



RADIO TEST REPORT

FCC ID : TV7CB5A60Y
Equipment : CubeG-5ac60ay
Brand Name : MikroTik
Model Name : CubeG-5ac60ay-US, CubeG-5ac60ay-SA-US
Applicant : Mikrotiks SIA
Brivibas gatve 214i, Riga, LV-1039 Latvia
Manufacturer : MIKROTIKLS SIA
Brivibas gatve 214i, Riga, LV-1039 Latvia
Standard : 47 CFR FCC Part 15.407

The product was received on Mar. 03, 2021, and testing was started from Oct. 02, 2021 and completed on Nov. 25, 2021. We, Sporton International Inc. Hsinchu Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

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

Approved by: Sam Chen

Sporton International Inc. Hsinchu Laboratory

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



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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 31
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Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
1.1.2	15.203	Antenna Requirement	PASS	-
3.1	15.207	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:

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

Comments and Explanations:

The 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
5150-5250	a, n (HT20), ac (VHT20)	5180-5240	36-48 [4]
5725-5850		5745-5825	149-165 [5]
5150-5250	n (HT40), ac (VHT40)	5190-5230	38-46 [2]
5725-5850		5755-5795	151-159 [2]
5150-5250	ac (VHT80)	5210	42 [1]
5725-5850		5775	155 [1]

Band	Mode	BWch (MHz)	Nant
5.15-5.25GHz	802.11a	20	1TX
5.15-5.25GHz	802.11n HT20	20	1TX
5.15-5.25GHz	802.11ac VHT20	20	1TX
5.15-5.25GHz	802.11n HT40	40	1TX
5.15-5.25GHz	802.11ac VHT40	40	1TX
5.15-5.25GHz	802.11ac VHT80	80	1TX
5.725-5.85GHz	802.11a	20	1TX
5.725-5.85GHz	802.11n HT20	20	1TX
5.725-5.85GHz	802.11ac VHT20	20	1TX
5.725-5.85GHz	802.11n HT40	40	1TX
5.725-5.85GHz	802.11ac VHT40	40	1TX
5.725-5.85GHz	802.11ac VHT80	80	1TX

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.
- ♦ BWch is the nominal channel bandwidth.

1.1.2 Antenna Information

For EUT 1

For WLAN 5GHz

Ant.	Port	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	1	MikroTik	CubeG-5ac60ay	Onboard Patch Antenna	I-PEX	11.5

Note1: For WLAN function (1TX, 1RX):

Only port 1 can be used as transmitting/receiving functions.

For WiGig 60GHz

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	MikroTik	60G-phased-array	60G-patch antenna array	N/A	30

Note2: The above information was declared by manufacturer.

For GPS

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	MikroTik	LHG GPS	inverted F antenna	N/A	2.2

Note3: The above information was declared by manufacturer.

For EUT 2

For WLAN 5GHz

Ant.	Port	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	1	MikroTik	CubeG-5ac60ay-SA	Onboard Patch Antenna	N/A	11.5

Note1: For WLAN function (1TX, 1RX):

Only port 1 can be used as transmitting/receiving functions.

For WiGig 60GHz

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	MikroTik	60G-phased-array	60G-patch antenna array	N/A	15

Note2: The above information was declared by manufacturer.

For GPS

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	MikroTik	LHG GPS	inverted F antenna	N/A	2.2

Note3: The above information was declared by manufacturer.

1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11a	0.953	0.21	2.075m	1k
802.11ac VHT20	0.964	0.16	1.941m	1k
802.11ac VHT40	0.887	0.52	956.25u	3k
802.11ac VHT80	0.809	0.92	464.625u	3k

Note:

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

1.1.4 EUT Operational Condition

EUT Power Type	From PoE with Power Adapter			
Beamforming Function	☐	With beamforming	☒	Without beamforming
Function	☒	Outdoor P2M	☐	Indoor P2M
	☒	Fixed P2P	☐	Client
Test Software Version	winbox(v3.15)			

Note: The above information was declared by manufacturer.

1.1.5 Table for Multiple Listing

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

EUT No.	Model Name	Antenna Gain (dBi)	Description
		WiGig 60GHz	
1	CubeG-5ac60ay-US	30	The different model names equip with different 60GHz antennas.
2	CubeG-5ac60ay-SA-US	15	

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 412172 D01 v01r01
- ♦ FCC KDB 414788 D01 v01r01

1.3 Testing Location Information

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

Test Condition	Test Site No.	Test Engineer	Test Environment (°C / %)	Test Date
RF Conducted	TH03-CB	Jay Lo	22.9~23.6 / 55~59	Oct. 04, 2021
Radiated	03CH01-CB	Stim Sung	24.2~26.1 / 55~58	Oct. 02, 2021 ~ Nov. 25, 2021
AC Conduction	CO02-CB	Peter Wu	24~25 / 55~57	Oct. 08, 2021

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)	2.0 dB	Confidence levels of 95%
Radiated Emission (9kHz ~ 30MHz)	4.2 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	5.5 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	4.7 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	4.2 dB	Confidence levels of 95%
Conducted Emission	2.5 dB	Confidence levels of 95%
Output Power Measurement	1.3 dB	Confidence levels of 95%
Power Density Measurement	2.5 dB	Confidence levels of 95%
Bandwidth Measurement	0.9%	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Channel Mode

Mode	Power Setting
802.11a_Nss1,(6Mbps)_1TX	-
5180MHz	18
5200MHz	19
5240MHz	19
5745MHz	19
5785MHz	19
5825MHz	19
802.11ac VHT20_Nss1,(MCS0)_1TX	-
5180MHz	18
5200MHz	19
5240MHz	19
5745MHz	19
5785MHz	19
5825MHz	19
802.11ac VHT40_Nss1,(MCS0)_1TX	-
5190MHz	13
5230MHz	19
5755MHz	19
5795MHz	19
802.11ac VHT80_Nss1,(MCS0)_1TX	-
5210MHz	11
5775MHz	19

Note:

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

2.2 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	AC power-line conducted emissions
Condition	AC power-line conducted measurement for line and neutral Test Voltage: 120Vac / 60Hz
Operating Mode	CTX
1	EUT 1 + 5GHz
2	EUT 1 + 60GHz
3	EUT 2 + 60GHz
For operating mode 2 is the worst case and it was record in this test report.	

The Worst Case Mode for Following Conformance Tests	
Tests Item	Emission Bandwidth Maximum Output Power Power Spectral Density
Test Condition	Conducted measurement at transmit chains
Operating Mode	EUT 1 + 5GHz

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 for emissions in Unwanted Emissions above 1GHz, and the worst case was found at Y axis. So the measurement will follow this same test configuration.
1	EUT 1 in Y axis + 5GHz
Operating Mode > 1GHz	CTX
	The EUT was performed at X axis, Y axis and Z axis, and the worst case was found at Y axis. So the measurement will follow this same test configuration.
1	EUT 1 in Y axis + 5GHz



The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	EUT 1 - 5GHz + 60GHz
2	EUT 2 - 5GHz + 60GHz
Refer to Sporton Test Report No.: FA130319 for Co-location RF Exposure Evaluation.	

2.3 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

2.4 Accessories

Accessories				
Equipment Name	Brand Name	Model Name	Rating	Remark
Adapter	CULLPOWER	SAW30-240-0 800U A	INPUT: 100-240V ~ 50/60Hz, 0.8A OUTPUT: 24V, 800mA	Non-shielded, 1.5m
PoE	MikroTik	RBGPOE	-	Power cable: Non-shielded, 0.2m RJ-45 cable: Shielded, 0.1m

2.5 Support Equipment

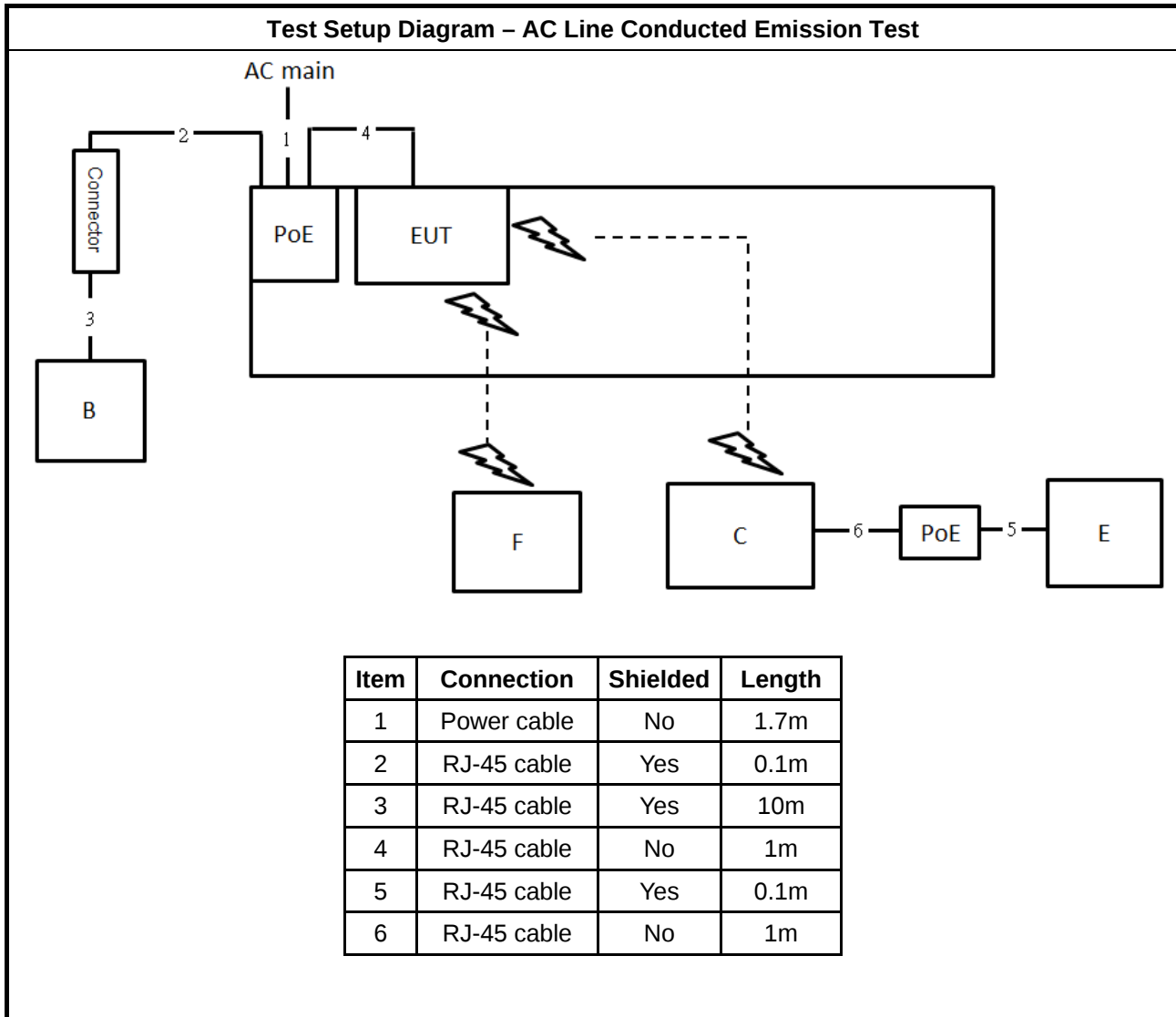
For AC Conduction:

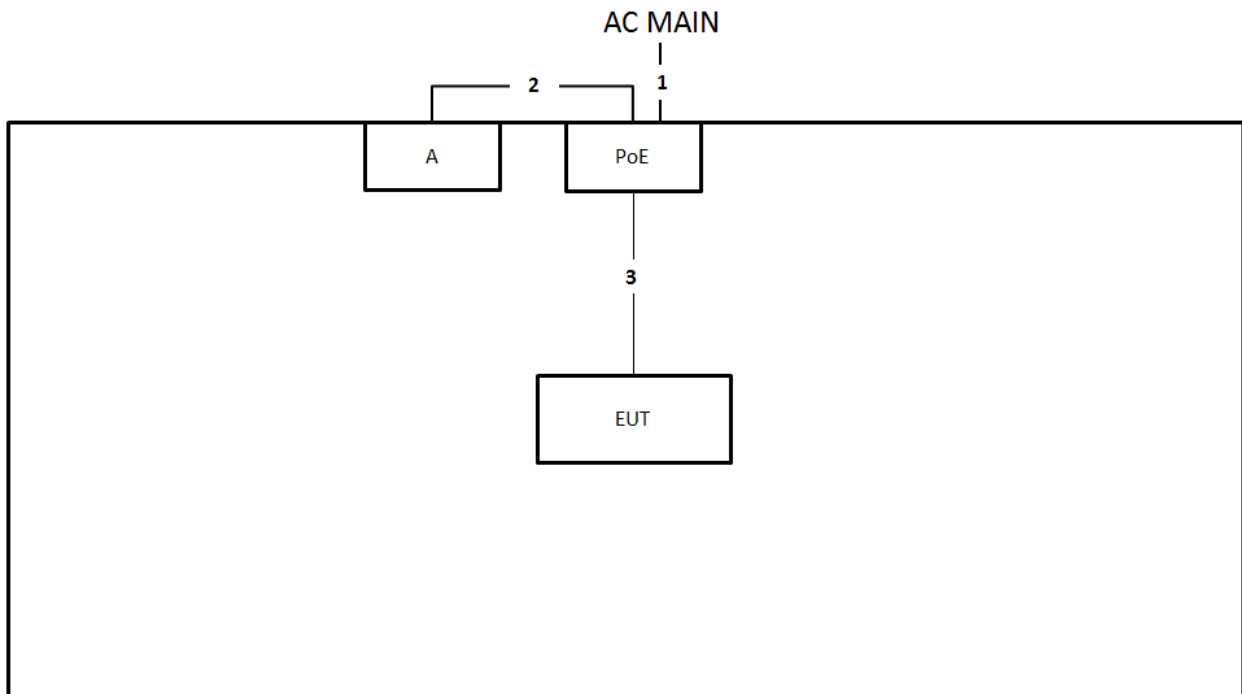
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
B	NB	DELL	E6430	N/A
C	Device	Mikrotikls SIA	CubeG-5ac60ay-SA-US	N/A
E	Device NB	DELL	E6430	N/A
F	GPS Simulator	WELNAVIGATE	GS-100	N/A

For Radiated and RF Conducted:

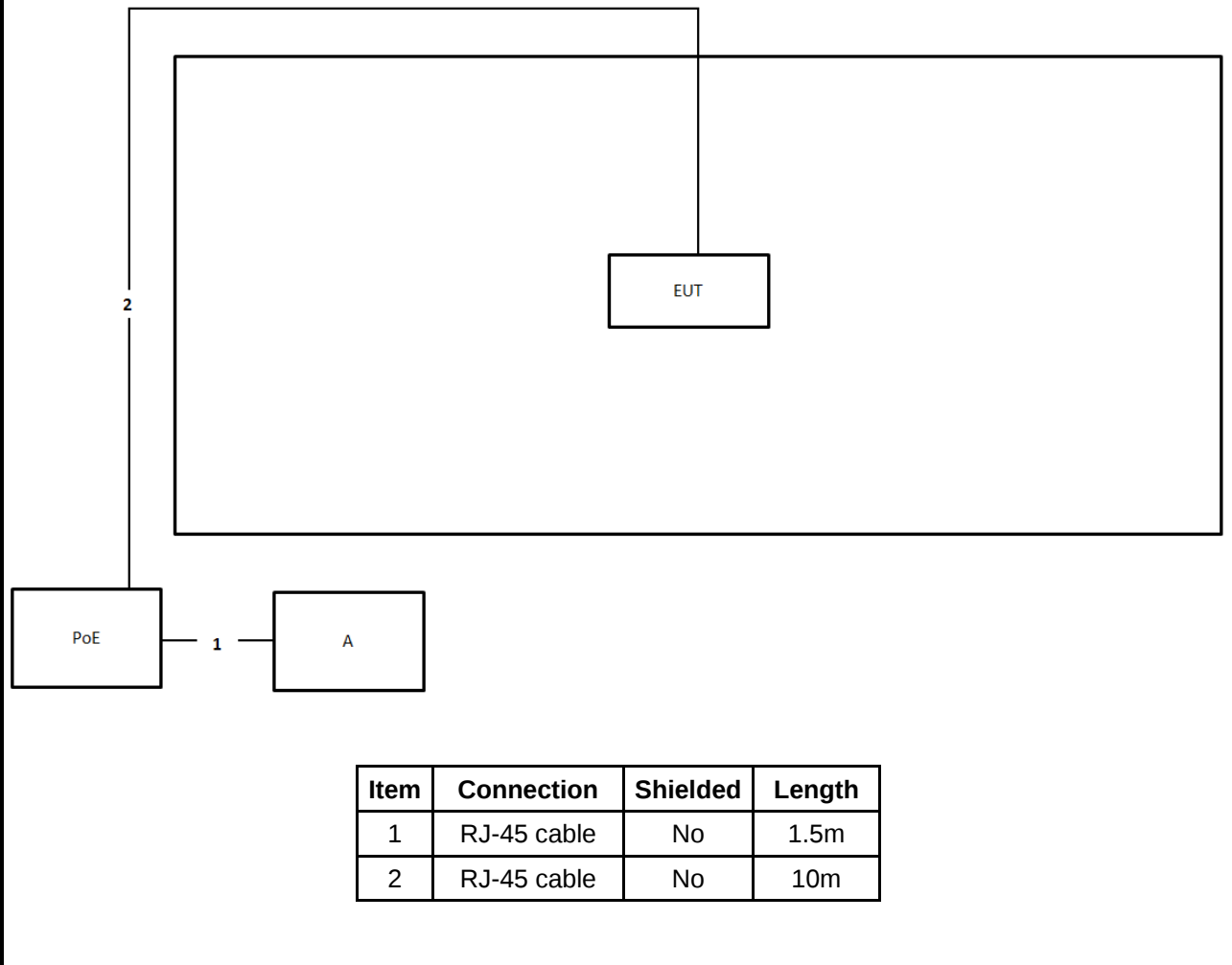
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Notebook	DELL	E4300	N/A

2.6 Test Setup Diagram



Test Setup Diagram - Radiated Test < 1GHz


Item	Connection	Shielded	Length
1	Power cable	No	1.7m
2	RJ-45 cable	Yes	0.1m
3	RJ-45 cable	No	0.4m

Test Setup Diagram - Radiated Test > 1GHz




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.

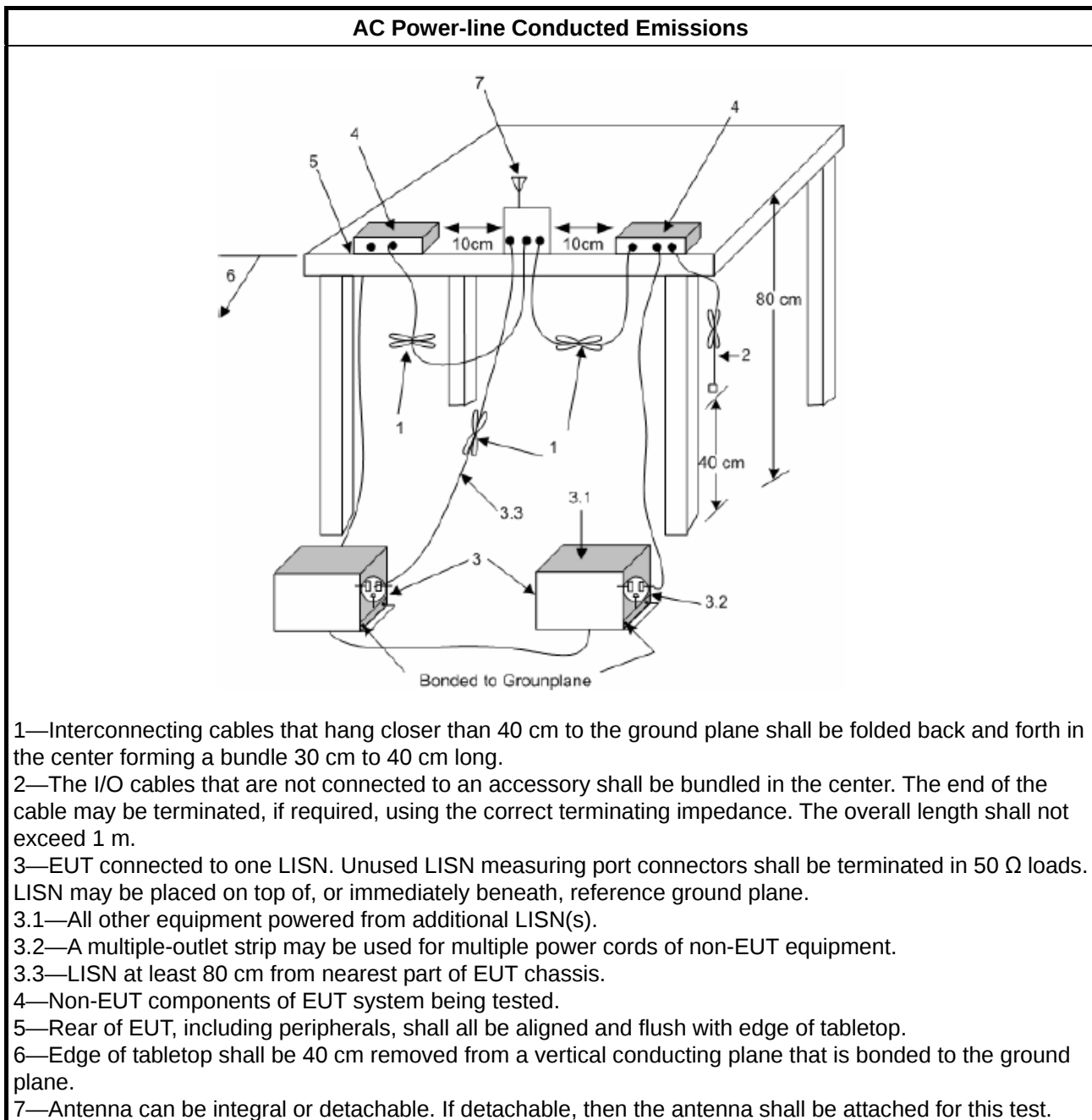
3.1.2 Measuring Instruments

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 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 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz.
☒	For the 5.725-5.85 GHz band, 6 dB emission bandwidth $\geq$ 500kHz.
☐	For the 5.85-5.895 GHz band, 6 dB emission bandwidth $\geq$ 500kHz.
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 $\geq$ 500kHz.

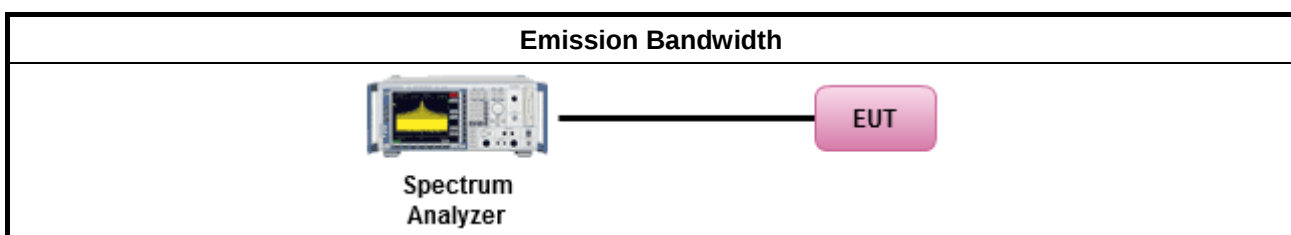
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

Test Method	
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.

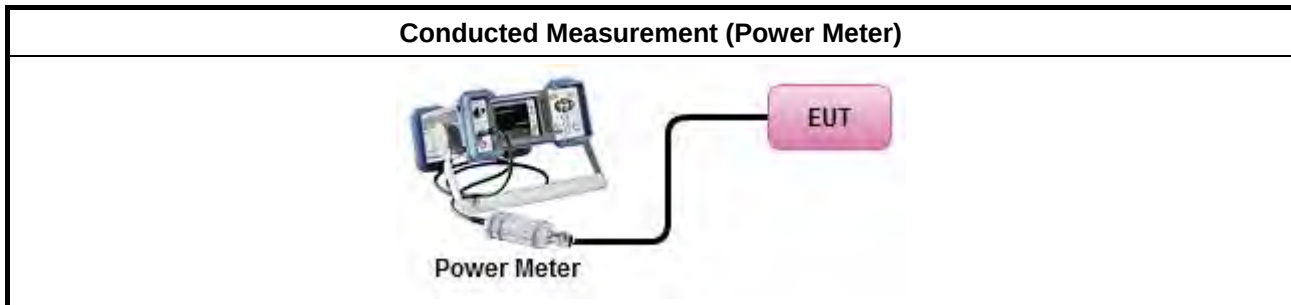
3.3.2 Measuring Instruments

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 (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 $\theta > 45^\circ$
☐ 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 the 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.

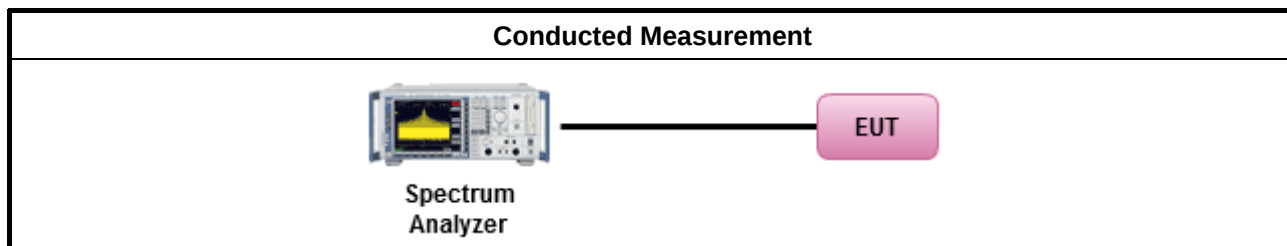


3.4.3 Test Procedures

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]) $EIRP_{total} = PPSD_{total} + DG$	
☐ 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.	

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

3.4.4 Test Setup



3.4.5 Test Result of Power Spectral Density

Refer as Appendix D



3.5 Unwanted Emissions

3.5.1 Transmitter Unwanted Emissions Limit

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

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

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

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

Un-restricted band emissions above 1GHz Limit	
Operating Band	Limit
☒ 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

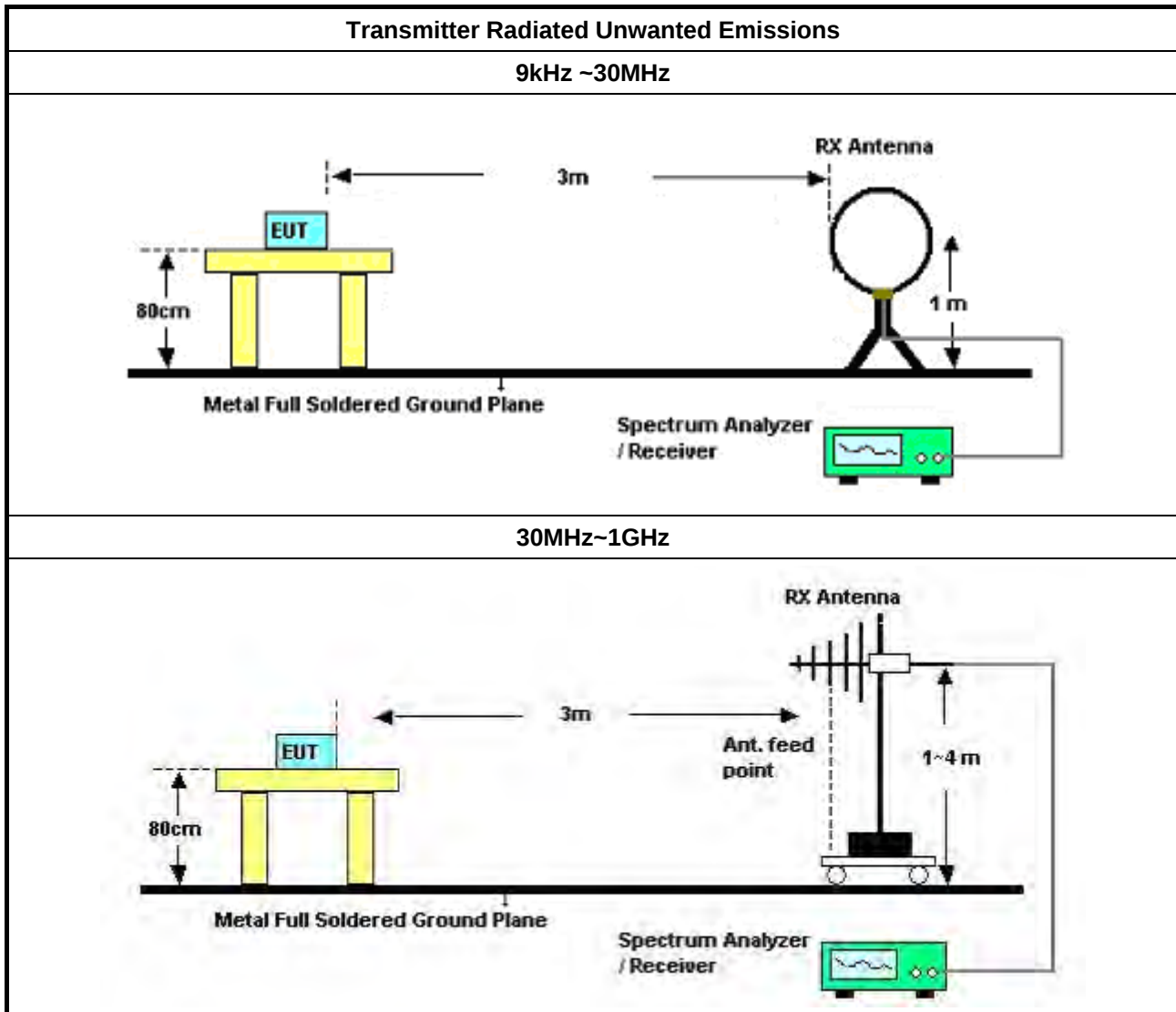
Test Method	
Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 m for frequencies above 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:	
	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.
☐ Refer as ANSI C63.10, clause 4.1.4.2.2 measurement procedure peak limit.	
For radiated measurement.	
	Refer as ANSI C63.10, clause 6.4 for radiated emissions below 30 MHz and test distance is 3m.
	Refer as ANSI C63.10, clause 6.5 for radiated emissions 30 MHz to 1 GHz and test distance is 3m.
	Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz.
The any unwanted emissions level shall not exceed the fundamental emission level.	

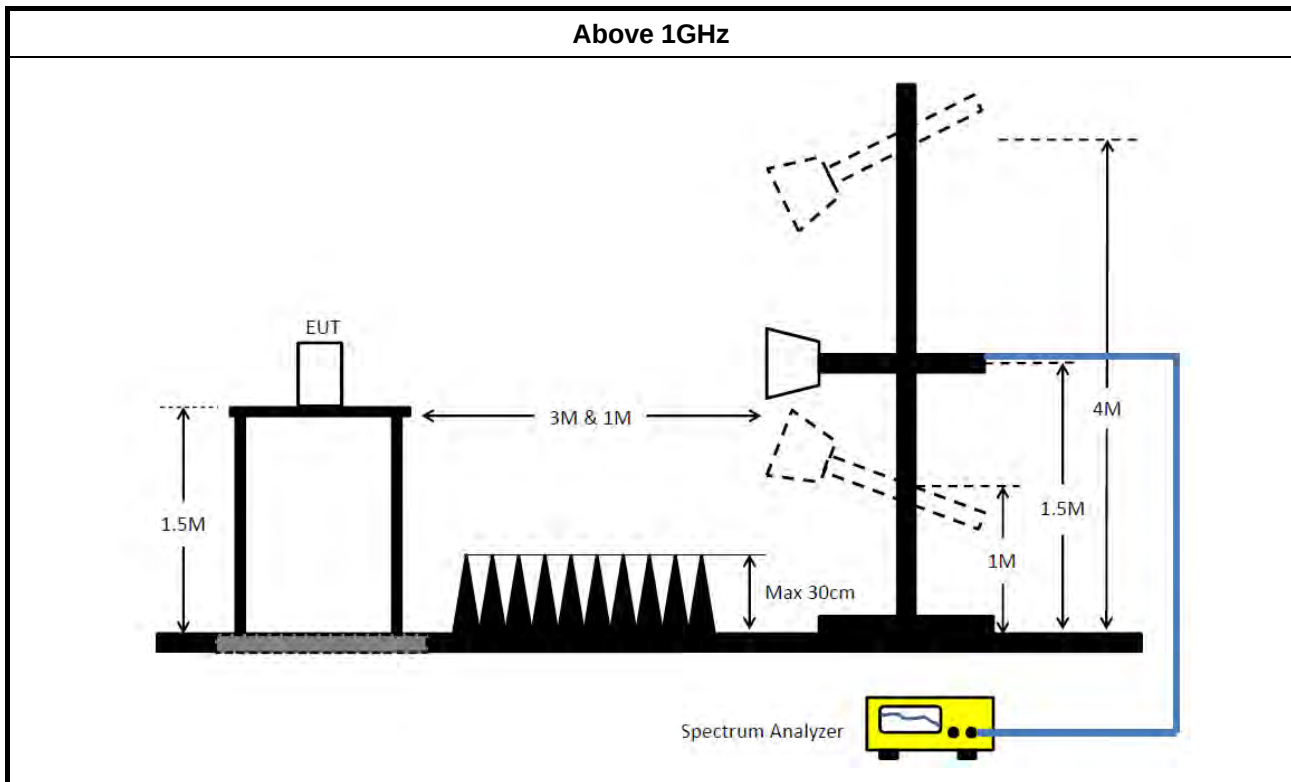


Test Method

- 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





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
LISN	Schwarzbeck	NSLK 8127	8127650	9kHz ~ 30MHz	Dec. 04, 2020	Dec. 03, 2021	Conduction (CO02-CB)
LISN	Schwarzbeck	NSLK 8127	8127478	9kHz ~ 30MHz	Nov. 20, 2020	Nov. 19, 2021	Conduction (CO02-CB)
EMI Receiver	Agilent	N9038A	MY52260140	9kHz ~ 8.4GHz	May 05, 2021	May 04, 2022	Conduction (CO02-CB)
COND Cable	Woken	Cable	2	0.15MHz~30MHz	Oct. 20, 2020	Oct. 19, 2021	Conduction (CO02-CB)
Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conduction (CO02-CB)
Pulse Limiter	Schwarzbeck	VTSD 9561F-N	00378	9kHz ~ 30MHz	Mar. 18, 2021	Mar. 17, 2022	Conduction (CO02-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Apr. 14, 2021	Apr. 13, 2022	Radiation (03CH01-CB)
3m Semi Anechoic Chamber NSA	TDK	SAC-3M	03CH01-CB	30 MHz ~ 1 GHz	Jan. 26, 2021	Jan. 25, 2022	Radiation (03CH01-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH01-CB	1GHz ~18GHz 3m	May 07, 2021	May 06, 2022	Radiation (03CH01-CB)
BILOG ANTENNA with 6dB Attenuator	TESEQ & EMC	CBL6112D N-6-06	37880 & AT-N0609	20MHz ~ 2GHz	Feb. 22, 2021	Feb. 21, 2022	Radiation (03CH01-CB)
Horn Antenna	ETS-LINDG REN	3115	00075790	750MHz~18GHz	Nov. 06, 2020	Nov. 05, 2021	Radiation (03CH01-CB)
Horn Antenna	SCHWARZB ECK	BBHA 9120 D	BBHA 9120 D 1370	1GHz~18GHz	Sep. 14, 2021	Sep. 13, 2022	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Aug. 05, 2021	Aug. 04, 2022	Radiation (03CH01-CB)
Amplifier	EMCI	EMC330N	980332	20MHz ~ 3GHz	Jul. 02, 2021	Jul. 01, 2022	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02121	1GHz ~ 26.5GHz	May 20, 2021	May 19, 2022	Radiation (03CH01-CB)
Pre-Amplifier	MITEQ	TTA1840-35-H G	1864479	18GHz ~ 40GHz	Jul. 13, 2021	Jul. 12, 2022	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	May 03, 2021	May 02, 2022	Radiation (03CH01-CB)
EMI Test Receiver	R&S	ESCS	826547/017	9kHz ~ 2.75GHz	Jun. 21, 2021	Jun. 20, 2022	Radiation (03CH01-CB)
RF Cable-low	Woken	RG402	Low Cable-16+17	30 MHz ~ 1 GHz	Oct. 05, 2020	Oct. 04, 2021	Radiation (03CH01-CB)
RF Cable-low	Woken	RG402	Low Cable-16+17	30 MHz ~ 1 GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH01-CB)



Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-16	1 GHz ~ 18 GHz	Oct. 05, 2020	Oct. 04, 2021	Radiation (03CH01-CB)
RF Cable-high	Woken	RG402	High Cable-16	1 GHz ~ 18 GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH01-CB)
RF Cable-high	Woken	RG402	High Cable-16+17	1 GHz ~ 18 GHz	Oct. 05, 2020	Oct. 04, 2021	Radiation (03CH01-CB)
RF Cable-high	Woken	RG402	High Cable-16+17	1 GHz ~ 18 GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH01-CB)
RF Cable-high	Woken	RG402	High Cable-40G#1	18GHz ~ 40 GHz	Jul. 15, 2021	Jul. 14, 2022	Radiation (03CH01-CB)
RF Cable-high	Woken	RG402	High Cable-40G#2	18GHz ~ 40 GHz	Jul. 15, 2021	Jul. 14, 2022	Radiation (03CH01-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSV40	101028	9kHz~40GHz	Dec. 31, 2020	Dec. 30, 2021	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)
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.

