FCC RADIO TEST REPORT

FCC ID	:	MSQ-RTHR00
Equipment	:	Wireless-AX11000 Tri-band Gigabit Router, ROG Rapture Tri-band Gaming Router
Brand Name	:	ASUS
Model Name	:	RT-AX95U, GT-AX11000
Applicant	:	ASUSTeK COMPUTER INC. 4F, No. 150, Li-Te Rd., Peitou, Taipei 112, Taiwan
Manufacturer (1)	:	ASKEY TECHNOLOGY (JIANG SU) LTD NO1388, Jiao Tong Road, Wujiang Economic Technological Development Area Jiangsu Province 215200 China
Manufacturer (2)	:	Compal Networking (KunShan) Co., LTD. No. 520, Nabbang Rd., Economic & Technical Development Zone Kunshan, Jiangsu Province China
Standard	:	47 CFR FCC Part 15.407

The product was received on Jun. 05, 2018 , and testing was started from Jun. 05, 2018 and completed on Sep. 06, 2018. We, SPORTON INTERTIONAL INC. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

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

Approved by: Sam Chen

SPORTON INTERTIONAL INC. EMC & Wireless Communications Laboratory
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Table of Contents

History of this test report

Report No.	Version	Description	Issued Date
FR812227-03AB	01	Initial issue of report	Sep. 06, 2018
FR812227-03AB	02	1. Modifying SKU information ; for item 2 of the chapter 1.1.5 Table for Multiple Listing. 2. Adding 11ac VHT160 (5250MHz) Emission Bandwidth, Maximum Conducted Output Power and Peak Power Spectral Density test for item 12 of the chapter 1.1.6 Table for Class II Change.	Sep. 12, 2018

Summary of Test Result

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

Reviewed by: Sam Chen

Report Producer: Wendy Pan

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), ax (HEW20)	5180-5240	36-48 [4]
5250-5350		5260-5320	52-64 [4]
5470-5725		5500-5720	100-144 [12]
5725-5850		5745-5825	149-165 [5]
5150-5250	n (HT40), ac (VHT40), ax (HEW40)	5190-5230	38-46 [2]
5250-5350		5270-5310	54-62 [2]
5470-5725		5510-5710	102-142 [6]
5725-5850		5755-5795	151-159 [2]
5150-5250	ac (VHT80), ax (HEW80)	5210	42 [1]
5250-5350		5290	58 [1]
5470-5725		5530-5690	106-138 [3]
5725-5850		5775	155 [1]
5150-5350	ac (VHT160), ax (HEW160)	5250	50 [1]
5470-5725		5570	114 [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	802.11ax HEW20	20	4TX
5.15-5.25GHz	802.11ax HEW20,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	802.11ax HEW40	40	4TX
5.15-5.25GHz	802.11ax HEW40,BF	40	4TX
5.15-5.25GHz	802.11ac VHT80	80	4TX
5.15-5.25GHz	802.11ac VHT80-BF	80	4TX
5.15-5.25GHz	802.11ax HEW80	80	4TX
5.15-5.25GHz	802.11ax HEW80,BF	80	4TX
5.15-5.25GHz	802.11ac VHT160	160	4TX
5.15-5.25GHz	802.11ac VHT160-BF	160	4TX
5.15-5.25GHz	802.11ax HEW160	160	4TX
5.15-5.25GHz	802.11ax HEW160-BF	160	4TX

Band	Mode	BWch (MHz)	Nant
5.25-5.35GHz	802.11a	20	4TX
5.25-5.35GHz	802.11n HT20	20	4TX
5.25-5.35GHz	802.11n HT20-BF	20	4TX
5.25-5.35GHz	802.11ac VHT20	20	4TX
5.25-5.35GHz	802.11ac VHT20-BF	20	4TX
5.25-5.35GHz	802.11HEW20	20	4TX
5.25-5.35GHz	802.11HEW20,BF	20	4TX
5.25-5.35GHz	802.11n HT40	40	4TX
5.25-5.35GHz	802.11n HT40-BF	40	4TX
5.25-5.35GHz	802.11ac VHT40	40	4TX
5.25-5.35GHz	802.11ac VHT40-BF	40	4TX
5.25-5.35GHz	802.11HEW40	40	4TX
5.25-5.35GHz	802.11HEW40,BF	40	4TX
5.25-5.35GHz	802.11ac VHT80	80	4TX
5.25-5.35GHz	802.11ac VHT80-BF	80	4TX
5.25-5.35GHz	802.11HEW80	80	4TX
5.25-5.35GHz	802.11HEW80,BF	80	4TX
5.25-5.35GHz	802.11ac VHT160	160	4TX
5.25-5.35GHz	802.11ac VHT160-BF	160	4TX
5.25-5.35GHz	802.11ax HEW160	160	4TX
5.25-5.35GHz	802.11ax HEW160-BF	160	4TX

Band	Mode	BWch (MHz)	Nant
5.47-5.725GHz	802.11a	20	4TX
5.47-5.725GHz	802.11n HT20	20	4TX
5.47-5.725GHz	802.11n HT20-BF	20	4TX
5.47-5.725GHz	802.11ac VHT20	20	4TX
5.47-5.725GHz	802.11ac VHT20-BF	20	4TX
5.47-5.725GHz	802.11HEW20	20	4TX
5.47-5.725GHz	802.11HEW20,BF	20	4TX
5.47-5.725GHz	802.11n HT40	40	4TX
5.47-5.725GHz	802.11n HT40-BF	40	4TX
5.47-5.725GHz	802.11ac VHT40	40	4TX
5.47-5.725GHz	802.11ac VHT40-BF	40	4TX
5.47-5.725GHz	802.11HEW40	40	4TX
5.47-5.725GHz	802.11HEW40,BF	40	4TX
5.47-5.725GHz	802.11ac VHT80	80	4TX
5.47-5.725GHz	802.11ac VHT80-BF	80	4TX
5.47-5.725GHz	802.11HEW80	80	4TX
5.47-5.725GHz	802.11HEW80,BF	80	4TX
5.47-5.725GHz	802.11ac VHT160	160	4TX
5.47-5.725GHz	802.11ac VHT160-BF	160	4TX
5.47-5.725GHz	802.11ax HEW160	160	4TX
5.47-5.725GHz	802.11ax HEW160-BF	160	4TX

Band	Mode	BWch (MHz)	Nant
5.725-5.85GHz	802.11a	20	4TX
5.725-5.85GHz	802.11n HT20	20	4TX
5.725-5.85GHz	802.11n 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	802.11ax HE20	20	4TX
5.725-5.85GHz	802.11ax HE20,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	802.11ax HE40	40	4TX
5.725-5.85GHz	802.11ax HE40,BF	40	4TX
5.725-5.85GHz	802.11ac VHT80	80	4TX
5.725-5.85GHz	802.11ac VHT80-BF	80	4TX
5.725-5.85GHz	802.11ax HE80	80	4TX
5.725-5.85GHz	802.11ax HE80,BF	80	4TX
5.725-5.85GHz	802.11ac VHT160	160	4TX
5.725-5.85GHz	802.11ac VHT160-BF	160	4TX
5.725-5.85GHz	802.11ax HEW160	160	4TX
5.725-5.85GHz	802.11ax HEW160-BF	160	4TX

Note:
- 11a, HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- VHT20, VHT40, VHT80 and VHT160 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM modulation.
- HEW20, HEW40, HEW80 and HEW160 use a combination of OFDMA-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM modulation.
- BWch is the nominal channel bandwidth.
- Nss-Min is the minimum number of spatial streams.
- Nant is the number of outputs. e.g., 2(2,3) means have 2 outputs for port 2 and port 3. 2 means have 2 outputs for port 1 and port 2.

1.1.2 Antenna Information

Set	Ant.	Port				Brand	P/N	Type	Connector	Gain (dBi)			
		2.4GHz	5GHz B1/B2	5GHz B3	5GHz B4					2.4GHz	5GHz B1/B2	5GHz B3	5GHz B4
1	1	1	-	4	4	WHA YU	C660-510413-A	Dipole	Reverse SMA Plug	1.9	-	2.3	1.9
	2	2	-	3	3	WHA YU	C660-510413-A	Dipole	Reverse SMA Plug	1.9	-	2.3	1.9
	3	3	-	2	2	WHA YU	C660-510413-A	Dipole	Reverse SMA Plug	1.9	-	2.3	1.9
	4	4	-	1	1	WHA YU	C660-510413-A	Dipole	Reverse SMA Plug	1.9	-	2.3	1.9
	5	-	1	-	-	WHA YU	C660-510413-A	Dipole	Reverse SMA Plug	-	2.3	-	-
	6	-	2	-	-	WHA YU	C660-510413-A	Dipole	Reverse SMA Plug	-	2.3	-	-
	7	-	3	-	-	WHA YU	C660-510413-A	Dipole	Reverse SMA Plug	-	2.3	-	-
	8	-	4	-	-	WHA YU	C660-510413-A	Dipole	Reverse SMA Plug	-	2.3	-	-
2	1	1	-	4	4	WHA YU	C660-510431-A	Dipole	Reverse SMA Plug	1.9	-	2.3	1.9
	2	2	-	3	3	WHA YU	C660-510431-A	Dipole	Reverse SMA Plug	1.9	-	2.3	1.9
	3	3	-	2	2	WHA YU	C660-510431-A	Dipole	Reverse SMA Plug	1.9	-	2.3	1.9
	4	4	-	1	1	WHA YU	C660-510431-A	Dipole	Reverse SMA Plug	1.9	-	2.3	1.9
	5	-	1	-	-	WHA YU	C660-510431-A	Dipole	Reverse SMA Plug	-	2.3	-	-
	6	-	2	-	-	WHA YU	C660-510431-A	Dipole	Reverse SMA Plug	-	2.3	-	-
	7	-	3	-	-	WHA YU	C660-510431-A	Dipole	Reverse SMA Plug	-	2.3	-	-
	8	-	4	-	-	WHA YU	C660-510431-A	Dipole	Reverse SMA Plug	-	2.3	-	-
3	1	1	-	4	4	PSA	RFDPA161000SBLB801	Dipole	Reverse SMA Plug	1.9	-	2.3	1.9
	2	2	-	3	3	PSA	RFDPA161000SBLB801	Dipole	Reverse SMA Plug	1.9	-	2.3	1.9
	3	3	-	2	2	PSA	RFDPA161000SBLB801	Dipole	Reverse SMA Plug	1.9	-	2.3	1.9
	4	4	-	1	1	PSA	RFDPA161000SBLB801	Dipole	Reverse SMA Plug	1.9	-	2.3	1.9
	5	-	1	-	-	PSA	RFDPA161000SBLB801	Dipole	Reverse SMA Plug	-	2.3	-	-
	6	-	2	-	-	PSA	RFDPA161000SBLB801	Dipole	Reverse SMA Plug	-	2.3	-	-
	7	-	3	-	-	PSA	RFDPA161000SBLB801	Dipole	Reverse SMA Plug	-	2.3	-	-
	8	-	4	-	-	PSA	RFDPA161000SBLB801	Dipole	Reverse SMA Plug	-	2.3	-	-

Note: B1 means Band1. The rule also applies to B2, B3, and B4.

Because WHA YU's antennas and PSA's antennas are the same type antennas and same gain, only the WHA YU's set 1 antennas was tested and recorded in the report.

<For 2.4GHz Band>

For IEEE 802.11b/g/n/ac/ax mode <4TX/4RX>:

Ant.1 (Port 1), Ant.2 (Port 2), Ant.3 (Port 3) and Ant.4 (Port 4) will transmit/receive the same signal simultaneously.

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

<For 5GHz Band>

For Band 1/2

For IEEE 802.11a/n/ac/ax mode <4TX/4RX>:

Ant.5 (Port 1), Ant.6 (Port 2), Ant.7 (Port 3) and Ant.8 (Port 4) will transmit/receive the same signal simultaneously.

Ant.5 (Port 1), Ant.6 (Port 2), Ant.7 (Port 3) and Ant.8 (Port 4) can be used as transmitting/receiving antennas.

For Band 3/4

For IEEE 802.11a/n/ac/ax mode <4TX/4RX>:

Ant.1 (Port 4), Ant.2 (Port 3), Ant.3 (Port 2) and Ant.4 (Port 1) will transmit/receive the same signal simultaneously.

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

1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11HEW20	0.949	0.227	1.473m	1k
802.11ac VHT40	0.919	0.367	953.75u	3k
802.11ax HEW80-BF	0.948	0.232	577.813u	3k
802.11ax HEW160	0.894	0.487	235u	10k
802.11ax HEW160-BF	0.887	0.521	232.188u	10k

1.1.4 EUT Operational Condition

EUT Power Type	From power adapter			
Beamforming Function	☒	With beamforming	☐	Without beamforming
	The product has beamforming function for 802.11n/ac/ax.			
Weather Band	☒	With 5600~5650MHz	☐	Without 5600~5650MHz
Function	☐	Outdoor P2M	☒	Indoor P2M
	☐	Fixed P2P	☐	Client
TPC Function	☒	With TPC	☐	Without TPC
Test Software Version	accessMTool_3_0_0_5			

1.1.5 Table for Multiple Listing

1. The difference for each equipment name and model name is shown as below:

Equipment Name	Model Name	Description
Wireless-AX11000 Tri-band Gigabit Router, ROG Rapture Tri-band Gaming Router	RT-AX95U, GT-AX11000	All the models/equipment names are identical; the different models/equipment names served as marketing strategy.

From the above models, model: RT-AX95U was selected as representative model for the test and its data was recorded in this report.

2. There are two EUT, the detail information as following:

EUT	SKU	LAN Transformer	
		Brand Name	P/N
1	1	SWAPnet	NS777202*1
		SWAPnet	NS771802*1
2	2	Mingtek	HN8001VG*1
		Mingtek	HN18101HF*1

1.1.6 Table for Class II Change

This product is an extension of original one reported under Sporton project number: FR812227-01AB

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

Modifications	Performance Checking
1. Removing 8 LAN Ports of the EUT. 2. Adding the R230 version of the 4 ports of the EUT. Based on the above modification. 3. Adding AX160 mode. 4. Adding home mesh mode. 5. Adding the Client without radar detection mode. 6. Adding the bridge mode. 7. Adding the extender mode. 8. Adding two sets of antenna with same type, same gain but different brand names and model names (Please refer chapter 1.1.2 Antenna Information.) 9. Adding Zero Wait function for bandwidth 20/40/80 in DFS band. 10. Adding an equipment name: ROG Rapture Tri-band Gaming Router (Please refer chapter 1.1.5 Table for Multiple Listing.) 11. Adding the LED on the top cover LOGO. 12. Changing heat sink. 13. Adding a 2.5GHz LAN Port. 14. Changing Flash. 15. Changing Transformer.	For Modification item 2, 5, 11, 12, 13, 14, 15. 1. AC Power-line Conducted Emissions. 2. Unwanted Emissions Below 1GHz. For Modification item 3 1. Emission Bandwidth 2. Maximum Conducted Output Power 3. Peak Power Spectral Density 4. Unwanted Emissions For Modification item 12 tested below items 11ac VHT160 (5250MHz) 1. Emission Bandwidth 2. Maximum Conducted Output Power 3. Peak Power Spectral Density 11ax HEW80 (5210MHz) has been 1. Emission Bandwidth 2. Maximum Conducted Output Power 3. Peak Power Spectral Density 4. Unwanted Emissions As below test items will be based on original output power to re-test. 11ac VHT40 (5230MHz) 11ac VHT40 (5310MHz) 11ax HEW80 (5610MHz) 11ax HEW20 (5785MHz) For Modification item 1, 4, 6, 7, 8, 9, 10 It's no need to re-test.

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
- FCC KDB 412172 D01 v01r01

1.3 Testing Location Information

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

Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
RF Conducted	TH01-CB	DK Chang	20°C / 50%	Jun. 05, 2018 ~ Sep. 06, 2018
Radiated (Others test)	03CH01-CB	Mason Chen	20°C / 50%	Aug. 07, 2018 ~ Sep. 04, 2018
Radiated (Below 1GHz test)	03CH01-CB	KJ Chang	22°C / 54%	Aug. 29, 2018
AC Conduction	CO02-CB	Peter Wu	22°C / 59%	Aug. 27, 2018

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	9.74×10^{-8}	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Channel Mode

Mode	PowerSetting
802.11ac VHT160_Nss1,(MCS0)_4TX	-
5250MHz Straddle 5.15-5.25GHz	71
5250MHz Straddle 5.25-5.35GHz	71
802.11ax HEW160_Nss1,(MCS0)_4TX	-
5250MHz Straddle 5.15-5.25GHz	71
5250MHz Straddle 5.25-5.35GHz	71
5570MHz	73
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-
5210MHz	79
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	-
5250MHz Straddle 5.15-5.25GHz	70
5250MHz Straddle 5.25-5.35GHz	70
5570MHz	69
802.11ac VHT160_Nss4,(MCS0)_4TX	-
5250MHz Straddle 5.15-5.25GHz	74
5250MHz Straddle 5.25-5.35GHz	74
5570MHz	78
802.11ax HEW160_Nss4,(MCS0)_4TX	-
5250MHz Straddle 5.15-5.25GHz	75
5250MHz Straddle 5.25-5.35GHz	75
5570MHz	78
802.11ax HEW160-BF_Nss2,(MCS0)_4TX	-
5250MHz Straddle 5.15-5.25GHz	73
5250MHz Straddle 5.25-5.35GHz	73
5570MHz	75

Note:
- There are two modes of EUT for 802.11n/ac/ax. one is beamforming mode, and the other is non-beamforming mode. Both modes have been tested and recorded in this test report.
- VHT20/VHT40 covers HT20/HT40, due to same modulation. The power setting for 802.11n HT20 and HT40 are the same or lower than 802.11ac VHT20 and VHT40.

2.2 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 EUT has AP Router, Client without radar detection, Bridge, Extender and Mesh and two SKUs and equips with adapter 1 ~ adapter 3. After evaluated, EUT1 (SKU1) AP Router (Master) + adapter 2 generated the worst test result, thus the measurement test will follow this same test.	
1	EUT1 (SKU1) AP Router (Master) + adapter 2

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

The Worst Case Mode for Following Conformance Tests	
Tests Item	Unwanted Emissions
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.
Operating Mode < 1GHz	Normal Link
The EUT has AP Router, Client without radar detection, Bridge, Extender and Mesh and two SKUs and equips with adapter 1 ~ adapter 3. After evaluated, EUT1 (SKU1) AP Router (Master) + adapter 3 generated the worst test result, thus the measurement test will follow this same test.	
1	EUT1 (SKU1) AP Router (Master) + adapter 3
Operating Mode > 1GHz	CTX
1	EUT1 (SKU1) AP Router (Master)

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 band 1, 2 + WLAN 5GHz band 3, 4
Refer to Sporton Test Report No.: FA812227-03 for Co-location RF Exposure Evaluation.	

Note: 1. The EUT supports below functions:

(1) AP Router (Master)

(2) Client without radar detection

(3) Bridge (Client without radar detection)

(4) Extender (Master)

(5) Mesh (Client without radar detection)

2. The EUT only be used at Z axis.

3. This model supports full RU configuration only, and the model does not have adjustable power levels for each user.

2.3 EUT Operation during Test

For Normal Link:

During the test, the EUT operation to normal function.

For CTX Mode:

For non-beamforming mode:

The EUT was programmed to be in continuously transmitting mode.

For beamforming mode:

For Conducted Mode:

The EUT was programmed to be in continuously transmitting mode.

For Radiated Mode:

During the test, the following programs under WIN 7 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%.

2.4 Accessories

Accessories				
Equipment Name	**Brand Name**	**Model Name**	**Type**	**Rating**
Adapter 1	DELTA	ADP-65DW B	-	INPUT: 100-240V~50-60Hz, 1.5A OUTPUT: 19V, 3.42A
Adapter 2	DELTA	ADP-65DW Y	-	INPUT: 100-240V~50-60Hz, 1.5A OUTPUT: 19V, 3.42A
Adapter 3	PI	AD2087320	010-1LF	INPUT: 100-240V~50/60Hz, 1.5A OUTPUT: 19V, 3.42A
Other				
RJ-45 cable: Shielded, 1.5m				

2.5 Support Equipment

For Test Site No: CO02-CB

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	NB*6	DELL	E6430	N/A
2	PC	DELL	OPTIPLEX 380	N/A
3	HDD3.0*2	WD	WDBACY5000AWT	N/A

For Test Site No: 03CH01-CB / Below 1GHz

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	NB*2	DELL	E4300	N/A
2	NB*4	Apple	Mac Book	N/A
3	PC	DELL	OPTIPLEX 380	N/A
4	Flash disk3.0*2	Transcend	JetFlash-700	N/A

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	N/A

<For Beamforming Mode>

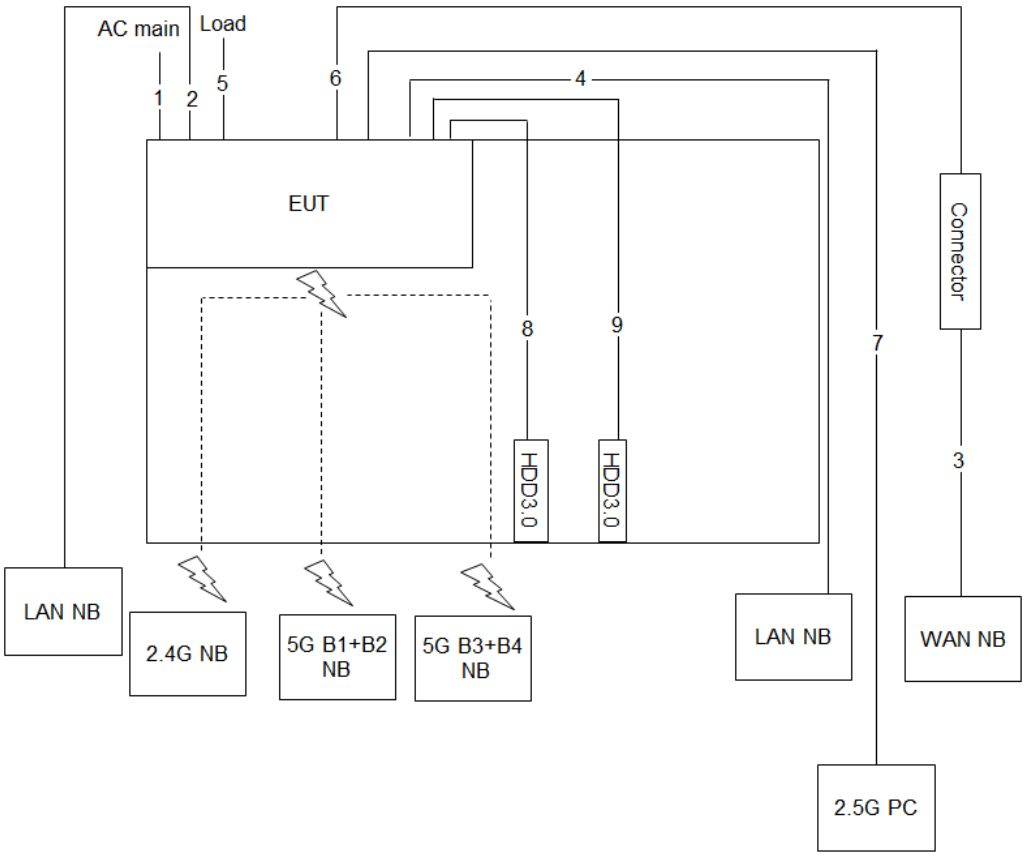
Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	NB*2	DELL	E4300	N/A
2	RX Device	AVAGO	43684MCH5	N/A

For Test Site No: TH01-CB

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	NB	DELL	E4300	N/A

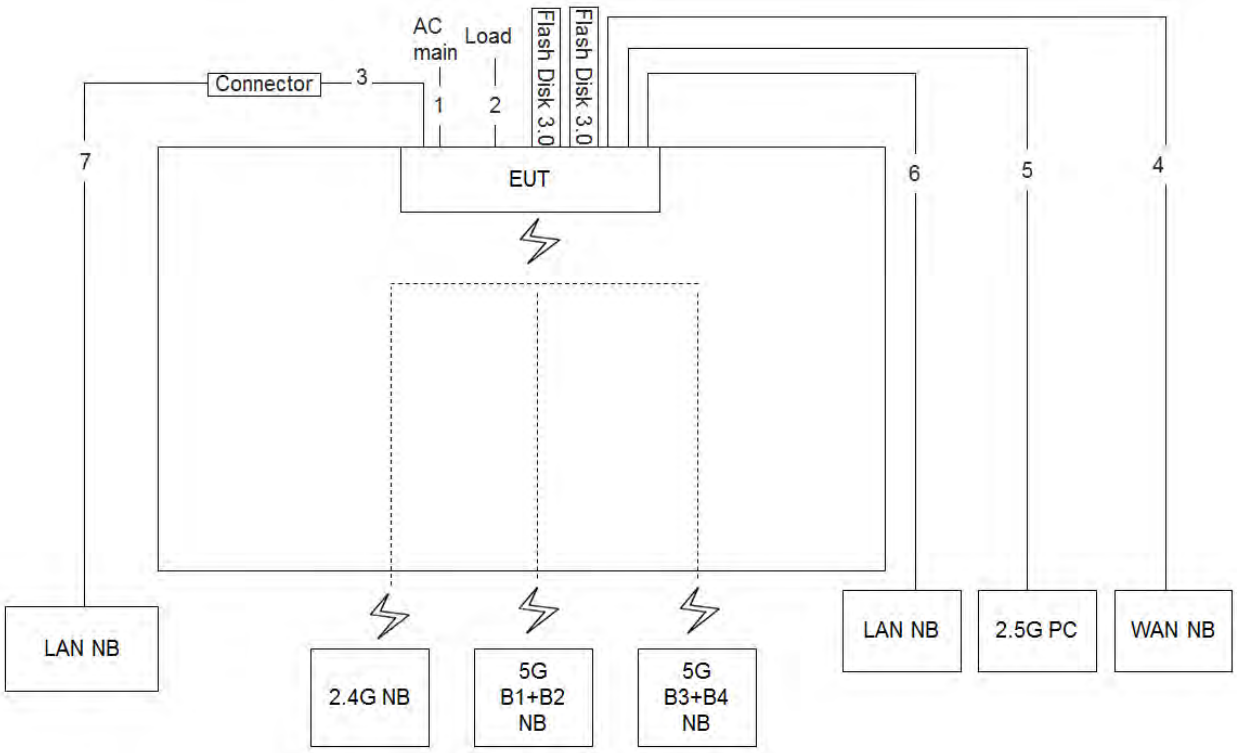
2.6 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



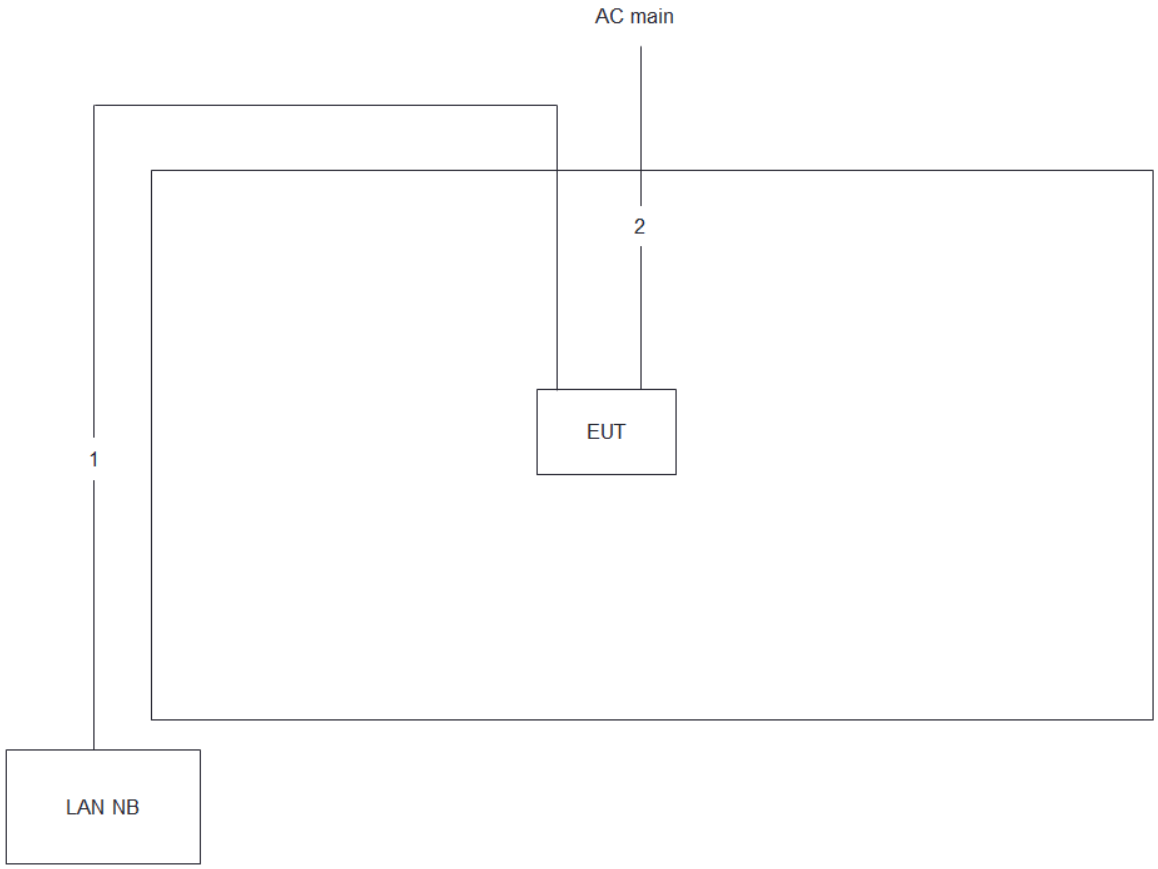
Item	Connection	Shielded	Length
1	Power cable	No	2.3m
2	RJ-45 cable	No	10m
3	RJ-45 cable	No	10m
4	RJ-45 cable	No	10m
5	RJ-45 cable*2	No	1.5m
6	RJ-45 cable	Yes	1.5m
7	RJ-45 cable	No	10m
8	USB cable	Yes	1.5m
9	USB cable	Yes	1.5m

Test Setup Diagram - Radiated Test < 1GHz



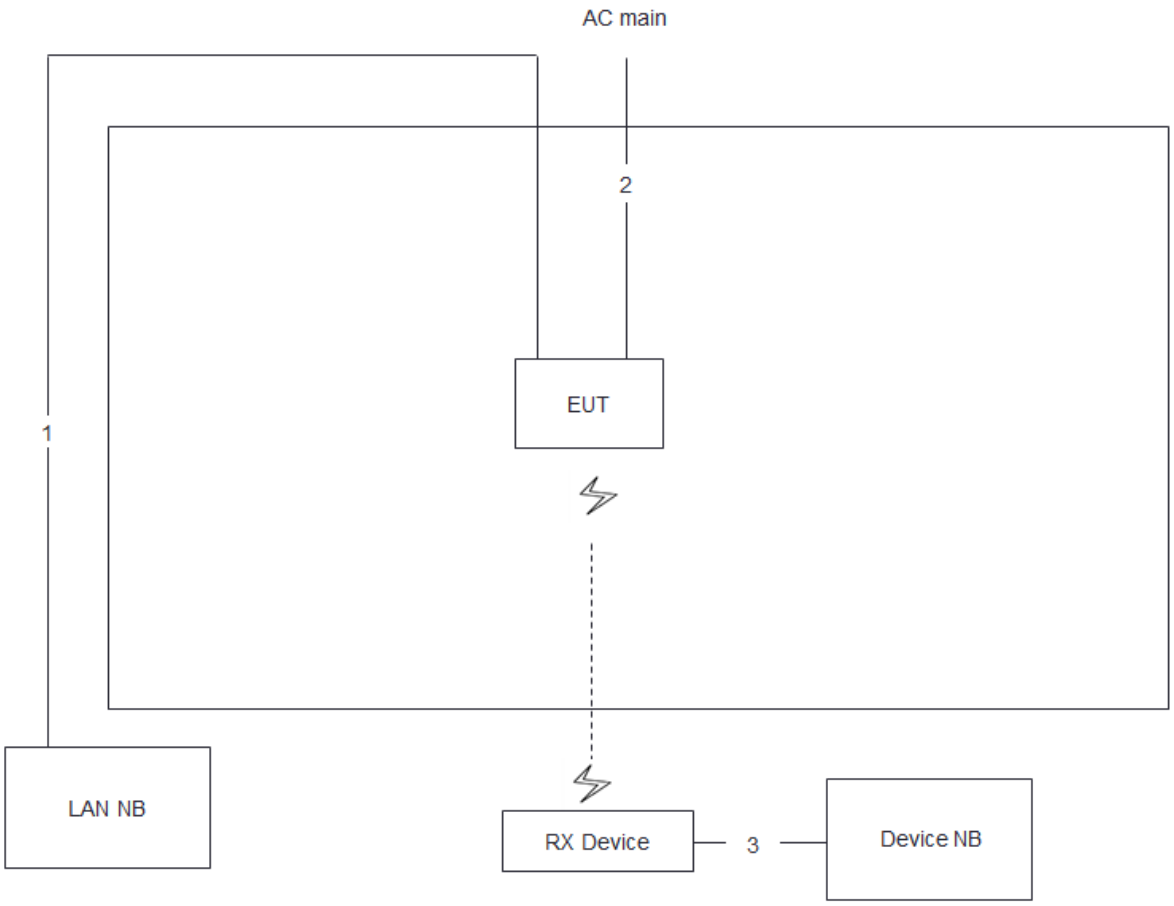
Item	Connection	Shielded	Length
1	Power cable	No	2.3m
2	RJ-45 cable*2	No	1.5m
3	RJ-45 cable	Yes	1.5m
4	RJ-45 cable	No	10m
5	RJ-45 cable	No	10m
6	RJ-45 cable	No	10m
7	RJ-45 cable	No	10m

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



Item	Connection	Shielded	Length
1	RJ-45 cable	No	10m
2	Power cable	No	2.3m

Test Setup Diagram - Radiated Test > 1GHz / Beamforming Mode



Item	Connection	Shielded	Length
1	RJ-45 cable	No	10m
2	Power cable	No	2.3m
3	RJ-45 cable	No	1.5m

3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

AC Power-line Conducted Emissions Limit		
Frequency Emission (MHz)	**Quasi-Peak**	**Average**
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50
Note 1: * Decreases with the logarithm of the frequency.		

