Test Report

Curtis-Straus LLC, *a wholly owned subsidiary of BV CPS*

Report No	ES0621-2
Client	Harman International Industries, Incorporated
Address	30001 Cabot Drive Novi MI 48377
Phone	1-248-785-2513
Items tested	PV602
FCC ID	2AHPN-BE2841
IC	6434C-BE2841
Equipment Type	Digital Transmission System
Equipment Code	DTS
FCC/IC Rule Parts	CFR Title 47 FCC Part 15.247, ISED Canada RSS-247 Issue 2
Test Dates	03/30/2018 to 04/25/2018
Results	As detailed within this report
Prepared by	Christopher Hamel – EMC Engineer
Authorized by	Yunus Fazilioglu – Sr. Engineer
Issue Date	5/16/2018
Conditions of Issue	This Test Report is issued subject to the conditions stated in the '*Conditions of Testing*' section on page 19 of this report.

Contents

Report REV Sep-08-2017 - YF

Summary

This test report supports an application for certification of a transmitter operating pursuant to: CFR Title 47 FCC Part 15.247, ISED Canada RSS-247 Issue 2

The product is the “PV602” automotive infotainment unit with Bluetooth and WLAN. It is a direct sequence spread spectrum transmitter that operates in the 2412 – 2462 MHz frequency range. This report is for the 2.4GHz WLAN portion of the device only.

Antenna Type: PCB Trace
Peak Gain: 2.3dBi

There are two variants to the product with the same model number:

HVIN (Model)	**FVIN**	**Remarks**
PV602	SOC: BR_RC1_R12.0.0_R18102A	Tested variant
PV602	SOC: NA_18.1.1	No hardware differences from the tested variant above. Only non-RF related software differences as follows: • Updated AM/FM tuner range and step size for North American markets • Removal of backup camera from software (external camera will not be connected), rear view mirror will have RVC display instead (not connected to the head unit) • HMI tweaks to follow NHTSA guidelines

Test samples were received in good condition.
We found that the product met the above requirements without modifications.

Test Methodology

All testing was performed according to the following rules/procedures/documents;
CFR Title 47 FCC Part 15.247, RSS-247 Issue 2, RSS-Gen Issue 4, FCC KDB 558074 D01 DTS Measurement Guidance v04 and ANSI C63.10-2013.

Radiated emissions were tested in the installation orientation of the device in a vehicle. Emissions were maximized by rotating the device and varying the test antenna's height and polarity.
EUT operating voltage is 13.8V DC from a vehicle battery, therefore AC line conducted emissions requirements are not applicable.

Following bandwidths were used during radiated spurious emissions testing.

Frequency	RBW	VBW
30-1000MHz	120kHz	1MHz
1-25GHz	1MHz	3MHz

Product Tested - Configuration Documentation

EUT Configuration			
Work Order:	S0621		
Company:	Harman International Industries, Incorporated		
Company Address:	30001 Cabot Drive		
	Novi, MI, 48377		
Contact:	Sarah Rowland		
	MN	**PN**	**SN**
EUT:	PV602		
EUT Description:	Car Stereo Head Unit		
EUT Max Frequency:	5825 MHz		
EUT Min Frequency:	5825 MHz		

EUT Components	**MN**	**SN**
PV602	FCC	
PV602	FCC Conducted	

Support Equipment	**MN**	**SN**
CS Supplied laptop		
USB to Ethernet converter		

Port Label	Port Type	# ports	# populated	cable type	shielded	ferrites	length (m)	in/out	under test	comment
Power	other	2	2	other	No	No	1	in	yes	
FM/AM	other	1	1	Coaxial	Yes	No	0.1	in	yes	
Back up camera	other	1	1	other	No	No	1	in	yes	
USB	USB	1	1	USB	Yes	No	1	in	yes	
Vehicle port	other	1	1	other	No	No	1	in	yes	

Software Operating Mode Description:

EUT will operate in constant TX mode for WiFi spurious emissions via client supplied test mode where channels and data rates are selectable.
EUT will operate in constant TX mode for BT spurious emissions with a link to CMW communication tester where channels and packet types are selectable.

Statement of Conformity

RSS-GEN	RSP-100	RSS 247	Part 15	Comments
6.3			15.15(b)	There are no controls accessible to the user that varies the output power to operate in violation of the regulatory requirements.
	3.1		15.19	The label is shown in the label exhibit.
	4		15.21	Information to the user is shown in the instruction manual exhibit.
			15.27	No special accessories are required for compliance.
3, 6.1			15.31	The EUT was tested in accordance with the measurement standards in this section.
6.13			15.33	Frequency range was investigated according to this section, unless noted in specific rule section under which the equipment operates.
8.1			15.35	The EUT emissions were measured using the measurement detector and bandwidth specified in this section, unless noted in specific rule section under which the equipment operates.
8.3			15.203	EUT employs PCB trace antenna 2.3dBi peak gain.
8.10			15.205 15.209	The fundamental is not in a Restricted band and the spurious and harmonic emissions in the Restricted bands comply with the general emission limits of 15.209 or RSS-Gen as applicable
8.8			15.207	N/A. Vehicle battery powered only.

Refer to Appendix A of this report for antenna port conducted measurements.

Test Results

Radiated Spurious Emissions

LIMITS

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).
[15.247(d)]

MEASUREMENTS / RESULTS

Worst case mode found to be 802.11b 1Mbps

Curtis Straus - a Bureau Veritas Company
Radiated Emissions Electric Field 3m Distance
Top Peaks Horizontal 30-1000MHz
Operator: cch
Notes:
2.4g wifi Spur. 802.11b 1Mbps 20MHz BW CH6

Work Order - S0621
EUT Power Input - 13.8V DC
Test Site - CH2
Conditions - 22.5°C; 34%RH; 1010mBar
Witnessed by - N/A
0

Data Taken at April 15, 2018

Frequency (MHz)	Peak Reading (dBµV)	Correction Factor (dB/m)	Adjusted Peak Amplitude (dBµV/m)	Lim1: FCC_pt15_209 (dBµV/m)	Lim1 Margin (dB)	Lim1 Test Results (Pass/Fail)	Worst Margin Lim1 (dB)	Lim2: FCC_pt15_209 (dBµV/m)	Lim2 Margin (dB)	Lim2 Test Results (Pass/Fail)	Worst Margin Lim2 (dB)
30.145	27	-1.4	25.6	40	-14.4	PASS	-14.4	40	-14.4	PASS	-14.4
126.297	28.1	-8.4	19.7	43.5	-23.8	PASS		43.5	-23.8	PASS	
184.084	32.6	-11.2	21.4	43.5	-22.1	PASS		43.5	-22.1	PASS	
292.337	31	-8.6	22.4	46	-23.6	PASS		46	-23.6	PASS	
466.33	32.7	-4.2	28.5	46	-17.5	PASS		46	-17.5	PASS	
916.459	28.5	3	31.5	46	-14.5	PASS		46	-14.5	PASS	

Curtis Straus - a Bureau Veritas Company
Radiated Emissions Electric Field 3m Distance
Top Peaks Vertical 30-1000MHz
Operator: cch
Notes:
2.4g wifi Spur. 802.11b 1Mbps 20MHz BW CH6

Work Order - S0621
EUT Power Input - 13.8V DC
Test Site - CH2
Conditions - 22.5°C; 34%RH; 1010mBar
Witnessed by - N/A
0

Data Taken at April 15, 2018

Frequency (MHz)	Peak Reading (dBµV)	Correction Factor (dB/m)	Adjusted Peak Amplitude (dBµV/m)	Lim1: FCC_pt15_209 (dBµV/m)	Lim1 Margin (dB)	Lim1 Test Results (Pass/Fail)	Worst Margin Lim1 (dB)	Lim2: FCC_pt15_209 (dBµV/m)	Lim2 Margin (dB)	Lim2 Test Results (Pass/Fail)	Worst Margin Lim2 (dB)
30.873	28	-2	25.9	40	-14.1	PASS	-14.1	40	-14.1	PASS	-14.1
65.72	40.2	-14.7	25.4	40	-14.6	PASS		40	-14.6	PASS	
73.286	35.4	-14.2	21.2	40	-18.8	PASS		40	-18.8	PASS	
466.354	31.1	-4.2	27	46	-19	PASS		46	-19	PASS	
742.514	29.8	-0.1	29.7	46	-16.3	PASS		46	-16.3	PASS	
930.912	27.8	3.1	30.9	46	-15.1	PASS		46	-15.1	PASS	

30-1000MHz Channel Mid

Curtis Straus - a Bureau Veritas Company
Radiated Emissions Electric Field 3m Distance
1-6GHz Horizontal Data
Operator: cch
Notes:
2.4g wifi Spur. 802.11b 1Mbps 20MHz BW CH1

Work Order - S0621
EUT Power Input - 13.8V DC
Test Site - CH2
Conditions - 22.5°C; 34%RH; 1010mBar
Witnessed by - N/A
0

Data Taken at April 12, 2018

Frequency (MHz)	Raw Peak Reading (dBµV)	Raw Avg Reading (dBµV)	Correction Factor (dB/m)	Adjusted Peak Amplitude (dBµV/m)	Pk Lim: FCC_pt15_209_Peak (dBµV/m)	Peak Margin (dB)	Peak Results (Pass/Fail)	Worst Peak Margin (dB)	Adjusted Avg Amplitude (dBµV/m)	Av Lim: FCC_pt15_209_Average (dBµV/m)	Avg Margin (dB)	Avg Results (Pass/Fail)	Worst Average Margin (dB)
1440	34.5	25.1	4.2	38.7	74	-35.3	PASS		29.3	54	-24.7	PASS	
1706	34	24.1	5.5	39.5	74	-34.5	PASS		29.5	54	-24.5	PASS	
1865.2	35.5	29.5	7.6	43	74	-31	PASS		37.1	54	-16.9	PASS	
5259.3	33.2	24.7	13.2	46.4	74	-27.6	PASS		37.9	54	-16.1	PASS	
5582.2	35.3	25.8	13.9	49.1	74	-24.9	PASS		39.7	54	-14.3	PASS	-14.3
5781.8	35.5	25	14.4	49.8	74	-24.2	PASS	-24.2	39.4	54	-14.6	PASS	

Curtis Straus - a Bureau Veritas Company
Radiated Emissions Electric Field 3m Distance
1-6GHz Vertical Data
Operator: cch
Notes:
2.4g wifi Spur. 802.11b 1Mbps 20MHz BW CH1

Work Order - S0621
EUT Power Input - 13.8V DC
Test Site - CH2
Conditions - 22.5°C; 34%RH; 1010mBar
Witnessed by - N/A
0

Data Taken at April 12, 2018

Frequency (MHz)	Raw Peak Reading (dBµV)	Raw Avg Reading (dBµV)	Correction Factor (dB/m)	Adjusted Peak Amplitude (dBµV/m)	Pk Lim: FCC_pt15_209_Peak (dBµV/m)	Peak Margin (dB)	Peak Results (Pass/Fail)	Worst Peak Margin (dB)	Adjusted Avg Amplitude (dBµV/m)	Av Lim: FCC_pt15_209_Average (dBµV/m)	Avg Margin (dB)	Avg Results (Pass/Fail)	Worst Avg Margin (dB)
1440.3	37.3	26.6	4.2	41.5	74	-32.5	PASS		30.8	54	-23.2	PASS	
1711.4	35.2	24.1	5.5	40.7	74	-33.3	PASS		29.7	54	-24.3	PASS	
1865	36.1	26.5	7.6	43.6	74	-30.4	PASS		34	54	-20	PASS	
5269.1	34.4	24.7	13.3	47.6	74	-26.4	PASS		38	54	-16	PASS	
5582.3	34.8	25.8	13.9	48.7	74	-25.3	PASS	-25.3	39.6	54	-14.4	PASS	-14.4
5794.1	33.9	24.9	14.4	48.2	74	-25.8	PASS		39.3	54	-14.7	PASS	

1-6GHz Channel Low

Curtis Straus - a Bureau Veritas Company
Radiated Emissions Electric Field 3m Distance
1-6GHz Horizontal Data
Operator: cch
Notes:
2.4g wifi Spur. 802.11b 1Mbps 20MHz BW CH6

Work Order - S0621
EUT Power Input - 13.8V DC
Test Site - CH2
Conditions - 22.5°C; 34%RH; 1010mBar
Witnessed by - N/A
0

Data Taken at April 12, 2018

Frequency (MHz)	Raw Peak Reading (dBµV)	Raw Avg Reading (dBµV)	Correction Factor (dB/m)	Adjusted Peak Amplitude (dBµV/m)	Pk Lim: FCC_pt15_209_Peak (dBµV/m)	Peak Margin (dB)	Peak Results (Pass/Fail)	Worst Peak Margin (dB)	Adjusted Avg Amplitude (dBµV/m)	Av Lim: FCC_pt15_209_Average (dBµV/m)	Avg Margin (dB)	Avg Results (Pass/Fail)	Worst Average Margin (dB)
1439.1	36.8	26.9	4.2	41.1	74	-32.9	PASS		31.1	54	-22.9	PASS	
1798.6	31.3	24.1	6.8	38.1	74	-35.9	PASS		30.9	54	-23.1	PASS	
1865.8	35	28.8	7.6	42.6	74	-31.4	PASS		36.4	54	-17.6	PASS	
2291.4	35.3	25	9.3	44.6	74	-29.4	PASS		34.3	54	-19.7	PASS	
4288.4	33.2	24.4	12.2	45.4	74	-28.6	PASS		36.7	54	-17.3	PASS	
5728.7	35.3	25.2	14.3	49.6	74	-24.4	PASS	-24.4	39.6	54	-14.4	PASS	-14.4

Curtis Straus - a Bureau Veritas Company
Radiated Emissions Electric Field 3m Distance
1-6GHz Vertical Data
Operator: cch
Notes:
2.4g wifi Spur. 802.11b 1Mbps 20MHz BW CH6

Work Order - S0621
EUT Power Input - 13.8V DC
Test Site - CH2
Conditions - 22.5°C; 34%RH; 1010mBar
Witnessed by - N/A
0

Data Taken at April 12, 2018

Frequency (MHz)	Raw Peak Reading (dBµV)	Raw Avg Reading (dBµV)	Correction Factor (dB/m)	Adjusted Peak Amplitude (dBµV/m)	Pk Lim: FCC_pt15_209_Peak (dBµV/m)	Peak Margin (dB)	Peak Results (Pass/Fail)	Worst Peak Margin (dB)	Adjusted Avg Amplitude (dBµV/m)	Av Lim: FCC_pt15_209_Average (dBµV/m)	Avg Margin (dB)	Avg Results (Pass/Fail)	Worst Avg Margin (dB)
1865.8	35.6	28.9	7.6	43.2	74	-30.8	PASS		36.5	54	-17.5	PASS	
2686	35.7	25.8	10.6	46.3	74	-27.7	PASS		36.4	54	-17.6	PASS	
5253.8	33.7	24.7	13.2	46.9	74	-27.1	PASS		37.9	54	-16.1	PASS	
5268.6	33	24.7	13.3	46.3	74	-27.7	PASS		38	54	-16	PASS	
5286.8	32.7	24.7	13.4	46	74	-28	PASS		38.1	54	-15.9	PASS	
5583.9	34.6	25.8	13.9	48.5	74	-25.5	PASS	-25.5	39.6	54	-14.4	PASS	-14.4

1-6GHz Channel Mid

Curtis Straus - a Bureau Veritas Company	Work Order - S0621
Radiated Emissions Electric Field 3m Distance	EUT Power Input - 13.8V DC
1-6GHz Horizontal Data	Test Site - CH2
Operator: cch	Conditions - 22.5°C; 34%RH; 1010mBar
Notes:	Witnessed by - N/A
2.4g wifi Spur. 802.11b 1Mbps 20MHz BW CH11	0

Data Taken at April 13, 2018

Frequency (MHz)	Raw Peak Reading (dBµV)	Raw Avg Reading (dBµV)	Correction Factor (dB/m)	Adjusted Peak Amplitude (dBµV/m)	Pk Lim: FCC_pt15_209_Peak (dBµV/m)	Peak Margin (dB)	Peak Results (Pass/Fail)	Worst Peak Margin (dB)	Adjusted Avg Amplitude (dBµV/m)	Av Lim: FCC_pt15_209_Average (dBµV/m)	Avg Margin (dB)	Avg Results (Pass/Fail)	Worst Average Margin (dB)
1438.9	38.2	27	4.3	42.6	74	-31.4	PASS		31.4	54	-22.6	PASS	
1795.8	31.2	24	7	38.1	74	-35.9	PASS		31	54	-23	PASS	
1916.9	34.2	24.4	8.2	42.4	74	-31.6	PASS		32.6	54	-21.4	PASS	
2675.4	35.4	25.9	10.5	45.9	74	-28.1	PASS		36.5	54	-17.5	PASS	
5255.8	32.5	24.2	13.1	45.6	74	-28.4	PASS		37.4	54	-16.6	PASS	
5498.2	34.3	24.5	13.6	47.9	74	-26.1	PASS	-26.1	38.1	54	-15.9	PASS	-15.9

Curtis Straus - a Bureau Veritas Company	Work Order - S0621
Radiated Emissions Electric Field 3m Distance	EUT Power Input - 13.8V DC
1-6GHz Vertical Data	Test Site - CH2
Operator: cch	Conditions - 22.5°C; 34%RH; 1010mBar
Notes:	Witnessed by - N/A
2.4g wifi Spur. 802.11b 1Mbps 20MHz BW CH11	0

Data Taken at April 13, 2018

Frequency (MHz)	Raw Peak Reading (dBµV)	Raw Avg Reading (dBµV)	Correction Factor (dB/m)	Adjusted Peak Amplitude (dBµV/m)	Pk Lim: FCC_pt15_209_Peak (dBµV/m)	Peak Margin (dB)	Peak Results (Pass/Fail)	Worst Peak Margin (dB)	Adjusted Avg Amplitude (dBµV/m)	Av Lim: FCC_pt15_209_Average (dBµV/m)	Avg Margin (dB)	Avg Results (Pass/Fail)	Worst Avg Margin (dB)
1187.7	36.9	30.7	3	39.9	74	-34.1	PASS		33.8	54	-20.2	PASS	
1797.7	33.8	23.9	7	40.8	74	-33.2	PASS		30.9	54	-23.1	PASS	
1926.9	33.8	24.3	8.2	42	74	-32	PASS		32.5	54	-21.5	PASS	
5266.3	33.3	24.3	13.1	46.4	74	-27.6	PASS		37.4	54	-16.6	PASS	
5500.4	34.2	24.5	13.6	47.8	74	-26.2	PASS	-26.2	38.1	54	-15.9	PASS	-15.9
5811.1	33.6	24.4	13.7	47.3	74	-26.7	PASS		38.1	54	-15.9	PASS	

1-6GHz Channel High

Curtis Straus - a Bureau Veritas Company
Radiated Emissions Electric Field 1m Distance
6-18GHz Horizontal Data
Operator: cch
Notes:
2.4g wifi Spur. 802.11b 1Mbps 20MHz BW CH1

Work Order - S0621
EUT Power Input - 13.8V DC
Test Site - CH2
Conditions - 22.5°C; 34%RH; 1010mBar
Witnessed by - N/A
0

Data Taken at April 15, 2018

Frequency (MHz)	Raw Peak Reading (dBµV)	Raw Avg Reading (dBµV)	Correction Factor (dB/m)	Adjusted Peak Amplitude (dBµV/m)	Pk Lim: FCC_pt15_209_Peak (dBµV/m)	Peak Margin (dB)	Peak Test Results (Pass/Fail)	Worst Peak Margin (dB)	Adjusted Avg Amplitude (dBµV/m)	Av Lim: FCC_pt15_209_Average (dBµV/m)	Avg Margin (dB)	Avg Test Results (Pass/Fail)	Worst Avg Margin (dB)
17986	39.3	31.1	19.1	58.4	83.5	-25.1	PASS	-25.1	50.2	63.5	-13.3	PASS	-13.3

Curtis Straus - a Bureau Veritas Company
Radiated Emissions Electric Field 1m Distance
6-18GHz Vertical Data
Operator: cch
Notes:
2.4g wifi Spur. 802.11b 1Mbps 20MHz BW CH1

Work Order - S0621
EUT Power Input - 13.8V DC
Test Site - CH2
Conditions - 22.5°C; 34%RH; 1010mBar
Witnessed by - N/A
0

Data Taken at April 15, 2018

Frequency (MHz)	Raw Peak Reading (dBµV)	Raw Avg Reading (dBµV)	Correction Factor (dB/m)	Adjusted Peak Amplitude (dBµV/m)	Pk Lim: FCC_pt15_209_Peak (dBµV/m)	Peak Margin (dB)	Peak Results (Pass/Fail)	Worst Peak Margin (dB)	Adjusted Avg Amplitude (dBµV/m)	Av Lim: FCC_pt15_209_Average (dBµV/m)	Avg Margin (dB)	Avg Results (Pass/Fail)	Worst Avg Margin (dB)
10532.9	40.6	30.2	11.2	51.7	83.5	-31.8	PASS		41.3	63.5	-22.2	PASS	
17975.6	40.9	31.1	19.1	59.9	83.5	-23.6	PASS	-23.6	50.2	63.5	-13.3	PASS	-13.3

6-18GHz Channel Low

Curtis Straus - a Bureau Veritas Company
Radiated Emissions Electric Field 1m Distance
6-18GHz Horizontal Data
Operator: cch
Notes:
2.4g wifi Spur. 802.11b 1Mbps 20MHz BW CH6

Work Order - S0621
EUT Power Input - 13.8V DC
Test Site - CH2
Conditions - 22.5°C; 34%RH; 1010mBar
Witnessed by - N/A
0

Data Taken at April 15, 2018

Frequency (MHz)	Raw Peak Reading (dBµV)	Raw Avg Reading (dBµV)	Correction Factor (dB/m)	Adjusted Peak Amplitude (dBµV/m)	Pk Lim: FCC_pt15_209_Peak (dBµV/m)	Peak Margin (dB)	Peak Test Results (Pass/Fail)	Worst Peak Margin (dB)	Adjusted Avg Amplitude (dBµV/m)	Av Lim: FCC_pt15_209_Average (dBµV/m)	Avg Margin (dB)	Avg Test Results (Pass/Fail)	Worst Avg Margin (dB)
17945.3	39.9	31.1	18.9	58.8	83.5	-24.7	PASS	-24.7	50.1	63.5	-13.4	PASS	-13.4

Curtis Straus - a Bureau Veritas Company
Radiated Emissions Electric Field 1m Distance
6-18GHz Vertical Data
Operator: cch
Notes:
2.4g wifi Spur. 802.11b 1Mbps 20MHz BW CH6

Work Order - S0621
EUT Power Input - 13.8V DC
Test Site - CH2
Conditions - 22.5°C; 34%RH; 1010mBar
Witnessed by - N/A
0

Data Taken at April 15, 2018

Frequency (MHz)	Raw Peak Reading (dBµV)	Raw Avg Reading (dBµV)	Correction Factor (dB/m)	Adjusted Peak Amplitude (dBµV/m)	Pk Lim: FCC_pt15_209_Peak (dBµV/m)	Peak Margin (dB)	Peak Results (Pass/Fail)	Worst Peak Margin (dB)	Adjusted Avg Amplitude (dBµV/m)	Av Lim: FCC_pt15_209_Average (dBµV/m)	Avg Margin (dB)	Avg Results (Pass/Fail)	Worst Avg Margin (dB)
17949.1	39.6	31.2	18.9	58.5	83.5	-25	PASS	-25	50.1	63.5	-13.4	PASS	-13.4

6-18GHz Channel Mid

Curtis Straus - a Bureau Veritas Company	Work Order - S0621
Radiated Emissions Electric Field 1m Distance	EUT Power Input - 13.8V DC
6-18GHz Horizontal Data	Test Site - CH2
Operator: cch	Conditions - 22.5°C; 34%RH; 1010mBar
Notes:	Witnessed by - N/A
2.4g wifi Spur. 802.11b 1Mbps 20MHz BW CH11	0

Data Taken at , April 15, 2018

Frequency (MHz)	Raw Peak Reading (dBµV)	Raw Avg Reading (dBµV)	Correction Factor (dB/m)	Adjusted Peak Amplitude (dBµV/m)	Pk Lim: FCC_pt15_209_Peak (dBµV/m)	Peak Margin (dB)	Peak Test Results (Pass/Fail)	Worst Peak Margin (dB)	Adjusted Avg Amplitude (dBµV/m)	Av Lim: FCC_pt15_209_Average (dBµV/m)	Avg Margin (dB)	Avg Test Results (Pass/Fail)	Worst Avg Margin (dB)
17947.2	39.5	31.1	18.9	58.4	83.5	-25.1	PASS	-25.1	50	63.5	-13.5	PASS	-13.5

Curtis Straus - a Bureau Veritas Company	Work Order - S0621
Radiated Emissions Electric Field 1m Distance	EUT Power Input - 13.8V DC
6-18GHz Vertical Data	Test Site - CH2
Operator: cch	Conditions - 22.5°C; 34%RH; 1010mBar
Notes:	Witnessed by - N/A
2.4g wifi Spur. 802.11b 1Mbps 20MHz BW CH11	0

Data Taken at April 15, 2018

Frequency (MHz)	Raw Peak Reading (dBµV)	Raw Avg Reading (dBµV)	Correction Factor (dB/m)	Adjusted Peak Amplitude (dBµV/m)	Pk Lim: FCC_pt15_209_Peak (dBµV/m)	Peak Margin (dB)	Peak Results (Pass/Fail)	Worst Peak Margin (dB)	Adjusted Avg Amplitude (dBµV/m)	Av Lim: FCC_pt15_209_Average (dBµV/m)	Avg Margin (dB)	Avg Results (Pass/Fail)	Worst Avg Margin (dB)
10532.7	39.4	30.1	11.2	50.6	83.5	-32.9	PASS		41.3	63.5	-22.2	PASS	
17985.4	41	31.1	19.1	60.1	83.5	-23.4	PASS	-23.4	50.2	63.5	-13.3	PASS	-13.3

6-18GHz Channel High

Radiated Emissions Table

Date: 15-Apr-18	**Company:** Harman International	**Work Order:** S0621
Engineer: Chris Hamel	**EUT Desc:** PV602	**EUT Operating Voltage/Frequency:** 13.8V DC
Temp: 22.7°C	**Humidity:** 27% **Pressure:** 1023mBar	
Frequency Range: 18-25GHz		**Measurement Distance:** 0.1 m
Notes: Tested channels 1 6 11. No emissions found.		**EUT Max Freq:** 5825MHz

Antenna Polarization (H / V)	Frequency (MHz)	Peak Reading (dBµV)	Average Reading (dBµV)	Preamp Factor (dB)	Antenna Factor (dB/m)	Cable Factor (dB)	Adjusted Peak Reading (dBµV/m)	Adjusted Avg Reading (dBµV/m)	FCC Class B High Frequency - Peak Limit (dBµV/m)	FCC Class B High Frequency - Peak Margin (dB)	FCC Class B High Frequency - Peak Result (Pass/Fail)	FCC Class B High Frequency - Average Limit (dBµV/m)	FCC Class B High Frequency - Average Margin (dB)	FCC Class B High Frequency - Average Result (Pass/Fail)
				---	---	---	---	---	---	---	---	---	---	---

Table Result: Pass by N/A dB ***Worst Freq:*** N/A MHz

Test Site: EMI Chamber 2 **Cable 1:** Asset #2323 **Cable 2:** --- **Cable 3:** ---
Analyzer: 2093 **Preamp:** 18-26.5GHz **Antenna:** 18-26.5GHz Horn **Preselector:** ---
CSsoft Radiated Emissions Calculator v 1.017.203
Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor

18-25GHz All Channels

Rev. 4/17/2018							
Spectrum Analyzers / Receivers /Preselectors	**Range**	**MN**	**Mfr**	**SN**	**Asset**	**Cat**	**Calibration Due**
Brown	9kHz-26.5GHz	E4407B	Agilent	SG44210511	1510	I	7/26/2018
2093 MXE EMI Receiver	20Hz-26.5GHz	N9038A	Agilent	MY51210181	2093	I	11/16/2018
Rental MXE EMI Receiver(1170725)	20Hz-26.5GHz	N9038A	Agilent	MY51210151	1170725	I	4/10/2019
Radiated Emissions Sites	**FCC Code**	**IC Code**	**VCCI Code**	**Range**	**Asset**	**Cat**	**Calibration Due**
EMI Chamber 1	719150	2762A-6	A-0015	30-1000MHz	1685	I	12/21/2018
EMI Chamber 1	719150	2762A-6	A-0015	1-18GHz	1685	I	12/21/2018
EMI Chamber 2	719150	2762A-7	A-0015	30-1000MHz	1686	I	12/21/2018
EMI Chamber 2	719150	2762A-7	A-0015	1-18GHz	1686	I	12/21/2018
Preamps /Couplers Attenuators / Filters	**Range**	**MN**	**Mfr**	**SN**	**Asset**	**Cat**	**Calibration Due**
2443 PA	9KHz-6GHz	BBV9744	SCWARZBECK	63	2443	I	2/5/2019
2444 PA	9KHz-6GHz	BBV9744	SCWARZBECK	67	2444	I	2/5/2019
2111 HF Preamp	0.5-18GHz	PAM-118A	COM-POWER	551063	2111	II	11/19/2018
HF (Yellow)	18-26.5GHz	AFS4-18002650-60-8P-4	CS	467559	1266	II	10/16/2018
Antennas	**Range**	**MN**	**Mfr**	**SN**	**Asset**	**Cat**	**Calibration Due**
Red-Black Bilog	30-2000MHz	JB1	Sunol	A091604-2	1106	I	2/28/2019
Orange Horn	1-18GHz	3115	EMCO	0004-6123	390	I	10/13/2018
HF (White) Horn	18-26.5GHz	801-WLM	Waveline	758	758	III	Verify before Use
Blue Horn	1-18Ghz	3117	ETS	157647	1861	I	2/14/2019
Meteorological Meters/Chambers		**MN**	**Mfr**	**SN**	**Asset**	**Cat**	**Calibration Due**
Weather Clock (Pressure Only)		BA928	Oregon Scientific	C3166-1	831	I	4/28/2018
THA#2084		HTC-1	HDE		2084	II	3/22/2019
THA#2085		HTC-1	HDE		2085	II	3/22/2019
Cables	**Range**		**Mfr**			**Cat**	**Calibration Due**
Asset #2456	9KHz-18GHz		MegaPhase			II	10/29/2018
Asset #2458	9KHz-18GHz		MegaPhase			II	10/29/2018
Asset #2459	9KHz-18GHz		MegaPhase			II	10/29/2018
Asset #2480	9KHz-18GHz		MegaPhase			II	10/29/2018
Asset #2323	1-26.5GHz	TM26-S1S1-120	MEGAPHASE	17139101 002	2323	II	8/19/2018
Asset #2466	9KHz-18GHz		MegaPhase			II	10/29/2018
All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.							

