

# FCC Test Report

Product Name : Wicorder

Model No. : CR58

FCC ID. : 2AA22CR58

Applicant : SanJet Technology Corp.

Address : 4F, No.2, Li-Hsin 6th Rd., Hsinchu Science Park,  
Hsinchu, Taiwan, R.O.C

Date of Receipt : 2013/11/11

Issued Date : 2013/12/18

Report No. : 13B0198R-RFUSP25V00

Report Version : V1.0



The test results relate only to the samples tested.

The test report shall not be reproduced except in full without the written approval of QuieTek Corporation.

## Test Report Certification

Issued Date : 2013/12/18

Report No. : 13B0198R-RFUSP25V00



Product Name : Wicorder  
Applicant : SanJet Technology Corp.  
Address : 4F, No.2, Li-Hsin 6th Rd., Hsinchu Science Park, Hsinchu,  
Taiwan, R.O.C  
Manufacturer : SanJet Technology Corp.  
Model No. : CR58  
FCC ID. : 2AA22CR58  
EUT Test Voltage : DC 12V  
Trade Name : The SanJet logo features the word "San" in blue and "Jet" in red, with a stylized "J" shape.  
Applicable Standard : FCC CFR Title 47 Part 15 Subpart C Section 15.247: 2012  
ANSI C63.4: 2009  
Test Result : Complied

The test results relate only to the samples tested.

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Documented By : A handwritten signature in blue ink, appearing to read "Fonbo Fang".  
( Fonbo Fang / Engineering Adm. Assistant )

Reviewed By : A handwritten signature in blue ink, appearing to read "Bruno Tsai".  
( Bruno Tsai / Assistant Engineer )

Approved By : A handwritten signature in blue ink, appearing to read "Roy Wang".  
( Roy Wang / Director )

## Laboratory Information

We, **QuieTek Corporation**, are an independent RF consultancy that was established the whole facility in our laboratories. The test facility has been accredited/accepted (audited or listed) by the following related bodies in compliance with ISO 17025 specified testing scopes:

Taiwan R.O.C.	:	TAF, Accreditation Number: 1313 NCC, Certificate No : NCC-RCB-07
USA	:	FCC, Registration Number: 365520
Canada	:	IC, Submission No: 150981

The related certificate for our laboratories about the test site and management system can be downloaded from QuieTek Corporation's Web Site:<http://www.quietek.com/tw/ctg/cts/accreditations.htm>

The address and introduction of QuieTek Corporation's laboratories can be founded in our Web site :  
<http://www.quietek.com/>

If you have any comments, Please don't hesitate to contact us. Our contact information is as below:

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TEL : 886-2-8601-3788 / FAX : 886-2-8601-3789 E-Mail : service@quietek.com

**TABLE OF CONTENTS**

Description	Page
1. General Information.....	6
1.1. EUT Description .....	6
1.2. Operational Description.....	10
1.3. Test Mode.....	11
1.4. Tested System Details .....	12
1.5. Configuration of tested System .....	13
1.6. EUT Exercise Software .....	13
1.7. Test Facility.....	14
2. Conducted Emission .....	15
2.1. Test Equipment.....	15
2.2. Test Setup .....	15
2.3. Limits .....	16
2.4. Test Procedure .....	16
2.5. Test Specification.....	16
2.6. Uncertainty .....	16
2.7. Test Result.....	17
2.8. Test Photo .....	19
3. Peak Power Output.....	20
3.1. Test Equipment.....	20
3.2. Test Setup .....	20
3.3. Test procedures.....	20
3.4. Limits .....	20
3.5. Test Specification.....	20
3.6. Uncertainty .....	20
3.7. Test Result.....	21
4. Radiated Emission .....	33
4.1. Test Equipment.....	33
4.2. Test Setup .....	33
4.3. Limits .....	34
4.4. Test Procedure .....	35
4.5. Test Specification.....	35
4.6. Uncertainty .....	35
4.7. Test Result.....	36
4.8. Test Photo .....	60
5. RF antenna conducted test .....	62
5.1. Test Equipment.....	62
5.2. Test Setup .....	62
5.3. Limits .....	63

5.4.	Test Procedure .....	63
5.5.	Test Specification.....	63
5.6.	Uncertainty .....	63
5.7.	Test Result.....	64
6.	Radiated Emission Band Edge.....	106
6.1.	Test Equipment.....	106
6.2.	Test Setup .....	106
6.3.	Limits .....	107
6.4.	Test Procedure .....	107
6.5.	Test Specification.....	107
6.6.	Uncertainty .....	107
6.7.	Test Result.....	108
7.	Occupied Bandwidth .....	132
7.1.	Test Equipment.....	132
7.2.	Test Setup .....	132
7.3.	Test Procedures .....	132
7.4.	Limits .....	132
7.5.	Test Specification.....	132
7.6.	Uncertainty .....	132
7.7.	Test Result.....	133
8.	Power Density .....	142
8.1.	Test Equipment.....	142
8.2.	Test Setup .....	142
8.3.	Limits .....	142
8.4.	Test Procedures .....	142
8.5.	Test Specification.....	142
8.6.	Uncertainty .....	142
8.7.	Test Result.....	143
	Attachement.....	149
	EUT Photograph.....	149

**1. General Information****1.1. EUT Description**

Product Name	Wicorder	
Product Type	WLAN (1TX, 1RX)	
Trade Name	<b>SanJet</b>	
Model No.	CR58	
Frequency Range/ Channel Number	IEEE 802.11b/g	2412~2462MHz / 11 Channels
	IEEE 802.11n (20MHz)	2412~2462MHz / 11 Channels
Type of Modulation	IEEE 802.11b	Direct Sequence Spread Spectrum
	IEEE 802.11g/n	Orthogonal Frequency Division Multiplexing
Data Speed	IEEE 802.11b	1, 2, 5.5, 11Mbps
	IEEE 802.11g	6, 9, 18, 24, 36, 48,54Mbps
	IEEE 802.11n	Support a subset of the combination of GI, MCS 0~MCS 7 and bandwidth defined in 802.11n
Antenna Gain	2.1dBi	
Antenna Type	SMD	

Component	
USB Cable	Shielded, 0.8m, one ferrite core bonded.
Car Charge	Non-Shielded, 4m

**ANT-TX / RX & Bandwidth**

ANT-TX / RX	TX		RX	
	20MHz	40MHz	20MHz	40MHz
Mode/ Channel Bandwidth				
IEEE802.11b	✓		✓	
IEEE802.11g	✓		✓	
IEEE802.11n(20MHz)	✓		✓	

**IEEE 802.11n(20MHz)**

MCS Index	Modulation	R	N <sub>BPSCS</sub>	N <sub>CBPS</sub>	N <sub>DBPS</sub>	Data Rate(Mb/s)	
				20MHz	20MHz	800ns GI	400ns GI
						20MHz	20MHz
0	BPSK	1/2	1	52	26	6.5	7.2
1	QPSK	1/2	2	104	52	13.0	14.4
2	QPSK	3/4	2	104	78	19.5	21.7
3	16-QAM	1/2	4	208	104	26.0	28.9
4	16-QAM	3/4	4	208	156	39.0	43.3
5	64-QAM	2/3	6	312	208	52.0	57.8
6	64-QAM	3/4	6	312	234	58.5	65.0
7	64-QAM	5/6	6	312	260	65.0	72.2

Note 1: Support of 400ns GI is optional on transmit and receive.

Table 1 – MCS parameters for TX Antenna number = 1

Symbol	Explanation
R	Code rate
N <sub>BPSC</sub>	Number of coded bits per single carrier
N <sub>CBPS</sub>	Number of coded bits per symbol
N <sub>DBPS</sub>	Number of data bits per symbol
GI	guard interval

IEEE 802.11b/g &amp; IEEE 802.11n (20MHz)

Working Frequency of Each Channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
001	2412 MHz	002	2417 MHz	003	2422 MHz	004	2427 MHz
005	2432 MHz	006	2437 MHz	007	2442 MHz	008	2447 MHz
009	2452 MHz	010	2457 MHz	011	2462 MHz		

Note:

1. This device is the Wicorder, including 2.4GHz b/g/n (1x1) transmitting and receiving function.
2. These test results on a sample of the device are for the purpose of demonstrating Compliance with Part 15 Subpart C Paragraph 15.247.
3. Regards to the frequency band operation; the lowest、middle and highest frequency of channel were selected to perform the test, and then shown on this report.
4. This device is a composite device in accordance with Part 15 regulations. The receiving function receiving was tested and its test report number is 13B0198R-RFUSP01V00 under Declaration of Conformity.

### 1.3. Test Mode

QuieTek has verified the construction and function in typical operation. The preliminary tests were performed in different data rate, and to find the worst condition, which was shown in this test report. The following table is the final test mode.

TX	Mode 1: Transmit			
----	------------------	--	--	--

Test Items	Modulation	Channel	Antenna	Result
Conducted Emission	11n(20MHz)	6	0	Complies
Peak Power Output	b/g	1/ 6/ 11	0	Complies
	11n(20MHz)	1/ 6/ 11	0	Complies
Radiated Emission	b/g	1/ 6/ 11	0	Complies
	11n(20MHz)	1/ 6/ 11	0	Complies
RF antenna conducted test	b/g	1/ 6/ 11	0	Complies
	11n(20MHz)	1/ 6/ 11	0	Complies
Radiated Emission Band Edge	b/g	1/ 11	0	Complies
	11n(20MHz)	1/ 11	0	Complies
Occupied Bandwidth	b/g	1/ 6/ 11	0	Complies
	11n(20MHz)	1/ 6/ 11	0	Complies
Power Density	b/g	1/ 6/ 11	0	Complies
	11n(20MHz)	1/ 6/ 11	0	Complies

#### 1.4. Tested System Details

The types for all equipments, plus descriptions of all cables used in the tested system (including inserted cards) are:

Test Mode		Mode 1: Transmit				
Product		Manufacturer	Model No.	Serial No.	FCC ID	Power Cord
1	Monitor	DELL	U2410f	082WXD-7287 2-16R-0V7L	DoC	Non-Shielded, 1.8m
2	Microphone & Earphone	Fujiei	SBZ-38	N/A	DoC	--
3	Mouse	Logitech	M-SBF83	HCA52200076	DoC	--
4	Printer	HP	C9007A	MY3621M0PS	DoC	Non-Shielded, 3.7m, one ferrite core bonded
5	Notebook PC	HP Compaq	NX6320FF	CNU7020BXT	DoC	Non-Shielded, 1.8m
6	fixture	SanJet	N/A	--	DoC	--

## 1.5. Configuration of tested System

Test Mode	Mode 1: Transmit																
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Signal Cable Type</th> <th style="text-align: center;">Signal cable Description</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>VGA Cable</td> </tr> <tr> <td>B</td> <td>Microphone &amp; Earphone Cable</td> </tr> <tr> <td>C</td> <td>Mouse Cable</td> </tr> <tr> <td>D</td> <td>Printer Cable</td> </tr> <tr> <td>E</td> <td>USB Cable</td> </tr> <tr> <td>F</td> <td>Signal Cable</td> </tr> <tr> <td>G</td> <td>USB Cable</td> </tr> </tbody> </table>		Signal Cable Type	Signal cable Description	A	VGA Cable	B	Microphone & Earphone Cable	C	Mouse Cable	D	Printer Cable	E	USB Cable	F	Signal Cable	G	USB Cable
Signal Cable Type	Signal cable Description																
A	VGA Cable																
B	Microphone & Earphone Cable																
C	Mouse Cable																
D	Printer Cable																
E	USB Cable																
F	Signal Cable																
G	USB Cable																
Signal Cable Type	Signal cable Description																
A	Shielded, 1.6m																
B	Non-Shielded, 1.2m																
C	Shielded, 1.2m																
D	Shielded, 1.8m																
E	Shielded, 0.8m, one ferrite core bonded.																
F	Non-Shielded, 0.2m																
G	Shielded, 1m																

## 1.6. EUT Exercise Software

Test Mode	Mode 1: Transmit
1	Setup the EUT as shown in Section 1.5.
2	Execute the telnet command to control the EUT.
3	Configure the test mode, the test channel, and the data rate.
4	Press "Start TX" to start the continuous transmitting.
5	Verify that the EUT works properly.

## 1.7. Test Facility

Ambient conditions in the laboratory:

Items	Test Item	Required (IEC 68-1)	Actual
Temperature (°C)	FCC PART 15 C 15.207 Conducted Emission	15 - 35	20
Humidity (%RH)		25 - 75	50
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.247 Peak Power Output	15 - 35	25
Humidity (%RH)		25 - 75	45
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.247 Radiated Emission	15 - 35	20
Humidity (%RH)		25 - 75	50
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.247 RF antenna conducted test	15 - 35	25
Humidity (%RH)		25 - 75	45
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.247 Band Edge	15 - 35	20
Humidity (%RH)		25 - 75	50
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.247 Occupied Bandwidth	15 - 35	25
Humidity (%RH)		25 - 75	45
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.247 Power Density	15 - 35	25
Humidity (%RH)		25 - 75	45
Barometric pressure (mbar)		860 - 1060	950-1000

## 2. Conducted Emission

### 2.1. Test Equipment

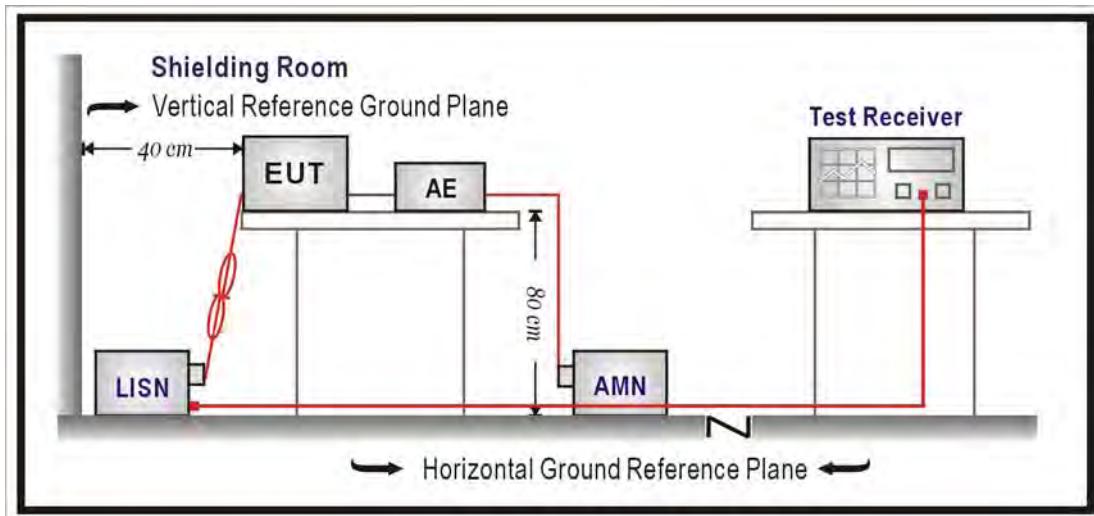
The following test equipments are used during the test:

Conducted Emission / SR3

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
LISN	R&S	ENV216	100096	2014/08/01
LISN	R&S	ESH3-Z5	836679/022	2014/01/20
Test Receiver	R&S	ESCS 30	825442/017	2014/01/01

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

### 2.2. Test Setup



### 2.3. Limits

<b>FCC Part 15 Subpart C Paragraph 15.207 Limits (dBuV)</b>		
Frequency MHz	QP	AV
0.15 - 0.50	66-56	56-46
0.50 - 5.0	56	46
5.0 - 30	60	50

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

### 2.4. Test Procedure

The EUT was setup according to ANSI C63.4: 2009 and tested according to DTS test procedure of KDB558074 v03r01 for compliance to FCC 47CFR 15.247 requirements.

The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface. The EUT and simulators are connected to the main power through a line impedance stabilization network (LISN). The LISN provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs.)

Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.

The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.

Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.

### 2.5. Test Specification

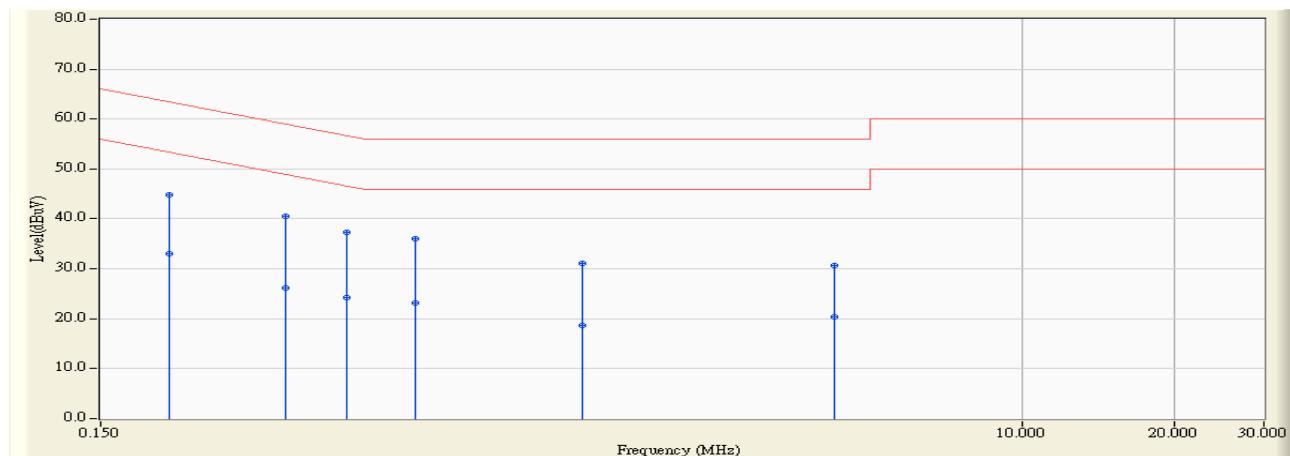
According to FCC Part 15 Subpart C Paragraph 15.207: 2012

### 2.6. Uncertainty

The measurement uncertainty is defined as  $\pm 2.26$  dB.

## 2.7. Test Result

Site : SR3	Time : 2013/12/17 - 00:10
Limit : CISPR_B_00M_QP	Margin : 10
Probe : SR3_LISN(16A)-3_0813 - Line1	Power : DC 12V
EUT : Wicorder	Note : 802.11n(20M)_2437MHz

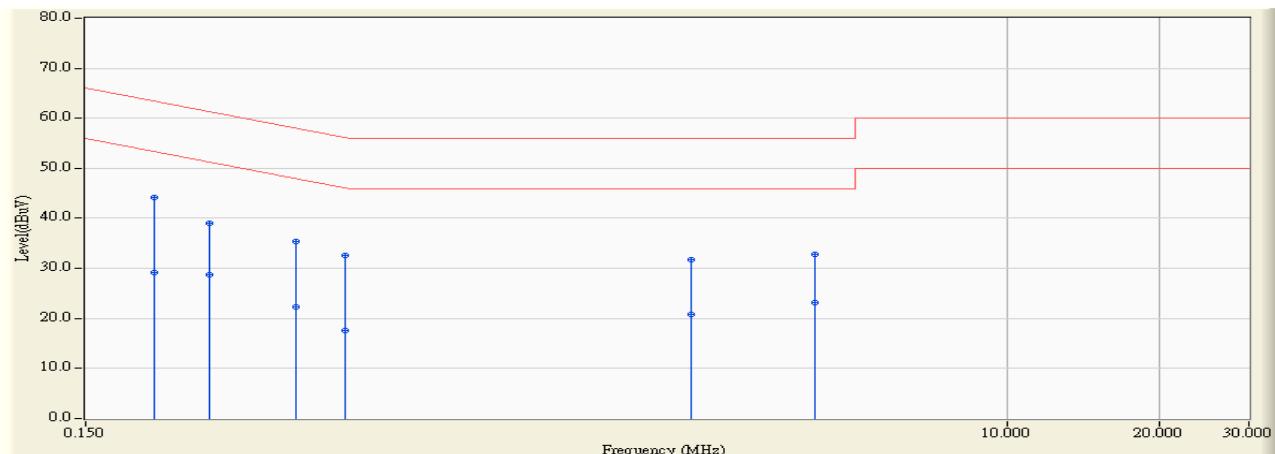


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	0.205	9.661	35.200	44.861	-18.545	63.405	QUASIPEAK
2	0.205	9.661	23.460	33.121	-30.285	63.405	AVERAGE
3 *	0.349	9.747	30.730	40.477	-18.510	58.986	QUASIPEAK
4	0.349	9.747	16.470	26.217	-32.770	58.986	AVERAGE
5	0.459	9.810	27.490	37.300	-19.411	56.711	QUASIPEAK
6	0.459	9.810	14.370	24.180	-32.531	56.711	AVERAGE
7	0.630	9.857	26.100	35.957	-20.043	56.000	QUASIPEAK
8	0.630	9.857	13.360	23.217	-32.783	56.000	AVERAGE
9	1.345	9.950	21.090	31.040	-24.960	56.000	QUASIPEAK
10	1.345	9.950	8.680	18.630	-37.370	56.000	AVERAGE
11	4.232	10.080	20.620	30.700	-25.300	56.000	QUASIPEAK
12	4.232	10.080	10.330	20.410	-35.590	56.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " \* ", means this data is the worst emission level.
3. Measure Level = Reading Level + Correct Factor °

Site : SR3	Time : 2013/12/17 - 00:13
Limit : CISPR_B_00M_QP	Margin : 10
Probe : SR3_LISN(16A)-3_0813 - Line2	Power : DC 12V
EUT : Wicorder	Note : 802.11n(20M)_2437Mhz



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	* 0.205	9.661	34.560	44.221	-19.197	63.418	QUASIPEAK
2	0.205	9.661	19.600	29.261	-24.157	53.418	AVERAGE
3	0.263	9.695	29.410	39.105	-22.222	61.327	QUASIPEAK
4	0.263	9.695	19.120	28.815	-22.512	51.327	AVERAGE
5	0.392	9.758	25.710	35.468	-22.549	58.017	QUASIPEAK
6	0.392	9.758	12.450	22.208	-25.809	48.017	AVERAGE
7	0.490	9.810	22.790	32.600	-23.570	56.170	QUASIPEAK
8	0.490	9.810	7.760	17.570	-28.600	46.170	AVERAGE
9	2.365	9.950	21.770	31.720	-24.280	56.000	QUASIPEAK
10	2.365	9.950	10.840	20.790	-25.210	46.000	AVERAGE
11	4.170	10.030	22.690	32.720	-23.280	56.000	QUASIPEAK
12	4.170	10.030	13.210	23.240	-22.760	46.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " \* ", means this data is the worst emission level.
3. Measure Level = Reading Level + Correct Factor °

### 3. Peak Power Output

#### 3.1. Test Equipment

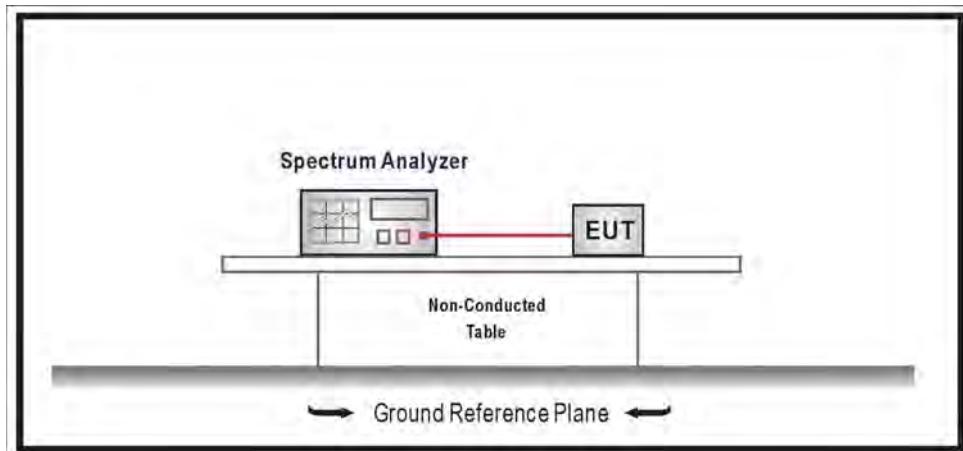
The following test equipments are used during the test:

Peak Power / SR7

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Spectrum Analyzer	Agilent	N9010A-EXA	US47140172	2014/08/05

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

#### 3.2. Test Setup



#### 3.3. Test procedures

The EUT was tested according to DTS test procedure section 9.1.2 of KDB558074 v03r01 measurement to FCC 47CFR 15.247 requirements. Set the RBW=1MHz, Set the VBW $\geq$  3xRBW, Sweep Time=Auto, Set Peak Detector.

#### 3.4. Limits

The maximum peak power shall be less 1 Watt.

#### 3.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2012

#### 3.6. Uncertainty

The measurement uncertainty is defined as  $\pm 1.27$  dB.

### 3.7. Test Result

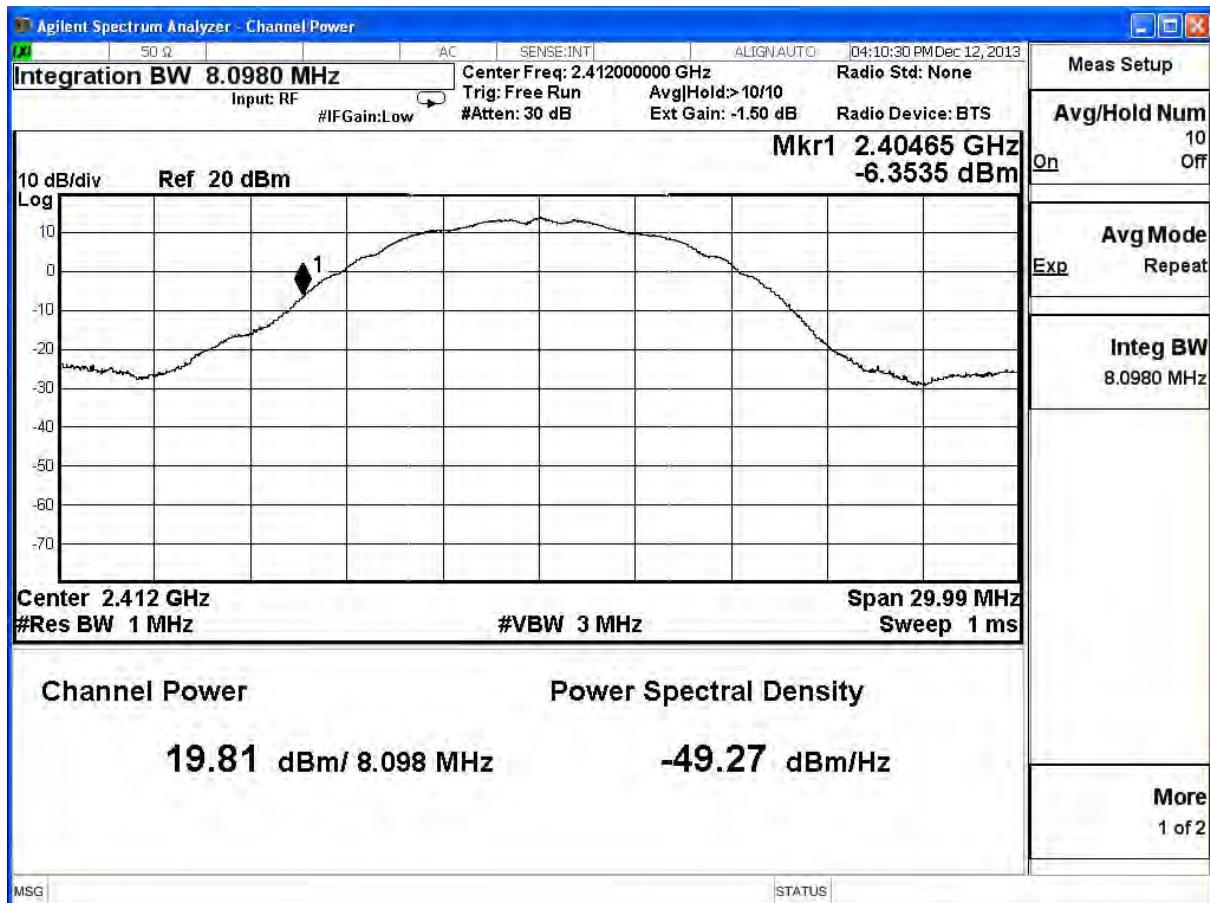
Product	Wicorder		
Test Item	Peak Power Output		
Test Mode	Mode 1: Transmit		
Date of Test	2013/12/12	Test Site	SR7

IEEE 802.11b, ANT 0				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412	19.81	≤30	Pass
6	2437	19.24	≤30	Pass
11	2462	16.53	≤30	Pass

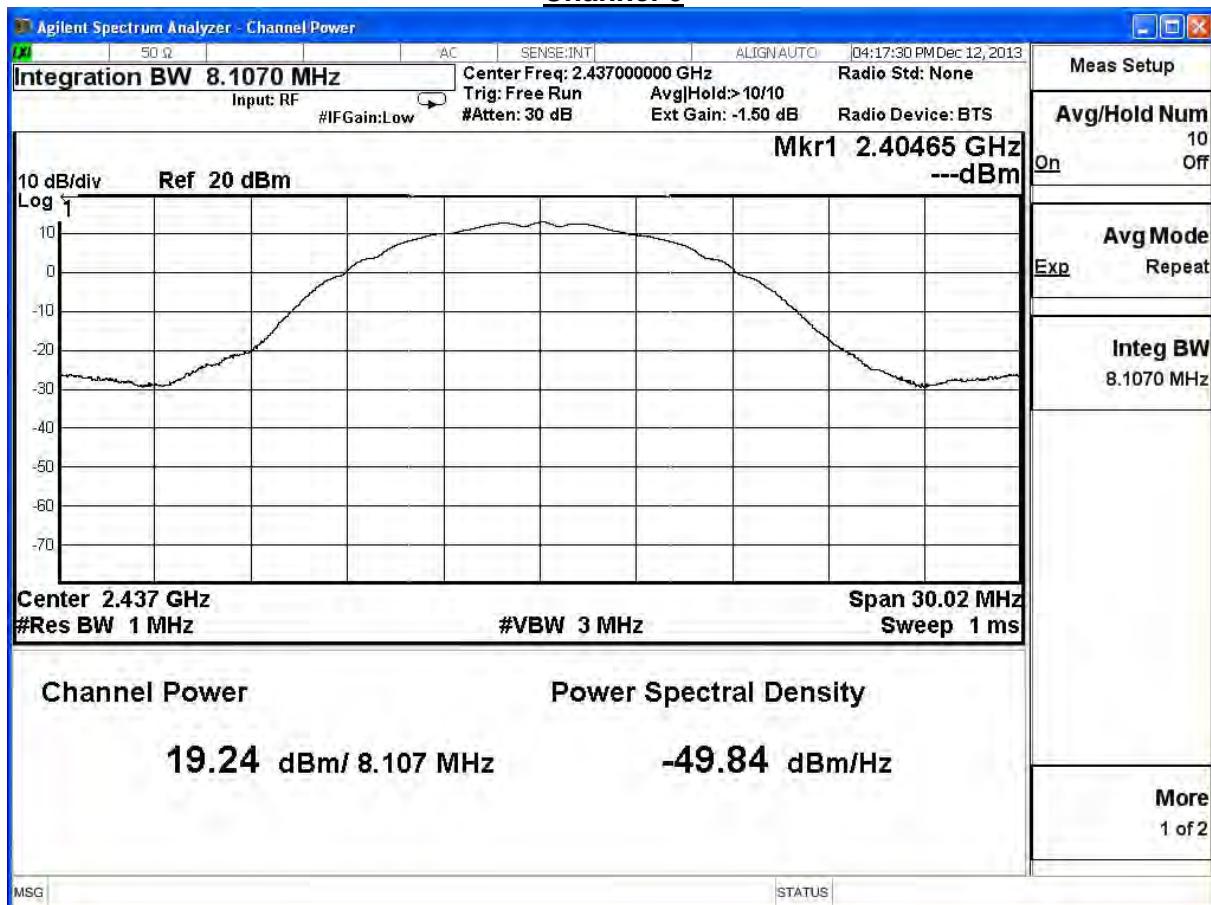
The worst emission of data rate is 1Mbps.

Channel No.	Frequency (MHz)	Peak Power Output Value(dBm)				Required Limit
		1	2	5.5	11	
1	2412	19.81	--	--	--	1 Watt=30dBm
6	2437	19.24	19.23	19.22	19.21	1 Watt=30dBm
11	2462	16.53	--	--	--	1 Watt=30dBm

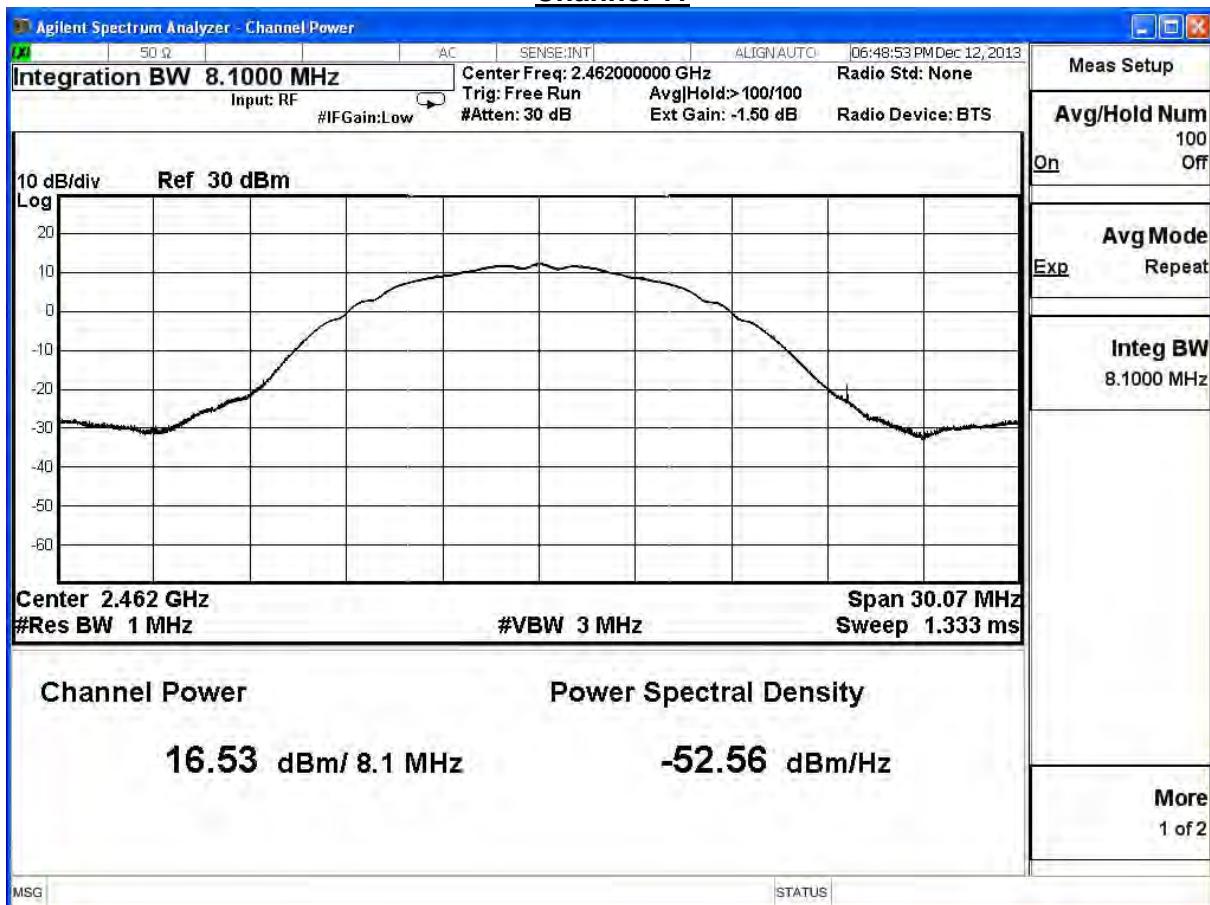
Note: Measure Level =Reading value + cable loss

**Channel 1**

## Channel 6



## Channel 11



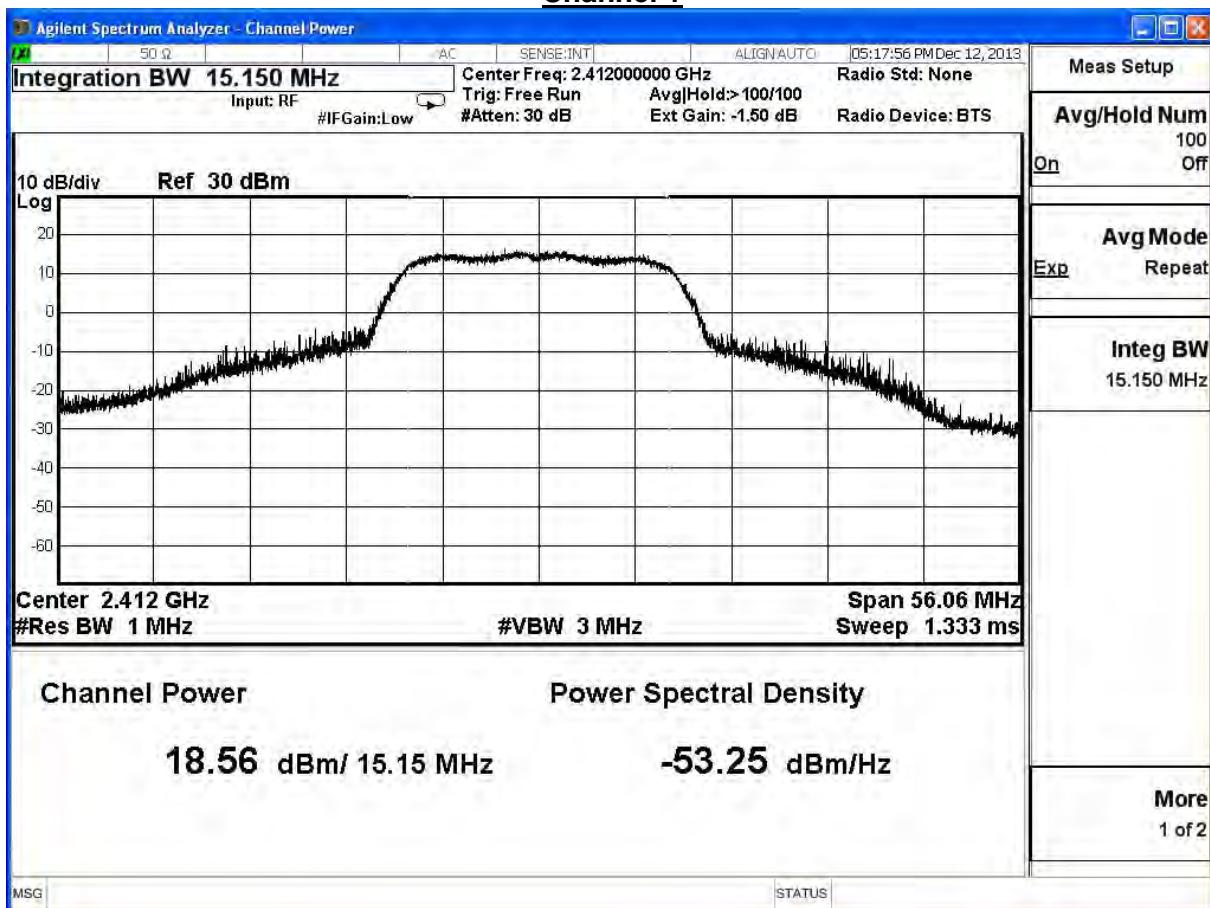
Product	Wicorder		
Test Item	Peak Power Output		
Test Mode	Mode 1: Transmit		
Date of Test	2013/12/12	Test Site	SR7

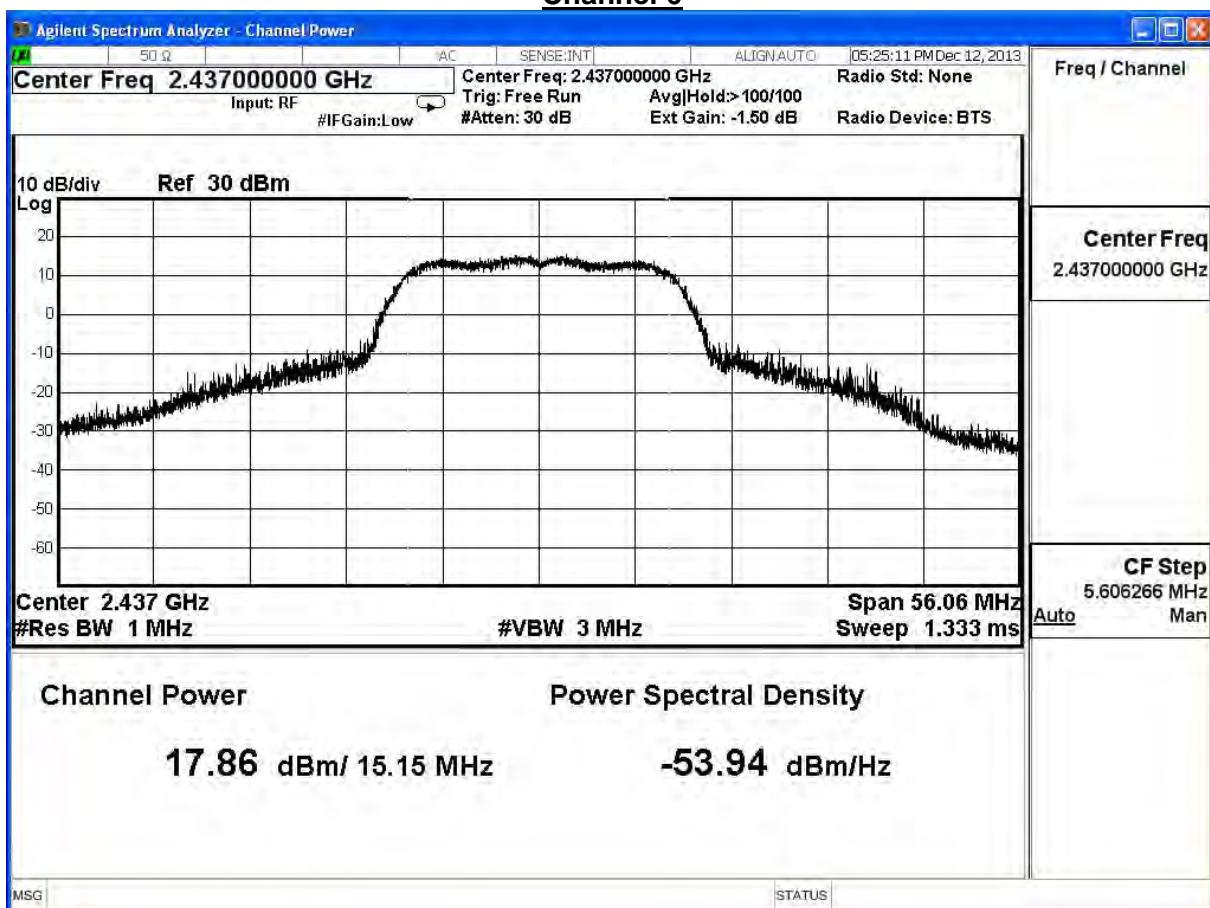
IEEE 802.11g, ANT 0				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412	18.56	≤30	Pass
6	2437	17.86	≤30	Pass
11	2462	16.92	≤30	Pass

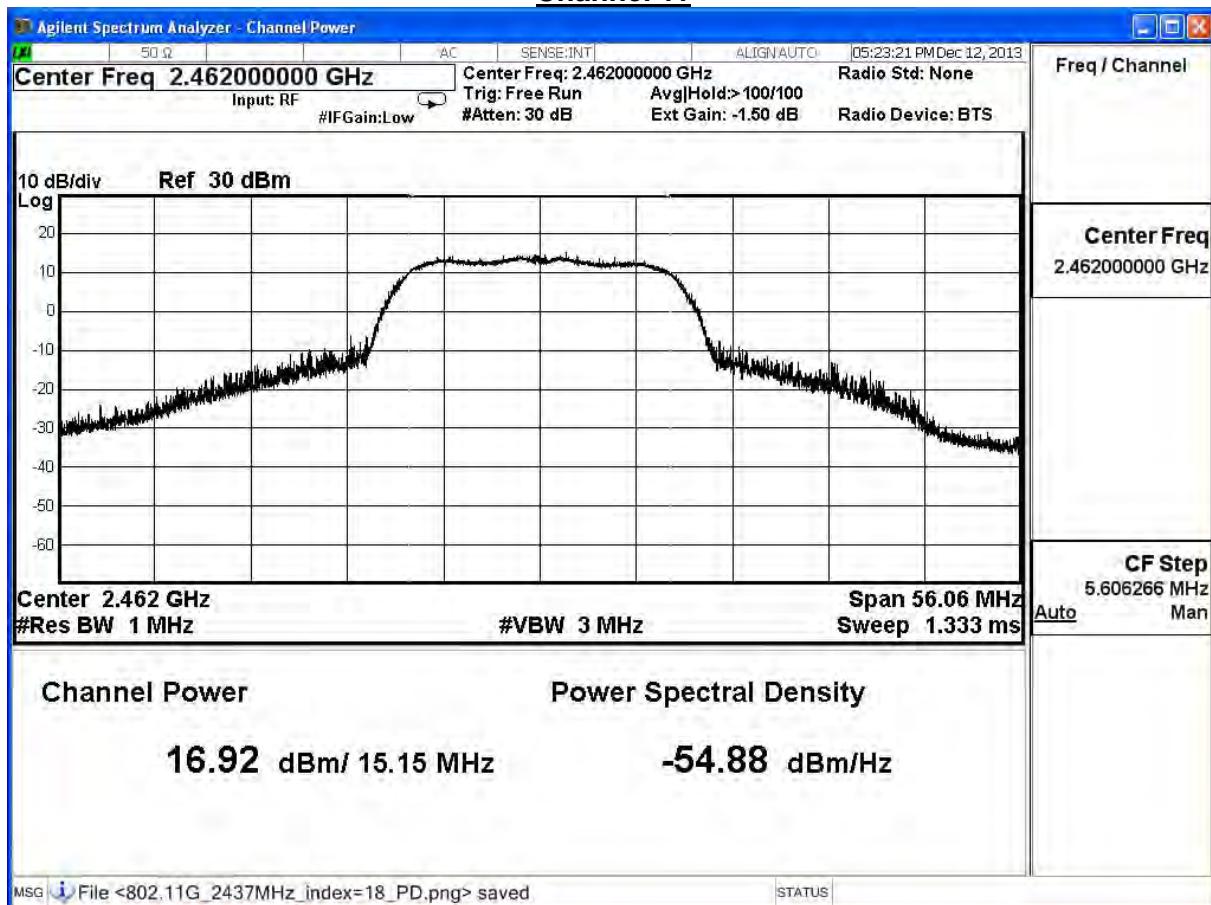
The worst emission of data rate is 6Mbps.