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



Conducted Emissions at Powerline

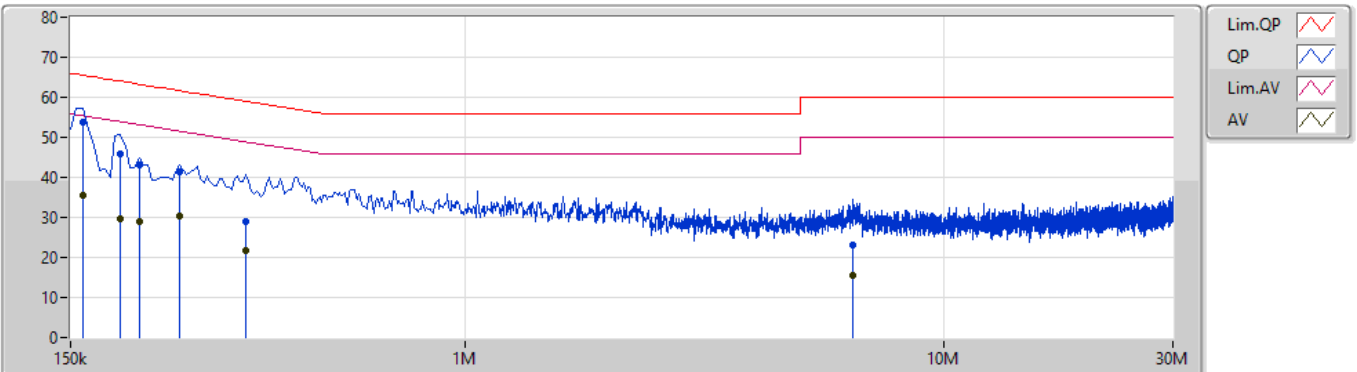
Appendix A

Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 2	Pass	QP	159k	53.75	65.52	-11.77	Line

Test Mode 2

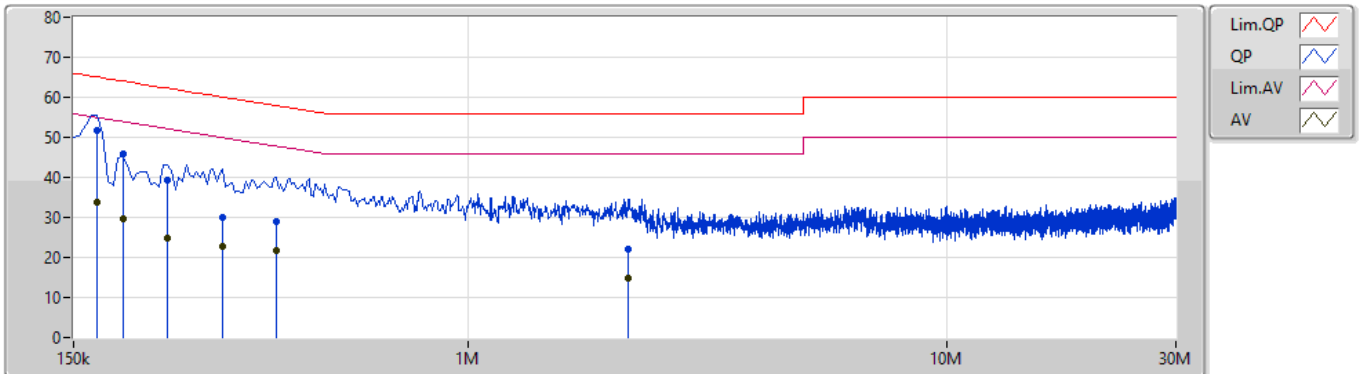
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Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	159k	53.75	65.52	-11.77	9.89	Line	"Worst"	43.86	0.04	0.04	9.81			
AV	159k	35.37	55.52	-20.15	9.89	Line	-	25.48	0.04	0.04	9.81			
QP	190.5k	45.90	64.01	-18.11	9.89	Line	-	36.01	0.04	0.04	9.81			
AV	190.5k	29.70	54.01	-24.31	9.89	Line	-	19.81	0.04	0.04	9.81			
QP	208.5k	43.22	63.27	-20.05	9.89	Line	-	33.33	0.04	0.04	9.81			
AV	208.5k	28.87	53.27	-24.40	9.89	Line	-	18.98	0.04	0.04	9.81			
QP	253.5k	41.41	61.64	-20.23	9.89	Line	-	31.52	0.04	0.04	9.81			
AV	253.5k	30.22	51.64	-21.42	9.89	Line	-	20.33	0.04	0.04	9.81			
QP	348k	29.11	59.00	-29.89	9.90	Line	-	19.21	0.04	0.04	9.82			
AV	348k	21.68	49.00	-27.32	9.90	Line	-	11.78	0.04	0.04	9.82			
QP	6.437M	23.12	60.00	-36.88	10.21	Line	-	12.91	0.18	0.14	9.89			
AV	6.437M	15.62	50.00	-34.38	10.21	Line	-	5.41	0.18	0.14	9.89			

Test Mode 2

29/11/2021



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	168k	51.67	65.06	-13.39	9.88	Neutral	"Worst"	41.79	0.03	0.04	9.81			
AV	168k	33.87	55.06	-21.19	9.88	Neutral	-	23.99	0.03	0.04	9.81			
QP	190.5k	45.96	64.01	-18.05	9.88	Neutral	-	36.08	0.03	0.04	9.81			
AV	190.5k	29.49	54.01	-24.52	9.88	Neutral	-	19.61	0.03	0.04	9.81			
QP	235.5k	39.18	62.25	-23.07	9.88	Neutral	-	29.30	0.03	0.04	9.81			
AV	235.5k	24.86	52.25	-27.39	9.88	Neutral	-	14.98	0.03	0.04	9.81			
QP	307.5k	29.96	60.03	-30.07	9.89	Neutral	-	20.07	0.03	0.04	9.82			
AV	307.5k	22.80	50.03	-27.23	9.89	Neutral	-	12.91	0.03	0.04	9.82			
QP	397.5k	28.91	57.91	-29.00	9.89	Neutral	-	19.02	0.03	0.04	9.82			
AV	397.5k	21.67	47.91	-26.24	9.89	Neutral	-	11.78	0.03	0.04	9.82			
QP	2.162M	22.09	56.00	-33.91	9.98	Neutral	-	12.11	0.07	0.08	9.83			
AV	2.162M	14.75	46.00	-31.25	9.98	Neutral	-	4.77	0.07	0.08	9.83			

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	28.44M	17.121M	17M1D1D	24.69M	17.001M
802.11ac VHT20_Nss1,(MCS0)_1TX	32.85M	18.261M	18M3D1D	25.86M	18.141M
802.11ac VHT40_Nss1,(MCS0)_1TX	66.12M	37.841M	37M8D1D	45M	37.301M
802.11ac VHT80_Nss1,(MCS0)_1TX	89.04M	77.121M	77M1D1D	89.04M	77.121M
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	16.32M	17.841M	17M8D1D	16.32M	17.511M
802.11ac VHT20_Nss1,(MCS0)_1TX	17.55M	18.981M	19M0D1D	17.55M	18.621M
802.11ac VHT40_Nss1,(MCS0)_1TX	36.36M	39.16M	39M2D1D	36.36M	38.801M
802.11ac VHT80_Nss1,(MCS0)_1TX	76.32M	78.561M	78M6D1D	76.32M	78.561M

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

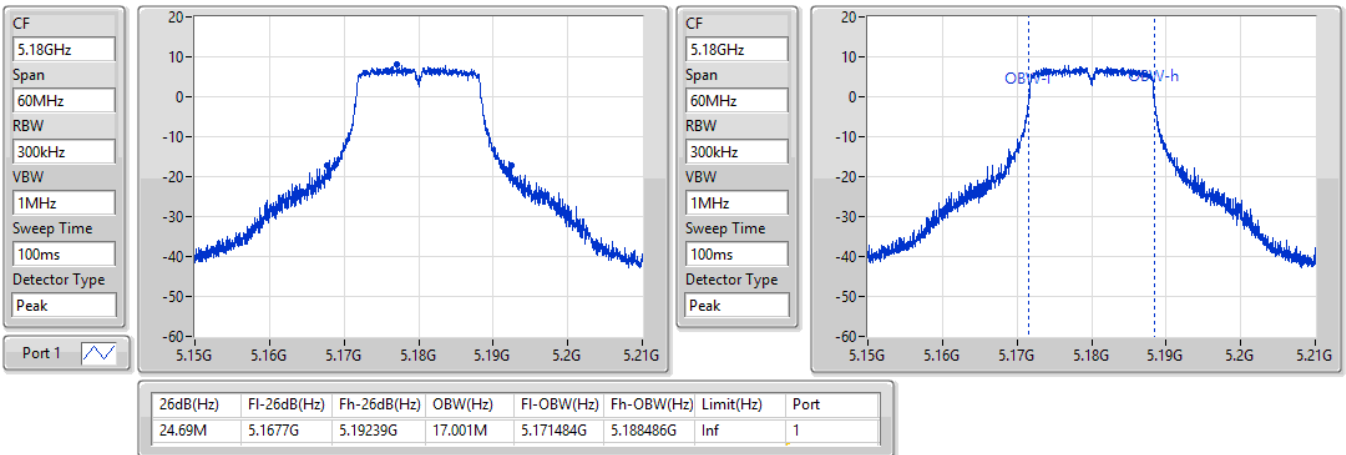
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
802.11a_Nss1,(6Mbps)_1TX	-	-	-	-
5180MHz	Pass	Inf	24.69M	17.001M
5200MHz	Pass	Inf	25.65M	17.121M
5240MHz	Pass	Inf	28.44M	17.091M
5745MHz	Pass	500k	16.32M	17.571M
5785MHz	Pass	500k	16.32M	17.511M
5825MHz	Pass	500k	16.32M	17.841M
802.11ac VHT20_Nss1,(MCS0)_1TX	-	-	-	-
5180MHz	Pass	Inf	25.86M	18.141M
5200MHz	Pass	Inf	32.85M	18.261M
5240MHz	Pass	Inf	28.95M	18.231M
5745MHz	Pass	500k	17.55M	18.621M
5785MHz	Pass	500k	17.55M	18.711M
5825MHz	Pass	500k	17.55M	18.981M
802.11ac VHT40_Nss1,(MCS0)_1TX	-	-	-	-
5190MHz	Pass	Inf	45M	37.301M
5230MHz	Pass	Inf	66.12M	37.841M
5755MHz	Pass	500k	36.36M	39.16M
5795MHz	Pass	500k	36.36M	38.801M
802.11ac VHT80_Nss1,(MCS0)_1TX	-	-	-	-
5210MHz	Pass	Inf	89.04M	77.121M
5775MHz	Pass	500k	76.32M	78.561M

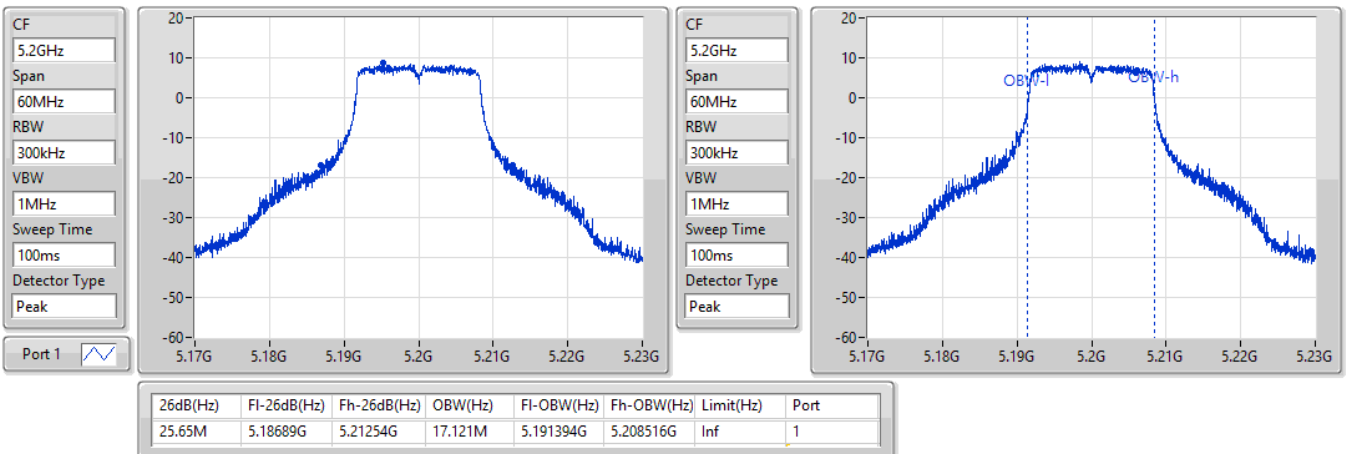
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth

802.11a_Nss1,(6Mbps)_1TX
EBW
5180MHz

04/10/2021


802.11a_Nss1,(6Mbps)_1TX
EBW
5200MHz

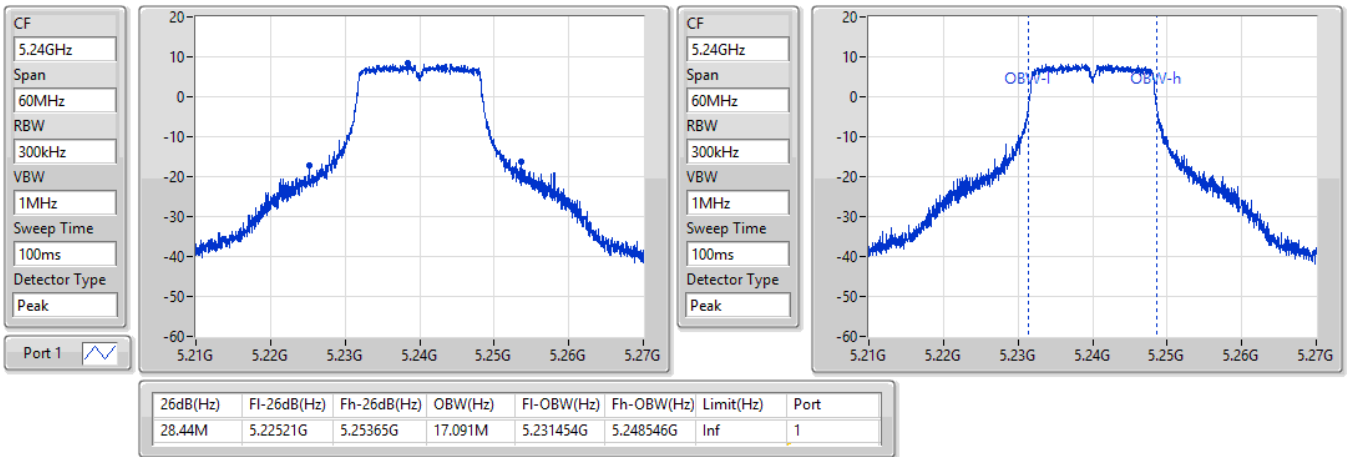
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802.11a_Nss1,(6Mbps)_1TX

EBW
5240MHz

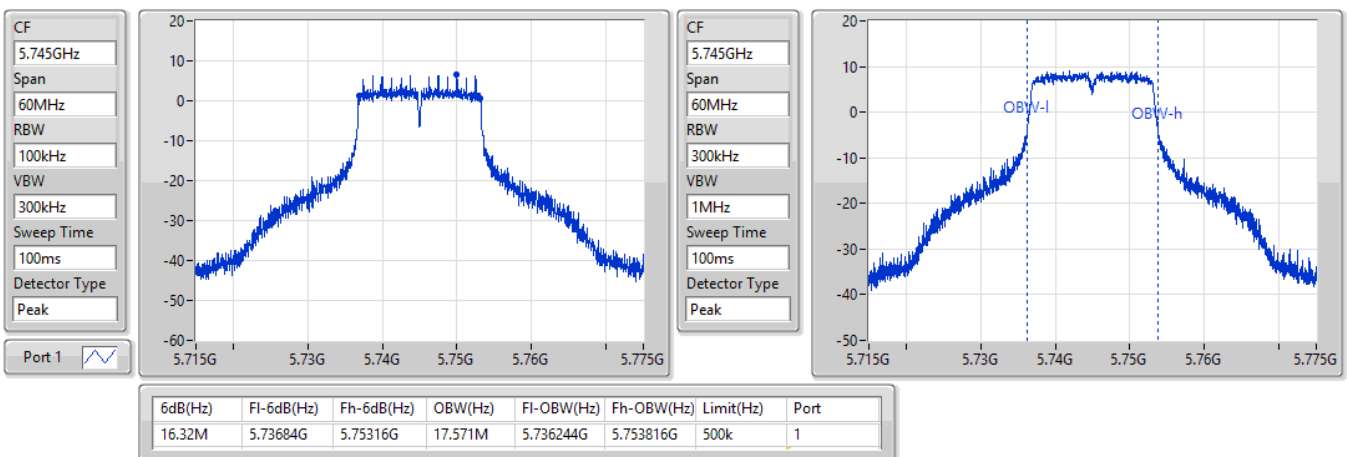
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802.11a_Nss1,(6Mbps)_1TX

EBW
5745MHz

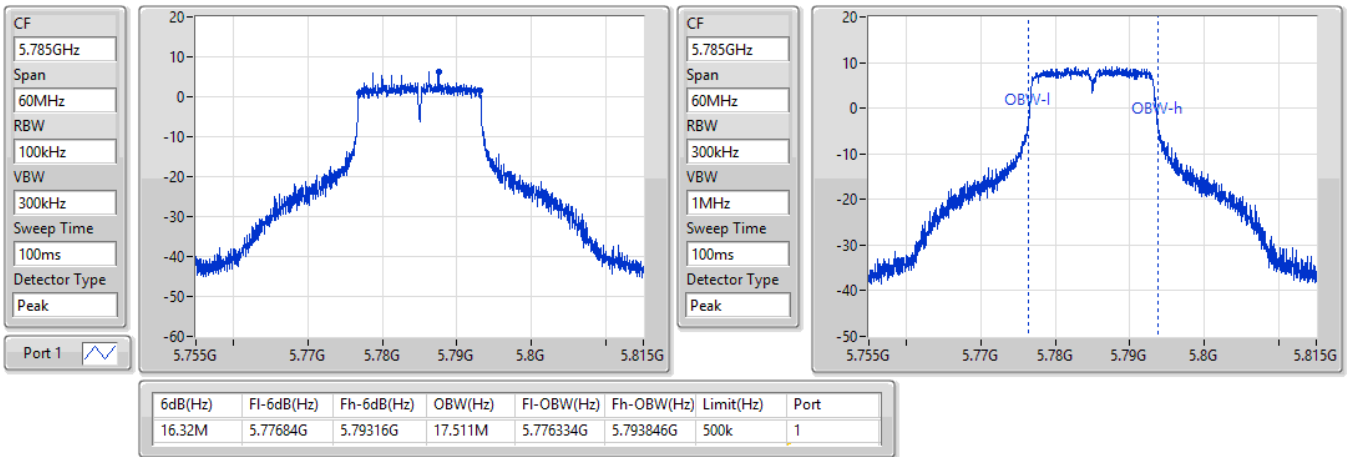
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802.11a_Nss1,(6Mbps)_1TX