Test Equipment Used

Radiated Band Edge

Radiated Emissions Table

Date: 13-Apr-18 **Company:** Harman International **Work Order:** S0621
Engineer: Chris Hamel **EUT Desc:** PV602 **EUT Operating Voltage/Frequency:** 13.8V DC
Temp: 23.4°C **Humidity:** 24% **Pressure:** 1000mBar
Frequency Range: 2300-2500MHz **Measurement Distance:** 3 m
Notes: 802.11b 1Mbps **EUT Max Freq:**

Antenna Polarization (H / V)	Frequency (MHz)	Peak Reading (dBµV)	Average Reading (dBµV)	Preamp Factor (dB)	Antenna Factor (dB/m)	Cable Factor (dB)	Adjusted Peak Reading (dBµV/m)	Adjusted Avg Reading (dBµV/m)	FCC Class B High Frequency - Peak			FCC Class B High Frequency - Average		
									Limit (dBµV/m)	Margin (dB)	Result (Pass/Fail)	Limit (dBµV/m)	Margin (dB)	Result (Pass/Fail)
Low Edge				---	---	---	---	---	---	---	---	---	---	---
Max H		86.05		---	---	---	---	---	---	---	---	---	---	---
Max V		87.3		---	---	---	---	---	---	---	---	---	---	---
V	2390.0	34.6	34.6	25.6	32.2	3.2	44.4	44.4	74.0	-29.6	Pass	54.0	-9.6	Pass
V	2389.5	38.03	38.0	25.6	32.2	3.2	47.8	47.8	74.0	-26.2	Pass	54.0	-6.2	Pass
				---	---	---	---	---	---	---	---	---	---	---
High edge				---	---	---	---	---	---	---	---	---	---	---
Max H		85.1		---	---	---	---	---	---	---	---	---	---	---
Max V		84.9		---	---	---	---	---	---	---	---	---	---	---
H	2483.5	33.9	33.9	25.4	32.4	3.3	44.2	44.2	74.0	-29.8	Pass	54.0	-9.8	Pass
H	2495.6	38.8	38.8	25.4	32.4	3.3	49.1	49.1	74.0	-24.9	Pass	54.0	-4.9	Pass

Table Result: Pass by -6.9 dB ***Worst Freq:*** 2495.6 MHz

Test Site: EMI Chamber 1 **Cable 1:** Asset #2480 **Cable 2:** Asset #2456 **Cable 3:** ---
Analyzer: Rental SA#1 **Preamp:** Asset #2444 **Antenna:** Blue Horn **Preselector:** ---
CSsoft Radiated Emissions Calculator v 1.017.203

Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor

802.11b: Worst Case 1Mbps

Radiated Emissions Table

Date: 13-Apr-18 **Company:** Harman International **Work Order:** S0621
Engineer: Chris Hamel **EUT Desc:** PV602 **EUT Operating Voltage/Frequency:** 13.8V DC
Temp: 23.4°C **Humidity:** 24% **Pressure:** 1000mBar
Frequency Range: 2300-2500MHz **Measurement Distance:** 3 m
Notes: 802.11g 6Mbps **EUT Max Freq:**

Antenna Polarization (H / V)	Frequency (MHz)	Peak Reading (dBµV)	Average Reading (dBµV)	Preamp Factor (dB)	Antenna Factor (dB/m)	Cable Factor (dB)	Adjusted Peak Reading (dBµV/m)	Adjusted Avg Reading (dBµV/m)	FCC Class B High Frequency - Peak			FCC Class B High Frequency - Average		
									Limit (dBµV/m)	Margin (dB)	Result (Pass/Fail)	Limit (dBµV/m)	Margin (dB)	Result (Pass/Fail)
Low Edge				---	---	---	---	---	---	---	---	---	---	---
Max H		90.4												
Max V		92.1												
V	2390.0	50.6	35.3	25.6	32.2	3.2	60.4	45.1	74.0	-13.6	Pass	54.0	-8.9	Pass
V	2388.2	47.8	34.3	25.6	32.2	3.2	57.6	44.1	74.0	-16.4	Pass	54.0	-9.9	Pass
V	2384.4	47.2	32.6	25.6	32.2	3.2	57.0	42.4	74.0	-17.0	Pass	54.0	-11.6	Pass
V	2383.9	46.3	32.3	25.6	32.2	3.2	56.1	42.1	74.0	-17.9	Pass	54.0	-11.9	Pass
				---	---	---	---	---	---	---	---	---	---	---
High edge														
Max H		89.7												
Max V		89.4												
H	2483.5	49.6	35.4	25.4	32.4	3.3	59.9	45.7	74.0	-14.1	Pass	54.0	-8.3	Pass
H	2488.3	48.05	33.3	25.4	32.4	3.3	58.4	43.6	74.0	-15.6	Pass	54.0	-10.4	Pass
H	2487.2	47.3	33.7	25.4	32.4	3.3	57.6	44.0	74.0	-16.4	Pass	54.0	-10.0	Pass
H	2491.2	48.3	32.3	25.4	32.4	3.3	58.6	42.6	74.0	-15.4	Pass	54.0	-11.4	Pass
H	2492.8	46.3	31.9	25.4	32.4	3.3	56.6	42.2	74.0	-17.4	Pass	54.0	-11.8	Pass

Table Result: Pass by -10.3 dB ***Worst Freq:*** 2483.5 MHz

Test Site: EMI Chamber 1 **Cable 1:** Asset #2480 **Cable 2:** Asset #2456 **Cable 3:** ---
Analyzer: Rental SA#1 **Preamp:** Asset #2444 **Antenna:** Blue Horn **Preselector:** ---
CSsoft Radiated Emissions Calculator v 1.017.203

Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor

802.11g: Worst Case 6Mbps

Radiated Emissions Table

Date: 13-Apr-18 **Company:** Harman International **Work Order:** S0621
Engineer: Chris Hamel **EUT Desc:** PV602 **EUT Operating Voltage/Frequency:** 13.8V DC
Temp: 23.4°C **Humidity:** 24% **Pressure:** 1000mBar
Frequency Range: 2300-2500MHz **Measurement Distance:** 3 m
Notes: 802.11n MCS0 20MHz **EUT Max Freq:**

Antenna Polarization (H / V)	Frequency (MHz)	Peak Reading (dBµV)	Average Reading (dBµV)	Preamp Factor (dB)	Antenna Factor (dB/m)	Cable Factor (dB)	Adjusted Peak Reading (dBµV/m)	Adjusted Avg Reading (dBµV/m)	FCC Class B High Frequency - Peak Limit (dBµV/m)	Margin (dB)	Result (Pass/Fail)	FCC Class B High Frequency - Average Limit (dBµV/m)	Margin (dB)	Result (Pass/Fail)
Low Edge				---	---	---	---	---	---	---	---	---	---	---
Max H		89.7												
Max V		90.62												
V	2390.0	52.9	38.0	25.6	32.2	3.2	62.7	47.8	74.0	-11.3	Pass	54.0	-6.2	Pass
V	2385.9	48.1	33.5	25.6	32.2	3.2	57.9	43.3	74.0	-16.1	Pass	54.0	-10.7	Pass
V	2381.7	46.4	31.9	25.6	32.1	3.2	56.1	41.6	74.0	-17.9	Pass	54.0	-12.4	Pass
V	2380.6	46.1	31.5	25.6	32.1	3.2	55.8	41.2	74.0	-18.2	Pass	54.0	-12.8	Pass
V	2379.2	45.7	31.2	25.6	32.1	3.2	55.4	40.9	74.0	-18.6	Pass	54.0	-13.1	Pass
				---	---	---	---	---	---	---	---		---	---
				---	---	---	---	---	---	---	---		---	---
High edge				---	---	---	---	---	---	---	---		---	---
Max H		88.5												
Max V		88.7												
V	2483.5	42.2	34.2	25.4	32.4	3.3	52.5	44.5	74.0	-21.5	Pass	54.0	-9.5	Pass
V	2484.1	52.9	33.7	25.4	32.4	3.3	63.2	44.0	74.0	-10.8	Pass	54.0	-10.0	Pass
V	2485.5	52.8	32.8	25.4	32.4	3.3	63.1	43.1	74.0	-10.9	Pass	54.0	-10.9	Pass
V	2485.3	52.8	32.9	25.4	32.4	3.3	63.1	43.2	74.0	-10.9	Pass	54.0	-12.8	Pass

Table Result: Pass by -8.2 dB ***Worst Freq:*** 2390.0 MHz

Test Site: EMI Chamber 1 **Cable 1:** Asset #2480 **Cable 2:** Asset #2456 **Cable 3:** ---
Analyzer: Rental SA#1 **Preamp:** Asset #2444 **Antenna:** Blue Horn **Preselector:** ---
CSsoft Radiated Emissions Calculator v 1.017.203

Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor

802.11n (HT20): Worst Case MCS0

Radiated Emissions Table

Date: 25-Apr-18 **Company:** Harman International **Work Order:** S0621
Engineer: Chris Hamel **EUT Desc:** PV602 **EUT Operating Voltage/Frequency:** 13.8V DC
Temp: 24.4°C **Humidity:** 27% **Pressure:** 1012mBar
Frequency Range: 2300-2500MHz **Measurement Distance:** 3 m
Notes: 802.11n MCS5 40MHz **EUT Max Freq:**

Antenna Polarization (H / V)	Frequency (MHz)	Peak Reading (dBµV)	Average Reading (dBµV)	Preamp Factor (dB)	Antenna Factor (dB/m)	Cable Factor (dB)	Adjusted Peak Reading (dBµV/m)	Adjusted Avg Reading (dBµV/m)	FCC Class B High Frequency - Peak Limit (dBµV/m)	Margin (dB)	Result (Pass/Fail)	FCC Class B High Frequency - Average Limit (dBµV/m)	Margin (dB)	Result (Pass/Fail)
Low Edge														
Max H		90.1												
Max V		91.5												
V	2390.0	53.4	38.2	25.4	32.2	3.2	63.4	48.2	74.0	-10.6	Pass	54.0	-5.8	Marginal
V	2385.0	49.1	33.4	25.4	32.2	3.2	59.1	43.4	74.0	-14.9	Pass	54.0	-10.6	Pass
V	2383.0	46.0	32.1	25.4	32.2	3.2	56.0	42.1	74.0	-18.0	Pass	54.0	-11.9	Pass
V	2382.0	46.1	31.6	25.4	32.2	3.2	56.1	41.6	74.0	-17.9	Pass	54.0	-12.4	Pass
V	2378.3	45.4	29.9	25.4	32.1	3.2	55.3	39.8	74.0	-18.7	Pass	54.0	-14.2	Pass
				---	---	---	---	---	---	---	---	---	---	---
				---	---	---	---	---	---	---	---	---	---	---
High edge				---	---	---	---	---	---	---	---	---	---	---
Max H		90.2												
Max V		91.1												
V	2483.5	42.2	35.6	25.3	32.4	3.3	52.6	46.0	74.0	-21.4	Pass	54.0	-8.0	Pass
V	2485.1	52.9	34.2	25.3	32.4	3.3	63.3	44.6	74.0	-10.7	Pass	54.0	-9.4	Pass
V	2487.2	52.8	34.0	25.3	32.4	3.3	63.2	44.4	74.0	-10.8	Pass	54.0	-9.6	Pass
V	2491.1	52.8	33.4	25.3	32.4	3.3	63.2	43.8	74.0	-10.8	Pass	54.0	-10.2	Pass

Table Result: Pass by -5.8 dB ***Worst Freq:*** 2390.0 MHz

Test Site: EMI Chamber 1 **Cable 1:** Asset #2456 **Cable 2:** Asset #2480 **Cable 3:** ---
Analyzer: Rental SA#3 **Preamp:** Asset #2443 **Antenna:** Blue Horn **Preselector:** ---
CSsoft Radiated Emissions Calculator v 1.017.203

Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor

802.11n (HT40): Worst Case MCS5

Rev. 4/17/2018							
Spectrum Analyzers / Receivers /Preselectors	**Range**	**MN**	**Mfr**	**SN**	**Asset**	**Cat**	**Calibration Due**
2093 MXE EMI Receiver	20Hz-26.5GHz	N9038A	Agilent	MY51210181	2093	I	11/16/2018
Rental MXE EMI Receiver(1170725)	20Hz-26.5GHz	N9038A	Agilent	MY51210151	1170725	I	4/10/2019
Radiated Emissions Sites	**FCC Code**	**IC Code**	**VCCI Code**	**Range**	**Asset**	**Cat**	**Calibration Due**
EMI Chamber 1	719150	2762A-6	A-0015	1-18GHz	1685	I	12/21/2018
EMI Chamber 2	719150	2762A-7	A-0015	1-18GHz	1686	I	12/21/2018
Antennas	**Range**	**MN**	**Mfr**	**SN**	**Asset**	**Cat**	**Calibration Due**
Orange Horn	1-18GHz	3115	EMCO	0004-6123	390	I	10/13/2018
Blue Horn	1-18Ghz	3117	ETS	157647	1861	I	2/14/2019
Meteorological Meters/Chambers		**MN**	**Mfr**	**SN**	**Asset**	**Cat**	**Calibration Due**
TH A#2084		HTC-1	HDE		2084	II	3/22/2019
TH A#2085		HTC-1	HDE		2085	II	3/22/2019
Cables	**Range**		**Mfr**			**Cat**	**Calibration Due**
Asset #2456	9KHz-18GHz		MegaPhase			II	10/29/2018
Asset #2458	9KHz-18GHz		MegaPhase			II	10/29/2018
Asset #2459	9KHz-18GHz		MegaPhase			II	10/29/2018
Asset #2480	9KHz-18GHz		MegaPhase			II	10/29/2018
All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.							

Test Equipment Used

AC Line Conducted Emissions

LIMITS

Frequency of emission (MHz)	Quasi-peak limit (dBµV)	Average limit (dBµV)
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

[47 CFR 15.207(a)]

MEASUREMENTS / RESULTS

N/A. Vehicle battery powered only.

Measurement Uncertainty

The listed uncertainties are the worst case uncertainty for the entire range of measurement. Please note that the uncertainty values are provided for informational purposes only and are not used in determining the PASS/FAIL results.

Measurement	Expanded Uncertainty k=2	Maximum allowable uncertainty
Radiated Emissions (30-1000MHz) NIST CISPR	 5.6dB 4.6dB	 N/A 5.2dB (Ucispr)
Radiated Emissions (1-26.5GHz)	4.6dB	N/A
Radiated Emissions (above 26.5GHz)	4.9dB	N/A
Magnetic Radiated Emissions	5.6dB	N/A
Conducted Emissions NIST CISPR	 3.9dB 3.6dB	 N/A 3.6dB (Ucispr)
Telco Conducted Emissions (Current)	2.9dB	N/A
Telco Conducted Emissions (Voltage)	4.4dB	N/A
Electrostatic Discharge	11.5%	N/A
Radiated RF Immunity (Uniform Field)	1.6dB	N/A
Electrical Fast Transients	23.1%	N/A
Surge	23.1%	N/A
Conducted RF Immunity	3dB	N/A
Magnetic Immunity	12.8%	N/A
Dips and Interrupts	2.3V	N/A
Harmonics	3.5%	N/A
Flicker	3.5%	N/A
Radio frequency (@ 2.4GHz)	3.23×10^{-8}	1×10^{-7}
RF power, conducted	0.40dB	0.75dB
Maximum frequency deviation: • Within 300Hz and 6kHz of audio frequency / Within 6kHz and 25kHz of audio frequency	 3.4% 0.3dB	 5% 3dB
Adjacent channel power	1.9dB	3dB
Conducted spurious emission of transmitter, valid up to 12.75GHz	2.39dB	3dB
Conducted emission of receivers	1.3dB	3dB
Radiated emission of transmitter, valid up to 26.5GHz	3.9dB	6dB
Radiated emission of transmitter, valid up to 80GHz	3.3dB	6dB
Radiated emission of receiver, valid up to 26.5GHz	3.9dB	6dB
Radiated emission of receiver, valid up to 80GHz	3.3dB	6dB
Humidity	2.37%	5%
Temperature	0.7°C	1.0°C
Time	4.1%	10%
RF Power Density, Conducted	0.4dB	3dB
DC and low frequency voltages	1.3%	3%
Voltage (AC, <10kHz)	1.3%	2%
Voltage (DC)	0.62%	1%
The above reflects a 95% confidence level		

Conditions Of Testing

[Bureau Veritas Consumer Products Services, Inc., a Massachusetts corporation], and/or its affiliates (collectively, the "Company") will conduct, at the request of the Submitter ("Client"), the tests specified on the submitted Test Request Form or equivalent in accordance with, and subject to, the following terms and conditions (collectively, "Conditions"):

1. All orders for tests are subject to acceptance by the Company, and no order will constitute a binding commitment of the Company unless and until such order is accepted by it, as evidenced by the issuance of a written report ("Test Report") by the Company. The Test Report is issued solely by the Company, is intended for the exclusive use of Client and shall not be published, used for advertising purposes, copied or replicated for distribution to any other person or entity or otherwise publicly disclosed without the prior written consent of the Company. By submitting a request for services to the Company, Client consents to the disclosure to accreditation bodies of those records of Client relevant to the accreditation body's assessment of the Company's competence and compliance with relevant accreditation criteria. The Company shall not be liable for any loss or damage whatsoever resulting from the failure of the Company to provide its services within any time period for completion estimated by the Company. If Client anticipates using the Test Report in any legal proceeding, arbitration, dispute resolution forum or other proceeding, it shall so notify the Company prior to submitting the Test Report in such proceeding. The Company has no obligation to provide a fact or expert witness at such proceeding unless the Company agrees in advance to do so for a separate and additional fee.
2. The Test Report will set forth the findings of the Company solely with respect to the test samples identified therein. Unless specifically and expressly indicated in the Test Report, the results set forth in such Test Report are not intended to be indicative or representative of the quality or characteristics of the lot from which a test sample is taken, and Client shall not rely upon the Test Report as being so indicative or representative of the lot or of the tested product in general. The Test Report will reflect the findings of the Company at the time of testing only, and the Company shall have no obligation to update the Test Report after its issuance. The Test Report will set forth the results of the tests performed by the Company based upon the written information provided to the Company. The Test Report will be based solely on the samples and written information submitted to the Company by Client, and the Company shall not be obligated to conduct any independent investigation or inquiry with respect thereto.
3. The Company may, in its sole discretion, destroy samples which have been furnished to the Company for testing and which have not been destroyed in the course of testing. The Company may delegate the performance of all or a portion of the services contemplated hereunder to an affiliate, agent or subcontractor of the Company, and Client consents to such delegation.
4. These Conditions and the Test Report represent the entire understanding of the parties hereto with respect to the subject matter hereof and of the Test Report, and no modification, variance or extrapolation with respect thereto shall be permitted without the prior written consent of the Company.
5. The names, service marks, trademarks and copyrights of the Company and its affiliates, including the names "**BUREAU VERITAS," "BUREAU VERITAS CONSUMER PRODUCTS SERVICES," "BVCPS", "MTL", "ACTS", "MTL-ACTS" and CURTIS-STRAUS** (collectively, the "Marks") are and shall remain the sole property of the Company or its affiliates and shall not be used by Client except solely to the extent that Client obtains the prior written approval of the Company and then only in the manner prescribed by the Company. Client shall not contest the validity of the Marks or take any action that might impair the value or goodwill associated with the Marks or the image or reputation of the Company or its affiliates.
6. Payment in full shall be due 30 days after the date of invoice. Interest shall be due on overdue amounts from the due date until paid at an interest rate of 1.5% per month or, if less, the maximum rate permitted by law. The Company reserves the right, at any time and from time to time, to revoke any credit extended to Client. Client shall reimburse the Company for any costs it incurs in collecting past due amounts, including court costs and fees and expenses of attorneys and collection agencies. The Test Report may not be used or relied upon by Client if and for so long as Client fails to pay when due any invoice issued by the Company or any affiliate of it to Client or any affiliate or subsidiary of Client together with interest and penalties, if any, accrued thereon.
7. The Company disclaims any and all responsibility or liability arising out of or in connection with e-mail transmissions of such information.
8. Client understands and agrees that the Company is neither an insurer nor a guarantor, that the Company does not take the place of Client or any designer, manufacturer, agent, buyer, distributor or transportation or shipping company, and that the Company disclaims all liability in such capacities. Client further understands that if it seeks assurance against loss or damage, it should obtain appropriate insurance.
9. Client agrees that the Company, by providing the services, does not take the place of Client nor any third party, nor does the Company release them from any of their obligations, nor does the Company otherwise assume, abridge, abrogate or undertake to discharge any duty of any third party to Client or any duty of Client or any third party to any other third party, and Client will not release any third party from its obligations and duties with respect to the tested goods.
10. Client shall, on a timely basis, (a) provide adequate instructions to the Company in order to enable the Company to perform properly its services, (b) provide, or cause Client's suppliers and contractors to provide, the Company with all documents necessary to enable the Company to perform its services, (c) furnish the Company with all relevant information regarding Client's intended use and purposes of the tested goods, (d) advise the Company of essential dates and deadlines relevant to the tested goods and (e) fully exercise all rights and remedies available to Client against third parties in respect of the tested goods.
11. The Company shall undertake due care and ordinary skill in the performance of its services to Client, and the Company shall accept responsibility only were such skill has not been exercised and, even in such event, only to the extent of the limitation of liability set forth herein.
12. If Client desires to assert a claim arising from or relating to (i) the performance, purported performance or non-performance of any services by the Company or (ii) the sale, resale, manufacture, distribution or use of any tested goods, it must submit that claim to the Company in a writing that sets forth with particularity the basis for such claim within 60 days from discovery of the potential claim and not more than six months after the date of issuance of the Test Report to Client. Client waives any and all such claims including, without limitation, claims that the Test Report is inaccurate, incomplete or misleading or that additional or different testing is required, unless and then only to the extent that Client submits a written claim to the Company within both such time periods.
13. CLIENT SHALL, EXCEPT TO THE EXTENT OF COMPANY'S LIABILITY TO CLIENT HEREUNDER (WHICH IN NO EVENT SHALL EXCEED THE LIMITATION OF LIABILITY HEREIN), HOLD HARMLESS AND INDEMNIFY THE COMPANY, ITS AFFILIATES AND THEIR RESPECTIVE DIRECTORS, OFFICERS, EMPLOYEES, AGENTS AND SUBCONTRACTORS AGAINST ALL ACTUAL OR ALLEGED THIRD PARTY CLAIMS FOR LOSS, DAMAGE OR EXPENSE OF WHATSOEVER NATURE AND HOWSOEVER ARISING FROM OR RELATING TO (i) THE PERFORMANCE, PURPORTED PERFORMANCE OR NON-PERFORMANCE OF ANY SERVICES BY THE COMPANY OR (ii) THE SALE, RESALE, MANUFACTURE, DISTRIBUTION OR USE OF ANY TESTED GOODS.
14. EXCEPT AS MAY OTHERWISE BE EXPRESSLY AGREED TO IN WRITING BY THE COMPANY AND NOTWITHSTANDING ANY PROVISION TO THE CONTRARY CONTAINED HEREIN OR IN ANY TEST REPORT, NO WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, IS MADE.

15. (A) IN NO EVENT WHATSOEVER SHALL THE COMPANY BE LIABLE FOR ANY CONSEQUENTIAL, SPECIAL, INCIDENTAL, EXEMPLARY OR PUNITIVE DAMAGES IN CONNECTION WITH, RELATING TO OR ARISING OUT OF THE TEST REPORT OR THE SERVICES PROVIDED BY THE COMPANY HEREUNDER, INCLUDING WITHOUT LIMITATION LOSS OF OR DAMAGE TO PROPERTY; LOSS OF INCOME, PROFIT OR USE; OR ANY CLAIMS OR DEMANDS MADE AGAINST CLIENT OR ANY OTHER PERSON BY ANY THIRD PARTY IN CONNECTION WITH, RELATING TO OR ARISING OUT OF THE SERVICES PROVIDED BY THE COMPANY HEREUNDER.

(B)NOTWITHSTANDING ANY PROVISION TO THE CONTRARY CONTAINED HEREIN, AND IN RECOGNITION OF THE RELATIVE RISKS AND BENEFITS TO CLIENT AND THE COMPANY ASSOCIATED WITH THE TESTING SERVICES CONTEMPLATED HEREBY, THE RISKS HAVE BEEN ALLOCATED SUCH THAT UNDER NO CIRCUMSTANCES WHATSOEVER SHALL THE LIABILITY OF THE COMPANY TO CLIENT OR ANY THIRD PARTY IN RESPECT OF ANY CLAIM FOR LOSS, DAMAGE OR EXPENSE, OF WHATSOEVER NATURE OR MAGNITUDE, AND HOWSOEVER ARISING, EXCEED AN AMOUNT EQUAL TO FIVE (5) TIMES THE AMOUNT OF THE FEES PAID TO THE COMPANY FOR THE SPECIFIC SERVICES WHICH GAVE RISE TO SUCH CLAIM OR U.S.$10,000, WHICHEVER IS THE LESSER AMOUNT.

16. The Company shall not be liable for any loss or damage resulting from any delay or failure in performance of its obligations hereunder resulting directly or indirectly from any event of force majeure or any event outside the control of the Company. If any such event occurs, the Company may immediately cancel or suspend its performance hereunder without incurring any liability whatsoever to Client.

17. Company's services, including these Conditions, shall be governed by, and construed in accordance with, the local laws of the country where the Company performs the tests or, in the case of tests performed in the United States of America, the laws of Massachusetts without regard to conflicts of laws principles. If any aspect(s) of these Conditions is found to be illegal or unenforceable, the validity, legality and enforceability of all remaining aspects of these Conditions shall not in any way be affected or impaired thereby. Any proceeding related to the subject matter hereof shall be brought, if at all, in the courts of the country where the Company performs the tests or, in the case of tests performed in the United States of America, in the courts of Massachusetts. Client waives the right to interpose any counterclaim or setoffs of any nature in any litigation arising hereunder.

The complete list of the Approved Subcontractors Curtis-Straus may use to delegate the performance of work can be provided upon request.
Rev.160009121(2)_#684340 v14CS

ES0621-2 Appendix A

CFR Title 47 FCC Part §15.247 and ISED Canada RSS-247 Issue 2

DUT Information

Model: PV602
Manufacturer: Harman International Industries, Inc.
Serial Number: 34670010475
Software Version: SOC: BR_RC1_R12.0.0_R18102A

Mode	Channel	Frequency
802.11b/g/n(HT20)	1	2412 MHz
802.11b/g/n(HT20)	2	2417 MHz
802.11b/g/n(HT20)	3	2422 MHz
802.11b/g/n(HT20)	4	2427 MHz
802.11b/g/n(HT20)	5	2432 MHz
802.11b/g/n(HT20)	6	2437 MHz
802.11b/g/n(HT20)	7	2442 MHz
802.11b/g/n(HT20)	8	2447 MHz
802.11b/g/n(HT20)	9	2452 MHz
802.11b/g/n(HT20)	10	2457 MHz
802.11b/g/n(HT20)	11	2462 MHz

Mode	Channel	Frequency
802.11n(HT40)	3	2422 MHz
802.11n(HT40)	4	2427 MHz
802.11n(HT40)	5	2432 MHz
802.11n(HT40)	6	2437 MHz
802.11n(HT40)	7	2442 MHz
802.11n(HT40)	8	2447 MHz
802.11n(HT40)	9	2452 MHz

Antenna:

2400-2500MHz Gain: 2.3dBi Peak

WIFI Antenna			
Frequency	Efficiency	Efficiency . dB	Peak Gain
2400	33%	-4.8	2.2
2410	34%	-4.7	2.3
2420	34%	-4.7	2.1
2430	35%	-4.6	2.0
2440	35%	-4.6	1.6
2450	36%	-4.5	1.3
2460	35%	-4.5	1.5
2470	34%	-4.6	1.5
2480	33%	-4.9	1.3
2490	31%	-5.1	0.9
2500	29%	-5.4	0.9
AVG	33%	-4.8	1.6

Number of transmission chains 1
Equipment Type Digital Transmission System (DTS)

Test Equipment Used:

Rev. 3/27/2018								
Spectrum Analyzers / Receivers /Preselectors	**Range**	**MN**	**Mfr**	**SN**	**Asset**	**Cat**	**Calibration Due**	**Calibrated on**
FSV40 Signal/Spectrum Analyzer	10Hz-40GHz	FSV40	ROHDE & SCHWARZ	101551	2200	I	6/30/2018	6/30/2017
Signal Generators/Comparaison Noise Emitter	**Range**	**MN**	**Mfr**	**SN**	**Asset**	**Cat**	**Calibration Due**	**Calibrated on**
SMBV100A Vector Signal Generator	9KHz-6GHz	SMBV100A	ROHDE & SCHWARZ	261919	2201	I	6/26/2018	6/26/2017
SMB100A Signal Generator	100kHz-40GHz	SMB100A	ROHDE & SCHWARZ	179846	2434	I	5/30/2018	5/30/2017
Power/Noise Meters		**MN**	**Mfr**	**SN**	**Asset**	**Cat**	**Calibration Due**	**Calibrated on**
OSP - open switch and control platform	30MHz-18GHz	OSP120	ROHDE & SCHWARZ	101674		I	6/1/2018	6/1/2017
Cables	**Range**		**Mfr**			**Cat**	**Calibration Due**	**Calibrated on**
DUT1	30MHz-26GHz		Micro-Coax			II	6/21/2018	6/21/2017
DUT2	30MHz-26GHz		Micro-Coax			II	6/22/2018	6/22/2017
DUT3	30MHz-26GHz		Micro-Coax			II	6/23/2018	6/23/2017
DUT4	30MHz-26GHz		Micro-Coax			II	6/24/2018	6/24/2017
Attenuators / Couplers	**Range**	**MN**	**Mfr**	**SN**	**Asset**	**Cat**	**Calibration Due**	**Calibrated on**
10dB Attenuator-01 Brown	30MHz-26GHz		Mini Curcuits			II	7/13/2018	7/14/2017
10dB Attenuator-02 Yellow	30MHz-26GHz		Mini Curcuits			II	7/13/2018	7/14/2017
10dB Attenuator-03 Red	30MHz-26GHz		Mini Curcuits			II	7/13/2018	7/14/2017
10dB Attenuator-04 orange	30MHz-26GHz		Mini Curcuits			II	7/13/2018	7/14/2017
API - 30dB 20W Attenuator	9KHz-40GHz	89-30-11	API Weinschel	703	2121	I	3/23/2019	3/23/2018
Directional Coupler	0.5GHz-18GHz	UDC	AA MCS	001040		II	8/11/2018	8/11/2017
Communication Tester	**Range**	**MN**	**Mfr**	**SN**	**Asset**	**Cat**	**Calibration Due**	**Calibrated on**
CMW500 Wideband Radio Communication Tester	DC to 6GHz	CMW500	ROHDE & SCHWARZ	155905		I	6/2/2018	6/2/2017
Meteorological Meters/Chambers		**MN**	**Mfr**	**SN**	**Asset**	**Cat**	**Calibration Due**	**Calibrated on**
Temp/Humidity Chamber #18		EPX-2H	Espec	137664	1645	I	1/5/2019	1/5/2018
All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.								

