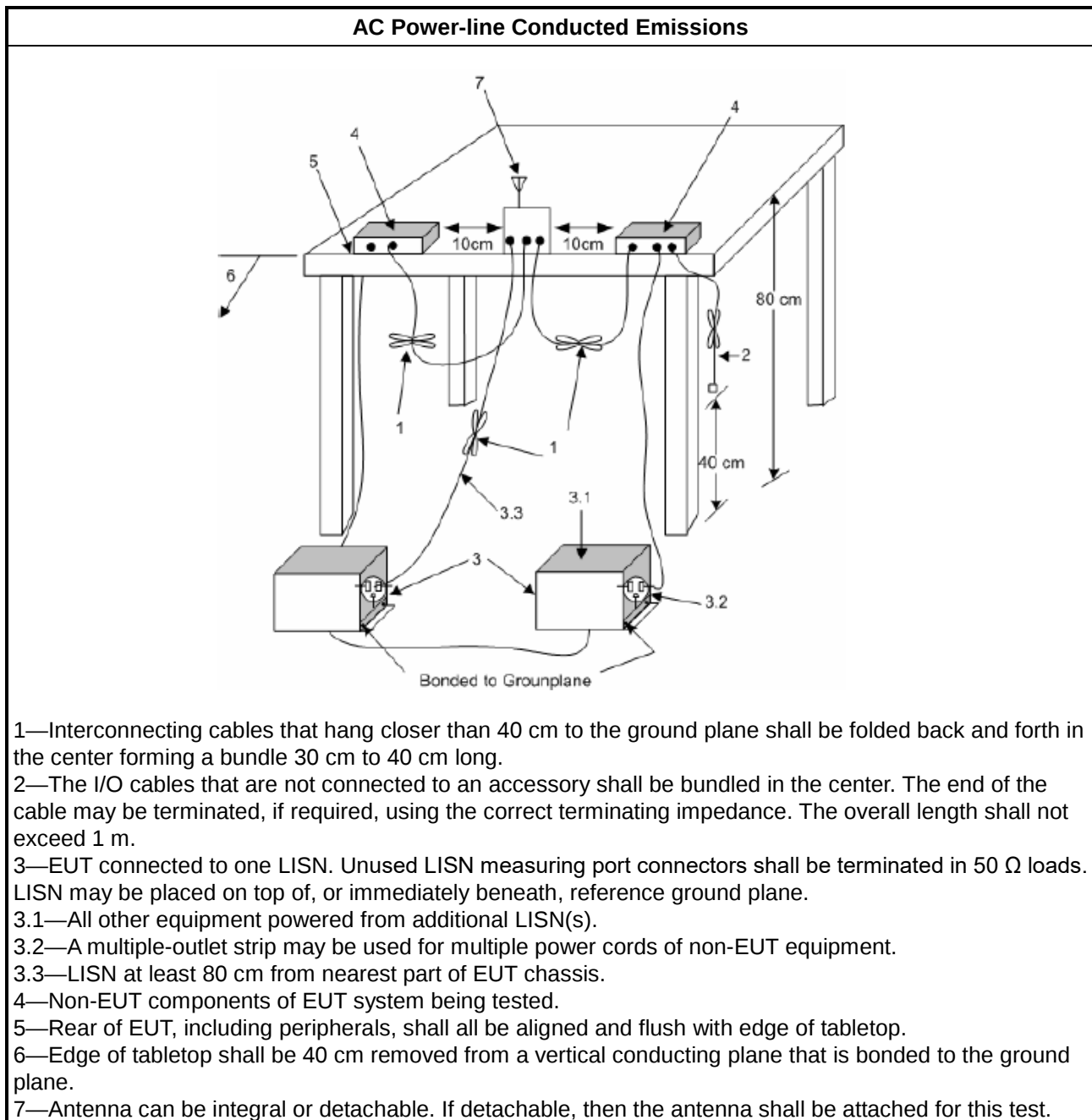
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

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

3.1.4 Test Setup



3.1.5 Measurement Results Calculation

The measured Level is calculated using:

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

3.1.6 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A



3.2 Emission Bandwidth

3.2.1 Emission Bandwidth Limit

Emission Bandwidth Limit	
UNII Devices	
☐	For the 5.15-5.25 GHz band, N/A
☐	For the 5.25-5.35 GHz band, the maximum conducted output power shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in MHz.
☐	For the 5.47-5.725 GHz band, the maximum conducted output power shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in MHz.
☒	For the 5.725-5.85 GHz band, 26 dB emission bandwidth ,N/A. 6 dB emission bandwidth $\geq 500\text{kHz}$.
☐	For the 5.85-5.895 GHz band, 26 dB emission bandwidth ,N/A. 6 dB emission bandwidth $\geq 500\text{kHz}$.
LE-LAN Devices	
☐	For the band 5.15-5.25 GHz, the maximum e.i.r.p. shall not exceed 200 mW or $10 + 10 \log B$, dBm, whichever power is less. B is the 99% emission bandwidth in MHz.
☐	For the 5.25-5.35 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or $17 + 10 \log B$, dBm, whichever power is less. B is the 99% emission bandwidth in MHz
☐	For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or $17 + 10 \log B$, dBm, whichever power is less. B is the 99% emission bandwidth in MHz
☐	For the 5.725-5.85 GHz band, 6 dB emission bandwidth $\geq 500\text{kHz}$.

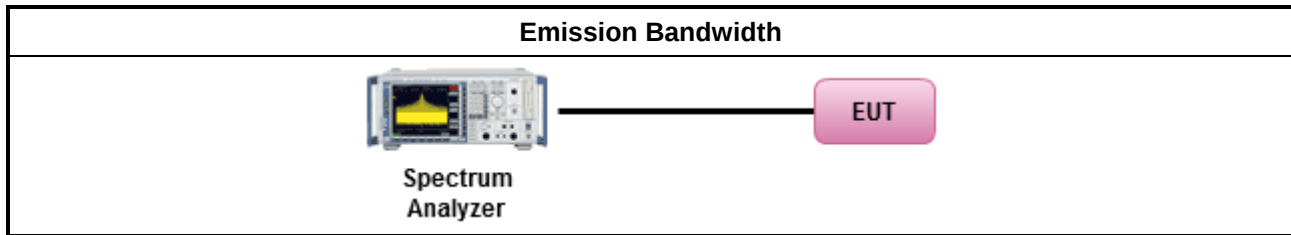
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

Test Method	
▪ For the emission bandwidth shall be measured using one of the options below:	
☒	Refer as FCC KDB 789033 D02, clause C for EBW and clause D for OBW measurement.
☐	Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.
☐	Refer as IC RSS-Gen, clause 4.6 for bandwidth testing.

3.2.4 Test Setup



3.2.5 Test Result of Emission Bandwidth

Refer as Appendix B

3.3 Maximum Output Power

3.3.1 Limit

Maximum Output Power Limit	
UNII Devices	
☐ For the 5.15-5.25 GHz band:	
☐	- Outdoor AP: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$. e.i.r.p. at any elevation angle above 30 degrees ≤ 125mW [21dBm] - Indoor AP: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$ - Point-to-point AP: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 23$ dBi, then $P_{Out} = 30 - (G_{TX} - 23)$. - Mobile or Portable Client: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 250 mW. If $G_{TX} > 6$ dBi, then $P_{Out} = 24 - (G_{TX} - 6)$.
☐ For the 5.25-5.35 GHz band, the maximum conducted output power (P_{Out}) shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 24 - (G_{TX} - 6)$.	
☐ For the 5.47-5.725 GHz band, the maximum conducted output power (P_{Out}) shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 24 - (G_{TX} - 6)$.	
☒ For the 5.725-5.85 GHz band:	
☐	- Point-to-multipoint systems (P2M): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$. - Point-to-point systems (P2P): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W.
Maximum EIRP Limit	
☐ For the 5.85-5.895 GHz band:	
☐	- Indoor AP & subordinate device < 36 dBm - Client device < 30 dBm
LE-LAN Devices	
☐ For the 5.15-5.25 GHz band, the maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz.	
☐ For the 5.25-5.35 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz	
☐ For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz	
☐ For the 5.725-5.85 GHz band:	
☐	- Point-to-multipoint systems (P2M): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$. - Point-to-point systems (P2P): the maximum conducted output power (P_{Out}) shall not exceed the

lesser of 1 W.

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

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

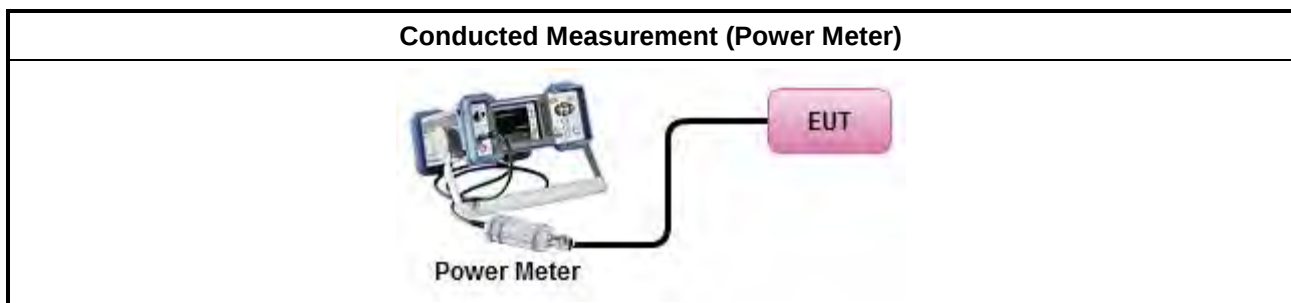
3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

Test Method	
	Average over on/off periods with duty factor
☐	Refer as FCC KDB 789033 D02, clause E Method SA-2 (spectral trace averaging).
☐	Refer as FCC KDB 789033 D02, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)
	Wideband RF power meter and average over on/off periods with duty factor
☒	Refer as FCC KDB 789033 D02, clause E Method PM-G (using an RF average power meter).
☒	For conducted measurement.
	If the EUT supports multiple transmit chains using options given below: Refer as FCC KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them.
	If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + \dots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$
☐	For radiated measurement.
	- Refer as FCC KDB 789033 D02 clause II A.1.F "Antenna-port Conducted versus Radiated Testing" - Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz. - Refer as FCC KDB 412172 D01 clause 2.2 for EIRP calculation.

3.3.4 Test Setup



3.3.5 Test Result of Maximum Output Power

Refer as Appendix C

3.4 Power Spectral Density

3.4.1 Limit

Peak Power Spectral Density Limit	
UNII Devices	
☐ For the 5.15-5.25 GHz band:	
	- Outdoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 17 - (G_{TX} - 6)$. - Indoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 17 - (G_{TX} - 6)$. - Point-to-point AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 23$ dBi, then $P_{Out} = 17 - (G_{TX} - 23)$. - Mobile or Portable Client: the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If $G_{TX} > 6$ dBi, then $PPSD = 11 - (G_{TX} - 6)$.
☐ For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If $G_{TX} > 6$ dBi, then $PPSD = 11 - (G_{TX} - 6)$.	
☐ For the 5.47-5.725 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If $G_{TX} > 6$ dBi, then $PPSD = 11 - (G_{TX} - 6)$.	
☒ For the 5.725-5.85 GHz band:	
	- Point-to-multipoint systems (P2M): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz. If $G_{TX} > 6$ dBi, then $PPSD = 30 - (G_{TX} - 6)$. - Point-to-point systems (P2P): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz.
EIRP Power Spectral Density Limit	
☐ For the 5.85-5.895 GHz band:	
	- Indoor AP & subordinate device < 20dBm/MHz - Client device < 14dBm/MHz
LE-LAN Devices	
☐ For the 5.15-5.25 GHz band, the e.i.r.p. peak power spectral density (PPSD) ≤ 10 dBm/MHz.	
☐ For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz.	
	e.i.r.p. greater than 200 mW shall comply with the following e.i.r.p. at different elevations, where θ is the angle above the local horizontal plane (of the Earth) as shown below: -13 dBW/MHz for $0^\circ \leq \theta < 8^\circ$; $-13 - 0.716 (\theta - 8)$ dBW/MHz for $8^\circ \leq \theta < 40^\circ$ $-35.9 - 1.22 (\theta - 40)$ dBW/MHz for $40^\circ \leq \theta \leq 45^\circ$; -42 dBW/MHz for $\theta > 45^\circ$
☐ For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz.	
☐ For the 5.725-5.85 GHz band:	
	- Point-to-multipoint systems (P2M): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz. If $G_{TX} > 6$ dBi, then $PPSD = 30 - (G_{TX} - 6)$. - Point-to-point systems (P2P): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz.
PPSD = peak power spectral density that he same method as used to determine the conducted output	



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

3.4.2 Measuring Instruments

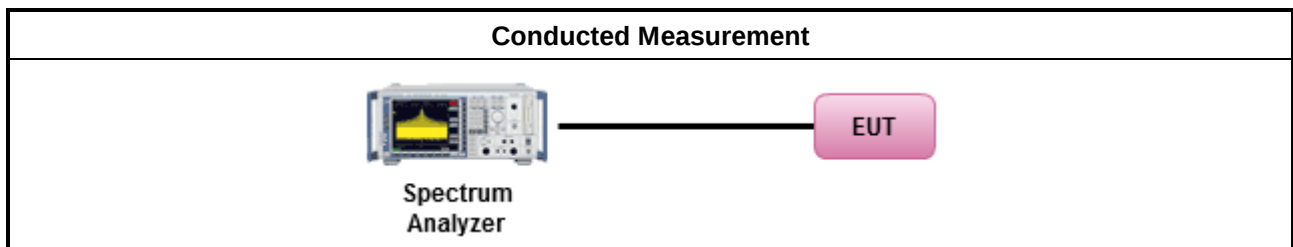
Refer a test equipment and calibration data table in this test report.

3.4.3 Test Procedures

Test Method	
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:	
☐	Refer as FCC KDB 789033 D02, F)5) power spectral density can be measured using resolution bandwidths < 1 MHz provided that the results are integrated over 1 MHz bandwidth
[duty cycle ≥ 98% or external video / power trigger]	
☒	Refer as FCC KDB 789033 D02, clause E Method SA-1 (spectral trace averaging).
☐	Refer as FCC KDB 789033 D02, clause E Method SA-1 Alt. (RMS detection with slow sweep speed)
duty cycle < 98% and average over on/off periods with duty factor	
☒	Refer as FCC KDB 789033 D02, clause E Method SA-2 (spectral trace averaging).
☐	Refer as FCC KDB 789033 D02, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)
☒ For conducted measurement.	
If the EUT supports multiple transmit chains using options given below:	
☒	Option 1: Measure and sum the spectra across the outputs. Refer as FCC KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the NTX output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace.
☐	Option 2: Measure and sum spectral maxima across the outputs. With this technique, spectra are measured at each output of the device at the required resolution bandwidth. The maximum value (peak) of each spectrum is determined. These maximum values are then summed mathematically in linear power units across the outputs. These operations shall be performed separately over frequency spans that have different out-of-band or spurious emission limits,
☐	Option 3: Measure and add 10 log(N) dB, where N is the number of transmit chains. Refer as FCC KDB 662911, In-band power spectral density (PSD). Performed at each transmit chains and each transmit chains shall be compared with the limit have been reduced with 10 log(N). Or each transmit chains shall be add 10 log(N) to compared with the limit.
If multiple transmit chains, EIRP PPSD calculation could be following as methods: $PPSD_{total} = PPSD_1 + PPSD_2 + \dots + PPSD_n$ (calculated in linear unit [mW] and transfer to log unit [dBm])	

Test Method	
	$EIRP_{total} = PPSD_{total} + DG$
☐	For radiated measurement.
	Refer as FCC KDB 789033 D02 clause II A.1.F "Antenna-port Conducted versus Radiated Testing"
	Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz.
	Refer as FCC KDB 412172 D01 clause 2.2 for EIRP calculation.

3.4.4 Test Setup



3.4.5 Test Result of Power Spectral Density

Refer as Appendix D



3.5 Unwanted Emissions

3.5.1 Transmitter Unwanted Emissions Limit

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

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

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

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

Un-restricted band emissions above 1GHz Limit	
Operating Band	Limit
☐ 5.15 - 5.25 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
☐ 5.25 - 5.35 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
☐ 5.47 - 5.725 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
☒ 5.725 - 5.85 GHz	all emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.
☐ 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).	

3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

Test Method	
Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 m for frequencies above 30 MHz, unless it can be further demonstrated that measurements at a distance of 30 m or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).	
The average emission levels shall be measured in [duty cycle $\geq$ 98 or duty factor].	
For the transmitter unwanted emissions shall be measured using following options below:	
For radiated measurement.	Refer as FCC KDB 789033 D02, clause G)2) for unwanted emissions into non-restricted bands.
	Refer as FCC KDB 789033 D02, clause G)1) for unwanted emissions into restricted bands.
	☐ Refer as FCC KDB 789033 D02, G)6) Method AD (Trace Averaging).
	☒ Refer as FCC KDB 789033 D02, G)6) Method VB (Reduced VBW).
	☐ Refer as ANSI C63.10, clause 11.12.2.5.3 (Reduced VBW). VBW $\geq$ 1/T, where T is pulse time.
	☐ Refer as ANSI C63.10, clause 7.5 average value of pulsed emissions.
	☒ Refer as FCC KDB 789033 D02, clause G)5) measurement procedure peak limit.
The any unwanted emissions level shall not exceed the fundamental emission level.	☐ Refer as ANSI C63.10, clause 4.1.4.2.2 measurement procedure peak limit.

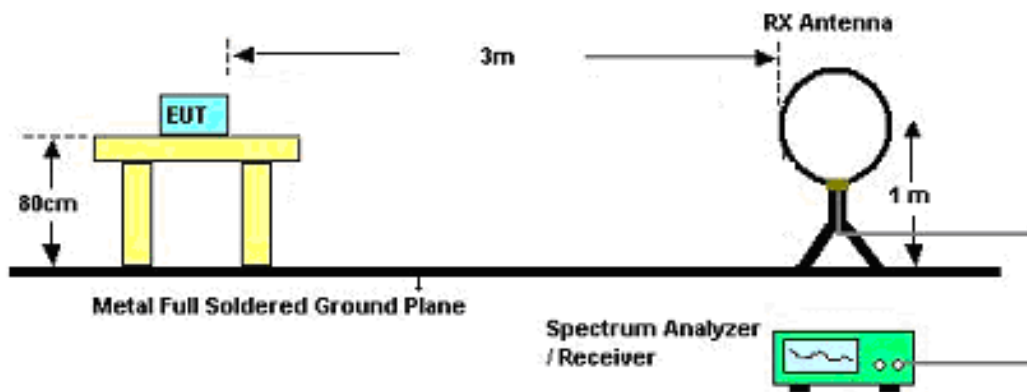
Test Method

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

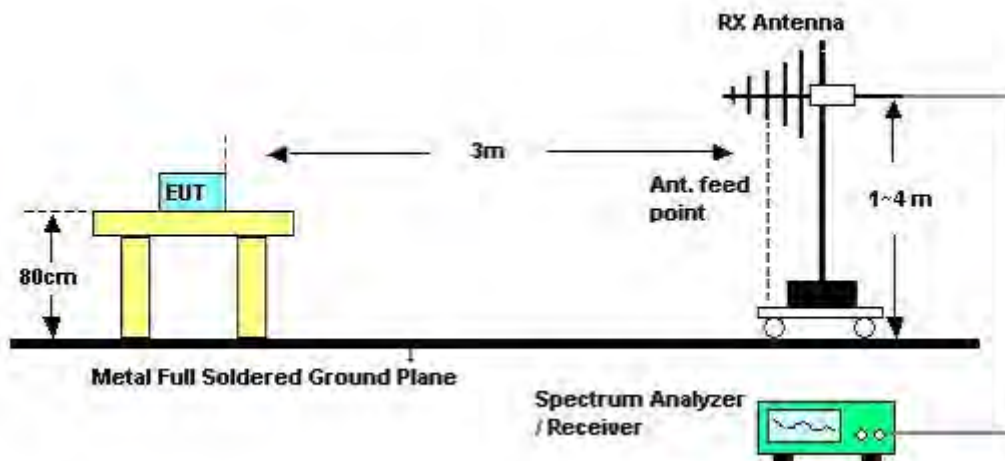
3.5.4 Test Setup

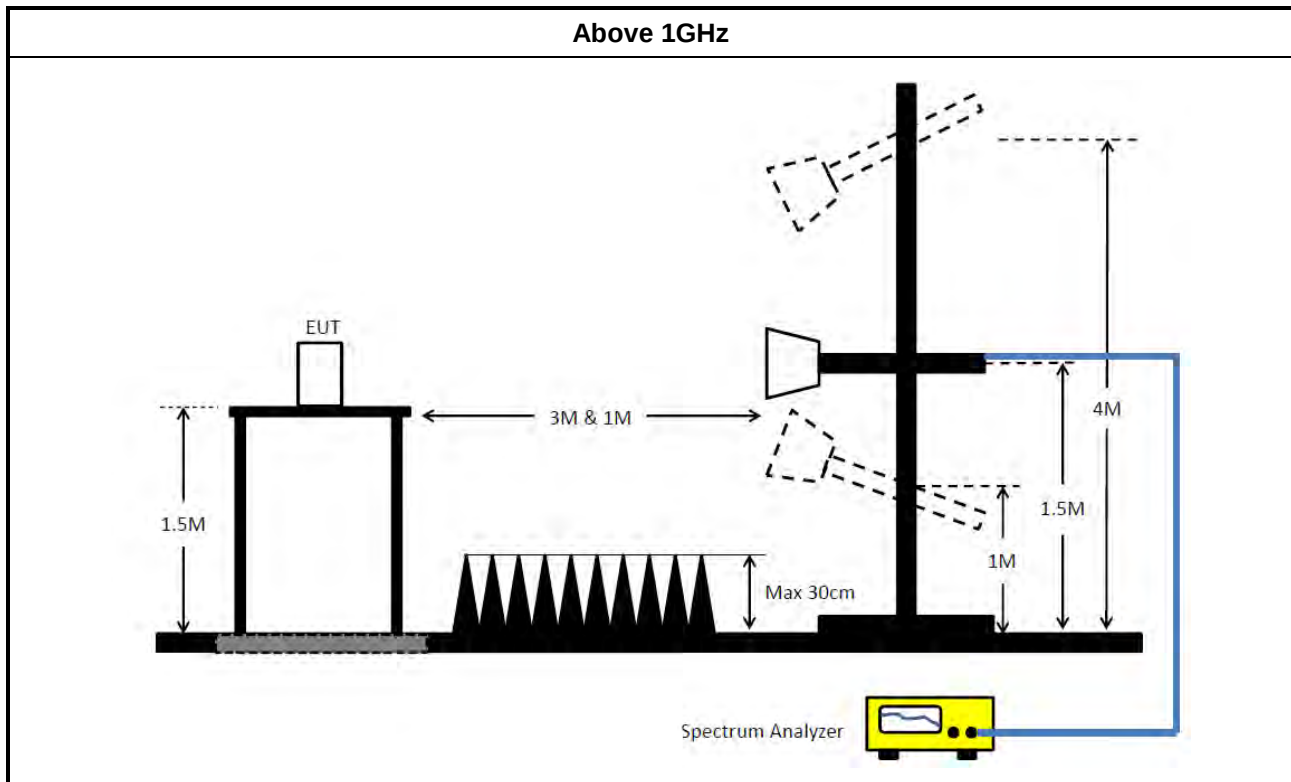
Transmitter Radiated Unwanted Emissions

9kHz ~30MHz



30MHz~1GHz





3.5.5 Measurement Results Calculation

The measured Level is calculated using:

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

3.5.6 Transmitter Unwanted Emissions (Below 30MHz)

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

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

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

3.5.7 Test Result of Transmitter Unwanted Emissions

Refer as Appendix E



4 Test Equipment and Calibration Data

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.4GHz	Feb. 22, 2022	Feb. 21, 2023	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	Feb. 09, 2022	Feb. 08, 2023	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Apr. 12, 2022	Apr. 11, 2023	Conduction (CO01-CB)
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100430	9kHz ~ 30MHz	Feb. 10, 2022	Feb. 09, 2023	Conduction (CO01-CB)
COND Cable	Woken	Cable	Low cable-CO01	9kHz ~ 30MHz	May 18, 2022	May 17, 2023	Conduction (CO01-CB)
Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conduction (CO01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	May 14, 2022	May 13, 2023	Radiation (03CH04-CB)
3m Semi Anechoic Chamber NSA	TDK	SAC-3M	03CH04-CB	30 MHz ~ 1 GHz	Aug. 08, 2021	Aug. 07, 2022	Radiation (03CH04-CB)
BILOG ANTENNA with 6 dB attenuator	Schaffner & EMCI	CBL6112B & N-6-06	22021&AT-N06 07	30MHz ~ 1GHz	Oct. 09, 2021	Oct. 08, 2022	Radiation (03CH04-CB)
Pre-Amplifier	Agilent	310N	187291	0.1MHz ~ 1GHz	Dec. 16, 2021	Dec. 15, 2022	Radiation (03CH04-CB)
Spectrum Analyzer	R&S	FSP40	100142	9kHz~40GHz	Mar. 28, 2022	Mar. 27, 2023	Radiation (03CH04-CB)
EMI Test Receiver	R&S	ESCS	826547/017	9kHz ~ 2.75GHz	Jun. 17, 2022	Jun. 16, 2023	Radiation (03CH04-CB)
RF Cable-low	Woken	RG402	Low Cable-03+67	30MHz ~ 1GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH04-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH04-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH05-CB	1GHz ~18GHz 3m	Nov. 07, 2021	Nov. 06, 2022	Radiation (03CH05-CB)
Horn Antenna	SCHWARZBECK	BBHA9120D	BBHA 9120 D-1291	1GHz~18GHz	Jun. 23, 2022	Jun. 22, 2023	Radiation (03CH05-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Aug. 05, 2021	Aug. 04, 2022	Radiation (03CH05-CB)
Pre-Amplifier	EMCI	EMC12630SE	980287	1GHz ~ 26.5GHz	Jul. 01, 2022	Jun. 30, 2023	Radiation (03CH05-CB)
Pre-Amplifier	-	-	TF-130N-R1	18GHz ~ 40GHz	Jun. 21, 2022	Jun. 20, 2023	Radiation (03CH05-CB)
Spectrum Analyzer	R&S	FSP40	100304	9kHz ~ 40GHz	Mar. 14, 2022	Mar. 13, 2023	Radiation (03CH05-CB)



Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-28	1GHz~18GHz	Oct. 13, 2021	Oct. 12, 2022	Radiation (03CH05-CB)
RF Cable-high	Woken	RG402	High Cable-04+28	1GHz~18GHz	Oct. 13, 2021	Oct. 12, 2022	Radiation (03CH05-CB)
High Cable	Woken	WCA0929M	40G#5+7	1GHz ~ 40 GHz	Dec. 14, 2021	Dec. 13, 2022	Radiation (03CH05-CB)
High Cable	Woken	WCA0929M	40G#5	1GHz ~ 40 GHz	Dec. 08, 2021	Dec. 07, 2022	Radiation (03CH05-CB)
High Cable	Woken	WCA0929M	40G#7	1GHz ~ 40 GHz	Dec. 14, 2021	Dec. 13, 2022	Radiation (03CH05-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH05-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	May 27, 2022	May 26, 2023	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-06	1 GHz – 26.5 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-07	1 GHz –26.5 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-08	1 GHz –26.5 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-09	1 GHz –26.5 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz –26.5 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-30	1 GHz –26.5 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH01-CB)
Switch	SPTCB	SP-SWI	SWI-01	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	SWI-01-P1	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	SWI-01-P2	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	SWI-01-P3	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	SWI-01-P4	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	SWI-01-P5	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH01-CB)
Power Sensor	Agilent	E9327A	US40442088	50MHz~18GHz	Feb. 21, 2022	Feb. 20, 2023	Conducted (TH01-CB)
Power Meter	Agilent	E4416A	GB41291199	50MHz~18GHz	Feb. 21, 2022	Feb. 20, 2023	Conducted (TH01-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conducted (TH01-CB)

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

N.C.R. means Non-Calibration required.



Conducted Emissions at Powerline

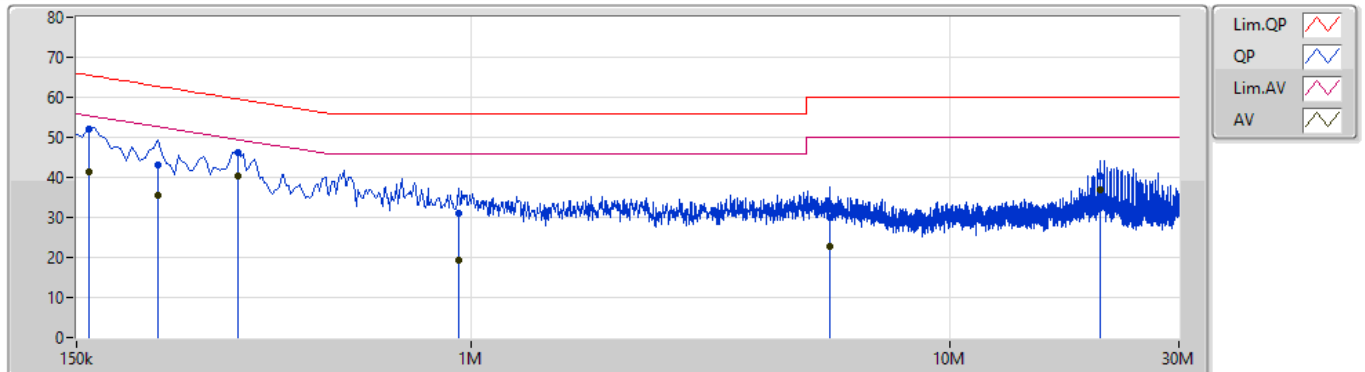
Appendix A

Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	AV	325.5k	41.09	49.56	-8.47	Neutral

Mode 1

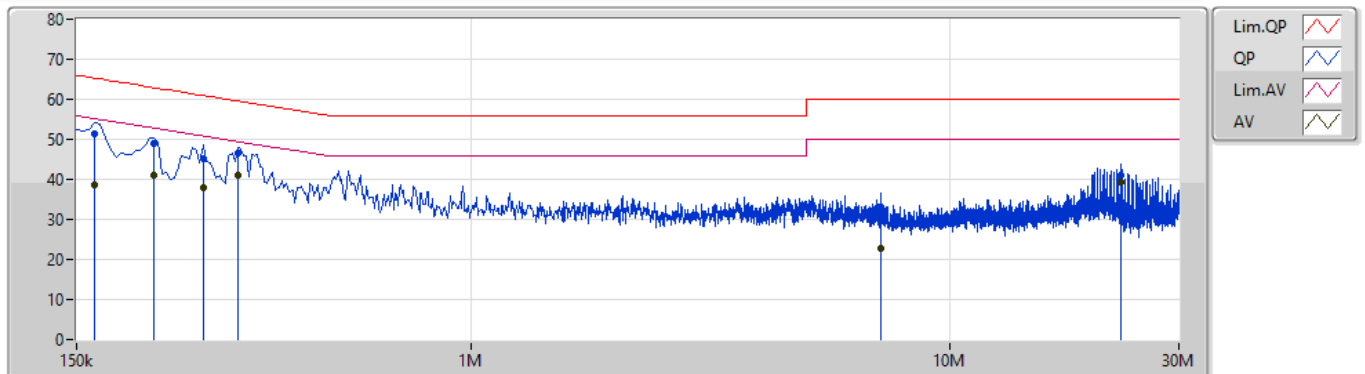
25/07/2022



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	159k	51.95	65.52	-13.57	9.99	Line	-	41.96	0.06	0.04	9.89			
AV	159k	41.38	55.52	-14.14	9.99	Line	-	31.39	0.06	0.04	9.89			
QP	222k	43.22	62.75	-19.53	9.99	Line	-	33.23	0.06	0.04	9.89			
AV	222k	35.39	52.75	-17.36	9.99	Line	-	25.40	0.06	0.04	9.89			
QP	325.5k	46.06	59.56	-13.50	10.00	Line	-	36.06	0.06	0.05	9.89			
AV	325.5k	40.41	49.56	-9.15	10.00	Line	"Worst"	30.41	0.06	0.05	9.89			
QP	942k	31.11	56.00	-24.89	10.00	Line	-	21.11	0.07	0.04	9.89			
AV	942k	19.43	46.00	-26.57	10.00	Line	-	9.43	0.07	0.04	9.89			
QP	5.618M	29.91	60.00	-30.09	10.18	Line	-	19.73	0.16	0.12	9.90			
AV	5.618M	22.69	50.00	-27.31	10.18	Line	-	12.51	0.16	0.12	9.90			
QP	20.54M	40.29	60.00	-19.71	10.50	Line	-	29.79	0.31	0.23	9.96			
AV	20.54M	36.91	50.00	-13.09	10.50	Line	-	26.41	0.31	0.23	9.96			

Mode 1

25/07/2022



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	163.5k	51.32	65.27	-13.95	10.00	Neutral	-	41.32	0.07	0.04	9.89			
AV	163.5k	38.51	55.27	-16.76	10.00	Neutral	-	28.51	0.07	0.04	9.89			
QP	217.5k	49.13	62.92	-13.79	10.00	Neutral	-	39.13	0.07	0.04	9.89			
AV	217.5k	41.08	52.92	-11.84	10.00	Neutral	-	31.08	0.07	0.04	9.89			
QP	276k	45.34	60.93	-15.59	10.01	Neutral	-	35.33	0.07	0.05	9.89			
AV	276k	37.95	50.93	-12.98	10.01	Neutral	-	27.94	0.07	0.05	9.89			
QP	325.5k	46.50	59.56	-13.06	10.01	Neutral	-	36.49	0.07	0.05	9.89			
AV	325.5k	41.09	49.56	-8.47	10.01	Neutral	"Worst"	31.08	0.07	0.05	9.89			
QP	7.166M	33.05	60.00	-26.95	10.24	Neutral	-	22.81	0.20	0.14	9.90			
AV	7.166M	22.90	50.00	-27.10	10.24	Neutral	-	12.66	0.20	0.14	9.90			
QP	22.686M	41.20	60.00	-18.80	10.52	Neutral	-	30.68	0.30	0.25	9.97			
AV	22.686M	39.32	50.00	-10.68	10.52	Neutral	-	28.80	0.30	0.25	9.97			

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	16.35M	16.792M	16M8D1D	16.32M	16.672M
802.11ax HEW20_Nss1,(MCS0)_4TX	19.05M	19.13M	19M1D1D	18.93M	19.07M
802.11ax HEW40_Nss1,(MCS0)_4TX	38.28M	38.501M	38M5D1D	37.74M	38.321M
802.11ax HEW80_Nss1,(MCS0)_4TX	78.24M	78.561M	78M6D1D	77.88M	78.321M

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

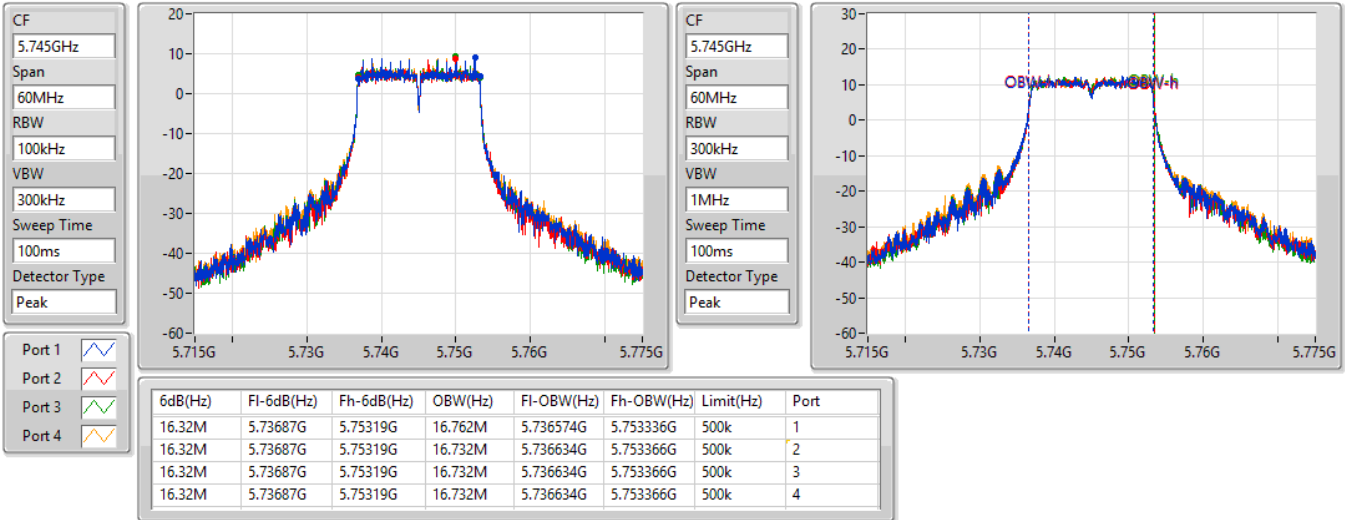
Result

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	-	-	-	-	-	-	-	-	-	-
5745MHz	Pass	500k	16.32M	16.762M	16.32M	16.732M	16.32M	16.732M	16.32M	16.732M
5785MHz	Pass	500k	16.35M	16.792M	16.35M	16.702M	16.35M	16.702M	16.35M	16.702M
5825MHz	Pass	500k	16.32M	16.762M	16.32M	16.702M	16.32M	16.732M	16.35M	16.672M
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5745MHz	Pass	500k	18.93M	19.07M	18.93M	19.07M	18.99M	19.07M	18.96M	19.07M
5785MHz	Pass	500k	18.99M	19.07M	19.05M	19.07M	18.96M	19.07M	18.93M	19.07M
5825MHz	Pass	500k	19.02M	19.07M	18.99M	19.13M	18.93M	19.07M	19.05M	19.07M
802.11ax HEW40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5755MHz	Pass	500k	38.1M	38.381M	37.74M	38.381M	38.16M	38.381M	37.8M	38.381M
5795MHz	Pass	500k	38.16M	38.501M	38.28M	38.441M	38.1M	38.321M	38.1M	38.501M
802.11ax HEW80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5775MHz	Pass	500k	78M	78.561M	78.12M	78.321M	77.88M	78.441M	78.24M	78.321M

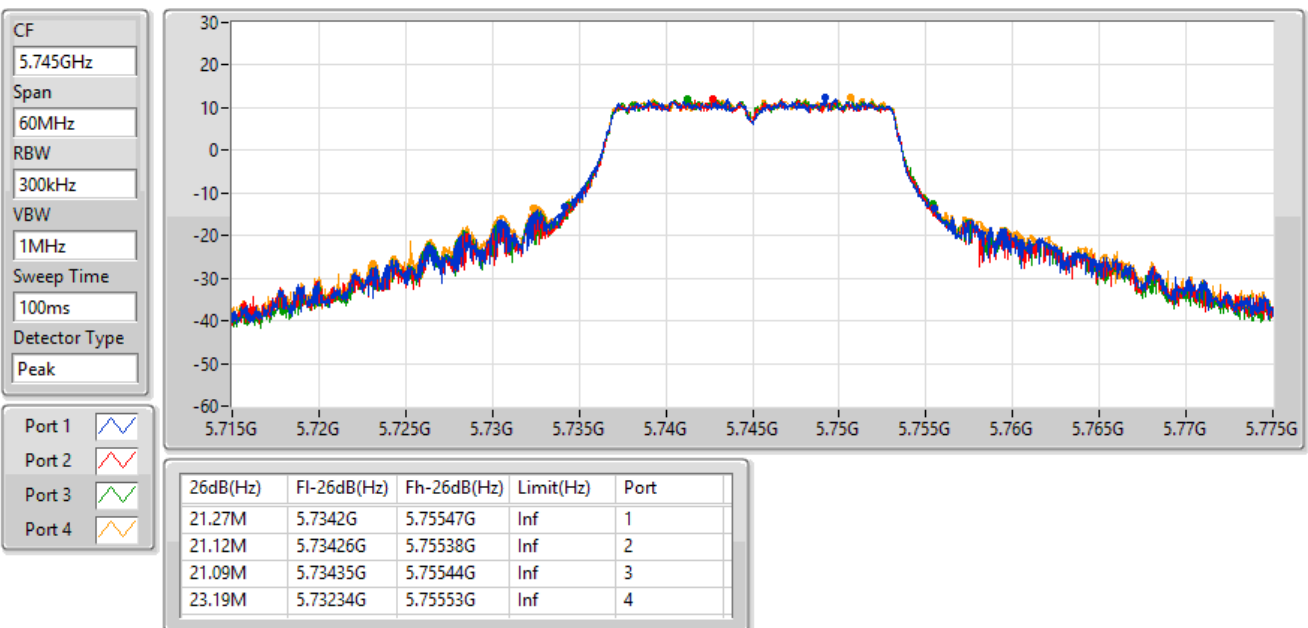
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth

