



FCC Test Report

Equipment : Home Wi-Fi Solution Kit
Brand Name : AirTies
Model No. : Air 4930
FCC ID : Z3WAIR4930
Standard : 47 CFR FCC Part 15.407
Operating Band : 5150 MHz – 5250 MHz
5725 MHz – 5850 MHz
Applicant : AirTies Wireless Networks
Mithat Uluunlu Sokak No. 23 Esentepe, Sisli Istanbul,
34394 Turkey
Manufacturer : AirTies Wireless Networks
Mithat Uluunlu Sokak No. 23 Esentepe, Sisli Istanbul,
34394 Turkey
Function : Outdoor; Indoor; Fixed P2P
 Client

The product sample received on Sep. 29, 2017 and completely tested on Feb. 22, 2018. 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.





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PHOTOGRAPHS OF EUT V01



Summary of Test Result

Conformance Test Specifications			
Report Clause	Ref. Std. Clause	Description	Result
1.1.2	15.203	Antenna Requirement	Complied
3.1	15.207	AC Power-line Conducted Emissions	Complied
3.2	15.407(a)	Emission Bandwidth	Complied
3.3	15.407(a)	Maximum Conducted Output Power	Complied
3.4	15.407(a)	Peak Power Spectral Density	Complied
3.5	15.407(b)	Unwanted Emissions	Complied
3.6	15.407(g)	Frequency Stability	Complied



1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	IEEE Std. 802.11	Ch. Frequency (MHz)	Channel Number
5150-5250	a, n (HT20), ac (VHT20),	5180-5240	36-48 [4]
5725-5850		5745-5825	149-165 [5]
5150-5250	n (HT40), ac (VHT40),	5190-5230	38-46 [2]
5725-5850		5755-5795	151-159 [2]
5150-5250	ac (VHT80)	5210	42 [1]
5725-5850		5775	155 [1]

Band	Mode	BWch (MHz)	Nant
5.15-5.25GHz	802.11a	20	4TX
5.15-5.25GHz	802.11n HT20	20	4TX
5.15-5.25GHz	802.11n HT20-BF	20	4TX
5.15-5.25GHz	802.11ac VHT20	20	4TX
5.15-5.25GHz	802.11ac VHT20-BF	20	4TX
5.15-5.25GHz	802.11n HT40	40	4TX
5.15-5.25GHz	802.11n HT40-BF	40	4TX
5.15-5.25GHz	802.11ac VHT40	40	4TX
5.15-5.25GHz	802.11ac VHT40-BF	40	4TX
5.15-5.25GHz	802.11ac VHT80	80	4TX
5.15-5.25GHz	802.11ac VHT80-BF	80	4TX
5.725-5.85GHz	802.11a	20	4TX
5.725-5.85GHz	802.11n HT20	20	4TX
5.725-5.85GHz	802.11n HT20-BF	20	4TX
5.725-5.85GHz	802.11ac VHT20	20	4TX
5.725-5.85GHz	802.11ac VHT20-BF	20	4TX
5.725-5.85GHz	802.11n HT40	40	4TX
5.725-5.85GHz	802.11n HT40-BF	40	4TX
5.725-5.85GHz	802.11ac VHT40	40	4TX
5.725-5.85GHz	802.11ac VHT40-BF	40	4TX
5.725-5.85GHz	802.11ac VHT80-	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 and VHT80 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM 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

Ant.	Brand	Model No.	Type	Connector	Gain (dBi)			Remark	
					2.4GHz	5GHz Band 1	5GHz Band 4	2.4GHz	5GHz
1	Airties	Airties#1	Printed	N/A	1.7	1.5	3	Port 1	Port 1
2	Airties	Airties#1	Printed	N/A	-	1.5	3	-	Port 2
3	Airties	Airties#1	Printed	N/A	-	1.5	3	-	Port 3
4	Airties	Airties#1	Printed	N/A	1.7	1.5	3	Port 2	Port 4

Note: 1. The EUT has four antennas.

2. For WLAN 2.4GHz:

For IEEE 802.11b/g mode (1TX/1RX):

Only Ant. 1(Port 1) can be used as transmitting/receiving antenna.

For IEEE 802.11n mode (2TX/2RX):

Ant. 1(Port 1) and Ant. 4(Port 4) can be used as transmitting/receiving antenna.

Ant. 1(Port 1) and Ant. 4(Port 4) could transmit/receive simultaneously.

3. For WLAN 5GHz:

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

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

Ant. 1(Port 1), Ant. 2(Port 2), Ant. 3(Port 3) and Ant. 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	0.983	0.074	n/a (DC>=0.98)	n/a (DC>=0.98)
802.11ac VHT20-BF	0.98	0.088	n/a (DC>=0.98)	n/a (DC>=0.98)
802.11ac VHT40-BF	0.957	0.191	947.5u	3k
802.11ac VHT80-BF	0.904	0.438	935u	3k

1.1.4 EUT Operational Condition

EUT Power Type	From Power Adapter			
Beamforming Function	<input checked="" type="checkbox"/>	With beamforming for IEEE 802.11 n/ac in 5GHz	<input type="checkbox"/>	Without beamforming
Test Software Version	Mtool_3.0.0.2			

Note: This device supports AP and Mesh mode.



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 v02r01
- ◆ FCC KDB 662911 D01 v02r01

1.3 Testing Location Information

Testing Location		
<input type="checkbox"/>	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
<input checked="" type="checkbox"/>	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 / Owen Hsu	20C / 56%	Oct. 13, 2017~Feb. 22, 2018
Radiated below 1GHz	03CH01-CB	Benson Su	22°C / 54%	Oct. 11, 2017~Feb. 14, 2018
Radiated above 1GHz		Zero Chen / Cola Fan		
AC Conduction	CO01-CB	GN Hou	23°C / 62%	Oct. 12, 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
Conducted Emission (150kHz ~ 30MHz)	3.2 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	3.6 dB	Confidence levels of 95%
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 x10 ⁻⁸	Confidence levels of 95%
Frequency Stability	6.06 x10 ⁻⁸	Confidence levels of 95%



2 Test Configuration of EUT

2.1 Test Channel Mode

Mode	Power Setting
802.11a_Nss1,(6Mbps)_4TX	-
5180MHz	87
5200MHz	94
5240MHz	94
5745MHz	83
5785MHz	83
5825MHz	96
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	-
5180MHz	83
5200MHz	88
5240MHz	89
5745MHz	85
5785MHz	84
5825MHz	84
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	-
5190MHz	63
5230MHz	88
5755MHz	84
5795MHz	84
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	-
5210MHz	67
5775MHz	80

Note:

- ♦ 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.
- ♦ There are two modes of EUT, one is beamforming mode, and the other is non-beamforming mode for 802.11n/ac in 5GHz. Only the beamforming mode had been tested and recorded in this test report.



2.2 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	AC power-line conducted emissions
Condition	AC power-line conducted measurement for line and neutral
Operating Mode	Normal Link

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 < 1GHz	Normal Link
Operating Mode > 1GHz	CTX

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Radiated Emission Co-location
Test Condition	Radiated measurement
Operating Mode	Normal Link
1	WLAN 2.4GHz + WLAN 5GHz
Refer to Appendix G for Radiated Emission Co-location.	

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	WLAN 2.4GHz + WLAN 5GHz
Refer to Sporton Test Report No.: FA792934 for Co-location RF Exposure Evaluation.	

Note: The EUT can only be used at standing position.



2.3 EUT Operation during Test

For CTX Mode:

non-beamforming mode:

The EUT was programmed to be in continuously transmitting mode.

beamforming 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 Telnet.
3. Executed "Telnet" to link with the remote workstation to transmit and receive packet by RX Device and transmit duty cycle no less than 98%.

For Normal Link:

During the test, the EUT operation to normal function.



2.4 Accessories

Accessories				
No.	Equipment Name	Brand Name	Model Name	Rating
1	Adapter	MOSO	MSA-C1000CS12.0-12A-US	INPUT: 100-240V, 50/60Hz 0.5A max OUTPUT: 12V, 1A

2.5 Support Equipment

For Test Site No: CO01-CB

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB*3	DELL	E6430	DoC

For Test Site No: 03CH01-CB (below 1GHz)

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB*3	DELL	E4300	DoC

For Test Site No: 03CH01-CB (above 1GHz)

For Non-Beamforming Mode:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB	DELL	E4300	DoC

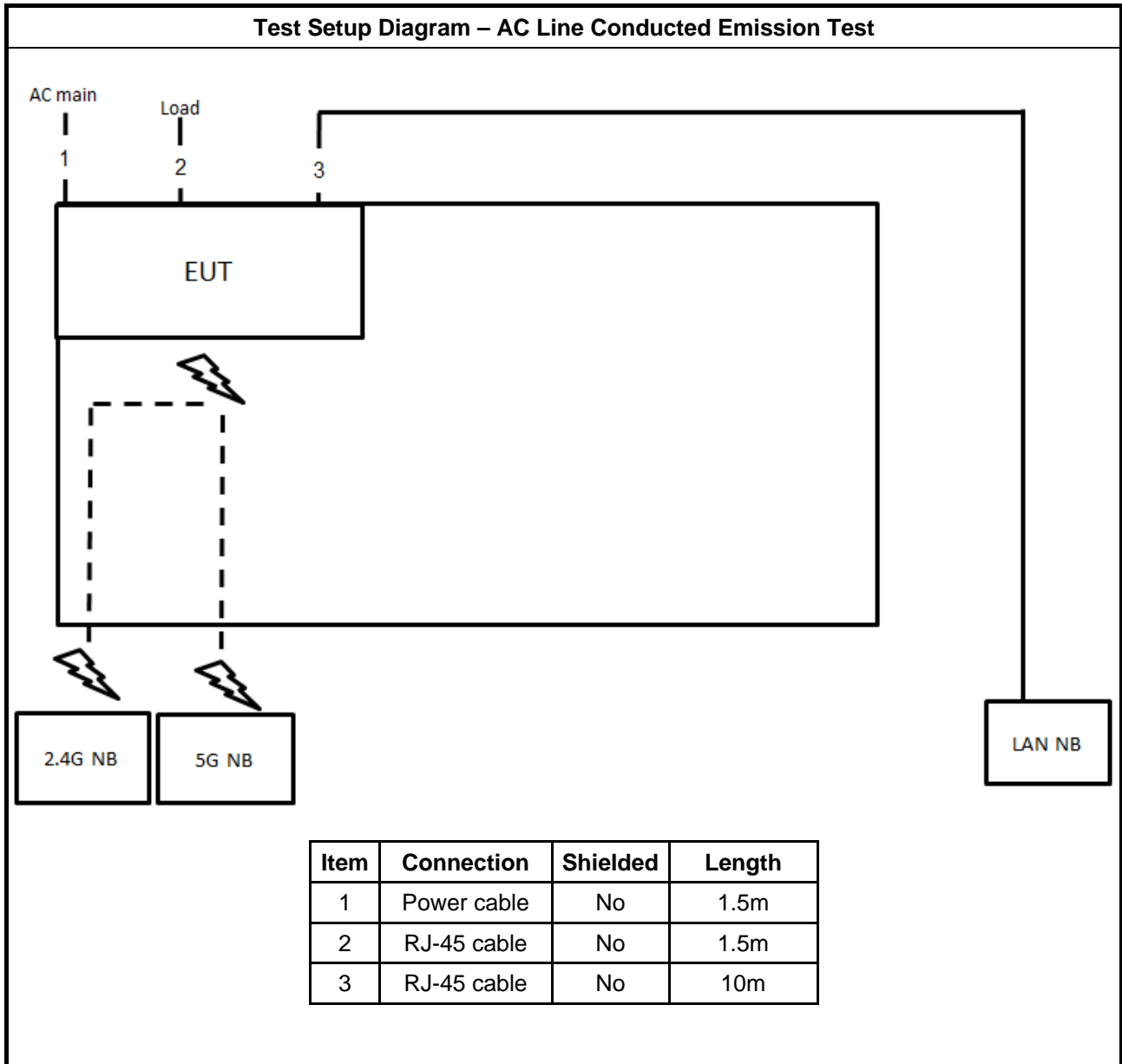
For Beamforming Mode:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB	DELL	E4300	DoC
2	RX Device	ASUS	PCE-88U	MSQ-PCIE0U00
3	Device PC	DELL	T3400	DoC

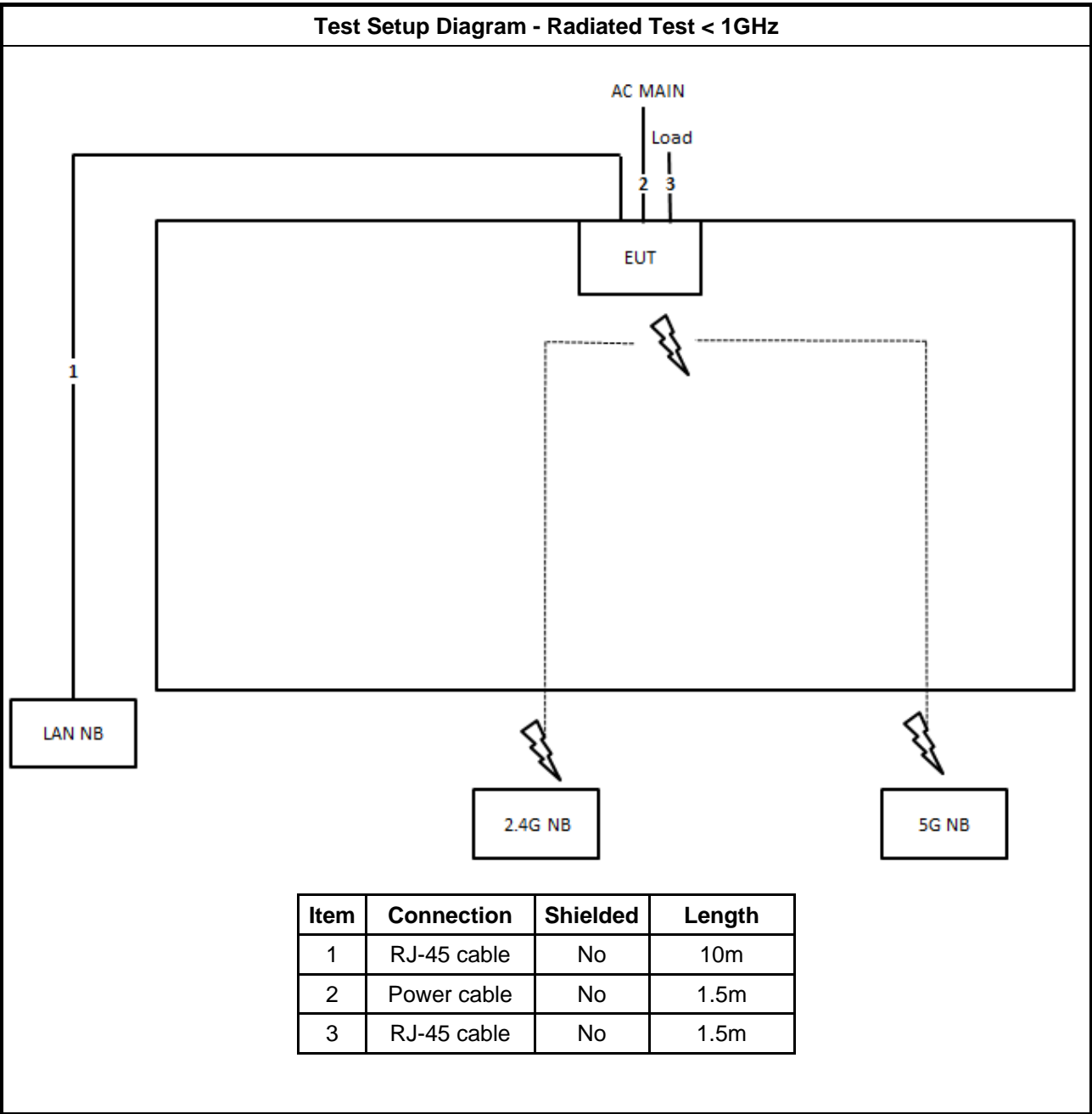
For Test Site No: TH01-CB

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB*2	DELL	E4300	DoC
2	WLAN module (RX Device)	Broadcom	BCM943162ZP	QDS-BRCM1075

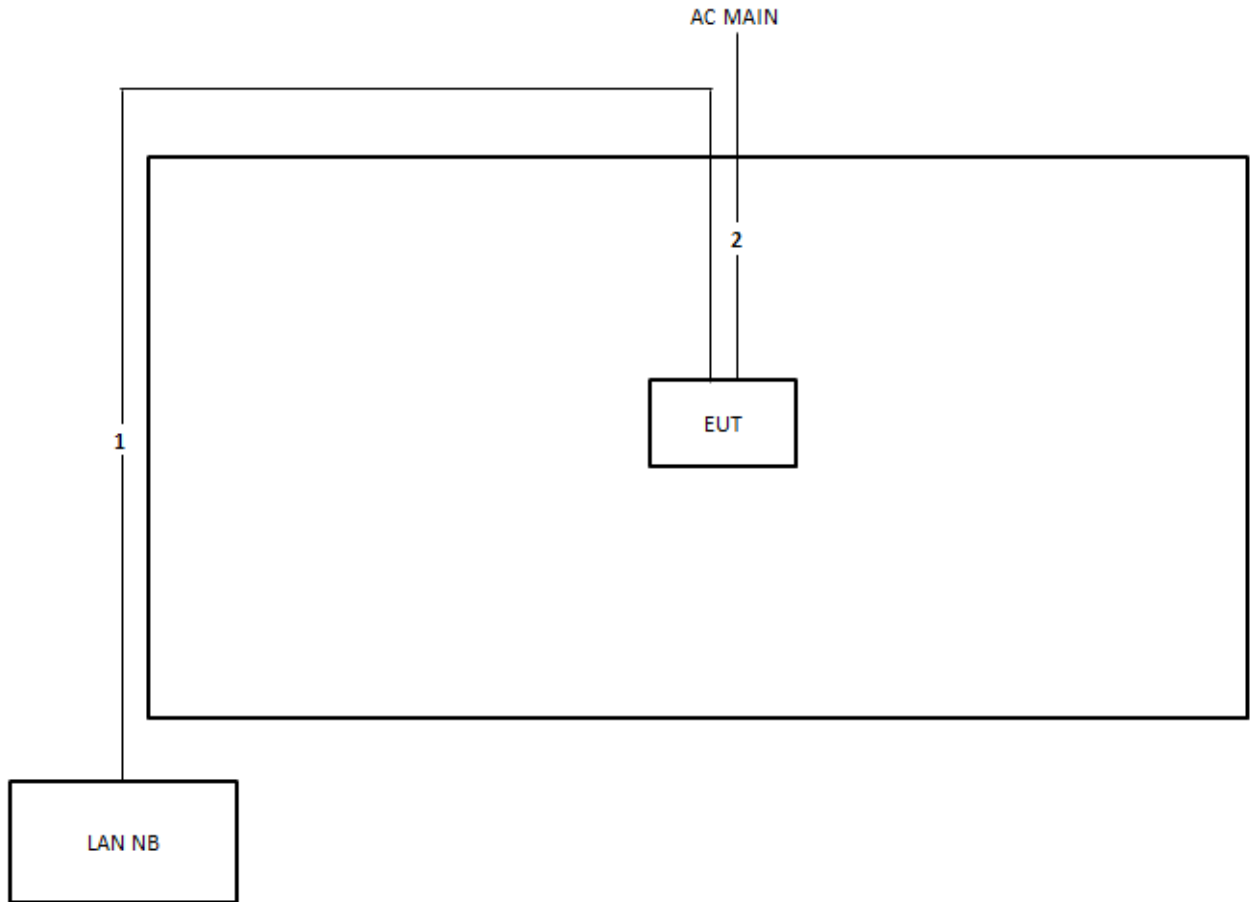
2.6 Test Setup Diagram



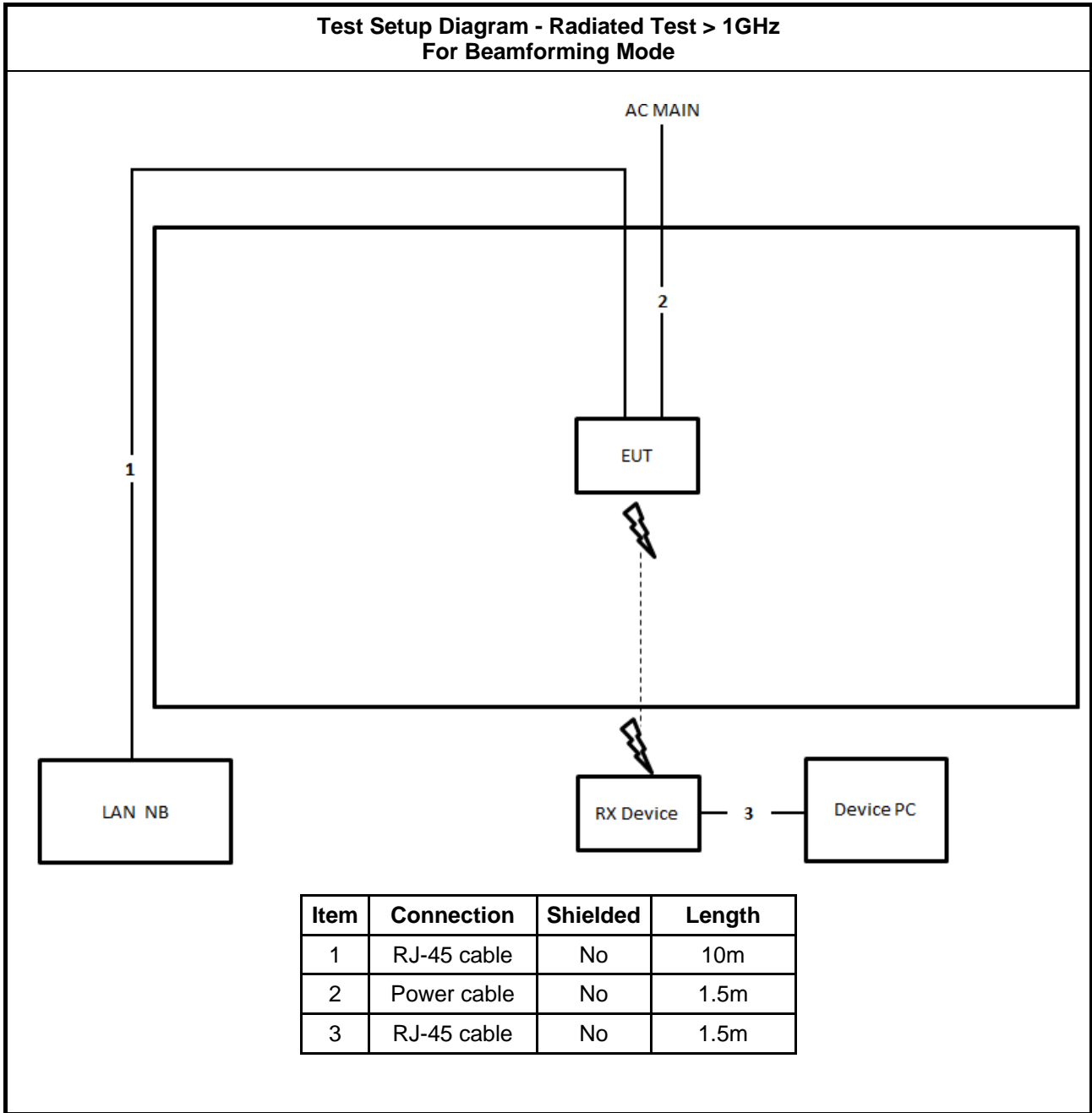
Test Setup Diagram - Radiated Test < 1GHz



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



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





3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

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

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

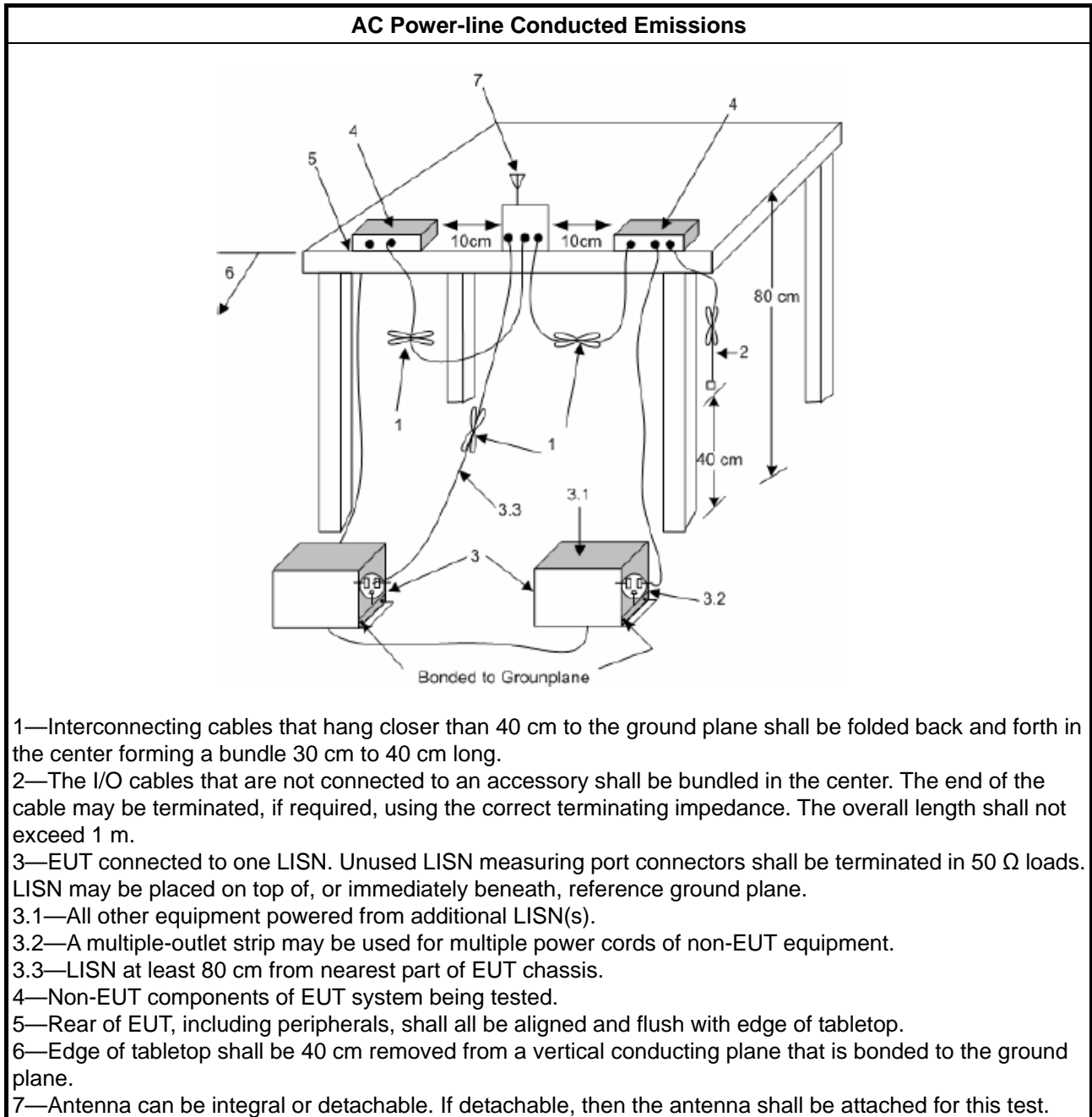
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

Test Method
<input checked="" type="checkbox"/> 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	
<input checked="" type="checkbox"/>	For the 5.15-5.25 GHz band, N/A
<input type="checkbox"/>	For the 5.25-5.35 GHz band, the maximum conducted output power shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz.
<input type="checkbox"/>	For the 5.47-5.725 GHz band, the maximum conducted output power shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz.
<input checked="" type="checkbox"/>	For the 5.725-5.85 GHz band, 6 dB emission bandwidth \geq 500kHz.
LE-LAN Devices	
<input type="checkbox"/>	For the band 5.15-5.25 GHz, the maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz.
<input type="checkbox"/>	For the 5.25-5.35 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz
<input type="checkbox"/>	For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz
<input type="checkbox"/>	For the 5.725-5.85 GHz band, 6 dB emission bandwidth \geq 500kHz.

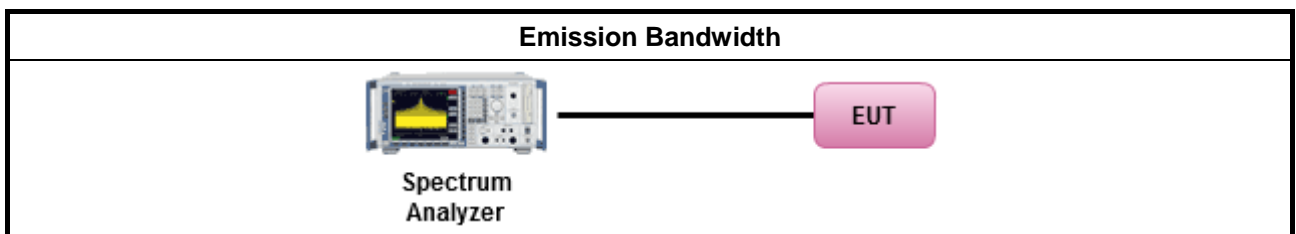
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

Test Method	
<ul style="list-style-type: none"> ▪ For the emission bandwidth shall be measured using one of the options below: 	
<input checked="" type="checkbox"/>	Refer as FCC KDB 789033, clause C for EBW and clause D for OBW measurement.
<input type="checkbox"/>	Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.
<input type="checkbox"/>	Refer as IC RSS-Gen, clause 4.6 for bandwidth testing.

3.2.4 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	
<input checked="" type="checkbox"/> For the 5.15-5.25 GHz band:	
	<ul style="list-style-type: none"> ▪ Outdoor AP: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$. e.i.r.p. at any elevation angle above 30 degrees $\leq 125mW$ [21dBm] ▪ Indoor AP: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$ ▪ Point-to-point AP: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 23$ dBi, then $P_{Out} = 30 - (G_{TX} - 23)$. ▪ Mobile or Portable Client: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 250 mW. If $G_{TX} > 6$ dBi, then $P_{Out} = 24 - (G_{TX} - 6)$.
<input type="checkbox"/> For the 5.25-5.35 GHz band, the maximum conducted output power (P_{Out}) shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 24 - (G_{TX} - 6)$.	
<input type="checkbox"/> For the 5.47-5.725 GHz band, the maximum conducted output power (P_{Out}) shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 24 - (G_{TX} - 6)$.	
<input checked="" type="checkbox"/> For the 5.725-5.85 GHz band:	
	<ul style="list-style-type: none"> ▪ Point-to-multipoint systems (P2M): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$. ▪ Point-to-point systems (P2P): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W.
LE-LAN Devices	
<input type="checkbox"/> For the 5.15-5.25 GHz band, the maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz.	
<input type="checkbox"/> For the 5.25-5.35 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz	
<input type="checkbox"/> For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz	
<input type="checkbox"/> For the 5.725-5.85 GHz band:	
	<ul style="list-style-type: none"> ▪ Point-to-multipoint systems (P2M): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$. ▪ Point-to-point systems (P2P): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W.
<p>P_{Out} = maximum conducted output power in dBm, G_{TX} = the maximum transmitting antenna directional gain in dBi.</p>	

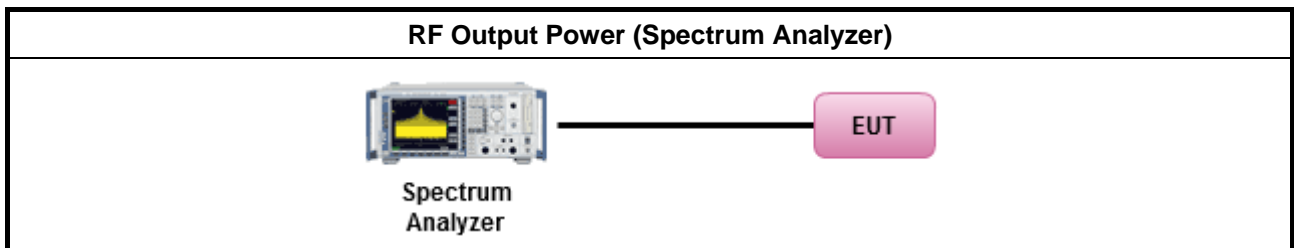
3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

Test Method	
<ul style="list-style-type: none"> Maximum Conducted Output Power 	
Average over on/off periods with duty factor	
<input type="checkbox"/>	Refer as FCC KDB 789033, clause E Method SA-2 (spectral trace averaging).
<input type="checkbox"/>	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	
<input checked="" type="checkbox"/>	Refer as FCC KDB 789033, clause E Method PM-G (using an RF average power meter).
<ul style="list-style-type: none"> For conducted measurement. 	
<ul style="list-style-type: none"> If the EUT supports multiple transmit chains using options given below: Refer as FCC KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them. 	
<ul style="list-style-type: none"> If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + \dots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$ 	

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	
<input checked="" type="checkbox"/> For the 5.15-5.25 GHz band:	
	<ul style="list-style-type: none"> ▪ Outdoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 17 - (G_{TX} - 6)$. ▪ Indoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 17 - (G_{TX} - 6)$. ▪ Point-to-point AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 23$ dBi, then $P_{Out} = 17 - (G_{TX} - 23)$. ▪ Mobile or Portable Client: the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If $G_{TX} > 6$ dBi, then $PPSD = 11 - (G_{TX} - 6)$.
<input type="checkbox"/> For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If $G_{TX} > 6$ dBi, then $PPSD = 11 - (G_{TX} - 6)$.	
<input type="checkbox"/> For the 5.47-5.725 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If $G_{TX} > 6$ dBi, then $PPSD = 11 - (G_{TX} - 6)$.	
<input checked="" type="checkbox"/> For the 5.725-5.85 GHz band:	
	<ul style="list-style-type: none"> ▪ Point-to-multipoint systems (P2M): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz. If $G_{TX} > 6$ dBi, then $PPSD = 30 - (G_{TX} - 6)$. ▪ Point-to-point systems (P2P): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz.
LE-LAN Devices	
<input type="checkbox"/> 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.	
<input type="checkbox"/> 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.	
	<ul style="list-style-type: none"> ▪ e.i.r.p. greater than 200 mW shall comply with the following e.i.r.p. at different elevations, where θ is the angle above the local horizontal plane (of the Earth) as shown below: -13 dBW/MHz for $0^\circ \leq \theta < 8^\circ$; -13 - 0.716 ($\theta-8$) dBW/MHz for $8^\circ \leq \theta < 40^\circ$ -35.9 - 1.22 ($\theta-40$) dBW/MHz for $40^\circ \leq \theta \leq 45^\circ$; -42 dBW/MHz for $\theta > 45^\circ$
<input type="checkbox"/> For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz and the e.i.r.p. peak power spectral density (PPSD) ≤ 17 dBm/MHz.	
<input type="checkbox"/> For the 5.725-5.85 GHz band:	
	<ul style="list-style-type: none"> ▪ Point-to-multipoint systems (P2M): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz. If $G_{TX} > 6$ dBi, then $PPSD = 30 - (G_{TX} - 6)$. ▪ Point-to-point systems (P2P): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz.
<p>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.</p>	

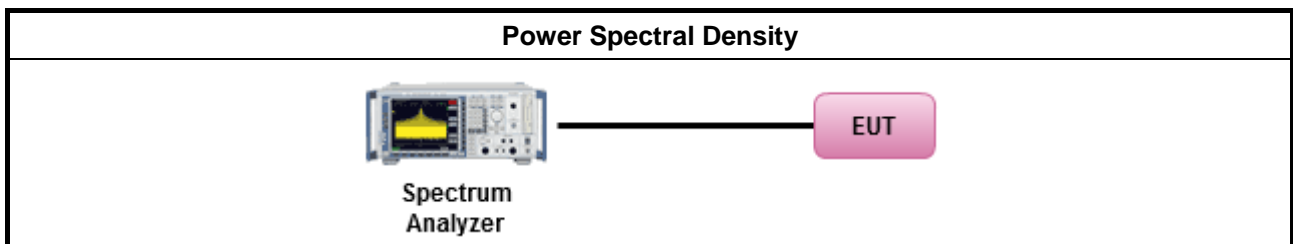
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

Test Method	
<ul style="list-style-type: none"> ▪ Peak power spectral density procedures that the same method as used to determine the conducted output power shall be used to determine the peak power spectral density and use the peak search function on the spectrum analyzer to find the peak of the spectrum. For the peak power spectral density shall be measured using below options: 	
<input type="checkbox"/>	Refer as FCC KDB 789033, F5) power spectral density can be measured using resolution bandwidths < 1 MHz provided that the results are integrated over 1 MHz bandwidth
[duty cycle ≥ 98% or external video / power trigger]	
<input checked="" type="checkbox"/>	Refer as FCC KDB 789033, clause E Method SA-1 (spectral trace averaging).
<input type="checkbox"/>	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	
<input checked="" type="checkbox"/>	Refer as FCC KDB 789033, clause E Method SA-2 (spectral trace averaging).
<input type="checkbox"/>	Refer as FCC KDB 789033, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)
<ul style="list-style-type: none"> ▪ For conducted measurement. 	
<ul style="list-style-type: none"> ▪ If the EUT supports multiple transmit chains using options given below: 	
<input checked="" type="checkbox"/>	Option 1: Measure and sum the spectra across the outputs. Refer as FCC KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the NTX output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace.
<input type="checkbox"/>	Option 2: Measure and sum spectral maxima across the outputs. With this technique, spectra are measured at each output of the device at the required resolution bandwidth. The maximum value (peak) of each spectrum is determined. These maximum values are then summed mathematically in linear power units across the outputs. These operations shall be performed separately over frequency spans that have different out-of-band or spurious emission limits,
<input type="checkbox"/>	Option 3: Measure and add 10 log(N) dB, where N is the number of transmit chains. Refer as FCC KDB 662911, In-band power spectral density (PSD). Performed at each transmit chains and each transmit chains shall be compared with the limit have been reduced with 10 log(N). Or each transmit chains shall be add 10 log(N) to compared with the limit.
<ul style="list-style-type: none"> ▪ If multiple transmit chains, EIRP PPSD calculation could be following as methods: $PPSD_{total} = PPSD_1 + PPSD_2 + \dots + PPSD_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = PPSD_{total} + DG$ 	

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
<input checked="" type="checkbox"/> 5.15 - 5.25 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
<input type="checkbox"/> 5.25 - 5.35 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
<input type="checkbox"/> 5.47 - 5.725 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
<input checked="" type="checkbox"/> 5.725 - 5.85 GHz	all emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

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).



