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Report No.: FCC12-RTE040601  
Page 1 of 68

# FCC REPORT

**Applicant:** Archos SA

**Address of Applicant:** 12, Rue Ampere 91430 Igny France

## Equipment Under Test (EUT)

**Product Name:** HOME TABLET

**Model No.:** AN7DG3ST

**Trade mark:** ARNOVA

**FCC ID:** SOVAN7DG3ST

**Applicable standards:** FCC CFR Title 47 Part 15 Subpart C Section 15.247:2010

**Date of sample receipt:** Mar. 15, 2012

**Date of Test:** Mar. 15-Apr. 03, 2012

**Date of report issued:** Apr. 06, 2012

**Test Result :** PASS \*

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

Authorized Signature:

Kavin Yu  
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 EBO product certification mark. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

This report may only be reproduced and distributed in full. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of EBO International Electrical Approvals or testing done by EBO International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by EBO International Electrical Approvals in writing.

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**2 Version**

<b>Version No.</b>	<b>Date</b>	<b>Description</b>
00	Apr. 06, 2012	Original

**Prepared By:***Collin. He***Date:**

Apr. 06, 2012

**Project Engineer****Check By:***Hans. Hu***Date:**

Apr. 06, 2012

**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

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

## 5 General Information

### 5.1 Client Information

Applicant:	Archos SA
Address of Applicant:	12, Rue Ampere 91430 Igny France
Manufacturer:	Archos SA
Address of Manufacturer/	12, Rue Ampere 91430 Igny France

### 5.2 General Description of E.U.T.

Product Name:	HOME TABLET
Model No.:	AN7DG3ST
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 802.11(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)
Antenna Type:	Integral
Antenna gain:	2dBi
Power supply:	MODEL: MD-ADP-0516UN001 Input: AC 100-240V 50/60Hz 0.3A Output: DC 5.0V 1.5A DC 3.7V Li-ion Battery

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 mode

Transmitting mode	Keep transmitting mode.
-------------------	-------------------------

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 out 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 Description of Support Units

None.

## 5.8 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. 29 2012	Mar. 28 2013
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	Jul. 04 2011	Jul. 03 2012
4	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	GTS214	Feb. 25 2012	Feb. 24 2013
5	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	9120D-829	GTS208	June 30 2011	June 29 2012
6	Horn Antenna	ETS-LINDGREN	3160	GTS217	Mar. 29 2012	Mar. 28 2013
7	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
8	Coaxial Cable	GTS	N/A	GTS213	Mar. 31 2012	Mar. 30 2013
9	Coaxial Cable	GTS	N/A	GTS211	Mar. 31 2012	Mar. 30 2013
10	Coaxial cable	GTS	N/A	GTS210	Mar. 31 2012	Mar. 30 2013
11	Coaxial Cable	GTS	N/A	GTS212	Mar. 31 2012	Mar. 30 2013
12	Amplifier(100kHz-3GHz)	HP	8347A	GTS204	Jul. 04 2011	Jul. 03 2012
13	Amplifier(2GHz-20GHz)	HP	8349B	GTS206	Jul. 04 2011	Jul. 03 2012
14	Pre-amplifier (18-26GHz)	Rohde & Schwarz	AFS33-18002 650-30-8P-44	GTS218	June 30 2011	June 29 2012
15	Band filter	Amindeon	82346	GTS219	June 30 2011	June 29 2012

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	Jul. 04 2011	Jul. 03 2012
2	EMI Test Receiver	Rohde & Schwarz	ESCS30	GTS223	Jul. 04 2011	Jul. 03 2012
3	10dB Pulse Limit	Rohde & Schwarz	N/A	GTS224	Jul. 04 2011	Jul. 03 2012
4	LISN	SCHWARZBECK MESS-ELEKTRONIK	NSLK 8127	GTS226	Jul. 04 2011	Jul. 03 2012
5	LISN	ETS-LINDGREN	3816/2	GTS232	Jul. 04 2011	Jul. 03 2012
6	Coaxial Cable	GTS	N/A	GTS227	Mar. 31 2012	Mar. 30 2013
7	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)
<b>15.203 requirement:</b> 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.	
<b>15.247(c) (1)(i) requirement:</b> (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.	
<b>E.U.T Antenna:</b> <i>The antenna is Integral antenna, the best case gain of the antenna is 2dBi</i>	

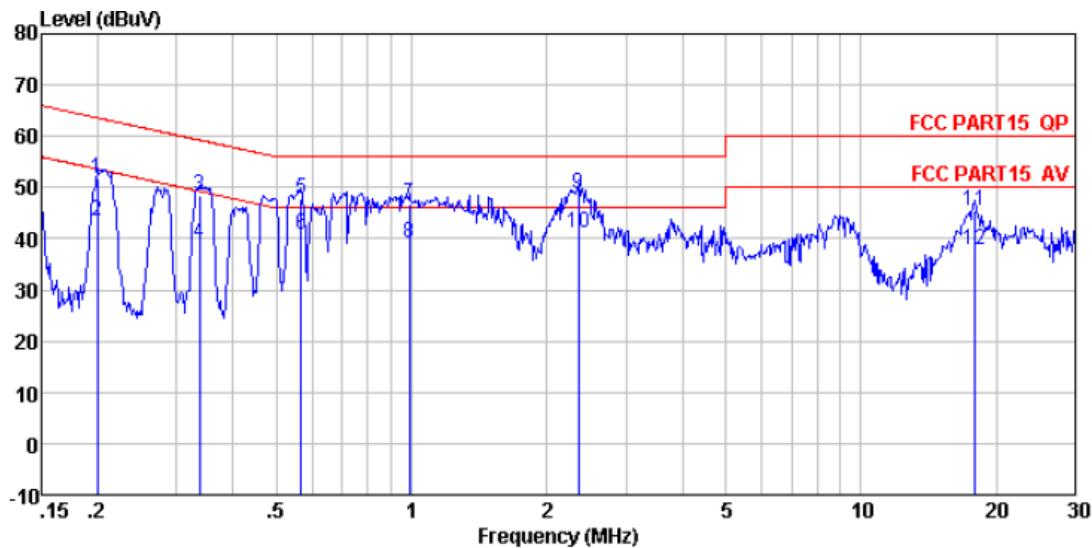
## 6.2 Conducted Emissions

Test Requirement:	FCC Part15 C Section 15.207																
Test Method:	ANSI C63.4:2003																
Test Frequency Range:	150KHz to 30MHz																
Class / Severity:																	
Receiver setup:	RBW=9KHz, VBW=30KHz, Sweep time=auto																
Limit:	<table border="1"> <thead> <tr> <th rowspan="2">Frequency range (MHz)</th> <th colspan="2">Limit (dBuV)</th> </tr> <tr> <th>Quasi-peak</th> <th>Average</th> </tr> </thead> <tbody> <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> </tbody> </table>			Frequency range (MHz)	Limit (dBuV)		Quasi-peak	Average	0.15-0.5	66 to 56*	56 to 46*	0.5-5	56	46	5-30	60	50
Frequency range (MHz)	Limit (dBuV)																
	Quasi-peak	Average															
0.15-0.5	66 to 56*	56 to 46*															
0.5-5	56	46															
5-30	60	50															
	* Decreases with the logarithm of the frequency.																
Test setup:	<p style="text-align: center;"><b>Reference Plane</b></p> <p><i>Remark</i> E.U.T: Equipment Under Test LISN: Line Impedance Stabilization Network Test table height=0.8m</p>																
Test procedure:	<ol style="list-style-type: none"> <li>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.</li> <li>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).</li> <li>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: 2003 on conducted measurement.</li> </ol>																
Test Instruments:	Refer to section 5.8 for details																
Test mode:	Refer to section 5.3 for details																
Test results:	Pass																

### Measurement data:

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Line:



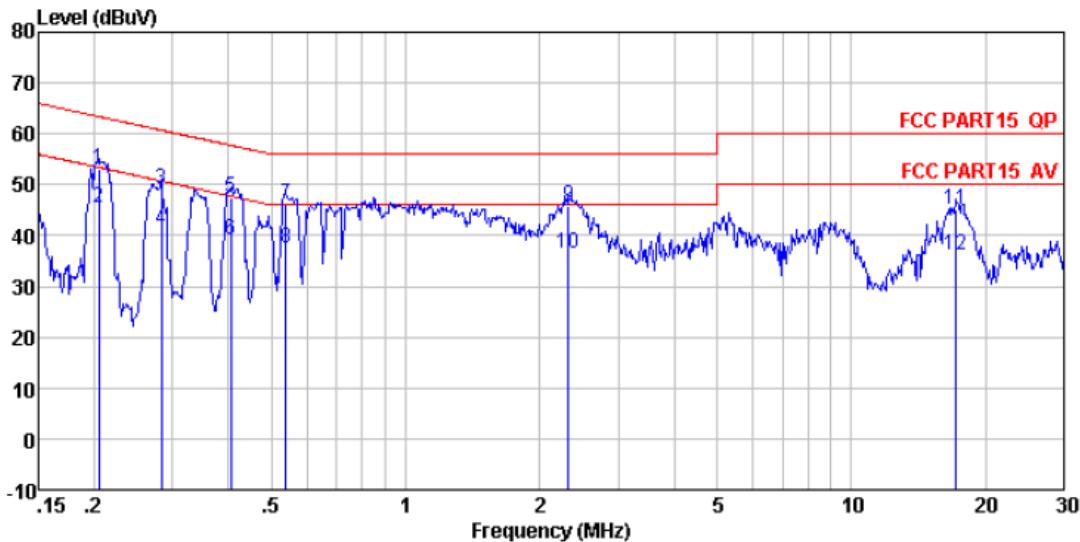
Condition : FCC PART15 QP LISN(2011) LINE

Job No. : 173RF

Test Mode : WIFI mode

Test Engineer: Aarons

Freq	Read	LISN	Cable	Limit	Over	Remark	
	MHz	Level	Factor	Loss	Level	Line	Limit
1	0.200	50.94	0.66	0.10	51.70	63.62	-11.92 QP
2	0.200	42.67	0.66	0.10	43.43	53.62	-10.19 Average
3	0.337	47.64	0.60	0.10	48.34	59.27	-10.93 QP
4	0.337	38.42	0.60	0.10	39.12	49.27	-10.15 Average
5	0.567	47.29	0.54	0.10	47.93	56.00	-8.07 QP
6	0.567	40.02	0.54	0.10	40.66	46.00	-5.34 Average
7	0.989	46.26	0.48	0.10	46.84	56.00	-9.16 QP
8	0.989	38.49	0.48	0.10	39.07	46.00	-6.93 Average
9	2.346	48.24	0.38	0.10	48.72	56.00	-7.28 QP
10	2.346	40.67	0.38	0.10	41.15	46.00	-4.85 Average
11	17.849	45.00	0.16	0.21	45.37	60.00	-14.63 QP
12	17.849	37.47	0.16	0.21	37.84	50.00	-12.16 Average

**Neutral:**

Condition : FCC PART15 QP LISN(2011) NEUTRAL

Job No. : 173RF

Test Mode : WIFI mode

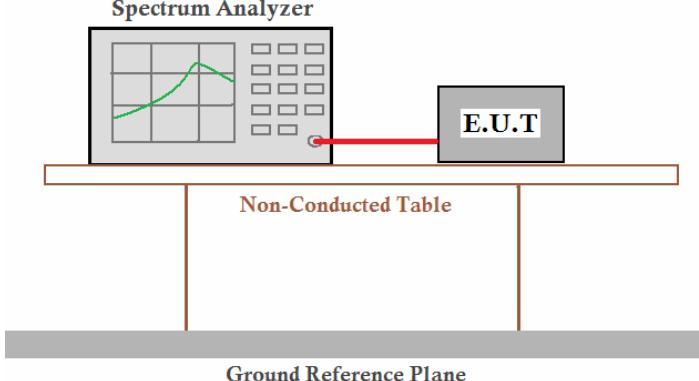
Test Engineer: Aarons

Freq	Read	LISN	Cable	Limit	Line	Over	Limit	Remark
	MHz	dBuV	dB					
1	0.205	52.24	0.65	0.10	52.99	63.40	-10.41	QP
2	0.205	44.67	0.65	0.10	45.42	53.40	-7.98	Average
3	0.283	48.38	0.62	0.10	49.10	60.72	-11.62	QP
4	0.283	40.56	0.62	0.10	41.28	50.72	-9.44	Average
5	0.406	46.74	0.58	0.10	47.42	57.73	-10.31	QP
6	0.406	38.59	0.58	0.10	39.27	47.73	-8.46	Average
7	0.538	45.36	0.55	0.10	46.01	56.00	-9.99	QP
8	0.538	36.89	0.55	0.10	37.54	46.00	-8.46	Average
9	2.321	45.45	0.38	0.10	45.93	56.00	-10.07	QP
10	2.321	36.12	0.38	0.10	36.60	46.00	-9.40	Average
11	17.199	44.78	0.16	0.20	45.14	60.00	-14.86	QP
12	17.199	35.69	0.16	0.20	36.05	50.00	-13.95	Average

**Notes:**

1. An initial pre-scan was performed on the line and neutral lines with peak detector.
2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3. Final Level =Receiver Read level + LISN Factor + Cable Loss