Channel No.	Frequency (MHz)	Peak Power Output Value(dBm)						Required Limit
		6	12	18	24	36	48	
1	2412	18.56	--	--	--	--	--	1 Watt=30dBm
6	2437	17.86	17.85	17.84	17.83	17.82	17.81	1 Watt=30dBm
11	2462	16.92	--	--	--	--	--	1 Watt=30dBm

Note: Measure Level =Reading value + cable loss

**Channel 1**

**Channel 6**

**Channel 11**

Product	Wicorder		
Test Item	Peak Power Output		
Test Mode	Mode 1: Transmit		
Date of Test	2013/12/12	Test Site	SR7

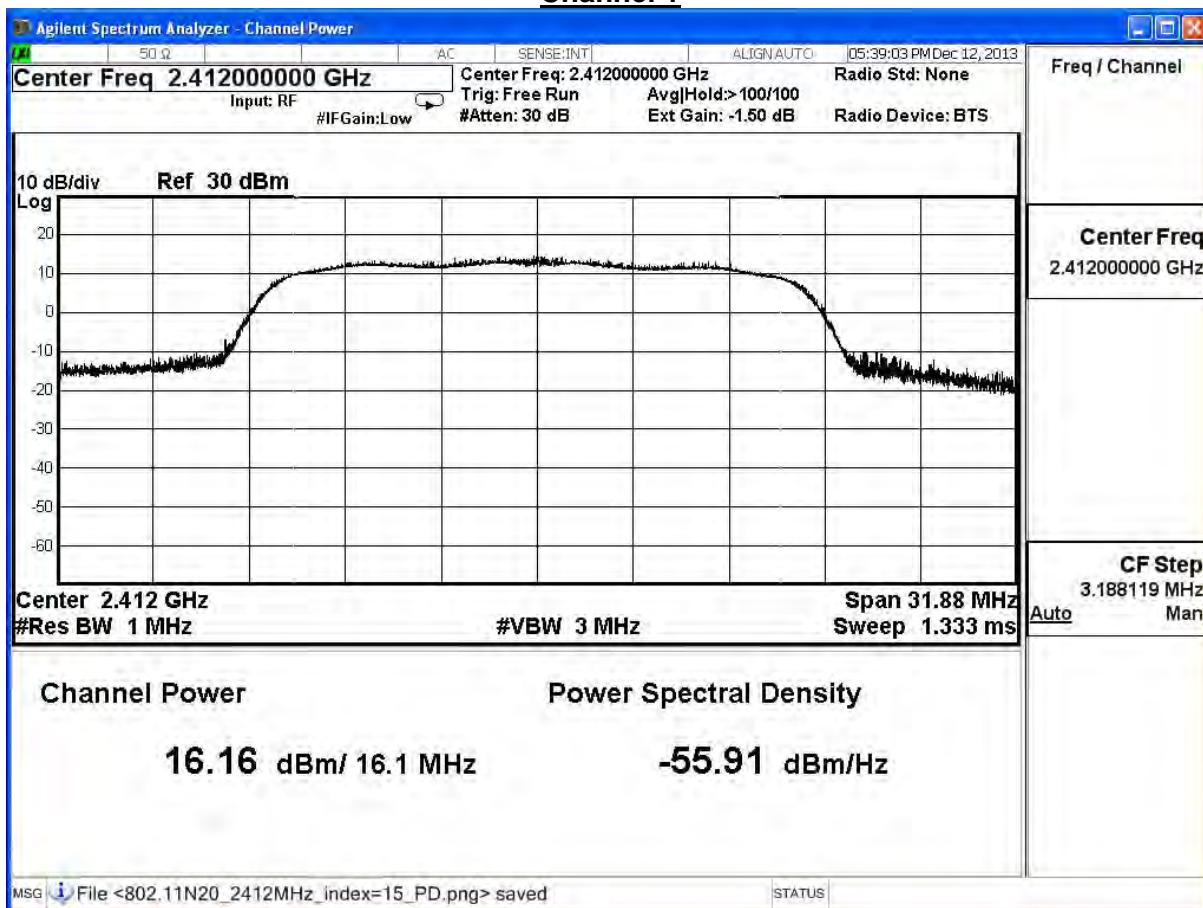
## IEEE 802.11n(20MHz), ANT 0

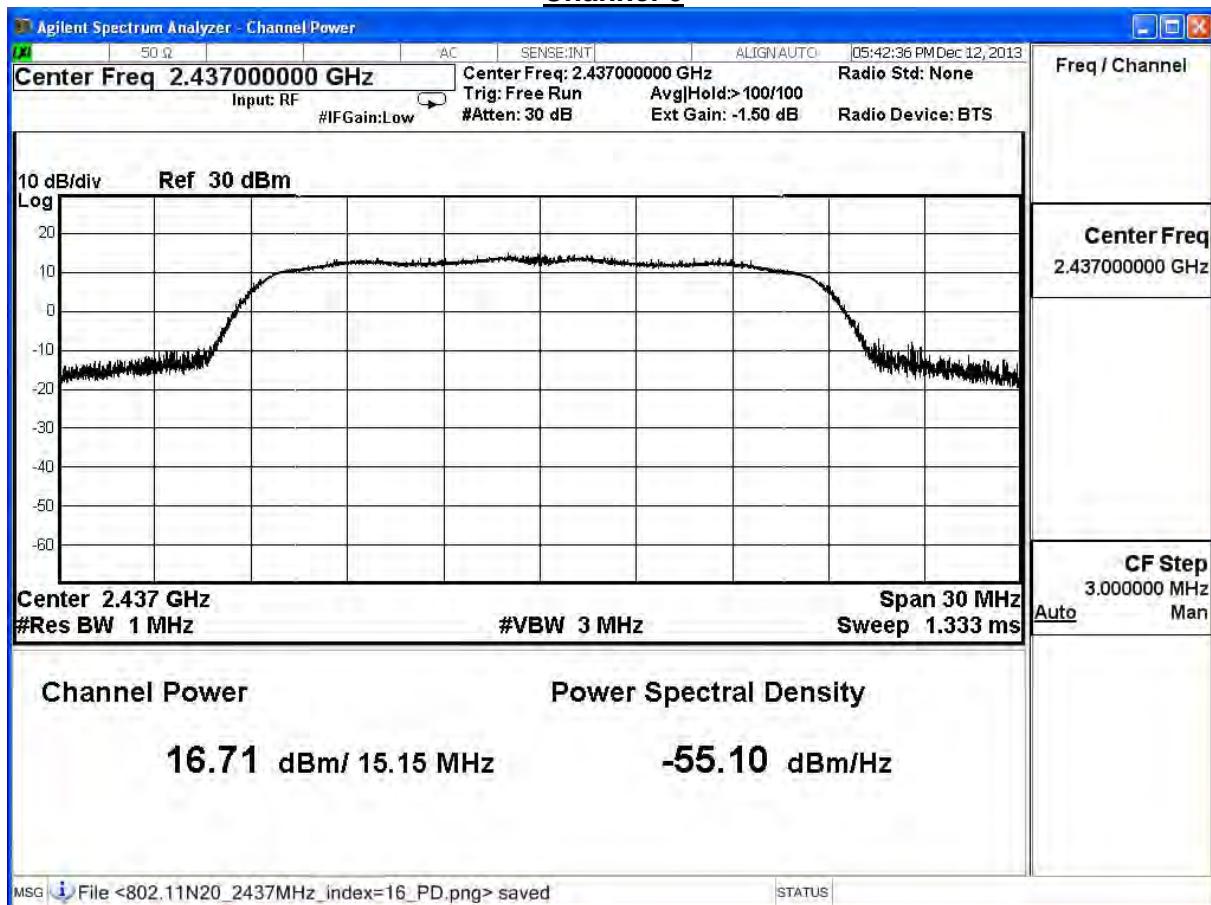
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412	16.16	≤30	Pass
6	2437	16.71	≤30	Pass
11	2462	16.52	≤30	Pass

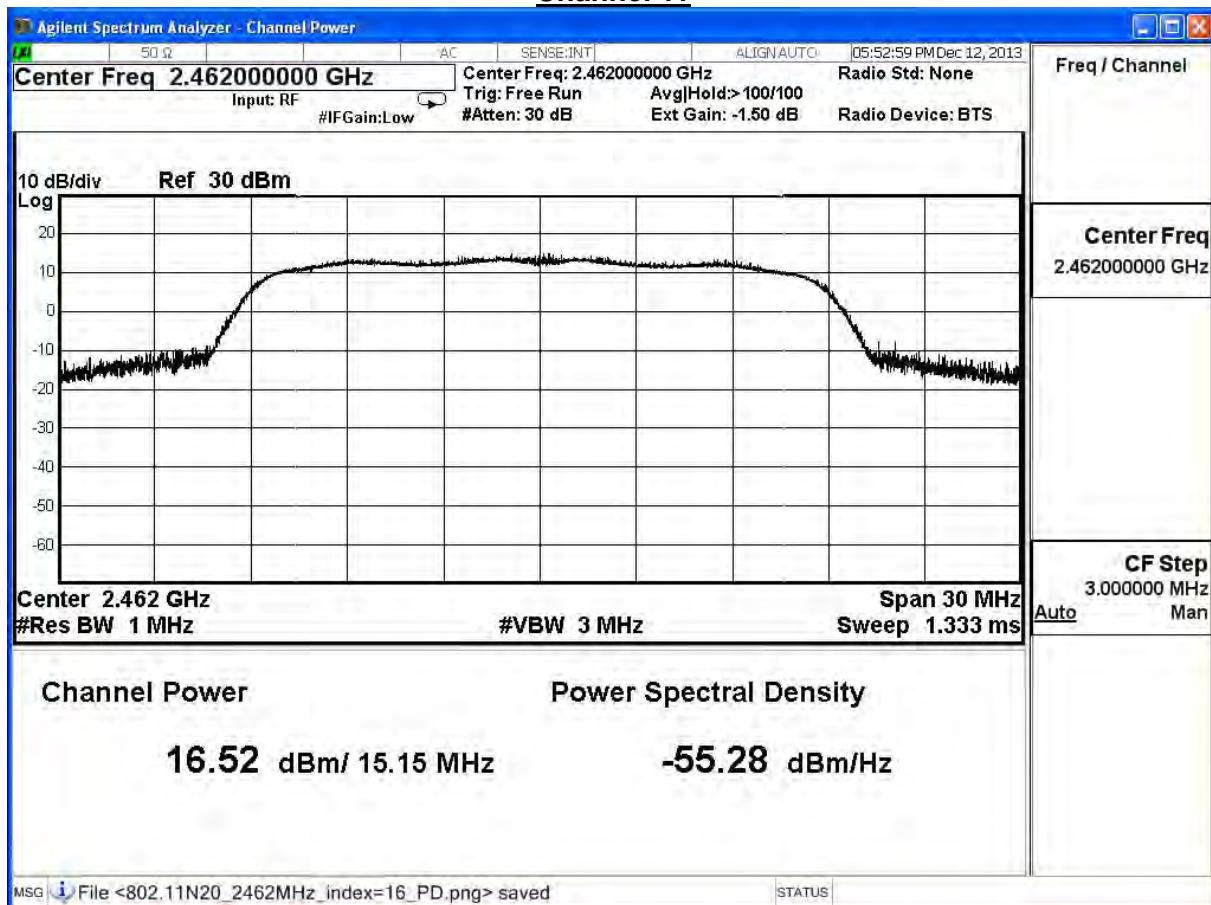
The worst emission of data rate is 19.5Mbps.

Peak Power Output (dBm)										
MCS Index		0	1	2	3	4	5	6	7	
Channel No	Frequency (MHz)	Data Rate								Required Limit
		19.5	39	58.5	78	117	156	175.5	195	
1	2412	16.16	--	--	--	--	--	--	--	1Watt=30dBm
6	2437	16.71	16.70	16.69	16.68	16.67	16.65	16.64	16.62	1Watt=30dBm
11	2462	16.52	--	--	--	--	--	--	--	1Watt=30dBm

Note: Measure Level =Reading value + cable loss

**Channel 1**

**Channel 6**

**Channel 11**

#### 4. Radiated Emission

##### 4.1. Test Equipment

The following test equipments are used during the test:

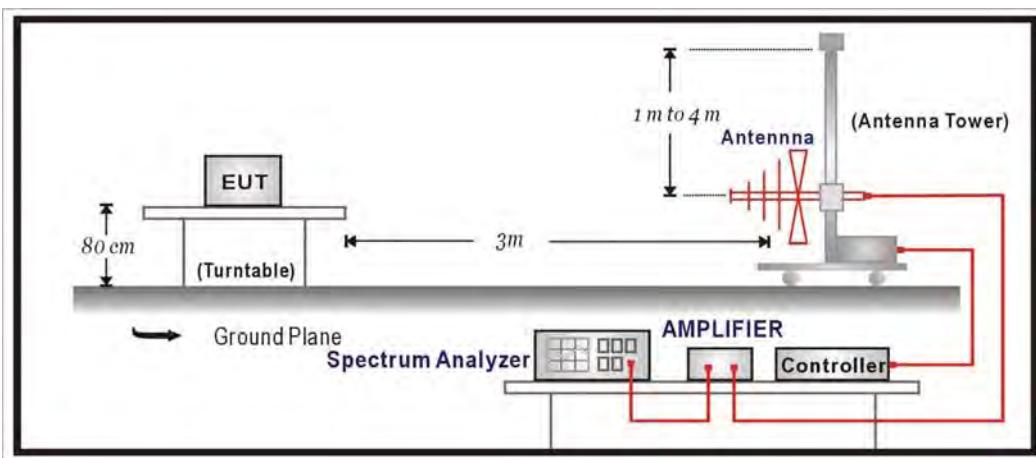
###### Radiated Emission / CB1

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Bilog Antenna	SCHAFFNER	CBL6112B	2895(CB1)	2014/08/14
Double Ridged Guide Horn Antenna	Schwarzback	BBHA 9120	D743	2014/02/17
Pre-Amplifier	MITEQ	AMF-4D	888003	2014/06/09
Pre-Amplifier	QuieTek	AP-025C	CHM-0706049	2014/02/19
Spectrum Analyzer	Agilent	E4440A	MY46187335	2014/01/27
k Type Cable	Huber Suhner	Sucoflex 102	25623/2	2014/02/21

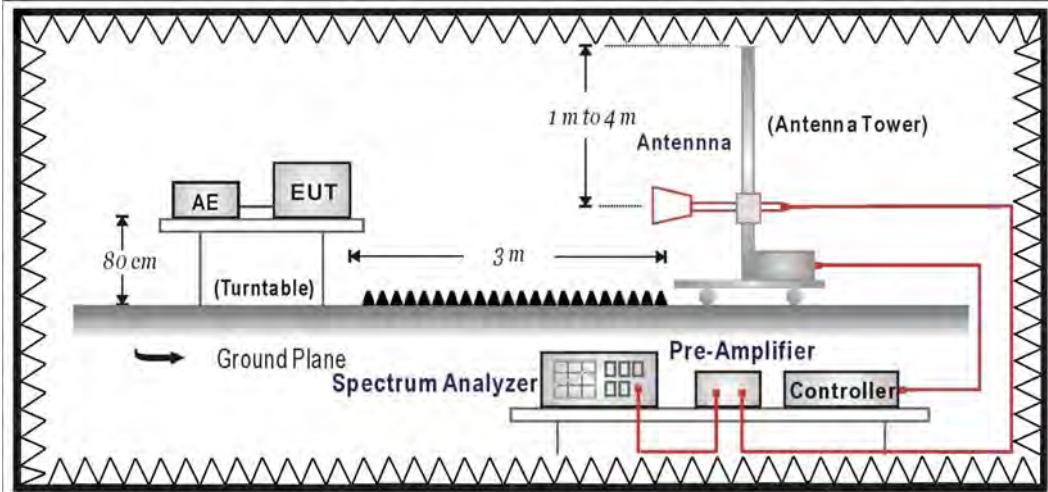
Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

##### 4.2. Test Setup

Under 1GHz Test Setup:



Above 1GHz Test Setup:



#### 4.3. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

<b>FCC Part 15 Subpart C Paragraph 15.209 Limits</b>			
Frequency MHz	uV/m	dBuV/m	Measurement Distance(meter)
0.009-0.490	2400/F(KHz)	67.60	300
0.490-1.705	2400/F(KHz)	87.60	30
1.705-30.0	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

Remarks: E field strength (dBuV/m) = 20 log E field strength (uV/m)

#### **4.4. Test Procedure**

The EUT was setup according to ANSI C63.4: 2009 and tested according to DTS test procedure of KDB558074 v03r01 for compliance to FCC 47CFR 15.247 requirements.

The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.4: 2009 on radiated measurement.

On any frequency or frequencies below or equal to 1000 MHz, the limits shown are based on measuring equipment employing a quasi-peak detector function and on any frequency or frequencies above 1000 MHz the radiated limits shown are based upon the use of measurement instrumentation employing an average detector function. When average radiated emission measurement are included emission measurement below 1000 MHz, there also is a limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20 dB above the maximum permitted average limit. The bandwidth below 1GHz setting on the field strength meter is 120 kHz and above 1GHz is 1MHz.

#### **4.5. Test Specification**

According to FCC Part 15 Subpart C Paragraph 15.247: 2012

#### **4.6. Uncertainty**

The measurement uncertainty

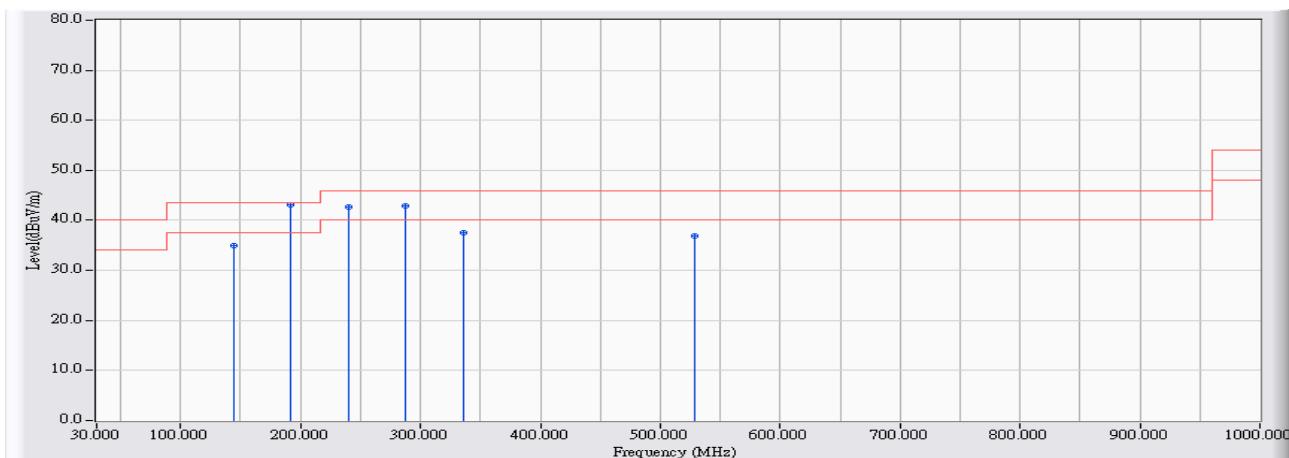
30MHz~1GHz as  $\pm 3.43\text{dB}$

1GHz~26.5Ghz as  $\pm 3.65\text{dB}$

## 4.7. Test Result

### 30MHz-1GHz Spurious

Site : CB1	Time : 2013/12/14 - 13:37
Limit : FCC_CLASS_B_03M_QP	Margin : 6
Probe : CB1_FCC_EFS_30-1G-2_1011 - HORIZONTAL	Power : DC 12V
EUT : Wicorder	Note : Mode 1: Transmit 802.11b_2437MHz

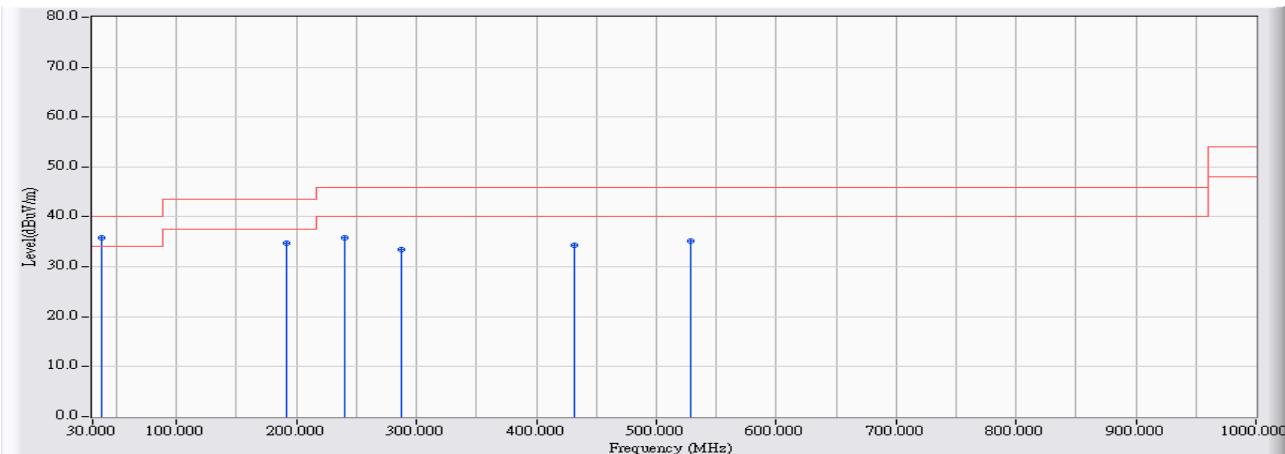


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	144.460	-23.090	58.139	35.049	-8.451	43.500	QUASIPEAK
2 *	191.990	-24.797	67.906	43.109	-0.391	43.500	QUASIPEAK
3	240.490	-21.742	64.459	42.716	-3.284	46.000	QUASIPEAK
4	288.020	-20.280	63.147	42.867	-3.133	46.000	QUASIPEAK
5	335.550	-19.158	56.761	37.603	-8.397	46.000	QUASIPEAK
6	528.580	-15.589	52.421	36.833	-9.167	46.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. “ \* ”, means this data is the worst emission level.
3. Measure Level = Reading Level + Correct Factor °

Site : CB1	Time : 2013/12/14 - 13:43
Limit : FCC_CLASS_B_03M_QP	Margin : 6
Probe : CB1_FCC_EFS_30-1G-2_1011 - VERTICAL	Power : DC 12V
EUT : Wicorder	Note : Mode 1: Transmit 802.11b_2437MHz

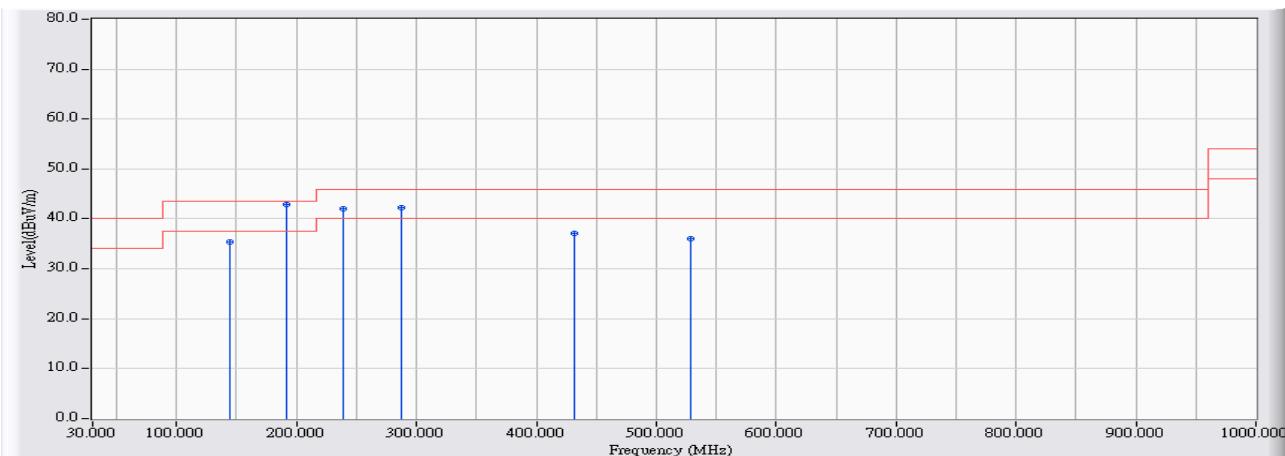


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	37.760	11.492	57.032	35.747	-4.253	40.000	QUASIPEAK
2		191.990	8.203	59.579	34.782	-8.718	43.500	QUASIPEAK
3		240.490	11.177	57.527	35.784	-10.216	46.000	QUASIPEAK
4		288.020	12.544	53.704	33.424	-12.576	46.000	QUASIPEAK
5		431.580	15.795	51.191	34.254	-11.746	46.000	QUASIPEAK
6		528.580	17.268	50.794	35.206	-10.794	46.000	QUASIPEAK

## Note:

1. All Reading Levels are Quasi-Peak value.
2. “ \* ”, means this data is the worst emission level.
3. Measure Level = Reading Level + Correct Factor .

Site : CB1	Time : 2013/12/14 - 13:46
Limit : FCC_CLASS_B_03M_QP	Margin : 6
Probe : CB1_FCC_EFS_30-1G-2_1011 - HORIZONTAL	Power : DC 12V
EUT : Wicorder	Note : Mode 1: Transmit 802.11g_2437MHz

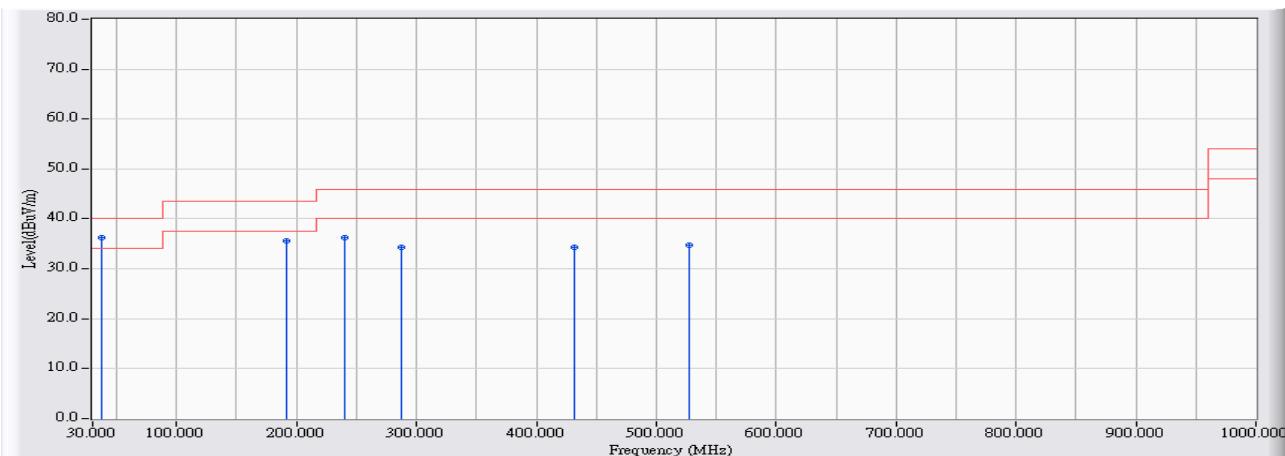


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	144.460	-23.090	58.429	35.339	-8.161	43.500	QUASIPEAK
2 *	191.990	-24.797	67.605	42.808	-0.692	43.500	QUASIPEAK
3	239.520	-21.817	63.958	42.141	-3.859	46.000	QUASIPEAK
4	288.020	-20.280	62.472	42.192	-3.808	46.000	QUASIPEAK
5	431.580	-16.937	54.115	37.178	-8.822	46.000	QUASIPEAK
6	528.580	-15.589	51.725	36.137	-9.863	46.000	QUASIPEAK

## Note:

1. All Reading Levels are Quasi-Peak value.
2. “ \* ”, means this data is the worst emission level.
3. Measure Level = Reading Level + Correct Factor .

Site : CB1	Time : 2013/12/14 - 13:52
Limit : FCC_CLASS_B_03M_QP	Margin : 6
Probe : CB1_FCC_EFS_30-1G-2_1011 - VERTICAL	Power : DC 12V
EUT : Wicorder	Note : Mode 1: Transmit 802.11g_2437MHz

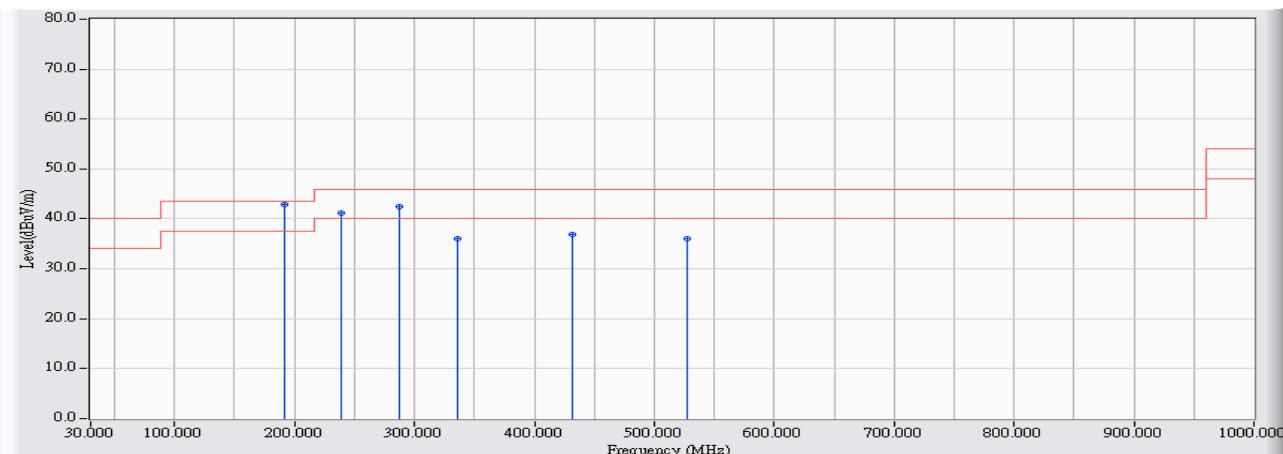


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	37.760	-21.286	57.428	36.143	-3.857	40.000	QUASIPEAK
2		191.990	-24.797	60.399	35.602	-7.898	43.500	QUASIPEAK
3		240.490	-21.742	57.976	36.233	-9.767	46.000	QUASIPEAK
4		288.020	-20.280	54.615	34.335	-11.665	46.000	QUASIPEAK
5		431.580	-16.937	51.241	34.304	-11.696	46.000	QUASIPEAK
6		527.610	-15.589	50.252	34.663	-11.337	46.000	QUASIPEAK

## Note:

1. All Reading Levels are Quasi-Peak value.
2. “ \* ”, means this data is the worst emission level.
3. Measure Level = Reading Level + Correct Factor °

Site : CB1	Time : 2013/12/14 - 13:58
Limit : FCC_CLASS_B_03M_QP	Margin : 6
Probe : CB1_FCC_EFS_30-1G-2_1011 - HORIZONTAL	Power : DC 12V
EUT : Wicorder	Note : Mode 1: Transmit 802.11n 20MHz_2437MHz

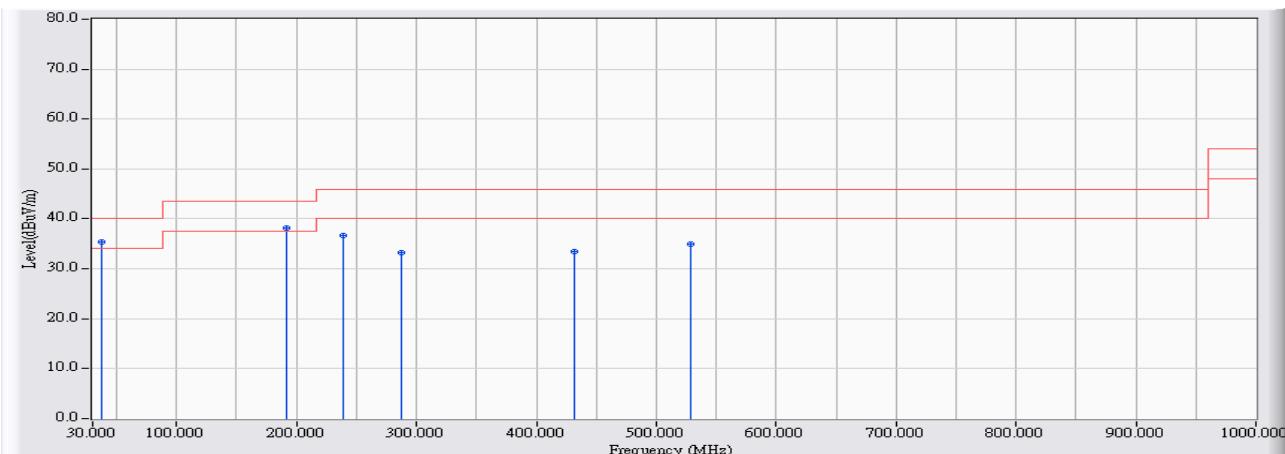


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	191.990	-24.797	67.793	42.996	-0.504	43.500	QUASIPEAK
2		239.520	-21.817	62.921	41.104	-4.896	46.000	QUASIPEAK
3		288.020	-20.280	62.728	42.448	-3.552	46.000	QUASIPEAK
4		335.550	-19.158	55.249	36.091	-9.909	46.000	QUASIPEAK
5		431.580	-16.937	53.861	36.924	-9.076	46.000	QUASIPEAK
6		527.610	-15.589	51.672	36.083	-9.917	46.000	QUASIPEAK

## Note:

1. All Reading Levels are Quasi-Peak value.
2. “ \* ”, means this data is the worst emission level.
3. Measure Level = Reading Level + Correct Factor .

Site : CB1	Time : 2013/12/14 - 14:03
Limit : FCC_CLASS_B_03M_QP	Margin : 6
Probe : CB1_FCC_EFS_30-1G-2_1011 - VERTICAL	Power : DC 12V
EUT : Wicorder	Note : Mode 1: Transmit 802.11n 20MHz_2437MHz



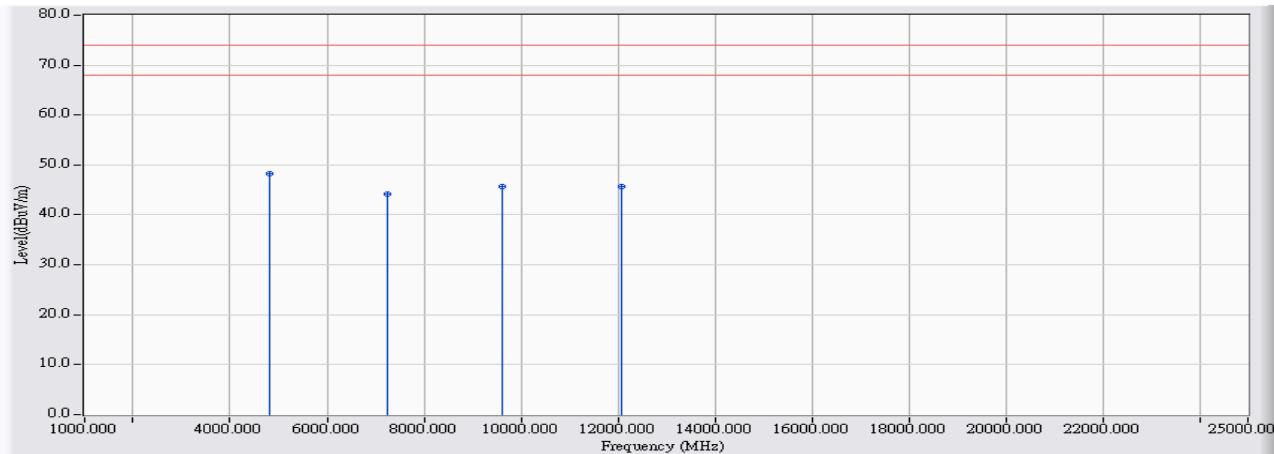
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	37.760	-21.286	56.769	35.484	-4.516	40.000	QUASIPEAK
2		191.990	-24.797	63.016	38.219	-5.281	43.500	QUASIPEAK
3		239.520	-21.817	58.416	36.599	-9.401	46.000	QUASIPEAK
4		288.020	-20.280	53.526	33.246	-12.754	46.000	QUASIPEAK
5		431.580	-16.937	50.374	33.437	-12.563	46.000	QUASIPEAK
6		528.580	-15.589	50.488	34.900	-11.100	46.000	QUASIPEAK

## Note:

1. All Reading Levels are Quasi-Peak value.
2. “ \* ”, means this data is the worst emission level.
3. Measure Level = Reading Level + Correct Factor °

**Above 1GHz Spurious**

Site : CB1	Time : 2013/12/14 - 10:49
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : DC 12V
EUT : Wicorder	Note : Mode 1: Transmit 802.11b_2412MHz

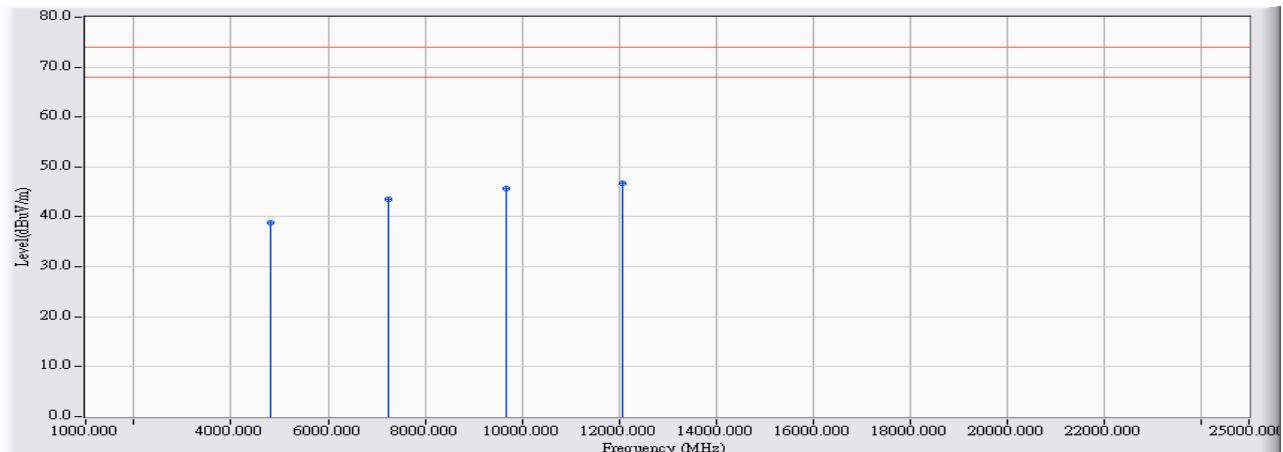


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	4818.060	-0.891	49.183	48.292	-25.708	74.000	PEAK
2		7245.700	5.694	38.562	44.256	-29.744	74.000	PEAK
3		9623.250	9.790	35.853	45.644	-28.356	74.000	PEAK
4		12082.200	11.772	33.804	45.577	-28.423	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor .
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2013/12/14 - 10:53
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : DC 12V
EUT : Wicorder	Note : Mode 1: Transmit 802.11b_2412MHz

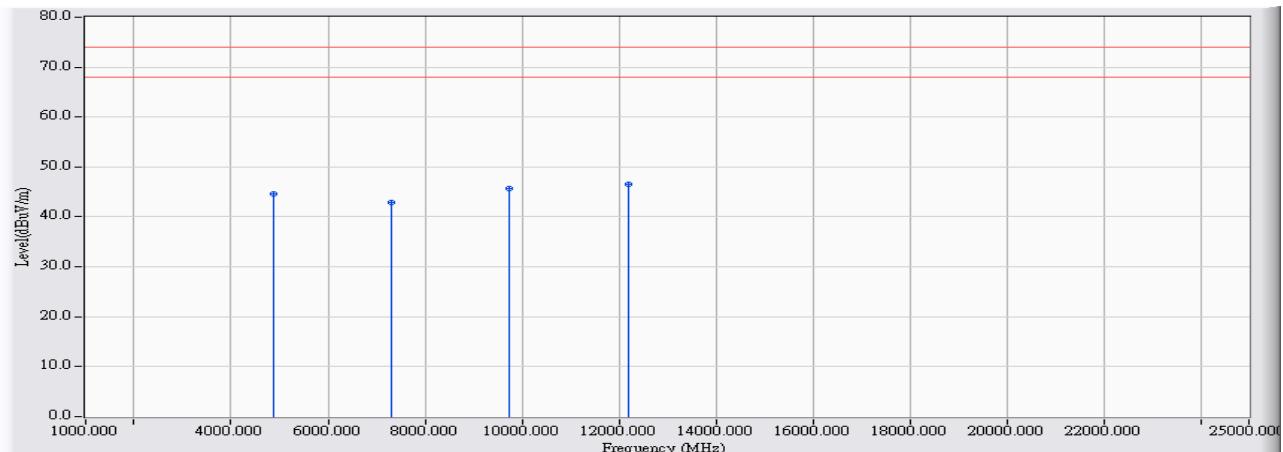


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type	
1	4817.450	-0.894	39.803	38.910	-35.090	74.000	PEAK	
2	7233.100	5.660	37.820	43.479	-30.521	74.000	PEAK	
3	9669.450	9.929	35.725	45.653	-28.347	74.000	PEAK	
4	*	12081.600	11.772	34.964	46.736	-27.264	74.000	PEAK

## Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor .
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2013/12/14 - 10:56
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : DC 12V
EUT : Wicorder	Note : Mode 1: Transmit 802.11b_2437MHz

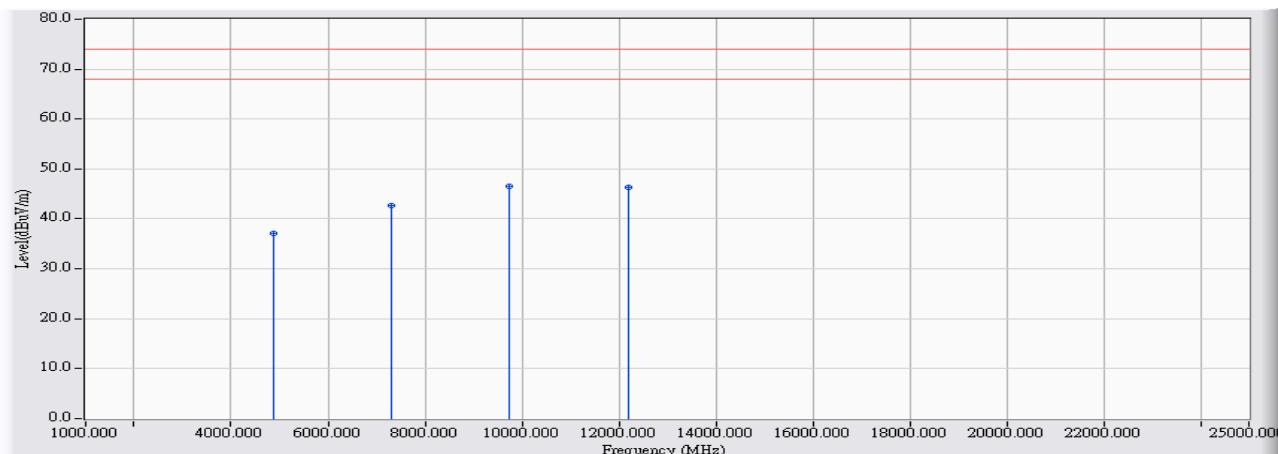


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type	
1	4874.180	-0.718	45.393	44.674	-29.326	74.000	PEAK	
2	7313.060	5.879	37.103	42.982	-31.018	74.000	PEAK	
3	9749.760	10.168	35.595	45.762	-28.238	74.000	PEAK	
4	*	12192.880	11.915	34.693	46.607	-27.393	74.000	PEAK

## Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor .
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2013/12/14 - 11:01
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : DC 12V
EUT : Wicorder	Note : Mode 1: Transmit 802.11b_2437MHz

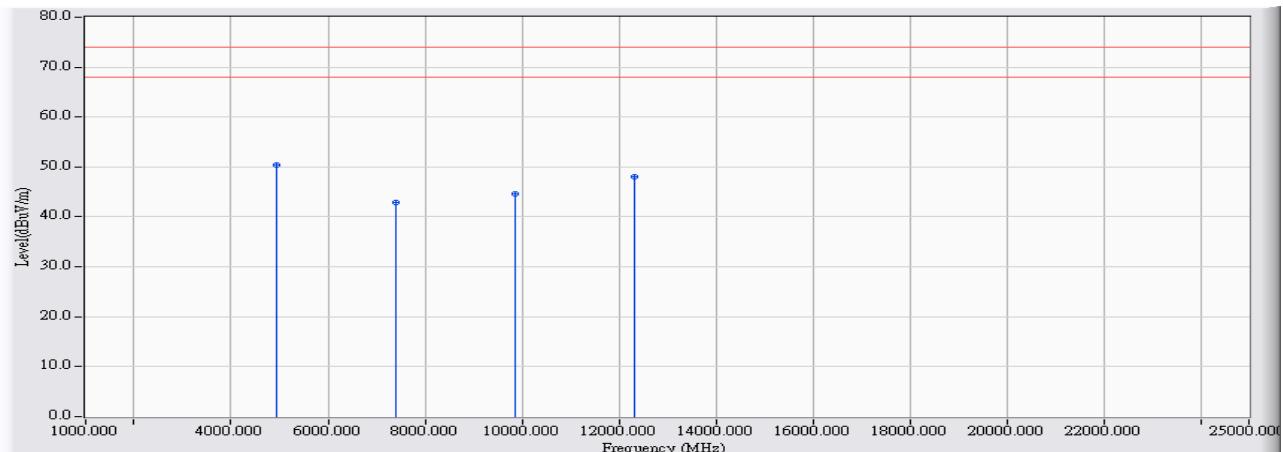


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	4874.140	-0.720	37.855	37.136	-36.864	74.000	PEAK
2	7305.520	5.858	36.836	42.694	-31.306	74.000	PEAK
3 *	9751.300	10.173	36.309	46.481	-27.519	74.000	PEAK
4	12190.600	11.912	34.387	46.298	-27.702	74.000	PEAK

## Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor .
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2013/12/14 - 11:04
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : DC 12V
EUT : Wicorder	Note : Mode 1: Transmit 802.11b_2462MHz

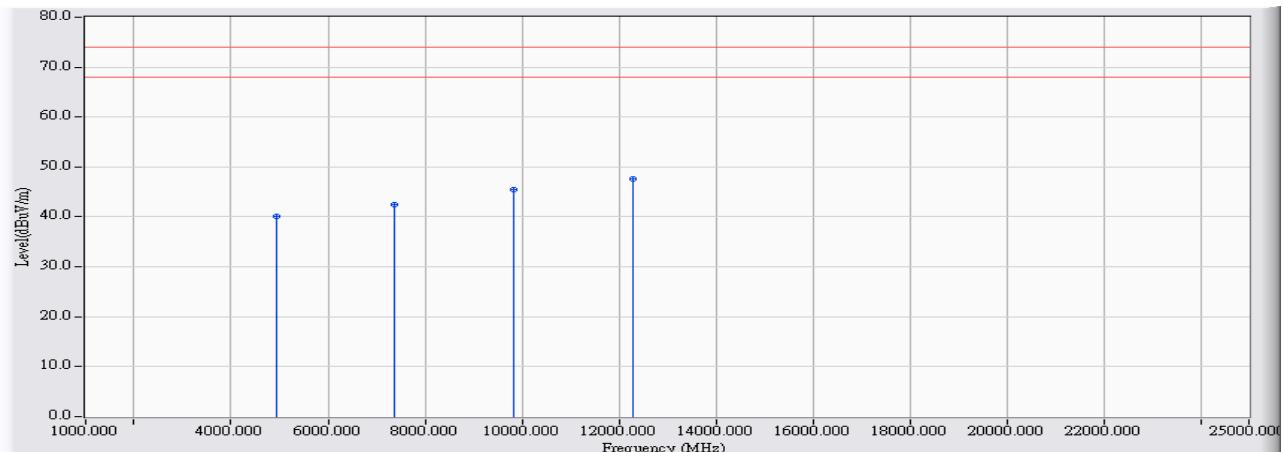


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	4924.100	-0.566	50.891	50.326	-23.674	74.000	PEAK
2		7388.140	6.085	36.848	42.933	-31.067	74.000	PEAK
3		9848.800	10.463	34.181	44.643	-29.357	74.000	PEAK
4		12319.040	12.076	35.908	47.984	-26.016	74.000	PEAK

## Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor .
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2013/12/14 - 11:07
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : DC 12V
EUT : Wicorder	Note : Mode 1: Transmit 802.11b_2462MHz

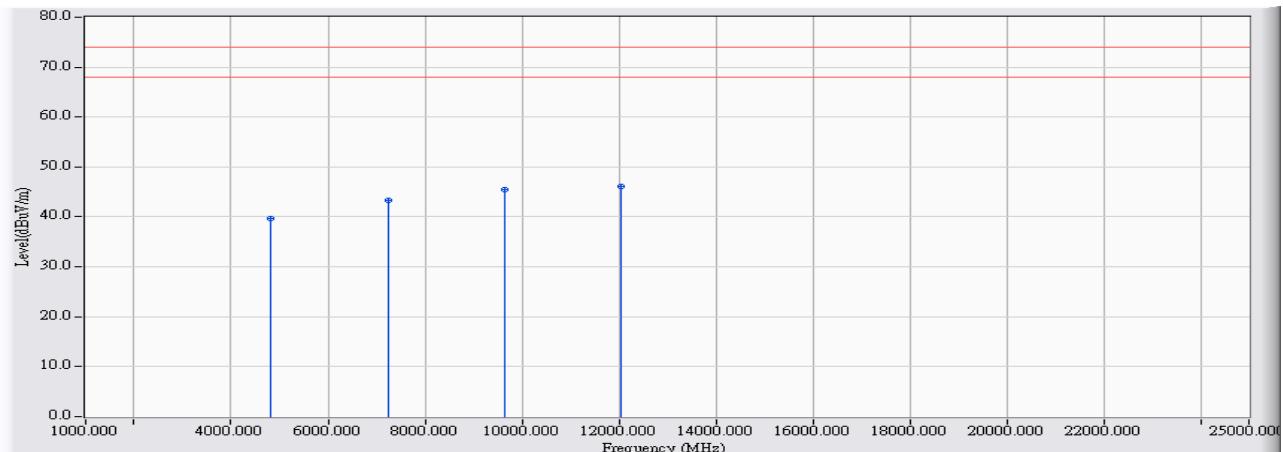


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type	
1	4924.440	-0.564	40.676	40.112	-33.888	74.000	PEAK	
2	7379.480	6.061	36.313	42.374	-31.626	74.000	PEAK	
3	9845.940	10.453	35.009	45.463	-28.537	74.000	PEAK	
4	*	12307.480	12.061	35.549	47.610	-26.390	74.000	PEAK

## Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor .
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2013/12/14 - 11:10
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : DC 12V
EUT : Wicorder	Note : Mode 1: Transmit 802.11g_2412MHz

