

FCC PART 15.247
EMI MEASUREMENT AND TEST REPORT
For

Archos SA
12 Rue Ampere, Igny 91430, France

FCC ID: SOVNF13PAD

August 11, 2012

This Report Concerns: Original Report	Equipment Type: 13.3 inch Tablet PC
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Test Engineer of performing the tests:	Adam Yang <i>Adam Yang</i>
Report No.:	BST12081007Y-1RE-3
Receive EUT Date/Test Date:	August 1, 2012/ August 2-10, 2012
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1. GENERAL INFORMATION

1.1. Report information

1.1.1. This report is not a certificate of quality; it only applies to the sample of the specific product/equipment given at the time of its testing. The results are not used to indicate or imply that they are application to the similar items. In addition, such results must not be used to indicate or imply that BST approves recommends or endorses the manufacture, supplier or use of such product/equipment, or that BST in any way guarantees the later performance of the product/equipment.

1.1.2. The sample/s mentioned in this report is/are supplied by Applicant, BST therefore assumes no responsibility for the accuracy of information on the brand name, model number, origin of manufacture or any information supplied.

Additional copies of the report are available to the Applicant at an additional fee. No third part can obtain a copy of this report through BST, unless the applicant has authorized BST in writing to do so.

Test Facility -

The test site used to collect the radiated data is located on the address of

Shenzhen Certification Technology Service Co., Ltd

(FCC Registered Test Site Number: 197647) on

2F, Building B, East Area of Nanchang Second Industrial Zone, Gushu 2nd Road,

Bao'an District, shenzhen 518126, China

The Test Site is constructed and calibrated to meet the FCC requirements.

1.2. Measurement Uncertainty

Available upon request.

2. PRODUCT DESCRIPTION

2.1. EUT Description

Applicant	:	Archos SA
Address	:	12 Rue Ampere, Igny 91430, France
Manufacturer	:	Dongguan YuanFeng Technology Co., Ltd
Address	:	NO.62, South Fumin Road, Fumin Industrial Park, Dalang Town, Dongguan City, Guangdong, P.R. China
EUT Description	:	13.3 inch Tablet PC
Trade Name	:	N/A
Modulation	:	802.11b: DSSS 802.11g/n: OFDM
Wi-fi Frequency Band	:	IEEE 802.11b/g: 2412-2462MHz IEEE802.11n HT20: 2412-2462MHz IEEE802.11n HT40: 2422-2452MHz
Number of Channels	:	IEEE 802.11b/g: 11 Channels IEEE802.11n HT20: 11 Channels IEEE802.11n HT40: 7 Channels
Model Number	:	MW13-1301, MW13-1302, MW13-1303, MW13-1304, MW13-1305, MW13-1306, MW13-1307, MW13-1308, MW13-1309
Power Supply	:	DC 5V (Powered by Adapter) or DC 3.7V (Li-ion battery)
Antenna gain	:	2dBi Max.

2.2. Block Diagram of EUT Configuration

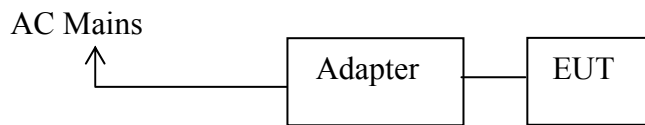


Figure 1 EUT SETUP

2.3. Support Equipment List

Table 2 Ancillary Equipment

Name	Model No	S/N	Manufacturer	Used “ √ ”
Adapter Input: AC 100-240V, 50/60Hz, 0.4A Max. Output: DC 5V, 2.5A	HNC050250X	--	HUONIU	√

2.4. Test Conditions

Temperature: 23~25

Relative Humidity: 50~63 %

After the preliminary test, we found to emit the worst emissions and therefore had been tested under operating condition.

IEEE 802.11b:

Channel Low (2412MHz), Channel Mid (2442MHz) and Channel High (2472MHz) with 1Mbps data rate were chosen for full testing.

IEEE 802.11g:

Channel Low (2412MHz), Channel Mid (2442MHz) and Channel High (2472MHz) with 6Mbps data rate were chosen for full testing.

IEEE 802.11n HT20:

Channel Low (2412MHz), Channel Mid (2442MHz) and Channel High (2472MHz) with 6.5Mbps data rate were chosen for full testing.

IEEE 802.11n HT40:

Channel Low (2422MHz), Channel Mid 2442MHz) and Channel High (2462MHz) with 13Mbps data rate were chosen for full testing.

3. FCC ID LABEL

FCC ID: SOVANF13PAD

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- 1. This device may not cause harmful interference, and**
- 2. This device must accept any interference received, including interference that may cause undesired operation.**

Label Location on EUT

EUT View/ FCC ID Label Location



4. TEST RESULTS SUMMARY

FCC 15 Subpart C, Paragraph 15.247

FCC RULES	DESCRIPTION OF TEST	RESULT
§15.247 (i) , §1.1307 (b) (1), §2.1093	RF Exposure	PASS
§15.203	Antenna Requirement	PASS
§15.207 (a)	Conducted Emissions	PASS
§15.247(d)	Spurious Emissions at Antenna Port	PASS
§15.205	Restricted Bands	PASS
§15.209, §15.205, §15.247(d)	Spurious Emissions	PASS
§15.247 (a)(2)	6 dB Bandwidth	PASS
§15.247(b)(3)	Maximum Peak Output Power	PASS
§15.247(d)	100kHz Bandwidth of Frequency Band Edge	PASS
§15.247(e)	Power Spectral Density	PASS

Statement: The EUT was setup according to ANSI C63.4-2003 and tested according to DTS test procedure of March 23, 2005 KDB558074 for compliance to FCC 47CFR 15.247 requirements.

Modifications

No modification was made.

5. TEST EQUIPMENT USED

Equipment/Facilities	Manufacturer	Model	Serial no.	Date of Cal.	Cal. Interval
3m Semi-Anechoic Chamber	Changzhou Chengyu	EC3048	N/A	May 5, 2012	1 Year
Broadband antenna	SCHWARZBECK	VULB 9168	VULB9168-438	Aug. 14, 2011	1 Year
Horn antenna	R&S	HF906	10027	Aug. 14, 2011	1 Year
ETS Horn Antenna	ETS	3160	SEL0076	May 8, 2012	1 Year
Active Loop Antenna	Beijing Daze	ZN30900A	SEL0097	Apr. 6, 2012	1 Year
Spectrum analyzer	Agilent	E4443A	MY46185649	Apr. 6, 2012	1 Year
Test receiver	R&S	ESCI	100492	Apr. 6, 2012	1 Year
Test receiver	R&S	ESCI	101202	Apr. 6, 2012	1 Year
L.I.S.N.	SCHWARZBECK	NSLK8126	8126466	Apr. 6, 2012	1 Year
L.I.S.N.	SCHWARZBECK	NSLK8126	8126487	Apr. 6, 2012	1 Year
Cable	Resenberger	N/A	NO.1	Apr. 6, 2012	1 Year
Cable	SCHWARZBECK	N/A	NO.2	Apr. 6, 2012	1 Year
Cable	SCHWARZBECK	N/A	NO.3	Apr. 6, 2012	1 Year
Pre-amplifier	SCHWARZBECK	BBV9743	9743-019	Apr. 6, 2012	1 Year
Pre-amplifier	R&S	AFS33-1800 2650-30-8P-44	SEL0080	Apr. 6, 2012	1 Year

6. §15.247 (I) AND §1.1307 (B) (1), §2.1093 – RF EXPOSURE

6.1. Standard Applicable

According to §15.247 (i) and §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

According to KDB 447498 D01 Mobile Portable RF Exposure V04 , no SAR required if power is lower than the flowing threshold:

When routine evaluation is required for SAR and the output power is $\leq 60/f(\text{GHz})$ mW, the test reduction and test exclusion procedures given herein, or in KDB 616217 and its supplement or KDB 648474, are applicable.

A device may be used in portable exposure conditions with no restrictions on host platforms when either the source-based time-averaged output power is $\leq 60/f(\text{GHz})$ mW or all measured 1-g SAR are < 0.4 W/kg. When SAR evaluation is required, the most conservative exposure conditions for all expected operating configurations must be tested.

6.2. Test Result

Measurement Result:

The Max conducted output power = 10.72dBm

Antenna gain = 2 dBi

SAR exclusion threshold= $60/f=60/2.437=24.62$ mW = 13.91 dBm > 12.72 dBm

So the SAR measurement is not required.

7. §15.203 - ANTENNA REQUIREMENT

7.1. Standard Applicable

According to § 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the user of a standard antenna Adam Yang or electrical connector is prohibited. The structure and application of the EUT were analyzed to determine compliance with section §15.203 of the rules. §15.203 state that the subject device must meet the following criteria:

- a. Antenna must be permanently attached to the unit.
- b. Antenna must use a unique type of connector to attach to the EUT.

Unit must be professionally installed, and installer shall be responsible for verifying that the correct antenna is employed with the unit.

And according to FCC 47 CFR section 15.247 (b), if the transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

7.2. Antenna Connector Construction

The antenna used for this product is a short metal soldered wire. The antenna is permanently attached. Refer to the product photo.

8. §15.207 - CONDUCTED EMISSIONS

8.1. Applicable Standard

The specification used was with the FCC Part 15.207 limits.

8.2. Test Procedure

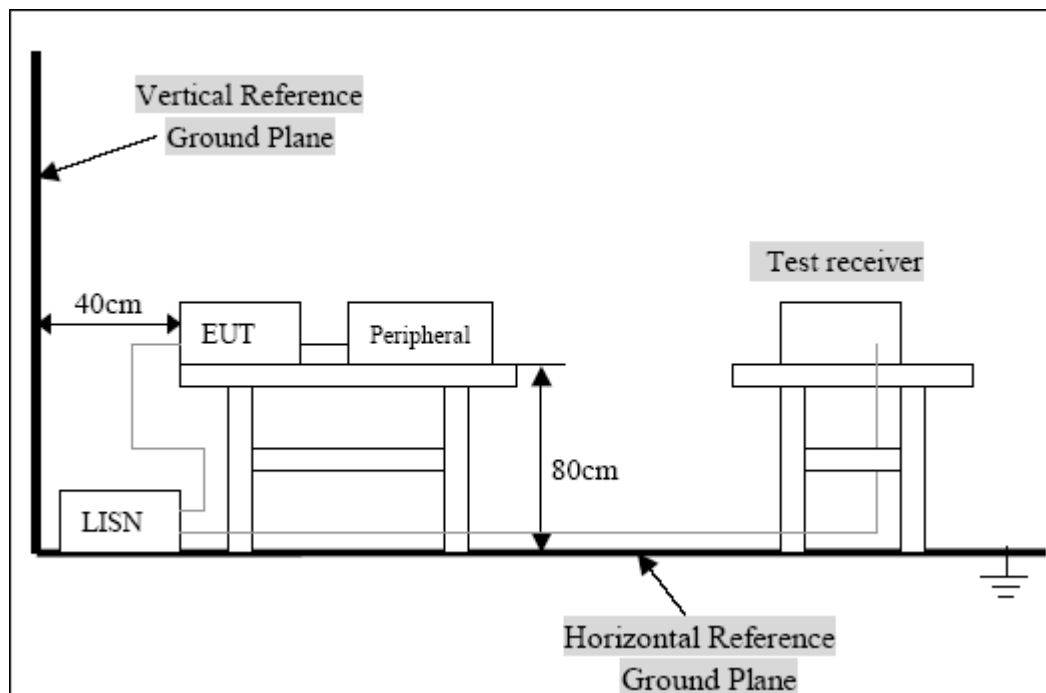
During the conducted emission test, the EUT was connected to the outlet of the LISN. Maximizing procedure was performed on the six (6) highest emissions of the EUT. All data was recorded in the Quasi-peak and average detection mode.

8.3. Conducted Power line Emission Limits

FCC Part 15 Paragraph 15.207 (dBuV)		
Frequency Range (MHz)	Class A QP/AV	Class B QP/AV
0.15-0.5	79/66	65-56/56-46
0.5-5.0	73/60	56-46
5.0-3.0	73/60	60-50

Note: In the above table, the tighter limit applies at the band edges.

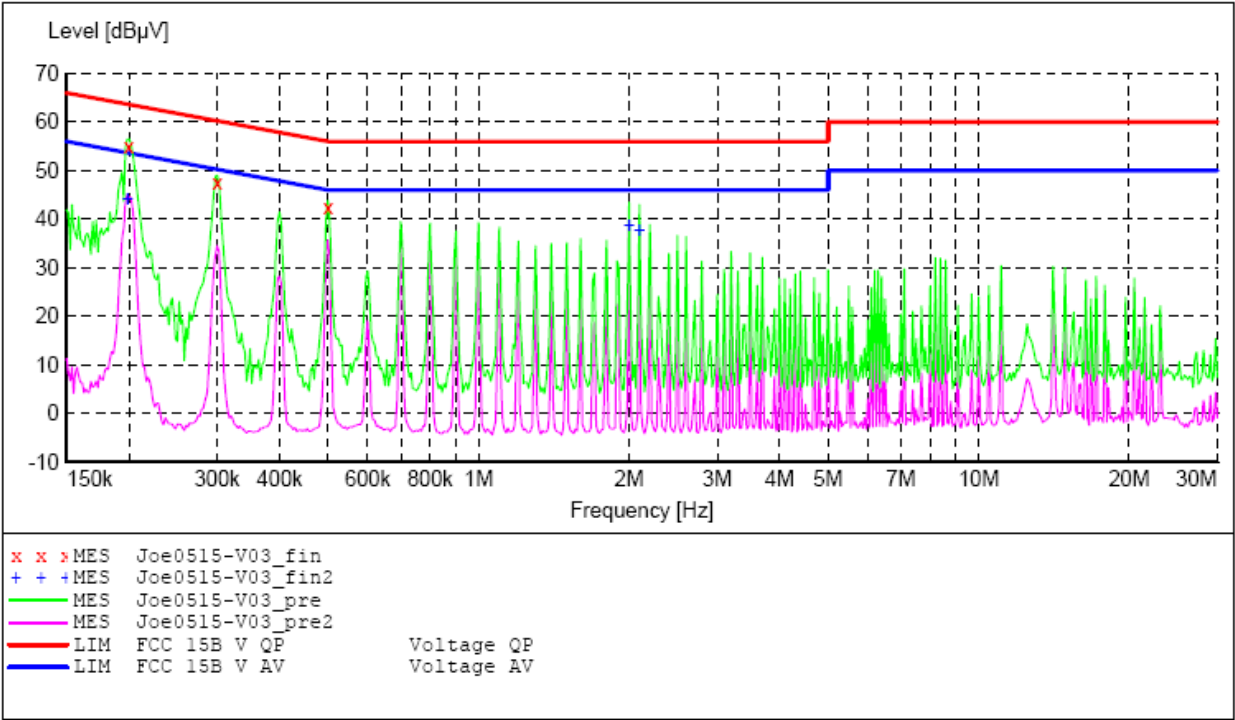
8.4. Block Diagram of Test Setup



8.5. Conducted Power Line Test Result

Pass.

The worst test mode: Wi-Fi TX 2437MHz

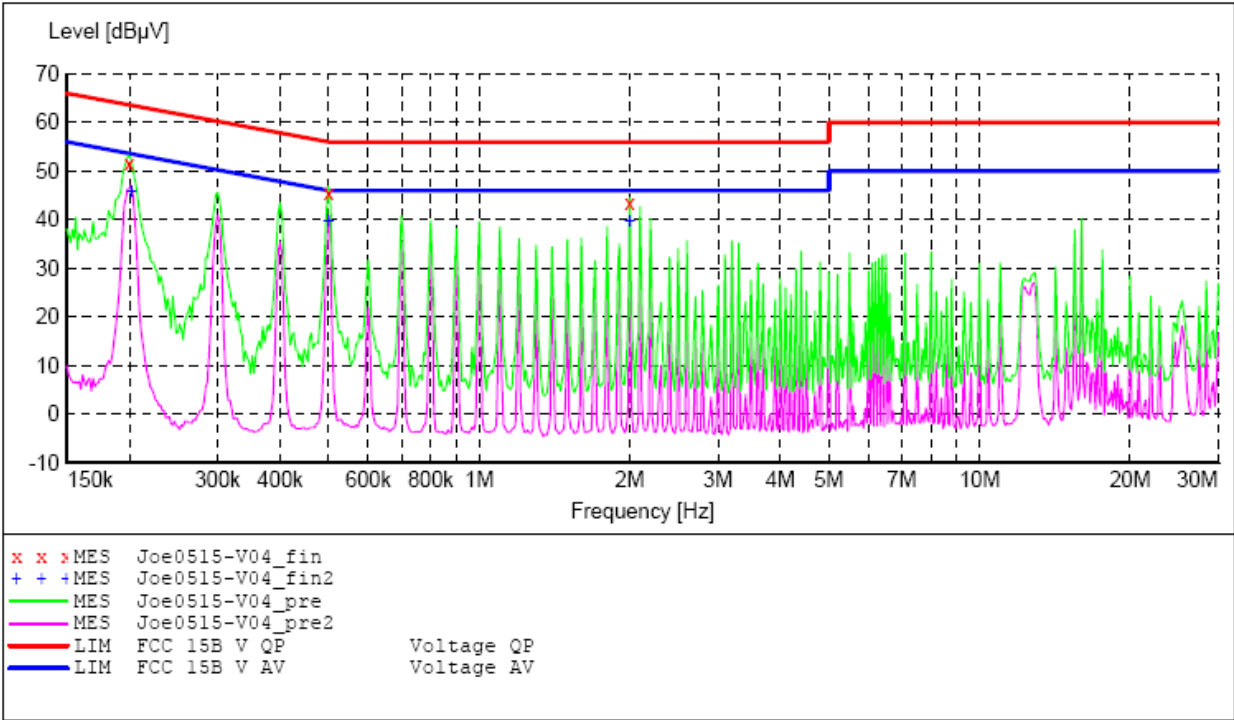


MEASUREMENT RESULT: "Joe0515-V03_fin"

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.199834	54.90	11.2	64	8.7	QP	L1	GND
0.300025	47.60	11.6	60	12.6	QP	L1	GND
0.499611	42.30	12.0	56	13.7	QP	L1	GND

MEASUREMENT RESULT: "Joe0515-V03_fin2"

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.198248	44.10	11.2	54	9.6	AV	L1	GND
1.998776	38.60	11.7	46	7.4	AV	L1	GND
2.096657	37.80	11.6	46	8.2	AV	L1	GND



MEASUREMENT RESULT: "Joe0515-V04_fin"

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.199834	51.60	11.2	64	12.0	QP	N	GND
0.499611	45.60	12.0	56	10.4	QP	N	GND
1.998776	43.40	11.7	56	12.6	QP	N	GND

MEASUREMENT RESULT: "Joe0515-V04_fin2"

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.201433	45.80	11.2	54	7.8	AV	N	GND
0.499611	39.80	12.0	46	6.2	AV	N	GND
1.998776	39.90	11.7	46	6.1	AV	N	GND

9. §15.209, §15.205, §15.247(D) - Spurious Emissions

9.1. Test Equipment

Please refer to section 2 this report.

9.2. Test Procedure

The EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level.

Calibrated Loop antenna is used as receiving antenna for frequencies below 30MHz, Calibrated Bilog antenna is used as receiving antenna for frequencies between 30 MHz and 1 GHz, Calibrated Horn antenna is used as receiving antenna for frequencies above 1000MHz. Both horizontal and vertical polarizations of the antenna are set on measurement. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.4: 2003 on radiated emission measurement.

The bandwidth of test receiver is set at 9kHz in below 30MHz. and set at 120kHz in 30-1000MHz, and 1MHz in above 1000MHz.

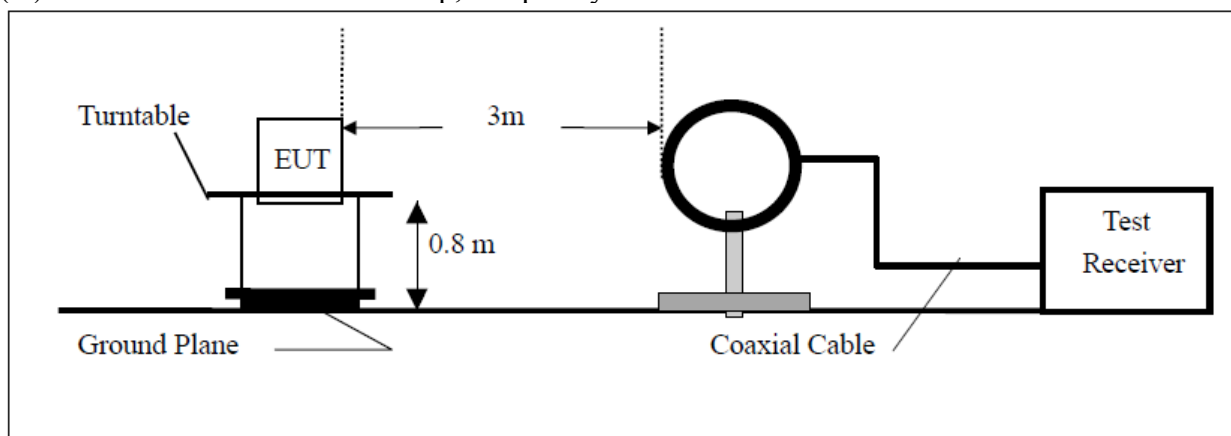
The frequency range from 9kHz to 25GHz is checked.

The final measurement in band 9-90kHz, 110-490kHz and above 1000MHz is performed with Peak detector and Average detector. Except those frequency bands mention above, the final measurement for frequencies below 1000MHz is performed with Quasi Peak detector.

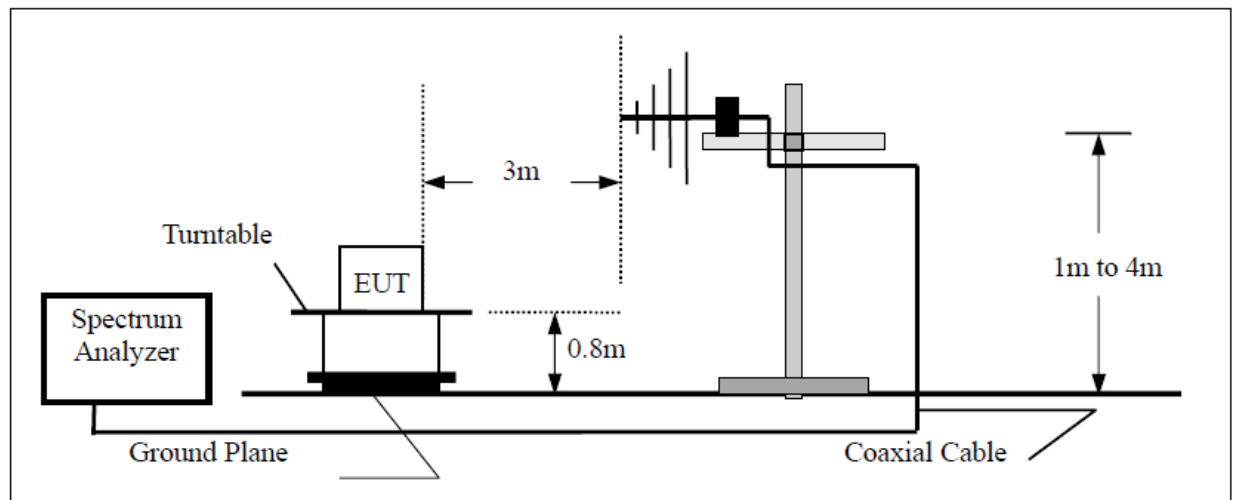
Through three orthogonal axes to determine which attitude and equipment arrangement produces the highest emission relative to the limit.

