TCT 通测检测 TESTING CENTRE TECHNOLOGY

TEST REPORT

FCC ID: 2AEHNA1048

Product: Tablet PC

Model No.: A1048

Additional Model No.: A7XX, A8XX, A9XX, A10XX, A11XX, A12XX, A13XX

Trade Mark: AZPEN

Report No.: TCT150401E007

Issued Date: May 22, 2015

Issued for:

Azpen Shenzhen MingTel Digital Technology CO., LTD.

2nd F, 9th Building, DeTai Industrial Park, Longhua District, Shenzhen, China

Issued By:

Shenzhen Tongce Testing Lab.

1F, Leinuo Watch Building, Fuyong Town, Baoan Dist, Shenzhen, China

TEL: +86-755-27673339

FAX: +86-755-27673332

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Hotline: 400-6611-140 Tel: 86-755-27673339 Fax: 86-755-27673332 http://www.tct-lab.com

1. Test Certification

Product:	Tablet PC
Model No.:	A1048
Additional Model No.:	A7XX, A8XX, A9XX, A10XX, A11XX, A12XX, A13XX
Applicant:	Azpen Shenzhen MingTel Digital Technology CO., LTD.
Address:	2nd F, 9th Building, DeTai Industrial Park, Longhua District, Shenzhen, China
Manufacturer:	Azpen Shenzhen MingTel Digital Technology CO., LTD.
Address:	2nd F, 9th Building, DeTai Industrial Park, Longhua District, Shenzhen, China
Date of Test:	Apr. 01- May 22, 2015
Applicable Standards:	FCC CFR Title 47 Part 15 Subpart C Section 15.247 KDB 558074 D01 DTS Meas Guidance v03r02

The above equipment has been tested by Shenzhen Tongce Testing Lab. and found compliance with the requirements set forth in the technical standards mentioned above. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Tested By:	Beryl Zhao	***Date:***	***May 22, 2015***
	Beryl Zhao		
Reviewed By:		***Date:***	***May 22, 2015***
	Joe Zhou		
Approved By:	Tomsin	***Date:***	***May 22, 2015***
	Tomsin		

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2. Test Result Summary

Requirement	CFR 47 Section	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 Emission Bandwidth	§15.247 (a)(2)	PASS
Power Spectral Density	§15.247 (e)	PASS
Band Edge	1§5.247(d)	PASS
Spurious Emission	§15.205/§15.209	PASS

Note:

1. Pass: Test item meets the requirement.

2. Fail: Test item does not meet the requirement.

3. N/A: Test case does not apply to the test object.

4. The test result judgment is decided by the limit of test standard.

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3. EUT Description

Product Name:	Tablet PC
Model :	A1048
Additional Model No.:	A7XX, A8XX, A9XX, A10XX, A11XX, A12XX, A13XX
Trade Mark:	AZPEN
Operation Frequency:	2412MHz~2462MHz (802.11b/802.11g/802.11n(H20)) 2422MHz~2452MHz (802.11n(H40))
Channel Separation:	5MHz
Number of Channel:	11 for 802.11b/802.11g/802.11n(H20) 7 for 802.11n(H40)
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 135Mbps
Antenna Type:	Internal Antenna
Antenna Gain:	2dBi
Power Supply:	Rechargeable Li-ion Battery DC3.7V/7000mA Adapter Information: Model: WTA0502000USB1, WTA0502000USB2, FYA05010US, SAPA05010EUU Input: AC 100~240V, 50/60Hz, 0.3A Output: DC 5V/2A
Remark:	1: A1048 is tested model, other models are derivative models, the models are identical in circuit and PCB layout, only different on the model names, So the test data of A1048 can represent the remaining models. 2: WTA0502000USB1 is tested adapter model, other adapter models are identical in circuit and PCB layout, only different on the model names.

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Operation Frequency each of channel For 802.11b/g/n(H20)

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		

Operation Frequency each of channel For 802.11n (H40)

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
--	--	4	2427MHz	7	2442MHz	--	--
--	--	5	2432MHz	8	2447MHz	--	--
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

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4. Genera Information

4.1. Test environment and mode

Operating Environment:	
Temperature:	24.0 °C
Humidity:	54 % RH
Atmospheric Pressure:	1010 mbar
Test Mode:	
Engineering mode:	Keep the EUT in continuous transmitting by select channel and modulations
The sample was placed 0.8m above the ground plane of 3m chamber. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating the turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case are shown in Test Results of the following pages.	

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)	13.5Mbps

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) and 13.5 Mbps for 802.11n(H40). Duty cycle setting during the transmission is 98.5% with maximum power setting for all modulations.

4.2. Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Equipment	Model No.	Serial No.	FCC ID	Trade Name
/	/	/	/	/

Note:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.

2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

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5. Facilities and Accreditations

5.1. Facilities

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

- FCC - Registration No.: 572331

  Shenzhen Tongce Testing Lab

  The 3m Semi-anechoic chamber has been registered and fully described in a report with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files.

- IC - Registration No.: 10668A-1

  The 3m Semi-anechoic chamber of Shenzhen TCT Testing Technology Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing

- CNAS - Registration No.: CNAS L6165

  Shenzhen TCT Testing Technology Co., Ltd. is accredited to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L6165.

5.2. Location

Shenzhen Tongce Testing Lab
Address: 1F, Leinuo Watch Building, Fuyong Town, Baoan Dist, Shenzhen, China
Tel: 86-755-36638142

5.3. Measurement Uncertainty

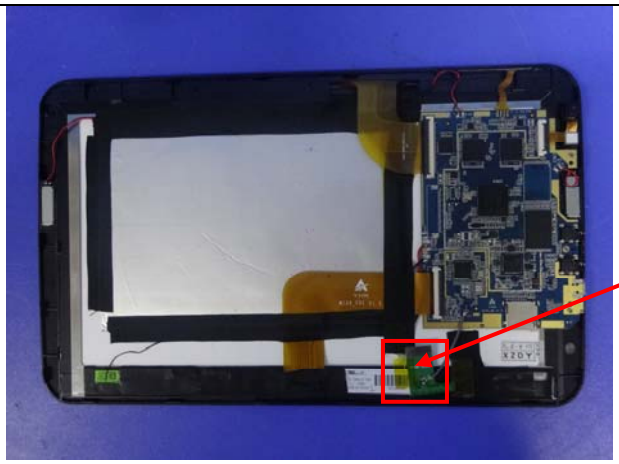
The reported uncertainty of measurement y ± U, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95 %.

No.	Item	MU
1	Conducted Emission	±2.56dB
2	RF power, conducted	±0.12dB
3	Spurious emissions, conducted	±0.11dB
4	All emissions, radiated(<1G)	±3.92dB
5	All emissions, radiated(>1G)	±4.28dB
6	Temperature	±0.1°C
7	Humidity	±1.0%

6. Test Results and Measurement Data

6.1. Antenna requirement

Standard requirement:	FCC Part15 C Section 15.203 /247(c)
15.203 requirement: 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. 15.247(c) (1)(i) requirement: (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.	
E.U.T Antenna:	
The WIFI antenna is an internal antenna which permanently attached, and the best case gain of the antenna is 2dBi.	



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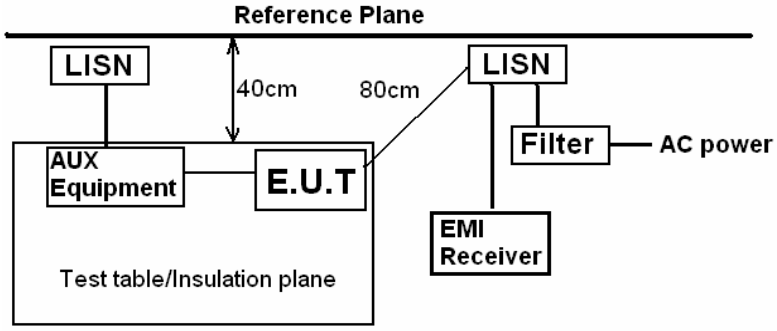
6.2. Conducted Emission

6.2.1. Test Specification

<table>
<tr><td>Test Requirement:</td><td>FCC Part15 C Section 15.207</td></tr>
<tr><td>Test Method:</td><td>ANSI C63.4:2009</td></tr>
<tr><td>Frequency Range:</td><td>150 kHz to 30 MHz</td></tr>
<tr><td>Receiver setup:</td><td>RBW=9 kHz, VBW=30 kHz, Sweep time=auto</td></tr>
<tr><td>Limits:</td><td>
<table>
<tr><td rowspan="2">Frequency range (MHz)</td><td colspan="2">Limit (dBuV)</td></tr>
<tr><td>Quasi-peak</td><td>Average</td></tr>
<tr><td>0.15-0.5</td><td>66 to 56*</td><td>56 to 46*</td></tr>
<tr><td>0.5-5</td><td>56</td><td>46</td></tr>
<tr><td>5-30</td><td>60</td><td>50</td></tr>
</table>
</td></tr>
<tr><td>Test Setup:</td><td> 

Remark:
E.U.T: Equipment Under Test
LISN: Line Impedence Stabilization Network
Test table height=0.8m</td></tr>
<tr><td>Test Mode:</td><td>Charging + Transmitting Mode</td></tr>
<tr><td>Test Procedure:</td><td>1. The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm/50uH coupling impedance for the measuring equipment.
2. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs).
3. 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: 2009 on conducted measurement.</td></tr>
<tr><td>Test Result:</td><td>PASS</td></tr>
</table>

6.2.2. Test Instruments

Conducted Emission Shielding Room Test Site (843)				
Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Due**
EMI Test Receiver	R&S	ESCS30	100139	Sep. 16, 2015
LISN	Schwarzbeck	NSLK 8126	8126453	Sep. 29, 2015
LISN	AFJ	LS16C	16010947251	Sep. 29, 2015
Coax cable	TCT	CE-05	N/A	Sep.15 , 2015
EMI Test Software	Shurple Technology	EZ-EMC	N/A	N/A

Note: *The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).*

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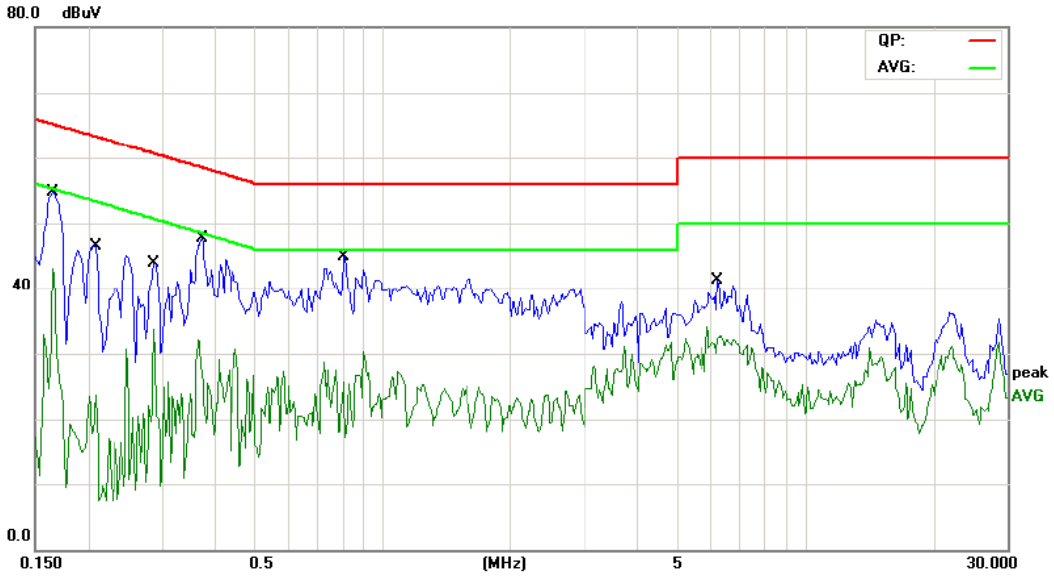
6.2.3. Test data

Please refer to following diagram for individual

Conducted Emission on Line Terminal of the power line (150 kHz to 30MHz)



Site Chamber #2 Phase: *L1* Temperature: 22 (C)

Limit: FCC PART 15 Conduction QP Power: AC 120V/60Hz Humidity: 54 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1655	38.83	11.49	50.32	65.18	-14.86	QP	
2		0.1655	21.71	11.49	33.20	55.18	-21.98	AVG	
3		0.2086	32.02	11.46	43.48	63.26	-19.78	QP	
4		0.2086	13.94	11.46	25.40	53.26	-27.86	AVG	
5		0.2867	29.12	11.42	40.54	60.62	-20.08	QP	
6		0.2867	12.30	11.42	23.72	50.62	-26.90	AVG	
7	*	0.3727	32.86	11.36	44.22	58.44	-14.22	QP	
8		0.3727	20.65	11.36	32.01	48.44	-16.43	AVG	
9		0.8023	27.12	11.20	38.32	56.00	-17.68	QP	
10		0.8023	11.41	11.20	22.61	46.00	-23.39	AVG	
11		6.2070	23.66	10.79	34.45	60.00	-25.55	QP	
12		6.2070	9.14	10.79	19.93	50.00	-30.07	AVG	

Note:

Freq. = Emission frequency in MHz

Reading level (dBμV) = Receiver reading

Corr. Factor (dB) = Antenna factor + Cable loss

Measurement (dBμV) = Reading level (dBμV) + Corr. Factor (dB)