### 6.3 Conducted Peak Output Power

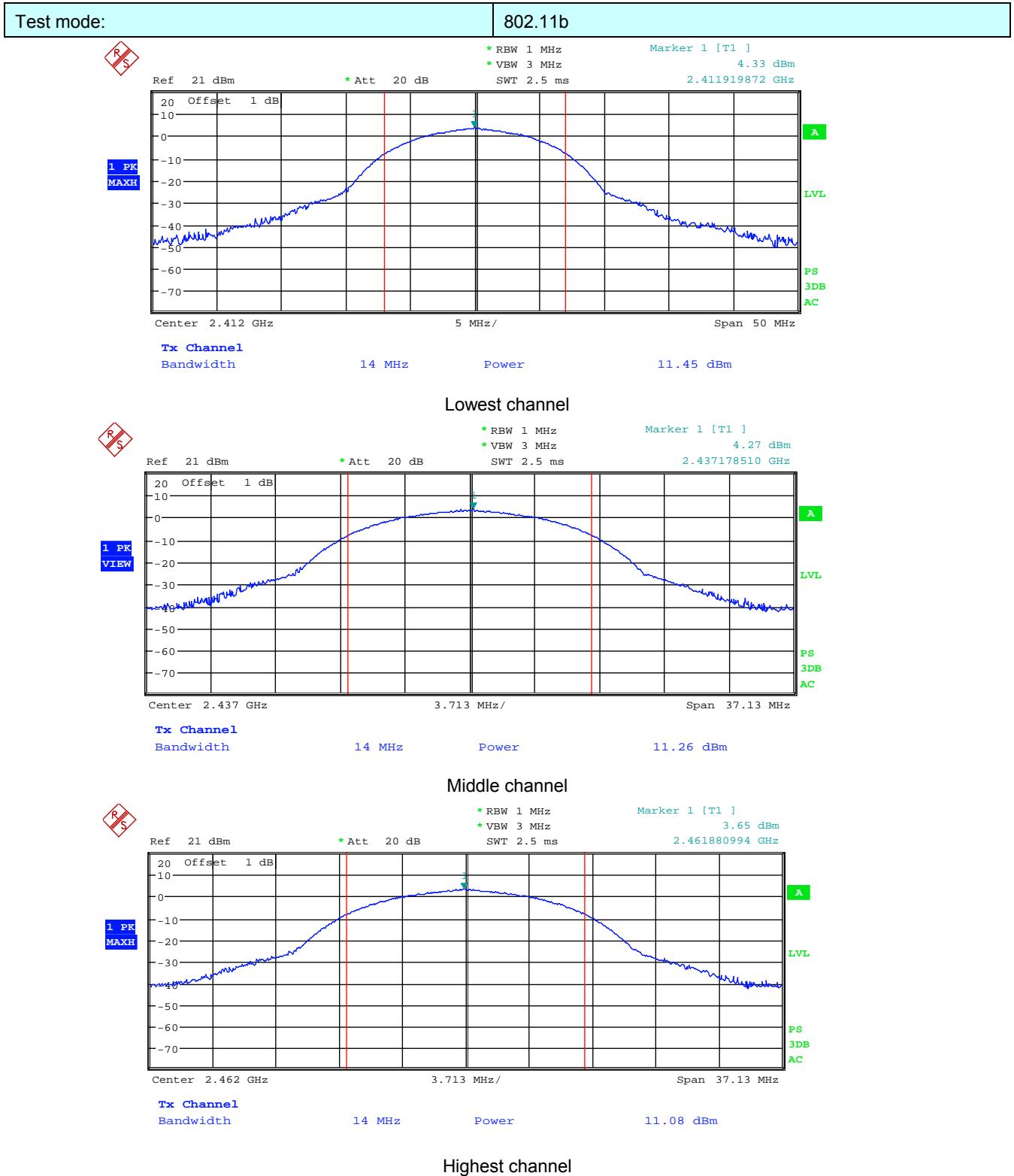
Test Requirement:	FCC Part15 C Section 15.247 (b)(3)		
Test Method:	ANSI C63.4:2003 and KDB558074 D01 Meas Guidance		
Limit:	30dBm		
Test setup:			
Test Instruments:	Refer to section 5.8 for details		
Test mode:	Refer to section 5.3 for details		
Test results:	Pass		

#### Measurement Data

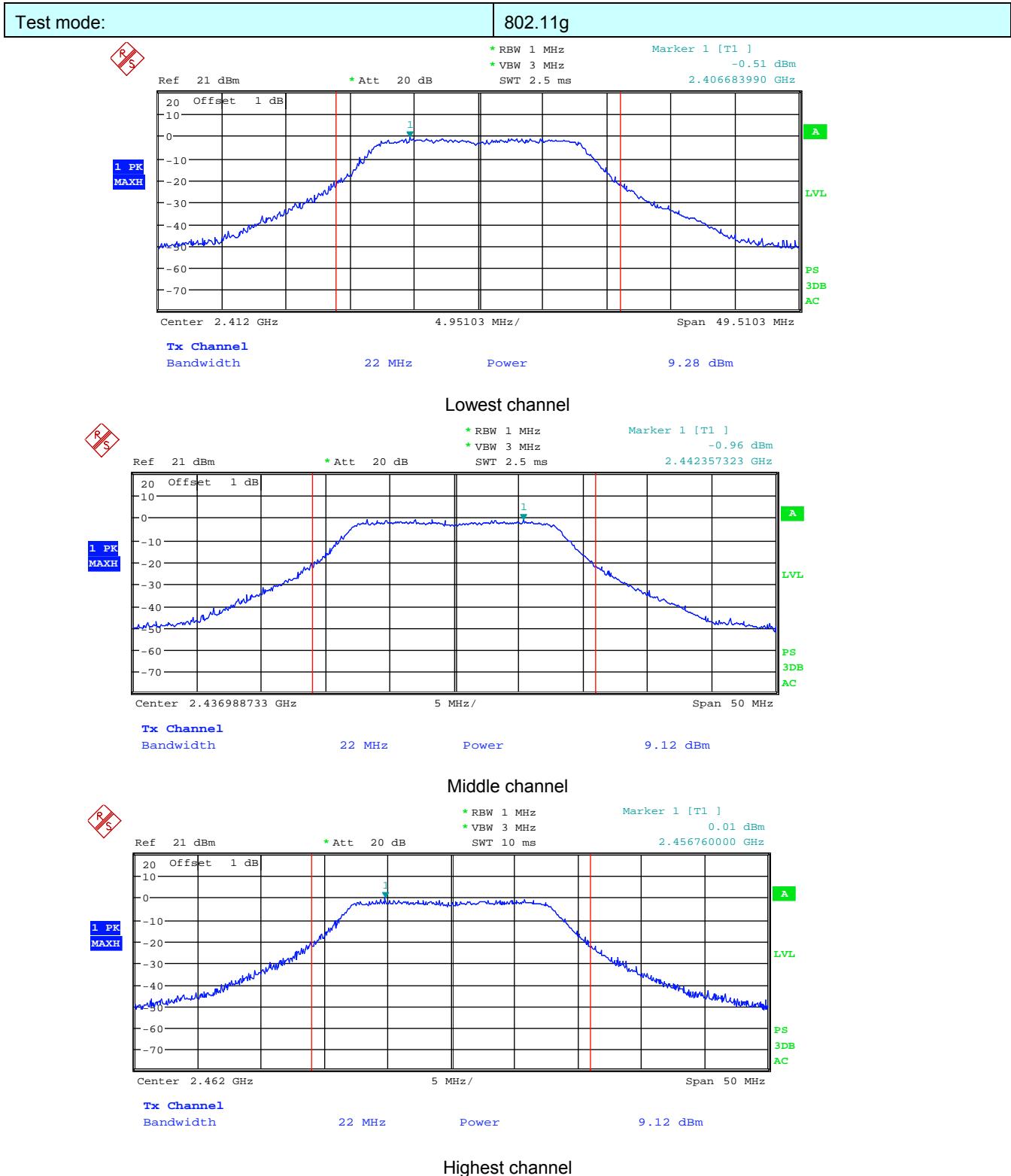
Test CH	Peak Output Power (dBm)				Limit(dBm)	Result
	802.11b	802.11g	802.11n(H20)	802.11n(H40)		
Lowest	11.45	9.28	8.55	7.51		
Middle	11.26	9.12	8.39	7.22	30.00	
Highest	11.08	9.12	8.07	7.07		Pass

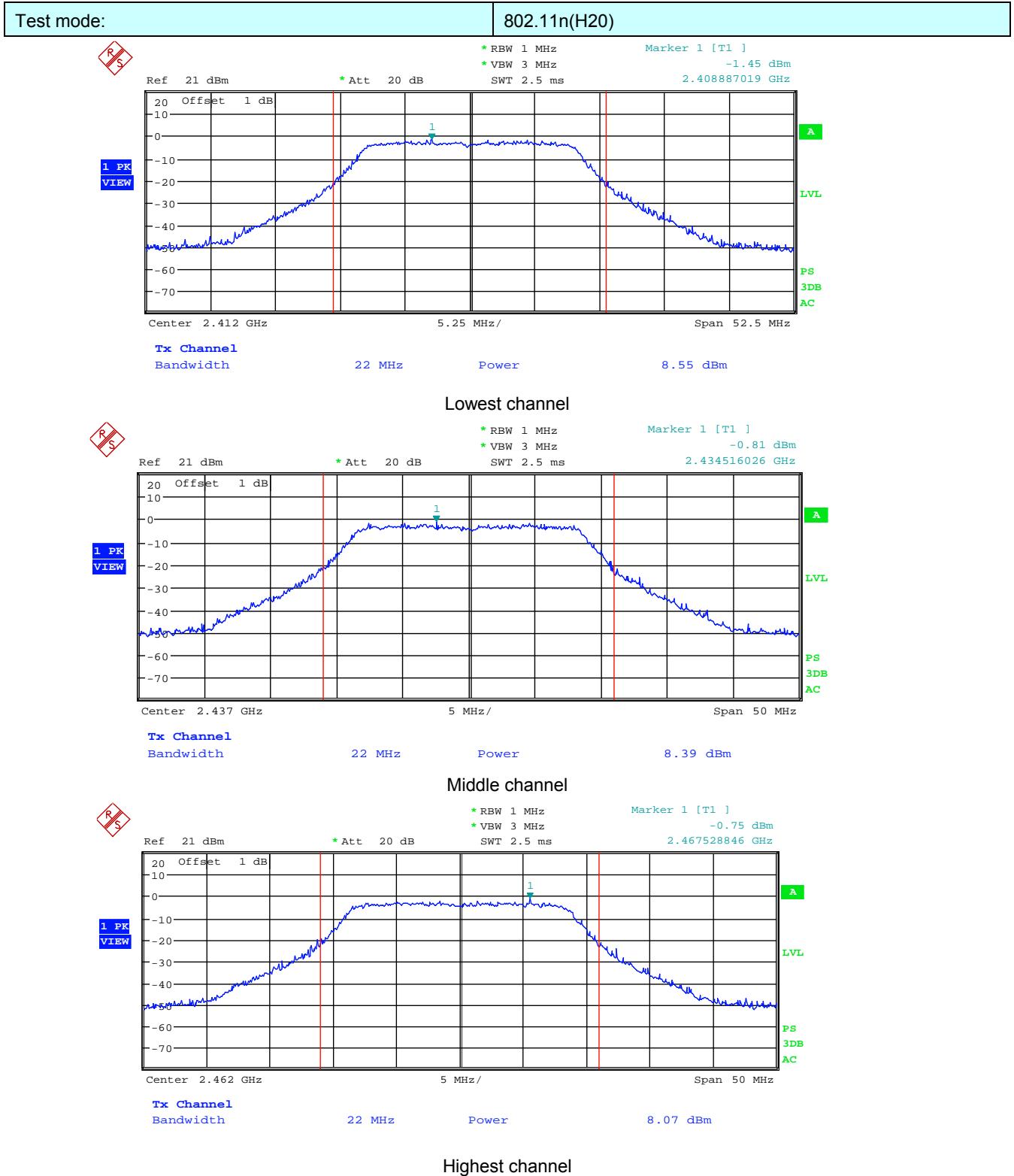
#### Test plot as follows:

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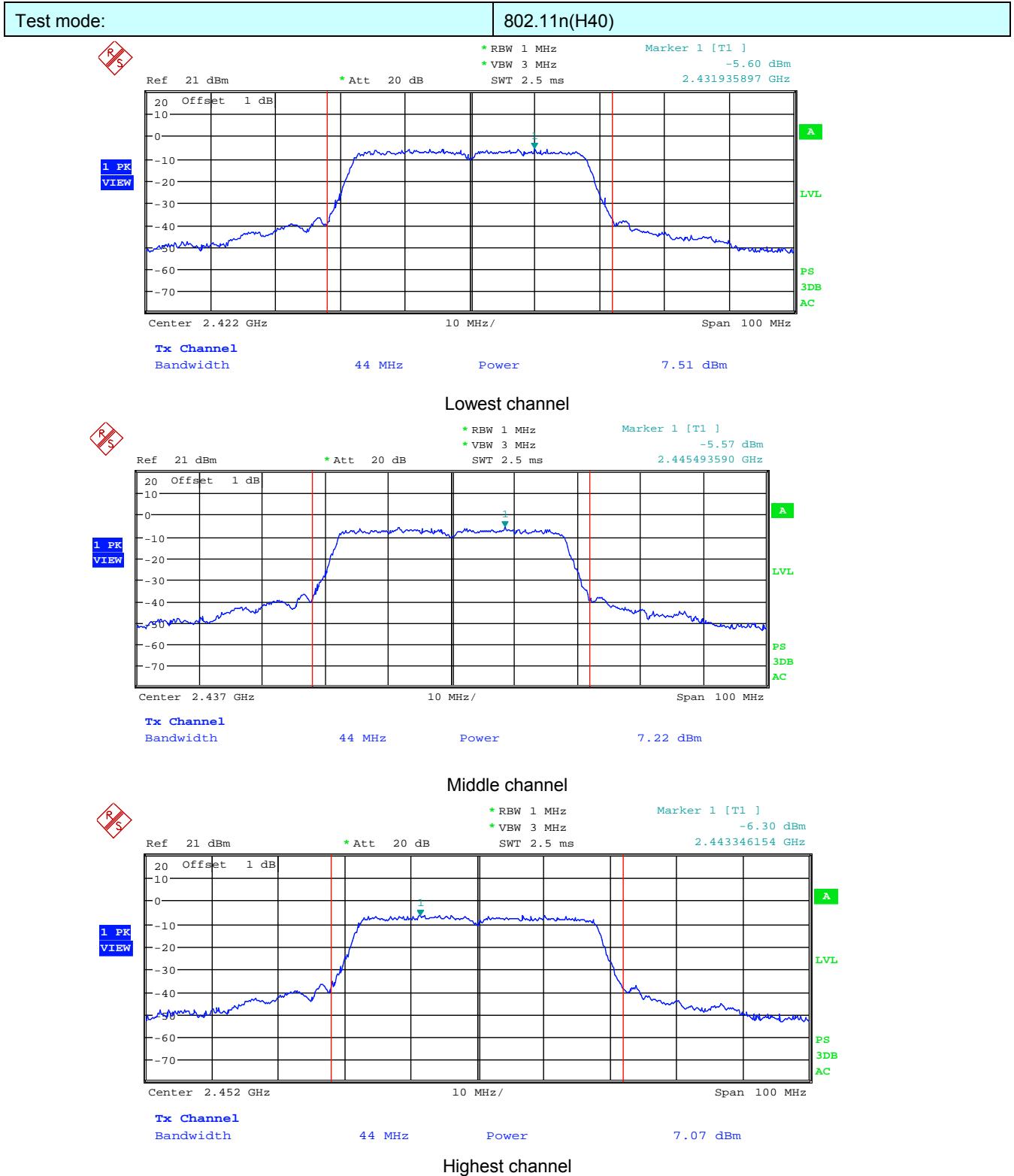