9.3. Radiated Test Setup

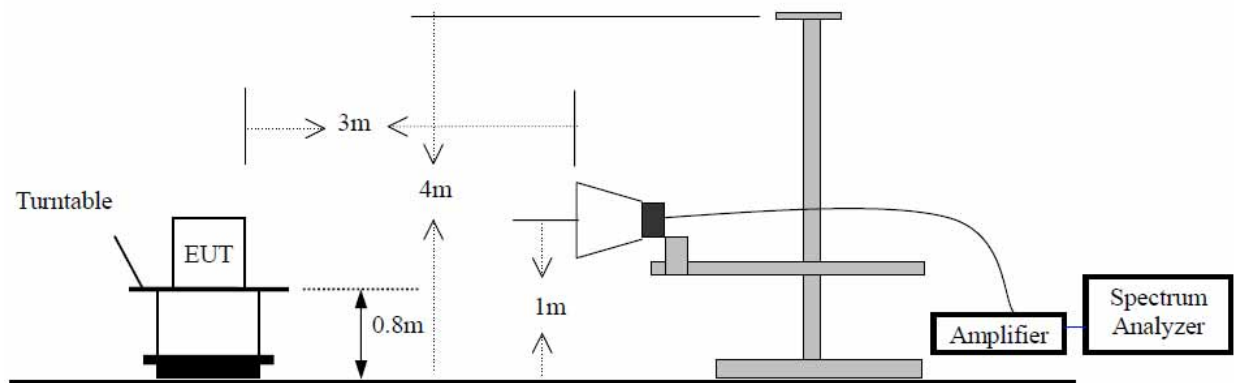
(A) Radiated Emission Test Set-Up, Frequency Below 30MHz



(B) Radiated Emission Test Set-Up, Frequency Below 1000MHz



(C) Radiated Emission Test Set-Up, Frequency above 1000MHz



9.4. Radiated Emission Limit

Frequency (MHz)	Limit			The final measurement in band 9-90kHz, 110-490kHz and above 1000MHz is performed with Average detector. Except those frequency bands mention above, the final measurement for frequencies below 1000MHz is performed with Quasi Peak detector.
	Field Strength of Quasi-peak Value (microvolts/m)	Field Strength of Quasi-peak Value (dB μ V/m)	Measurement distance (m)	
0.009 - 0.490	2400/F(kHz)	/	300	
0.490 - 1.705	24000/F(kHz)	/	30	
1.705-30	30	29.5	30	
30 - 88	100	40	3	
88 - 216	150	43.5	3	
216 - 960	200	46	3	
Above 960	500	54	3	

Note: (1) RF Voltage (dBuV)=20 log Voltage(uV)

(2) In the Above Table, the tighter limit applies at the band edges.

(3) Distancce refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

9.5. Radiated Emission Test Result

Pass.

Date of Test:	August 3, 2012	Temperature:	24°C
EUT:	13.3 inch Tablet PC	Humidity:	53%
Model No.:	MW13-1301	Power Supply:	AC 120V/60Hz
Test Mode:	802.11b Channel Low 2412MHz	Test Engineer:	Adam Yang

For below 1000MHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency (MHz)	Reading (dBμV/m)	Correct Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
	QP		QP	QP	QP	
-	-	-	-	-	-	Vertical
-	-	-	-	-	-	Horizontal

For 1GHz-25GHz

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
4824.000	0.246	51.730	51.977	-22.023	74.000
7236.000	7.359	44.540	51.899	-22.101	74.000
9648.000	7.759	39.900	47.660	-26.340	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4824.000	0.654	50.910	51.565	-22.435	74.000
7236.000	7.858	44.430	52.288	-21.712	74.000
9648.000	8.296	38.580	46.876	-27.124	74.000
Average Detector:					
--					

Note: 1. Emissions attenuated more than 20 dB below the permissible value are not reported.
 2. Measurement Level = Reading Level + Correct Factor.
 3. The average measurement was not performed when the peak measured data under the limit of average detection.

Date of Test:	August 3, 2012	Temperature:	24°C
EUT:	13.3 inch Tablet PC	Humidity:	53%
Model No.:	MW13-1301	Power Supply:	AC 120V/60Hz
Test Mode:	802.11b Channel Middle 2437MHz	Test Engineer:	Adam Yang

For below 1000MHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency (MHz)	Reading (dBμV/m)	Correct Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
	QP		QP	QP	QP	
-	-	-	-	-	-	Vertical
-	-	-	-	-	-	Horizontal

For 1GHz-25GHz

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
------------------	-------------------------	--------------------------	--------------------------------	--------------	-----------------

Horizontal**Peak Detector:**

4874.000	-0.058	49.700	49.643	-24.357	74.000
7311.000	7.672	39.910	47.582	-26.418	74.000
9748.000	7.753	40.110	47.863	-26.137	74.000

**Average
Detector:**

--

Vertical**Peak Detector:**

4874.000	0.398	47.740	48.138	-25.862	74.000
7311.000	8.249	41.500	49.749	-24.251	74.000
9748.000	8.389	39.760	48.150	-25.850	74.000

**Average
Detector:**

--

- Note: 1. Emissions attenuated more than 20 dB below the permissible value are not reported.
 2. Measurement Level = Reading Level + Correct Factor.
 3. The average measurement was not performed when the peak measured data under the limit of average detection.

Date of Test:	August 3, 2012	Temperature:	24°C
EUT:	13.3 inch Tablet PC	Humidity:	53%
Model No.:	MW13-1301	Power Supply:	AC 120V/60Hz
Test Mode:	802.11b Channel High 2462MHz	Test Engineer:	Adam Yang

For below 1000MHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency (MHz)	Reading (dBμV/m)	Correct Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
	QP		QP	QP	QP	
-	-	-	-	-	-	Vertical
-	-	-	-	-	-	Horizontal

For 1GHz-25GHz

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBuV	dBuV/m	dB	dBuV/m

Horizontal**Peak Detector:**

4924.000	0.063	47.080	47.143	-26.857	74.000
7386.000	8.504	37.760	46.265	-27.735	74.000
9848.000	8.156	39.820	47.976	-26.024	74.000

Average**Detector:**

--

Vertical**Peak Detector:**

4924.000	0.677	46.510	47.187	-26.813	74.000
7386.000	9.311	40.150	49.461	-24.539	74.000
9848.000	8.993	40.020	49.012	-24.988	74.000

Average**Detector:**

--

- Note: 1. Emissions attenuated more than 20 dB below the permissible value are not reported.
 2. Measurement Level = Reading Level + Correct Factor.
 3. The average measurement was not performed when the peak measured data under the limit of average detection.

Date of Test:	August 3, 2012	Temperature:	24°C
EUT:	13.3 inch Tablet PC	Humidity:	53%
Model No.:	MW13-1301	Power Supply:	AC 120V/60Hz
Test Mode:	802.11g Channel Low 2412MHz	Test Engineer:	Adam Yang

For below 1000MHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency (MHz)	Reading (dBμV/m)	Correct Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
	QP		QP	QP	QP	
-	-	-	-	-	-	Vertical
-	-	-	-	-	-	Horizontal

For 1GHz-25GHz

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
4824.000	0.246	47.670	47.917	-26.083	74.000
7326.000	8.053	40.010	48.063	-25.937	74.000
9648.000	7.759	39.080	46.840	-27.160	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4824.000	0.654	46.840	47.495	-26.505	74.000
7236.000	7.858	42.280	50.138	-23.862	74.000
9648.000	8.296	39.710	48.006	-25.994	74.000
Average Detector:					
--					

Note: 1. Emissions attenuated more than 20 dB below the permissible value are not reported.
 2. Measurement Level = Reading Level + Correct Factor.
 3. The average measurement was not performed when the peak measured data under the limit of average detection.

Date of Test:	August 3, 2012	Temperature:	24°C
EUT:	13.3 inch Tablet PC	Humidity:	53%
Model No.:	MW13-1301	Power Supply:	AC 120V/60Hz
Test Mode:	802.11g Channel Middle 2437MHz	Test Engineer:	Adam Yang

For below 1000MHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency (MHz)	Reading (dBμV/m)	Correct Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
	QP		QP	QP	QP	
-	-	-	-	-	-	Vertical
-	-	-	-	-	-	Horizontal

For 1GHz-25GHz

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBuV	dBuV/m	dB	dBuV/m

Horizontal**Peak Detector:**

4874.000	-0.058	46.840	46.783	-27.217	74.000
7311.000	7.672	38.910	46.582	-27.418	74.000
9748.000	7.753	38.970	46.723	-27.277	74.000

Average**Detector:**

--

Vertical**Peak Detector:**

4874.000	0.398	44.620	45.018	-28.982	74.000
7311.000	8.249	40.120	48.369	-25.631	74.000
9748.000	8.389	39.080	47.470	-26.530	74.000

Average**Detector:**

--

- Note: 1. Emissions attenuated more than 20 dB below the permissible value are not reported.
 2. Measurement Level = Reading Level + Correct Factor.
 3. The average measurement was not performed when the peak measured data under the limit of average detection.

Date of Test:	August 3, 2012	Temperature:	24°C
EUT:	13.3 inch Tablet PC	Humidity:	53%
Model No.:	MW13-1301	Power Supply:	AC 120V/60Hz
Test Mode:	802.11g Channel High 2462MHz	Test Engineer:	Adam Yang

For below 1000MHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency (MHz)	Reading (dBμV/m)	Correct Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
	QP		QP	QP	QP	
-	-	-	-	-	-	Vertical
-	-	-	-	-	-	Horizontal

For 1GHz-25GHz

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBuV	dBuV/m	dB	dBuV/m

Horizontal**Peak Detector:**

4924.000	0.063	45.680	45.743	-28.257	74.000
7386.000	8.504	38.910	47.415	-26.585	74.000
9848.000	8.156	39.620	47.776	-26.224	74.000

Average**Detector:**

--

Vertical**Peak Detector:**

4924.000	0.677	43.690	44.367	-29.633	74.000
7386.000	9.311	38.600	47.911	-26.089	74.000
9848.000	8.993	39.610	48.602	-25.398	74.000

Average**Detector:**

--

- Note: 1. Emissions attenuated more than 20 dB below the permissible value are not reported.
 2. Measurement Level = Reading Level + Correct Factor.
 3. The average measurement was not performed when the peak measured data under the limit of average detection.

Date of Test:	August 3, 2012	Temperature:	24°C
EUT:	13.3 inch Tablet PC	Humidity:	53%
Model No.:	MW13-1301	Power Supply:	AC 120V/60Hz
Test Mode:	802.11n HT20 Channel Low 2412MHz	Test Engineer:	Adam Yang

For below 1000MHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency (MHz)	Reading (dBμV/m)	Correct Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
	QP		QP	QP	QP	
-	-	-	-	-	-	Vertical
-	-	-	-	-	-	Horizontal

For 1GHz-25GHz

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBuV	dBuV/m	dB	dBuV/m

Horizontal**Peak Detector:**

4824.000	0.246	41.840	42.087	-31.913	74.000
7236.000	7.858	39.980	47.838	-26.162	74.000
9648.000	8.296	39.410	47.706	-26.294	74.000

Average**Detector:**

--

Vertical**Peak Detector:**

4824.000	0.654	43.330	43.985	-30.015	74.000
7236.000	7.858	39.270	47.128	-26.872	74.000
9648.000	8.296	39.250	47.546	-26.454	74.000

Average**Detector:**

--

- Note: 1. Emissions attenuated more than 20 dB below the permissible value are not reported.
 2. Measurement Level = Reading Level + Correct Factor.
 3. The average measurement was not performed when the peak measured data under the limit of average detection.

Date of Test: August 3, 2012

Temperature: 24°C

EUT: 13.3 inch Tablet PC

Humidity: 53%

Model No.: MW13-1301

Power Supply: AC 120V/60Hz

Test Mode: 802.11n HT20 Channel Middle 2437MHz

Test Engineer: Adam Yang

For below 1000MHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency (MHz)	Reading (dBμV/m)	Correct Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
	QP		QP	QP	QP	
-	-	-	-	-	-	Vertical
-	-	-	-	-	-	Horizontal

For 1GHz-25GHz

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBuV	dBuV/m	dB	dBuV/m

Horizontal**Peak Detector:**

4874.000	-0.058	42.510	42.453	-31.547	74.000
7311.000	7.672	38.870	46.542	-27.458	74.000
9748.000	7.753	39.450	47.203	-26.797	74.000

Average**Detector:**

--

Vertical**Peak Detector:**

4874.000	0.398	41.110	41.508	-32.492	74.000
7311.000	8.249	38.770	47.019	-26.981	74.000
9748.000	8.389	39.090	47.480	-26.520	74.000

Average**Detector:**

--

Note: 1. Emissions attenuated more than 20 dB below the permissible value are not reported.

2. Measurement Level = Reading Level + Correct Factor.

3. The average measurement was not performed when the peak measured data under the limit of average detection.

Date of Test:	August 3, 2012	Temperature:	24°C
EUT:	13.3 inch Tablet PC	Humidity:	53%
Model No.:	MW13-1301	Power Supply:	AC 120V/60Hz
Test Mode:	802.11n HT20 Channel High 2462MHz	Test Engineer:	Adam Yang

For below 1000MHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency (MHz)	Reading (dBμV/m)	Correct Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
	QP		QP	QP	QP	
-	-	-	-	-	-	Vertical
-	-	-	-	-	-	Horizontal

For 1GHz-25GHz

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBuV	dBuV/m	dB	dBuV/m

Horizontal**Peak Detector:**

4924.000	0.063	41.350	41.413	-32.587	74.000
7386.000	8.504	38.940	47.445	-26.555	74.000
9848.000	8.156	39.440	47.596	-26.404	74.000

Average**Detector:**

--

Vertical**Peak Detector:**

4924.000	0.677	40.770	41.447	-32.553	74.000
7386.000	9.311	39.840	49.151	-24.849	74.000
9848.000	8.993	40.430	49.422	-24.578	74.000

Average**Detector:**

--

- Note: 1. Emissions attenuated more than 20 dB below the permissible value are not reported.
 2. Measurement Level = Reading Level + Correct Factor.
 3. The average measurement was not performed when the peak measured data under the limit of average detection.

Date of Test:	August 3, 2012	Temperature:	24°C
EUT:	13.3 inch Tablet PC	Humidity:	53%
Model No.:	MW13-1301	Power Supply:	AC 120V/60Hz
Test Mode:	802.11n HT40 Channel Low 2422MHz	Test Engineer:	Adam Yang

For below 1000MHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency (MHz)	Reading (dBμV/m)	Correct Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
	QP		QP	QP	QP	
-	-	-	-	-	-	Vertical
-	-	-	-	-	-	Horizontal

For 1GHz-25GHz

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBuV	dBuV/m	dB	dBuV/m

Horizontal**Peak Detector:**

4844.000	0.098	41.630	41.729	-32.271	74.000
7266.000	7.264	38.420	45.684	-28.316	74.000
9688.000	7.693	38.980	46.673	-27.327	74.000

Average**Detector:**

--

Vertical**Peak Detector:**

4864.000	0.433	41.870	42.303	-31.697	74.000
7266.000	7.784	37.980	45.764	-28.236	74.000
9688.000	8.314	36.740	45.053	-28.947	74.000

Average**Detector:**

--

Note: 1. Emissions attenuated more than 20 dB below the permissible value are not reported.

2. Measurement Level = Reading Level + Correct Factor.

3. The average measurement was not performed when the peak measured data under the limit of average detection.

Date of Test:	August 3, 2012	Temperature:	24°C
EUT:	13.3 inch Tablet PC	Humidity:	53%
Model No.:	MW13-1301	Power Supply:	AC 120V/60Hz
Test Mode:	802.11n HT40 Channel Middle 2437MHz	Test Engineer:	Adam Yang

For below 1000MHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency (MHz)	Reading (dBμV/m)	Correct Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
	QP		QP	QP	QP	
-	-	-	-	-	-	Vertical
-	-	-	-	-	-	Horizontal

For 1GHz-25GHz

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m

Horizontal**Peak Detector:**

4874.000	-0.058	43.580	43.523	-30.477	74.000
7311.000	7.672	39.840	47.512	-26.488	74.000
9748.000	7.753	39.470	47.223	-26.777	74.000

Average**Detector:**

--

Vertical**Peak Detector:**

4874.000	0.398	41.080	41.478	-32.522	74.000
7311.000	8.249	39.830	48.079	-25.921	74.000
9748.000	8.389	39.260	47.650	-26.350	74.000

Average**Detector:**

--

- Note: 1. Emissions attenuated more than 20 dB below the permissible value are not reported.
 2. Measurement Level = Reading Level + Correct Factor.
 3. The average measurement was not performed when the peak measured data under the limit of average detection.

Date of Test:	August 3, 2012	Temperature:	24°C
EUT:	13.3 inch Tablet PC	Humidity:	53%
Model No.:	MW13-1301	Power Supply:	AC 120V/60Hz
Test Mode:	802.11n HT40 Channel High 2452MHz	Test Engineer:	Adam Yang

For below 1000MHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency (MHz)	Reading (dBμV/m)	Correct Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
	QP		QP	QP	QP	
-	-	-	-	-	-	Vertical
-	-	-	-	-	-	Horizontal

For 1GHz-25GHz

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m

Horizontal**Peak Detector:**

4904.000	-0.098	41.270	41.172	-32.828	74.000
7356.000	8.603	37.760	46.363	-27.637	74.000
9808.000	8.070	39.870	47.940	-26.060	74.000

Average**Detector:**

--

Vertical**Peak Detector:**

4904.000	0.415	40.850	41.265	-32.735	74.000
7356.000	9.317	39.840	49.157	-24.843	74.000
9808.000	8.732	38.470	47.202	-26.798	74.000

Average**Detector:**

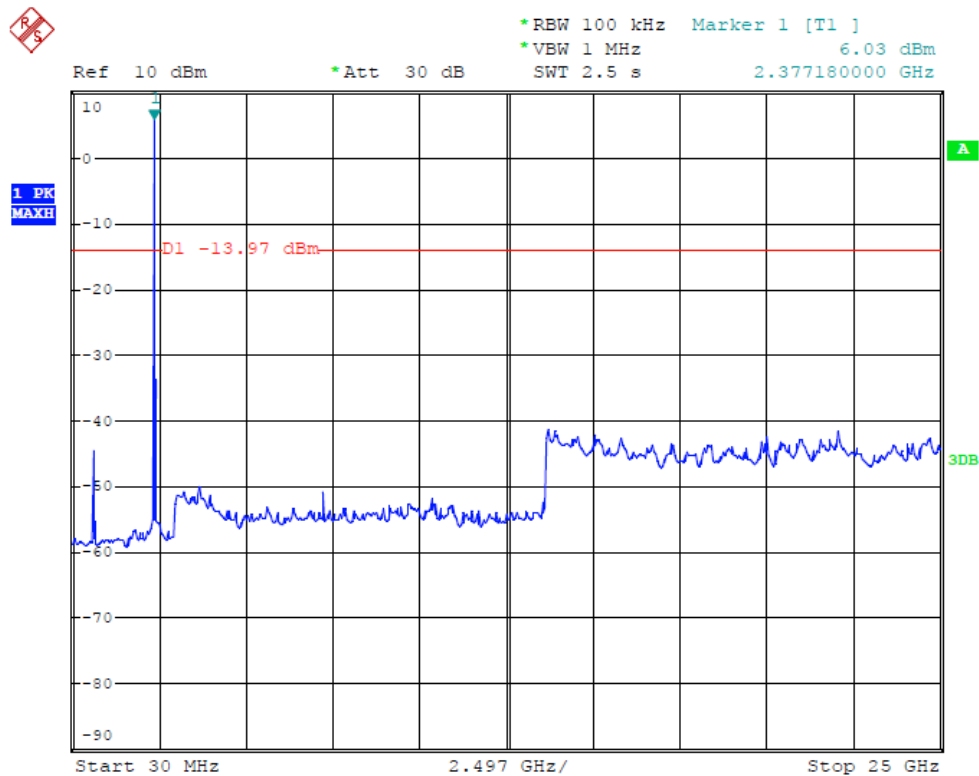
--

- Note: 1. Emissions attenuated more than 20 dB below the permissible value are not reported.
 2. Measurement Level = Reading Level + Correct Factor.
 3. The average measurement was not performed when the peak measured data under the limit of average detection.