802.11a_Nss1,(6Mbps)_4TX
EBW
5745MHz

16/07/2022

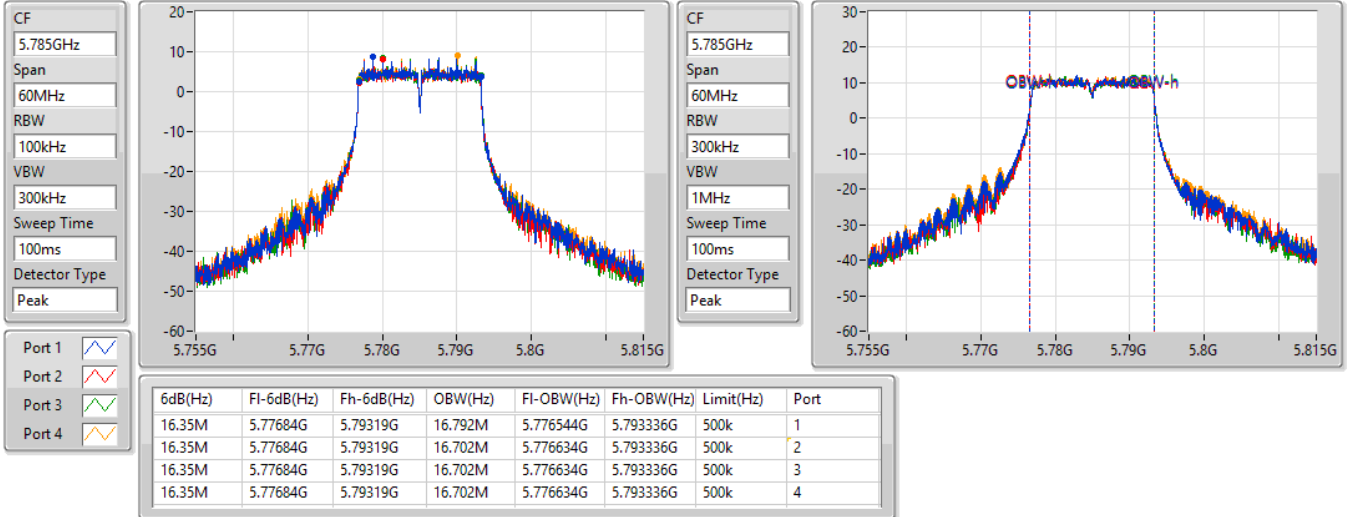

802.11a_Nss1,(6Mbps)_4TX
EBW
5745MHz

16/07/2022

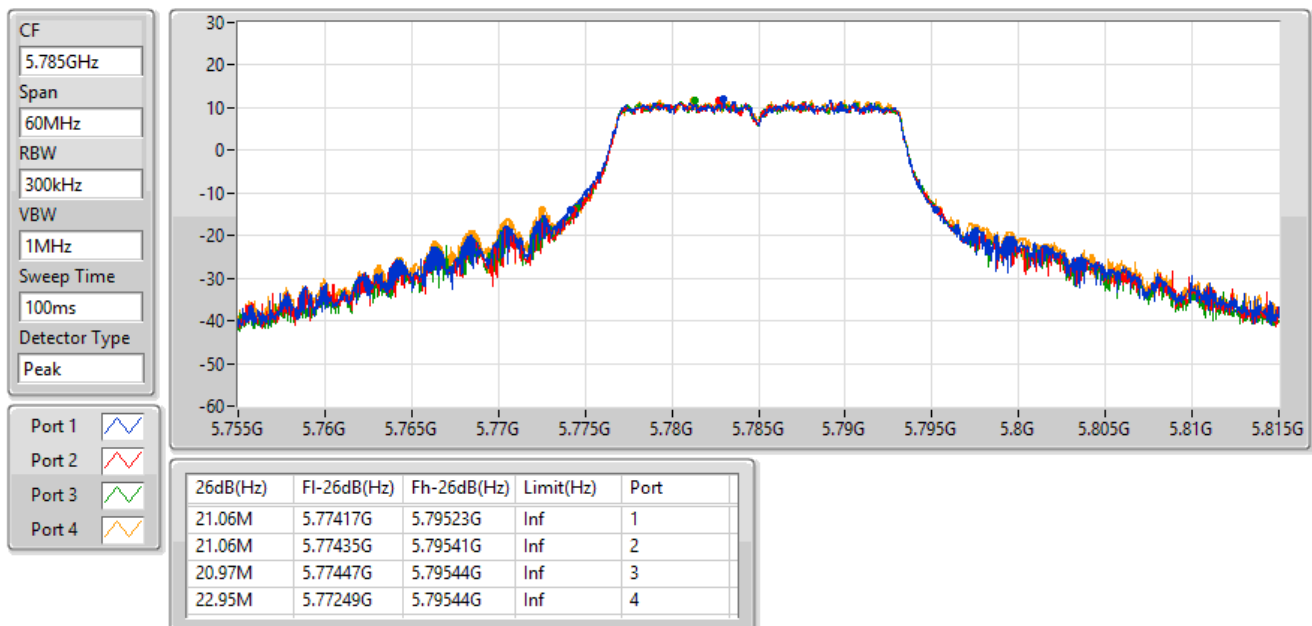


802.11a_Nss1,(6Mbps)_4TX
EBW
5785MHz

16/07/2022

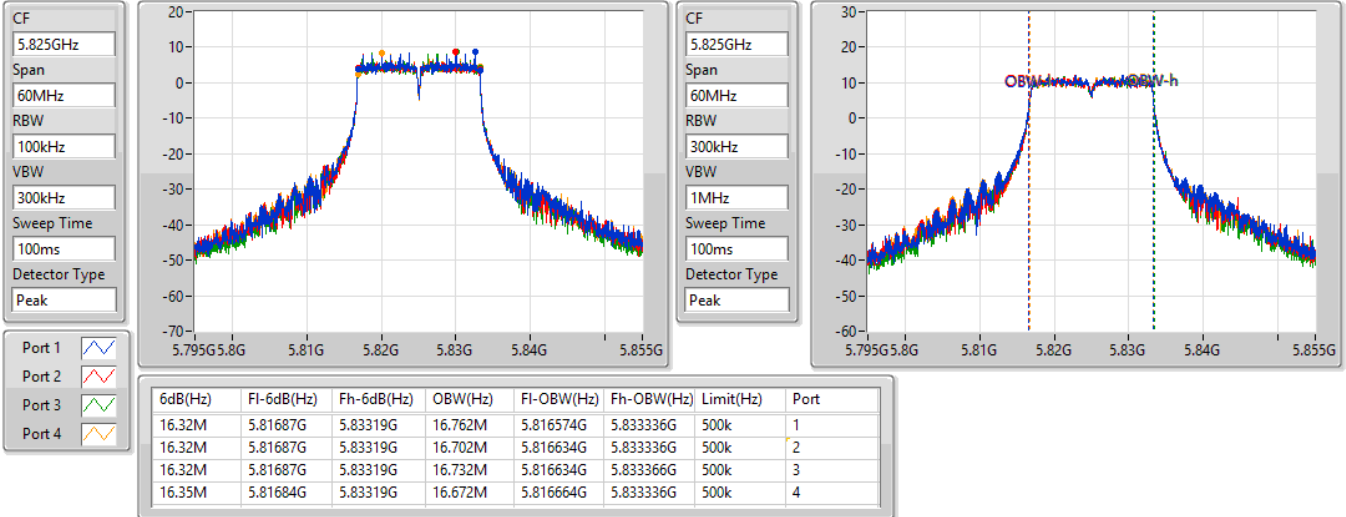

802.11a_Nss1,(6Mbps)_4TX
EBW
5785MHz

16/07/2022

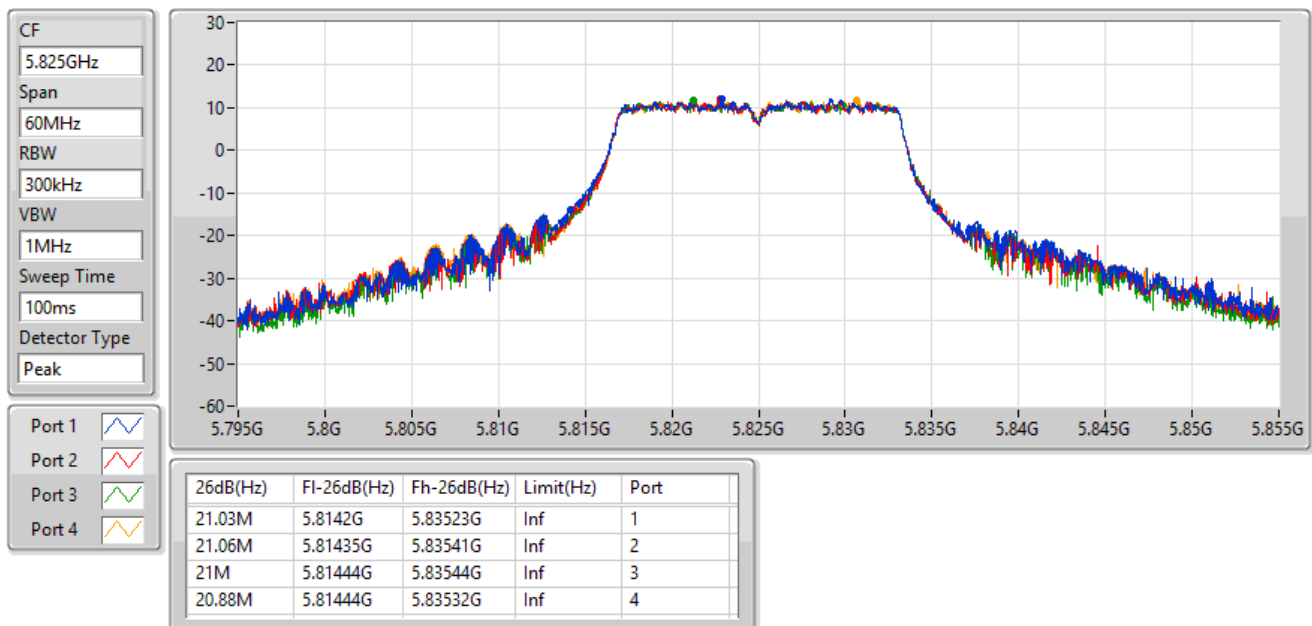


802.11a_Nss1,(6Mbps)_4TX
EBW
5825MHz

16/07/2022

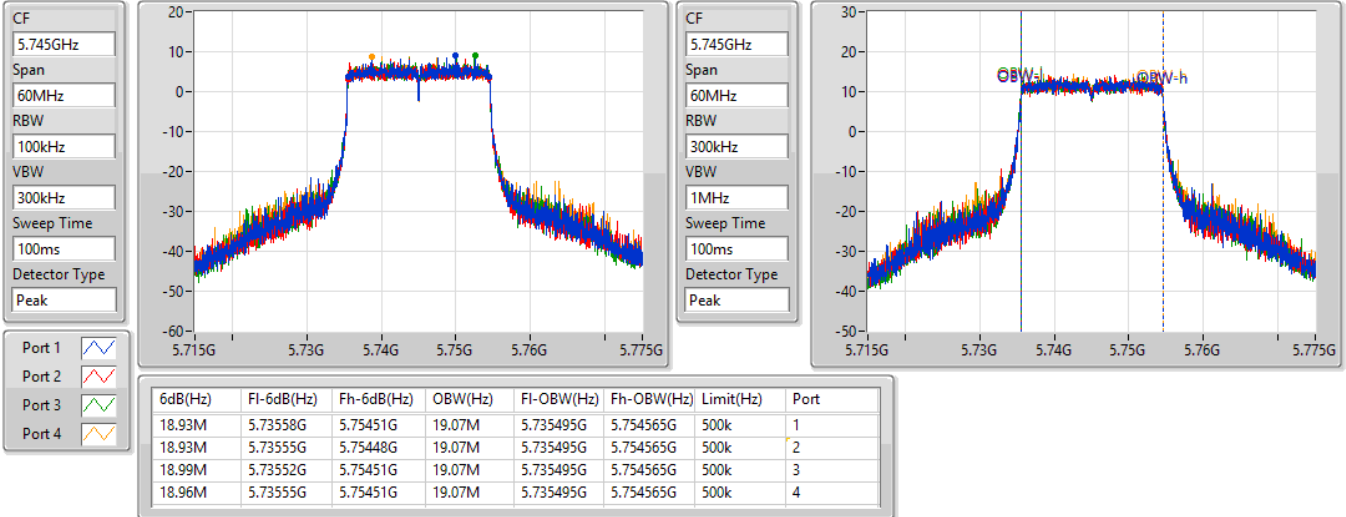

802.11a_Nss1,(6Mbps)_4TX
EBW
5825MHz

16/07/2022

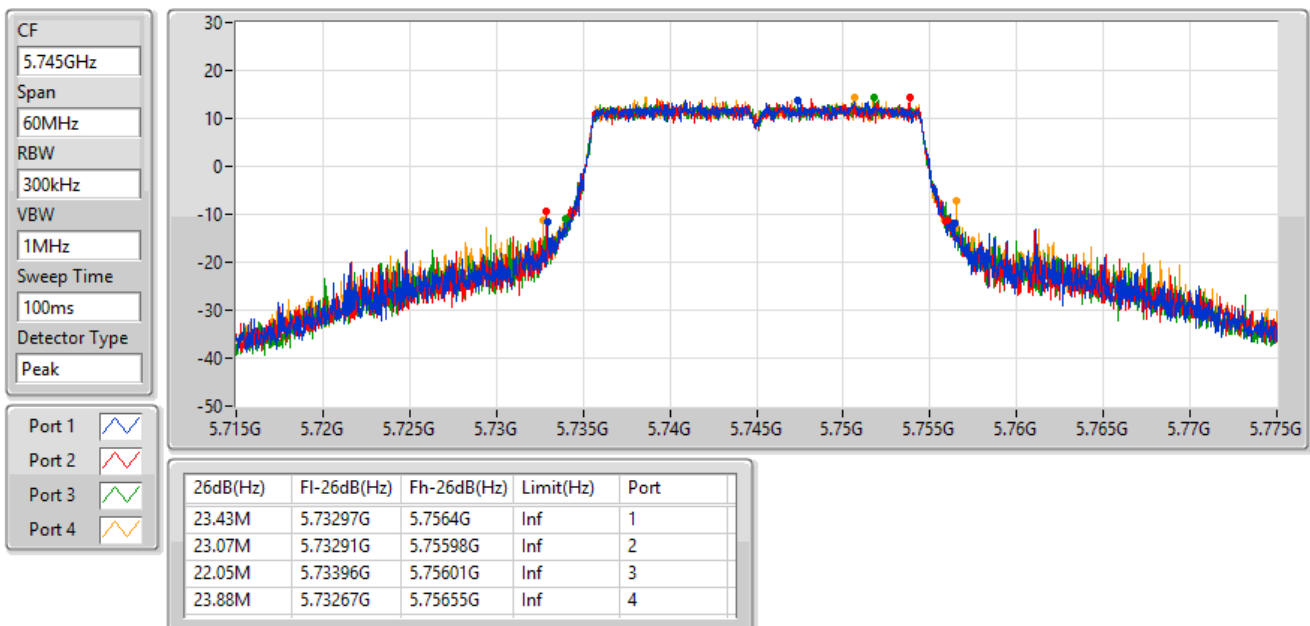


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5745MHz

16/07/2022

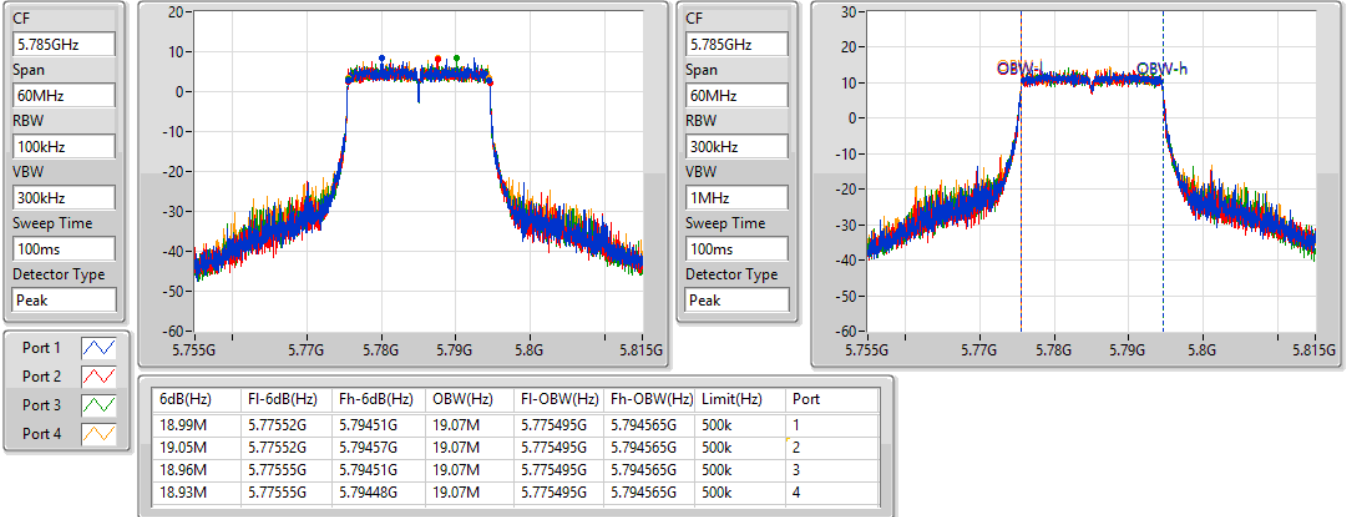

802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5745MHz

16/07/2022

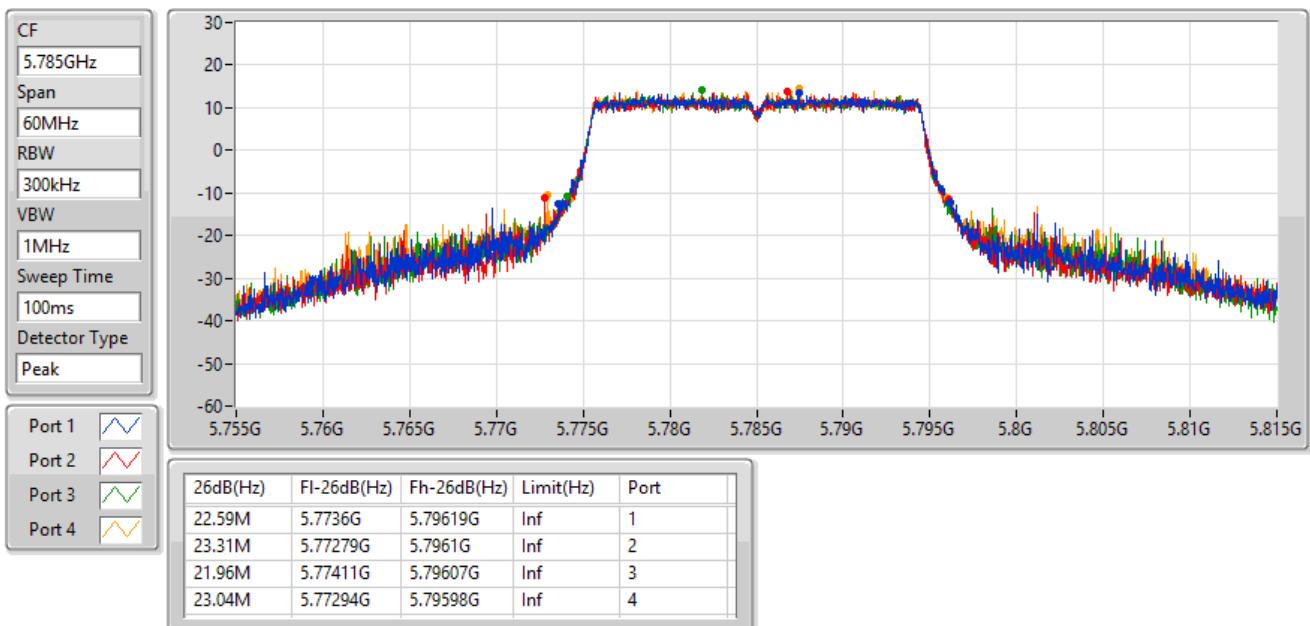


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5785MHz

16/07/2022

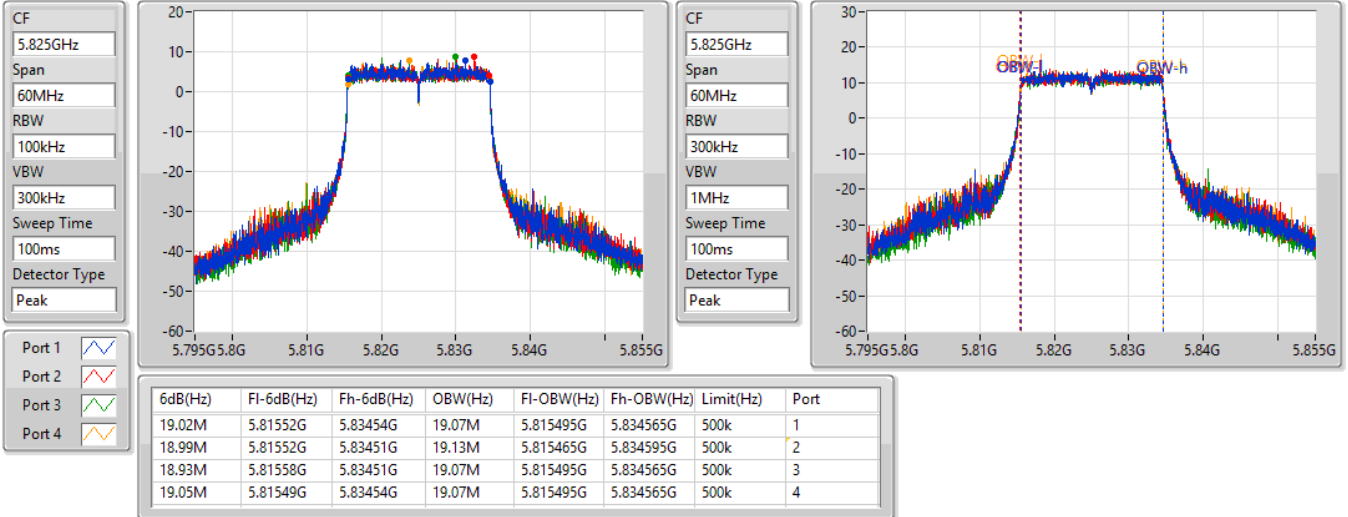

802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5785MHz

16/07/2022

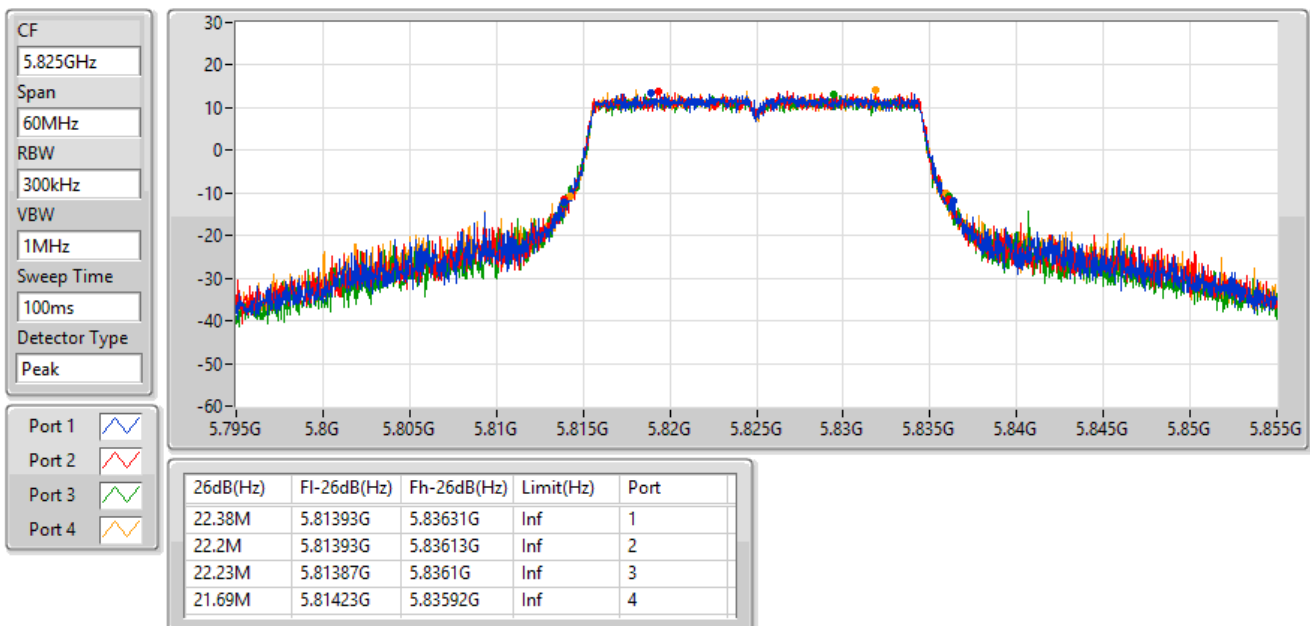


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5825MHz

16/07/2022


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5825MHz

16/07/2022

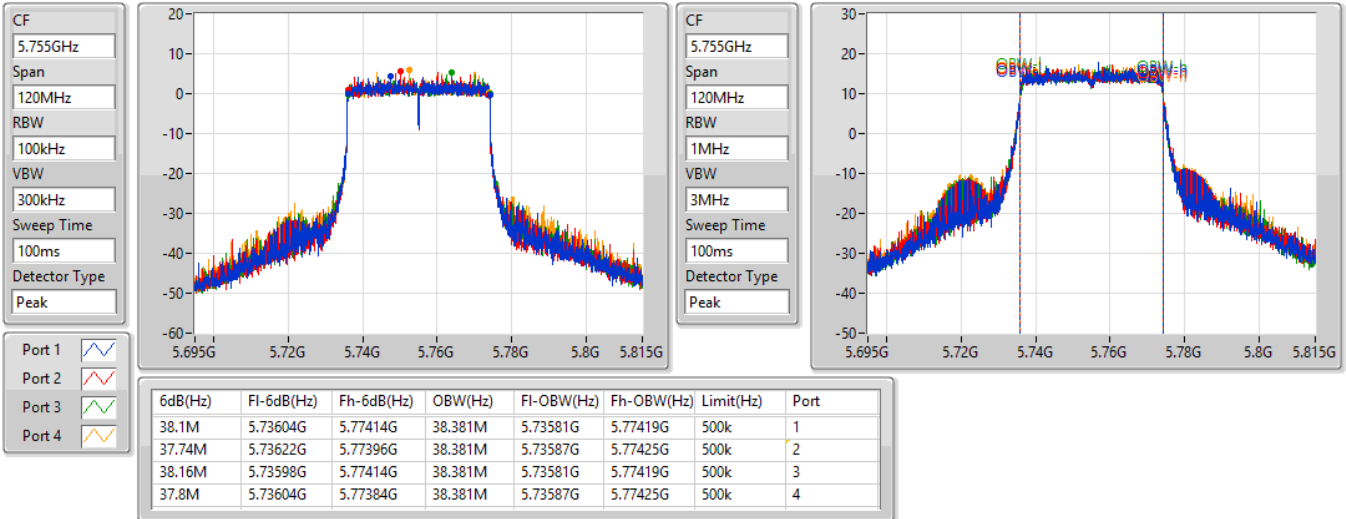


802.11ax HEW40_Nss1,(MCS0)_4TX

EBW

5755MHz

16/07/2022

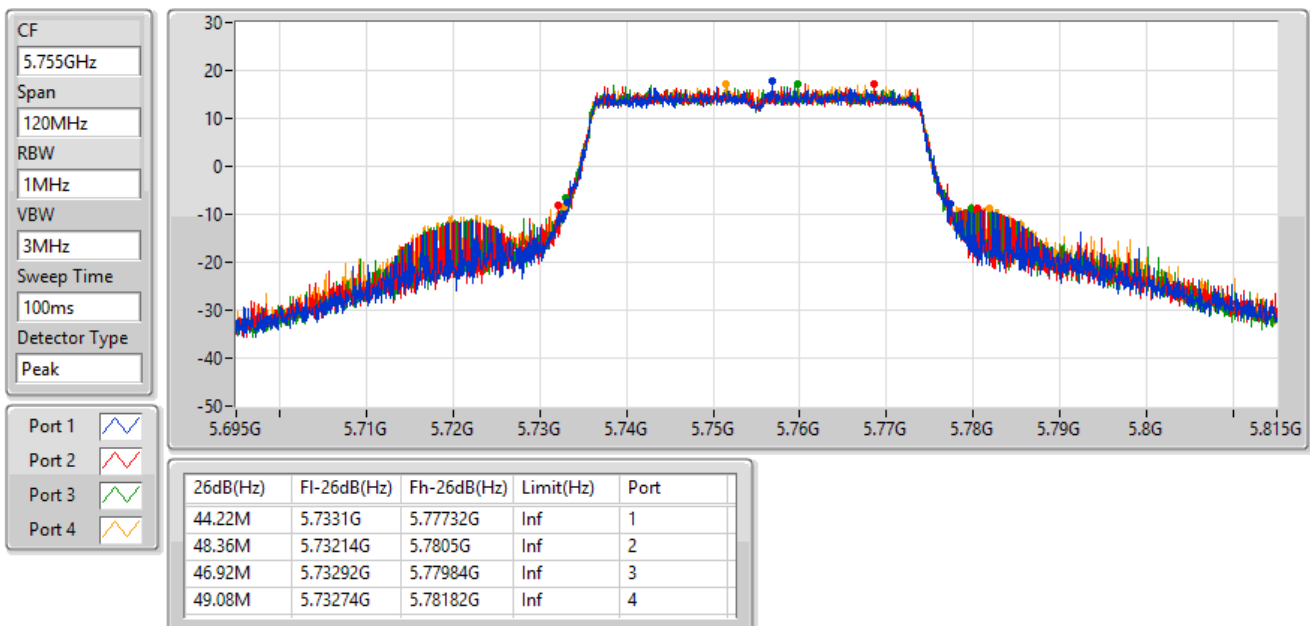


802.11ax HEW40_Nss1,(MCS0)_4TX

EBW

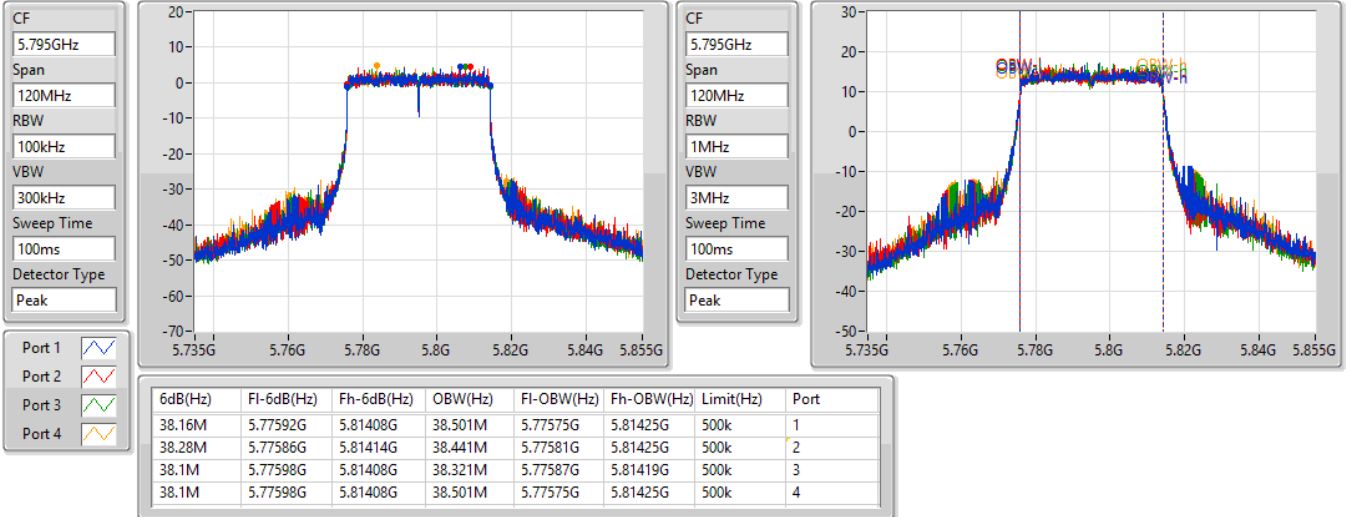
5755MHz

16/07/2022

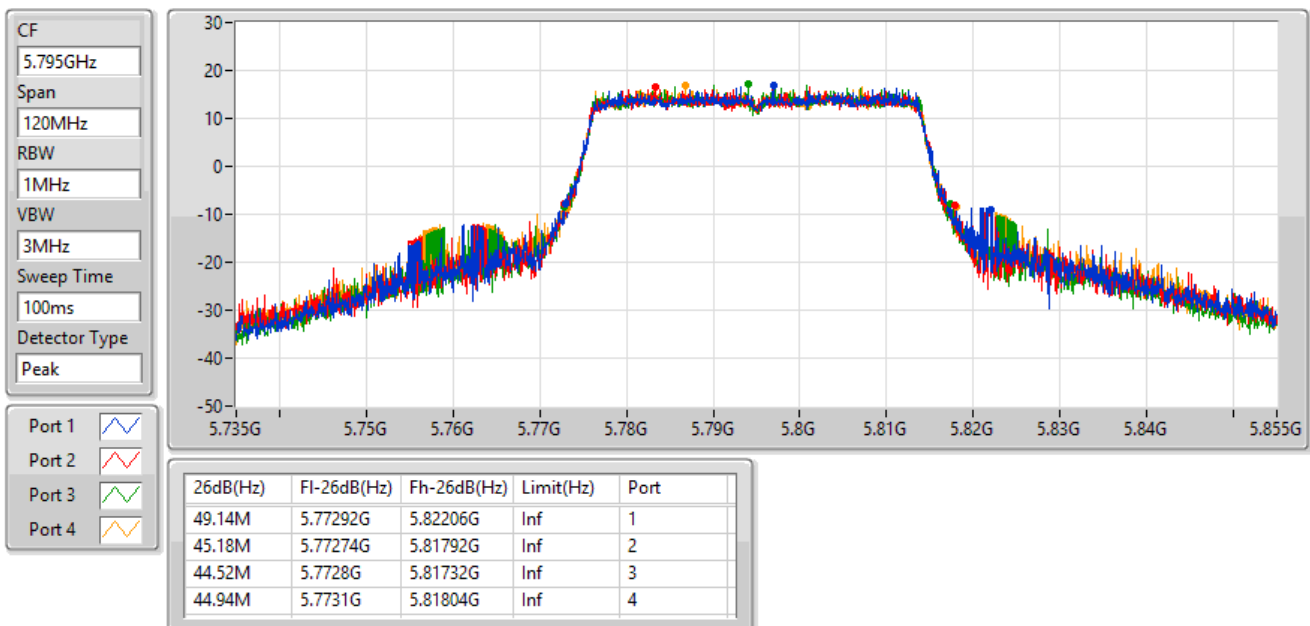


802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5795MHz

16/07/2022

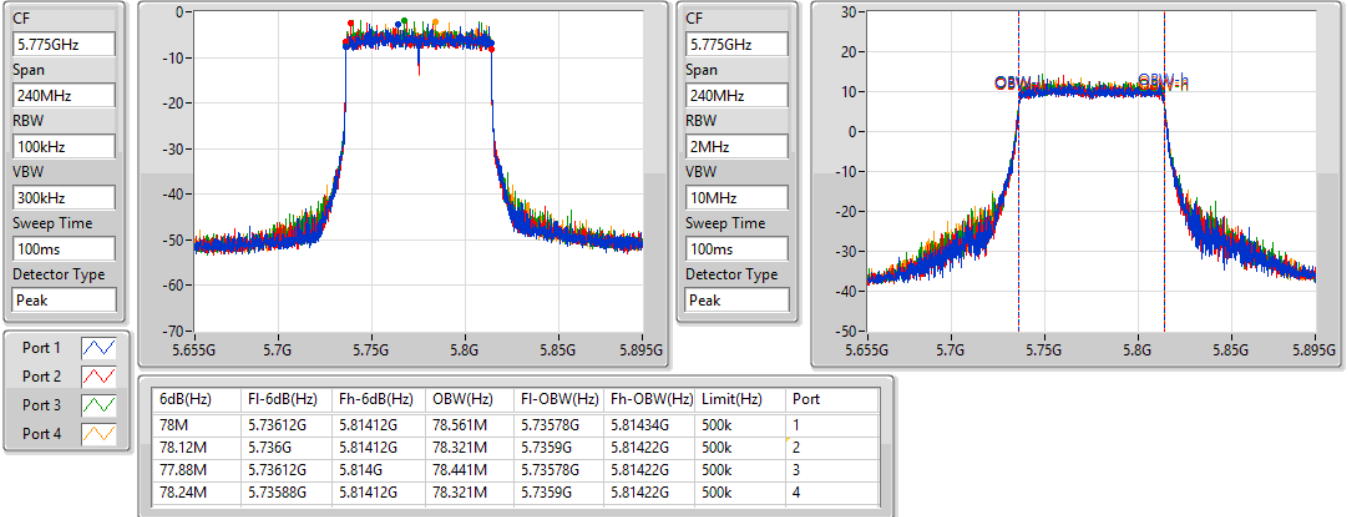

802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5795MHz

16/07/2022

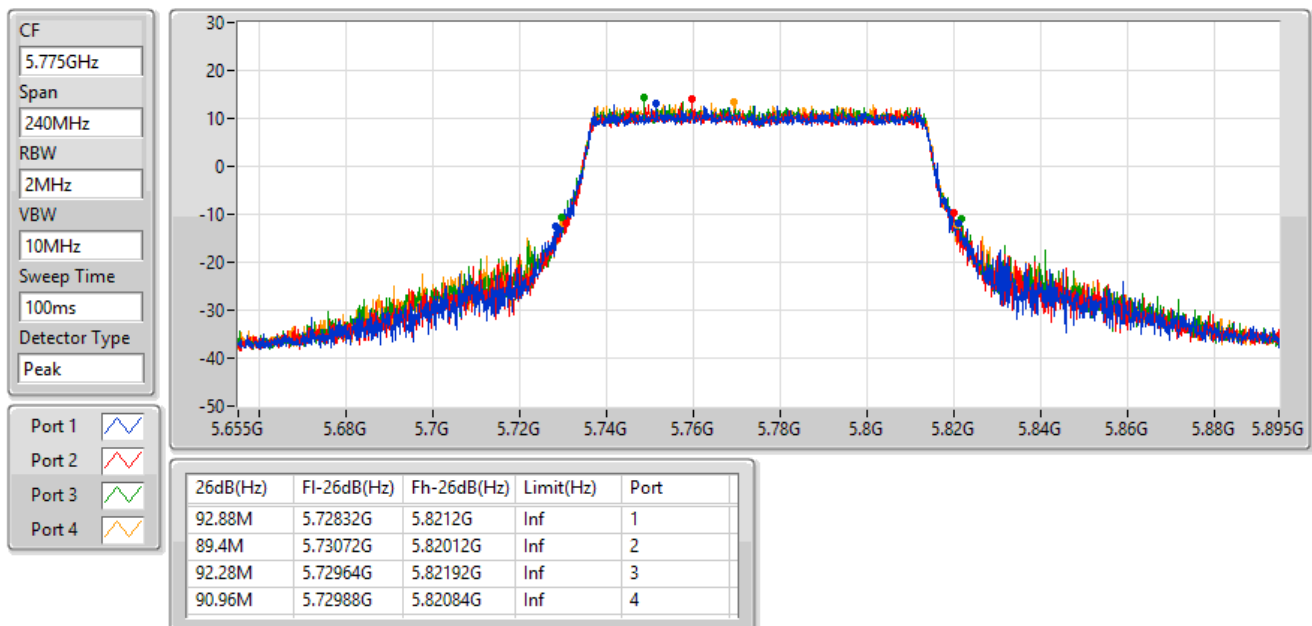


802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
5775MHz

16/07/2022


802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
5775MHz

16/07/2022





Average Power

Appendix C

Summary

Mode	Total Power (dBm)	Total Power (W)
5.725-5.85GHz	-	-
802.11a_Nss1,(6Mbps)_4TX	26.76	0.47424
802.11ax HEW20_Nss1,(MCS0)_4TX	26.87	0.48641
802.11ax HEW40_Nss1,(MCS0)_4TX	26.23	0.41976
802.11ax HEW80_Nss1,(MCS0)_4TX	22.47	0.17660



Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-
5745MHz	Pass	18.00	20.73	20.58	20.75	20.89	26.76	30.00