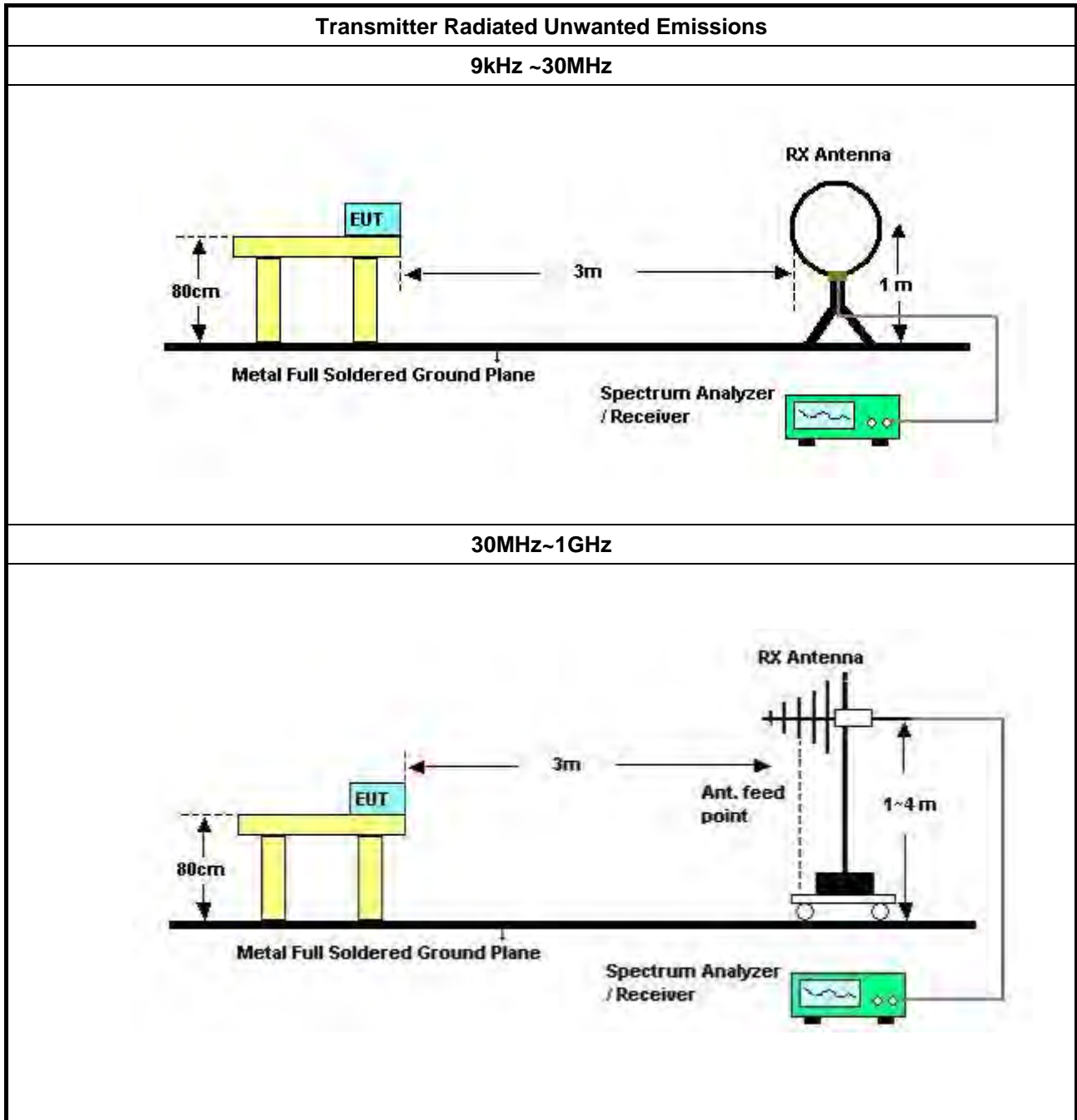
3.5.2 Measuring Instruments

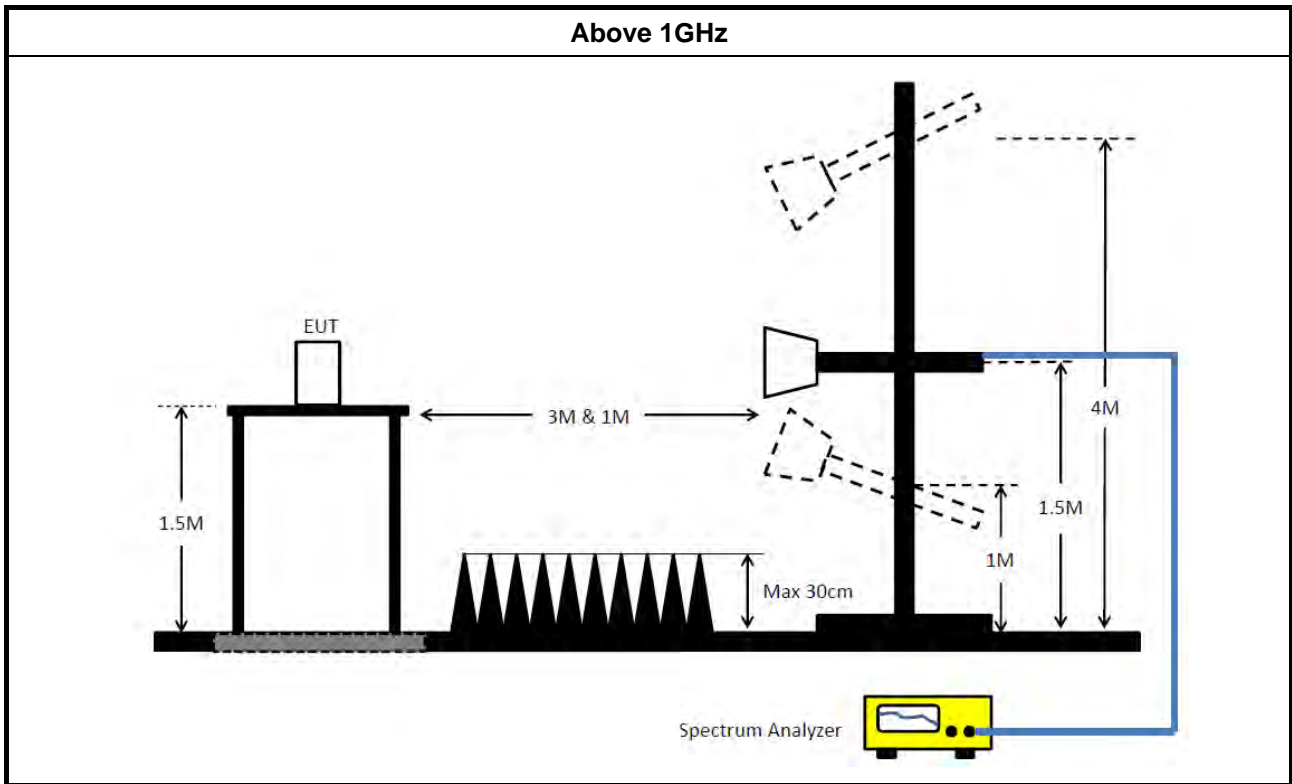
Refer a test equipment and calibration data table in this test report.

3.5.3 Test Procedures

Test Method	
	<ul style="list-style-type: none"> ▪ Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 m for frequencies above 30 MHz, unless it can be further demonstrated that measurements at a distance of 30 m or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).
	<ul style="list-style-type: none"> ▪ The average emission levels shall be measured in [duty cycle \geq 98 or duty factor].
	<ul style="list-style-type: none"> ▪ For the transmitter unwanted emissions shall be measured using following options below: <ul style="list-style-type: none"> ▪ 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. <ul style="list-style-type: none"> <input type="checkbox"/> Refer as FCC KDB 789033, H)6) Method AD (Trace Averaging). <input checked="" type="checkbox"/> Refer as FCC KDB 789033, H)6) Method VB (Reduced VBW). <input type="checkbox"/> Refer as ANSI C63.10, clause 4.2.3.2.3 (Reduced VBW). $VBW \geq 1/T$, where T is pulse time. <input type="checkbox"/> Refer as ANSI C63.10, clause 4.2.3.2.4 average value of pulsed emissions. <input checked="" type="checkbox"/> Refer as FCC KDB 789033, clause H)5) measurement procedure peak limit. <input type="checkbox"/> Refer as ANSI C63.10, clause 4.2.3.2.2 measurement procedure peak limit.
	<ul style="list-style-type: none"> ▪ For radiated measurement. <ul style="list-style-type: none"> ▪ 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.
	<ul style="list-style-type: none"> ▪ The any unwanted emissions level shall not exceed the fundamental emission level.
	<ul style="list-style-type: none"> ▪ All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.

3.5.4 Test Setup





3.5.5 Transmitter Unwanted Emissions (Below 30MHz)

Refer as Appendix E

3.5.6 Test Result of Transmitter Unwanted Emissions

Refer as Appendix E

3.6 Frequency Stability

3.6.1 Frequency Stability Limit

Frequency Stability Limit
UNII Devices
<ul style="list-style-type: none"> 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
<ul style="list-style-type: none"> N/A
IEEE Std. 802.11
<ul style="list-style-type: none"> 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.

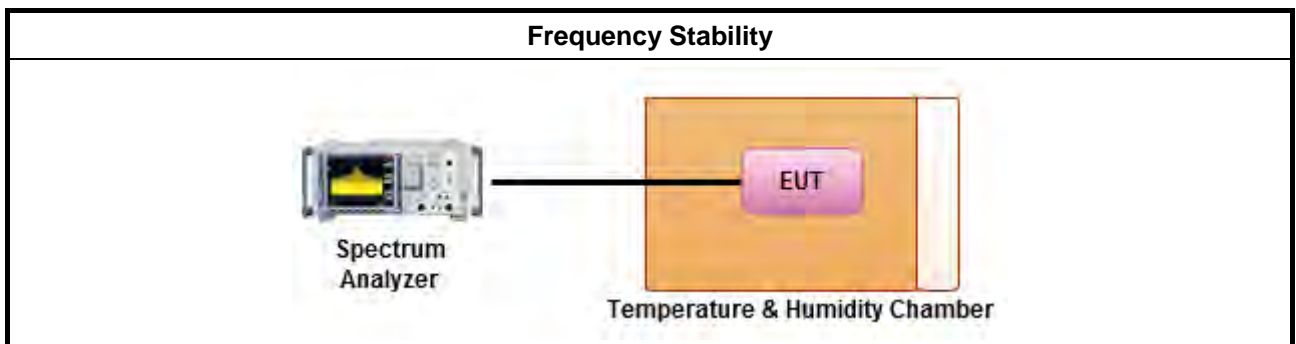
3.6.2 Measuring Instruments

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

3.6.3 Test Procedures

Test Method
<ul style="list-style-type: none"> Refer as ANSI C63.10, clause 6.8 for frequency stability tests
<ul style="list-style-type: none"> Frequency stability with respect to ambient temperature
<ul style="list-style-type: none"> Frequency stability when varying supply voltage
<ul style="list-style-type: none"> Extreme temperature is 0°C~40°C.

3.6.4 Test Setup



3.6.5 Test Result of Frequency Stability

Refer as Appendix F



4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.45GHz	Jan. 23, 2017	Jan. 22, 2018	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	Dec. 14, 2016	Dec. 13, 2017	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Dec. 21, 2016	Dec. 20, 2017	Conduction (CO01-CB)
COND Cable	Woken	Cable	01	150kHz ~ 30MHz	May 23, 2017	May 22, 2018	Conduction (CO01-CB)
Software	Audix	E3	6.120210n	-	N.C.R.	N.C.R.	Conduction (CO01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 16, 2016*	Mar. 15, 2018*	Radiation (03CH01-CB)
BILOG ANTENNA with 6dB Attenuator	TESEQ & EMCI	CBL6112D & N-6-06	37880 & AT-N0609	20MHz ~ 2GHz	Aug. 30, 2017	Aug. 29, 2018	Radiation (03CH01-CB)
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Nov. 10, 2016	Nov. 09, 2017	Radiation (03CH01-CB)
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Nov. 20, 2017	Nov. 19, 2018	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA917025 2	15GHz ~ 40GHz	Jul. 05, 2017	Jul. 04, 2018	Radiation (03CH01-CB)
Pre-Amplifier	EMCI	EMC330N	980332	20MHz ~ 3GHz	May 02, 2017	May 01, 2018	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 16, 2017	Jan. 15, 2018	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 09, 2018	Jan. 08, 2019	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)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Nov. 23, 2017	Nov. 22, 2018	Radiation (03CH01-CB)
EMI Test	R&S	ESCS	100355	9kHz ~ 2.75GHz	May 06, 2017	May 05, 2018	Radiation (03CH01-CB)
RF Cable-low	Woken	Low Cable-16+17	N/A	30 MHz ~ 1 GHz	Oct. 11, 2017	Oct. 10, 2018	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)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	Dec. 26, 2016	Dec. 25, 2017	Conducted (TH01-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	Dec. 21, 2017	Dec. 20, 2018	Conducted (TH01-CB)



Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
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)
Power Sensor	Agilent	U2021XA	MY53410001	50MHz~18GHz	Nov. 20, 2017	Nov. 19, 2018	Conducted (TH01-CB)

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

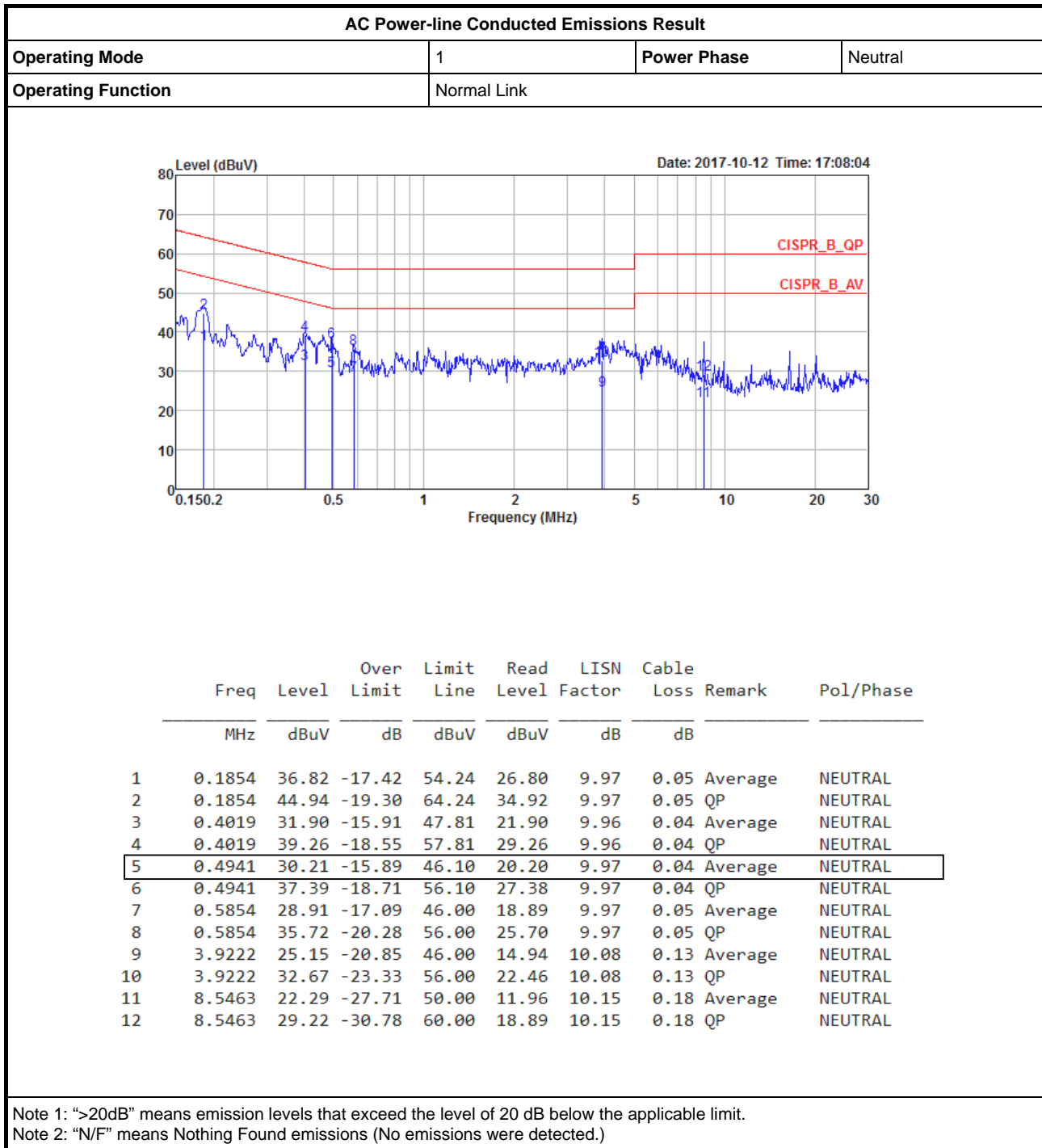
“**” Calibration Interval of instruments listed above is two years.

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



AC Power-line Conducted Emissions Result

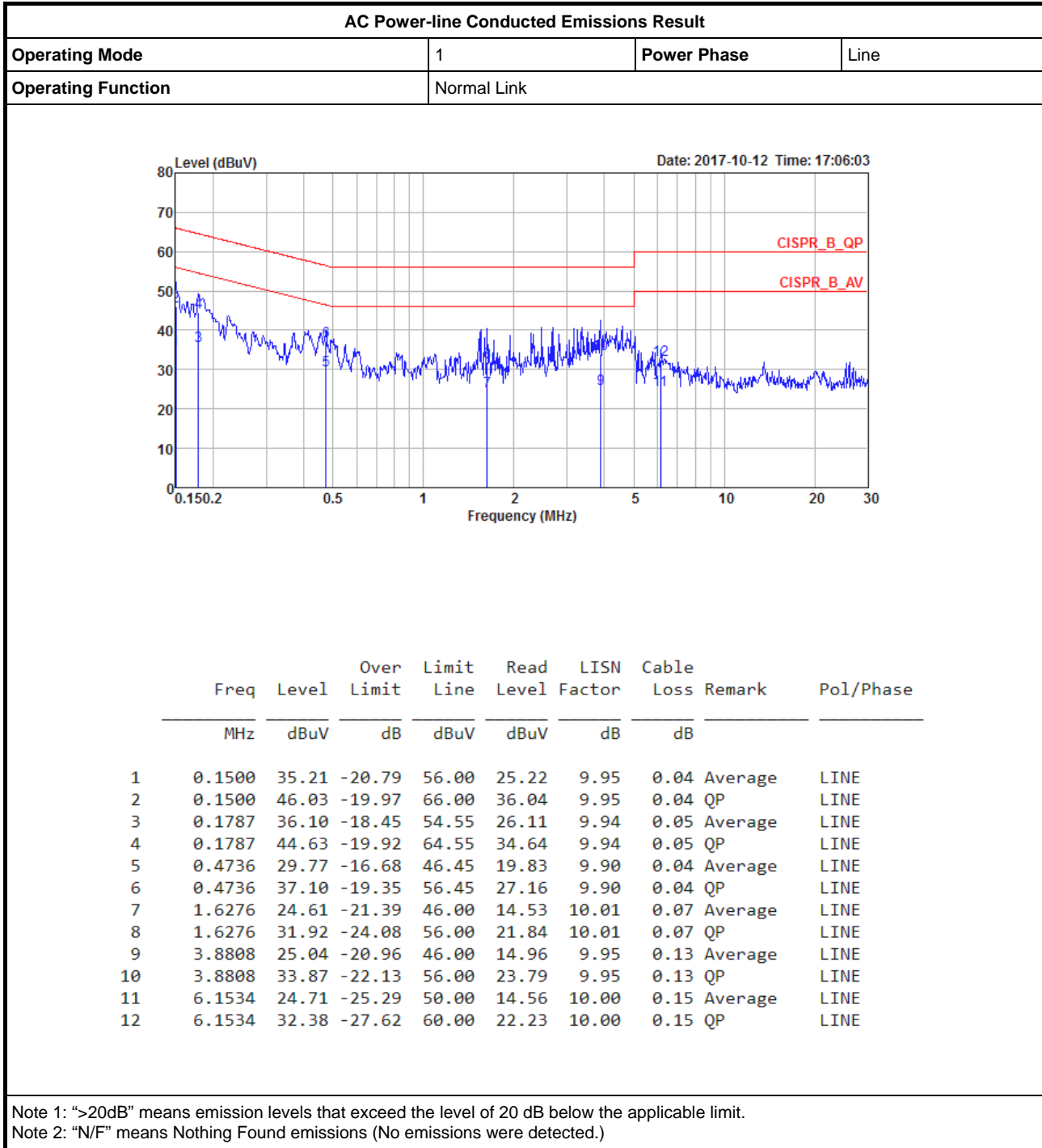
Appendix A





AC Power-line Conducted Emissions Result

Appendix A





Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	39.35M	17.075M	17M1D1D	21.725M	16.775M
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	37.975M	18M	18M0D1D	21.625M	17.85M
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	74.35M	36.65M	36M6D1D	41M	36.55M
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	81.2M	75.2M	75M2D1D	80.9M	75M
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	16.375M	20.55M	20M5D1D	16.3M	16.725M
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	17.6M	18.05M	18M0D1D	17.575M	17.85M
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	36.35M	36.85M	36M8D1D	36.3M	36.65M
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	76.4M	76.2M	76M2D1D	75.6M	75.7M

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;

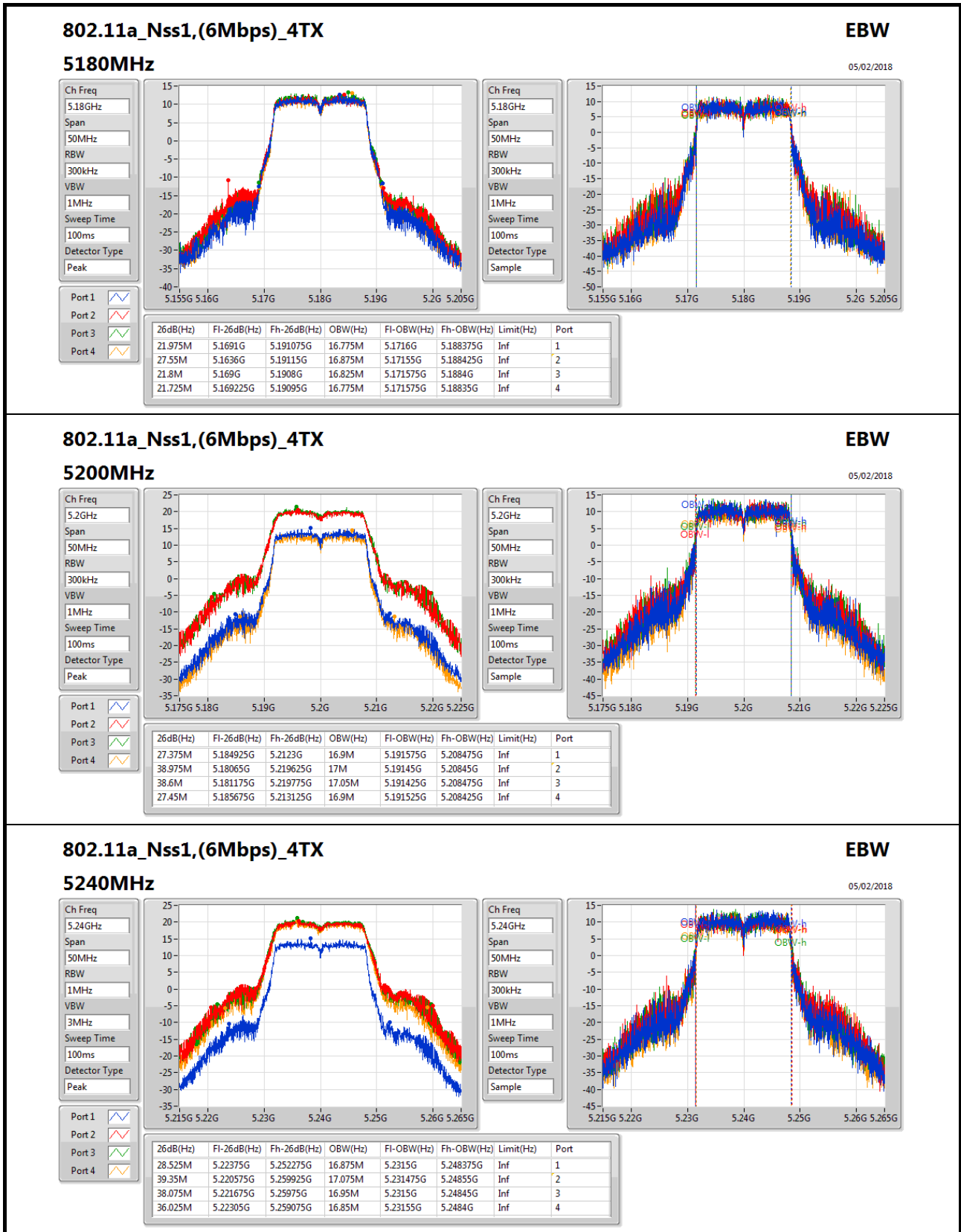
Min-OBW = Minimum 99% occupied bandwidth;



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	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	21.975M	16.775M	27.55M	16.875M	21.8M	16.825M	21.725M	16.775M
5200MHz	Pass	Inf	27.375M	16.9M	38.975M	17M	38.6M	17.05M	27.45M	16.9M
5240MHz	Pass	Inf	28.525M	16.875M	39.35M	17.075M	38.075M	16.95M	36.025M	16.85M
5745MHz	Pass	500k	16.35M	16.85M	16.325M	16.85M	16.35M	16.725M	16.35M	16.875M
5785MHz	Pass	500k	16.325M	16.925M	16.325M	16.8M	16.35M	16.775M	16.325M	17.075M
5825MHz	Pass	500k	16.3M	18.35M	16.325M	19.125M	16.35M	17.225M	16.375M	20.55M
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	23.35M	17.875M	26.55M	17.875M	24.575M	17.9M	21.625M	17.85M
5200MHz	Pass	Inf	29.45M	17.875M	35.4M	18M	34.1M	17.925M	29.55M	17.9M
5240MHz	Pass	Inf	27.55M	17.875M	37.975M	17.925M	36.05M	17.925M	31.3M	17.85M
5745MHz	Pass	500k	17.575M	18.025M	17.575M	18.025M	17.6M	17.85M	17.575M	18.025M
5785MHz	Pass	500k	17.575M	17.975M	17.6M	17.925M	17.575M	17.9M	17.6M	18.05M
5825MHz	Pass	500k	17.575M	17.975M	17.575M	18.025M	17.575M	17.95M	17.575M	18M
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	41.1M	36.55M	41.15M	36.55M	41M	36.55M	41.15M	36.6M
5230MHz	Pass	Inf	74.35M	36.6M	73.65M	36.65M	70.5M	36.65M	55.3M	36.65M
5755MHz	Pass	500k	36.35M	36.65M	36.35M	36.8M	36.3M	36.65M	36.3M	36.85M
5795MHz	Pass	500k	36.3M	36.85M	36.3M	36.75M	36.3M	36.65M	36.3M	36.8M
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	81.2M	75M	80.9M	75.2M	80.9M	75.2M	81.2M	75.2M
5775MHz	Pass	500k	75.6M	75.9M	76.3M	76.2M	75.6M	75.7M	76.4M	76M