3.1.2 Measuring Instruments

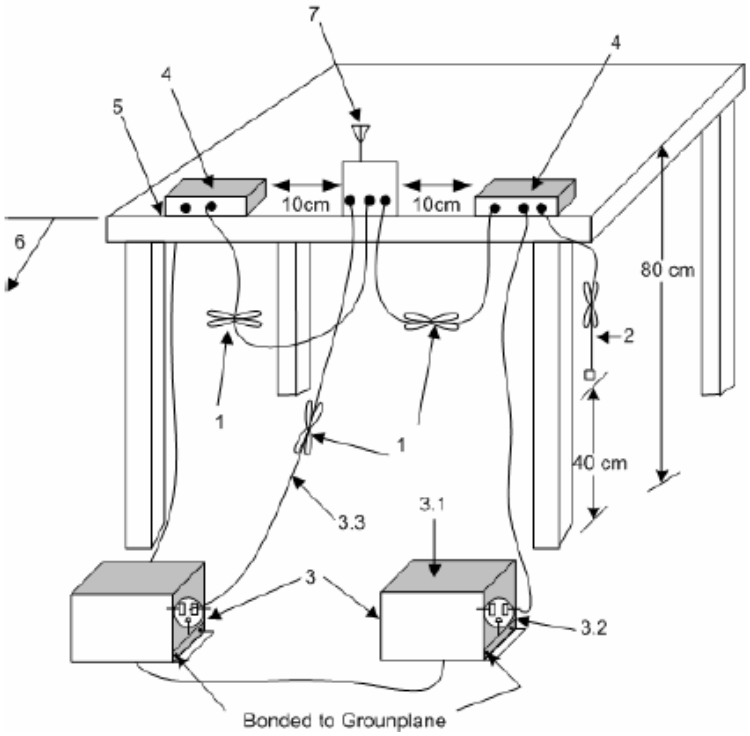
Refer a test equipment and calibration data table in this test report.

3.1.3 Test Procedures

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

3.1.4 Test Setup

AC Power-line Conducted Emissions



1—Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 cm to 40 cm long.
2—The I/O cables that are not connected to an accessory shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
3—EUT connected to one LISN. Unused LISN measuring port connectors shall be terminated in 50 Ω loads. LISN may be placed on top of, or immediately beneath, reference ground plane.
3.1—All other equipment powered from additional LISN(s).
3.2—A multiple-outlet strip may be used for multiple power cords of non-EUT equipment.
3.3—LISN at least 80 cm from nearest part of EUT chassis.
4—Non-EUT components of EUT system being tested.
5—Rear of EUT, including peripherals, shall all be aligned and flush with edge of tabletop.
6—Edge of tabletop shall be 40 cm removed from a vertical conducting plane that is bonded to the ground plane.
7—Antenna can be integral or detachable. If detachable, then the antenna shall be attached for this test.

3.1.5 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A

3.2 Emission Bandwidth

3.2.1 Emission Bandwidth Limit

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

3.2.2 Measuring Instruments

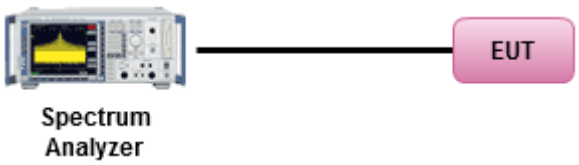
Refer a test equipment and calibration data table in this test report.

3.2.3 Test Procedures

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

3.2.4 Test Setup

Emission Bandwidth



3.2.5 Test Result of Emission Bandwidth

Refer as Appendix B

3.3 Maximum Conducted Output Power

3.3.1 Maximum Conducted Output Power Limit

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

3.3.2 Measuring Instruments

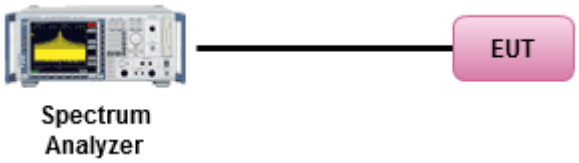
Refer a test equipment and calibration data table in this test report.

3.3.3 Test Procedures

Test Method	
▪ Maximum Conducted Output Power	
	Average over on/off periods with duty factor
	☒ Refer as FCC KDB 789033, clause E Method SA-2 (spectral trace averaging) for straddle channel.
	☐ Refer as FCC KDB 789033, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)
	Wideband RF power meter and average over on/off periods with duty factor
	☒ Refer as FCC KDB 789033, clause E Method PM-G (using an RF average power meter) for other channel.
▪ For conducted measurement.	
	▪ If the EUT supports multiple transmit chains using options given below: Refer as FCC KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them.
	▪ If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + \ldots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$

3.3.4 Test Setup

For straddle channel:

RF Output Power (Spectrum Analyzer)


For other channel:

RF Output Power (Power Meter)


3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C

3.4 Peak Power Spectral Density

3.4.1 Peak Power Spectral Density Limit

Peak Power Spectral Density Limit	
UNII Devices	
☒	For the 5.15-5.25 GHz band:
	▪ Outdoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If G_{TX} > 6 dBi, then P_{Out} = 17 – (G_{TX} – 6).
	▪ Indoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If G_{TX} > 6 dBi, then P_{Out} = 17 – (G_{TX} – 6).
	▪ Point-to-point AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If G_{TX} > 23 dBi, then P_{Out} = 17 – (G_{TX} – 23).
	▪ Mobile or Portable Client: the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If G_{TX} > 6 dBi, then PPSD= 11 – (G_{TX} – 6)..
☒	For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If G_{TX} > 6 dBi, then PPSD= 11 – (G_{TX} – 6).
☒	For the 5.47-5.725 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If G_{TX} > 6 dBi, then PPSD= 11 – (G_{TX} – 6).
☐	For the 5.725-5.85 GHz band:
	▪ Point-to-multipoint systems (P2M): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz. If G_{TX} > 6 dBi, then PPSD= 30 – (G_{TX} – 6).
	▪ Point-to-point systems (P2P): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz.
LE-LAN Devices	
☐	For the 5.15-5.25 GHz band, the peak power spectral density (PPSD) ≤ 4 dBm/MHz and the e.i.r.p. peak power spectral density (PPSD) ≤ 10 dBm/MHz.
☐	For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz and the e.i.r.p. peak power spectral density (PPSD) ≤ 17 dBm/MHz.
	▪ e.i.r.p. greater than 200 mW shall comply with the following e.i.r.p. at different elevations, where θ is the angle above the local horizontal plane (of the Earth) as shown below: -13 dBW/MHz for 0° ≤ θ < 8° ; -13 − 0.716 (θ-8) dBW/MHz for 8° ≤ θ < 40° -35.9 − 1.22 (θ-40) dBW/MHz for 40° ≤ θ ≤ 45° ; -42 dBW/MHz for θ > 45°
☐	For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz and the e.i.r.p. peak power spectral density (PPSD) ≤ 17 dBm/MHz.
☐	For the 5.725-5.85 GHz band:
	▪ Point-to-multipoint systems (P2M): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz. If G_{TX} > 6 dBi, then PPSD= 30 – (G_{TX} – 6).
	▪ Point-to-point systems (P2P): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz.
PPSD = peak power spectral density that he same method as used to determine the conducted output power shall be used to determine the power spectral density. And power spectral density in dBm/MHz **G_{TX}** = the maximum transmitting antenna directional gain in dBi.	

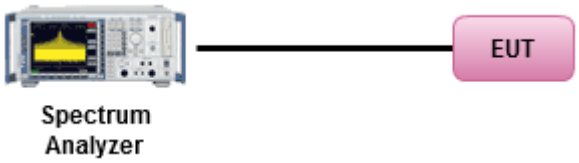
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

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

3.4.4 Test Setup

Power Spectral Density


3.4.5 Test Result of Peak Power Spectral Density

Refer as Appendix D

3.5 Unwanted Emissions

3.5.1 Transmitter Radiated Unwanted Emissions Limit

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

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

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

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

Un-restricted band emissions above 1GHz Limit	
Operating Band	**Limit**
☒ 5.15 - 5.25 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
☒ 5.25 - 5.35 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
☒ 5.47 - 5.725 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
☐ 5.725 - 5.85 GHz	Follow 15.407(b)(4)(ii), the emission limits in § 15.247(d), 30dBc in any 100 kHz bandwidth outside the operating frequency band.

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

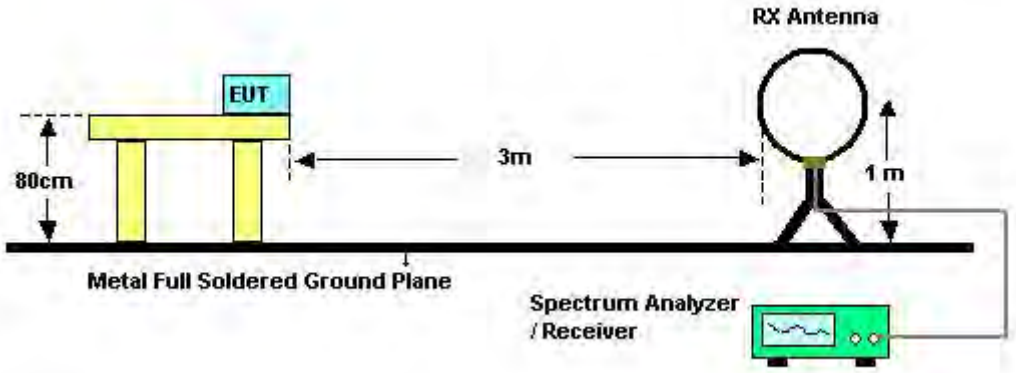
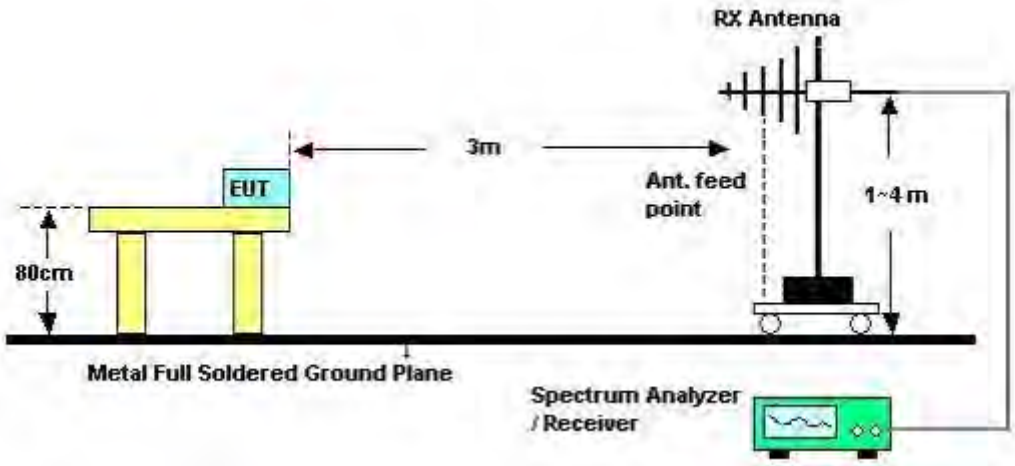
3.5.2 Measuring Instruments

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

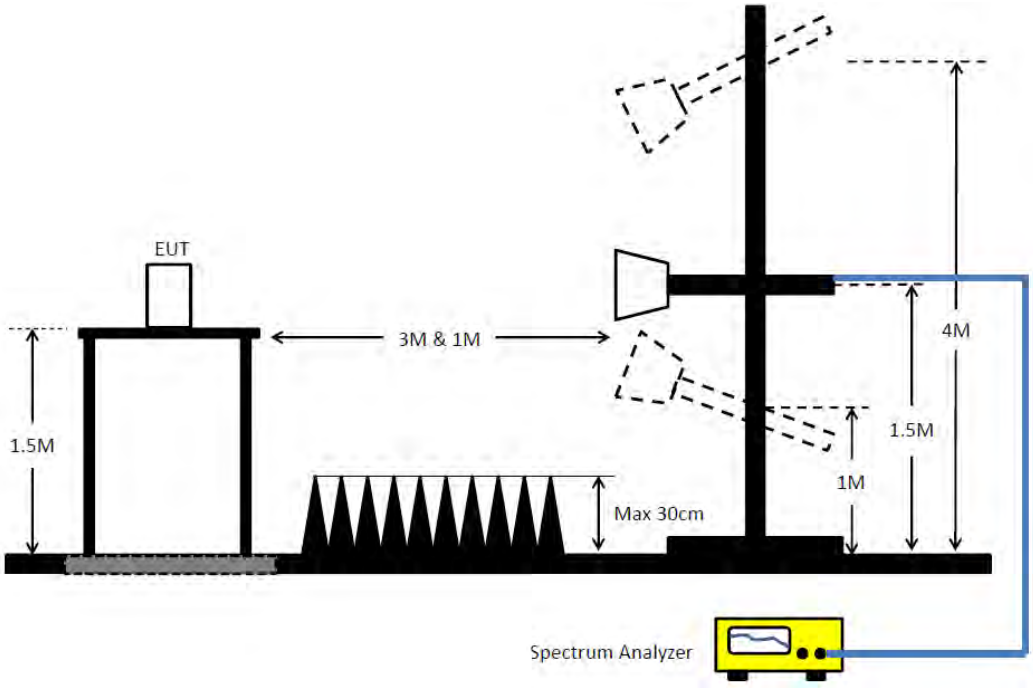
3.5.3 Test Procedures

Test Method		
▪ Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 m for frequencies above 30 MHz, unless it can be further demonstrated that measurements at a distance of 30 m or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).		
▪ The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].		
▪ For the transmitter unwanted emissions shall be measured using following options below:		
	▪ Refer as FCC KDB 789033, clause H)2) for unwanted emissions into non-restricted bands.	
	▪ Refer as FCC KDB 789033, clause H)1) for unwanted emissions into restricted bands.	
		☐ Refer as FCC KDB 789033, H)6) Method AD (Trace Averaging).
		☒ Refer as FCC KDB 789033, H)6) Method VB (Reduced VBW).
		☐ Refer as ANSI C63.10, clause 4.2.3.2.3 (Reduced VBW). VBW ≥ 1/T, where T is pulse time.
		☐ Refer as ANSI C63.10, clause 4.2.3.2.4 average value of pulsed emissions.
		☒ Refer as FCC KDB 789033, clause H)5) measurement procedure peak limit.
		☐ Refer as ANSI C63.10, clause 4.2.3.2.2 measurement procedure peak limit.
▪ For radiated measurement.		
	▪ Refer as ANSI C63.10, clause 6.4 for radiated emissions below 30 MHz and test distance is 3m.	
	▪ Refer as ANSI C63.10, clause 6.5 for radiated emissions 30 MHz to 1 GHz and test distance is 3m.	
	▪ Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz.	
▪ The any unwanted emissions level shall not exceed the fundamental emission level.		
▪ All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.		

3.5.4 Test Setup

Transmitter Radiated Unwanted Emissions
9kHz ~30MHz

30MHz~1GHz


Transmitter Radiated Unwanted Emissions
Above 1GHz



3.5.5 Transmitter Radiated Unwanted Emissions (Below 30MHz)

All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.
The radiated emissions were investigated from 9 kHz or the lowest frequency generated within the device, up to the 10 harmonic or 40 GHz, whichever is appropriate.

3.5.6 Test Result of Transmitter Unwanted Emissions

Refer as Appendix E

4 Test Equipment and Calibration Data

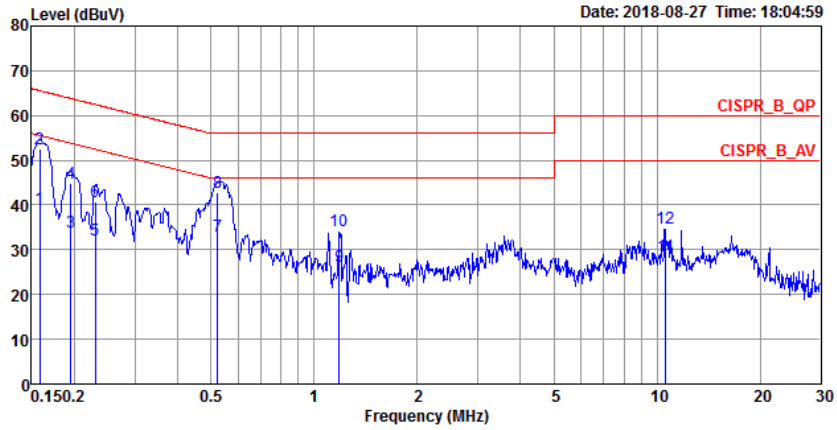
Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
LISN	Schwarzbeck	NSLK 8127	8127650	9kHz ~ 30MHz	Nov. 24, 2017	Nov. 23, 2018	Conduction (CO02-CB)
LISN	Schwarzbeck	NSLK 8127	8127478	9kHz ~ 30MHz	Nov. 13, 2017	Nov. 12, 2018	Conduction (CO02-CB)
EMI Receiver	Agilent	N9038A	MY52260140	9kHz ~ 8.4GHz	Jan. 17, 2018	Jan. 16, 2019	Conduction (CO02-CB)
COND Cable	Woken	Cable	2	0.15MHz ~ 30MHz	Nov. 10, 2017	Nov. 09, 2018	Conduction (CO02-CB)
Software	Audix	E3	6.120210n	-	N.C.R.	N.C.R.	Conduction (CO02-CB)
BILOG ANTENNA with 6dB Attenuator	TESEQ & EMCI	CBL6112D & N-6-06	37880 & AT-N0609	20MHz ~ 2GHz	Aug. 27, 2018	Aug. 26, 2019	Radiation (03CH01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 16, 2018	Mar. 15, 2019	Radiation (03CH01-CB)
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Nov. 20, 2017	Nov. 19, 2018	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jun. 28, 2018	Jun. 27, 2019	Radiation (03CH01-CB)
Pre-Amplifier	EMCI	EMC330N	980332	20MHz ~ 3GHz	May 02, 2018	May 01, 2019	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. 04, 2018	Jul. 03, 2019	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	100354	9kHz ~ 2.75GHz	Dec. 08, 2017	Dec. 07, 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	Jul. 27, 2018	Jul. 26, 2019	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#2	N/A	18GHz ~ 40 GHz	Jul. 27, 2018	Jul. 26, 2019	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	Dec. 21, 2017	Dec. 20, 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)

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
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. 20, 2017	Nov. 19, 2018	Conducted (TH01-CB)

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

N.C.R. means Non-Calibration required

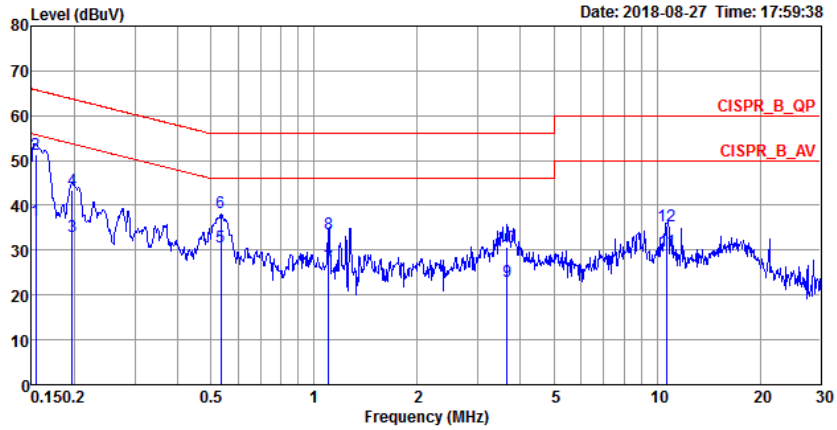
AC Power-line Conducted Emissions Result			
Operating Mode	1	**Power Phase**	Neutral
Operating Function	Normal Link		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1582	39.26	-16.30	55.56	29.08	10.17	0.01	Average	NEUTRAL
2	0.1582	52.56	-13.00	65.56	42.38	10.17	0.01	QP	NEUTRAL
3	0.1955	33.99	-19.81	53.80	23.81	10.17	0.01	Average	NEUTRAL
4	0.1955	45.00	-18.80	63.80	34.82	10.17	0.01	QP	NEUTRAL
5	0.2304	32.21	-20.23	52.44	22.03	10.17	0.01	Average	NEUTRAL
6	0.2304	40.86	-21.58	62.44	30.68	10.17	0.01	QP	NEUTRAL
7	0.5238	32.92	-13.08	46.00	22.72	10.17	0.03	Average	NEUTRAL
8	0.5238	42.84	-13.16	56.00	32.64	10.17	0.03	QP	NEUTRAL
9	1.1857	26.26	-19.74	46.00	16.05	10.18	0.03	Average	NEUTRAL
10	1.1857	34.23	-21.77	56.00	24.02	10.18	0.03	QP	NEUTRAL
11	10.5954	28.64	-21.36	50.00	18.24	10.33	0.07	Average	NEUTRAL
12	10.5954	34.71	-25.29	60.00	24.31	10.33	0.07	QP	NEUTRAL

Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)

AC Power-line Conducted Emissions Result			
Operating Mode	1	**Power Phase**	Line
Operating Function	Normal Link		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1540	36.60	-19.18	55.78	26.43	10.16	0.01	Average	LINE
2	0.1540	51.45	-14.33	65.78	41.28	10.16	0.01	QP	LINE
3	0.1965	33.19	-20.57	53.76	23.02	10.16	0.01	Average	LINE
4	0.1965	43.30	-20.46	63.76	33.13	10.16	0.01	QP	LINE
5	0.5350	30.71	-15.29	46.00	20.52	10.16	0.03	Average	LINE
6	0.5350	38.30	-17.70	56.00	28.11	10.16	0.03	QP	LINE
7	1.1032	26.14	-19.86	46.00	15.95	10.17	0.02	Average	LINE
8	1.1032	33.62	-22.38	56.00	23.43	10.17	0.02	QP	LINE
9	3.6464	23.13	-22.87	46.00	12.84	10.22	0.07	Average	LINE
10	3.6464	30.56	-25.44	56.00	20.27	10.22	0.07	QP	LINE
11	10.6871	29.68	-20.32	50.00	19.28	10.33	0.07	Average	LINE
12	10.6871	35.56	-24.44	60.00	25.16	10.33	0.07	QP	LINE

Note 1: “>20dB” means emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: “N/F” means Nothing Found emissions (No emissions were detected.)

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ac VHT160_Nss1,(MCS0)_4TX	81.04M	75.562M	75M6D1D	80.4M	75.322M
802.11ax HEW160_Nss1,(MCS0)_4TX	80.56M	76.88M	76M9D1D	80.32M	76.4M
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	81.6M	76.862M	76M9D1D	81.6M	76.662M
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	81.04M	76.922M	76M9D1D	80.32M	76.522M
5.25-5.35GHz	-	-	-	-	-
802.11ax HEW160_Nss1,(MCS0)_4TX	81.12M	77.12M	77M1D1D	80.88M	76.88M
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	80.96M	77.081M	77M1D1D	80.8M	76.762M
5.47-5.725GHz	-	-	-	-	-
802.11ax HEW160_Nss1,(MCS0)_4TX	165.4M	155M	155MD1D	165M	154.4M
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	163.8M	154.723M	155MD1D	163.6M	153.923M

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

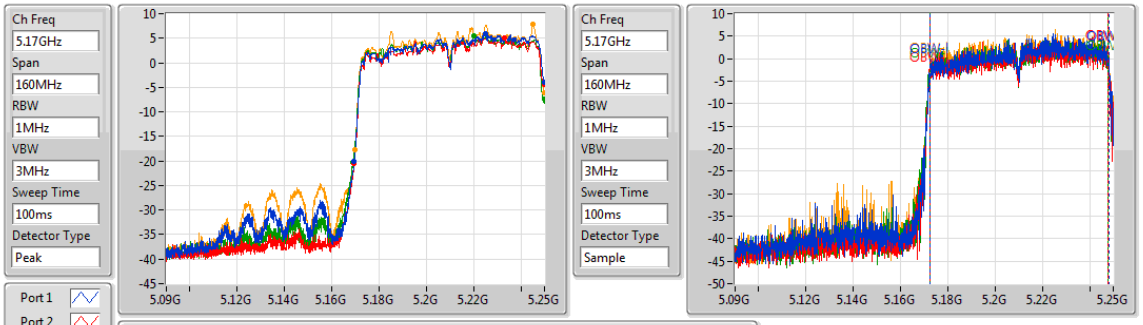
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11ac VHT160_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	Inf	80.48M	75.402M	80.48M	75.482M	81.04M	75.562M	80.4M	75.322M
5250MHz Straddle 5.25-5.35GHz	Pass	Inf	80.96M	75.562M	81.84M	75.642M	80.4M	75.562M	80.4M	75.642M
802.11ax HEW160_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	Inf	80.48M	76.4M	80.32M	76.88M	80.4M	76.72M	80.56M	76.72M
5250MHz Straddle 5.25-5.35GHz	Pass	Inf	80.88M	76.88M	81.12M	76.96M	80.96M	77.12M	80.96M	76.96M
5570MHz	Pass	Inf	165.2M	155M	165.2M	154.8M	165M	154.4M	165.4M	154.8M
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	81.6M	76.862M	81.6M	76.862M	81.6M	76.862M	81.6M	76.662M
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	Inf	80.32M	76.842M	80.48M	76.922M	81.04M	76.682M	80.72M	76.522M
5250MHz Straddle 5.25-5.35GHz	Pass	Inf	80.96M	76.762M	80.8M	77.081M	80.8M	76.842M	80.8M	77.081M
5570MHz	Pass	Inf	163.6M	154.523M	163.6M	154.723M	163.8M	153.923M	163.6M	154.323M

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

802.11ac VHT160_Nss1,(MCS0)_4TX — EBW

5250MHz Straddle 5.15-5.25GHz

06/09/2018

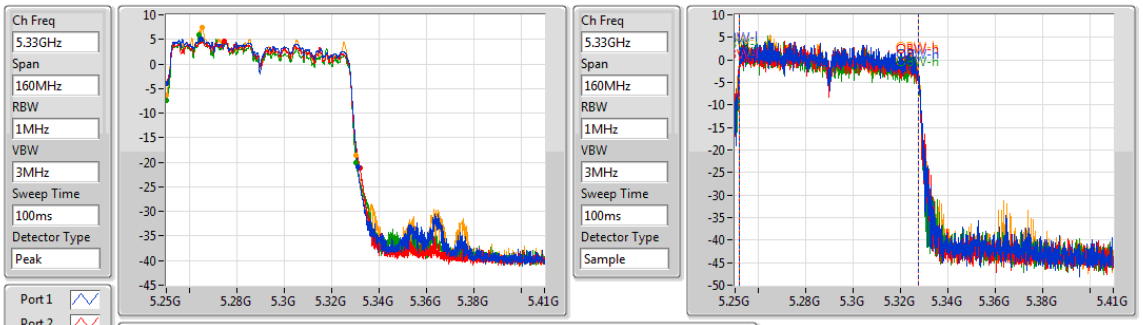


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
80.48M	5.16952G	5.25G	75.402M	5.172639G	5.248041G	Inf	1
80.48M	5.16952G	5.25G	75.482M	5.172479G	5.247961G	Inf	2
81.04M	5.16896G	5.25G	75.562M	5.172399G	5.247961G	Inf	3
80.4M	5.1696G	5.25G	75.322M	5.172639G	5.247961G	Inf	4