5785MHz	Pass	18.00	20.64	20.32	20.44	20.60	26.52	30.00
5825MHz	Pass	18.00	20.74	20.64	20.38	20.63	26.62	30.00
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5745MHz	Pass	18.00	20.63	20.59	20.72	20.75	26.69	30.00
5785MHz	Pass	18.00	20.55	20.37	20.35	20.57	26.48	30.00
5825MHz	Pass	18.00	20.88	20.88	20.77	20.86	26.87	30.00
802.11ax HEW40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5755MHz	Pass	18.00	20.13	20.03	20.30	20.35	26.23	30.00
5795MHz	Pass	18.00	20.08	19.86	19.91	20.03	25.99	30.00
802.11ax HEW80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5775MHz	Pass	18.00	16.12	16.16	16.59	16.87	22.47	30.00

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

Summar

Mode	PD (dBm/RBW)
5.725-5.85GHz	-
802.11a_Nss1,(6Mbps)_4TX	12.16
802.11ax HEW20_Nss1,(MCS0)_4TX	11.49
802.11ax HEW40_Nss1,(MCS0)_4TX	8.36
802.11ax HEW80_Nss1,(MCS0)_4TX	1.02

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

Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	Port 3 (dBm/RBW)	Port 4 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-
5745MHz	Pass	21.01	6.46	6.16	6.39	6.52	12.16	30.00
5785MHz	Pass	21.01	6.06	5.74	5.99	6.12	11.77	30.00
5825MHz	Pass	21.01	6.10	5.99	6.01	6.19	11.87	30.00
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5745MHz	Pass	21.01	5.61	5.26	5.59	5.65	11.43	30.00
5785MHz	Pass	21.01	5.22	4.90	5.07	5.24	11.01	30.00
5825MHz	Pass	21.01	5.54	5.69	5.52	5.46	11.49	30.00
802.11ax HEW40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5755MHz	Pass	21.01	2.44	2.32	2.49	2.62	8.36	30.00
5795MHz	Pass	21.01	1.93	1.88	2.06	1.97	7.81	30.00
802.11ax HEW80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5775MHz	Pass	21.01	-5.21	-5.27	-4.59	-4.45	1.02	30.00

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

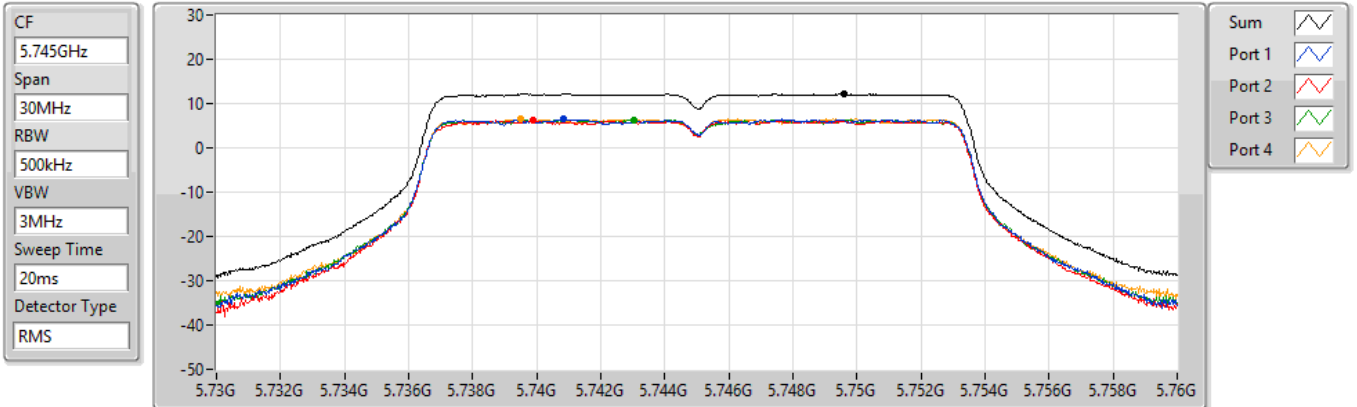
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;

802.11a_Nss1,(6Mbps)_4TX

PSD

5745MHz

16/07/2022



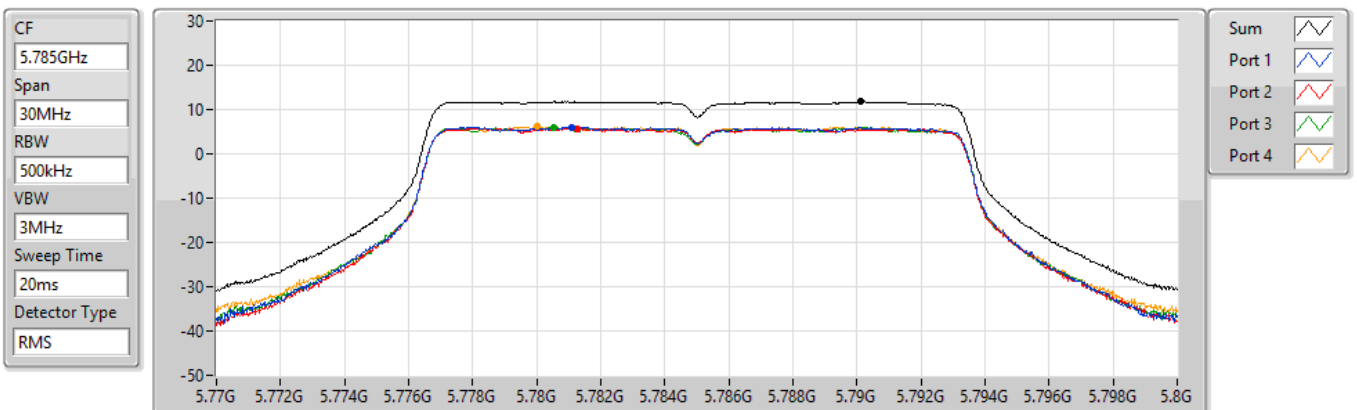
Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
12.16	12.16	6.46	6.16	6.39	6.52

802.11a_Nss1,(6Mbps)_4TX

PSD

5785MHz

16/07/2022



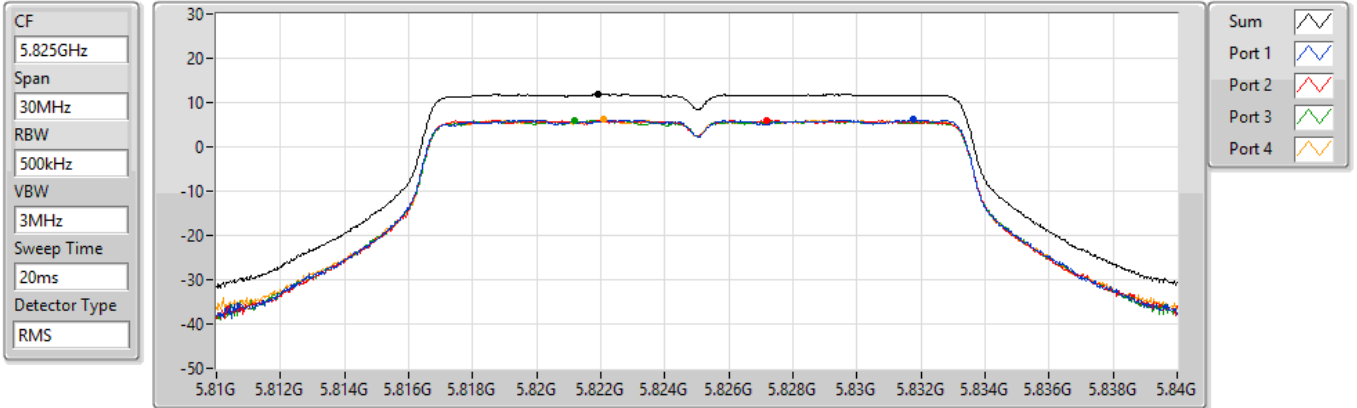
Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
11.77	11.77	6.06	5.74	5.99	6.12