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

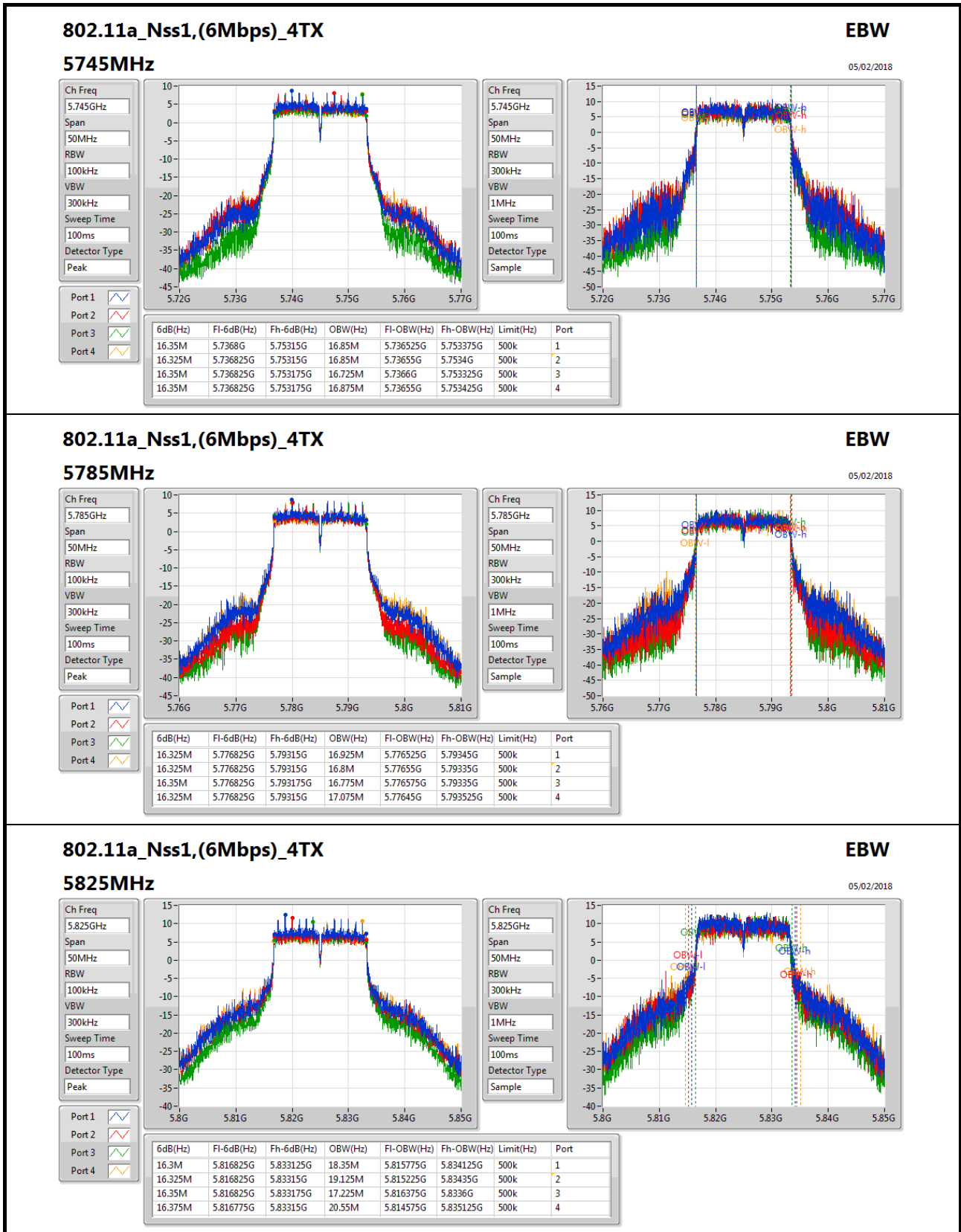
05/02/2018

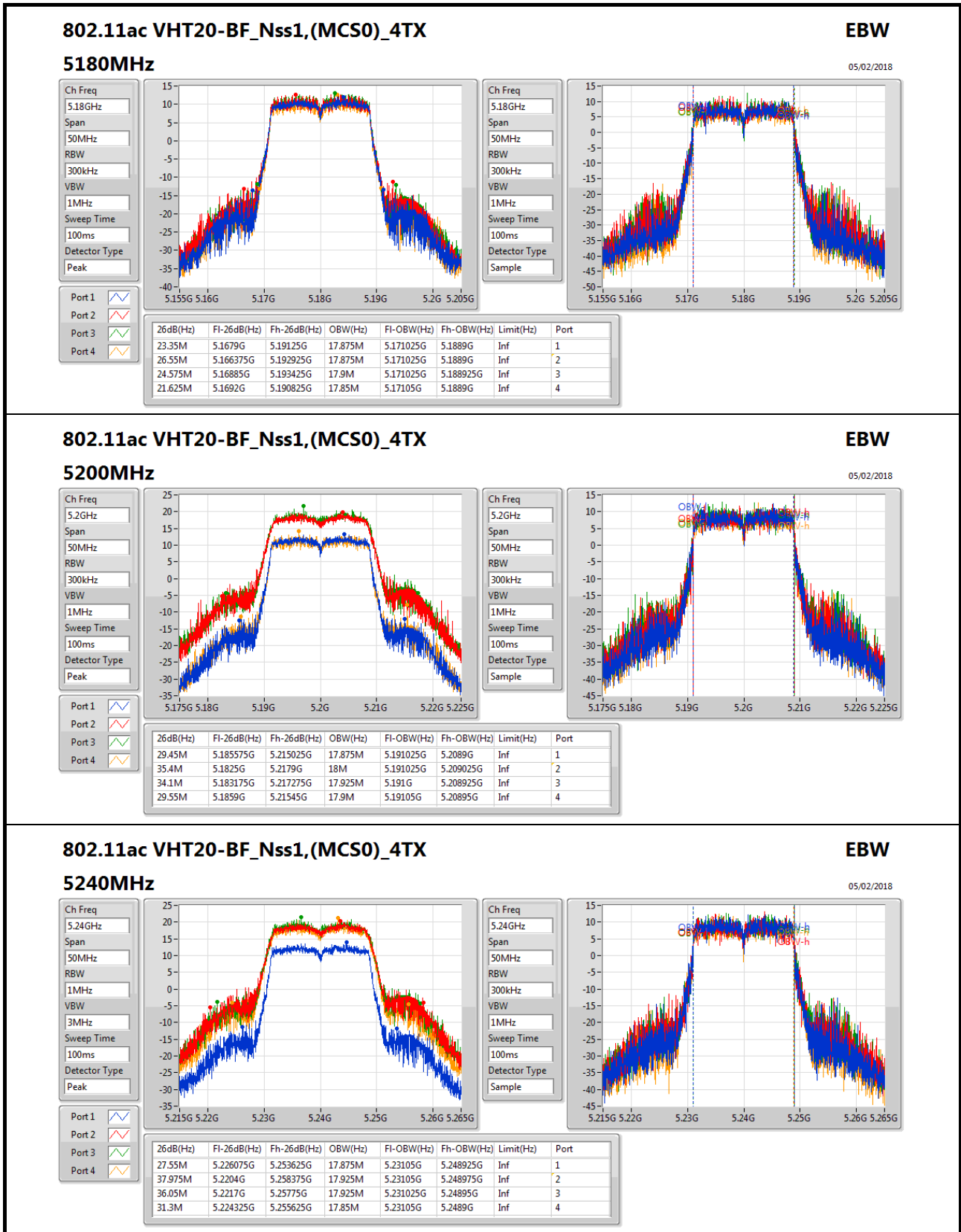
5240MHz

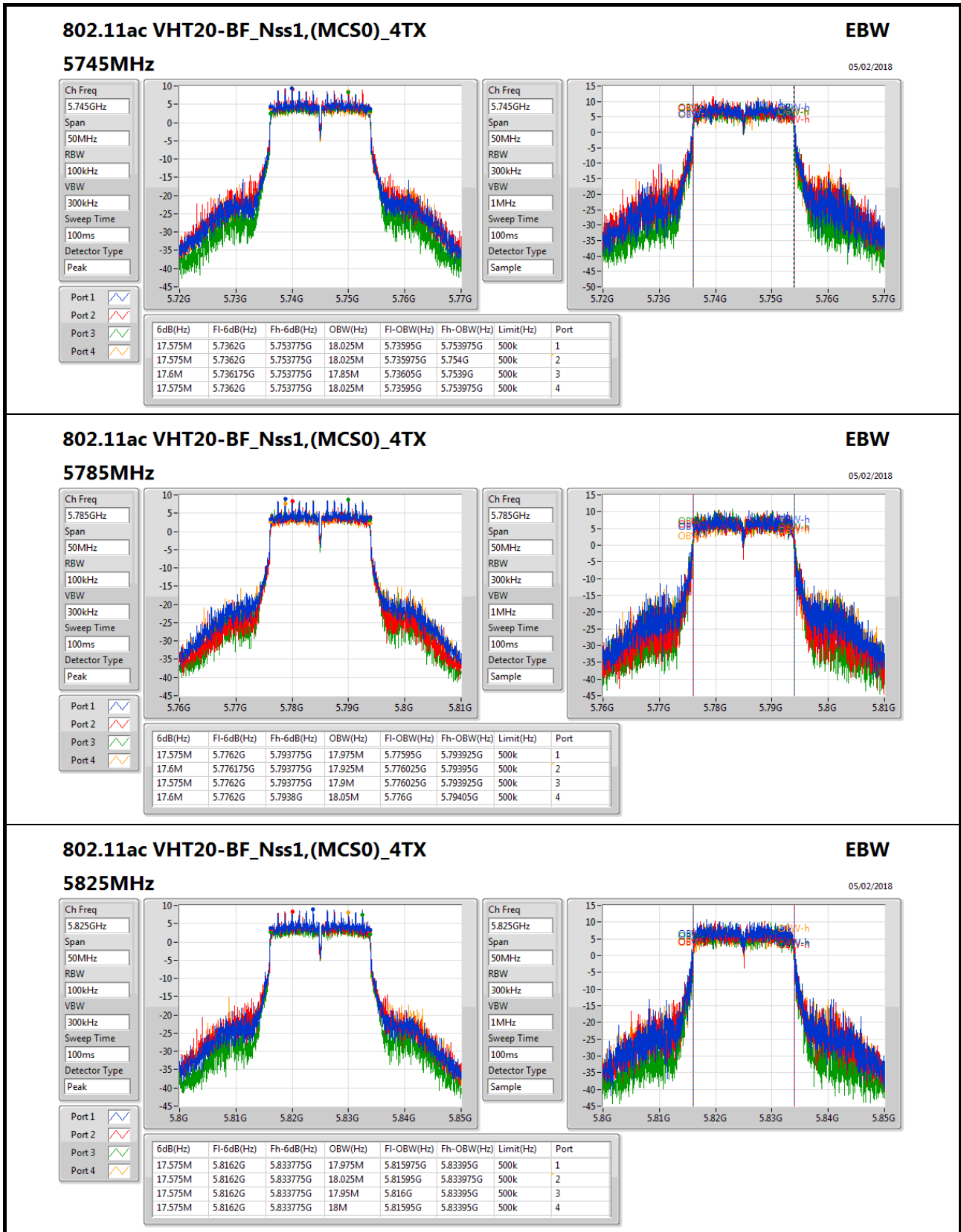
Ch Freq: 5.24GHz
Span: 50MHz
RBW: 1MHz
VBW: 3MHz
Sweep Time: 100ms
Detector Type: Peak

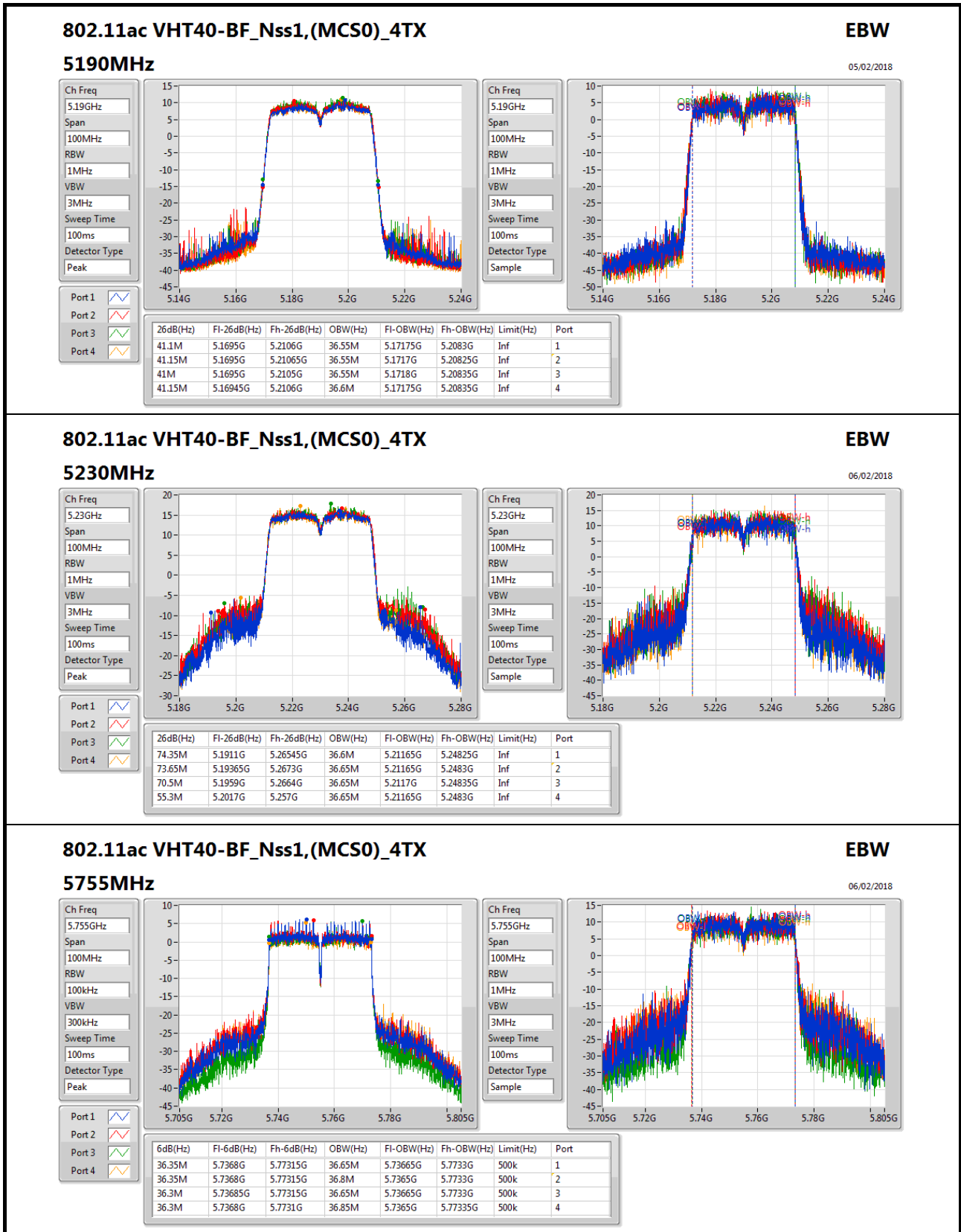
Ch Freq: 5.24GHz
Span: 50MHz
RBW: 300kHz
VBW: 1MHz
Sweep Time: 100ms
Detector Type: Sample

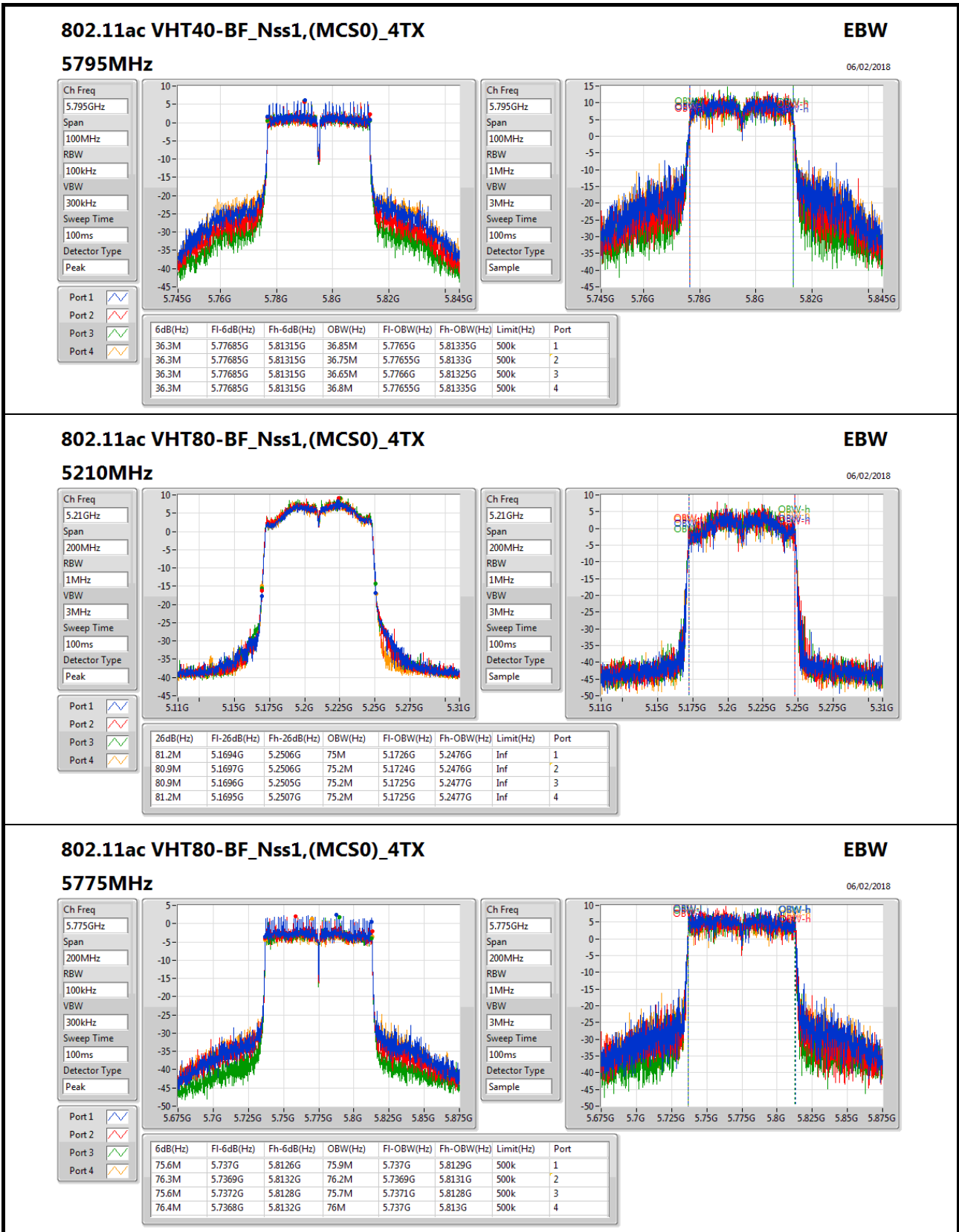
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
28.525M	5.22375G	5.252275G	16.875M	5.2315G	5.248375G	Inf	1
39.35M	5.220575G	5.259925G	17.075M	5.231475G	5.24855G	Inf	2
38.075M	5.221675G	5.25975G	16.95M	5.2315G	5.24845G	Inf	3
36.025M	5.22305G	5.259075G	16.85M	5.23155G	5.2484G	Inf	4













Summary

Mode	Total Power (dBm)	Total Power (W)
5.15-5.25GHz	-	-
802.11a_Nss1,(6Mbps)_4TX	29.86	0.96828
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	28.42	0.69502
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	28.34	0.68234
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	22.89	0.19454
5.725-5.85GHz	-	-
802.11a_Nss1,(6Mbps)_4TX	29.56	0.90365
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	26.94	0.49431
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	26.89	0.48865
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	25.80	0.38019



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	-	-	-	-	-	-	-	-
5180MHz	Pass	1.50	21.72	21.96	22.14	21.35	27.82	30.00
5200MHz	Pass	1.50	24.02	23.92	24.25	23.07	29.86	30.00
5240MHz	Pass	1.50	23.97	23.50	23.87	23.09	29.64	30.00
5745MHz	Pass	3.00	20.84	20.66	19.94	20.02	26.40	30.00
5785MHz	Pass	3.00	20.79	20.33	20.52	20.21	26.49	30.00
5825MHz	Pass	3.00	24.03	23.49	23.47	23.10	29.56	30.00
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5180MHz	Pass	7.52	22.56	21.08	21.50	20.56	27.51	28.48
5200MHz	Pass	7.52	22.37	22.37	22.91	21.84	28.41	28.48
5240MHz	Pass	7.52	22.53	22.33	22.66	22.05	28.42	28.48
5745MHz	Pass	9.02	21.39	21.16	20.32	20.26	26.83	26.98
5785MHz	Pass	9.02	21.10	20.61	21.07	20.37	26.82	26.98
5825MHz	Pass	9.02	21.62	20.99	20.42	20.56	26.94	26.98
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5190MHz	Pass	7.52	15.78	15.92	16.39	15.55	21.94	28.48
5230MHz	Pass	7.52	22.43	22.13	22.72	21.94	28.34	28.48
5755MHz	Pass	9.02	21.10	20.94	20.51	20.26	26.74	26.98
5795MHz	Pass	9.02	21.38	20.67	21.00	20.37	26.89	26.98
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5210MHz	Pass	7.52	16.92	16.94	17.11	16.49	22.89	28.48
5775MHz	Pass	9.02	20.06	19.81	19.99	19.22	25.80	26.98

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



Summary

Mode	PD (dBm/RBW)
5.15-5.25GHz	-
802.11a_Nss1,(6Mbps)_4TX	15.38
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	14.36
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	10.92
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	3.66
5.725-5.85GHz	-
802.11a_Nss1,(6Mbps)_4TX	11.96
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	9.85
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	6.43
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	2.51

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

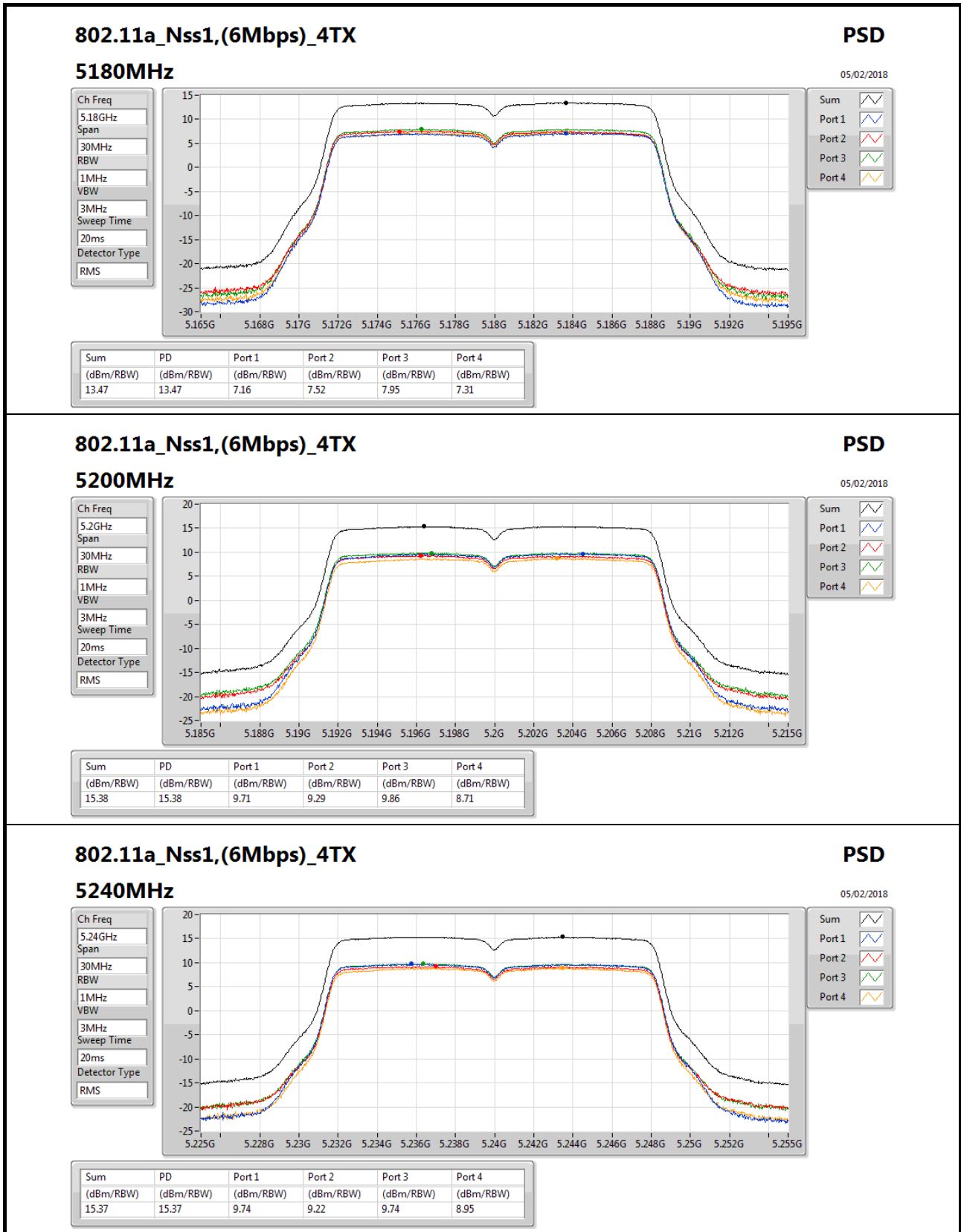


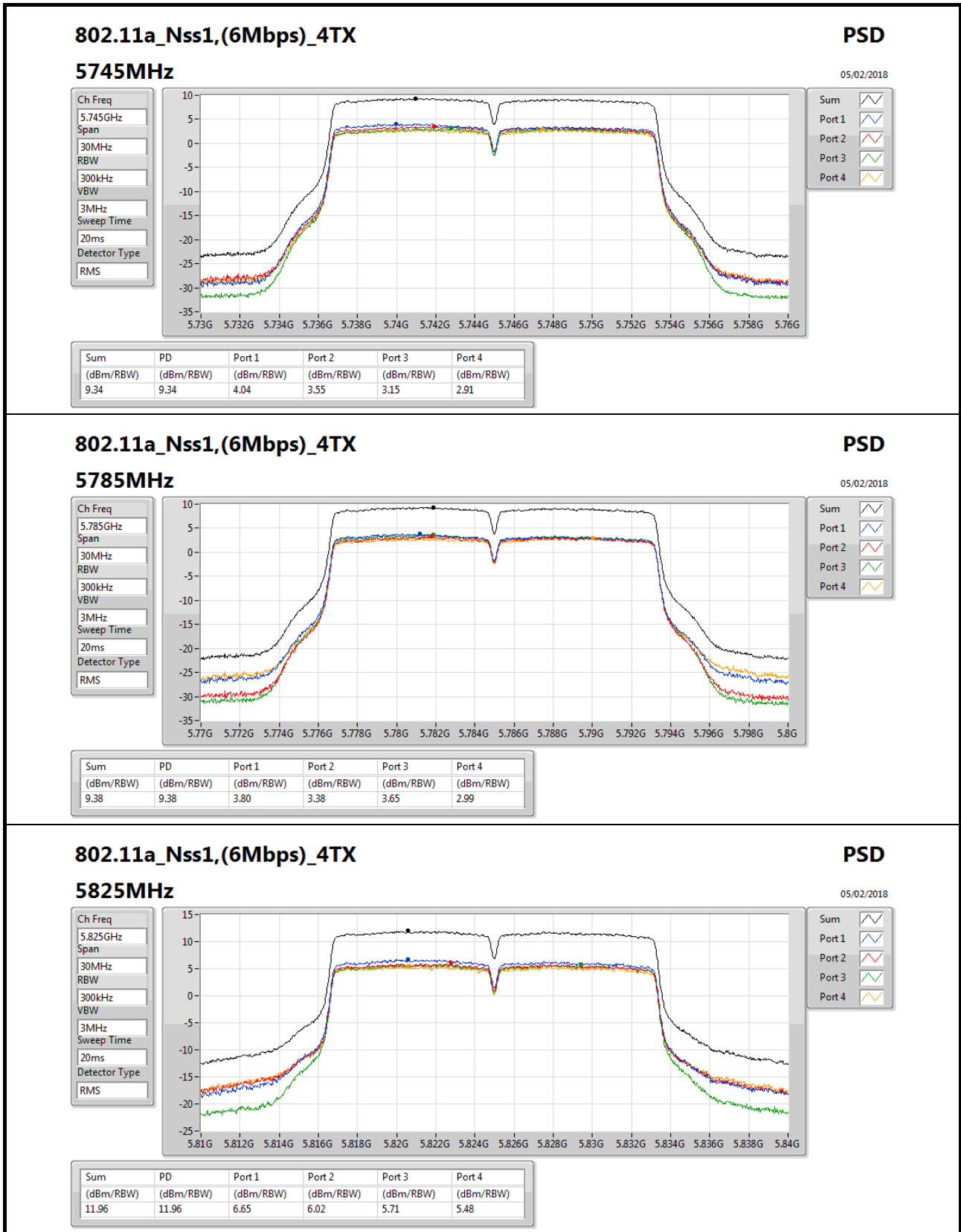
Result

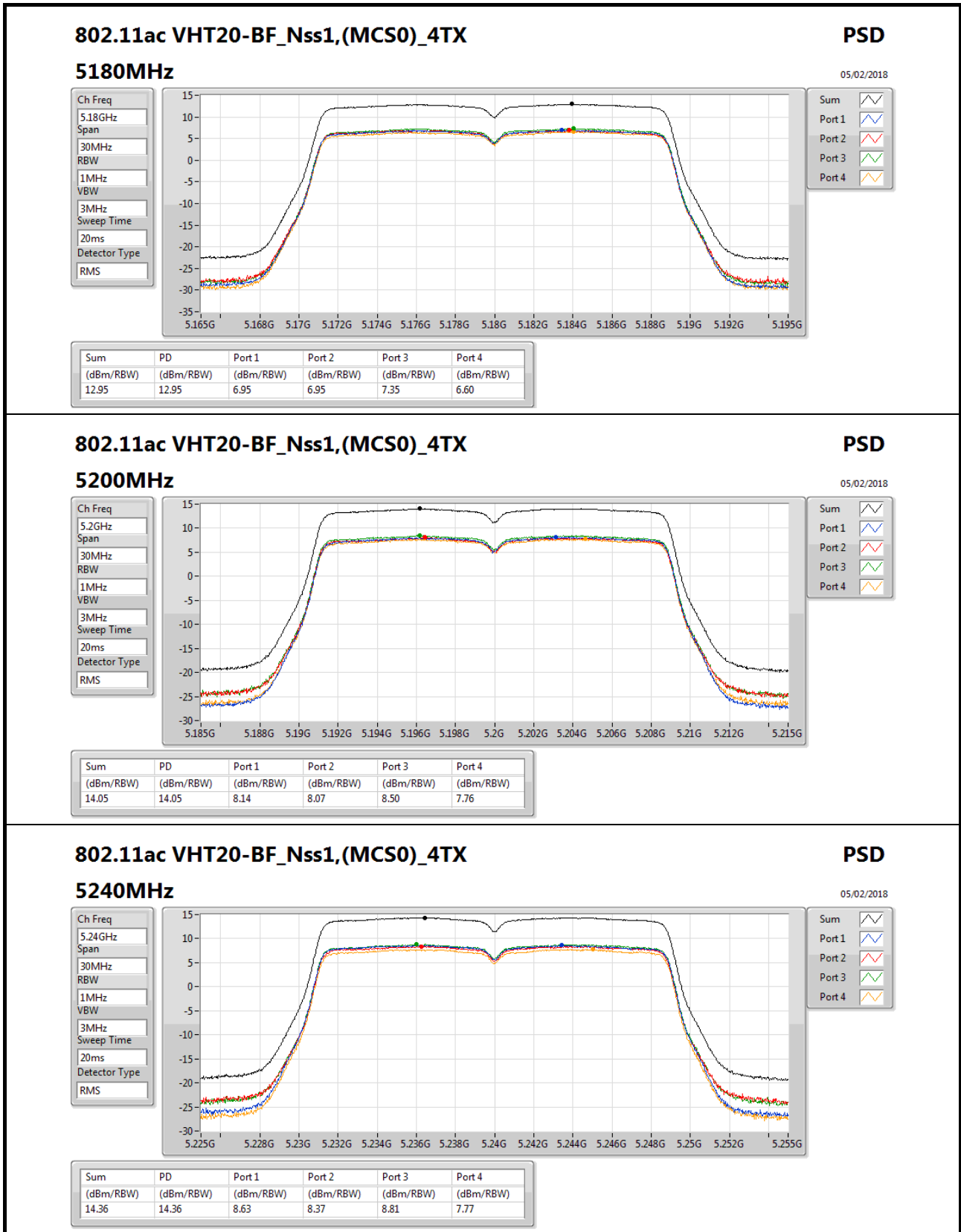
Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	Port 3 (dBm/RBW)	Port 4 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-
5180MHz	Pass	7.52	7.16	7.52	7.95	7.31	13.47	15.48
5200MHz	Pass	7.52	9.71	9.29	9.86	8.71	15.38	15.48
5240MHz	Pass	7.52	9.74	9.22	9.74	8.95	15.37	15.48
5745MHz	Pass	9.02	4.04	3.55	3.15	2.91	9.34	26.98
5785MHz	Pass	9.02	3.80	3.38	3.65	2.99	9.38	26.98
5825MHz	Pass	9.02	6.65	6.02	5.71	5.48	11.96	26.98
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5180MHz	Pass	7.52	6.95	6.95	7.35	6.60	12.95	15.48
5200MHz	Pass	7.52	8.14	8.07	8.50	7.76	14.05	15.48
5240MHz	Pass	7.52	8.63	8.37	8.81	7.77	14.36	15.48
5745MHz	Pass	9.02	4.57	4.06	3.66	3.40	9.85	26.98
5785MHz	Pass	9.02	4.06	3.69	3.84	3.09	9.56	26.98
5825MHz	Pass	9.02	4.26	3.48	2.84	2.90	9.23	26.98
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5190MHz	Pass	7.52	-1.34	-1.22	-0.71	-1.50	4.71	15.48
5230MHz	Pass	7.52	4.94	4.99	5.37	4.67	10.92	15.48
5755MHz	Pass	9.02	0.73	0.71	0.30	-0.08	6.34	26.98
5795MHz	Pass	9.02	0.99	0.44	0.45	0.40	6.43	26.98
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5210MHz	Pass	7.52	-2.19	-2.16	-2.12	-2.39	3.66	15.48
5775MHz	Pass	9.02	-2.86	-3.29	-3.35	-3.92	2.51	26.98

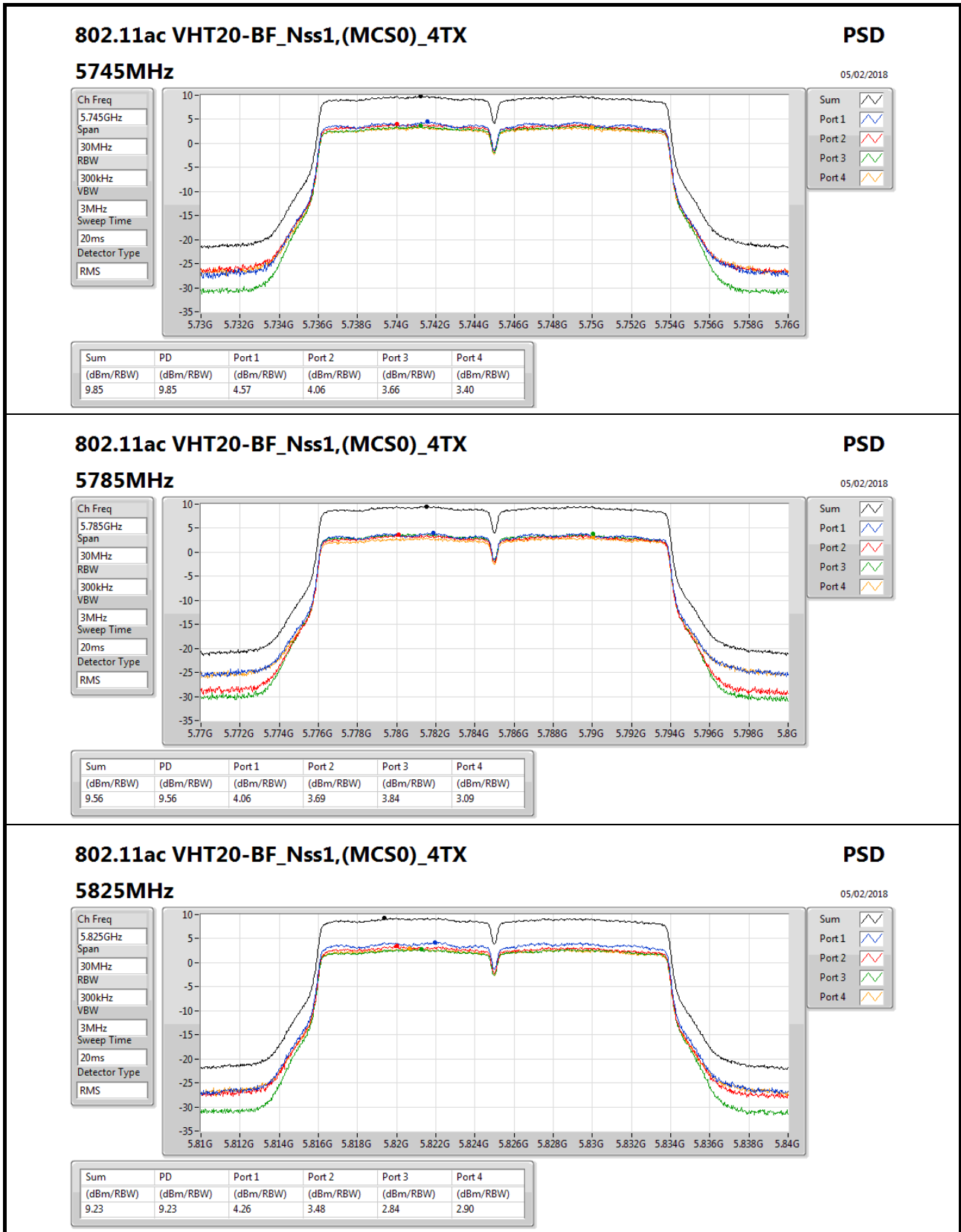
DG = Directional Gain; RBW = 500kHz for 5.725-5.85GHz band / 1MHz for other band;

