RF TEST REPORT

SIEMIC
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YOUR CHOICE FOR- TCB FCB CB NB CAB RCB

Report No.: FCC_RF_SL16012001-ZBR-001_UNII
Supersede Report No.: None

Applicant	:	Zebra Technologies Corporation
Product Name	:	N Radio module with 802.11 a/b/g/n and BT
Model No.	:	WYSBMVGXB
Test Standard	:	47 CFR 15.407
Test Method	:	ANSI C63.10: 2013 789033 D02 General UNII Test Procedures New Rules v01
FCC ID	:	I28MD-EXLAN11N
IC ID	:	3798B-EXLAN11N
Dates of test	:	03/01/2016 – 06/16/2016
Issue Date	:	06/17/2016
Test Result	:	☒ Pass ☐ Fail
Equipment complied with the specification [X] Equipment did not comply with the specification [ ]		

This Test Report is Issued Under the Authority of:	
Rachana	Chen Ge
Rachana Khanduri	Chen Ge
Test Engineer	Engineer Reviewer
This test report may be reproduced in full only Test result presented in this test report is applicable to the tested sample only	

Issued By:
SIEMIC Laboratories
775 Montague Expressway, Milpitas, 95035 CA

ilac-MRA
A2LA ACCREDITED
TESTING CERT # 2742.01

Laboratory Introduction

SIEMIC, headquartered in the heart of Silicon Valley, with superior facilities in US and Asia, is one of the leading independent testing and certification facilities providing customers with one-stop shop services for Compliance Testing and Global Certifications.

In addition to testing and certification, SIEMIC provides initial design reviews and compliance management throughout a project. Our extensive experience with China, Asia Pacific, North America, European, and International compliance requirements, assures the fastest, most cost effective way to attain regulatory compliance for the global markets.

Accreditations for Conformity Assessment

Country/Region	Accreditation Body	Scope
USA	FCC, A2LA	EMC, RF/Wireless, Telecom
Canada	IC, A2LA, NIST	EMC, RF/Wireless, Telecom
Taiwan	BSMI, NCC, NIST	EMC, RF, Telecom, Safety
Hong Kong	OFTA, NIST	RF/Wireless, Telecom
Australia	NATA, NIST	EMC, RF, Telecom, Safety
Korea	KCC/RRA, NIST	EMI, EMS, RF, Telecom, Safety
Japan	VCCI, JATE, TELEC, RFT	EMI, RF/Wireless, Telecom
Mexico	NOM, COFETEL, Caniety	Safety, EMC, RF/Wireless, Telecom
Europe	A2LA, NIST	EMC, RF, Telecom, Safety
Israel	MOC, NIST	EMC, RF, Telecom, Safety

Accreditations for Product Certifications

Country	Accreditation Body	Scope
USA	FCC TCB, NIST	EMC, RF, Telecom
Canada	IC FCB, NIST	EMC, RF, Telecom
Singapore	iDA, NIST	EMC, RF, Telecom
EU	NB	EMC & R&TTE Directive
Japan	MIC (RCB 208)	RF, Telecom
Hong Kong	OFTA (US002)	RF, Telecom

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1 Report Revision History

Report No.	Report Version	Description	Issue Date
FCC _RF_SL16012001-ZBR-001_UNII	None	Original	06/17/2016

2 Executive Summary

The purpose of this test program was to demonstrate compliance of following product

Company: Zebra Technologies Corporation
Product: N Radio Module with 802.11 a/b/g/n and BT
Model: WYSBMVGXB

against the current Stipulated Standards. The specified model product stated above has demonstrated compliance with the Stipulated Standard listed on 1st page.

3 Customer information

Applicant Name	:	Zebra Technologies Corporation
Applicant Address	:	333 Corporate Woods, Vernon Hills, IL, 60061, USA
Manufacturer Name	:	Zebra Technologies Corporation
Manufacturer Address	:	333 Corporate Woods, Vernon Hills, IL, 60061, USA

4 Test site information

Lab performing tests	SIEMIC Laboratories
Lab Address	775 Montague Expressway, Milpitas, CA 95035
FCC Test Site No.	881796
IC Test Site No.	4842D-2
VCCI Test Site No.	A0133

5 Modification

Index	Item	Description	Note
-	-	-	-

6 EUT Information

6.1 EUT Description

Product Name	N Radio Module with 802.11 a/b/g/n and BT
Model No.	WYSBMVGXB
Trade Name	Zebra Technologies Corporation
Serial No.	N/A
Host Model No.	N/A
Input Power	100-240VDC, 50/60Hz
Power Adapter Manu/Model	FSP GROPU INC./FSP025-DHAN2
Power Adapter SN	H00000035
Product Hardware version	N/A
Product Software version	N/A
Radio Hardware version	Revision B
Radio Software version	N/A
Test Software version	Splat v0.6 or ToolBox v1.79
Date of EUT received	01/22/2016
Equipment Class/ Category	UNII
Clock Frequencies	N/A
Port/Connectors	USB

6.2 Radio Description

Radio Type	802.11a	802.11n-20M	802.11n-40M
Operating Frequency	5180-5240MHz 5260-5320MHz 5500-5700MHz 5745-5825MHz	5180-5240MHz 5260-5320MHz 5500-5700MHz 5745-5825MHz	5190-5230MHz 5270-5310MHz 5510-5670MHz 5755-5795MHz
Modulation	OFDM (BPSK, QPSK, 16QAM, 64QAM)	OFDM (BPSK, QPSK, 16QAM, 64QAM)	OFDM (BPSK, QPSK, 16QAM, 64QAM)
Channel Spacing	20MHz	20MHz (5GHz)	40MHz
Number of Channels	22	22 (5GHz)	10 (5GHz)
Antenna Type	Omnidirectional Antenna Patch Antenna		
Antenna Gain	Omnidirectional Antenna - 5dBi (5GHz) Patch Antenna – 3.19dBi (5GHz)		
Antenna Connector Type	Reverse SMA U.FL connector		
Remarks	2.4GHz and 5GHz Radio does not transmit simultaneously		

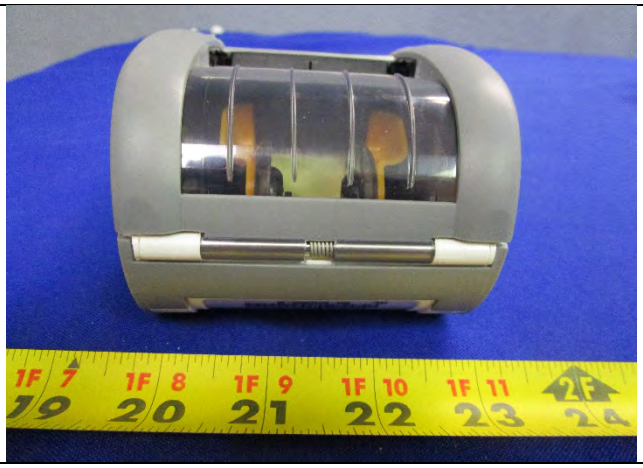
EUT Power Setting (power setting is same for both antenna type)

5.2 GHz			
Test mode	Freq(MHz)	CH	Power settings
802.11a	5180	Low	18
	5200	Mid	18
	5240	High	18
802.11n20	5180	Low	18
	5200	Mid	18
	5240	High	18
802.11n40	5190	Low	18
	5230	High	18
5.3 GHz			
Test mode	Freq(MHz)	CH	Power settings
802.11a	5260	Low	18
	5280	Mid	18
	5320	High	18
802.11n20	5260	Low	18
	5280	Mid	18
	5320	High	18
802.11n40	5270	Low	18
	5310	High	18
5.5 GHz			
Test mode	Freq(MHz)	CH	Power settings
802.11a	5500	Low	18
	5580	Mid	18
	5700	High	18
802.11n20	5500	Low	18
	5580	Mid	18
	5700	High	18
802.11n40	5510	Low	18
	5550	Mid	18
	5670	High	18

5.8 GHz			
Test mode	Freq(MHz)	CH	Conducted Power (dBm)
802.11a	5745	Low	18
	5785	Mid	18
	5825	High	18
802.11n20	5745	Low	18
	5785	Mid	18
	5825	High	18
802.11n40	5755	Low	18
	5795	High	18

6.3 EUT Photos-External

EUT – Front View



EUT – Rear View

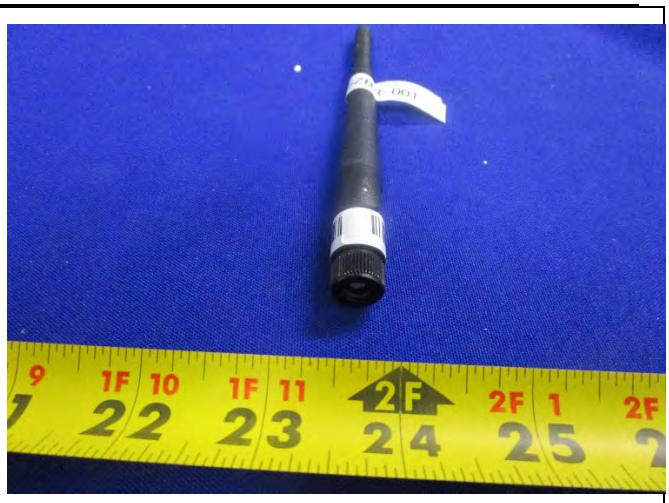
EUT – Top View

EUT – Bottom View

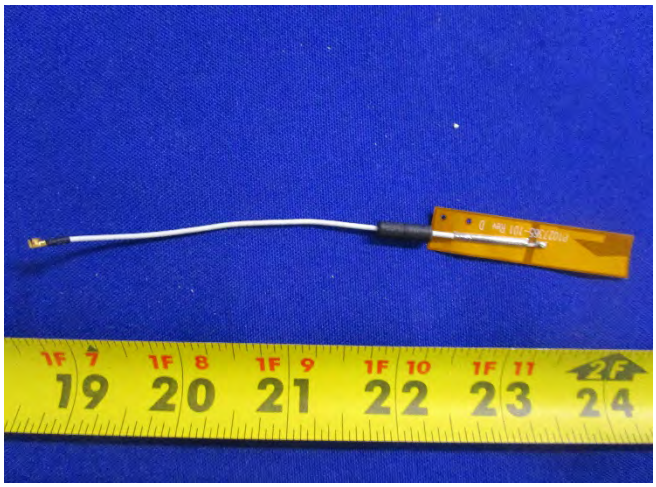
EUT – Left Side View

EUT – Right Side View

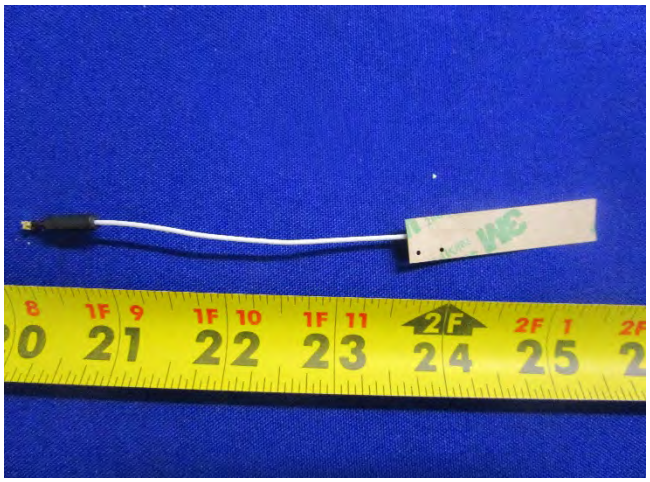
Omnidirectional Antenna



Omnidirectional Antenna



Patch Antenna Top View

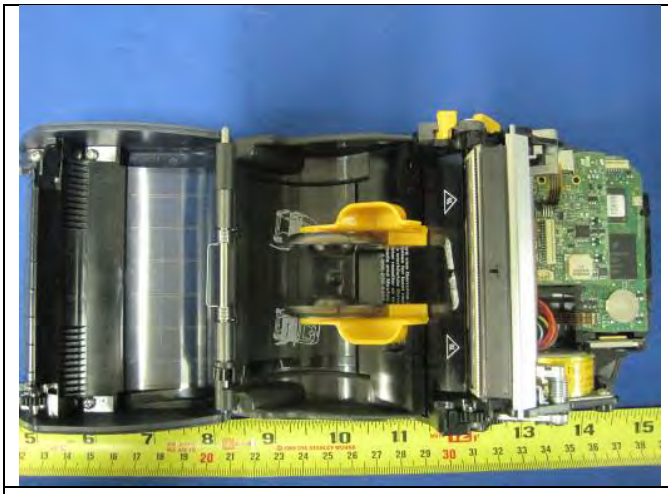


Patch Antenna Bottom

Support Equipment Power Supply Top View

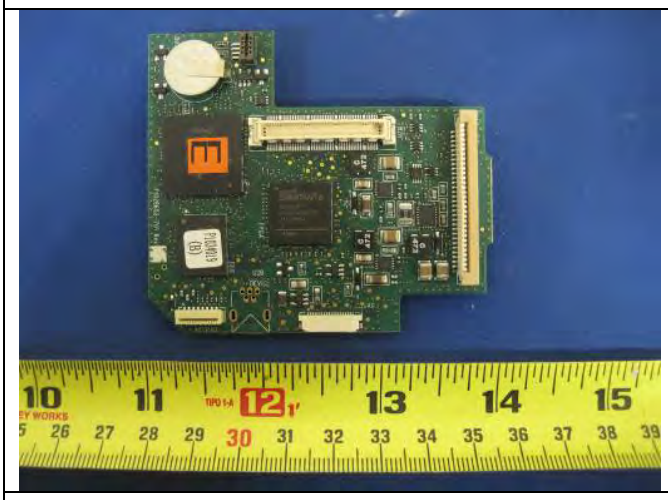
Support Equipment Power Supply Bottom View

6.4 EUT Photos – Internal

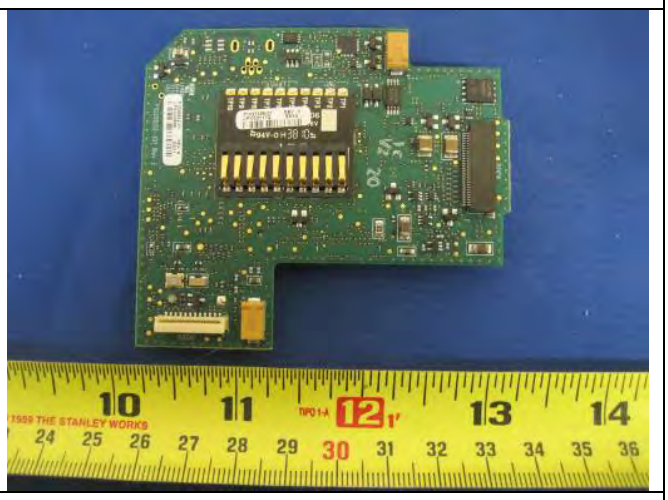


EUT: Cover Off View 1

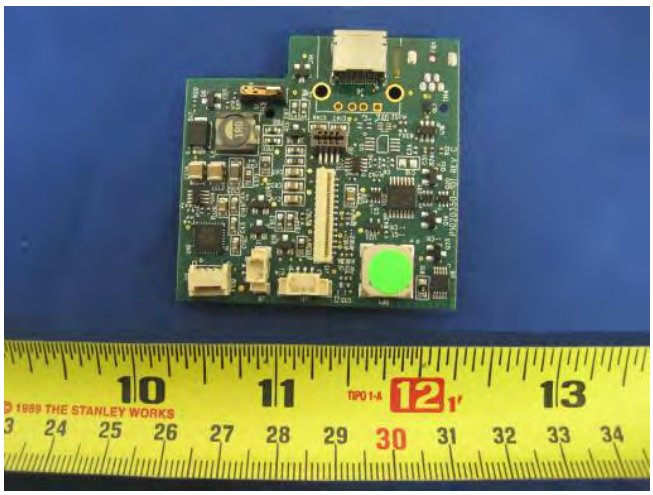
EUT: Cover Off View 2



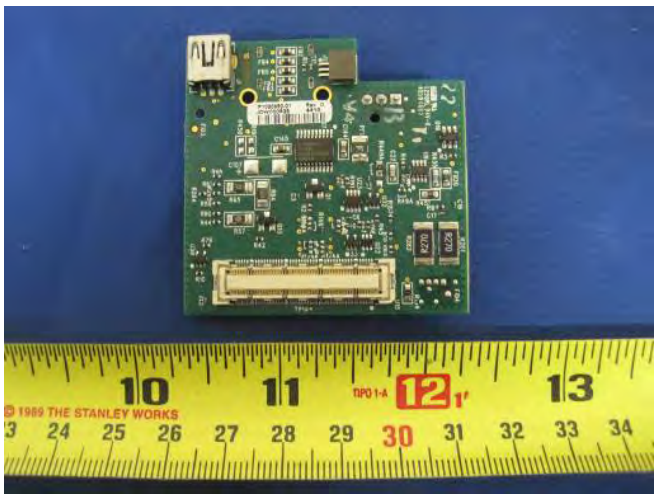
Internal PCBA 1 Top View



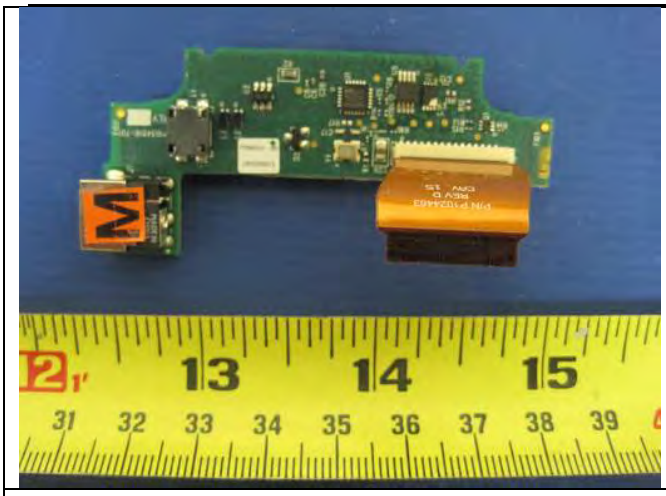
Internal PCBA 1 Bottom View



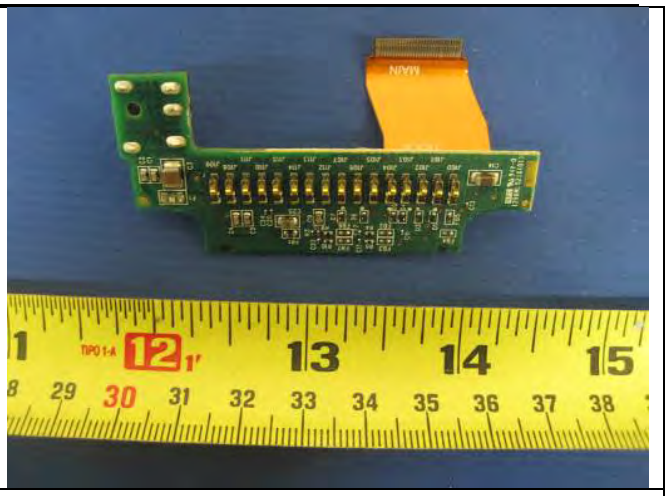
Internal PCBA 2 Top View



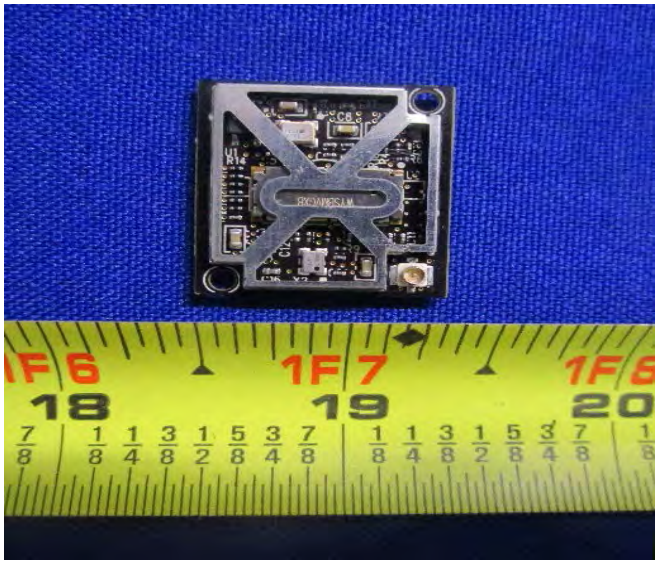
Internal PCBA 2 Bottom View



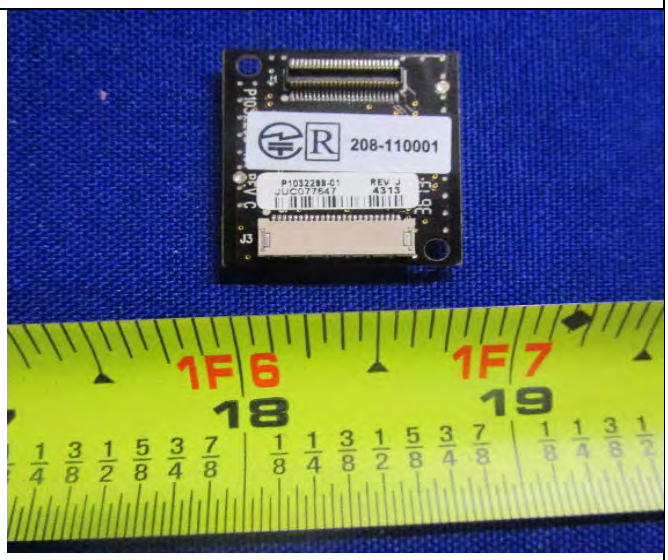
Internal PCBA 3 Top View



Internal PCBA 3 Bottom View



Radio Module Top View



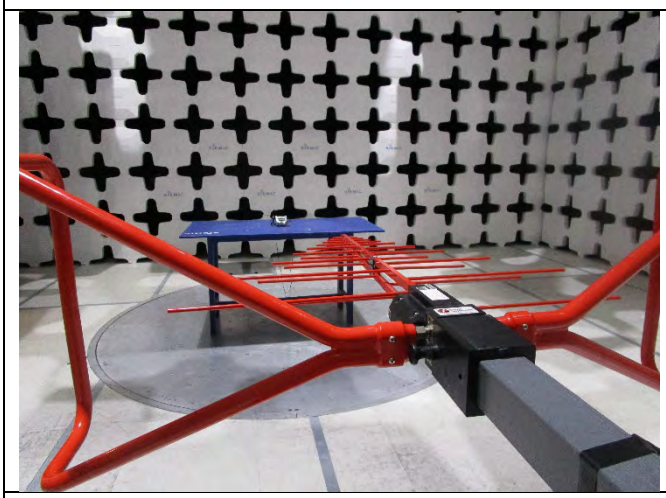
Radio Module Bottom View

6.5 EUT Test Setup Photos

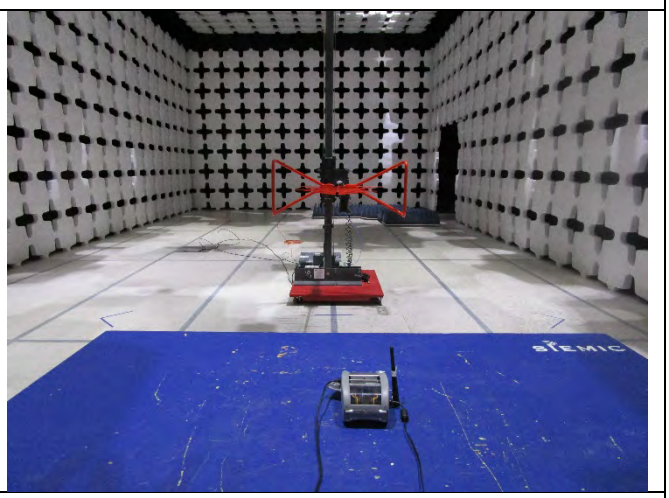
Onmidirectional Antenna

AC Line Conducted Emissions – Front View

AC Line Conducted Emissions – Rear View



Radiated Emissions (<1GHz) – Front View

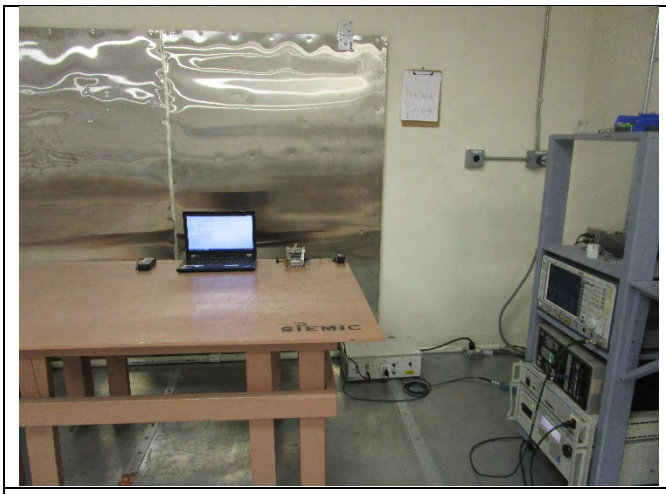


Radiated Emissions (<1GHz) – Rear View

Radiated Emissions (>1GHz) – Front View

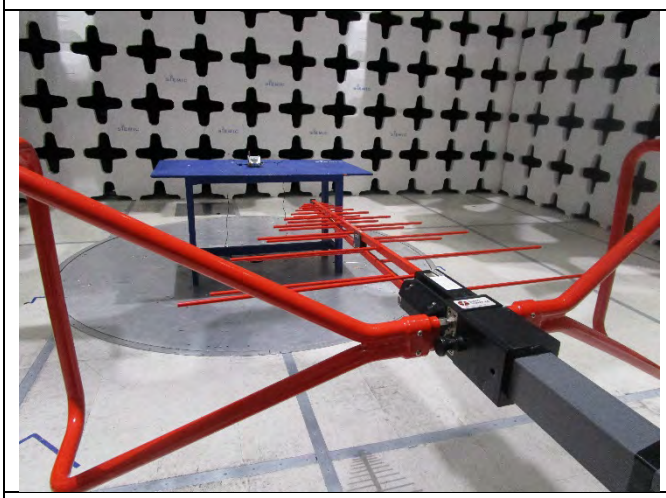
Radiated Emissions (>1GHz) – Rear View

Patch Antenna

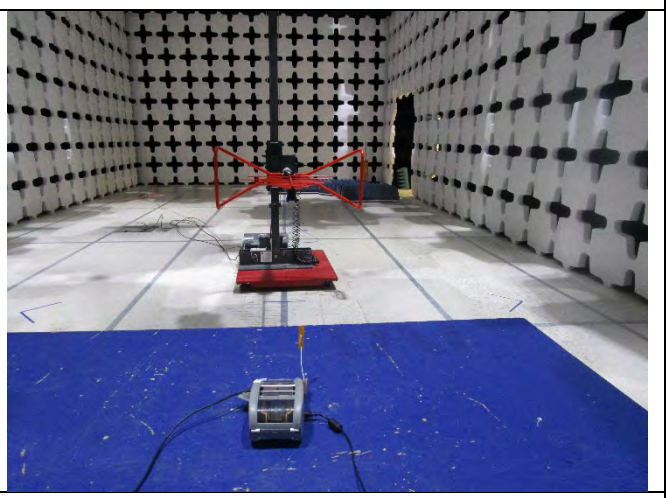


AC Line Conducted Emissions – Front View

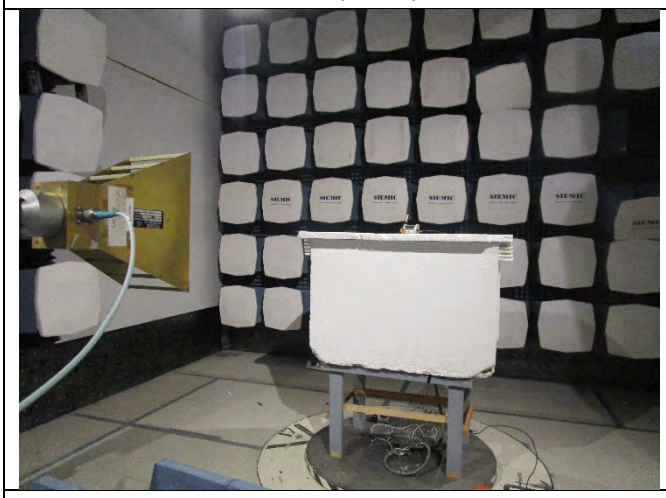
AC Line Conducted Emissions – Rear View



Radiated Emissions (<1GHz) – Front View



Radiated Emissions (<1GHz) – Rear View



Radiated Emissions (>1GHz) – Front View

Radiated Emissions (>1GHz) – Rear View

7 Supporting Equipment/Software and cabling Description

7.1 Supporting Equipment

Item	Supporting Equipment Description	Model	Serial Number	Manufacturer	Note
1	Laptop	ThinkPad T420s	N/A	Lenovo	-

7.2 Cabling Description

Name	Connection Start		Connection Stop		Length / shielding Info		Note
	From	I/O Port	To	I/O Port	Length (m)	Shielding	
USB	EUT	I/O Port	Laptop	USB	2	Unshielded	-

7.3 Test Software Description

Test Item	Software	Description
RF Testing	Toolbox	Set the EUT to transmit continuously in diferent test mode

8 Test Summary

Test Item	Test standard		Test Method/Procedure	Pass / Fail
Restricted Band of Operation	FCC	15.205	ANSI C63.10 – 2013 789033 D02 General UNII Test Procedures New Rules v01	☒ Pass ☐ N/A
AC Conducted Emissions Voltage	FCC	15.207(a)	ANSI C63.10 – 2013	☒ Pass ☐ N/A

Test Item	Test standard		Test Method/Procedure	Pass / Fail
26 & 6 dB Emission Bandwidth	FCC	15.407 (a) (2)	789033 D02 General UNII Test Procedures New Rules v01	☒ Pass ☐ N/A
Maximum conducted Output Power	FCC	15.407 (a) (2)	789033 D02 General UNII Test Procedures New Rules v01	☒ Pass ☐ N/A
Power reduction (Antenna Gain > 6 dBi)	FCC	15.407 (a) (2)	-	☒ Pass ☐ N/A
Band Edge and Radiated Spurious Emissions	FCC	15.407(b)(2), 15.407(b)(6)	ANSI C63.10 – 2013 789033 D02 General UNII Test Procedures New Rules v01	☒ Pass ☐ N/A
Power Spectral Density	FCC	15.407 (a) (2)	789033 D02 General UNII Test Procedures New Rules v01	☒ Pass ☐ N/A
User Manual	FCC	-	-	☒ Pass ☐ N/A
Remark	1. All measurement uncertainties are not taken into consideration for all presented test result. 2. The applicant shall ensure frequency stability by showing that an emission is maintained within the band of operation under all normal operating conditions as specified in the user's manual. 3. The device is operating at near 98% duty cycle.			

