

FCC Test Report

FCC ID : 2ANKPIPW608TX
Equipment : Wireless Display HDMI Extender
Brand Name : MCT
Model Name : IPW608-TX , IPW607-TX
Applicant : Magic Control Technology Corp.
10F., No.123, Zhongcheng Rd., Tucheng Dist.,
New Taipei City 236, Taiwan R.O.C.
Manufacturer : Magic Control Technology Corporation
10F., No.123, Zhongcheng Rd., Tucheng Dist.,
New Taipei City 236, Taiwan R.O.C.
Standard : 47 CFR FCC Part 15.407

The product was received on May 13, 2020, and testing was started from May 23, 2020 and completed on Jun. 02, 2020. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications 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 report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

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



Approved by: Allen Lin

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory

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

Table of Contents

HISTORY OF THIS TEST REPORT	3
SUMMARY OF TEST RESULT	4
1 GENERAL DESCRIPTION	5
1.1 Information.....	5
1.2 Testing Applied Standards	7
1.3 Testing Location Information	7
1.4 Measurement Uncertainty	8
2 TEST CONFIGURATION OF EUT.....	9
2.1 Test Condition	9
2.2 Test Channel Mode	9
2.3 The Worst Case Measurement Configuration.....	10
2.4 Accessories	11
2.5 Support Equipment.....	11
2.6 Test Setup Diagram	12
3 TRANSMITTER TEST RESULT	14
3.1 AC Power-line Conducted Emissions	14
3.2 Emission Bandwidth	16
3.3 Maximum Conducted Output Power	17
3.4 Peak Power Spectral Density.....	19
3.5 Unwanted Emissions.....	21
4 TEST EQUIPMENT AND CALIBRATION DATA	25
APPENDIX A. TEST RESULTS OF AC POWER-LINE CONDUCTED EMISSIONS	
APPENDIX B. TEST RESULTS OF EMISSION BANDWIDTH	
APPENDIX C. TEST RESULTS OF MAXIMUM CONDUCTED OUTPUT POWER	
APPENDIX D. TEST RESULTS OF PEAK POWER SPECTRAL DENSITY	
APPENDIX E. TEST RESULTS OF UNWANTED EMISSIONS	
APPENDIX F. TEST PHOTOS	
PHOTOGRAPHS OF EUT V01	



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 Conducted Output Power	PASS	-
3.4	15.407(a)	Peak 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:

None

Reviewed by: Sam Tsai

Report Producer: Jenny Yang

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	ac (VHT80)	5210	42 [1]
5725-5850		5775	155 [1]

Band	Mode	BWch (MHz)	Nant
5.15-5.25GHz	802.11ac VHT80	80	2TX
5.725-5.85GHz	802.11ac VHT80	80	2TX

Note:

- ♦ VHT80 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM modulation.
- ♦ BWch is the nominal channel bandwidth.

1.1.2 Antenna Information

Ant.	Port	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	1	HT-TECH	WIA1J-2458-B1-SMA-MR-W2	Dipole	I-PEX	5
2	2	HT-TECH	WIA1J-2458-B1-SMA-MR-W2	Dipole	I-PEX	5

Note 1: The EUT has two antennas.

For 5GHz function:

For IEEE 802.11 ac mode (2TX/2RX)

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

1.1.3 EUT Information

Operational Condition			
EUT Power Type	From AC Adapter		
EUT Function	☐ Outdoor AP	☐ Indoor AP	
	☒ Fixed P2P AP	☐ Outdoor/Indoor Client	
Beamforming Function	☐ With beamforming	☒ Without beamforming	
Type of EUT			
☒	Stand-alone		
☐	Combined (EUT where the radio part is fully integrated within another device)		
	Combined Equipment - Brand Name / Model No.: ...		
☐	Plug-in radio (EUT intended for a variety of host systems)		
	Host System - Brand Name / Model No.:		
☐	Other:		

1.1.4 Mode Test Duty Cycle

IPW607-TX

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11ac VHT80_Nss1,(MCS0)_2TX	0.706	1.51	336.25u	3k

Note. If DC < 0.98, the DCF was added while measuring Output power and PSD.

IPW608-TX

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11ac VHT80_Nss1,(MCS0)_2TX	0.76	1.19	336.25u	3k

Note. If DC < 0.98, the DCF was added while measuring Output power and PSD.

1.1.5 Table for Multiple Listing

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

Model Name	USB Port	Description
IPW608-TX	With	All the models are identical, the difference is that EUT with USB Port or not.
IPW607-TX	Without	

1.2 Testing Applied 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
- ♦ KDB 789033 D02 v02r01

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

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

1.3 Testing Location Information

Testing Location			
☒	HWA YA	ADD : No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)	
		TEL : 886-3-327-3456	FAX : 886-3-327-0973
Test site Designation No. TW1190 with FCC.			
☐	JHUBEI	ADD : No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County, Taiwan (R.O.C.)	
		TEL : 886-3-656-9065	FAX : 886-3-656-9085
Test site Designation No. TW0006 with FCC.			
☐	Wen Shan	ADD : No.14-1, Ln. 19, Wen 33rd St., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)	
		TEL : 886-3-318-0787	FAX : 886-3-318-0287
Test site Designation No. TW1097 with FCC.			

Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
AC Conduction	CO04-HY	Edward Wang	23.1~24.5°C / 62~68%	26/May/2020~ 27/May/2020
RF Conducted	TH07-HY	Justin Pan	20~24°C / 50~56%	25/May/2020~ 29/May/2020
Radiated	03CH03-HY	Jeff Lin	21.6~25.5°C / 51~ 62%	23/May/2020~ 02/Jun/2020

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)	0.9 dB	Confidence levels of 95%
Radiated Emission (9kHz ~ 30MHz)	2.4 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	3.7 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	3.6 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	3.5 dB	Confidence levels of 95%
Conducted Emission	1.0 dB	Confidence levels of 95%
Temperature	0.41 °C	Confidence levels of 95%
Humidity	3.4 %	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Condition

Condition Item	Abbreviation/Remark	Remark
TnomVnom	Tnom	20°C
-	Vnom	120V

2.2 Test Channel Mode

Test Software Version	QATool: v 1.0.3.23
-----------------------	--------------------

IPW607-TX

Mode	Power Setting
802.11ac VHT80_Nss1,(MCS0)_2TX	-
5210MHz	0E,0E
5775MHz	1D,1D

IPW608-TX

Mode	Power Setting
802.11ac VHT80_Nss1,(MCS0)_2TX	-
5210MHz	0E,0E
5775MHz	1E,1E

2.3 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
Operating Mode	CTX
1	AC Adapter mode (DSA-12PFU-05 FCA); IPW607-TX
2	AC Adapter mode (DSA-12PFU-05 FUS); IPW607-TX
3	AC Adapter mode (DSA-12PFU-05 FCA) ;IPW608-TX
4	AC Adapter mode (DSA-12PFU-05 FUS) ;IPW608-TX

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

The Worst Case Mode for Following Conformance Tests		
Tests Item	Unwanted Emissions	
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.	
Operating Mode < 1GHz	CTX	
1	AC Adapter mode (DSA-12PFU-05 FCA); IPW607-TX	
2	AC Adapter mode (DSA-12PFU-05 FUS); IPW607-TX	
3	AC Adapter mode (DSA-12PFU-05 FCA) ;IPW608-TX	
4	AC Adapter mode (DSA-12PFU-05 FUS) ;IPW608-TX	
Operating Mode > 1GHz	CTX	
Orthogonal Planes of EUT	Y Plane	Z Plane
		
Worst Planes of EUT		V

2.4 Accessories

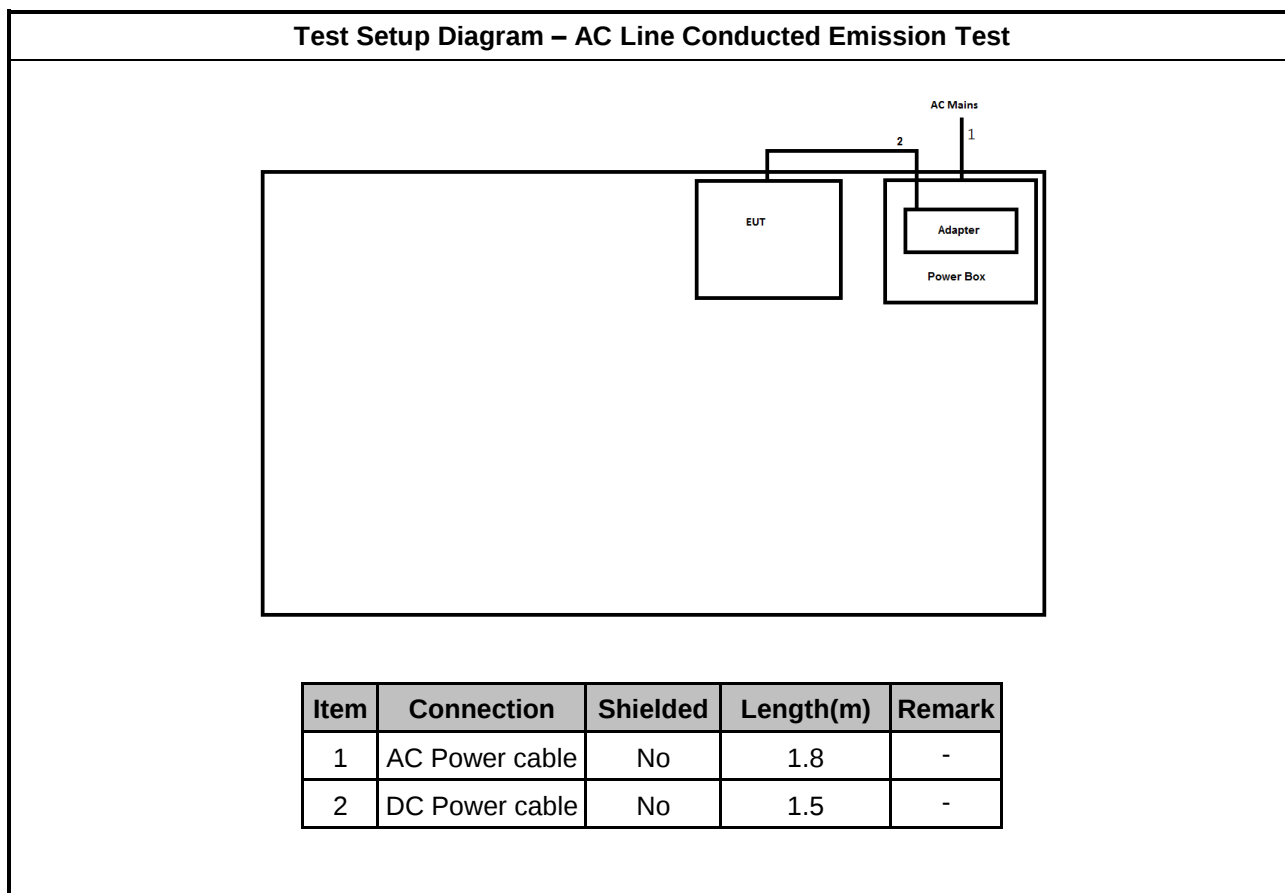
Accessories				
AC Adapter 1	Brand Name	EFFICIENCY LEVEL	Model Name	DSA-12PFU-05 FCA
	Power Rating	I/P: 100 - 240 Vac, 0.5 A, O/P: 5 Vdc, 2 A		
	Power Cord	1.5meter, non-shielded cable, w/o ferrite core		
AC Adapter 2	Brand Name	EFFICIENCY LEVEL	Model Name	DSA-12PFU-05 FUS
	Power Rating	I/P: 100 - 240 Vac, 0.5 A, O/P: 5Vdc, 2 A		
	Power Cord	1.5 meter, non-shielded cable, w/o ferrite core		
HDMI Cable	Brand Name	Hisetec	Model Name	5CH00100000001
	Signal Line	1 meter, shielded cable, w/o ferrite core		
IR Cable	Brand Name	Alaways Tai Lai	Model Name	ATL-0504
	Signal Line	1.5 meter, non-shielded cable		
IR Cable	Brand Name	Alaways Tai Lai	Model Name	ATL-0439
	Signal Line	1.5 meter, non-shielded cable		

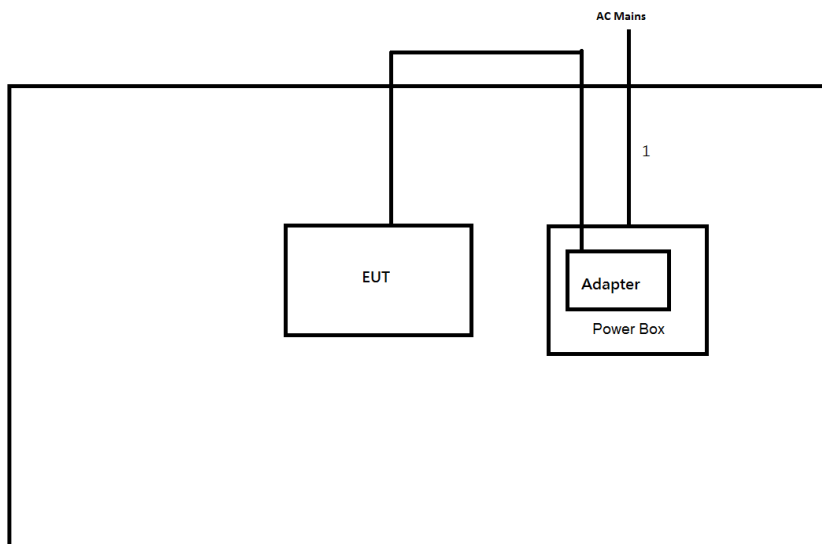
Reminder: Regarding to more detail and other information, please refer to user manual.

2.5 Support Equipment

Support Equipment – Conducted					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	Notebook	DELL	PP13S	-	-
2	Adapter for NB	DELL	AA90PM111	-	-

2.6 Test Setup Diagram



Test Setup Diagram - Radiated Test


Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.8	-
2	DC Power cable	No	1.5	-

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.		

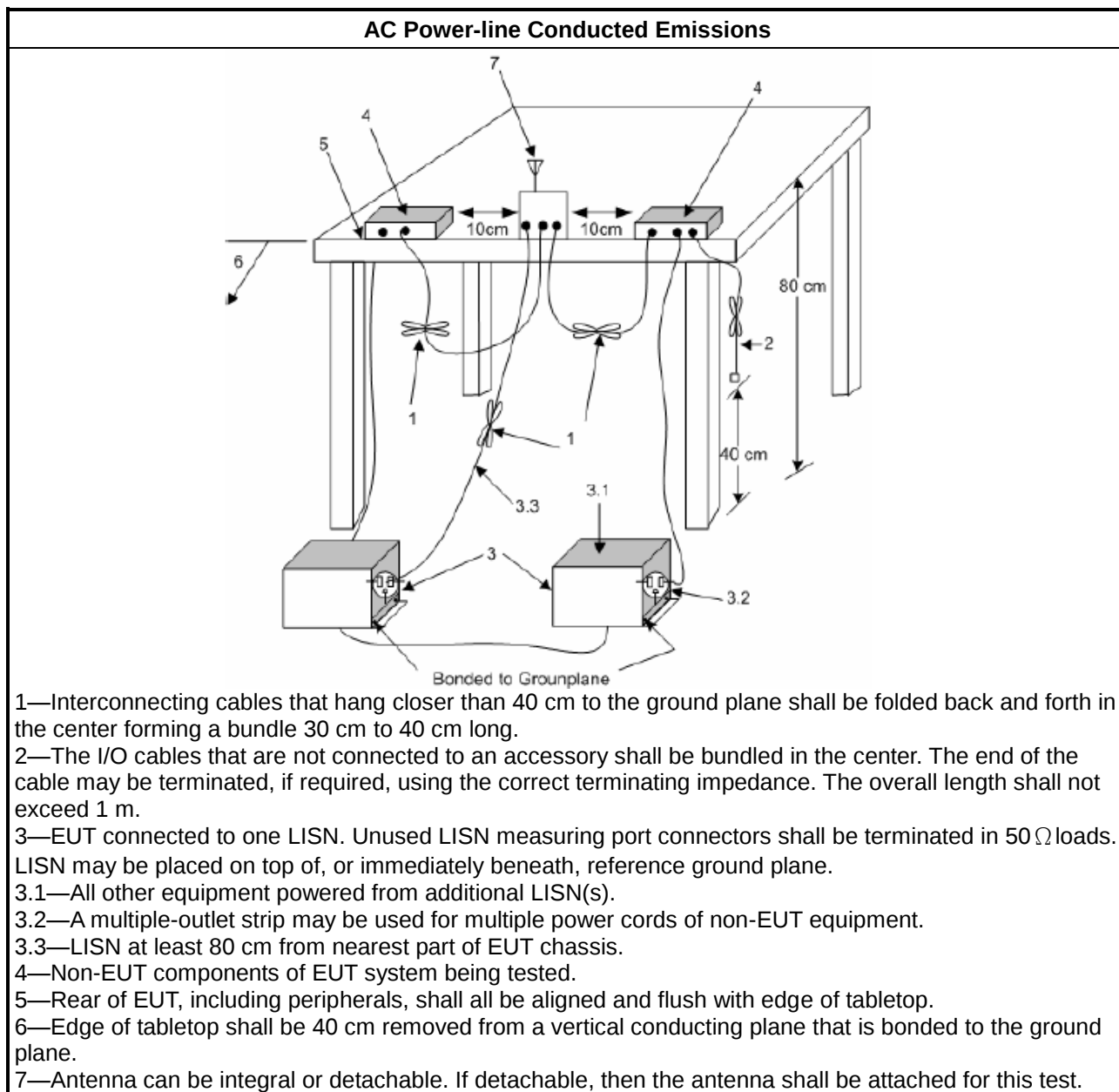
3.1.2 Measuring Instruments

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 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, N/A
☐	For the 5.47-5.725 GHz band, N/A
☒	For the 5.725-5.85 GHz band, 6 dB emission bandwidth $\geq$ 500kHz.