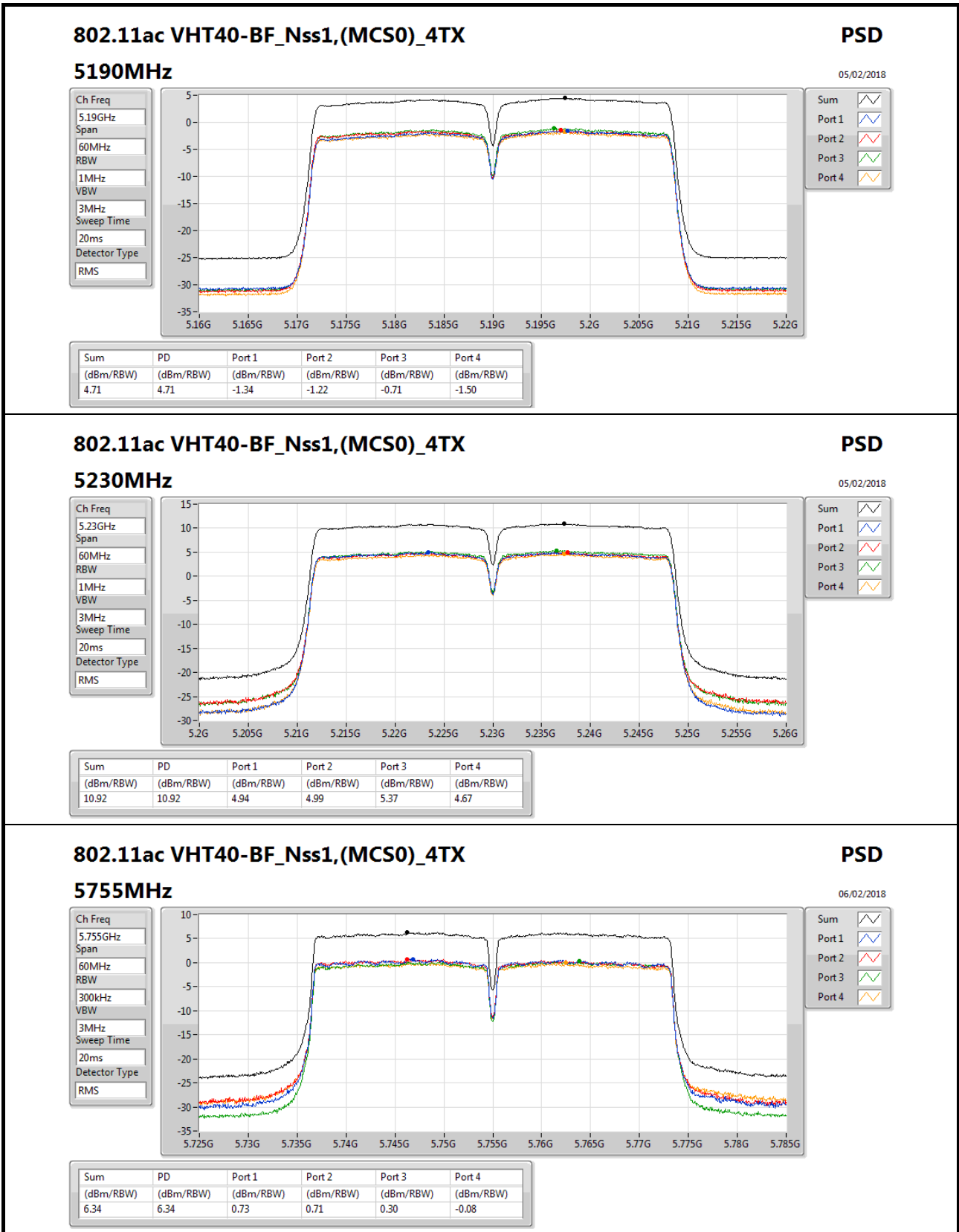
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port Xpower density;

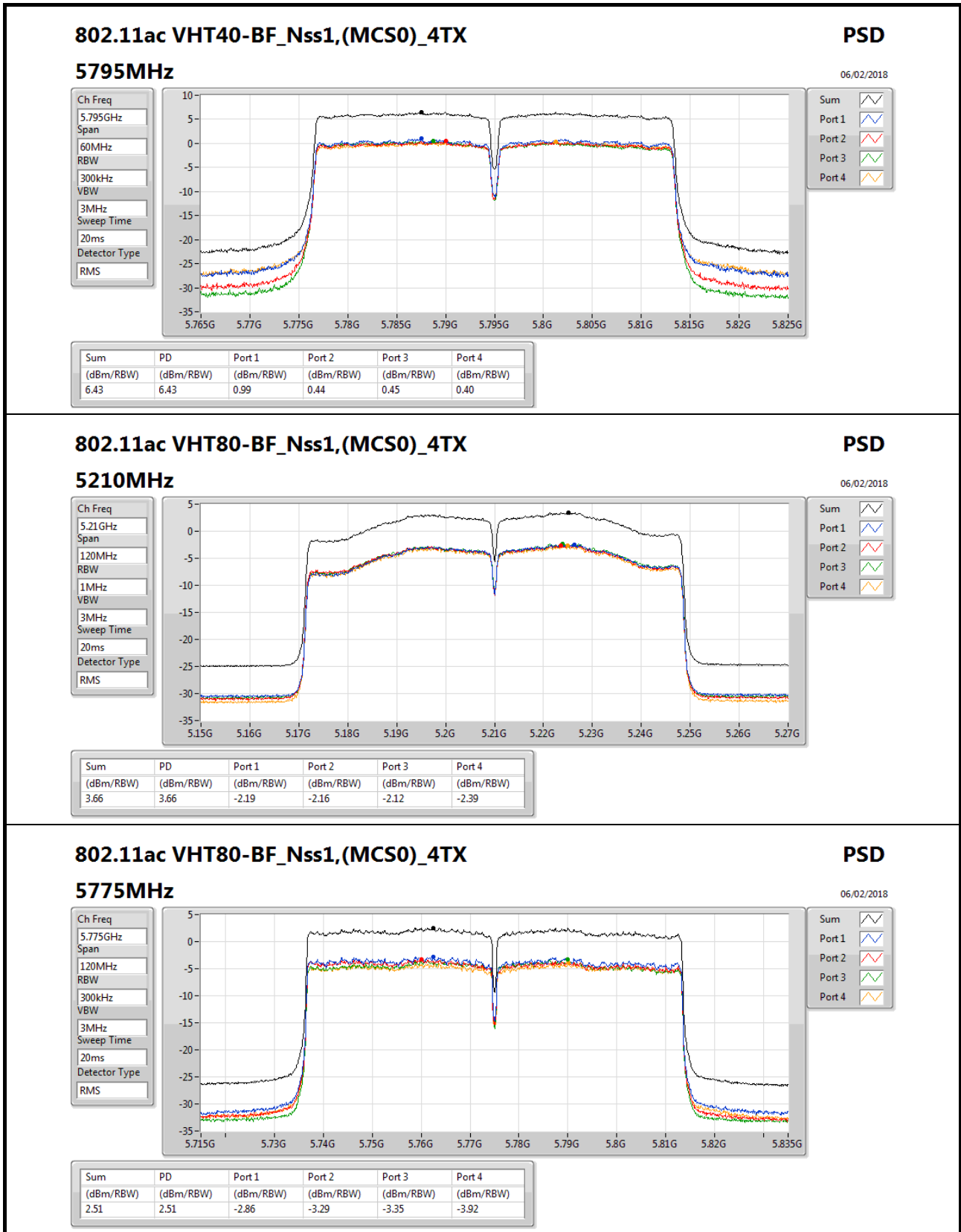






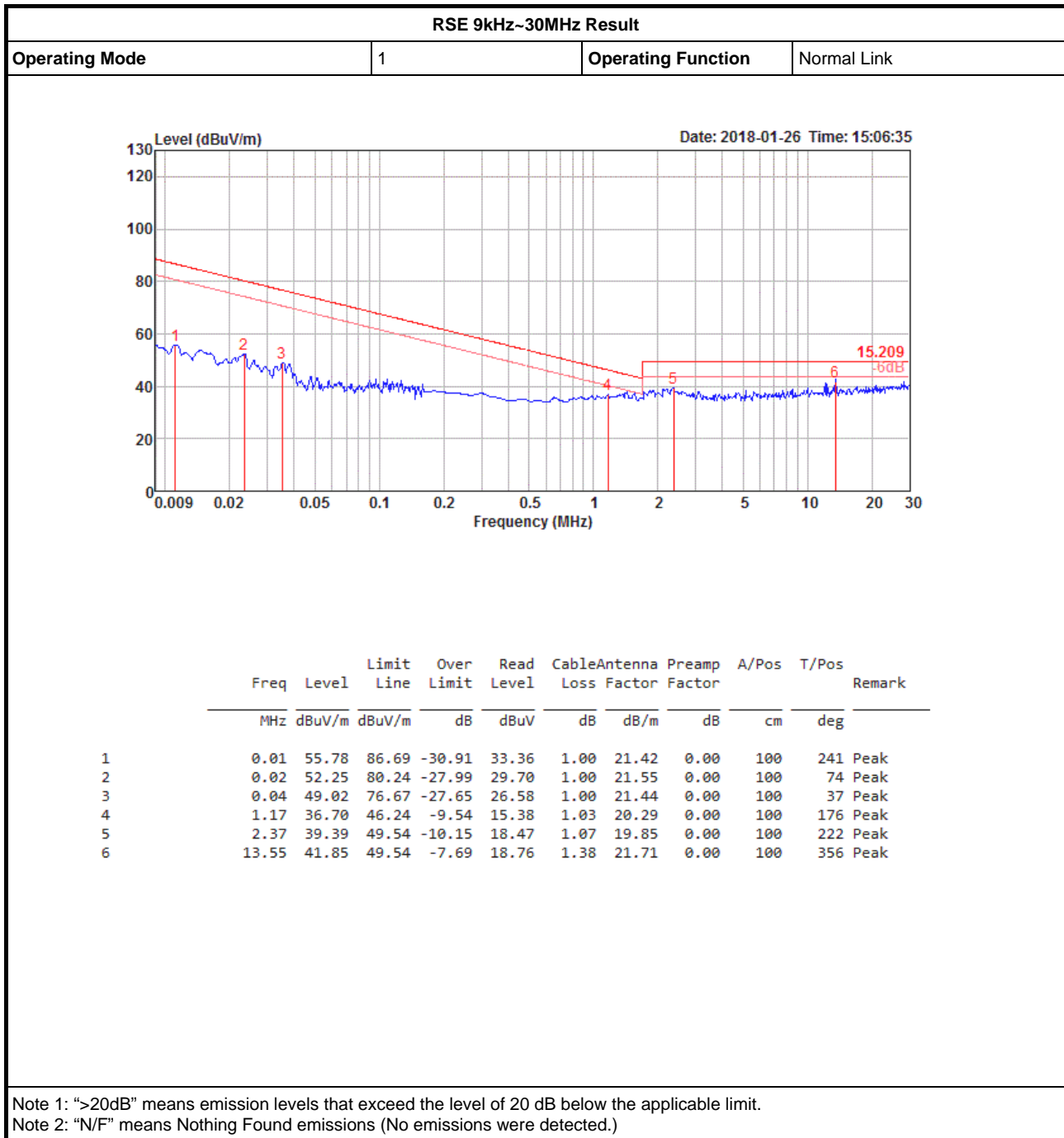






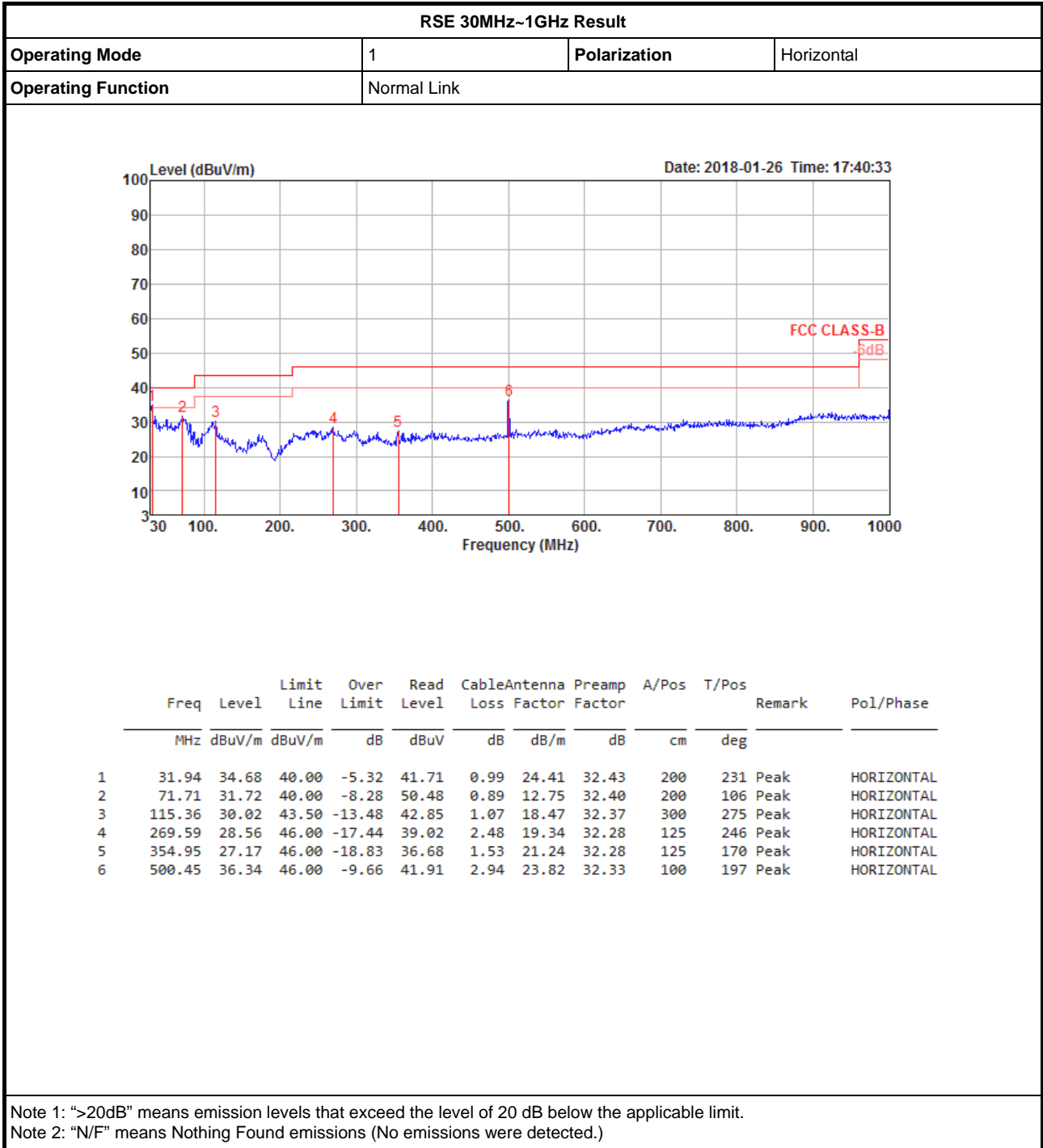


RSE below 1GHz Result



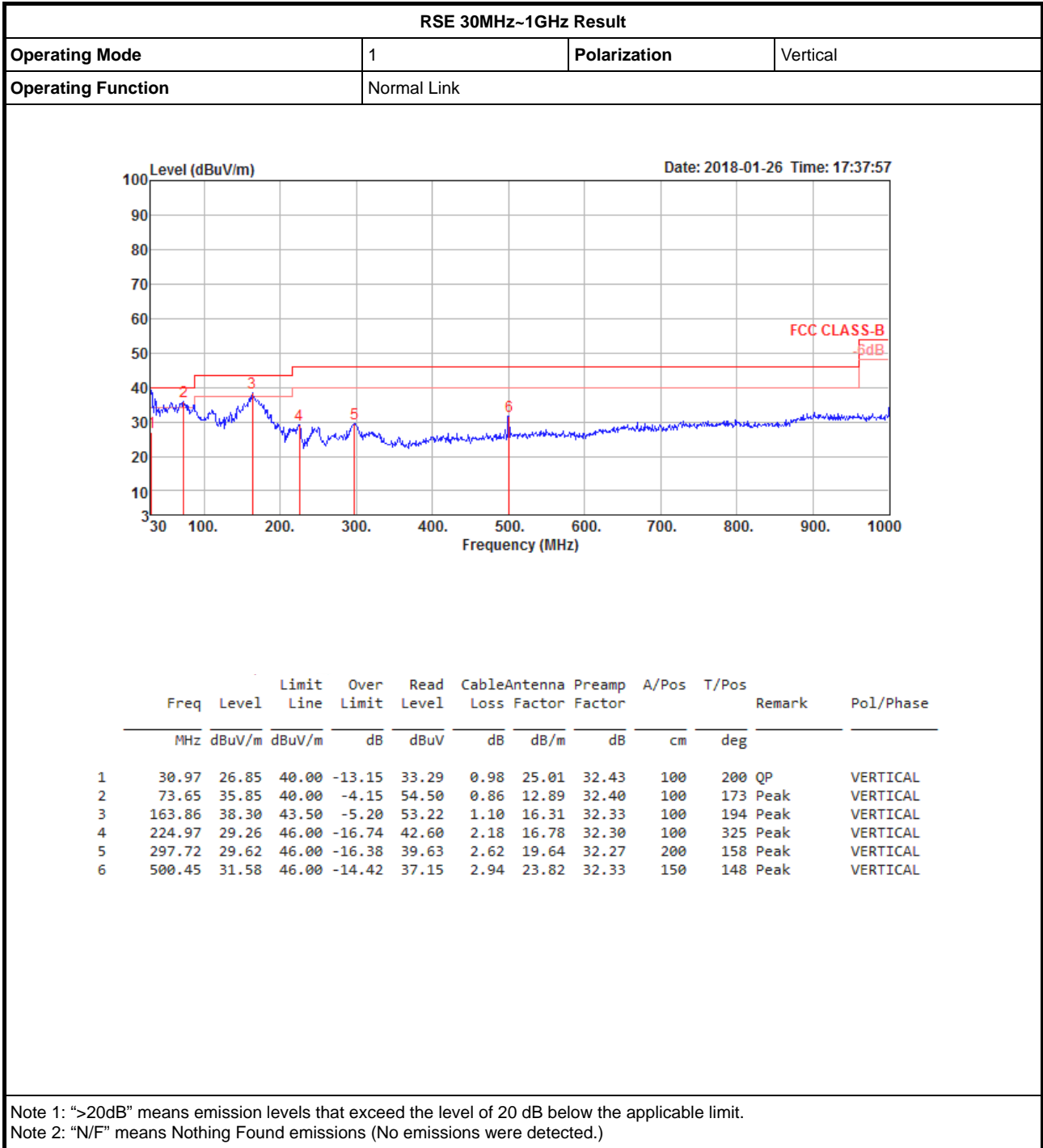


RSE below 1GHz Result





RSE below 1GHz Result





Summary

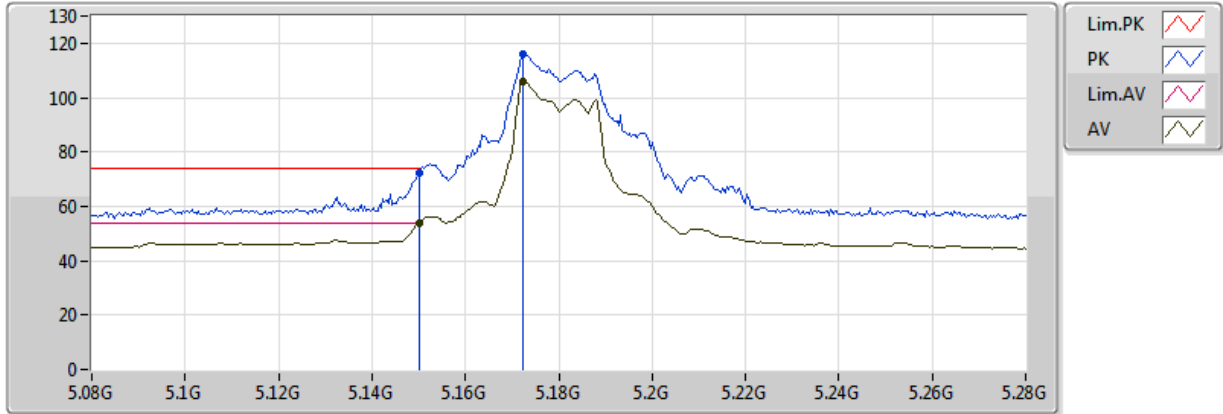
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
5.725-5.85GHz	-	-	-	-	-	-	-	-	-	-	-	-
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	Pass	PK	5.648G	68.18	68.20	-0.02	5.30	3	Vertical	158	2.01	-



802.11a_Nss1,(6Mbps)_4TX

5180MHz_TX

02/02/2018



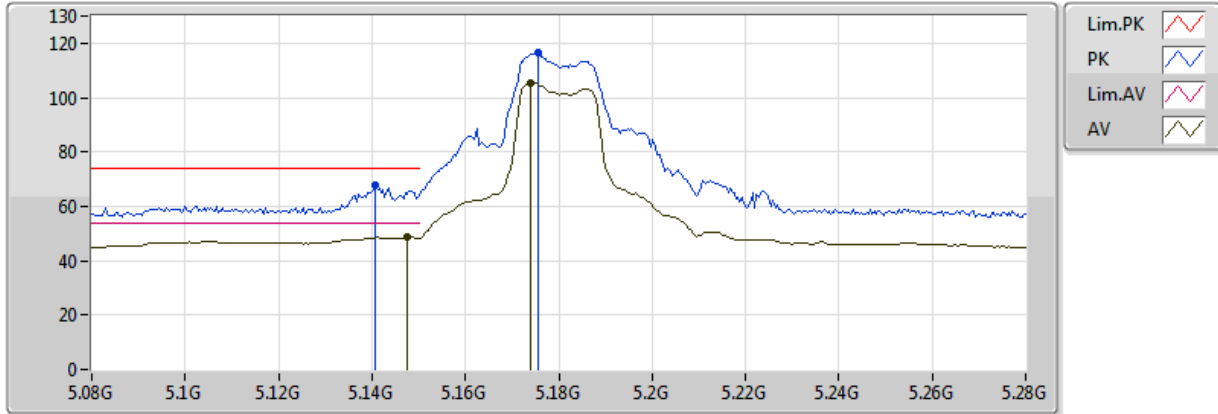
20180201
EUT_Y_4TX
Setting 87
04-Z-1-13
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	5.149995G	53.71	54.00	-0.29	4.06	3	Vertical	163	1.50
AV	5.1724G	105.76	Inf	-Inf	4.13	3	Vertical	163	1.50
PK	5.149995G	72.41	74.00	-1.59	4.06	3	Vertical	163	1.50
PK	5.1724G	116.04	Inf	-Inf	4.13	3	Vertical	163	1.50

802.11a_Nss1,(6Mbps)_4TX

5180MHz_TX

02/02/2018



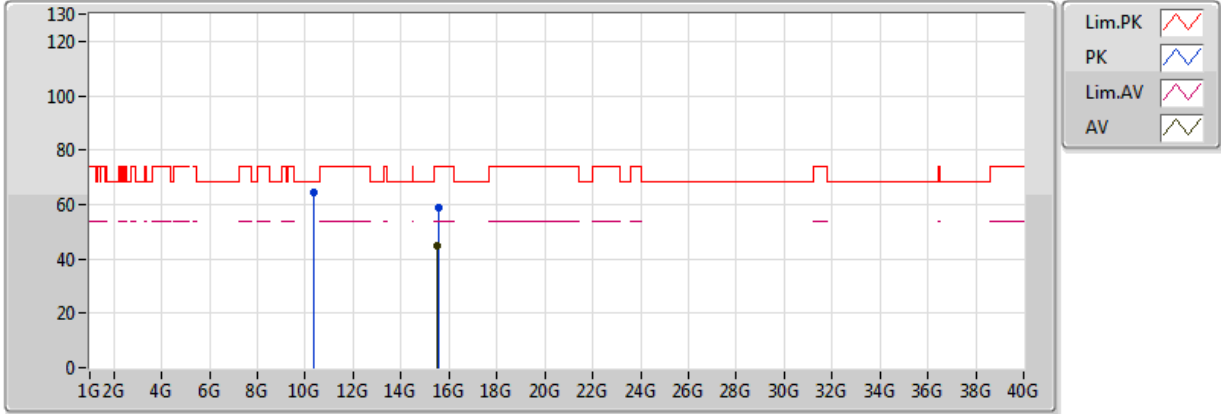
20180201
EUT_Y_4TX
Setting 87
04-Z-1-13
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	5.1476G	48.83	54.00	-5.17	4.05	3	Horizontal	321	2.02
AV	5.174G	105.47	Inf	-Inf	4.13	3	Horizontal	321	2.02
PK	5.1408G	67.57	74.00	-6.43	4.03	3	Horizontal	321	2.02
PK	5.1756G	116.64	Inf	-Inf	4.14	3	Horizontal	321	2.02

802.11a_Nss1,(6Mbps)_4TX

5180MHz_TX

01/02/2018



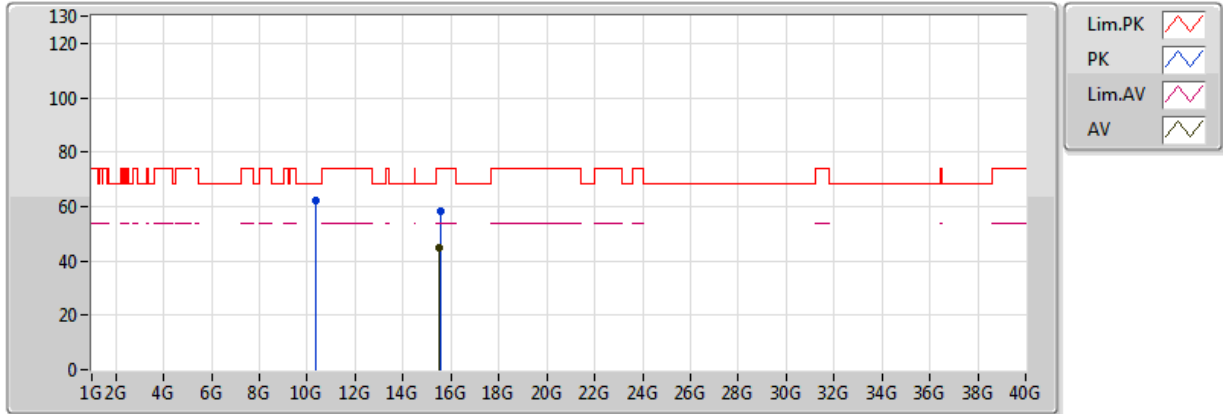
20180201
EUT_Y_4TX
Setting 87
04-Z-1
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	15.52824G	44.89	54.00	-9.11	15.23	3	Vertical	305	1.50
PK	10.34896G	64.64	68.20	-3.56	12.45	3	Vertical	188	1.59
PK	15.55072G	59.08	74.00	-14.92	15.21	3	Vertical	305	1.50

802.11a_Nss1,(6Mbps)_4TX

5180MHz_TX

01/02/2018



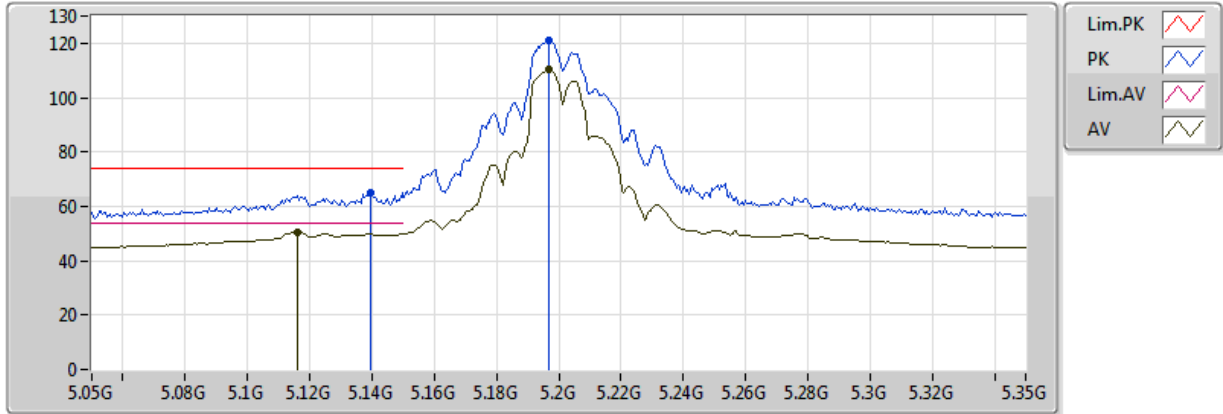
20180201
EUT_Y_4TX
Setting 87
04-Z-1
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	15.52048G	44.99	54.00	-9.01	15.24	3	Horizontal	340	1.21
PK	10.3656G	62.11	68.20	-6.09	12.47	3	Horizontal	246	2.26
PK	15.5408G	58.51	74.00	-15.49	15.22	3	Horizontal	340	1.21

802.11a_Nss1,(6Mbps)_4TX

5200MHz_TX

02/02/2018



20180201
EUT_Y_4TX
Setting 100
04-Z-1-13
FSP(100142)

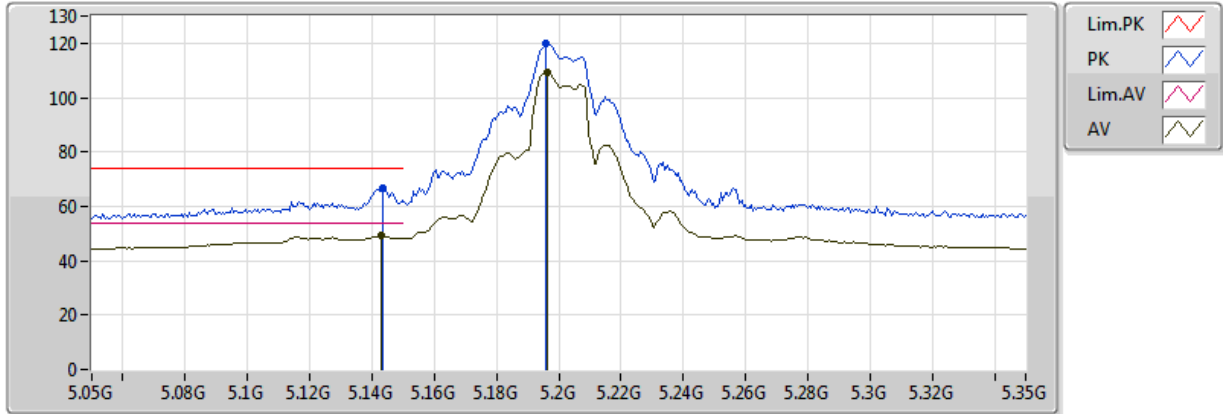
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	5.116G	50.39	54.00	-3.61	3.96	3	Vertical	2	2.16
AV	5.197G	110.35	Inf	-Inf	4.20	3	Vertical	2	2.16
PK	5.1394G	65.06	74.00	-8.94	4.03	3	Vertical	2	2.16
PK	5.197G	120.92	Inf	-Inf	4.20	3	Vertical	2	2.16



802.11a_Nss1,(6Mbps)_4TX

5200MHz_TX

02/02/2018



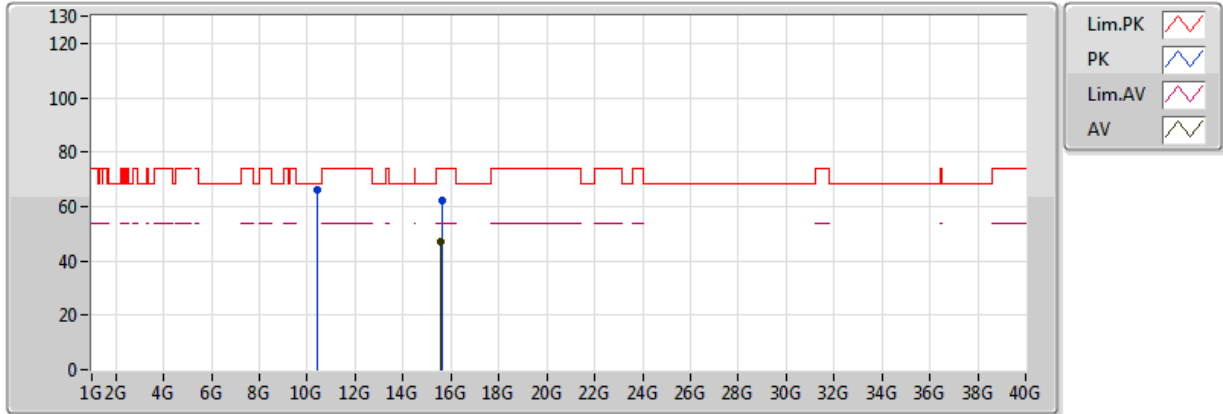
20180201
EUT_Y_4TX
Setting 100
04-Z-1-13
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	5.143G	49.07	54.00	-4.93	4.04	3	Horizontal	308	2.11
AV	5.1964G	109.06	Inf	-Inf	4.20	3	Horizontal	308	2.11
PK	5.1436G	66.59	74.00	-7.41	4.04	3	Horizontal	308	2.11
PK	5.1958G	120.14	Inf	-Inf	4.20	3	Horizontal	308	2.11

802.11a_Nss1,(6Mbps)_4TX

5200MHz_TX

01/02/2018



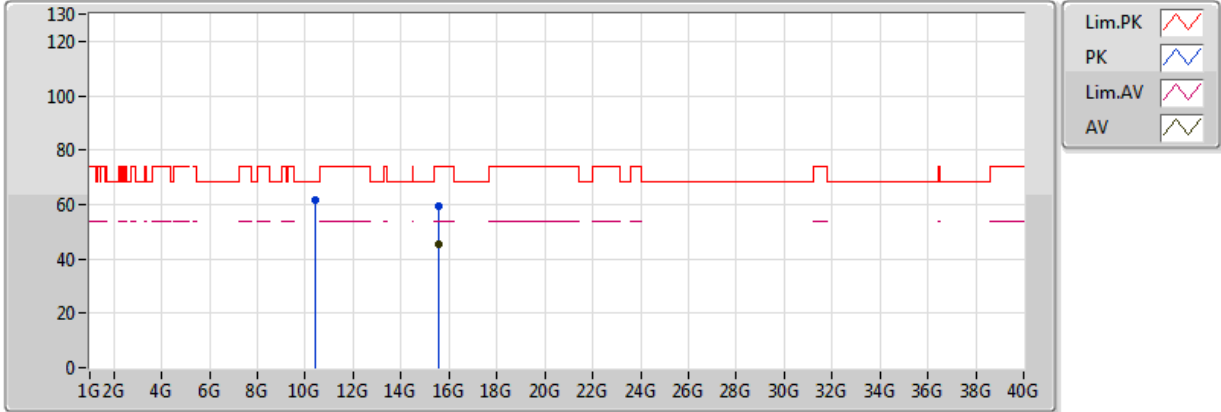
20180201
EUT_Y_4TX
Setting 100
04-Z-1
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	15.6008G	47.27	54.00	-6.73	15.16	3	Vertical	113	1.14
PK	10.3892G	65.94	68.20	-2.26	12.50	3	Vertical	179	1.61
PK	15.60168G	62.24	74.00	-11.76	15.16	3	Vertical	113	1.14

802.11a_Nss1,(6Mbps)_4TX

5200MHz_TX

01/02/2018



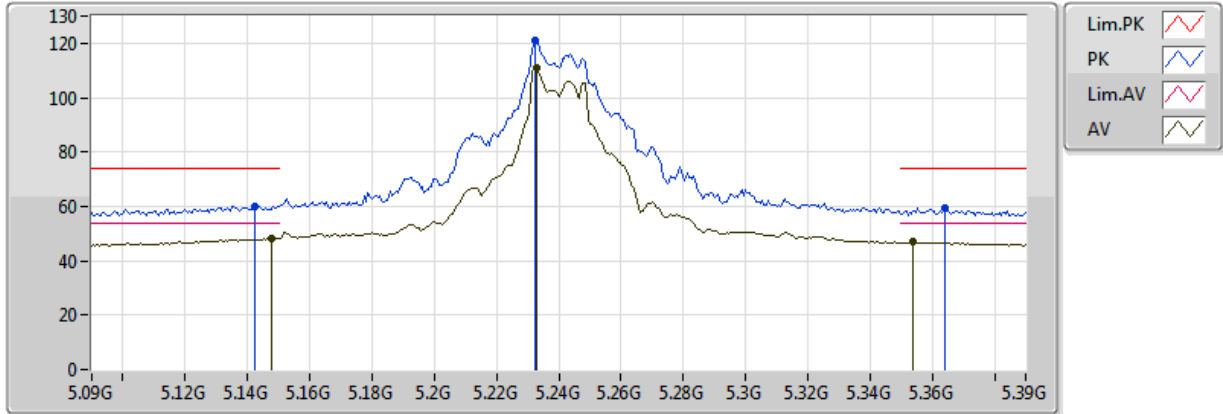
20180201
EUT_Y_4TX
Setting 100
04-Z-1
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	15.59792G	45.22	54.00	-8.78	15.16	3	Horizontal	16	1.23
PK	10.38912G	61.59	68.20	-6.61	12.50	3	Horizontal	250	2.20
PK	15.59608G	59.13	74.00	-14.87	15.16	3	Horizontal	16	1.23