Limit (dBμV) = Limit stated in standard

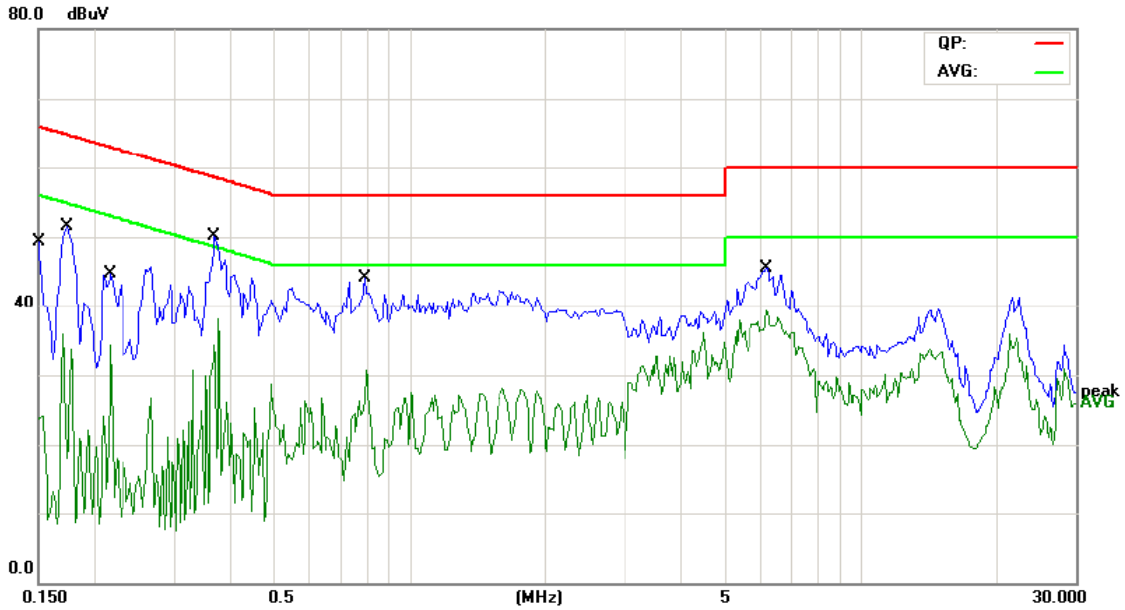
Margin (dB) = Measurement (dBμV) – Limits (dBμV)

Q.P. =Quasi-Peak

AVG =average

** is meaning the worst frequency has been tested in the frequency range 150 kHz to 30MHz.*

Conducted Emission on Neutral Terminal of the power line (150 kHz to 30MHz)



Site Chamber #2 Phase: *N* Temperature: 22 (C)

Limit: FCC PART 15 Conduction QP Power: AC 120V/60Hz Humidity: 54 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1500	23.75	11.52	35.27	65.99	-30.72	QP	
2		0.1500	7.81	11.52	19.33	55.99	-36.66	AVG	
3		0.1734	28.67	11.50	40.17	64.79	-24.62	QP	
4		0.1734	5.84	11.50	17.34	54.79	-37.45	AVG	
5		0.2164	18.66	11.47	30.13	62.95	-32.82	QP	
6		0.2164	10.16	11.47	21.63	52.95	-31.32	AVG	
7	*	0.3688	34.75	11.38	46.13	58.53	-12.40	QP	
8		0.3688	19.44	11.38	30.82	48.53	-17.71	AVG	
9		0.7945	24.72	11.20	35.92	56.00	-20.08	QP	
10		0.7945	9.45	11.20	20.65	46.00	-25.35	AVG	
11		6.2148	28.79	10.80	39.59	60.00	-20.41	QP	
12		6.2148	12.42	10.80	23.22	50.00	-26.78	AVG	

Note:

Freq. = Emission frequency in MHz

Reading level (dBμV) = Receiver reading

Corr. Factor (dB) = Antenna factor + Cable loss

Measurement (dBμV) = Reading level (dBμV) + Corr. Factor (dB)

Limit (dBμV) = Limit stated in standard

Margin (dB) = Measurement (dBμV) – Limits (dBμV)

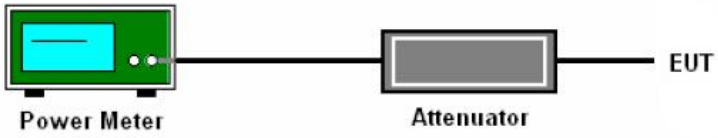
Q.P. =Quasi-Peak

AVG =average

** is meaning the worst frequency has been tested in the frequency range 150 kHz to 30MHz.*

6.3. Conducted Output Power

6.3.1. Test Specification

Test Requirement:	FCC Part15 C Section 15.247 (b)(3)
Test Method:	ANSI C63.4:2009 and KDB558074
Limit:	30dBm
Test Setup:	
Test Mode:	Reference to section 4.1 for details
Test Procedure:	1. The testing follows the Measurement Procedure of FCC KDB No. 558074 DTS D01 Meas. Guidance v03r02. 2. The RF output of EUT was connected to the power meter by RF cable and attenuator. The path loss was compensated to the results for each measurement. 3. Set to the maximum power setting and enable the EUT transmit continuously. 4. Measure the Maximum Peak conducted output power and record the results in the test report.
Test Result:	PASS

6.3.2. Test Instruments

Equipment	Manufacturer	Model	Serial Number	Calibration Due
Power Sensor	Anritsu	MA2411B	0917070	Sep. 16, 2015
Power Meter	Anritsu	E4416A	ML2495A	Sep.16, 2015

Note: *The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).*

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6.3.3. Test Data

802.11b mode			
Test channel	Maximum Peak Conducted Output Power (dBm)	Limit (dBm)	Result
Lowest	12.95	30.00	PASS
Middle	12.86	30.00	PASS
Highest	12.46	30.00	PASS

802.11g mode			
Test channel	Maximum Peak Conducted Output Power (dBm)	Limit (dBm)	Result
Lowest	9.57	30.00	PASS
Middle	10.02	30.00	PASS
Highest	10.68	30.00	PASS

802.11n(H20) mode			
Test channel	Maximum Peak Conducted Output Power (dBm)	Limit (dBm)	Result
Lowest	9.86	30.00	PASS
Middle	10.03	30.00	PASS
Highest	10.65	30.00	PASS

802.11n(H40) mode			
Test channel	Maximum Peak Conducted Output Power (dBm)	Limit (dBm)	Result
Lowest	9.24	30.00	PASS
Middle	9.35	30.00	PASS
Highest	10.21	30.00	PASS

802.11b mode			
Test channel	Maximum Conducted Output Power (dBm)	Limit (dBm)	Result
Lowest	12.39	30.00	PASS
Middle	12.22	30.00	PASS
Highest	12.28	30.00	PASS

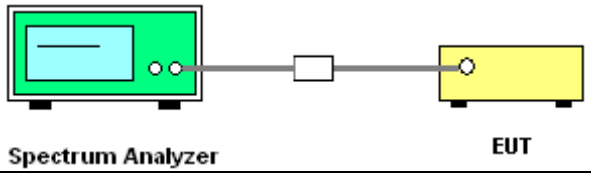
802.11g mode			
Test channel	Maximum Conducted Output Power (dBm)	Limit (dBm)	Result
Lowest	9.24	30.00	PASS
Middle	9.83	30.00	PASS
Highest	10.25	30.00	PASS

802.11n(H20) mode			
Test channel	Maximum Conducted Output Power (dBm)	Limit (dBm)	Result
Lowest	9.28	30.00	PASS
Middle	9.63	30.00	PASS
Highest	10.16	30.00	PASS

802.11n(H40) mode			
Test channel	Maximum Conducted Output Power (dBm)	Limit (dBm)	Result
Lowest	8.84	30.00	PASS
Middle	9.11	30.00	PASS
Highest	9.52	30.00	PASS

6.4. Emission Bandwidth

6.4.1. Test Specification

Test Requirement:	FCC Part15 C Section 15.247 (a)(2)
Test Method:	ANSI C63.4:2009 and KDB558074
Limit:	>500kHz
Test Setup:	
Test Mode:	Reference to section 4.1 for details
Test Procedure:	1. The testing follows FCC KDB Publication No. 558074 DTS D01 Meas. Guidance v03r02. 2. The testing follows FCC KDB Publication No. 558074 DTS D01 Meas. Guidance v03r02. 3. Set to the maximum power setting and enable the EUT transmit continuously. 4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. Set the Video bandwidth (VBW) = 300 kHz. In order to make an accurate measurement. The 6dB bandwidth must be greater than 500 kHz. 5. Measure and record the results in the test report.
Test Result:	PASS

6.4.2. Test Instruments

RF Test Room				
Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Due**
Spectrum Analyzer	R&S	FSU	200054	Sep. 15, 2015

Note: *The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).*

6.4.3. Test data

Test channel	6dB Emission Bandwidth (MHz)			
	802.11b	802.11g	802.11n(H20)	802.11n(H40)
Lowest	10.10	16.39	17.63	35.71
Middle	10.10	16.44	17.63	36.06
Highest	10.14	16.44	17.68	35.87
Limit:	>500k			
Test Result:	PASS			

Test plots as follows:

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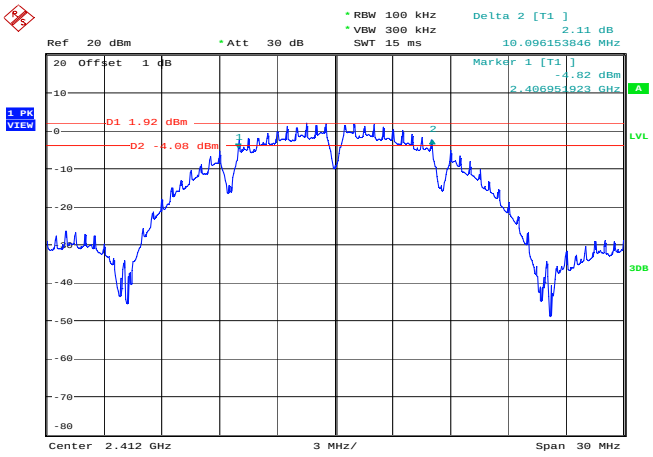
802.11b Modulation

Lowest channel



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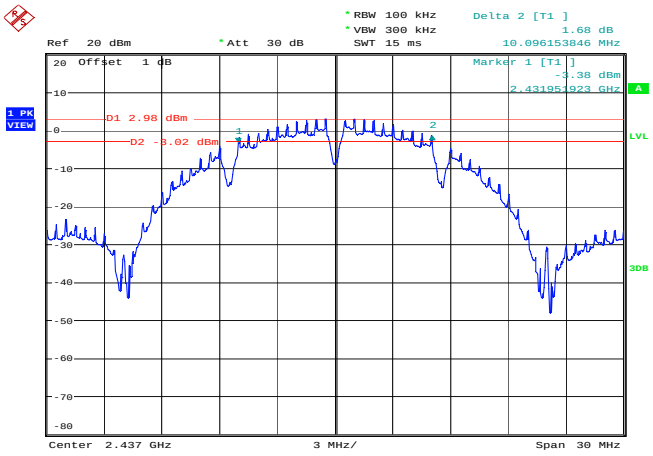
Middle channel



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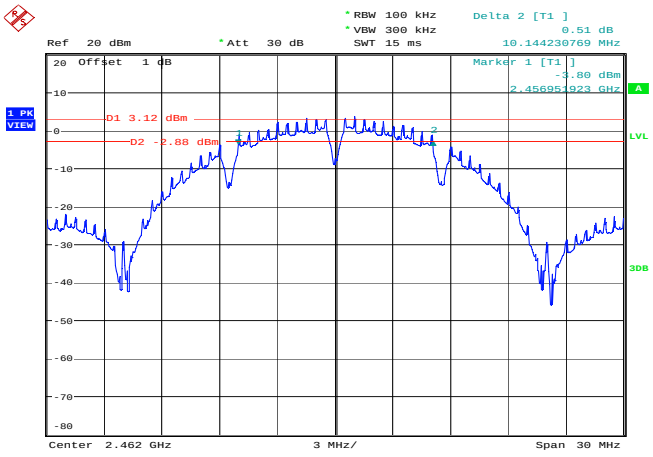
Highest channel



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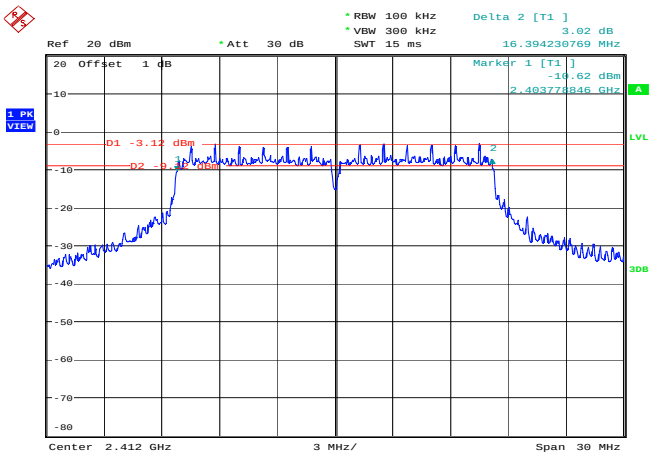
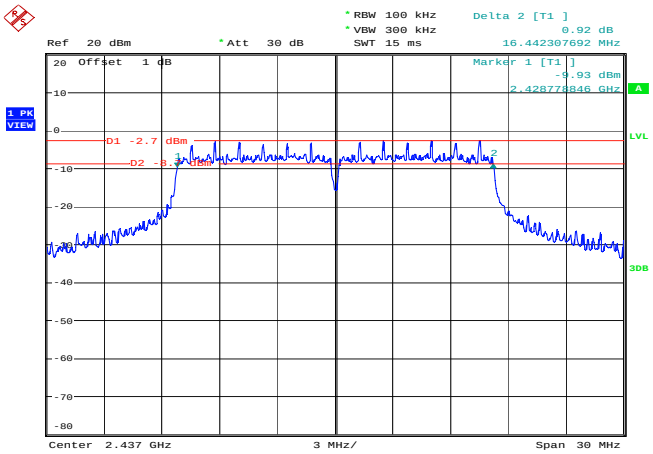
802.11g Modulation