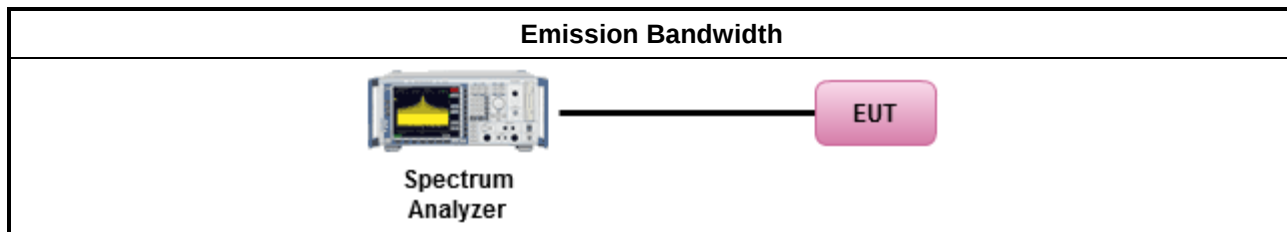
3.2.2 Measuring Instruments

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 KDB 789033, clause C for EBW and clause D for OBW measurement.
☐	Refer as ANSI C63.10, clause 6.9.3 for occupied bandwidth testing.
☐	Refer as IC RSS-Gen, clause 6.7 for bandwidth testing.

3.2.4 Test Setup



3.2.5 Test Result of Emission Bandwidth

Refer as Appendix B

3.3 Maximum Conducted Output Power

3.3.1 Maximum Conducted Output Power Limit

Maximum Conducted 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.
P_{Out} = maximum conducted output power in dBm, G_{TX} = the maximum transmitting antenna directional gain in dBi.	

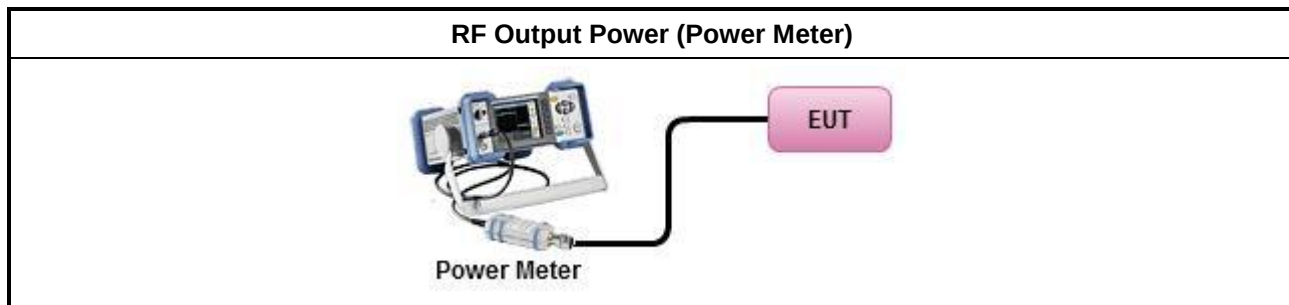
3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

Test Method	
Maximum Conducted Output Power	
	Duty cycle $\geq 98\%$
☐	Refer as KDB 789033, clause E Method SA-2 (spectral trace averaging).
	Duty cycle $< 98\%$
☐	Refer as KDB 789033, 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 KDB 789033, clause E Method PM (using an RF average power meter).
For conducted measurement.	
	If the EUT supports multiple transmit chains using options given below: Refer as 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: $P_{\text{total}} = P_1 + P_2 + \dots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $\text{EIRP}_{\text{total}} = P_{\text{total}} + \text{DG}$

3.3.4 Test Setup



3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C

3.4 Peak Power Spectral Density

3.4.1 Peak Power Spectral Density 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.
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.	

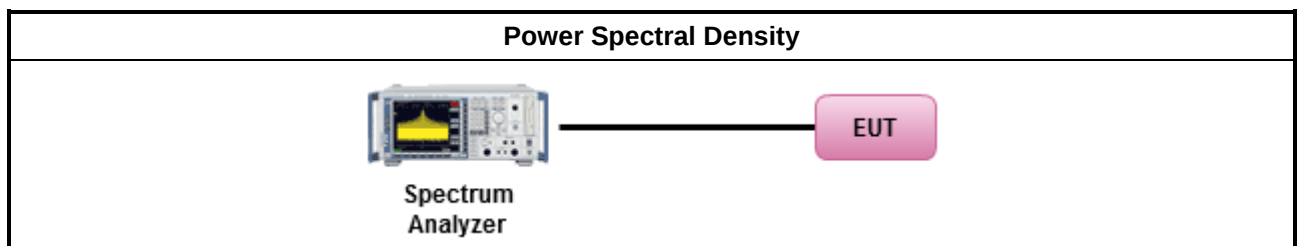
3.4.2 Measuring Instruments

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 KDB 789033, 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%	
☐ Refer as KDB 789033, clause E Method SA-2 (spectral trace averaging).	
Duty cycle < 98%	
☒ Refer as KDB 789033, 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:	
☐ Measure and sum the spectra across the outputs. Refer as 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.	
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]) $EIRP_{total} = PPSD_{total} + DG$	

3.4.4 Test Setup



3.4.5 Test Result of Peak Power Spectral Density

Refer as Appendix D

3.5 Unwanted Emissions

3.5.1 Transmitter Radiated 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	5.650-5700 GHz: e.i.r.p. -27 ~ 10 dBm [68.2 ~ 105.2 dBuV/m@3m] 5.700-5720 GHz: e.i.r.p. 10 ~ 15.6 dBm [105.2 ~ 110.8 dBuV/m@3m] 5.720-5725 GHz: e.i.r.p. 15.6 ~ 27 dBm [110.8 ~ 122.2 dBuV/m@3m] 5.850-5.855 GHz: e.i.r.p. 27 ~ 15.6 dBm [122.2 ~ 110.8 dBuV/m@3m] 5.855-5.875 GHz: e.i.r.p. 15.6 ~ 10 dBm [110.8 ~ 105.2 dBuV/m@3m] 5.875-5.925 GHz: e.i.r.p. 10 ~ -27 dBm [105.2 ~ 68.2dBuV/m@3m] Other un-restricted band: e.i.r.p. -27 dBm [68.2 dBuV/m@3m]

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).

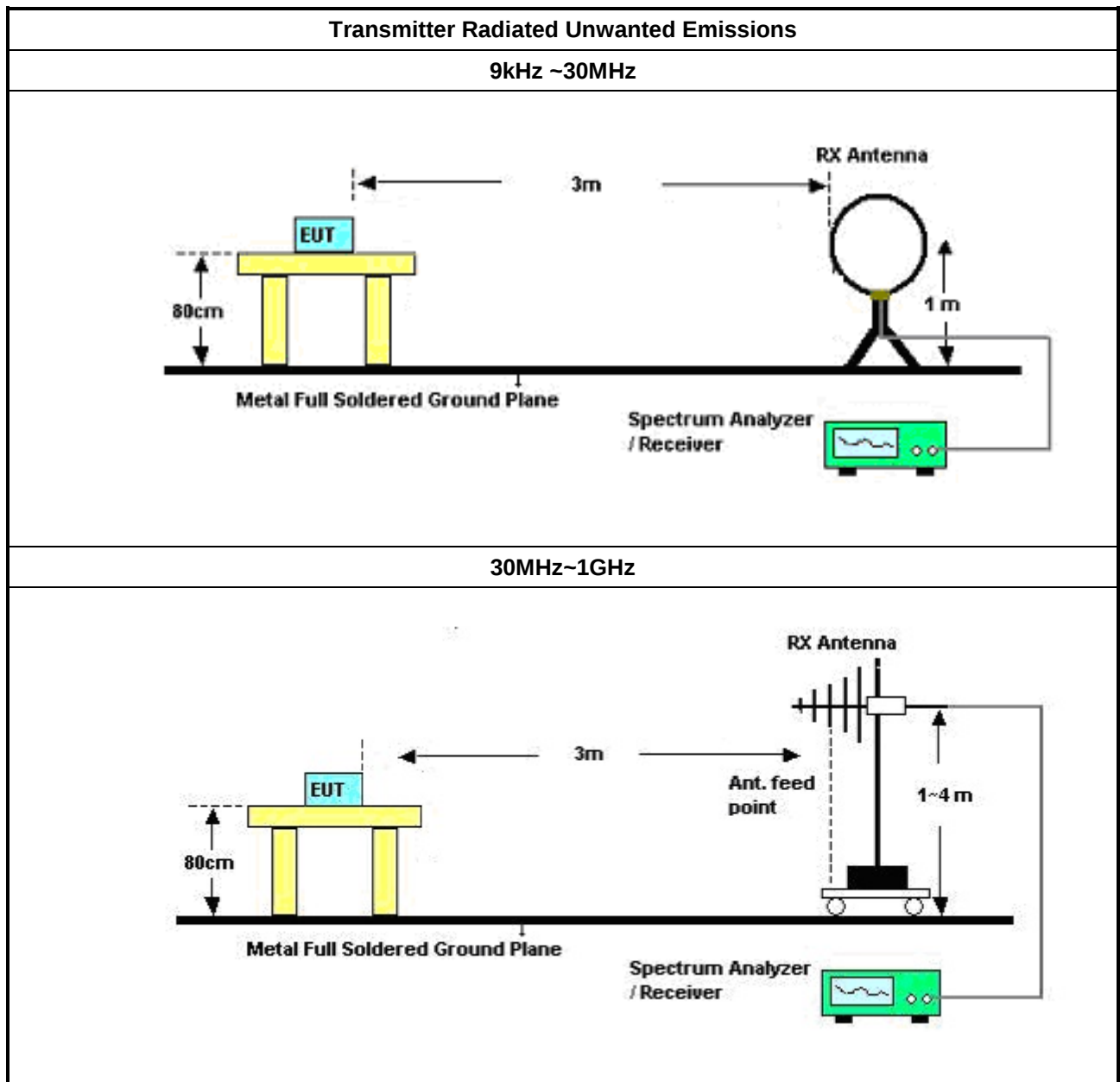
3.5.2 Measuring Instruments

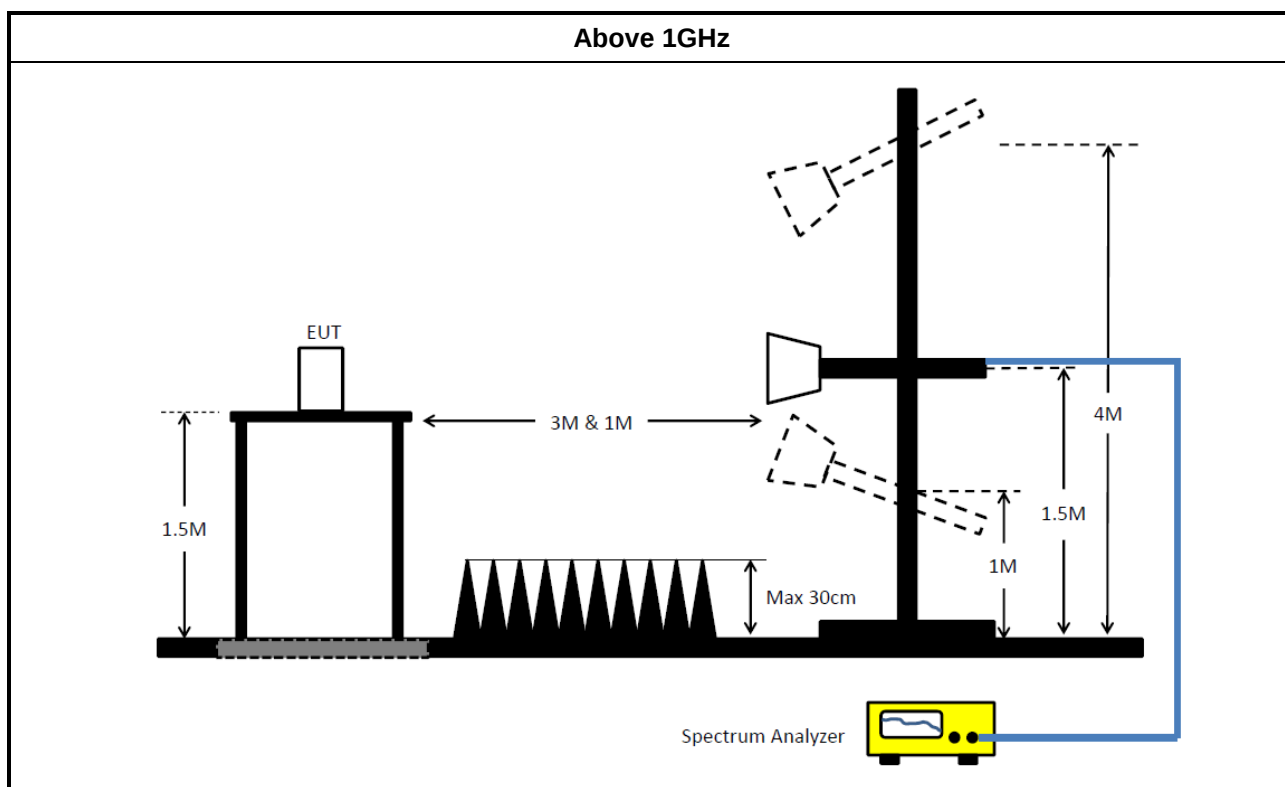
Refer a test equipment and calibration data table in this test report.

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 KDB 789033, clause G)2) for unwanted emissions into non-restricted bands.
	Refer as KDB 789033, clause G)1) for unwanted emissions into restricted bands.
	☒ Refer as KDB 789033, G)6) Method VB (ANSI C63.10, clause 4.1.4.2.3), Reduced VBW.
	☒ Refer as KDB 789033, clause G)5) (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.	
All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.	
Use the following spectrum analyzer settings:	
	Set RBW=100 kHz for $f < 1$ GHz; VBW=3 * RBW; Sweep = auto; Detector function = peak; Trace = max hold.
	Set RBW = 1 MHz, VBW= 3MHz for $f \geq 1$ GHz for peak measurement. For average measurement, refer as 1.1.4.
KDB 414788 Open-Field Test Sites and Chamber Correlation Justification.	
	Based on FCC 15.31 (f) (2): measurements may be performed at a distance closer than that specified in regulations; however, an attempt should be made to avoid making measurements in the near field.
	Open-field site and chamber correlation testing had been performed and chamber measured test result is the worst case test result.

