

FCC REPORT

Applicant: OMG ELECTRONICS LIMITED

Address of Applicant: 7Floor, Huarong Building, Mintian Road, Futian District,
Shenzhen, China

Equipment Under Test (EUT)

Product Name: MID

Model No.: MT8WG4, MID01-VB

FCC ID: ZQMMT8WG4

Standards: FCC CFR Title 47 Part 15 Subpart C Section 15.247:2010

Date of Receipt: 28 Jun., 2011

Date of Test: 02-13 Jul., 2011

Date of Issue: 13 Jul., 2011

Test Result : PASS *

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

Authorized Signature:



Robinson Lo
Laboratory Manager

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product and does not permit the use of the GTS product certification mark. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

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2 Version

Version No.	Date	Description
00	2011-07-13	Original

Prepared By:

Collin He

Date:

2011-07-13

Project Engineer

Check By:

Hans. Hu

Date:

2011-07-13

Reviewer

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4 Test Summary

Test Item	Section in CFR 47	Result
Antenna requirement	15.203/15.247 (c)	Pass
AC Power Line Conducted Emission	15.207	Pass
Conducted Peak Output Power	15.247 (b)(3)	Pass
6dB Occupied Bandwidth	15.247 (a)(2)	Pass
Power Spectral Density	15.247 (e)	Pass
Band Edge	15.247(d)	Pass
Spurious Emission	15.205/15.209	Pass

Remark:

- *Pass: The EUT complies with the essential requirements in the standard.*

5 General Information

5.1 Client Information

Applicant:	OMG ELECTRONICS LIMITED
Address of Applicant:	7Floor, Huarong Building, Mintian Road, Futian District, Shenzhen, China
Manufacturer/ Factory:	OMG ELECTRONICS LIMITED
Address of Manufacturer/ Factory:	Iefushan Industrial Park, Youganpu Village Fenggang Town, Dongguan, China

5.2 General Description of E.U.T.

Product Name:	MID
Model No.:	MT8WG4, MID01-VB
Remark:	Only the Model No. MT8WG4 was tested, MT8WG4 and MID01-VB are identical in interior structure, electrical circuits, components and appearance with different model names for marketing requirement.
Operation Frequency:	2412MHz~2462MHz (802.11b/802.11g/802.11n(H20)) 2422MHz~2452MHz (802.11n(H40))
Channel numbers:	11 for 802.11b/802.11g/802.11n(H20) 7 for 802.11n(H40)
Channel separation:	5MHz
Modulation technology: (IEEE 802.11b)	Direct Sequence Spread Spectrum (DSSS)
Modulation technology: (IEEE 802.11g/802.11n)	Orthogonal Frequency Division Multiplexing(OFDM)
Data speed (IEEE 802.11b):	1Mbps, 2Mbps, 5.5Mbps, 11Mbps
Data speed (IEEE 802.11g):	6Mbps, 9Mbps, 12Mbps, 18Mbps, 24Mbps, 36Mbps, 48Mbps,54Mbps
Data speed (IEEE 802.11n):	Up to 150Mbps
Antenna Type:	Integral
Antenna gain:	0dBi (declare by manufacturer)
Power supply:	Internal rechargeable battery: 3.7VDC which is charged by adapter was shown as below. Adapter:Input: AC 100-240V 50/60Hz 0.4A Max Output: DC 9.0V 1.5A

Operation Frequency each of channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	2412MHz	4	2427MHz	7	2442MHz	10	2457MHz
2	2417MHz	5	2432MHz	8	2447MHz	11	2462MHz
3	2422MHz	6	2437MHz	9	2452MHz		

Note:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

802.11b/802.11g/802.11n(H20)

Channel	Frequency
The lowest channel	2412MHz
The middle channel	2437MHz
The Highest channel	2462MHz

802.11n(H40)

Channel	Frequency
The lowest channel	2422MHz
The middle channel	2437MHz
The Highest channel	2452MHz

5.3 Test environment and mode

Operating Environment:	
Temperature:	24.0 °C
Humidity:	54 % RH
Atmospheric Pressure:	1010 mbar
Test mode:	
Play mode	Keep the EUT in Operation mode.
PC mode	Keep the EUT in Operation mode. with PC
WIFI	Keep the EUT in Operation mode. with WIFI

We have verified the construction and function in typical operation. All the test modes were carried out with the EUT in transmitting operation, which was shown in this test report and defined as follows:

Per-scan all kind of data rate in lowest channel, and found the follow list which it was worst case.

Mode	Data rate
802.11b	1Mbps
802.11g	6Mbps
802.11n(H20)	6.5Mbps
802.11n(H40)	13.0Mbps

Final Test Mode:

According to ANSI C63.4 standards, the test results are both the “worst case” and “worst setup” 1Mbps for 802.11b, 6Mbps for 802.11g, 6.5Mbps for 802.11n(H20), 13Mbps for 802.11n(H40)

5.4 Test Facility

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

● FCC —Registration No.: 600491

Global United Technology Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 600491, July 20, 2010.

● Industry Canada (IC)

The 3m Semi-anechoic chamber of Global United Technology Services Co., Ltd. Has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 9079A-1.

5.5 Test Location

All tests were performed at:
Global United Technology Services Co., Ltd. Address: 2nd Floor, Block No.2, Laodong Industrial Zone, Xixiang Road Baoan District, Shenzhen, China Tel: 0755-27798480 Fax: 0755-27798960

5.6 Other Information Requested by the Customer

None.

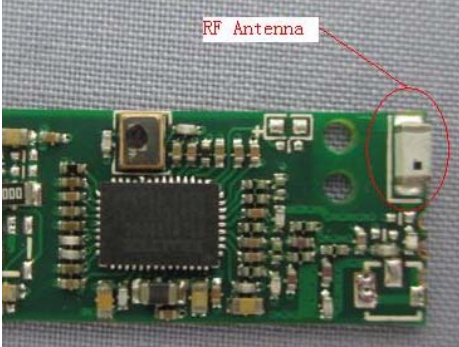
5.7 Test Instruments list

Radiated Emission:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	3m Semi- Anechoic Chamber	ZhongYu Electron	9.2(L)*6.2(W)* 6.4(H)	GTS250	Mar. 30 2011	Mar. 29 2012
2	Control Room	ZhongYu Electron	6.2(L)*2.5(W)* 2.4(H)	GTS251	N/A	N/A
3	EMI Test Receiver	Rohde & Schwarz	ESU26	GTS203	Sept. 10 2010	Sept. 09 2011
4	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	GTS214	Feb. 26 2011	Feb. 25 2012
5	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	9120D-829	GTS208	Aug. 03 2010	Aug. 02 2011
6	Horn Antenna	ETS-LINDGREN	3160	GTS217	Aug. 03 2010	Aug. 02 2011
7	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
8	Coaxial Cable	GTS	N/A	GTS213	Apr. 01 2011	Mar. 31 2012
9	Coaxial Cable	GTS	N/A	GTS211	Apr. 01 2011	Mar. 31 2012
9	Coaxial cable	GTS	N/A	GTS210	Apr. 01 2011	Mar. 31 2012
11	Coaxial Cable	GTS	N/A	GTS212	Apr. 01 2011	Mar. 31 2012
12	Amplifier(100kHz-3GHz)	HP	8347A	GTS204	Aug. 03 2010	Aug. 02 2011
13	Amplifier(2GHz-20GHz)	HP	8349B	GTS206	Aug. 03 2010	Aug. 02 2011
14	Pre-amplifier (18-26GHz)	Rohde & Schwarz	AFS33-18002 650-30-8P-44	GTS218	Aug. 03 2010	Aug. 02 2011
15	Band filter	Amindeon	82346	GTS219	Aug. 03 2010	Aug. 02 2011

Conducted Emission:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	Shielding Room	ZhongYu Electron	7.0(L)x3.0(W)x3.0(H)	GTS252	Apr. 10 2011	Apr. 09 2012
2	EMI Test Receiver	Rohde & Schwarz	ESCS30	GTS223	Sept. 14 2010	Sept. 13 2011
3	10dB Pulse Limita	Rohde & Schwarz	N/A	GTS224	Sept. 14 2010	Sept. 13 2011
4	LISN	SCHWARZBECK MESS-ELEKTRONIK	NSLK 8127	GTS226	Apr. 14 2011	Apr. 13 2012
5	Coaxial Cable	GTS	N/A	GTS227	Apr. 01 2011	Mar. 31 2012
6	EMI Test Software	AUDIX	E3	N/A	N/A	N/A

6 Test results and Measurement Data

6.1 Antenna requirement:

Standard requirement:	FCC Part15 C Section 15.203 /247(c)
<p>15.203 requirement: <i>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.</i></p> <p>15.247(c) (1)(i) requirement: <i>(i) Systems operating in the 2400-2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6dBi.</i></p>	
E.U.T Antenna:	
<p><i>The antenna port is an unique antenna, the best case gain of the antenna is 0dBi.</i></p>	
	

6.2 Conducted Emissions

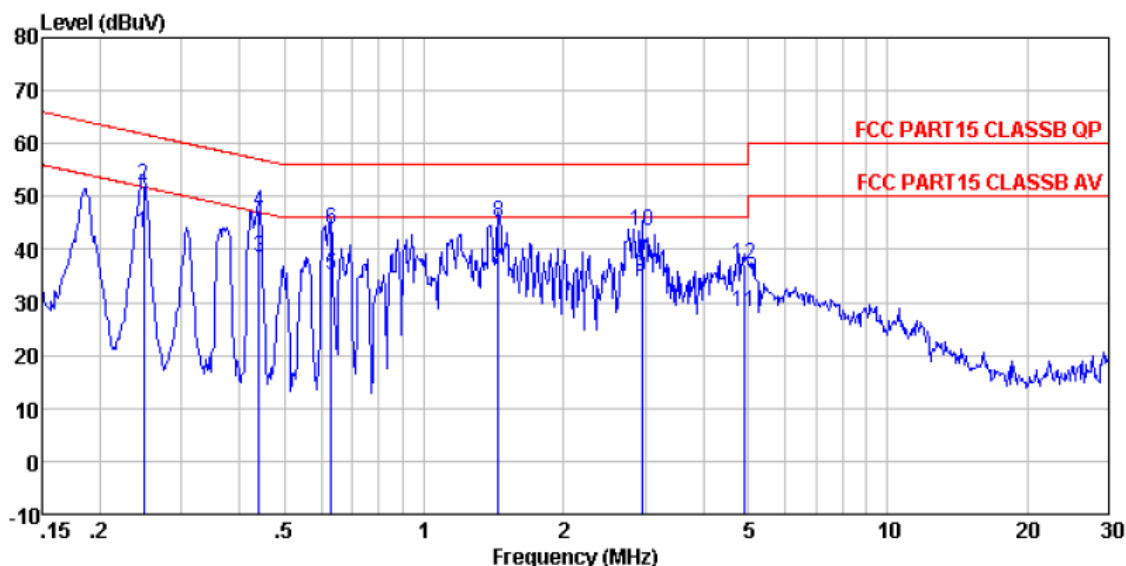
Test Requirement:	FCC Part15 C Section 15.207		
Test Method:	ANSI C63.4: 2003		
Test Frequency Range:	150kHz to 30MHz		
Class / Severity:	Class B		
Receiver setup:	RBW=9kHz, VBW=30kHz		
Limit:	Frequency range (MHz)	Limit (dBμV)	
		Quasi-peak	Average
	0.15-0.5	66 to 56*	56 to 46*
	0.5-5	56	46
	5-30	60	50
Test procedure	<p>The E.U.T and simulators are connected to the main power through a line impedance stabilization network(L.I.S.N.). The provide a 50ohm/50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs). Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 2003 on conducted measurement.</p>		
Test setup:	<div><div><div><div><div>Reference Plane</div><div>LISN</div><div>AUX Equipment</div><div>E.U.T</div><div>Test table/Insulation plane</div></div><div><div>40cm</div><div>80cm</div></div><div><div>LISN</div><div>Filter</div><div>AC power</div><div>EMI Receiver</div></div></div></div><div><p>Remark: E.U.T: Equipment Under Test LISN: Line Impedance Stabilization Network Test table height=0.8m</p></div></div>		
Test Instruments:	Refer to section 5.7 for details		
Test mode:	Refer to section 5.3 for details		
Test results:	Passed		

Measurement Data

An initial pre-scan was performed on the live and neutral lines with peak detector. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected.

WIFI mode:

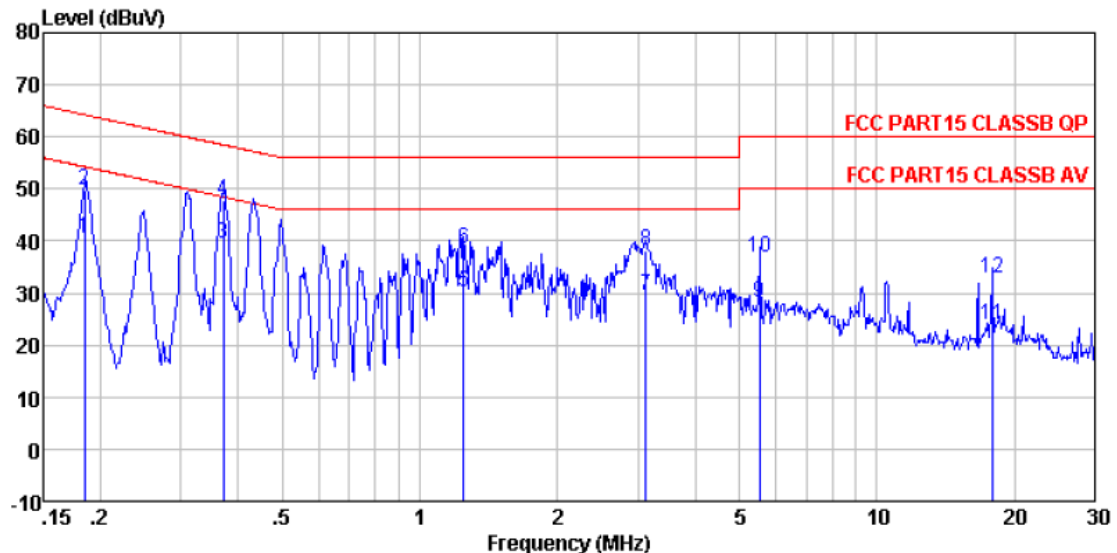
Line:



Condition : FCC PART15 CLASSB QP LISN(2011) LINE
 Job No. : 531RF
 Test Mode : WIFI mode
 Test Engineer: Dick

	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dBuV	dBuV	dB	
1	0.248	42.27	0.63	0.10	43.00	51.82	-8.82	Average
2	0.248	51.34	0.63	0.10	52.07	61.82	-9.75	QP
3	0.440	37.78	0.57	0.10	38.45	47.07	-8.62	Average
4	0.440	46.46	0.57	0.10	47.13	57.07	-9.94	QP
5	0.630	34.68	0.53	0.10	35.31	46.00	-10.69	Average
6	0.630	43.11	0.53	0.10	43.74	56.00	-12.26	QP
7	1.449	35.69	0.44	0.10	36.23	46.00	-9.77	Average
8	1.449	44.60	0.44	0.10	45.14	56.00	-10.86	QP
9	2.946	34.49	0.36	0.10	34.95	46.00	-11.05	Average
10	2.946	43.03	0.36	0.10	43.49	56.00	-12.51	QP
11	4.926	27.78	0.30	0.10	28.18	46.00	-17.82	Average
12	4.926	36.66	0.30	0.10	37.06	56.00	-18.94	QP

Neutral:



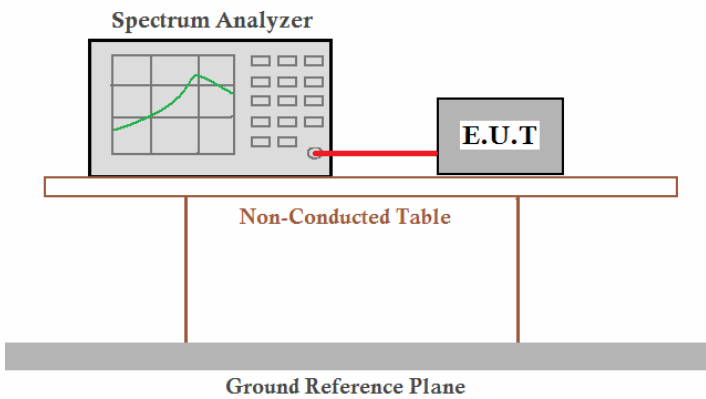
Condition : FCC PART15 CLASSB QP LISN(2011) NEUTRAL
 Job No. : 531RF
 Test Mode : WIFI mode
 Test Engineer: Dick

	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dBuV	dBuV	dB	
1	0.184	39.56	0.67	0.10	40.33	54.28	-13.95	Average
2	0.184	48.88	0.67	0.10	49.65	64.28	-14.63	QP
3	0.371	38.64	0.59	0.10	39.33	48.47	-9.14	Average
4	0.371	47.05	0.59	0.10	47.74	58.47	-10.73	QP
5	1.249	29.61	0.45	0.10	30.16	46.00	-15.84	Average
6	1.249	38.10	0.45	0.10	38.65	56.00	-17.35	QP
7	3.123	28.91	0.35	0.10	29.36	46.00	-16.64	Average
8	3.123	37.58	0.35	0.10	38.03	56.00	-17.97	QP
9	5.535	27.64	0.29	0.11	28.04	50.00	-21.96	Average
10	5.535	36.27	0.29	0.11	36.67	60.00	-23.33	QP
11	17.849	23.65	0.16	0.21	24.02	50.00	-25.98	Average
12	17.849	32.36	0.16	0.21	32.73	60.00	-27.27	QP

Notes:

1. The following Quasi-Peak and Average measurements were performed on the EUT:
2. Final Test Level = Receiver Reading + LISN Factor + Cable Loss.