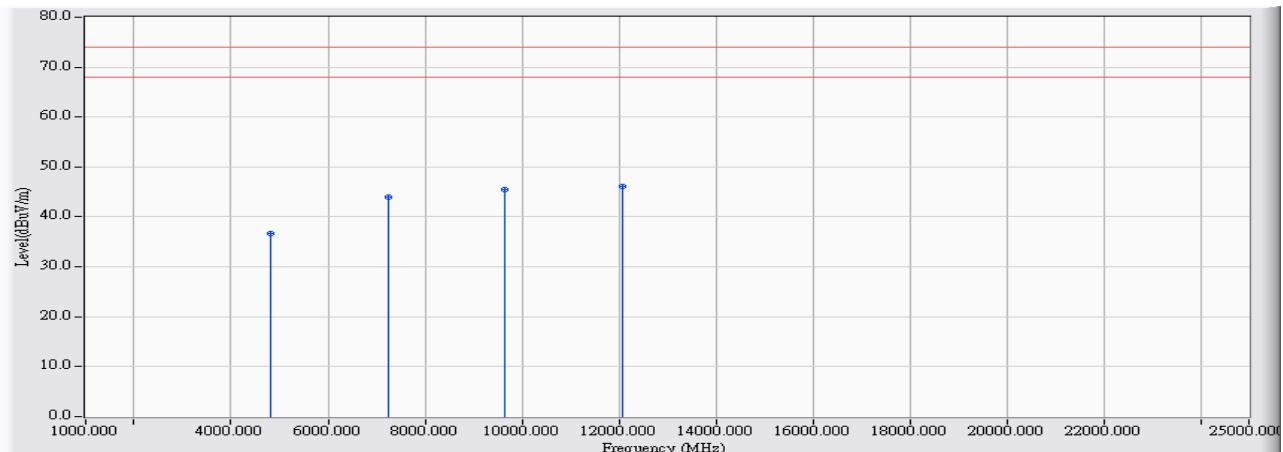


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type	
1	4825.220	-0.870	40.472	39.603	-34.397	74.000	PEAK	
2	7232.010	5.656	37.628	43.284	-30.716	74.000	PEAK	
3	9646.840	9.861	35.592	45.453	-28.547	74.000	PEAK	
4	*	12058.500	11.742	34.394	46.136	-27.864	74.000	PEAK

## Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor .
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2013/12/14 - 11:13
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : DC 12V
EUT : Wicorder	Note : Mode 1: Transmit 802.11g_2412MHz

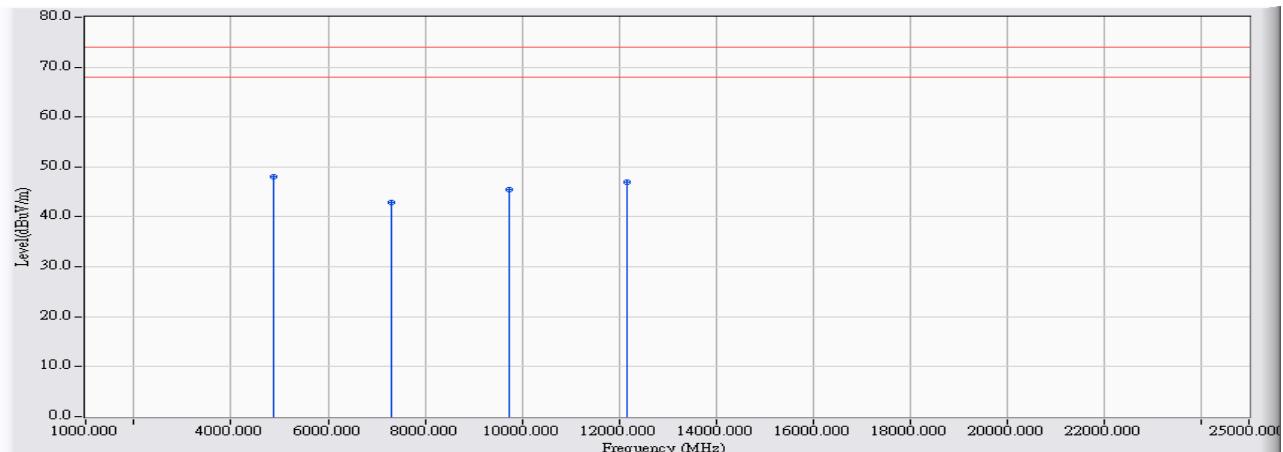


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	4820.460	-0.884	37.524	36.640	-37.360	74.000	PEAK
2	7233.000	5.660	38.275	43.934	-30.066	74.000	PEAK
3	9645.280	9.857	35.520	45.376	-28.624	74.000	PEAK
4 *	12062.120	11.747	34.443	46.190	-27.810	74.000	PEAK

## Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor .
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2013/12/14 - 11:25
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : DC 12V
EUT : Wicorder	Note : Mode 1: Transmit 802.11g_2437MHz

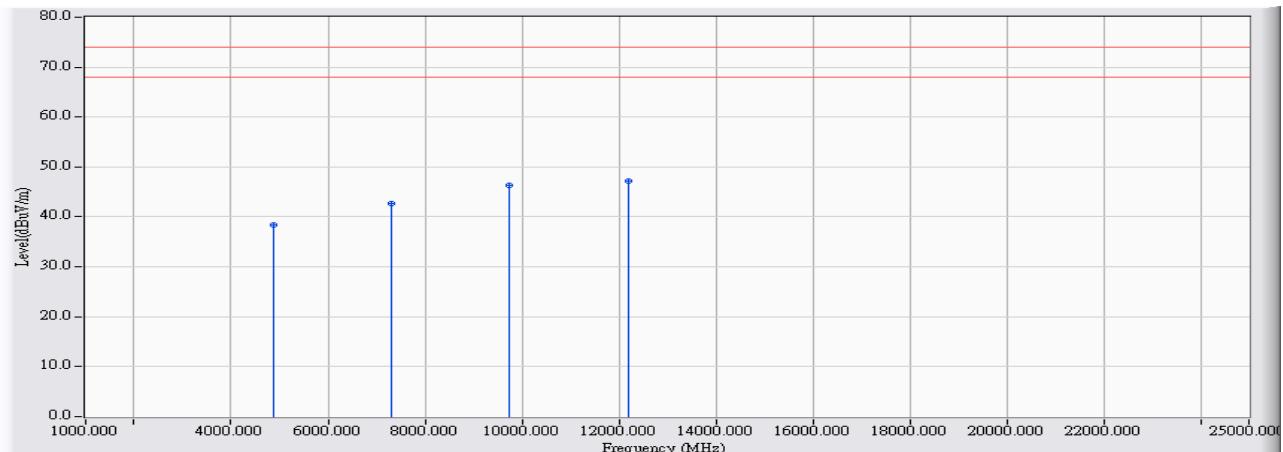


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	4870.450	-0.730	48.727	47.997	-26.003	74.000	PEAK
2		7315.350	5.885	37.068	42.953	-31.047	74.000	PEAK
3		9740.200	10.138	35.315	45.454	-28.546	74.000	PEAK
4		12174.600	11.890	35.037	46.928	-27.072	74.000	PEAK

## Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor .
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2013/12/14 - 11:28
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : DC 12V
EUT : Wicorder	Note : Mode 1: Transmit 802.11g_2437MHz

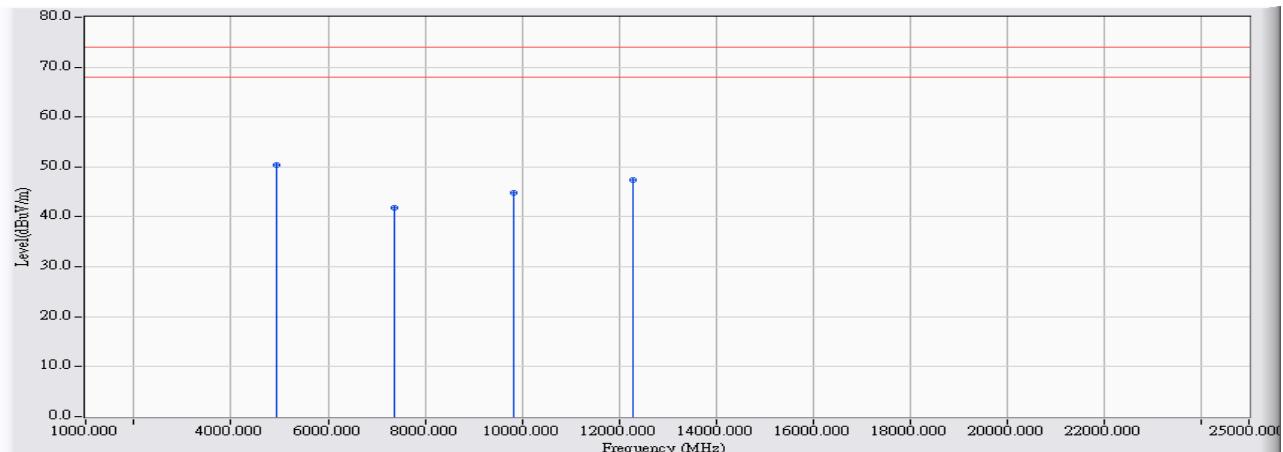


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type	
1	4869.650	-0.733	39.127	38.394	-35.606	74.000	PEAK	
2	7318.450	5.894	36.725	42.618	-31.382	74.000	PEAK	
3	9728.300	10.104	36.182	46.285	-27.715	74.000	PEAK	
4	*	12196.650	11.919	35.367	47.286	-26.714	74.000	PEAK

## Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor .
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2013/12/14 - 11:31
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : DC 12V
EUT : Wicorder	Note : Mode 1: Transmit 802.11g_2462MHz

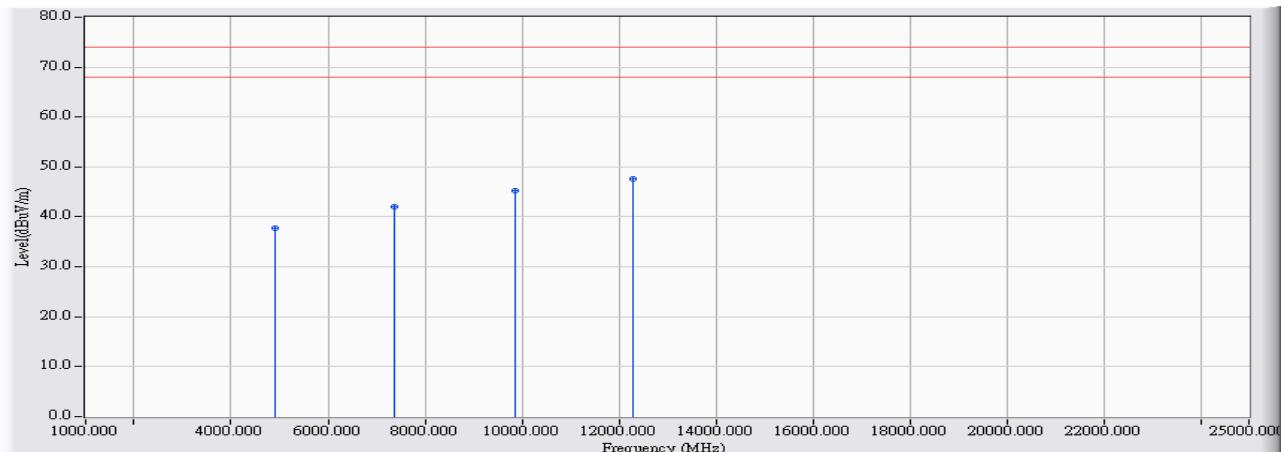


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	4925.050	-0.562	50.912	50.350	-23.650	74.000	PEAK
2		7381.150	6.066	35.853	41.918	-32.082	74.000	PEAK
3		9834.700	10.420	34.339	44.759	-29.241	74.000	PEAK
4		12303.350	12.056	35.305	47.361	-26.639	74.000	PEAK

#### Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor .
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2013/12/14 - 11:34
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : DC 12V
EUT : Wicorder	Note : Mode 1: Transmit 802.11g_2462MHz

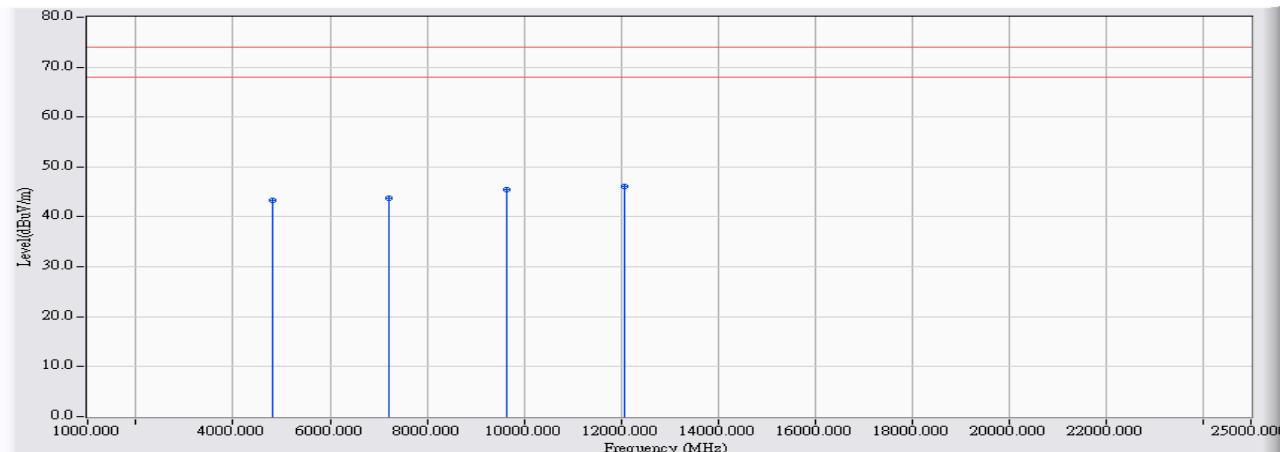


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type	
1	4920.150	-0.578	38.346	37.769	-36.231	74.000	PEAK	
2	7384.450	6.075	36.008	42.083	-31.917	74.000	PEAK	
3	9848.800	10.463	34.770	45.232	-28.768	74.000	PEAK	
4	*	12303.700	12.056	35.536	47.592	-26.408	74.000	PEAK

## Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor .
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2013/12/14 - 11:36
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : DC 12V
EUT : Wicorder	Note : Mode 1: Transmit 802.11n 20MHz_2412MHz

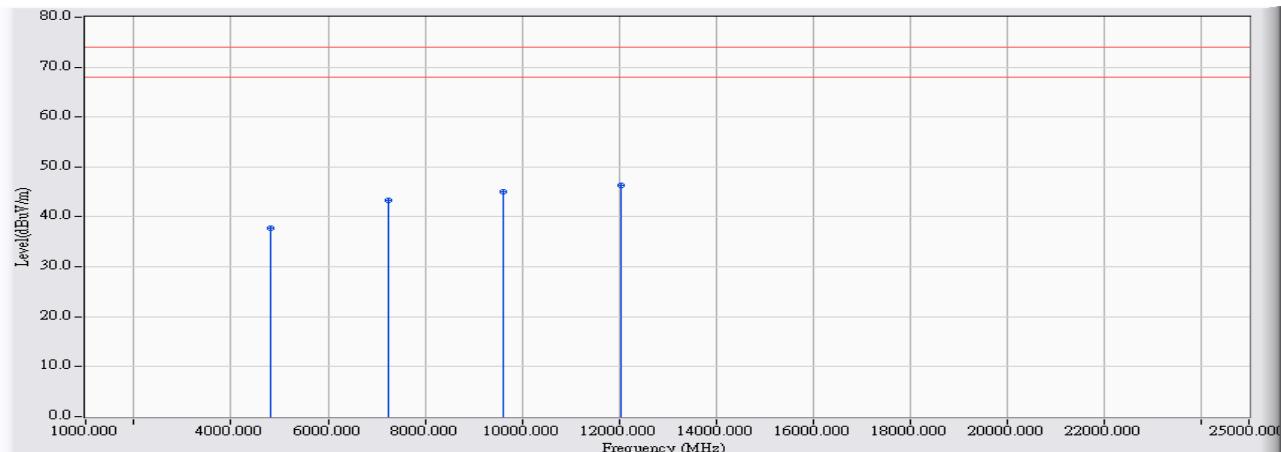


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	4825.000	-0.870	44.127	43.257	-30.743	74.000	PEAK
2	7226.350	5.641	38.033	43.674	-30.326	74.000	PEAK
3	9652.385	9.878	35.639	45.516	-28.484	74.000	PEAK
4 *	12069.750	11.757	34.344	46.101	-27.899	74.000	PEAK

## Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor .
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2013/12/14 - 11:39
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : DC 12V
EUT : Wicorder	Note : Mode 1: Transmit 802.11n 20MHz_2412MHz

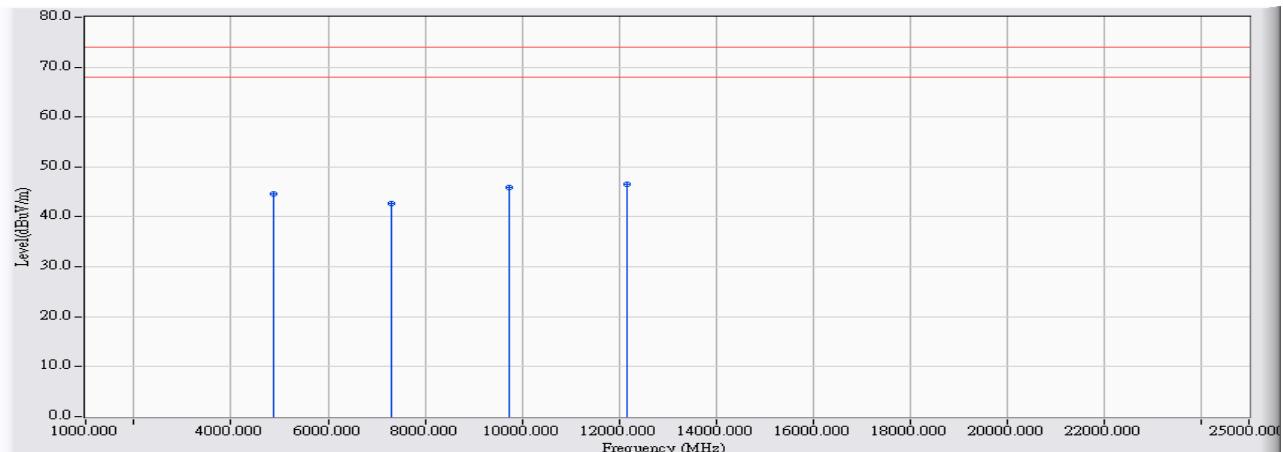


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type	
1	4809.050	-0.920	38.687	37.768	-36.232	74.000	PEAK	
2	7231.850	5.656	37.763	43.419	-30.581	74.000	PEAK	
3	9628.550	9.806	35.278	45.084	-28.916	74.000	PEAK	
4	*	12051.300	11.734	34.625	46.358	-27.642	74.000	PEAK

## Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor .
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2013/12/14 - 11:43
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : DC 12V
EUT : Wicorder	Note : Mode 1: Transmit 802.11n 20MHz_2437MHz

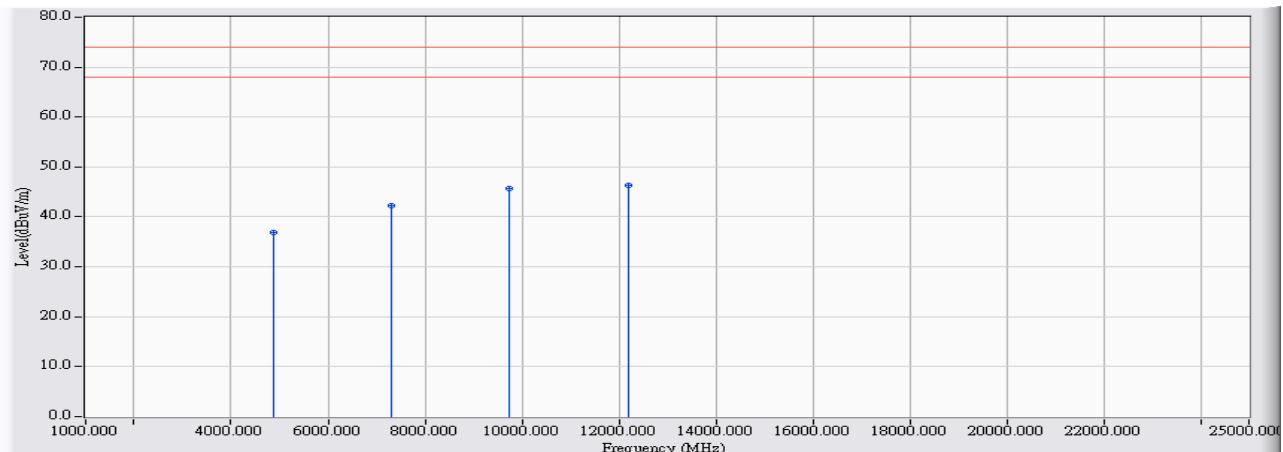


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type	
1	4876.860	-0.711	45.365	44.655	-29.345	74.000	PEAK	
2	7318.460	5.894	36.707	42.601	-31.399	74.000	PEAK	
3	9753.820	10.180	35.625	45.804	-28.196	74.000	PEAK	
4	*	12182.860	11.902	34.691	46.593	-27.407	74.000	PEAK

## Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor .
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2013/12/14 - 11:45
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : DC 12V
EUT : Wicorder	Note : Mode 1: Transmit 802.11n 20MHz_2437MHz

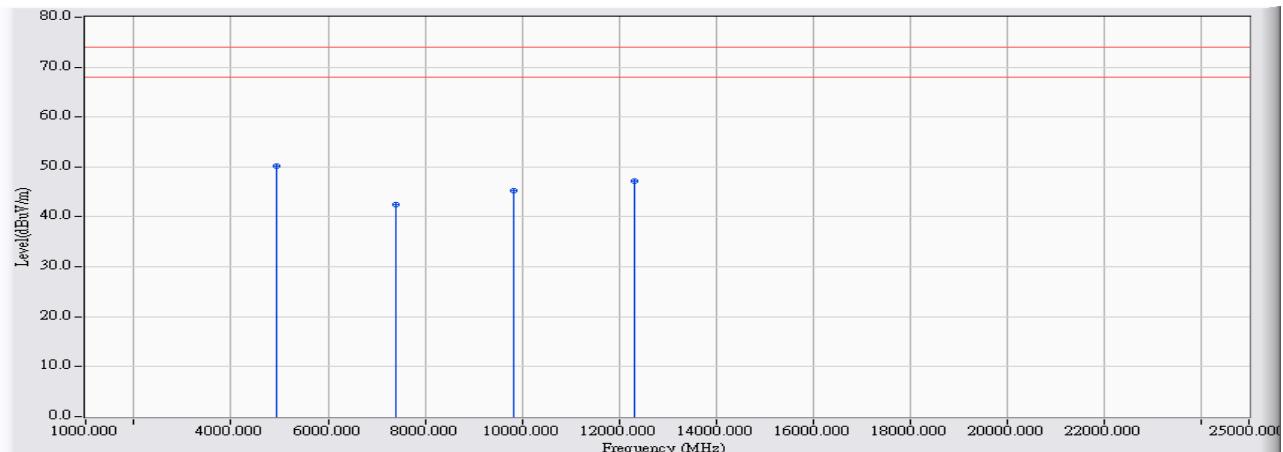


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type	
1	4881.380	-0.697	37.559	36.862	-37.138	74.000	PEAK	
2	7306.060	5.859	36.495	42.355	-31.645	74.000	PEAK	
3	9742.580	10.146	35.440	45.586	-28.414	74.000	PEAK	
4	*	12192.600	11.914	34.385	46.299	-27.701	74.000	PEAK

## Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor .
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2013/12/14 - 11:48
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : DC 12V
EUT : Wicorder	Note : Mode 1: Transmit 802.11n 20MHz_2462MHz

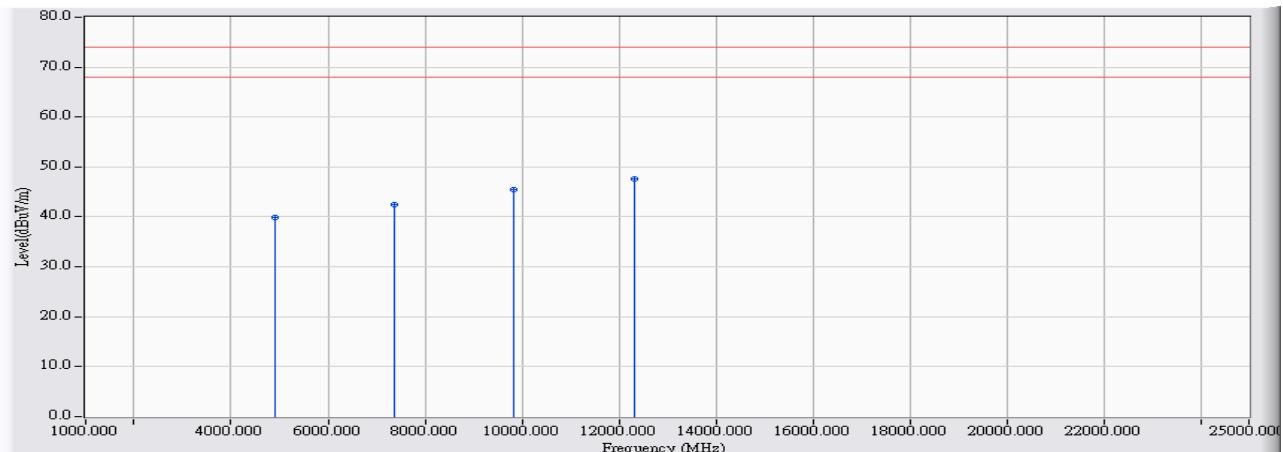


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	4926.000	-0.559	50.675	50.116	-23.884	74.000	PEAK
2		7395.850	6.106	36.353	42.459	-31.541	74.000	PEAK
3		9823.700	10.387	34.803	45.190	-28.810	74.000	PEAK
4		12332.150	12.092	35.111	47.204	-26.796	74.000	PEAK

## Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor .
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2013/12/14 - 11:51
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : DC 12V
EUT : Wicorder	Note : Mode 1: Transmit 802.11n 20MHz_2462MHz



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	4919.850	-0.578	40.388	39.810	-34.190	74.000	PEAK
2	7373.100	6.044	36.455	42.498	-31.502	74.000	PEAK
3	9828.900	10.404	35.020	45.423	-28.577	74.000	PEAK
4 *	12324.500	12.082	35.544	47.627	-26.373	74.000	PEAK

## Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor .
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

## 5. RF antenna conducted test

### 5.1. Test Equipment

The following test equipments are used during the test:

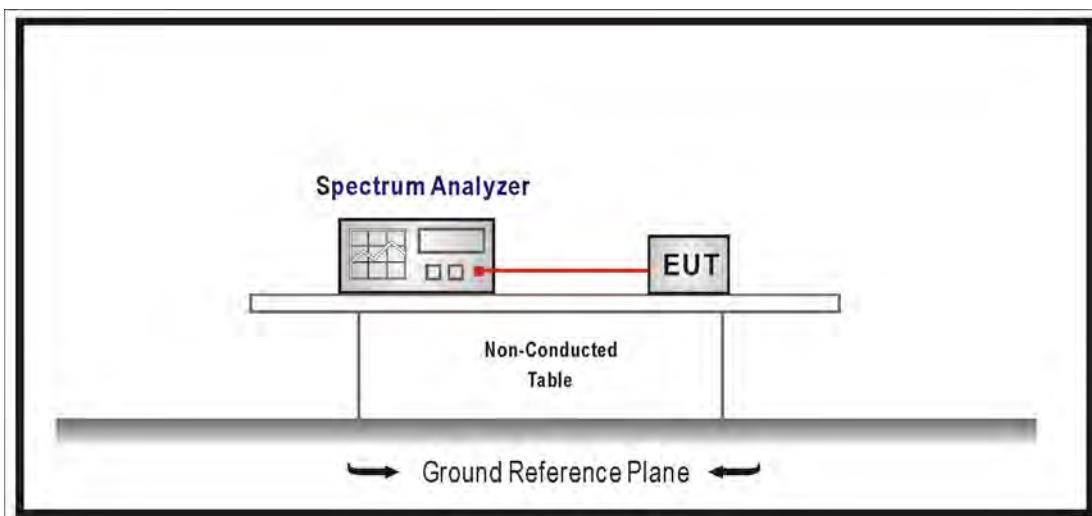
#### RF antenna conducted test / SR7

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Spectrum Analyzer	Agilent	N9010A-EXA	US47140172	2014/08/05

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

### 5.2. Test Setup

RF Antenna Conducted Measurement:



### **5.3. Limits**

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 an RF conducted or radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

### **5.4. Test Procedure**

The EUT was setup according to ANSI C63.4: 2009 and tested according to DTS test procedure of KDB558074 v03r01 for compliance to FCC 47CFR 15.247 requirements  
Set RBW = 100 kHz, Set VBW  $\geq$  3xRBW, scan up through 10th harmonic.

### **5.5. Test Specification**

According to FCC Part 15 Subpart C Paragraph 15.247: 2012

### **5.6. Uncertainty**

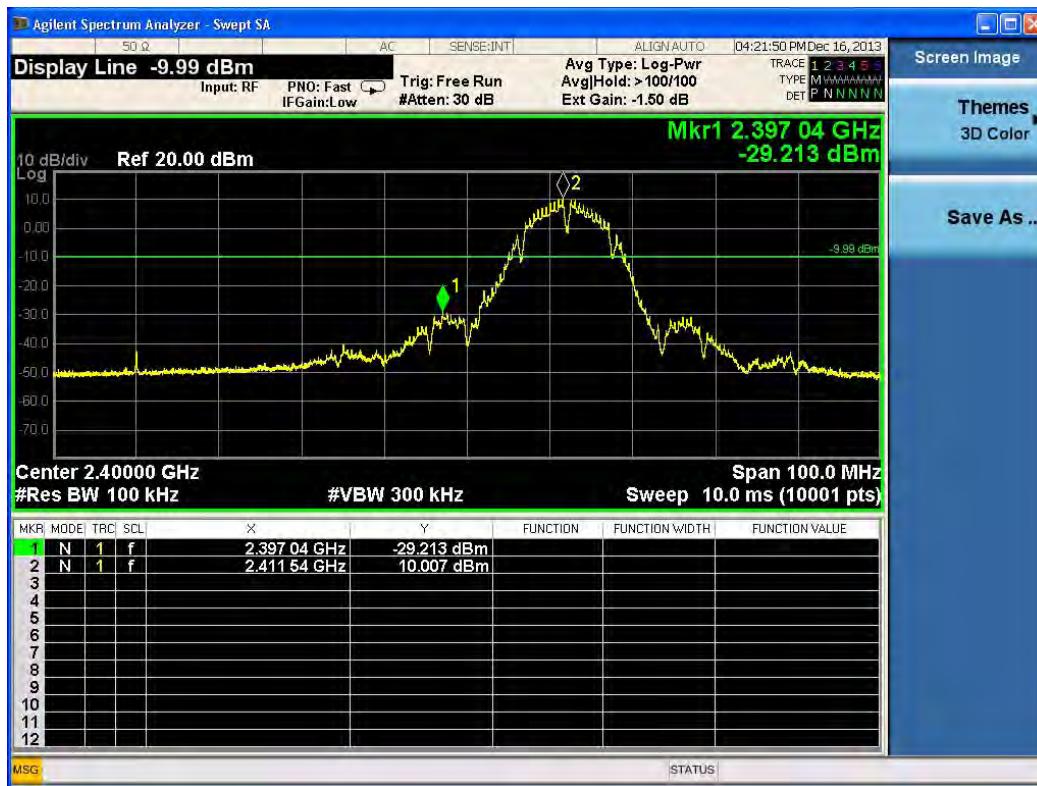
Conducted is defined as  $\pm 1.27\text{dB}$

## 5.7. Test Result

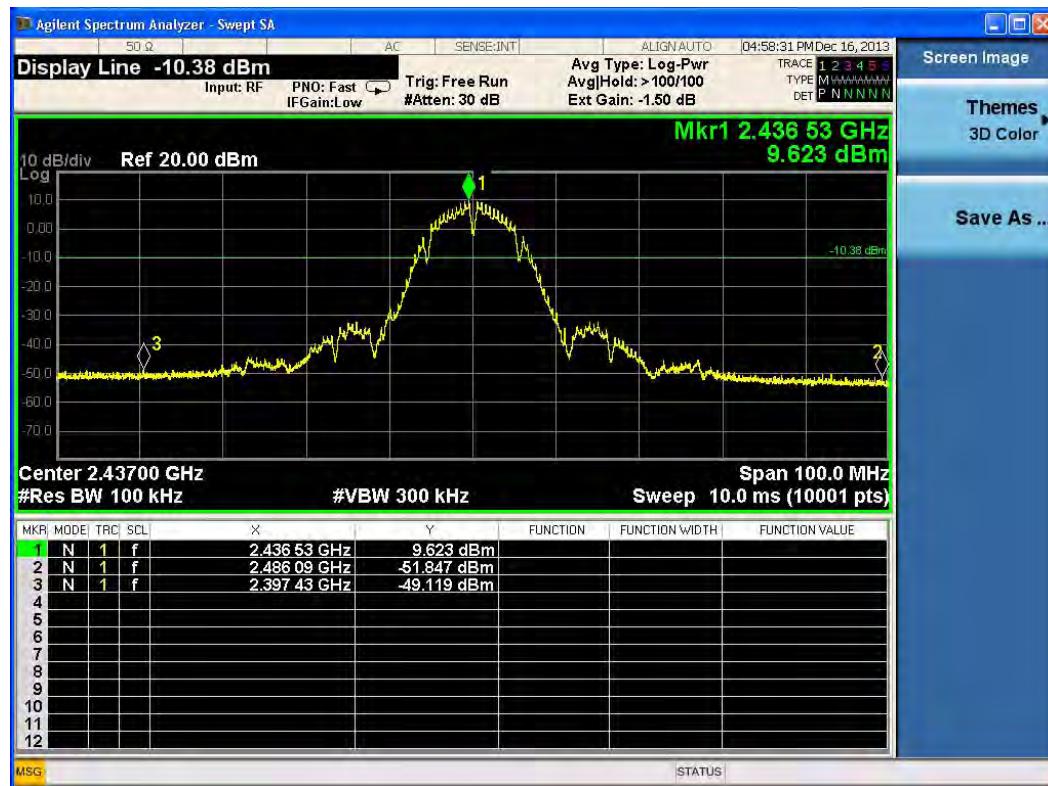
Product	Wicorder		
Test Item	RF antenna conducted test		
Test Mode	Mode 1: Transmit		
Date of Test	2013/12/04	Test Site	SR7

IEEE 802.11b, Duty Cycle: 1				
Channel No.	Frequency (MHz)	Measure Level (dBc)	Limit (dBc)	Result
1	2412	39.220	≥20	Pass
6	2437	58.742	≥20	Pass
11	2462	56.928	≥20	Pass

Channel 1 (2412MHz)



## Channel 6 (2437MHz)



## Channel 11 (2462MHz)



Product	Wicorder		
Test Item	RF antenna conducted test		
Test Mode	Mode 1: Transmit		
Date of Test	2013/12/04	Test Site	SR7

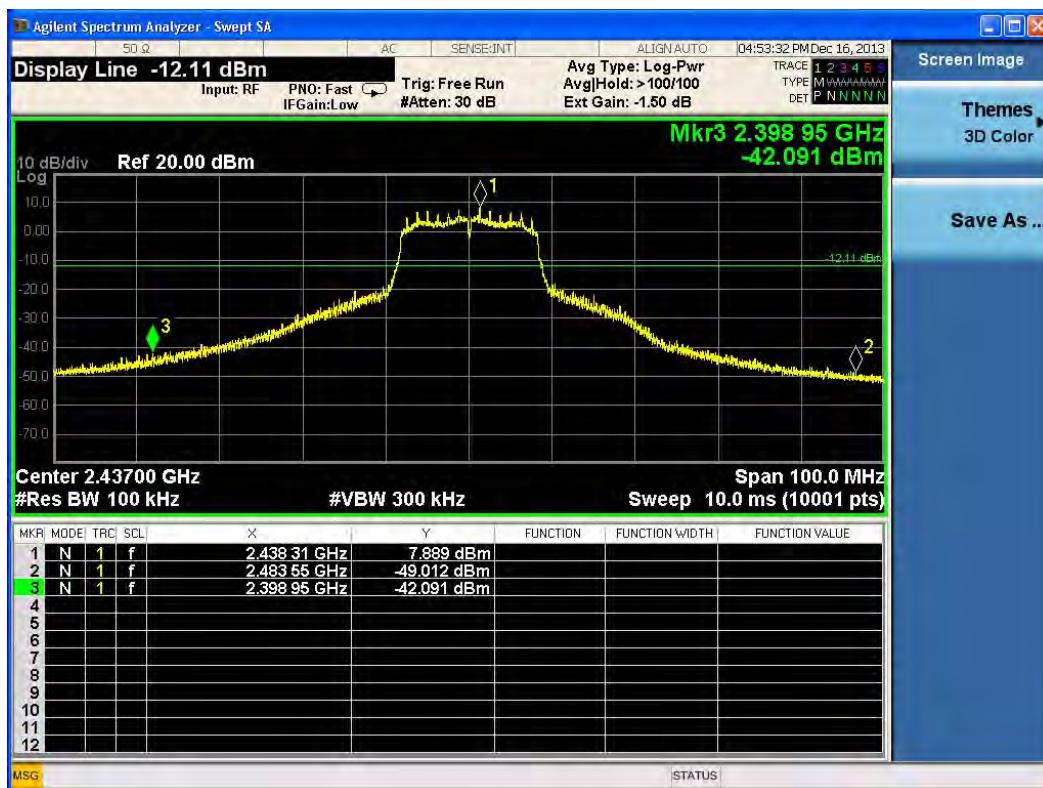
## IEEE 802.11g, Duty Cycle: 1

Channel No.	Frequency (MHz)	Measure Level (dBc)	Limit (dBc)	Result
1	2412	26.723	≥20	Pass
6	2437	49.980	≥20	Pass
11	2462	45.937	≥20	Pass

## Channel 1 (2412MHz)



## Channel 6 (2437MHz)



### Channel 11 (2462MHz)

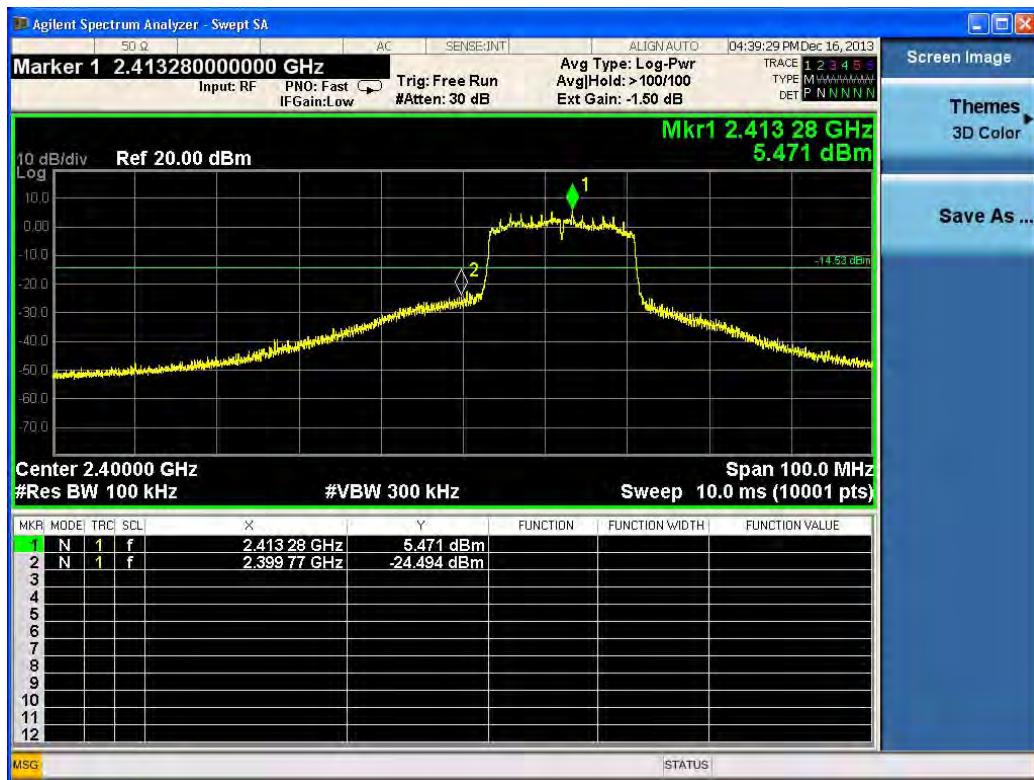


Product	Wicorder		
Test Item	RF antenna conducted test		
Test Mode	Mode 1: Transmit		
Date of Test	2013/12/04	Test Site	SR7

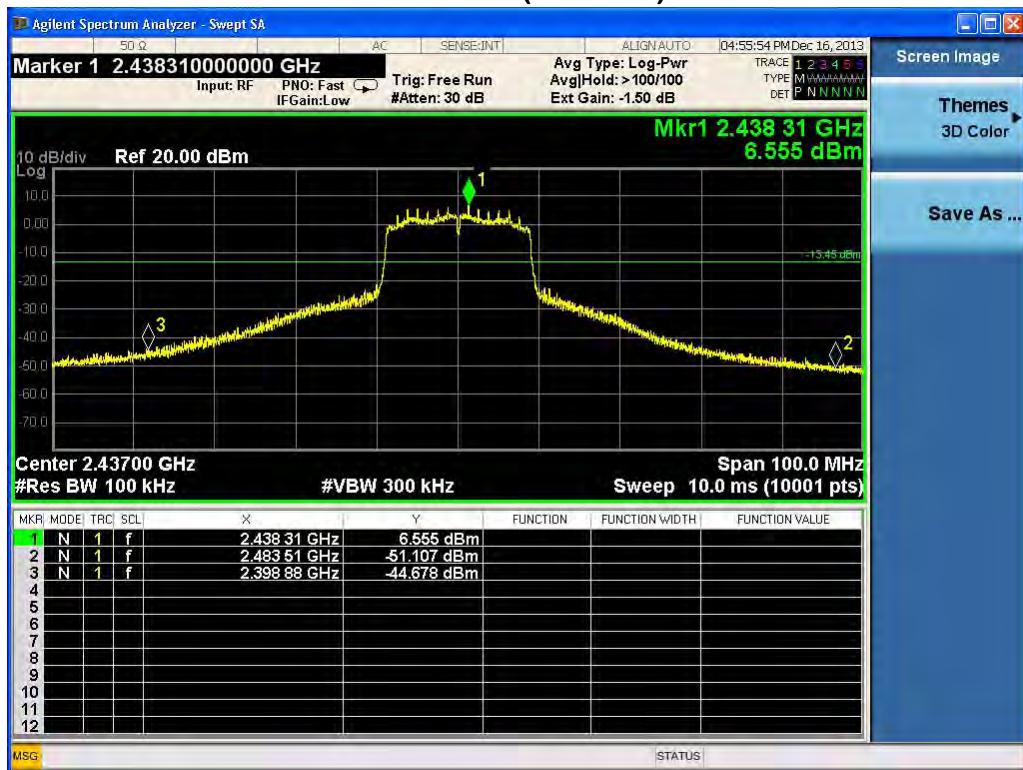
## IEEE 802.11n (20MHz), Duty Cycle: 1

Channel No.	Frequency (MHz)	Measure Level (dBc)	Limit (dBc)	Result
1	2412	29.965	≥20	Pass
6	2437	51.233	≥20	Pass
11	2462	43.699	≥20	Pass

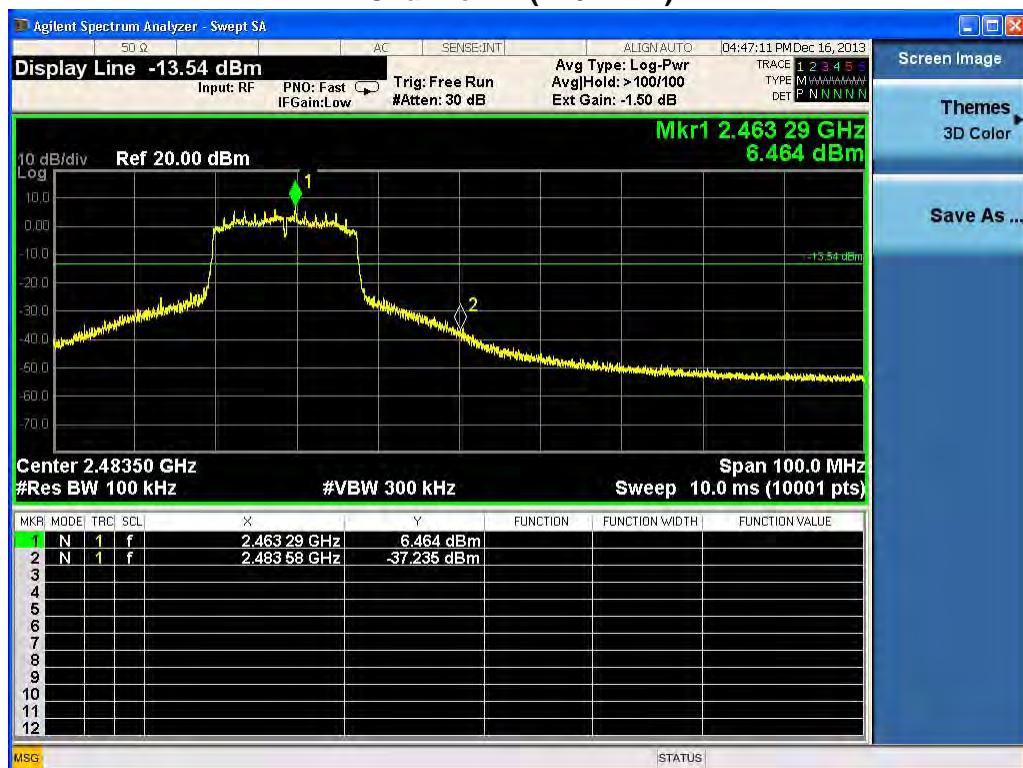
## Channel 1 (2412MHz)



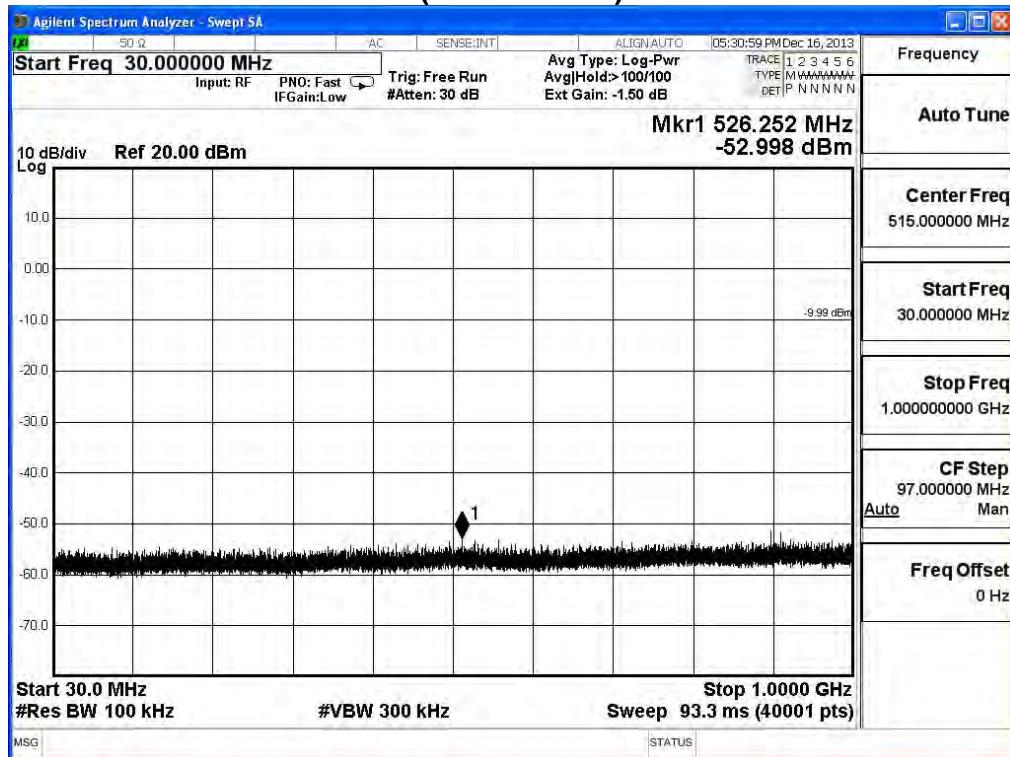
## Channel 6 (2437MHz)



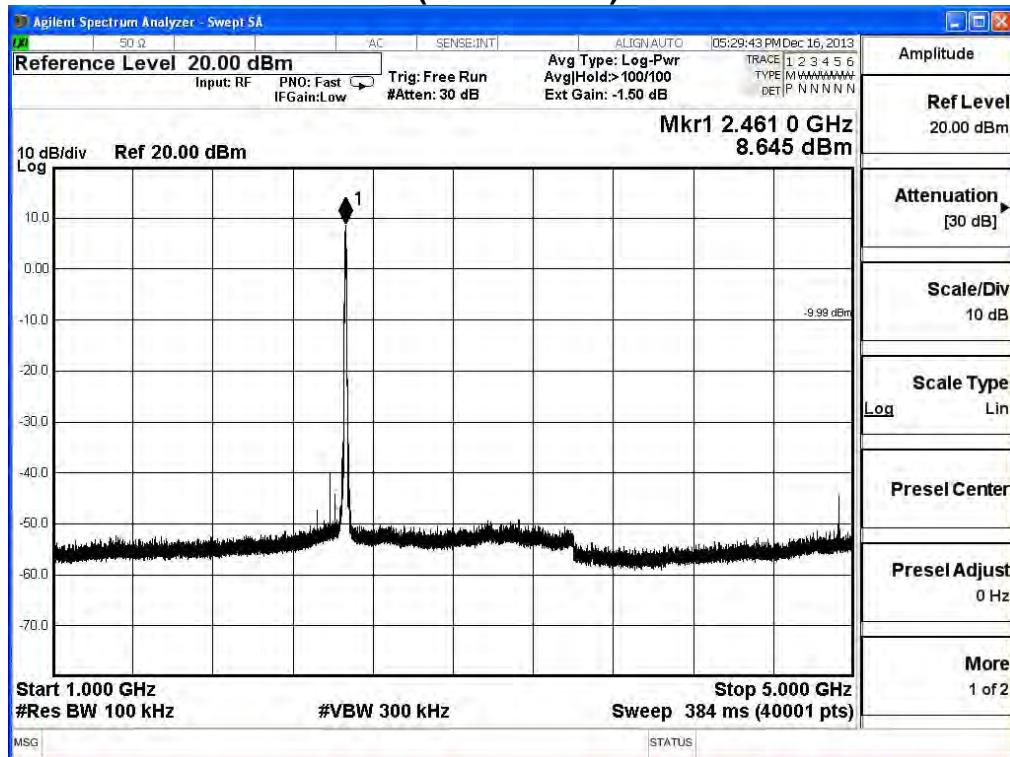
## Channel 11 (2462MHz)