802.11a_Nss1,(6Mbps)_4TX

5240MHz_TX

02/02/2018



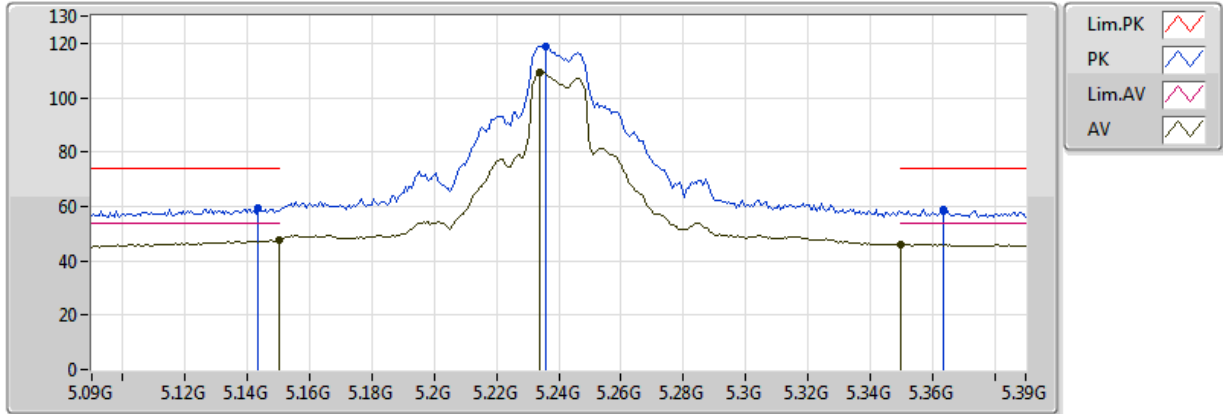
20180201
EUT_Y_4TX
Setting 100
04-Z-1-13
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	5.1476G	48.11	54.00	-5.89	4.05	3	Vertical	174	2.11
AV	5.2328G	111.12	Inf	-Inf	4.29	3	Vertical	174	2.11
AV	5.354G	46.92	54.00	-7.08	4.57	3	Vertical	174	2.11
PK	5.1422G	60.22	74.00	-13.78	4.04	3	Vertical	174	2.11
PK	5.2322G	120.78	Inf	-Inf	4.29	3	Vertical	174	2.11
PK	5.3642G	59.32	74.00	-14.68	4.59	3	Vertical	174	2.11

802.11a_Nss1,(6Mbps)_4TX

5240MHz_TX

02/02/2018



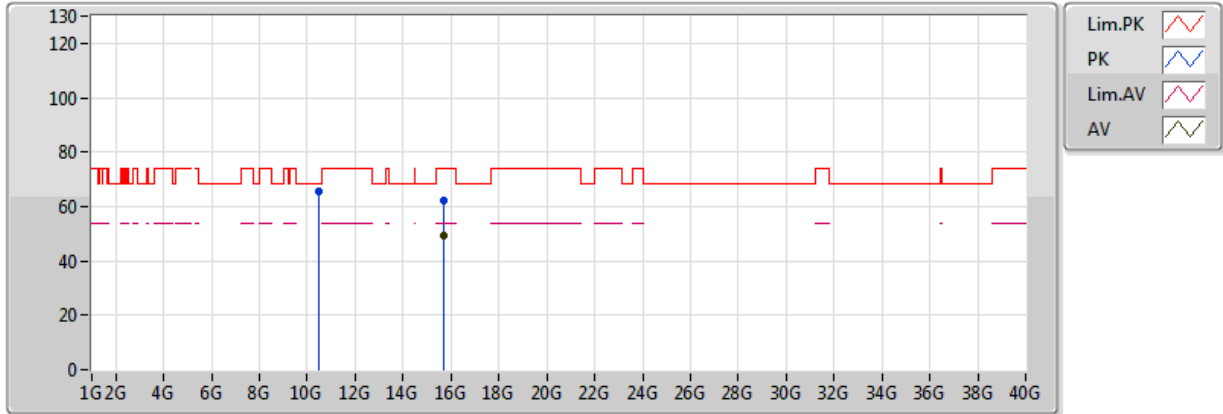
20180201
EUT_Y_4TX
Setting 100
04-Z-1-13
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	5.149995G	47.46	54.00	-6.54	4.06	3	Horizontal	319	1.98
AV	5.234G	109.31	Inf	-Inf	4.30	3	Horizontal	319	1.98
AV	5.350005G	46.00	54.00	-8.00	4.57	3	Horizontal	319	1.98
PK	5.1434G	59.31	74.00	-14.69	4.04	3	Horizontal	319	1.98
PK	5.2358G	119.05	Inf	-Inf	4.30	3	Horizontal	319	1.98
PK	5.3636G	58.87	74.00	-15.13	4.59	3	Horizontal	319	1.98

802.11a_Nss1,(6Mbps)_4TX

5240MHz_TX

01/02/2018



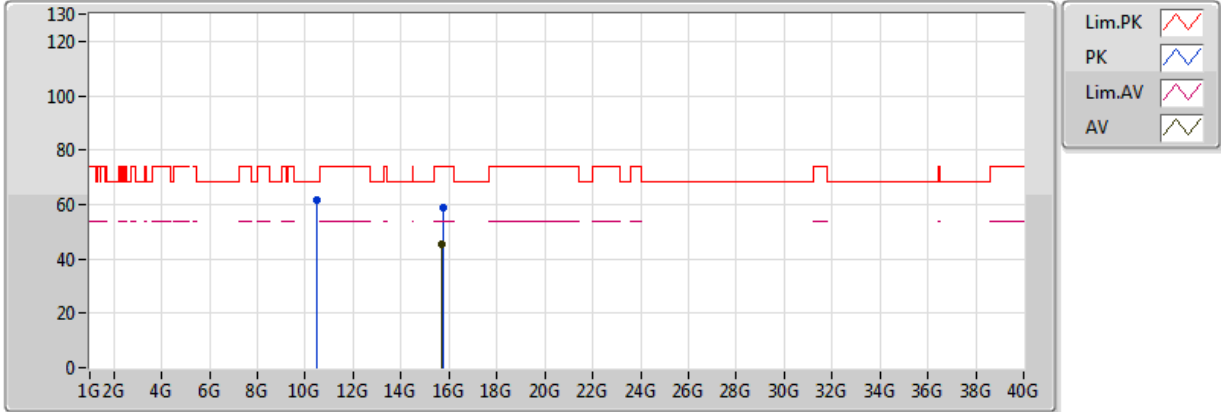
20180201
EUT_Y_4TX
Setting 100
04-Z-1
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	15.71728G	49.20	54.00	-4.80	15.03	3	Vertical	109	2.38
PK	10.46912G	65.73	68.20	-2.47	12.59	3	Vertical	187	1.58
PK	15.71936G	61.96	74.00	-12.04	15.03	3	Vertical	109	2.38

802.11a_Nss1,(6Mbps)_4TX

5240MHz_TX

01/02/2018



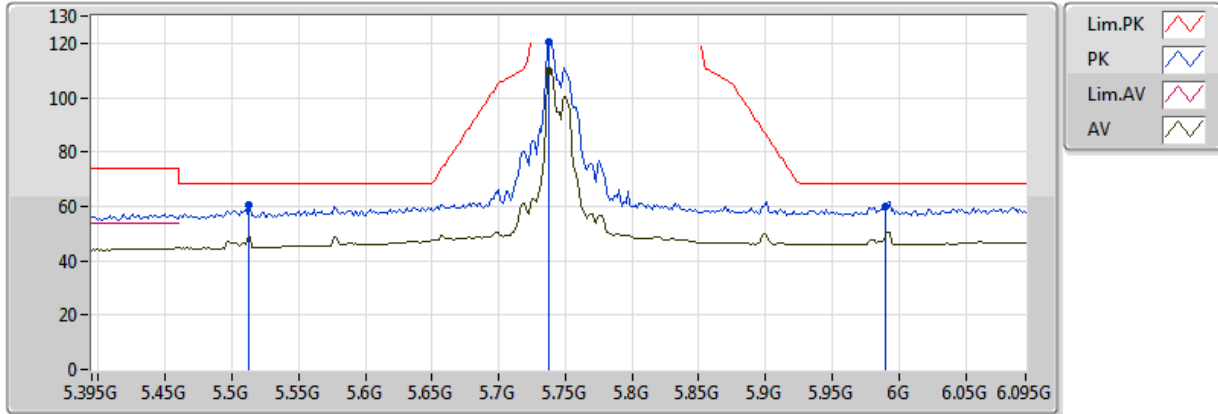
20180201
EUT_Y_4TX
Setting 100
04-Z-1
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	15.72016G	45.41	54.00	-8.59	15.03	3	Horizontal	358	2.06
PK	10.48264G	61.79	68.20	-6.41	12.61	3	Horizontal	245	2.23
PK	15.73432G	58.78	74.00	-15.22	15.01	3	Horizontal	358	2.06

802.11a_Nss1,(6Mbps)_4TX

5745MHz_TX

02/02/2018



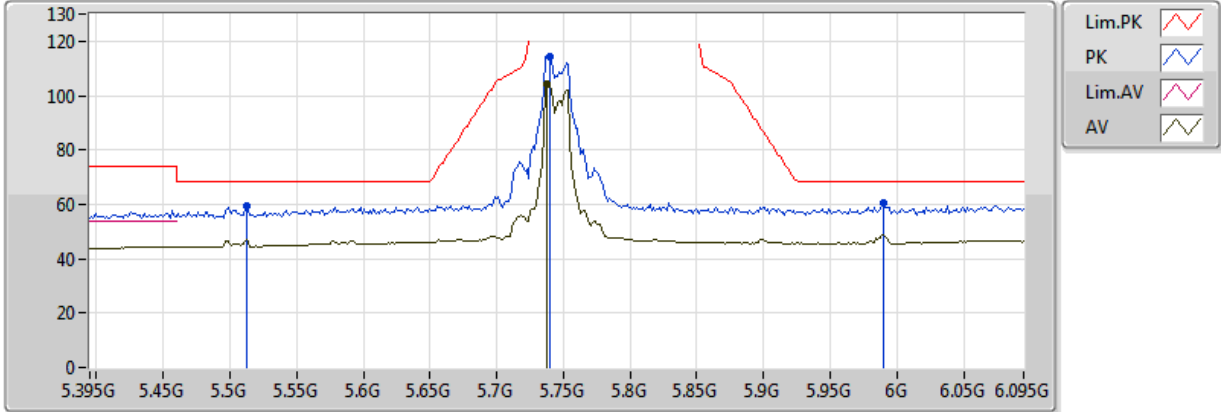
20180201
EUT_Y_4TX
Setting 83
04-Z-1-13
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	5.738G	109.99	Inf	-Inf	5.63	3	Vertical	173	1.98
PK	5.5126G	60.64	68.20	-7.56	4.87	3	Vertical	173	1.98
PK	5.738G	120.20	Inf	-Inf	5.63	3	Vertical	173	1.98
PK	5.99G	60.05	68.20	-8.15	6.55	3	Vertical	173	1.98

802.11a_Nss1,(6Mbps)_4TX

5745MHz_TX

02/02/2018



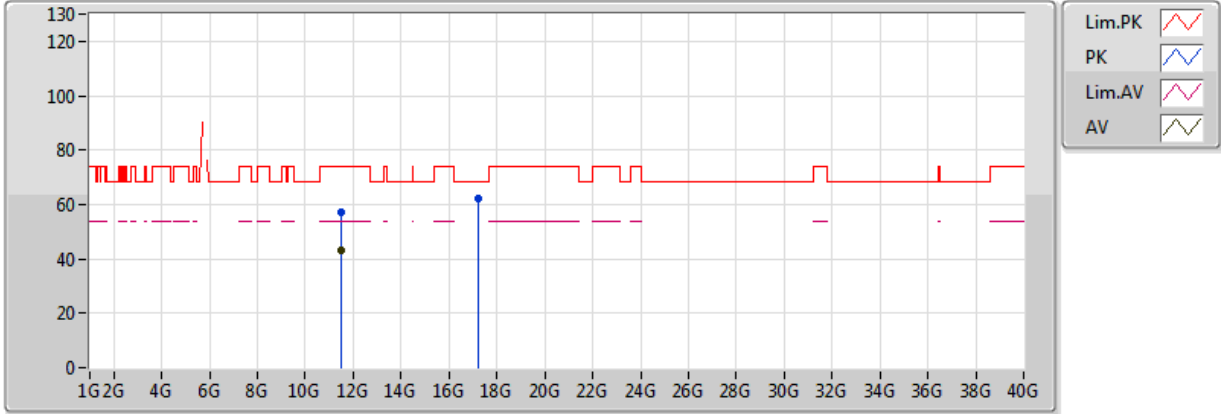
20180201
EUT_Y_4TX
Setting 83
04-Z-1-13
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	5.738G	104.39	Inf	-Inf	5.63	3	Horizontal	212	1.82
PK	5.5126G	59.44	68.20	-8.76	4.87	3	Horizontal	212	1.82
PK	5.7394G	114.55	Inf	-Inf	5.64	3	Horizontal	212	1.82
PK	5.99G	60.74	68.20	-7.46	6.55	3	Horizontal	212	1.82

802.11a_Nss1,(6Mbps)_4TX

5745MHz_TX

01/02/2018



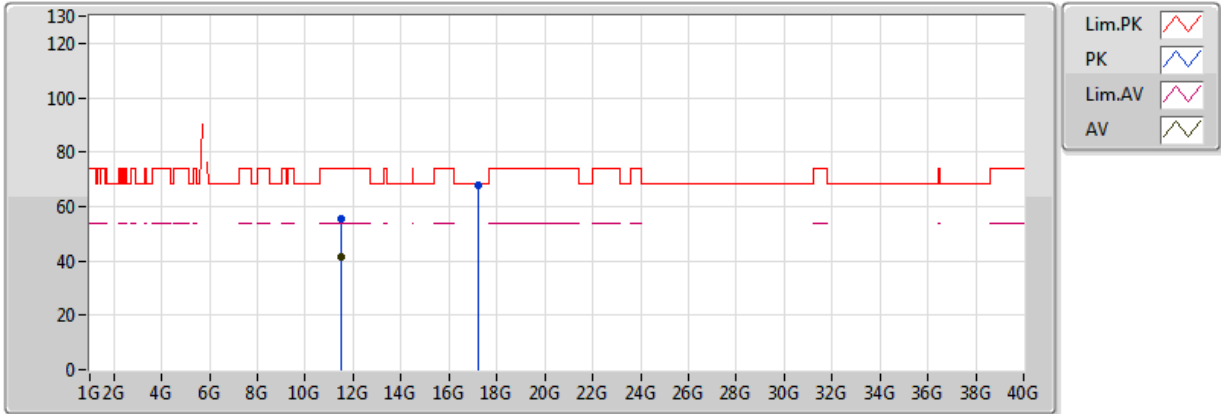
20180201
EUT_Y_4TX
Setting 83
04-Z-1
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	11.47712G	42.91	54.00	-11.09	13.32	3	Vertical	187	1.47
PK	11.47896G	57.12	74.00	-16.88	13.32	3	Vertical	187	1.47
PK	17.237G	62.39	68.20	-5.81	17.48	3	Vertical	296	2.98

802.11a_Nss1,(6Mbps)_4TX

5745MHz_TX

01/02/2018



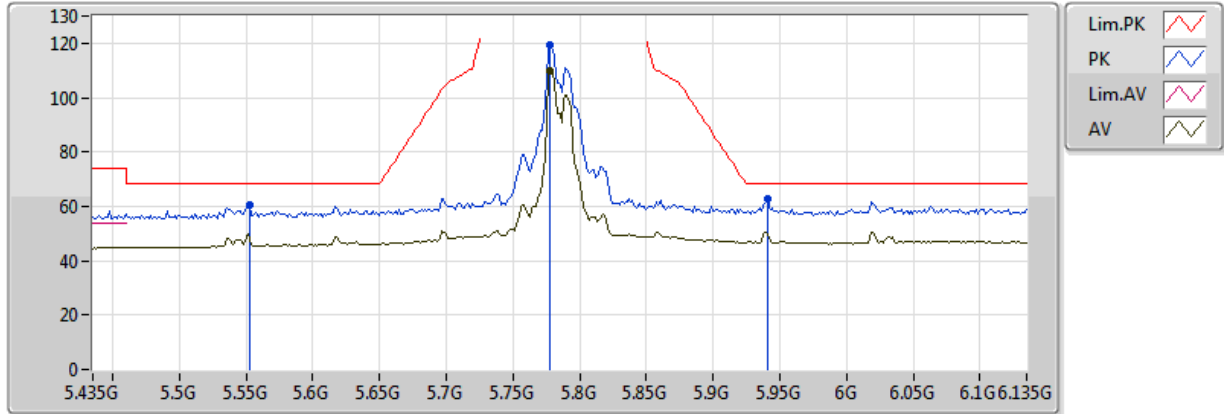
20180201
EUT_Y_4TX
Setting 83
04-Z-1
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	11.48232G	41.71	54.00	-12.29	13.32	3	Horizontal	102	1.55
PK	11.48264G	55.58	74.00	-18.42	13.32	3	Horizontal	102	1.55
PK	17.23692G	67.97	68.20	-0.23	17.48	3	Horizontal	211	1.64

802.11a_Nss1,(6Mbps)_4TX

5785MHz_TX

02/02/2018



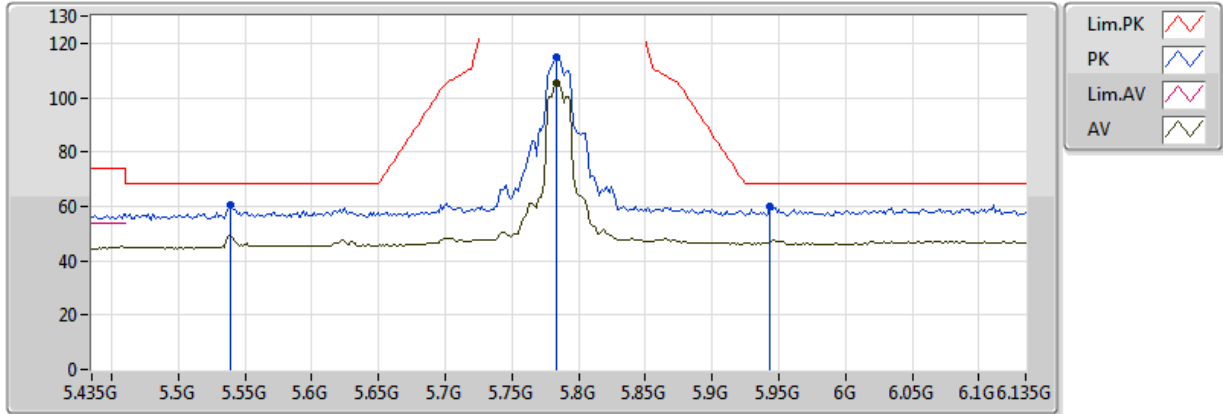
20180201
EUT_Y_4TX
Setting 83
04-Z-1-13
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	5.778G	109.93	Inf	-Inf	5.78	3	Vertical	173	1.85
PK	5.5526G	60.48	68.20	-7.72	4.98	3	Vertical	173	1.85
PK	5.778G	119.46	Inf	-Inf	5.78	3	Vertical	173	1.85
PK	5.9404G	62.57	68.20	-5.63	6.38	3	Vertical	173	1.85

802.11a_Nss1,(6Mbps)_4TX

5785MHz_TX

02/02/2018



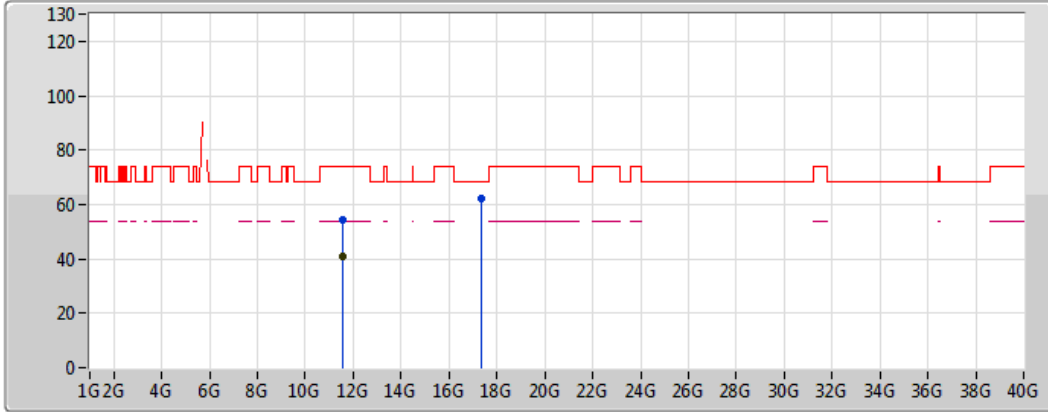
20180201
EUT_Y_4TX
Setting 83
04-Z-1-13
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	5.7836G	105.12	Inf	-Inf	5.80	3	Horizontal	326	2.03
PK	5.5386G	60.24	68.20	-7.96	4.94	3	Horizontal	326	2.03
PK	5.7836G	114.60	Inf	-Inf	5.80	3	Horizontal	326	2.03
PK	5.9432G	59.71	68.20	-8.49	6.39	3	Horizontal	326	2.03

802.11a_Nss1,(6Mbps)_4TX

5785MHz_TX

01/02/2018



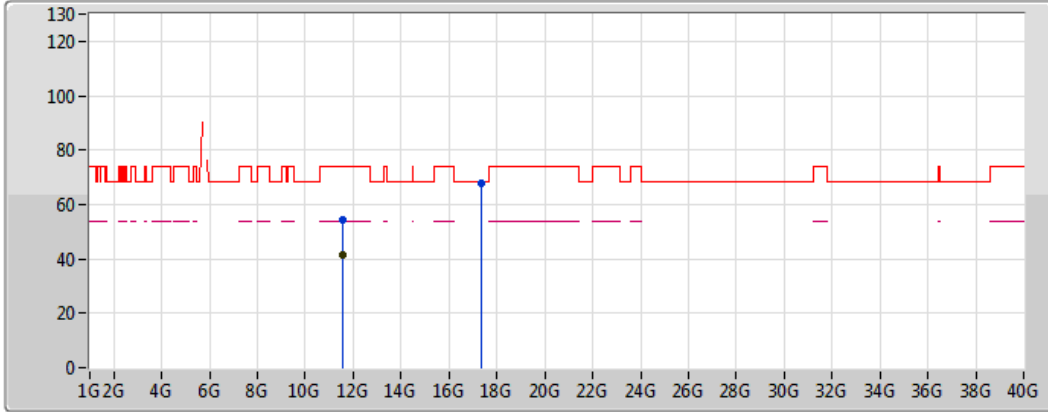
20180201
EUT_Y_4TX
Setting 83
04-Z-1
FSP(100142)





Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	11.56056G	41.15	54.00	-12.85	13.33	3	Vertical	246	1.58
PK	11.57888G	54.35	74.00	-19.65	13.33	3	Vertical	246	1.58
PK	17.35652G	62.20	68.20	-6.00	17.62	3	Vertical	287	2.06

802.11a_Nss1,(6Mbps)_4TX

5785MHz_TX

01/02/2018



- Lim.PK 
- PK 
- Lim.AV 
- AV 

20180201
EUT_Y_4TX
Setting 83
04-Z-1
FSP(100142)

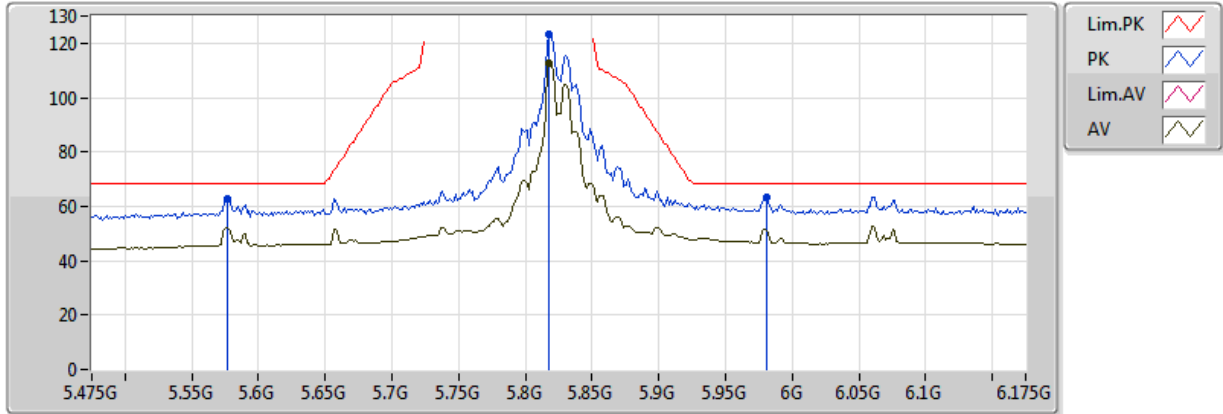
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	11.56312G	41.37	54.00	-12.63	13.33	3	Horizontal	158	2.42
PK	11.56104G	54.29	74.00	-19.71	13.33	3	Horizontal	158	2.42
PK	17.35724G	67.91	68.20	-0.29	17.62	3	Horizontal	210	1.67



802.11a_Nss1,(6Mbps)_4TX

5825MHz_TX

02/02/2018



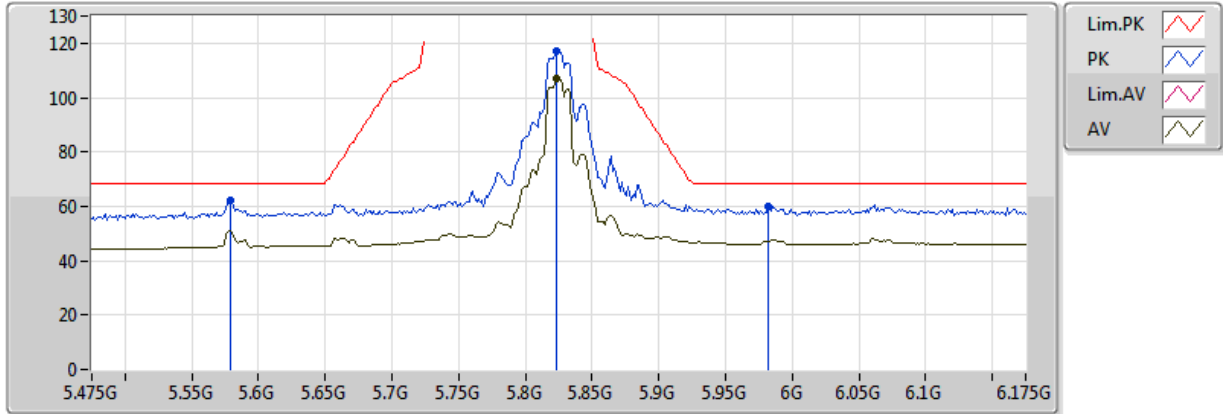
20180201
EUT_Y_4TX
Setting 96
04-Z-1-13
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	5.818G	112.53	Inf	-Inf	5.93	3	Vertical	174	1.89
PK	5.5772G	62.66	68.20	-5.54	5.05	3	Vertical	174	1.89
PK	5.818G	123.48	Inf	-Inf	5.93	3	Vertical	174	1.89
PK	5.9804G	63.30	68.20	-4.90	6.52	3	Vertical	174	1.89

802.11a_Nss1,(6Mbps)_4TX

5825MHz_TX

02/02/2018



20180201
EUT_Y_4TX
Setting 96
04-Z-1-13
FSP(100142)

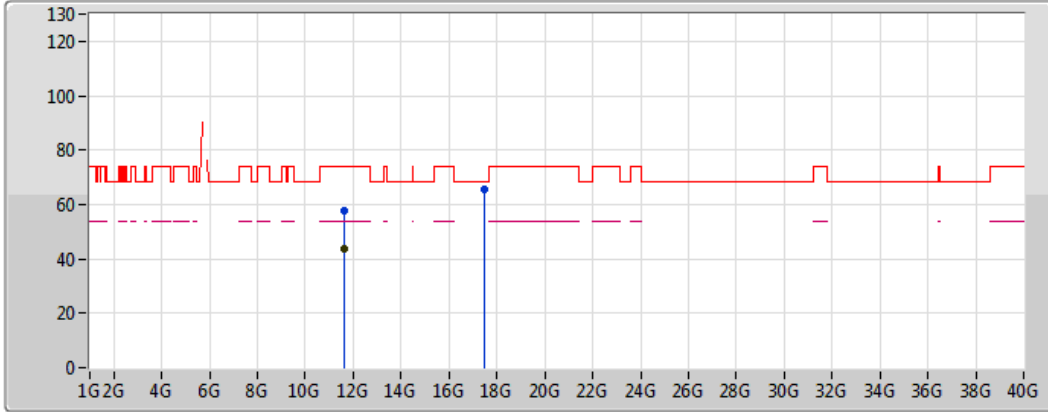
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	5.8236G	106.95	Inf	-Inf	5.95	3	Horizontal	322	2.04
PK	5.5786G	62.06	68.20	-6.14	5.06	3	Horizontal	322	2.04
PK	5.8236G	117.20	Inf	-Inf	5.95	3	Horizontal	322	2.04
PK	5.9818G	60.05	68.20	-8.15	6.52	3	Horizontal	322	2.04



802.11a_Nss1,(6Mbps)_4TX

5825MHz_TX

01/02/2018



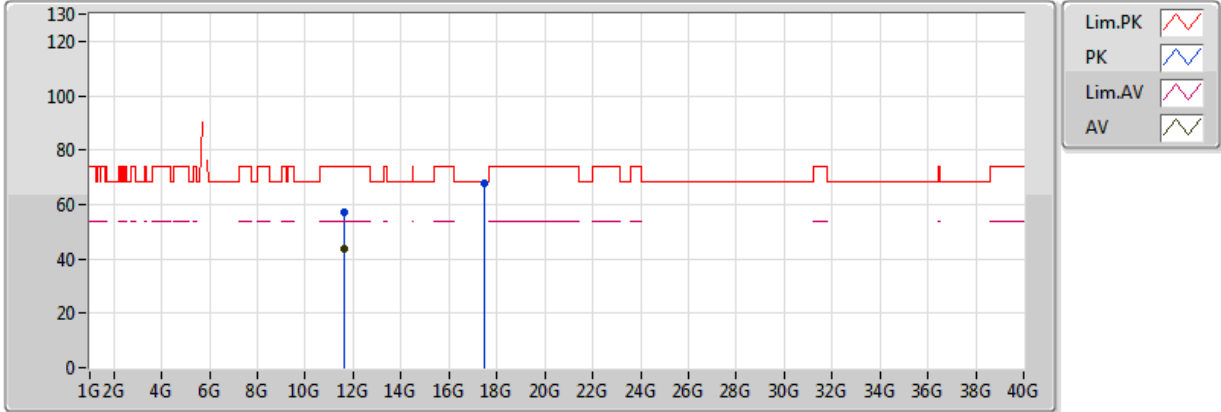
20180201
EUT_Y_4TX
Setting 96
04-Z-1
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	11.64336G	43.71	54.00	-10.29	13.35	3	Vertical	256	1.69
PK	11.65584G	57.51	74.00	-16.49	13.35	3	Vertical	256	1.69
PK	17.47708G	65.68	68.20	-2.52	17.76	3	Vertical	261	2.97

802.11a_Nss1,(6Mbps)_4TX

5825MHz_TX

01/02/2018



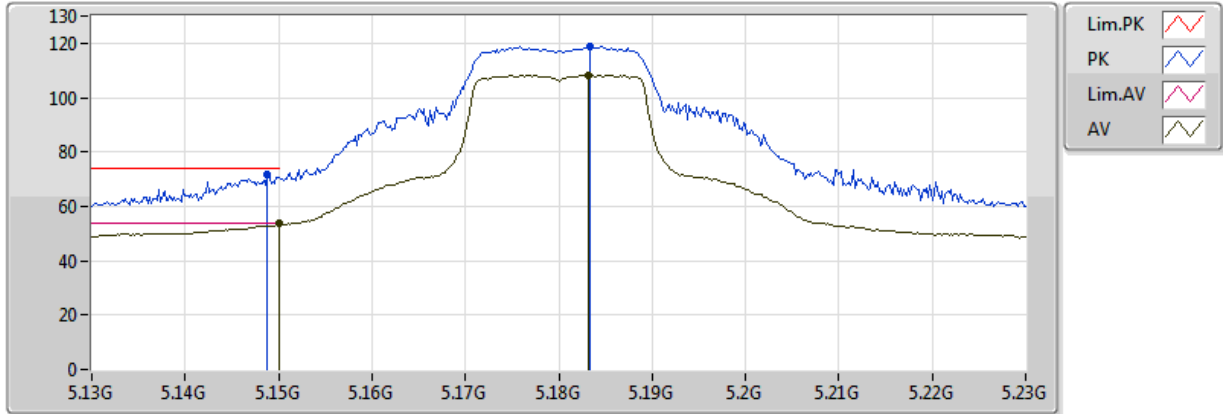
20180201
EUT_Y_4TX
Setting 96
04-Z-1
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	11.6436G	43.74	54.00	-10.26	13.35	3	Horizontal	16	1.81
PK	11.64216G	57.18	74.00	-16.82	13.35	3	Horizontal	16	1.81
PK	17.46548G	68.05	68.20	-0.15	17.75	3	Horizontal	216	1.68