6.3 Conducted Peak Output Power

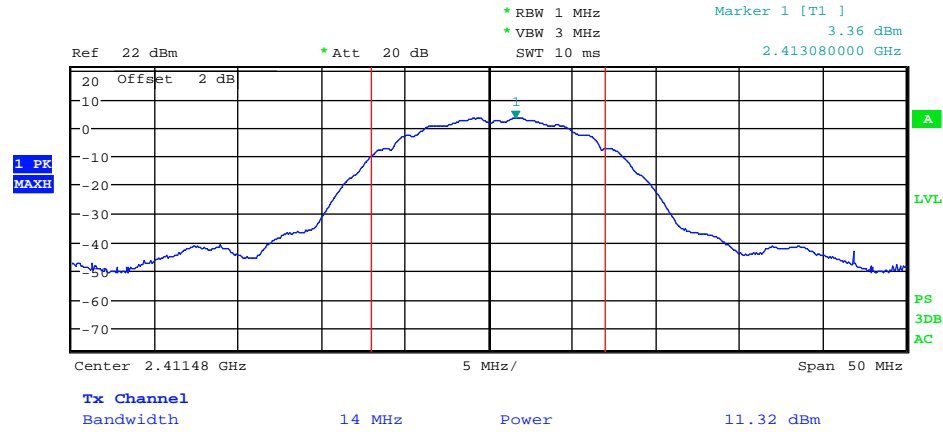
Test Requirement:	FCC Part15 C Section 15.247 (b)(3)
Test Method:	ANSI C63.4:2003 and KDB558074
Limit:	30dBm
Test setup:	 <p>The diagram illustrates the test setup. A Spectrum Analyzer is connected to an E.U.T (Equipment Under Test) via a red cable. Both the Spectrum Analyzer and the E.U.T are placed on a Non-Conducted Table. The table is supported by a Ground Reference Plane.</p>
Test Instruments:	Refer to section 5.7 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

Measurement Data

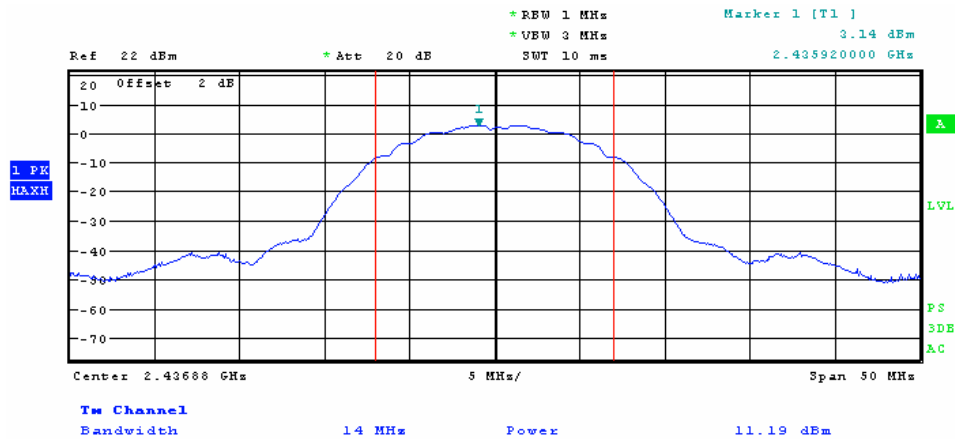
802.11b mode			
Test channel	Peak Output Power (dBm)	Limit (dBm)	Result
Lowest	11.32	30.00	Pass
Middle	11.19	30.00	Pass
Highest	11.25	30.00	Pass
802.11g mode			
Test channel	Peak Output Power (dBm)	Limit (dBm)	Result
Lowest	10.79	30.00	Pass
Middle	10.89	30.00	Pass
Highest	10.35	30.00	Pass
802.11n-H20 mode			
Test channel	Peak Output Power (dBm)	Limit (dBm)	Result
Lowest	9.70	30.00	Pass
Middle	9.25	30.00	Pass
Highest	9.17	30.00	Pass
802.11n-H40 mode			
Test channel	Peak Output Power (dBm)	Limit (dBm)	Result
Lowest	8.18	30.00	Pass
Middle	8.44	30.00	Pass
Highest	8.71	30.00	Pass

Test plot as follows:

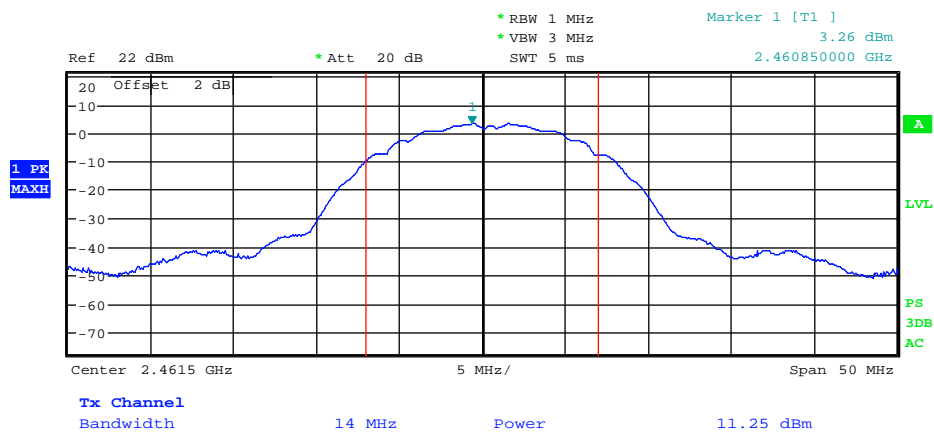
Test mode:	802.11b	Test channel:	Lowest
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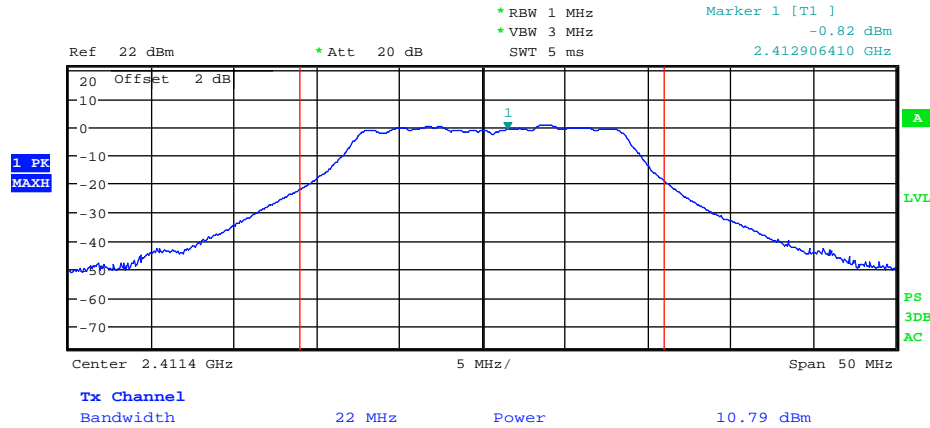
Test mode:	802.11b	Test channel:	Middle
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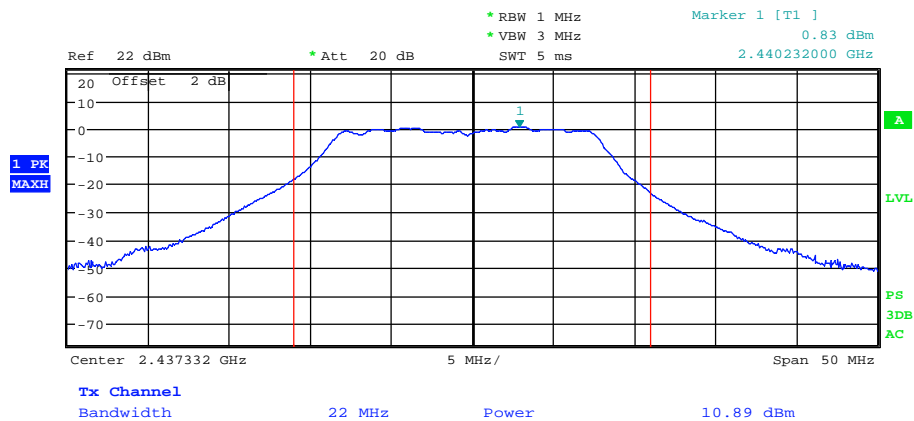
Test mode:	802.11b	Test channel:	Highest
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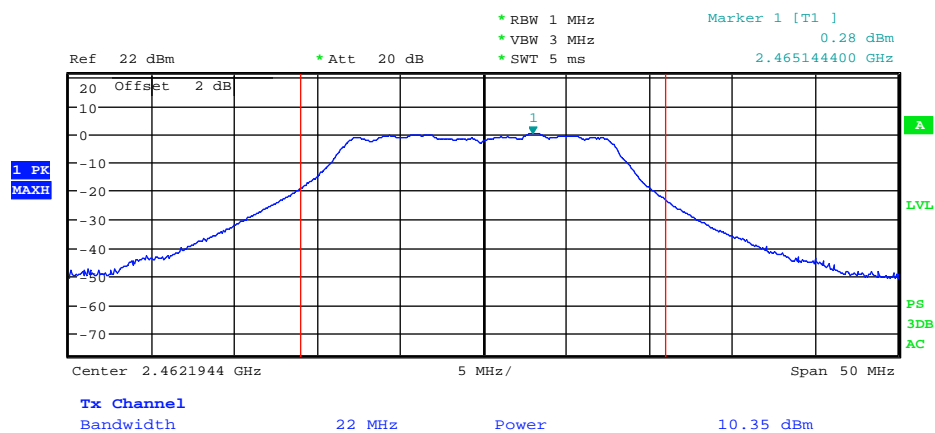
Test mode:	802.11g	Test channel:	Lowest
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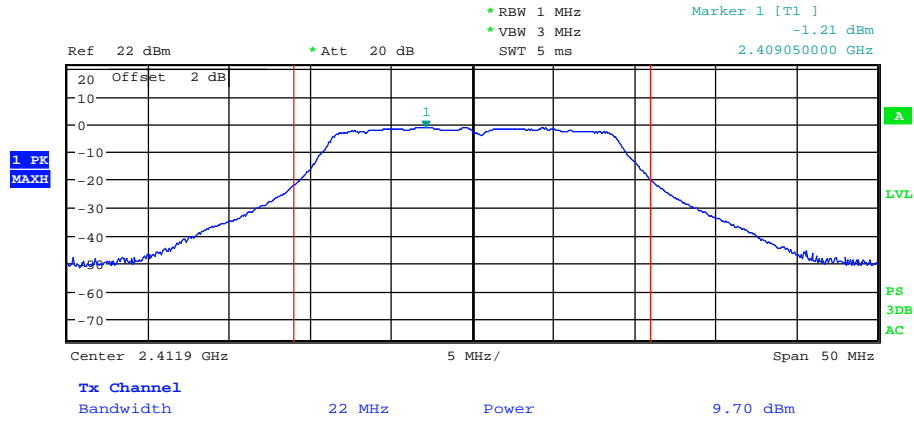
Test mode:	802.11g	Test channel:	Middle
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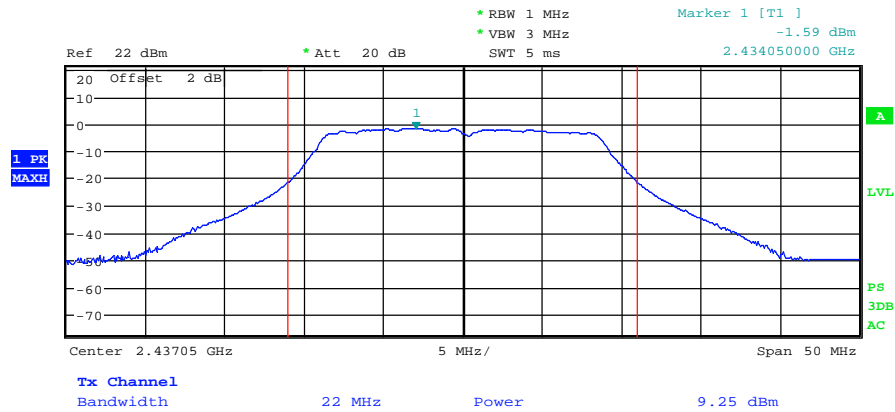
Test mode:	802.11g	Test channel:	Highest
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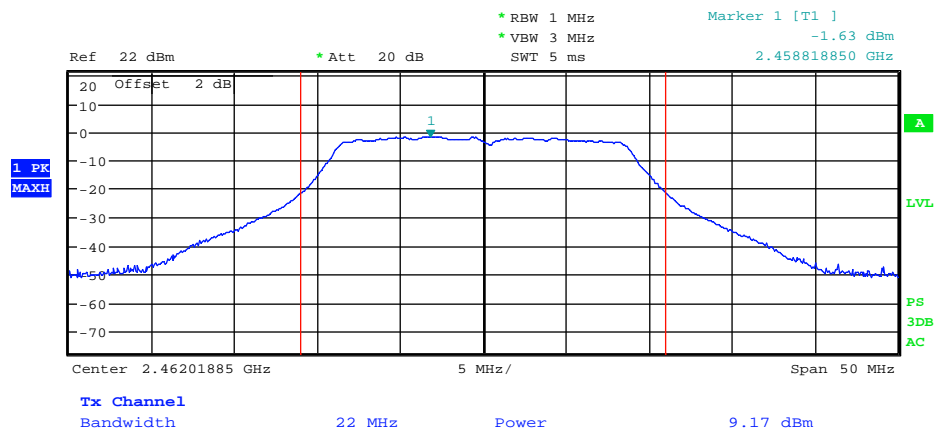
Test mode:	802.11n(H20)	Test channel:	Lowest
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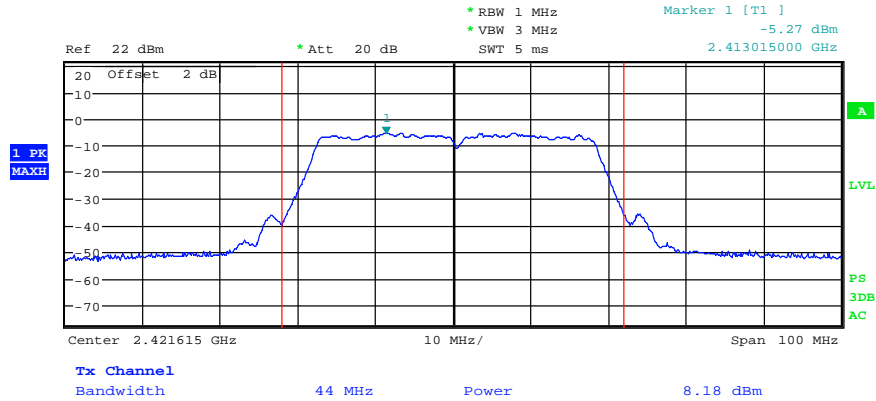
Test mode:	802.11n(H20)	Test channel:	Middle
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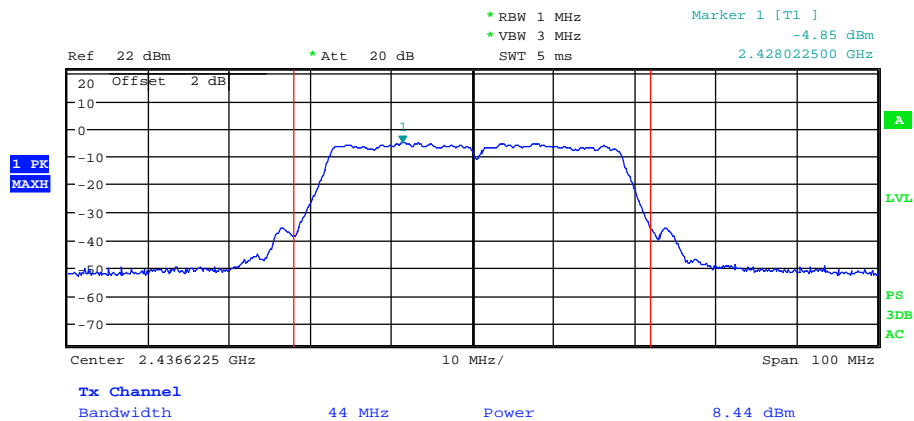
Test mode:	802.11n(H20)	Test channel:	Highest
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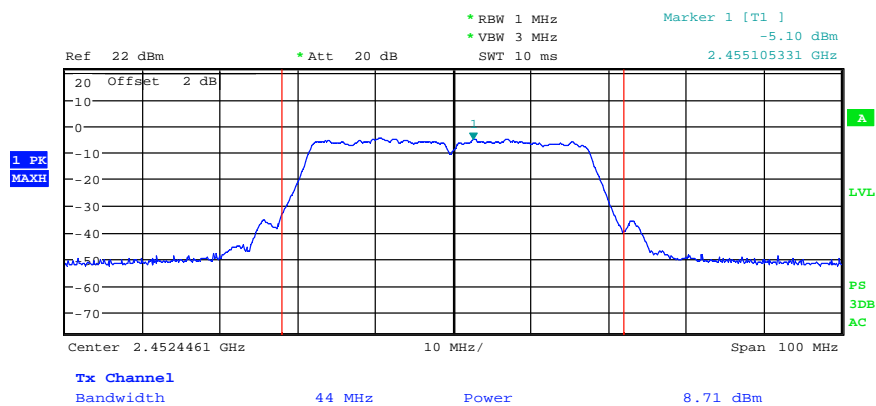
Test mode:	802.11n(H40)	Test channel:	Lowest
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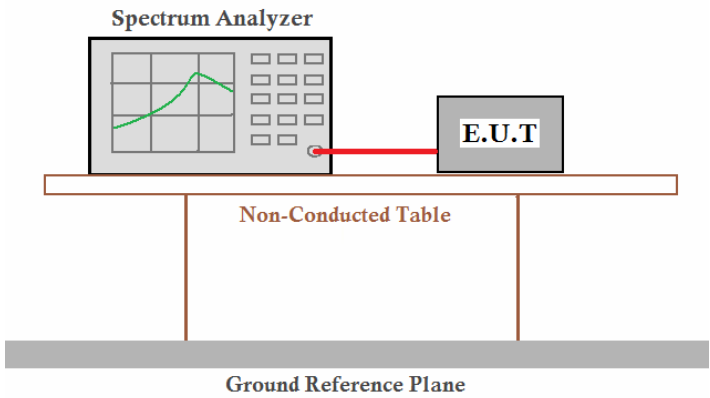
Test mode:	802.11n(H40)	Test channel:	Middle
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Test mode:	802.11n(H40)	Test channel:	Highest
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6.4 6dB Occupy Bandwidth

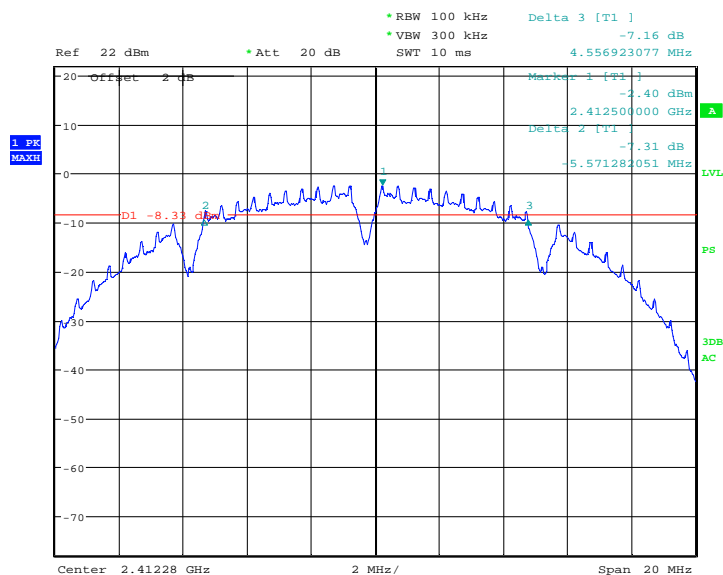
Test Requirement:	FCC Part15 C Section 15.247 (a)(2)
Test Method:	ANSI C63.4:2003 and KDB558074
Limit:	>500kHz
Test setup:	 <p>The diagram illustrates the test setup. A Spectrum Analyzer, shown with a green trace on its screen, is connected to an E.U.T (Equipment Under Test) by a red cable. Both the Spectrum Analyzer and the E.U.T are placed on a 'Non-Conducted Table'. Below this table is a 'Ground Reference Plane', represented by a thick grey bar.</p>
Test Instruments:	Refer to section 5.7 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

Measurement Data

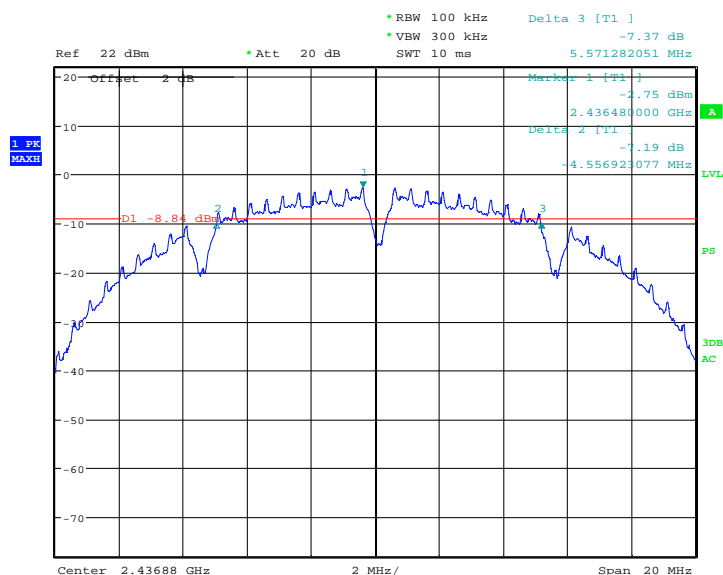
802.11b mode			
Test channel	6dB Occupy Bandwidth (MHz)	Limit (KHz)	Result
Lowest	10.137	>500	Pass
Middle	10.127	>500	Pass
Highest	10.095	>500	Pass
802.11g mode			
Test channel	6dB Occupy Bandwidth (MHz)	Limit (KHz)	Result
Lowest	16.350	>500	Pass
Middle	16.570	>500	Pass
Highest	16.490	>500	Pass
802.11n-H20 mode			
Test channel	6dB Occupy Bandwidth (MHz)	Limit (KHz)	Result
Lowest	17.555	>500	Pass
Middle	17.807	>500	Pass
Highest	17.820	>500	Pass
802.11n-H40 mode			
Test channel	6dB Occupy Bandwidth (MHz)	Limit (KHz)	Result
Lowest	36.464	>500	Pass
Middle	36.455	>500	Pass
Highest	36.455	>500	Pass

