FCC Test Report

Equipment	:	TELUS TVX
Brand Name	:	arcadyan
Model No.	:	HMB2213PW22TS
FCC ID	:	RAXHMB2213PW
Standard	:	47 CFR FCC Part 15.407
Operating Band	:	5150 MHz – 5250 MHz 5725 MHz – 5850 MHz
Applicant	:	Arcadyan Technology Corporation No.8, Sec.2, Guangfu Rd.,Hsinchu, 30071 Taiwan
Manufacturer	:	Arcadyan Technology Corporation No.8, Sec.2, Guangfu Rd.,Hsinchu, 30071 Taiwan
Function	:	☐ Outdoor; ☒ Indoor; ☐ Fixed P2P ☐ Client

The product sample received on Sep. 07, 2016 and completely tested on Sep. 30, 2016. We, SPORTON, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

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

Sam Chen
SPORTON INTERNATIONAL INC.

Testing Laboratory
1190

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Summary of Test Result

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

Revision History

Report No.	Version	Description	Issued Date
FR672701AB	Rev. 01	Initial issue of report	Oct. 07, 2016

1 General Description

1.1 Information

1.1.1 RF General Information

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

Band	Mode	BWch (MHz)	Nant
5.2G	11a	20	2
5.8G	11a	20	2
5.2G	HT20	20	2
5.8G	HT20	20	2
5.2G	VHT20	20	2
5.8G	VHT20	20	2
5.2G	HT40	40	2
5.8G	HT40	40	2
5.2G	VHT40	40	2
5.8G	VHT40	40	2
5.2G	VHT80	80	2
5.8G	VHT80	80	2

Note:
- 5.2G/5.2G-I(IC) is the 5.2GHz Band (5.15-5.25GHz).
- 5.8G/5.8G-I(IC) is the 5.8GHz Band (5.725-5.850GHz).
- 11a, HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- VHT20, VHT40 and VHT80 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM modulation.
- BWch is the nominal channel bandwidth.
- Nss-Min is the minimum number of spatial streams.
- Nant is the number of outputs. e.g., 2(2,3) means have 2 outputs for port 2 and port 3. 2 means have 2 outputs for port 1 and port 2.

1.1.2 Antenna Information

Ant.	Brand	Part No.	Type	Connector	Gain (dBi)	
					2.4GHz WLAN	5GHz WLAN
1	arcadyan	120800031900J	PCB	N/A	4.14	4.18
2	arcadyan	120800031900J	PCB	N/A	4.91	4.73
Ant.	**Brand**	**Part No.**	**Type**	**Connector**	**Gain (dBi)**	
					Bluetooth	
3	arcadyan	120700035500J	Print PCB	N/A	3.93	

Note: The EUT has three antennas.

For WLAN function:

Ant. 1 and Ant. 2 can be used as transmitting/receiving antenna.

Ant. 1 and Ant. 2 could transmit/receive simultaneously.

For Bluetooth function:

Only Ant. 3 can be used as transmitting/receiving antenna.

1.1.3 Mode Test Duty Cycle

Mode	DC	T(s)	VBW(Hz) ≥ 1/T
11a	0.985	n/a (DC>=0.98)	n/a (DC>=0.98)
VHT20	0.985	n/a (DC>=0.98)	n/a (DC>=0.98)
VHT40	0.969	953.125u	3k
VHT80	0.939	460.625u	3k

1.1.4 EUT Operational Condition

EUT Power Type	From power adapter			
Beamforming Function	☐	With beamforming	☒	Without beamforming

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 v01r03
- FCC KDB 644545 D03 v01
- FCC KDB 662911 D01 v02r01

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	Eddie Weng	20°C / 50%	Sep. 19, 2016~Sep. 23, 2016
Radiated	03CH01-CB	Nyle Chang, Zero Chen, Jay Luo	22°C / 54%	Sep. 07, 2016~Sep. 21, 2016
AC Conduction	CO01-CB	Hank Yang	25°C / 57%	Sep. 30, 2016

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%

2 Test Configuration of EUT

2.1 Test Channel Mode

Band	Mode	BWch 4 (MHz)	Nss-Min	Nant	Ch. (MHz)	Range	Power Setting
5.2G	11a	20	1	2	5180	L	57
5.2G	11a	20	1	2	5200	M	69
5.2G	11a	20	1	2	5240	H	71
5.8G	11a	20	1	2	5745	L	80
5.8G	11a	20	1	2	5785	M	80
5.8G	11a	20	1	2	5825	H	80
5.2G	VHT20	20	1,(M0)	2	5180	L	56
5.2G	VHT20	20	1,(M0)	2	5200	M	68
5.2G	VHT20	20	1,(M0)	2	5240	H	72
5.8G	VHT20	20	1,(M0)	2	5745	L	80
5.8G	VHT20	20	1,(M0)	2	5785	M	80
5.8G	VHT20	20	1,(M0)	2	5825	H	80
5.2G	VHT40	40	1,(M0)	2	5190	L	42
5.2G	VHT40	40	1,(M0)	2	5230	H	62
5.8G	VHT40	40	1,(M0)	2	5755	L	80
5.8G	VHT40	40	1,(M0)	2	5795	H	80
5.2G	VHT80	80	1,(M0)	2	5210	S	45
5.8G	VHT80	80	1,(M0)	2	5775	S	59

Note:
- Test range channel consist of L (Low Ch.), M (Middle Ch.), H (High Ch.), S (Single Ch.) and C (Straddle Band Ch.).

Note. VHT20/VHT40 covers HT20/HT40, due to same modulation. The power setting for 802.11n HT20 and HT40 are the same or lower than 802.11ac VHT20 and VHT40.

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
1	2.4GHz WLAN + Bluetooth
2	5GHz WLAN + Bluetooth
For operating mode 2 is the worst case and it was record in this test report.	

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

The Worst Case Mode for Following Conformance Tests	
Tests Item	Unwanted Emissions
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.
Operating Mode < 1GHz	Normal Link
1	2.4GHz WLAN + Bluetooth
2	5GHz WLAN + Bluetooth
For operating mode 1 is the worst case and it was record in this test report.	
Operating Mode > 1GHz	CTX

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis
Operating Mode	
1	2.4GHz WLAN + Bluetooth
2	5GHz WLAN + Bluetooth
Refer to Sporton Test Report No.: FA672701 for Co-location RF Exposure Evaluation.	

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

2.3 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

2.4 Accessories

Accessories			
Power	**Brand**	**Model No.**	**Rating**
Adapter	APD	WB-18D12FU	Input: 100-240Vac, 50-60Hz, 0.5A Max. Output: 12Vdc, 1.5A
Other			
HDMI cable: Shielded, 1.8m			

2.5 Support Equipment

For Test Site No: CO01-CB

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	AP	Planex	GW-AP54SGX	KA220030603014-1
2	NB	DELL	E6430	DoC
3	iPad	Apple	A1430	DoC
4	Converter	UPMOST	DCT3	N/A
5	Earphone	SHYARO CHI	MIC-04	N/A
6	TV	SONY	KLV-32U300A	DoC
7	Flash disk	Transcend	604108 8255	DoC

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

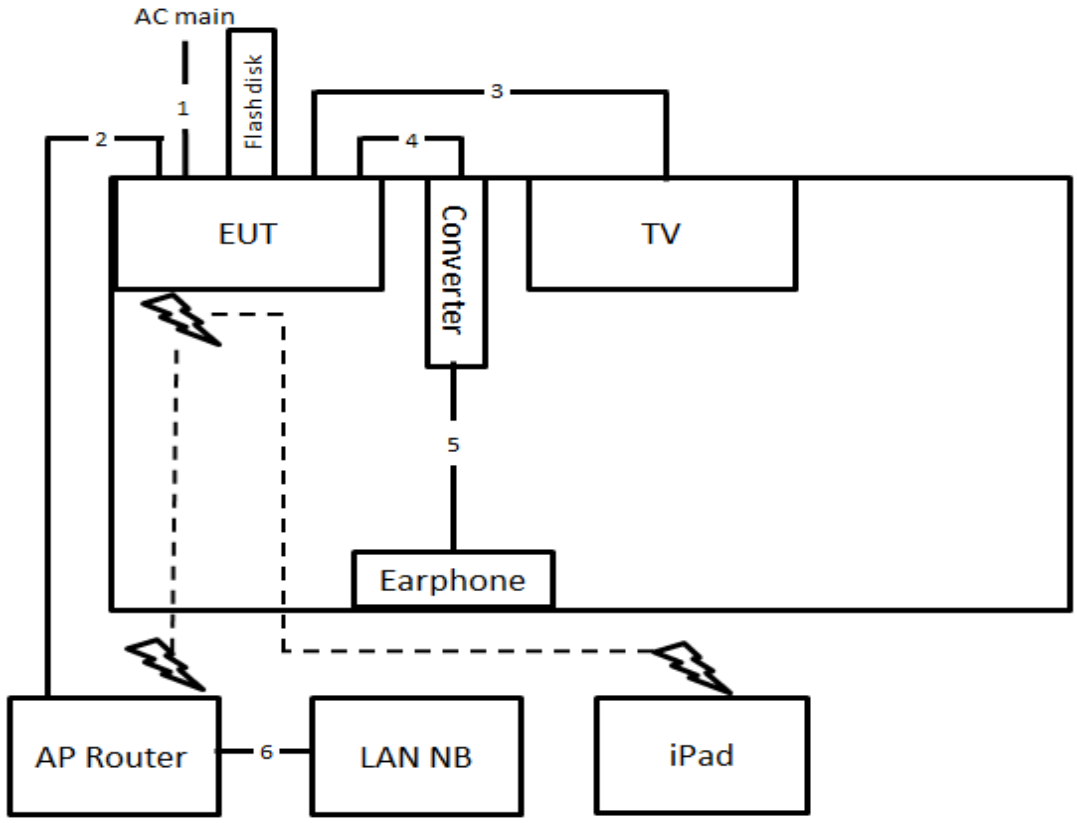
Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	NB	DELL	E4300	DoC
2	Converter	UPMOST	DCT3	N/A
3	Flash disk	Silicon Power	I-Series	DoC
4	Earphone	SHYARO CHI	MIC-04	N/A
5	TV	SONY	KLV-32U300A	DoC
6	AP	Planex	GW-AP54SGX	KA220030603014-1
7	iPad	Apple	A1430	DoC

For Test Site No: 03CH01-CB (above 1GHz) and TH01-CB

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

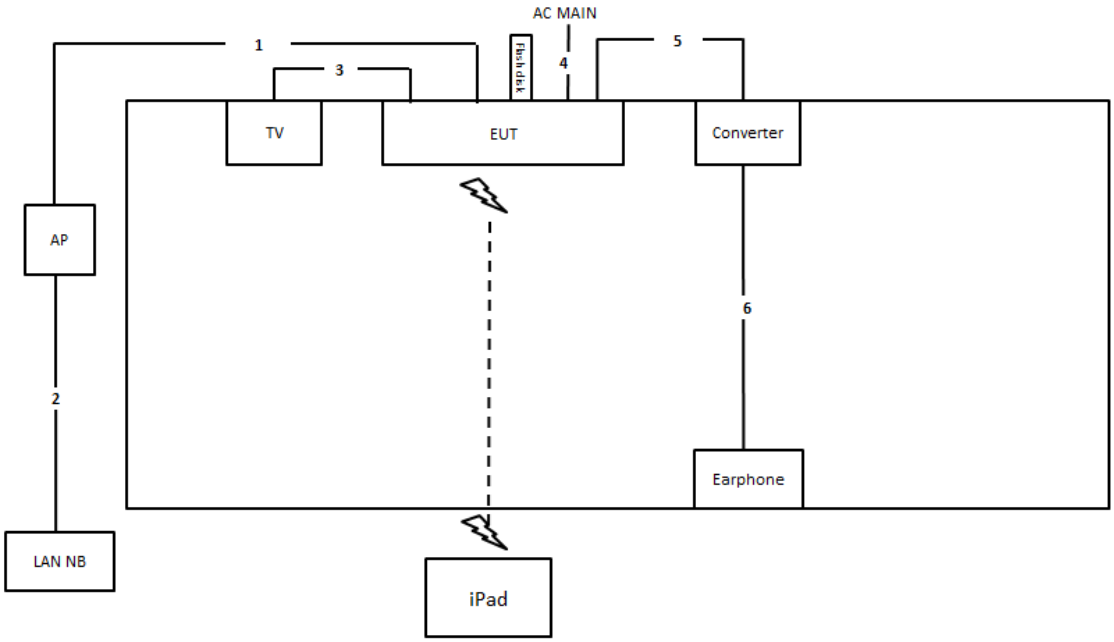
2.6 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



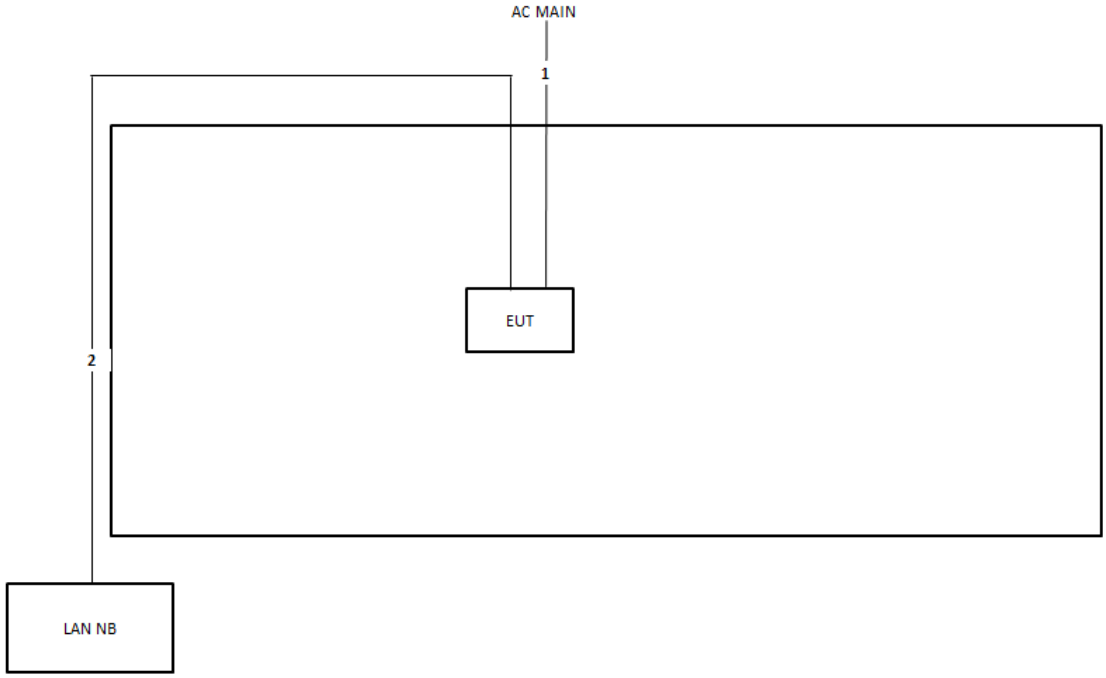
Item	Connection	Shielded	Length
1	Power cable	No	1.5m
2	RJ-45 cable	No	10m
3	HDMI cable	Yes	1.8m
4	Optical cable	No	1m
5	Audio cable	No	1.1m
6	RJ-45 cable	No	3m

Test Setup Diagram - Radiated Test < 1GHz



Item	Connection	Shielded	Length
1	RJ-45 cable	No	10m
2	RJ-45 cable	No	10m
3	HDMI cable	Yes	1.8m
4	Power cable	No	1.5m
5	Optical cable	No	1m
6	Audio cable	No	1.4m

Test Setup Diagram - Radiated Test > 1GHz



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

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

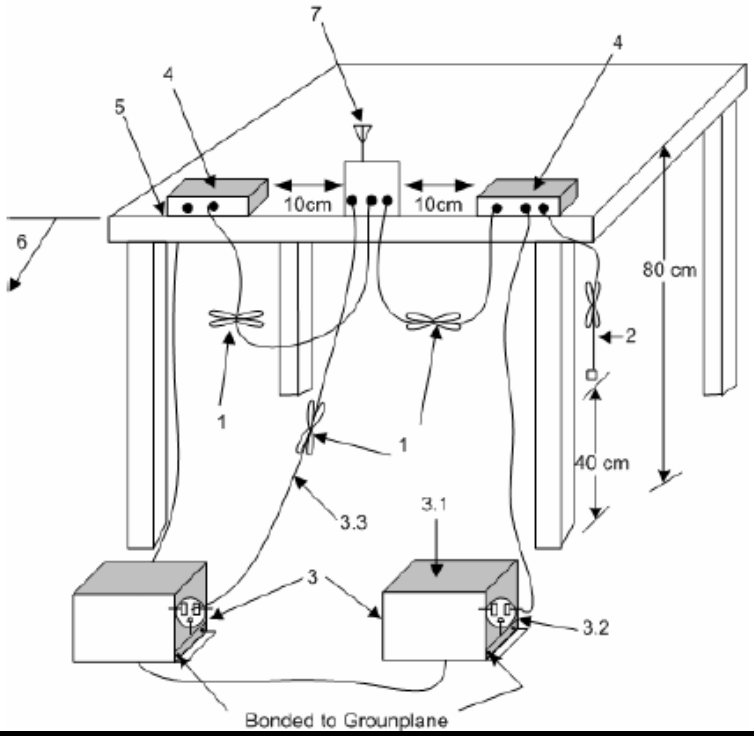
Refer a test equipment and calibration data table in this test report.

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



3.1.5 Test Result of AC Power-line Conducted Emissions

Refer as Appendix B

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

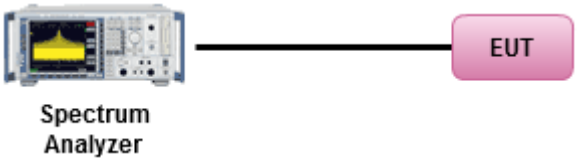
Refer a test equipment and calibration data table in this test report.

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 C

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

3.3.4 Test Setup

RF Output Power (Power Meter)


3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix D

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.	

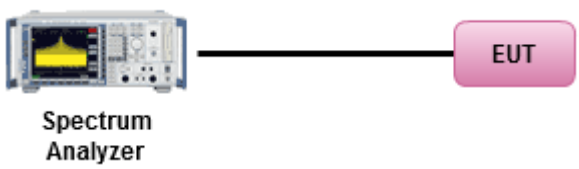
3.4.2 Measuring Instruments

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 E

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.

Un-restricted band emissions above 1GHz Limit	
Operating Band	**Limit**
5.15 - 5.25 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.25 - 5.35 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.47 - 5.725 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.725 - 5.85 GHz	all emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

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

3.5.2 Measuring Instruments

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

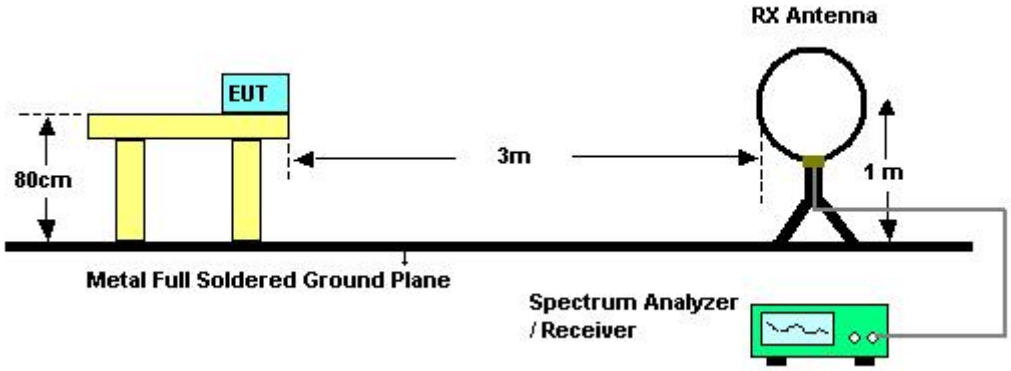
3.5.3 Test Procedures

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.		