3.5.4 Test Setup





3.5.5 Transmitter Unwanted Emissions (Below 30MHz)

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

3.5.6 Test Result of Transmitter Unwanted Emissions

Refer as Appendix E

4 Test Equipment and Calibration Data

Instrument for AC Conduction

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
EMC Receiver	R&S	ESR3	102052	9kHz ~ 3.6GHz	09/Apr/2020	08/Apr/2021
LISN	R&S	ENV216	101295	9kHz ~ 30MHz	04/Nov/2019	05/Nov/2020
RF Cable-CON	MTJ	RG142	CB002-CO	9kHz ~ 200MHz	12/Sep/2019	11/Sep/2020
AC POWER	APC	AFC-11005G	F310050055	47Hz~63Hz 5~300V	NCR	NCR
Impuls Begrenzer Pulse Limiter	SCHWARZBECK	VTSD 9561-F	9561-F041	9 kHz ~ 30 MHz	24/Sep/2019	23/Sep/2020

NCR : Non-Calibration Require

Instrument for Conducted Test

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Spectrum Analyzer	R&S	FSV 40	101013	10Hz~40GHz	19/Mar/2020	18/Mar/2021
Pulse Power Sensor	Anritsu	MA2411B	0917017	300MHz ~ 40GHz	17/Feb/2020	16/Feb/2021
Power Meter	Anritsu	ML2495A	0949003	300MHz ~ 40GHz	17/Feb/2020	16/Feb/2021
SMB100A Signal Generator	R&S	SMB100A03	181147	100kHz~40GHz	12/Nov/2018	10/Nov/2020

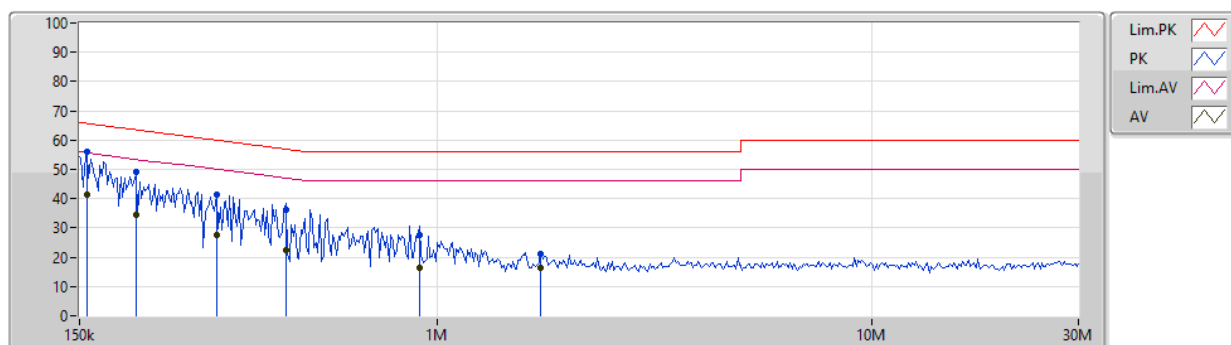
Instrument for Radiated Test

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	30MHz~1GHz 3m	30/Aug/2019	29/Aug/2020
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	1GHz~18GHz 3m	30/Aug/2019	29/Aug/2020
Amplifier	HP	8447D	2944A08033	10kHz~1.3GHz	14/Apr/2020	13/Apr/2021
EMC Receiver	R&S	ESR3	102052	9kHz ~ 3.6GHz	09/Apr/2020	08/Apr/2021
Bilog Antenna & 6dB Attenuator	SCHAFFNER / EMCI	CBL6112B / N-6-05	22237 / AT-N-0603	30 MHz~1 GHz	19/Apr/2020	18/Apr/2021
Microwave System Preamplifier	KEYSIGHT	83017A	MY53270196	1GHz~26.5GHz	09/Sep/2019	08/Sep/2020
Signal Analyzer	R&S	FSV40	101500	10Hz~40GHz	15/Aug/2019	14/Aug/2020
RF Cable-R03m	Jye Bao	RG142	CB021	9kHz~1GHz	18/Mar/2020	17/Mar/2021
RF CABLE 5+6m	HUBER+SUHNER	SUOFLEX 104	SN 805801/4+SN 804300/4	1GHz~40GHz	18/Mar/2020	17/Mar/2021
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA 9170221	18GHz~40GHz	13/Mar/2020	12/Mar/2021
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1531	1GHz~18GHz	26/Mar/2020	25/Mar/2021
Preamplifier	MITEQ	TTA1840-35-HG	1864481	18GHz~40GHz	10/Mar/2020	09/Mar/2021
Loop Antenna	TESEQ	HLA 6120	31244	9kHz~30MHz	16/Mar/2020	15/Mar/2021

AC Power-line Conducted Emissions Result

Operating Mode	1	Power Phase	Neutral
Operating Function	AC Adapter mode (DSA-12PFU-05 FCA)		

27/05/2020

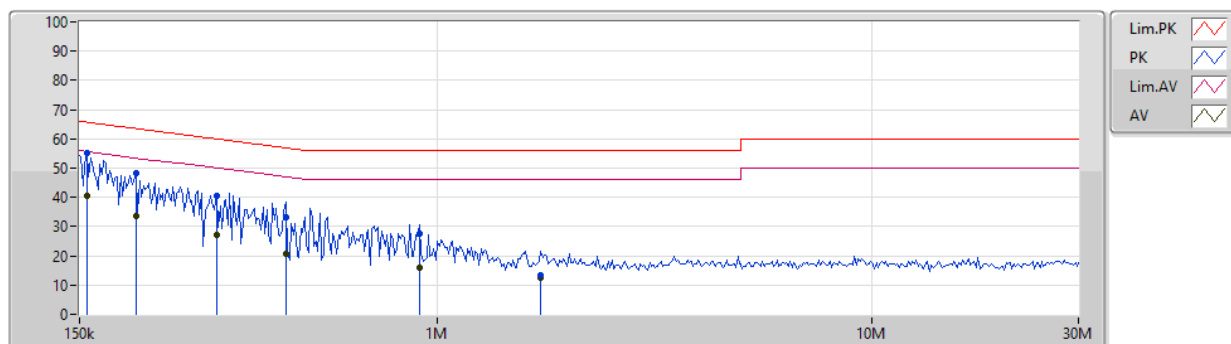


Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	156.091k	55.92	65.67	-9.75	19.63	Neutral	"Worst"	36.29	9.65	0.11	9.87			
AV	156.091k	41.48	55.67	-14.19	19.63	Neutral	-	21.85	9.65	0.11	9.87			
QP	202.177k	49.08	63.51	-14.43	19.62	Neutral	-	29.46	9.64	0.11	9.87			
AV	202.177k	34.52	53.51	-18.99	19.62	Neutral	-	14.90	9.64	0.11	9.87			
QP	310.136k	41.39	59.96	-18.57	19.62	Neutral	-	21.77	9.63	0.12	9.87			
AV	310.136k	27.56	49.96	-22.40	19.62	Neutral	-	7.94	9.63	0.12	9.87			
QP	448.17k	36.16	56.92	-20.76	19.63	Neutral	-	16.53	9.63	0.13	9.87			
AV	448.17k	22.50	46.92	-24.42	19.63	Neutral	-	2.87	9.63	0.13	9.87			
QP	908.364k	27.62	56.00	-28.38	19.62	Neutral	-	8.00	9.63	0.11	9.88			
AV	908.364k	16.54	46.00	-29.46	19.62	Neutral	-	-3.08	9.63	0.11	9.88			
QP	1.734M	21.17	56.00	-34.83	19.66	Neutral	-	1.51	9.65	0.14	9.87			
AV	1.734M	16.46	46.00	-29.54	19.66	Neutral	-	-3.20	9.65	0.14	9.87			

AC Power-line Conducted Emissions Result

Operating Mode	1	Power Phase	Line
Operating Function	AC Adapter mode (DSA-12PFU-05 FCA)		

27/05/2020

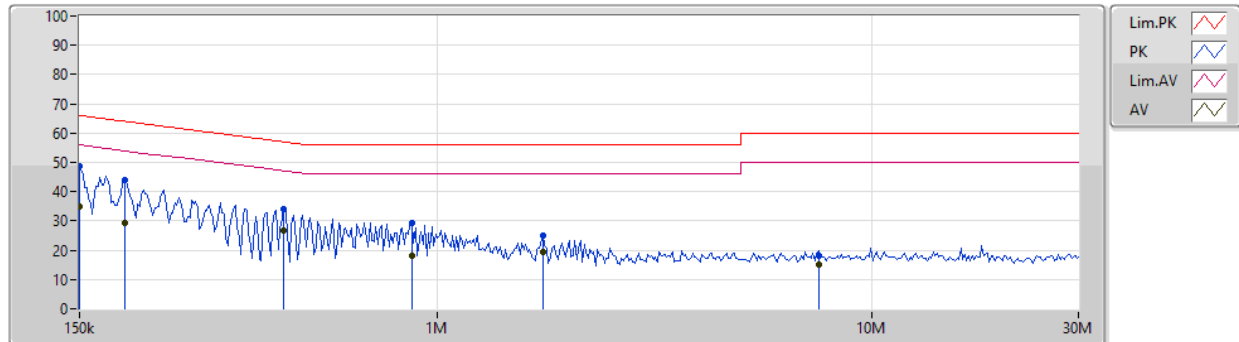


Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	156.091k	54.99	65.67	-10.68	19.64	Line	"Worst"	35.35	9.66	0.11	9.87			
AV	156.091k	40.49	55.67	-15.18	19.64	Line	-	20.85	9.66	0.11	9.87			
QP	202.177k	48.16	63.51	-15.35	19.63	Line	-	28.53	9.65	0.11	9.87			
AV	202.177k	33.73	53.51	-19.78	19.63	Line	-	14.10	9.65	0.11	9.87			
QP	310.136k	40.47	59.96	-19.49	19.63	Line	-	20.84	9.64	0.12	9.87			
AV	310.136k	26.98	49.96	-22.98	19.63	Line	-	7.35	9.64	0.12	9.87			
QP	448.17k	33.07	56.92	-23.85	19.64	Line	-	13.43	9.64	0.13	9.87			
AV	448.17k	20.59	46.92	-26.33	19.64	Line	-	0.95	9.64	0.13	9.87			
QP	908.364k	27.59	56.00	-28.41	19.63	Line	-	7.96	9.64	0.11	9.88			
AV	908.364k	16.02	46.00	-29.98	19.63	Line	-	-3.61	9.64	0.11	9.88			
QP	1.734M	13.56	56.00	-42.44	19.66	Line	-	-6.10	9.65	0.14	9.87			
AV	1.734M	12.38	46.00	-33.62	19.66	Line	-	-7.28	9.65	0.14	9.87			

AC Power-line Conducted Emissions Result

Operating Mode	2	Power Phase	Neutral
Operating Function	AC Adapter mode (DSA-12PFU-05 FUS)		

27/05/2020

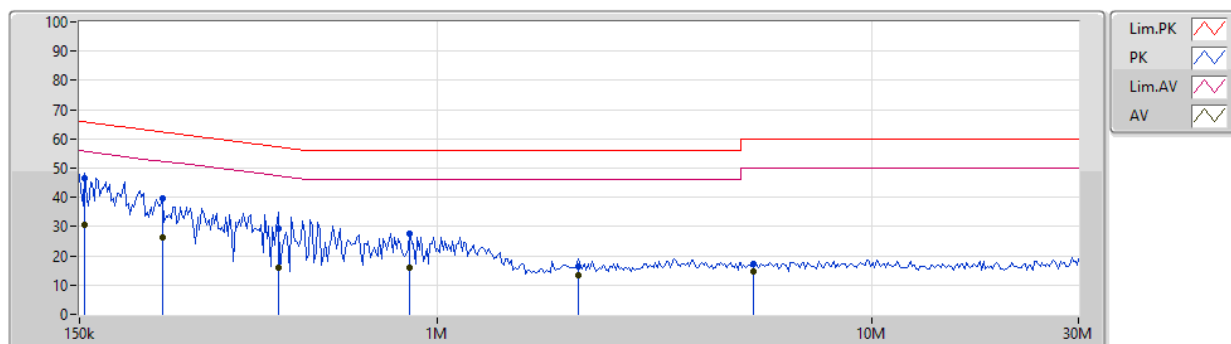


Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	150k	48.56	66.00	-17.44	19.63	Neutral	"Worst"	28.93	9.65	0.11	9.87			
AV	150k	34.94	56.00	-21.06	19.63	Neutral	-	15.31	9.65	0.11	9.87			
QP	190.46k	43.78	64.01	-20.23	19.62	Neutral	-	24.16	9.64	0.11	9.87			
AV	190.46k	29.39	54.01	-24.62	19.62	Neutral	-	9.77	9.64	0.11	9.87			
QP	443.732k	34.09	56.99	-22.90	19.63	Neutral	-	14.46	9.63	0.13	9.87			
AV	443.732k	26.76	46.99	-20.23	19.63	Neutral	-	7.13	9.63	0.13	9.87			
QP	872.92k	29.32	56.00	-26.68	19.61	Neutral	-	9.71	9.63	0.11	9.87			
AV	872.92k	17.94	46.00	-28.06	19.61	Neutral	-	-1.67	9.63	0.11	9.87			
QP	1.752M	24.84	56.00	-31.16	19.66	Neutral	-	5.18	9.65	0.14	9.87			
AV	1.752M	19.28	46.00	-26.72	19.66	Neutral	-	-0.38	9.65	0.14	9.87			
QP	7.563M	18.01	60.00	-41.99	19.81	Neutral	-	-1.80	9.69	0.24	9.88			
AV	7.563M	15.24	50.00	-34.76	19.81	Neutral	-	-4.57	9.69	0.24	9.88			

AC Power-line Conducted Emissions Result

Operating Mode	2	Power Phase	Line
Operating Function	AC Adapter mode (DSA-12PFU-05 FUS)		

27/05/2020

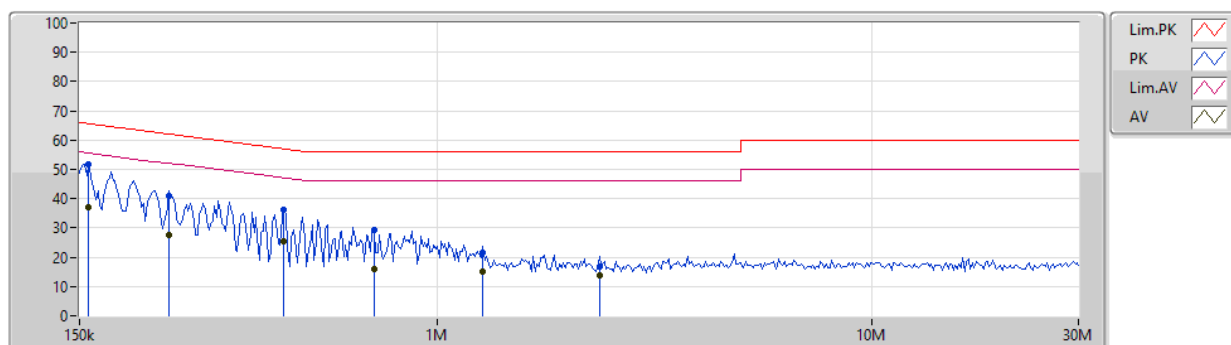


Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	154.545k	46.54	65.75	-19.21	19.64	Line	"Worst"	26.90	9.66	0.11	9.87			
AV	154.545k	30.79	55.75	-24.96	19.64	Line	-	11.15	9.66	0.11	9.87			
QP	232.398k	39.59	62.37	-22.78	19.64	Line	-	19.95	9.65	0.12	9.87			
AV	232.398k	26.47	52.37	-25.90	19.64	Line	-	6.83	9.65	0.12	9.87			
QP	430.682k	29.30	57.24	-27.94	19.64	Line	-	9.66	9.64	0.13	9.87			
AV	430.682k	16.01	47.24	-31.23	19.64	Line	-	-3.63	9.64	0.13	9.87			
QP	864.277k	27.39	56.00	-28.61	19.62	Line	-	7.77	9.64	0.11	9.87			
AV	864.277k	15.91	46.00	-30.09	19.62	Line	-	-3.71	9.64	0.11	9.87			
QP	2.116M	16.45	56.00	-39.55	19.67	Line	-	-3.22	9.65	0.15	9.87			
AV	2.116M	13.51	46.00	-32.49	19.67	Line	-	-6.16	9.65	0.15	9.87			
QP	5.339M	17.06	60.00	-42.94	19.76	Line	-	-2.70	9.67	0.21	9.88			
AV	5.339M	14.76	50.00	-35.24	19.76	Line	-	-5.00	9.67	0.21	9.88			