9 Measurement Uncertainty

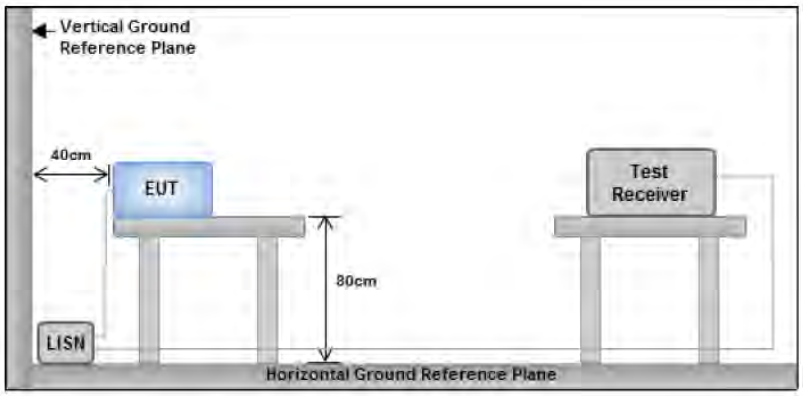
Emissions			
Test Item	Frequency Range	Description	Uncertainty
AC Conducted Emissions	150KHz – 30MHz	Confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2	±3.5dB
Band Edge and Radiated Spurious Emissions	30MHz – 1GHz	Confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2 (for EUTs < 0.5m X 0.5m X 0.5m)	+5.6dB/-4.5dB
Band Edge and Radiated Spurious Emissions	1GHz – 40GHz	Confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2 (for EUTs < 0.5m X 0.5m X 0.5m)	+4.3dB/-4.1dB

10 Measurements, Examination and Derived Results

10.1 Conducted Emissions

Conducted Emission Limit

Frequency ranges (MHz)	Limit (dBuV)	
	QP	Average
0.15 ~ 0.5	66 – 56	56 – 46
0.5 ~ 5	56	46
5 ~ 30	60	50

Spec	Item	Requirement	Applicable
47CFR§15.207	a)	For Low-power radio-frequency devices that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 μH/50 ohms line impedance stabilization network (LISN). The lower limit applies at the boundary between the frequency ranges.	☒
Test Setup		 Note: 1. Support units were connected to second LISN. 2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes	
Procedure		- The EUT and supporting equipment were set up in accordance with the requirements of the standard on top of a 1.5m x 1m x 0.8m high, non-metallic table, as shown in Annex B. - The power supply for the EUT was fed through a 50Ω/50μH EUT LISN, connected to filtered mains. - The RF OUT of the EUT LISN was connected to the EMI test receiver via a low-loss coaxial cable. - All other supporting equipment was powered separately from another main supply.	
Remark		EUT was tested at 120VAC, 60Hz	
Result		☒ Pass ☐ Fail	

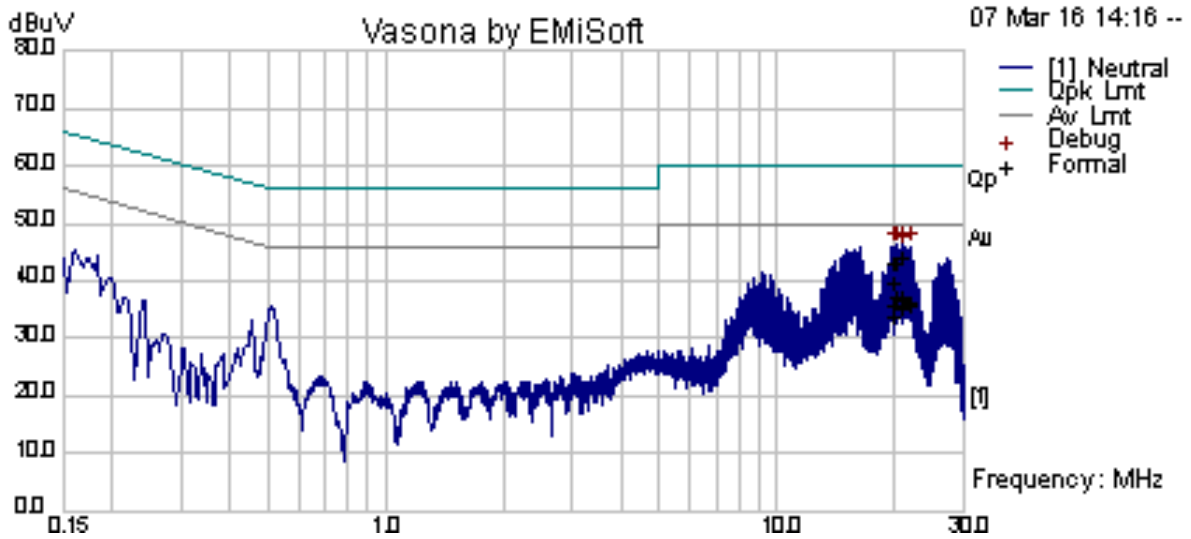
Test Data ☒ Yes ☐ N/A

Test Plot ☒ Yes (See below) ☐ N/A

Test was done by *Rachana Khanduri* at *Conducted Emission Test Site*.

Conducted Emission Test Results (Omnidirectional Antenna)

Test specification:	Conducted Emissions			
Environmental Conditions:	Temp(°C):	21	Result:	☒ Pass ☐ Fail
	Humidity (%):	42		
	Atmospheric(mbar):	1021		
Mains Power:	120Vac, 60Hz			
Tested by:	Rachana Khanduri			
Test Date:	03/07/2016			
Remarks	AC Line @ Neutral			

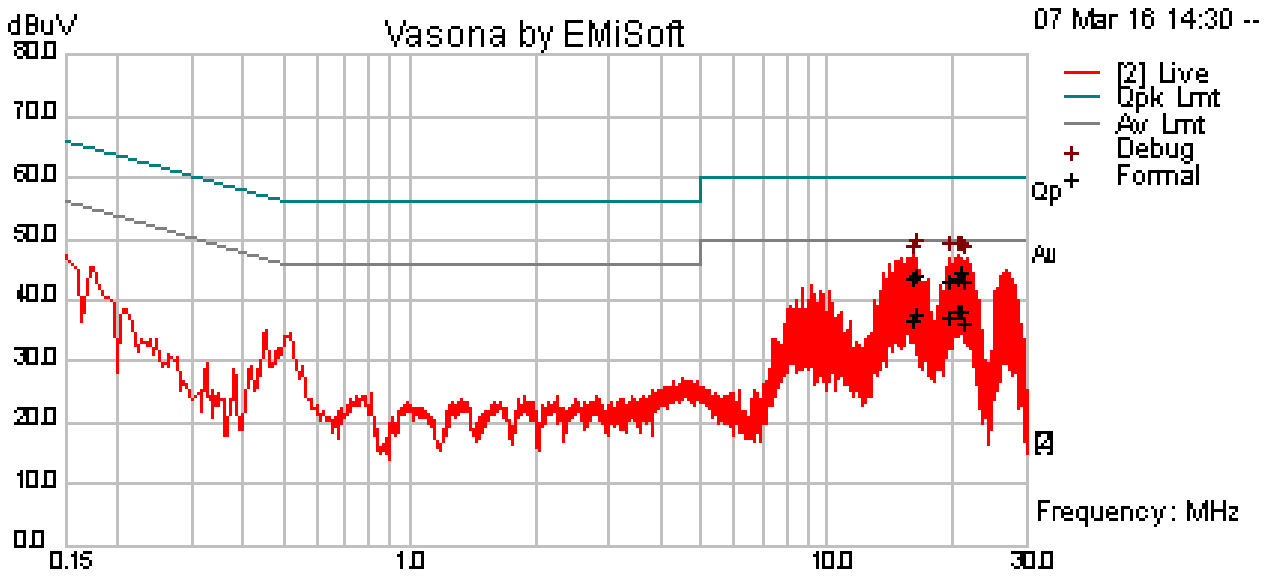


Neutral Plot at 120Vac, 60Hz

Frequency (MHz)	Raw (dBuV)	Cable Loss (dB)	Factors (dB)	Level (dBuV)	Measurement Type	Line	Limit (dBuV)	Margin (dB)	Pass /Fail
20.28	32.58	10.07	0.70	43.34	Quasi Peak	Neutral	60.00	-16.66	Pass
20.86	33.53	10.07	0.71	44.30	Quasi Peak	Neutral	60.00	-15.70	Pass
21.90	25.10	10.07	0.72	35.90	Quasi Peak	Neutral	60.00	-24.10	Pass
19.81	29.21	10.07	0.69	39.96	Quasi Peak	Neutral	60.00	-20.04	Pass
19.69	32.30	10.07	0.69	43.05	Quasi Peak	Neutral	60.00	-16.95	Pass
20.98	26.15	10.07	0.71	36.92	Quasi Peak	Neutral	60.00	-23.08	Pass
20.28	26.65	10.07	0.70	37.41	Average	Neutral	50.00	-12.59	Pass
20.86	26.64	10.07	0.71	37.42	Average	Neutral	50.00	-12.58	Pass
21.90	25.48	10.07	0.72	36.27	Average	Neutral	50.00	-13.73	Pass
19.81	22.91	10.07	0.69	33.67	Average	Neutral	50.00	-16.33	Pass
19.69	25.24	10.07	0.69	35.99	Average	Neutral	50.00	-14.01	Pass
20.98	24.39	10.07	0.71	35.17	Average	Neutral	50.00	-14.83	Pass

Conducted Emission Test Results (Omnidirectional Antenna)

Test specification:	Conducted Emissions			
Environmental Conditions:	Temp(°C):	21	Result:	☒ Pass ☐ Fail
	Humidity (%):	42		
	Atmospheric(mbar):	1021		
Mains Power:	120Vac, 60Hz			
Tested by:	Rachana Khanduri			
Test Date:	03/07/2016			
Remarks	AC Line @ Line			



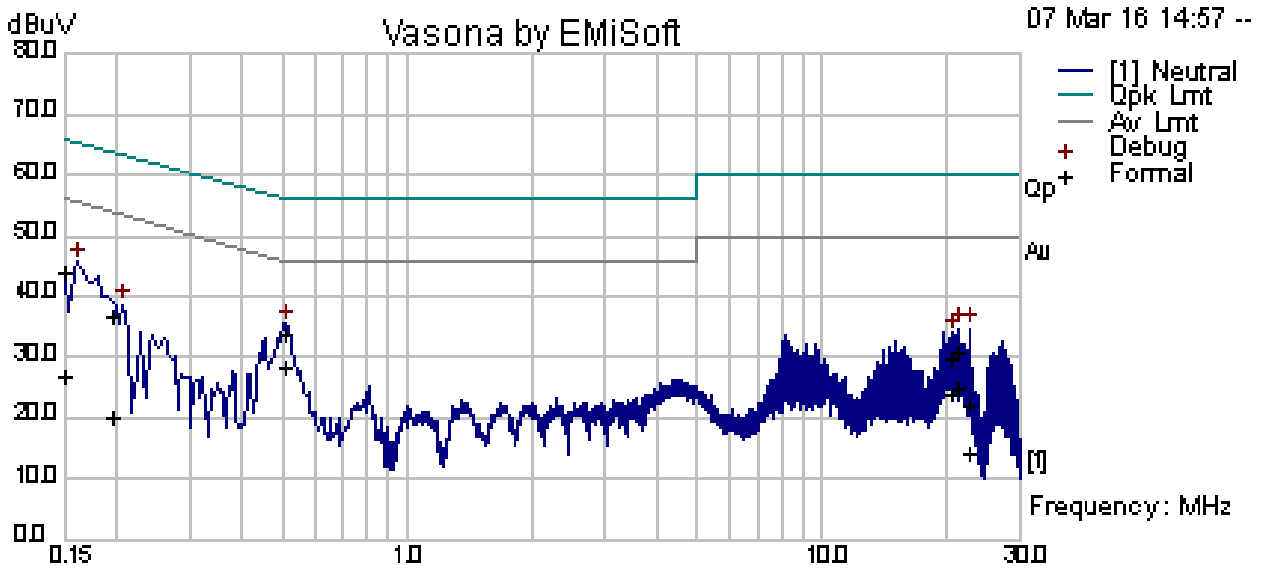
Line Plot at 120Vac, 60Hz

Frequency (MHz)	Raw (dBuV)	Cable Loss (dB)	Factors (dB)	Level (dBuV)	Measurement Type	Line	Limit (dBuV)	Margin (dB)	Pass /Fail
16.17	33.29	10.06	0.62	43.98	Quasi Peak	Live	60.00	-16.02	Pass
20.74	33.72	10.07	0.70	44.49	Quasi Peak	Live	60.00	-15.51	Pass
20.39	32.67	10.07	0.70	43.43	Quasi Peak	Live	60.00	-16.57	Pass
19.57	32.52	10.07	0.68	43.27	Quasi Peak	Live	60.00	-16.73	Pass
21.10	32.53	10.07	0.71	43.31	Quasi Peak	Live	60.00	-16.69	Pass
15.94	32.82	10.06	0.62	43.50	Quasi Peak	Live	60.00	-16.50	Pass
16.17	27.06	10.06	0.62	37.74	Average	Live	50.00	-12.26	Pass
20.74	27.71	10.07	0.70	38.48	Average	Live	50.00	-11.52	Pass
20.39	27.34	10.07	0.70	38.11	Average	Live	50.00	-11.89	Pass
19.57	26.55	10.07	0.68	37.30	Average	Live	50.00	-12.70	Pass
21.10	25.75	10.07	0.71	36.53	Average	Live	50.00	-13.47	Pass
15.94	26.28	10.06	0.62	36.96	Average	Live	50.00	-13.04	Pass

Note: The results above shows only the worst case.

Conducted Emission Test Results (Patch Antenna)

Test specification:	Conducted Emissions			
Environmental Conditions:	Temp(°C):	21	Result:	☒ Pass ☐ Fail
	Humidity (%):	42		
	Atmospheric(mbar):	1021		
Mains Power:	120Vac, 60Hz			
Tested by:	Rachana Khanduri			
Test Date:	03/07/2016			
Remarks	AC Line @ Neutral			

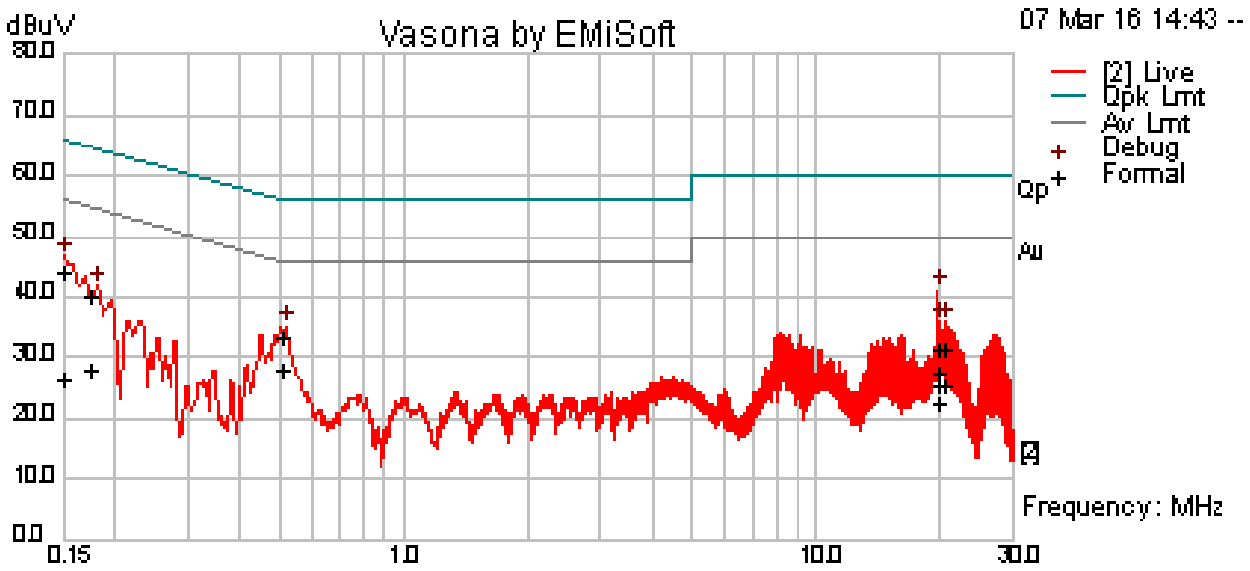


Neutral Plot at 120Vac, 60Hz

Frequency (MHz)	Raw (dBuV)	Cable Loss (dB)	Factors (dB)	Level (dBuV)	Measurement Type	Line	Limit (dBuV)	Margin (dB)	Pass /Fail
0.15	32.24	10.00	1.80	44.05	Quasi Peak	Neutral	66.00	-21.95	Pass
0.51	23.04	10.01	0.68	33.73	Quasi Peak	Neutral	56.00	-22.27	Pass
0.19	25.62	10.00	1.35	36.98	Quasi Peak	Neutral	63.86	-26.88	Pass
21.21	20.09	10.07	0.71	30.88	Quasi Peak	Neutral	60.00	-29.12	Pass
22.69	11.12	10.07	0.74	21.93	Quasi Peak	Neutral	60.00	-38.07	Pass
20.51	19.36	10.07	0.70	30.13	Quasi Peak	Neutral	60.00	-29.87	Pass
0.15	15.37	10.00	1.80	27.17	Average	Neutral	56.00	-28.83	Pass
0.51	17.53	10.01	0.68	28.21	Average	Neutral	46.00	-17.79	Pass
0.19	8.91	10.00	1.35	20.27	Average	Neutral	53.86	-33.59	Pass
21.21	14.15	10.07	0.71	24.93	Average	Neutral	50.00	-25.07	Pass
22.69	3.40	10.07	0.74	14.21	Average	Neutral	50.00	-35.79	Pass
20.51	13.14	10.07	0.70	23.91	Average	Neutral	50.00	-26.09	Pass

Conducted Emission Test Results (Patch Antenna)

Test specification:	Conducted Emissions			
Environmental Conditions:	Temp(°C):	21	Result:	☒ Pass ☐ Fail
	Humidity (%):	42		
	Atmospheric(mbar):	1021		
Mains Power:	120Vac, 60Hz			
Tested by:	Rachana Khanduri			
Test Date:	03/07/2016			
Remarks	AC Line @ Line			



Line Plot at 120Vac, 60Hz

Frequency (MHz)	Raw (dBuV)	Cable Loss (dB)	Factors (dB)	Level (dBuV)	Measurement Type	Line	Limit (dBuV)	Margin (dB)	Pass /Fail
19.72	16.61	10.07	0.69	27.36	Quasi Peak	Live	60.00	-32.64	Pass
0.15	32.21	10.00	1.80	44.01	Quasi Peak	Live	66.00	-21.99	Pass
0.51	22.76	10.01	0.68	33.44	Quasi Peak	Live	56.00	-22.56	Pass
0.17	28.69	10.00	1.52	40.20	Quasi Peak	Live	64.78	-24.57	Pass
20.51	20.64	10.07	0.70	31.41	Quasi Peak	Live	60.00	-28.59	Pass
19.81	20.60	10.07	0.69	31.36	Quasi Peak	Live	60.00	-28.64	Pass
19.72	11.61	10.07	0.69	22.36	Average	Live	50.00	-27.64	Pass
0.15	14.72	10.00	1.80	26.53	Average	Live	56.00	-29.47	Pass
0.51	17.28	10.01	0.68	27.96	Average	Live	46.00	-18.04	Pass
0.17	16.65	10.00	1.52	28.17	Average	Live	54.78	-26.61	Pass
20.51	14.95	10.07	0.70	25.72	Average	Live	50.00	-24.28	Pass
19.81	14.63	10.07	0.69	25.39	Average	Live	50.00	-24.61	Pass

Note: The results above shows only the worst case.

10.2 26 dB Bandwidth & 6 dB Bandwidth

Requirement(s):

Spec	Item	Requirement	Applicable
§ 15.407	-	99% BW: Report only for reference.	☒
	a) (2)	26 dB Emission BW: Report only for power limit calculation.	☒
	e)	Within the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.	☒

Test Setup

Test Procedure

789033 D02 General UNII Test Procedures New Rules v01

26dB Emission bandwidth measurement procedure (Other than 5.725-5.85 GHz)

- Allow the trace to stabilize.
- Use the spectrum analyzer built-in measurement function to determine the 26dB BW.
  - Set RBW = around 1% of emission bandwidth
  - Set VBW > RBW
  - Detector = Peak
  - Trace mode = max hold
- Capture the plot.
- Repeat above steps for different test channel and other modulation type.

6 dB Minimum emission bandwidth measurement procedure (for 5.725-5.85 GHz)

- Allow the trace to stabilize.
- Use the spectrum analyzer built-in measurement function to determine the 6dB BW.
  - Set RBW = 100 KHz
  - Set VBW ≥ 3 x RBW
  - Detector = Peak
  - Trace mode = max hold
  - Sweep = auto couple
- Capture the plot.
- Repeat above steps for different test channel and other modulation type.

Test Date	03/01/2016	Environmental condition	Temperature 22ºC Relative Humidity 38% Atmospheric Pressure 1020mbar
Remark	None		
Result	☒ Pass ☐ Fail		

Test Data ☒ Yes ☐ N/A
Test Plot ☒ Yes ☐ N/A

Test was done by *Rachana Khanduri* at *RF Test Site*.

26dB Bandwidth measurement result for 5.2GHz

Type	Test mode	Freq (MHz)	CH	Result (MHz)	Limit (MHz)
26dB BW	802.11a	5180	Low	19.24	-
		5200	Mid	19.11	-
		5240	High	19.28	-
	802.11n20	5180	Low	19.97	-
		5200	Mid	19.60	-
		5240	High	19.78	-
	802.11n40	5190	Low	39.95	-
		5230	High	39.20	-

26dB Bandwidth measurement result for 5.3GHz

Type	Test mode	Freq (MHz)	CH	Result(MHz)	Limit (MHz)
26dB BW	802.11a	5260	Low	19.51	-
		5280	Mid	18.92	-
		5320	High	19.33	-
	802.11n20	5260	Low	19.56	-
		5280	Mid	19.86	-
		5320	High	19.69	-
	802.11n40	5270	Low	39.90	-
		5310	High	39.87	-

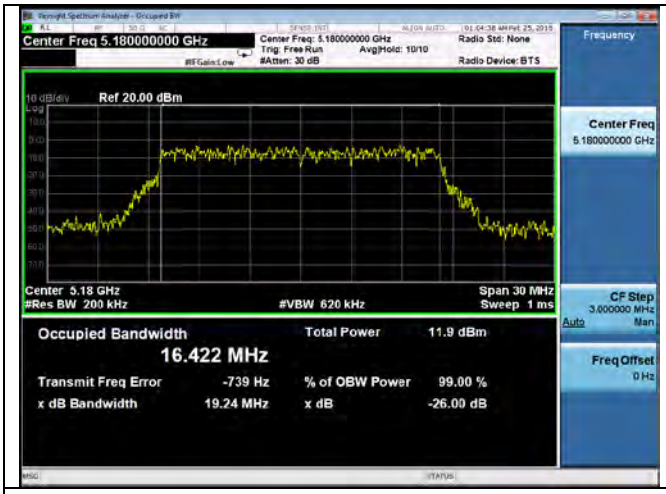
26dB Bandwidth measurement result for 5.5GHz

Type	Test mode	Freq (MHz)	CH	Result (MHz)	Limit (MHz)
26dB BW	802.11a	5500	Low	19.04	-
		5580	Mid	19.48	-
		5700	High	18.96	-
	802.11n20	5500	Low	19.79	-
		5580	Mid	19.48	-
		5700	High	19.77	-
	802.11n40	5510	Low	39.49	-
		5550	Mid	40.02	-
		5670	High	39.46	-

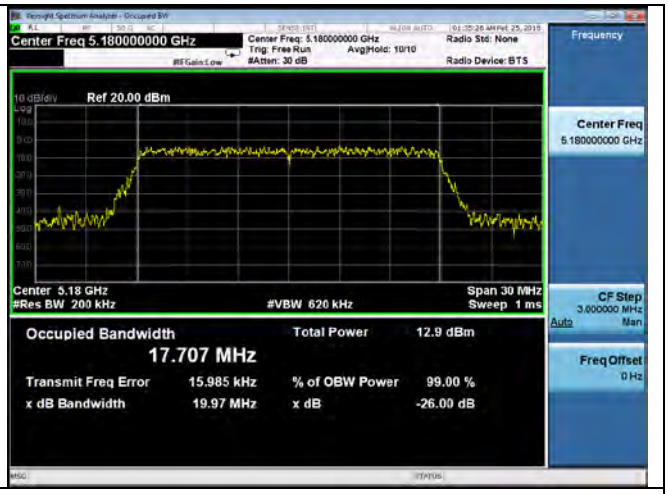
6dB Bandwidth measurement result for 5.8GHz

Type	Test mode	Freq (MHz)	CH	Result (MHz)	Limit (MHz)	Result
6dB BW	802.11a	5745	Low	16.48	>0.5	pass
		5785	Mid	16.44	>0.5	pass
		5825	High	16.36	>0.5	pass
	802.11n20	5745	Low	17.67	>0.5	pass
		5785	Mid	17.72	>0.5	pass
		5825	High	17.76	>0.5	pass
	802.11n40	5755	Low	36.32	>0.5	pass
		5795	High	36.42	>0.5	pass