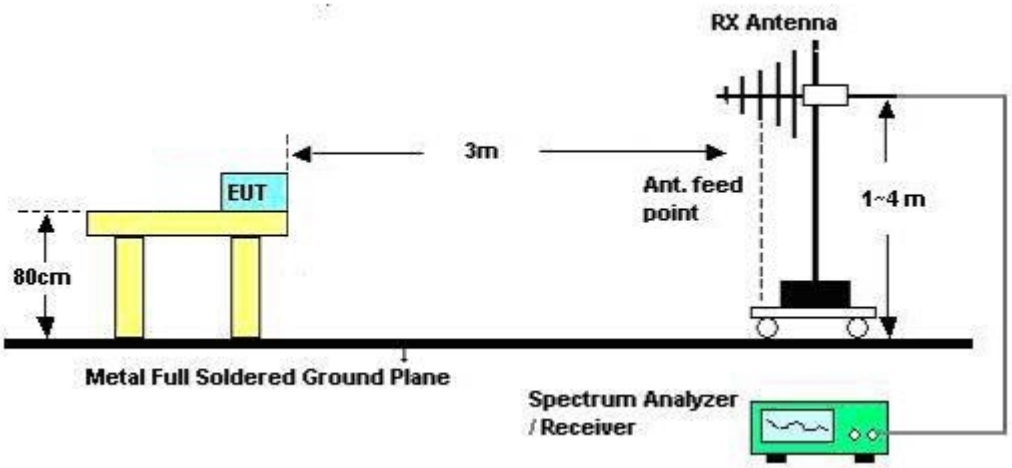
3.5.4 Test Setup

Transmitter Radiated Unwanted Emissions

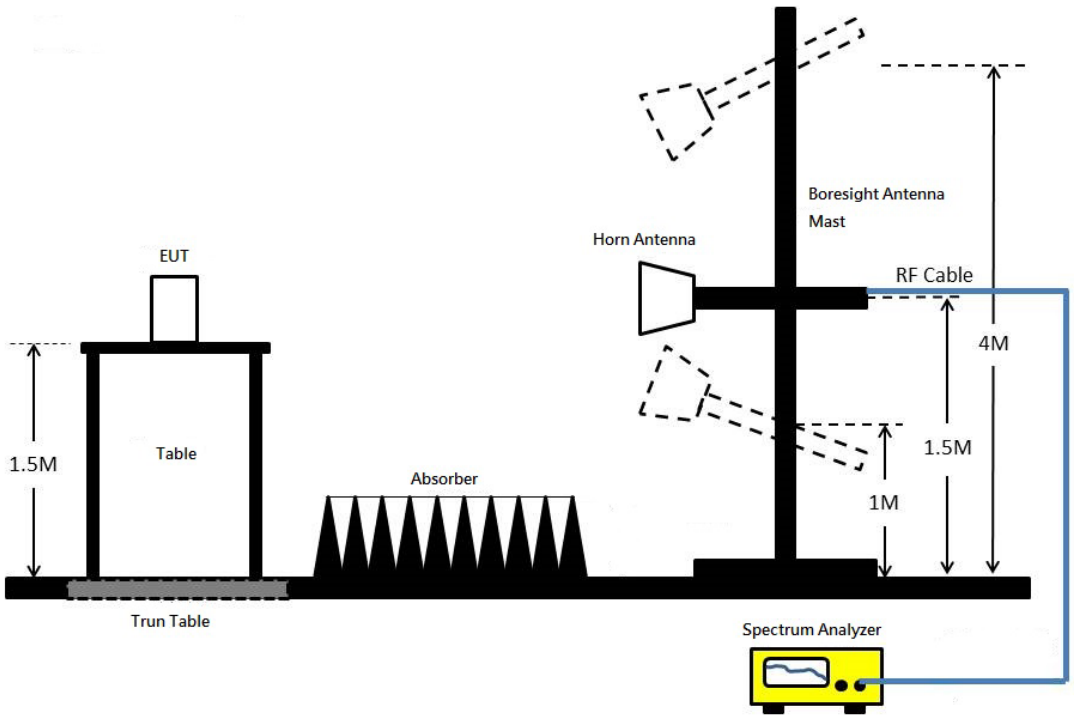
9kHz ~30MHz



30MHz~1GHz



Above 1GHz



3.5.5 Transmitter 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.

3.5.6 Test Result of Transmitter Unwanted Emissions

Refer as Appendix F

3.6 Frequency Stability

3.6.1 Frequency Stability Limit

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

3.6.2 Measuring Instruments

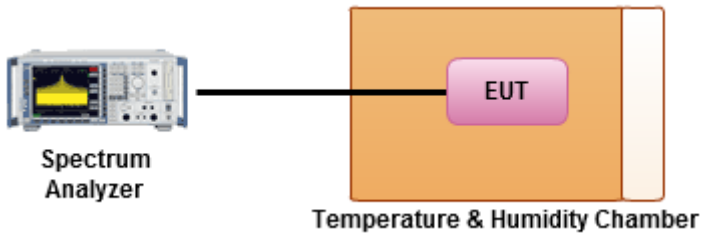
Refer a test equipment and calibration data table in this test report.

3.6.3 Test Procedures

Test Method	
▪ Refer as ANSI C63.10, clause 6.8 for frequency stability tests	
	▪ Frequency stability with respect to ambient temperature
	▪ Frequency stability when varying supply voltage
	▪ Extreme temperature is -30°C~50°C.

3.6.4 Test Setup

Frequency Stability



3.6.5 Test Result of Frequency Stability

Refer as Appendix G

4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.45GHz	Jan. 27, 0216	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	Dec. 08, 2015	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Dec. 23, 2015	Conduction (CO01-CB)
COND Cable	Woken	Cable	01	150kHz ~ 30MHz	May 24, 2016	Conduction (CO01-CB)
Software	Audix	E3	6.120210n	-	N.C.R.	Conduction (CO01-CB)
BILOG ANTENNA	TESEQ	CBL6112D	37880	20MHz ~ 2GHz	Aug. 30, 2016	Radiation (03CH01-CB)
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Oct. 22, 2015	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jul. 25, 2016	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8447D	2944A10991	0.1MHz ~ 1.3GHz	Mar. 15, 2016	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 18, 2016	Radiation (03CH01-CB)
Pre-Amplifier	WM	TF-130N-R1	923365	26GHz ~ 40GHz	Nov. 13, 2015	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Oct. 27, 2015	Radiation (03CH01-CB)
EMI Test	R&S	ESCS	100355	9kHz ~ 2.75GHz	May 16, 2016	Radiation (03CH01-CB)
RF Cable-low	Woken	Low Cable-1	N/A	30 MHz ~ 1 GHz	Nov. 02, 2015	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16	N/A	1 GHz ~ 18 GHz	Nov. 02, 2015	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-17	N/A	1 GHz ~ 18 GHz	Nov. 02, 2015	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G-1	N/A	18GHz ~ 40 GHz	Nov. 02, 2015	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G-2	N/A	18GHz ~ 40 GHz	Nov. 02, 2015	Radiation (03CH01-CB)
Test Software	Audix	E3	6.2009-l0-7	N/A	N/A	Radiation (03CH01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 16, 2016*	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	Dec. 09, 2015	Conducted (TH01-CB)
Temp. and Humidity Chamber	Ten Billion	TTH-D3SP	TBN-931011	-30~100 degree	Jun. 03, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-6	1 GHz – 26.5 GHz	Nov. 02, 2015	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-7	1 GHz – 26.5 GHz	Nov. 02, 2015	Conducted (TH01-CB)

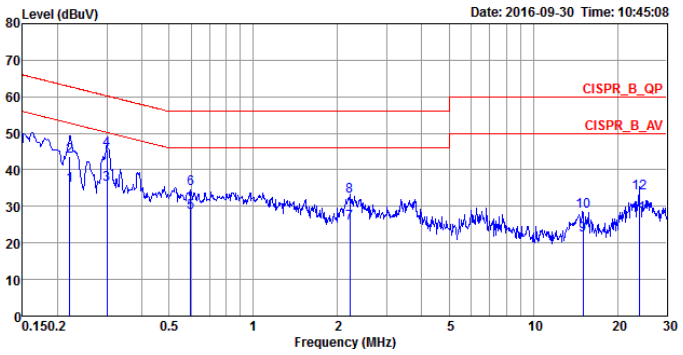
Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
RF Cable-high	Woken	RG402	High Cable-8	1 GHz – 26.5 GHz	Nov. 02, 2015	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-9	1 GHz – 26.5 GHz	Nov. 02, 2015	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz – 26.5 GHz	Nov. 02, 2015	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY53410001	50MHz~18GHz	Nov. 02, 2015	Conducted (TH01-CB)

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

"*" Calibration Interval of instruments listed above is two years.

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

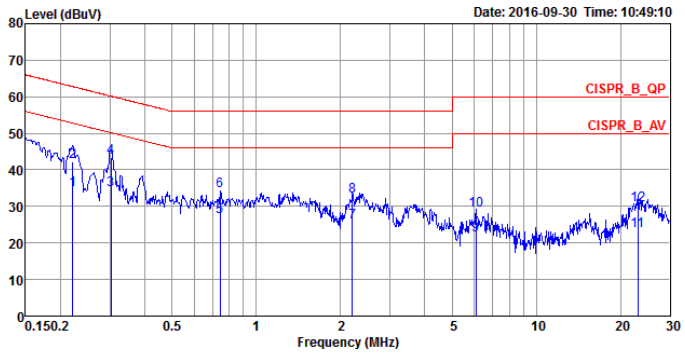
AC Power-line Conducted Emissions Result			
Operating Mode	2	**Power Phase**	Neutral
Operating Function	Normal Link		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Pol/Phase	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.2208	35.61	-17.18	52.79	25.61	9.97	0.03	NEUTRAL	Average
2	0.2208	43.60	-19.19	62.79	33.60	9.97	0.03	NEUTRAL	QP
3	0.3003	35.94	-14.30	50.24	25.94	9.96	0.04	NEUTRAL	Average
4	0.3003	45.33	-14.91	60.24	35.33	9.96	0.04	NEUTRAL	QP
5	0.5979	28.26	-17.74	46.00	18.25	9.97	0.04	NEUTRAL	Average
6	0.5979	34.98	-21.02	56.00	24.97	9.97	0.04	NEUTRAL	QP
7	2.2132	25.49	-20.51	46.00	15.43	10.00	0.06	NEUTRAL	Average
8	2.2132	32.67	-23.33	56.00	22.61	10.00	0.06	NEUTRAL	QP
9	15.0750	22.02	-27.98	50.00	11.53	10.23	0.26	NEUTRAL	Average
10	15.0750	28.66	-31.34	60.00	18.17	10.23	0.26	NEUTRAL	QP
11	23.8476	27.64	-22.36	50.00	17.03	10.34	0.27	NEUTRAL	Average
12	23.8476	33.65	-26.35	60.00	23.04	10.34	0.27	NEUTRAL	QP

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	2	**Power Phase**	Line
Operating Function	Normal Link		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Pol/Phase	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.2208	34.48	-18.31	52.79	24.49	9.96	0.03	LINE	Average
2	0.2208	42.21	-20.58	62.79	32.22	9.96	0.03	LINE	QP
3	0.3035	34.63	-15.52	50.15	24.64	9.95	0.04	LINE	Average
4	0.3035	43.44	-16.71	60.15	33.45	9.95	0.04	LINE	QP
5	0.7430	27.25	-18.75	46.00	17.25	9.96	0.04	LINE	Average
6	0.7430	34.13	-21.87	56.00	24.13	9.96	0.04	LINE	QP
7	2.2015	25.81	-20.19	46.00	15.75	10.00	0.06	LINE	Average
8	2.2015	32.82	-23.18	56.00	22.76	10.00	0.06	LINE	QP
9	6.0885	22.11	-27.89	50.00	11.90	10.08	0.13	LINE	Average
10	6.0885	28.85	-31.15	60.00	18.64	10.08	0.13	LINE	QP
11	23.0181	23.37	-26.63	50.00	12.70	10.40	0.27	LINE	Average
12	23.0181	30.37	-29.63	60.00	19.70	10.40	0.27	LINE	QP

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.)

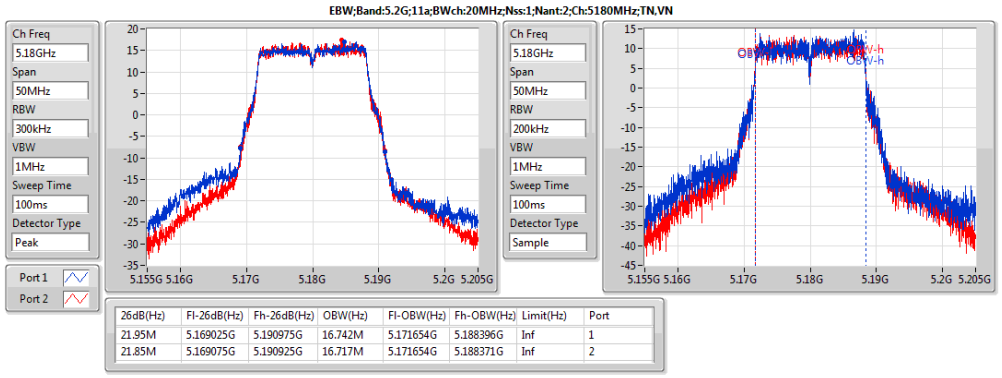
Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.2G;11a;Nss1;Ntx2	41.175M	17.791M	17M8D1D	21.85M	16.717M
5.8G;11a;Nss1;Ntx2	16.35M	24.563M	24M6D1D	16.275M	18.466M
5.2G;VHT20;Nss1,(M0);Ntx2	36.875M	17.991M	18M0D1D	21.725M	17.791M
5.8G;VHT20;Nss1,(M0);Ntx2	17.6M	26.187M	26M2D1D	16.525M	19.14M
5.2G;VHT40;Nss1,(M0);Ntx2	69.2M	36.532M	36M5D1D	39.95M	36.232M
5.8G;VHT40;Nss1,(M0);Ntx2	36.3M	55.622M	55M6D1D	36M	42.429M
5.2G;VHT80;Nss1,(M0);Ntx2	81.7M	75.662M	75M7D1D	81.5M	75.562M
5.8G;VHT80;Nss1,(M0);Ntx2	75.7M	75.862M	75M9D1D	75.1M	75.762M

Result

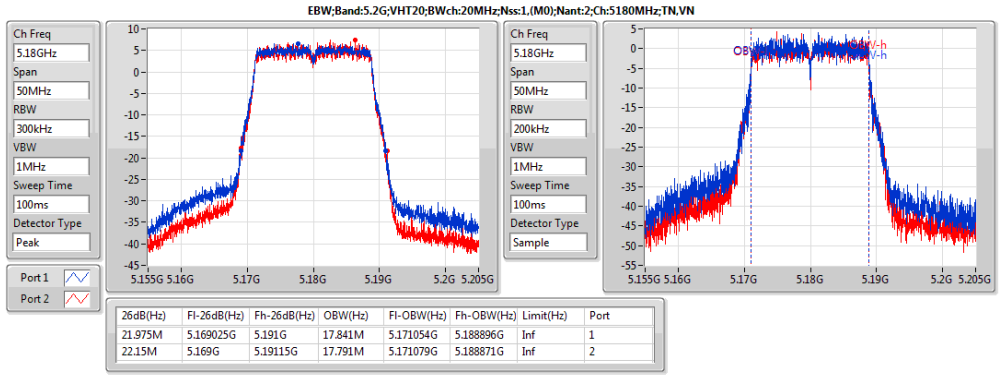
Mode	Result	Limit	P1-N dB (Hz)	P1-OBW (Hz)	P2-N dB (Hz)	P2-OBW (Hz)
5.2G;11a;Nss1;Ntx2;5180	Pass	Inf	21.95M	16.742M	21.85M	16.717M
5.2G;11a;Nss1;Ntx2;5200	Pass	Inf	39.125M	17.116M	22.625M	16.742M
5.2G;11a;Nss1;Ntx2;5240	Pass	Inf	41.175M	17.791M	33.925M	16.892M
5.8G;11a;Nss1;Ntx2;5745	Pass	500k	16.3M	23.263M	16.35M	18.741M
5.8G;11a;Nss1;Ntx2;5785	Pass	500k	16.275M	24.563M	16.325M	18.991M
5.8G;11a;Nss1;Ntx2;5825	Pass	500k	16.325M	24.238M	16.35M	18.466M
5.2G;VHT20;Nss1,(M0);Ntx2;5180	Pass	Inf	21.975M	17.841M	22.15M	17.791M
5.2G;VHT20;Nss1,(M0);Ntx2;5200	Pass	Inf	32.025M	17.991M	21.85M	17.816M
5.2G;VHT20;Nss1,(M0);Ntx2;5240	Pass	Inf	36.875M	17.991M	21.725M	17.841M
5.8G;VHT20;Nss1,(M0);Ntx2;5745	Pass	500k	17.55M	25.537M	17.55M	19.915M
5.8G;VHT20;Nss1,(M0);Ntx2;5785	Pass	500k	16.525M	26.187M	17.55M	20.59M
5.8G;VHT20;Nss1,(M0);Ntx2;5825	Pass	500k	17.6M	25.687M	17.6M	19.14M
5.2G;VHT40;Nss1,(M0);Ntx2;5190	Pass	Inf	40.7M	36.232M	39.95M	36.282M
5.2G;VHT40;Nss1,(M0);Ntx2;5230	Pass	Inf	69.2M	36.532M	40M	36.282M
5.8G;VHT40;Nss1,(M0);Ntx2;5755	Pass	500k	36M	55.622M	36.3M	43.128M
5.8G;VHT40;Nss1,(M0);Ntx2;5795	Pass	500k	36.3M	53.723M	36.3M	42.429M
5.2G;VHT80;Nss1,(M0);Ntx2;5210	Pass	Inf	81.7M	75.662M	81.5M	75.562M
5.8G;VHT80;Nss1,(M0);Ntx2;5775	Pass	500k	75.1M	75.862M	75.7M	75.762M

EBW;Band:5.2G;11a;BWch:20MHz;Nss:1;Nant:2;Ch:5180MHz;TN,VN



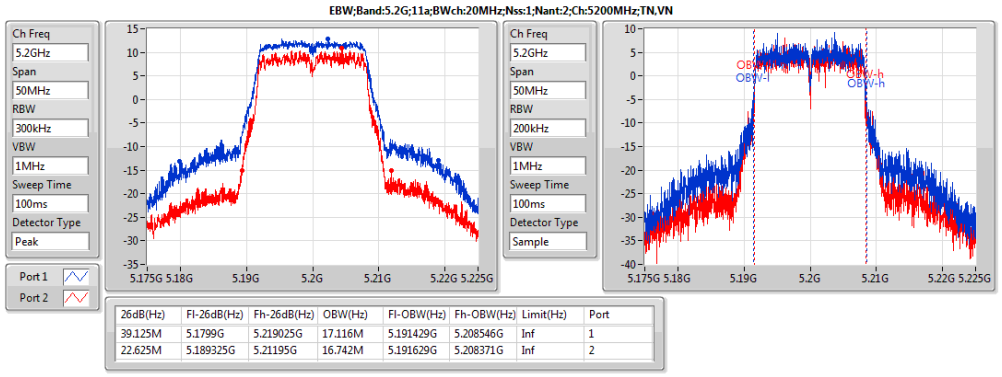
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
21.95M	5.169025G	5.190975G	16.742M	5.171654G	5.188396G	Inf	1
21.85M	5.169075G	5.190925G	16.717M	5.171654G	5.188371G	Inf	2

EBW;Band:5.2G;VHT20;BWch:20MHz;Nss:1,(M0);Nant:2;Ch:5180MHz;TN,VN



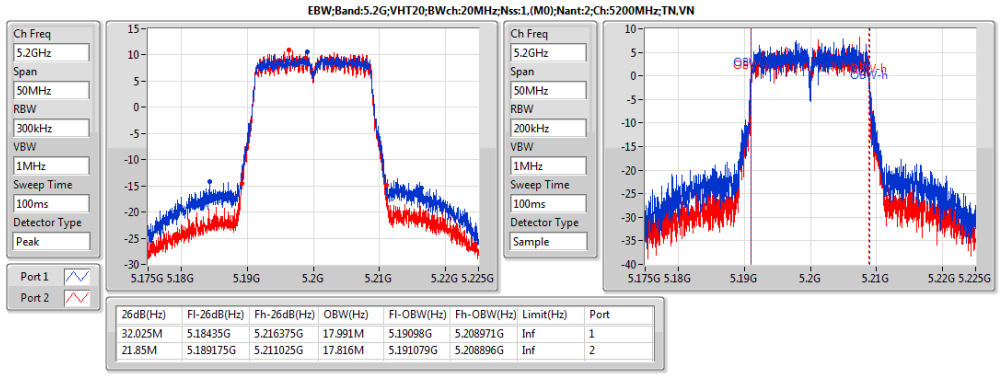
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
21.975M	5.169025G	5.191G	17.841M	5.171054G	5.188896G	Inf	1
22.15M	5.169G	5.19115G	17.791M	5.171079G	5.188871G	Inf	2

EBW;Band:5.2G;11a;BWch:20MHz;Nss:1;Nant:2;Ch:5200MHz;TN,VN



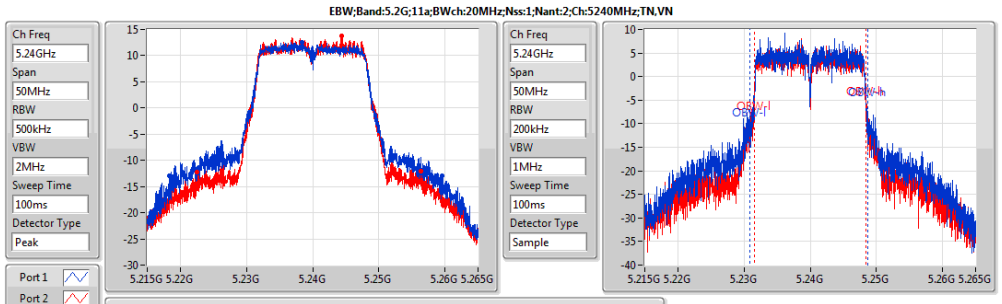
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
39.125M	5.1799G	5.219025G	17.116M	5.191429G	5.208546G	Inf	1
22.625M	5.189325G	5.21195G	16.742M	5.191629G	5.208371G	Inf	2