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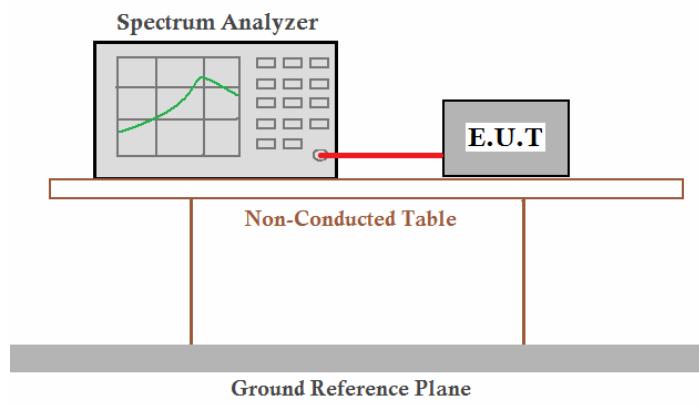


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## 6.4 Emission Bandwidth

Test Requirement:	FCC Part15 C Section 15.247 (a)(2)		
Test Method:	ANSI C63.4:2003 and KDB558074 D01 Meas Guidance		
Limit:	>500KHz		
Test setup:			
Test Instruments:	Refer to section 5.8 for details		
Test mode:	Refer to section 5.3 for details		
Test results:	Pass		

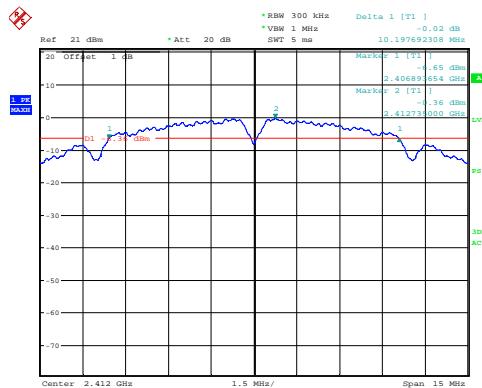
### Measurement Data

Test CH	Emission Bandwidth (MHz)				Limit(KHz)	Result
	802.11b	802.11g	802.11n(H20)	802.11n(H40)		
Lowest	10.20	16.87	17.67	36.38		
Middle	10.23	16.63	17.75	36.22		
Highest	10.23	16.51	17.75	36.14	>500	Pass

**Test plot as follows:**

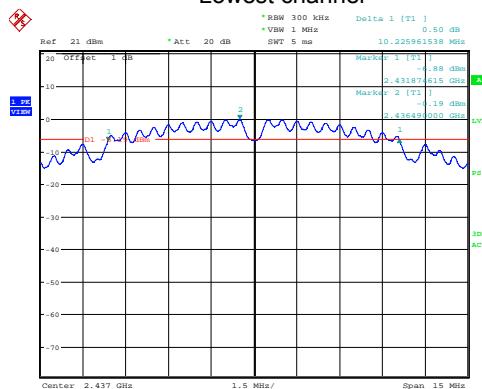
Test mode:

802.11b



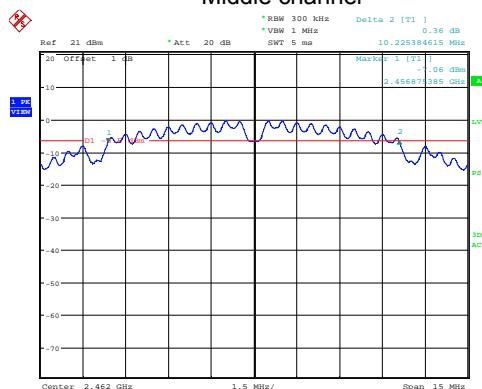
Date: 29.MAR.2012 21:22:53

## Lowest channel



Date: 29.MAR.2012 21:27:06

## Middle channel

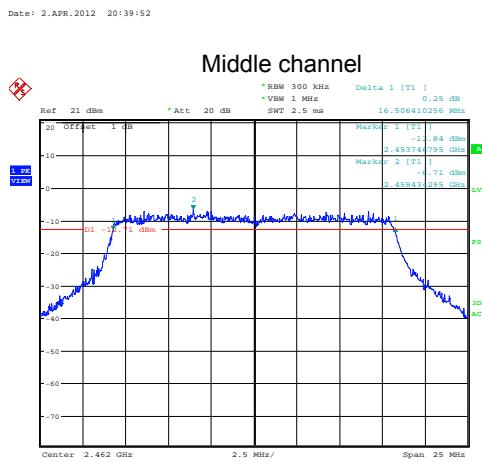
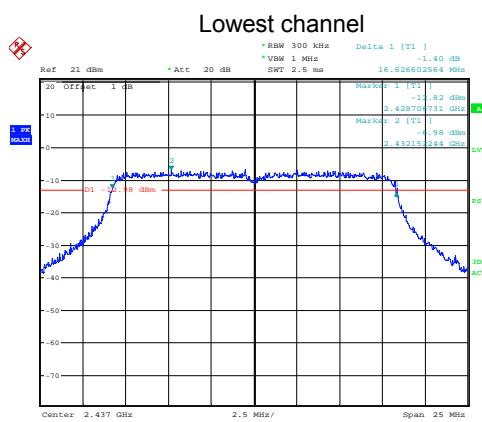
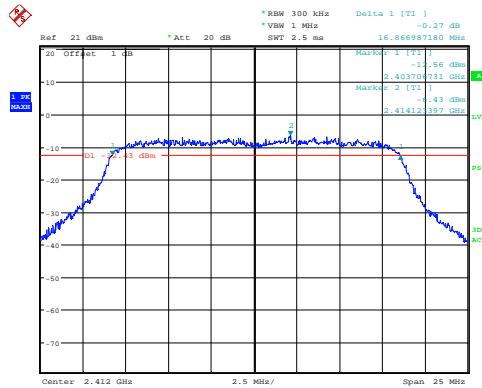


Date: 29.MAR.2012 21:30:27

## Highest channel

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Test mode:	802.11g
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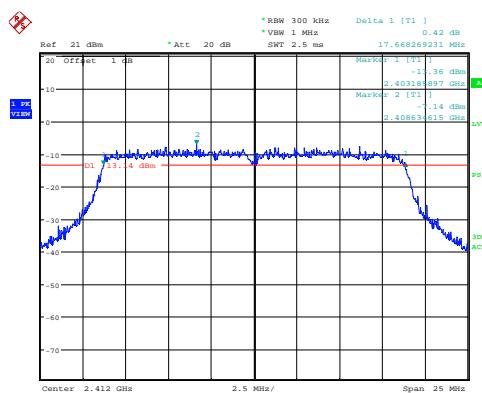


### Highest channel

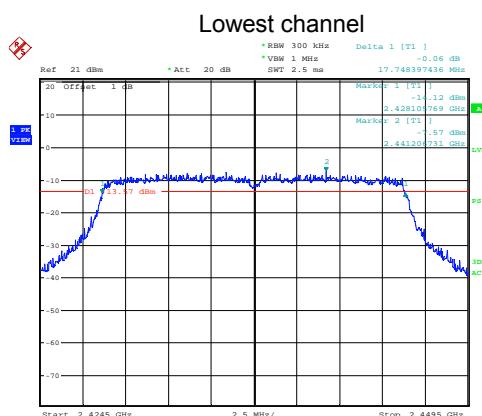
"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.ebotech.cn> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.ebotech.cn>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only."

Test mode:

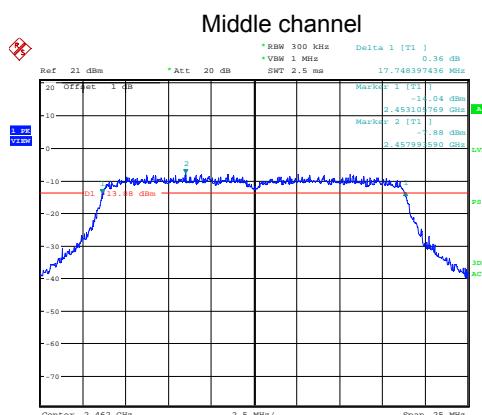
802.11n(H20)



Date: 2.APR.2012 21:46:40



Date: 2.APR.2012 22:10:25



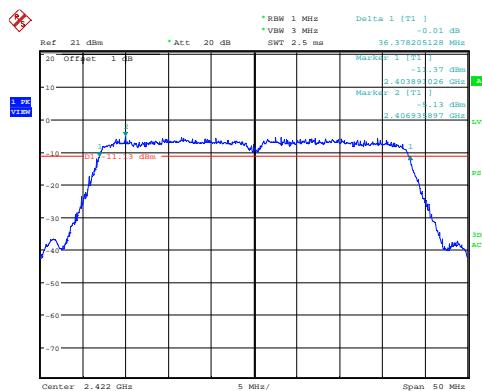
Date: 2.APR.2012 22:29:49

### Highest channel

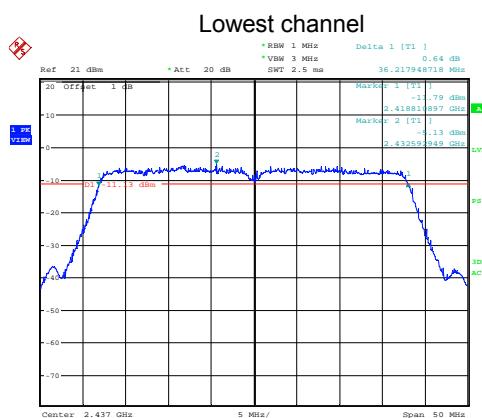
"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.ebotech.cn> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.ebotech.cn>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only."

Test mode:

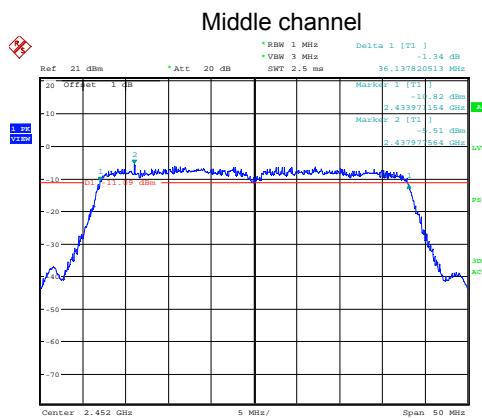
802.11n(H40)



Date: 2.APR.2012 22:53:02



Date: 2.APR.2012 23:20:07

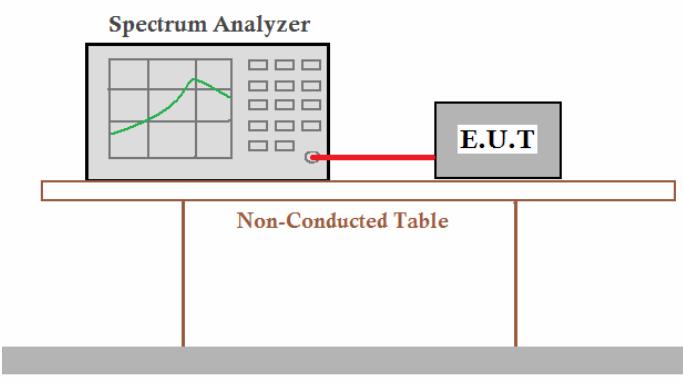


Date: 2.APR.2012 23:36:34

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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 D01 Meas Guidance	
Limit:	8dBm	
Test setup:		
Test Instruments:	Refer to section 5.8 for details	
Test mode:	Refer to section 5.3 for details	
Test results:	Pass	

### Measurement Data

Test CH	Power Spectral Density (dBm/100KHz)		BWCF	Power Spectral Density (dBm/3KHz)		Limit (dBm/3KHz)	Result
	802.11b	802.11g		802.11b	802.11g		
Lowest	-2.68	-10.98	-15.20	-17.88	-26.18	8.00	Pass
Middle	-1.94	-11.79	-15.20	-17.14	-26.99		
Highest	-2.25	-11.46	-15.20	-17.45	-26.66		
Test CH	Power Spectral Density (dBm/100KHz)		BWCF	Power Spectral Density (dBm/3KHz)		Limit (dBm/3KHz)	Result
	802.11n(H20)	802.11n(H40)		802.11n(H20)	802.11n(H40)		
Lowest	-11.37	-15.52	-15.20	-26.57	-30.72	8.00	Pass
Middle	-11.53	-15.69	-15.20	-26.73	-30.89		
Highest	-11.84	-15.84	-15.20	-27.04	-31.04		