802.11ac VHT20-BF_Nss1,(MCS0)_4TX

5180MHz_TX

02/02/2018



20180201
EUT_Y_4TX
Setting 83
04-Z-1-13
FSP(100142)

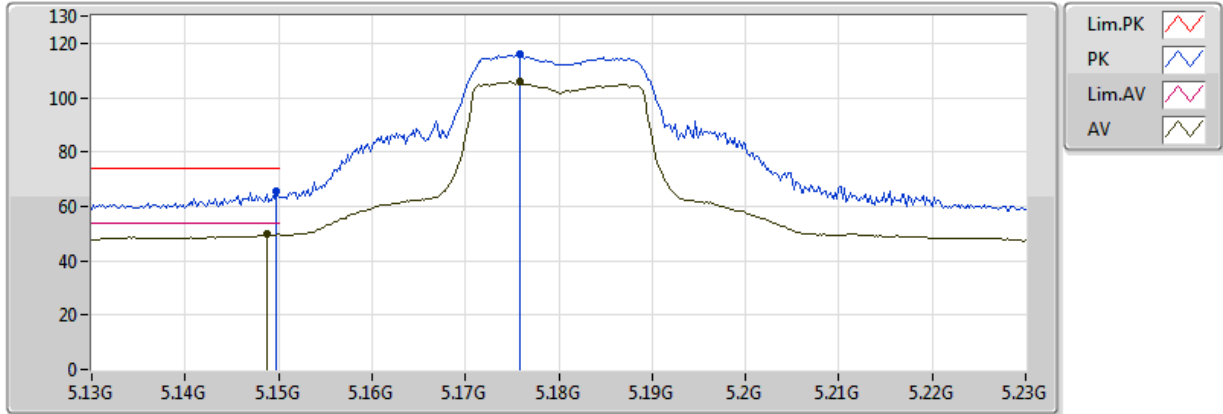
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	5.149995G	53.76	54.00	-0.24	4.06	3	Vertical	173	1.99
AV	5.1832G	108.26	Inf	-Inf	4.16	3	Vertical	173	1.99
PK	5.1488G	72.00	74.00	-2.00	4.06	3	Vertical	173	1.99
PK	5.1834G	118.82	Inf	-Inf	4.16	3	Vertical	173	1.99



802.11ac VHT20-BF_Nss1,(MCS0)_4TX

5180MHz_TX

02/02/2018



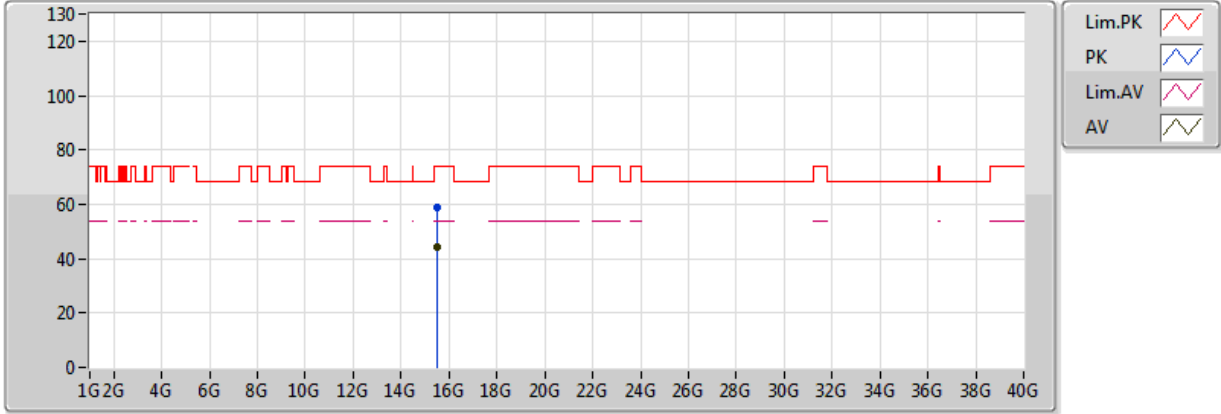
20180201
EUT_Y_4TX
Setting 83
04-Z-1-13
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	5.1488G	49.68	54.00	-4.32	4.06	3	Horizontal	337	2.16
AV	5.1758G	105.67	Inf	-Inf	4.14	3	Horizontal	337	2.16
PK	5.1498G	65.77	74.00	-8.23	4.06	3	Horizontal	337	2.16
PK	5.1758G	116.05	Inf	-Inf	4.14	3	Horizontal	337	2.16

802.11ac VHT20-BF_Nss1,(MCS0)_4TX

5180MHz_TX

02/02/2018



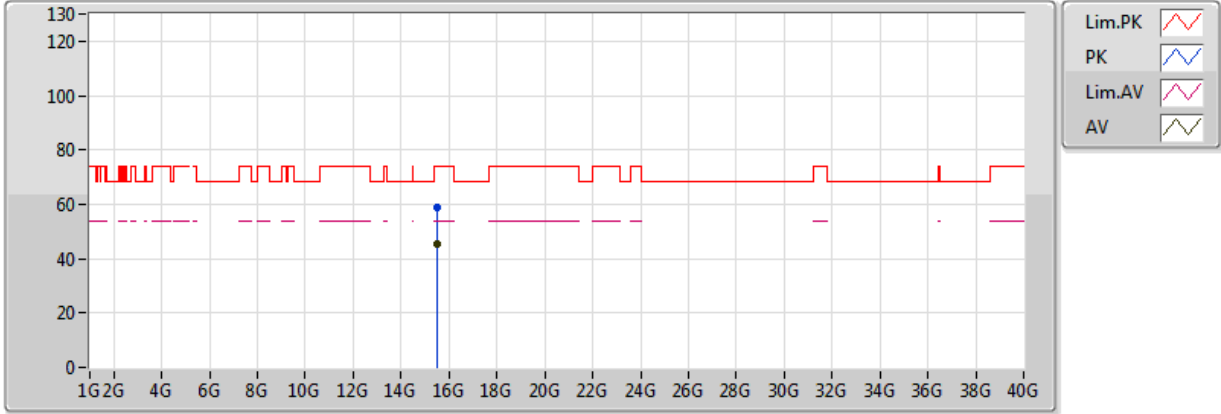
20180201
EUT_Y_4TX
Setting 83
04-Z-1
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	15.5336G	44.37	54.00	-9.63	15.23	3	Vertical	84	1.50
PK	15.53072G	58.83	74.00	-15.17	15.23	3	Vertical	84	1.50

802.11ac VHT20-BF_Nss1,(MCS0)_4TX

5180MHz_TX

02/02/2018



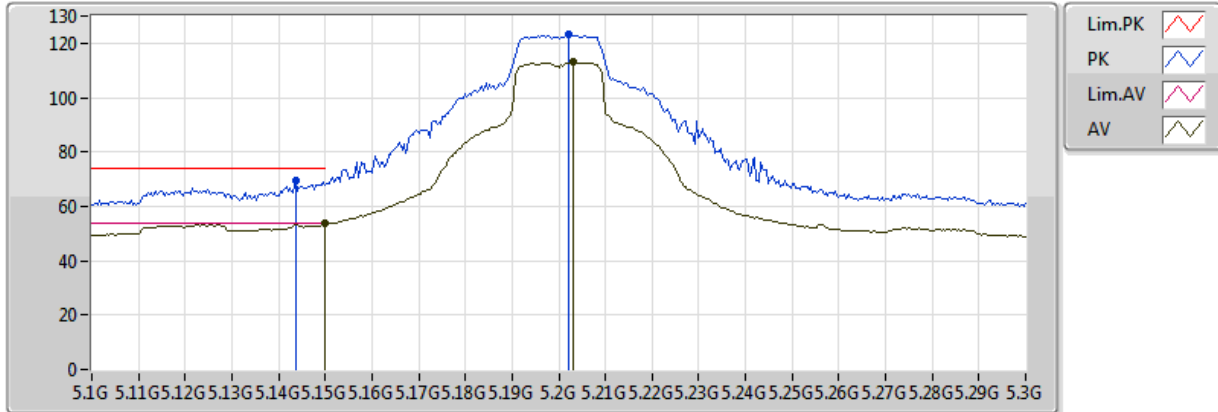
20180201
EUT_Y_4TX
Setting 83
04-Z-1
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	15.52624G	45.37	54.00	-8.63	15.24	3	Horizontal	337	1.49
PK	15.51312G	58.74	74.00	-15.26	15.25	3	Horizontal	337	1.49

802.11ac VHT20-BF_Nss1,(MCS0)_4TX

5200MHz_TX

02/02/2018



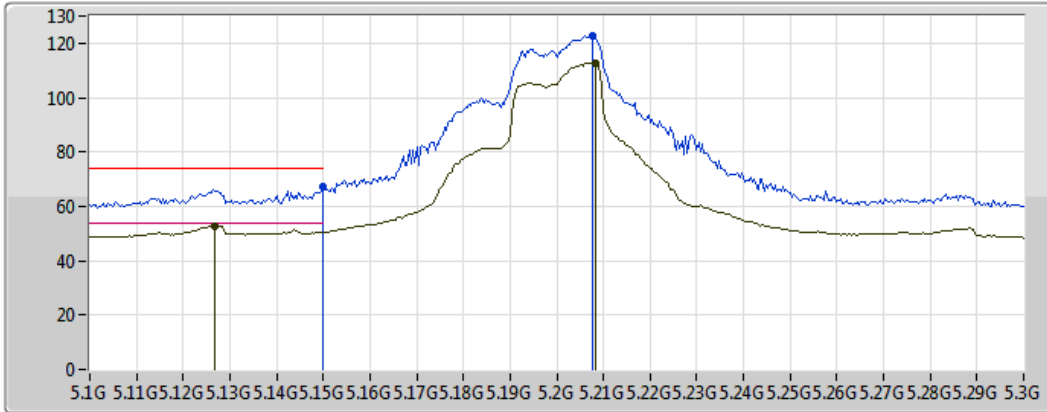
20180201
EUT_Y_4TX
Setting 100
04-Z-1-13
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	5.149995G	53.84	54.00	-0.16	4.06	3	Vertical	4	2.11
AV	5.2032G	112.94	Inf	-Inf	4.22	3	Vertical	4	2.11
PK	5.1436G	69.31	74.00	-4.69	4.04	3	Vertical	4	2.11
PK	5.202G	123.54	Inf	-Inf	4.21	3	Vertical	4	2.11

802.11ac VHT20-BF_Nss1,(MCS0)_4TX

5200MHz_TX

02/02/2018



Legend for the spectrum plot:

- Lim.PK: Red line with a peak icon
- PK: Blue line with a peak icon
- Lim.AV: Pink line with a peak icon
- AV: Green line with a peak icon

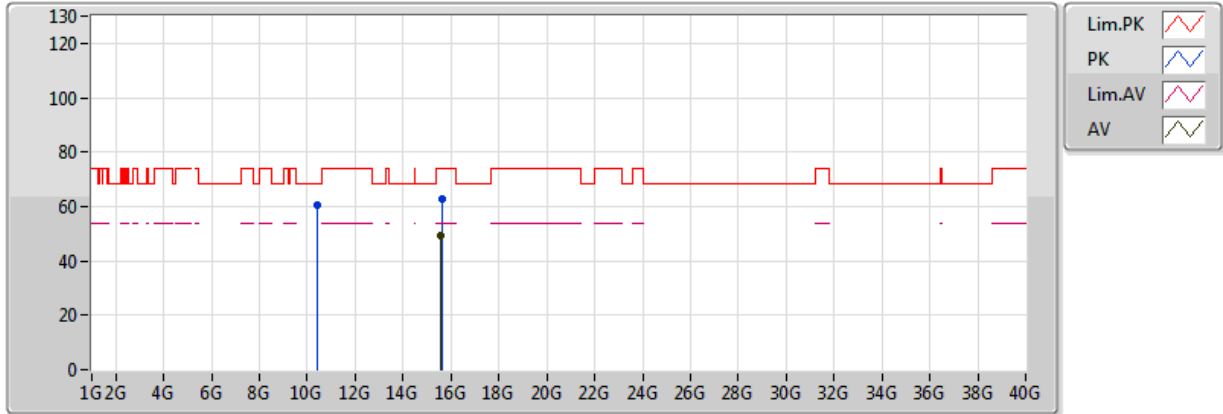
20180201
EUT_Y_4TX
Setting 100
04-Z-1-13
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	5.1268G	52.89	54.00	-1.11	3.99	3	Horizontal	328	2.08
AV	5.2084G	112.89	Inf	-Inf	4.23	3	Horizontal	328	2.08
PK	5.149995G	67.16	74.00	-6.84	4.06	3	Horizontal	328	2.08
PK	5.2076G	122.51	Inf	-Inf	4.23	3	Horizontal	328	2.08

802.11ac VHT20-BF_Nss1,(MCS0)_4TX

5200MHz_TX

01/02/2018



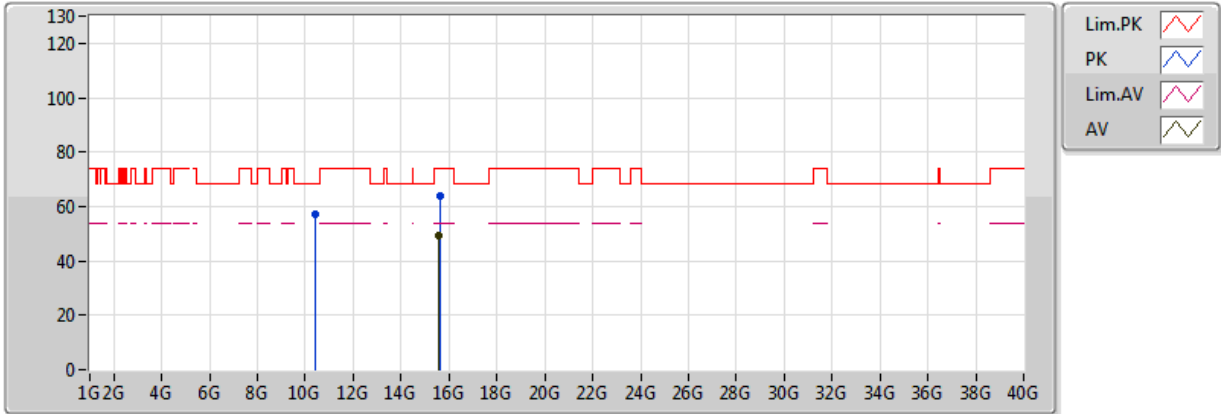
20180201
EUT_Y_4TX
Setting 100
04-Z-1
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	15.59824G	49.07	54.00	-4.93	15.16	3	Vertical	95	1.74
PK	10.39664G	60.41	68.20	-7.79	12.51	3	Vertical	212	2.27
PK	15.60272G	62.98	74.00	-11.02	15.16	3	Vertical	95	1.74

802.11ac VHT20-BF_Nss1,(MCS0)_4TX

5200MHz_TX

01/02/2018



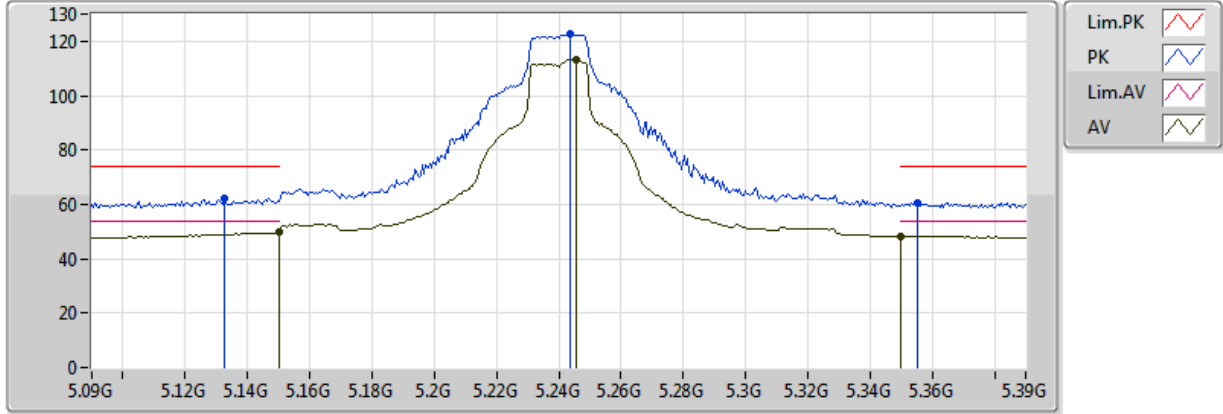
20180201
EUT_Y_4TX
Setting 100
04-Z-1
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	15.59584G	49.40	54.00	-4.60	15.16	3	Horizontal	322	1.50
PK	10.39616G	56.99	68.20	-11.21	12.51	3	Horizontal	195	1.76
PK	15.6032G	63.62	74.00	-10.38	15.15	3	Horizontal	322	1.50

802.11ac VHT20-BF_Nss1,(MCS0)_4TX

5240MHz_TX

02/02/2018



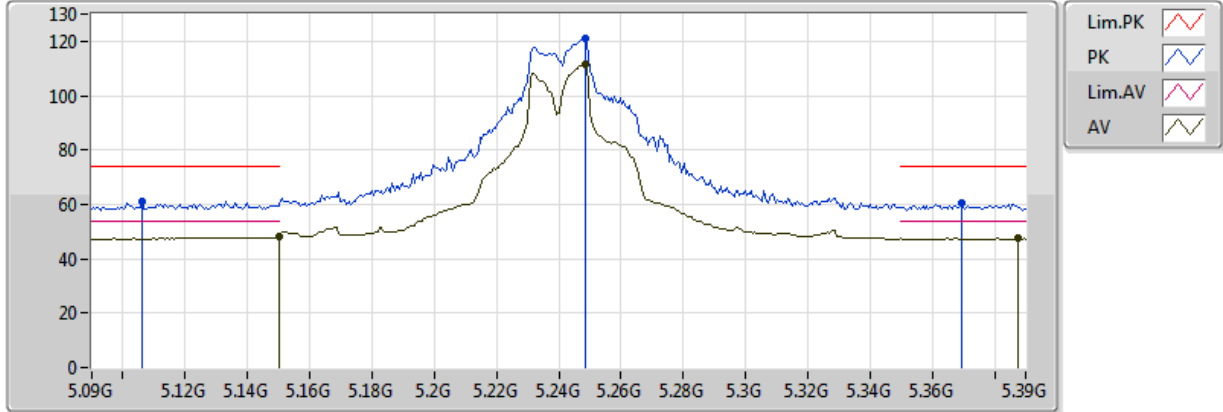
20180201
EUT_Y_4TX
Setting 100
04-Z-1-13
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	5.149995G	49.68	54.00	-4.32	4.06	3	Vertical	173	2.08
AV	5.2454G	112.98	Inf	-Inf	4.32	3	Vertical	173	2.08
AV	5.350005G	48.37	54.00	-5.63	4.57	3	Vertical	173	2.08
PK	5.1326G	62.10	74.00	-11.90	4.01	3	Vertical	173	2.08
PK	5.2436G	122.45	Inf	-Inf	4.32	3	Vertical	173	2.08
PK	5.3552G	60.71	74.00	-13.29	4.58	3	Vertical	173	2.08

802.11ac VHT20-BF_Nss1,(MCS0)_4TX

5240MHz_TX

02/02/2018



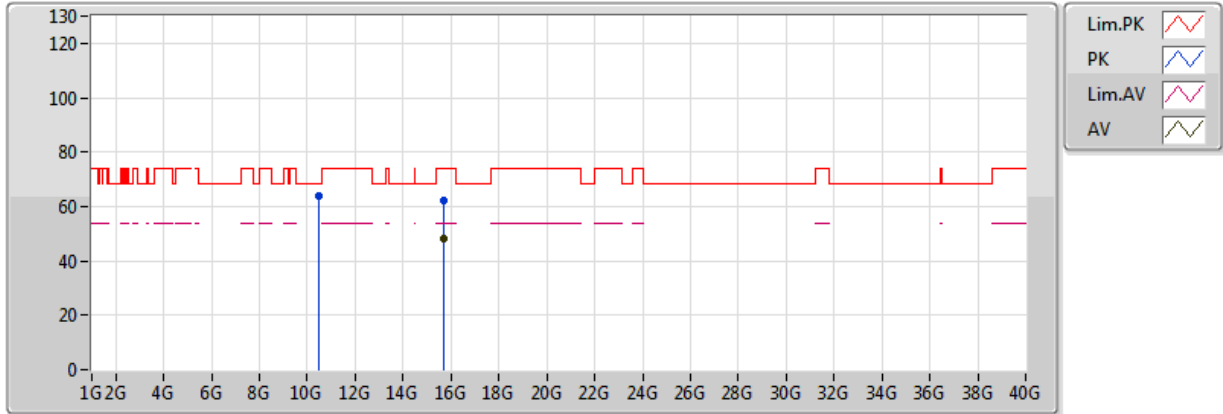
20180201
EUT_Y_4TX
Setting 100
04-Z-1-13
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	5.149995G	48.01	54.00	-5.99	4.06	3	Horizontal	332	1.92
AV	5.2484G	111.50	Inf	-Inf	4.33	3	Horizontal	332	1.92
AV	5.3876G	47.43	54.00	-6.57	4.64	3	Horizontal	332	1.92
PK	5.1062G	61.13	74.00	-12.87	3.93	3	Horizontal	332	1.92
PK	5.2484G	120.97	Inf	-Inf	4.33	3	Horizontal	332	1.92
PK	5.3696G	60.24	74.00	-13.76	4.61	3	Horizontal	332	1.92

802.11ac VHT20-BF_Nss1,(MCS0)_4TX

5240MHz_TX

01/02/2018



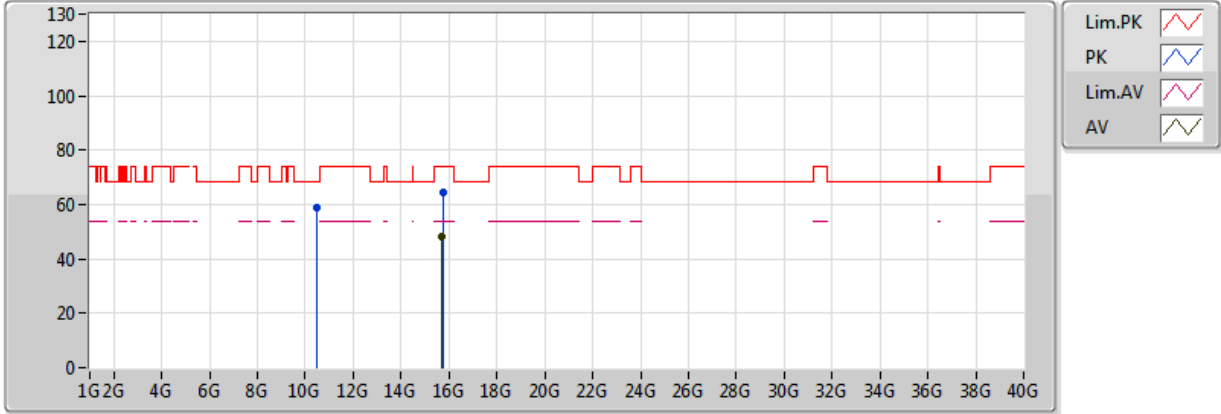
20180201
EUT_Y_4TX
Setting 100
04-Z-1
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	15.71984G	48.30	54.00	-5.70	15.03	3	Vertical	318	1.57
PK	10.48528G	63.84	68.20	-4.36	12.61	3	Vertical	187	1.62
PK	15.72336G	62.21	74.00	-11.79	15.03	3	Vertical	318	1.57

802.11ac VHT20-BF_Nss1,(MCS0)_4TX

5240MHz_TX

01/02/2018



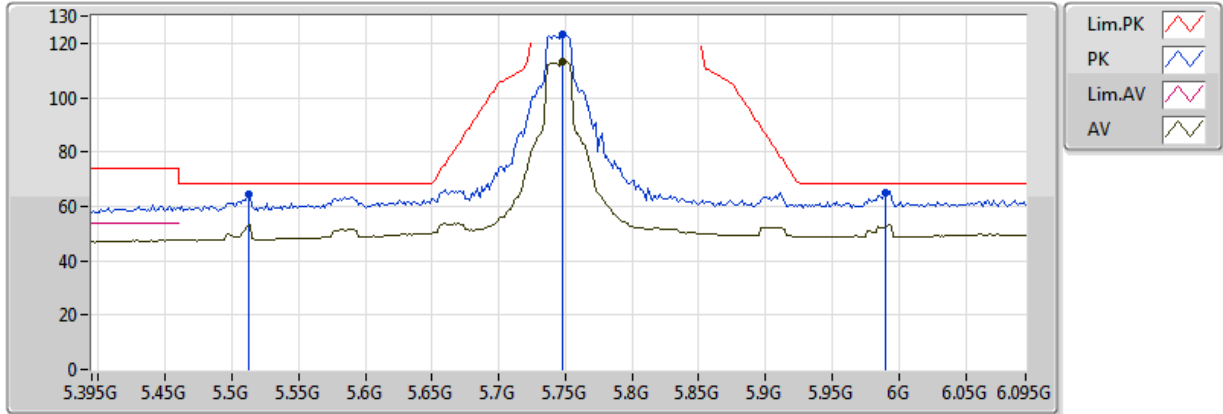
20180201
EUT_Y_4TX
Setting 100
04-Z-1
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	15.728G	48.39	54.00	-5.61	15.02	3	Horizontal	321	1.71
PK	10.48304G	58.64	68.20	-9.56	12.61	3	Horizontal	262	1.43
PK	15.73376G	64.57	74.00	-9.43	15.01	3	Horizontal	321	1.71

802.11ac VHT20-BF_Nss1,(MCS0)_4TX

5745MHz_TX

02/02/2018



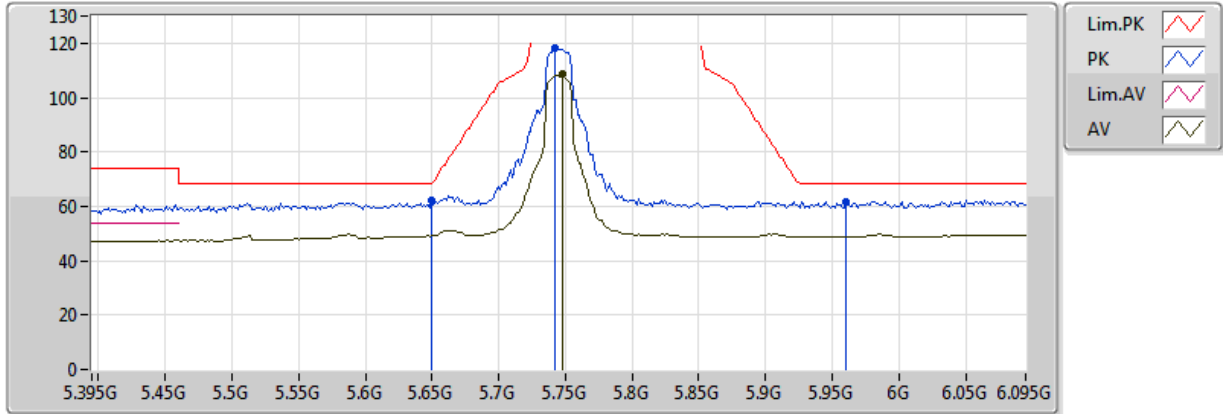
20180201
EUT_Y_4TX
Setting 92
04-Z-1-13
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	5.7478G	113.29	Inf	-Inf	5.67	3	Vertical	175	2.06
PK	5.5126G	64.25	68.20	-3.95	4.87	3	Vertical	175	2.06
PK	5.7478G	123.08	Inf	-Inf	5.67	3	Vertical	175	2.06
PK	5.99G	64.99	68.20	-3.21	6.55	3	Vertical	175	2.06

802.11ac VHT20-BF_Nss1,(MCS0)_4TX

5745MHz_TX

02/02/2018



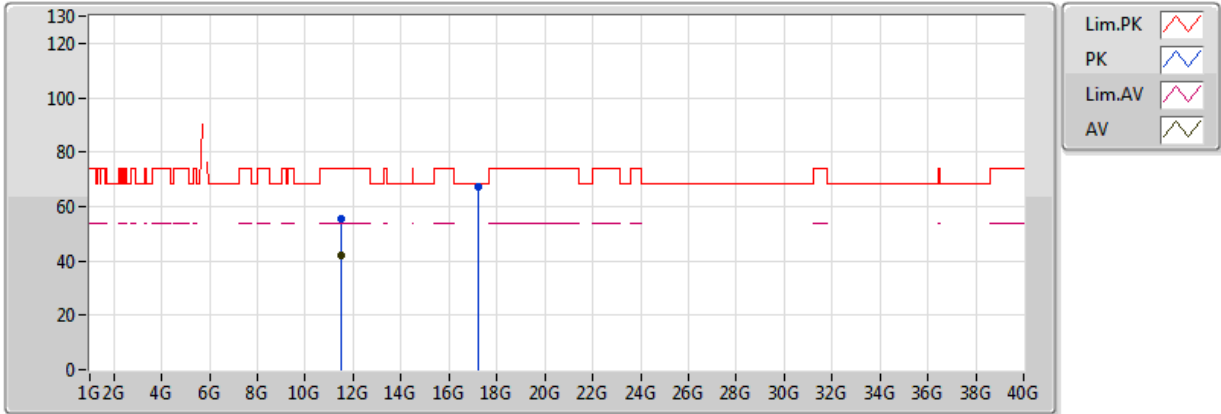
20180201
EUT_Y_4TX
Setting 92
04-Z-1-13
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	5.7478G	108.52	Inf	-Inf	5.67	3	Horizontal	207	2.09
PK	5.6498G	62.44	68.20	-5.76	5.30	3	Horizontal	207	2.09
PK	5.7422G	118.23	Inf	-Inf	5.65	3	Horizontal	207	2.09
PK	5.9606G	61.63	68.20	-6.57	6.45	3	Horizontal	207	2.09

802.11ac VHT20-BF_Nss1,(MCS0)_4TX

5745MHz_TX

02/02/2018



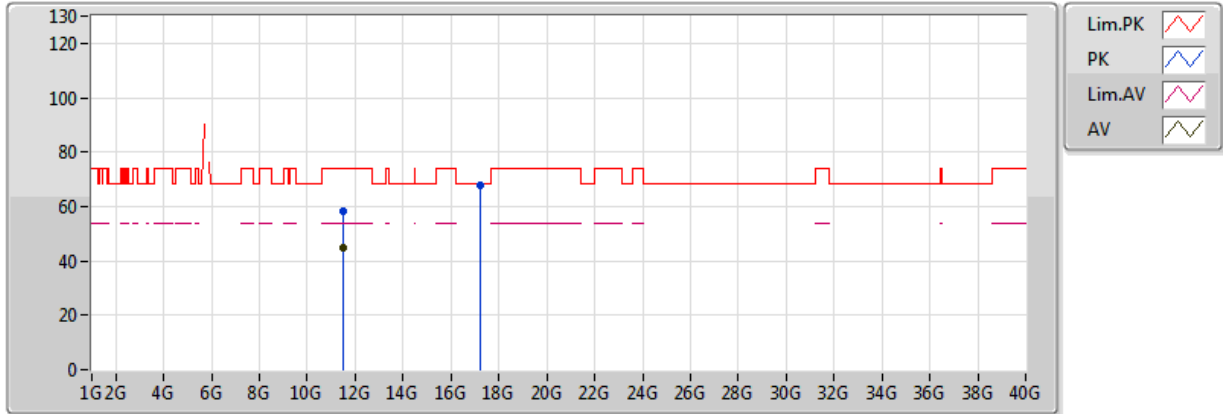
20180201
EUT_Y_4TX
Setting 92
04-Z-1
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	11.4852G	41.84	54.00	-12.16	13.32	3	Vertical	358	1.46
PK	11.48536G	55.69	74.00	-18.31	13.32	3	Vertical	358	1.46
PK	17.24188G	67.12	68.20	-1.08	17.49	3	Vertical	264	2.43

802.11ac VHT20-BF_Nss1,(MCS0)_4TX

5745MHz_TX

02/02/2018



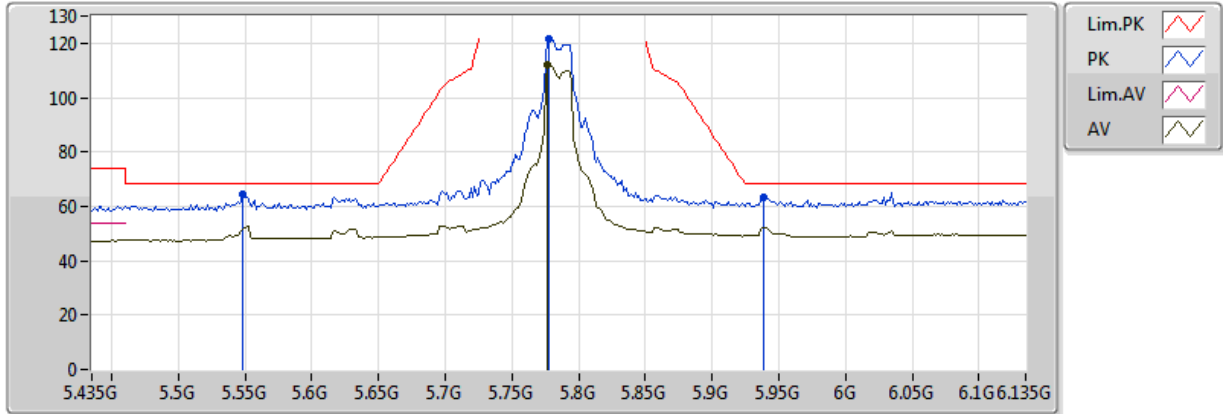
20180201
EUT_Y_4TX
Setting 92
04-Z-1
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	11.4836G	44.87	54.00	-9.13	13.32	3	Horizontal	261	1.61
PK	11.48904G	58.48	74.00	-15.52	13.32	3	Horizontal	261	1.61
PK	17.23132G	67.88	68.20	-0.32	17.48	3	Horizontal	216	1.63

802.11ac VHT20-BF_Nss1,(MCS0)_4TX

5785MHz_TX

02/02/2018



20180201
EUT_Y_4TX
Setting 90
04-Z-1-13
FSP(100142)

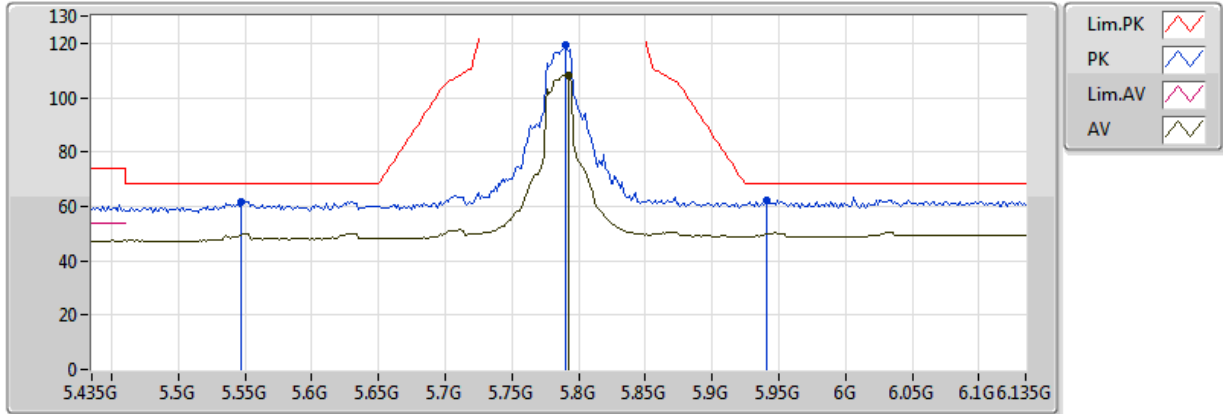
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	5.7766G	112.01	Inf	-Inf	5.77	3	Vertical	178	2.00
PK	5.5484G	64.60	68.20	-3.60	4.97	3	Vertical	178	2.00
PK	5.778G	121.36	Inf	-Inf	5.78	3	Vertical	178	2.00
PK	5.939G	63.35	68.20	-4.85	6.37	3	Vertical	178	2.00



