FCC Test Report

Equipment	:	Dual Band 4x4 802.11ac PCI-E adapter
Brand Name	:	ASUS
Model No.	:	PCE-AC88
FCC ID	:	MSQ-PCIE0U00
Standard	:	47 CFR FCC Part 15.407
Operating Band	:	5725 MHz – 5850 MHz
Applicant	:	ASUSTeK COMPUTER INC. 4F, No. 150, Li-Te Rd., Peitou, Taipei 112, Taiwan
Manufacturer (1)	:	ASKEY TECHNOLOGY (JIANG SU) LTD NO1388, Jiao Tong Road, Wujiang Economic Technological Development Area Jiangsu Province 215200 China
Manufacturer (2)	:	Compal Networking (KunShan) Co., LTD. No. 520, Nabbang Rd., Economic & Technical Development Zone Kunshan, Jiangsu Province China
Function	:	☐ Outdoor; ☒ Indoor; ☐ Fixed P2P ☐ Client

The product sample received on Nov. 05, 2015 and completely tested on Oct. 21, 2017. We, SPORTON, 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., the test report shall not be reproduced except in full.

Cliff Chang
SPORTON INTERNATIONAL INC.

Testing Laboratory
1190

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Summary of Test Result

Conformance Test Specifications			
Report Clause	**Ref. Std. Clause**	**Description**	**Result**
1.1.2	15.203	Antenna Requirement	Complied
3.1	15.407(a)	Emission Bandwidth	Complied
3.2	15.407(a)	Maximum Conducted Output Power	Complied
3.3	15.407(a)	Peak Power Spectral Density	Complied
3.4	15.407(b)	Unwanted Emissions	Complied
3.5	15.407(g)	Frequency Stability	Complied

Revision History

Report No.	Version	Description	Issued Date
FR5N0421-12AD	Rev. 01	Initial issue of report	Nov. 06, 2017

1 General Description

1.1 Information

1.1.1 RF General Information

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

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

Note:
- 11a, HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- VHT20, VHT40, VHT80 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM modulation.
- BWch is the nominal channel bandwidth.
- Nss-Min is the minimum number of spatial streams.
- Nant is the number of outputs. e.g., 2(2,3) means have 2 outputs for port 2 and port 3. 2 means have 2 outputs for port 1 and port 2.

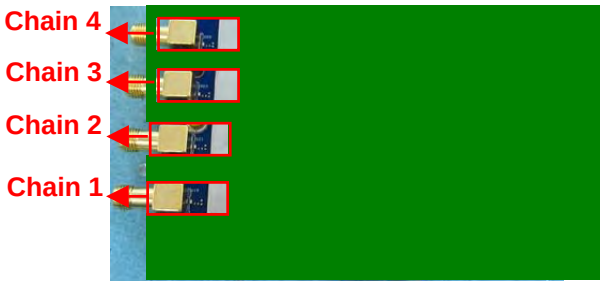
1.1.2 Antenna Information

Set	Brand	P/N	Type	Connector	Gain (dBi)				
					2.4GHz	5GHz Band 1	5GHz Band 2	5GHz Band 3	5GHz Band 4
1	WHA YU	C660-510336-A (SRF20141892)	Dipole	Reversed-SMA	1.86	1.97	1.96	1.95	1.95

Set	Loss of Cable (dB)					True Gain (dBi)				
	2.4GHz	5GHz Band 1	5GHz Band 2	5GHz Band 3	5GHz Band 4	2.4GHz	5GHz Band 1	5GHz Band 2	5GHz Band 3	5GHz Band 4
1	1.70	2.80	2.80	2.80	2.80	0.16	-0.83	-0.84	-0.85	-0.85

Note: The EUT has one set antenna, and each set contains four antennas.

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



1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11a	0.987	0.057	n/a (DC>=0.98)	n/a (DC>=0.98)
802.11ac VHT20-BF	0.802	0.958	1.948m	1k
802.11ac VHT40-BF	0.64	1.938	952.5u	3k
802.11ac VHT80-BF	0.455	3.42	460u	3k

1.1.4 EUT Operational Condition

EUT Power Type	From host system			
Beamforming Function	☒	With beamforming	☐	Without beamforming
	The product has beamforming function for 802.11n/ac.			
Test Software Version	Mtool 2.0.2.8			

1.1.5 Table for Class II Change

This product is an extension of original one reported under Sporton project number: FR5N0421AA

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

Modifications	Performance Checking
1. Updating the test rule of 5GHz band 4 to “15.407 (b)(4)(i) of New Rules (ET Docket No. 13–49; FCC 16–24)” from “15.407 (b)(4)(ii)”.	1. Emission Bandwidth 2. Maximum Conducted Output Power 3. Peak Power Spectral Density 4. Unwanted Emissions (Above 1GHz) 5. Frequency Stability
2. Changing the Power Amplifier for 2.4GHz (Pin to pin PA. Radio parameter is same between old PA and new PA.).	It is not necessary to re-test all test items.

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
- FCC KDB 789033 D02 v01r04
- FCC KDB 644545 D03 v01
- FCC KDB 662911 D01 v02r01
- FCC KDB 412172 D01 v01r01

1.3 Testing Location Information

Testing Location			
☐	HWA YA	ADD :	No. 52, Hwa Ya 1st Rd., Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.
		TEL :	886-3-327-3456 FAX : 886-3-318-0055
☒	JHUBEI	ADD :	No.8, Lane 724, Bo-ai St., Jhubei City, HsinChu County 302, Taiwan, R.O.C.
		TEL :	886-3-656-9065 FAX : 886-3-656-9085

Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
RF Conducted	TH01-CB	Serway Li	20°C / 45%	Oct. 12, 2017
Radiated	03CH01-CB	Mason Chan	25°C / 60%	Oct. 11, 2017~ Oct. 21, 2017

Test site Designation No. TW0006 with FCC
Test site registered number IC 4086D with Industry Canada.

1.4 Measurement Uncertainty

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

Test Items	Uncertainty	Remark
Radiated Emission (1GHz ~ 18GHz)	3.7 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	3.5 dB	Confidence levels of 95%
Conducted Emission	1.7 dB	Confidence levels of 95%
Output Power Measurement	1.33 dB	Confidence levels of 95%
Power Density Measurement	1.27 dB	Confidence levels of 95%
Bandwidth Measurement	9.74×10^{-8}	Confidence levels of 95%
Frequency Stability	6.06×10^{-8}	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Channel Mode

Mode	Power Setting
802.11a_Nss1,(6Mbps)_4TX	-
5745MHz	102
5785MHz	104
5825MHz	104
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	-
5745MHz	104
5785MHz	105
5825MHz	105
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	-
5755MHz	103
5795MHz	103
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	-
5775MHz	103

Note:
1. VHT20/VHT40 covers HT20/HT40, due to same modulation. The power setting for 802.11n HT20 and HT40 are the same or lower than 802.11ac VHT20 and VHT40.
2. There are two functions of EUT, one is beamforming function, and the other is non-beamforming function for 802.11n/ac, after evaluating, beamforming function has been evaluated to be the worst case, so it was selected to test and record in this test report.

2.2 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	Emission Bandwidth Maximum Conducted Output Power Peak Power Spectral Density Frequency Stability
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	CTX
1	2.4GHz WLAN function_Z axis position

Note: The EUT can only be used at Z axis position.

2.3 EUT Operation during Test

<For Non-Beamforming Mode>

The EUT was programmed to be in continuously transmitting mode.

<For Beamforming Mode>

For Conducted Mode:

The EUT was programmed to be in continuously transmitting mode.

For Radiated Mode:

During the test, the following programs under WIN XP were executed.

The program was executed as follows:

1. During the test, the EUT operation to normal function.
2. Executed command fixed test channel under DOS.
3. Executed "Lantest.exe " to link with the remote workstation to receive and transmit packet by Wireless ac AP and transmit duty cycle no less 98%

2.4 Accessories

Antenna connection pedestal*1

2.5 Support Equipment

<For Non-Beamforming Mode>
For Test Site No: 03CH01-CB (above 1GHz)

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	PC	ASUS	Vintage2-PH1	DoC
2	LCD Monitor	ASUS	VB171	DoC
3	Keyboard	ASUS	AS-KBA000	DoC
4	Mouse	ASUS	MOBTUO	DoC

<For Beamforming Mode>
For Test Site No: 03CH01-CB (above 1GHz)

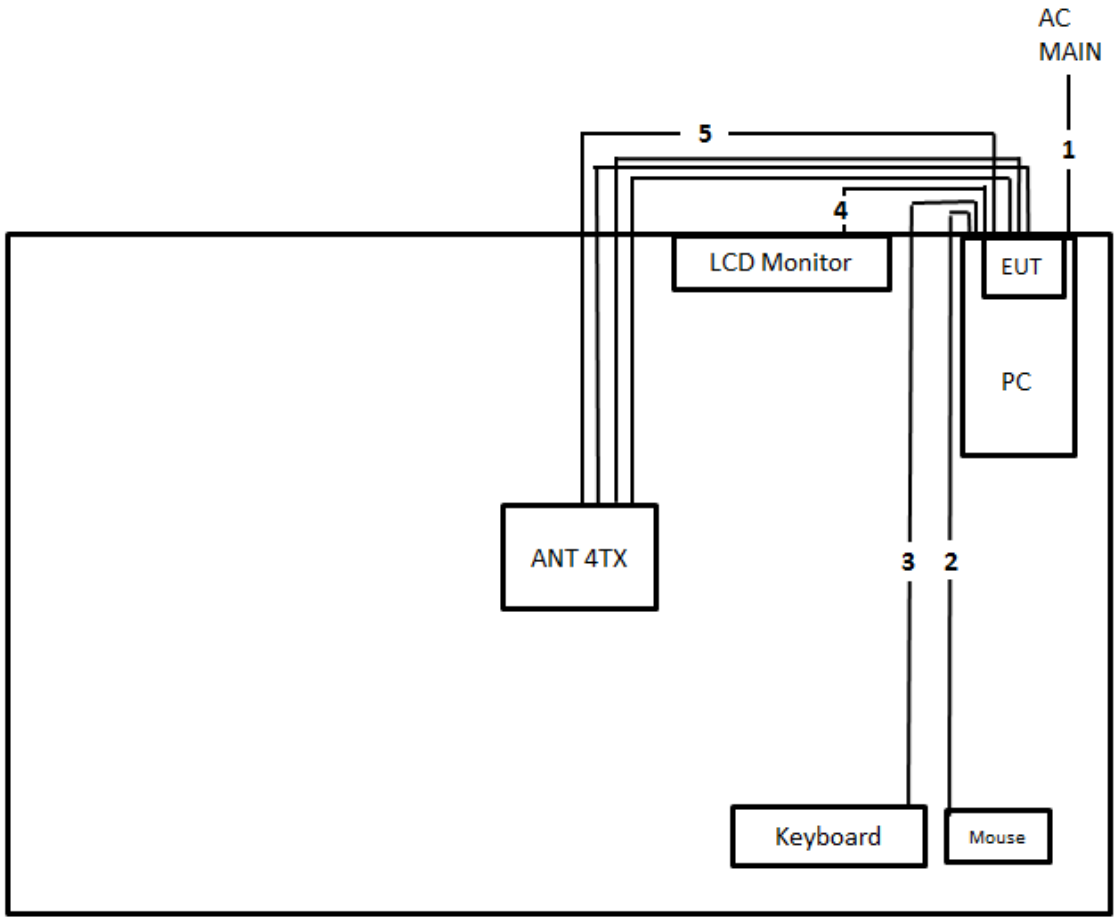
Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	PC	ASUS	Vintage2-PH1	DoC
2	LCD Monitor	ASUS	VB171	DoC
3	Keyboard	ASUS	AS-KBA000	DoC
4	Mouse	ASUS	MOBTUO	DoC
5	Wireless ac AP	ASUS	RT-AC88U	MSQ-RTGW00
6	Notebook	DELL	E4300	DoC

For Test Site No: TH01-CB

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	PC	ASUS	Vintage2-PH1	DoC
2	LCD Monitor	ASUS	VB171	DoC
3	Keyboard	ASUS	AS-KBA000	DoC
4	Mouse	ASUS	MOBTUO	DoC

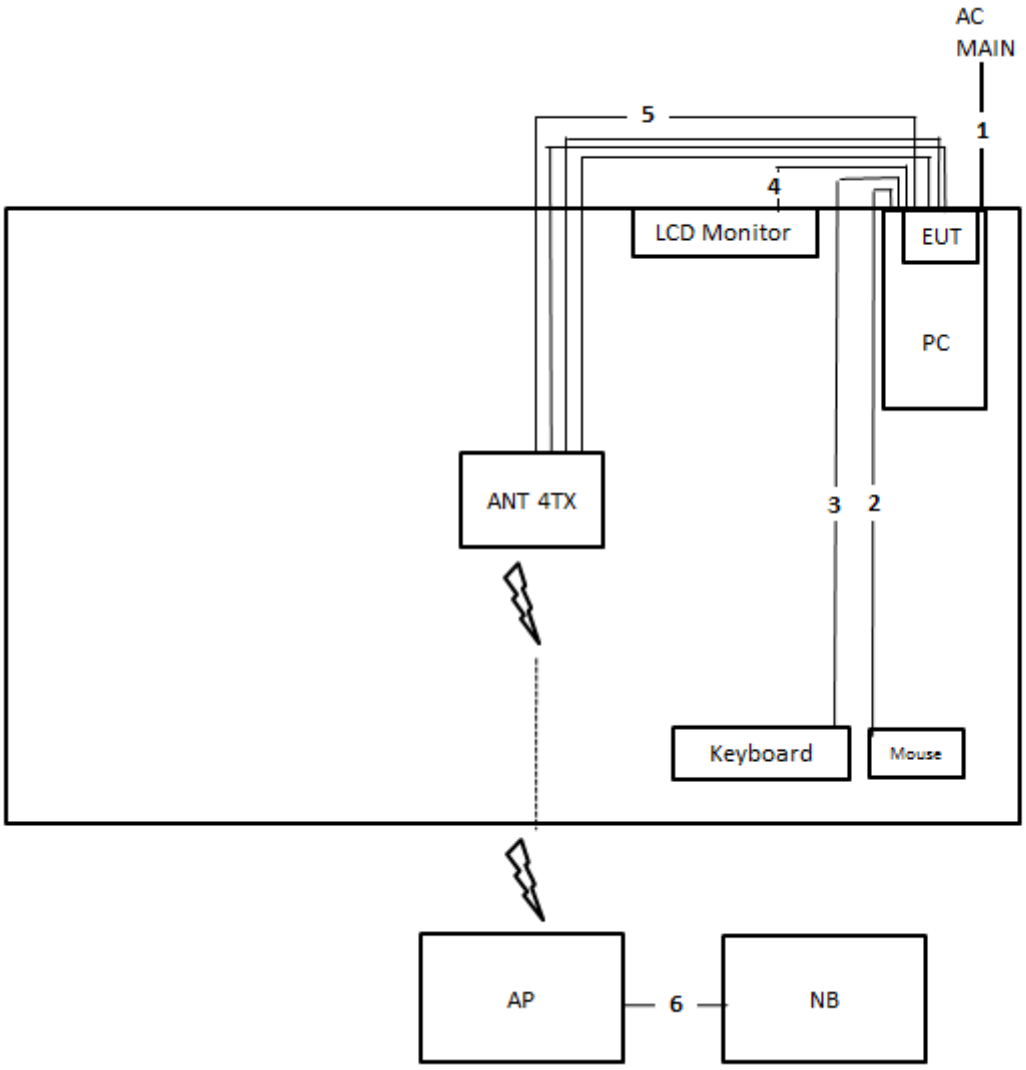
2.6 Test Setup Diagram

Test Setup Diagram - Radiated Test > 1GHz and Non-Beamforming Mode



Item	Connection	Shielded	Length
1	Power cable	No	1.8m
2	USB cable	Yes	1.8m
3	USB cable	Yes	1.8m
4	VGA cable	Yes	1.8m
5	Ant cable*4	Yes	1m

Test Setup Diagram - Radiated Test > 1GHz Beamforming Mode



Item	Connection	Shielded	Length
1	Power cable	No	1.8m
2	USB cable	Yes	1.8m
3	USB cable	Yes	1.8m
4	VGA cable	Yes	1.8m
5	Ant cable*4	Yes	1m
6	RJ-45 cable	No	1.5m

3 Transmitter Test Result

3.1 Emission Bandwidth

3.1.1 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 ≥ 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 ≥ 500kHz.