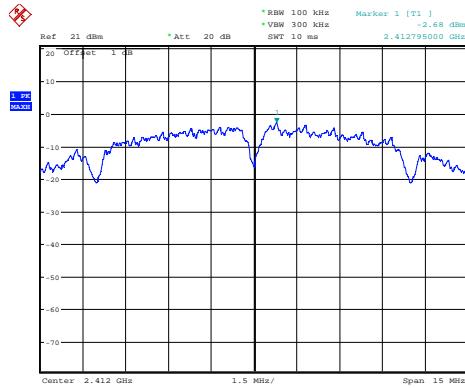
Remark: BWCF =  $10\log(3 \text{ kHz}/100 \text{ kHz}) = -15.20 \text{ dB}$

### Test plot as follows:

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Test mode:

802.11b



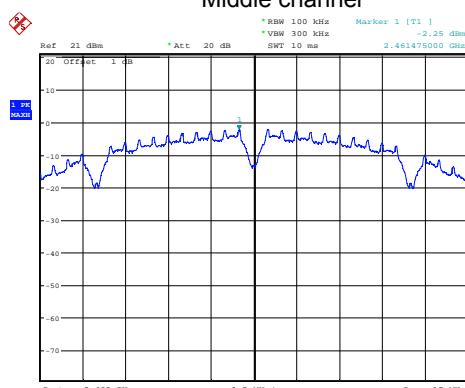
Date: 29.MAR.2012 21:23:20

## Lowest channel



Date: 29.MAR.2012 21:27:35

## Middle channel



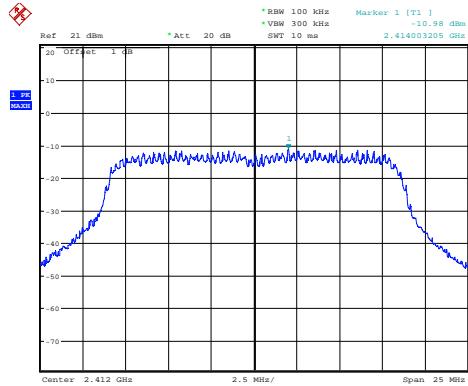
Date: 29.MAR.2012 21:30:47

## Highest channel

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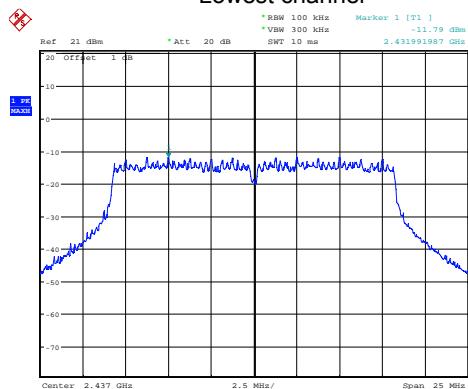
Test mode:

802.11g



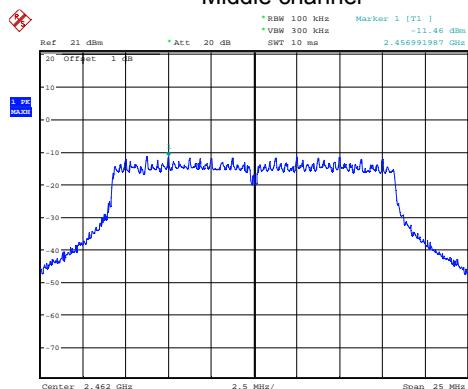
Date: 30.MAR.2012 01:32:17

## Lowest channel



Date: 2.APR.2012 20:46:56

## Middle channel

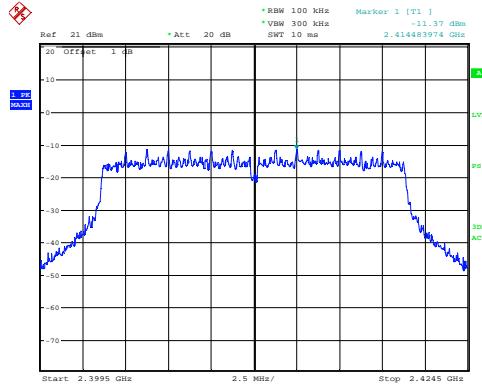


Date: 2.APR.2012 21:25:15

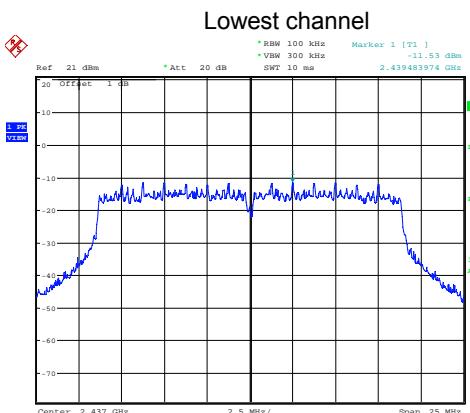
## Highest channel

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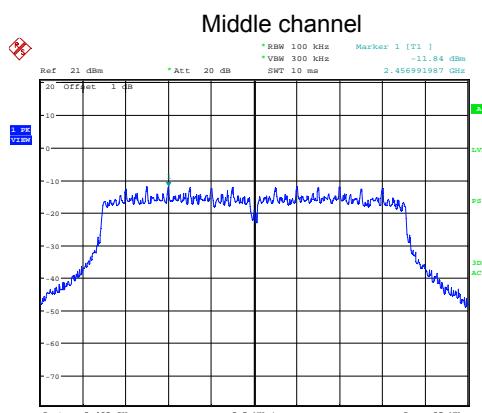
Test mode:	802.11n(H20)
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Date: 2.APR.2012 21:53:22



Date: 2.APR.2012 22:16:30

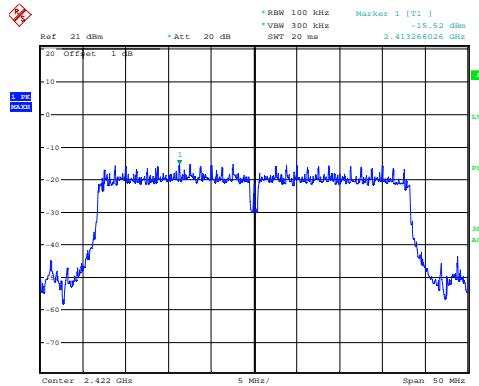


Date: 2.APR.2012 22:34:25

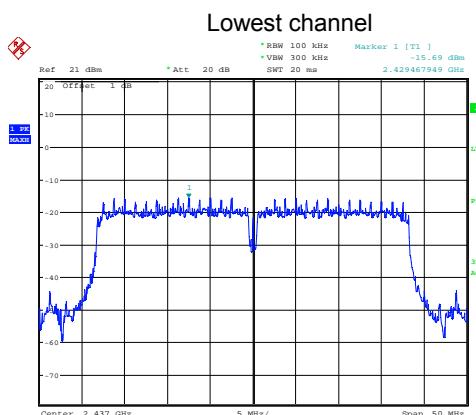
## Highest channel

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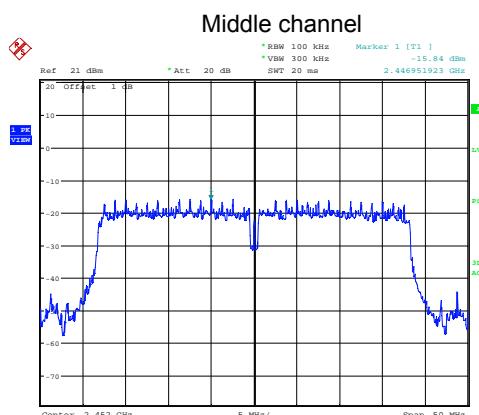
Test mode:	802.11n(H40)
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Date: 2.APR.2012 22:58:19



Date: 2.APR.2012 23:25:47



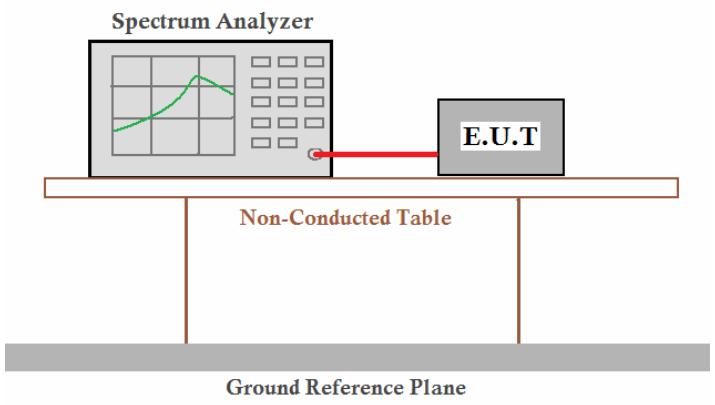
Date: 2.APR.2012 23:41:30

## Highest channel

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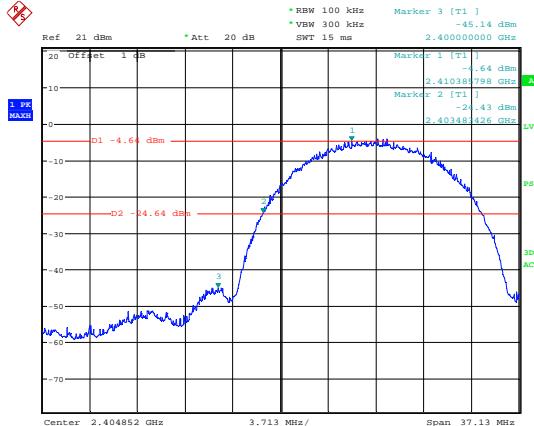
## 6.6 Band edges

### 6.6.1 Conducted Emission Method

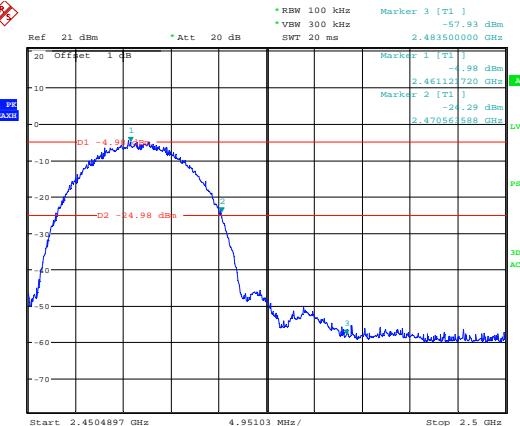
Test Requirement:	FCC Part15 C Section 15.247 (d)
Test Method:	ANSI C63.4:2003 and KDB558074 D01 Meas Guidance
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator 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:	
Test Instruments:	Refer to section 5.8 for details
Test mode:	Refer to section 5.3 for details
Test results:	Pass

**Test plot as follows:**

## Test mode:



## 802.11b



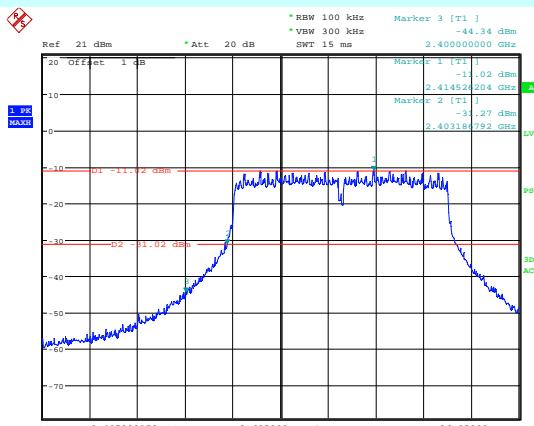
Date: 2.APR.2012 19:16:59

Date: 2.APR.2012 19:41:25

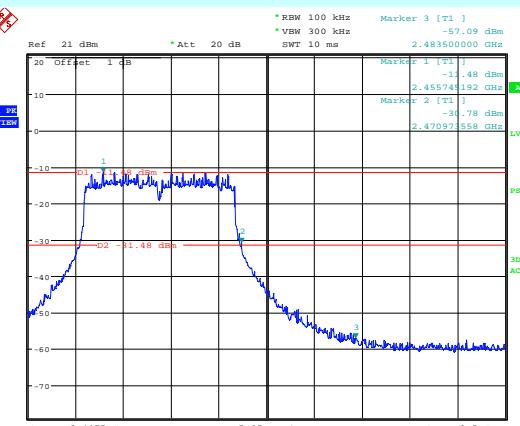
## Lowest channel

## Highest channel

## Test mode:



## 802.11g



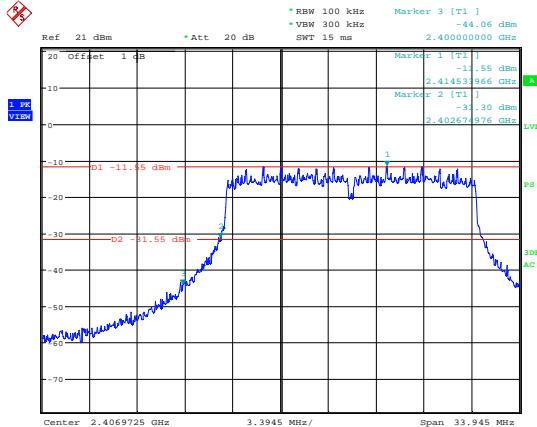
Date: 2.APR.2012 20:00:16

Date: 2.APR.2012 21:36:51

## Lowest channel

## Highest channel

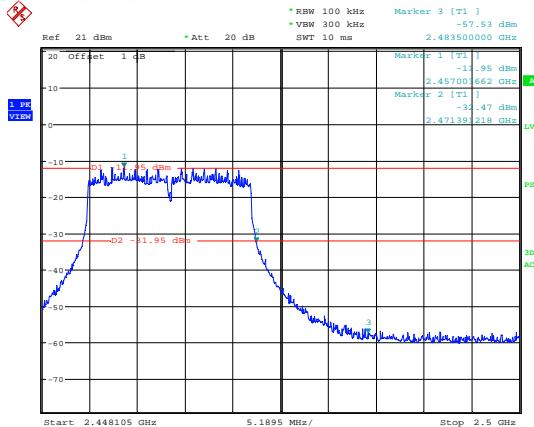
## Test mode:



Date: 2.APR.2012 22:02:30

## Lowest channel

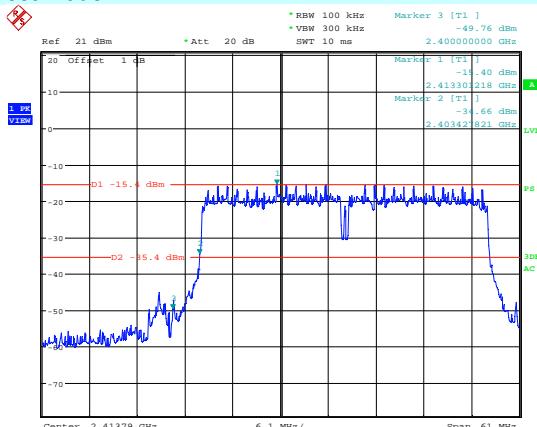
## 802.11n(H20)



Date: 2.APR.2012 22:43:06

## Highest channel

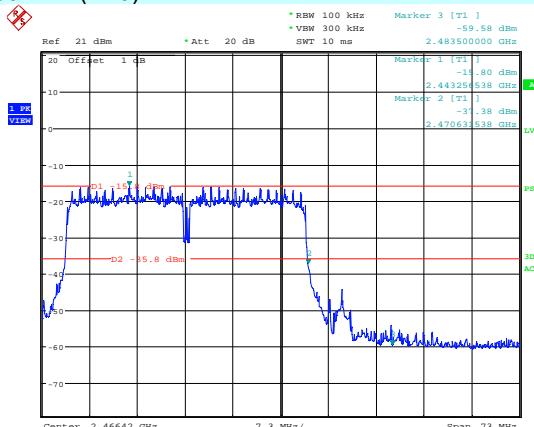
## Test mode:



Date: 2.APR.2012 23:10:15

## Lowest channel

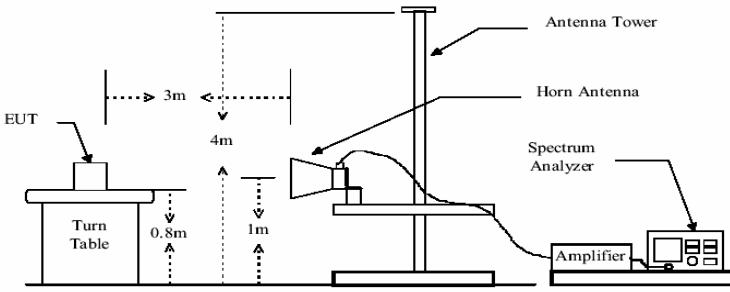
## 802.11n(H40)



Date: 2.APR.2012 23:50:16

## Highest channel

## 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:	30MHz to 25GHz, only worse case is reported						
Test site:	Measurement Distance: 3m						
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		54.00		Average Value		
			74.00		Peak Value		
Test setup:							
Test Procedure:	<ol style="list-style-type: none"> <li>1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.</li> <li>2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.</li> <li>3. 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.</li> <li>4. 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 rota table was turned from 0 degrees to 360 degrees to find the maximum reading.</li> <li>5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</li> <li>6. 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.</li> </ol>						
Test Instruments:	Refer to section 5.8 for details						
Test mode:	Refer to section 5.3 for details						
Test results:	Pass						

## Remark:

Pre-scan all kind of the place mode (X-axis, Y-axis, Z-axis), and found the Y-axis which it is worse case.

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**Measurement data:**

Test mode:	802.11b	Test channel:	Lowest
------------	---------	---------------	--------

**Peak value:**

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	43.40	27.58	3.81	32.93	41.86	74.00	-32.14	Horizontal
2400.00	43.34	27.58	3.83	32.93	41.82	74.00	-32.18	Horizontal
2390.00	43.65	27.58	3.81	32.93	42.11	74.00	-31.89	Vertical
2400.00	43.74	27.58	3.83	32.93	42.22	74.00	-31.78	Vertical

**Average value:**

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	32.15	27.58	3.81	32.93	30.61	54.00	-23.39	Horizontal
2400.00	32.04	27.58	3.83	32.93	30.52	54.00	-23.48	Horizontal
2390.00	32.30	27.58	3.81	32.93	30.76	54.00	-23.24	Vertical
2400.00	32.36	27.58	3.83	32.93	30.84	54.00	-23.16	Vertical

Test mode:	802.11b	Test channel:	Highest
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**Peak value:**

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	44.21	27.52	3.89	32.99	42.63	74.00	-31.37	Horizontal
2500.00	43.94	27.55	3.90	33.00	42.39	74.00	-31.61	Horizontal
2483.50	44.15	27.52	3.89	32.99	42.57	74.00	-31.43	Vertical
2500.00	43.80	27.55	3.90	33.00	42.25	74.00	-31.75	Vertical

**Average value:**

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	34.42	27.52	3.89	32.99	32.84	54.00	-21.16	Horizontal
2500.00	33.78	27.55	3.90	33.00	32.23	54.00	-21.77	Horizontal
2483.50	34.12	27.52	3.89	32.99	32.54	54.00	-21.46	Vertical
2500.00	33.59	27.55	3.90	33.00	32.04	54.00	-21.96	Vertical

**Remark:**

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

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Test mode:	802.11g	Test channel:	Lowest
------------	---------	---------------	--------

**Peak value:**

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	43.16	27.58	3.81	32.93	41.62	74.00	-32.38	Horizontal
2400.00	43.11	27.58	3.83	32.93	41.59	74.00	-32.41	Horizontal
2390.00	43.25	27.58	3.81	32.93	41.71	74.00	-32.29	Vertical
2400.00	43.23	27.58	3.83	32.93	41.71	74.00	-32.29	Vertical

**Average value:**

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	33.10	27.58	3.81	32.93	31.56	54.00	-22.44	Horizontal
2400.00	33.04	27.58	3.83	32.93	31.52	54.00	-22.48	Horizontal
2390.00	33.32	27.58	3.81	32.93	31.78	54.00	-22.22	Vertical
2400.00	33.25	27.58	3.83	32.93	31.73	54.00	-22.27	Vertical

Test mode:	802.11g	Test channel:	Highest
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**Peak value:**

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	44.12	27.52	3.89	32.99	42.54	74.00	-31.46	Horizontal
2500.00	44.03	27.55	3.90	33.00	42.48	74.00	-31.52	Horizontal
2483.50	44.78	27.52	3.89	32.99	43.20	74.00	-30.80	Vertical
2500.00	43.99	27.55	3.90	33.00	42.44	74.00	-31.56	Vertical

**Average value:**

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	33.84	27.52	3.89	32.99	32.26	54.00	-21.74	Horizontal
2500.00	33.59	27.55	3.90	33.00	32.04	54.00	-21.96	Horizontal
2483.50	34.12	27.52	3.89	32.99	32.54	54.00	-21.46	Vertical
2500.00	33.97	27.55	3.90	33.00	32.42	54.00	-21.58	Vertical

**Remark:**

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

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Test mode:	802.11n(H20)	Test channel:	Lowest
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**Peak value:**

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	42.98	27.58	3.81	32.93	41.44	74.00	-32.56	Horizontal
2400.00	42.95	27.58	3.83	32.93	41.43	74.00	-32.57	Horizontal
2390.00	43.05	27.58	3.81	32.93	41.51	74.00	-32.49	Vertical
2400.00	42.98	27.58	3.83	32.93	41.46	74.00	-32.54	Vertical

**Average value:**

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	34.01	27.52	3.89	32.99	32.43	54.00	-21.57	Horizontal
2400.00	33.87	27.55	3.90	33.00	32.32	54.00	-21.68	Horizontal
2390.00	33.24	27.58	3.81	32.93	31.70	54.00	-22.30	Vertical
2400.00	33.15	27.58	3.83	32.93	31.63	54.00	-22.37	Vertical

Test mode:	802.11n(H20)	Test channel:	Highest
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**Peak value:**

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	43.36	27.52	3.89	32.99	41.78	74.00	-32.22	Horizontal
2500.00	43.20	27.55	3.90	33.00	41.65	74.00	-32.35	Horizontal
2483.50	43.45	27.52	3.89	32.99	41.87	74.00	-32.13	Vertical
2500.00	43.21	27.55	3.90	33.00	41.66	74.00	-32.34	Vertical

**Average value:**

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	33.98	27.52	3.89	32.99	32.40	54.00	-21.60	Horizontal
2500.00	33.68	27.55	3.90	33.00	32.13	54.00	-21.87	Horizontal
2483.50	34.01	27.52	3.89	32.99	32.43	54.00	-21.57	Vertical
2500.00	33.87	27.55	3.90	33.00	32.32	54.00	-21.68	Vertical

**Remark:**

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Test mode:	802.11n(H40)	Test channel:	Lowest
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**Peak value:**

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	42.64	27.58	3.81	32.93	41.10	74.00	-32.90	Horizontal
2400.00	42.25	27.58	3.83	32.93	40.73	74.00	-33.27	Horizontal
2390.00	42.87	27.58	3.81	32.93	41.33	74.00	-32.67	Vertical
2400.00	42.65	27.58	3.83	32.93	41.13	74.00	-32.87	Vertical

**Average value:**

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	33.25	27.58	3.81	32.93	31.71	54.00	-22.29	Horizontal
2400.00	33.12	27.58	3.83	32.93	31.60	54.00	-22.40	Horizontal
2390.00	33.46	27.58	3.81	32.93	31.92	54.00	-22.08	Vertical
2400.00	33.25	27.58	3.83	32.93	31.73	54.00	-22.27	Vertical

Test mode:	802.11n(H40)	Test channel:	Highest
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**Peak value:**

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	43.56	27.52	3.89	32.99	41.98	74.00	-32.02	Horizontal
2500.00	43.33	27.55	3.90	33.00	41.78	74.00	-32.22	Horizontal
2483.50	43.57	27.52	3.89	32.99	41.99	74.00	-32.01	Vertical
2500.00	43.46	27.55	3.90	33.00	41.91	74.00	-32.09	Vertical

**Average value:**

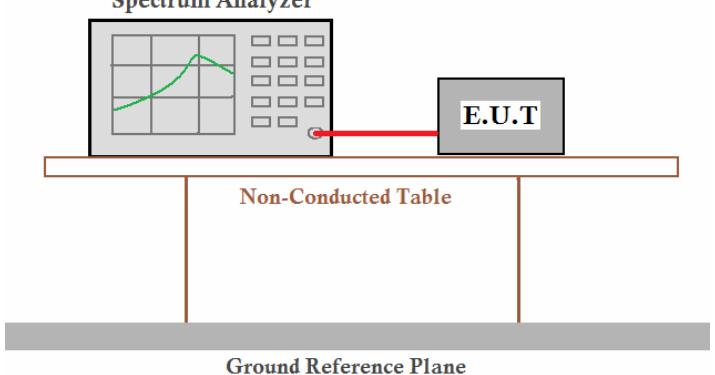
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2483.50	33.64	27.52	3.89	32.99	32.06	54.00	-21.94	Horizontal
2500.00	33.48	27.55	3.90	33.00	31.93	54.00	-22.07	Horizontal
2483.50	33.79	27.52	3.89	32.99	32.21	54.00	-21.79	Vertical
2500.00	33.54	27.55	3.90	33.00	31.99	54.00	-22.01	Vertical

**Remark:**

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

## 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 D01 Meas Guidance
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 style="text-align: center;"><b>Spectrum Analyzer</b></p>  <p style="text-align: center;">Non-Conducted Table</p> <p style="text-align: center;">Ground Reference Plane</p>
Test Instruments:	Refer to section 5.8 for details
Test mode:	Refer to section 5.3 for details
Test results:	Pass

**Test plot as follows:**

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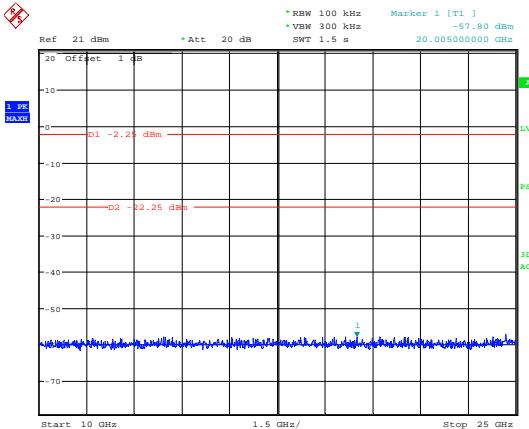
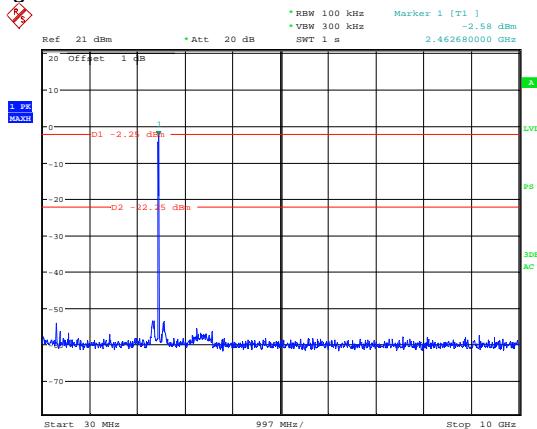
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## Highest channel