Lowest channel



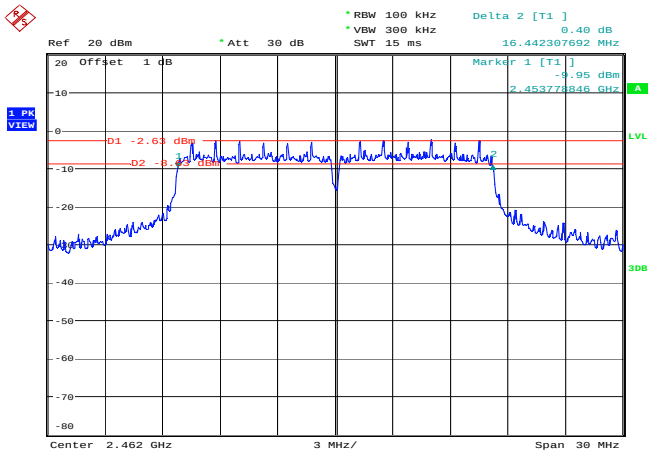
Date: 17.APR.2015 16:11:53

Middle channel



Date: 17.APR.2015 16:13:15

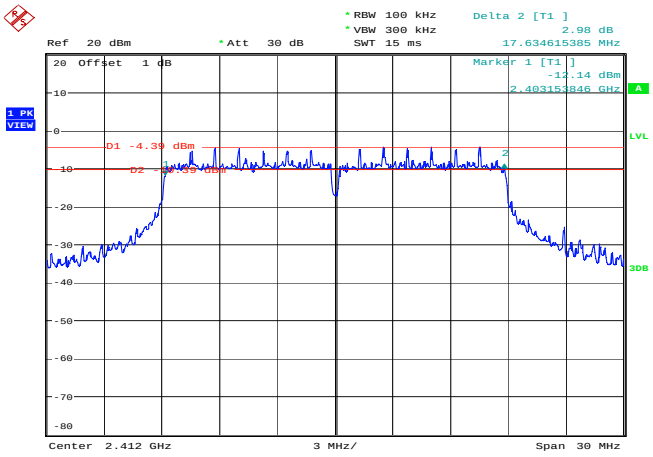
Highest channel



Date: 17.APR.2015 16:14:22

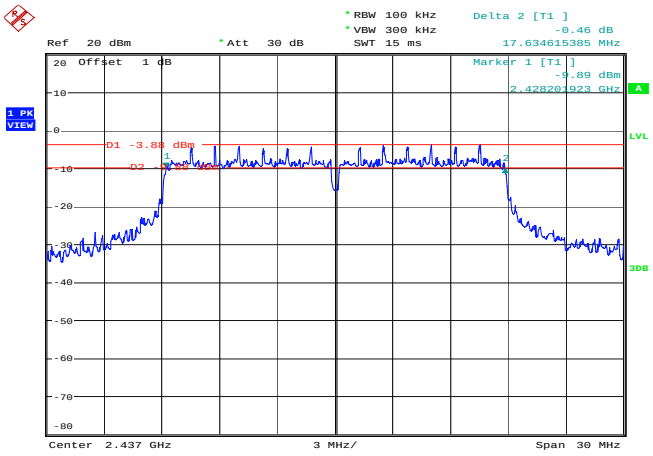
802.11n (HT20) Modulation

Lowest channel



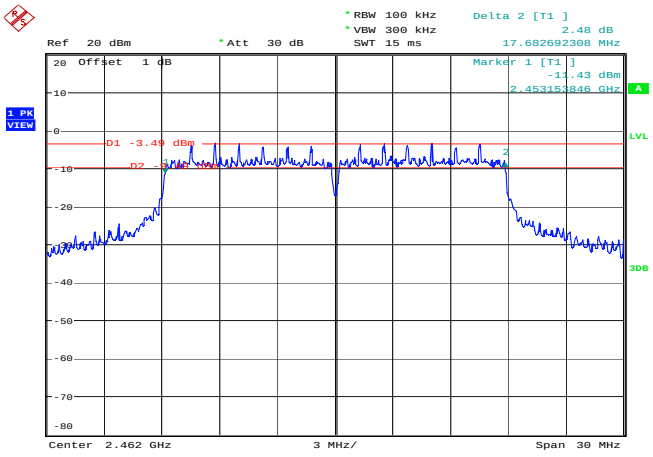
Date: 17.APR.2015 16:20:44

Middle channel



Date: 17.APR.2015 16:18:18

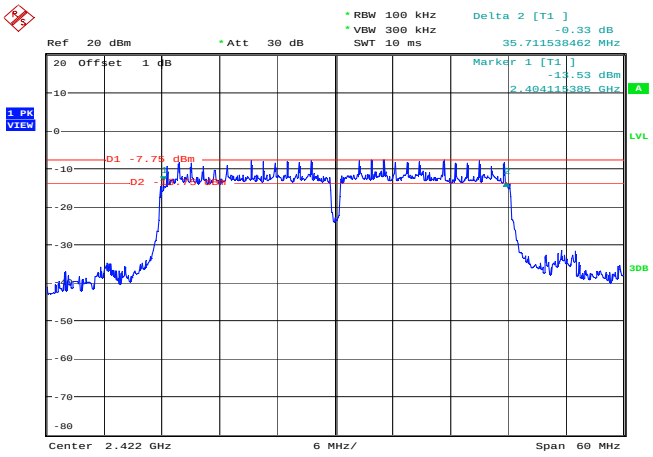
Highest channel



Date: 17.APR.2015 16:16:50

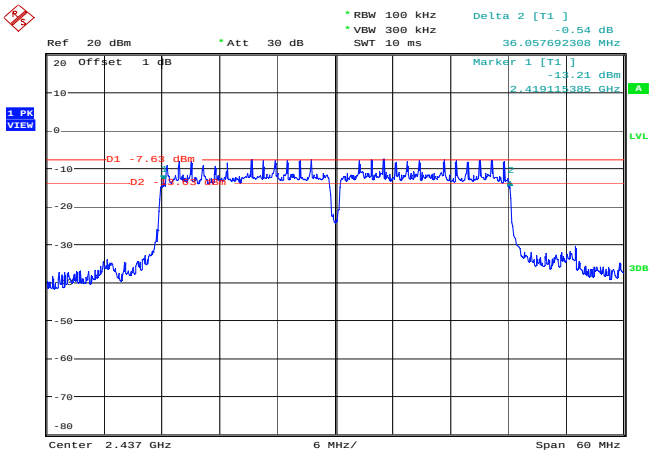
802.11n (HT40) Modulation

Lowest channel



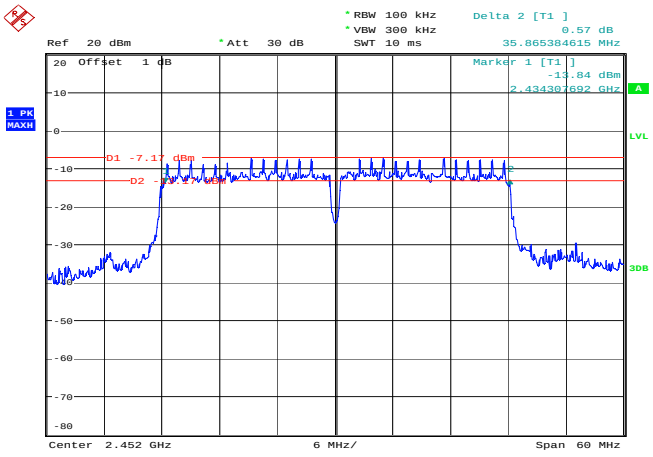
Date: 17.APR.2015 16:22:03

Middle channel



Date: 17.APR.2015 16:23:14

Highest channel



Date: 17.APR.2015 16:24:46

6.5. Power Spectral Density

6.6. Test Specification

Test Requirement:	FCC Part15 C Section 15.247 (e)
Test Method:	ANSI C63.4:2009 and KDB558074
Limit:	The peak power spectral density shall not be greater than 8dBm in any 3kHz band at any time interval of continuous transmission.
Test Setup:	
Test Mode:	Reference to section 4.1 for details
Test Procedure:	1. The testing follows Measurement Procedure 10.2 Method PKPSD of FCC KDB Publication No.558074 D01 DTS Meas. Guidance v03r02 2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement. 3. Set to the maximum power setting and enable the EUT transmit continuously. 4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 3 kHz. Video bandwidth VBW = 10 kHz In order to make an accurate measurement, set the span to 1.5 times DTS Channel Bandwidth. (6dB BW) 5. Detector = peak, Sweep time = auto couple, Trace mode = max hold, Allow trace to fully stabilize. Use the peak marker function to determine the maximum power level. 6. Measure and record the results in the test report.
Test Result:	PASS

6.6.1. Test Instruments

RF Test Room				
Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Due**
Spectrum Analyzer	R&S	FSU	200054	Sep. 15, 2015

Note: *The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).*

6.6.2. Test data

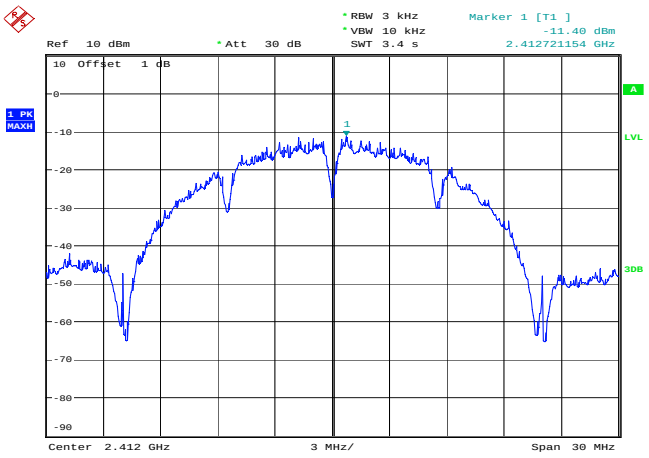
Test channel	Peak Power Spectral Density(dBm/3kHz)			
	802.11b	802.11g	802.11n(H20)	802.11n(H40)
Lowest	-11.40	-18.05	-18.39	-23.21
Middle	-11.15	-19.61	-18.76	-22.80
Highest	-13.30	-18.88	-17.66	-22.31
Limit:	8dBm/3kHz			
Test Result:	PASS			

Test plots as follows:

Hotline: 400-6611-140 Tel: 86-755-27673339 Fax: 86-755-27673332 http://www.tct-lab.com