EBW;Band:5.2G;VHT20;BWch:20MHz;Nss:1,(M0);Nant:2;Ch:5200MHz;TN,VN



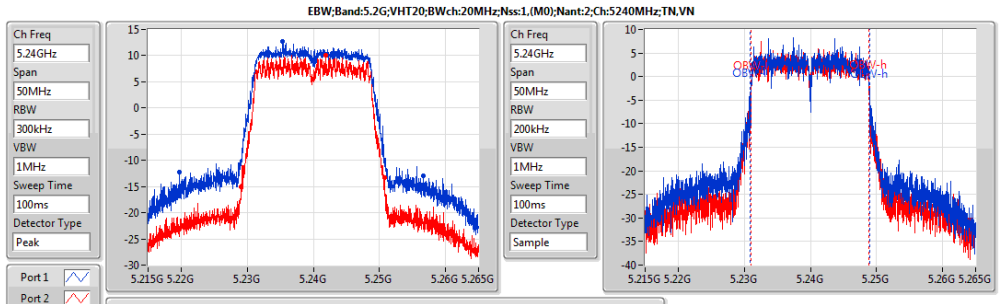
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
32.025M	5.18435G	5.216375G	17.991M	5.19098G	5.208971G	Inf	1
21.85M	5.189175G	5.211025G	17.816M	5.191079G	5.208896G	Inf	2

EBW;Band:5.2G;11a;BWch:20MHz;Nss:1;Nant:2;Ch:5240MHz;TN,VN



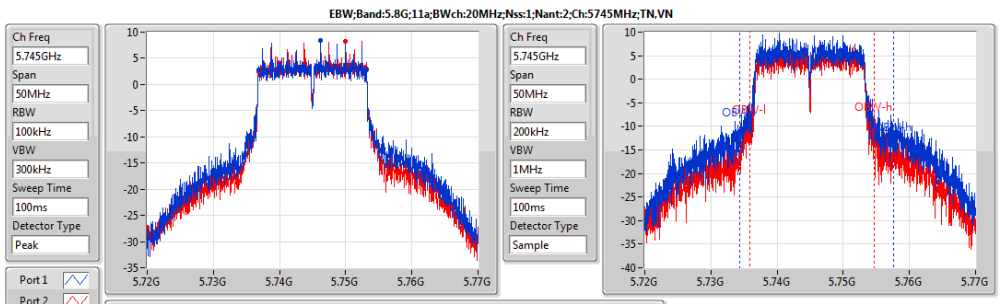
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
41.175M	5.21835G	5.259525G	17.791M	5.230905G	5.248696G	Inf	1
33.925M	5.222475G	5.2564G	16.892M	5.231504G	5.248396G	Inf	2

EBW;Band:5.2G;VHT20;BWch:20MHz;Nss:1,(M0);Nant:2;Ch:5240MHz;TN,VN



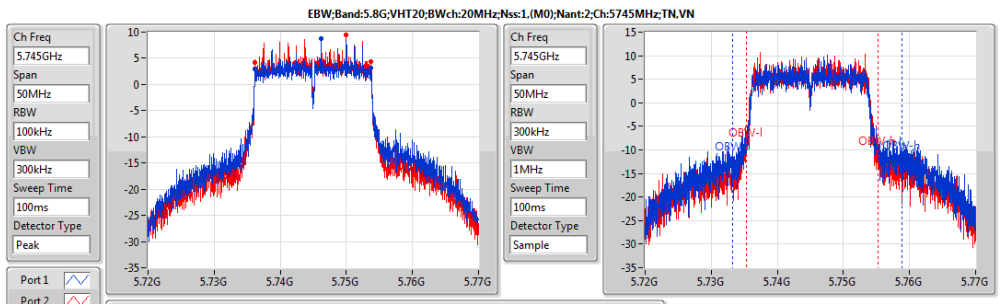
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
36.875M	5.219775G	5.25665G	17.991M	5.23093G	5.248921G	Inf	1
21.725M	5.2291G	5.250825G	17.841M	5.231029G	5.248871G	Inf	2

EBW;Band:5.8G;11a;BWch:20MHz;Nss:1;Nant:2;Ch:5745MHz;TN,VN



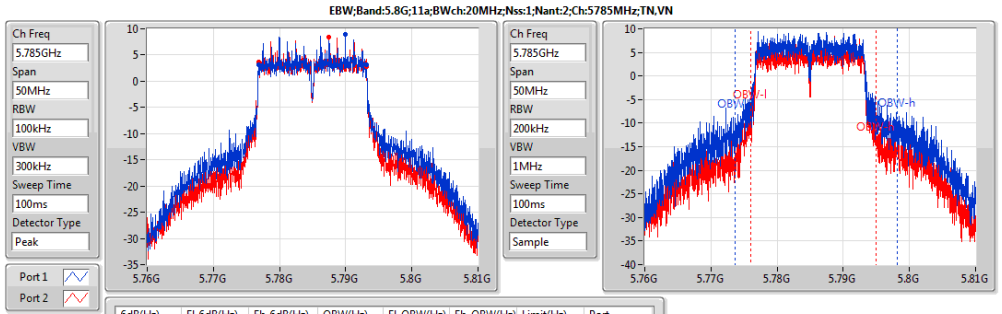
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.3M	5.736825G	5.753125G	23.263M	5.73438G	5.757644G	500k	1
16.35M	5.7368G	5.75315G	18.741M	5.735905G	5.754645G	500k	2

EBW;Band:5.8G;VHT20;BWch:20MHz;Nss:1,(M0);Nant:2;Ch:5745MHz;TN,VN



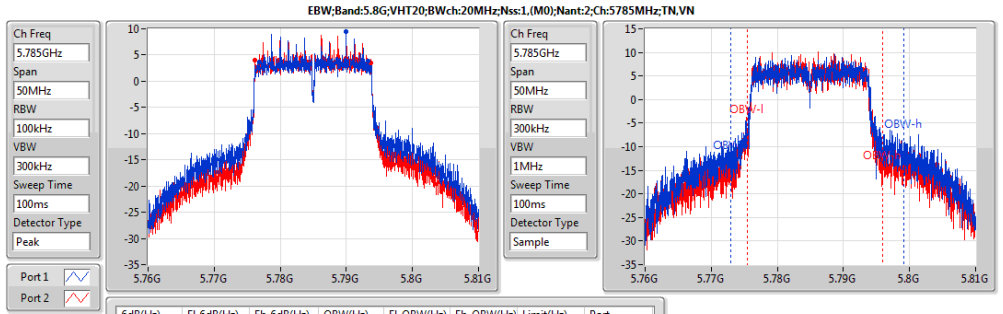
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.55M	5.7362G	5.75375G	25.537M	5.733281G	5.758818G	500k	1
17.55M	5.7362G	5.75375G	19.915M	5.73538G	5.755295G	500k	2

EBW;Band:5.8G;11a;BWch:20MHz;Nss:1;Nant:2;Ch:5785MHz;TN,VN



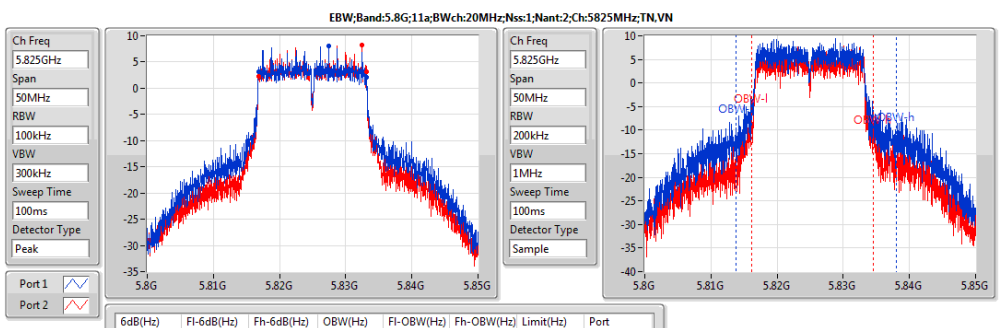
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.275M	5.77685G	5.793125G	24.563M	5.773631G	5.798193G	500k	1
16.325M	5.776825G	5.79315G	18.991M	5.775955G	5.794945G	500k	2

EBW;Band:5.8G;VHT20;BWch:20MHz;Nss:1,(M0);Nant:2;Ch:5785MHz;TN,VN



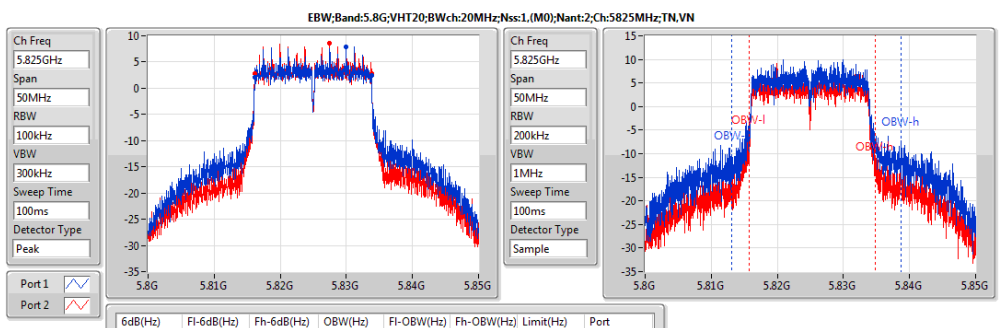
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.525M	5.776825G	5.79335G	26.187M	5.772956G	5.799143G	500k	1
17.55M	5.7762G	5.79375G	20.59M	5.775405G	5.795995G	500k	2

EBW;Band:5.8G;11a;BWch:20MHz;Nss:1;Nant:2;Ch:5825MHz;TN,VN



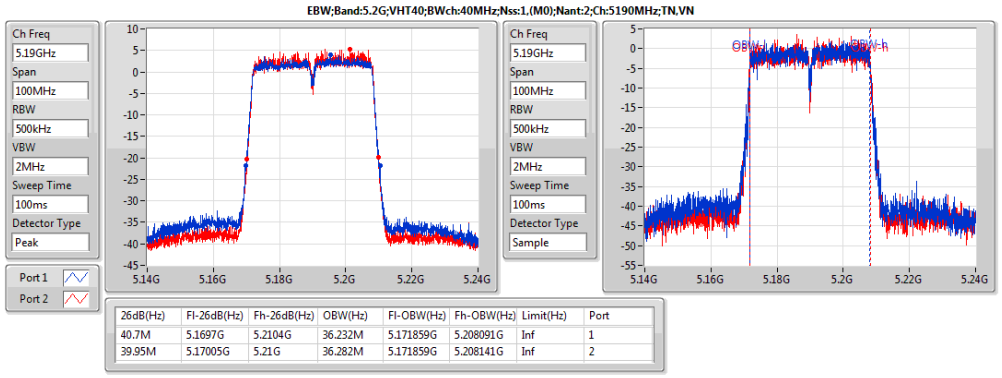
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.325M	5.816825G	5.83315G	24.238M	5.813781G	5.838018G	500k	1
16.35M	5.8168G	5.83315G	18.466M	5.816104G	5.83457G	500k	2

EBW;Band:5.8G;VHT20;BWch:20MHz;Nss:1,(M0);Nant:2;Ch:5825MHz;TN,VN



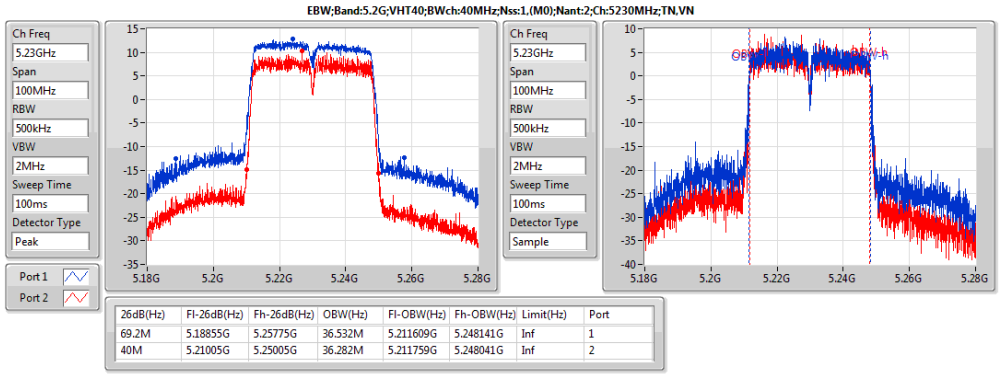
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.6M	5.816175G	5.833775G	25.687M	5.813031G	5.838718G	500k	1
17.6M	5.816175G	5.833775G	19.14M	5.815705G	5.834845G	500k	2

EBW;Band:5.2G;VHT40;BWch:40MHz;Nss:1,(M0);Nant:2;Ch:5190MHz;TN,VN



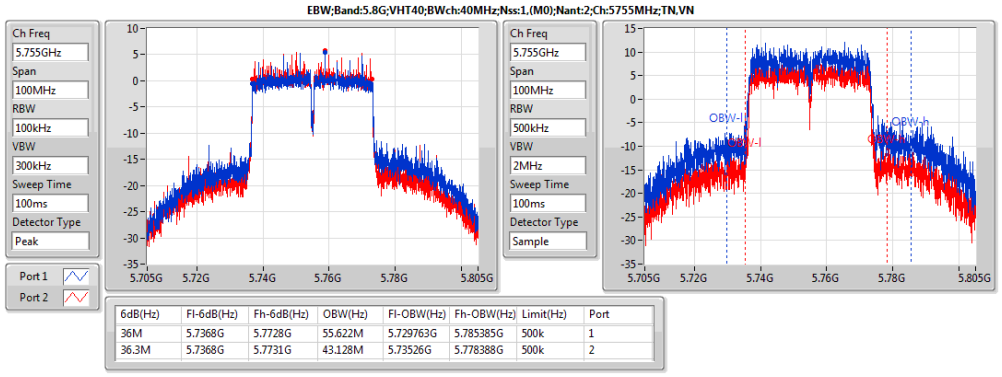
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
40.7M	5.1697G	5.2104G	36.232M	5.171859G	5.208091G	Inf	1
39.95M	5.17005G	5.21G	36.282M	5.171859G	5.208141G	Inf	2

EBW;Band:5.2G;VHT40;BWch:40MHz;Nss:1,(M0);Nant:2;Ch:5230MHz;TN,VN



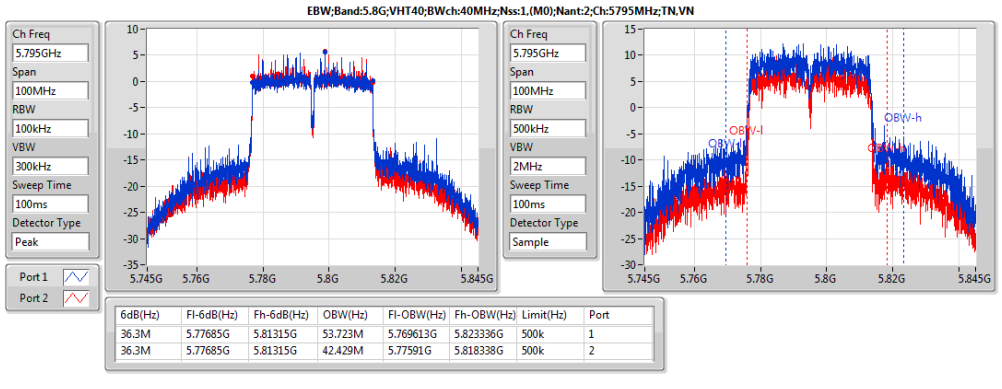
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
69.2M	5.18855G	5.25775G	36.532M	5.211609G	5.248141G	Inf	1
40M	5.21005G	5.25005G	36.282M	5.211759G	5.248041G	Inf	2

EBW;Band:5.8G;VHT40;BWch:40MHz;Nss:1,(M0);Nant:2;Ch:5755MHz;TN,VN



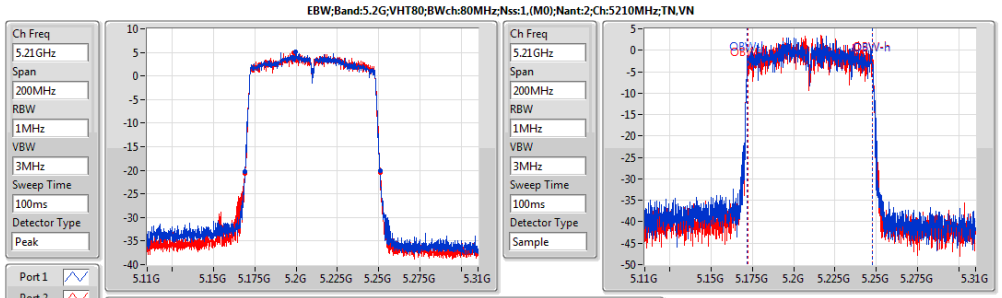
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
36M	5.7368G	5.7728G	55.622M	5.729763G	5.785385G	500k	1
36.3M	5.7368G	5.7731G	43.128M	5.73526G	5.778388G	500k	2

EBW;Band:5.8G;VHT40;BWch:40MHz;Nss:1,(M0);Nant:2;Ch:5795MHz;TN,VN



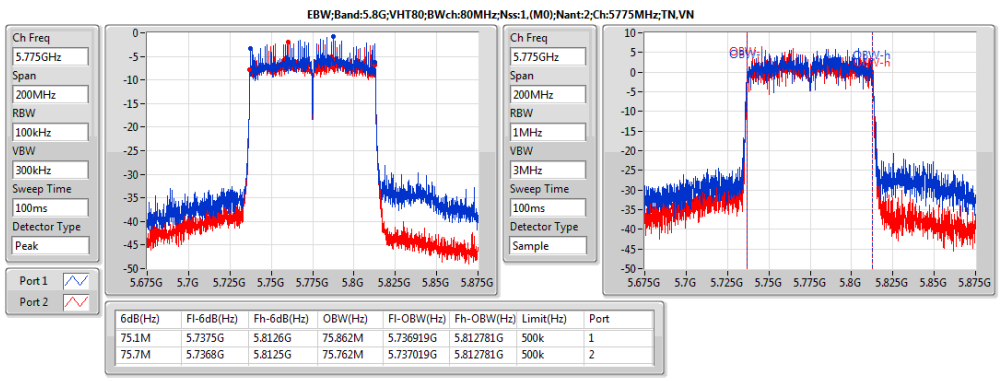
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
36.3M	5.77685G	5.81315G	53.723M	5.769613G	5.823336G	500k	1
36.3M	5.77685G	5.81315G	42.429M	5.77591G	5.818338G	500k	2

EBW;Band:5.2G;VHT80;BWch:80MHz;Nss:1,(M0);Nant:2;Ch:5210MHz;TN,VN



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
81.7M	5.169G	5.2507G	75.662M	5.172019G	5.247681G	Inf	1
81.5M	5.1692G	5.2507G	75.562M	5.172119G	5.247681G	Inf	2

EBW;Band:5.8G;VHT80;BWch:80MHz;Nss:1,(M0);Nant:2;Ch:5775MHz;TN,VN



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
75.1M	5.7375G	5.8126G	75.862M	5.736919G	5.812781G	500k	1
75.7M	5.7368G	5.8125G	75.762M	5.737019G	5.812781G	500k	2

Summary

Mode	Sum (dBm)	Sum (W)	EIRP (dBm)	EIRP (W)
5.2G;11a;Nss1;Ntx2	22.10	0.16218	27.01	0.50234
5.8G;11a;Nss1;Ntx2	22.66	0.1845	27.57	0.57148
5.2G;VHT20;Nss1,(M0);Ntx2	22.12	0.16293	27.03	0.50466
5.8G;VHT20;Nss1,(M0);Ntx2	22.78	0.18967	27.69	0.58749
5.2G;VHT40;Nss1,(M0);Ntx2	20.49	0.11194	25.40	0.34674
5.8G;VHT40;Nss1,(M0);Ntx2	22.62	0.18281	27.53	0.56624
5.2G;VHT80;Nss1,(M0);Ntx2	15.62	0.03648	20.53	0.11298
5.8G;VHT80;Nss1,(M0);Ntx2	18.55	0.07161	23.46	0.22182

Result

Mode	Result	DG (dBi)	EIRP (dBm)	EIRP Lim. (dBm)	Sum (dBm)	Sum Lim. (dBm)	P1 (dBm)	P2 (dBm)
5.2G;11a;Nss1;Ntx2;5180	Pass	4.91	23.48	30.00	18.57	23.98	15.78	15.32
5.2G;11a;Nss1;Ntx2;5200	Pass	4.91	26.28	30.00	21.37	23.98	18.63	18.07
5.2G;11a;Nss1;Ntx2;5240	Pass	4.91	27.01	30.00	22.10	23.98	19.37	18.78
5.8G;11a;Nss1;Ntx2;5745	Pass	4.91	27.52	36.00	22.61	30.00	19.37	19.82
5.8G;11a;Nss1;Ntx2;5785	Pass	4.91	27.57	36.00	22.66	30.00	19.46	19.84
5.8G;11a;Nss1;Ntx2;5825	Pass	4.91	27.41	36.00	22.50	30.00	19.35	19.62
5.2G;VHT20;Nss1,(M0);Ntx2;5180	Pass	4.91	23.09	30.00	18.18	23.98	15.37	14.95
5.2G;VHT20;Nss1,(M0);Ntx2;5200	Pass	4.91	25.97	30.00	21.06	23.98	18.33	17.74
5.2G;VHT20;Nss1,(M0);Ntx2;5240	Pass	4.91	27.03	30.00	22.12	23.98	19.35	18.85
5.8G;VHT20;Nss1,(M0);Ntx2;5745	Pass	4.91	27.69	36.00	22.78	30.00	19.58	19.95
5.8G;VHT20;Nss1,(M0);Ntx2;5785	Pass	4.91	27.66	36.00	22.75	30.00	19.62	19.86
5.8G;VHT20;Nss1,(M0);Ntx2;5825	Pass	4.91	27.54	36.00	22.63	30.00	19.48	19.75
5.2G;VHT40;Nss1,(M0);Ntx2;5190	Pass	4.91	20.33	30.00	15.42	23.98	12.54	12.27
5.2G;VHT40;Nss1,(M0);Ntx2;5230	Pass	4.91	25.40	30.00	20.49	23.98	17.76	17.17
5.8G;VHT40;Nss1,(M0);Ntx2;5755	Pass	4.91	27.53	36.00	22.62	30.00	19.36	19.85
5.8G;VHT40;Nss1,(M0);Ntx2;5795	Pass	4.91	27.42	36.00	22.51	30.00	19.31	19.69
5.2G;VHT80;Nss1,(M0);Ntx2;5210	Pass	4.91	20.53	30.00	15.62	23.98	12.84	12.36
5.8G;VHT80;Nss1,(M0);Ntx2;5775	Pass	4.91	23.46	36.00	18.55	30.00	15.73	15.34