Date: 29.MAR.2012 21:31:14

Date: 29.MAR.2012 21:31:28

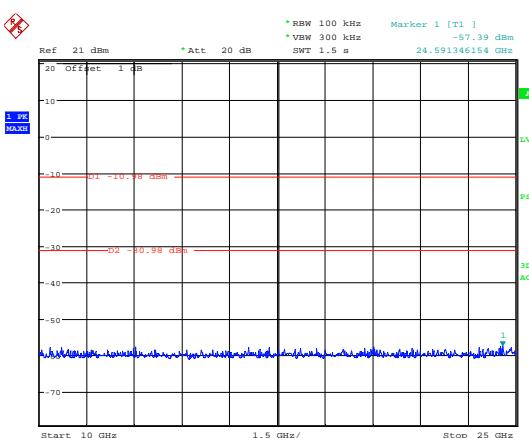
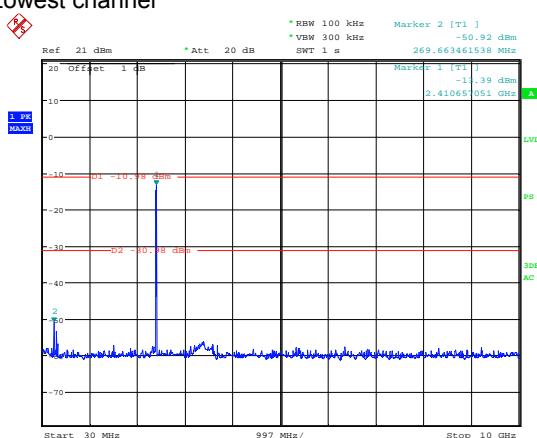
30MHz~10GHz

10GHz~25GHz

Test mode:

802.11g

## Lowest channel



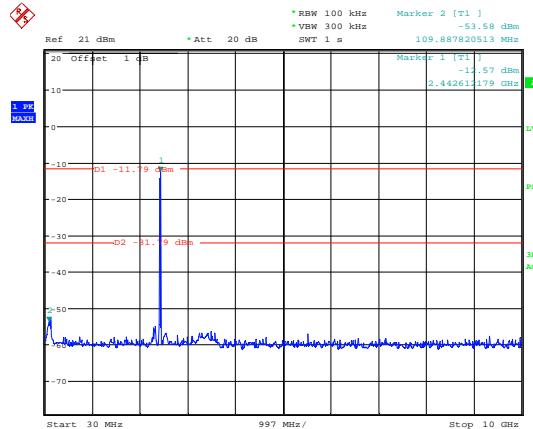
Date: 30.MAR.2012 01:32:50

Date: 30.MAR.2012 01:33:04

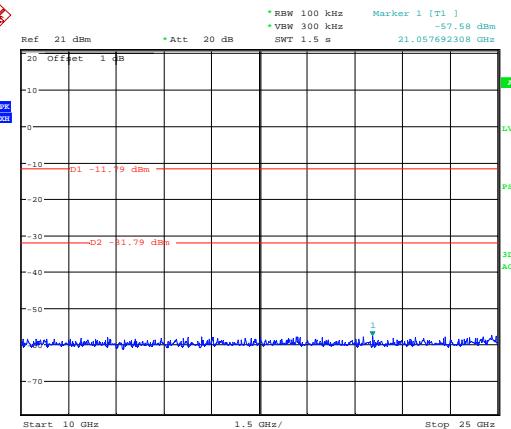
30MHz~10GHz

10GHz~25GHz

## Middle channel



Date: 2.APR.2012 20:47:29

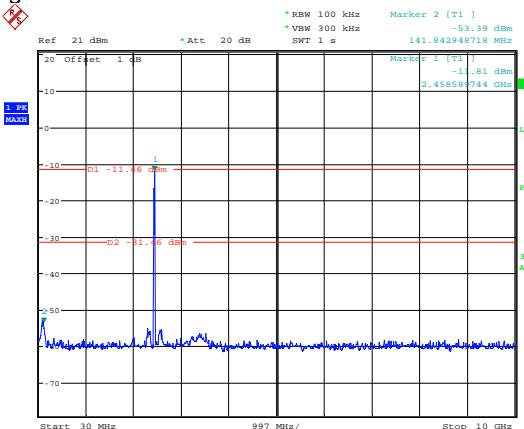


Date: 2.APR.2012 20:47:44

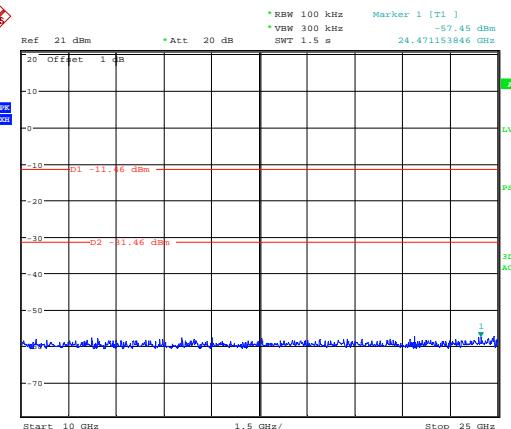
## 30MHz~10GHz

## 10GHz~25GHz

## Highest channel



Date: 2.APR.2012 21:25:45

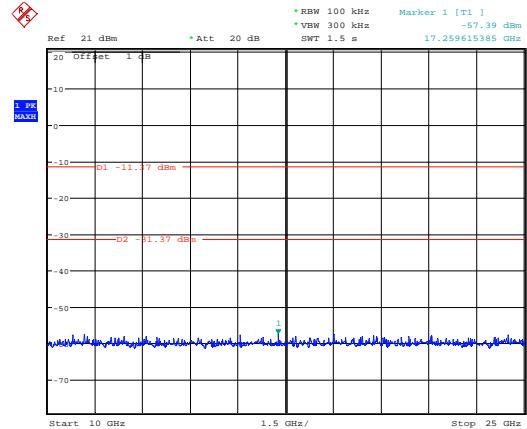
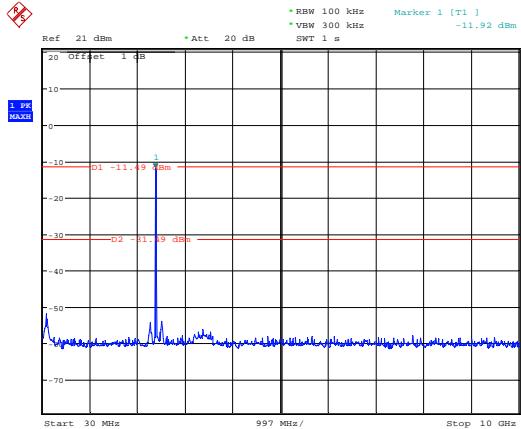


## 30MHz~10GHz

## 10GHz~25GHz

Test mode:	802.11n(H20)
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## Lowest channel



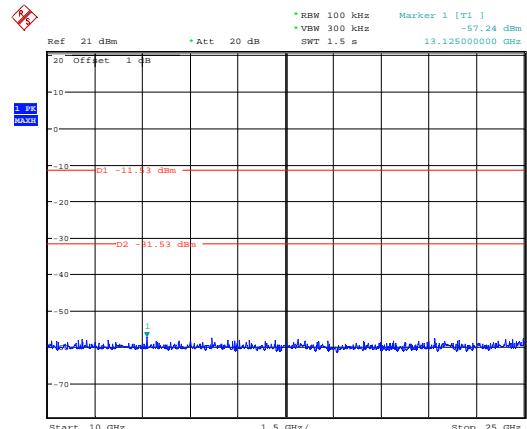
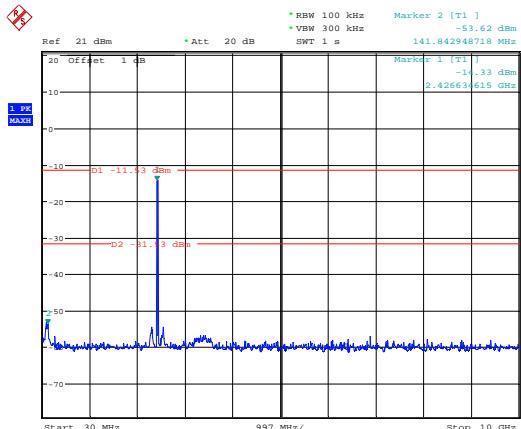
Date: 2.APR.2012 21:59:09

Date: 2.APR.2012 21:53:58

## 30MHz~10GHz

## 10GHz~25GHz

## Middle channel



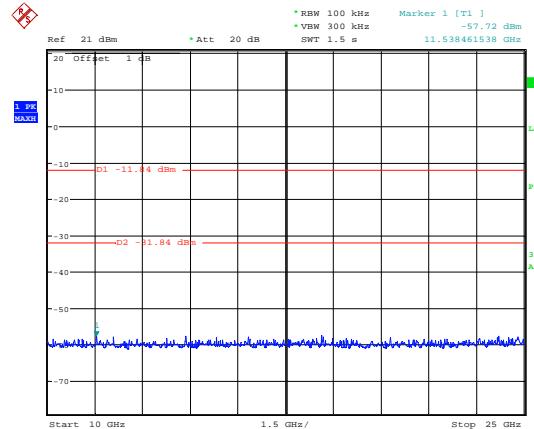
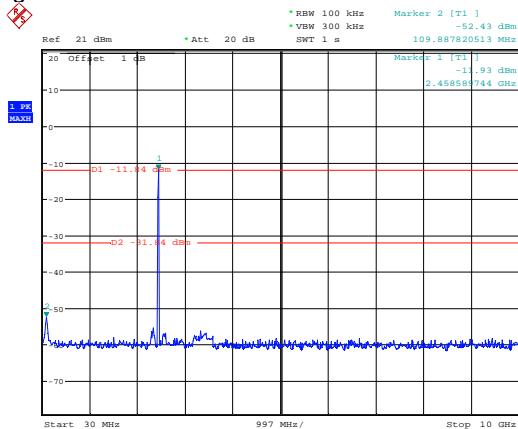
Date: 2.APR.2012 22:16:55

Date: 2.APR.2012 22:17:08

## 30MHz~10GHz

## 10GHz~25GHz

## Highest channel



Date: 2.APR.2012 22:34:46

Date: 2.APR.2012 22:34:58

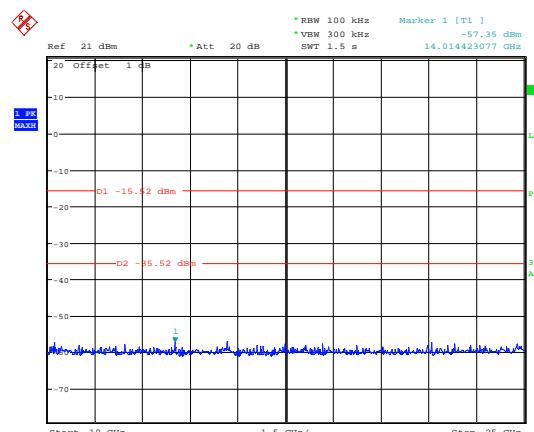
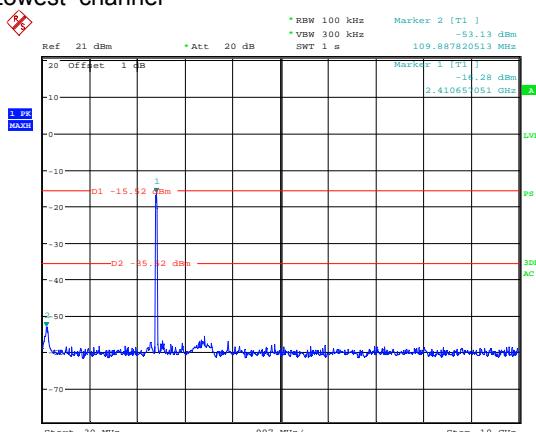
30MHz~10GHz

10GHz~25GHz

Test mode:

802.11n(H40)

## Lowest channel



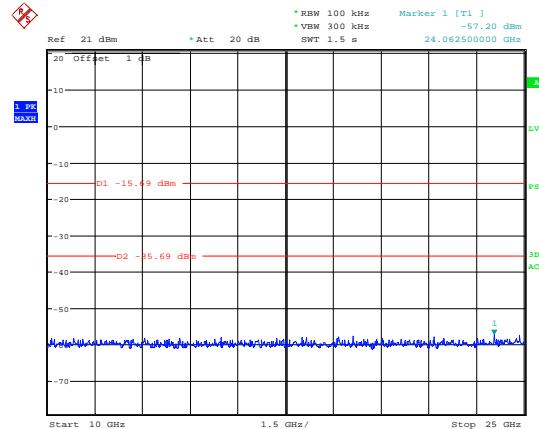
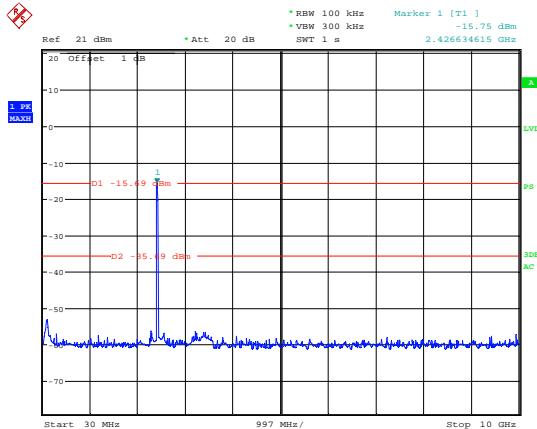
Date: 2.APR.2012 22:58:43