802.11ac VHT160_Nss1,(MCS0)_4TX — EBW

5250MHz Straddle 5.25-5.35GHz

06/09/2018

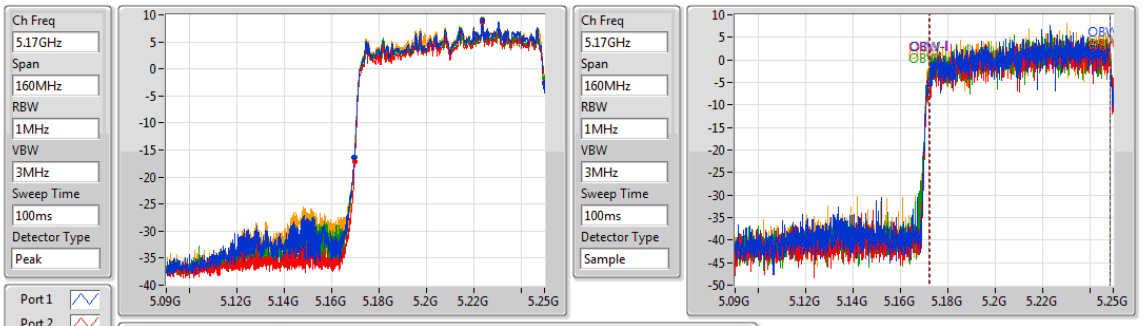


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
80.96M	5.25G	5.33096G	75.562M	5.251799G	5.327361G	Inf	1
81.84M	5.25G	5.33184G	75.642M	5.251799G	5.327441G	Inf	2
80.4M	5.25G	5.3304G	75.562M	5.251799G	5.327361G	Inf	3
80.4M	5.25G	5.3304G	75.642M	5.251719G	5.327361G	Inf	4

802.11ax HEW160_Nss1,(MCS0)_4TX — EBW

5250MHz Straddle 5.15-5.25GHz

12/07/2018

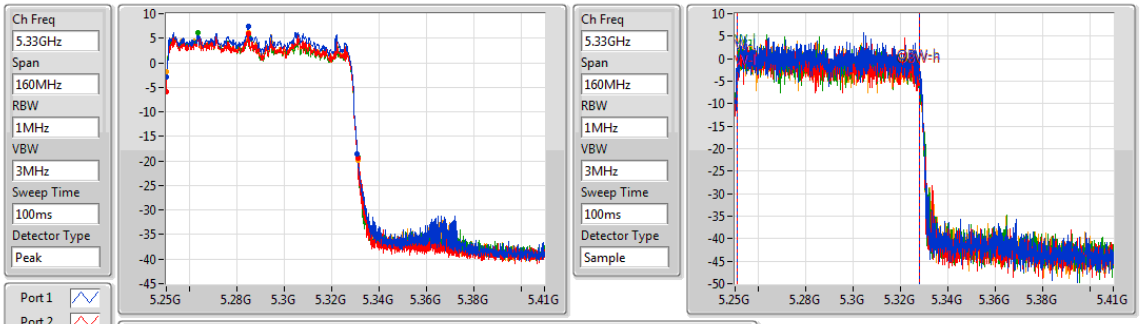


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
80.48M	5.16952G	5.25G	76.4M	5.17224G	5.24864G	Inf	1
80.32M	5.16968G	5.25G	76.88M	5.172G	5.24888G	Inf	2
80.4M	5.1696G	5.25G	76.72M	5.17208G	5.2488G	Inf	3
80.56M	5.16944G	5.25G	76.72M	5.17208G	5.2488G	Inf	4

802.11ax HEW160_Nss1,(MCS0)_4TX EBW

5250MHz Straddle 5.25-5.35GHz

12/07/2018

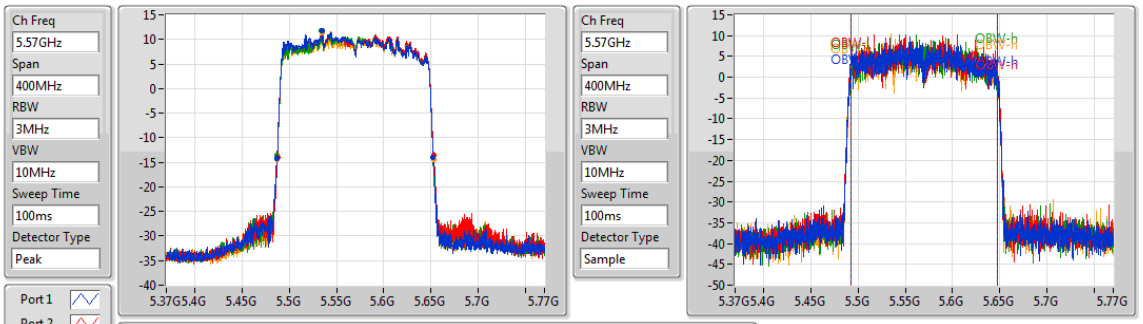


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
80.88M	5.25G	5.33088G	76.88M	5.25104G	5.32792G	Inf	1
81.12M	5.25G	5.33112G	76.96M	5.25096G	5.32792G	Inf	2
80.96M	5.25G	5.33096G	77.12M	5.25088G	5.328G	Inf	3
80.96M	5.25G	5.33096G	76.96M	5.25096G	5.32792G	Inf	4

802.11ax HEW160_Nss1,(MCS0)_4TX EBW

5570MHz

12/07/2018

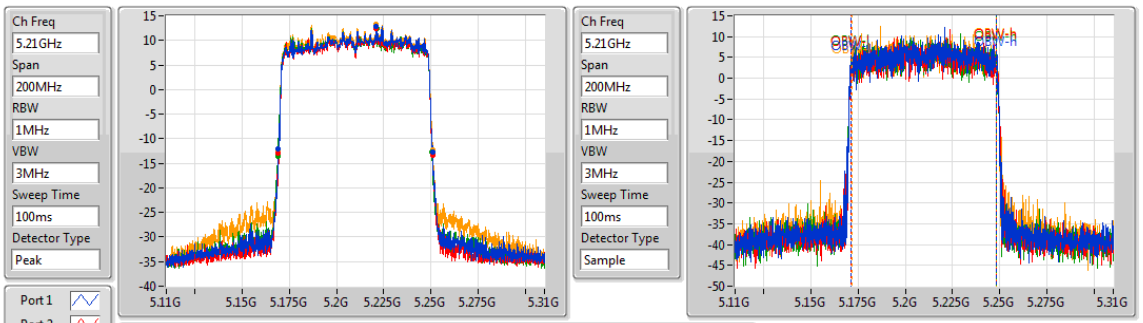


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
165.2M	5.4872G	5.6524G	155M	5.4922G	5.6472G	Inf	1
165.2M	5.4876G	5.6528G	154.8M	5.4924G	5.6472G	Inf	2
165M	5.4872G	5.6522G	154.4M	5.4926G	5.647G	Inf	3
165.4M	5.4874G	5.6528G	154.8M	5.4922G	5.647G	Inf	4

802.11ax HEW80-BF_Nss1,(MCS0)_4TX EBW

5210MHz

07/06/2018

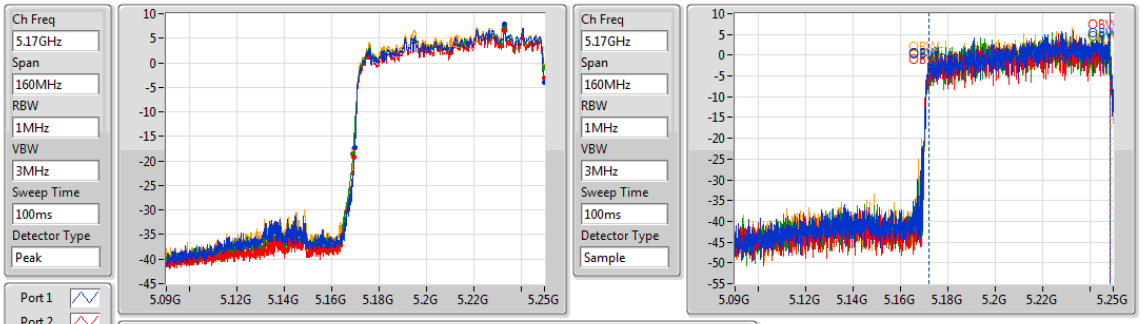


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
81.6M	5.1693G	5.2509G	76.862M	5.171519G	5.248381G	Inf	1
81.6M	5.1693G	5.2509G	76.862M	5.171519G	5.248381G	Inf	2
81.6M	5.1689G	5.2505G	76.862M	5.171519G	5.248381G	Inf	3
81.6M	5.1692G	5.2508G	76.662M	5.171619G	5.248281G	Inf	4

802.11ax HEW160-BF_Nss1,(MCS0)_4TX EBW

5250MHz Straddle 5.15-5.25GHz

05/06/2018

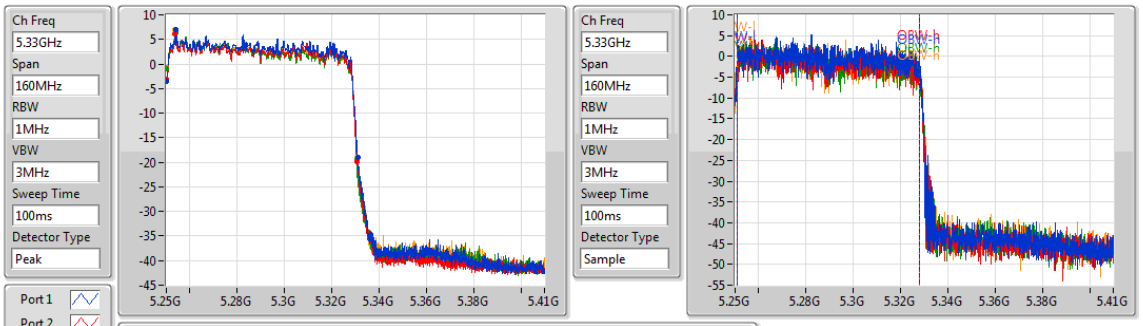


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
80.32M	5.16968G	5.25G	76.842M	5.171919G	5.248761G	Inf	1
80.48M	5.16952G	5.25G	76.922M	5.171839G	5.248761G	Inf	2
81.04M	5.16896G	5.25G	76.682M	5.172079G	5.248761G	Inf	3
80.72M	5.16928G	5.25G	76.522M	5.172159G	5.248681G	Inf	4

802.11ax HEW160-BF_Nss1,(MCS0)_4TX EBW

5250MHz Straddle 5.25-5.35GHz

05/06/2018

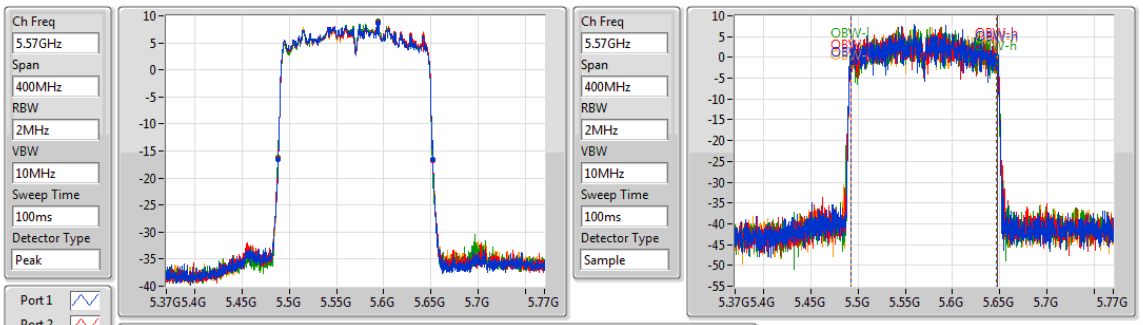


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
80.96M	5.25G	5.33096G	76.762M	5.251079G	5.327841G	Inf	1
80.8M	5.25G	5.3308G	77.081M	5.251079G	5.328161G	Inf	2
80.8M	5.25G	5.3308G	76.842M	5.251G	5.327841G	Inf	3
80.8M	5.25G	5.3308G	77.081M	5.251G	5.328081G	Inf	4

802.11ax HEW160-BF_Nss1,(MCS0)_4TX EBW

5570MHz

05/06/2018



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
163.6M	5.4884G	5.652G	154.523M	5.492639G	5.647161G	Inf	1
163.6M	5.4884G	5.652G	154.723M	5.492439G	5.647161G	Inf	2
163.8M	5.488G	5.6518G	153.923M	5.492839G	5.646762G	Inf	3
163.6M	5.4882G	5.6518G	154.323M	5.492839G	5.647161G	Inf	4

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ax HEW160-BF_Nss2,(MCS0)_4TX	80.72M	76.762M	76M8D1D	80.32M	76.602M
5.25-5.35GHz	-	-	-	-	-
802.11ax HEW160-BF_Nss2,(MCS0)_4TX	80.88M	76.922M	76M9D1D	80.4M	76.442M
5.47-5.725GHz	-	-	-	-	-
802.11ax HEW160-BF_Nss2,(MCS0)_4TX	163M	154.923M	155MD1D	162.6M	154.123M

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

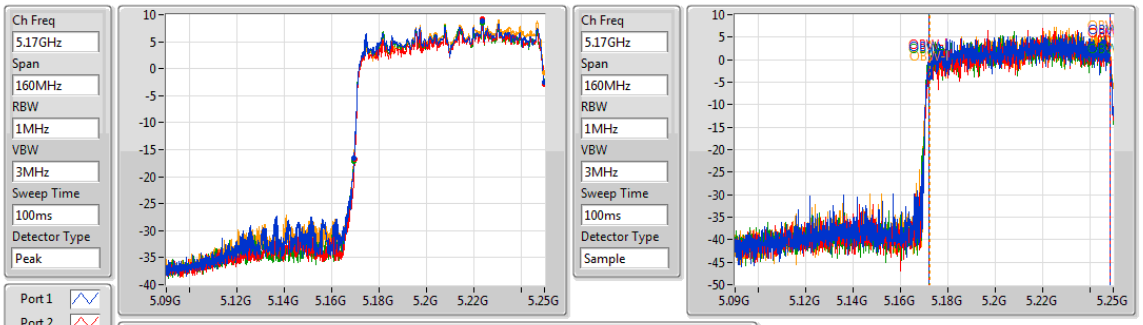
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11ax HEW160-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	Inf	80.56M	76.762M	80.32M	76.602M	80.64M	76.762M	80.72M	76.602M
5250MHz Straddle 5.25-5.35GHz	Pass	Inf	80.48M	76.762M	80.88M	76.922M	80.4M	76.442M	80.72M	76.842M
5570MHz	Pass	Inf	162.8M	154.923M	163M	154.523M	162.6M	154.123M	162.8M	154.323M

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;

802.11ax HEW160-BF_Nss2,(MCS0)_4TX EBW

5250MHz Straddle 5.15-5.25GHz

03/09/2018

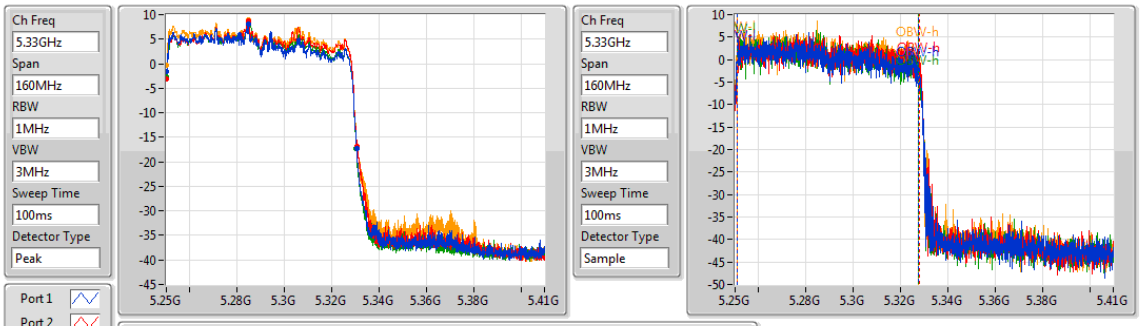


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
80.56M	5.16944G	5.25G	76.762M	5.171839G	5.248601G	Inf	1
80.32M	5.16968G	5.25G	76.602M	5.171999G	5.248601G	Inf	2
80.64M	5.16936G	5.25G	76.762M	5.171839G	5.248601G	Inf	3
80.72M	5.16928G	5.25G	76.602M	5.172239G	5.248841G	Inf	4

802.11ax HEW160-BF_Nss2,(MCS0)_4TX EBW

5250MHz Straddle 5.25-5.35GHz

03/09/2018

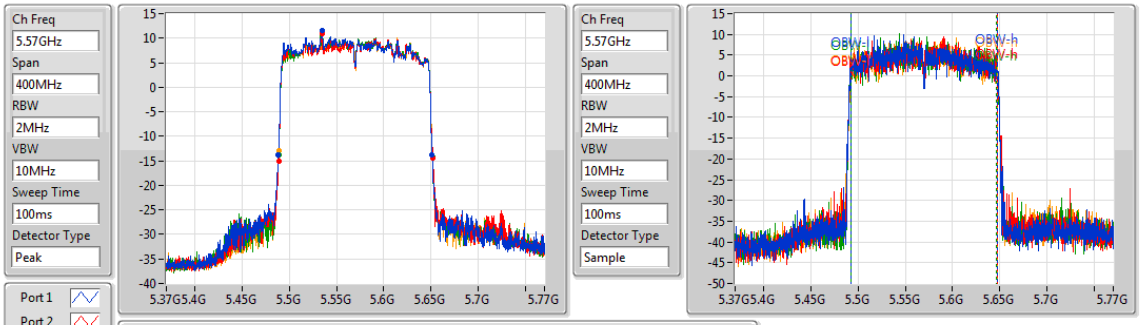


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
80.48M	5.25G	5.33048G	76.762M	5.25092G	5.327681G	Inf	1
80.88M	5.25G	5.33088G	76.922M	5.251079G	5.328001G	Inf	2
80.4M	5.25G	5.3304G	76.442M	5.251079G	5.327521G	Inf	3
80.72M	5.25G	5.33072G	76.842M	5.25092G	5.327761G	Inf	4

802.11ax HEW160-BF_Nss2,(MCS0)_4TX EBW

5570MHz

03/09/2018



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
162.8M	5.4884G	5.6512G	154.923M	5.492239G	5.647161G	Inf	1
163M	5.4888G	5.6518G	154.523M	5.492639G	5.647161G	Inf	2
162.6M	5.4888G	5.6514G	154.123M	5.492639G	5.646762G	Inf	3
162.8M	5.4888G	5.6516G	154.323M	5.492839G	5.647161G	Inf	4

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ac VHT160_Nss4,(MCS0)_4TX	81.12M	75.562M	75M6D1D	80.32M	75.162M
802.11ax HEW160_Nss4,(MCS0)_4TX	80.64M	76.762M	76M8D1D	80.24M	76.442M
5.25-5.35GHz	-	-	-	-	-
802.11ac VHT160_Nss4,(MCS0)_4TX	80.96M	75.722M	75M7D1D	80.32M	75.482M
802.11ax HEW160_Nss4,(MCS0)_4TX	81.52M	77.001M	77M0D1D	80.48M	76.762M
5.47-5.725GHz	-	-	-	-	-
802.11ac VHT160_Nss4,(MCS0)_4TX	163.8M	153.723M	154MD1D	162.4M	153.323M
802.11ax HEW160_Nss4,(MCS0)_4TX	163.8M	155.122M	155MD1D	163.2M	154.323M

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

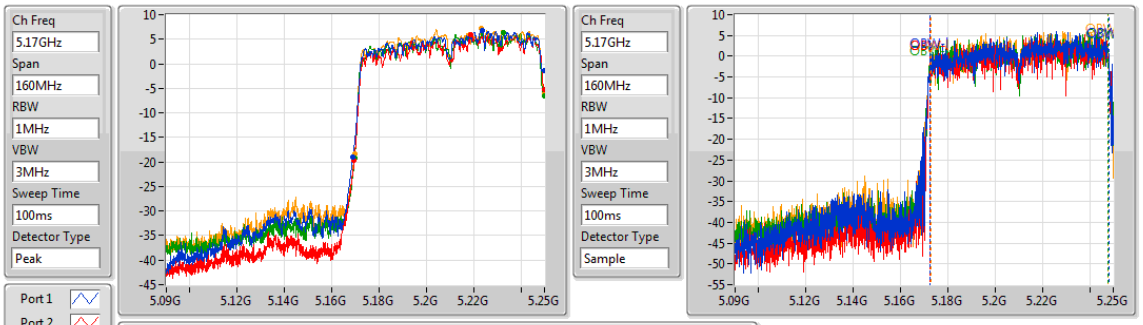
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11ac VHT160_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	Inf	81.12M	75.562M	80.48M	75.402M	80.4M	75.402M	80.32M	75.162M
5250MHz Straddle 5.25-5.35GHz	Pass	Inf	80.96M	75.562M	80.88M	75.722M	80.32M	75.482M	80.96M	75.642M
5570MHz	Pass	Inf	163.8M	153.723M	163.2M	153.723M	162.4M	153.323M	163.4M	153.723M
802.11ax HEW160_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	Inf	80.24M	76.522M	80.48M	76.442M	80.64M	76.762M	80.56M	76.682M
5250MHz Straddle 5.25-5.35GHz	Pass	Inf	81.36M	76.922M	81.52M	76.762M	80.8M	77.001M	80.48M	77.001M
5570MHz	Pass	Inf	163.4M	155.122M	163.6M	154.323M	163.2M	154.323M	163.8M	154.323M

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

802.11ac VHT160_Nss4,(MCS0)_4TX — EBW

5250MHz Straddle 5.15-5.25GHz

10/08/2018

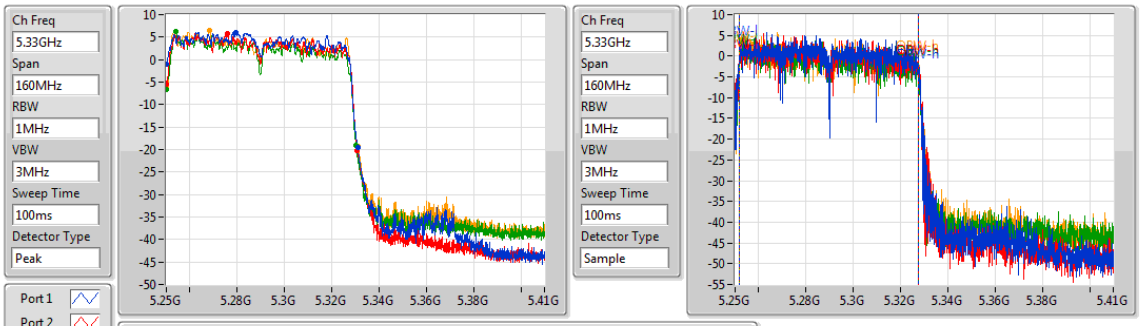


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
81.12M	5.16888G	5.25G	75.562M	5.172479G	5.248041G	Inf	1
80.48M	5.16952G	5.25G	75.402M	5.172639G	5.248041G	Inf	2
80.4M	5.1696G	5.25G	75.402M	5.172559G	5.247961G	Inf	3
80.32M	5.16968G	5.25G	75.162M	5.172719G	5.247881G	Inf	4

802.11ac VHT160_Nss4,(MCS0)_4TX — EBW

5250MHz Straddle 5.25-5.35GHz

10/08/2018

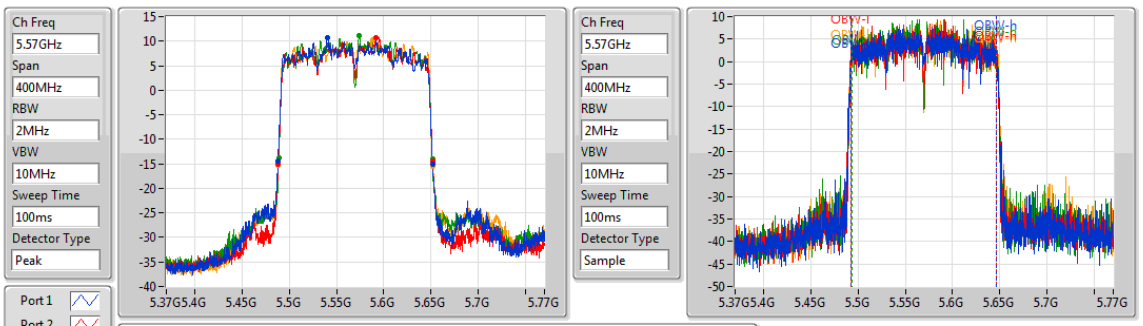


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
80.96M	5.25G	5.33096G	75.562M	5.251799G	5.327361G	Inf	1
80.88M	5.25G	5.33088G	75.722M	5.251799G	5.327521G	Inf	2
80.32M	5.25G	5.33032G	75.482M	5.251879G	5.327361G	Inf	3
80.96M	5.25G	5.33096G	75.642M	5.251799G	5.327441G	Inf	4

802.11ac VHT160_Nss4,(MCS0)_4TX — EBW

5570MHz

10/08/2018

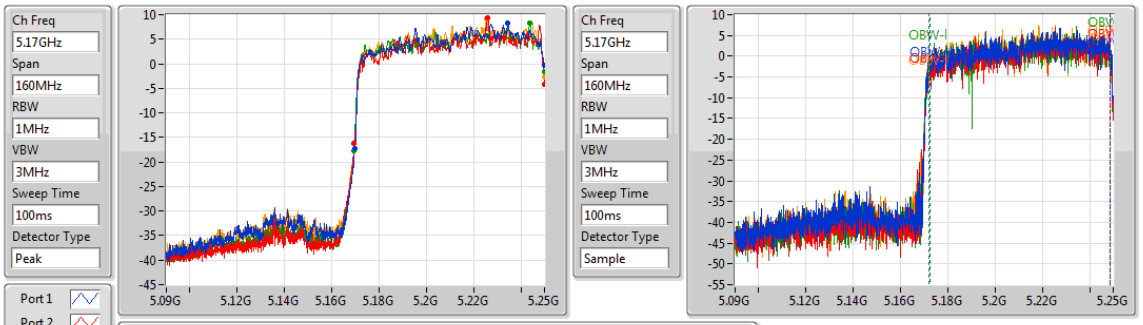


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
163.8M	5.488G	5.6518G	153.723M	5.493038G	5.646762G	Inf	1
163.2M	5.4884G	5.6516G	153.723M	5.493038G	5.646762G	Inf	2
162.4M	5.489G	5.6514G	153.323M	5.493238G	5.646562G	Inf	3
163.4M	5.4886G	5.652G	153.723M	5.493038G	5.646762G	Inf	4

802.11ax HEW160_Nss4,(MCS0)_4TX EBW

5250MHz Straddle 5.15-5.25GHz

09/08/2018

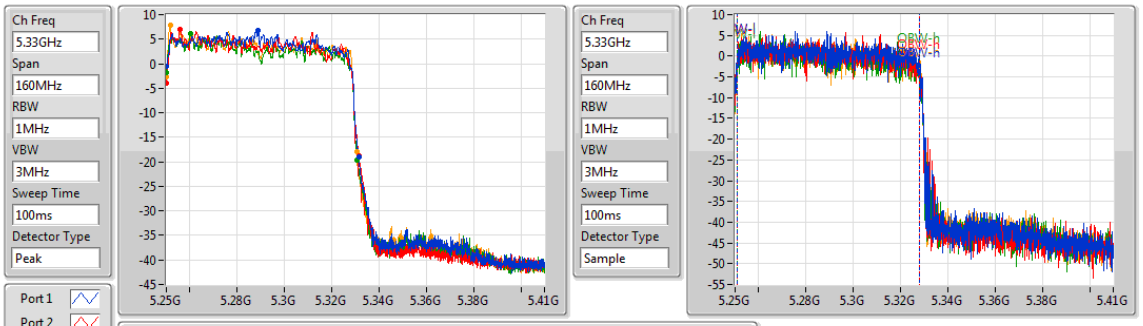


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
80.24M	5.16976G	5.25G	76.522M	5.172319G	5.248841G	Inf	1
80.48M	5.16952G	5.25G	76.442M	5.172399G	5.248841G	Inf	2
80.64M	5.16936G	5.25G	76.762M	5.171999G	5.248761G	Inf	3
80.56M	5.16944G	5.25G	76.682M	5.172159G	5.248841G	Inf	4

802.11ax HEW160_Nss4,(MCS0)_4TX EBW

5250MHz Straddle 5.25-5.35GHz

09/08/2018

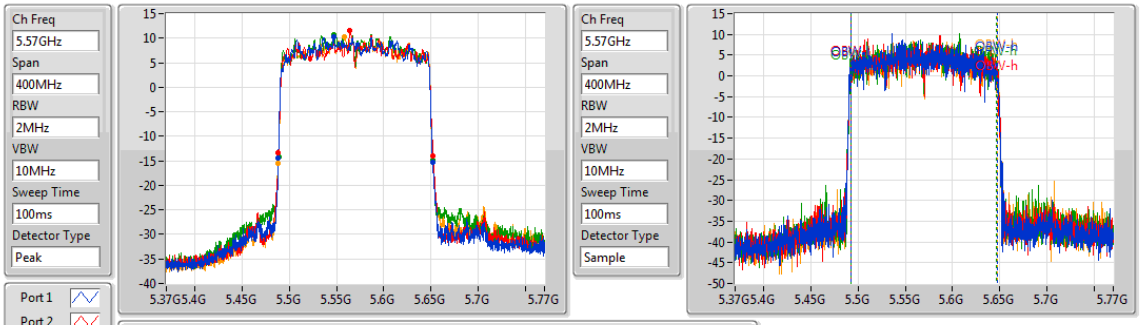


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
81.36M	5.25G	5.33136G	76.922M	5.251G	5.327921G	Inf	1
81.52M	5.25G	5.33152G	76.762M	5.251079G	5.327841G	Inf	2
80.8M	5.25G	5.3308G	77.001M	5.25092G	5.327921G	Inf	3
80.48M	5.25G	5.33048G	77.001M	5.251079G	5.328081G	Inf	4

802.11ax HEW160_Nss4,(MCS0)_4TX EBW

5570MHz

10/08/2018



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
163.4M	5.4884G	5.6518G	155.122M	5.492239G	5.647361G	Inf	1
163.6M	5.4886G	5.6522G	154.323M	5.492639G	5.646962G	Inf	2
163.2M	5.4888G	5.652G	154.323M	5.492439G	5.646762G	Inf	3
163.8M	5.4882G	5.652G	154.323M	5.492639G	5.646962G	Inf	4

Summary

Mode	Total Power (dBm)	Total Power (W)
5.15-5.25GHz	-	-
802.11ac VHT160_Nss1,(MCS0)_4TX	19.96	0.09908
802.11ax HEW160_Nss1,(MCS0)_4TX	20.59	0.11455
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	25.25	0.33497
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	19.91	0.09795
5.25-5.35GHz	-	-
802.11ac VHT160_Nss1,(MCS0)_4TX	19.31	0.08531
802.11ax HEW160_Nss1,(MCS0)_4TX	19.37	0.08650
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	19.06	0.08054
5.47-5.725GHz	-	-
802.11ax HEW160_Nss1,(MCS0)_4TX	22.46	0.17620
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	21.64	0.14588