EBW
5785MHz

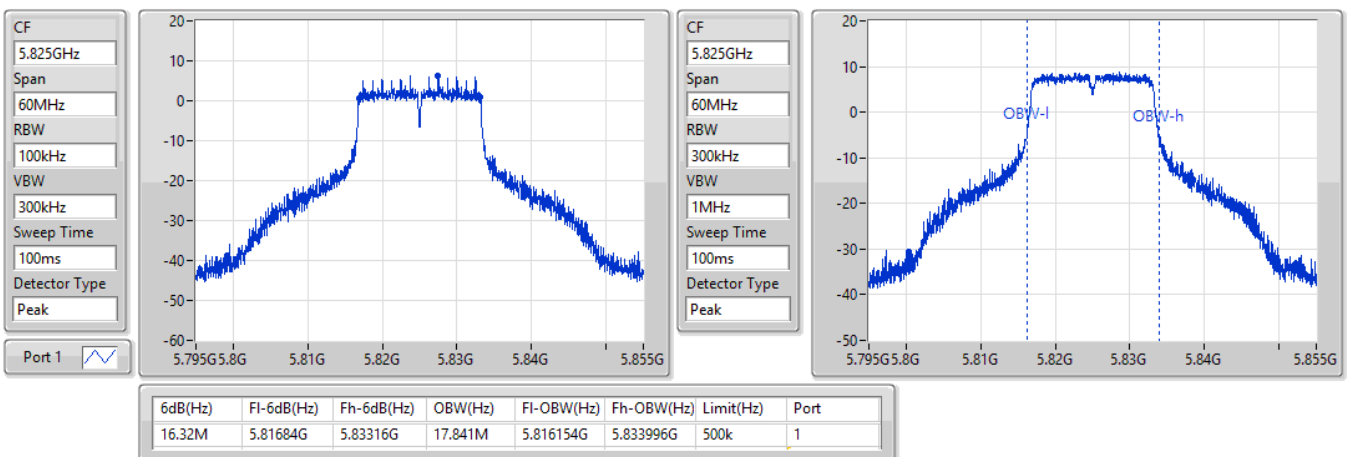
04/10/2021



802.11a_Nss1,(6Mbps)_1TX

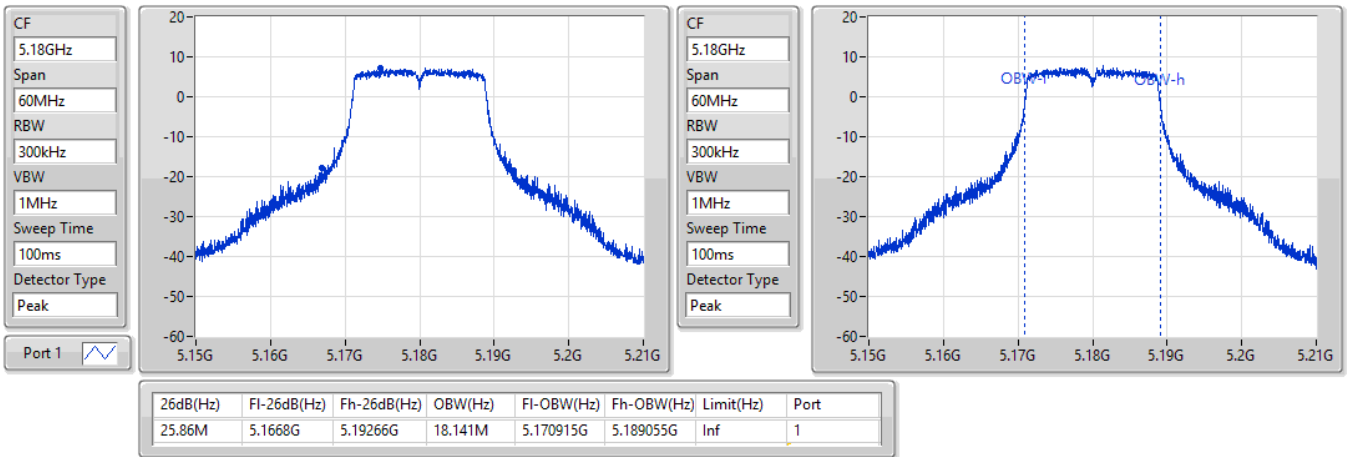
EBW
5825MHz

04/10/2021

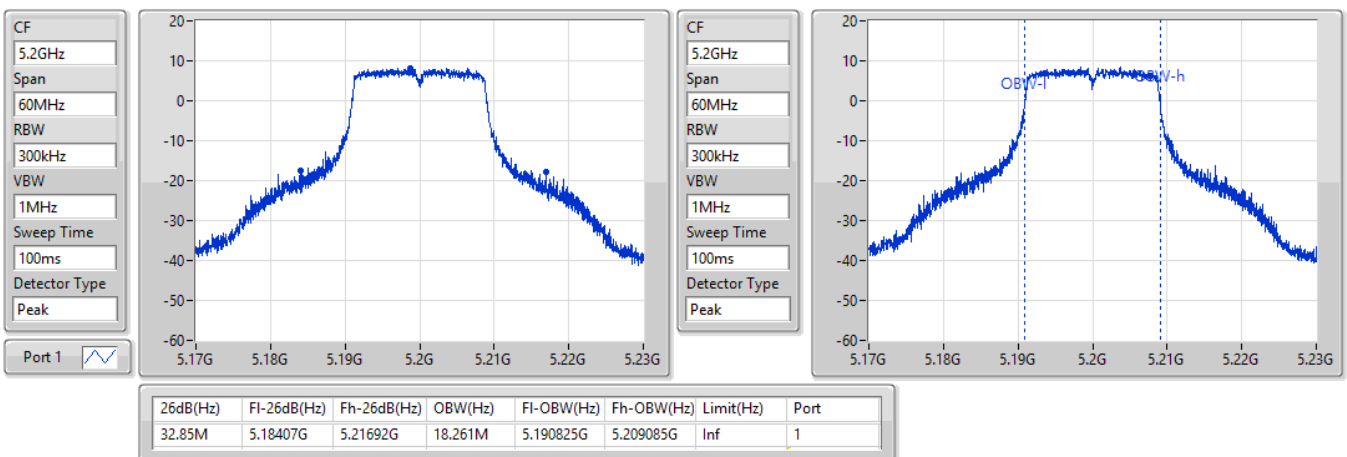


802.11ac VHT20_Nss1,(MCS0)_1TX
EBW
5180MHz

04/10/2021

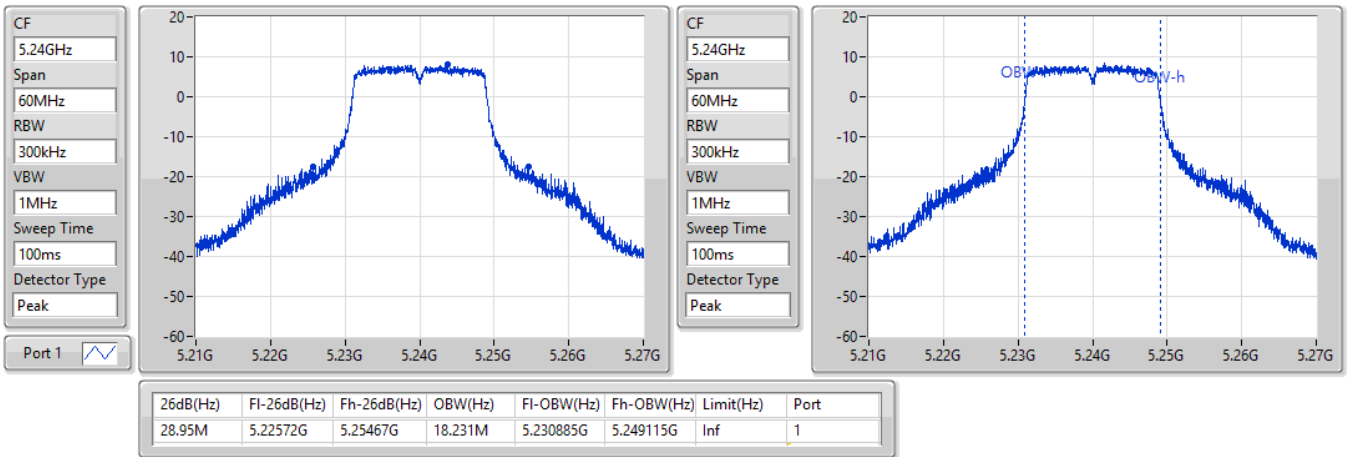

802.11ac VHT20_Nss1,(MCS0)_1TX
EBW
5200MHz

04/10/2021

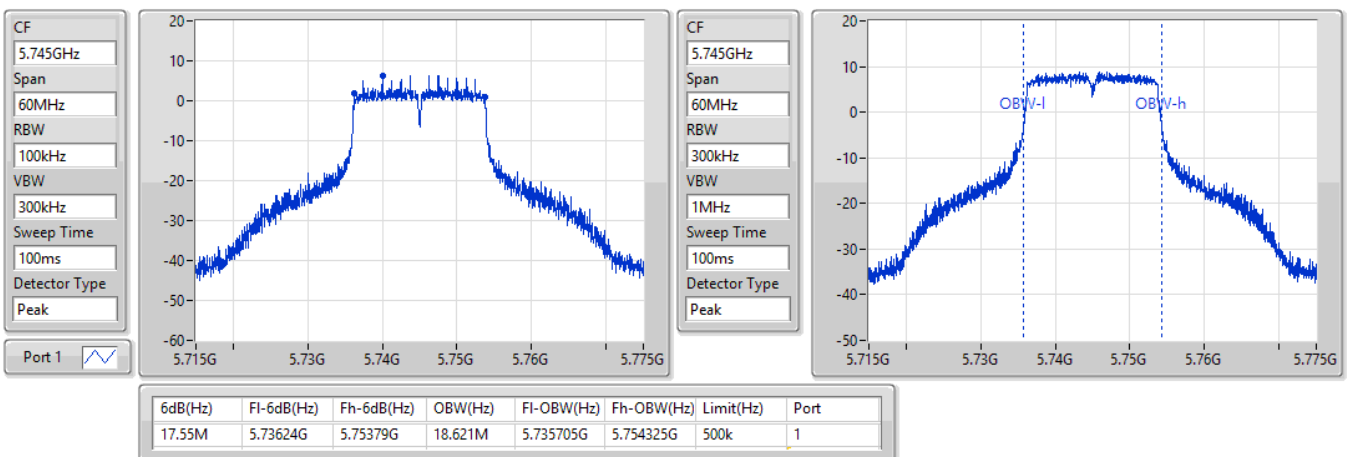


802.11ac VHT20_Nss1,(MCS0)_1TX
EBW
5240MHz

04/10/2021

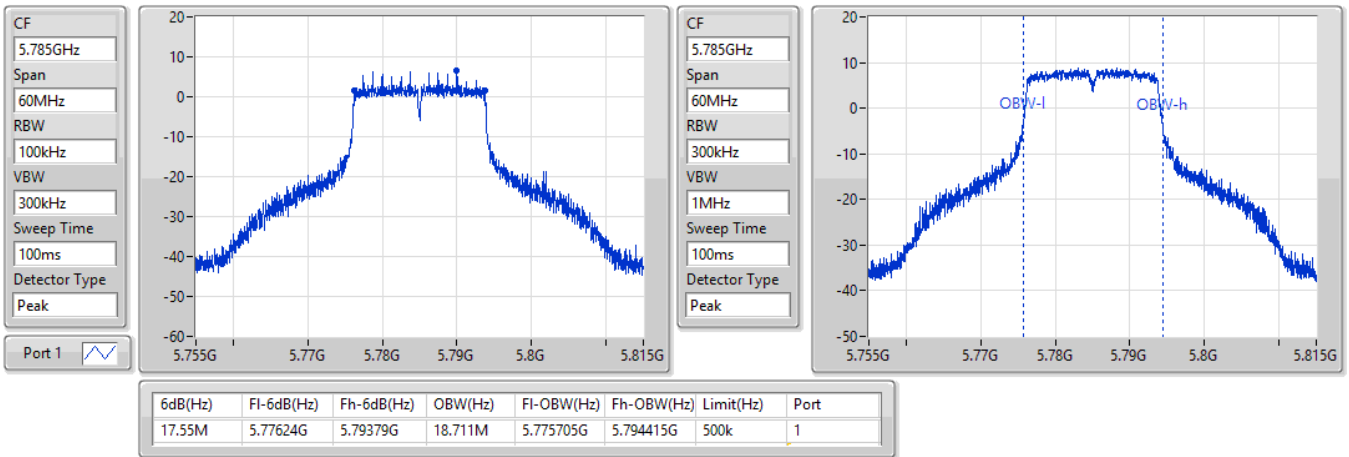

802.11ac VHT20_Nss1,(MCS0)_1TX
EBW
5745MHz

04/10/2021

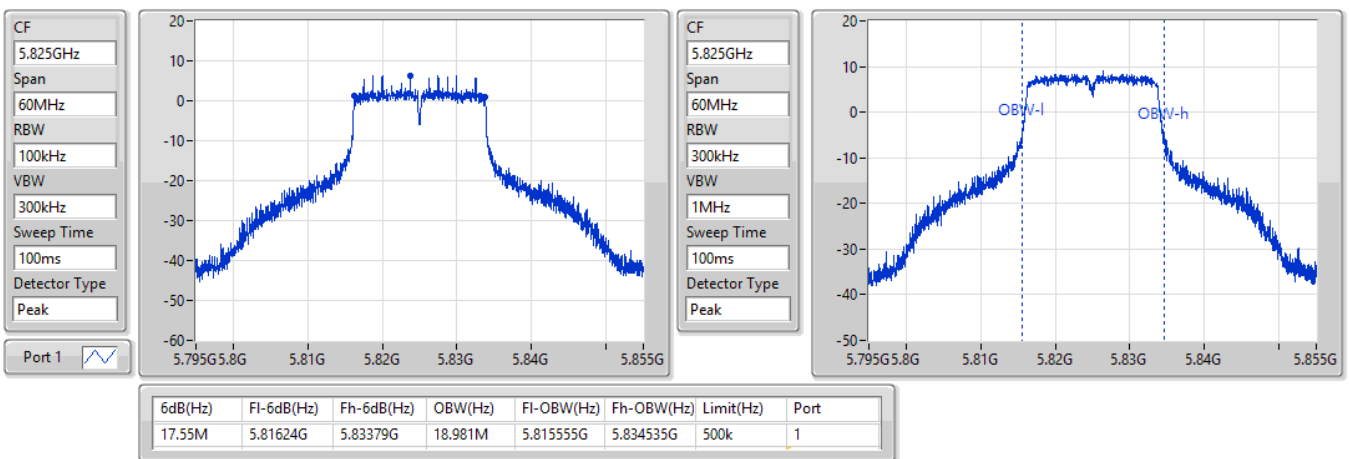


802.11ac VHT20_Nss1,(MCS0)_1TX
EBW
5785MHz

04/10/2021

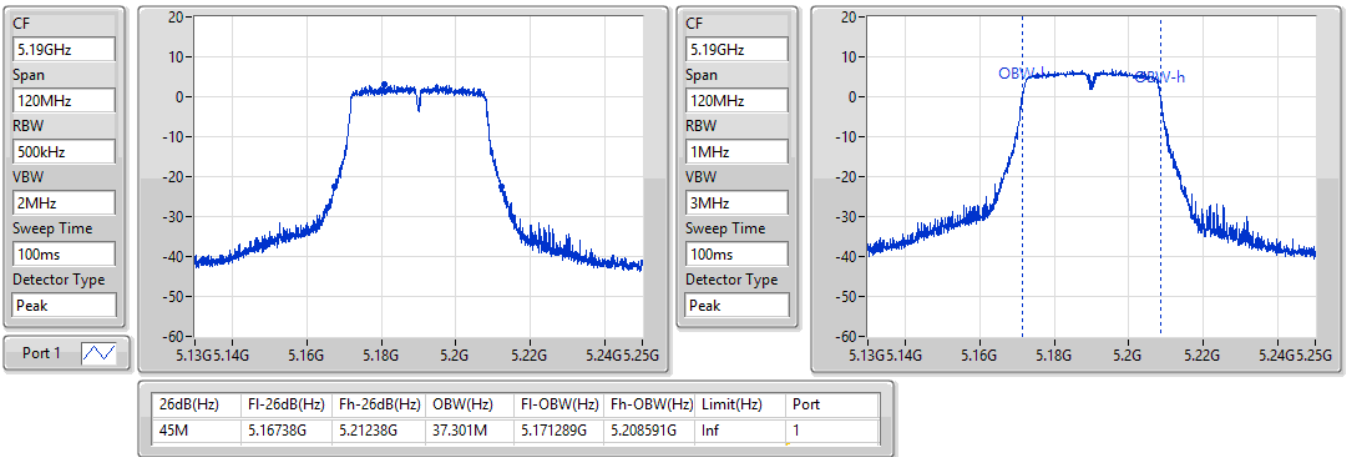

802.11ac VHT20_Nss1,(MCS0)_1TX
EBW
5825MHz

04/10/2021

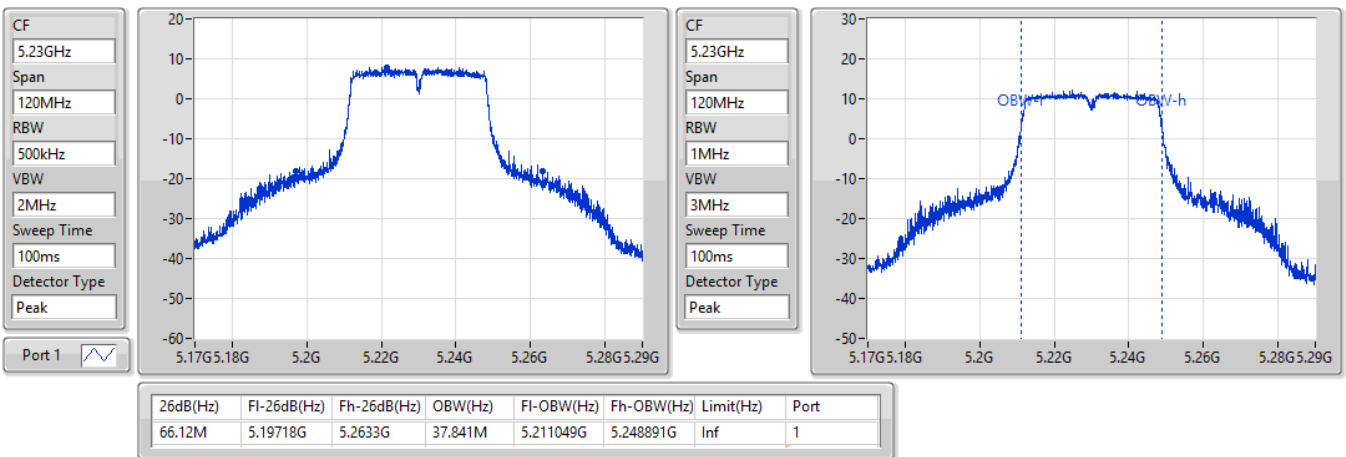


802.11ac VHT40_Nss1,(MCS0)_1TX
EBW
5190MHz

04/10/2021


802.11ac VHT40_Nss1,(MCS0)_1TX
EBW
5230MHz

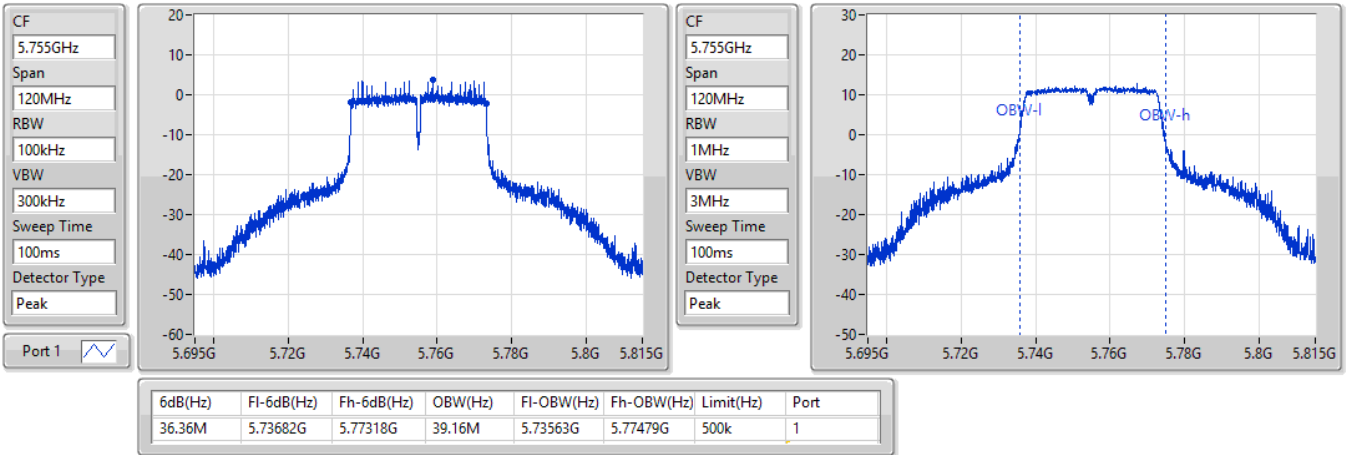
04/10/2021



802.11ac VHT40_Nss1,(MCS0)_1TX

EBW
5755MHz

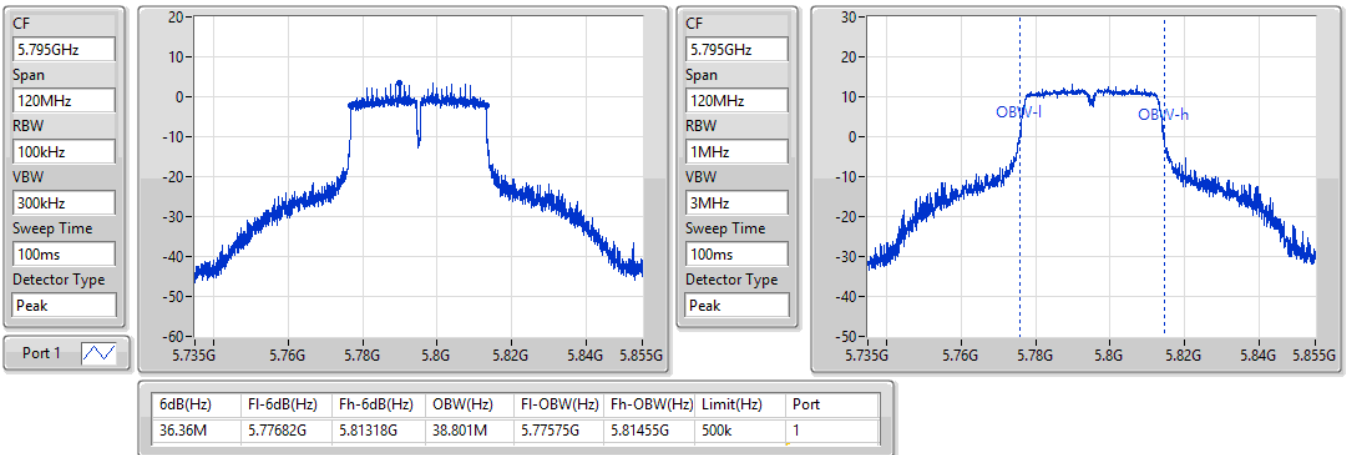
04/10/2021



802.11ac VHT40_Nss1,(MCS0)_1TX

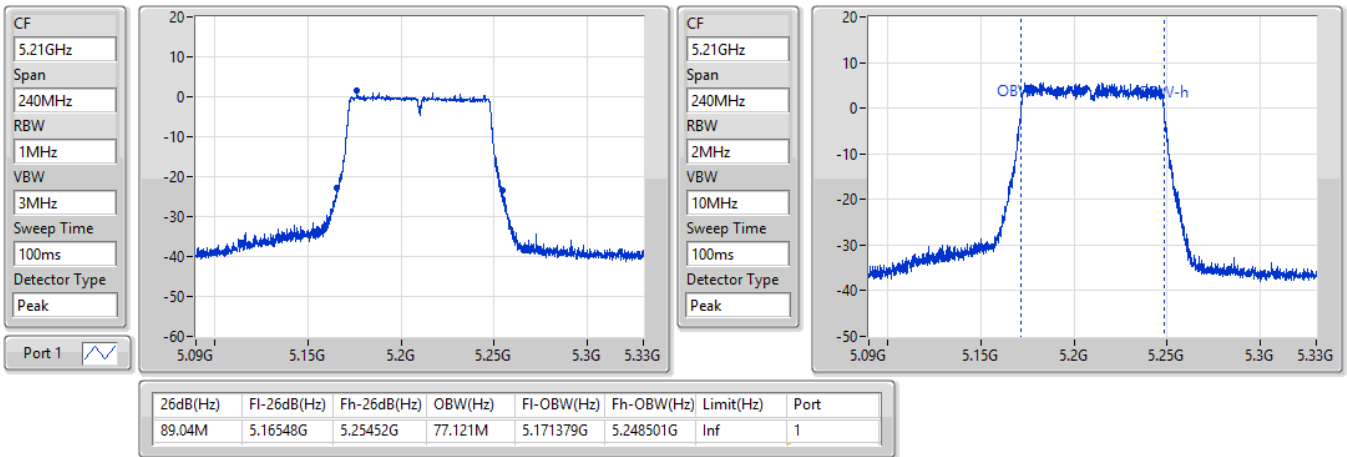
EBW
5795MHz

04/10/2021

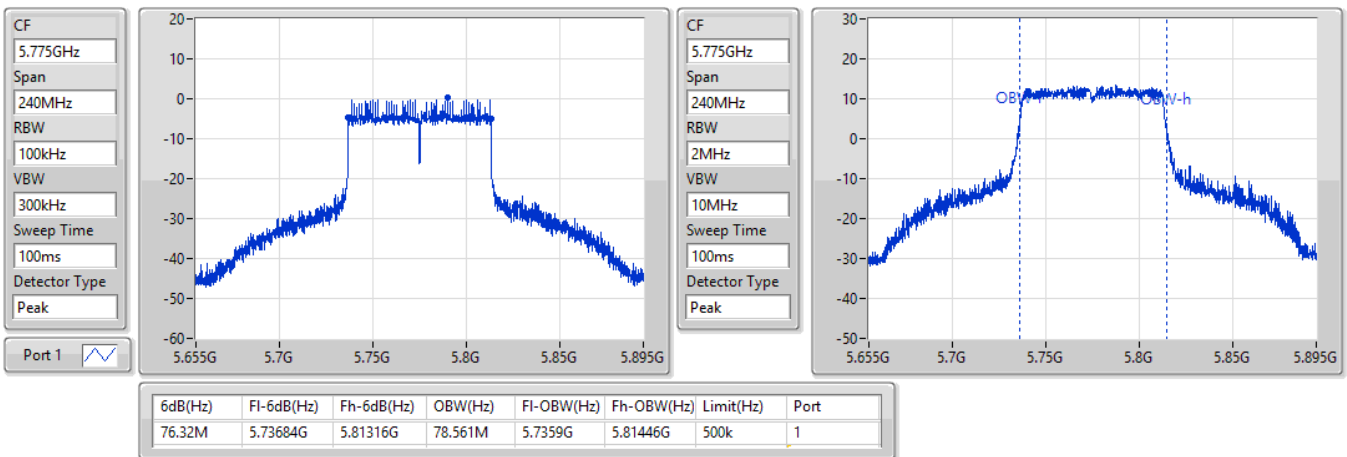


802.11ac VHT80_Nss1,(MCS0)_1TX
EBW
5210MHz

04/10/2021


802.11ac VHT80_Nss1,(MCS0)_1TX
EBW
5775MHz

04/10/2021



Summary

Mode	Total Power (dBm)	Total Power (W)
5.15-5.25GHz	-	-
802.11a_Nss1,(6Mbps)_1TX	17.64	0.05808
802.11ac VHT20_Nss1,(MCS0)_1TX	17.41	0.05508
802.11ac VHT40_Nss1,(MCS0)_1TX	17.41	0.05508
802.11ac VHT80_Nss1,(MCS0)_1TX	10.10	0.01023
5.725-5.85GHz	-	-
802.11a_Nss1,(6Mbps)_1TX	18.02	0.06339
802.11ac VHT20_Nss1,(MCS0)_1TX	18.05	0.06383
802.11ac VHT40_Nss1,(MCS0)_1TX	18.41	0.06934
802.11ac VHT80_Nss1,(MCS0)_1TX	17.68	0.05861



Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11a_Nss1,(6Mbps)_1TX	-	-	-	-	-
5180MHz	Pass	11.50	16.63	16.63	30.00
5200MHz	Pass	11.50	17.64	17.64	30.00
5240MHz	Pass	11.50	17.55	17.55	30.00
5745MHz	Pass	11.50	18.02	18.02	30.00
5785MHz	Pass	11.50	17.96	17.96	30.00
5825MHz	Pass	11.50	17.83	17.83	30.00
802.11ac_VHT20_Nss1,(MCS0)_1TX	-	-	-	-	-
5180MHz	Pass	11.50	16.63	16.63	30.00
5200MHz	Pass	11.50	17.17	17.17	30.00
5240MHz	Pass	11.50	17.41	17.41	30.00
5745MHz	Pass	11.50	18.05	18.05	30.00
5785MHz	Pass	11.50	17.90	17.90	30.00
5825MHz	Pass	11.50	17.82	17.82	30.00
802.11ac_VHT40_Nss1,(MCS0)_1TX	-	-	-	-	-
5190MHz	Pass	11.50	12.85	12.85	30.00
5230MHz	Pass	11.50	17.41	17.41	30.00
5755MHz	Pass	11.50	18.41	18.41	30.00
5795MHz	Pass	11.50	17.94	17.94	30.00
802.11ac_VHT80_Nss1,(MCS0)_1TX	-	-	-	-	-
5210MHz	Pass	11.50	10.10	10.10	30.00
5775MHz	Pass	11.50	17.68	17.68	30.00

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

Summary

Mode	PD (dBm/RBW)
5.15-5.25GHz	-
802.11a_Nss1,(6Mbps)_1TX	4.29
802.11ac VHT20_Nss1,(MCS0)_1TX	4.10
802.11ac VHT40_Nss1,(MCS0)_1TX	1.47
802.11ac VHT80_Nss1,(MCS0)_1TX	-9.53
5.725-5.85GHz	-
802.11a_Nss1,(6Mbps)_1TX	3.31
802.11ac VHT20_Nss1,(MCS0)_1TX	2.91
802.11ac VHT40_Nss1,(MCS0)_1TX	0.31
802.11ac VHT80_Nss1,(MCS0)_1TX	-3.43

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

Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11a_Nss1,(6Mbps)_1TX	-	-	-	-	-
5180MHz	Pass	11.50	3.50	3.50	17.00
5200MHz	Pass	11.50	4.29	4.29	17.00
5240MHz	Pass	11.50	4.08	4.08	17.00
5745MHz	Pass	11.50	3.16	3.16	30.00
5785MHz	Pass	11.50	3.31	3.31	30.00
5825MHz	Pass	11.50	3.07	3.07	30.00
802.11ac VHT20_Nss1,(MCS0)_1TX	-	-	-	-	-
5180MHz	Pass	11.50	3.06	3.06	17.00
5200MHz	Pass	11.50	4.10	4.10	17.00
5240MHz	Pass	11.50	3.69	3.69	17.00
5745MHz	Pass	11.50	2.91	2.91	30.00
5785MHz	Pass	11.50	2.86	2.86	30.00
5825MHz	Pass	11.50	2.79	2.79	30.00
802.11ac VHT40_Nss1,(MCS0)_1TX	-	-	-	-	-
5190MHz	Pass	11.50	-3.53	-3.53	17.00
5230MHz	Pass	11.50	1.47	1.47	17.00
5755MHz	Pass	11.50	0.31	0.31	30.00
5795MHz	Pass	11.50	0.12	0.12	30.00
802.11ac VHT80_Nss1,(MCS0)_1TX	-	-	-	-	-
5210MHz	Pass	11.50	-9.53	-9.53	17.00
5775MHz	Pass	11.50	-3.43	-3.43	30.00

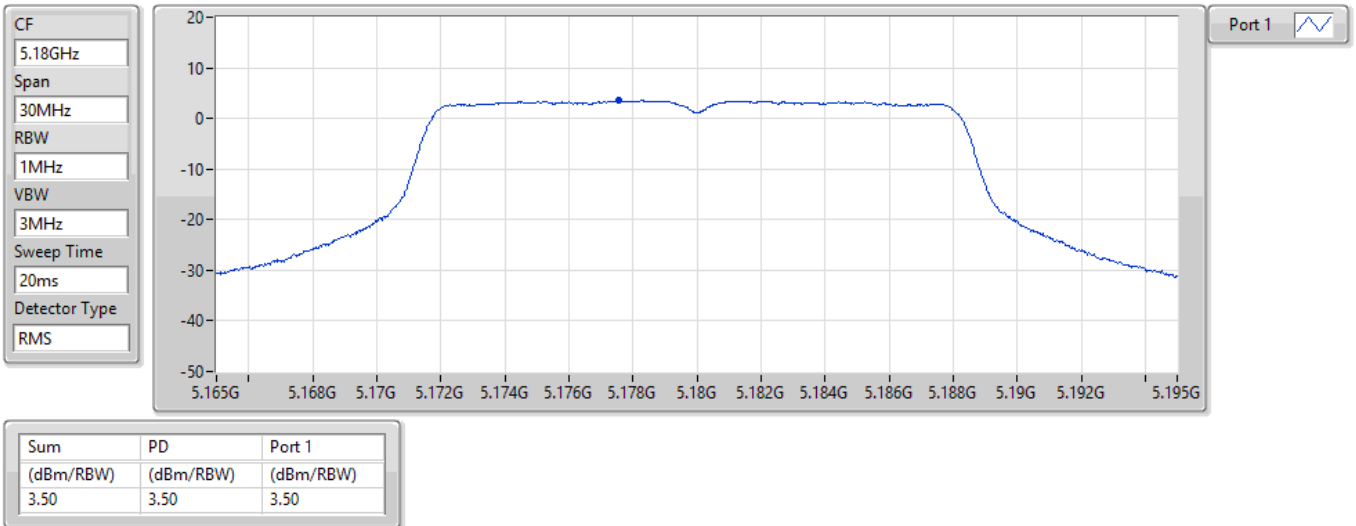
DG = Directional Gain; RBW = 500kHz for 5.725-5.85GHz band / 1MHz for other band;
 PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;

802.11a_Nss1,(6Mbps)_1TX

PSD

5180MHz

04/10/2021

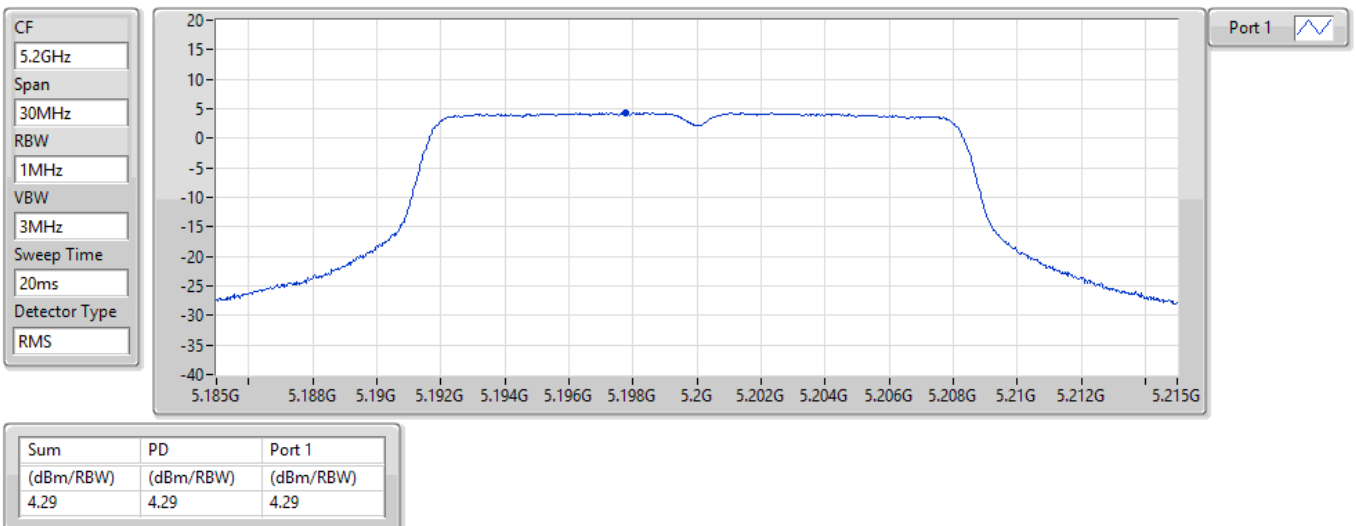


802.11a_Nss1,(6Mbps)_1TX

PSD

5200MHz

04/10/2021

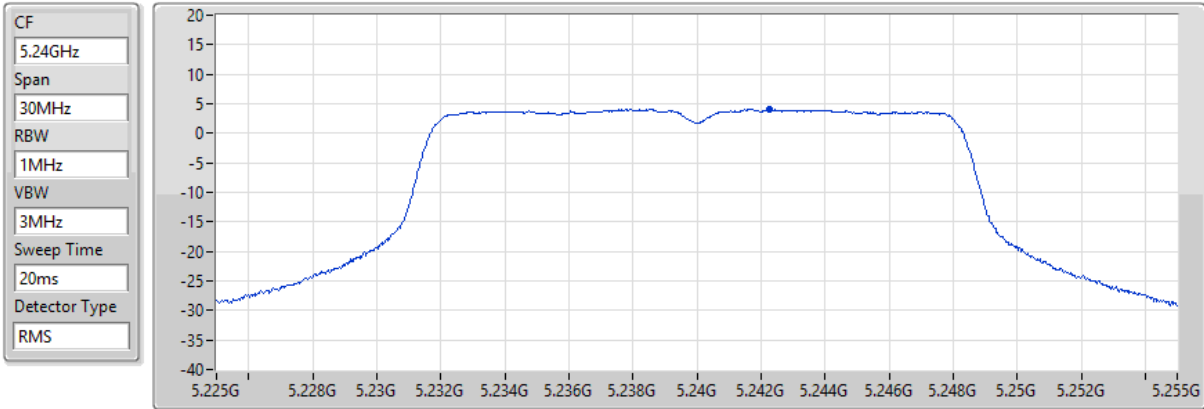


802.11a_Nss1,(6Mbps)_1TX

PSD

5240MHz

04/10/2021



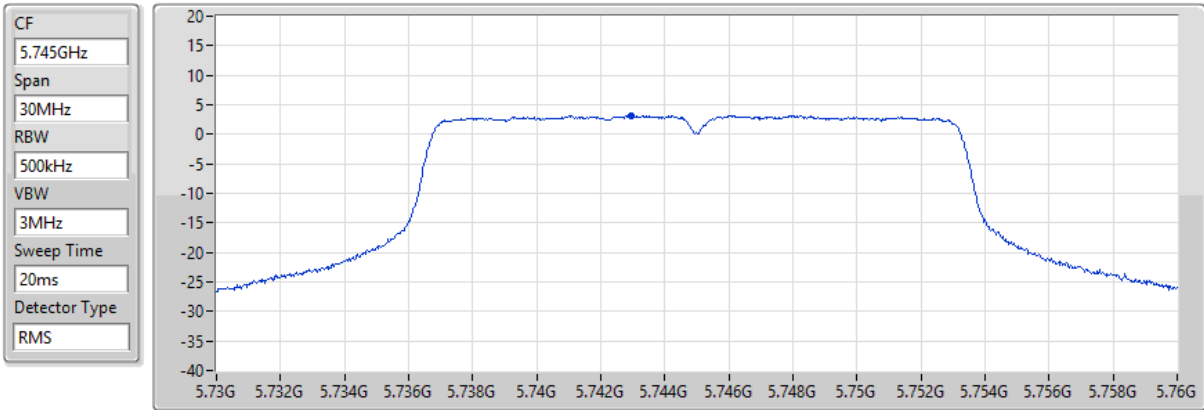
Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
4.08	4.08	4.08

802.11a_Nss1,(6Mbps)_1TX

PSD

5745MHz

04/10/2021



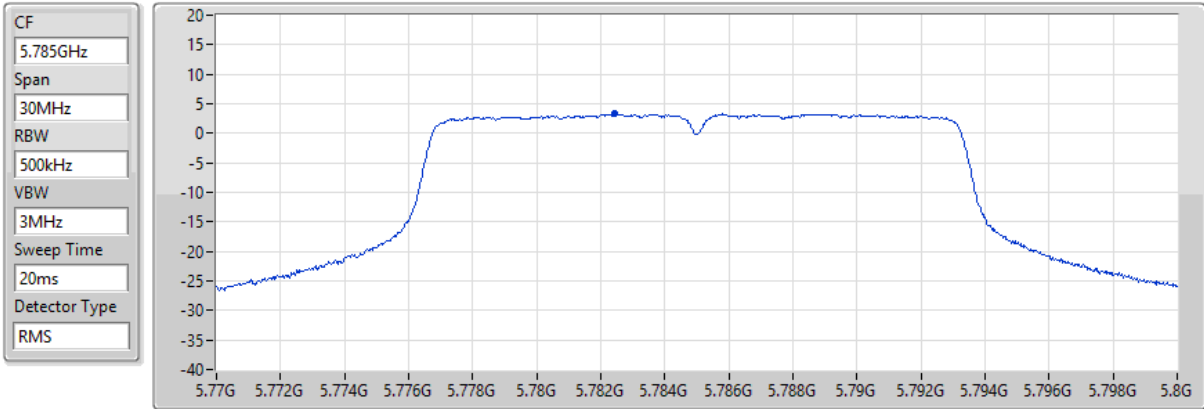
Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
3.16	3.16	3.16

802.11a_Nss1,(6Mbps)_1TX

PSD

5785MHz

04/10/2021



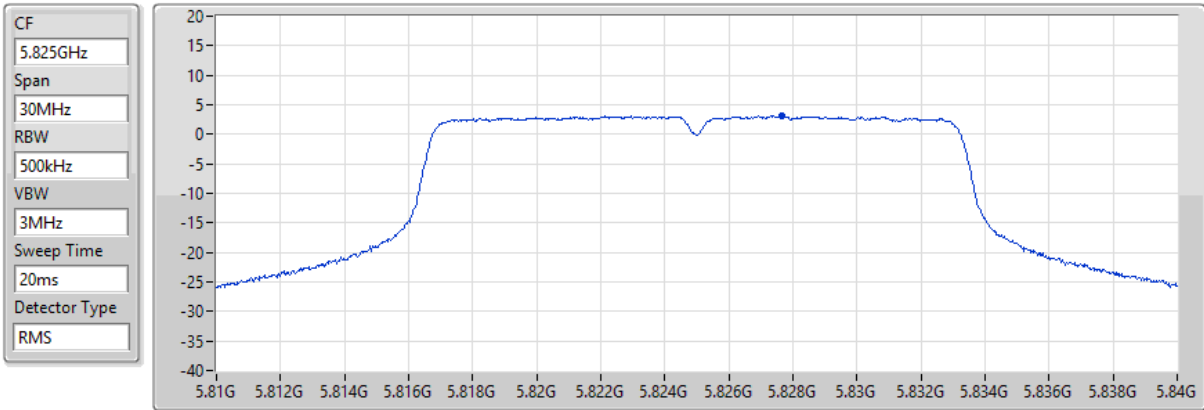
Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
3.31	3.31	3.31

802.11a_Nss1,(6Mbps)_1TX

PSD

5825MHz

04/10/2021



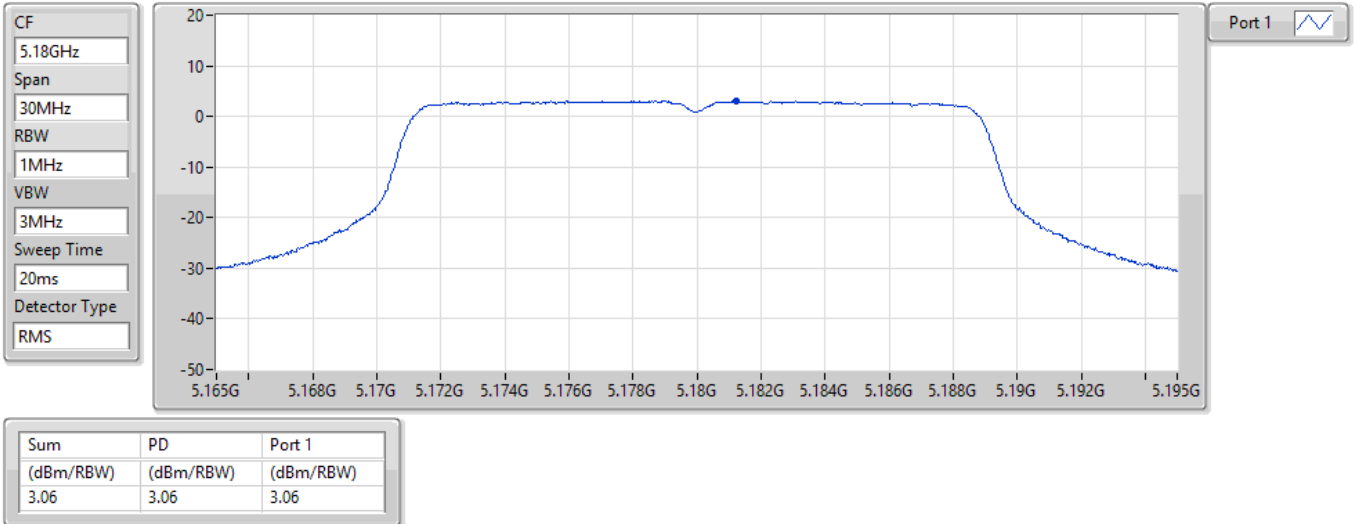
Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
3.07	3.07	3.07