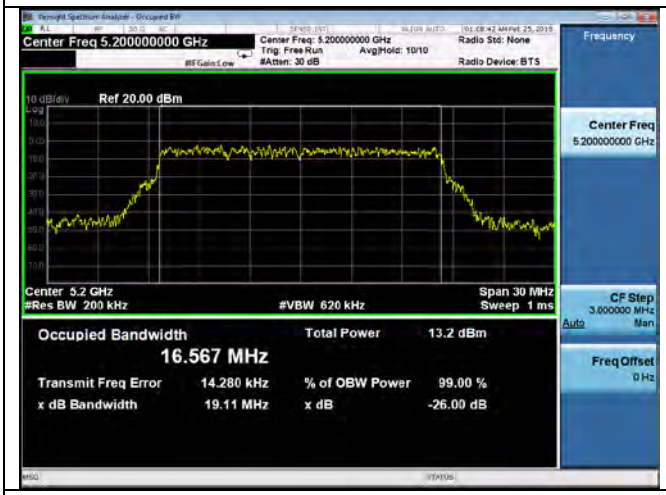
26dB Bandwidth Test Plots



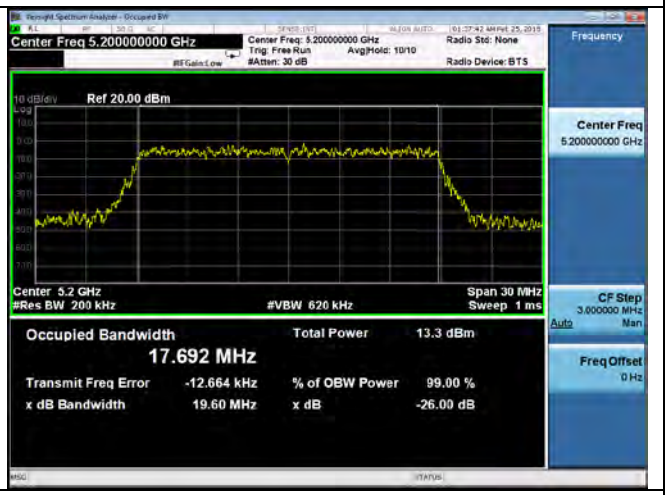
26dB BW - 802.11a 5180MHz



26dB BW - 802.11n-20M 5180MHz

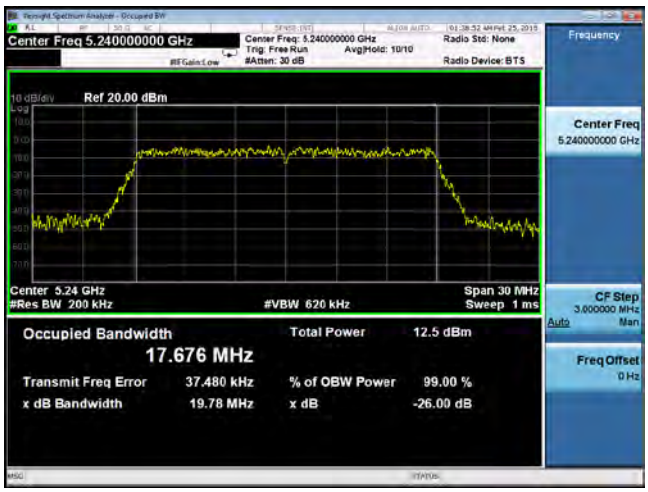


26dB BW - 802.11a 5200MHz

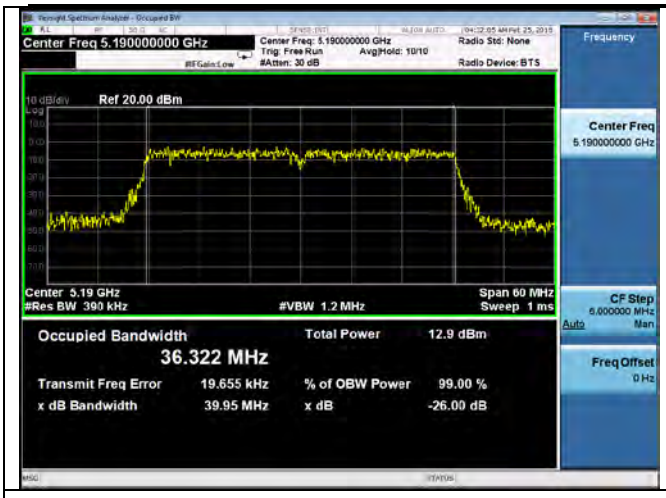


26dB BW - 802.11n-20M 5200MHz

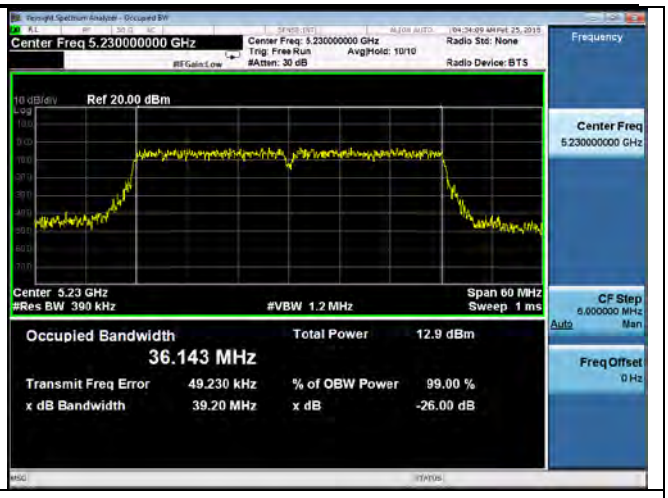
26dB BW - 802.11a 5240MHz



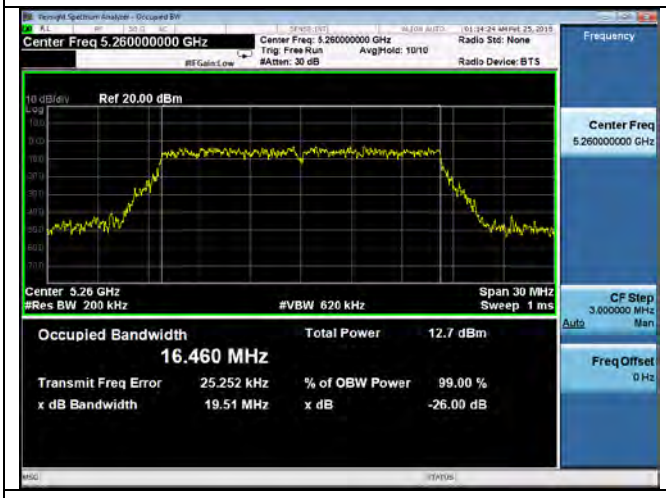
26dB BW - 802.11n-20M 5240MHz



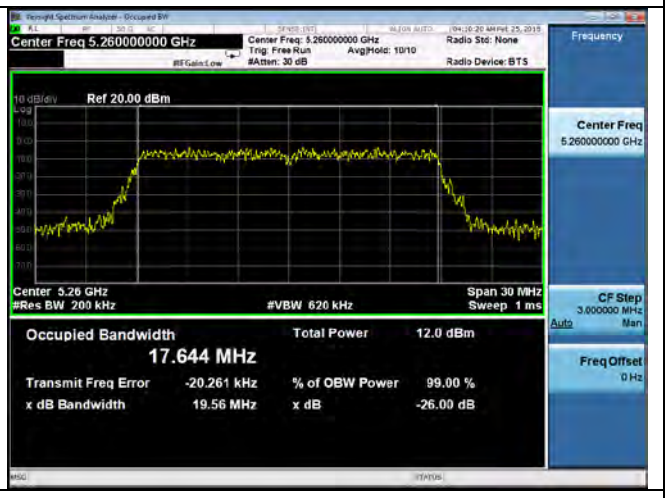
26dB BW - 802.11n40 5190MHz



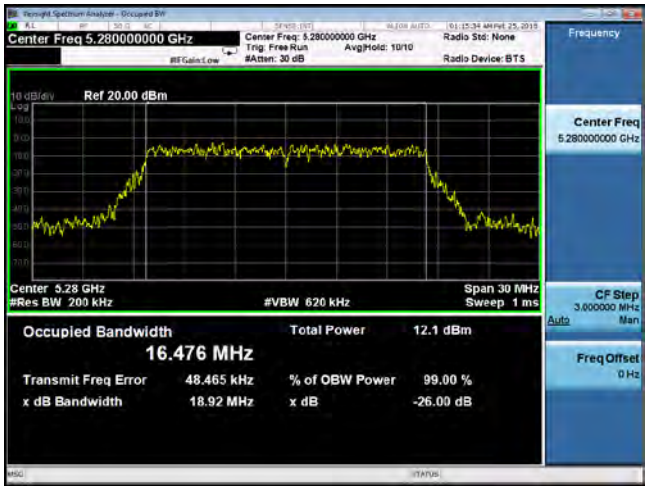
26dB BW - 802.11n-40M 5230MHz



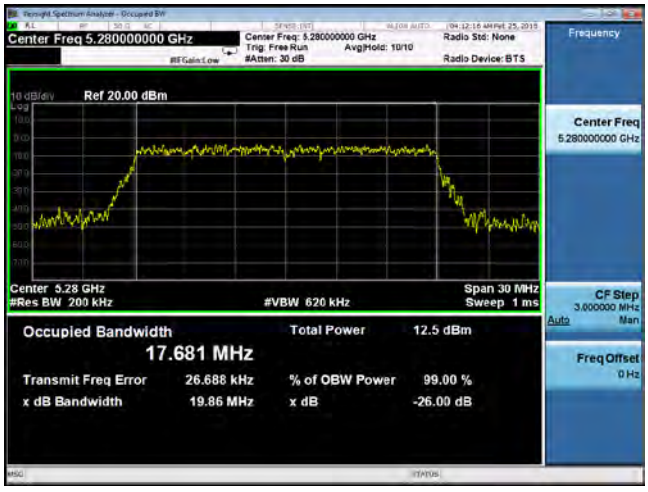
26dB BW - 802.11a 5260MHz



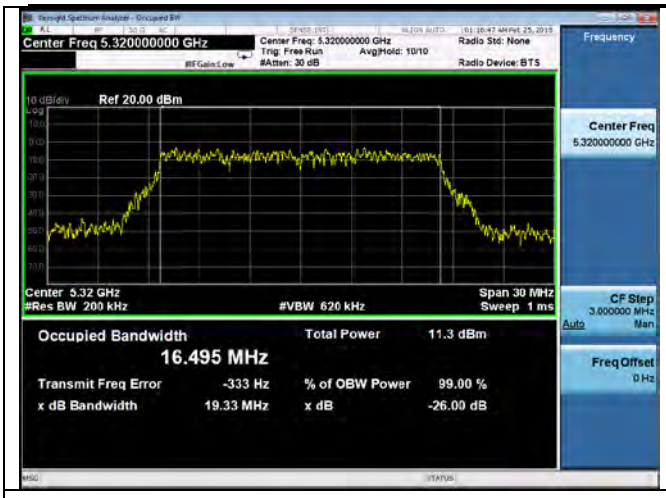
26dB BW - 802.11n-20M 5260MHz



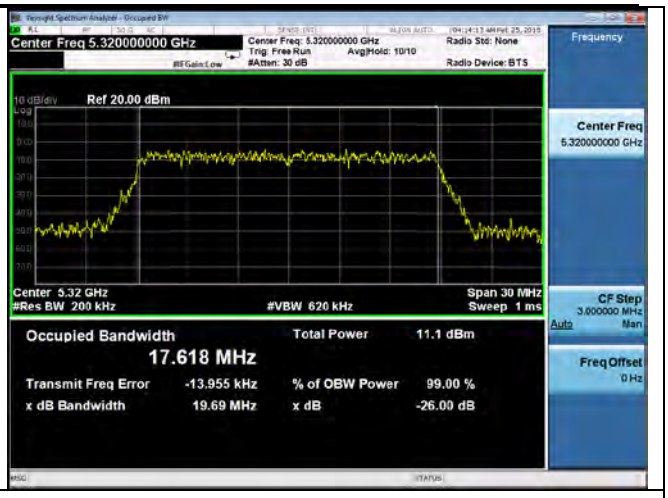
26dB BW - 802.11a 5280MHz



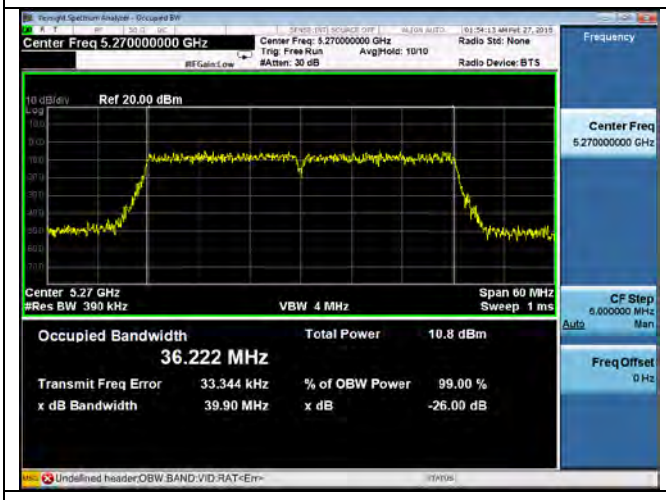
26dB BW - 802.11n-20M 5280MHz



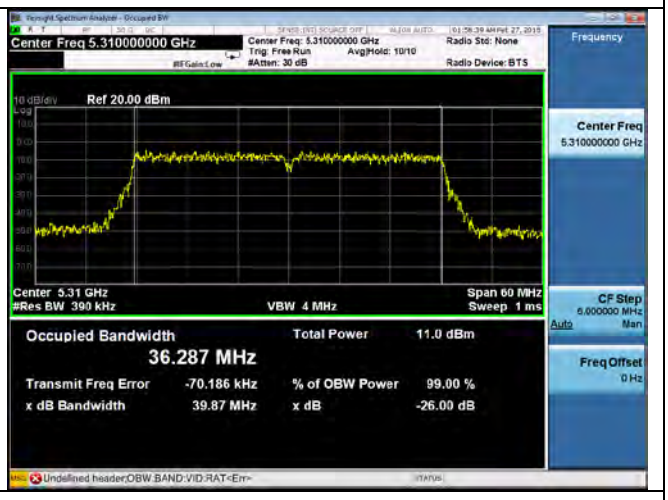
26dB BW - 802.11a 5320MHz



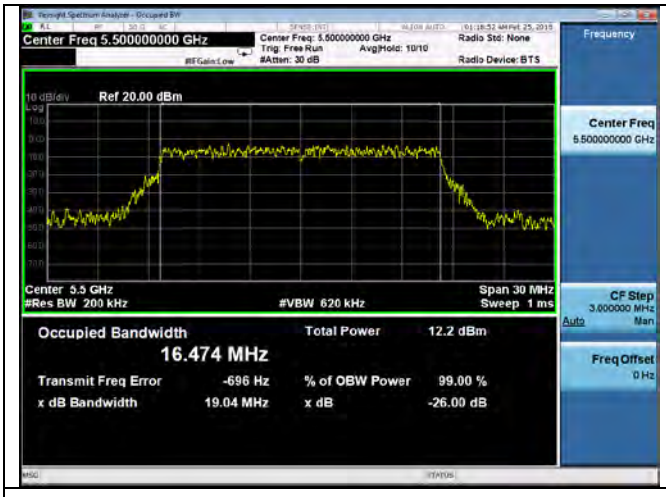
26dB BW - 802.11n-20M 5320MHz



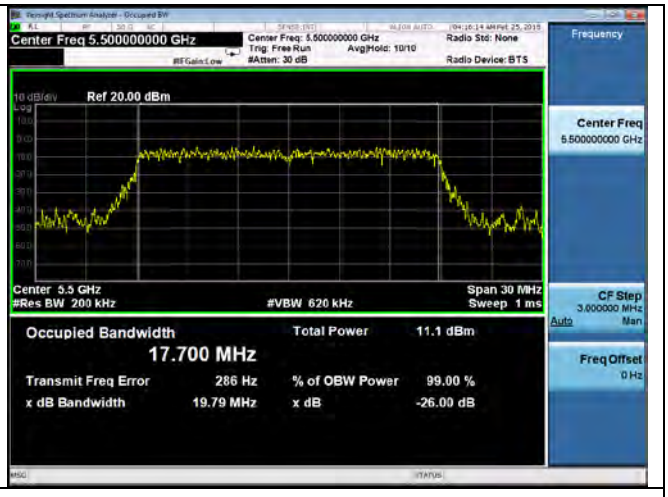
26dB BW - 802.11n-40 5270MHz



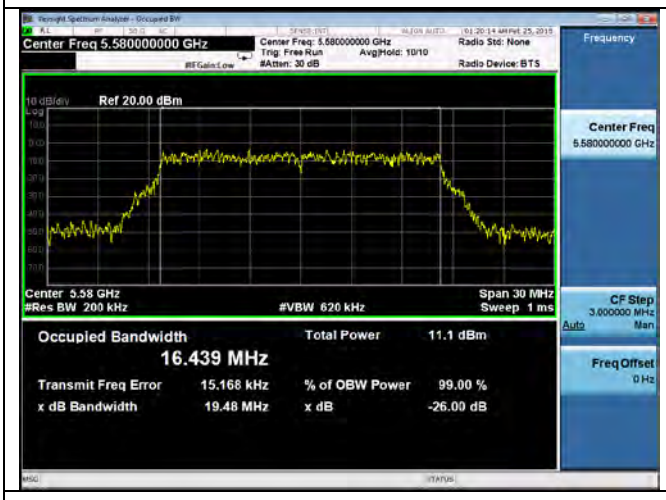
26dB BW - 802.11n-40M 5310MHz



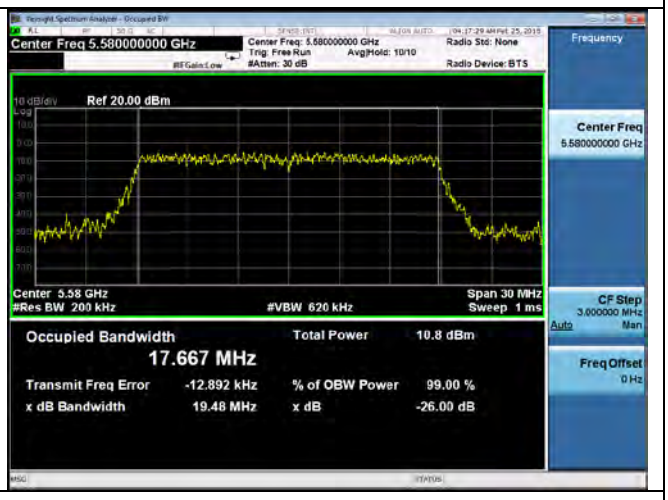
26dB BW - 802.11a 5500MHz



26dB BW - 802.11n-20M 5500MHz

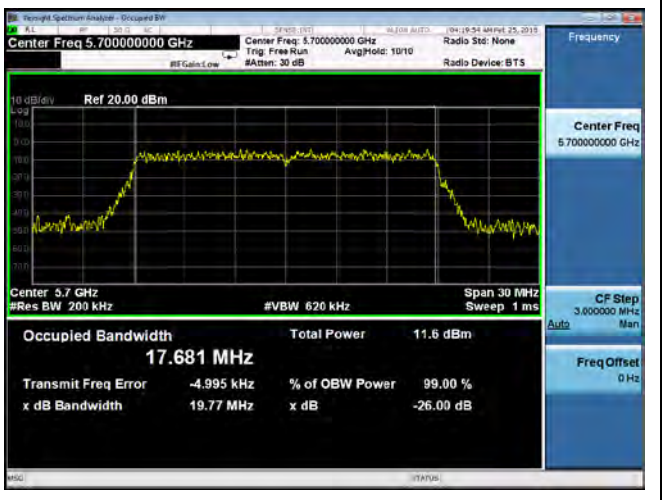


26dB BW - 802.11a 5580MHz

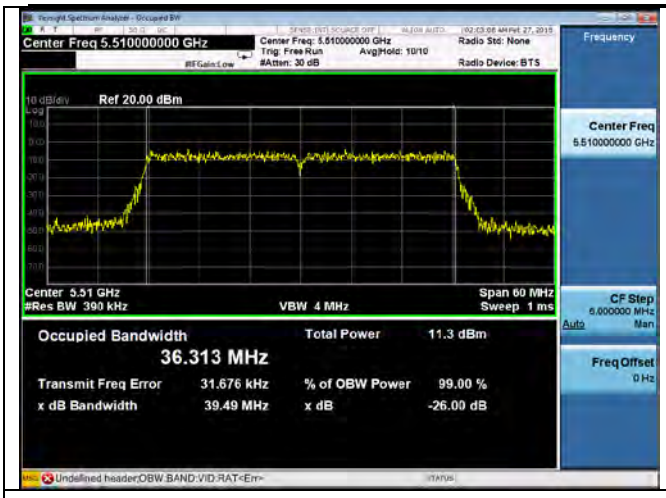


26dB BW - 802.11n-20M 5580MHz

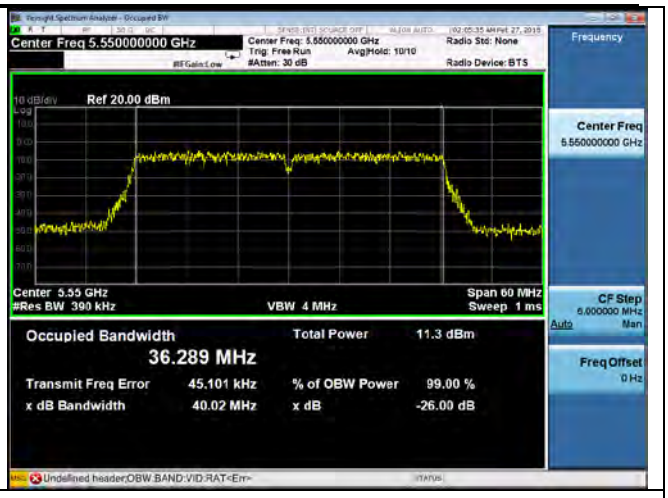
26dB BW - 802.11a 5700MHz



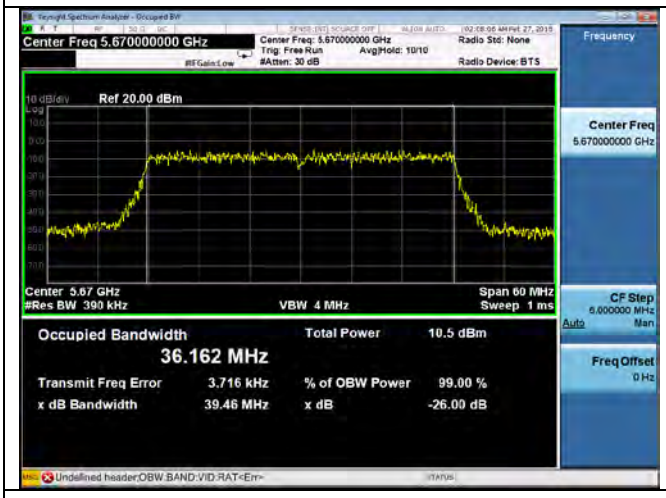
26dB BW - 802.11n-20M 5700MHz



26dB BW - 802.11n40 5510MHz

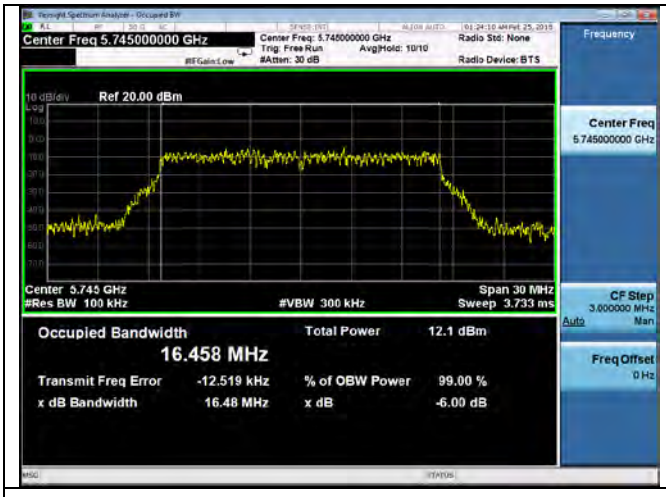


26dB BW - 802.11n40 5550MHz

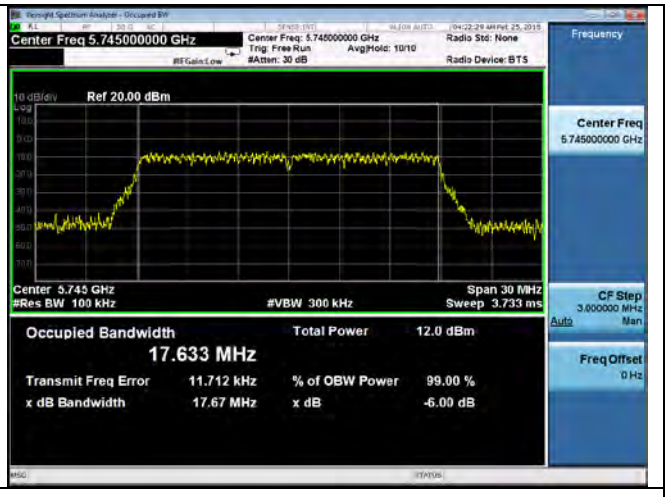


26dB BW - 802.11n-40M 5670MHz

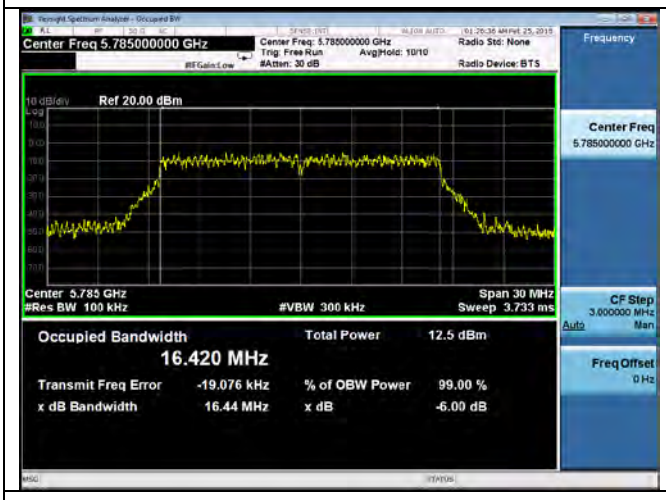
6dB Bandwidth Test Plots



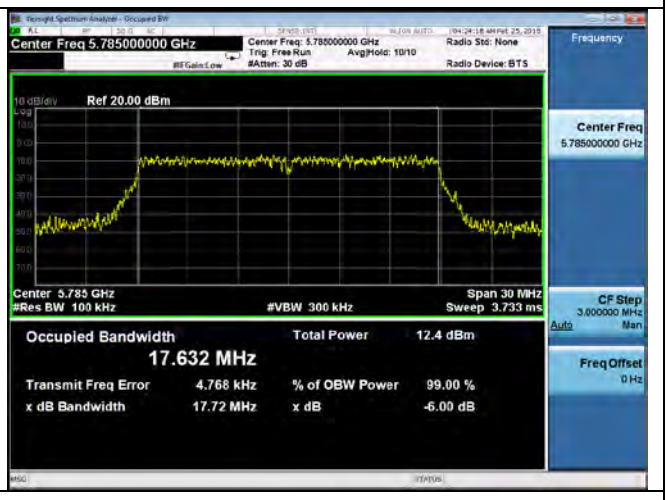
6dB BW 802.11a 5745MHz



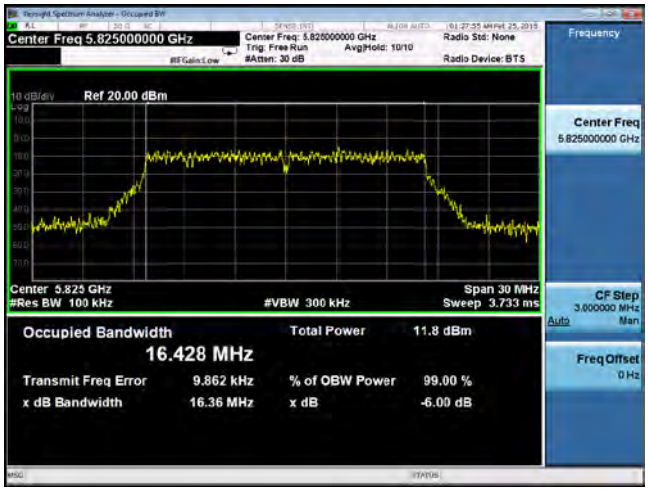
6dB BW 802.11n-20M 5745MHz



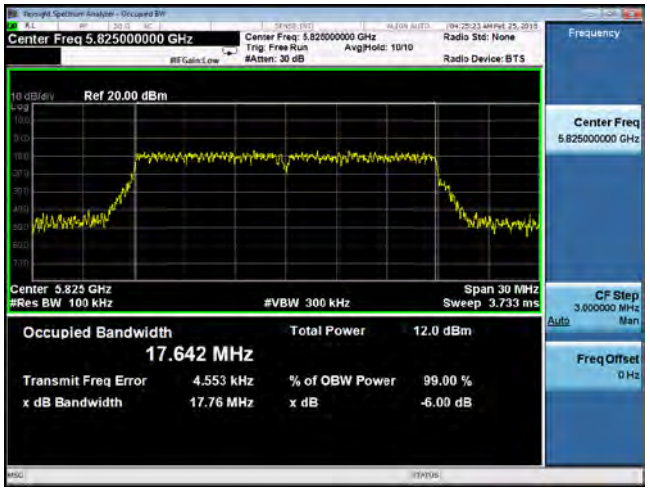
6dB BW 802.11a 5785MHz



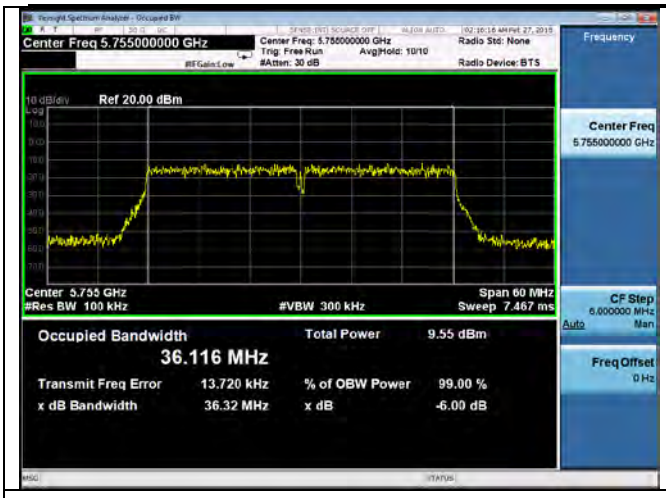
6dB BW 802.11n-20M 5785MHz



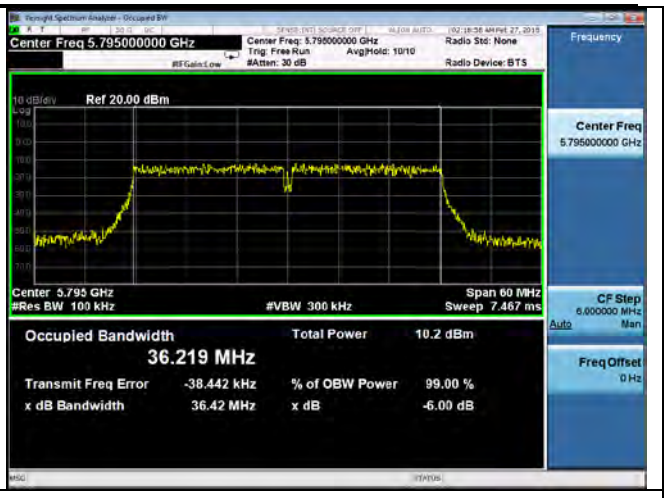
6dB BW 802.11a 5825MHz



6dB BW 802.11n-20M 5825MHz



6dB BW 802.11n-40M 5755MHz



6dB BW 802.11n40 5795MHz

10.3 Output Power

Requirement(s):

Spec	Item	Requirement	Applicable
§ 15.407	a)(1)(i)	For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).	☐
	a)(1)(ii)	For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi.	☒
	a)(1)(iii)	For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi.	☐
	a)(1)(iv)	For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi.	☐
	a)(2)	For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm 10 log B, where B is the 26 dB emission bandwidth in megahertz.	☒
	a)(3)	For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W.	☒

Test Setup				
Test Procedure	789033 D02 General UNII Test Procedures New Rules v01 Measurement using a Power Meter (PM) Measurements may be performed using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required. - Connect EUT's RF output power to power meter - Set EUT to be continuous transmission mode - Measurement the average output power using power meter and record the result - Repeat above steps for different test channel and other modulation type.			
Test Date	06/17/2016	Environmental condition	Temperature Relative Humidity Atmospheric Pressure	21°C 40% 1019mbar
Remark	-			
Result	☒ Pass ☐ Fail			

Test Data ☒ Yes ☐ N/A

Test Plot ☐ Yes (See below) ☒ N/A

Test was done by *Rachana Khanduri* at *RF Test Site*.

Output Power measurement result :

5.2 GHz					
Test mode	Freq(MHz)	CH	Conducted Power (dBm)	Limit (dBm)	Result
802.11a	5180	Low	12.51	30	pass
	5200	Mid	12.50	30	pass
	5240	High	12.22	30	pass
802.11n20	5180	Low	12.56	30	pass
	5200	Mid	12.45	30	pass
	5240	High	12.26	30	pass
802.11n40	5190	Low	12.56	30	pass
	5230	High	12.02	30	pass

5.3 GHz					
Test mode	Freq(MHz)	CH	Conducted Power (dBm)	Limit (dBm)	Result
802.11a	5260	Low	12.39	24	pass
	5280	Mid	12.78	24	pass
	5320	High	12.32	24	pass
802.11n20	5260	Low	12.19	24	pass
	5280	Mid	12.52	24	pass
	5320	High	12.18	24	pass
802.11n40	5270	Low	11.93	24	pass
	5310	High	12.08	24	pass

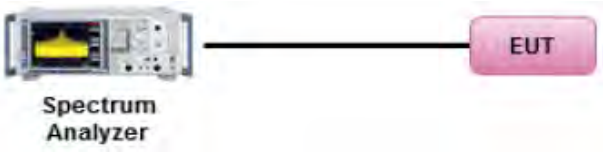
5.5 GHz					
Test mode	Freq(MHz)	CH	Conducted Power (dBm)	Limit (dBm)	Result
802.11a	5500	Low	14.61	24	pass
	5580	Mid	14.52	24	pass
	5700	High	14.01	24	pass
802.11n20	5500	Low	14.84	24	pass
	5580	Mid	14.15	24	pass
	5700	High	13.73	24	Pass
802.11n40	5510	Low	14.74	24	Pass
	5550	Mid	14.44	24	Pass
	5670	High	13.72	24	Pass

5.8 GHz					
Test mode	Freq(MHz)	CH	Conducted Power (dBm)	Limit (dBm)	Result
802.11a	5745	Low	13.57	30	Pass
	5785	Mid	14.08	30	Pass
	5825	High	13.42	30	Pass
802.11n20	5745	Low	13.84	30	Pass
	5785	Mid	14.15	30	Pass
	5825	High	13.48	30	Pass
802.11n40	5755	Low	13.52	30	Pass
	5795	High	13.78	30	Pass

10.4 Peak Spectral Density

Requirement(s):

Spec	Item	Requirement	Applicable
§ 15.407	a)(1)(i)	For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band.	☐
	a)(1)(ii)	For an indoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band.	☒
	a)(2)	For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band.	☒
	a)(3)	For the band 5.725-5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band.	☒

Test Setup				
Test Procedure	789033 D02 General UNII Test Procedures New Rules v01, II.F. Method SA-1 Maximum spectral density measurement procedure - Set span to encompass the entire emission bandwidth (EBW) (or, alternatively, the entire 99% occupied bandwidth) of the signal. - Set RBW = 1 MHz - Set VBW ≥ 3 MHz - Detector = RMS. - Sweep time = auto couple. - Trace mode = max hold. - Trace average at least 100 traces in power averaging - Use the peak marker function to determine the maximum amplitude level within the RBW. Apply correction to the result if different RBW is used.			
Test Date	06/17/2016	Environmental condition	Temperature Relative Humidity Atmospheric Pressure	22ºC 42% 1020mbar
Remark	-			
Result	☒ Pass ☐ Fail			

Test Data ☒ Yes ☐ N/A

Test Plot ☒ Yes (See below) ☐ N/A

Test was done by *Rachana Khanduri* at *RF Test Site*.

