TEST REPORT

Application No.:	HKEM1810000806IT
Applicant:	VTECH TELECOMMUNICATIONS LTD
Address of Applicant:	23/F, Tai Ping Industrial Centre, Block 1, 57 Ting Kok Road, Tai Po, Hong Kong
Manufacturer:	VTECH TELECOMMUNICATIONS LTD
Address of Manufacturer:	23/F, Tai Ping Industrial Centre, Block 1, 57 Ting Kok Road, Tai Po, Hong Kong
Factory:	VTech (Dongguan) Telecommunications Limited.
Address of Factory:	VTech Science Park, Xia Ling Bei Management Zone, Liaobu, Dongguan, Guangdong, China.
Equipment Under Test (EUT):	
EUT Name:	Full HD Camera with Alarm
HVIN:	35-400190BU
Model No.:	VC9411 Camera, VC9411-2 Camera, VC9411-3 Camera, VC9411-12 Camera, VC9411-22 Camera, VC941z-abcd Camera ♣
Trade mark:	VTech
♣	Please refer to section 2 of this report which indicates which item was actually tested and which were electrically identical.
Standard(s):	CFR 47 FCC Part 15, Subpart C, 2017 RSS-247 Issue 2: May 2017 RSS-Gen Issue 4: November 2014
Date of Receipt:	2018-10-08
Date of Test:	2018-10-01 to 2018-10-26
Date of Issue:	10/31/2018
Test Result :	**Pass***

* In the configuration tested, the EUT complied with the standards specified above.

Ivan Toa

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.

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Revision Record				
Version	**Chapter**	**Date**	**Modifier**	**Remark**
01		10/31/2018		*Original*

Authorized for issue by:				
Tested By				2018-10-26
		Leo Xu /Project Engineer		**Date**
Checked By				10/31/2018
		Ivan Toa /Reviewer		**Date**

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2 Test Summary

Radio Spectrum Technical Requirement				
Item	**Standard**	**Method**	**Requirement**	**Result**
Antenna Requirement	CFR 47 FCC Part 15, Subpart C 15.247	N/A	CFR 47 FCCPart 15, Subpart C 15.203 & 15.247(c)	Pass
Antenna Requirement	RSS-GEN Issue 4, November 2014	N/A	RSS-Gen Section 8.3	Pass

Radio Spectrum Matter Part				
Item	**Standard**	**Method**	**Requirement**	**Result**
Conducted Disturbance at AC Power Line(150kHz-30MHz)	CFR 47 FCCPart 15, Subpart C 15.207	ANSI C63.10: 2013 Section 6.2	CFR 47 FCCPart 15, Subpart C 15.207	Pass
Conducted Peak Output Power	CFR 47 FCCPart 15, Subpart C 15.247	ANSI C63.10: 2013 Section 11.9.1.2	CFR 47 FCCPart 15, Subpart C 15.247(b)(3)	Pass
Minimum 6dB Bandwidth	CFR 47 FCCPart 15, Subpart C 15.247	ANSI C63.10: 2013 Section 11.8.1	CFR 47 FCCPart 15, Subpart C 15.247a(2)	Pass
Power Spectrum Density	CFR 47 FCCPart 15, Subpart C 15.247	ANSI C63.10: 2013 Section 11.10.2	CFR 47 FCCPart 15, Subpart C 15.247(e)	Pass
Conducted Spurious Emissions	CFR 47 FCCPart 15, Subpart C 15.247	ANSI C63.10: 2013 Section 11.11	CFR 47 FCCPart 15, Subpart C 15.247(d)	Pass
Radiated Spurious Emissions	CFR 47 FCCPart 15, Subpart C 15.247 & 15.209	ANSI C63.10: 2013 Section 6.10.4	CFR 47 FCCPart 15, Subpart C 15.209 & 15.247(d)	Pass
Radiated Emissions which fall in the restricted bands	CFR 47 FCCPart 15, Subpart C 15.247	ANSI C63.10: 2013 Section 6.10.5	CFR 47 FCCPart 15, Subpart C 15.209 & 15.247(d)	Pass
Conducted Band Edges Measurement	CFR 47 FCCPart 15, Subpart C 15.247	ANSI C63.10: 2013 Section 11.13.3.2	CFR 47 FCCPart 15, Subpart C 15.247(d)	Pass
Conducted Emissions at AC Power Line (150kHz-30MHz)	RSS-GEN Issue 4, November 2014	ANSI C63.10 (2013) Section 6.2	RSS-Gen Section 8.8	Pass
99% Bandwidth	RSS-GEN Issue 4, November 2014	ANSI C63.10 Section 6.9.3	RSS-Gen Section 6.6	Pass
Minimum 6dB Bandwidth	RSS-247 Issue 2, February 2017	ANSI C63.10 (2013) Section 11.8.1	RSS-247 Section 5.2(a)	Pass
Conducted Peak Output Power	RSS-247 Issue 2, February 2017	ANSI C63.10 (2013) Section 11.9.1	RSS-247 Section 5.4(d)	Pass

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Radio Spectrum Matter Part				
Item	**Standard**	**Method**	**Requirement**	**Result**
Power Spectrum Density	RSS-247 Issue 2, February 2017	ANSI C63.10 (2013) Section 11.10.2	RSS-247 Clause 5.2(b)	Pass
Conducted Band Edges Measurement	RSS-247 Issue 2, February 2017	ANSI C63.10 (2013) Section 11.12	RSS-247 Section 5.5	Pass
Conducted Spurious Emissions	RSS-247 Issue 2, February 2017	ANSI C63.10 (2013) Section 11.11	RSS-247 Section 5.5	Pass
Radiated Emissions which fall in the restricted bands	RSS-GEN Issue 4, November 2014	ANSI C63.10 (2013) Section 6.4&6.5&6.6	Section 3.3 & RSS-Gen Section 8.9	Pass
Radiated Spurious Emissions	RSS-GEN Issue 4, November 2014	ANSI C63.10 (2013) Section 6.4&6.5&6.6	Section 3.3 & RSS-Gen Section 8.9	Pass

Model: VC9411 Camera, VC9411-2 Camera, VC9411-3 Camera, VC9411-12 Camera, VC9411-22 Camera, and
VC941z-abcd Camera
Suffix (“ a, b, c, d, z” of “VC941z-abcd Camera”) represents
☐ Color code
☐ Packing configuration
☒ (Others, please specify)
z=packaging, can be 0-9, a-z, A-Z
a=number of IP Cam; can be 0-9, a-z, A-Z or blank
b=color options, can be 0-9, a-z, A-Z or blank
c= combinations of sensor types/ other accessory in the bundle, can be 0-9, 00-99 or blank
d= combinations of sensor types/ other accessory in the bundle, can be 0-9, 00-99 or blank

According to the confirmation from the applicant, the above models are identical in all electrical aspects in relating to the circuit design, PCB layout, electrical components used, internal wiring and function. The differences are only the model and color for trading purpose Therefore only the model VC9411 Camera was tested in this report.

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3 Contents

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4 General Information

4.1 Details of E.U.T.

Power supply:	AC100-240V, 50/60Hz 0.5A
Adapter	Adaptor 1* Adapter Model: CS12N05015FUF Input: AC100-240V, 50/60Hz 0.5A Output: DC 5.0V, 1.5A Adaptor 2 Adapter Model: S012CDU0500150 Input: AC100-240V, 50/60Hz 0.4A Output: DC 5.0V, 1.5A *Remark: Complete measurement was performed with Adaptor 1 in this report)
Cable	295cm 2 wires unshielded DC power cable
Funtion	Wireless Network camera, Local storage (micro sd card) recording
Test Voltage	AC120V 60 Hz
Operation Frequency:	IEEE 802.11b/g/n(HT20): 2412MHz to 2462MHz IEEE 802.11n(HT40): 2422MHz to 2452MHz
Channel Numbers:	IEEE 802.11b/g, IEEE 802.11n HT20: 11 Channels IEEE 802.11n HT40: 7 Channels
Channel Separation:	5MHz
Type of Modulation:	IEEE for 802.11b: DSSS(CCK,DQPSK,DBPSK) IEEE for 802.11g : OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE for 802.11n(HT20 and HT40) : OFDM (64QAM, 16QAM, QPSK,BPSK)
Sample Type:	Fixed production
Antenna Type:	PIFA Antenna
Antenna Gain:	2 dBi
Frequency List	

Channel list for 802.11b/g/n(HT20)

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2412	5	2432	9	2452
2	2417	6	2437	10	2457
3	2422	7	2442	11	2462
4	2427	8	2447		
Remark: Test frequencies for 20MHz bandwidth are the lowest channel: 1 channel(2412MHz), middle channel: 6 channel (2437 MHz) and highest channel: 11 channel (2462 MHz).					

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Channel list for 802.11n(HT40)

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
		5	2432	9	2452
		6	2437		
3	2422	7	2442		
4	2427	8	2447		
Test frequencies for 40MHz bandwidth are the lowest channel: 3 channel(2422MHz), middle channel: 6 channel (2437 MHz) and highest channel: 9 channel (2452 MHz).					

4.2 Description of Support Units

The EUT has been tested as an independent unit for fixed frequency by testing lab.

The EUT has been tested with corresponding accessories as below:

Supplied by client

Description	Manufacturer	Model No.	SN/Certificate NO
BT test board	--	2015-018	--

Supplied by SGS:

Description	Manufacturer	Model No.	SN/Certificate NO
NoteBook	Lenovo	Inspiron 15 3000	--

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4.3 Measurement Uncertainty

The following expanded uncertainties for the measurement of emission recorded in this report are based on a coverage factor k=2 , providing a level of confidence of approximately 95% :

No.	Item	Measurement Uncertainty
1	RF conducted power	±2.01dB
2	Conducted Spurious emissions	±2.01dB
	Conducted Disturbance 150kHz - 30MHz	±2.77dB
	Radiated disturbance 9 kHz - 30MHz	±4.09dB
	Radiated disturbance 30MHz - 1GHz	±5.28dB
	Radiated disturbance 1GHz - 18GHz	±5.11dB
	Temperature test	±1°C
	Humidity test	±3%
	DC and low frequency voltages test	±0.5%

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4.4 Test Location

All tests were performed at:

SGS IECC Limited (Member of the SGS Group (SGS SA))
No. 16-B, Yip Wo Street, On Lok Tsuen, Fanling, N.T., Hong Kong
Tel: +852 2305 2570 Fax: +852 2756 4480

No tests were sub-contracted.

4.5 Test Facility

The test facility is recognized or accredited by the following organizations:

- **HOKLAS (Lab Code: 125)**

SGS IECC Limited has been accepted by HKAS Executive, on the recommendation of the Accreditation Advisory Board, as a HOKLAS Accredited Laboratory, this laboratory meets the requirements of ISO/IEC 17025:2005 an it has been accredited for performing specific test as listed in the scope of accreditation within the test category of Electrical and Electronic Products.

- **FCC Recognized Accredited Test Firm(CAB Registration No.: 446297)**

SGS IECC Limited has been accredited and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Designation Number: HK0010, Test Firm Registration Number: 446297.

- **Industry Canada (Registration No.: 5193A-2)**

The 3m Alternative Semi-anechoic chamber of SGS IECC Limited has been registered by Certification and Engineering of Industry Canada for radio equipment testing with Registration No. 5193A-2..

4.6 Deviation from Standards

None

4.7 Abnormalities from Standard Conditions

None

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5 Equipment List

Radiated Emission			
Equipment	**Manufacturer**	**Model / Serial No.**	**Cal. Due Date**
3m Semi-Anechoic Chamber	ChamPro	N/A	2020/09/14
Test Receiver	Rohde & Schwarz	ESCS 30 / 100388	2019/09/26
EMI Test Receiver	Rohde & Schwarz	ESR3	2019/08/15
Signal Generator	Rohde & Schwarz	SMT03 / 832939/017	2019/06/04
Spectrum Analyzer	Rohde & Schwarz	FSP 30 / 101474	2019/05/30
Loop Antenna	Rohde & Schwarz	HFH2-Z2 / 871336/48	2019/01/22
Antenna 30-1000MHz	Schaffner	CBL6111C / 2791	2019/10/26
Horn Antenna 1-18GHz	Schwarzbeck	BBHA9120D / 9120D-1070	2019/01/22
Horn Antenna 15-40GHz	Schwarzbeck	BBHA9170 / 9170-492	2019/11/23
Preamplifier 10MHz – 6GHz	Schwarzbeck	BBV9743 / 9743-052	2019/04/18
Preamplifier 1-18GHz	Schwarzbeck	BBV9718 / 9718-223	2019/01/22
Preamplifier 18-26.5GHz	Schwarzbeck	BBV9719 / 9719-019	2019/11/18
Coaxial Cable	--	E167	2019/10/09
RF Cable	HUBER+SUHNER	E207	2019/11/16
Millivoltmeter	Rohde & Schwarz	URV5 / 846254/013	2019/06/28
100V insertion Unit	Rohde & Schwarz	URV5-Z4 / 100138	2019/06/28
Amplifier	TESEQ	CBAIG-070 / T43859	--
Boresight Mast Controller	ChamPro	AM-BS-4500-E / 060860-ABS	--
Turntable with Controller	ChamPro	EM1000 / 60860	--

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Conducted Emission			
Equipment	**Manufacturer**	**Model / Serial No.**	**Calibration Due**
Test Receiver	Rohde & Schwarz	ESHS 30 / 839667/002	2019/09/26
Signal Generator	Rohde & Schwarz	SMT03 / 832939/017	2019/06/04
Artificial Mains Network (LISN)	Schwarzbeck	NSLK 8127 / 8127309	2019/09/26
Impulse Limiter	Rohde & Schwarz	ESH-3-Z2 / 357881052	2019/01/22

RF Conducted			
Equipment	**Manufacturer**	**Model / Serial No.**	**Cal. Due Date**
Wireless Conn. Tester (CMW)	Rohde & Schwarz	CMW270	2019/08/12
OSP	Rohde & Schwarz	OSP-B157W8	2019/09/17
FSV40 SIGNAL ANALYZER 40GHz	Rohde & Schwarz	FSV40	2019/08/12
SMBV100A VECTOR SIGNAL GENERATOR	Rohde & Schwarz	SMBV100A	2019/08/12
Cable	Rohde & Schwarz	J12J103539-00-2	2019/08/12

General Use Equipment			
Equipment	**Manufacturer**	**Model / Serial No.**	**Cal. Due Date**
Digital Multimeter	Fluke	189 / 83640020	2019/05/22
Temperature / Humidity meter	-	E159	2019/09/20

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6 Radio Spectrum Technical Requirement

6.1 Antenna Requirement

6.1.1 Test Requirement:

FCC Part 15 Subpart C Section 15.247 & 15.203

RSS-Gen Section 8.3

6.1.2 Conclusion

Standard Requirment:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

Testing shall be performed using the highest gain antenna of each combination of licence-exempt transmitter and antenna type, with the transmitter output power set at the maximum level. When a measurement at the antenna connector is used to determine RF output power, the effective gain of the device's antenna shall be stated, based on a measurement or on data from the antenna manufacturer.

15.203 requirement:

For intentional device. According to 15.203. an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

15.247(b) (4) requirement:

The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

EUT Antenna:

The antenna uses a unique coupling to the intentional radiator and no consideration of replacement.

Photo of antenna refer to Appendix – Internal photo.

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7 Radio Spectrum Matter Test Results

7.1 Conducted Disturbance at AC Power Line(150kHz-30MHz)

Test Requirement FCC Part 15 Subpart C Section 15.207
RSS-Gen Section 8.8

Test Method: ANSI C63.10 Section 6.2

Limit:

Frequency of emission(MHz)	Conducted limit (dBμV)	
	Quasi-peak	Average
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.		

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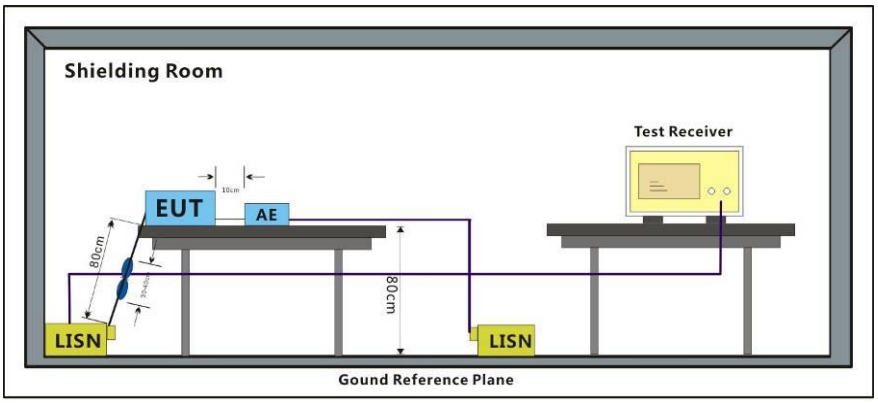
7.1.1 E.U.T. Operation

Operating Environment:

Temperature:	25.0 °C	Humidity:	55 % RH	Atmospheric Pressure:	1015	mbar

Test mode	Pretest the EUT with Continuous Video transimitting mode for adaptor 1 and adaptor 2
The worst case for final test:	Test the EUT with Continuous Video transimitting mode and adaptor 1

7.1.2 Test Setup Diagram



7.1.3 Measurement Data

1) The mains terminal disturbance voltage test was conducted in a shielded room.

2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50ohm/50μH + 5ohm linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.

3) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane,

4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2.

5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.

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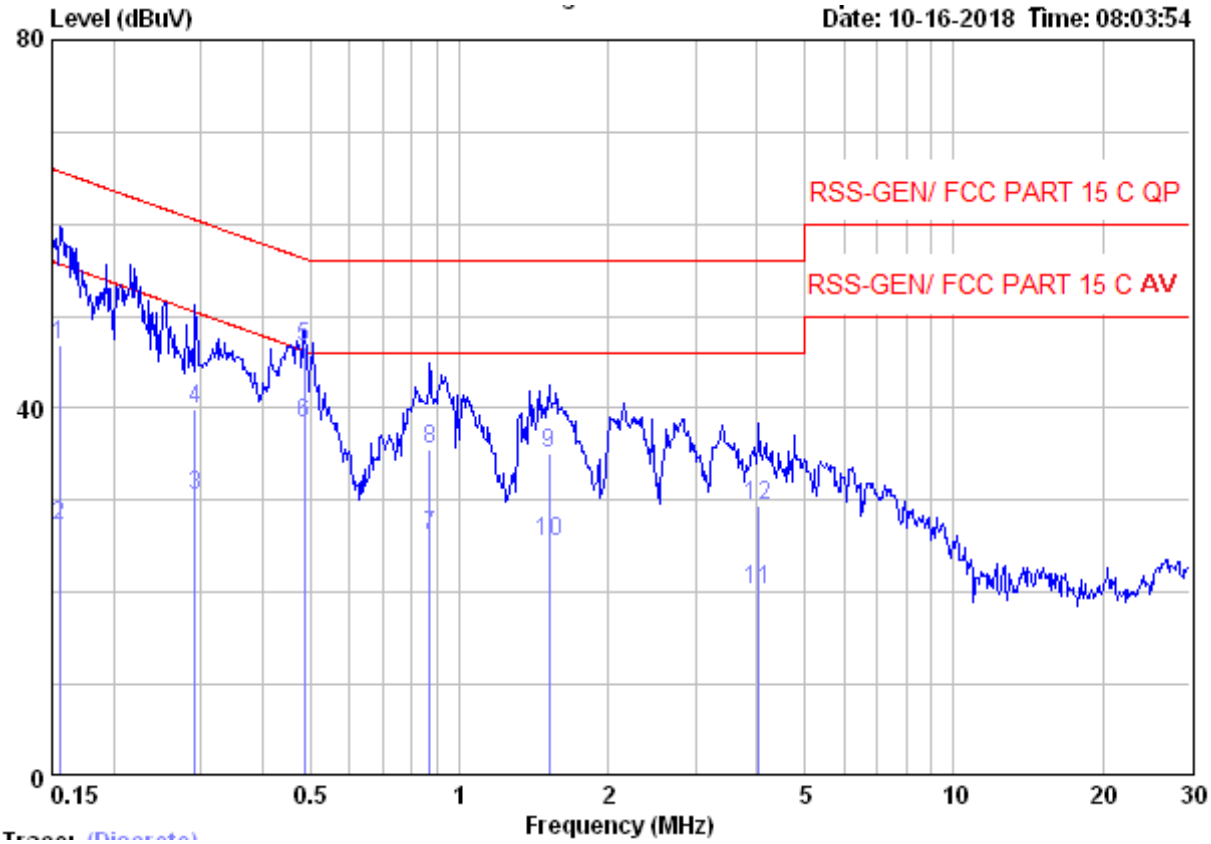
Live Line



		Freq	Cable Loss	LISN Factor	Read Level	Level	Limit Line	Over Limit	Remark
		MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1		0.16	0.00	9.93	36.95	46.88	65.69	-18.81	QP
2		0.16	0.00	9.93	17.21	27.14	65.69	-38.55	AVERAGE
3		0.29	0.00	9.93	20.50	30.43	60.46	-30.03	AVERAGE
4		0.29	0.00	9.93	30.02	39.95	60.46	-20.51	QP
5	peak	0.49	0.00	9.94	36.65	46.59	56.23	-9.64	QP
6		0.49	0.00	9.94	28.39	38.33	56.23	-17.90	AVERAGE
7		0.87	0.00	9.96	16.21	26.17	56.00	-29.83	AVERAGE
8		0.87	0.00	9.96	25.63	35.59	56.00	-20.41	QP
9		1.52	0.00	9.98	25.14	35.12	56.00	-20.88	QP
10		1.52	0.00	9.98	15.61	25.59	56.00	-30.41	AVERAGE
11		4.03	0.00	10.05	10.18	20.23	56.00	-35.77	AVERAGE
12		4.03	0.00	10.05	19.39	29.44	56.00	-26.56	QP

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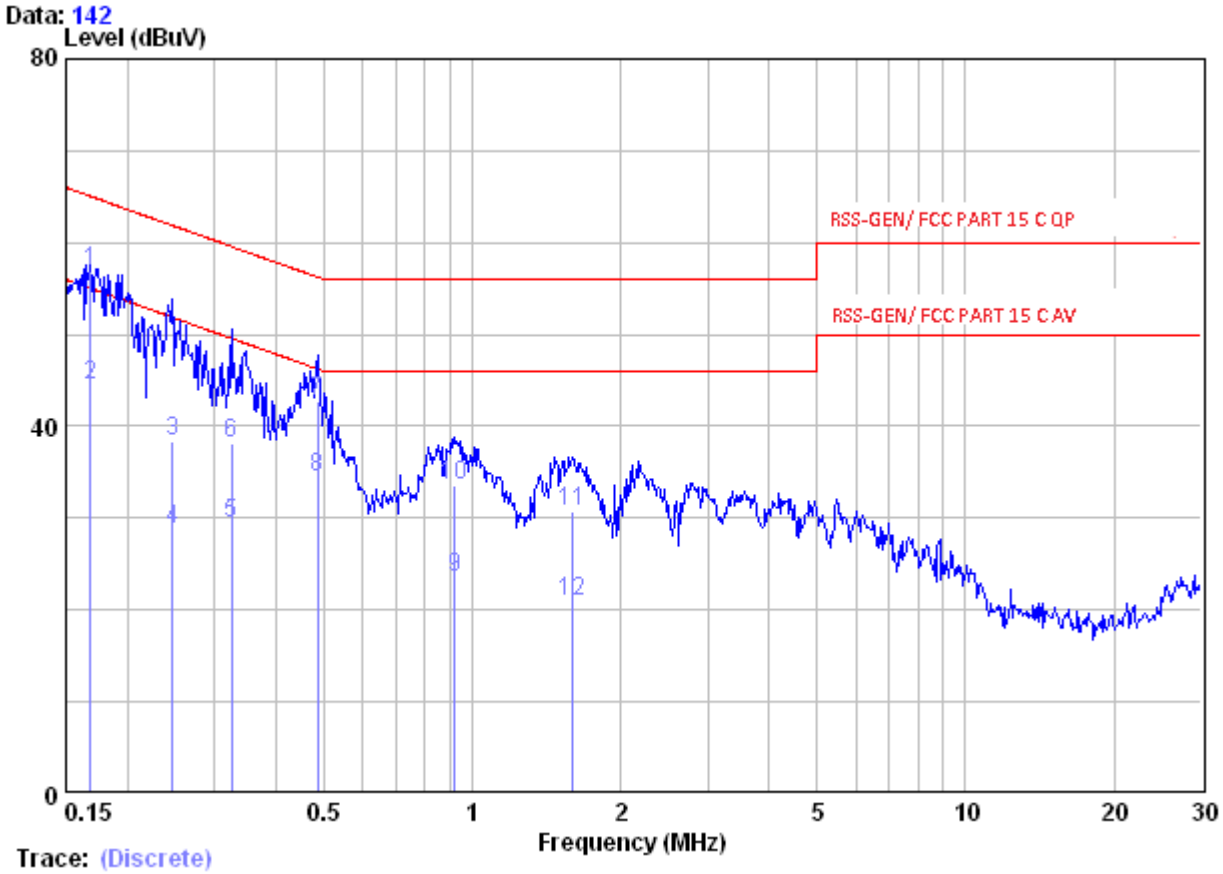
Neutral Line



	Freq	Cable Loss	LISN Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1 peak	0.17	0.00	9.95	47.03	56.98	65.03	-8.05	AVERAGE
2	0.17	0.00	9.95	34.55	44.50	65.03	-20.53	QP
3	0.25	0.00	9.95	28.35	38.30	61.86	-23.56	QP
4	0.25	0.00	9.95	18.83	28.78	61.86	-33.08	AVERAGE
5	0.33	0.00	9.95	19.51	29.46	59.57	-30.11	AVERAGE
6	0.33	0.00	9.95	28.19	38.14	59.57	-21.43	QP
7	0.49	0.00	9.95	32.75	42.70	56.23	-13.53	QP
8	0.49	0.00	9.95	24.45	34.40	56.23	-21.83	AVERAGE
9	0.92	0.00	9.98	13.46	23.44	56.00	-32.56	AVERAGE
10	0.92	0.00	9.98	23.68	33.66	56.00	-22.34	QP
11	1.59	0.00	10.00	20.75	30.75	56.00	-25.25	QP
12	1.59	0.00	10.00	10.92	20.92	56.00	-35.08	AVERAGE

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7.2 Conducted RF Output Power

Test Requirement FCC Part 15 Subpart C Section 15.247(b)(3)
RSS-247 Section 5.4(d)

Test Method: ANSI C63.10 Section 11.9.1

Limit:

Frequency range(MHz)	Output power of the intentional radiator(watt)
902-928	1w for ≥50 hopping channels
	0.25w for 25≤ hopping channels <50
	1 for digital modulation
2400-2483.5	1w for ≥75 non-overlapping hopping channels
	0.125w for all other frequency hopping systems
	1w for digital modulation
5725-5850	1w for frequency hopping systems and digital modulation

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7.2.1 E.U.T. Operation

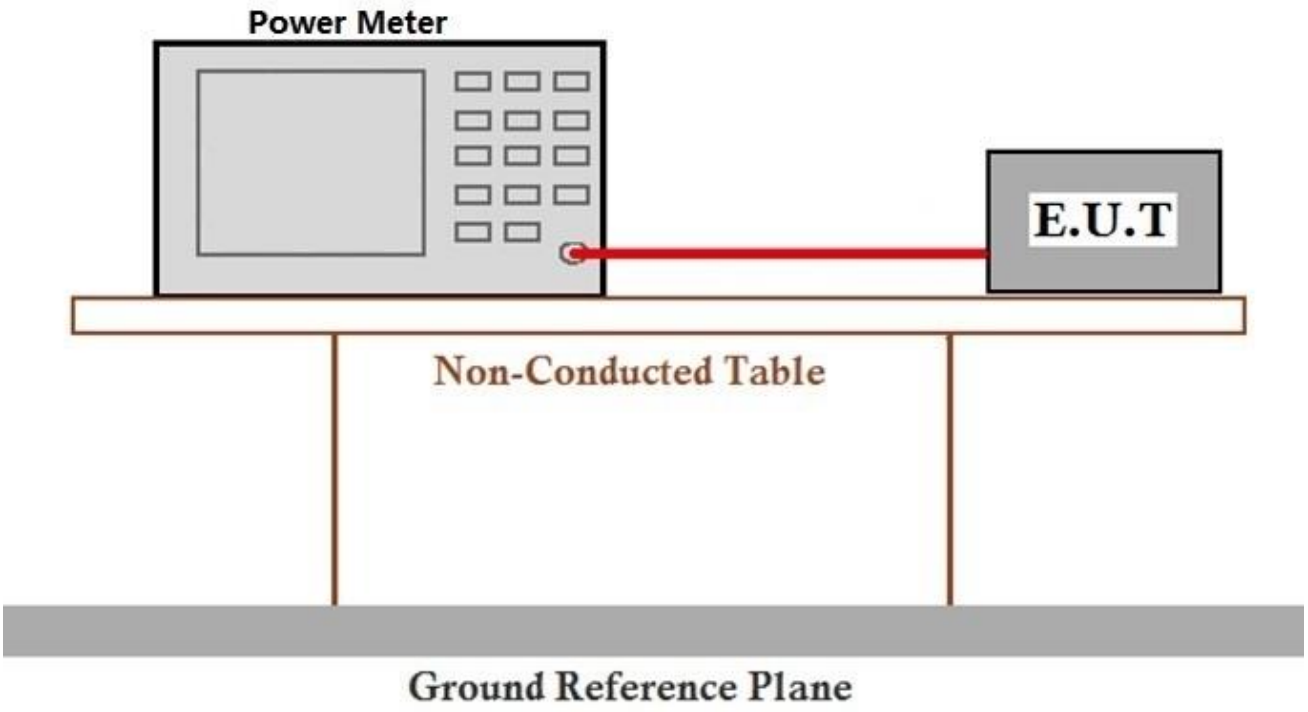
Operating Environment:

Temperature: 25.0 °C Humidity: 56 % RH Atmospheric Pressure: 1015 mbar

Test mode: Continuous Transmiiting Mode with 802.11b/g/n (20) and 802.11n(HT40).