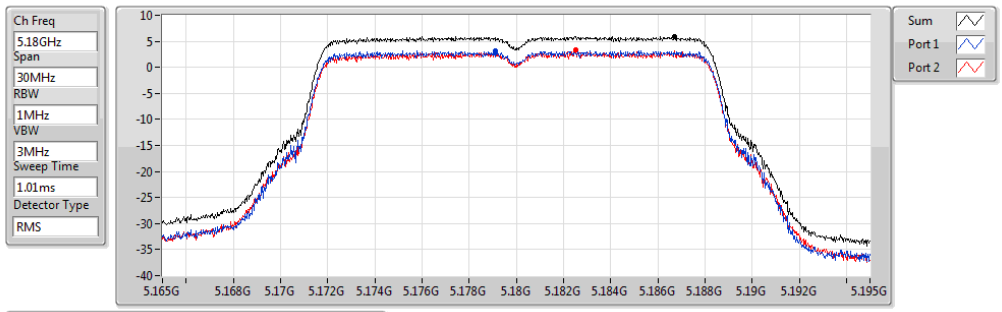
Summary

Mode	PD (dBm/RBW)	EIRP.PD (dBm/RBW)
5.2G;11a;Nss1;Ntx2	8.93	16.76
5.8G;11a;Nss1;Ntx2	8.17	16.00
5.2G;VHT20;Nss1,(M0);Ntx2	8.81	16.64
5.8G;VHT20;Nss1,(M0);Ntx2	8.00	15.83
5.2G;VHT40;Nss1,(M0);Ntx2	5.04	12.87
5.8G;VHT40;Nss1,(M0);Ntx2	5.03	12.86
5.2G;VHT80;Nss1,(M0);Ntx2	-2.56	5.27
5.8G;VHT80;Nss1,(M0);Ntx2	-1.92	5.91

Result

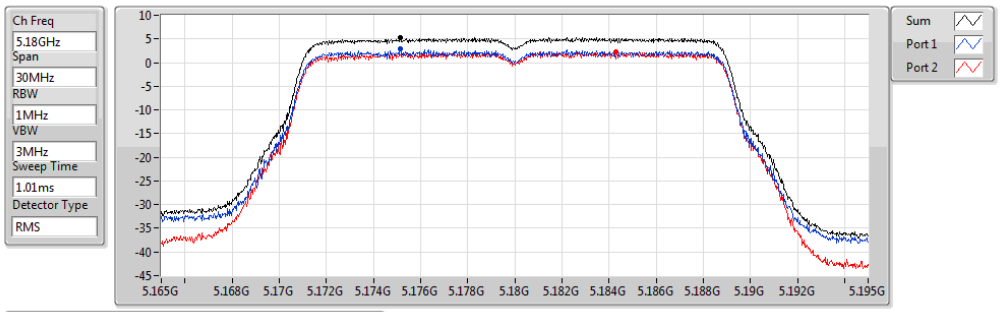
Mode	Result	Meas.RBW (Hz)	Lim.RBW (Hz)	BWCF (dB)	DG (dBi)	Sum.Max (dBm/RBW)	PD (dBm/RBW)	PD.Limit (dBm/RBW)	EIRP.PD (dBm/RBW)	EIRP.PD.Lim (dBm/RBW)	P1 (dBm/RBW)	P2 (dBm/RBW)
5.2G;11a;Nss1;Ntx2;5180	Pass	1M	1M	0.00	7.83	5.98	5.98	9.17	13.81	Inf	3.21	3.28
5.2G;11a;Nss1;Ntx2;5200	Pass	1M	1M	0.00	7.83	8.82	8.82	9.17	16.65	Inf	6.17	5.98
5.2G;11a;Nss1;Ntx2;5240	Pass	1M	1M	0.00	7.83	8.93	8.93	9.17	16.76	Inf	6.51	6.22
5.8G;11a;Nss1;Ntx2;5745	Pass	500k	500k	0.00	7.83	7.98	7.98	28.17	15.81	Inf	4.88	5.46
5.8G;11a;Nss1;Ntx2;5785	Pass	500k	500k	0.00	7.83	8.17	8.17	28.17	16.00	Inf	5.33	5.48
5.8G;11a;Nss1;Ntx2;5825	Pass	500k	500k	0.00	7.83	8.02	8.02	28.17	15.85	Inf	5.19	5.32
5.2G;VHT20;Nss1,(M0);Ntx2;5180	Pass	1M	1M	0.00	7.83	5.34	5.34	9.17	13.17	Inf	2.98	2.28
5.2G;VHT20;Nss1,(M0);Ntx2;5200	Pass	1M	1M	0.00	7.83	8.81	8.81	9.17	16.64	Inf	6.28	5.78
5.2G;VHT20;Nss1,(M0);Ntx2;5240	Pass	1M	1M	0.00	7.83	8.76	8.76	9.17	16.59	Inf	6.11	5.68
5.8G;VHT20;Nss1,(M0);Ntx2;5745	Pass	500k	500k	0.00	7.83	7.84	7.84	28.17	15.67	Inf	4.82	5.40
5.8G;VHT20;Nss1,(M0);Ntx2;5785	Pass	500k	500k	0.00	7.83	7.91	7.91	28.17	15.74	Inf	5.14	5.52
5.8G;VHT20;Nss1,(M0);Ntx2;5825	Pass	500k	500k	0.00	7.83	8.00	8.00	28.17	15.83	Inf	5.05	4.96
5.2G;VHT40;Nss1,(M0);Ntx2;5190	Pass	1M	1M	0.00	7.83	0.18	0.18	9.17	8.01	Inf	-2.74	-2.88
5.2G;VHT40;Nss1,(M0);Ntx2;5230	Pass	1M	1M	0.00	7.83	5.04	5.04	9.17	12.87	Inf	2.56	1.98
5.8G;VHT40;Nss1,(M0);Ntx2;5755	Pass	500k	500k	0.00	7.83	4.96	4.96	28.17	12.79	Inf	1.96	2.25
5.8G;VHT40;Nss1,(M0);Ntx2;5795	Pass	500k	500k	0.00	7.83	5.03	5.03	28.17	12.86	Inf	2.26	2.50
5.2G;VHT80;Nss1,(M0);Ntx2;5210	Pass	1M	1M	0.00	7.83	-2.56	-2.56	9.17	5.27	Inf	-5.16	-5.58
5.8G;VHT80;Nss1,(M0);Ntx2;5775	Pass	500k	500k	0.00	7.83	-1.92	-1.92	28.17	5.91	Inf	-4.37	-5.41

PSD;Band:5.2G;11a;BWch:20MHz;Nss:1;Nant:2;Ch:5180MHz;TN,VN



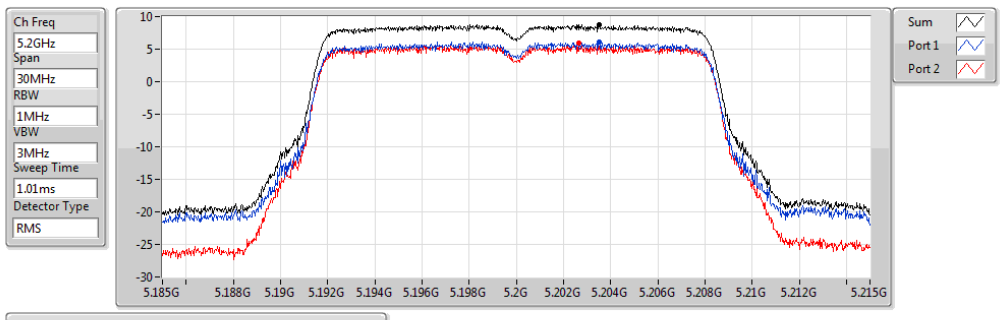
Sum.Max	PD	P1	P2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
5.98	5.98	3.21	3.28

PSD;Band:5.2G;VHT20;BWch:20MHz;Nss:1,(M0);Nant:2;Ch:5180MHz;TN,VN



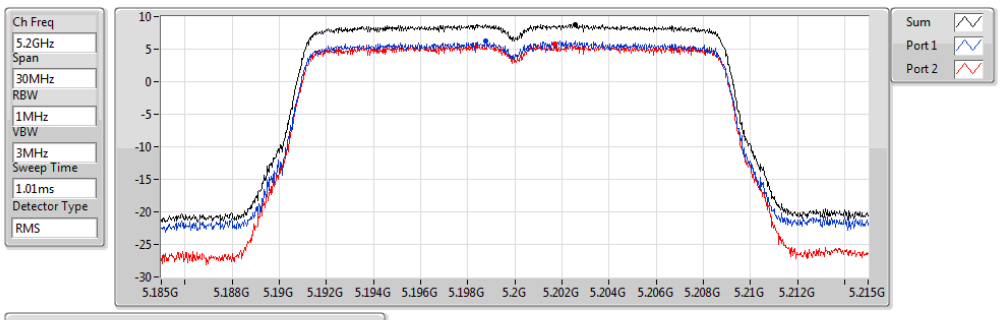
Sum.Max	PD	P1	P2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
5.34	5.34	2.98	2.28

PSD;Band:5.2G;11a;BWch:20MHz;Nss:1;Nant:2;Ch:5200MHz;TN,VN



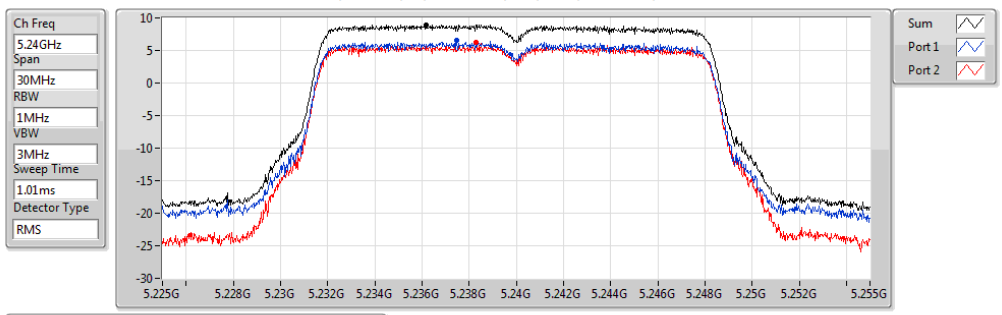
Sum.Max	PD	P1	P2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
8.82	8.82	6.17	5.98

PSD;Band:5.2G;VHT20;BWch:20MHz;Nss:1,(M0);Nant:2;Ch:5200MHz;TN,VN



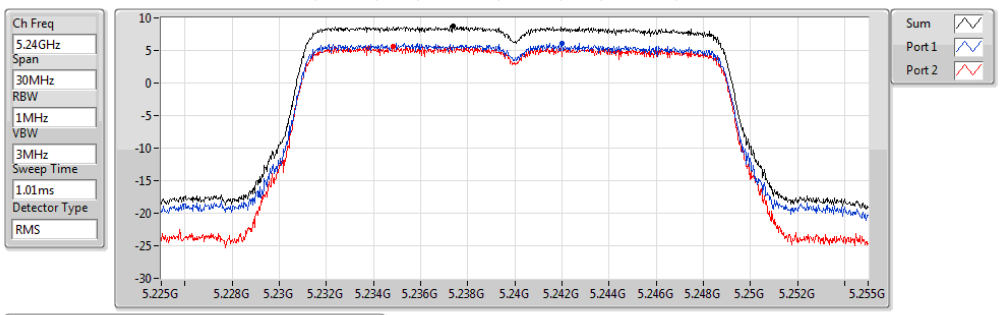
Sum.Max	PD	P1	P2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
8.81	8.81	6.28	5.78

PSD;Band:5.2G;11a;BWch:20MHz;Nss:1;Nant:2;Ch:5240MHz;TN,VN



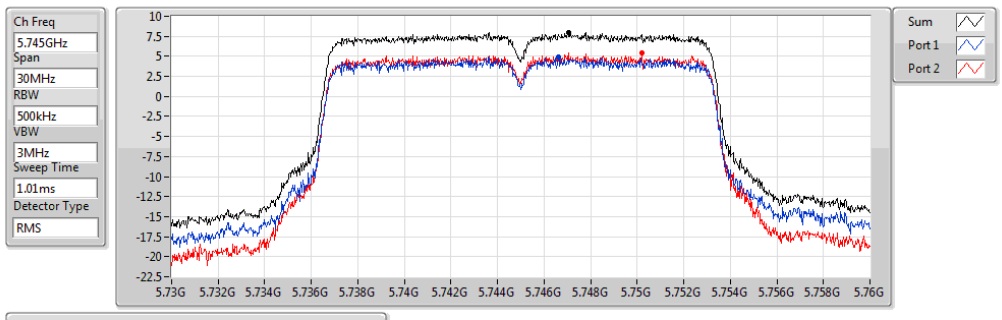
Sum.Max	PD	P1	P2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
8.93	8.93	6.51	6.22

PSD;Band:5.2G;VHT20;BWch:20MHz;Nss:1,(M0);Nant:2;Ch:5240MHz;TN,VN



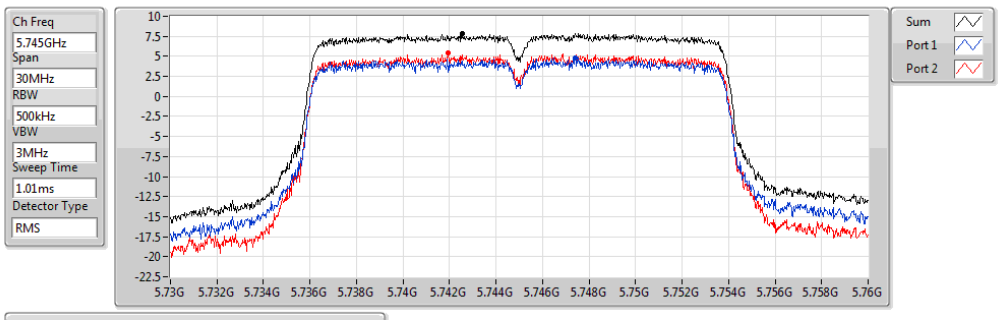
Sum.Max	PD	P1	P2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
8.76	8.76	6.11	5.68

PSD;Band:5.8G;11a;BWch:20MHz;Nss:1;Nant:2;Ch:5745MHz;TN,VN



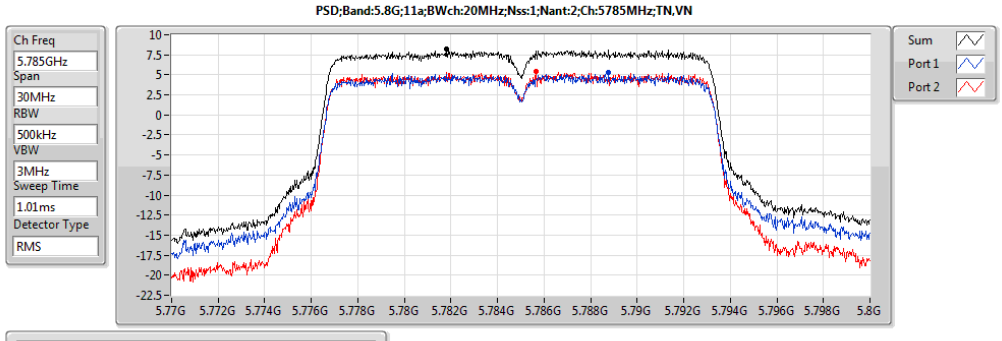
Sum.Max	PD	P1	P2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.98	7.98	4.88	5.46

PSD;Band:5.8G;VHT20;BWch:20MHz;Nss:1,(M0);Nant:2;Ch:5745MHz;TN,VN



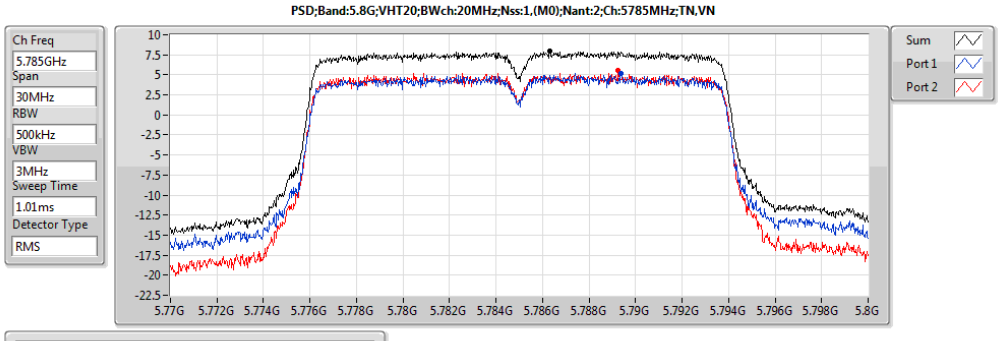
Sum.Max	PD	P1	P2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.84	7.84	4.82	5.40

PSD;Band:5.8G;11a;BWch:20MHz;Nss:1;Nant:2;Ch:5785MHz;TN,VN



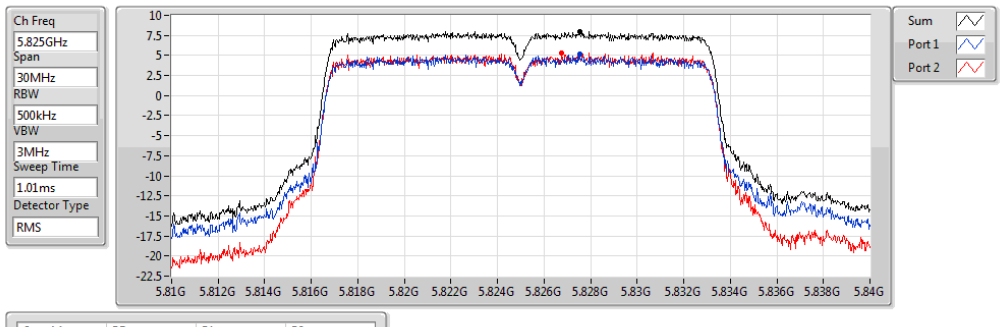
Sum.Max	PD	P1	P2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
8.17	8.17	5.33	5.48

PSD;Band:5.8G;VHT20;BWch:20MHz;Nss:1,(M0);Nant:2;Ch:5785MHz;TN,VN



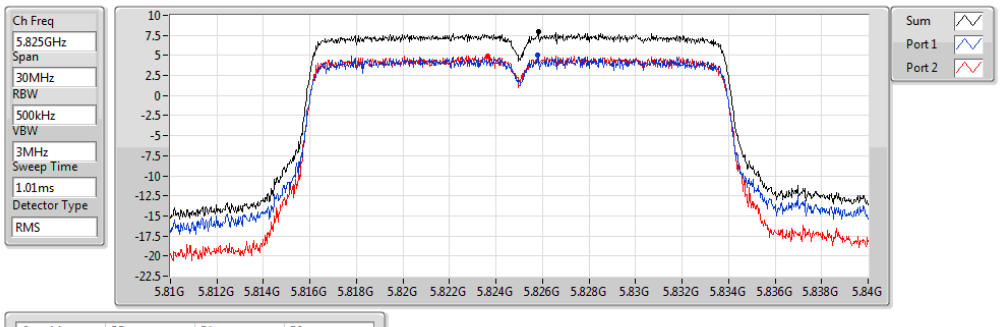
Sum.Max	PD	P1	P2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.91	7.91	5.14	5.52

PSD;Band:5.8G;11a;BWch:20MHz;Nss:1;Nant:2;Ch:5825MHz;TN,VN



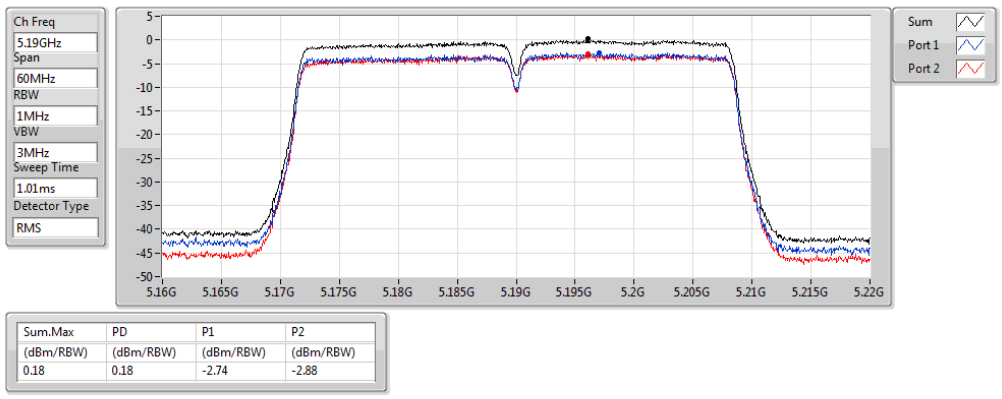
Sum.Max	PD	P1	P2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
8.02	8.02	5.19	5.32