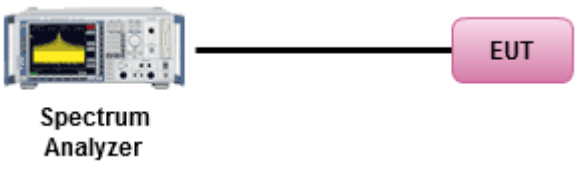
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

Test Method	
▪ For the emission bandwidth shall be measured using one of the options below:	
	☒ Refer as FCC KDB 789033, 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.

3.1.4 Test Setup

Emission Bandwidth


3.1.5 Test Result of Emission Bandwidth

Refer as Appendix A

3.2 Maximum Conducted Output Power

3.2.1 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.
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.	

3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

Test Method	
▪ Maximum Conducted Output Power	
	Average over on/off periods with duty factor
	☐ Refer as FCC KDB 789033, clause E Method SA-2 (spectral trace averaging).
	☐ Refer as FCC 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 FCC KDB 789033, 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: $P_{total} = P_1 + P_2 + \ldots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$

3.2.4 Test Setup

RF Output Power (Power Meter)


3.2.5 Test Result of Maximum Conducted Output Power

Refer as Appendix B

3.3 Peak Power Spectral Density

3.3.1 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.
LE-LAN Devices	
☐	For the 5.15-5.25 GHz band, the peak power spectral density (PPSD) ≤ 4 dBm/MHz and 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 and the e.i.r.p. peak power spectral density (PPSD) ≤ 17 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° ≤ θ < 8° ; -13 − 0.716 (θ-8) dBW/MHz for 8° ≤ θ < 40° -35.9 − 1.22 (θ-40) dBW/MHz for 40° ≤ θ ≤ 45° ; -42 dBW/MHz for θ > 45°
☐	For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz and the e.i.r.p. peak power spectral density (PPSD) ≤ 17 dBm/MHz.
☐	For the 5.725-5.85 GHz band:
	▪ Point-to-multipoint systems (P2M): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz. If G_{TX} > 6 dBi, then PPSD= 30 – (G_{TX} – 6).
	▪ Point-to-point systems (P2P): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz.
PPSD = peak power spectral density that he same method as used to determine the conducted output power shall be used to determine the power spectral density. And power spectral density in dBm/MHz **G_{TX}** = the maximum transmitting antenna directional gain in dBi.	

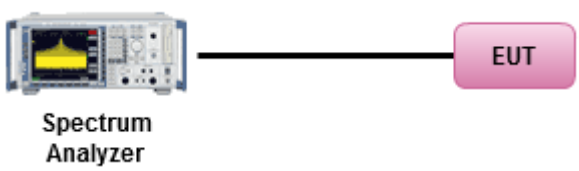
3.3.2 Measuring Instruments

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

3.3.3 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, 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, clause E Method SA-1 (spectral trace averaging).
	☐ Refer as FCC KDB 789033, 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, clause E Method SA-2 (spectral trace averaging).
	☐ Refer as FCC 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:
	☒ 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: $PPSD_{total} = PPSD_1 + PPSD_2 + \ldots + PPSD_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = PPSD_{total} + DG$

3.3.4 Test Setup

Power Spectral Density


3.3.5 Test Result of Peak Power Spectral Density

Refer as Appendix C

3.4 Unwanted Emissions

3.4.1 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	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.

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

3.4.2 Measuring Instruments

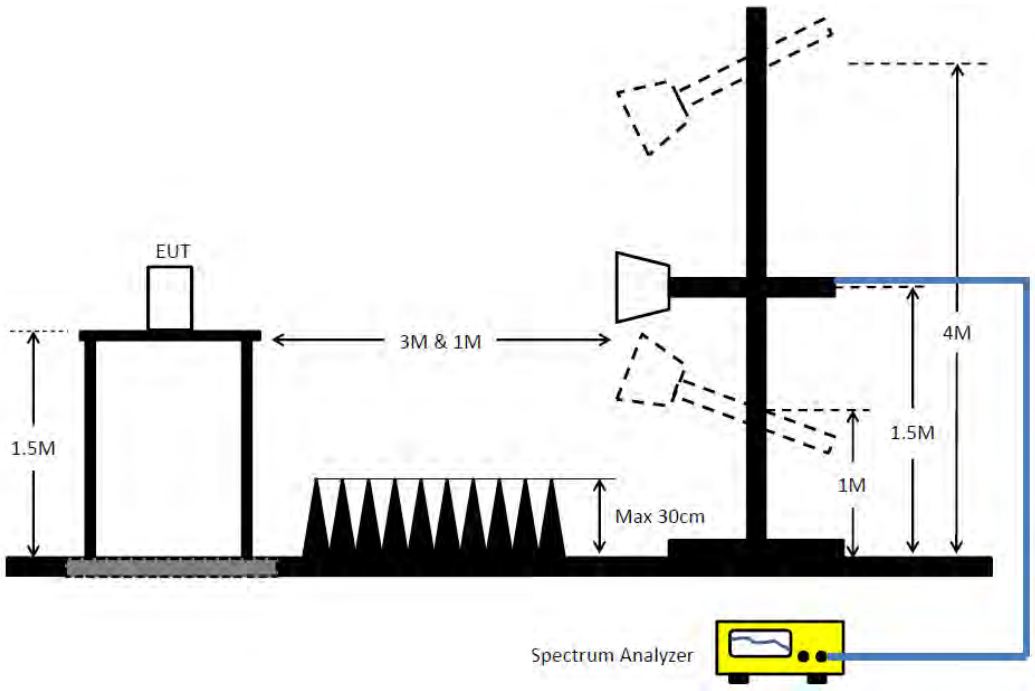
Refer a test equipment and calibration data table in this test report.

3.4.3 Test Procedures

Test Method		
▪ 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 ≥ 98 or duty factor].		
▪ For the transmitter unwanted emissions shall be measured using following options below:		
	▪ Refer as FCC KDB 789033, clause H)2) for unwanted emissions into non-restricted bands.	
	▪ Refer as FCC KDB 789033, clause H)1) for unwanted emissions into restricted bands.	
		☐ Refer as FCC KDB 789033, H)6) Method AD (Trace Averaging).
		☒ Refer as FCC KDB 789033, H)6) Method VB (Reduced VBW).
		☐ Refer as ANSI C63.10, clause 4.2.3.2.3 (Reduced VBW). VBW ≥ 1/T, where T is pulse time.
		☐ Refer as ANSI C63.10, clause 4.2.3.2.4 average value of pulsed emissions.
		☒ Refer as FCC KDB 789033, clause H)5) measurement procedure peak limit.
		☐ Refer as ANSI C63.10, clause 4.2.3.2.2 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.		

3.4.4 Test Setup

Transmitter Radiated Unwanted Emissions
Above 1GHz



3.4.5 Test Result of Transmitter Unwanted Emissions

Refer as Appendix D

3.5 Frequency Stability

3.5.1 Frequency Stability Limit

Frequency Stability Limit
UNII Devices
▪ In-band emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.
LE-LAN Devices
▪ N/A
IEEE Std. 802.11
▪ The transmitter center frequency tolerance shall be ± 20 ppm maximum for the 5 GHz band and ± 25 ppm maximum for the 2.4 GHz band.

3.5.2 Measuring Instruments

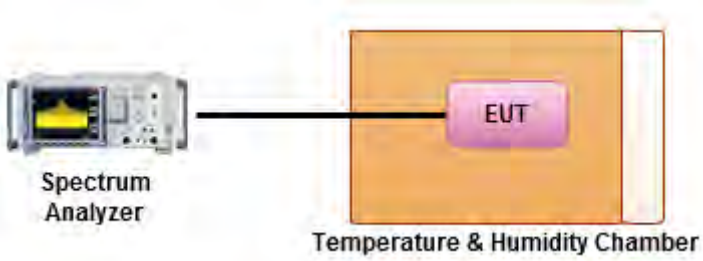
Refer a test equipment and calibration data table in this test report.

3.5.3 Test Procedures

Test Method	
▪ Refer as ANSI C63.10, clause 6.8 for frequency stability tests	
	▪ Frequency stability with respect to ambient temperature
	▪ Frequency stability when varying supply voltage
	▪ Extreme temperature is 0℃~40℃.

3.5.4 Test Setup

Frequency Stability



3.5.5 Test Result of Frequency Stability

Refer as Appendix E

4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Nov. 10, 2016	Nov. 09, 2017	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jul. 05, 2017	Jul. 04, 2018	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 16, 2017	Jan. 15, 2018	Radiation (03CH01-CB)
Pre-Amplifier	MITEQ	TTA1840-35-H G	1864479	18GHz ~ 40GHz	Jul. 10, 2017	Jul. 09, 2018	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Nov. 22, 2016	Nov. 21, 2017	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16	N/A	1 GHz ~ 18 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16+17	N/A	1 GHz ~ 18 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#1	N/A	18GHz ~ 40 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#2	N/A	18GHz ~ 40 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
Test Software	Audix	E3	6.2009-l0-7	N/A	N/A	N/A	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	Dec. 26, 2016	Dec. 25, 2017	Conducted (TH01-CB)
Temp. and Humidity Chamber	Ten Billion	TTH-D3SP	TBN-931011	-30~100 degree	Jun. 02, 2017	Jun. 01, 2018	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-06	1 GHz – 26.5 GHz	Oct. 11, 2017	Oct. 10, 2018	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-07	1 GHz –26.5 GHz	Oct. 11, 2017	Oct. 10, 2018	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-08	1 GHz –26.5 GHz	Oct. 11, 2017	Oct. 10, 2018	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-09	1 GHz –26.5 GHz	Oct. 11, 2017	Oct. 10, 2018	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz –26.5 GHz	Oct. 11, 2017	Oct. 10, 2018	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY53410001	50MHz~18GHz	Nov. 22, 2016	Nov. 21, 2017	Conducted (TH01-CB)

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

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	16.375M	16.767M	16M8D1D	16.325M	16.617M
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	17.6M	17.891M	17M9D1D	17.55M	17.791M
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	36.35M	36.482M	36M5D1D	36.3M	36.332M
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	76.4M	76.162M	76M2D1D	76.3M	75.962M

Max-N dB = Maximum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;
Max-OBW = Maximum 99% occupied bandwidth;
Min-N dB = Minimum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;
Min-OBW = Minimum 99% occupied bandwidth;

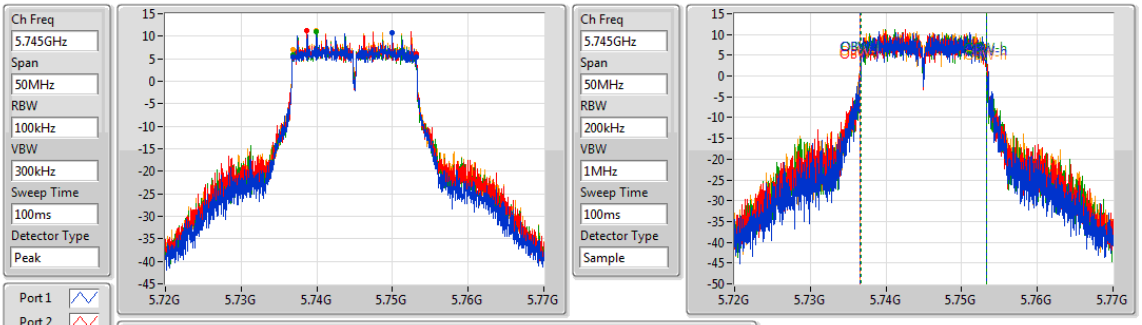
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
5745MHz	Pass	500k	16.35M	16.692M	16.35M	16.767M	16.325M	16.617M	16.325M	16.692M
5785MHz	Pass	500k	16.325M	16.642M	16.35M	16.717M	16.325M	16.642M	16.35M	16.667M
5825MHz	Pass	500k	16.375M	16.617M	16.325M	16.667M	16.35M	16.692M	16.35M	16.617M
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5745MHz	Pass	500k	17.575M	17.791M	17.55M	17.891M	17.55M	17.866M	17.575M	17.891M
5785MHz	Pass	500k	17.575M	17.816M	17.575M	17.841M	17.55M	17.791M	17.575M	17.891M
5825MHz	Pass	500k	17.6M	17.816M	17.6M	17.816M	17.6M	17.841M	17.575M	17.816M
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5755MHz	Pass	500k	36.3M	36.382M	36.3M	36.382M	36.3M	36.332M	36.3M	36.482M
5795MHz	Pass	500k	36.3M	36.332M	36.35M	36.332M	36.3M	36.482M	36.3M	36.432M
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5775MHz	Pass	500k	76.4M	75.962M	76.3M	75.962M	76.3M	75.962M	76.4M	76.162M