The worst case for final test: Continuous Transmitting Mode
Through Pre-scan, found
5.5Mbps of rate is the worst case of 802.11b;
9Mbps of rate is the worst case of 802.11g;
21.7Mbps of rate is the worst case of 802.11n(HT20);
45Mbps of rate is the worst case of 802.11n(HT40).
Only the data of worst case is recorded in the report

7.2.2 Test Setup Diagram



7.2.3 Measurement Data

The detailed test data see: section 9 Appendix

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7.3 Minimum 6dB Bandwidth

Test Requirement	FCC Part 15 Subpart C Section 15.247a(2)
	RSS-247 Section 5.2(a)
Test Method:	ANSI C63.10 Section 11.8.1
Limit:	≥500 kHz

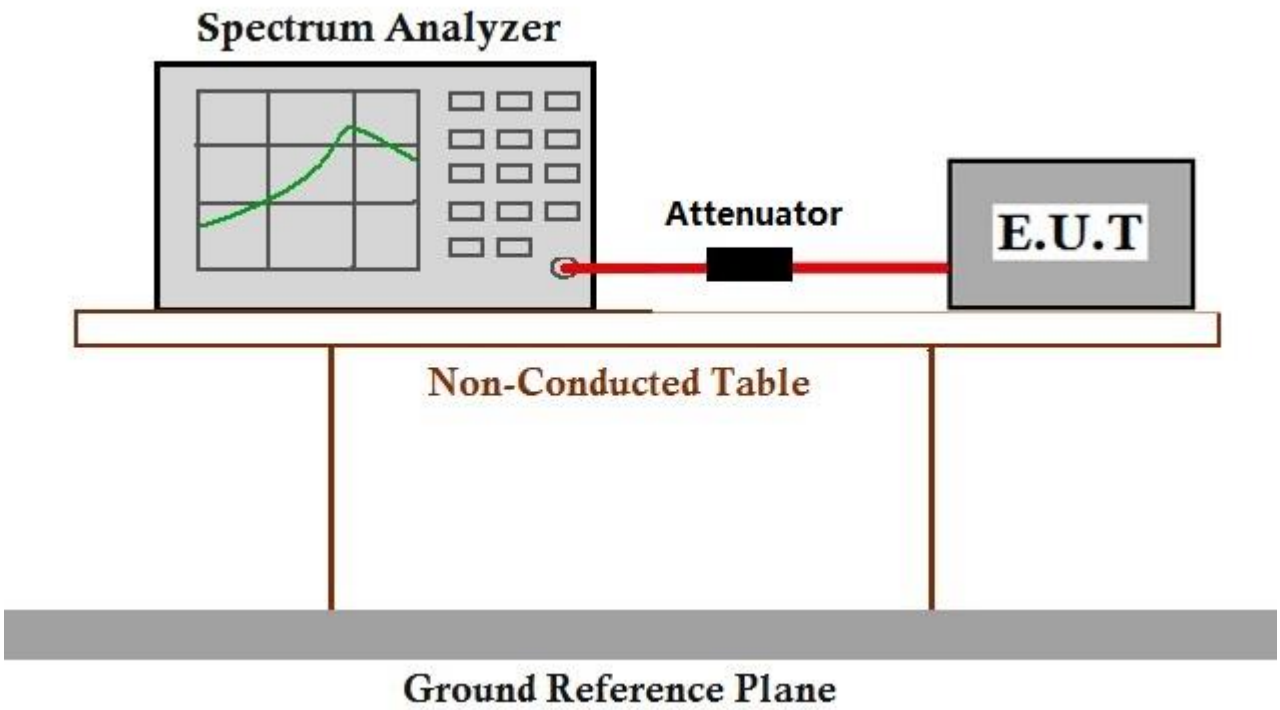
7.3.1 E.U.T. Operation

Operating Environment:

Temperature: 25.0 °C Humidity: 56 % RH Atmospheric Pressure: 1015 mbar

Test mode	Continuous Transmiiting Mode
	Continuous Transmiiting Mode with 802.11b/g/n (20) and 802.11n(HT40).
The worst case for final test:	Continuous Transmitting Mode
	Through Pre-scan, found
	5.5Mbps of rate is the worst case of 802.11b;
	9Mbps of rate is the worst case of 802.11g;
	21.7Mbps of rate is the worst case of 802.11n(HT20);
	45Mbps of rate is the worst case of 802.11n(HT40).
	Only the data of worst case is recorded in the report

7.3.2 Test Setup Diagram



7.3.3 Measurement Data

The detailed test data see: section 9 Appendix

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7.4 Power Spectrum Density

Test Requirement	FCC Part 15, Subpart C Section 15.247(e) RSS-247 Clause 5.2(b)
Test Method:	ANSI C63.10 Section 11.10.2
Limit:	≤8dBm in any 3 kHz band during any time interval of continuous transmission

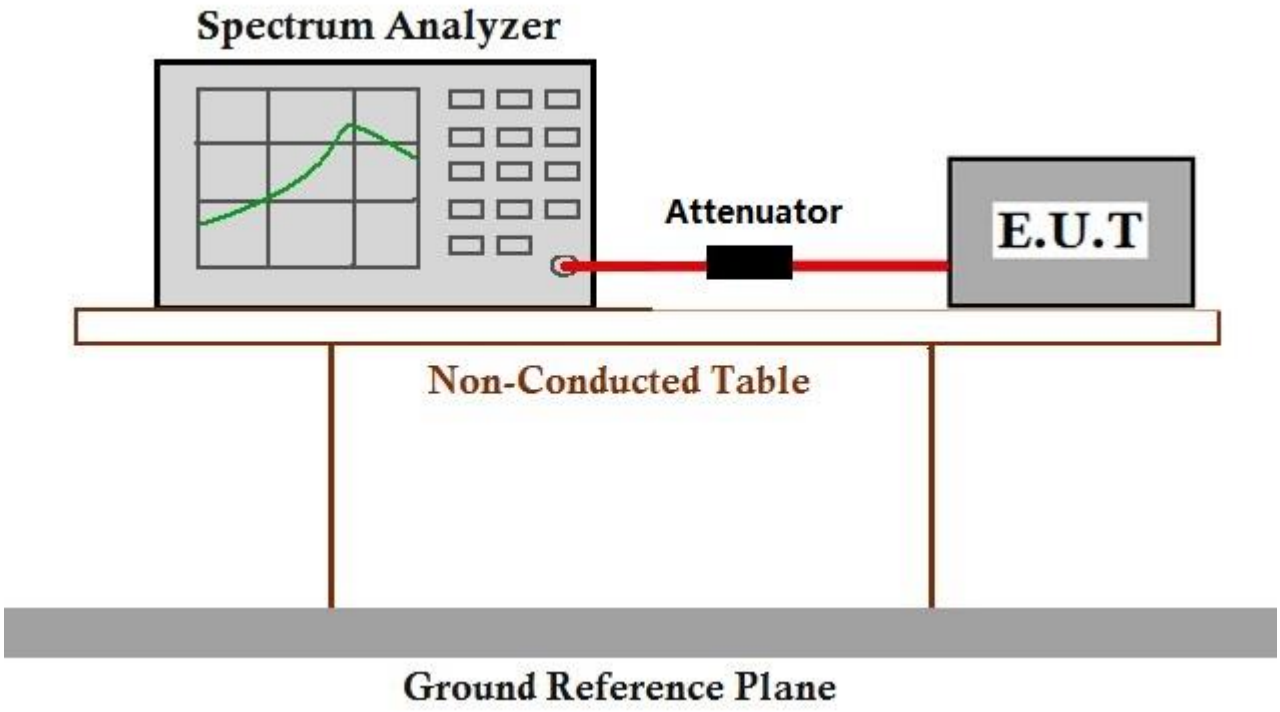
7.4.1 E.U.T. Operation

Operating Environment:

Temperature: 25.0 °C Humidity: 56 % RH Atmospheric Pressure: 1015 mbar

Test mode	Continuous Transmiiting Mode Continuous Transmiiting Mode with 802.11b/g/n (20) and 802.11n(HT40).
The worst case for final test:	Continuous Transmitting Mode Through Pre-scan, found 5.5Mbps of rate is the worst case of 802.11b; 9Mbps of rate is the worst case of 802.11g; 21.7Mbps of rate is the worst case of 802.11n(HT20); 45Mbps of rate is the worst case of 802.11n(HT40). Only the data of worst case is recorded in the report

7.4.2 Test Setup Diagram



7.4.3 Measurement Data

The detailed test data see: section 9 Appendix

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7.5 Conducted Spurious Emissions

Test Requirement	FCC Part 15, Subpart C Section 15.247(d) RSS-247 Section 5.5
Test Method:	ANSI C63.10 Section 11.11
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

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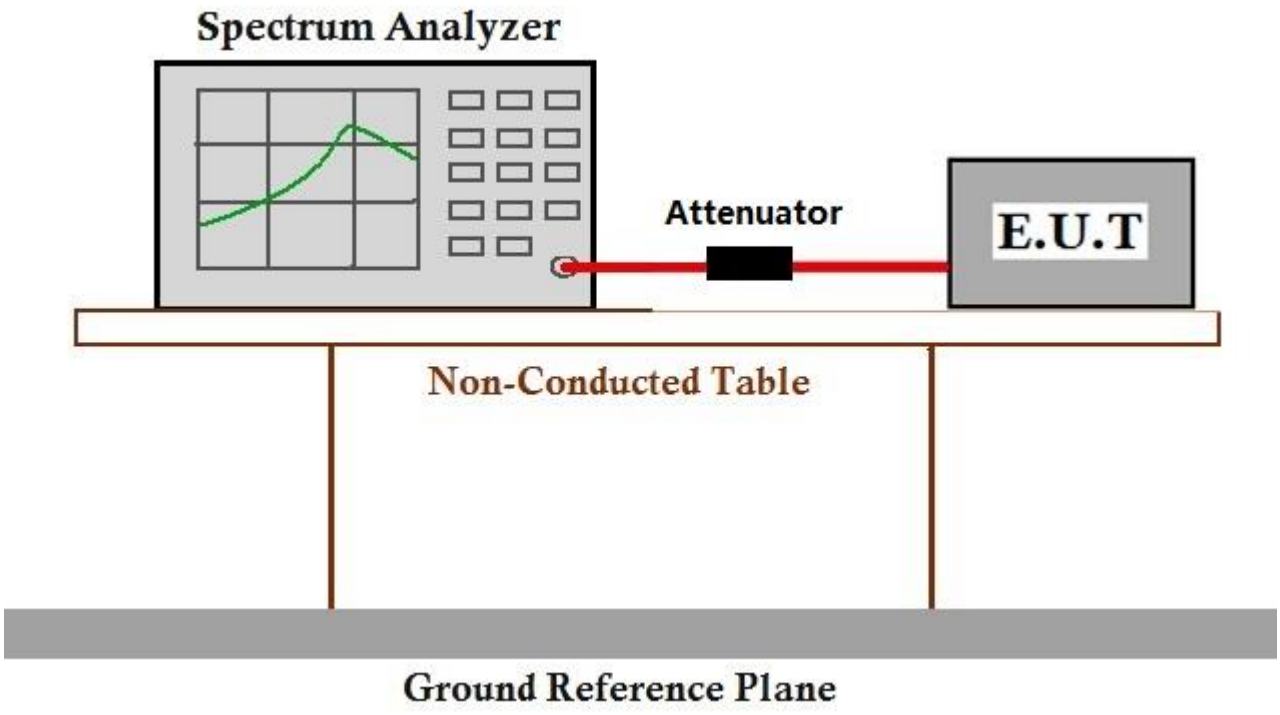
7.5.1 E.U.T. Operation

Operating Environment:

Temperature:	25.0 °C	Humidity:	56 % RH	Atmospheric Pressure:	1015	mbar

Test mode	Continuous Transmiiting Mode Continuous Transmiiting Mode with 802.11b/g/n (20) and 802.11n(HT40).
The worst case for final test:	Continuous Transmitting Mode Through Pre-scan, found 5.5Mbps of rate is the worst case of 802.11b; 9Mbps of rate is the worst case of 802.11g; 21.7Mbps of rate is the worst case of 802.11n(HT20); 45Mbps of rate is the worst case of 802.11n(HT40). Only the data of worst case is recorded in the report

7.5.2 Test Setup Diagram



7.5.3 Measurement Data

The detailed test data see: section 9 Appendix

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7.6 Radiated Spurious Emissions

Test Requirement: FCC Part 15, Subpart C Section 15.209 & 15.247(d)
Section 3.3 & RSS-Gen Section 8.9

Test Method: ANSI C63.10 Section 6.10.4
ANSI C63.10 Section 6.4&6.5&6.6

Measurement Distance: 3m

Limit:

Frequency(MHz)	Field strength(microvolts/meter)	Measurement distance(meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

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7.6.1 E.U.T. Operation

Operating Environment:

Temperature: 23.0 °C Humidity: 52 % RH Atmospheric Pressure: 1015 mbar

Test mode: Continuous Transmiiting Mode with 802.11b/g/n (20) and 802.11n(HT40).

The worst case for final test: Continuous Transmitting Mode

Through Pre-scan, found

5.5Mbps of rate is the worst case of 802.11b;

9Mbps of rate is the worst case of 802.11g;

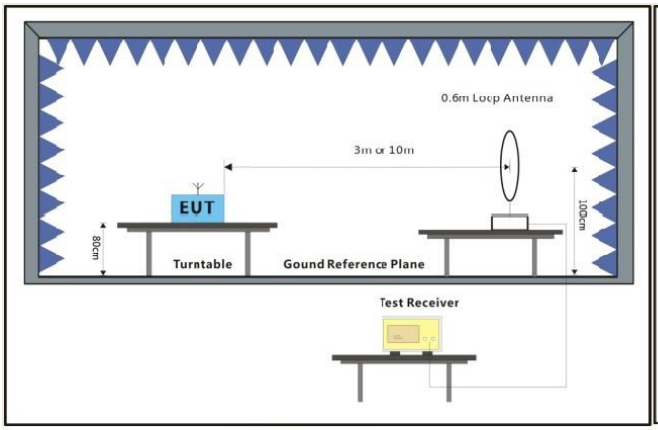
21.7Mbps of rate is the worst case of 802.11n(HT20);

45Mbps of rate is the worst case of 802.11n(HT40).

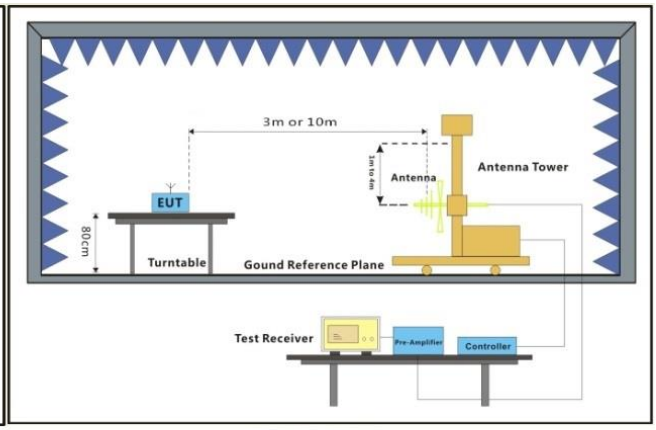
For below 1GHz, through Pre-scan, 5.5Mbps of 802.11b is the worst case.

Only the worst case is recorded in the report.

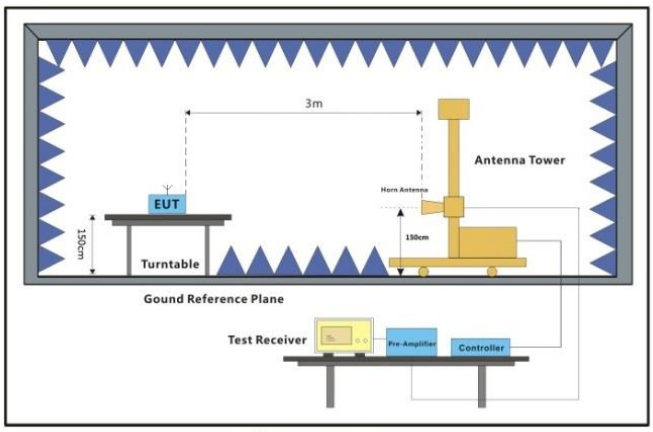
7.6.2 Test Setup Diagram



Below 30MHz



30MHz-1GHz



Above 1GHz

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7.6.3 Measurement Data

a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

c. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

d. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

e. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

g. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

h. Test the EUT in the lowest channel,the middle channel,the Highest channel.

i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the Y axis positioning which it is the worst case.

j. Repeat above procedures until all frequencies measured was complete.

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7.7 Conducted Band Edges Measurement

Test Requirement	FCC Part 15, Subpart C Section 15.247(d)
	RSS-247 Section 5.5
Test Method:	ANSI C63.10 Section 11.13.3.2

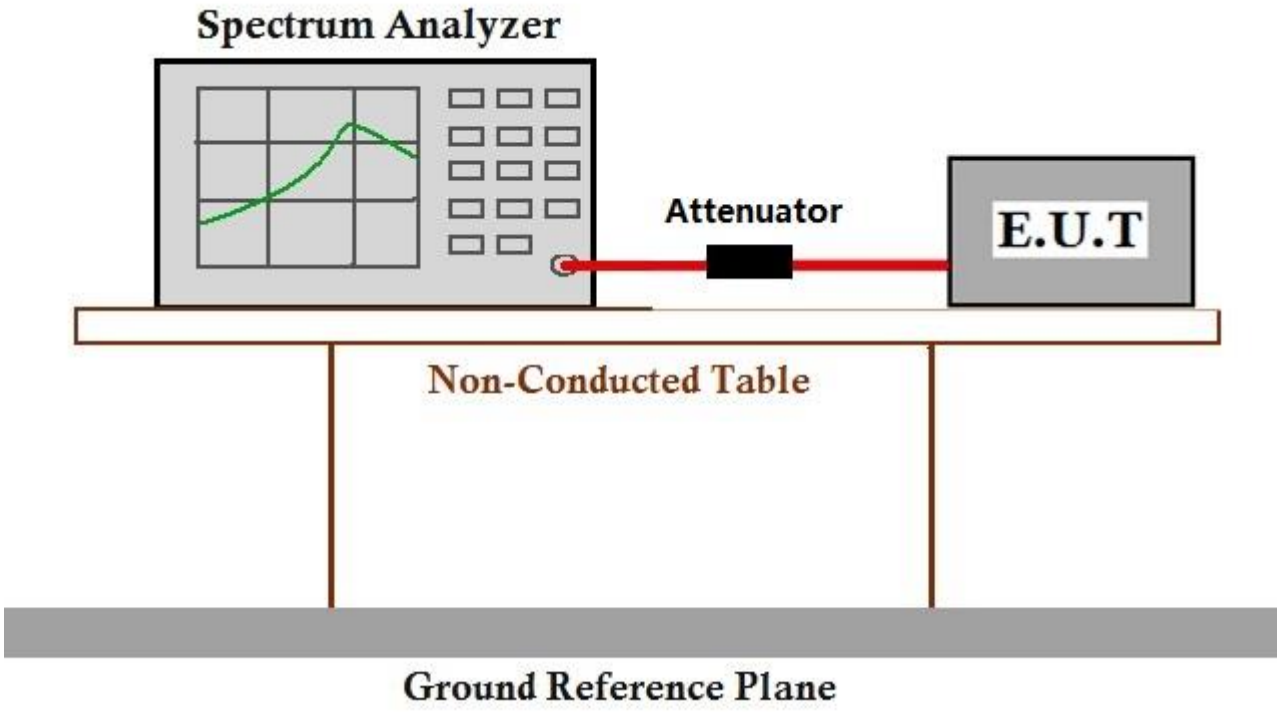
7.7.1 E.U.T. Operation

Operating Environment:

Temperature:	25.0 °C	Humidity:	56 % RH	Atmospheric Pressure:	1015 mbar

Test mode	Keep the EUT transmitted the continuous modulation test signal at the lowest and highest channel
The worst case for final test:	Keep the EUT transmitted the continuous modulation test signal at the lowest and highest channel.Through Pre-scan, found 1Mbps of rate is the worst case of 802.11b; 6Mbps of rate is the worst case of 802.11g; 6.5Mbps of rate is the worst case of 802.11n(HT20); 13.5Mbps of rate is the worst case of 802.11n(HT40) Only the worst case is recorded in the report.

7.7.2 Test Setup Diagram



7.7.3 Measurement Data

The detailed test data see: section 9 Appendix

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7.1 99% Bandwidth

Test Requirement RSS-Gen Section 6.6

Test Method: ANSI C63.10 Section 6.9.3

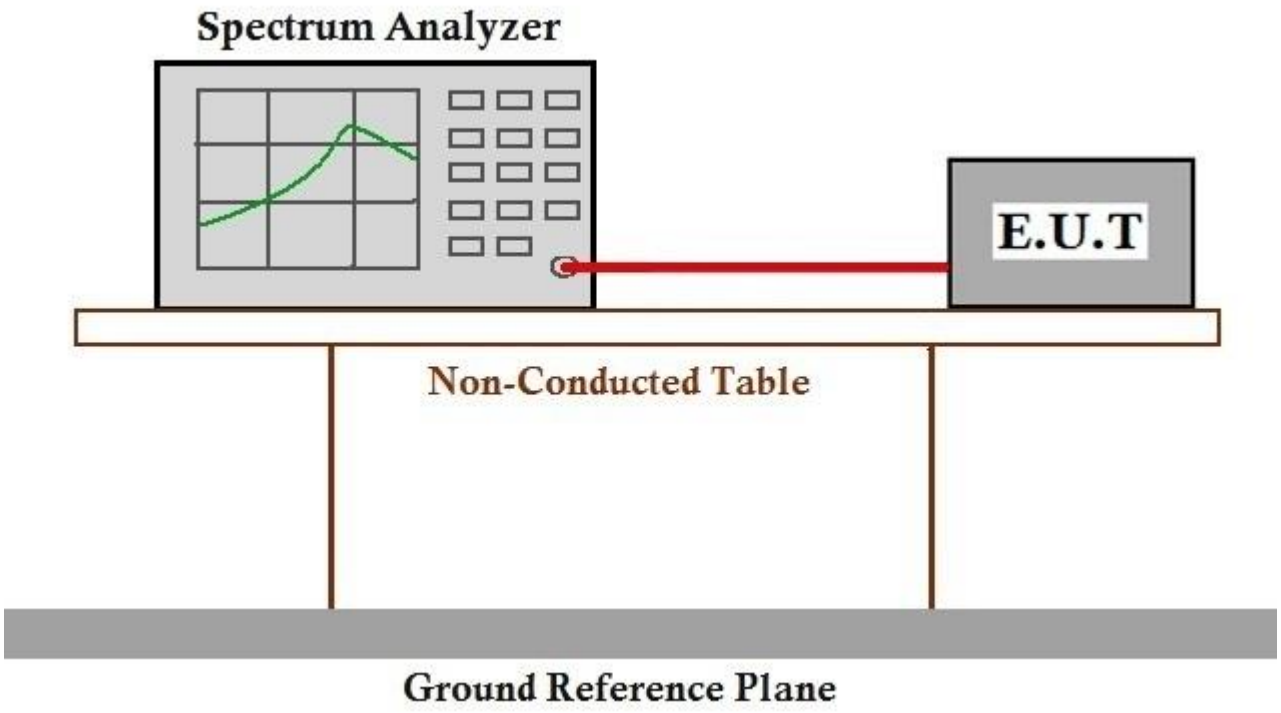
7.1.1 E.U.T. Operation

Operating Environment:

Temperature: 25 °C Humidity: 56 % RH Atmospheric Pressure: 1020 mbar

Test mode Keep the EUT transmitted the continuous modulation test signal at the specific channel(s).