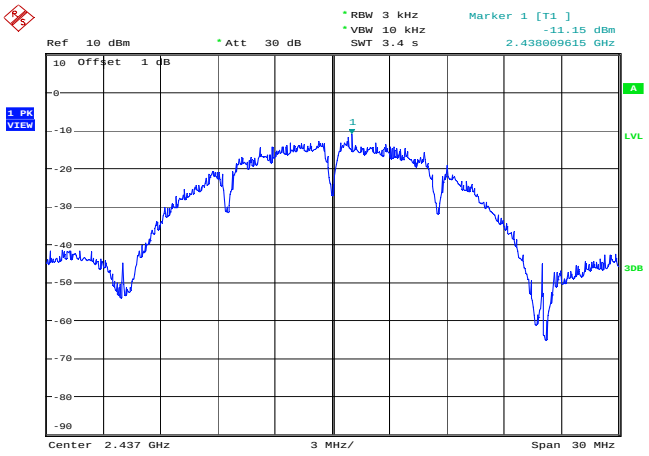
802.11b Modulation

Lowest channel



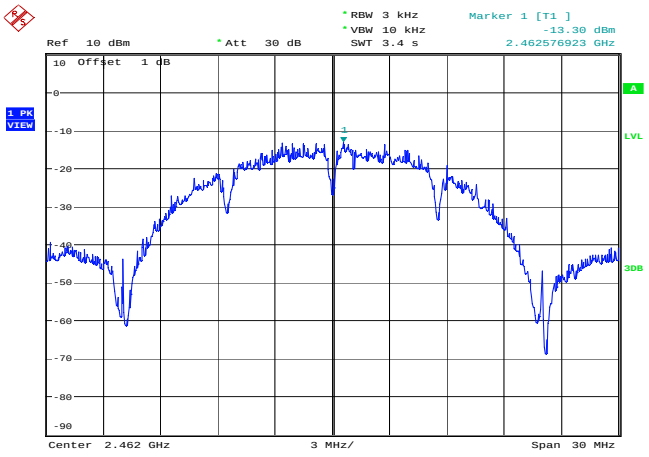
Date: 17.APR.2015 16:29:42

Middle channel



Date: 17.APR.2015 16:30:40

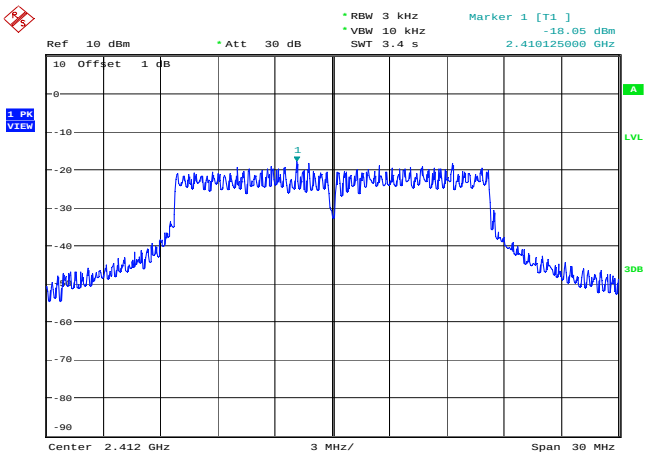
Highest channel



Date: 17.APR.2015 16:31:24

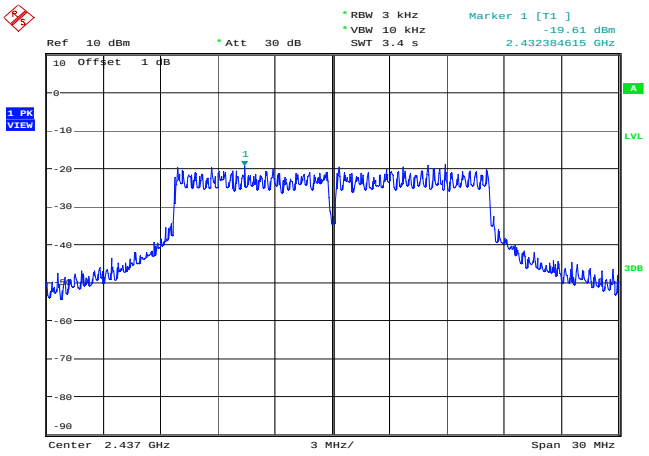
802.11g Modulation

Lowest channel



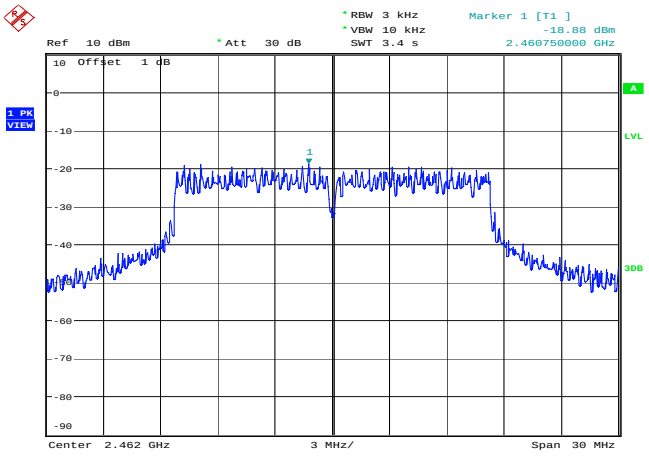
Date: 17.APR.2015 16:39:19

Middle channel



Date: 17.APR.2015 16:33:02

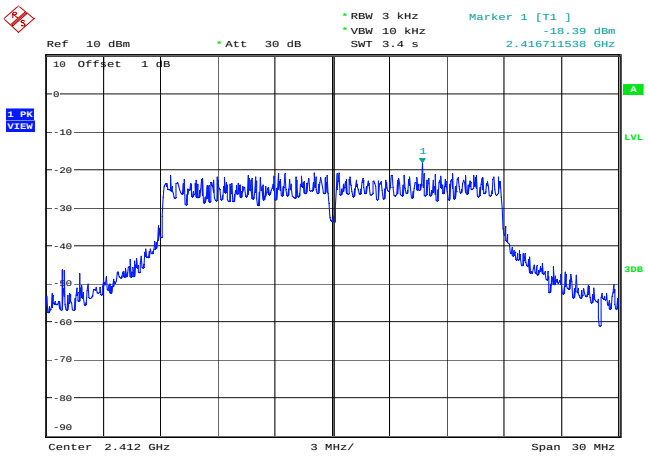
Highest channel



Date: 17.APR.2015 16:32:17

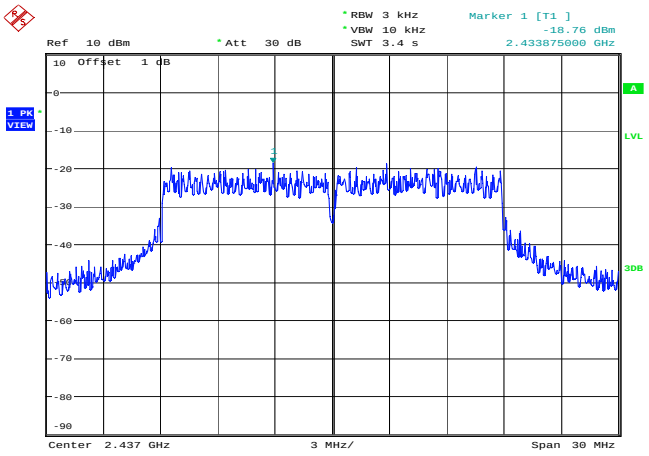
802.11n (HT20) Modulation

Lowest channel



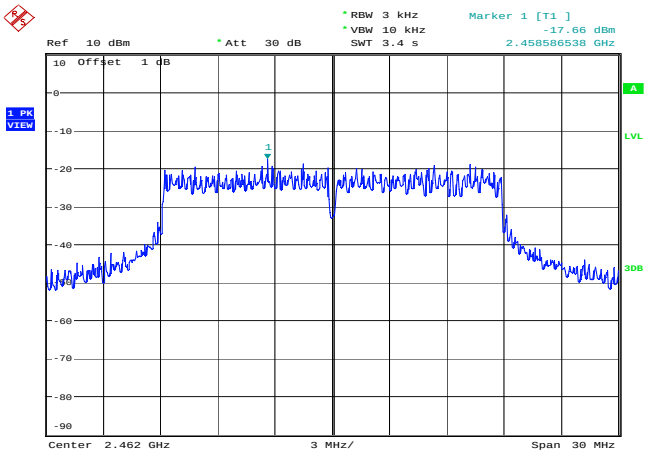
Date: 17.APR.2015 16:40:57

Middle channel



Date: 17.APR.2015 16:43:31

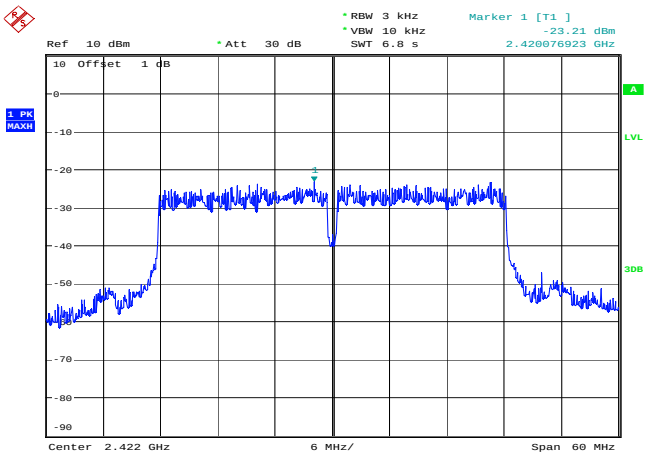
Highest channel



Date: 17.APR.2015 16:44:34

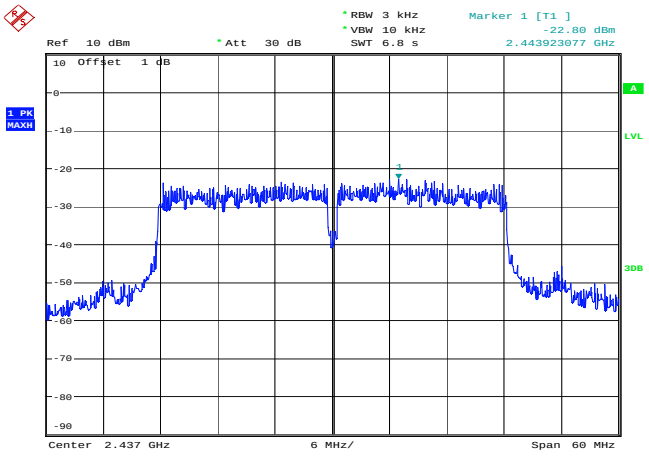
802.11n (HT40) Modulation

Lowest channel



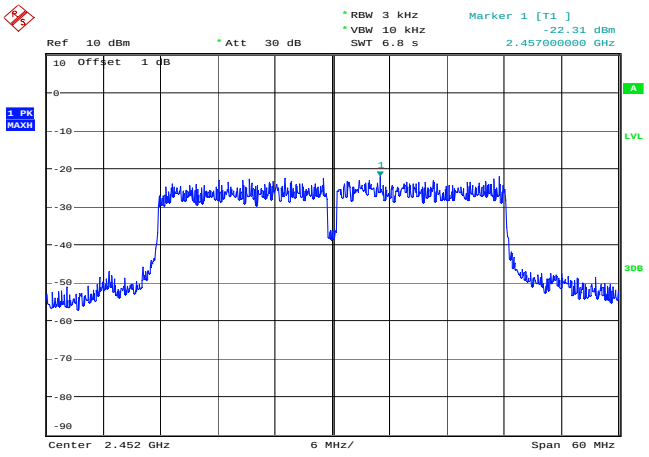
Date: 17.APR.2015 16:27:50

Middle channel



Date: 17.APR.2015 16:26:59

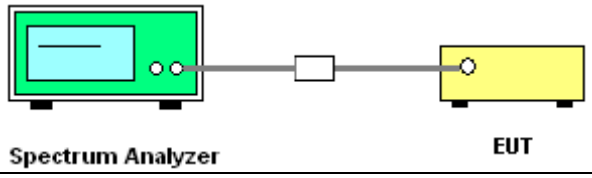
Highest channel



Date: 17.APR.2015 16:26:09

6.7. Conducted Band Edge and Spurious Emission Measurement

6.7.1. Test Specification

Test Requirement:	FCC Part15 C Section 15.247 (d)
Test Method:	ANSI C63.4:2009 and KDB558074
Limit:	In any 100 kHz bandwidth outside of the authorized frequency band, the emissions which fall in the non-restricted bands shall be attenuated at least 20 dB / 30dB relative to the maximum PSD level in 100 kHz by RF conducted measurement and radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).
Test Setup:	
Test Mode:	Reference to section 4.1 for details
Test Procedure:	1. The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r02. 2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement. 3. Set to the maximum power setting and enable the EUT transmit continuously. 4. Set RBW = 100 kHz, VBW=300 kHz, Peak Detector. Unwanted Emissions measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz when maximum peak conducted output power procedure is used. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB per 15.247(d). 5. Measure and record the results in the test report. 6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
Test Result:	PASS

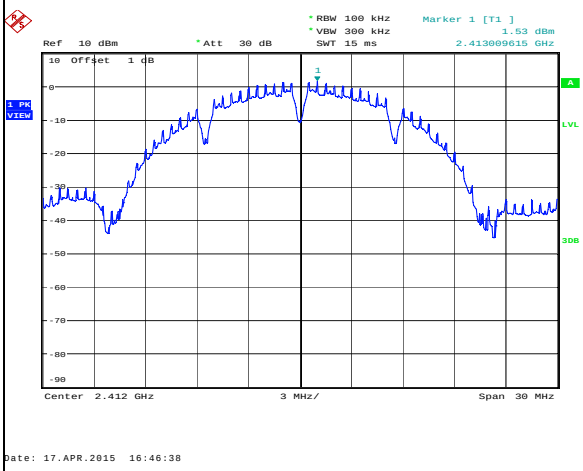
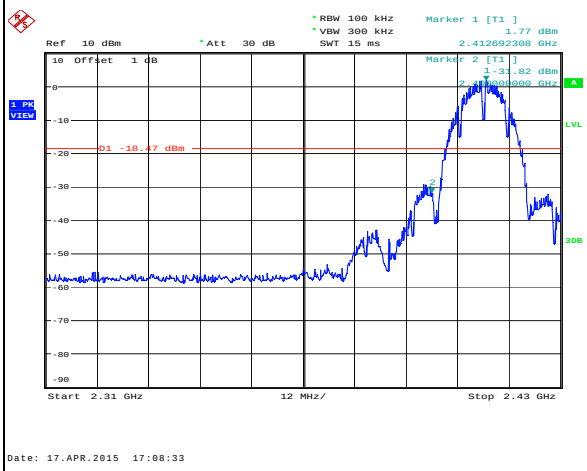
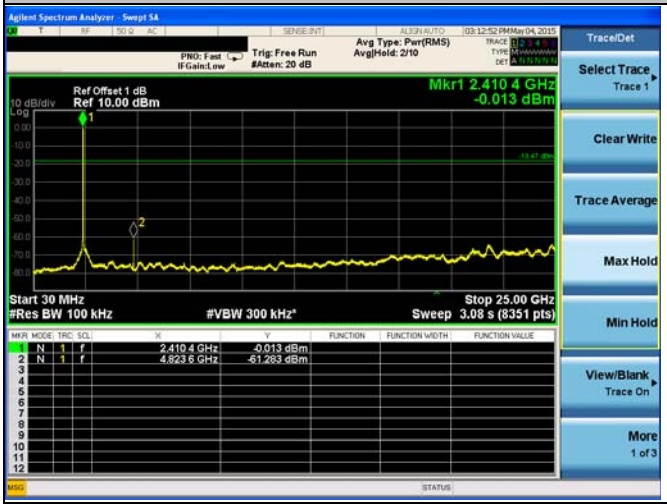
6.7.2. Test Instruments