802.11ac VHT20_Nss1,(MCS0)_1TX

PSD

5180MHz

04/10/2021

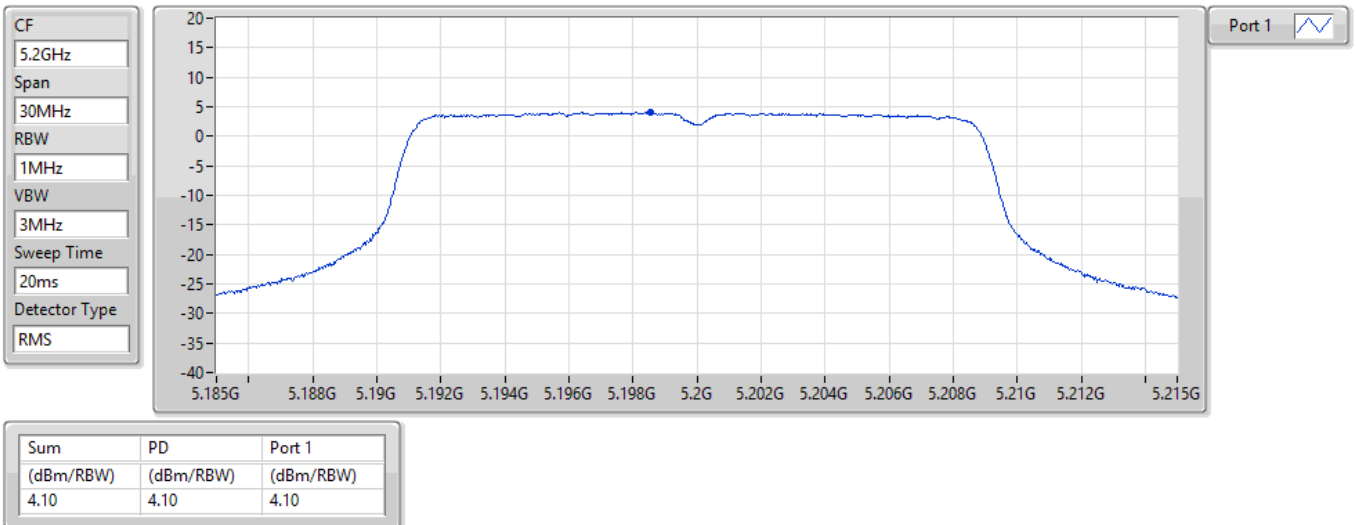


802.11ac VHT20_Nss1,(MCS0)_1TX

PSD

5200MHz

04/10/2021

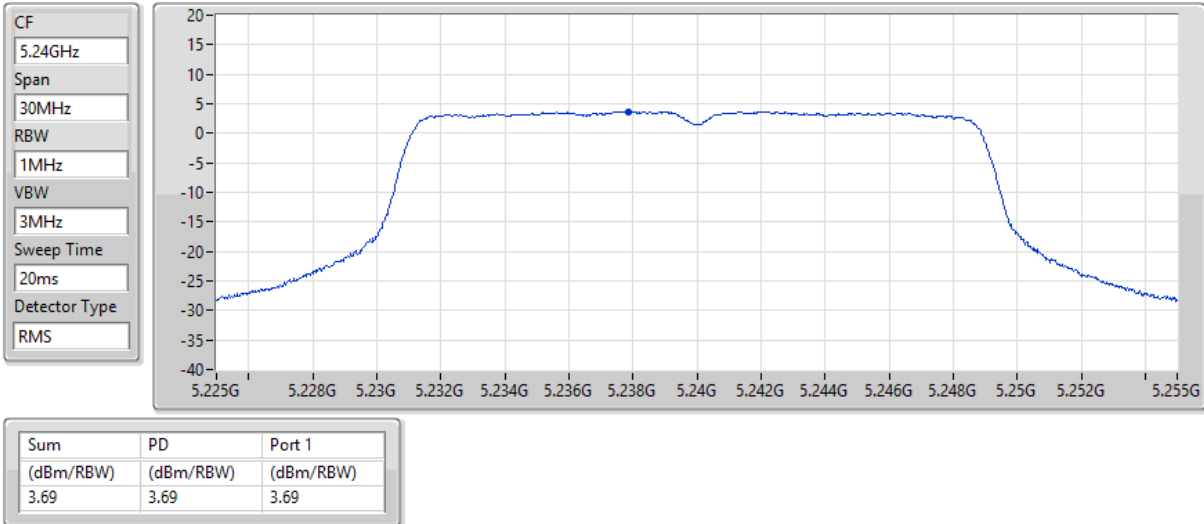


802.11ac VHT20_Nss1,(MCS0)_1TX

PSD

5240MHz

04/10/2021

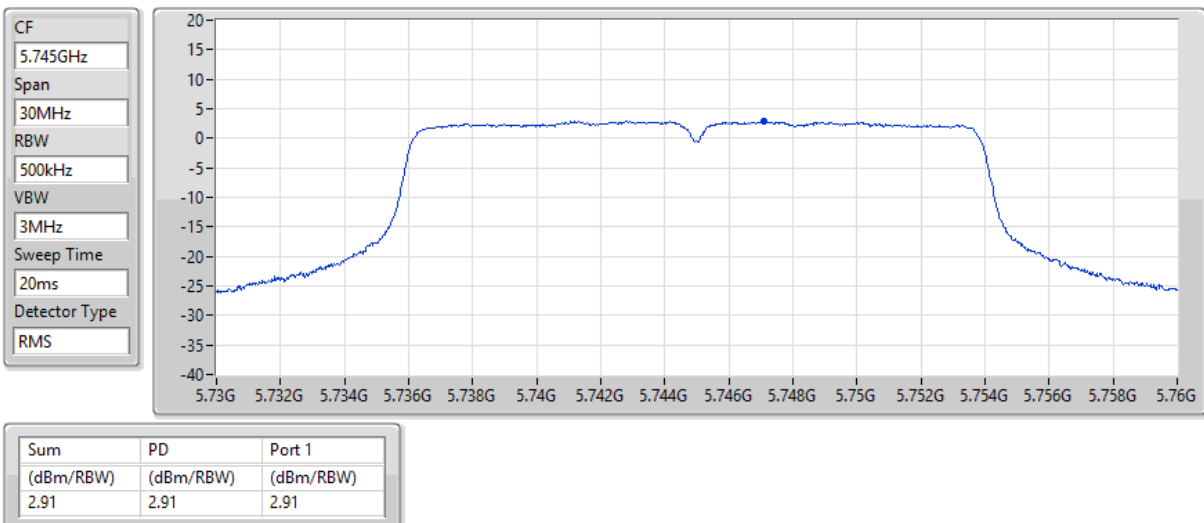


802.11ac VHT20_Nss1,(MCS0)_1TX

PSD

5745MHz

04/10/2021

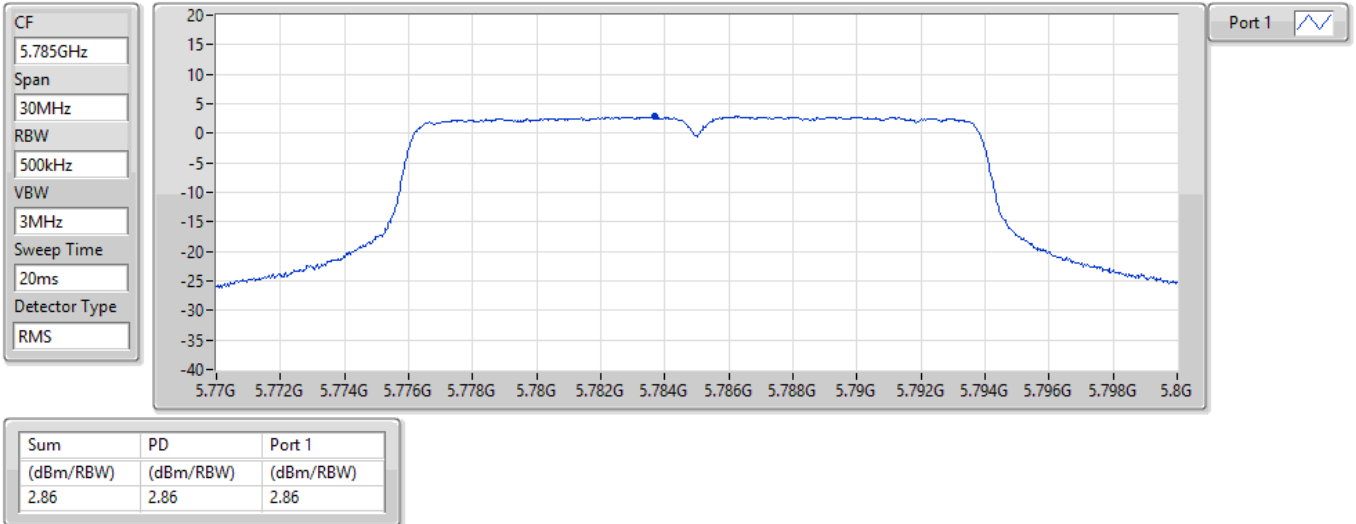


802.11ac VHT20_Nss1,(MCS0)_1TX

PSD

5785MHz

04/10/2021

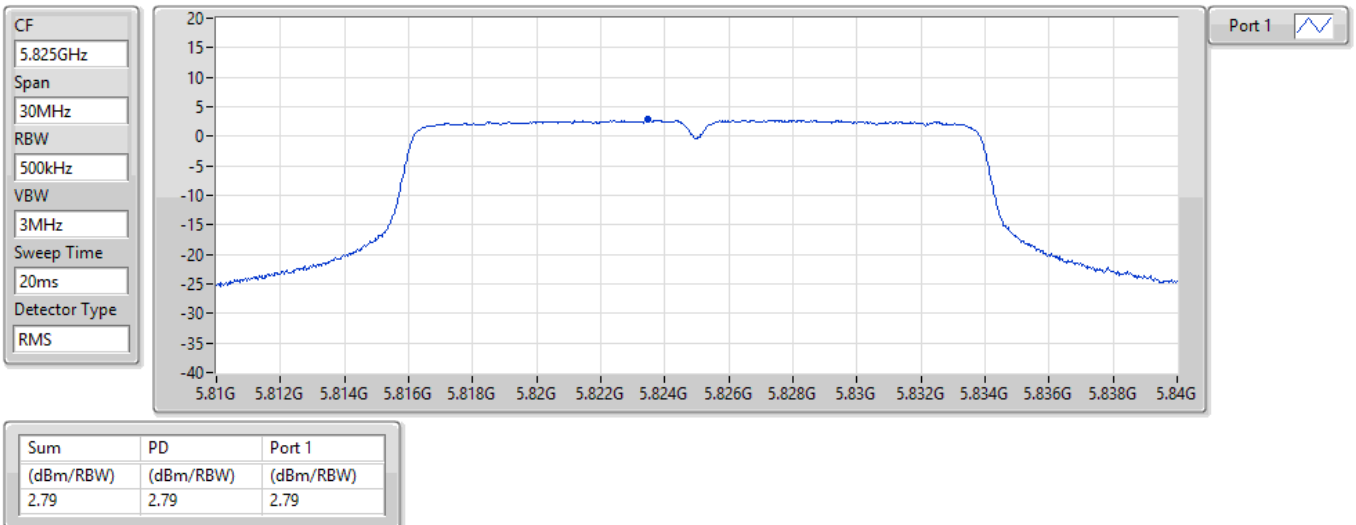


802.11ac VHT20_Nss1,(MCS0)_1TX

PSD

5825MHz

04/10/2021

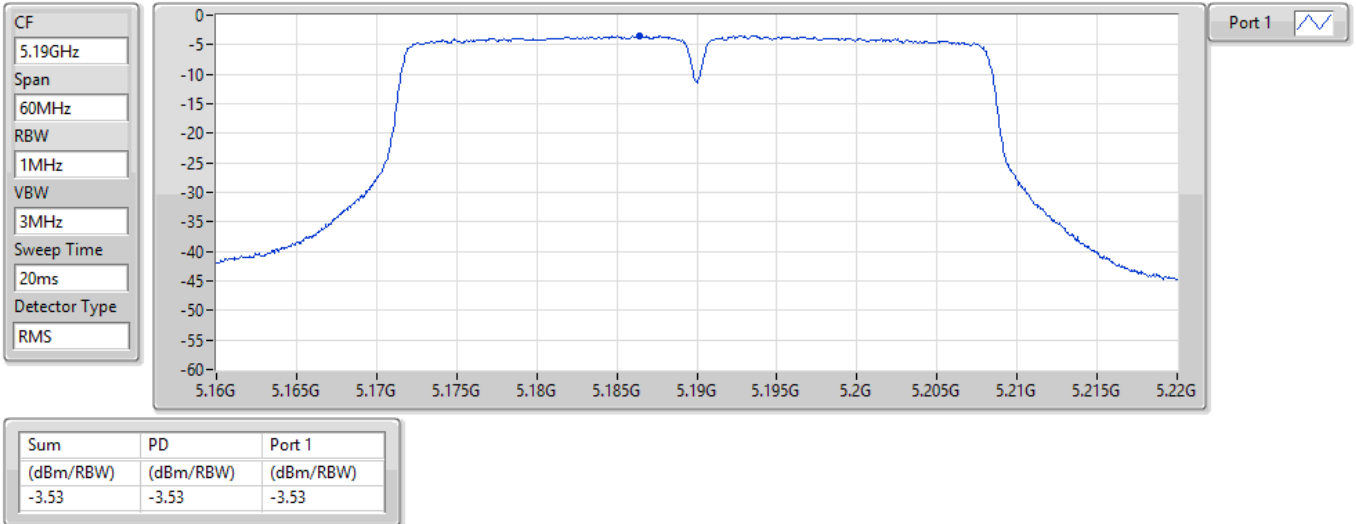


802.11ac VHT40_Nss1,(MCS0)_1TX

PSD

5190MHz

04/10/2021

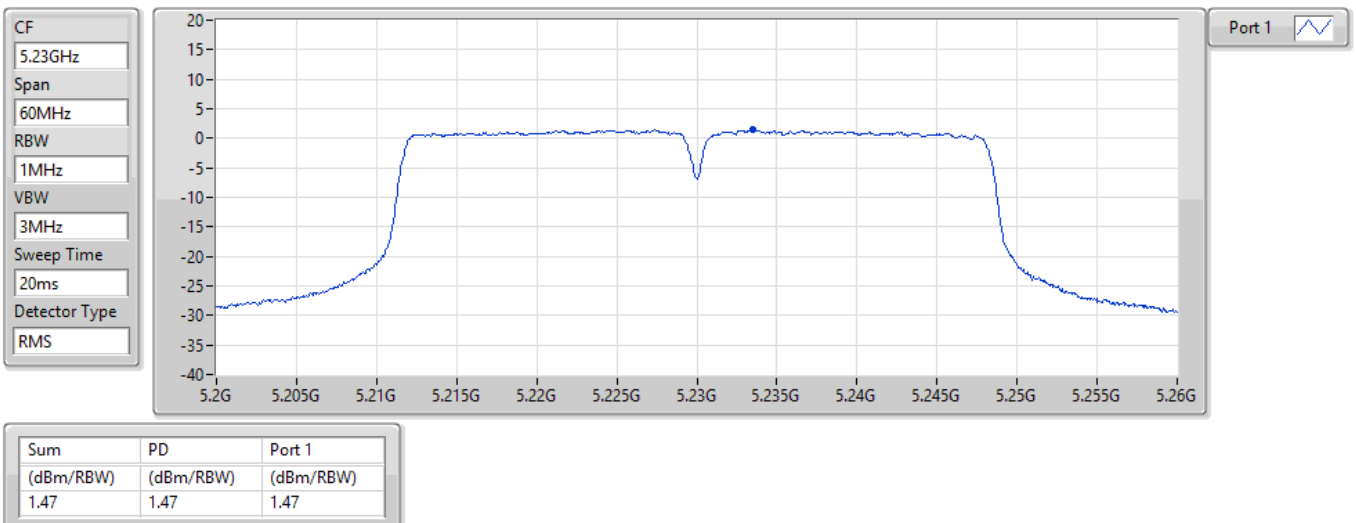


802.11ac VHT40_Nss1,(MCS0)_1TX

PSD

5230MHz

04/10/2021

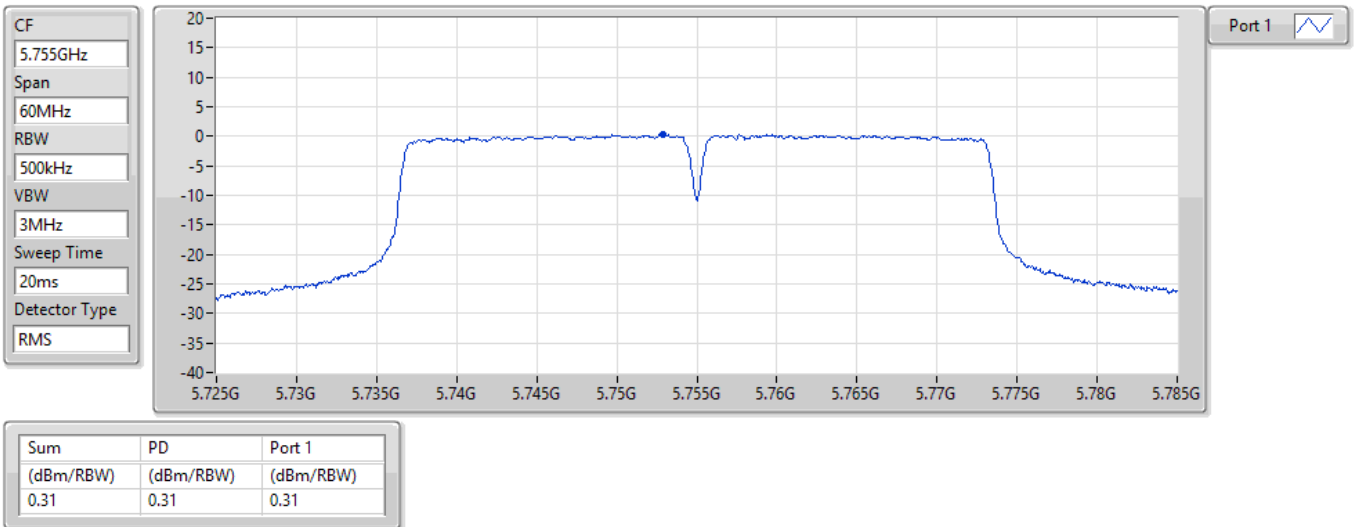


802.11ac VHT40_Nss1,(MCS0)_1TX

PSD

5755MHz

04/10/2021



802.11ac VHT40_Nss1,(MCS0)_1TX

PSD

5795MHz

04/10/2021

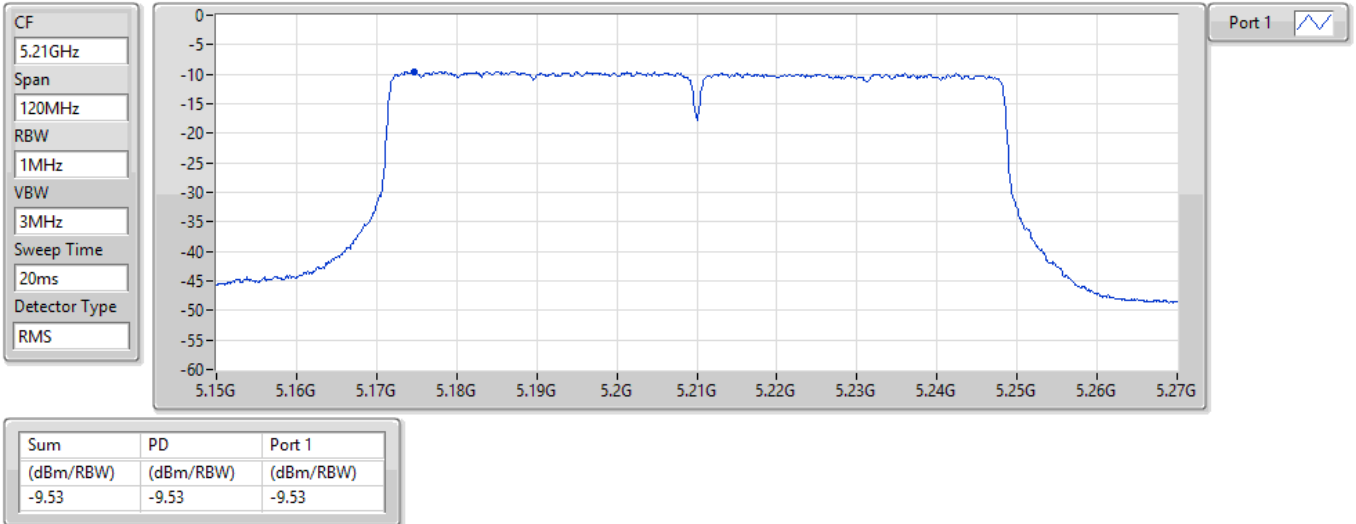


802.11ac VHT80_Nss1,(MCS0)_1TX

PSD

5210MHz

04/10/2021



802.11ac VHT80_Nss1,(MCS0)_1TX

PSD

5775MHz

04/10/2021





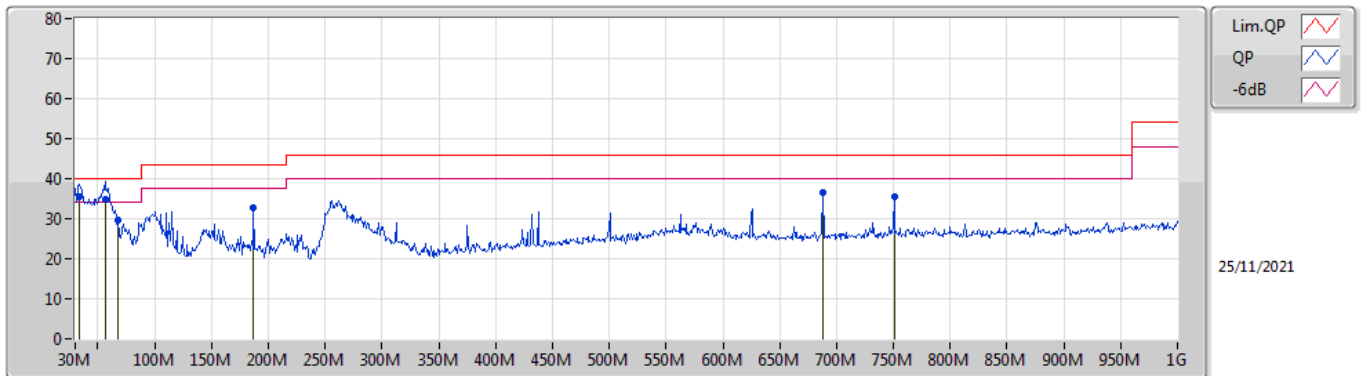
Radiated Emissions below 1GHz

Appendix E.1

Summary

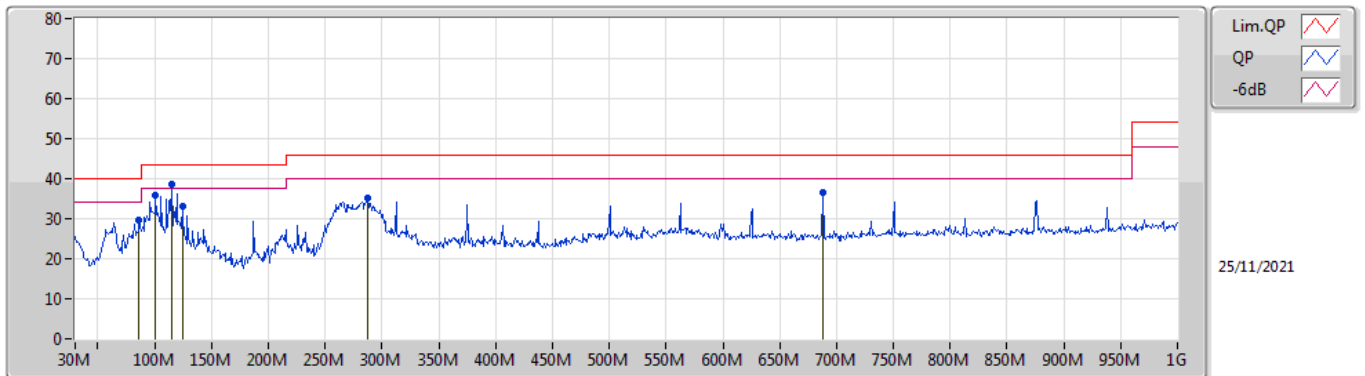
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	QP	33.88M	35.62	40.00	-4.38	Vertical

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)
QP	33.88M	35.62	40.00	-4.38	-9.58	3	Vertical	360	1.00	"Worst"	45.20	21.56	0.50	31.64
QP	56.19M	34.68	40.00	-5.32	-19.32	3	Vertical	85	1.00	"	54.00	11.83	0.70	31.85
PK	67.83M	29.64	40.00	-10.36	-19.94	3	Vertical	233	1.50	-	49.58	11.26	0.70	31.90
PK	187.14M	32.85	43.50	-10.65	-16.83	3	Vertical	202	1.00	-	49.68	13.93	1.14	31.90
PK	687.66M	36.54	46.00	-9.46	-6.25	3	Vertical	192	1.00	-	42.79	23.98	2.08	32.31
PK	750.71M	35.51	46.00	-10.49	-5.48	3	Vertical	194	1.50	-	40.99	24.64	2.20	32.32

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	86.26M	29.57	40.00	-10.43	-18.09	3	Horizontal	141	2.00	-	47.66	13.02	0.80	31.91
PK	100.81M	35.69	43.50	-7.81	-15.15	3	Horizontal	282	2.00	-	50.84	15.94	0.80	31.89
PK	115.36M	38.46	43.50	-5.04	-13.97	3	Horizontal	194	3.00	"Worst"	52.43	17.06	0.88	31.91
PK	124.09M	33.03	43.50	-10.47	-13.94	3	Horizontal	174	3.00	-	46.97	17.05	0.92	31.91
PK	287.05M	35.08	46.00	-10.92	-12.60	3	Horizontal	186	1.00	-	47.68	18.00	1.37	31.97
PK	687.66M	36.53	46.00	-9.47	-6.25	3	Horizontal	195	1.25	-	42.78	23.98	2.08	32.31

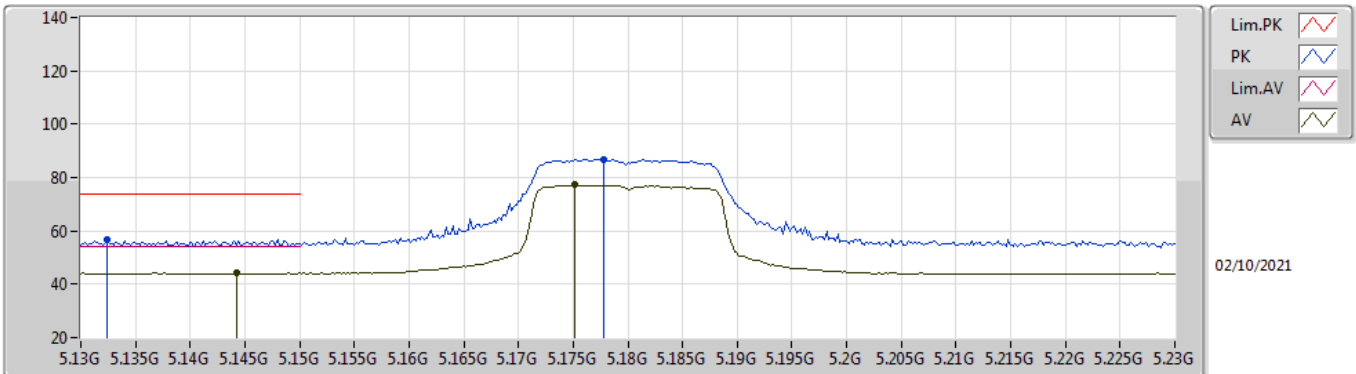


Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
5.15-5.25GHz	-	-	-	-	-	-	-	-	-	-	-
802.11ac VHT40_Nss1,(MCS0)_1TX	Pass	AV	5.15G	53.59	54.00	-0.41	3	Horizontal	176	2.23	-

802.11a_Nss1,(6Mbps)_1TX

5180MHz_TnomVnom

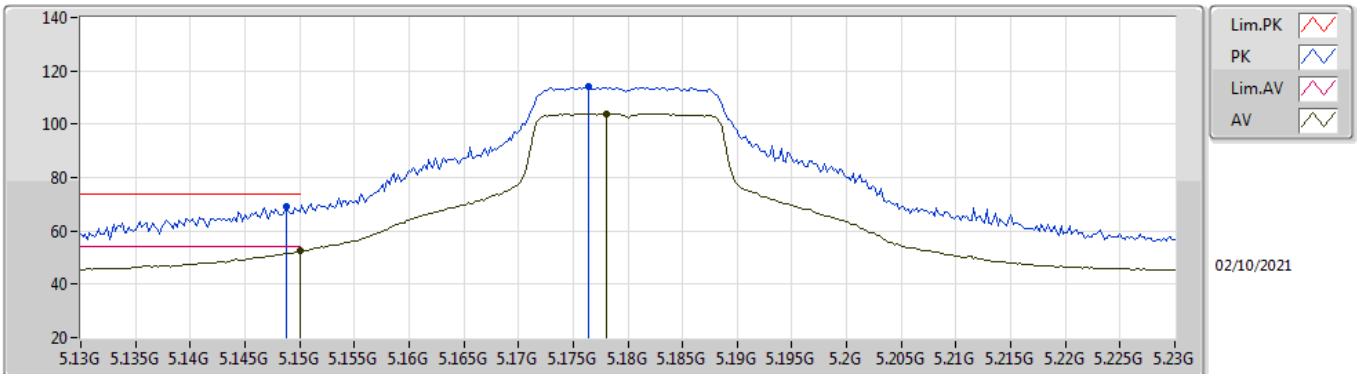


EUT V_1TX
Setting 18
06-F-S-5-10

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	5.1324G	56.69	74.00	-17.31	51.85	3	Vertical	161	1.80	-	31.81	5.00	31.97	
AV	5.1442G	44.47	54.00	-9.53	39.71	3	Vertical	161	1.80	-	31.73	5.00	31.97	
PK	5.1778G	86.93	Inf	-Inf	82.39	3	Vertical	161	1.80	-	31.53	5.00	31.99	
AV	5.1752G	77.16	Inf	-Inf	72.60	3	Vertical	161	1.80	-	31.55	5.00	31.99	

802.11a_Nss1,(6Mbps)_1TX

5180MHz_TnomVnom

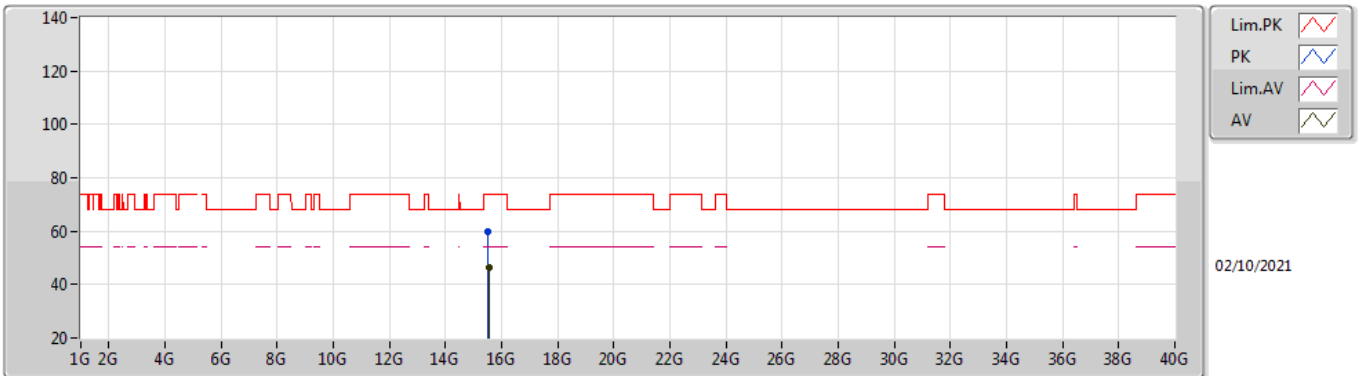


EUT V_1TX
Setting 18
06-F-S-5-10

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	5.1488G	69.35	74.00	-4.65	64.62	3	Horizontal	360	2.23	-	31.71	5.00	31.98	
AV	5.15G	52.41	54.00	-1.59	47.69	3	Horizontal	360	2.23	-	31.70	5.00	31.98	
PK	5.1764G	114.20	Inf	-Inf	109.65	3	Horizontal	360	2.23	-	31.54	5.00	31.99	
AV	5.178G	103.92	Inf	-Inf	99.38	3	Horizontal	360	2.23	-	31.53	5.00	31.99	

802.11a_Nss1,(6Mbps)_1TX

5180MHz_TnomVnom

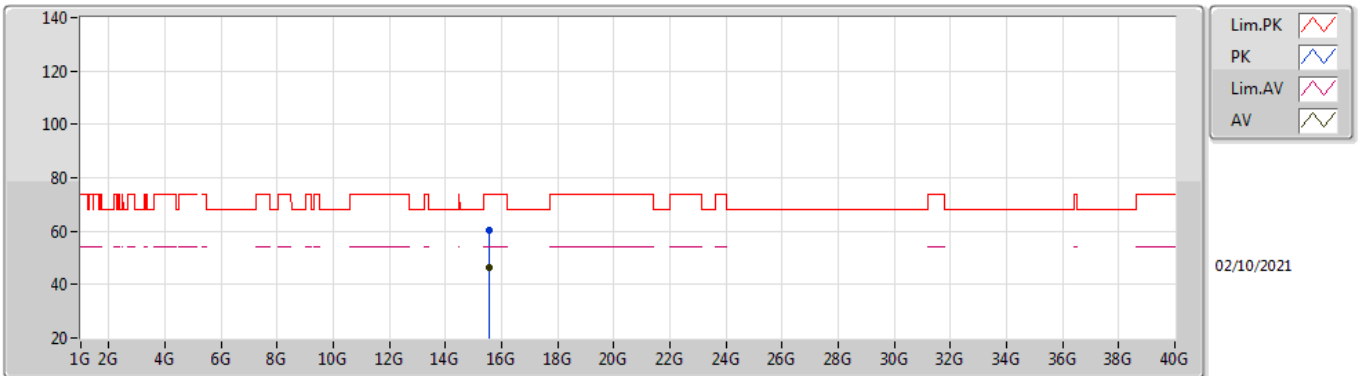


EUT_V_1TX
Setting 18
06-F-S-5

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	15.53244G	59.64	74.00	-14.36	44.96	3	Vertical	57	1.80	-	38.54	10.37	34.23
AV	15.5362G	46.31	54.00	-7.69	31.65	3	Vertical	57	1.80	-	38.52	10.37	34.23

802.11a_Nss1,(6Mbps)_1TX

5180MHz_TnomVnom

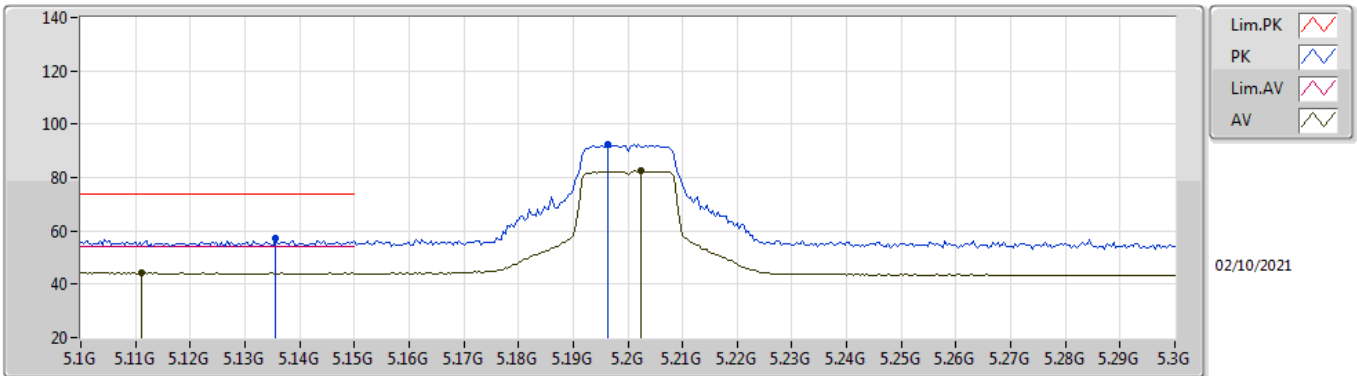


EUT_V_1TX
Setting 18
06-F-S-5

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	15.53308G	60.16	74.00	-13.84	45.49	3	Horizontal	134	2.58	-	38.53	10.37	34.23
AV	15.53812G	46.52	54.00	-7.48	31.88	3	Horizontal	134	2.58	-	38.51	10.37	34.24

802.11a_Nss1,(6Mbps)_1TX

5200MHz_TnomVnom

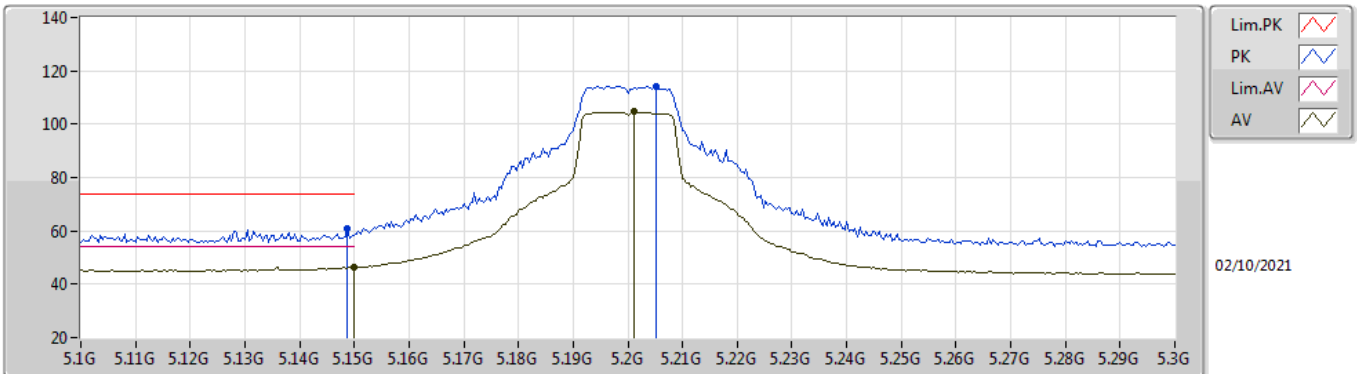


EUT V_1TX
Setting 19
06-F-S-5-10

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	5.1356G	57.13	74.00	-16.87	52.31	3	Vertical	13	2.51	-	31.79	5.00	31.97
AV	5.1112G	44.42	54.00	-9.58	39.45	3	Vertical	13	2.51	-	31.93	5.00	31.96
PK	5.1964G	92.47	Inf	-Inf	88.05	3	Vertical	13	2.51	-	31.42	5.00	32.00
AV	5.2024G	82.49	Inf	-Inf	78.10	3	Vertical	13	2.51	-	31.39	5.00	32.00

802.11a_Nss1,(6Mbps)_1TX

5200MHz_TnomVnom

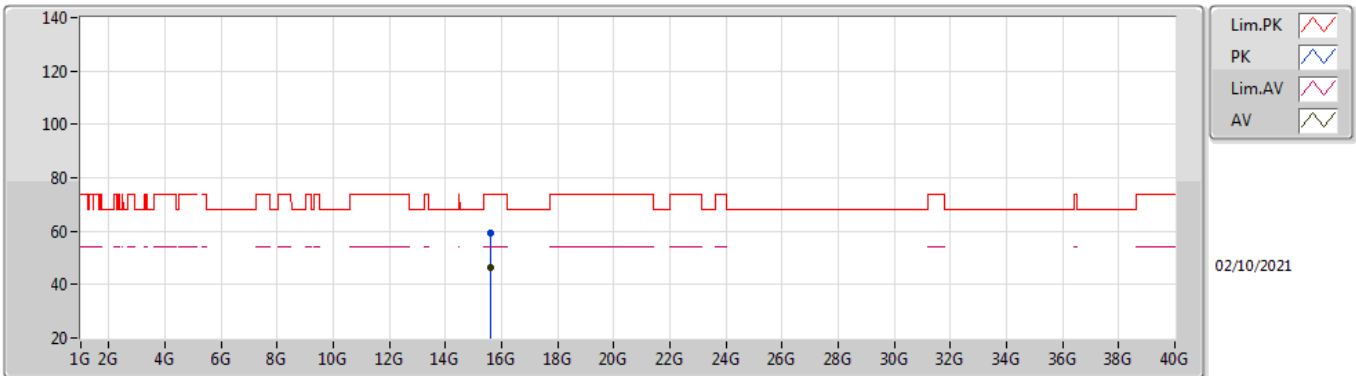


EUT V_1TX
Setting 19
06-F-S-5-10

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	5.1488G	60.66	74.00	-13.34	55.93	3	Horizontal	360	2.32	-	31.71	5.00	31.98	
AV	5.15G	46.43	54.00	-7.57	41.71	3	Horizontal	360	2.32	-	31.70	5.00	31.98	
PK	5.2052G	114.17	Inf	-Inf	109.80	3	Horizontal	360	2.32	-	31.37	5.00	32.00	
AV	5.2012G	104.58	Inf	-Inf	100.19	3	Horizontal	360	2.32	-	31.39	5.00	32.00	