7.1.2 Test Setup Diagram



7.1.3 Measurement Procedure and Data

The detailed test data see: 9.1 Appendix

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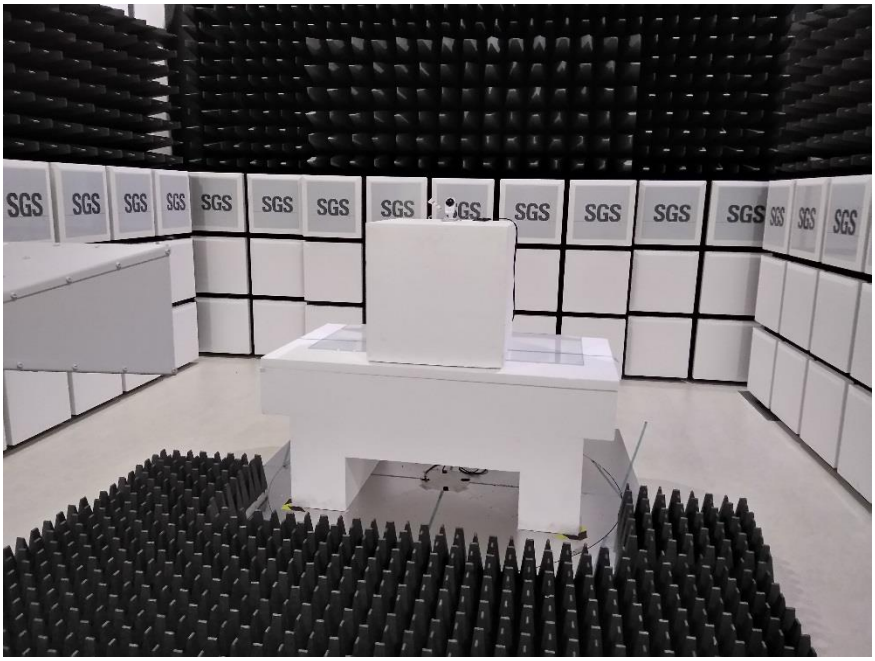
8 Photographs

8.1 Conducted Disturbance at AC Power Line(150kHz-30MHz) Test Setup

8.2 Radiated Spurious Emissions Test Setup



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8.3 EUT Constructional Details

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9 Appendix

9.1 Minimum Emission Bandwidth 6 dB

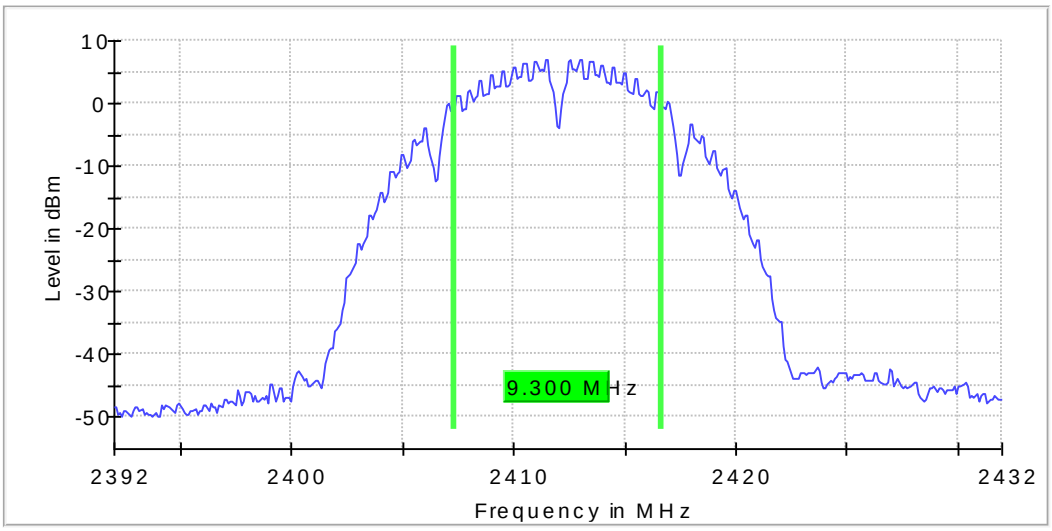
(802.11b)

Lowest channel: 2412MHz

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2412.000000	9.300000	0.500000	---	2407.350000	2416.650000

(continuation of the "6 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2412.000000	7.0	PASS



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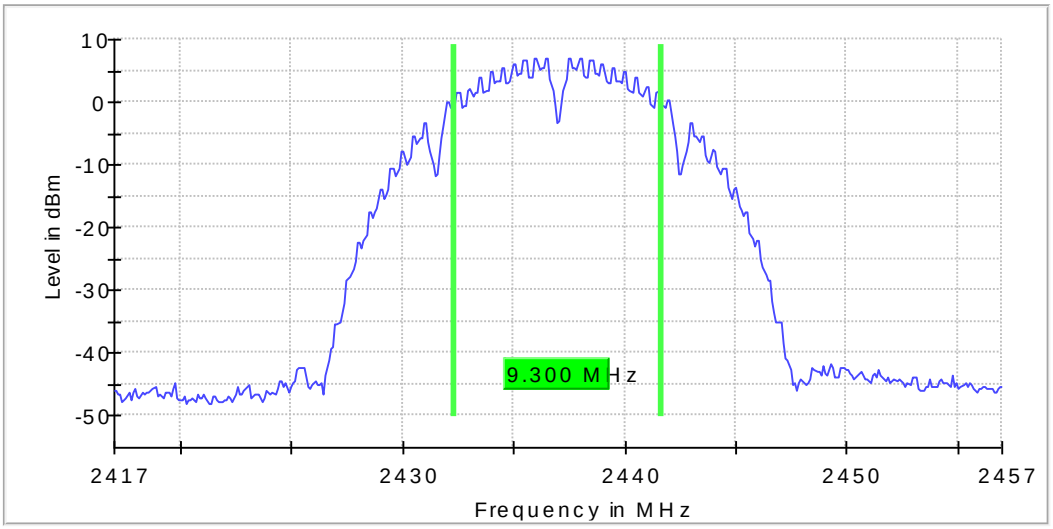
Middle channel: 2437MHz

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2437.000000	9.300000	0.500000	---	2432.350000	2441.650000

(continuation of the "6 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2437.000000	7.1	PASS

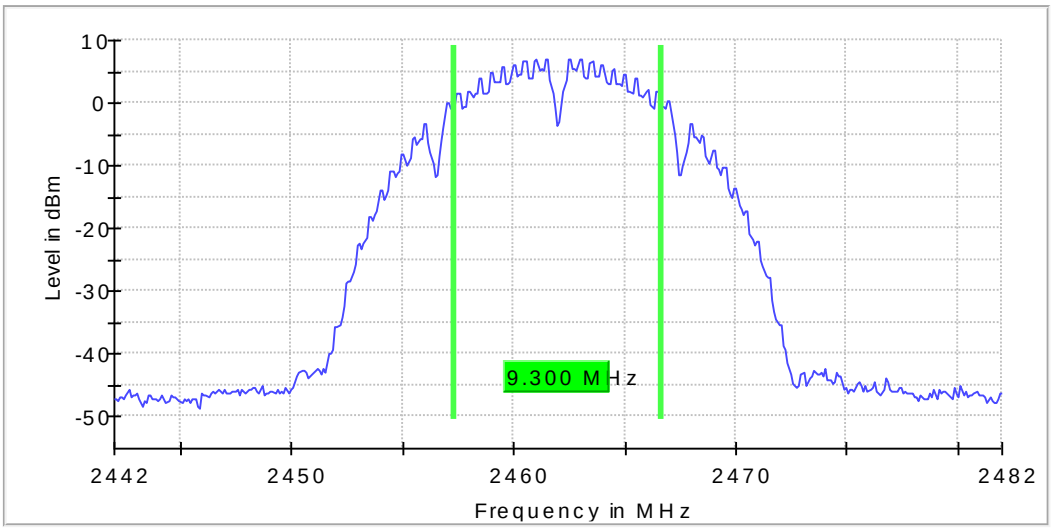


Highest channel: 2462MHz

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2462.000000	9.300000	0.500000	---	2457.350000	2466.650000

(continuation of the "6 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2462.000000	7.1	PASS



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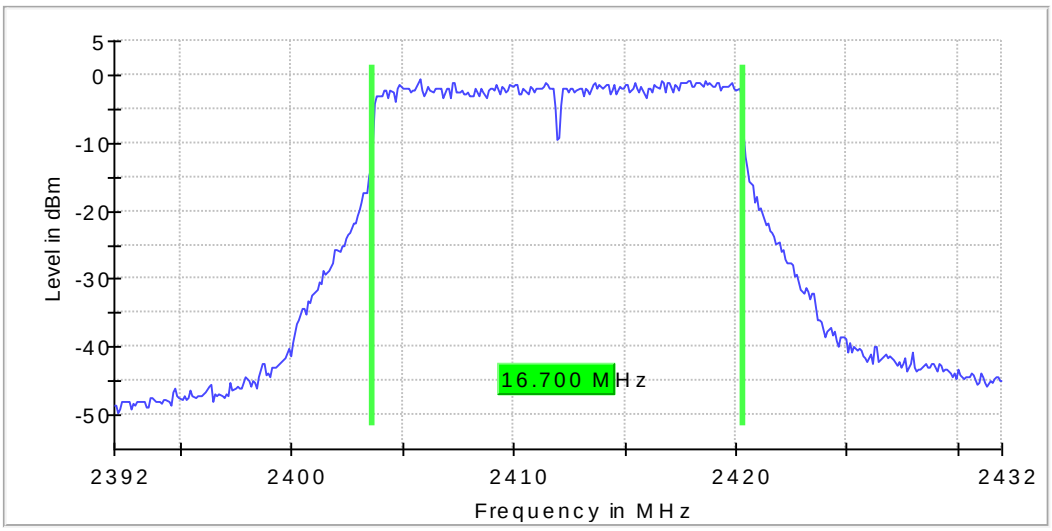
(802.11g)

Lowest channel: 2412MHz

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2412.000000	16.700000	0.500000	---	2403.650000	2420.350000

(continuation of the "6 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2412.000000	-0.7	PASS



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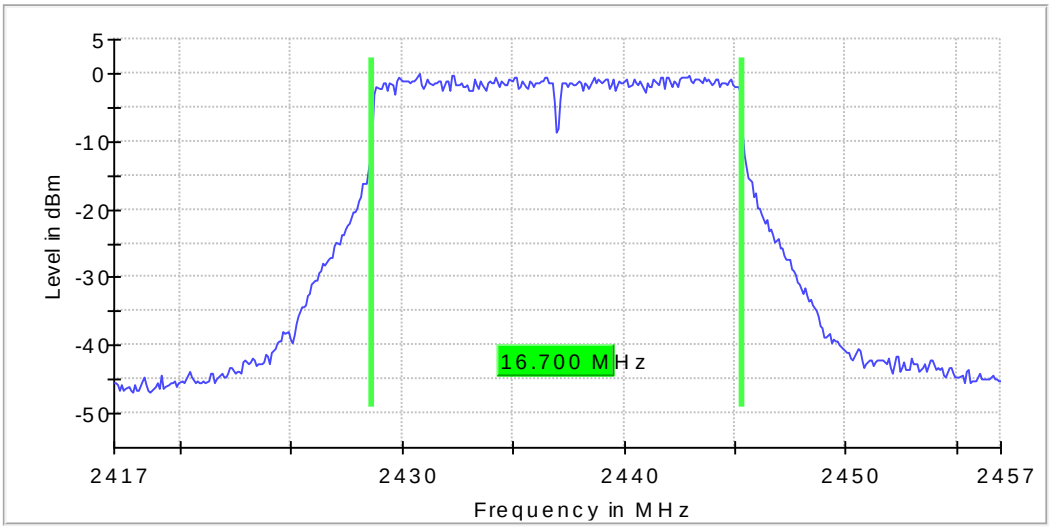
Middle channel: 2437MHz

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2437.000000	16.700000	0.500000	---	2428.650000	2445.350000

(continuation of the "6 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2437.000000	0.1	PASS

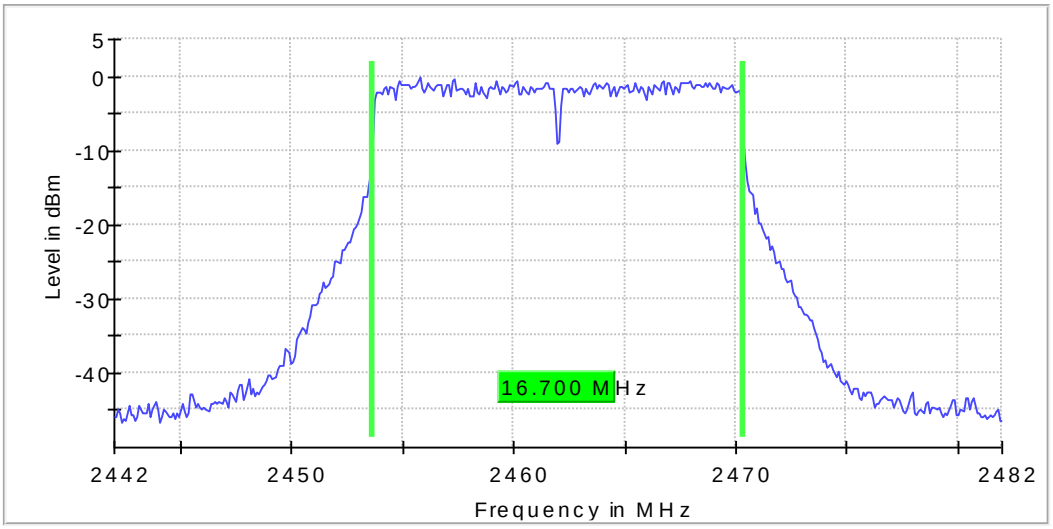


Highest channel: 2462MHz

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2462.000000	16.700000	0.500000	---	2453.650000	2470.350000

(continuation of the "6 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2462.000000	0.0	PASS



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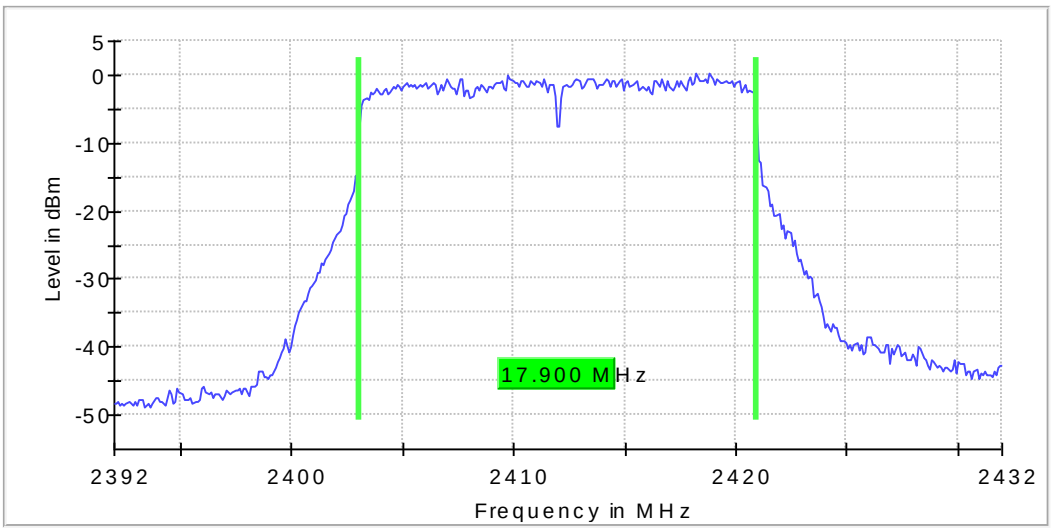
(802.11n20)

Lowest channel: 2412MHz

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2412.000000	17.900000	0.500000	---	2403.050000	2420.950000

(continuation of the "6 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2412.000000	0.4	PASS



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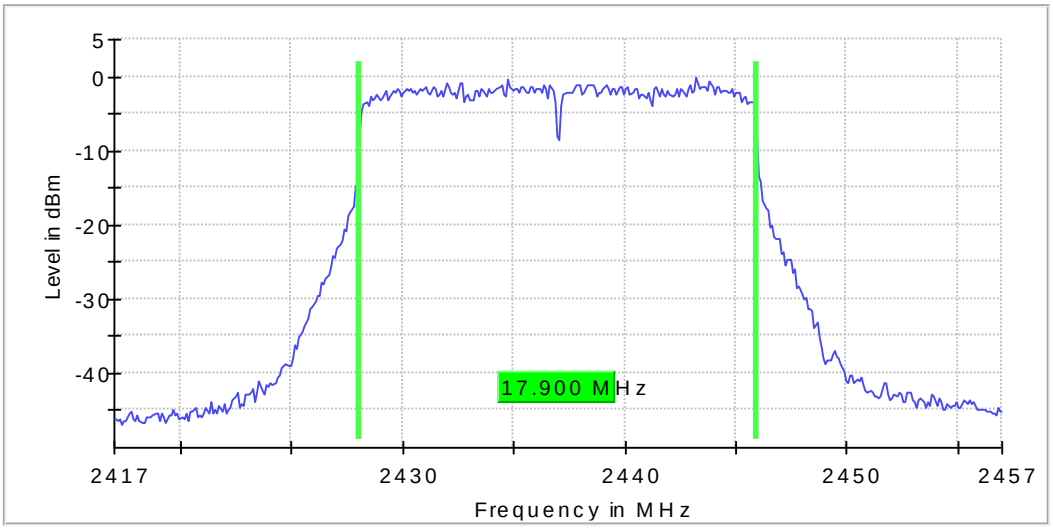
Middle channel: 2437MHz

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2437.000000	17.900000	0.500000	---	2428.050000	2445.950000

(continuation of the "6 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2437.000000	-0.2	PASS

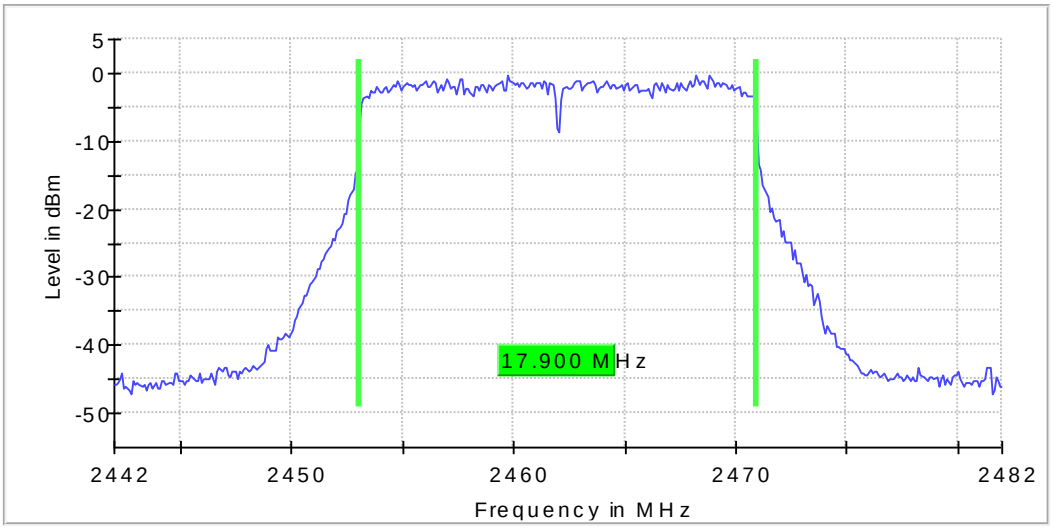


Highest channel: 2462MHz

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2462.000000	17.900000	0.500000	---	2453.050000	2470.950000

(continuation of the "6 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2462.000000	-0.2	PASS



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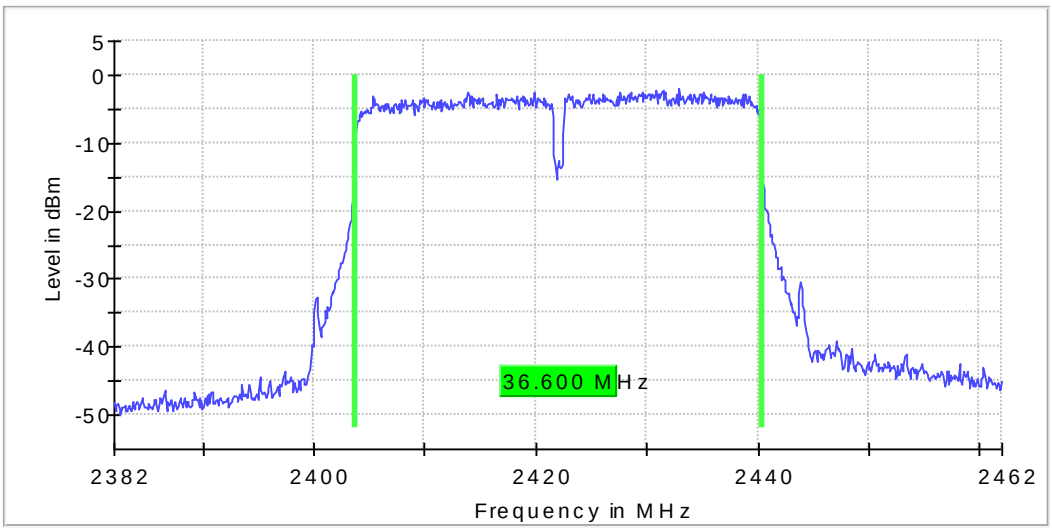
(802.11n40)

Lowest channel: 2422MHz

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2422.000000	36.600000	0.500000	---	2403.750000	2440.350000

(continuation of the "6 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2422.000000	-1.9	PASS



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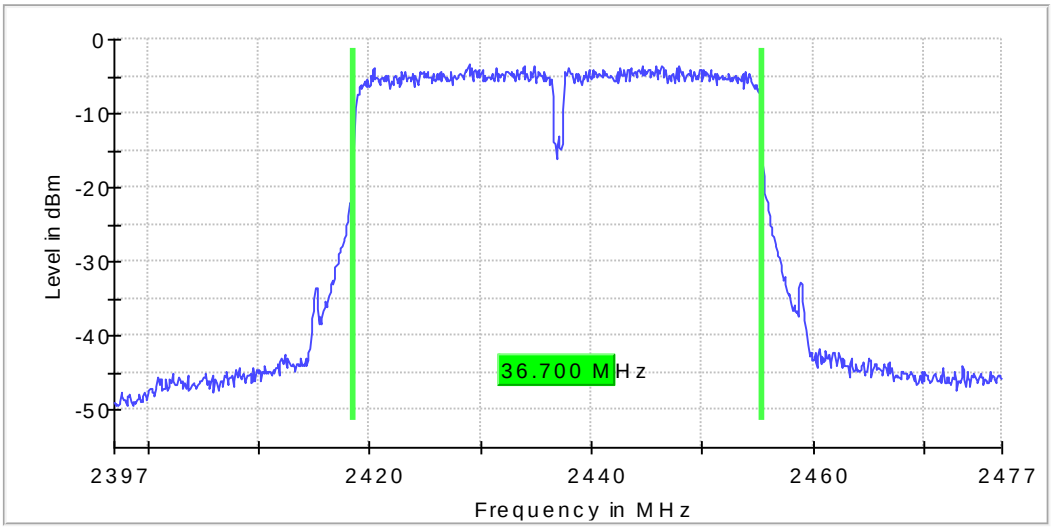
Middle channel: 2437MHz

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2437.000000	36.700000	0.500000	---	2418.650000	2455.350000

(continuation of the "6 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2437.000000	-3.4	PASS

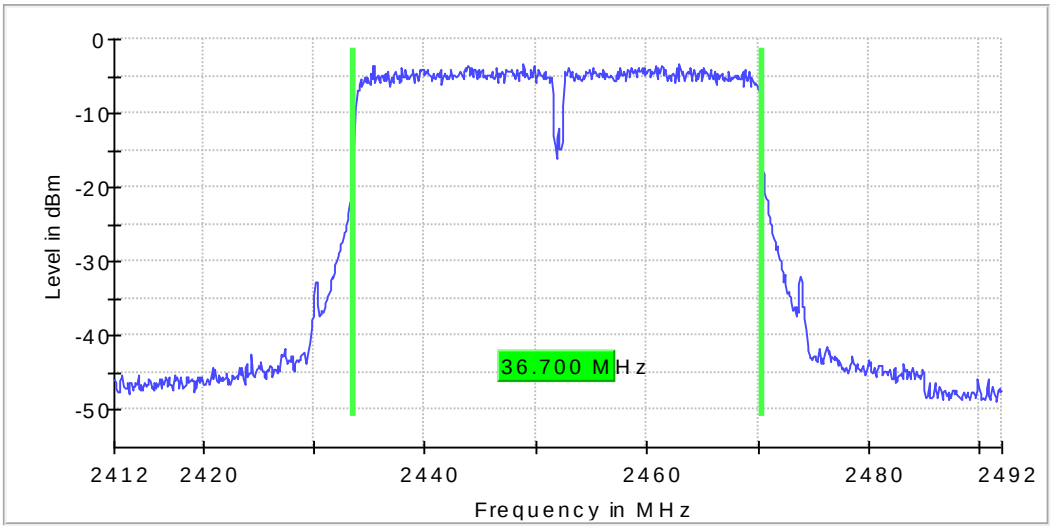


Highest channel: 2452MHz

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2452.000000	36.700000	0.500000	---	2433.650000	2470.350000

(continuation of the "6 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2452.000000	-3.3	PASS



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9.2 RF output power

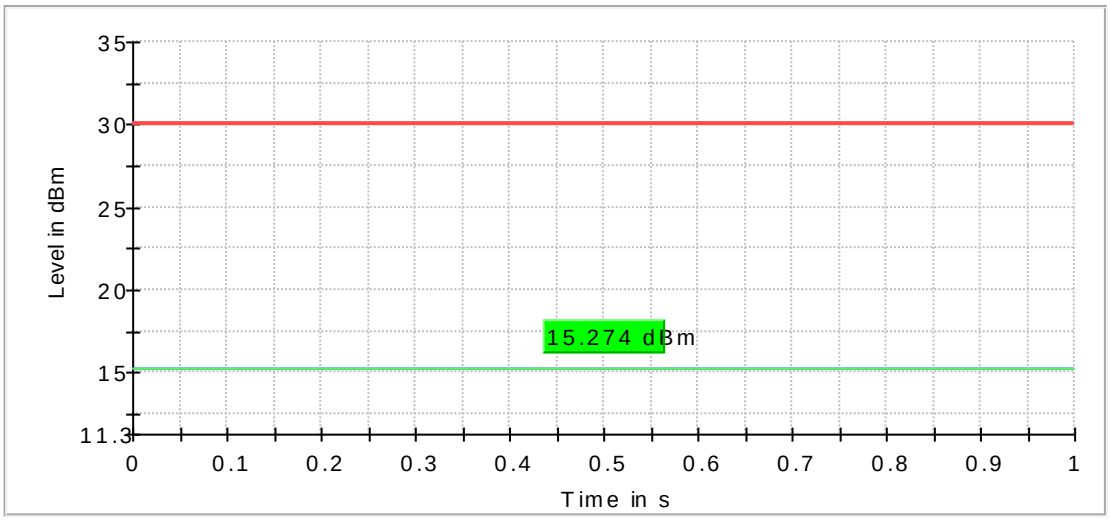
(802.11b)

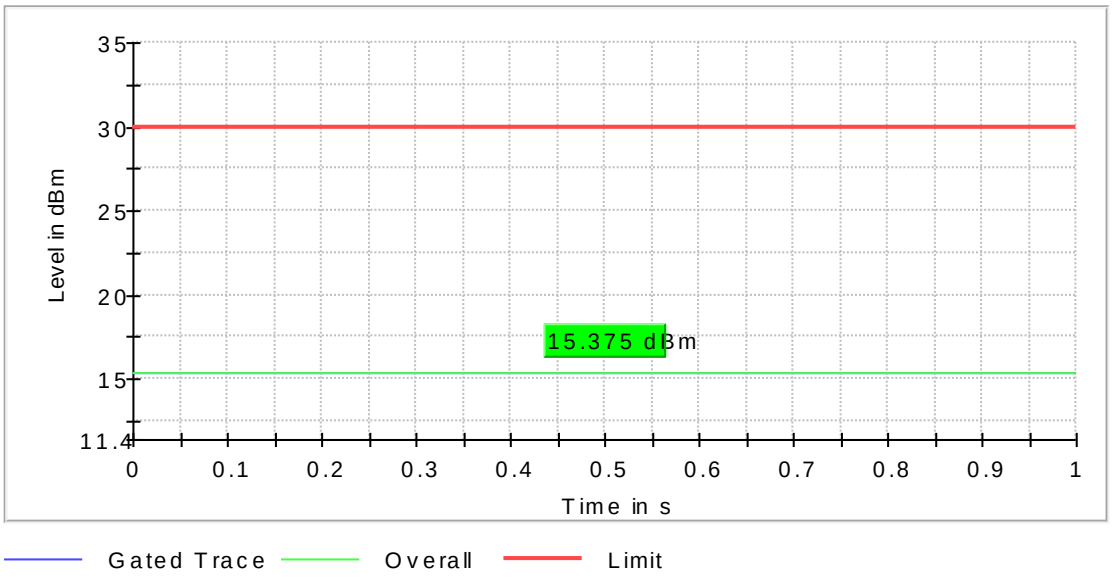
Result

DUT Frequency (MHz)	Gated RMS (dBm)	Limit Max (dBm)	Gated EIRP (dBm)	DutyCycle (%)	Result
2412.000000	15.3	30.0	17.3	100.000	PASS

DUT Frequency (MHz)	Gated RMS (dBm)	Limit Max (dBm)	Gated EIRP (dBm)	DutyCycle (%)	Result
2437.000000	15.4	30.0	17.4	100.000	PASS

DUT Frequency (MHz)	Gated RMS (dBm)	Limit Max (dBm)	Gated EIRP (dBm)	DutyCycle (%)	Result
2462.000000	15.4	30.0	17.4	100.000	PASS