AC Power-line Conducted Emissions Result

Operating Mode	3	Power Phase	Neutral
Operating Function	AC Adapter mode (DSA-12PFU-05 FCA)		

27/05/2020

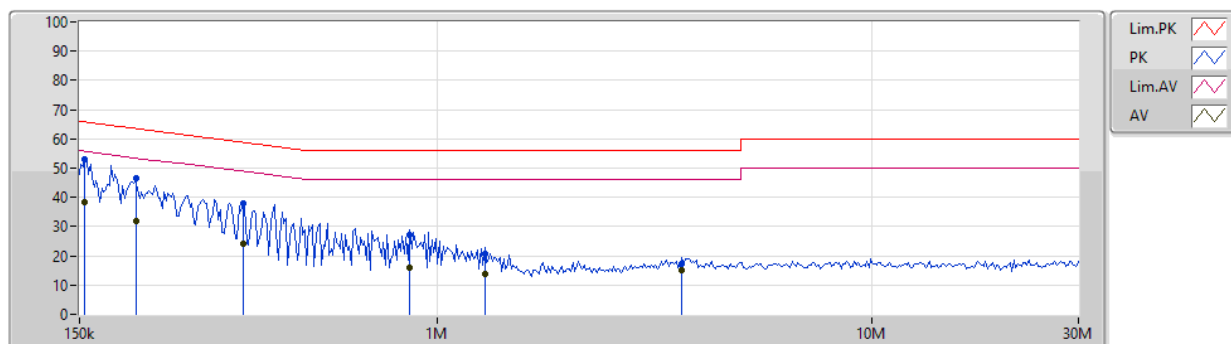


Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	157.652k	51.69	65.58	-13.89	19.63	Neutral	"Worst"	32.06	9.65	0.11	9.87			
AV	157.652k	36.94	55.58	-18.64	19.63	Neutral	-	17.31	9.65	0.11	9.87			
QP	241.834k	41.14	62.02	-20.88	19.63	Neutral	-	21.51	9.64	0.12	9.87			
AV	241.834k	27.50	52.02	-24.52	19.63	Neutral	-	7.87	9.64	0.12	9.87			
QP	443.732k	36.13	56.99	-20.86	19.63	Neutral	-	16.50	9.63	0.13	9.87			
AV	443.732k	25.56	46.99	-21.43	19.63	Neutral	-	5.93	9.63	0.13	9.87			
QP	715.397k	29.16	56.00	-26.84	19.62	Neutral	-	9.54	9.63	0.12	9.87			
AV	715.397k	16.11	46.00	-29.89	19.62	Neutral	-	-3.51	9.63	0.12	9.87			
QP	1.274M	21.58	56.00	-34.42	19.64	Neutral	-	1.94	9.64	0.12	9.88			
AV	1.274M	15.02	46.00	-30.98	19.64	Neutral	-	-4.62	9.64	0.12	9.88			
QP	2.361M	16.93	56.00	-39.07	19.68	Neutral	-	-2.75	9.65	0.16	9.87			
AV	2.361M	13.94	46.00	-32.06	19.68	Neutral	-	-5.74	9.65	0.16	9.87			

AC Power-line Conducted Emissions Result

Operating Mode	3	Power Phase	Line
Operating Function	AC Adapter mode (DSA-12PFU-05 FCA)		

27/05/2020

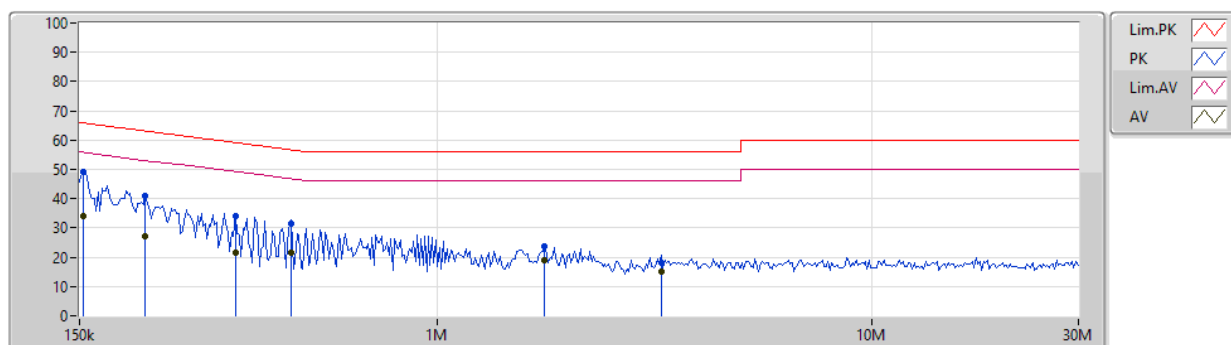


Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	154.545k	52.98	65.75	-12.77	19.64	Line	"Worst"	33.34	9.66	0.11	9.87			
AV	154.545k	38.28	55.75	-17.47	19.64	Line	-	18.64	9.66	0.11	9.87			
QP	202.177k	46.37	63.51	-17.14	19.63	Line	-	26.74	9.65	0.11	9.87			
AV	202.177k	31.73	53.51	-21.78	19.63	Line	-	12.10	9.65	0.11	9.87			
QP	356.493k	38.02	58.81	-20.79	19.63	Line	-	18.39	9.64	0.12	9.87			
AV	356.493k	24.27	48.81	-24.54	19.63	Line	-	4.64	9.64	0.12	9.87			
QP	864.277k	27.35	56.00	-28.65	19.62	Line	-	7.73	9.64	0.11	9.87			
AV	864.277k	16.00	46.00	-30.00	19.62	Line	-	-3.62	9.64	0.11	9.87			
QP	1.287M	20.88	56.00	-35.12	19.64	Line	-	1.24	9.64	0.12	9.88			
AV	1.287M	13.91	46.00	-32.09	19.64	Line	-	-5.73	9.64	0.12	9.88			
QP	3.658M	17.28	56.00	-38.72	19.72	Line	-	-2.44	9.66	0.18	9.88			
AV	3.658M	14.89	46.00	-31.11	19.72	Line	-	-4.83	9.66	0.18	9.88			

AC Power-line Conducted Emissions Result

Operating Mode	4	Power Phase	Neutral
Operating Function	AC Adapter mode (DSA-12PFU-05 FUS)		

27/05/2020

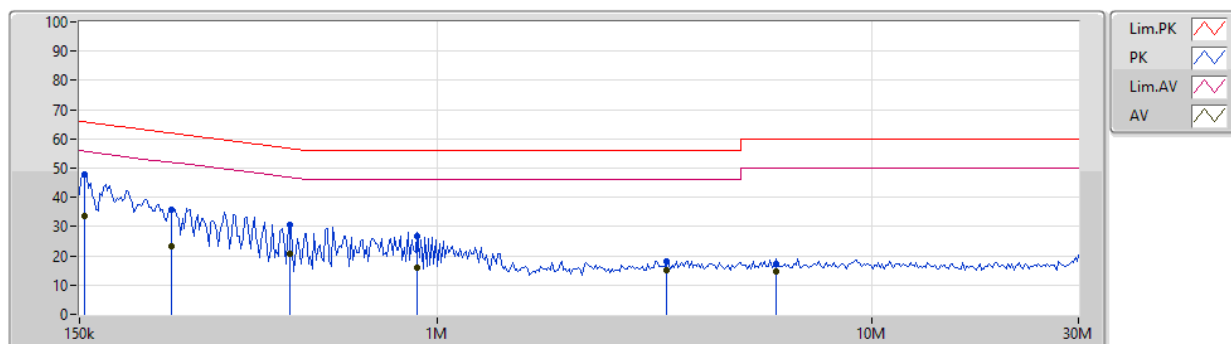


Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	153.015k	49.02	65.83	-16.81	19.63	Neutral	"Worst"	29.39	9.65	0.11	9.87			
AV	153.015k	34.09	55.83	-21.74	19.63	Neutral	-	14.46	9.65	0.11	9.87			
QP	212.49k	40.96	63.11	-22.15	19.62	Neutral	-	21.34	9.64	0.11	9.87			
AV	212.49k	27.26	53.11	-25.85	19.62	Neutral	-	7.64	9.64	0.11	9.87			
QP	342.583k	33.91	59.14	-25.23	19.62	Neutral	-	14.29	9.63	0.12	9.87			
AV	342.583k	21.40	49.14	-27.74	19.62	Neutral	-	1.78	9.63	0.12	9.87			
QP	461.75k	31.60	56.67	-25.07	19.63	Neutral	-	11.97	9.63	0.13	9.87			
AV	461.75k	21.48	46.67	-25.19	19.63	Neutral	-	1.85	9.63	0.13	9.87			
QP	1.769M	23.50	56.00	-32.50	19.66	Neutral	-	3.84	9.65	0.14	9.87			
AV	1.769M	18.94	46.00	-27.06	19.66	Neutral	-	-0.72	9.65	0.14	9.87			
QP	3.279M	18.30	56.00	-37.70	19.72	Neutral	-	-1.42	9.66	0.18	9.88			
AV	3.279M	15.13	46.00	-30.87	19.72	Neutral	-	-4.59	9.66	0.18	9.88			

AC Power-line Conducted Emissions Result

Operating Mode	4	Power Phase	Line
Operating Function	AC Adapter mode (DSA-12PFU-05 FUS)		

27/05/2020



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	154.545k	47.88	65.75	-17.87	19.64	Line	"Worst"	28.24	9.66	0.11	9.87			
AV	154.545k	33.80	55.75	-21.95	19.64	Line	-	14.16	9.66	0.11	9.87			
QP	244.252k	35.63	61.95	-26.32	19.64	Line	-	15.99	9.65	0.12	9.87			
AV	244.252k	23.45	51.95	-28.50	19.64	Line	-	3.81	9.65	0.12	9.87			
QP	457.178k	30.78	56.75	-25.97	19.64	Line	-	11.14	9.64	0.13	9.87			
AV	457.178k	20.70	46.75	-26.05	19.64	Line	-	1.06	9.64	0.13	9.87			
QP	899.37k	26.55	56.00	-29.45	19.63	Line	-	6.92	9.64	0.11	9.88			
AV	899.37k	16.15	46.00	-29.85	19.63	Line	-	-3.48	9.64	0.11	9.88			
QP	3.378M	18.27	56.00	-37.73	19.72	Line	-	-1.45	9.66	0.18	9.88			
AV	3.378M	14.93	46.00	-31.07	19.72	Line	-	-4.79	9.66	0.18	9.88			
QP	6.016M	17.12	60.00	-42.88	19.77	Line	-	-2.65	9.67	0.22	9.88			
AV	6.016M	14.76	50.00	-35.24	19.77	Line	-	-5.01	9.67	0.22	9.88			

**Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ac VHT80_Nss1,(MCS0)_2TX	81.6M	75.034M	75M0D1D	81.24M	74.939M
5.725-5.85GHz	-	-	-	-	-
802.11ac VHT80_Nss1,(MCS0)_2TX	75.12M	76.186M	76M2D1D	73.92M	75.418M

Max-N dB = Maximum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;

Max-OBW = Maximum 99% occupied bandwidth;

Min-N dB = Minimum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;

Min-OBW = Minimum 99% occupied bandwidth;

Result

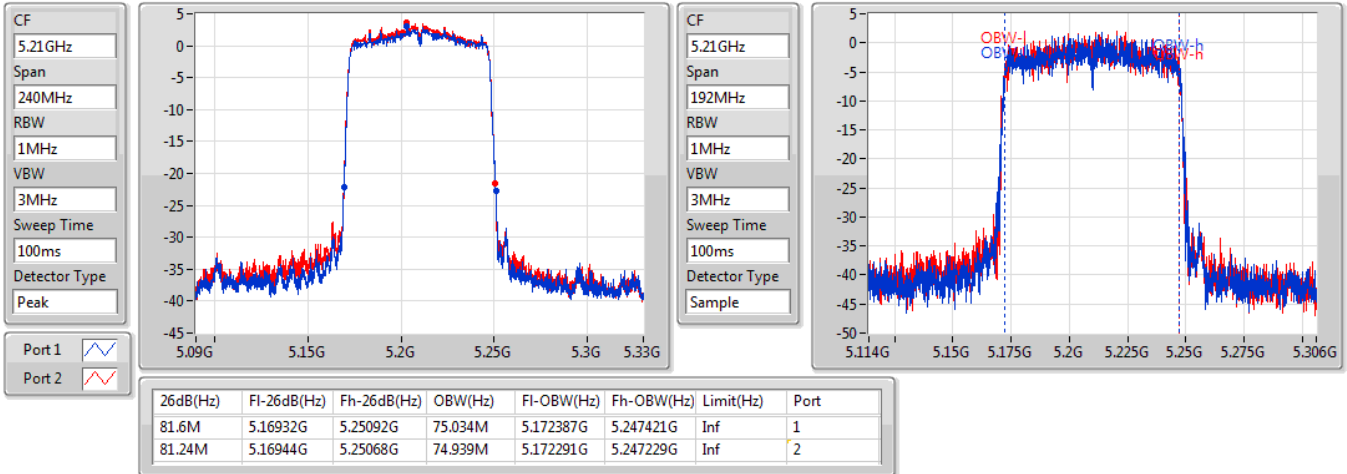
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5210MHz_TnomVnom	Pass	Inf	81.6M	75.034M	81.24M	74.939M
5775MHz_TnomVnom	Pass	500k	73.92M	76.186M	75.12M	75.418M

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

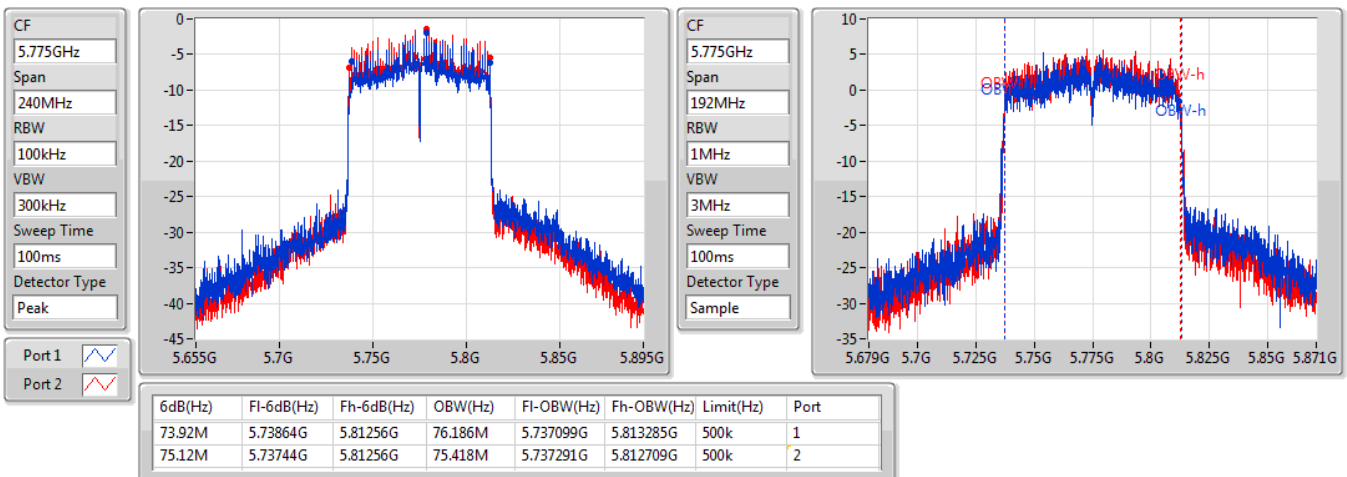
Port X-OBW = Port X 99% occupied bandwidth;

802.11ac VHT80_Nss1,(MCS0)_2TX
EBW
5210MHz

25/05/2020


802.11ac VHT80_Nss1,(MCS0)_2TX
EBW
5775MHz

29/05/2020



**Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ac VHT80_Nss1,(MCS0)_2TX	81.36M	75.034M	75M0D1D	81.36M	74.939M
5.725-5.85GHz	-	-	-	-	-
802.11ac VHT80_Nss1,(MCS0)_2TX	75.12M	75.994M	76M0D1D	75.12M	75.61M

Max-N dB = Maximum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;

Max-OBW = Maximum 99% occupied bandwidth;

Min-N dB = Minimum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;

Min-OBW = Minimum 99% occupied bandwidth;

