JQA File No. : KL80100554
Issue Date : April 12, 2011

TEST REPORT

APPLICANT	:	Sharp Corporation, Communication Systems Group
ADDRESS	:	2-13-1, Iida Hachihonmatsu, Higashi-Hiroshima City, Hiroshima, 739-0192, JAPAN
PRODUCTS	:	Cellular Phone
MODEL NO.	:	SH-10C
SERIAL NO.	:	004401113245175 004401113245241
FCC ID	:	APYHRO00145
TEST STANDARD	:	CFR 47 FCC Rules and Regulations Part 15
TESTING LOCATION	:	Japan Quality Assurance Organization KITA-KANSAI Testing Center 1-7-7, Ishimaru, Minoh-shi, Osaka 562-0027, Japan
TEST RESULTS	:	**Passed**
DATE OF TEST	:	March 29, 2011 ~ April 5, 2011

This report must not used by the client to claim product endorsement by NVLAP or NIST or any agency of the U.S. Government.

NVLAP LAB CODE 200191-0

Kousei Shibata
Manager
Japan Quality Assurance Organization
KITA-KANSAI Testing Center
Testing Dept. EMC Division
1-7-7, Ishimaru, Minoh-shi, Osaka 562-0027, Japan

TABLE OF CONTENTS

DEFINITIONS FOR ABBREVIATION AND SYMBOLS USED IN THIS TEST REPORT

EUT : Equipment Under Test
AE : Associated Equipment
N/A : Not Applicable
N/T : Not Tested
EMC : Electromagnetic Compatibility
EMI : Electromagnetic Interference
EMS : Electromagnetic Susceptibility

☒ - indicates that the listed condition, standard or equipment is applicable for this report.
☐ - indicates that the listed condition, standard or equipment is not applicable for this report.

Documentation

1 Test Regulation

Applied Standard : CFR 47 FCC Rules and Regulations Part 15
Subpart C – Intentional Radiators

Test Requirements : §15.247, §15.207 and §15.209

Test Procedure : ANSI C63.4–2003
The tests were performed with reference to the FCC Public Notice DA 00-705, released March 30, 2000.
The test set-up was made in accordance to the general provisions of ANSI C63.4-2003.

2 Test Location

KITA-KANSAI Testing Center
1-7-7, Ishimaru, Minoh-shi, Osaka 562-0027, Japan
KAMEOKA EMC Branch
9-1, Ozaki, Inukanno, Nishibetsuin-cho, Kameoka-shi, Kyoto 621-0126, Japan

3 Recognition of Test Laboratory

VLAC Code : VLAC-001-2 (Effective through : March 30, 2012)
NVLAP Lab Code : 200191-0 (Effective through : June 30, 2011)
BSMI Recognition No. : SL2-IS-E-6006, SL2-IN-E-6006, SL2-AI-E-6006
(Effective through : September 14, 2013)

VCCI Registration No. : R-008, C-006, C-007, C-1674, C-2143, C-3685, T-1418, T-1419, T-1819, T-1820, T-1821, G-172, G-173
(Effective through : March 30, 2012)
IC Registration No. : 2079E-1, 2079E-2 (Effective through : January 25, 2014)

Accredited as conformity assessment body for Japan electrical appliances and material law by METI. (Effective through : February 22, 2012)

4 Description of the Equipment Under Test

4.1 General Information

1.	Manufacturer	:	Sharp Corporation, Communication Systems Group 2-13-1, Iida Hachihonmatsu, Higashi-Hiroshima City, Hiroshima, 739-0192, JAPAN
2.	Products	:	Cellular Phone
3.	Model No.	:	SH-10C
4.	Serial No.	:	004401113245175
		:	004401113245241
5.	Product Type	:	Pre-production
6.	Date of Manufacture	:	March, 2011
7.	Transmitting Frequency	:	2412.0 MHz(01CH) –2462.0MHz(11CH)
8.	Receiving Frequency	:	2412.0 MHz(01CH) –2462.0MHz(11CH)
9.	Max. RF Output Power	:	18.43dBm(Measure Value of IEEE802.11b)
		:	20.78dBm(Measure Value of IEEE802.11g)
		:	20.58dBm(Measure Value of IEEE802.11n)
10.	Power Rating	:	4.0VDC (Lithium-ion Battery Pack SH27 800mAh)
11.	EUT Grounding	:	None
12.	EUT Authorization	:	Certification
13.	Receive Date of EUT	:	March 27, 2011

4.2 Channel Plan

The carrier spacing is 5 MHz.
The carrier frequency is designated by the absolute frequency channel number (ARFCN).
The carrier frequency is expressed in the equation shown as follows:

Transmitting Frequency (in MHz) = 2407.0 + 5*n
Receiving Frequency (in MHz) = 2407.0 + 5*n
where, n : channel number ($1 \leq n \leq 11$)

5 Test Condition

5.1 Channel Separation

The requirements are ☐ - Applicable [☐ - Tested. ☐ - Not tested by applicant request.]
☒ - Not Applicable

Test site : KITA-KANSAI ☐ - Shielded room ☐ - 2nd Shielded room
KAMEOKA ☐ - Shielded room ☐ - Conducted emission facility

Test instruments : Refer to Appendix C.

5.2 Minimum Hopping Channel

The requirements are ☐ - Applicable [☐ - Tested. ☐ - Not tested by applicant request.]
☒ - Not Applicable

Test site : KITA-KANSAI ☐ - Shielded room ☐ - 2nd Shielded room
KAMEOKA ☐ - Shielded room ☐ - Conducted emission facility

Test instruments : Refer to Appendix C.

5.3 Occupied Bandwidth

The requirements are ☒ - Applicable [☒ - Tested. ☐ - Not tested by applicant request.]
☐ - Not Applicable

Test site : KITA-KANSAI ☒ - Shielded room ☐ - 2nd Shielded room
KAMEOKA ☐ - Shielded room ☐ - Conducted emission facility

Test instruments : Refer to Appendix C.

5.4 Dwell Time

The requirements are ☐ - Applicable [☐ - Tested. ☐ - Not tested by applicant request.]
☒ - Not Applicable

Test site : KITA-KANSAI ☐ - Shielded room ☐ - 2nd Shielded room
KAMEOKA ☐ - Shielded room ☐ - Conducted emission facility

Test instruments : Refer to Appendix C.

5.5 Peak Output Power and Density (Conduction)

The requirements are ☒ - Applicable [☒ - Tested. ☐ - Not tested by applicant request.]
☐ - Not Applicable

Test site : KITA-KANSAI ☒ - Shielded room ☐ - 2nd Shielded room
KAMEOKA ☐ - Shielded room ☐ - Conducted emission facility

Test instruments : Refer to Appendix C.

5.6 Spurious Emission (Conduction)

The requirements are ☒ - Applicable [☒ - Tested. ☐ - Not tested by applicant request.]
☐ - Not Applicable

Test site : KITA-KANSAI ☒ - Shielded room ☐ - 2nd Shielded room
KAMEOKA ☐ - Shielded room ☐ - Conducted emission facility

Test instruments : Refer to Appendix C.

5.7 AC Powerline Conducted Emission

The requirements are ☒ - Applicable [☒ - Tested. ☐ - Not tested by applicant request.]
☐ - Not Applicable

Test site : KITA-KANSAI ☒ - Shielded room ☐ - Anechoic chamber
KAMEOKA ☐ - Shielded room ☐ - Conducted emission facility
☐ - 1st open site

Test instruments : Refer to Appendix C.

5.8 Field Strength of Spurious Radiation

The requirements are ☒ - Applicable [☒ - Tested. ☐ - Not tested by applicant request.]
☐ - Not Applicable

Test site : ☒ - KAMEOKA 1st open site ☒ - 3 m ☐ - 10 m
☐ - KAMEOKA 2nd open site ☐ - 3 m ☐ - 10 m

Test instruments : Refer to Appendix C.

6 Preliminary Test and Test Setup

6.1 Channel Separation

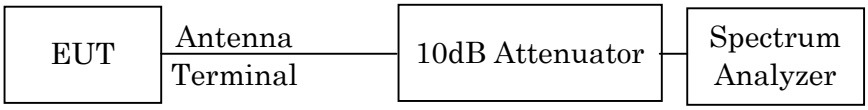
Not Applicable

6.2 Minimum Hopping Channel

Not Applicable

6.3 Occupied Bandwidth

The test system is shown as follows:



The setting of the spectrum analyzer are shown as follows:

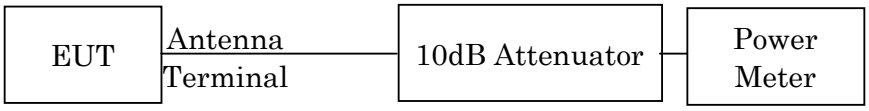
Res. Bandwidth	100 kHz
Video Bandwidth	100 kHz
Span	30 MHz
Sweep Time	AUTO
Trace	Maxhold

6.4 Dwell Time

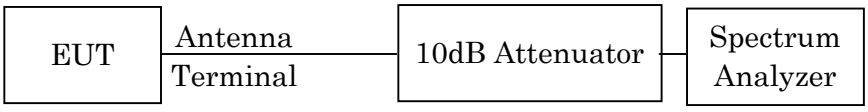
Not Applicable

6.5 Peak Output Power and Peak Power Density

The Conducted RF Power Output was measured with a power meter, one 10dB attenuator and a short, low loss cable.

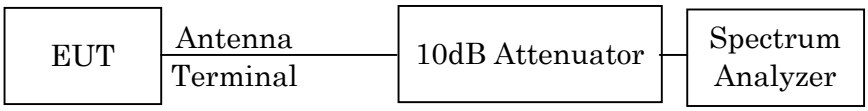


The Peak Power Density was measured with a power meter, one 10dB attenuator and a short, low loss cable.



6.6 Spurious Emission(Conduction)

The test system is shown as follows:



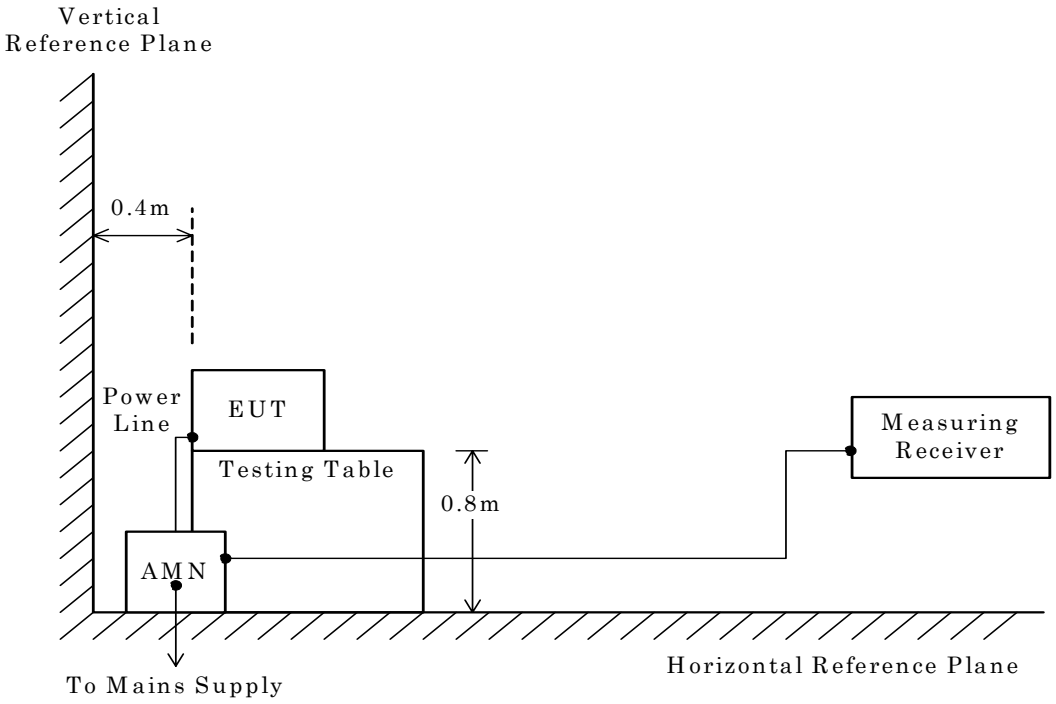
The setting of the spectrum analyzer are shown as follows:

Frequency Range	30 MHz - 25 GHz	Band-Edge
Res. Bandwidth	100 kHz	100 kHz
Video Bandwidth	300 kHz	300 kHz
Sweep Time	AUTO	AUTO
Trace	Maxhold	Maxhold

6.7 AC Powerline Conducted Emission

The preliminary tests were performed using the scan mode of test receiver or spectrum analyzer to observe the emissions characteristics of the EUT.
The EUT configuration, cable configuration and mode of operation were determined for producing the maximum level of emissions.
This configurations was used for final tests.

– Side View –



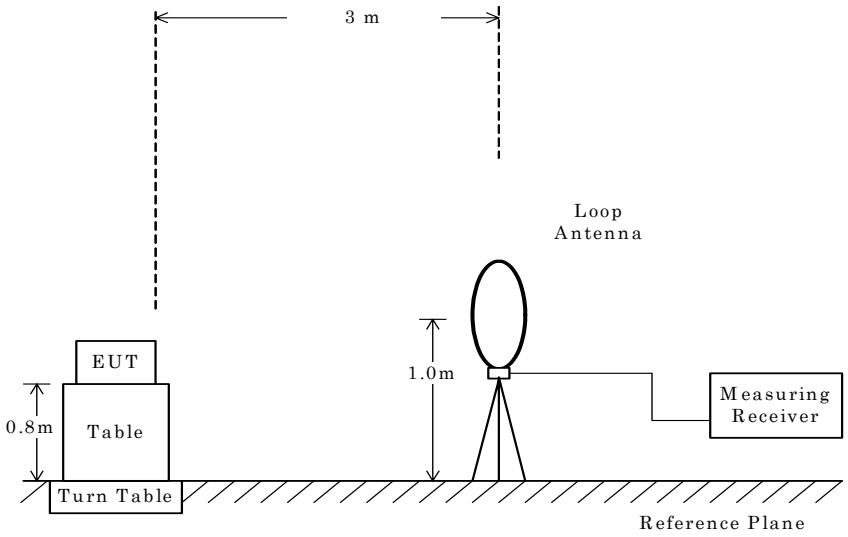
NOTE
AMN : Artificial Mains Network

6.8 Field Strength of Spurious Emission

6.8.1 Field Strength of Spurious Emission 9 kHz – 30 MHz

The preliminary tests were performed at the measurement distance that specified for compliance to determine the emission characteristics of the EUT.
The EUT configuration(in X, Y and Z axis), cable configuration and mode of operation were determined for producing the maximum level of emissions.
This configurations was used for the final tests.

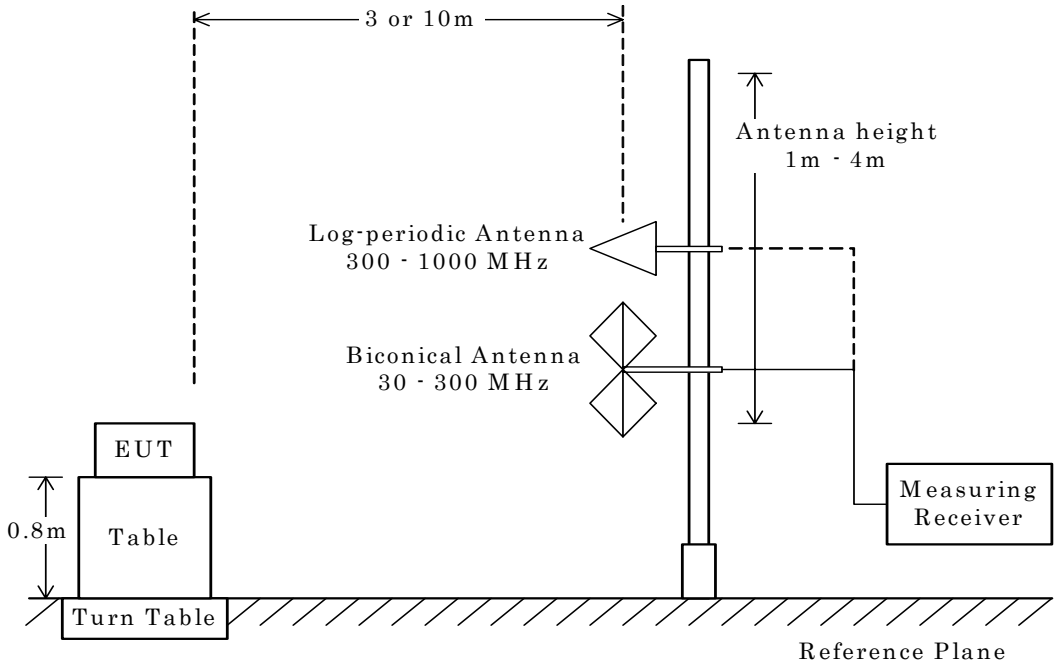
– Side View –



6.8.2 Field Strength of Spurious Emission 30 MHz – 1000 MHz

The preliminary tests were performed at the measurement distance that specified for compliance to determine the emission characteristics of the EUT.
The EUT configuration(in X, Y and Z axis), cable configuration and mode of operation were determined for producing the maximum level of emissions.
This configurations was used for the final tests.

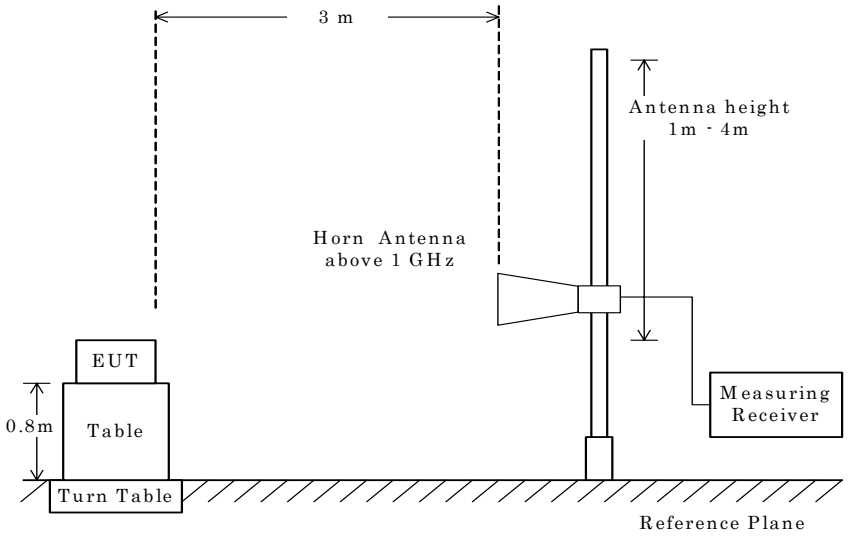
– Side View –



6.8.3 Field Strength of Spurious Emission above 1 GHz

The preliminary tests were performed at the measurement distance that specified for compliance to determine the emission characteristics of the EUT.
The EUT configuration(in X, Y and Z axis), cable configuration and mode of operation were determined for producing the maximum level of emissions.
This configurations was used for the final tests.

– Side View –



NOTE
The antenna height is scanned depending on the EUT's size and mounting height.

7 Equipment Under Test Modification

☒ - No modifications were conducted by JQA to achieve compliance to the limitations.
☐ - To achieve compliance to the limitations, the following changes were made by JQA during the compliance test.

The modifications will be implemented in all production models of this equipment.

Applicant : Not Applicable
Date : Not Applicable
Typed Name : Not Applicable
Position : Not Applicable Signatory : Not Applicable

8 Responsible Party

Responsible Party of Test Item (Product)

Responsible Party :

Contact Person :

Signatory

9 Deviation from Standard

☒ - No deviations from the standard described in clause 1.
☐ - The following deviations were employed from the standard described in clause 1.

10 Test Results

10.1 RF Power Output (§2.1046)

10.1.1 Channel Separation

The requirements are ☐ - Applicable [☐ - Tested. ☐ - Not tested by applicant request.]
☒ - Not Applicable

☐ - **Passed** ☐ - **Failed** ☐ - **Not judged**

Channel Separation is _____ MHz
Channel Separation(Inquiry) is _____ MHz

Uncertainty of Measurement Results +/-0.9 %(2σ)

Remarks : _____

10.1.2 Minimum Hopping Channel

The requirements are ☐ - Applicable [☐ - Tested. ☐ - Not tested by applicant request.]
☒ - Not Applicable

Number of Channel is _____
Number of Channel (Inquiry) is _____

Remarks : _____

10.1.3 Occupied Bandwidth

The requirements are ☒ - Applicable [☐ - Tested. ☐ - Not tested by applicant request.]
☐ - Not Applicable

☒ - **Passed** ☐ - **Failed** ☐ - **Not judged**

The 99% Bandwidth of IEEE802.11b is	12.532	MHz	at	2437.0 MHz
The 99% Bandwidth of IEEE802.11g is	16.312	MHz	at	2412.0 MHz
The 99% Bandwidth of IEEE802.11n is	17.575	MHz	at	2412.0 MHz
The 6dB Bandwidth of IEEE802.11b is	8.242	MHz	at	2462.0 MHz
The 6dB Bandwidth of IEEE802.11g is	15.120	MHz	at	2462.0 MHz
The 6dB Bandwidth of IEEE802.11n is	15.458	MHz	at	2437.0 MHz

Uncertainty of Measurement Results +/-0.9 %(2σ)

Remarks : _____

10.1.4 Dwell Time

The requirements are ☐ - Applicable [☐ - Tested. ☐ - Not tested by applicant request.]
☒ - Not Applicable

☐ - **Passed** ☐ - **Failed** ☐ - **Not judged**

Dwell Time is _____ msec
Dwell Time (Inquiry) is _____ msec

Uncertainty of Measurement Results +/-0.6 %(2σ)

Remarks : _____

10.1.5 Peak Output Power(Conduction)

The requirements are ☒ - Applicable [☒ - Tested. ☐ - Not tested by applicant request.]
☐ - Not Applicable

Peak Output Power of IEEE802.11b is	18.43	dBm	at	2462.0 MHz
Peak Output Power of IEEE802.11g is	20.78	dBm	at	2462.0 MHz
Peak Output Power of IEEE802.11n is	20.58	dBm	at	2462.0 MHz

Uncertainty of Measurement Results at Amplitude +/-1.2 dB(2σ)

Remarks : _____

10.1.6 Peak Power Density(Conduction)

The requirements are ☒ - Applicable [☒ - Tested. ☐ - Not tested by applicant request.]
☐ - Not Applicable

Peak Power Density of IEEE802.11b is	-6.43	dBm	at	2437.0 MHz
Peak Power Density of IEEE802.11g is	-12.38	dBm	at	2462.0 MHz
Peak Power Density of IEEE802.11n is	-12.86	dBm	at	2462.0 MHz

Uncertainty of Measurement Results at Amplitude +/-0.8 dB(2σ)

Remarks : _____

10.2 Spurious Emissions(Conduction)

The requirements are ☒ - Applicable [☒ - Tested. ☐ - Not tested by applicant request.]
☐ - Not Applicable

☒ - **Passed** ☐ - **Failed** ☐ - **Not judged**

Uncertainty of Measurement Results		
9 kHz – 1GHz	+/-1.0	dB(2σ)
1GHz – 18GHz	+/-1.2	dB(2σ)
18GHz – 40GHz	+/-1.6	dB(2σ)

Remarks : _____

10.3 AC Powerline Conducted Emission

The requirements are ☒ - Applicable [☒ - Tested. ☐ - Not tested by applicant request.]
☐ - Not Applicable

☒ - **Passed** ☐ - **Failed** ☐ - **Not judged**

Min. Limit Margin (Average)	14.8	dB	at	41.6 MHz
Max. Limit Exceeding (Quasi-Peak)		dB	at	MHz
Uncertainty of Measurement Results				+/-2.5 dB(2σ)

Remarks : _____

10.4 Field Strength of Spurious Emission

The requirements are ☒ - Applicable [☒ - Tested. ☐ - Not tested by applicant request.]
☐ - Not Applicable

☒ - **Passed** ☐ - **Failed** ☐ - **Not judged**

Min. Limit Margin (Average)	>4.0	dB	at	22158.0 MHz
Max. Limit Exceeding (Average)		dB	at	MHz

Uncertainty of Measurement Results		
9 kHz – 30 MHz	+/-1.7	dB(2σ)
30 MHz – 300 MHz	+/-4.3	dB(2σ)
300 MHz – 1000 MHz	+/-4.5	dB(2σ)
1 GHz – 18 GHz	+/-4.0	dB(2σ)
18 GHz – 40 GHz	+/-4.7	dB(2σ)

Remarks : _____

11 Summary

General Remarks :

The EUT was tested according to the requirements of the following standard.
CFR 47 FCC Rules and Regulations Part 15
The test configuration is shown in clause 12 to 14.
The conclusion for the test items of which are required by the applied regulation is indicated under the test results.
Determining compliance with the limits in this report was based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

Test Results :

The "as received" sample;

☒ - fulfill the test requirements of the regulation mentioned on clause 1.
☐ - doesn't fulfill the test requirements of the regulation mentioned on clause 1.

Reviewed by:

Shigeru Kinoshita
Deputy Manager
Testing Dept. EMC Div.
JQA KITA-KANSAI Testing Center

Tested by:

Shigeru Osawa
Deputy Manager
Testing Dept. EMC Div.
JQA KITA-KANSAI Testing Center

12 Operating Condition

Transmitting/Receiving

Transmitting frequency : 2412.0 MHz(1CH) – 2462.0 MHz(11CH)
Receiver frequency : 2412.0 MHz(1CH) – 2462.0 MHz(11CH)

Modulation Type
1. 802.11b : DSSS
2. 802.11g : OFDM
3. 802.11n : OFDM

Other Clock Frequency
27.12MHz, 52MHz, 26MHz, 27.456MHz, 40.95MHz, 48MHz, 32.768kHz

13 Test Configuration

The equipment under test (EUT) consists of :

	Item	Manufacturer	Model No.	Serial No.	FCC ID
A	Cellular Phone	Sharp	SH-10C	004401113245175*1) 004401113245241*2)	APYHRO00145
B	Lithium-ion Battery	Sharp	SH27	--	N/A
C	AC Adapter for Global use	NTT DoCoMo	MAS-BH0008 -A 002	--	N/A
D	Headset Conversion Cable	NTT DoCoMo	P01	--	N/A
E	Arib Connector Adaptor	SMK	--	--	N/A
F	Stereo Handsfree	Sharp	SHLDL1	--	N/A

*1) Used for AC Powerline Conducted Emission and Field Strength of Spurious Emission
*2) Used for Antenna Conducted Emission

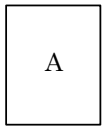
The auxiliary equipment used for testing :
None

Type of Cable:

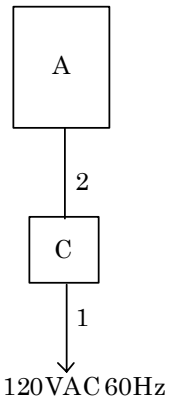
No.	Description	Identification (Manu. etc.)	Connector Shielded	Cable Shielded	Ferrite Core	Length (m)
1	AC Power Cord	--	--	NO	NO	0.5
2	DC Power Cord	--	NO	--	NO	1.5
3	Headset Conversion Cable	--	--	NO	NO	0.8
4	Arib Connector Cable	--	--	NO	NO	0.1
5	Handsfree Cable	--	NO	--	NO	1.5

14 Equipment Under Test Arrangement (Drawings)

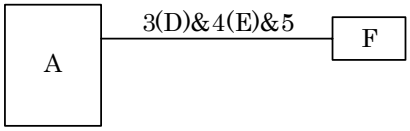
a) Single Unit



b) AC Adapter used



c) Stereo Handsfree used



Appendix A: Test Data

A.1 Channel Separation

Not Applicable

A.2 Minimum Hopping Channel

Not Applicable

A.3 Occupied Bandwidth

Test Date : March 29, 2011
Temp.:20°C, Humi:24%

The resolution bandwidth was set to about 1% of emission bandwidth, -6dBc display line was placed on the screen (or 99% bandwidth), the occupied bandwidth is the delta frequency between the two points where the display line intersects the signal trace.