PSD measurement results:

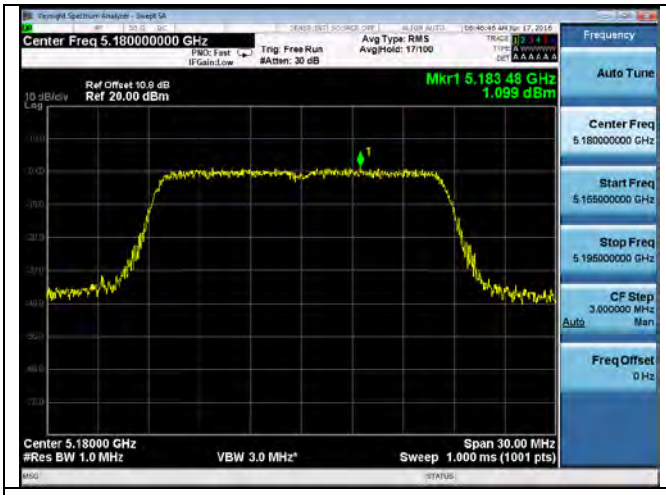
5.2 GHz					
Test mode	Freq(MHz)	CH	Conducted PSD (dBm/MHz)	Limit (dBm/MHz)	Result
802.11a	5180	Low	1.10	17	Pass
	5200	Mid	1.01	17	Pass
	5240	High	1.50	17	Pass
802.11n20	5180	Low	0.75	17	Pass
	5200	Mid	1.11	17	Pass
	5240	High	1.06	17	Pass
802.11n40	5190	Low	-1.08	17	Pass
	5230	High	-1.64	17	Pass

5.3 GHz					
Test mode	Freq(MHz)	CH	Conducted PSD (dBm/MHz)	Limit (dBm/MHz)	Result
802.11a	5260	Low	0.83	11	Pass
	5280	Mid	1.84	11	Pass
	5320	High	1.21	11	Pass
802.11n20	5260	Low	1.15	11	Pass
	5280	Mid	1.21	11	Pass
	5320	High	0.85	11	Pass
802.11n40	5270	Low	-1.09	11	Pass
	5310	High	-1.52	11	Pass

5.5 GHz					
Test mode	Freq(MHz)	CH	Conducted PSD (dBm/MHz)	Limit (dBm/MHz)	Result
802.11a	5500	Low	3.99	11	Pass
	5580	Mid	3.62	11	Pass
	5700	High	2.65	11	Pass
802.11n20	5500	Low	4.03	11	Pass
	5580	Mid	3.88	11	Pass
	5700	High	2.37	11	Pass
802.11n40	5510	Low	0.36	11	Pass
	5550	Mid	1.67	11	Pass
	5670	High	0.05	11	Pass

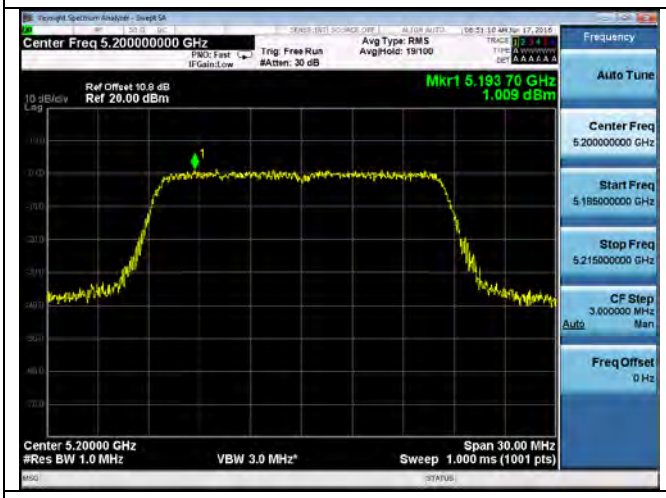
5.8 GHz							
Test mode	Freq(MHz)	CH	Conducted PSD (dBm/100KHz)	Correction Factor*	Combined PSD (dBm/500KHz)	Limit (dBm/500KHz)	Result
802.11a	5745	Low	-6.34	6.99	0.64	30	Pass
	5785	Mid	-5.74	6.99	1.25	30	Pass
	5825	High	-6.81	6.99	0.18	30	Pass
802.11n20	5745	Low	-7.45	6.99	-0.46	30	Pass
	5785	Mid	-6.74	6.99	0.25	30	Pass
	5825	High	-7.72	6.99	-0.73	30	Pass
802.11n40	5755	Low	-10.80	6.99	-3.81	30	Pass
	5795	High	-10.02	6.99	-3.03	30	Pass
*Note	BW correction factor = 10log(500kHz/RBW)						

Test Plots



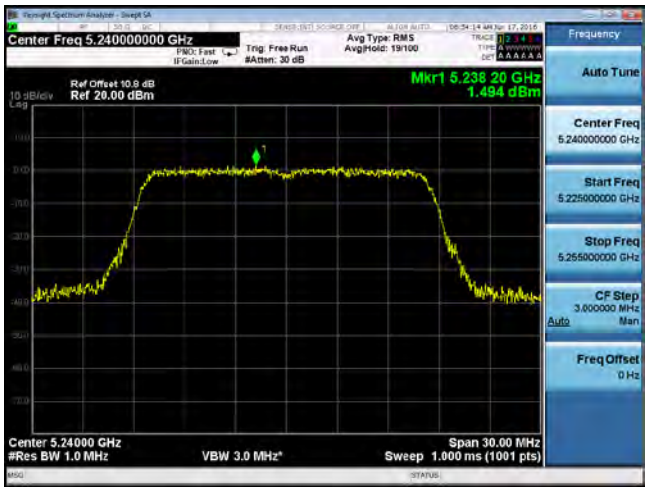
PSD-802.11a 5180MHz

PSD-802.11n-20M 5180MHz

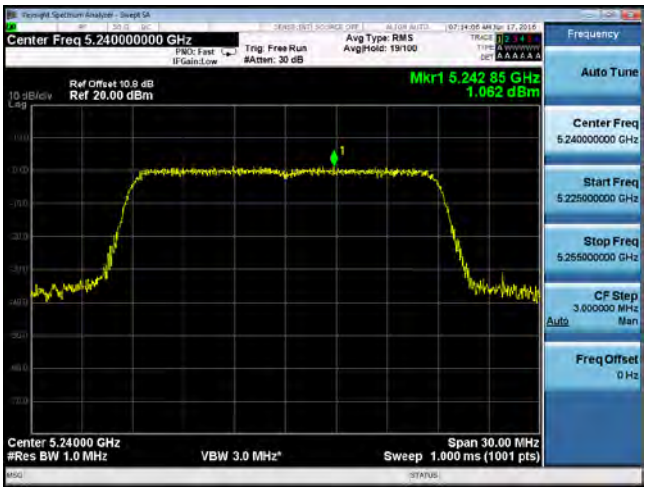


PSD-802.11a 5200MHz

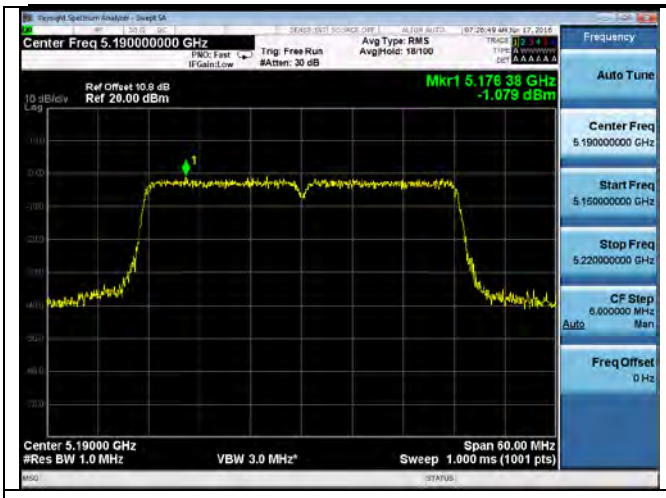
PSD-802.11n-20M 5200 MHz



PSD-802.11a 5240MHz

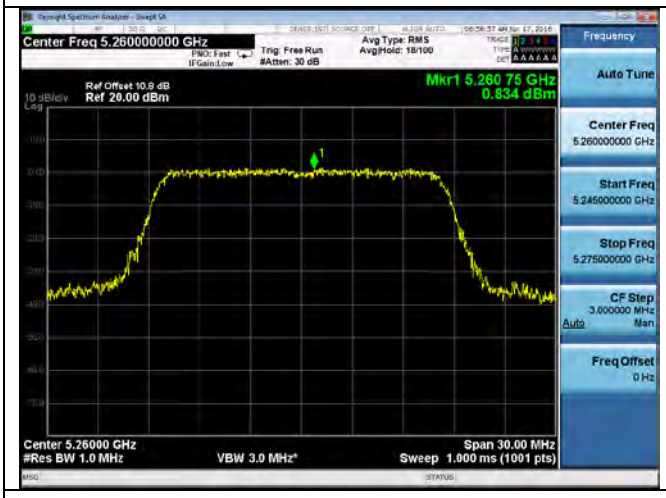


PSD-802.11n-20M 5240MHz

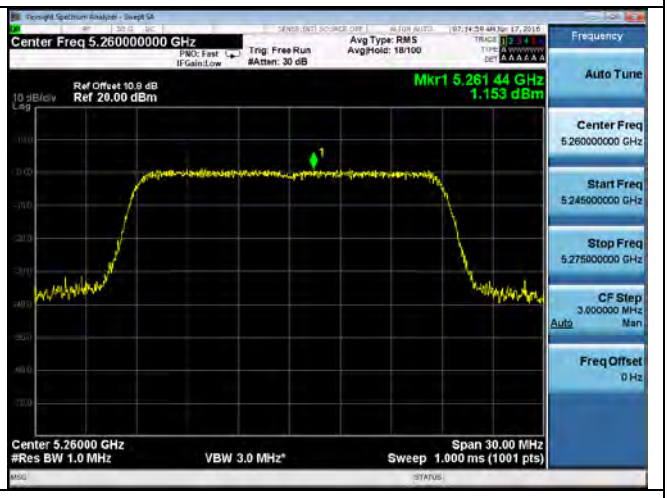


PSD-802.11n-40M 5190MHz

PSD-802.11n-40M 5230MHz

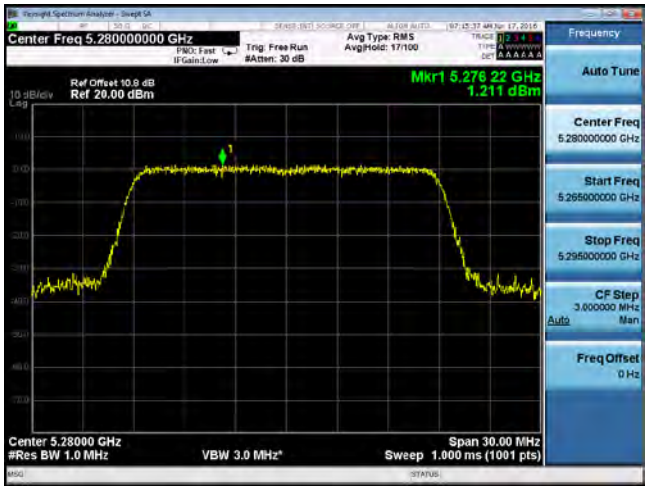


PSD-802.11a 5260MHz

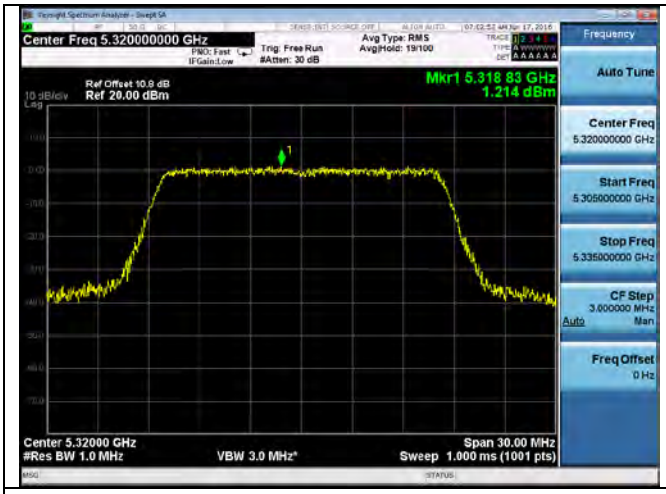


PSD-802.11n-20M 5260MHz

PSD-802.11a 5280MHz

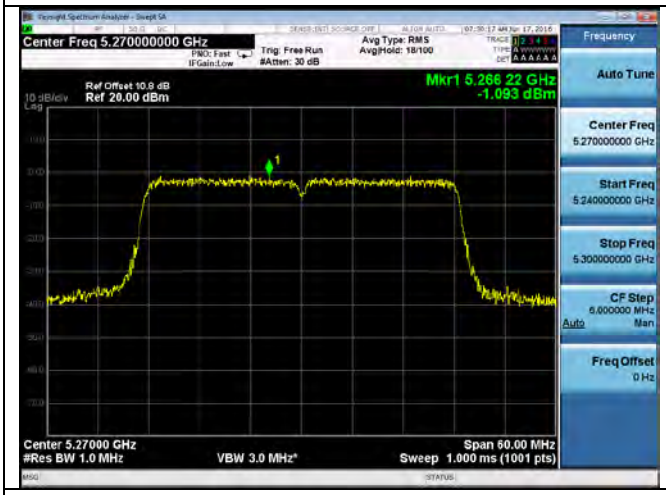


PSD-802.11n20M 5280MHz



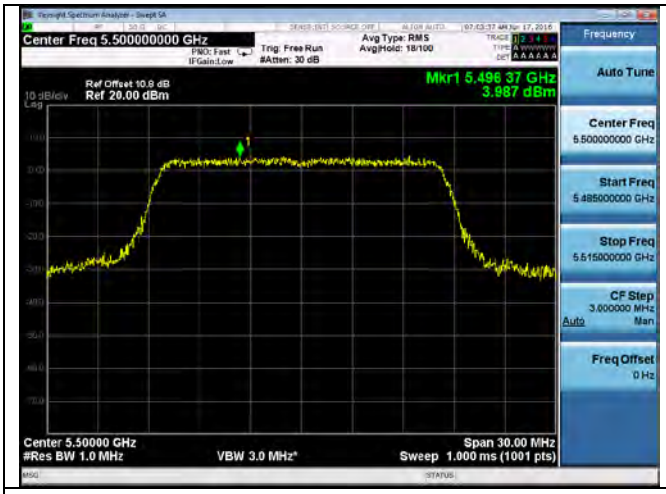
PSD-802.11a 5320MHz

PSD-802.11n-20M 5320MHz



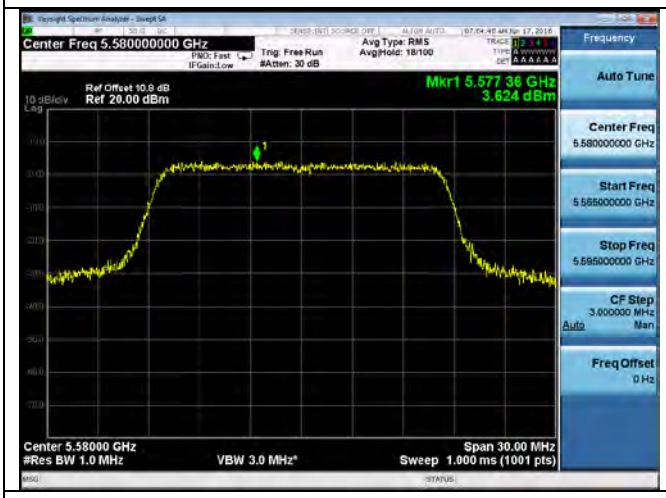
PSD-802.11n-40M 5270MHz

PSD-802.11n-40M 5310MHz



PSD-802.11a 5500MHz

PSD-802.11n-20M 5500MHz

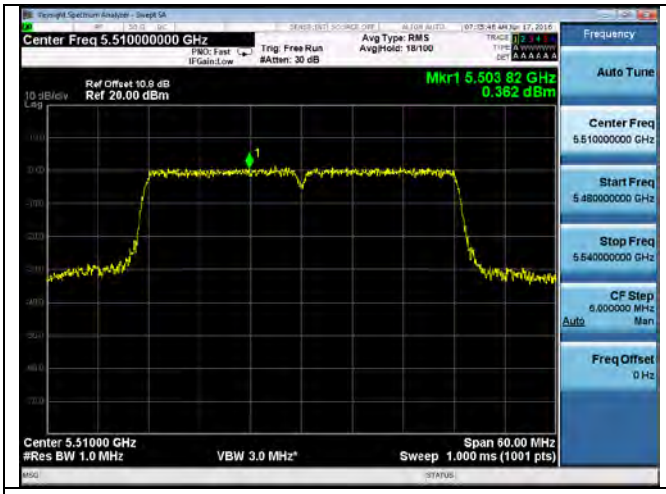


PSD-802.11a 5580MHz

PSD-802.11n-20M 5580MHz

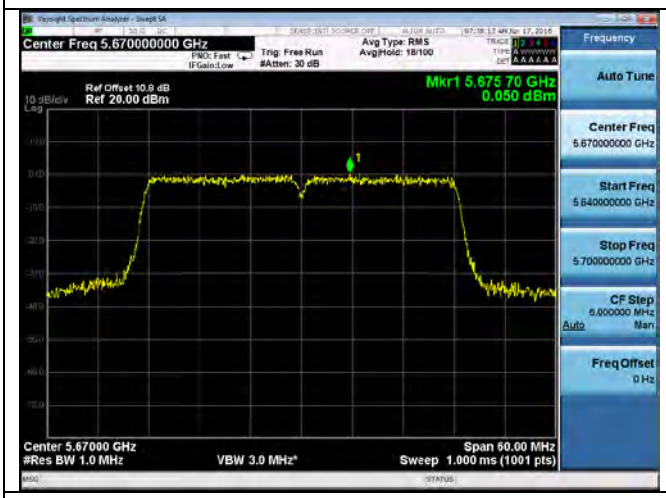
PSD-802.11a 5700MHz

PSD-802.11n-20M 5700MHz

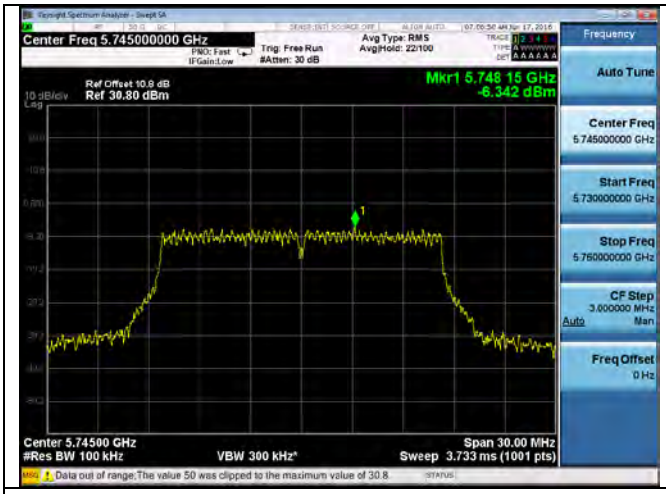


PSD-802.11n-40M 5510MHz

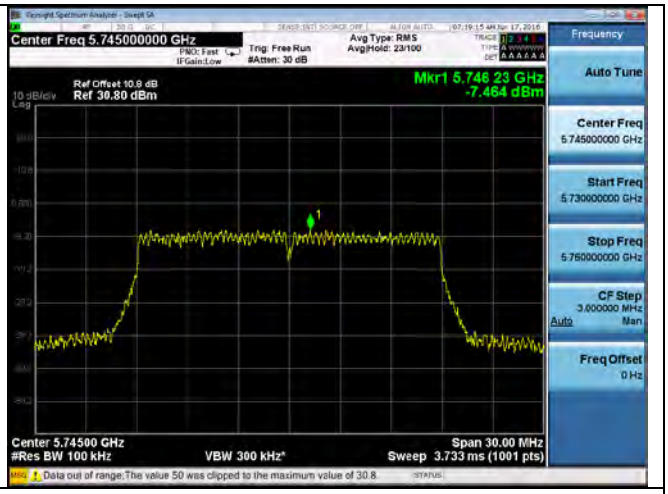
PSD-802.11n-40M 5550MHz



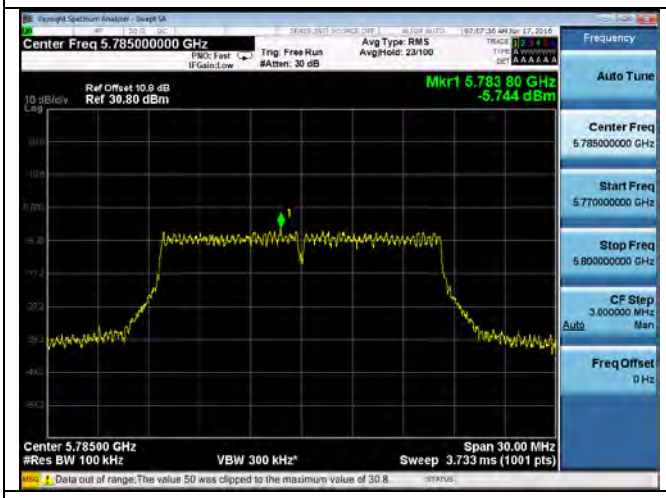
PSD-802.11n-40M 5670MHz



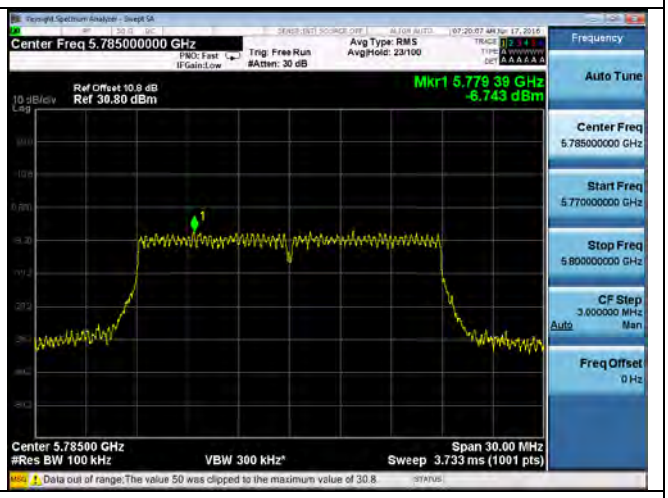
PSD-802.11a 5745MHz



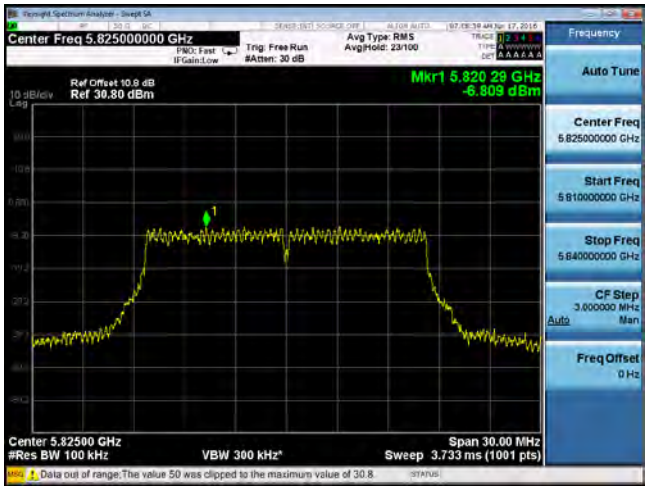
PSD-802.11n-20M 5745MHz



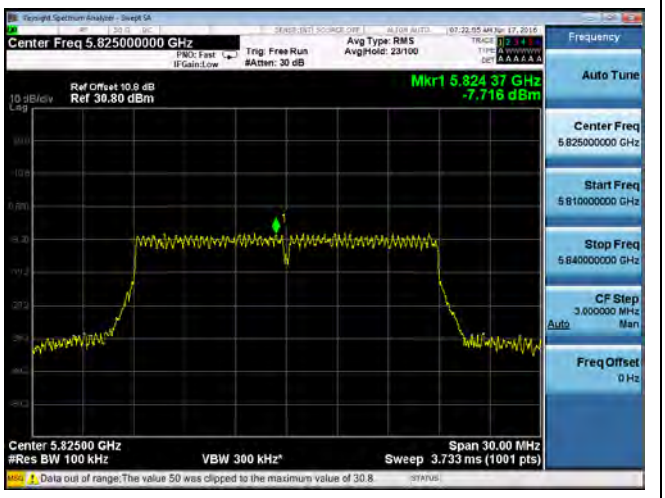
PSD-802.11a 5785MHz



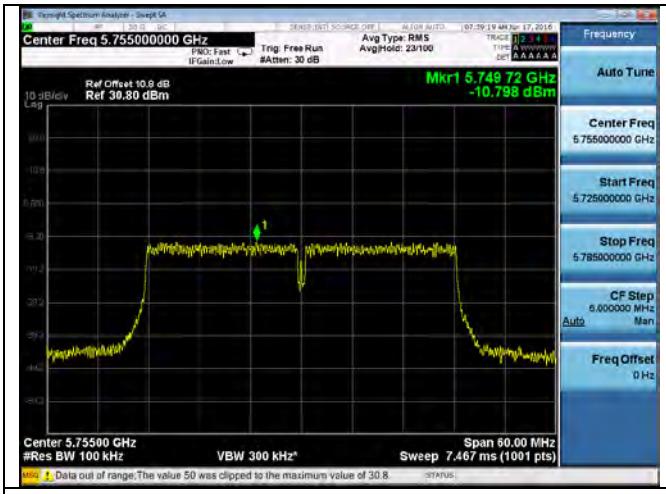
PSD-802.11n-20M 5785MHz



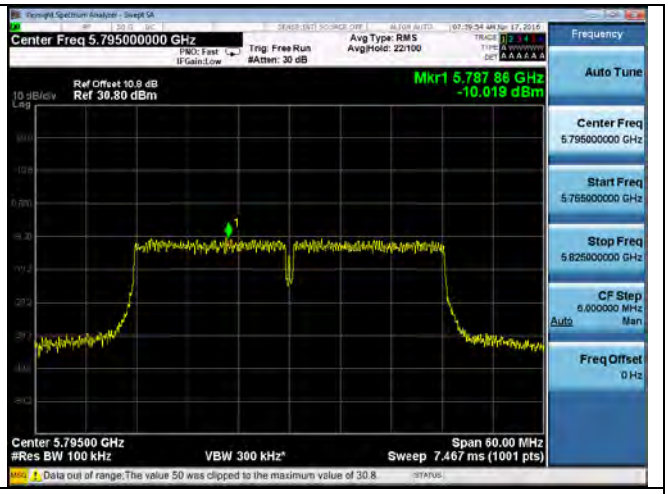
PSD-802.11a 5825MHz



PSD-802.11n-20M 5825MHz



PSD-802.11n40-5755 MHz



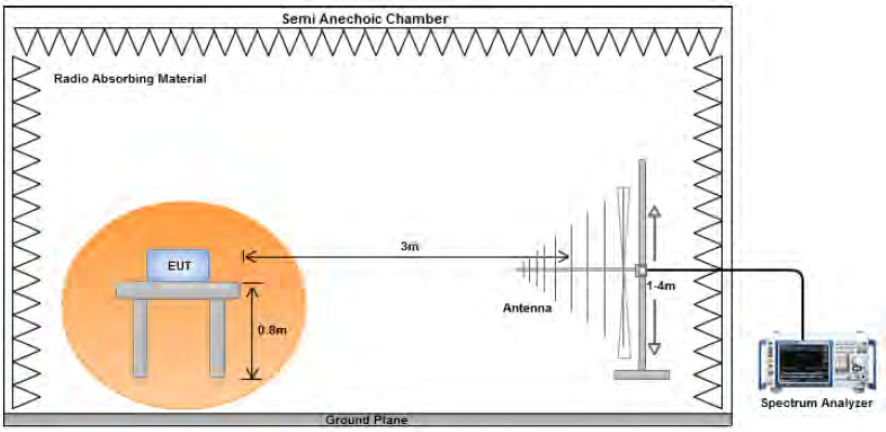
PSD-802.11n40-5795 MHz

10.5 Radiated Emissions below 1GHz

Requirement(s):

Spec	Requirement	Applicable
47CFR§ 15.407(b) 15.209 (a)	Except higher limit as specified elsewhere in other section, the emissions from the low-power radio-frequency devices shall not exceed the field strength levels specified in the following table and the level of any unwanted emissions shall not exceed the level of the fundamental emission. The tighter limit applies at the band edges	☒

Frequency range (MHz)	Field Strength (uV/m)
30 – 88	100
88 – 216	150
216 960	200
Above 960	500

Test Setup	
Procedure	1. The EUT was switched on and allowed to warm up to its normal operating condition. 2. The test was carried out at the selected frequency points obtained from the EUT characterisation. Maximization of the emissions, was carried out by rotating the EUT, changing the antenna polarization, and adjusting the antenna height in the following manner: a. Vertical or horizontal polarisation (whichever gave the higher emission level over a full rotation of the EUT) was chosen. b. The EUT was then rotated to the direction that gave the maximum emission. c. Finally, the antenna height was adjusted to the height that gave the maximum emission. 3. A Quasi-peak measurement was then made for that frequency point. 4. Steps 2 and 3 were repeated for the next frequency point, until all selected frequency points were measured.
Remark	Both horizontal and vertical polarities were investigated. The results show only the worst case.
Result	☒ Pass ☐ Fail

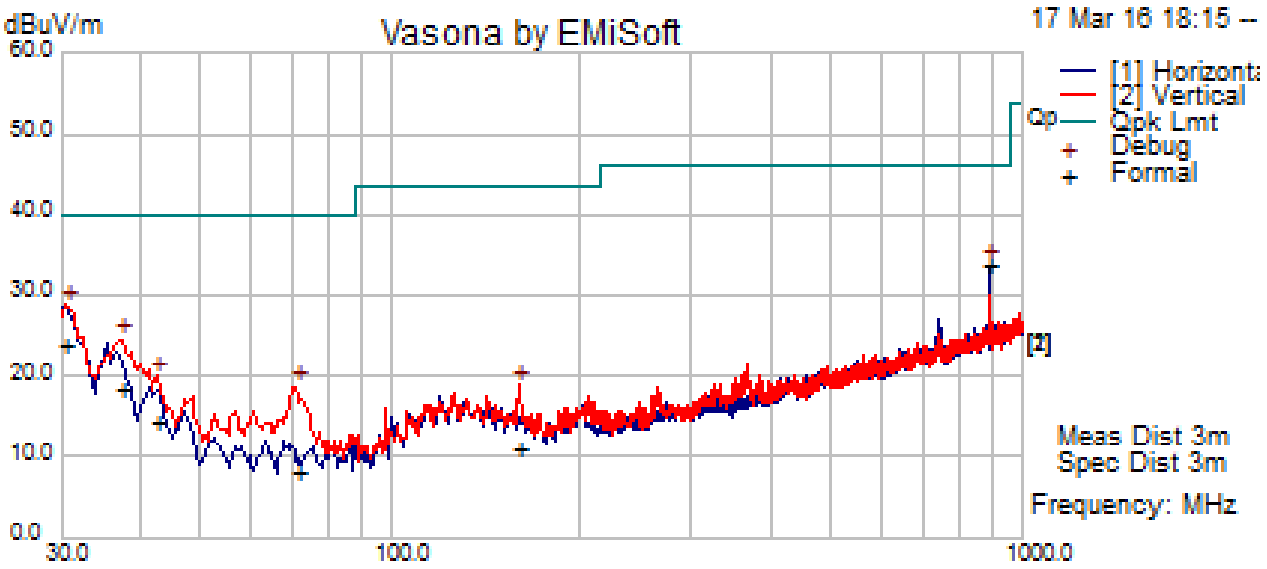
Test Data ☒ Yes (See below) ☐ N/A

Test Plot ☒ Yes (See below) ☐ N/A

Test was done by *Rachana Khanduri* at *10m Chamber*.

Radiated Emission Test Results (Below 1GHz) (Omnidirectional Antenna)

Test specification	Above 1GHz			
Environmental Conditions:	Temp (°C):	25.7	Result	Pass
	Humidity (%)	29		
	Atmospheric (mPa):	1021		
Mains Power:	110VAC, 60Hz			
Tested by:	Rachana Khanduri			
Test Date:	03/17/2016			
Remarks:	5.2GHz 11n40 5270 Omnidirectional Antenna			

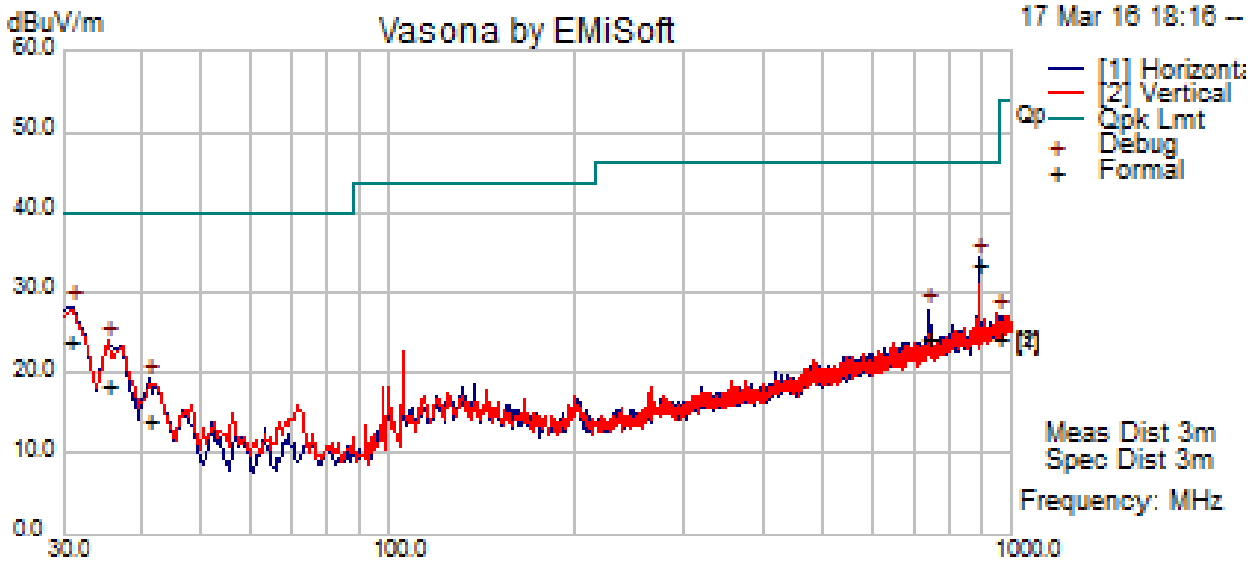


Quasi Max Measurement

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
30.34	39.20	0.82	-15.93	24.09	Quasi Max	V	107.00	118.00	40.00	-15.91	Pass
890.20	45.40	4.72	-16.44	33.68	Quasi Max	H	105.00	157.00	46.02	-12.34	Pass
37.23	39.07	0.91	-21.73	18.25	Quasi Max	V	225.00	185.00	40.00	-21.75	Pass
42.38	38.91	0.96	-25.42	14.45	Quasi Max	V	320.00	97.00	40.00	-25.55	Pass
70.97	37.61	1.26	-30.92	7.96	Quasi Max	V	231.00	312.00	40.00	-32.04	Pass
159.37	36.47	1.88	-27.24	11.11	Quasi Max	V	251.00	322.00	43.52	-32.41	Pass

Note: Both horizontal and vertical polarities were investigated. The results above show only the worst case.