Result

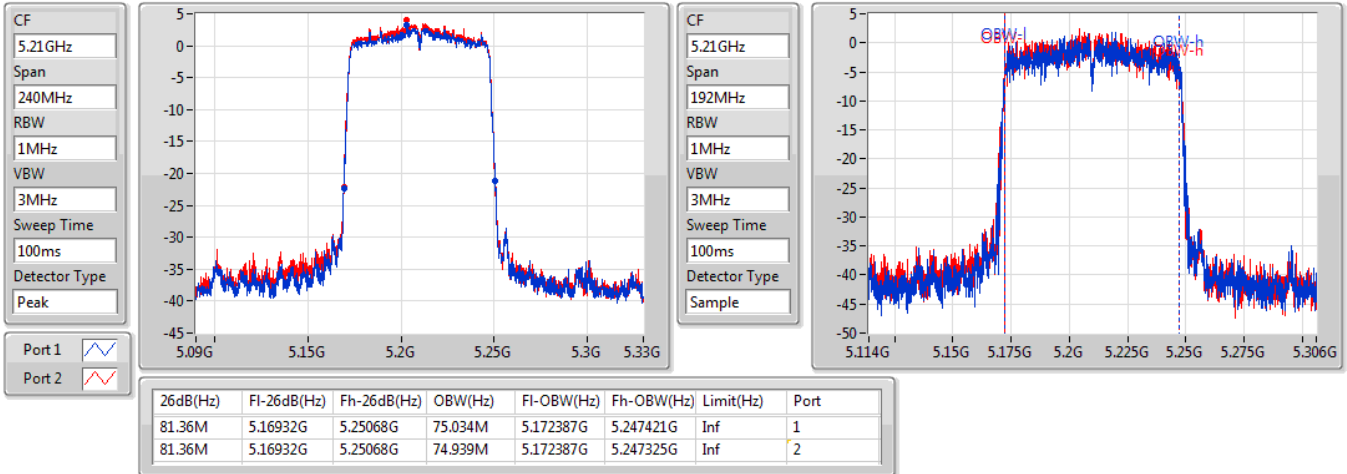
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5210MHz_TnomVnom	Pass	Inf	81.36M	75.034M	81.36M	74.939M
5775MHz_TnomVnom	Pass	500k	75.12M	75.61M	75.12M	75.994M

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

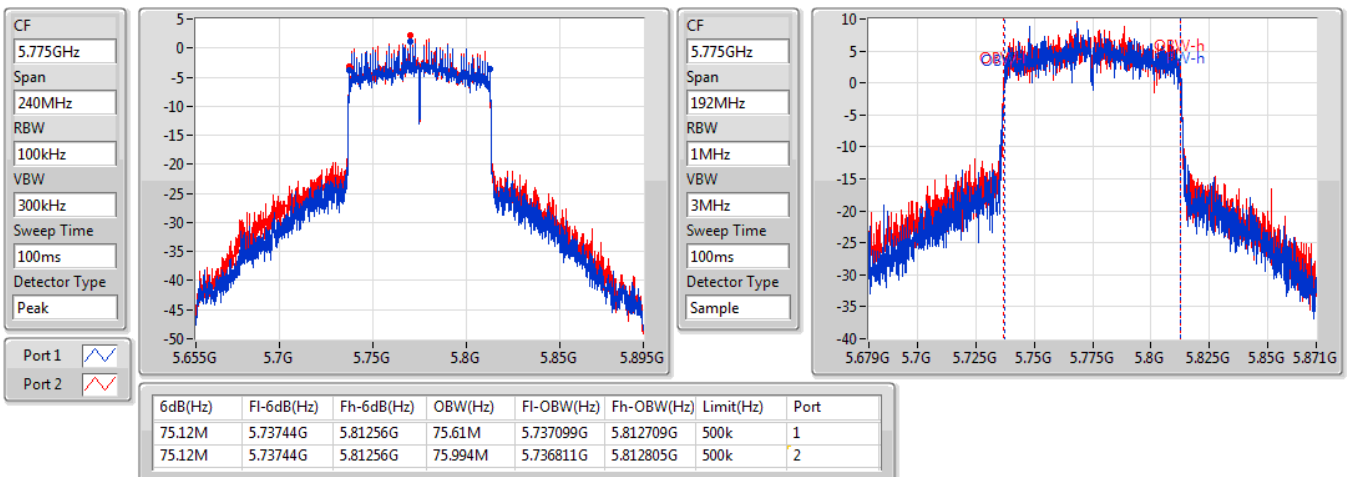
Port X-OBW = Port X 99% occupied bandwidth;

802.11ac VHT80_Nss1,(MCS0)_2TX
EBW
5210MHz

25/05/2020


802.11ac VHT80_Nss1,(MCS0)_2TX
EBW
5775MHz

29/05/2020





Summary

Mode	Total Power (dBm)	Total Power (W)	EIRP (dBm)	EIRP (W)
5.15-5.25GHz	-	-	-	-
802.11ac VHT80_Nss1,(MCS0)_2TX	14.20	0.02630	19.20	0.08318
5.725-5.85GHz	-	-	-	-
802.11ac VHT80_Nss1,(MCS0)_2TX	17.50	0.05623	22.50	0.17783



Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5210MHz_TnomVnom	Pass	5.00	10.92	11.44	14.20	30.00	19.20	53.00
5775MHz_TnomVnom	Pass	5.00	14.09	14.86	17.50	30.00	22.50	Inf

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



Summary

Mode	Total Power (dBm)	Total Power (W)	EIRP (dBm)	EIRP (W)
5.15-5.25GHz	-	-	-	-
802.11ac VHT80_Nss1,(MCS0)_2TX	14.15	0.02600	19.15	0.08222
5.725-5.85GHz	-	-	-	-
802.11ac VHT80_Nss1,(MCS0)_2TX	20.43	0.11041	25.43	0.34914



Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5210MHz_TnomVnom	Pass	5.00	11.03	11.24	14.15	30.00	19.15	53.00
5775MHz_TnomVnom	Pass	5.00	17.26	17.58	20.43	30.00	25.43	Inf

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



Summary

Mode	PD (dBm/RBW)	EIRP PD (dBm/RBW)
5.15-5.25GHz	-	-
802.11ac VHT80_Nss1,(MCS0)_2TX	-3.57	4.44
5.725-5.85GHz	-	-
802.11ac VHT80_Nss1,(MCS0)_2TX	-1.01	7.00

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



Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)	EIRP PD (dBm/RBW)	EIRP PD Limit (dBm/RBW)
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5210MHz_TnomVnom	Pass	8.01	-6.78	-6.25	-3.57	17.00	4.44	40.00
5775MHz_TnomVnom	Pass	8.01	-4.56	-3.47	-1.01	30.00	7.00	30.00

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

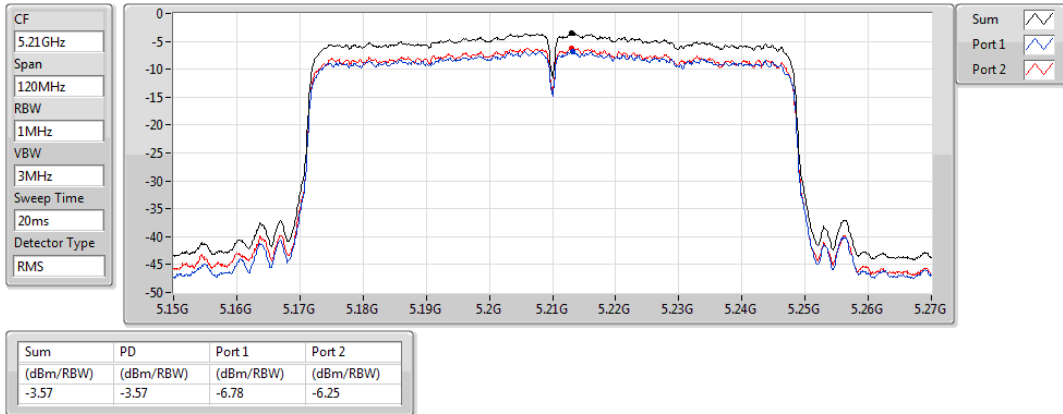
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; **Port X** = Port X power density;

802.11ac VHT80_Nss1,(MCS0)_2TX

PSD

5210MHz

25/05/2020

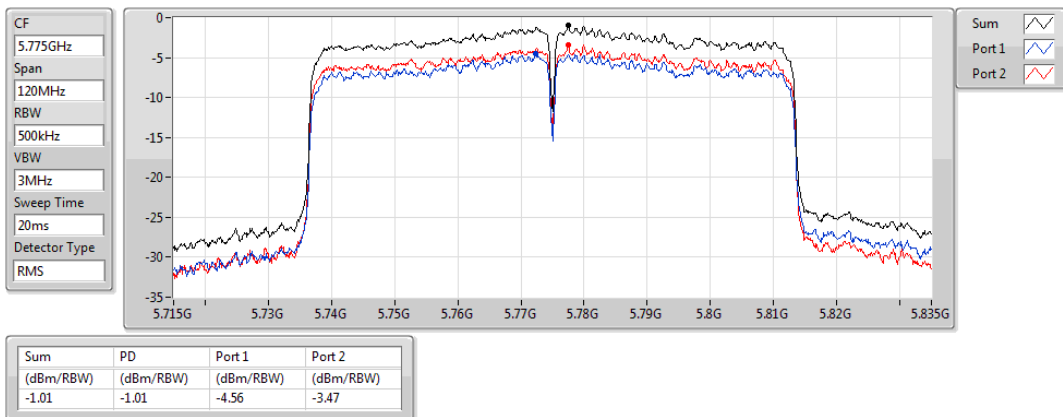


802.11ac VHT80_Nss1,(MCS0)_2TX

PSD

5775MHz

29/05/2020





Summary

Mode	PD (dBm/RBW)	EIRP PD (dBm/RBW)
5.15-5.25GHz	-	-
802.11ac VHT80_Nss1,(MCS0)_2TX	-3.61	4.40
5.725-5.85GHz	-	-
802.11ac VHT80_Nss1,(MCS0)_2TX	1.40	9.41

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



Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)	EIRP PD (dBm/RBW)	EIRP PD Limit (dBm/RBW)
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5210MHz_TnomVnom	Pass	8.01	-6.85	-6.19	-3.61	17.00	4.40	40.00
5775MHz_TnomVnom	Pass	8.01	-1.48	-1.41	1.40	30.00	9.41	30.00

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

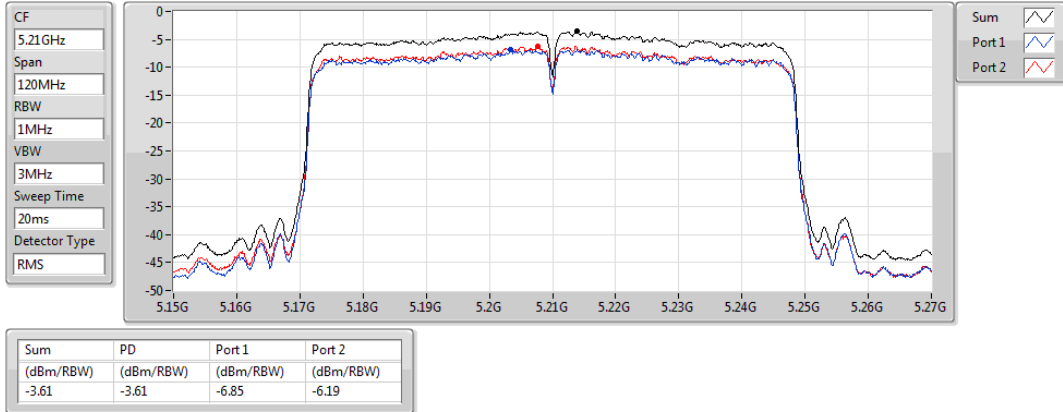
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; **Port X** = Port X power density;

802.11ac VHT80_Nss1,(MCS0)_2TX

PSD

5210MHz

25/05/2020

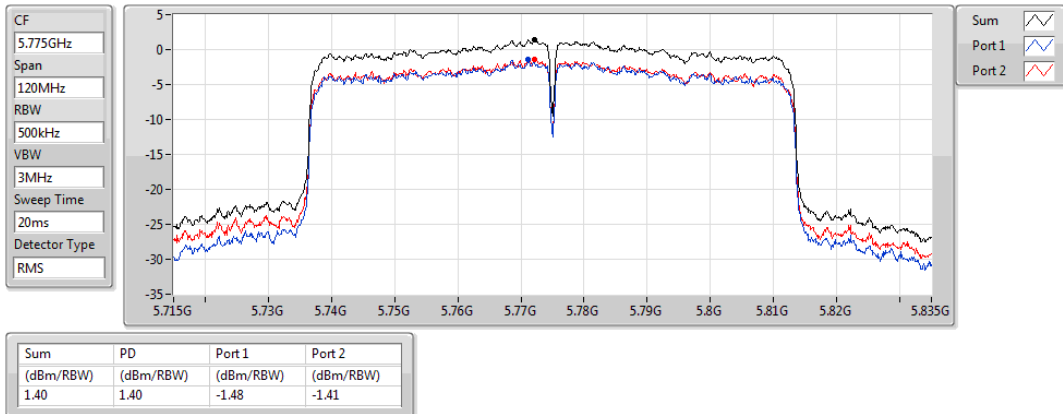


802.11ac VHT80_Nss1,(MCS0)_2TX

PSD

5775MHz

29/05/2020





Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
5.725-5.85GHz	-	-	-	-	-	-	-	-	-	-	-
802.11ac VHT80_Nss1,(MCS0)_2TX	Pass	PK	33.88M	35.34	40.00	-4.66	3	Vertical	360	1.00	-

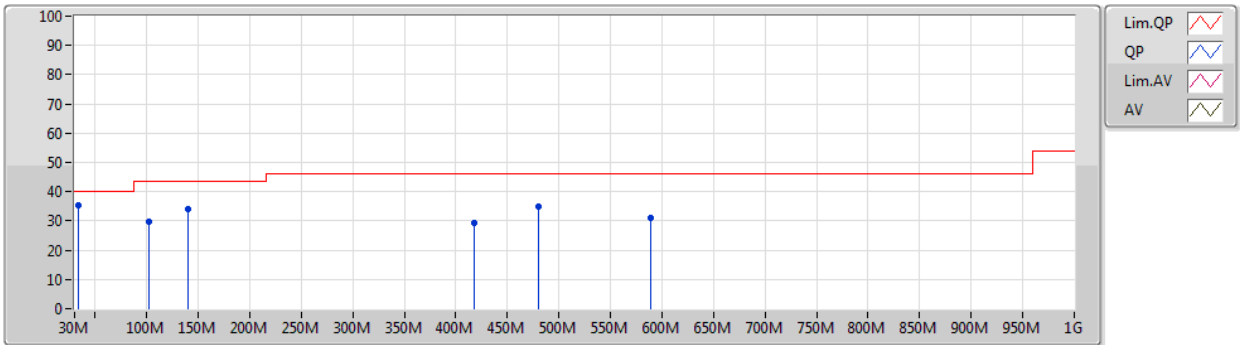
Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-
5775MHz	Pass	PK	33.88M	35.34	40.00	-4.66	3	Vertical	360	1.00	-
5775MHz	Pass	PK	101.78M	29.65	43.50	-13.85	3	Vertical	360	1.00	-
5775MHz	Pass	PK	140.58M	33.90	43.50	-9.60	3	Vertical	360	1.00	-
5775MHz	Pass	PK	418M	29.43	46.00	-16.57	3	Vertical	360	1.00	-
5775MHz	Pass	PK	480.08M	34.97	46.00	-11.03	3	Vertical	360	1.00	-
5775MHz	Pass	PK	588.72M	31.15	46.00	-14.85	3	Vertical	360	1.00	-
5775MHz	Pass	PK	35.82M	28.05	40.00	-11.95	3	Horizontal	0	1.00	-
5775MHz	Pass	PK	103.72M	28.66	43.50	-14.84	3	Horizontal	0	1.00	-
5775MHz	Pass	PK	152.22M	32.71	43.50	-10.79	3	Horizontal	0	1.00	-
5775MHz	Pass	PK	313.24M	27.75	46.00	-18.25	3	Horizontal	0	1.00	-
5775MHz	Pass	PK	418M	29.19	46.00	-16.81	3	Horizontal	0	1.00	-
5775MHz	Pass	PK	606.18M	30.79	46.00	-15.21	3	Horizontal	0	1.00	-
5775MHz	Pass	PK	99.84M	32.23	43.50	-11.27	3	Vertical	0	2.00	-
5775MHz	Pass	PK	134.76M	33.89	43.50	-9.61	3	Vertical	0	2.00	-
5775MHz	Pass	PK	233.7M	27.18	46.00	-18.82	3	Vertical	0	2.00	-
5775MHz	Pass	PK	313.24M	28.43	46.00	-17.57	3	Vertical	0	2.00	-
5775MHz	Pass	PK	480.08M	33.47	46.00	-12.53	3	Vertical	0	2.00	-
5775MHz	Pass	PK	524.7M	31.56	46.00	-14.44	3	Vertical	0	2.00	-
5775MHz	Pass	PK	61.04M	28.51	40.00	-11.49	3	Horizontal	0	1.00	-
5775MHz	Pass	PK	136.7M	32.71	43.50	-10.79	3	Horizontal	0	1.00	-
5775MHz	Pass	PK	233.7M	34.36	46.00	-11.64	3	Horizontal	0	1.00	-
5775MHz	Pass	PK	309.36M	33.04	46.00	-12.96	3	Horizontal	0	1.00	-
5775MHz	Pass	PK	480.08M	32.49	46.00	-13.51	3	Horizontal	0	1.00	-
5775MHz	Pass	PK	802.12M	36.02	46.00	-9.98	3	Horizontal	0	1.00	-