802.11ac VHT20-BF_Nss1,(MCS0)_4TX

5785MHz_TX

02/02/2018



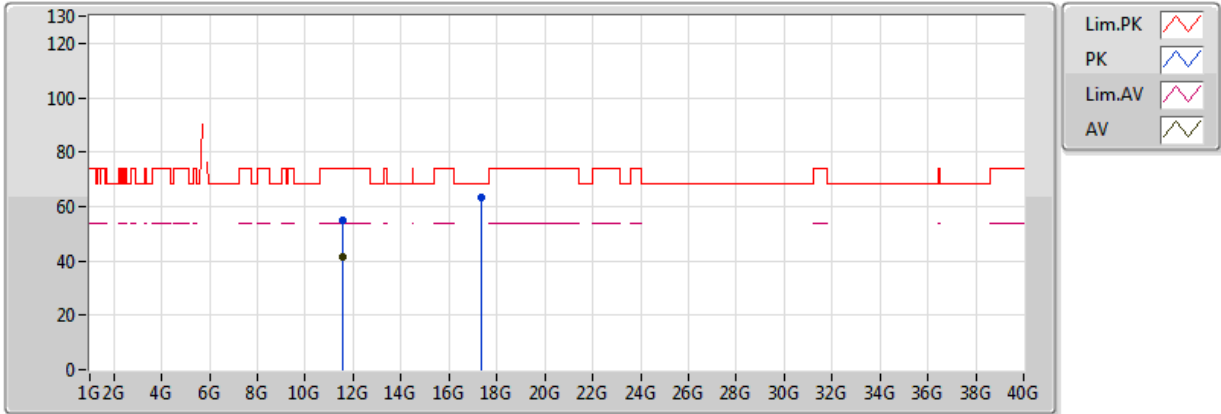
20180201
EUT_Y_4TX
Setting 90
04-Z-1-13
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	5.792G	108.41	Inf	-Inf	5.83	3	Horizontal	323	1.98
PK	5.547G	61.80	68.20	-6.40	4.97	3	Horizontal	323	1.98
PK	5.7906G	119.36	Inf	-Inf	5.83	3	Horizontal	323	1.98
PK	5.9404G	62.24	68.20	-5.96	6.38	3	Horizontal	323	1.98

802.11ac VHT20-BF_Nss1,(MCS0)_4TX

5785MHz_TX

02/02/2018



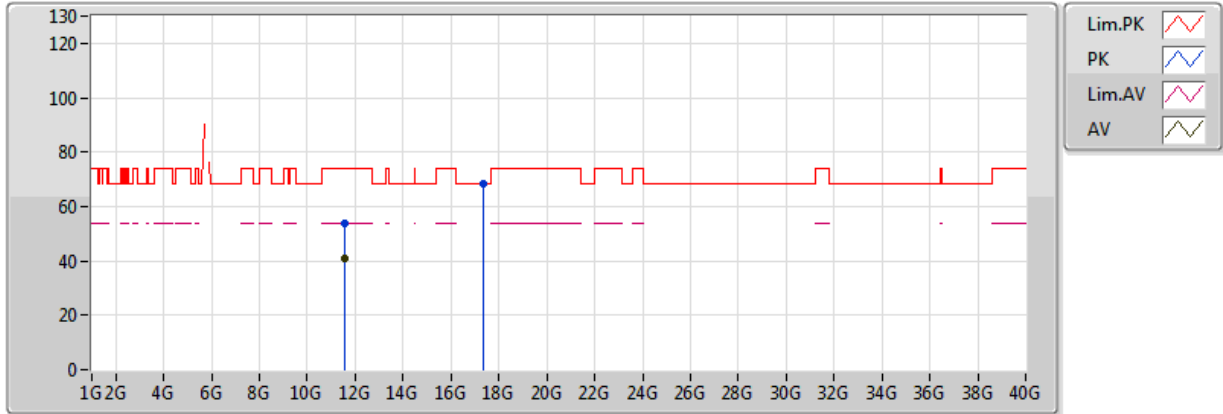
20180201
EUT_Y_4TX
Setting 90
04-Z-1
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	11.5452G	41.52	54.00	-12.48	13.33	3	Vertical	194	1.68
PK	11.55752G	55.05	74.00	-18.95	13.33	3	Vertical	194	1.68
PK	17.34348G	63.11	68.20	-5.09	17.61	3	Vertical	304	1.62

802.11ac VHT20-BF_Nss1,(MCS0)_4TX

5785MHz_TX

02/02/2018



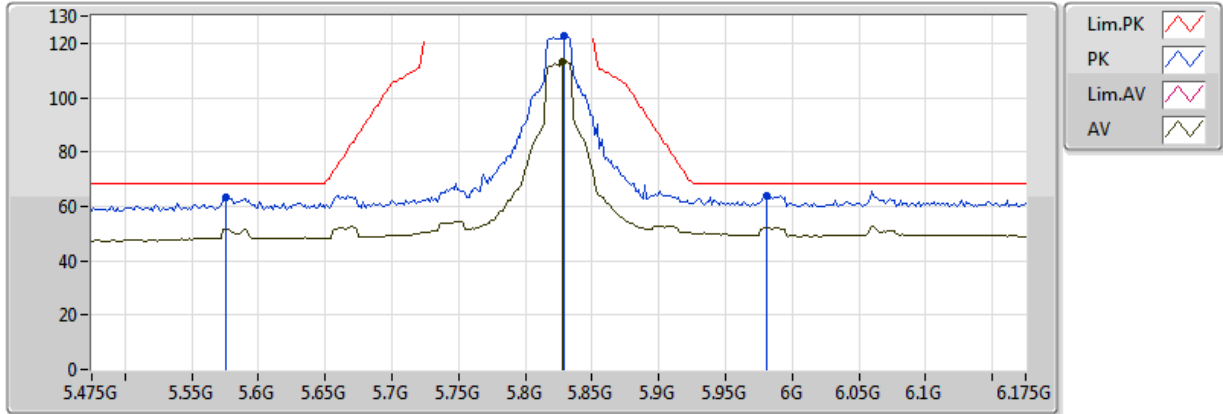
20180201
EUT_Y_4TX
Setting 90
04-Z-1
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	11.55848G	40.85	54.00	-13.15	13.33	3	Horizontal	247	1.28
PK	11.53352G	53.90	74.00	-20.10	13.33	3	Horizontal	247	1.28
PK	17.34348G	68.10	68.20	-0.10	17.61	3	Horizontal	315	1.92

802.11ac VHT20-BF_Nss1,(MCS0)_4TX

5825MHz_TX

02/02/2018



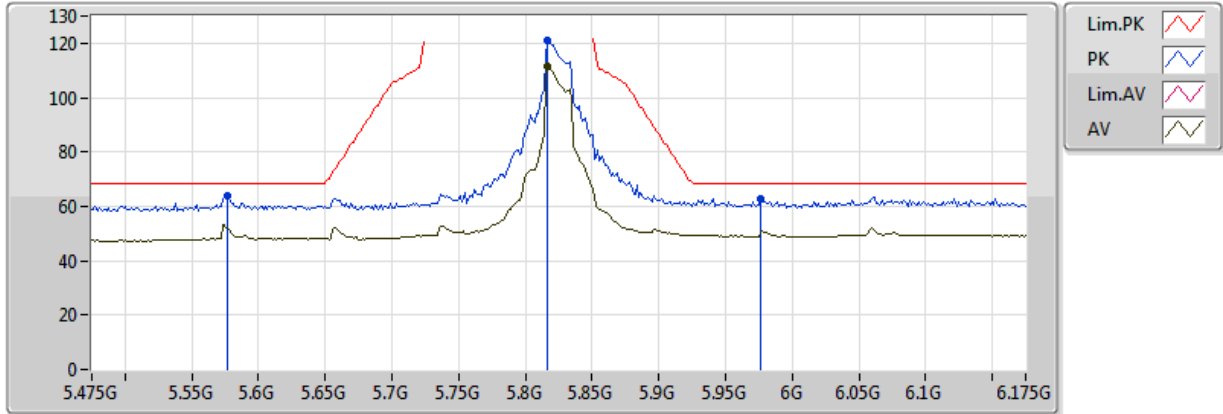
20180201
EUT_Y_4TX
Setting 94
04-Z-1-13
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	5.8278G	113.37	Inf	-Inf	5.96	3	Vertical	181	1.94
PK	5.5758G	63.06	68.20	-5.14	5.05	3	Vertical	181	1.94
PK	5.8292G	122.77	Inf	-Inf	5.97	3	Vertical	181	1.94
PK	5.9804G	63.72	68.20	-4.48	6.52	3	Vertical	181	1.94

802.11ac VHT20-BF_Nss1,(MCS0)_4TX

5825MHz_TX

02/02/2018



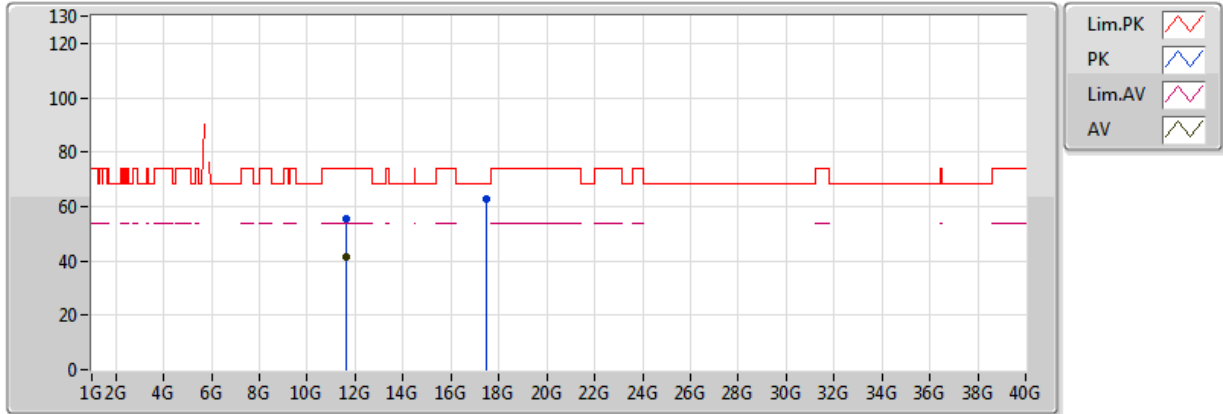
20180201
EUT_Y_4TX
Setting 94
04-Z-1-13
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	5.8166G	111.68	Inf	-Inf	5.92	3	Horizontal	328	2.00
PK	5.5772G	64.07	68.20	-4.13	5.05	3	Horizontal	328	2.00
PK	5.8166G	120.88	Inf	-Inf	5.92	3	Horizontal	328	2.00
PK	5.9762G	62.75	68.20	-5.45	6.50	3	Horizontal	328	2.00

802.11ac VHT20-BF_Nss1,(MCS0)_4TX

5825MHz_TX

02/02/2018



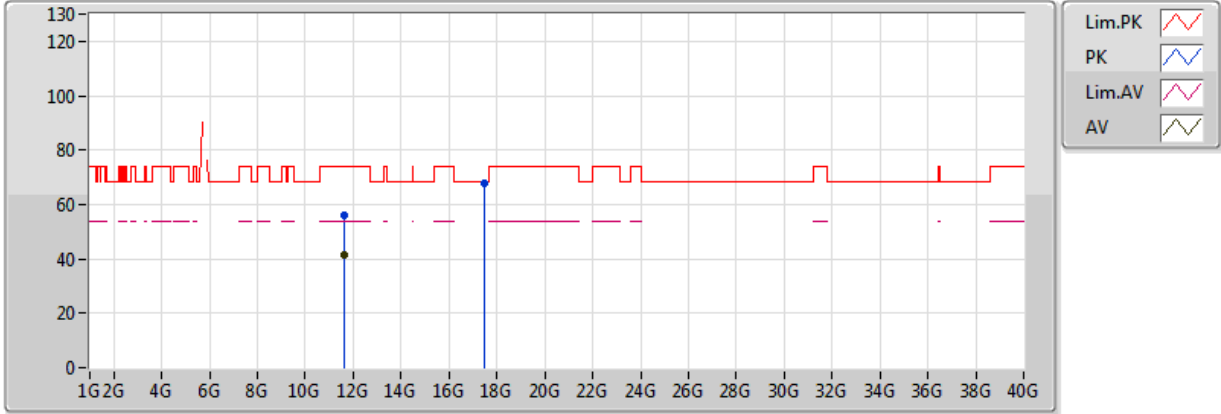
20180201
EUT_Y_4TX
Setting 94
04-Z-1
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	11.64872G	41.63	54.00	-12.37	13.35	3	Vertical	296	1.20
PK	11.64648G	55.33	74.00	-18.67	13.35	3	Vertical	296	1.20
PK	17.45612G	62.89	68.20	-5.31	17.74	3	Vertical	290	2.94

802.11ac VHT20-BF_Nss1,(MCS0)_4TX

5825MHz_TX

02/02/2018



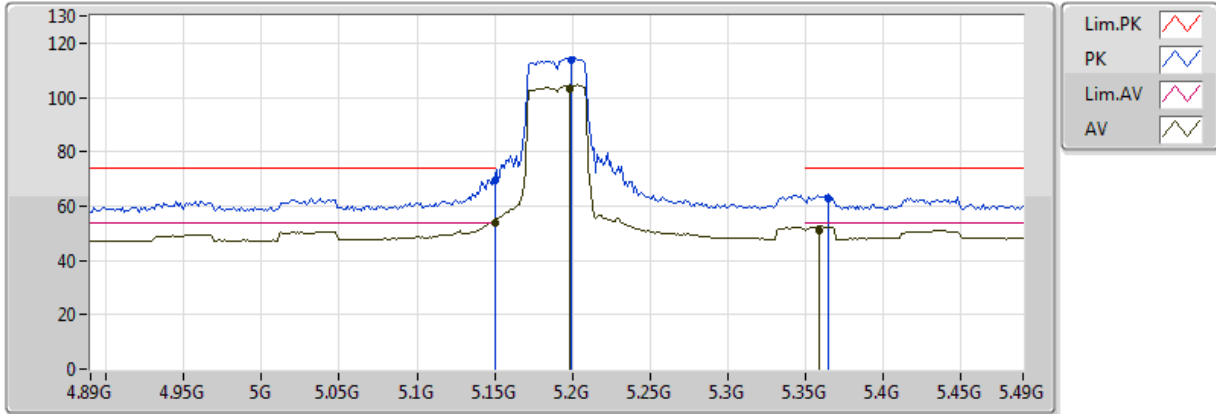
20180201
EUT_Y_4TX
Setting 94
04-Z-1
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	11.64888G	41.67	54.00	-12.33	13.35	3	Horizontal	291	1.75
PK	11.64872G	55.86	74.00	-18.14	13.35	3	Horizontal	291	1.75
PK	17.47948G	68.00	68.20	-0.20	17.77	3	Horizontal	226	1.69

802.11ac VHT40-BF_Nss1,(MCS0)_4TX

5190MHz_TX

08/02/2018



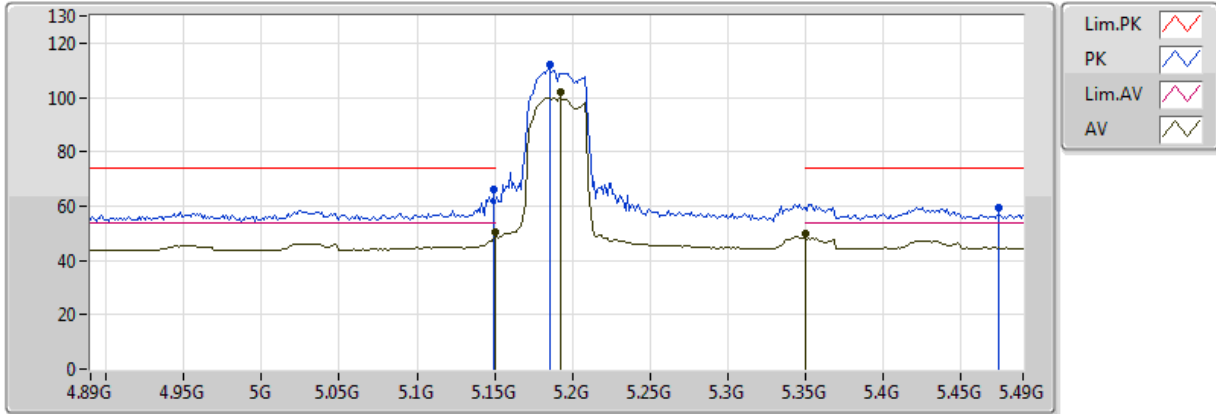
20180207
EUT_Y_4TX
Setting 63
01-C-4-10
FSP
S10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	5.149995G	53.67	54.00	-0.33	5.74	3	Vertical	360	1.91
AV	5.1984G	103.20	Inf	-Inf	5.95	3	Vertical	360	1.91
AV	5.3592G	51.05	54.00	-2.95	6.23	3	Vertical	360	1.91
PK	5.149995G	69.46	74.00	-4.54	5.74	3	Vertical	360	1.91
PK	5.1996G	113.55	Inf	-Inf	5.96	3	Vertical	360	1.91
PK	5.3652G	62.85	74.00	-11.15	6.24	3	Vertical	360	1.91

802.11ac VHT40-BF_Nss1,(MCS0)_4TX

5190MHz_TX

08/02/2018



20180207
EUT_Y_4TX
Setting 63
01-C-4-10
FSP
S10

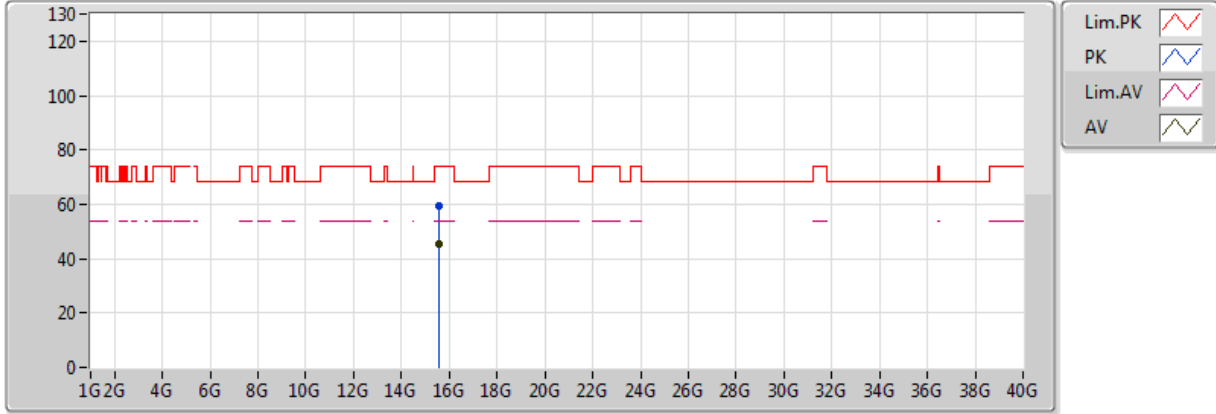
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	5.149995G	50.40	54.00	-3.60	5.74	3	Horizontal	326	2.08
AV	5.1924G	101.83	Inf	-Inf	5.93	3	Horizontal	326	2.08
AV	5.350005G	49.89	54.00	-4.11	6.21	3	Horizontal	326	2.08
PK	5.1492G	65.91	74.00	-8.09	5.74	3	Horizontal	326	2.08
PK	5.1852G	111.91	Inf	-Inf	5.90	3	Horizontal	326	2.08
PK	5.4744G	59.25	68.20	-8.95	6.40	3	Horizontal	326	2.08



802.11ac VHT40-BF_Nss1,(MCS0)_4TX

5190MHz_TX

08/02/2018



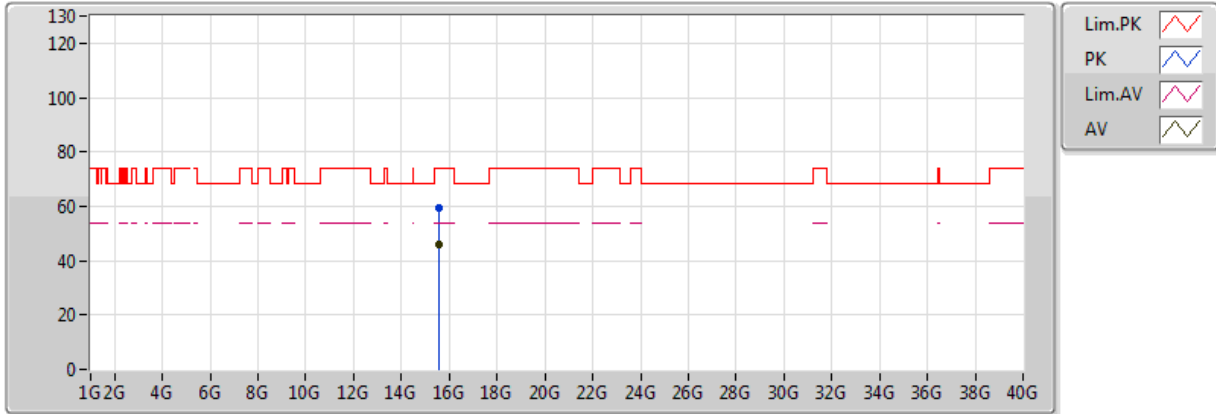
20180207
EUT_Y_4TX
Setting 63
01-C-4
FSP
S10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	15.5654G	45.48	54.00	-8.52	16.08	3	Vertical	181	1.50
PK	15.56914G	59.22	74.00	-14.78	16.07	3	Vertical	181	1.50

802.11ac VHT40-BF_Nss1,(MCS0)_4TX

5190MHz_TX

08/02/2018



20180207
EUT_Y_4TX
Setting 63
01-C-4
FSP
S10

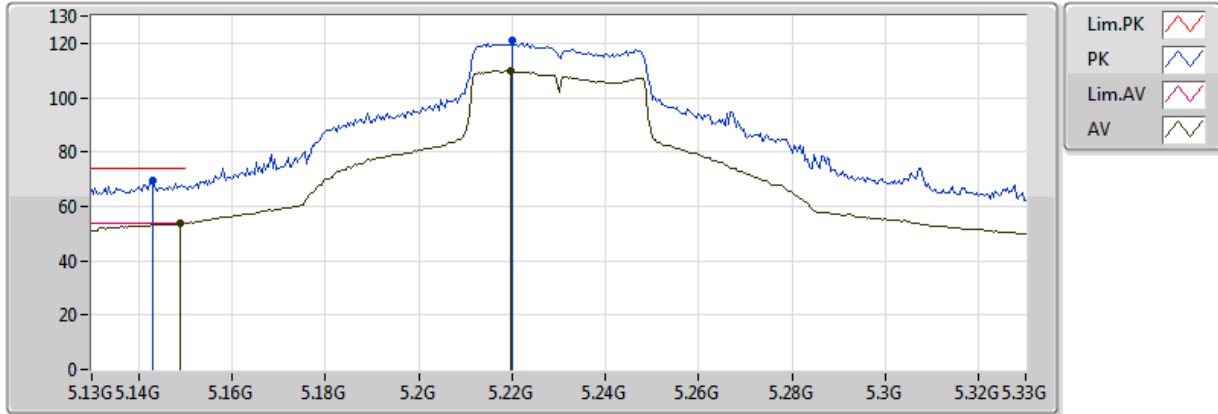
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	15.548G	46.04	54.00	-7.96	16.14	3	Horizontal	140	1.50
PK	15.542G	59.63	74.00	-14.37	16.16	3	Horizontal	140	1.50



802.11ac VHT40-BF_Nss1,(MCS0)_4TX

5230MHz_TX

02/02/2018



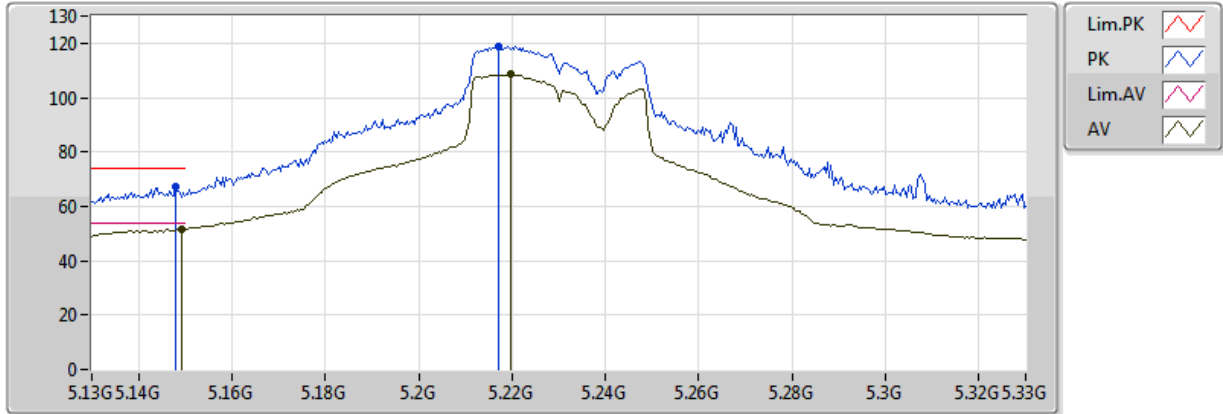
20180201
EUT_Y_4TX
Setting 95
04-Z-1-13
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	5.1488G	53.75	54.00	-0.25	4.06	3	Vertical	0	2.07
AV	5.2196G	109.77	Inf	-Inf	4.26	3	Vertical	0	2.07
PK	5.1432G	69.21	74.00	-4.79	4.04	3	Vertical	0	2.07
PK	5.22G	121.29	Inf	-Inf	4.26	3	Vertical	0	2.07

802.11ac VHT40-BF_Nss1,(MCS0)_4TX

5230MHz_TX

02/02/2018



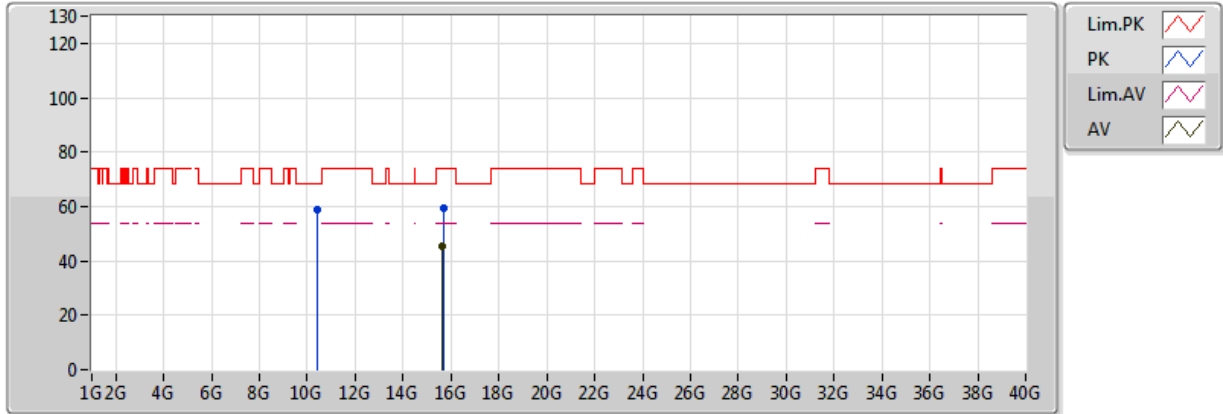
20180201
EUT_Y_4TX
Setting 95
04-Z-1-13
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	5.1492G	51.59	54.00	-2.41	4.06	3	Horizontal	338	2.27
AV	5.2196G	108.65	Inf	-Inf	4.26	3	Horizontal	338	2.27
PK	5.148G	67.14	74.00	-6.86	4.05	3	Horizontal	338	2.27
PK	5.2172G	118.79	Inf	-Inf	4.25	3	Horizontal	338	2.27

802.11ac VHT40-BF_Nss1,(MCS0)_4TX

5230MHz_TX

02/02/2018



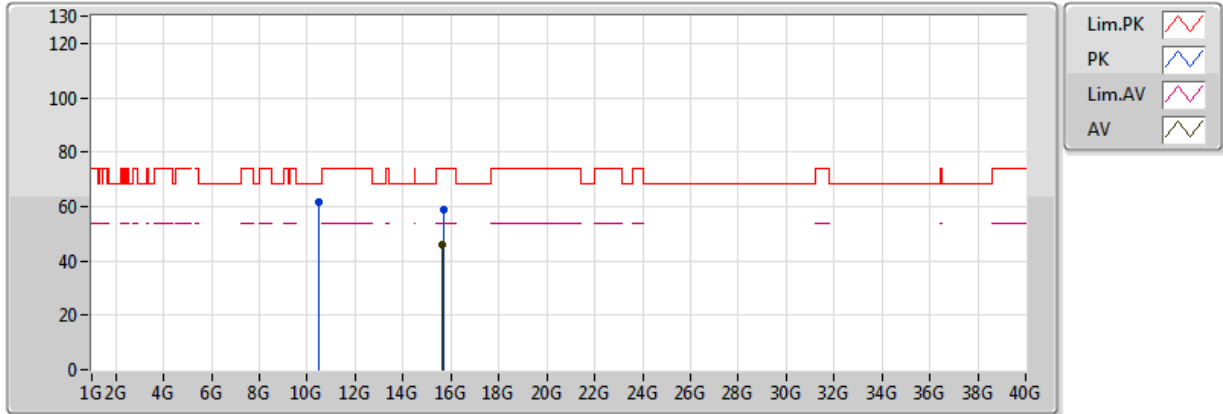
20180201
EUT_Y_4TX
Setting 95
04-Z-1
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	15.6644G	45.55	54.00	-8.45	15.09	3	Vertical	347	2.15
PK	10.43664G	59.11	68.20	-9.09	12.55	3	Vertical	221	1.72
PK	15.68744G	59.38	74.00	-14.62	15.06	3	Vertical	347	2.15

802.11ac VHT40-BF_Nss1,(MCS0)_4TX

5230MHz_TX

02/02/2018



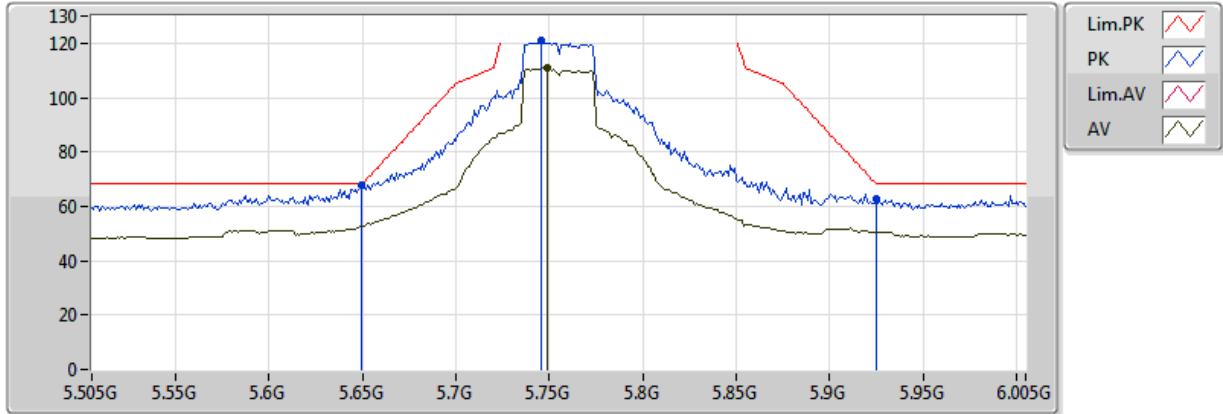
20180201
EUT_Y_4TX
Setting 95
04-Z-1
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	15.65752G	45.68	54.00	-8.32	15.10	3	Horizontal	100	1.44
PK	10.46G	61.74	68.20	-6.46	12.58	3	Horizontal	228	2.15
PK	15.66568G	59.06	74.00	-14.94	15.09	3	Horizontal	100	1.44

802.11ac VHT40-BF_Nss1,(MCS0)_4TX

5755MHz_TX

02/02/2018



20180201
EUT_Y_4TX
Setting 95
04-Z-1-13
FSP(100142)

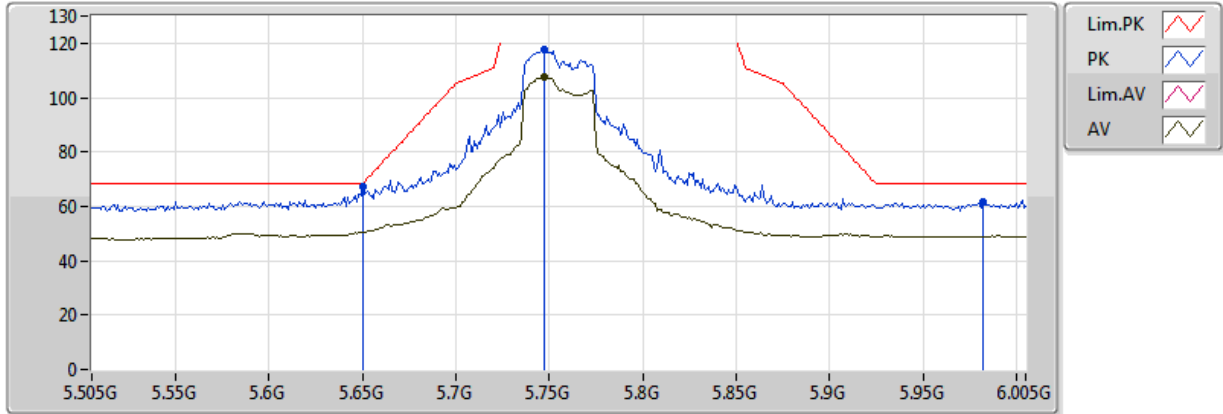
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	5.749G	111.05	Inf	-Inf	5.67	3	Vertical	179	2.03
PK	5.649G	68.05	68.20	-0.15	5.30	3	Vertical	179	2.03
PK	5.746G	120.95	Inf	-Inf	5.66	3	Vertical	179	2.03
PK	5.925G	62.59	68.20	-5.61	6.32	3	Vertical	179	2.03



802.11ac VHT40-BF_Nss1,(MCS0)_4TX

5755MHz_TX

02/02/2018



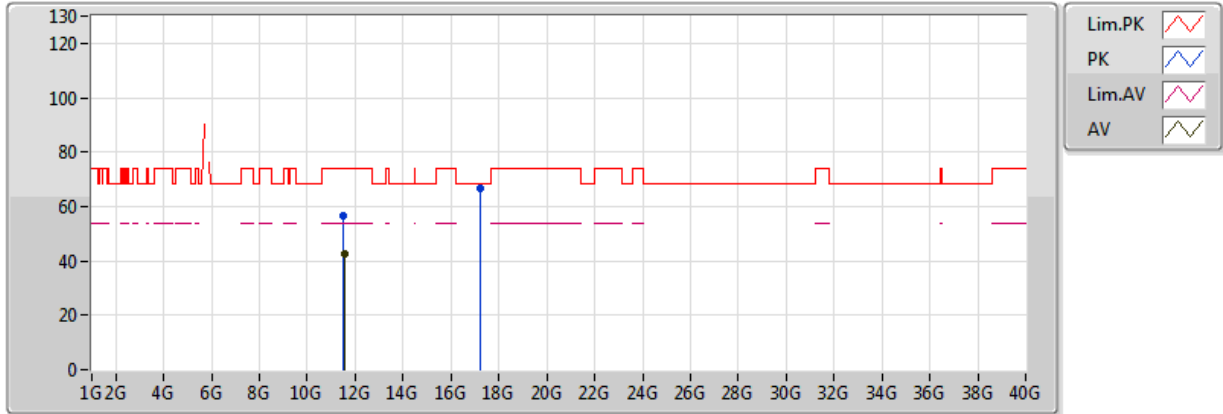
20180201
EUT_Y_4TX
Setting 95
04-Z-1-13
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	5.747G	107.71	Inf	-Inf	5.66	3	Horizontal	209	1.88
PK	5.65G	67.10	68.20	-1.10	5.30	3	Horizontal	209	1.88
PK	5.747G	117.78	Inf	-Inf	5.66	3	Horizontal	209	1.88
PK	5.982G	61.47	68.20	-6.73	6.53	3	Horizontal	209	1.88