Result

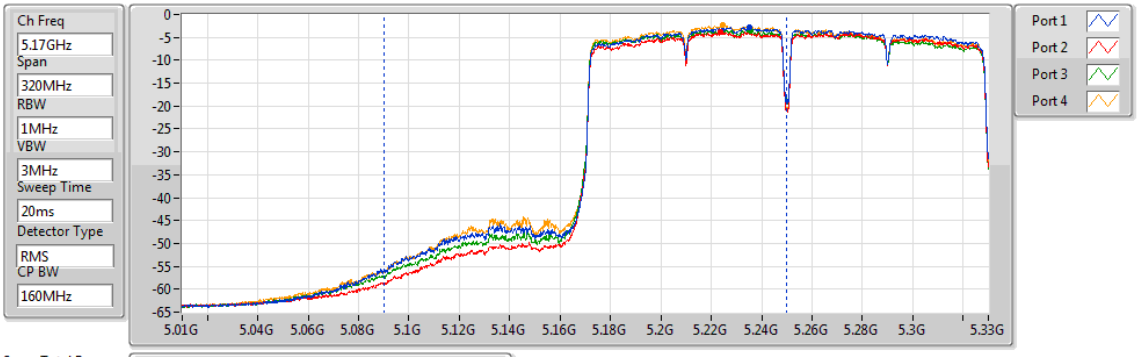
Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11ac VHT160_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	2.30	14.14	13.13	13.4	14.60	19.96	30.00
5250MHz Straddle 5.25-5.35GHz	Pass	2.30	13.79	13.13	12.72	13.44	19.31	23.98
802.11ax HEW160_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	2.30	14.84	13.80	14.41	15.13	20.59	30.00
5250MHz Straddle 5.25-5.35GHz	Pass	2.30	13.95	12.93	12.99	13.45	19.37	23.98
5570MHz	Pass	2.30	16.35	16.40	16.75	16.24	22.46	23.98
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5210MHz	Pass	8.32	19.22	18.88	19.05	19.72	25.25	27.68
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	8.32	14.18	13.02	13.69	14.53	19.91	27.68
5250MHz Straddle 5.25-5.35GHz	Pass	8.32	13.57	12.75	12.61	13.15	19.06	21.66
5570MHz	Pass	8.32	15.62	15.71	15.64	15.49	21.64	21.66

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

802.11ac VHT160_Nss1,(MCS0)_4TX — AV Power

5250MHz Straddle 5.15-5.25GHz

06/09/2018



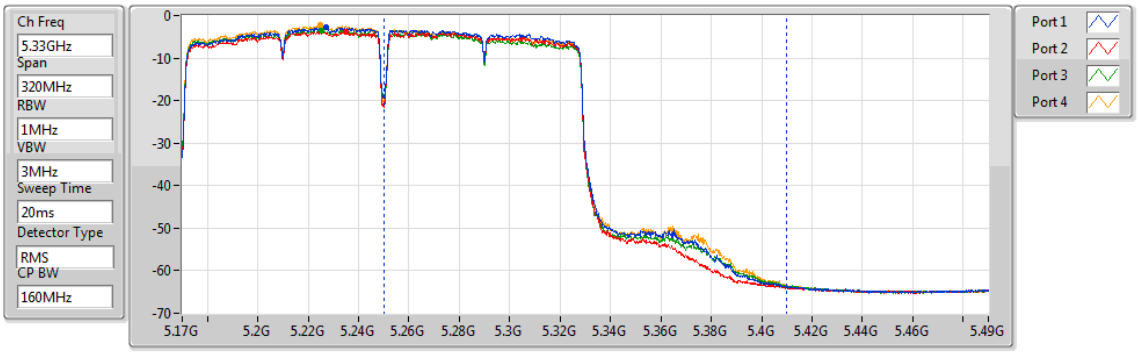
Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
19.96	14.14	13.13	13.74	14.60

802.11ac VHT160_Nss1,(MCS0)_4TX — AV Power

5250MHz Straddle 5.25-5.35GHz

06/09/2018



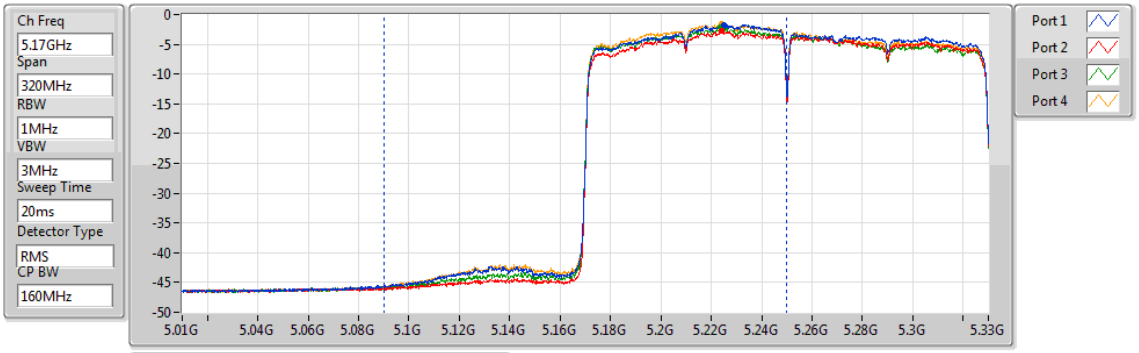
Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
19.31	13.79	13.13	12.72	13.44

802.11ax HEW160_Nss1,(MCS0)_4TX — AV Power

5250MHz Straddle 5.15-5.25GHz

12/07/2018



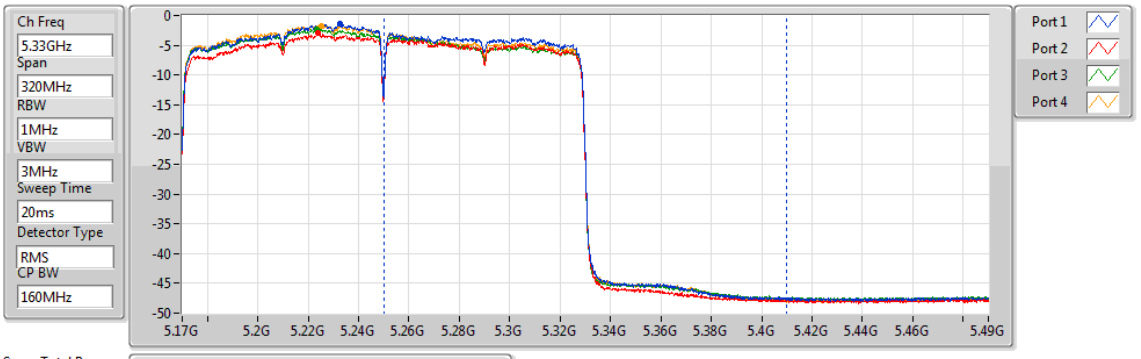
Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
20.59	14.84	13.80	14.41	15.13

802.11ax HEW160_Nss1,(MCS0)_4TX — AV Power

5250MHz Straddle 5.25-5.35GHz

12/07/2018



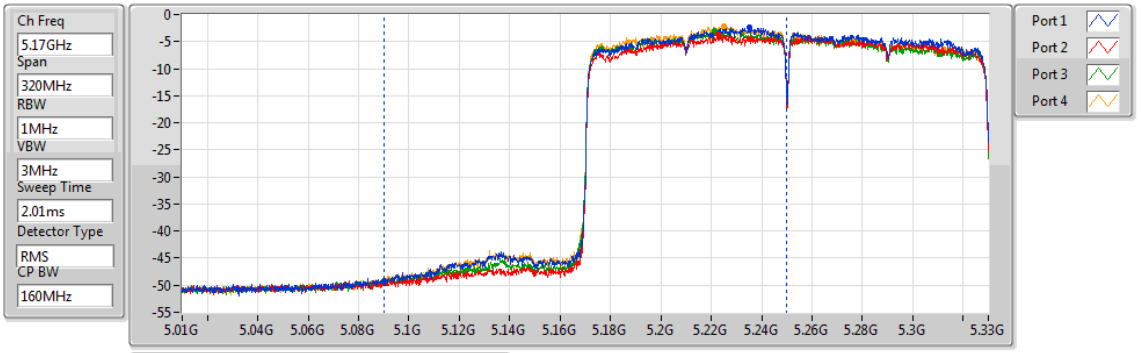
Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
19.37	13.95	12.93	12.99	13.45

802.11ax HEW160-BF_Nss1,(MCS0)_4TX — AV Power

5250MHz Straddle 5.15-5.25GHz

05/06/2018



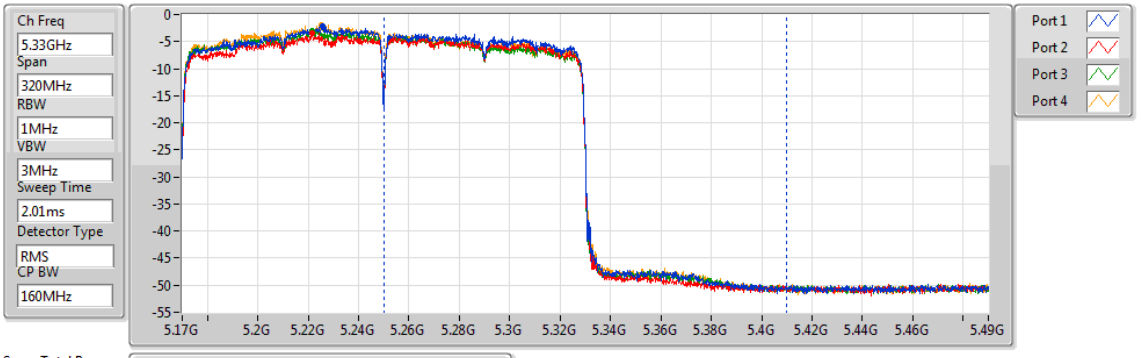
Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
19.91	14.18	13.02	13.69	14.53

802.11ax HEW160-BF_Nss1,(MCS0)_4TX — AV Power

5250MHz Straddle 5.25-5.35GHz

05/06/2018



Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
19.06	13.57	12.75	12.61	13.15

Summary

Mode	Total Power (dBm)	Total Power (W)
5.15-5.25GHz	-	-
802.11ax HEW160-BF_Nss2,(MCS0)_4TX	21.09	0.12853
5.25-5.35GHz	-	-
802.11ax HEW160-BF_Nss2,(MCS0)_4TX	20.54	0.11324
5.47-5.725GHz	-	-
802.11ax HEW160-BF_Nss2,(MCS0)_4TX	23.96	0.24889

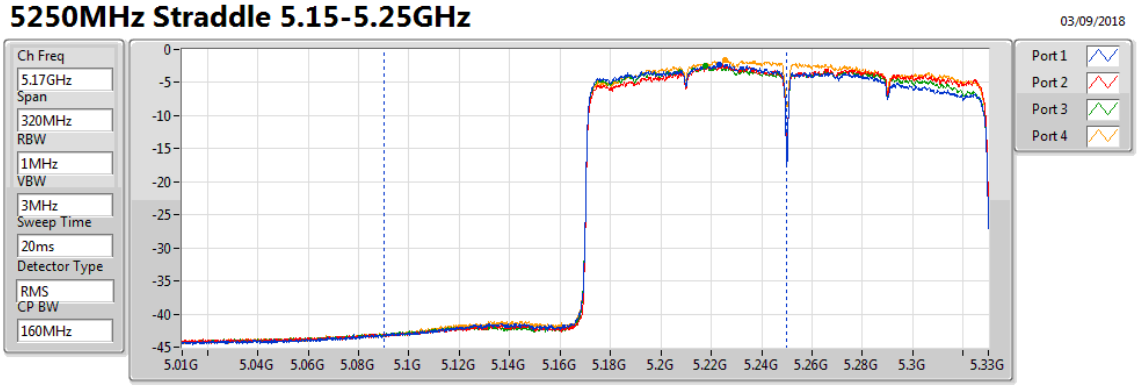
Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11ax HEW160-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	5.31	15.11	14.65	14.82	15.62	21.09	30.00
5250MHz Straddle 5.25-5.35GHz	Pass	5.31	14.05	14.60	14.21	15.15	20.54	23.98
5570MHz	Pass	5.31	17.79	17.74	18.21	18.02	23.96	23.98

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

802.11ax HEW160-BF_Nss2,(MCS0)_4TX **AV Power**

5250MHz Straddle 5.15-5.25GHz

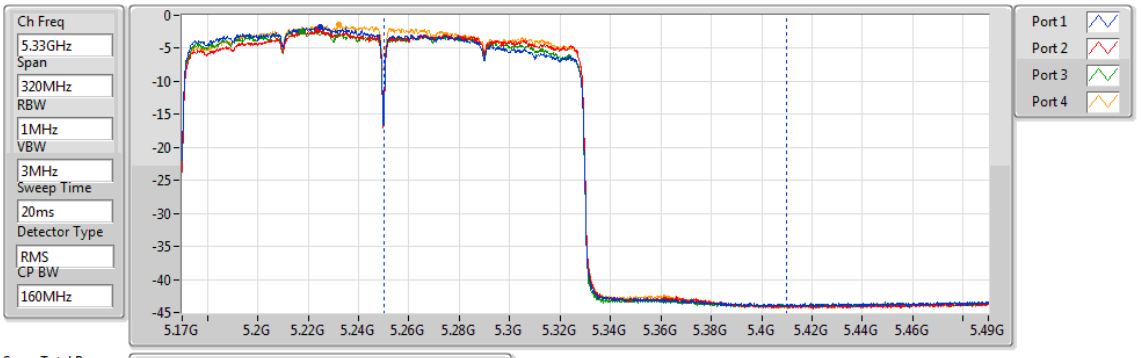


Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
21.09	15.11	14.65	14.82	15.62

802.11ax HEW160-BF_Nss2,(MCS0)_4TX **AV Power**

5250MHz Straddle 5.25-5.35GHz



Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
20.54	14.05	14.60	14.21	15.15

Summary

Mode	Total Power (dBm)	Total Power (W)
5.15-5.25GHz	-	-
802.11ac VHT160_Nss4,(MCS0)_4TX	21.35	0.13646
802.11ax HEW160_Nss4,(MCS0)_4TX	21.97	0.15740
5.25-5.35GHz	-	-
802.11ac VHT160_Nss4,(MCS0)_4TX	20.49	0.11194
802.11ax HEW160_Nss4,(MCS0)_4TX	20.99	0.12560
5.47-5.725GHz	-	-
802.11ac VHT160_Nss4,(MCS0)_4TX	23.74	0.23659
802.11ax HEW160_Nss4,(MCS0)_4TX	23.71	0.23496

Result

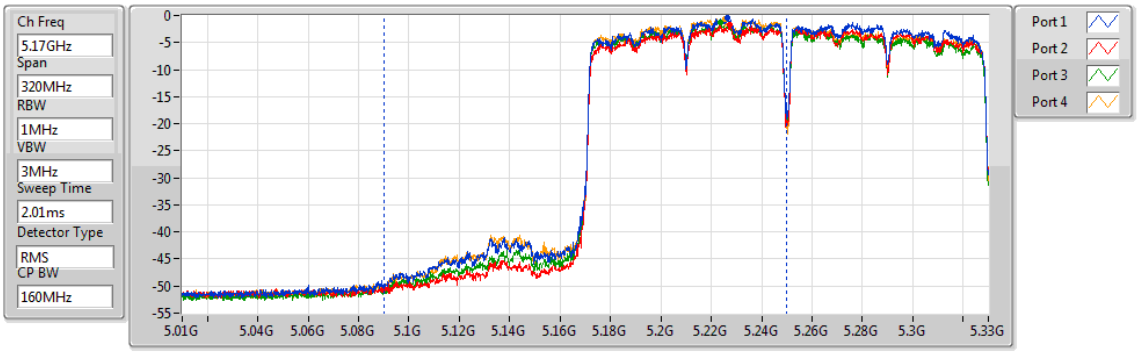
Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11ac VHT160_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	2.30	15.71	14.53	14.99	15.93	21.35	30.00
5250MHz Straddle 5.25-5.35GHz	Pass	2.30	15.24	14.37	13.66	14.48	20.49	23.98
5570MHz	Pass	2.30	17.61	17.57	17.92	17.78	23.74	23.98
802.11ax HEW160_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	2.30	16.32	15.30	15.46	16.58	21.97	30.00
5250MHz Straddle 5.25-5.35GHz	Pass	2.30	15.55	14.98	14.26	14.98	20.99	23.98
5570MHz	Pass	2.30	17.63	17.56	18.05	17.48	23.71	23.98

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

802.11ac VHT160_Nss4,(MCS0)_4TX — AV Power

5250MHz Straddle 5.15-5.25GHz

10/08/2018



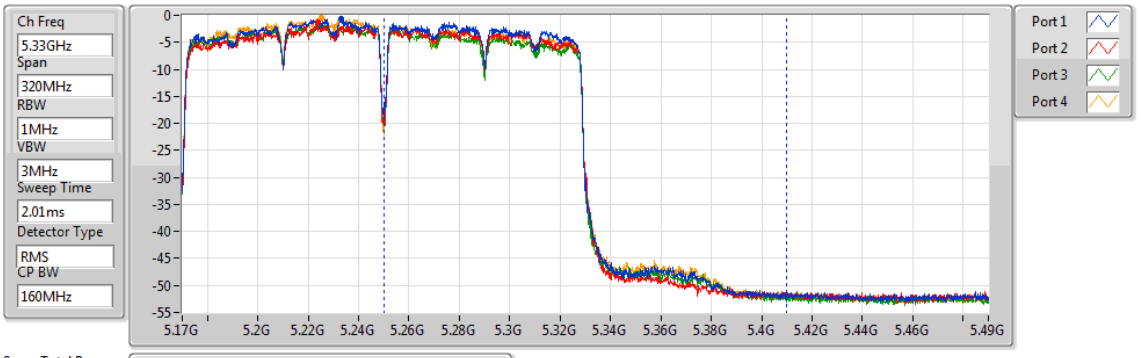
Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
21.35	15.71	14.53	14.99	15.93

802.11ac VHT160_Nss4,(MCS0)_4TX — AV Power

5250MHz Straddle 5.25-5.35GHz

10/08/2018



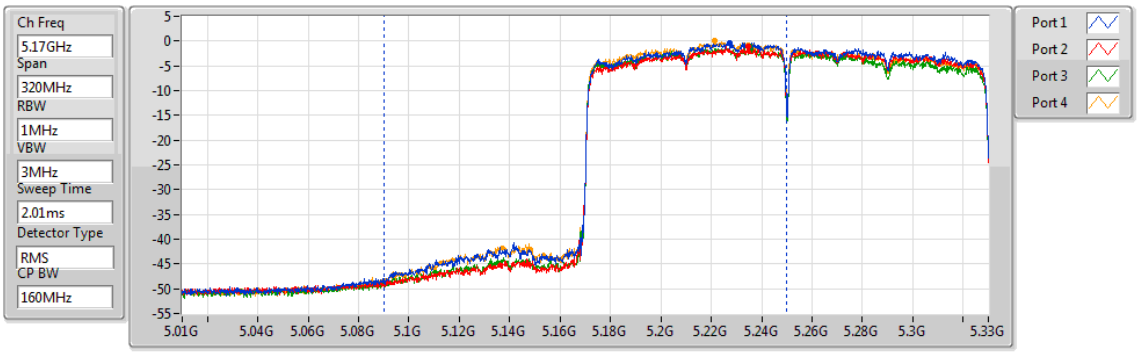
Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
20.49	15.24	14.37	13.66	14.48

802.11ax HEW160_Nss4,(MCS0)_4TX — AV Power

5250MHz Straddle 5.15-5.25GHz

09/08/2018



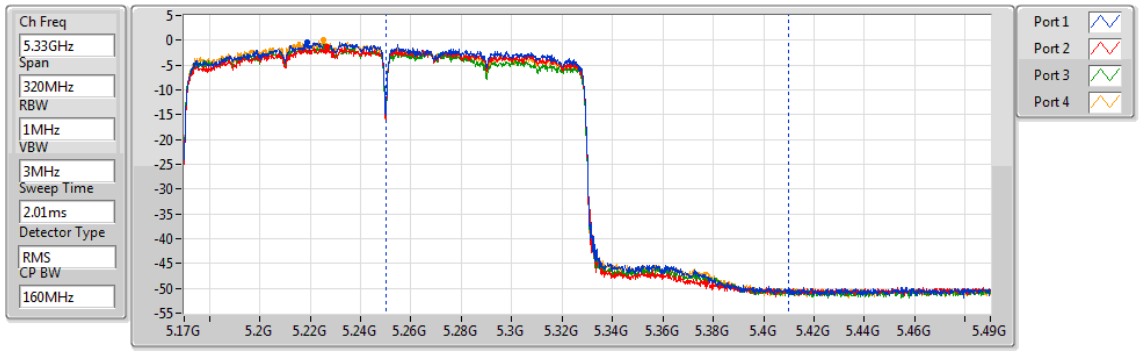
Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
21.97	16.32	15.30	15.46	16.58

802.11ax HEW160_Nss4,(MCS0)_4TX **AV Power**

5250MHz Straddle 5.25-5.35GHz

09/08/2018



Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
20.99	15.55	14.98	14.26	14.98

Summary

Mode	PD (dBm/RBW)
5.15-5.25GHz	-
802.11ac VHT160_Nss1,(MCS0)_4TX	-0.01
802.11ax HEW160_Nss1,(MCS0)_4TX	1.95
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	6.36
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	1.22
5.25-5.35GHz	-
802.11ac VHT160_Nss1,(MCS0)_4TX	-1.19
802.11ax HEW160_Nss1,(MCS0)_4TX	0.39
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	0.37
5.47-5.725GHz	-
802.11ax HEW160_Nss1,(MCS0)_4TX	0.75
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	0.12

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

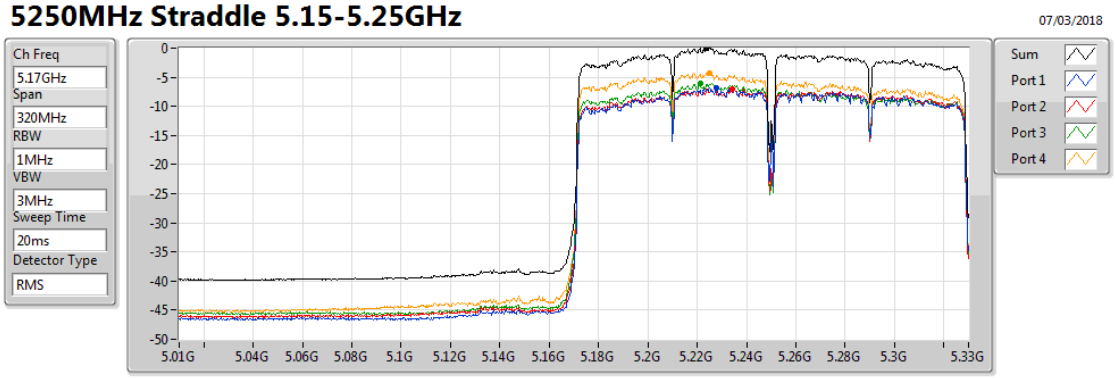
Result

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)
802.11ac VHT160_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	8.32	-6.82	-6.99	-6.00	-4.24	-0.01	14.68
5250MHz Straddle 5.25-5.35GHz	Pass	8.32	-7.77	-7.32	-7.29	-5.94	-1.19	8.68
802.11ax HEW160_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	8.32	-3.80	-4.58	-4.42	-3.40	1.95	14.68
5250MHz Straddle 5.25-5.35GHz	Pass	8.32	-5.17	-6.18	-5.66	-5.23	0.39	8.68
5570MHz	Pass	8.32	-4.80	-5.14	-4.75	-5.51	0.75	8.68
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5210MHz	Pass	8.32	0.47	0.09	0.16	0.98	6.36	14.68
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	8.32	-4.36	-5.51	-4.97	-4.1	1.22	14.68
5250MHz Straddle 5.25-5.35GHz	Pass	8.32	-5.38	-6.01	-5.74	-5.36	0.37	8.68
5570MHz	Pass	8.32	-5.76	-5.73	-5.43	-6.09	0.12	8.68

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;

802.11ac VHT160_Nss1,(MCS0)_4TX PSD

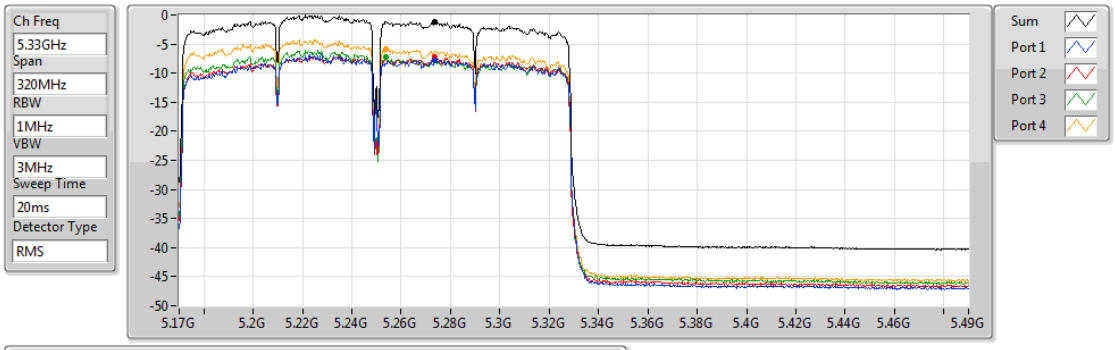
5250MHz Straddle 5.15-5.25GHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-0.01	-0.01	-6.82	-6.99	-6.00	-4.24

802.11ac VHT160_Nss1,(MCS0)_4TX PSD

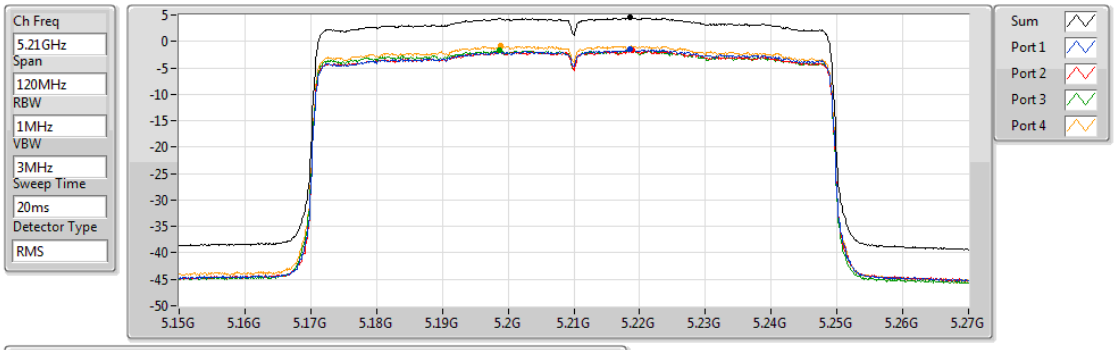
5250MHz Straddle 5.25-5.35GHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-1.19	-1.19	-7.77	-7.32	-7.29	-5.94

802.11ax HEW80_Nss1,(MCS0)_4TX PSD

5210MHz

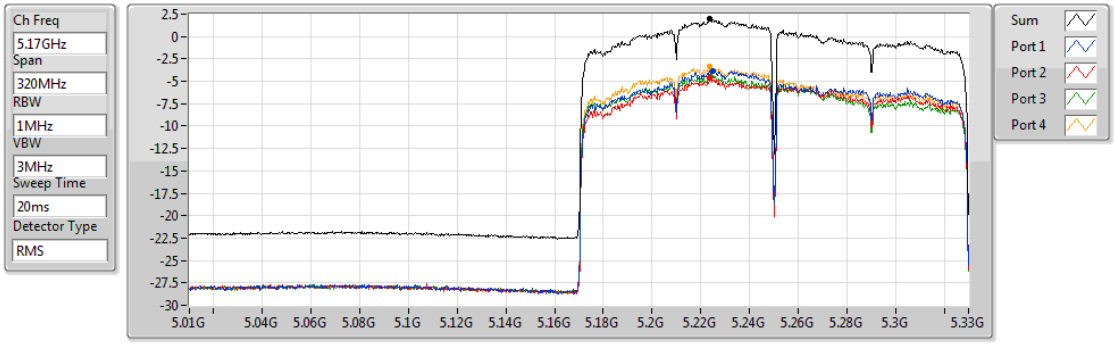


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
4.47	4.47	-1.49	-1.71	-1.64	-0.78

802.11ax HEW160_Nss1,(MCS0)_4TX PSD

5250MHz Straddle 5.15-5.25GHz

12/07/2018

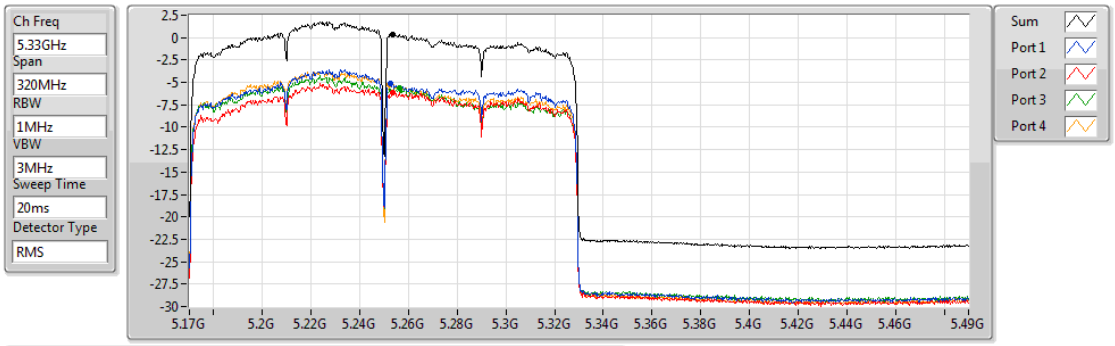


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
1.95	1.95	-3.80	-4.58	-4.42	-3.40

802.11ax HEW160_Nss1,(MCS0)_4TX PSD

5250MHz Straddle 5.25-5.35GHz

12/07/2018

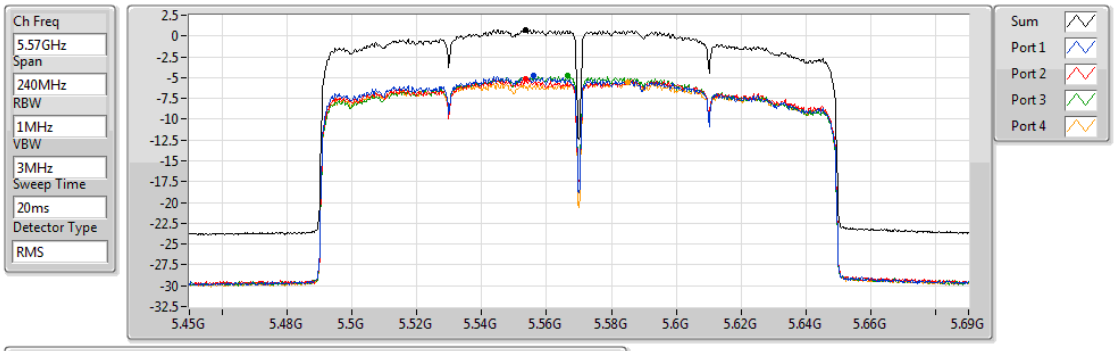


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
0.39	0.39	-5.17	-6.18	-5.66	-5.23