Test Results Summary

Test	Frequency (MHz)	802.11b	802.11g	802.11n (HT20)
Average Output Power	2412.000	PASS	PASS	PASS
Peak Power Spectral Density	2412.000	PASS	PASS	PASS
DTS Bandwidth (6dB)	2412.000	PASS	PASS	PASS
Conducted Band Edges	2412.000	PASS	PASS	PASS
Conducted Spurious Emissions	2412.000	PASS	PASS	PASS
Average Output Power	2437.000	PASS	PASS	PASS
Peak Power Spectral Density	2437.000	PASS	PASS	PASS
DTS Bandwidth (6dB)	2437.000	PASS	PASS	PASS
Conducted Band Edges	2437.000	PASS	PASS	PASS
Conducted Spurious Emissions	2437.000	PASS	PASS	PASS
Average Output Power	2462.000	PASS	PASS	PASS
Peak Power Spectral Density	2462.000	PASS	PASS	PASS
DTS Bandwidth (6dB)	2462.000	PASS	PASS	PASS
Conducted Band Edges	2462.000	PASS	PASS	PASS
Conducted Spurious Emissions	2462.000	PASS	PASS	PASS

Test	Frequency (MHz)	802.11n (HT40)
Average Output Power	2422.000	PASS
Peak Power Spectral Density	2422.000	PASS
DTS Bandwidth (6dB)	2422.000	PASS
Conducted Band Edges	2422.000	PASS
Conducted Spurious Emissions	2422.000	PASS
Average Output Power	2437.000	PASS
Peak Power Spectral Density	2437.000	PASS
DTS Bandwidth (6dB)	2437.000	PASS
Conducted Band Edges	2437.000	PASS
Conducted Spurious Emissions	2437.000	PASS
Average Output Power	2452.000	PASS
Peak Power Spectral Density	2452.000	PASS
DTS Bandwidth (6dB)	2452.000	PASS
Conducted Band Edges	2452.000	PASS
Conducted Spurious Emissions	2452.000	PASS

Average Output Power (Gated)

Test according to FCC KDB 558074 DTS Measurement Guidance v04 Section 9.2.3.2.

Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Combined Uncertainty of absolute Level Measurement (K=2) < 1 dB

802.11b

Data Rate	Gated RMS (dBm) 2412 MHz	Gated RMS (dBm) 2437 MHz	Gated RMS (dBm) 2462 MHz	Limit (dBm)	Duty Cycle (%)
1 Mbps	11.637	14.685	12.876	30	99.755
2 Mbps	11.641	13.116	13.343	30	99.511
5.5 Mbps	12.515	12.359	11.888	30	98.717
11 Mbps	12.33	12.338	12.305	30	97.609

802.11g

Data Rate	Gated RMS (dBm) 2412 MHz	Gated RMS (dBm) 2437 MHz	Gated RMS (dBm) 2462 MHz	Limit (dBm)	Duty Cycle (%)
6 Mbps	13.847	13.96	14.578	30	98.502
9 Mbps	13.815	13.653	13.509	30	97.776
12 Mbps	13.878	13.658	13.502	30	97.093
18 Mbps	13.555	13.548	13.495	30	95.762
24 Mbps	13.856	13.657	13.507	30	94.512
36 Mbps	13.608	13.48	13.51	30	92.151
48 Mbps	13.595	13.463	13.371	30	90.151
54 Mbps	13.558	13.499	13.378	30	89.196

802.11n(HT20)

Data Rate	Gated RMS (dBm) 2412 MHz	Gated RMS (dBm) 2437 MHz	Gated RMS (dBm) 2462 MHz	Limit (dBm)	Duty Cycle (%)
MCS0	13.627	13.575	13.601	30	98.399
MCS1	13.548	13.563	13.082	30	96.923
MCS2	13.638	13.622	13.6	30	95.584
MCS3	13.605	13.588	13.505	30	94.348
MCS4	13.802	13.677	13.496	30	92.153
MCS5	13.546	13.673	13.558	30	90.163
MCS6	13.782	13.621	13.565	30	89.402
MCS7	13.62	13.612	13.571	30	88.499

802.11n(HT40)

Data Rate	Gated RMS (dBm) 2422 MHz	Gated RMS (dBm) 2437 MHz	Gated RMS (dBm) 2452 MHz	Limit (dBm)	Duty Cycle (%)
MCS0	13.938	13.966	13.804	30	96.837
MCS1	13.94	13.903	13.813	30	94.216
MCS2	13.883	13.564	13.522	30	91.978
MCS3	13.683	13.788	13.713	30	90.073
MCS4	13.804	13.922	13.777	30	86.933
MCS5	13.988	13.987	13.835	30	84.313
MCS6	14.077	13.975	13.834	30	83.331
MCS7	13.768	13.951	13.905	30	82.232

Peak Power Spectral Density

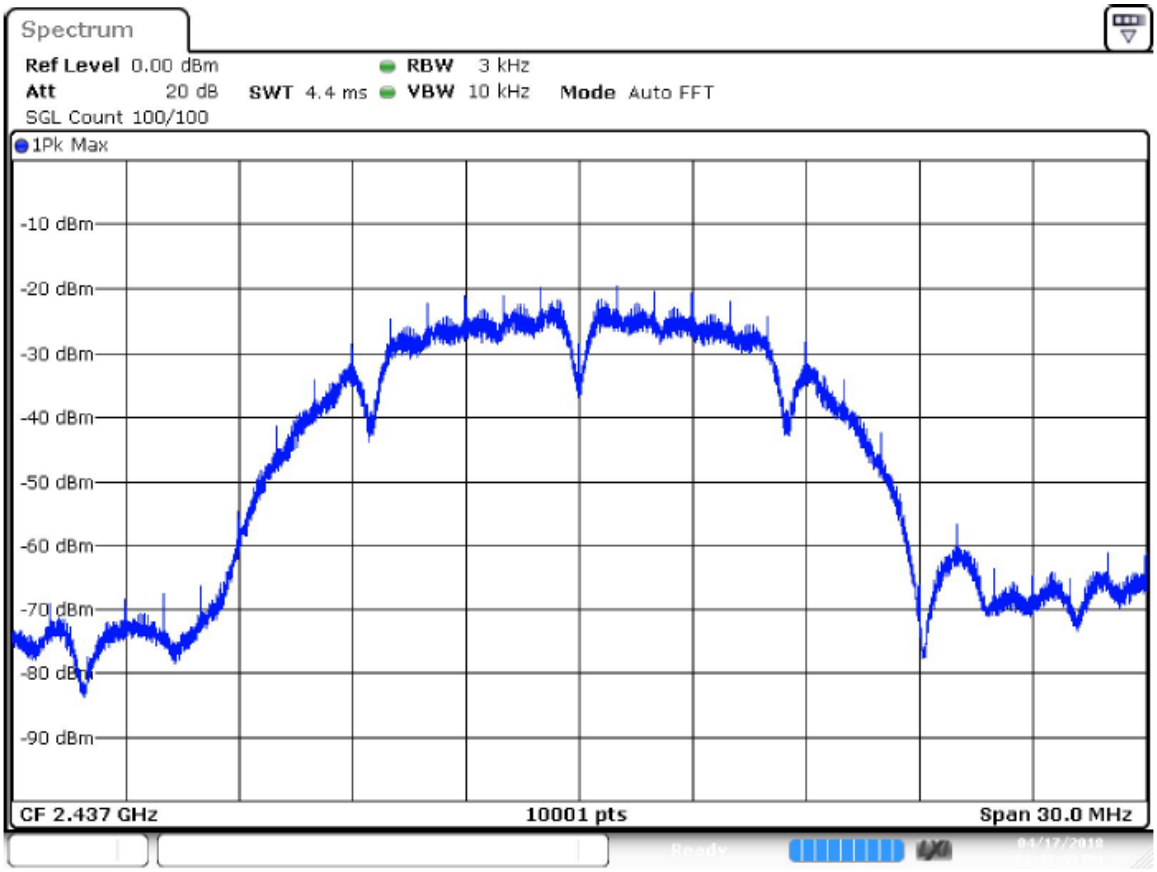
Test according to FCC KDB 558074 DTS Measurement Guidance v04 Section 10.2

Measurement uncertainty calculated in accordance with ETSI TR 100 028-1. Expanded Uncertainty (K=2) < 1.3 dB

802.11b

Data Rate	Peak PSD (dBm) 2412 MHz	Peak PSD (dBm) 2437 MHz	Peak PSD (dBm) 2462 MHz	Limit (dBm)
1 Mbps	-10.959	-7.835	-9.802	8
2 Mbps	-10.914	-10.447	-10.071	8
5.5 Mbps	-11.513	-11.605	-11.633	8
11 Mbps	-12.257	-12.310	-12.778	8

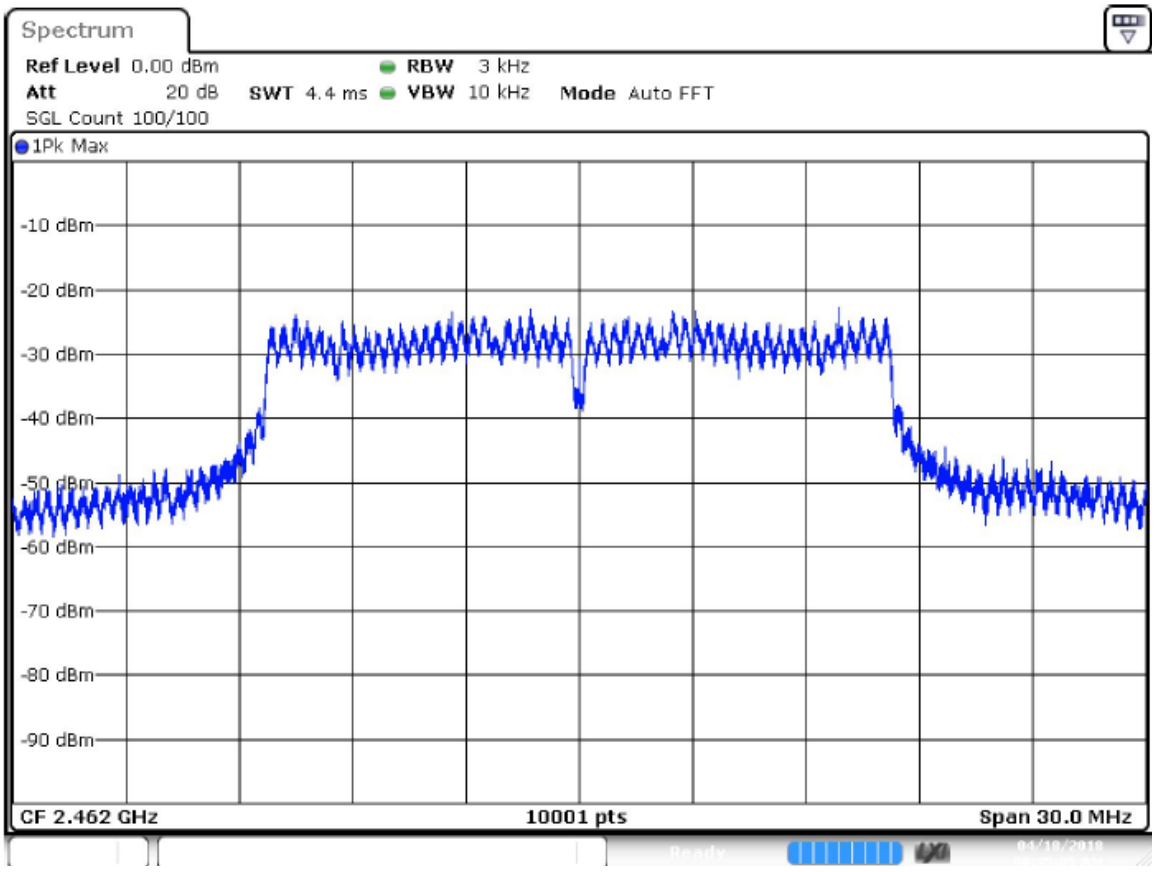
802.11b 1 Mbps 2437MHz



802.11g

Data Rate	Peak PSD (dBm) 2412 MHz	Peak PSD (dBm) 2437 MHz	Peak PSD (dBm) 2462 MHz	Limit (dBm)
6 Mbps	-11.484	-11.251	-10.888	8
9 Mbps	-11.845	-11.807	-12.393	8
12 Mbps	-12.252	-11.705	-12.363	8
18 Mbps	-12.234	-11.723	-12.144	8
24 Mbps	-11.548	-12.011	-12.114	8
36 Mbps	-11.897	-12.355	-12.168	8
48 Mbps	-12.173	-12.418	-12.282	8
54 Mbps	-11.425	-11.479	-11.503	8

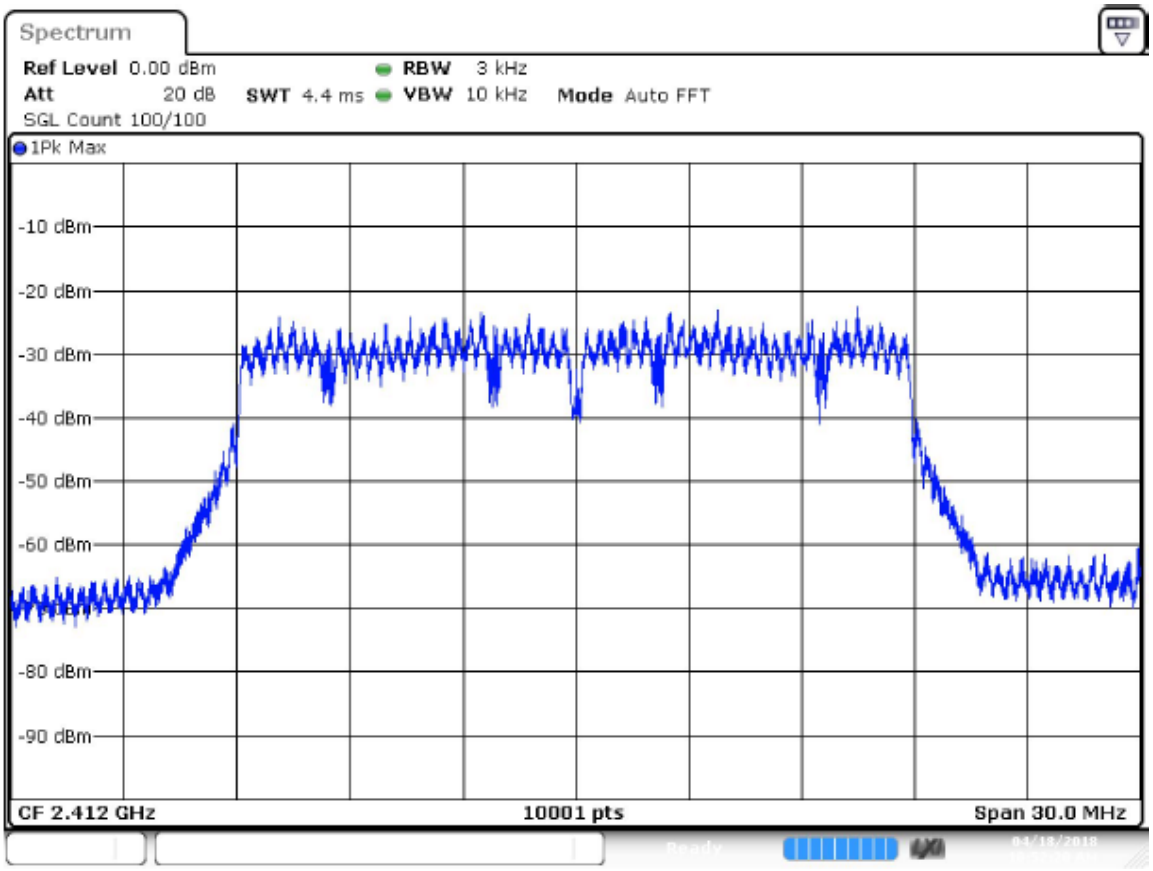
802.11g 6Mbps 2462MHz



802.11n(HT20)

Data Rate	Peak PSD (dBm) 2412 MHz	Peak PSD (dBm) 2437 MHz	Peak PSD (dBm) 2462 MHz	Limit (dBm)
MCS0	-11.338	-11.180	-11.180	8
MCS1	-11.709	-12.132	-12.224	8
MCS2	-11.700	-11.391	-11.589	8
MCS3	-11.893	-12.199	-12.345	8
MCS4	-11.271	-11.159	-11.496	8
MCS5	-11.357	-11.599	-12.127	8
MCS6	-10.799	-11.134	-11.272	8
MCS7	-11.598	-11.617	-11.827	8

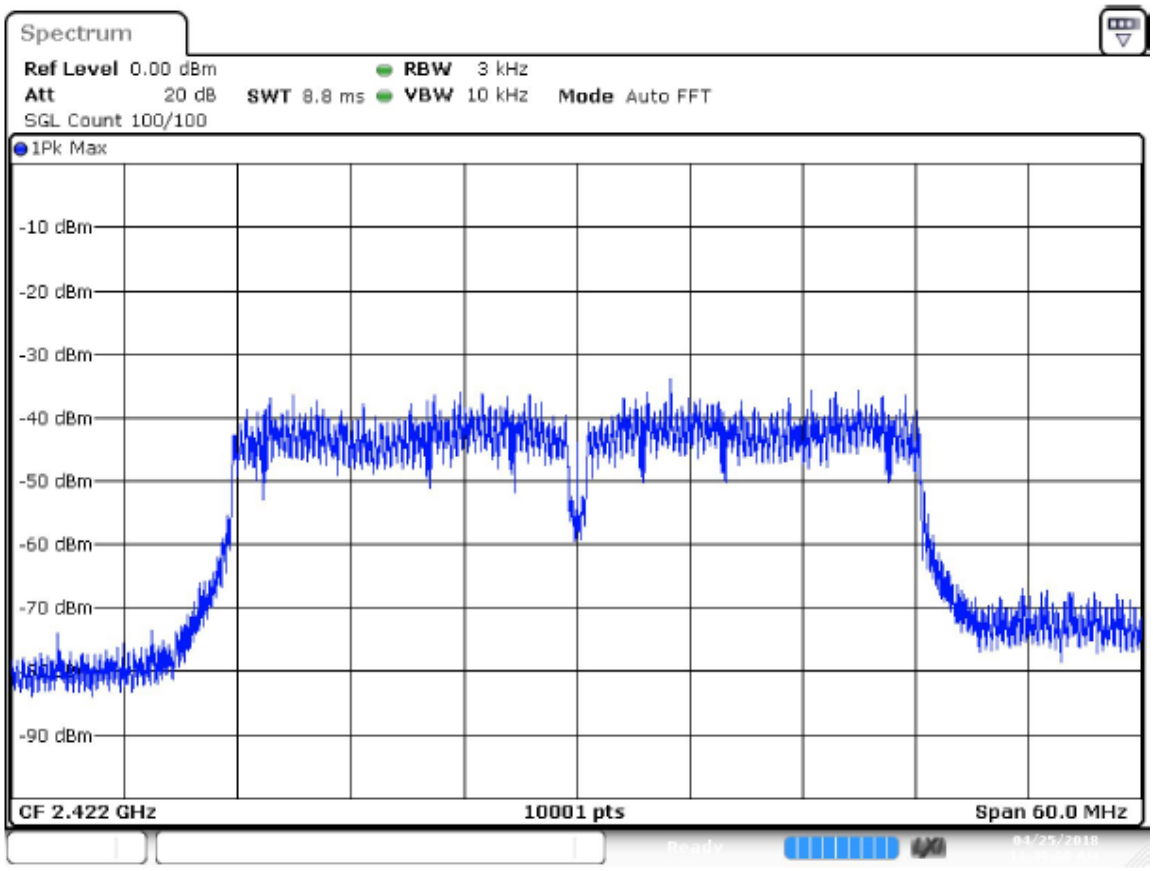
802.11n(HT20) MCS6 2412MHz



802.11n(HT40)

Data Rate	Peak PSD (dBm) 2422 MHz	Peak PSD (dBm) 2437 MHz	Peak PSD (dBm) 2452 MHz	Limit (dBm)
MCS0	-14.570	-14.730	-14.834	8
MCS1	-13.467	-13.876	-14.299	8
MCS2	-13.194	-13.341	-13.414	8
MCS3	-13.755	-13.935	-14.378	8
MCS4	-13.473	-13.539	-13.785	8
MCS5	-11.917	-12.093	-12.274	8
MCS6	-12.420	-12.618	-12.851	8
MCS7	-13.001	-13.217	-13.236	8

802.11n(HT40) MCS5 2422MHz



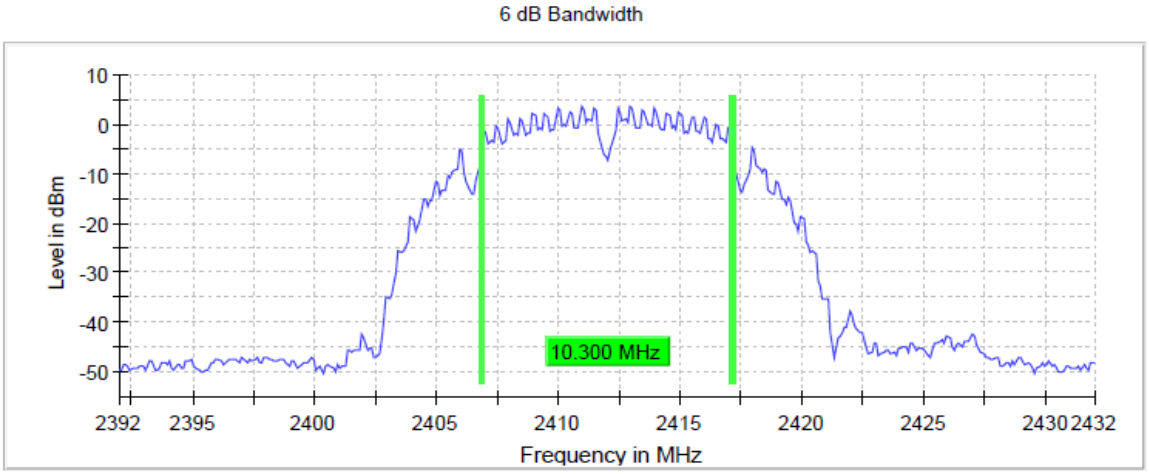
DTS Bandwidth (6dB)

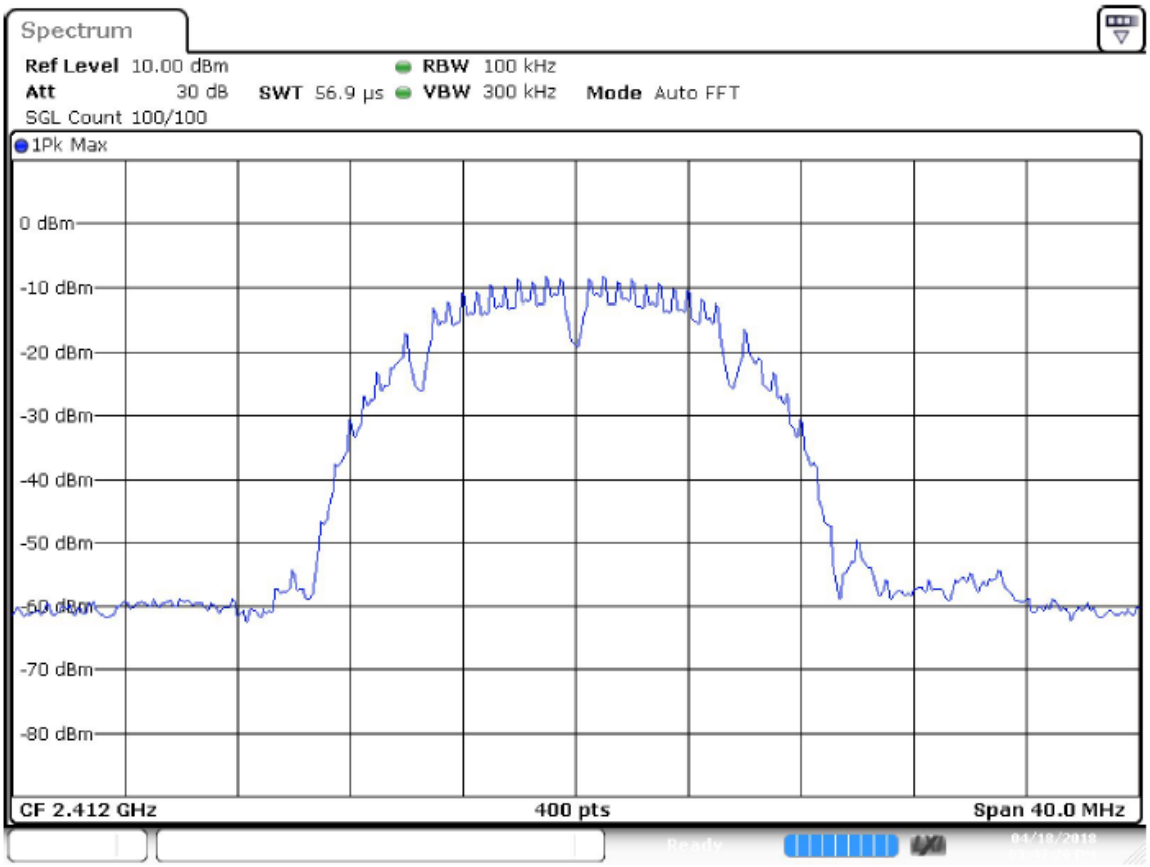
Test according to FCC KDB 558074 DTS Measurement Guidance v04 Section 8.1

Measurement uncertainty calculated in accordance with ETSI TR 100 028-1. Expanded Uncertainty (K=2) < 2%

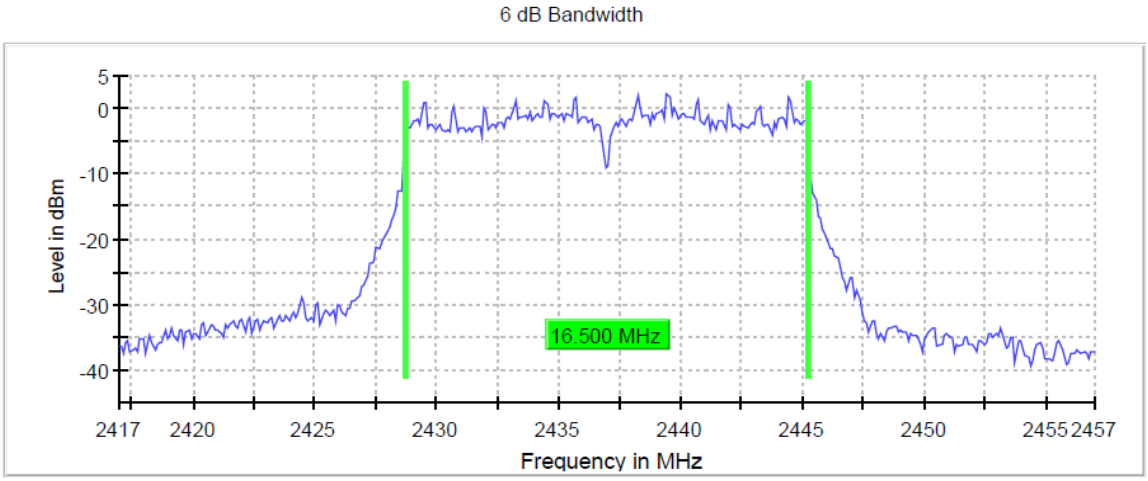
Data Rate	DUT Frequency (MHz)	Bandwidth (MHz)	Minimum Limit (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
802.11b 1 Mbps	2412.000	10.300000	0.5	2406.850000	2417.150000
802.11g 6 Mbps	2412.000	16.500000	0.5	2403.750000	2420.250000
802.11n(HT20) MCS4	2412.000	17.900000	0.5	2403.050000	2420.950000
802.11n(HT40) MCS6	2422.000	37.000000	0.5	2403.750000	2440.750000
802.11b 1 Mbps	2437.000	10.300000	0.5	2431.850000	2442.150000
802.11g 6 Mbps	2437.000	16.500000	0.5	2428.750000	2445.250000
802.11n(HT20) MCS4	2437.000	17.900000	0.5	2428.050000	2445.950000
802.11n(HT40) MCS6	2437.000	37.500000	0.5	2418.250000	2455.750000
802.11b 1 Mbps	2462.000	10.300000	0.5	2456.850000	2467.150000
802.11g 6 Mbps	2462.000	16.500000	0.5	2453.750000	2470.250000
802.11n(HT20) MCS4	2462.000	17.900000	0.5	2453.050000	2470.950000
802.11n(HT40) MCS6	2452.000	37.500000	0.5	2433.250000	2470.750000