802.11a_Nss1,(6Mbps)_1TX

5200MHz_TnomVnom

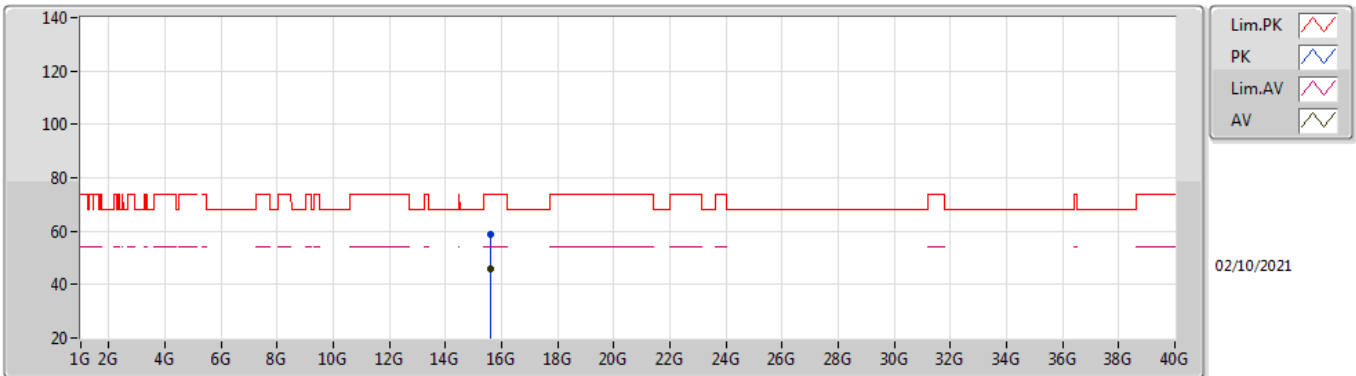


EUT_V_1TX
Setting 19
06-F-S-5

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	15.5986G	59.54	74.00	-14.46	45.19	3	Vertical	224	1.49	-	38.21	10.40	34.26	
AV	15.59526G	46.20	54.00	-7.80	31.84	3	Vertical	224	1.49	-	38.22	10.40	34.26	

802.11a_Nss1,(6Mbps)_1TX

5200MHz_TnomVnom

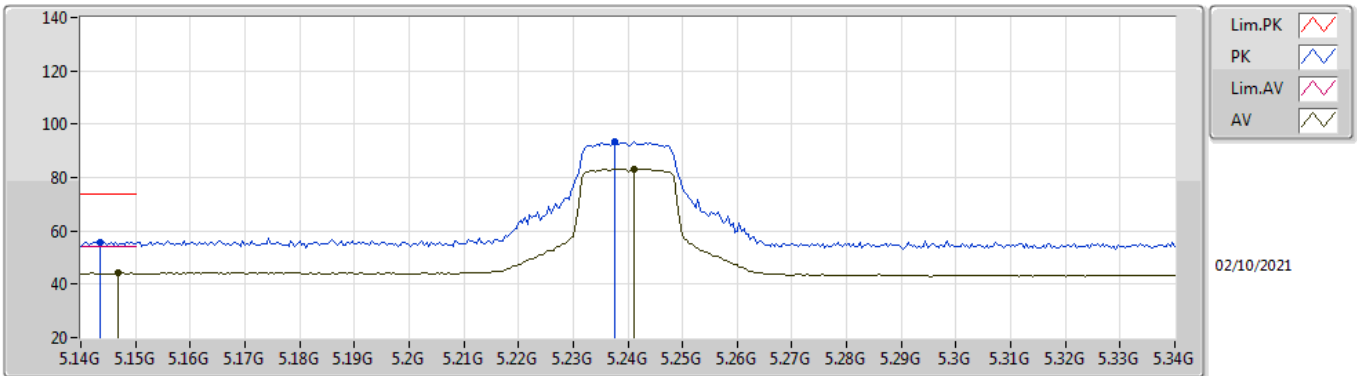


EUT_V_1TX
Setting 19
06-F-S-5

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	15.59866G	58.71	74.00	-15.29	44.36	3	Horizontal	354	2.52	-	38.21	10.40	34.26
AV	15.59768G	45.96	54.00	-8.04	31.61	3	Horizontal	354	2.52	-	38.21	10.40	34.26

802.11a_Nss1,(6Mbps)_1TX

5240MHz_TnomVnom

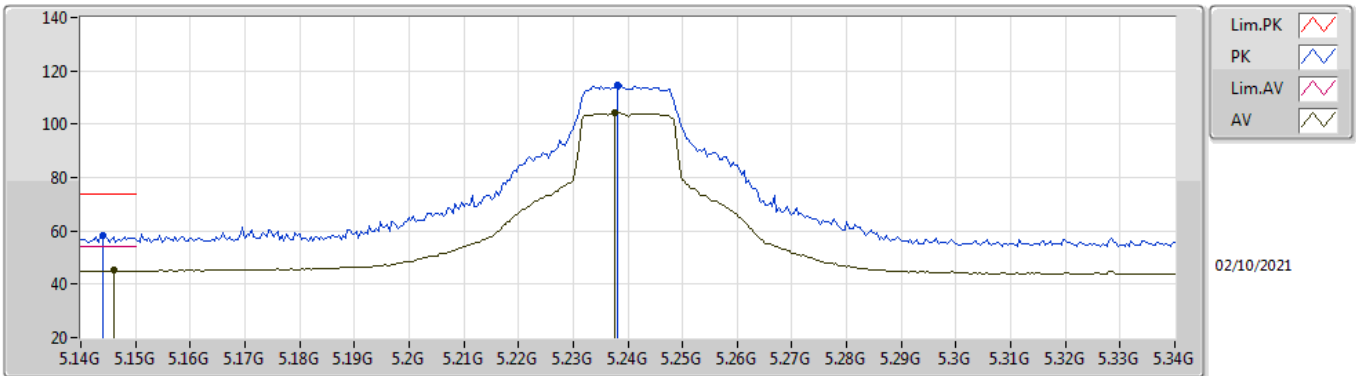


EUT_V_1TX
Setting 19
06-F-S-5-10

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	5.1436G	55.91	74.00	-18.09	51.14	3	Vertical	195	2.48	-	31.74	5.00	31.97	
AV	5.1468G	44.11	54.00	-9.89	39.36	3	Vertical	195	2.48	-	31.72	5.00	31.97	
PK	5.2376G	93.39	Inf	-Inf	89.23	3	Vertical	195	2.48	-	31.17	5.00	32.01	
AV	5.2412G	83.34	Inf	-Inf	79.21	3	Vertical	195	2.48	-	31.15	5.00	32.02	

802.11a_Nss1,(6Mbps)_1TX

5240MHz_TnomVnom

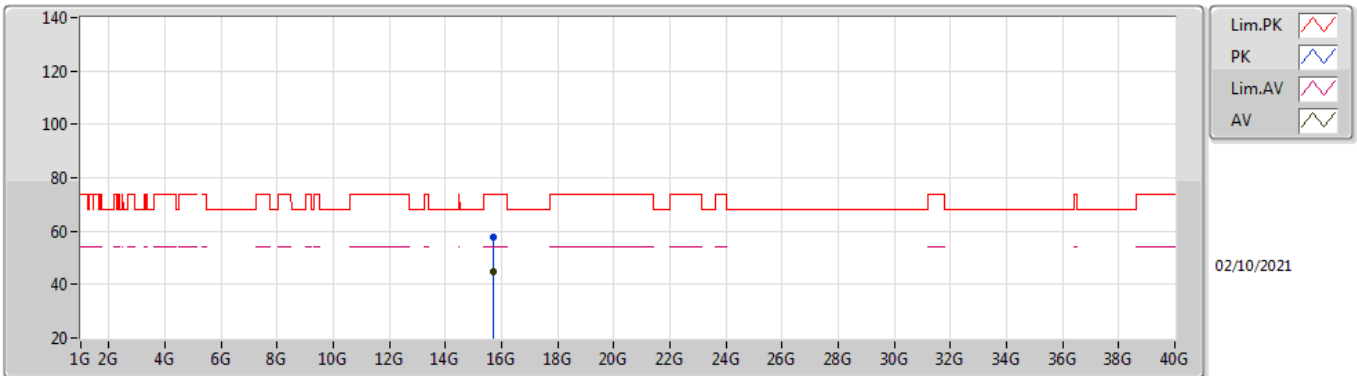


EUT V_1TX
Setting 19
06-F-S-5-10

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	5.144G	58.23	74.00	-15.77	53.46	3	Horizontal	0	2.18	-	31.74	5.00	31.97	
AV	5.146G	45.17	54.00	-8.83	40.42	3	Horizontal	0	2.18	-	31.72	5.00	31.97	
PK	5.238G	114.52	Inf	-Inf	110.36	3	Horizontal	0	2.18	-	31.17	5.00	32.01	
AV	5.2376G	104.21	Inf	-Inf	100.05	3	Horizontal	0	2.18	-	31.17	5.00	32.01	

802.11a_Nss1,(6Mbps)_1TX

5240MHz_TnomVnom

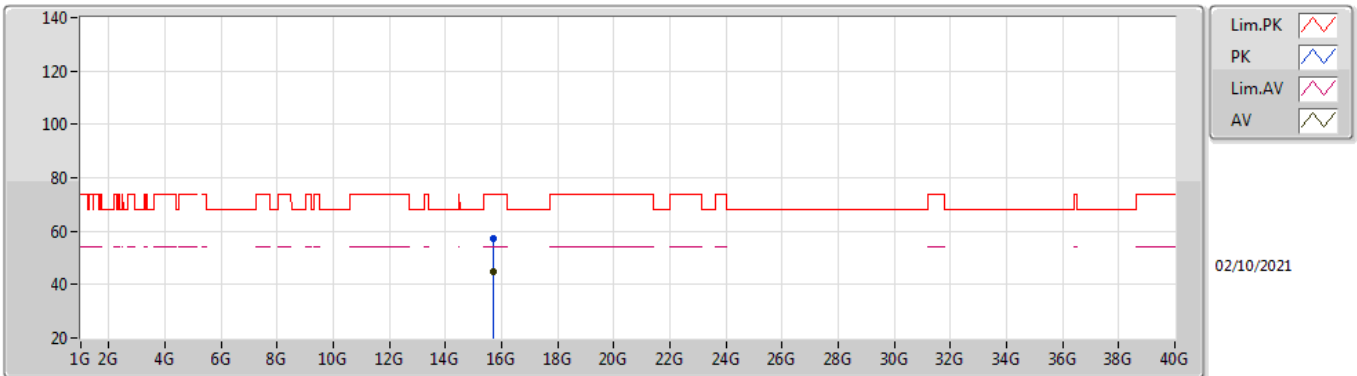


EUT_V_1TX
Setting 19
06-F-S-5

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	15.71674G	57.84	74.00	-16.16	43.89	3	Vertical	339	2.23	-	37.80	10.46	34.31	
AV	15.71722G	44.67	54.00	-9.33	30.72	3	Vertical	339	2.23	-	37.80	10.46	34.31	

802.11a_Nss1,(6Mbps)_1TX

5240MHz_TnomVnom

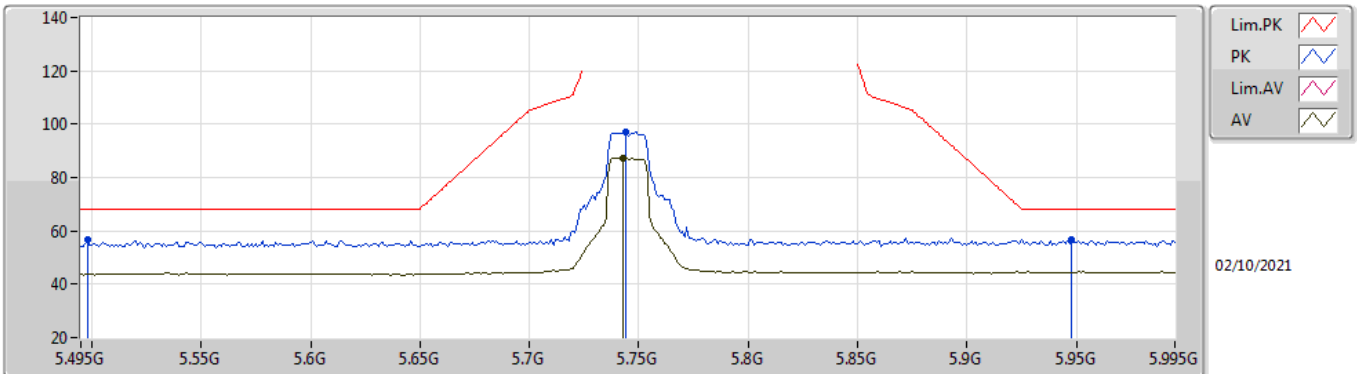


EUT_V_1TX
Setting 19
06-F-S-5

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	15.72278G	57.47	74.00	-16.53	43.52	3	Horizontal	102	1.51	-	37.80	10.46	34.31
AV	15.71684G	44.88	54.00	-9.12	30.93	3	Horizontal	102	1.51	-	37.80	10.46	34.31

802.11a_Nss1,(6Mbps)_1TX

5745MHz_TnomVnom

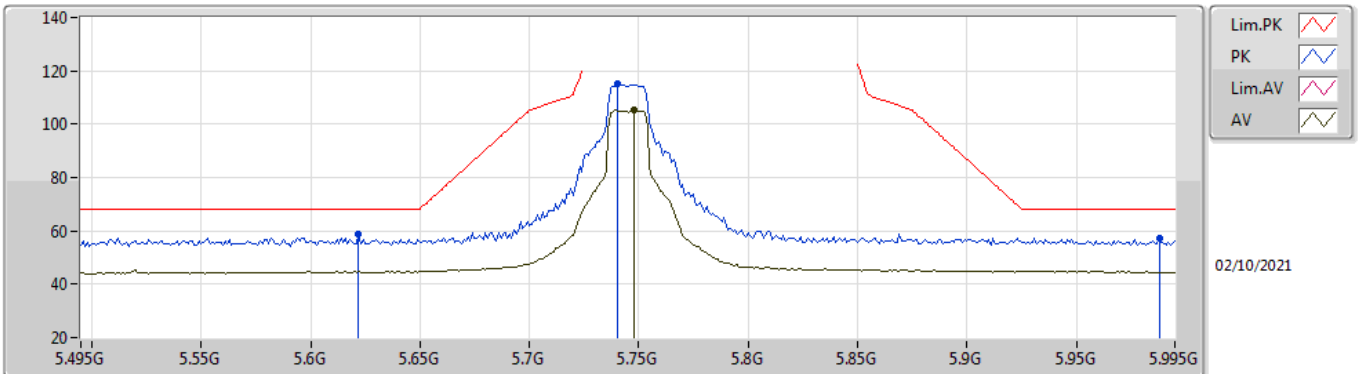


EUT V_1TX
Setting 19
06-F-S-5-10

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	5.498G	56.65	68.20	-11.55	52.18	3	Vertical	194	1.66	-	31.50	5.10	32.13	
PK	5.744G	97.00	Inf	-Inf	92.03	3	Vertical	194	1.66	-	31.98	5.27	32.28	
AV	5.743G	87.50	Inf	-Inf	82.54	3	Vertical	194	1.66	-	31.97	5.27	32.28	
PK	5.948G	56.84	68.20	-11.36	51.59	3	Vertical	194	1.66	-	32.20	5.45	32.40	

802.11a_Nss1,(6Mbps)_1TX

5745MHz_TnomVnom

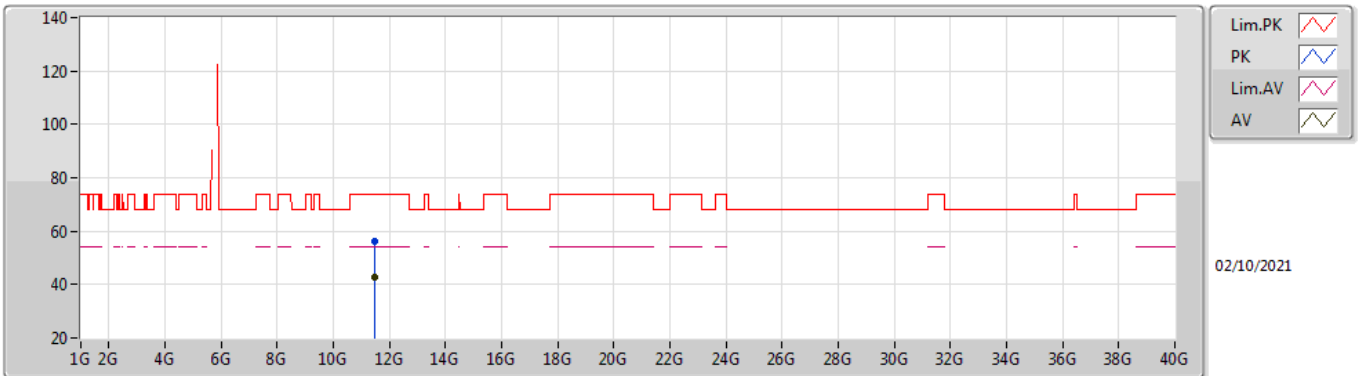


EUT V_1TX
Setting 19
06-F-S-5-10

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	5.622G	58.76	68.20	-9.44	54.15	3	Horizontal	181	1.06	-	31.60	5.21	32.20	
PK	5.74G	115.37	Inf	-Inf	110.41	3	Horizontal	181	1.06	-	31.96	5.27	32.27	
AV	5.748G	105.19	Inf	-Inf	100.21	3	Horizontal	181	1.06	-	31.99	5.27	32.28	
PK	5.988G	57.30	68.20	-10.90	52.03	3	Horizontal	181	1.06	-	32.20	5.49	32.42	

802.11a_Nss1,(6Mbps)_1TX

5745MHz_TnomVnom

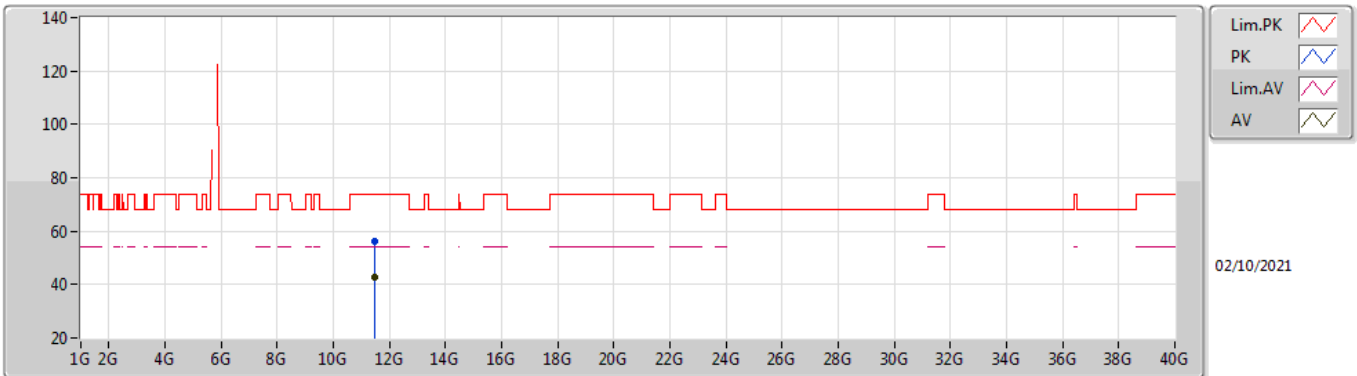


EUT_V_1TX
Setting 19
06-F-S-5

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	11.49064G	55.98	74.00	-18.02	42.37	3	Vertical	244	1.43	-	39.62	8.30	34.31	
AV	11.48558G	42.89	54.00	-11.11	29.28	3	Vertical	244	1.43	-	39.63	8.29	34.31	

802.11a_Nss1,(6Mbps)_1TX

5745MHz_TnomVnom

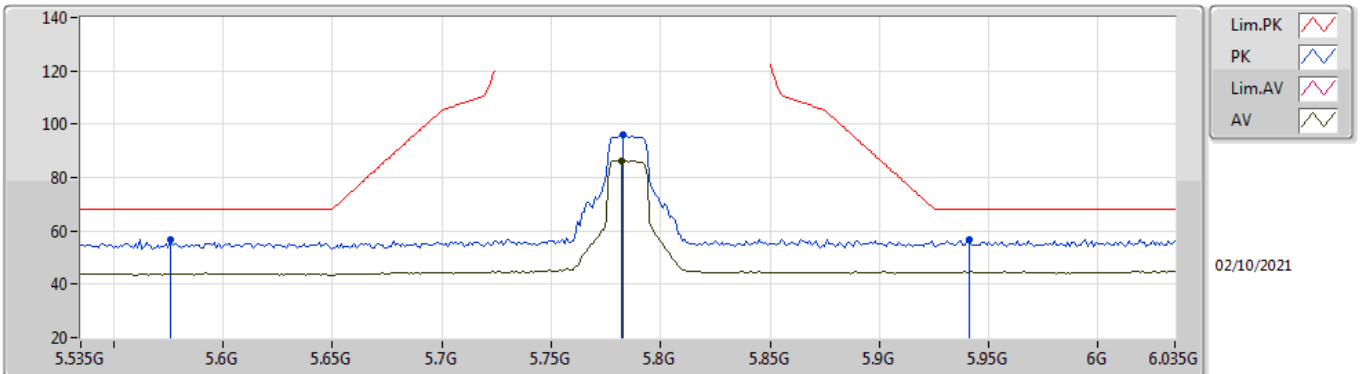


EUT_V_1TX
Setting 19
06-F-S-5

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	11.4856G	56.09	74.00	-17.91	42.48	3	Horizontal	82	1.33	-	39.63	8.29	34.31	
AV	11.48914G	42.71	54.00	-11.29	29.10	3	Horizontal	82	1.33	-	39.62	8.30	34.31	

802.11a_Nss1,(6Mbps)_1TX

5785MHz_TnomVnom

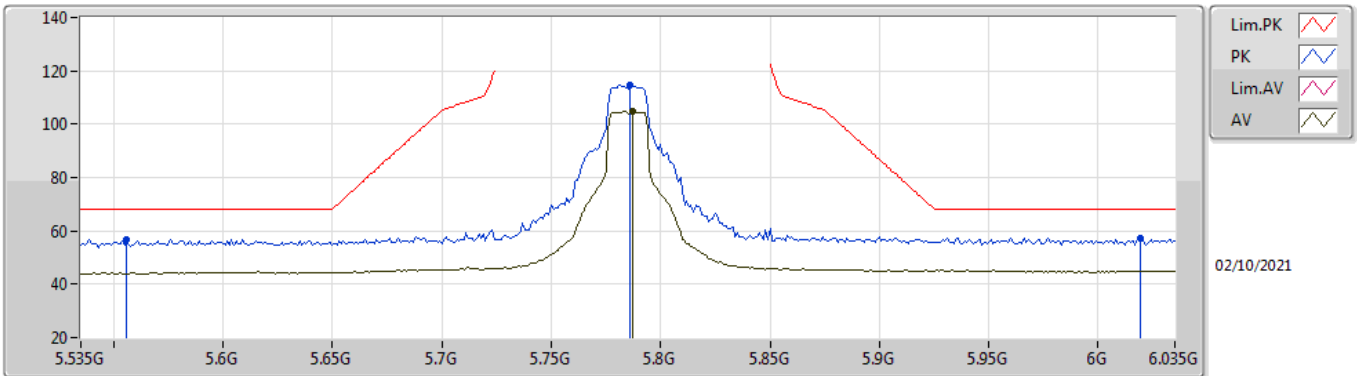


EUT V_1TX
Setting 19
06-F-S-5-10

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	5.576G	56.72	68.20	-11.48	52.17	3	Vertical	194	1.65	-	31.55	5.18	32.18	
PK	5.783G	95.86	Inf	-Inf	90.87	3	Vertical	194	1.65	-	32.00	5.29	32.30	
AV	5.782G	86.44	Inf	-Inf	81.45	3	Vertical	194	1.65	-	32.00	5.29	32.30	
PK	5.941G	56.98	68.20	-11.22	51.75	3	Vertical	194	1.65	-	32.18	5.44	32.39	

802.11a_Nss1,(6Mbps)_1TX

5785MHz_TnomVnom

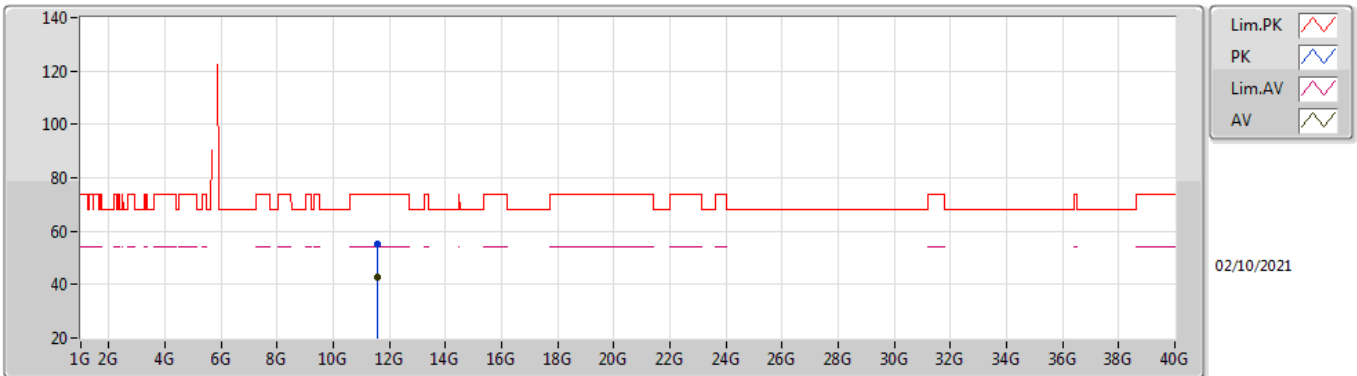


EUT V_1TX
Setting 19
06-F-S-5-10

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	5.556G	56.92	68.20	-11.28	52.41	3	Horizontal	182	2.23	-	31.51	5.16	32.16
PK	5.786G	114.61	Inf	-Inf	109.62	3	Horizontal	182	2.23	-	32.00	5.29	32.30
AV	5.787G	104.63	Inf	-Inf	99.64	3	Horizontal	182	2.23	-	32.00	5.29	32.30
PK	6.019G	57.41	68.20	-10.79	52.04	3	Horizontal	182	2.23	-	32.31	5.50	32.44

802.11a_Nss1,(6Mbps)_1TX

5785MHz_TnomVnom

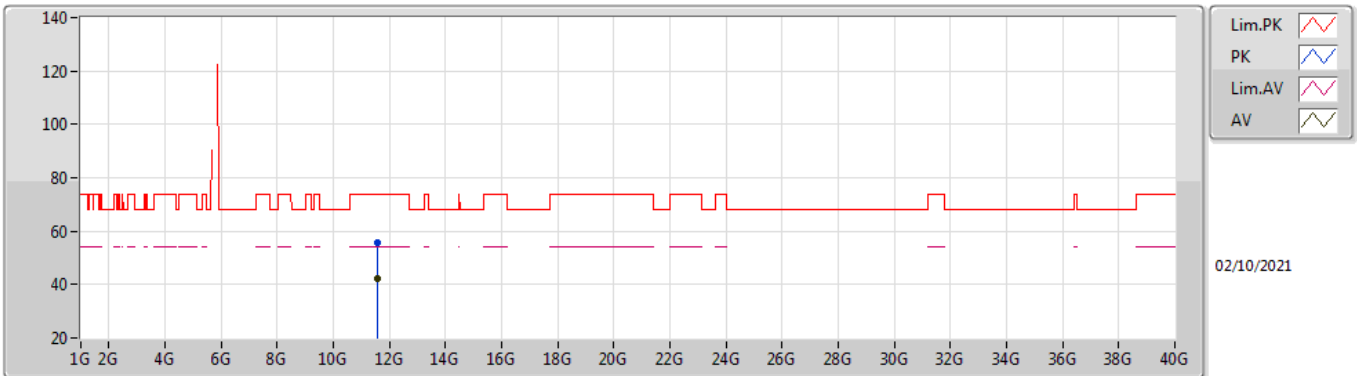


EUT_V_1TX
Setting 19
06-F-S-5

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	11.5726G	55.28	74.00	-18.72	41.72	3	Vertical	137	2.41	-	39.53	8.33	34.30	
AV	11.56742G	42.57	54.00	-11.43	29.01	3	Vertical	137	2.41	-	39.53	8.33	34.30	

802.11a_Nss1,(6Mbps)_1TX

5785MHz_TnomVnom

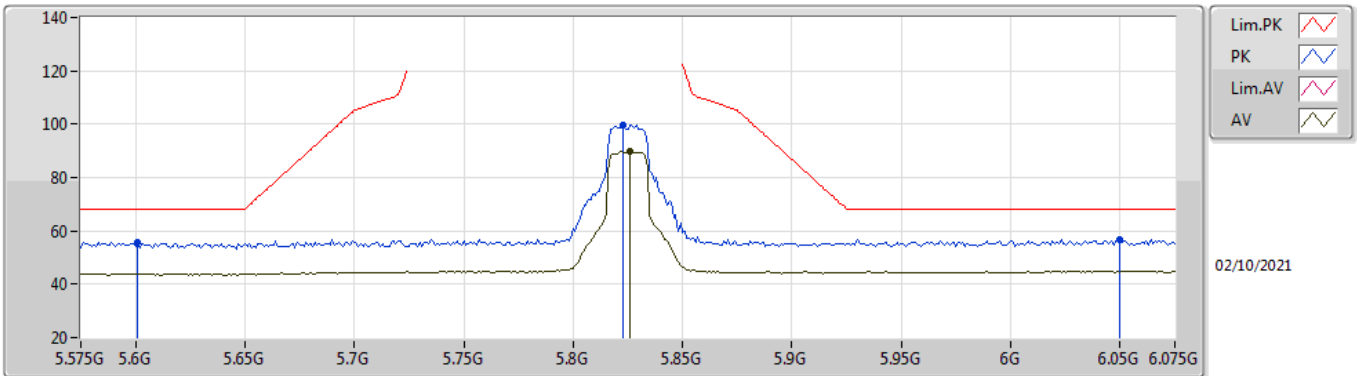


EUT_V_1TX
Setting 19
06-F-S-5

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	11.56898G	55.94	74.00	-18.06	42.38	3	Horizontal	132	1.85	-	39.53	8.33	34.30	
AV	11.57184G	42.39	54.00	-11.61	28.83	3	Horizontal	132	1.85	-	39.53	8.33	34.30	

802.11a_Nss1,(6Mbps)_1TX

5825MHz_TnomVnom

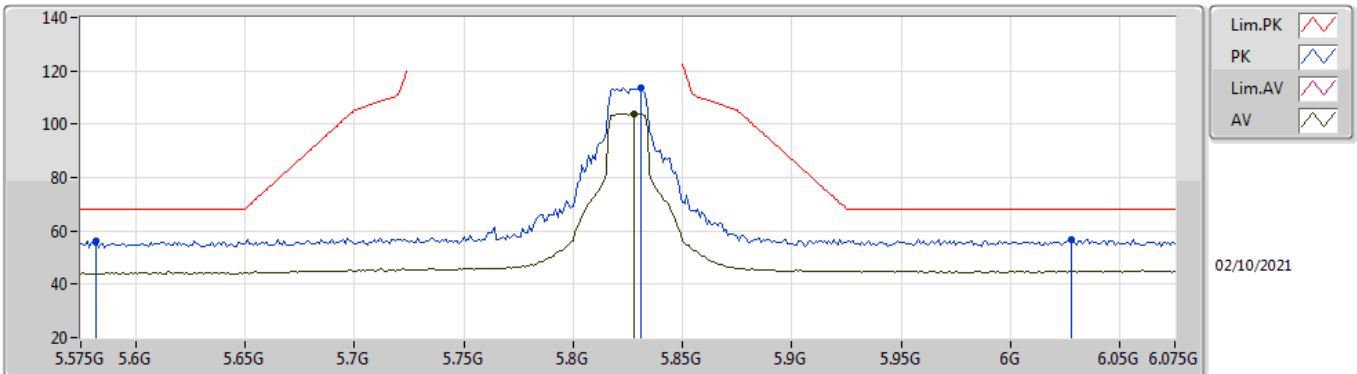


EUT_V_1TX
Setting 19
06-F-S-5-10

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	55.66	68.20	-12.54	51.05	3	Vertical	124	2.43	-	31.60	5.20	32.19	
PK	5.823G	99.58	Inf	-Inf	94.58	3	Vertical	124	2.43	-	32.00	5.32	32.32	
AV	5.826G	89.68	Inf	-Inf	84.68	3	Vertical	124	2.43	-	32.00	5.33	32.33	
PK	6.05G	56.76	68.20	-11.44	51.21	3	Vertical	124	2.43	-	32.50	5.50	32.45	

802.11a_Nss1,(6Mbps)_1TX

5825MHz_TnomVnom

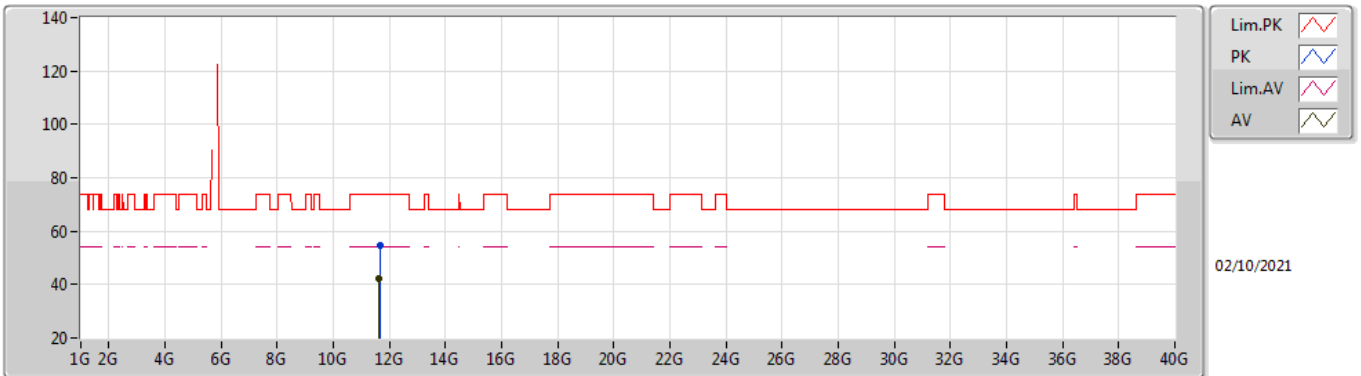


EUT_V_1TX
Setting 19
06-F-S-5-10

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	5.582G	56.24	68.20	-11.96	51.68	3	Horizontal	180	2.17	-	31.56	5.18	32.18	
PK	5.831G	113.49	Inf	-Inf	108.49	3	Horizontal	180	2.17	-	32.00	5.33	32.33	
AV	5.828G	103.95	Inf	-Inf	98.95	3	Horizontal	180	2.17	-	32.00	5.33	32.33	
PK	6.028G	56.79	68.20	-11.41	51.36	3	Horizontal	180	2.17	-	32.37	5.50	32.44	