802.11ac VHT80_Nss1,(MCS0)_2TX

01/06/2020

5775MHz_Adapter1

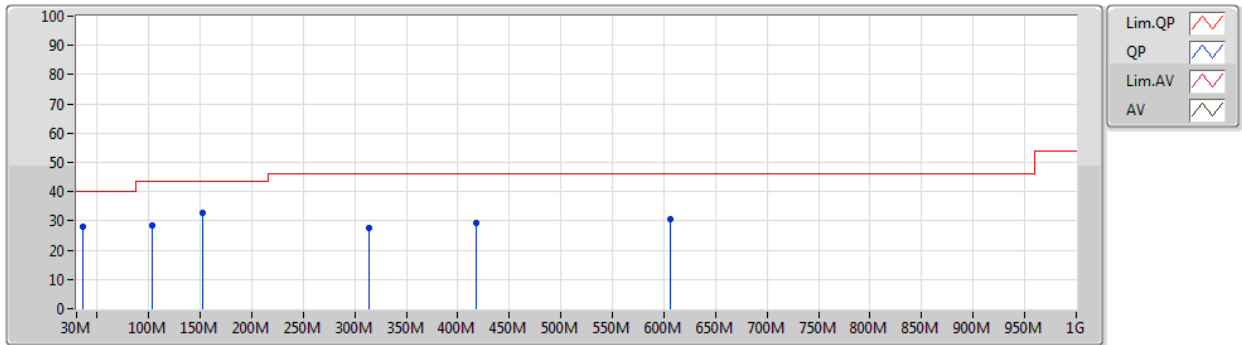


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	33.88M	35.34	40.00	-4.66	-5.66	3	Vertical	360	1.00	-	41.00	21.00	0.90	27.56
PK	101.78M	29.65	43.50	-13.85	-9.58	3	Vertical	360	1.00	-	39.23	16.18	1.62	27.38
PK	140.58M	33.90	43.50	-9.60	-9.29	3	Vertical	360	1.00	-	43.19	16.04	1.90	27.23
PK	418M	29.43	46.00	-16.57	-2.25	3	Vertical	360	1.00	-	31.68	21.82	3.34	27.41
PK	480.08M	34.97	46.00	-11.03	-1.72	3	Vertical	360	1.00	-	36.69	22.45	3.58	27.75
PK	588.72M	31.15	46.00	-14.85	-0.40	3	Vertical	360	1.00	-	31.55	23.56	4.05	28.01

802.11ac VHT80_Nss1,(MCS0)_2TX

01/06/2020

5775MHz_Adapter1

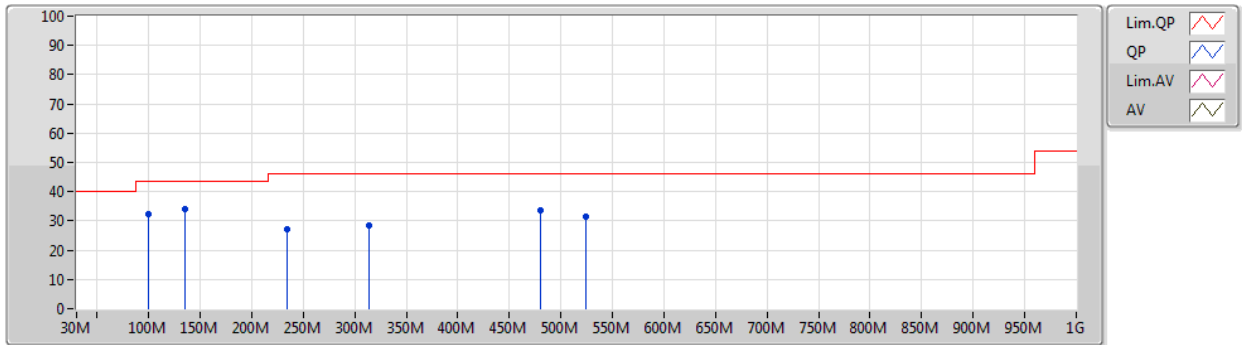


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	35.82M	28.05	40.00	-11.95	-6.64	3	Horizontal	0	1.00	-	34.69	19.99	0.92	27.55
PK	103.72M	28.66	43.50	-14.84	-9.35	3	Horizontal	0	1.00	-	38.01	16.38	1.64	27.37
PK	152.22M	32.71	43.50	-10.79	-10.09	3	Horizontal	0	1.00	-	42.80	15.12	1.96	27.17
PK	313.24M	27.75	46.00	-18.25	-5.11	3	Horizontal	0	1.00	-	32.86	18.67	2.95	26.73
PK	418M	29.19	46.00	-16.81	-2.25	3	Horizontal	0	1.00	-	31.44	21.82	3.34	27.41
PK	606.18M	30.79	46.00	-15.21	-0.27	3	Horizontal	0	1.00	-	31.06	23.63	4.12	28.02

802.11ac VHT80_Nss1,(MCS0)_2TX

01/06/2020

5775MHz_Adapter2

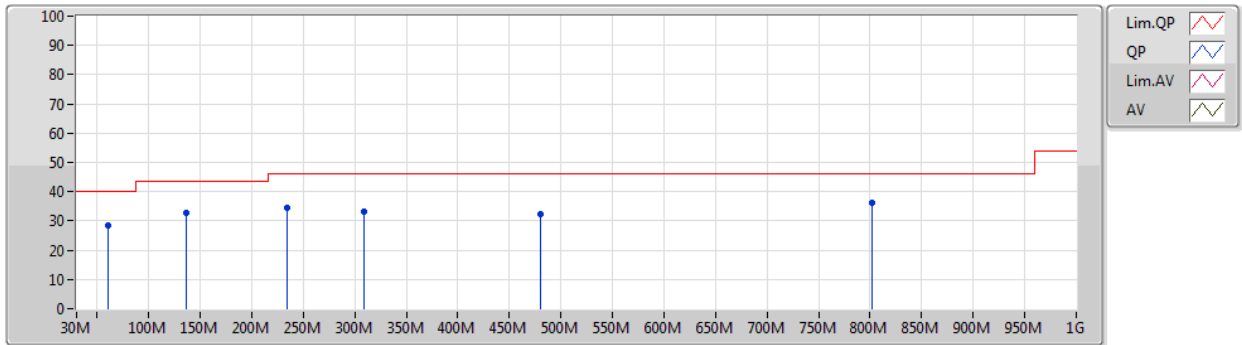


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	99.84M	32.23	43.50	-11.27	-9.86	3	Vertical	0	1.00	-	42.09	15.93	1.60	27.39
PK	134.76M	33.89	43.50	-9.61	-8.82	3	Vertical	0	1.00	-	42.71	16.56	1.87	27.25
PK	233.7M	27.18	46.00	-18.82	-8.70	3	Vertical	0	1.00	-	35.88	15.58	2.50	26.78
PK	313.24M	28.43	46.00	-17.57	-5.11	3	Vertical	0	1.00	-	33.54	18.67	2.95	26.73
PK	480.08M	33.47	46.00	-12.53	-1.72	3	Vertical	0	1.00	-	35.19	22.45	3.58	27.75
PK	524.7M	31.56	46.00	-14.44	-1.42	3	Vertical	0	1.00	-	32.98	22.68	3.80	27.90

802.11ac VHT80_Nss1,(MCS0)_2TX

01/06/2020

5775MHz_Adapter2



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	61.04M	28.51	40.00	-11.49	-14.99	3	Horizontal	0	1.00	-	43.50	11.28	1.22	27.49
PK	136.7M	32.71	43.50	-10.79	-8.86	3	Horizontal	0	1.00	-	41.57	16.50	1.88	27.24
PK	233.7M	34.36	46.00	-11.64	-8.70	3	Horizontal	0	1.00	-	43.06	15.58	2.50	26.78
PK	309.36M	33.04	46.00	-12.96	-5.10	3	Horizontal	0	1.00	-	38.14	18.66	2.94	26.70
PK	480.08M	32.49	46.00	-13.51	-1.72	3	Horizontal	0	1.00	-	34.21	22.45	3.58	27.75
PK	802.12M	36.02	46.00	-9.98	1.72	3	Horizontal	0	1.00	-	34.30	24.71	4.80	27.79

**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 VHT80_Nss1,(MCS0)_2TX	Pass	AV	5.141G	53.69	54.00	-0.31	3	Vertical	214	2.27	-
5.725-5.85GHz	-	-	-	-	-	-	-	-	-	-	-
802.11ac VHT80_Nss1,(MCS0)_2TX	Pass	PK	5.6442G	66.91	68.20	-1.29	3	Vertical	275	1.90	-

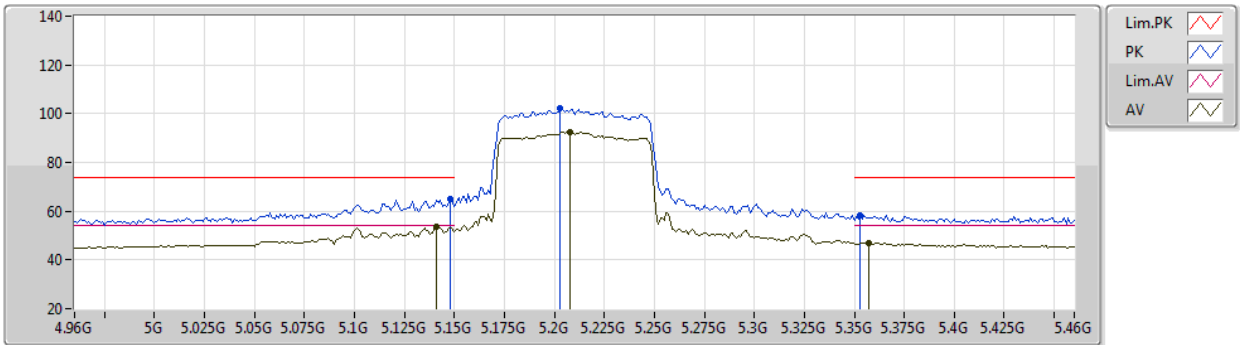
Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
802.11ac_VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	AV	5.141G	53.69	54.00	-0.31	3	Vertical	214	2.27	-
5210MHz	Pass	AV	5.208G	92.60	Inf	-Inf	3	Vertical	214	2.27	-
5210MHz	Pass	AV	5.357G	47.06	54.00	-6.94	3	Vertical	214	2.27	-
5210MHz	Pass	PK	5.148G	64.93	74.00	-9.07	3	Vertical	214	2.27	-
5210MHz	Pass	PK	5.203G	102.31	Inf	-Inf	3	Vertical	214	2.27	-
5210MHz	Pass	PK	5.353G	58.47	74.00	-15.53	3	Vertical	214	2.27	-
5210MHz	Pass	PK	10.42138G	56.46	68.20	-11.74	3	Vertical	358	2.83	-
5210MHz	Pass	PK	10.40602G	55.63	68.20	-12.57	3	Horizontal	164	1.00	-
5775MHz	Pass	AV	5.739G	94.78	Inf	-Inf	3	Vertical	275	1.90	-
5775MHz	Pass	PK	5.6442G	66.91	68.20	-1.29	3	Vertical	275	1.90	-
5775MHz	Pass	PK	5.7486G	103.96	Inf	-Inf	3	Vertical	275	1.90	-
5775MHz	Pass	PK	5.925G	60.98	68.20	-7.22	3	Vertical	275	1.90	-
5775MHz	Pass	AV	11.55066G	51.00	54.00	-3.00	3	Vertical	200	2.15	-
5775MHz	Pass	PK	11.55828G	62.43	74.00	-11.57	3	Vertical	200	2.15	-
5775MHz	Pass	AV	11.55018G	47.29	54.00	-6.71	3	Horizontal	229	1.04	-
5775MHz	Pass	PK	11.5587G	58.38	74.00	-15.62	3	Horizontal	229	1.04	-

802.11ac VHT80_Nss1,(MCS0)_2TX

23/05/2020

5210MHz_TX

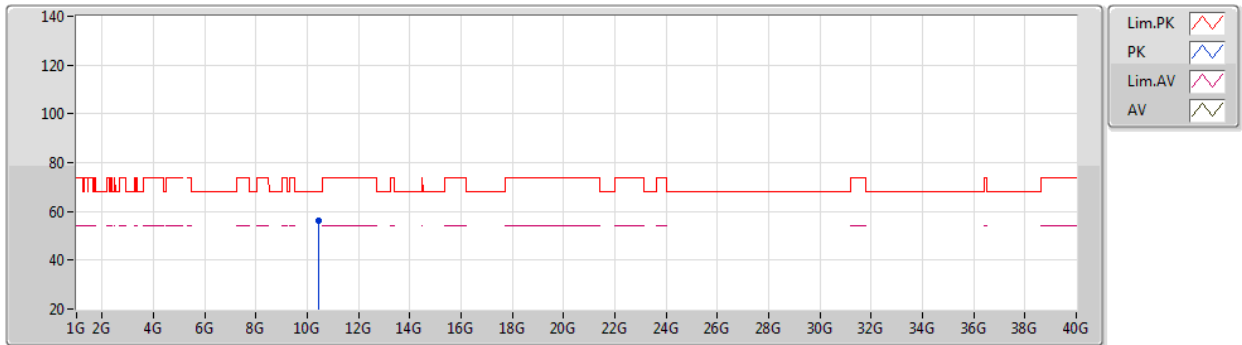


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	5.141G	53.69	54.00	-0.31	6.44	3	Vertical	214	2.27	-	47.25	31.76	8.51	33.83
AV	5.208G	92.60	Inf	-Inf	6.50	3	Vertical	214	2.27	-	86.10	31.78	8.57	33.85
AV	5.357G	47.06	54.00	-6.94	6.55	3	Vertical	214	2.27	-	40.51	31.84	8.60	33.89
PK	5.148G	64.93	74.00	-9.07	6.45	3	Vertical	214	2.27	-	58.48	31.76	8.52	33.83
PK	5.203G	102.31	Inf	-Inf	6.50	3	Vertical	214	2.27	-	95.81	31.78	8.57	33.85
PK	5.353G	58.47	74.00	-15.53	6.55	3	Vertical	214	2.27	-	51.92	31.84	8.60	33.89

802.11ac VHT80_Nss1,(MCS0)_2TX

23/05/2020

5210MHz_TX

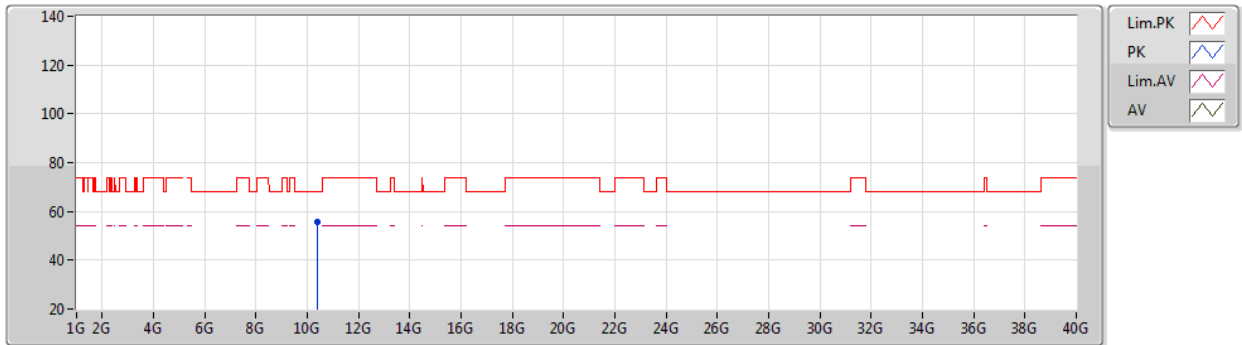


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	10.42138G	56.46	68.20	-11.74	17.40	3	Vertical	358	2.83	-	39.06	39.45	12.21	34.26