A) IEEE 802.11b

1)Data Rate : 1Mbps

Channel	Frequency (MHz)	99% Bandwidth (MHz)	-6dBc Bandwidth (MHz)
01	2412.0	12.459	8.097
06	2437.0	12.467	8.059
11	2462.0	12.499	7.125

2)Data Rate : 2Mbps

Channel	Frequency (MHz)	99% Bandwidth (MHz)	-6dBc Bandwidth (MHz)
01	2412.0	12.502	7.673
06	2437.0	12.494	8.037
11	2462.0	12.471	8.068

3)Data Rate : 5.5Mbps

Channel	Frequency (MHz)	99% Bandwidth (MHz)	-6dBc Bandwidth (MHz)
01	2412.0	12.529	7.909
06	2437.0	12.532	7.839
11	2462.0	12.492	7.573

4)Data Rate : 11Mbps

Channel	Frequency (MHz)	99% Bandwidth (MHz)	-6dBc Bandwidth (MHz)
01	2412.0	12.398	7.892
06	2437.0	12.456	8.108
11	2462.0	12.432	8.242

B) IEEE 802.11g

1)Data Rate : 6Mbps

Channel	Frequency (MHz)	99% Bandwidth (MHz)	-6dBc Bandwidth (MHz)
01	2412.0	16.312	15.047
06	2437.0	16.297	15.086
11	2462.0	16.296	15.120

2)Data Rate : 54Mbps

Channel	Frequency (MHz)	99% Bandwidth (MHz)	-6dBc Bandwidth (MHz)
01	2412.0	16.273	15.038
06	2437.0	16.249	15.114
11	2462.0	16.290	15.106

C) IEEE 802.11n

1)Data Rate : 6.5Mbps

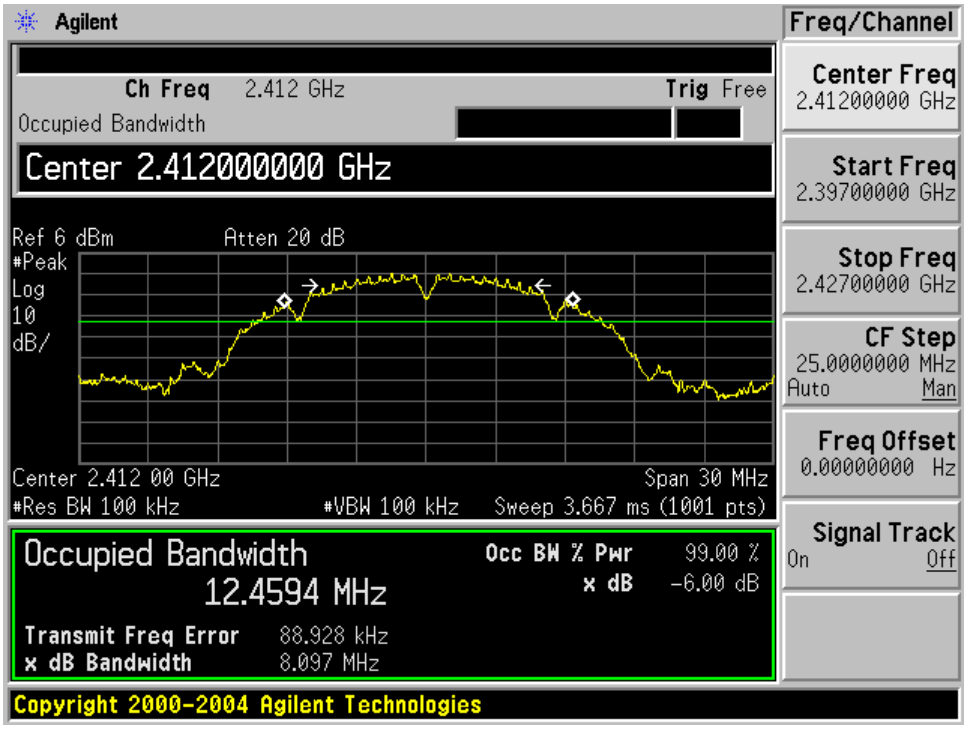
Channel	Frequency (MHz)	99% Bandwidth (MHz)	-6dBc Bandwidth (MHz)
01	2412.0	17.525	13.829
06	2437.0	17.531	13.883
11	2462.0	17.542	15.384

2)Data Rate :65Mbps

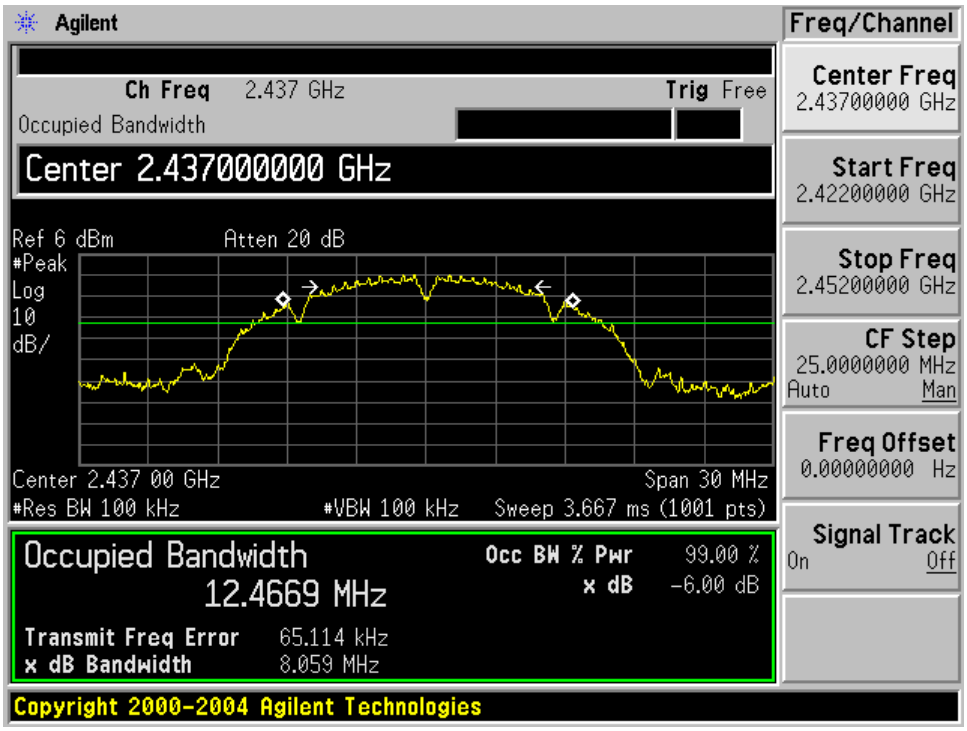
Channel	Frequency (MHz)	99% Bandwidth (MHz)	-6dBc Bandwidth (MHz)
01	2412.0	17.575	15.125
06	2437.0	17.525	15.458
11	2462.0	17.541	15.153

1)Data Rate : 1Mbps(IEEE 802.11b)

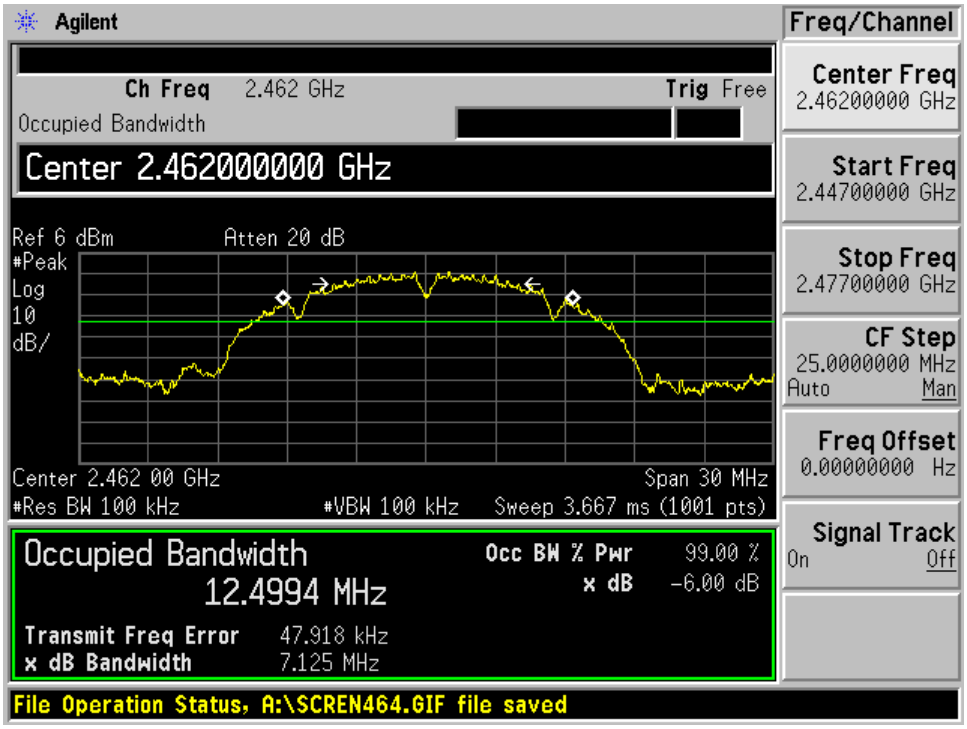
Low Channel



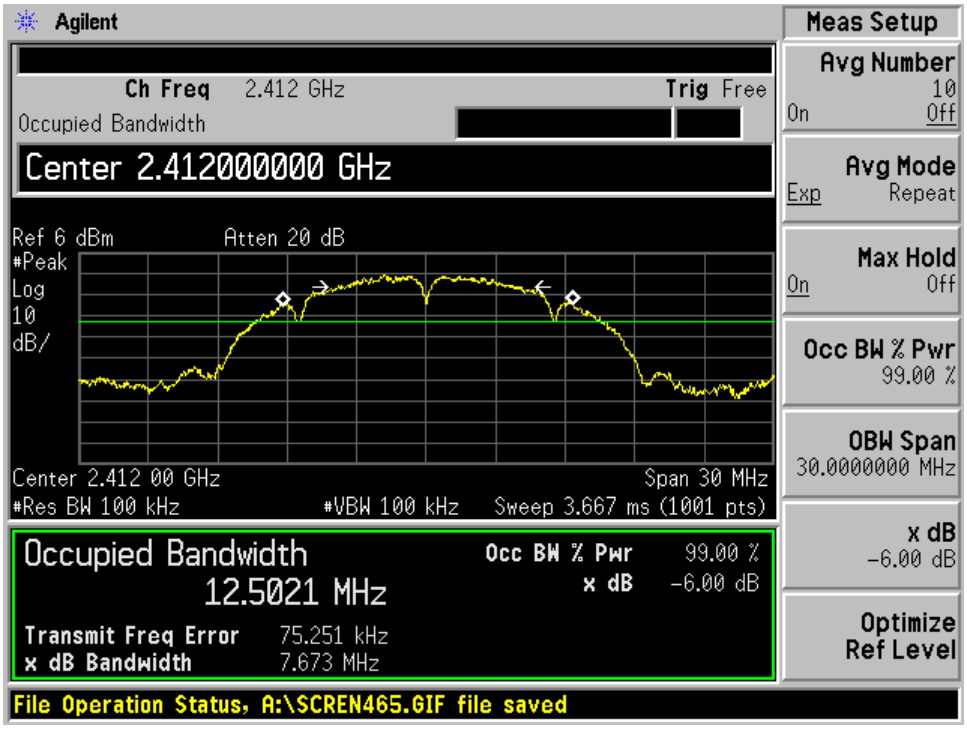
Middle Channel



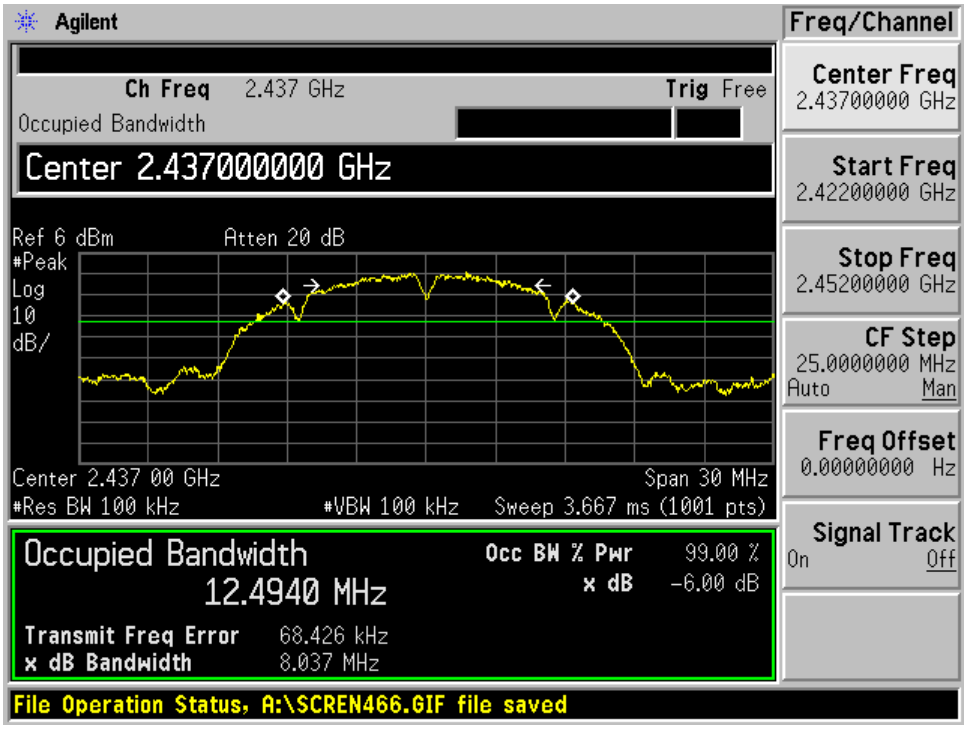
High Channel



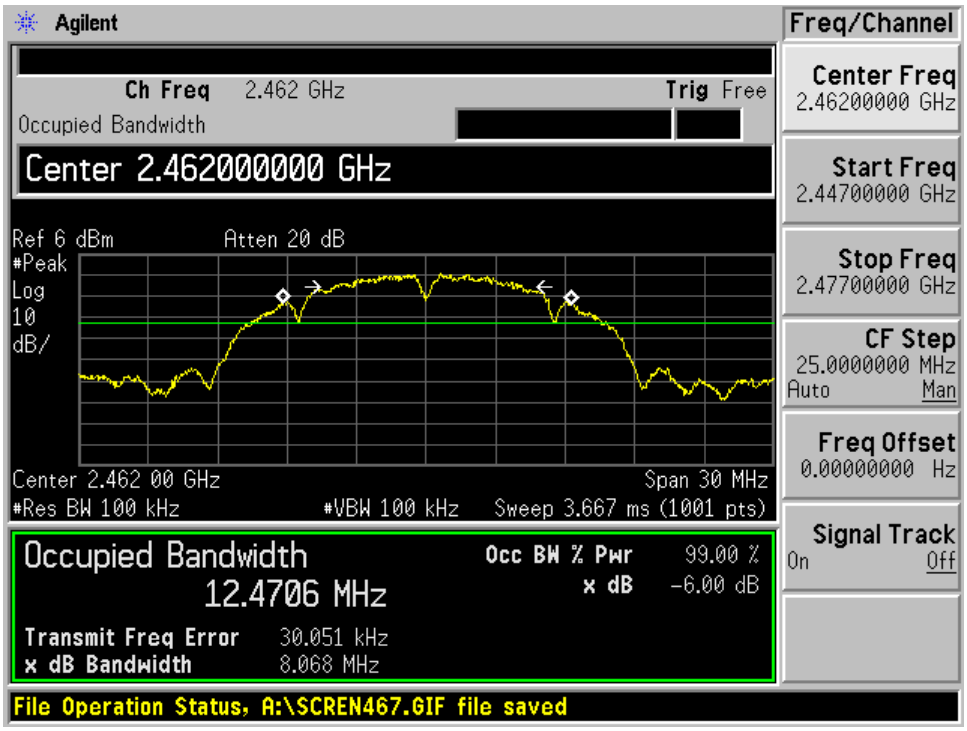
2)Data Rate : 2Mbps(IEEE 802.11b)
Low Channel



Middle Channel

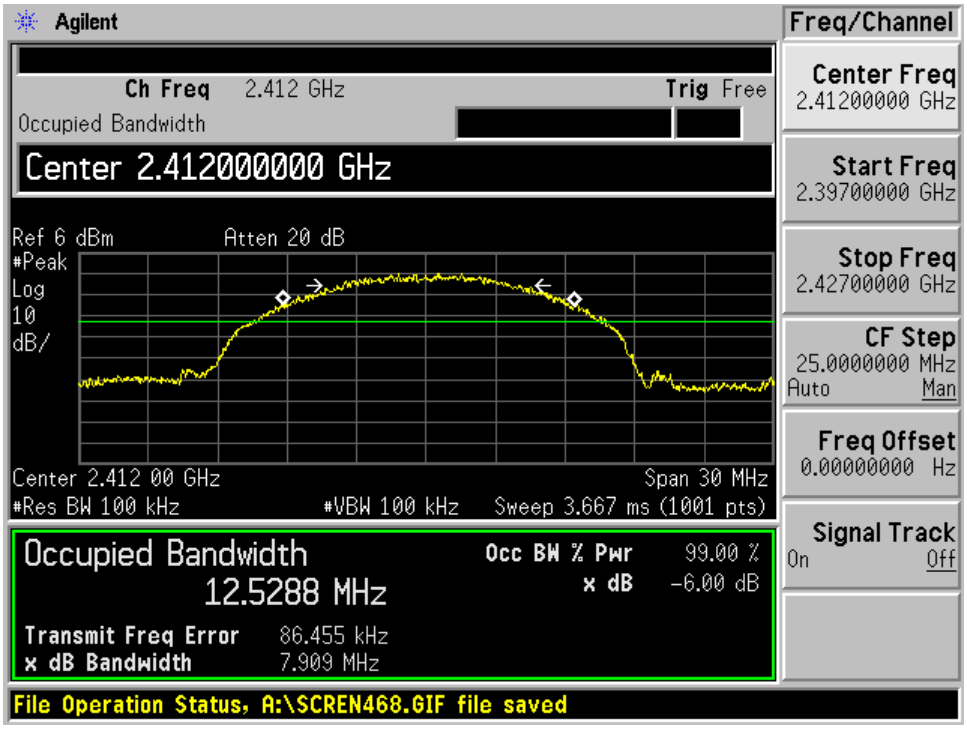


High Channel

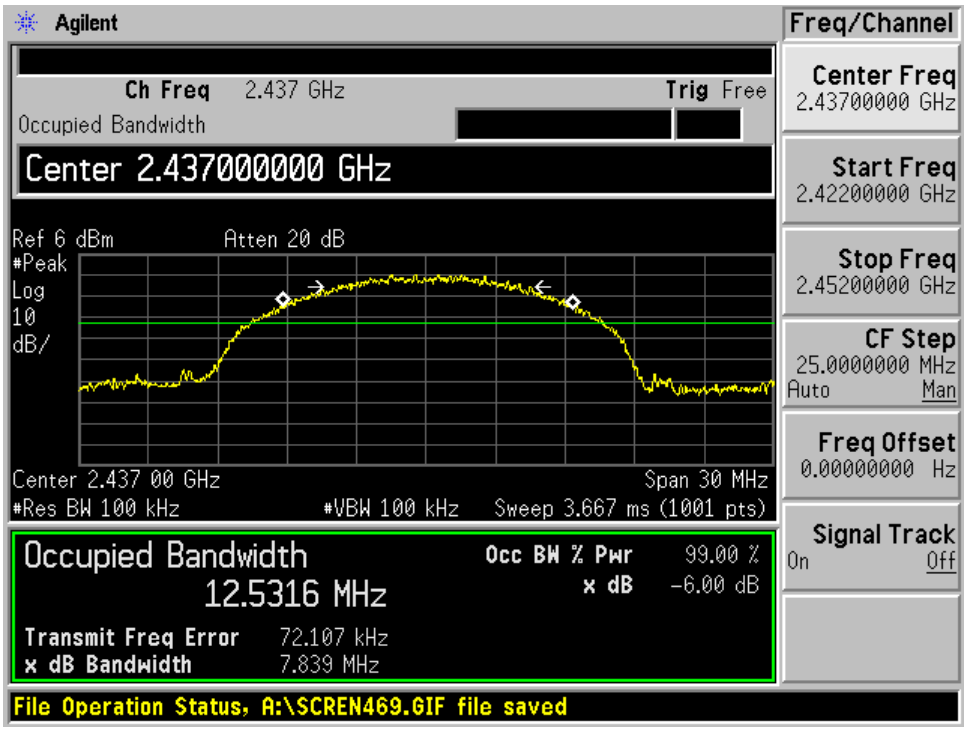


3)Data Rate : 5.5Mbps(IEEE 802.11b)

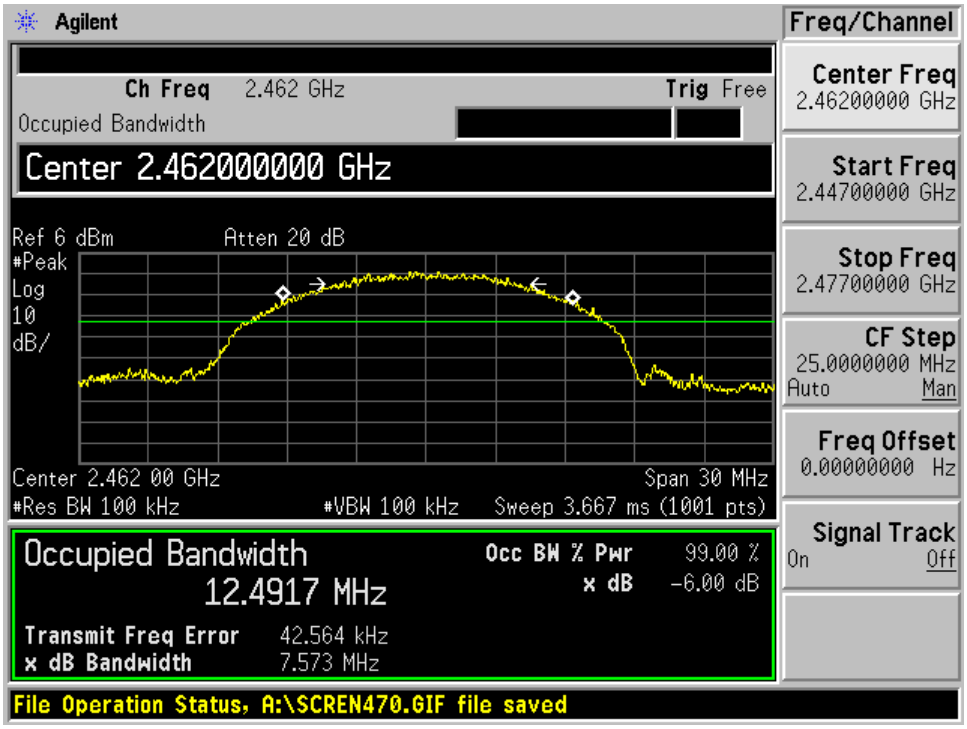
Low Channel



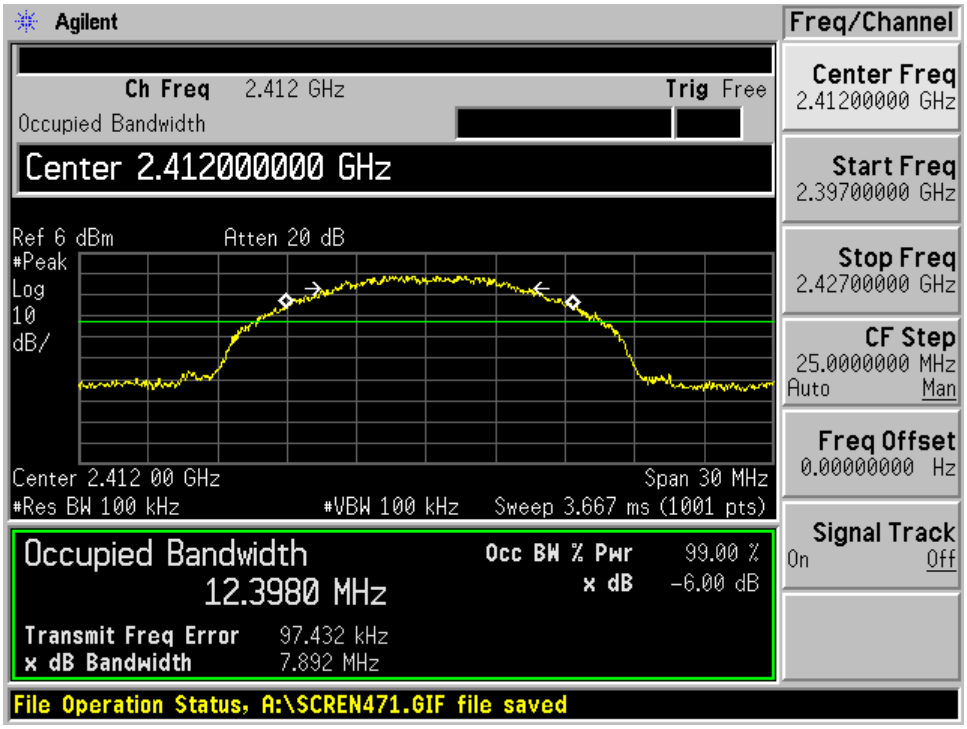
Middle Channel



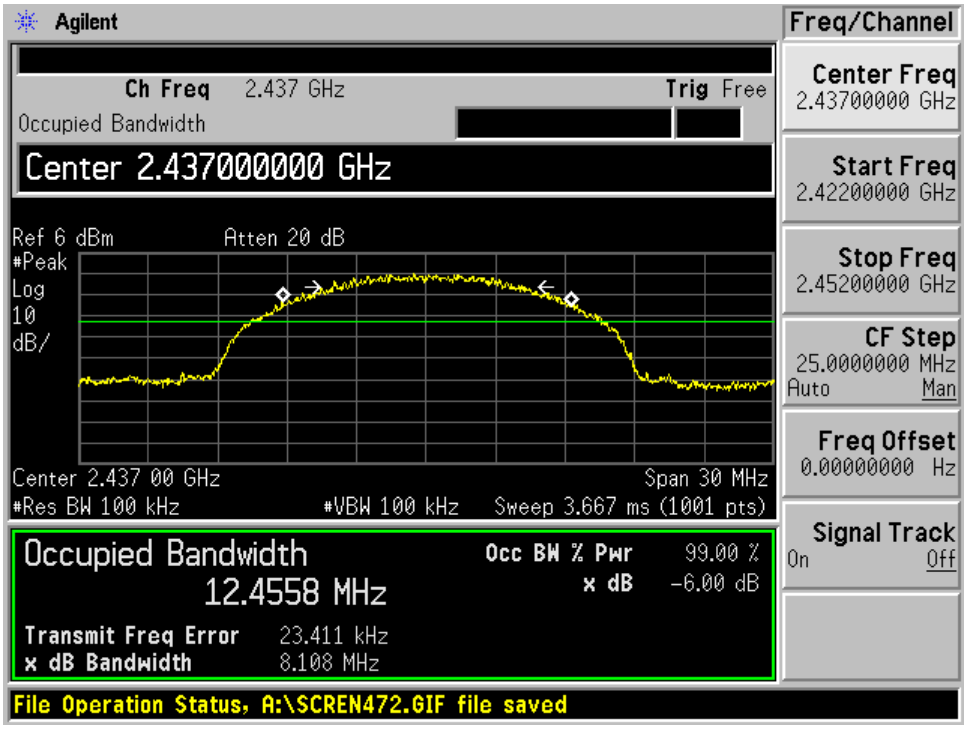
High Channel



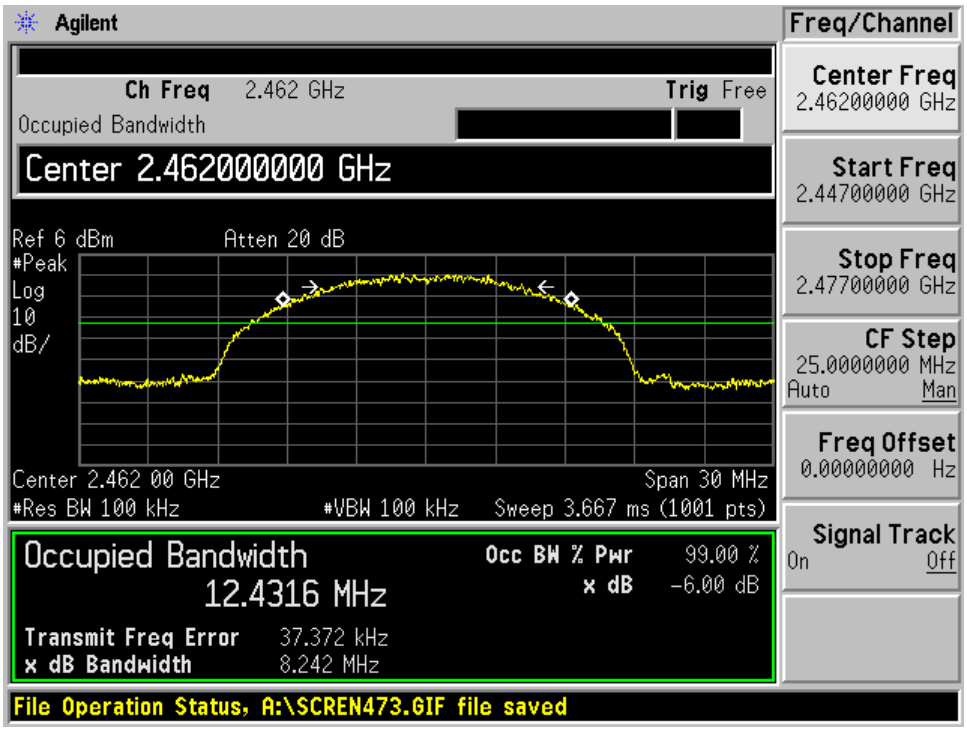
4)Data Rate : 11Mbps(IEEE 802.11b)
Low Channel