802.11a_Nss1,(6Mbps)_1TX

5825MHz_TnomVnom

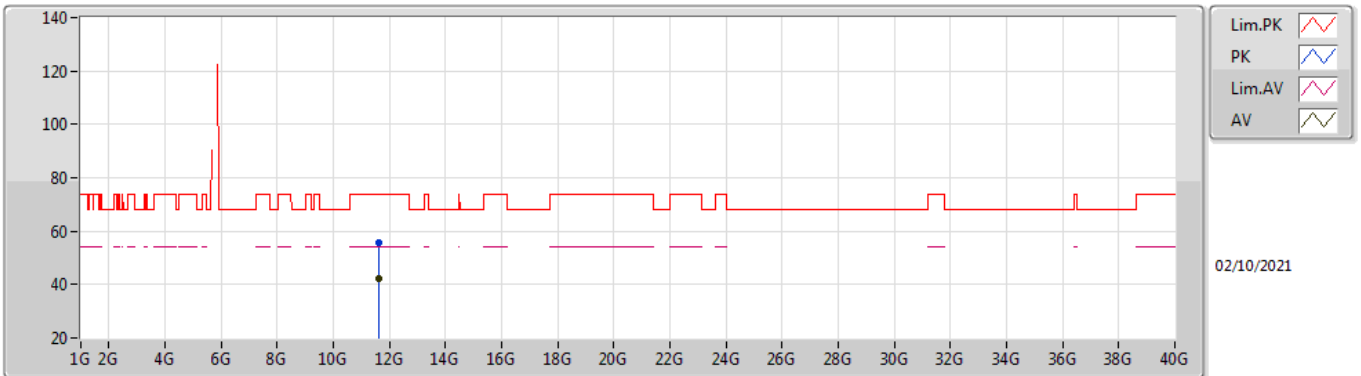


EUT_V_1TX
Setting 19
06-F-S-5

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	11.65014G	54.85	74.00	-19.15	41.42	3	Vertical	90	2.58	-	39.35	8.36	34.28
AV	11.64694G	42.43	54.00	-11.57	28.99	3	Vertical	90	2.58	-	39.36	8.36	34.28

802.11a_Nss1,(6Mbps)_1TX

5825MHz_TnomVnom

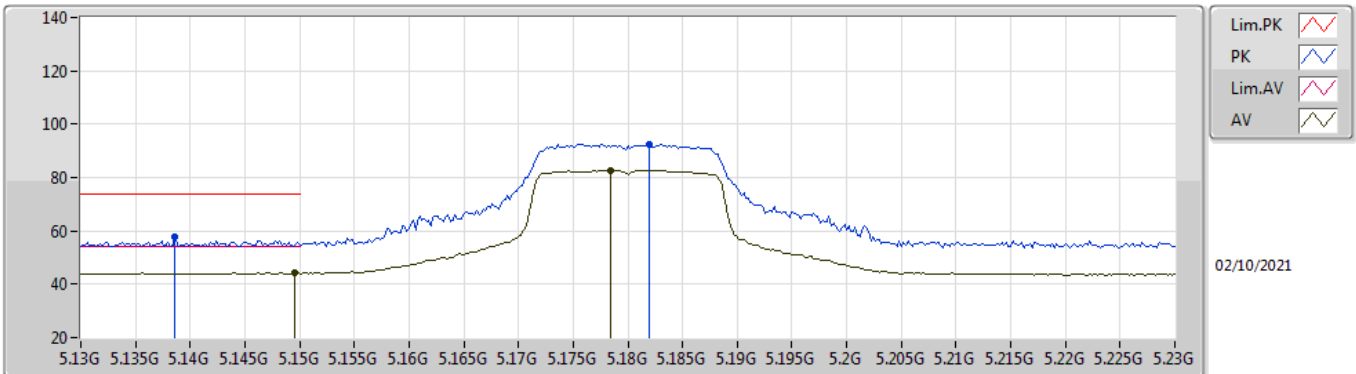


EUT_V_1TX
Setting 19
06-F-S-5

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	11.64748G	55.83	74.00	-18.17	42.39	3	Horizontal	102	2.02	-	39.36	8.36	34.28	
AV	11.64724G	42.30	54.00	-11.70	28.86	3	Horizontal	102	2.02	-	39.36	8.36	34.28	

802.11ac VHT20_Nss1,(MCS0)_1TX

5180MHz_TnomVnom

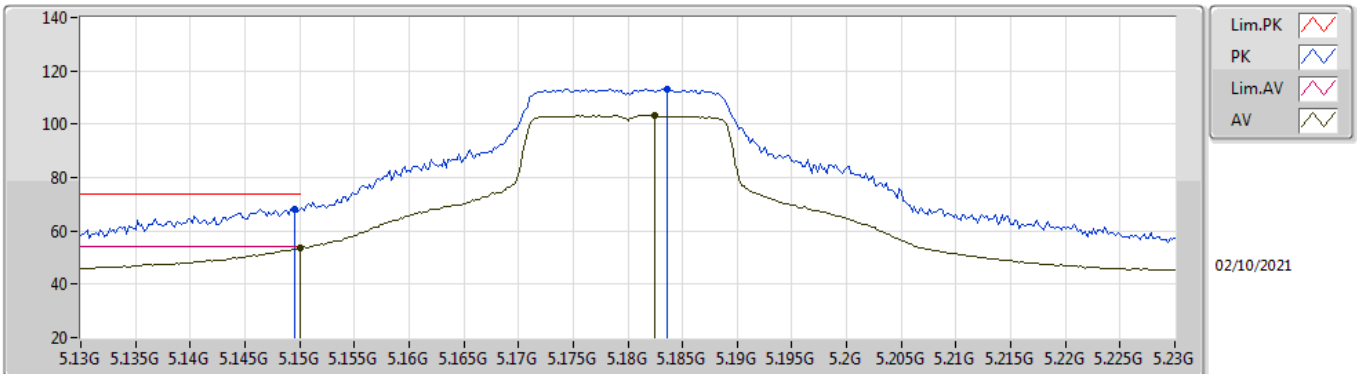


EUT_V_1TX
Setting 18
06-F-S-5-10

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	5.1386G	57.66	74.00	-16.34	52.86	3	Vertical	199	2.52	-	31.77	5.00	31.97
AV	5.1496G	44.30	54.00	-9.70	39.58	3	Vertical	199	2.52	-	31.70	5.00	31.98
PK	5.182G	92.58	Inf	-Inf	88.06	3	Vertical	199	2.52	-	31.51	5.00	31.99
AV	5.1784G	82.81	Inf	-Inf	78.27	3	Vertical	199	2.52	-	31.53	5.00	31.99

802.11ac VHT20_Nss1,(MCS0)_1TX

5180MHz_TnomVnom

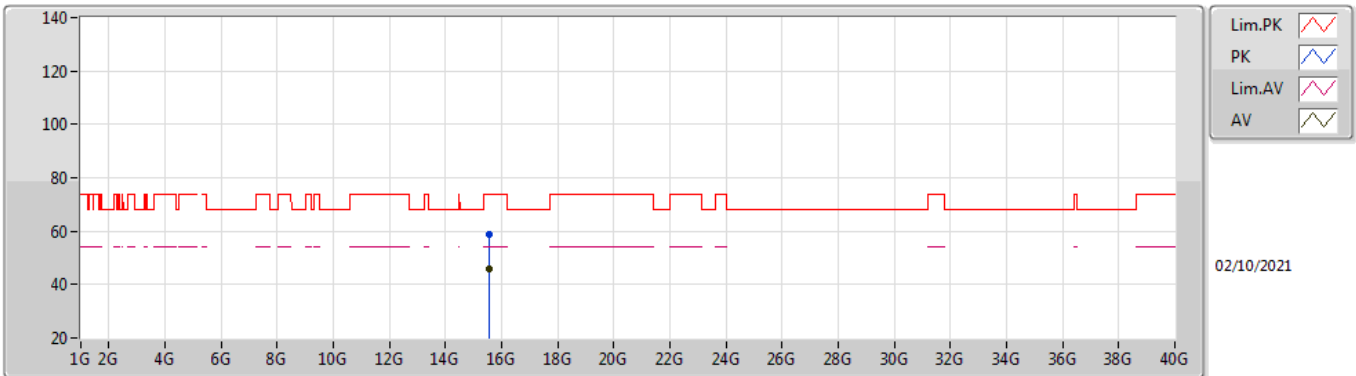


EUT V_1TX
Setting 18
06-F-S-5-10

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	5.1496G	68.21	74.00	-5.79	63.49	3	Horizontal	178.9	2.36	-	31.70	5.00	31.98
AV	5.15G	53.52	54.00	-0.48	48.80	3	Horizontal	178.9	2.36	-	31.70	5.00	31.98
PK	5.1836G	113.28	Inf	-Inf	108.77	3	Horizontal	178.9	2.36	-	31.50	5.00	31.99
AV	5.1824G	103.22	Inf	-Inf	98.70	3	Horizontal	178.9	2.36	-	31.51	5.00	31.99

802.11ac VHT20_Nss1,(MCS0)_1TX

5180MHz_TnomVnom

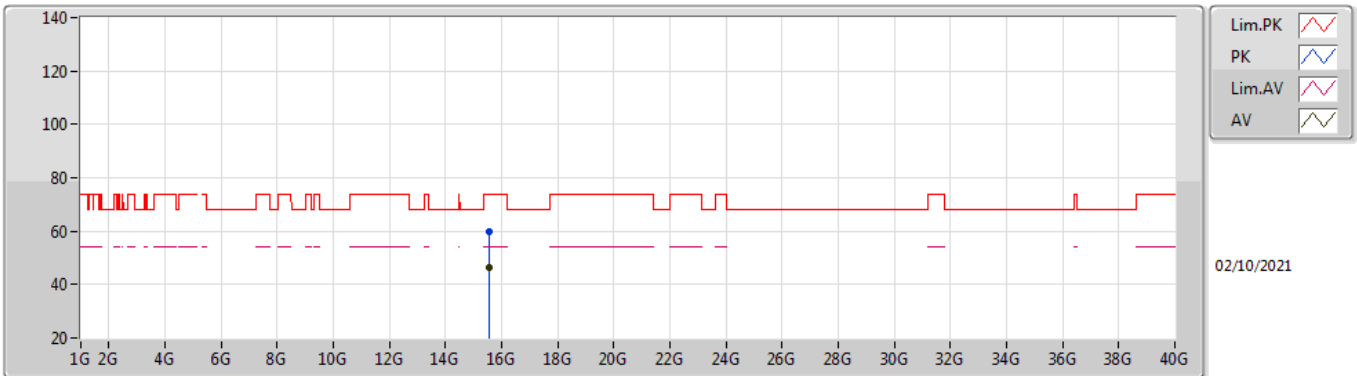


EUT V_1TX
Setting 18
06-F-S-5

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	15.5405G	58.71	74.00	-15.29	44.08	3	Vertical	212	2.96	-	38.50	10.37	34.24	
AV	15.5392G	46.07	54.00	-7.93	31.44	3	Vertical	212	2.96	-	38.50	10.37	34.24	

802.11ac VHT20_Nss1,(MCS0)_1TX

5180MHz_TnomVnom

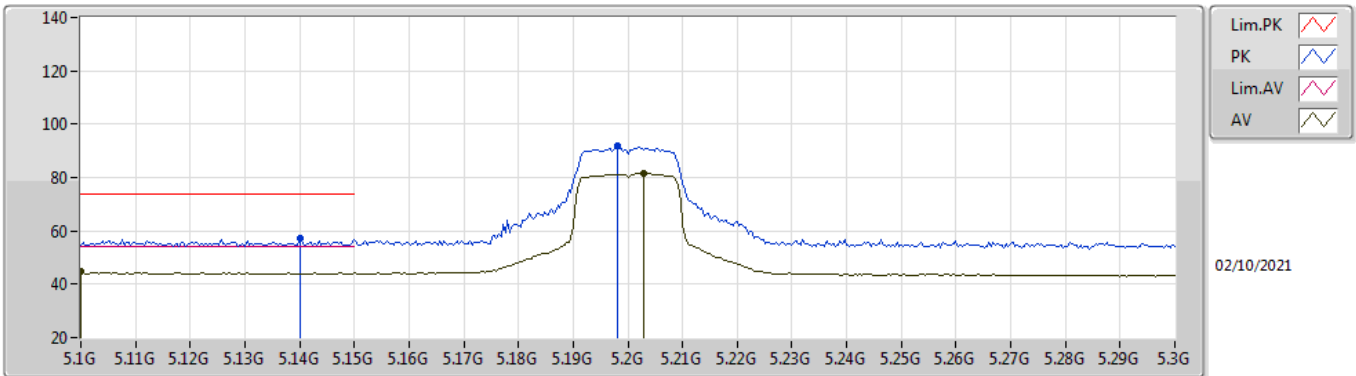


EUT V_1TX
Setting 18
06-F-S-5

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	15.54398G	59.65	74.00	-14.35	45.04	3	Horizontal	340	2.22	-	38.48	10.37	34.24	
AV	15.53642G	46.18	54.00	-7.82	31.52	3	Horizontal	340	2.22	-	38.52	10.37	34.23	

802.11ac VHT20_Nss1,(MCS0)_1TX

5200MHz_TnomVnom

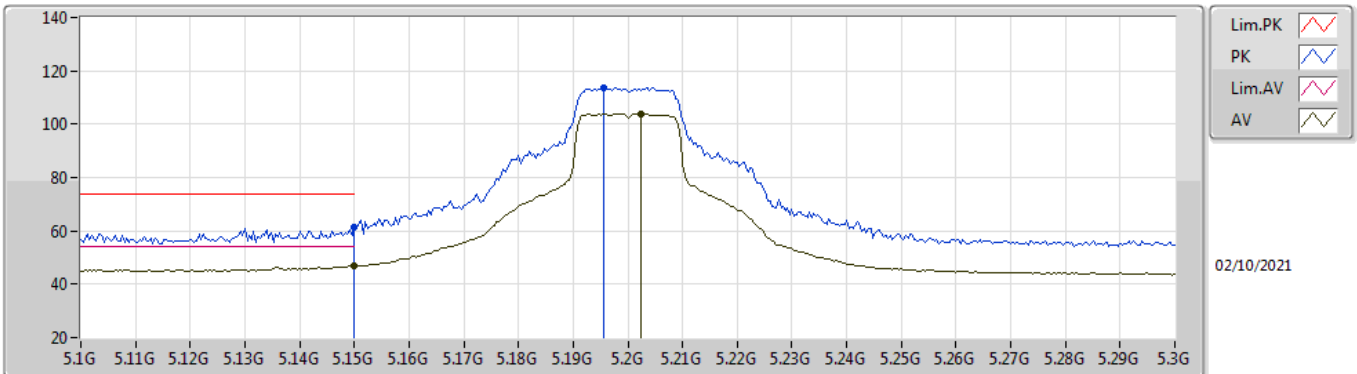


EUT_V_1TX
Setting 19
06-F-S-5-10

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	5.14G	57.18	74.00	-16.82	52.39	3	Vertical	193.9	2.77	-	31.76	5.00	31.97
AV	5.1G	44.61	54.00	-9.39	39.56	3	Vertical	193.9	2.77	-	32.00	5.00	31.95
PK	5.198G	91.69	Inf	-Inf	87.28	3	Vertical	193.9	2.77	-	31.41	5.00	32.00
AV	5.2028G	81.39	Inf	-Inf	77.01	3	Vertical	193.9	2.77	-	31.38	5.00	32.00

802.11ac VHT20_Nss1,(MCS0)_1TX

5200MHz_TnomVnom

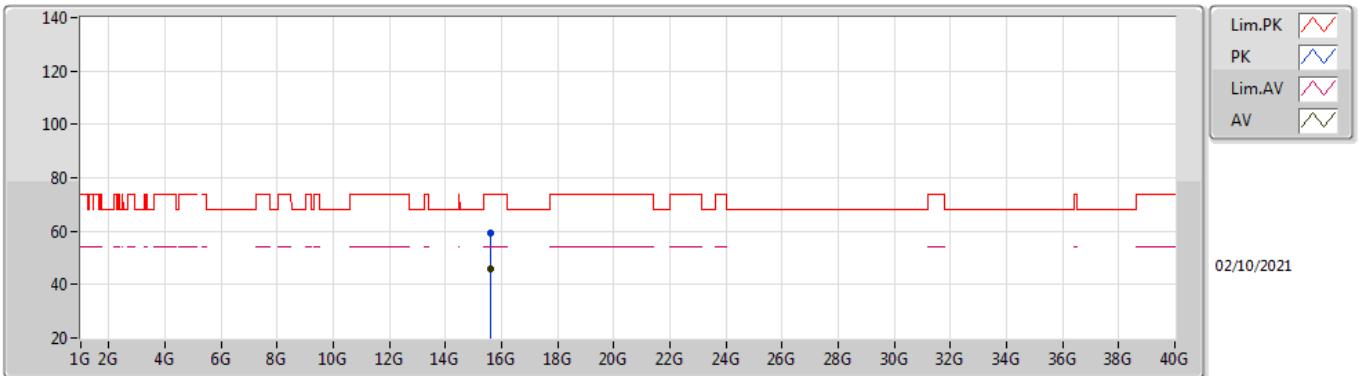


EUT_V_1TX
Setting 19
06-F-S-5-10

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	5.15G	61.17	74.00	-12.83	56.45	3	Horizontal	179.6	2.36	-	31.70	5.00	31.98
AV	5.15G	46.79	54.00	-7.21	42.07	3	Horizontal	179.6	2.36	-	31.70	5.00	31.98
PK	5.1956G	113.78	Inf	-Inf	109.35	3	Horizontal	179.6	2.36	-	31.43	5.00	32.00
AV	5.2024G	103.96	Inf	-Inf	99.57	3	Horizontal	179.6	2.36	-	31.39	5.00	32.00

802.11ac VHT20_Nss1,(MCS0)_1TX

5200MHz_TnomVnom

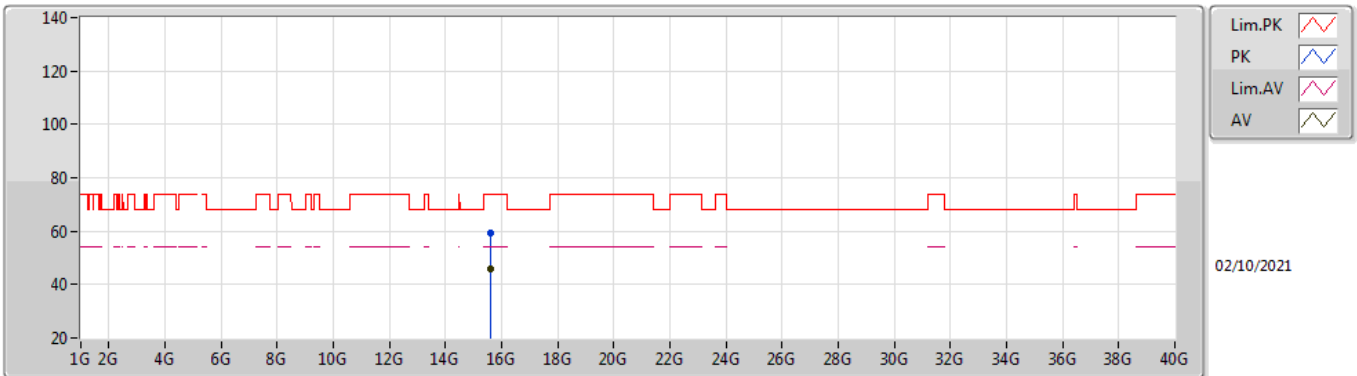


EUT V_1TX
Setting 19
06-F-S-5

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	15.60462G	59.55	74.00	-14.45	45.23	3	Vertical	64	2.88	-	38.18	10.40	34.26
AV	15.59804G	46.06	54.00	-7.94	31.71	3	Vertical	64	2.88	-	38.21	10.40	34.26

802.11ac VHT20_Nss1,(MCS0)_1TX

5200MHz_TnomVnom

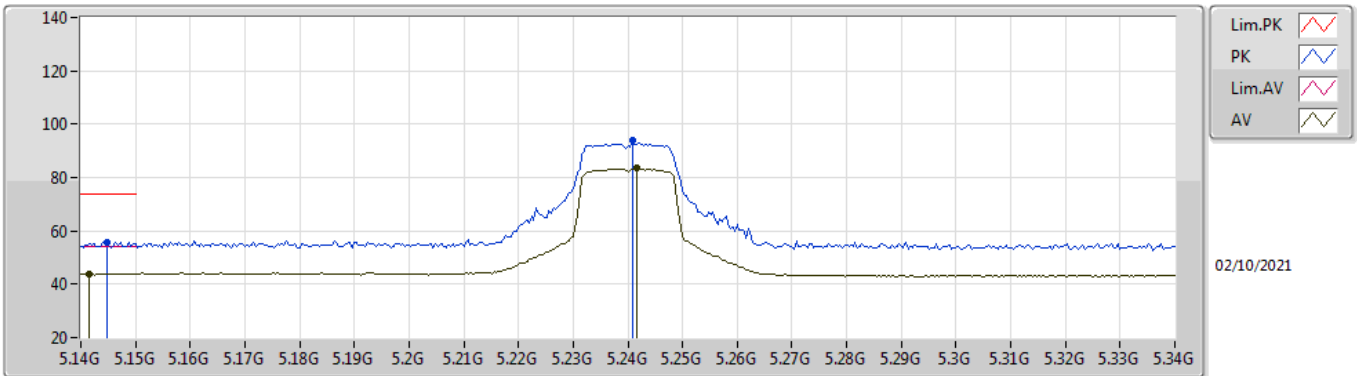


EUT V_1TX
Setting 19
06-F-S-5

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	15.59952G	59.13	74.00	-14.87	44.79	3	Horizontal	318	2.56	-	38.20	10.40	34.26
AV	15.59628G	46.04	54.00	-7.96	31.68	3	Horizontal	318	2.56	-	38.22	10.40	34.26

802.11ac VHT20_Nss1,(MCS0)_1TX

5240MHz_TnomVnom

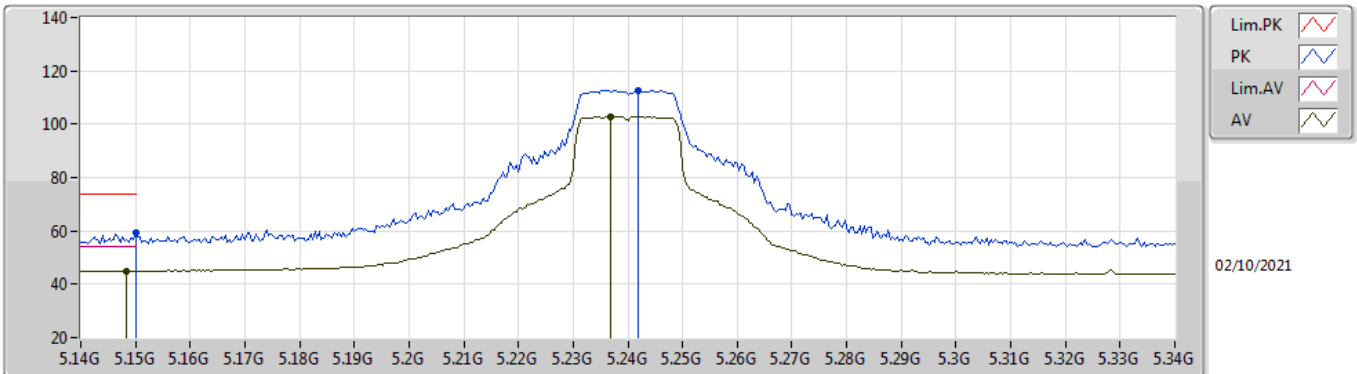


EUT_V_1TX
Setting 19
06-F-S-5-10

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	5.1448G	55.94	74.00	-18.06	51.18	3	Vertical	195	2.48	-	31.73	5.00	31.97	
AV	5.1416G	43.99	54.00	-10.01	39.21	3	Vertical	195	2.48	-	31.75	5.00	31.97	
PK	5.2408G	93.71	Inf	-Inf	89.57	3	Vertical	195	2.48	-	31.16	5.00	32.02	
AV	5.2416G	83.46	Inf	-Inf	79.33	3	Vertical	195	2.48	-	31.15	5.00	32.02	

802.11ac VHT20_Nss1,(MCS0)_1TX

5240MHz_TnomVnom

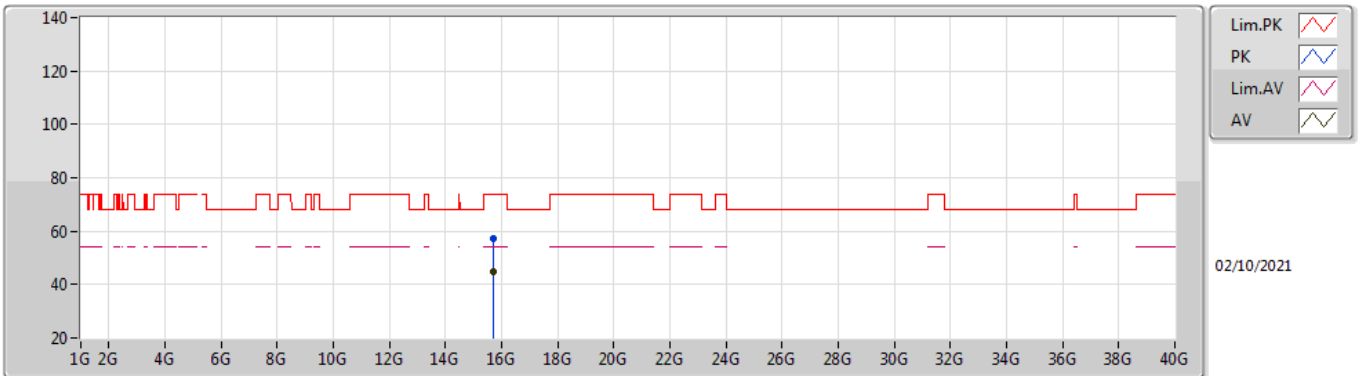


EUT_V_1TX
Setting 19
06-F-S-5-10

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	5.15G	59.14	74.00	-14.86	54.42	3	Horizontal	184.6	2.35	-	31.70	5.00	31.98	
AV	5.1484G	45.04	54.00	-8.96	40.31	3	Horizontal	184.6	2.35	-	31.71	5.00	31.98	
PK	5.242G	112.62	Inf	-Inf	108.49	3	Horizontal	184.6	2.35	-	31.15	5.00	32.02	
AV	5.2368G	103.01	Inf	-Inf	98.84	3	Horizontal	184.6	2.35	-	31.18	5.00	32.01	

802.11ac VHT20_Nss1,(MCS0)_1TX

5240MHz_TnomVnom

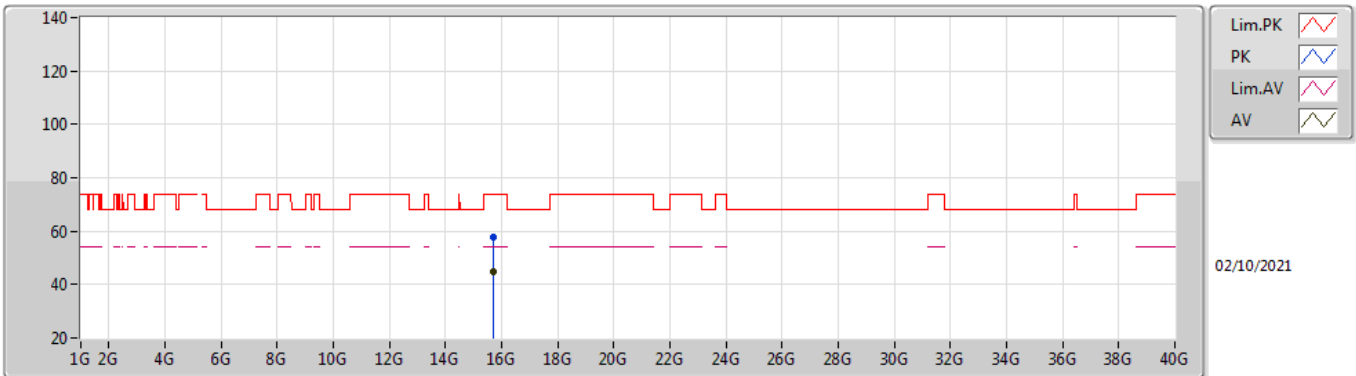


EUT V_1TX
Setting 19
06-F-S-5

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	15.71612G	57.35	74.00	-16.65	43.40	3	Vertical	67	1.65	-	37.80	10.46	34.31	
AV	15.72132G	44.77	54.00	-9.23	30.82	3	Vertical	67	1.65	-	37.80	10.46	34.31	

802.11ac VHT20_Nss1,(MCS0)_1TX

5240MHz_TnomVnom

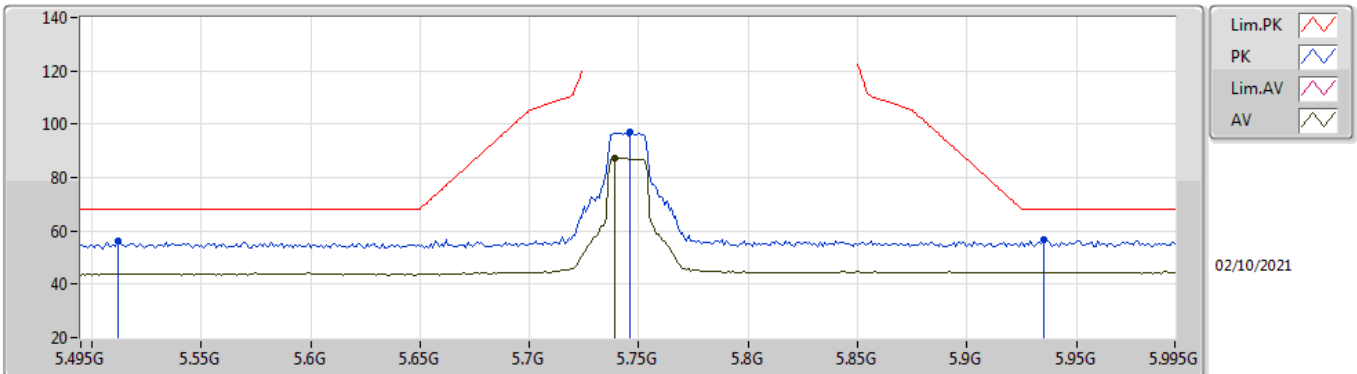


EUT V_1TX
Setting 19
06-F-S-5

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	15.71922G	57.86	74.00	-16.14	43.91	3	Horizontal	145	1.22	-	37.80	10.46	34.31
AV	15.71854G	44.95	54.00	-9.05	31.00	3	Horizontal	145	1.22	-	37.80	10.46	34.31

802.11ac VHT20_Nss1,(MCS0)_1TX

5745MHz_TnomVnom

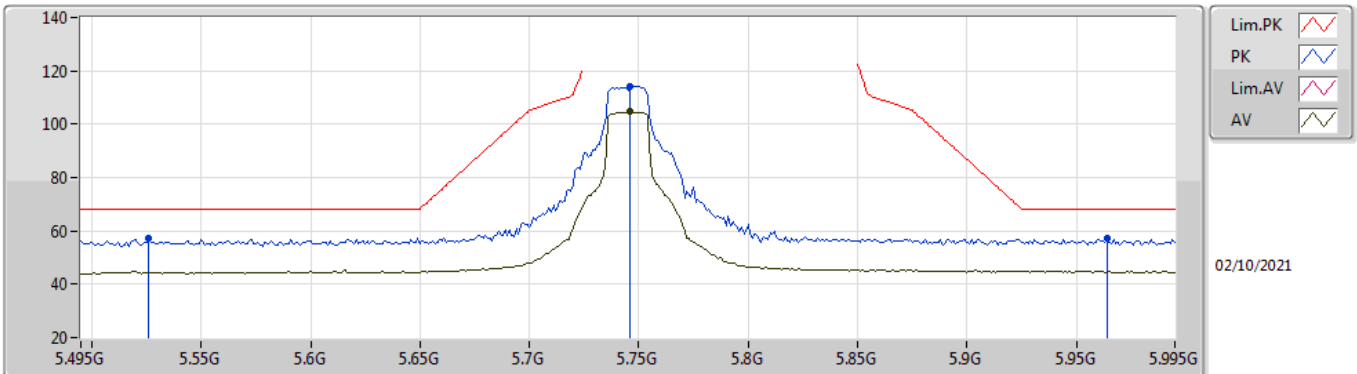


EUT V_1TX
Setting 19
06-F-S-5-10

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	5.512G	56.00	68.20	-12.20	51.53	3	Vertical	194	1.66	-	31.50	5.11	32.14
PK	5.746G	96.96	Inf	-Inf	91.99	3	Vertical	194	1.66	-	31.98	5.27	32.28
AV	5.739G	87.22	Inf	-Inf	82.26	3	Vertical	194	1.66	-	31.96	5.27	32.27
PK	5.935G	56.68	68.20	-11.52	51.46	3	Vertical	194	1.66	-	32.17	5.44	32.39

802.11ac VHT20_Nss1,(MCS0)_1TX

5745MHz_TnomVnom

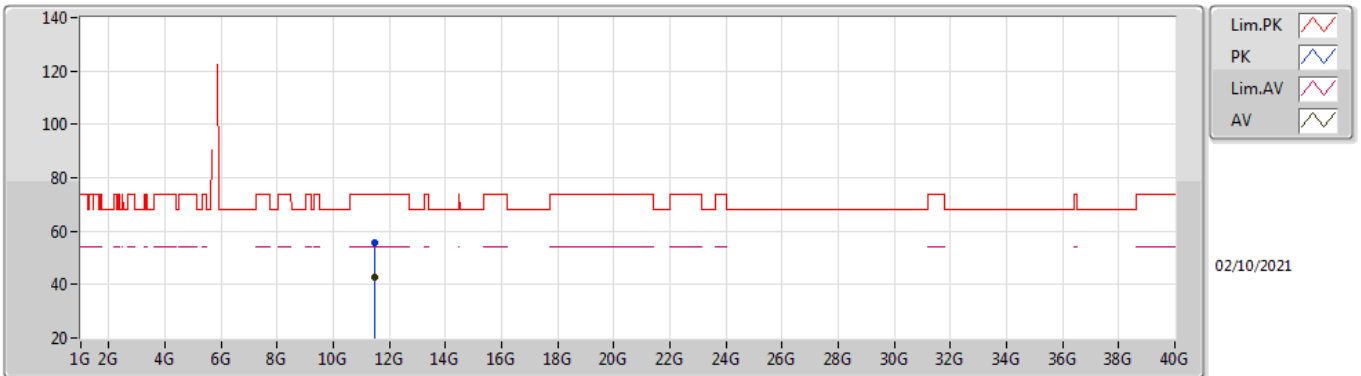


EUT_V_1TX
Setting 19
06-F-S-5-10

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	5.526G	57.42	68.20	-10.78	52.94	3	Horizontal	185.4	2.28	-	31.50	5.13	32.15
PK	5.746G	114.23	Inf	-Inf	109.26	3	Horizontal	185.4	2.28	-	31.98	5.27	32.28
AV	5.746G	104.62	Inf	-Inf	99.65	3	Horizontal	185.4	2.28	-	31.98	5.27	32.28
PK	5.964G	57.49	68.20	-10.71	52.24	3	Horizontal	185.4	2.28	-	32.20	5.46	32.41

802.11ac VHT20_Nss1,(MCS0)_1TX

5745MHz_TnomVnom

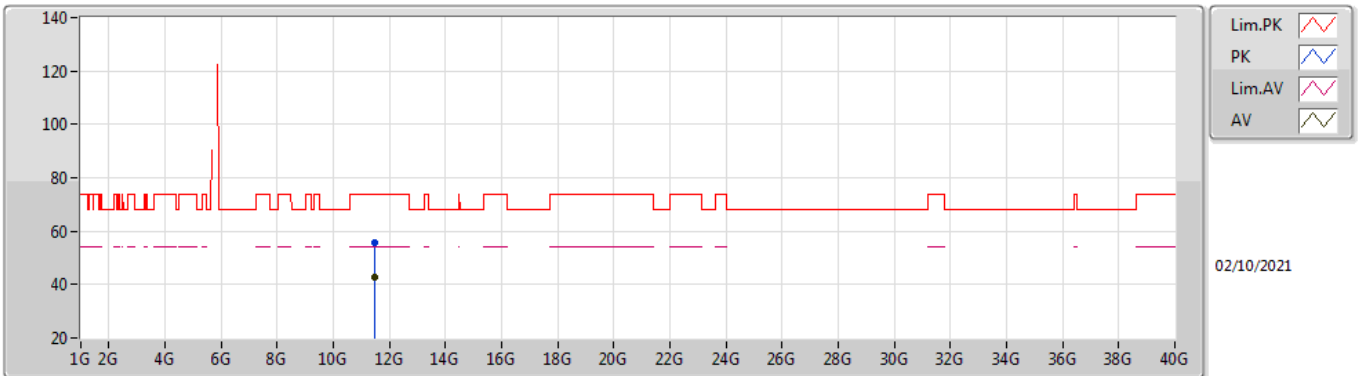


EUT V_1TX
Setting 19
06-F-S-5

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	11.48852G	55.56	74.00	-18.44	41.95	3	Vertical	123	1.89	-	39.62	8.30	34.31	
AV	11.48356G	42.59	54.00	-11.41	28.98	3	Vertical	123	1.89	-	39.63	8.29	34.31	