802.11ac VHT80_Nss1,(MCS0)_2TX

23/05/2020

5210MHz_TX

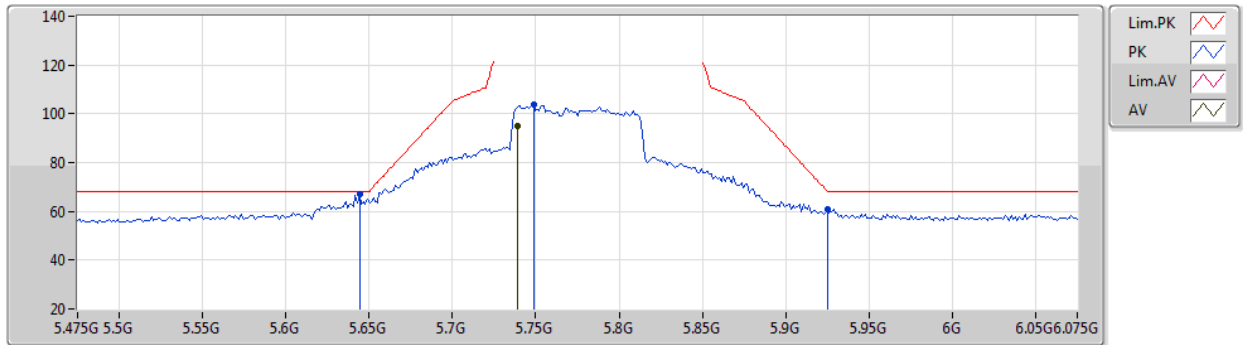


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	10.40602G	55.63	68.20	-12.57	17.37	3	Horizontal	164	1.00	-	38.26	39.43	12.21	34.27

802.11ac VHT80_Nss1,(MCS0)_2TX

28/05/2020

5775MHz_TX

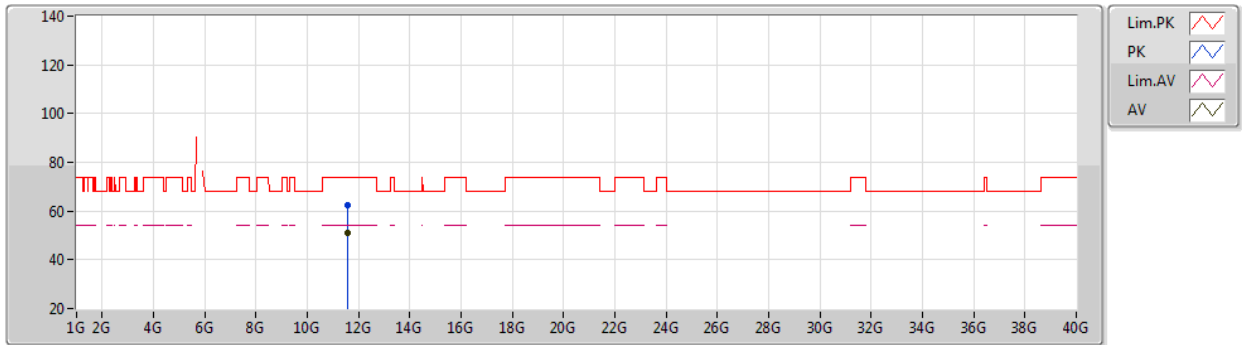


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	5.739G	94.78	Inf	-Inf	10.26	3	Vertical	275	1.90	-	84.52	31.98	7.64	29.36
PK	5.6442G	66.91	68.20	-1.29	9.90	3	Vertical	275	1.90	-	57.01	31.72	7.54	29.36
PK	5.7486G	103.96	Inf	-Inf	10.29	3	Vertical	275	1.90	-	93.67	32.00	7.65	29.36
PK	5.925G	60.98	68.20	-7.22	10.78	3	Vertical	275	1.90	-	50.20	32.30	7.83	29.35

802.11ac VHT80_Nss1,(MCS0)_2TX

28/05/2020

5775MHz_TX

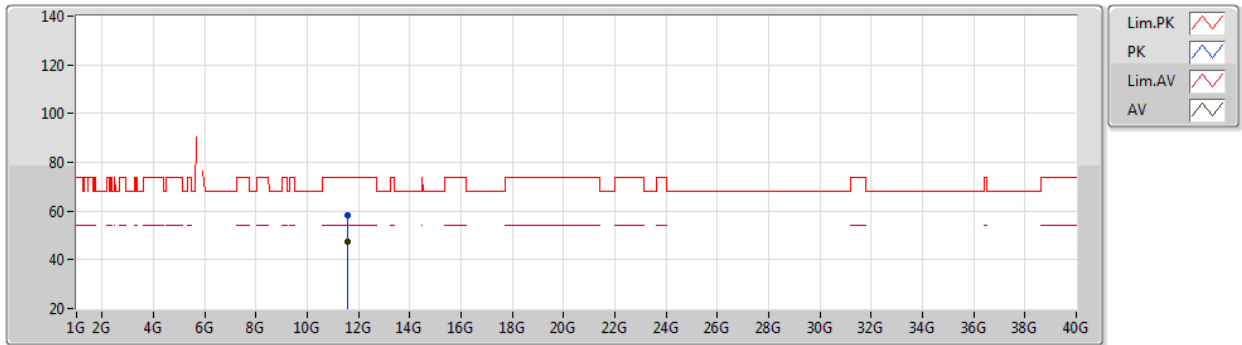


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	11.55066G	51.00	54.00	-3.00	19.45	3	Vertical	200	2.15	-	31.55	39.95	10.28	30.78
PK	11.55828G	62.43	74.00	-11.57	19.44	3	Vertical	200	2.15	-	42.99	39.94	10.28	30.78

802.11ac VHT80_Nss1,(MCS0)_2TX

28/05/2020

5775MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	11.55018G	47.29	54.00	-6.71	19.45	3	Horizontal	229	1.04	-	27.84	39.95	10.28	30.78
PK	11.5587G	58.38	74.00	-15.62	19.44	3	Horizontal	229	1.04	-	38.94	39.94	10.28	30.78



Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
5.725-5.85GHz	-	-	-	-	-	-	-	-	-	-	-
802.11ac VHT80_Nss1,(MCS0)_2TX	Pass	PK	115.36M	40.30	43.50	-3.20	3	Vertical	0	1.00	-

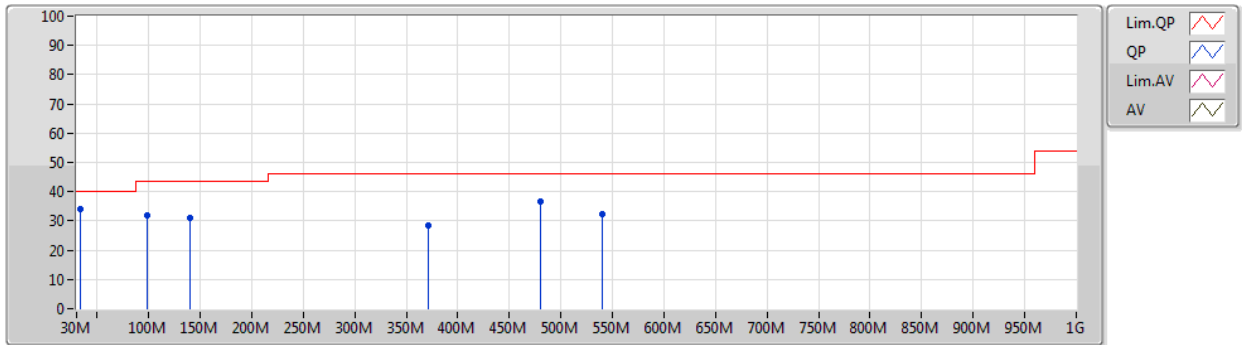
Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-
5775MHz	Pass	PK	97.9M	31.91	43.50	-11.59	3	Vertical	360	1.00	-
5775MHz	Pass	PK	140.58M	30.96	43.50	-12.54	3	Vertical	360	1.00	-
5775MHz	Pass	PK	371.44M	28.39	46.00	-17.61	3	Vertical	360	1.00	-
5775MHz	Pass	PK	480.08M	36.85	46.00	-9.15	3	Vertical	360	1.00	-
5775MHz	Pass	PK	540.22M	32.30	46.00	-13.70	3	Vertical	360	1.00	-
5775MHz	Pass	QP	33.88M	34.02	40.00	-5.98	3	Vertical	358	1.00	-
5775MHz	Pass	PK	64.92M	28.66	40.00	-11.34	3	Horizontal	0	1.00	-
5775MHz	Pass	PK	97.9M	30.18	43.50	-13.32	3	Horizontal	0	1.00	-
5775MHz	Pass	PK	134.76M	31.02	43.50	-12.48	3	Horizontal	0	1.00	-
5775MHz	Pass	PK	319.06M	27.62	46.00	-18.38	3	Horizontal	0	1.00	-
5775MHz	Pass	PK	480.08M	34.75	46.00	-11.25	3	Horizontal	0	1.00	-
5775MHz	Pass	PK	540.22M	32.91	46.00	-13.09	3	Horizontal	0	1.00	-
5775MHz	Pass	PK	49.4M	34.68	40.00	-5.32	3	Vertical	0	1.00	-
5775MHz	Pass	PK	115.36M	40.30	43.50	-3.20	3	Vertical	0	1.00	-
5775MHz	Pass	PK	231.76M	31.79	46.00	-14.21	3	Vertical	0	1.00	-
5775MHz	Pass	PK	480.08M	37.06	46.00	-8.94	3	Vertical	0	1.00	-
5775MHz	Pass	PK	540.22M	32.29	46.00	-13.71	3	Vertical	0	1.00	-
5775MHz	Pass	PK	730.34M	37.16	46.00	-8.84	3	Vertical	0	1.00	-
5775MHz	Pass	PK	30M	27.03	40.00	-12.97	3	Horizontal	0	1.00	-
5775MHz	Pass	PK	59.1M	29.30	40.00	-10.70	3	Horizontal	0	1.00	-
5775MHz	Pass	PK	134.76M	33.23	43.50	-10.27	3	Horizontal	0	1.00	-
5775MHz	Pass	PK	400.54M	30.53	46.00	-15.47	3	Horizontal	0	1.00	-
5775MHz	Pass	PK	480.08M	33.10	46.00	-12.90	3	Horizontal	0	1.00	-
5775MHz	Pass	PK	730.34M	34.88	46.00	-11.12	3	Horizontal	0	1.00	-

802.11ac VHT80_Nss1,(MCS0)_2TX

01/06/2020

5775MHz_Adapter1

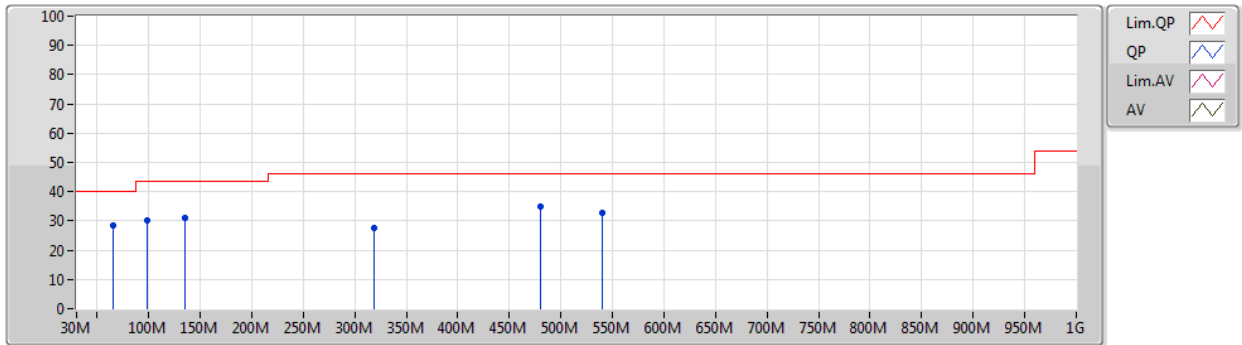


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	97.9M	31.91	43.50	-11.59	-10.21	3	Vertical	360	1.00	-	42.12	15.58	1.60	27.39
PK	140.58M	30.96	43.50	-12.54	-9.29	3	Vertical	360	1.00	-	40.25	16.04	1.90	27.23
PK	371.44M	28.39	46.00	-17.61	-3.92	3	Vertical	360	1.00	-	32.31	19.96	3.19	27.07
PK	480.08M	36.85	46.00	-9.15	-1.72	3	Vertical	360	1.00	-	38.57	22.45	3.58	27.75
PK	540.22M	32.30	46.00	-13.70	-0.26	3	Vertical	360	1.00	-	32.56	23.86	3.86	27.98
QP	33.88M	34.02	40.00	-5.98	-5.66	3	Vertical	358	1.00	-	39.68	21.00	0.90	27.56

802.11ac VHT80_Nss1,(MCS0)_2TX

01/06/2020

5775MHz_Adapter1

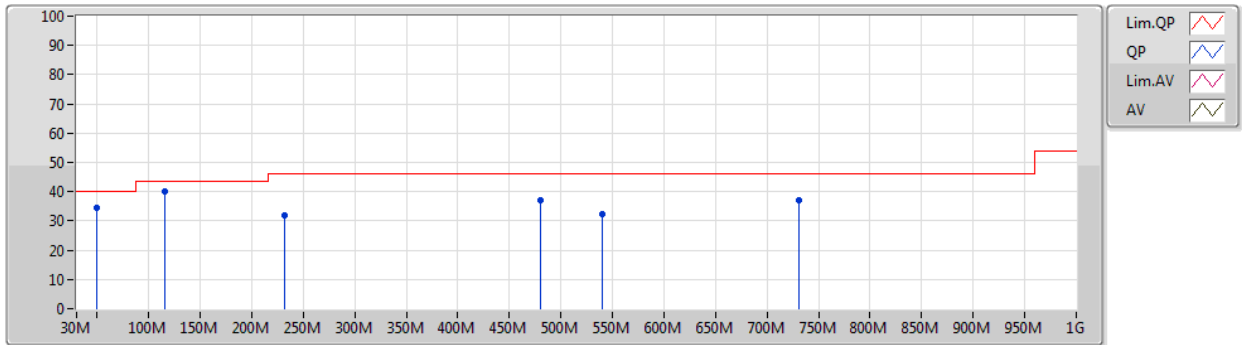


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	64.92M	28.66	40.00	-11.34	-14.95	3	Horizontal	0	1.00	-	43.61	11.22	1.30	27.47
PK	97.9M	30.18	43.50	-13.32	-10.21	3	Horizontal	0	1.00	-	40.39	15.58	1.60	27.39
PK	134.76M	31.02	43.50	-12.48	-8.82	3	Horizontal	0	1.00	-	39.84	16.56	1.87	27.25
PK	319.06M	27.62	46.00	-18.38	-5.04	3	Horizontal	0	1.00	-	32.66	18.74	2.98	26.76
PK	480.08M	34.75	46.00	-11.25	-1.72	3	Horizontal	0	1.00	-	36.47	22.45	3.58	27.75
PK	540.22M	32.91	46.00	-13.09	-0.26	3	Horizontal	0	1.00	-	33.17	23.86	3.86	27.98