PSD;Band:5.8G;VHT20;BWch:20MHz;Nss:1,(M0);Nant:2;Ch:5825MHz;TN,VN



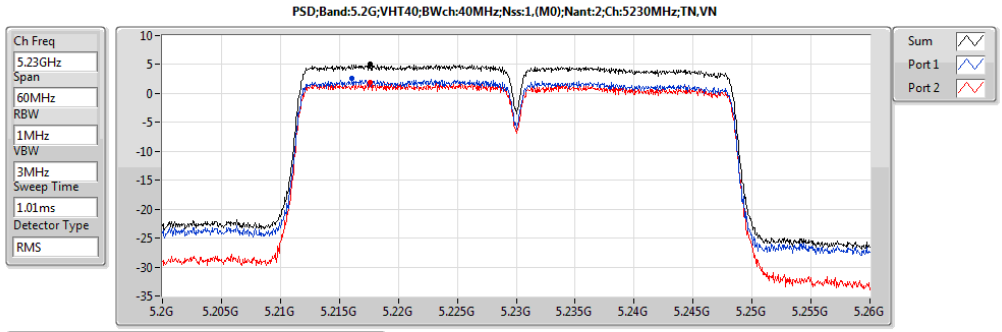
Sum.Max	PD	P1	P2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
8.00	8.00	5.05	4.96

PSD;Band:5.2G;VHT40;BWch:40MHz;Nss:1,(M0);Nant:2;Ch:5190MHz;TN,VN



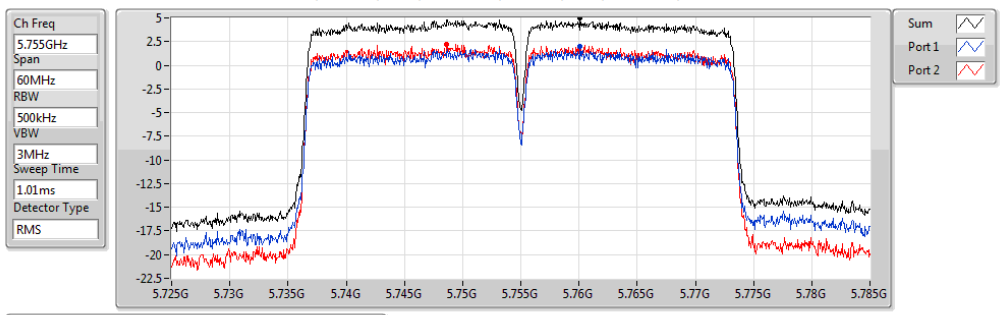
Sum.Max	PD	P1	P2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
0.18	0.18	-2.74	-2.88

PSD;Band:5.2G;VHT40;BWch:40MHz;Nss:1,(M0);Nant:2;Ch:5230MHz;TN,VN



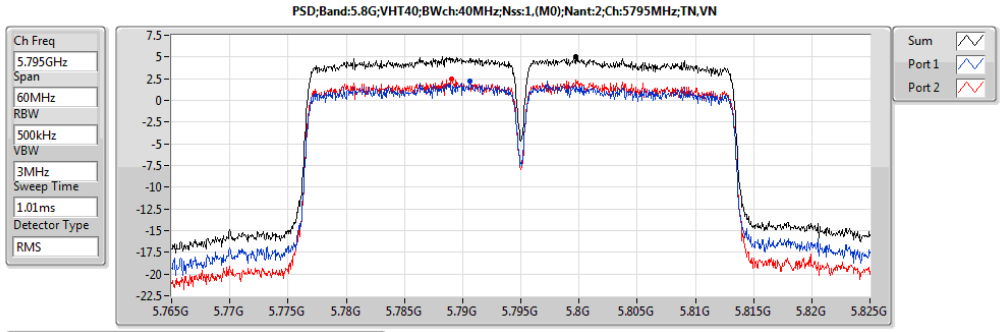
Sum.Max	PD	P1	P2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
5.04	5.04	2.56	1.98

PSD;Band:5.8G;VHT40;BWch:40MHz;Nss:1,(M0);Nant:2;Ch:5755MHz;TN,VN



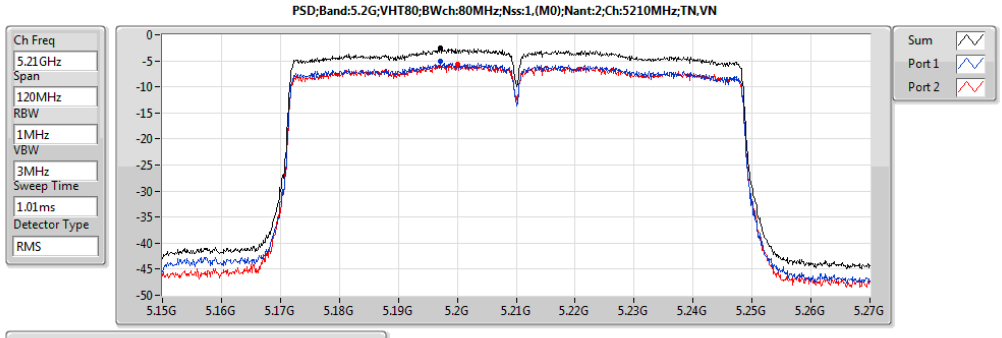
Sum.Max	PD	P1	P2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
4.96	4.96	1.96	2.25

PSD;Band:5.8G;VHT40;BWch:40MHz;Nss:1,(M0);Nant:2;Ch:5795MHz;TN,VN



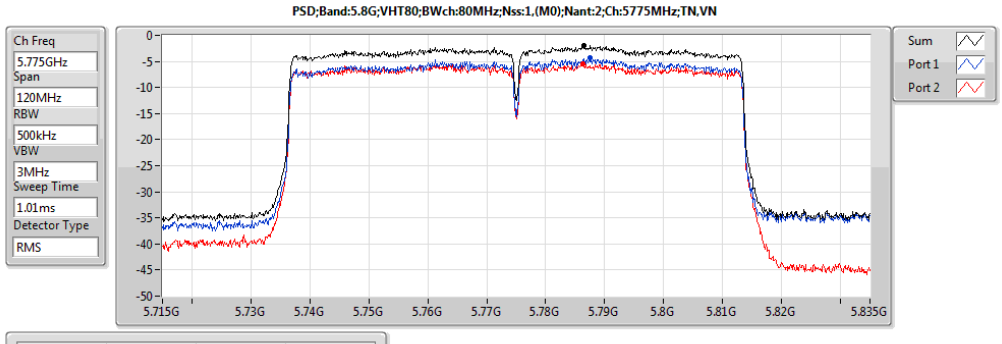
Sum.Max	PD	P1	P2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
5.03	5.03	2.26	2.50

PSD;Band:5.2G;VHT80;BWch:80MHz;Nss:1,(M0);Nant:2;Ch:5210MHz;TN,VN



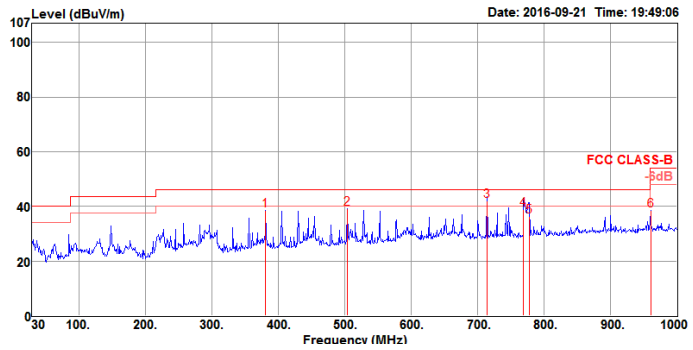
Sum.Max	PD	P1	P2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-2.56	-2.56	-5.16	-5.58

PSD;Band:5.8G;VHT80;BWch:80MHz;Nss:1,(M0);Nant:2;Ch:5775MHz;TN,VN



Sum.Max	PD	P1	P2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-1.92	-1.92	-4.37	-5.41

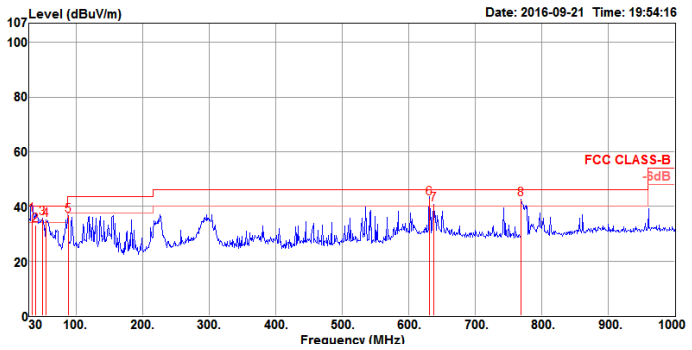
RSE below 1GHz Result			
Operating Mode	1	**Polarization**	Horizontal
Operating Function	Normal Link		



	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	381.14	38.59	46.00	-7.41	47.20	1.91	21.76	32.28	100	346	Peak	HORIZONTAL
2	503.36	39.24	46.00	-6.76	45.63	2.19	23.76	32.34	100	286	Peak	HORIZONTAL
3	713.85	41.93	46.00	-4.07	45.96	2.61	25.68	32.32	125	121	QP	HORIZONTAL
4	769.14	38.96	46.00	-7.04	42.19	2.72	26.29	32.24	300	37	QP	HORIZONTAL
5	777.87	36.42	46.00	-9.58	39.54	2.73	26.38	32.23	200	2	QP	HORIZONTAL
6	960.23	38.53	54.00	-15.47	38.74	3.06	27.86	31.13	100	164	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	**Power Phase**	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	33.88	36.94	40.00	-3.06	45.65	0.59	23.09	32.39	100	132	QP	VERTICAL
2	39.70	33.24	40.00	-6.76	45.33	0.63	19.66	32.38	100	284	QP	VERTICAL
3	49.40	35.70	40.00	-4.30	52.67	0.71	14.69	32.37	150	202	Peak	VERTICAL
4	55.22	35.15	40.00	-4.85	53.51	0.74	13.27	32.37	150	7	Peak	VERTICAL
5	88.20	36.58	43.50	-6.92	53.49	0.94	14.54	32.39	125	288	Peak	VERTICAL
6	631.40	42.93	46.00	-3.07	47.73	2.45	25.13	32.38	125	266	QP	VERTICAL
7	638.19	40.77	46.00	-5.23	45.49	2.47	25.19	32.38	125	271	Peak	VERTICAL
8	769.14	42.54	46.00	-3.46	45.77	2.72	26.29	32.24	175	188	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.)

Radiated Emissions (1GHz~40GHz)

Configurations	IEEE 802.11a CH 36 / Ant 1 + Ant 2

Horizontal

	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	15540.05	58.49	74.00	-15.51	45.88	9.09	38.16	34.64	159	237	Peak	HORIZONTAL
2	15540.10	45.01	54.00	-8.99	32.40	9.09	38.16	34.64	159	237	Average	HORIZONTAL

Vertical

	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	15539.95	58.05	74.00	-15.95	45.44	9.09	38.16	34.64	161	293	Peak	VERTICAL
2	15540.23	44.85	54.00	-9.15	32.24	9.09	38.16	34.64	161	293	Average	VERTICAL

Configurations	IEEE 802.11a CH 40 / Ant 1 + Ant 2

Horizontal

	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	15600.08	57.61	74.00	-16.39	44.95	9.11	38.23	34.68	169	278	Peak	HORIZONTAL
2	15600.12	44.70	54.00	-9.30	32.04	9.11	38.23	34.68	169	278	Average	HORIZONTAL

Vertical

	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	15599.87	44.83	54.00	-9.17	32.17	9.11	38.23	34.68	181	261	Average	VERTICAL
2	15600.00	57.95	74.00	-16.05	45.29	9.11	38.23	34.68	181	261	Peak	VERTICAL

Configurations	IEEE 802.11a CH 48 / Ant 1 + Ant 2

Horizontal

	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	15719.77	58.63	74.00	-15.37	45.86	9.16	38.42	34.81	176	248	Peak	HORIZONTAL
2	15720.08	45.17	54.00	-8.83	32.40	9.16	38.42	34.81	176	248	Average	HORIZONTAL

Vertical

	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	15720.01	44.97	54.00	-9.03	32.20	9.16	38.42	34.81	165	223	Average	VERTICAL
2	15720.14	57.97	74.00	-16.03	45.20	9.16	38.42	34.81	165	223	Peak	VERTICAL

Configurations	IEEE 802.11a CH 149 / Ant 1 + Ant 2

Horizontal

	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	11489.79	56.14	74.00	-17.86	44.34	7.92	38.50	34.62	171	94	Peak	HORIZONTAL
2	11489.91	42.62	54.00	-11.38	30.82	7.92	38.50	34.62	171	94	Average	HORIZONTAL

Vertical

	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	11489.88	55.83	74.00	-18.17	44.03	7.92	38.50	34.62	154	68	Peak	VERTICAL
2	11490.17	42.72	54.00	-11.28	30.92	7.92	38.50	34.62	154	68	Average	VERTICAL

Configurations	IEEE 802.11a CH 157 / Ant 1 + Ant 2

Horizontal

	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	11569.97	42.63	54.00	-11.37	30.79	7.96	38.53	34.65	175	41	Average	HORIZONTAL
2	11569.97	56.37	74.00	-17.63	44.53	7.96	38.53	34.65	175	41	Peak	HORIZONTAL

Vertical

	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	11569.78	42.50	54.00	-11.50	30.66	7.96	38.53	34.65	182	25	Average	VERTICAL
2	11570.00	55.67	74.00	-18.33	43.83	7.96	38.53	34.65	182	25	Peak	VERTICAL

Configurations	IEEE 802.11a CH 165 / Ant 1 + Ant 2

Horizontal

	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	11649.82	42.25	54.00	-11.75	30.38	8.00	38.55	34.68	192	34	Average	HORIZONTAL
2	11650.17	55.85	74.00	-18.15	43.98	8.00	38.55	34.68	192	34	Peak	HORIZONTAL

Vertical

	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	11649.80	55.36	74.00	-18.64	43.49	8.00	38.55	34.68	184	51	Peak	VERTICAL
2	11649.83	42.16	54.00	-11.84	30.29	8.00	38.55	34.68	184	51	Average	VERTICAL

Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 36 / Ant 1 + Ant 2

Horizontal

	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	15539.77	57.24	74.00	-16.76	44.63	9.09	38.16	34.64	174	62	Peak	HORIZONTAL
2	15539.86	43.83	54.00	-10.17	31.22	9.09	38.16	34.64	174	62	Average	HORIZONTAL

Vertical

	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	15540.01	57.18	74.00	-16.82	44.57	9.09	38.16	34.64	162	79	Peak	VERTICAL
2	15540.02	44.06	54.00	-9.94	31.45	9.09	38.16	34.64	162	79	Average	VERTICAL

Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 40 / Ant 1 + Ant 2

Horizontal

	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	15599.89	44.44	54.00	-9.56	31.78	9.11	38.23	34.68	173	91	Average	HORIZONTAL
2	15600.14	57.53	74.00	-16.47	44.87	9.11	38.23	34.68	173	91	Peak	HORIZONTAL

Vertical

	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	15600.02	44.11	54.00	-9.89	31.45	9.11	38.23	34.68	165	93	Average	VERTICAL
2	15600.13	56.85	74.00	-17.15	44.19	9.11	38.23	34.68	165	93	Peak	VERTICAL

Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 48 / Ant 1 + Ant 2

Horizontal

	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	15719.78	57.66	74.00	-16.34	44.89	9.16	38.42	34.81	168	113	Peak	HORIZONTAL
2	15720.13	45.05	54.00	-8.95	32.28	9.16	38.42	34.81	168	113	Average	HORIZONTAL

Vertical

	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	15720.02	45.07	54.00	-8.93	32.30	9.16	38.42	34.81	170	131	Average	VERTICAL
2	15720.21	57.94	74.00	-16.06	45.17	9.16	38.42	34.81	170	131	Peak	VERTICAL

Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 149 / Ant 1 + Ant 2

Horizontal

	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	11489.83	42.30	54.00	-11.70	30.50	7.92	38.50	34.62	173	137	Average	HORIZONTAL
2	11490.17	55.25	74.00	-18.75	43.45	7.92	38.50	34.62	173	137	Peak	HORIZONTAL

Vertical

	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	11489.80	42.65	54.00	-11.35	30.85	7.92	38.50	34.62	184	166	Average	VERTICAL
2	11489.89	55.54	74.00	-18.46	43.74	7.92	38.50	34.62	184	166	Peak	VERTICAL

Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 157 / Ant 1 + Ant 2

Horizontal

	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	11569.80	55.59	74.00	-18.41	43.75	7.96	38.53	34.65	192	194	Peak	HORIZONTAL
2	11570.07	41.99	54.00	-12.01	30.15	7.96	38.53	34.65	192	194	Average	HORIZONTAL

Vertical

	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	11569.77	41.90	54.00	-12.10	30.06	7.96	38.53	34.65	199	238	Average	VERTICAL
2	11570.01	55.08	74.00	-18.92	43.24	7.96	38.53	34.65	199	238	Peak	VERTICAL

Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 165 / Ant 1 + Ant 2

Horizontal

	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	11649.91	41.93	54.00	-12.07	30.06	8.00	38.55	34.68	210	184	Average	HORIZONTAL
2	11650.19	55.51	74.00	-18.49	43.64	8.00	38.55	34.68	210	184	Peak	HORIZONTAL

Vertical

	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	11649.89	41.86	54.00	-12.14	29.99	8.00	38.55	34.68	189	148	Average	VERTICAL
2	11650.04	55.65	74.00	-18.35	43.78	8.00	38.55	34.68	189	148	Peak	VERTICAL

Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 38 / Ant 1 + Ant 2

Horizontal

	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	15570.04	44.21	54.00	-9.79	31.56	9.10	38.23	34.68	178	216	Average	HORIZONTAL
2	15570.11	58.17	74.00	-15.83	45.52	9.10	38.23	34.68	178	216	Peak	HORIZONTAL

Vertical

	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	15569.84	57.88	74.00	-16.12	45.23	9.10	38.23	34.68	165	171	Peak	VERTICAL
2	15570.08	44.60	54.00	-9.40	31.95	9.10	38.23	34.68	165	171	Average	VERTICAL

Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 46 / Ant 1 + Ant 2

Horizontal

	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	15689.80	44.76	54.00	-9.24	32.03	9.15	38.35	34.77	128	213	Average	HORIZONTAL
2	15689.98	57.40	74.00	-16.60	44.67	9.15	38.35	34.77	128	213	Peak	HORIZONTAL

Vertical

	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	15689.82	57.25	74.00	-16.75	44.52	9.15	38.35	34.77	142	249	Peak	VERTICAL
2	15689.91	44.17	54.00	-9.83	31.44	9.15	38.35	34.77	142	249	Average	VERTICAL

Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 151 / Ant 1 + Ant 2

Horizontal

	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	11509.96	42.07	54.00	-11.93	30.27	7.93	38.50	34.63	170	177	Average	HORIZONTAL
2	11510.14	55.24	74.00	-18.76	43.44	7.93	38.50	34.63	170	177	Peak	HORIZONTAL

Vertical

	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	11510.18	42.02	54.00	-11.98	30.22	7.93	38.50	34.63	172	205	Average	VERTICAL
2	11510.20	55.14	74.00	-18.86	43.34	7.93	38.50	34.63	172	205	Peak	VERTICAL

Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 159 / Ant 1 + Ant 2

Horizontal

	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	11589.90	42.16	54.00	-11.84	30.31	7.97	38.54	34.66	189	170	Average	HORIZONTAL
2	11589.91	54.54	74.00	-19.46	42.69	7.97	38.54	34.66	189	170	Peak	HORIZONTAL

Vertical

	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	11589.82	55.25	74.00	-18.75	43.40	7.97	38.54	34.66	184	198	Peak	VERTICAL
2	11590.13	41.85	54.00	-12.15	30.00	7.97	38.54	34.66	184	198	Average	VERTICAL

Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 42 / Ant 1 + Ant 2

Horizontal

	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	15630.05	44.44	54.00	-9.56	31.75	9.13	38.29	34.73	192	233	Average	HORIZONTAL
2	15630.19	57.72	74.00	-16.28	45.03	9.13	38.29	34.73	192	233	Peak	HORIZONTAL

Vertical

	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	15630.05	44.39	54.00	-9.61	31.70	9.13	38.29	34.73	171	205	Average	VERTICAL
2	15630.09	57.49	74.00	-16.51	44.80	9.13	38.29	34.73	171	205	Peak	VERTICAL

Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 155 / Ant 1 + Ant 2

Horizontal

	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	11550.12	41.81	54.00	-12.19	30.00	7.95	38.51	34.65	158	174	Average	HORIZONTAL
2	11550.21	54.79	74.00	-19.21	42.96	7.95	38.53	34.65	158	174	Peak	HORIZONTAL

Vertical

	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	11550.14	41.97	54.00	-12.03	30.16	7.95	38.51	34.65	152	192	Average	VERTICAL
2	11550.14	54.57	74.00	-19.43	42.76	7.95	38.51	34.65	152	192	Peak	VERTICAL