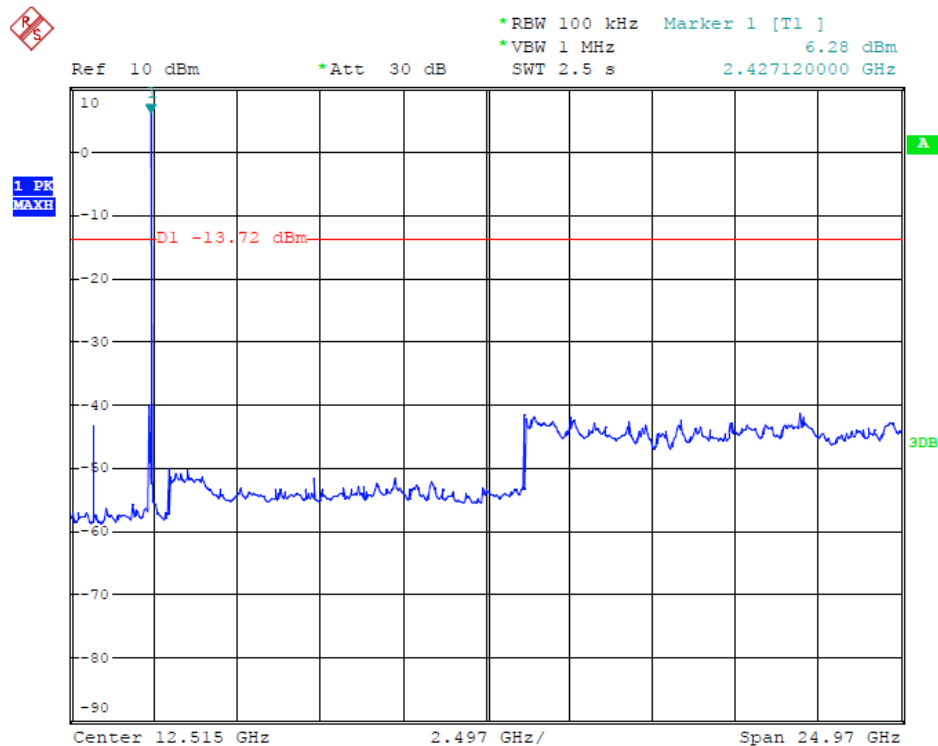
Antenna port conducted spurious emissions

802.11b mode:

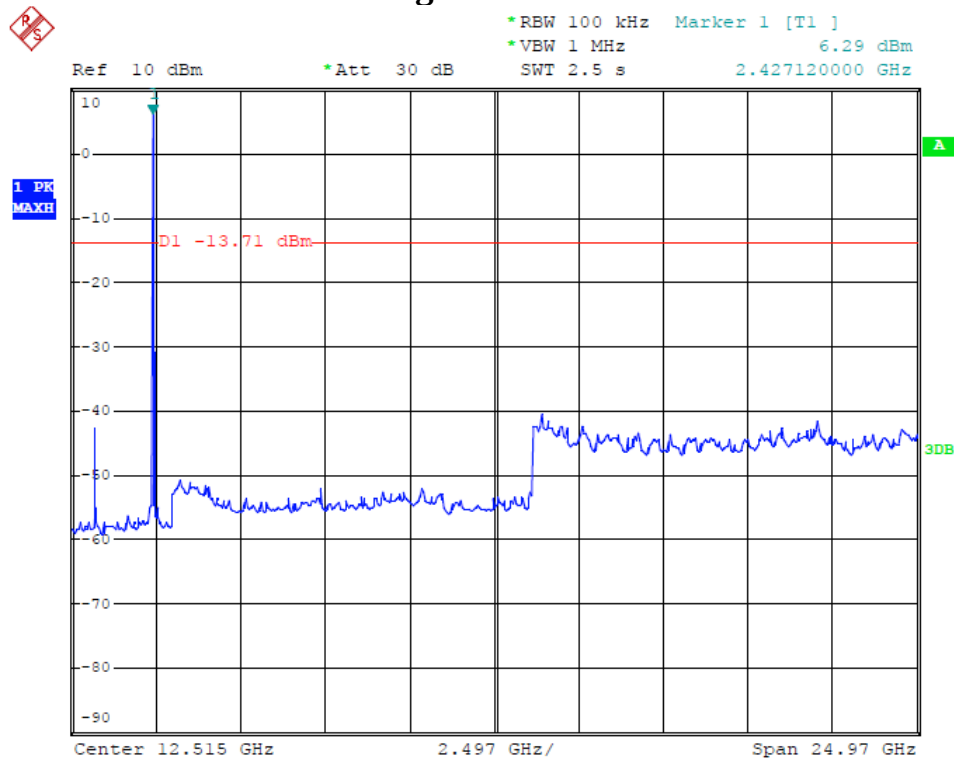
Low channel



Middle channel

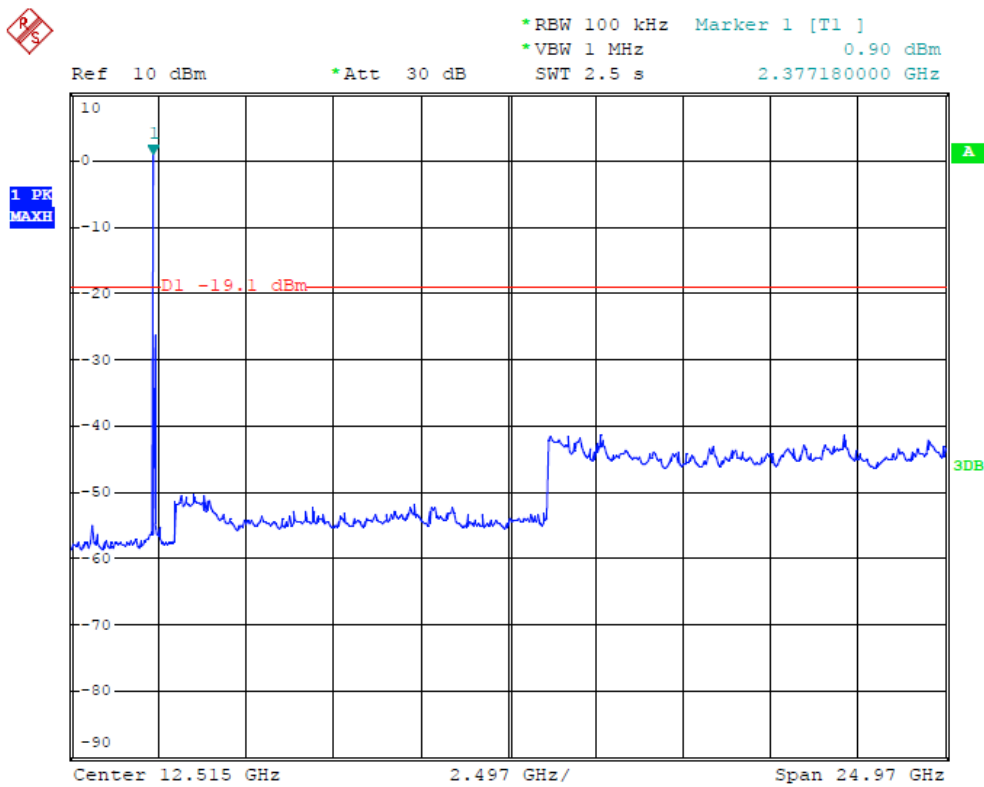


High channel

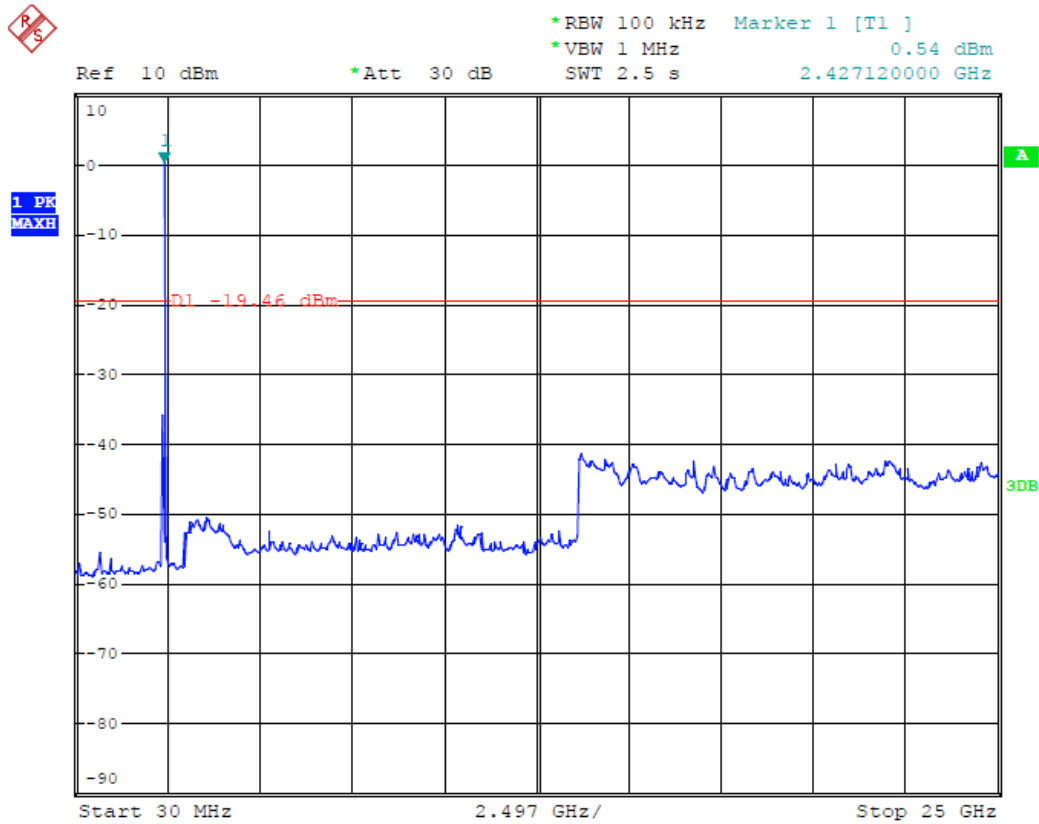


802.11g mode:

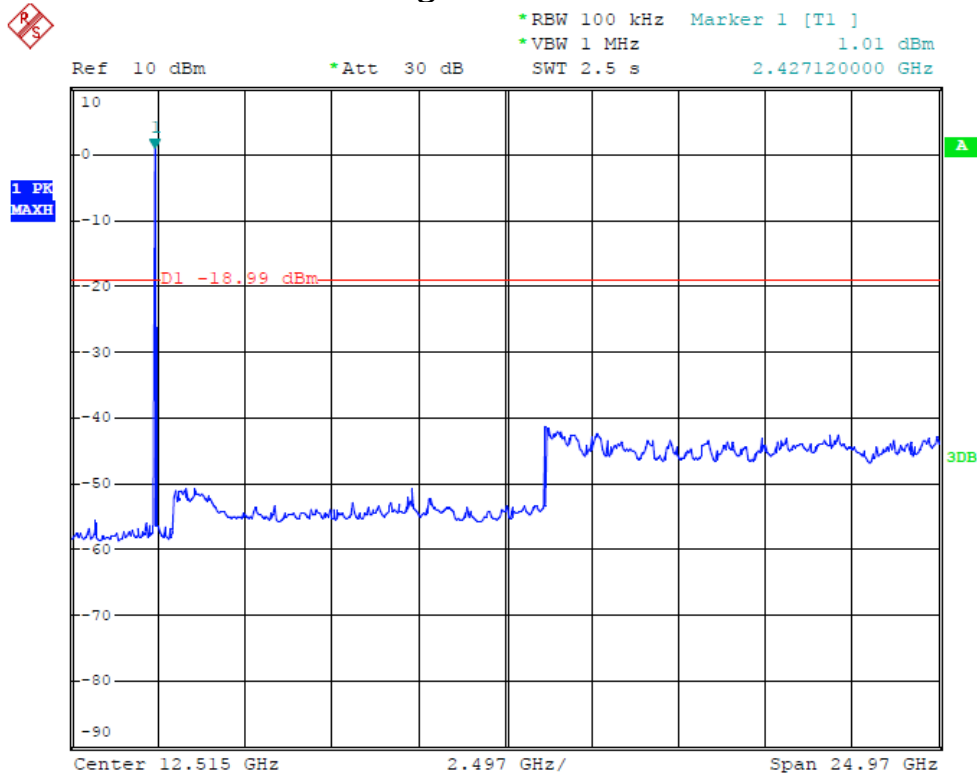
Low channel



Middle channel

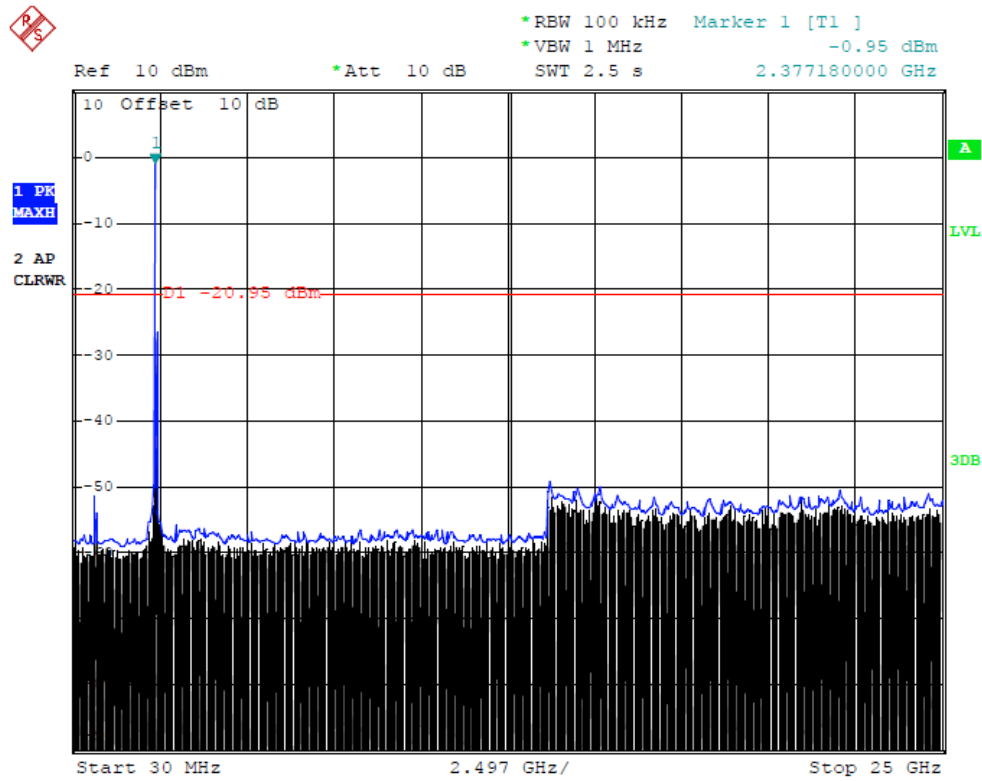


High channel

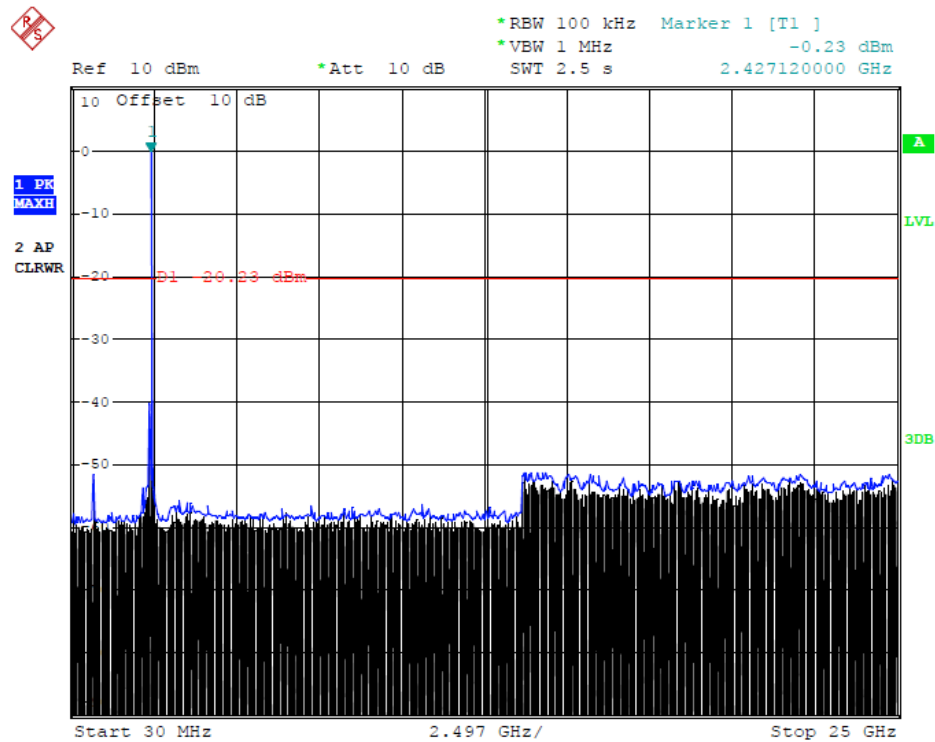


802.11n (20M) mode:

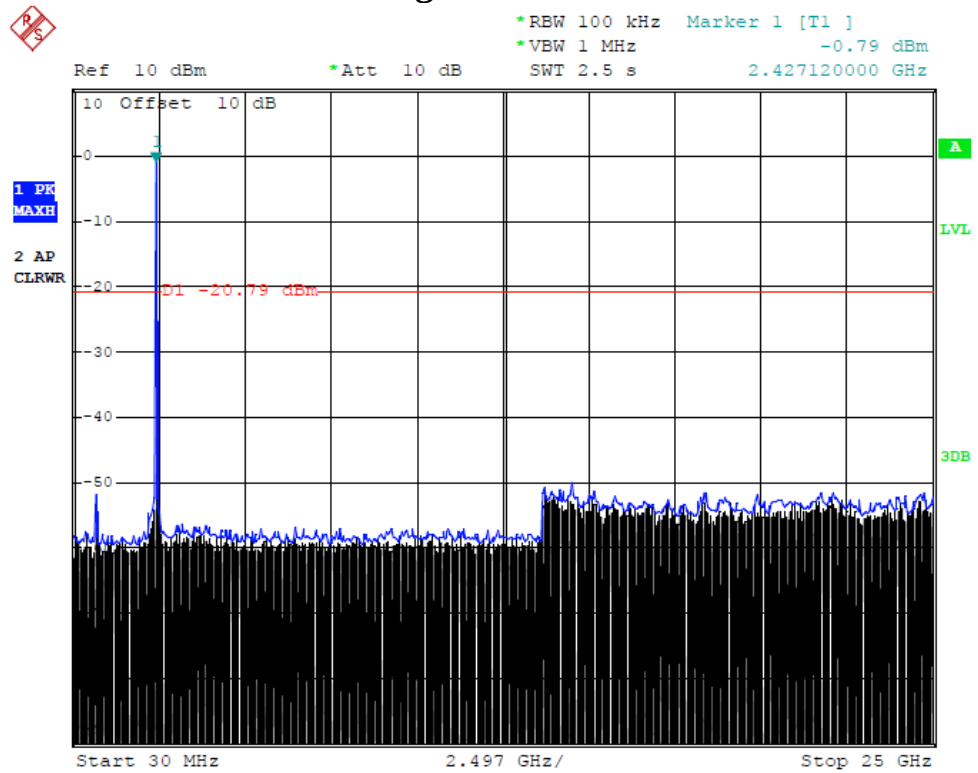
Low channel



Middle channel

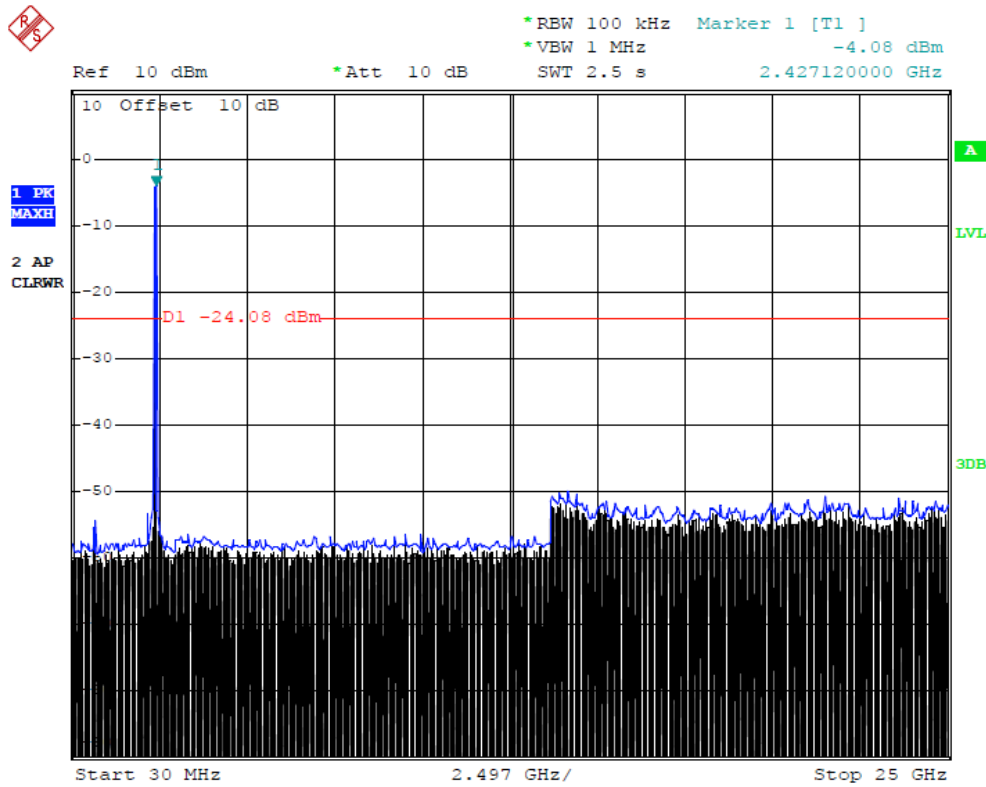


High channel

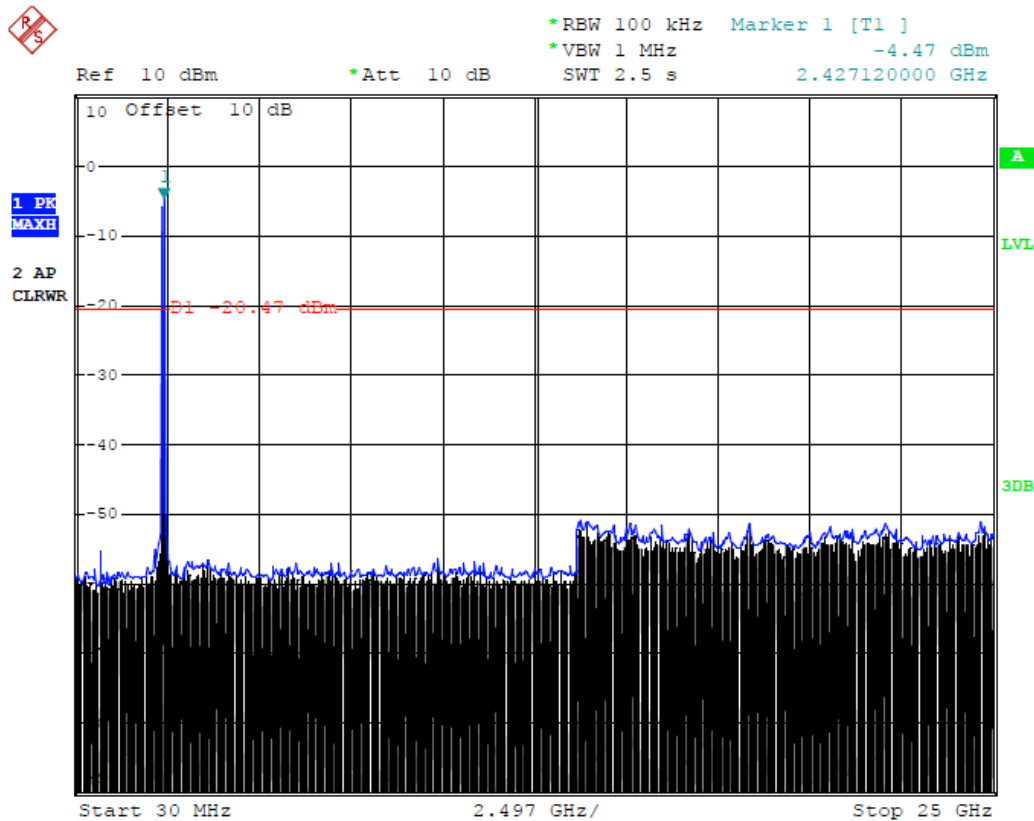


802.11n (40M) mode:

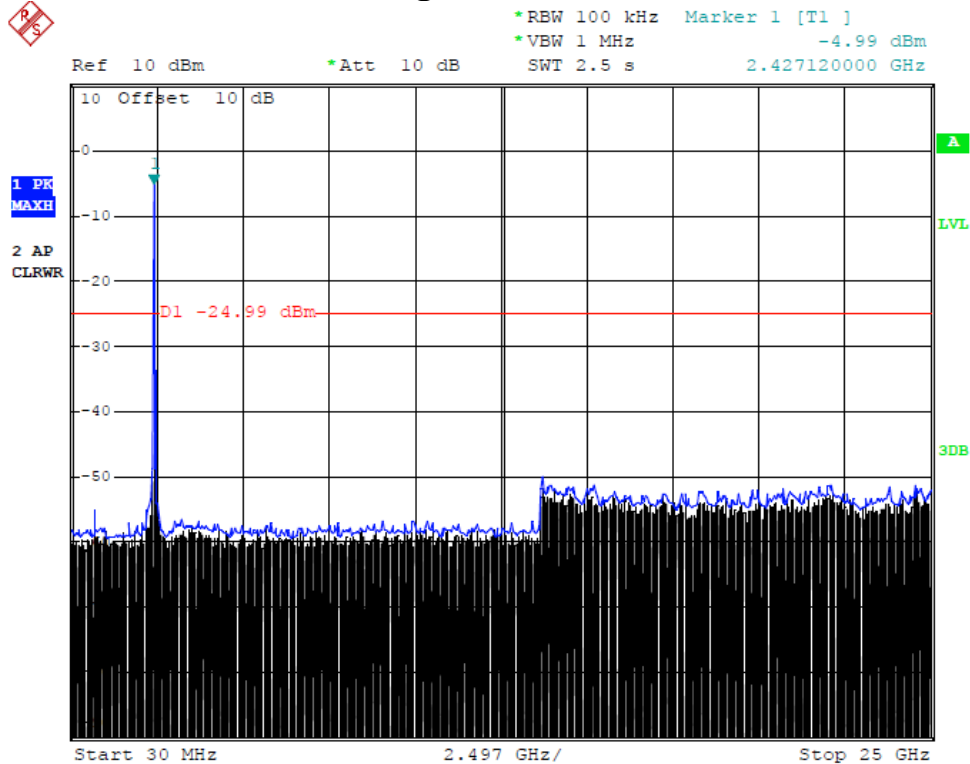
Low channel



Middle channel



High channel



10. §15.247(A) (2) – 6DB BANDWIDTH TESTING

10.1. Test Equipment

Please refer to Section 4 this report.