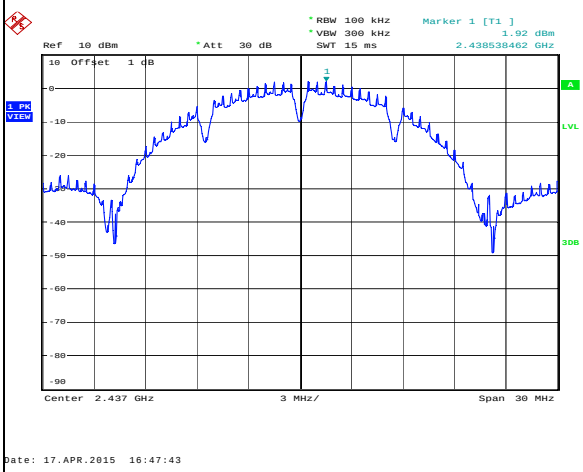
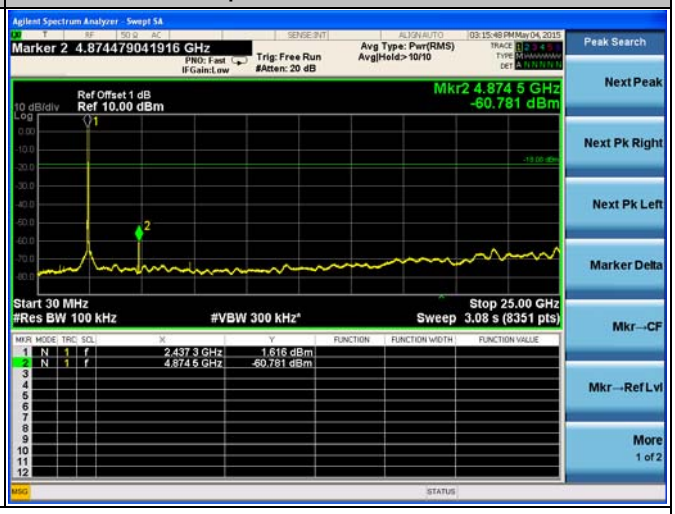
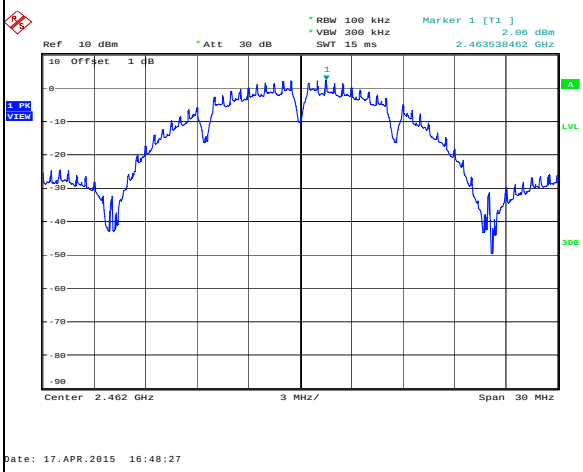
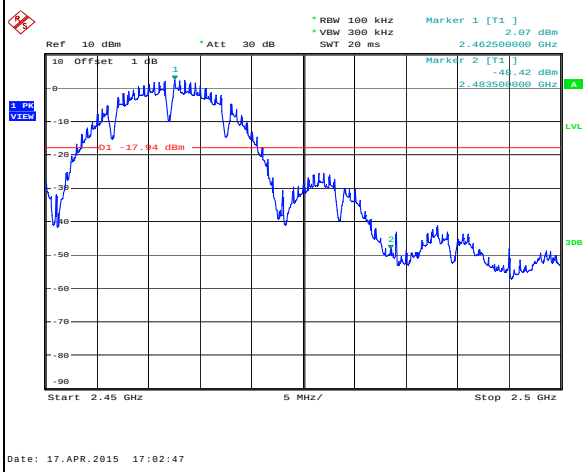
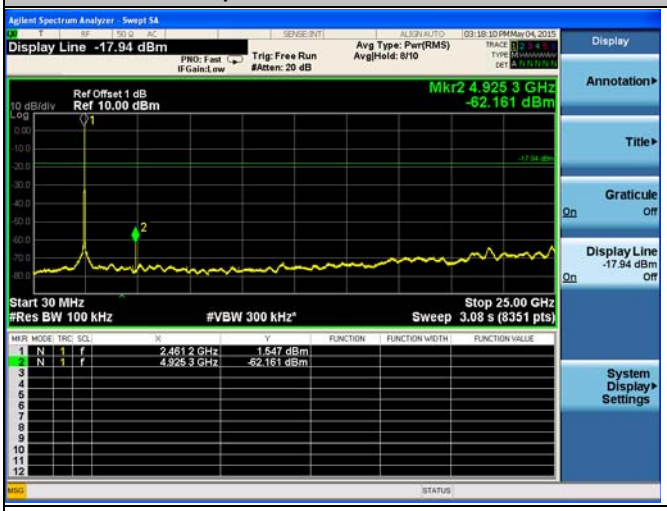
RF Test Room				
Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Due**
Spectrum Analyzer	Agilent	N9020A	MY49100060	Oct. 21, 2015
Spectrum Analyzer	R&S	FSU	200054	Sep. 15, 2015

Note: *The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).*

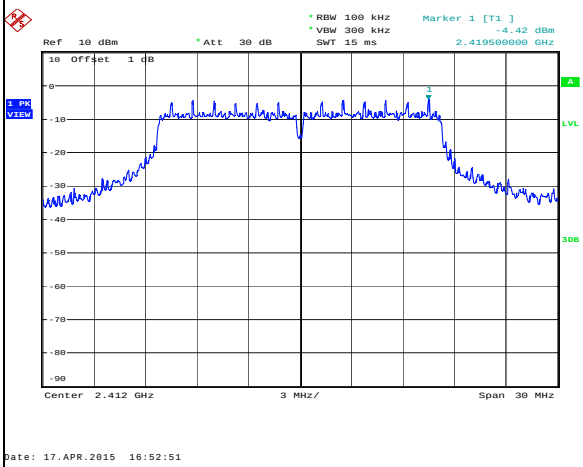
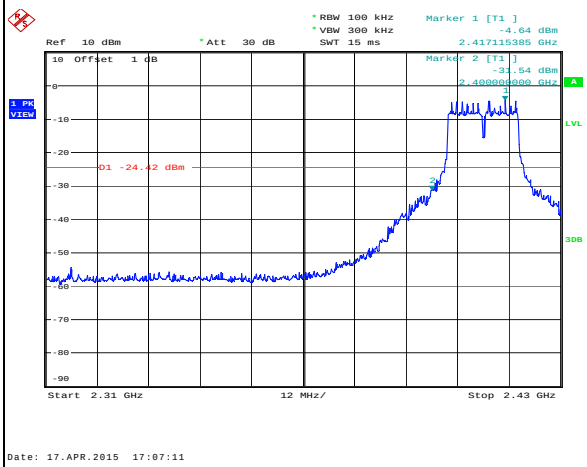
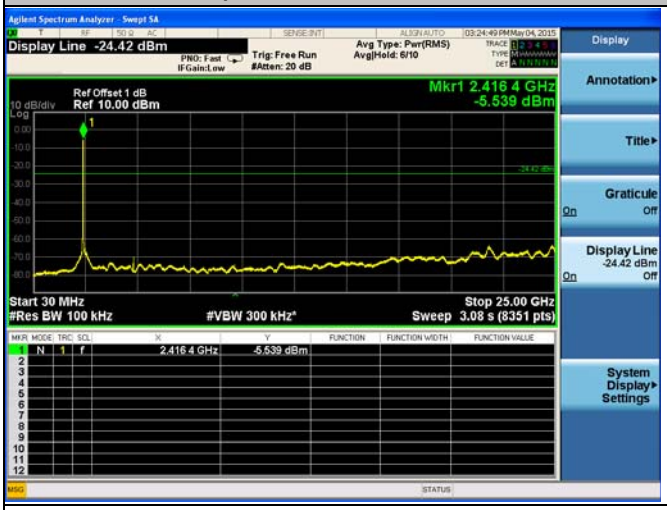
6.7.3. Test Data

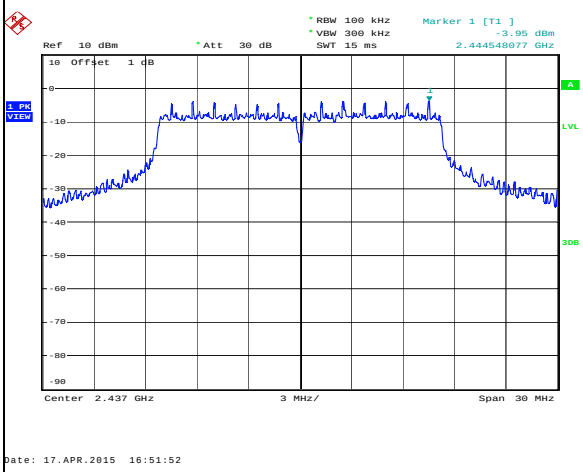
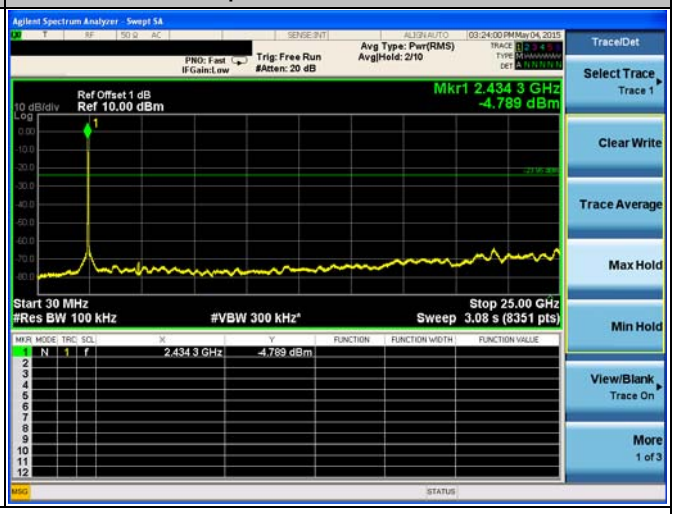
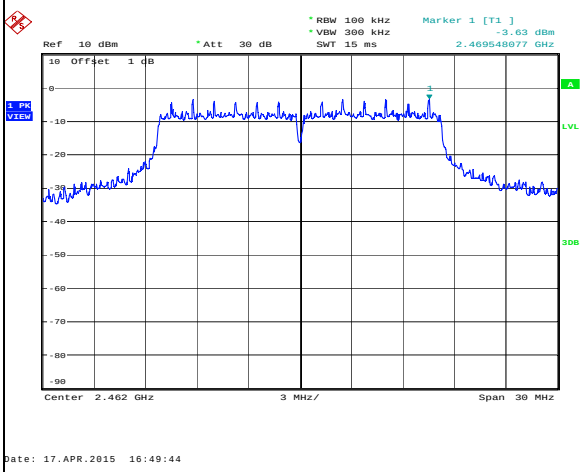
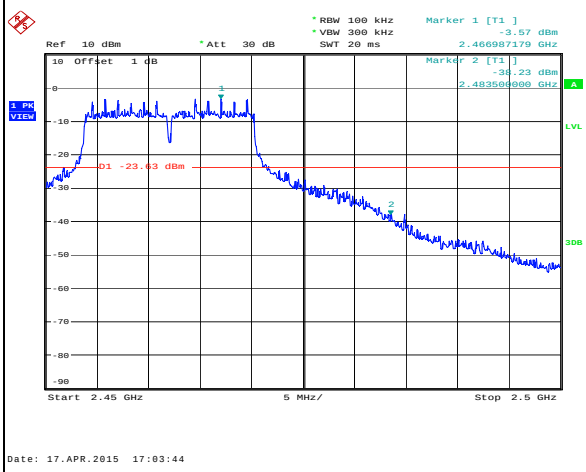
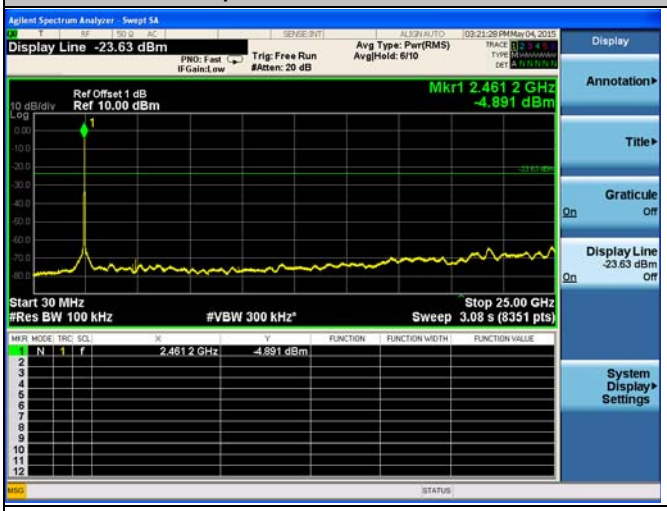
802.11b Modulation

100kHz PSD reference Level	Band Edge
	
Spurious emission	
	
Lowest Channel	

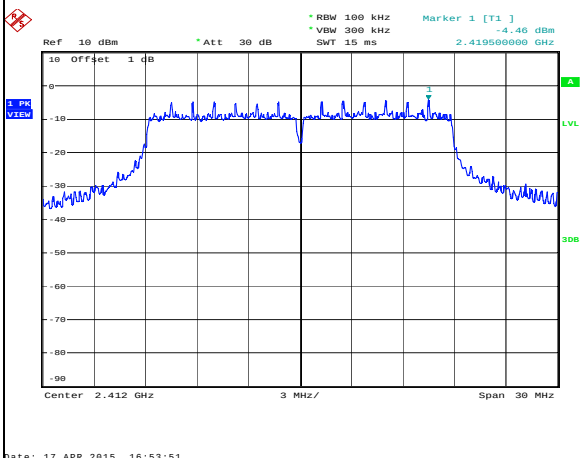
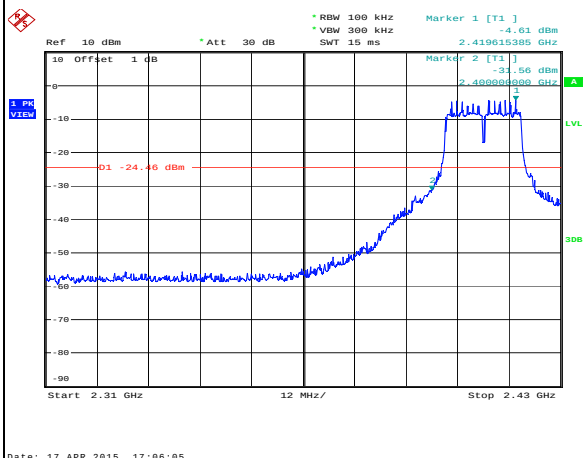
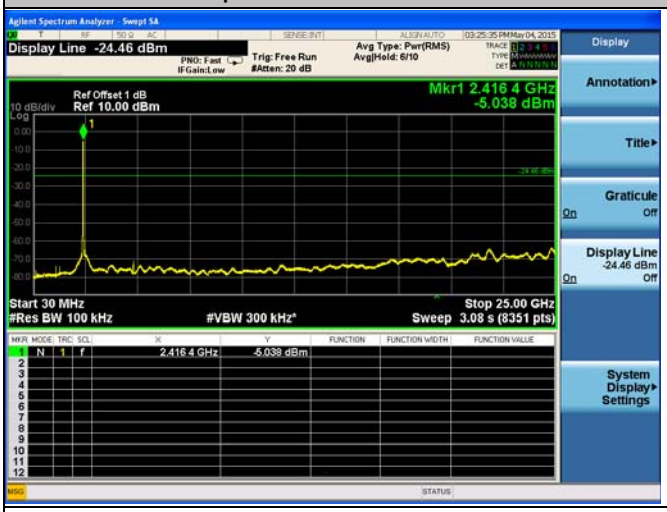
100kHz PSD reference Level	Spurious emission
	