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

802.11a_Nss1,(6Mbps)_4TX **EBW**

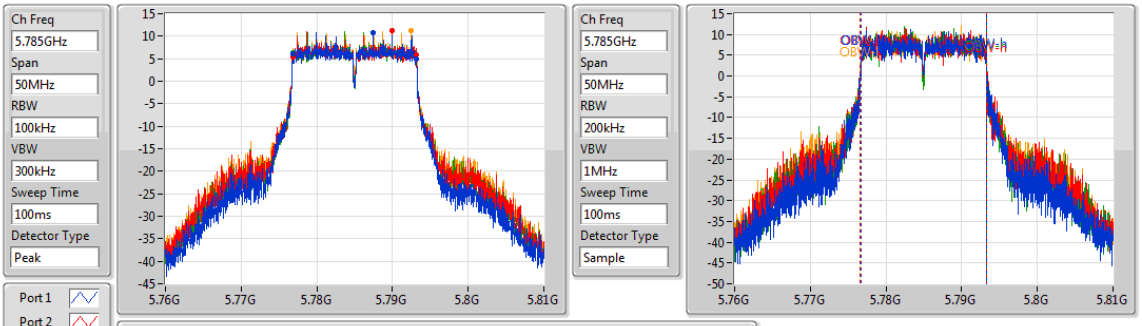
5745MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.35M	5.7368G	5.75315G	16.692M	5.736629G	5.753321G	500k	1
16.35M	5.7368G	5.75315G	16.767M	5.736579G	5.753346G	500k	2
16.325M	5.736825G	5.75315G	16.617M	5.736654G	5.753271G	500k	3
16.325M	5.736825G	5.75315G	16.692M	5.736604G	5.753296G	500k	4

802.11a_Nss1,(6Mbps)_4TX **EBW**

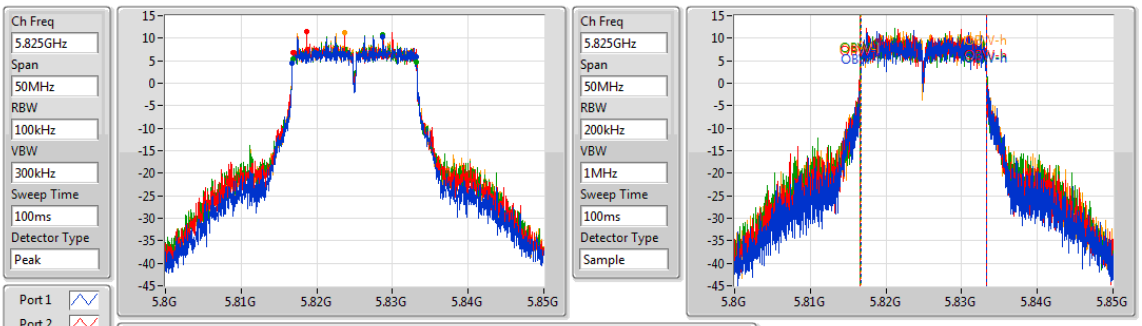
5785MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.325M	5.776825G	5.79315G	16.642M	5.776654G	5.793296G	500k	1
16.35M	5.7768G	5.79315G	16.717M	5.776604G	5.793321G	500k	2
16.325M	5.776825G	5.79315G	16.642M	5.776654G	5.793296G	500k	3
16.35M	5.7768G	5.79315G	16.667M	5.776629G	5.793296G	500k	4

802.11a_Nss1,(6Mbps)_4TX **EBW**

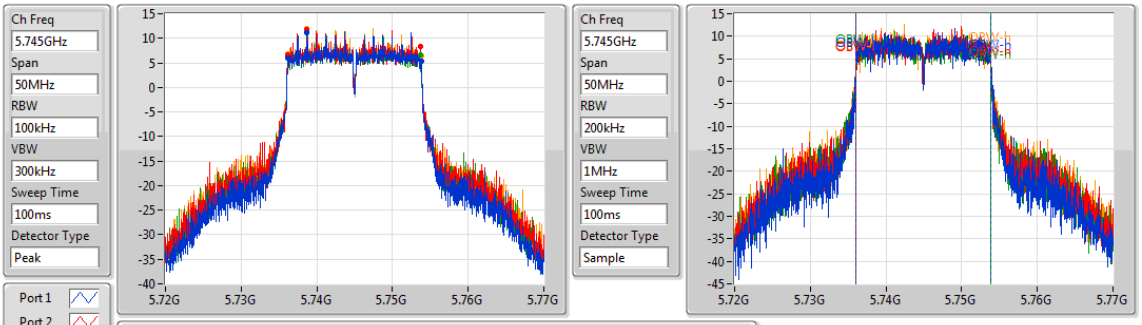
5825MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.375M	5.816775G	5.83315G	16.617M	5.816679G	5.833296G	500k	1
16.325M	5.816825G	5.83315G	16.667M	5.816604G	5.833271G	500k	2
16.35M	5.8168G	5.83315G	16.692M	5.816604G	5.833296G	500k	3
16.35M	5.8168G	5.83315G	16.617M	5.816679G	5.833296G	500k	4

802.11ac VHT20-BF_Nss1,(MCS0)_4TX **EBW**

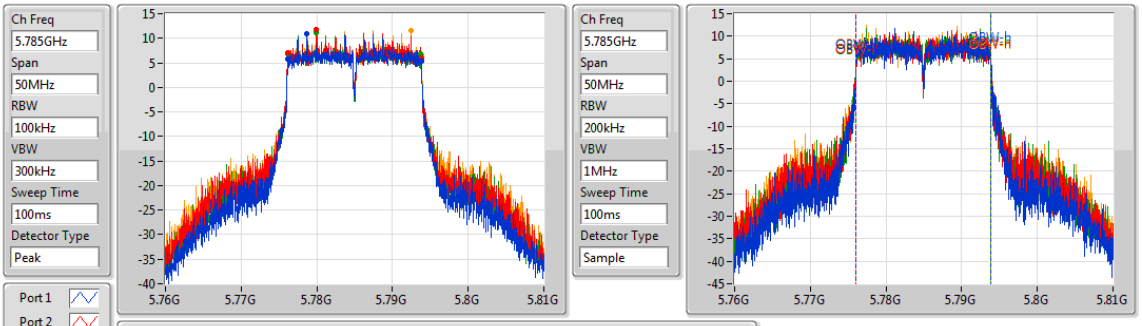
5745MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.575M	5.7362G	5.753775G	17.791M	5.736079G	5.753871G	500k	1
17.55M	5.7362G	5.75375G	17.891M	5.736004G	5.753896G	500k	2
17.55M	5.7362G	5.75375G	17.866M	5.736029G	5.753896G	500k	3
17.575M	5.7362G	5.753775G	17.891M	5.736004G	5.753896G	500k	4

802.11ac VHT20-BF_Nss1,(MCS0)_4TX **EBW**

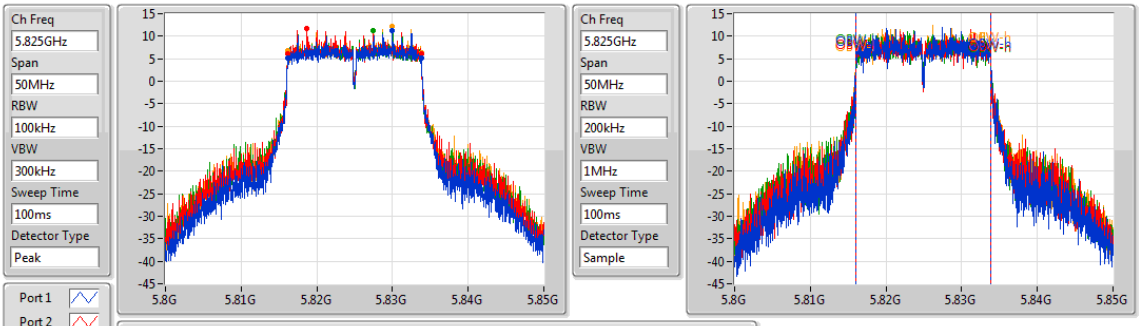
5785MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.575M	5.7762G	5.793775G	17.816M	5.776054G	5.793871G	500k	1
17.575M	5.7762G	5.793775G	17.841M	5.776054G	5.793896G	500k	2
17.55M	5.7762G	5.79375G	17.791M	5.776054G	5.793846G	500k	3
17.575M	5.7762G	5.793775G	17.891M	5.776004G	5.793896G	500k	4

802.11ac VHT20-BF_Nss1,(MCS0)_4TX **EBW**

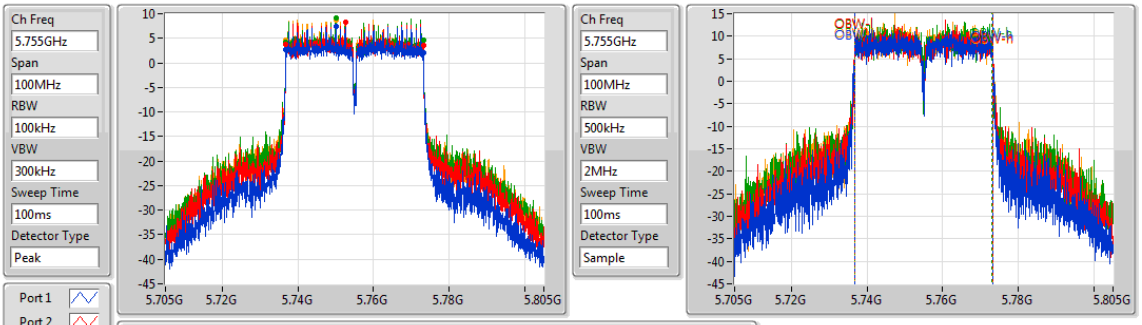
5825MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.6M	5.816175G	5.833775G	17.816M	5.816079G	5.833896G	500k	1
17.6M	5.816175G	5.833775G	17.816M	5.816054G	5.833871G	500k	2
17.6M	5.816175G	5.833775G	17.841M	5.816054G	5.833896G	500k	3
17.575M	5.8162G	5.833775G	17.816M	5.816054G	5.833871G	500k	4

802.11ac VHT40-BF_Nss1,(MCS0)_4TX **EBW**

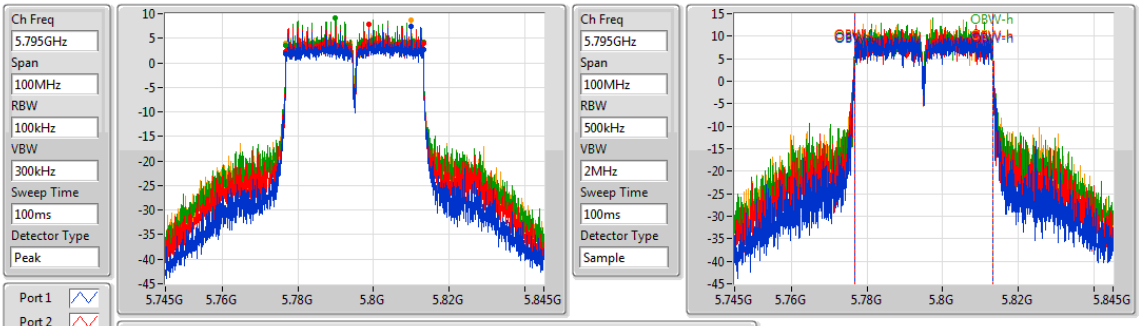
5755MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
36.3M	5.73685G	5.77315G	36.382M	5.736759G	5.773141G	500k	1
36.3M	5.73685G	5.77315G	36.382M	5.736759G	5.773141G	500k	2
36.3M	5.73685G	5.77315G	36.332M	5.736759G	5.773091G	500k	3
36.3M	5.73685G	5.77315G	36.482M	5.736709G	5.773191G	500k	4

802.11ac VHT40-BF_Nss1,(MCS0)_4TX **EBW**

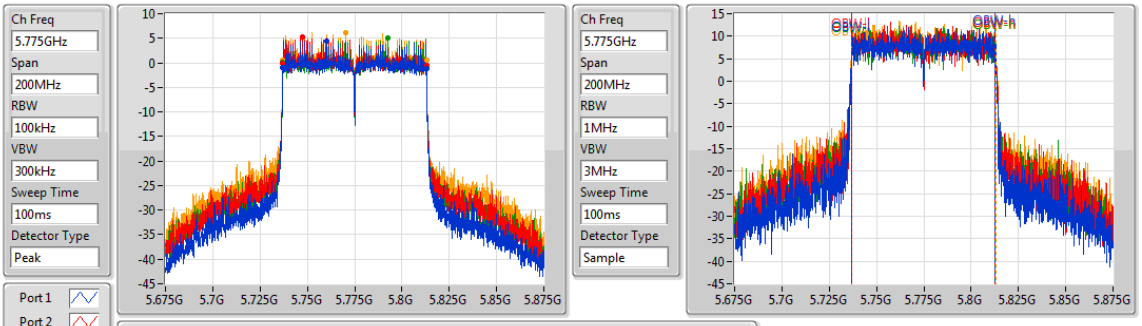
5795MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
36.3M	5.77685G	5.81315G	36.332M	5.776809G	5.813141G	500k	1
36.35M	5.7768G	5.81315G	36.332M	5.776809G	5.813141G	500k	2
36.3M	5.77685G	5.81315G	36.482M	5.776709G	5.813191G	500k	3
36.3M	5.77685G	5.81315G	36.432M	5.776759G	5.813191G	500k	4

802.11ac VHT80-BF_Nss1,(MCS0)_4TX **EBW**

5775MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
76.4M	5.7368G	5.8132G	75.962M	5.736919G	5.812881G	500k	1
76.3M	5.7368G	5.8131G	75.962M	5.736919G	5.812881G	500k	2
76.3M	5.7368G	5.8131G	75.962M	5.736919G	5.812881G	500k	3
76.4M	5.7368G	5.8132G	76.162M	5.736819G	5.812981G	500k	4

Summary

Mode	Total Power (dBm)	Total Power (W)
5.725-5.85GHz	-	-
802.11a_Nss1,(6Mbps)_4TX	29.98	0.99541
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	29.98	0.99541
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	29.98	0.99541
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	29.40	0.87096

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-
5745MHz	Pass	-0.85	23.21	23.42	23.35	24.19	29.58	30.00
5785MHz	Pass	-0.85	23.71	23.98	23.54	24.54	29.98	30.00
5825MHz	Pass	-0.85	23.69	23.91	23.51	24.61	29.97	30.00
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5745MHz	Pass	5.17	23.86	23.87	23.55	24.49	29.98	30.00
5785MHz	Pass	5.17	23.62	23.69	23.34	24.16	29.73	30.00
5825MHz	Pass	5.17	23.65	23.71	23.25	24.42	29.80	30.00
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5755MHz	Pass	5.17	23.31	23.82	23.57	24.94	29.98	30.00
5795MHz	Pass	5.17	23.42	23.79	23.13	24.65	29.81	30.00
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5775MHz	Pass	5.17	23.14	23.07	22.96	24.21	29.40	30.00

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

Summary

Mode	PD (dBm/RBW)
5.725-5.85GHz	-
802.11a_Nss1,(6Mbps)_4TX	14.44
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	15.29
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	13.03
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	11.08