802.11ax HEW160_Nss1,(MCS0)_4TX PSD

5570MHz

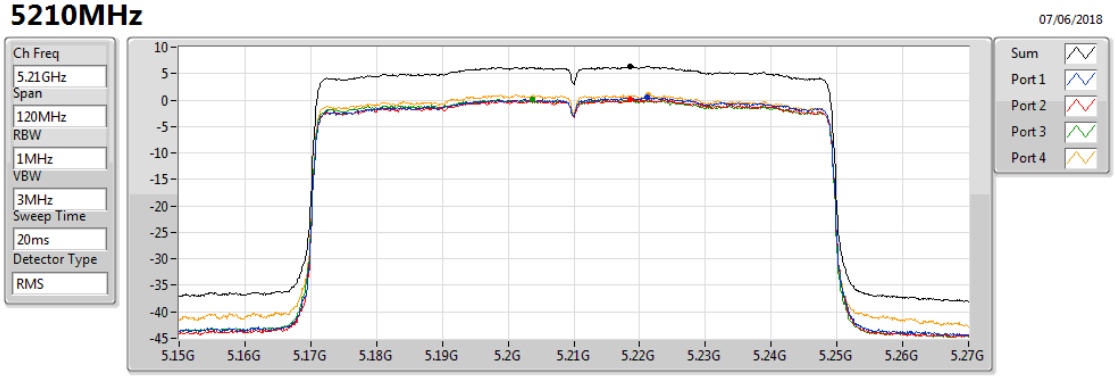
12/07/2018



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
0.75	0.75	-4.80	-5.14	-4.75	-5.51

802.11ax HEW80-BF_Nss1,(MCS0)_4TX PSD

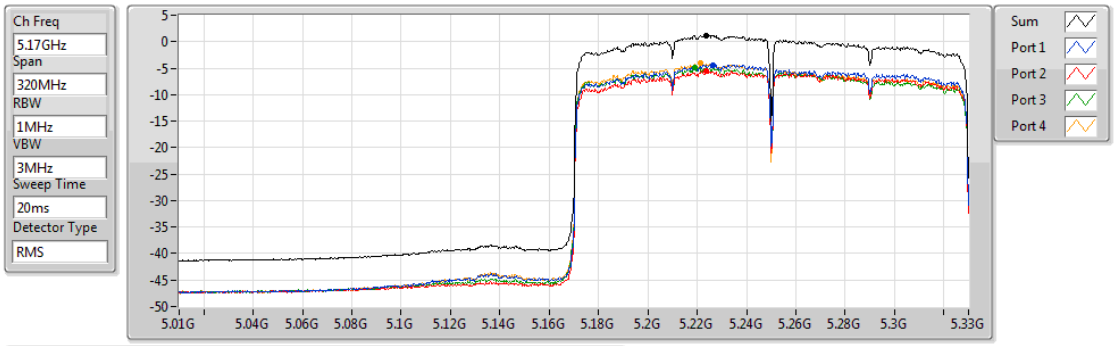
5210MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.36	6.36	0.47	0.09	0.16	0.98

802.11ax HEW160-BF_Nss1,(MCS0)_4TX PSD

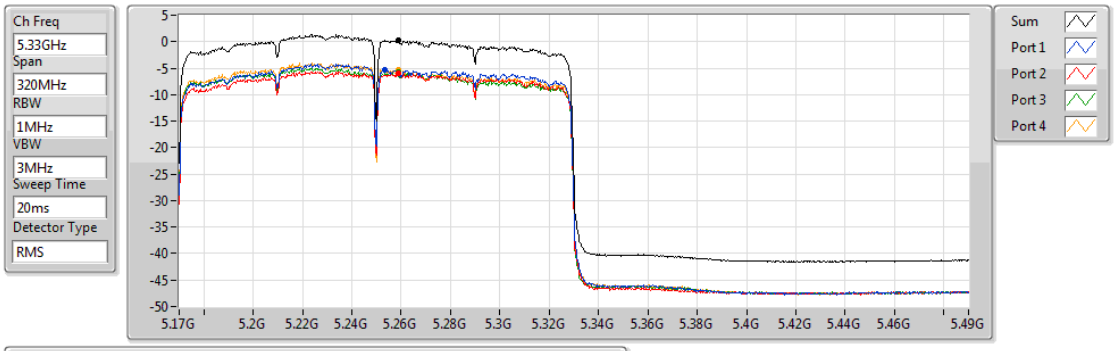
5250MHz Straddle 5.15-5.25GHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
1.22	1.22	-4.36	-5.51	-4.97	-4.10

802.11ax HEW160-BF_Nss1,(MCS0)_4TX PSD

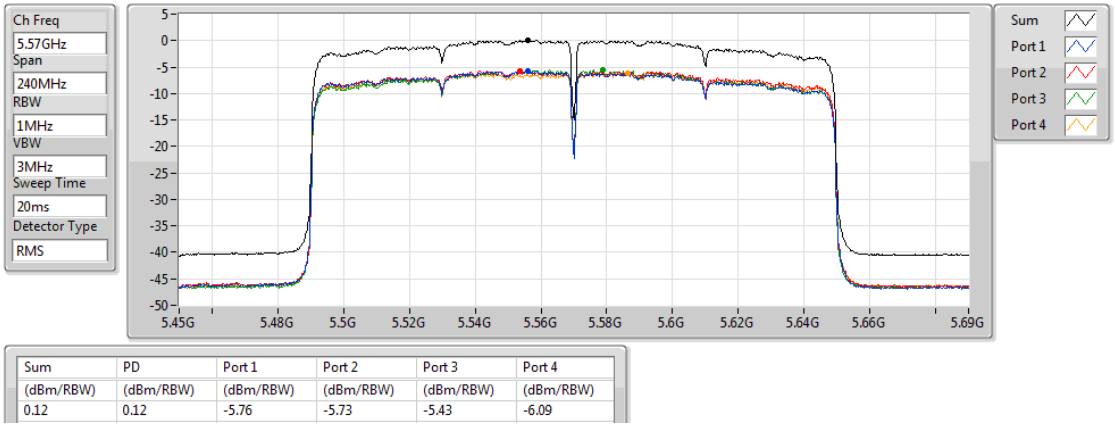
5250MHz Straddle 5.25-5.35GHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
0.37	0.37	-5.38	-6.01	-5.74	-5.36

802.11ax HEW160-BF_Nss1,(MCS0)_4TX **PSD**

5570MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
0.12	0.12	-5.76	-5.73	-5.43	-6.09

Summary

Mode	PD (dBm/RBW)
5.15-5.25GHz	-
802.11ax HEW160-BF_Nss2,(MCS0)_4TX	2.20
5.25-5.35GHz	-
802.11ax HEW160-BF_Nss2,(MCS0)_4TX	1.74
5.47-5.725GHz	-
802.11ax HEW160-BF_Nss2,(MCS0)_4TX	1.52

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

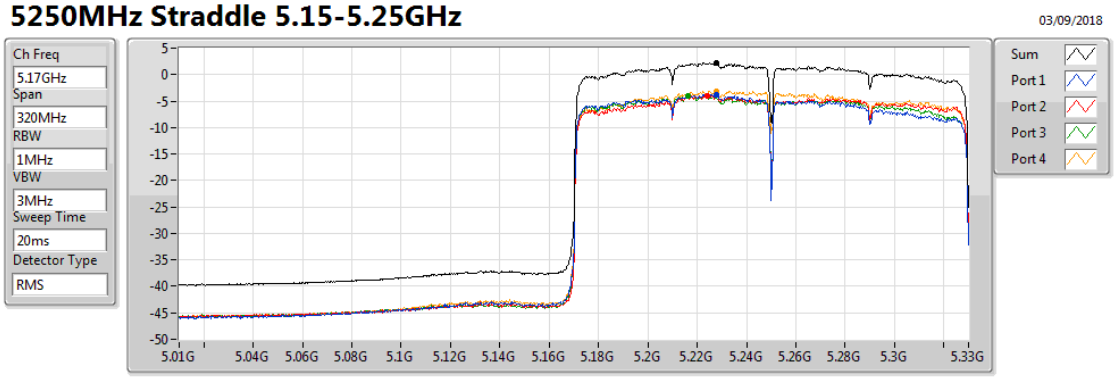
Result

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)
802.11ax HEW160-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	5.31	-3.81	-3.95	-4.04	-3.08	2.20	17.00
5250MHz Straddle 5.25-5.35GHz	Pass	5.31	-4.35	-4.44	-4.59	-3.46	1.74	11.00
5570MHz	Pass	5.31	-4.08	-4.34	-4.17	-4.36	1.52	11.00

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

802.11ax HEW160-BF_Nss2,(MCS0)_4TX PSD

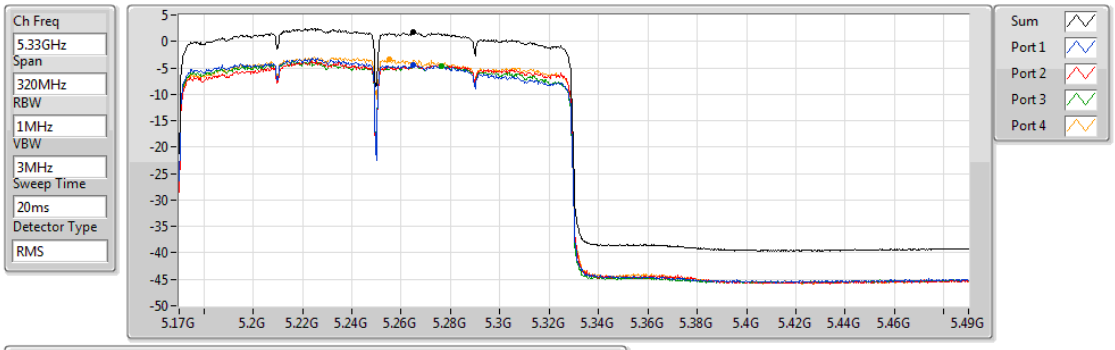
5250MHz Straddle 5.15-5.25GHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
2.20	2.20	-3.81	-3.95	-4.04	-3.08

802.11ax HEW160-BF_Nss2,(MCS0)_4TX PSD

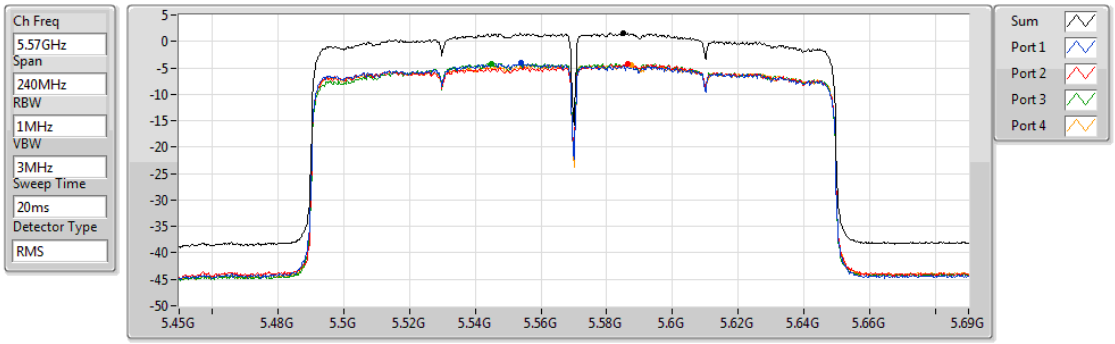
5250MHz Straddle 5.25-5.35GHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
1.74	1.74	-4.35	-4.44	-4.59	-3.46

802.11ax HEW160-BF_Nss2,(MCS0)_4TX PSD

5570MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
1.52	1.52	-4.08	-4.34	-4.17	-4.36

Summary

Mode	PD (dBm/RBW)
5.15-5.25GHz	-
802.11ac VHT160_Nss4,(MCS0)_4TX	3.26
802.11ax HEW160_Nss4,(MCS0)_4TX	3.49
5.25-5.35GHz	-
802.11ac VHT160_Nss4,(MCS0)_4TX	2.16
802.11ax HEW160_Nss4,(MCS0)_4TX	2.29
5.47-5.725GHz	-
802.11ac VHT160_Nss4,(MCS0)_4TX	2.85
802.11ax HEW160_Nss4,(MCS0)_4TX	2.57

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

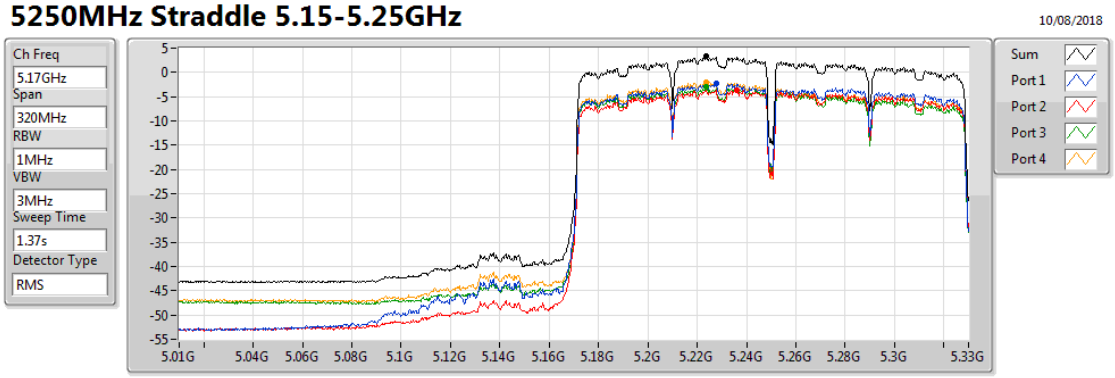
Result

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)
802.11ac VHT160_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	2.30	-2.20	-3.59	-2.86	-1.93	3.26	17.00
5250MHz Straddle 5.25-5.35GHz	Pass	2.30	-3.26	-3.98	-4.21	-3.47	2.16	11.00
5570MHz	Pass	2.30	-2.15	-3.21	-2.48	-2.95	2.85	11.00
802.11ax HEW160_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	2.30	-2.15	-3.01	-3.10	-1.87	3.49	17.00
5250MHz Straddle 5.25-5.35GHz	Pass	2.30	-3.34	-3.75	-4.07	-3.53	2.29	11.00
5570MHz	Pass	2.30	-2.39	-3.21	-2.92	-3.61	2.57	11.00

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

802.11ac VHT160_Nss4,(MCS0)_4TX PSD

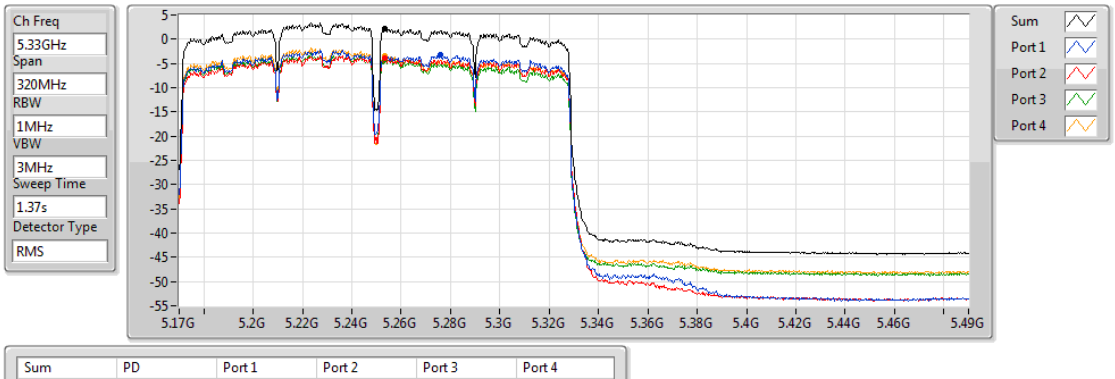
5250MHz Straddle 5.15-5.25GHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
3.26	3.26	-2.20	-3.59	-2.86	-1.93

802.11ac VHT160_Nss4,(MCS0)_4TX PSD

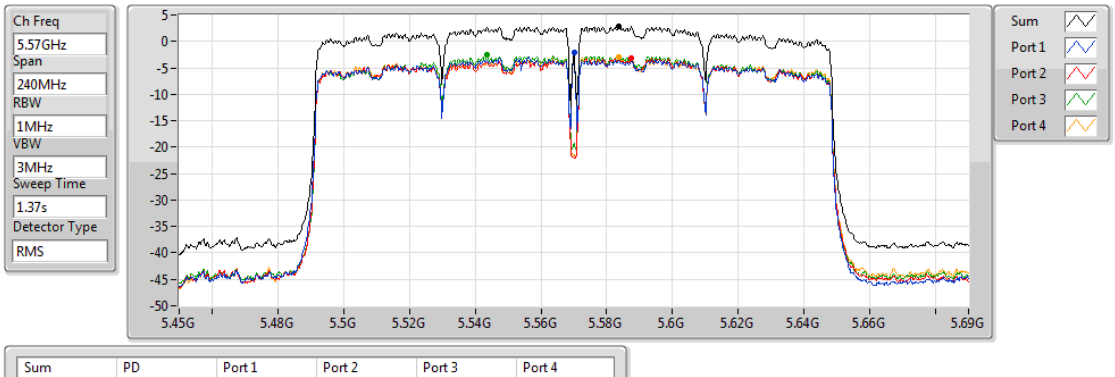
5250MHz Straddle 5.25-5.35GHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
2.16	2.16	-3.26	-3.98	-4.21	-3.47

802.11ac VHT160_Nss4,(MCS0)_4TX PSD

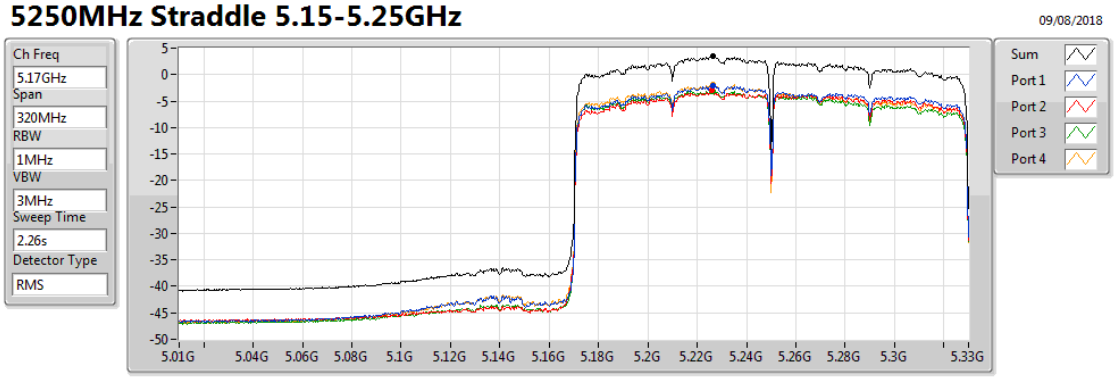
5570MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
2.85	2.85	-2.15	-3.21	-2.48	-2.95

802.11ax HEW160_Nss4,(MCS0)_4TX PSD

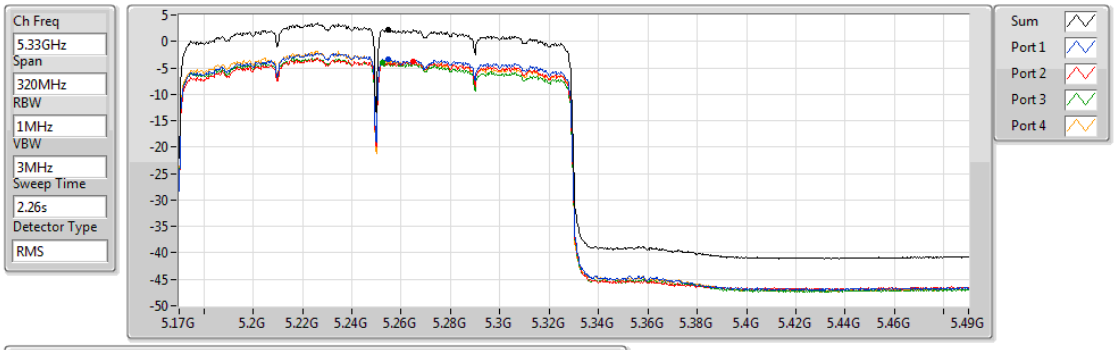
5250MHz Straddle 5.15-5.25GHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
3.49	3.49	-2.15	-3.01	-3.10	-1.87

802.11ax HEW160_Nss4,(MCS0)_4TX PSD

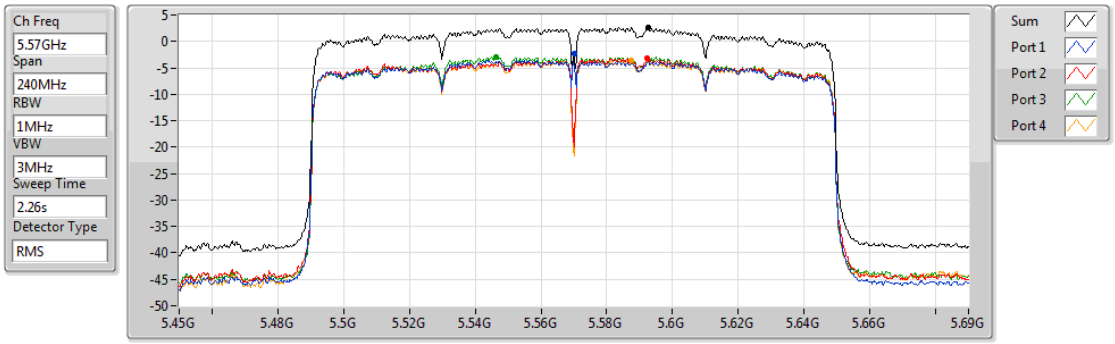
5250MHz Straddle 5.25-5.35GHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
2.29	2.29	-3.34	-3.75	-4.07	-3.53

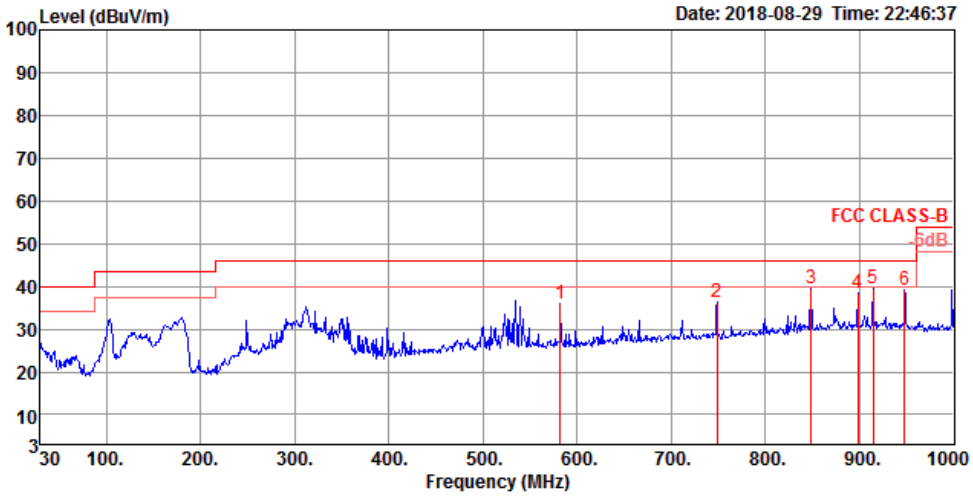
802.11ax HEW160_Nss4,(MCS0)_4TX PSD

5570MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
2.57	2.57	-2.39	-3.21	-2.92	-3.61

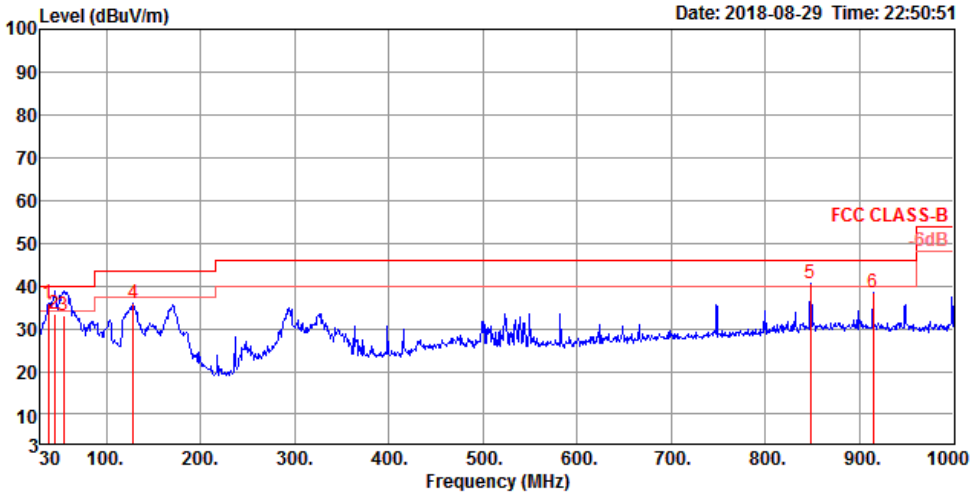
RSE below 1GHz Result			
Operating Mode	1	**Polarization**	Horizontal
Operating Function	Normal Link		



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	581.93	35.79	46.00	-10.21	40.48	2.91	24.80	32.40	200	59	Peak	HORIZONTAL
2	748.77	36.43	46.00	-9.57	39.48	3.31	26.17	32.53	150	60	Peak	HORIZONTAL
3	848.68	39.68	46.00	-6.32	41.31	3.54	27.27	32.44	125	148	Peak	HORIZONTAL
4	898.15	38.48	46.00	-7.52	39.63	3.64	27.68	32.47	100	157	Peak	HORIZONTAL
5	914.64	39.49	46.00	-6.51	40.48	3.66	27.80	32.45	125	38	Peak	HORIZONTAL
6	947.62	39.12	46.00	-6.88	39.82	3.70	28.00	32.40	100	145	Peak	HORIZONTAL

Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)

RSE below 1GHz Result			
Operating Mode	1	**Polarization**	Vertical
Operating Function	Normal Link		



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	38.73	35.89	40.00	-4.11	46.25	0.77	20.51	31.64	100	208	Peak	VERTICAL
2	44.55	33.48	40.00	-6.52	47.12	0.81	17.25	31.70	125	298	QP	VERTICAL
3	54.25	33.22	40.00	-6.78	50.28	0.90	13.83	31.79	100	355	QP	VERTICAL
4	128.94	35.79	43.50	-7.71	47.78	1.38	18.52	31.89	100	163	Peak	VERTICAL
5	847.71	40.73	46.00	-5.27	42.36	3.54	27.27	32.44	100	352	Peak	VERTICAL
6	914.64	38.54	46.00	-7.46	39.53	3.66	27.80	32.45	125	171	Peak	VERTICAL

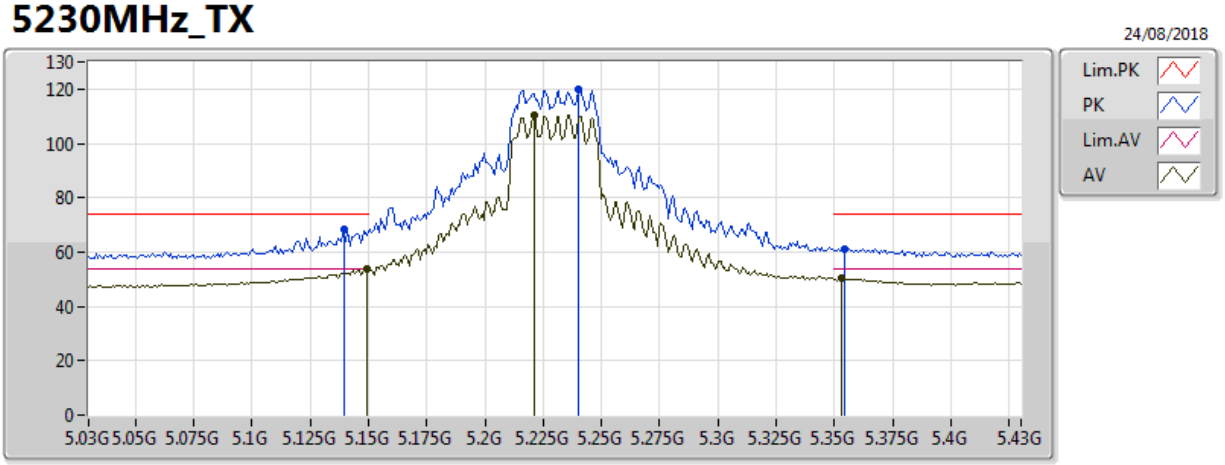
Note 1: “>20dB” means emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: “N/F” means Nothing Found emissions (No emissions were detected.)

Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
5.15-5.25GHz	-	-	-	-	-	-	-	-	-	-	-	-
802.11ac VHT40_Nss1,(MCS0)_4TX	Pass	AV	5.1492G	53.75	54.00	-0.25	6.15	3	Vertical	202	1.50	-

802.11ac VHT40_Nss1,(MCS0)_4TX

5230MHz_TX

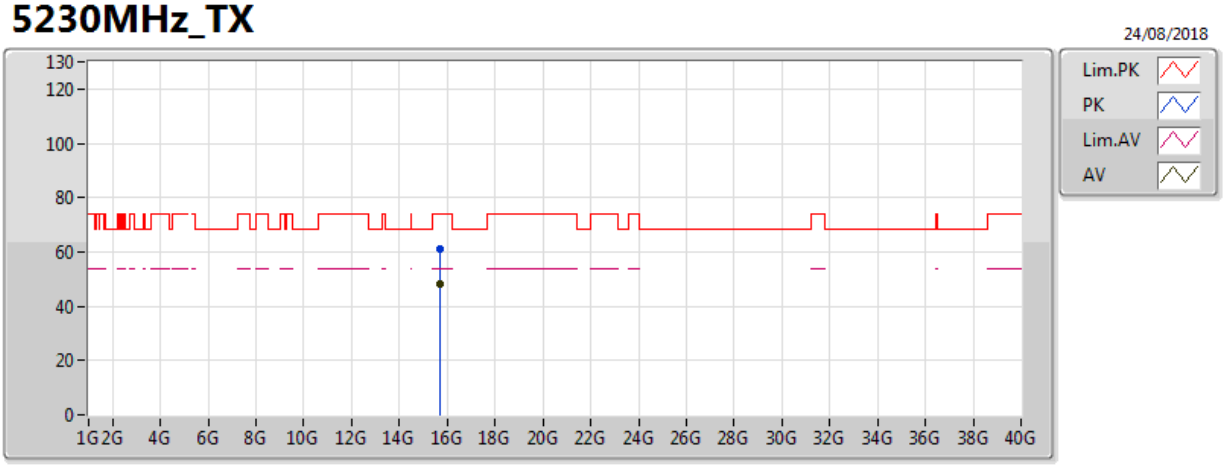


20180824
EUT Z_4TX TX_Dipole
Setting 96
03-M-1-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	5.1396G	68.59	74.00	-5.41	6.13	3	Vertical	202	1.50	-
AV	5.1492G	53.75	54.00	-0.25	6.15	3	Vertical	202	1.50	-
PK	5.2404G	120.06	Inf	-Inf	6.33	3	Vertical	202	1.50	-
AV	5.2212G	110.17	Inf	-Inf	6.28	3	Vertical	202	1.50	-
PK	5.354G	61.15	74.00	-12.85	6.62	3	Vertical	202	1.50	-
AV	5.3532G	50.16	54.00	-3.84	6.62	3	Vertical	202	1.50	-

802.11ac VHT40_Nss1,(MCS0)_4TX

5230MHz_TX

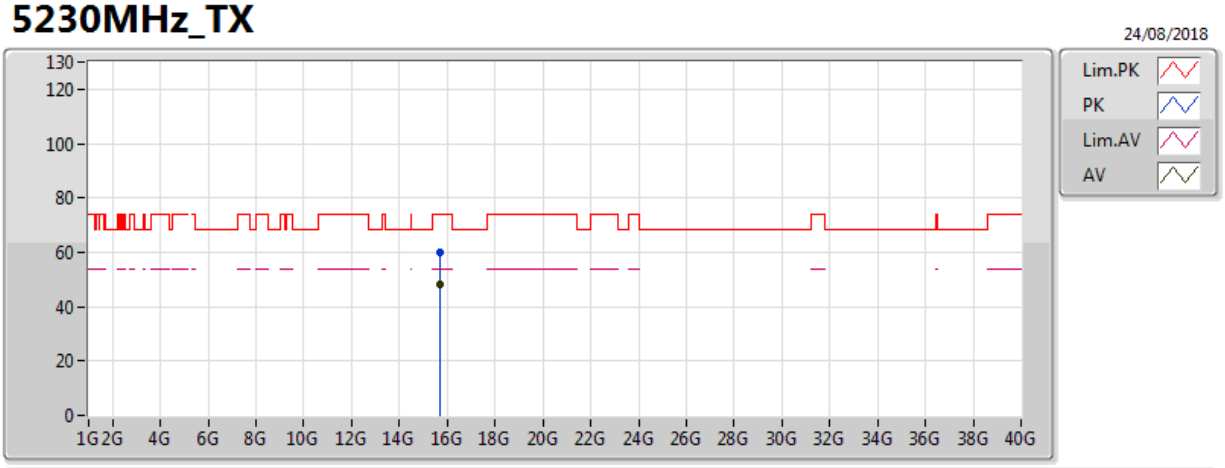


20180824
EUT Z_4TX TX_Dipole
Setting 96
03-M-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	15.69176G	60.84	74.00	-13.16	15.73	3	Vertical	342	1.32	-
AV	15.69232G	47.95	54.00	-6.05	15.73	3	Vertical	342	1.32	-

802.11ac VHT40_Nss1,(MCS0)_4TX

5230MHz_TX

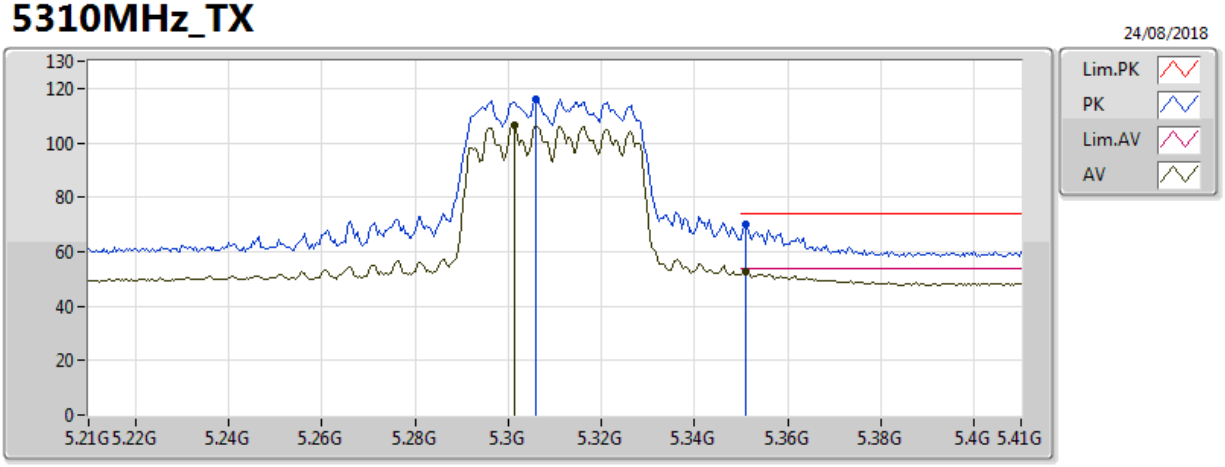


20180824
EUT Z_4TX TX_Dipole
Setting 96
03-M-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	15.68767G	60.19	74.00	-13.81	15.75	3	Horizontal	155	1.46	-
AV	15.68909G	48.00	54.00	-6.00	15.74	3	Horizontal	155	1.46	-

802.11ac VHT40_Nss1,(MCS0)_4TX

5310MHz_TX

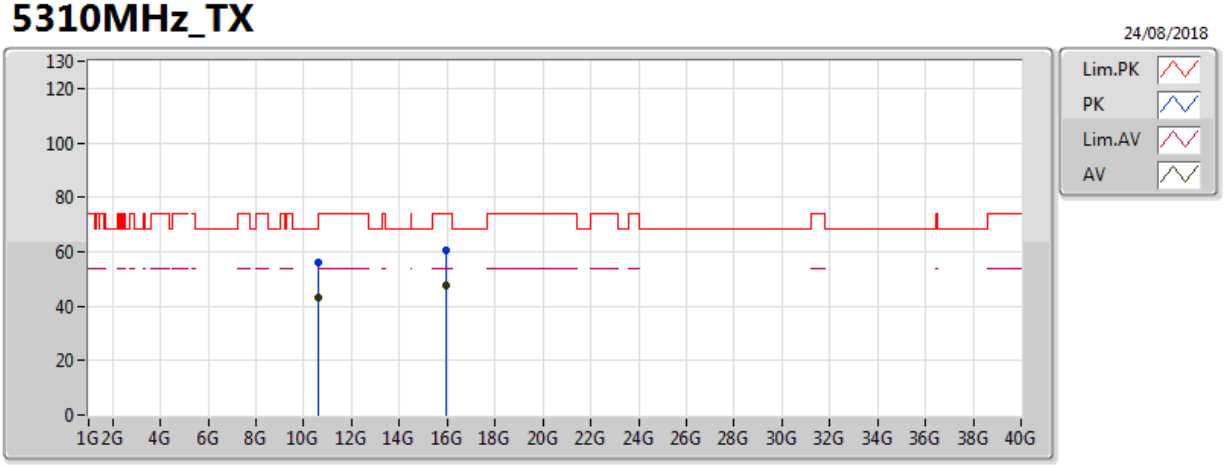


20180824
EUT Z_4TX TX_Dipole
Setting 74
03-M-1-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	5.306G	115.84	Inf	-Inf	6.50	3	Vertical	199	1.85	-
AV	5.3012G	106.35	Inf	-Inf	6.49	3	Vertical	199	1.85	-
PK	5.3508G	69.89	74.00	-4.11	6.61	3	Vertical	199	1.85	-
AV	5.3508G	52.60	54.00	-1.40	6.61	3	Vertical	199	1.85	-

802.11ac VHT40_Nss1,(MCS0)_4TX

5310MHz_TX

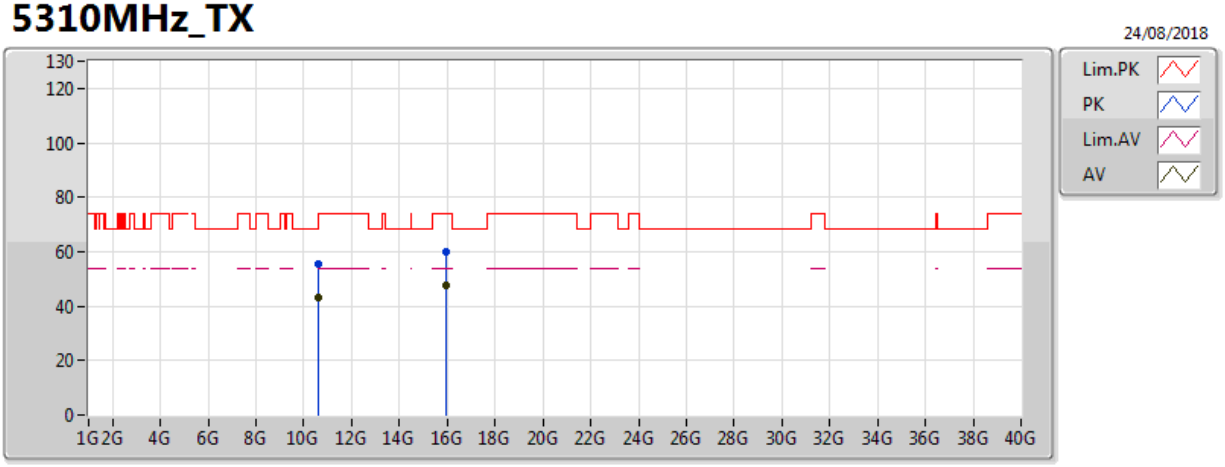


20180824
EUT Z_4TX TX_Dipole
Setting 74
03-M-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	10.61793G	55.84	74.00	-18.16	13.75	3	Vertical	16	1.50	-
AV	10.61984G	43.22	54.00	-10.78	13.75	3	Vertical	16	1.50	-
PK	15.93181G	60.73	74.00	-13.27	14.93	3	Vertical	303	1.50	-
AV	15.93194G	47.38	54.00	-6.62	14.93	3	Vertical	303	1.50	-

802.11ac VHT40_Nss1,(MCS0)_4TX

5310MHz_TX



20180824
EUT Z_4TX TX_Dipole
Setting 74
03-M-1
FSP

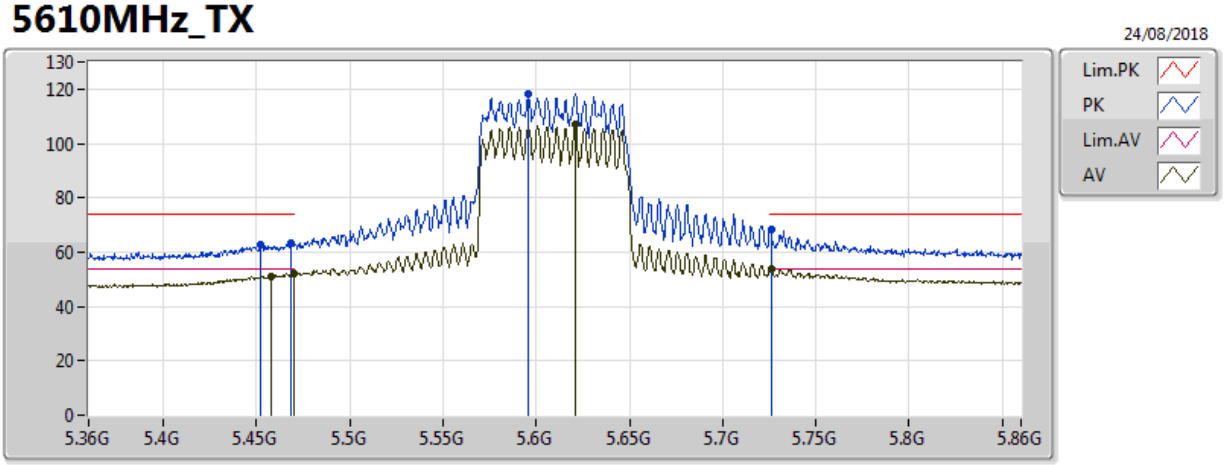
Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	10.61766G	55.46	74.00	-18.54	13.75	3	Horizontal	73	1.06	-
AV	10.61765G	43.40	54.00	-10.60	13.75	3	Horizontal	73	1.06	-
PK	15.93039G	59.97	74.00	-14.03	14.93	3	Horizontal	4	1.52	-
AV	15.93026G	47.47	54.00	-6.53	14.93	3	Horizontal	4	1.52	-

Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
5.47-5.725GHz	-	-	-	-	-	-	-	-	-	-	-	-
HEW80_Nss2,(MCS0)_4TX	Pass	AV	5.726G	53.89	54.00	-0.11	7.22	3	Vertical	26	1.74	-

HEW80_Nss2,(MCS0)_4TX

5610MHz_TX

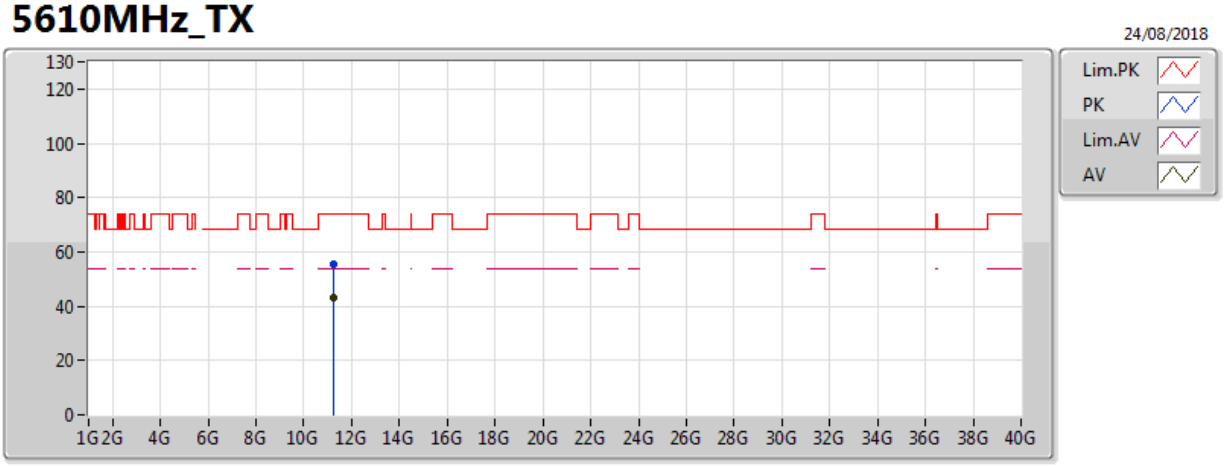


20180824
EUT Z_4TX TX_Dipole
Setting 77
03-M-1-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	5.4525G	62.63	74.00	-11.37	6.87	3	Vertical	26	1.74	-
AV	5.458G	51.17	54.00	-2.83	6.89	3	Vertical	26	1.74	-
PK	5.4685G	63.49	74.00	-10.51	6.91	3	Vertical	26	1.74	-
AV	5.469995G	51.89	54.00	-2.11	6.92	3	Vertical	26	1.74	-
PK	5.5955G	118.45	Inf	-Inf	7.08	3	Vertical	26	1.74	-
AV	5.621G	106.75	Inf	-Inf	7.10	3	Vertical	26	1.74	-
PK	5.726G	68.55	74.00	-5.45	7.22	3	Vertical	26	1.74	-
AV	5.726G	53.89	54.00	-0.11	7.22	3	Vertical	26	1.74	-

HEW80_Nss2,(MCS0)_4TX

5610MHz_TX

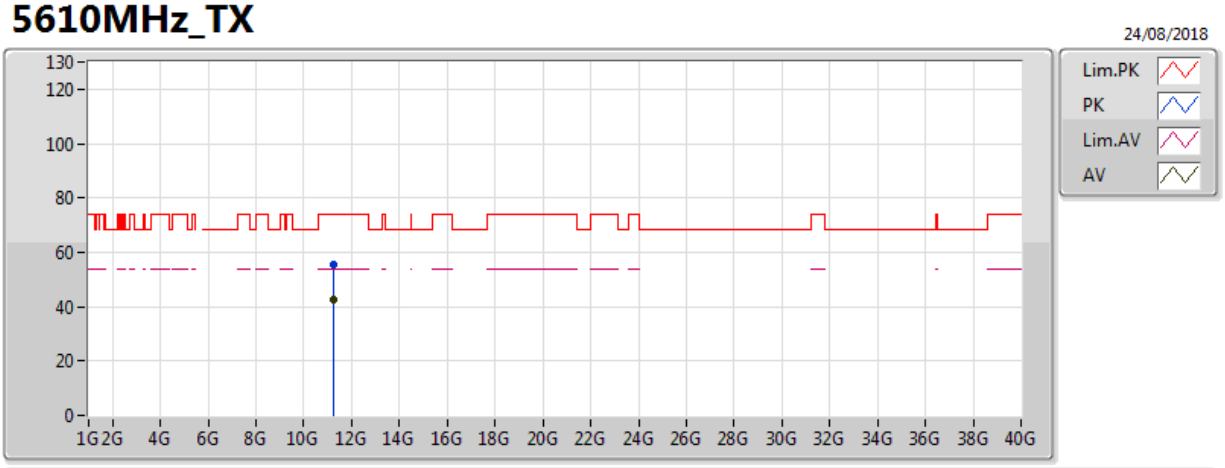


20180824
EUT Z_4TX TX_Dipole
Setting 77
03-M-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	11.221885G	55.50	74.00	-18.50	14.13	3	Vertical	122	1.48	-
AV	11.21931G	42.90	54.00	-11.10	14.13	3	Vertical	122	1.48	-

HEW80_Nss2,(MCS0)_4TX

5610MHz_TX

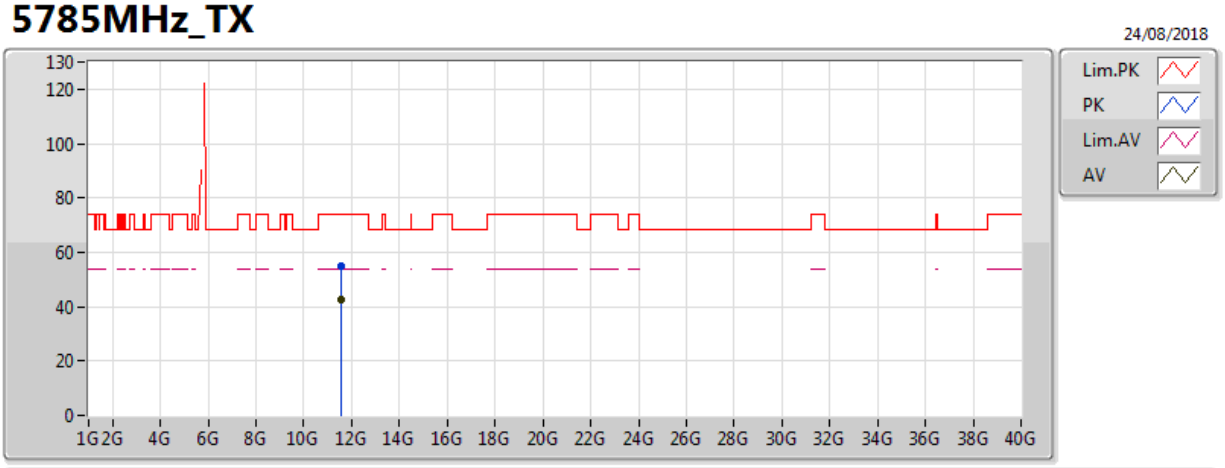


20180824
EUT Z_4TX TX_Dipole
Setting 77
03-M-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	11.221665G	55.42	74.00	-18.58	14.13	3	Horizontal	197	2.26	-
AV	11.2179G	42.59	54.00	-11.41	14.12	3	Horizontal	197	2.26	-

HEW20_Nss1,(MCS0)_4TX

5785MHz_TX

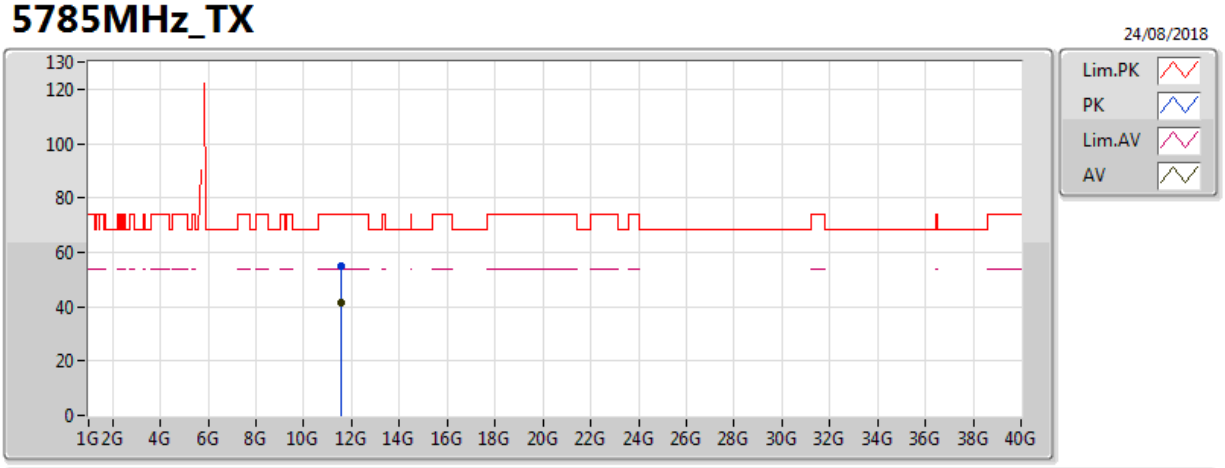


20180824
EUT Z_4TX TX_Dipole
Setting 97
03-M-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	11.570035G	54.79	74.00	-19.21	14.29	3	Vertical	217	1.42	-
AV	11.57069G	42.40	54.00	-11.60	14.29	3	Vertical	217	1.42	-

HEW20_Nss1,(MCS0)_4TX

5785MHz_TX



20180824
EUT Z_4TX TX_Dipole
Setting 97
03-M-1
FSP

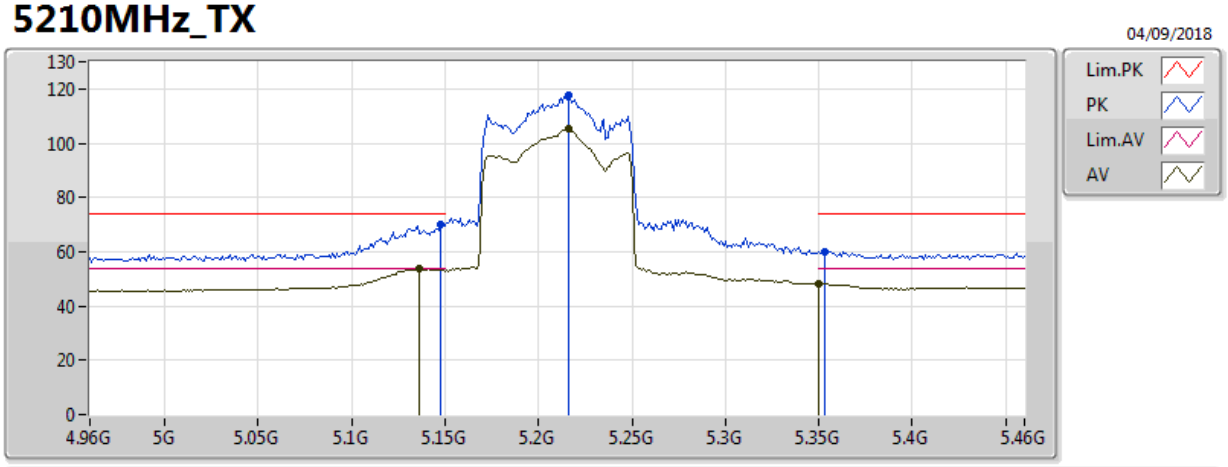
Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	11.569775G	55.02	74.00	-18.98	14.29	3	Horizontal	154	2.20	-
AV	11.57151G	41.59	54.00	-12.41	14.29	3	Horizontal	154	2.20	-

Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
5.15-5.25GHz	-	-	-	-	-	-	-	-	-	-	-	-
802.11ax HEW160_Nss1,(MCS0)_4TX	Pass	AV	5.148G	53.97	54.00	-0.03	7.38	3	Vertical	315	2.43	-

HE80,BF_Nss1,(MCS0)_4TX

5210MHz_TX

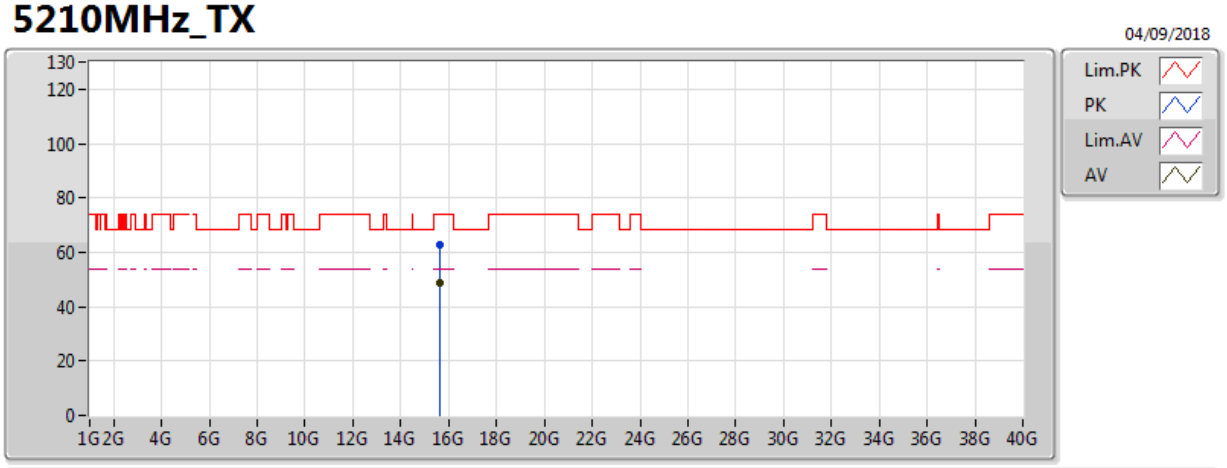


EUT Z_4TX
Setting 79
06-S-5-10
FSP
TXBF
R221 #13 ANT #1

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	5.148G	70.10	74.00	-3.90	7.38	3	Vertical	58	2.07	-
AV	5.136G	53.89	54.00	-0.11	7.36	3	Vertical	58	2.07	-
PK	5.216G	117.63	Inf	-Inf	7.49	3	Vertical	58	2.07	-
AV	5.216G	105.15	Inf	-Inf	7.49	3	Vertical	58	2.07	-
PK	5.353G	60.19	74.00	-13.81	7.69	3	Vertical	58	2.07	-
AV	5.350005G	48.22	54.00	-5.78	7.68	3	Vertical	58	2.07	-

HE80,BF_Nss1,(MCS0)_4TX

5210MHz_TX

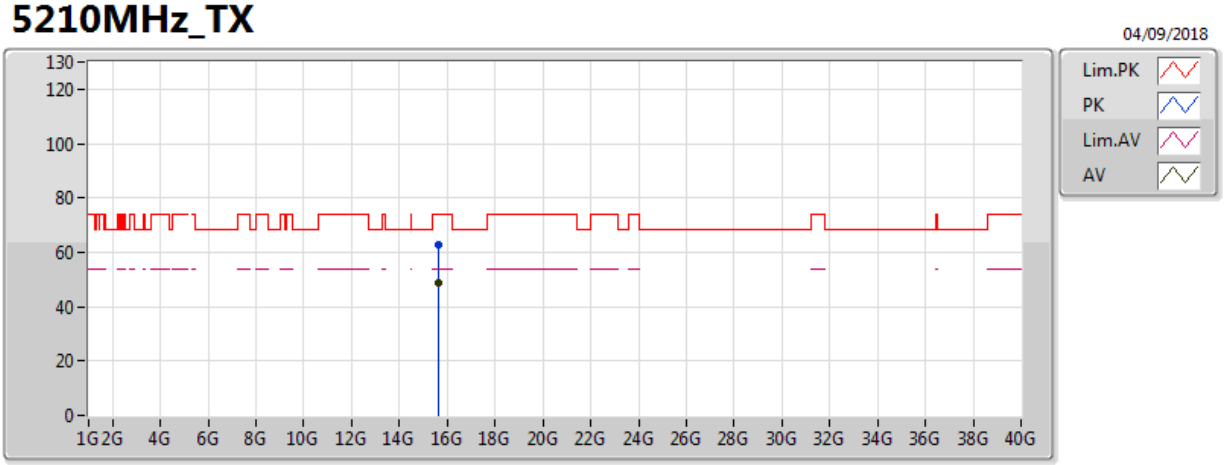


EUT Z_4TX
Setting 79
06-S-5
FSP
TXBF
R221 #13 ANT #1

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	15.62176G	62.89	74.00	-11.11	18.30	3	Vertical	167	1.50	-
AV	15.62348G	48.72	54.00	-5.28	18.30	3	Vertical	167	1.50	-

HE80,BF_Nss1,(MCS0)_4TX

5210MHz_TX

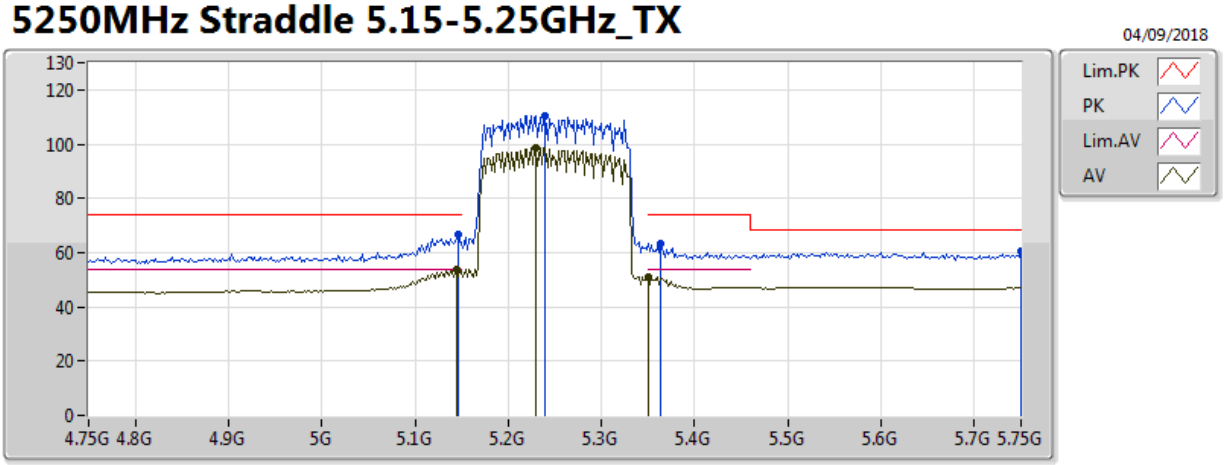


EUT Z_4TX
Setting 79
06-S-5
FSP
TXBF
R221 #13 ANT #1

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	15.62108G	62.94	74.00	-11.06	18.30	3	Horizontal	118	1.77	-
AV	15.62024G	48.74	54.00	-5.26	18.31	3	Horizontal	118	1.77	-