Middle Channel

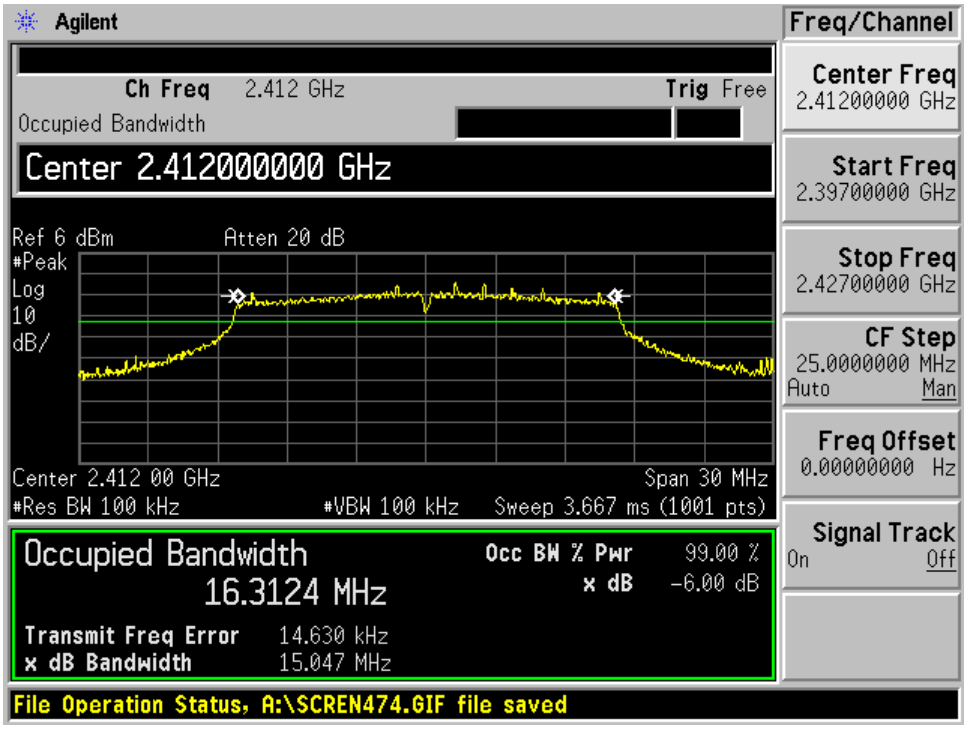


High Channel

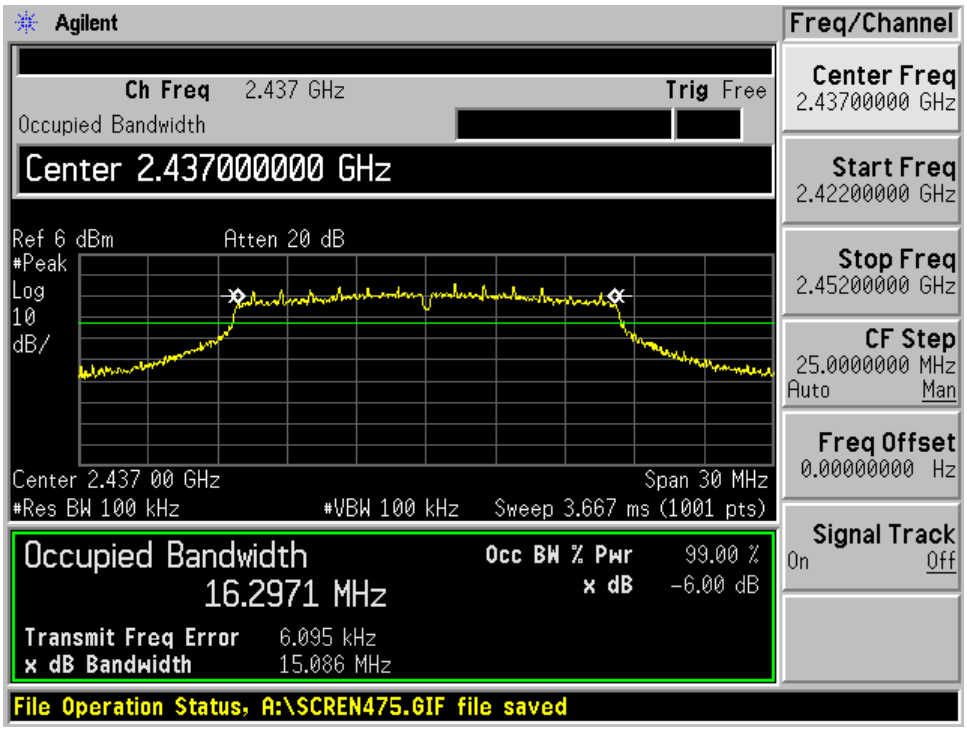


5)Data Rate : 6Mbps(IEEE 802.11g)

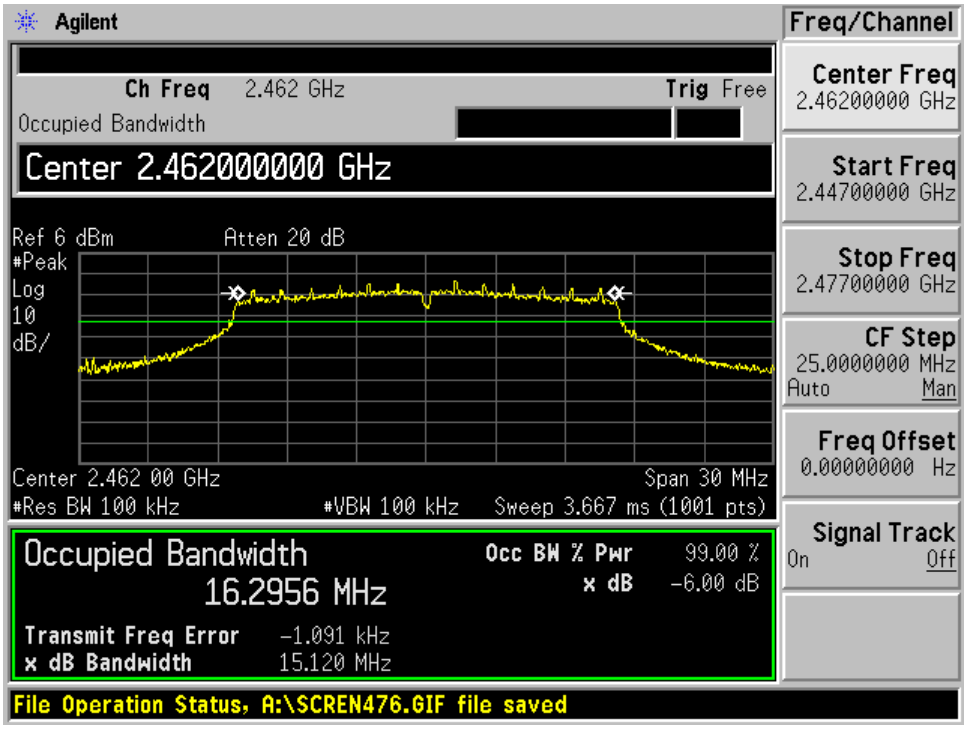
Low Channel



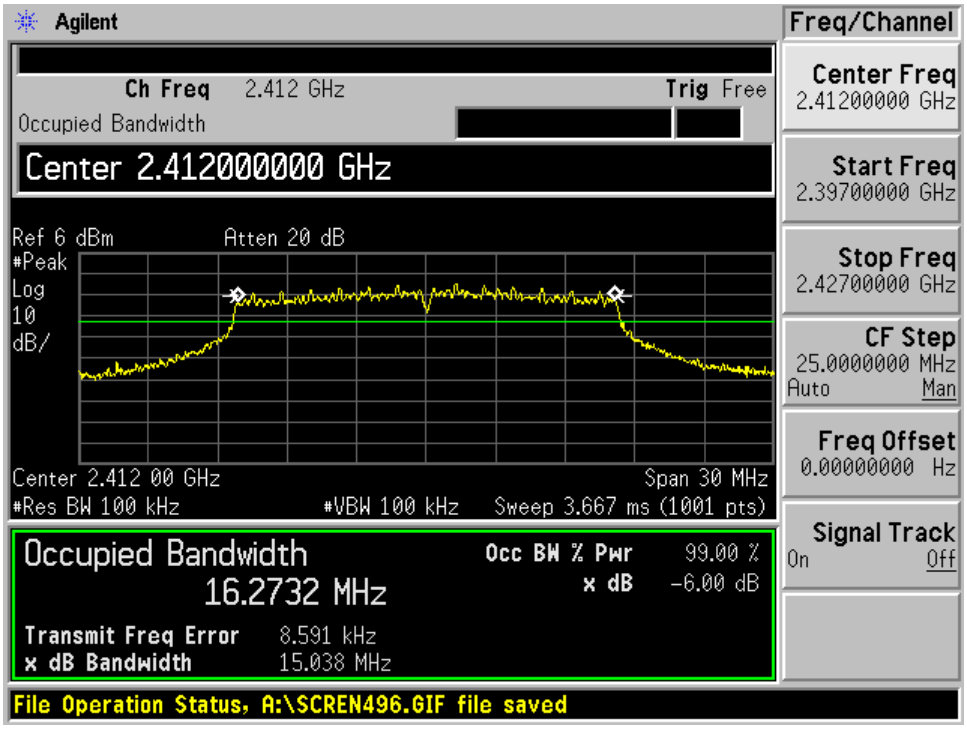
Middle Channel



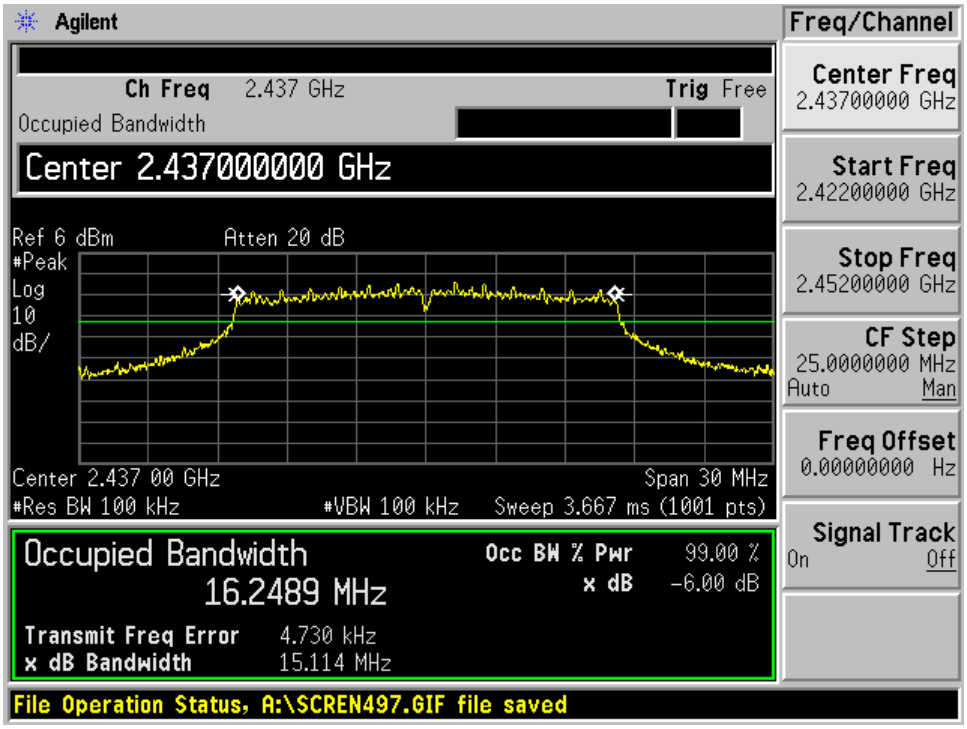
High Channel



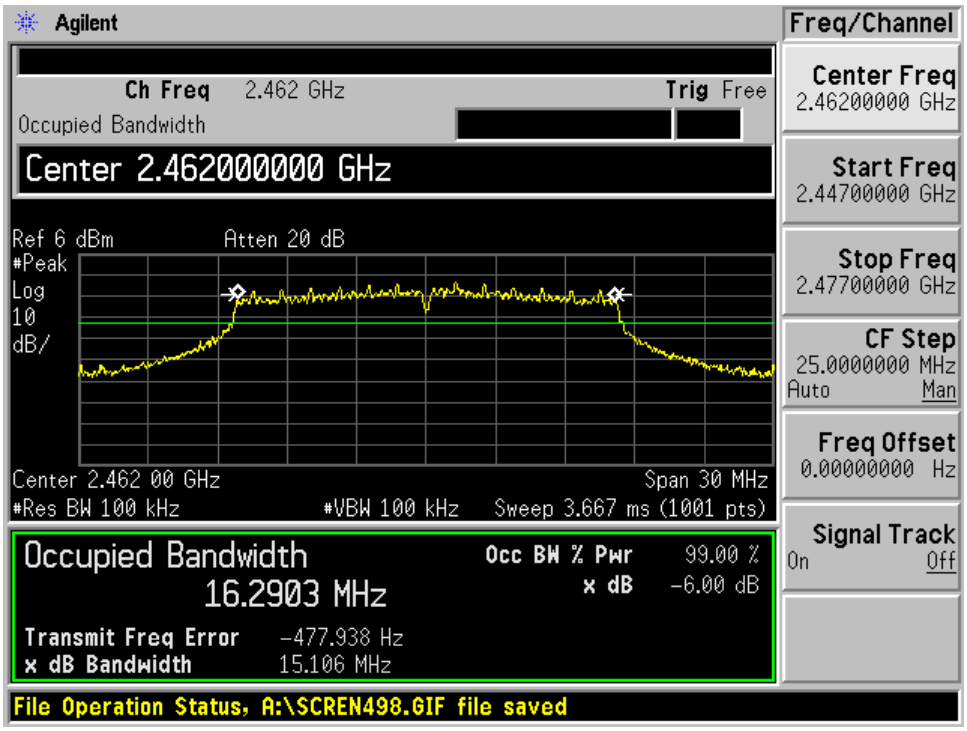
6)Data Rate : 54Mbps(IEEE 802.11g)
Low Channel



Middle Channel

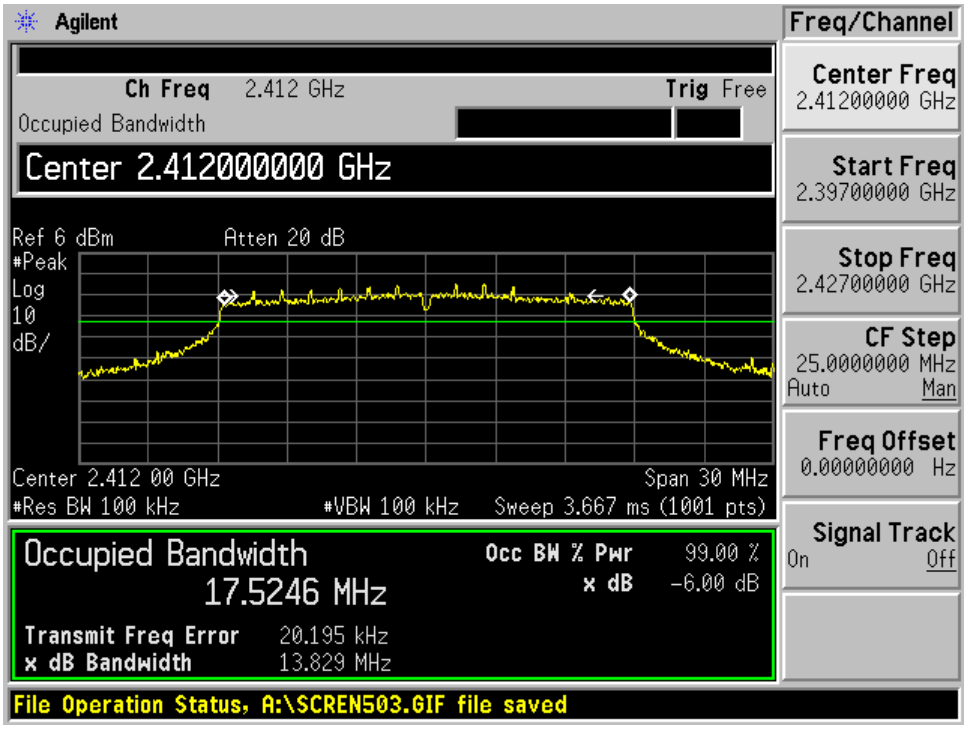


High Channel

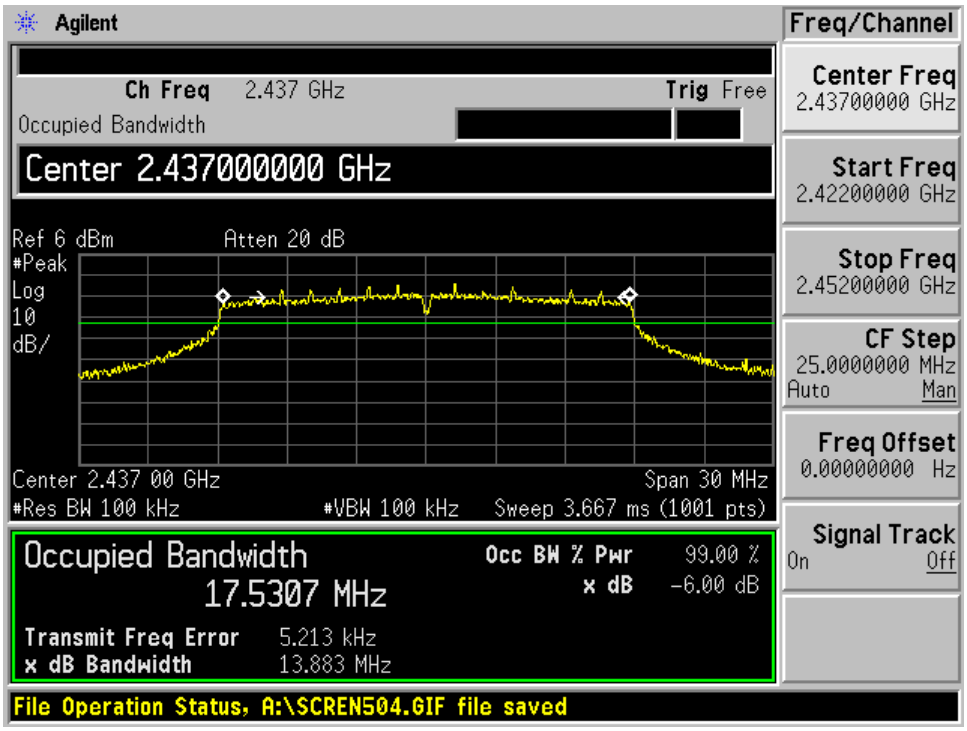


7)Data Rate : 6.5Mbps(IEEE 802.11n)

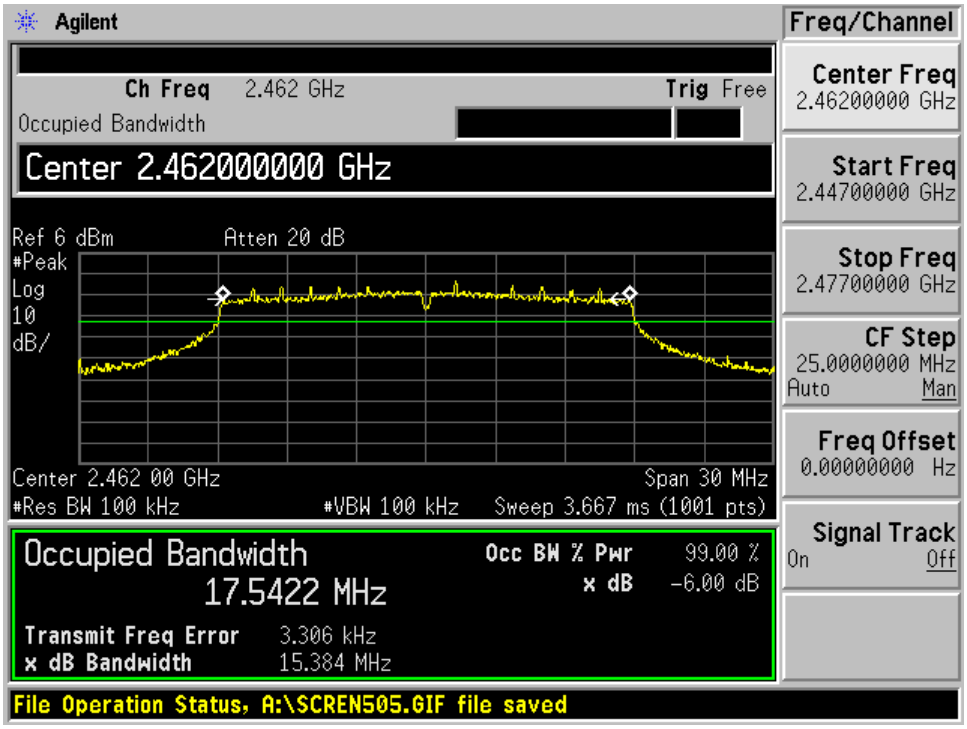
Low Channel



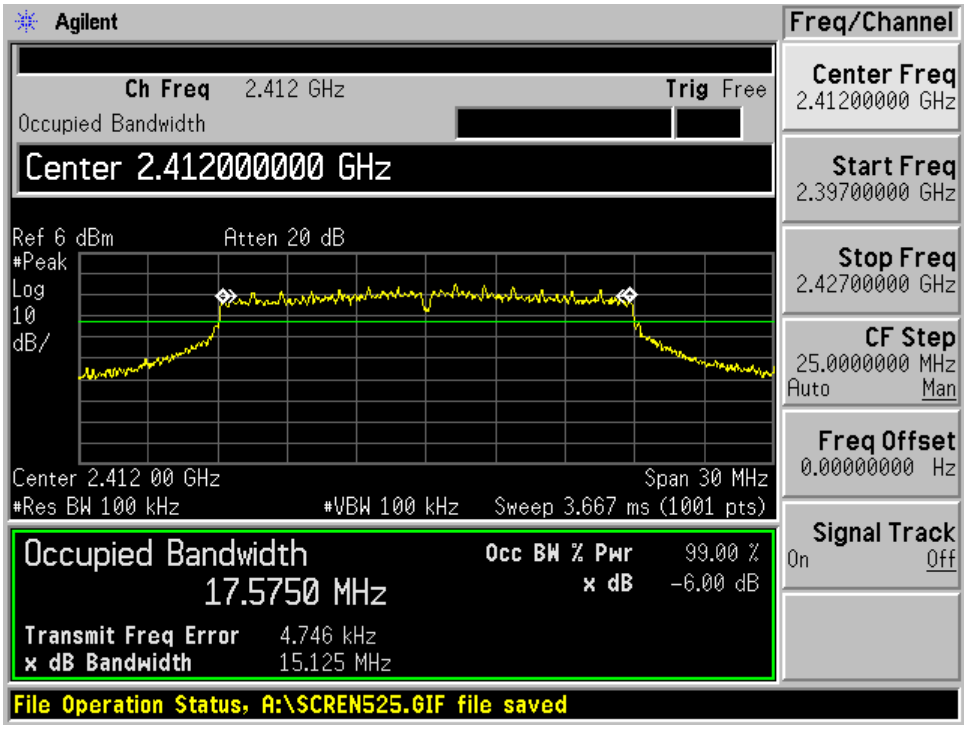
Middle Channel



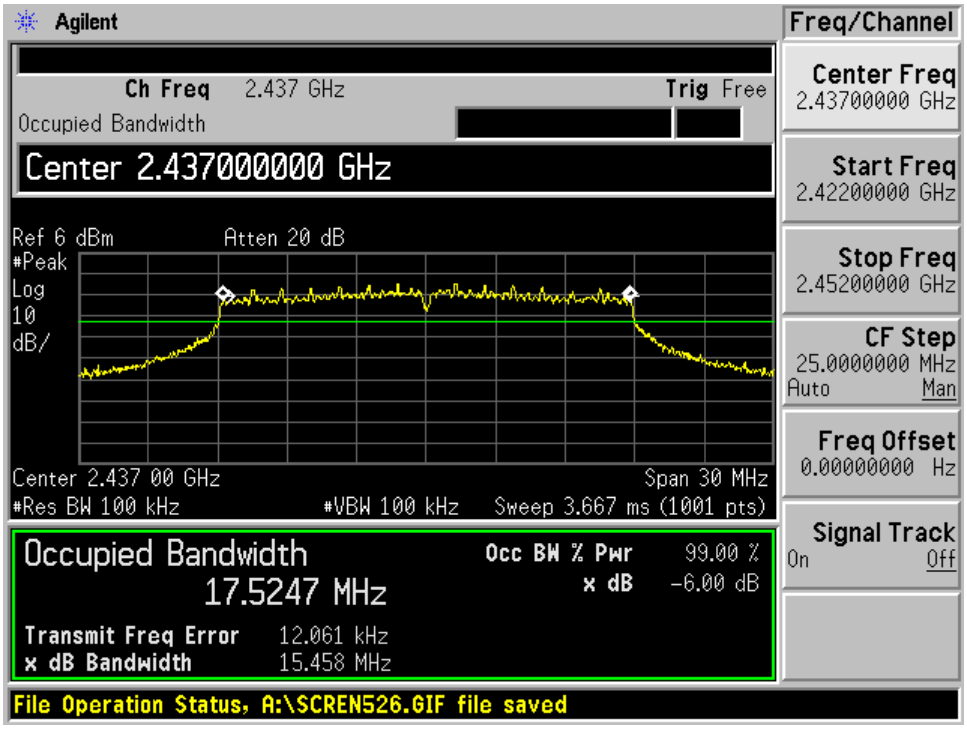
High Channel



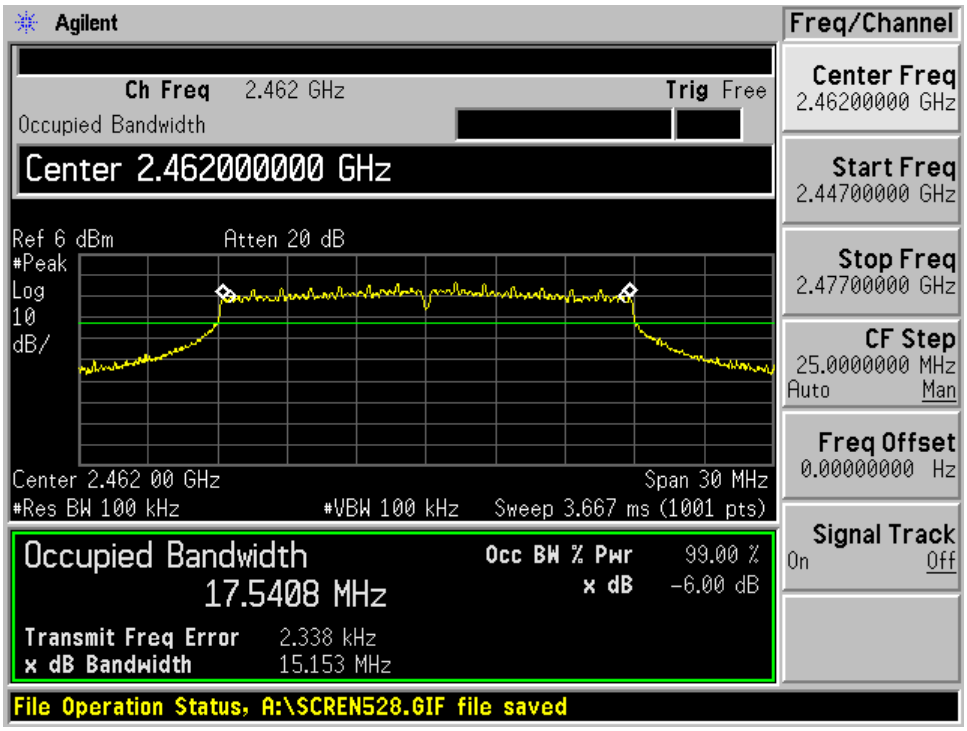
8)Data Rate : 65Mbps(IEEE 802.11n)
Low Channel



Middle Channel



High Channel



A.4 Dwell Time

Not Applicable

A.5 Peak Output Power(Conduction)

1)Data Rate : 1Mbps(IEEE 802.11b)

Test Date: March 29, 2011
Temp.: 20 °C, Humi: 24 %

Data Rate : 1Mbps

Transmitting Frequency		Correction Factor	Meter Reading	Conducted Peak Output Power		Limits	Margin
CH	[MHz]	[dB]	[dBm]	[dBm]	[mW]	[dBm]	[dB]
01	2412	9.88	7.63	17.51	56.36	30.00	+12.49
06	2437	9.88	8.16	18.04	63.68	30.00	+11.96
11	2462	9.88	8.43	18.31	67.76	30.00	+11.69