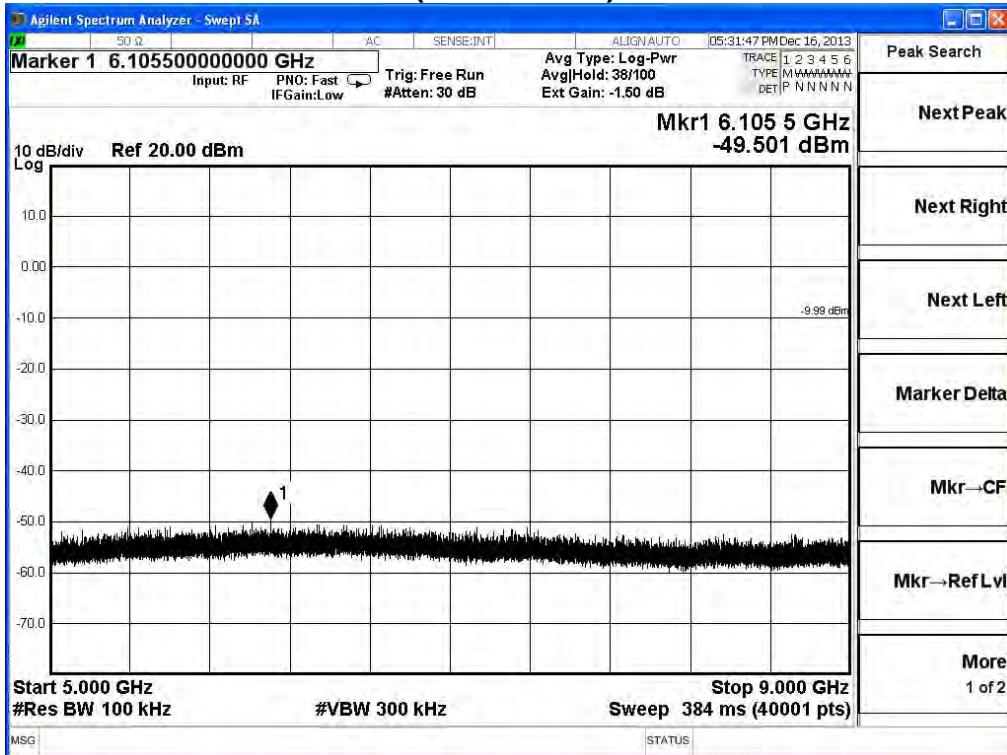
## 2412MHz (30MHz~1GHz)-802.11b



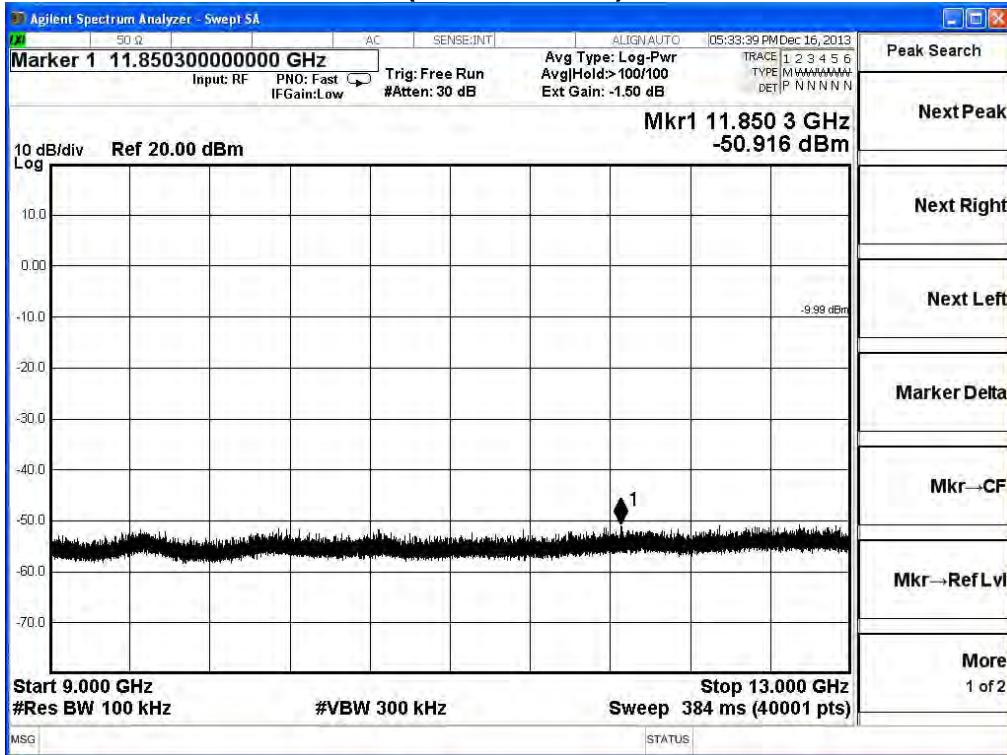
## 2412MHz (1GHz~5GHz) -802.11b



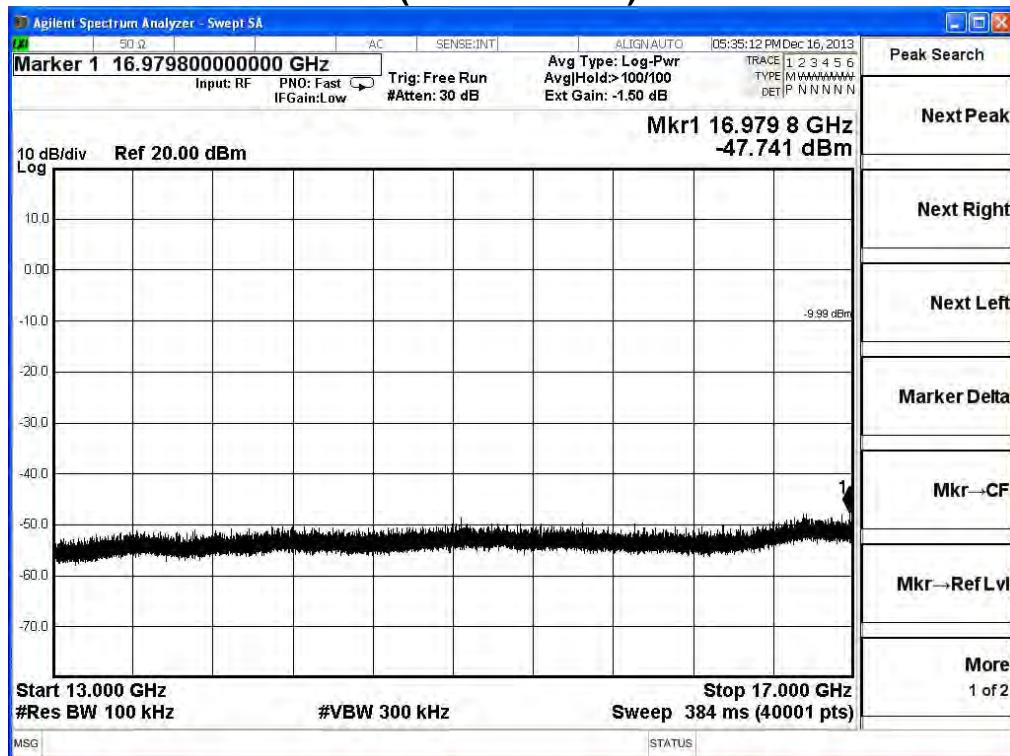
## 2412MHz (5GHz~9GHz) -802.11b



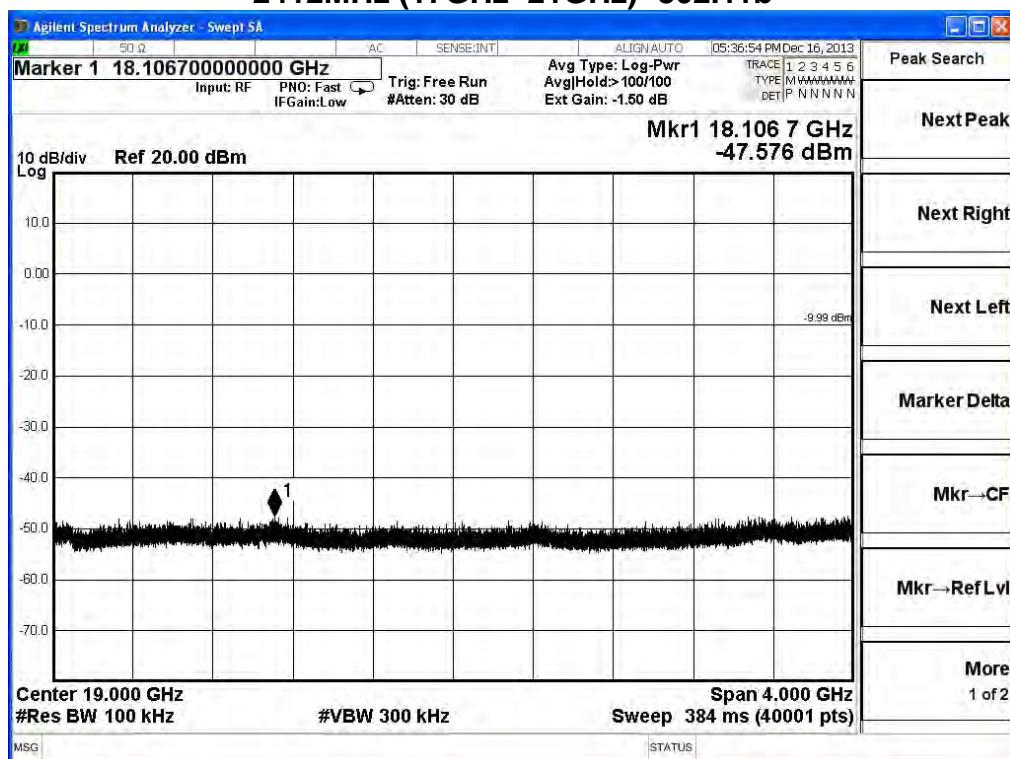
## 2412MHz (9GHz~13GHz) -802.11b



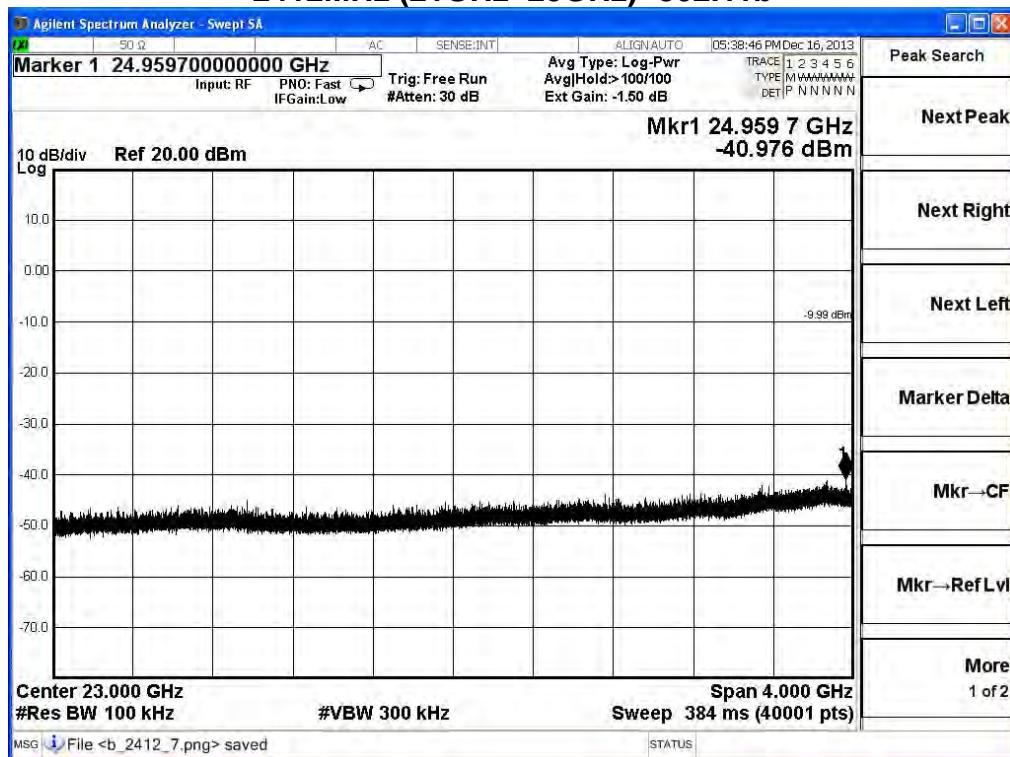
## 2412MHz (13GHz~17GHz) -802.11b



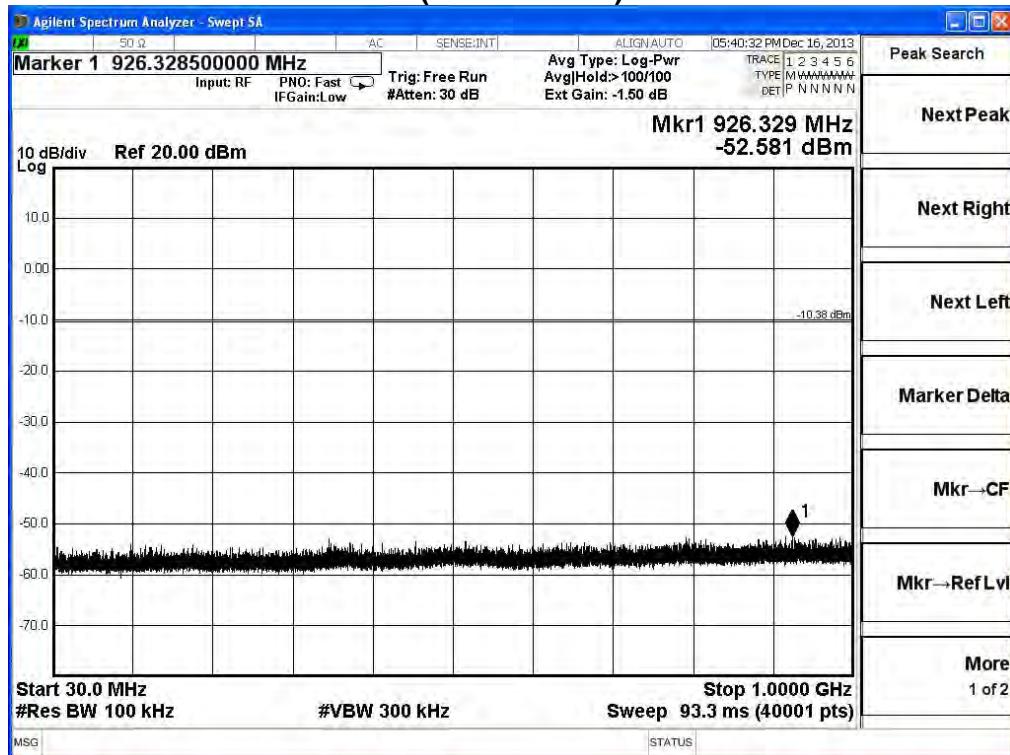
## 2412MHz (17GHz~21GHz) -802.11b



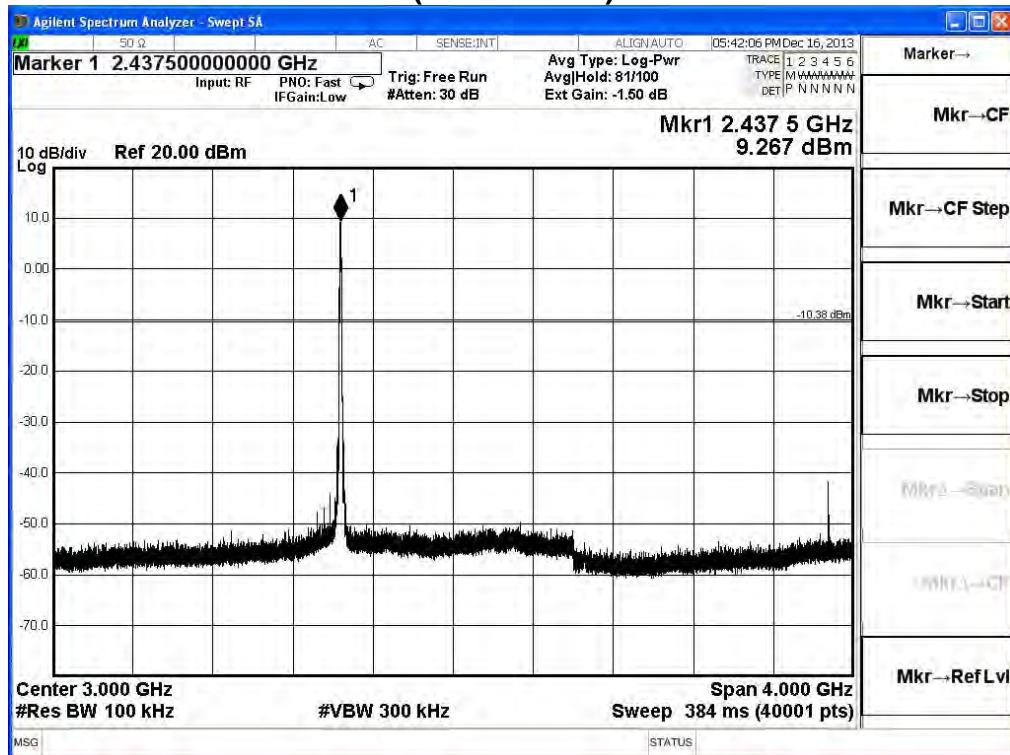
## 2412MHz (21GHz~25GHz) -802.11b



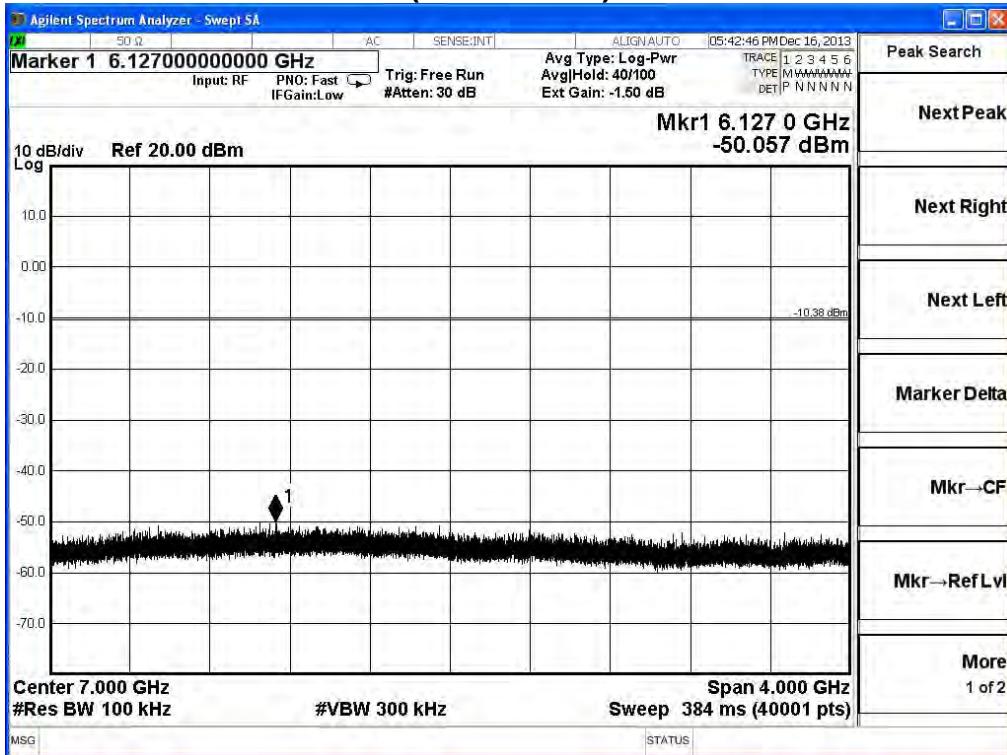
## 2437MHz (30MHz~1GHz)-802.11b



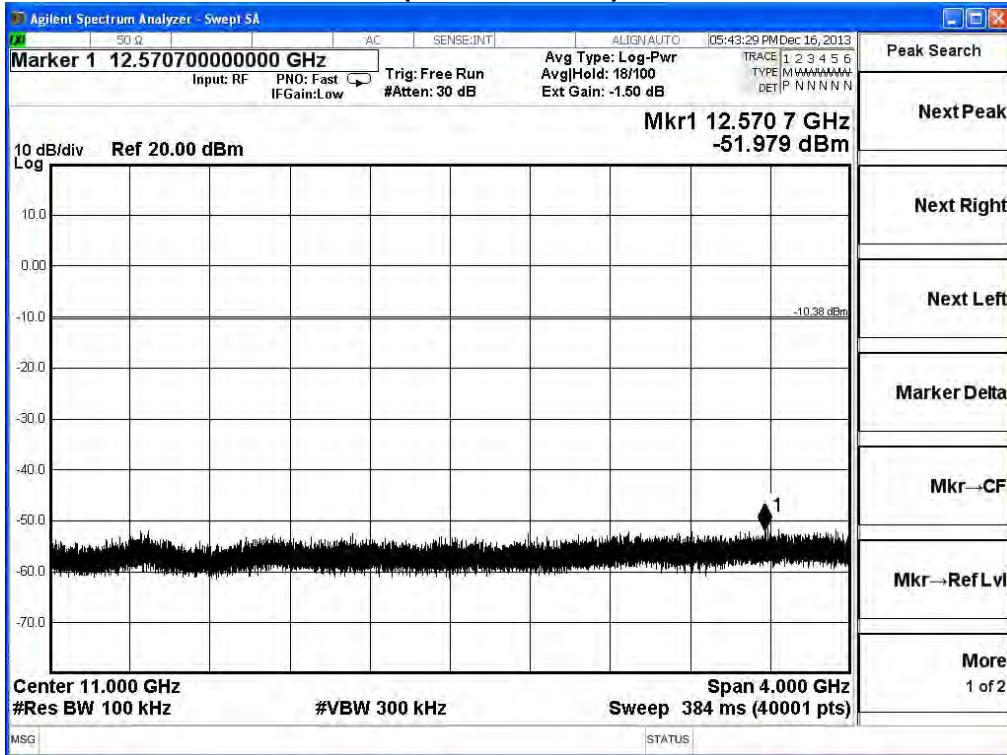
## 2437MHz (1GHz~5GHz) -802.11 b



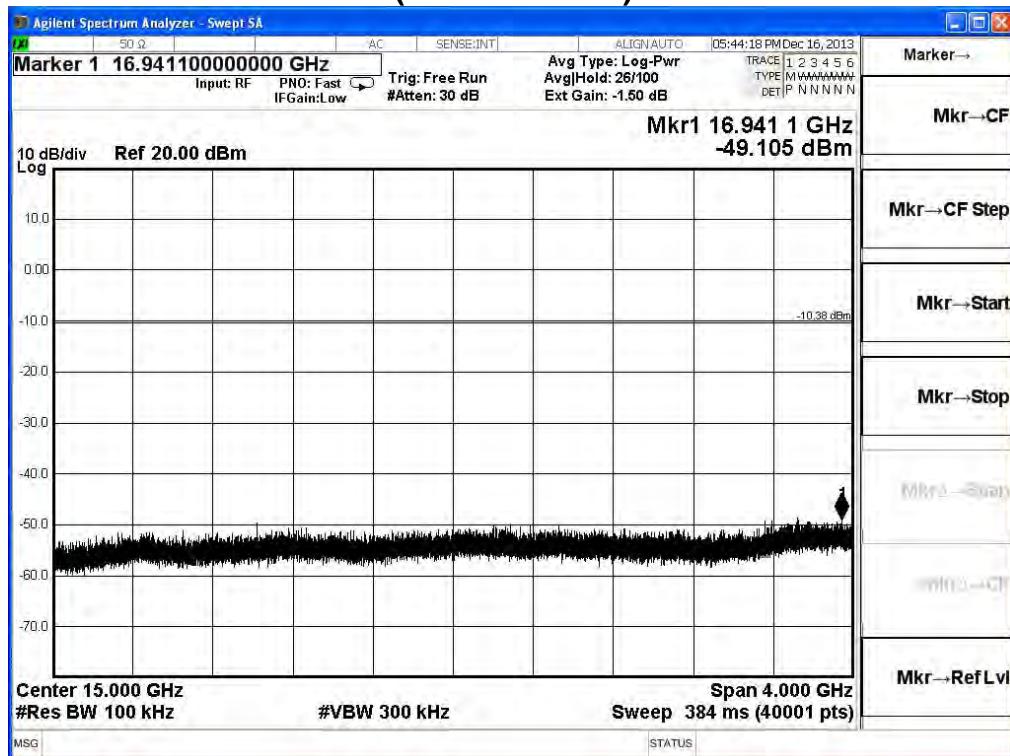
## 2437MHz (5GHz~9GHz) -802.11 b



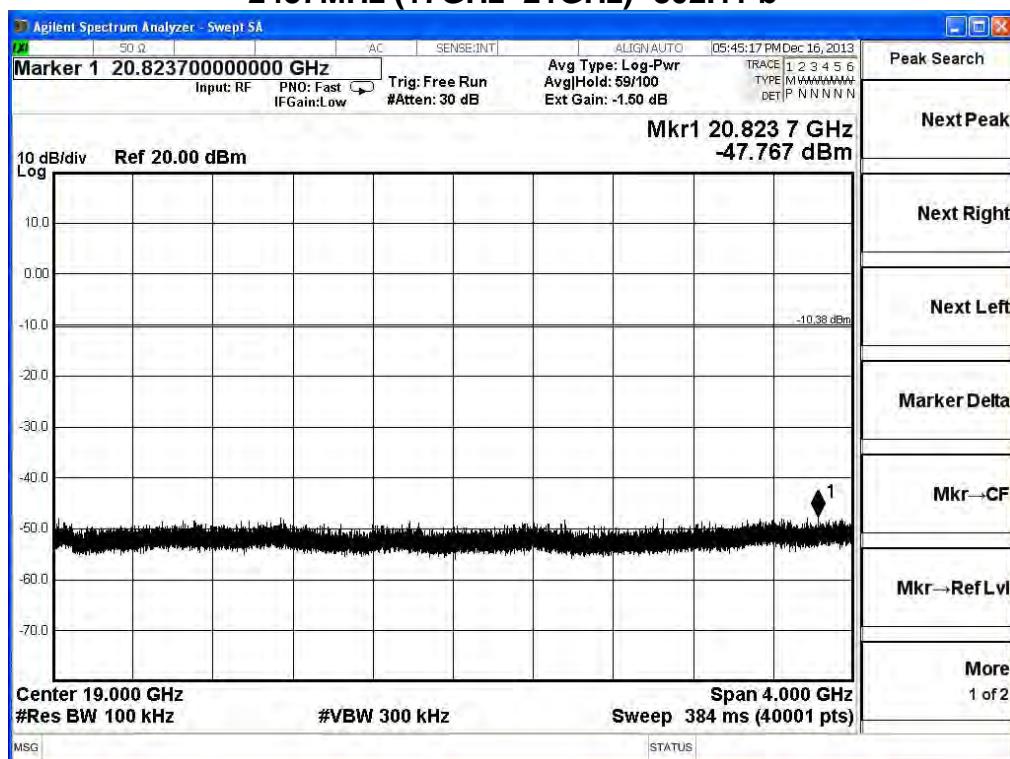
## 2437MHz (9GHz~13GHz) -802.11 b

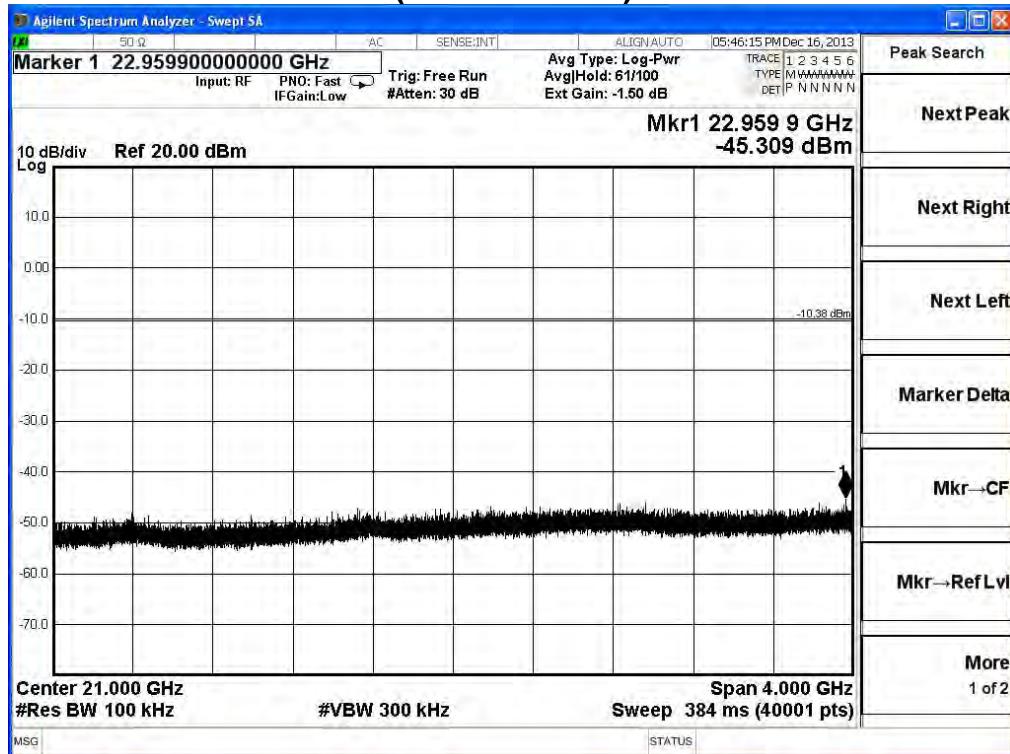


## 2437MHz (13GHz~17GHz) -802.11 b

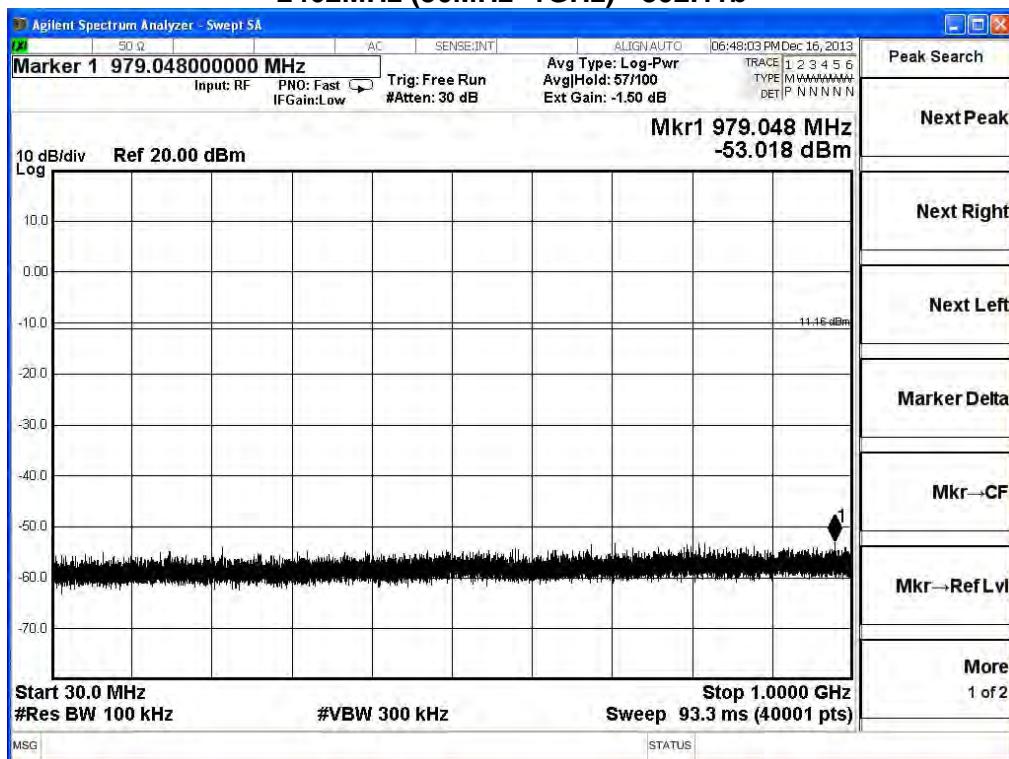


## 2437MHz (17GHz~21GHz) -802.11 b

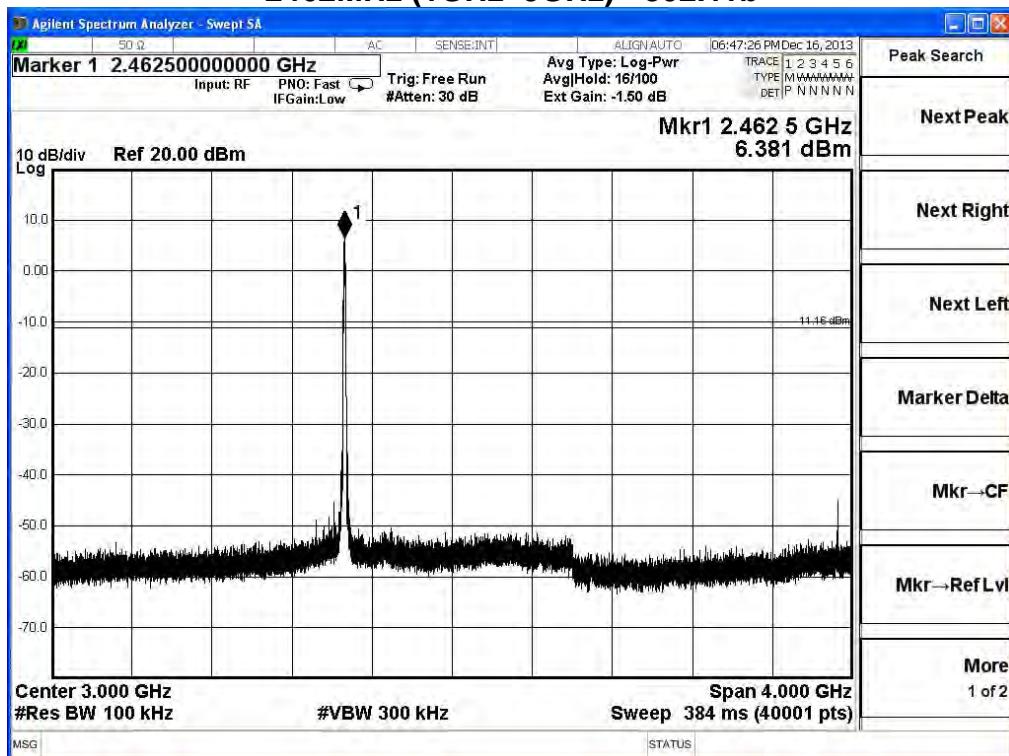


**2437MHz (21GHz~25GHz) -802.11 b**

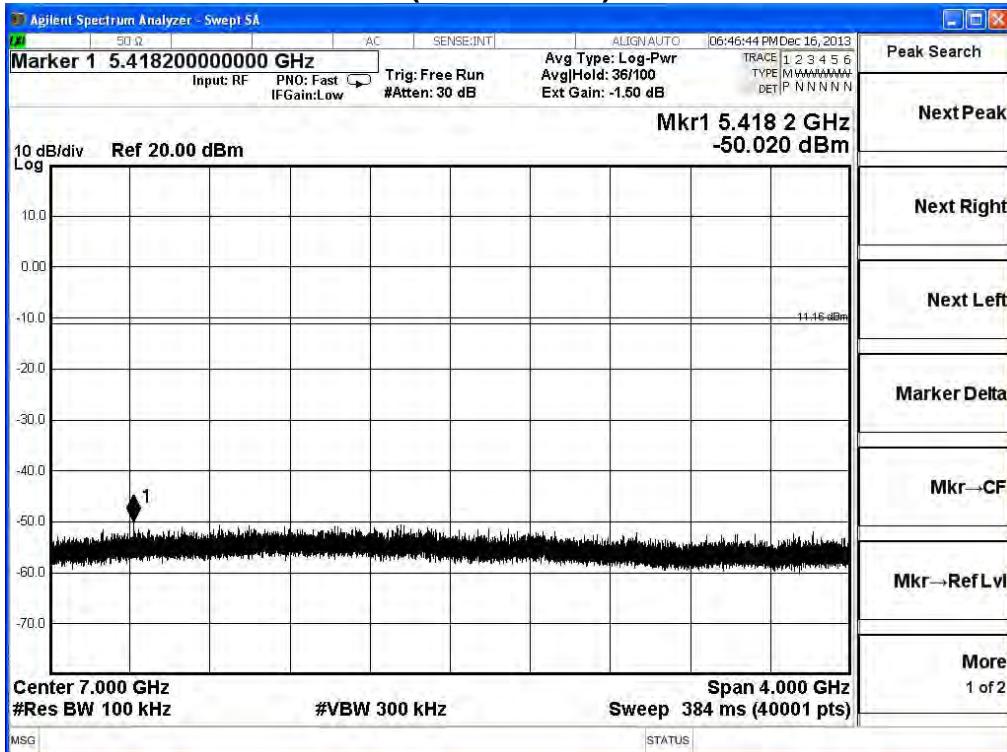
## 2462MHz (30MHz~1GHz) - 802.11b



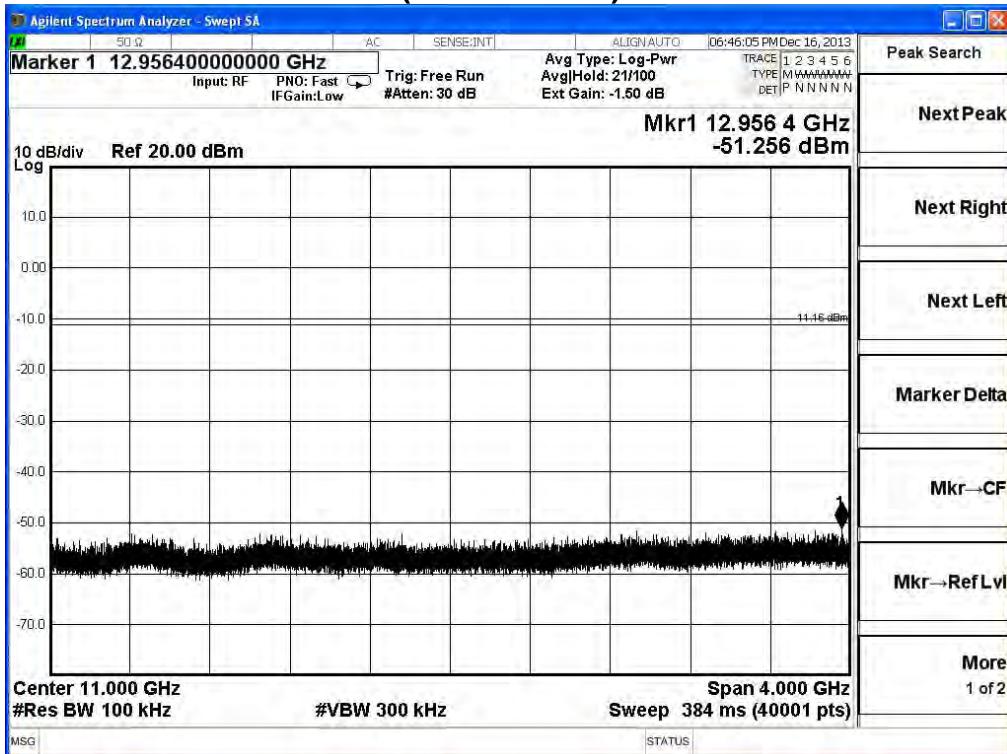
## 2462MHz (1GHz~5GHz) - 802.11b



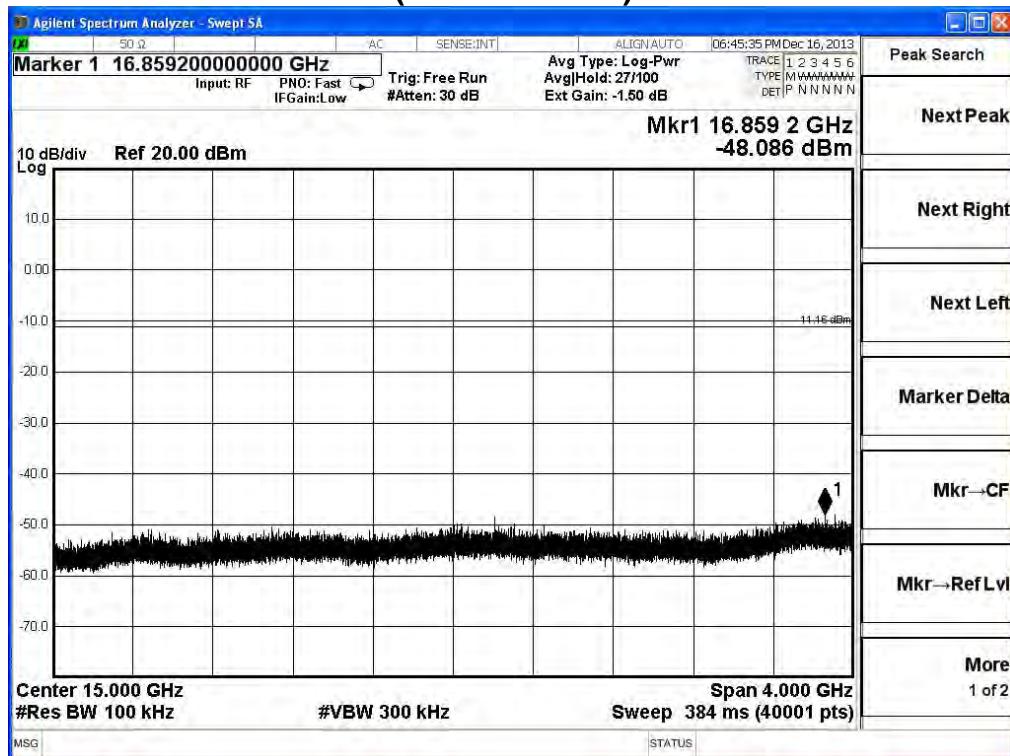
## 2462MHz (5GHz~9GHz) - 802.11b



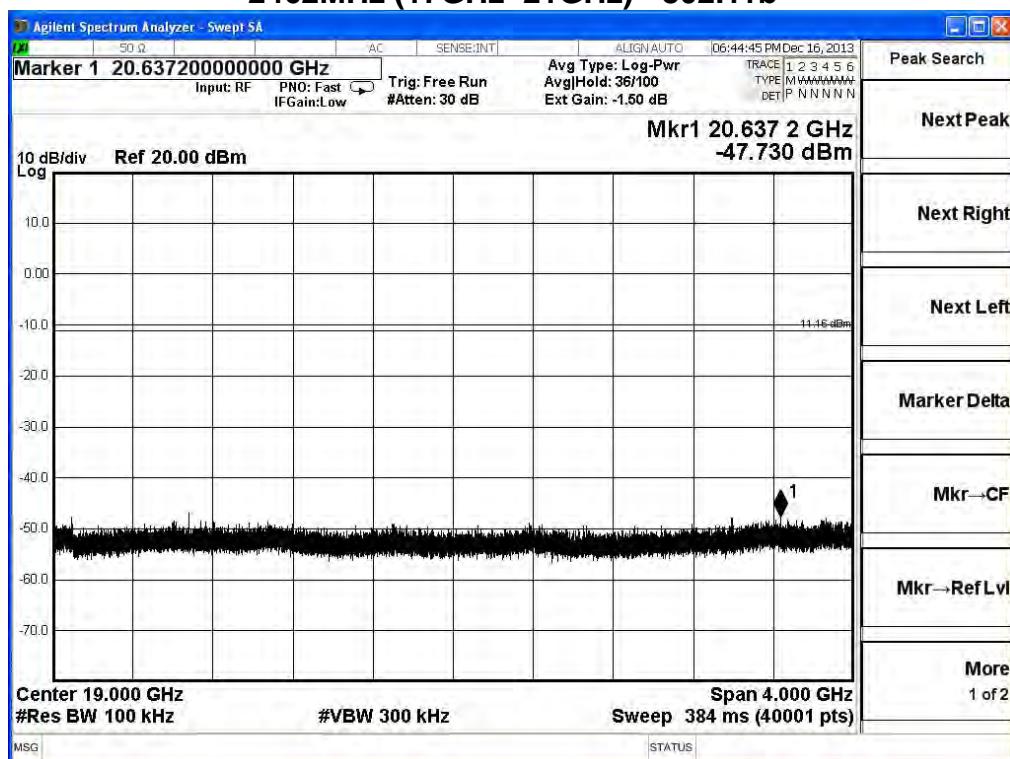
## 2462MHz (9GHz~13GHz) - 802.11b



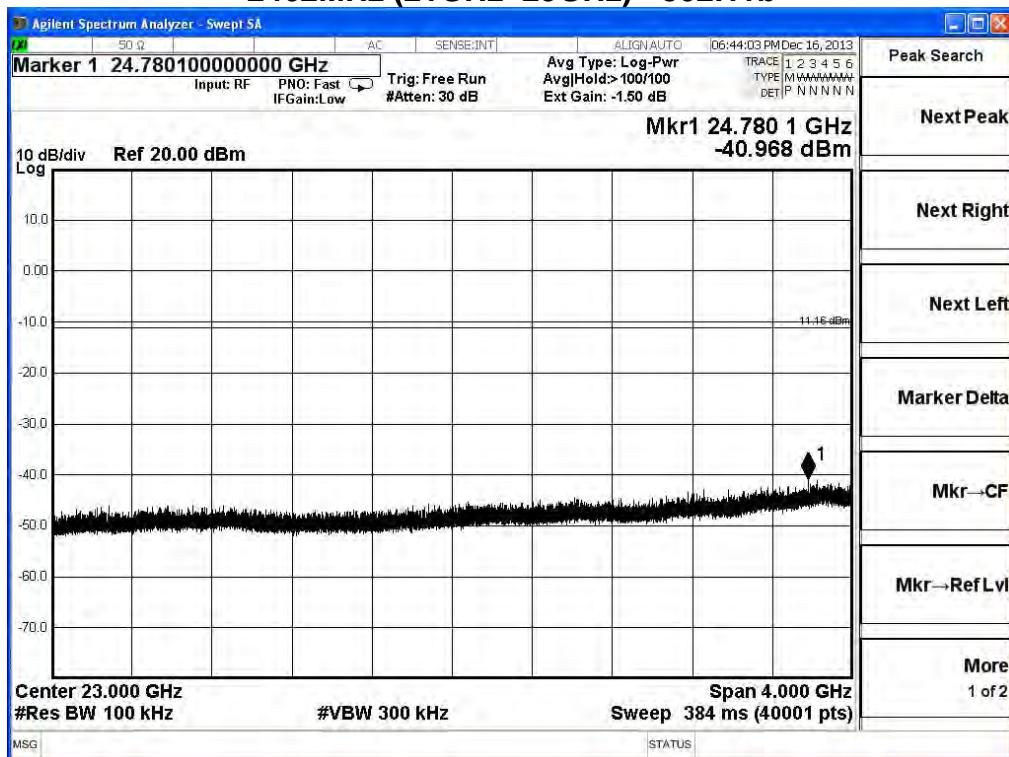
## 2462MHz (13GHz~17GHz) - 802.11b



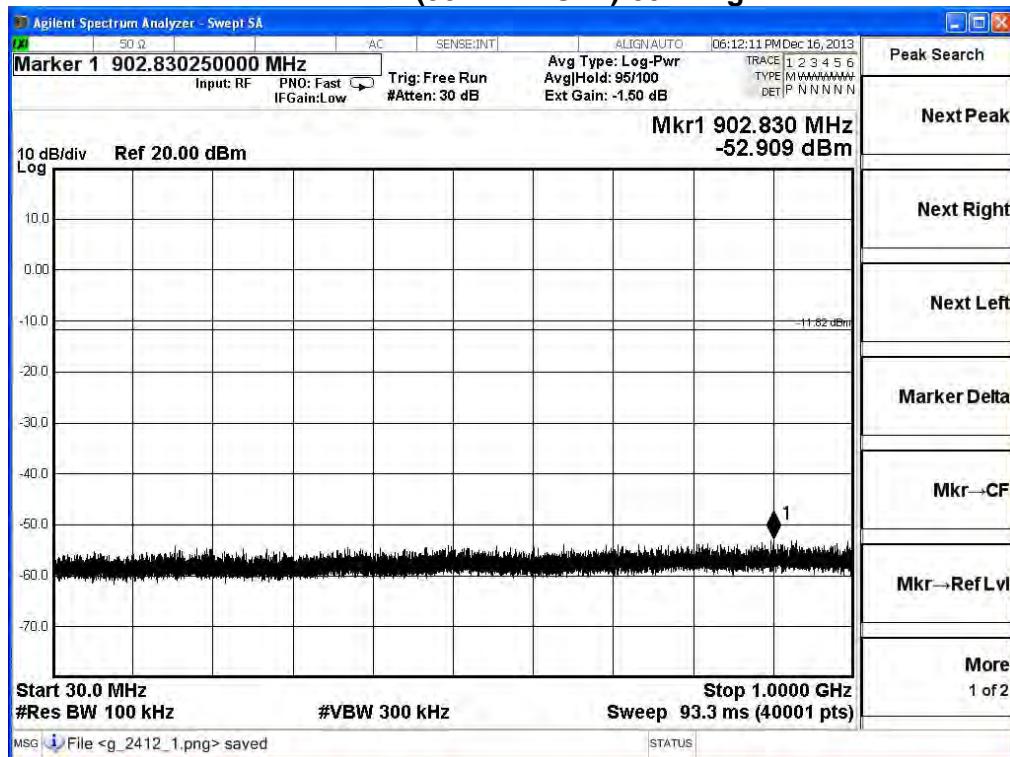
## 2462MHz (17GHz~21GHz) - 802.11b



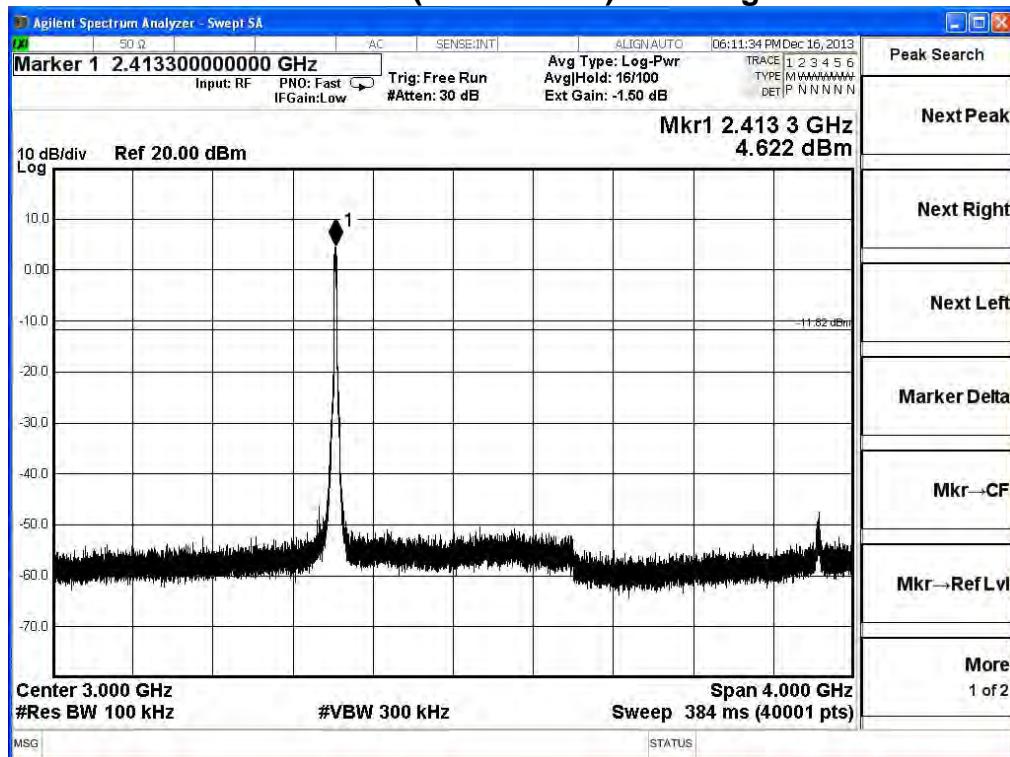