10.2. Test Procedure

1. Set EUT in the transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
3. Set the spectrum analyzer as RBW=100KHz, VBW $\geq$ RBW, Span=50MHz, Sweep=auto.
4. Mark the peak frequency and -6dB(upper and lower)frequency.
5. Repeat until all the rest channels are investigated.

10.3. Applicable Standard

Systems using digital modulation techniques may operate in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

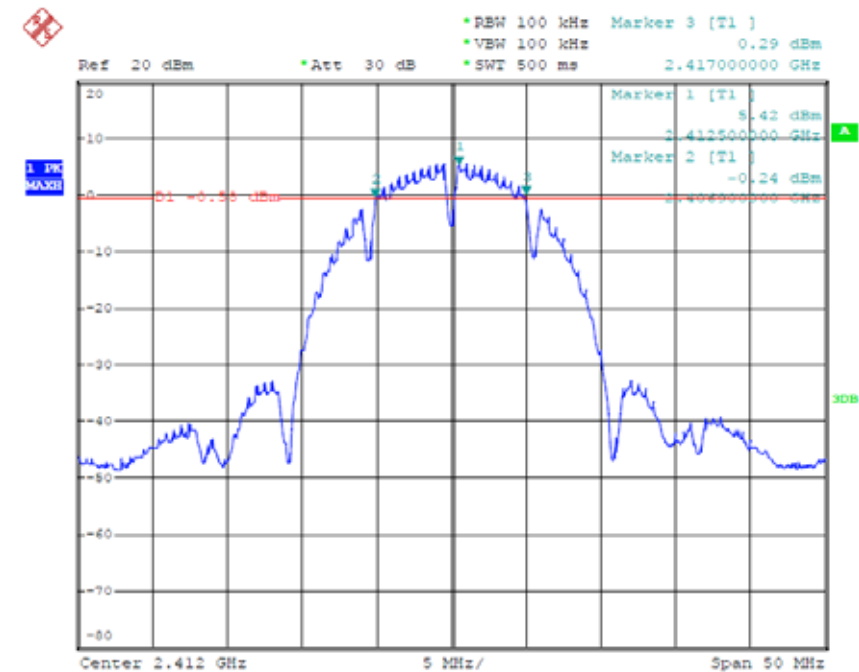
10.4. Test Result: Pass.

Please refer to the following tables

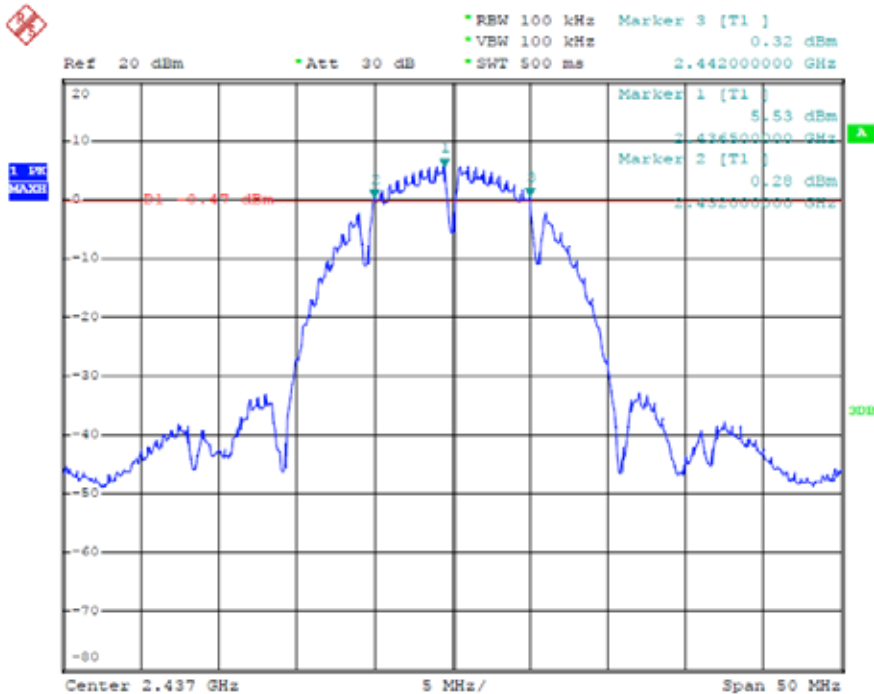
Channel Frequency (MHz)	Data Rate (Mbps)	6dB Bandwidth (kHz)	Limit (kHz)	Result
802.11b Mode				
2412	1	10100	> 500	Pass
2437	1	10000	> 500	Pass
2462	1	10100	> 500	Pass
802.11g Mode				
2412	6	16500	> 500	Pass
2437	6	16500	> 500	Pass
2462	6	16500	> 500	Pass
802.11n (20M) Mode				
2412	6.5	17800	> 500	Pass
2437	6.5	17800	> 500	Pass
2462	6.5	17800	> 500	Pass
802.11n (40M) Mode				
2412	13	36400	> 500	Pass
2437	13	36400	> 500	Pass
2462	13	36400	> 500	Pass

802.11b Mode:

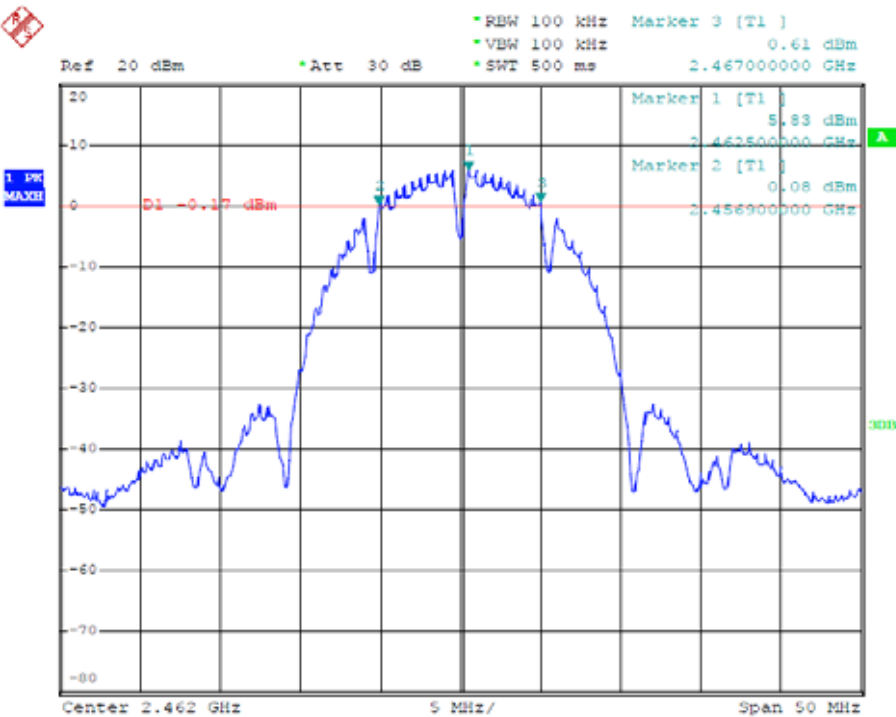
Low Channel



Middle Channel

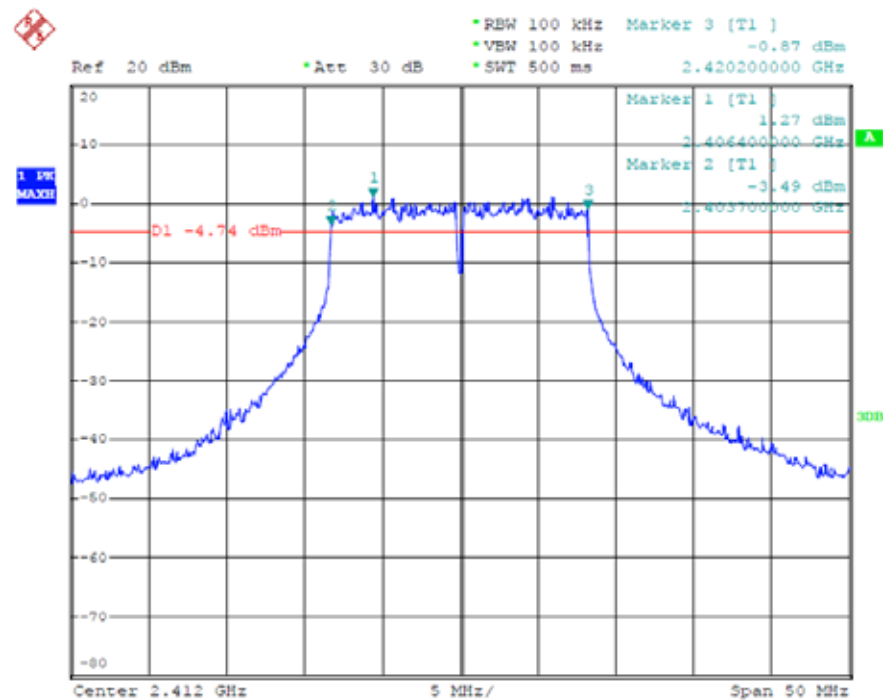


High Channel

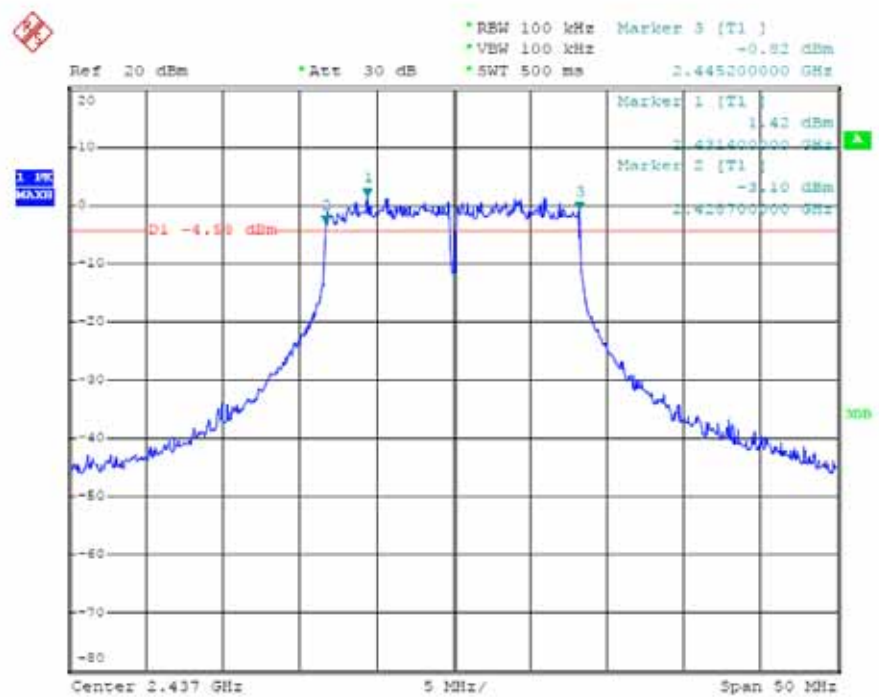


802.11g Mode:

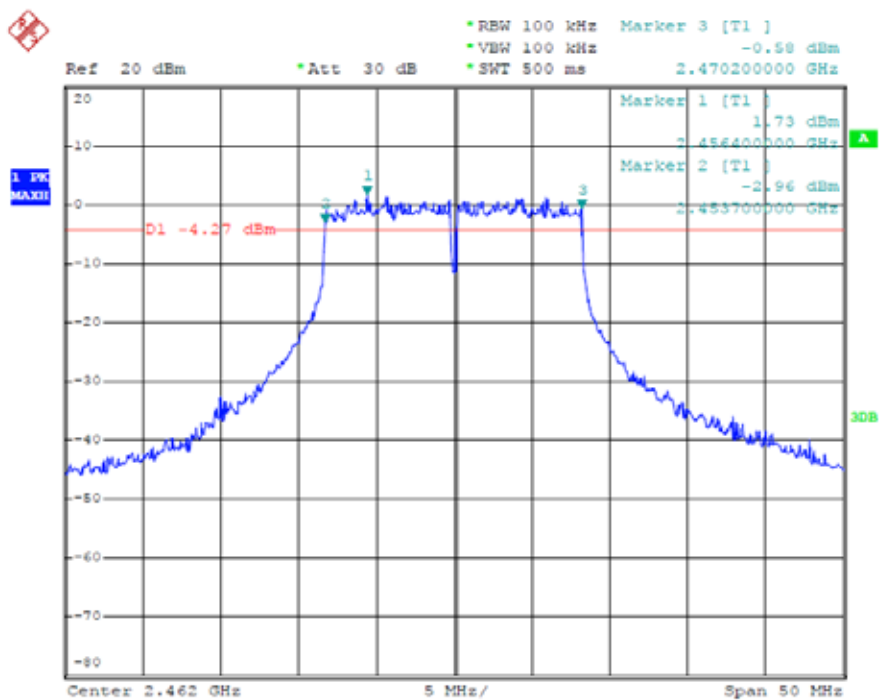
Low Channel



Middle Channel

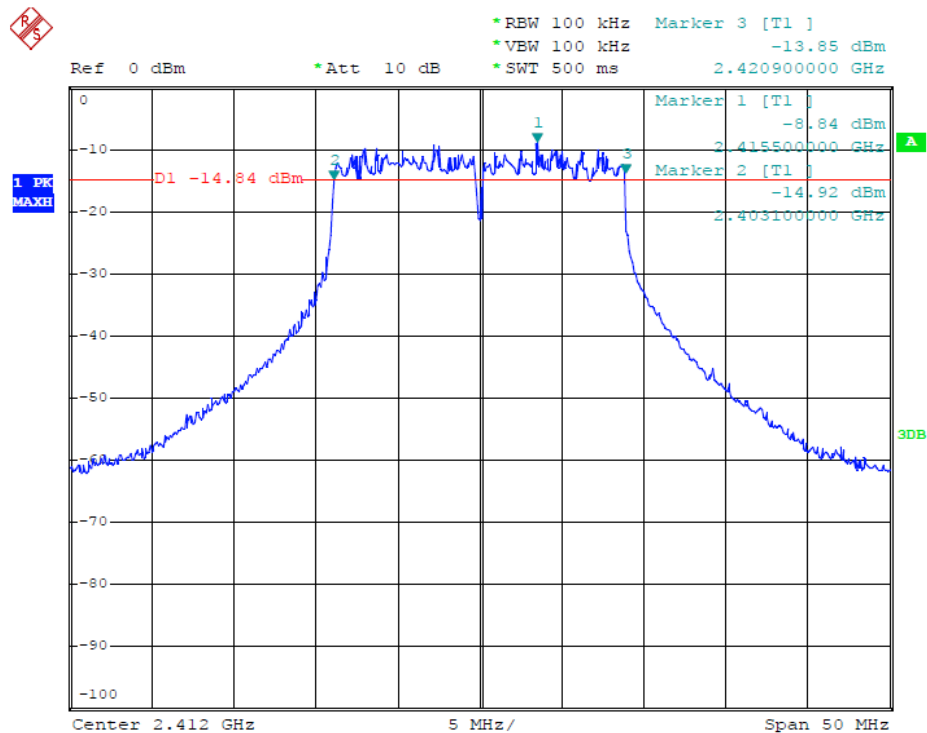


High Channel

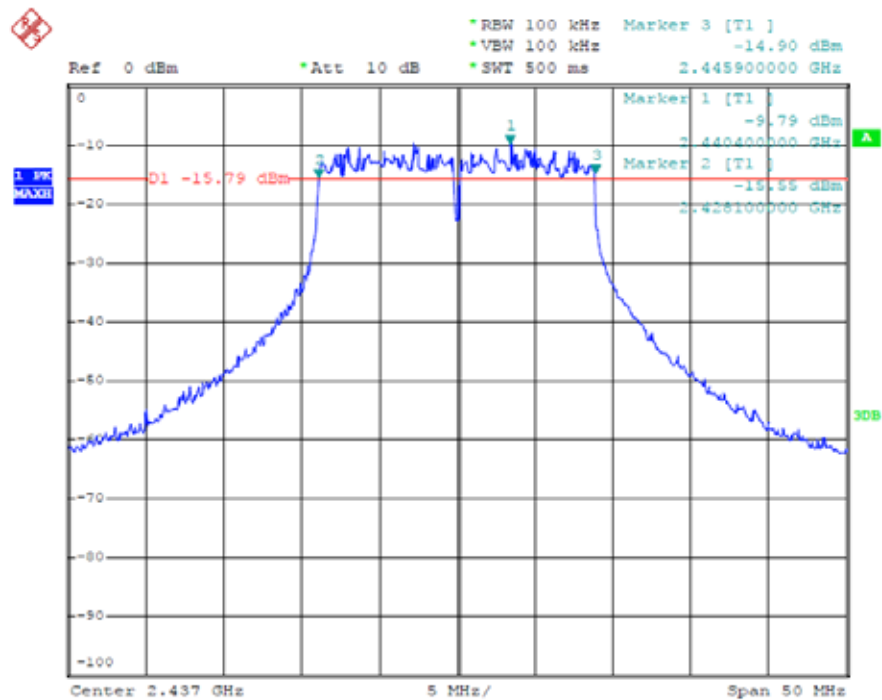


802.11n (20M) Mode:

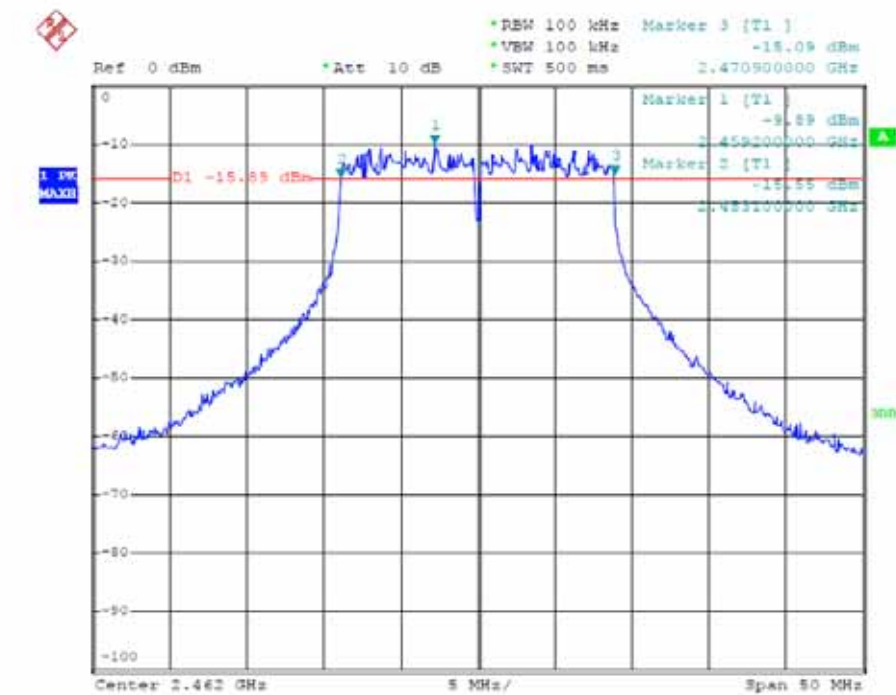
Low Channel



Middle Channel

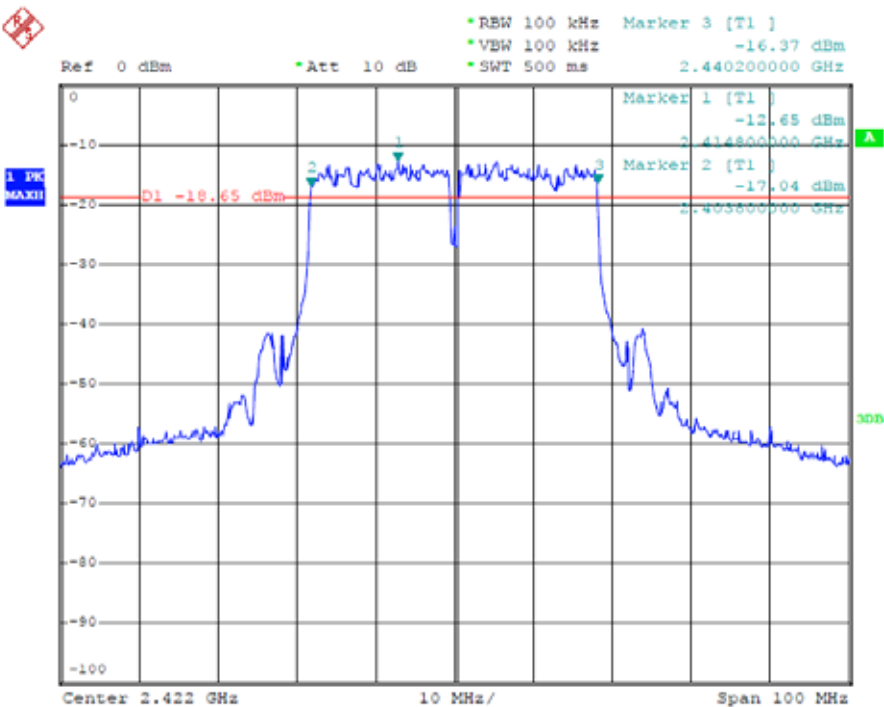


High Channel

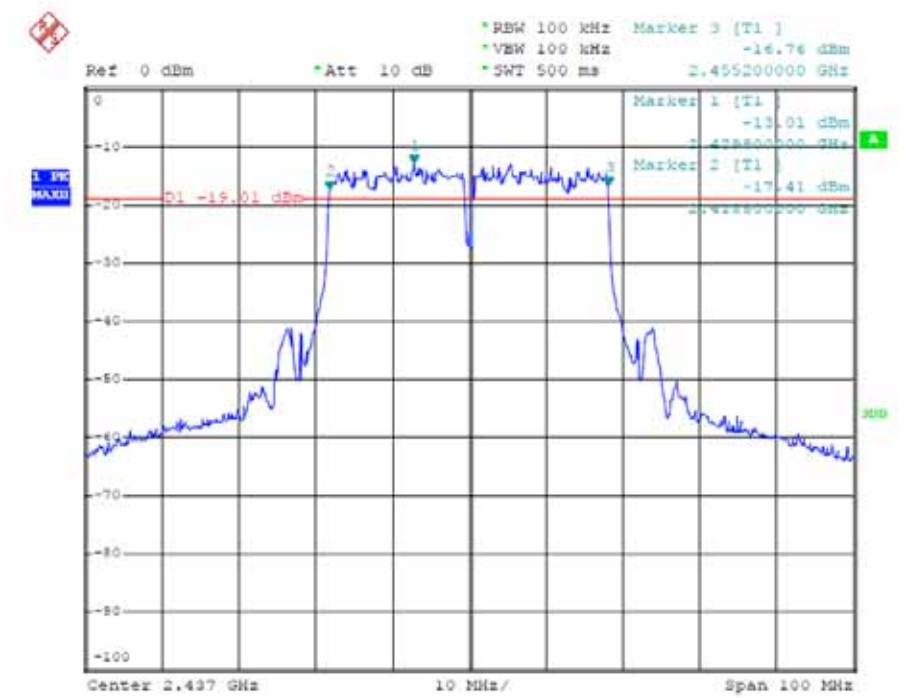


802.11n (40M) Mode:

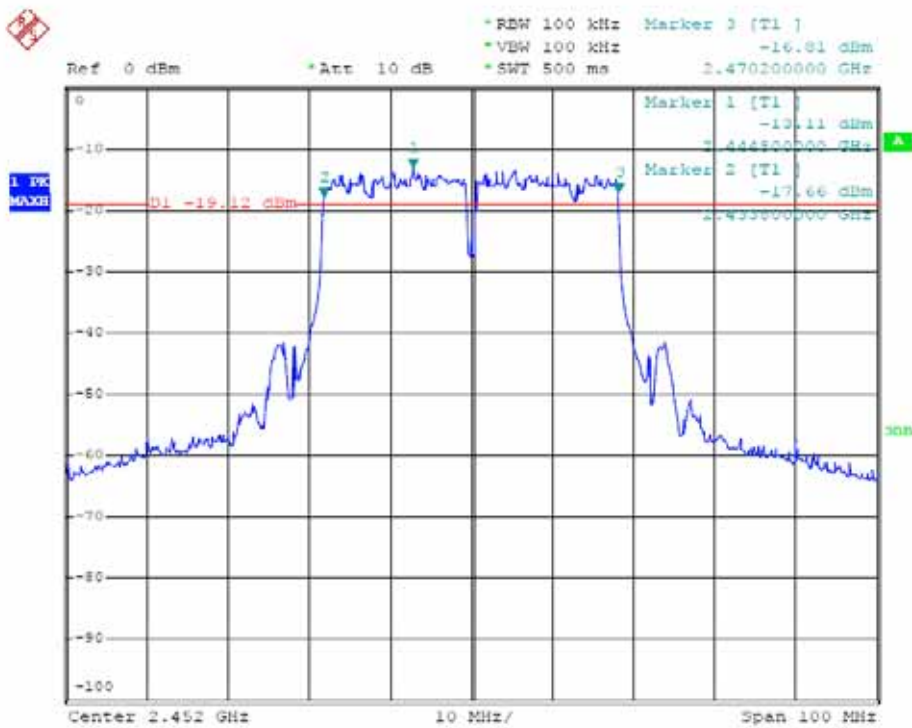
Low Channel



Middle Channel



High Channel



11. §15.247(B) (3) - Maximum Peak Output Power

11.1. Test Equipment

Please refer to Section 4 this report.