Calculated result at 2462.000 MHz, as the worst point shown on underline:

	Correction Factor	=	9.88 dB
+)	Meter Reading	=	8.43 dBm
	Result	=	18.31 dBm = 67.76 mW

Minimum Margin: 30.00 - 18.31 = 11.69 (dB)

NOTES
1. The correction factor shows the attenuation pad loss including the short, low loss cable or adapter.
2. Setting of measuring instrument(s) :

Detector Function	Video B.W.
Peak	5 MHz

2)Data Rate : 2Mbps(IEEE 802.11b)

Test Date: March 29, 2011
Temp.: 20 °C, Humi: 24 %

Data Rate : 2Mbps

Transmitting Frequency		Correction Factor	Meter Reading	Conducted Peak Output Power		Limits	Margin
CH	[MHz]	[dB]	[dBm]	[dBm]	[mW]	[dBm]	[dB]
01	2412	9.88	7.92	17.80	60.26	30.00	+12.20
06	2437	9.88	8.41	18.29	67.45	30.00	+11.71
11	2462	9.88	8.45	18.33	68.08	30.00	+11.67

Calculated result at 2462.000 MHz, as the worst point shown on underline:

	Correction Factor	=	9.88 dB
+)	Meter Reading	=	8.45 dBm
	Result	=	18.33 dBm = 68.08 mW

Minimum Margin: 30.00 - 18.33 = 11.67 (dB)

NOTES
1. The correction factor shows the attenuation pad loss including the short, low loss cable or adapter.
2. Setting of measuring instrument(s) :

Detector Function	Video B.W.
Peak	5 MHz

3)Data Rate : 5.5Mbps(IEEE 802.11b)

Test Date: March 29, 2011
Temp.: 20 °C, Humi: 24 %

Data Rate : 5.5Mbps

Transmitting Frequency		Correction Factor	Meter Reading	Conducted Peak Output Power		Limits	Margin
CH	[MHz]	[dB]	[dBm]	[dBm]	[mW]	[dBm]	[dB]
01	2412	9.88	7.94	17.82	60.53	30.00	+12.18
06	2437	9.88	8.21	18.09	64.42	30.00	+11.91
11	2462	9.88	8.54	18.42	69.50	30.00	+11.58

Calculated result at 2462.000 MHz, as the worst point shown on underline:

	Correction Factor	=	9.88 dB
+)	Meter Reading	=	8.54 dBm
	Result	=	18.42 dBm = 69.50 mW

Minimum Margin: 30.00 - 18.42 = 11.58 (dB)

NOTES
1. The correction factor shows the attenuation pad loss including the short, low loss cable or adapter.
2. Setting of measuring instrument(s) :

Detector Function	Video B.W.
Peak	5 MHz

4)Data Rate : 11Mbps(IEEE 802.11b)

Test Date: March 29, 2011
Temp.: 20 °C, Humi: 24 %

Data Rate : 11Mbps

Transmitting Frequency		Correction Factor	Meter Reading	Conducted Peak Output Power		Limits	Margin
CH	[MHz]	[dB]	[dBm]	[dBm]	[mW]	[dBm]	[dB]
01	2412	9.88	7.72	17.60	57.54	30.00	+12.40
06	2437	9.88	8.20	18.08	64.27	30.00	+11.92
11	2462	9.88	8.55	18.43	69.66	30.00	+11.57

Calculated result at 2462.000 MHz, as the worst point shown on underline:

	Correction Factor	=	9.88 dB
+)	Meter Reading	=	8.55 dBm
	Result	=	18.43 dBm = 69.66 mW

Minimum Margin: 30.00 - 18.43 = 11.57 (dB)

NOTES
1. The correction factor shows the attenuation pad loss including the short, low loss cable or adapter.
2. Setting of measuring instrument(s) :

Detector Function	Video B.W.
Peak	5 MHz

5)Data Rate : 6Mbps(IEEE 802.11g)

Test Date: March 29, 2011
Temp.: 20 °C, Humi: 24 %

Data Rate : 6Mbps

Transmitting Frequency		Correction Factor	Meter Reading	Conducted Peak Output Power		Limits	Margin
CH	[MHz]	[dB]	[dBm]	[dBm]	[mW]	[dBm]	[dB]
01	2412	9.88	10.30	20.18	104.23	30.00	+ 9.82
06	2437	9.88	10.61	20.49	111.94	30.00	+ 9.51
11	2462	9.88	10.60	20.48	111.69	30.00	+ 9.52

Calculated result at 2437.000 MHz, as the worst point shown on underline:

	Correction Factor	=	9.88 dB	
+)	Meter Reading	=	10.61 dBm	
	Result	=	20.49 dBm	= 111.94 mW

Minimum Margin: 30.00 - 20.49 = 9.51 (dB)

NOTES
1. The correction factor shows the attenuation pad loss including the short, low loss cable or adapter.
2. Setting of measuring instrument(s) :

Detector Function	Video B.W.
Peak	5 MHz

6)Data Rate : 54Mbps(IEEE 802.11g)

Test Date: March 29, 2011
Temp.: 20 °C, Humi: 24 %

Data Rate : 54Mbps

Transmitting Frequency		Correction Factor	Meter Reading	Conducted Peak Output Power		Limits	Margin
CH	[MHz]	[dB]	[dBm]	[dBm]	[mW]	[dBm]	[dB]
01	2412	9.88	10.00	19.88	97.27	30.00	+10.12
06	2437	9.88	10.50	20.38	109.14	30.00	+ 9.62
11	2462	9.88	10.90	20.78	119.67	30.00	+ 9.22

Calculated result at 2462.000 MHz, as the worst point shown on underline:

	Correction Factor	=	9.88 dB	
+)	Meter Reading	=	10.90 dBm	
	Result	=	20.78 dBm	= 119.67 mW

Minimum Margin: 30.00 - 20.78 = 9.22 (dB)

NOTES
1. The correction factor shows the attenuation pad loss including the short, low loss cable or adapter.
2. Setting of measuring instrument(s) :

Detector Function	Video B.W.
Peak	5 MHz

7)Data Rate : 6.5Mbps(IEEE 802.11n)

Test Date: March 29, 2011
Temp.: 20 °C, Humi: 24 %

Data Rate : 6.5Mbps

Transmitting Frequency		Correction Factor	Meter Reading	Conducted Peak Output Power		Limits	Margin
CH	[MHz]	[dB]	[dBm]	[dBm]	[mW]	[dBm]	[dB]
01	2412	9.88	9.72	19.60	91.20	30.00	+10.40
06	2437	9.88	10.10	19.98	99.54	30.00	+10.02
11	2462	9.88	10.37	20.25	105.93	30.00	+ 9.75

Calculated result at 2462.000 MHz, as the worst point shown on underline:

	Correction Factor	=	9.88 dB
+)	Meter Reading	=	10.37 dBm
	Result	=	20.25 dBm = 105.93 mW

Minimum Margin: 30.00 - 20.25 = 9.75 (dB)

NOTES
1. The correction factor shows the attenuation pad loss including the short, low loss cable or adapter.
2. Setting of measuring instrument(s) :

Detector Function	Video B.W.
Peak	5 MHz

8)Data Rate : 65Mbps(IEEE 802.11n)

Test Date: March 29, 2011
Temp.: 20 °C, Humi: 24 %

Data Rate : 65Mbps

Transmitting Frequency		Correction Factor	Meter Reading	Conducted Peak Output Power		Limits	Margin
CH	[MHz]	[dB]	[dBm]	[dBm]	[mW]	[dBm]	[dB]
01	2412	9.88	9.60	19.48	88.72	30.00	+10.52
06	2437	9.88	10.40	20.28	106.66	30.00	+ 9.72
11	2462	9.88	10.70	20.58	114.29	30.00	+ 9.42

Calculated result at 2462.000 MHz, as the worst point shown on underline:

	Correction Factor	=	9.88 dB
+)	Meter Reading	=	10.70 dBm
	Result	=	20.58 dBm = 114.29 mW

Minimum Margin: 30.00 - 20.58 = 9.42 (dB)

NOTES
1. The correction factor shows the attenuation pad loss including the short, low loss cable or adapter.
2. Setting of measuring instrument(s) :

Detector Function	Video B.W.
Peak	5 MHz

A.6 Peak Power Density(Conduction)

1)Data Rate : 1Mbps(IEEE 802.11b)

Test Date: March 29, 2011
Temp.: 20 °C, Humi: 24 %

Data Rate : 1Mbps

Transmitting Frequency		Correction Factor	Meter Reading	Conducted Peak Output Power		Limits	Margin
CH	[MHz]	[dB]	[dBm]	[dBm]	[mW]	[dBm]	[dB]
01	2412	9.88	-17.85	-7.97	0.16	8.00	+15.97
06	2437	9.88	-17.63	-7.75	0.17	8.00	+15.75
11	2462	9.88	-16.81	-6.93	0.20	8.00	+14.93

Calculated result at 2462.000 MHz, as the worst point shown on underline:

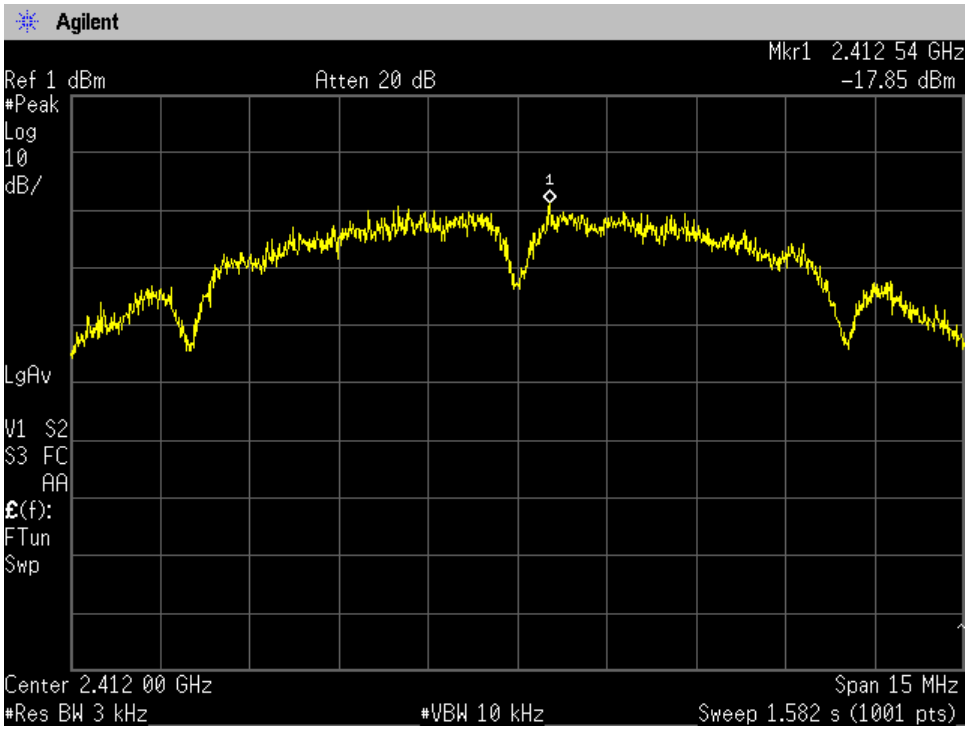
	Correction Factor	=	9.88	dB
+)	Meter Reading	=	-16.81	dBm
	Result	=	-6.93	dBm = 0.20 mW

Minimum Margin: 8.00 - -6.93 = 14.93 (dB)

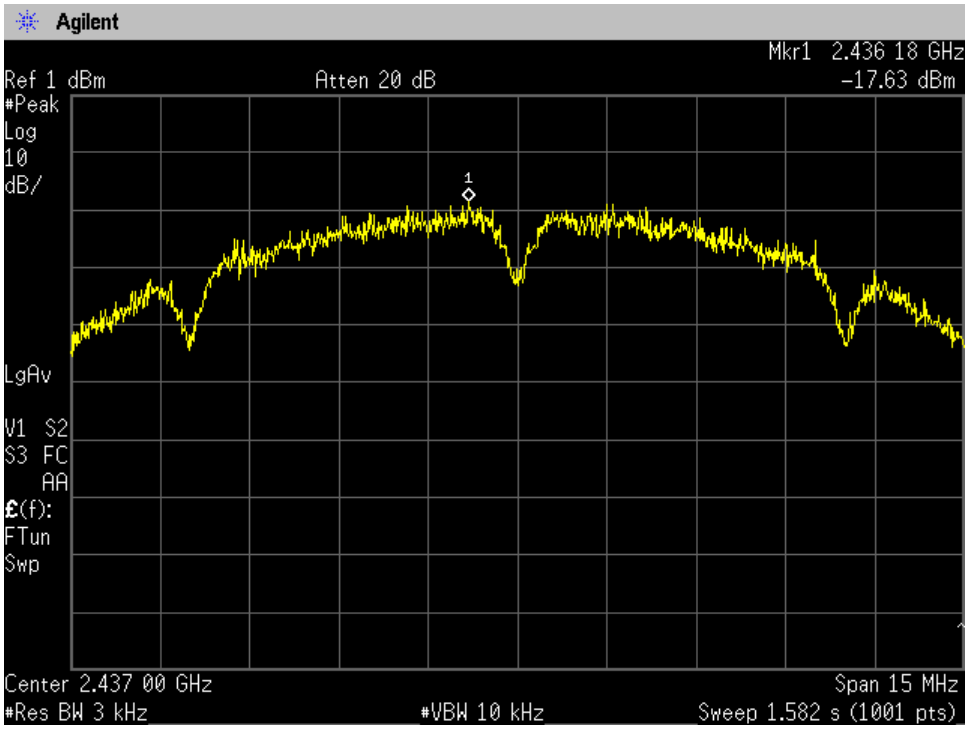
NOTES
1. The correction factor shows the attenuation pad loss including the short, low loss cable or adapter.
2. Setting of measuring instrument(s) :

Detector Function	RES B.W.	Video B.W.
Peak	3kHz	10kHz

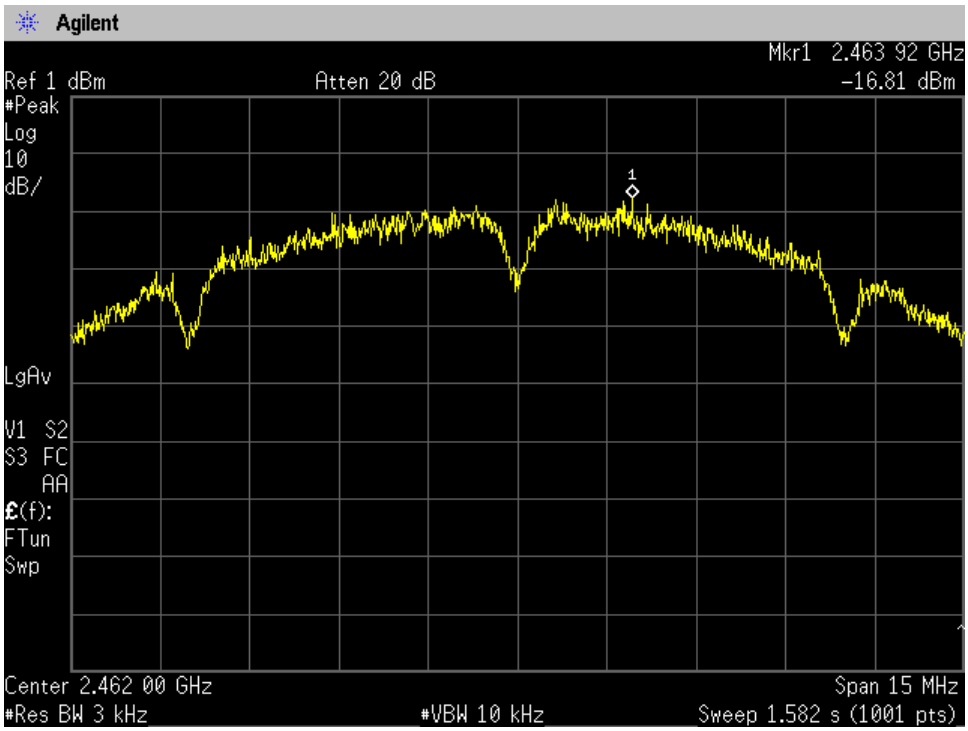
Low Channel



Middle Channel



High Channel



2)Data Rate : 2Mbps(IEEE 802.11b)

Test Date: March 29, 2011
Temp.: 20 °C, Humi: 24 %

Data Rate : 2Mbps

Transmitting Frequency		Correction Factor	Meter Reading	Conducted Peak Output Power		Limits	Margin
CH	[MHz]	[dB]	[dBm]	[dBm]	[mW]	[dBm]	[dB]
01	2412	9.88	-17.38	-7.50	0.18	8.00	+15.50
06	2437	9.88	-16.31	-6.43	0.23	8.00	+14.43
11	2462	9.88	-17.48	-7.60	0.17	8.00	+15.60

Calculated result at 2437.000 MHz, as the worst point shown on underline:

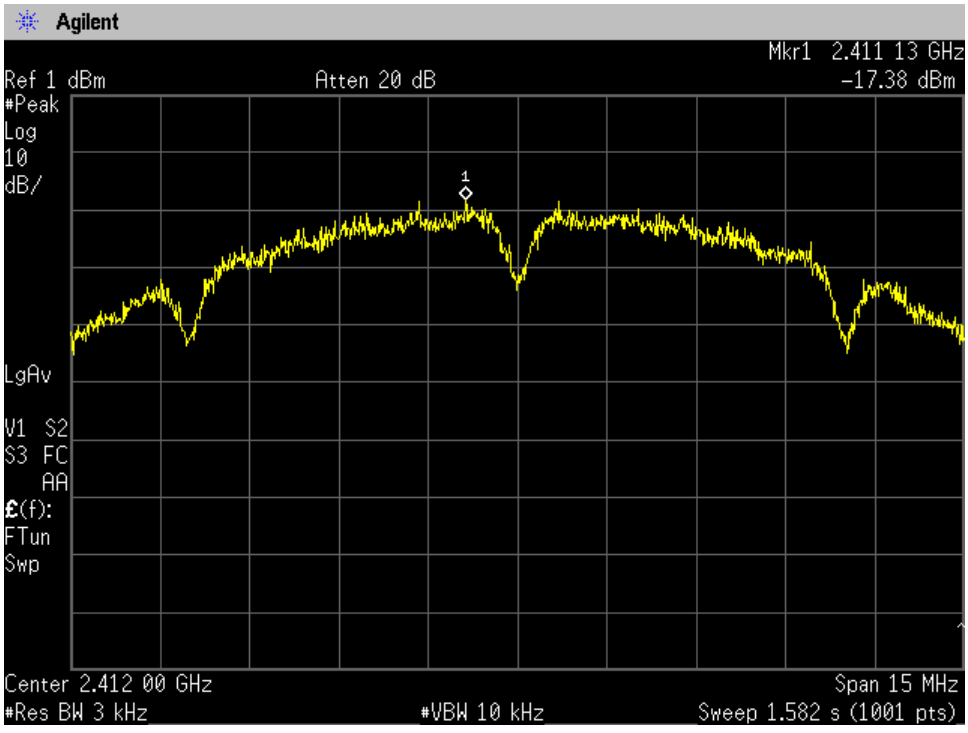
Correction Factor	=	9.88 dB	
+) Meter Reading	=	-16.31 dBm	
Result	=	-6.43 dBm	= 0.23 mW

Minimum Margin: 8.00 - -6.43 = 14.43 (dB)

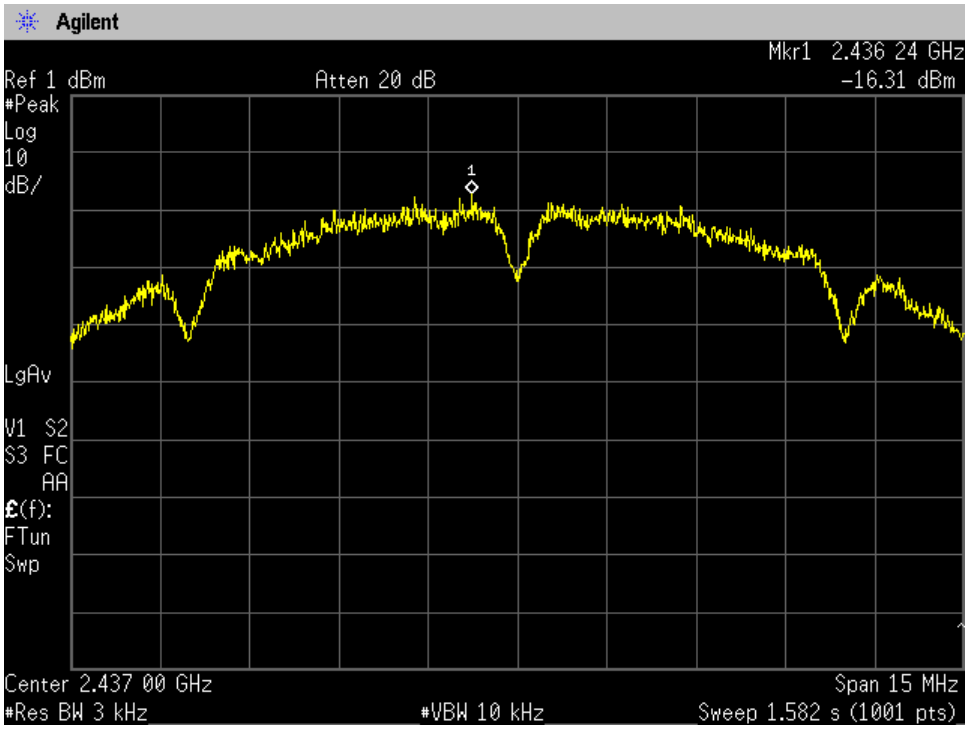
NOTES
1. The correction factor shows the attenuation pad loss including the short, low loss cable or adapter.
2. Setting of measuring instrument(s) :

Detector Function	RES B.W.	Video B.W.
Peak	3kHz	10kHz

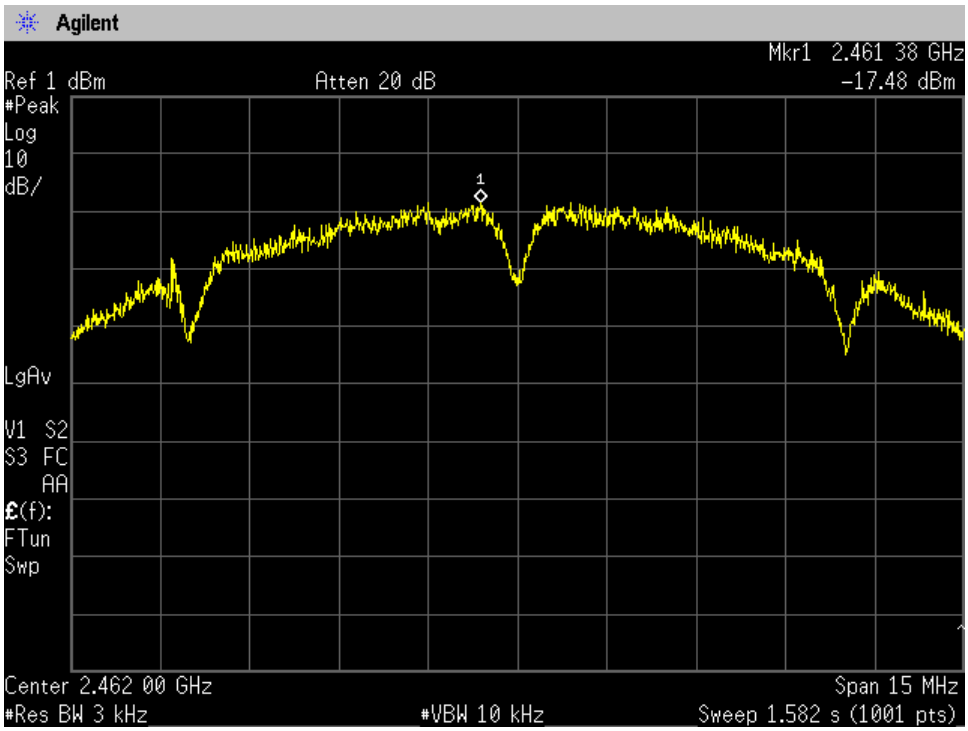
Low Channel



Middle Channel



High Channel



3)Data Rate : 5.5Mbps(IEEE 802.11b)

Test Date: March 29, 2011
Temp.: 20 °C, Humi: 24 %

Data Rate : 5.5Mbps

Transmitting Frequency		Correction Factor	Meter Reading	Conducted Peak Output Power		Limits	Margin
CH	[MHz]	[dB]	[dBm]	[dBm]	[mW]	[dBm]	[dB]
01	2412	9.88	-18.17	-8.29	0.15	8.00	+16.29
06	2437	9.88	-17.94	-8.06	0.16	8.00	+16.06
11	2462	9.88	-17.79	-7.91	0.16	8.00	+15.91

Calculated result at 2462.000 MHz, as the worst point shown on underline:

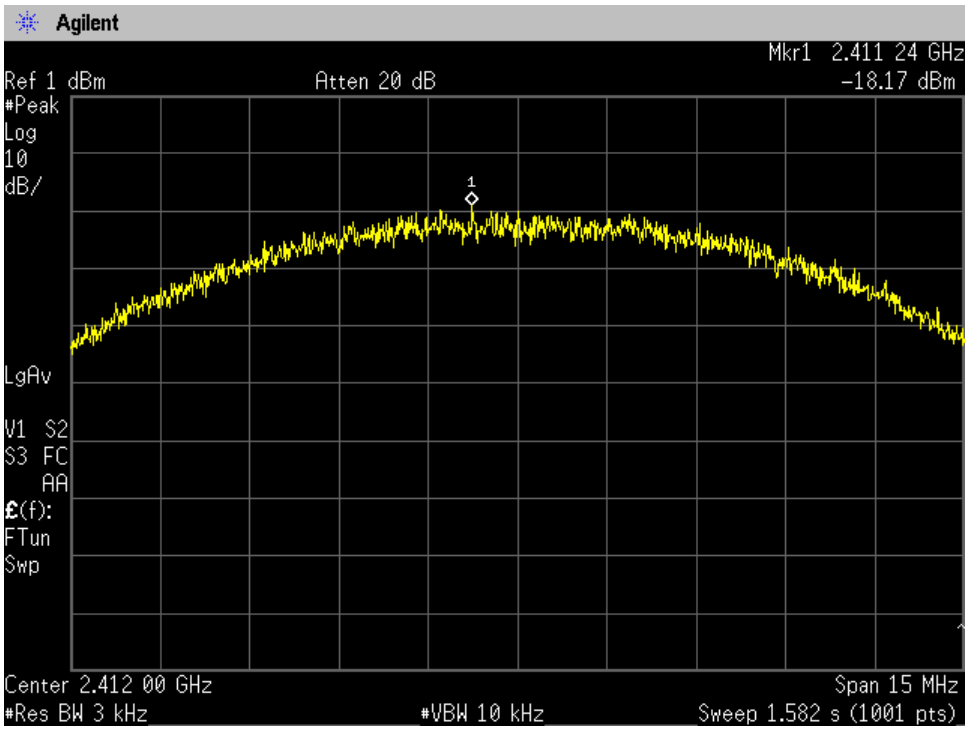
Correction Factor	=	9.88 dB	
+) Meter Reading	=	-17.79 dBm	
Result	=	-7.91 dBm	= 0.16 mW

Minimum Margin: 8.00 - -7.91 = 15.91 (dB)

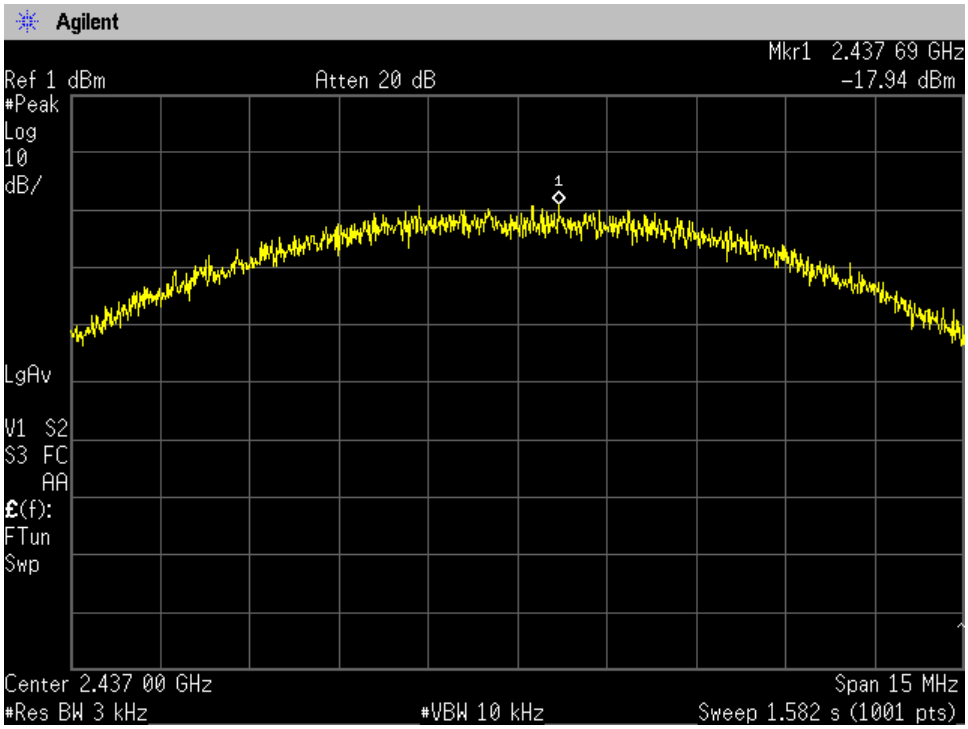
NOTES
1. The correction factor shows the attenuation pad loss including the short, low loss cable or adapter.
2. Setting of measuring instrument(s) :