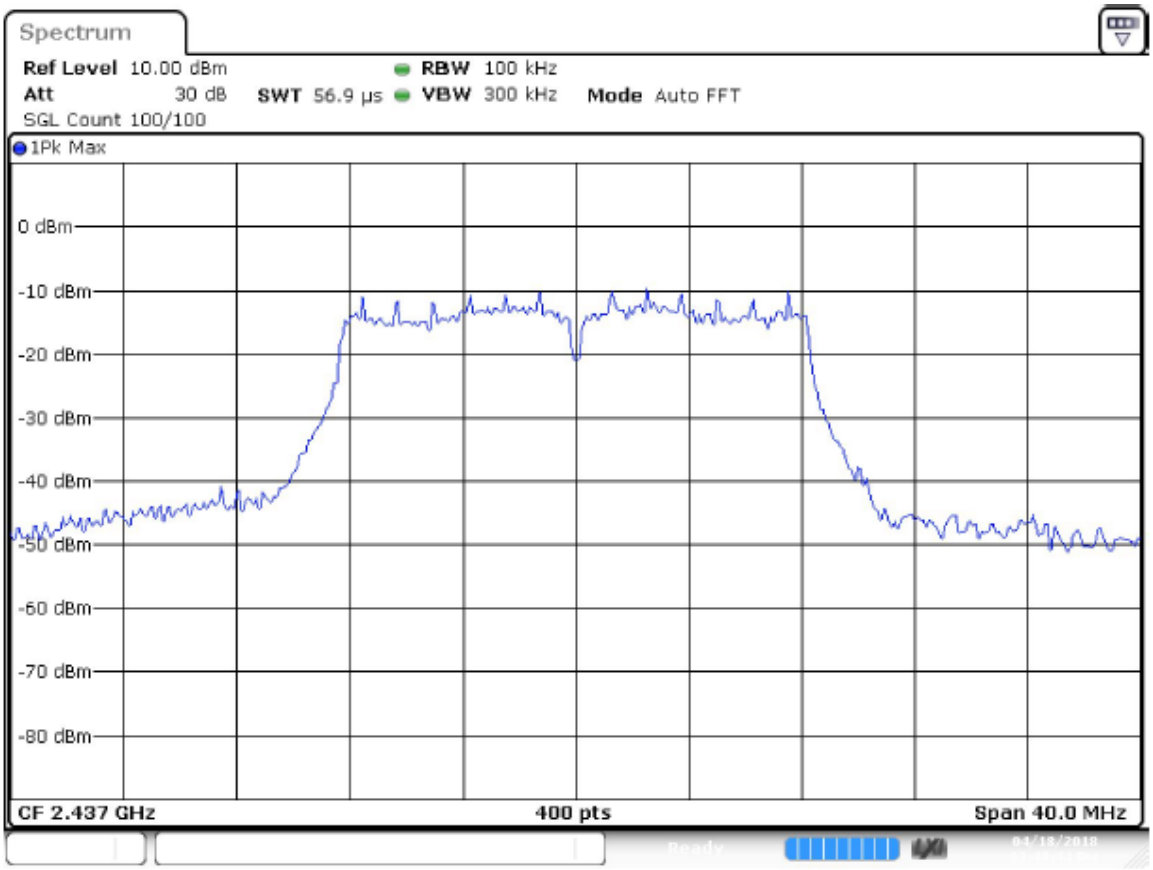
802.11b 1Mbps 2412MHz



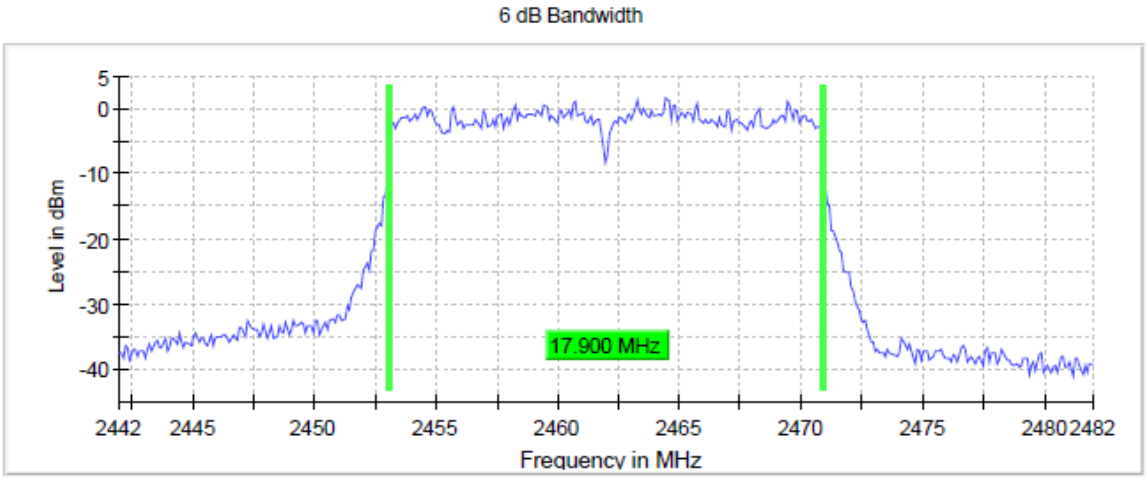


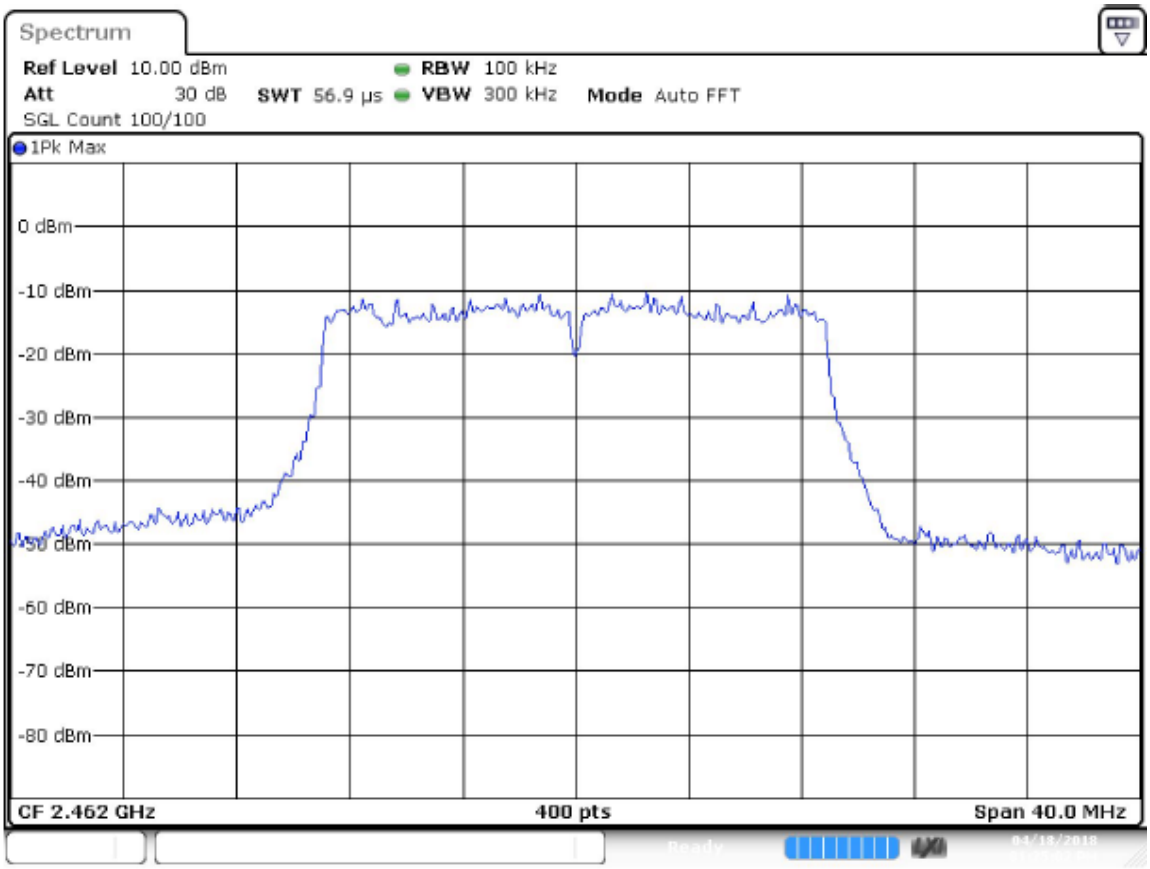
802.11g 6 Mbps 2437MHz



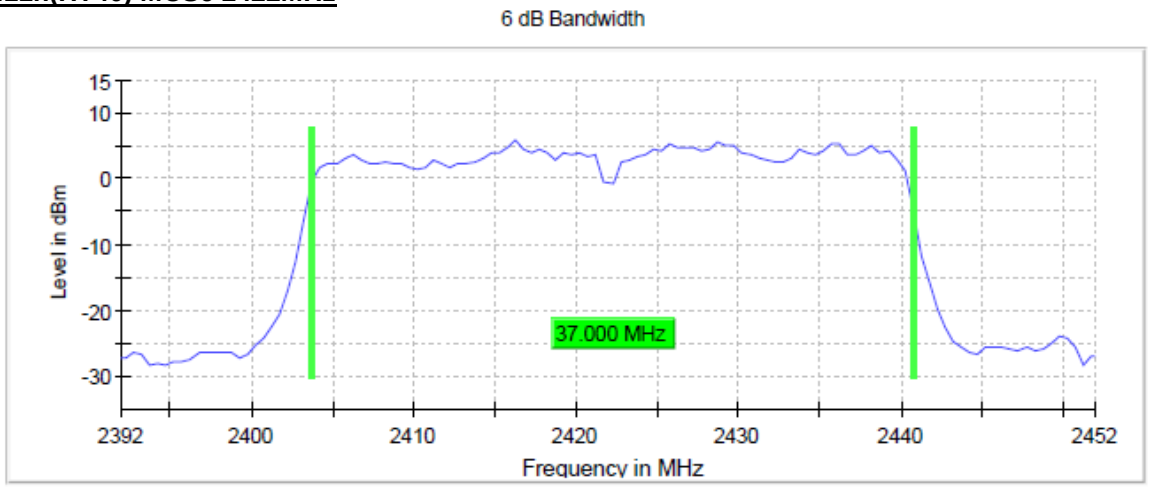


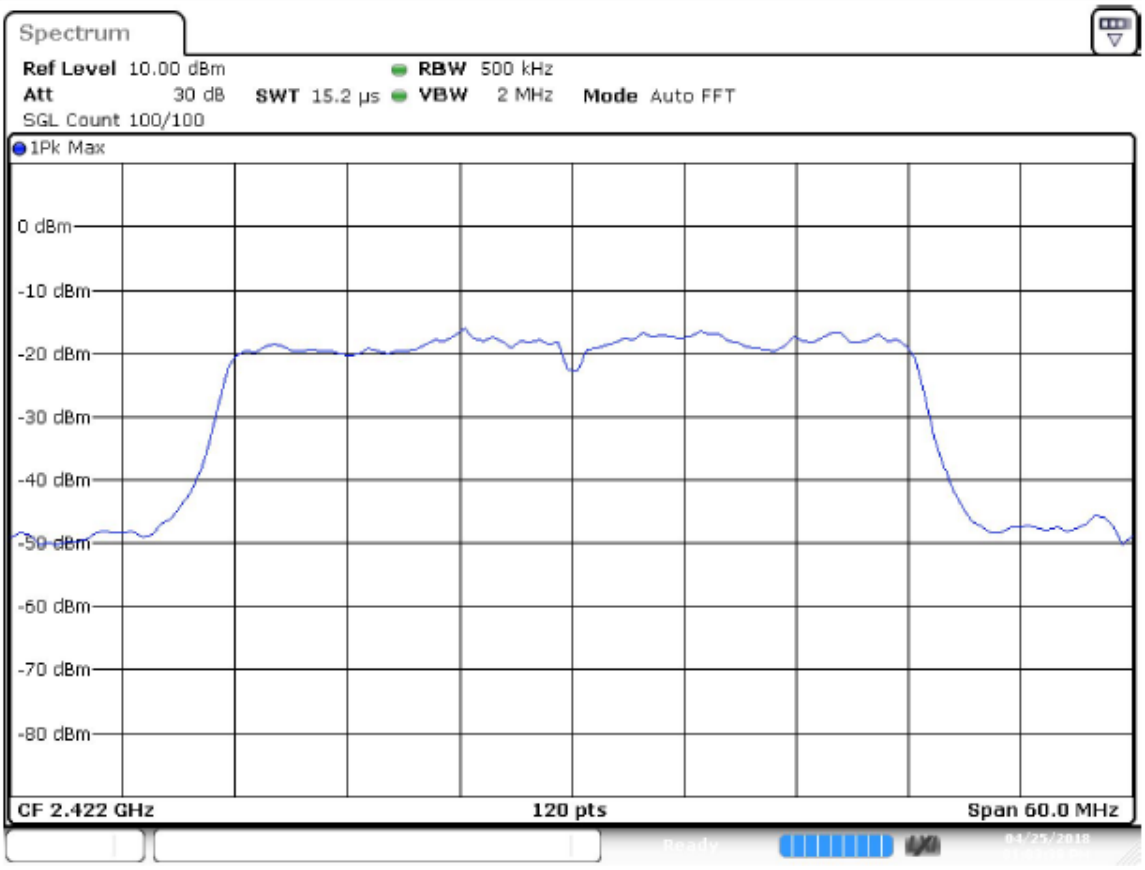
802.11n(HT20) MCS4 2462MHz





802.11n(HT40) MCS6 2422MHz





Conducted Band Edge

Test according to FCC KDB 558074 DTS Measurement Guidance v04 Section 11.

Measurement uncertainty calculated in accordance with ETSI TR 100 028-1. Expanded Uncertainty (K=2) < 0.8 dB

802.11b 1Mbps 2412MHz

Band Edge Low

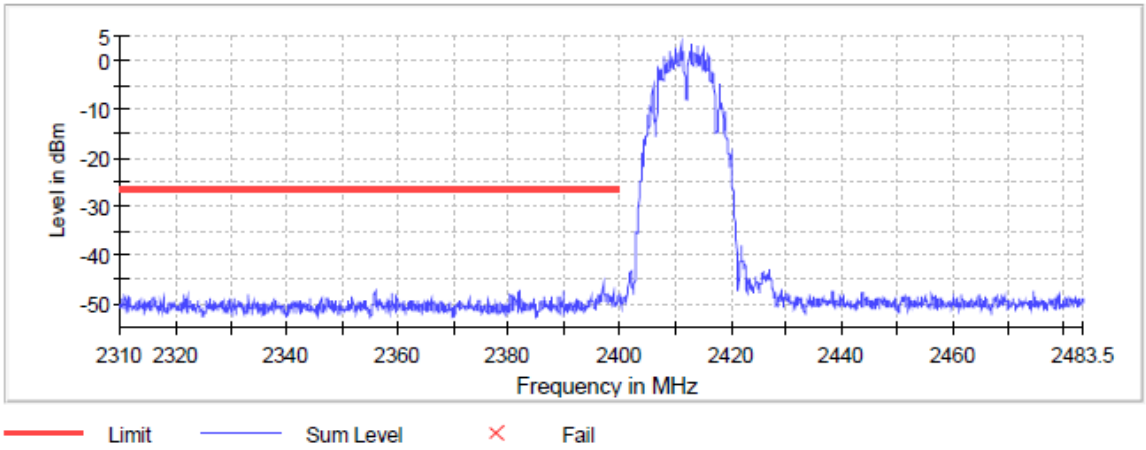
Inband Peak

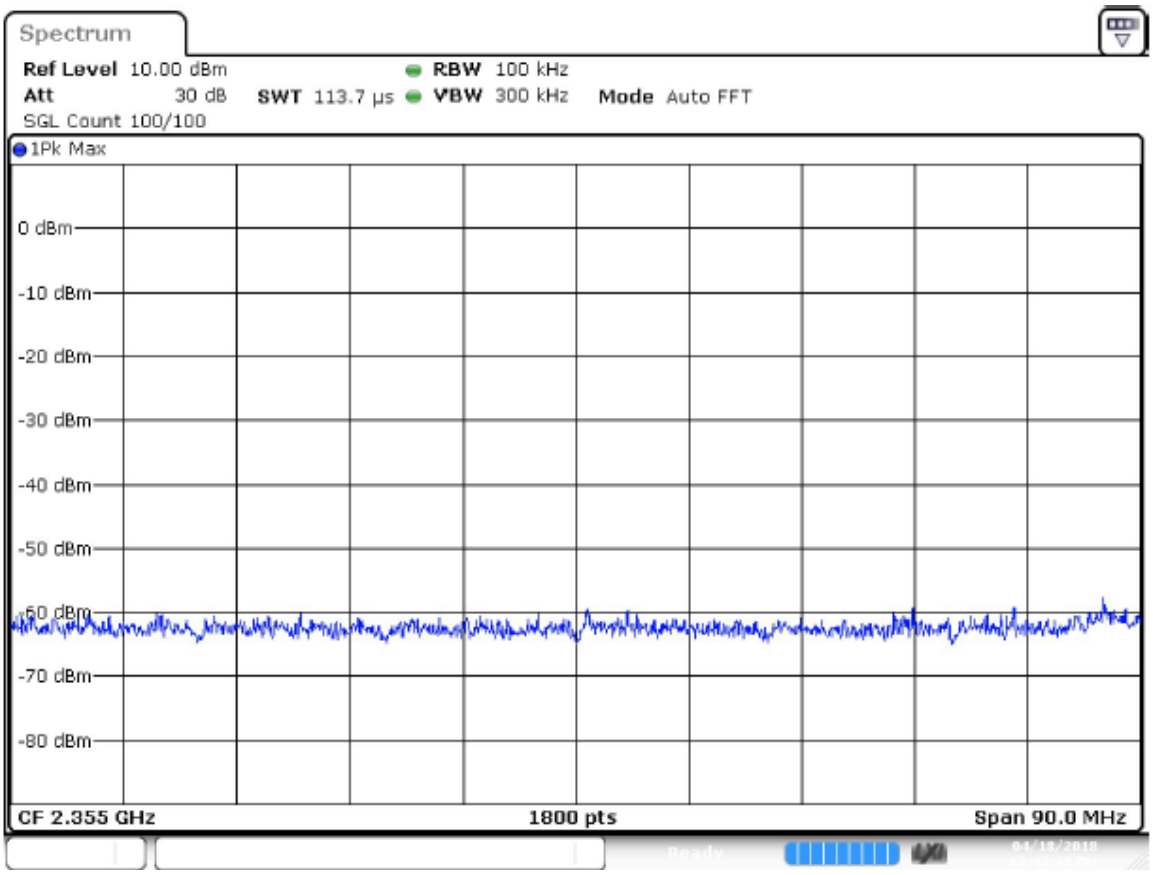
Frequency (MHz)	Level (dBm)
2412.975000	3.7

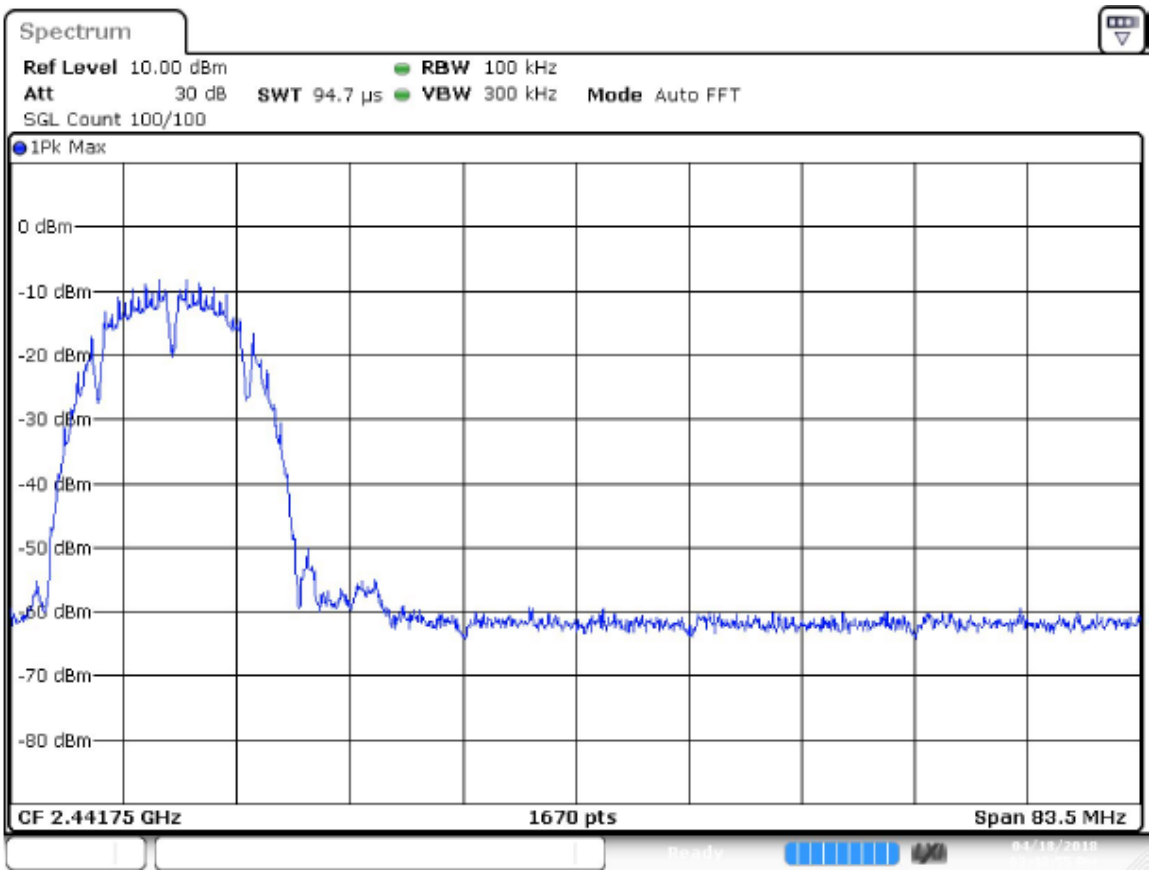
Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2396.975000	-45.9	19.6	-26.3	PASS
2397.025000	-46.0	19.7	-26.3	PASS
2397.075000	-47.1	20.7	-26.3	PASS
2397.125000	-47.2	20.9	-26.3	PASS
2389.925000	-47.4	21.1	-26.3	PASS
2381.825000	-47.5	21.1	-26.3	PASS
2397.225000	-47.5	21.2	-26.3	PASS
2389.875000	-47.5	21.2	-26.3	PASS
2355.925000	-47.7	21.3	-26.3	PASS
2381.775000	-47.7	21.4	-26.3	PASS
2398.825000	-47.7	21.4	-26.3	PASS
2396.925000	-47.8	21.5	-26.3	PASS
2398.775000	-47.9	21.5	-26.3	PASS
2397.925000	-47.9	21.5	-26.3	PASS
2359.075000	-47.9	21.6	-26.3	PASS

Band Edge




Spectrum
Ref Level 10.00 dBm
RBW 100 kHz
Att 30 dB
SWT 113.7 µs
VBW 300 kHz
Mode Auto FFT
SGL Count 100/100
1Pk Max
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
CF 2.355 GHz
1800 pts
Span 90.0 MHz



802.11b 1Mbps 2462MHz

Band Edge High

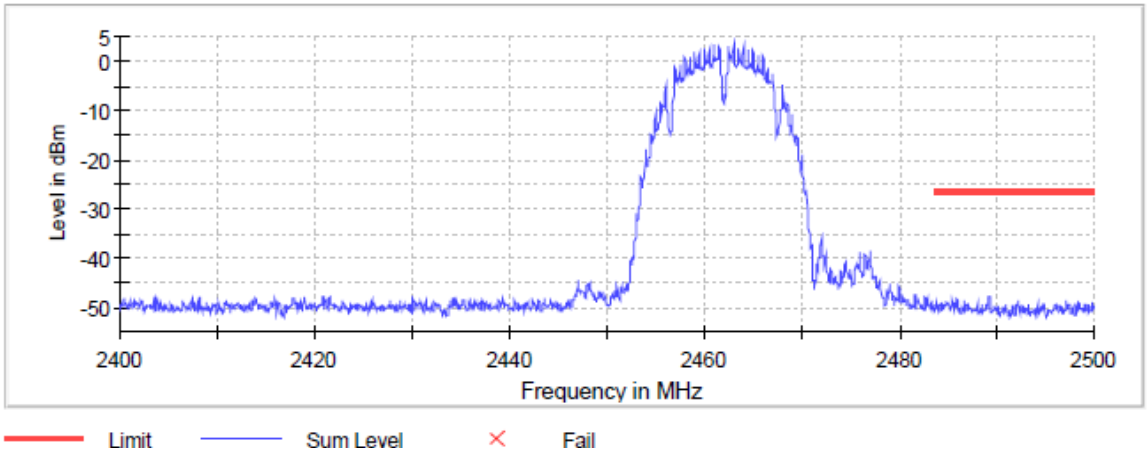
Inband Peak

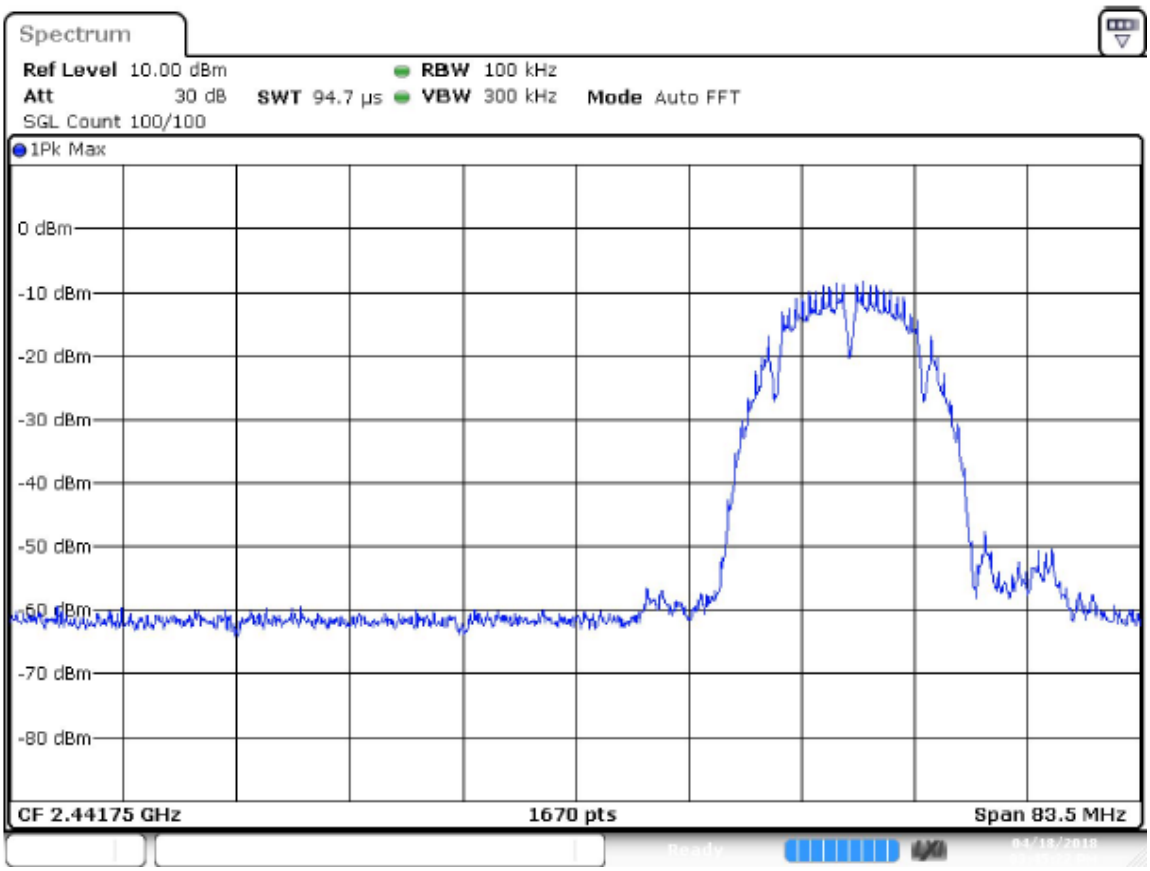
Frequency (MHz)	Level (dBm)
2462.975000	3.5

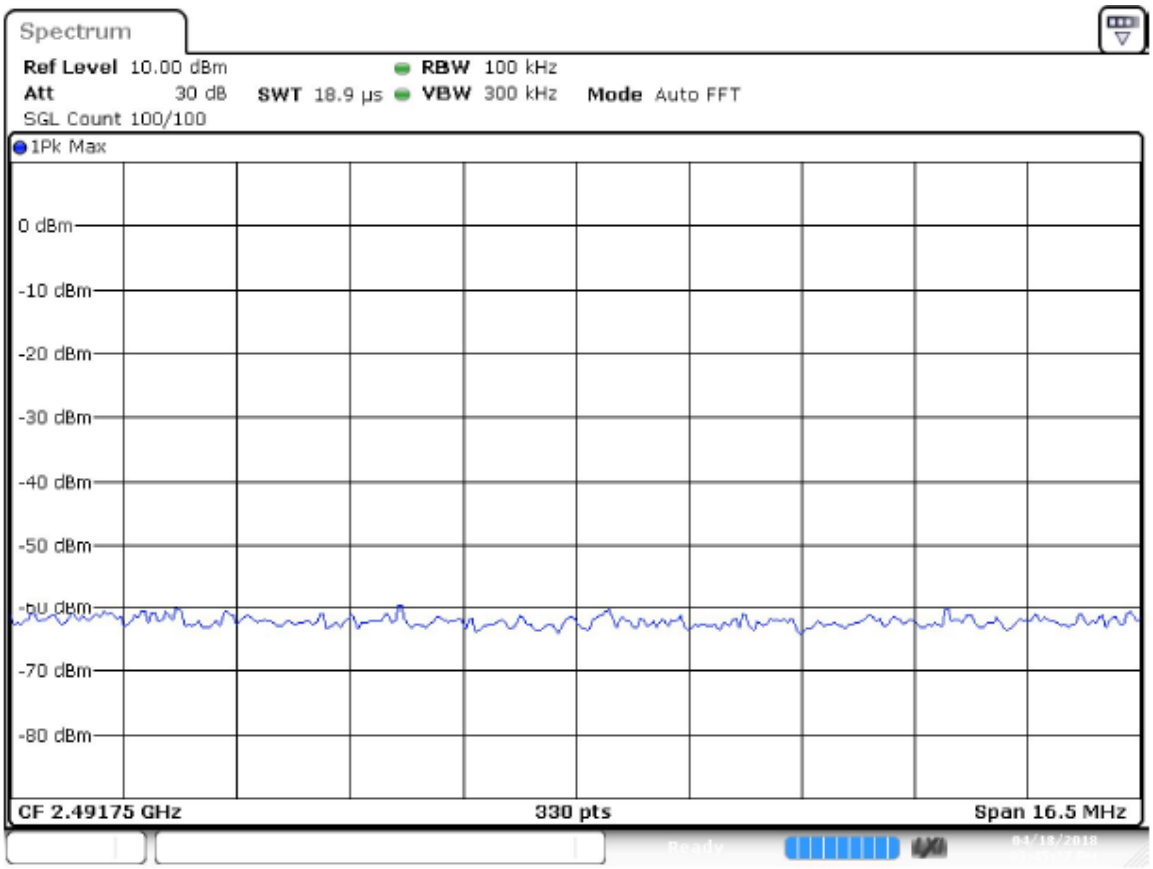
Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2489.175000	-47.9	21.4	-26.5	PASS
2489.225000	-47.9	21.5	-26.5	PASS
2485.925000	-48.4	21.9	-26.5	PASS
2497.175000	-48.5	22.1	-26.5	PASS
2485.975000	-48.6	22.2	-26.5	PASS
2497.125000	-48.6	22.2	-26.5	PASS
2492.225000	-48.6	22.2	-26.5	PASS
2485.425000	-48.7	22.2	-26.5	PASS
2485.475000	-48.7	22.3	-26.5	PASS
2486.675000	-48.8	22.4	-26.5	PASS
2492.175000	-48.8	22.4	-26.5	PASS
2499.825000	-48.8	22.4	-26.5	PASS
2484.875000	-48.9	22.4	-26.5	PASS
2485.775000	-48.9	22.4	-26.5	PASS
2483.825000	-48.9	22.5	-26.5	PASS