802.11a_Nss1,(6Mbps)_4TX

PSD

5825MHz

16/07/2022

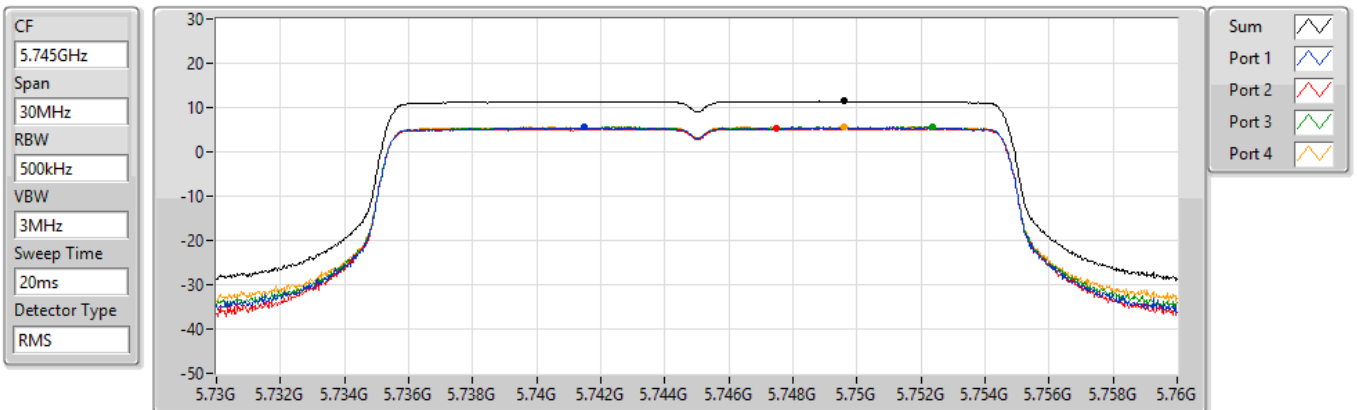


802.11ax HEW20_Nss1,(MCS0)_4TX

PSD

5745MHz

16/07/2022

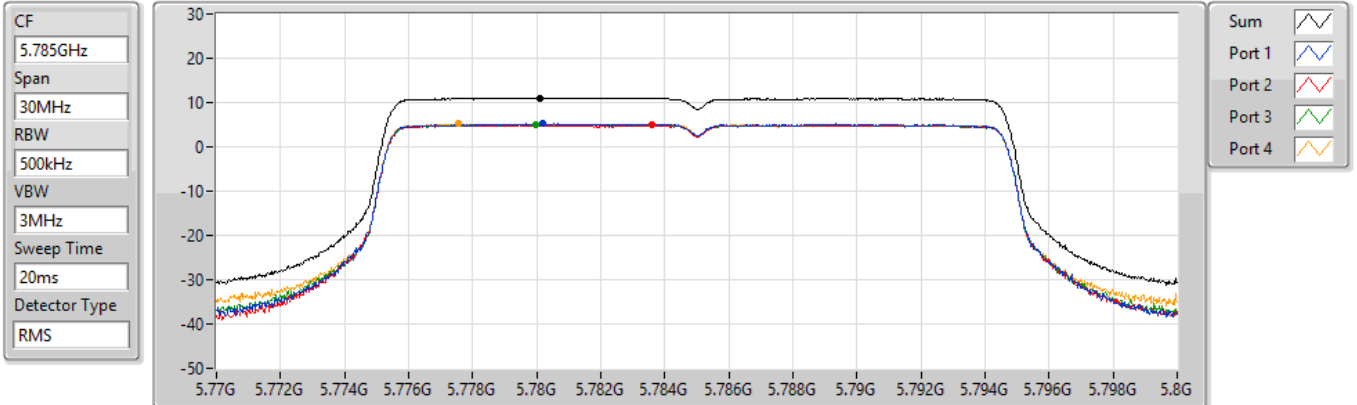


802.11ax HEW20_Nss1,(MCS0)_4TX

PSD

5785MHz

16/07/2022

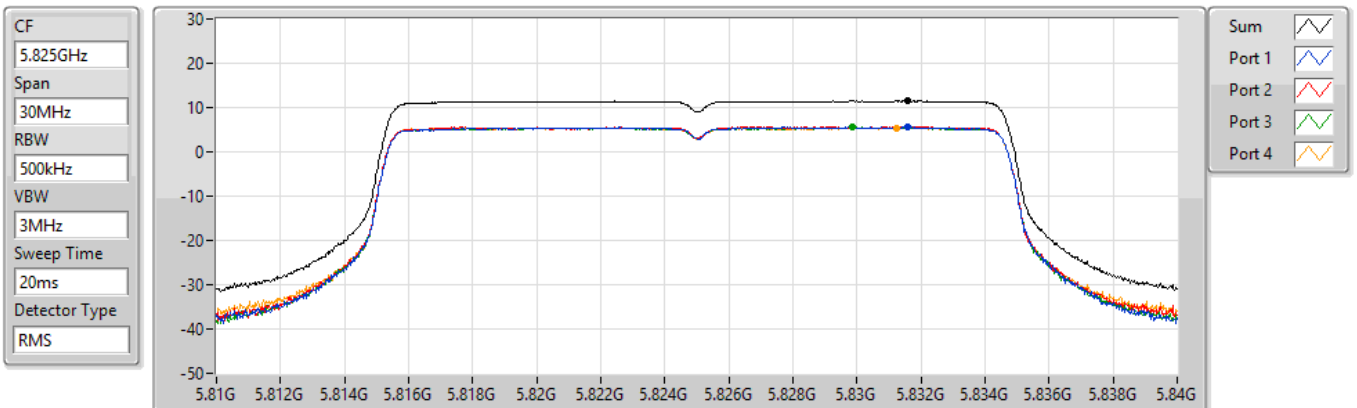


802.11ax HEW20_Nss1,(MCS0)_4TX

PSD

5825MHz

16/07/2022

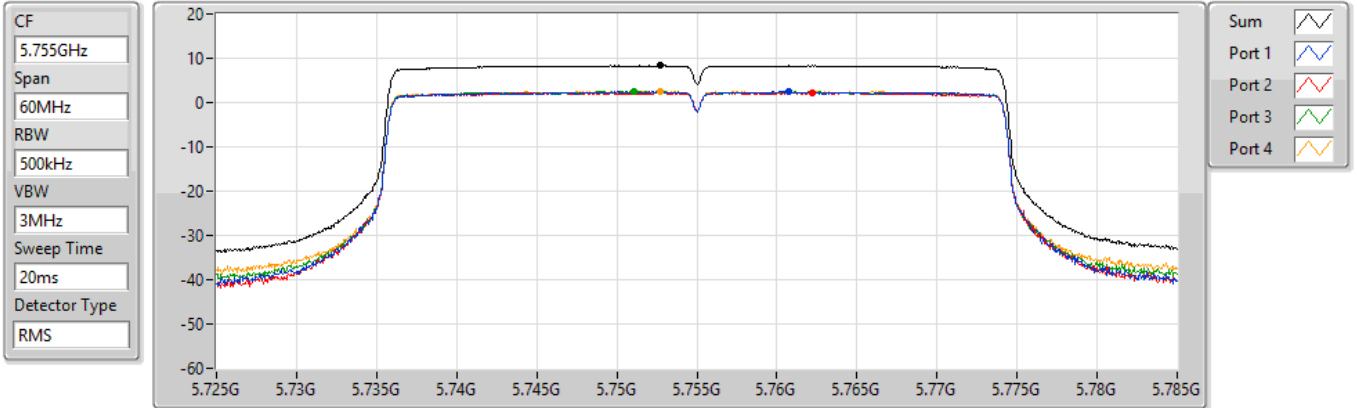


802.11ax HEW40_Nss1,(MCS0)_4TX

PSD

5755MHz

16/07/2022



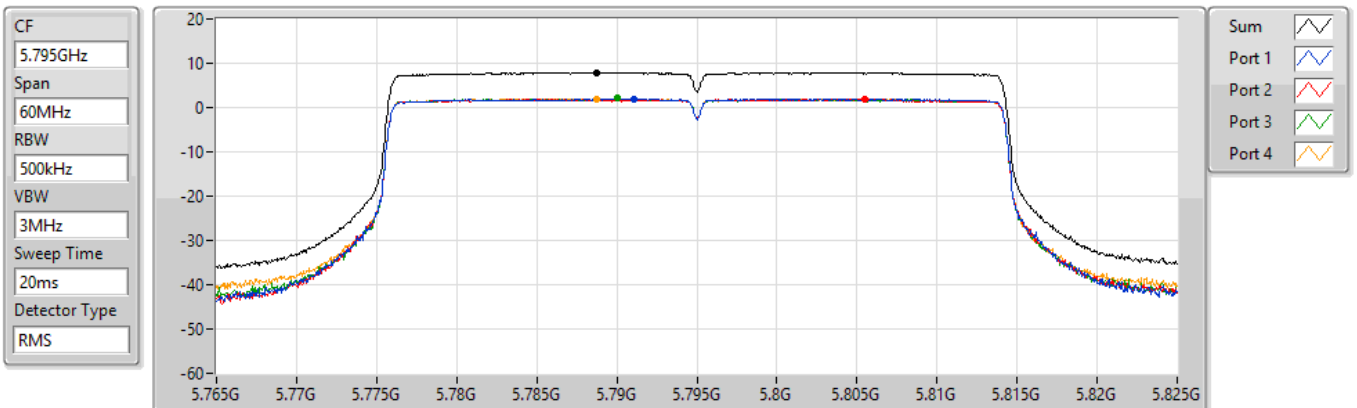
Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
8.36	8.36	2.44	2.32	2.49	2.62

802.11ax HEW40_Nss1,(MCS0)_4TX

PSD

5795MHz

16/07/2022



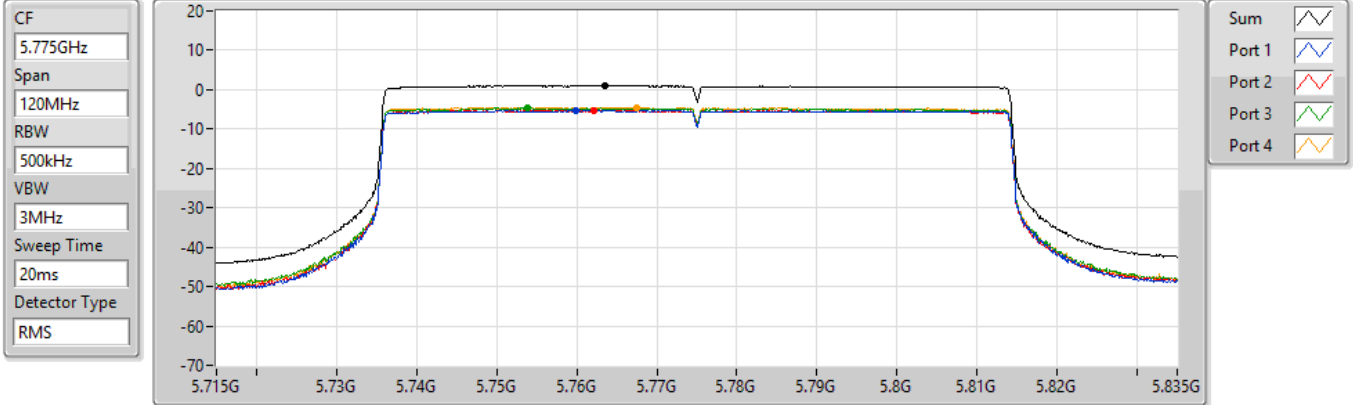
Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.81	7.81	1.93	1.88	2.06	1.97

802.11ax HEW80_Nss1,(MCS0)_4TX

5775MHz

PSD

16/07/2022



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
1.02	1.02	-5.21	-5.27	-4.59	-4.45



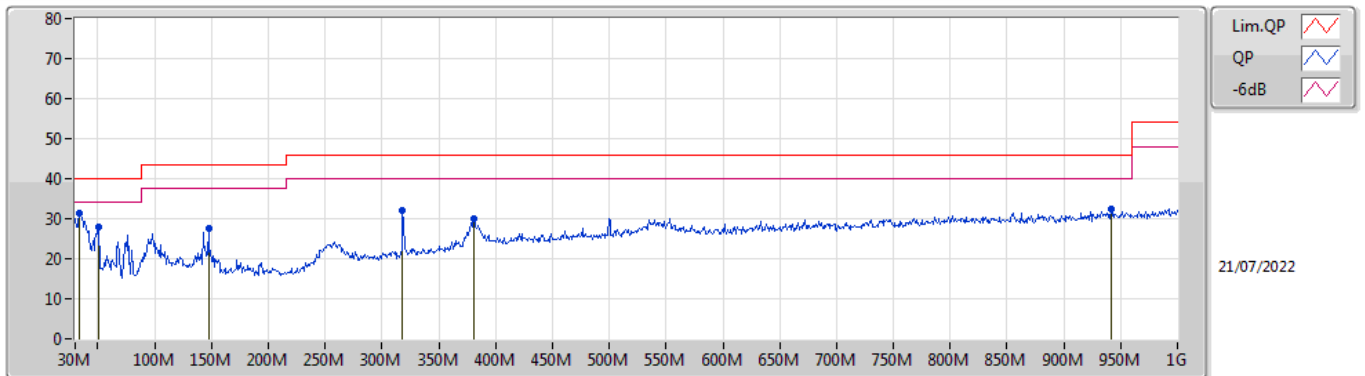
Radiated Emissions below 1GHz

Appendix E.1

Summary

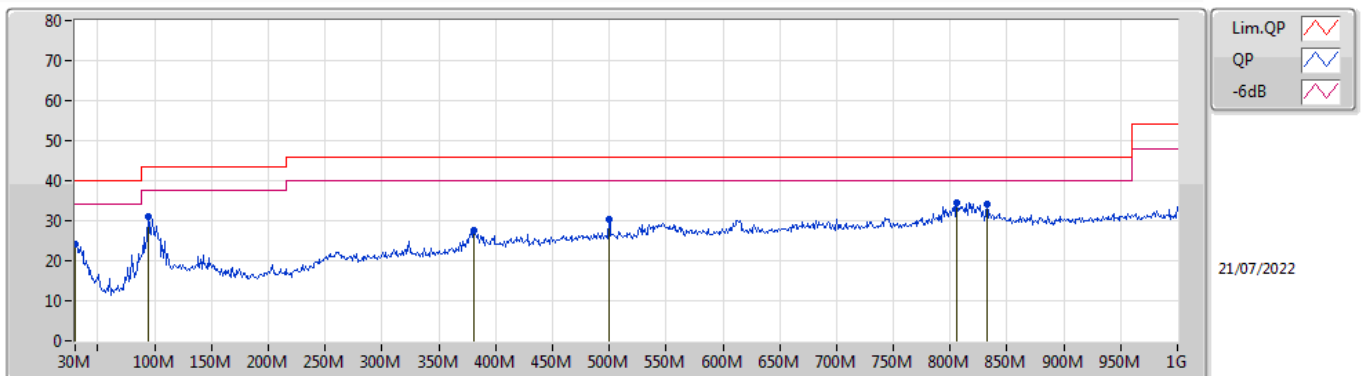
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	PK	33.88M	31.31	40.00	-8.69	Vertical

Mode 1



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV/m)	AF (dB/m)	CL (dB)	PA (dB)
PK	33.88M	31.31	40.00	-8.69	-8.80	3	Vertical	36	1.25	"Worst"	40.11	21.98	0.88	31.66
PK	50.37M	28.02	40.00	-11.98	-16.84	3	Vertical	35	1.00	-	44.86	13.92	1.10	31.86
PK	147.37M	27.45	43.50	-16.05	-13.77	3	Vertical	165	1.00	-	41.22	16.37	1.87	32.01
PK	318.09M	32.09	46.00	-13.91	-9.82	3	Vertical	119	1.50	-	41.91	19.51	2.81	32.14
PK	381.14M	29.94	46.00	-16.06	-8.15	3	Vertical	162	1.00	-	38.09	20.90	3.12	32.17
PK	941.8M	32.44	46.00	-13.56	-0.54	3	Vertical	166	3.00	-	32.98	26.39	5.55	32.48

Mode 1



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV/m)	(dB/m)	(dB)	(dB)
PK	30M	24.25	40.00	-15.75	-6.76	3	Horizontal	228	1.00	-	31.01	23.99	0.80	31.55
PK	94.02M	30.90	43.50	-12.60	-15.02	3	Horizontal	116	3.00	-	45.92	15.51	1.42	31.95
PK	381.14M	27.50	46.00	-18.50	-8.15	3	Horizontal	302	1.00	-	35.65	20.90	3.12	32.17
PK	499.48M	30.43	46.00	-15.57	-5.61	3	Horizontal	205	1.25	-	36.04	23.19	3.60	32.40
PK	806M	34.52	46.00	-11.48	-2.02	3	Horizontal	113	1.00	"Worst"	36.54	25.57	4.92	32.51
PK	832.19M	34.02	46.00	-11.98	-1.76	3	Horizontal	228	1.25	-	35.78	25.71	5.03	32.50

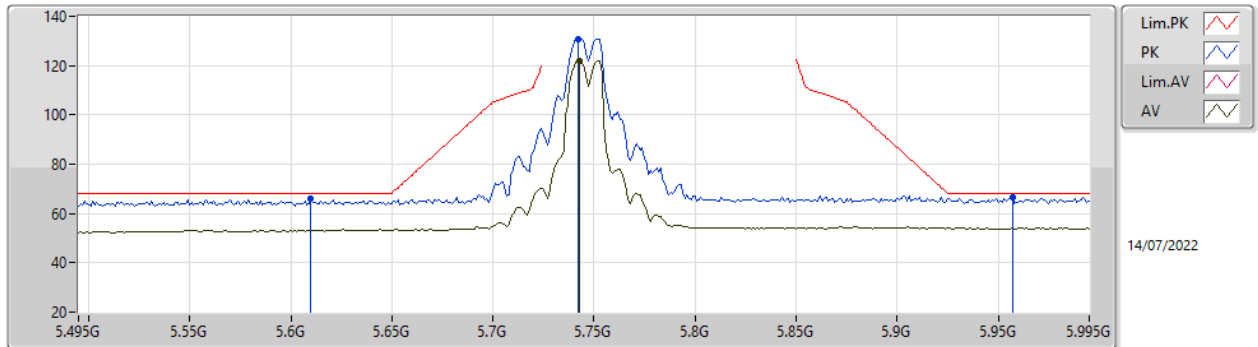


Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
5.725-5.85GHz	-	-	-	-	-	-	-	-	-	-	-
802.11ax HEW40_Nss1.(MCS0)_4TX	Pass	PK	5.942G	68.19	68.20	-0.01	3	Vertical	347	1.71	-

802.11a_Nss1,(6Mbps)_4TX

5745MHz_TnomVnom

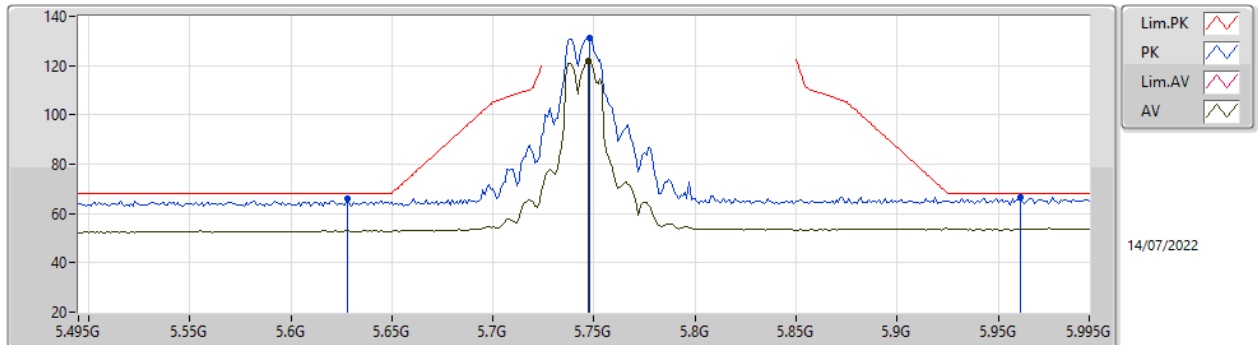


EUT Y_4TX
Setting 20
04-E-C-6-15

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	5.61G	66.09	68.20	-2.11	59.19	3	Vertical	337	1.75	-	34.06	5.30	32.46
PK	5.742G	130.94	Inf	-Inf	123.77	3	Vertical	337	1.75	-	34.37	5.30	32.50
AV	5.743G	121.81	Inf	-Inf	114.64	3	Vertical	337	1.75	-	34.37	5.30	32.50
PK	5.957G	66.66	68.20	-1.54	58.62	3	Vertical	337	1.75	-	35.23	5.38	32.57

802.11a_Nss1,(6Mbps)_4TX

5745MHz_TnomVnom

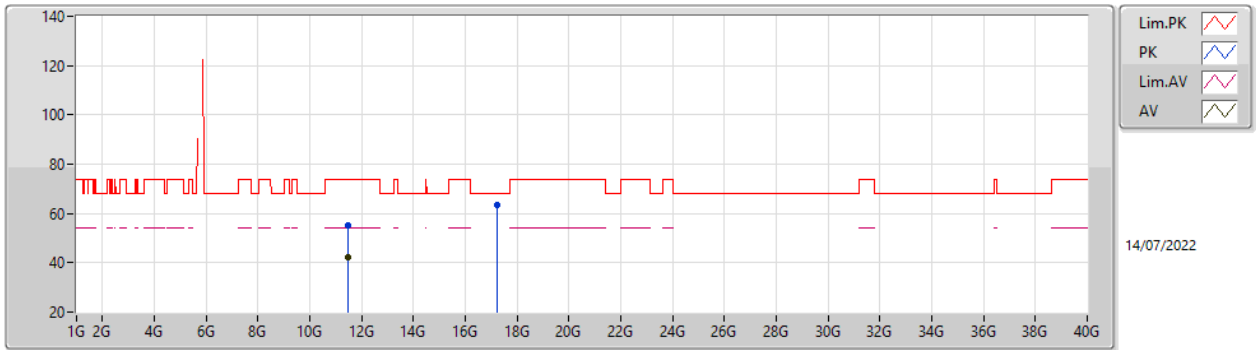


EUT Y_4TX
Setting 20
04-E-C-6-15

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	5.628G	65.87	68.20	-2.33	58.87	3	Horizontal	342	1.78	-	34.17	5.30	32.47
PK	5.748G	131.04	Inf	-Inf	123.85	3	Horizontal	342	1.78	-	34.39	5.30	32.50
AV	5.747G	121.71	Inf	-Inf	114.52	3	Horizontal	342	1.78	-	34.39	5.30	32.50
PK	5.961G	66.81	68.20	-1.39	58.76	3	Horizontal	342	1.78	-	35.24	5.38	32.57