## 2462MHz (21GHz~25GHz) - 802.11b



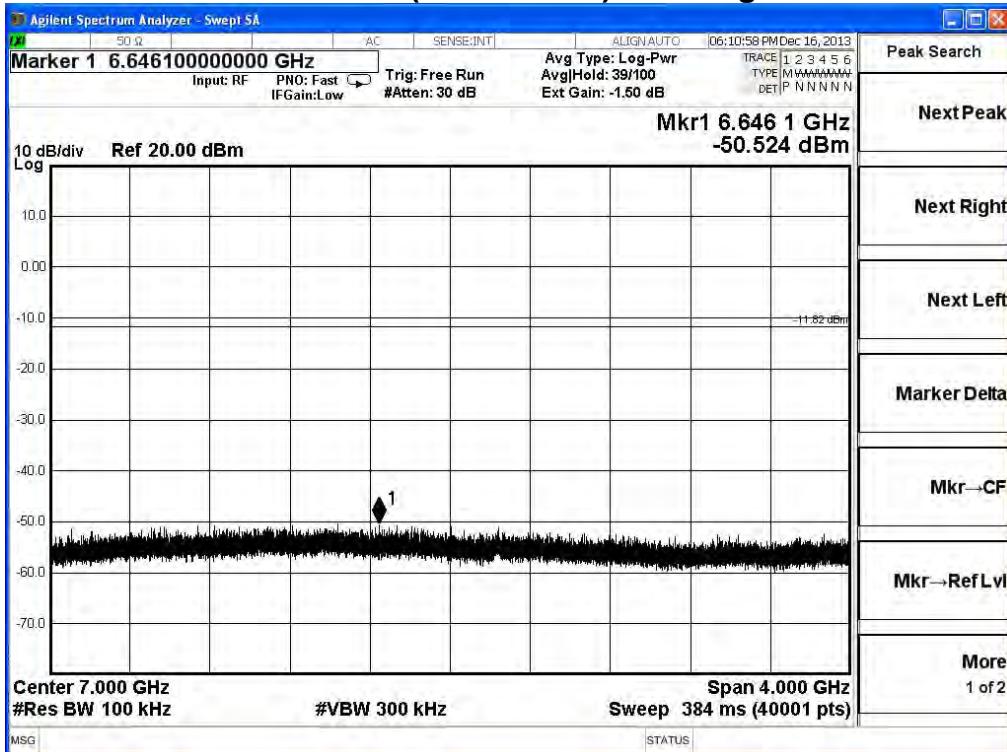
## 2412MHz (30MHz~1GHz)-802.11 g



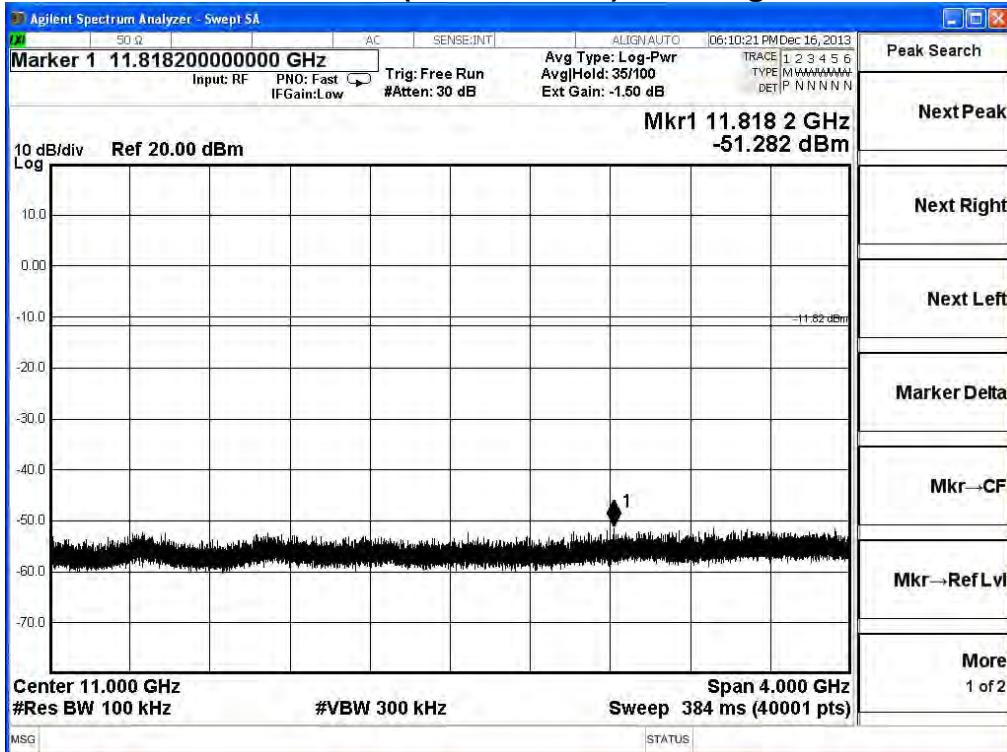
## 2412MHz (1GHz~5GHz) -802.11 g



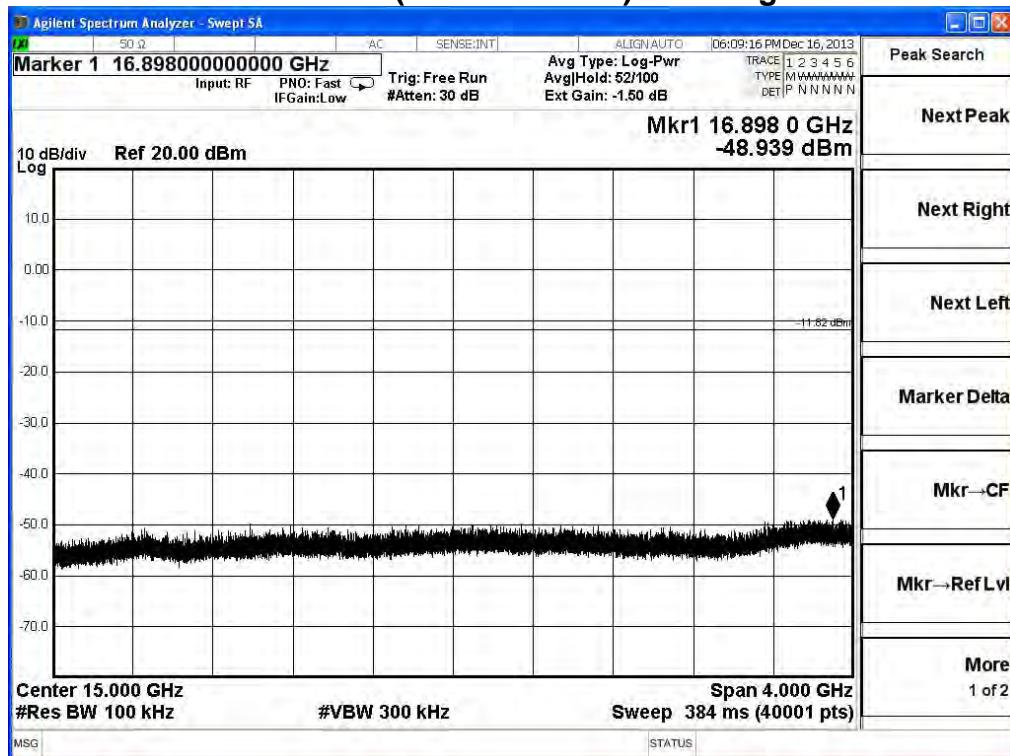
## 2412MHz (5GHz~9GHz) -802.11 g



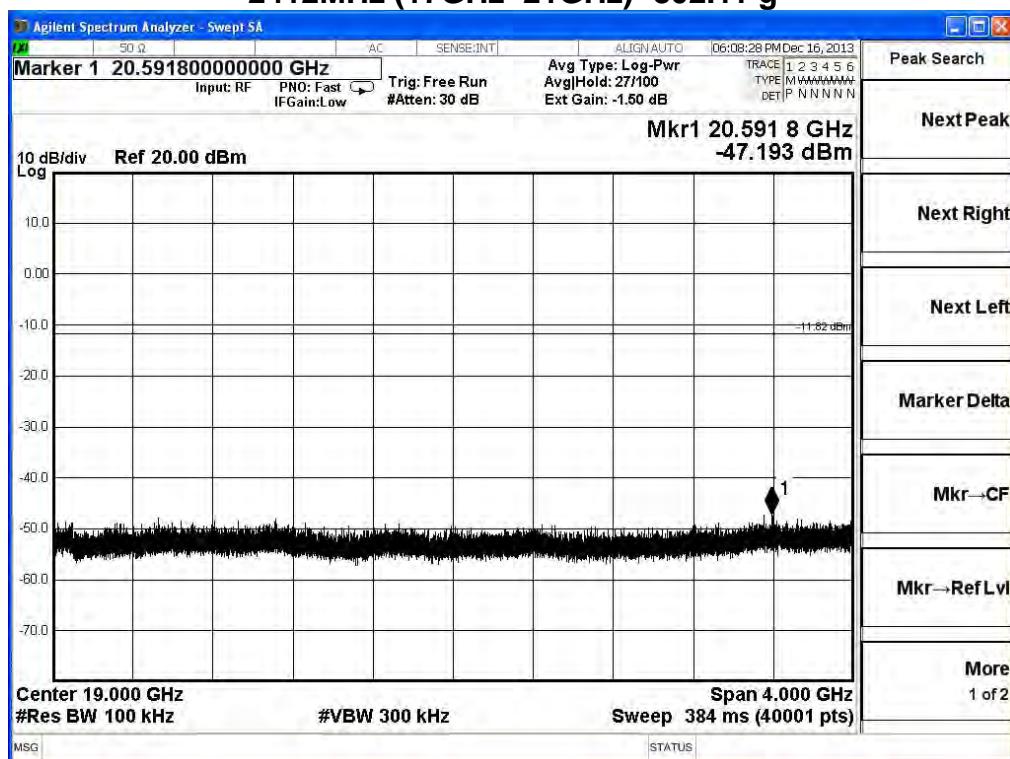
## 2412MHz (9GHz~13GHz) -802.11 g

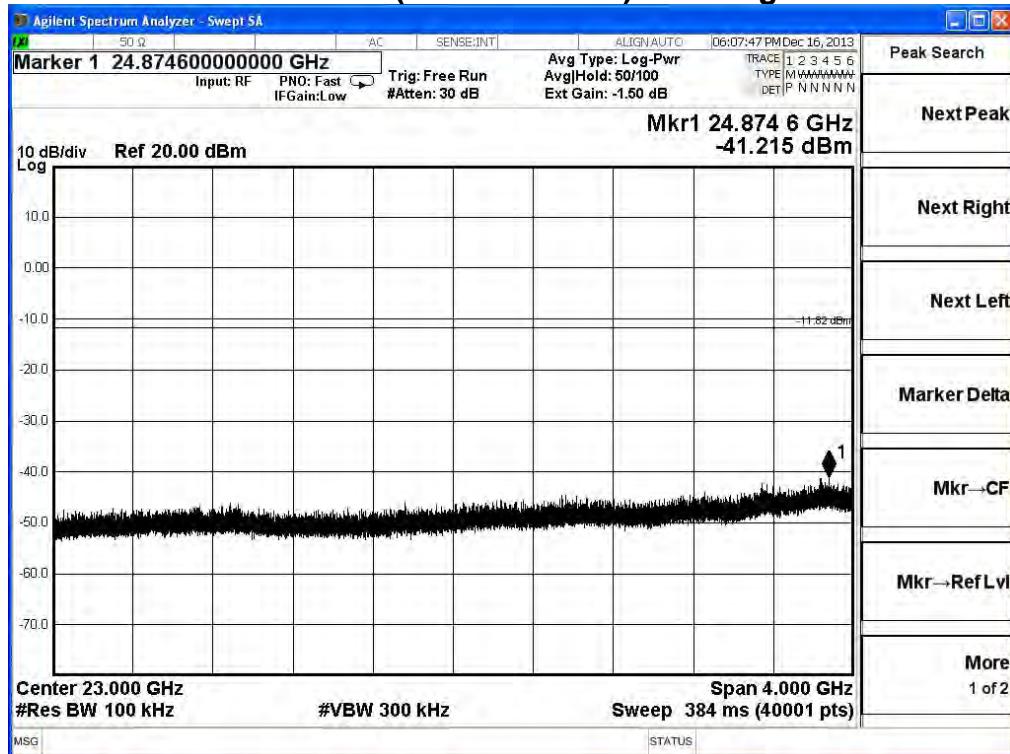


## 2412MHz (13GHz~17GHz) -802.11 g

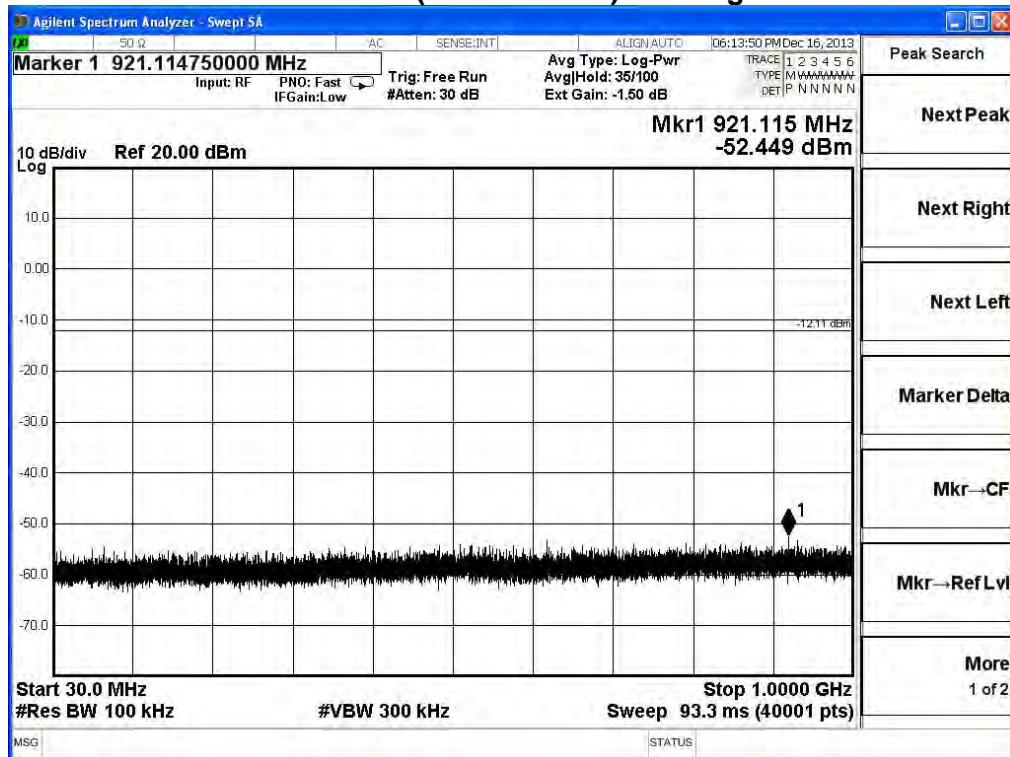


## 2412MHz (17GHz~21GHz) -802.11 g

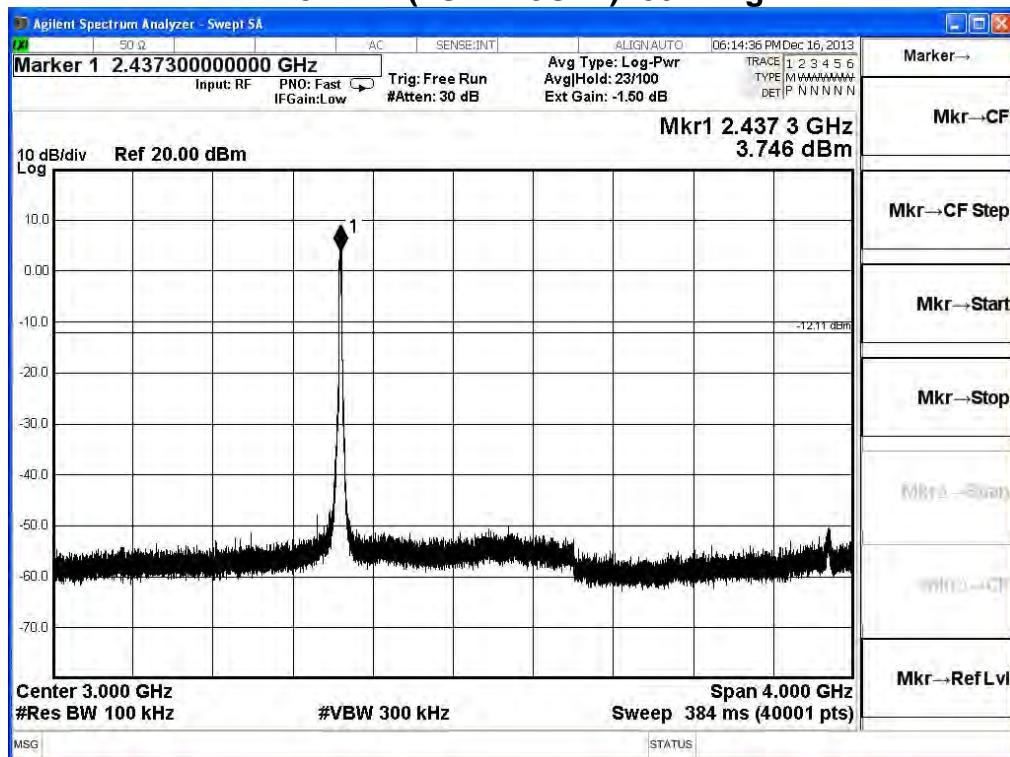


**2412MHz (21GHz~25GHz) -802.11 g**

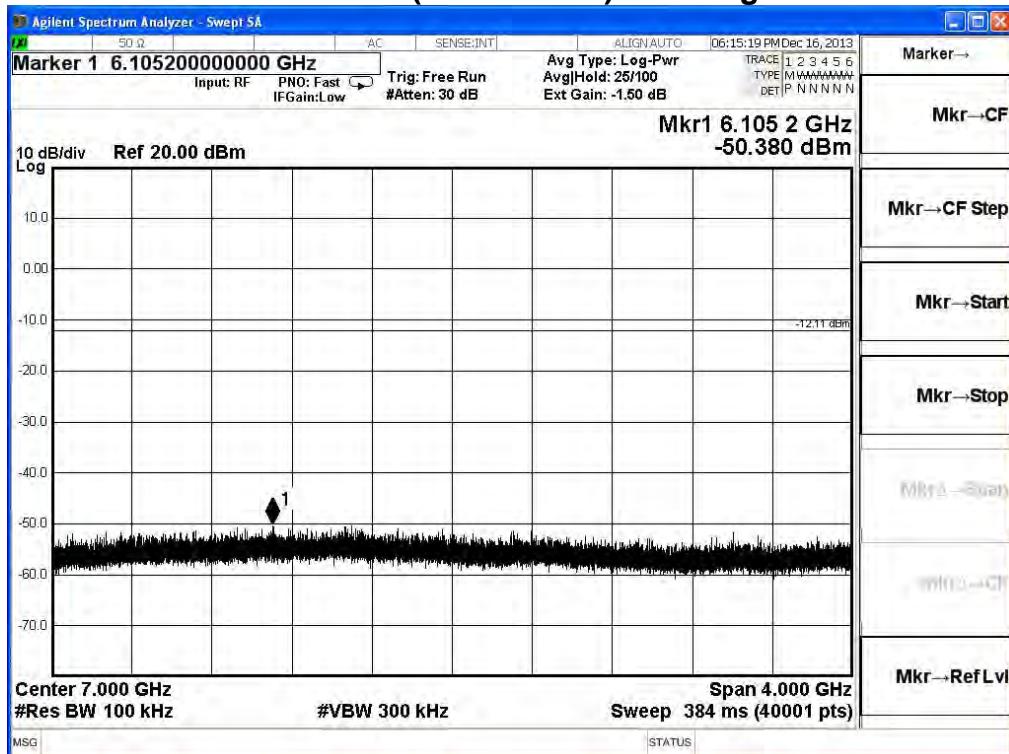
## 2437MHz (30MHz~1GHz)-802.11 g



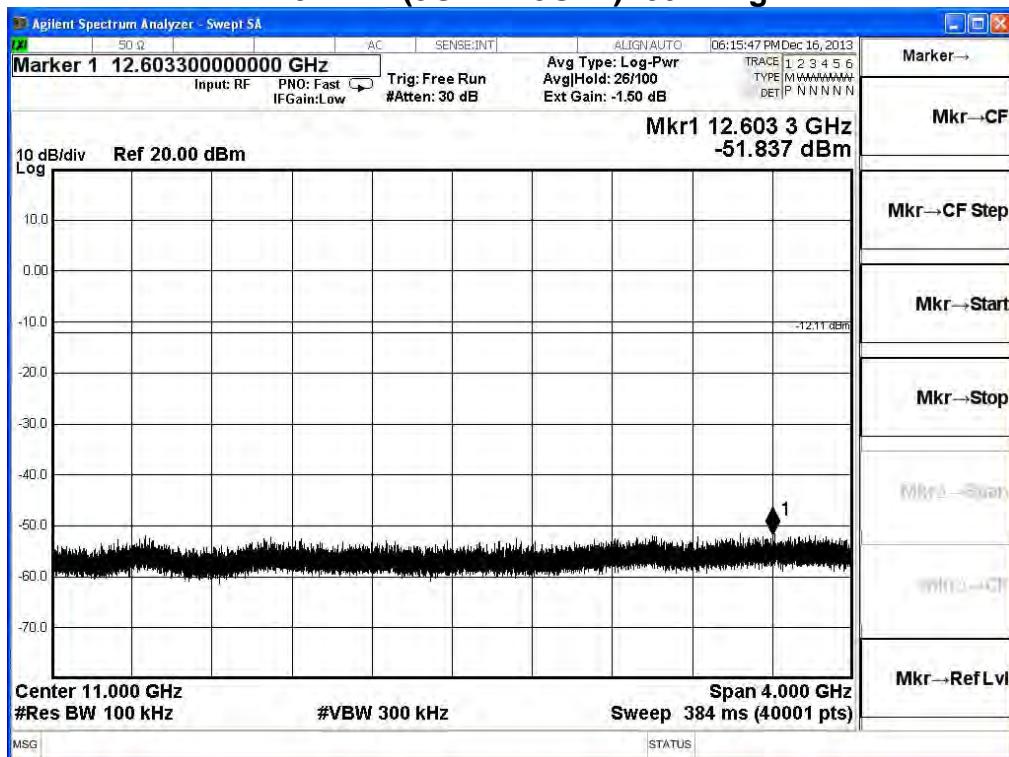
## 2437MHz (1GHz ~5GHz) -802.11 g



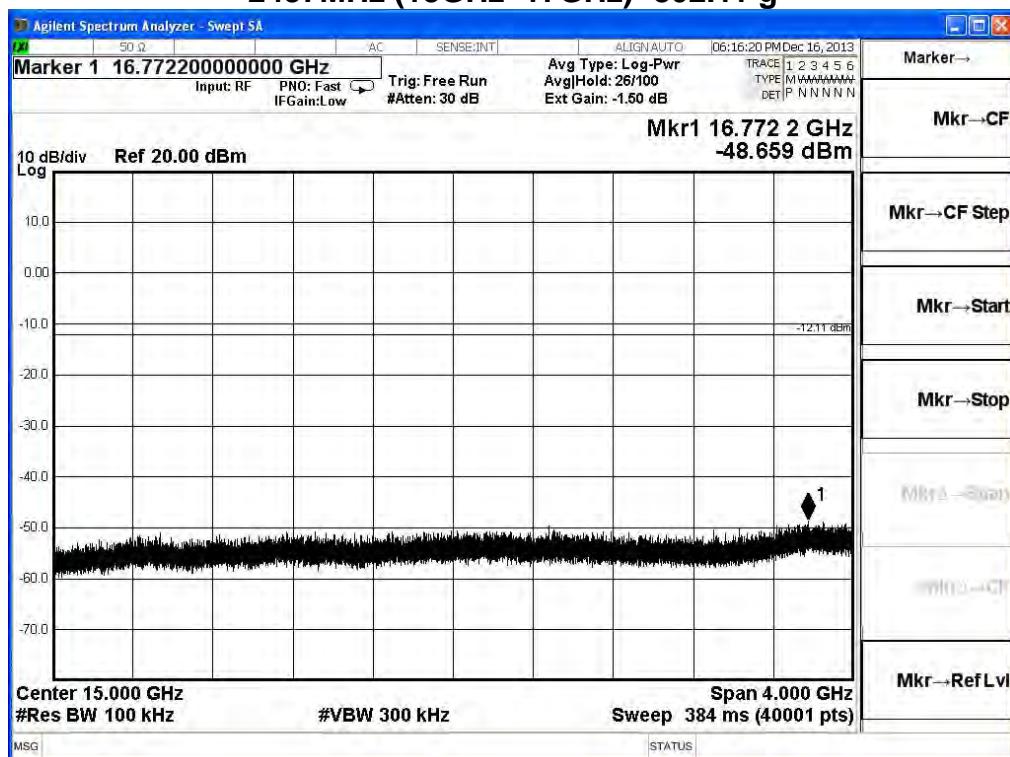
## 2437MHz (5GHz~9GHz) -802.11 g



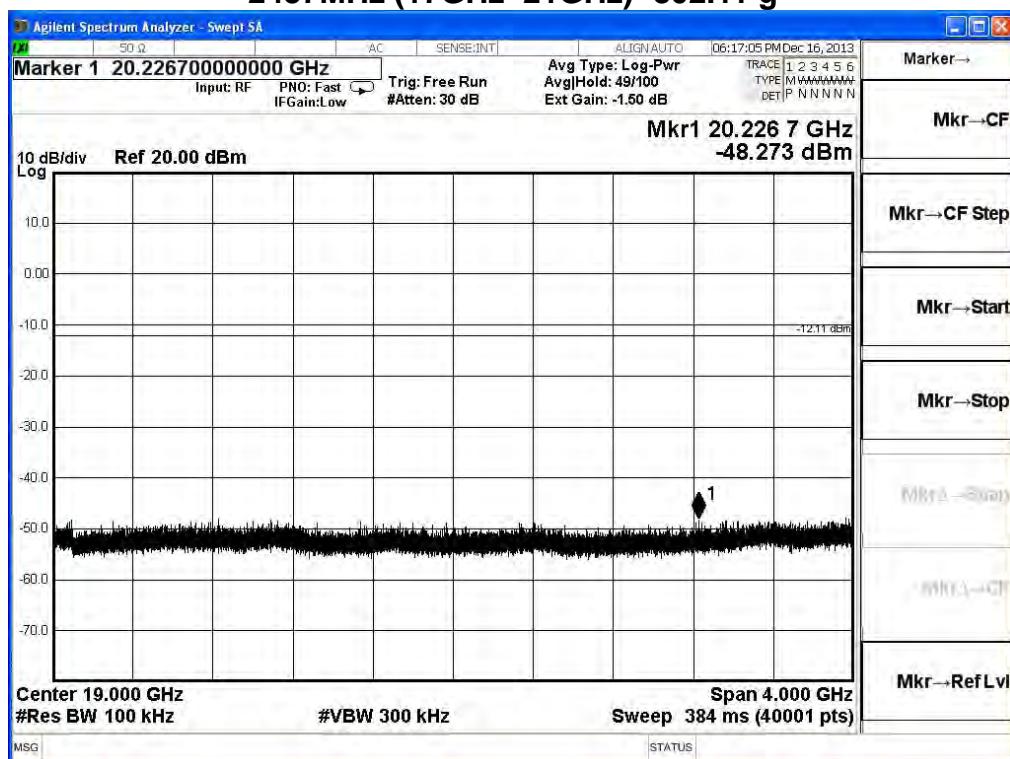
## 2437MHz (9GHz~13GHz) -802.11 g



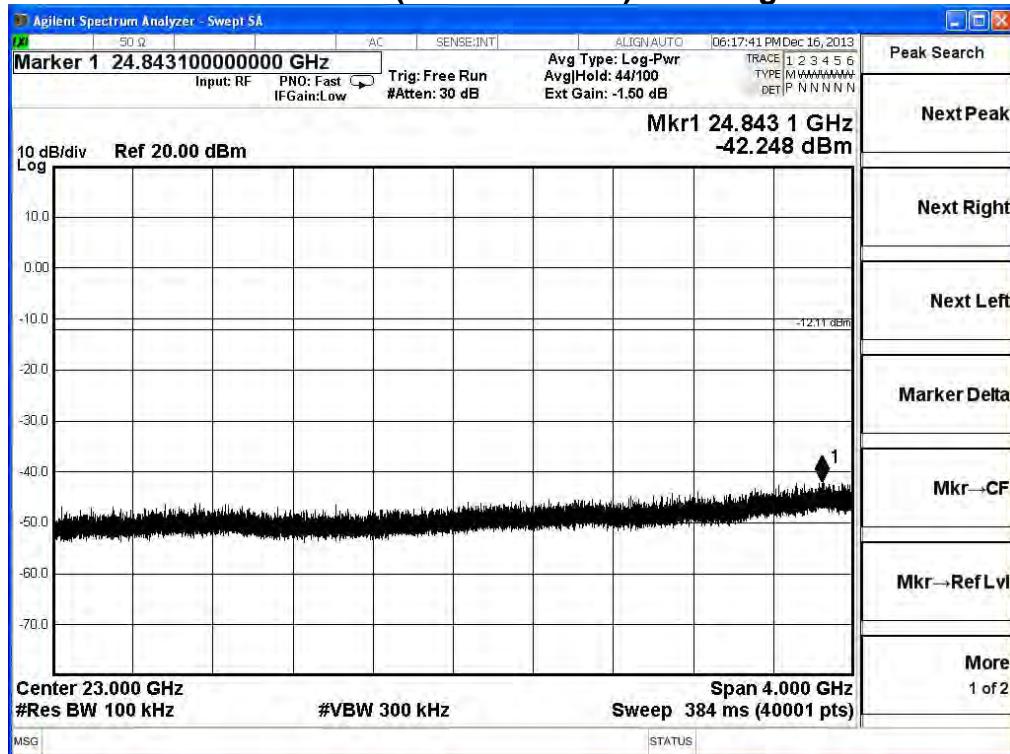
## 2437MHz (13GHz~17GHz) -802.11 g



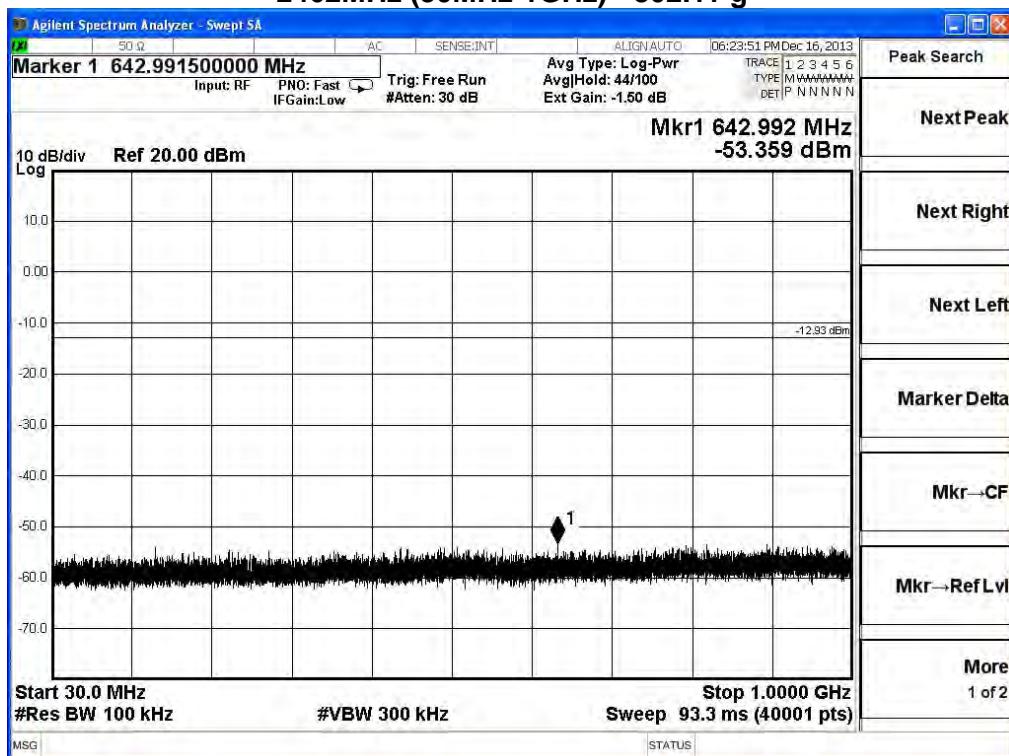
## 2437MHz (17GHz~21GHz) -802.11 g



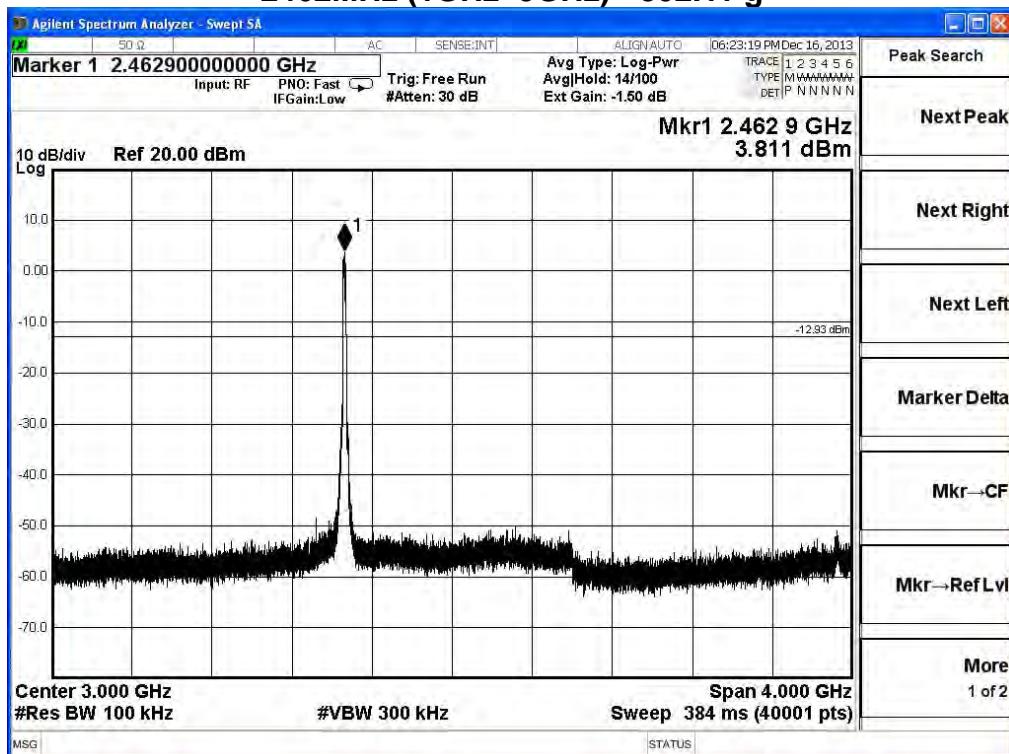
## 2437MHz (21GHz~25GHz) -802.11 g



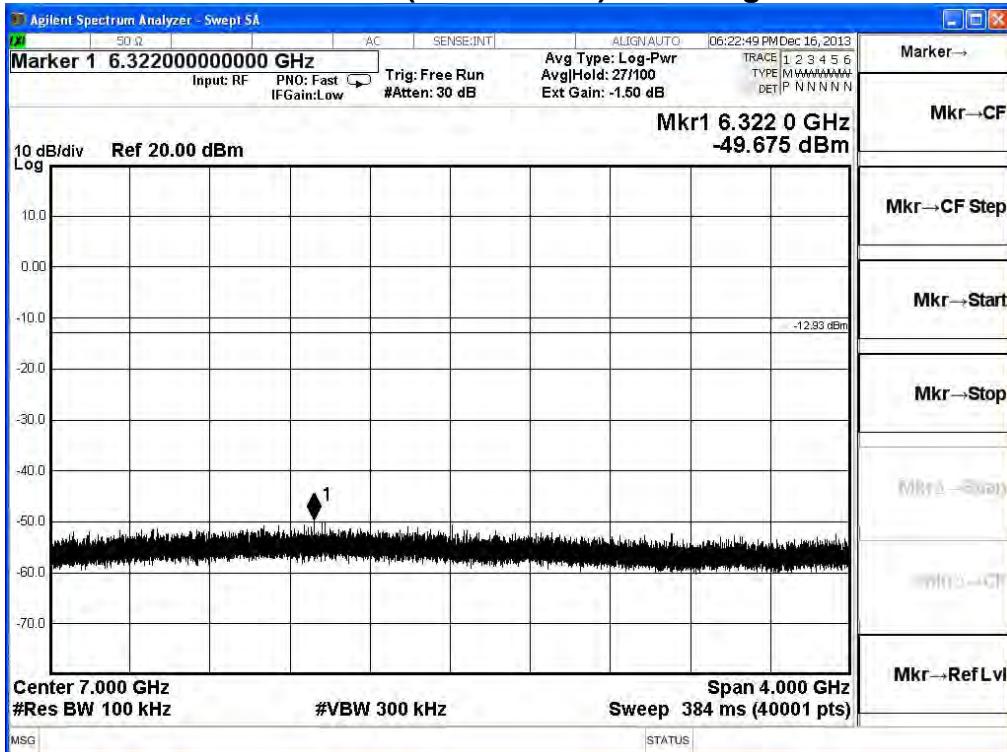
## 2462MHz (30MHz-1GHz) - 802.11 g



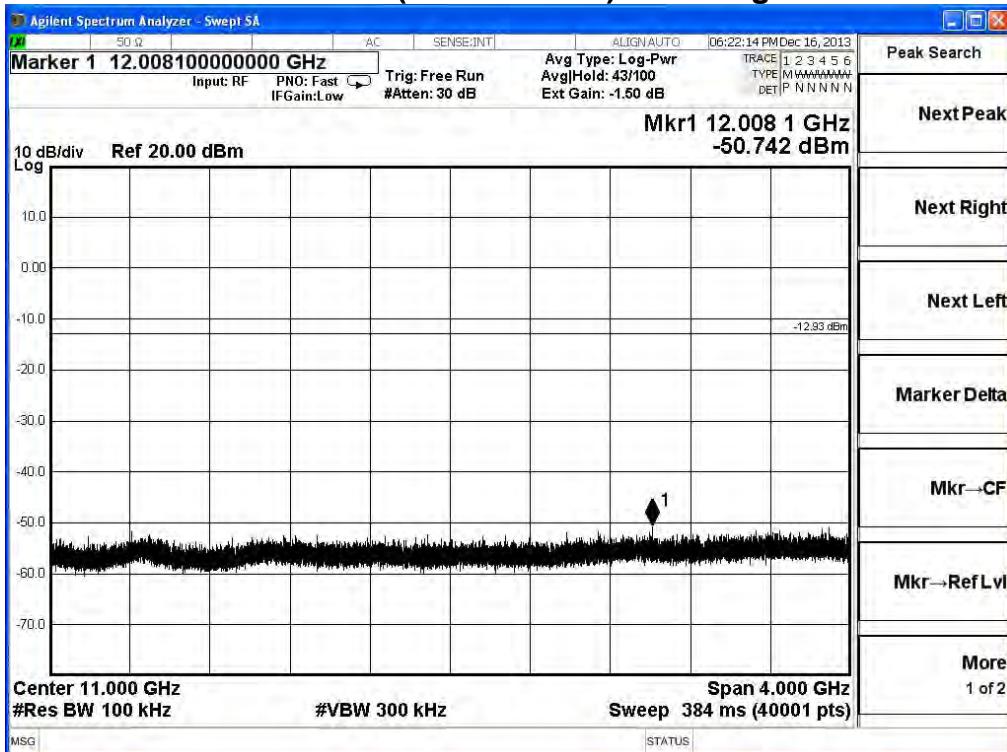
## 2462MHz (1GHz~5GHz) - 802.11 g



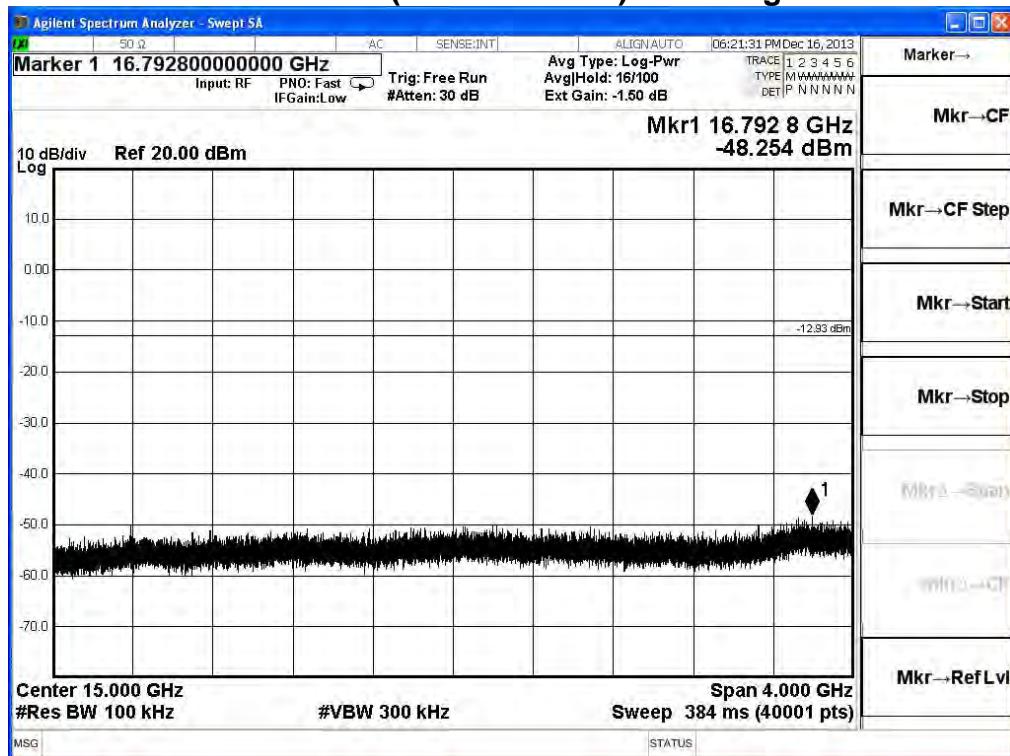
## 2462MHz (5GHz~9GHz) - 802.11 g



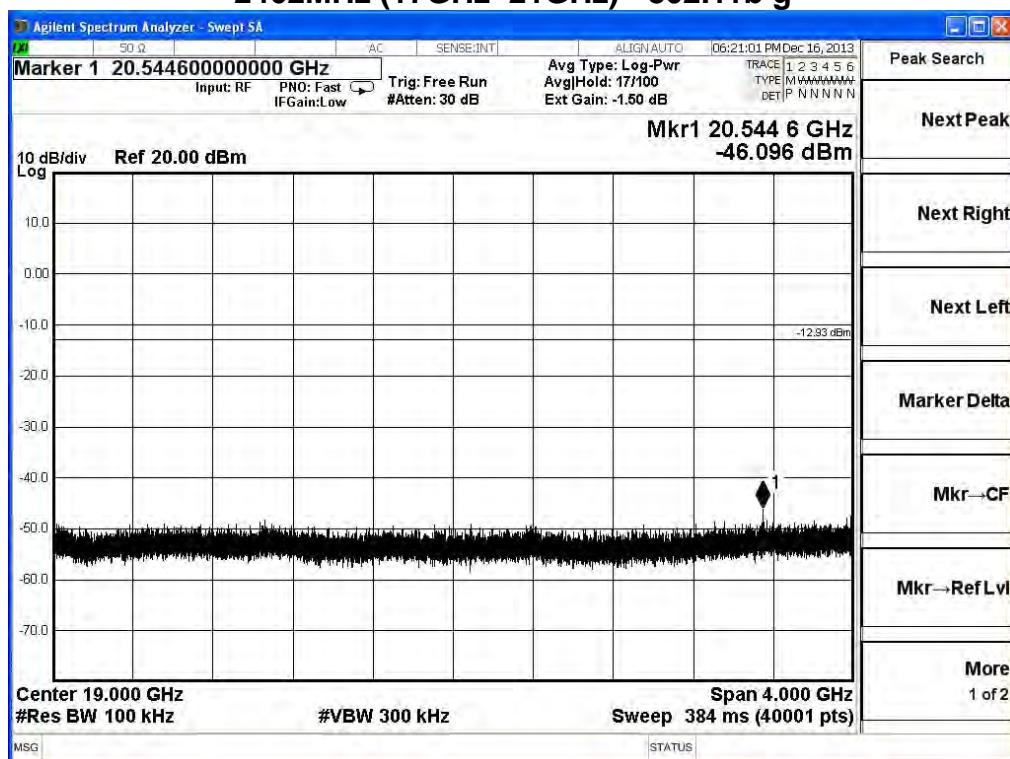
## 2462MHz (9GHz~13GHz) - 802.11 g



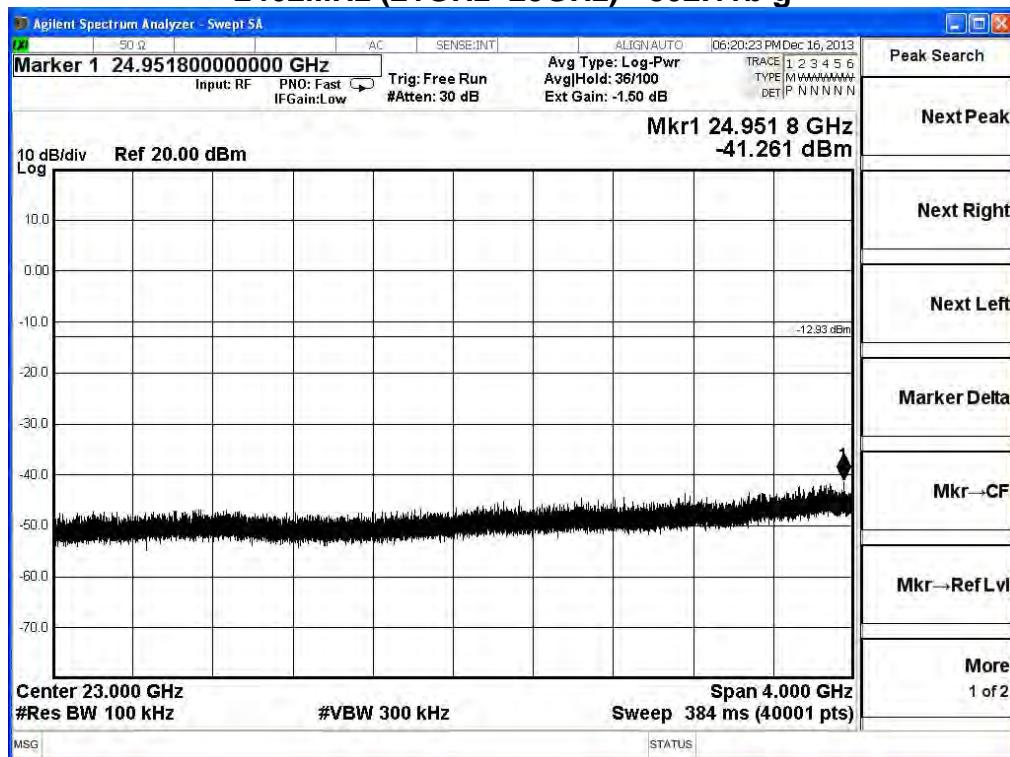
## 2462MHz (13GHz~17GHz) - 802.11 g



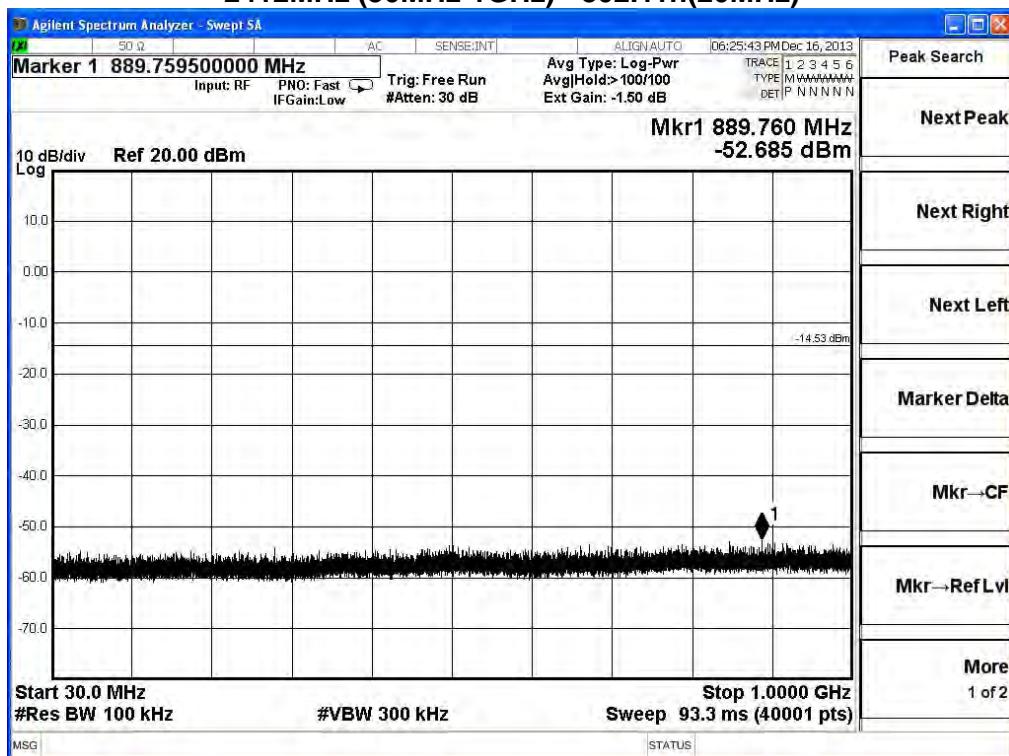