HE160_Nss1,(MCS0)_4TX

5250MHz Straddle 5.15-5.25GHz_TX

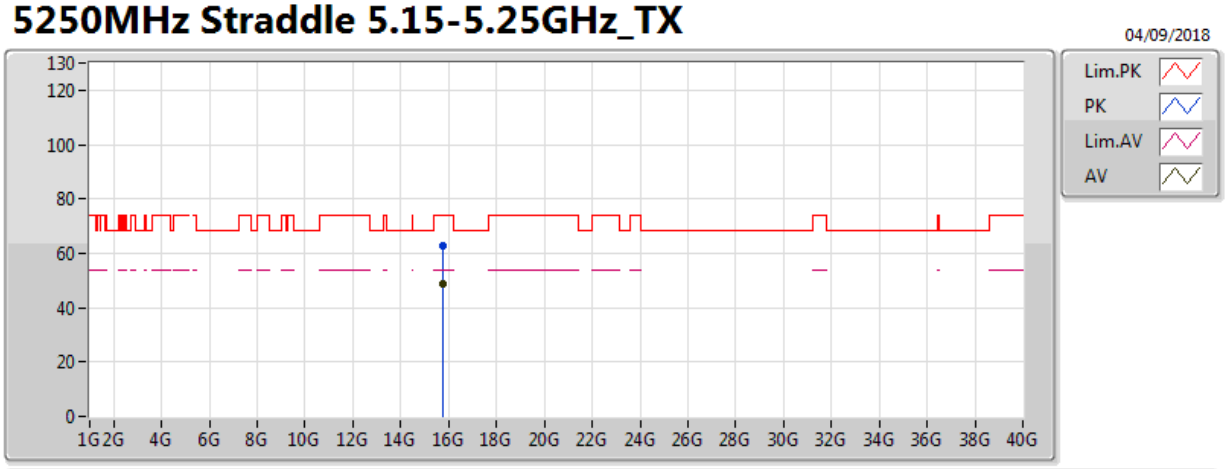


EUT Z_4TX
Setting 71
06-S-5-10
FSP
EUT R221 #13 ANT #1

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	5.146G	66.88	74.00	-7.12	7.27	3	Vertical	165	1.99	-
AV	5.144G	53.53	54.00	-0.47	7.27	3	Vertical	165	1.99	-
PK	5.24G	110.64	Inf	-Inf	7.47	3	Vertical	165	1.99	-
AV	5.23G	98.79	Inf	-Inf	7.45	3	Vertical	165	1.99	-
PK	5.364G	63.16	74.00	-10.84	7.71	3	Vertical	165	1.99	-
AV	5.350005G	51.13	54.00	-2.87	7.69	3	Vertical	165	1.99	-
PK	5.75G	60.42	68.20	-7.78	8.42	3	Vertical	165	1.99	-

HE160_Nss1,(MCS0)_4TX

5250MHz Straddle 5.15-5.25GHz_TX

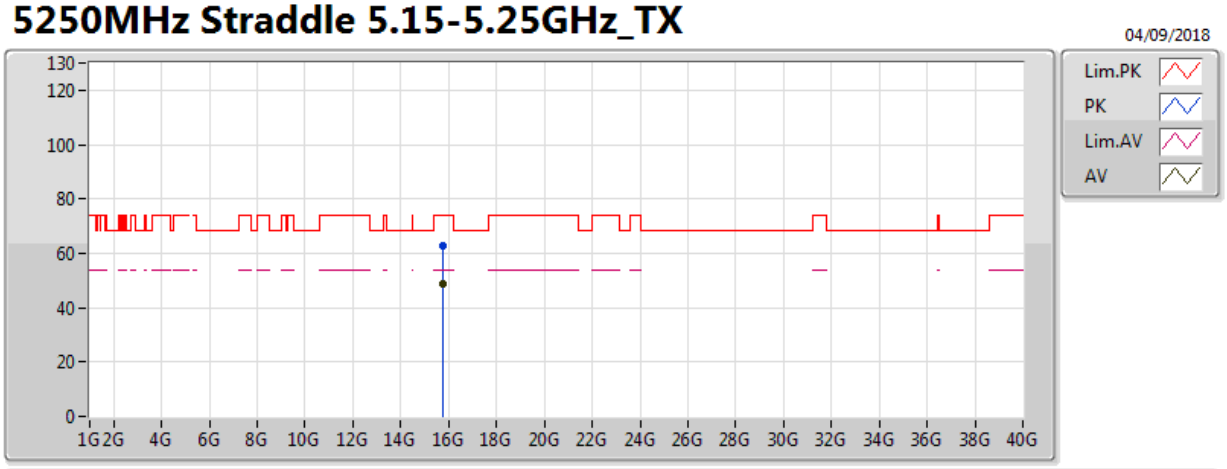


EUT Z_4TX
Setting 71
06-S-5
FSP
EUT R221 #13 ANT #1

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	15.74816G	62.89	74.00	-11.11	17.91	3	Vertical	256	2.92	-
AV	15.75256G	48.82	54.00	-5.18	17.89	3	Vertical	256	2.92	-

HE160_Nss1,(MCS0)_4TX

5250MHz Straddle 5.15-5.25GHz_TX

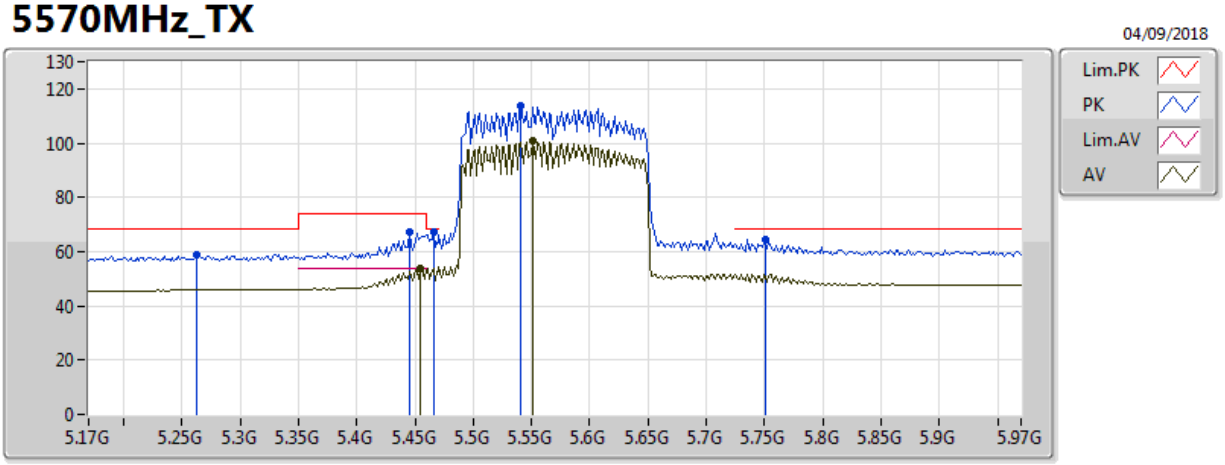


EUT Z_4TX
Setting 71
06-S-5
FSP
EUT R221 #13 ANT #1

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	15.75292G	62.88	74.00	-11.12	17.89	3	Horizontal	61	1.47	-
AV	15.74928G	48.81	54.00	-5.19	17.90	3	Horizontal	61	1.47	-

HE160_Nss1,(MCS0)_4TX

5570MHz_TX

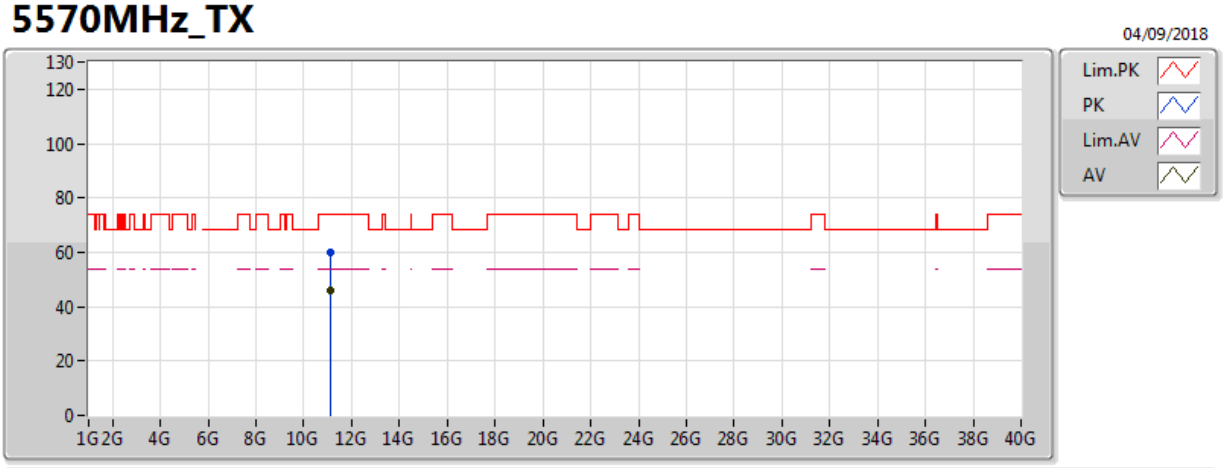


EUT Z_4TX
Setting 73
06-S-5-10
FSP
EUT R221 #9 ANT #2

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	5.2628G	58.85	68.20	-9.35	7.51	3	Vertical	23	1.88	-
PK	5.4452G	67.48	74.00	-6.52	7.85	3	Vertical	23	1.88	-
AV	5.4548G	53.94	54.00	-0.06	7.87	3	Vertical	23	1.88	-
PK	5.466G	67.15	68.20	-1.05	7.89	3	Vertical	23	1.88	-
PK	5.5412G	113.75	Inf	-Inf	8.00	3	Vertical	23	1.88	-
AV	5.5508G	100.64	Inf	-Inf	8.02	3	Vertical	23	1.88	-
PK	5.7508G	64.18	68.20	-4.02	8.42	3	Vertical	23	1.88	-

HE160_Nss1,(MCS0)_4TX

5570MHz_TX

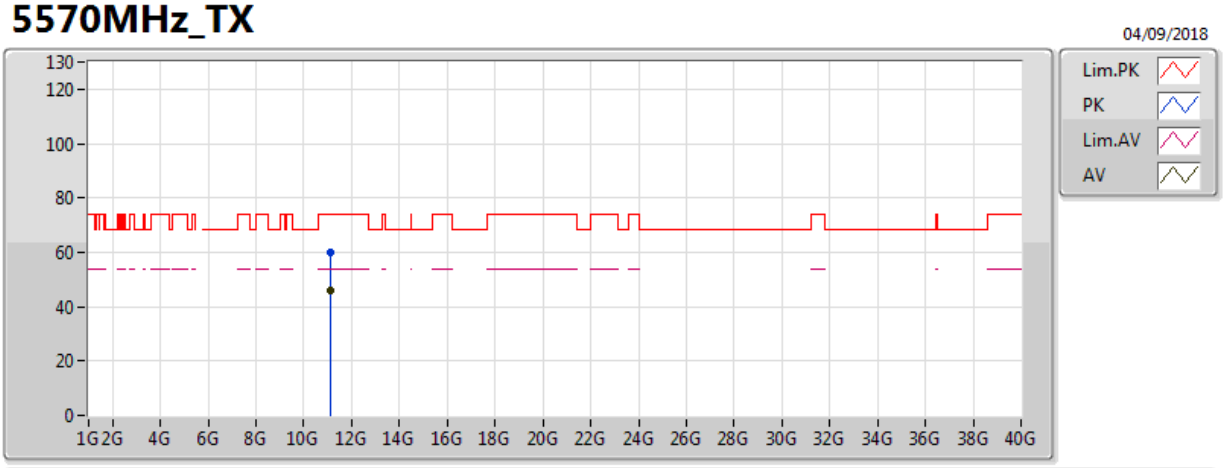


EUT Z_4TX
Setting 73
06-S-5
FSP
EUT R221 #9 ANT #2

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	11.13556G	59.82	74.00	-14.18	17.87	3	Vertical	359	1.50	-
AV	11.13788G	45.81	54.00	-8.19	17.87	3	Vertical	359	1.50	-

HE160_Nss1,(MCS0)_4TX

5570MHz_TX

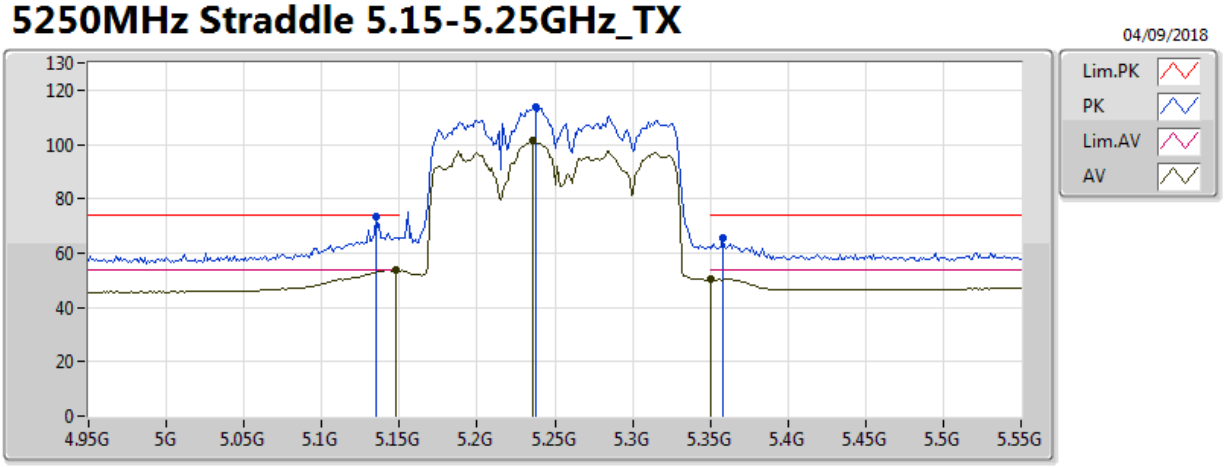


EUT Z_4TX
Setting 73
06-S-5
FSP
EUT R221 #9 ANT #2

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	11.13008G	60.03	74.00	-13.97	17.87	3	Horizontal	174	1.84	-
AV	11.13076G	45.80	54.00	-8.20	17.87	3	Horizontal	174	1.84	-

HE160,BF_Nss1,(MCS0)_4TX

5250MHz Straddle 5.15-5.25GHz_TX

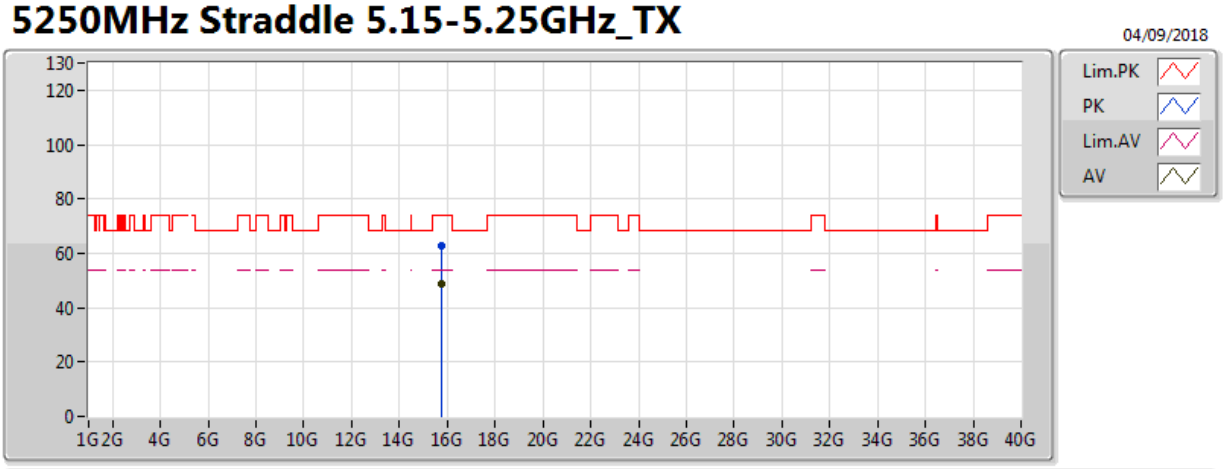


EUT Z_4TX
Setting 70
06-S-5-10
FSP
TXBF
R221 #13 ANT #1

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	5.1348G	73.47	74.00	-0.53	7.36	3	Vertical	315	2.43	-
AV	5.148G	53.97	54.00	-0.03	7.38	3	Vertical	315	2.43	-
PK	5.238G	113.54	Inf	-Inf	7.52	3	Vertical	315	2.43	-
AV	5.2356G	101.33	Inf	-Inf	7.52	3	Vertical	315	2.43	-
PK	5.358G	65.53	74.00	-8.47	7.69	3	Vertical	315	2.43	-
AV	5.350005G	50.44	54.00	-3.56	7.68	3	Vertical	315	2.43	-

HE160,BF_Nss1,(MCS0)_4TX

5250MHz Straddle 5.15-5.25GHz_TX

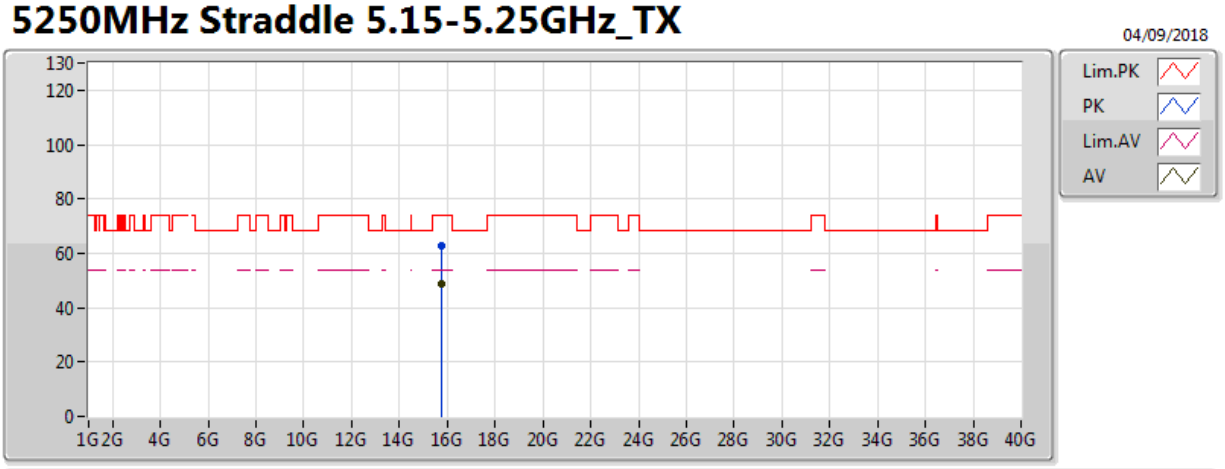


EUT Z_4TX
Setting 70
06-S-5
FSP
TXBF
R221 #13 ANT #1

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	15.74772G	62.62	74.00	-11.38	17.91	3	Vertical	136	1.87	-
AV	15.75948G	48.85	54.00	-5.15	17.87	3	Vertical	136	1.87	-

HE160,BF_Nss1,(MCS0)_4TX

5250MHz Straddle 5.15-5.25GHz_TX

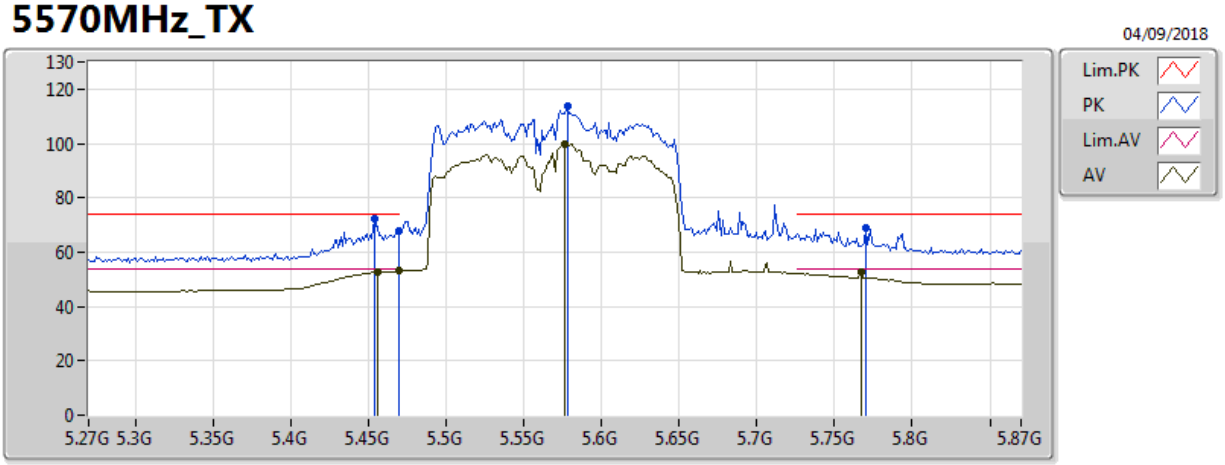


EUT Z_4TX
Setting 70
06-S-5
FSP
TXBF
R221 #13 ANT #1

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	15.74992G	62.66	74.00	-11.34	17.90	3	Horizontal	281	1.48	-
AV	15.75048G	48.92	54.00	-5.08	17.90	3	Horizontal	281	1.48	-

HE160,BF_Nss1,(MCS0)_4TX

5570MHz_TX

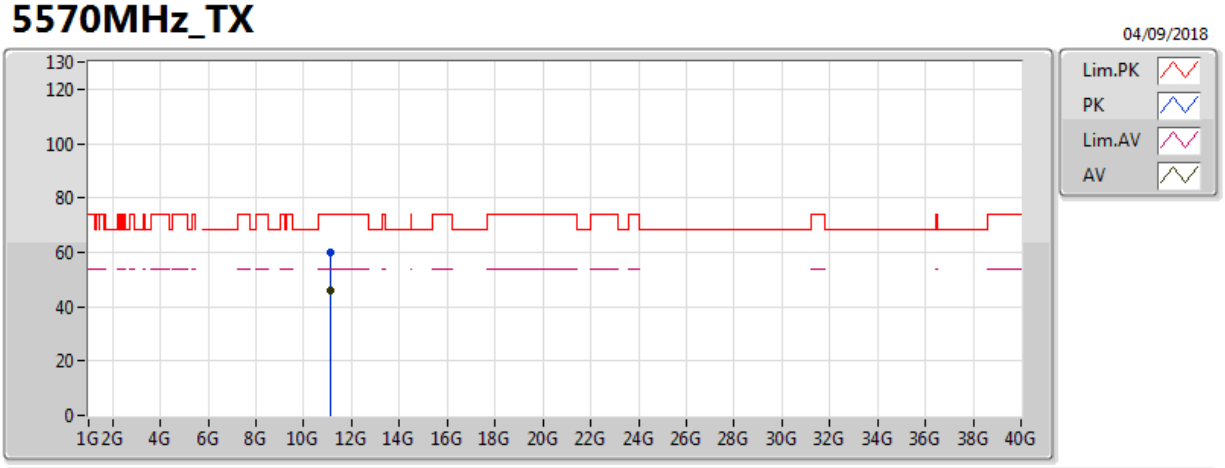


EUT Z_4TX
Setting 76
06-S-5-10
FSP
TXBF
R221 #9 ANT #2

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	5.4536G	72.20	74.00	-1.80	7.80	3	Vertical	99	2.11	-
AV	5.456G	52.79	54.00	-1.21	7.81	3	Vertical	99	2.11	-
PK	5.4692G	67.87	74.00	-6.13	7.82	3	Vertical	99	2.11	-
AV	5.469995G	53.39	54.00	-0.61	7.82	3	Vertical	99	2.11	-
PK	5.5784G	113.48	Inf	-Inf	7.94	3	Vertical	99	2.11	-
AV	5.576G	99.88	Inf	-Inf	7.94	3	Vertical	99	2.11	-
PK	5.7704G	68.88	74.00	-5.12	8.31	3	Vertical	99	2.11	-
AV	5.7668G	52.78	54.00	-1.22	8.30	3	Vertical	99	2.11	-

HE160,BF_Nss1,(MCS0)_4TX

5570MHz_TX

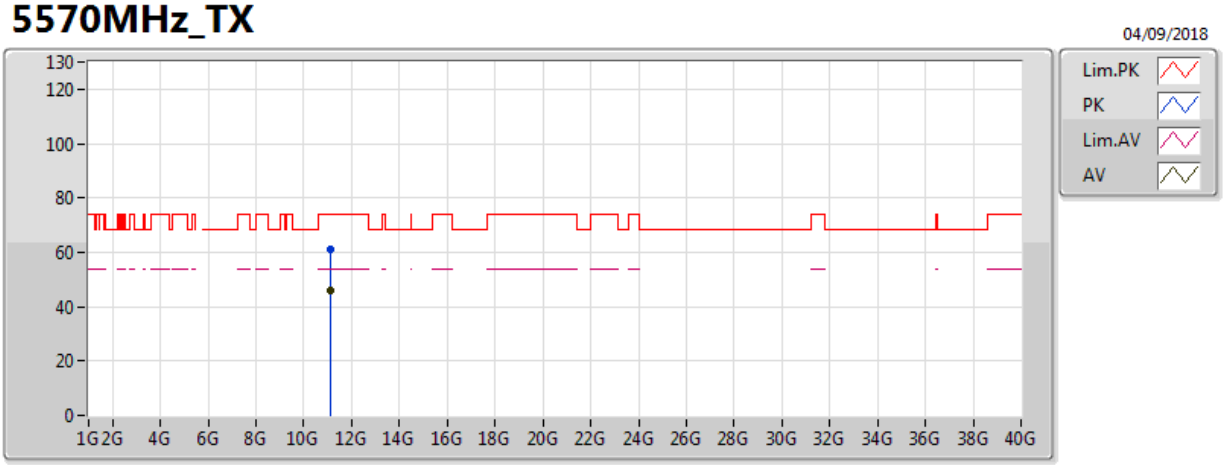


EUT Z_4TX
Setting 76
06-S-5
FSP
TXBF
R221 #9 ANT #2

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	11.1338G	59.93	74.00	-14.07	17.87	3	Vertical	108	1.50	-
AV	11.13088G	45.97	54.00	-8.03	17.87	3	Vertical	108	1.50	-

HE160,BF_Nss1,(MCS0)_4TX

5570MHz_TX

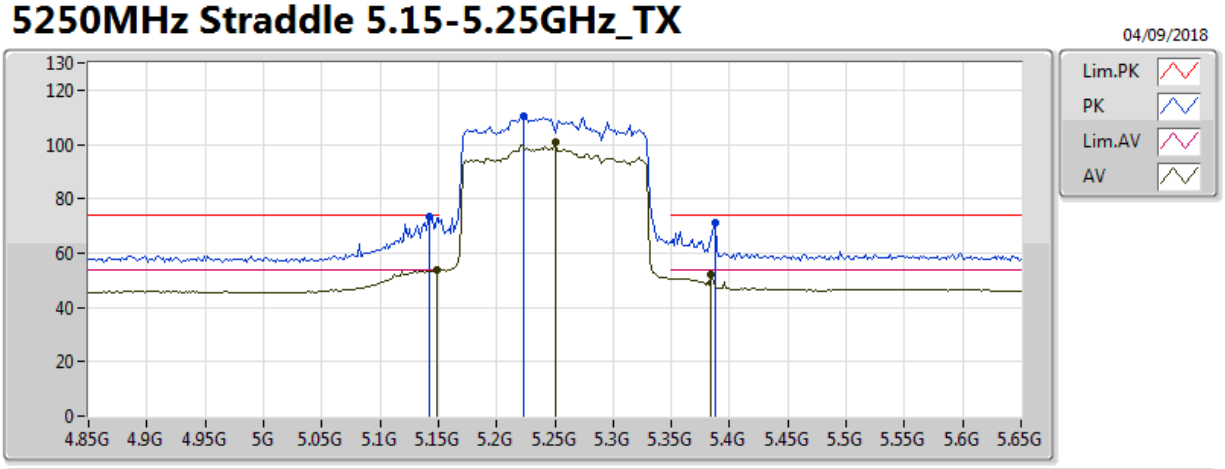


EUT Z_4TX
Setting 76
06-S-5
FSP
TXBF
R221 #9 ANT #2

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	11.13004G	61.06	74.00	-12.94	17.87	3	Horizontal	309	1.50	-
AV	11.13148G	45.92	54.00	-8.08	17.87	3	Horizontal	309	1.50	-

HE160,BF_Nss2,(MCS0)_4TX

5250MHz Straddle 5.15-5.25GHz_TX

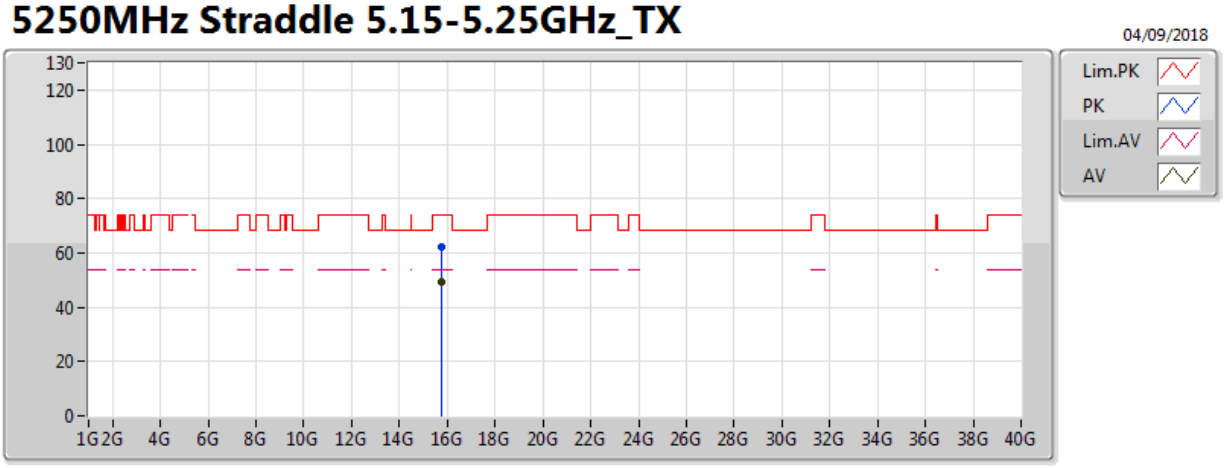


EUT Z_4TX Dipole ANT
Setting 73
06-M-1-10
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	5.1428G	73.56	74.00	-0.44	7.21	3	Vertical	69	2.23
AV	5.1492G	53.62	54.00	-0.38	7.22	3	Vertical	69	2.23
PK	5.2228G	110.38	Inf	-Inf	7.35	3	Vertical	69	2.23
AV	5.25G	101.08	Inf	-Inf	7.39	3	Vertical	69	2.23
PK	5.3876G	71.04	74.00	-2.96	7.61	3	Vertical	69	2.23
AV	5.3844G	51.86	54.00	-2.14	7.61	3	Vertical	69	2.23