11.2. Test Procedure

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW = 1 MHz.
3. Set VBW $\geq$ 3 MHz.
4. Use sample detector mode if bin width (i.e., span/number of points in spectrum display) < 0.5 RBW. Otherwise use peak detector mode.
5. Use a video trigger with the trigger level set to enable triggering only on full power pulses. Transmitter must operate at full control power for entire sweep of every sweep. If the device transmits continuously, with no off intervals or reduced power intervals, the trigger may be set to “free run”.
6. Trace average 100 traces in power averaging mode.
7. Compute power by integrating the spectrum across the 26 dB EBW of the signal. The integration can be performed using the spectrum analyzer’s band power measurement function with band limits set equal to the EBW band edges or by summing power levels in each 1 MHz band in linear power terms. The 1 MHz band power levels to be summed can be obtained by averaging, in linear power terms, power levels in each frequency bin across the 1 MHz.

11.3. Applicable Standard

According to §15.247(b) (3), for systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.

11.4. Test Result**Pass****802.11b Mode:**

Channel	Frequency (MHz)	Data Rate (Mbps)	Conducted Power (dBm)	Limit (dBm)
Low	2412	1	10.24	30
Mid	2437	1	10.28	30
High	2462	1	10.19	30

802.11g Mode:

Channel	Frequency (MHz)	Data Rate (Mbps)	Conducted Power (dBm)	Limit (dBm)
Low	2412	6	10.53	30
Mid	2437	6	10.72	30
High	2462	6	10.64	30

802.11n (20M) Mode:

Channel	Frequency (MHz)	Data Rate (Mbps)	Conducted Power (dBm)	Limit (dBm)
Low	2412	6.5	10.18	30
Mid	2437	6.5	10.35	30
High	2462	6.5	10.33	30

802.11n (40M) Mode:

Channel	Frequency (MHz)	Data Rate (Mbps)	Conducted Power (dBm)	Limit (dBm)
Low	2422	13.5	10.27	30
Mid	2437	13.5	10.42	30
High	2452	13.5	10.36	30

12. §15.247(D) – 100 KHZ Bandwidth of Frequency Band Edge

12.1.Test Equipment

Please refer to Section 4 this report.

12.2.Test Procedure

- 1, Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
- 2, Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
- 3, Set RBW to 100 kHz and VBW of spectrum analyzer to 300 kHz with a convenient frequency span including 100 kHz bandwidth from band edge.
Note: For Rdstricted Band
RBW=1MHz
VBW=1 MHz
- 4, Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
- 5, Repeat above procedures until all measured frequencies were complete.

12.3.Applicable Standard

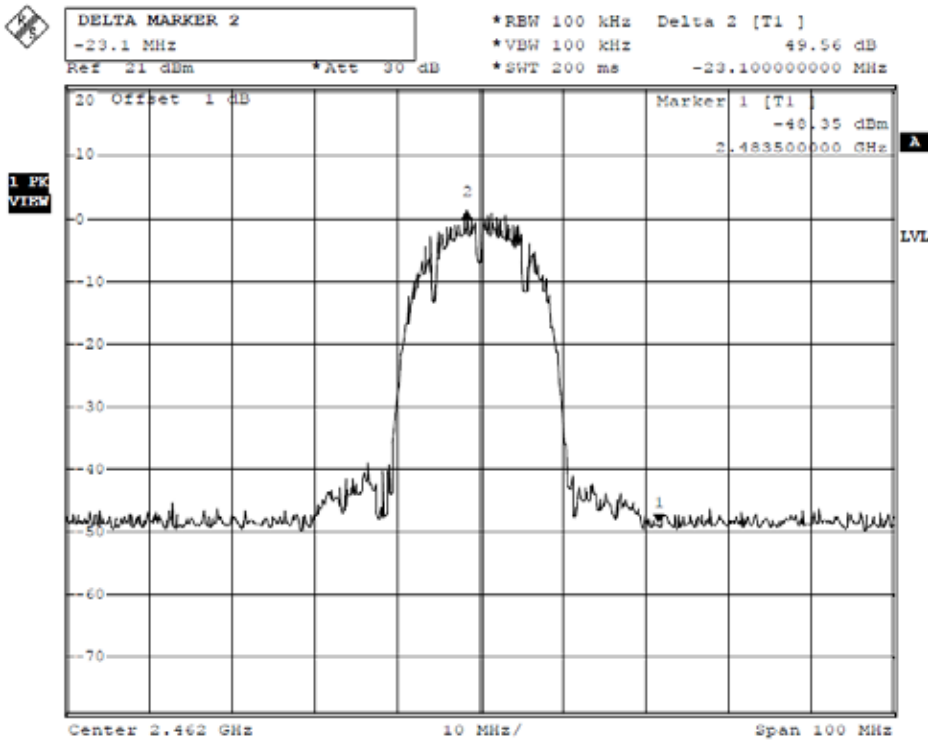
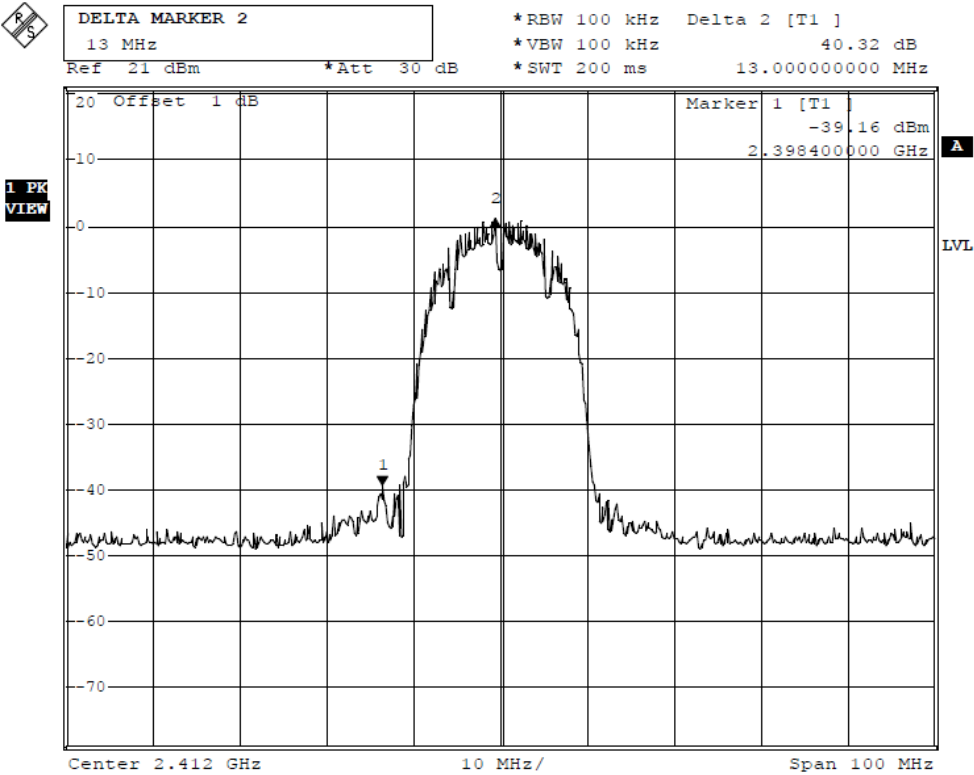
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

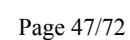
12.4.Test Result

Pass.

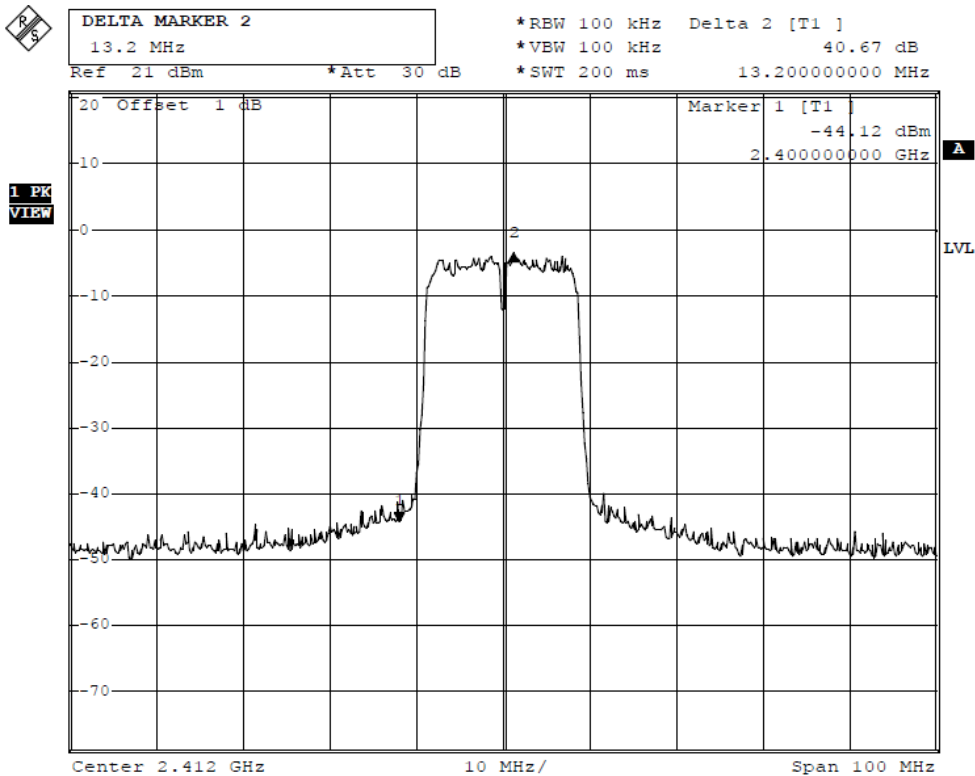
Conducted test

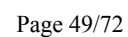
802.11b Mode:





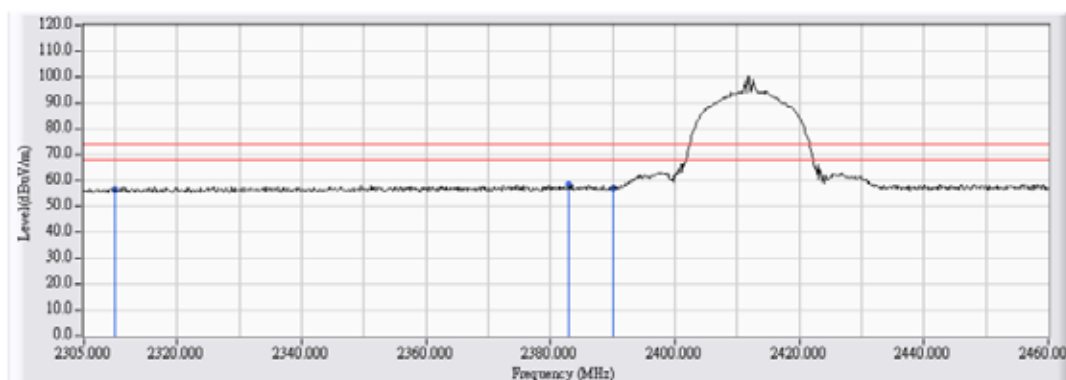
802.11n (20M) Mode:



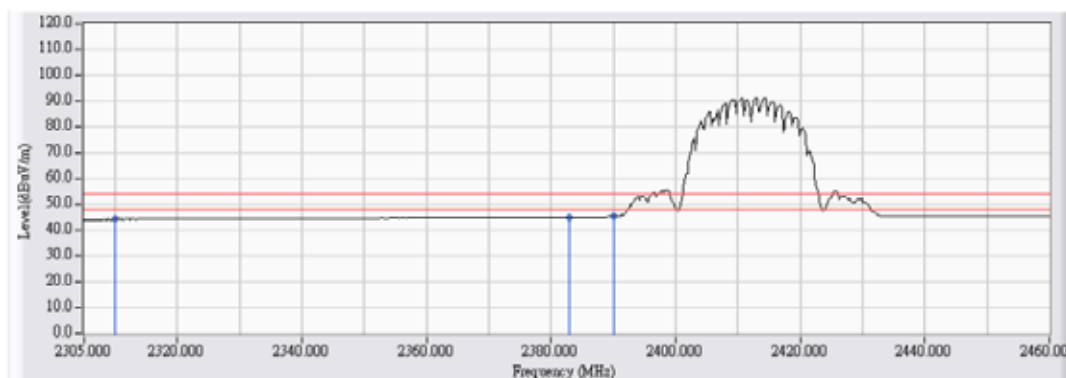


Radiated test

Date of Test:	August 3, 2012	Temperature:	24°C
EUT:	13.3 inch Tablet PC	Humidity:	53%
Model No.:	MW13-1301	Power Supply:	AC 120V/60Hz
Test Mode:	802.11b Channel Low 2412MHz	Polarization:	HORIZONTAL



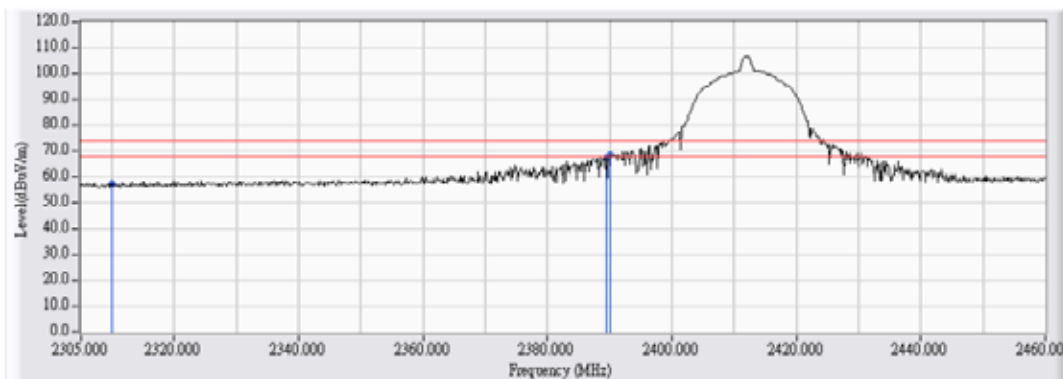
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2310.000	27.265	29.252	56.517	-17.483	74.000	PEAK
2	* 2382.965	27.570	30.818	58.389	-15.611	74.000	PEAK
3	2390.000	27.600	29.298	56.898	-17.102	74.000	PEAK



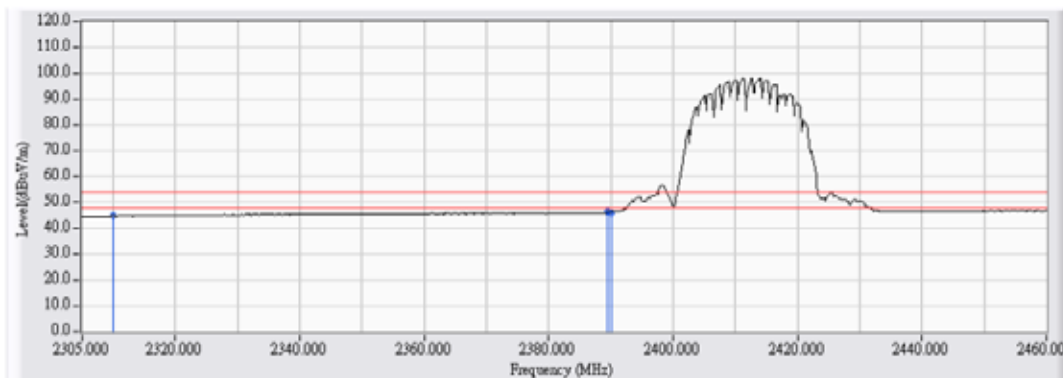
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2310.000	27.265	17.003	44.268	-9.732	54.000	AVERAGE
2	2382.965	27.570	17.534	45.105	-8.895	54.000	AVERAGE
3	* 2390.000	27.600	17.723	45.323	-8.677	54.000	AVERAGE

- Note: 1. Measurement Level = Reading Level + Correct Factor.
 2. The average measurement was not performed when the peak measured data under the limit of average detection.

Date of Test:	August 3, 2012	Temperature:	24°C
EUT:	13.3 inch Tablet PC	Humidity:	53%
Model No.:	MW13-1301	Power Supply:	AC 120V/60Hz
Test Mode:	802.11b Channel Low 2412MHz	Polarization:	VERTICAL



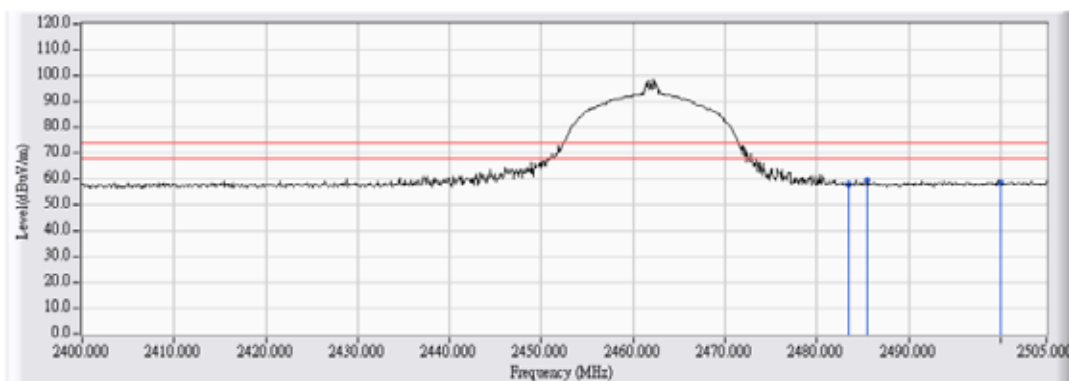
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2310.000	27.265	30.250	57.515	-16.485	74.000	PEAK
2	2389.475	27.597	39.797	67.395	-6.605	74.000	PEAK
3	* 2390.000	27.600	40.756	68.356	-5.644	74.000	PEAK



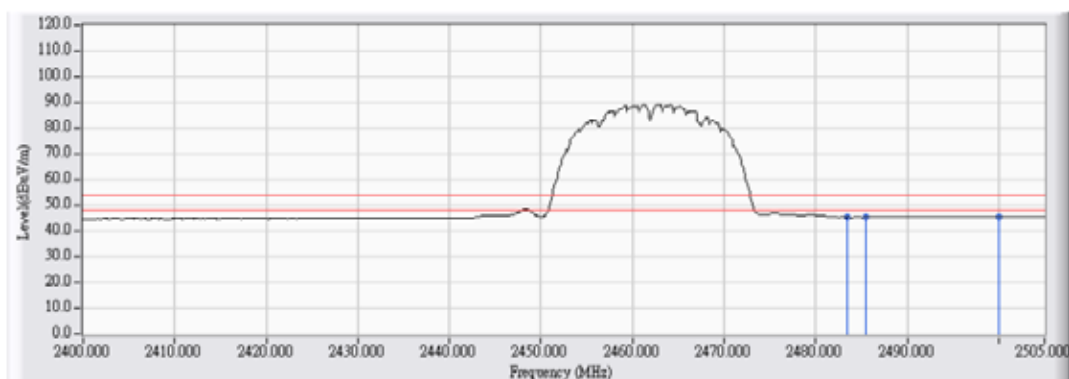
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2310.000	27.265	17.540	44.805	-9.195	54.000	AVERAGE
2	* 2389.475	27.597	18.712	46.310	-7.690	54.000	AVERAGE
3	2390.000	27.600	18.607	46.207	-7.793	54.000	AVERAGE

- Note: 1. Measurement Level = Reading Level + Correct Factor.
 2. The average measurement was not performed when the peak measured data under the limit of average detection.