## 2462MHz (17GHz~21GHz) - 802.11b g



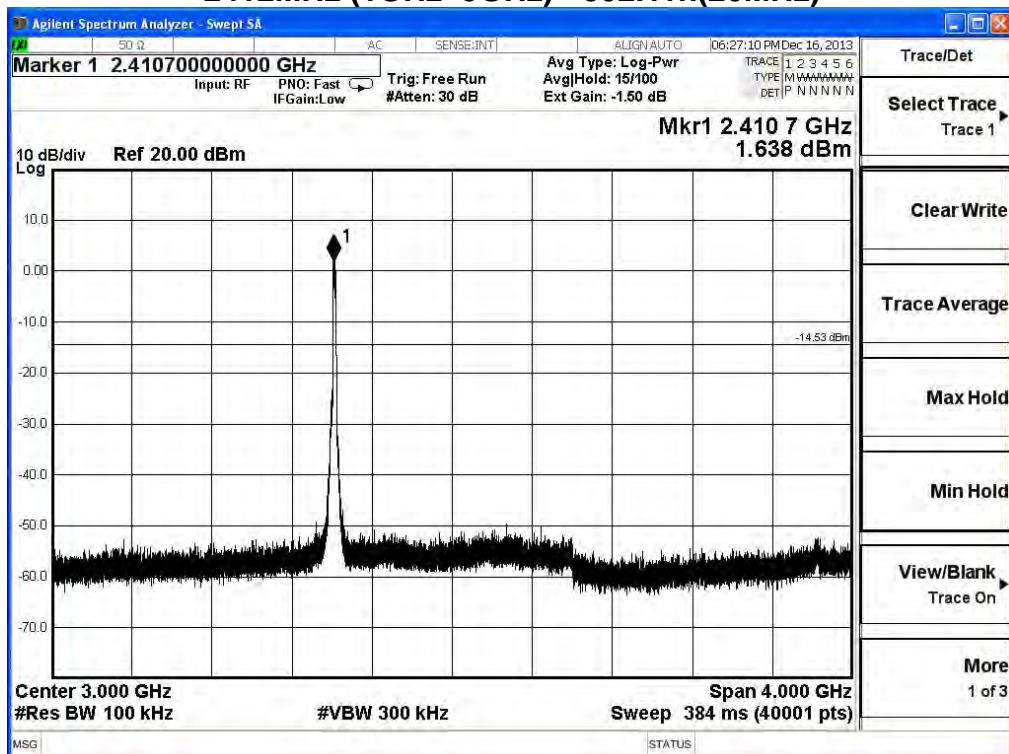
## 2462MHz (21GHz~25GHz) - 802.11b g



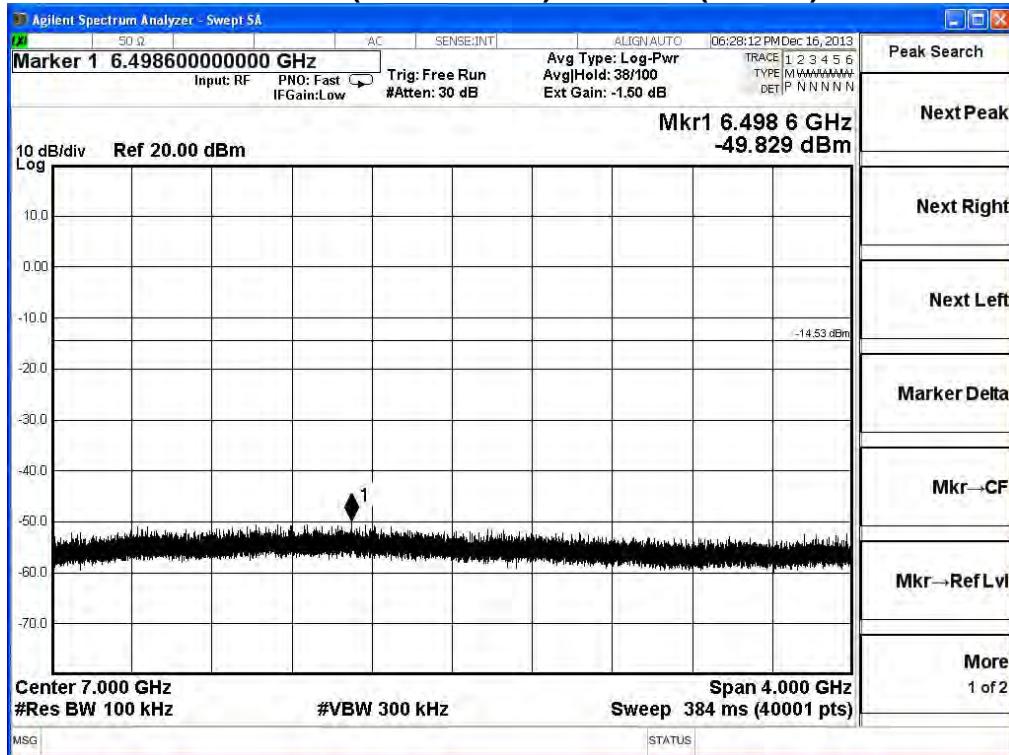
## 2412MHz (30MHz-1GHz) - 802.11n(20MHz)



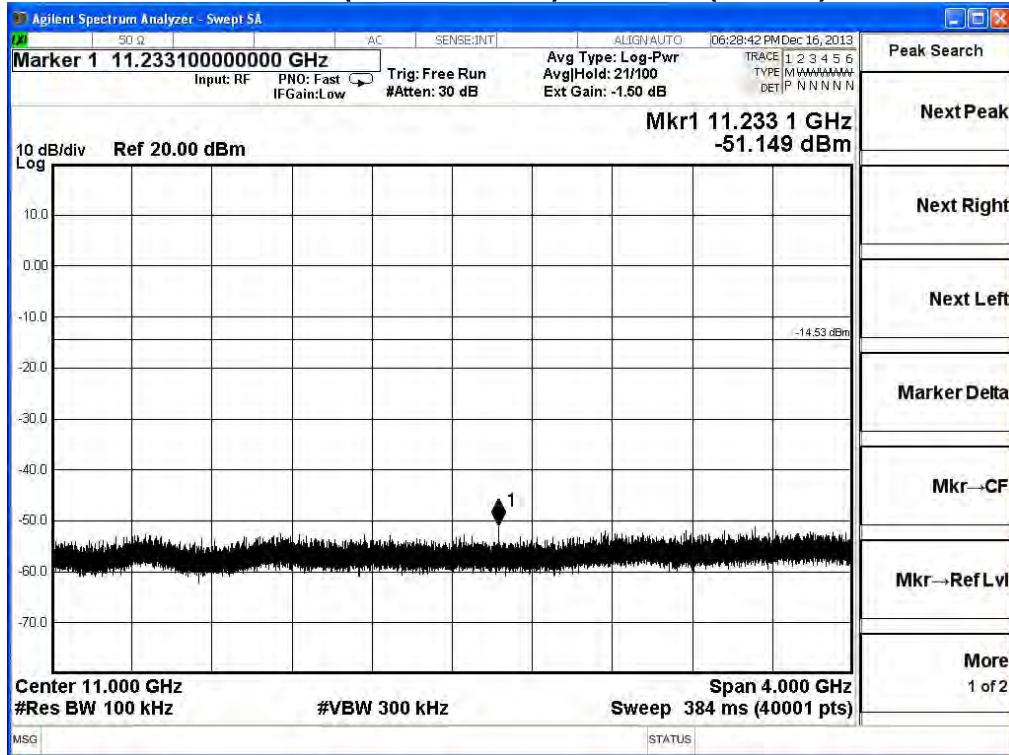
## 2412MHz (1GHz~5GHz) - 802.11n(20MHz)



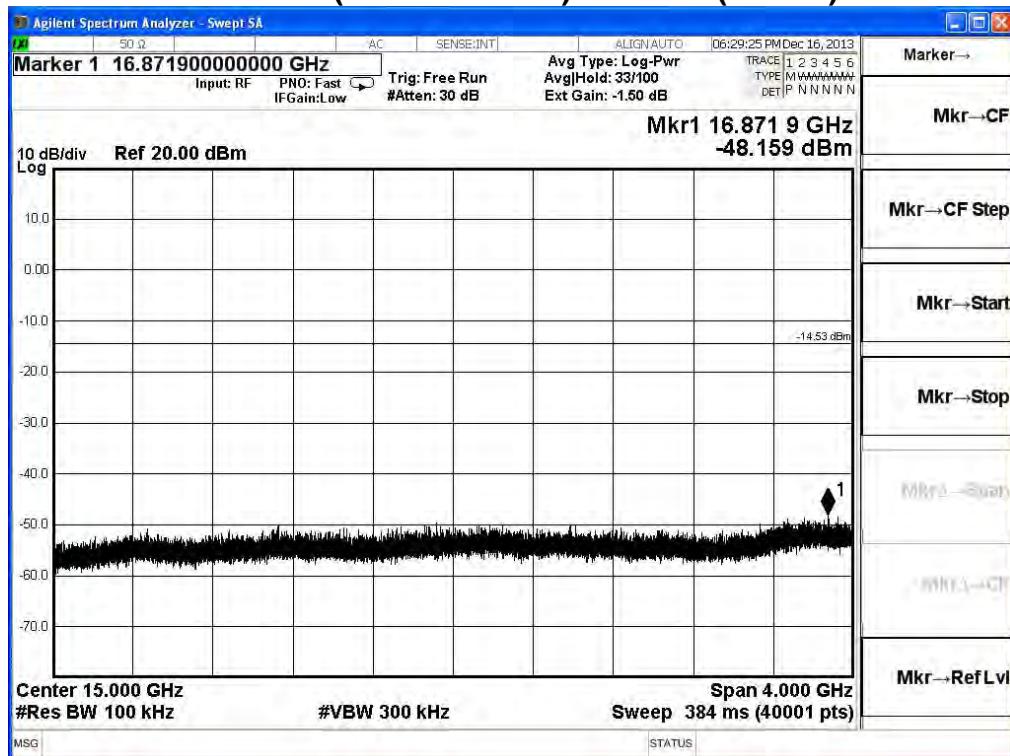
## 2412MHz (5GHz~9GHz) - 802.11n(20MHz)



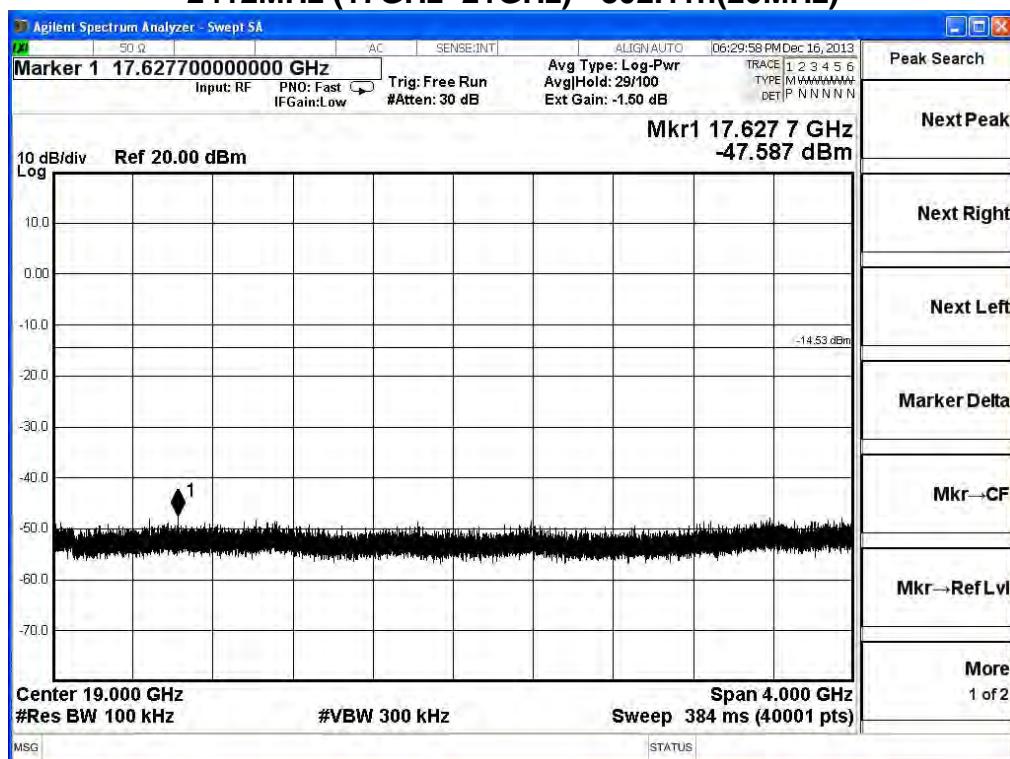
## 2412MHz (9GHz~13GHz) - 802.11n(20MHz)



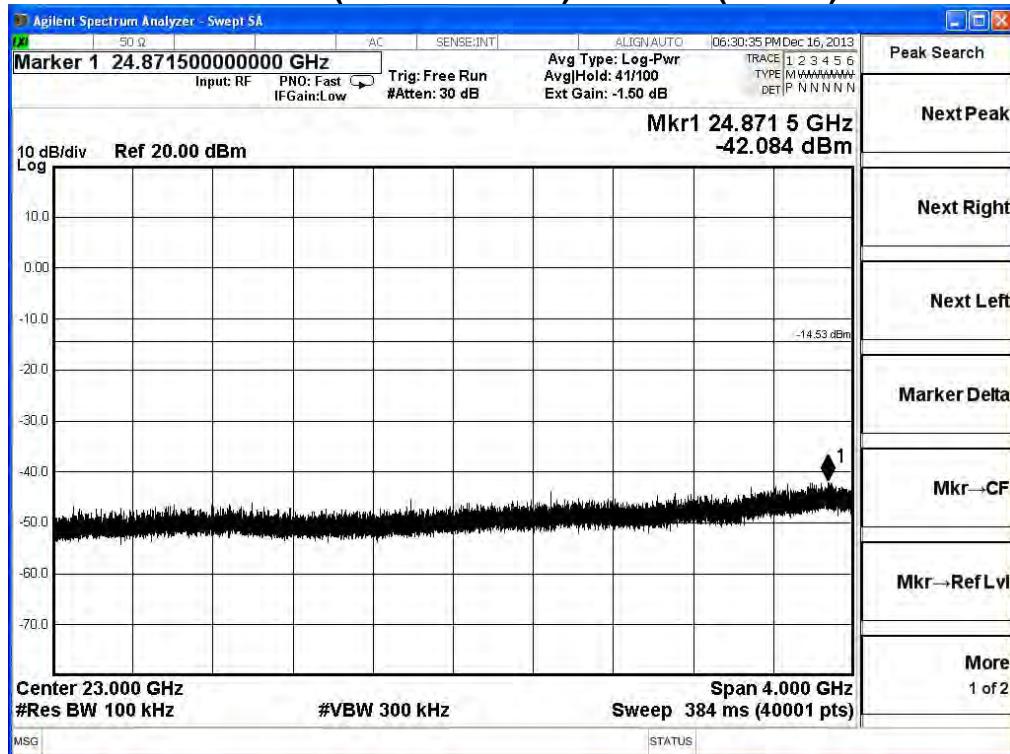
## 2412MHz (13GHz~17GHz) - 802.11n(20MHz)



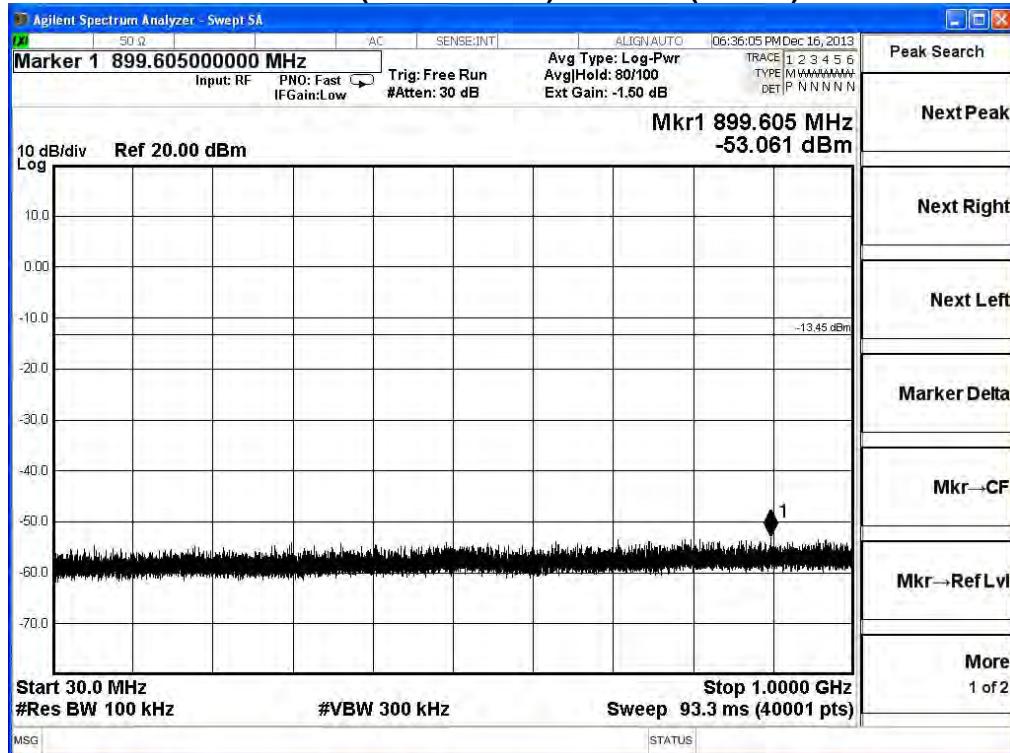
## 2412MHz (17GHz~21GHz) - 802.11n(20MHz)



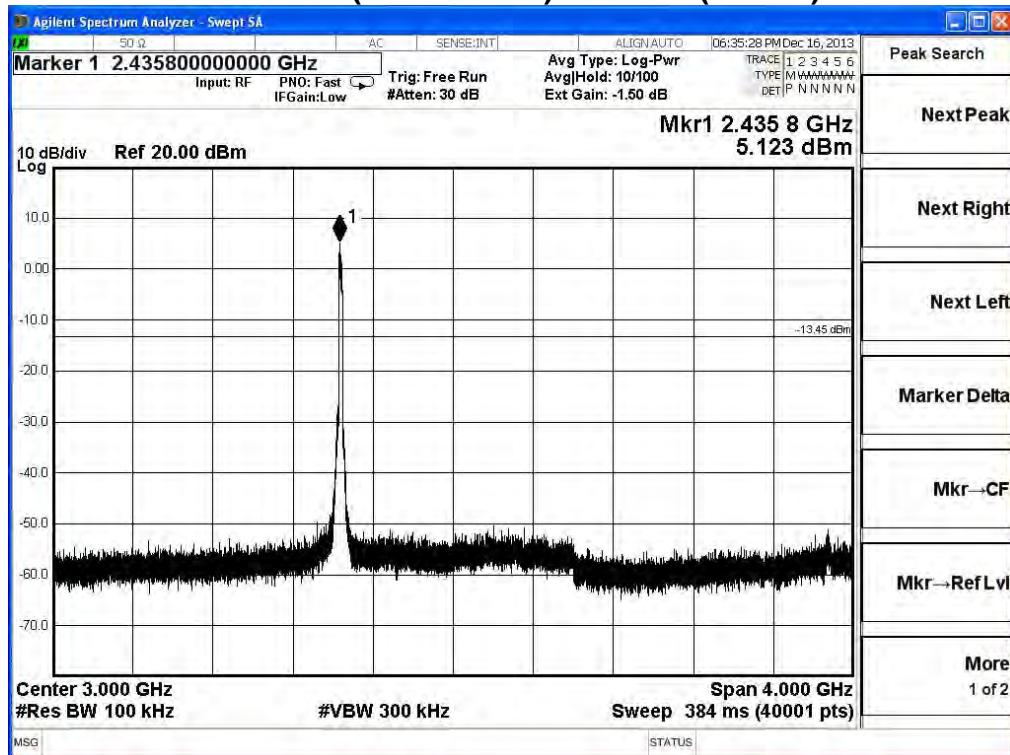
## 2412MHz (21GHz~25GHz) - 802.11n(20MHz)



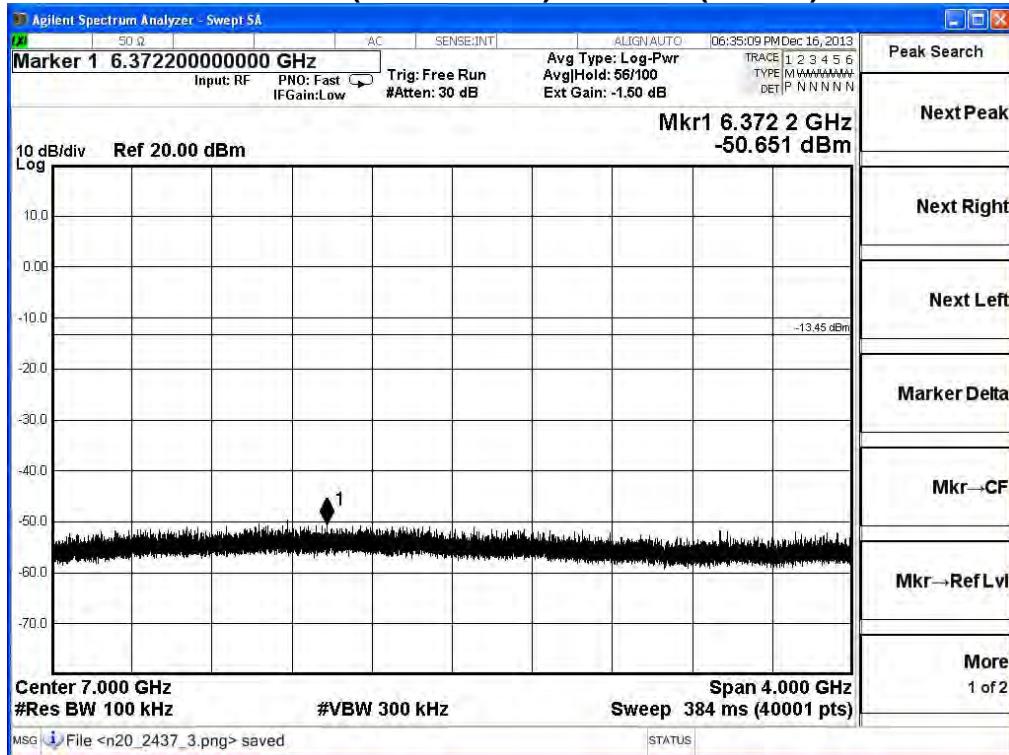
## 2437MHz (30MHz-1GHz) - 802.11n(20MHz)



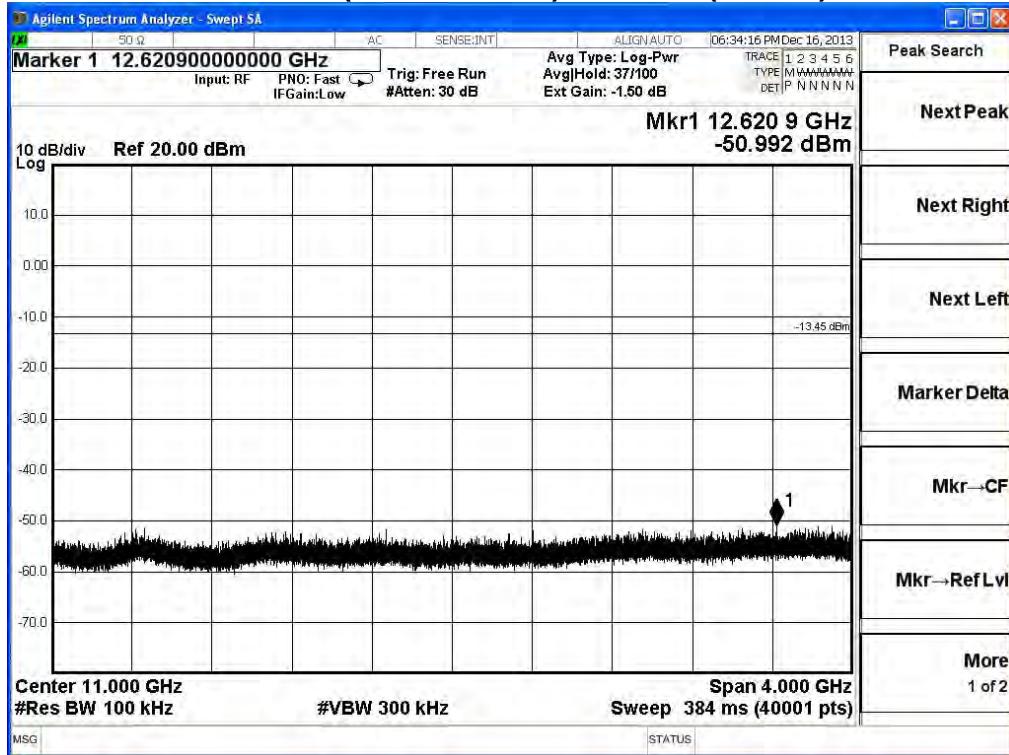
## 2437MHz (1GHz~5GHz) - 802.11n(20MHz)



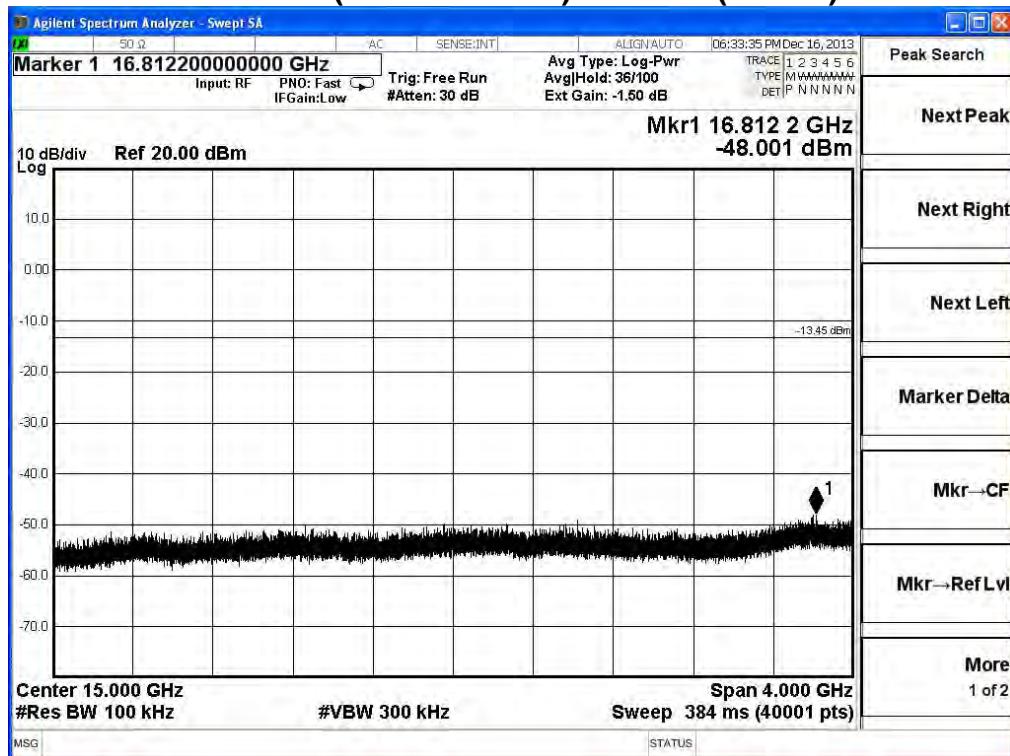
## 2437MHz (5GHz~9GHz) - 802.11n(20MHz)



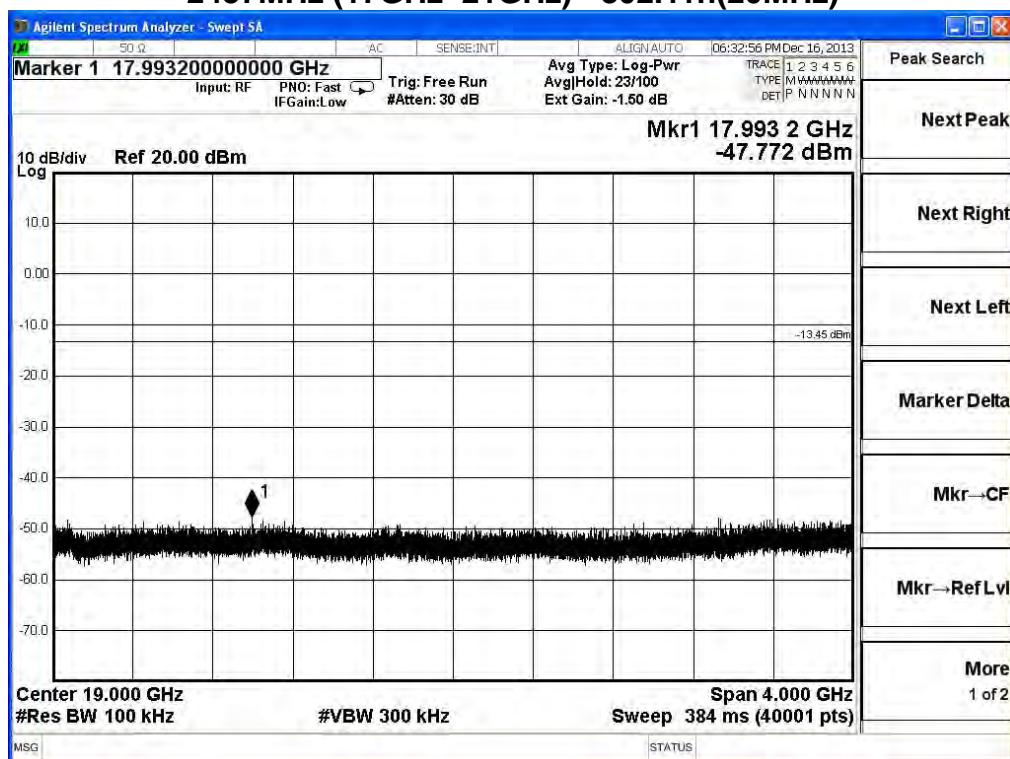
## 2437MHz (9GHz~13GHz) - 802.11n(20MHz)



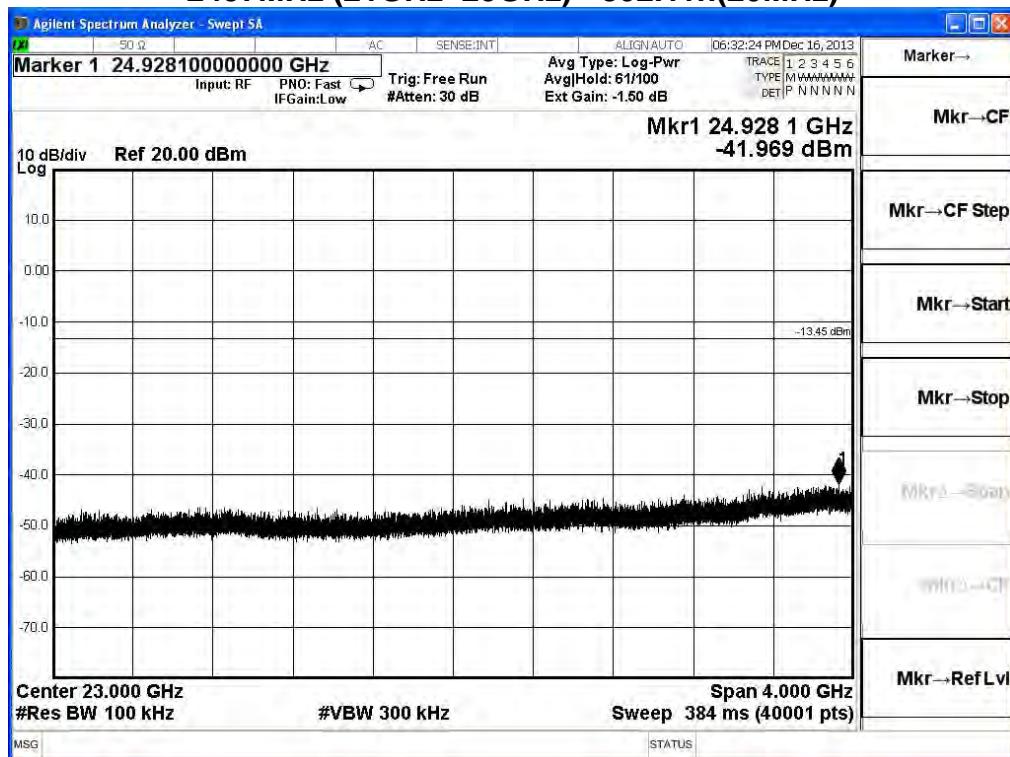
## 2437MHz (13GHz~17GHz) - 802.11n(20MHz)



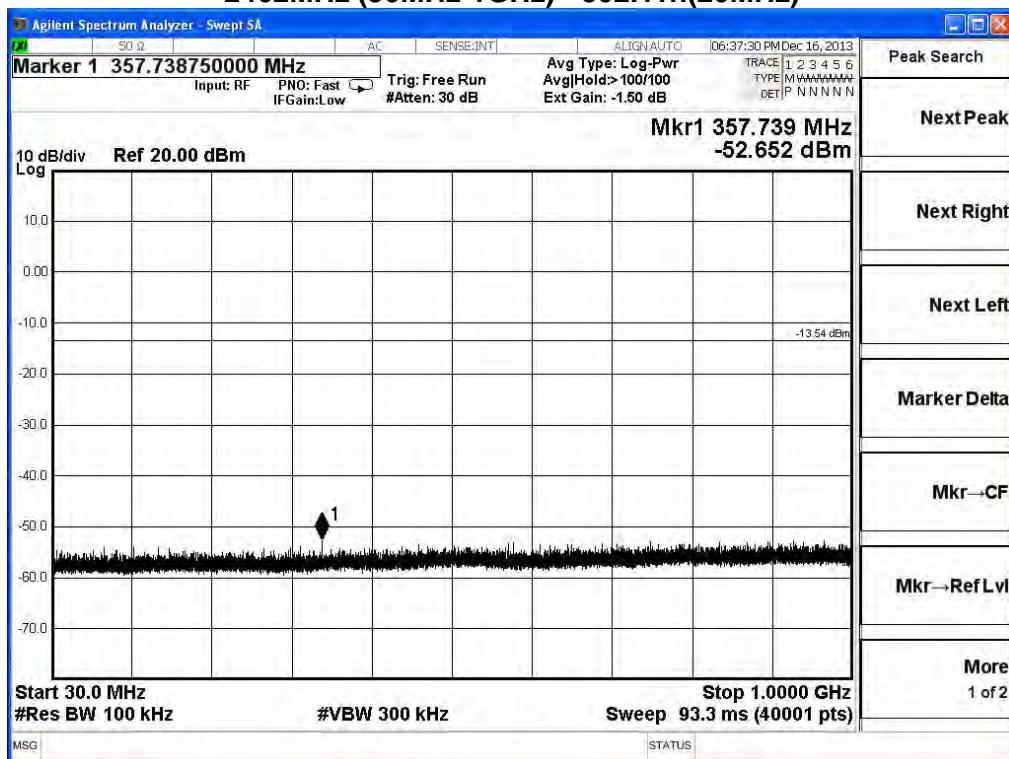
## 2437MHz (17GHz~21GHz) - 802.11n(20MHz)



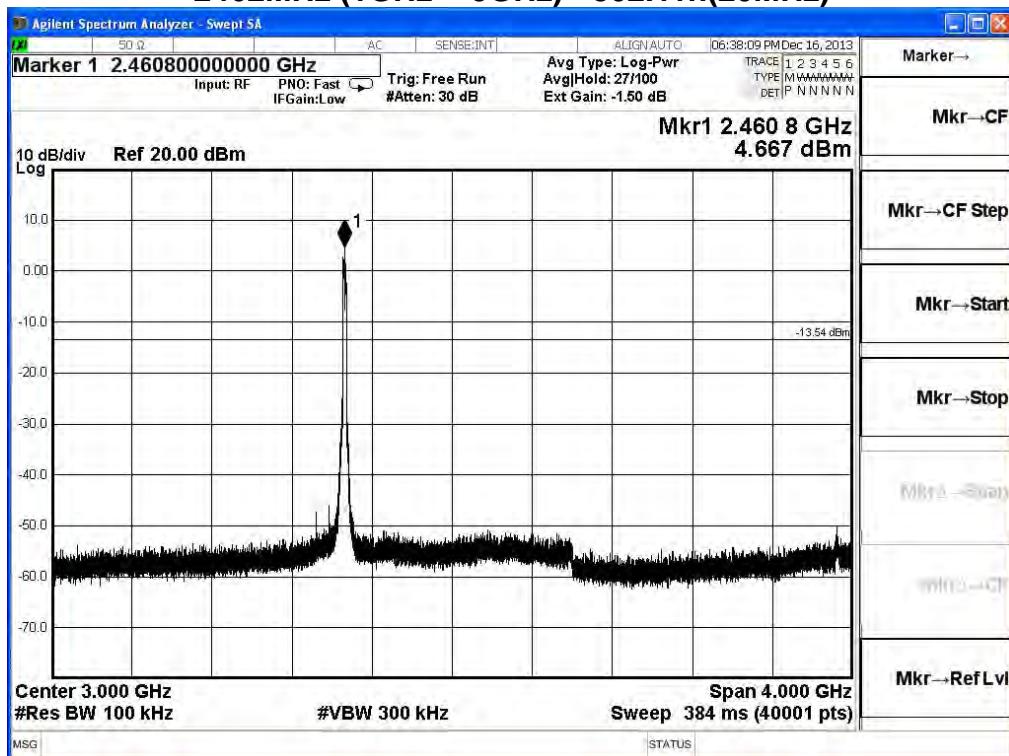
## 2437MHz (21GHz~25GHz) - 802.11n(20MHz)



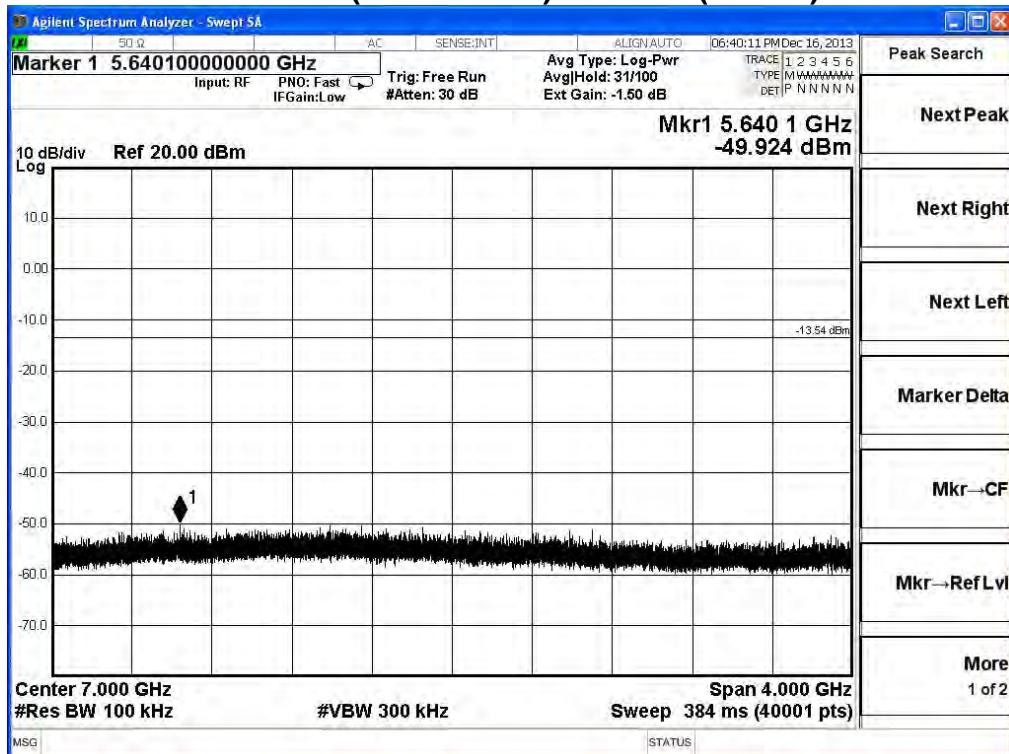
## 2462MHz (30MHz-1GHz) - 802.11n(20MHz)



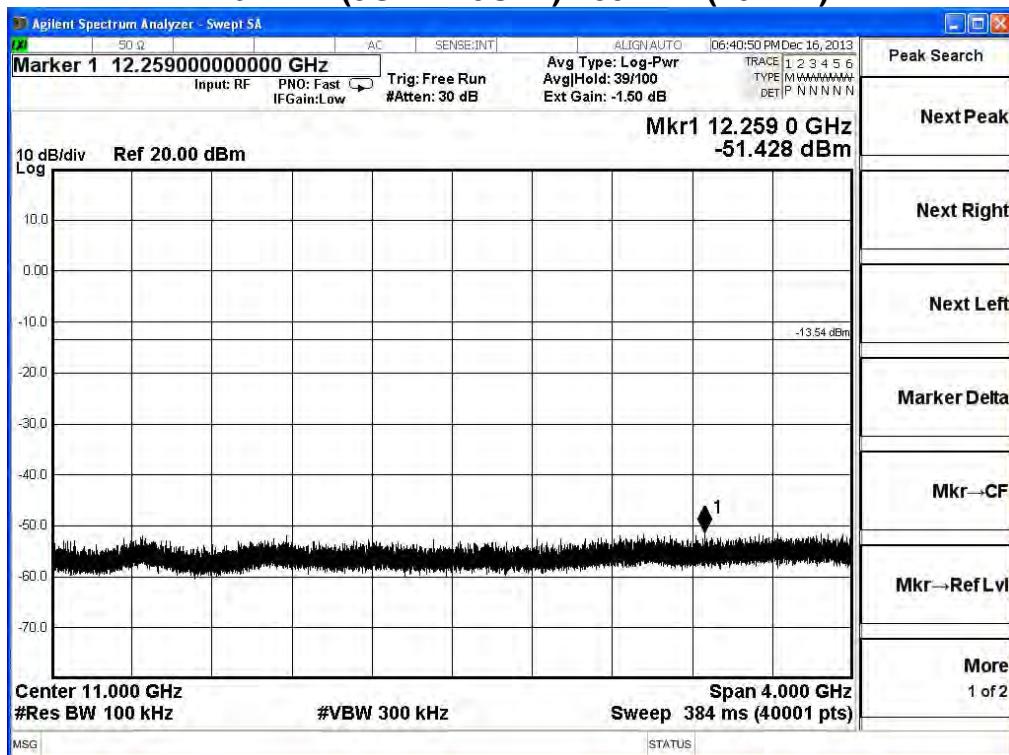
## 2462MHz (1GHz --5GHz) - 802.11n(20MHz)



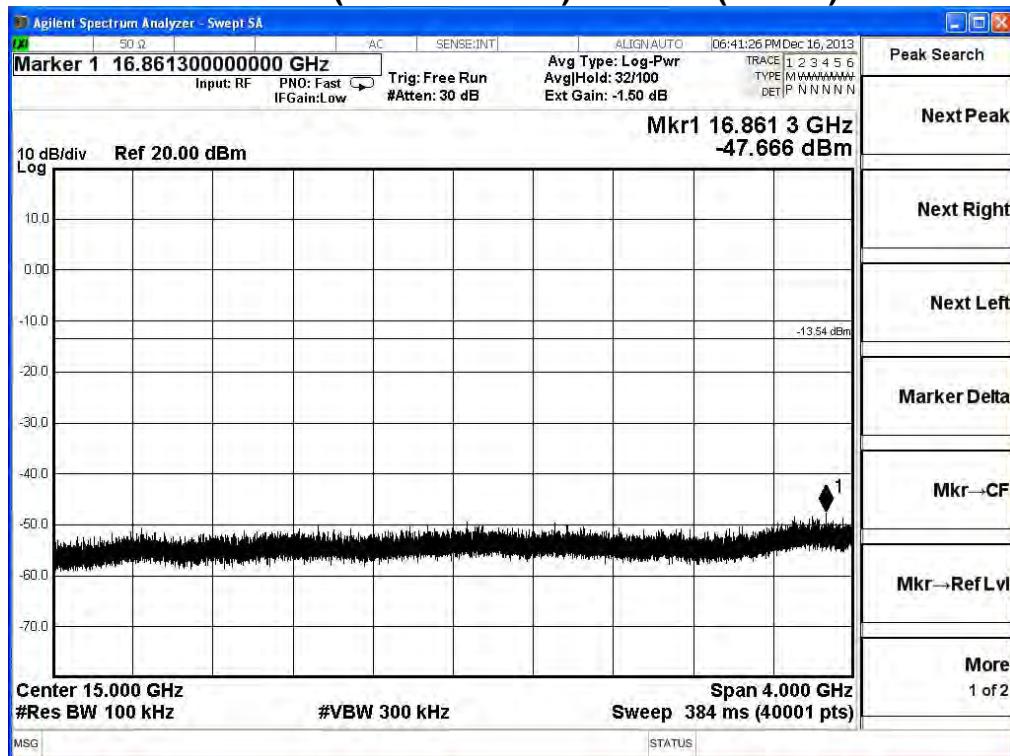
## 2462MHz (5GHz~9GHz) - 802.11n(20MHz)