Detector Function	RES B.W.	Video B.W.
Peak	3kHz	10kHz

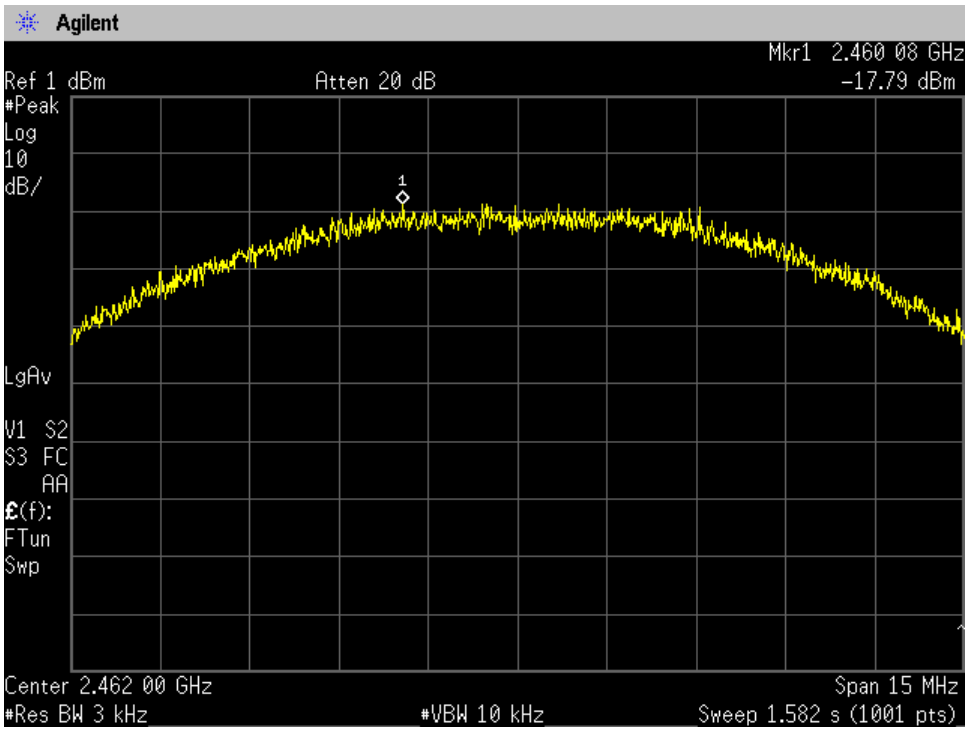
Low Channel



Middle Channel



High Channel



4)Data Rate : 11Mbps(IEEE 802.11b)

Test Date: March 29, 2011
Temp.: 20 °C, Humi: 24 %

Data Rate : 11Mbps

Transmitting Frequency		Correction Factor	Meter Reading	Conducted Peak Output Power		Limits	Margin
CH	[MHz]	[dB]	[dBm]	[dBm]	[mW]	[dBm]	[dB]
01	2412	9.88	-18.52	-8.64	0.14	8.00	+16.64
06	2437	9.88	-18.10	-8.22	0.15	8.00	+16.22
11	2462	9.88	-18.01	-8.13	0.15	8.00	+16.13

Calculated result at 2462.000 MHz, as the worst point shown on underline:

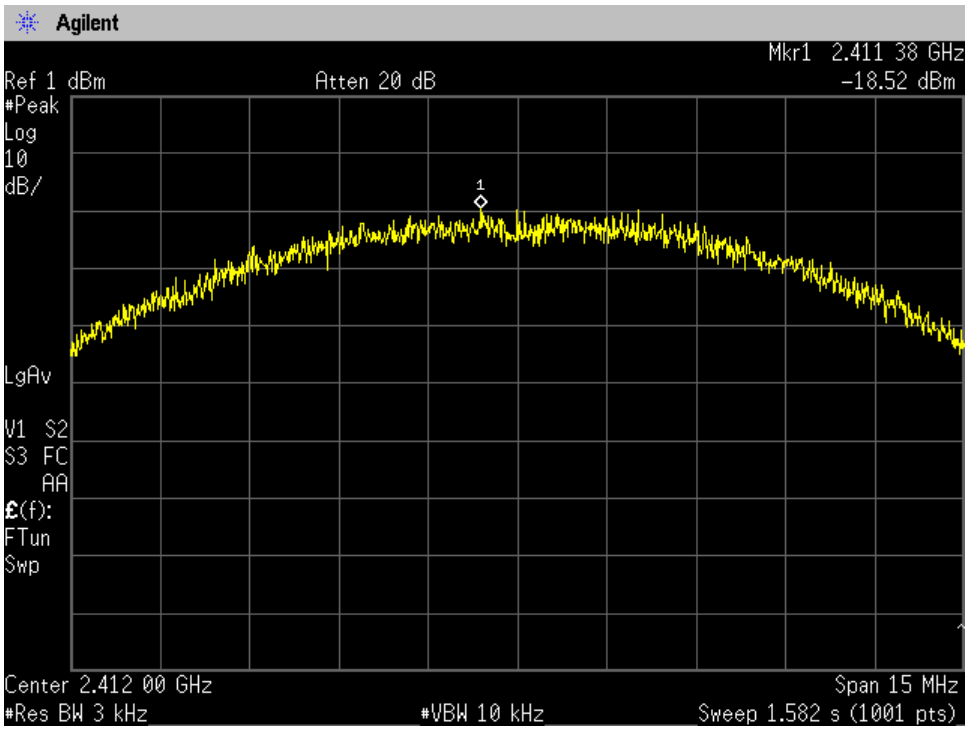
Correction Factor	=	9.88 dB	
+) Meter Reading	=	-18.01 dBm	
Result	=	-8.13 dBm	= 0.15 mW

Minimum Margin: 8.00 - -8.13 = 16.13 (dB)

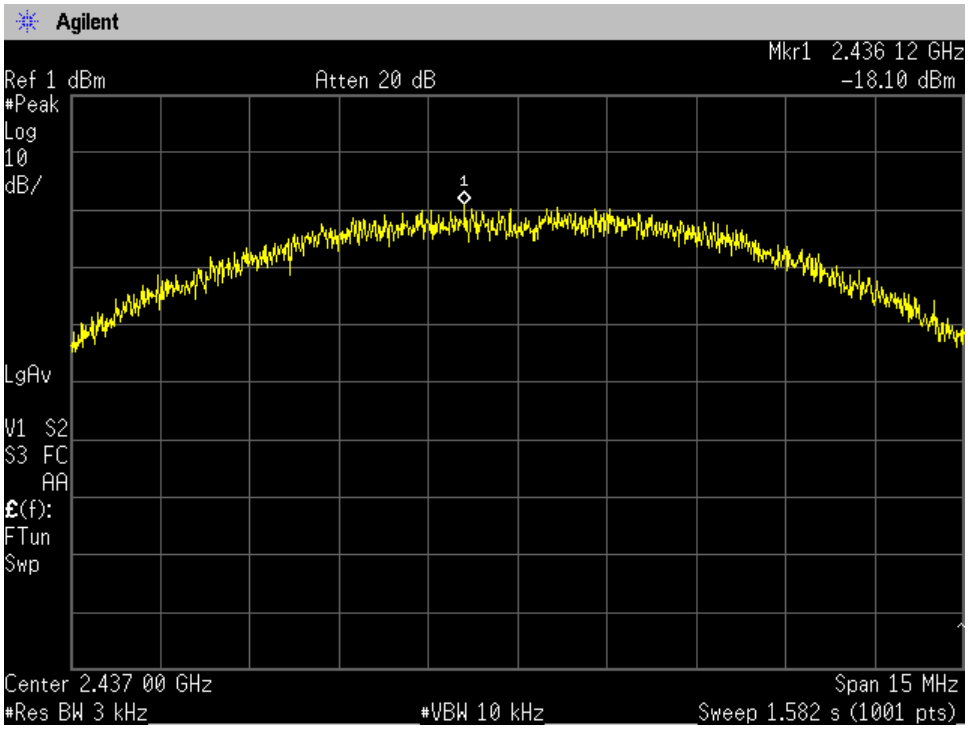
NOTES
1. The correction factor shows the attenuation pad loss including the short, low loss cable or adapter.
2. Setting of measuring instrument(s) :

Detector Function	RES B.W.	Video B.W.
Peak	3kHz	10kHz

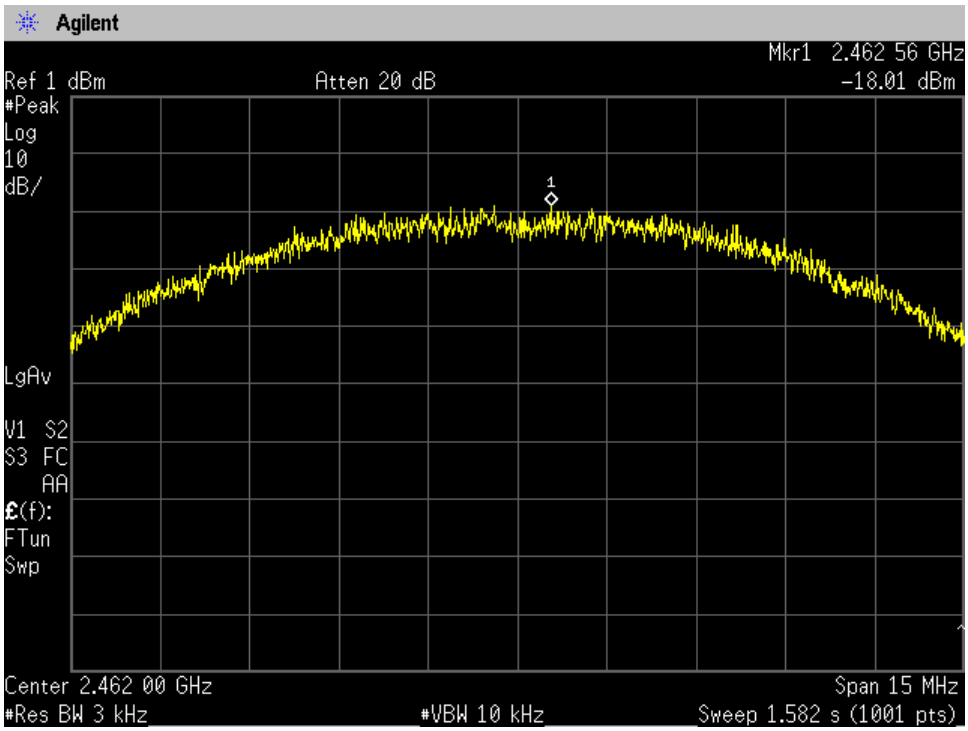
Low Channel



Middle Channel



High Channel



5)Data Rate : 6Mbps(IEEE 802.11g)

Test Date: March 29, 2011
Temp.: 20 °C, Humi: 24 %

Data Rate : 6Mbps

Transmitting Frequency		Correction Factor	Meter Reading	Conducted Peak Output Power		Limits	Margin
CH	[MHz]	[dB]	[dBm]	[dBm]	[mW]	[dBm]	[dB]
01	2412	9.88	-22.86	-12.98	0.05	8.00	+20.98
06	2437	9.88	-22.80	-12.92	0.05	8.00	+20.92
11	2462	9.88	-22.26	-12.38	0.06	8.00	+20.38

Calculated result at 2462.000 MHz, as the worst point shown on underline:

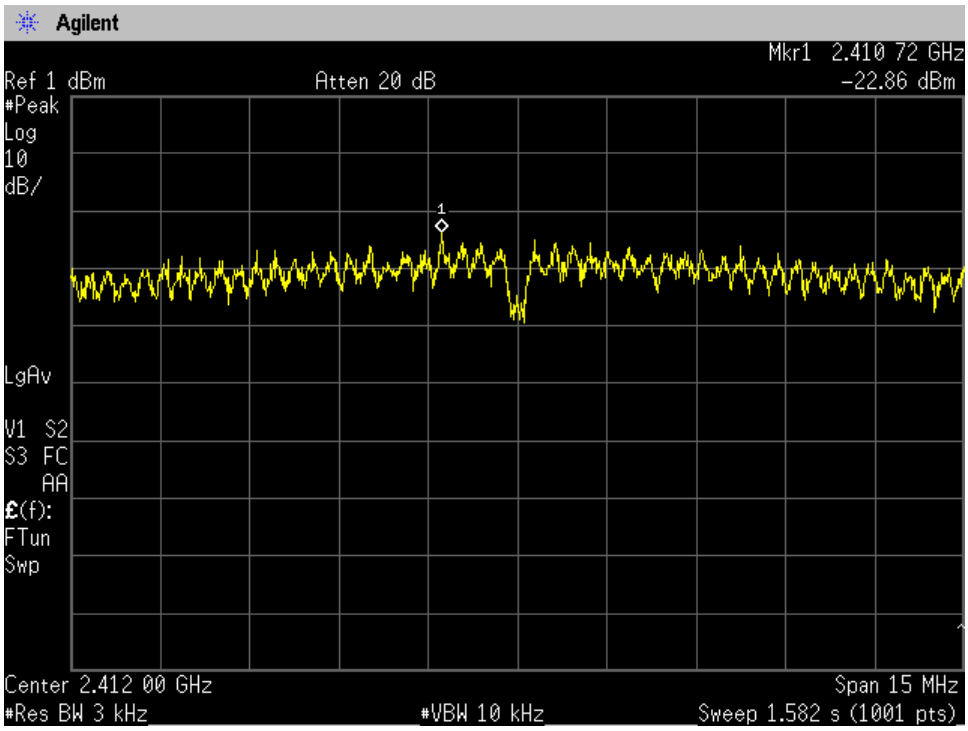
Correction Factor	=	9.88 dB	
+) Meter Reading	=	-22.26 dBm	
Result	=	-12.38 dBm	= 0.06 mW

Minimum Margin: 8.00 - -12.38 = 20.38 (dB)

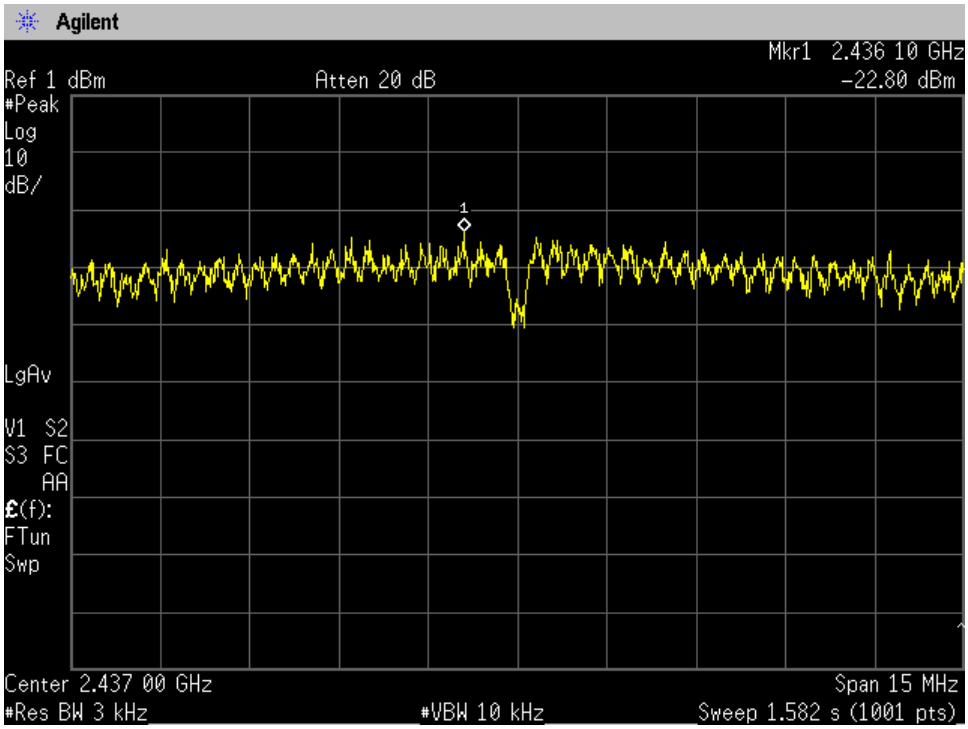
NOTES
1. The correction factor shows the attenuation pad loss including the short, low loss cable or adapter.
2. Setting of measuring instrument(s) :

Detector Function	RES B.W.	Video B.W.
Peak	3kHz	10kHz

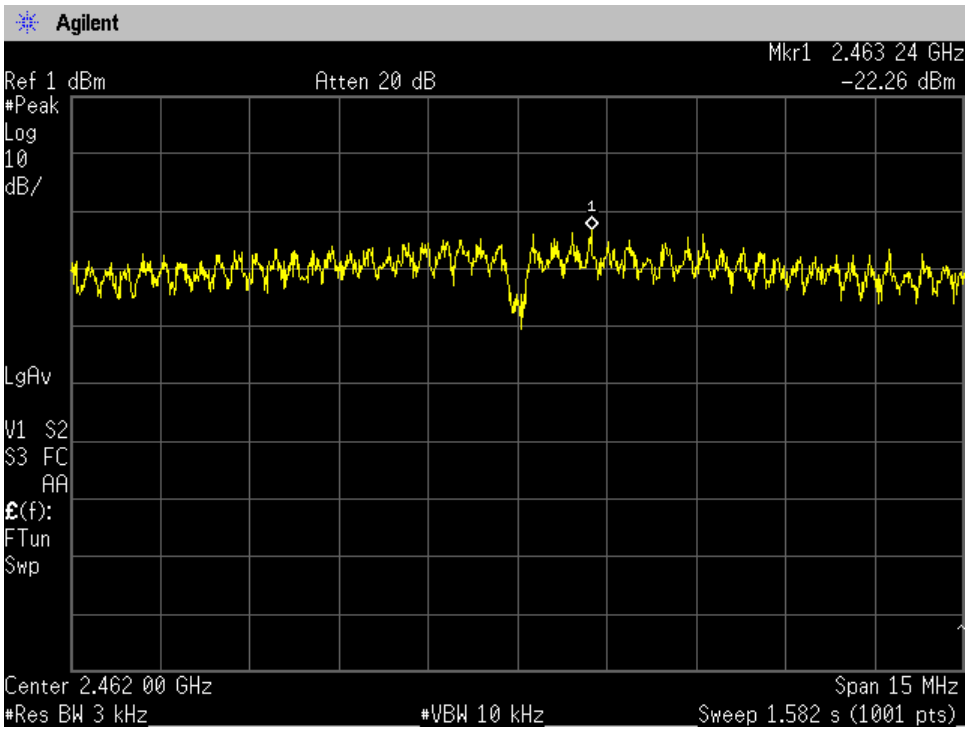
Low Channel



Middle Channel



High Channel



6)Data Rate : 54Mbps(IEEE 802.11g)

Test Date: March 29, 2011
Temp.: 20 °C, Humi: 24 %

Data Rate : 6Mbps

Transmitting Frequency		Correction Factor	Meter Reading	Conducted Peak Output Power		Limits	Margin
CH	[MHz]	[dB]	[dBm]	[dBm]	[mW]	[dBm]	[dB]
01	2412	9.88	-23.59	-13.71	0.04	8.00	+21.71
06	2437	9.88	-23.30	-13.42	0.05	8.00	+21.42
11	2462	9.88	-23.46	-13.58	0.04	8.00	+21.58

Calculated result at 2437.000 MHz, as the worst point shown on underline:

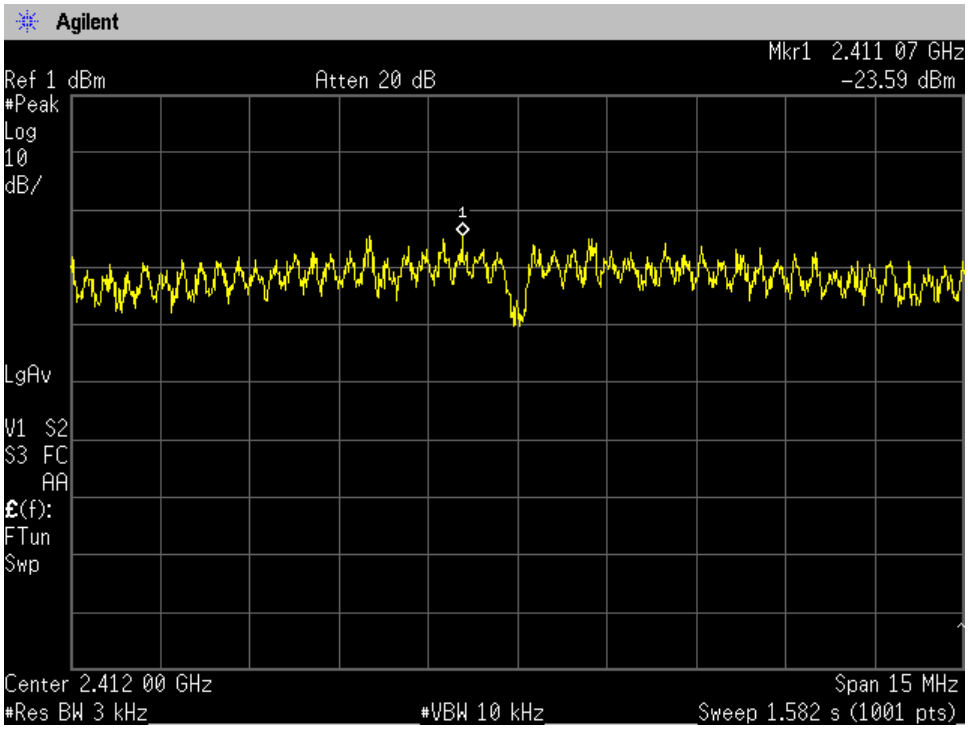
	Correction Factor	=	9.88 dB
+)	Meter Reading	=	-23.30 dBm
	Result	=	-13.42 dBm = 0.05 mW

Minimum Margin: 8.00 - -13.42 = 21.42 (dB)

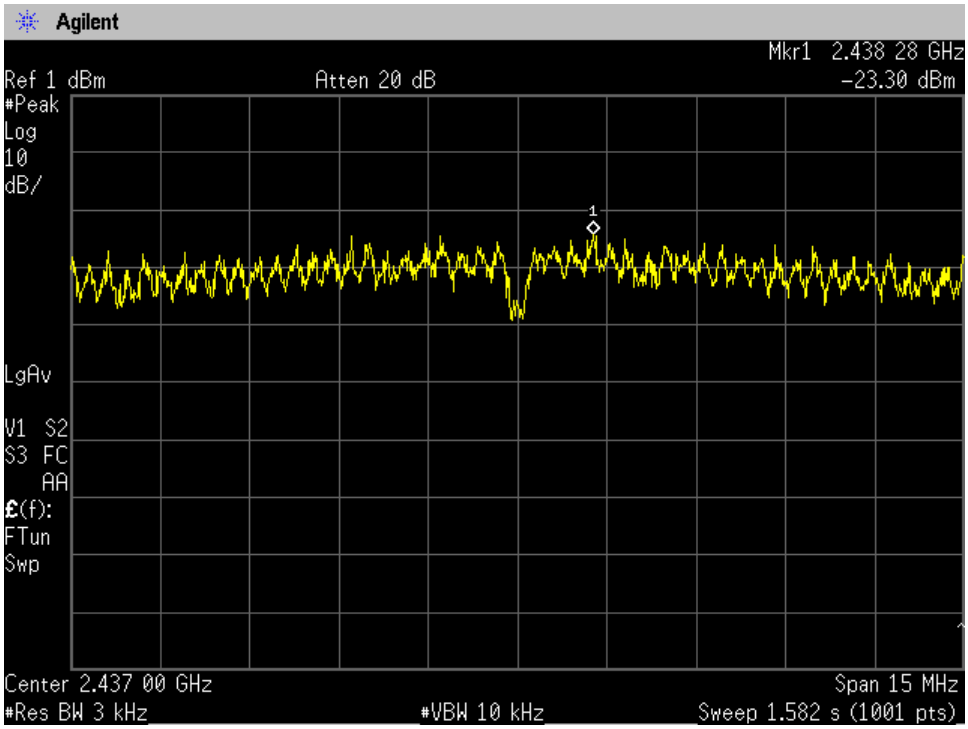
NOTES
1. The correction factor shows the attenuation pad loss including the short, low loss cable or adapter.
2. Setting of measuring instrument(s) :

Detector Function	RES B.W.	Video B.W.
Peak	3kHz	10kHz

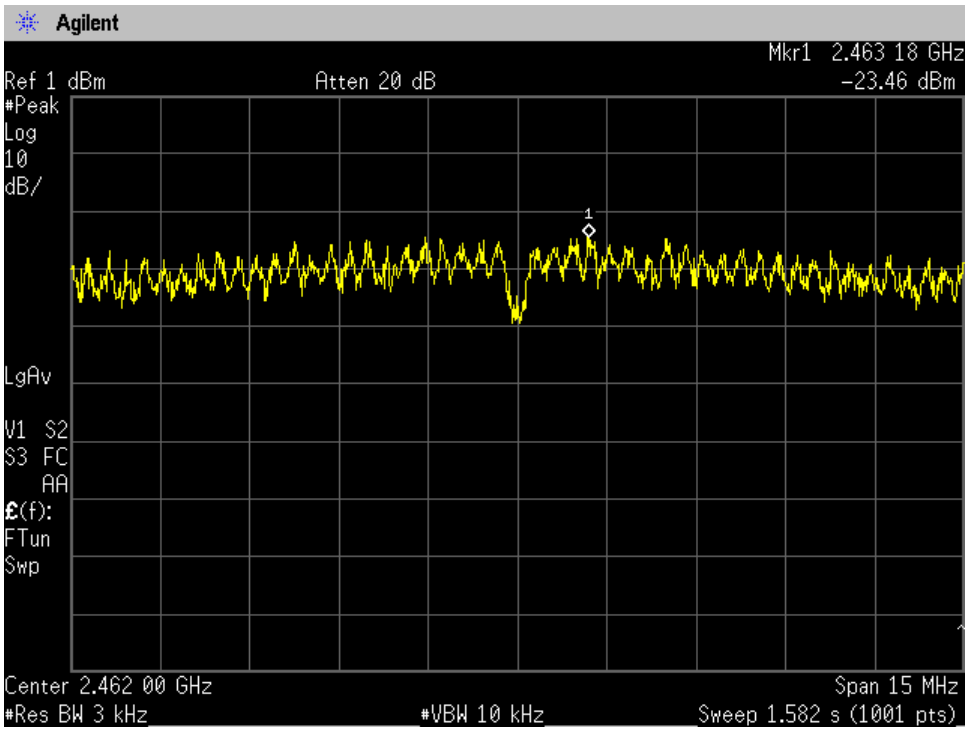
Low Channel



Middle Channel



High Channel



7)Data Rate : 6.5Mbps(IEEE 802.11n)

Test Date: March 29, 2011
Temp.: 20 °C, Humi: 24 %

Data Rate : 6.5Mbps

Transmitting Frequency		Correction Factor	Meter Reading	Conducted Peak Output Power		Limits	Margin
CH	[MHz]	[dB]	[dBm]	[dBm]	[mW]	[dBm]	[dB]
01	2412	9.88	-23.36	-13.48	0.04	8.00	+21.48
06	2437	9.88	-23.36	-13.48	0.04	8.00	+21.48
11	2462	9.88	-22.74	-12.86	0.05	8.00	+20.86

Calculated result at 2462.000 MHz, as the worst point shown on underline:

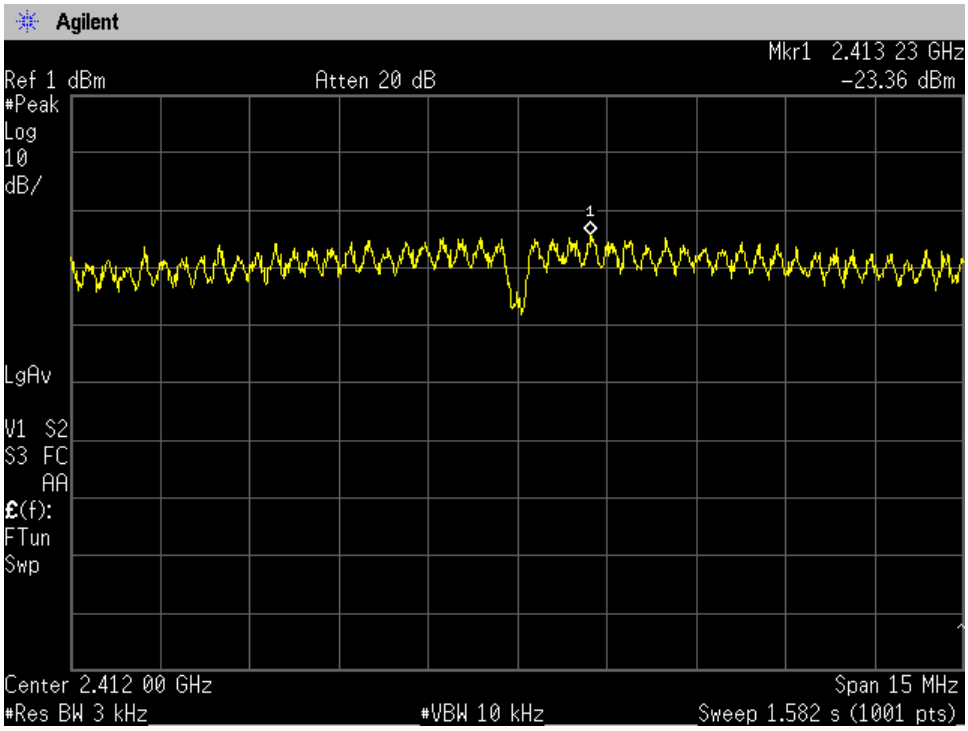
	Correction Factor	=	9.88 dB
+)	Meter Reading	=	-22.74 dBm
	Result	=	-12.86 dBm = 0.05 mW

Minimum Margin: 8.00 - -12.86 = 20.86 (dB)

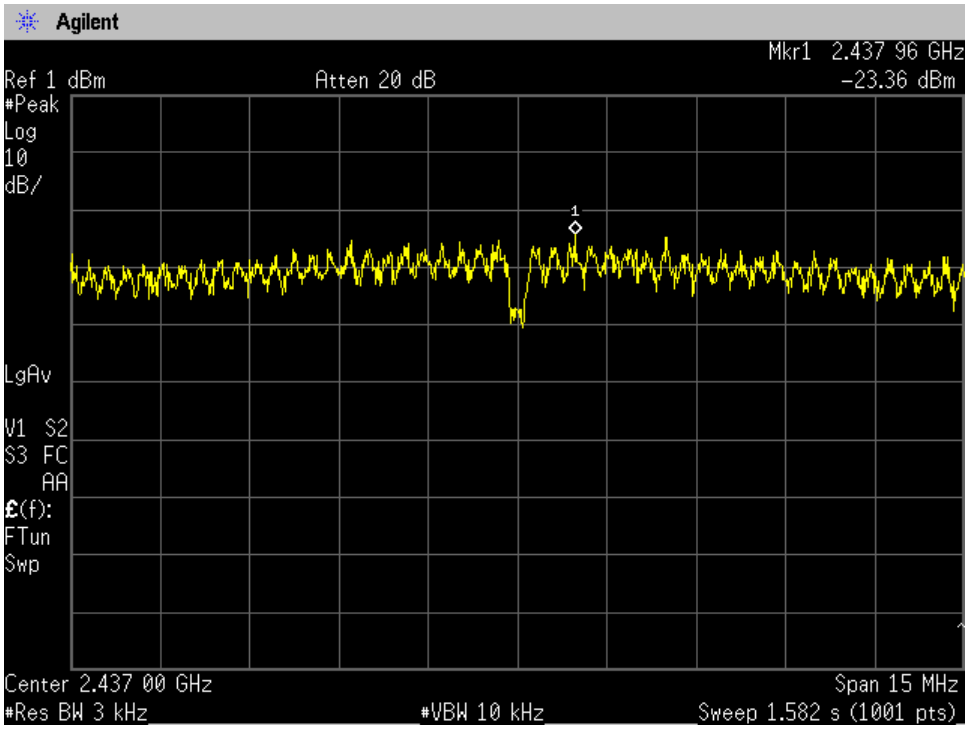
NOTES
1. The correction factor shows the attenuation pad loss including the short, low loss cable or adapter.
2. Setting of measuring instrument(s) :

Detector Function	RES B.W.	Video B.W.
Peak	3kHz	10kHz

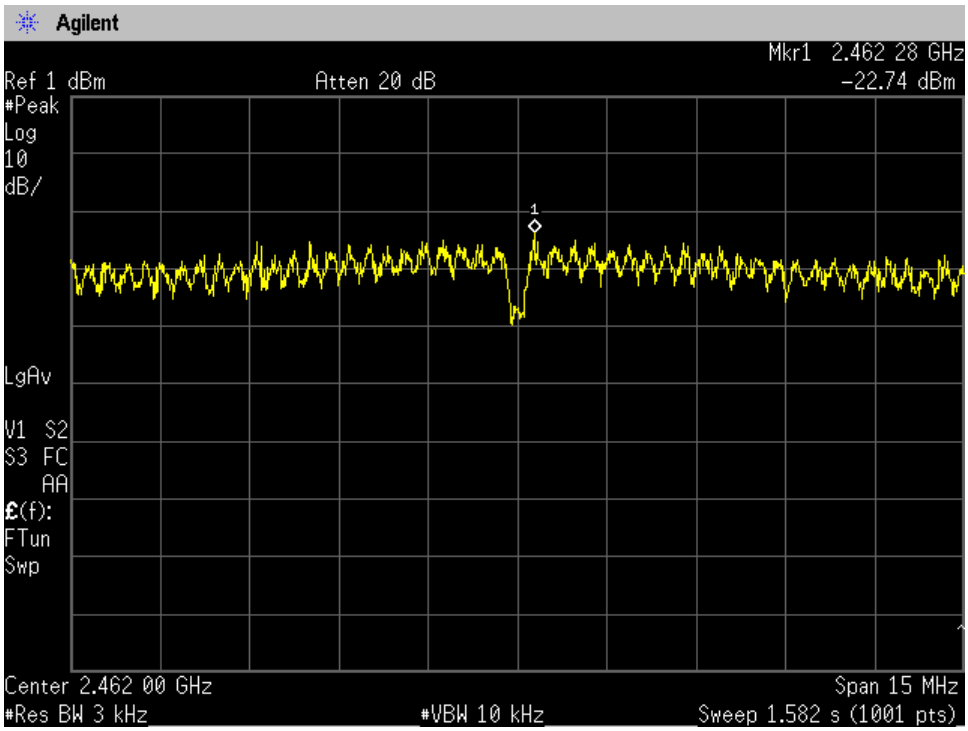
Low Channel



Middle Channel



High Channel



8)Data Rate : 65Mbps(IEEE 802.11n)

Test Date: March 29, 2011
Temp.: 20 °C, Humi: 24 %

Data Rate : 65Mbps

Transmitting Frequency		Correction Factor	Meter Reading	Conducted Peak Output Power		Limits	Margin
CH	[MHz]	[dB]	[dBm]	[dBm]	[mW]	[dBm]	[dB]
01	2412	9.88	-23.48	-13.60	0.04	8.00	+21.60
06	2437	9.88	-23.02	-13.14	0.05	8.00	+21.14
11	2462	9.88	-23.36	-13.48	0.04	8.00	+21.48

Calculated result at 2437.000 MHz, as the worst point shown on underline:

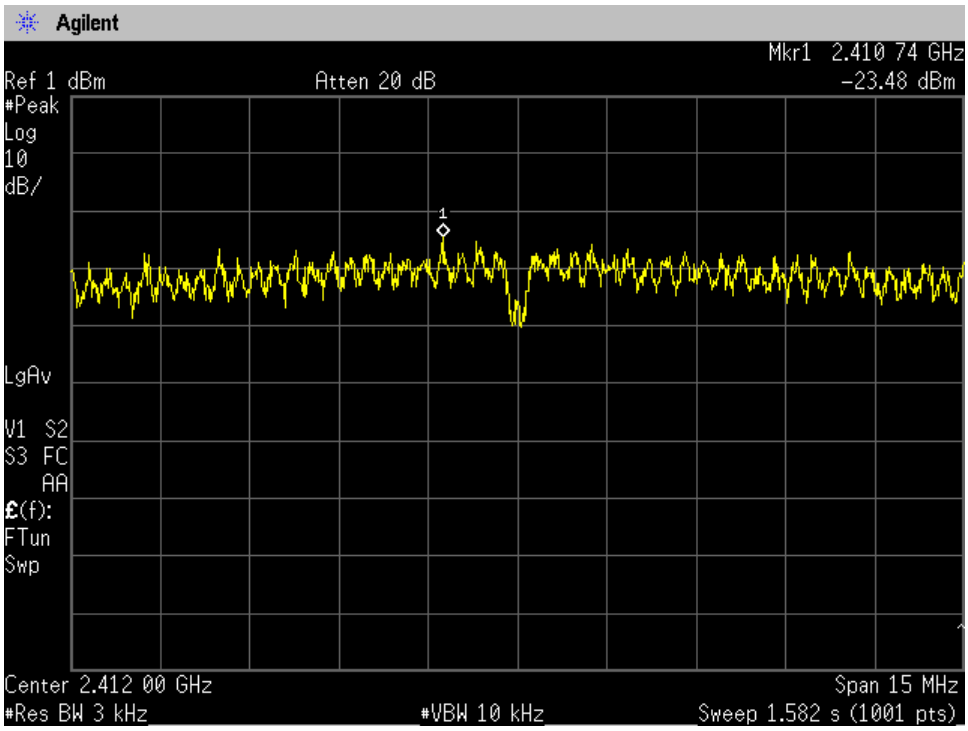
Correction Factor	=	9.88 dB	
+) Meter Reading	=	-23.02 dBm	
Result	=	-13.14 dBm	= 0.05 mW

Minimum Margin: 8.00 - -13.14 = 21.14 (dB)

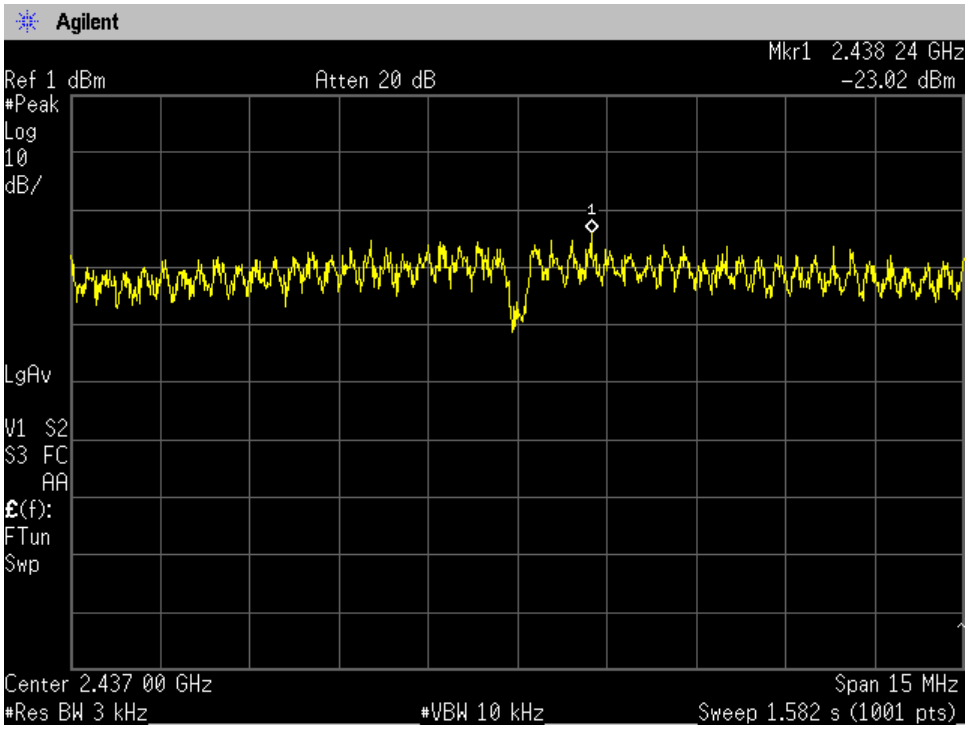
NOTES
1. The correction factor shows the attenuation pad loss including the short, low loss cable or adapter.
2. Setting of measuring instrument(s) :

Detector Function	RES B.W.	Video B.W.
Peak	3kHz	10kHz

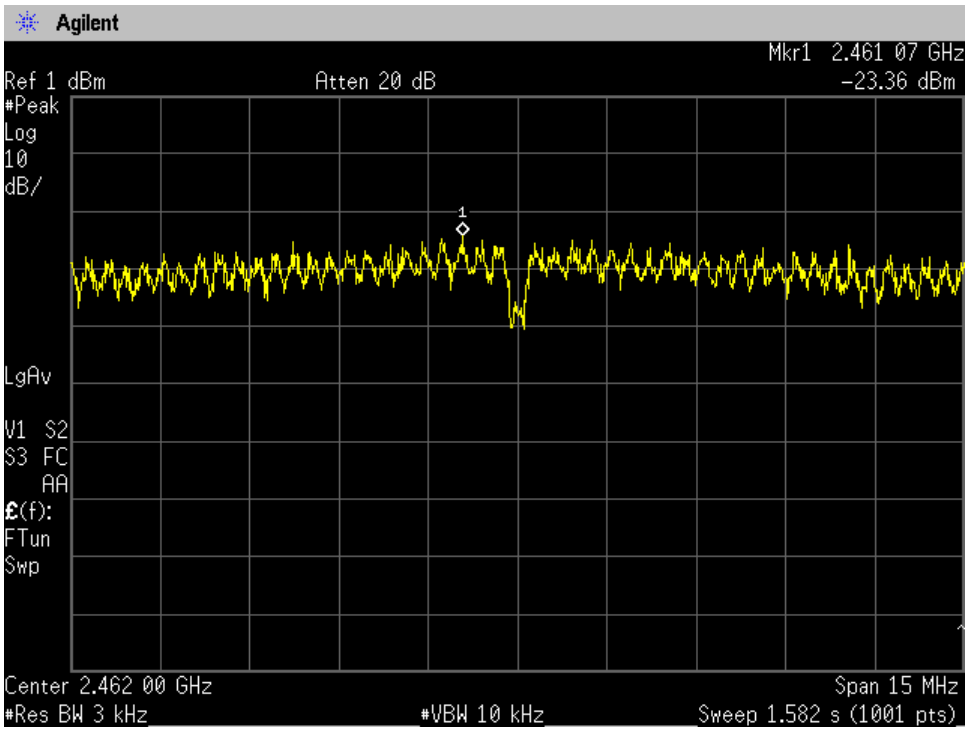
Low Channel



Middle Channel



High Channel

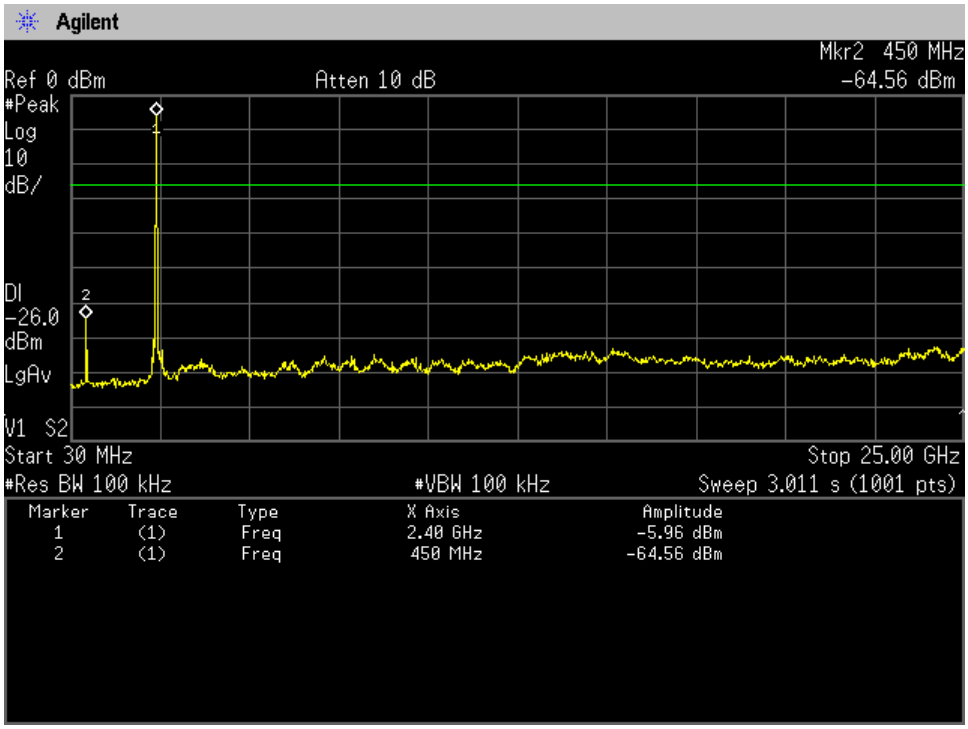


A.7 Spurious Emission(Conduction)

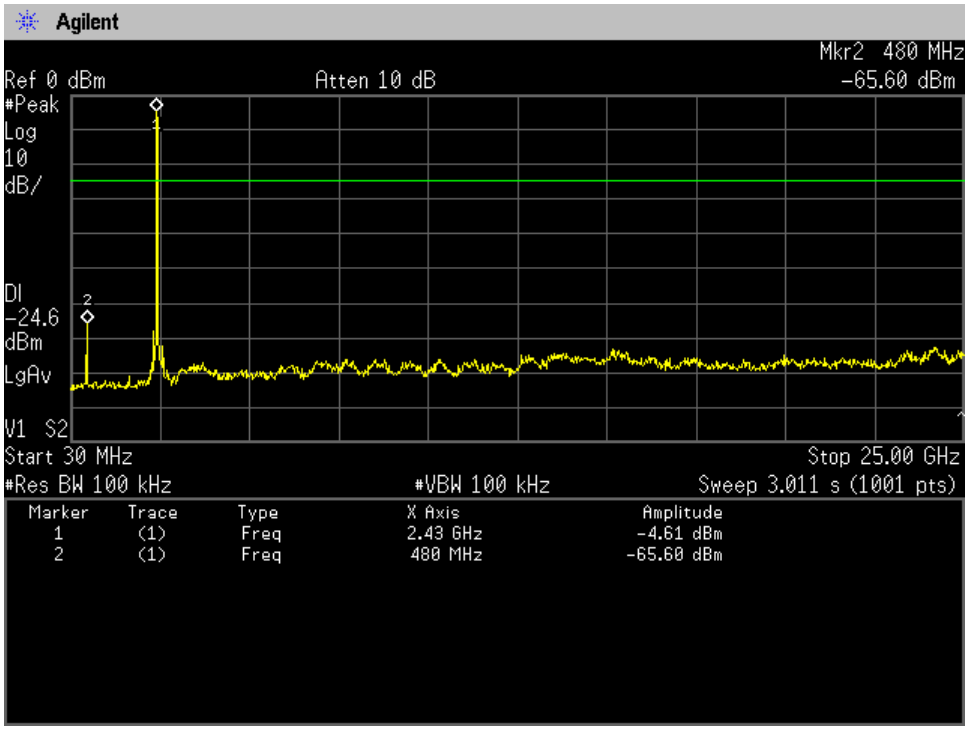
Test Date : March 31, 2011
Temp.:19°C, Humi:31%

1)Data Rate : 1Mbps(IEEE 802.11b)

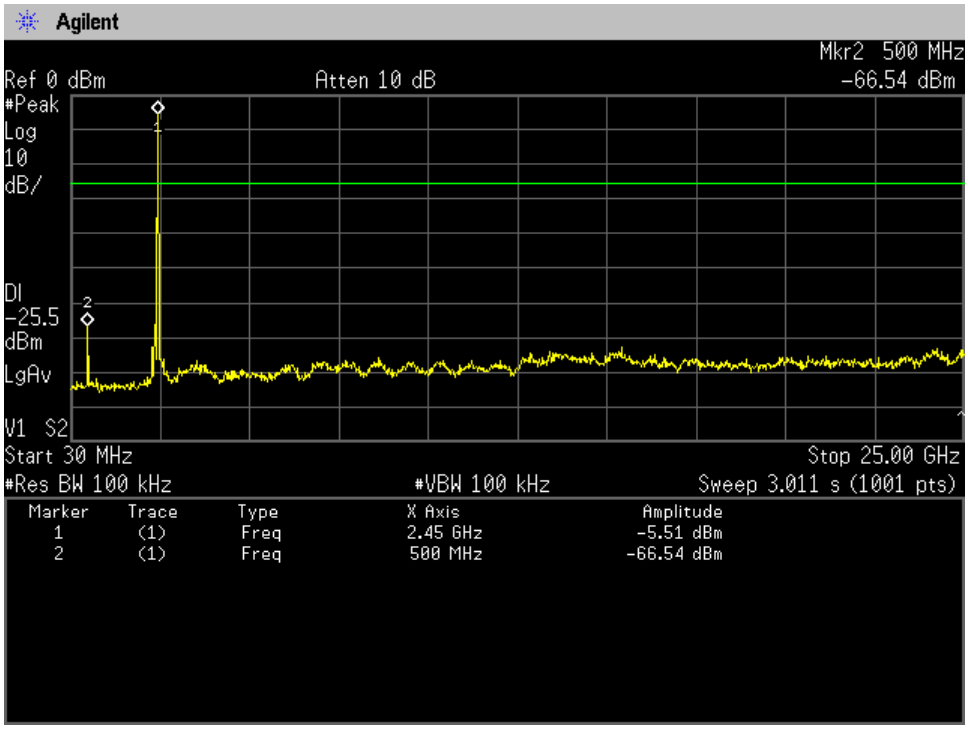
Low Channel



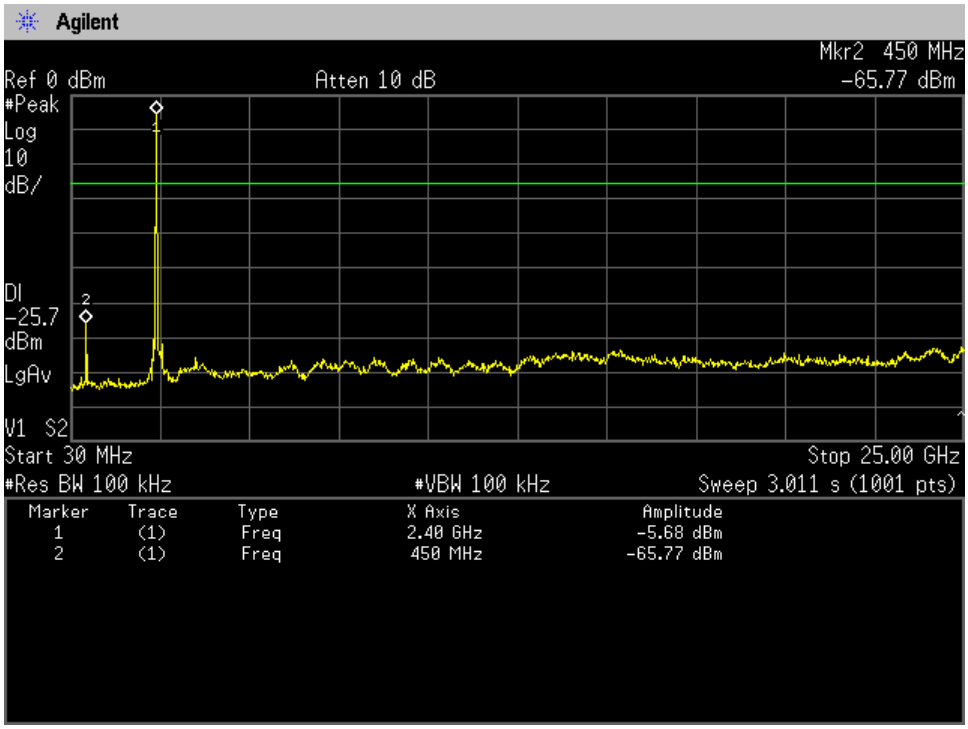
Middle Channel



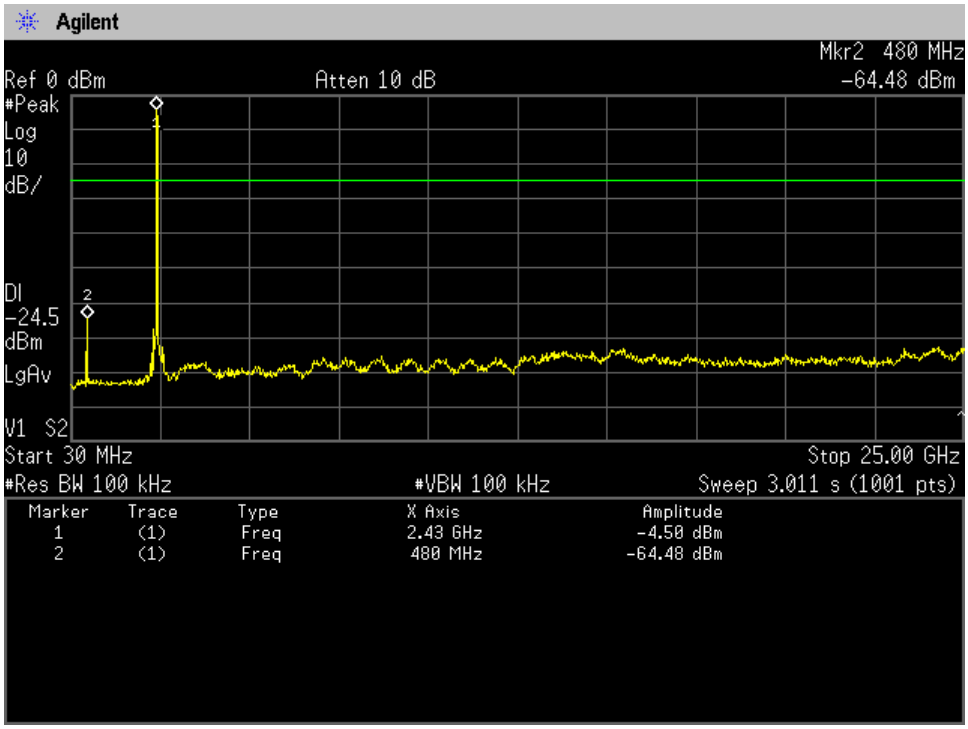
High Channel



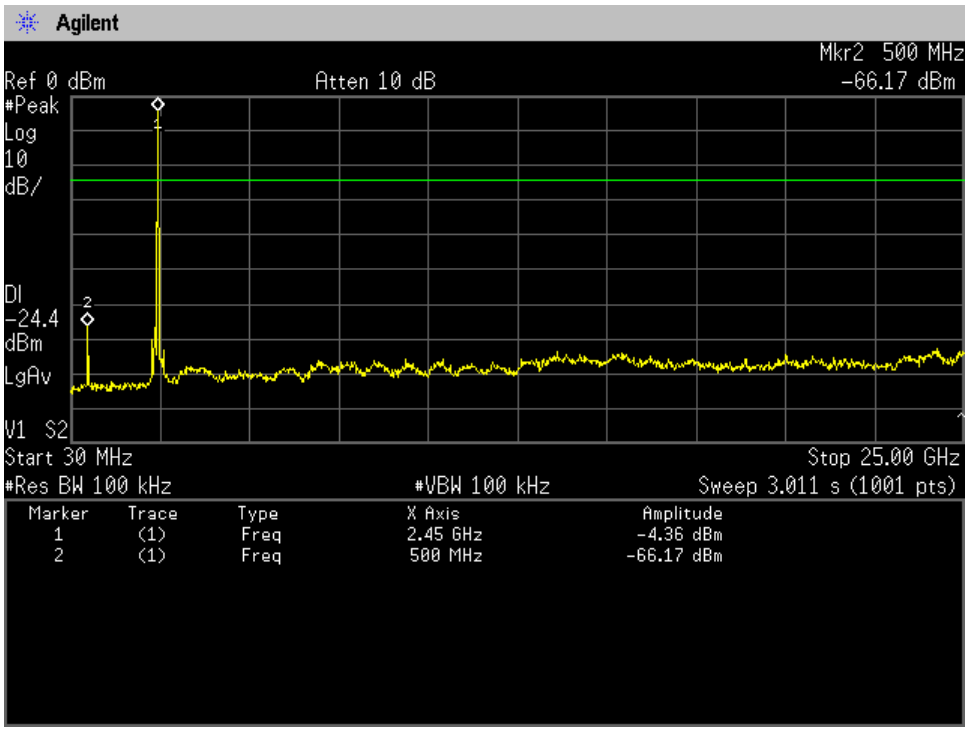
2)Data Rate : 11Mbps(IEEE 802.11b)
Low Channel