Test specification	Above 1GHz			
Environmental Conditions:	Temp (°C):	25.7	Result	Pass
	Humidity (%)	29		
	Atmospheric (mPa):	1021		
Mains Power:	110VAC, 60Hz			
Tested by:	Rachana Khanduri			
Test Date:	03/17/2016			
Remarks:	5.3GHz 11n-40 5310MHz Omnidirectional Antenna			

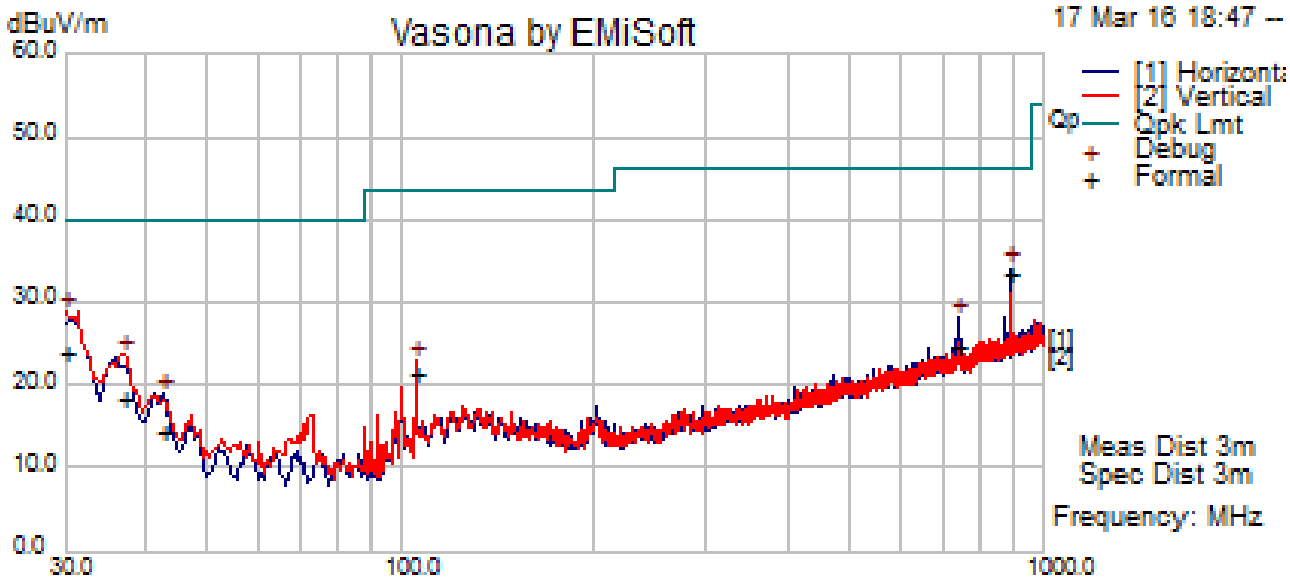


Quasi Max Measurement

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
30.76	39.42	0.83	-16.32	23.93	Quasi Max	H	225.00	173.00	40.00	-16.07	Pass
890.23	45.19	4.72	-16.43	33.48	Quasi Max	H	101.00	24.00	46.02	-12.54	Pass
35.40	37.67	0.85	-20.30	18.22	Quasi Max	V	398.00	135.00	40.00	-21.78	Pass
735.71	38.45	4.26	-18.38	24.33	Quasi Max	H	110.00	177.00	46.02	-21.69	Pass
953.22	34.79	4.95	-15.61	24.13	Quasi Max	V	209.00	149.00	46.02	-21.89	Pass
41.15	37.63	0.94	-24.57	14.01	Quasi Max	H	342.00	122.00	40.00	-25.99	Pass

Note: Both horizontal and vertical polarities were investigated. The results above show only the worst case.

Test specification	Above 1GHz			
Environmental Conditions:	Temp (°C):	25.7	Result	Pass
	Humidity (%)	29		
	Atmospheric (mPa):	1021		
Mains Power:	110VAC, 60Hz			
Tested by:	Rachana Khanduri			
Test Date:	03/17/2016			
Remarks:	5.5GHz 11n-40M 5670MHz Omnidirectional Antenna			

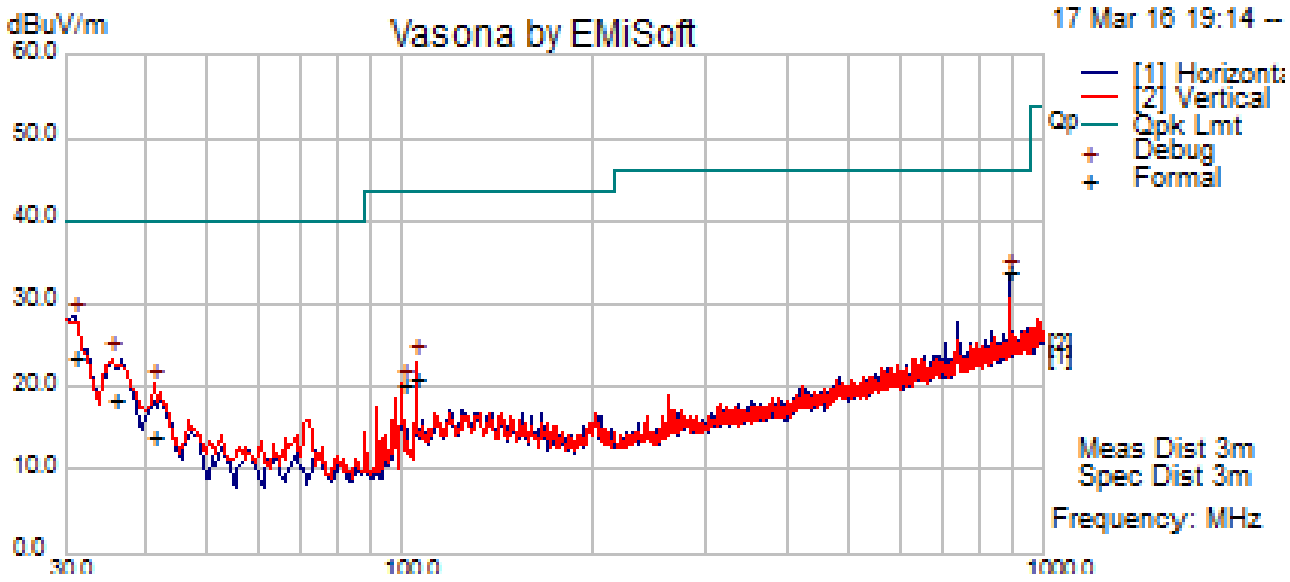


Quasi Max Measurement

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
30.00	38.82	0.82	-15.61	24.02	Quasi Max	V	377.00	349.00	40.00	-15.98	Pass
890.27	45.34	4.72	-16.43	33.63	Quasi Max	H	108.00	60.00	46.02	-12.39	Pass
37.00	39.15	0.90	-21.55	18.50	Quasi Max	V	184.00	272.00	40.00	-21.50	Pass
734.56	38.92	4.25	-18.39	24.78	Quasi Max	H	154.00	163.00	46.02	-21.24	Pass
105.74	47.52	1.57	-27.76	21.33	Quasi Max	V	111.00	284.00	43.52	-22.19	Pass
42.45	38.87	0.97	-25.47	14.36	Quasi Max	H	127.00	74.00	40.00	-25.64	Pass

Note: Both horizontal and vertical polarities were investigated. The results above show only the worst case.

Test specification	Above 1GHz			
Environmental Conditions:	Temp (°C):	25.7	Result	Pass
	Humidity (%)	29		
	Atmospheric (mPa):	1021		
Mains Power:	110VAC, 60Hz			
Tested by:	Rachana Khanduri			
Test Date:	03/17/2016			
Remarks:	5.8GHz 11n-40M 5795MHz Omnidirectional Antenna			



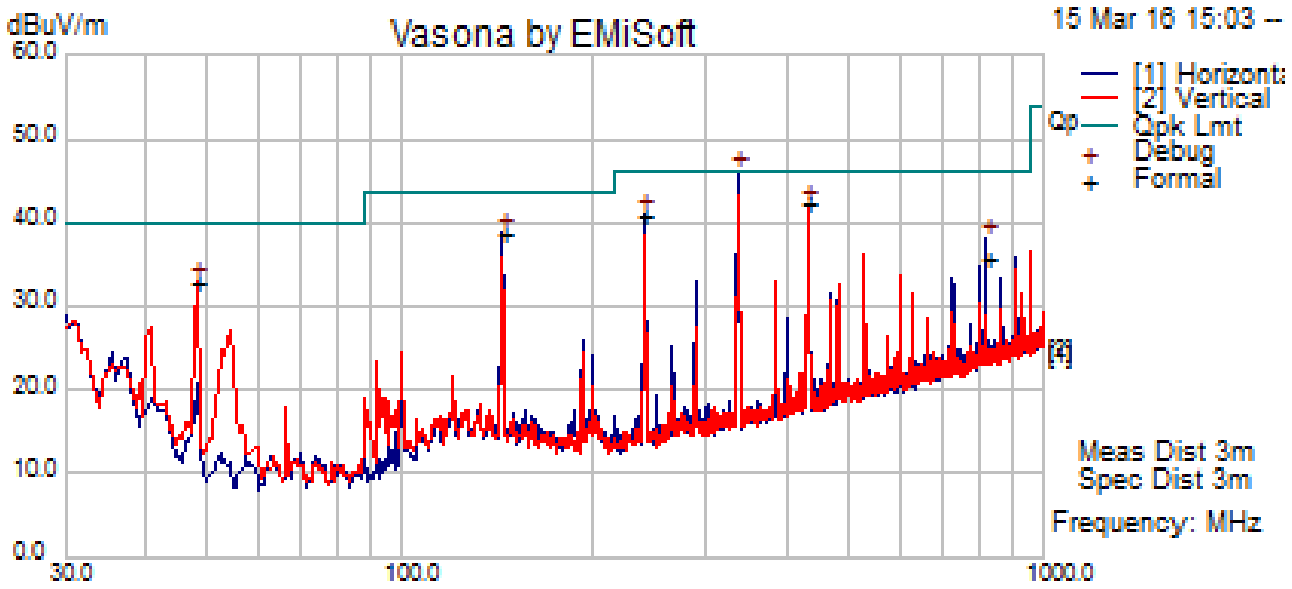
Quasi Max Measurement

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
31.02	39.45	0.83	-16.56	23.72	Quasi Max	H	214.00	228.00	40.00	-16.28	Pass
890.20	45.40	4.72	-16.44	33.68	Quasi Max	H	104.00	60.00	46.02	-12.34	Pass
35.55	38.03	0.86	-20.42	18.47	Quasi Max	H	203.00	202.00	40.00	-21.53	Pass
41.19	37.75	0.95	-24.60	14.09	Quasi Max	V	157.00	215.00	40.00	-25.91	Pass
105.67	47.26	1.57	-27.77	21.05	Quasi Max	V	157.00	72.00	43.52	-22.47	Pass
100.33	47.98	1.57	-29.21	20.34	Quasi Max	V	119.00	356.00	43.52	-23.18	Pass

Note: Both horizontal and vertical polarities were investigated. The results above show only the worst case.

Radiated Emission Test Results (Below 1GHz) (Patch Antenna)

Test specification	Above 1GHz			
Environmental Conditions:	Temp (°C):	25.7	Result	Pass
	Humidity (%)	29		
	Atmospheric (mPa):	1021		
Mains Power:	110VAC, 60Hz			
Tested by:	Rachana Khanduri			
Test Date:	03/15/2016			
Remarks:	5.2GHz 11n40 5270 Patch Antenna			

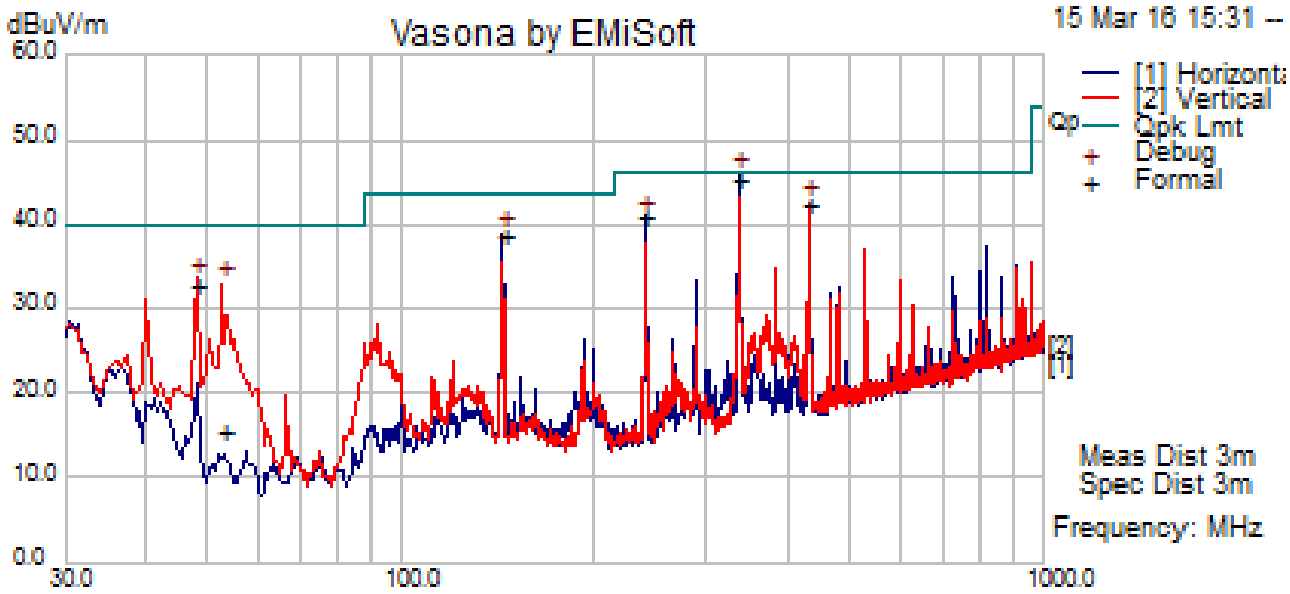


Quasi Max Measurement

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
432.02	61.72	3.24	-22.79	42.18	Quasi Max	V	110.00	77.00	46.02	-3.84	Pass
144.00	63.08	1.76	-26.34	38.49	Quasi Max	H	195.00	96.00	43.52	-5.03	Pass
240.01	66.11	2.33	-27.59	40.85	Quasi Max	H	120.00	235.00	46.02	-5.17	Pass
48.00	60.53	1.06	-28.94	32.65	Quasi Max	V	100.00	155.00	40.00	-7.35	Pass
816.05	48.41	4.51	-17.13	35.79	Quasi Max	H	100.00	166.00	46.02	-10.23	Pass
432.02	61.72	3.24	-22.79	42.18	Quasi Max	V	110.00	77.00	46.02	-3.84	Pass

Note: Both horizontal and vertical polarities were investigated. The results above show only the worst case.

Test specification	Above 1GHz			
Environmental Conditions:	Temp (°C):	25.7	Result	Pass
	Humidity (%)	29		
	Atmospheric (mPa):	1021		
Mains Power:	110VAC, 60Hz			
Tested by:	Rachana Khanduri			
Test Date:	03/15/2016			
Remarks:	5.3GHz 11n-40M 5310MHz Patch Antenna			

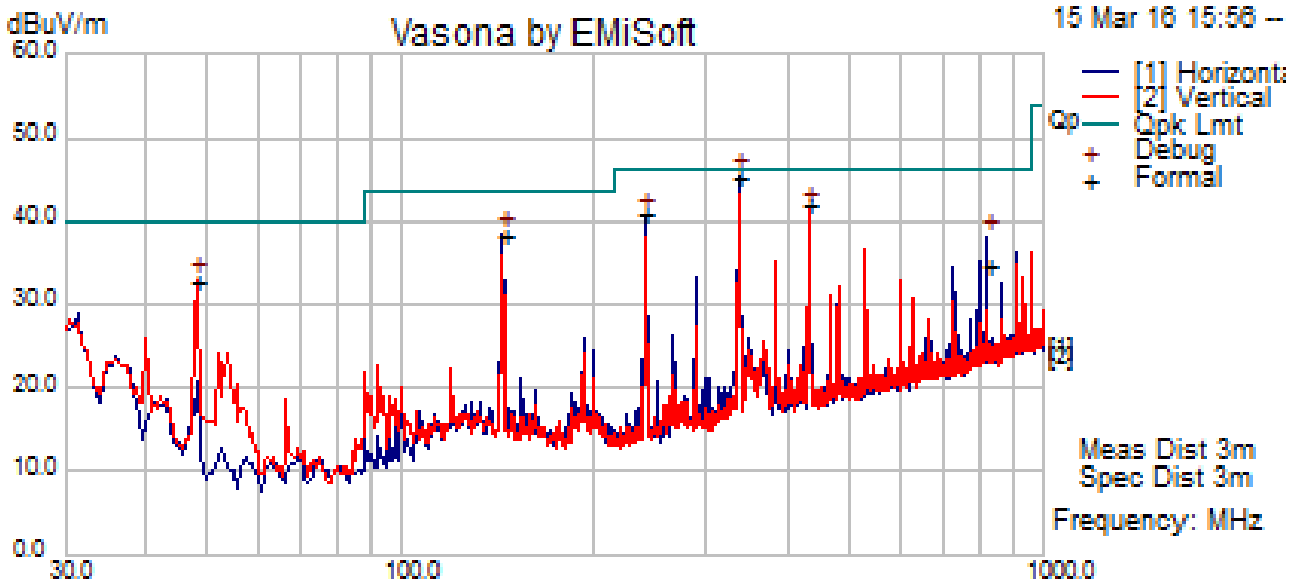


Quasi Max Measurement

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
336.01	67.44	2.80	-25.14	45.10	Quasi Max	H	101.00	233.00	46.02	-0.92	Pass
432.00	61.74	3.24	-22.79	42.19	Quasi Max	V	113.00	81.00	46.02	-3.83	Pass
144.00	63.19	1.76	-26.34	38.60	Quasi Max	H	201.00	81.00	43.52	-4.92	Pass
240.01	65.95	2.33	-27.59	40.69	Quasi Max	H	128.00	242.00	46.02	-5.33	Pass
48.00	60.67	1.06	-28.94	32.79	Quasi Max	V	100.00	140.00	40.00	-7.21	Pass
52.72	44.83	1.12	-30.41	15.54	Quasi Max	V	121.00	172.00	40.00	-24.46	Pass

Note: Both horizontal and vertical polarities were investigated. The results above show only the worst case.

Test specification	Above 1GHz			
Environmental Conditions:	Temp (°C):	25.7	Result	Pass
	Humidity (%)	29		
	Atmospheric (mPa):	1021		
Mains Power:	110VAC, 60Hz			
Tested by:	Rachana Khanduri			
Test Date:	03/15/2016			
Remarks:	5.5GHz 11n-40M 5670MHz Patch Antenna			

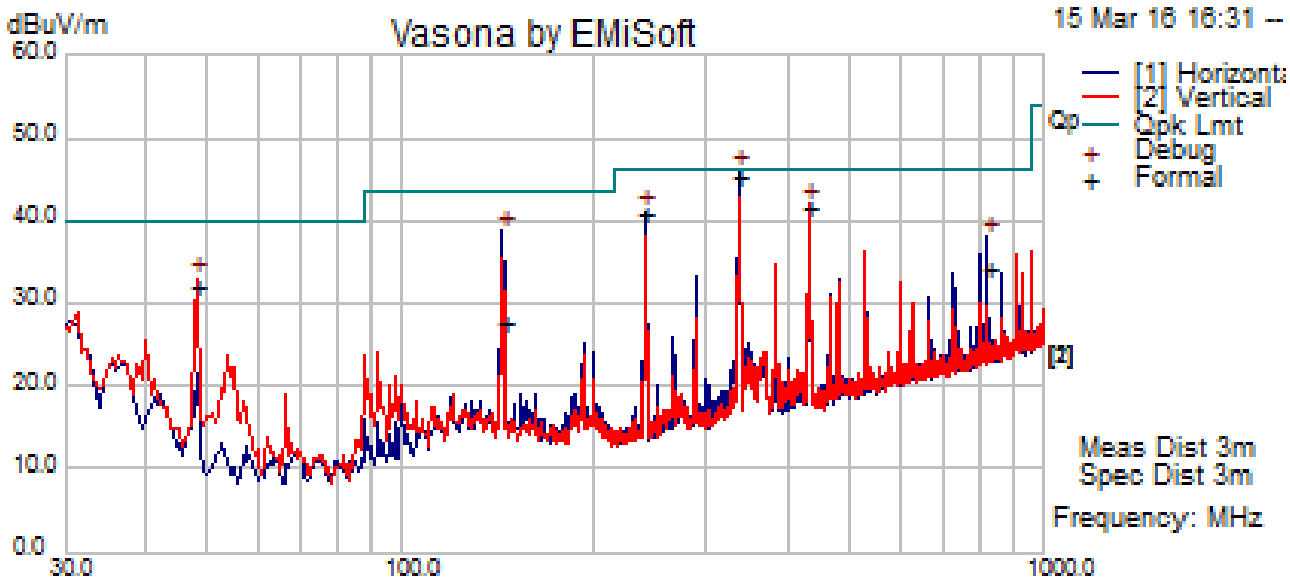


Quasi Max Measurement

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
336.00	67.49	2.80	-25.14	45.15	Quasi Max	H	100.00	223.00	46.02	-0.87	Pass
432.00	61.42	3.24	-22.79	41.87	Quasi Max	V	122.00	82.00	46.02	-4.15	Pass
144.01	62.83	1.76	-26.34	38.24	Quasi Max	H	177.00	251.00	43.52	-5.28	Pass
240.01	65.89	2.33	-27.59	40.63	Quasi Max	H	120.00	247.00	46.02	-5.39	Pass
48.00	60.64	1.06	-28.94	32.75	Quasi Max	V	101.00	137.00	40.00	-7.25	Pass
815.94	47.24	4.51	-17.13	34.62	Quasi Max	H	103.00	167.00	46.02	-11.40	Pass

Note: Both horizontal and vertical polarities were investigated. The results above show only the worst case.

Test specification	Above 1GHz			
Environmental Conditions:	Temp (°C):	25.7	Result	Pass
	Humidity (%)	29		
	Atmospheric (mPa):	1021		
Mains Power:	110VAC, 60Hz			
Tested by:	Rachana Khanduri			
Test Date:	03/15/2016			
Remarks:	5.8GHz 11n-40M 5795MHz Patch Antenna			



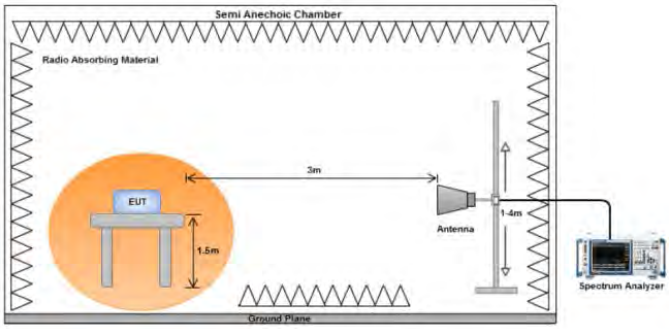
Quasi Max Measurement

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
336.01	67.63	2.80	-25.14	45.29	Quasi Max	H	100.00	222.00	46.02	-0.73	Pass
432.01	61.08	3.24	-22.79	41.53	Quasi Max	V	108.00	84.00	46.02	-4.49	Pass
143.90	52.13	1.76	-26.33	27.56	Quasi Max	H	400.00	271.00	43.52	-15.96	Pass
240.00	66.10	2.33	-27.59	40.84	Quasi Max	H	123.00	237.00	46.02	-5.18	Pass
48.00	59.76	1.06	-28.94	31.88	Quasi Max	V	110.00	288.00	40.00	-8.12	Pass
816.01	46.88	4.51	-17.13	34.26	Quasi Max	H	166.00	133.00	46.02	-11.76	Pass

Note: Both horizontal and vertical polarities were investigated. The results above show only the worst case.

10.6 Radiated Spurious Emissions above 1GHz

Requirement(s):

Spec	Item	Requirement	Applicable
47CFR§ 15.407(b)(2), 15.407(b)(6)	(1)	For transmitters operating in the 5.15-5.25 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz.	☒
	(2)	For transmitters operating in the 5.25-5.35 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz. Devices operating in the 5.25-5.35 GHz band that generate emissions in the 5.15-5.25 GHz band must meet all applicable technical requirements for operation in the 5.15-5.25 GHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of -27 dBm/MHz in the 5.15-5.25 GHz band.	☒
	(3)	For transmitters operating in the 5.47-5.725 GHz band: all emissions outside of the 5.47-5.725 GHz band shall not exceed an EIRP of −27 dBm/MHz.	☒
	(4)	For transmitters operating in the 5.725-5.825 GHz band: all emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an EIRP of -17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an EIRP of -27 dBm/MHz.	☒
	(5)	Restricted band, emission must also comply with the radiated emission limits specified in 15.209	☒
Test Setup			
Procedure	1. The EUT was switched on and allowed to warm up to its normal operating condition. 2. The test was carried out at the selected frequency points obtained from the EUT characterisation. Maximization of the emissions, was carried out by rotating the EUT, changing the antenna polarization, and adjusting the antenna height in the following manner: a. Vertical or horizontal polarisation (whichever gave the higher emission level over a full rotation of the EUT) was chosen. b. The EUT was then rotated to the direction that gave the maximum emission. c. Finally, the antenna height was adjusted to the height that gave the maximum emission. 3. An average measurement was then made for that frequency point. 4. Steps 2 and 3 were repeated for the next frequency point, until all selected frequency points were measured.		
Remark	Both horizontal and vertical polarities were investigated. The results show only the worst case.		
Result	☒ Pass ☐ Fail		

Test Data ☒Yes (See below) ☐ N/A
Test Plot ☒ Yes (See below) ☐ N/A

Test was done by *Rachana Khanduri* at *3m Chamber*.

Radiated Emission Test Results (Above 1GHz)

Omnidirectional Antenna : 5.2 GHz

802.11a – 5180MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17557.23	35.73	16.69	10.46	62.88	Peak Max	V	227.00	288.00	74.00	-11.12	Pass
6111.39	36.01	10.62	10.80	57.43	Peak Max	V	213.00	198.00	74.00	-16.57	Pass
10044.77	35.98	10.82	8.80	55.60	Peak Max	V	160.00	25.00	74.00	-18.40	Pass
17557.23	23.58	16.69	10.46	50.72	Average Max	V	227.00	288.00	54.00	-3.28	Pass
6111.39	24.48	10.62	10.80	45.90	Average Max	V	213.00	198.00	54.00	-8.11	Pass
10044.77	24.28	10.82	8.80	43.91	Average Max	V	160.00	25.00	54.00	-10.09	Pass

802.11a – 5200MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17595.17	34.45	16.62	10.50	61.57	Peak Max	V	179.00	321.00	74.00	-12.43	Pass
6112.82	36.19	10.62	10.79	57.61	Peak Max	H	227.00	162.00	74.00	-16.39	Pass
10078.19	36.23	10.86	8.78	55.88	Peak Max	H	183.00	203.00	74.00	-18.13	Pass
17595.17	23.51	16.62	10.50	50.63	Average Max	V	179.00	321.00	54.00	-3.37	Pass
6112.82	24.49	10.62	10.79	45.91	Average Max	H	227.00	162.00	54.00	-8.09	Pass
10078.19	24.20	10.86	8.78	43.84	Average Max	H	183.00	203.00	54.00	-10.16	Pass

802.11a – 5240MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17511.23	35.22	16.77	10.41	62.40	Peak Max	H	236.00	0.00	74.00	-11.60	Pass
6006.83	36.83	10.49	11.05	58.37	Peak Max	V	198.00	0.00	74.00	-15.63	Pass
11927.76	34.57	12.07	8.49	55.13	Peak Max	V	246.00	258.00	74.00	-18.87	Pass
17511.23	23.53	16.77	10.41	50.71	Average Max	H	236.00	0.00	54.00	-3.29	Pass
6006.83	24.37	10.49	11.05	45.92	Average Max	V	198.00	0.00	54.00	-8.09	Pass
11927.76	23.32	12.07	8.49	43.88	Average Max	V	246.00	258.00	54.00	-10.13	Pass

Omnidirectional Antenna : 5.2 GHz

802.11n20 – 5180MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17280.30	35.12	16.76	9.74	61.62	Peak Max	H	171.00	142.00	74.00	-12.38	Pass
6144.20	36.61	10.66	10.72	57.99	Peak Max	H	190.00	0.00	74.00	-16.01	Pass
10785.93	36.16	12.29	8.36	56.81	Peak Max	V	209.00	275.00	74.00	-17.19	Pass
17280.30	22.90	16.76	9.74	49.40	Average Max	H	171.00	142.00	54.00	-4.60	Pass
6144.20	24.71	10.66	10.72	46.09	Average Max	H	190.00	0.00	54.00	-7.92	Pass
10785.93	23.95	12.29	8.36	44.61	Average Max	V	209.00	275.00	54.00	-9.39	Pass

802.11n20 – 5200MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17713.35	34.55	16.42	10.62	61.59	Peak Max	H	164.00	184.00	74.00	-12.41	Pass
6029.87	36.60	10.52	11.00	58.11	Peak Max	V	212.00	161.00	74.00	-15.89	Pass
12183.74	34.74	12.13	8.49	55.36	Peak Max	V	147.00	290.00	74.00	-18.64	Pass
17713.35	22.81	16.42	10.62	49.85	Average Max	H	164.00	184.00	54.00	-4.15	Pass
6029.87	24.49	10.52	11.00	46.00	Average Max	V	212.00	161.00	54.00	-8.00	Pass
12183.74	23.01	12.13	8.49	43.63	Average Max	V	147.00	290.00	54.00	-10.37	Pass

802.11n20 – 5240MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17625.72	33.96	16.57	10.53	61.06	Peak Max	H	182.00	203.00	74.00	-12.94	Pass
6103.52	36.26	10.61	10.82	57.68	Peak Max	V	148.00	52.00	74.00	-16.32	Pass
10739.88	35.44	12.14	8.39	55.97	Peak Max	V	212.00	114.00	74.00	-18.03	Pass
17625.72	22.80	16.57	10.53	49.90	Average Max	H	182.00	203.00	54.00	-4.10	Pass
6103.52	24.55	10.61	10.82	45.98	Average Max	V	148.00	52.00	54.00	-8.02	Pass
10739.88	24.08	12.14	8.39	44.61	Average Max	V	212.00	114.00	54.00	-9.39	Pass

Omnidirectional Antenna : 5.2 GHz

802.11n40 – 5190MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17953.66	34.74	16.01	10.86	61.61	Peak Max	V	148.00	132.00	74.00	-12.39	Pass
6136.47	36.35	10.65	10.74	57.74	Peak Max	V	148.00	148.00	74.00	-16.26	Pass
10958.59	35.07	12.84	8.27	56.18	Peak Max	H	224.00	328.00	74.00	-17.82	Pass
17953.66	23.02	16.01	10.86	49.89	Average Max	V	148.00	132.00	54.00	-4.11	Pass
6136.47	24.71	10.65	10.74	46.10	Average Max	V	148.00	148.00	54.00	-7.90	Pass
10958.59	22.80	12.84	8.27	43.90	Average Max	H	224.00	328.00	54.00	-10.10	Pass

802.11n40 – 5230MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
6149.35	36.37	10.67	10.71	57.75	Peak Max	V	146.00	341.00	74.00	-16.25	Pass
17731.18	34.63	16.39	10.64	61.66	Peak Max	V	232.00	192.00	74.00	-12.34	Pass
10726.42	36.20	12.10	8.40	56.69	Peak Max	H	245.00	36.00	74.00	-17.31	Pass
6149.35	24.78	10.67	10.71	46.16	Average Max	V	146.00	341.00	54.00	-7.84	Pass
17731.18	22.81	16.39	10.64	49.83	Average Max	V	232.00	192.00	54.00	-4.17	Pass
10726.42	23.99	12.10	8.40	44.48	Average Max	H	245.00	36.00	54.00	-9.52	Pass

Omnidirectional Antenna : 5.3 GHz

802.11a – 5260MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17573.25	34.99	16.66	10.47	62.12	Peak Max	V	239.00	333.00	74.00	-11.88	Pass
6143.61	36.00	10.66	10.72	57.38	Peak Max	V	212.00	172.00	74.00	-16.62	Pass
10018.96	36.19	10.79	8.82	55.80	Peak Max	H	171.00	20.00	74.00	-18.20	Pass
17573.25	23.49	16.66	10.47	50.62	Average Max	V	239.00	333.00	54.00	-3.38	Pass
6143.61	24.55	10.66	10.72	45.93	Average Max	V	212.00	172.00	54.00	-8.07	Pass
10018.96	24.33	10.79	8.82	43.94	Average Max	H	171.00	20.00	54.00	-10.06	Pass