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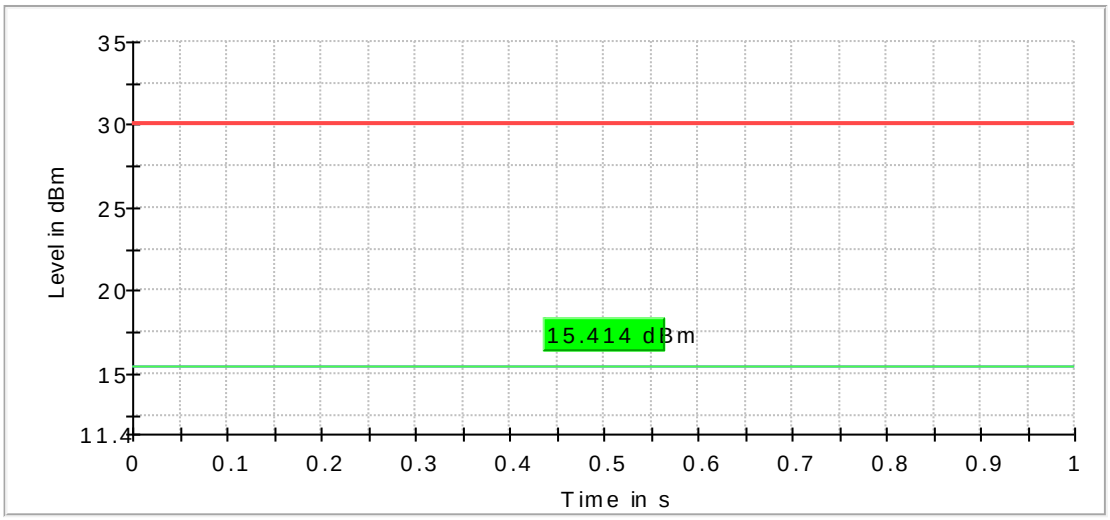


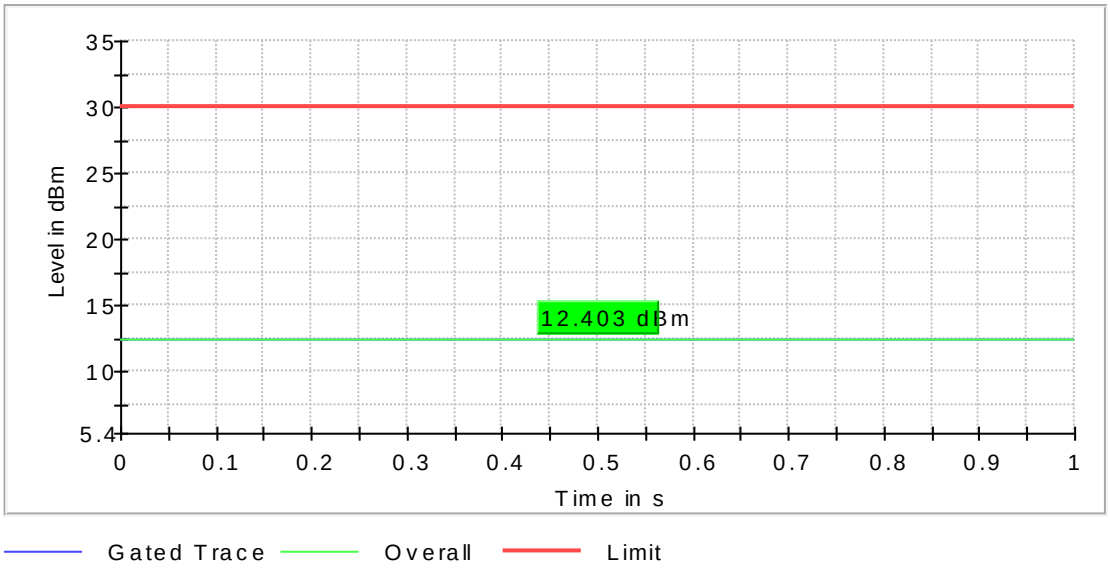
(802.11g)

Result

DUT Frequency (MHz)	Gated RMS (dBm)	Limit Max (dBm)	Gated EIRP (dBm)	DutyCycle (%)	Result
2412.000000	12.4	30.0	14.4	100.000	PASS

DUT Frequency (MHz)	Gated RMS (dBm)	Limit Max (dBm)	Gated EIRP (dBm)	DutyCycle (%)	Result
2437.000000	13.0	30.0	15.0	100.000	PASS

DUT Frequency (MHz)	Gated RMS (dBm)	Limit Max (dBm)	Gated EIRP (dBm)	DutyCycle (%)	Result
2462.000000	12.9	30.0	14.9	100.000	PASS



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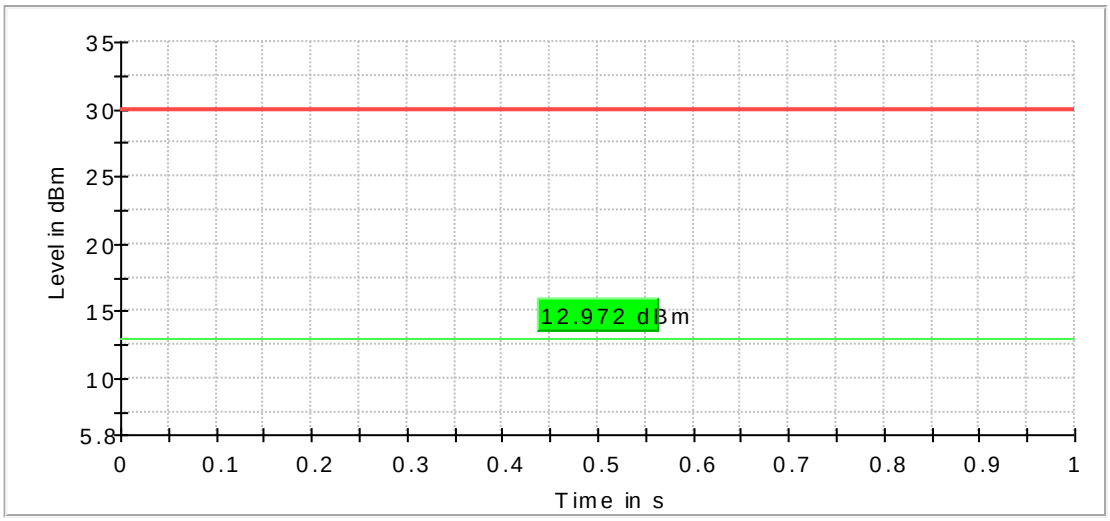

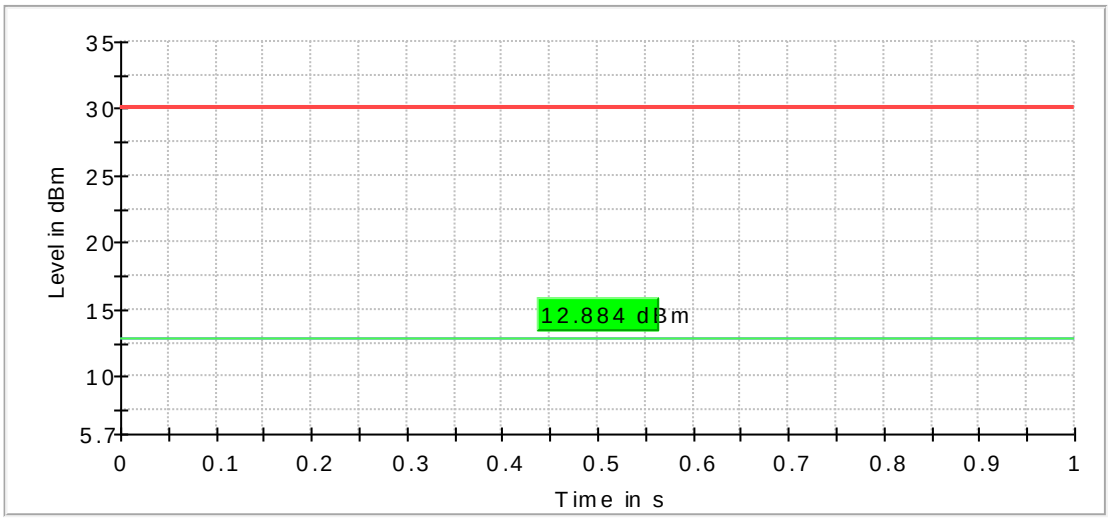

(802.11n20)

Result

DUT Frequency (MHz)	Gated RMS (dBm)	Limit Max (dBm)	Gated EIRP (dBm)	DutyCycle (%)	Result
2412.000000	13.0	30.0	15.0	100.000	PASS

DUT Frequency (MHz)	Gated RMS (dBm)	Limit Max (dBm)	Gated EIRP (dBm)	DutyCycle (%)	Result
2437.000000	12.5	30.0	14.5	100.000	PASS

DUT Frequency (MHz)	Gated RMS (dBm)	Limit Max (dBm)	Gated EIRP (dBm)	DutyCycle (%)	Result
2462.000000	12.6	30.0	14.6	100.000	PASS

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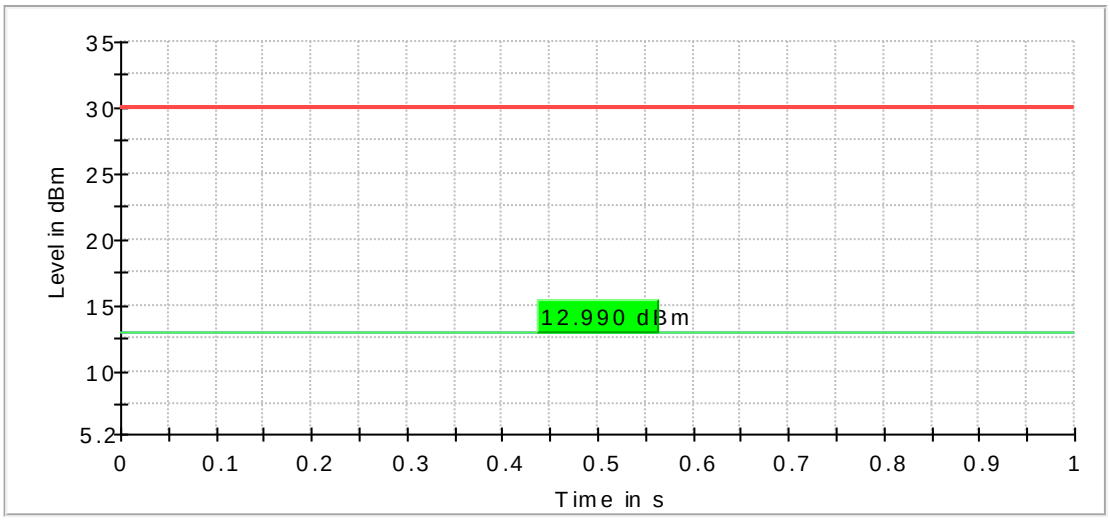

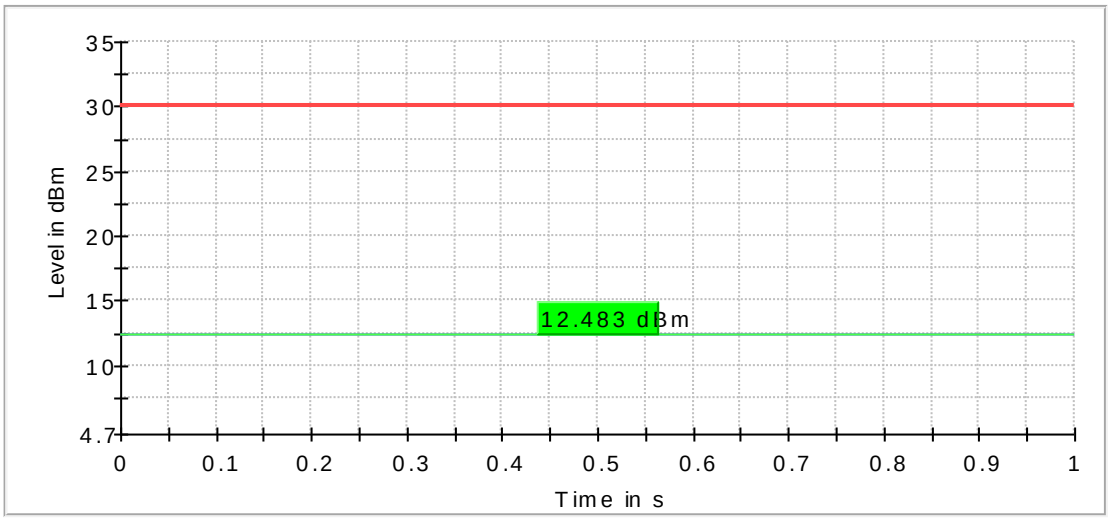

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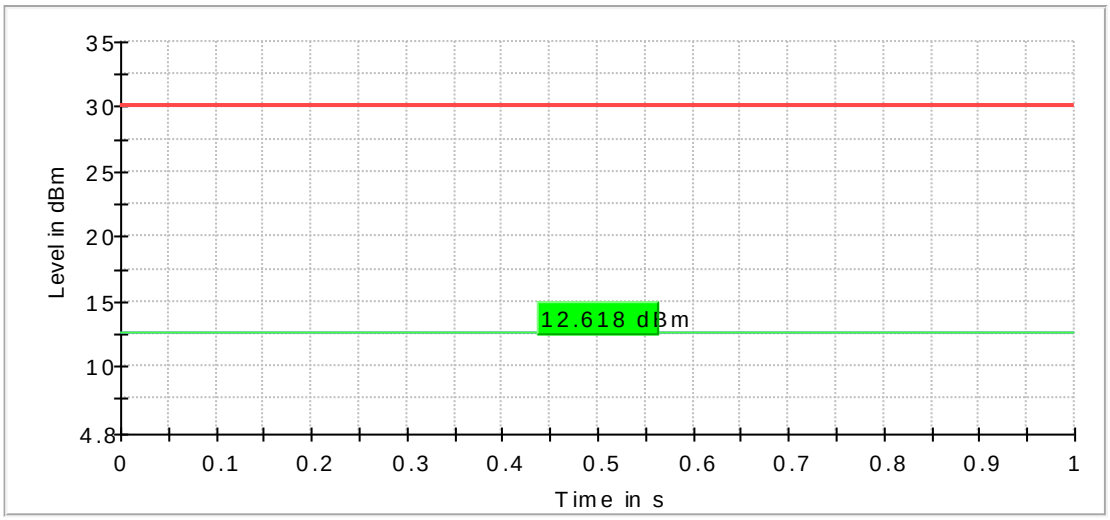


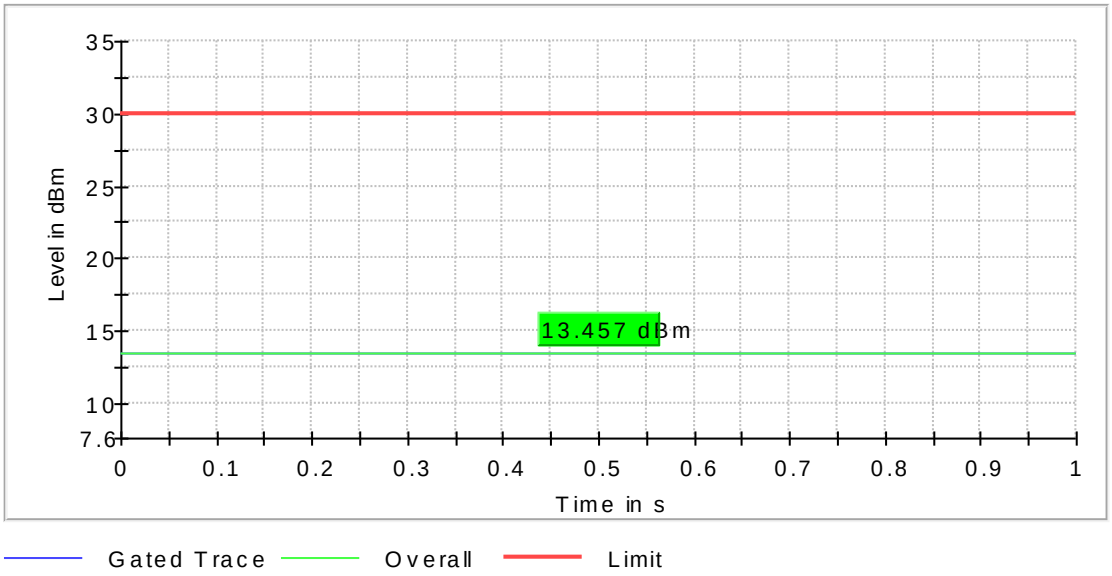
(802.11n40)

Result

DUT Frequency (MHz)	Gated RMS (dBm)	Limit Max (dBm)	Gated EIRP (dBm)	DutyCycle (%)	Result
2422.000000	13.5	30.0	15.5	100.000	PASS

DUT Frequency (MHz)	Gated RMS (dBm)	Limit Max (dBm)	Gated EIRP (dBm)	DutyCycle (%)	Result
2437.000000	12.4	30.0	14.4	100.000	PASS

DUT Frequency (MHz)	Gated RMS (dBm)	Limit Max (dBm)	Gated EIRP (dBm)	DutyCycle (%)	Result
2452.000000	12.6	30.0	14.6	100.000	PASS



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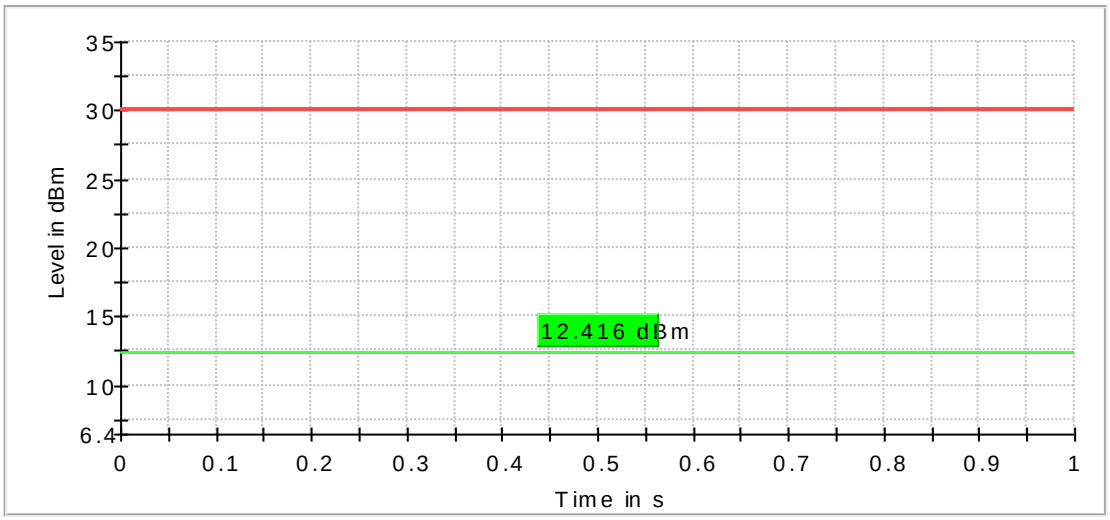

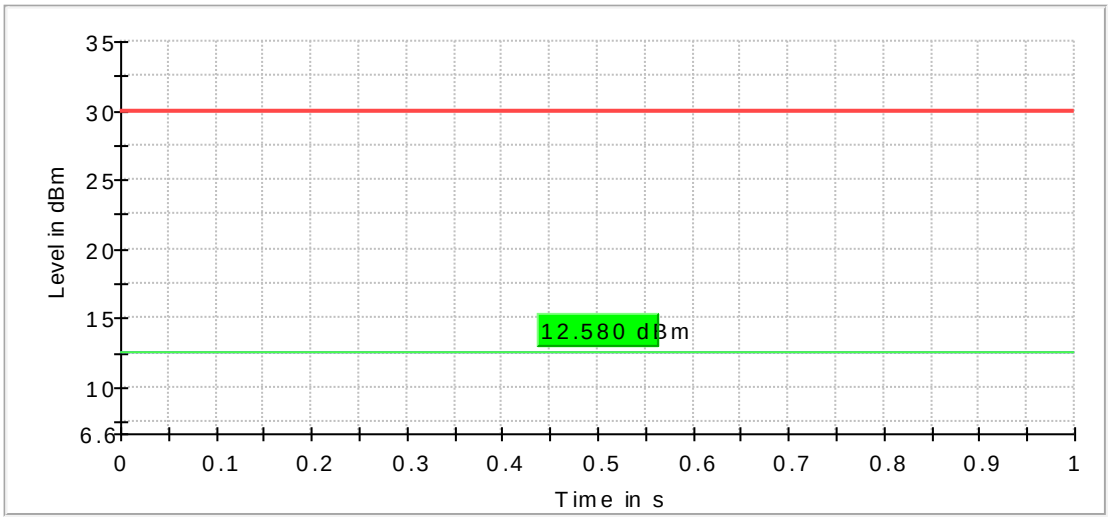

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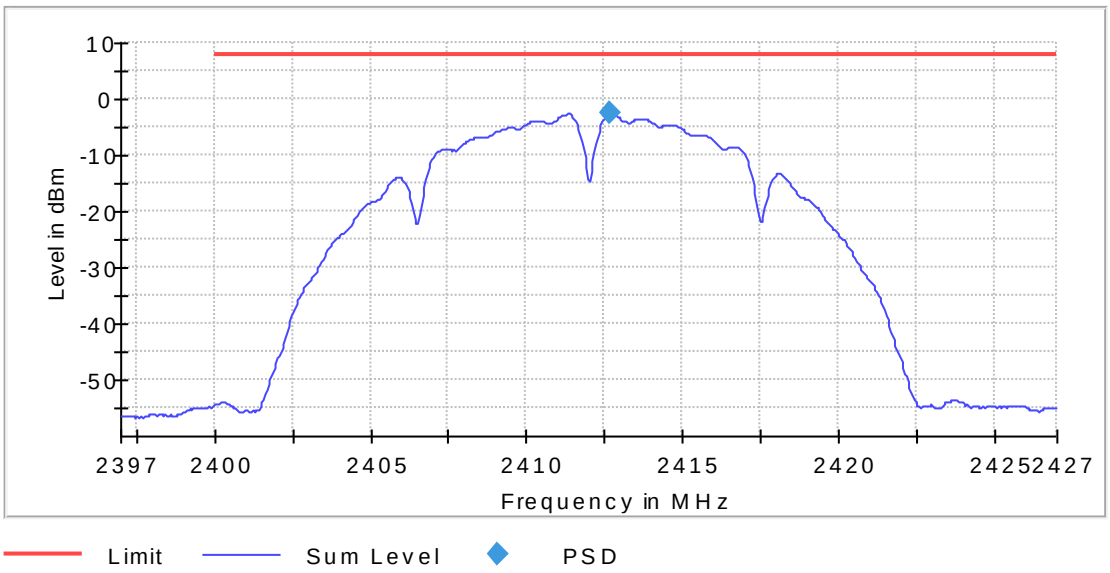
9.3 Power Spectral Density

(802.11b)

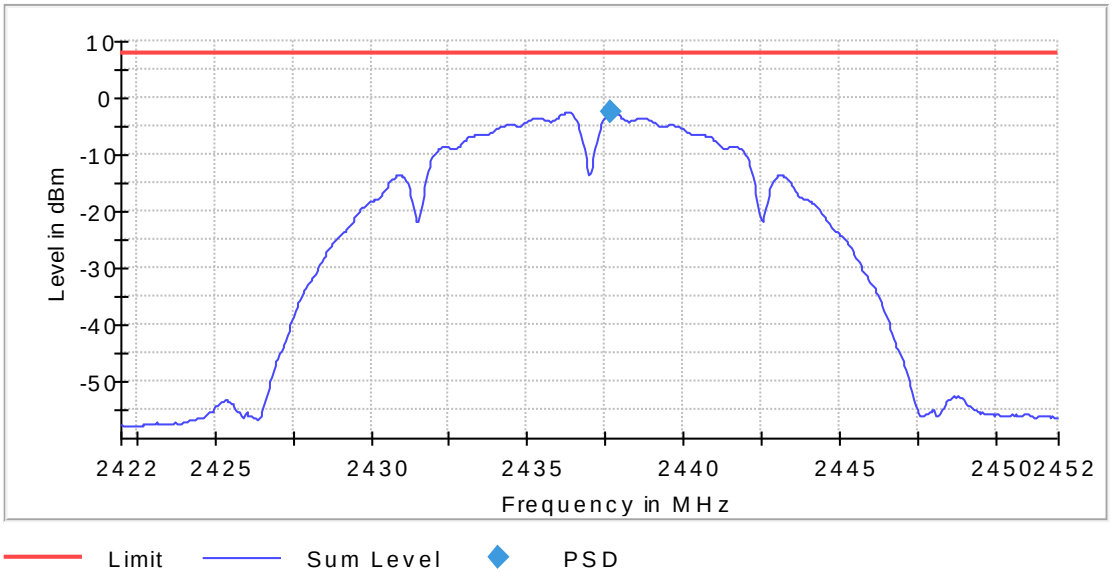
Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2412.000000	2412.675000	-2.592	8.0	PASS



Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2437.000000	2437.675000	-2.504	8.0	PASS



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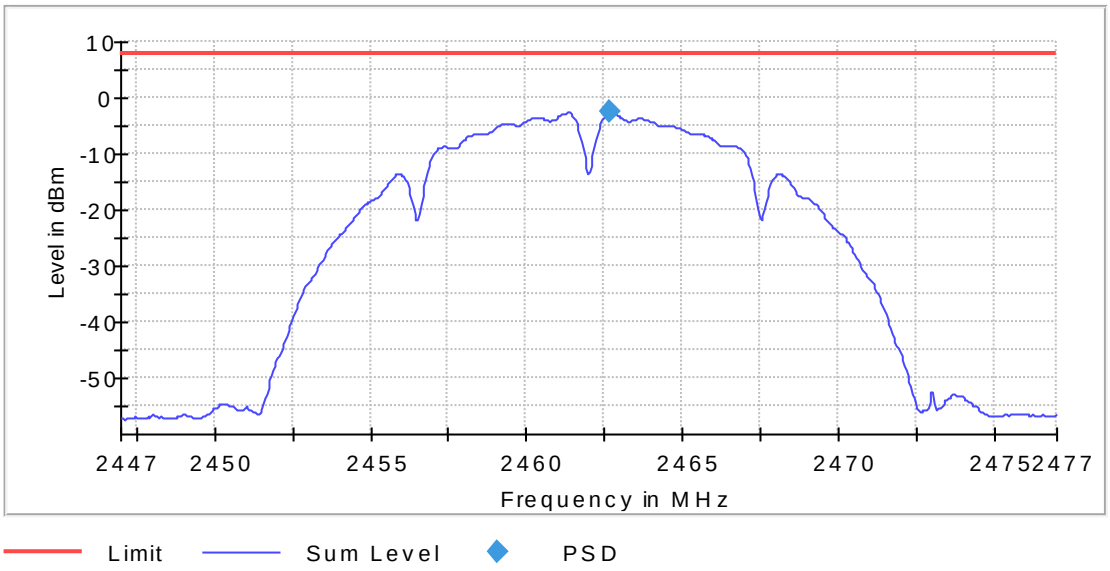
Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2462.000000	2462.675000	-2.520	8.0	PASS



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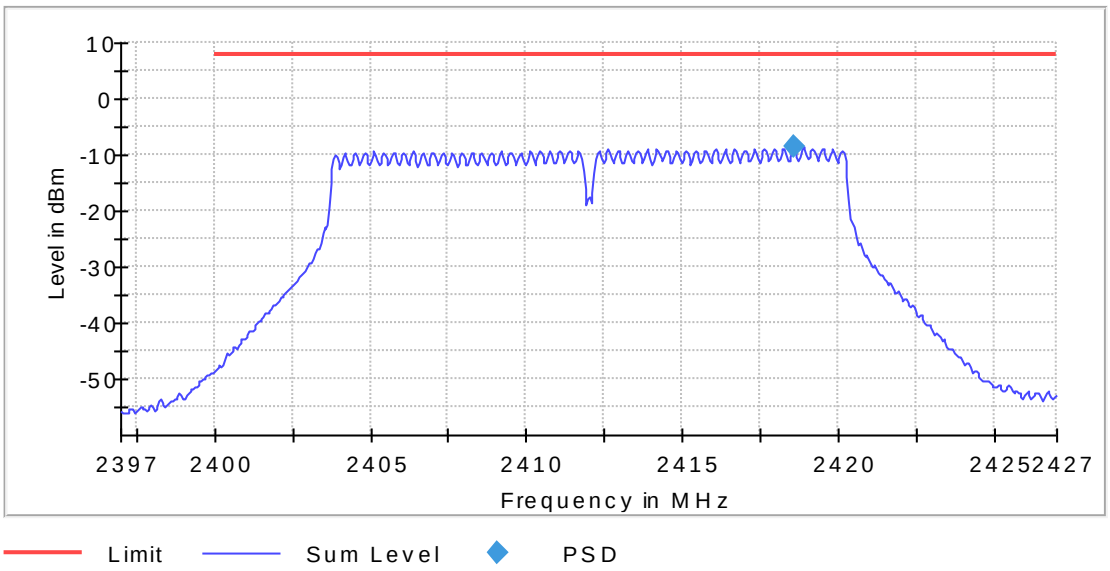
(802.11g)