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

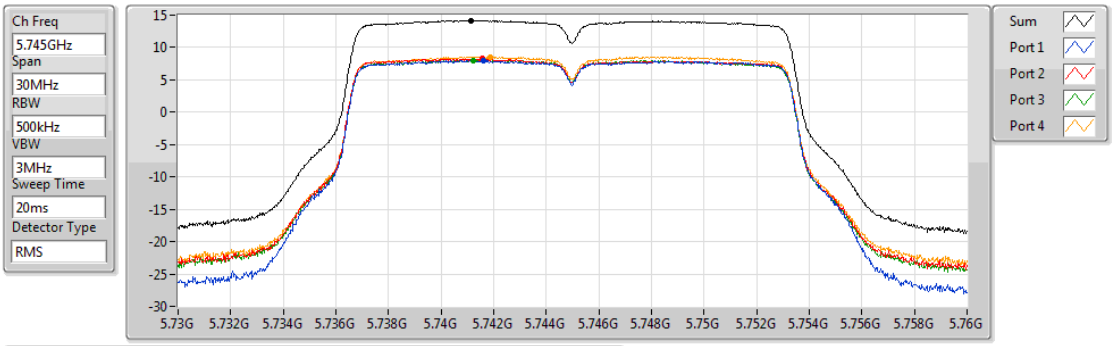
Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	Port 3 (dBm/RBW)	Port 4 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-
5745MHz	Pass	5.17	7.99	8.24	8.04	8.56	14.16	30.00
5785MHz	Pass	5.17	8.00	8.45	8.32	8.72	14.27	30.00
5825MHz	Pass	5.17	8.16	8.58	8.51	8.91	14.44	30.00
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5745MHz	Pass	5.17	8.93	9.31	9.25	9.74	15.29	30.00
5785MHz	Pass	5.17	8.95	9.36	9.20	9.38	15.14	30.00
5825MHz	Pass	5.17	9.13	9.46	9.37	9.68	15.28	30.00
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5755MHz	Pass	5.17	6.43	6.92	7.58	7.40	13.03	30.00
5795MHz	Pass	5.17	6.30	6.72	7.42	7.31	12.86	30.00
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5775MHz	Pass	5.17	4.68	5.09	5.18	5.77	11.08	30.00

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

802.11a_Nss1,(6Mbps)_4TX PSD

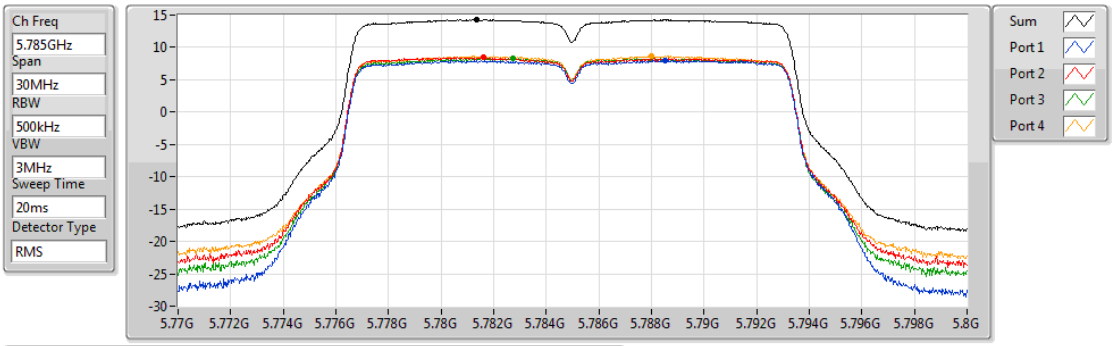
5745MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
14.16	14.16	7.99	8.24	8.04	8.56

802.11a_Nss1,(6Mbps)_4TX PSD

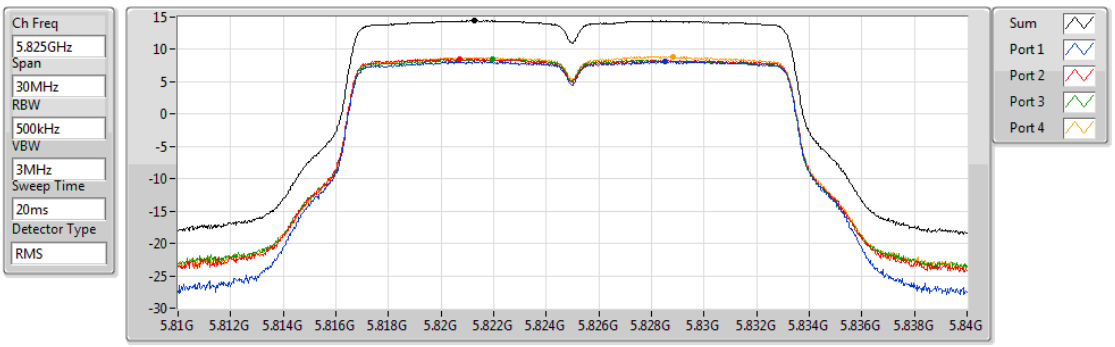
5785MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
14.27	14.27	8.00	8.45	8.32	8.72

802.11a_Nss1,(6Mbps)_4TX PSD

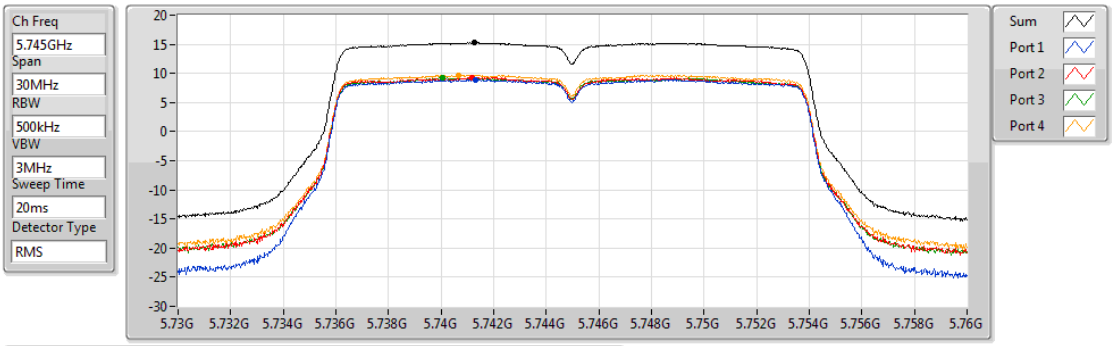
5825MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
14.44	14.44	8.16	8.58	8.51	8.91

802.11ac VHT20-BF_Nss1,(MCS0)_4TX PSD

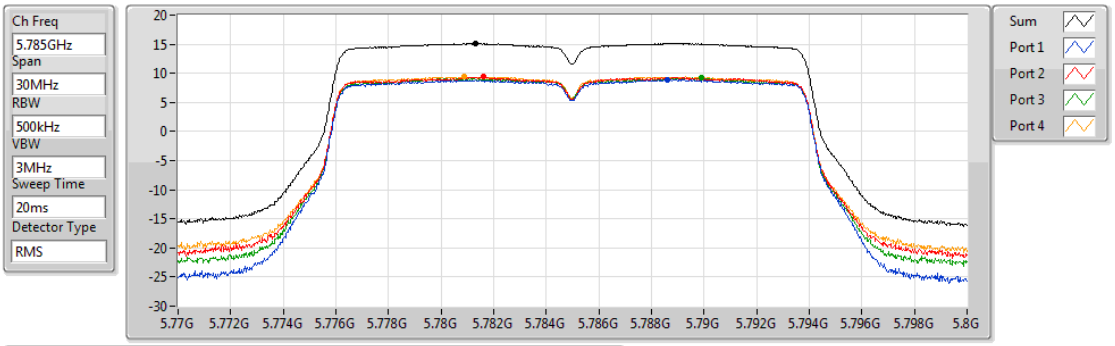
5745MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
15.29	15.29	8.93	9.31	9.25	9.74

802.11ac VHT20-BF_Nss1,(MCS0)_4TX PSD

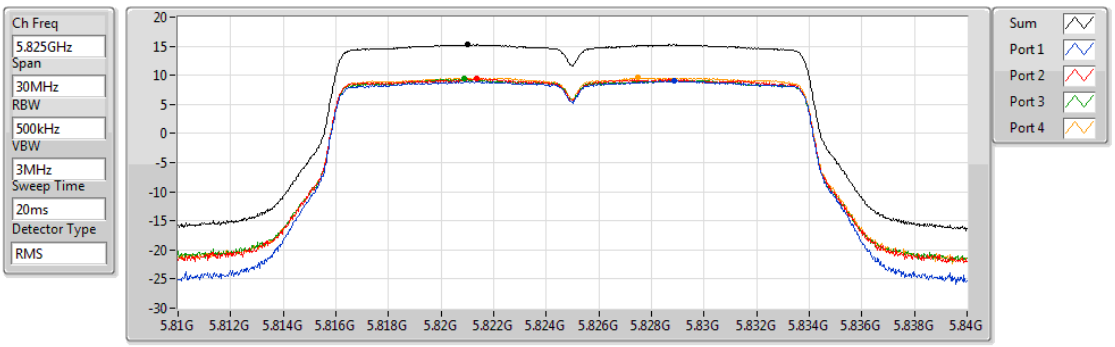
5785MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
15.14	15.14	8.95	9.36	9.20	9.38

802.11ac VHT20-BF_Nss1,(MCS0)_4TX PSD

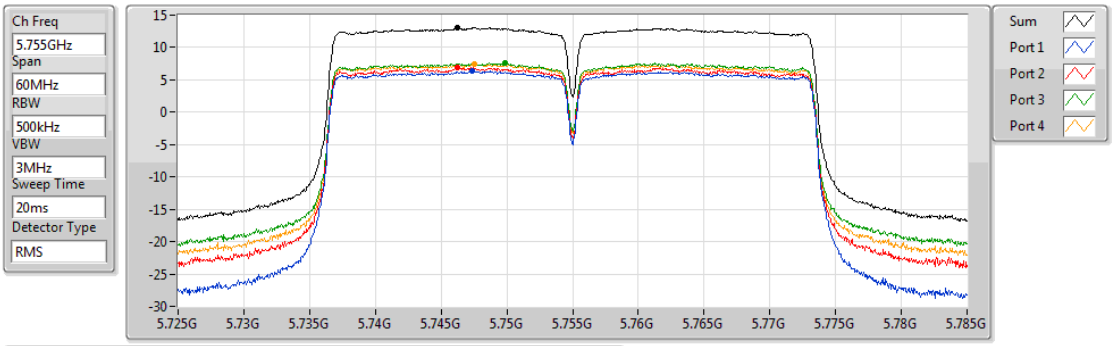
5825MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
15.28	15.28	9.13	9.46	9.37	9.68

802.11ac VHT40-BF_Nss1,(MCS0)_4TX PSD

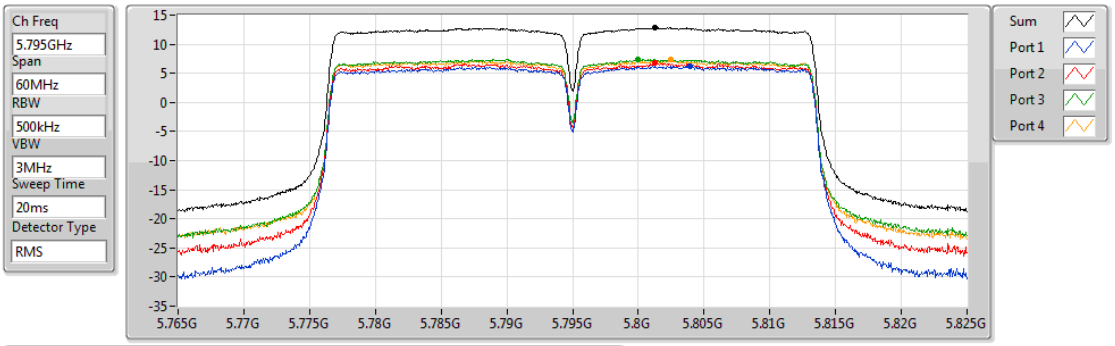
5755MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
13.03	13.03	6.43	6.92	7.58	7.40

802.11ac VHT40-BF_Nss1,(MCS0)_4TX PSD

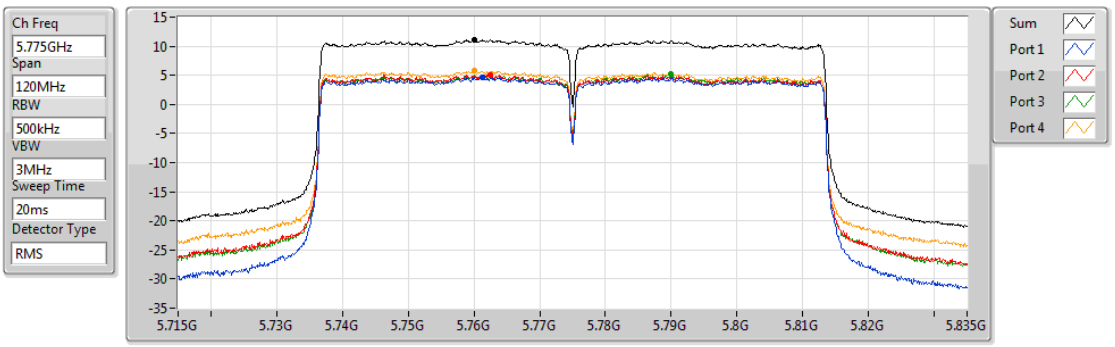
5795MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
12.86	12.86	6.30	6.72	7.42	7.31

802.11ac VHT80-BF_Nss1,(MCS0)_4TX PSD

5775MHz



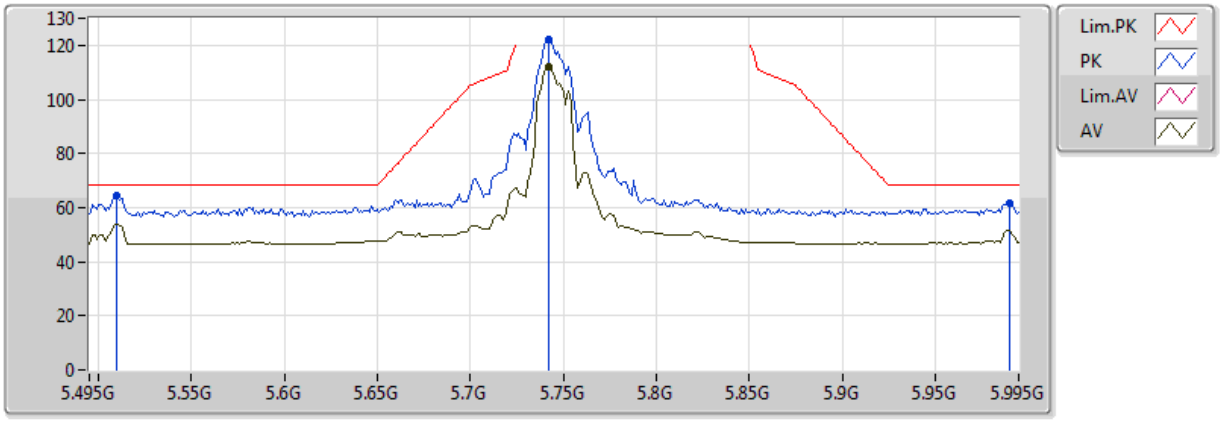
Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
11.08	11.08	4.68	5.09	5.18	5.77

Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
5.725-5.85GHz	-	-	-	-	-	-	-	-	-	-	-	-
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	Pass	PK	5.6298G	67.10	68.20	-1.10	5.40	3	Vertical	268	1.44	-

802.11a_Nss1,(6Mbps)_4TX

5745MHz_TX

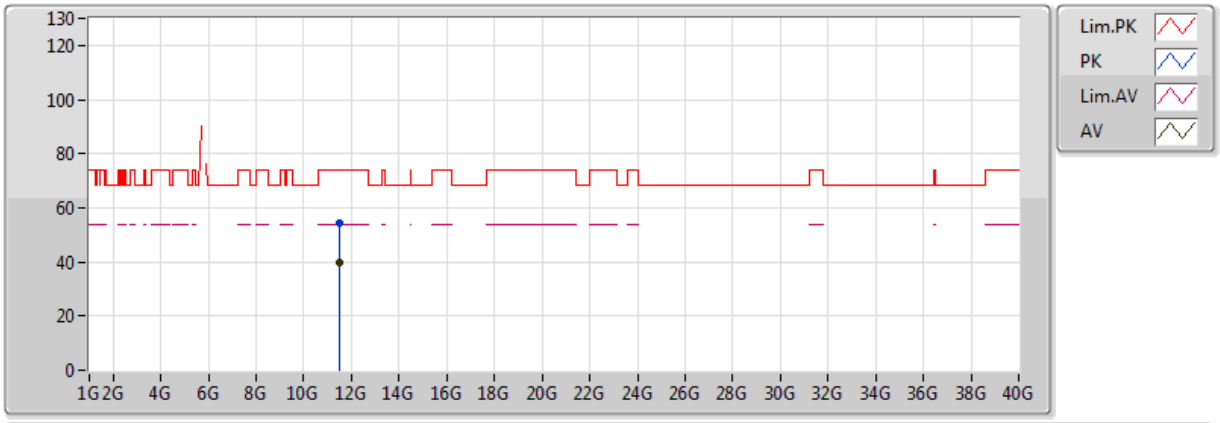


20171011
EUT Z_4TX Dipole
Setting 102
01-J-6-10
FSP(100080)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	5.742G	112.15	Inf	-Inf	5.71	3	Vertical	264	1.65	-
PK	5.51G	64.22	68.20	-3.98	4.94	3	Vertical	264	1.65	-
PK	5.742G	122.16	Inf	-Inf	5.71	3	Vertical	264	1.65	-
PK	5.99G	61.74	68.20	-6.46	6.58	3	Vertical	264	1.65	-

802.11a_Nss1,(6Mbps)_4TX

5745MHz_TX

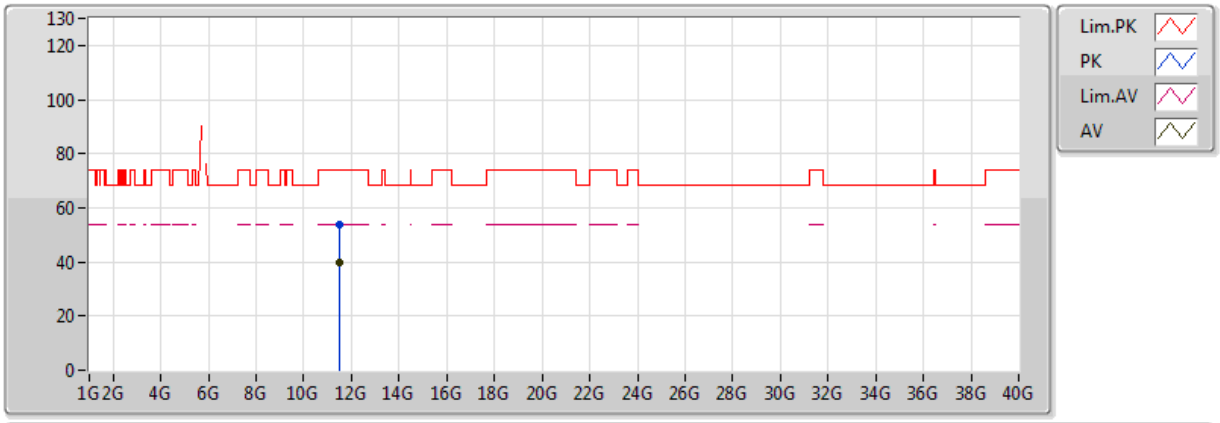


20171011
EUT Z_4TX Dipole
Setting 102
01-J-6
FSP(100080)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	11.49028G	39.75	54.00	-14.25	12.31	3	Vertical	218	2.32	-
PK	11.48556G	54.51	74.00	-19.49	12.31	3	Vertical	218	2.32	-

802.11a_Nss1,(6Mbps)_4TX

5745MHz_TX

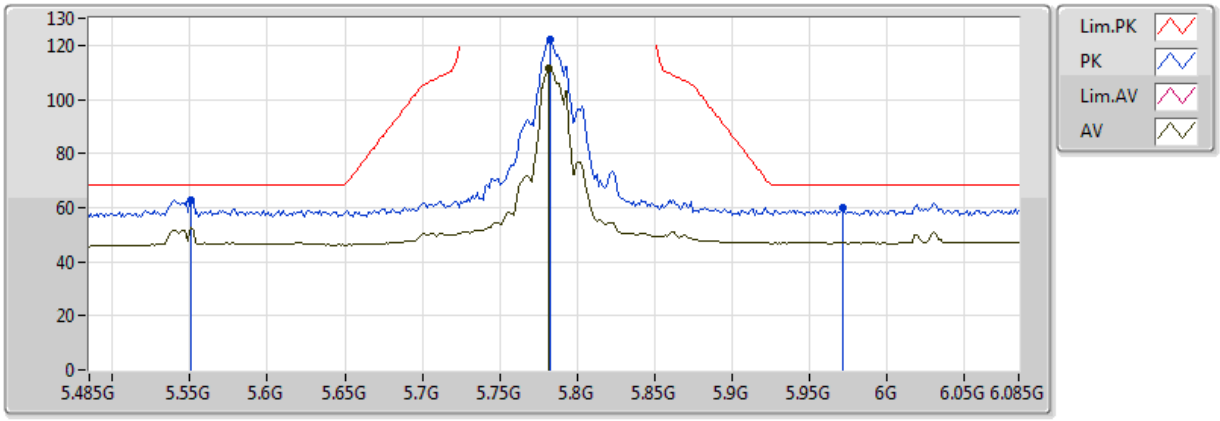


20171011
EUT Z_4TX Dipole
Setting 102
01-J-6
FSP(100080)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	11.49008G	39.73	54.00	-14.27	12.31	3	Horizontal	299	1.16	-
PK	11.49036G	53.63	74.00	-20.37	12.31	3	Horizontal	299	1.16	-

802.11a_Nss1,(6Mbps)_4TX

5785MHz_TX

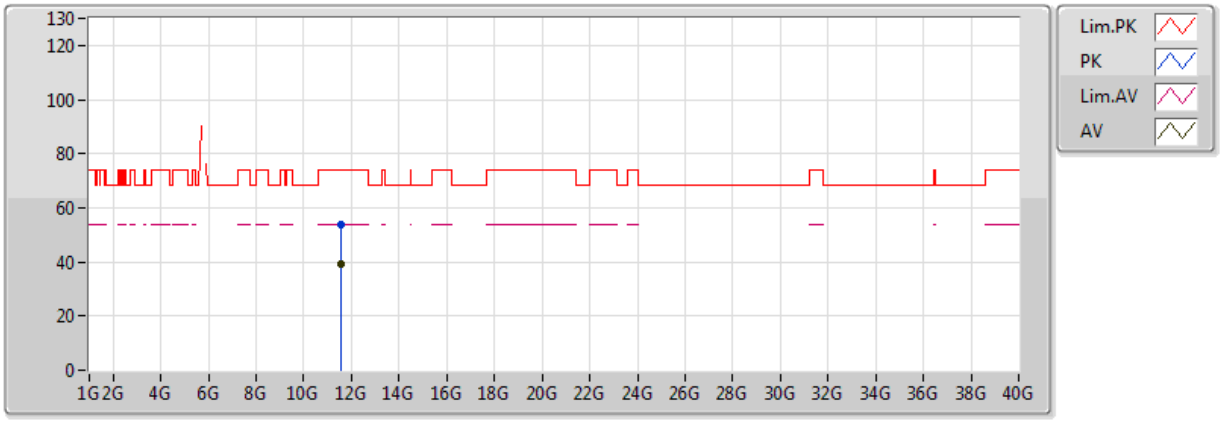


20171011
EUT Z_4TX Dipole
Setting 104
01-J-6-10
FSP(100080)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	5.7814G	111.71	Inf	-Inf	5.82	3	Vertical	264	1.49	-
PK	5.551G	62.64	68.20	-5.56	5.11	3	Vertical	264	1.49	-
PK	5.7826G	121.91	Inf	-Inf	5.82	3	Vertical	264	1.49	-
PK	5.971G	59.86	68.20	-8.34	6.51	3	Vertical	264	1.49	-

802.11a_Nss1,(6Mbps)_4TX

5785MHz_TX

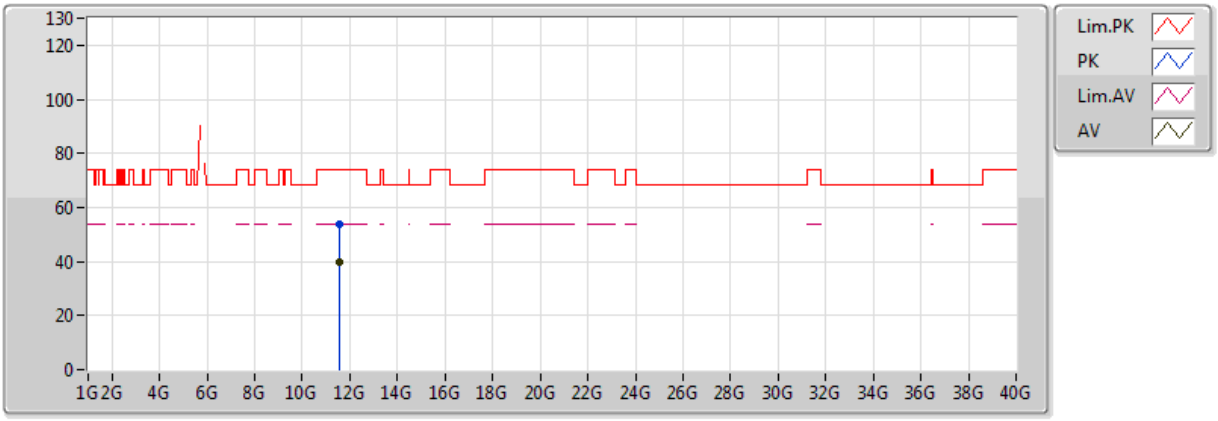


20171011
EUT Z_4TX Dipole
Setting 104
01-J-6
FSP(100080)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	11.56944G	39.47	54.00	-14.53	12.29	3	Vertical	326	1.74	-
PK	11.57636G	54.06	74.00	-19.94	12.29	3	Vertical	326	1.74	-

802.11a_Nss1,(6Mbps)_4TX

5785MHz_TX

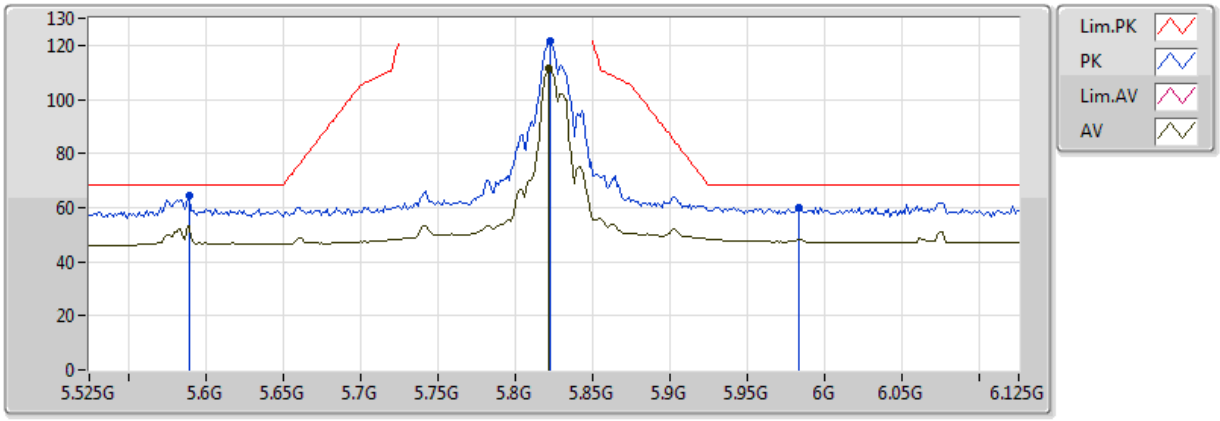


20171011
EUT Z_4TX Dipole
Setting 104
01-J-6
FSP(100080)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	11.57836G	39.55	54.00	-14.45	12.29	3	Horizontal	206	2.34	-
PK	11.57016G	53.77	74.00	-20.23	12.29	3	Horizontal	206	2.34	-

802.11a_Nss1,(6Mbps)_4TX

5825MHz_TX

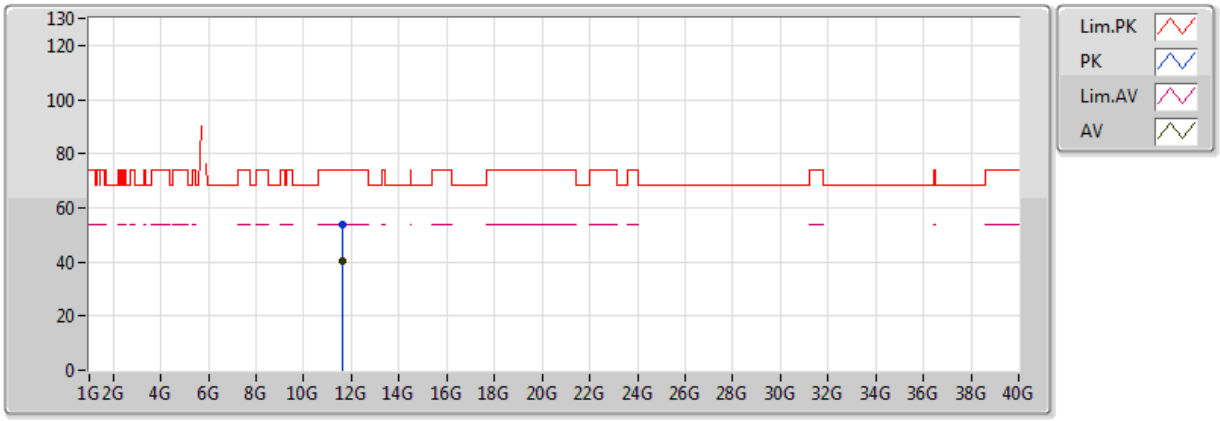


20171011
EUT Z_4TX Dipole
Setting 104
01-J-6-10
FSP(100080)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	5.8214G	111.69	Inf	-Inf	5.95	3	Vertical	258	2.15	-
PK	5.5898G	64.38	68.20	-3.82	5.27	3	Vertical	258	2.15	-
PK	5.8226G	121.44	Inf	-Inf	5.95	3	Vertical	258	2.15	-
PK	5.9834G	60.00	68.20	-8.20	6.56	3	Vertical	258	2.15	-