Middle Channel

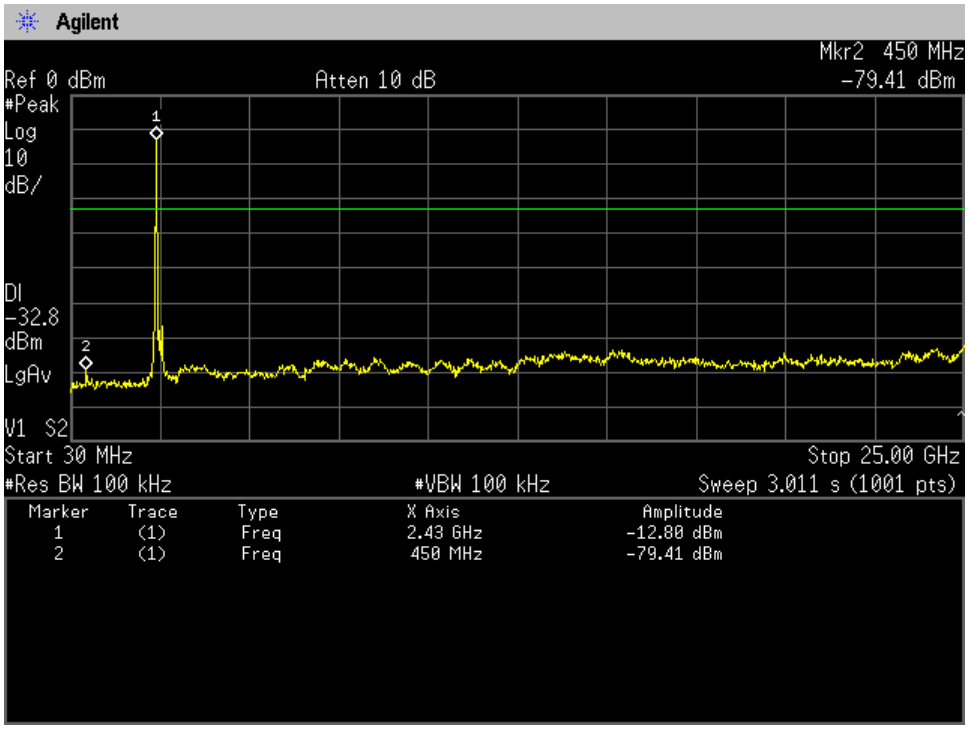


High Channel

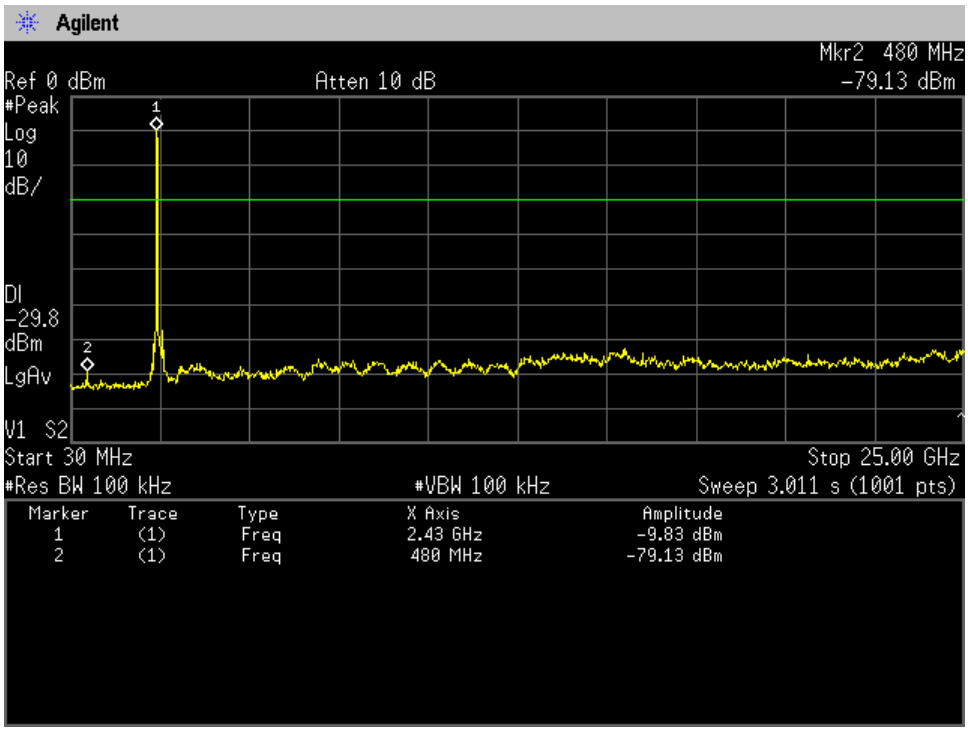


3)Data Rate : 6Mbps(IEEE 802.11g)

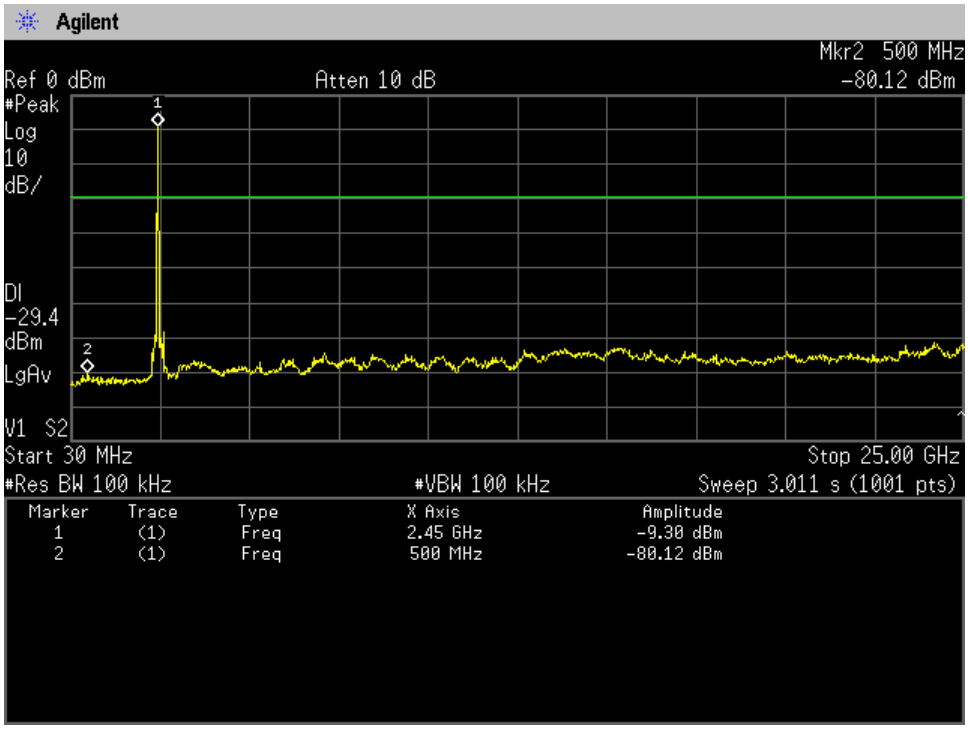
Low Channel



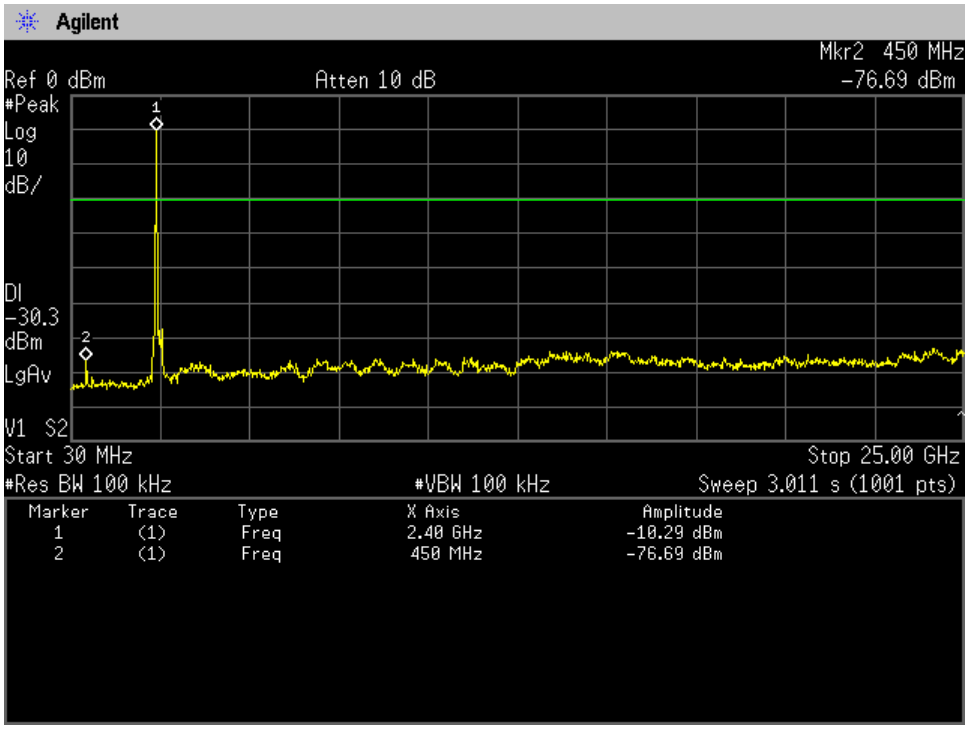
Middle Channel



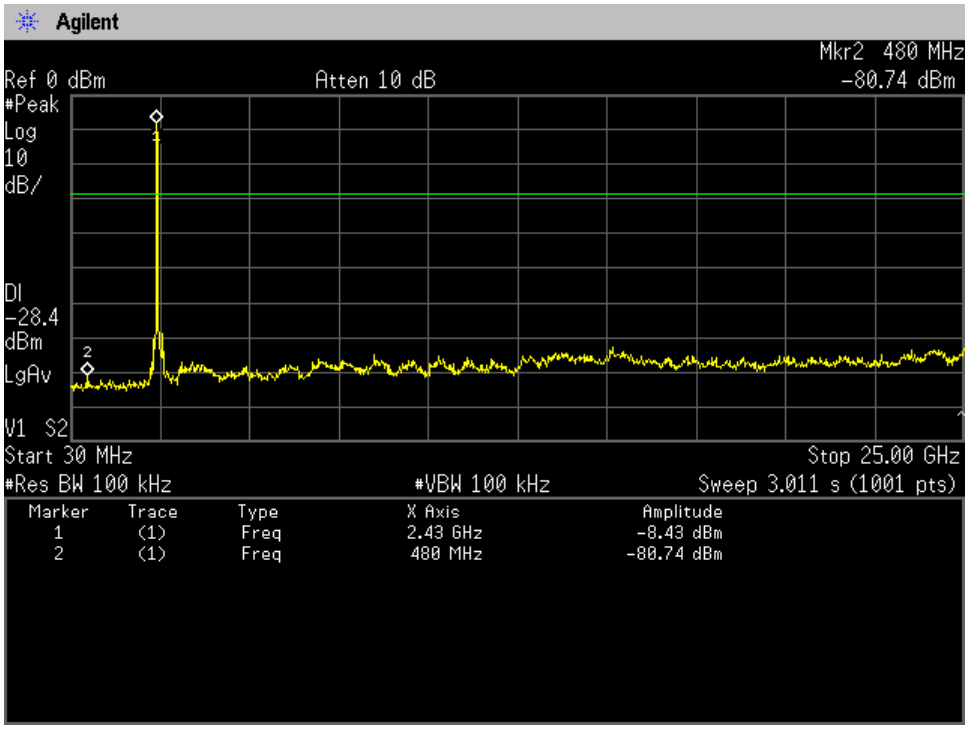
High Channel



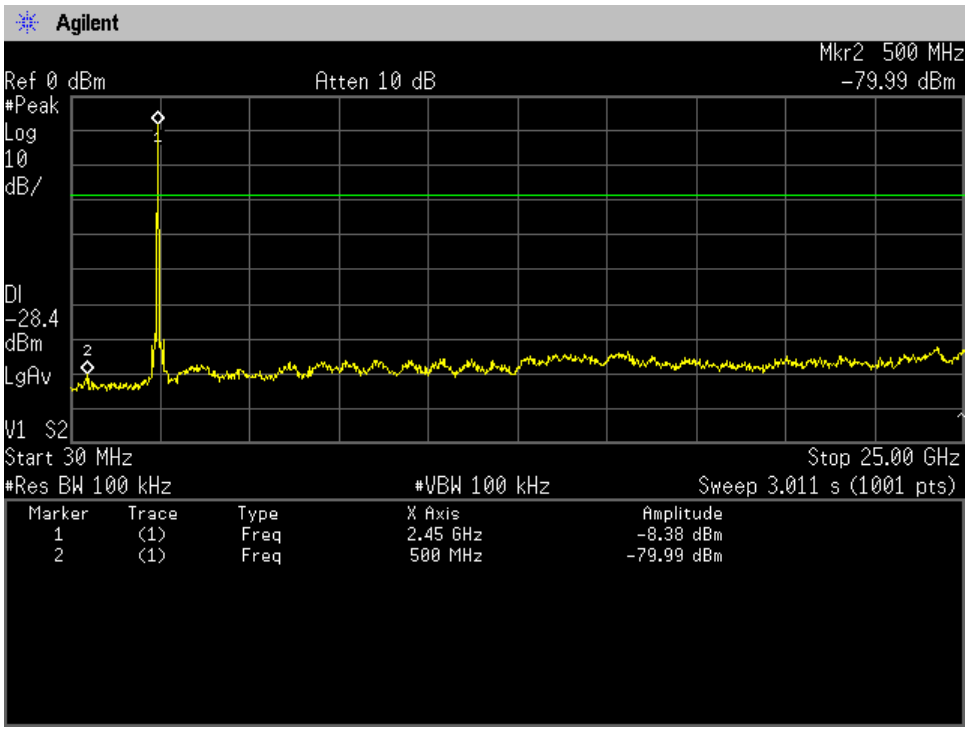
4)Data Rate : 54Mbps(IEEE 802.11g)
Low Channel



Middle Channel

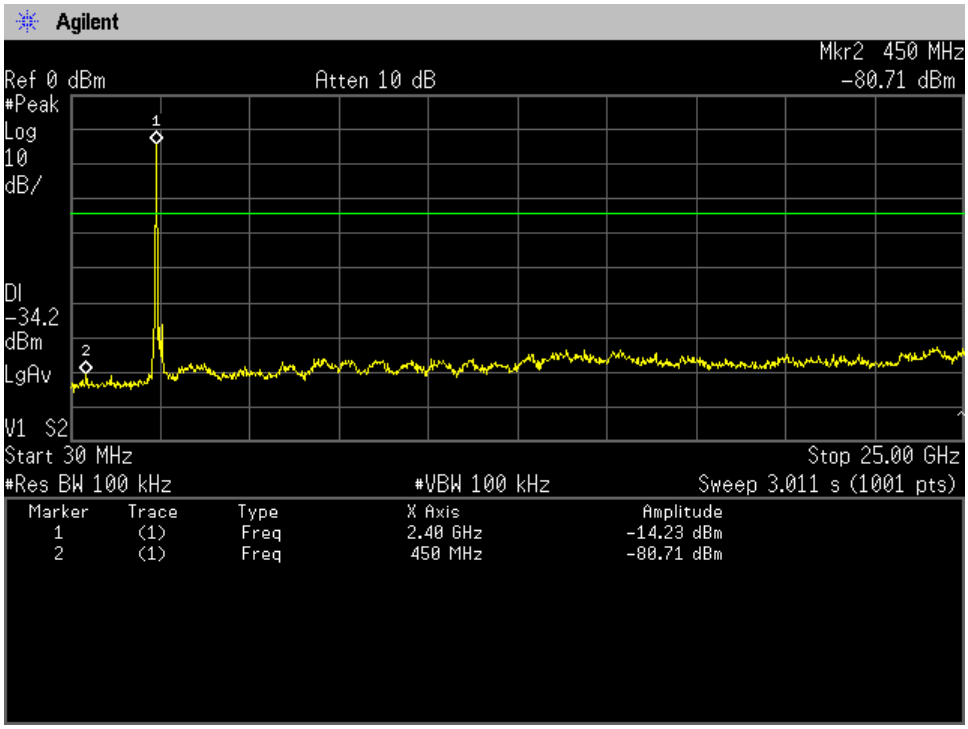


High Channel

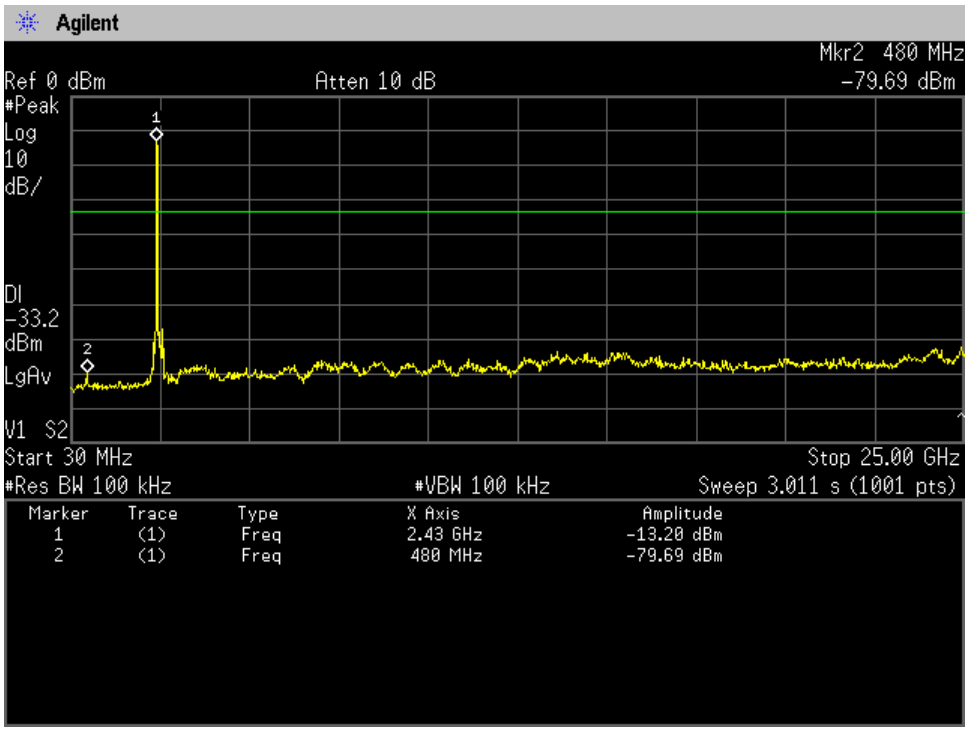


5)Data Rate : 6.5Mbps(IEEE 802.11n)

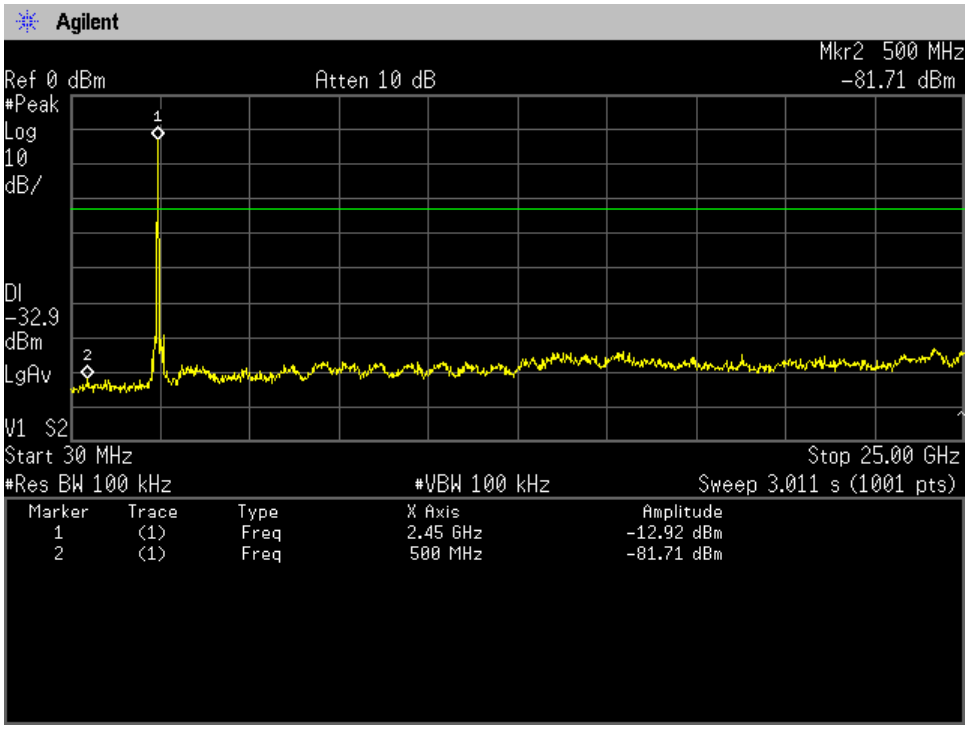
Low Channel



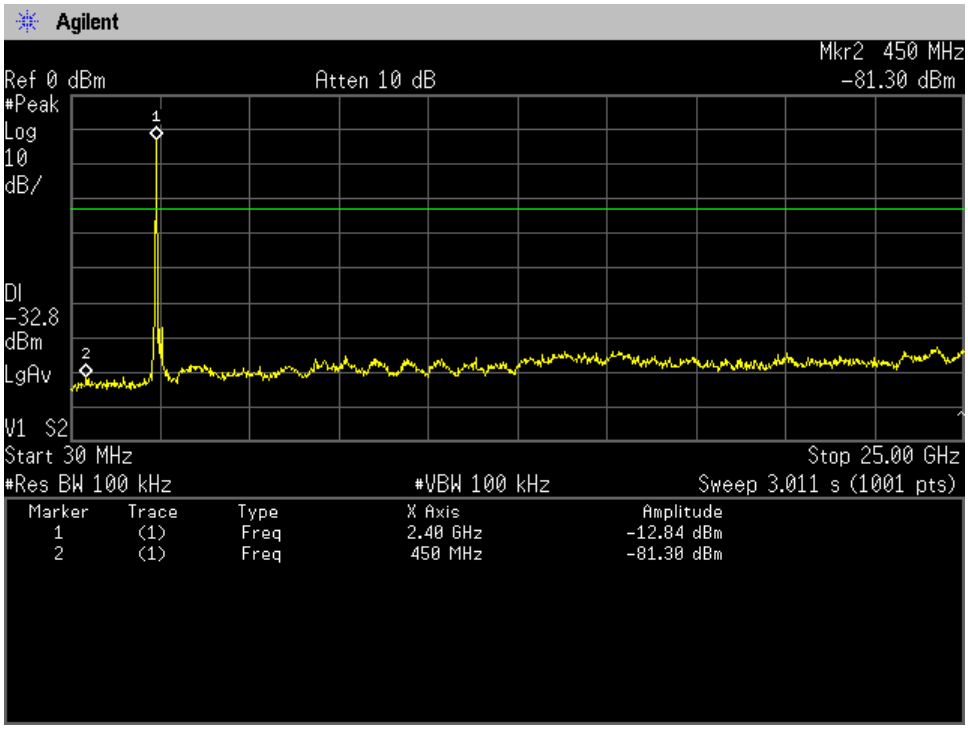
Middle Channel



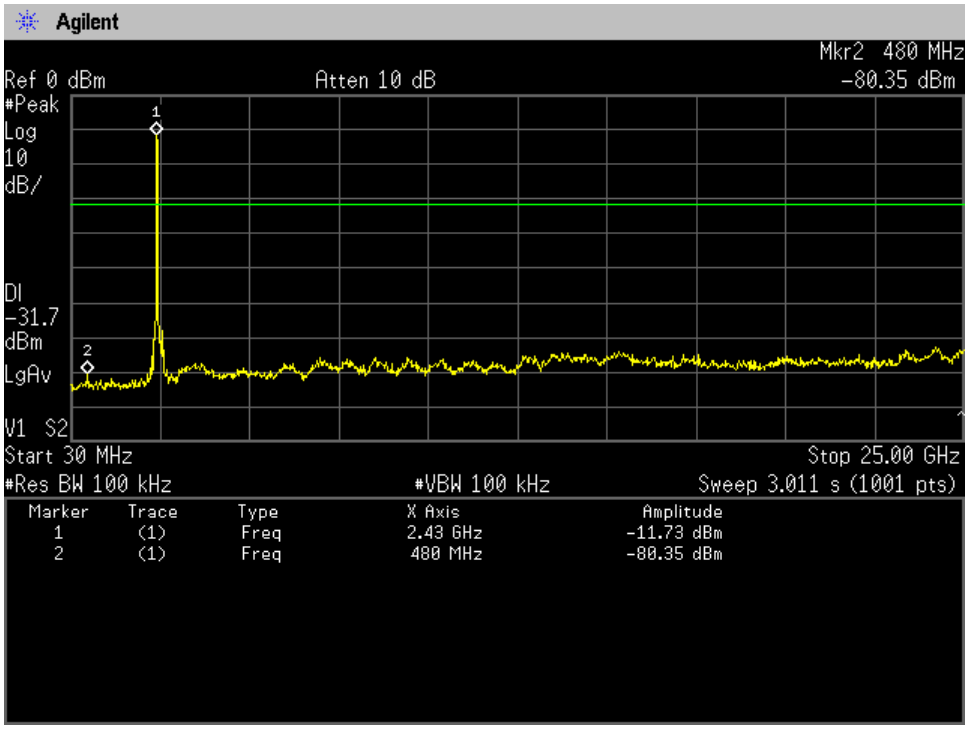
High Channel



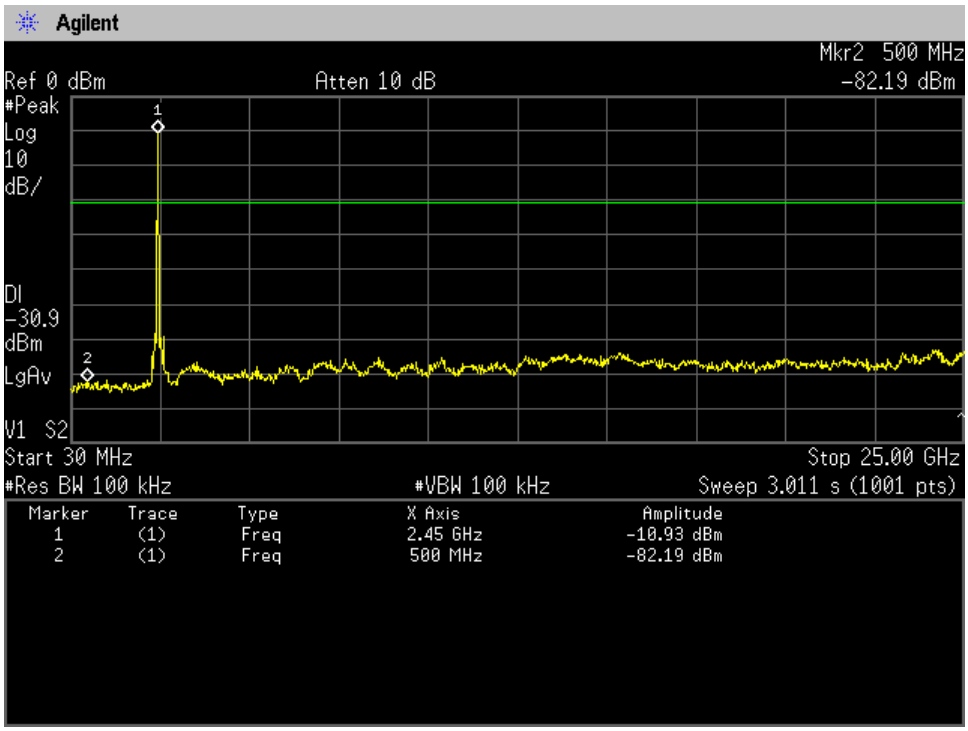
6)Data Rate : 65Mbps(IEEE 802.11n)
Low Channel