Date of Test:	August 3, 2012	Temperature:	24°C
EUT:	13.3 inch Tablet PC	Humidity:	53%
Model No.:	MW13-1301	Power Supply:	AC 120V/60Hz
Test Mode:	802.11b Channel High 2462MHz	Polarization:	HORIZONTAL



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2483.500	27.991	29.781	57.772	-16.228	74.000	PEAK
2	* 2485.470	28.000	31.423	59.422	-14.578	74.000	PEAK
3	2500.000	28.057	30.299	58.356	-15.644	74.000	PEAK

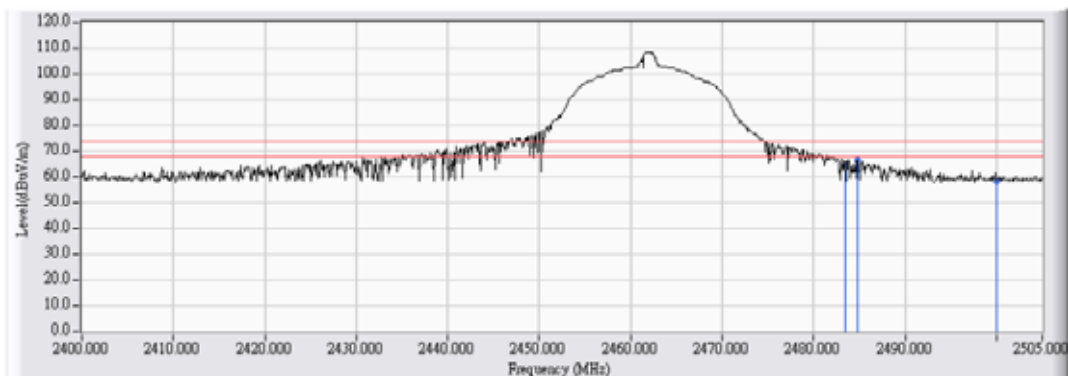


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2483.500	27.991	17.288	45.279	-8.721	54.000	AVERAGE
2	2485.470	28.000	17.289	45.288	-8.712	54.000	AVERAGE
3	* 2500.000	28.057	17.424	45.481	-8.519	54.000	AVERAGE

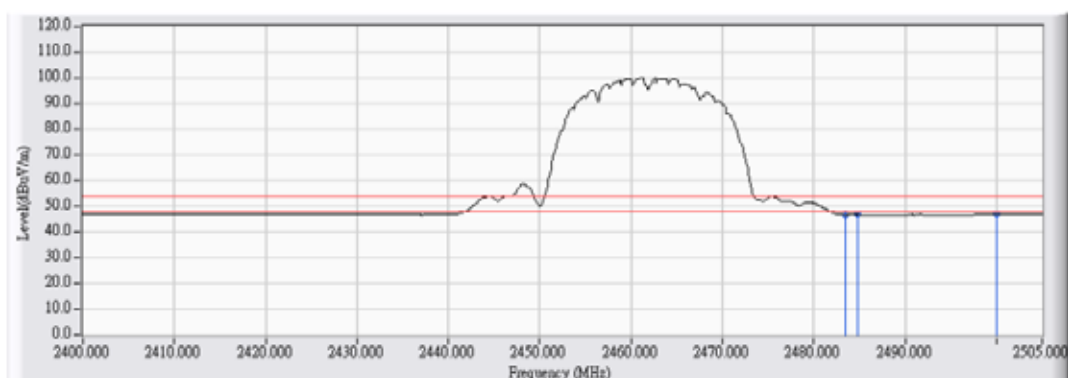
Note: 1. Measurement Level = Reading Level + Correct Factor.

2. The average measurement was not performed when the peak measured data under the limit of average detection.

Date of Test:	August 3, 2012	Temperature:	24°C
EUT:	13.3 inch Tablet PC	Humidity:	53%
Model No.:	MW13-1301	Power Supply:	AC 120V/60Hz
Test Mode:	802.11b Channel High 2462MHz	Polarization:	VERTICAL



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2483.500	27.991	36.428	64.419	-9.581	74.000	PEAK
2	* 2484.840	27.996	38.601	66.598	-7.402	74.000	PEAK
3	2500.000	28.057	30.646	58.703	-15.297	74.000	PEAK

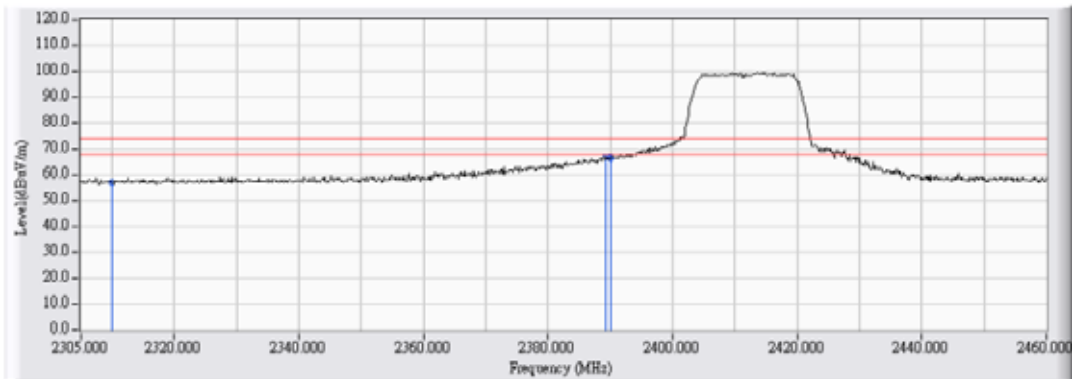


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2483.500	27.991	18.735	46.726	-7.274	54.000	AVERAGE
2	2484.840	27.996	18.789	46.786	-7.214	54.000	AVERAGE
3	* 2500.000	28.057	18.792	46.849	-7.151	54.000	AVERAGE

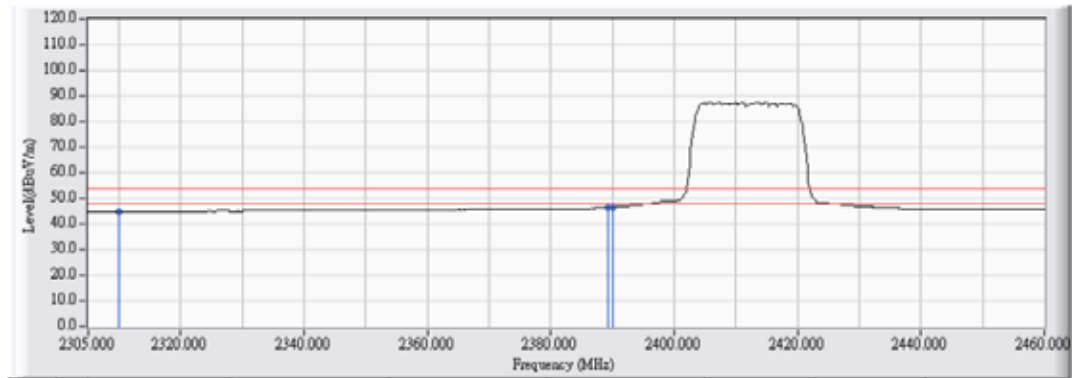
Note: 1. Measurement Level = Reading Level + Correct Factor.
 2. The average measurement was not performed when the peak measured data under the limit of average detection.

Radiated test

Date of Test:	August 3, 2012	Temperature:	24°C
EUT:	13.3 inch Tablet PC	Humidity:	53%
Model No.:	MW13-1301	Power Supply:	AC 120V/60Hz
Test Mode:	802.11g Channel Low 2412MHz	Polarization:	HORIZONTAL



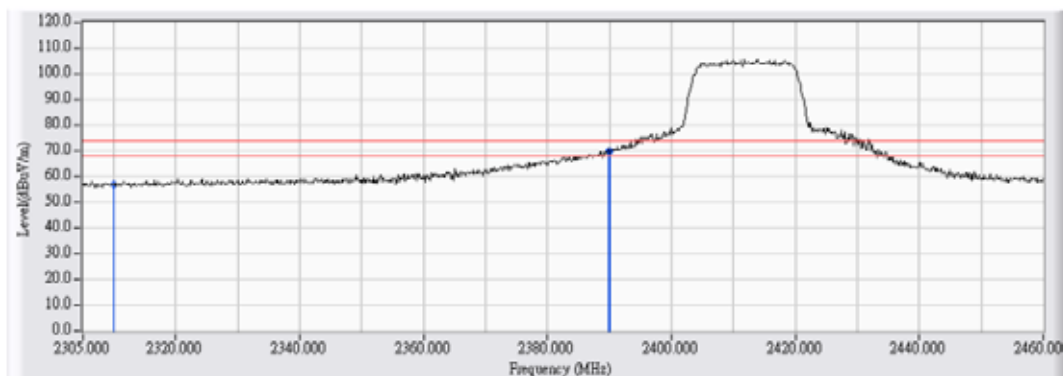
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2310.000	27.265	29.645	56.910	-17.090	74.000	PEAK
2	* 2389.320	27.597	39.609	67.206	-6.794	74.000	PEAK
3	2390.000	27.600	38.784	66.384	-7.616	74.000	PEAK



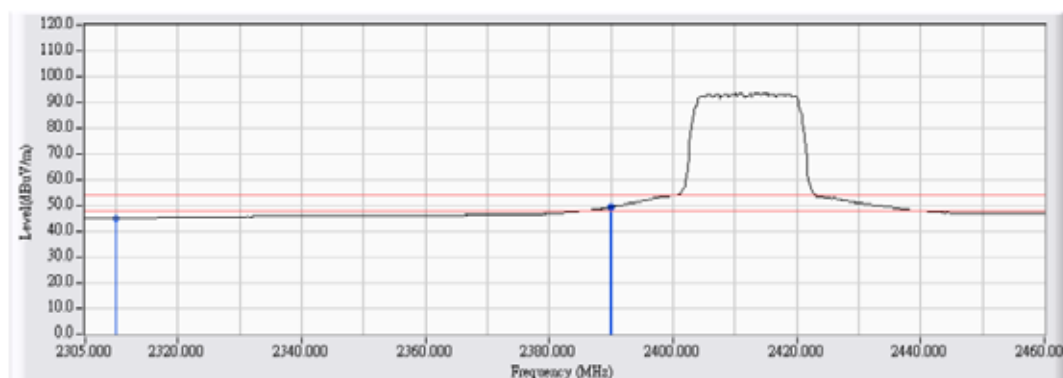
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2310.000	27.265	17.867	45.132	-8.868	54.000	AVERAGE
2	2389.320	27.597	18.956	46.553	-7.447	54.000	AVERAGE
3	* 2390.000	27.600	19.041	46.641	-7.359	54.000	AVERAGE

- Note: 1. Measurement Level = Reading Level + Correct Factor.
2. The average measurement was not performed when the peak measured data under the limit of average detection.

Date of Test:	August 3, 2012	Temperature:	24°C
EUT:	13.3 inch Tablet PC	Humidity:	53%
Model No.:	MW13-1301	Power Supply:	AC 120V/60Hz
Test Mode:	802.11g Channel Low 2412MHz	Polarization:	VERTICAL



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2310.000	27.265	29.547	56.812	-17.188	74.000	PEAK
2	2389.785	27.599	42.441	70.040	-3.960	74.000	PEAK
3	* 2390.000	27.600	42.517	70.117	-3.883	74.000	PEAK

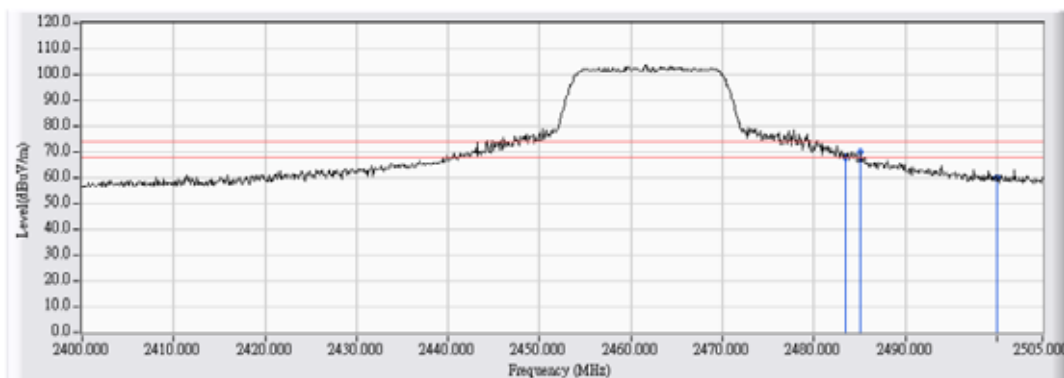


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2310.000	27.265	17.769	45.034	-8.966	54.000	AVERAGE
2	2389.785	27.599	21.720	49.319	-4.681	54.000	AVERAGE
3	* 2390.000	27.600	21.851	49.451	-4.549	54.000	AVERAGE

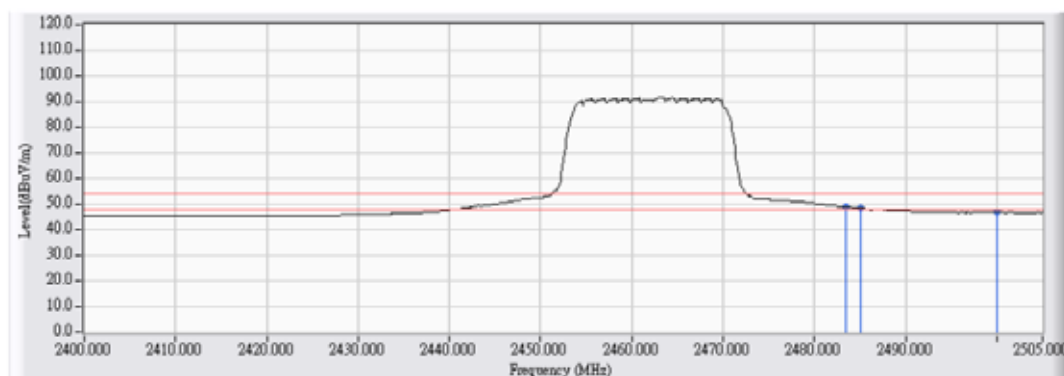
Note: 1. Measurement Level = Reading Level + Correct Factor.

2. The average measurement was not performed when the peak measured data under the limit of average detection.

Date of Test:	August 3, 2012	Temperature:	24°C
EUT:	13.3 inch Tablet PC	Humidity:	53%
Model No.:	MW13-1301	Power Supply:	AC 120V/60Hz
Test Mode:	802.11g Channel High 2462MHz	Polarization:	HORIZONTAL



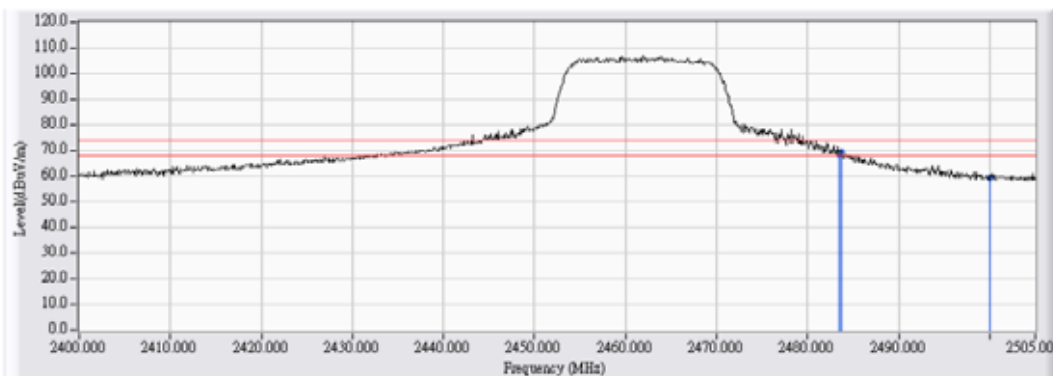
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2483.500	27.991	39.891	67.882	-6.118	74.000	PEAK
2	* 2485.050	27.997	41.997	69.995	-4.005	74.000	PEAK
3	2500.000	28.057	31.966	60.023	-13.977	74.000	PEAK



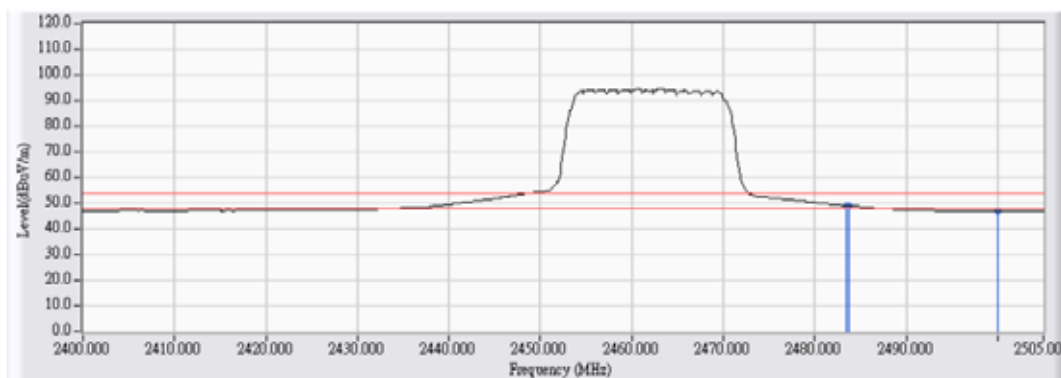
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	* 2483.500	27.991	20.976	48.967	-5.033	54.000	AVERAGE
2	2485.050	27.997	20.472	48.470	-5.530	54.000	AVERAGE
3	2500.000	28.057	18.793	46.850	-7.150	54.000	AVERAGE

Note: 1. Measurement Level = Reading Level + Correct Factor.
 2. The average measurement was not performed when the peak measured data under the limit of average detection.

Date of Test:	August 3, 2012	Temperature:	24°C
EUT:	13.3 inch Tablet PC	Humidity:	53%
Model No.:	MW13-1301	Power Supply:	AC 120V/60Hz
Test Mode:	802.11g Channel High 2462MHz	Polarization:	VERTICAL



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2483.500	27.991	40.501	68.492	-5.508	74.000	PEAK
2	* 2483.685	27.992	41.264	69.256	-4.744	74.000	PEAK
3	2500.000	28.057	31.399	59.456	-14.544	74.000	PEAK



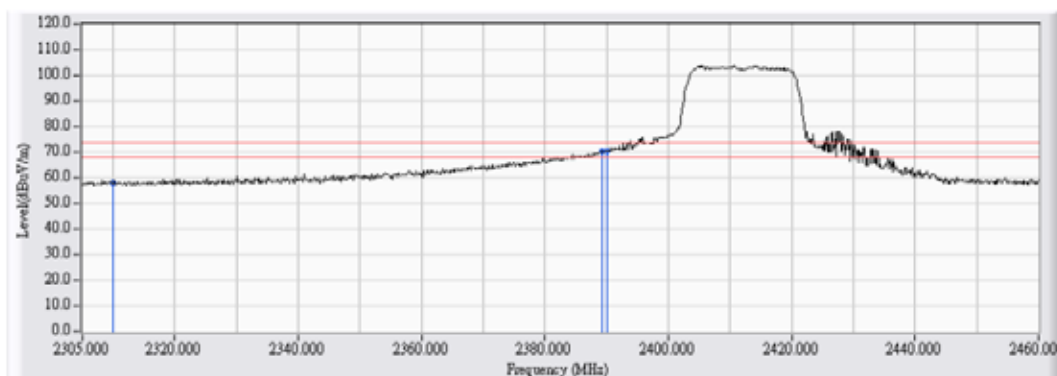
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	* 2483.500	27.991	21.049	49.040	-4.960	54.000	AVERAGE
2	2483.685	27.992	20.977	48.969	-5.031	54.000	AVERAGE
3	2500.000	28.057	18.955	47.012	-6.988	54.000	AVERAGE

Note: 1. Measurement Level = Reading Level + Correct Factor.

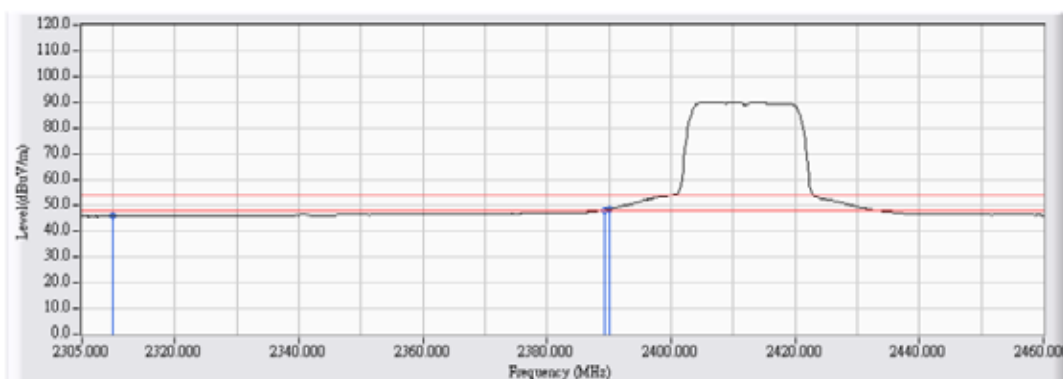
2. The average measurement was not performed when the peak measured data under the limit of average detection.

Radiated test

Date of Test:	August 3, 2012	Temperature:	24°C
EUT:	13.3 inch Tablet PC	Humidity:	53%
Model No.:	MW13-1301	Power Supply:	AC 120V/60Hz
Test Mode:	802.11n HT20 Channel Low 2412MHz	Polarization:	HORIZONTAL



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2310.000	27.265	30.598	57.863	-16.137	74.000	PEAK
2	2389.320	27.597	42.674	70.271	-3.729	74.000	PEAK
3	* 2390.000	27.600	42.838	70.438	-3.562	74.000	PEAK

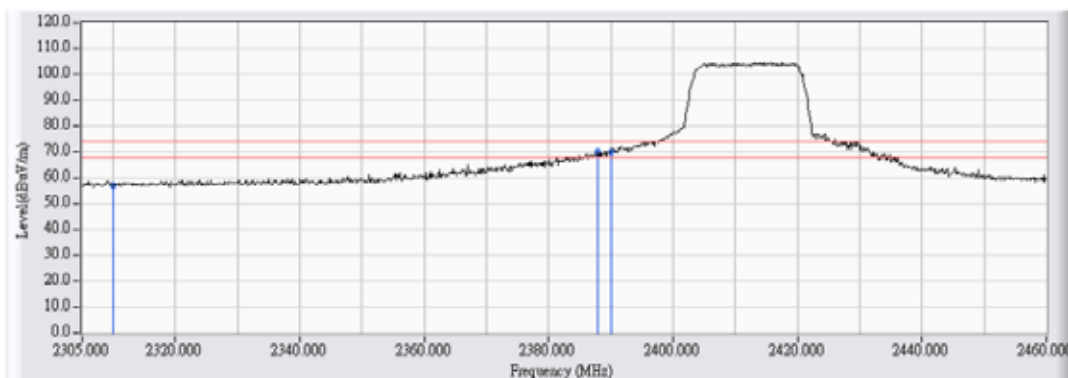


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2310.000	27.265	18.609	45.874	-8.126	54.000	AVERAGE
2	2389.320	27.597	20.636	48.233	-5.767	54.000	AVERAGE
3	* 2390.000	27.600	20.954	48.554	-5.446	54.000	AVERAGE

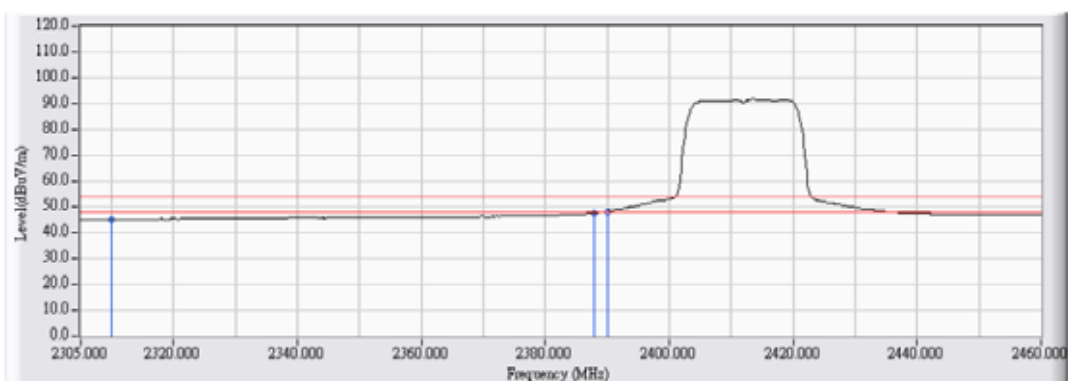
Note: 1. Measurement Level = Reading Level + Correct Factor.