Date: 2.APR.2012 22:58:55

30MHz~10GHz

10GHz~25GHz

### Middle channel



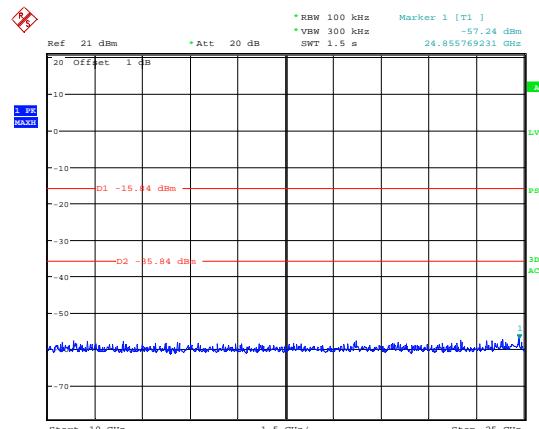
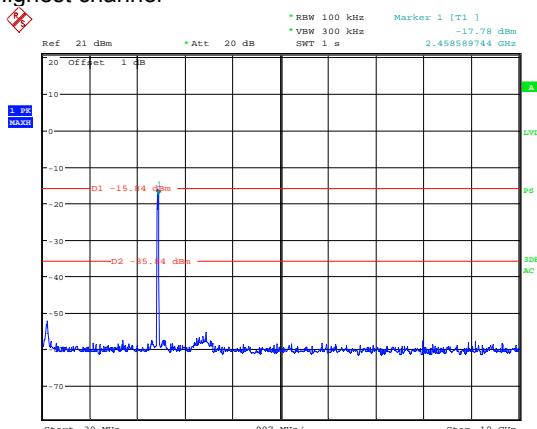
Date: 2.APR.2012 23:26:12

Date: 2.APR.2012 23:26:24

30MHz~10GHz

10GHz~25GHz

### Highest channel



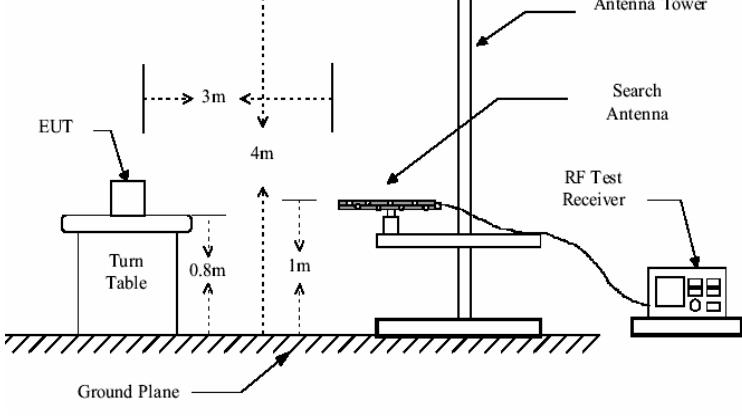
Date: 2.APR.2012 23:41:51

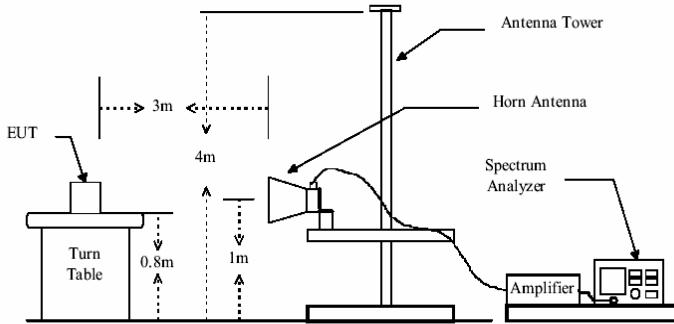
Date: 2.APR.2012 23:42:03

30MHz~10GHz

10GHz~25GHz

## 6.7.2 Radiated Emission Method

Test Requirement:	FCC Part15 C Section 15.209				
Test Method:	ANSI C63.4: 2003				
Test Frequency Range:	30MHz to 25GHz				
Test site:	Measurement Distance: 3m				
Receiver setup:	Frequency	Detector	RBW	VBW	Remark
	30MHz-1GHz	Quasi-peak	120kHz	300kHz	Quasi-peak Value
	Above 1GHz	Peak	1MHz	3MHz	Peak Value
Limit:	Frequency	Limit (dBuV/m @3m)		Remark	
	30MHz-88MHz	40.0		Quasi-peak Value	
	88MHz-216MHz	43.5		Quasi-peak Value	
	216MHz-960MHz	46.0		Quasi-peak Value	
	960MHz-1GHz	54.0		Quasi-peak Value	
	Above 1GHz	54.0		Average Value	
		74.0		Peak Value	
Test setup:	<p>Below 1GHz</p>  <p>Above 1GHz</p>				



Test Procedure:	<ol style="list-style-type: none"> <li>1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.</li> <li>2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.</li> <li>3. 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.</li> <li>4. 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 rota table was turned from 0 degrees to 360 degrees to find the maximum reading.</li> <li>5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</li> <li>6. 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.</li> </ol>
Test Instruments:	Refer to section 5.8 for details
Test mode:	Refer to section 5.3 for details
Test results:	Pass

**Remark:**

Pre-scan all kind of the place mode (X-axis, Y-axis, Z-axis), and found the Y-axis which it is worse case.

## ■ 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
66.12	46.78	13.18	0.18	31.91	28.23	40.00	-11.77	Vertical
85.03	50.25	11.15	0.22	31.79	29.83	40.00	-10.17	Vertical
153.25	48.24	11.12	0.36	32.00	27.72	43.50	-15.78	Vertical
400.13	49.68	14.20	0.81	32.32	32.37	46.00	-13.63	Vertical
665.98	47.69	18.37	1.28	31.56	35.78	46.00	-10.22	Vertical
935.01	49.32	21.70	1.78	31.48	41.32	46.00	-4.68	Vertical
33.01	52.13	14.84	0.62	32.23	35.36	40.00	-4.64	Horizontal
55.74	48.48	15.69	0.69	31.99	32.87	40.00	-7.13	Horizontal
70.20	50.99	13.43	0.82	31.89	33.35	40.00	-6.65	Horizontal
430.20	35.99	15.43	2.30	32.09	21.63	46.00	-24.37	Horizontal
596.31	36.79	19.38	2.68	31.31	27.54	46.00	-18.46	Horizontal
921.88	36.55	24.56	3.36	31.47	33.00	46.00	-13.00	Horizontal

## ■ Above 1GHz

Test mode:	802.11b	Test channel:	Lowest
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## Peak value:

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
4824.00	43.78	31.54	5.87	35.47	45.72	74.00	-28.28	Vertical
7236.00	42.98	36.50	7.10	35.30	51.28	74.00	-22.72	Vertical
9648.00	42.45	38.14	9.01	35.73	53.87	74.00	-20.13	Vertical
12060.00	*					74.00		Vertical
14472.00	*					74.00		Vertical
16884.00	*					74.00		Vertical
4824.00	44.65	31.54	5.87	35.47	46.59	74.00	-27.41	Horizontal
7236.00	43.12	36.50	7.10	35.30	51.42	74.00	-22.58	Horizontal
9648.00	42.41	38.14	9.01	35.73	53.83	74.00	-20.17	Horizontal
12060.00	*					74.00		Horizontal
14472.00	*					74.00		Horizontal
16884.00	*					74.00		Horizontal

## Average value:

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
4824.00	33.65	31.54	5.87	35.47	35.59	54.00	-18.41	Vertical
7236.00	32.76	36.50	7.10	35.30	41.06	54.00	-12.94	Vertical
9648.00	32.24	38.14	9.01	35.73	43.66	54.00	-10.34	Vertical
12060.00	*					54.00		Vertical
14472.00	*					54.00		Vertical
16884.00	*					54.00		Vertical
4824.00	34.12	31.54	5.87	35.47	36.06	54.00	-17.94	Horizontal
7236.00	33.48	36.50	7.10	35.30	41.78	54.00	-12.22	Horizontal
9648.00	32.69	38.14	9.01	35.73	44.11	54.00	-9.89	Horizontal
12060.00	*					54.00		Horizontal
14472.00	*					54.00		Horizontal
16884.00	*					54.00		Horizontal

## Remark:

- Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
- \*\*, means this data is the too weak instrument of signal is unable to test.

Test mode:	802.11b	Test channel:	Middle
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**Peak value:**

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
4874.00	43.34	31.57	5.91	35.48	45.34	74.00	-28.66	Vertical
7311.00	42.57	36.48	7.14	35.28	50.91	74.00	-23.09	Vertical
9748.00	42.31	38.45	9.06	35.75	54.07	74.00	-19.93	Vertical
12185.00	*					74.00		Vertical
14682.00	*					74.00		Vertical
17179.00	*					74.00		Vertical
4874.00	43.98	31.57	5.91	35.48	45.98	74.00	-28.02	Horizontal
7311.00	43.05	36.48	7.14	35.28	51.39	74.00	-22.61	Horizontal
9748.00	42.38	38.45	9.06	35.75	54.14	74.00	-19.86	Horizontal
12185.00	*					74.00		Horizontal
14682.00	*					74.00		Horizontal
17179.00	*					74.00		Horizontal

**Average value:**

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
4874.00	33.24	31.57	5.91	35.48	35.24	54.00	-18.76	Vertical
7311.00	32.58	36.48	7.14	35.28	40.92	54.00	-13.08	Vertical
9748.00	32.19	38.45	9.06	35.75	43.95	54.00	-10.05	Vertical
12185.00	*					54.00		Vertical
14682.00	*					54.00		Vertical
17179.00	*					54.00		Vertical
4874.00	34.01	31.57	5.91	35.48	36.01	54.00	-17.99	Horizontal
7311.00	33.36	36.48	7.14	35.28	41.70	54.00	-12.30	Horizontal
9748.00	32.45	38.45	9.06	35.75	44.21	54.00	-9.79	Horizontal
12185.00	*					54.00		Horizontal
14682.00	*					54.00		Horizontal
17179.00	*					54.00		Horizontal

**Remark:**

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. \*\*, means this data is the too weak instrument of signal is unable to test.

Test mode:	802.11b	Test channel:	Highest
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**Peak value:**

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
4924.00	43.15	31.61	5.93	35.49	45.20	74.00	-28.80	Vertical
7386.00	42.26	36.52	7.16	35.24	50.70	74.00	-23.30	Vertical
9848.00	42.01	38.70	9.08	35.77	54.02	74.00	-19.98	Vertical
12310.00	*					74.00		Vertical
14772.00	*					74.00		Vertical
17234.00	*					74.00		Vertical
4924.00	43.79	31.61	5.93	35.49	45.84	74.00	-28.16	Horizontal
7386.00	42.89	36.52	7.16	35.24	51.33	74.00	-22.67	Horizontal
9848.00	42.36	38.70	9.08	35.77	54.37	74.00	-19.63	Horizontal
12310.00	*					74.00		Horizontal
14772.00	*					74.00		Horizontal
17234.00	*					74.00		Horizontal

**Average value:**

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
4924.00	33.11	31.61	5.93	35.49	35.16	54.00	-18.84	Vertical
7386.00	32.46	36.52	7.16	35.24	40.90	54.00	-13.10	Vertical
9848.00	32.15	38.70	9.08	35.77	44.16	54.00	-9.84	Vertical
12310.00	*					54.00		Vertical
14772.00	*					54.00		Vertical
17234.00	*					54.00		Vertical
4924.00	33.87	31.61	5.93	35.49	35.92	54.00	-18.08	Horizontal
7386.00	33.14	36.52	7.16	35.24	41.58	54.00	-12.42	Horizontal
9848.00	32.25	38.70	9.08	35.77	44.26	54.00	-9.74	Horizontal
12310.00	*					54.00		Horizontal
14772.00	*					54.00		Horizontal
17234.00	*					54.00		Horizontal

**Remark:**

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. \*\*, means this data is the too weak instrument of signal is unable to test.

Test mode:	802.11g	Test channel:	lowest
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**Peak value:**

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
4824.00	44.48	31.54	5.87	35.47	46.42	74.00	-27.58	Vertical
7236.00	43.24	36.50	7.10	35.30	51.54	74.00	-22.46	Vertical
9648.00	42.56	38.14	9.01	35.73	53.98	74.00	-20.02	Vertical
12060.00	*					74.00		Vertical
14472.00	*					74.00		Vertical
16884.00	*					74.00		Vertical
4824.00	44.74	31.54	5.87	35.47	46.68	74.00	-27.32	Horizontal
7236.00	43.28	36.50	7.10	35.30	51.58	74.00	-22.42	Horizontal
9648.00	43.65	38.14	9.01	35.73	55.07	74.00	-18.93	Horizontal
12060.00	*					74.00		Horizontal
14472.00	*					74.00		Horizontal
16884.00	*					74.00		Horizontal

**Average value:**

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
4824.00	34.21	31.54	5.87	35.47	36.15	54.00	-17.85	Vertical
7236.00	33.78	36.50	7.10	35.30	42.08	54.00	-11.92	Vertical
9648.00	32.65	38.14	9.01	35.73	44.07	54.00	-9.93	Vertical
12060.00	*					54.00		Vertical
14472.00	*					54.00		Vertical
16884.00	*					54.00		Vertical
4824.00	34.68	31.54	5.87	35.47	36.62	54.00	-17.38	Horizontal
7236.00	33.87	36.50	7.10	35.30	42.17	54.00	-11.83	Horizontal
9648.00	32.75	38.14	9.01	35.73	44.17	54.00	-9.83	Horizontal
12060.00	*					54.00		Horizontal
14472.00	*					54.00		Horizontal
16884.00	*					54.00		Horizontal

**Remark:**

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. \*\*, means this data is the too weak instrument of signal is unable to test.