802.11a_Nss1,(6Mbps)_4TX

5745MHz_TnomVnom

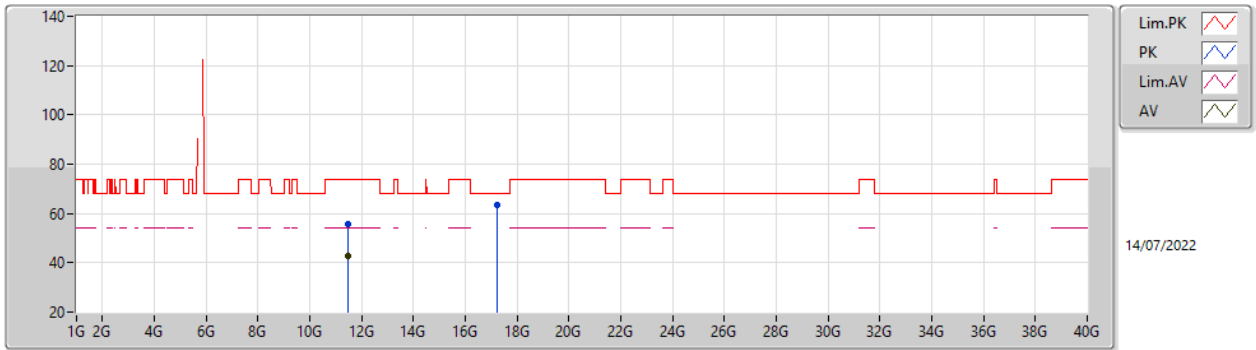


EUT Y_4TX
Setting 20
04-E-C-6

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	11.48178G	55.43	74.00	-18.57	41.54	3	Vertical	20	1.01	-	39.32	8.64	34.07
AV	11.47662G	42.43	54.00	-11.57	28.54	3	Vertical	20	1.01	-	39.32	8.63	34.06
PK	17.2242G	63.49	68.20	-4.71	46.23	3	Vertical	301	1.50	-	41.32	9.53	33.59

802.11a_Nss1,(6Mbps)_4TX

5745MHz_TnomVnom

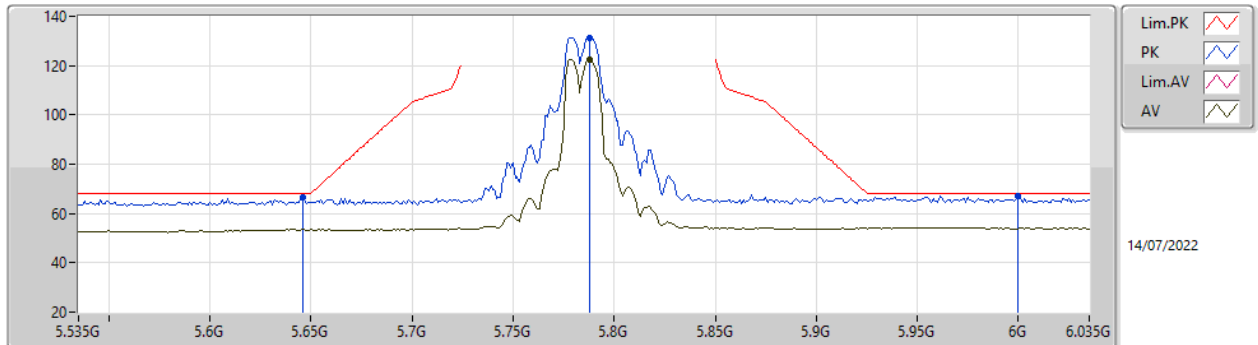


EUT Y_4TX
Setting 20
04-E-C-6

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	11.4954G	55.85	74.00	-18.15	41.98	3	Horizontal	285	1.93	-	39.30	8.65	34.08
AV	11.48832G	42.63	54.00	-11.37	28.76	3	Horizontal	285	1.93	-	39.31	8.64	34.08
PK	17.24424G	63.35	68.20	-4.85	45.98	3	Horizontal	3	1.86	-	41.42	9.54	33.59

802.11a_Nss1,(6Mbps)_4TX

5785MHz_TnomVnom

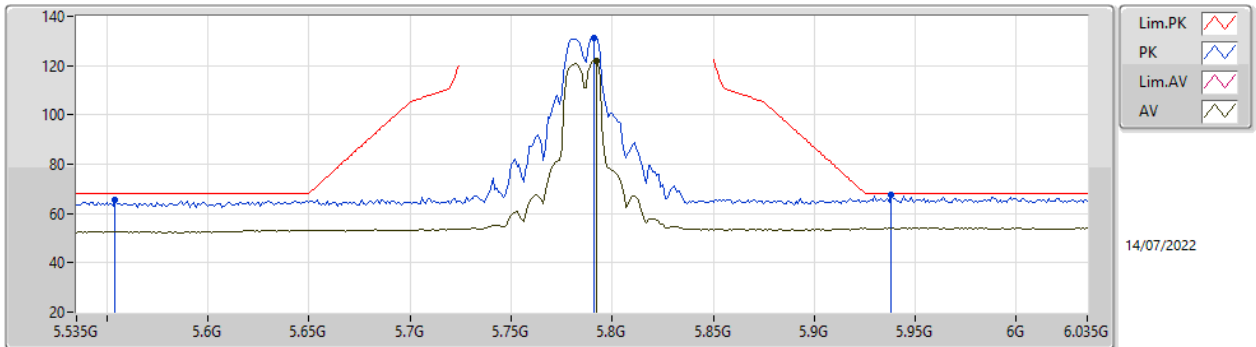


EUT Y_4TX
Setting 20
04-E-C-6-15

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	66.43	68.20	-1.77	59.32	3	Vertical	0	1.68	-	34.28	5.30	32.47
PK	5.788G	131.20	Inf	-Inf	123.94	3	Vertical	0	1.68	-	34.48	5.30	32.52
AV	5.788G	122.36	Inf	-Inf	115.10	3	Vertical	0	1.68	-	34.48	5.30	32.52
PK	6G	67.07	68.20	-1.13	58.85	3	Vertical	0	1.68	-	35.40	5.40	32.58

802.11a_Nss1,(6Mbps)_4TX

5785MHz_TnomVnom

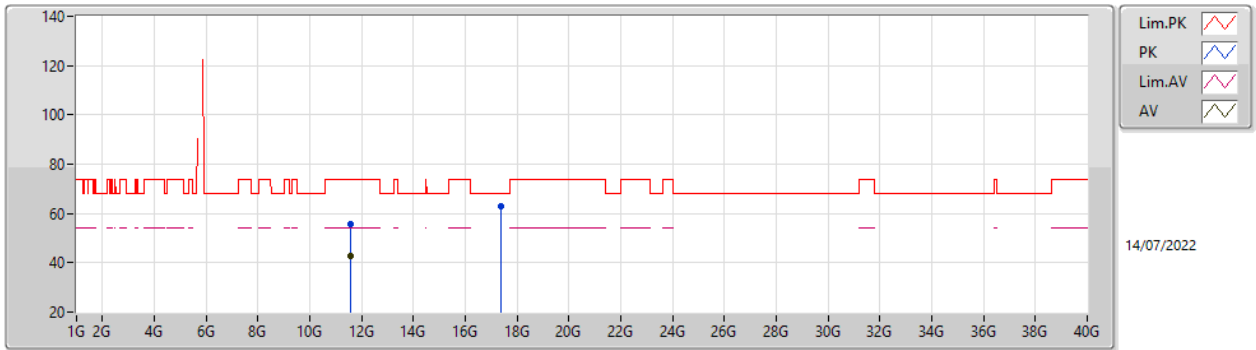


EUT Y_4TX
Setting 20
04-E-C-6-15

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	5.554G	65.55	68.20	-2.65	58.66	3	Horizontal	2	1.73	-	34.09	5.25	32.45
PK	5.791G	131.14	Inf	-Inf	123.88	3	Horizontal	2	1.73	-	34.48	5.30	32.52
AV	5.792G	121.89	Inf	-Inf	114.63	3	Horizontal	2	1.73	-	34.48	5.30	32.52
PK	5.938G	67.54	68.20	-0.66	59.60	3	Horizontal	2	1.73	-	35.13	5.37	32.56

802.11a_Nss1,(6Mbps)_4TX

5785MHz_TnomVnom

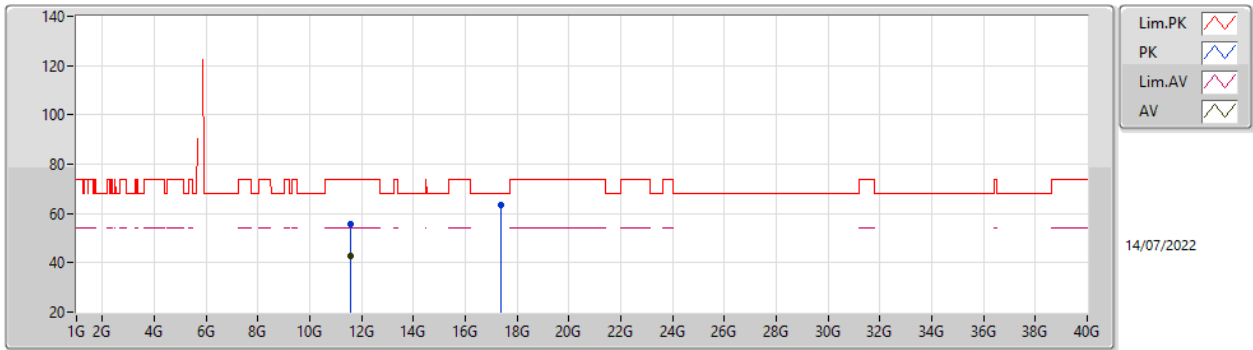


EUT Y_4TX
Setting 20
04-E-C-6

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	11.56436G	55.83	74.00	-18.17	41.96	3	Vertical	13	1.67	-	39.30	8.70	34.13
AV	11.57282G	42.74	54.00	-11.26	28.87	3	Vertical	13	1.67	-	39.30	8.70	34.13
PK	17.36136G	63.11	68.20	-5.09	45.26	3	Vertical	348	2.07	-	41.88	9.58	33.61

802.11a_Nss1,(6Mbps)_4TX

5785MHz_TnomVnom

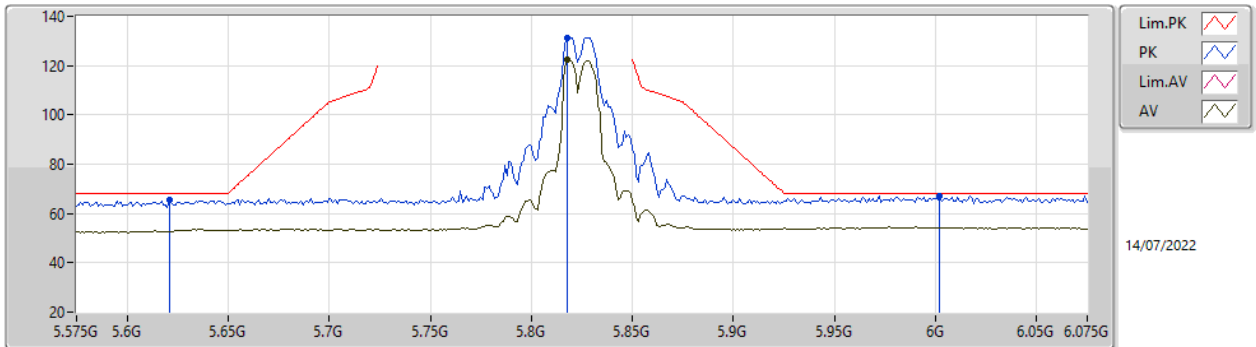


EUT Y_4TX
Setting 20
04-E-C-6

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	11.56256G	55.79	74.00	-18.21	41.93	3	Horizontal	258	2.82	-	39.30	8.69	34.13
AV	11.5721G	42.73	54.00	-11.27	28.86	3	Horizontal	258	2.82	-	39.30	8.70	34.13
PK	17.35596G	63.47	68.20	-4.73	45.64	3	Horizontal	297	1.29	-	41.87	9.57	33.61

802.11a_Nss1,(6Mbps)_4TX

5825MHz_TnomVnom

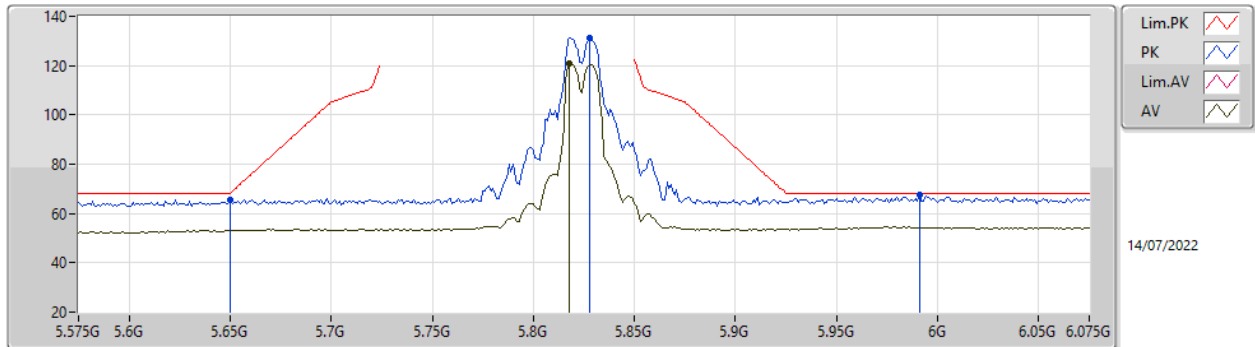


EUT Y_4TX
Setting 20
04-E-C-6-15

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	5.621G	65.44	68.20	-2.76	58.48	3	Vertical	0	1.70	-	34.13	5.30	32.47
PK	5.818G	131.24	Inf	-Inf	123.85	3	Vertical	0	1.70	-	34.61	5.31	32.53
AV	5.818G	122.41	Inf	-Inf	115.02	3	Vertical	0	1.70	-	34.61	5.31	32.53
PK	6.002G	66.96	68.20	-1.24	58.74	3	Vertical	0	1.70	-	35.40	5.40	32.58

802.11a_Nss1,(6Mbps)_4TX

5825MHz_TnomVnom

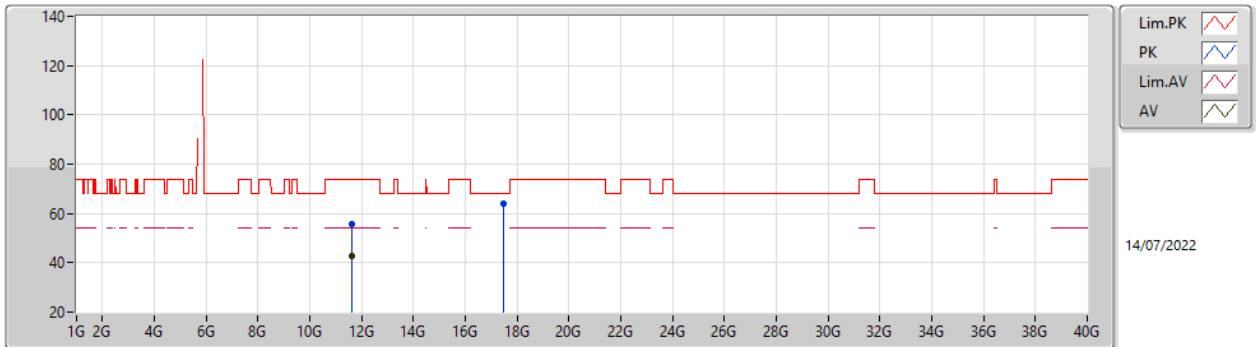


EUT Y_4TX
Setting 20
04-E-C-6-15

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	65.60	68.20	-2.60	58.48	3	Horizontal	348	1.72	-	34.30	5.30	32.48
PK	5.828G	131.05	Inf	-Inf	123.60	3	Horizontal	348	1.72	-	34.67	5.31	32.53
AV	5.818G	120.85	Inf	-Inf	113.46	3	Horizontal	348	1.72	-	34.61	5.31	32.53
PK	5.991G	67.37	68.20	-0.83	59.19	3	Horizontal	348	1.72	-	35.36	5.40	32.58

802.11a_Nss1,(6Mbps)_4TX

5825MHz_TnomVnom

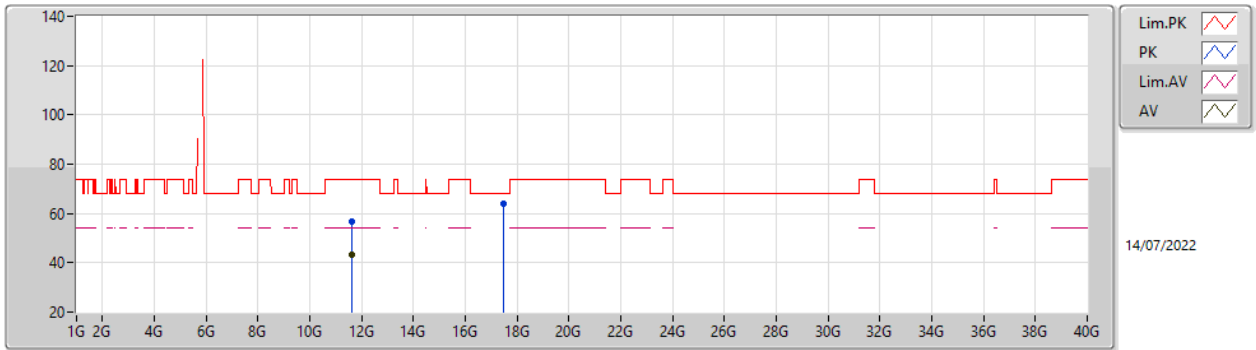


EUT Y_4TX
Setting 20
04-E-C-6

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	11.63974G	55.70	74.00	-18.30	41.86	3	Vertical	185	2.74	-	39.26	8.75	34.17
AV	11.63956G	42.84	54.00	-11.16	29.00	3	Vertical	185	2.74	-	39.26	8.75	34.17
PK	17.46462G	63.74	68.20	-4.46	45.70	3	Vertical	32	2.34	-	42.06	9.61	33.63

802.11a_Nss1,(6Mbps)_4TX

5825MHz_TnomVnom

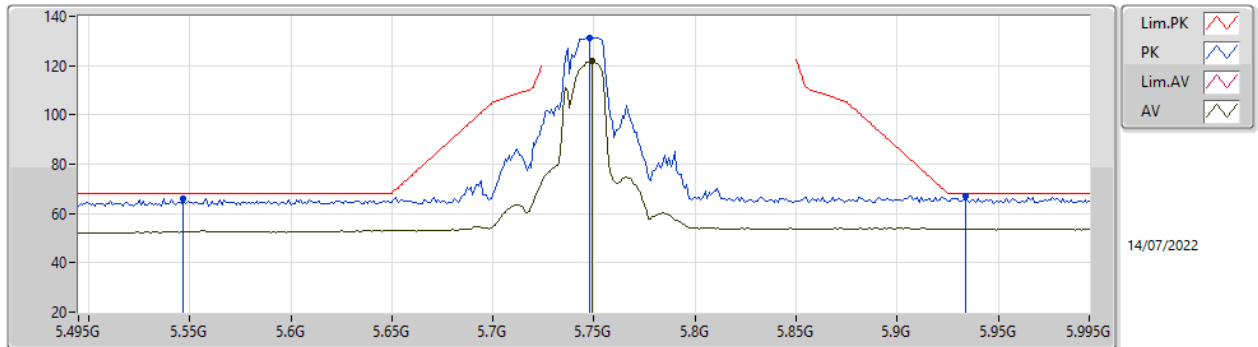


EUT Y_4TX
Setting 20
04-E-C-6

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	11.63782G	56.92	74.00	-17.08	43.08	3	Horizontal	323	2.68	-	39.26	8.75	34.17
AV	11.6449G	43.39	54.00	-10.61	29.55	3	Horizontal	323	2.68	-	39.26	8.75	34.17
PK	17.4816G	63.97	68.20	-4.23	45.90	3	Horizontal	149	2.06	-	42.08	9.62	33.63

802.11ax HEW20_Nss1,(MCS0)_4TX

5745MHz_TnomVnom

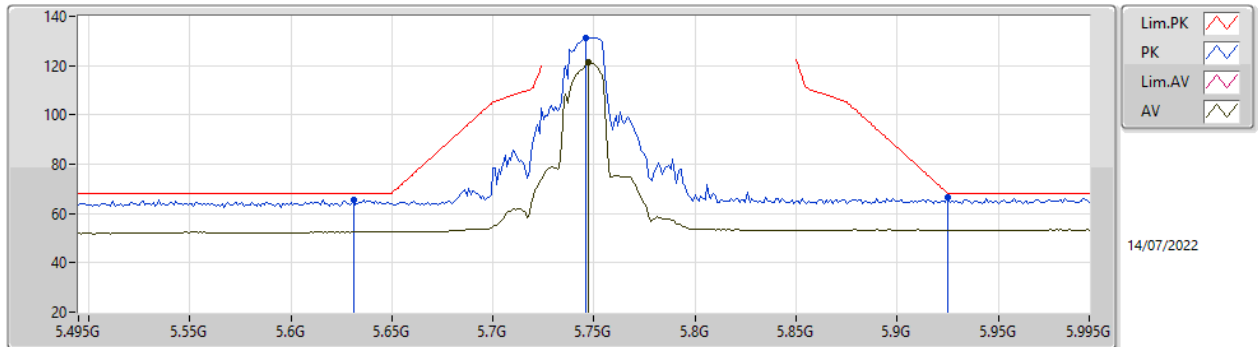


EUT Y_4TX
Setting 20
04-E-C-6-15

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	5.547G	66.02	68.20	-2.18	59.12	3	Vertical	356	1.72	-	34.09	5.25	32.44
PK	5.748G	131.18	Inf	-Inf	123.99	3	Vertical	356	1.72	-	34.39	5.30	32.50
AV	5.749G	121.64	Inf	-Inf	114.44	3	Vertical	356	1.72	-	34.40	5.30	32.50
PK	5.934G	67.09	68.20	-1.11	59.18	3	Vertical	356	1.72	-	35.10	5.37	32.56