802.11ac VHT20_Nss1,(MCS0)_1TX

5745MHz_TnomVnom

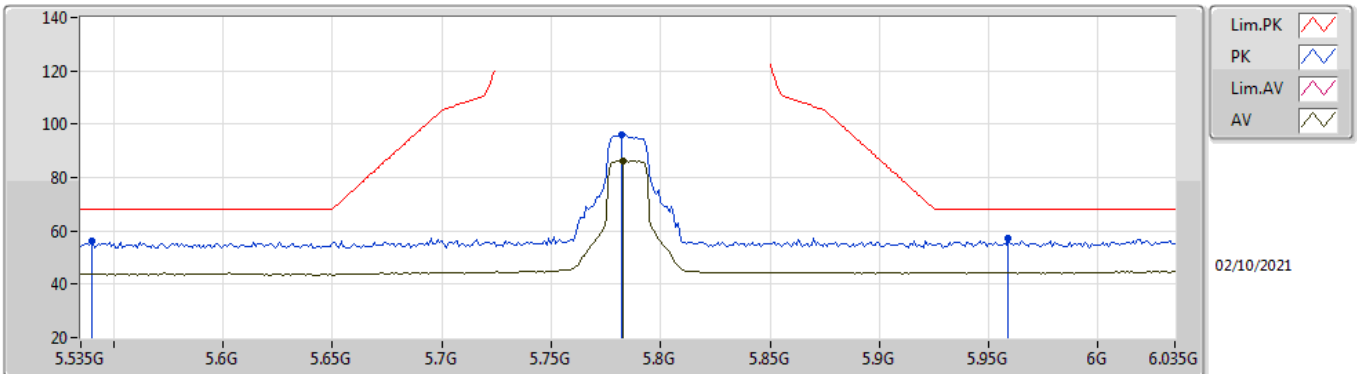


EUT_V_1TX
Setting 19
06-F-S-5

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	11.48664G	55.69	74.00	-18.31	42.08	3	Horizontal	89	1.97	-	39.63	8.29	34.31	
AV	11.48668G	42.57	54.00	-11.43	28.96	3	Horizontal	89	1.97	-	39.63	8.29	34.31	

802.11ac VHT20_Nss1,(MCS0)_1TX

5785MHz_TnomVnom

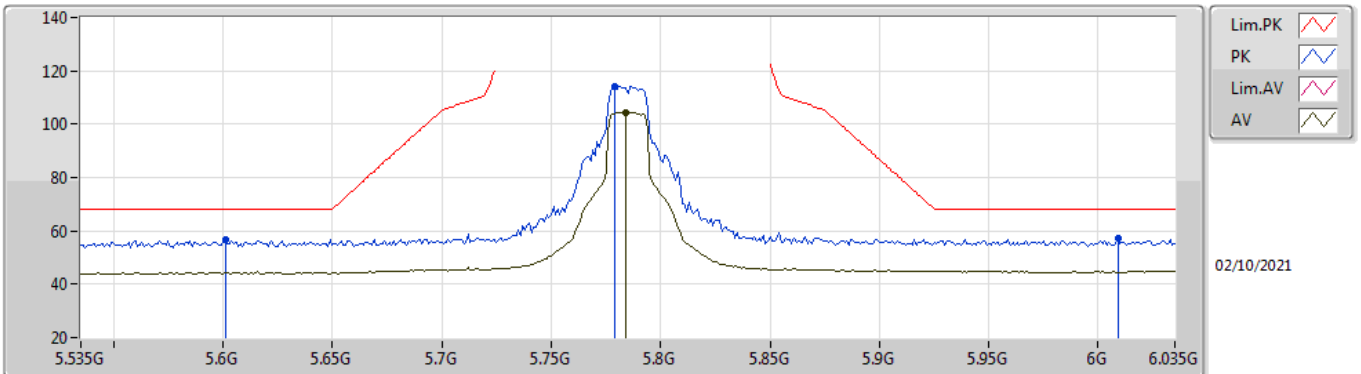


EUT V_1TX
Setting 19
06-F-S-5-10

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	5.54G	56.03	68.20	-12.17	51.54	3	Vertical	195	1.64	-	31.50	5.14	32.15	
PK	5.782G	95.98	Inf	-Inf	90.99	3	Vertical	195	1.64	-	32.00	5.29	32.30	
AV	5.783G	86.25	Inf	-Inf	81.26	3	Vertical	195	1.64	-	32.00	5.29	32.30	
PK	5.959G	57.02	68.20	-11.18	51.77	3	Vertical	195	1.64	-	32.20	5.46	32.41	

802.11ac VHT20_Nss1,(MCS0)_1TX

5785MHz_TnomVnom

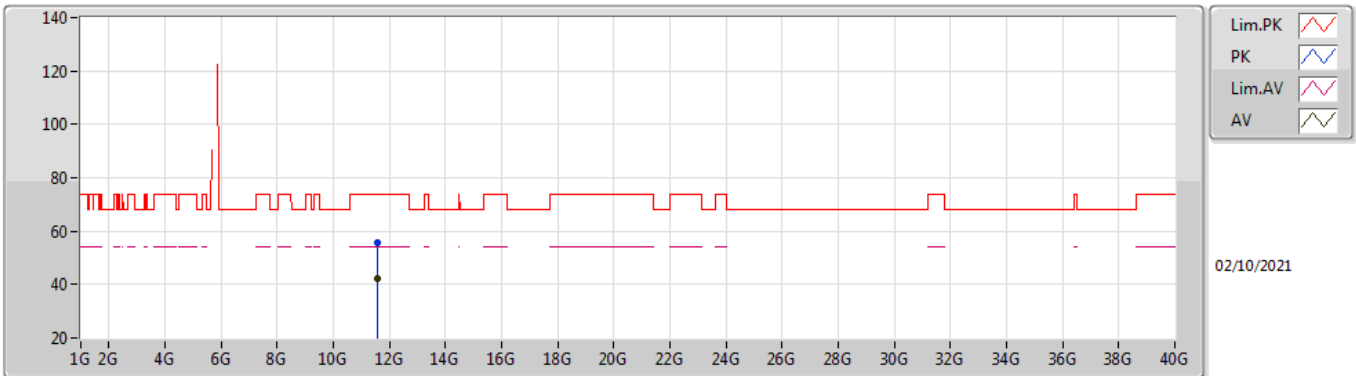


EUT V_1TX
Setting 19
06-F-S-5-10

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	56.70	68.20	-11.50	52.09	3	Horizontal	181	1.06	-	31.60	5.20	32.19
PK	5.779G	114.18	Inf	-Inf	109.19	3	Horizontal	181	1.06	-	32.00	5.29	32.30
AV	5.784G	104.55	Inf	-Inf	99.56	3	Horizontal	181	1.06	-	32.00	5.29	32.30
PK	6.009G	57.18	68.20	-11.02	51.86	3	Horizontal	181	1.06	-	32.25	5.50	32.43

802.11ac VHT20_Nss1,(MCS0)_1TX

5785MHz_TnomVnom

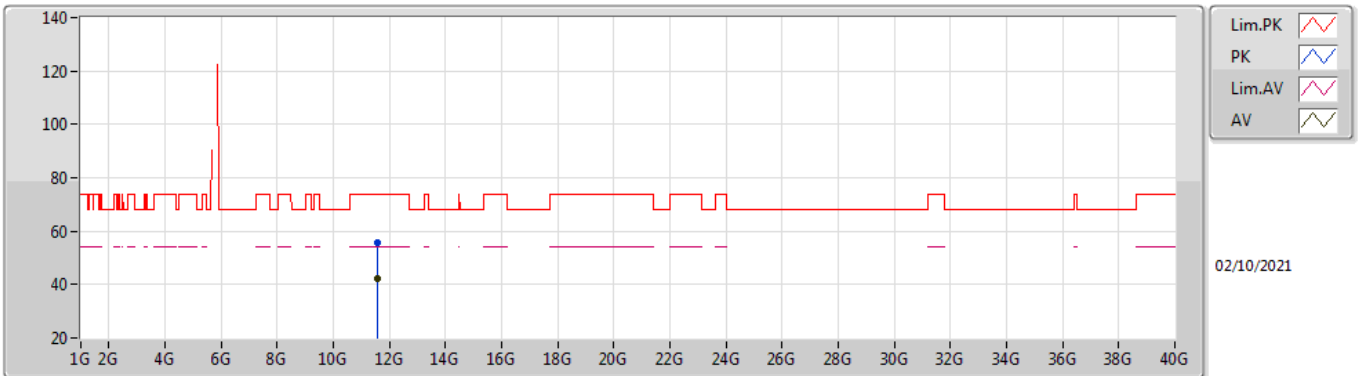


EUT V_1TX
Setting 19
06-F-S-5

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	11.56948G	55.57	74.00	-18.43	42.01	3	Vertical	75	1.75	-	39.53	8.33	34.30	
AV	11.56794G	42.38	54.00	-11.62	28.82	3	Vertical	75	1.75	-	39.53	8.33	34.30	

802.11ac VHT20_Nss1,(MCS0)_1TX

5785MHz_TnomVnom

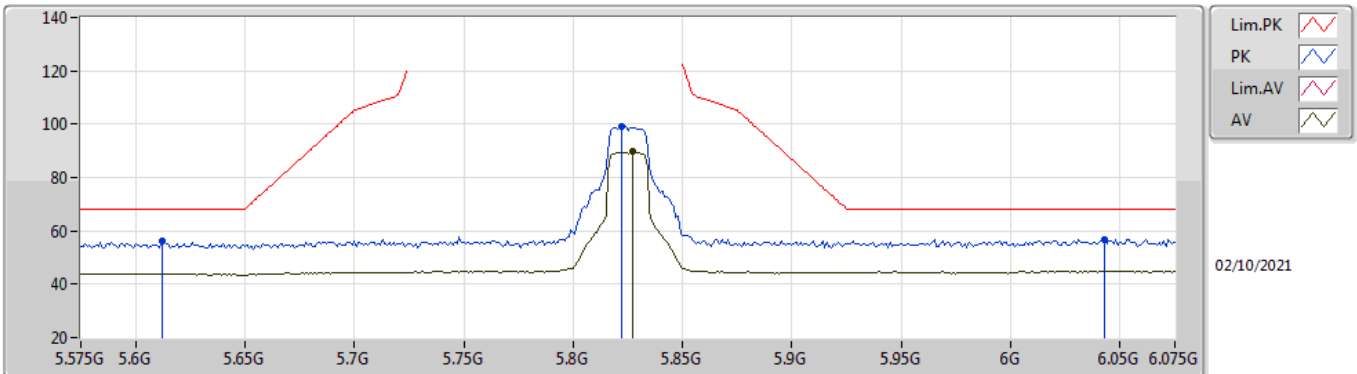


EUT V_1TX
Setting 19
06-F-S-5

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	11.56842G	55.71	74.00	-18.29	42.15	3	Horizontal	62	2.18	-	39.53	8.33	34.30	
AV	11.56966G	42.34	54.00	-11.66	28.78	3	Horizontal	62	2.18	-	39.53	8.33	34.30	

802.11ac VHT20_Nss1,(MCS0)_1TX

5825MHz_TnomVnom

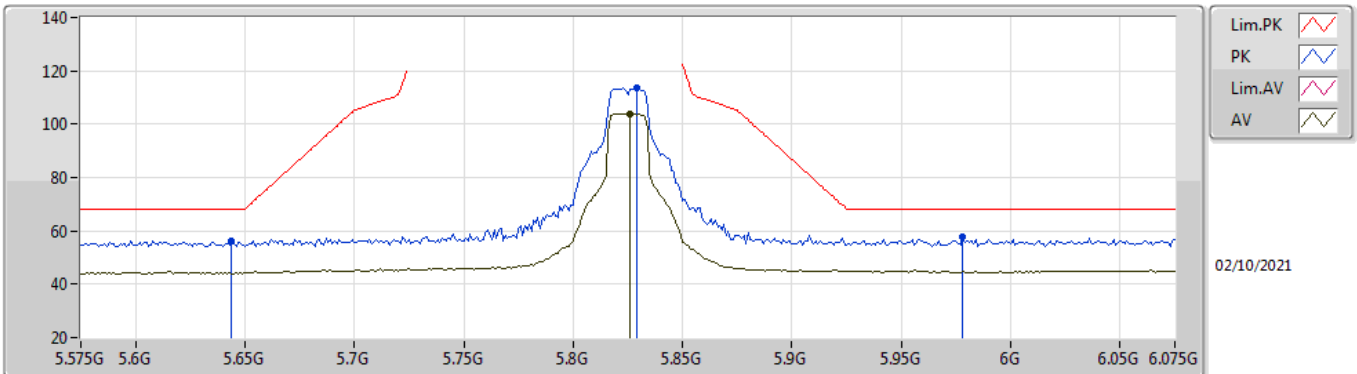


EUT V_1TX
Setting 19
06-F-S-5-10

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	5.612G	55.99	68.20	-12.21	51.38	3	Vertical	124	2.44	-	31.60	5.21	32.20	
PK	5.822G	99.38	Inf	-Inf	94.38	3	Vertical	124	2.44	-	32.00	5.32	32.32	
AV	5.827G	89.65	Inf	-Inf	84.65	3	Vertical	124	2.44	-	32.00	5.33	32.33	
PK	6.043G	56.90	68.20	-11.30	51.39	3	Vertical	124	2.44	-	32.46	5.50	32.45	

802.11ac VHT20_Nss1,(MCS0)_1TX

5825MHz_TnomVnom

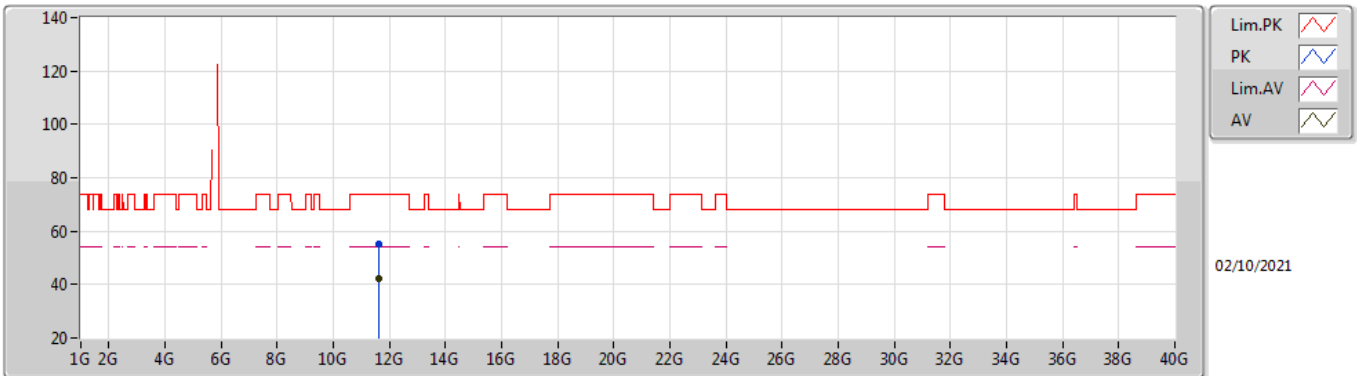


EUT_V_1TX
Setting 19
06-F-S-5-10

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	56.33	68.20	-11.87	51.73	3	Horizontal	180	1.13	-	31.60	5.22	32.22	
PK	5.829G	113.60	Inf	-Inf	108.60	3	Horizontal	180	1.13	-	32.00	5.33	32.33	
AV	5.826G	104.00	Inf	-Inf	99.00	3	Horizontal	180	1.13	-	32.00	5.33	32.33	
PK	5.978G	57.91	68.20	-10.29	52.65	3	Horizontal	180	1.13	-	32.20	5.48	32.42	

802.11ac VHT20_Nss1,(MCS0)_1TX

5825MHz_TnomVnom

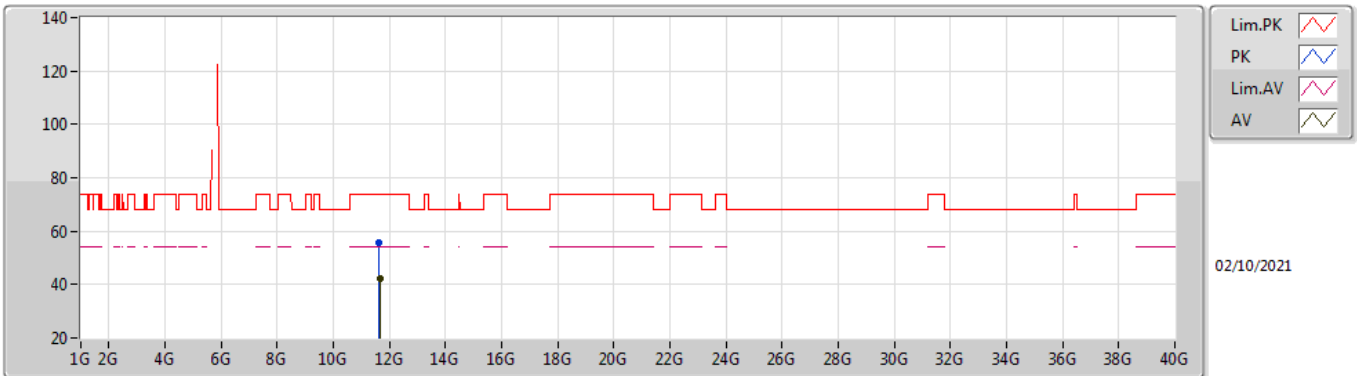


EUT V_1TX
Setting 19
06-F-S-5

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	11.64588G	55.14	74.00	-18.86	41.70	3	Vertical	284	1.89	-	39.36	8.36	34.28
AV	11.64552G	42.31	54.00	-11.69	28.87	3	Vertical	284	1.89	-	39.36	8.36	34.28

802.11ac VHT20_Nss1,(MCS0)_1TX

5825MHz_TnomVnom

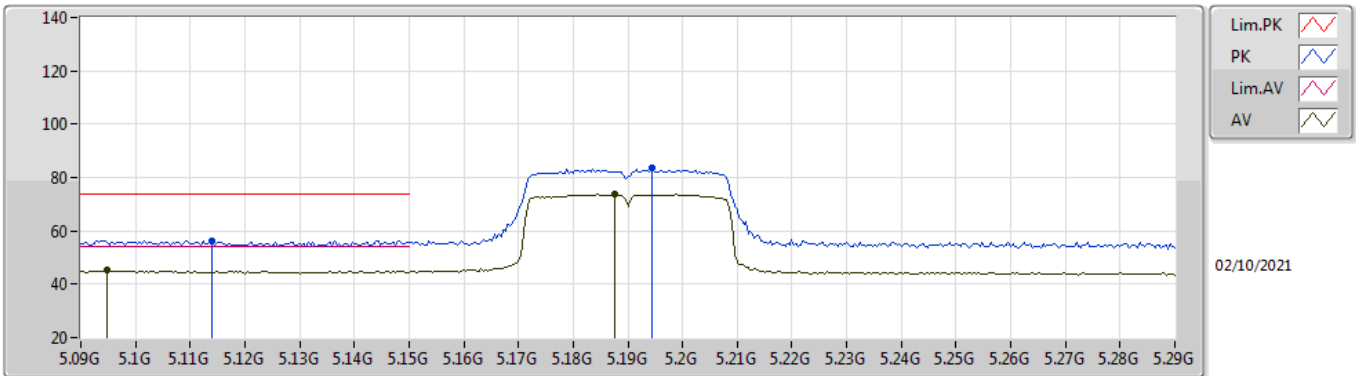


EUT V_1TX
Setting 19
06-F-S-5

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	11.64528G	55.68	74.00	-18.32	42.24	3	Horizontal	227	1.39	-	39.36	8.36	34.28	
AV	11.65444G	42.25	54.00	-11.75	28.83	3	Horizontal	227	1.39	-	39.34	8.36	34.28	

802.11ac VHT40_Nss1,(MCS0)_1TX

5190MHz_TnomVnom

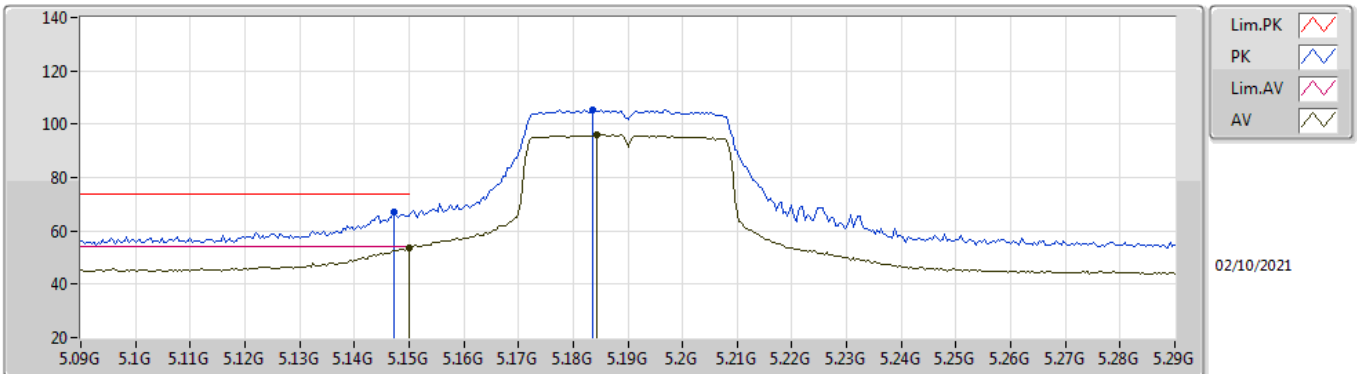


EUT_V_1TX
Setting 13
06-F-S-5-10

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	5.114G	56.39	74.00	-17.61	51.43	3	Vertical	190.2	2.16	-	31.92	5.00	31.96	
AV	5.0948G	45.33	54.00	-8.67	40.33	3	Vertical	190.2	2.16	-	31.95	5.00	31.95	
PK	5.1944G	83.41	Inf	-Inf	78.98	3	Vertical	190.2	2.16	-	31.43	5.00	32.00	
AV	5.1876G	73.68	Inf	-Inf	69.20	3	Vertical	190.2	2.16	-	31.47	5.00	31.99	

802.11ac VHT40_Nss1,(MCS0)_1TX

5190MHz_TnomVnom

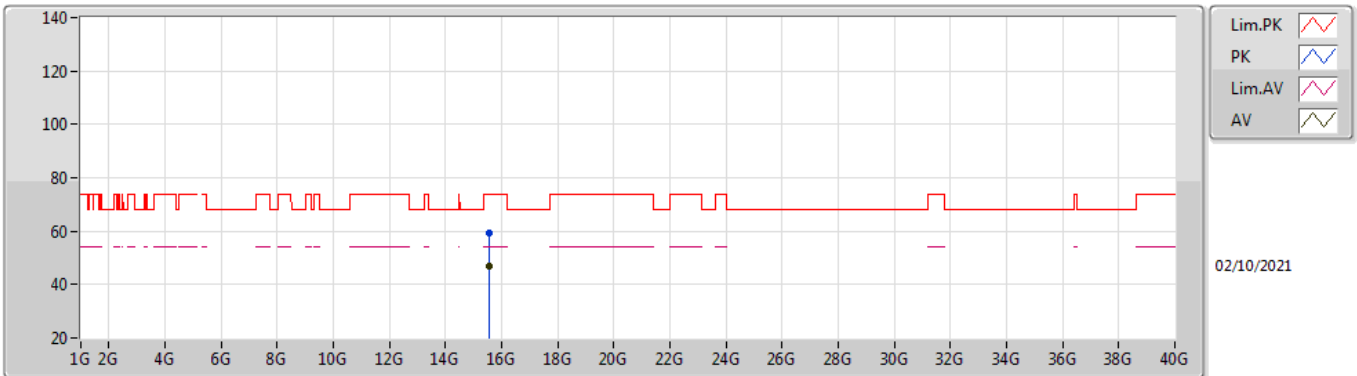


EUT V_1TX
Setting 13
06-F-S-5-10

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	5.1472G	66.83	74.00	-7.17	62.08	3	Horizontal	176	2.23	-	31.72	5.00	31.97
AV	5.15G	53.59	54.00	-0.41	48.87	3	Horizontal	176	2.23	-	31.70	5.00	31.98
PK	5.1836G	105.34	Inf	-Inf	100.83	3	Horizontal	176	2.23	-	31.50	5.00	31.99
AV	5.1844G	95.92	Inf	-Inf	91.42	3	Horizontal	176	2.23	-	31.49	5.00	31.99

802.11ac VHT40_Nss1,(MCS0)_1TX

5190MHz_TnomVnom

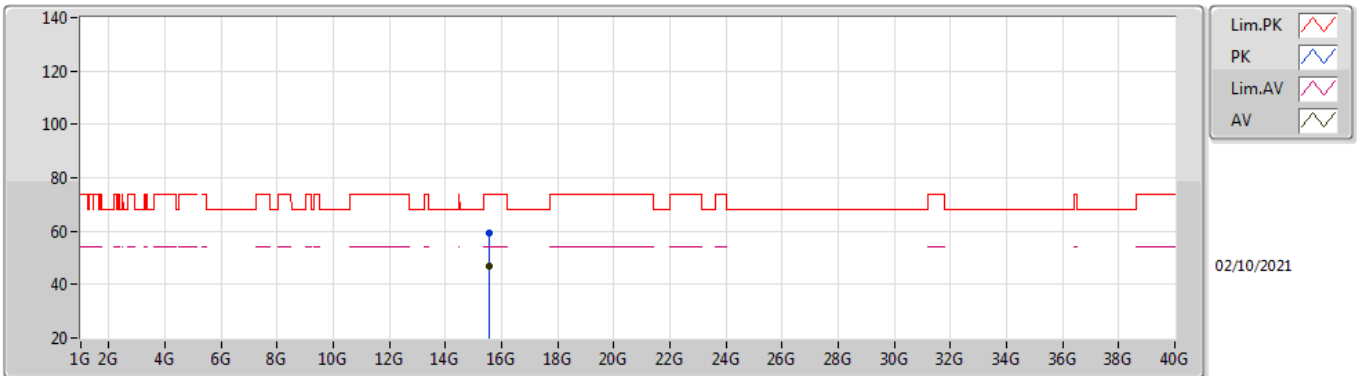


EUT V_1TX
Setting 13
06-F-S-5

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	15.5674G	59.18	74.00	-14.82	44.69	3	Vertical	12	1.37	-	38.36	10.38	34.25	
AV	15.5698G	46.82	54.00	-7.18	32.34	3	Vertical	12	1.37	-	38.35	10.38	34.25	

802.11ac VHT40_Nss1,(MCS0)_1TX

5190MHz_TnomVnom

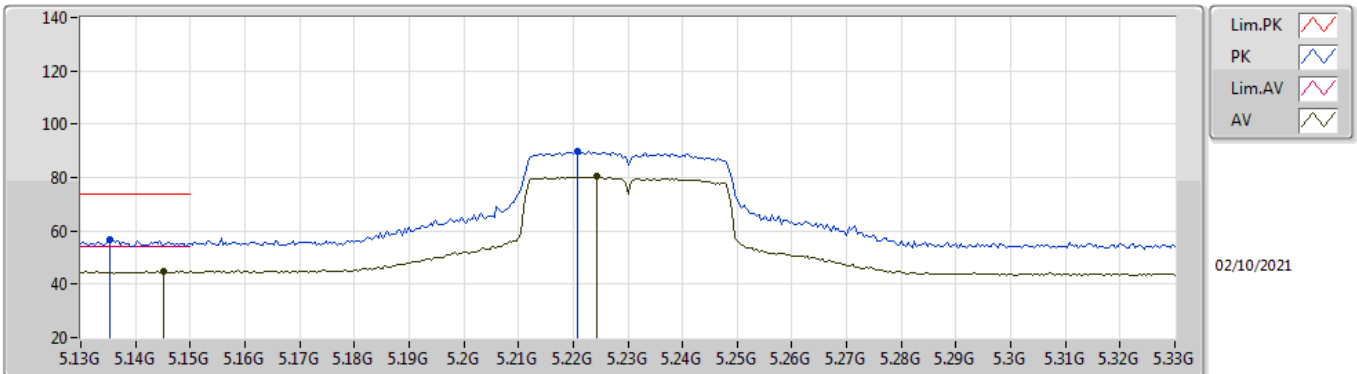


EUT V_1TX
Setting 13
06-F-S-5

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	15.57142G	59.07	74.00	-14.93	44.59	3	Horizontal	290	2.92	-	38.34	10.39	34.25
AV	15.5719G	47.00	54.00	-7.00	32.52	3	Horizontal	290	2.92	-	38.34	10.39	34.25

802.11ac VHT40_Nss1,(MCS0)_1TX

5230MHz_TnomVnom

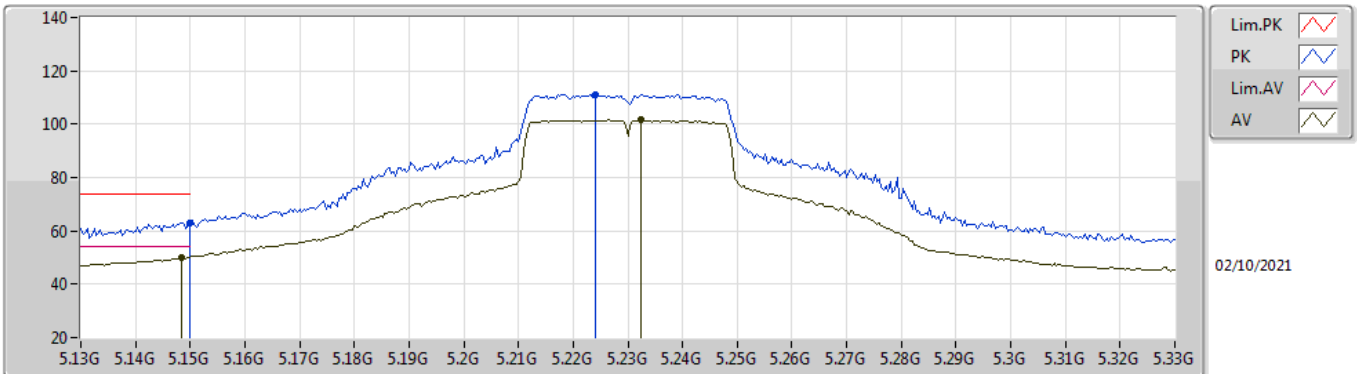


EUT_V_1TX
Setting 19
06-F-S-5-10

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	5.1352G	56.49	74.00	-17.51	51.67	3	Vertical	198.8	2.61	-	31.79	5.00	31.97
AV	5.1452G	45.00	54.00	-9.00	40.24	3	Vertical	198.8	2.61	-	31.73	5.00	31.97
PK	5.2208G	89.76	Inf	-Inf	85.49	3	Vertical	198.8	2.61	-	31.28	5.00	32.01
AV	5.2244G	80.26	Inf	-Inf	76.02	3	Vertical	198.8	2.61	-	31.25	5.00	32.01

802.11ac VHT40_Nss1,(MCS0)_1TX

5230MHz_TnomVnom

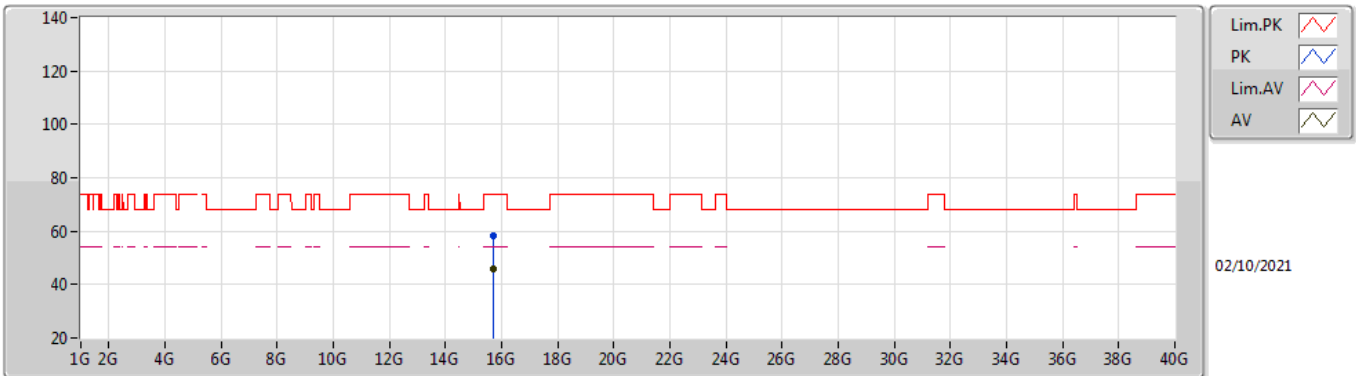


EUT_V_1TX
Setting 19
06-F-S-5-10

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	5.15G	62.90	74.00	-11.10	58.18	3	Horizontal	181.3	2.33	-	31.70	5.00	31.98	
AV	5.1484G	50.10	54.00	-3.90	45.37	3	Horizontal	181.3	2.33	-	31.71	5.00	31.98	
PK	5.224G	111.14	Inf	-Inf	106.89	3	Horizontal	181.3	2.33	-	31.26	5.00	32.01	
AV	5.2324G	101.55	Inf	-Inf	97.35	3	Horizontal	181.3	2.33	-	31.21	5.00	32.01	

802.11ac VHT40_Nss1,(MCS0)_1TX

5230MHz_TnomVnom

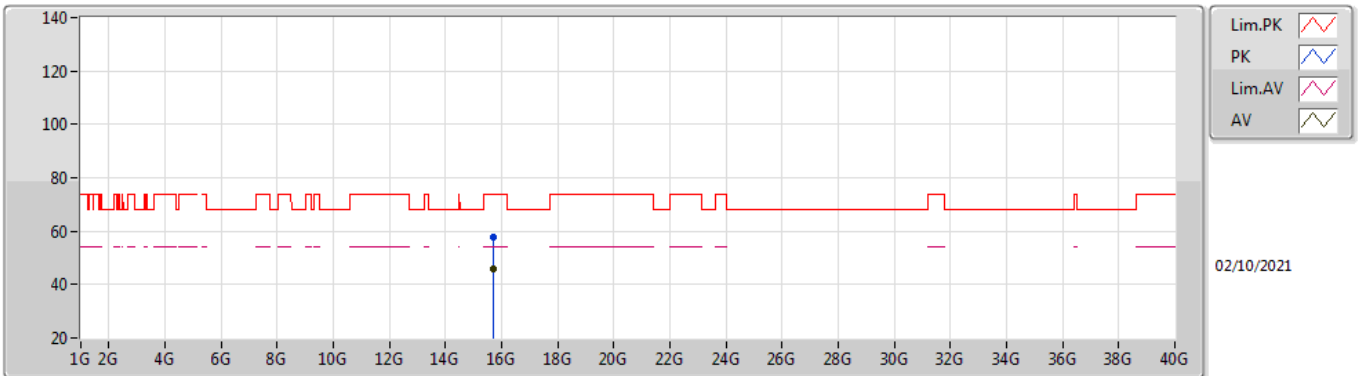


EUT V_1TX
Setting 19
06-F-S-5

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	15.6852G	58.14	74.00	-15.86	44.13	3	Vertical	92	2.42	-	37.86	10.44	34.29
AV	15.68968G	45.89	54.00	-8.11	31.91	3	Vertical	92	2.42	-	37.84	10.44	34.30