Middle Channel	
100kHz PSD reference Level	Band Edge
	
Spurious emission	
	
Highest Channel	

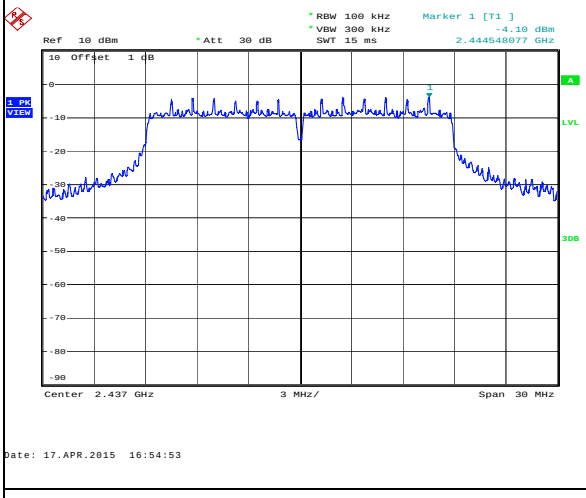
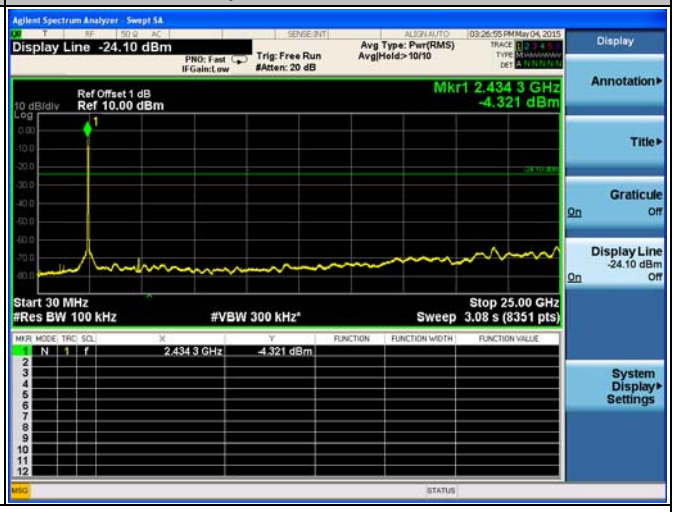
802.11g Modulation

100kHz PSD reference Level	Band Edge
	
Spurious emission	
	
Lowest Channel	

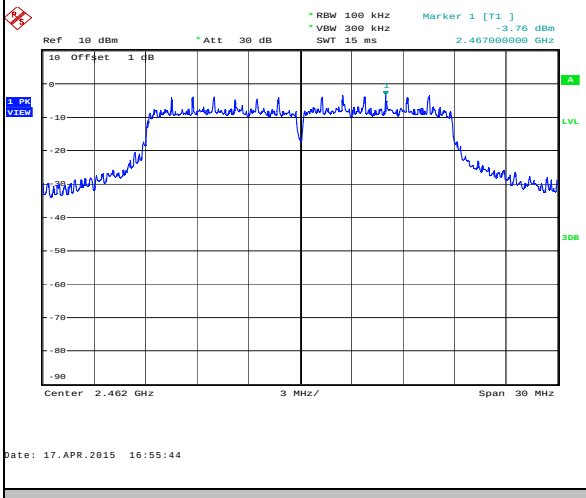
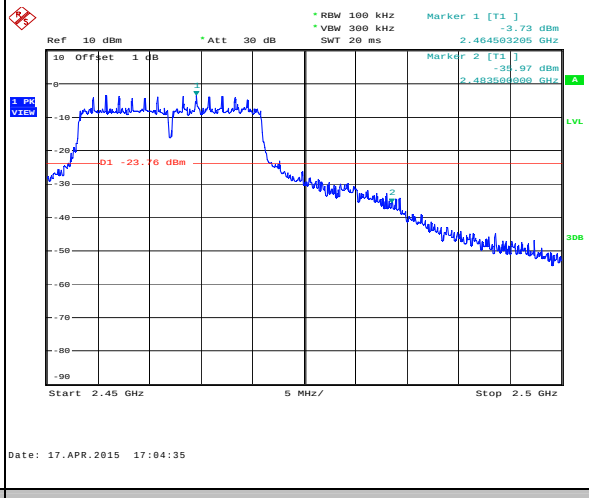
100kHz PSD reference Level	Spurious emission
	
Middle Channel	
100kHz PSD reference Level	Band Edge
	
Spurious emission	
	
Highest Channel	

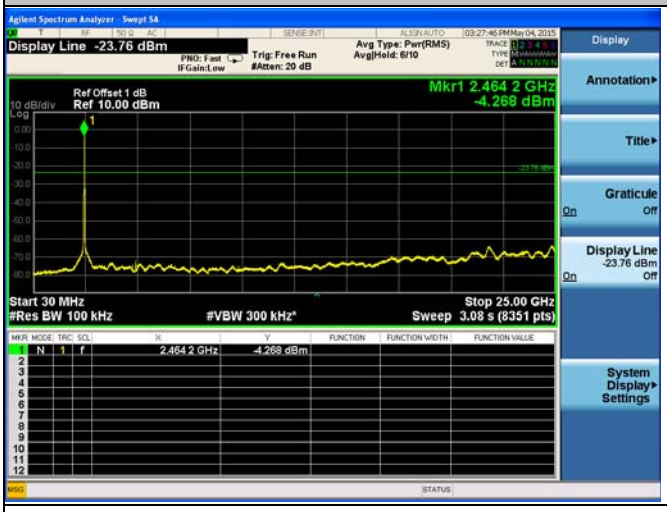
802.11n (HT20) Modulation

100kHz PSD reference Level	Band Edge
	
Spurious emission	
	
Lowest Channel	

100kHz PSD reference Level	Spurious emission
	

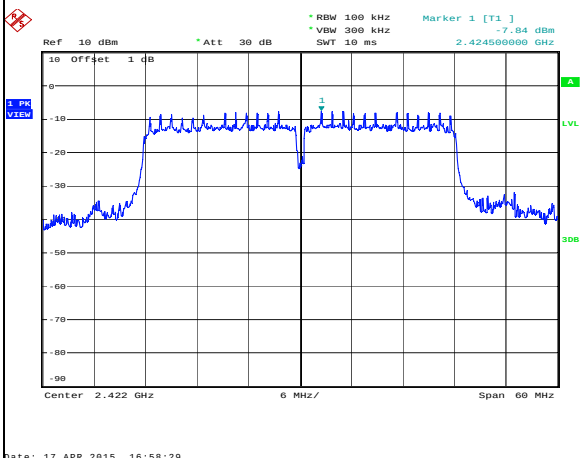
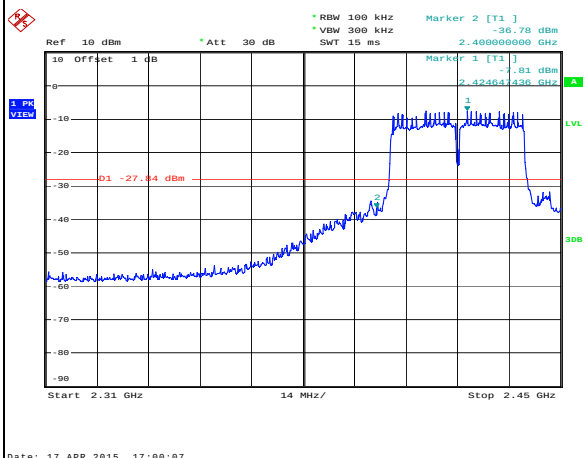
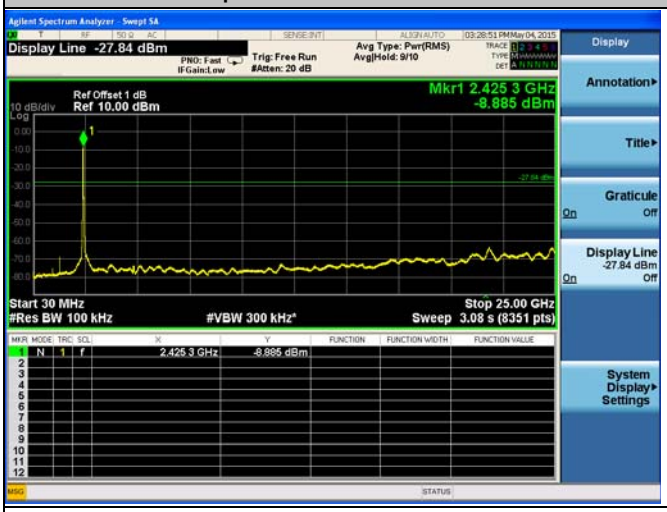
Middle Channel

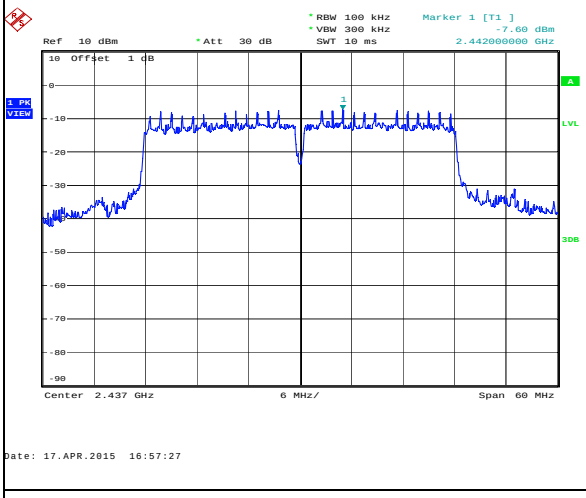
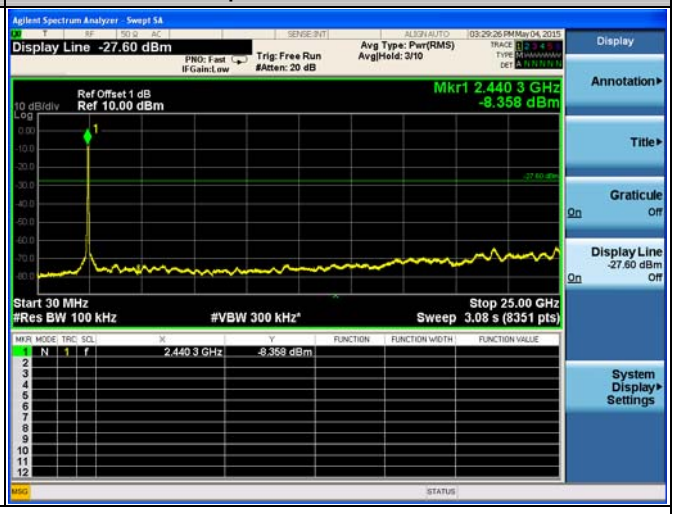
100kHz PSD reference Level	Band Edge
	

Spurious emission	
	

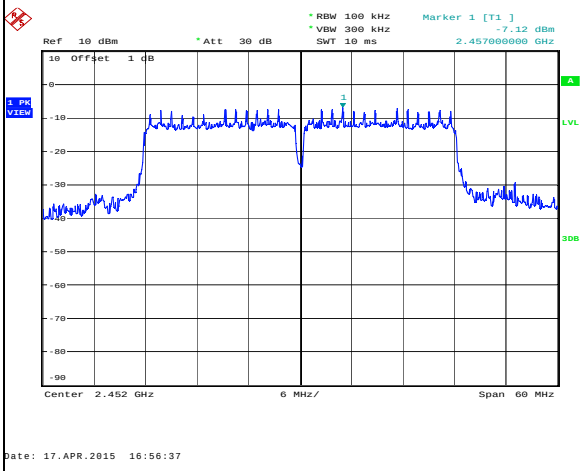
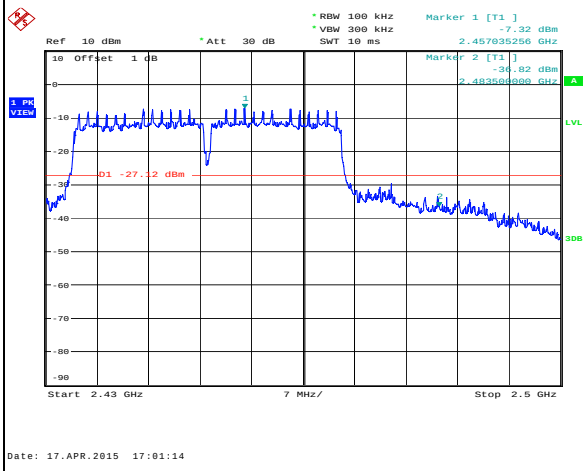
Highest Channel