Band Edge




Spectrum
Ref Level 10.00 dBm
RBW 100 kHz
Att 30 dB
SWT 94.7 µs
VBW 300 kHz
Mode Auto FFT
SGL Count 100/100
1Pk Max
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
CF 2.44175 GHz
1670 pts
Span 83.5 MHz



802.11g 6 Mbps 2412MHz

Band Edge Low

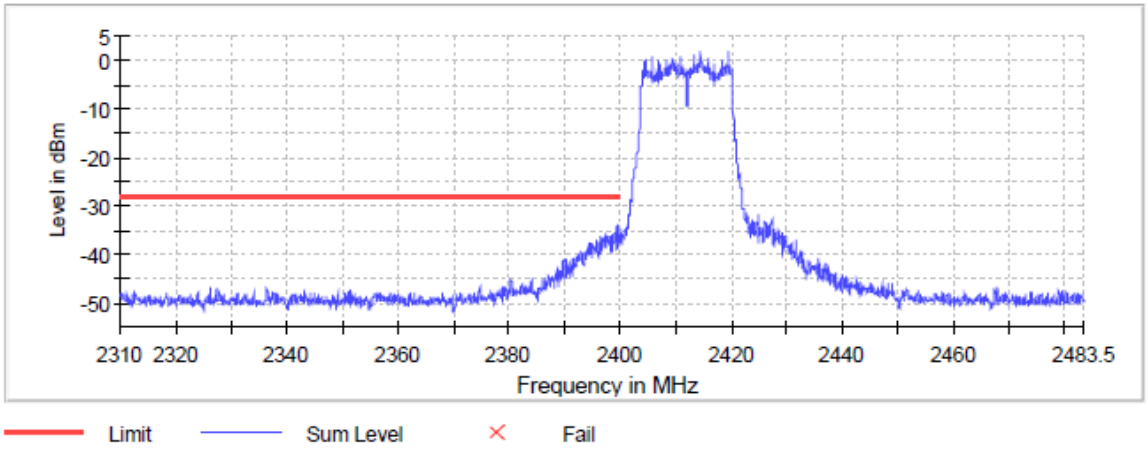
Inband Peak

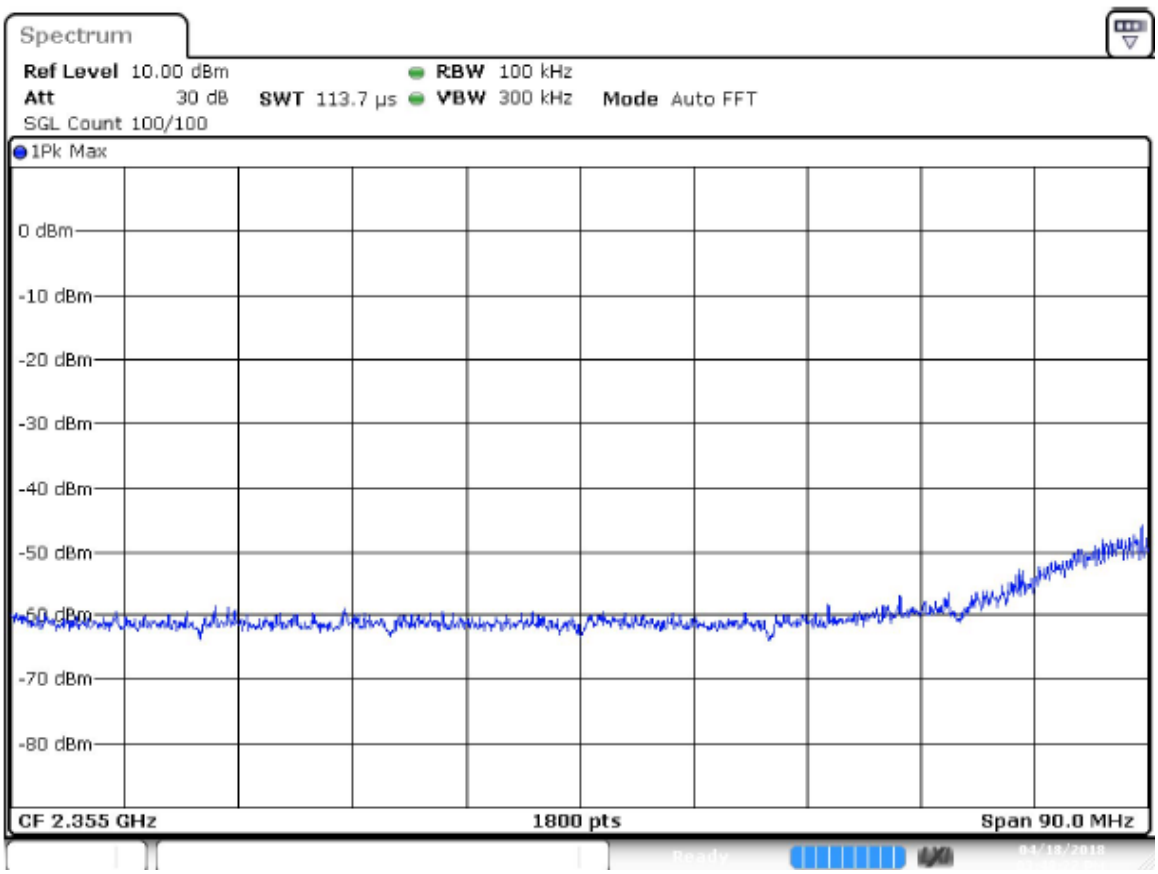
Frequency (MHz)	Level (dBm)
2414.475000	2.1

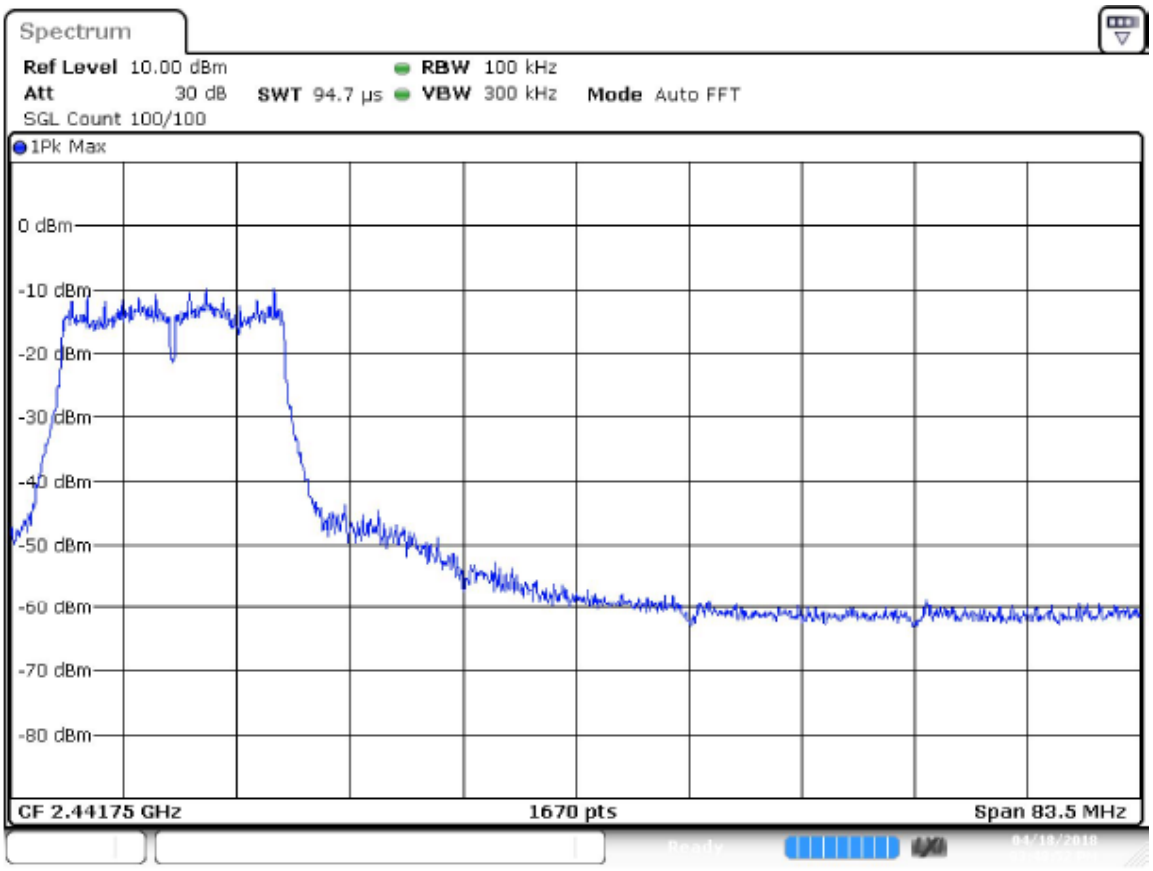
Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2399.475000	-33.9	6.0	-27.9	PASS
2399.425000	-34.4	6.5	-27.9	PASS
2399.525000	-34.5	6.6	-27.9	PASS
2398.875000	-35.5	7.6	-27.9	PASS
2398.475000	-35.8	7.9	-27.9	PASS
2398.525000	-35.9	8.0	-27.9	PASS
2399.825000	-36.0	8.1	-27.9	PASS
2399.875000	-36.0	8.1	-27.9	PASS
2397.875000	-36.1	8.2	-27.9	PASS
2397.575000	-36.1	8.2	-27.9	PASS
2398.825000	-36.1	8.2	-27.9	PASS
2397.625000	-36.1	8.2	-27.9	PASS
2396.375000	-36.1	8.3	-27.9	PASS
2399.075000	-36.2	8.3	-27.9	PASS
2397.825000	-36.3	8.4	-27.9	PASS

Band Edge




Spectrum
Ref Level 10.00 dBm
RBW 100 kHz
Att 30 dB
SWT 113.7 µs
VBW 300 kHz
Mode Auto FFT
SGL Count 100/100
1Pk Max
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
CF 2.355 GHz
1800 pts
Span 90.0 MHz



802.11g 6 Mbps 2462MHz

Band Edge High

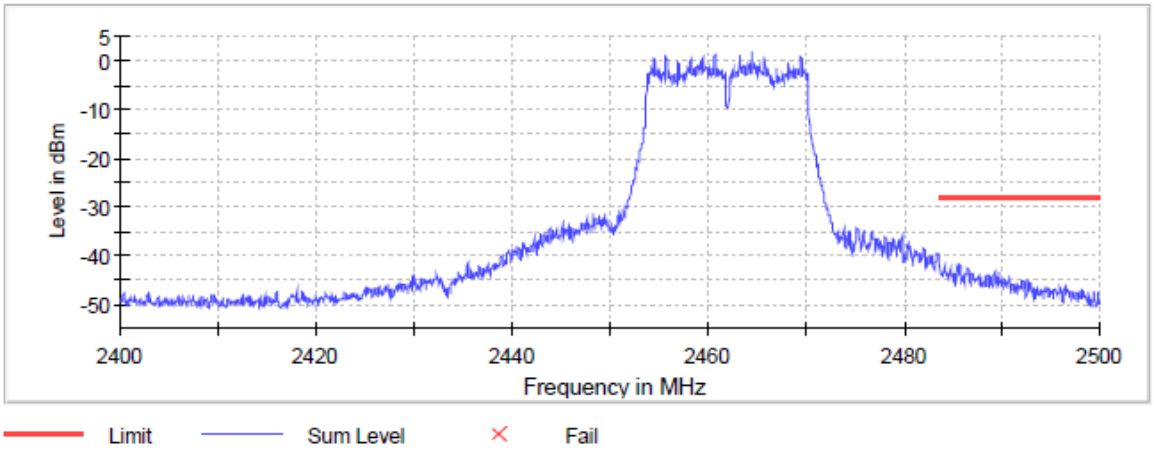
Inband Peak

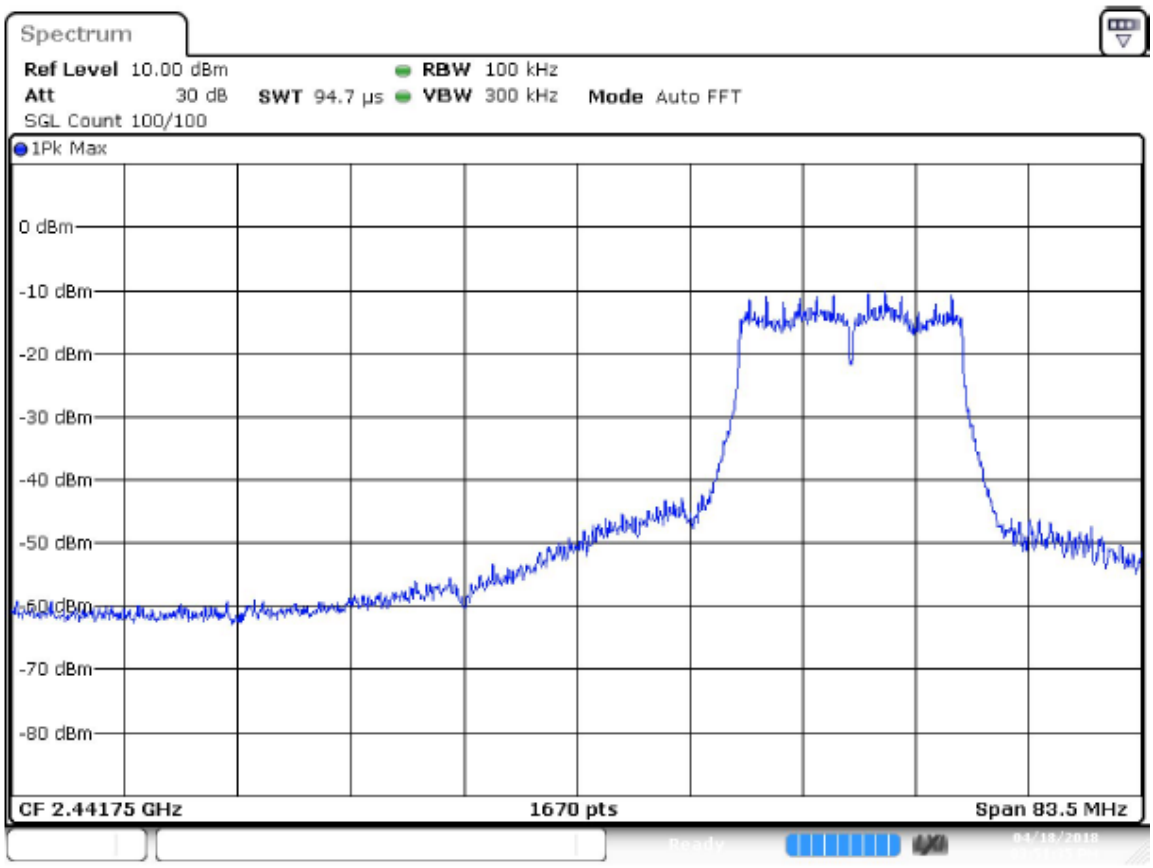
Frequency (MHz)	Level (dBm)
2464.475000	1.9

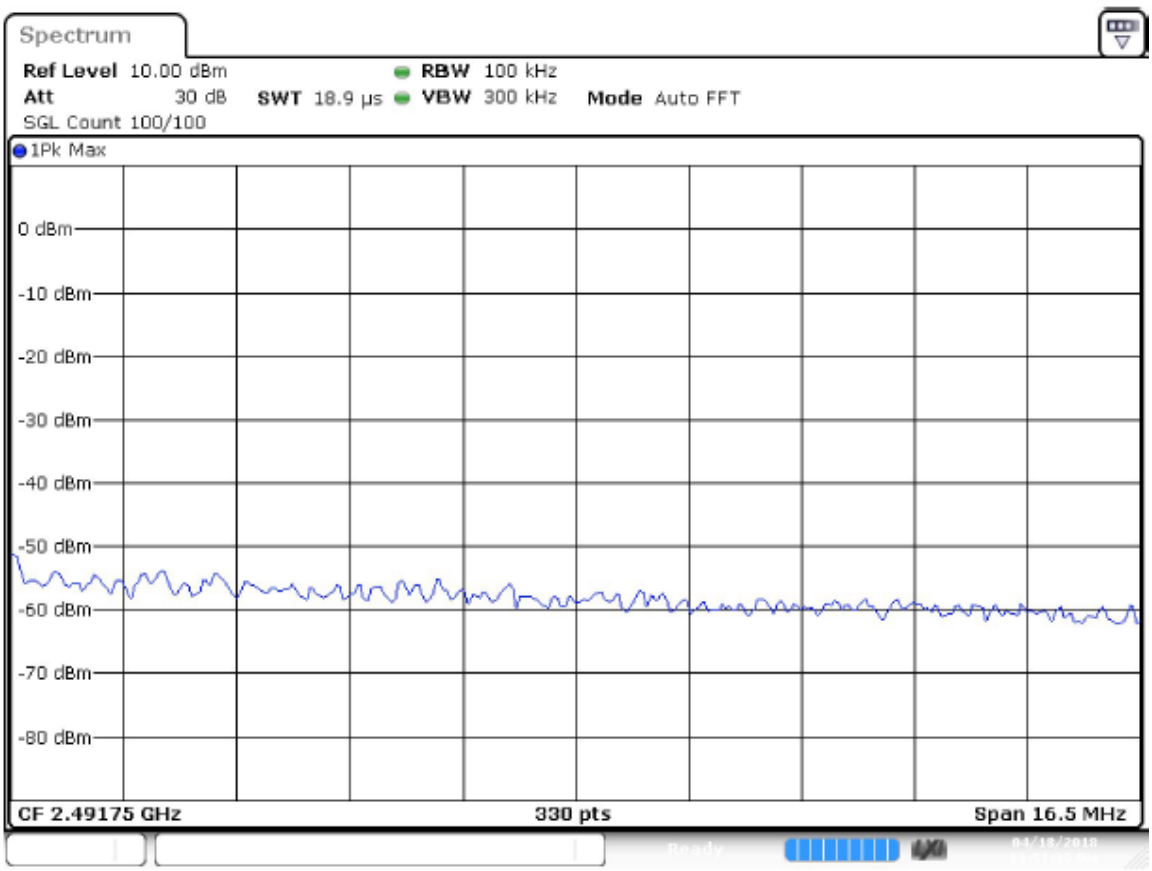
Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2483.575000	-39.5	11.4	-28.1	PASS
2483.525000	-39.6	11.5	-28.1	PASS
2483.625000	-40.0	11.8	-28.1	PASS
2485.725000	-42.0	13.9	-28.1	PASS
2483.675000	-42.1	13.9	-28.1	PASS
2485.775000	-42.2	14.1	-28.1	PASS
2484.175000	-42.3	14.2	-28.1	PASS
2485.475000	-42.4	14.3	-28.1	PASS
2484.125000	-42.4	14.3	-28.1	PASS
2485.675000	-42.4	14.3	-28.1	PASS
2484.225000	-42.5	14.4	-28.1	PASS
2486.525000	-42.5	14.4	-28.1	PASS
2485.425000	-42.6	14.5	-28.1	PASS
2486.475000	-42.6	14.5	-28.1	PASS
2484.725000	-42.7	14.6	-28.1	PASS

Band Edge




Spectrum
Ref Level 10.00 dBm
RBW 100 kHz
Att 30 dB
SWT 94.7 µs
VBW 300 kHz
Mode Auto FFT
SGL Count 100/100
1Pk Max
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
CF 2.44175 GHz
1670 pts
Span 83.5 MHz


Spectrum
Ref Level 10.00 dBm
RBW 100 kHz
Att 30 dB
SWT 18.9 µs
VBW 300 kHz
Mode Auto FFT
SGL Count 100/100
1Pk Max
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
CF 2.49175 GHz
330 pts
Span 16.5 MHz

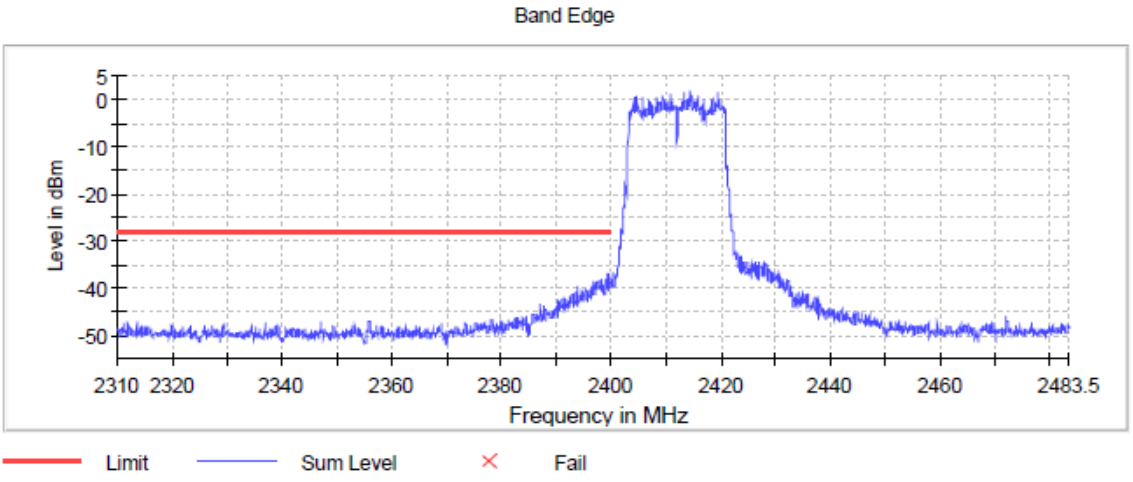
802.11n(HT20) MCS4 2412MHz
Band Edge Low

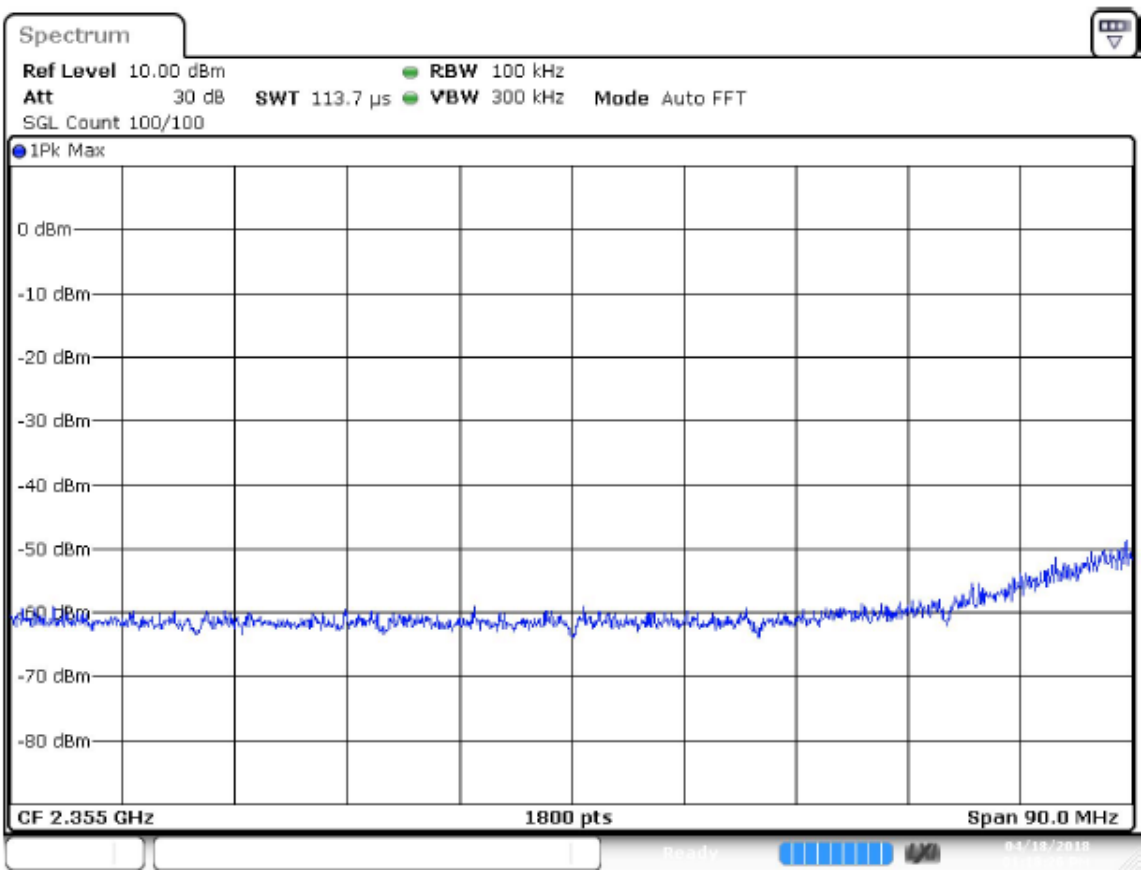
Inband Peak

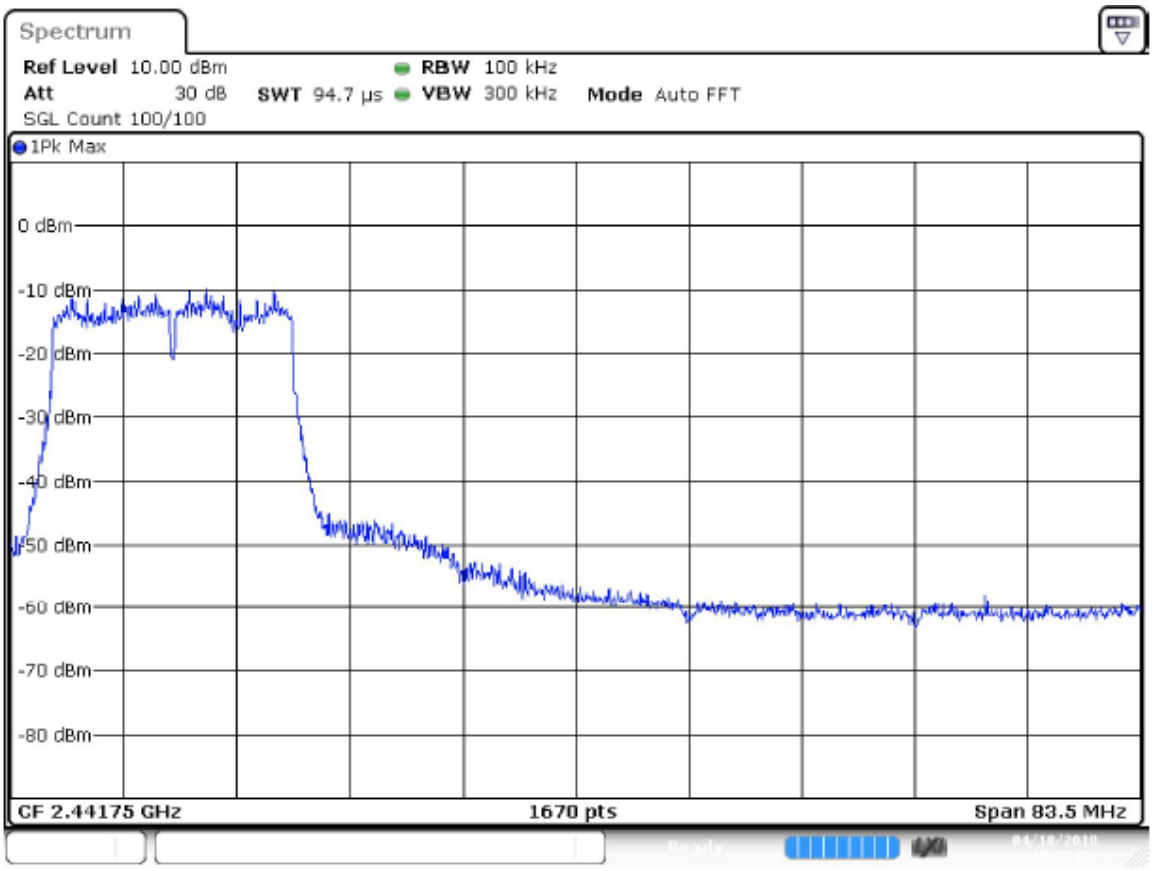
Frequency (MHz)	Level (dBm)
2414.475000	2.1

Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2399.475000	-36.9	9.0	-27.9	PASS
2399.425000	-37.0	9.1	-27.9	PASS
2399.525000	-37.6	9.7	-27.9	PASS
2399.175000	-38.0	10.1	-27.9	PASS
2399.125000	-38.2	10.3	-27.9	PASS
2398.225000	-38.2	10.3	-27.9	PASS
2398.875000	-38.2	10.3	-27.9	PASS
2397.675000	-38.4	10.4	-27.9	PASS
2396.675000	-38.6	10.7	-27.9	PASS
2398.825000	-38.6	10.7	-27.9	PASS
2399.575000	-38.6	10.7	-27.9	PASS
2399.825000	-38.7	10.8	-27.9	PASS
2397.625000	-38.7	10.8	-27.9	PASS
2398.925000	-38.7	10.8	-27.9	PASS
2396.625000	-38.8	10.8	-27.9	PASS




Spectrum
Ref Level 10.00 dBm
RBW 100 kHz
Att 30 dB
SWT 113.7 µs
VBW 300 kHz
Mode Auto FFT
SGL Count 100/100
1Pk Max
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
CF 2.355 GHz
1800 pts
Span 90.0 MHz