HE160,BF_Nss2,(MCS0)_4TX

5250MHz Straddle 5.15-5.25GHz_TX

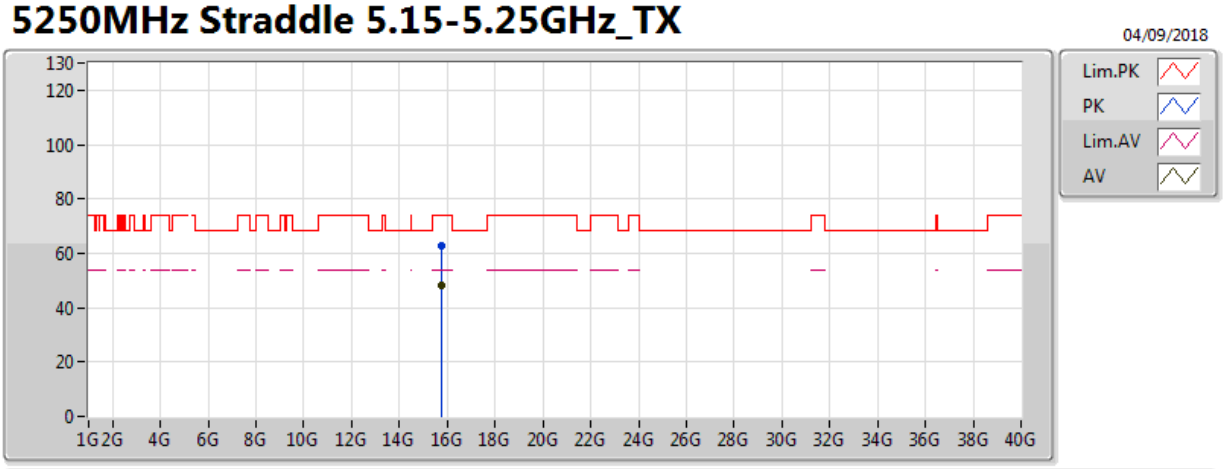


EUT Z_4TX Dipole ANT
Setting 73
06-M-1-10
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	15.74798G	61.99	74.00	-12.01	17.68	3	Vertical	113	1.89
AV	15.75206G	49.58	54.00	-4.42	17.67	3	Vertical	113	1.89

HE160,BF_Nss2,(MCS0)_4TX

5250MHz Straddle 5.15-5.25GHz_TX

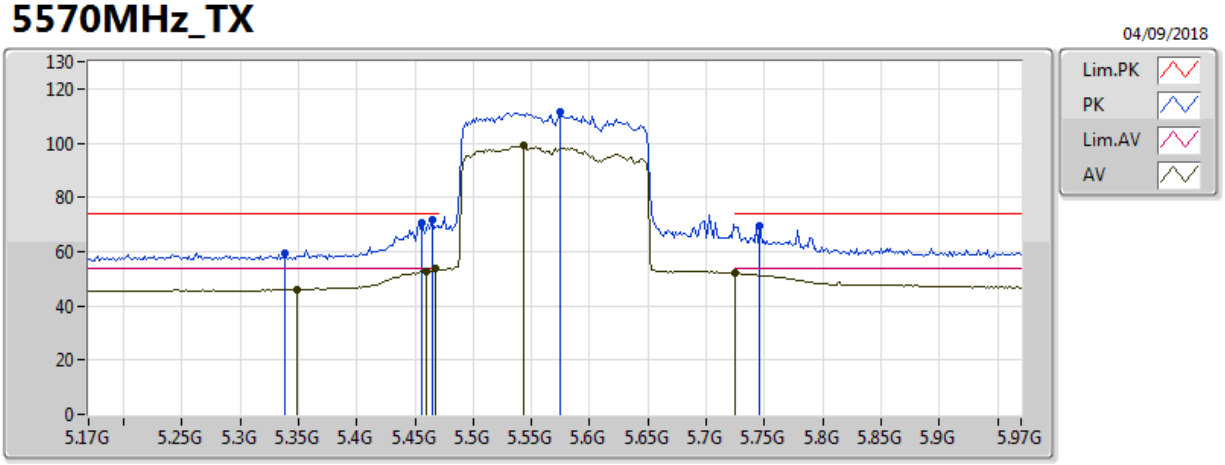


EUT Z_4TX Dipole ANT
Setting 73
06-M-1-10
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	15.75205G	62.55	74.00	-11.45	17.67	3	Horizontal	199	1.62
AV	15.74774G	48.46	54.00	-5.54	17.68	3	Horizontal	199	1.62

HE160,BF_Nss2,(MCS0)_4TX

5570MHz_TX

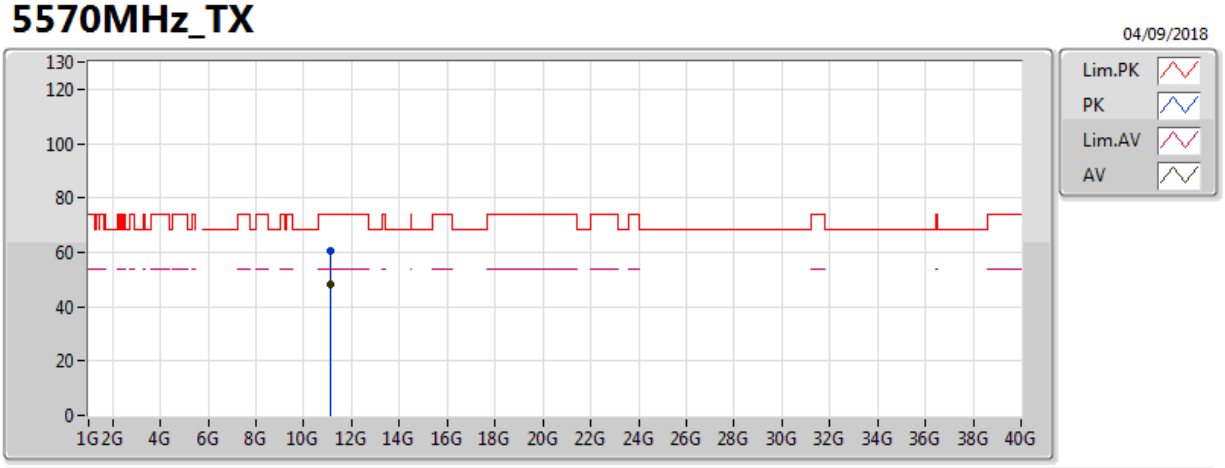


EUT Z_4TX Dipole ANT
Setting 79
06-M-1-10
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	5.338G	59.25	74.00	-14.75	7.53	3	Vertical	44	2.21
AV	5.3492G	45.93	54.00	-8.07	7.55	3	Vertical	44	2.21
PK	5.4564G	70.50	74.00	-3.50	7.69	3	Vertical	44	2.21
AV	5.4596G	52.58	54.00	-1.42	7.70	3	Vertical	44	2.21
PK	5.4644G	71.91	74.00	-2.09	7.70	3	Vertical	44	2.21
AV	5.4676G	53.89	54.00	-0.11	7.71	3	Vertical	44	2.21
PK	5.5748G	111.27	Inf	-Inf	7.85	3	Vertical	44	2.21
AV	5.5428G	99.29	Inf	-Inf	7.81	3	Vertical	44	2.21
PK	5.746G	69.63	74.00	-4.37	8.21	3	Vertical	44	2.21
AV	5.7252G	52.11	54.00	-1.89	8.17	3	Vertical	44	2.21

HE160,BF_Nss2,(MCS0)_4TX

5570MHz_TX

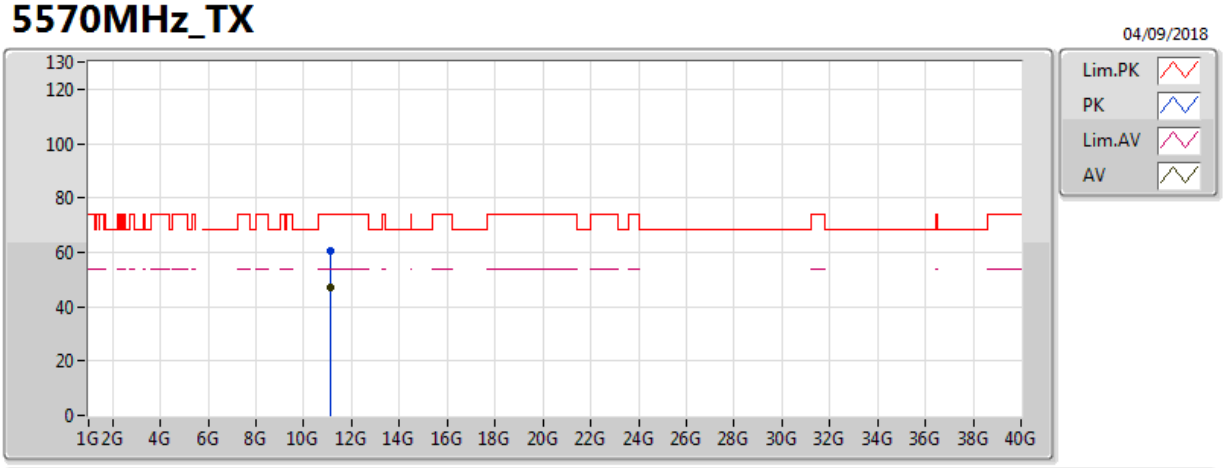


EUT Z_4TX Dipole ANT
Setting 79
06-M-1-10
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	11.14091G	60.74	74.00	-13.26	18.06	3	Vertical	152	1.36
AV	11.13819G	48.27	54.00	-5.73	18.06	3	Vertical	152	1.36

HE160,BF_Nss2,(MCS0)_4TX

5570MHz_TX

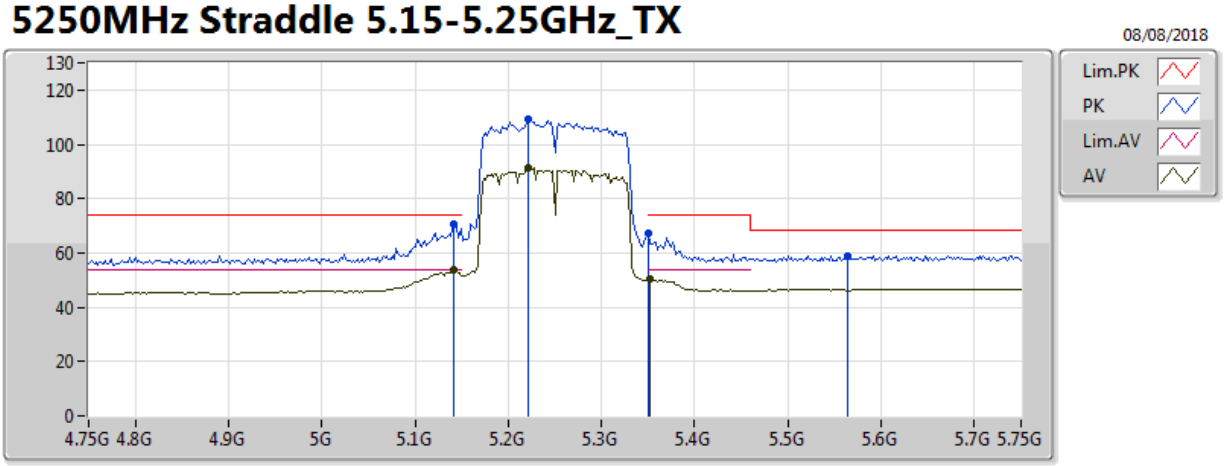


EUT Z_4TX Dipole ANT
Setting 79
06-M-1-10
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	11.14241G	60.66	74.00	-13.34	18.06	3	Horizontal	253	1.80
AV	11.13794G	47.06	54.00	-6.94	18.06	3	Horizontal	253	1.80

802.11ac VHT160_Nss4,(MCS0)_4TX

5250MHz Straddle 5.15-5.25GHz_TX

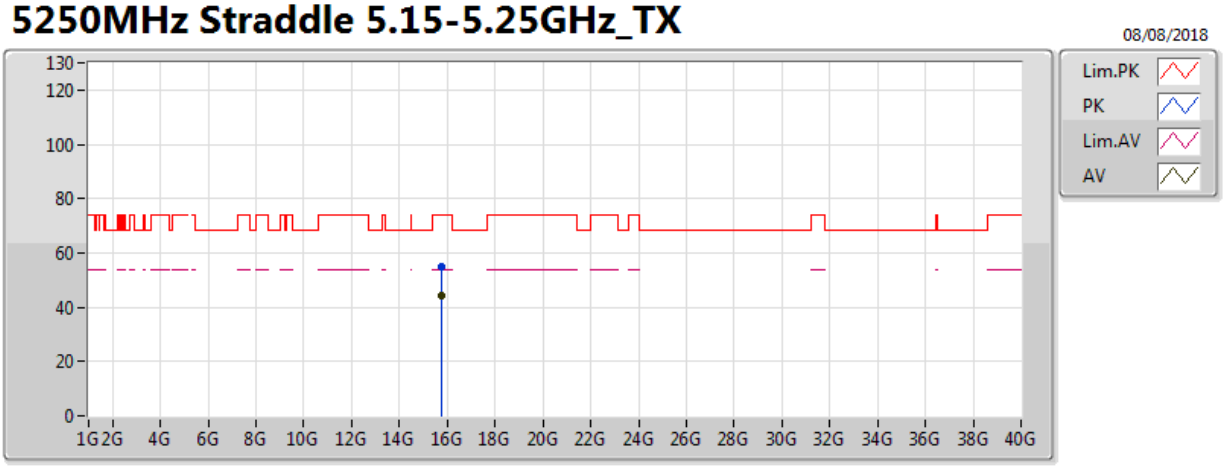


EUT Z_4TX
Setting 74
02-M-1-10
FSU(100015)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	5.142G	70.44	74.00	-3.56	8.54	3	Vertical	101	2.48
AV	5.142G	53.89	54.00	-0.11	8.54	3	Vertical	101	2.48
PK	5.222G	109.37	Inf	-Inf	8.67	3	Vertical	101	2.48
AV	5.222G	91.26	Inf	-Inf	8.67	3	Vertical	101	2.48
PK	5.350005G	67.28	74.00	-6.72	8.84	3	Vertical	101	2.48
AV	5.352G	50.20	54.00	-3.80	8.84	3	Vertical	101	2.48
PK	5.564G	59.05	68.20	-9.15	9.16	3	Vertical	101	2.48

802.11ac VHT160_Nss4,(MCS0)_4TX

5250MHz Straddle 5.15-5.25GHz_TX

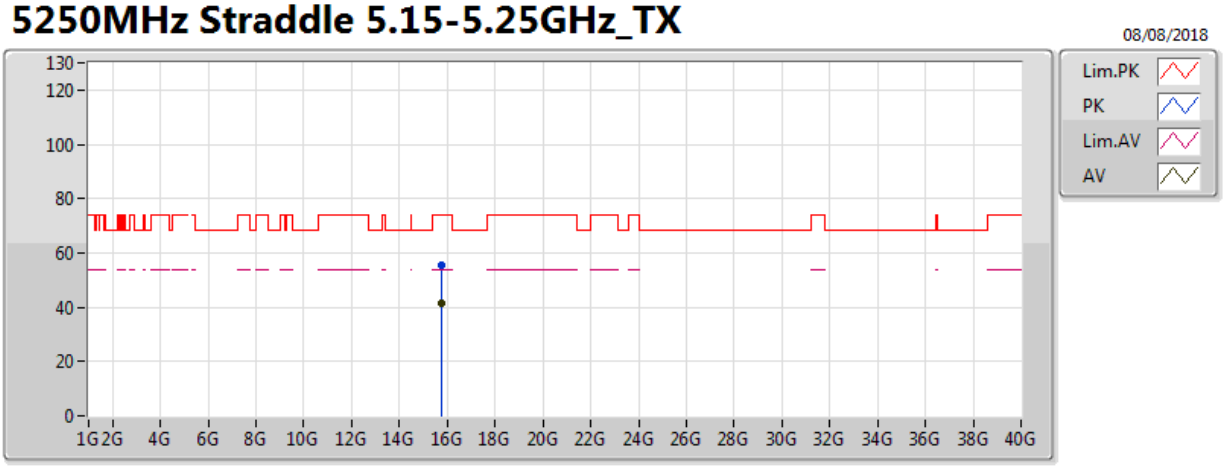


EUT Z_4TX
Setting 74
02-M-1-10
FSU(100015)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	15.750832G	54.96	74.00	-19.04	15.42	3	Vertical	104	1.58
AV	15.750292G	44.20	54.00	-9.80	15.42	3	Vertical	104	1.58

802.11ac VHT160_Nss4,(MCS0)_4TX

5250MHz Straddle 5.15-5.25GHz_TX

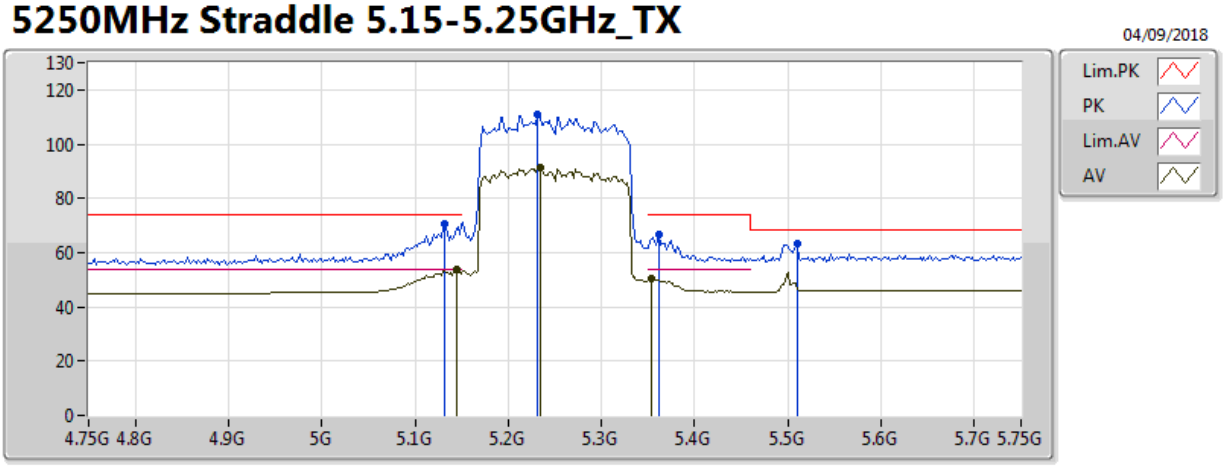


EUT Z_4TX
Setting 74
02-M-1-10
FSU(100015)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	15.74952G	55.35	74.00	-18.65	15.43	3	Horizontal	92	2.46
AV	15.750504G	41.46	54.00	-12.54	15.42	3	Horizontal	92	2.46

HE160_Nss4_4TX

5250MHz Straddle 5.15-5.25GHz_TX

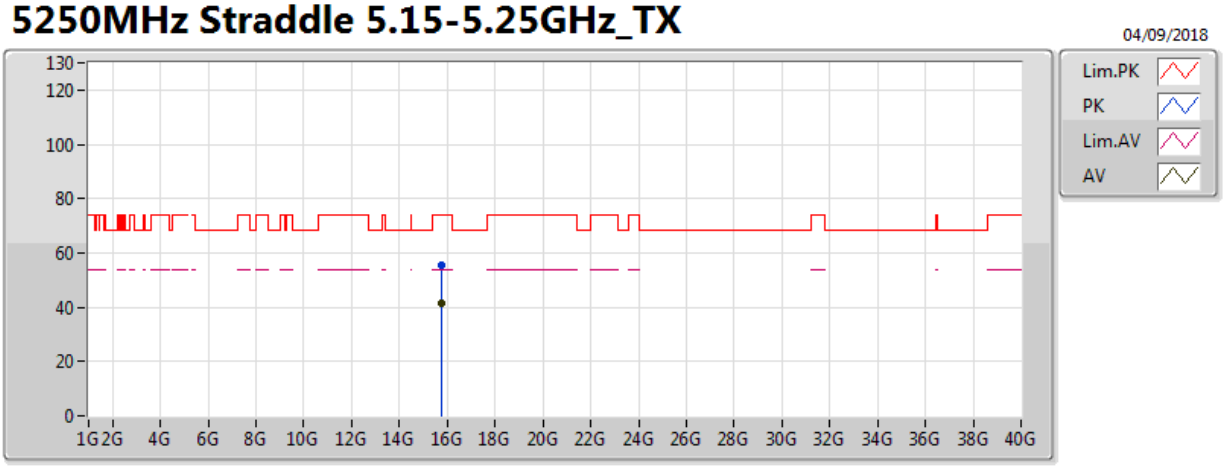


EUT Z_4TX
Setting 75
02-M-1-10
FSU(100015)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	5.132G	70.66	74.00	-3.34	8.53	3	Vertical	222	2.20
AV	5.144G	53.83	54.00	-0.17	8.54	3	Vertical	222	2.20
PK	5.232G	111.08	Inf	-Inf	8.68	3	Vertical	222	2.20
AV	5.234G	91.45	Inf	-Inf	8.68	3	Vertical	222	2.20
PK	5.362G	66.62	74.00	-7.38	8.84	3	Vertical	222	2.20
AV	5.354G	50.33	54.00	-3.67	8.84	3	Vertical	222	2.20
PK	5.51G	63.27	68.20	-4.93	9.13	3	Vertical	222	2.20

HE160_Nss4_4TX

5250MHz Straddle 5.15-5.25GHz_TX

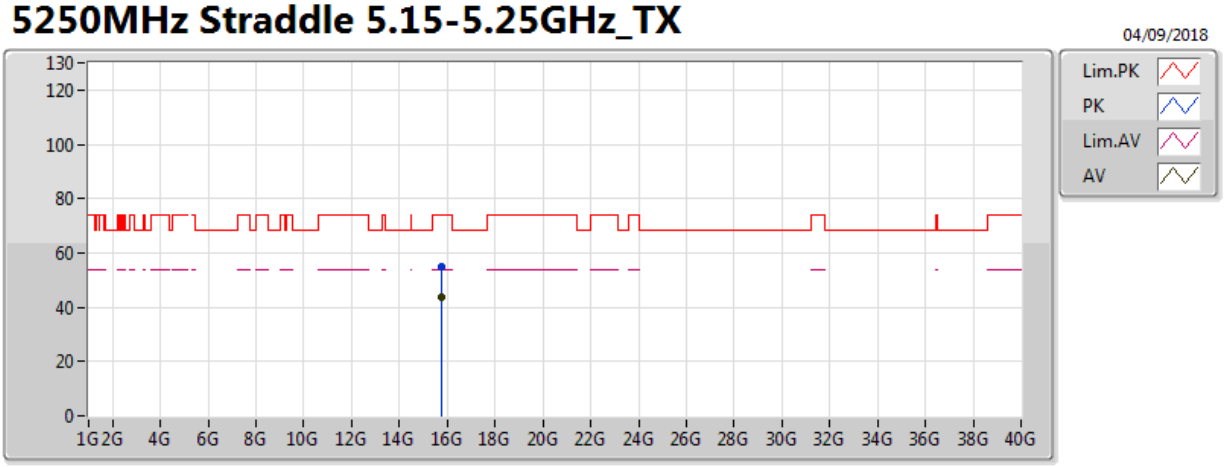


EUT Z_4TX
Setting 75
02-M-1-10
FSU(100015)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	15.7505G	55.22	74.00	-18.78	15.42	3	Vertical	329	2.43
AV	15.7509G	41.41	54.00	-12.59	15.42	3	Vertical	339	2.43

HE160_Nss4_4TX

5250MHz Straddle 5.15-5.25GHz_TX

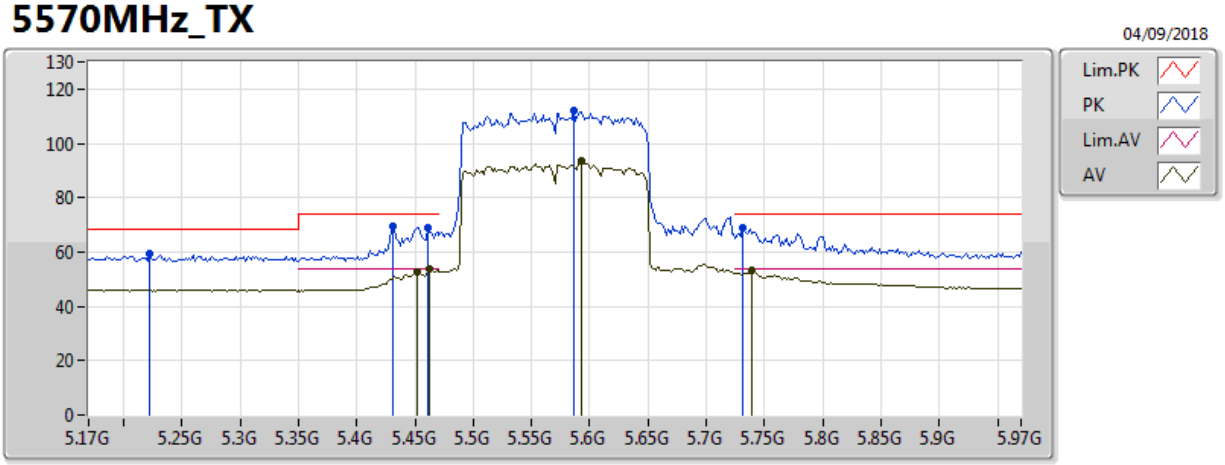


EUT Z_4TX
Setting 75
02-M-1-10
FSU(100015)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	15.750392G	55.11	74.00	-18.89	15.42	3	Horizontal	53	2.27
AV	15.749456G	43.89	54.00	-10.11	15.43	3	Horizontal	53	2.27

HE160_Nss4_4TX

5570MHz_TX

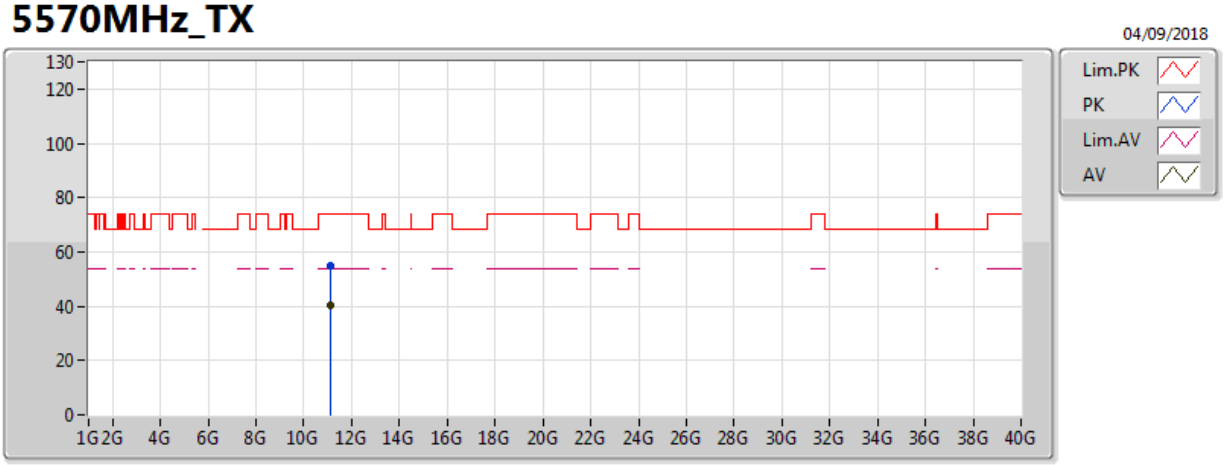


EUT Z_4TX
Setting 78
02-M-1-10
FSU(100015)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	5.2228G	59.23	68.20	-8.97	8.67	3	Vertical	79	1.95
PK	5.4308G	69.69	74.00	-4.31	8.96	3	Vertical	79	1.95
AV	5.4516G	52.62	54.00	-1.38	9.01	3	Vertical	79	1.95
PK	5.4612G	69.11	74.00	-4.89	9.03	3	Vertical	79	1.95
AV	5.4628G	53.69	54.00	-0.31	9.03	3	Vertical	79	1.95
PK	5.586G	111.97	Inf	-Inf	9.18	3	Vertical	79	1.95
AV	5.5924G	93.36	Inf	-Inf	9.18	3	Vertical	79	1.95
PK	5.7316G	68.87	74.00	-5.13	9.22	3	Vertical	79	1.95
AV	5.7396G	53.01	54.00	-0.99	9.22	3	Vertical	79	1.95

HE160_Nss4_4TX

5570MHz_TX

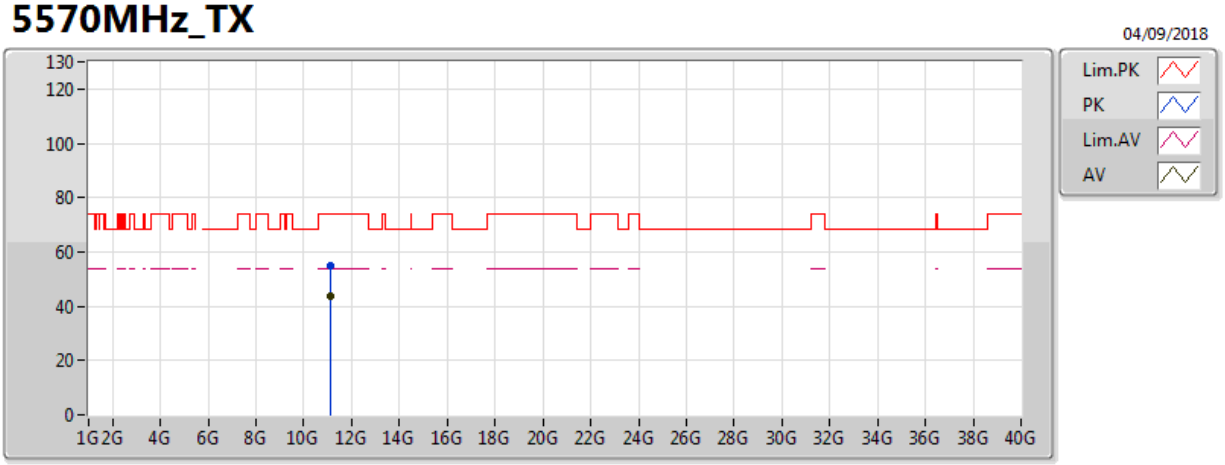


EUT Z_4TX
Setting 78
02-M-1-10
FSU(100015)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	11.1394G	54.71	74.00	-19.29	14.18	3	Vertical	23	1.32
AV	11.140944G	40.17	54.00	-13.83	14.19	3	Vertical	23	1.32

HE160_Nss4_4TX

5570MHz_TX



EUT Z_4TX
Setting 78
02-M-1-10
FSU(100015)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
PK	11.139128G	54.97	74.00	-19.03	14.18	3	Horizontal	220	1.09
AV	11.140768G	43.80	54.00	-10.20	14.19	3	Horizontal	220	1.09