802.11a_Nss1,(6Mbps)_4TX

5825MHz_TX

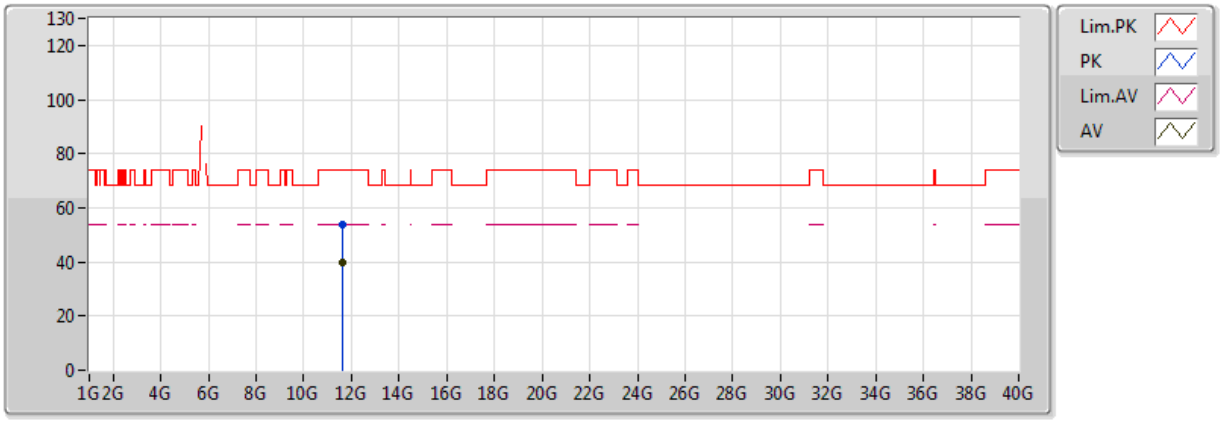


20171011
EUT Z_4TX Dipole
Setting 104
01-J-6
FSP(100080)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	11.65228G	40.07	54.00	-13.93	12.28	3	Vertical	301	2.34	-
PK	11.65024G	53.82	74.00	-20.18	12.28	3	Vertical	301	2.34	-

802.11a_Nss1,(6Mbps)_4TX

5825MHz_TX

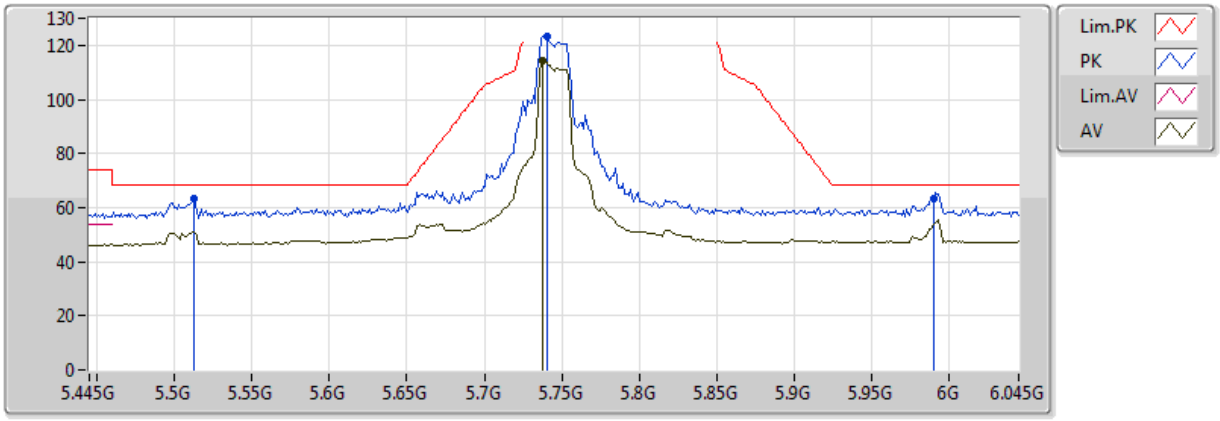


20171011
EUT Z_4TX Dipole
Setting 104
01-J-6
FSP(100080)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	11.65284G	40.03	54.00	-13.97	12.28	3	Horizontal	341	1.47	-
PK	11.641G	53.98	74.00	-20.02	12.28	3	Horizontal	341	1.47	-

802.11ac VHT20-BF_Nss1,(MCS0)_4TX

5745MHz_TX

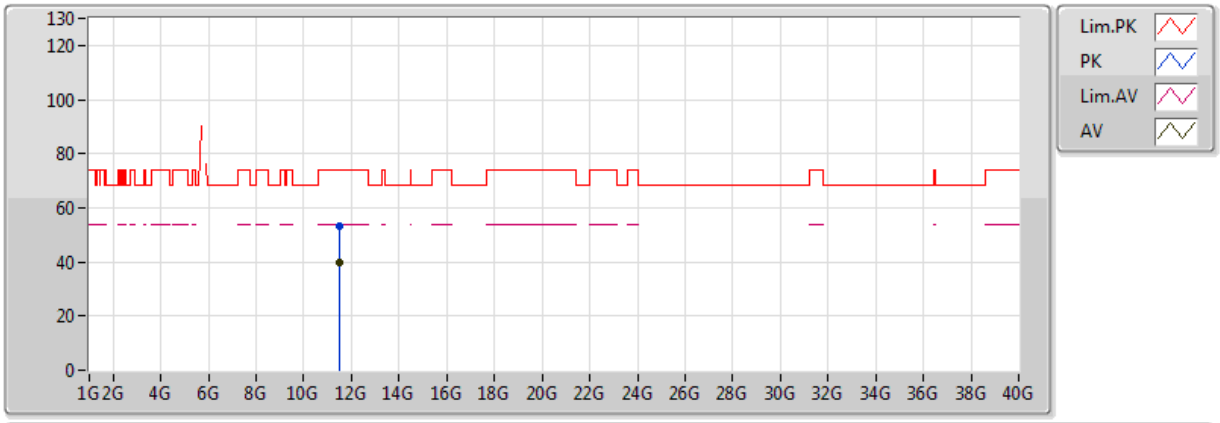


20171011
EUT Z_4TX Dipole
Setting 104
01-J-6-10
FSP(100080)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	5.7378G	114.19	Inf	-Inf	5.70	3	Vertical	271	1.71	-
PK	5.5122G	63.15	68.20	-5.05	4.95	3	Vertical	271	1.71	-
PK	5.7402G	123.25	Inf	-Inf	5.71	3	Vertical	271	1.71	-
PK	5.9898G	63.55	68.20	-4.65	6.58	3	Vertical	271	1.71	-

802.11ac VHT20-BF_Nss1,(MCS0)_4TX

5745MHz_TX

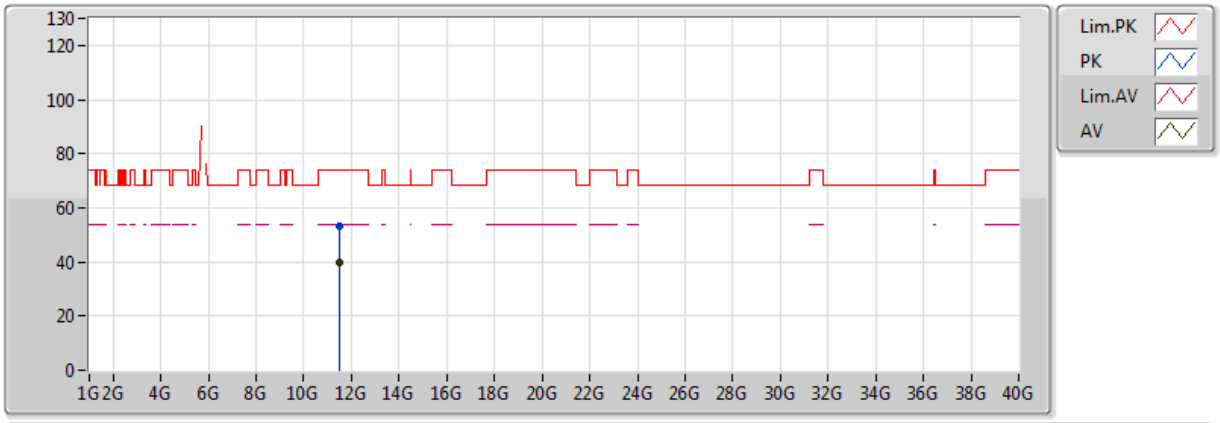


20171011
EUT Z_4TX Dipole
Setting 104
01-J-6
FSP(100080)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	11.481G	39.86	54.00	-14.14	12.31	3	Vertical	227	2.96	-
PK	11.48516G	53.23	74.00	-20.77	12.31	3	Vertical	227	2.96	-

802.11ac VHT20-BF_Nss1,(MCS0)_4TX

5745MHz_TX

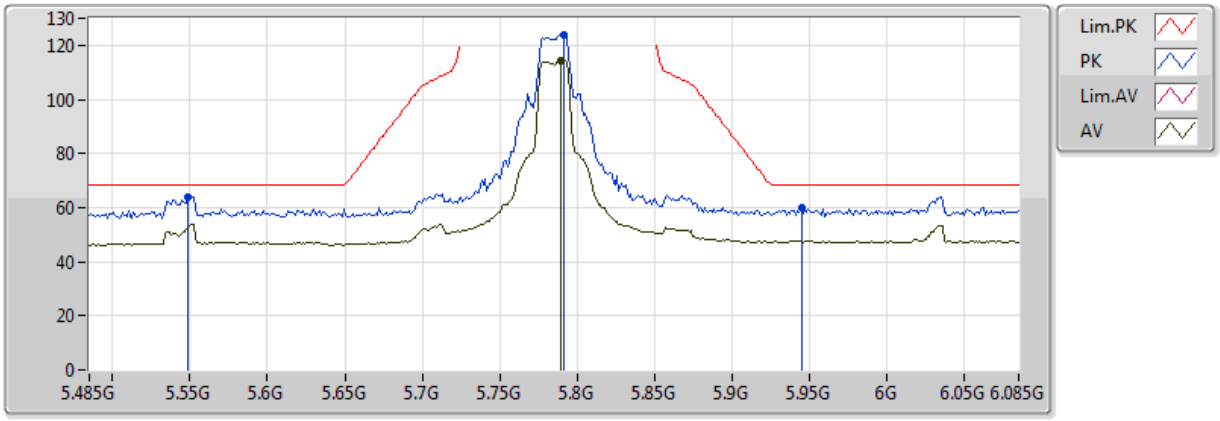


20171011
EUT Z_4TX Dipole
Setting 104
01-J-6
FSP(100080)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	11.49072G	39.93	54.00	-14.07	12.31	3	Horizontal	186	1.42	-
PK	11.48096G	53.20	74.00	-20.80	12.31	3	Horizontal	186	1.42	-

802.11ac VHT20-BF_Nss1,(MCS0)_4TX

5785MHz_TX

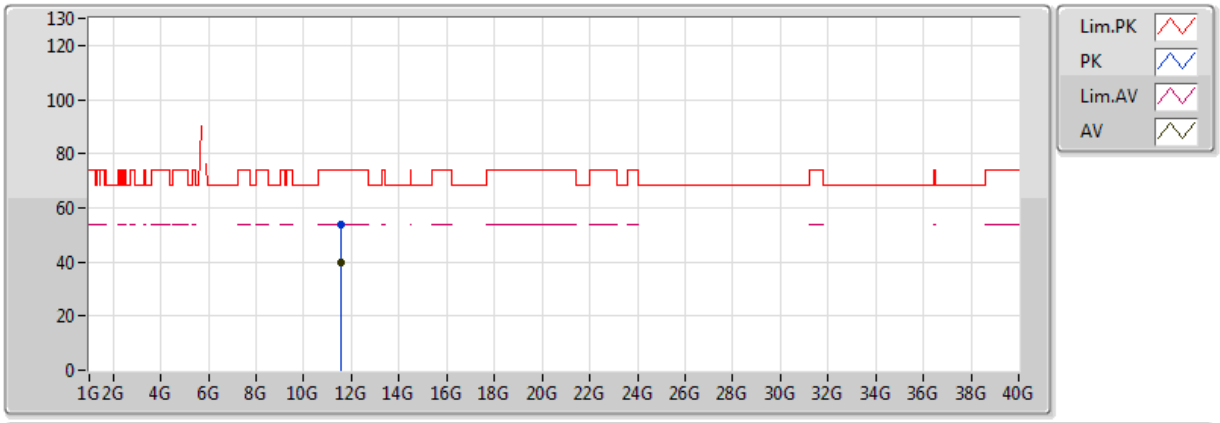


20171011
EUT Z_4TX Dipole
Setting 105
01-J-6-10
FSP(100080)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	5.7898G	114.44	Inf	-Inf	5.84	3	Vertical	268	1.38	-
PK	5.5486G	64.14	68.20	-4.06	5.10	3	Vertical	268	1.38	-
PK	5.791G	124.05	Inf	-Inf	5.85	3	Vertical	268	1.38	-
PK	5.9446G	59.96	68.20	-8.24	6.41	3	Vertical	268	1.38	-

802.11ac VHT20-BF_Nss1,(MCS0)_4TX

5785MHz_TX

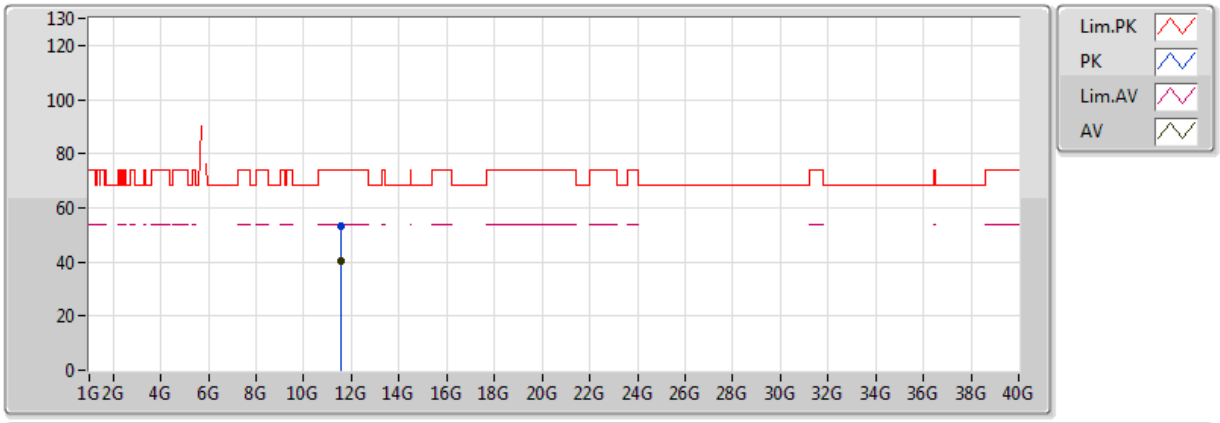


20171011
EUT Z_4TX Dipole
Setting 105
01-J-6
FSP(100080)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	11.57556G	40.04	54.00	-13.96	12.29	3	Vertical	148	2.32	-
PK	11.57908G	53.62	74.00	-20.38	12.29	3	Vertical	148	2.32	-