802.11a – 5300MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17461.87	35.36	16.78	10.28	62.43	Peak Max	V	236.00	135.00	74.00	-11.57	Pass
6233.89	36.22	10.77	10.51	57.50	Peak Max	H	152.00	87.00	74.00	-16.51	Pass
10110.35	35.58	10.90	8.76	55.24	Peak Max	V	176.00	123.00	74.00	-18.76	Pass
17461.87	23.45	16.78	10.28	50.52	Average Max	V	236.00	135.00	54.00	-3.48	Pass
6233.89	24.25	10.77	10.51	45.53	Average Max	H	152.00	87.00	54.00	-8.47	Pass
10110.35	24.06	10.90	8.76	43.72	Average Max	V	176.00	123.00	54.00	-10.28	Pass

802.11a – 5320MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17593.69	34.99	16.63	10.49	62.11	Peak Max	V	223.00	56.00	74.00	-11.89	Pass
6125.52	35.86	10.64	10.76	57.26	Peak Max	H	229.00	332.00	74.00	-16.74	Pass
10683.33	35.81	11.96	8.42	56.19	Peak Max	V	222.00	158.00	74.00	-17.81	Pass
17593.69	23.49	16.63	10.49	50.61	Average Max	V	223.00	56.00	54.00	-3.39	Pass
6125.52	24.27	10.64	10.76	45.68	Average Max	H	229.00	332.00	54.00	-8.32	Pass
10683.33	24.19	11.96	8.42	44.57	Average Max	V	222.00	158.00	54.00	-9.43	Pass

Omnidirectional Antenna : 5.3 GHz

802.11n20 – 5260MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17690.62	34.68	16.46	10.59	61.73	Peak Max	V	147.00	359.00	74.00	-12.27	Pass
6140.99	36.36	10.66	10.73	57.74	Peak Max	V	193.00	41.00	74.00	-16.26	Pass
11054.52	35.06	12.89	8.22	56.16	Peak Max	V	175.00	363.00	74.00	-17.84	Pass
17690.62	22.81	16.46	10.59	49.86	Average Max	V	147.00	359.00	54.00	-4.14	Pass
6140.99	24.11	10.66	10.73	45.50	Average Max	V	193.00	41.00	54.00	-8.50	Pass
11054.52	23.42	12.89	8.22	44.52	Average Max	V	175.00	363.00	54.00	-9.48	Pass

802.11n20 – 5300MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
6143.228	36.43	10.66	10.72	57.81	Peak Max	H	148.00	187.00	74.00	-16.19	Pass
17721.51	34.76	16.41	10.63	61.79	Peak Max	H	146.00	157.00	74.00	-12.21	Pass
10723.14	36.67	12.09	8.40	57.16	Peak Max	V	224.00	246.00	74.00	-16.84	Pass
6143.228	24.56	10.66	10.72	45.94	Average Max	H	148.00	187.00	54.00	-8.06	Pass
17721.51	22.85	16.41	10.63	49.88	Average Max	H	146.00	157.00	54.00	-4.12	Pass
10723.14	24.27	12.09	8.40	44.76	Average Max	V	224.00	246.00	54.00	-9.24	Pass

802.11n20 – 5320MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
6238.17	35.51	10.78	10.50	56.78	Peak Max	H	240.00	87.00	74.00	-17.22	Pass
17977.86	34.81	15.97	10.89	61.67	Peak Max	H	168.00	192.00	74.00	-12.33	Pass
10808.28	35.89	12.36	8.35	56.60	Peak Max	V	155.00	61.00	74.00	-17.40	Pass
6238.17	24.40	10.78	10.50	45.68	Average Max	H	240.00	87.00	54.00	-8.33	Pass
17977.86	23.00	15.97	10.89	49.85	Average Max	H	168.00	192.00	54.00	-4.15	Pass
10808.28	23.78	12.36	8.35	44.49	Average Max	V	155.00	61.00	54.00	-9.51	Pass

Omnidirectional Antenna : 5.3 GHz

802.11n40 – 5270MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17475.29	34.77	16.79	10.32	61.88	Peak Max	H	160.00	5.00	74.00	-12.12	Pass
6073.395	36.45	10.57	10.89	57.92	Peak Max	H	146.00	285.00	74.00	-16.09	Pass
11214.09	35.54	12.64	8.14	56.32	Peak Max	H	201.00	74.00	74.00	-17.68	Pass
17475.29	22.83	16.79	10.32	49.95	Average Max	H	160.00	5.00	54.00	-4.06	Pass
6073.395	24.68	10.57	10.89	46.15	Average Max	H	146.00	285.00	54.00	-7.86	Pass
11214.09	23.27	12.64	8.14	44.05	Average Max	H	201.00	74.00	54.00	-9.95	Pass

802.11n40 – 5310MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17482.01	34.81	16.79	10.34	61.94	Peak Max	H	231.00	287.00	74.00	-12.06	Pass
6009.32	36.60	10.49	11.05	58.14	Peak Max	H	152.00	115.00	74.00	-15.86	Pass
10778.39	36.07	12.27	8.37	56.70	Peak Max	V	209.00	363.00	74.00	-17.30	Pass
17482.01	22.80	16.79	10.34	49.94	Average Max	H	231.00	287.00	54.00	-4.07	Pass
6009.32	24.58	10.49	11.05	46.12	Average Max	H	152.00	115.00	54.00	-7.89	Pass
10778.39	23.92	12.27	8.37	44.55	Average Max	V	209.00	363.00	54.00	-9.45	Pass

Omnidirectional Antenna : 5.5 GHz

802.11a – 5500MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17385.41	34.92	16.77	10.05	61.75	Peak Max	V	218.00	230.00	74.00	-12.25	Pass
6084.24	35.22	10.59	10.86	56.67	Peak Max	V	199.00	88.00	74.00	-17.33	Pass
11994.22	35.62	12.05	8.56	56.23	Peak Max	H	150.00	351.00	74.00	-17.77	Pass
17385.41	23.48	16.77	10.05	50.31	Average Max	V	218.00	230.00	54.00	-3.69	Pass
6084.24	23.71	10.59	10.86	45.16	Average Max	V	199.00	88.00	54.00	-8.84	Pass
11994.22	23.46	12.05	8.56	44.08	Average Max	H	150.00	351.00	54.00	-9.92	Pass

802.11a – 5580MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17473.60	35.87	16.79	10.32	62.98	Peak Max	H	215.00	279.00	74.00	-11.02	Pass
6143.32	36.43	10.66	10.72	57.81	Peak Max	V	147.00	234.00	74.00	-16.19	Pass
10706.44	36.45	12.03	8.41	56.89	Peak Max	V	222.00	278.00	74.00	-17.11	Pass
17473.60	23.40	16.79	10.32	50.50	Average Max	H	215.00	279.00	54.00	-3.50	Pass
6143.32	24.51	10.66	10.72	45.89	Average Max	V	147.00	234.00	54.00	-8.11	Pass
10706.44	24.19	12.03	8.41	44.63	Average Max	V	222.00	278.00	54.00	-9.37	Pass

802.11a – 5700MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17864.58	36.15	16.16	10.77	63.08	Peak Max	H	154.00	307.00	74.00	-10.92	Pass
6216.26	36.59	10.75	10.55	57.89	Peak Max	H	229.00	166.00	74.00	-16.11	Pass
10105.62	36.42	10.90	8.76	56.08	Peak Max	V	172.00	354.00	74.00	-17.92	Pass
17864.58	23.29	16.16	10.77	50.22	Average Max	H	154.00	307.00	54.00	-3.78	Pass
6216.26	24.21	10.75	10.55	45.51	Average Max	H	229.00	166.00	54.00	-8.49	Pass
10105.62	24.04	10.90	8.76	43.70	Average Max	V	172.00	354.00	54.00	-10.30	Pass

Omnidirectional Antenna : 5.5 GHz

802.11n20 – 5500MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17481.09	35.45	16.79	10.34	62.58	Peak Max	V	220.00	239.00	74.00	-11.43	Pass
6120.73	36.45	10.63	10.78	57.85	Peak Max	H	209.00	274.00	74.00	-16.15	Pass
10726.92	37.19	12.10	8.40	57.68	Peak Max	V	149.00	242.00	74.00	-16.32	Pass
17481.09	22.83	16.79	10.34	49.96	Average Max	V	220.00	239.00	54.00	-4.05	Pass
6120.73	24.42	10.63	10.78	45.83	Average Max	H	209.00	274.00	54.00	-8.17	Pass
10726.92	24.25	12.10	8.40	44.75	Average Max	V	149.00	242.00	54.00	-9.25	Pass

802.11n20 – 5580MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
6148.16	36.87	10.67	10.71	58.25	Peak Max	H	179.00	99.00	74.00	-15.75	Pass
17709.15	35.02	16.43	10.61	62.06	Peak Max	H	202.00	204.00	74.00	-11.94	Pass
13650.56	35.30	14.38	7.39	57.07	Peak Max	H	220.00	113.00	74.00	-16.93	Pass
6148.16	24.85	10.67	10.71	46.22	Average Max	H	179.00	99.00	54.00	-7.78	Pass
17709.15	22.91	16.43	10.61	49.95	Average Max	H	202.00	204.00	54.00	-4.05	Pass
13650.56	23.32	14.38	7.39	45.09	Average Max	H	220.00	113.00	54.00	-8.91	Pass

802.11n20 – 5700MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17353.82	35.32	16.77	9.96	62.05	Peak Max	H	153.00	252.00	74.00	-11.95	Pass
6133.21	36.23	10.65	10.75	57.63	Peak Max	H	228.00	321.00	74.00	-16.38	Pass
10741.09	35.74	12.15	8.39	56.27	Peak Max	H	173.00	24.00	74.00	-17.73	Pass
17353.82	23.26	16.77	9.96	49.99	Average Max	H	153.00	252.00	54.00	-4.01	Pass
6133.21	24.71	10.65	10.75	46.10	Average Max	H	228.00	321.00	54.00	-7.90	Pass
10741.09	24.15	12.15	8.39	44.68	Average Max	H	173.00	24.00	54.00	-9.32	Pass

Omnidirectional Antenna : 5.5 GHz

802.11n40 – 5510MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17896.09	34.52	16.11	10.80	61.43	Peak Max	H	216.00	280.00	74.00	-12.57	Pass
6158.79	36.40	10.68	10.68	57.77	Peak Max	V	148.00	85.00	74.00	-16.23	Pass
10084.50	35.95	10.87	8.78	55.59	Peak Max	V	189.00	14.00	74.00	-18.41	Pass
17896.09	22.96	16.11	10.80	49.87	Average Max	H	216.00	280.00	54.00	-4.13	Pass
6158.79	24.51	10.68	10.68	45.87	Average Max	V	148.00	85.00	54.00	-8.13	Pass
10084.50	24.05	10.87	8.78	43.70	Average Max	V	189.00	14.00	54.00	-10.31	Pass

802.11n40 – 5550MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17753.55	34.62	16.35	10.66	61.63	Peak Max	V	148.00	311.00	74.00	-12.38	Pass
6135.09	35.86	10.65	10.74	57.25	Peak Max	V	199.00	320.00	74.00	-16.75	Pass
11961.51	35.21	12.06	8.52	55.80	Peak Max	V	187.00	0.00	74.00	-18.20	Pass
17753.55	23.04	16.35	10.66	50.05	Average Max	V	148.00	311.00	54.00	-3.95	Pass
6135.09	24.59	10.65	10.74	45.98	Average Max	V	199.00	320.00	54.00	-8.02	Pass
11961.51	22.89	12.06	8.52	43.47	Average Max	V	187.00	0.00	54.00	-10.53	Pass

802.11n40 – 5670MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17705.84	35.21	16.43	10.61	62.25	Peak Max	V	235.00	108.00	74.00	-11.75	Pass
6239.57	36.15	10.78	10.49	57.42	Peak Max	H	159.00	326.00	74.00	-16.58	Pass
10651.65	35.52	11.86	8.44	55.81	Peak Max	V	229.00	280.00	74.00	-18.19	Pass
17705.84	22.85	16.43	10.61	49.90	Average Max	V	235.00	108.00	54.00	-4.10	Pass
6239.57	24.41	10.78	10.49	45.68	Average Max	H	159.00	326.00	54.00	-8.32	Pass
10651.65	23.79	11.86	8.44	44.09	Average Max	V	229.00	280.00	54.00	-9.91	Pass

Omnidirectional Antenna : 5.8 GHz

802.11a – 5745MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17354.69	34.39	16.77	9.96	61.12	Peak Max	H	179.00	364.00	74.00	-12.88	Pass
6113.06	35.44	10.62	10.79	56.85	Peak Max	V	215.00	29.00	74.00	-17.15	Pass
10085.93	35.73	10.87	8.77	55.38	Peak Max	H	190.00	53.00	74.00	-18.62	Pass
17354.69	23.00	16.77	9.96	49.73	Average Max	H	179.00	364.00	54.00	-4.27	Pass
6113.06	24.25	10.62	10.79	45.67	Average Max	V	215.00	29.00	54.00	-8.33	Pass
10085.93	24.13	10.87	8.77	43.78	Average Max	H	190.00	53.00	54.00	-10.23	Pass

802.11a – 5785MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17541.98	34.10	16.72	10.44	61.26	Peak Max	H	192.00	71.00	74.00	-12.74	Pass
6175.80	35.98	10.70	10.64	57.32	Peak Max	V	165.00	156.00	74.00	-16.68	Pass
10774.91	35.30	12.25	8.37	55.92	Peak Max	V	159.00	147.00	74.00	-18.08	Pass
17543.16	22.79	16.72	10.44	49.94	Average Max	H	192.00	71.00	54.00	-4.06	Pass
6175.80	24.29	10.70	10.64	45.63	Average Max	V	165.00	156.00	54.00	-8.37	Pass
10774.91	23.91	12.25	8.37	44.54	Average Max	V	159.00	147.00	54.00	-9.47	Pass

802.11a – 5825MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17498.02	34.68	16.79	10.39	61.86	Peak Max	H	196.00	277.00	74.00	-12.14	Pass
6119.72	35.68	10.63	10.78	57.08	Peak Max	V	175.00	217.00	74.00	-16.92	Pass
10683.44	36.18	11.96	8.42	56.56	Peak Max	V	226.00	290.00	74.00	-17.45	Pass
17498.02	22.86	16.79	10.39	50.04	Average Max	H	196.00	277.00	54.00	-3.96	Pass
6119.72	24.28	10.63	10.78	45.68	Average Max	V	175.00	217.00	54.00	-8.32	Pass
10683.44	24.04	11.96	8.42	44.42	Average Max	V	226.00	290.00	54.00	-9.59	Pass

Omnidirectional Antenna : 5.8 GHz

802.11n20 – 5745MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17444.40	34.72	16.78	10.23	61.74	Peak Max	H	218.00	73.00	74.00	-12.26	Pass
6112.20	36.25	10.62	10.80	57.67	Peak Max	V	235.00	79.00	74.00	-16.33	Pass
10694.55	35.52	12.00	8.41	55.93	Peak Max	V	205.00	273.00	74.00	-18.07	Pass
17444.40	23.07	16.78	10.23	50.08	Average Max	H	218.00	73.00	54.00	-3.92	Pass
6112.20	24.70	10.62	10.80	46.11	Average Max	V	235.00	79.00	54.00	-7.89	Pass
10694.55	24.07	12.00	8.41	44.48	Average Max	V	205.00	273.00	54.00	-9.52	Pass

802.11n20 – 5785MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
6163.97	35.94	10.69	10.67	57.30	Peak Max	H	212.00	140.00	74.00	-16.70	Pass
17660.94	34.27	16.51	10.56	61.34	Peak Max	V	217.00	146.00	74.00	-12.66	Pass
11026.27	34.75	12.93	8.23	55.91	Peak Max	V	201.00	356.00	74.00	-18.09	Pass
6163.97	24.00	10.69	10.67	45.36	Average Max	H	212.00	140.00	54.00	-8.64	Pass
17660.94	22.73	16.51	10.56	49.81	Average Max	V	217.00	146.00	54.00	-4.19	Pass
11026.27	23.16	12.93	8.23	44.33	Average Max	V	201.00	356.00	54.00	-9.67	Pass

802.11n20 – 5825MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17521.85	34.32	16.75	10.42	61.49	Peak Max	H	176.00	323.00	74.00	-12.51	Pass
5999.92	36.45	10.48	11.07	58.00	Peak Max	H	232.00	193.00	74.00	-16.00	Pass
10859.05	34.53	12.52	8.32	55.38	Peak Max	H	163.00	357.00	74.00	-18.62	Pass
17521.85	22.73	16.75	10.42	49.90	Average Max	H	176.00	323.00	54.00	-4.10	Pass
5999.92	24.47	10.48	11.07	46.02	Average Max	H	232.00	193.00	54.00	-7.99	Pass
10859.05	23.50	12.52	8.32	44.34	Average Max	H	163.00	357.00	54.00	-9.66	Pass

Omnidirectional Antenna : 5.8 GHz

802.11n40 – 5755MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17469.32	34.94	16.79	10.31	62.03	Peak Max	V	146.00	173.00	74.00	-11.97	Pass
6249.31	34.02	10.79	10.47	55.28	Peak Max	H	198.00	325.00	74.00	-18.72	Pass
10688.66	35.72	11.98	8.42	56.11	Peak Max	H	149.00	233.00	74.00	-17.89	Pass
17469.32	23.20	16.79	10.31	50.29	Average Max	V	146.00	173.00	54.00	-3.71	Pass
6249.31	22.26	10.79	10.47	43.52	Average Max	H	198.00	325.00	54.00	-10.48	Pass
10688.66	24.03	11.98	8.42	44.43	Average Max	H	149.00	233.00	54.00	-9.57	Pass

802.11n40 – 5795MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17556.99	35.42	16.69	10.46	62.56	Peak Max	V	209.00	72.00	74.00	-11.44	Pass
6144.49	36.32	10.66	10.72	57.70	Peak Max	V	168.00	147.00	74.00	-16.30	Pass
10715.67	35.94	12.06	8.40	56.41	Peak Max	H	148.00	22.00	74.00	-17.60	Pass
17556.99	22.80	16.69	10.46	49.95	Average Max	V	209.00	72.00	54.00	-4.05	Pass
6144.49	24.74	10.66	10.72	46.12	Average Max	V	168.00	147.00	54.00	-7.88	Pass
10715.67	24.13	12.06	8.40	44.59	Average Max	H	148.00	22.00	54.00	-9.41	Pass

Radiated Emission Test Results (Above 1GHz)

Patch Antenna : 5.2 GHz

802.11a – 5180MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17533.64	35.32	16.73	10.43	62.49	Peak Max	V	107.00	72.00	74.00	-11.51	Pass
4230.65	37.80	9.08	11.23	58.10	Peak Max	V	238.00	161.00	74.00	-15.90	Pass
3079.47	40.62	5.30	10.08	56.00	Peak Max	H	197.00	74.00	74.00	-18.00	Pass
17533.64	23.12	16.73	10.43	50.28	Average Max	V	107.00	72.00	54.00	-3.72	Pass
4230.65	25.55	9.08	11.23	45.86	Average Max	V	238.00	161.00	54.00	-8.14	Pass
3079.47	28.22	5.30	10.08	43.60	Average Max	H	197.00	74.00	54.00	-10.40	Pass

802.11a – 5200MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17510.69	34.96	16.77	10.41	62.14	Peak Max	V	114.00	339.00	74.00	-11.86	Pass
4145.83	37.71	8.87	11.59	58.16	Peak Max	V	188.00	210.00	74.00	-15.84	Pass
6099.34	36.50	10.61	10.83	57.93	Peak Max	V	151.00	0.00	74.00	-16.07	Pass
17510.69	23.46	16.77	10.41	50.64	Average Max	V	114.00	339.00	54.00	-3.36	Pass
4145.83	25.83	8.87	11.59	46.29	Average Max	V	188.00	210.00	54.00	-7.71	Pass
6099.34	24.82	10.61	10.83	46.25	Average Max	V	151.00	0.00	54.00	-7.75	Pass

802.11a – 5240MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17435.90	34.94	16.78	10.21	61.92	Peak Max	H	120.00	214.00	74.00	-12.08	Pass
4048.81	37.53	8.62	12.01	58.16	Peak Max	H	242.00	301.00	74.00	-15.84	Pass
6162.77	36.60	10.68	10.67	57.96	Peak Max	V	174.00	294.00	74.00	-16.04	Pass
17435.90	23.50	16.78	10.21	50.49	Average Max	H	120.00	214.00	54.00	-3.51	Pass
4048.81	25.60	8.62	12.01	46.24	Average Max	H	242.00	301.00	54.00	-7.76	Pass
6162.77	24.92	10.68	10.67	46.28	Average Max	V	174.00	294.00	54.00	-7.72	Pass

Patch Antenna : 5.2 GHz

802.11n20 – 5180MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17582.53	35.58	16.65	10.48	62.71	Peak Max	V	246.00	140.00	74.00	-11.29	Pass
6074.11	36.70	10.57	10.89	58.16	Peak Max	H	150.00	83.00	74.00	-15.84	Pass
9957.73	36.14	10.77	8.66	55.57	Peak Max	V	185.00	73.00	74.00	-18.43	Pass
17582.53	23.32	16.65	10.48	50.45	Average Max	V	246.00	140.00	54.00	-3.55	Pass
6074.11	24.50	10.57	10.89	45.97	Average Max	H	150.00	83.00	54.00	-8.03	Pass
9957.73	24.15	10.77	8.66	43.58	Average Max	V	185.00	73.00	54.00	-10.42	Pass

802.11n20 – 5200MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17495.76	34.78	16.79	10.38	61.96	Peak Max	V	212.00	153.00	74.00	-12.05	Pass
6031.72	36.34	10.52	10.99	57.85	Peak Max	V	147.00	11.00	74.00	-16.15	Pass
9957.23	35.24	10.77	8.66	54.67	Peak Max	V	162.00	311.00	74.00	-19.33	Pass
17495.76	23.40	16.79	10.38	50.58	Average Max	V	212.00	153.00	54.00	-3.42	Pass
6031.72	24.49	10.52	10.99	46.00	Average Max	V	147.00	11.00	54.00	-8.00	Pass
9957.23	24.12	10.77	8.66	43.55	Average Max	V	162.00	311.00	54.00	-10.45	Pass

802.11n20 – 5240MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17491.67	35.01	16.79	10.37	62.17	Peak Max	H	240.00	42.00	74.00	-11.83	Pass
6113.20	36.46	10.62	10.79	57.87	Peak Max	V	205.00	320.00	74.00	-16.13	Pass
14551.50	34.54	13.56	8.28	56.38	Peak Max	V	158.00	301.00	74.00	-17.62	Pass
17491.67	23.30	16.79	10.37	50.46	Average Max	H	240.00	42.00	54.00	-3.54	Pass
6113.20	24.68	10.62	10.79	46.09	Average Max	V	205.00	320.00	54.00	-7.91	Pass
14551.50	22.99	13.56	8.28	44.83	Average Max	V	158.00	301.00	54.00	-9.17	Pass

Patch Antenna : 5.2 GHz

802.11n40 – 5190MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17529.43	35.22	16.74	10.43	62.38	Peak Max	H	227.00	37.00	74.00	-11.62	Pass
6263.34	36.75	10.81	10.44	57.99	Peak Max	V	192.00	203.00	74.00	-16.01	Pass
11203.23	35.06	12.66	8.14	55.86	Peak Max	V	184.00	223.00	74.00	-18.14	Pass
17529.43	23.46	16.74	10.43	50.63	Average Max	H	227.00	37.00	54.00	-3.37	Pass
6263.34	24.33	10.81	10.44	45.57	Average Max	V	192.00	203.00	54.00	-8.43	Pass
11203.23	23.44	12.66	8.14	44.25	Average Max	V	184.00	223.00	54.00	-9.75	Pass

802.11n40 – 5230MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17525.60	35.38	16.75	10.42	62.55	Peak Max	V	245.00	78.00	74.00	-11.45	Pass
5999.14	36.84	10.48	11.07	58.39	Peak Max	V	215.00	2.00	74.00	-15.61	Pass
10705.37	35.89	12.03	8.41	56.32	Peak Max	V	222.00	32.00	74.00	-17.68	Pass
17525.60	23.47	16.75	10.42	50.64	Average Max	V	245.00	78.00	54.00	-3.36	Pass
5999.14	24.56	10.48	11.07	46.11	Average Max	V	215.00	2.00	54.00	-7.89	Pass
10705.37	24.19	12.03	8.41	44.63	Average Max	V	222.00	32.00	54.00	-9.38	Pass

Patch Antenna : 5.3 GHz

802.11a – 5260MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17683.02	34.88	16.47	10.59	61.94	Peak Max	V	245.00	146.00	74.00	-12.06	Pass
4072.28	37.29	8.68	11.91	57.89	Peak Max	H	200.00	216.00	74.00	-16.12	Pass
6271.41	36.37	10.82	10.42	57.60	Peak Max	V	107.00	59.00	74.00	-16.40	Pass
17683.02	23.27	16.47	10.59	50.33	Average Max	V	245.00	146.00	54.00	-3.67	Pass
4072.28	25.54	8.68	11.91	46.13	Average Max	H	200.00	216.00	54.00	-7.87	Pass
6271.41	24.53	10.82	10.42	45.76	Average Max	V	107.00	59.00	54.00	-8.24	Pass

802.11a – 5300MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17421.49	35.34	16.78	10.16	62.29	Peak Max	V	222.00	218.00	74.00	-11.72	Pass
6096.55	36.65	10.60	10.83	58.09	Peak Max	H	200.00	233.00	74.00	-15.92	Pass
9968.51	35.70	10.77	8.70	55.17	Peak Max	V	198.00	0.00	74.00	-18.83	Pass
17421.49	23.23	16.78	10.16	50.17	Average Max	V	222.00	218.00	54.00	-3.83	Pass
6096.55	24.66	10.60	10.83	46.09	Average Max	H	200.00	233.00	54.00	-7.91	Pass
9968.51	24.09	10.77	8.70	43.57	Average Max	V	198.00	0.00	54.00	-10.43	Pass

802.11a – 5320MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17522.19	34.74	16.75	10.42	61.91	Peak Max	V	238.00	261.00	74.00	-12.09	Pass
4166.19	37.29	8.92	11.50	57.71	Peak Max	V	238.00	96.00	74.00	-16.29	Pass
6099.66	36.51	10.61	10.83	57.94	Peak Max	H	201.00	106.00	74.00	-16.06	Pass
17522.19	23.39	16.75	10.42	50.56	Average Max	V	238.00	261.00	54.00	-3.44	Pass
4166.19	25.79	8.92	11.50	46.21	Average Max	V	238.00	96.00	54.00	-7.79	Pass
6099.66	24.54	10.61	10.83	45.97	Average Max	H	201.00	106.00	54.00	-8.03	Pass

Patch Antenna : 5.3 GHz

802.11n20 – 5260MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17416.74	34.95	16.78	10.15	61.88	Peak Max	V	227.00	0.00	74.00	-12.12	Pass
6037.55	37.26	10.53	10.98	58.77	Peak Max	V	215.00	18.00	74.00	-15.23	Pass
11975.18	35.52	12.06	8.54	56.11	Peak Max	V	146.00	317.00	74.00	-17.89	Pass
17416.74	23.24	16.78	10.15	50.17	Average Max	V	227.00	0.00	54.00	-3.83	Pass
6037.55	24.67	10.53	10.98	46.18	Average Max	V	215.00	18.00	54.00	-7.83	Pass
11975.18	23.28	12.06	8.54	43.88	Average Max	V	146.00	317.00	54.00	-10.12	Pass

802.11n20 – 5300MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17490.19	35.12	16.79	10.37	62.28	Peak Max	H	174.00	330.00	74.00	-11.72	Pass
6052.695	35.93	10.55	10.94	57.42	Peak Max	V	242.00	243.00	74.00	-16.58	Pass
10669.18	36.13	11.91	8.43	56.47	Peak Max	V	243.00	33.00	74.00	-17.53	Pass
17490.19	23.32	16.79	10.37	50.48	Average Max	H	174.00	330.00	54.00	-3.52	Pass
6052.695	24.20	10.55	10.94	45.69	Average Max	V	242.00	243.00	54.00	-8.31	Pass
10669.18	24.28	11.91	8.43	44.62	Average Max	V	243.00	33.00	54.00	-9.38	Pass

802.11n20 – 5320MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17496.15	35.18	16.79	10.39	62.36	Peak Max	V	189.00	68.00	74.00	-11.64	Pass
6136.84	36.93	10.65	10.74	58.32	Peak Max	H	169.00	0.00	74.00	-15.68	Pass
10763.64	36.88	12.22	8.38	57.47	Peak Max	V	199.00	306.00	74.00	-16.53	Pass
17496.15	23.38	16.79	10.39	50.56	Average Max	V	189.00	68.00	54.00	-3.44	Pass
6136.84	24.88	10.65	10.74	46.27	Average Max	H	169.00	0.00	54.00	-7.74	Pass
10763.64	24.04	12.22	8.38	44.63	Average Max	V	199.00	306.00	54.00	-9.37	Pass

Patch Antenna : 5.3 GHz

802.11n40 – 5270MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17514.31	35.06	16.77	10.41	62.24	Peak Max	H	219.00	286.00	74.00	-11.76	Pass
6020.875	36.79	10.51	11.02	58.31	Peak Max	V	212.00	316.00	74.00	-15.69	Pass
11258.66	35.14	12.58	8.11	55.84	Peak Max	V	188.00	43.00	74.00	-18.17	Pass
17514.31	23.37	16.77	10.41	50.55	Average Max	H	219.00	286.00	54.00	-3.45	Pass
6020.875	24.61	10.51	11.02	46.14	Average Max	V	212.00	316.00	54.00	-7.86	Pass
11258.66	23.30	12.58	8.11	43.99	Average Max	V	188.00	43.00	54.00	-10.01	Pass

802.11n40 – 5310MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17281.29	34.61	16.76	9.74	61.11	Peak Max	H	156.00	48.00	74.00	-12.89	Pass
6128.80	35.13	10.64	10.76	56.53	Peak Max	V	241.00	279.00	74.00	-17.47	Pass
10883.87	35.33	12.60	8.31	56.24	Peak Max	V	158.00	305.00	74.00	-17.76	Pass
17281.29	23.29	16.76	9.74	49.79	Average Max	H	156.00	48.00	54.00	-4.21	Pass
6128.80	23.90	10.64	10.76	45.29	Average Max	V	241.00	279.00	54.00	-8.71	Pass
10883.87	23.27	12.60	8.31	44.18	Average Max	V	158.00	305.00	54.00	-9.82	Pass

Patch Antenna : 5.5 GHz

802.11a – 5500MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17512.05	35.36	16.77	10.41	62.54	Peak Max	V	154.00	333.00	74.00	-11.46	Pass
6106.05	36.05	10.61	10.81	57.47	Peak Max	H	174.00	166.00	74.00	-16.53	Pass
11941.05	35.11	12.07	8.50	55.68	Peak Max	V	155.00	43.00	74.00	-18.32	Pass
17512.05	23.40	16.77	10.41	50.58	Average Max	V	154.00	333.00	54.00	-3.42	Pass
6106.05	24.70	10.61	10.81	46.12	Average Max	H	174.00	166.00	54.00	-7.88	Pass
11941.05	23.08	12.07	8.50	43.65	Average Max	V	155.00	43.00	54.00	-10.35	Pass

802.11a – 5580MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17713.77	35.36	16.42	10.62	62.40	Peak Max	H	251.00	211.00	74.00	-11.60	Pass
6119.77	36.76	10.63	10.78	58.16	Peak Max	H	163.00	90.00	74.00	-15.84	Pass
10828.34	35.38	12.43	8.34	56.15	Peak Max	V	211.00	72.00	74.00	-17.85	Pass
17713.77	23.30	16.42	10.62	50.33	Average Max	H	251.00	211.00	54.00	-3.67	Pass
6119.77	24.58	10.63	10.78	45.98	Average Max	H	163.00	90.00	54.00	-8.02	Pass
10828.34	23.42	12.43	8.34	44.19	Average Max	V	211.00	72.00	54.00	-9.81	Pass