802.11ac VHT40-BF_Nss1,(MCS0)_4TX

5755MHz_TX

02/02/2018



20180201
EUT_Y_4TX
Setting 95
04-Z-1
FSP(100142)

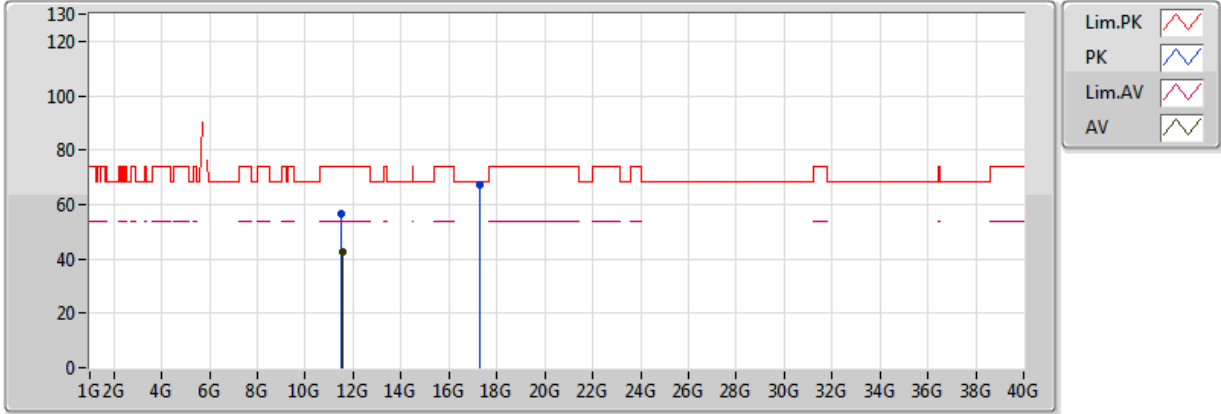
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	11.5296G	42.83	54.00	-11.17	13.33	3	Vertical	328	1.71
PK	11.52808G	56.39	74.00	-17.61	13.33	3	Vertical	328	1.71
PK	17.25404G	66.82	68.20	-1.38	17.50	3	Vertical	251	2.87



802.11ac VHT40-BF_Nss1,(MCS0)_4TX

5755MHz_TX

02/02/2018



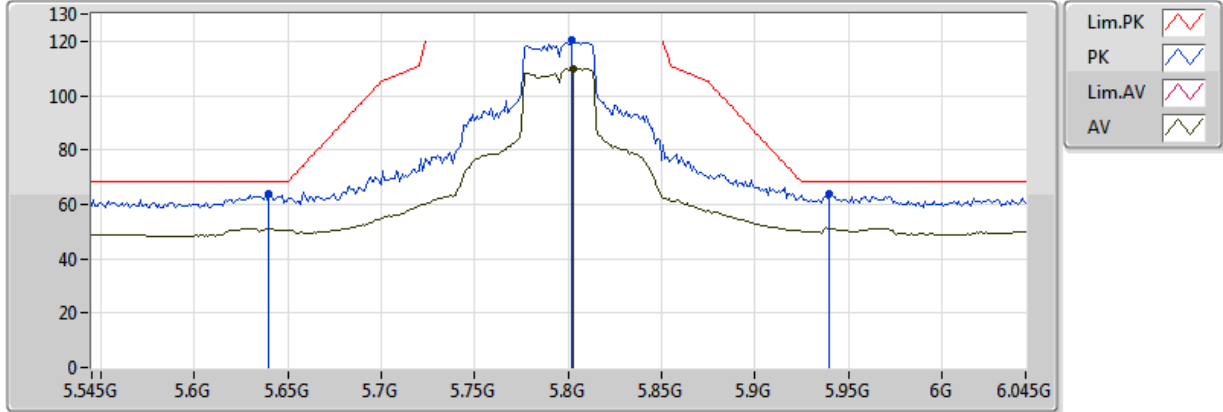
20180201
EUT_Y_4TX
Setting 95
04-Z-1
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	11.52968G	42.81	54.00	-11.19	13.33	3	Horizontal	34	1.83
PK	11.51G	56.67	74.00	-17.33	13.32	3	Horizontal	34	1.83
PK	17.2614G	67.24	68.20	-0.96	17.51	3	Horizontal	227	1.96

802.11ac VHT40-BF_Nss1,(MCS0)_4TX

5795MHz_TX

02/02/2018



20180201
EUT_Y_4TX
Setting 93
04-Z-1-13
FSP(100142)

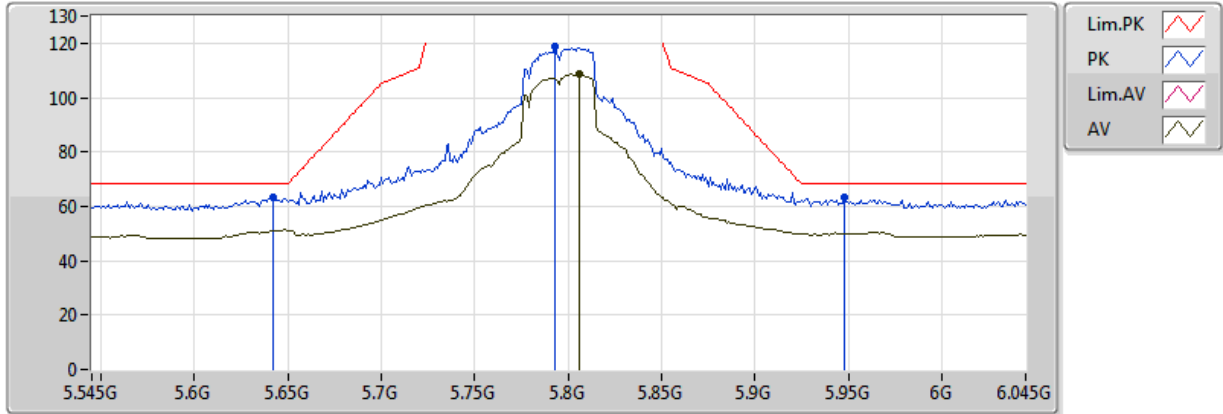
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	5.803G	109.88	Inf	-Inf	5.87	3	Vertical	94	1.24
PK	5.64G	63.61	68.20	-4.59	5.27	3	Vertical	94	1.24
PK	5.802G	120.62	Inf	-Inf	5.87	3	Vertical	94	1.24
PK	5.94G	63.93	68.20	-4.27	6.37	3	Vertical	94	1.24



802.11ac VHT40-BF_Nss1,(MCS0)_4TX

5795MHz_TX

02/02/2018



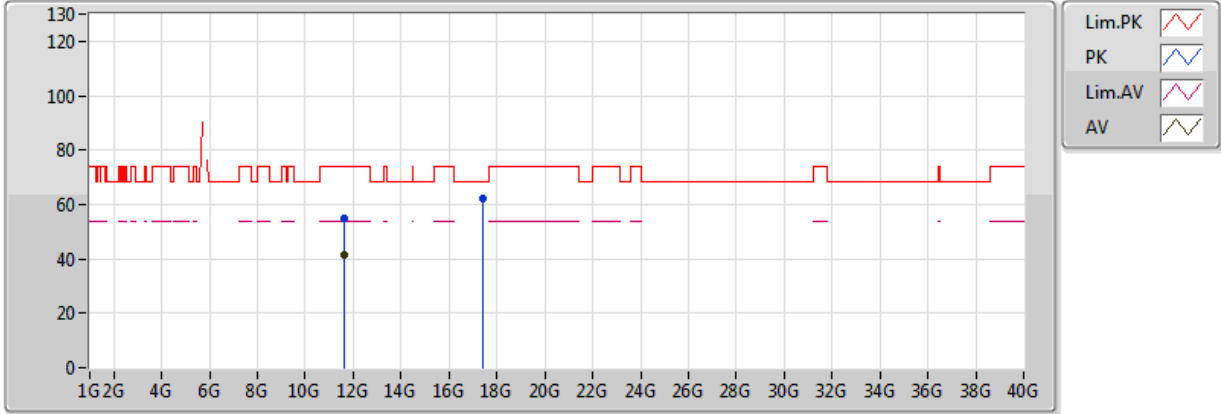
20180201
EUT_Y_4TX
Setting 93
04-Z-1-13
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	5.806G	108.59	Inf	-Inf	5.88	3	Horizontal	324	1.99
PK	5.642G	63.55	68.20	-4.65	5.28	3	Horizontal	324	1.99
PK	5.793G	118.98	Inf	-Inf	5.83	3	Horizontal	324	1.99
PK	5.948G	63.10	68.20	-5.10	6.40	3	Horizontal	324	1.99

802.11ac VHT40-BF_Nss1,(MCS0)_4TX

5795MHz_TX

02/02/2018



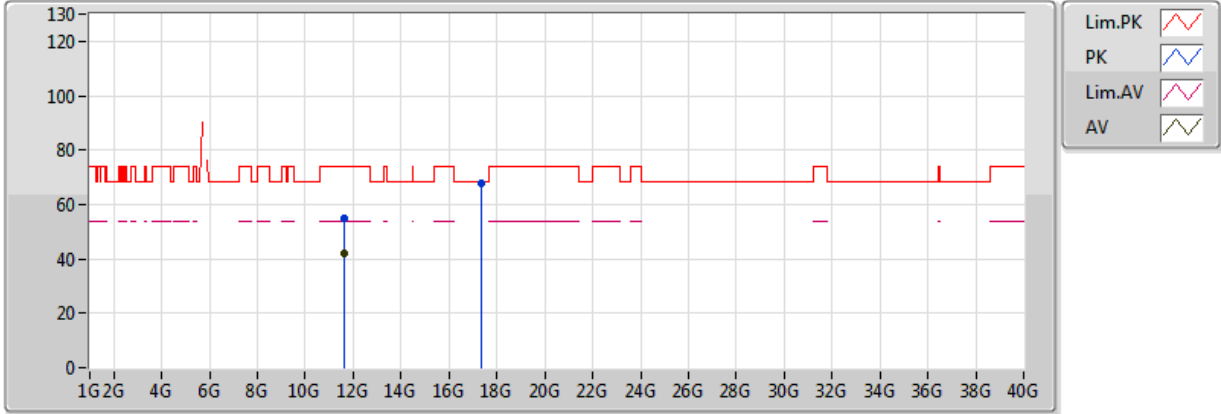
20180201
EUT_Y_4TX
Setting 93
04-Z-1
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	11.60952G	41.72	54.00	-12.28	13.34	3	Vertical	139	2.12
PK	11.62104G	55.19	74.00	-18.81	13.34	3	Vertical	139	2.12
PK	17.38996G	62.18	68.20	-6.02	17.66	3	Vertical	303	3.00

802.11ac VHT40-BF_Nss1,(MCS0)_4TX

5795MHz_TX

02/02/2018



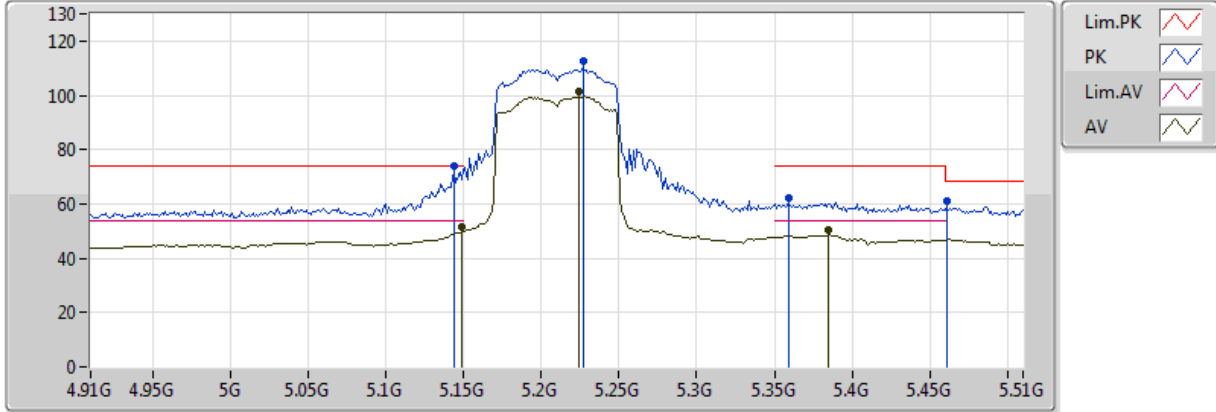
20180201
EUT_Y_4TX
Setting 93
04-Z-1
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	11.61464G	41.75	54.00	-12.25	13.34	3	Horizontal	42	1.82
PK	11.60248G	54.67	74.00	-19.33	13.34	3	Horizontal	42	1.82
PK	17.3714G	68.00	68.20	-0.20	17.64	3	Horizontal	226	1.65

802.11ac VHT80-BF_Nss1,(MCS0)_4TX

5210MHz_TX

08/02/2018



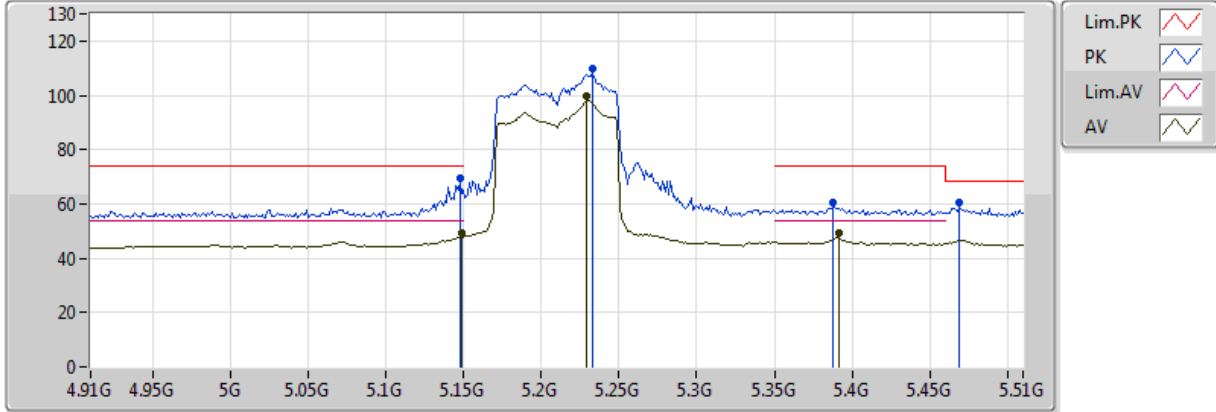
20180207
EUT_Y_4TX
Setting 67
01-C-4-10
FSP
S10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	5.1488G	51.63	54.00	-2.37	5.74	3	Vertical	178	1.05
AV	5.2244G	101.31	Inf	-Inf	6.00	3	Vertical	178	1.05
AV	5.3852G	50.41	54.00	-3.59	6.27	3	Vertical	178	1.05
PK	5.144G	73.92	74.00	-0.08	5.72	3	Vertical	178	1.05
PK	5.2268G	112.38	Inf	-Inf	6.01	3	Vertical	178	1.05
PK	5.3588G	62.15	74.00	-11.85	6.23	3	Vertical	178	1.05
PK	5.4608G	60.83	68.20	-7.37	6.38	3	Vertical	178	1.05

802.11ac VHT80-BF_Nss1,(MCS0)_4TX

5210MHz_TX

08/02/2018



20180207
EUT_Y_4TX
Setting 67
01-C-4-10
FSP
S10

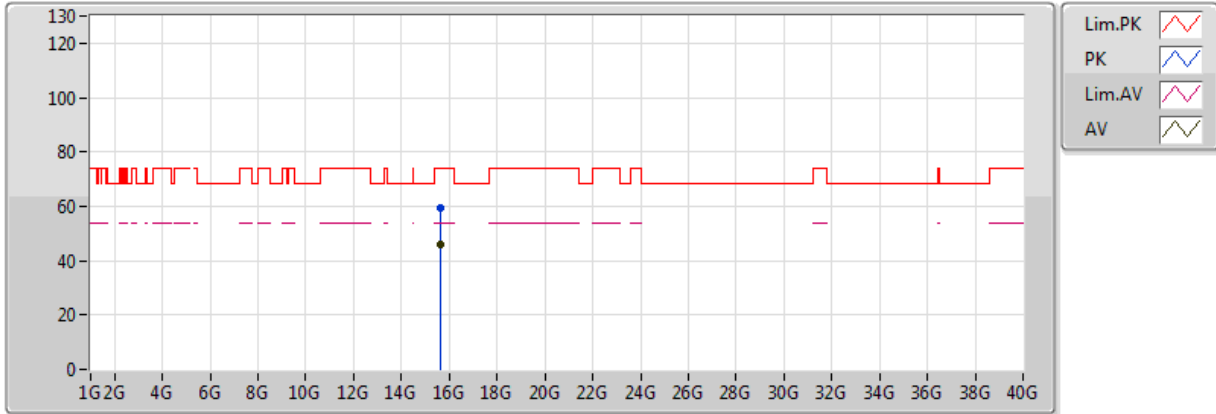
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	5.1488G	49.45	54.00	-4.55	5.74	3	Horizontal	44	2.00
AV	5.2292G	99.65	Inf	-Inf	6.01	3	Horizontal	44	2.00
AV	5.3912G	49.29	54.00	-4.71	6.28	3	Horizontal	44	2.00
PK	5.1476G	69.64	74.00	-4.36	5.73	3	Horizontal	44	2.00
PK	5.2328G	109.74	Inf	-Inf	6.02	3	Horizontal	44	2.00
PK	5.4692G	60.57	68.20	-7.63	6.39	3	Horizontal	44	2.00
PK	5.3876G	60.67	74.00	-13.33	6.27	3	Horizontal	44	2.00



802.11ac VHT80-BF_Nss1,(MCS0)_4TX

5210MHz_TX

08/02/2018



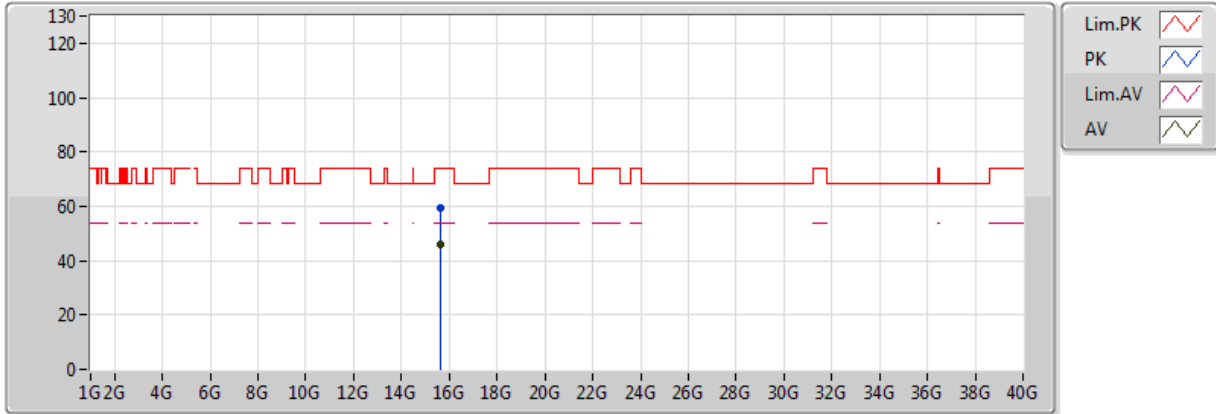
20180207
EUT_Y_4TX
Setting 67
01-C-4
FSP
S10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	15.6096G	45.75	54.00	-8.25	15.93	3	Vertical	226	1.50
PK	15.6078G	59.45	74.00	-14.55	15.94	3	Vertical	226	1.50

802.11ac VHT80-BF_Nss1,(MCS0)_4TX

5210MHz_TX

08/02/2018



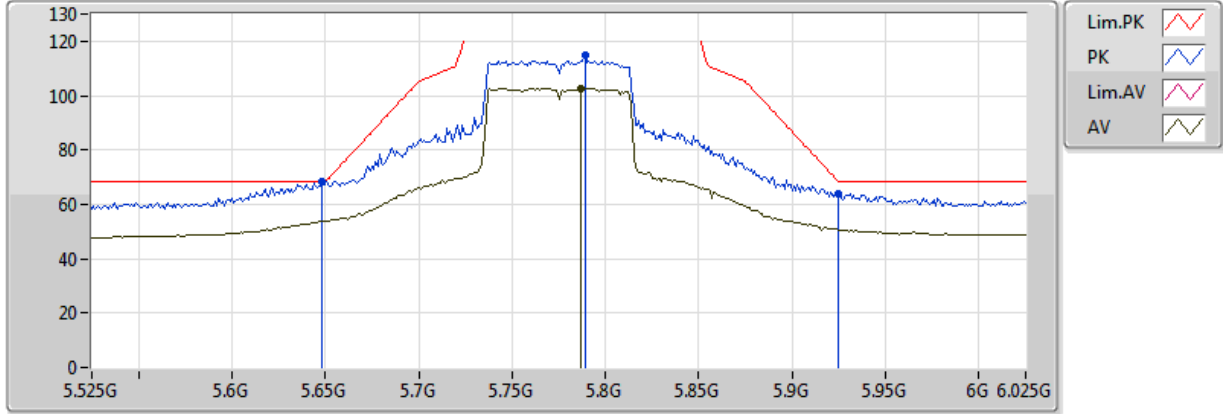
20180207
EUT_Y_4TX
Setting 67
01-C-4
FSP
S10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	15.6148G	45.77	54.00	-8.23	15.91	3	Horizontal	137	1.50
PK	15.611G	59.16	74.00	-14.84	15.93	3	Horizontal	137	1.50

802.11ac VHT80-BF_Nss1,(MCS0)_4TX

5775MHz_TX

02/02/2018



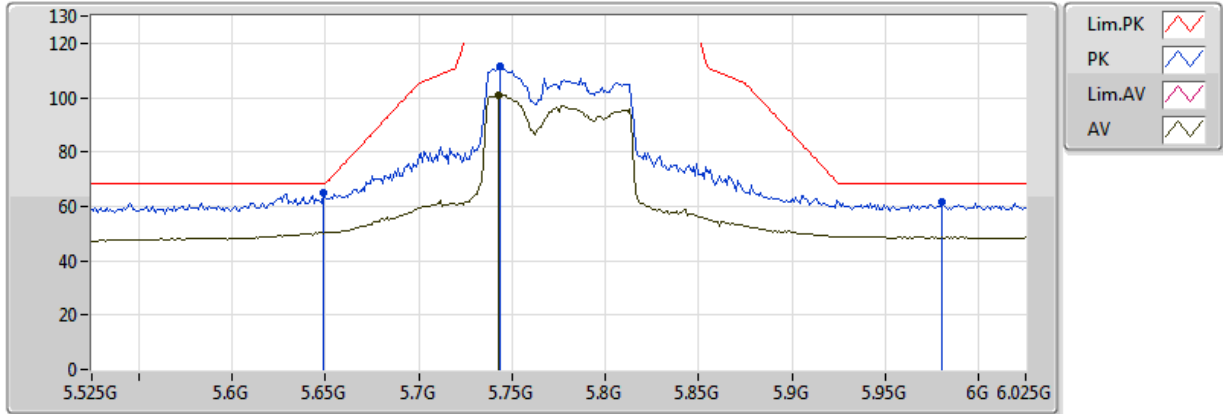
20180201
EUT_Y_4TX
Setting 80
04-Z-1-13
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	5.787G	102.81	Inf	-Inf	5.81	3	Vertical	158	2.01
PK	5.648G	68.18	68.20	-0.02	5.30	3	Vertical	158	2.01
PK	5.789G	114.66	Inf	-Inf	5.82	3	Vertical	158	2.01
PK	5.925G	63.90	68.20	-4.30	6.32	3	Vertical	158	2.01

802.11ac VHT80-BF_Nss1,(MCS0)_4TX

5775MHz_TX

02/02/2018



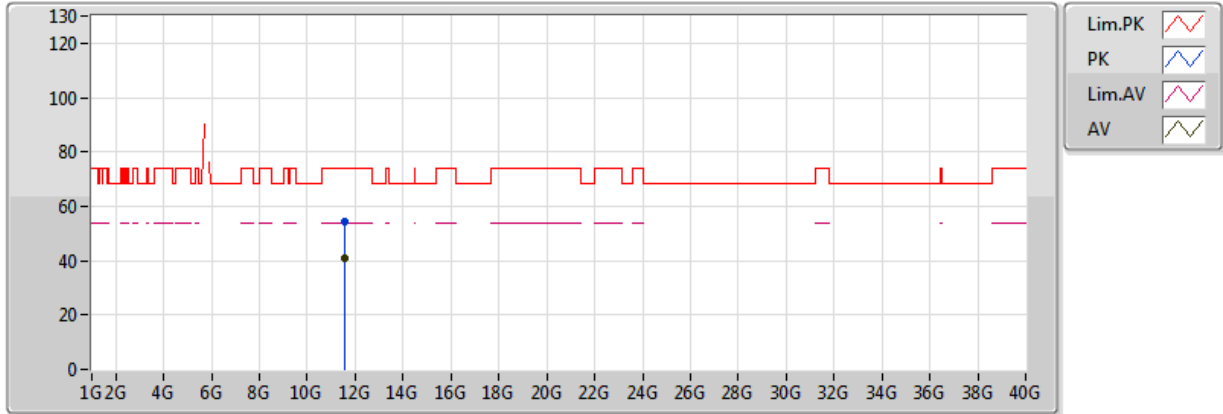
20180201
EUT_Y_4TX
Setting 80
04-Z-1-13
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	5.743G	101.07	Inf	-Inf	5.65	3	Horizontal	209	1.94
PK	5.649G	64.95	68.20	-3.25	5.30	3	Horizontal	209	1.94
PK	5.744G	111.34	Inf	-Inf	5.65	3	Horizontal	209	1.94
PK	5.98G	61.60	68.20	-6.60	6.52	3	Horizontal	209	1.94

802.11ac VHT80-BF_Nss1,(MCS0)_4TX

5775MHz_TX

02/02/2018



20180201
EUT_Y_4TX
Setting 80
04-Z-1
FSP(100142)

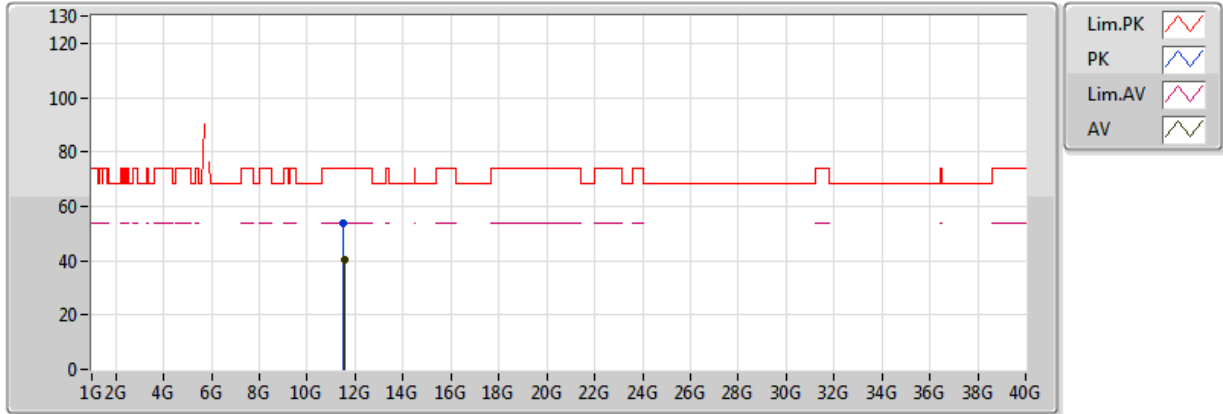
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	11.54408G	41.14	54.00	-12.86	13.33	3	Vertical	188	2.88
PK	11.56008G	54.19	74.00	-19.81	13.33	3	Vertical	188	2.88



802.11ac VHT80-BF_Nss1,(MCS0)_4TX

5775MHz_TX

02/02/2018



20180201
EUT_Y_4TX
Setting 80
04-Z-1
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)
AV	11.54968G	40.30	54.00	-13.70	13.33	3	Horizontal	254	1.86
PK	11.5164G	53.74	74.00	-20.26	13.32	3	Horizontal	254	1.86



Mode: 20 MHz / Port 2

Voltage vs. Frequency Stability

Voltage (V)	Measurement Frequency (MHz)			
	5200 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5200.0179	5200.0176	5200.0168	5200.0164
110.00	5200.0174	5200.0169	5200.0164	5200.0158
93.50	5200.0169	5200.0168	5200.0165	5200.0162
Max. Deviation (MHz)	0.0179	0.0176	0.0168	0.0164
Max. Deviation (ppm)	3.44	3.38	3.23	3.15
Result	Pass			

Temperature vs. Frequency Stability

Temperature (°C)	Measurement Frequency (MHz)			
	5200 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5200.0159	5200.0157	5200.0151	5200.0144
10	5200.0164	5200.0161	5200.0156	5200.0147
20	5200.0174	5200.0166	5200.0162	5200.0158
30	5200.0178	5200.0173	5200.0171	5200.0162
40	5200.0197	5200.0196	5200.0188	5200.0178
Max. Deviation (MHz)	0.0211	0.0203	0.0194	0.0185
Max. Deviation (ppm)	4.06	3.90	3.73	3.56
Result	Pass			

Voltage vs. Frequency Stability

Voltage (V)	Measurement Frequency (MHz)			
	5785 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5785.0182	5785.0172	5785.0166	5785.0159
110.00	5785.0174	5785.0169	5785.0161	5785.0152
93.50	5785.0167	5785.0164	5785.0155	5785.0152
Max. Deviation (MHz)	0.0182	0.0172	0.0166	0.0159
Max. Deviation (ppm)	3.14	2.97	2.86	2.74
Result	Pass			

Temperature vs. Frequency Stability

Temperature (°C)	Measurement Frequency (MHz)			
	5785 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5785.0162	5785.0153	5785.0144	5785.0134
10	5785.0164	5785.0156	5785.0152	5785.0143
20	5785.0174	5785.0172	5785.0171	5785.0164
30	5785.0178	5785.0168	5785.0159	5785.0151
40	5785.0181	5785.0180	5785.0175	5785.0172
Max. Deviation (MHz)	0.0194	0.0192	0.0185	0.0176
Max. Deviation (ppm)	3.35	3.32	3.20	3.04
Result	Pass			



Mode: 40 MHz / Port 2

Voltage vs. Frequency Stability

Voltage (V)	Measurement Frequency (MHz)			
	5190 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5190.0180	5190.0174	5190.0167	5190.0164
110.00	5190.0174	5190.0170	5190.0164	5190.0159
93.50	5190.0165	5190.0160	5190.0154	5190.0146
Max. Deviation (MHz)	0.0180	0.0174	0.0167	0.0164
Max. Deviation (ppm)	3.46	3.35	3.21	3.15
Result	Pass			

Temperature vs. Frequency Stability

Temperature (°C)	Measurement Frequency (MHz)			
	5190 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5190.0157	5190.0151	5190.0144	5190.0136
10	5190.0161	5190.0158	5190.0148	5190.0142
20	5190.0174	5190.0165	5190.0159	5190.0158
30	5190.0178	5190.0171	5190.0169	5190.0161
40	5190.0198	5190.0191	5190.0182	5190.0177
Max. Deviation (MHz)	0.0213	0.0208	0.0207	0.0199
Max. Deviation (ppm)	4.10	4.01	3.99	3.83
Result	Pass			

Voltage vs. Frequency Stability

Voltage (V)	Measurement Frequency (MHz)			
	5755 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5755.0176	5755.0166	5755.0164	5755.0154
110.00	5755.0174	5755.0167	5755.0162	5755.0158
93.50	5755.0171	5755.0167	5755.0162	5755.0153
Max. Deviation (MHz)	0.0176	0.0167	0.0164	0.0158
Max. Deviation (ppm)	3.05	2.90	2.84	2.74
Result	Pass			

Temperature vs. Frequency Stability

Temperature (°C)	Measurement Frequency (MHz)			
	5755 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5755.0154	5755.0151	5755.0141	5755.0134
10	5755.0168	5755.0158	5755.0153	5755.0145
20	5755.0174	5755.0168	5755.0163	5755.0156
30	5755.0178	5755.0171	5755.0164	5755.0159
40	5755.0193	5755.0190	5755.0187	5755.0178
Max. Deviation (MHz)	0.0204	0.0194	0.0187	0.0186
Max. Deviation (ppm)	3.54	3.37	3.25	3.23
Result	Pass			



Mode: 80 MHz / Port 2
Voltage vs. Frequency Stability

Voltage (V)	Measurement Frequency (MHz)			
	5210 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5210.0181	5210.0173	5210.0166	5210.0158
110.00	5210.0174	5210.0165	5210.0158	5210.0157
93.50	5210.0165	5210.0162	5210.0159	5210.0156
Max. Deviation (MHz)	0.0181	0.0173	0.0166	0.0158
Max. Deviation (ppm)	3.47	3.31	3.18	3.03
Result	Pass			

Temperature vs. Frequency Stability

Temperature (°C)	Measurement Frequency (MHz)			
	5210 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5210.0149	5210.0148	5210.0138	5210.0134
10	5210.0159	5210.0157	5210.0148	5210.0146
20	5210.0174	5210.0169	5210.0166	5210.0165
30	5210.0178	5210.0173	5210.0170	5210.0169
40	5210.0183	5210.0176	5210.0169	5210.0163
Max. Deviation (MHz)	0.0189	0.0179	0.0177	0.0169
Max. Deviation (ppm)	3.63	3.44	3.40	3.24
Result	Pass			

Voltage vs. Frequency Stability

Voltage (V)	Measurement Frequency (MHz)			
	5775 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5775.0179	5775.0170	5775.0160	5775.0156
110.00	5775.0174	5775.0171	5775.0166	5775.0165
93.50	5775.0173	5775.0166	5775.0158	5775.0154
Max. Deviation (MHz)	0.0179	0.0171	0.0166	0.0165
Max. Deviation (ppm)	3.09	2.96	2.87	2.85
Result	Pass			

Temperature vs. Frequency Stability

Temperature (°C)	Measurement Frequency (MHz)			
	5775 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5775.0153	5775.0150	5775.0147	5775.0137
10	5775.0158	5775.0156	5775.0152	5775.0147
20	5775.0174	5775.0173	5775.0167	5775.0160
30	5775.0178	5775.0171	5775.0165	5775.0155
40	5775.0196	5775.0192	5775.0189	5775.0186
Max. Deviation (MHz)	0.0206	0.0196	0.0189	0.0186
Max. Deviation (ppm)	3.57	3.39	3.27	3.22
Result	Pass			



RSE Co-location Result

Appendix G