802.11ac VHT20-BF_Nss1,(MCS0)_4TX

5785MHz_TX

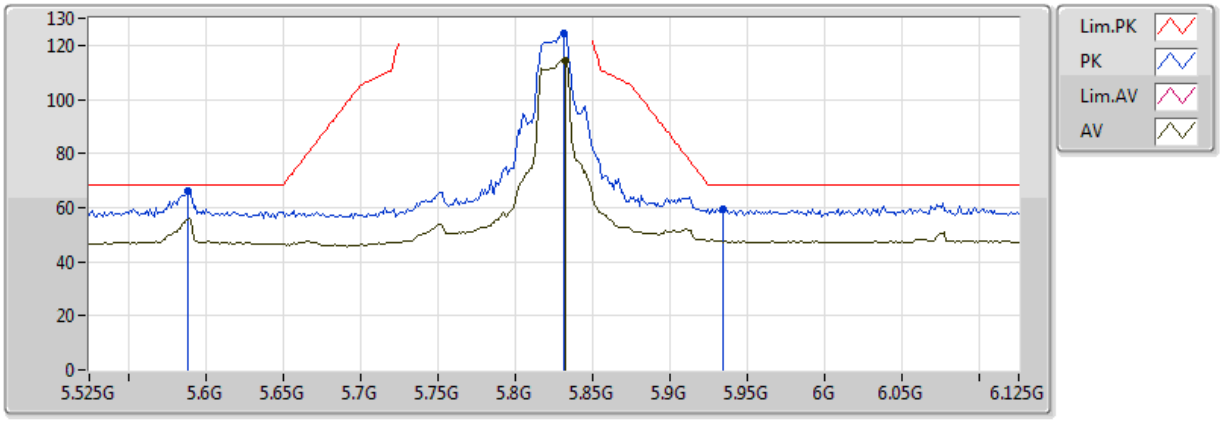


20171011
EUT Z_4TX Dipole
Setting 105
01-J-6
FSP(100080)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	11.57896G	40.20	54.00	-13.80	12.29	3	Horizontal	217	1.34	-
PK	11.57744G	53.43	74.00	-20.57	12.29	3	Horizontal	217	1.34	-

802.11ac VHT20-BF_Nss1,(MCS0)_4TX

5825MHz_TX

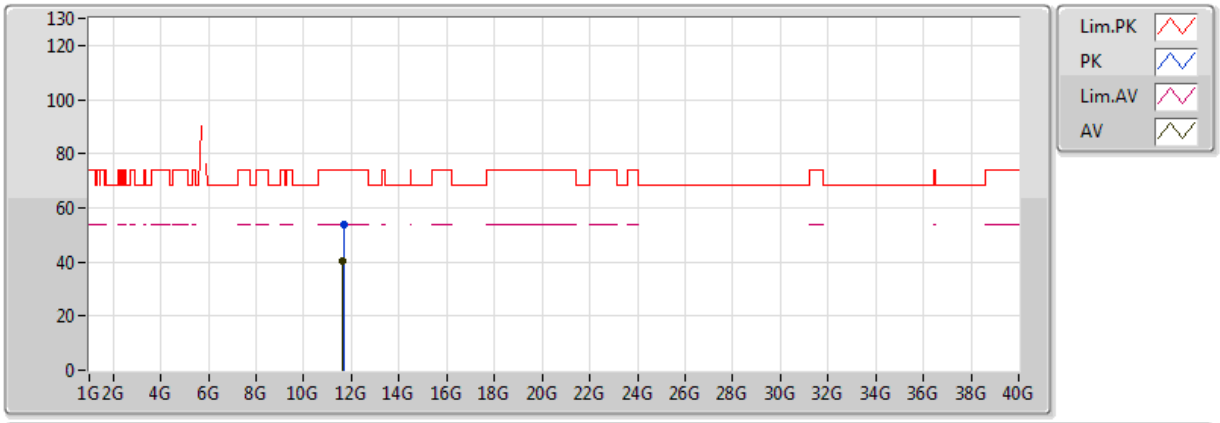


20171011
EUT Z_4TX Dipole
Setting 105
01-J-6-10
FSP(100080)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	5.8322G	114.56	Inf	-Inf	5.99	3	Vertical	265	1.24	-
PK	5.5886G	66.04	68.20	-2.16	5.26	3	Vertical	265	1.24	-
PK	5.831G	124.23	Inf	-Inf	5.98	3	Vertical	265	1.24	-
PK	5.9342G	59.44	68.20	-8.76	6.37	3	Vertical	265	1.24	-

802.11ac VHT20-BF_Nss1,(MCS0)_4TX

5825MHz_TX

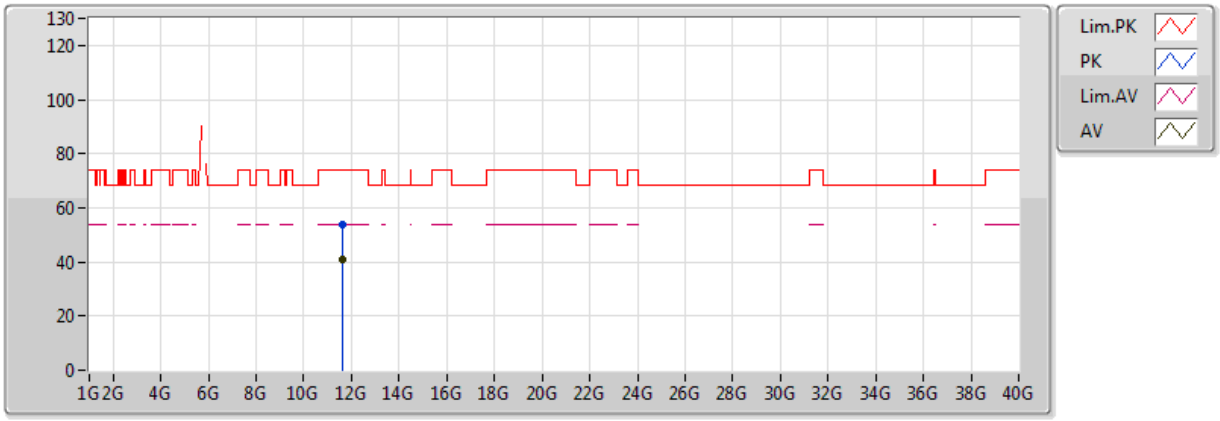


20171011
EUT Z_4TX Dipole
Setting 105
01-J-6
FSP(100080)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	11.64544G	40.60	54.00	-13.40	12.28	3	Vertical	59	1.43	-
PK	11.65904G	53.54	74.00	-20.46	12.27	3	Vertical	59	1.43	-

802.11ac VHT20-BF_Nss1,(MCS0)_4TX

5825MHz_TX

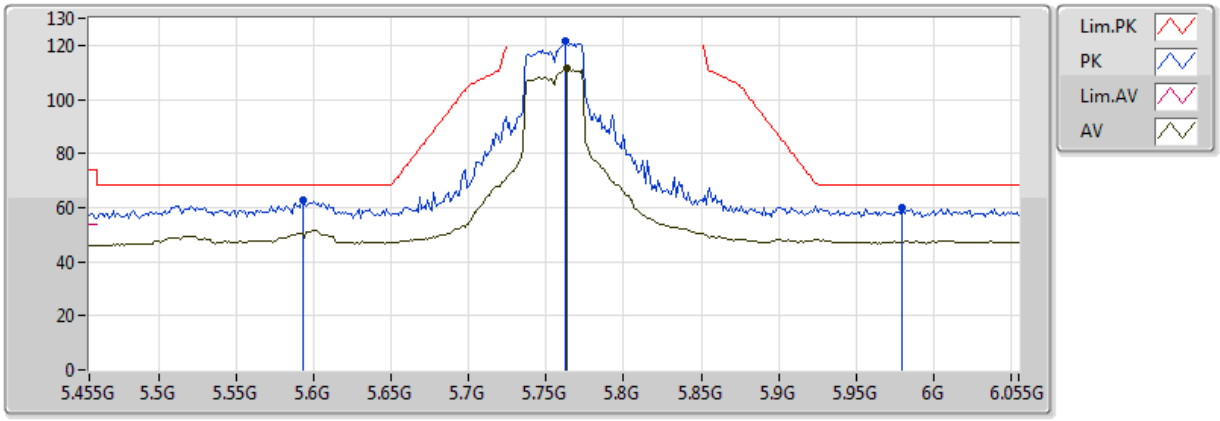


20171011
EUT Z_4TX Dipole
Setting 105
01-J-6
FSP(100080)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	11.64204G	40.64	54.00	-13.36	12.28	3	Horizontal	175	1.70	-
PK	11.64892G	53.61	74.00	-20.39	12.28	3	Horizontal	175	1.70	-

802.11ac VHT40-BF_Nss1,(MCS0)_4TX

5755MHz_TX

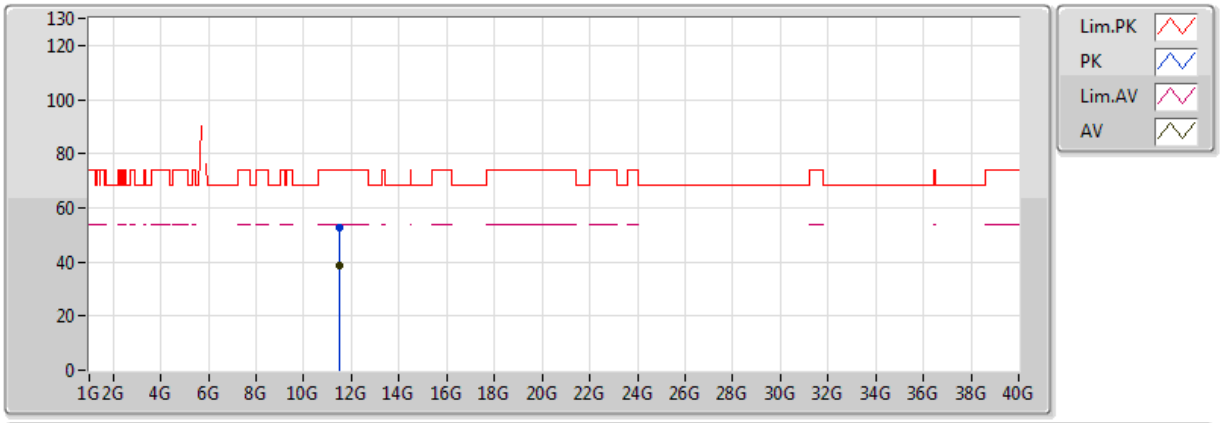


20171011
EUT Z_4TX Dipole
Setting 103
01-J-6-10
FSP(100080)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	5.7634G	111.48	Inf	-Inf	5.77	3	Vertical	268	1.36	-
PK	5.593G	62.76	68.20	-5.44	5.28	3	Vertical	268	1.36	-
PK	5.7622G	121.60	Inf	-Inf	5.77	3	Vertical	268	1.36	-
PK	5.9794G	59.95	68.20	-8.25	6.54	3	Vertical	268	1.36	-

802.11ac VHT40-BF_Nss1,(MCS0)_4TX

5755MHz_TX

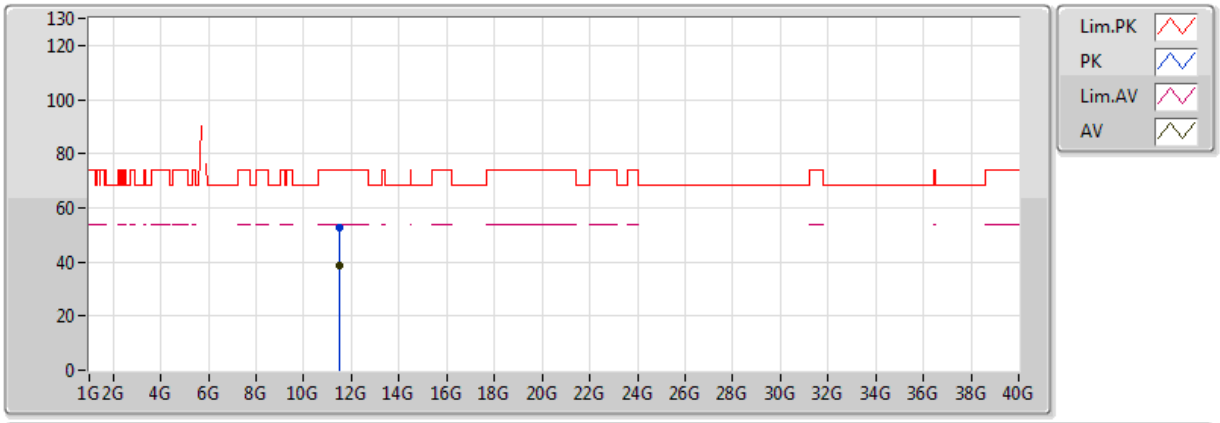


20171011
EUT Z_4TX Dipole
Setting 103
01-J-6
FSP(100080)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	11.50092G	38.77	54.00	-15.23	12.30	3	Vertical	253	2.12	-
PK	11.50984G	52.69	74.00	-21.31	12.30	3	Vertical	253	2.12	-

802.11ac VHT40-BF_Nss1,(MCS0)_4TX

5755MHz_TX

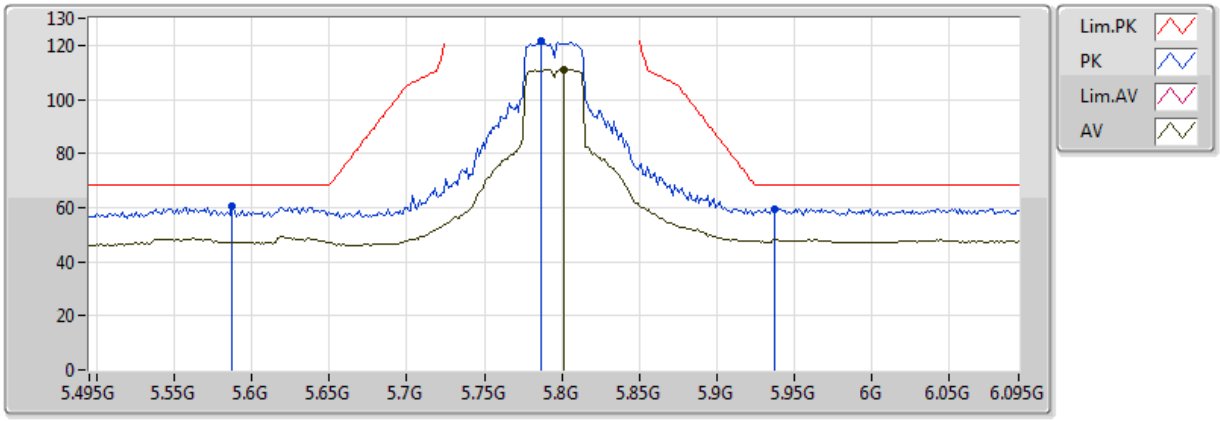


20171011
EUT Z_4TX Dipole
Setting 103
01-J-6
FSP(100080)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	11.50104G	38.76	54.00	-15.24	12.30	3	Horizontal	266	2.28	-
PK	11.50644G	52.70	74.00	-21.30	12.30	3	Horizontal	266	2.28	-