802.11n(HT20) MCS4 2462MHz

Band Edge High

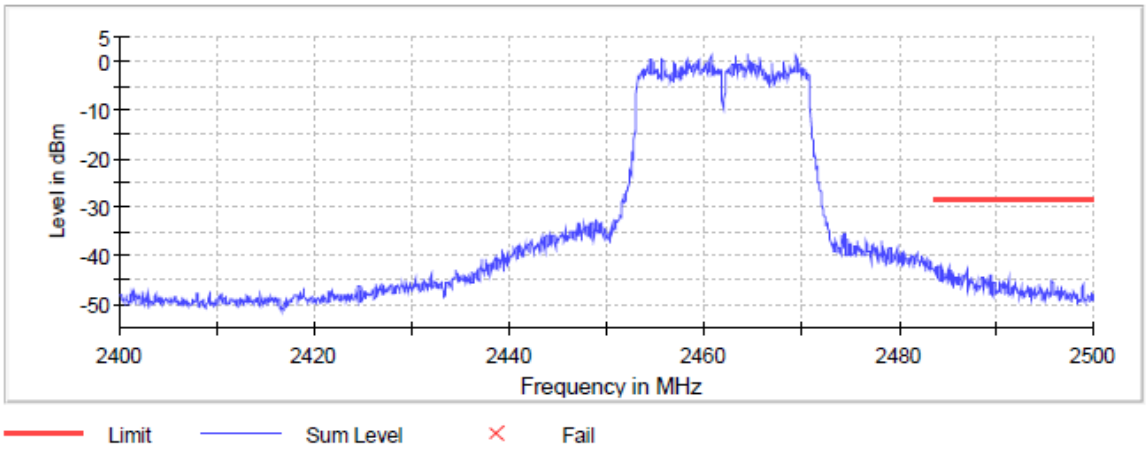
Inband Peak

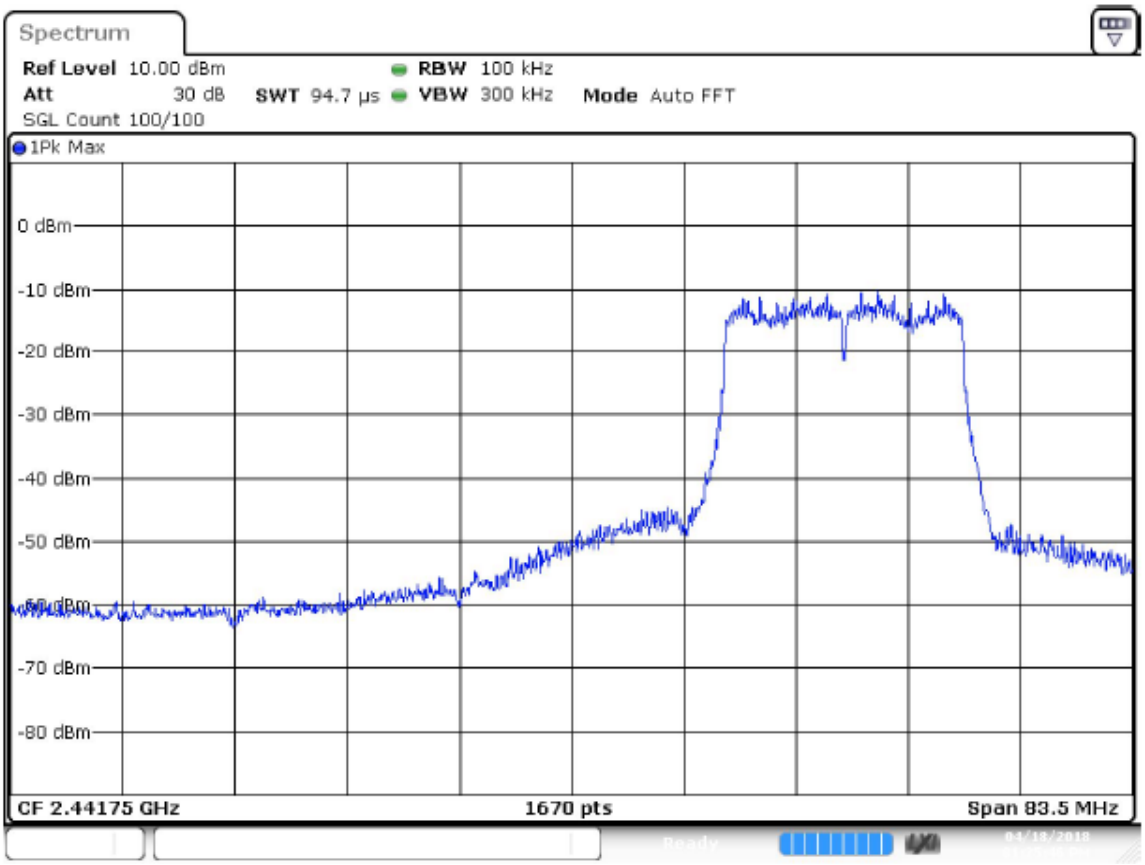
Frequency (MHz)	Level (dBm)
2464.475000	1.7

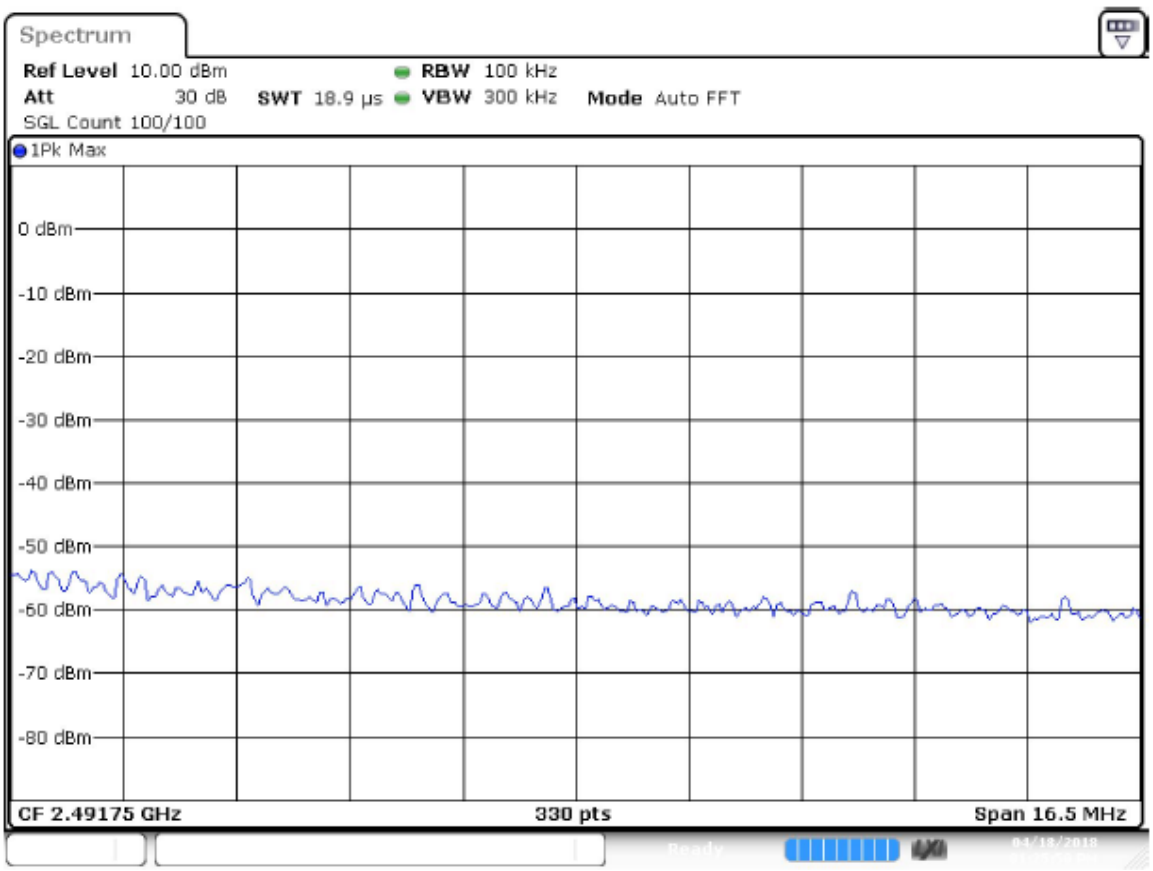
Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2483.825000	-42.1	13.7	-28.3	PASS
2484.125000	-42.3	13.9	-28.3	PASS
2484.425000	-42.3	14.0	-28.3	PASS
2484.475000	-42.3	14.0	-28.3	PASS
2484.075000	-42.4	14.0	-28.3	PASS
2485.125000	-42.4	14.1	-28.3	PASS
2483.625000	-42.4	14.1	-28.3	PASS
2483.875000	-42.5	14.1	-28.3	PASS
2483.525000	-42.7	14.3	-28.3	PASS
2483.575000	-42.7	14.4	-28.3	PASS
2485.175000	-42.8	14.5	-28.3	PASS
2485.425000	-42.9	14.5	-28.3	PASS
2484.175000	-42.9	14.5	-28.3	PASS
2486.975000	-43.0	14.7	-28.3	PASS
2483.675000	-43.0	14.7	-28.3	PASS

Band Edge




Spectrum
Ref Level 10.00 dBm
RBW 100 kHz
Att 30 dB
SWT 94.7 µs
VBW 300 kHz
Mode Auto FFT
SGL Count 100/100
1Pk Max
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
CF 2.44175 GHz
1670 pts
Span 83.5 MHz


Spectrum
Ref Level 10.00 dBm
RBW 100 kHz
Att 30 dB
SWT 18.9 µs
VBW 300 kHz
Mode Auto FFT
SGL Count 100/100
1Pk Max
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
CF 2.49175 GHz
330 pts
Span 16.5 MHz

802.11n(HT40) MCS6 2422MHz

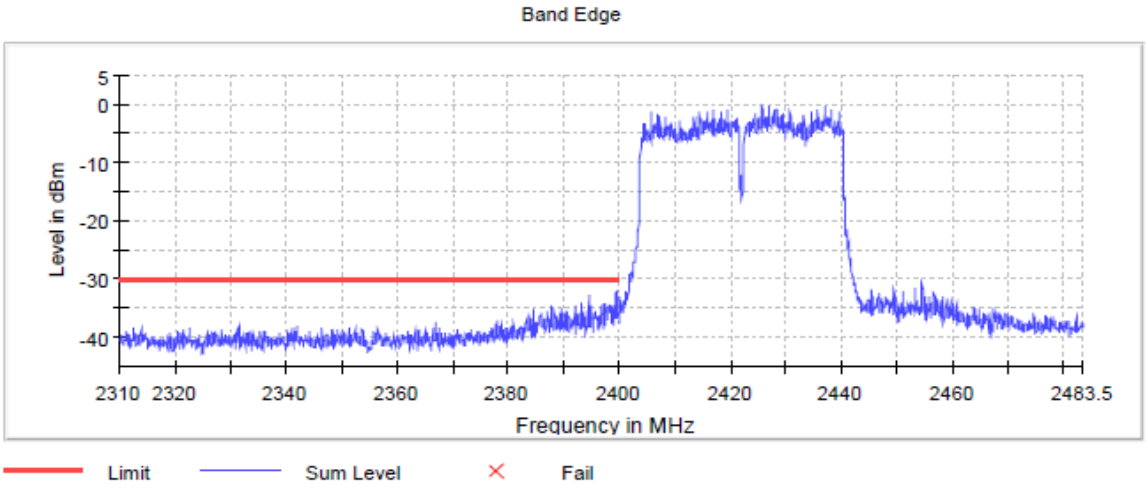
Band Edge Low

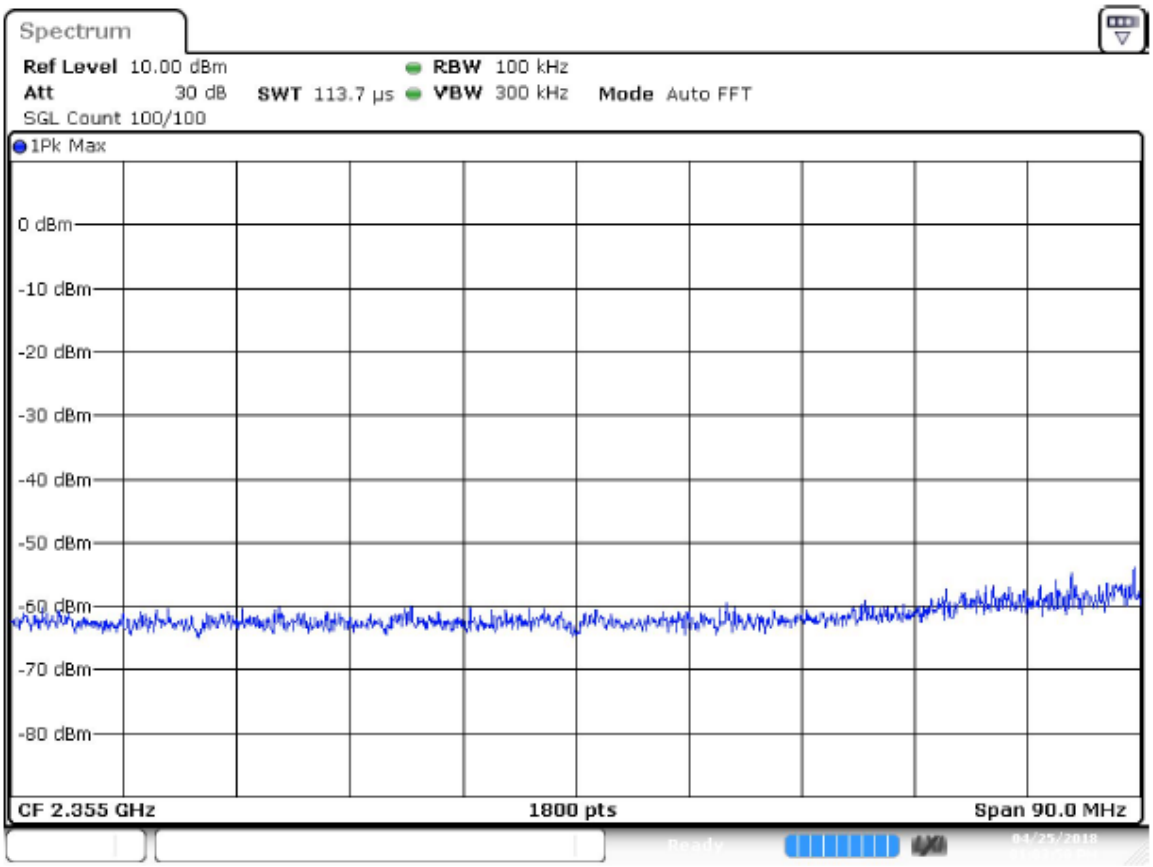
Inband Peak

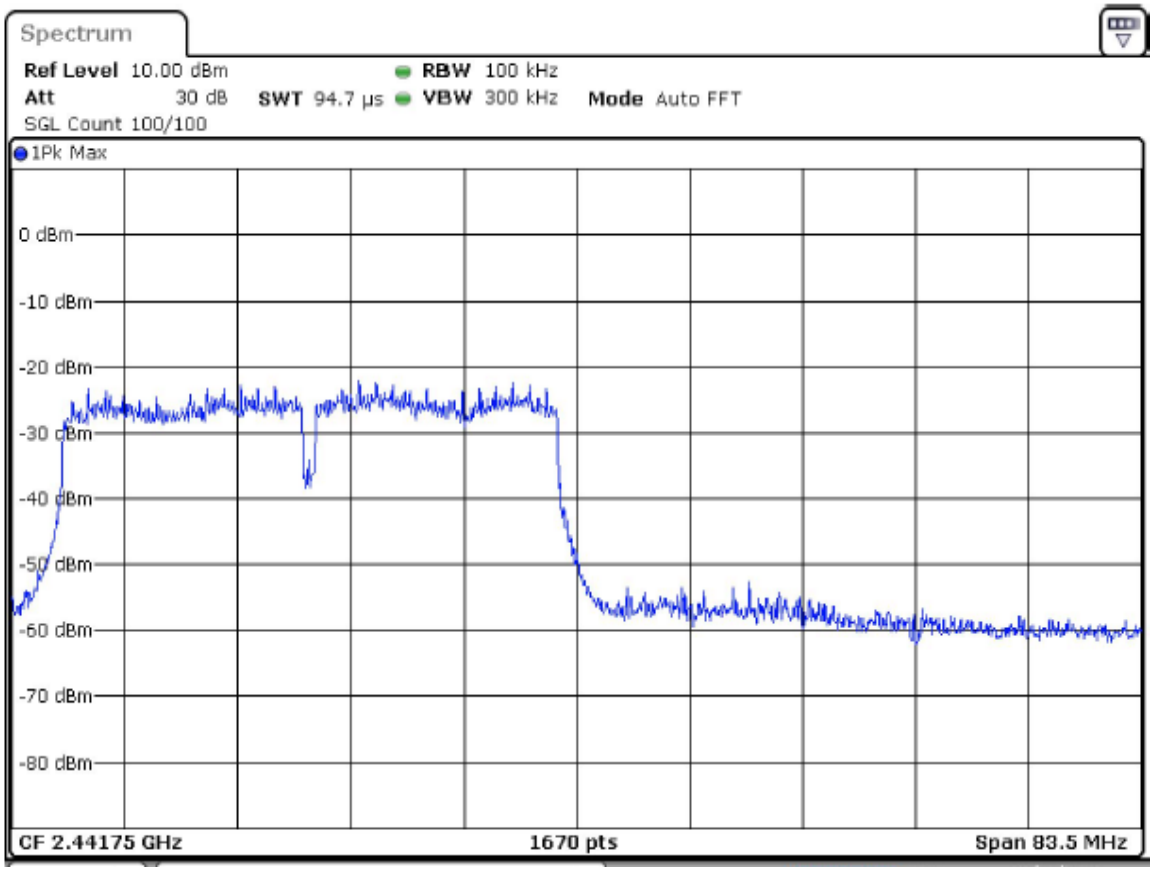
Frequency (MHz)	Level (dBm)
2425.725000	-0.2

Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2399.475000	-32.0	1.8	-30.2	PASS
2399.425000	-32.4	2.2	-30.2	PASS
2399.525000	-32.7	2.5	-30.2	PASS
2394.475000	-32.9	2.7	-30.2	PASS
2394.525000	-33.2	3.0	-30.2	PASS
2394.425000	-33.4	3.2	-30.2	PASS
2393.275000	-34.1	3.9	-30.2	PASS
2393.225000	-34.2	4.0	-30.2	PASS
2397.275000	-34.4	4.2	-30.2	PASS
2397.325000	-34.4	4.2	-30.2	PASS
2398.475000	-34.6	4.4	-30.2	PASS
2398.025000	-34.6	4.4	-30.2	PASS
2398.525000	-34.7	4.5	-30.2	PASS
2399.125000	-34.7	4.5	-30.2	PASS
2399.175000	-34.7	4.5	-30.2	PASS




Spectrum
Ref Level 10.00 dBm
RBW 100 kHz
Att 30 dB
SWT 113.7 µs
VBW 300 kHz
Mode Auto FFT
SGL Count 100/100
1Pk Max
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
CF 2.355 GHz
1800 pts
Span 90.0 MHz



802.11n(HT40) MCS6 2452MHz

Band Edge High

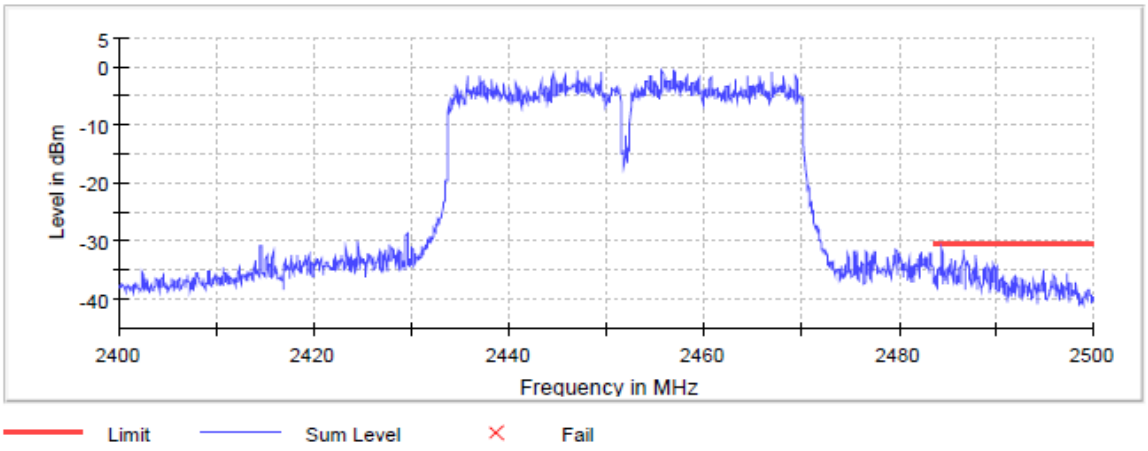
Inband Peak

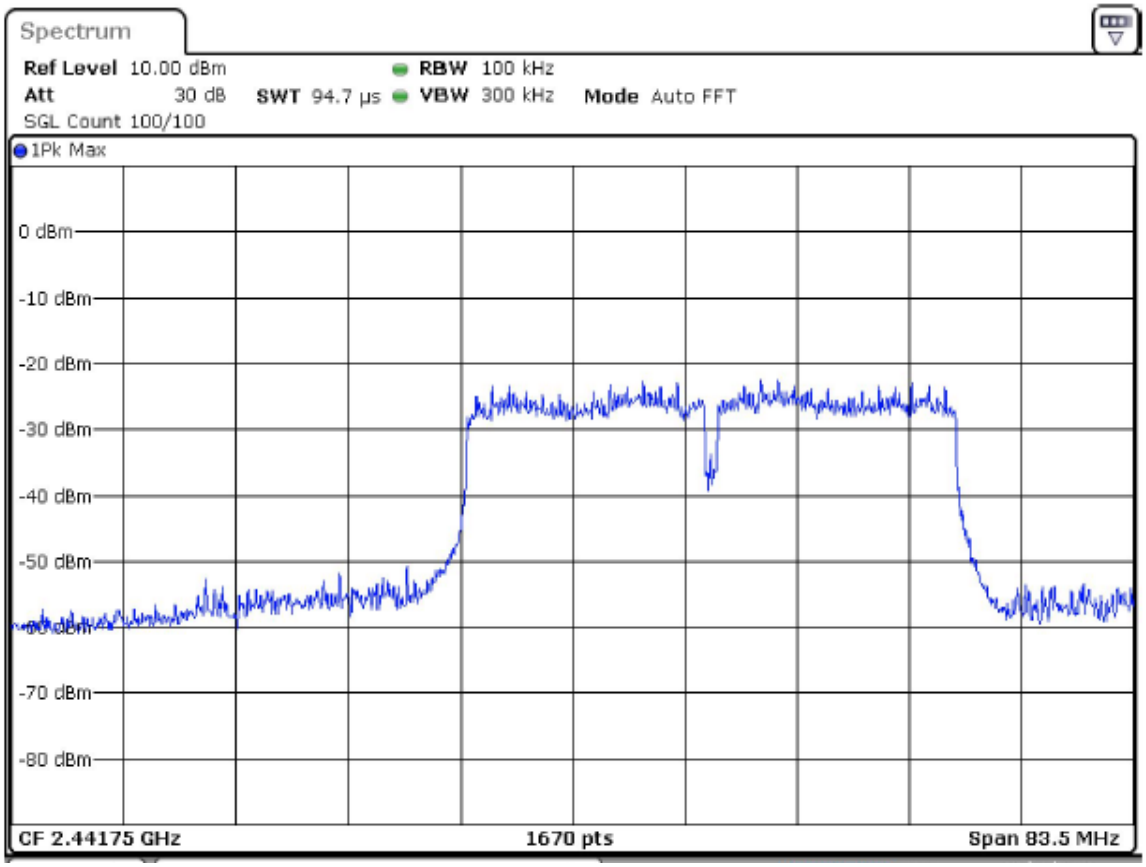
Frequency (MHz)	Level (dBm)
2456.975000	-0.5

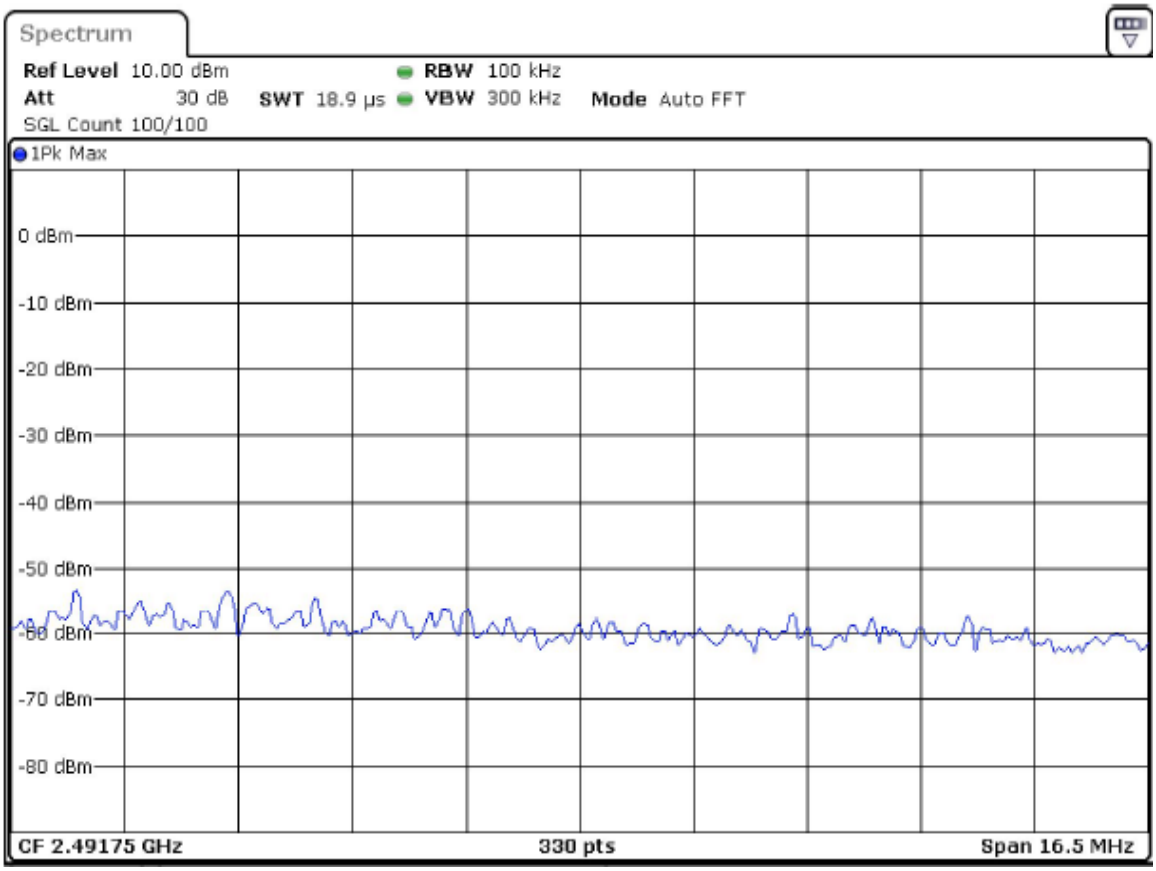
Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2484.475000	-31.2	0.7	-30.5	PASS
2486.675000	-31.5	1.0	-30.5	PASS
2484.425000	-31.6	1.1	-30.5	PASS
2486.625000	-31.8	1.3	-30.5	PASS
2484.525000	-32.3	1.8	-30.5	PASS
2486.725000	-32.3	1.8	-30.5	PASS
2487.925000	-32.6	2.1	-30.5	PASS
2487.975000	-32.9	2.4	-30.5	PASS
2486.575000	-32.9	2.4	-30.5	PASS
2485.375000	-33.1	2.6	-30.5	PASS
2485.425000	-33.2	2.6	-30.5	PASS
2487.075000	-33.3	2.8	-30.5	PASS
2485.825000	-33.4	2.9	-30.5	PASS
2485.775000	-33.4	2.9	-30.5	PASS
2487.025000	-33.6	3.1	-30.5	PASS

Band Edge




Spectrum
Ref Level 10.00 dBm
RBW 100 kHz
Att 30 dB
SWT 94.7 µs
VBW 300 kHz
Mode Auto FFT
SGL Count 100/100
1Pk Max
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-70 dBm
-80 dBm
CF 2.44175 GHz
1670 pts
Span 83.5 MHz


Spectrum
Ref Level 10.00 dBm
RBW 100 kHz
Att 30 dB
SWT 18.9 µs
VBW 300 kHz
Mode Auto FFT
SGL Count 100/100
1Pk Max
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
CF 2.49175 GHz
330 pts
Span 16.5 MHz

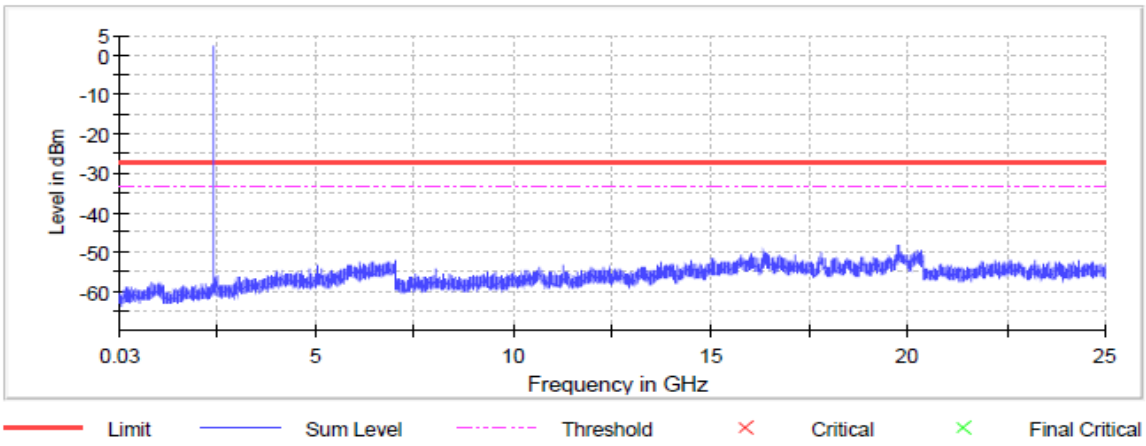
Conducted Spurious Emissions

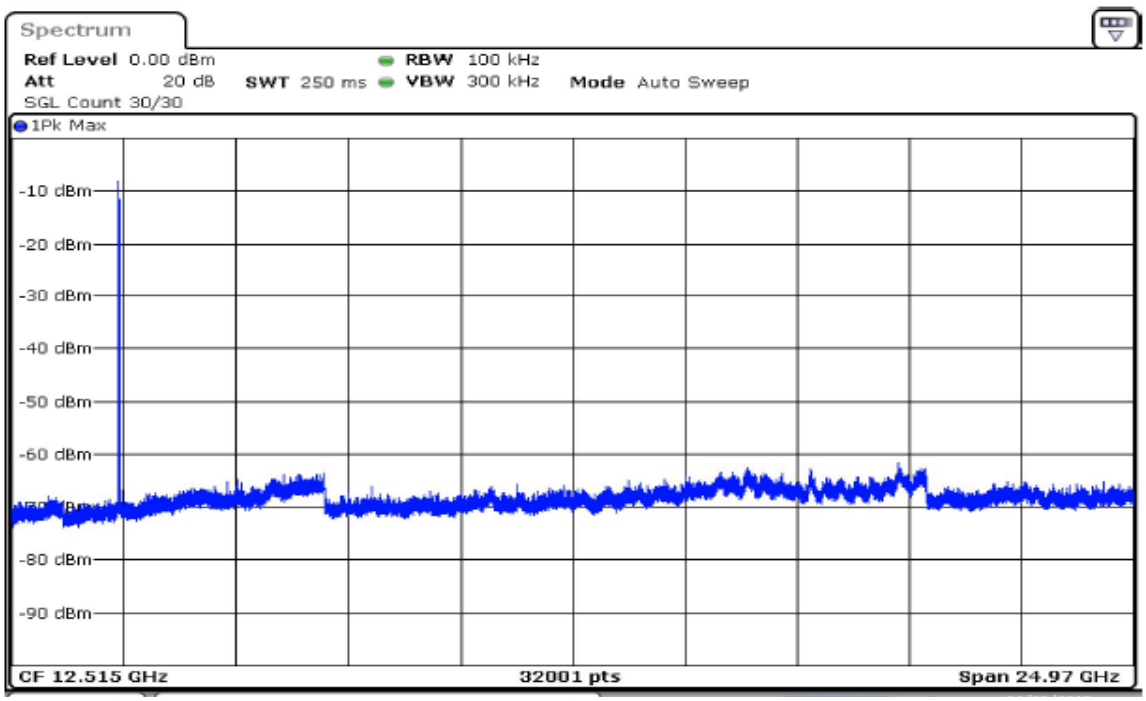
Test according to FCC KDB 558074 DTS Measurement Guidance v04 Section 11.
Measurement uncertainty calculated in accordance with ETSI TR 100 028-1. Expanded Uncertainty (K=2) < 1.8 dB