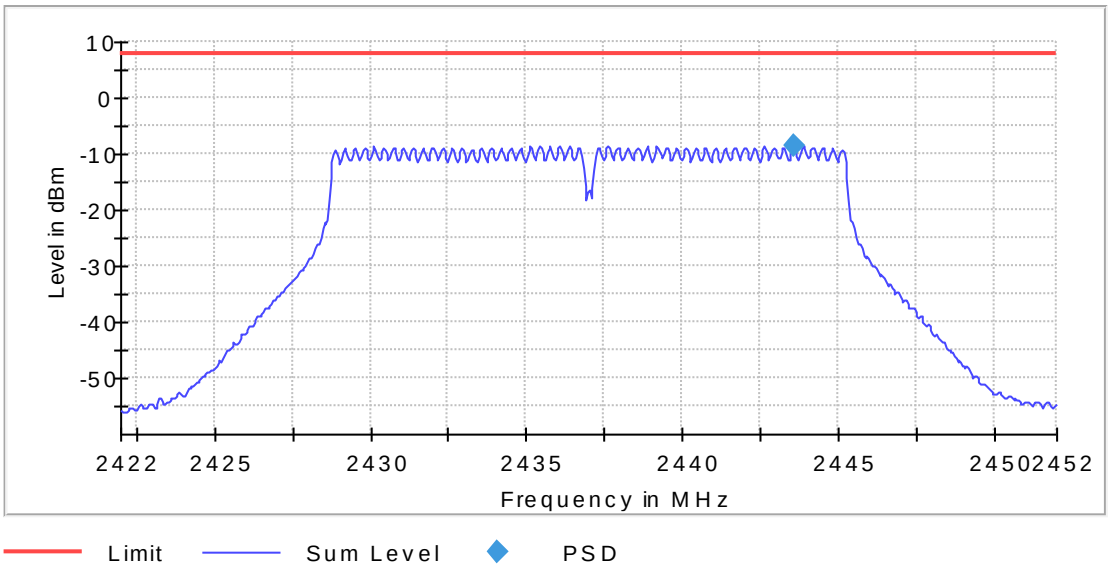
Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2412.000000	2418.575000	-8.552	8.0	PASS



Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2437.000000	2443.575000	-8.485	8.0	PASS



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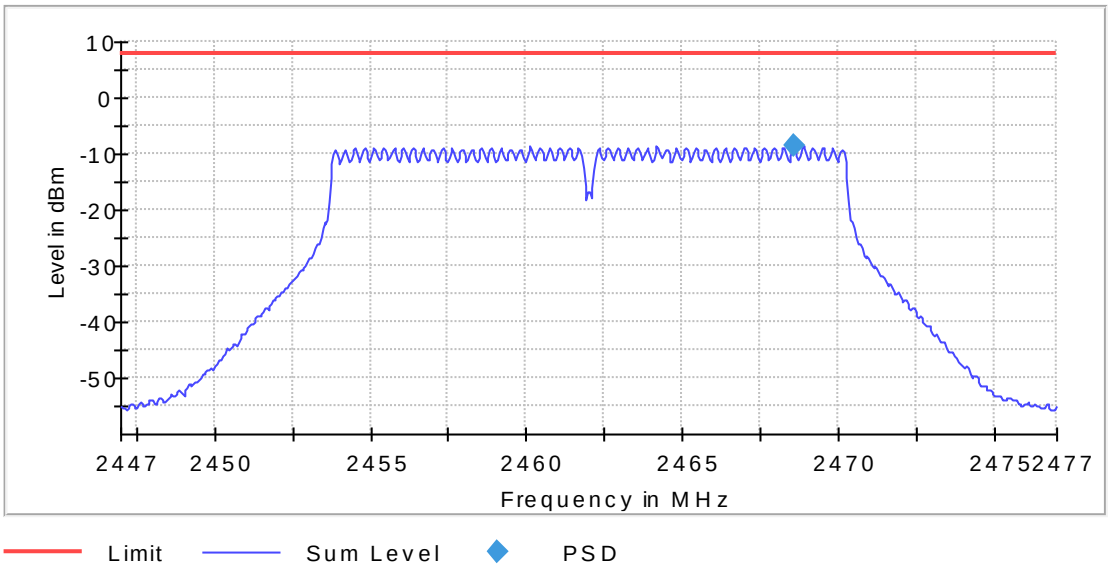
Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2462.000000	2468.575000	-8.581	8.0	PASS



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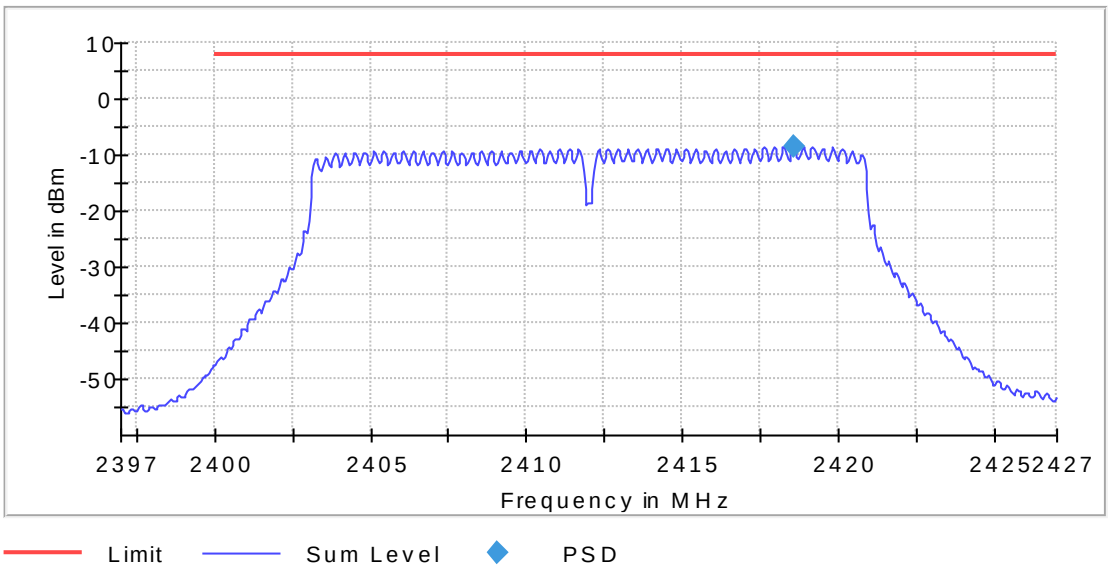
(802.11n20)

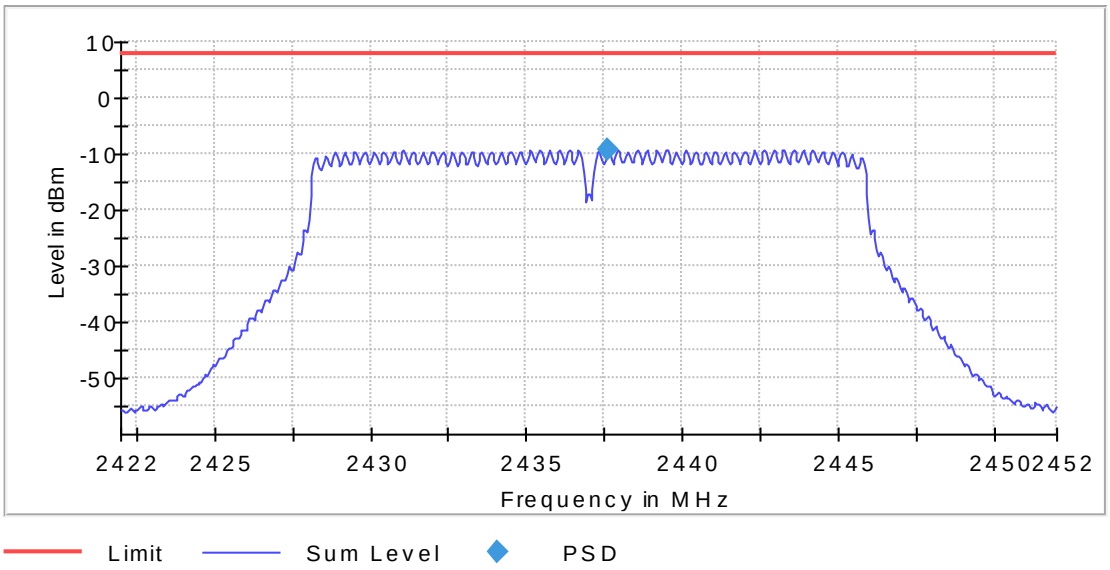
Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2412.000000	2418.575000	-8.490	8.0	PASS



Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2437.000000	2437.625000	-9.199	8.0	PASS



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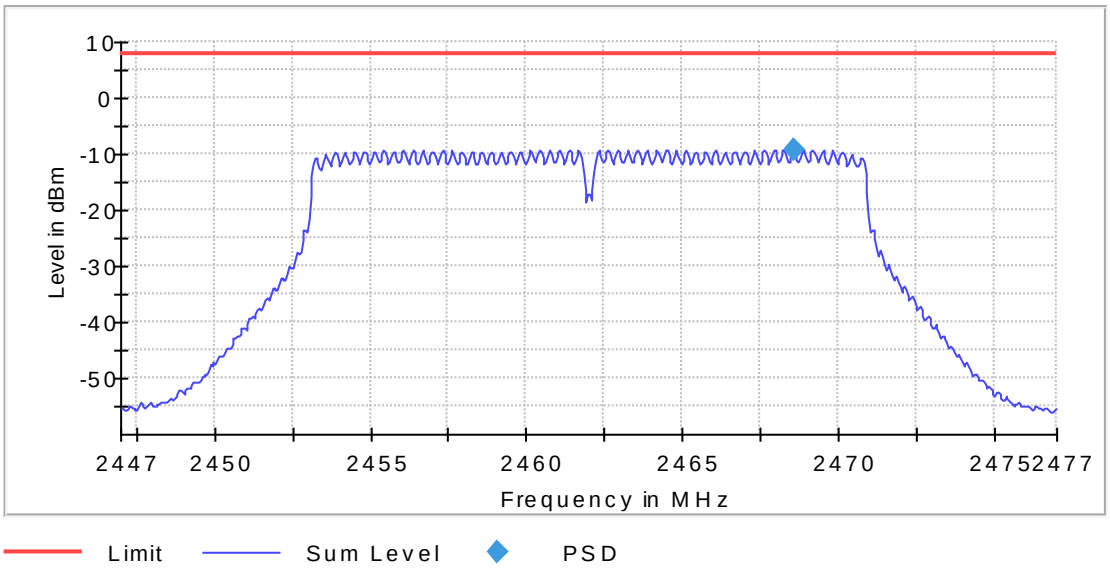
Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2462.000000	2468.575000	-9.143	8.0	PASS



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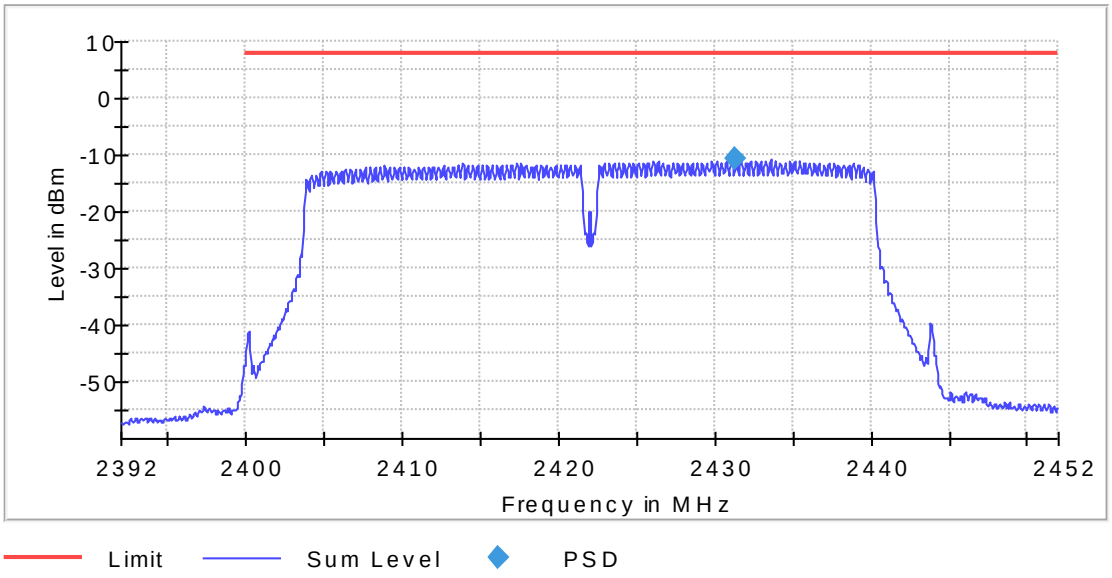
(802.11n40)

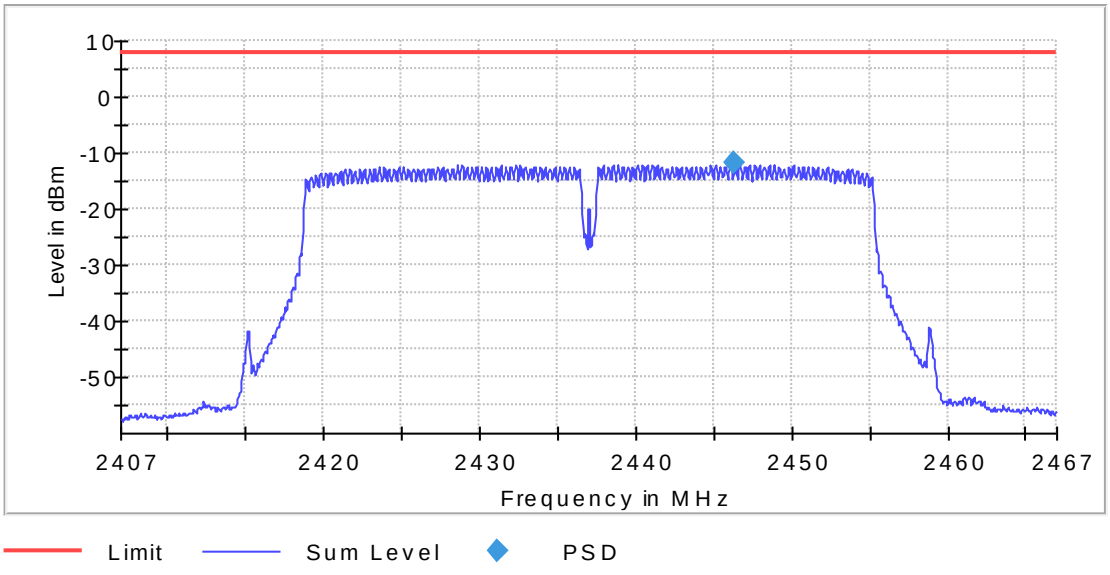
Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2422.000000	2431.375000	-10.815	8.0	PASS



Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2437.000000	2446.375000	-11.923	8.0	PASS



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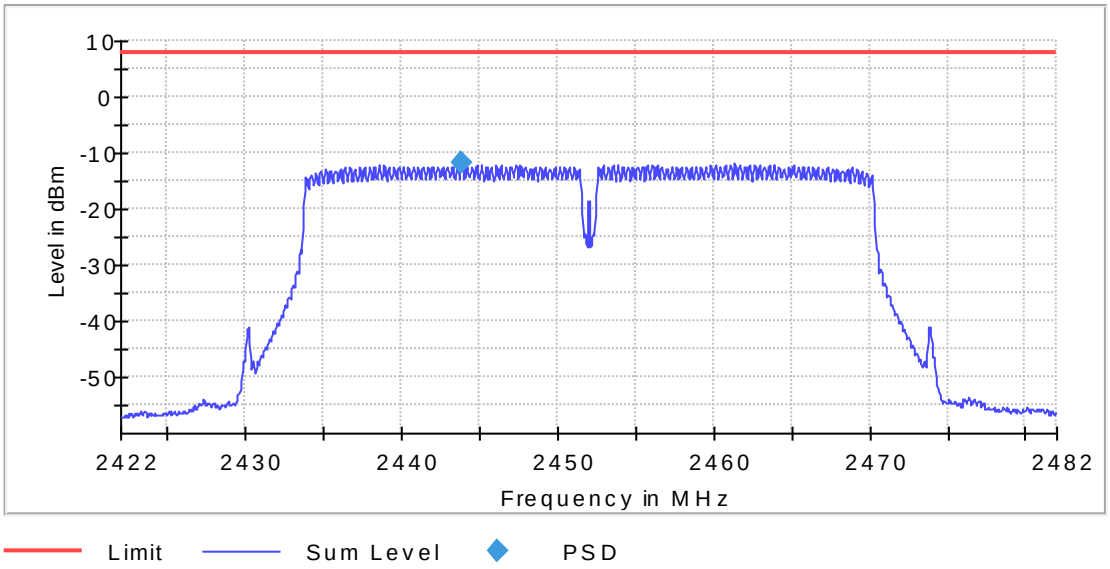
Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2452.000000	2443.875000	-11.810	8.0	PASS



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9.4 Band Edge

(802.11b)

Result

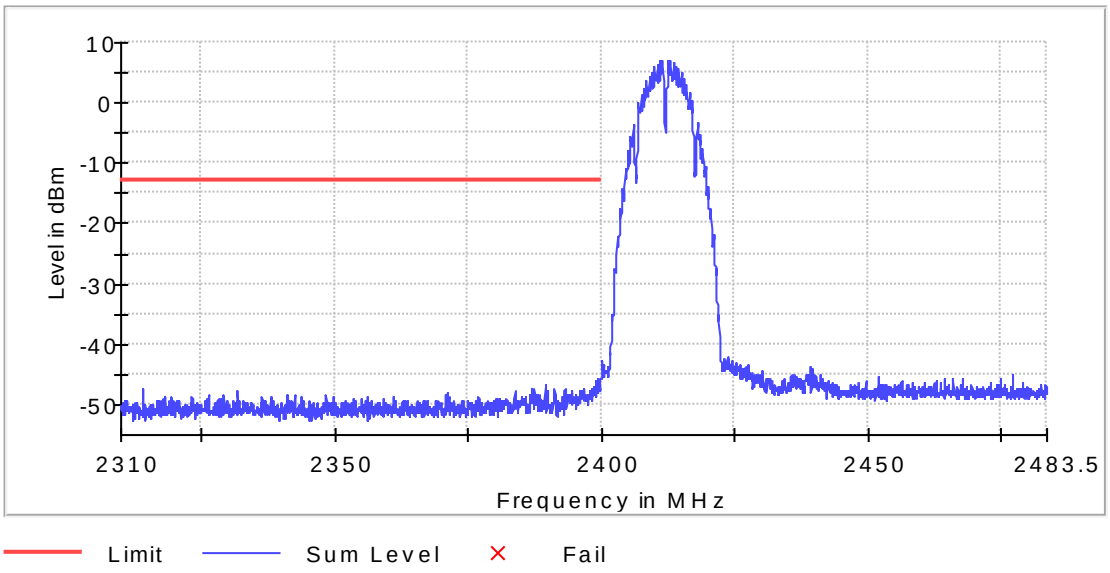
DUT Frequency (MHz)	Result
2412.000000	PASS

Inband Peak

Frequency (MHz)	Level (dBm)
2411.525000	7.0

Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2399.925000	-45.7	32.8	-13.0	PASS
2399.975000	-45.8	32.9	-13.0	PASS
2399.375000	-45.9	32.9	-13.0	PASS
2399.325000	-45.9	32.9	-13.0	PASS
2399.075000	-46.1	33.2	-13.0	PASS
2399.875000	-46.2	33.2	-13.0	PASS
2399.025000	-46.2	33.2	-13.0	PASS
2389.525000	-46.8	33.8	-13.0	PASS
2399.175000	-46.8	33.9	-13.0	PASS
2399.475000	-46.8	33.9	-13.0	PASS
2389.475000	-46.9	34.0	-13.0	PASS
2399.825000	-47.0	34.0	-13.0	PASS
2399.725000	-47.0	34.0	-13.0	PASS
2398.575000	-47.0	34.1	-13.0	PASS
2399.225000	-47.1	34.1	-13.0	PASS



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Result

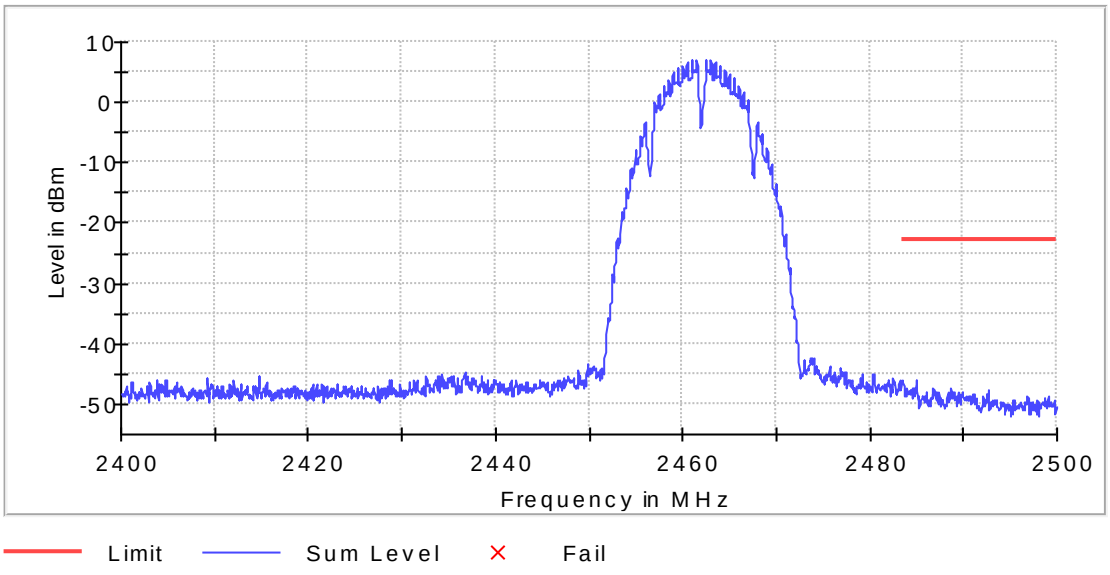
DUT Frequency (MHz)	Result
2462.000000	PASS

Inband Peak

Frequency (MHz)	Level (dBm)
2462.525000	7.1

Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2484.975000	-46.1	23.3	-22.9	PASS
2483.525000	-46.2	23.4	-22.9	PASS
2483.575000	-46.5	23.6	-22.9	PASS
2484.925000	-46.8	23.9	-22.9	PASS
2483.625000	-46.9	24.1	-22.9	PASS
2483.675000	-47.1	24.3	-22.9	PASS
2488.725000	-47.3	24.4	-22.9	PASS
2484.625000	-47.3	24.5	-22.9	PASS
2484.725000	-47.3	24.5	-22.9	PASS
2484.025000	-47.4	24.5	-22.9	PASS
2484.775000	-47.4	24.5	-22.9	PASS
2484.675000	-47.5	24.6	-22.9	PASS
2488.675000	-47.5	24.6	-22.9	PASS
2483.975000	-47.5	24.6	-22.9	PASS
2486.825000	-47.5	24.6	-22.9	PASS



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(802.11g)

Result

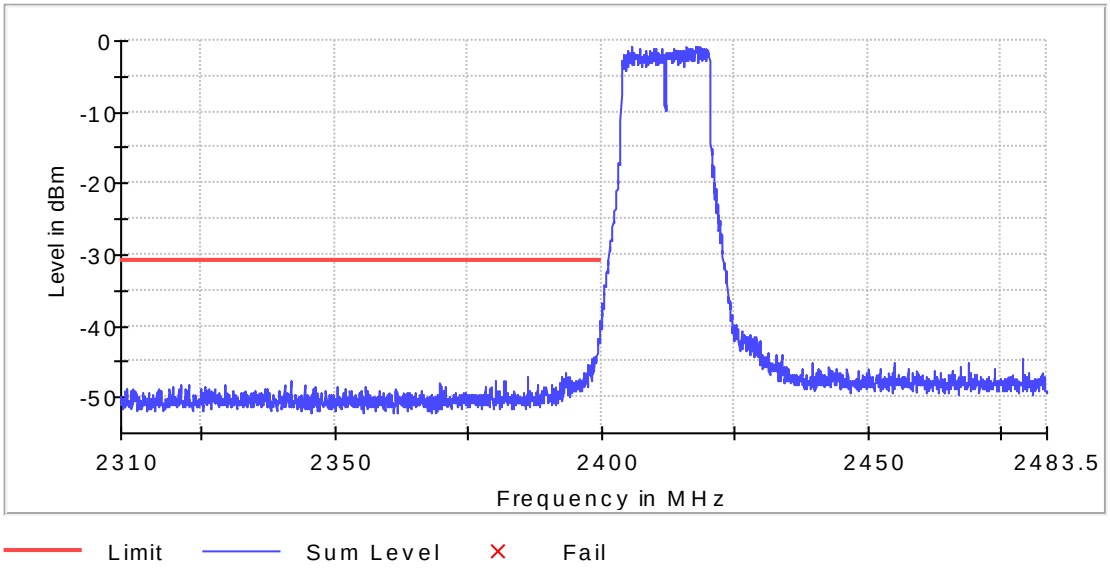
DUT Frequency (MHz)	Result
2412.000000	PASS

Inband Peak

Frequency (MHz)	Level (dBm)
2405.775000	-0.7

Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2399.875000	-39.3	8.6	-30.7	PASS
2399.825000	-40.0	9.2	-30.7	PASS
2399.925000	-40.3	9.6	-30.7	PASS
2399.975000	-40.4	9.7	-30.7	PASS
2399.775000	-41.4	10.7	-30.7	PASS
2399.575000	-41.9	11.1	-30.7	PASS
2399.375000	-41.9	11.1	-30.7	PASS
2399.625000	-41.9	11.2	-30.7	PASS
2399.325000	-41.9	11.2	-30.7	PASS
2399.725000	-42.0	11.2	-30.7	PASS
2399.675000	-42.3	11.6	-30.7	PASS
2399.525000	-42.4	11.6	-30.7	PASS
2399.425000	-42.4	11.7	-30.7	PASS
2399.475000	-42.6	11.9	-30.7	PASS
2399.275000	-43.3	12.6	-30.7	PASS



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Result

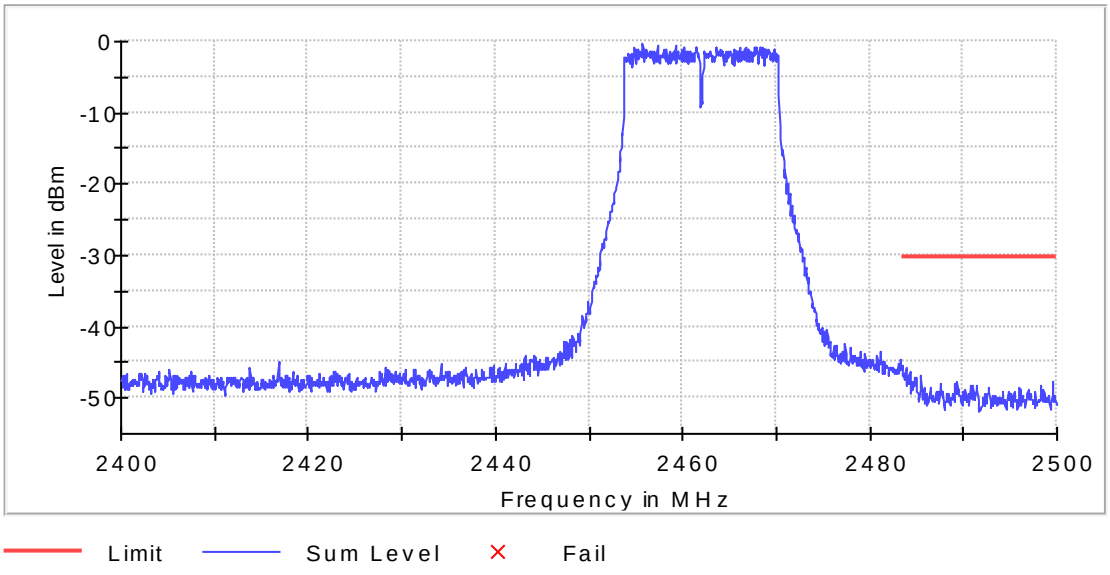
DUT Frequency (MHz)	Result
2462.000000	PASS