Note:

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

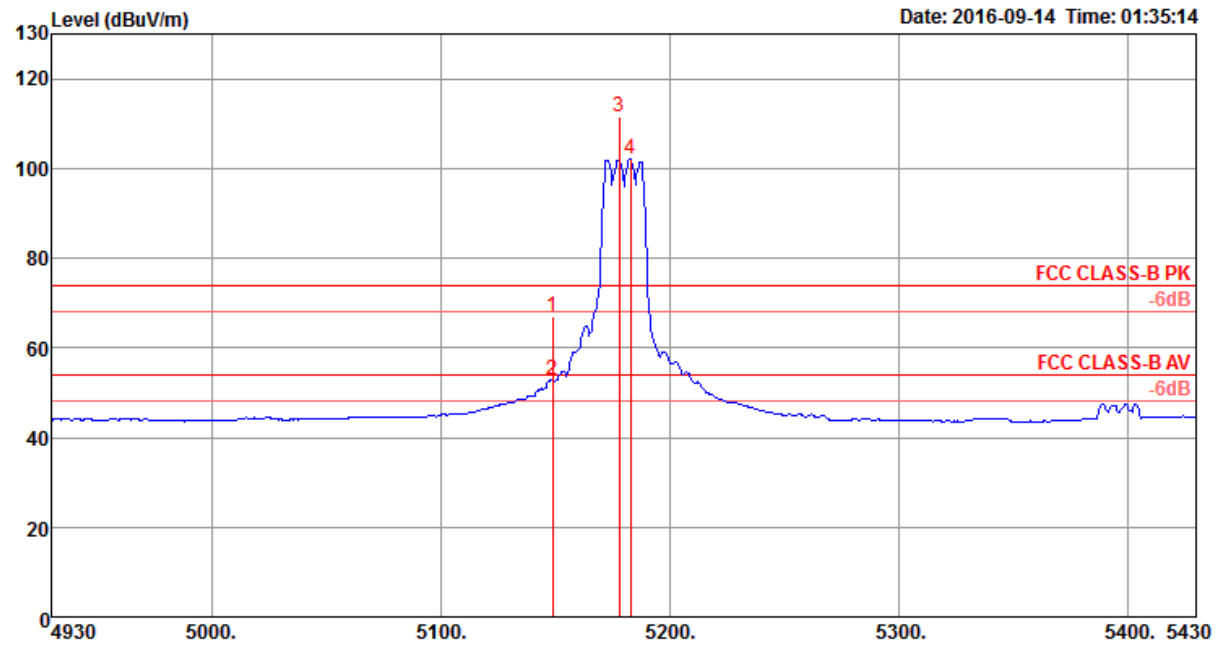
Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Band Edge Emissions

Configurations	IEEE 802.11a CH 36, 40, 48 / Ant 1 + Ant 2

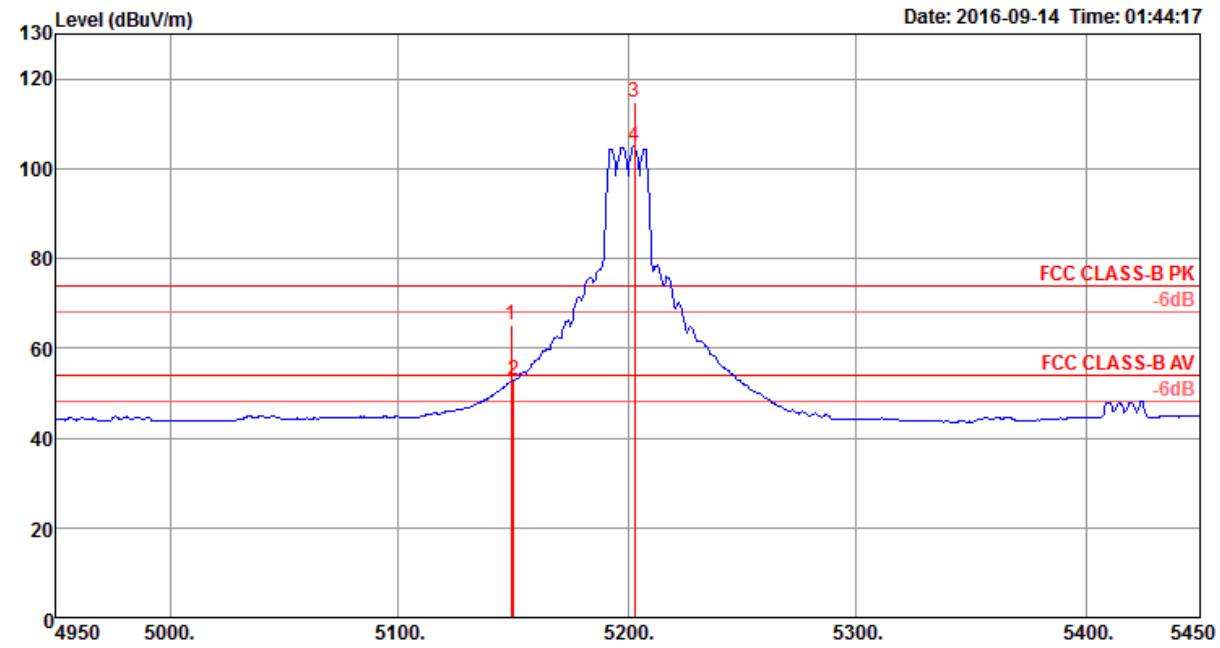
Channel 36



	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	5149.00	67.09	74.00	-6.91	63.20	5.05	33.31	34.47	100	45	Peak	HORIZONTAL
2	5149.00	52.99	54.00	-1.01	49.10	5.05	33.31	34.47	100	45	Average	HORIZONTAL
3 @	5178.00	111.62			107.67	5.07	33.35	34.47	100	45	Peak	HORIZONTAL
4 @	5183.00	102.07			98.11	5.08	33.35	34.47	100	45	Average	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5180 MHz.

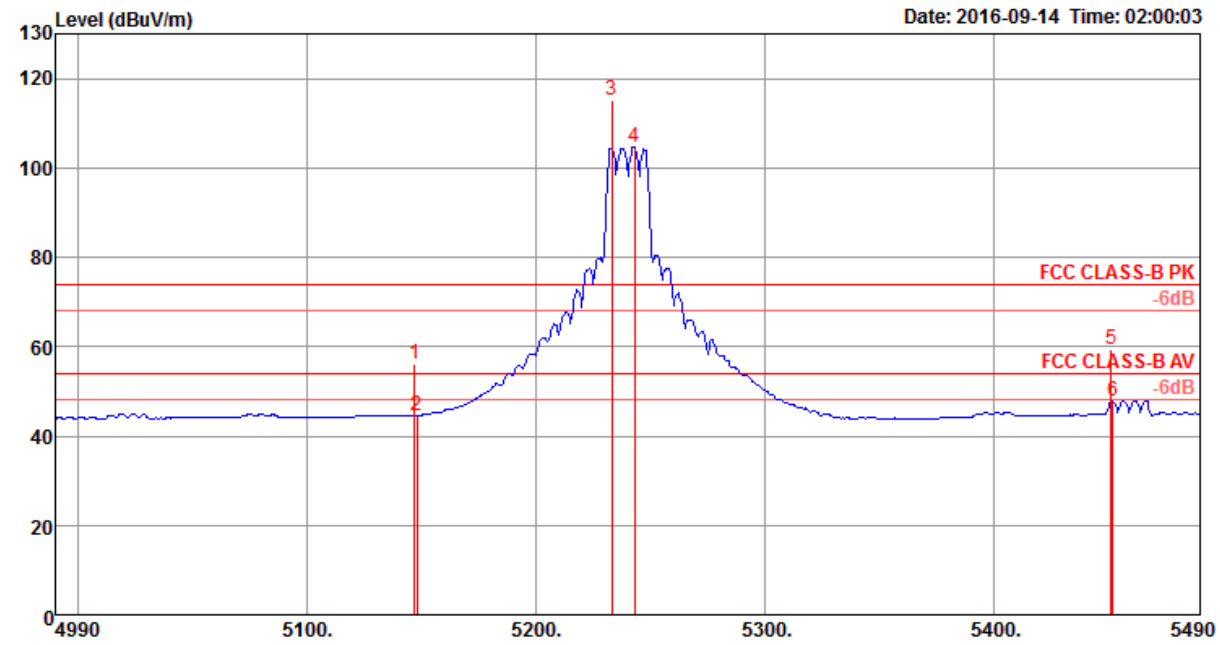
Channel 40



	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	5149.00	65.20	74.00	-8.80	61.31	5.05	33.31	34.47	104	46	Peak	HORIZONTAL
2	5150.00	52.94	54.00	-1.06	49.05	5.05	33.31	34.47	104	46	Average	HORIZONTAL
3 @	5203.00	114.83			110.81	5.09	33.40	34.47	104	46	Peak	HORIZONTAL
4 @	5203.00	104.93			100.91	5.09	33.40	34.47	104	46	Average	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5200 MHz.

Channel 48

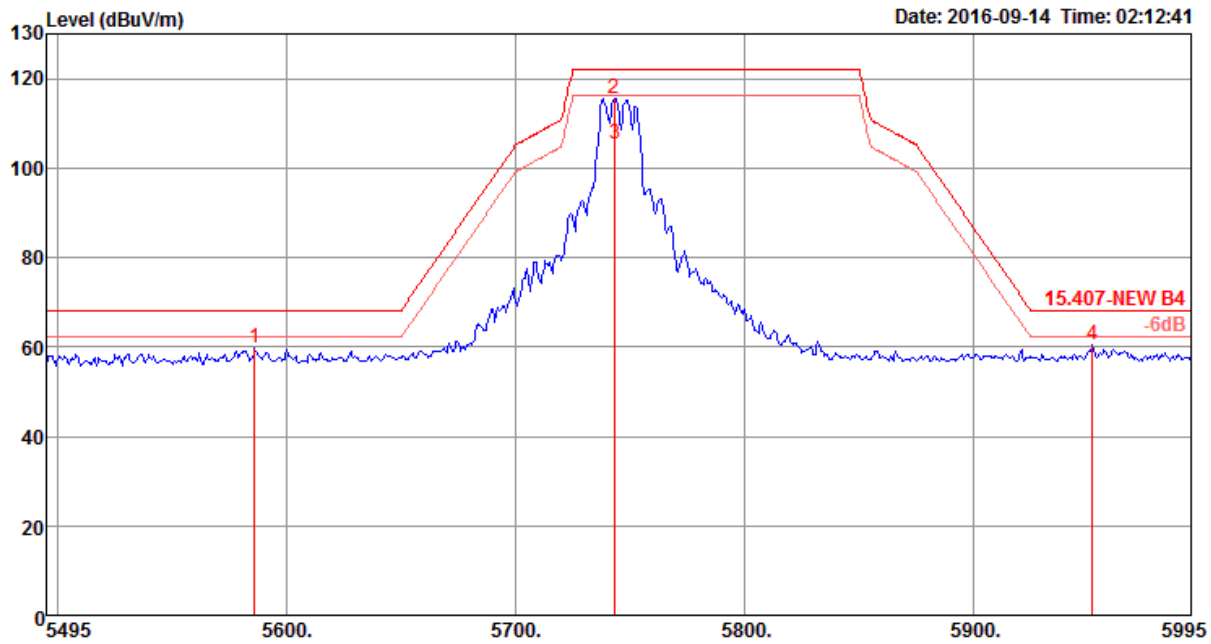


		Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1		5147.00	56.17	74.00	-17.83	52.28	5.05	33.31	34.47	105	47	Peak	HORIZONTAL
2		5148.00	44.62	54.00	-9.38	40.73	5.05	33.31	34.47	105	47	Average	HORIZONTAL
3	@	5233.00	115.05			110.97	5.11	33.44	34.47	105	47	Peak	HORIZONTAL
4	@	5243.00	104.70			100.61	5.12	33.44	34.47	105	47	Average	HORIZONTAL
5		5451.00	59.49	74.00	-14.51	55.01	5.21	33.74	34.47	105	47	Peak	HORIZONTAL
6		5452.00	47.93	54.00	-6.07	43.45	5.21	33.74	34.47	105	47	Average	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5240 MHz.

Configurations	IEEE 802.11a CH 149, 157, 165 / Ant 1 + Ant 2

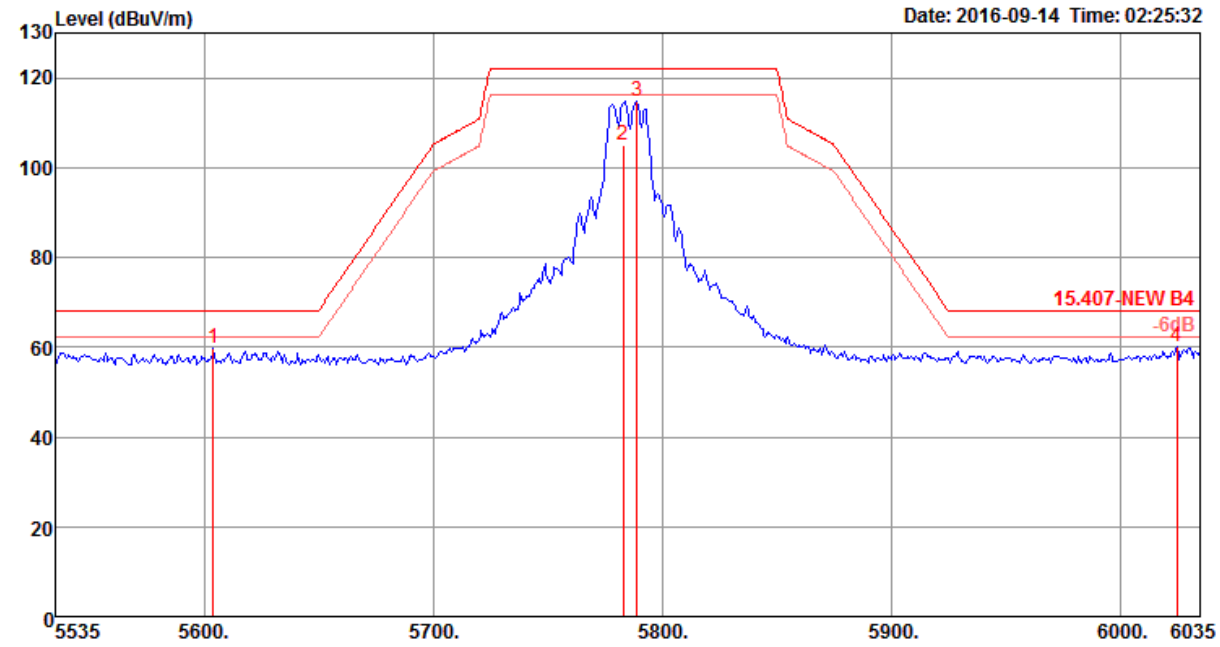
Channel 149



	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	5586.00	59.66	68.20	-8.54	54.93	5.17	34.05	34.49	103	45	Peak	HORIZONTAL
2	5743.00	115.61			110.21	5.37	34.55	34.52	103	45	Peak	HORIZONTAL
3	5743.40	105.51			100.11	5.37	34.55	34.52	103	45	Average	HORIZONTAL
4	5952.00	60.40	68.20	-7.80	54.34	5.47	35.15	34.56	103	45	Peak	HORIZONTAL

Item 2, 3 are the fundamental frequency at 5745 MHz.

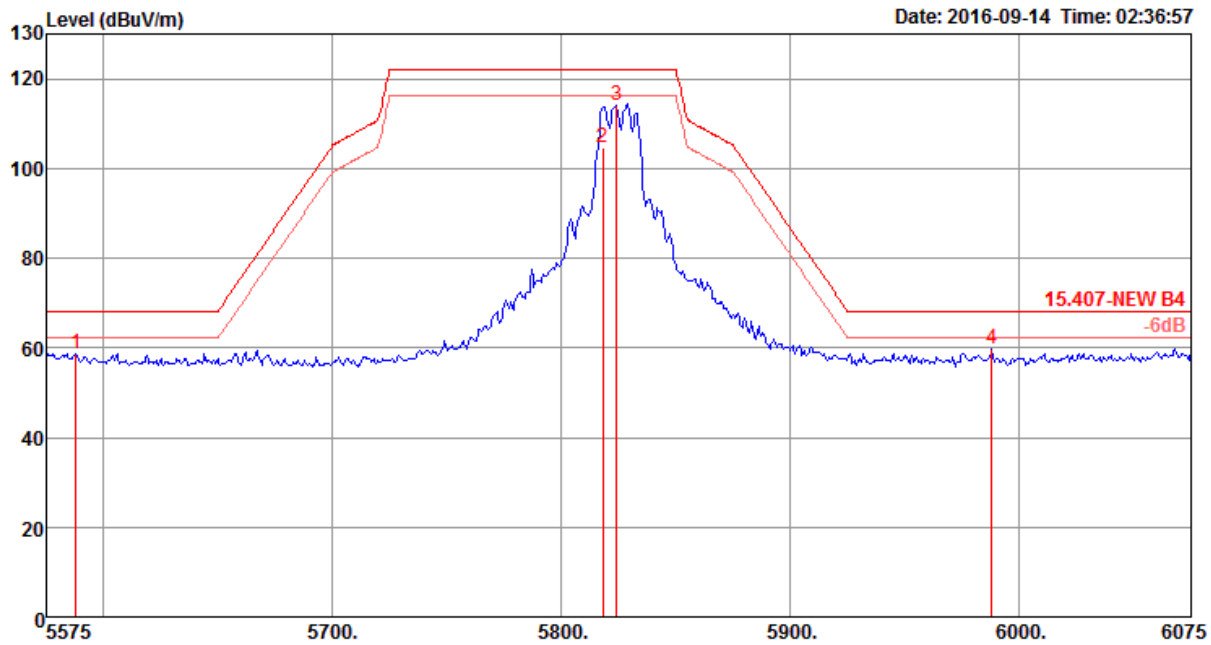
Channel 157



	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	5604.00	59.85	68.20	-8.35	55.06	5.18	34.10	34.49	102	44	Peak	HORIZONTAL
2	5783.00	105.15	122.20	-17.05	99.60	5.43	34.65	34.53	102	44	Average	HORIZONTAL
3	5789.00	114.97			109.37	5.43	34.70	34.53	102	44	Peak	HORIZONTAL
4	6025.00	60.16			53.95	5.46	35.32	34.57	102	44	Peak	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5785 MHz.

Channel 165

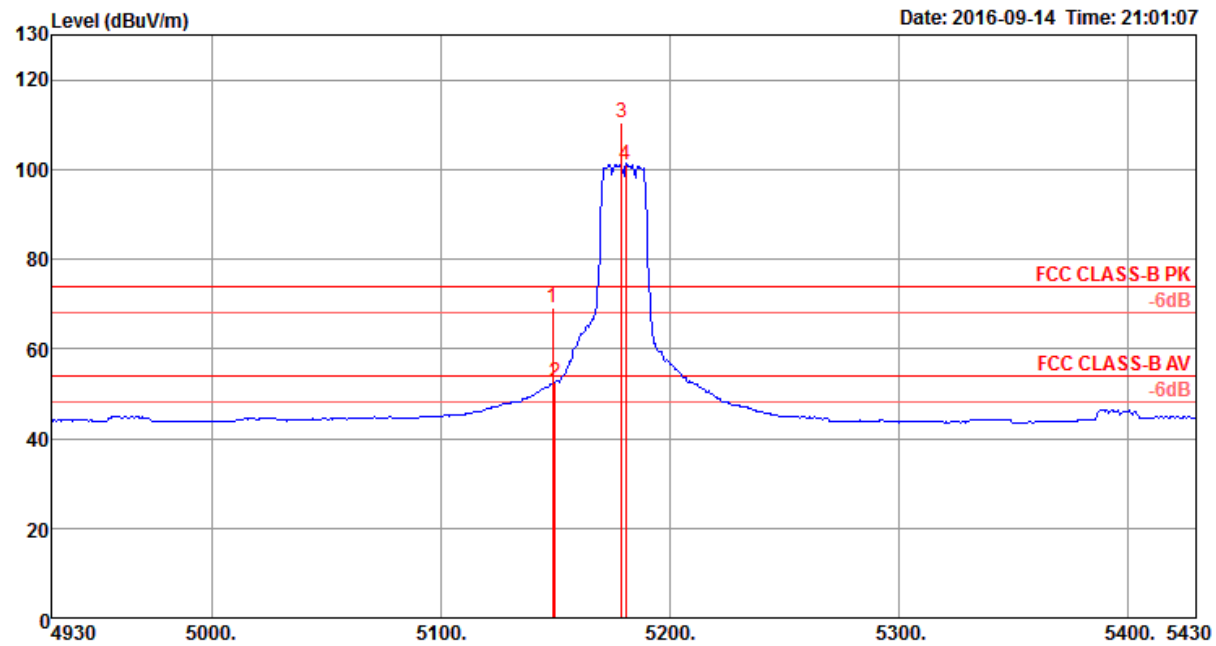


	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5588.00	58.82	68.20	-9.38	54.09	5.17	34.05	34.49	102	44	Peak	HORIZONTAL
2	5818.00	104.64			98.97	5.45	34.75	34.53	102	44	Average	HORIZONTAL
3	5824.00	113.89			108.18	5.45	34.80	34.54	102	44	Peak	HORIZONTAL
4	5988.00	59.66	68.20	-8.54	53.51	5.47	35.25	34.57	102	44	Peak	HORIZONTAL

Item 2, 3 are the fundamental frequency at 5825 MHz.

Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 36, 40, 48 / Ant 1 + Ant 2

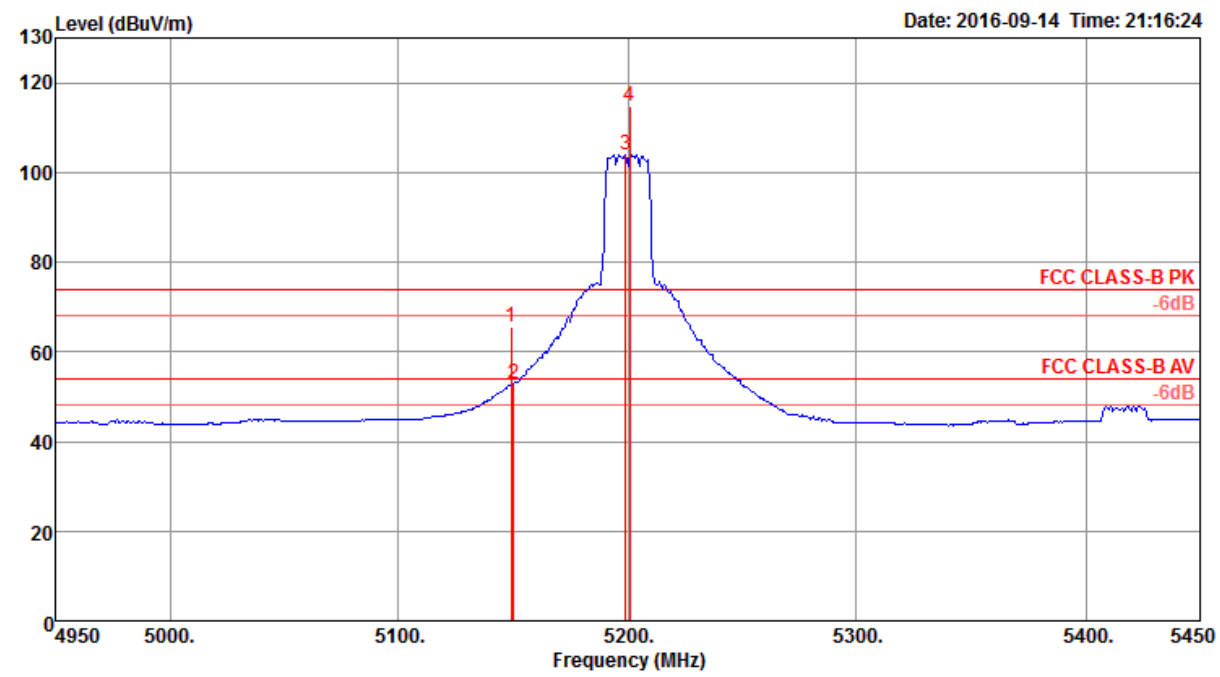
Channel 36



	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	5149.00	69.06	74.00	-4.94	65.17	5.05	33.31	34.47	104	45	Peak	HORIZONTAL
2	5150.00	52.63	54.00	-1.37	48.74	5.05	33.31	34.47	104	45	Average	HORIZONTAL
3 @	5179.00	110.48			106.53	5.07	33.35	34.47	104	45	Peak	HORIZONTAL
4 @	5181.00	101.21			97.25	5.08	33.35	34.47	104	45	Average	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5180 MHz.

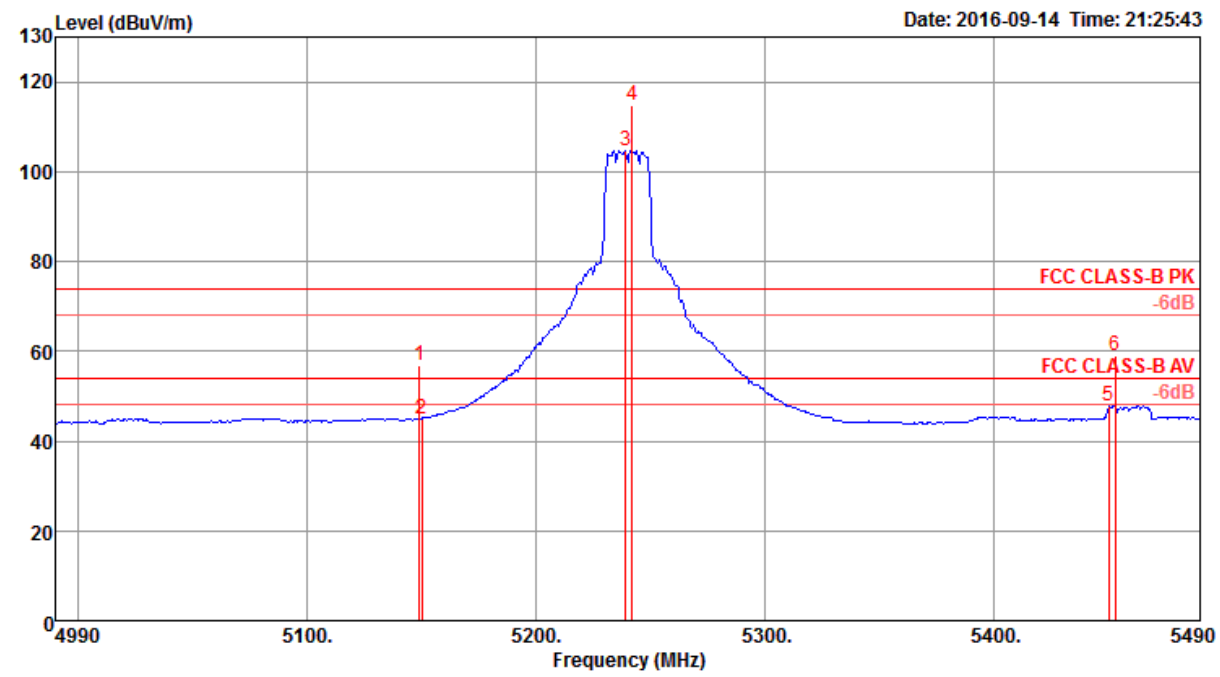
Channel 40



	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	5149.00	65.48	74.00	-8.52	61.59	5.05	33.31	34.47	103	43	Peak	HORIZONTAL
2	5150.00	52.93	54.00	-1.07	49.04	5.05	33.31	34.47	103	43	Average	HORIZONTAL
3 @	5199.00	104.02			100.02	5.09	33.38	34.47	103	43	Average	HORIZONTAL
4 @	5201.00	114.84			110.84	5.09	33.38	34.47	103	43	Peak	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5200 MHz.

Channel 48

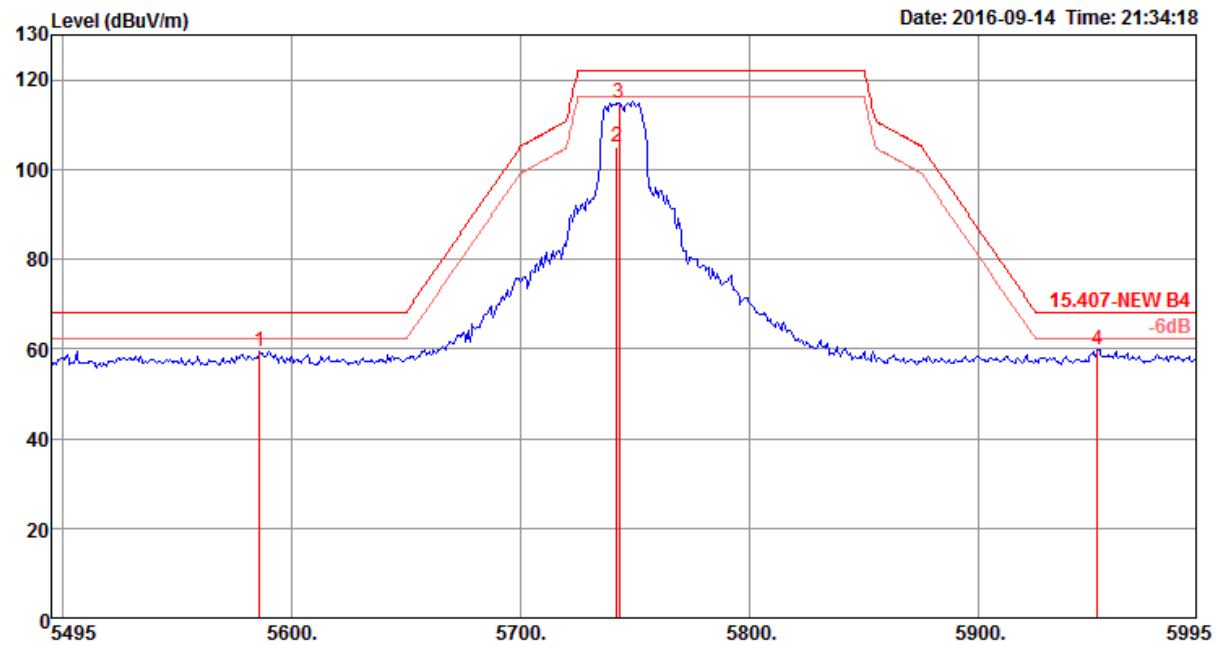


	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5149.00	56.90	74.00	-17.10	53.01	5.05	33.31	34.47	106	44	Peak	HORIZONTAL
2	5150.00	45.01	54.00	-8.99	41.12	5.05	33.31	34.47	106	44	Average	HORIZONTAL
3 @	5239.00	104.73			100.64	5.12	33.44	34.47	106	44	Average	HORIZONTAL
4 @	5242.00	114.78			110.69	5.12	33.44	34.47	106	44	Peak	HORIZONTAL
5	5450.00	47.97	54.00	-6.03	43.49	5.21	33.74	34.47	106	44	Average	HORIZONTAL
6	5453.00	59.12	74.00	-14.88	54.64	5.21	33.74	34.47	106	44	Peak	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5240 MHz.

Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 149, 157, 165 / Ant 1 + Ant 2

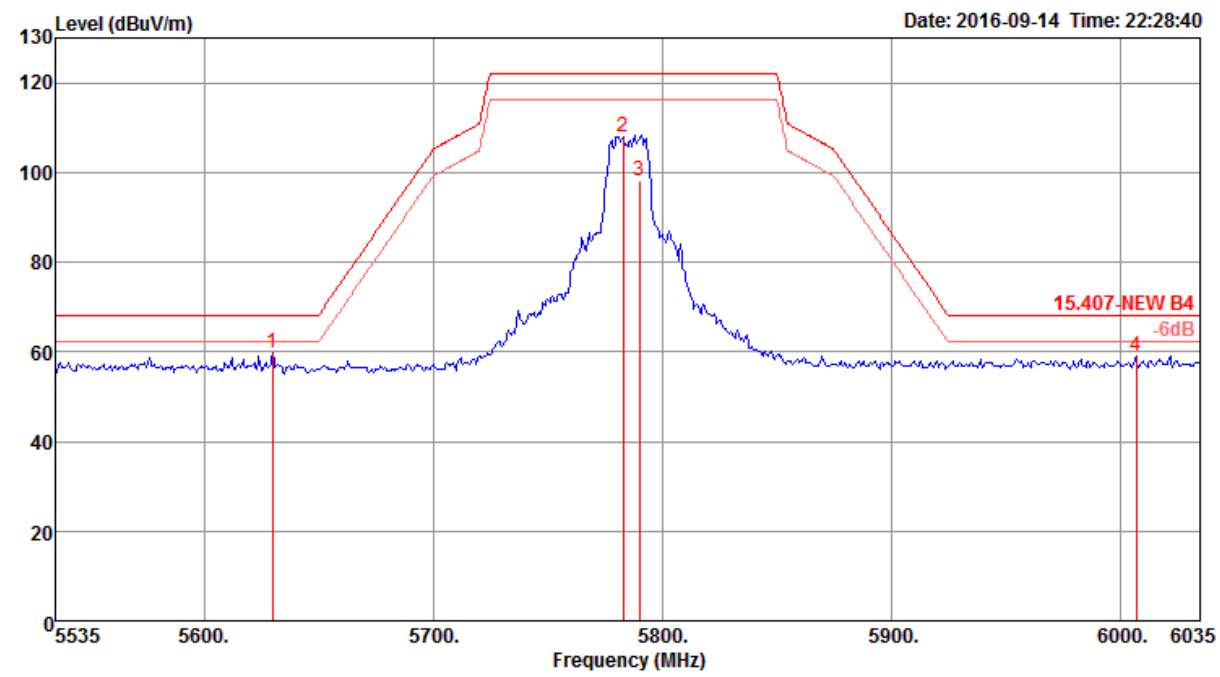
Channel 149



	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	5586.00	59.34	68.20	-8.86	54.61	5.17	34.05	34.49	104	43	Peak	HORIZONTAL
2	5742.00	104.94			99.54	5.37	34.55	34.52	104	43	Average	HORIZONTAL
3	5743.00	114.70			109.30	5.37	34.55	34.52	104	43	Peak	HORIZONTAL
4	5952.00	59.88	68.20	-8.32	53.82	5.47	35.15	34.56	104	43	Peak	HORIZONTAL

Item 2, 3 are the fundamental frequency at 5745 MHz.

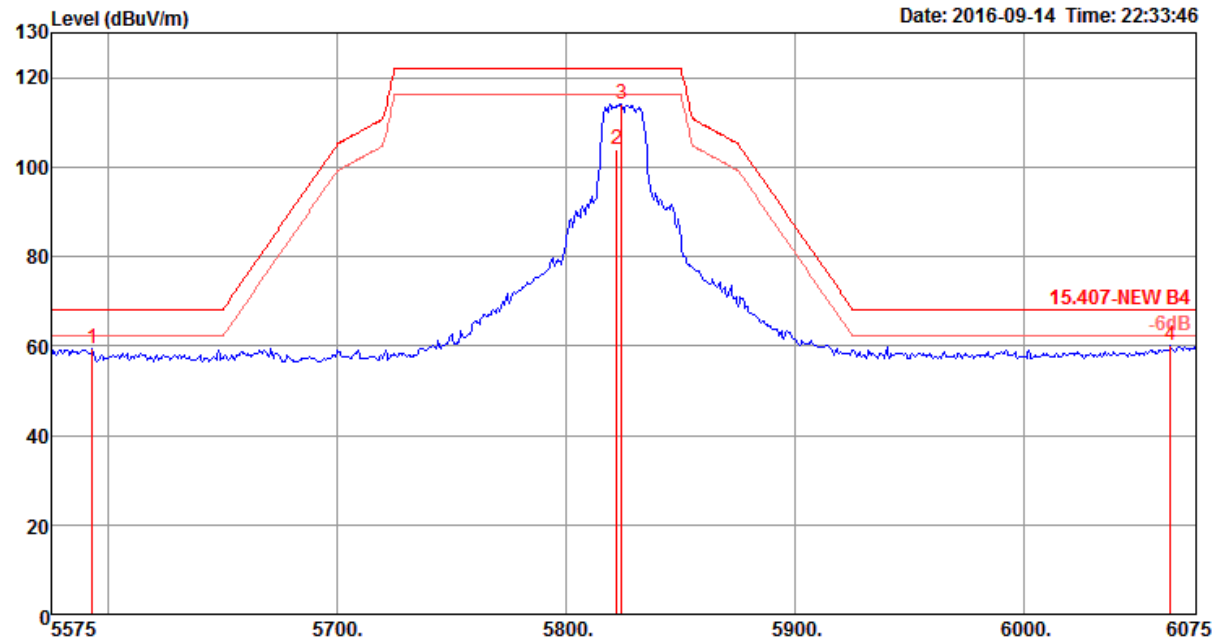
Channel 157



	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	5630.00	59.75	68.20	-8.45	54.84	5.21	34.20	34.50	310	321	Peak	VERTICAL
2	5783.00	107.98			102.43	5.43	34.65	34.53	310	321	Peak	VERTICAL
3	5790.00	98.27			92.66	5.44	34.70	34.53	310	321	Average	VERTICAL
4	6007.00	59.13	68.20	-9.07	52.93	5.47	35.30	34.57	310	321	Peak	VERTICAL

Item 2, 3 are the fundamental frequency at 5785 MHz.

Channel 165

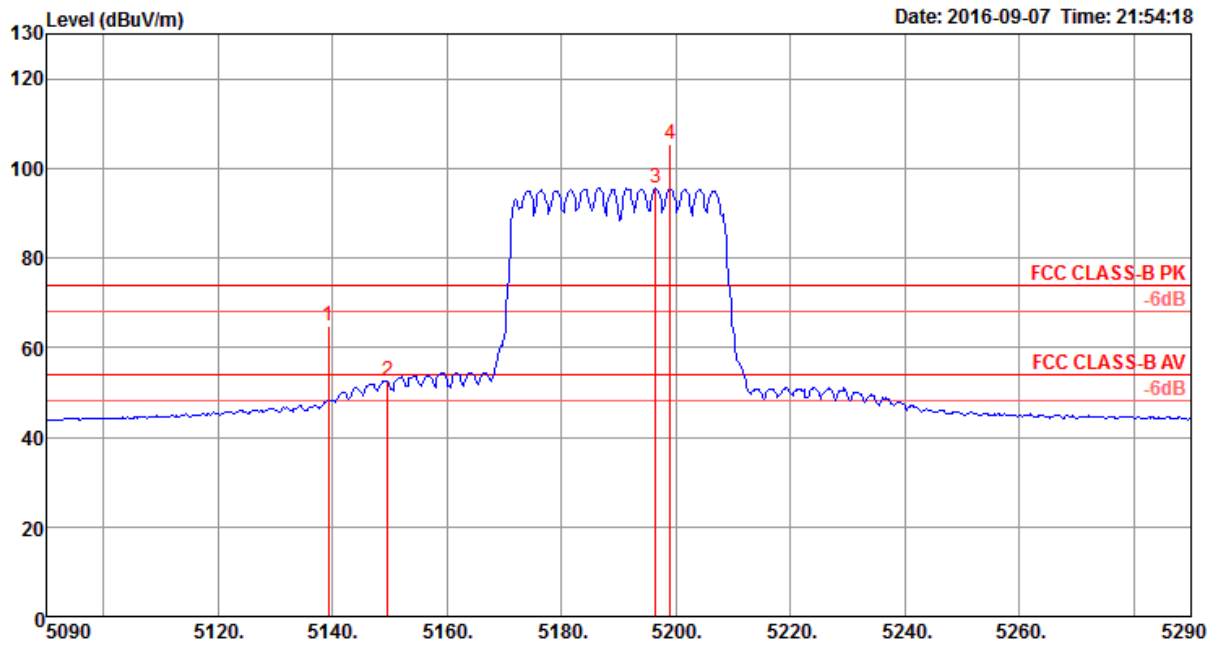


	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5593.00	59.39	68.20	-8.81	54.61	5.17	34.10	34.49	102	43	Peak	HORIZONTAL
2	5822.00	104.04			98.38	5.45	34.75	34.54	102	43	Average	HORIZONTAL
3	5824.00	114.12			108.41	5.45	34.80	34.54	102	43	Peak	HORIZONTAL
4	6064.00	59.93	68.20	-8.27	53.68	5.45	35.37	34.57	102	43	Peak	HORIZONTAL

Item 2, 3 are the fundamental frequency at 5825 MHz.

Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 38, 46 / Ant 1 + Ant 2

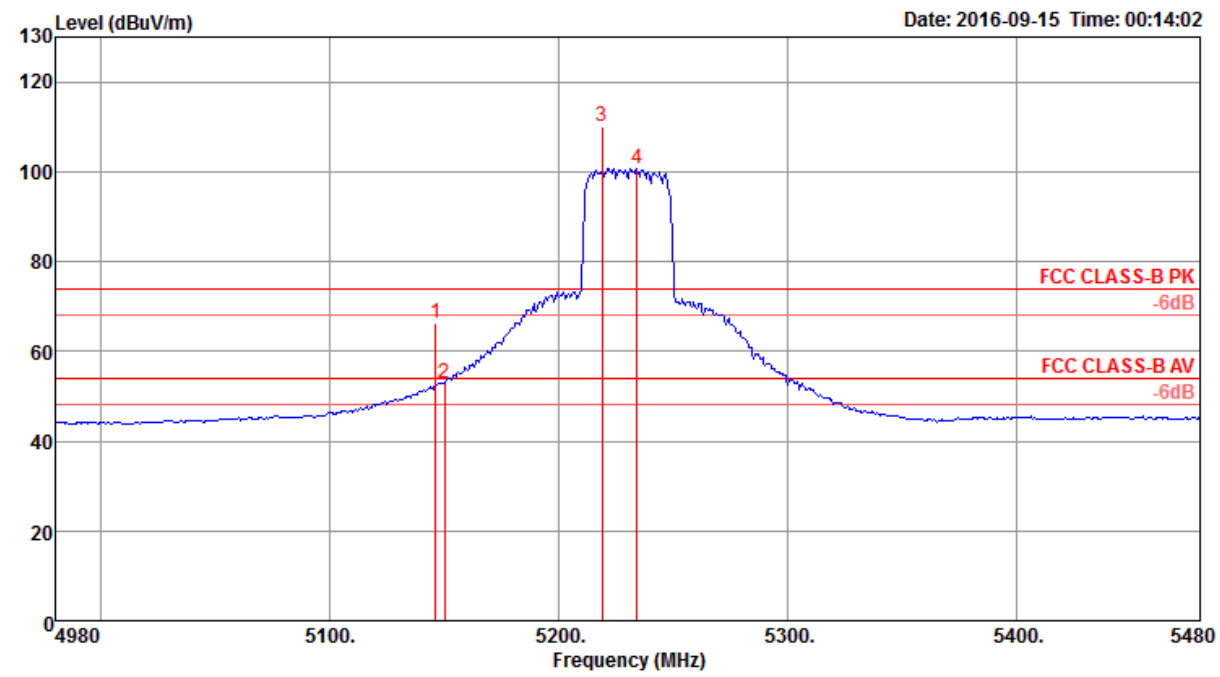
Channel 38



	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	5139.36	64.97	74.00	-9.03	61.10	5.05	33.29	34.47	100	41	Peak	HORIZONTAL
2	5149.62	52.33	54.00	-1.67	48.44	5.05	33.31	34.47	100	41	Average	HORIZONTAL
3 @	5196.41	95.51			91.51	5.09	33.38	34.47	100	41	Average	HORIZONTAL
4 @	5198.97	105.22			101.22	5.09	33.38	34.47	100	41	Peak	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5190 MHz.