2. The average measurement was not performed when the peak measured data under the limit of average detection.

Date of Test:	August 3, 2012	Temperature:	24°C
EUT:	13.3 inch Tablet PC	Humidity:	53%
Model No.:	MW13-1301	Power Supply:	AC 120V/60Hz
Test Mode:	802.11n HT20 Channel Low 2412MHz	Polarization:	VERTICAL



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2310.000	27.265	29.635	56.900	-17.100	74.000	PEAK
2	2387.925	27.591	42.173	69.764	-4.236	74.000	PEAK
3	* 2390.000	27.600	42.273	69.873	-4.127	74.000	PEAK

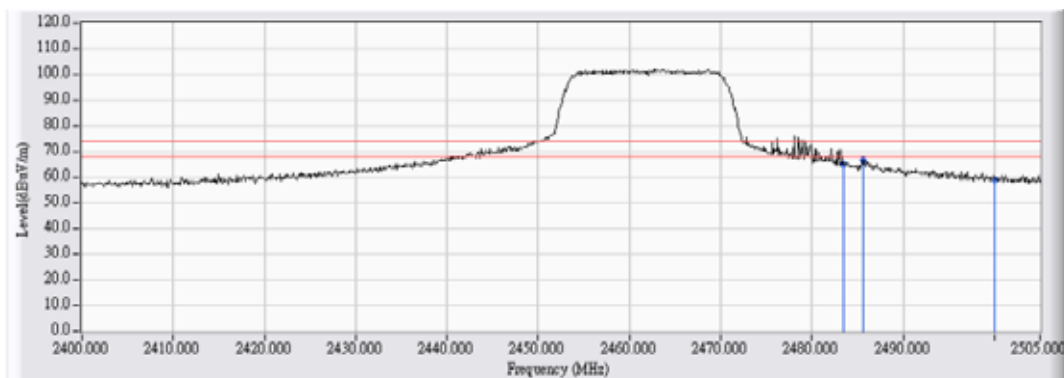


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2310.000	27.265	17.706	44.971	-9.029	54.000	AVERAGE
2	2387.925	27.591	19.890	47.481	-6.519	54.000	AVERAGE
3	* 2390.000	27.600	20.638	48.238	-5.762	54.000	AVERAGE

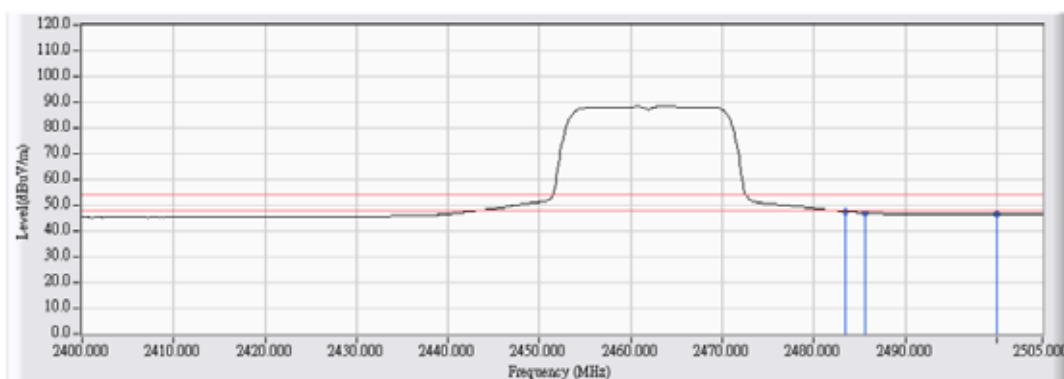
Note: 1. Measurement Level = Reading Level + Correct Factor.

2. The average measurement was not performed when the peak measured data under the limit of average detection.

Date of Test:	August 3, 2012	Temperature:	24°C
EUT:	13.3 inch Tablet PC	Humidity:	53%
Model No.:	MW13-1301	Power Supply:	AC 120V/60Hz
Test Mode:	802.11n HT20 Channel High 2462MHz	Polarization:	HORIZONTAL



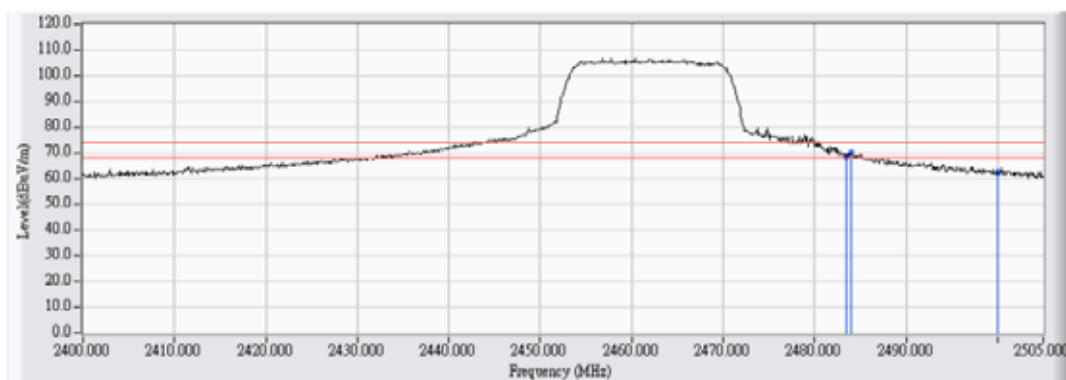
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2483.500	27.991	36.925	64.916	-9.084	74.000	PEAK
2	* 2485.575	28.000	38.696	66.696	-7.304	74.000	PEAK
3	2500.000	28.057	31.147	59.204	-14.796	74.000	PEAK



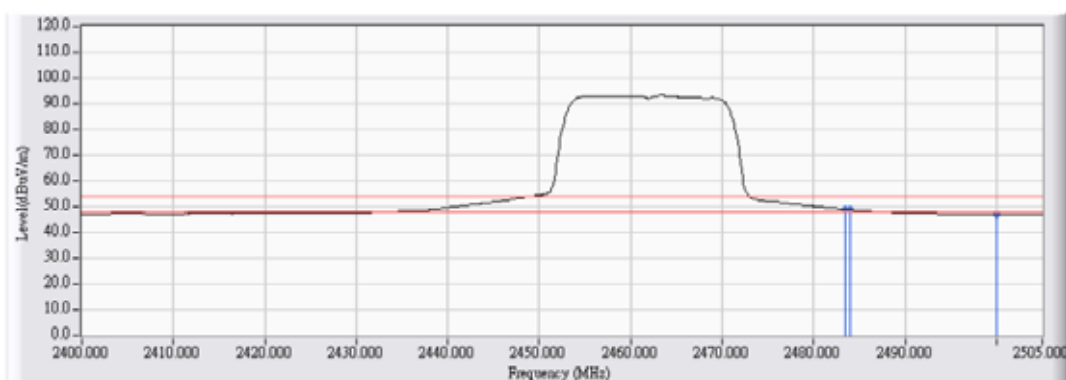
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	* 2483.500	27.991	19.560	47.551	-6.449	54.000	AVERAGE
2	2485.575	28.000	19.080	47.080	-6.920	54.000	AVERAGE
3	2500.000	28.057	18.557	46.614	-7.386	54.000	AVERAGE

- Note: 1. Measurement Level = Reading Level + Correct Factor.
 2. The average measurement was not performed when the peak measured data under the limit of average detection.

Date of Test:	August 3, 2012	Temperature:	24°C
EUT:	13.3 inch Tablet PC	Humidity:	53%
Model No.:	MW13-1301	Power Supply:	AC 120V/60Hz
Test Mode:	802.11n HT20 Channel High 2462MHz	Polarization:	VERTICAL



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2483.500	27.991	40.740	68.731	-5.269	74.000	PEAK
2	* 2484.000	27.993	42.049	70.042	-3.958	74.000	PEAK
3	2500.000	28.057	34.609	62.666	-11.334	74.000	PEAK



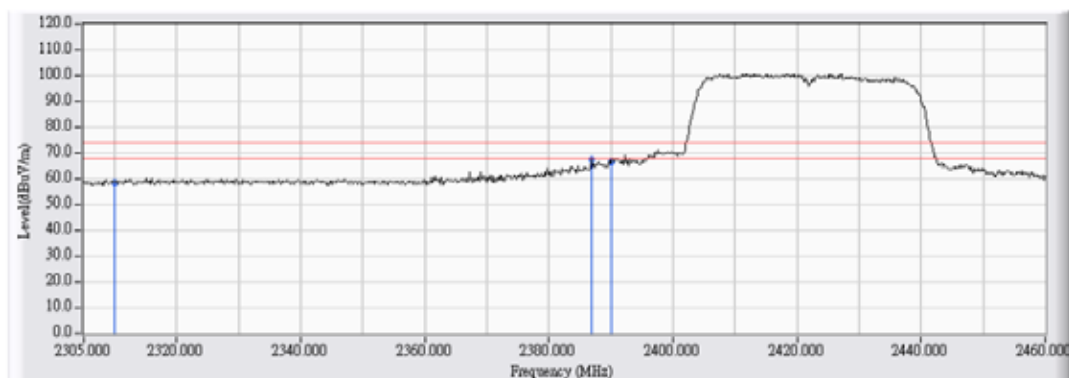
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	* 2483.500	27.991	20.996	48.987	-5.013	54.000	AVERAGE
2	2484.000	27.993	20.861	48.854	-5.146	54.000	AVERAGE
3	2500.000	28.057	19.030	47.087	-6.913	54.000	AVERAGE

Note: 1. Measurement Level = Reading Level + Correct Factor.

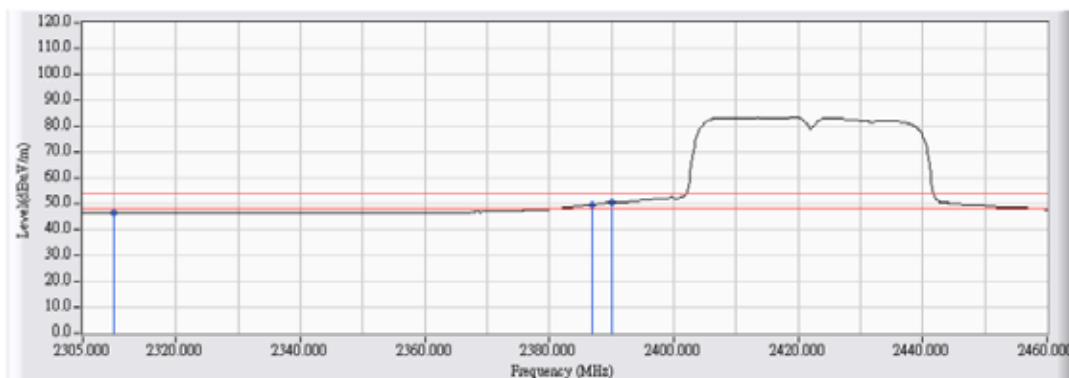
2. The average measurement was not performed when the peak measured data under the limit of average detection.

Radiated test

Date of Test:	August 3, 2012	Temperature:	24°C
EUT:	13.3 inch Tablet PC	Humidity:	53%
Model No.:	MW13-1301	Power Supply:	AC 120V/60Hz
Test Mode:	802.11n HT40 Channel Low 2422MHz	Polarization:	HORIZONTAL



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2310.000	27.265	31.438	58.703	-15.297	74.000	PEAK
2	* 2386.840	27.587	40.099	67.686	-6.314	74.000	PEAK
3	2390.000	27.600	39.100	66.700	-7.300	74.000	PEAK

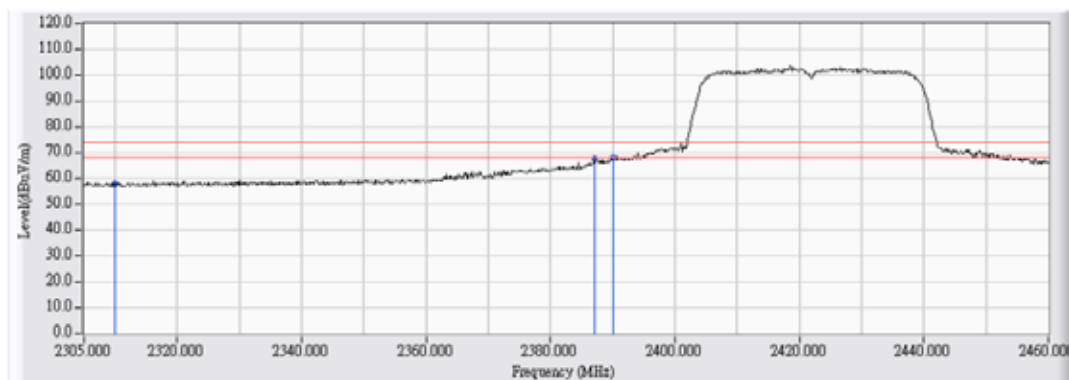


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2310.000	27.265	19.226	46.491	-7.509	54.000	AVERAGE
2	2386.840	27.587	22.085	49.672	-4.328	54.000	AVERAGE
3	* 2390.000	27.600	22.806	50.406	-3.594	54.000	AVERAGE

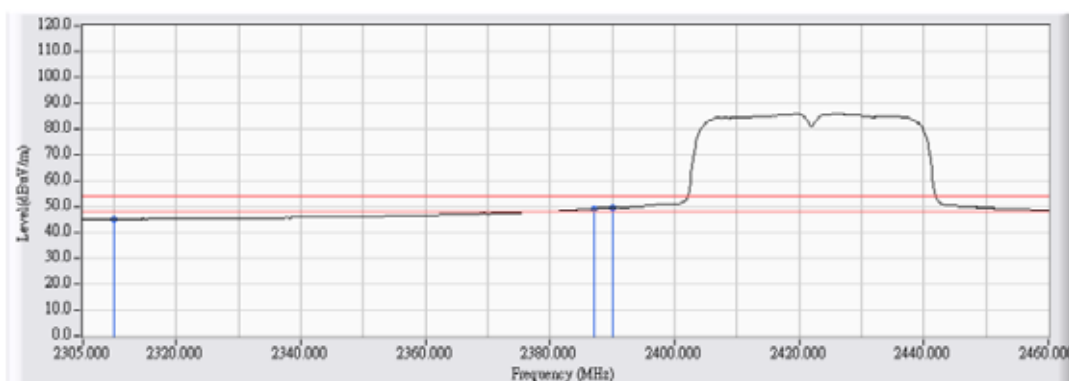
Note: 1. Measurement Level = Reading Level + Correct Factor.

2. The average measurement was not performed when the peak measured data under the limit of average detection.

Date of Test:	August 3, 2012	Temperature:	24°C
EUT:	13.3 inch Tablet PC	Humidity:	53%
Model No.:	MW13-1301	Power Supply:	AC 120V/60Hz
Test Mode:	802.11n HT40 Channel Low 2422MHz	Polarization:	VERTICAL



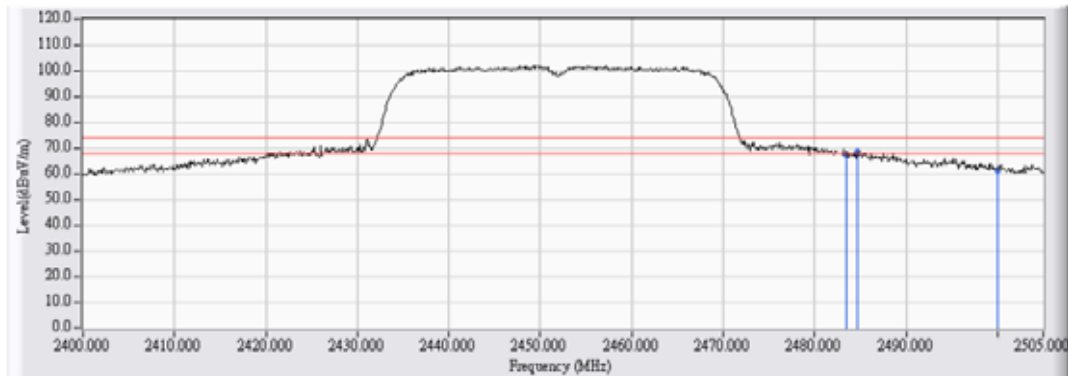
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2310.000	27.265	30.933	58.198	-15.802	74.000	PEAK
2	2387.150	27.588	39.687	67.275	-6.725	74.000	PEAK
3	* 2390.000	27.600	40.327	67.927	-6.073	74.000	PEAK



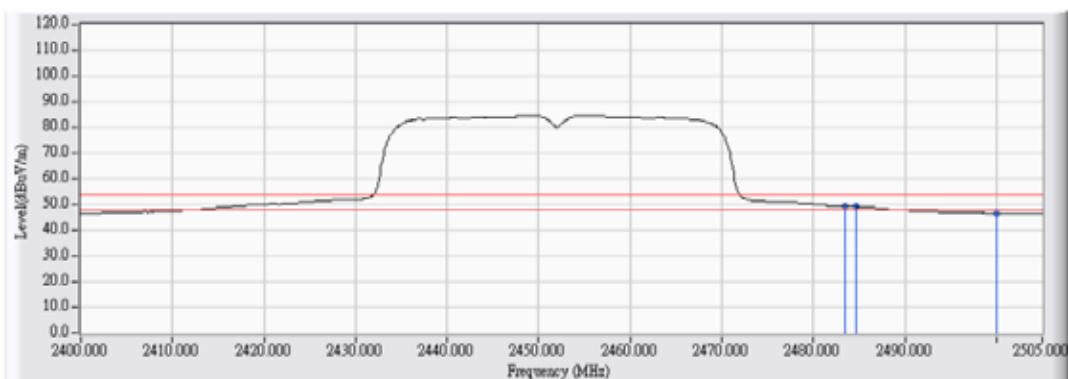
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2310.000	27.265	17.912	45.177	-8.823	54.000	AVERAGE
2	2387.150	27.588	21.592	49.180	-4.820	54.000	AVERAGE
3	* 2390.000	27.600	22.059	49.659	-4.341	54.000	AVERAGE

Note: 1. Measurement Level = Reading Level + Correct Factor.
 2. The average measurement was not performed when the peak measured data under the limit of average detection.

Date of Test:	August 3, 2012	Temperature:	24°C
EUT:	13.3 inch Tablet PC	Humidity:	53%
Model No.:	MW13-1301	Power Supply:	AC 120V/60Hz
Test Mode:	802.11n HT40 Channel High 2452MHz	Polarization:	HORIZONTAL



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2483.500	27.991	39.461	67.452	-6.548	74.000	PEAK
2	* 2484.630	27.996	40.640	68.636	-5.364	74.000	PEAK
3	2500.000	28.057	33.491	61.548	-12.452	74.000	PEAK

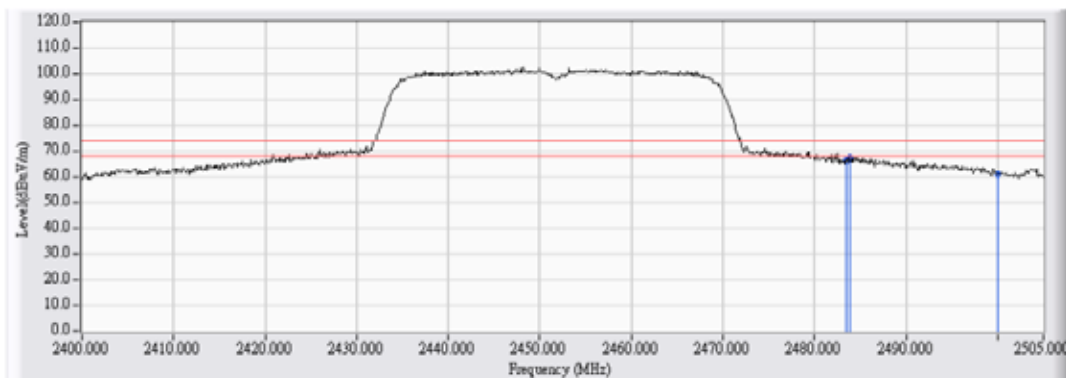


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	* 2483.500	27.991	21.365	49.356	-4.644	54.000	AVERAGE
2	2484.630	27.996	21.277	49.273	-4.727	54.000	AVERAGE
3	2500.000	28.057	18.609	46.666	-7.334	54.000	AVERAGE

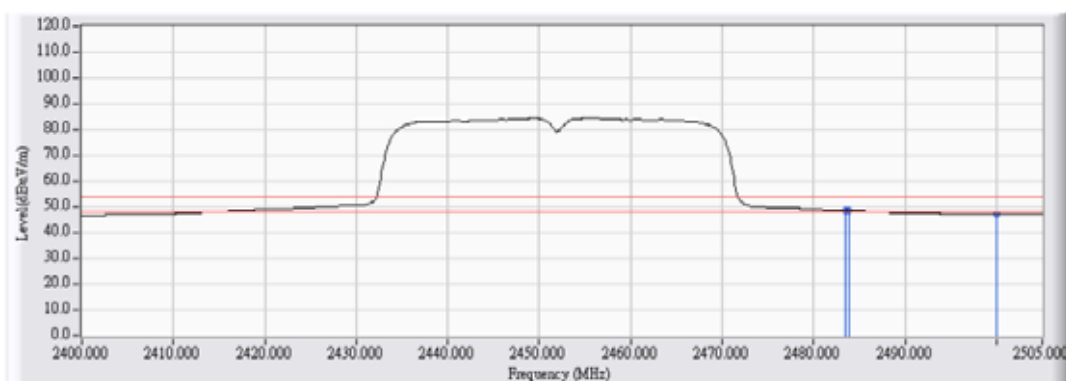
Note: 1. Measurement Level = Reading Level + Correct Factor.

2. The average measurement was not performed when the peak measured data under the limit of average detection.

Date of Test:	August 3, 2012	Temperature:	24°C
EUT:	13.3 inch Tablet PC	Humidity:	53%
Model No.:	MW13-1301	Power Supply:	AC 120V/60Hz
Test Mode:	802.11n HT40 Channel High 2452MHz	Polarization:	VERTICAL



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2483.500	27.991	38.287	66.278	-7.722	74.000	PEAK
2	* 2483.895	27.992	39.608	67.601	-6.399	74.000	PEAK
3	2500.000	28.057	32.960	61.017	-12.983	74.000	PEAK



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	* 2483.500	27.991	20.457	48.448	-5.552	54.000	AVERAGE
2	2483.895	27.992	20.395	48.388	-5.612	54.000	AVERAGE
3	2500.000	28.057	18.920	46.977	-7.023	54.000	AVERAGE

Note: 1. Measurement Level = Reading Level + Correct Factor.
 2. The average measurement was not performed when the peak measured data under the limit of average detection.

13. §15.247(E) - Power Spectral Density

13.1. Test Equipment

Please refer to Section 4 this report.

13.2. Test Procedure

- 1, Set EUT in the transmitting mode.
- 2, Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
- 3, Set the spectrum analyzer as RBW=3KHz, VBW=10KHz, Span=1.5MHz, Sweep=500S.
- 4, Record the max. reading
- 5, Repeat the above procedure until the measurements for all frequencies are completed.