802.11a – 5700MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17481.46	34.78	16.79	10.34	61.91	Peak Max	H	242.00	238.00	74.00	-12.09	Pass
6142.42	36.68	10.66	10.72	58.06	Peak Max	V	162.00	347.00	74.00	-15.94	Pass
10800.65	35.30	12.34	8.35	55.99	Peak Max	V	234.00	187.00	74.00	-18.01	Pass
17481.46	23.29	16.79	10.34	50.42	Average Max	H	242.00	238.00	54.00	-3.58	Pass
6142.42	24.54	10.66	10.72	45.92	Average Max	V	162.00	347.00	54.00	-8.08	Pass
10800.65	23.73	12.34	8.35	44.42	Average Max	V	234.00	187.00	54.00	-9.58	Pass

Patch Antenna : 5.5 GHz

802.11n20 – 5500MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17289.14	35.39	16.76	9.76	61.92	Peak Max	V	216.00	38.00	74.00	-12.08	Pass
6074.63	36.44	10.57	10.89	57.90	Peak Max	V	173.00	56.00	74.00	-16.10	Pass
10705.93	36.10	12.03	8.41	56.54	Peak Max	V	251.00	90.00	74.00	-17.47	Pass
17289.14	23.29	16.76	9.76	49.81	Average Max	V	216.00	38.00	54.00	-4.19	Pass
6074.63	24.79	10.57	10.89	46.25	Average Max	V	173.00	56.00	54.00	-7.75	Pass
10705.93	24.31	12.03	8.41	44.75	Average Max	V	251.00	90.00	54.00	-9.25	Pass

802.11n20 – 5580MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17881.73	34.56	16.13	10.79	61.48	Peak Max	H	198.00	26.00	74.00	-12.53	Pass
6210.56	36.41	10.74	10.56	57.72	Peak Max	H	173.00	286.00	74.00	-16.28	Pass
10918.85	35.02	12.71	8.29	56.03	Peak Max	V	200.00	129.00	74.00	-17.97	Pass
17881.73	23.27	16.13	10.79	50.19	Average Max	H	198.00	26.00	54.00	-3.81	Pass
6210.56	24.43	10.74	10.56	45.74	Average Max	H	173.00	286.00	54.00	-8.26	Pass
10918.85	23.17	12.71	8.29	44.17	Average Max	V	200.00	129.00	54.00	-9.83	Pass

802.11n20 – 5700MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17511.31	35.09	16.77	10.41	62.27	Peak Max	H	250.00	175.00	74.00	-11.73	Pass
6016.22	36.06	10.50	11.03	57.59	Peak Max	V	217.00	54.00	74.00	-16.41	Pass
11149.82	35.29	12.74	8.17	56.20	Peak Max	V	207.00	233.00	74.00	-17.80	Pass
17511.31	23.44	16.77	10.41	50.62	Average Max	H	250.00	175.00	54.00	-3.38	Pass
6016.22	24.49	10.50	11.03	46.02	Average Max	V	217.00	54.00	54.00	-7.98	Pass
11149.82	23.44	12.74	8.17	44.35	Average Max	V	207.00	233.00	54.00	-9.65	Pass

Patch Antenna : 5.5 GHz

802.11n40 – 5510MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17491.11	34.84	16.79	10.37	62.00	Peak Max	H	244.00	270.00	74.00	-12.00	Pass
6164.51	37.02	10.69	10.67	58.38	Peak Max	V	158.00	169.00	74.00	-15.62	Pass
10746.12	35.75	12.16	8.38	56.30	Peak Max	V	192.00	188.00	74.00	-17.70	Pass
17491.11	23.47	16.79	10.37	50.63	Average Max	H	244.00	270.00	54.00	-3.37	Pass
6164.51	24.40	10.69	10.67	45.76	Average Max	V	158.00	169.00	54.00	-8.25	Pass
10746.12	24.02	12.16	8.38	44.56	Average Max	V	192.00	188.00	54.00	-9.44	Pass

802.11n40 – 5550MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17551.86	35.37	16.70	10.45	62.52	Peak Max	V	230.00	261.00	74.00	-11.48	Pass
6076.57	36.46	10.58	10.88	57.92	Peak Max	V	204.00	106.00	74.00	-16.08	Pass
10203.91	35.24	11.01	8.70	54.96	Peak Max	V	162.00	299.00	74.00	-19.04	Pass
17551.86	23.40	16.70	10.45	50.55	Average Max	V	230.00	261.00	54.00	-3.45	Pass
6076.57	24.74	10.58	10.88	46.20	Average Max	V	204.00	106.00	54.00	-7.80	Pass
10203.91	23.66	11.01	8.70	43.37	Average Max	V	162.00	299.00	54.00	-10.63	Pass

802.11n40 – 5670MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17474.13	34.86	16.79	10.32	61.97	Peak Max	V	242.00	61.00	74.00	-12.03	Pass
6141.52	35.89	10.66	10.73	57.28	Peak Max	H	235.00	52.00	74.00	-16.72	Pass
10966.51	34.65	12.86	8.26	55.78	Peak Max	V	196.00	185.00	74.00	-18.22	Pass
17474.13	23.32	16.79	10.32	50.43	Average Max	V	242.00	61.00	54.00	-3.57	Pass
6141.52	24.14	10.66	10.73	45.52	Average Max	H	235.00	52.00	54.00	-8.48	Pass
10966.51	22.89	12.86	8.26	44.02	Average Max	V	196.00	185.00	54.00	-9.98	Pass

Patch Antenna : 5.8 GHz

802.11a – 5745MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17586.03	34.91	16.64	10.49	62.04	Peak Max	V	132.00	299.00	74.00	-11.96	Pass
4050.59	36.68	8.63	12.00	57.31	Peak Max	H	107.00	117.00	74.00	-16.69	Pass
6090.65	36.58	10.59	10.85	58.02	Peak Max	H	180.00	178.00	74.00	-15.98	Pass
17586.03	23.36	16.64	10.49	50.48	Average Max	V	132.00	299.00	54.00	-3.52	Pass
4050.59	25.53	8.63	12.00	46.17	Average Max	H	107.00	117.00	54.00	-7.83	Pass
6090.65	24.74	10.59	10.85	46.18	Average Max	H	180.00	178.00	54.00	-7.82	Pass

802.11a – 5785MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17499.47	34.93	16.79	10.40	62.12	Peak Max	H	111.00	190.00	74.00	-11.88	Pass
4229.33	36.93	9.07	11.23	57.24	Peak Max	H	231.00	268.00	74.00	-16.77	Pass
6002.54	36.46	10.48	11.06	58.01	Peak Max	H	155.00	336.00	74.00	-15.99	Pass
17499.47	23.50	16.79	10.40	50.69	Average Max	H	111.00	190.00	54.00	-3.31	Pass
4229.33	25.59	9.07	11.23	45.89	Average Max	H	231.00	268.00	54.00	-8.11	Pass
6002.54	24.60	10.48	11.06	46.15	Average Max	H	155.00	336.00	54.00	-7.85	Pass

802.11-a – 5825MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17501.58	34.87	16.79	10.40	62.05	Peak Max	V	151.00	11.00	74.00	-11.95	Pass
4081.90	37.36	8.71	11.87	57.93	Peak Max	V	111.00	17.00	74.00	-16.07	Pass
6163.59	37.49	10.69	10.67	58.85	Peak Max	V	106.00	125.00	74.00	-15.15	Pass
17501.58	23.46	16.79	10.40	50.64	Average Max	V	151.00	11.00	54.00	-3.36	Pass
4081.90	25.72	8.71	11.87	46.29	Average Max	V	111.00	17.00	54.00	-7.71	Pass
6163.59	24.83	10.69	10.67	46.19	Average Max	V	106.00	125.00	54.00	-7.81	Pass

Patch Antenna : 5.8 GHz

802.11n-20 – 5745MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17460.04	34.94	16.78	10.28	62.00	Peak Max	V	176.00	238.00	74.00	-12.00	Pass
6142.58	36.53	10.66	10.72	57.91	Peak Max	H	219.00	169.00	74.00	-16.09	Pass
10680.95	36.55	11.95	8.42	56.93	Peak Max	V	200.00	364.00	74.00	-17.07	Pass
17460.04	23.33	16.78	10.28	50.39	Average Max	V	176.00	238.00	54.00	-3.61	Pass
6142.58	24.61	10.66	10.72	45.99	Average Max	H	219.00	169.00	54.00	-8.01	Pass
10680.95	24.17	11.95	8.42	44.54	Average Max	V	200.00	364.00	54.00	-9.46	Pass

802.11n-20 – 5785MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17520.40	34.89	16.75	10.42	62.07	Peak Max	V	183.00	3.00	74.00	-11.94	Pass
6014.60	36.07	10.50	11.03	57.60	Peak Max	V	188.00	310.00	74.00	-16.40	Pass
9906.54	36.32	10.78	8.45	55.55	Peak Max	H	220.00	364.00	74.00	-18.45	Pass
17520.40	23.43	16.75	10.42	50.60	Average Max	V	183.00	3.00	54.00	-3.40	Pass
6014.60	24.63	10.50	11.03	46.16	Average Max	V	188.00	310.00	54.00	-7.84	Pass
9906.54	24.18	10.78	8.45	43.41	Average Max	H	220.00	364.00	54.00	-10.59	Pass

802.11n-20 – 5825MHz

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17445.28	35.62	16.78	10.23	62.64	Peak Max	V	169.00	196.00	74.00	-11.36	Pass
6113.28	36.47	10.62	10.79	57.89	Peak Max	V	208.00	182.00	74.00	-16.11	Pass
10669.17	35.63	11.91	8.43	55.97	Peak Max	V	206.00	70.00	74.00	-18.03	Pass
17445.28	23.33	16.78	10.23	50.35	Average Max	V	169.00	196.00	54.00	-3.65	Pass
6113.28	24.79	10.62	10.79	46.20	Average Max	V	208.00	182.00	54.00	-7.80	Pass
10669.17	24.23	11.91	8.43	44.57	Average Max	V	206.00	70.00	54.00	-9.43	Pass

Patch Antenna : 5.8 GHz

802.11n-40 – 5755MHz

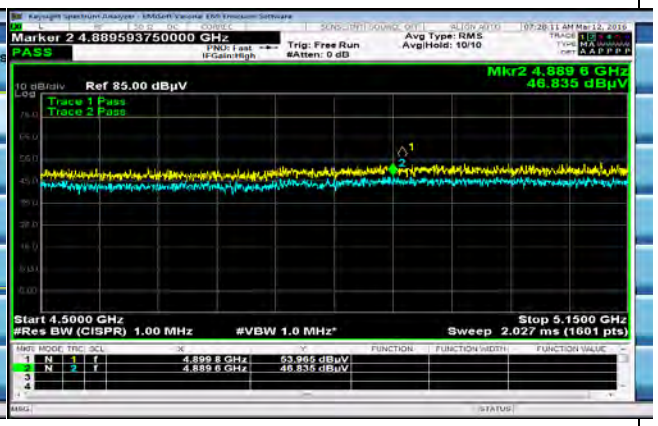
Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17536.50	35.18	16.73	10.44	62.35	Peak Max	H	224.00	162.00	74.00	-11.65	Pass
6185.89	35.50	10.71	10.62	56.83	Peak Max	V	249.00	326.00	74.00	-17.17	Pass
9955.15	35.98	10.77	8.65	55.40	Peak Max	V	155.00	125.00	74.00	-18.60	Pass
17536.50	23.36	16.73	10.44	50.53	Average Max	H	224.00	162.00	54.00	-3.47	Pass
6185.89	24.46	10.71	10.62	45.79	Average Max	V	249.00	326.00	54.00	-8.21	Pass
9955.15	23.84	10.77	8.65	43.27	Average Max	V	155.00	125.00	54.00	-10.73	Pass

802.11n-40 – 5795MHz

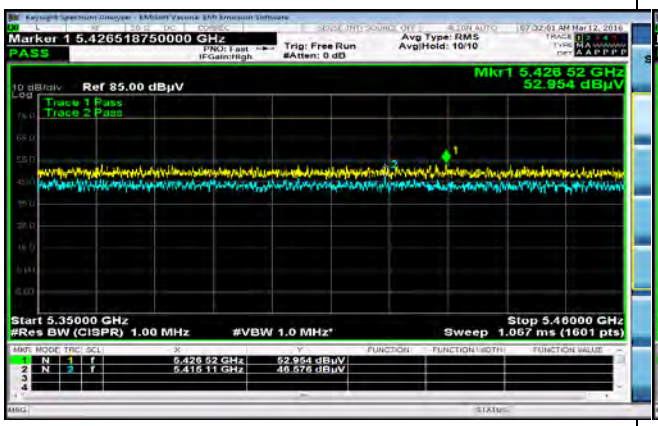
Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17415.24	35.28	16.78	10.14	62.20	Peak Max	V	220.00	216.00	74.00	-11.80	Pass
6143.31	36.32	10.66	10.72	57.70	Peak Max	V	183.00	301.00	74.00	-16.30	Pass
9994.41	35.67	10.77	8.81	55.24	Peak Max	V	148.00	338.00	74.00	-18.76	Pass
17415.24	23.29	16.78	10.14	50.21	Average Max	V	220.00	216.00	54.00	-3.79	Pass
6143.31	24.94	10.66	10.72	46.32	Average Max	V	183.00	301.00	54.00	-7.68	Pass
9994.41	23.86	10.77	8.81	43.44	Average Max	V	148.00	338.00	54.00	-10.56	Pass

Restricted Band Measurement Plots: (Omnidirectional Antenna)

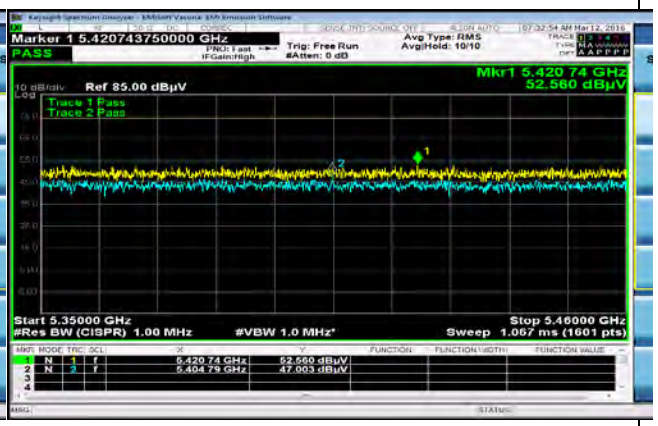
Lower Band 802.11a 5180MHz



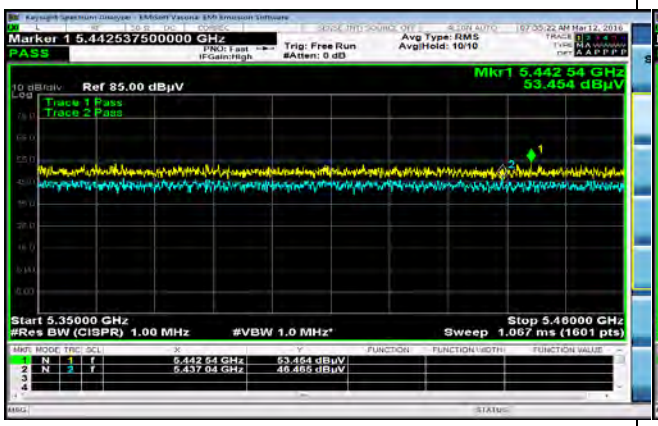
Lower Band 802.11n-20M 5180MHz



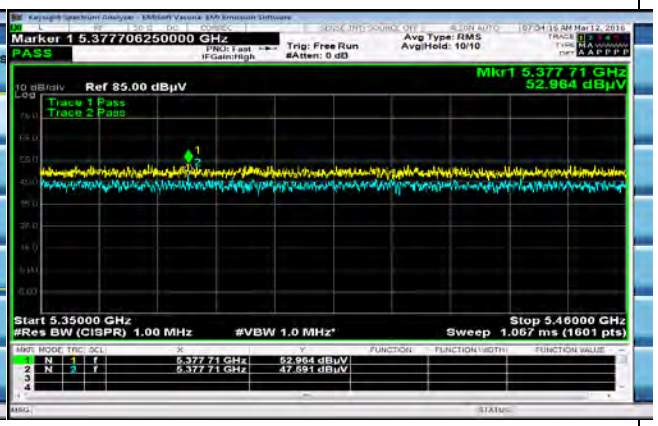
Higher Band 802.11a 5320MHz



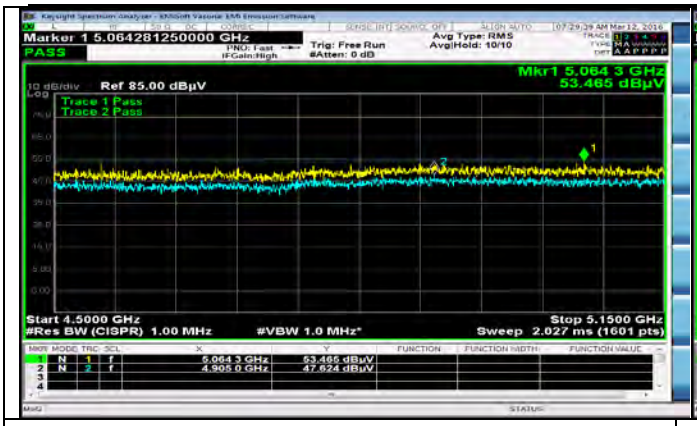
Higher Band 802.11n-20M 5320MHz



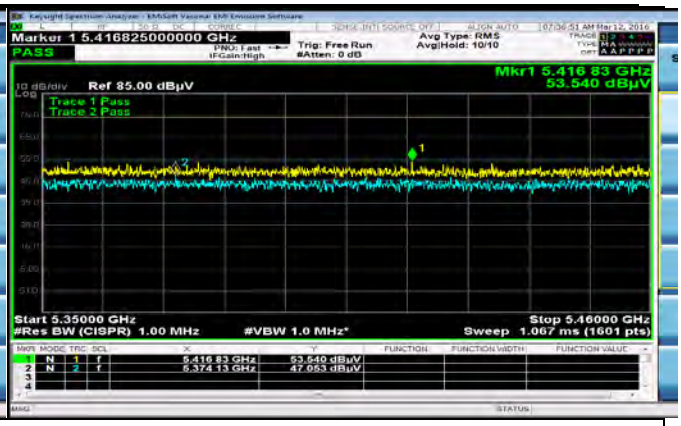
Lower Band 802.11a 5500MHz



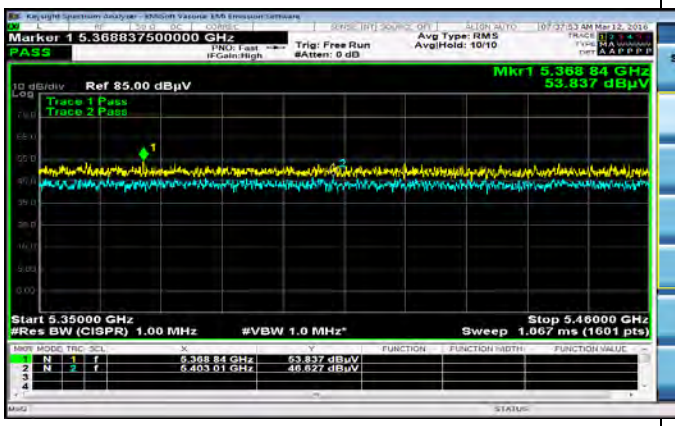
Lower band 802.11n-20M 5500MHz



Lower Band 802.11n-40M 5190MHz



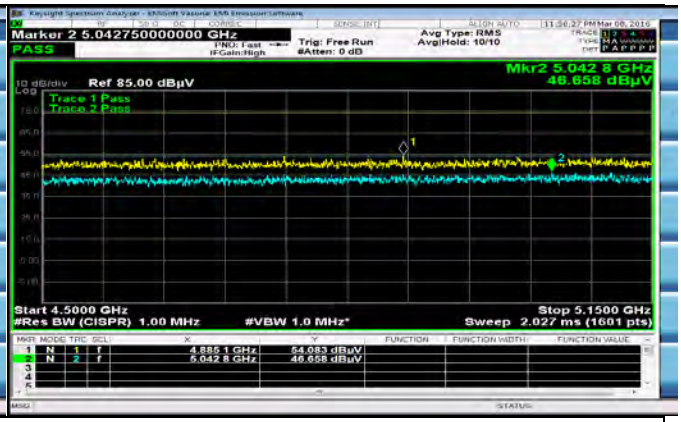
Higher Band 802.11n-40M 5310MHz



Lower Band 802.11n-40M 5510MHz

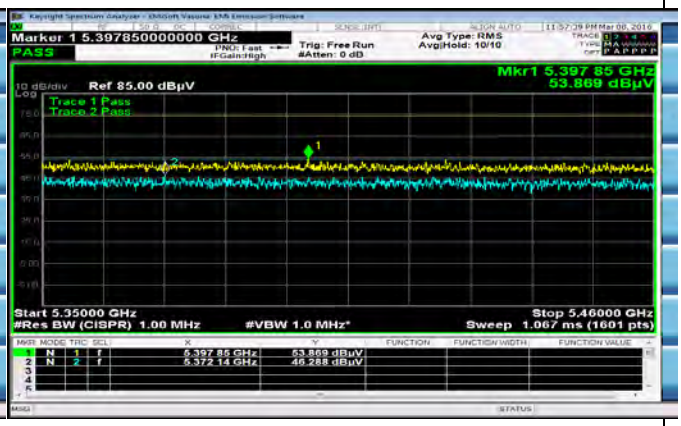
Restricted Band Measurement Plots: (Patch Antenna)

Lower Band 802.11a 5180MHz

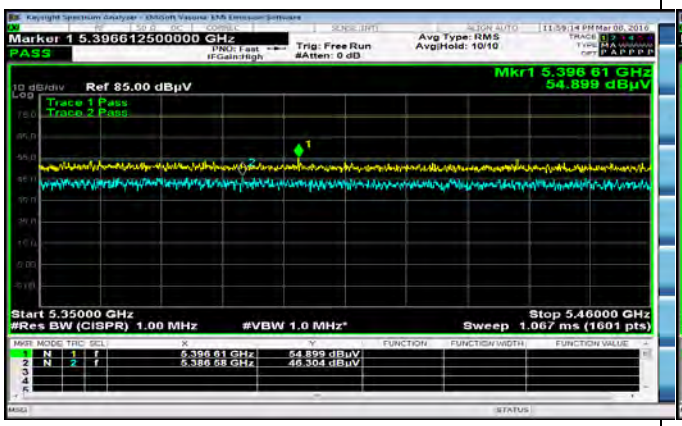


Lower Band 802.11n-20M 5180MHz

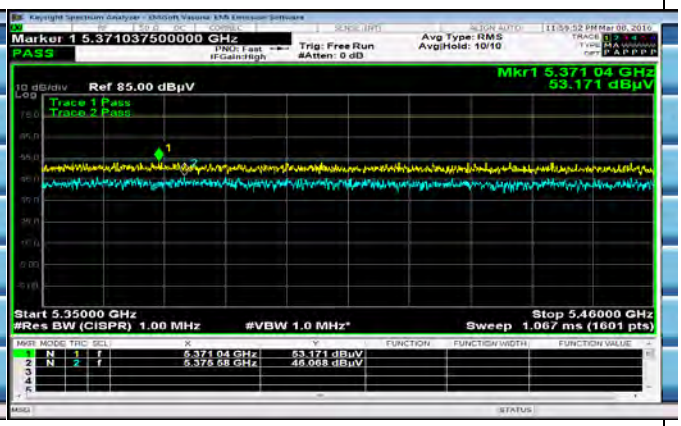
Higher Band 802.11a 5320MHz



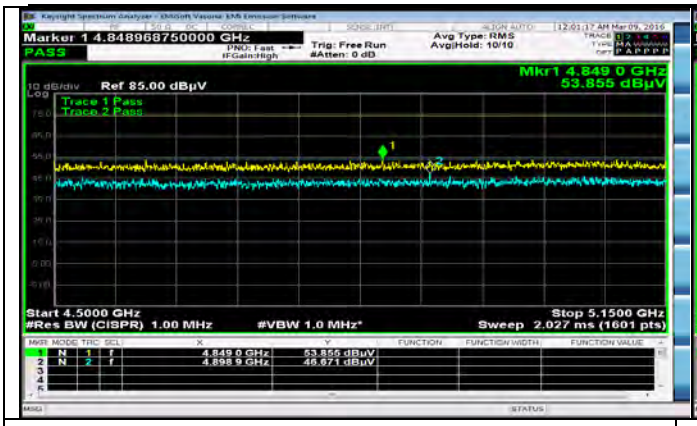
Higher Band 802.11n-20M 5320MHz



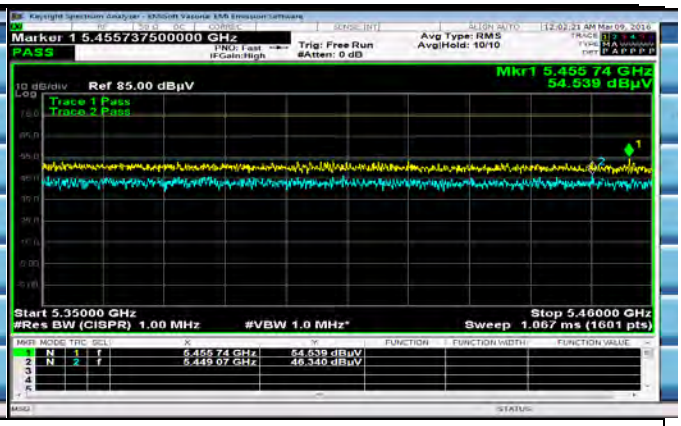
Lower Band 802.11a 5500MHz



Lower band 802.11n-20M 5500MHz



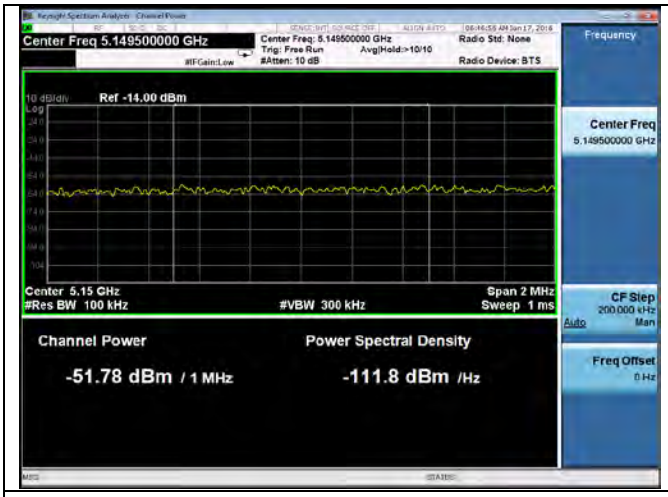
Lower Band 802.11n-40M 5190MHz



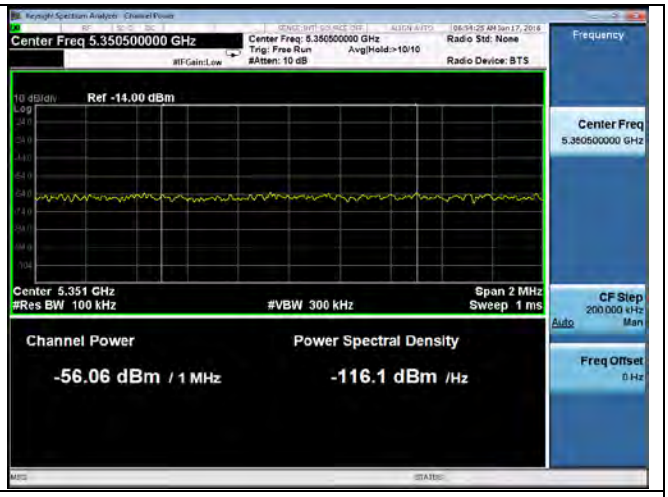
Higher Band 802.11n-40M 5310MHz

Lower Band 802.11n-40M 5510MHz

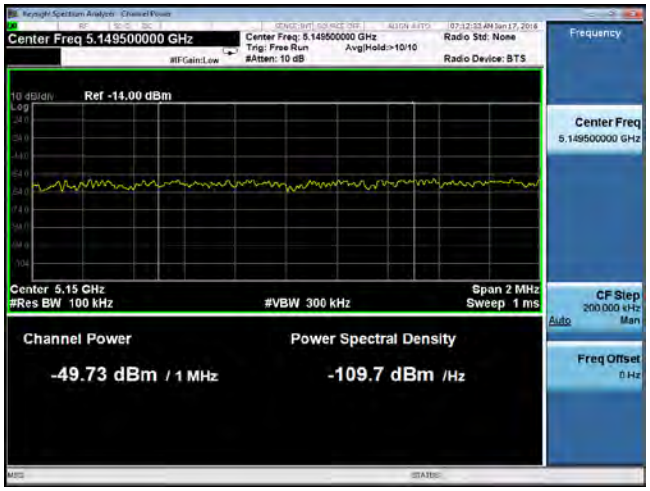
Conducted Band Edge Measurement Plots:



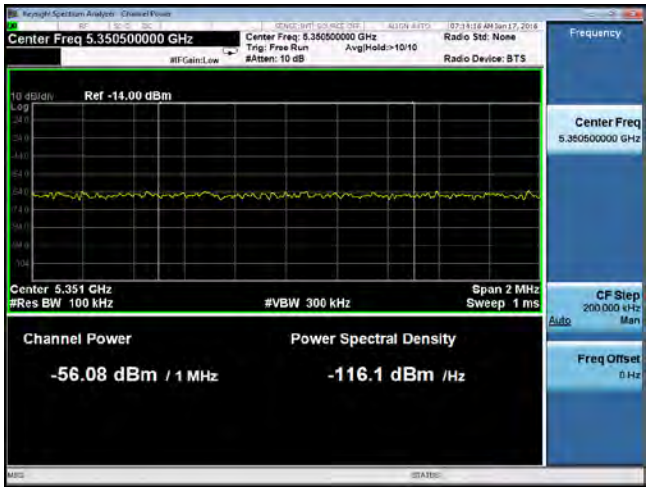
Band Edge-802.11a 5180 MHz (Limit: -27dBm/MHz eirp)



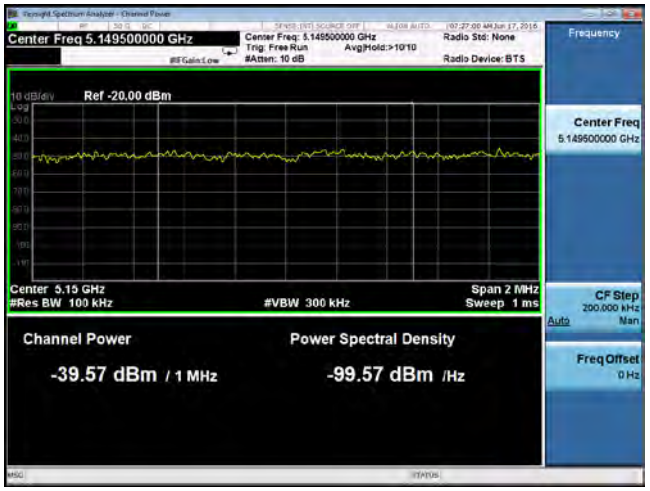
Band Edge-802.11a 5240 MHz (Limit: -27dBm/MHz eirp)



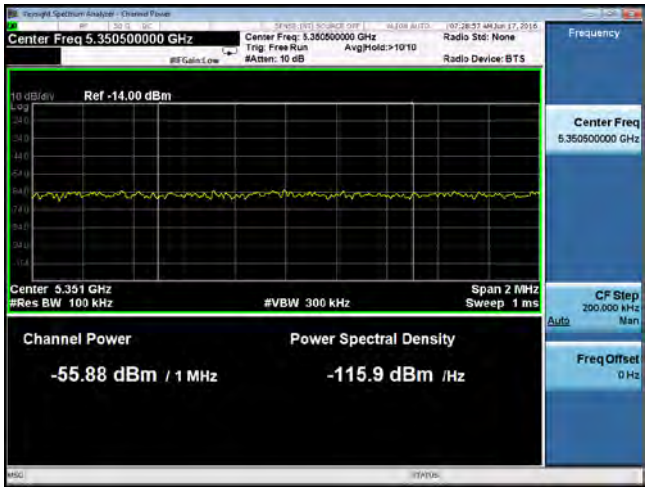
Band Edge-802.11n20 5180 MHz (Limit: -27dBm/MHz eirp)