Inband Peak

Frequency (MHz)	Level (dBm)
2455.775000	-0.2

Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2483.875000	-45.7	15.5	-30.2	PASS
2483.925000	-45.8	15.7	-30.2	PASS
2483.525000	-46.0	15.8	-30.2	PASS
2484.275000	-46.3	16.1	-30.2	PASS
2484.325000	-46.3	16.1	-30.2	PASS
2483.675000	-46.6	16.4	-30.2	PASS
2483.725000	-46.6	16.4	-30.2	PASS
2484.175000	-46.8	16.6	-30.2	PASS
2483.825000	-46.8	16.6	-30.2	PASS
2484.225000	-46.8	16.6	-30.2	PASS
2485.475000	-46.8	16.6	-30.2	PASS
2483.575000	-46.8	16.6	-30.2	PASS
2485.525000	-47.0	16.8	-30.2	PASS
2484.975000	-47.0	16.8	-30.2	PASS
2483.625000	-47.0	16.9	-30.2	PASS



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(802.11n20)

Result

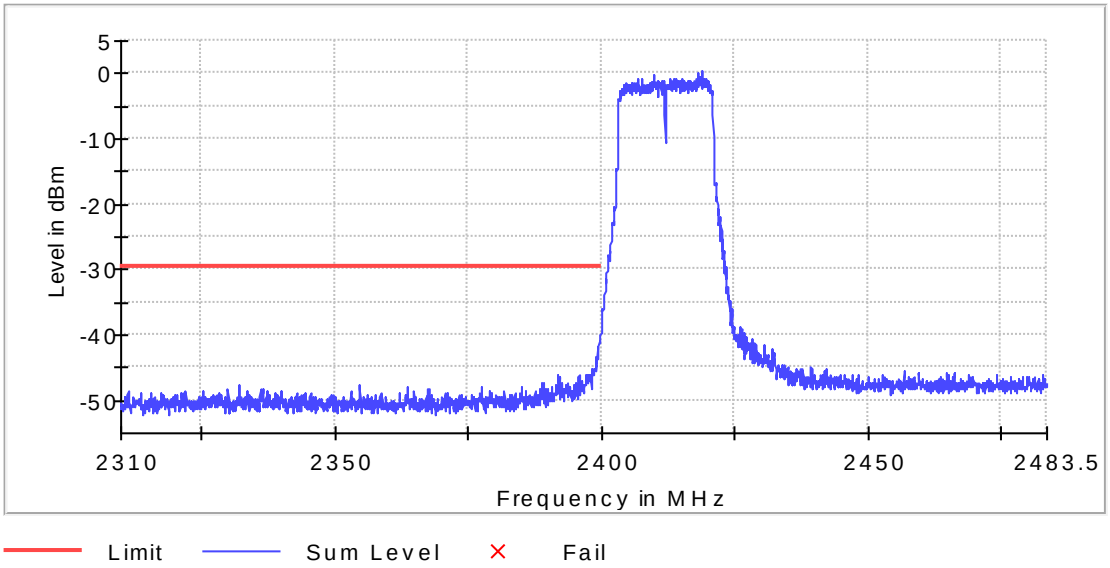
DUT Frequency (MHz)	Result
2412.000000	PASS

Inband Peak

Frequency (MHz)	Level (dBm)
2418.875000	0.3

Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2399.975000	-39.8	10.1	-29.7	PASS
2399.925000	-40.1	10.4	-29.7	PASS
2399.875000	-40.8	11.1	-29.7	PASS
2399.825000	-40.8	11.1	-29.7	PASS
2399.775000	-40.8	11.1	-29.7	PASS
2399.675000	-40.8	11.1	-29.7	PASS
2399.575000	-41.0	11.3	-29.7	PASS
2399.725000	-41.0	11.3	-29.7	PASS
2399.625000	-41.2	11.5	-29.7	PASS
2399.475000	-41.8	12.1	-29.7	PASS
2399.525000	-42.0	12.2	-29.7	PASS
2399.275000	-42.0	12.2	-29.7	PASS
2399.225000	-42.2	12.5	-29.7	PASS
2399.425000	-43.3	13.6	-29.7	PASS
2399.025000	-43.4	13.7	-29.7	PASS



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Result

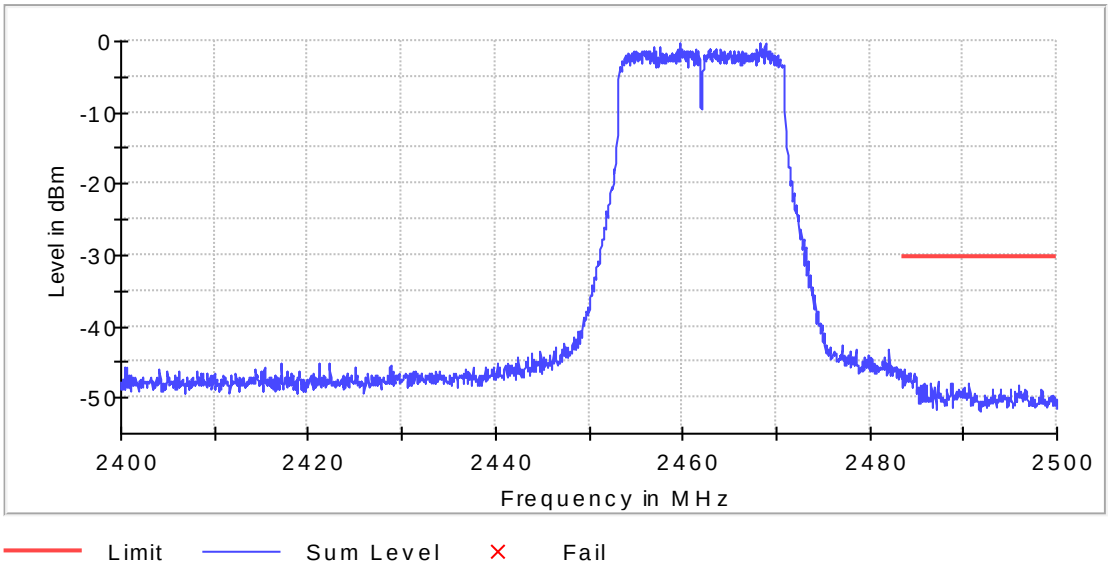
DUT Frequency (MHz)	Result
2462.000000	PASS

Inband Peak

Frequency (MHz)	Level (dBm)
2468.875000	-0.3

Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2483.675000	-46.0	15.7	-30.3	PASS
2483.725000	-46.0	15.7	-30.3	PASS
2484.275000	-46.6	16.2	-30.3	PASS
2484.725000	-46.6	16.2	-30.3	PASS
2484.225000	-46.7	16.4	-30.3	PASS
2484.375000	-46.7	16.4	-30.3	PASS
2484.775000	-46.7	16.4	-30.3	PASS
2483.925000	-46.7	16.4	-30.3	PASS
2484.425000	-46.9	16.6	-30.3	PASS
2484.875000	-46.9	16.6	-30.3	PASS
2484.325000	-47.0	16.6	-30.3	PASS
2483.625000	-47.0	16.7	-30.3	PASS
2484.175000	-47.1	16.8	-30.3	PASS
2484.925000	-47.2	16.8	-30.3	PASS
2483.975000	-47.2	16.9	-30.3	PASS



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(802.11n40)

Result

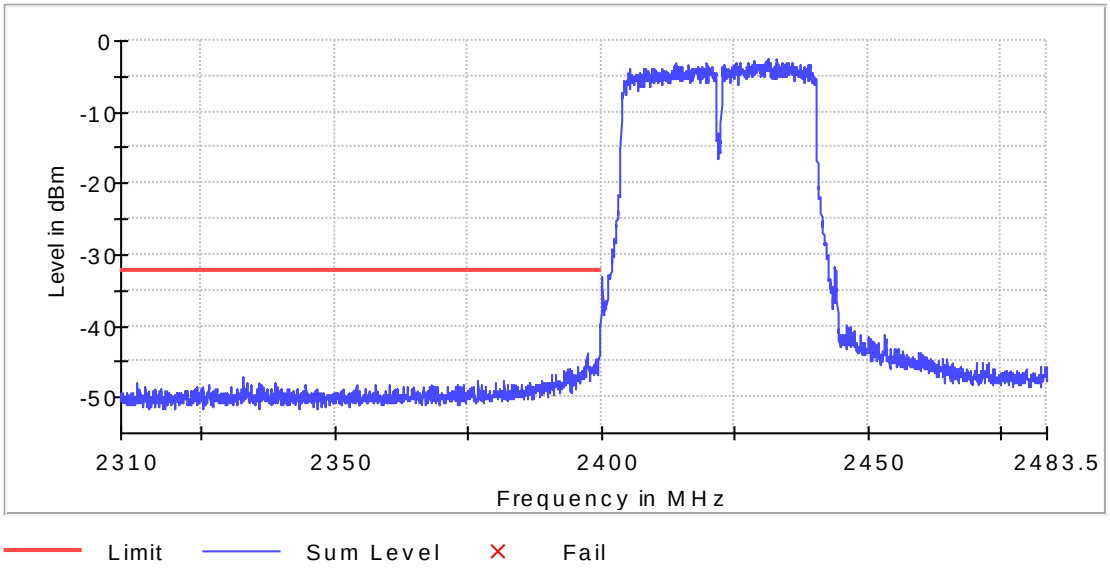
DUT Frequency (MHz)	Result
2422.000000	PASS

Inband Peak

Frequency (MHz)	Level (dBm)
2432.925000	-2.4

Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2399.975000	-37.8	5.4	-32.4	PASS
2399.825000	-39.9	7.5	-32.4	PASS
2399.925000	-40.1	7.7	-32.4	PASS
2399.875000	-40.1	7.7	-32.4	PASS
2399.775000	-40.6	8.2	-32.4	PASS
2399.725000	-41.9	9.5	-32.4	PASS
2397.325000	-43.7	11.3	-32.4	PASS
2399.675000	-43.9	11.5	-32.4	PASS
2399.575000	-44.0	11.6	-32.4	PASS
2399.625000	-44.1	11.7	-32.4	PASS
2397.375000	-44.2	11.8	-32.4	PASS
2398.825000	-44.5	12.1	-32.4	PASS
2398.875000	-44.6	12.2	-32.4	PASS
2399.475000	-44.6	12.2	-32.4	PASS
2397.275000	-44.8	12.4	-32.4	PASS



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Result

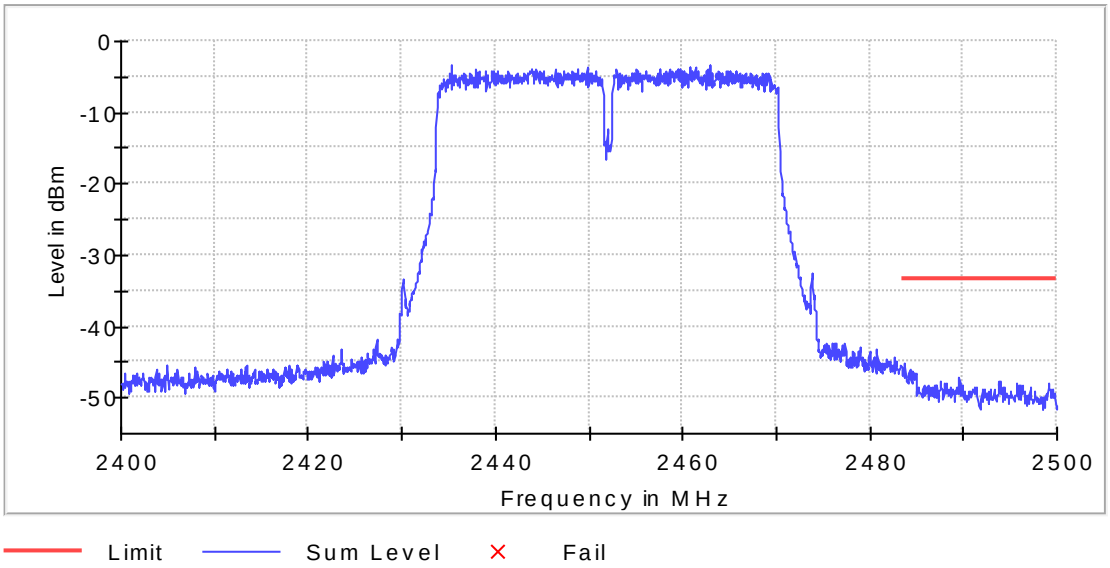
DUT Frequency (MHz)	Result
2452.000000	PASS

Inband Peak

Frequency (MHz)	Level (dBm)
2462.975000	-3.4

Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2483.775000	-45.2	11.8	-33.4	PASS
2483.825000	-45.5	12.2	-33.4	PASS
2484.275000	-45.9	12.5	-33.4	PASS
2483.575000	-46.1	12.7	-33.4	PASS
2483.725000	-46.1	12.8	-33.4	PASS
2483.525000	-46.2	12.9	-33.4	PASS
2484.625000	-46.3	12.9	-33.4	PASS
2484.575000	-46.4	13.0	-33.4	PASS
2484.325000	-46.4	13.0	-33.4	PASS
2484.375000	-46.4	13.0	-33.4	PASS
2484.425000	-46.5	13.1	-33.4	PASS
2484.725000	-46.5	13.2	-33.4	PASS
2484.675000	-46.6	13.2	-33.4	PASS
2484.825000	-46.6	13.2	-33.4	PASS
2484.925000	-46.7	13.3	-33.4	PASS



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9.5 Conducted Spurious Emissions

(802.11b)

Result

DUT Frequency (MHz)	Result
2412.000000	PASS

Final measurements

Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
2384.750000	-44.6	-52.3	-41.2	11.1	PASS
2494.250000	-45.7	-56.5	-41.2	15.3	PASS
4824.250000	-43.1	-46.5	-41.2	5.3	PASS

Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
4824.250000	-43.1	1.9	-41.2
4824.750000	-43.2	2.0	-41.2
4823.750000	-43.9	2.7	-41.2
2384.750000	-44.6	3.4	-41.2
2383.250000	-45.2	4.0	-41.2
2387.750000	-45.2	4.0	-41.2
2385.250000	-45.3	4.1	-41.2
2389.750000	-45.5	4.3	-41.2
2386.250000	-45.6	4.4	-41.2
2383.750000	-45.7	4.5	-41.2
2494.250000	-45.7	4.5	-41.2
2384.250000	-45.7	4.5	-41.2
2386.750000	-46.0	4.8	-41.2
2387.250000	-46.0	4.8	-41.2
2490.750000	-46.1	4.9	-41.2

Measurement Settings

Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
30.000000	1000.000000	1	1
1000.000000	2400.000000	2	2
2400.000000	2483.500000	2	2
2483.500000	7000.000000	2	2
7000.000000	18000.000000	2	2
18000.000000	26000.000000	2	2

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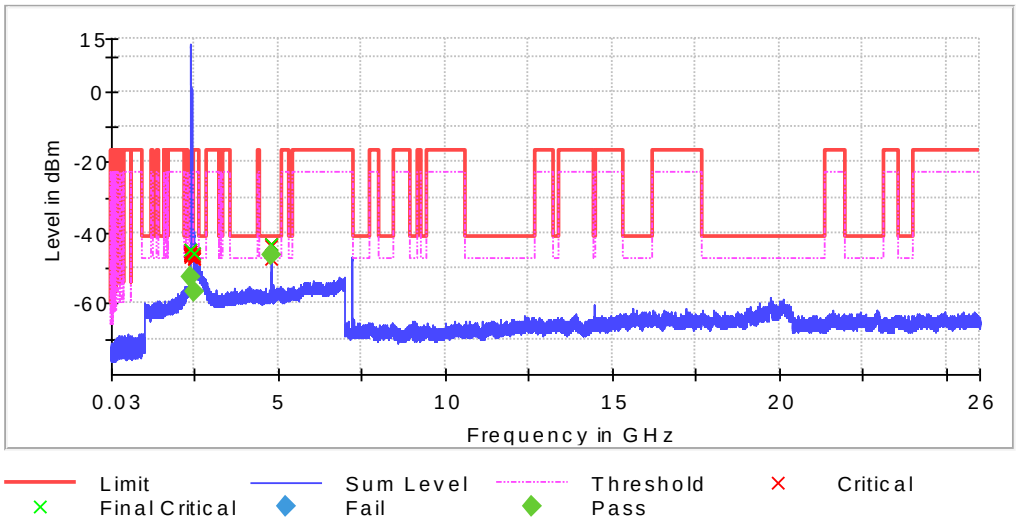

Result

DUT Frequency (MHz)	Result
2437.000000	PASS

Final measurements

Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
2484.750000	-46.8	-57.7	-41.2	16.5	PASS
4874.250000	-44.7	-48.3	-41.2	7.1	PASS

Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
4874.250000	-44.7	3.5	-41.2
4874.750000	-45.2	4.0	-41.2
4873.750000	-46.1	4.9	-41.2
2484.750000	-46.8	5.6	-41.2
2486.750000	-47.7	6.5	-41.2
2484.250000	-47.9	6.7	-41.2
7311.250000	-48.0	6.8	-41.2
7310.750000	-48.3	7.1	-41.2
2483.750000	-48.4	7.2	-41.2
4875.250000	-48.5	7.3	-41.2
2489.750000	-48.5	7.3	-41.2
7310.250000	-48.6	7.4	-41.2
7309.750000	-48.6	7.4	-41.2
7312.250000	-48.7	7.5	-41.2
7312.750000	-48.7	7.5	-41.2

Measurement Settings

Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
30.000000	1000.000000	1	1
1000.000000	2400.000000	2	2
2400.000000	2483.500000	2	2
2483.500000	7000.000000	2	2
7000.000000	18000.000000	2	2
18000.000000	26000.000000	2	2

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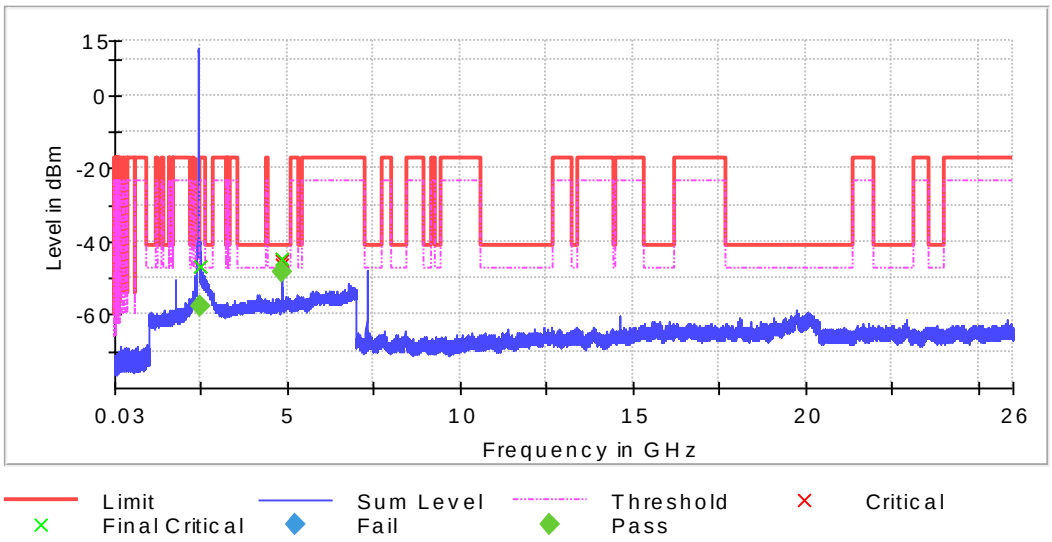

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Result

DUT Frequency (MHz)	Result
2462.000000	PASS

Final measurements

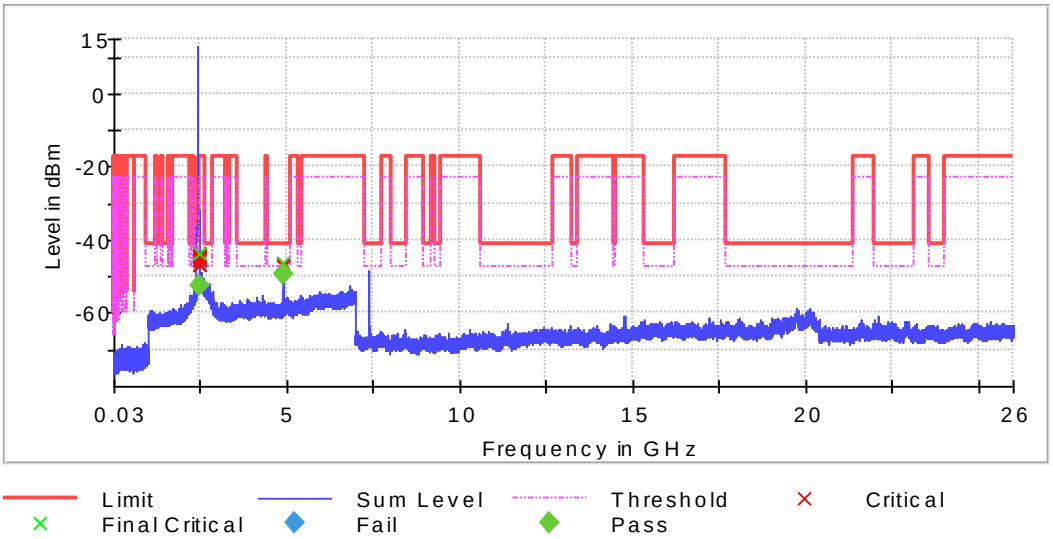
Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
2485.250000	-43.7	-52.3	-41.2	11.1	PASS
4924.250000	-46.1	-49.5	-41.2	8.3	PASS

Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
2485.250000	-43.7	2.5	-41.2
2487.250000	-43.7	2.5	-41.2
2486.250000	-43.9	2.7	-41.2
2488.750000	-43.9	2.7	-41.2
2485.750000	-44.1	2.9	-41.2
2490.250000	-44.2	3.0	-41.2
2484.750000	-44.3	3.1	-41.2
2489.750000	-44.3	3.1	-41.2
2487.750000	-44.4	3.2	-41.2
2488.250000	-44.5	3.3	-41.2
2486.750000	-44.7	3.5	-41.2
2484.250000	-44.8	3.6	-41.2
2489.250000	-45.0	3.8	-41.2
2483.750000	-45.1	3.9	-41.2
2490.750000	-45.6	4.4	-41.2

Measurement Settings

Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
30.000000	1000.000000	1	1
1000.000000	2400.000000	2	2
2400.000000	2483.500000	2	2
2483.500000	7000.000000	2	2
7000.000000	18000.000000	2	2
18000.000000	26000.000000	2	2



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(802.11g)

Result

DUT Frequency (MHz)	Result
2412.000000	PASS

Final measurements

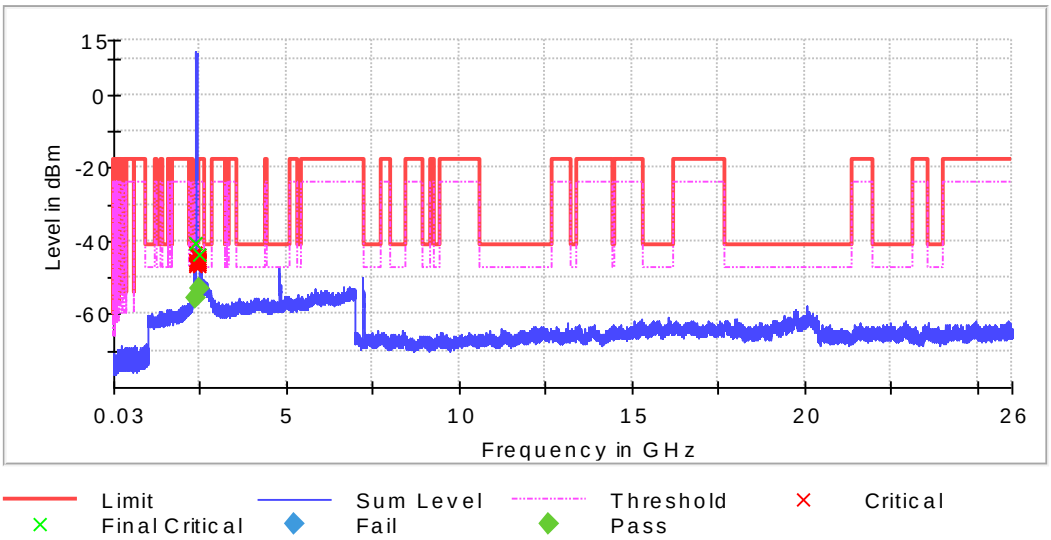
Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
2389.750000	-40.3	-55.5	-41.2	14.3	PASS
2484.250000	-43.7	-53.2	-41.2	12.0	PASS

Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
2389.750000	-40.3	-0.9	-41.2
2388.750000	-42.9	1.7	-41.2
2388.250000	-43.0	1.8	-41.2
2389.250000	-43.5	2.3	-41.2
2484.250000	-43.7	2.5	-41.2
2484.750000	-43.7	2.5	-41.2
2486.750000	-44.1	2.9	-41.2
2487.250000	-44.2	3.0	-41.2
2487.750000	-44.7	3.5	-41.2
2498.750000	-44.9	3.7	-41.2
2489.750000	-45.0	3.8	-41.2
2496.750000	-45.0	3.8	-41.2
2383.750000	-45.0	3.8	-41.2
2496.250000	-45.1	3.9	-41.2
2387.750000	-45.1	3.9	-41.2

Measurement Settings

Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
30.000000	1000.000000	1	1
1000.000000	2400.000000	2	2
2400.000000	2483.500000	2	2
2483.500000	7000.000000	2	2
7000.000000	18000.000000	2	2
18000.000000	26000.000000	2	2



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Result

DUT Frequency (MHz)	Result
2437.000000	PASS

Final measurements

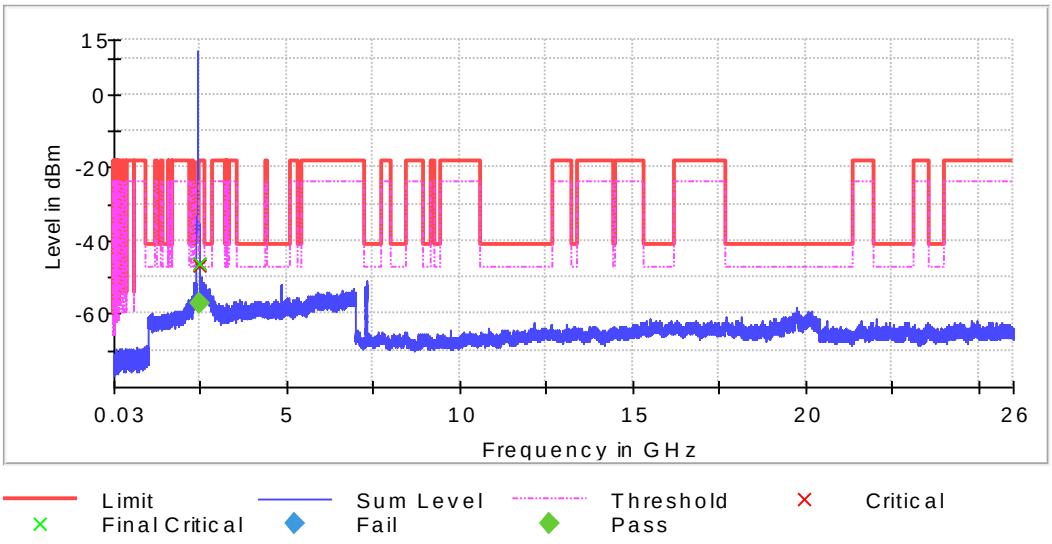
Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
2483.750000	-46.4	-57.2	-41.2	16.0	PASS

Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
2483.750000	-46.4	5.2	-41.2
2484.250000	-47.0	5.8	-41.2
2484.750000	-49.9	8.7	-41.2
7316.750000	-50.7	9.5	-41.2
2485.250000	-51.0	9.8	-41.2
7316.250000	-51.0	9.8	-41.2
2497.250000	-51.1	9.9	-41.2
2489.250000	-51.2	10.0	-41.2
2487.750000	-51.3	10.1	-41.2
2361.250000	-51.4	10.2	-41.2
2362.750000	-51.4	10.2	-41.2
2359.250000	-51.5	10.3	-41.2
2488.750000	-51.5	10.3	-41.2
2362.250000	-51.6	10.4	-41.2
2360.750000	-51.6	10.4	-41.2

Measurement Settings

Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
30.000000	1000.000000	1	1
1000.000000	2400.000000	2	2
2400.000000	2483.500000	2	2
2483.500000	7000.000000	2	2
7000.000000	18000.000000	2	2
18000.000000	26000.000000	2	2



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Result

DUT Frequency (MHz)	Result
2462.000000	PASS

Final measurements

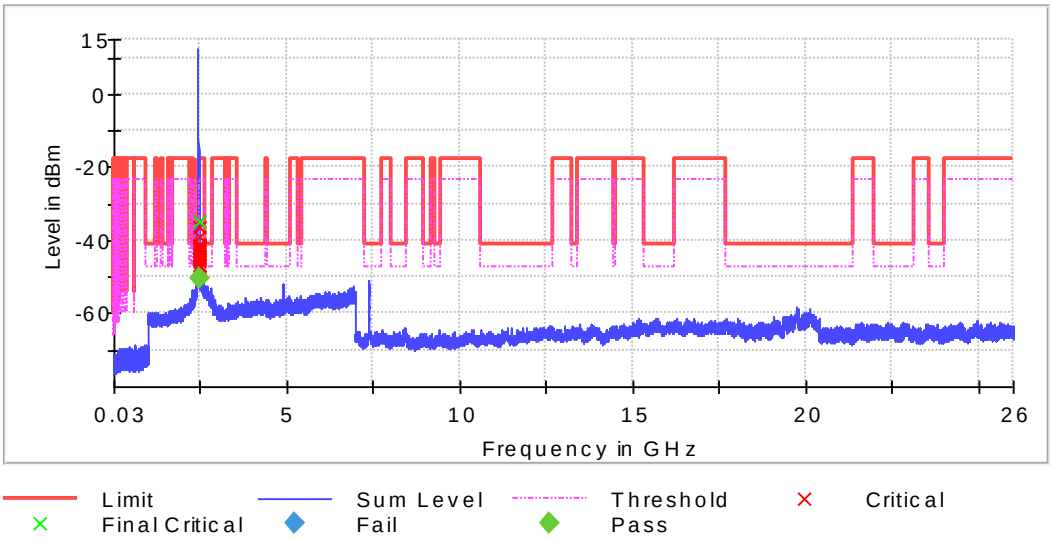
Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
2483.750000	-34.7	-50.5	-41.2	9.3	PASS

Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
2483.750000	-34.7	-6.5	-41.2
2484.250000	-36.6	-4.6	-41.2
2484.750000	-38.9	-2.3	-41.2
2487.750000	-41.2	0.0	-41.2
2485.750000	-41.6	0.4	-41.2
2486.750000	-41.6	0.4	-41.2
2489.250000	-41.8	0.6	-41.2
2491.750000	-41.9	0.7	-41.2
2486.250000	-41.9	0.7	-41.2
2487.250000	-42.7	1.5	-41.2
2488.750000	-43.0	1.8	-41.2
2490.250000	-43.3	2.1	-41.2
2490.750000	-43.9	2.7	-41.2
2485.250000	-44.4	3.2	-41.2
2488.250000	-44.5	3.3	-41.2

Measurement Settings

Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
30.000000	1000.000000	1	1
1000.000000	2400.000000	2	2
2400.000000	2483.500000	2	2
2483.500000	7000.000000	2	2
7000.000000	18000.000000	2	2
18000.000000	26000.000000	2	2



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(802.11n20)

Result

DUT Frequency (MHz)	Result
2412.000000	PASS

Final measurements

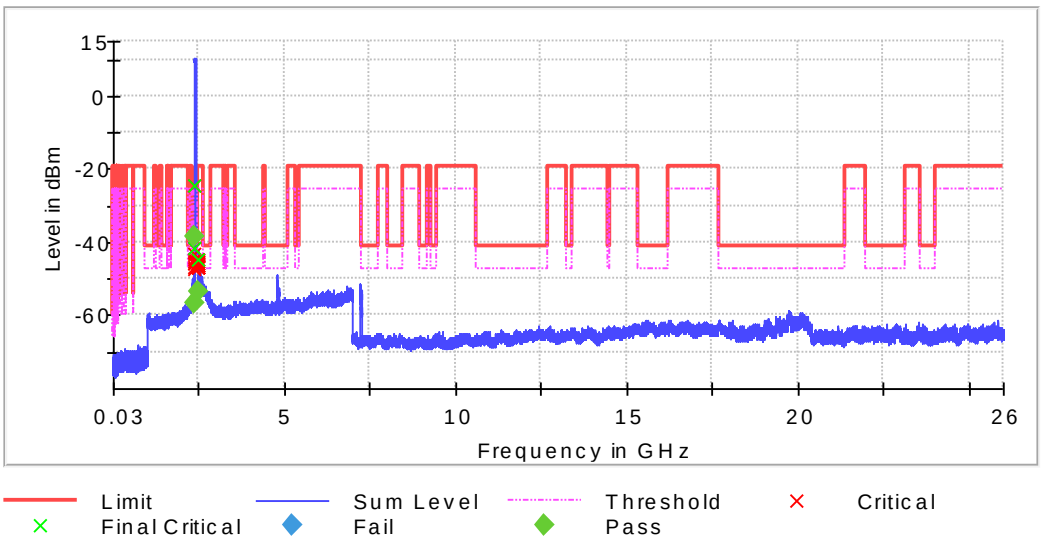
Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
2388.250000	-41.4	-56.4	-41.2	15.2	PASS
2399.750000	-24.7	-38.5	-19.5	19.0	PASS
2483.750000	-44.5	-53.6	-41.2	12.4	PASS

Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
2388.250000	-41.4	0.2	-41.2
2386.750000	-43.0	1.8	-41.2
2388.750000	-44.4	3.2	-41.2
2483.750000	-44.5	3.3	-41.2
2484.750000	-44.6	3.4	-41.2
2499.250000	-44.8	3.6	-41.2
2492.750000	-44.8	3.6	-41.2
2499.750000	-45.3	4.1	-41.2
2494.250000	-45.3	4.1	-41.2
2484.250000	-45.4	4.2	-41.2
2389.250000	-45.4	4.2	-41.2
2495.250000	-45.4	4.2	-41.2
2486.250000	-45.4	4.2	-41.2
2389.750000	-45.6	4.4	-41.2
2381.250000	-45.7	4.5	-41.2

Measurement Settings

Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
30.000000	1000.000000	1	1
1000.000000	2400.000000	2	2
2400.000000	2483.500000	2	2
2483.500000	7000.000000	2	2
7000.000000	18000.000000	2	2
18000.000000	26000.000000	2	2



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Result

DUT Frequency (MHz)	Result
2437.000000	PASS

Final measurements

Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
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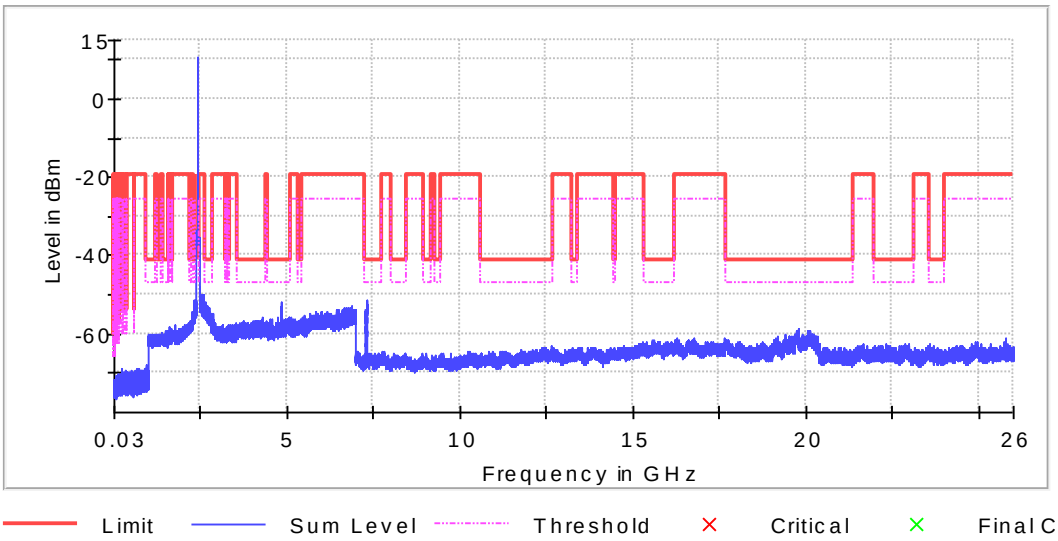
Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
2484.750000	-48.1	6.9	-41.2
2484.250000	-48.5	7.3	-41.2
2483.750000	-49.3	8.1	-41.2
2489.750000	-50.8	9.6	-41.2
2497.250000	-51.0	9.8	-41.2
2494.250000	-51.1	9.9	-41.2
2485.250000	-51.2	10.0	-41.2
2354.250000	-51.2	10.0	-41.2
2485.750000	-51.4	10.2	-41.2
7316.750000	-51.4	10.2	-41.2
2354.750000	-51.4	10.2	-41.2
2495.750000	-51.7	10.5	-41.2
2363.750000	-51.7	10.5	-41.2
2493.750000	-51.7	10.5	-41.2
2488.250000	-51.7	10.5	-41.2

Measurement Settings

Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
30.000000	1000.000000	1	1
1000.000000	2400.000000	2	2
2400.000000	2483.500000	2	2
2483.500000	7000.000000	2	2
7000.000000	18000.000000	2	2
18000.000000	26000.000000	2	2



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Result

DUT Frequency (MHz)	Result
2462.000000	PASS

Final measurements

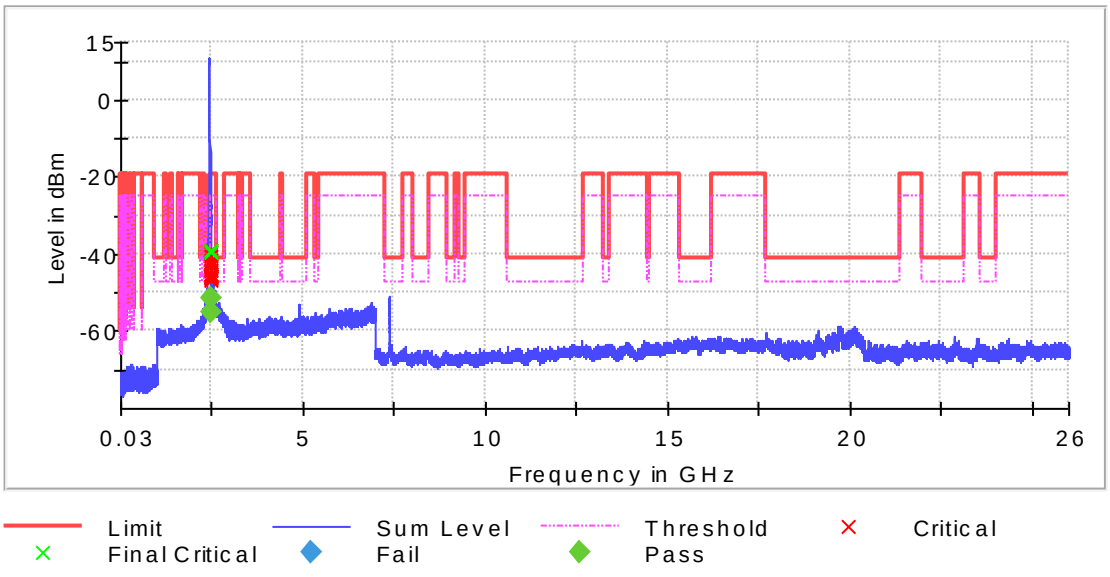
Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
2484.750000	-38.8	-51.5	-41.2	10.3	PASS
2487.750000	-39.6	-55.1	-41.2	13.9	PASS

Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
2484.750000	-38.8	-2.4	-41.2
2487.750000	-39.6	-1.6	-41.2
2488.250000	-40.8	-0.4	-41.2
2485.250000	-41.5	0.3	-41.2
2483.750000	-42.1	0.9	-41.2
2484.250000	-42.6	1.4	-41.2
2489.250000	-42.9	1.7	-41.2
2485.750000	-42.9	1.7	-41.2
2489.750000	-44.2	3.0	-41.2
2491.250000	-44.3	3.1	-41.2
2490.750000	-45.2	4.0	-41.2
2488.750000	-45.4	4.2	-41.2
2494.250000	-45.4	4.2	-41.2
2487.250000	-45.5	4.3	-41.2
2495.750000	-45.5	4.3	-41.2

Measurement Settings

Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
30.000000	1000.000000	1	1
1000.000000	2400.000000	2	2
2400.000000	2483.500000	2	2
2483.500000	7000.000000	2	2
7000.000000	18000.000000	2	2
18000.000000	26000.000000	2	2



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(802.11n40)

Result

DUT Frequency (MHz)	Result
2422.000000	PASS

Final measurements

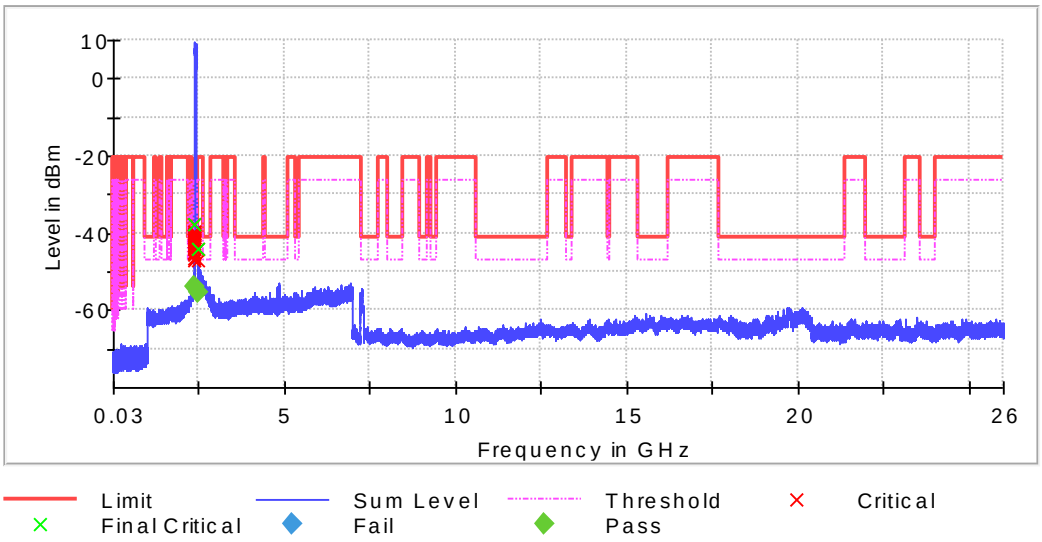
Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
2386.750000	-37.5	-53.9	-41.2	12.7	PASS
2484.750000	-44.2	-55.4	-41.2	14.2	PASS

Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
2386.750000	-37.5	-3.7	-41.2
2389.750000	-39.6	-1.6	-41.2
2388.750000	-39.6	-1.6	-41.2
2388.250000	-40.1	-1.1	-41.2
2387.750000	-40.5	-0.7	-41.2
2381.250000	-40.8	-0.4	-41.2
2380.250000	-41.1	-0.1	-41.2
2379.750000	-41.2	0.0	-41.2
2389.250000	-41.5	0.3	-41.2
2384.750000	-41.8	0.6	-41.2
2380.750000	-41.9	0.7	-41.2
2387.250000	-42.2	1.0	-41.2
2381.750000	-42.3	1.1	-41.2
2382.250000	-43.0	1.8	-41.2
2385.750000	-43.1	1.9	-41.2

Measurement Settings

Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
30.000000	1000.000000	1	1
1000.000000	2400.000000	2	2
2400.000000	2483.500000	2	2
2483.500000	7000.000000	2	2
7000.000000	18000.000000	2	2
18000.000000	26000.000000	2	2



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Result

DUT Frequency (MHz)	Result
2437.000000	PASS

Final measurements

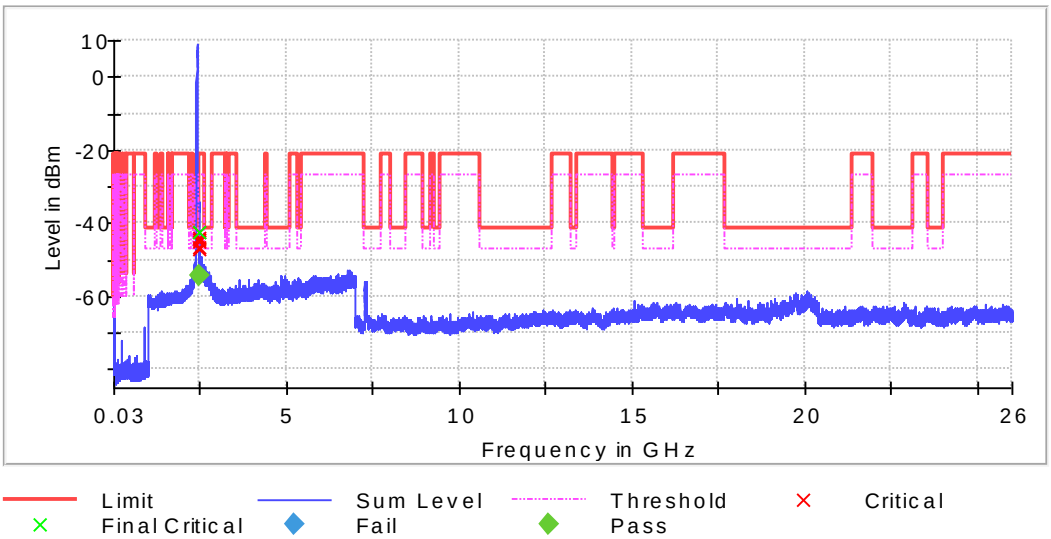
Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
2483.750000	-42.5	-54.6	-41.2	13.4	PASS

Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
2483.750000	-42.5	1.3	-41.2
2489.250000	-44.2	3.0	-41.2
2484.250000	-44.8	3.6	-41.2
2484.750000	-44.8	3.6	-41.2
2488.750000	-46.4	5.2	-41.2
2493.250000	-47.0	5.8	-41.2
2485.250000	-47.4	6.2	-41.2
2496.750000	-47.9	6.7	-41.2
2487.750000	-48.0	6.8	-41.2
2485.750000	-48.1	6.9	-41.2
2388.750000	-48.4	7.2	-41.2
2490.750000	-48.4	7.2	-41.2
2490.250000	-48.5	7.3	-41.2
2388.250000	-48.6	7.4	-41.2
2498.750000	-48.6	7.4	-41.2

Measurement Settings

Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
30.000000	1000.000000	1	1
1000.000000	2400.000000	2	2
2400.000000	2483.500000	2	2
2483.500000	7000.000000	2	2
7000.000000	18000.000000	2	2
18000.000000	26000.000000	2	2



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Result

DUT Frequency (MHz)	Result
2452.000000	PASS

Final measurements

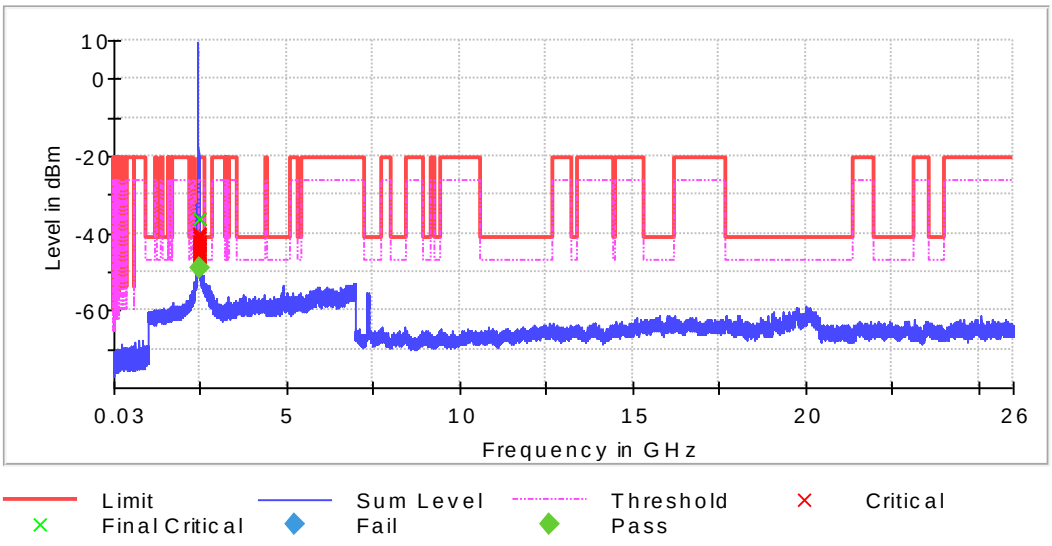
Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
2483.750000	-36.3	-49.0	-41.2	7.8	PASS

Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
2483.750000	-36.3	-4.9	-41.2
2484.250000	-40.0	-1.2	-41.2
2484.750000	-40.0	-1.2	-41.2
2486.750000	-40.1	-1.1	-41.2
2490.250000	-40.5	-0.7	-41.2
2489.250000	-41.3	0.1	-41.2
2488.750000	-41.3	0.1	-41.2
2488.250000	-42.1	0.9	-41.2
2487.750000	-42.4	1.2	-41.2
2485.250000	-42.5	1.3	-41.2
2487.250000	-42.6	1.4	-41.2
2485.750000	-43.0	1.8	-41.2
2486.250000	-43.3	2.1	-41.2
2489.750000	-43.4	2.2	-41.2
2495.750000	-43.9	2.7	-41.2

Measurement Settings

Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
30.000000	1000.000000	1	1
1000.000000	2400.000000	2	2
2400.000000	2483.500000	2	2
2483.500000	7000.000000	2	2
7000.000000	18000.000000	2	2
18000.000000	26000.000000	2	2



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9.6 99% Occupied Bandwidth

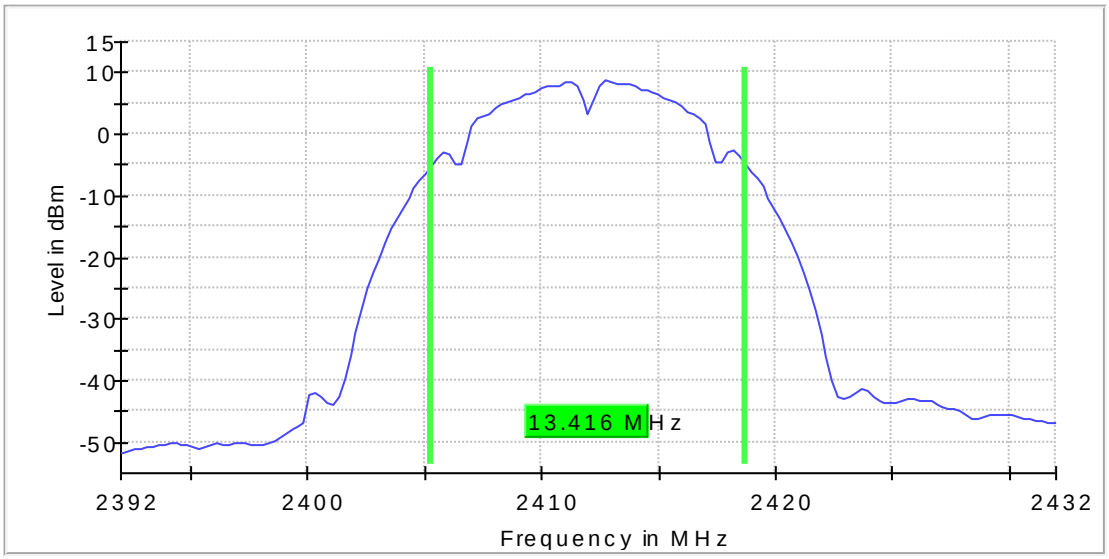
Remark: 500kHz of RBW was used for 802.11b, 802.11g and 802.11n (20MHz)
1MHz of RBW was used for 802.11 (40MHz)