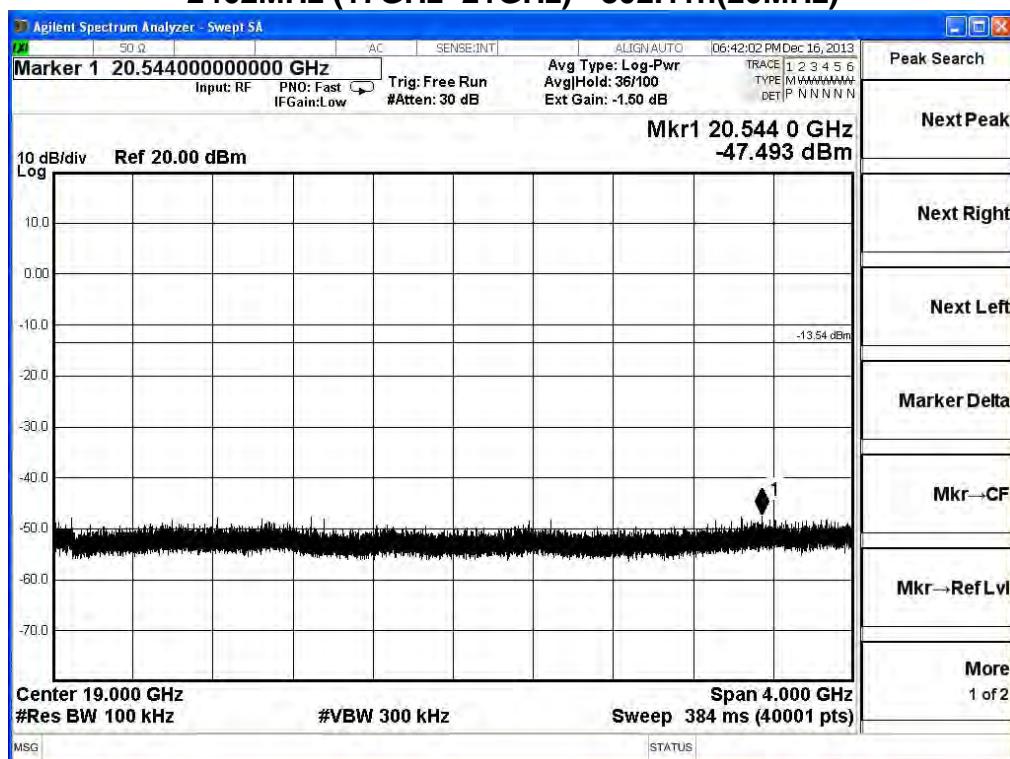
## 2462MHz (9GHz~13GHz) - 802.11n(20MHz)



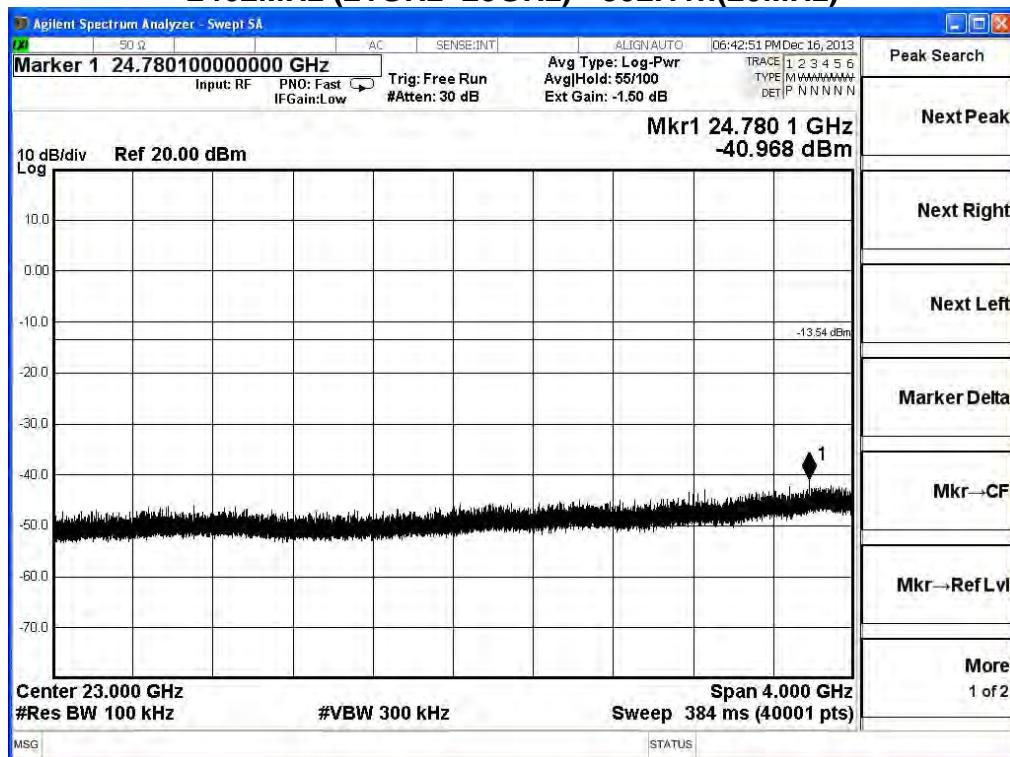
## 2462MHz (13GHz~17GHz) - 802.11n(20MHz)



## 2462MHz (17GHz~21GHz) - 802.11n(20MHz)



## 2462MHz (21GHz~25GHz) - 802.11n(20MHz)



## 6. Radiated Emission Band Edge

### 6.1. Test Equipment

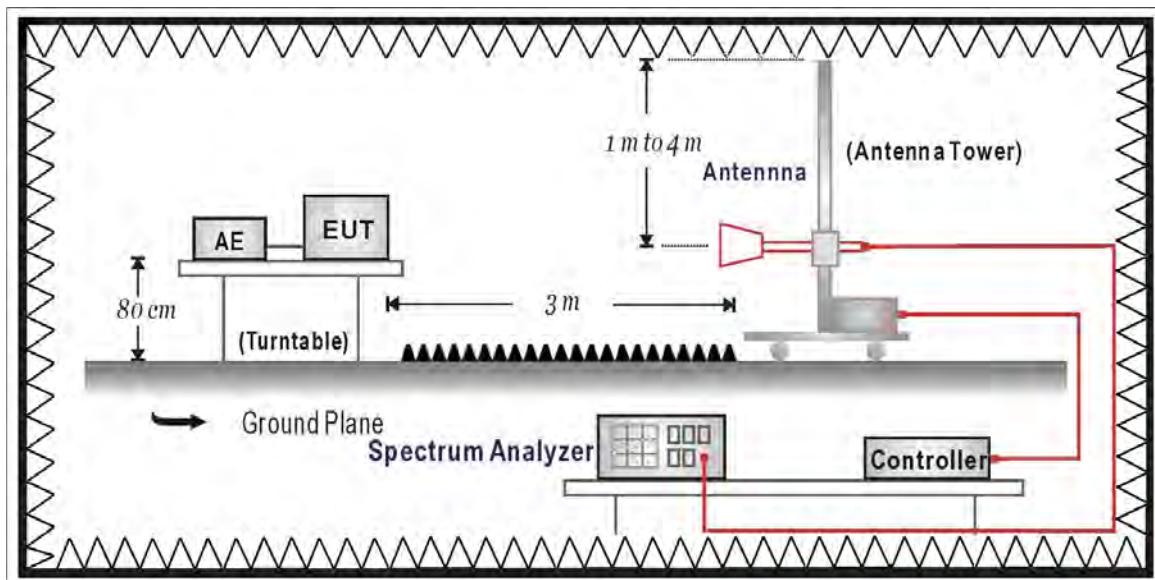
The following test equipments are used during the test:

Radiated Emission Band Edge / CB1

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Double Ridged Guide Horn Antenna	Schwarzbeck	BBHA 9120	D743	2014/02/17
Spectrum Analyzer	Agilent	E4440A	MY46187335	2014/01/27
K Type Cable	Huber Suhner	Sucoflex 102	25623/2	2014/02/21

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

### 6.2. Test Setup



### **6.3. Limits**

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

### **6.4. Test Procedure**

The EUT was setup according to ANSI C63.4: 2009 and tested according to DTS test procedure of KDB558074 v03r01 for compliance to FCC 47CFR 15.247 requirements.

The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.4: 2009 on radiated measurement.

### **6.5. Test Specification**

According to FCC Part 15 Subpart C Paragraph 15.247: 2012

### **6.6. Uncertainty**

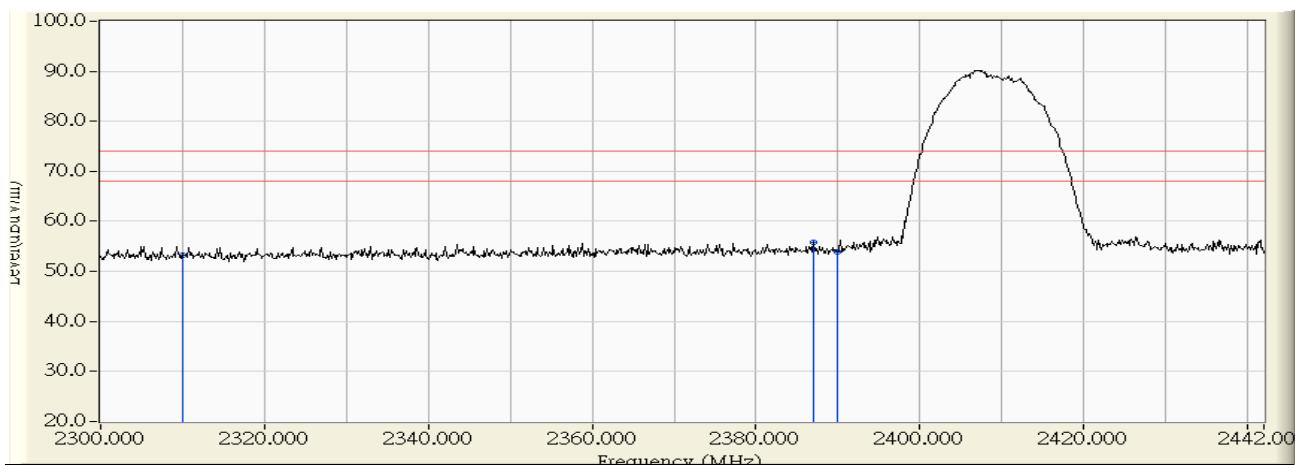
The measurement uncertainty

± 3.9 dB above 1GHz

## 6.7. Test Result

Radiated is defined as

Site : CB1	Time : 2013/12/13 - 22:00
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : DC 12V
EUT : Wicorder	Note : Mode 1: Transmit 802.11b_2412MHz



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2310.000	30.059	23.228	53.287	-20.713	74.000	PEAK
2 *	2387.046	30.858	24.937	55.795	-18.205	74.000	PEAK
3	2390.000	30.888	23.016	53.904	-20.096	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor .
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/12/13 - 22:01
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : DC 12V
EUT : Wicorder	Note : Mode 1: Transmit 802.11b_2412MHz

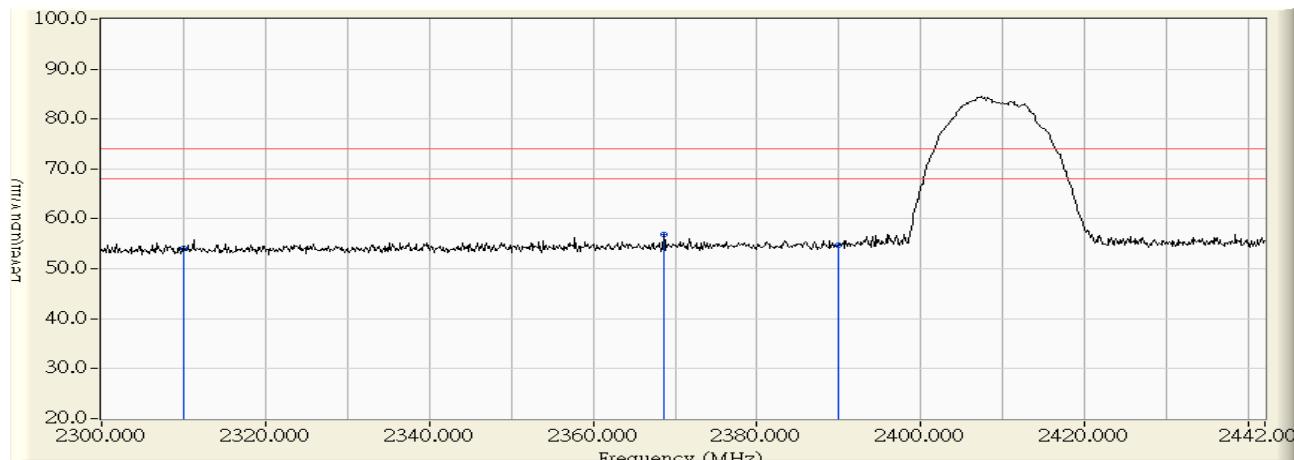


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2310.000	30.059	12.233	42.292	-11.708	54.000	AVERAGE
2	2389.744	30.886	12.626	43.512	-10.488	54.000	AVERAGE
3 *	2390.000	30.888	12.643	43.531	-10.469	54.000	AVERAGE

#### Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor .
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/12/13 - 22:05
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : DC 12V
EUT : Wicorder	Note : Mode 1: Transmit 802.11b_2412MHz



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2310.000	30.059	24.039	54.098	-19.902	74.000	PEAK
2 *	2368.586	30.666	26.272	56.938	-17.062	74.000	PEAK
3	2390.000	30.888	23.919	54.807	-19.193	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor .
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/12/13 - 22:06
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : DC 12V
EUT : Wicorder	Note : Mode 1: Transmit 802.11b_2412MHz

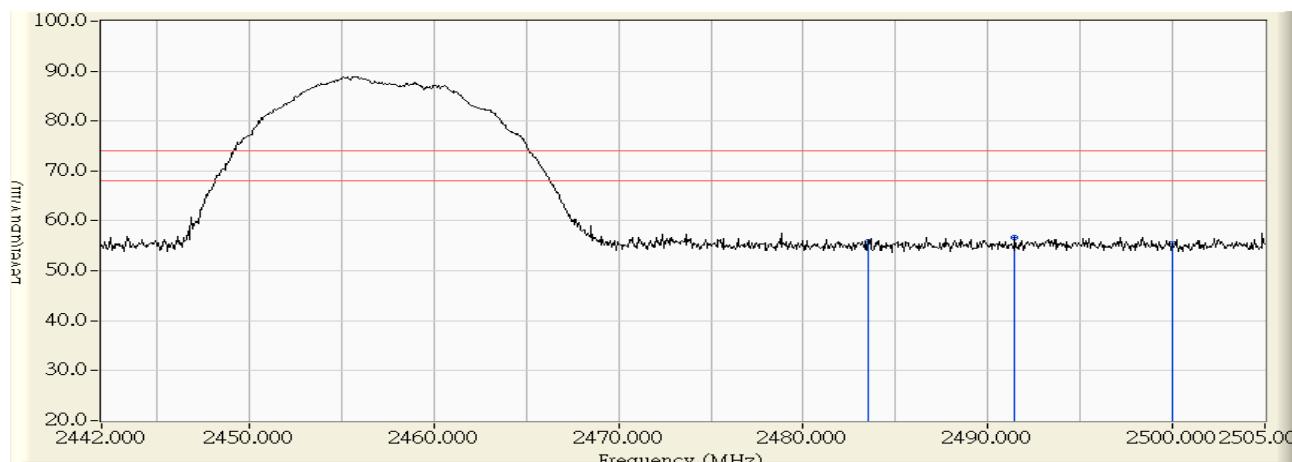


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2310.000	30.059	12.255	42.314	-11.686	54.000	AVERAGE
2	2388.466	30.873	12.361	43.233	-10.767	54.000	AVERAGE
3 *	2390.000	30.888	12.358	43.246	-10.754	54.000	AVERAGE

#### Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor .
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/12/13 - 22:12
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : DC 12V
EUT : Wicorder	Note : Mode 1: Transmit 802.11b_2462MHz

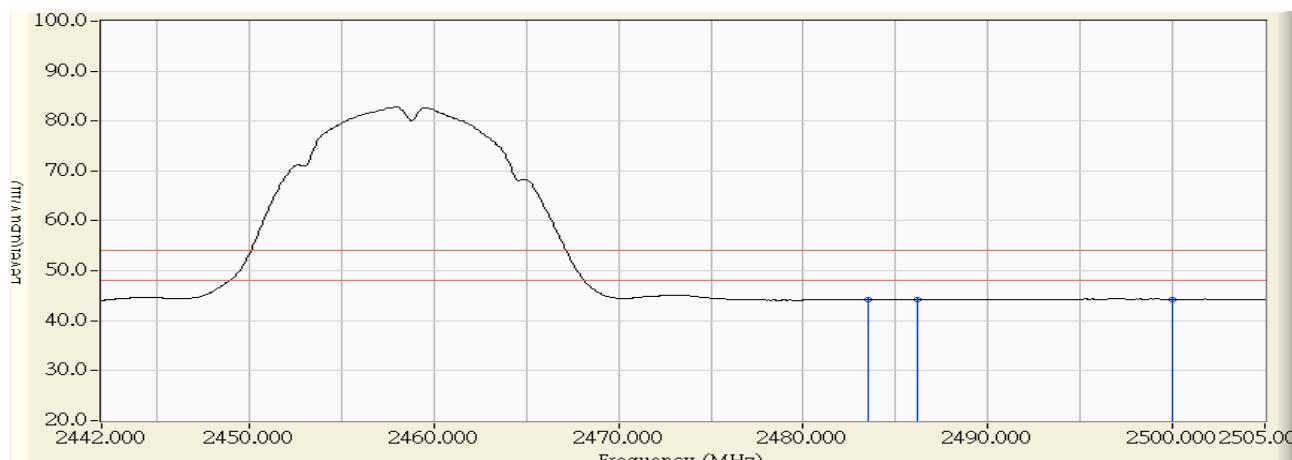


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2483.500	31.858	23.876	55.734	-18.266	74.000	PEAK
2 *	2491.455	31.940	24.772	56.712	-17.288	74.000	PEAK
3	2500.000	31.988	23.339	55.328	-18.672	74.000	PEAK

#### Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor .
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/12/13 - 22:12
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : DC 12V
EUT : Wicorder	Note : Mode 1: Transmit 802.11b_2462MHz

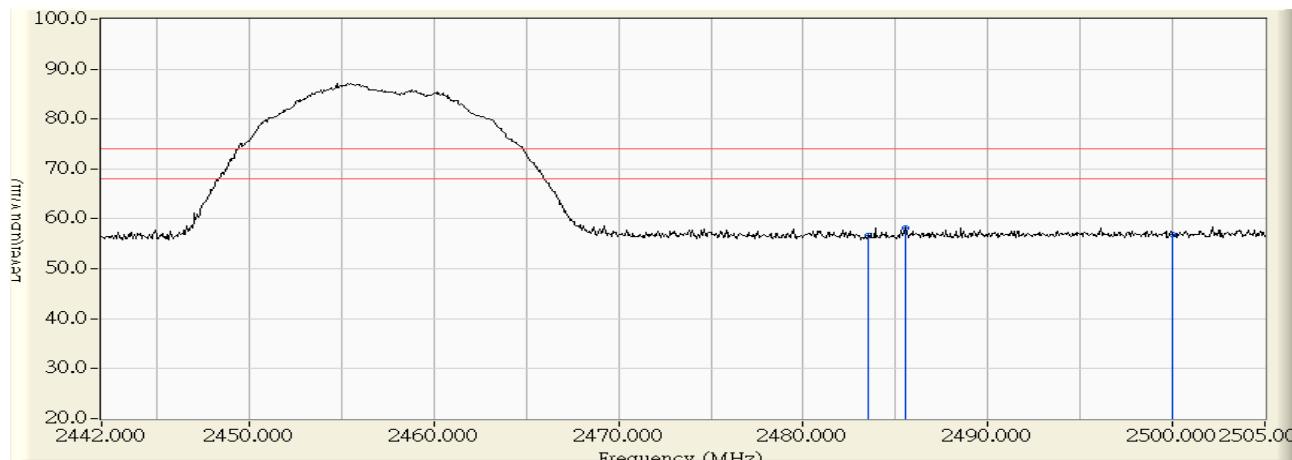


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2483.500	31.858	12.297	44.155	-9.845	54.000	AVERAGE
2	2486.163	31.886	12.334	44.220	-9.780	54.000	AVERAGE
3 *	2500.000	31.988	12.323	44.312	-9.688	54.000	AVERAGE

#### Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor .
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/12/13 - 22:16
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : DC 12V
EUT : Wicorder	Note : Mode 1: Transmit 802.11b_2462MHz

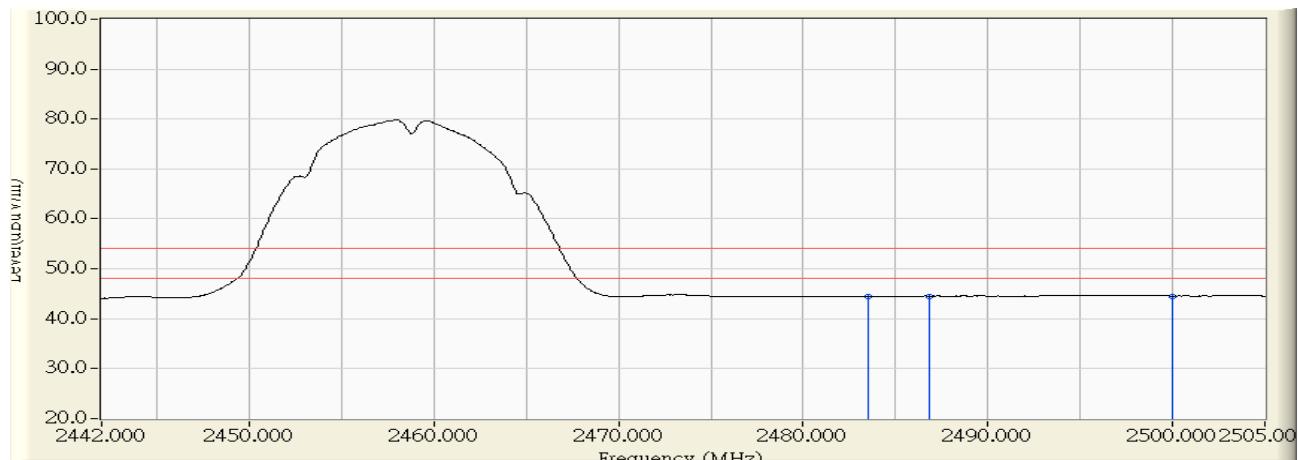


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2483.500	31.858	24.728	56.586	-17.414	74.000	PEAK
2	* 2485.533	31.879	26.230	58.109	-15.891	74.000	PEAK
3	2500.000	31.988	24.907	56.896	-17.104	74.000	PEAK

#### Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor .
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/12/13 - 22:16
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : DC 12V
EUT : Wicorder	Note : Mode 1: Transmit 802.11b_2462MHz

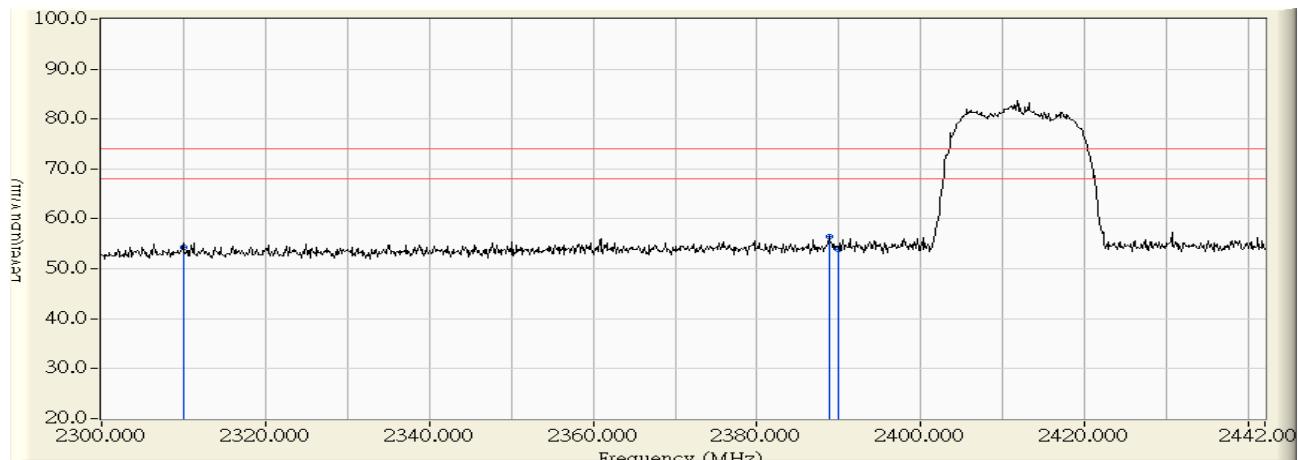


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2483.500	31.858	12.629	44.487	-9.513	54.000	AVERAGE
2	2486.793	31.892	12.648	44.540	-9.460	54.000	AVERAGE
3 *	2500.000	31.988	12.560	44.549	-9.451	54.000	AVERAGE

#### Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor .
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/12/13 - 22:21
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : DC 12V
EUT : Wicorder	Note : Mode 1: Transmit 802.11g_2412MHz



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2310.000	30.059	24.322	54.381	-19.619	74.000	PEAK
2 *	2388.750	30.876	25.524	56.399	-17.601	74.000	PEAK
3	2390.000	30.888	22.966	53.854	-20.146	74.000	PEAK

## Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor .
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/12/13 - 22:21
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : DC 12V
EUT : Wicorder	Note : Mode 1: Transmit 802.11g_2412MHz

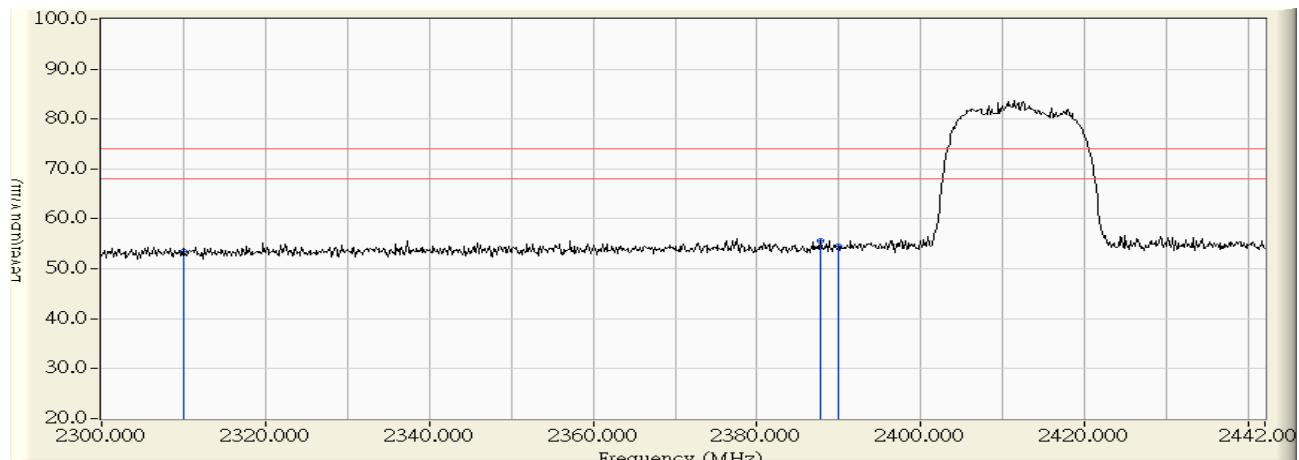


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2310.000	30.059	12.064	42.123	-11.877	54.000	AVERAGE
2	2386.052	30.848	12.379	43.226	-10.774	54.000	AVERAGE
3 *	2390.000	30.888	12.433	43.321	-10.679	54.000	AVERAGE

#### Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor .
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/12/13 - 22:26
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : DC 12V
EUT : Wicorder	Note : Mode 1: Transmit 802.11g_2412MHz



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2310.000	30.059	23.488	53.547	-20.453	74.000	PEAK
2 *	2387.756	30.865	24.745	55.610	-18.390	74.000	PEAK
3	2390.000	30.888	23.584	54.472	-19.528	74.000	PEAK

## Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor .
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/12/13 - 22:26
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : DC 12V
EUT : Wicorder	Note : Mode 1: Transmit 802.11g_2412MHz

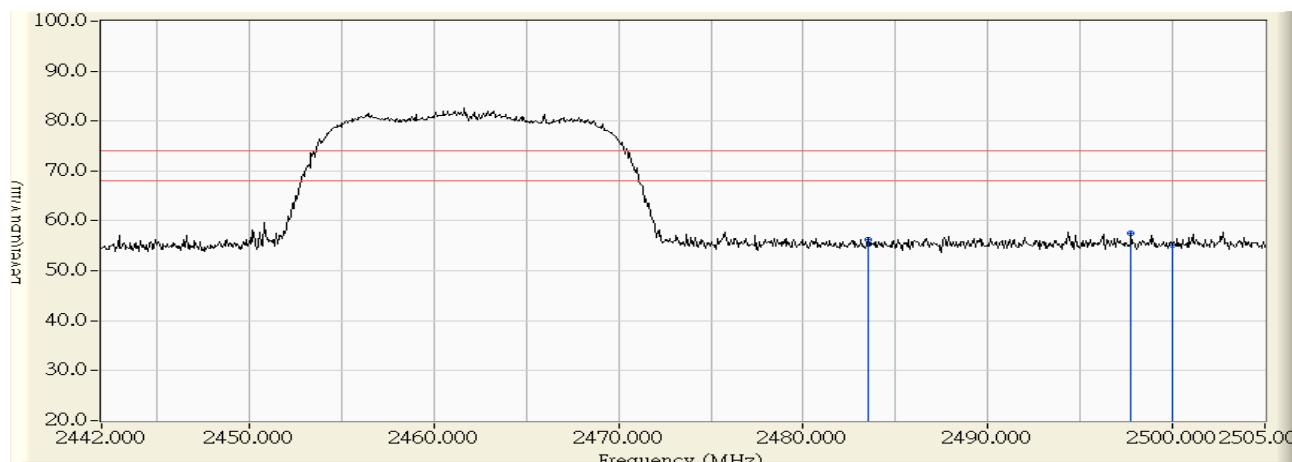


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2310.000	30.059	12.074	42.133	-11.867	54.000	AVERAGE
2	2387.614	30.864	12.386	43.250	-10.750	54.000	AVERAGE
3 *	2390.000	30.888	12.457	43.345	-10.655	54.000	AVERAGE

#### Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor .
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/12/13 - 22:32
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : DC 12V
EUT : Wicorder	Note : Mode 1: Transmit 802.11g_2462MHz

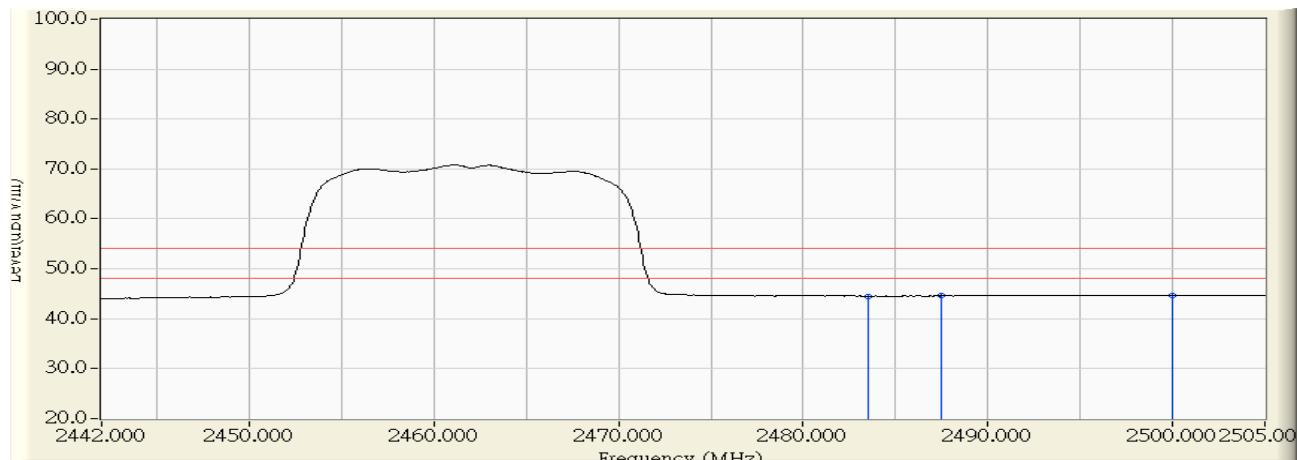


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2483.500	31.858	24.349	56.207	-17.793	74.000	PEAK
2	* 2497.755	31.988	25.618	57.606	-16.394	74.000	PEAK
3	2500.000	31.988	23.258	55.247	-18.753	74.000	PEAK

#### Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor .
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/12/13 - 22:33
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : DC 12V
EUT : Wicorder	Note : Mode 1: Transmit 802.11g_2462MHz

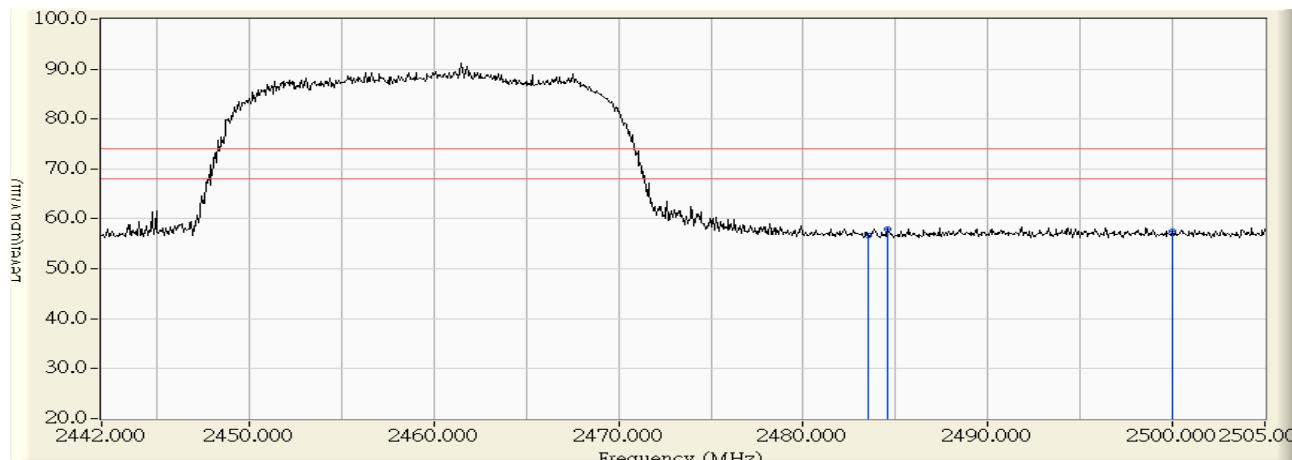


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2483.500	31.858	12.685	44.543	-9.457	54.000	AVERAGE
2	2487.486	31.899	12.665	44.564	-9.436	54.000	AVERAGE
3 *	2500.000	31.988	12.599	44.588	-9.412	54.000	AVERAGE

#### Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor .
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/12/13 - 22:36
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : DC 12V
EUT : Wicorder	Note : Mode 1: Transmit 802.11g_2462MHz



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2483.500	31.858	24.786	56.644	-17.356	74.000	PEAK
2 *	2484.588	31.869	26.002	57.871	-16.129	74.000	PEAK
3	2500.000	31.988	25.463	57.452	-16.548	74.000	PEAK

#### Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor .
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/12/13 - 22:37
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : DC 12V
EUT : Wicorder	Note : Mode 1: Transmit 802.11g_2462MHz

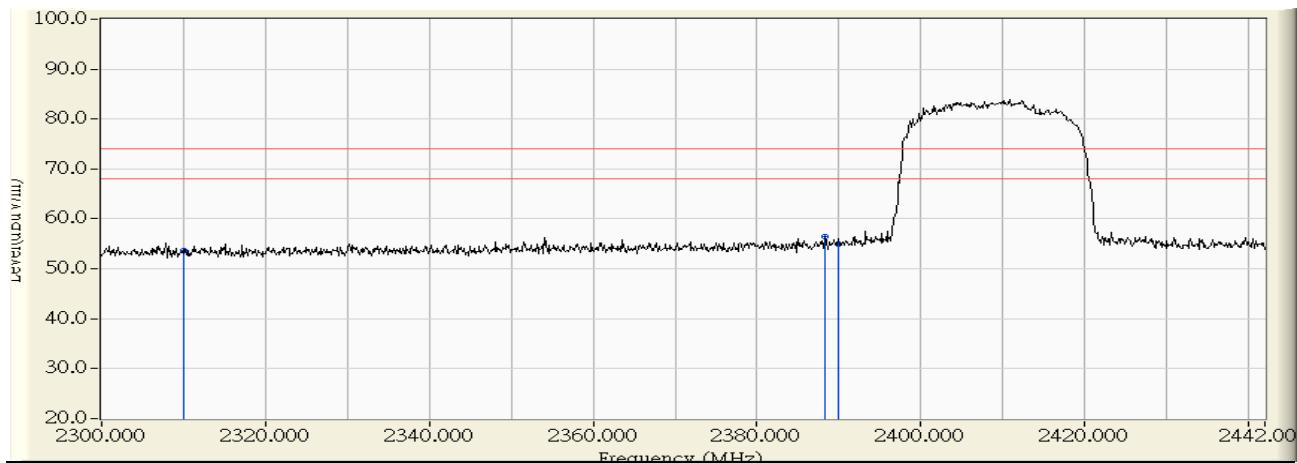


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2483.500	31.858	12.681	44.539	-9.461	54.000	AVERAGE
2		2484.147	31.865	12.650	44.515	-9.485	54.000	AVERAGE
3		2500.000	31.988	12.392	44.381	-9.619	54.000	AVERAGE

#### Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor .
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/12/13 - 22:42
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : DC 12V
EUT : Wicorder	Note : Mode 1: Transmit 802.11n(20MHz) 2412MHz



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2310.000	30.059	23.514	53.573	-20.427	74.000	PEAK
2 *	2388.324	30.871	25.636	56.507	-17.493	74.000	PEAK
3	2390.000	30.888	24.161	55.049	-18.951	74.000	PEAK

#### Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor .
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/12/13 - 22:42
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : DC 12V
EUT : Wicorder	Note : Mode 1: Transmit 802.11n(20MHz) 2412MHz

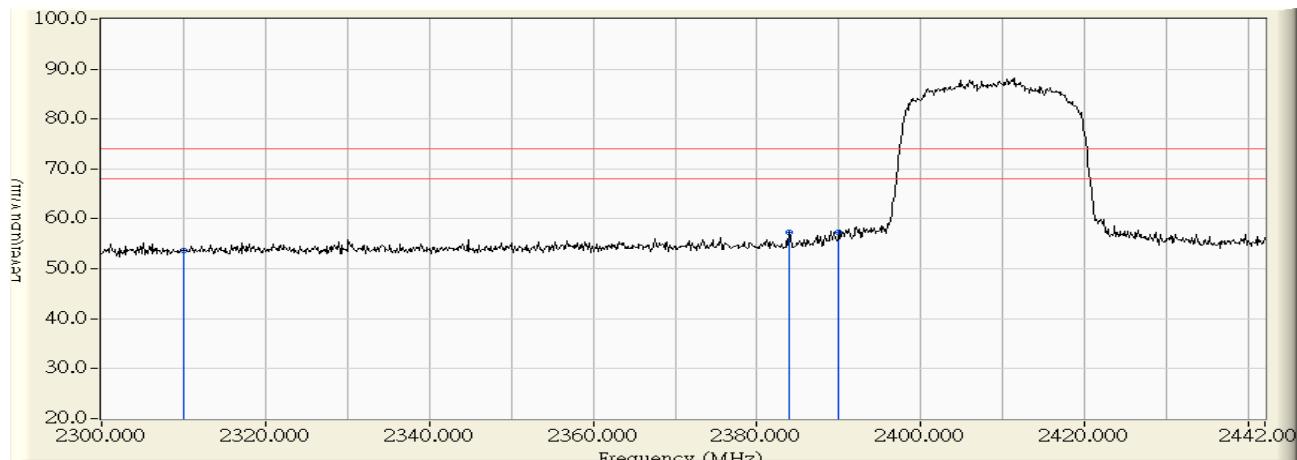


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2310.000	30.059	12.228	42.287	-11.713	54.000	AVERAGE
2	2387.898	30.867	12.734	43.601	-10.399	54.000	AVERAGE
3 *	2390.000	30.888	12.947	43.835	-10.165	54.000	AVERAGE

#### Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor .
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/12/13 - 22:46
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : DC 12V
EUT : Wicorder	Note : Mode 1: Transmit 802.11n(20MHz) 2412MHz



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2310.000	30.059	23.707	53.766	-20.234	74.000	PEAK
2	2383.922	30.825	26.456	57.281	-16.719	74.000	PEAK
3 *	2390.000	30.888	26.422	57.310	-16.690	74.000	PEAK

#### Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor .
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/12/13 - 22:46
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : DC 12V
EUT : Wicorder	Note : Mode 1: Transmit 802.11n(20MHz) 2412MHz

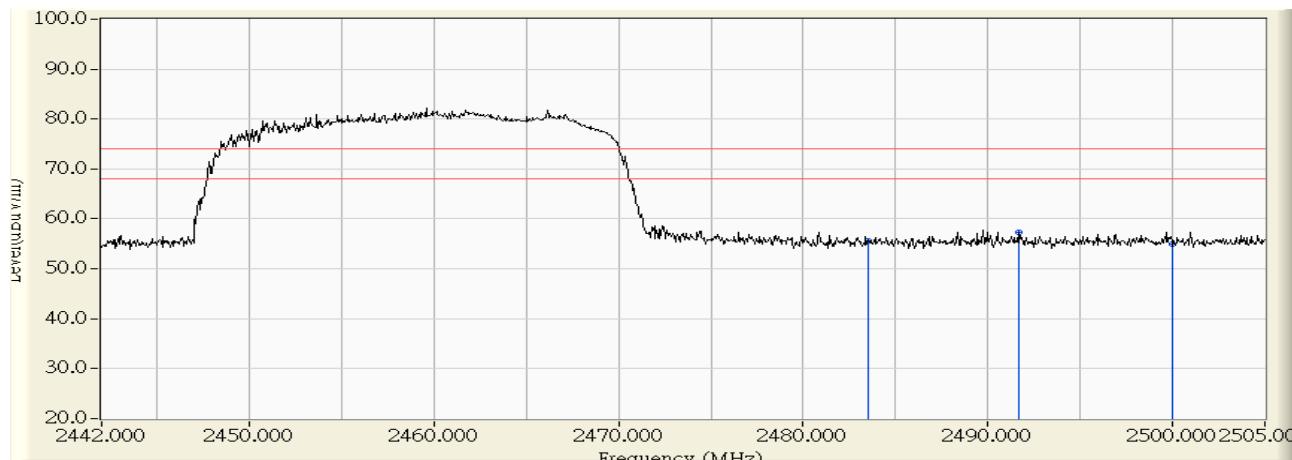


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2310.000	30.059	12.191	42.250	-11.750	54.000	AVERAGE
2	2389.034	30.878	12.992	43.870	-10.130	54.000	AVERAGE
3 *	2390.000	30.888	13.191	44.079	-9.921	54.000	AVERAGE

## Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor .
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/12/13 - 22:51
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : DC 12V
EUT : Wicorder	Note : Mode 1: Transmit 802.11n(20MHz) 2462MHz

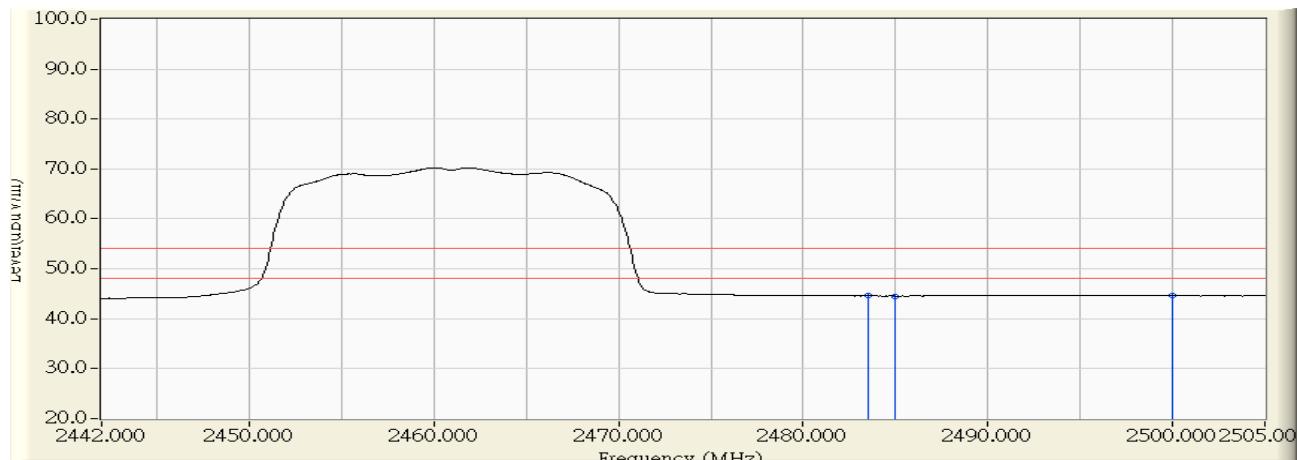


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2483.500	31.858	23.671	55.529	-18.471	74.000	PEAK
2 *	2491.644	31.942	25.276	57.218	-16.782	74.000	PEAK
3	2500.000	31.988	22.974	54.963	-19.037	74.000	PEAK

#### Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor .
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/12/13 - 22:52
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : DC 12V
EUT : Wicorder	Note : Mode 1: Transmit 802.11n(20MHz) 2462MHz

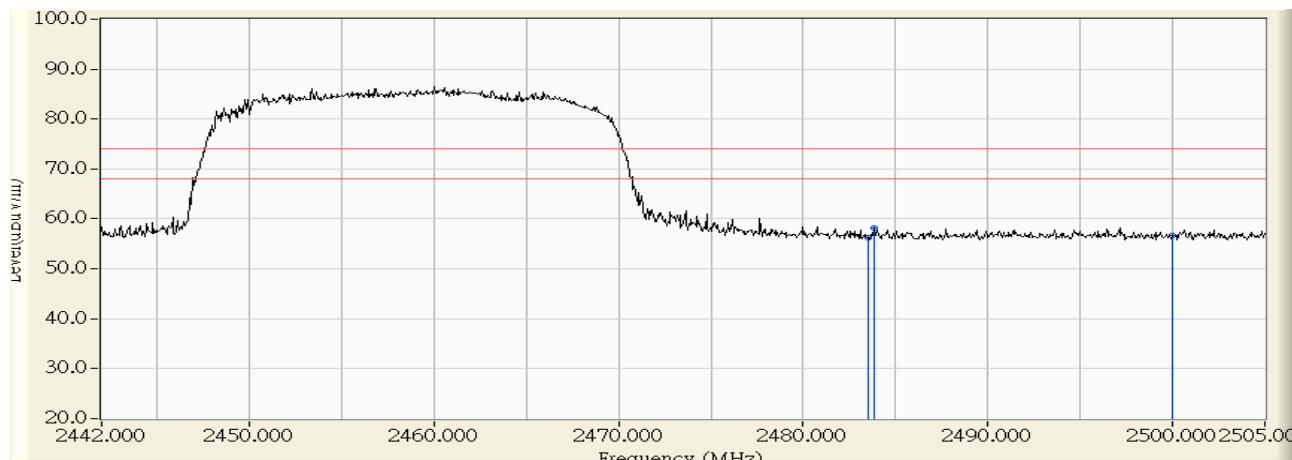


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2483.500	31.858	12.749	44.607	-9.393	54.000	AVERAGE
2		2484.966	31.873	12.673	44.546	-9.454	54.000	AVERAGE
3		2500.000	31.988	12.605	44.594	-9.406	54.000	AVERAGE

#### Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor .
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/12/13 - 22:53
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : DC 12V
EUT : Wicorder	Note : Mode 1: Transmit 802.11n(20MHz) 2462MHz



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2483.500	31.858	24.382	56.240	-17.760	74.000	PEAK
2	* 2483.832	31.861	26.212	58.073	-15.927	74.000	PEAK
3	2500.000	31.988	24.674	56.663	-17.337	74.000	PEAK

#### Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor .
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/12/13 - 22:53
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : DC 12V
EUT : Wicorder	Note : Mode 1: Transmit 802.11n(20MHz) 2462MHz



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2483.500	31.858	12.810	44.668	-9.332	54.000	AVERAGE
2 *	2497.629	31.988	12.684	44.672	-9.328	54.000	AVERAGE
3	2500.000	31.988	12.667	44.656	-9.344	54.000	AVERAGE

#### Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor .
6. The average measurement was not performed when the peak measured data under the limit of average detection.