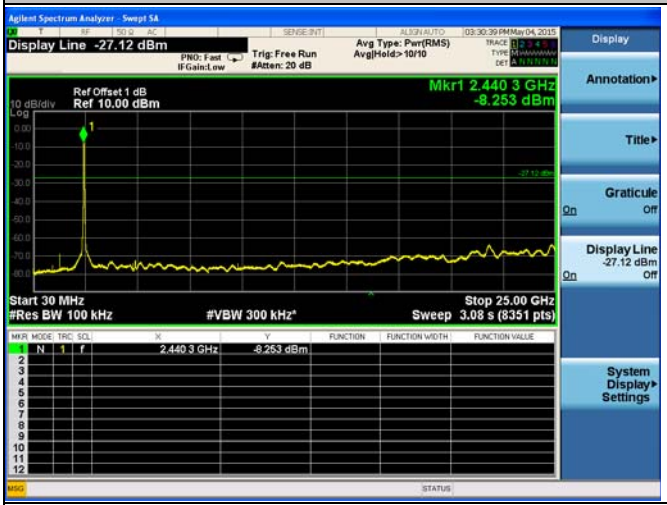
802.11n (HT40) Modulation

100kHz PSD reference Level	Band Edge
	
Spurious emission	
	
Lowest Channel	

100kHz PSD reference Level	Spurious emission
	

Middle Channel

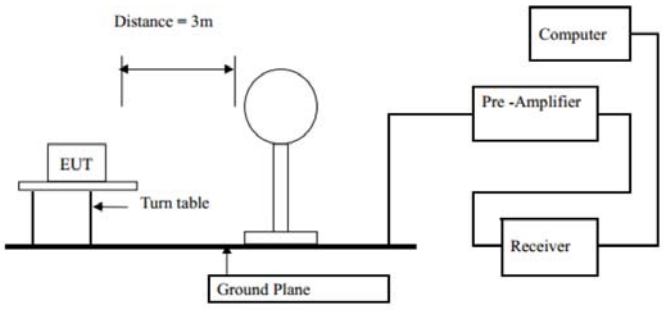
100kHz PSD reference Level	Band Edge
	

Spurious emission	
	

Highest Channel

6.8. Radiated Spurious Emission Measurement

6.8.1. Test Specification

<table>
<tr><td>Test Requirement:</td><td>FCC Part15 C Section 15.209</td></tr>
<tr><td>Test Method:</td><td>ANSI C63.4: 2009 and ANSI C63.10: 2009</td></tr>
<tr><td>Frequency Range:</td><td>9 kHz to 25 GHz</td></tr>
<tr><td>Measurement Distance:</td><td>3 m</td></tr>
<tr><td>Antenna Polarization:</td><td>Horizontal & Vertical</td></tr>
<tr><td>Receiver Setup:</td><td>
<table>
<tr><td>Frequency</td><td>Detector</td><td>RBW</td><td>VBW</td><td>Remark</td></tr>
<tr><td>9kHz- 150kHz</td><td>Quasi-peak</td><td>200Hz</td><td>1kHz</td><td>Quasi-peak Value</td></tr>
<tr><td>150kHz-30MHz</td><td>Quasi-peak</td><td>9kHz</td><td>30kHz</td><td>Quasi-peak Value</td></tr>
<tr><td>30MHz-1GHz</td><td>Quasi-peak</td><td>100KHz</td><td>300KHz</td><td>Quasi-peak Value</td></tr>
<tr><td rowspan="2">Above 1GHz</td><td>Peak</td><td>1MHz</td><td>3MHz</td><td>Peak Value</td></tr>
<tr><td>Peak</td><td>1MHz</td><td>10Hz</td><td>Average Value</td></tr>
</table>
</td></tr>
<tr><td>Limit:</td><td>
<table>
<tr><td>Frequency</td><td>Field Strength (microvolts/meter)</td><td>Measurement Distance (meters)</td></tr>
<tr><td>0.009-0.490</td><td>2400/F(KHz)</td><td>300</td></tr>
<tr><td>0.490-1.705</td><td>24000/F(KHz)</td><td>30</td></tr>
<tr><td>1.705-30</td><td>30</td><td>30</td></tr>
<tr><td>30-88</td><td>100</td><td>3</td></tr>
<tr><td>88-216</td><td>150</td><td>3</td></tr>
<tr><td>216-960</td><td>200</td><td>3</td></tr>
<tr><td>Above 960</td><td>500</td><td>3</td></tr>
</table>
<table>
<tr><td>Frequency</td><td>Field Strength (microvolts/meter)</td><td>Measurement Distance (meters)</td><td>Detector</td></tr>
<tr><td rowspan="2">Above 1GHz</td><td>500</td><td>3</td><td>Average</td></tr>
<tr><td>5000</td><td>3</td><td>Peak</td></tr>
</table>
</td></tr>
<tr><td>Test setup:</td><td>For radiated emissions below 30MHz
 

30MHz to 1GHz</td></tr>
</table>

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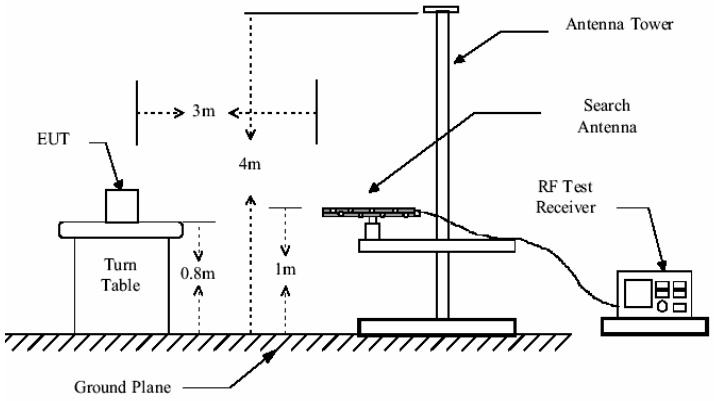
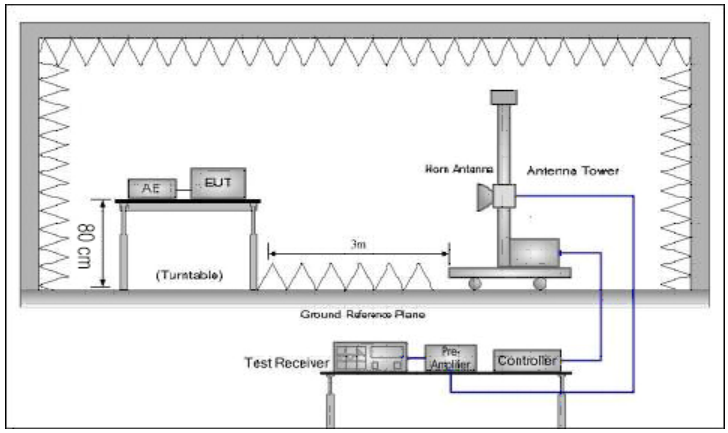


Above 1GHz



Test Procedure:

1. The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r02.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
3. The EUT was placed on a turntable with 0.8 meter above ground.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
5. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
6. For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.
7. Use the following spectrum analyzer settings:
   (1) Span shall wide enough to fully capture the emission being measured;

	(2) Set RBW=100 kHz for f < 1 GHz; VBW ⩾RBW; Sweep = auto; Detector function = peak; Trace = max hold; (3) Set RBW = 1 MHz, VBW= 3MHz for f 1 GHz for peak measurement. For average measurement: VBW = 10 Hz, when duty cycle is no less than 98 percent. VBW ⩾ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.
Test mode:	Reference to section 4.1 for details
Test results:	PASS

6.8.2. Test Instruments

Radiated Emission Test Site (966)				
Name of Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Due**
ESPI Test Receiver	ROHDE&SCHWARZ	ESVD	100008	Sep.16 , 2015
Spectrum Analyzer	ROHDE&SCHWARZ	FSEM	848597/001	Sep.16 , 2015
Pre-amplifier	EM Electronics Corporation CO.,LTD	EM30265	07032613	Sep.16 , 2015
Pre-amplifier	HP	8447D	2727A05017	Sep.16 , 2015
Loop antenna	ZHINAN	ZN30900A	12024	Dec.14 , 2015
Broadband Antenna	Schwarzbeck	VULB9163	340	Sep.16 , 2015
Horn Antenna	Schwarzbeck	BBHA 9120D	631	Sep.16 , 2015
Horn Antenna	Schwarzbeck	BBHA 9170	373	Sep.16 , 2015
Coax cable	TCT	RE-low-01	N/A	Sep.15 , 2015
Coax cable	TCT	RE-high-02	N/A	Sep.15 , 2015
Coax cable	TCT	RE-low-03	N/A	Sep.15 , 2015
Coax cable	TCT	RE-high-04	N/A	Sep.15 , 2015
Antenna Mast	CCS	CC-A-4M	N/A	N/A
EMI Test Software	Shurple Technology	EZ-EMC	N/A	N/A

Note: *The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).*

6.8.3. Test Data

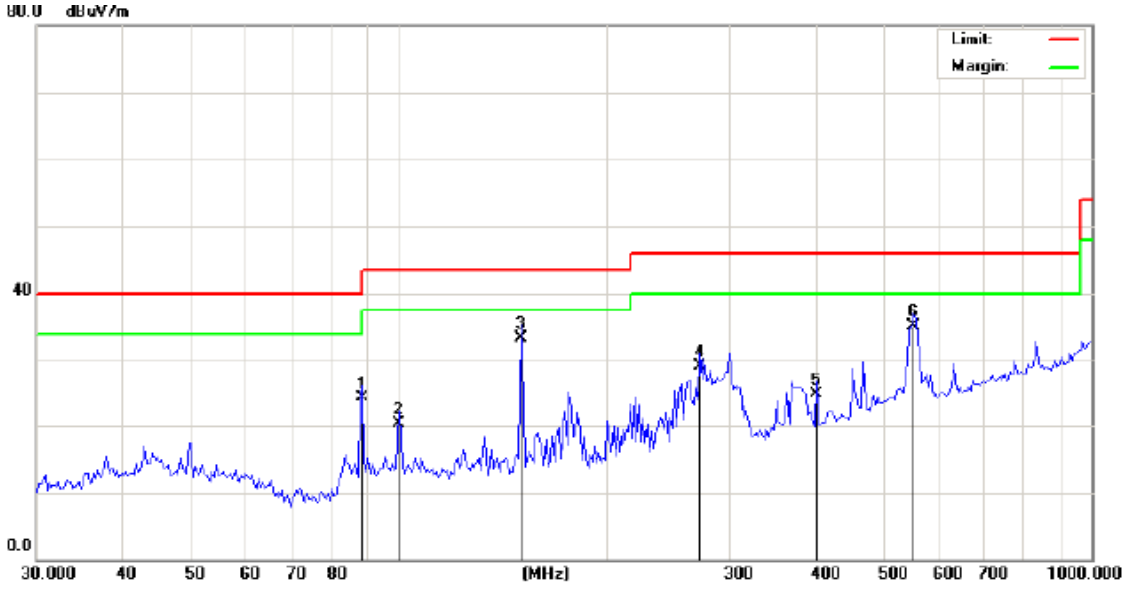
Radiated Emission (9 kHz----30 MHz)

Remark: The emission levels are too low, which are not reported. It is deemed to comply with the requirement

Radiated Emission (30MHz----1000 MHz)

Please refer to following diagram for individual

Horizontal:



Site

Polarization: *Horizontal*

Temperature: 23℃

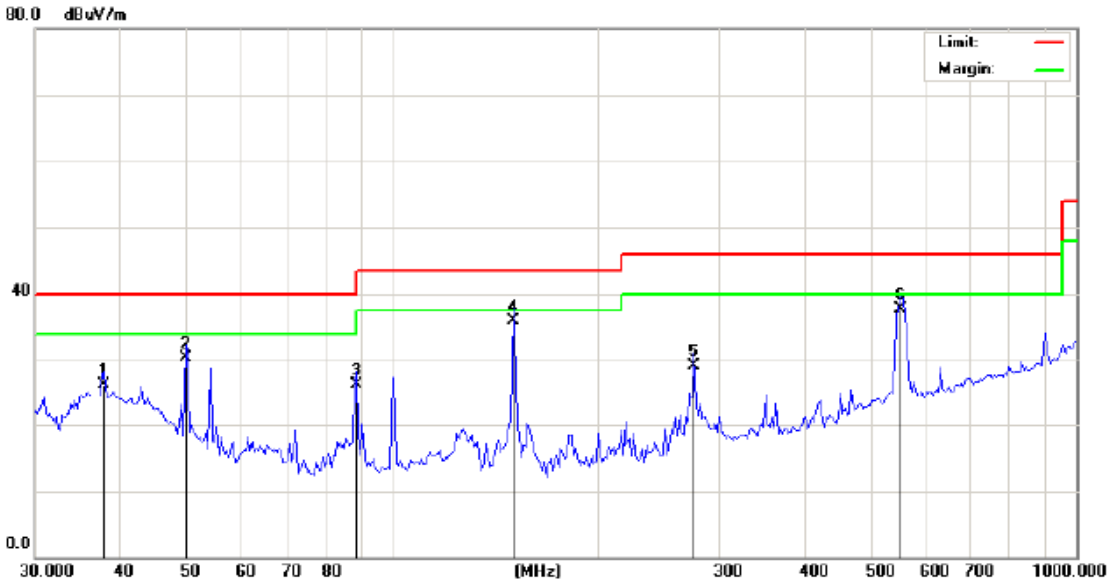
Limit: FCC Part 15B Class B RE_3 m

Power: AC 120V/60Hz

Humidity: 53 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		88.5336	37.81	-13.47	24.34	43.50	-19.16	QP		0	
2		99.7676	31.68	-11.47	20.21	43.50	-23.29	QP		0	
3	*	149.9676	48.38	-15.16	33.22	43.50	-10.28	QP		0	
4		272.5246	38.35	-9.18	29.17	46.00	-16.83	QP		0	
5		401.1050	31.06	-6.16	24.90	46.00	-21.10	QP		0	
6		554.1708	37.59	-2.41	35.18	46.00	-10.82	QP		0	