Test mode:	802.11g	Test channel:	Middle
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**Peak value:**

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
4874.00	44.35	31.57	5.91	35.48	46.35	74.00	-27.65	Vertical
7311.00	43.46	36.48	7.14	35.28	51.80	74.00	-22.20	Vertical
9748.00	42.41	38.45	9.06	35.75	54.17	74.00	-19.83	Vertical
12185.00	*					74.00		Vertical
14472.00	*					74.00		Vertical
16884.00	*					74.00		Vertical
4874.00	44.49	31.57	5.91	35.48	46.49	74.00	-27.51	Horizontal
7311.00	43.98	36.48	7.14	35.28	52.32	74.00	-21.68	Horizontal
9748.00	43.35	38.45	9.06	35.75	55.11	74.00	-18.89	Horizontal
12185.00	*					74.00		Horizontal
14472.00	*					74.00		Horizontal
16884.00	*					74.00		Horizontal

**Average value:**

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
4874.00	34.01	31.57	5.91	35.48	36.01	54.00	-17.99	Vertical
7311.00	33.49	36.48	7.14	35.28	41.83	54.00	-12.17	Vertical
9748.00	32.54	38.45	9.06	35.75	44.30	54.00	-9.70	Vertical
12185.00	*					54.00		Vertical
14472.00	*					54.00		Vertical
16884.00	*					54.00		Vertical
4874.00	34.55	31.57	5.91	35.48	36.55	54.00	-17.45	Horizontal
7311.00	33.69	36.48	7.14	35.28	42.03	54.00	-11.97	Horizontal
9748.00	32.59	38.45	9.06	35.75	44.35	54.00	-9.65	Horizontal
12185.00	*					54.00		Horizontal
14472.00	*					54.00		Horizontal
16884.00	*					54.00		Horizontal

**Remark:**

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. \*\*\*, means this data is the too weak instrument of signal is unable to test.

Test mode:	802.11g	Test channel:	Highest
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**Peak value:**

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
4924.00	44.16	31.61	5.93	35.49	46.21	74.00	-27.79	Vertical
7386.00	43.28	36.52	7.16	35.24	51.72	74.00	-22.28	Vertical
9848.00	42.15	38.70	9.08	35.77	54.16	74.00	-19.84	Vertical
12310.00	*					74.00		Vertical
14772.00	*					74.00		Vertical
17234.00	*					74.00		Vertical
4924.00	44.26	31.61	5.93	35.49	46.31	74.00	-27.69	Horizontal
7386.00	43.68	36.52	7.16	35.24	52.12	74.00	-21.88	Horizontal
9848.00	43.10	38.70	9.08	35.77	55.11	74.00	-18.89	Horizontal
12310.00	*					74.00		Horizontal
14772.00	*					74.00		Horizontal
17234.00	*					74.00		Horizontal

**Average value:**

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
4924.00	33.89	31.61	5.93	35.49	35.94	54.00	-18.06	Vertical
7386.00	33.11	36.52	7.16	35.24	41.55	54.00	-12.45	Vertical
9848.00	32.33	38.70	9.08	35.77	44.34	54.00	-9.66	Vertical
12310.00	*					54.00		Vertical
14772.00	*					54.00		Vertical
17234.00	*					54.00		Vertical
4924.00	34.42	31.61	5.93	35.49	36.47	54.00	-17.53	Horizontal
7386.00	33.58	36.52	7.16	35.24	42.02	54.00	-11.98	Horizontal
9848.00	31.46	38.70	9.08	35.77	43.47	54.00	-10.53	Horizontal
12310.00	*					54.00		Horizontal
14772.00	*					54.00		Horizontal
17234.00	*					54.00		Horizontal

**Remark:**

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. \*\*, means this data is the too weak instrument of signal is unable to test.

Test mode:	802.11n(H20)	Test channel:	Lowest
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**Peak value:**

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
4824.00	44.32	31.54	5.87	35.47	46.26	74.00	-27.74	Vertical
7236.00	42.98	36.50	7.10	35.30	51.28	74.00	-22.72	Vertical
9648.00	42.41	38.14	9.01	35.73	53.83	74.00	-20.17	Vertical
12060.00	*					74.00		Vertical
14472.00	*					74.00		Vertical
16884.00	*					74.00		Vertical
4824.00	44.45	31.54	5.87	35.47	46.39	74.00	-27.61	Horizontal
7236.00	43.78	36.50	7.10	35.30	52.08	74.00	-21.92	Horizontal
9648.00	42.68	38.14	9.01	35.73	54.10	74.00	-19.90	Horizontal
12060.00	*					74.00		Horizontal
14472.00	*					74.00		Horizontal
16884.00	*					74.00		Horizontal

**Average value:**

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
4824.00	34.21	31.54	5.87	35.47	36.15	54.00	-17.85	Vertical
7236.00	33.65	36.50	7.10	35.30	41.95	54.00	-12.05	Vertical
9648.00	32.14	38.14	9.01	35.73	43.56	54.00	-10.44	Vertical
12060.00	*					54.00		Vertical
14472.00	*					54.00		Vertical
16884.00	*					54.00		Vertical
4824.00	34.65	31.54	5.87	35.47	36.59	54.00	-17.41	Horizontal
7236.00	33.84	36.50	7.10	35.30	42.14	54.00	-11.86	Horizontal
9648.00	32.76	38.14	9.01	35.73	44.18	54.00	-9.82	Horizontal
12060.00	*					54.00		Horizontal
14472.00	*					54.00		Horizontal
16884.00	*					54.00		Horizontal

**Remark:**

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. “\*”, means this data is the too weak instrument of signal is unable to test.

Test mode:	802.11n(H20)	Test channel:	Middle
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**Peak value:**

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
4874.00	44.25	31.57	5.91	35.48	46.25	74.00	-27.75	Vertical
7311.00	42.38	36.48	7.14	35.28	50.72	74.00	-23.28	Vertical
9748.00	42.26	38.45	9.06	35.75	54.02	74.00	-19.98	Vertical
12185.00	*					74.00		Vertical
14682.00	*					74.00		Vertical
17179.00	*					74.00		Vertical
4874.00	44.24	31.57	5.91	35.48	46.24	74.00	-27.76	Horizontal
7311.00	43.64	36.48	7.14	35.28	51.98	74.00	-22.02	Horizontal
9748.00	42.57	38.45	9.06	35.75	54.33	74.00	-19.67	Horizontal
12185.00	*					74.00		Horizontal
14682.00	*					74.00		Horizontal
17179.00	*					74.00		Horizontal

**Average value:**

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
4874.00	34.15	31.57	5.91	35.48	36.15	54.00	-17.85	Vertical
7311.00	33.62	36.48	7.14	35.28	41.96	54.00	-12.04	Vertical
9748.00	32.08	38.45	9.06	35.75	43.84	54.00	-10.16	Vertical
12185.00	*					54.00		Vertical
14682.00	*					54.00		Vertical
17179.00	*					54.00		Vertical
4874.00	34.54	31.57	5.91	35.48	36.54	54.00	-17.46	Horizontal
7311.00	33.76	36.48	7.14	35.28	42.10	54.00	-11.90	Horizontal
9748.00	32.69	38.45	9.06	35.75	44.45	54.00	-9.55	Horizontal
12185.00	*					54.00		Horizontal
14682.00	*					54.00		Horizontal
17179.00	*					54.00		Horizontal

**Remark:**

- Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
- “\*”, means this data is the too weak instrument of signal is unable to test.

Test mode:	802.11n(H20)	Test channel:	Highest
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**Peak value:**

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
4924.00	44.14	31.61	5.93	35.49	46.19	74.00	-27.81	Vertical
7386.00	42.25	36.52	7.16	35.24	50.69	74.00	-23.31	Vertical
9848.00	42.17	38.70	9.08	35.77	54.18	74.00	-19.82	Vertical
12310.00	*					74.00		Vertical
14772.00	*					74.00		Vertical
17234.00	*					74.00		Vertical
4924.00	44.08	31.61	5.93	35.49	46.13	74.00	-27.87	Horizontal
7386.00	43.16	36.52	7.16	35.24	51.60	74.00	-22.40	Horizontal
9848.00	42.23	38.70	9.08	35.77	54.24	74.00	-19.76	Horizontal
12310.00	*					74.00		Horizontal
14772.00	*					74.00		Horizontal
17234.00	*					74.00		Horizontal

**Average value:**

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
4924.00	33.98	31.61	5.93	35.49	36.03	54.00	-17.97	Vertical
7386.00	33.35	36.52	7.16	35.24	41.79	54.00	-12.21	Vertical
9848.00	32.01	38.70	9.08	35.77	44.02	54.00	-9.98	Vertical
12310.00	*					54.00		Vertical
14772.00	*					54.00		Vertical
17234.00	*					54.00		Vertical
4924.00	34.21	31.61	5.93	35.49	36.26	54.00	-17.74	Horizontal
7386.00	33.38	36.52	7.16	35.24	41.82	54.00	-12.18	Horizontal
9848.00	32.40	38.70	9.08	35.77	44.41	54.00	-9.59	Horizontal
12310.00	*					54.00		Horizontal
14772.00	*					54.00		Horizontal
17234.00	*					54.00		Horizontal

**Remark:**

- 1 Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
- 2 \*\*\*, means this data is the too weak instrument of signal is unable to test.

Test mode:	802.11n(H40)	Test channel:	Lowest
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**Peak value:**

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
4844.00	44.25	31.55	5.89	35.47	46.22	74.00	-27.78	Vertical
7266.00	43.76	36.49	7.12	35.29	52.08	74.00	-21.92	Vertical
9688.00	42.35	38.25	9.03	35.74	53.89	74.00	-20.11	Vertical
12060.00	*					74.00		Vertical
14472.00	*					74.00		Vertical
16884.00	*					74.00		Vertical
4844.00	44.36	31.55	5.89	35.47	46.33	74.00	-27.67	Horizontal
7266.00	43.85	36.49	7.12	35.29	52.17	74.00	-21.83	Horizontal
9688.00	42.35	38.25	9.03	35.74	53.89	74.00	-20.11	Horizontal
12060.00	*					74.00		Horizontal
14472.00	*					74.00		Horizontal
16884.00	*					74.00		Horizontal

**Average value:**

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
4844.00	34.12	31.55	5.89	35.47	36.09	54.00	-17.91	Vertical
7266.00	33.45	36.49	7.12	35.29	41.77	54.00	-12.23	Vertical
9688.00	32.79	38.25	9.03	35.74	44.33	54.00	-9.67	Vertical
12060.00	*					54.00		Vertical
14472.00	*					54.00		Vertical
16884.00	*					54.00		Vertical
4844.00	34.21	31.55	5.89	35.47	36.18	54.00	-17.82	Horizontal
7266.00	33.76	36.49	7.12	35.29	42.08	54.00	-11.92	Horizontal
9688.00	32.65	38.25	9.03	35.74	44.19	54.00	-9.81	Horizontal
12060.00	*					54.00		Horizontal
14472.00	*					54.00		Horizontal
16884.00	*					54.00		Horizontal

**Remark:**

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. “\*”, means this data is the too weak instrument of signal is unable to test.

Test mode:	802.11n(H40)	Test channel:	Middle
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**Peak value:**

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
4874.00	44.12	31.57	5.91	35.48	46.12	74.00	-27.88	Vertical
7311.00	43.53	36.48	7.14	35.28	51.87	74.00	-22.13	Vertical
9748.00	42.49	38.45	9.06	35.75	54.25	74.00	-19.75	Vertical
12185.00	*					74.00		Vertical
14682.00	*					74.00		Vertical
17179.00	*					74.00		Vertical
4874.00	44.21	31.57	5.91	35.48	46.21	74.00	-27.79	Horizontal
7311.00	43.64	36.48	7.14	35.28	51.98	74.00	-22.02	Horizontal
9748.00	42.20	38.45	9.06	35.75	53.96	74.00	-20.04	Horizontal
12185.00	*					74.00		Horizontal
14682.00	*					74.00		Horizontal
17179.00	*					74.00		Horizontal

**Average value:**

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
4874.00	34.05	31.57	5.91	35.48	36.05	54.00	-17.95	Vertical
7311.00	33.38	36.48	7.14	35.28	41.72	54.00	-12.28	Vertical
9748.00	32.69	38.45	9.06	35.75	44.45	54.00	-9.55	Vertical
12185.00	*					54.00		Vertical
14682.00	*					54.00		Vertical
17179.00	*					54.00		Vertical
4874.00	34.12	31.57	5.91	35.48	36.12	54.00	-17.88	Horizontal
7311.00	33.54	36.48	7.14	35.28	41.88	54.00	-12.12	Horizontal
9748.00	32.43	38.45	9.06	35.75	44.19	54.00	-9.81	Horizontal
12185.00	*					54.00		Horizontal
14682.00	*					54.00		Horizontal
17179.00	*					54.00		Horizontal

**Remark:**

- Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
- “\*”, means this data is the too weak instrument of signal is unable to test.

Test mode:	802.11n(H40)	Test channel:	Highest
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**Peak value:**

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
4904.00	44.11	31.59	5.93	35.48	46.15	74.00	-27.85	Vertical
7356.00	43.47	36.47	7.14	35.26	51.82	74.00	-22.18	Vertical
9808.00	42.36	38.64	9.08	35.76	54.32	74.00	-19.68	Vertical
12310.00	*					74.00		Vertical
14772.00	*					74.00		Vertical
17234.00	*					74.00		Vertical
4904.00	44.08	31.59	5.93	35.48	46.12	74.00	-27.88	Horizontal
7356.00	43.24	36.47	7.14	35.26	51.59	74.00	-22.41	Horizontal
9808.00	42.15	38.64	9.08	35.76	54.11	74.00	-19.89	Horizontal
12310.00	*					74.00		Horizontal
14772.00	*					74.00		Horizontal
17234.00	*					74.00		Horizontal

**Average value:**

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
4904.00	33.99	31.59	5.93	35.48	36.03	54.00	-17.97	Vertical
7356.00	33.25	36.47	7.14	35.26	41.60	54.00	-12.40	Vertical
9808.00	32.43	38.64	9.08	35.76	44.39	54.00	-9.61	Vertical
12310.00	*					54.00		Vertical
14772.00	*					54.00		Vertical
17234.00	*					54.00		Vertical
4904.00	34.05	31.59	5.93	35.48	36.09	54.00	-17.91	Horizontal
7356.00	33.36	36.47	7.14	35.26	41.71	54.00	-12.29	Horizontal
9808.00	32.21	38.64	9.08	35.76	44.17	54.00	-9.83	Horizontal
12310.00	*					54.00		Horizontal
14772.00	*					54.00		Horizontal
17234.00	*					54.00		Horizontal

**Remark:**

- 1 Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
- 2 \*\*\*, means this data is the too weak instrument of signal is unable to test.