802.11ac VHT80_Nss1,(MCS0)_2TX

01/06/2020

5775MHz_Adapter2

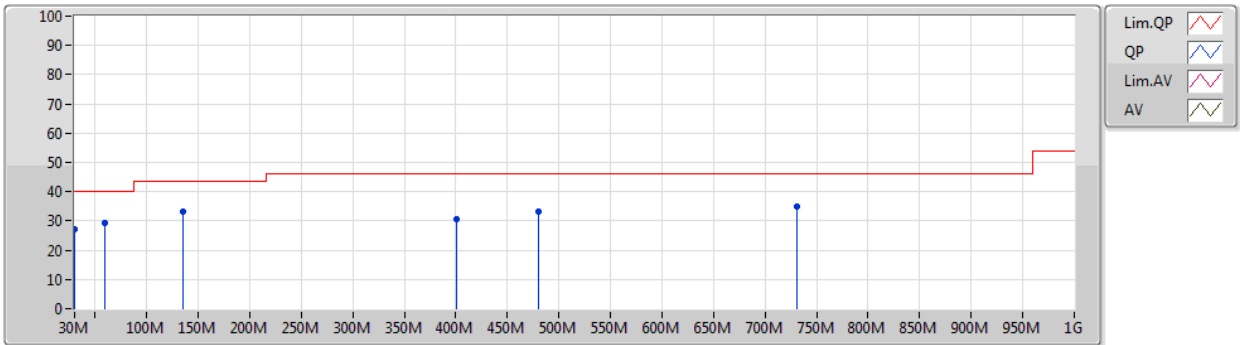


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	49.4M	34.68	40.00	-5.32	-13.22	3	Vertical	0	1.00	-	47.90	13.20	1.09	27.51
PK	115.36M	40.30	43.50	-3.20	-8.40	3	Vertical	0	1.00	-	48.70	17.16	1.75	27.31
PK	231.76M	31.79	46.00	-14.21	-8.94	3	Vertical	0	1.00	-	40.73	15.36	2.49	26.79
PK	480.08M	37.06	46.00	-8.94	-1.72	3	Vertical	0	1.00	-	38.78	22.45	3.58	27.75
PK	540.22M	32.29	46.00	-13.71	-0.26	3	Vertical	0	1.00	-	32.55	23.86	3.86	27.98
PK	730.34M	37.16	46.00	-8.84	1.03	3	Vertical	0	1.00	-	36.13	24.51	4.52	28.00

802.11ac VHT80_Nss1,(MCS0)_2TX

01/06/2020

5775MHz_Adapter2



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	30M	27.03	40.00	-12.97	-3.35	3	Horizontal	0	1.00	-	30.38	23.33	0.90	27.58
PK	59.1M	29.30	40.00	-10.70	-14.91	3	Horizontal	0	1.00	-	44.21	11.39	1.20	27.50
PK	134.76M	33.23	43.50	-10.27	-8.82	3	Horizontal	0	1.00	-	42.05	16.56	1.87	27.25
PK	400.54M	30.53	46.00	-15.47	-2.84	3	Horizontal	0	1.00	-	33.37	21.11	3.30	27.25
PK	480.08M	33.10	46.00	-12.90	-1.72	3	Horizontal	0	1.00	-	34.82	22.45	3.58	27.75
PK	730.34M	34.88	46.00	-11.12	1.03	3	Horizontal	0	1.00	-	33.85	24.51	4.52	28.00

**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 VHT80_Nss1,(MCS0)_2TX	Pass	AV	5.143G	53.29	54.00	-0.71	3	Vertical	184	2.00	-
5.725-5.85GHz	-	-	-	-	-	-	-	-	-	-	-
802.11ac VHT80_Nss1,(MCS0)_2TX	Pass	PK	5.649G	67.69	68.20	-0.51	3	Vertical	276	1.86	-

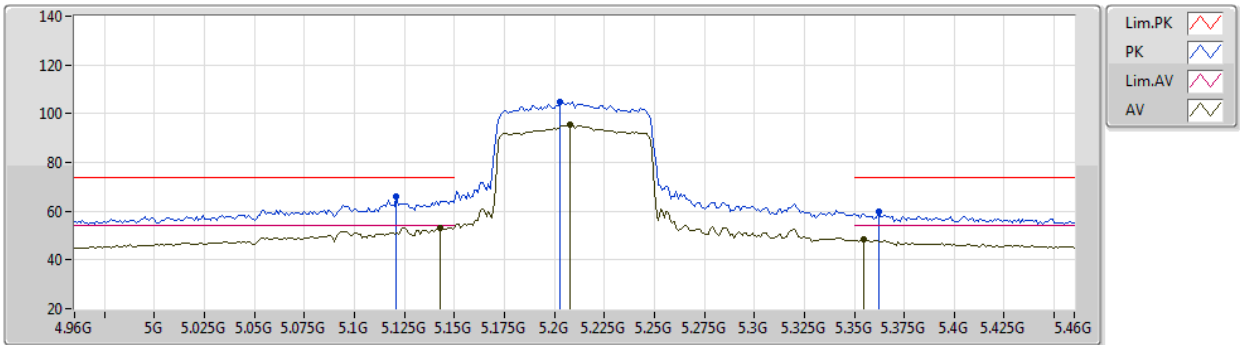
Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	AV	5.143G	53.29	54.00	-0.71	3	Vertical	184	2.00	-
5210MHz	Pass	AV	5.208G	95.33	Inf	-Inf	3	Vertical	184	2.00	-
5210MHz	Pass	AV	5.355G	48.38	54.00	-5.62	3	Vertical	184	2.00	-
5210MHz	Pass	PK	5.121G	65.81	74.00	-8.19	3	Vertical	184	2.00	-
5210MHz	Pass	PK	5.203G	104.82	Inf	-Inf	3	Vertical	184	2.00	-
5210MHz	Pass	PK	5.362G	59.64	74.00	-14.36	3	Vertical	184	2.00	-
5210MHz	Pass	PK	10.42006G	56.06	68.20	-12.14	3	Vertical	35	2.69	-
5210MHz	Pass	PK	10.4254G	54.47	68.20	-13.73	3	Horizontal	333	1.49	-
5775MHz	Pass	AV	5.781G	100.45	Inf	-Inf	3	Vertical	276	1.86	-
5775MHz	Pass	PK	5.649G	67.69	68.20	-0.51	3	Vertical	276	1.86	-
5775MHz	Pass	PK	5.7882G	109.44	Inf	-Inf	3	Vertical	276	1.86	-
5775MHz	Pass	PK	5.925G	65.23	68.20	-2.97	3	Vertical	276	1.86	-
5775MHz	Pass	AV	11.55042G	50.28	54.00	-3.72	3	Vertical	347	2.29	-
5775MHz	Pass	PK	11.5434G	61.69	74.00	-12.31	3	Vertical	347	2.29	-
5775MHz	Pass	AV	11.55024G	47.52	54.00	-6.48	3	Horizontal	189	2.02	-
5775MHz	Pass	PK	11.55324G	59.42	74.00	-14.58	3	Horizontal	189	2.02	-

802.11ac VHT80_Nss1,(MCS0)_2TX

23/05/2020

5210MHz_TX

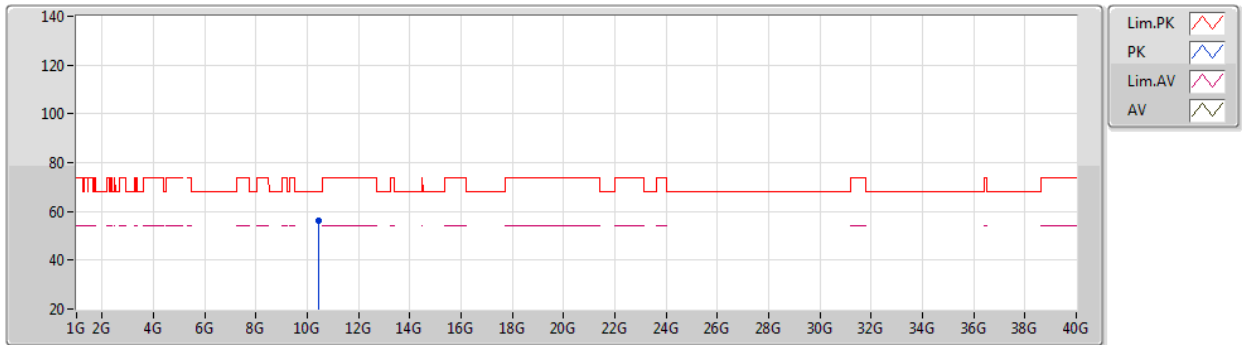


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	5.143G	53.29	54.00	-0.71	6.45	3	Vertical	184	2.00	-	46.84	31.76	8.52	33.83
AV	5.208G	95.33	Inf	-Inf	6.50	3	Vertical	184	2.00	-	88.83	31.78	8.57	33.85
AV	5.355G	48.38	54.00	-5.62	6.55	3	Vertical	184	2.00	-	41.83	31.84	8.60	33.89
PK	5.121G	65.81	74.00	-8.19	6.41	3	Vertical	184	2.00	-	59.40	31.75	8.49	33.83
PK	5.203G	104.82	Inf	-Inf	6.50	3	Vertical	184	2.00	-	98.32	31.78	8.57	33.85
PK	5.362G	59.64	74.00	-14.36	6.55	3	Vertical	184	2.00	-	53.09	31.84	8.60	33.89

802.11ac VHT80_Nss1,(MCS0)_2TX

23/05/2020

5210MHz_TX

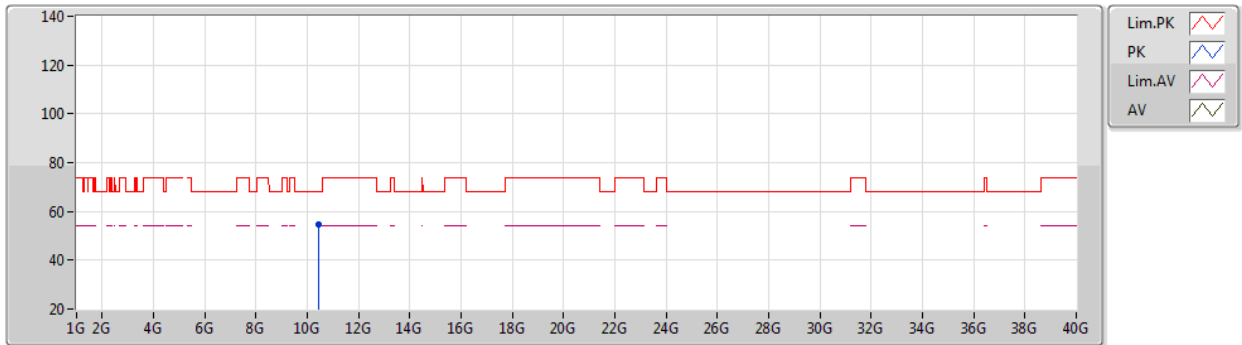


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	10.42006G	56.06	68.20	-12.14	17.40	3	Vertical	35	2.69	-	38.66	39.45	12.21	34.26

802.11ac VHT80_Nss1,(MCS0)_2TX

23/05/2020

5210MHz_TX

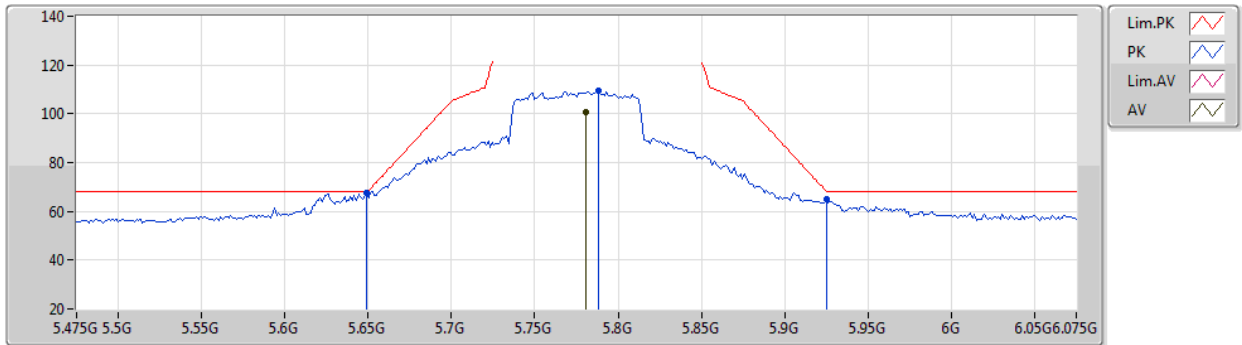


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	10.4254G	54.47	68.20	-13.73	17.41	3	Horizontal	333	1.49	-	37.06	39.45	12.21	34.25

802.11ac VHT80_Nss1,(MCS0)_2TX

28/05/2020

5775MHz_TX

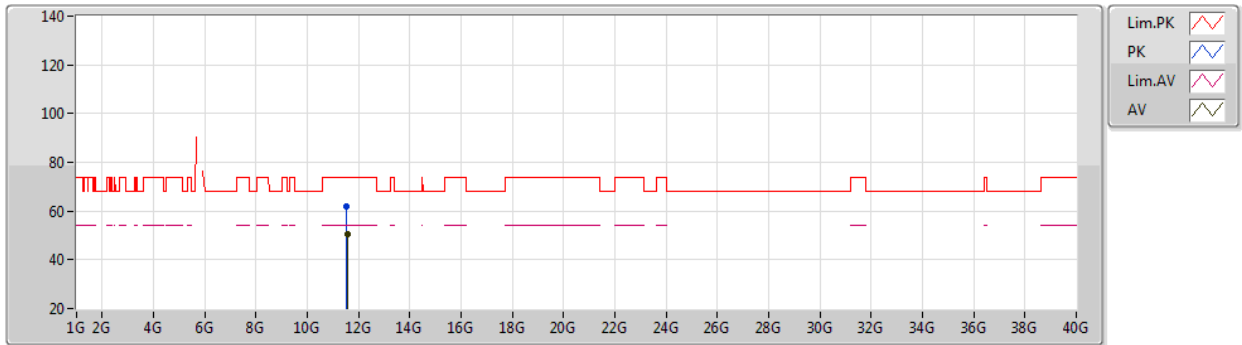


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	5.781G	100.45	Inf	-Inf	10.32	3	Vertical	276	1.86	-	90.13	32.00	7.68	29.36
PK	5.649G	67.69	68.20	-0.51	9.89	3	Vertical	276	1.86	-	57.80	31.70	7.55	29.36
PK	5.7882G	109.44	Inf	-Inf	10.33	3	Vertical	276	1.86	-	99.11	32.00	7.69	29.36
PK	5.925G	65.23	68.20	-2.97	10.78	3	Vertical	276	1.86	-	54.45	32.30	7.83	29.35

802.11ac VHT80_Nss1,(MCS0)_2TX

28/05/2020

5775MHz_TX

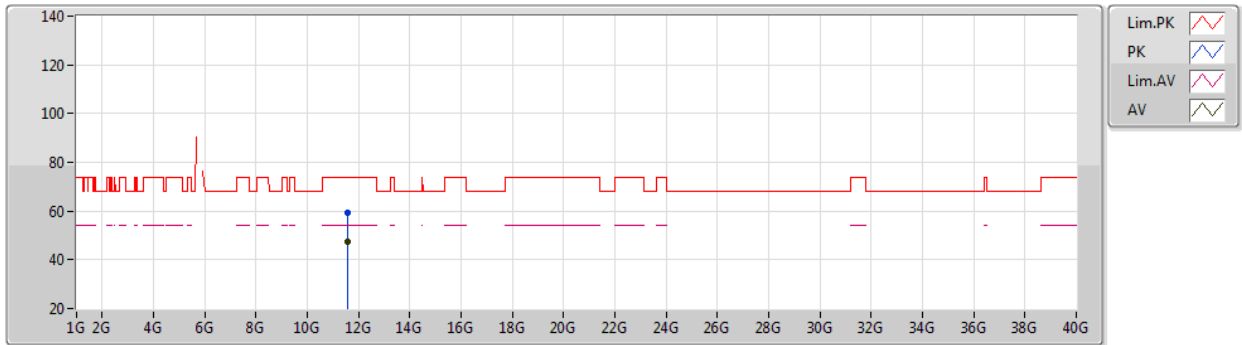


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	11.55042G	50.28	54.00	-3.72	19.45	3	Vertical	347	2.29	-	30.83	39.95	10.28	30.78
PK	11.5434G	61.69	74.00	-12.31	19.45	3	Vertical	347	2.29	-	42.24	39.96	10.27	30.78

802.11ac VHT80_Nss1,(MCS0)_2TX

28/05/2020

5775MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	11.55024G	47.52	54.00	-6.48	19.45	3	Horizontal	189	2.02	-	28.07	39.95	10.28	30.78
PK	11.55324G	59.42	74.00	-14.58	19.45	3	Horizontal	189	2.02	-	39.97	39.95	10.28	30.78