Vertical:



Site

Limit: FCC Part 15B Class B RE 3 m

Polarization: *Vertical*

Power: AC 120V/60Hz

Temperature: 23℃

Humidity: 53 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		37.8297	39.14	-12.75	26.39	40.00	-13.61	QP		0	
2		49.7571	42.36	-12.04	30.32	40.00	-9.68	QP		0	
3		88.5336	39.74	-13.47	26.27	43.50	-17.23	QP		0	
4	*	149.9676	51.12	-15.16	35.96	43.50	-7.54	QP		0	
5		276.3817	38.07	-9.06	29.01	46.00	-16.99	QP		0	
6		554.1707	40.19	-2.41	37.78	46.00	-8.22	QP		0	

Note: *Measurements were conducted in all three channels (high, middle, low), and the worst case 802.11b Mode (Highest channel) was submitted only.*

Radiated Emission (Above 1GHz)

Modulation Type: 802.11b

Low channel: 2412 MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBuV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
2387.50	H	70.14	---	-4.20	65.94	---	74.00	54.00	-8.06
2387. 50	H	---	50.47	-4.20	---	46.27	74.00	54.00	-7.73
4824.00	H	48.48	---	-3.94	44.54	---	74.00	54.00	-9.46
7236.00	H	44.94	---	0.52	45.46	---	74.00	54.00	-8.54
---	H	---	---	---	---	---	---	---	---
2387.50	V	68.63	---	-4.20	64.43	---	74.00	54.00	-9.57
2387.50	V	---	51.30	-4.20	---	47.10	74.00	54.00	-6.90
4824.00	V	48.50	---	-3.94	44.56	---	74.00	54.00	-9.44
7236.00	V	45.39	---	0.52	45.91	---	74.00	54.00	-8.09
---	V	---	---	---	---	---	---	---	---

Middle channel: 2437MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBμV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
4874.00	H	48.75	---	-3.98	44.77	---	74.00	54.00	-9.23
7311.00	H	45.71	---	0.57	46.28	---	74.00	54.00	-7.72
---	---	---	---	---	---	---	---	---	---
---	H	---	---	---	---	---	---	---	---
---	H	---	---	---	---	---	---	---	---
4874.00	V	49.57	---	-3.98	45.59	---	74.00	54.00	-8.41
7311.00	V	46.30	---	0.57	46.87	---	74.00	54.00	-7.13
---	V	---	---	---	---	---	---	---	---
---	V	---	---	---	---	---	---	---	---
---	---	---	---	---	---	----	---	---	---

High channel: 2462 MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBμV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
2486.58	H	67.69	---	-2.38	65.31	---	74.00	54.00	-8.69
2486.58	H	---	48.93	-2.38	---	46.55	74.00	54.00	-7.45
4924.00	H	50.52	---	-3.98	46.54	---	74.00	54.00	-7.46
7386.00	H	46.84	---	0.57	47.41	---	74.00	54.00	-6.59
---	H	---	---	---	---	---	---	---	---
2483.51	V	68.76	---	-2.38	66.38	---	74.00	54.00	-7.62
2483.51	V	---	49.12	-2.38	---	46.74	74.00	54.00	-7.26
4924.00	V	50.60	---	-3.98	46.62	---	74.00	54.00	-7.38
7386.00	V	45.82	---	0.57	46.39	---	74.00	54.00	-7.61
---	V	---	---	---	---	---	---	---	---

Note:

1. *Emission Level=Peak Reading + Correction Factor; Correction Factor= Antenna Factor + Cable loss – Pre-amplifier*
2. *Margin (dB) = Emission Level (Peak) (dBμV/m)-Average limit (dBμV/m)*
3. *The emission levels of other frequencies are very lower than the limit and not show in test report.*
4. *Measurements were conducted from 1 GHz to the 10th harmonic of highest fundamental frequency.*
5. *Data of measurement shown "---"in the above table mean that the reading of emissions is attenuated more than 20 dB below the limits or the field strength is too small to be measured.*

Modulation Type: 802.11g

Low channel: 2412 MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBuV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
2387.50	H	70.38	---	-4.20	66.18	---	74.00	54.00	-7.82
2387. 50	H	---	50.40	-4.20	---	46.20	74.00	54.00	-7.80
4824.00	H	49.19	---	-3.94	45.25	---	74.00	54.00	-8.75
7236.00	H	44.67	---	0.52	45.19	---	74.00	54.00	-8.81
---	H	---	---	---	---	---	---	---	---
2387.50	V	68.71	---	-4.20	64.51	---	74.00	54.00	-9.49
2387.50	V	---	50.83	-4.20	---	46.63	74.00	54.00	-7.37
4824.00	V	48.9	---	-3.94	44.96	---	74.00	54.00	-9.04
7236.00	V	45.14	---	0.52	45.66	---	74.00	54.00	-8.34
---	V	---	---	---	---	---	---	---	---

Middle channel: 2437MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBμV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
4874.00	H	48.94	---	-3.98	44.96	---	74.00	54.00	-9.04
7311.00	H	45.63	---	0.57	46.20	---	74.00	54.00	-7.80
---	---	---	---	---	---	---	---	---	---
---	H	---	---	---	---	---	---	---	---
---	H	---	---	---	---	---	---	---	---
4874.00	V	49.35	---	-3.98	45.37	---	74.00	54.00	-8.63
7311.00	V	46.09	---	0.57	46.66	---	74.00	54.00	-7.34
---	V	---	---	---	---	---	---	---	---
---	V	---	---	---	---	---	---	---	---
---	---	---	---	---	---	----	---	---	---

High channel: 2462 MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBμV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
2486.58	H	67.96	---	-2.38	65.58	---	74.00	54.00	-8.42
2486.58	H	---	48.67	-2.38	---	46.29	74.00	54.00	-7.71
4924.00	H	49.89	---	-3.98	45.91	---	74.00	54.00	-8.09
7386.00	H	46.44	---	0.57	47.01	---	74.00	54.00	-6.99
---	H	---	---	---	---	---	---	---	---
2483.51	V	68.35	---	-2.38	65.97	---	74.00	54.00	-8.03
2483.51	V	---	49.19	-2.38	---	46.81	74.00	54.00	-7.19
4924.00	V	49.58	---	-3.98	45.60	---	74.00	54.00	-8.40
7386.00	V	45.04	---	0.57	45.61	---	74.00	54.00	-8.39
---	V	---	---	---	---	---	---	---	---

Note:

1. *Emission Level=Peak Reading + Correction Factor; Correction Factor= Antenna Factor + Cable loss – Pre-amplifier*
2. *Margin (dB) = Emission Level (Peak) (dBμV/m)-Average limit (dBμV/m)*
3. *The emission levels of other frequencies are very lower than the limit and not show in test report.*
4. *Measurements were conducted from 1 GHz to the 10th harmonic of highest fundamental frequency.*
5. *Data of measurement shown "---"in the above table mean that the reading of emissions is attenuated more than 20 dB below the limits or the field strength is too small to be measured.*

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Modulation Type: 802.11n (HT20)

Low channel: 2412 MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBuV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
2387.50	H	70.32	---	-4.20	66.12	---	74.00	54.00	-7.88
2387. 50	H	---	50.17	-4.20	---	45.97	74.00	54.00	-8.03
4824.00	H	48.58	---	-3.94	44.64	---	74.00	54.00	-9.36
7236.00	H	45.12	---	0.52	45.64	---	74.00	54.00	-8.36
---	H	---	---	---	---	---	---	---	---
2387.50	V	68.67	---	-4.20	64.47	---	74.00	54.00	-9.53
2387.50	V	---	51.04	-4.20	---	46.84	74.00	54.00	-7.16
4824.00	V	48.73	---	-3.94	44.79	---	74.00	54.00	-9.21
7236.00	V	45.09	---	0.52	45.61	---	74.00	54.00	-8.39
---	V	---	---	---	---	---	---	---	---

Middle channel: 2437MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBμV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
4874.00	H	49.20	---	-3.98	45.22	---	74.00	54.00	-8.78
7311.00	H	45.56	---	0.57	46.13	---	74.00	54.00	-7.87
---	---	---	---	---	---	---	---	---	---
---	H	---	---	---	---	---	---	---	---
---	H	---	---	---	---	---	---	---	---
4874.00	V	49.29	---	-3.98	45.31	---	74.00	54.00	-8.69
7311.00	V	45.96	---	0.57	46.53	---	74.00	54.00	-7.47
---	V	---	---	---	---	---	---	---	---
---	V	---	---	---	---	---	---	---	---
---	---	---	---	---	---	----	---	---	---

High channel: 2462 MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBμV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
2486.58	H	66.97	---	-2.38	64.59	---	74.00	54.00	-9.41
2486.58	H	---	48.92	-2.38	---	46.54	74.00	54.00	-7.46
4924.00	H	50.09	---	-3.98	46.11	---	74.00	54.00	-7.89
7386.00	H	45.93	---	0.57	46.50	---	74.00	54.00	-7.50
---	H	---	---	---	---	---	---	---	---
2483.51	V	68.47	---	-2.38	66.09	---	74.00	54.00	-7.91
2483.51	V	---	49.10	-2.38	---	46.72	74.00	54.00	-7.28
4924.00	V	50.50	---	-3.98	46.52	---	74.00	54.00	-7.48
7386.00	V	45.54	---	0.57	46.11	---	74.00	54.00	-7.89
---	V	---	---	---	---	---	---	---	---

Note:

1. *Emission Level=Peak Reading + Correction Factor; Correction Factor= Antenna Factor + Cable loss – Pre-amplifier*
2. *Margin (dB) = Emission Level (Peak) (dBμV/m)-Average limit (dBμV/m)*
3. *The emission levels of other frequencies are very lower than the limit and not show in test report.*
4. *Measurements were conducted from 1 GHz to the 10th harmonic of highest fundamental frequency.*
5. *Data of measurement shown "---"in the above table mean that the reading of emissions is attenuated more than 20 dB below the limits or the field strength is too small to be measured.*

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Modulation Type: 802.11n (HT40)

Low channel: 2422 MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBuV)	Correction Factor (dB/m)	Emission Level Peak (dBμV/m)	Emission Level AV (dBμV/m)	Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
2389.98	H	69.10	---	-4.20	64.90	---	74.00	54.00	-9.10
2389.98	H	---	49.86	-4.20	---	45.66	74.00	54.00	-8.34
4844.00	H	49.54	---	-3.94	45.6	---	74.00	54.00	-8.40
7266.00	H	44.97	---	0.52	45.49	---	74.00	54.00	-8.51
---	H	---	---	---	---	---	---	---	---
2389.98	V	70.70	---	-4.20	66.50	---	74.00	54.00	-7.50
2389.98	V	---	51.01	-4.20	---	46.81	74.00	54.00	-7.19
4844.00	V	49.97	---	-3.94	46.03	---	74.00	54.00	-7.97
7266.00	V	45.32	---	0.52	45.84	---	74.00	54.00	-8.16
---	V	---	---	---	---	---	---	---	---

Middle channel: 2437MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBμV)	Correction Factor (dB/m)	Emission Level Peak (dBμV/m)	Emission Level AV (dBμV/m)	Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
4874.00	H	50.23	---	-3.98	46.25	---	74.00	54.00	-7.75
7311.00	H	45.84	---	0.57	46.41	---	74.00	54.00	-7.59
---	---	---	---	---	---	---	---	---	---
---	H	---	---	---	---	---	---	---	---
---	H	---	---	---	---	---	---	---	---
4874.00	V	49.31	---	-3.98	45.33	---	74.00	54.00	-8.67
7311.00	V	44.36	---	0.57	44.93	---	74.00	54.00	-9.07
---	V	---	---	---	---	---	---	---	---
---	V	---	---	---	---	---	---	---	---
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High channel: 2452 MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBμV)	Correction Factor (dB/m)	Emission Level Peak (dBμV/m)	Emission Level AV (dBμV/m)	Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
2493.51	H	68.45	---	-2.38	66.07	---	74.00	54.00	-7.93
2493.51	H	---	48.46	-2.38	---	46.08	74.00	54.00	-7.92
4904.00	H	50.25	---	-3.98	46.27	---	74.00	54.00	-7.73
7356.00	H	44.84	---	0.57	45.41	---	74.00	54.00	-8.59
---	H	---	---	---	---	---	---	---	---
2493.51	V	68.66	---	-2.38	66.28	---	74.00	54.00	-7.72
2493.51	V	---	47.27	-2.38	---	44.89	74.00	54.00	-9.11
4904.00	V	49.85	---	-3.98	45.87	---	74.00	54.00	-8.13
7356.00	V	44.91	---	0.57	45.48	---	74.00	54.00	-8.52
---	V	---	---	---	---	---	---	---	---

Note:

1. *Emission Level=Peak Reading + Correction Factor; Correction Factor= Antenna Factor + Cable loss – Pre-amplifier*
2. *Margin (dB) = Emission Level (Peak) (dBμV/m)-Average limit (dBμV/m)*
3. *The emission levels of other frequencies are very lower than the limit and not show in test report.*
4. *Measurements were conducted from 1 GHz to the 10th harmonic of highest fundamental frequency.*
5. *Data of measurement shown "---"in the above table mean that the reading of emissions is attenuated more than 20 dB below the limits or the field strength is too small to be measured.*

********END OF REPORT********

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