Measurement

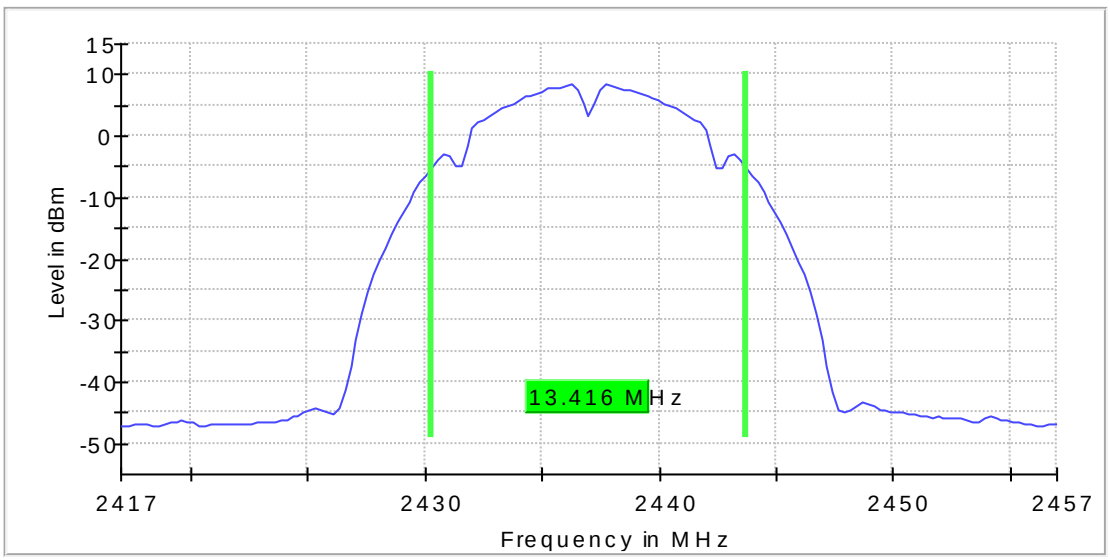
802.11b

Channel (MHz)	Bandwidth (MHz)
2412	13.4
2437	13.4
2462	13.4

Lowest Channel



Middle Channel



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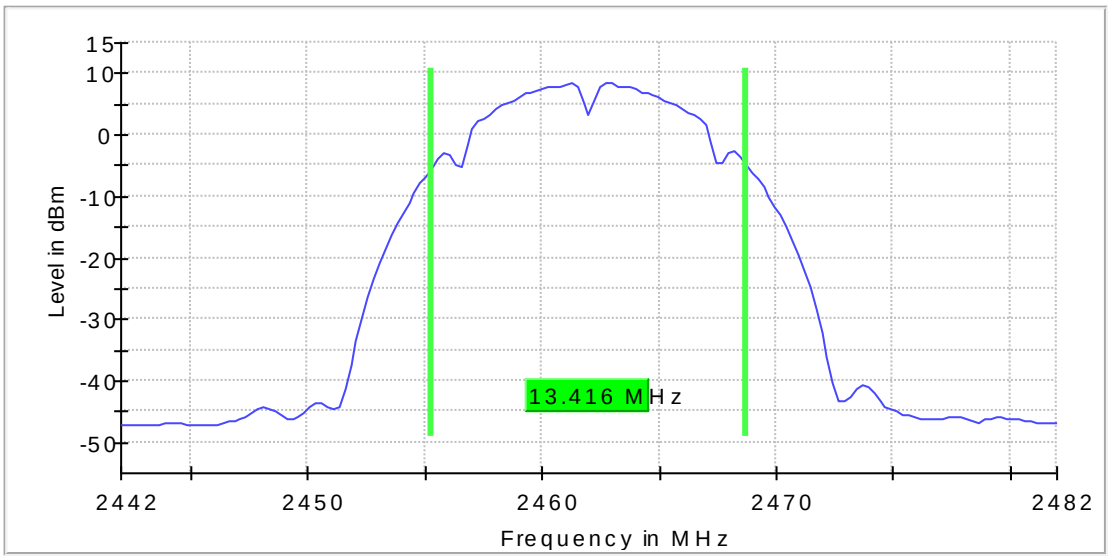
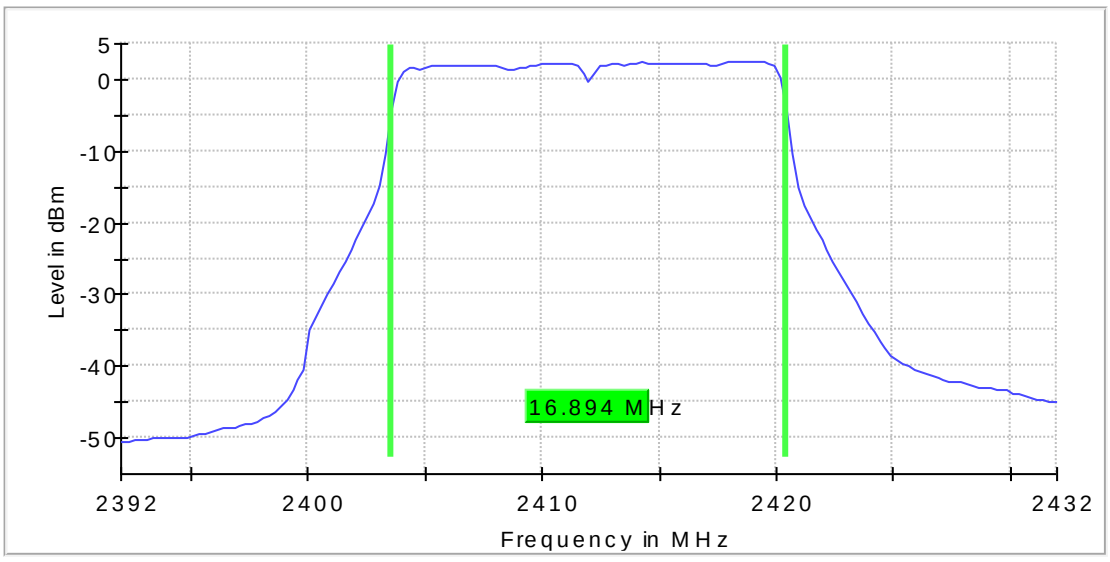
Highest Channel



802.11g

Channel (MHz)	Bandwidth (MHz)
2412	16.9
2437	16.9
2462	16.6

Lowest channel



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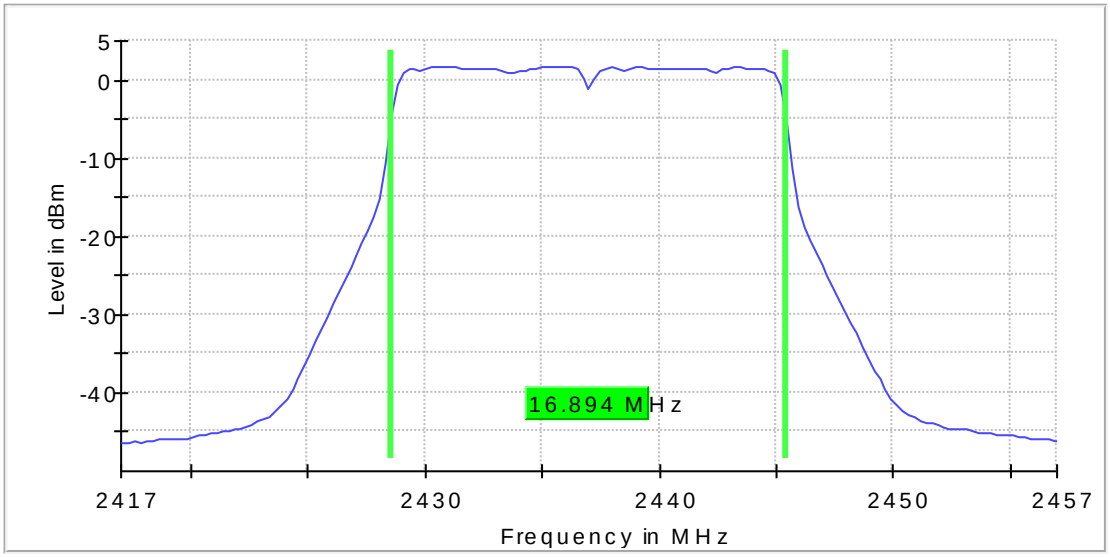
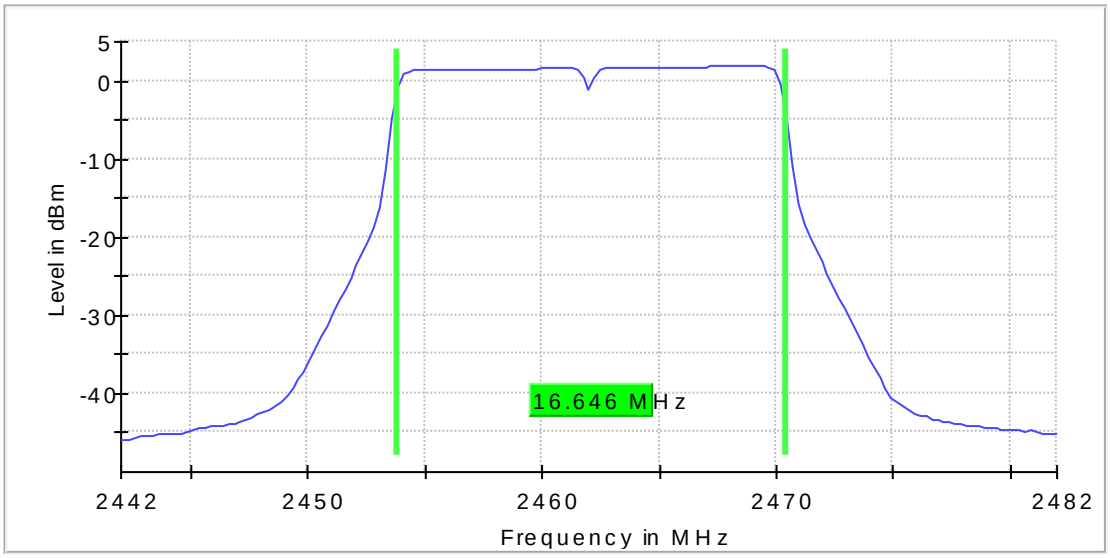
Middle Channel



Highest Channel



802.11n20

Channel (MHz)	Bandwidth (MHz)
2412	17.9
2437	17.9
2462	17.9

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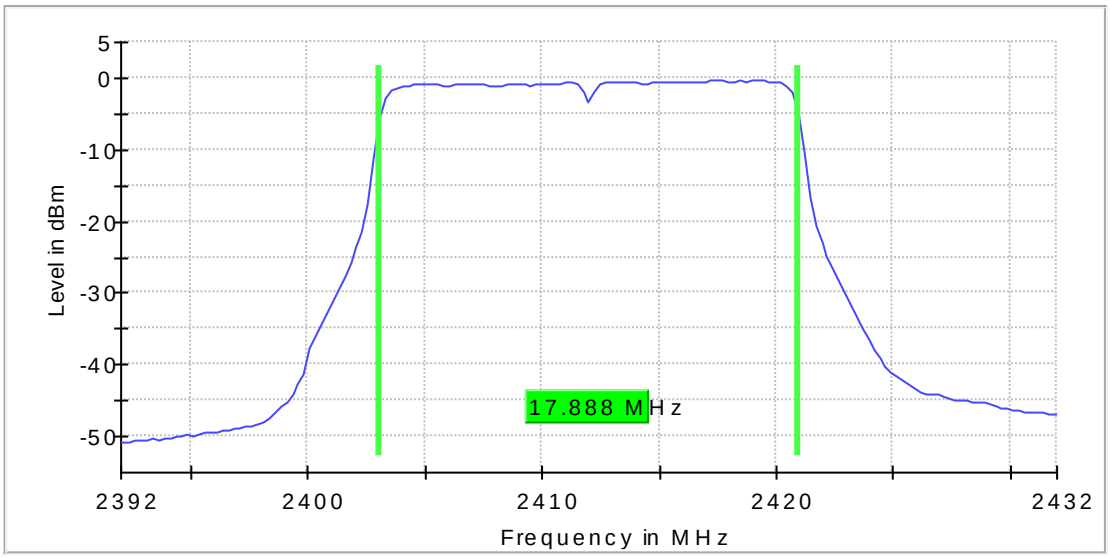
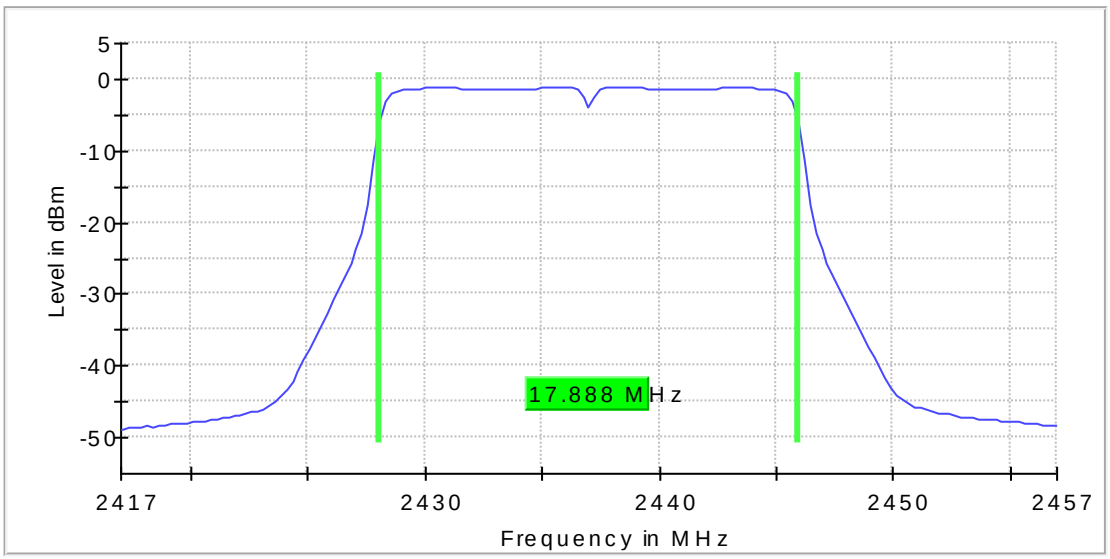
Lowest Channel



Middle Channel



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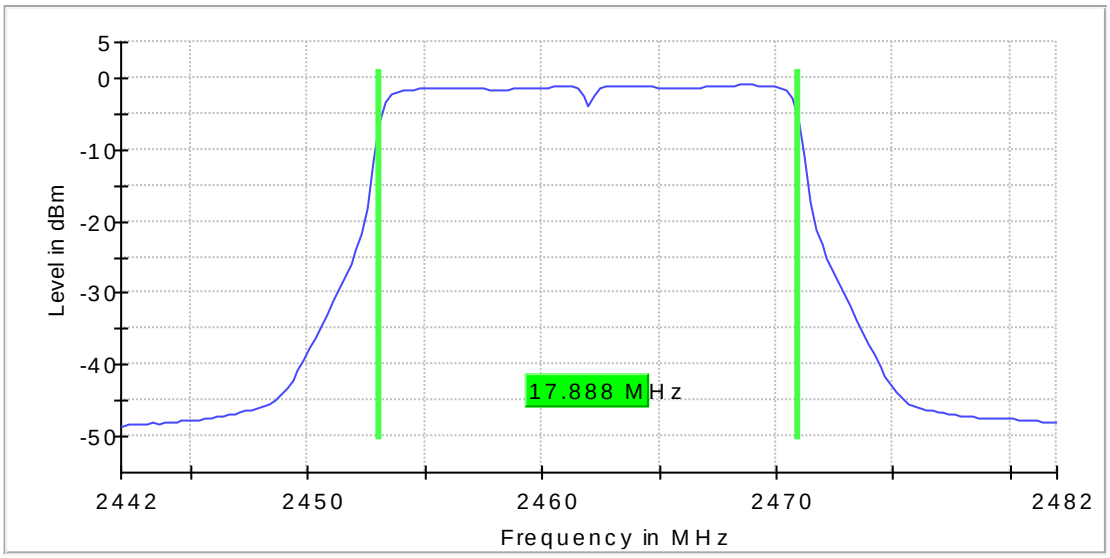
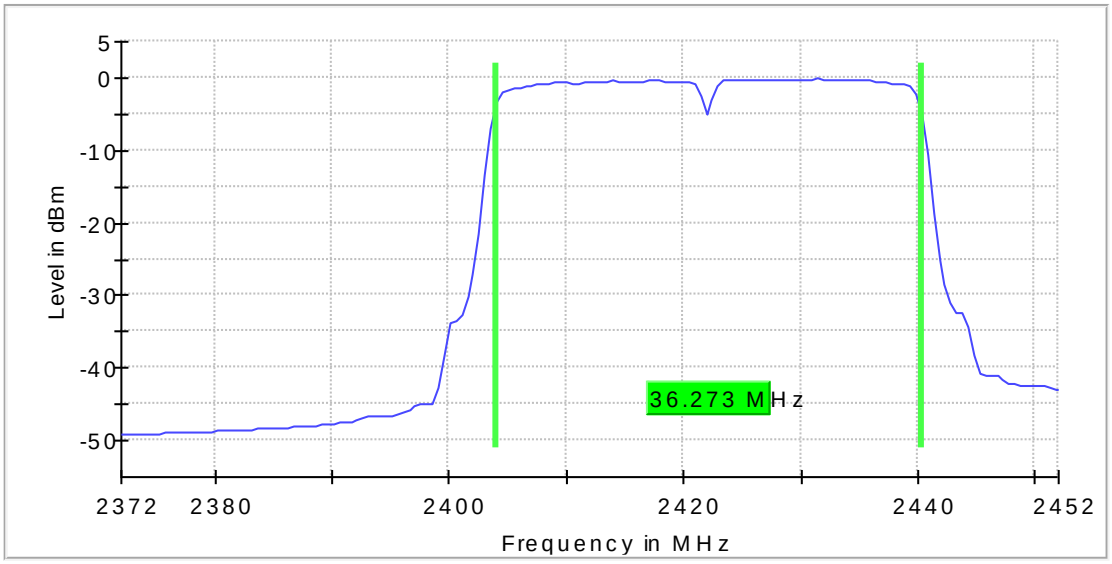
Highest Channel



802.11n40

Channel (MHz)	Bandwidth (MHz)
2422	36.2
2437	36.8
2452	36.8

Lowest Channel



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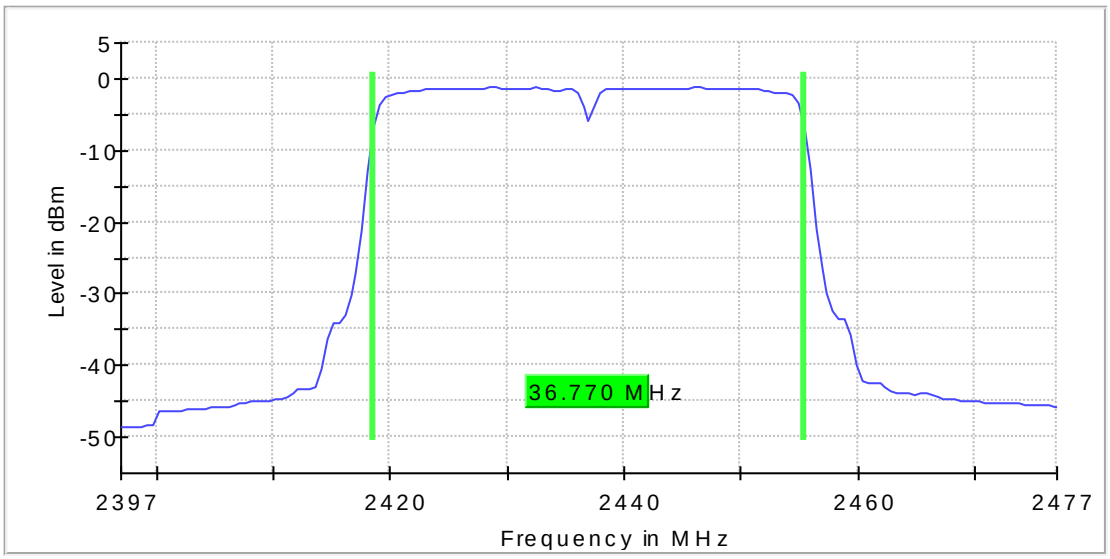
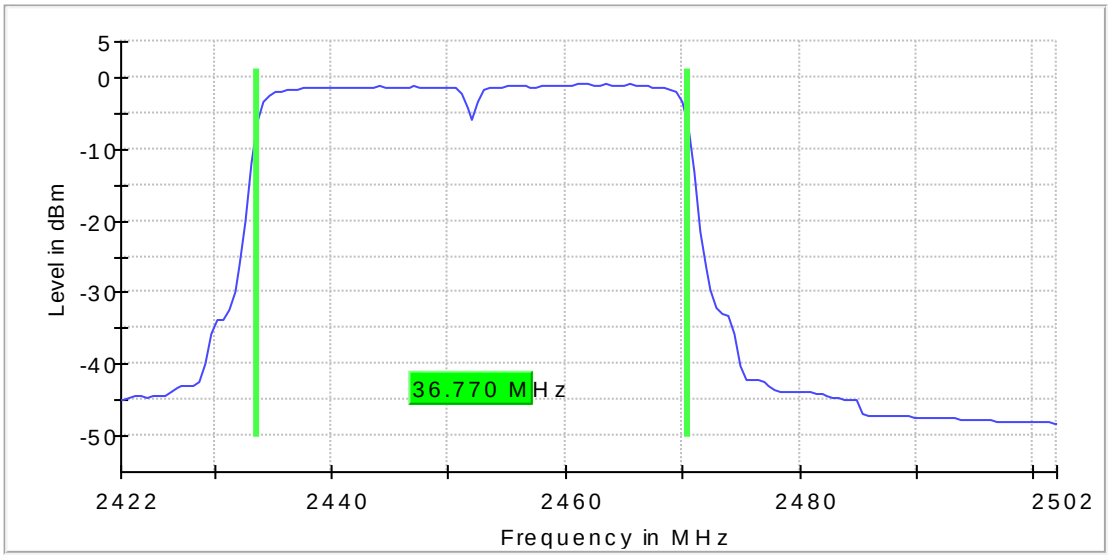
Middle Channel



Highest Channel



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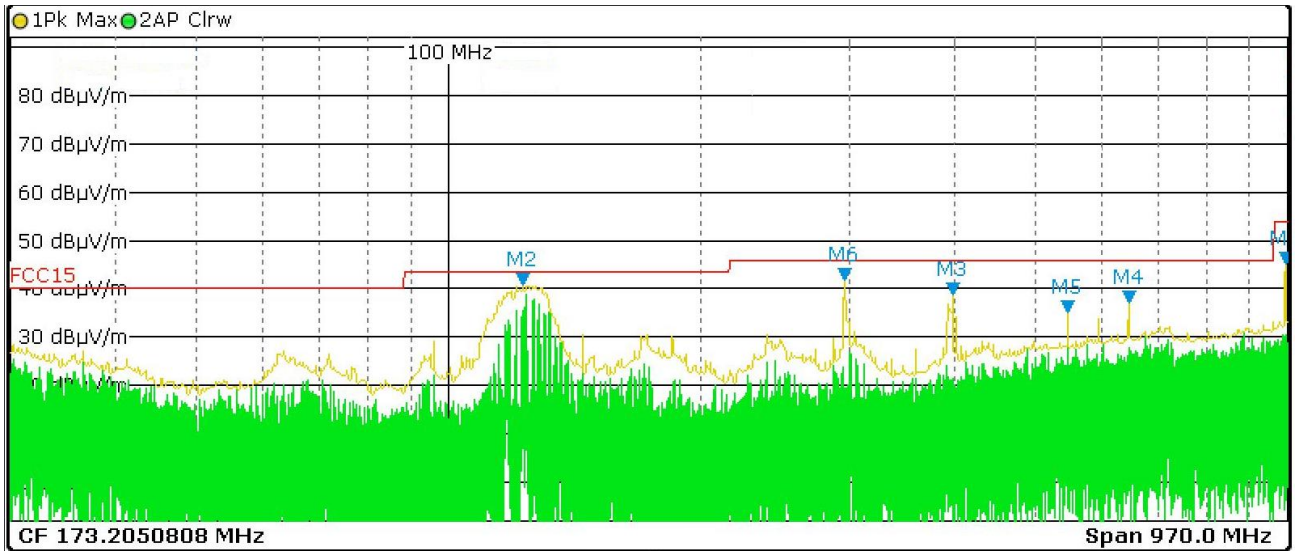
9.7 Radiated Emission

Radiated Emission Below 1G

Worest case mode: Transmitting Mode



Frequency (MHz)	Antenna Polarization	Emission Level (dBµV/m)	Limit (dBµV/m)	Remark
63.0	H	37.31	40	Pass
71.9	H	31.93	40	Pass
122.6	V	40.97	43.5	Pass
296.8	V	41.98	46	Pass
398.8	V	38.87	46	Pass
645.9	V	37.30	46	Pass

Remark:

1. PeaK detector was used for measurement.

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Radiated Emission above 1GHz

802.11b

Lowest Channel

Frequency (MHz)	Polarity	Level (dBµV/m)	Limit (dBµV/m)	Over limit (dB)
1660	**H**	**47.7**	**54.0**	**-6.30**
4824	**V**	**52.3**	**54.0**	**-1.69**
7236	V	48.9	54.0	-5.09
9648	V	49.5	54.0	-4.50
12060	**V**	**49.9**	**54.0**	**-4.08**
14472	**H**	**52.6**	**54.0**	**-1.36**

Middle Channel

Frequency (MHz)	Polarity	Level (dBµV/m)	Limit (dBµV/m)	Over limit (dB)
1660	**H**	**46.9**	**54.0**	**-7.1**
4874	**V**	**52.4**	**54.0**	**-1.6**
7311	**V**	**49.1**	**54.0**	**-4.9**
9748	V	50.2	54.0	-3.8
12185	**V**	**51.4**	**54.0**	**-2.6**
14622	V	53.0	54.0	-1.0

Highest Channel

Frequency (MHz)	Polarity	Level (dBµV/m)	Limit (dBµV/m)	Over limit (dB)
1660	**H**	**45.1**	**54.0**	**-8.9**
4924	**V**	**52.5**	**54.0**	**-1.5**
7386	**V**	**50.9**	**54.0**	**-3.1**
9848	V	51.6	54.0	-2.4
12310	**V**	**52.0**	**54.0**	**-2.0**
14772	V	53.3	54.0	-0.7

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802.11g

Lowest Channel

Frequency (MHz)	Polarity	Level (dBµV/m)	Limit (dBµV/m)	Over limit (dB)
1780	V	43.6	54.0	-10.4
4824	**V**	**43.2**	**54.0**	**-10.8**
7236	V	43.1	54.0	-10.9
9648	V	47.4	54.0	-6.6
12060	**V**	**51.3**	**54.0**	**-2.7**
14472	**H**	**53.6**	**54.0**	**-0.4**

Middle Channel

Frequency (MHz)	Polarity	Level (dBµV/m)	Limit (dBµV/m)	Over limit (dB)
1782	V	43.4	54.0	-10.6
4874	**V**	**45.0**	**54.0**	**-9.0**
7311	**V**	**43.9**	**54.0**	**-10.1**
9748	V	47.2	54.0	-6.8
12185	**V**	**51.1**	**54.0**	**-2.9**
14622	V	51.6	54.0	-2.4

Highest Channel

Frequency (MHz)	Polarity	Level (dBµV/m)	Limit (dBµV/m)	Over limit (dB)
1780	V	43.0	54.0	-11.0
4924	**V**	**41.2**	**54.0**	**-12.8**
7386	**V**	**43.5**	**54.0**	**-10.5**
9848	V	46.7	54.0	-7.3
12310	**V**	**50.6**	**54.0**	**-3.5**
14772	V	52.3	54.0	-1.7

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802.11n20

Lowest Channel

Frequency (MHz)	Polarity	Level (dBµV/m)	Limit (dBµV/m)	Over limit (dB)
1470	**H**	**41.0**	**54.0**	**-13.0**
4824	**V**	**45.8**	**54.0**	**-8.2**
7236	V	40.4	54.0	-13.7
9648	V	45.6	54.0	-8.4
12060	**V**	**50.4**	**54.0**	**-3.6**
14472	**H**	**53.1**	**54.0**	**-0.9**

Middle Channel

Frequency (MHz)	Polarity	Level (dBµV/m)	Limit (dBµV/m)	Over limit (dB)
1460	**H**	**41.6**	**54.0**	**-12.4**
4874	**V**	**44.7**	**54.0**	**-9.3**
7311	**V**	**41.2**	**54.0**	**-12.8**
9748	V	46.0	54.0	-8.0
12185	**V**	**51.1**	**54.0**	**-2.9**
14622	V	52.1	54.0	-1.9

Highest Channel

Frequency (MHz)	Polarity	Level (dBµV/m)	Limit (dBµV/m)	Over limit (dB)
1460	**H**	**42.6**	**54.0**	**-11.4**
4924	**V**	**45.1**	**54.0**	**-8.9**
7386	**V**	**40.2**	**54.0**	**-13.8**
9848	V	46.1	54.0	-7.9
12310	**V**	**52.3**	**54.0**	**-1.7**
14772	V	53.8	54.0	-0.2

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Lowest Channel

Frequency (MHz)	Polarity	Level (dBμV/m)	Limit (dBμV/m)	Over limit (dB)
1990	H	41.6	54.0	-12.4
4844	**V**	**44.3**	**54.0**	**-8.2**
7266	**V**	**46.3**	**54.0**	**-13.7**
9688	V	47.6	54.0	-8.4
12110	**V**	**51.2**	**54.0**	**-3.6**
14532	H	53.1	54.0	-0.9

Middle Channel

Frequency (MHz)	Polarity	Level (dBμV/m)	Limit (dBμV/m)	Over limit (dB)
1990	V	43.2	54.0	-10.8
4874	**V**	**45.3**	**54.0**	**-9.3**
7311	**V**	**45.2**	**54.0**	**-12.8**
9748	V	46.7	54.0	-8.0
12185	**V**	**51.7**	**54.0**	**-2.9**
14622	V	53.2	54.0	-1.9

Highest Channel

Frequency (MHz)	Polarity	Level (dBμV/m)	Limit (dBμV/m)	Over limit (dB)
1990	V	43.0	54.0	-11.0
4904	**V**	**45.5**	**54.0**	**-8.9**
7356	**V**	**46.8**	**54.0**	**-13.8**
9808	V	46.5	54.0	-7.9
12260	**V**	**50.9**	**54.0**	**-1.7**
14712	V	53.2	54.0	-0.2

Remark:

1) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:
   Final Test Level =Receiver Reading + Antenna Factor + Cable Factor – Preamplifier Factor
2) Scan from 9kHz to 25GHz, the amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported .
3) As shown in this section, for frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. So, only the peak measurements were shown in the report.
4) Spurious emissions that fall within restricted band have been highlighted in Bold.

- End of Report -

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