Test plot as follows:

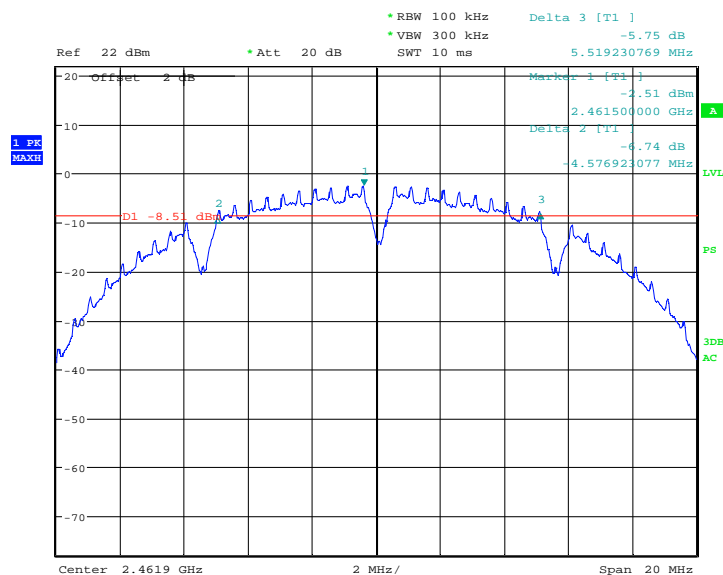
Test mode:	802.11b	Test channel:	Lowest
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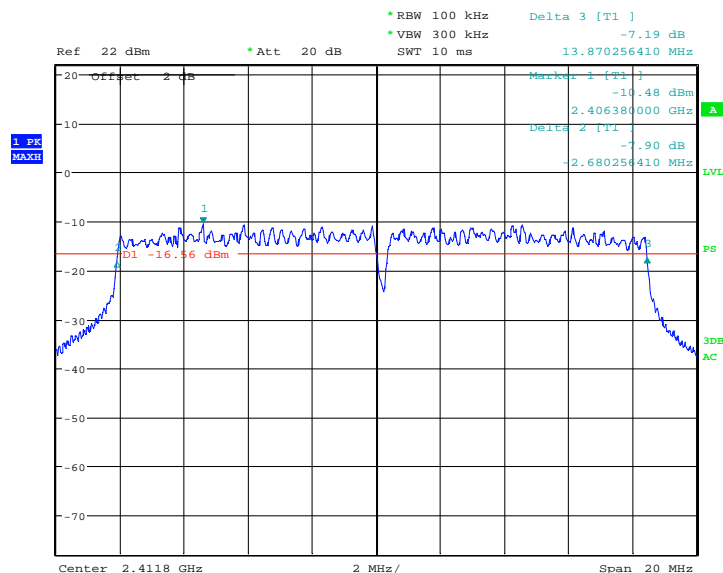
Test mode:	802.11b	Test channel:	Middle
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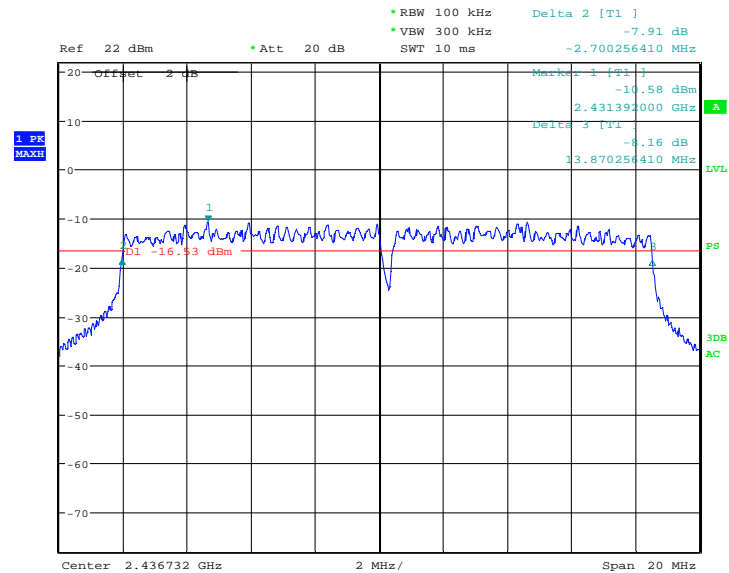
Test mode:	802.11b	Test channel:	Highest
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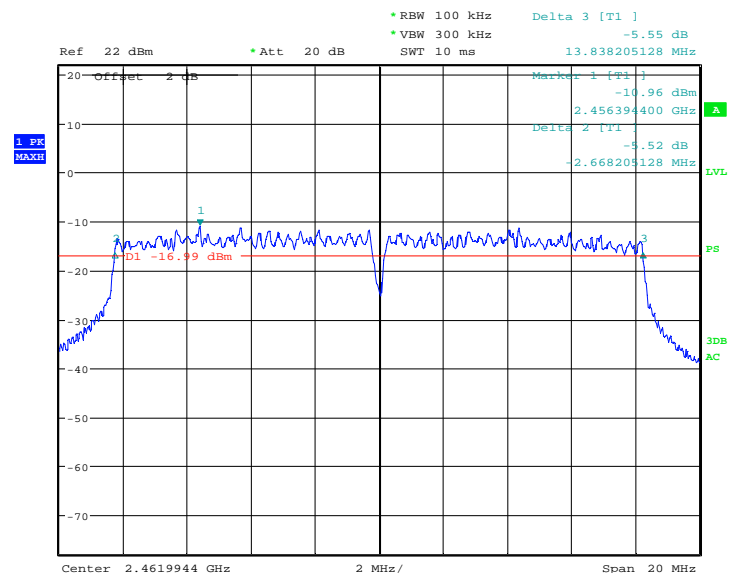
Test mode:	802.11g	Test channel:	Lowest
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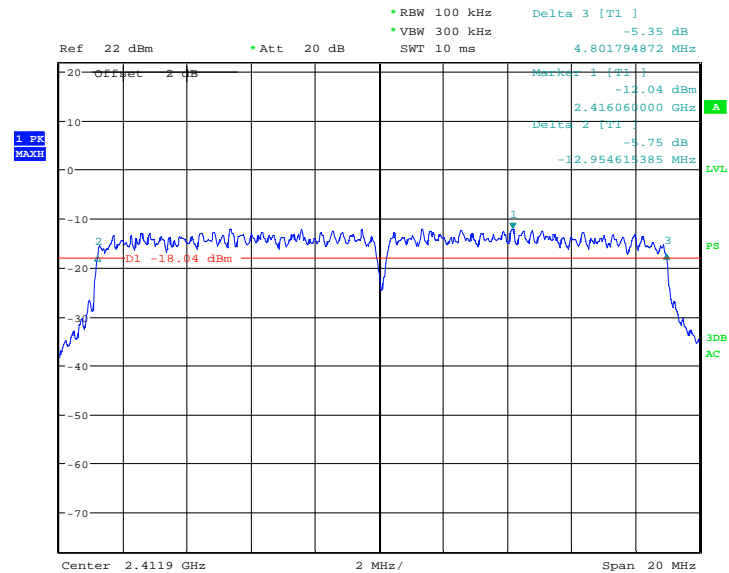
Test mode:	802.11g	Test channel:	Middle
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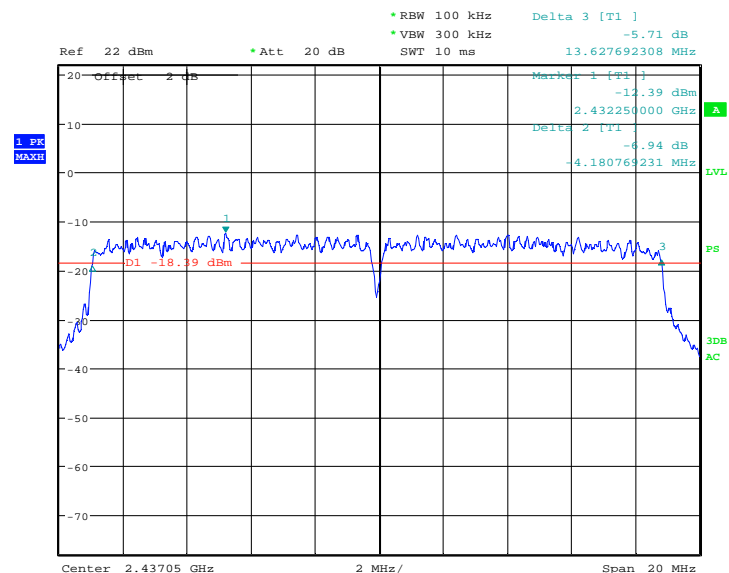
Test mode:	802.11g	Test channel:	Highest
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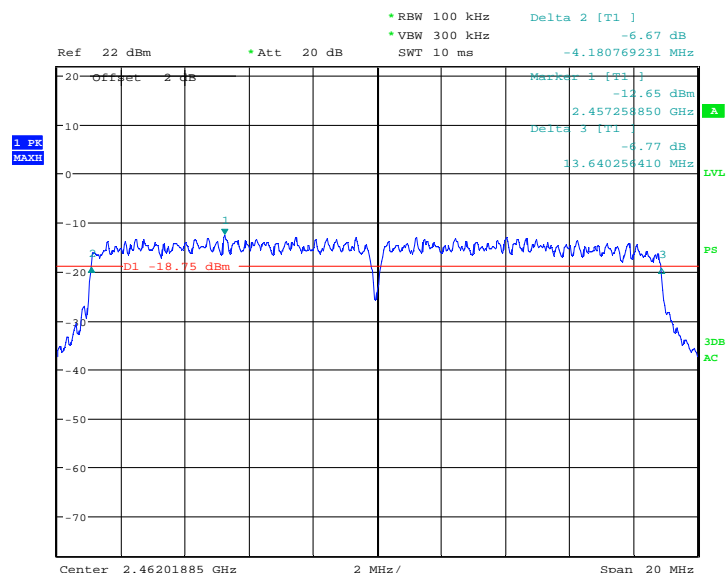
Test mode:	802.11n-H20	Test channel:	Lowest
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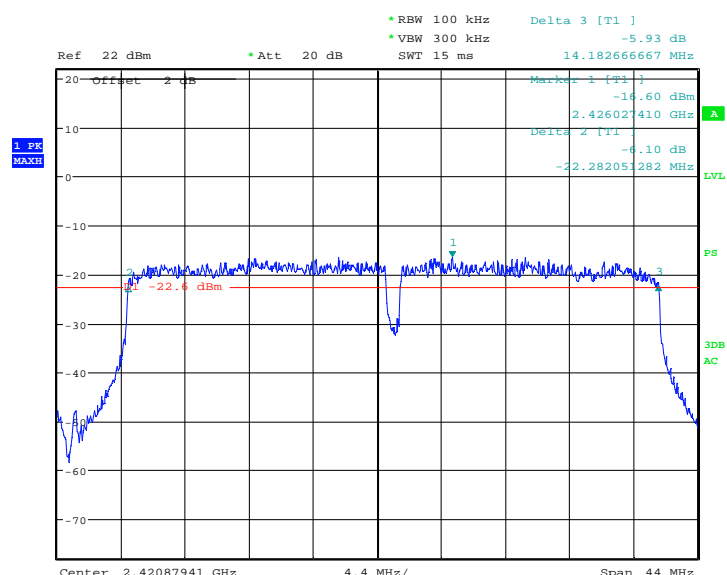
Test mode:	802.11n-H20	Test channel:	Middle
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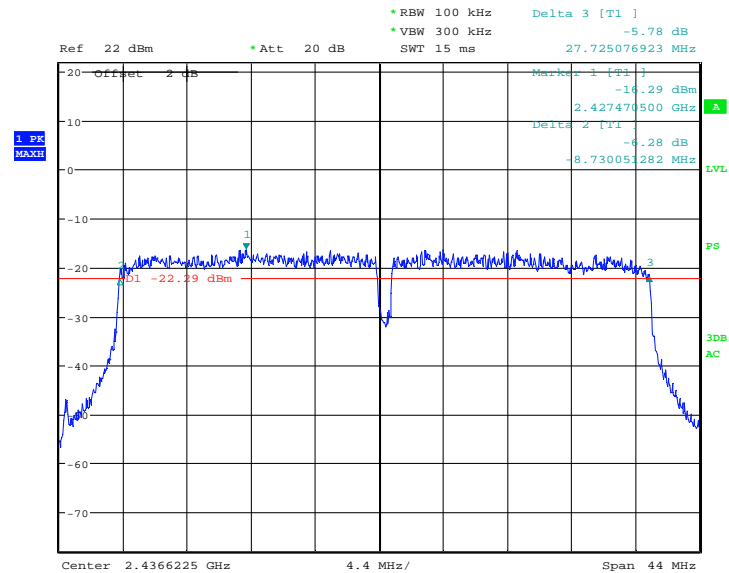
Test mode:	802.11n-H20	Test channel:	Highest
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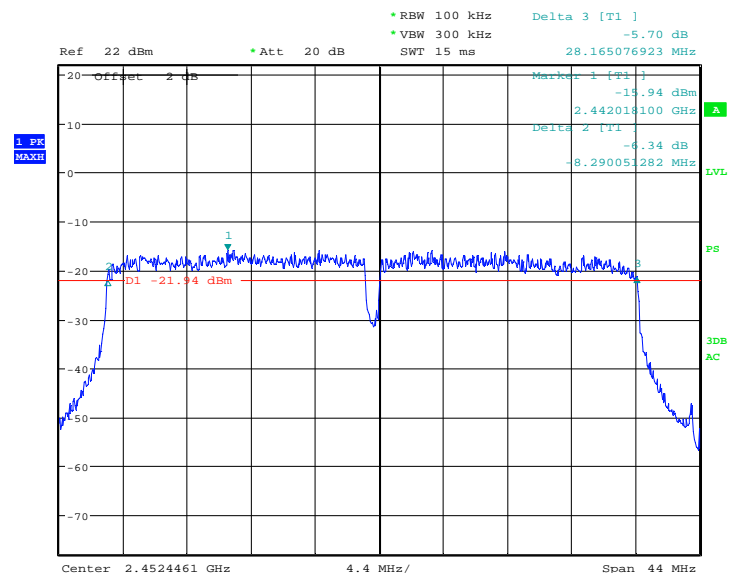
Test mode:	802.11n-H40	Test channel:	Lowest
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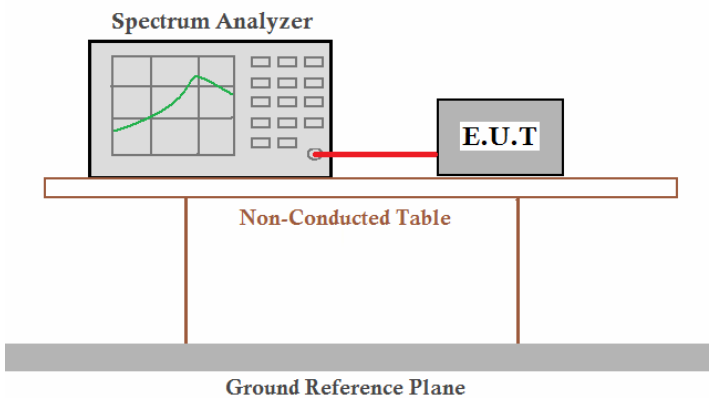
Test mode:	802.11n-H40	Test channel:	Middle
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Test mode:	802.11n-H40	Test channel:	Highest
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6.5 Power Spectral Density

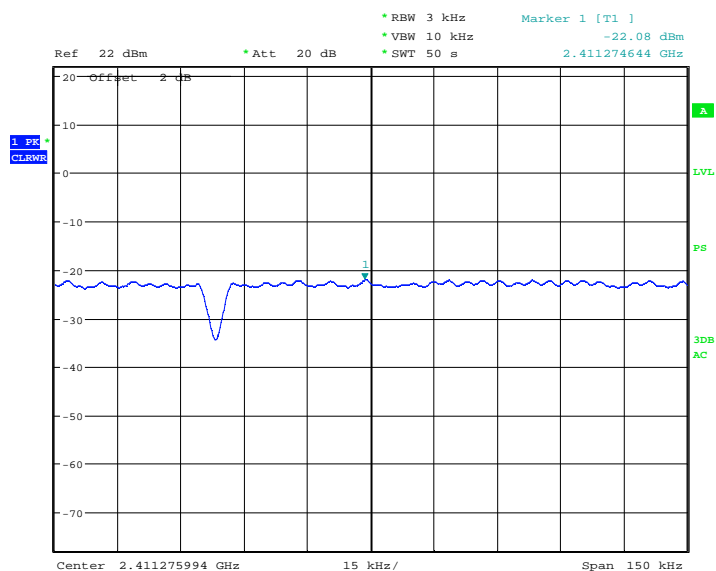
Test Requirement:	FCC Part15 C Section 15.247 (e)
Test Method:	ANSI C63.4:2003 and KDB558074
Limit:	8dBm
Test setup:	 <p>The diagram illustrates the test setup. A Spectrum Analyzer, shown with a grid and a green curve on its screen, is connected to an E.U.T. (Equipment Under Test) by a red cable. Both the Spectrum Analyzer and the E.U.T. are positioned on a Non-Conducted Table, which is supported by two vertical legs. Below the table, a Ground Reference Plane is indicated by a thick gray bar.</p>
Test Instruments:	Refer to section 5.7 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

Measurement Data

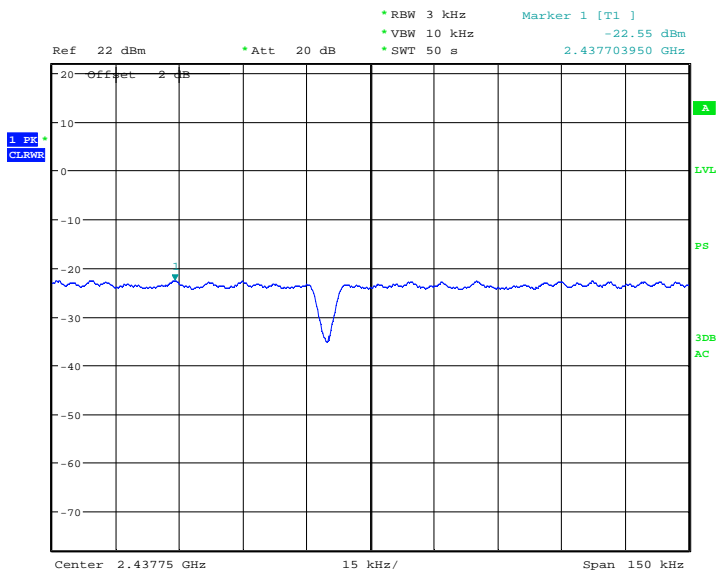
802.11b mode			
Test channel	Power Spectral Density (dBm)	Limit (dBm)	Result
Lowest	-22.08	8.00	Pass
Middle	-22.55	8.00	Pass
Highest	-21.98	8.00	Pass
802.11g mode			
Test channel	Power Spectral Density (dBm)	Limit (dBm)	Result
Lowest	-26.09	8.00	Pass
Middle	-25.16	8.00	Pass
Highest	-25.29	8.00	Pass
802.11n-H20 mode			
Test channel	Power Spectral Density (dBm)	Limit (dBm)	Result
Lowest	-26.09	8.00	Pass
Middle	-26.20	8.00	Pass
Highest	-26.81	8.00	Pass
802.11n-H40 mode			
Test channel	Power Spectral Density (dBm)	Limit (dBm)	Result
Lowest	-31.29	8.00	Pass
Middle	-28.02	8.00	Pass
Highest	-27.86	8.00	Pass

Test plot as follows:

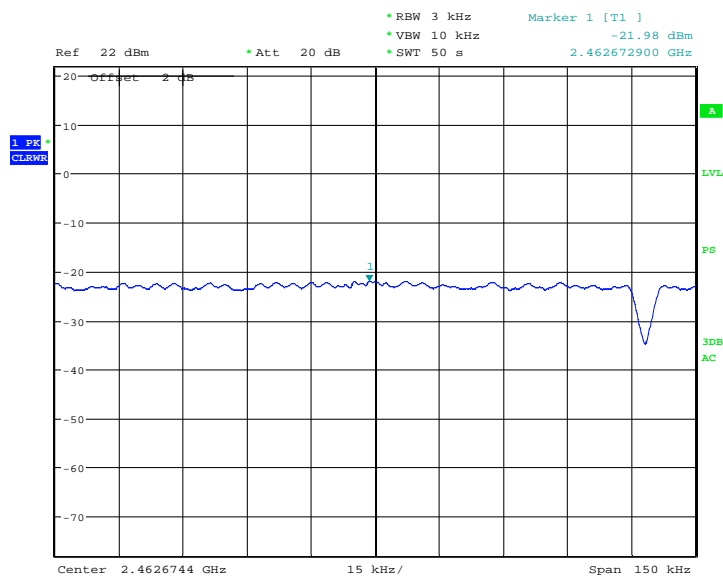
Test mode:	802.11b	Test channel:	Lowest
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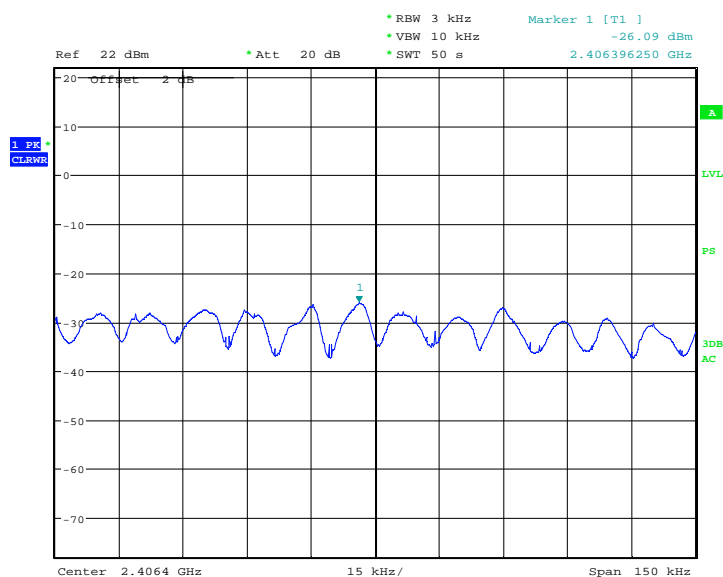
Test mode:	802.11b	Test channel:	Middle
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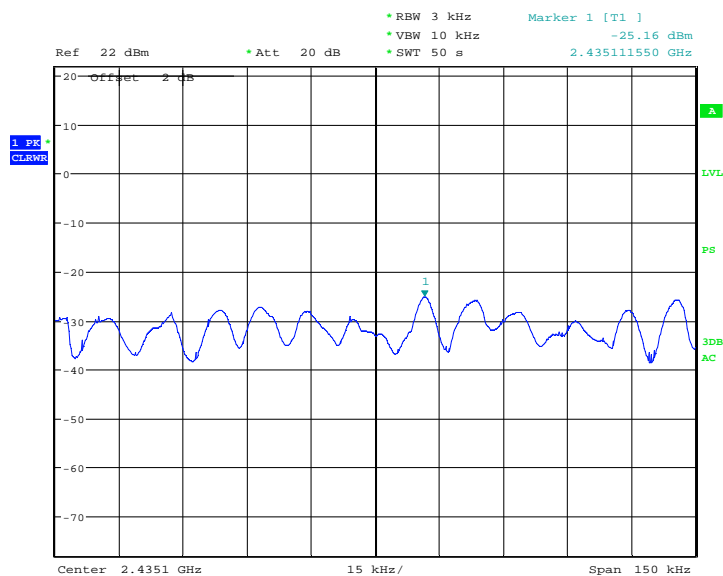
Test mode:	802.11b	Test channel:	Highest
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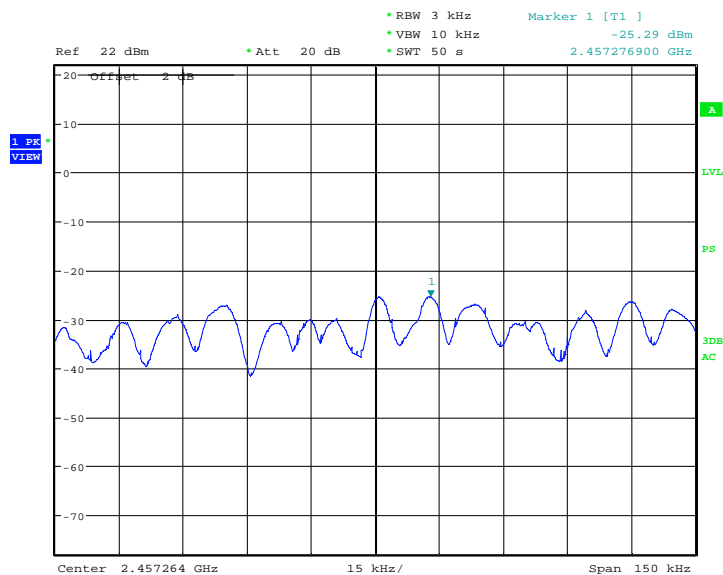
Test mode:	802.11g	Test channel:	Lowest
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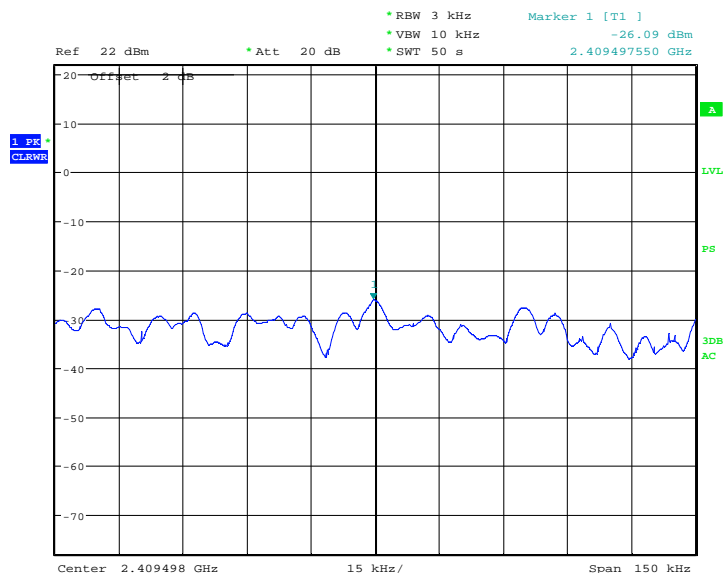
Test mode:	802.11g	Test channel:	Middle
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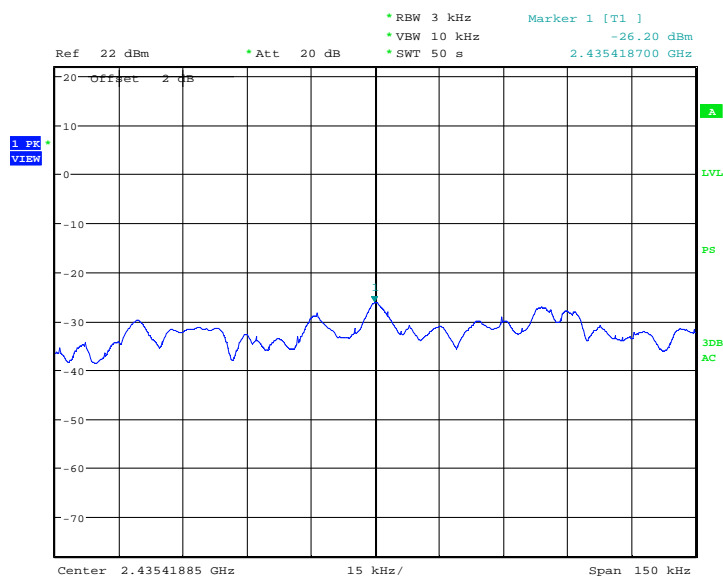
Test mode:	802.11g	Test channel:	Highest
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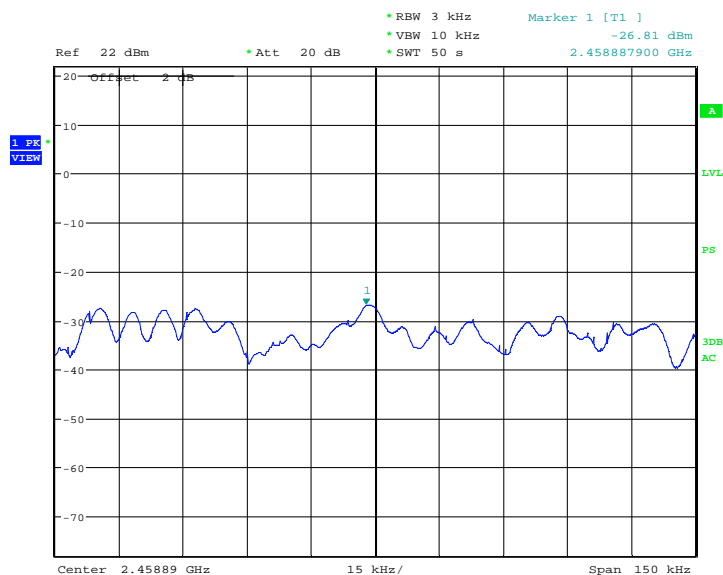
Test mode:	802.11n-H20	Test channel:	Lowest
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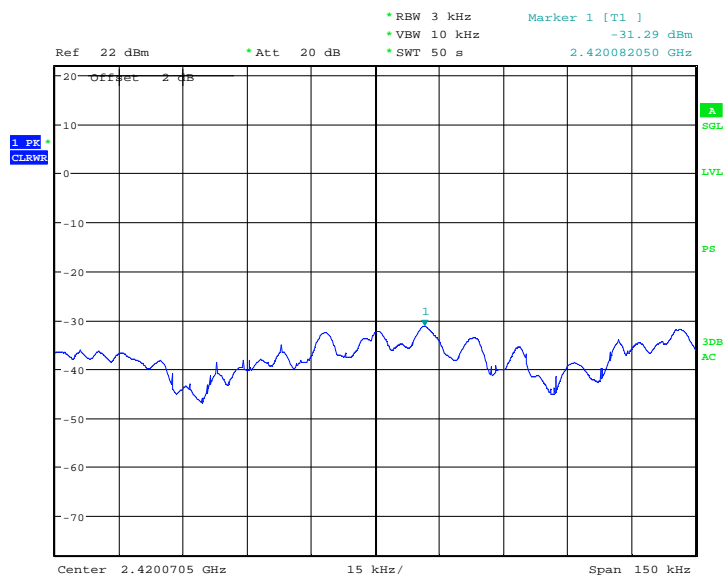
Test mode:	802.11n-H20	Test channel:	Middle
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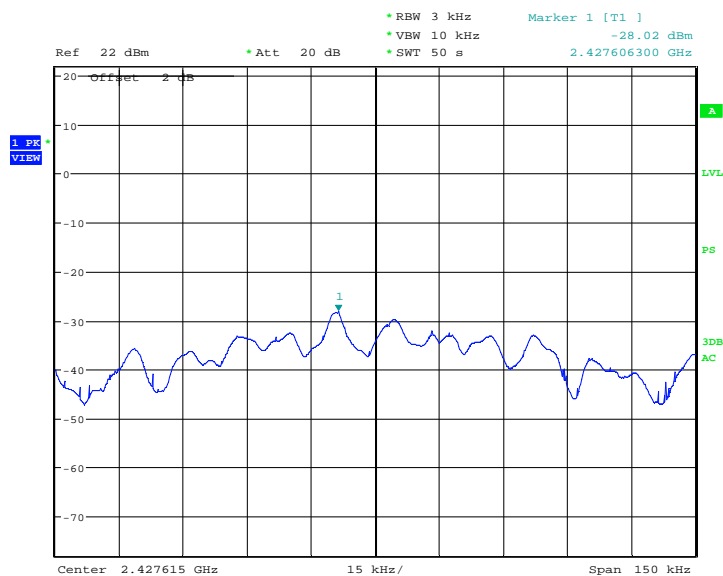
Test mode:	802.11n-H20	Test channel:	Highest
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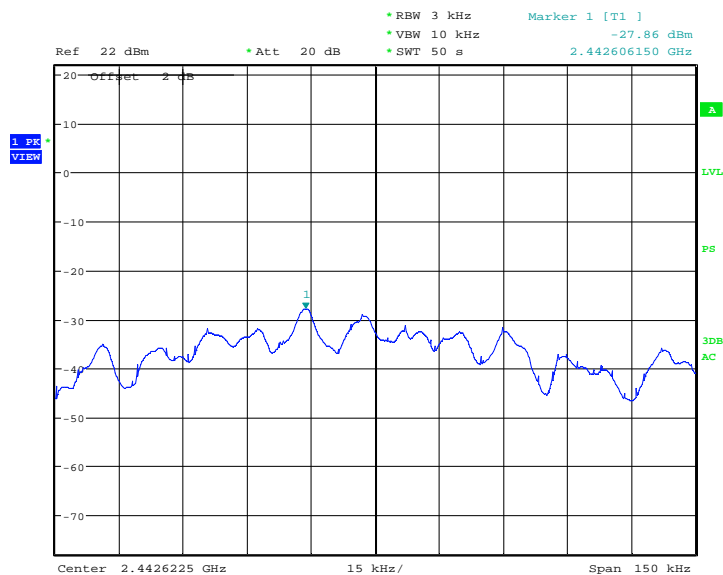
Test mode:	802.11n-H40	Test channel:	Lowest
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Test mode:	802.11n-H40	Test channel:	Middle
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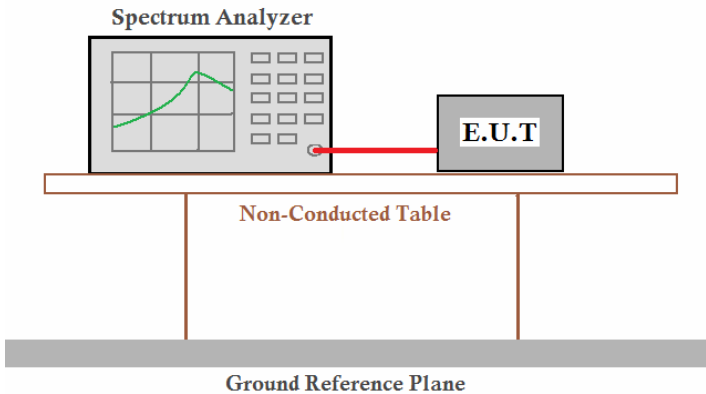


Test mode:	802.11n-H40	Test channel:	Highest
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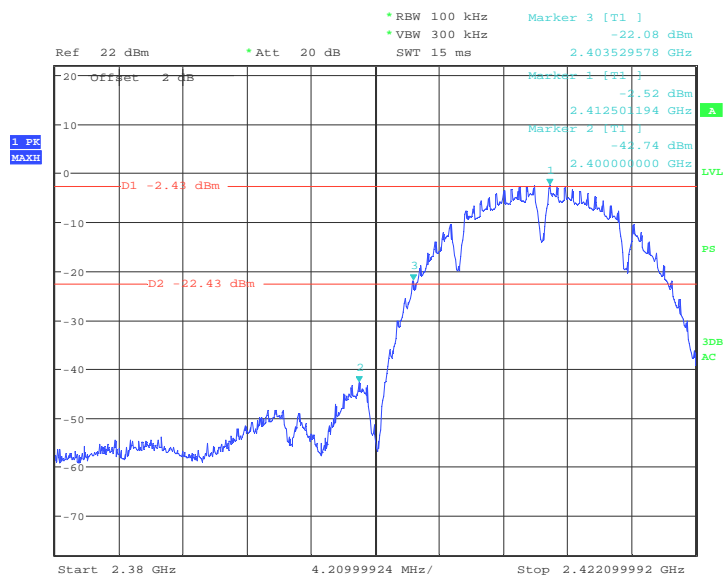
6.6 Band Edge

6.6.1 Conducted Emission Method

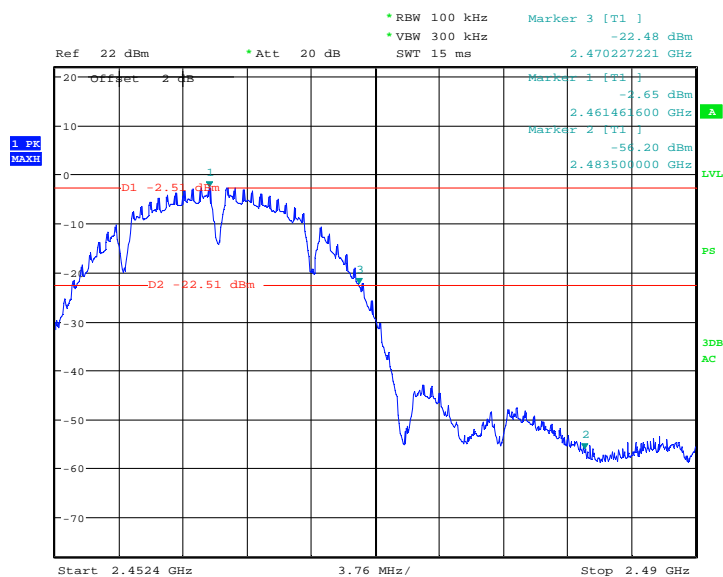
Test Requirement:	FCC Part15 C Section 15.247 (d)
Test Method:	ANSI C63.4:2003 and KDB558074
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 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.
Test setup:	 <p>The diagram illustrates the test setup. A Spectrum Analyzer is connected to an E.U.T. (Equipment Under Test) via a red cable. Both the Spectrum Analyzer and the E.U.T. are placed on a Non-Conducted Table. The table is supported by a Ground Reference Plane.</p>
Test Instruments:	Refer to section 5.7 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

Test plot as follows:

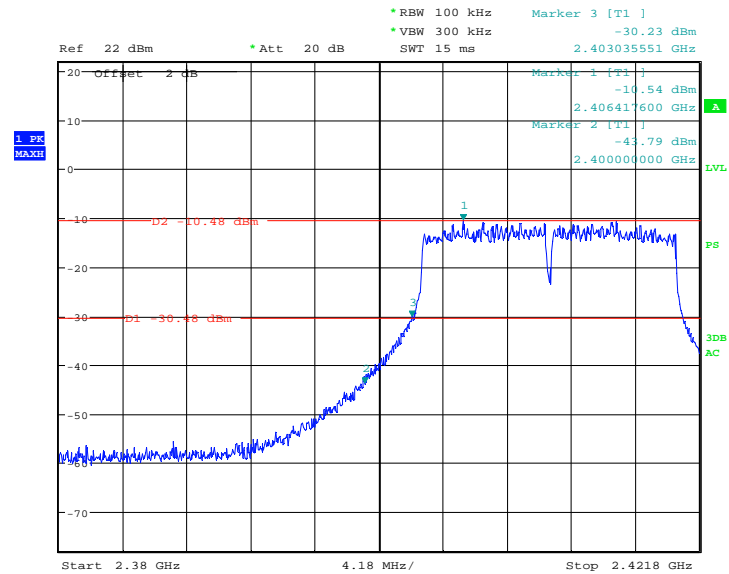
Test mode:	802.11b	Test channel:	Lowest
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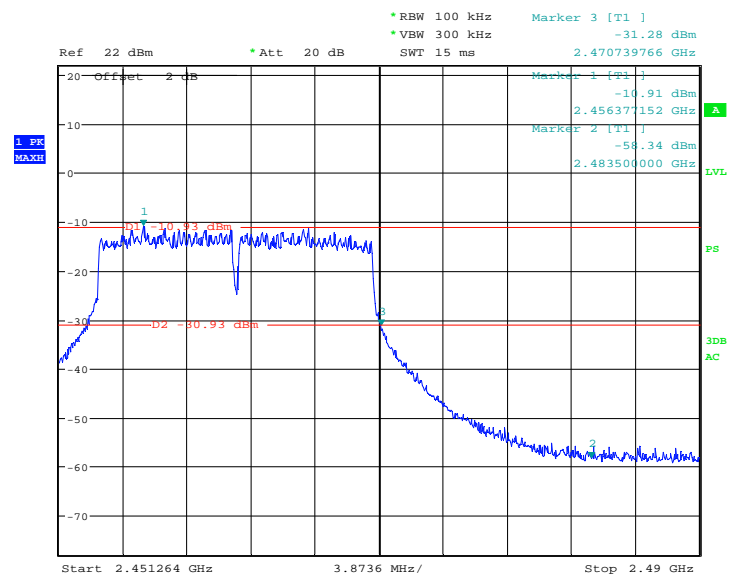
Test mode:	802.11b	Test channel:	Highest
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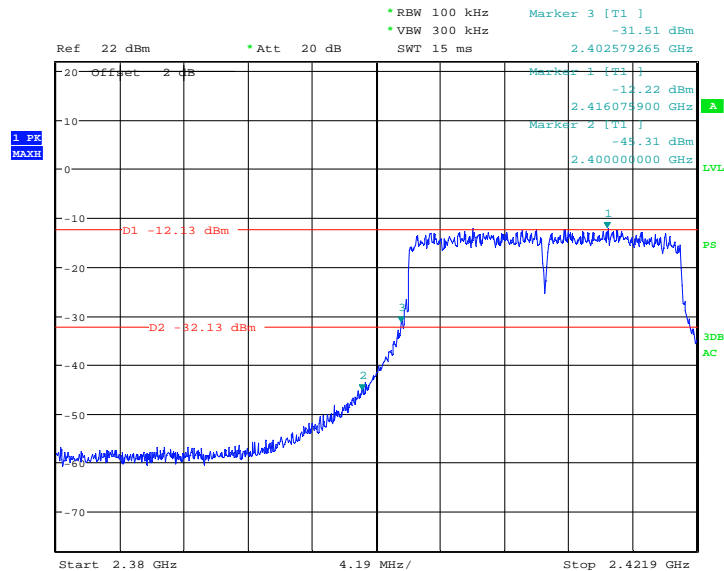
Test mode:	802.11g	Test channel:	Lowest
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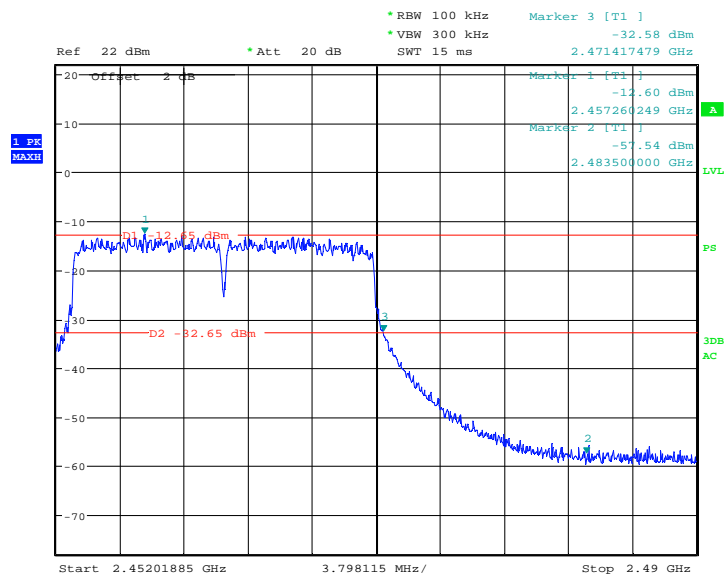
Test mode:	802.11g	Test channel:	Highest
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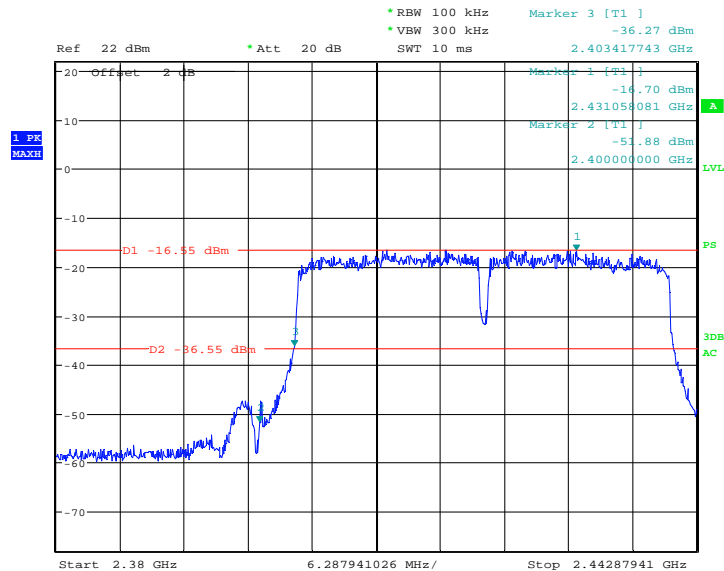
Test mode:	802.11n (H20)	Test channel:	Lowest
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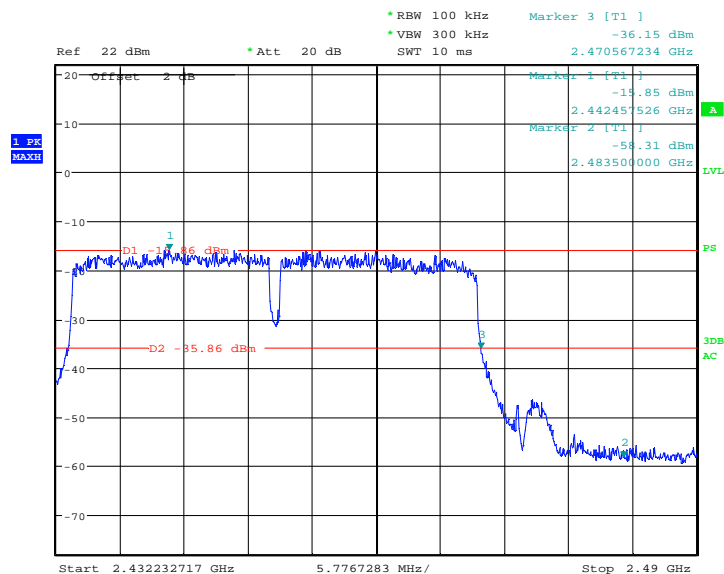
Test mode:	802.11n (H20)	Test channel:	Highest
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Test mode:	802.11n (H40)	Test channel:	Lowest
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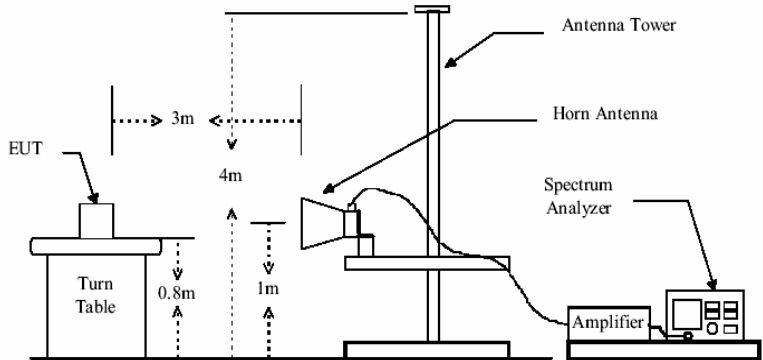


Test mode:	802.11n (H40)	Test channel:	Highest
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6.6.2 Radiated Emission Method

Test Requirement:	FCC Part15 C Section 15.209 and 15.205				
Test Method:	ANSI C63.4: 2003				
Test Frequency Range:	2.3GHz to 2.5GHz				
Test site:	Measurement Distance: 3m (Semi-Anechoic Chamber)				
Receiver setup:					
	Frequency	Detector	RBW	VBW	Remark
	Above 1GHz	Peak	1MHz	3MHz	Peak Value
Peak		1MHz	10Hz	Average Value	
Limit:					
	Frequency		Limit (dBuV/m @3m)		Remark
	Above 1GHz		54.0		Average Value
74.0			Peak Value		
Test Procedure:	<p>a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation.</p> <p>b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.</p> <p>c. 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.</p> <p>d. 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 and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.</p> <p>e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</p> <p>f. 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.</p>				

Test setup:	 <p>The diagram illustrates the test setup. An EUT (Equipment Under Test) is placed on a Turn Table. A Horn Antenna is mounted on an Antenna Tower. The distance between the EUT and the antenna is 3m. The height of the antenna is 4m. The height of the turn table is 0.8m. The distance from the antenna to the Spectrum Analyzer is 1m. The Spectrum Analyzer is connected to an Amplifier.</p>
Test Instruments:	Refer to section 5.7 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

Note:

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

Measurement data:

Test mode:		802.11b		Test channel:		Lowest		Remark:		Peak	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)		Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization		
2390.00	49.67	27.59		3.33	30.10	50.49	74.00	-23.51	Vertical		
2400.00	55.30	27.58		3.37	30.10	56.15	74.00	-17.85	Vertical		
2390.00	51.64	27.59		3.33	30.10	52.46	74.00	-21.54	Horizontal		
2400.00	55.70	27.58		3.37	30.10	56.55	74.00	-17.45	Horizontal		

Test mode:		802.11b		Test channel:		Lowest		Remark:		Average	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization			
2390.00	33.31	27.59	3.33	30.10	34.13	54.00	-19.87	Vertical			
2400.00	38.29	27.58	3.37	30.10	39.14	54.00	-14.86	Vertical			
2390.00	35.28	27.59	3.33	30.10	36.10	54.00	-17.90	Horizontal			
2400.00	38.69	27.58	3.37	30.10	39.54	54.00	-14.46	Horizontal			

Test mode:		802.11b		Test channel:		Highest		Remark:		Peak	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization			
2483.50	50.21	27.53	3.49	29.93	51.30	74.00	-22.70	Vertical			
2500.00	55.58	27.55	3.52	30.70	55.95	74.00	-18.05	Vertical			
2483.50	52.23	27.53	3.49	29.93	53.32	74.00	-20.68	Horizontal			
2500.00	56.08	27.55	3.52	30.70	56.45	74.00	-17.55	Horizontal			

Test mode:		802.11b		Test channel:		Highest		Remark:		Average	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization			
2483.50	37.07	27.53	3.49	29.93	38.16	54.00	-15.84	Vertical			
2500.00	33.97	27.55	3.52	30.70	34.34	54.00	-19.66	Vertical			
2483.50	39.09	27.53	3.49	29.93	40.18	54.00	-13.82	Horizontal			
2500.00	34.47	27.55	3.52	30.70	34.84	54.00	-19.16	Horizontal			

Test mode:		802.11g		Test channel:		Lowest		Remark:		Peak	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization			
2390.00	48.12	27.59	3.33	30.10	48.94	74.00	-25.06	Vertical			
2400.00	53.68	27.58	3.37	30.10	54.53	74.00	-19.47	Vertical			
2390.00	50.28	27.59	3.33	30.10	51.10	74.00	-22.90	Horizontal			
2400.00	54.30	27.58	3.37	30.10	55.15	74.00	-18.85	Horizontal			

Test mode:		802.11g		Test channel:		Lowest		Remark:		Average	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization			
2390.00	33.38	27.59	3.33	30.10	34.20	54.00	-19.80	Vertical			
2400.00	38.77	27.58	3.37	30.10	39.62	54.00	-14.38	Vertical			
2390.00	35.98	27.59	3.33	30.10	36.80	54.00	-17.20	Horizontal			
2400.00	39.92	27.58	3.37	30.10	40.77	54.00	-13.23	Horizontal			

Test mode:		802.11g		Test channel:		Highest		Remark:		Peak	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization			
2483.50	48.95	27.53	3.49	29.93	50.04	74.00	-23.96	Vertical			
2500.00	54.37	27.55	3.52	30.70	54.74	74.00	-19.26	Vertical			
2483.50	51.17	27.53	3.49	29.93	52.26	74.00	-21.74	Horizontal			
2500.00	54.97	27.55	3.52	30.70	55.34	74.00	-18.66	Horizontal			

Test mode:		802.11g		Test channel:		Highest		Remark:		Average	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization			
2483.50	38.49	27.53	3.49	29.93	39.58	54.00	-14.42	Vertical			
2500.00	35.70	27.55	3.52	30.70	36.07	54.00	-17.93	Vertical			
2483.50	39.42	27.53	3.49	29.93	40.51	54.00	-13.49	Horizontal			
2500.00	35.18	27.55	3.52	30.70	35.55	54.00	-18.45	Horizontal			

Test mode:		802.11n(H20)	Test channel:		Lowest	Remark:		Peak
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
2390.00	35.43	27.59	3.33	30.10	36.25	74.00	-37.75	Vertical
2400.00	49.26	27.58	3.37	30.10	50.11	74.00	-23.89	Vertical
2390.00	50.44	27.59	3.33	30.10	51.26	74.00	-22.74	Horizontal
2400.00	54.54	27.58	3.37	30.10	55.39	74.00	-18.61	Horizontal

Test mode:		802.11n(H20)		Test channel:		Lowest		Remark:		Average	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization			
2390.00	35.59	27.59	3.33	30.10	36.41	54.00	-17.59	Vertical			
2400.00	41.00	27.58	3.37	30.10	41.85	54.00	-12.15	Vertical			
2390.00	35.77	27.59	3.33	30.10	36.59	54.00	-17.41	Horizontal			
2400.00	35.79	27.58	3.37	30.10	36.64	54.00	-17.36	Horizontal			

Test mode:		802.11n(H20)		Test channel:		Highest		Remark:		Peak	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization			
2483.50	39.58	27.53	3.49	29.93	40.67	74.00	-33.33	Vertical			
2500.00	49.86	27.55	3.52	30.70	50.23	74.00	-23.77	Vertical			
2483.50	51.20	27.53	3.49	29.93	52.29	74.00	-21.71	Horizontal			
2500.00	55.03	27.55	3.52	30.70	55.40	74.00	-18.60	Horizontal			

Test mode:		802.11n(H20)		Test channel:		Highest		Remark:		Average	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization			
2483.50	39.67	27.53	3.49	29.93	40.76	54.00	-13.24	Vertical			
2500.00	39.66	27.55	3.52	30.70	40.03	54.00	-13.97	Vertical			
2483.50	38.44	27.53	3.49	29.93	39.53	54.00	-14.47	Horizontal			
2500.00	34.08	27.55	3.52	30.70	34.45	54.00	-19.55	Horizontal			

Test mode:		802.11n(H40)	Test channel:		Lowest	Remark:		Peak
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
2390.00	49.27	27.59	3.33	30.10	50.09	74.00	-23.91	Vertical
2400.00	53.65	27.58	3.37	30.10	54.50	74.00	-19.50	Vertical
2390.00	51.43	27.59	3.33	30.10	52.25	74.00	-21.75	Horizontal
2400.00	54.27	27.58	3.37	30.10	55.12	74.00	-18.88	Horizontal

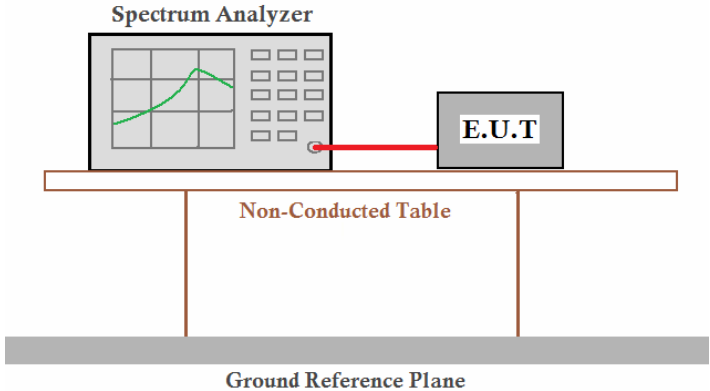
Test mode:		802.11n(H40)		Test channel:		Lowest		Remark:		Average	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization			
2390.00	32.54	27.59	3.33	30.10	33.36	54.00	-20.64	Vertical			
2400.00	39.23	27.58	3.37	30.10	40.08	54.00	-13.92	Vertical			
2390.00	34.04	27.59	3.33	30.10	34.86	54.00	-19.14	Horizontal			
2400.00	39.18	27.58	3.37	30.10	40.03	54.00	-13.97	Horizontal			

Test mode:		802.11n(H40)		Test channel:		Highest		Remark:		Peak	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization			
2483.50	51.28	27.53	3.49	29.93	52.37	74.00	-21.63	Vertical			
2500.00	49.34	27.55	3.52	30.70	49.71	74.00	-24.29	Vertical			
2483.50	52.75	27.53	3.49	29.93	53.84	74.00	-20.16	Horizontal			
2500.00	49.37	27.55	3.52	30.70	49.74	74.00	-24.26	Horizontal			

Test mode:		802.11n(H40)		Test channel:		Highest		Remark:		Average	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization			
2483.50	41.82	27.53	3.49	29.93	42.91	54.00	-11.09	Vertical			
2500.00	41.66	27.55	3.52	30.70	42.03	54.00	-11.97	Vertical			
2483.50	41.00	27.53	3.49	29.93	42.09	54.00	-11.91	Horizontal			
2500.00	39.57	27.55	3.52	30.70	39.94	54.00	-14.06	Horizontal			

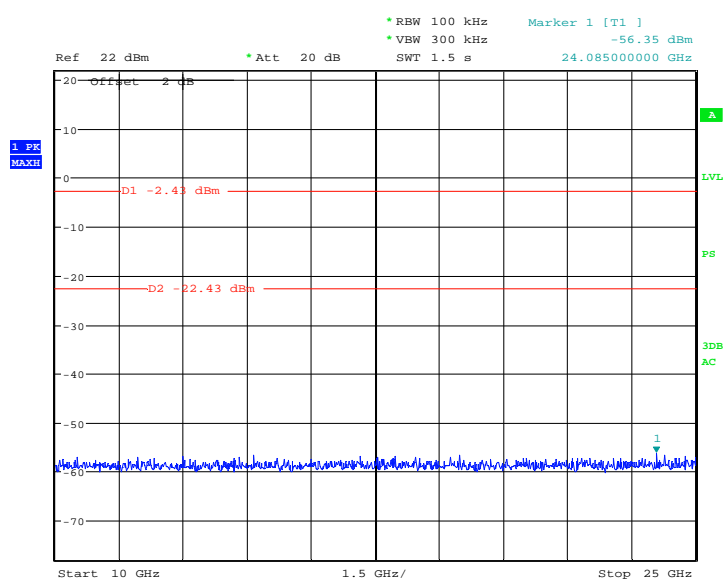
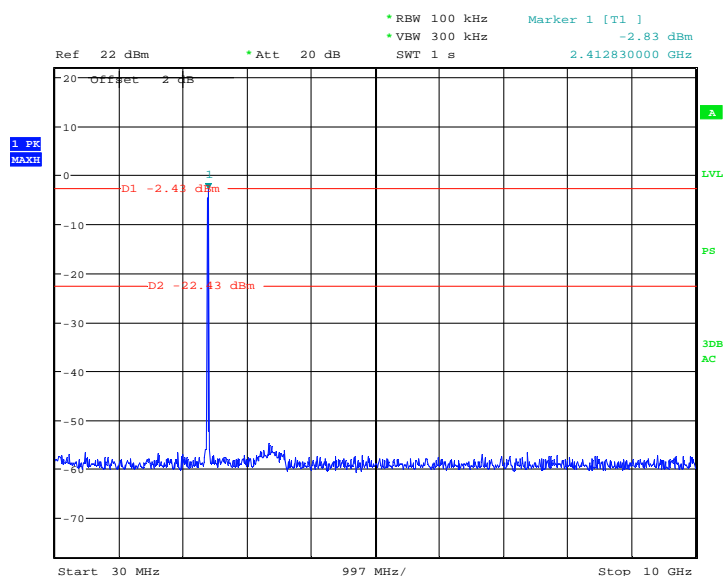
6.7 Spurious Emission