802.11ac VHT40-BF_Nss1,(MCS0)_4TX

5795MHz_TX

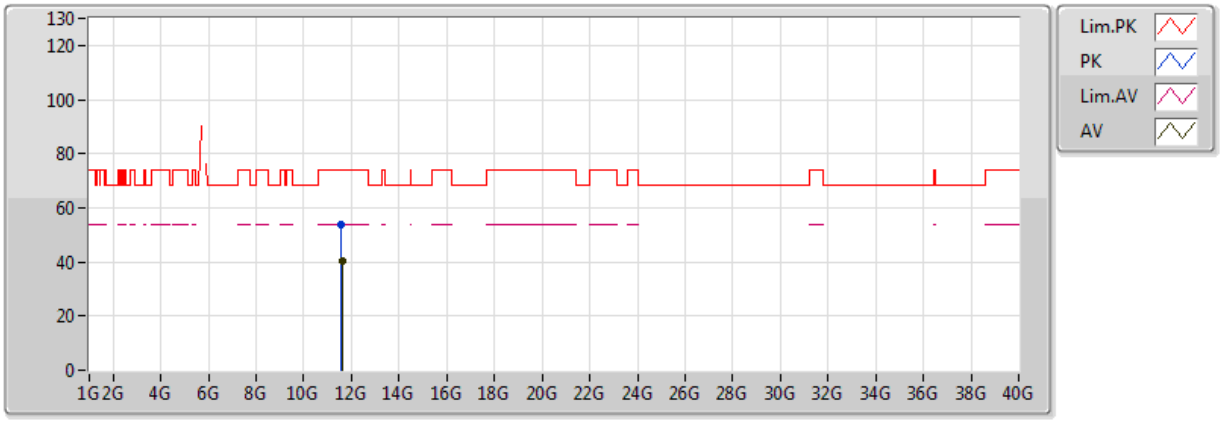


20171011
EUT Z_4TX Dipole
Setting 103
01-J-6-10
FSP(100080)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	5.801G	111.17	Inf	-Inf	5.87	3	Vertical	269	1.26	-
PK	5.5874G	60.24	68.20	-7.96	5.26	3	Vertical	269	1.26	-
PK	5.7866G	121.62	Inf	-Inf	5.83	3	Vertical	269	1.26	-
PK	5.9378G	59.58	68.20	-8.62	6.38	3	Vertical	269	1.26	-

802.11ac VHT40-BF_Nss1,(MCS0)_4TX

5795MHz_TX

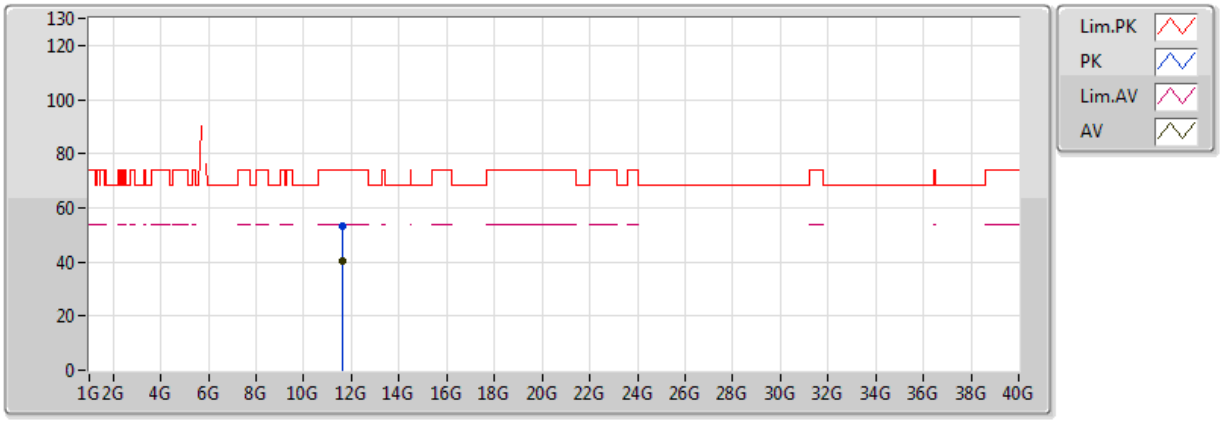


20171011
EUT Z_4TX Dipole
Setting 103
01-J-6
FSP(100080)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	11.59448G	40.33	54.00	-13.67	12.29	3	Vertical	317	1.27	-
PK	11.58736G	53.61	74.00	-20.39	12.29	3	Vertical	317	1.27	-

802.11ac VHT40-BF_Nss1,(MCS0)_4TX

5795MHz_TX

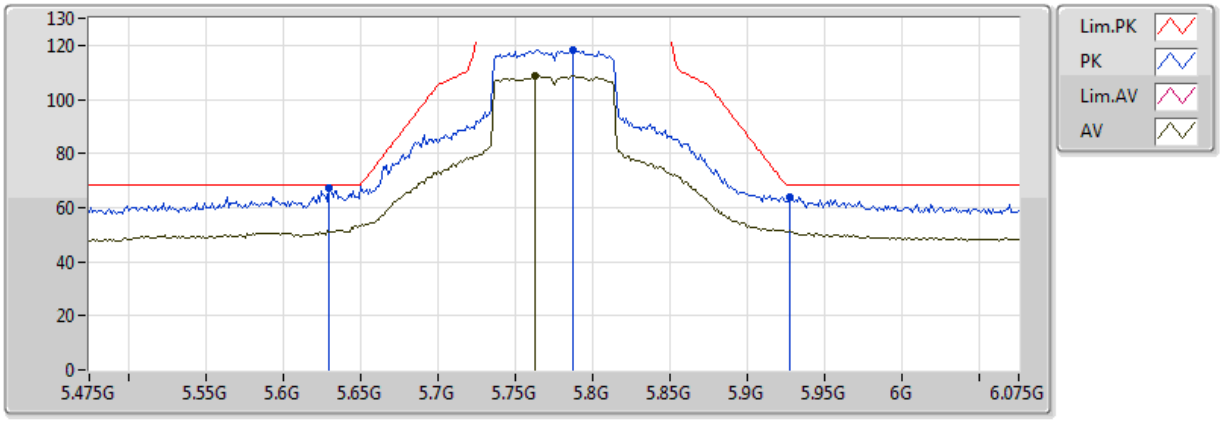


20171011
EUT Z_4TX Dipole
Setting 103
01-J-6
FSP(100080)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	11.5938G	40.46	54.00	-13.54	12.29	3	Horizontal	74	1.56	-
PK	11.59336G	53.26	74.00	-20.74	12.29	3	Horizontal	74	1.56	-

802.11ac VHT80-BF_Nss1,(MCS0)_4TX

5775MHz_TX

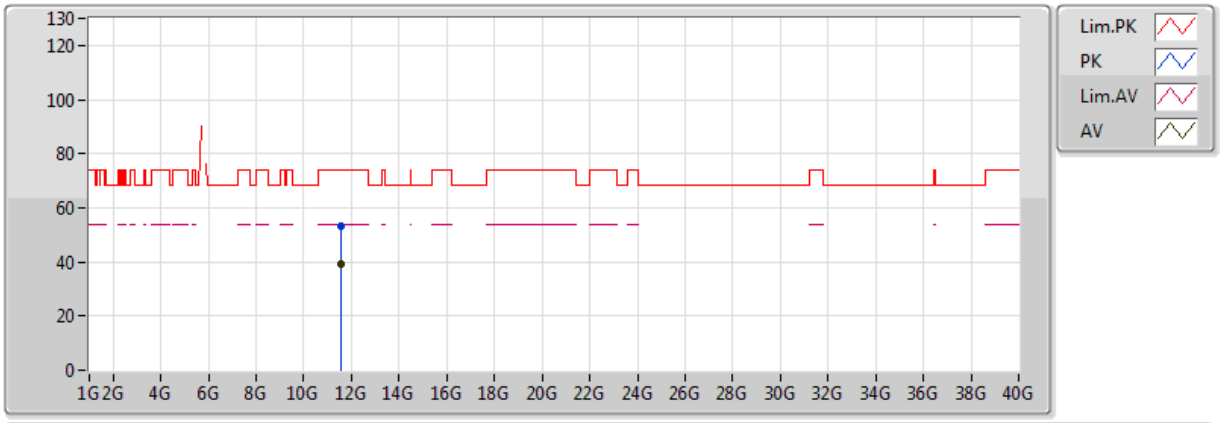


20171011
EUT Z_4TX Dipole
Setting 103
01-J-6-10
FSP(100080)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	5.763G	108.84	Inf	-Inf	5.77	3	Vertical	268	1.44	-
PK	5.6298G	67.10	68.20	-1.10	5.40	3	Vertical	268	1.44	-
PK	5.787G	118.09	Inf	-Inf	5.83	3	Vertical	268	1.44	-
PK	5.9274G	63.73	68.20	-4.47	6.34	3	Vertical	268	1.44	-

802.11ac VHT80-BF_Nss1,(MCS0)_4TX

5775MHz_TX

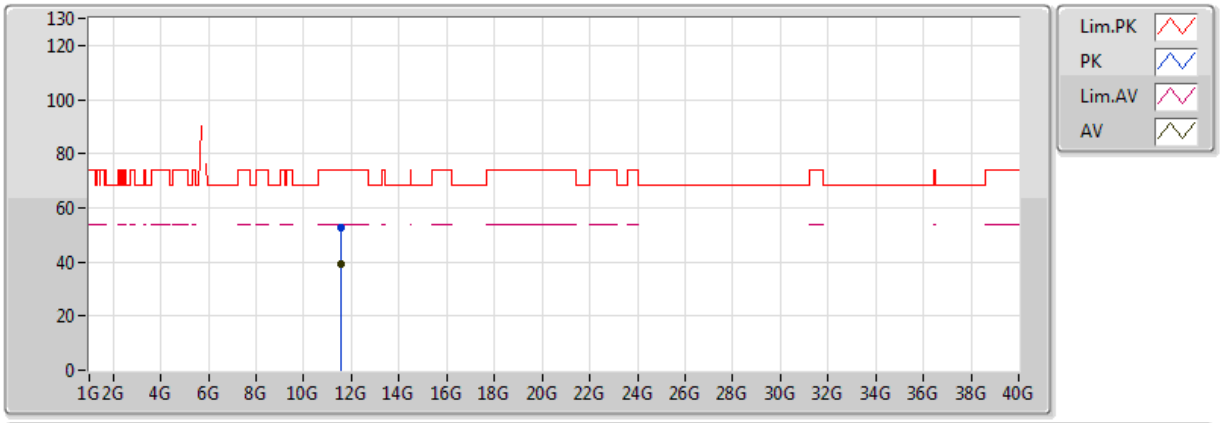


20171011
EUT Z_4TX Dipole
Setting 103
01-J-6
FSP(100080)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	11.5598G	39.06	54.00	-14.94	12.29	3	Vertical	33	1.48	-
PK	11.5528G	53.19	74.00	-20.81	12.29	3	Vertical	33	1.48	-

802.11ac VHT80-BF_Nss1,(MCS0)_4TX

5775MHz_TX



20171011
EUT Z_4TX Dipole
Setting 103
01-J-6
FSP(100080)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	11.55956G	39.08	54.00	-14.92	12.29	3	Horizontal	50	1.57	-
PK	11.5592G	52.81	74.00	-21.19	12.29	3	Horizontal	50	1.57	-

Mode: 20 MHz / Port 2
Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5785 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5784.9953	5784.9947	5784.9941	5784.9940
110.00	5784.9948	5784.9941	5784.9940	5784.9933
93.50	5784.9946	5784.9939	5784.9935	5784.9927
Max. Deviation (MHz)	0.0054	0.0061	0.0065	0.0073
Max. Deviation (ppm)	0.94	1.06	1.13	1.26
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(℃)	5785 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5784.9962	5784.9957	5784.9950	5784.9943
10	5784.9950	5784.9946	5784.9945	5784.9942
20	5784.9948	5784.9946	5784.9938	5784.9930
30	5784.9944	5784.9937	5784.9931	5784.9930
40	5784.9933	5784.9926	5784.9923	5784.9916
Max. Deviation (MHz)	0.0067	0.0074	0.0077	0.0084
Max. Deviation (ppm)	1.17	1.29	1.34	1.46
Result	Pass			

Mode: 40 MHz / Port 2
Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5755 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5754.9949	5754.9940	5754.9931	5754.9925
110.00	5754.9948	5754.9945	5754.9936	5754.9931
93.50	5754.9942	5754.9935	5754.9932	5754.9924
Max. Deviation (MHz)	0.0058	0.0065	0.0069	0.0076
Max. Deviation (ppm)	1.01	1.13	1.20	1.32
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(℃)	5755 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5754.9966	5754.9961	5754.9954	5754.9944
10	5754.9956	5754.9952	5754.9945	5754.9939
20	5754.9948	5754.9945	5754.9935	5754.9928
30	5754.9944	5754.9943	5754.9935	5754.9933
40	5754.9925	5754.9918	5754.9917	5754.9915
Max. Deviation (MHz)	0.0075	0.0082	0.0083	0.0085
Max. Deviation (ppm)	1.31	1.43	1.45	1.48
Result	Pass			

Mode: 80 MHz / Port 2

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5775 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5774.9955	5774.9948	5774.9946	5774.9937
110.00	5774.9948	5774.9940	5774.9939	5774.9929
93.50	5774.9939	5774.9929	5774.9928	5774.9924
Max. Deviation (MHz)	0.0061	0.0071	0.0072	0.0076
Max. Deviation (ppm)	1.06	1.23	1.25	1.32
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(℃)	5775 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5774.9974	5774.9973	5774.9963	5774.9954
10	5774.9957	5774.9947	5774.9938	5774.9931
20	5774.9948	5774.9944	5774.9937	5774.9933
30	5774.9944	5774.9939	5774.9929	5774.9926
40	5774.9930	5774.9929	5774.9927	5774.9920
Max. Deviation (MHz)	0.0070	0.0071	0.0073	0.0080
Max. Deviation (ppm)	1.22	1.24	1.27	1.39
Result	Pass			