802.11ax HEW20_Nss1,(MCS0)_4TX

5745MHz_TnomVnom

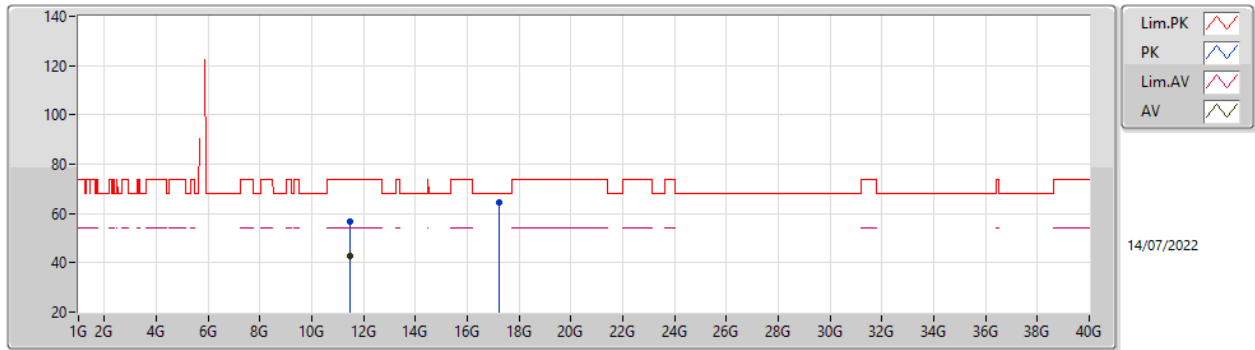


EUT Y_4TX
Setting 20
04-E-C-6-15

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	65.62	68.20	-2.58	58.60	3	Horizontal	340	1.78	-	34.19	5.30	32.47
PK	5.746G	131.20	Inf	-Inf	124.02	3	Horizontal	340	1.78	-	34.38	5.30	32.50
AV	5.747G	121.34	Inf	-Inf	114.15	3	Horizontal	340	1.78	-	34.39	5.30	32.50
PK	5.925G	66.31	68.20	-1.89	58.46	3	Horizontal	340	1.78	-	35.05	5.36	32.56

802.11ax HEW20_Nss1,(MCS0)_4TX

5745MHz_TnomVnom

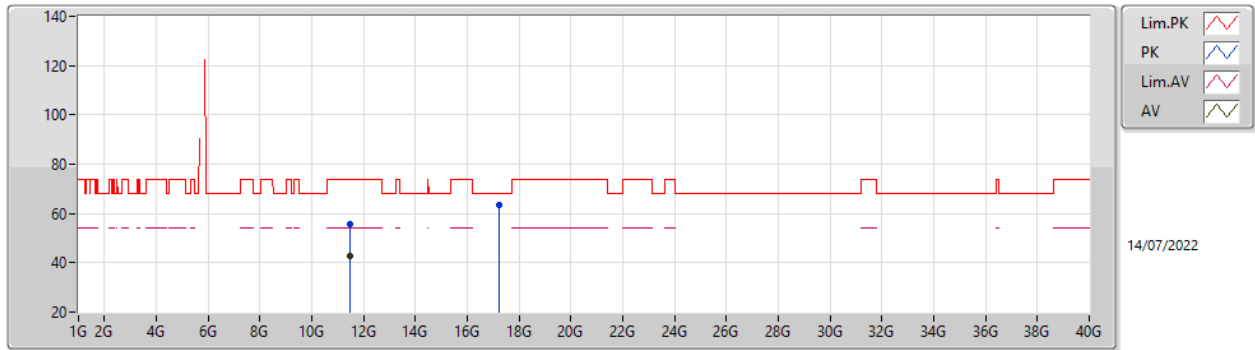


EUT Y_4TX
Setting 20
04-E-C-6

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	11.47926G	56.91	74.00	-17.09	43.01	3	Vertical	259	2.25	-	39.32	8.64	34.06
AV	11.48202G	42.55	54.00	-11.45	28.66	3	Vertical	259	2.25	-	39.32	8.64	34.07
PK	17.2344G	64.34	68.20	-3.86	47.03	3	Vertical	156	1.80	-	41.37	9.53	33.59

802.11ax HEW20_Nss1,(MCS0)_4TX

5745MHz_TnomVnom

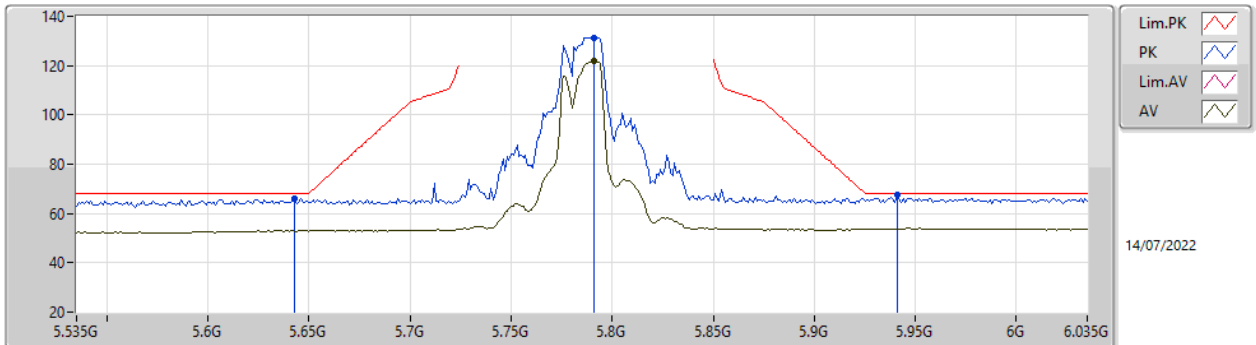


EUT Y_4TX
Setting 20
04-E-C-6

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	11.49774G	55.55	74.00	-18.45	41.69	3	Horizontal	97	2.37	-	39.30	8.65	34.09
AV	11.48484G	42.58	54.00	-11.42	28.69	3	Horizontal	97	2.37	-	39.32	8.64	34.07
PK	17.2251G	63.36	68.20	-4.84	46.09	3	Horizontal	258	1.35	-	41.33	9.53	33.59

802.11ax HEW20_Nss1,(MCS0)_4TX

5785MHz_TnomVnom

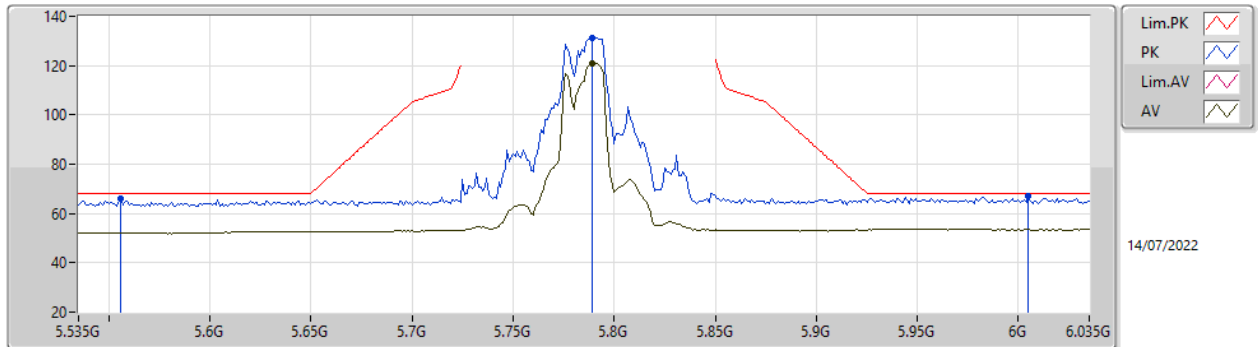


EUT Y_4TX
Setting 20
04-E-C-6-15

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	5.643G	65.96	68.20	-2.24	58.87	3	Vertical	360	1.72	-	34.26	5.30	32.47
PK	5.791G	131.25	Inf	-Inf	123.99	3	Vertical	360	1.72	-	34.48	5.30	32.52
AV	5.791G	121.91	Inf	-Inf	114.65	3	Vertical	360	1.72	-	34.48	5.30	32.52
PK	5.941G	67.55	68.20	-0.65	59.59	3	Vertical	360	1.72	-	35.15	5.37	32.56

802.11ax HEW20_Nss1,(MCS0)_4TX

5785MHz_TnomVnom

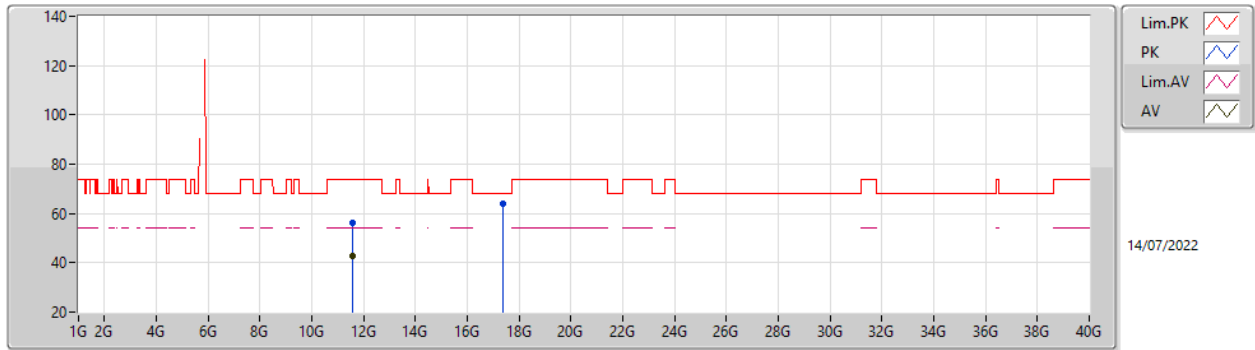


EUT Y_4TX
Setting 20
04-E-C-6-15

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	5.556G	65.92	68.20	-2.28	59.02	3	Horizontal	347	1.74	-	34.09	5.26	32.45
PK	5.789G	131.16	Inf	-Inf	123.90	3	Horizontal	347	1.74	-	34.48	5.30	32.52
AV	5.789G	121.11	Inf	-Inf	113.85	3	Horizontal	347	1.74	-	34.48	5.30	32.52
PK	6.005G	66.86	68.20	-1.34	58.63	3	Horizontal	347	1.74	-	35.40	5.41	32.58

802.11ax HEW20_Nss1,(MCS0)_4TX

5785MHz_TnomVnom

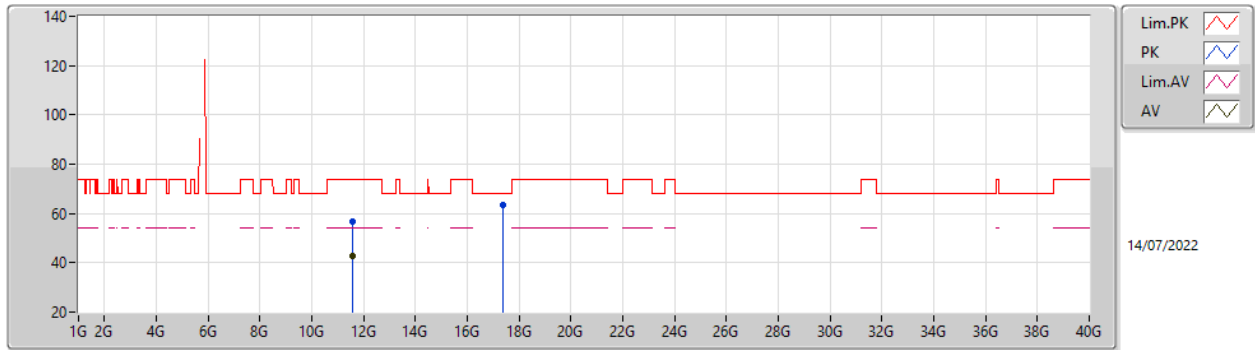


EUT Y_4TX
Setting 20
04-E-C-6

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	11.5649G	56.30	74.00	-17.70	42.43	3	Vertical	94	2.12	-	39.30	8.70	34.13
AV	11.56298G	42.56	54.00	-11.44	28.70	3	Vertical	94	2.12	-	39.30	8.69	34.13
PK	17.3655G	63.76	68.20	-4.44	45.89	3	Vertical	59	1.05	-	41.90	9.58	33.61

802.11ax HEW20_Nss1,(MCS0)_4TX

5785MHz_TnomVnom

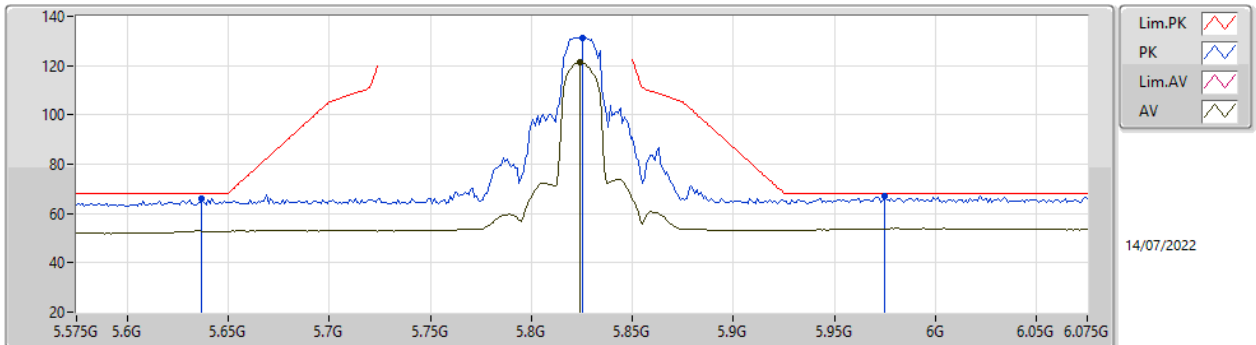


EUT Y_4TX
Setting 20
04-E-C-6

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	11.5682G	56.77	74.00	-17.23	42.90	3	Horizontal	245	2.30	-	39.30	8.70	34.13
AV	11.56916G	42.65	54.00	-11.35	28.78	3	Horizontal	245	2.30	-	39.30	8.70	34.13
PK	17.36778G	63.34	68.20	-4.86	45.47	3	Horizontal	182	2.83	-	41.90	9.58	33.61

802.11ax HEW20_Nss1,(MCS0)_4TX

5825MHz_TnomVnom

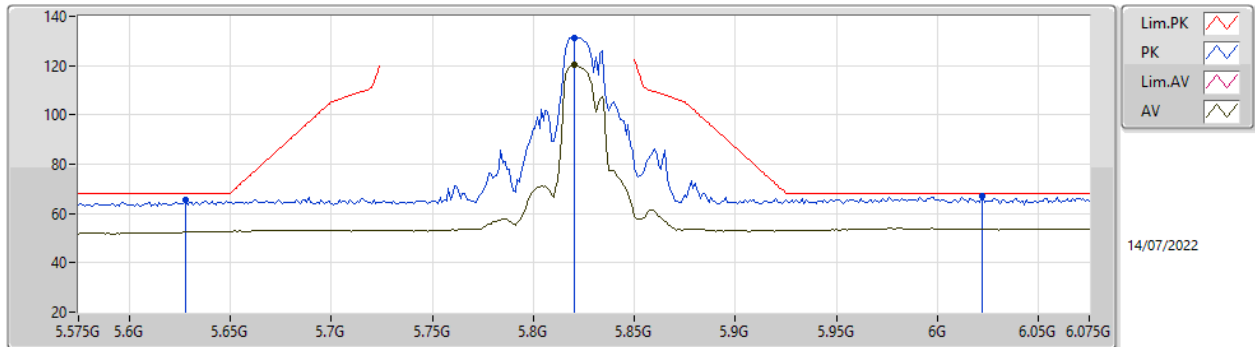


EUT Y_4TX
Setting 20
04-E-C-6-15

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	5.637G	66.06	68.20	-2.14	59.01	3	Vertical	348	1.70	-	34.22	5.30	32.47
PK	5.825G	131.28	Inf	-Inf	123.85	3	Vertical	348	1.70	-	34.65	5.31	32.53
AV	5.824G	121.44	Inf	-Inf	114.02	3	Vertical	348	1.70	-	34.64	5.31	32.53
PK	5.975G	67.14	68.20	-1.06	59.02	3	Vertical	348	1.70	-	35.30	5.39	32.57

802.11ax HEW20_Nss1,(MCS0)_4TX

5825MHz_TnomVnom

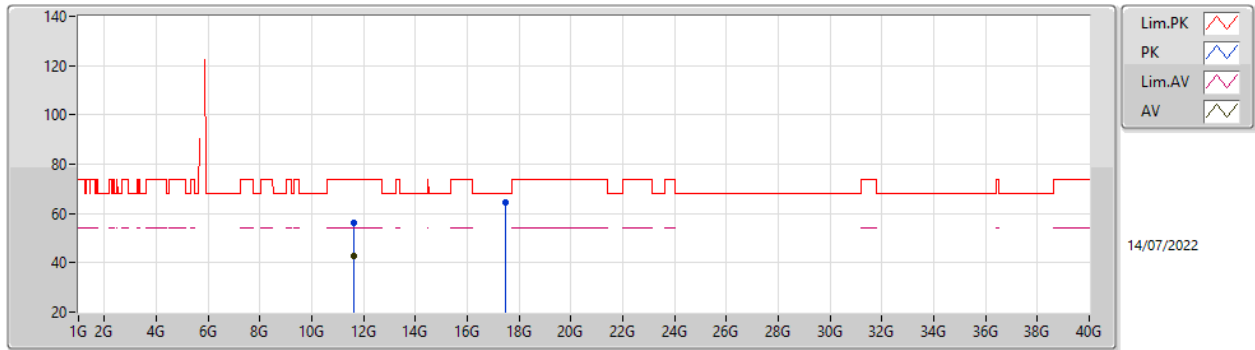


EUT Y_4TX
Setting 20
04-E-C-6-15

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	5.628G	65.46	68.20	-2.74	58.46	3	Horizontal	10	1.70	-	34.17	5.30	32.47
PK	5.82G	131.20	Inf	-Inf	123.80	3	Horizontal	10	1.70	-	34.62	5.31	32.53
AV	5.82G	120.31	Inf	-Inf	112.91	3	Horizontal	10	1.70	-	34.62	5.31	32.53
PK	6.022G	67.08	68.20	-1.12	58.85	3	Horizontal	10	1.70	-	35.40	5.42	32.59

802.11ax HEW20_Nss1,(MCS0)_4TX

5825MHz_TnomVnom

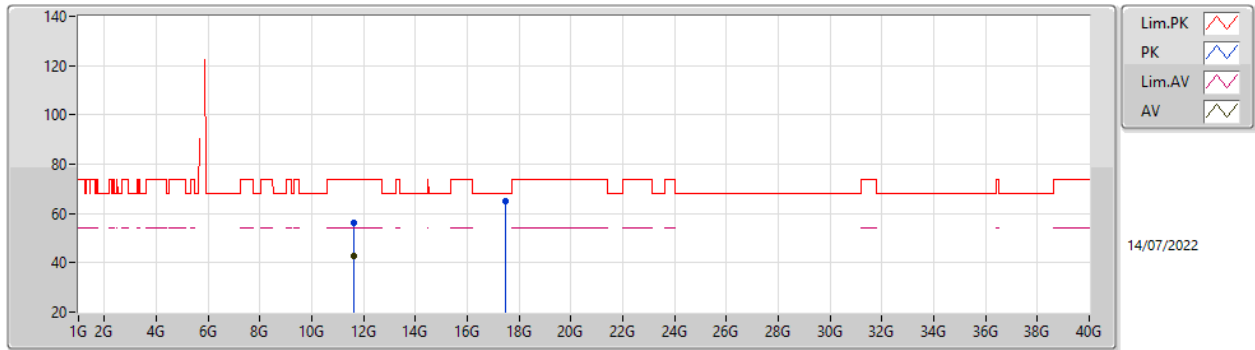


EUT Y_4TX
Setting 20
04-E-C-6

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	11.63716G	56.01	74.00	-17.99	42.17	3	Vertical	271	2.12	-	39.26	8.75	34.17
AV	11.6371G	42.82	54.00	-11.18	28.98	3	Vertical	271	2.12	-	39.26	8.75	34.17
PK	17.46096G	64.38	68.20	-3.82	46.33	3	Vertical	159	2.08	-	42.06	9.61	33.62

802.11ax HEW20_Nss1,(MCS0)_4TX

5825MHz_TnomVnom

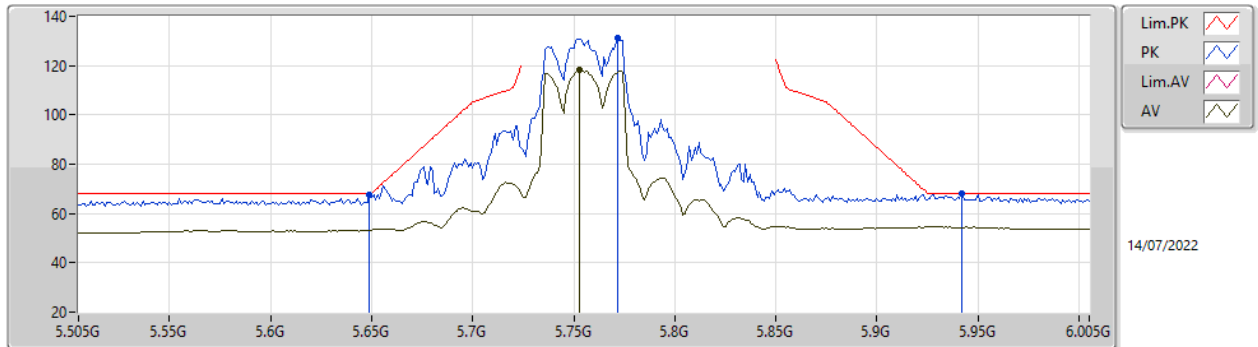


EUT Y_4TX
Setting 20
04-E-C-6

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	11.64016G	56.11	74.00	-17.89	42.27	3	Horizontal	9	2.50	-	39.26	8.75	34.17
AV	11.64268G	42.78	54.00	-11.22	28.94	3	Horizontal	9	2.50	-	39.26	8.75	34.17
PK	17.4804G	65.21	68.20	-2.99	47.14	3	Horizontal	157	2.41	-	42.08	9.62	33.63