6.7.1 Conducted Emission Method

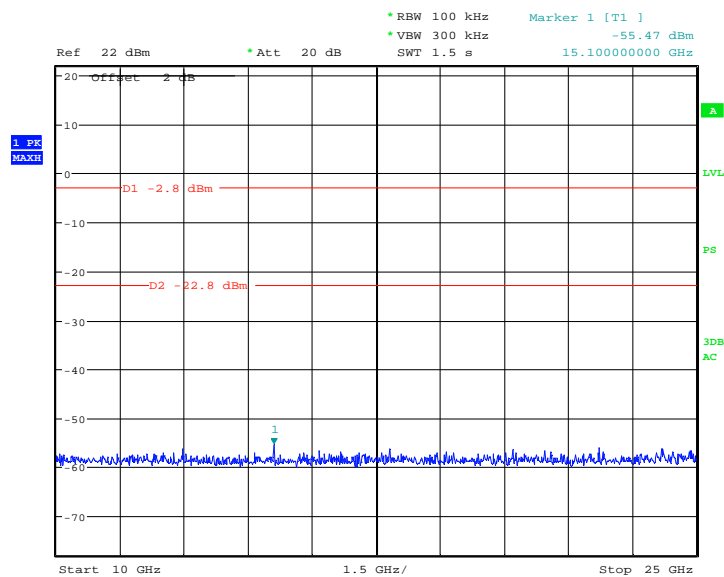
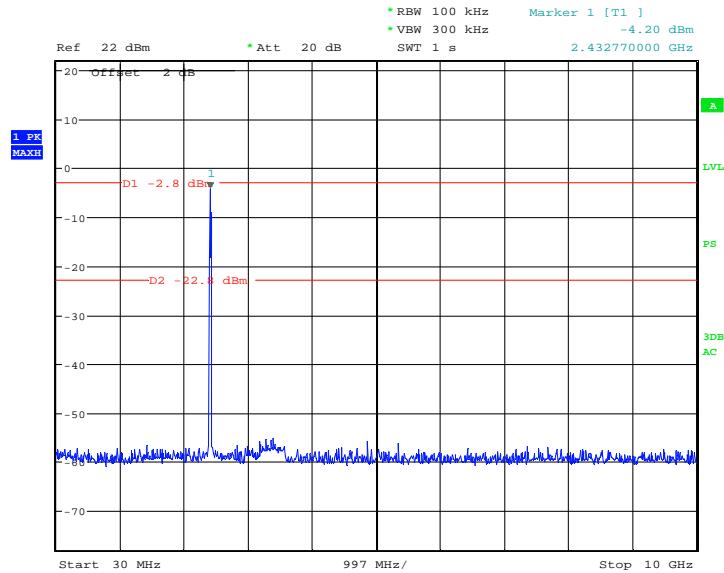
Test Requirement:	FCC Part15 C Section 15.247 (d)
Test Method:	ANSI C63.4:2003 and KDB558074
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 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.
Test setup:	 <p>The diagram illustrates the test setup. A Spectrum Analyzer is connected to an E.U.T. (Equipment Under Test) via a red cable. Both the Spectrum Analyzer and the E.U.T. are placed on a Non-Conducted Table. Below the table is a Ground Reference Plane.</p>
Test Instruments:	Refer to section 5.7 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

Test plot as follows:

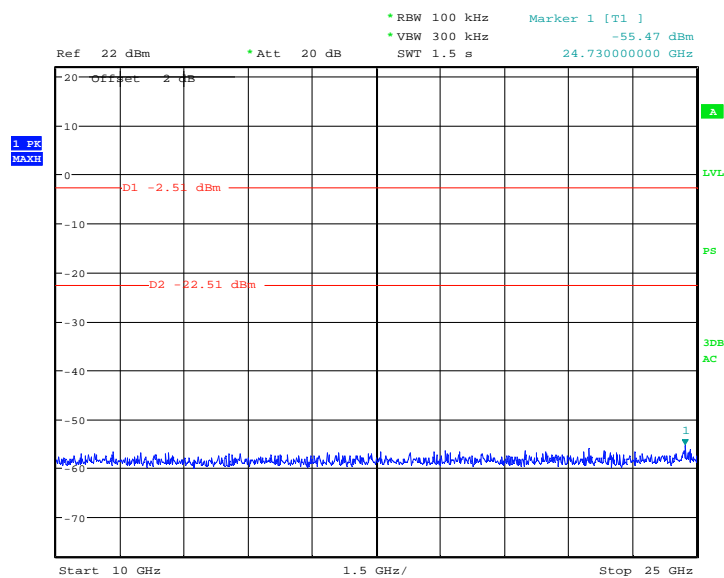
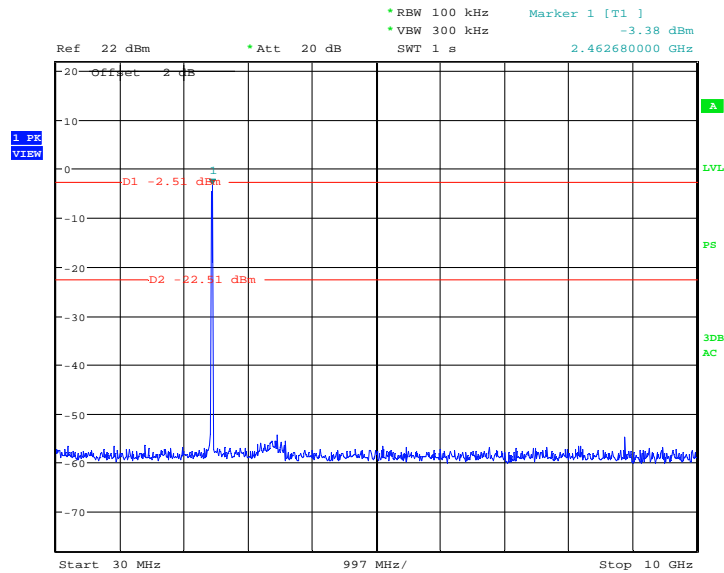
Test mode:	802.11b	Test channel:	Lowest
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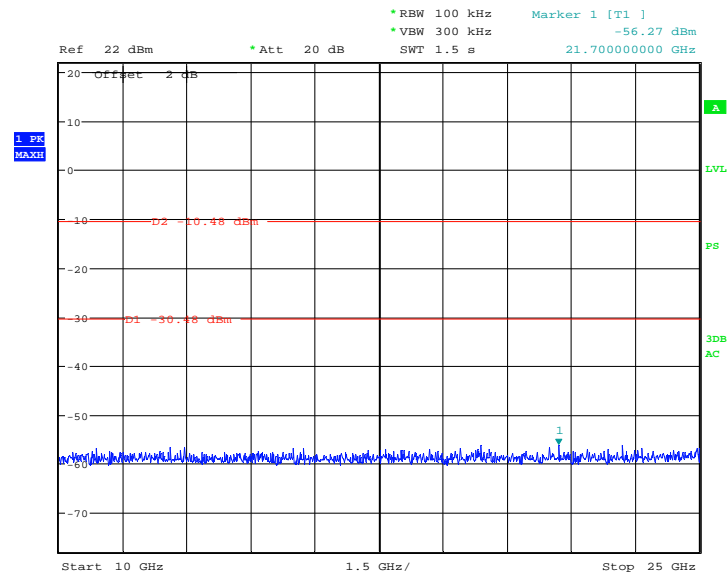
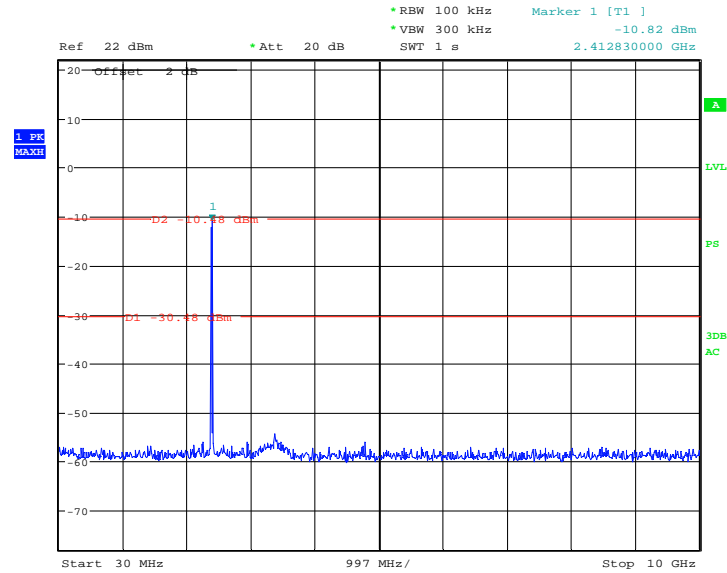
Test mode:	802.11b	Test channel:	Middle
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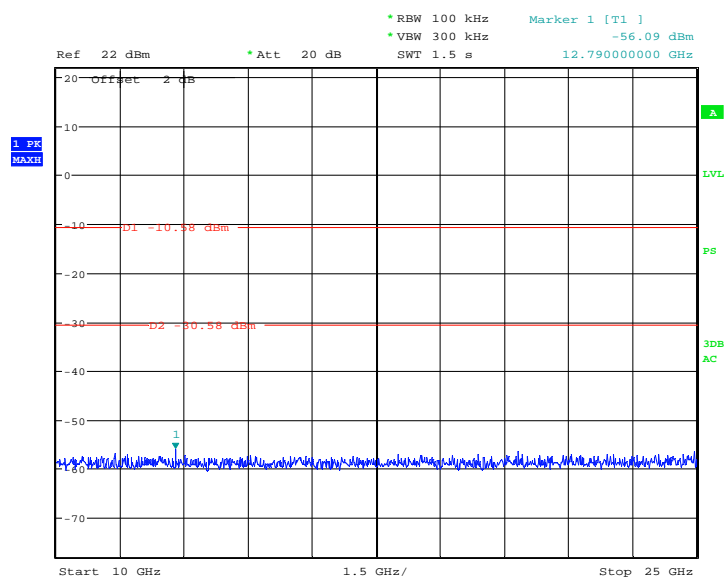
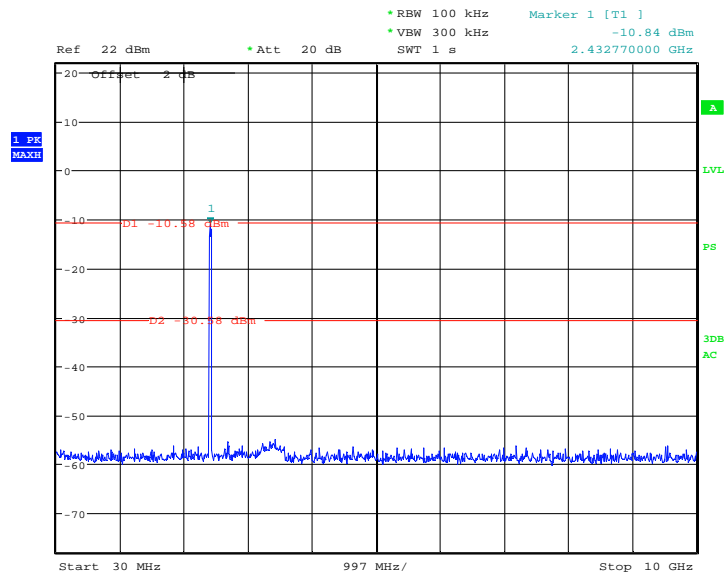
Test mode:	802.11b	Test channel:	Highest
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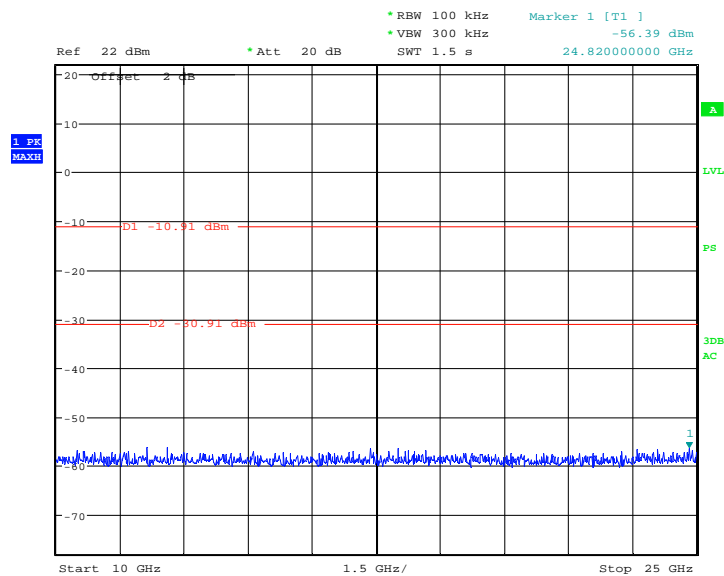
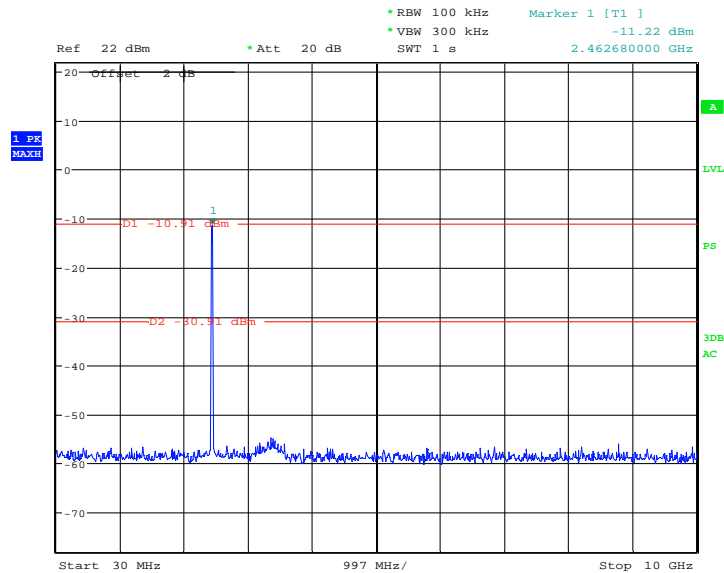
Test mode:	802.11g	Test channel:	Lowest
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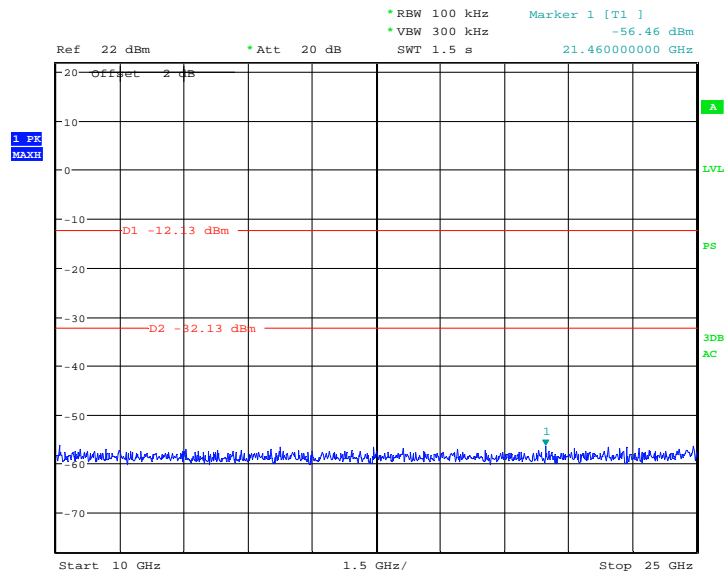
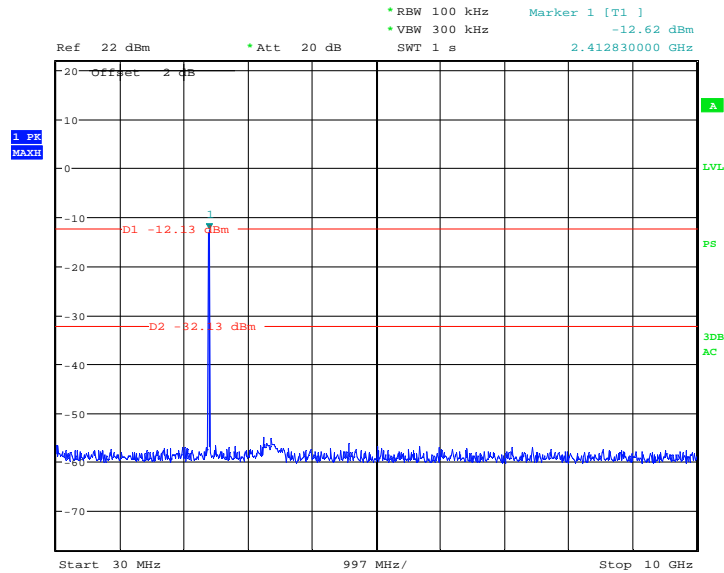
Test mode:	802.11g	Test channel:	Middle
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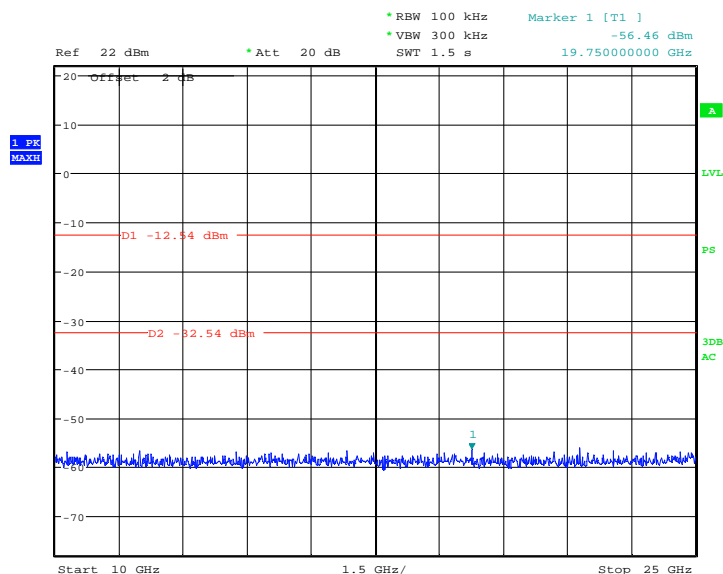
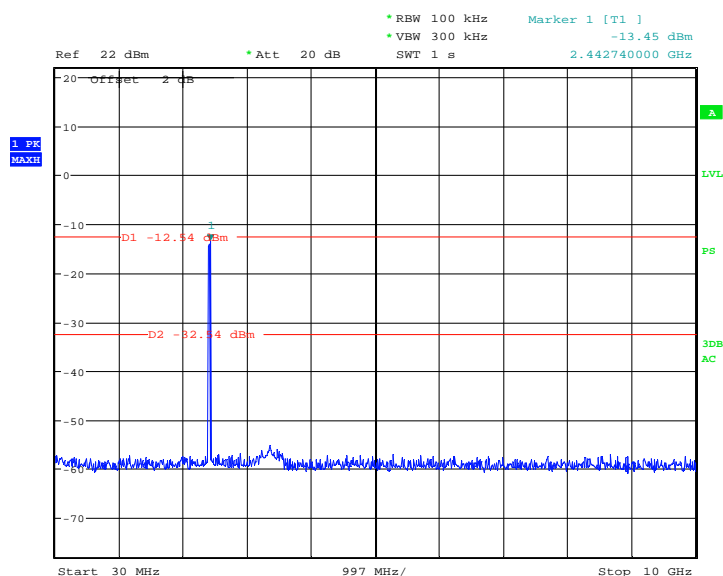
Test mode:	802.11g	Test channel:	Highest
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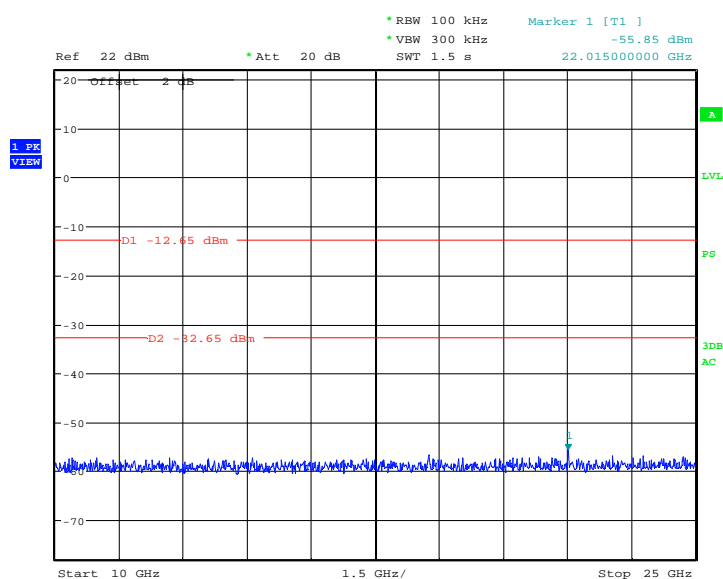
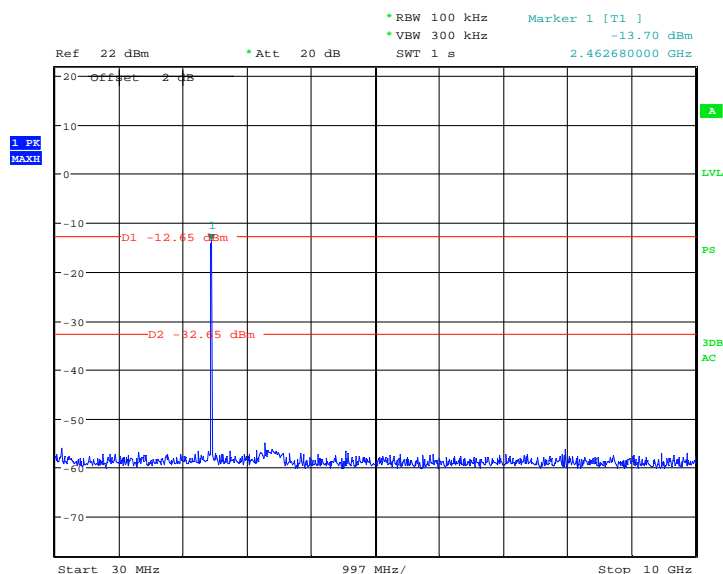
Test mode:	802.11n(H20)	Test channel:	Lowest
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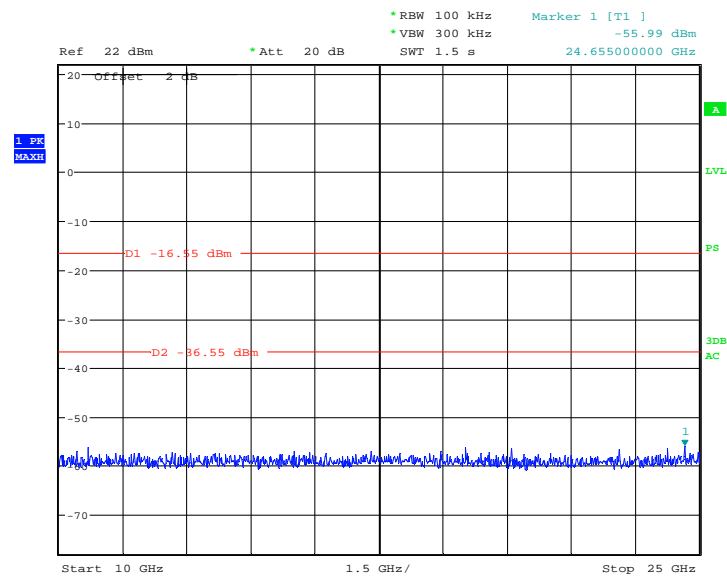
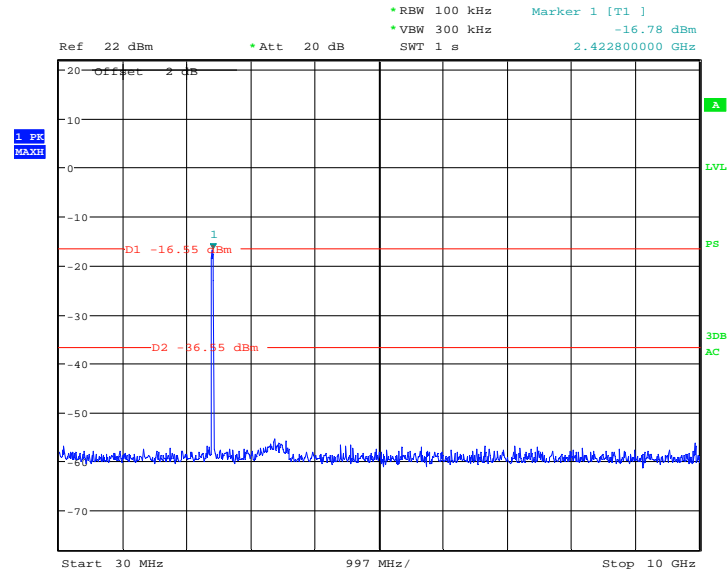
Test mode:	802.11n(H20)	Test channel:	Middle
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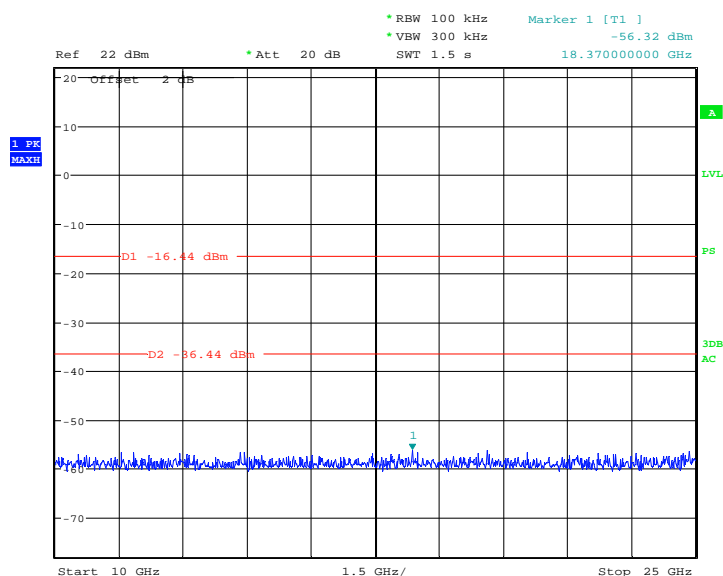
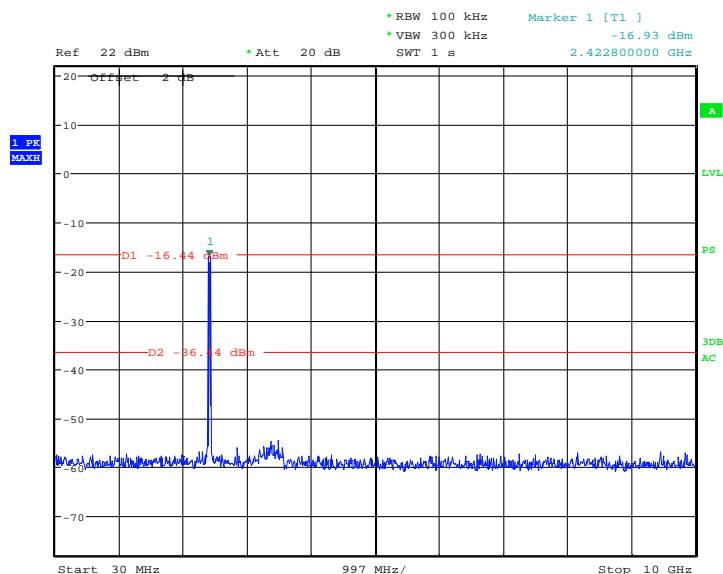
Test mode:	802.11n(H20)	Test channel:	Highest
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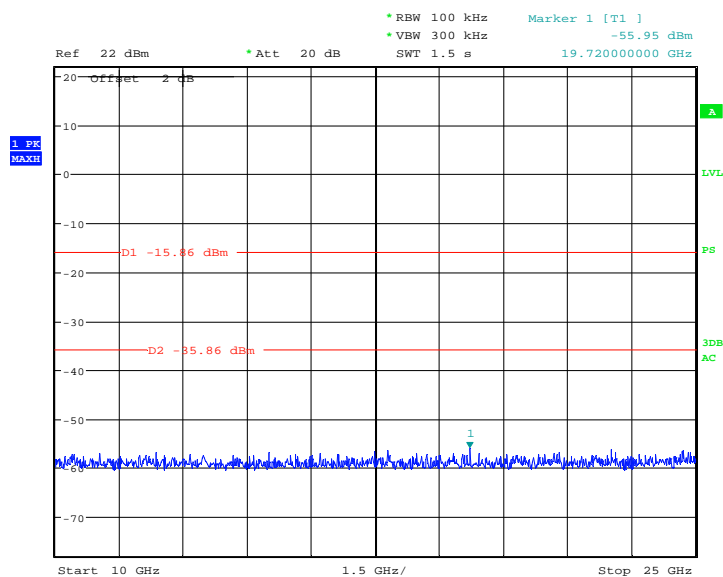
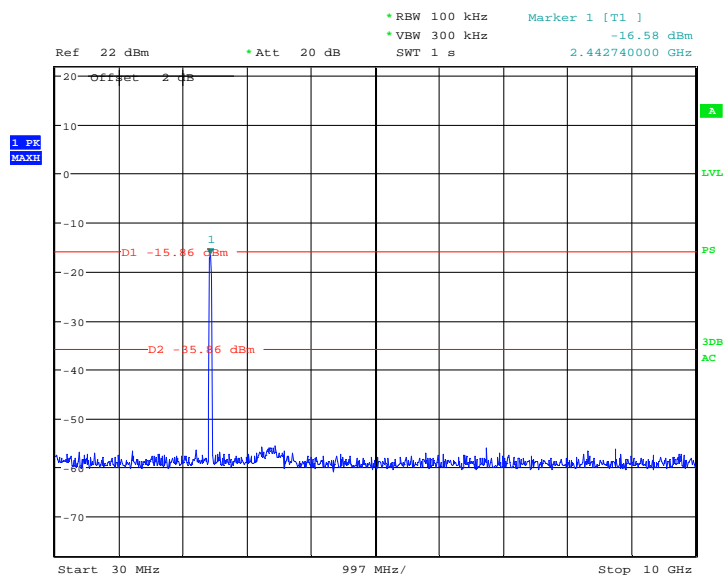
Test mode:	802.11n(H40)	Test channel:	Lowest
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Test mode:	802.11n(H40)	Test channel:	Middle
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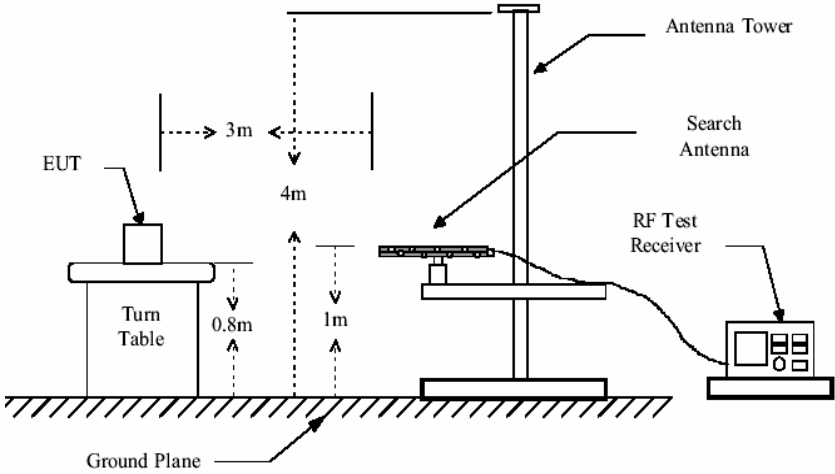
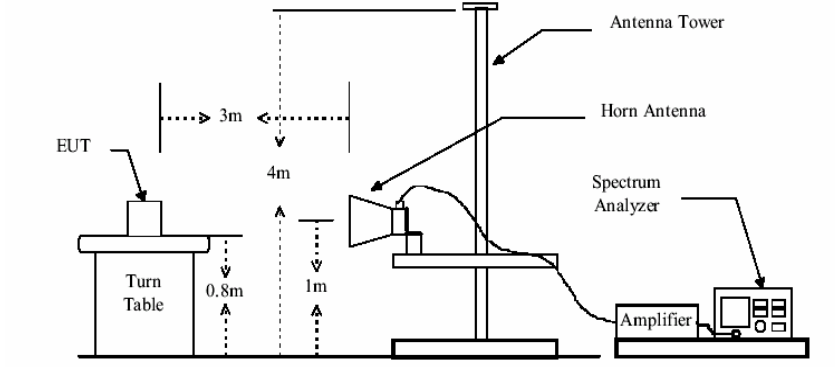