Channel 46

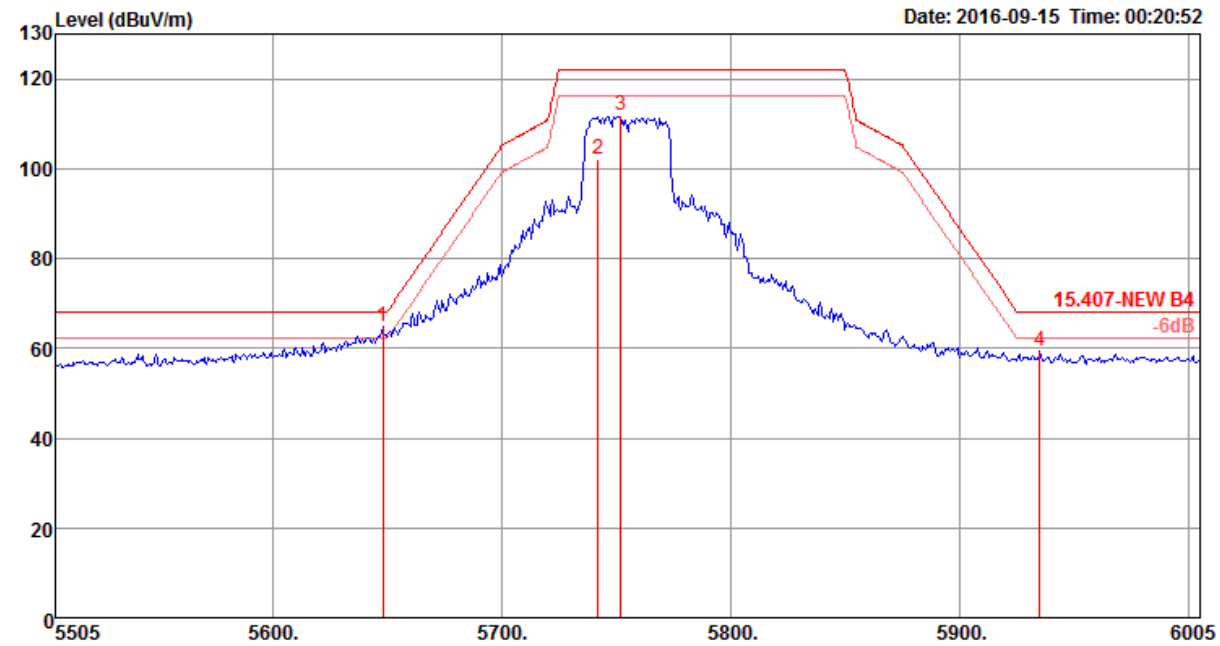


	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5146.00	66.44	74.00	-7.56	62.55	5.05	33.31	34.47	102	43	Peak	HORIZONTAL
2	5150.00	52.99	54.00	-1.01	49.10	5.05	33.31	34.47	102	43	Average	HORIZONTAL
3 @	5219.00	110.10			106.05	5.10	33.42	34.47	102	43	Peak	HORIZONTAL
4 @	5234.00	100.81			96.73	5.11	33.44	34.47	102	43	Average	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5230 MHz.

Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 151, 159 / Ant 1 + Ant 2

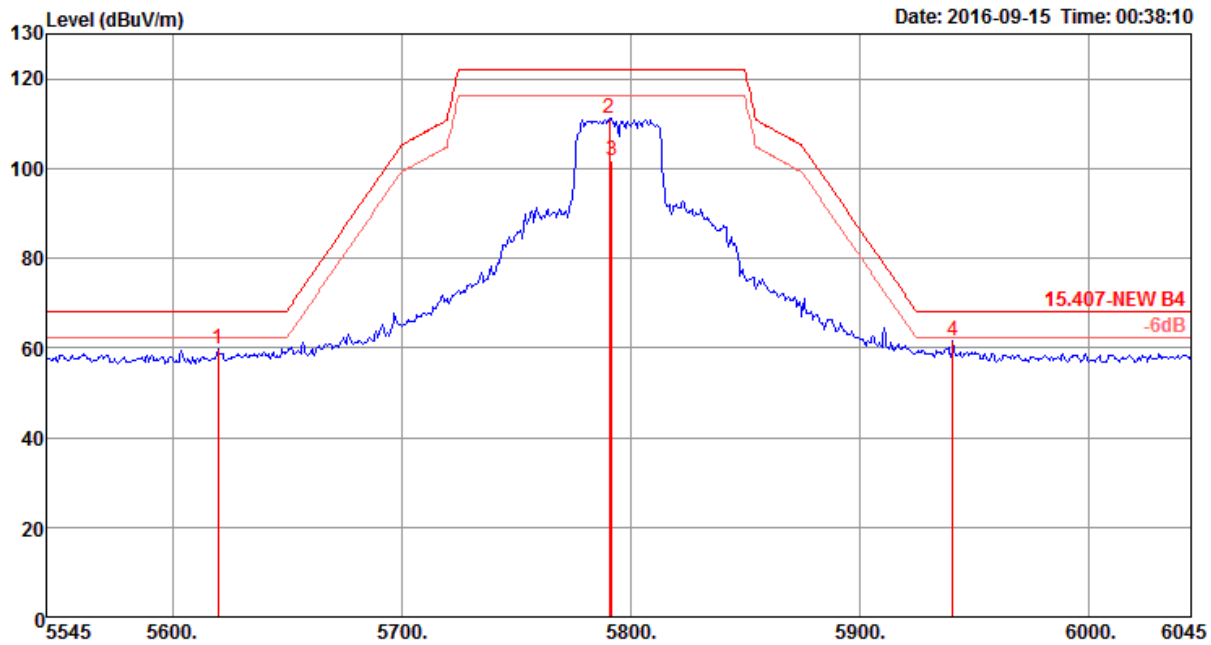
Channel 151



	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	5648.00	64.74	68.20	-3.46	59.75	5.24	34.25	34.50	104	42	Peak	HORIZONTAL
2	5742.00	102.10			96.70	5.37	34.55	34.52	104	42	Average	HORIZONTAL
3	5752.00	111.77			106.36	5.38	34.55	34.52	104	42	Peak	HORIZONTAL
4	5935.00	59.22	68.20	-8.98	53.22	5.46	35.10	34.56	104	42	Peak	HORIZONTAL

Item 2, 3 are the fundamental frequency at 5755 MHz.

Channel 159

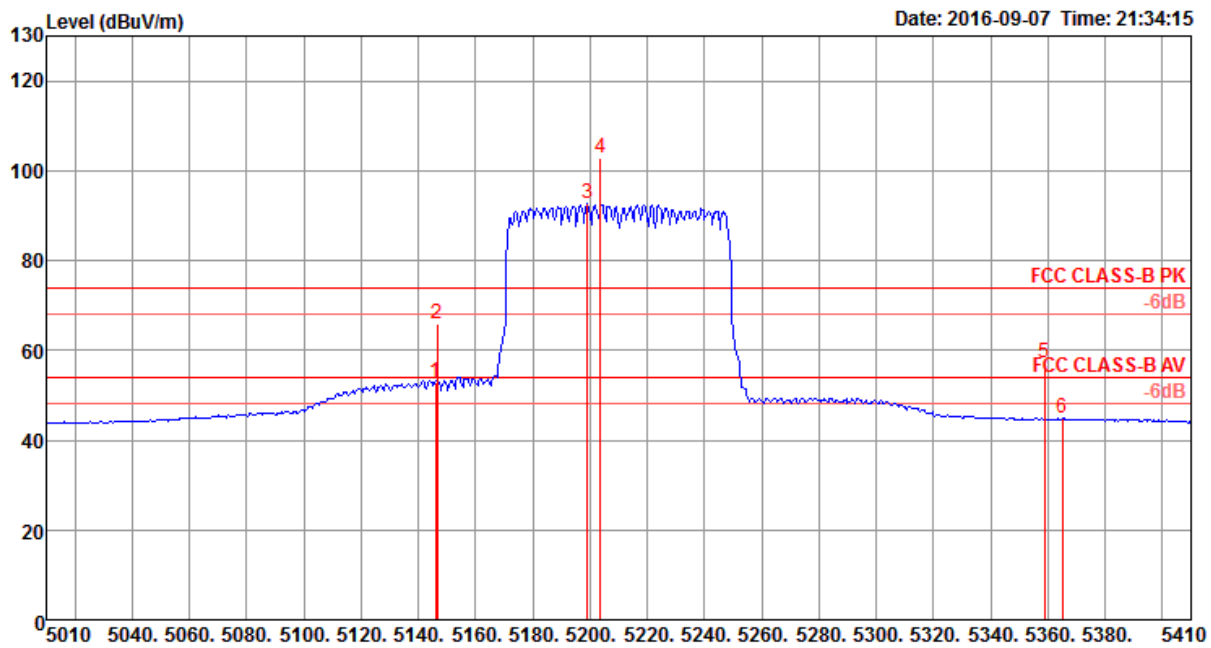


	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5620.00	59.76	68.20	-8.44	54.91	5.20	34.15	34.50	109	43	Peak	HORIZONTAL
2	5791.00	111.20			105.59	5.44	34.70	34.53	109	43	Peak	HORIZONTAL
3	5792.00	101.62			96.01	5.44	34.70	34.53	109	43	Average	HORIZONTAL
4	5941.00	61.43	68.20	-6.77	55.43	5.46	35.10	34.56	109	43	Peak	HORIZONTAL

Item 2, 3 are the fundamental frequency at 5795 MHz.

Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 42, 155 / Ant 1 + Ant 2

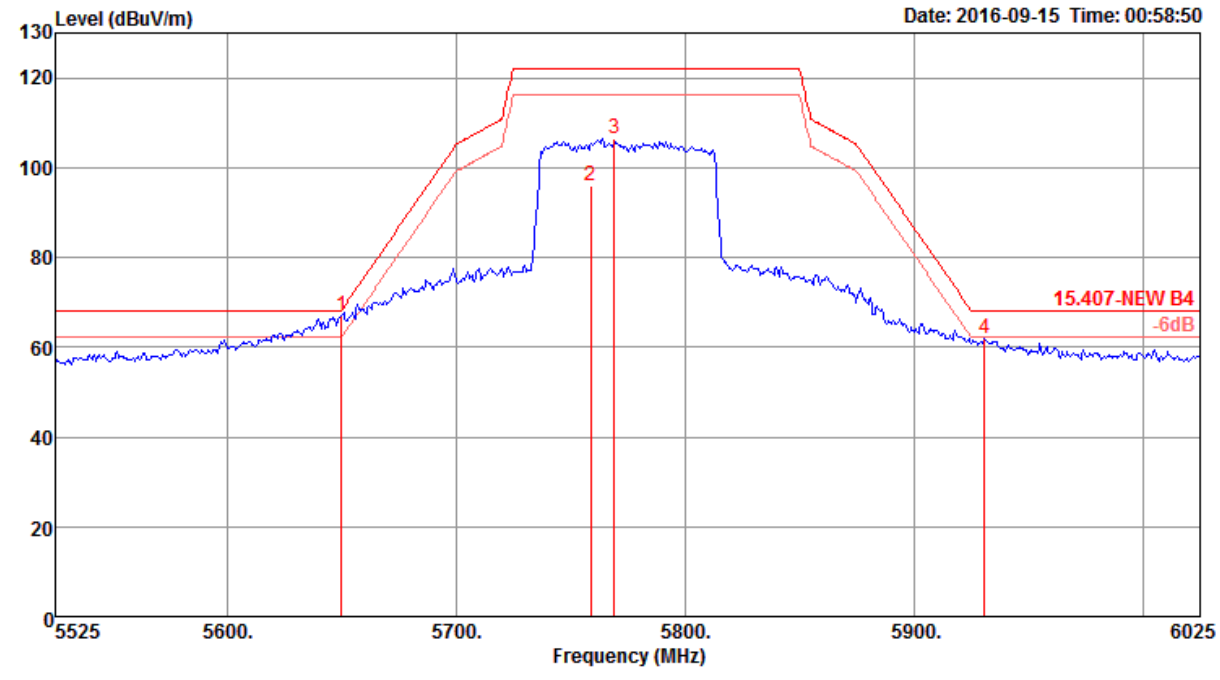
Channel 42



	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	5145.90	52.93	54.00	-1.07	49.04	5.05	33.31	34.47	100	42	Average	HORIZONTAL
2	5146.54	65.84	74.00	-8.16	61.95	5.05	33.31	34.47	100	42	Peak	HORIZONTAL
3 @	5199.10	92.54			88.54	5.09	33.38	34.47	100	42	Average	HORIZONTAL
4 @	5203.59	102.79			98.77	5.09	33.40	34.47	100	42	Peak	HORIZONTAL
5	5358.72	57.07	74.00	-16.93	52.74	5.19	33.61	34.47	100	42	Peak	HORIZONTAL
6	5365.13	45.00	54.00	-9.00	40.66	5.20	33.61	34.47	100	42	Average	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5210 MHz.

Channel 155



	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	5650.00	66.84	68.20	-1.36	61.85	5.24	34.25	34.50	103	41	Peak	HORIZONTAL
2	5759.00	95.86	122.20	-26.34	90.39	5.39	34.60	34.52	103	41	Average	HORIZONTAL
3	5769.00	106.41			100.93	5.41	34.60	34.53	103	41	Peak	HORIZONTAL
4	5931.00	61.92			55.92	5.46	35.10	34.56	103	41	Peak	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5775 MHz.

Note:

Emission level (dBuV/m) = 20 log Emission level (uV/m)

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level

Mode: 20 MHz / Ant. 2

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5200 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5199.9936	5199.9933	5199.9931	5199.9926
110.00	5199.9934	5199.9931	5199.9929	5199.9924
93.50	5199.9928	5199.9927	5199.9925	5199.9923
Max. Deviation (MHz)	0.0072	0.0073	0.0075	0.0077
Max. Deviation (ppm)	1.38	1.40	1.44	1.48
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(℃)	5200 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
-30	5199.9877	5199.9871	5199.9870	5199.9865
-20	5199.9893	5199.9890	5199.9881	5199.9876
-10	5199.9905	5199.9896	5199.9890	5199.9882
0	5199.9925	5199.9923	5199.9921	5199.9913
10	5199.9927	5199.9924	5199.9922	5199.9915
20	5199.9934	5199.9925	5199.9917	5199.9910
30	5199.9948	5199.9946	5199.9940	5199.9934
40	5199.9963	5199.9957	5199.9948	5199.9943
50	5199.9969	5199.9960	5199.9956	5199.9951
Max. Deviation (MHz)	0.0123	0.0129	0.0130	0.0135
Max. Deviation (ppm)	2.37	2.48	2.50	2.60
Result	Pass			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5785 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5784.9944	5784.9940	5784.9935	5784.9933
110.00	5784.9934	5784.9927	5784.9922	5784.9920
93.50	5784.9931	5784.9922	5784.9912	5784.9906
Max. Deviation (MHz)	0.0069	0.0078	0.0088	0.0094
Max. Deviation (ppm)	1.19	1.35	1.52	1.62
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(℃)	5785 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
-30	5784.9873	5784.9869	5784.9868	5784.9865
-20	5784.9891	5784.9886	5784.9878	5784.9868
-10	5784.9909	5784.9905	5784.9897	5784.9894
0	5784.9926	5784.9925	5784.9924	5784.9922
10	5784.9932	5784.9929	5784.9920	5784.9914
20	5784.9934	5784.9925	5784.9920	5784.9917
30	5784.9948	5784.9943	5784.9933	5784.9931
40	5784.9965	5784.9958	5784.9948	5784.9941
50	5784.9952	5784.9942	5784.9938	5784.9934
Max. Deviation (MHz)	0.0127	0.0131	0.0132	0.0135
Max. Deviation (ppm)	2.20	2.26	2.28	2.33
Result	Pass			

Mode: 40 MHz / Ant. 2

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5190 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5189.9939	5189.9930	5189.9923	5189.9914
110.00	5189.9934	5189.9929	5189.9925	5189.9918
93.50	5189.9928	5189.9922	5189.9915	5189.9907
Max. Deviation (MHz)	0.0072	0.0078	0.0085	0.0093
Max. Deviation (ppm)	1.39	1.50	1.64	1.79
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(℃)	5190 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
-30	5189.9905	5189.9904	5189.9898	5189.9896
-20	5189.9914	5189.9904	5189.9901	5189.9894
-10	5189.9920	5189.9917	5189.9907	5189.9899
0	5189.9927	5189.9919	5189.9910	5189.9906
10	5189.9933	5189.9928	5189.9921	5189.9911
20	5189.9934	5189.9930	5189.9929	5189.9923
30	5189.9948	5189.9943	5189.9934	5189.9930
40	5189.9968	5189.9967	5189.9960	5189.9950
50	5189.9941	5189.9932	5189.9929	5189.9926
Max. Deviation (MHz)	0.0095	0.0096	0.0102	0.0106
Max. Deviation (ppm)	1.83	1.85	1.97	2.04
Result	Pass			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5755 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5754.9935	5754.9926	5754.9925	5754.9924
110.00	5754.9934	5754.9927	5754.9918	5754.9913
93.50	5754.9929	5754.9927	5754.9917	5754.9908
Max. Deviation (MHz)	0.0071	0.0074	0.0083	0.0092
Max. Deviation (ppm)	1.23	1.29	1.44	1.60
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(℃)	5755 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
-30	5754.9871	5754.9862	5754.9858	5754.9854
-20	5754.9874	5754.9873	5754.9866	5754.9859
-10	5754.9885	5754.9878	5754.9869	5754.9861
0	5754.9903	5754.9893	5754.9887	5754.9883
10	5754.9915	5754.9908	5754.9905	5754.9904
20	5754.9934	5754.9933	5754.9923	5754.9919
30	5754.9948	5754.9944	5754.9943	5754.9936
40	5754.9955	5754.9951	5754.9944	5754.9942
50	5754.9948	5754.9942	5754.9937	5754.9935
Max. Deviation (MHz)	0.0129	0.0138	0.0142	0.0146
Max. Deviation (ppm)	2.24	2.40	2.47	2.54
Result	Pass			

Mode: 80 MHz / Ant. 2

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5210 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5209.9941	5209.9934	5209.9933	5209.9924
110.00	5209.9934	5209.9931	5209.9926	5209.9920
93.50	5209.9924	5209.9918	5209.9908	5209.9900
Max. Deviation (MHz)	0.0076	0.0082	0.0092	0.0100
Max. Deviation (ppm)	1.46	1.57	1.77	1.92
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(℃)	5210 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
-30	5209.9903	5209.9901	5209.9892	5209.9887
-20	5209.9908	5209.9898	5209.9892	5209.9886
-10	5209.9910	5209.9905	5209.9904	5209.9903
0	5209.9913	5209.9904	5209.9896	5209.9886
10	5209.9932	5209.9929	5209.9919	5209.9914
20	5209.9934	5209.9926	5209.9924	5209.9917
30	5209.9948	5209.9947	5209.9941	5209.9938
40	5209.9958	5209.9957	5209.9949	5209.9946
50	5209.9952	5209.9947	5209.9941	5209.9934
Max. Deviation (MHz)	0.0097	0.0102	0.0108	0.0114
Max. Deviation (ppm)	1.86	1.96	2.07	2.19
Result	Pass			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5775 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5774.9943	5774.9938	5774.9930	5774.9926
110.00	5774.9934	5774.9926	5774.9924	5774.9915
93.50	5774.9933	5774.9932	5774.9930	5774.9921
Max. Deviation (MHz)	0.0067	0.0074	0.0076	0.0085
Max. Deviation (ppm)	1.16	1.28	1.32	1.47
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(℃)	5775 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
-30	5774.9862	5774.9852	5774.9845	5774.9837
-20	5774.9882	5774.9873	5774.9863	5774.9859
-10	5774.9895	5774.9892	5774.9887	5774.9886
0	5774.9901	5774.9891	5774.9888	5774.9885
10	5774.9917	5774.9915	5774.9908	5774.9907
20	5774.9934	5774.9932	5774.9922	5774.9912
30	5774.9948	5774.9938	5774.9934	5774.9932
40	5774.9949	5774.9942	5774.9940	5774.9935
50	5774.9953	5774.9943	5774.9940	5774.9937
Max. Deviation (MHz)	0.0138	0.0148	0.0155	0.0163
Max. Deviation (ppm)	2.39	2.56	2.68	2.82
Result	Pass			