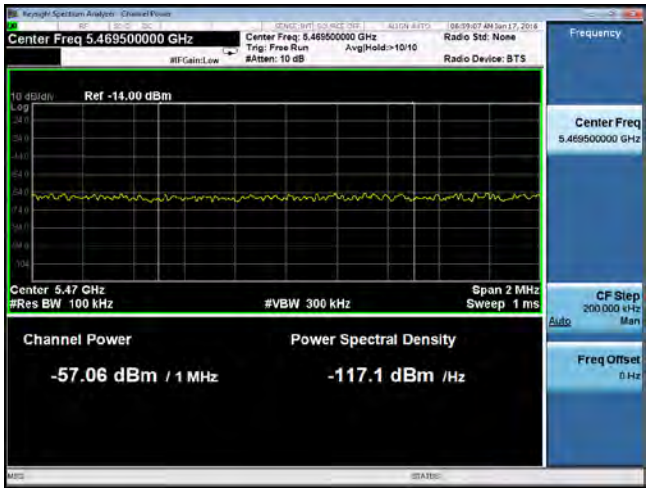
Band Edge-802.11n20 5240 MHz (Limit: -27dBm/MHz eirp)



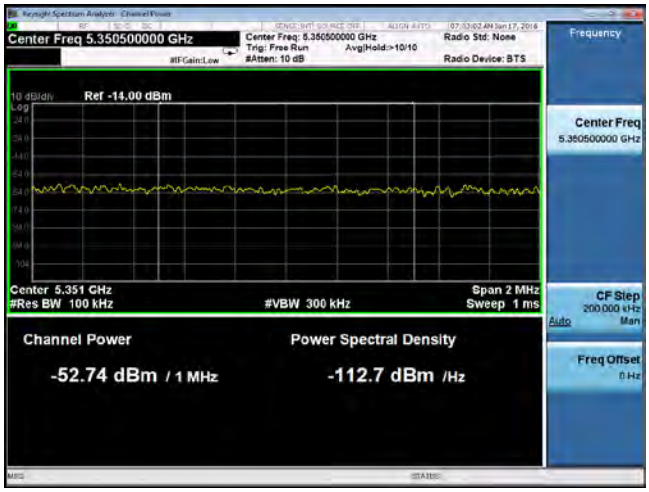
Band Edge-802.11n40 5190 MHz (Limit: -27dBm/MHz eirp)



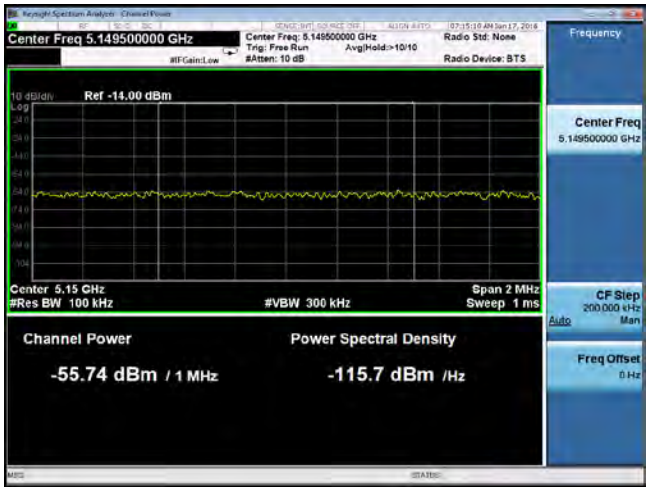
Band Edge-802.11n40 5230 MHz (Limit: -27dBm/MHz eirp)



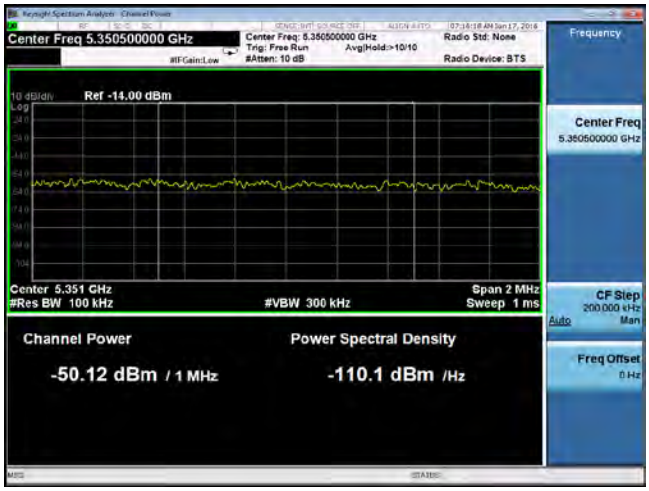
Band Edge-802.11a 5260 MHz (Limit: -27dBm/MHz eirp)



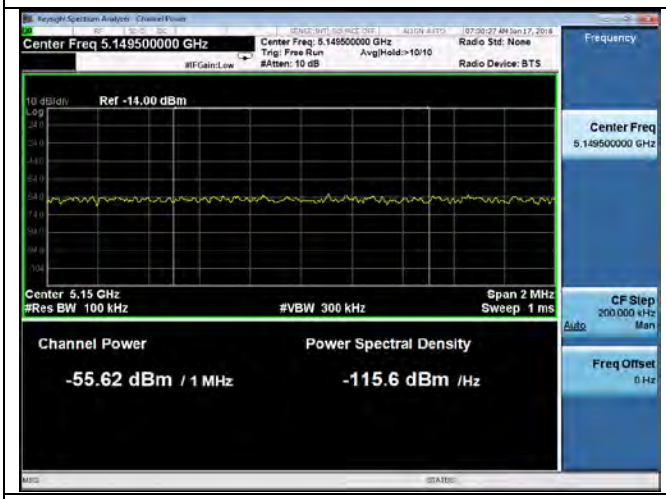
Band Edge-802.11a 5320 MHz (Limit: -27dBm/MHz eirp)



Band Edge-802.11n20 5260 MHz (Limit: -27dBm/MHz eirp)

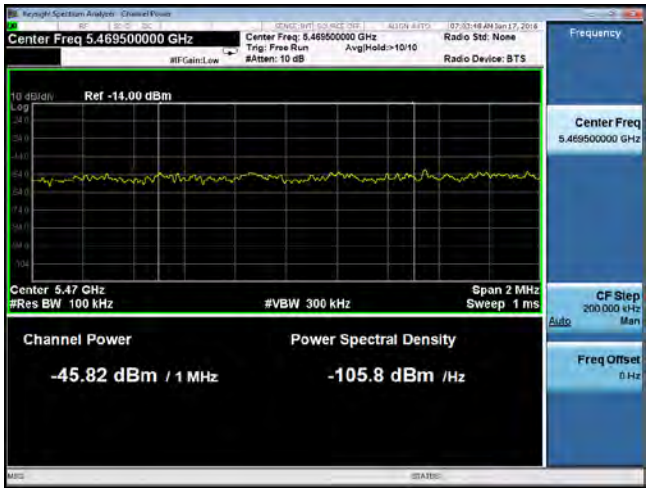


Band Edge-802.11n20 5320 MHz (Limit: -27dBm/MHz eirp)

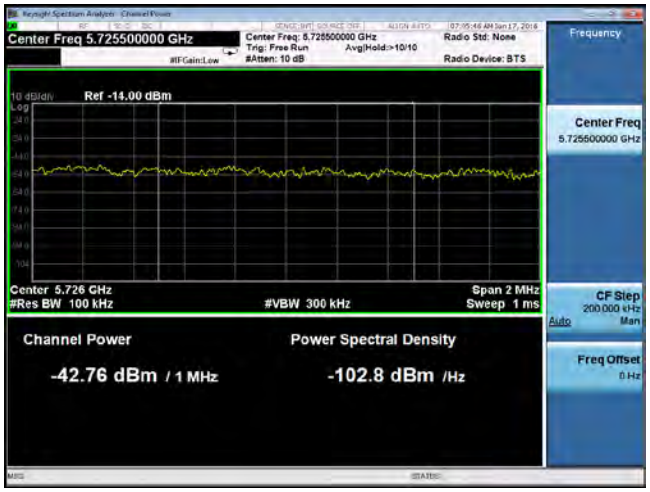


Band Edge-802.11n40 5270 MHz (Limit: -27dBm/MHz eirp)

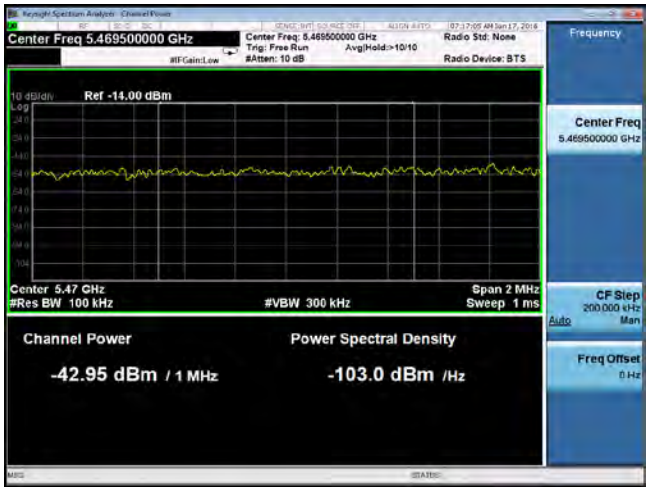
Band Edge-802.11n40 5310 MHz (Limit: -27dBm/MHz eirp)



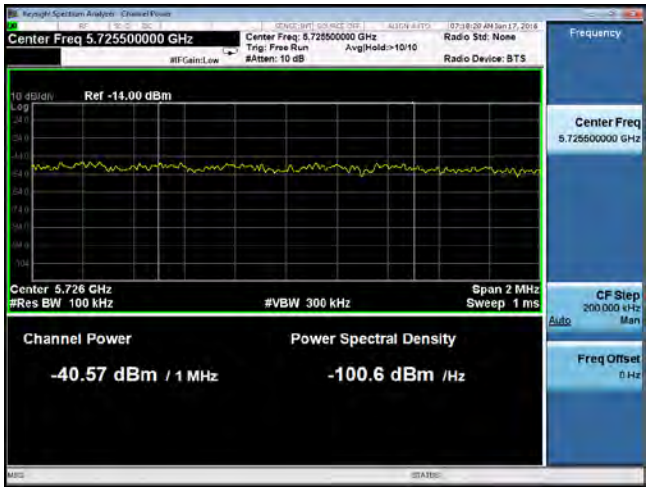
Band Edge-802.11a 5500 MHz (Limit: -27dBm/MHz eirp)



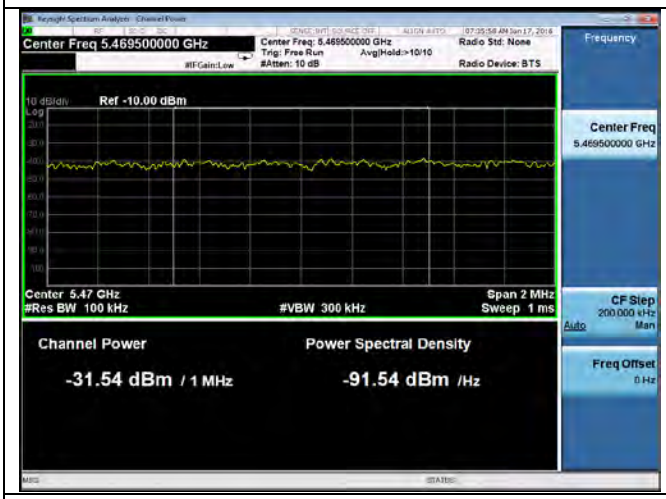
Band Edge-802.11a 5700 MHz (Limit: -27dBm/MHz eirp)



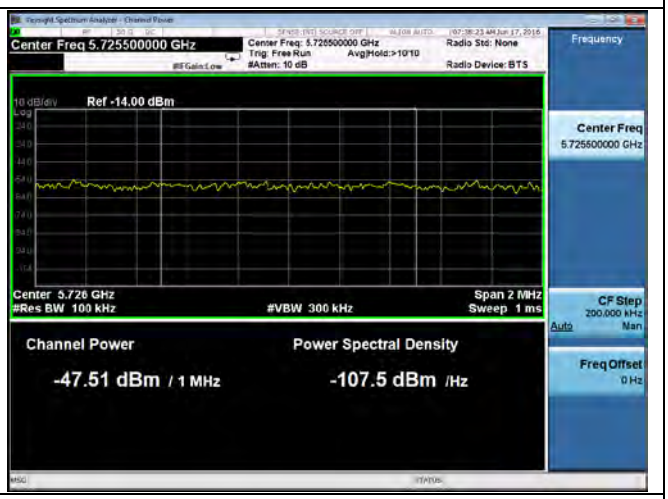
Band Edge-802.11n20 5500 MHz (Limit: -27dBm/MHz eirp)



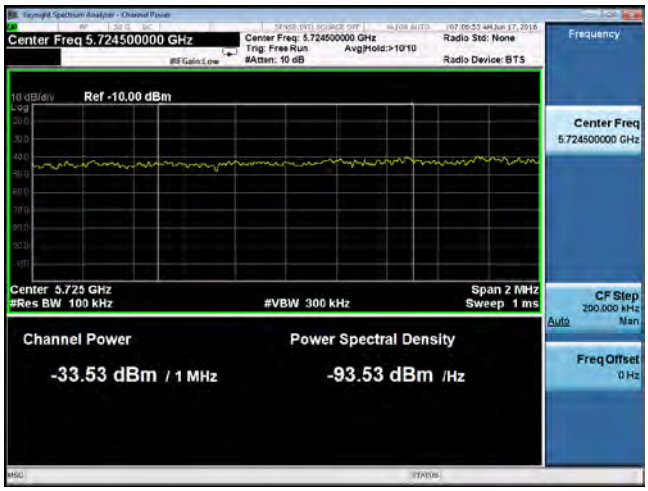
Band Edge-802.11n20 5700 MHz (Limit: -27dBm/MHz eirp)



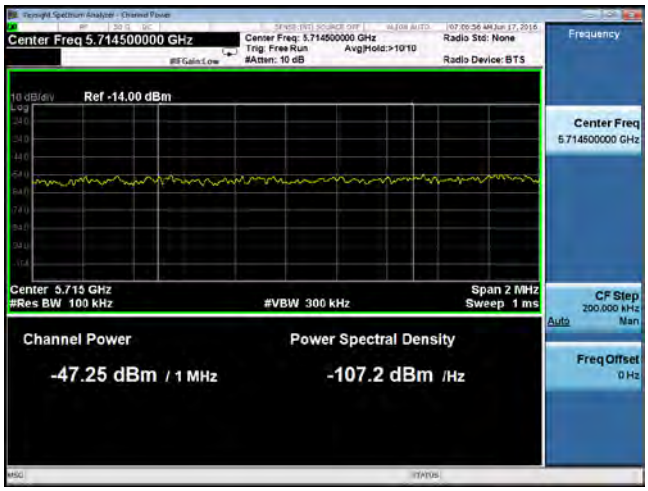
Band Edge-802.11n40 5510 MHz (Limit: -27dBm/MHz eirp)



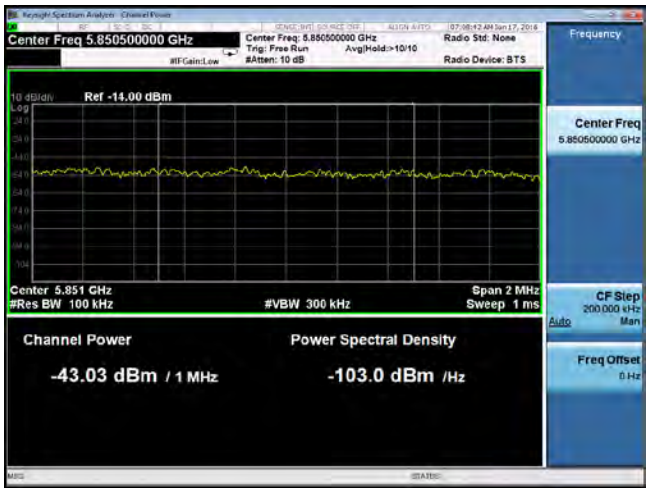
Band Edge-802.11n40 5670 MHz (Limit: -27dBm/MHz eirp)



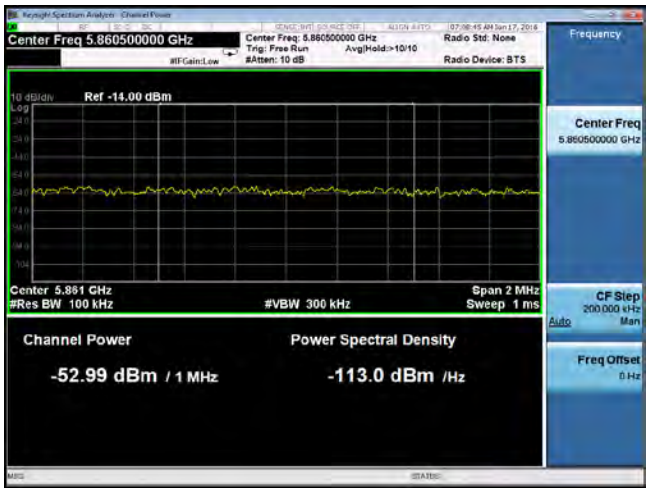
5.8GHz Band Edge-802.11a 5745 MHz (Limit: -17 eirp)



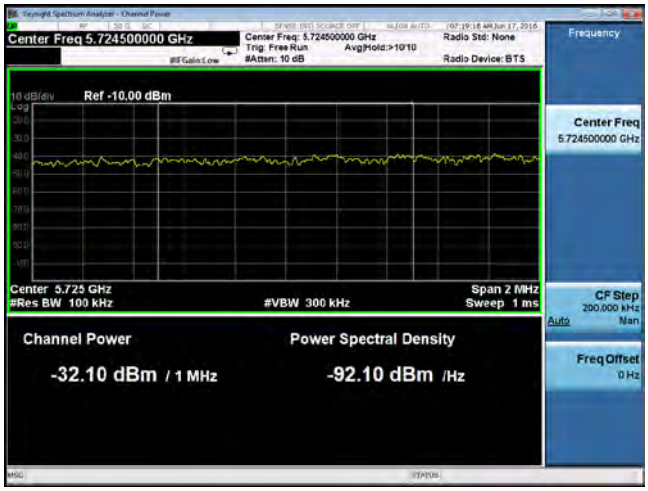
5.8GHz Band Edge-802.11a 5745 MHz (Limit: -27 eirp)



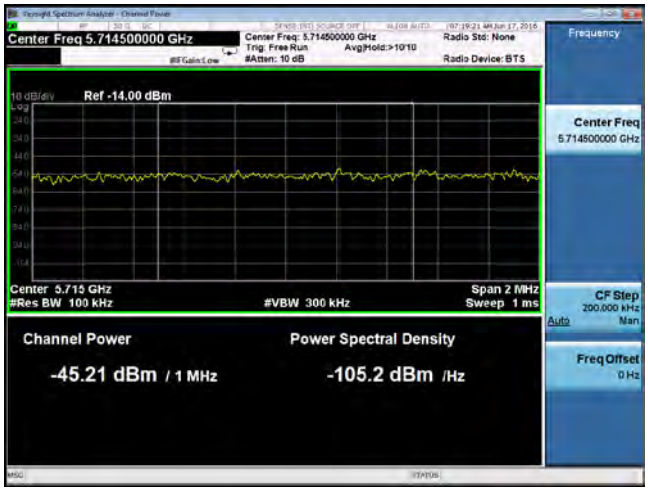
5.8GHz Band Edge-802.11a 5825 MHz (Limit: -17 eirp)



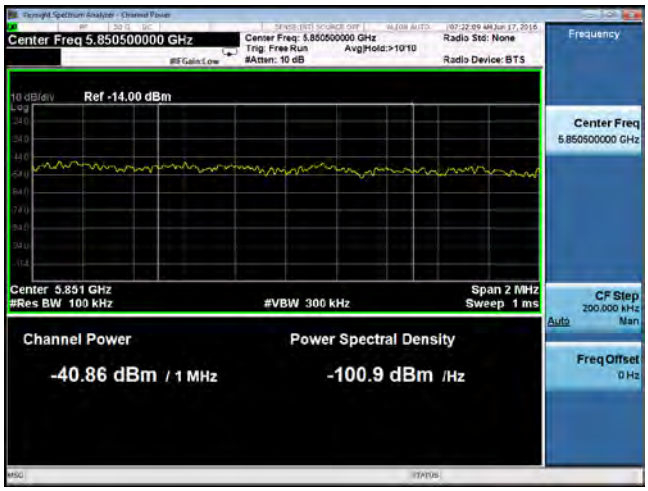
5.8GHz Band Edge-802.11a 5825 MHz (Limit: -27 eirp)



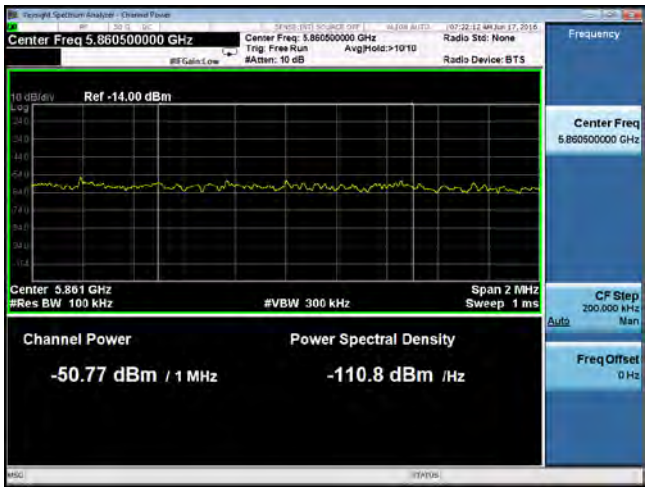
5.8GHz Band Edge-802.11n20 5745 MHz (Limit: -17 eirp)



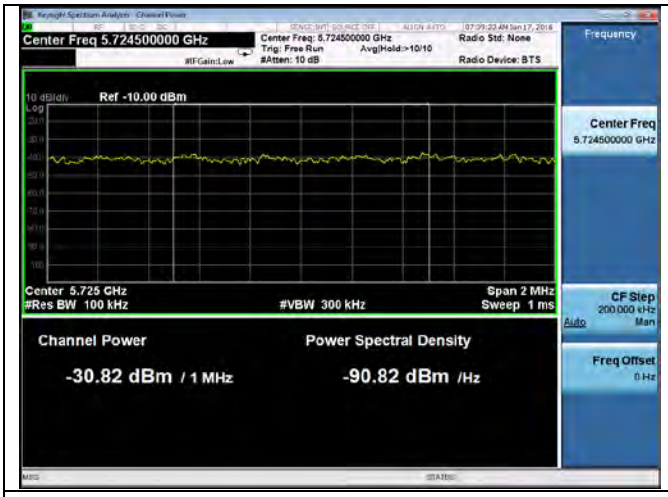
5.8GHz Band Edge-802.11n20 5745 MHz (Limit: -27 eirp)



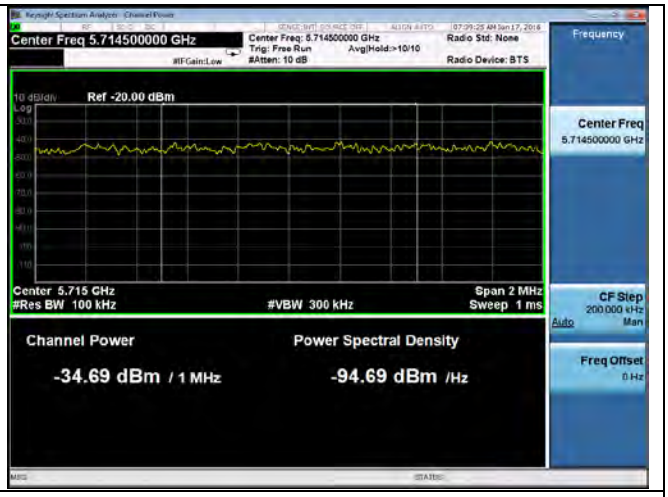
5.8GHz Band Edge-802.11n20 5825 MHz (Limit: -17 eirp)



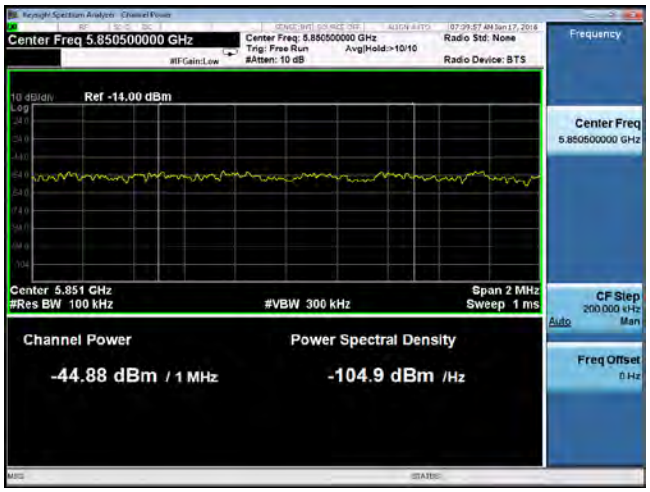
5.8GHz Band Edge-802.11n20 5825 MHz (Limit: -27 eirp)



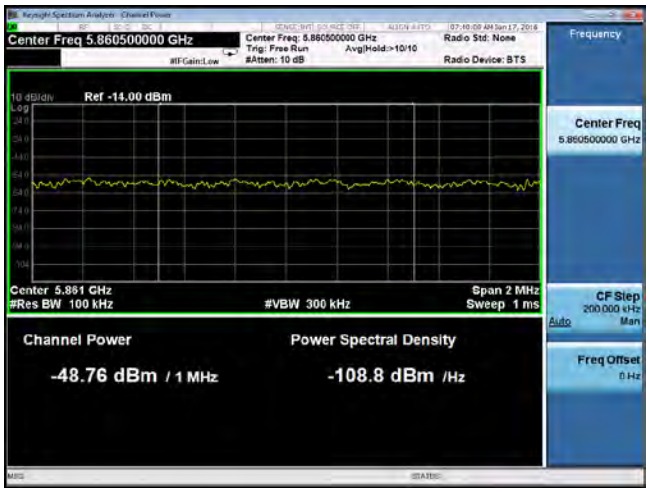
5.8GHz Band Edge-802.11n40 5755 MHz (Limit: -17 eirp)



5.8GHz Band Edge-802.11n40 5755 MHz (Limit: -27 eirp)



5.8GHz Band Edge-802.11n40 5795 MHz (Limit: -17 eirp)



5.8GHz Band Edge-802.11n40 5795 MHz (Limit: -27 eirp)

Note: Power setting with both antenna are the same. The results above show only the worst case. Omindirectional antenna gain -5dBi.

Annex A. TEST INSTRUMENT

Instrument	Model	Manufacturer	Serial #	Cal Date	Cal Cycle	Cal Due	In use
Conducted Emissions							
R & S Receiver	ESIB 40	Rohde & Schwarz	100179	06/08/2016	1 Year	06/08/2017	☑
CHASE LISN (9k-30MHz)	MN2050B	Chase	1018	08/07/2015	1 Year	08/07/2016	☑
Radiated Emissions							
R & S Receiver	ESIB 40	Rohde & Schwarz	100179	06/08/2016	1 Year	06/08/2017	☑
Spectrum Analyzer	N9010A	Keysight	10SL0219	08/20/2015	1 Year	08/20/2016	☑
Pre-Amplifier (1-26.5GHz)	8449B	Hewlett Packard	3008A00715	03/30/2016	1 Year	03/30/2017	☑
Preamplifier (100KHz-7GHz)	LPA-6-30	RF Bay, Inc.	11140711	02/10/2016	1 Year	02/10/2017	☑
ETS-Lingren Loop Antenna	6512	ETS-Lingren	00049120	05/12/2015	1 Year	05/12/2016	☐
Bi-Log antenna (30MHz~2GHz)	JB1	Sunol Sciences	A030702	08/15/2015	1 Year	08/15/2016	☑
Horn Antenna (1-26.5GHz)	3115	EMCO	10SL0059	08/25/2015	1 Year	08/25/2016	☑
3 Meters SAC	3M	ETS-Lingren	N/A	06/09/2016	1 Year	06/09/2017	☑
10 Meters SAC	10M	ETS-Lingren	N/A	09/05/2015	1 Year	09/05/2016	☑
RF Conducted Measurement							
Spectrum Analyzer	N9010A	Keysight	10SL0219	08/20/2015	1 Year	08/20/2016	☑
USB RF Power Sensor	7002-006	ETS-Lingren	10SL0190	09/03/2015	1 Year	09/03/2016	☑

Test Software Version

Test Item	Vendor	Software	Version
Radiated Emission	EMISoft	EMISoft Vasona	V6.0

Annex B. SIEMIC Accreditation

Accreditations	Document	Scope / Remark
ISO 17025 (A2LA)		Please see the documents for the detailed scope
ISO Guide 65 (A2LA)		Please see the documents for the detailed scope
TCB Designation		A1, A2, A3, A4, B1, B2, B3, B4, C
FCC DoC Accreditation		FCC Declaration of Conformity Accreditation
FCC Site Registration		3 meter site
FCC Site Registration		10 meter site
IC Site Registration		3 meter site
IC Site Registration		10 meter site
EU NB		Radio & Telecommunications Terminal Equipment: EN45001 – EN ISO/IEC 17025
		Electromagnetic Compatibility: EN45001 – EN ISO/IEC 17025
Singapore iDA CB(Certification Body)		Phase I, Phase II
Vietnam MIC CAB Accreditation		Please see the document for the detailed scope
Hong Kong OFCA		(Phase II) OFCA Foreign Certification Body for Radio and Telecom
		(Phase I) Conformity Assessment Body for Radio and Telecom
Industry Canada CAB		Radio: Scope A – All Radio Standard Specification in Category I
		Telecom: CS-03 Part I, II, V, VI, VII, VIII

Japan Recognized Certification Body Designation		Radio: A1. Terminal equipment for purpose of calling Telecom: B1. Specified radio equipment specified in Article 38-2, Paragraph 1, Item 1 of the Radio Law
Korea CAB Accreditation		EMI: KCC Notice 2008-39, RRL Notice 2008-3: CA Procedures for EMI KN22: Test Method for EMI EMS: KCC Notice 2008-38, RRL Notice 2008-4: CA Procedures for EMS KN24, KN61000-4-2, -4-3, -4-4, -4-5, -4-6, -4-8, -4-11: Test Method for EMS
		Radio: RRL Notice 2008-26, RRL Notice 2008-2, RRL Notice 2008-10, RRL Notice 2007-49, RRL Notice 2007-20, RRL Notice 2007-21, RRL Notice 2007-80, RRL Notice 2004-68
		Telecom: President Notice 20664, RRL Notice 2007-30, RRL Notice 2008-7 with attachments 1, 3, 5, 6; President Notice 20664, RRL Notice 2008-7 with attachment 4
Taiwan NCC CAB Recognition		LP0002, PSTN01, ADSL01, ID0002, IS6100, CNS14336, PLMN07, PLMN01, PLMN08
Taiwan BSMI CAB Recognition		CNS 13438
Japan VCCI		R-3083: Radiation 3 meter site C-3421: Main Ports Conducted Interference Measurement T-1597: Telecommunication Ports Conducted Interference Measurement
Australia CAB Recognition		EMC: AS/NZS CISPR 11, AS/NZS CISPR 14.1, AS/NZS CISPR22, AS/NZS 61000.6.3, AS/NZS 61000.6.4
		Radio communications: AS/NZS 4281, AS/NZS 4268, AS/NZS 4280.1, AS/NZS 4280.2, AS/NZS 4295, AS/NZS 4582, AS/NZS 4583, AS/NZS 4769.1, AS/NZS 4769.2, AS/NZS 4770, AS/NZS 4771
		Telecommunications: AS/ACIF S002:05, AS/ACIF S003:06, AS/ACIF S004:06 AS/ACIF S006:01, AS/ACIF S016:01, AS/ACIF S031:01, AS/ACIF S038:01, AS/ACIF S040:01, AS/ACIF S041:05, AS/ACIF S043.2:06, AS/ACIF S60950.1
Australia NATA Recognition		AS/ACIF S002, AS/ACIF S003, AS/ACIF S004, AS/ACIF S006, AS/ACIF S016,AS/ACIF S031, AS/ACIF S038, AS/ACIF S040, AS/ACIF S041, AS/ACIF S043.2