Test mode:	802.11n(H40)	Test channel:	Highest
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6.7.2 Radiated Emission Method

Test Requirement:	FCC Part15 C Section 15.209 and 15.205				
Test Method:	ANSI C63.4:2003				
Test Frequency Range:	30MHz to 25GHz				
Test site:	Measurement Distance: 3m (Semi-Anechoic Chamber)				
Receiver setup:	Frequency 30MHz-1GHz Above 1GHz	Detector Quasi-peak Peak Peak	RBW 100kHz 1MHz 1MHz	VBW 300kHz 3MHz 10Hz	Remark Quasi-peak Value Peak Value Average Value
Limit:	Frequency 30MHz-88MHz 88MHz-216MHz 216MHz-960MHz 960MHz-1GHz Above 1GHz	Limit (dBuV/m @3m) 40.0 43.5 46.0 54.0 54.0 74.0		Remark Quasi-peak Value Quasi-peak Value Quasi-peak Value Quasi-peak Value Average Value Peak Value	
Test Procedure:	<p>g. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation.</p> <p>h. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.</p> <p>i. 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.</p> <p>j. 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 and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.</p> <p>k. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</p> <p>l. 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.</p>				

<p>Test setup:</p>	<p>Below 1GHz</p>  <p>Above 1GHz</p> 
<p>Test Instruments:</p>	<p>Refer to section 5.7 for details</p>
<p>Test mode:</p>	<p>Refer to section 5.3 for details</p>
<p>Test results:</p>	<p>Passed</p>

Note:

The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

$$\text{Final Test Level} = \text{Receiver Reading} + \text{Antenna Factor} + \text{Cable Factor} - \text{Preamplifier Factor}$$

Below 1GHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
51.48	48.20	16.07	0.68	32.01	32.94	40.00	-7.06	Vertical
86.81	46.75	12.82	1.03	31.77	28.83	40.00	-11.17	Vertical
199.99	55.59	10.17	1.78	32.27	35.27	43.50	-8.23	Vertical
360.45	48.58	13.00	2.19	32.31	31.46	46.00	-14.54	Vertical
600.02	50.79	19.43	2.69	31.29	41.62	46.00	-4.38	Vertical
881.41	43.62	24.14	3.29	31.47	39.58	46.00	-6.42	Vertical
79.80	45.10	9.73	0.96	31.81	23.98	40.00	-16.02	Horizontal
119.86	49.77	10.76	1.32	31.81	30.04	43.50	-13.46	Horizontal
280.02	56.00	12.49	2.03	32.29	38.23	46.00	-7.77	Horizontal
443.29	47.43	18.60	2.33	32.00	36.36	46.00	-9.64	Horizontal
600.03	53.21	19.38	2.69	31.29	43.99	46.00	-2.01	Horizontal
842.13	45.50	24.46	3.22	31.48	41.70	46.00	-4.30	Horizontal

Above 1GHz

Test mode:		802.11b		Test channel:		Lowest		Remark:		Peak	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization			
1384	39.60	25.63	2.43	21.35	46.31	74	-27.69	Vertical			
4824	36.63	31.79	5.34	24.07	49.69	74	-24.31	Vertical			
7236	34.04	36.19	6.88	26.44	50.67	74	-23.33	Vertical			
9648	32.21	38.07	8.96	25.36	53.88	74	-20.12	Vertical			
12060	30.57	39.05	10.35	25.15	54.82	74	-19.18	Vertical			
1384	43.46	25.63	2.43	21.35	50.17	74	-23.83	Horizontal			
4824	40.33	31.79	5.34	24.07	53.39	74	-20.61	Horizontal			
7236	34.42	36.19	6.88	26.44	51.05	74	-22.95	Horizontal			
9648	33.34	38.07	8.96	25.36	55.01	74	-18.99	Horizontal			
12060	31.26	39.05	10.35	25.15	55.51	74	-18.49	Horizontal			

Test mode:		802.11b		Test channel:		Lowest		Remark:		Average	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization			
1384	23.14	25.63	2.43	21.35	29.85	54	-24.15	Vertical			
4824	20.39	31.79	5.34	24.07	33.45	54	-20.55	Vertical			
7236	18.04	36.19	6.88	26.44	34.67	54	-19.33	Vertical			
9648	15.69	38.07	8.96	25.36	37.36	54	-16.64	Vertical			
12060	17.22	39.05	10.35	25.15	41.47	54	-12.53	Vertical			
1384	25.43	25.63	2.43	21.35	32.14	54	-21.86	Horizontal			
4824	20.55	31.79	5.34	24.07	33.61	54	-20.39	Horizontal			
7236	18.42	36.19	6.88	26.44	35.05	54	-18.95	Horizontal			
9648	16.82	38.07	8.96	25.36	38.49	54	-15.51	Horizontal			
12060	17.91	39.05	10.35	25.15	42.16	54	-11.84	Horizontal			

Test mode:		802.11b		Test channel:		Middle		Remark:		Peak	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization			
1754	49.46	25.09	2.61	28.59	48.57	74	-25.43	Vertical			
4874	40.02	31.85	5.4	24.01	53.26	74	-20.74	Vertical			
7311	36.04	36.37	6.9	26.58	52.73	74	-21.27	Vertical			
9688	29.37	38.13	8.98	25.34	51.14	74	-22.86	Vertical			
12185	31.74	38.92	10.38	25.04	56	74	-18	Vertical			
1754	51.1	25.09	2.61	28.59	50.21	74	-23.79	Horizontal			
4874	40.54	31.85	5.4	24.01	53.78	74	-20.22	Horizontal			
7311	36.35	36.37	6.9	26.58	53.04	74	-20.96	Horizontal			
9688	31.13	38.13	8.98	25.34	52.9	74	-21.1	Horizontal			
12185	30.97	38.92	10.38	25.04	55.23	74	-18.77	Horizontal			

Remark:

1. Final Test Level = Receiver Reading + Antenna Factor + Cable Factor – Preamplifier Factor
2. The emission levels of above 5th harmonic frequency are very lower than the limit and not show in test report.

Test mode:		802.11b		Test channel:		Middle		Remark:		Average	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization			
1754	32.14	25.09	2.61	28.59	31.25	54	-22.75	Vertical			
4874	22.32	31.85	5.4	24.01	35.56	54	-18.44	Vertical			
7311	19.73	36.37	6.9	26.58	36.42	54	-17.58	Vertical			
9688	15.35	38.13	8.98	25.34	37.12	54	-16.88	Vertical			
12185	17.08	38.92	10.38	25.04	41.34	54	-12.66	Vertical			
1754	30.63	25.09	2.61	28.59	29.74	54	-24.26	Horizontal			
4874	21.31	31.85	5.4	24.01	34.55	54	-19.45	Horizontal			
7311	20.05	36.37	6.9	26.58	36.74	54	-17.26	Horizontal			
9688	16.45	38.13	8.98	25.34	38.22	54	-15.78	Horizontal			
12185	16.97	38.92	10.38	25.04	41.23	54	-12.77	Horizontal			

Test mode:		802.11b		Test channel:		Highest		Remark:		Peak	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization			
1648	45.72	24.87	2.55	27.09	46.05	74	-27.95	Vertical			
4924	39.91	31.89	5.46	23.96	53.3	74	-20.7	Vertical			
7386	31.54	36.49	6.93	26.79	48.17	74	-25.83	Vertical			
12310	28.85	38.83	10.41	24.9	53.19	74	-20.81	Vertical			
14772	24.71	41.82	12.18	24.52	54.19	74	-19.81	Vertical			
1648	46.01	24.87	2.55	27.09	46.34	74	-27.66	Horizontal			
4924	40.83	31.89	5.46	23.96	54.22	74	-19.78	Horizontal			
7386	32.12	36.49	6.93	26.79	48.75	74	-25.25	Horizontal			
12310	29.92	38.83	10.41	24.9	54.26	74	-19.74	Horizontal			
14772	25.73	41.82	12.18	24.52	55.21	74	-18.79	Horizontal			

Test mode:		802.11b		Test channel:		Highest		Remark:		Average	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preampl Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization			
1648	28.13	24.87	2.55	27.09	28.46	54	-25.54	Vertical			
4924	21.54	31.89	5.46	23.96	34.93	54	-19.07	Vertical			
7386	19.42	36.49	6.93	26.79	36.05	54	-17.95	Vertical			
12310	16.84	38.83	10.41	24.9	41.18	54	-12.82	Vertical			
14772	13.95	41.82	12.18	24.52	43.43	54	-10.57	Vertical			
1648	28.42	24.87	2.55	27.09	28.75	54	-25.25	Horizontal			
4924	21.09	31.89	5.46	23.96	34.48	54	-19.52	Horizontal			
7386	20	36.49	6.93	26.79	36.63	54	-17.37	Horizontal			
12310	17.91	38.83	10.41	24.9	42.25	54	-11.75	Horizontal			
14772	13.97	41.82	12.18	24.52	43.45	54	-10.55	Horizontal			

Remark:

1. Final Test Level = Receiver Reading + Antenna Factor + Cable Factor – Preamplifier Factor
2. The emission levels of above 5th harmonic frequency are very lower than the limit and not show in test report.