802.11ac VHT40_Nss1,(MCS0)_1TX

5230MHz_TnomVnom

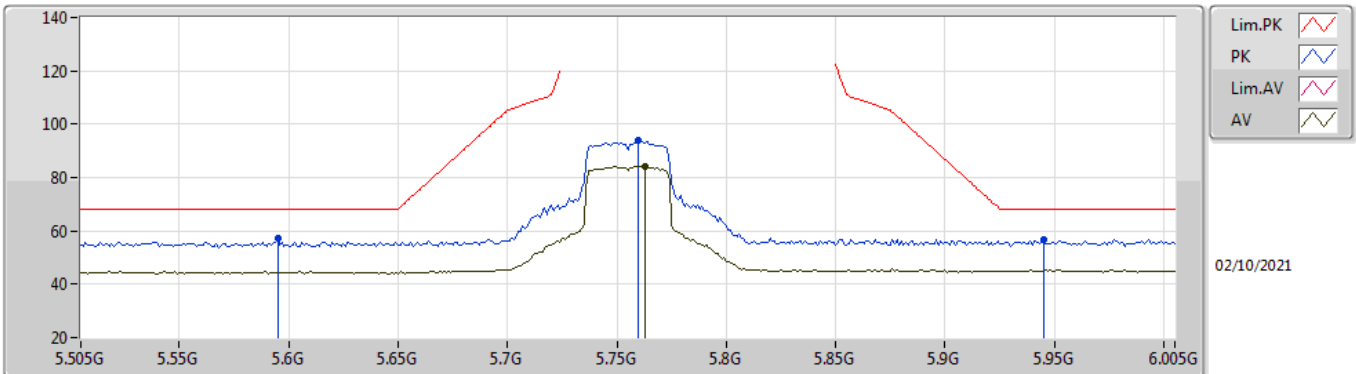


EUT_V_1TX
Setting 19
06-F-S-5

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	15.69092G	57.98	74.00	-16.02	43.99	3	Horizontal	212	2.75	-	37.84	10.45	34.30	
AV	15.6918G	45.67	54.00	-8.33	31.69	3	Horizontal	212	2.75	-	37.83	10.45	34.30	

802.11ac VHT40_Nss1,(MCS0)_1TX

5755MHz_TnomVnom

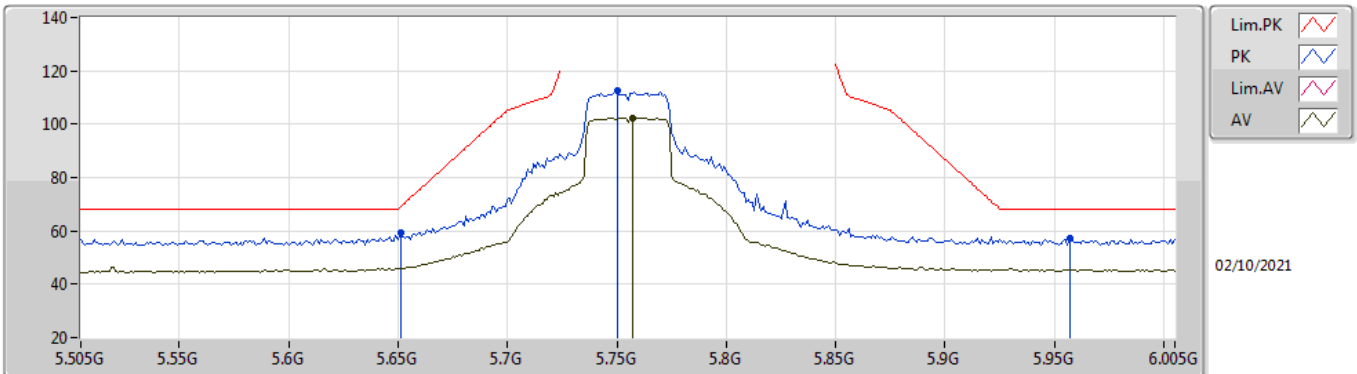


EUT_V_1TX
Setting 19
06-F-S-5-10

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	5.595G	57.20	68.20	-11.00	52.60	3	Vertical	199.4	2.30	-	31.59	5.20	32.19	
PK	5.76G	93.96	Inf	-Inf	88.97	3	Vertical	199.4	2.30	-	32.00	5.28	32.29	
AV	5.763G	84.27	Inf	-Inf	79.28	3	Vertical	199.4	2.30	-	32.00	5.28	32.29	
PK	5.945G	56.64	68.20	-11.56	51.40	3	Vertical	199.4	2.30	-	32.19	5.45	32.40	

802.11ac VHT40_Nss1,(MCS0)_1TX

5755MHz_TnomVnom

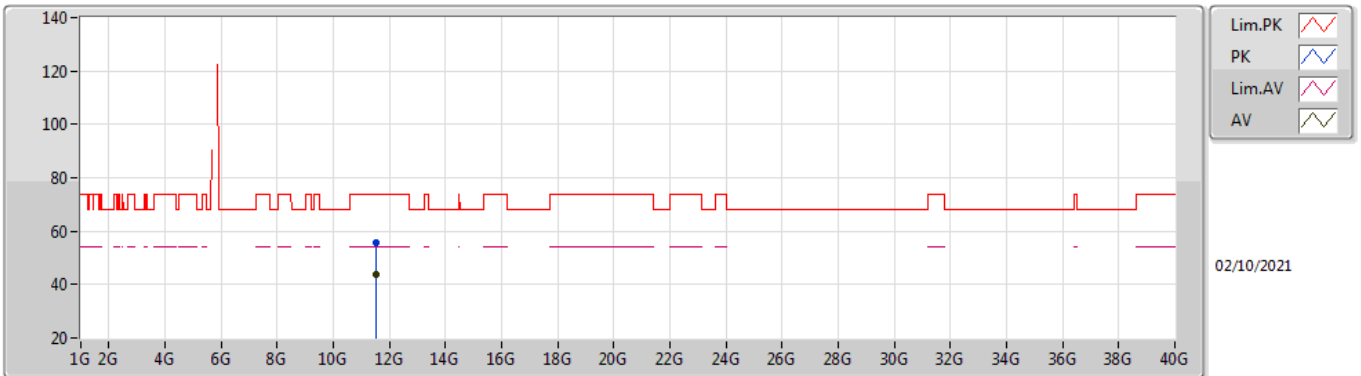


EUT_V_1TX
Setting 19
06-F-S-5-10

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	59.29	68.94	-9.65	54.68	3	Horizontal	185	2.24	-	31.60	5.23	32.22	
PK	5.75G	112.54	Inf	-Inf	107.54	3	Horizontal	185	2.24	-	32.00	5.28	32.28	
AV	5.757G	102.35	Inf	-Inf	97.35	3	Horizontal	185	2.24	-	32.00	5.28	32.28	
PK	5.957G	57.17	68.20	-11.03	51.91	3	Horizontal	185	2.24	-	32.20	5.46	32.40	

802.11ac VHT40_Nss1,(MCS0)_1TX

5755MHz_TnomVnom

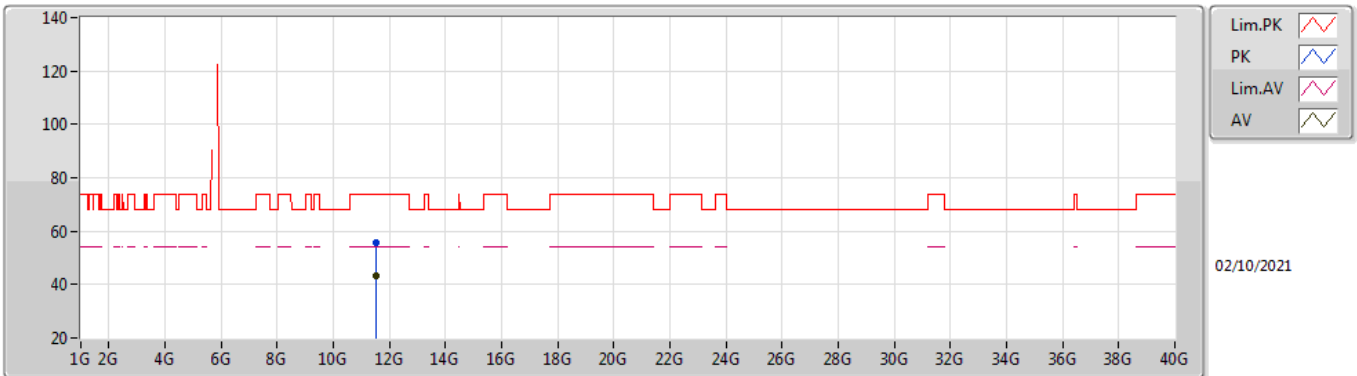


EUT_V_1TX
Setting 19
06-F-S-5

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	11.50578G	55.90	74.00	-18.10	42.32	3	Vertical	166	2.14	-	39.59	8.30	34.31	
AV	11.51218G	43.70	54.00	-10.30	30.12	3	Vertical	166	2.14	-	39.59	8.30	34.31	

802.11ac VHT40_Nss1,(MCS0)_1TX

5755MHz_TnomVnom

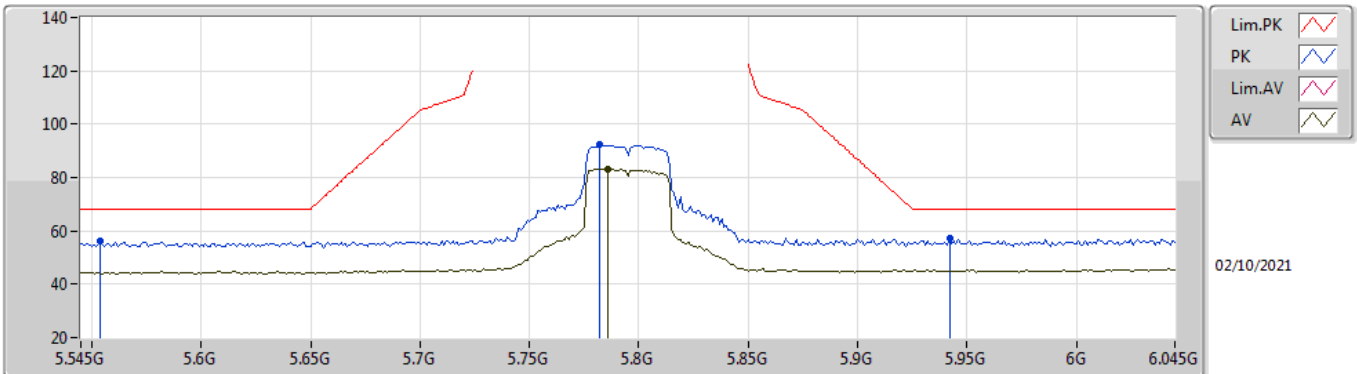


EUT V_1TX
Setting 19
06-F-S-5

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	11.5134G	55.68	74.00	-18.32	42.09	3	Horizontal	126	1.04	-	39.59	8.31	34.31	
AV	11.50924G	43.48	54.00	-10.52	29.90	3	Horizontal	126	1.04	-	39.59	8.30	34.31	

802.11ac VHT40_Nss1,(MCS0)_1TX

5795MHz_TnomVnom

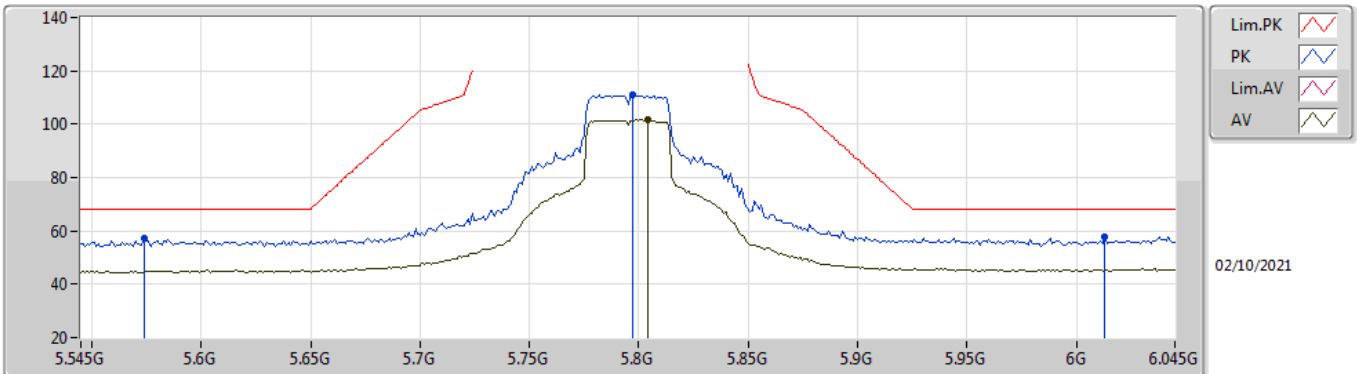


EUT V_1TX
Setting 19
06-F-S-5-10

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	5.554G	56.09	68.20	-12.11	51.59	3	Vertical	197.4	1.81	-	31.51	5.15	32.16
PK	5.782G	92.37	Inf	-Inf	87.38	3	Vertical	197.4	1.81	-	32.00	5.29	32.30
AV	5.786G	83.23	Inf	-Inf	78.24	3	Vertical	197.4	1.81	-	32.00	5.29	32.30
PK	5.942G	57.12	68.20	-11.08	51.90	3	Vertical	197.4	1.81	-	32.18	5.44	32.40

802.11ac VHT40_Nss1,(MCS0)_1TX

5795MHz_TnomVnom

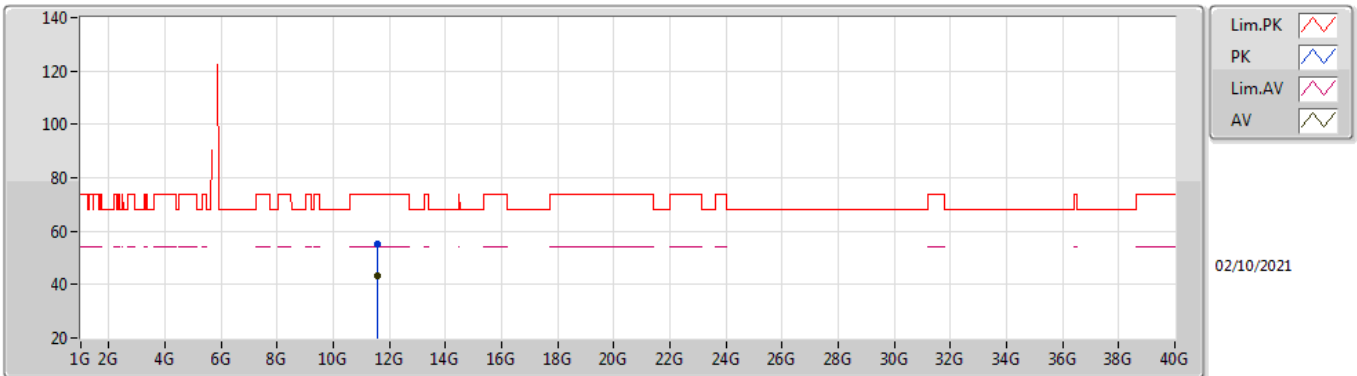


EUT_V_1TX
Setting 19
06-F-S-5-10

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	5.574G	57.14	68.20	-11.06	52.59	3	Horizontal	185.7	2.25	-	31.55	5.17	32.17	
PK	5.797G	111.04	Inf	-Inf	106.05	3	Horizontal	185.7	2.25	-	32.00	5.30	32.31	
AV	5.804G	101.51	Inf	-Inf	96.52	3	Horizontal	185.7	2.25	-	32.00	5.30	32.31	
PK	6.013G	57.71	68.20	-10.49	52.37	3	Horizontal	185.7	2.25	-	32.28	5.50	32.44	

802.11ac VHT40_Nss1,(MCS0)_1TX

5795MHz_TnomVnom

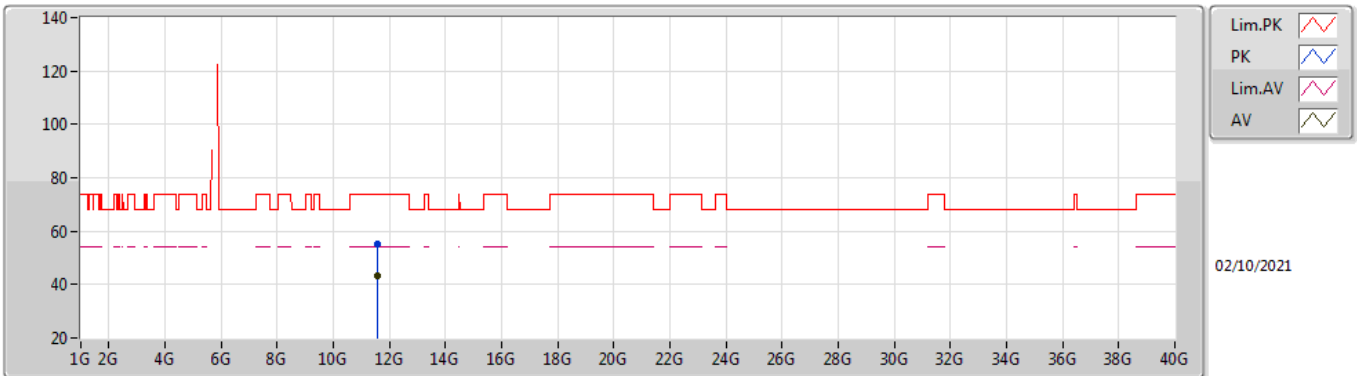


EUT_V_1TX
Setting 19
06-F-S-5

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	11.5907G	55.32	74.00	-18.68	41.76	3	Vertical	191	1.99	-	39.51	8.34	34.29	
AV	11.59398G	43.14	54.00	-10.86	29.58	3	Vertical	191	1.99	-	39.51	8.34	34.29	

802.11ac VHT40_Nss1,(MCS0)_1TX

5795MHz_TnomVnom

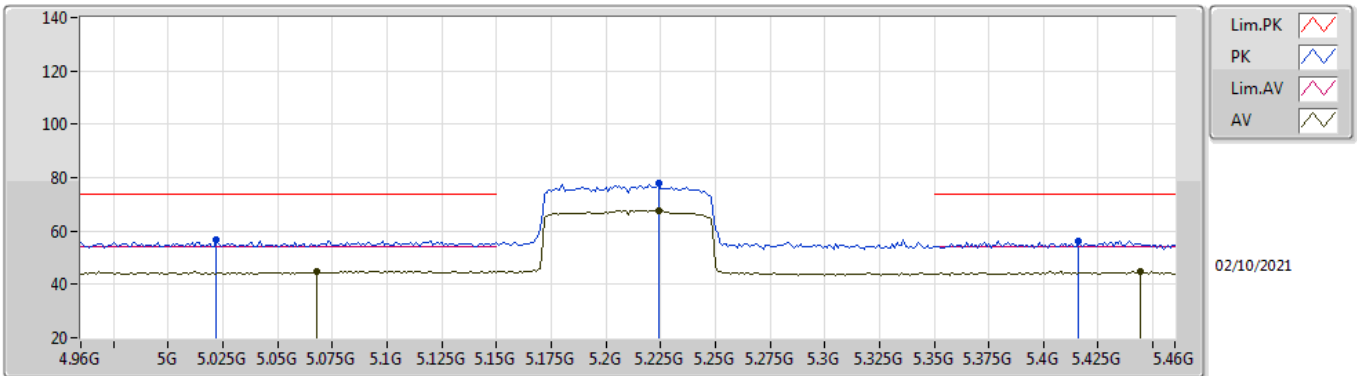


EUT_V_1TX
Setting 19
06-F-S-5

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	11.58958G	55.31	74.00	-18.69	41.75	3	Horizontal	262	2.70	-	39.51	8.34	34.29
AV	11.5858G	43.05	54.00	-10.95	29.50	3	Horizontal	262	2.70	-	39.51	8.33	34.29

802.11ac VHT80_Nss1,(MCS0)_1TX

5210MHz_TnomVnom

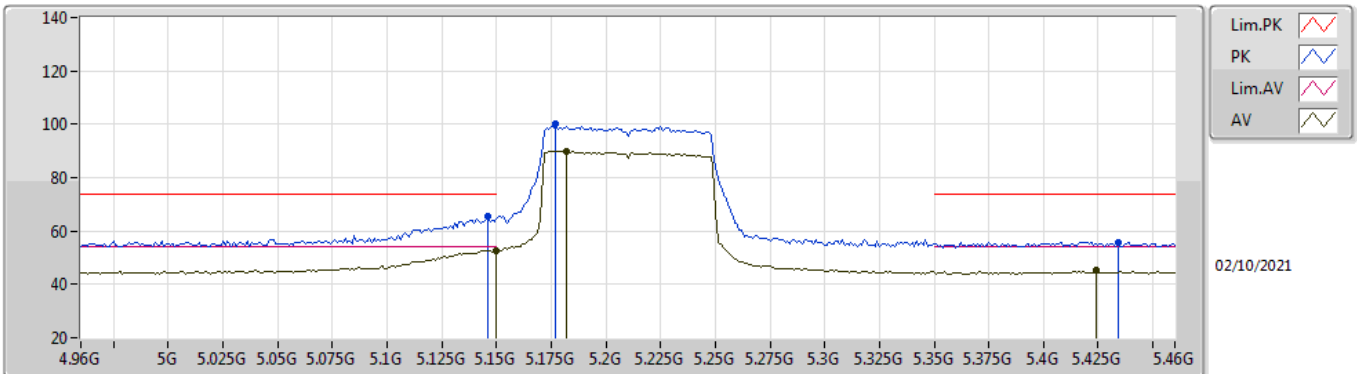


EUT V_1TX
Setting 11
06-F-S-5-10

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	5.022G	56.85	74.00	-17.15	52.38	3	Vertical	200.7	2.62	-	31.39	5.00	31.92
AV	5.068G	45.01	54.00	-8.99	40.27	3	Vertical	200.7	2.62	-	31.68	5.00	31.94
PK	5.224G	77.99	Inf	-Inf	73.74	3	Vertical	200.7	2.62	-	31.26	5.00	32.01
AV	5.224G	67.72	Inf	-Inf	63.47	3	Vertical	200.7	2.62	-	31.26	5.00	32.01
PK	5.416G	56.27	74.00	-17.73	51.91	3	Vertical	200.7	2.62	-	31.43	5.02	32.09
AV	5.444G	44.70	54.00	-9.30	40.28	3	Vertical	200.7	2.62	-	31.49	5.04	32.11

802.11ac VHT80_Nss1,(MCS0)_1TX

5210MHz_TnomVnom

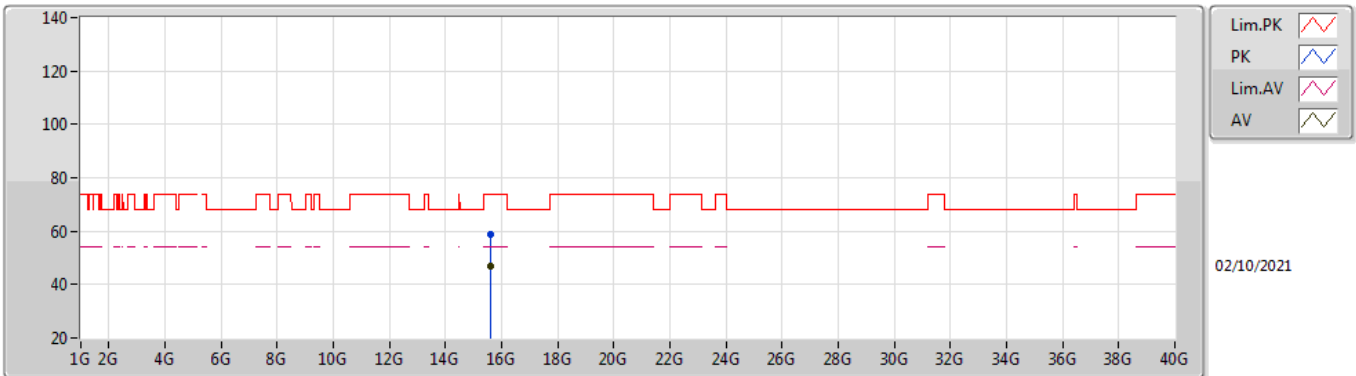


EUT V_1TX
Setting 11
06-F-S-5-10

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	5.146G	65.28	74.00	-8.72	60.53	3	Horizontal	177.7	2.37	-	31.72	5.00	31.97
AV	5.15G	52.69	54.00	-1.31	47.97	3	Horizontal	177.7	2.37	-	31.70	5.00	31.98
PK	5.177G	100.38	Inf	-Inf	95.83	3	Horizontal	177.7	2.37	-	31.54	5.00	31.99
AV	5.182G	89.80	Inf	-Inf	85.28	3	Horizontal	177.7	2.37	-	31.51	5.00	31.99
PK	5.434G	55.91	74.00	-18.09	51.51	3	Horizontal	177.7	2.37	-	31.47	5.03	32.10
AV	5.424G	45.40	54.00	-8.60	41.03	3	Horizontal	177.7	2.37	-	31.45	5.02	32.10

802.11ac VHT80_Nss1,(MCS0)_1TX

5210MHz_TnomVnom

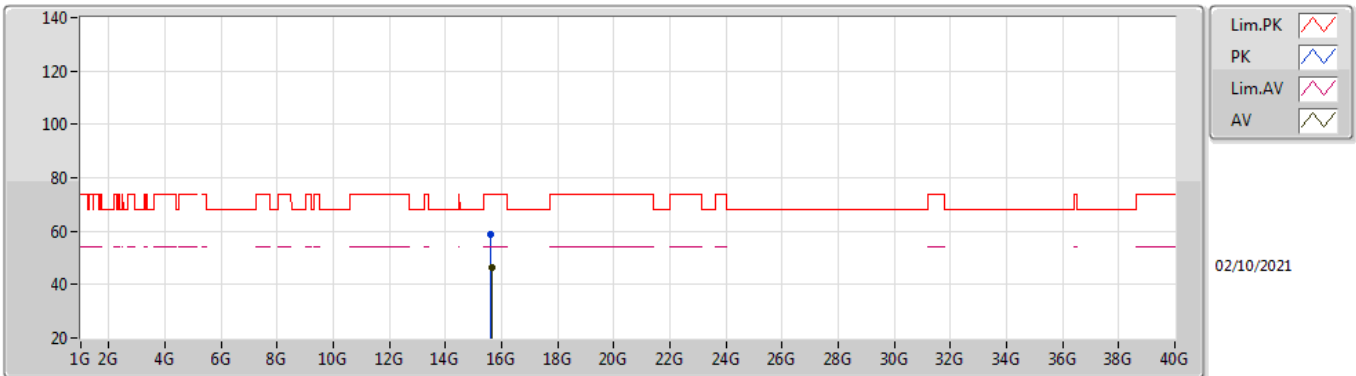


EUT_V_1TX
Setting 11
06-F-S-5

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	15.63074G	59.01	74.00	-14.99	44.78	3	Vertical	102	1.88	-	38.08	10.42	34.27	
AV	15.62614G	46.77	54.00	-7.23	32.53	3	Vertical	102	1.88	-	38.10	10.41	34.27	

802.11ac VHT80_Nss1,(MCS0)_1TX

5210MHz_TnomVnom

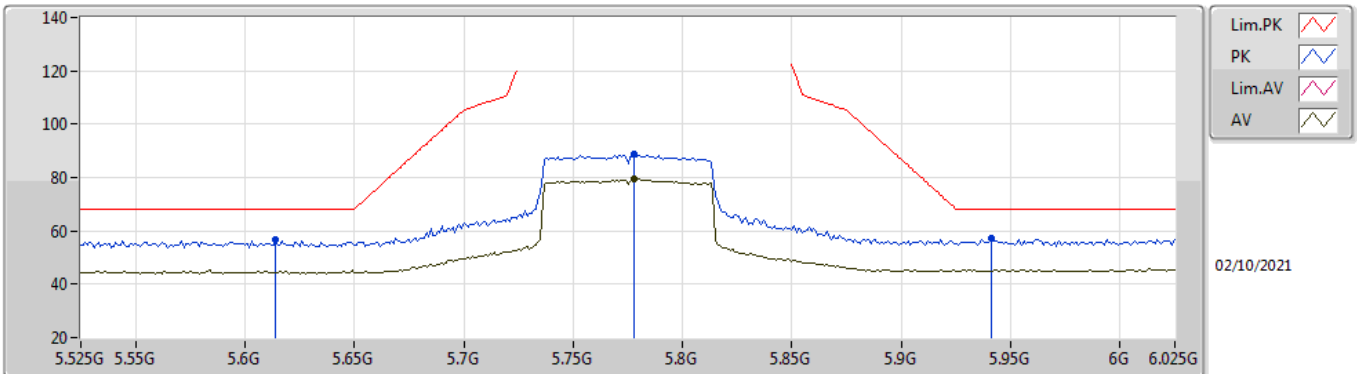


EUT V_1TX
Setting 11
06-F-S-5

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	15.62798G	58.99	74.00	-15.01	44.76	3	Horizontal	313	2.44	-	38.09	10.41	34.27	
AV	15.63364G	46.63	54.00	-7.37	32.41	3	Horizontal	313	2.44	-	38.07	10.42	34.27	

802.11ac VHT80_Nss1,(MCS0)_1TX

5775MHz_TnomVnom

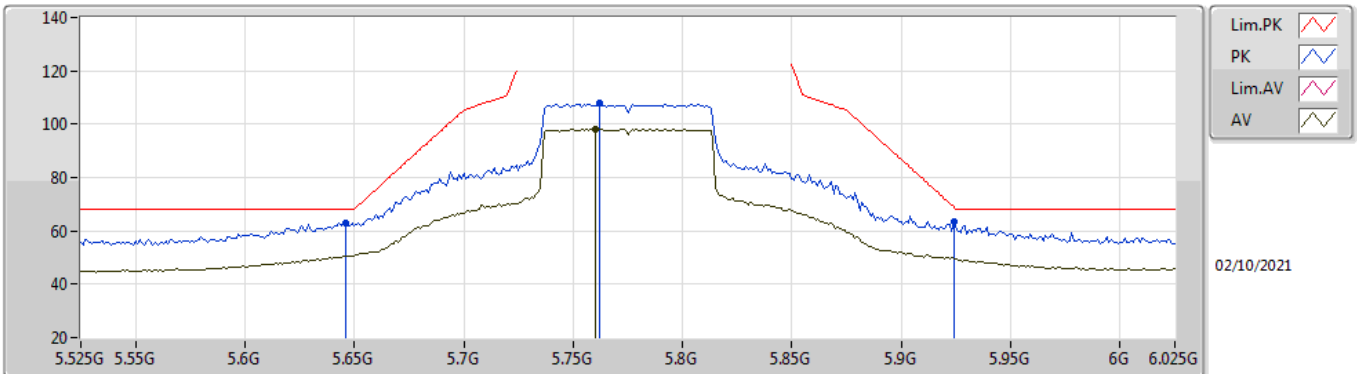


EUT_V_1TX
Setting 19
06-F-S-5-10

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	5.614G	56.51	68.20	-11.69	51.90	3	Vertical	132.4	1.80	-	31.60	5.21	32.20
PK	5.778G	88.56	Inf	-Inf	83.57	3	Vertical	132.4	1.80	-	32.00	5.29	32.30
AV	5.778G	79.49	Inf	-Inf	74.50	3	Vertical	132.4	1.80	-	32.00	5.29	32.30
PK	5.941G	57.28	68.20	-10.92	52.05	3	Vertical	132.4	1.80	-	32.18	5.44	32.39

802.11ac VHT80_Nss1,(MCS0)_1TX

5775MHz_TnomVnom

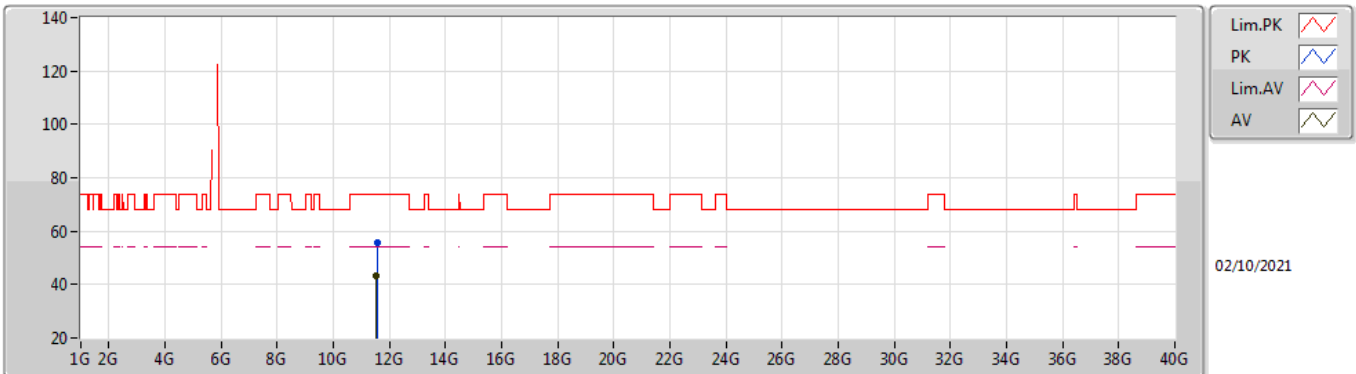


EUT_V_1TX
Setting 19
06-F-S-5-10

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	63.06	68.20	-5.14	58.46	3	Horizontal	184.9	2.24	-	31.60	5.22	32.22	
PK	5.762G	108.03	Inf	-Inf	103.04	3	Horizontal	184.9	2.24	-	32.00	5.28	32.29	
AV	5.76G	98.27	Inf	-Inf	93.28	3	Horizontal	184.9	2.24	-	32.00	5.28	32.29	
PK	5.924G	63.41	68.94	-5.53	58.22	3	Horizontal	184.9	2.24	-	32.15	5.42	32.38	

802.11ac VHT80_Nss1,(MCS0)_1TX

5775MHz_TnomVnom

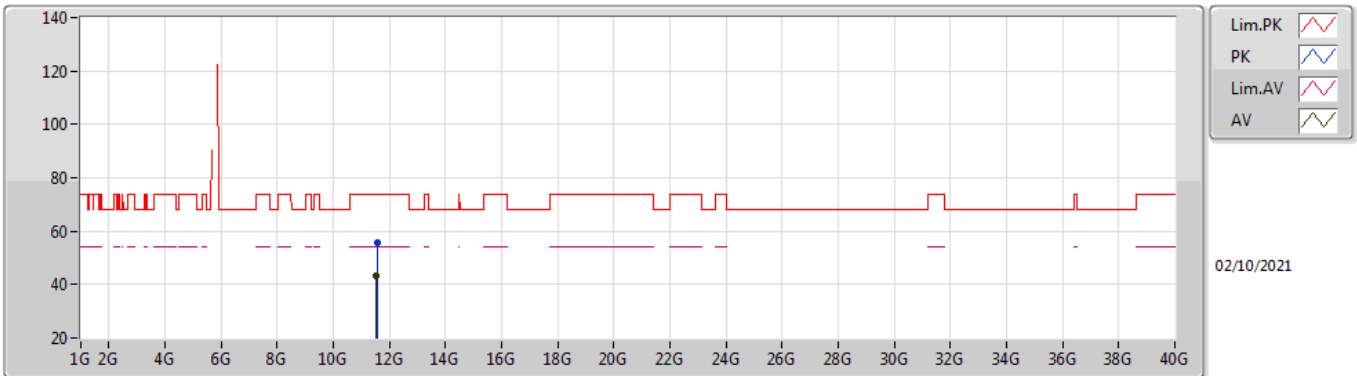


EUT_V_1TX
Setting 19
06-F-S-5

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	11.55062G	55.48	74.00	-18.52	41.91	3	Vertical	87	2.69	-	39.55	8.32	34.30	
AV	11.54548G	43.41	54.00	-10.59	29.84	3	Vertical	87	2.69	-	39.55	8.32	34.30	

802.11ac VHT80_Nss1,(MCS0)_1TX

5775MHz_TnomVnom



EUT V_1TX
Setting 19
06-F-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	11.55482G	55.85	74.00	-18.15	42.28	3	Horizontal	75	2.62	-	39.55	8.32	34.30	
AV	11.5462G	43.22	54.00	-10.78	29.65	3	Horizontal	75	2.62	-	39.55	8.32	34.30	