802.11b 1 Mbps 2412MHz

Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
19754.513140	-48.2	20.8	-27.4
19763.096309	-48.3	20.9	-27.4
19805.231868	-49.4	22.0	-27.4
19750.611700	-49.5	22.1	-27.4
19793.527546	-49.6	22.1	-27.4
20257.798975	-49.6	22.2	-27.4
20362.357583	-49.7	22.3	-27.4
19817.716478	-49.8	22.4	-27.4
20310.078279	-49.8	22.4	-27.4
17806.133715	-49.8	22.4	-27.4
20263.260992	-49.9	22.4	-27.4
19771.679479	-49.9	22.5	-27.4
16392.251648	-50.0	22.5	-27.4
19798.989563	-50.0	22.5	-27.4
19784.164089	-50.0	22.6	-27.4

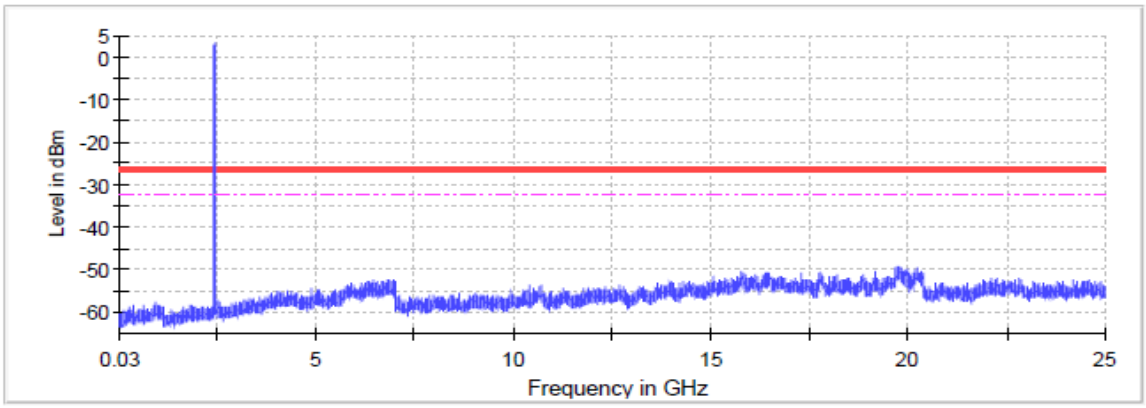


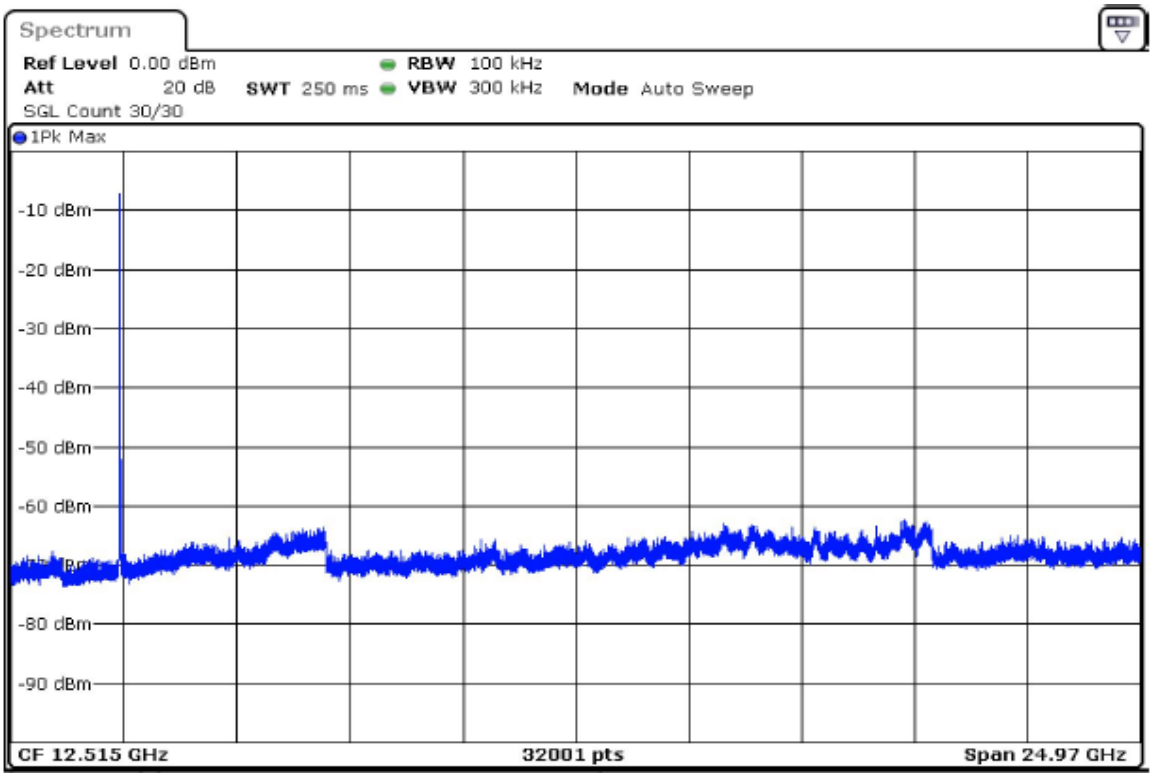


802.11b 1 Mbps 2437MHz

Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
19795.088122	-49.0	22.6	-26.4
19745.929971	-49.3	22.8	-26.4
19815.375613	-49.4	23.0	-26.4
19791.186682	-49.4	23.0	-26.4
19775.580919	-49.5	23.1	-26.4
19776.361207	-49.6	23.1	-26.4
19701.453548	-49.6	23.1	-26.4
20245.314365	-49.6	23.2	-26.4
19800.550139	-49.8	23.3	-26.4
19762.316021	-49.8	23.3	-26.4
19777.921784	-49.8	23.4	-26.4
20226.587450	-49.9	23.5	-26.4
20247.655230	-49.9	23.5	-26.4
19820.057342	-50.0	23.5	-26.4
19790.406394	-50.0	23.5	-26.4

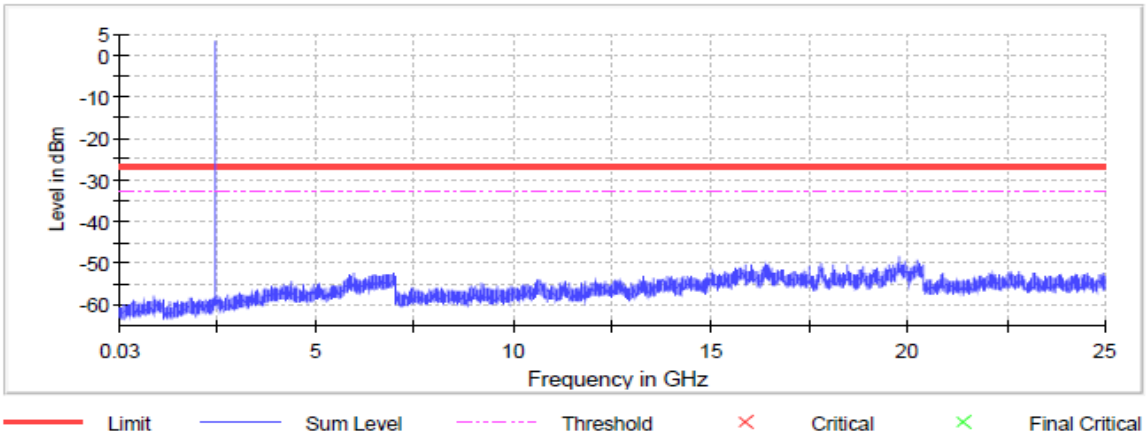

Level in dBm
5
0
-10
-20
-30
-40
-50
-60
0.03
5
10
15
20
25
Frequency in GHz
Limit
Sum Level
Threshold
Critical
Final Critical

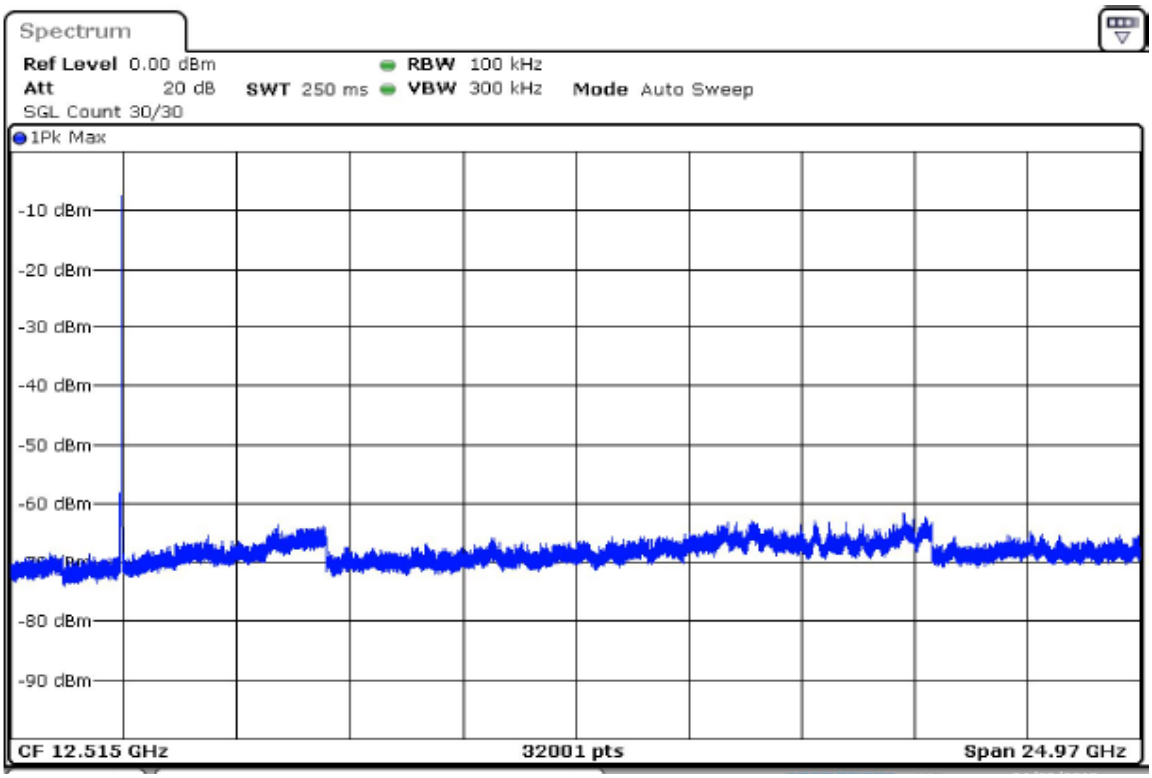

Spectrum
Ref Level 0.00 dBm
RBW 100 kHz
Att 20 dB
SWT 250 ms
VBW 300 kHz
Mode Auto Sweep
SGL Count 30/30
1Pk Max
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-80 dBm
-90 dBm
CF 12.515 GHz
32001 pts
Span 24.97 GHz

802.11b 1Mbps 2462MHz

Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
19759.975157	-48.2	21.5	-26.8
19780.262648	-48.6	21.8	-26.8
19774.800631	-48.9	22.1	-26.8
20239.852348	-49.2	22.4	-26.8
19958.948627	-49.5	22.7	-26.8
20253.117246	-49.5	22.7	-26.8
19781.042936	-49.8	23.0	-26.8
20232.829755	-49.8	23.0	-26.8
20296.813381	-49.9	23.1	-26.8
19803.671292	-49.9	23.1	-26.8
19767.778038	-49.9	23.2	-26.8
19792.747258	-49.9	23.2	-26.8
17788.187088	-50.0	23.2	-26.8
17794.429393	-50.0	23.2	-26.8
19754.513140	-50.0	23.3	-26.8

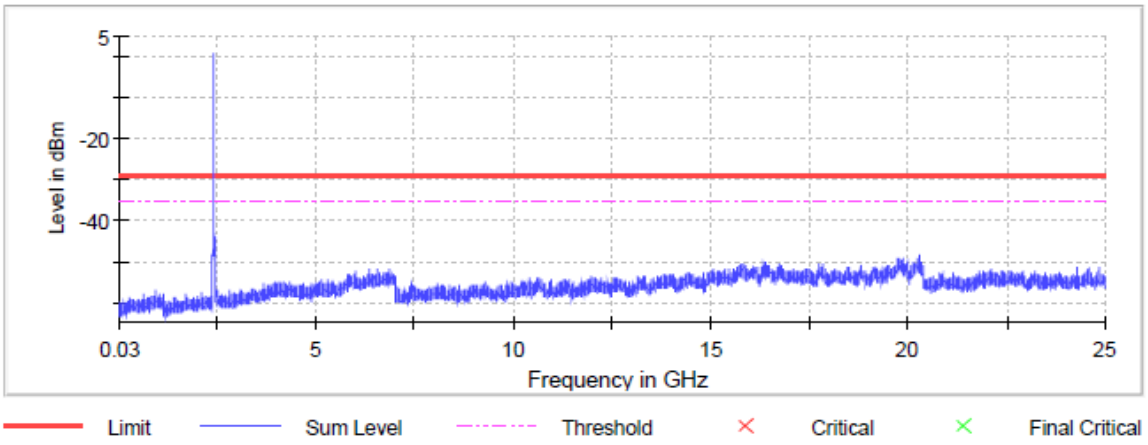


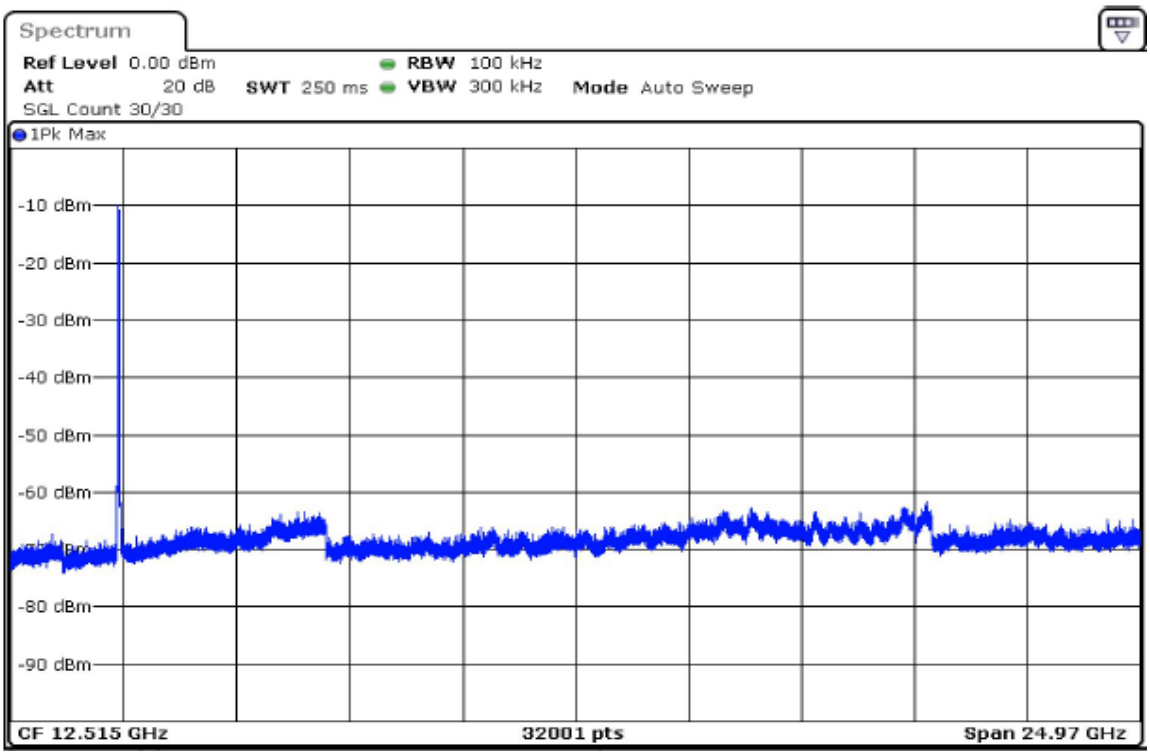

Spectrum
Ref Level 0.00 dBm
RBW 100 kHz
Att 20 dB
SWT 250 ms
VBW 300 kHz
Mode Auto Sweep
SGL Count 30/30
1Pk Max
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-80 dBm
-90 dBm
CF 12.515 GHz
32001 pts
Span 24.97 GHz

802.11g 6 Mbps 2412MHz

Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
2398.564576	-37.8	8.8	-29.1
2399.344864	-38.4	9.4	-29.1
2397.004000	-39.1	10.1	-29.1
2397.784288	-39.3	10.2	-29.1
2396.223712	-39.4	10.3	-29.1
2395.443424	-41.0	11.9	-29.1
2393.882847	-41.0	12.0	-29.1
2394.663136	-41.6	12.6	-29.1
2393.102559	-43.7	14.6	-29.1
2391.541983	-43.8	14.8	-29.1
2390.761695	-44.8	15.7	-29.1
2392.322271	-44.8	15.8	-29.1
2389.201119	-45.0	15.9	-29.1
2389.981407	-45.7	16.6	-29.1
2387.640542	-46.1	17.1	-29.1

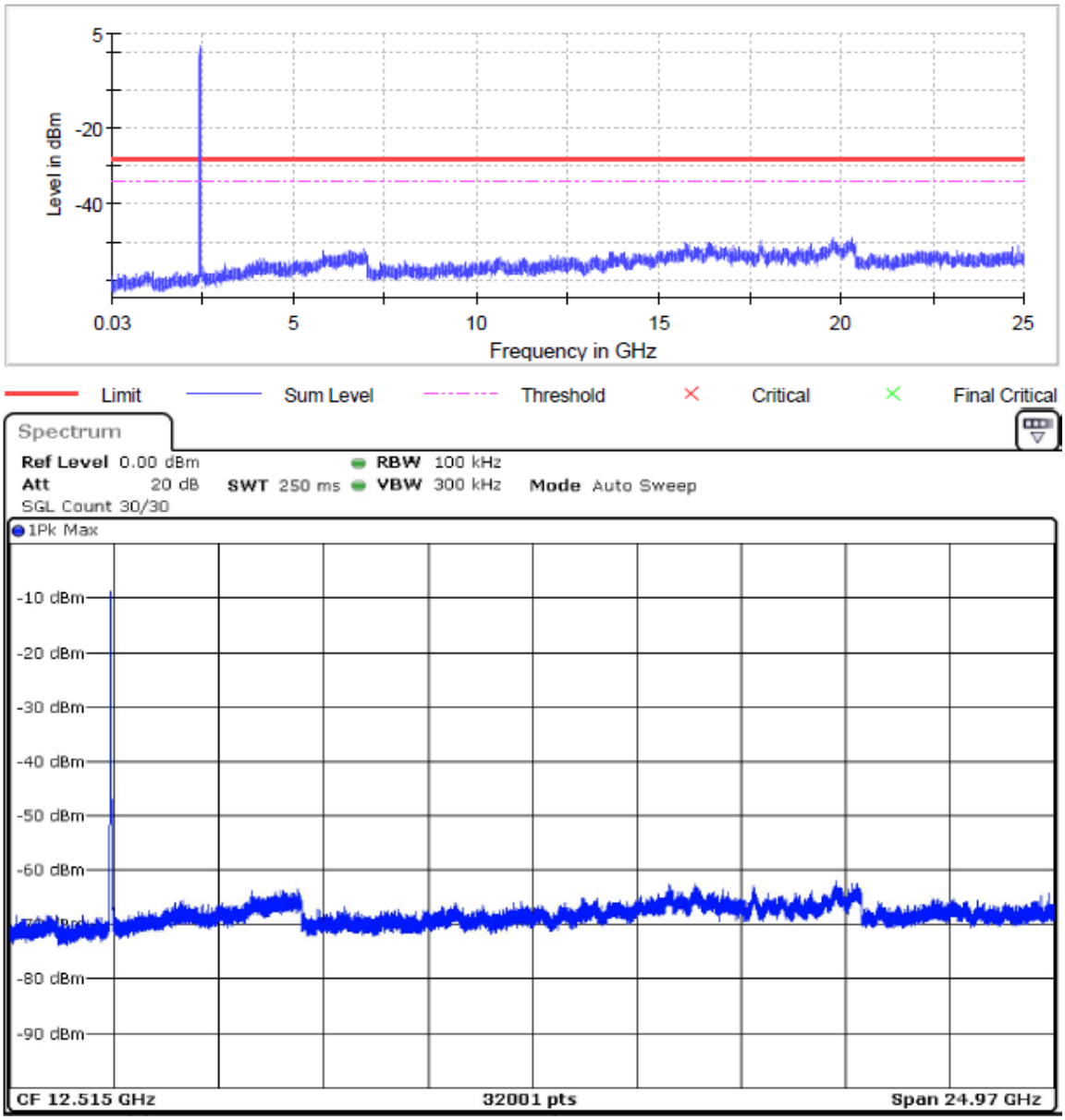




802.11g 6 Mbps 2437MHz

Pre Measurements

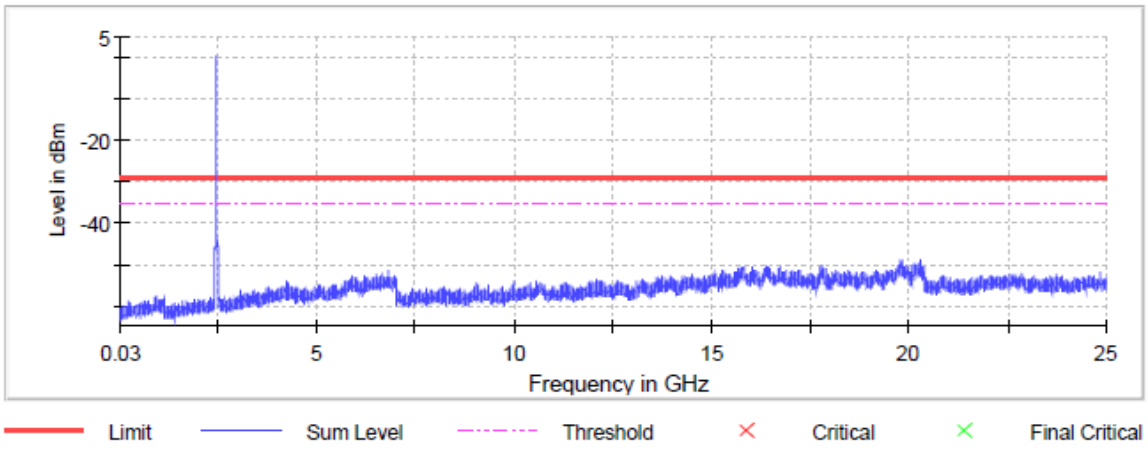
Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
19777.921784	-48.7	20.7	-28.0
20293.692228	-49.5	21.4	-28.0
19738.907378	-49.6	21.5	-28.0
20264.821568	-49.6	21.6	-28.0
20167.285554	-49.7	21.6	-28.0
19750.611700	-49.7	21.6	-28.0
19773.240055	-49.7	21.7	-28.0
19762.316021	-49.8	21.8	-28.0
19798.989563	-49.8	21.8	-28.0
17787.406800	-49.9	21.9	-28.0
19781.042936	-49.9	21.9	-28.0
19734.225649	-49.9	21.9	-28.0
19738.127090	-50.0	21.9	-28.0
19741.248242	-50.0	21.9	-28.0
19852.049155	-50.0	21.9	-28.0

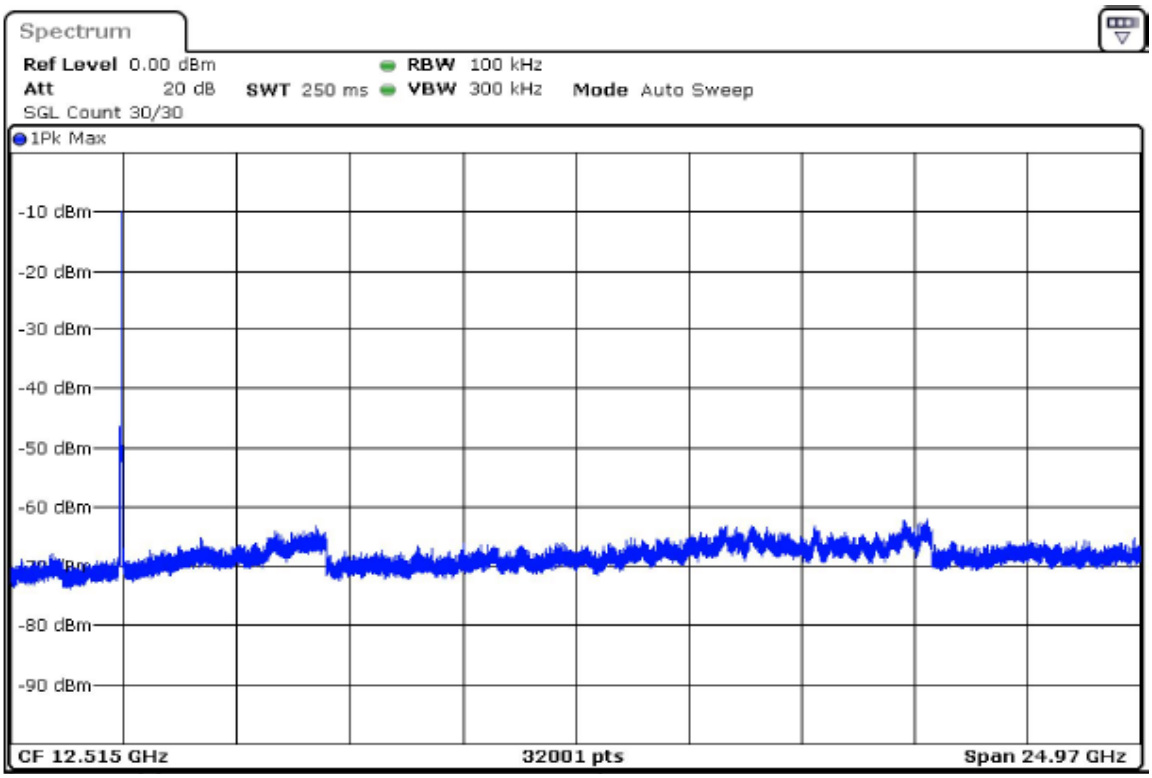

5
-20
-40
Level in dBm
0.03
5
10
15
20
25
Frequency in GHz
Limit
Sum Level
Threshold
Critical
Final Critical
Spectrum
Ref Level 0.00 dBm
RBW 100 kHz
Att 20 dB
SWT 250 ms
VBW 300 kHz
Mode Auto Sweep
SGL Count 30/30
1Pk Max
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-80 dBm
-90 dBm
CF 12.515 GHz
32001 pts
Span 24.97 GHz

802.11g 6 Mbps 2462MHz

Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
2484.396269	-42.5	13.3	-29.2
2485.956845	-42.6	13.3	-29.2
2483.615981	-43.8	14.6	-29.2
2485.176557	-44.9	15.7	-29.2
2487.517421	-45.5	16.3	-29.2
2489.858286	-45.9	16.7	-29.2
2486.737133	-46.0	16.8	-29.2
2490.638574	-46.2	17.0	-29.2
2489.077998	-46.3	17.1	-29.2
2488.297709	-46.7	17.4	-29.2
2492.979438	-47.7	18.5	-29.2
2491.418862	-47.9	18.7	-29.2
2495.320302	-48.4	19.1	-29.2
2494.540014	-48.8	19.6	-29.2
19759.975157	-48.9	19.7	-29.2