Test mode:		802.11g		Test channel:		Lowest		Remark:		Peak	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization			
1384	36.12	25.63	2.43	21.35	42.83	74	-31.17	Vertical			
4824	34.96	31.79	5.34	24.07	48.02	74	-25.98	Vertical			
7236	32.28	36.19	6.88	26.44	48.91	74	-25.09	Vertical			
9648	30.38	38.07	8.96	25.36	52.05	74	-21.95	Vertical			
12060	28.67	39.05	10.35	25.15	52.92	74	-21.08	Vertical			
1384	41.57	25.63	2.43	21.35	48.28	74	-25.72	Horizontal			
4824	40.42	31.79	5.34	24.07	53.48	74	-20.52	Horizontal			
7236	32.94	36.19	6.88	26.44	49.57	74	-24.43	Horizontal			
9648	31.51	38.07	8.96	25.36	53.18	74	-20.82	Horizontal			
12060	29.73	39.05	10.35	25.15	53.98	74	-20.02	Horizontal			

Test mode:		802.11g		Test channel:		Lowest		Remark:		Average	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization			
1384	24.8	25.63	2.43	21.35	31.51	54	-22.49	Vertical			
4824	21.28	31.79	5.34	24.07	34.34	54	-19.66	Vertical			
7236	19.34	36.19	6.88	26.44	35.97	54	-18.03	Vertical			
9648	17.4	38.07	8.96	25.36	39.07	54	-14.93	Vertical			
12060	19.34	39.05	10.35	25.15	43.59	54	-10.41	Vertical			
1384	25.6	25.63	2.43	21.35	32.31	54	-21.69	Horizontal			
4824	25.9	31.79	5.34	24.07	38.96	54	-15.04	Horizontal			
7236	20.71	36.19	6.88	26.44	37.34	54	-16.66	Horizontal			
9648	19.33	38.07	8.96	25.36	41	54	-13	Horizontal			
12060	19.29	39.05	10.35	25.15	43.54	54	-10.46	Horizontal			

Test mode:		802.11g		Test channel:		Middle		Remark:		Peak	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization			
1754	45.29	25.09	2.61	28.59	44.4	74	-29.6	Vertical			
4874	36.84	31.85	5.4	24.01	50.08	74	-23.92	Vertical			
7311	32.32	36.37	6.9	26.58	49.01	74	-24.99	Vertical			
9688	27.12	38.13	8.98	25.34	48.89	74	-25.11	Vertical			
12185	28.79	38.92	10.38	25.04	53.05	74	-20.95	Vertical			
1754	43.88	25.09	2.61	28.59	42.99	74	-31.01	Horizontal			
4874	40.7	31.85	5.4	24.01	53.94	74	-20.06	Horizontal			
7311	32.54	36.37	6.9	26.58	49.23	74	-24.77	Horizontal			
9688	28.02	38.13	8.98	25.34	49.79	74	-24.21	Horizontal			
12185	28.38	38.92	10.38	25.04	52.64	74	-21.36	Horizontal			

Remark:

1. Final Test Level = Receiver Reading + Antenna Factor + Cable Factor – Preamplifier Factor
2. The emission levels of above 5th harmonic frequency are very lower than the limit and not show in test report.

Test mode:		802.11g		Test channel:		Middle		Remark:		Average	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization			
1754	32.81	25.09	2.61	28.59	31.92	54	-22.08	Vertical			
4874	23.52	31.85	5.4	24.01	36.76	54	-17.24	Vertical			
7311	21.46	36.37	6.9	26.58	38.15	54	-15.85	Vertical			
9688	17.61	38.13	8.98	25.34	39.38	54	-14.62	Vertical			
12185	19.87	38.92	10.38	25.04	44.13	54	-9.87	Vertical			
1754	31.18	25.09	2.61	28.59	30.29	54	-23.71	Horizontal			
4874	23.77	31.85	5.4	24.01	37.01	54	-16.99	Horizontal			
7311	21.24	36.37	6.9	26.58	37.93	54	-16.07	Horizontal			
9688	17.96	38.13	8.98	25.34	39.73	54	-14.27	Horizontal			
12185	18.8	38.92	10.38	25.04	43.06	54	-10.94	Horizontal			

Test mode:		802.11g		Test channel:		Highest		Remark:		Peak	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization			
1648	45.41	24.87	2.55	27.09	45.74	74	-28.26	Vertical			
4924	32.61	31.89	5.46	23.96	46	74	-28	Vertical			
7386	30.43	36.49	6.93	26.79	47.06	74	-26.94	Vertical			
12310	27.79	38.83	10.41	24.9	52.13	74	-21.87	Vertical			
14772	23.7	41.82	12.18	24.52	53.18	74	-20.82	Vertical			
1648	44.32	24.87	2.55	27.09	44.65	74	-29.35	Horizontal			
4924	39.96	31.89	5.46	23.96	53.35	74	-20.65	Horizontal			
7386	30.91	36.49	6.93	26.79	47.54	74	-26.46	Horizontal			
12310	28.66	38.83	10.41	24.9	53	74	-21	Horizontal			
14772	24.42	41.82	12.18	24.52	53.9	74	-20.1	Horizontal			

Test mode:		802.11g		Test channel:		Highest		Remark:		Average	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization			
1648	29.24	24.87	2.55	27.09	29.57	54	-24.43	Vertical			
4924	23.58	31.89	5.46	23.96	36.97	54	-17.03	Vertical			
7386	21.77	36.49	6.93	26.79	38.4	54	-15.6	Vertical			
12310	19.5	38.83	10.41	24.9	43.84	54	-10.16	Vertical			
14772	16.92	41.82	12.18	24.52	46.4	54	-7.6	Vertical			
1648	28.37	24.87	2.55	27.09	28.7	54	-25.3	Horizontal			
4924	24.64	31.89	5.46	23.96	38.03	54	-15.97	Horizontal			
7386	21.47	36.49	6.93	26.79	38.1	54	-15.9	Horizontal			
12310	19.76	38.83	10.41	24.9	44.1	54	-9.9	Horizontal			
14772	15.2	41.82	12.18	24.52	44.68	54	-9.32	Horizontal			

Remark:

1. Final Test Level = Receiver Reading + Antenna Factor + Cable Factor – Preamplifier Factor
2. The emission levels of above 5th harmonic frequency are very lower than the limit and not show in test report.

Test mode:		802.11n(H20)		Test channel:		Lowest		Remark:		Peak	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization			
1384	42.61	25.63	2.43	21.35	49.32	74	-24.68	Vertical			
4824	40.69	31.79	5.34	24.07	53.75	74	-20.25	Vertical			
7236	38.16	36.19	6.88	26.44	54.79	74	-19.21	Vertical			
9648	32.43	38.07	8.96	25.36	54.1	74	-19.9	Vertical			
12060	30.59	39.05	10.35	25.15	54.84	74	-19.16	Vertical			
1384	41.65	25.63	2.43	21.35	48.36	74	-25.64	Horizontal			
4824	40.86	31.79	5.34	24.07	53.92	74	-20.08	Horizontal			
7236	33.34	36.19	6.88	26.44	49.97	74	-24.03	Horizontal			
9648	31.99	38.07	8.96	25.36	53.66	74	-20.34	Horizontal			
12060	30.29	39.05	10.35	25.15	54.54	74	-19.46	Horizontal			

Test mode:		802.11n(H20)		Test channel:		Lowest		Remark:		Average	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preampl Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization			
1384	32.81	25.63	2.43	21.35	39.52	54	-14.48	Vertical			
4824	27.26	31.79	5.34	24.07	40.32	54	-13.68	Vertical			
7236	22.96	36.19	6.88	26.44	39.59	54	-14.41	Vertical			
9648	21.97	38.07	8.96	25.36	43.64	54	-10.36	Vertical			
12060	21.09	39.05	10.35	25.15	45.34	54	-8.66	Vertical			
1384	29.34	25.63	2.43	21.35	36.05	54	-17.95	Horizontal			
4824	24.99	31.79	5.34	24.07	38.05	54	-15.95	Horizontal			
7236	26.45	36.19	6.88	26.44	43.08	54	-10.92	Horizontal			
9648	21.72	38.07	8.96	25.36	43.39	54	-10.61	Horizontal			
12060	19.92	39.05	10.35	25.15	44.17	54	-9.83	Horizontal			

Test mode:		802.11n(H20)		Test channel:		Middle		Remark:		Peak	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preampl Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization			
1754	47.41	25.09	2.61	28.59	46.52	74	-27.48	Vertical			
4874	40.19	31.85	5.4	24.01	53.43	74	-20.57	Vertical			
7311	36.53	36.37	6.9	26.58	53.22	74	-20.78	Vertical			
9688	29.84	38.13	8.98	25.34	51.61	74	-22.39	Vertical			
12185	26.79	38.92	10.38	25.04	51.05	74	-22.95	Vertical			
1754	46.45	25.09	2.61	28.59	45.56	74	-28.44	Horizontal			
4874	36.5	31.85	5.4	24.01	49.74	74	-24.26	Horizontal			
7311	32.27	36.37	6.9	26.58	48.96	74	-25.04	Horizontal			
9688	27.83	38.13	8.98	25.34	49.6	74	-24.4	Horizontal			
12185	28.27	38.92	10.38	25.04	52.53	74	-21.47	Horizontal			

Remark:

1. Final Test Level = Receiver Reading + Antenna Factor + Cable Factor – Preamplifier Factor
2. The emission levels of above 5th harmonic frequency are very lower than the limit and not show in test report.

Test mode:		802.11n(H20)		Test channel:		Middle		Remark:		Average	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization			
1754	33.15	25.09	2.61	28.59	32.26	54	-21.74	Vertical			
4874	22.19	31.85	5.4	24.01	35.43	54	-18.57	Vertical			
7311	23.69	36.37	6.9	26.58	40.38	54	-13.62	Vertical			
9688	19.46	38.13	8.98	25.34	41.23	54	-12.77	Vertical			
12185	20.76	38.92	10.38	25.04	45.02	54	-8.98	Vertical			
1754	31.08	25.09	2.61	28.59	30.19	54	-23.81	Horizontal			
4874	20.66	31.85	5.4	24.01	33.9	54	-20.1	Horizontal			
7311	29.12	36.37	6.9	26.58	45.81	54	-8.19	Horizontal			
9688	20.56	38.13	8.98	25.34	42.33	54	-11.67	Horizontal			
12185	17.54	38.92	10.38	25.04	41.8	54	-12.2	Horizontal			

Test mode:		802.11n(H20)		Test channel:		Highest		Remark:		Peak	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization			
1648	46.35	24.87	2.55	27.09	46.68	74	-27.32	Vertical			
4924	38.06	31.89	5.46	23.96	51.45	74	-22.55	Vertical			
7386	37.4	36.49	6.93	26.79	54.03	74	-19.97	Vertical			
12310	30.08	38.83	10.41	24.9	54.42	74	-19.58	Vertical			
14772	27.41	41.82	12.18	24.52	56.89	74	-17.11	Vertical			
1648	48	24.87	2.55	27.09	48.33	74	-25.67	Horizontal			
4924	40.16	31.89	5.46	23.96	53.55	74	-20.45	Horizontal			
7386	31.03	36.49	6.93	26.79	47.66	74	-26.34	Horizontal			
12310	28.81	38.83	10.41	24.9	53.15	74	-20.85	Horizontal			
14772	24.6	41.82	12.18	24.52	54.08	74	-19.92	Horizontal			

Test mode:		802.11n(H20)		Test channel:		Highest		Remark:		Average	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization			
1648	35.35	24.87	2.55	27.09	35.68	54	-18.32	Vertical			
4924	21.65	31.89	5.46	23.96	35.04	54	-18.96	Vertical			
7386	24.63	36.49	6.93	26.79	41.26	54	-12.74	Vertical			
12310	21.68	38.83	10.41	24.9	46.02	54	-7.98	Vertical			
14772	16.38	41.82	12.18	24.52	45.86	54	-8.14	Vertical			
1648	32.62	24.87	2.55	27.09	32.95	54	-21.05	Horizontal			
4924	26.05	31.89	5.46	23.96	39.44	54	-14.56	Horizontal			
7386	29.47	36.49	6.93	26.79	46.1	54	-7.9	Horizontal			
12310	22.18	38.83	10.41	24.9	46.52	54	-7.48	Horizontal			
14772	17	41.82	12.18	24.52	46.48	54	-7.52	Horizontal			

Remark:

1. Final Test Level = Receiver Reading + Antenna Factor + Cable Factor – Preamplifier Factor
2. The emission levels of above 5th harmonic frequency are very lower than the limit and not show in test report.

Test mode:		802.11n(H40)		Test channel:		Lowest		Remark:		Peak	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization			
1725	48.5	25.02	2.59	28.36	47.75	74	-26.25	Vertical			
4844	35.2	31.82	5.36	24.05	48.33	74	-25.67	Vertical			
7266	31.07	36.28	6.89	26.51	47.73	74	-26.27	Vertical			
12110	28.07	38.98	10.37	25.11	52.31	74	-21.69	Vertical			
14532	25.71	42.55	11.78	24.38	55.66	74	-18.34	Vertical			
1725	50.95	25.02	2.59	28.36	50.2	74	-23.8	Horizontal			
4844	36.03	31.82	5.36	24.05	49.16	74	-24.84	Horizontal			
7266	31.73	36.28	6.89	26.51	48.39	74	-25.61	Horizontal			
12110	29.2	38.98	10.37	25.11	53.44	74	-20.56	Horizontal			
14532	26.77	42.55	11.78	24.38	56.72	74	-17.28	Horizontal			

Test mode:		802.11n(H40)		Test channel:		Lowest		Remark:		Average	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preampl Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization			
1725	35.38	25.02	2.59	28.36	34.63	54	-19.37	Vertical			
4844	24.47	31.82	5.36	24.05	37.6	54	-16.4	Vertical			
7266	23.41	36.28	6.89	26.51	40.07	54	-13.93	Vertical			
12110	20.1	38.98	10.37	25.11	44.34	54	-9.66	Vertical			
14532	16.34	42.55	11.78	24.38	46.29	54	-7.71	Vertical			
1725	33.18	25.02	2.59	28.36	32.43	54	-21.57	Horizontal			
4844	23.53	31.82	5.36	24.05	36.66	54	-17.34	Horizontal			
7266	23.38	36.28	6.89	26.51	40.04	54	-13.96	Horizontal			
12110	20.53	38.98	10.37	25.11	44.77	54	-9.23	Horizontal			
14532	15.69	42.55	11.78	24.38	45.64	54	-8.36	Horizontal			

Test mode:		802.11n(H40)		Test channel:		Middle		Remark:		Peak	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preampl Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization			
1754	50.65	25.09	2.61	28.59	49.76	74	-24.24	Vertical			
4874	39.69	31.85	5.4	24.01	52.93	74	-21.07	Vertical			
7311	34.22	36.37	6.9	26.58	50.91	74	-23.09	Vertical			
9688	29.29	38.13	8.98	25.34	51.06	74	-22.94	Vertical			
12185	31.23	38.92	10.38	25.04	55.49	74	-18.51	Vertical			
1754	48.24	25.09	2.61	28.59	47.35	74	-26.65	Horizontal			
4874	40.76	31.85	5.4	24.01	54	74	-20	Horizontal			
7311	34.44	36.37	6.9	26.58	51.13	74	-22.87	Horizontal			
9688	30.19	38.13	8.98	25.34	51.96	74	-22.04	Horizontal			
12185	30.82	38.92	10.38	25.04	55.08	74	-18.92	Horizontal			

Remark:

1. Final Test Level = Receiver Reading + Antenna Factor + Cable Factor – Preamplifier Factor
2. The emission levels of above 5th harmonic frequency are very lower than the limit and not show in test report.

Test mode:		802.11n(H40)		Test channel:		Middle		Remark:		Average	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization			
1754	34.37	25.09	2.61	28.59	33.48	54	-20.52	Vertical			
4874	22.78	31.85	5.4	24.01	36.02	54	-17.98	Vertical			
7311	24.12	36.37	6.9	26.58	40.81	54	-13.19	Vertical			
9688	19.78	38.13	8.98	25.34	41.55	54	-12.45	Vertical			
12185	22.31	38.92	10.38	25.04	46.57	54	-7.43	Vertical			
1754	31.74	25.09	2.61	28.59	30.85	54	-23.15	Horizontal			
4874	21.5	31.85	5.4	24.01	34.74	54	-19.26	Horizontal			
7311	23.9	36.37	6.9	26.58	40.59	54	-13.41	Horizontal			
9688	20.13	38.13	8.98	25.34	41.9	54	-12.1	Horizontal			
12185	21.24	38.92	10.38	25.04	45.5	54	-8.5	Horizontal			

Test mode:		802.11n(H40)		Test channel:		Highest		Remark:		Peak	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization			
1954	49.48	25.95	2.74	30.69	47.48	74	-26.52	Vertical			
4904	42.53	31.88	5.42	23.97	55.86	74	-18.14	Vertical			
7356	33.45	36.45	6.92	26.7	50.12	74	-23.88	Vertical			
9748	31.04	38.27	9	25.3	53.01	74	-20.99	Vertical			
12260	29.81	38.86	10.4	24.97	54.1	74	-19.9	Vertical			
1954	50.76	25.95	2.74	30.69	48.76	74	-25.24	Horizontal			
4904	36.25	31.88	5.42	23.97	49.58	74	-24.42	Horizontal			
7356	34.14	36.45	6.92	26.7	50.81	74	-23.19	Horizontal			
9748	31.62	38.27	9	25.3	53.59	74	-20.41	Horizontal			
12260	30.32	38.86	10.4	24.97	54.61	74	-19.39	Horizontal			

Test mode:		802.11n(H40)		Test channel:		Highest		Remark:		Average	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization			
1954	36.34	25.95	2.74	30.69	34.34	54	-19.66	Vertical			
4904	27.37	31.88	5.42	23.97	40.7	54	-13.3	Vertical			
7356	24.61	36.45	6.92	26.7	41.28	54	-12.72	Vertical			
9748	22.42	38.27	9	25.3	44.39	54	-9.61	Vertical			
12260	21.41	38.86	10.4	24.97	45.7	54	-8.3	Vertical			
1954	32.16	25.95	2.74	30.69	30.16	54	-23.84	Horizontal			
4904	23.17	31.88	5.42	23.97	36.5	54	-17.5	Horizontal			
7356	24.7	36.45	6.92	26.7	41.37	54	-12.63	Horizontal			
9748	22.72	38.27	9	25.3	44.69	54	-9.31	Horizontal			
12260	21.96	38.86	10.4	24.97	46.25	54	-7.75	Horizontal			

Remark:

1. Final Test Level = Receiver Reading + Antenna Factor + Cable Factor – Preamplifier Factor
2. The emission levels of above 5th harmonic frequency are very lower than the limit and not show in test report.