13.3. Applicable Standard

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

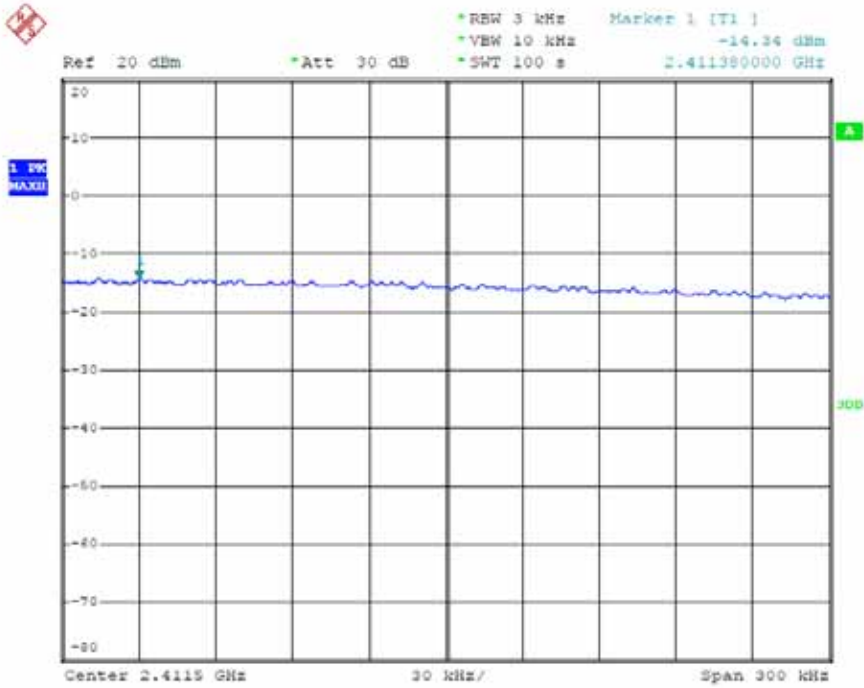
13.4. Test Result

PASS

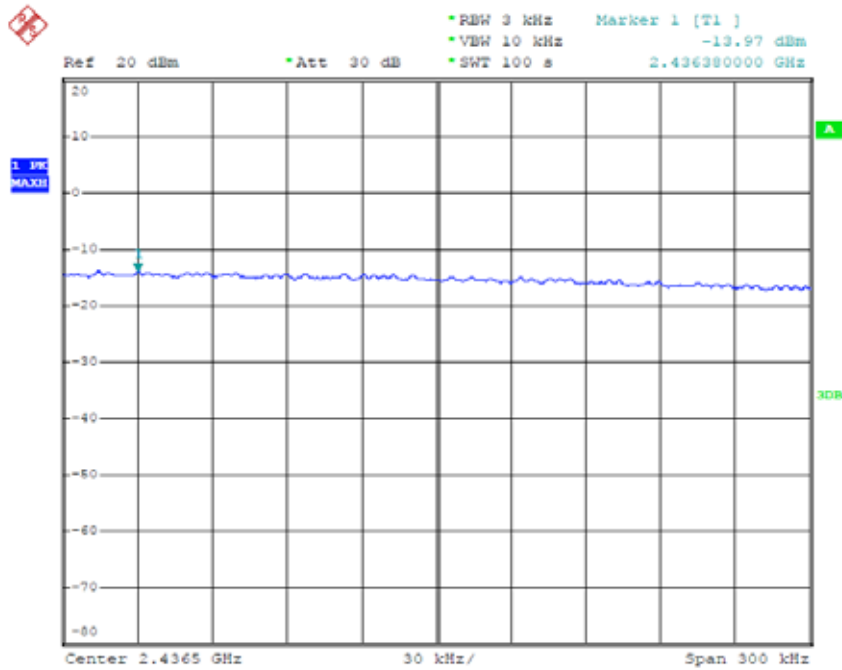
Channel Frequency (MHz)	Data Rate (Mbps)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	RESULT
802.11b Mode				
2412	1	-14.34	8	Compliant
2437	1	-13.97	8	Compliant
2462	1	-14.62	8	Compliant
802.11g Mode				
2412	6	-14.80	8	Compliant
2437	6	-14.58	8	Compliant
2462	6	-14.71	8	Compliant
802.11n (20M) Mode				
2412	6	-22.03	8	Compliant
2437	6	-22.20	8	Compliant
2462	6	-22.63	8	Compliant
802.11n (40M) Mode				
2412	6	-27.81	8	Compliant
2437	6	-27.09	8	Compliant
2462	6	-26.25	8	Compliant

802.11b Mode:

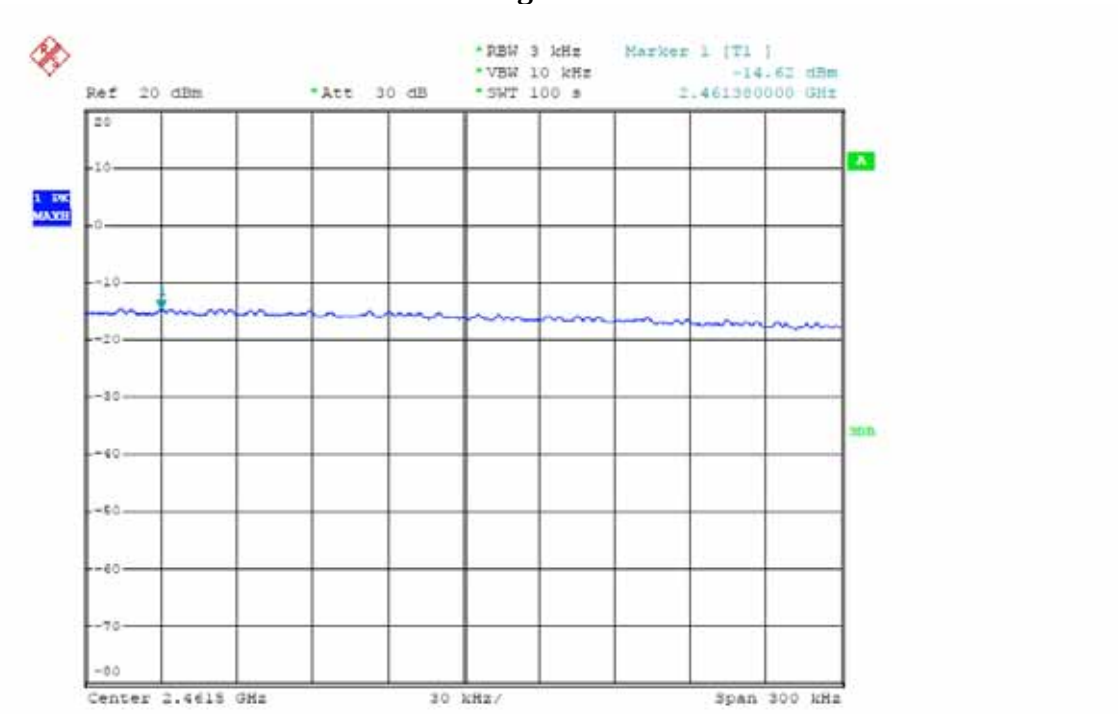
Low Channel



Middle Channel

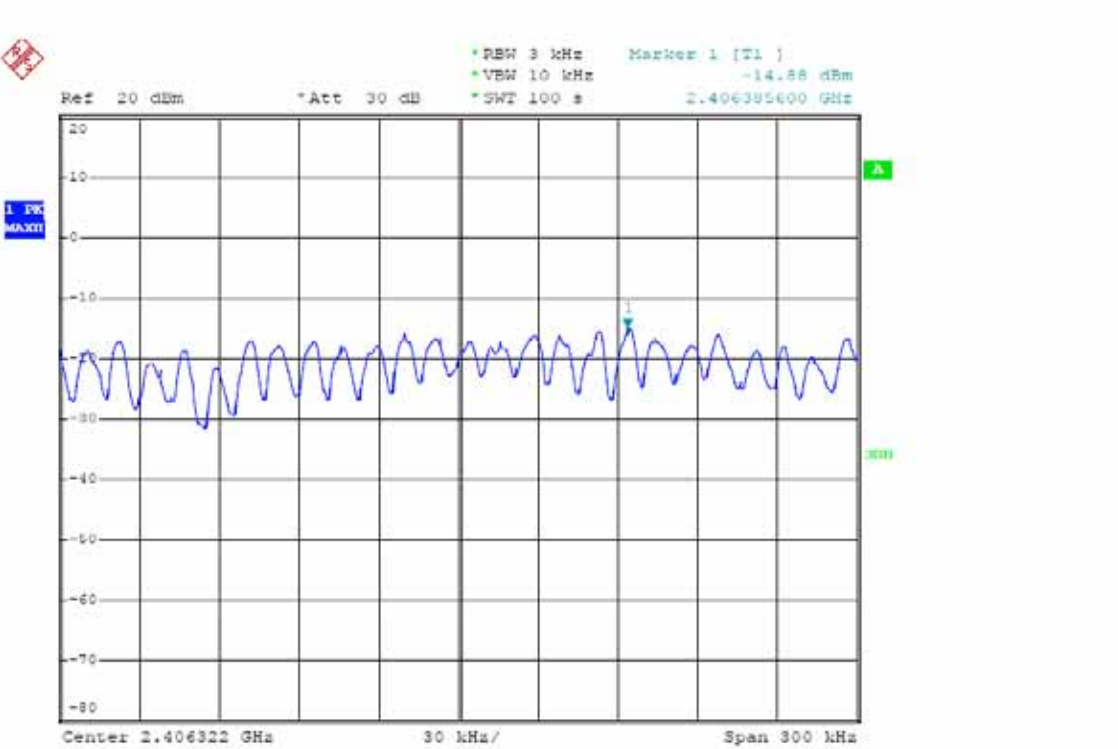


High Channel

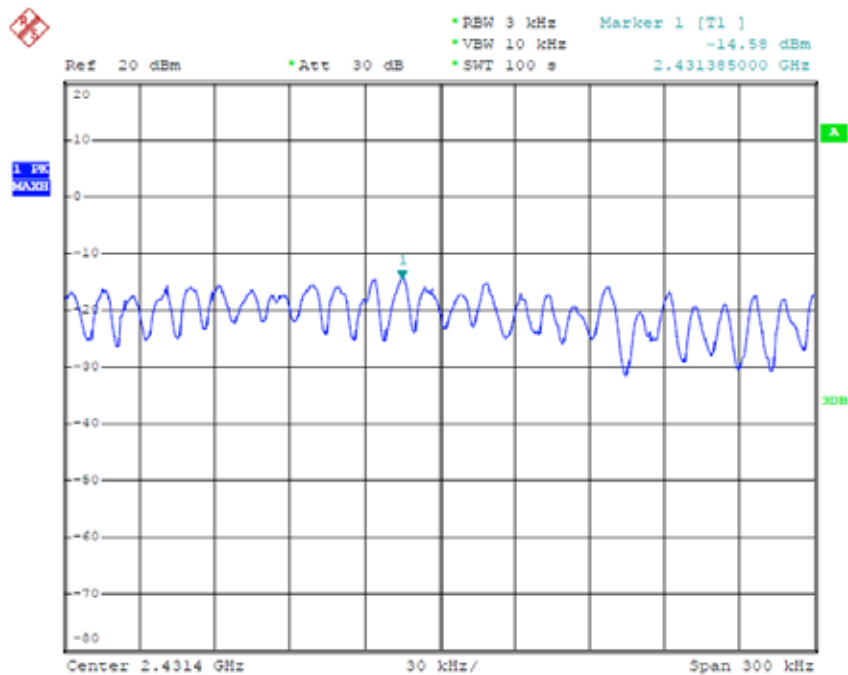


802.11g Mode:

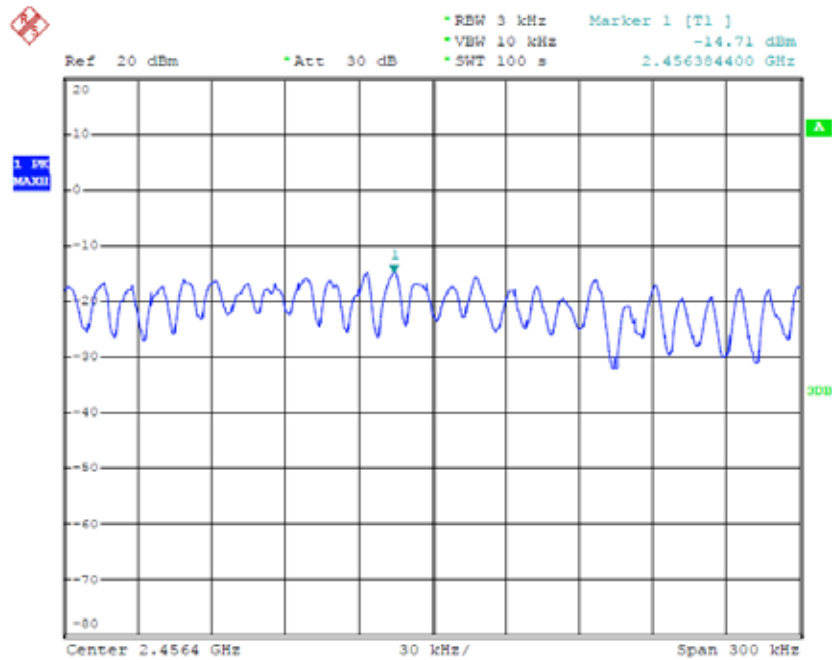
Low Channel



Middle Channel

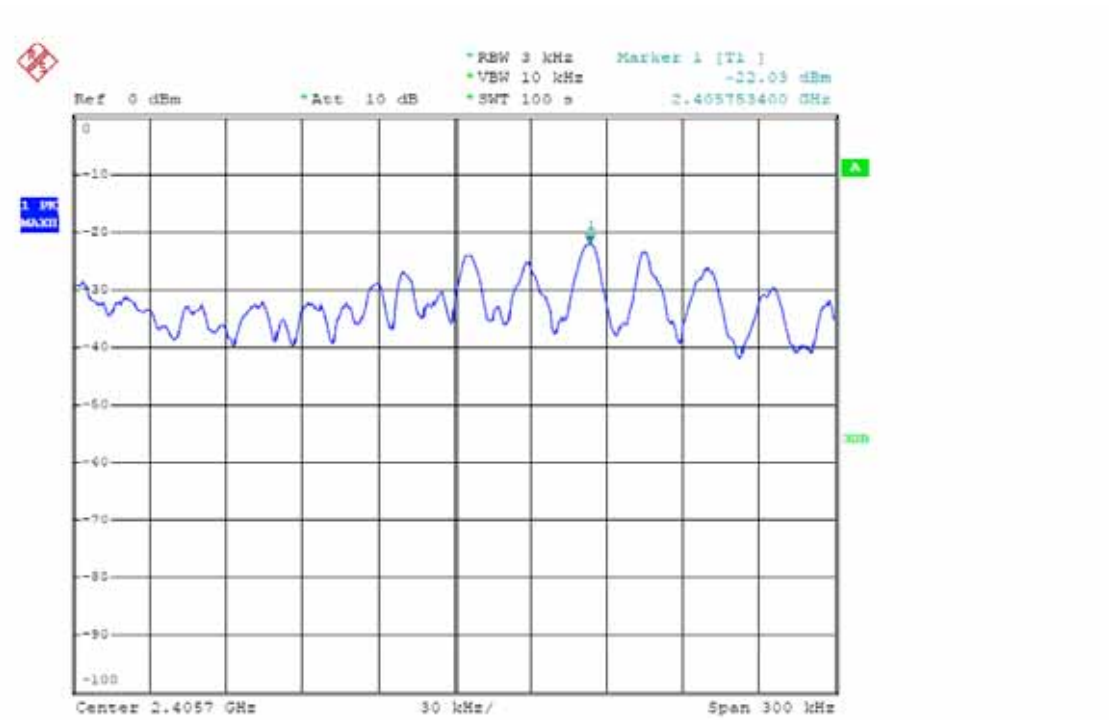


High Channel

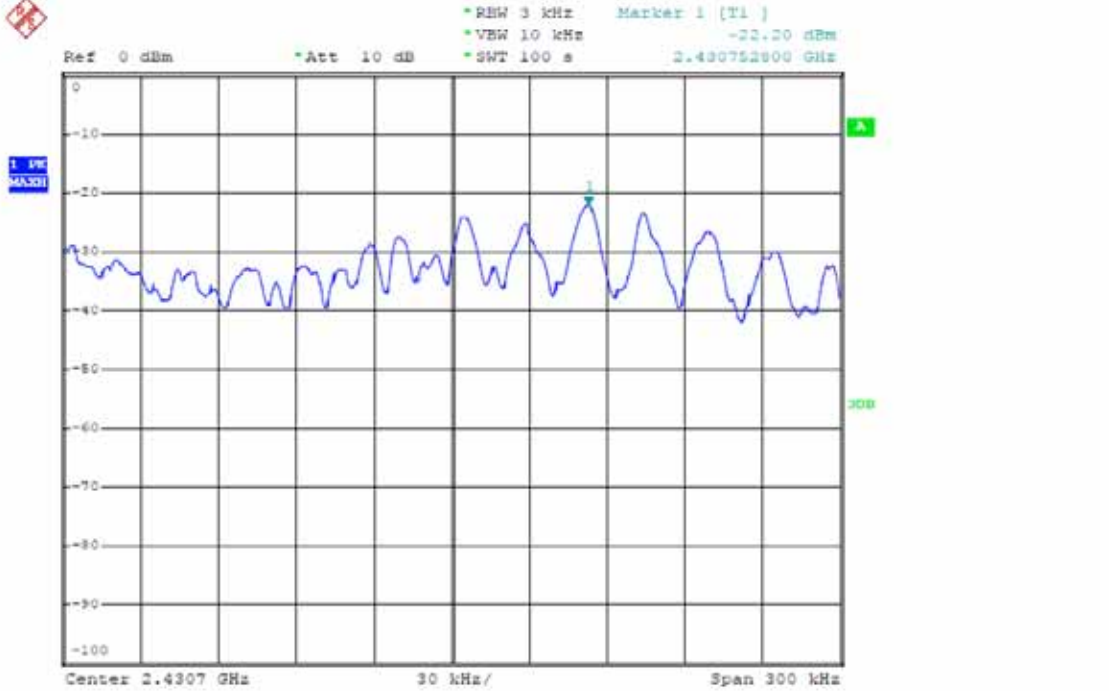


802.11n (20M) Mode:

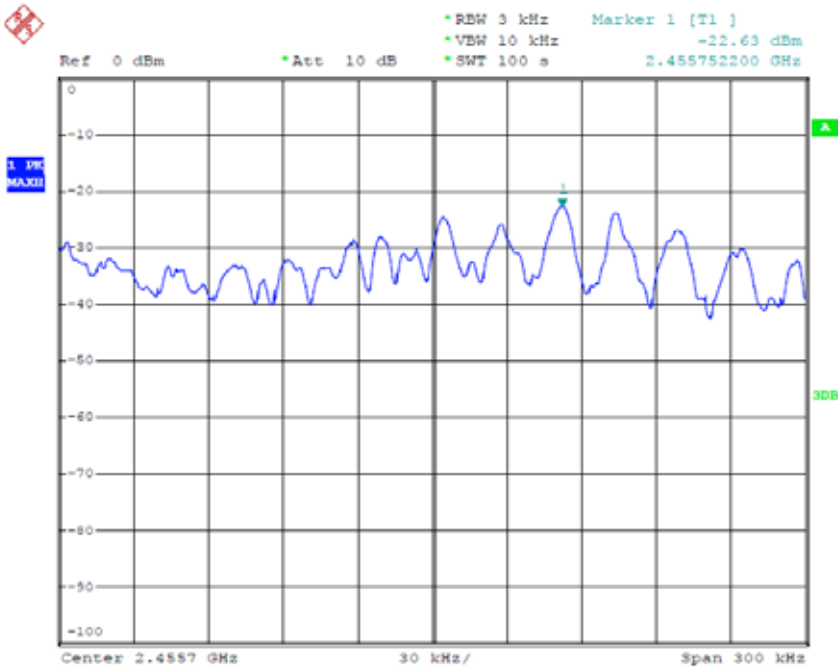
Low Channel



Middle Channel

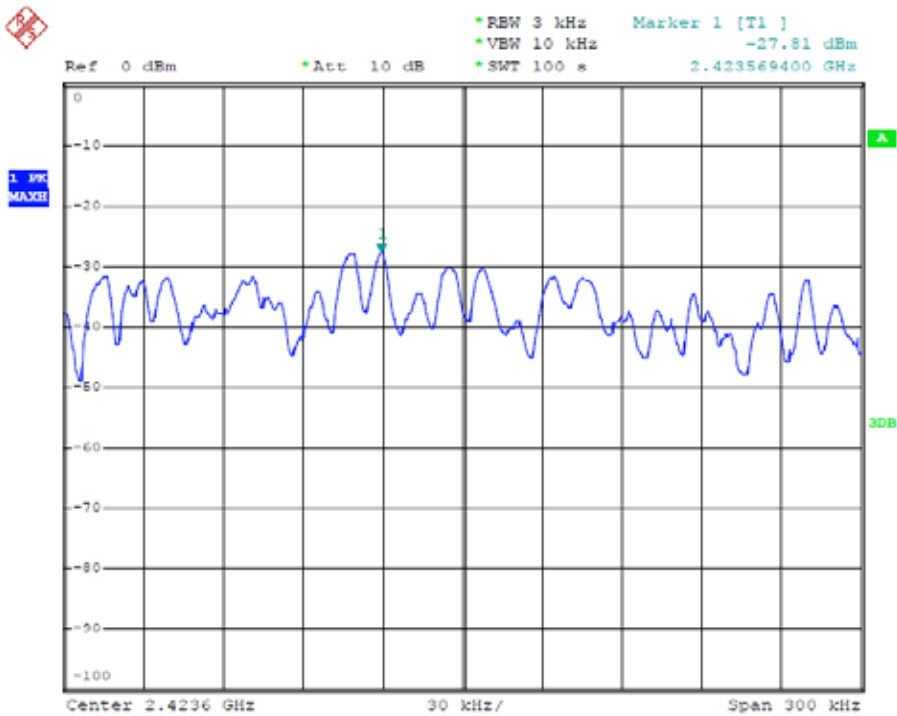


High Channel

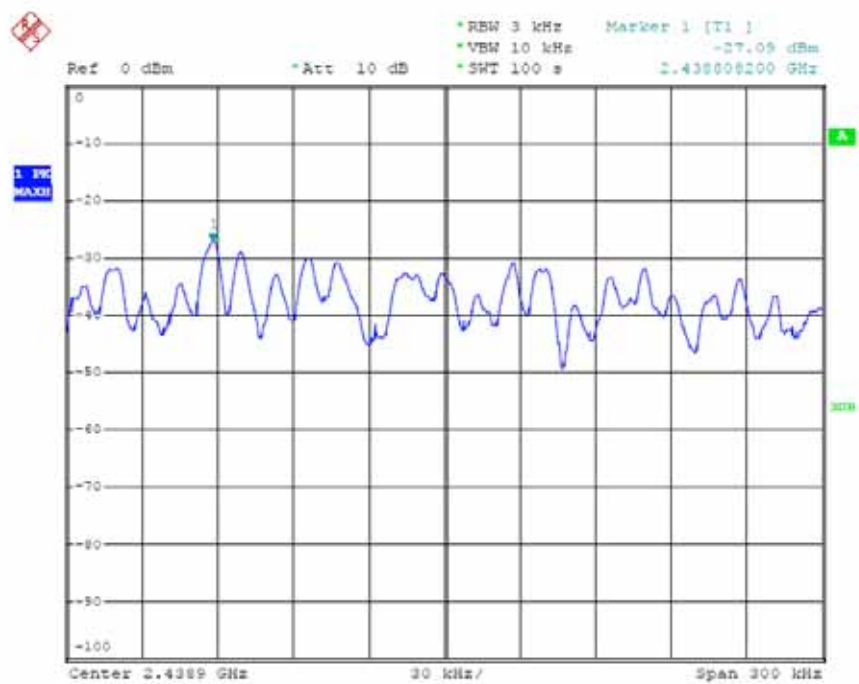


802.11n (40M) Mode:

Low Channel



Middle Channel



High Channel