802.11ax HEW40_Nss1,(MCS0)_4TX

5755MHz_TnomVnom

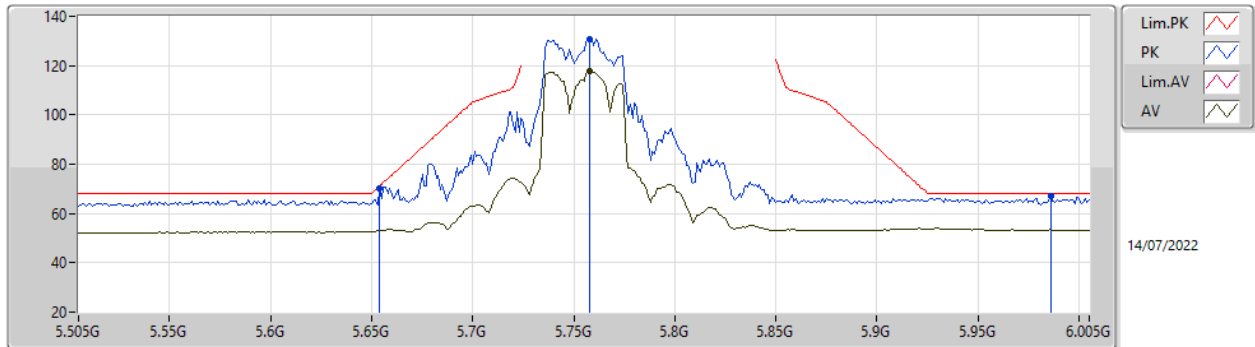


EUT Y_4TX
Setting 19.5
04-E-C-6-15

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	5.649G	67.63	68.20	-0.57	60.51	3	Vertical	347	1.71	-	34.29	5.30	32.47
PK	5.772G	131.01	Inf	-Inf	123.78	3	Vertical	347	1.71	-	34.44	5.30	32.51
AV	5.753G	118.07	Inf	-Inf	110.87	3	Vertical	347	1.71	-	34.41	5.30	32.51
PK	5.942G	68.19	68.20	-0.01	60.23	3	Vertical	347	1.71	-	35.15	5.37	32.56

802.11ax HEW40_Nss1,(MCS0)_4TX

5755MHz_TnomVnom

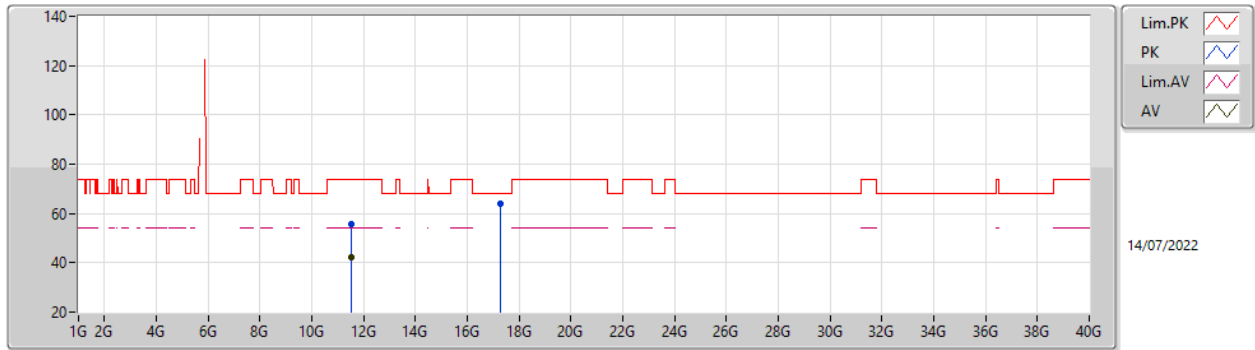


EUT Y_4TX
Setting 19.5
04-E-C-6-15

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	5.654G	70.19	71.16	-0.97	63.08	3	Horizontal	342	1.80	-	34.29	5.30	32.48
PK	5.758G	130.74	Inf	-Inf	123.53	3	Horizontal	342	1.80	-	34.42	5.30	32.51
AV	5.758G	117.78	Inf	-Inf	110.57	3	Horizontal	342	1.80	-	34.42	5.30	32.51
PK	5.986G	66.88	68.20	-1.32	58.73	3	Horizontal	342	1.80	-	35.34	5.39	32.58

802.11ax HEW40_Nss1,(MCS0)_4TX

5755MHz_TnomVnom

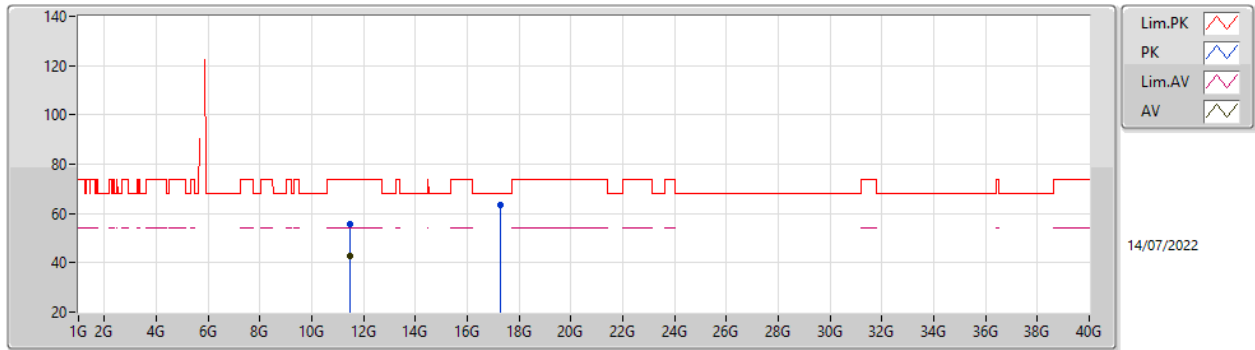


EUT Y_4TX
Setting 19.5
04-E-C-6

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	11.51504G	55.73	74.00	-18.27	41.87	3	Vertical	5	1.88	-	39.30	8.66	34.10
AV	11.50262G	42.39	54.00	-11.61	28.53	3	Vertical	5	1.88	-	39.30	8.65	34.09
PK	17.26074G	63.88	68.20	-4.32	46.44	3	Vertical	36	1.51	-	41.50	9.54	33.60

802.11ax HEW40_Nss1,(MCS0)_4TX

5755MHz_TnomVnom

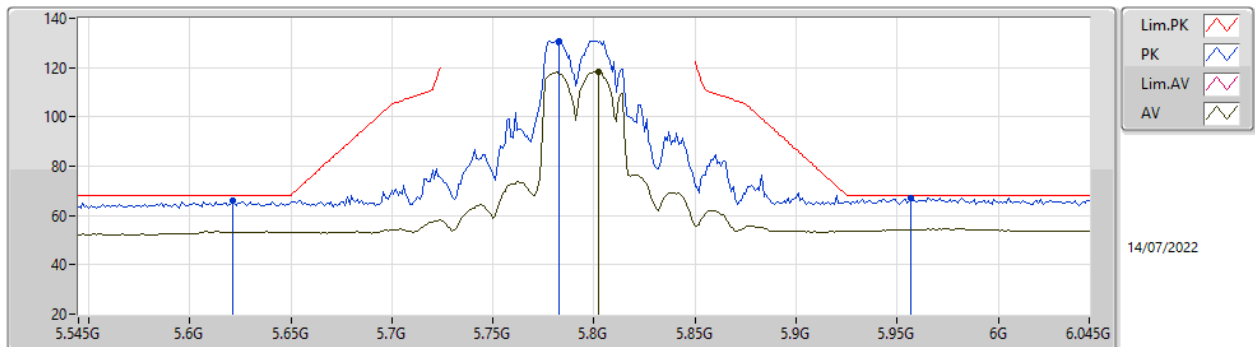


EUT Y_4TX
Setting 19.5
04-E-C-6

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	11.49584G	55.66	74.00	-18.34	41.79	3	Horizontal	69	2.47	-	39.30	8.65	34.08
AV	11.49632G	42.52	54.00	-11.48	28.66	3	Horizontal	69	2.47	-	39.30	8.65	34.09
PK	17.27424G	63.27	68.20	-4.93	45.75	3	Horizontal	323	2.64	-	41.57	9.55	33.60

802.11ax HEW40_Nss1,(MCS0)_4TX

5795MHz_TnomVnom

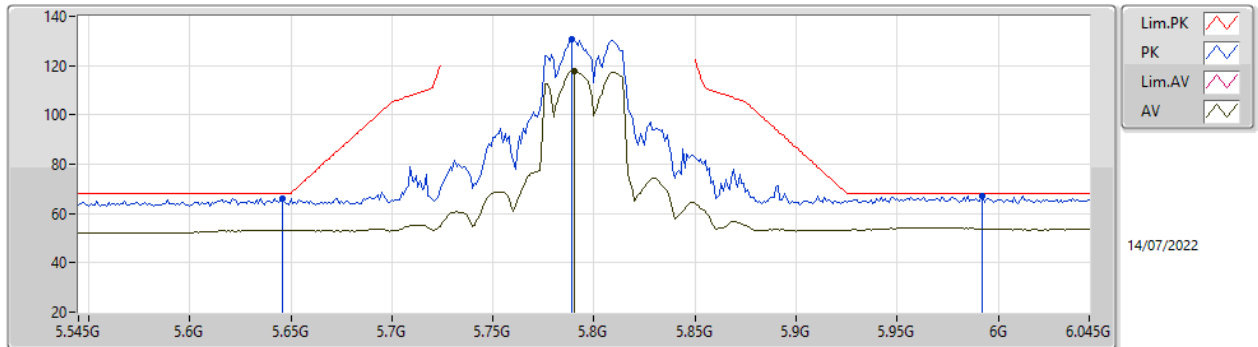


EUT Y_4TX
Setting 19.5
04-E-C-6-15

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	5.621G	66.02	68.20	-2.18	59.06	3	Vertical	0	1.69	-	34.13	5.30	32.47
PK	5.783G	130.87	Inf	-Inf	123.61	3	Vertical	0	1.69	-	34.47	5.30	32.51
AV	5.802G	118.30	Inf	-Inf	111.01	3	Vertical	0	1.69	-	34.51	5.30	32.52
PK	5.957G	67.11	68.20	-1.09	59.07	3	Vertical	0	1.69	-	35.23	5.38	32.57

802.11ax HEW40_Nss1,(MCS0)_4TX

5795MHz_TnomVnom

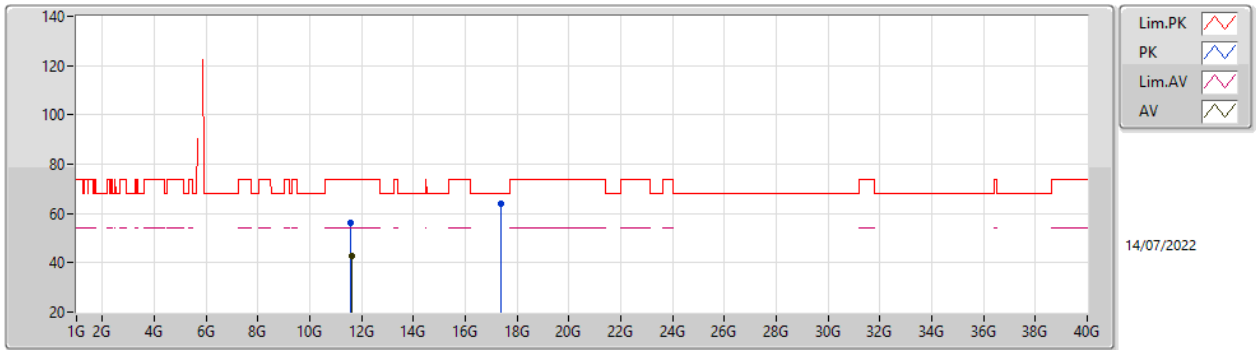


EUT Y_4TX
Setting 19.5
04-E-C-6-15

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	66.16	68.20	-2.04	59.05	3	Horizontal	9	1.73	-	34.28	5.30	32.47
PK	5.789G	130.86	Inf	-Inf	123.60	3	Horizontal	9	1.73	-	34.48	5.30	32.52
AV	5.79G	117.85	Inf	-Inf	110.59	3	Horizontal	9	1.73	-	34.48	5.30	32.52
PK	5.992G	67.12	68.20	-1.08	58.93	3	Horizontal	9	1.73	-	35.37	5.40	32.58

802.11ax HEW40_Nss1,(MCS0)_4TX

5795MHz_TnomVnom

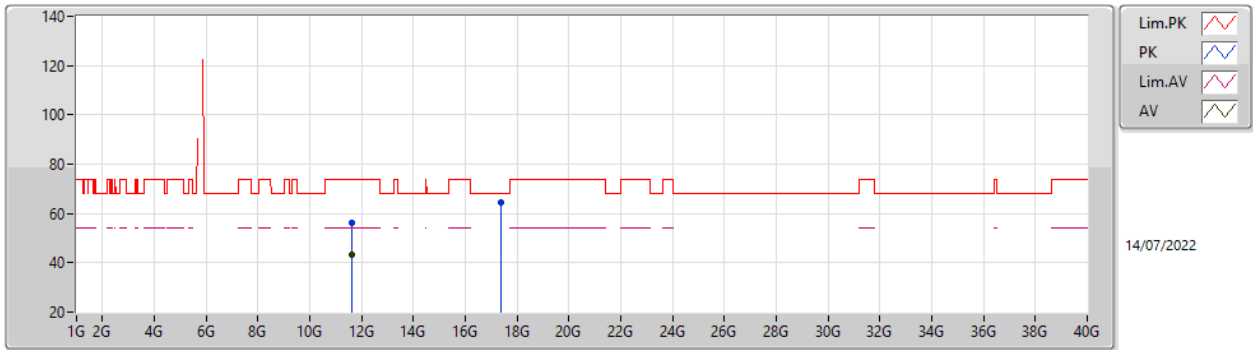


EUT Y_4TX
Setting 19.5
04-E-C-6

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	11.58556G	56.38	74.00	-17.62	42.51	3	Vertical	44	1.44	-	39.30	8.71	34.14
AV	11.60266G	42.95	54.00	-11.05	29.08	3	Vertical	44	1.44	-	39.30	8.72	34.15
PK	17.37846G	63.72	68.20	-4.48	45.81	3	Vertical	294	2.96	-	41.94	9.58	33.61

802.11ax HEW40_Nss1,(MCS0)_4TX

5795MHz_TnomVnom

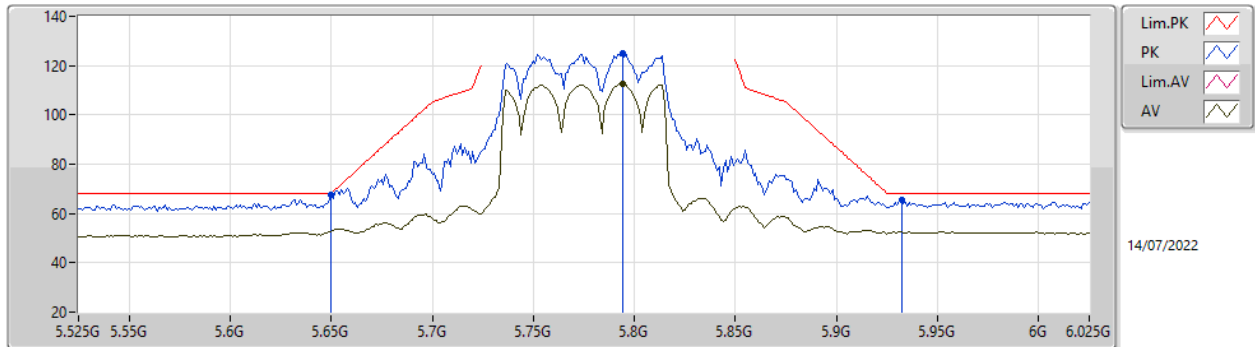


EUT Y_4TX
Setting 19.5
04-E-C-6

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	11.6002G	56.26	74.00	-17.74	42.39	3	Horizontal	244	1.69	-	39.30	8.72	34.15
AV	11.60356G	43.13	54.00	-10.87	29.26	3	Horizontal	244	1.69	-	39.30	8.72	34.15
PK	17.37972G	64.38	68.20	-3.82	46.47	3	Horizontal	220	1.56	-	41.94	9.58	33.61

802.11ax HEW80_Nss1,(MCS0)_4TX

5775MHz_TnomVnom

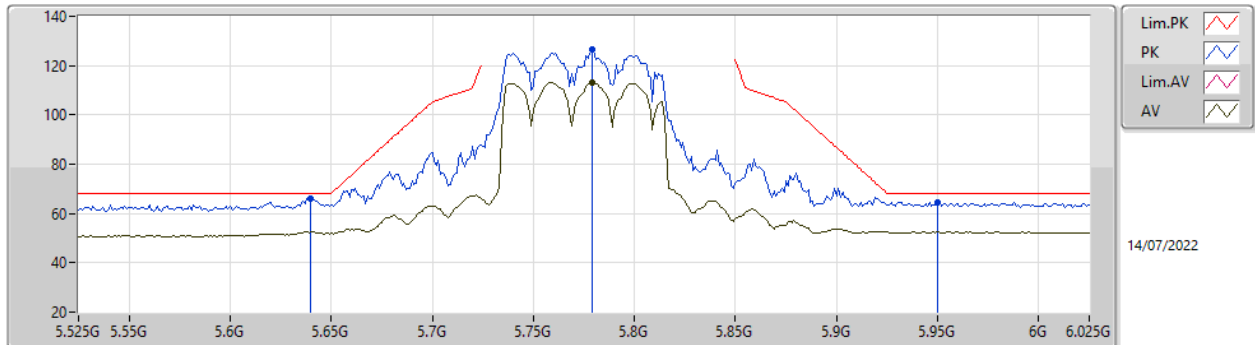


EUT Y_4TX
Setting 16
04-E-C-6-13

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	5.65G	67.54	68.20	-0.66	60.42	3	Vertical	346	1.73	-	34.30	5.30	32.48
PK	5.794G	124.76	Inf	-Inf	117.49	3	Vertical	346	1.73	-	34.49	5.30	32.52
AV	5.794G	112.74	Inf	-Inf	105.47	3	Vertical	346	1.73	-	34.49	5.30	32.52
PK	5.932G	65.33	68.20	-2.87	57.43	3	Vertical	346	1.73	-	35.09	5.37	32.56

802.11ax HEW80_Nss1,(MCS0)_4TX

5775MHz_TnomVnom

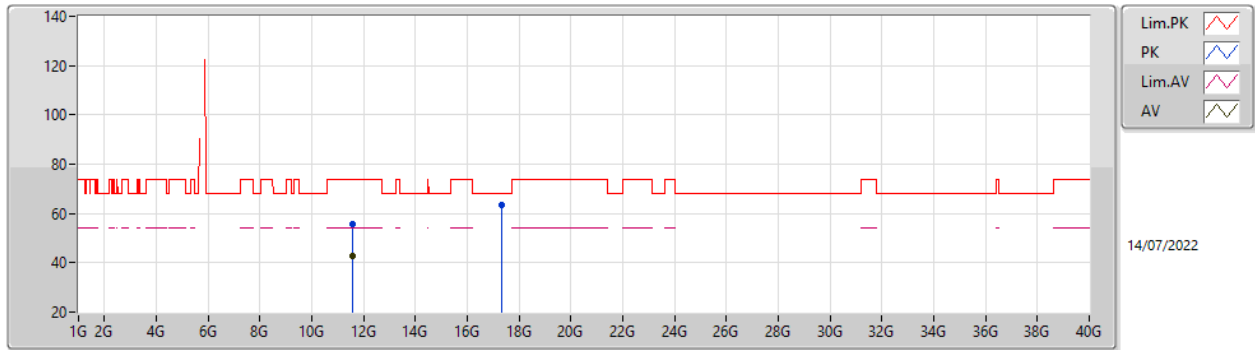


EUT Y_4TX
Setting 16
04-E-C-6-13

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	5.64G	66.09	68.20	-2.11	59.02	3	Horizontal	344	1.78	-	34.24	5.30	32.47
PK	5.779G	126.47	Inf	-Inf	119.22	3	Horizontal	344	1.78	-	34.46	5.30	32.51
AV	5.779G	113.08	Inf	-Inf	105.83	3	Horizontal	344	1.78	-	34.46	5.30	32.51
PK	5.95G	64.74	68.20	-3.46	56.73	3	Horizontal	344	1.78	-	35.20	5.37	32.56

802.11ax HEW80_Nss1,(MCS0)_4TX

5775MHz_TnomVnom

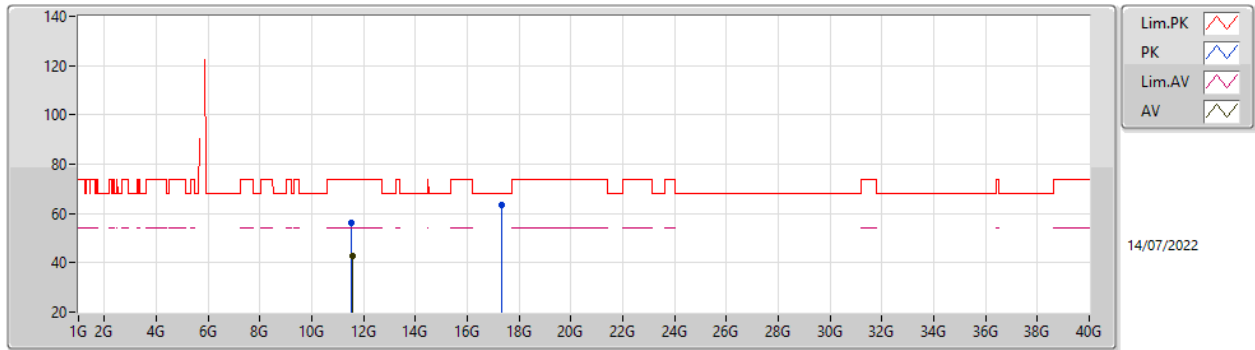


EUT Y_4TX
Setting 16
04-E-C-6

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	11.56248G	55.80	74.00	-18.20	41.94	3	Vertical	194	1.42	-	39.30	8.69	34.13
AV	11.5581G	42.56	54.00	-11.44	28.69	3	Vertical	194	1.42	-	39.30	8.69	34.12
PK	17.32428G	63.52	68.20	-4.68	45.80	3	Vertical	210	2.87	-	41.77	9.56	33.61

802.11ax HEW80_Nss1,(MCS0)_4TX

5775MHz_TnomVnom



EUT Y_4TX
Setting 16
04-E-C-6

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	11.5449G	56.34	74.00	-17.66	42.48	3	Horizontal	308	2.89	-	39.30	8.68	34.12
AV	11.56152G	42.64	54.00	-11.36	28.78	3	Horizontal	308	2.89	-	39.30	8.69	34.13
PK	17.32122G	63.29	68.20	-4.91	45.57	3	Horizontal	145	1.09	-	41.76	9.56	33.60