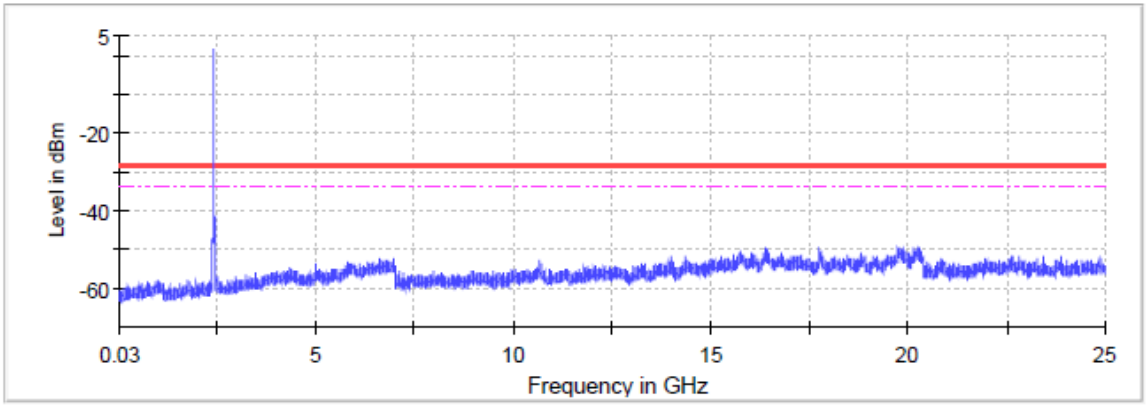


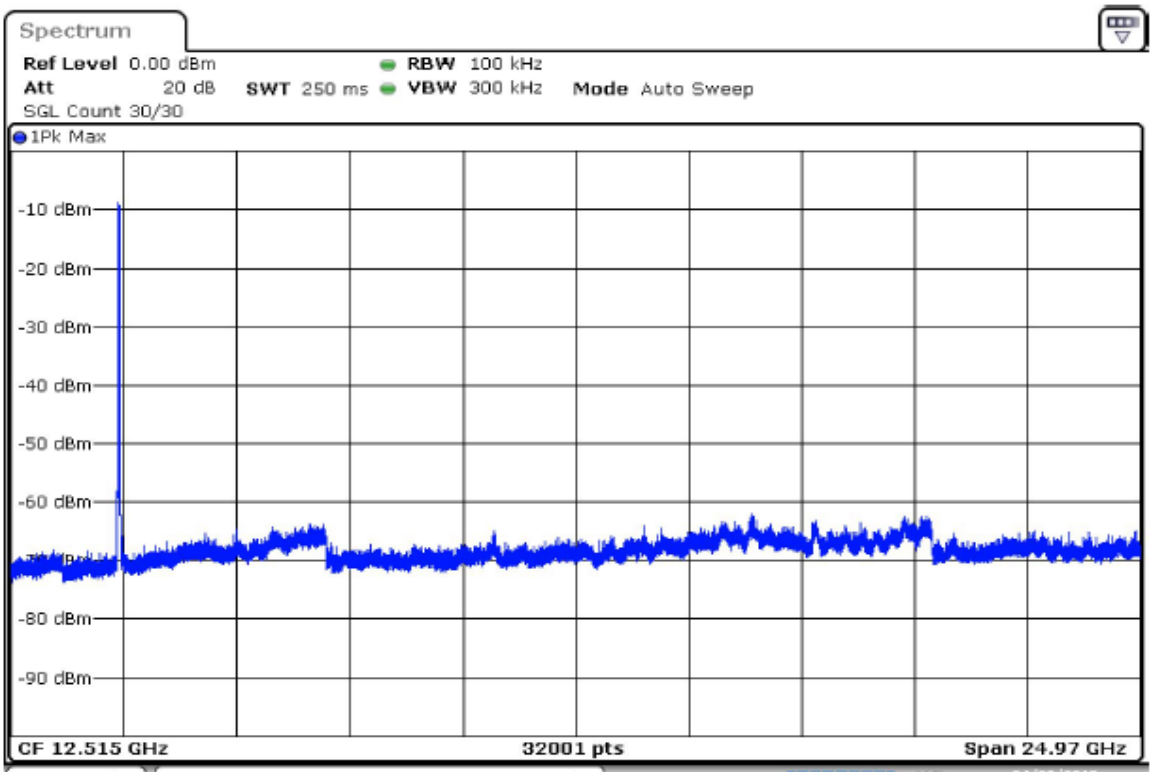


802.11n(HT20) MCS4 2412MHz

Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
2398.564576	-38.1	10.0	-28.1
2399.344864	-39.4	11.3	-28.1
2397.784288	-40.4	12.3	-28.1
2395.443424	-40.5	12.4	-28.1
2396.223712	-40.8	12.7	-28.1
2397.004000	-40.8	12.7	-28.1
2394.663136	-42.2	14.0	-28.1
2393.102559	-42.5	14.4	-28.1
2393.882847	-42.6	14.5	-28.1
2392.322271	-43.7	15.5	-28.1
2391.541983	-43.8	15.7	-28.1
2390.761695	-44.0	15.9	-28.1
2389.981407	-44.3	16.2	-28.1
2389.201119	-45.5	17.4	-28.1
2385.299678	-47.0	18.9	-28.1

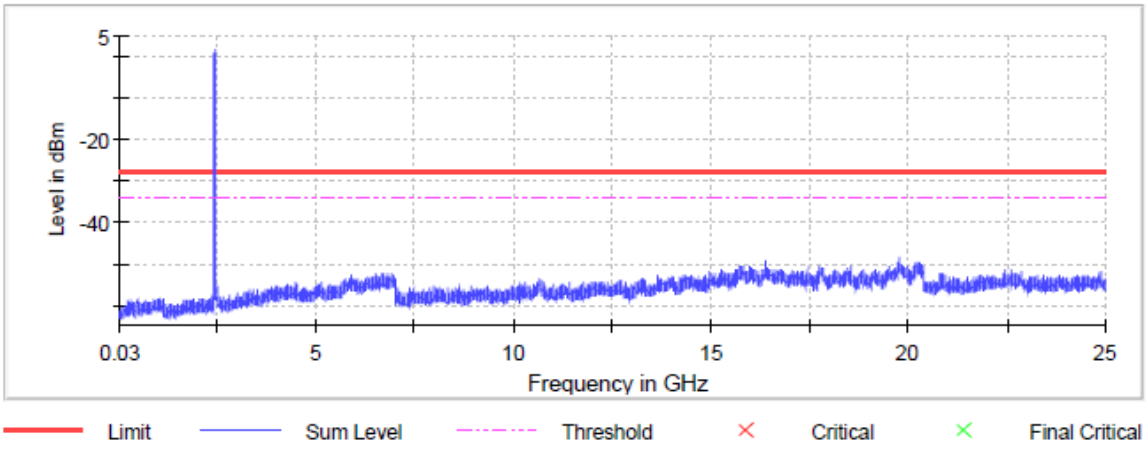

5
-20
-40
-60
Level in dBm
0.03
5
10
15
20
25
Frequency in GHz
Limit
Sum Level
Threshold
Critical
Final Critical

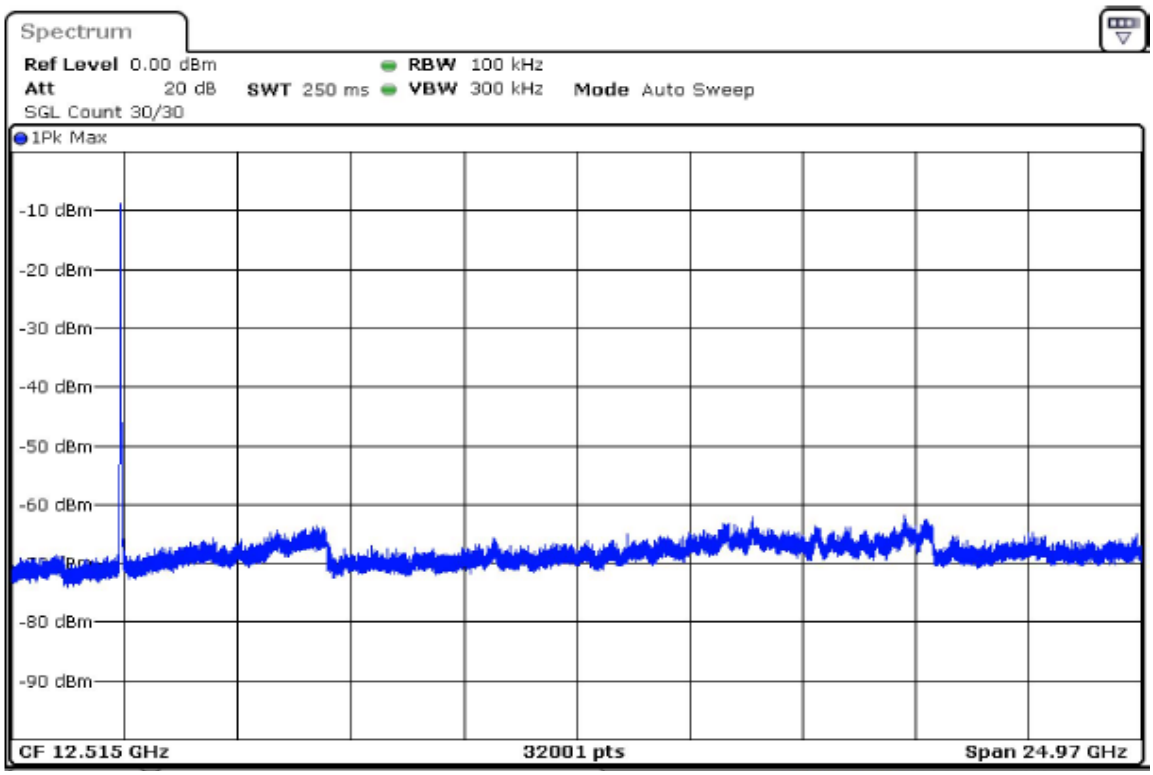

Spectrum
Ref Level 0.00 dBm
RBW 100 kHz
Att 20 dB
SWT 250 ms
VBW 300 kHz
Mode Auto Sweep
SGL Count 30/30
1Pk Max
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-80 dBm
-90 dBm
CF 12.515 GHz
32001 pts
Span 24.97 GHz

802.11n(HT20) MCS4 2437MHz

Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
19761.535733	-48.5	20.4	-28.0
16400.054530	-49.3	21.3	-28.0
19779.482360	-49.3	21.3	-28.0
20232.049467	-49.5	21.4	-28.0
20271.063873	-49.8	21.8	-28.0
20209.421112	-49.8	21.8	-28.0
19731.884785	-49.8	21.8	-28.0
16396.153089	-49.9	21.8	-28.0
19767.778038	-49.9	21.8	-28.0
19769.338614	-49.9	21.8	-28.0
19765.437174	-49.9	21.9	-28.0
19805.231868	-50.0	22.0	-28.0
20207.860536	-50.0	22.0	-28.0
20278.866754	-50.0	22.0	-28.0
19778.702072	-50.0	22.0	-28.0

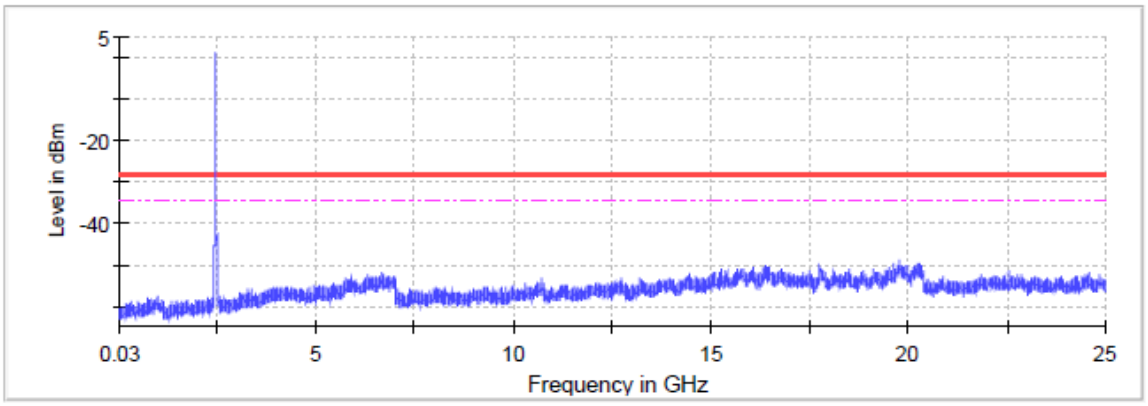


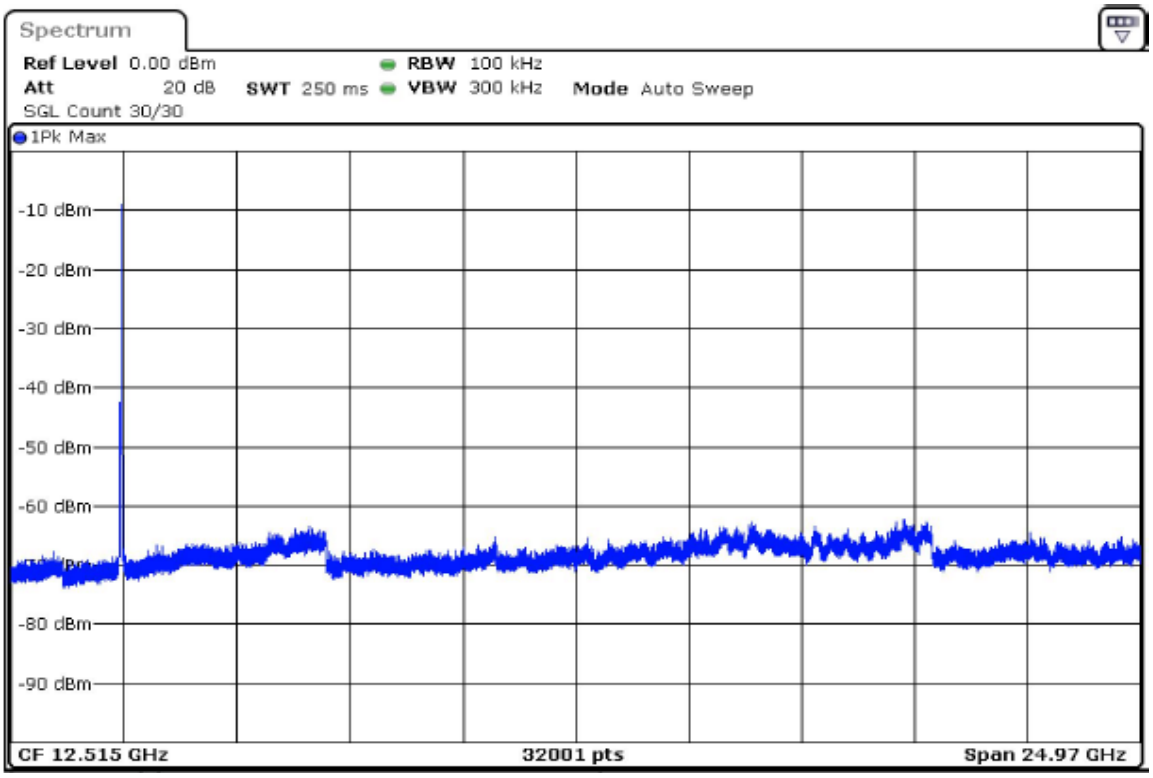


802.11n(HT20) MCS4 2462MHz

Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
2483.615981	-40.9	12.6	-28.3
2485.176557	-41.3	13.0	-28.3
2484.396269	-41.8	13.5	-28.3
2486.737133	-43.0	14.7	-28.3
2485.956845	-44.5	16.2	-28.3
2488.297709	-44.7	16.4	-28.3
2487.517421	-45.2	17.0	-28.3
2489.077998	-46.3	18.0	-28.3
2491.418862	-46.4	18.1	-28.3
2496.100591	-46.4	18.1	-28.3
2493.759726	-46.5	18.2	-28.3
2492.199150	-46.8	18.5	-28.3
2490.638574	-47.1	18.8	-28.3
2489.858286	-47.3	19.0	-28.3
2492.979438	-47.7	19.4	-28.3

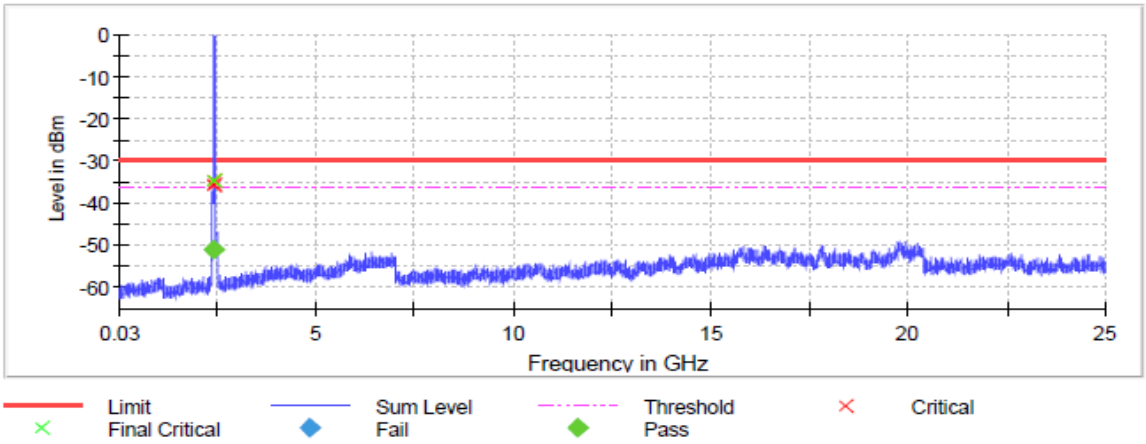

5
-20
-40
Level in dBm
0.03
5
10
15
20
25
Frequency in GHz
Limit
Sum Level
Threshold
Critical
Final Critical

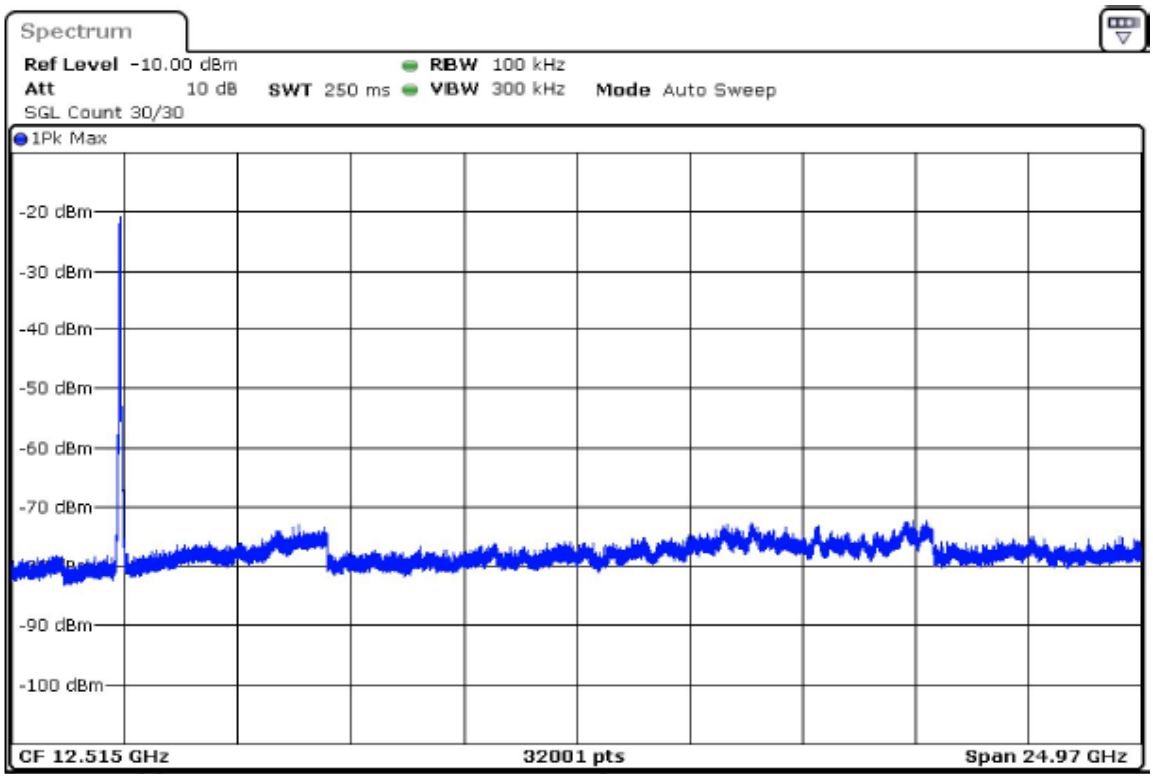

Spectrum
Ref Level 0.00 dBm
RBW 100 kHz
Att 20 dB
SWT 250 ms
VBW 300 kHz
Mode Auto Sweep
SGL Count 30/30
1Pk Max
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-80 dBm
-90 dBm
CF 12.515 GHz
32001 pts
Span 24.97 GHz

802.11n(HT40) MCS6 2422MHz

Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
2394.663136	-34.7	4.6	-30.1
2399.344864	-34.7	4.6	-30.1
2398.564576	-35.4	5.3	-30.1
2397.004000	-35.8	5.7	-30.1
2397.784288	-36.3	6.2	-30.1
2384.519390	-37.1	7.0	-30.1
2386.860254	-37.6	7.5	-30.1
2388.420831	-37.8	7.7	-30.1
2393.102559	-37.9	7.8	-30.1
2395.443424	-38.0	7.9	-30.1
2389.201119	-38.3	8.2	-30.1
2396.223712	-38.3	8.2	-30.1
2393.882847	-38.4	8.3	-30.1
2390.761695	-38.4	8.3	-30.1
2386.079966	-38.4	8.3	-30.1

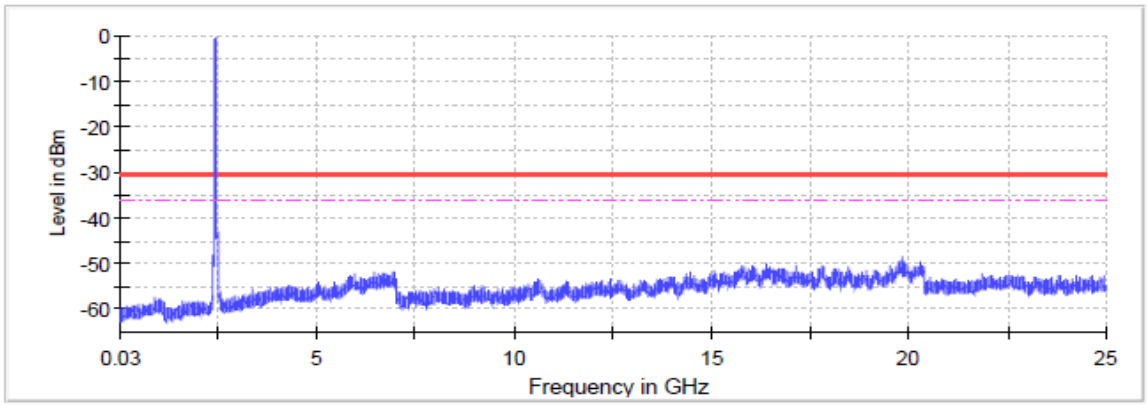


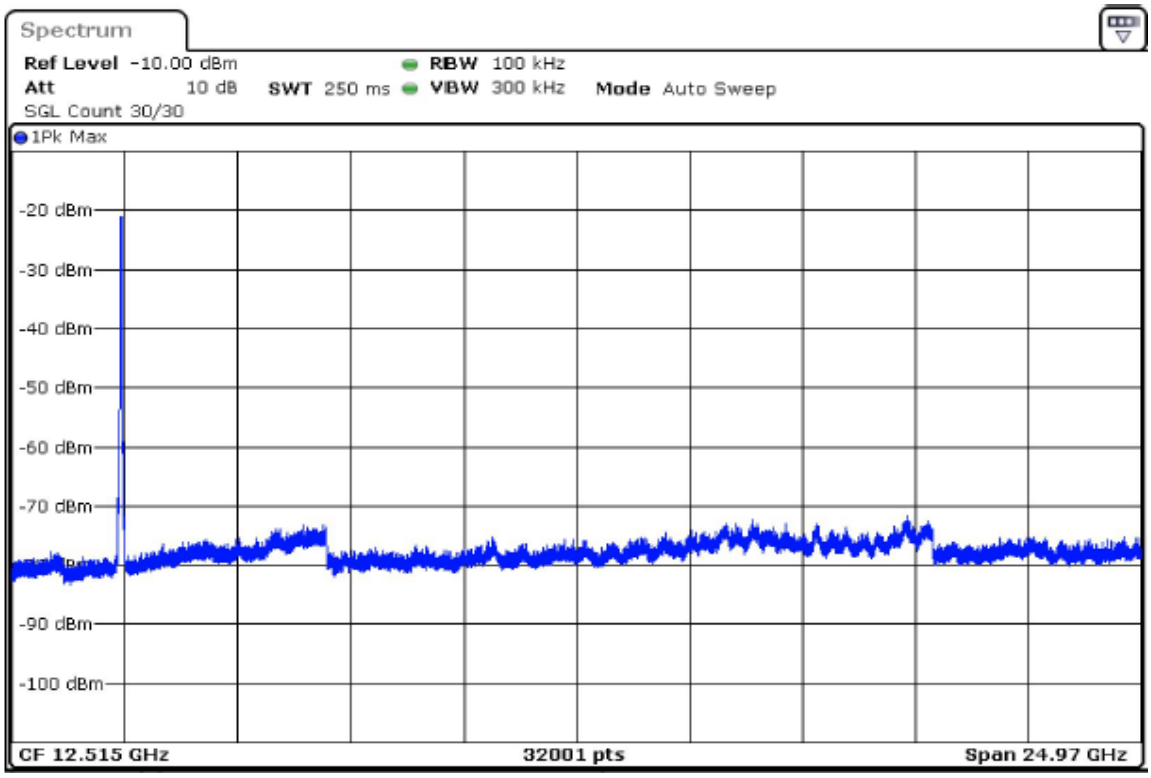


802.11n(HT40) MCS6 2437MHz

Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
2399.344864	-38.3	8.1	-30.2
2394.663136	-42.5	12.2	-30.2
2489.858286	-42.8	12.6	-30.2
2483.615981	-43.0	12.8	-30.2
2484.396269	-43.1	12.8	-30.2
2485.176557	-43.3	13.0	-30.2
2398.564576	-43.3	13.1	-30.2
2397.784288	-43.7	13.5	-30.2
2487.517421	-43.8	13.6	-30.2
2397.004000	-43.8	13.6	-30.2
2486.737133	-43.8	13.6	-30.2
2395.443424	-44.1	13.9	-30.2
2392.322271	-44.1	13.9	-30.2
2393.102559	-44.2	14.0	-30.2
2492.199150	-44.3	14.1	-30.2

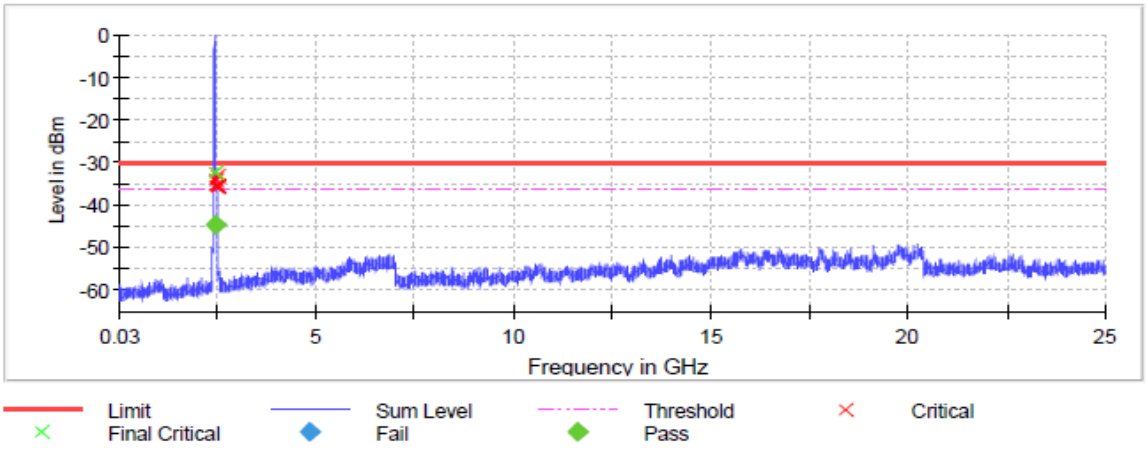

0
-10
-20
-30
-40
-50
-60
Level in dBm
0.03
5
10
15
20
25
Frequency in GHz
Limit
Sum Level
Threshold
Critical
Final Critical

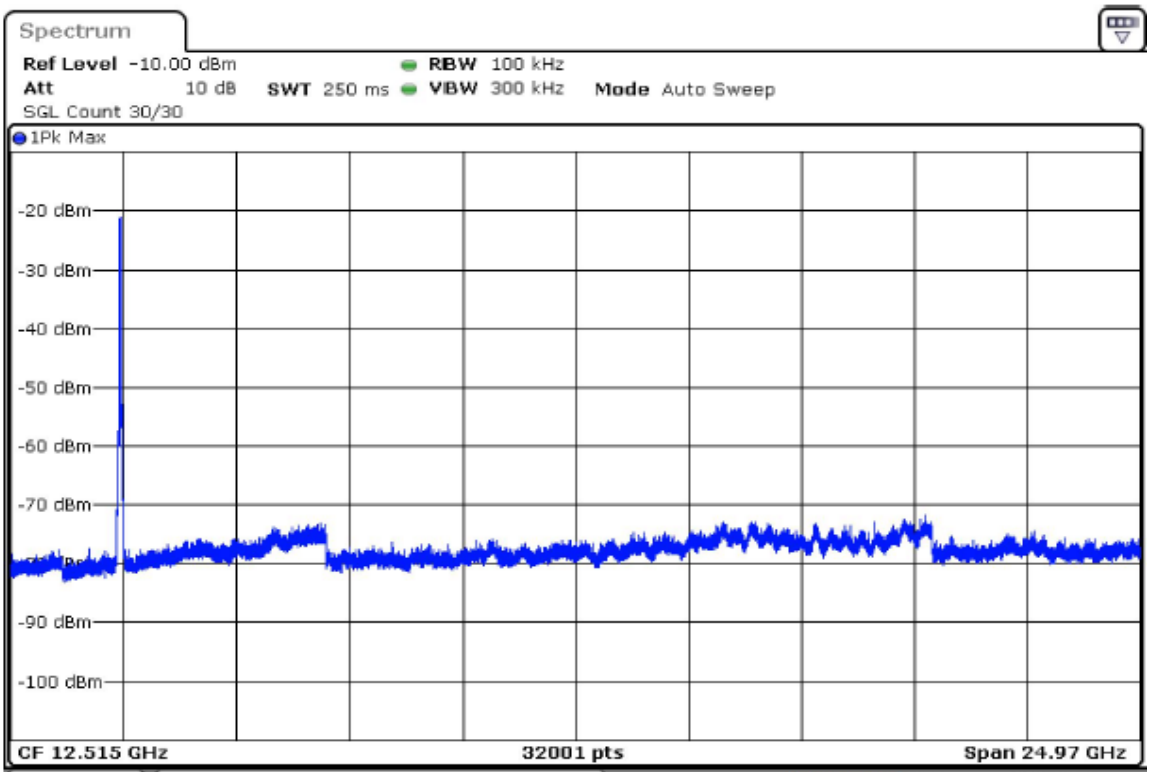

Spectrum
Ref Level -10.00 dBm
RBW 100 kHz
Att 10 dB
SWT 250 ms
VBW 300 kHz
Mode Auto Sweep
SGL Count 30/30
1Pk Max
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-90 dBm
-100 dBm
CF 12.515 GHz
32001 pts
Span 24.97 GHz

802.11n(HT40) MCS6 2452MHz

Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
2484.396269	-32.2	2.0	-30.2
2486.737133	-33.1	2.9	-30.2
2483.615981	-34.0	3.8	-30.2
2485.956845	-34.3	4.1	-30.2
2487.517421	-35.3	5.2	-30.2
2488.297709	-35.5	5.3	-30.2
2489.858286	-35.5	5.3	-30.2
2485.176557	-35.5	5.4	-30.2
2489.077998	-36.1	5.9	-30.2
2494.540014	-37.2	7.0	-30.2
2491.418862	-38.7	8.6	-30.2
2492.979438	-38.8	8.6	-30.2
2496.880879	-39.1	8.9	-30.2
2490.638574	-39.2	9.0	-30.2
2492.199150	-39.3	9.1	-30.2




Spectrum
Ref Level -10.00 dBm
RBW 100 kHz
Att 10 dB
SWT 250 ms
VBW 300 kHz
Mode Auto Sweep
SGL Count 30/30
1Pk Max
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-90 dBm
-100 dBm
CF 12.515 GHz
32001 pts
Span 24.97 GHz