## 7. Occupied Bandwidth

### 7.1. Test Equipment

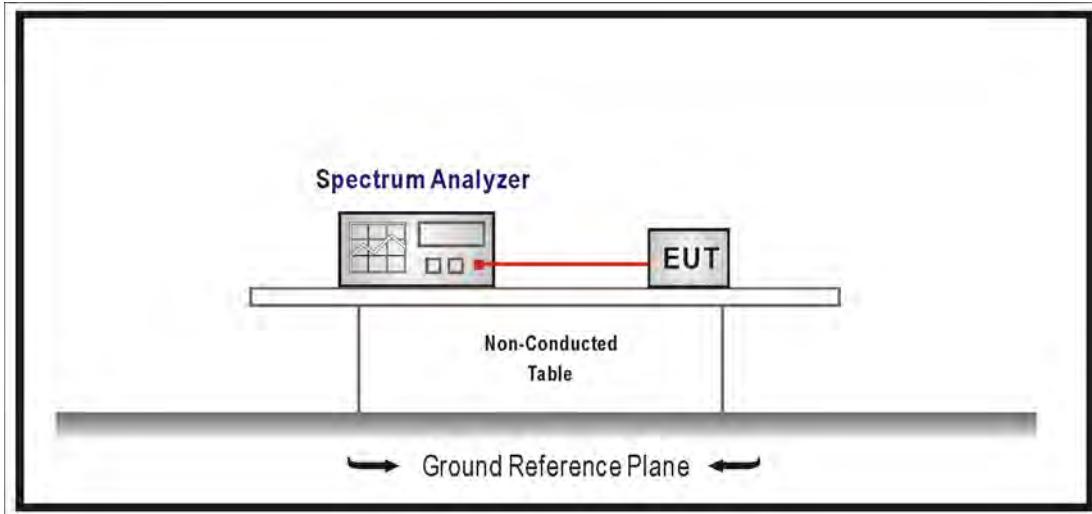
The following test equipments are used during the test:

Occupied Bandwidth / SR7

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Spectrum Analyzer	Agilent	N9010A-EXA	US47140172	2014/08/05

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

### 7.2. Test Setup



### 7.3. Test Procedures

The EUT was setup according to ANSI C63.4: 2009; tested according to DTS test procedure section 8.1 of KDB558074 v03r01 for compliance to FCC 47CFR 15.247 requirements.

Set RBW = 100KHz, VBW $\geq$ 3xRBW, Sweep time=Auto, Set Peak detector.

### 7.4. Limits

The 6 dB bandwidth must be greater than 500 kHz.

### 7.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2012

### 7.6. Uncertainty

The measurement uncertainty is defined as  $\pm 150\text{Hz}$

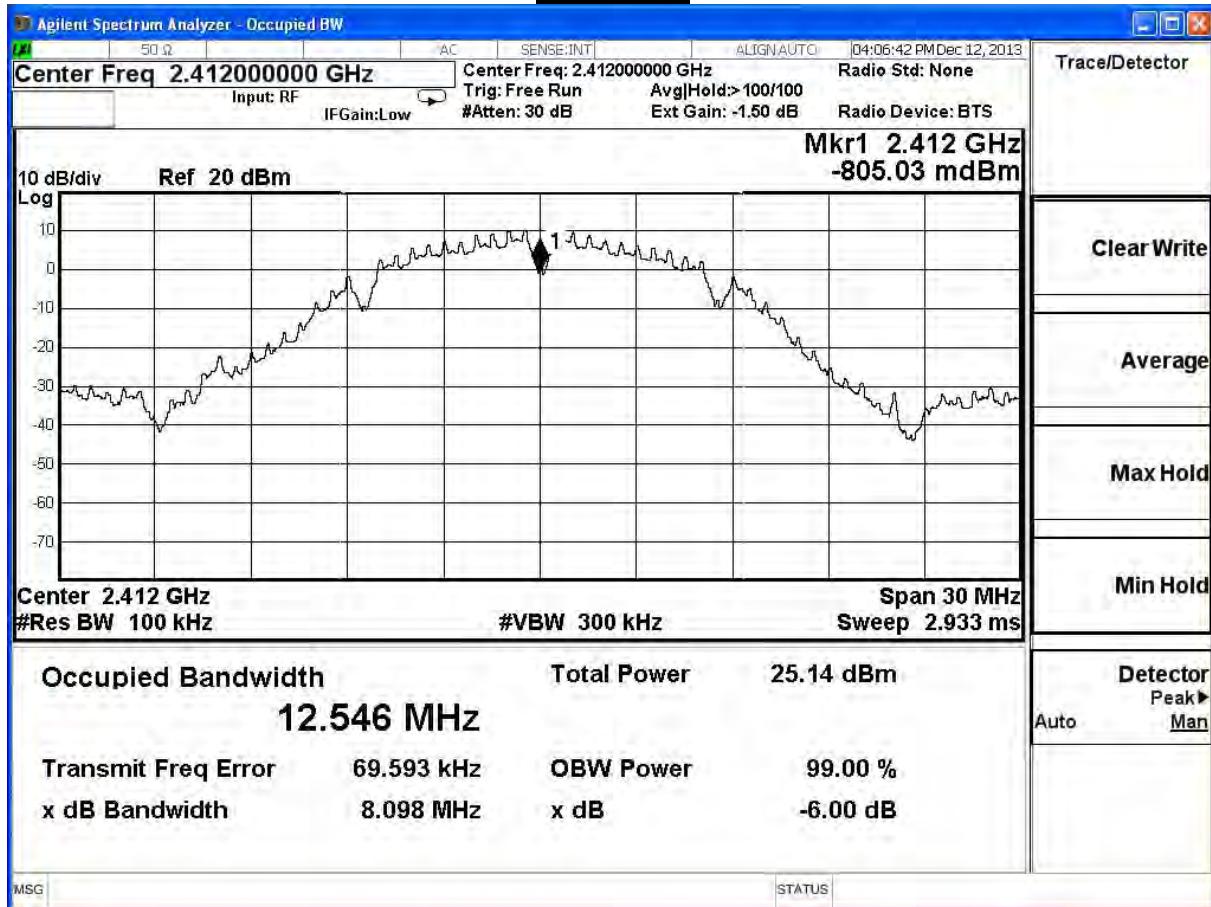
## 7.7. Test Result

Product	Wicorder		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: Transmit		
Date of Test	2013/12/12	Test Site	SR7

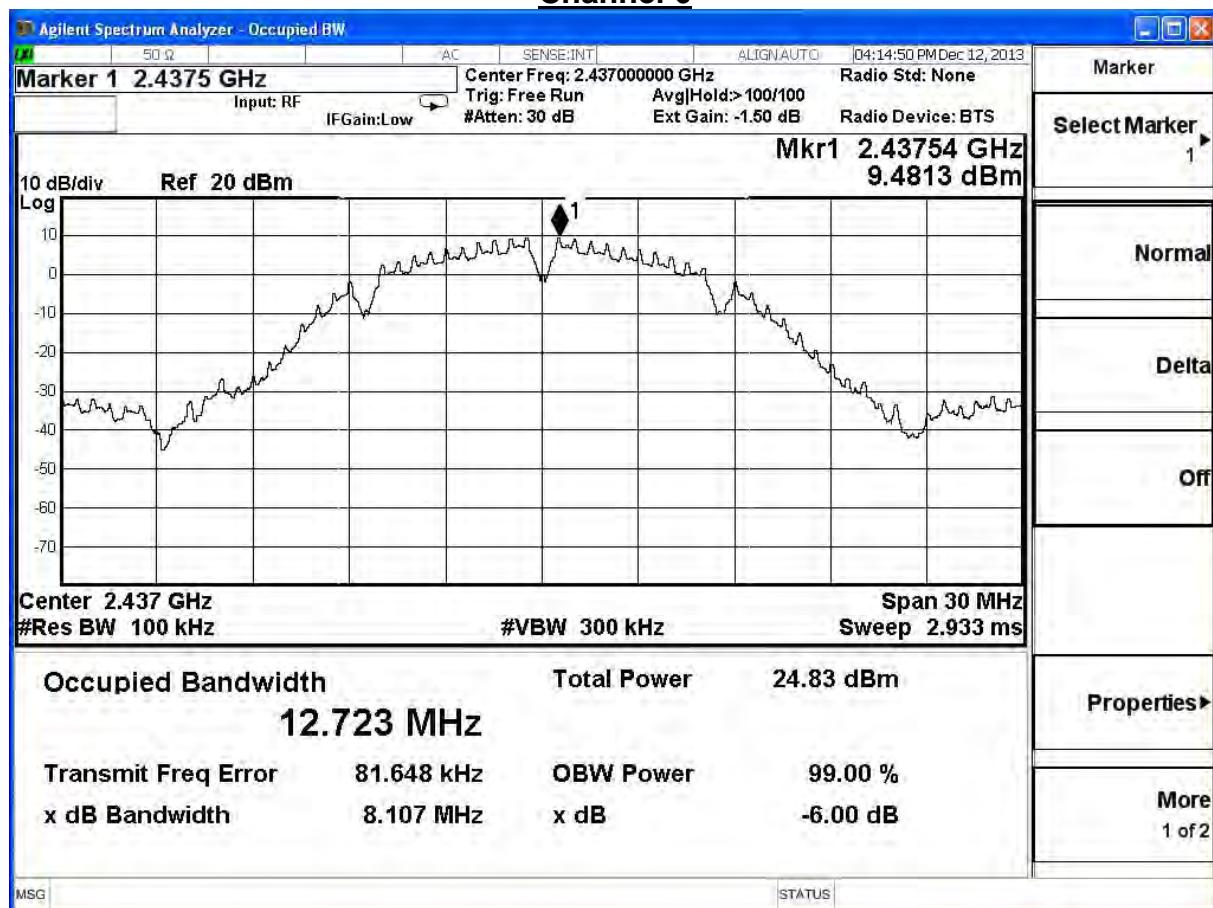
802.11 b, ANT 0

Channel No.	Frequency (MHz)	Measure Level (MHz)	Required Limit (MHz)	Result
1	2412	8.098	≥0.5	Pass
6	2437	8.107	≥0.5	Pass
11	2462	8.100	≥0.5	Pass

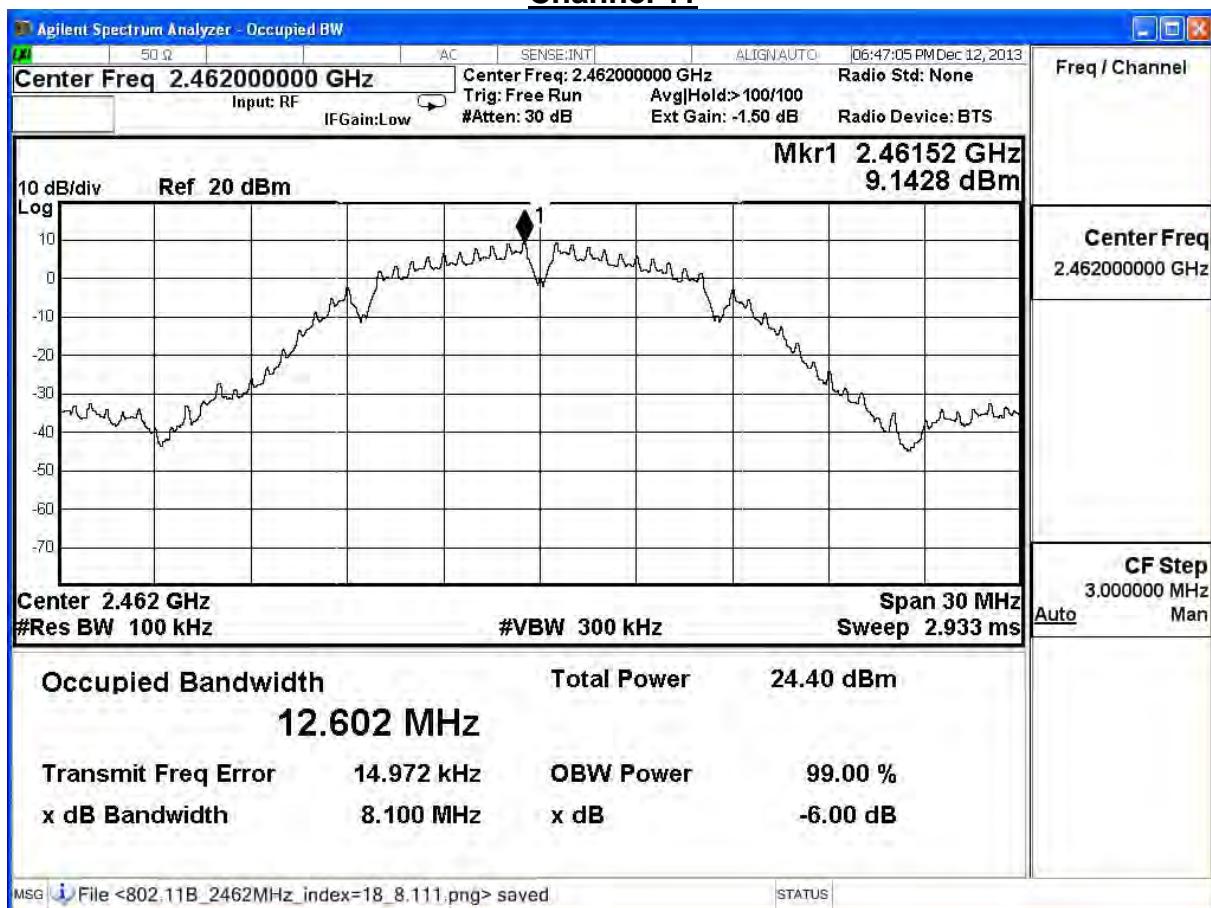
### Channel 1



## Channel 6



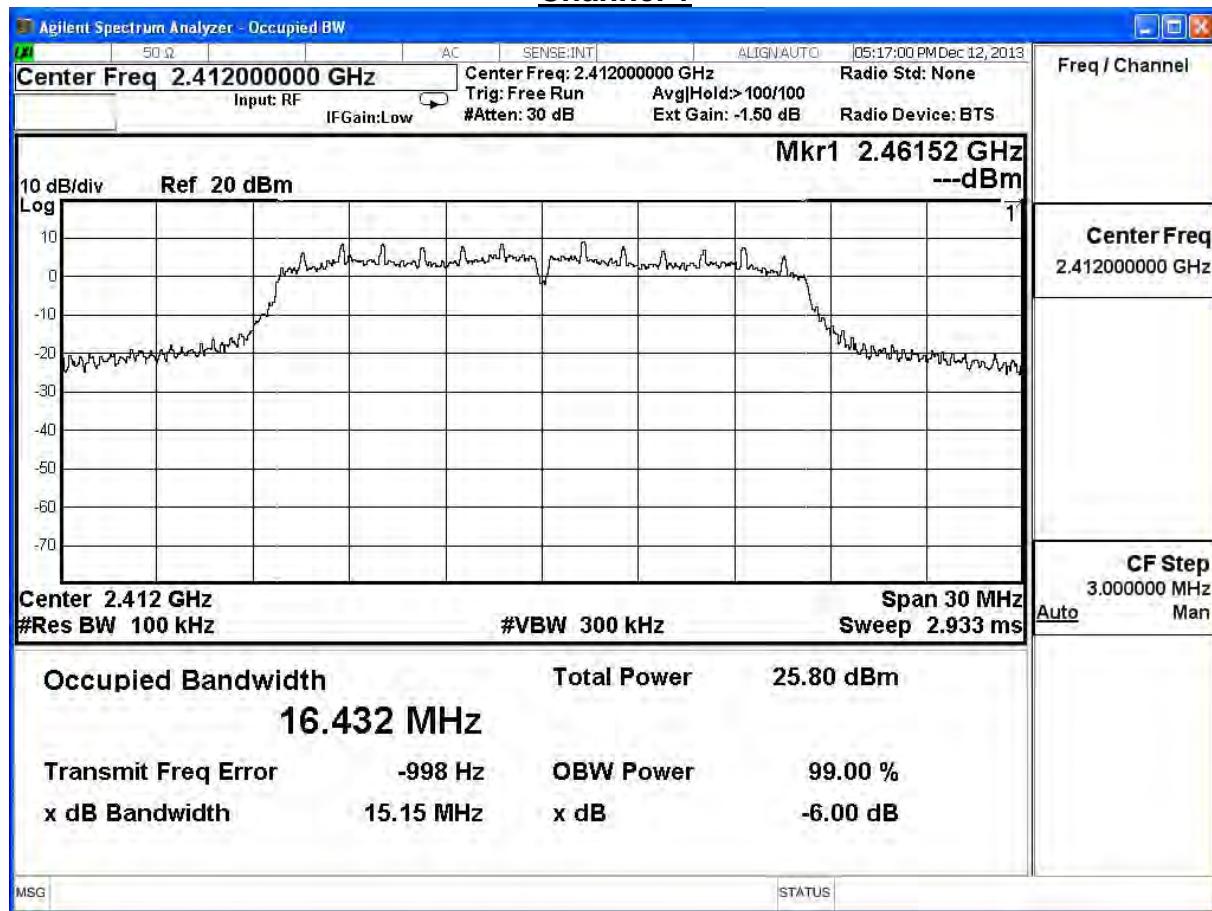
## Channel 11



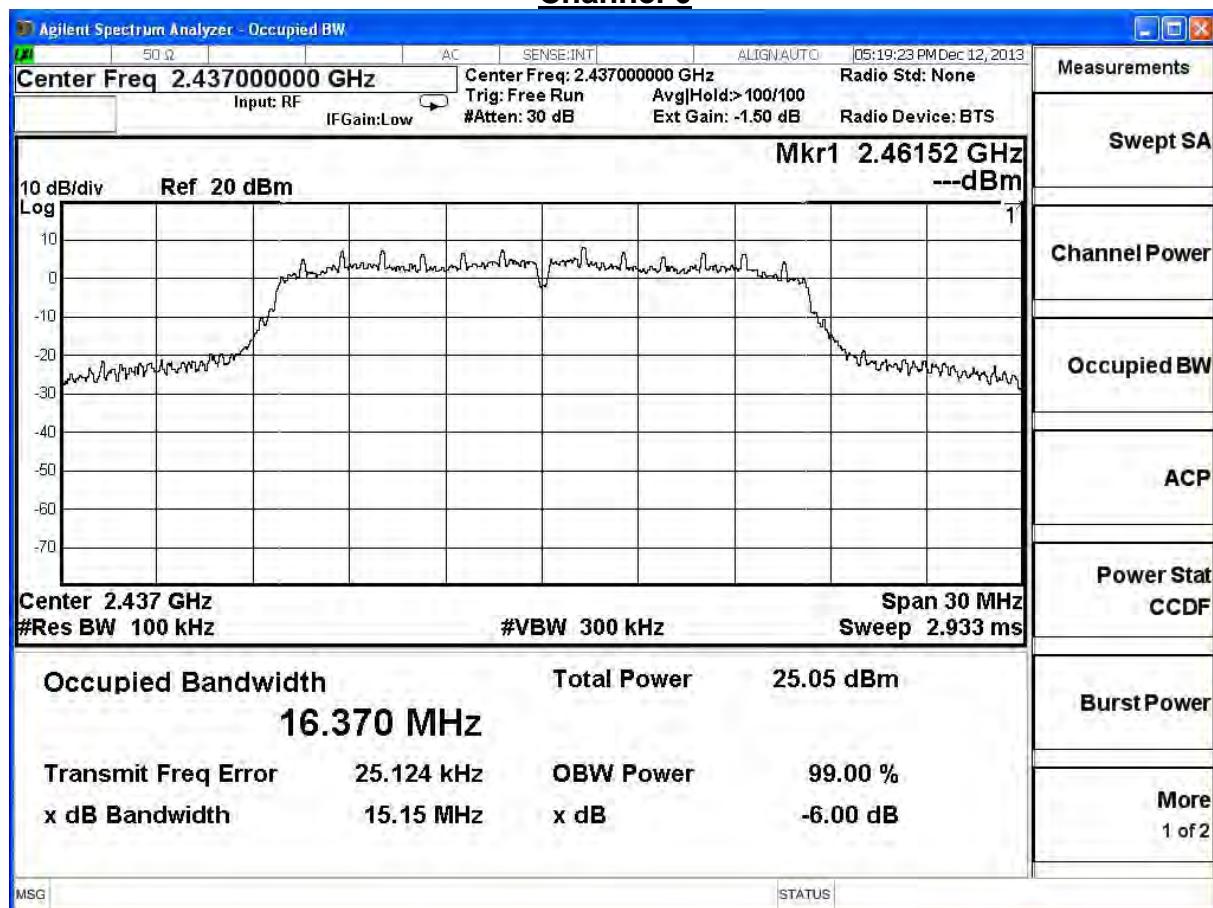
Product	Wicorder		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: Transmit		
Date of Test	2013/12/12	Test Site	SR7

## IEEE 802.11g, ANT 0

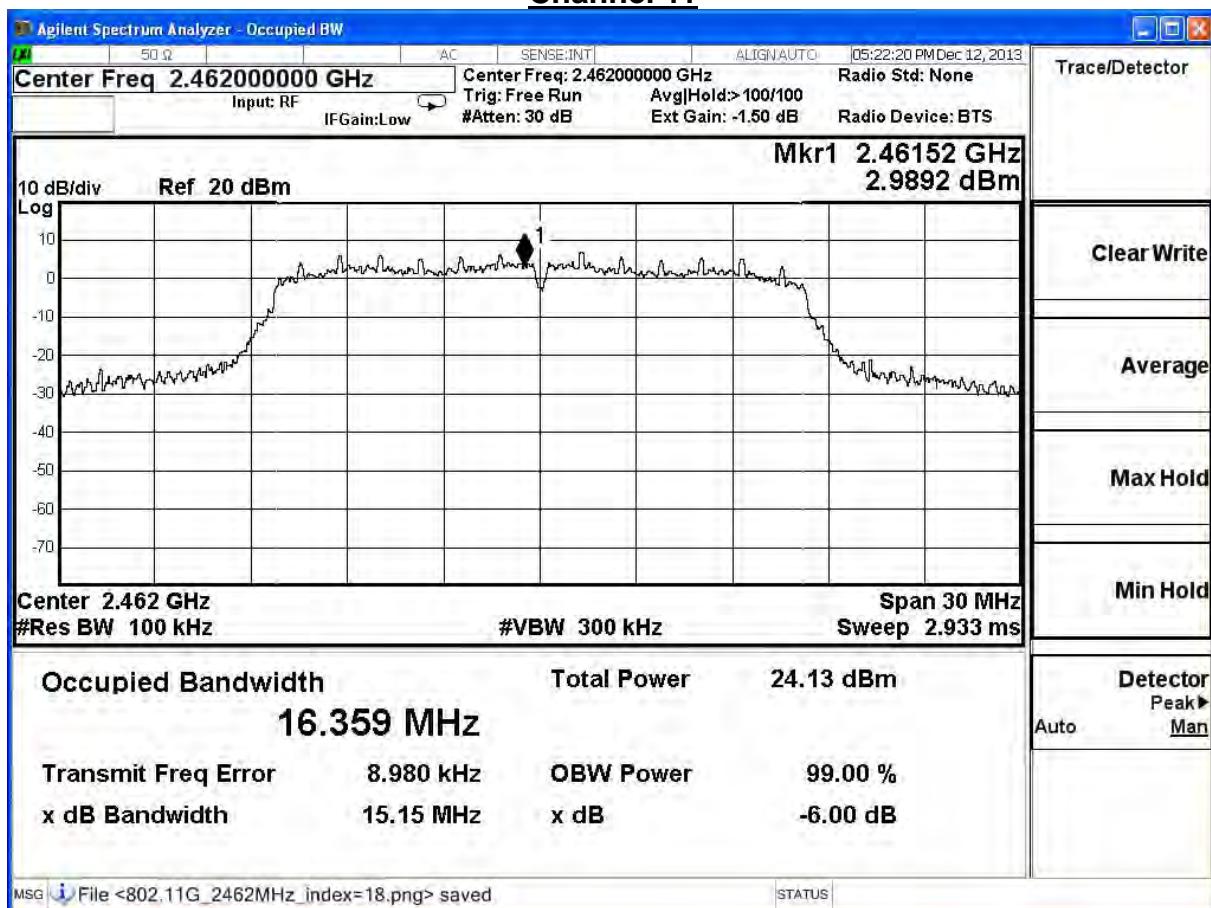
Channel No.	Frequency (MHz)	Measure Level (MHz)	Required Limit (MHz)	Result
1	2412	15.150	≥0.5	Pass
6	2437	15.150	≥0.5	Pass
11	2462	15.150	≥0.5	Pass

Channel 1

## Channel 6



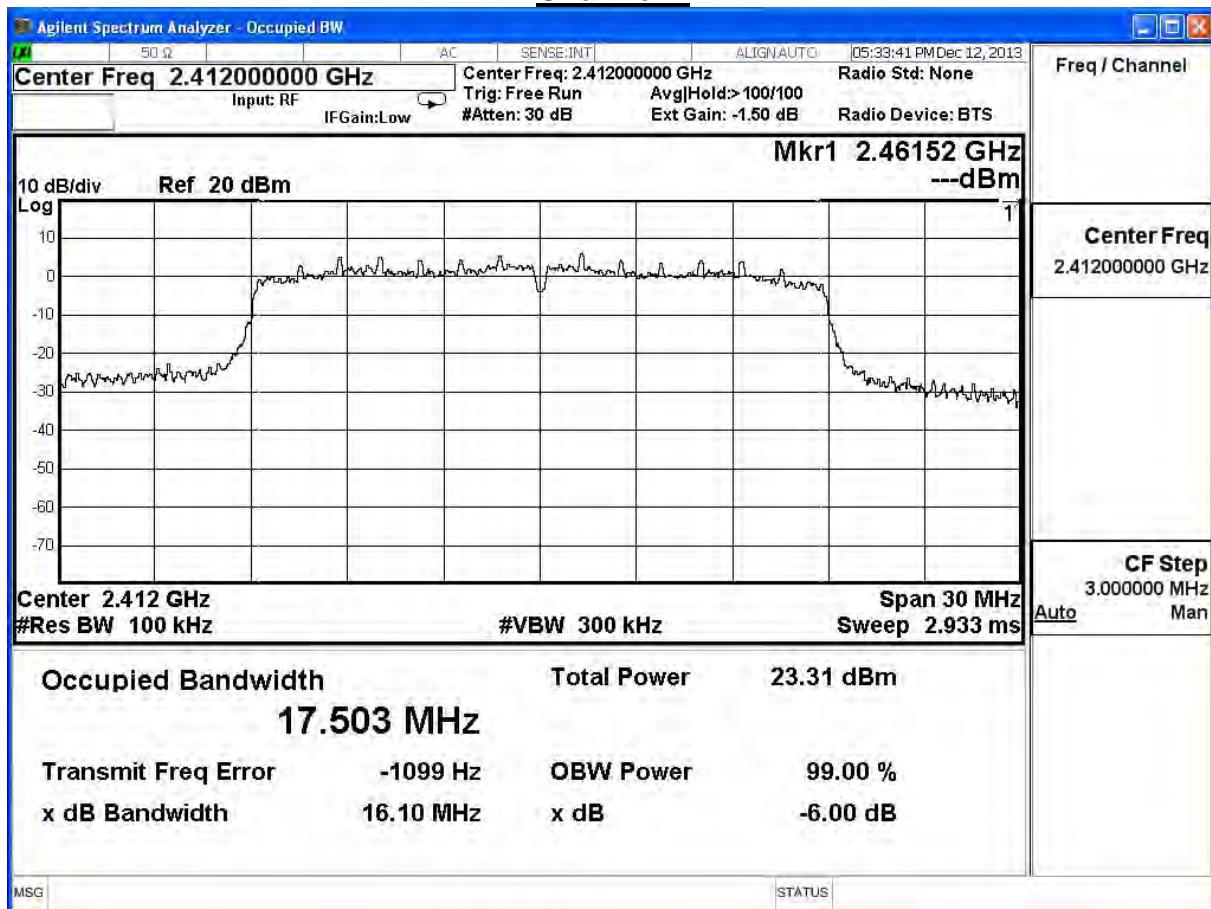
## Channel 11



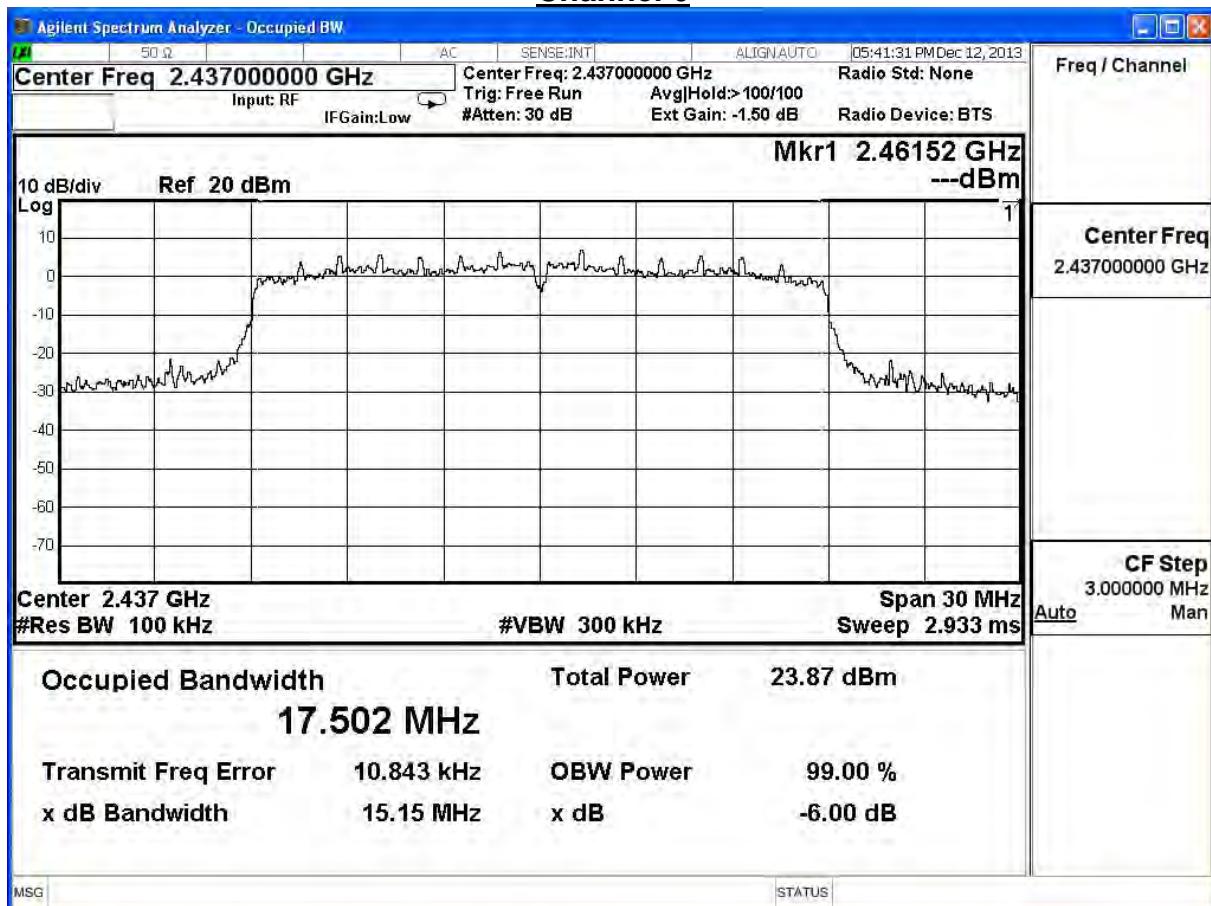
Product	Wicorder		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: Transmit		
Date of Test	2013/12/12	Test Site	SR7

## IEEE 802.11n (20MHz), ANT 0

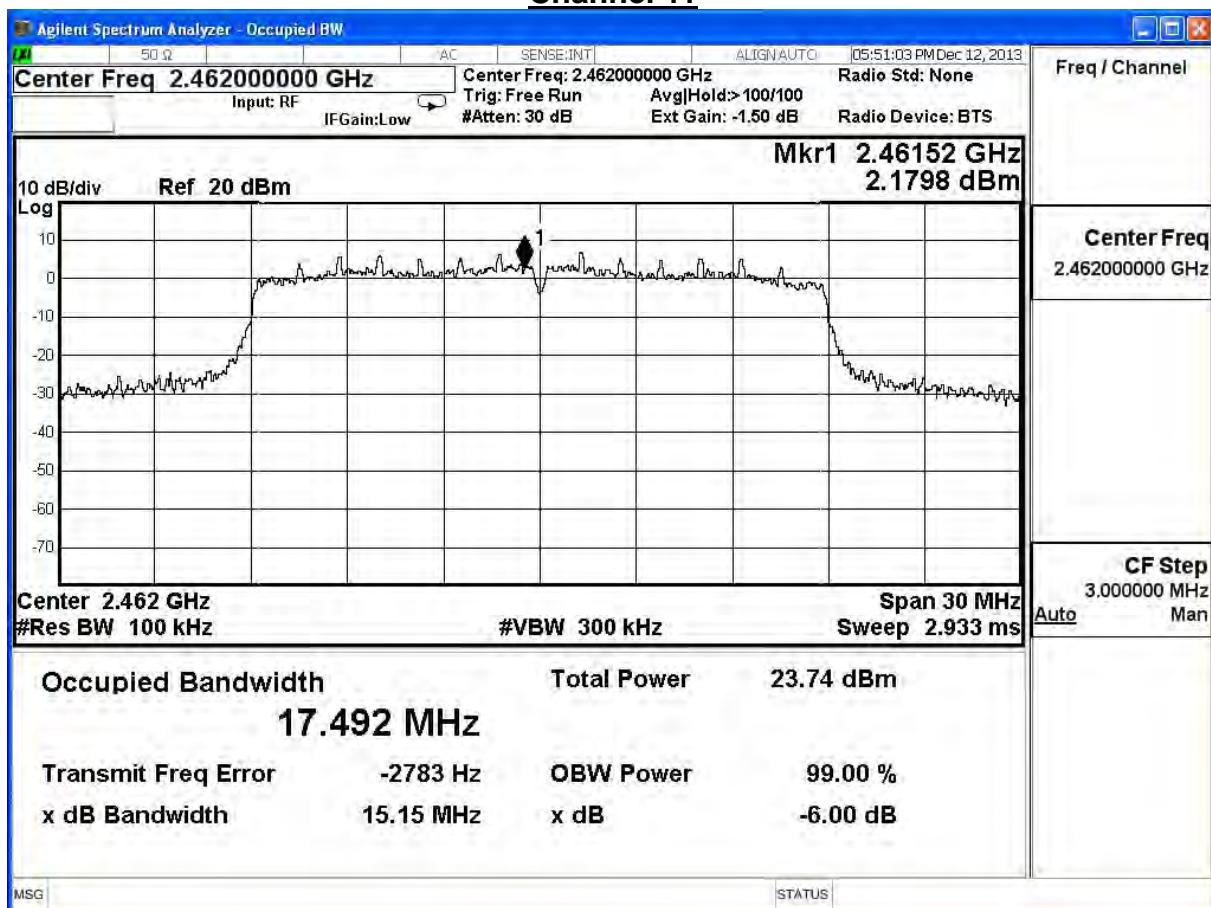
Channel No.	Frequency (MHz)	Measure Level (MHz)	Required Limit (MHz)	Result
1	2412	16.100	≥0.5	Pass
6	2437	15.150	≥0.5	Pass
11	2462	15.150	≥0.5	Pass

Channel 1

## Channel 6



## Channel 11



## 8. Power Density

### 8.1. Test Equipment

The following test equipment is used during the test:

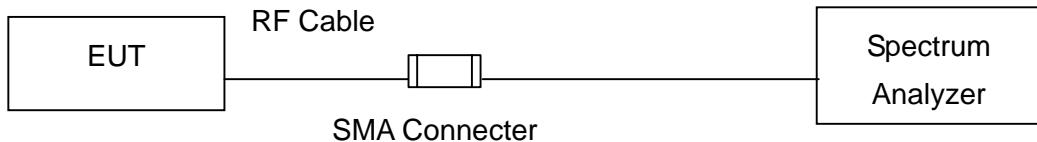
#### Power Density / SR7

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Spectrum Analyzer	Agilent	N9010A-EXA	US47140172	2014/08/05

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

### 8.2. Test Setup

IEEE 802.11 b / g / n ( 20M ) MODE



### 8.3. Limits

The peak power spectral density conducted from the intentional radiated to the antenna shall not be greater than +8dBm in any 3kHz band during any time interval of continuous transmission.

### 8.4. Test Procedures

The EUT was setup according to ANSI C63.4: 2009; tested according to DTS test procedure section 10.2 of KDB558074 v03r01 for compliance to FCC 47CFR 15.247 requirements. Set 3KHz  $\leq$  RBW  $\leq$  100 kHz, Set VBW  $\geq$  3xRBW, Sweep time=Auto, Set Peak detector.

### 8.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2012

### 8.6. Uncertainty

The measurement uncertainty is defined as  $\pm 1.27$ dB.

## 8.7. Test Result

Product	Wicorder		
Test Item	Power Density		
Test Mode	Mode 1: Transmit		
Date of Test	2013/12/12	Test Site	SR7

IEEE 802.11b, ANT 0				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412	1.145	≤8	Pass
6	2437	0.995	≤8	Pass
11	2462	0.603	≤8	Pass

Channel 1

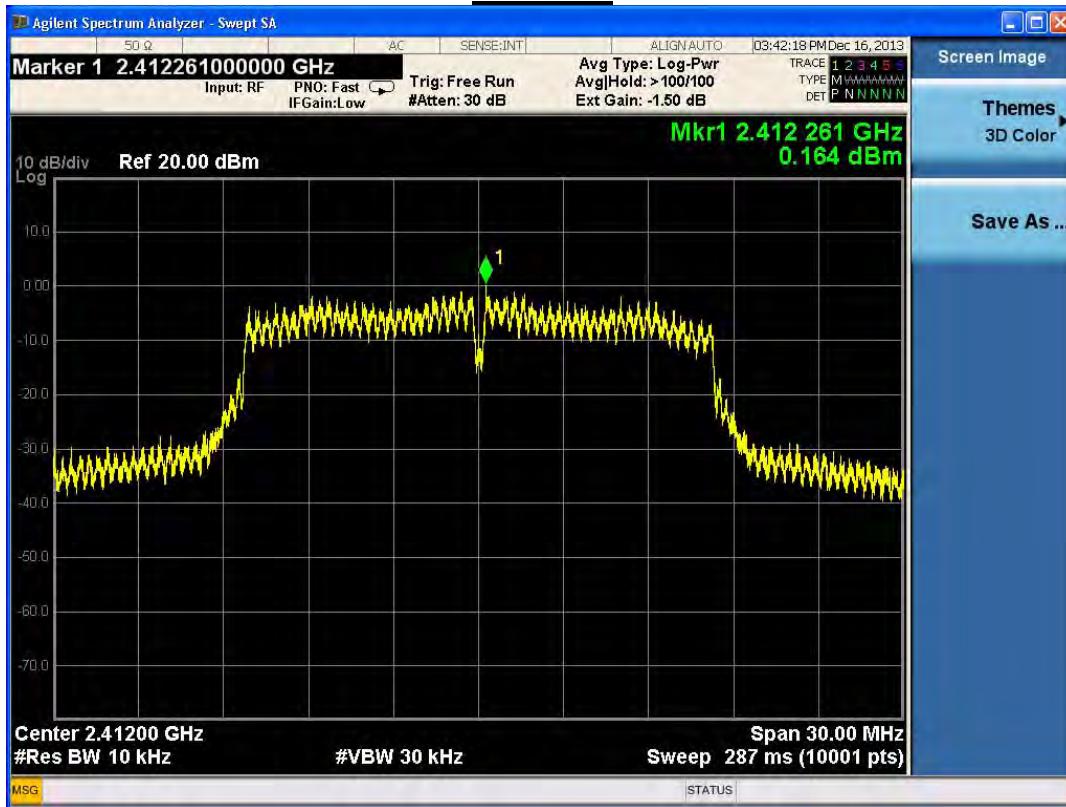


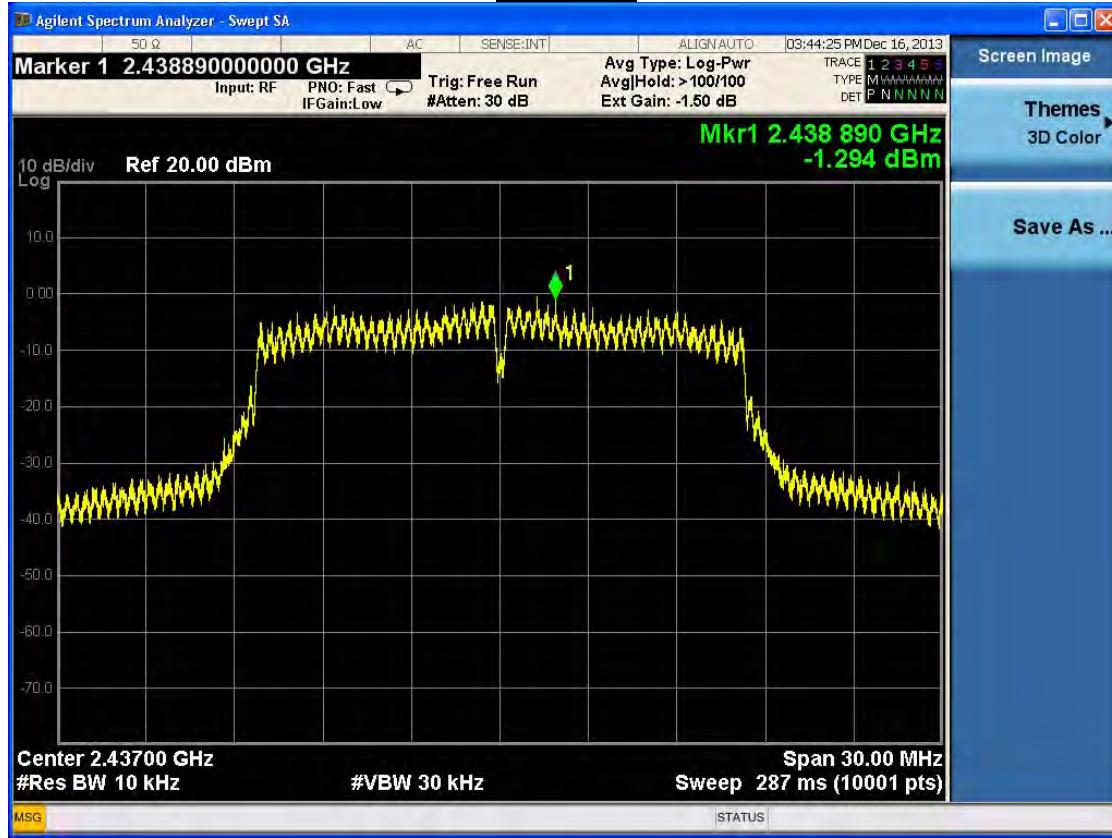
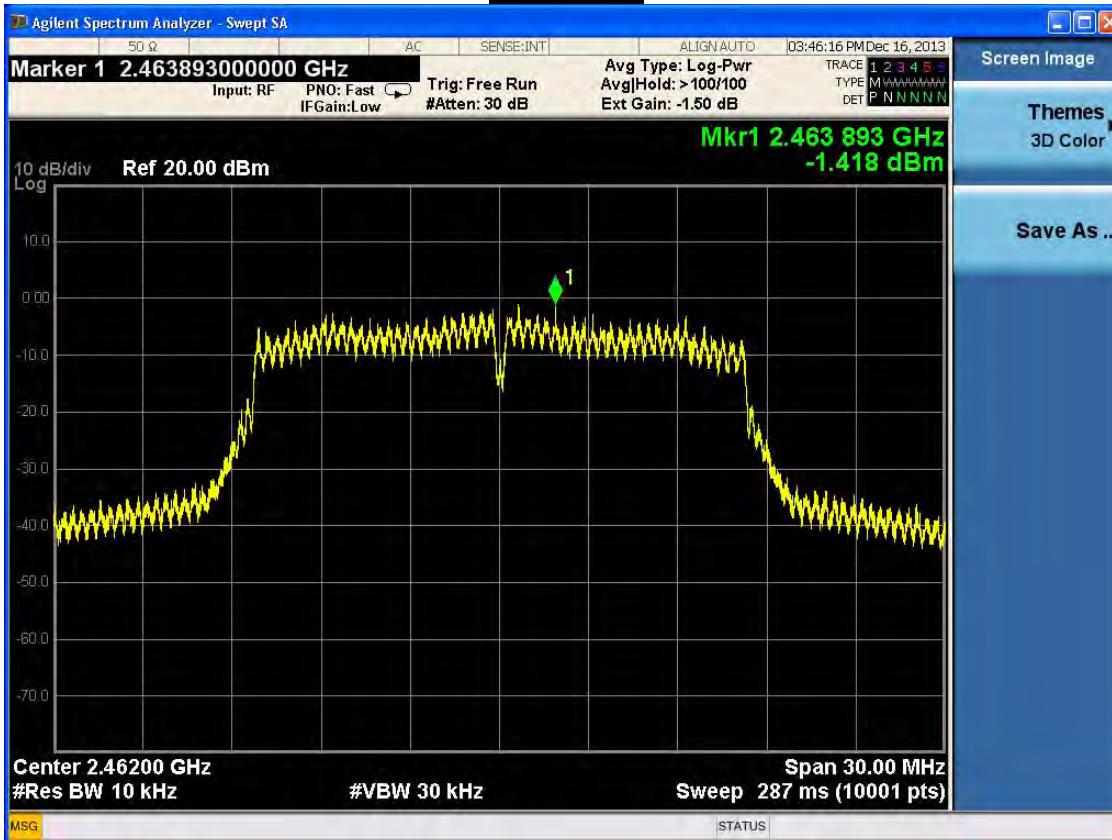
Channel 6Channel 11

Product	Wicorder		
Test Item	Power Density		
Test Mode	Mode 1: Transmit		
Date of Test	2013/12/12	Test Site	SR7

## IEEE 802.11g, ANT 0

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412	0.164	≤8	Pass
6	2437	-1.294	≤8	Pass
11	2462	-1.418	≤8	Pass

Channel 1

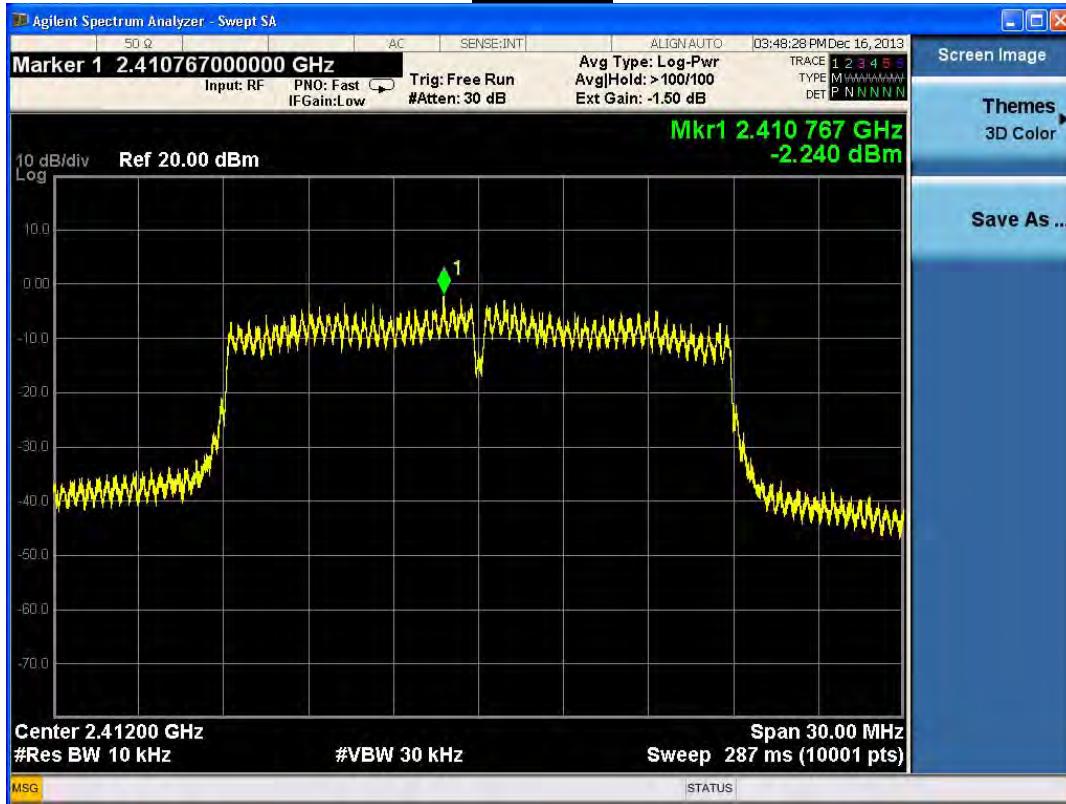
**Channel 6****Channel 11**

Product	Wicorder		
Test Item	Power Density		
Test Mode	Mode 1: Transmit		
Date of Test	2013/12/16	Test Site	SR7

## IEEE802.11n\_20MHz, ANT 0

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412	-2.240	≤8	Pass
6	2437	-2.159	≤8	Pass
11	2462	-1.586	≤8	Pass

## Channel 1



**Channel 6****Channel 11**