Middle Channel



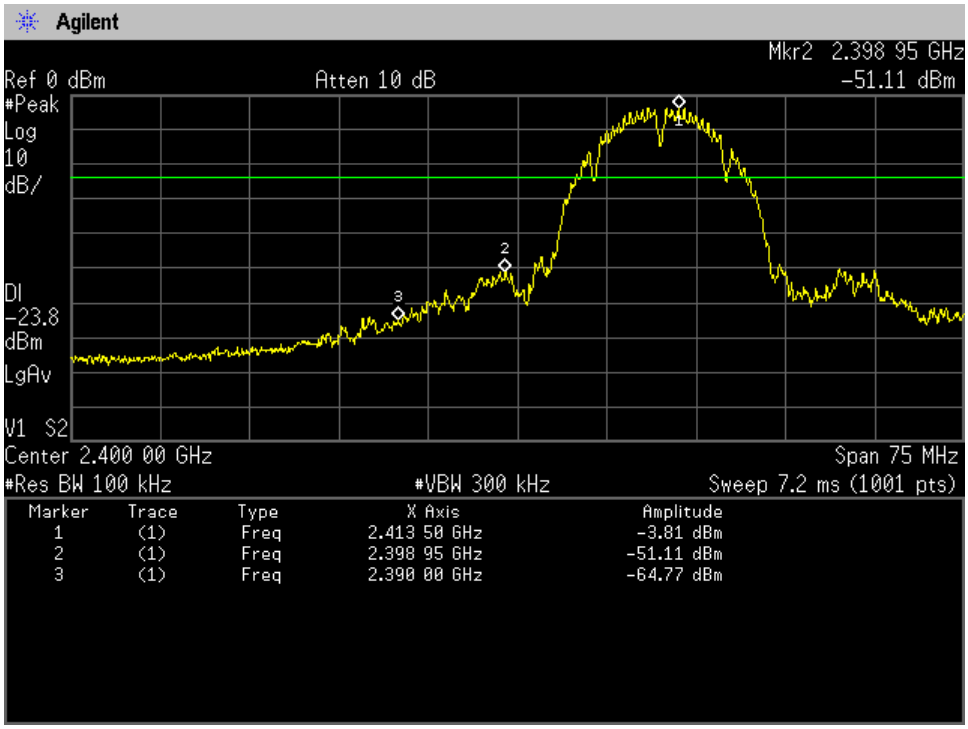
High Channel



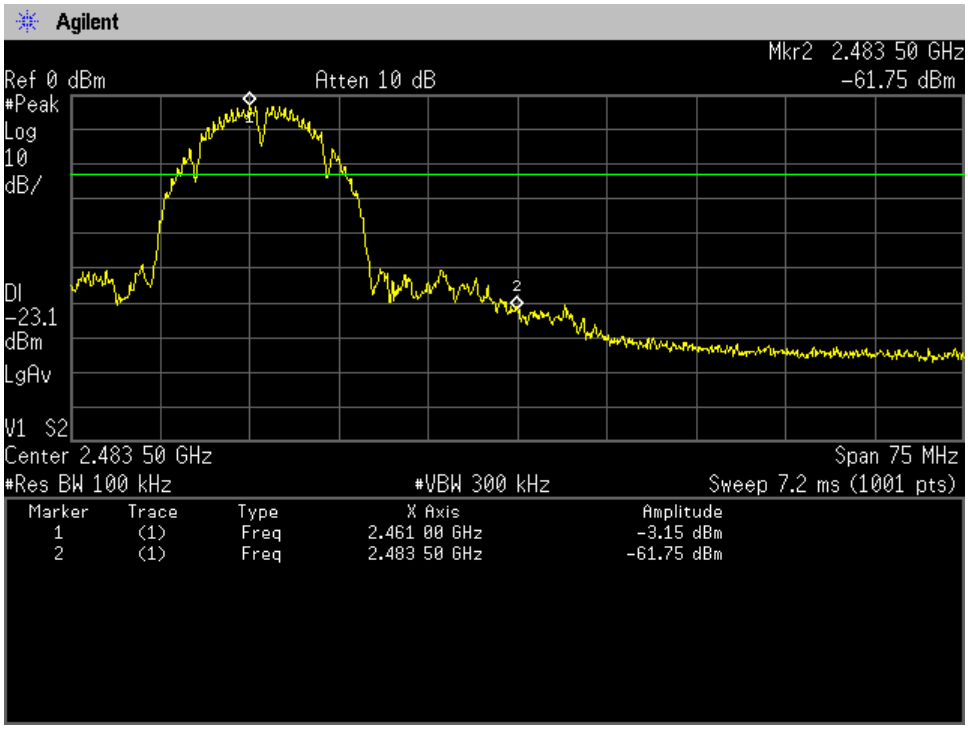
Band-Edge Emission

1)Data Rate : 1Mbps(IEEE 802.11b)

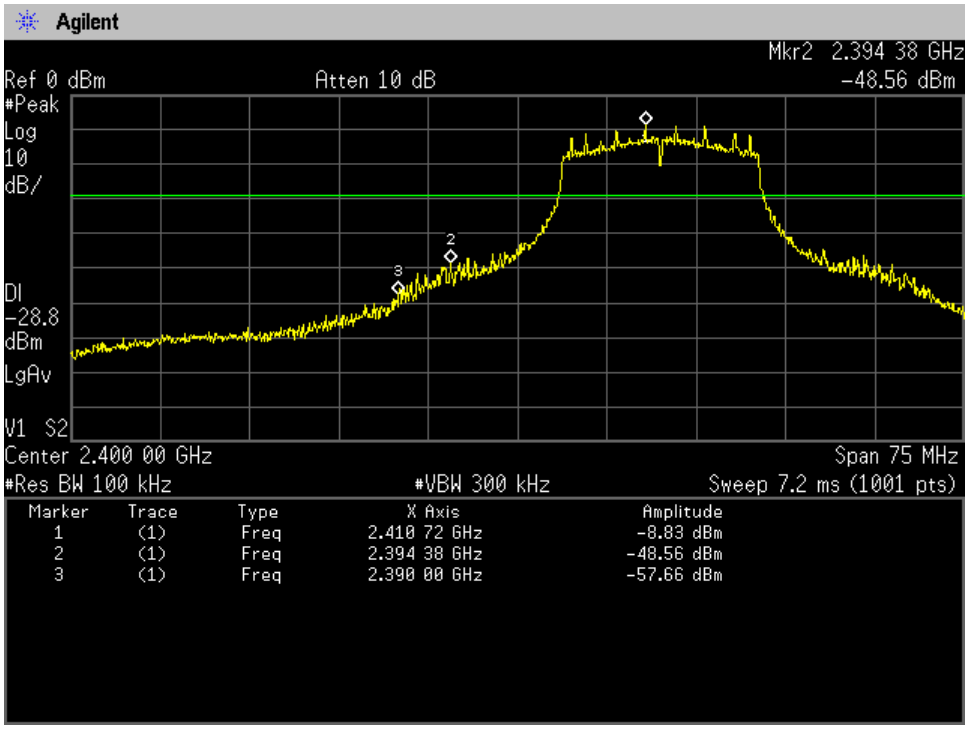
Low Channel



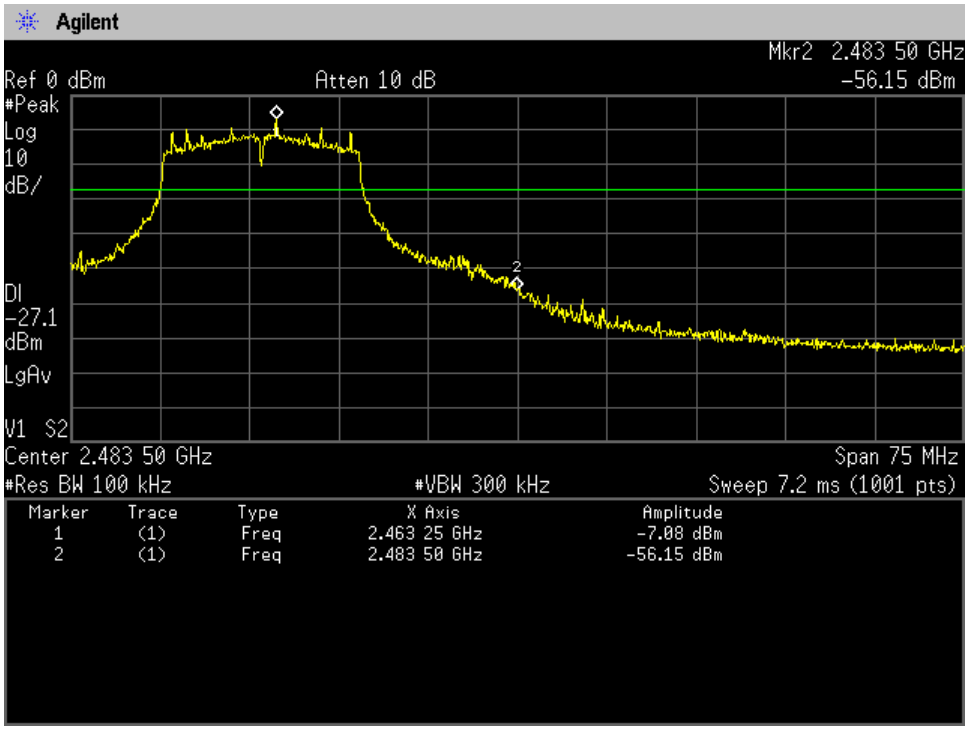
High Channel



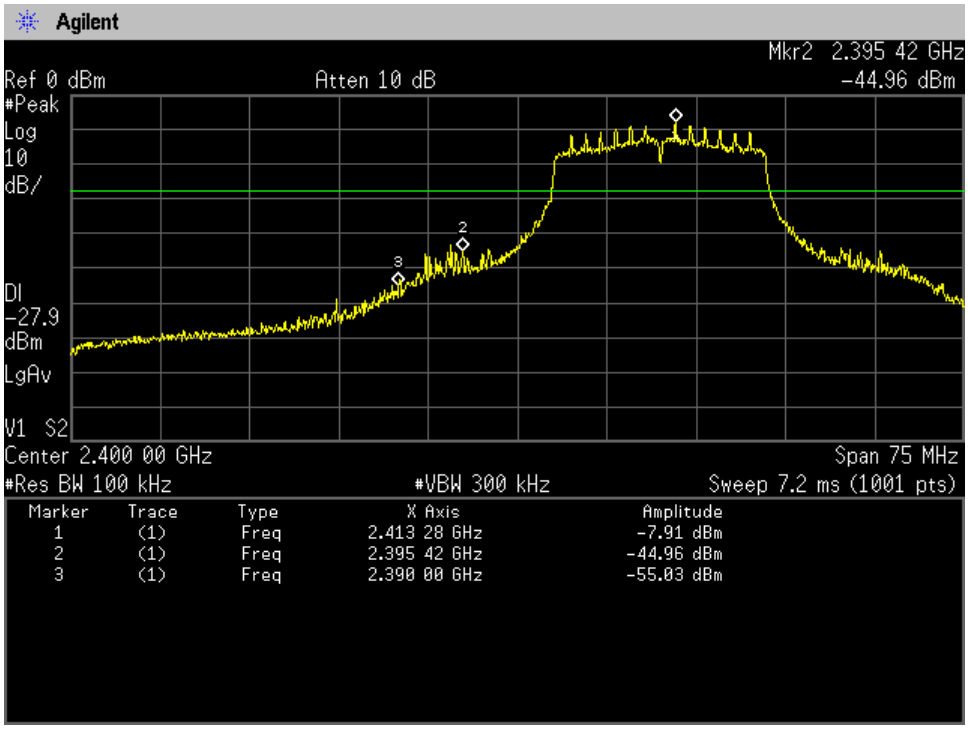
2)Data Rate : 6Mbps(IEEE 802.11g)
Low Channel



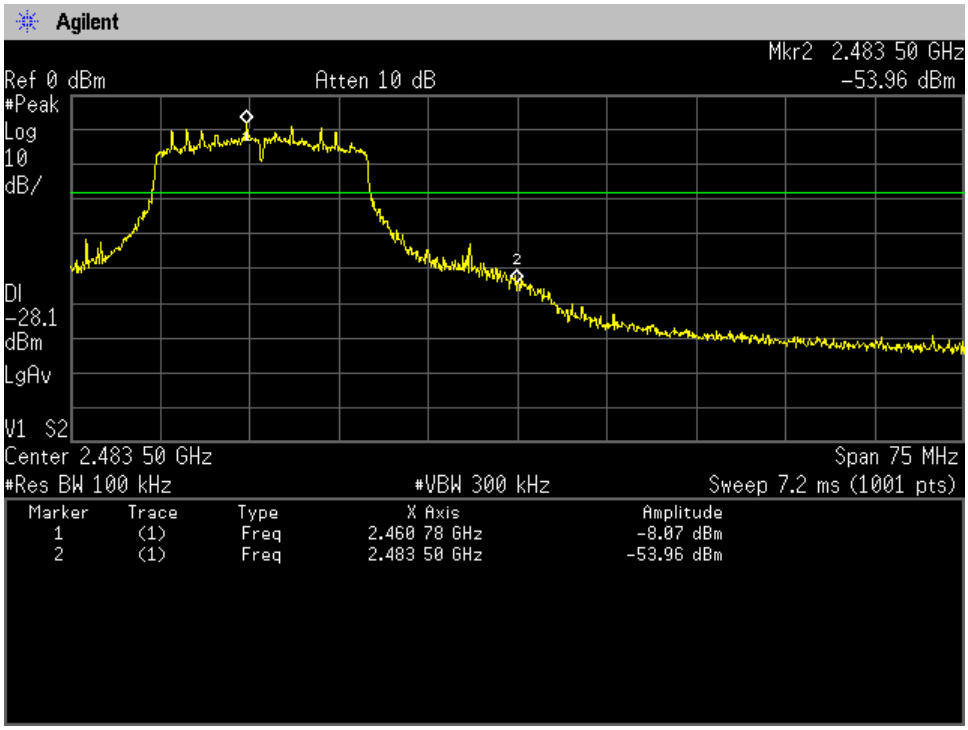
High Channel



2)Data Rate : 6.5Mbps(IEEE 802.11n)
Low Channel



High Channel

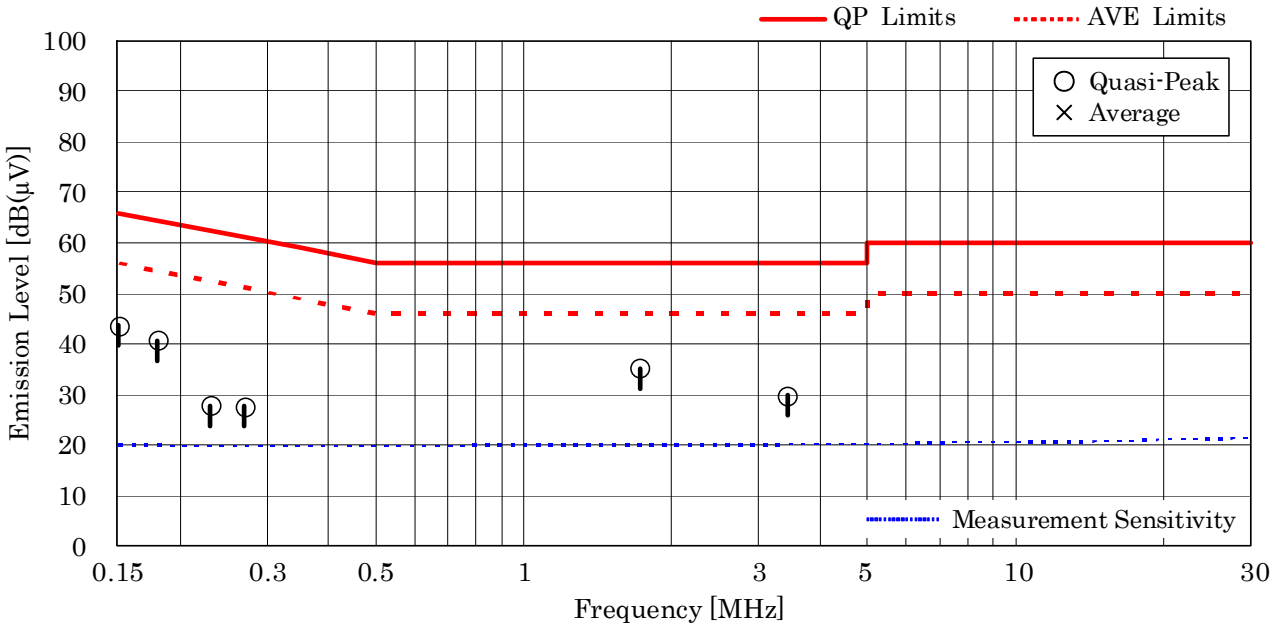


A.8 AC Powerline Conducted Emission

Mode of EUT : All modes have been investigated and the worst case mode for channel (06ch: 2437MHz / IEEE 802.11b, IEEE 802.11g and IEEE 802.11n) has been listed.

Test Date: March 29, 2011
Temp.: 23 °C, Humi: 26 %

Frequency [MHz]	Corr. Factor [dB]	Meter Readings [dB(μV)] VA QP	VA AVE	VB QP	VB AVE	Limits [dB(μV)] QP	Limits [dB(μV)] AVE	Results [dB(μV)] QP	Results [dB(μV)] AVE	Margin [dB]	Remarks
0.15	10.1	33.6	--	33.5	--	66.0	56.0	43.7	--	+22.3	-
0.18	10.1	30.5	--	30.6	--	64.5	54.5	40.7	--	+23.8	-
0.23	10.0	16.9	--	17.8	--	62.4	52.4	27.8	--	+34.6	-
0.27	10.0	15.2	--	17.7	--	61.1	51.1	27.7	--	+33.4	-
1.72	10.1	25.1	--	24.2	--	56.0	46.0	35.2	--	+20.8	-
3.44	10.2	17.4	--	19.6	--	56.0	46.0	29.8	--	+26.2	-



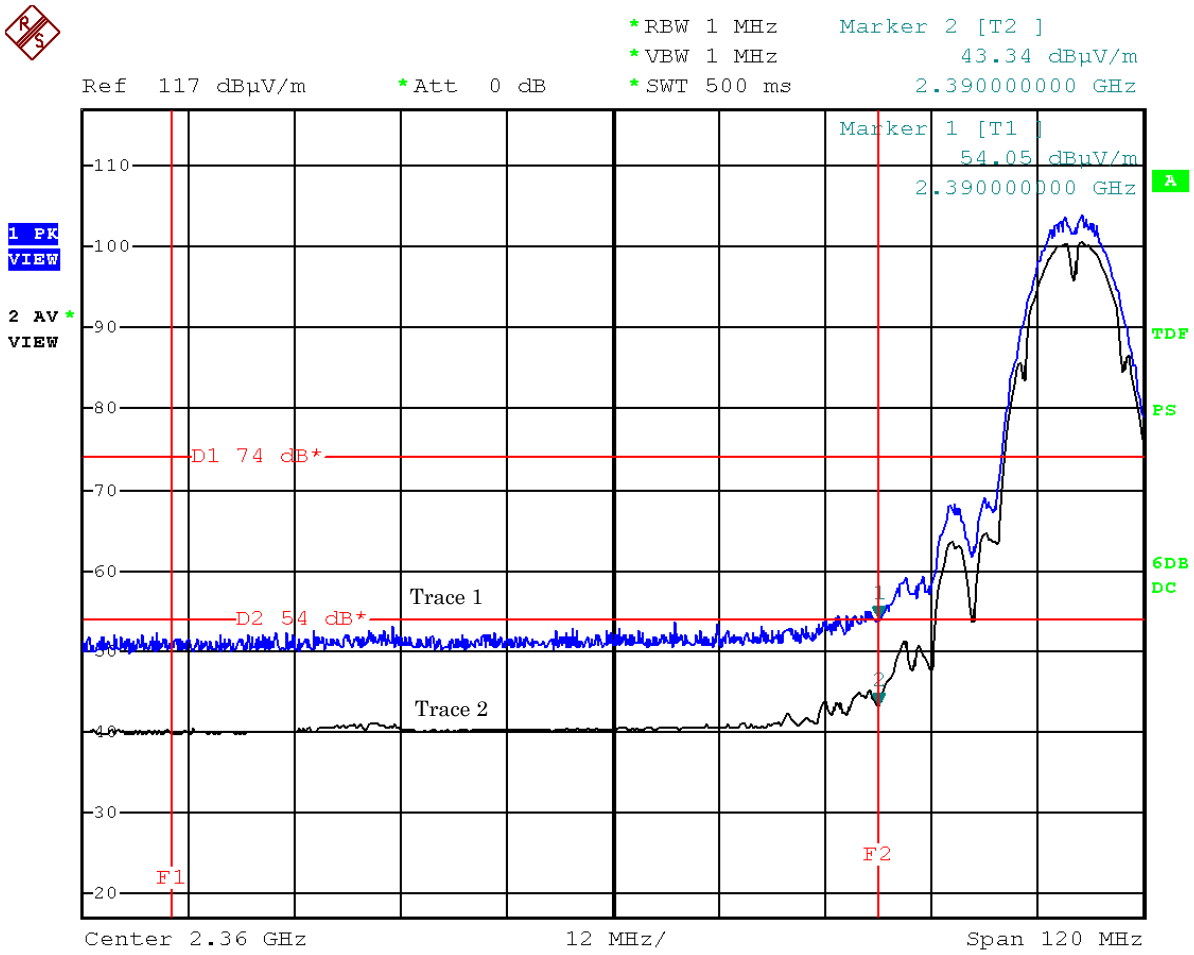
NOTES
1. The spectrum was checked from 0.15 MHz to 30 MHz.
2. The correction factor includes the AMN insertion loss and the cable loss.
3. The symbol of "<" means "or less".
4. The symbol of ">" means "more than".
5. The symbol of "--" means "not applicable".
6. Calculated result at 1.72 MHz, as the worst point shown on underline:
   Correction Factor + Meter Reading = 10.1 + 25.1 = 35.2 dB(μV)
7. QP : Quasi-Peak Detector / AVE : Average Detector
8. Test receiver setting(s) : CISPR QP 9 kHz / Average 9 kHz

A.9 Field Strength of Spurious Radiation

A.9.1 Band-edge Compliance

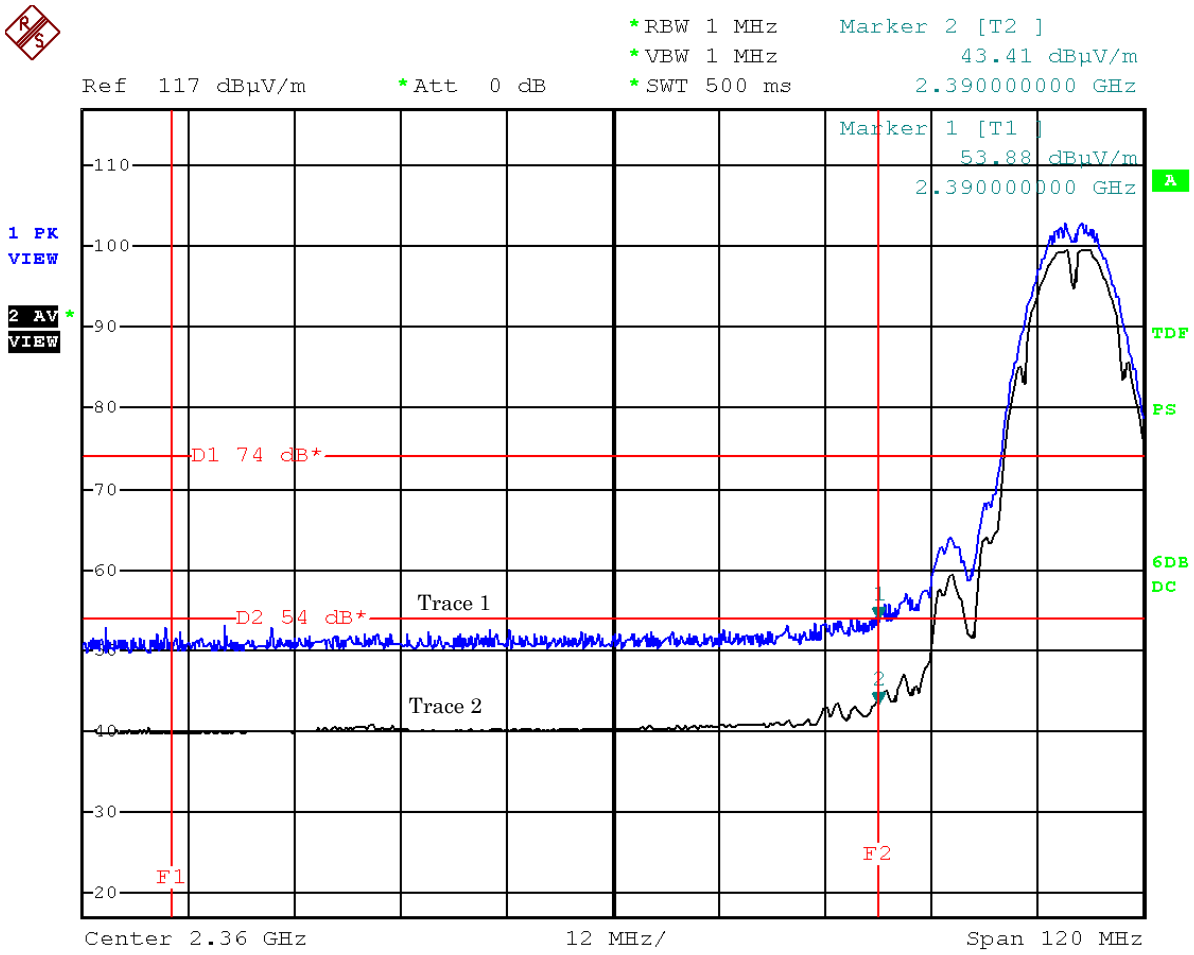
Test Date : March 30, 2011
Temp.:22°C, Humi:40%

Mode of EUT : TX(1ch: 2412 MHz, data rate : 1Mbps(IEEE 802.11b))
Antenna Polarization : Horizontal



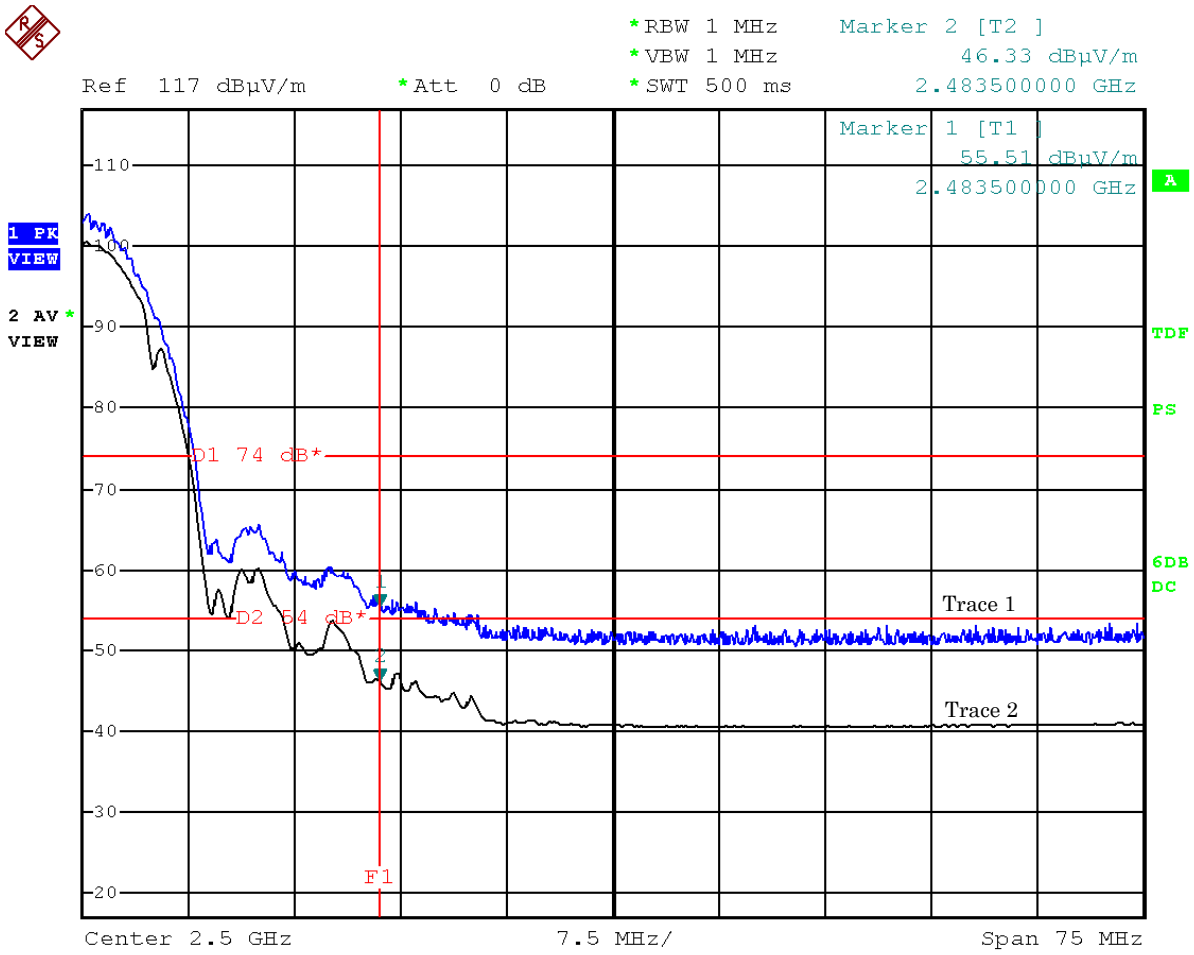
Note: The trace 1 is Peak detection. The trace 2 is Average detection.

Mode of EUT : TX(1ch: 2412 MHz, data rate : 1Mbps(IEEE 802.11b))
Antenna Polarization : Vertical



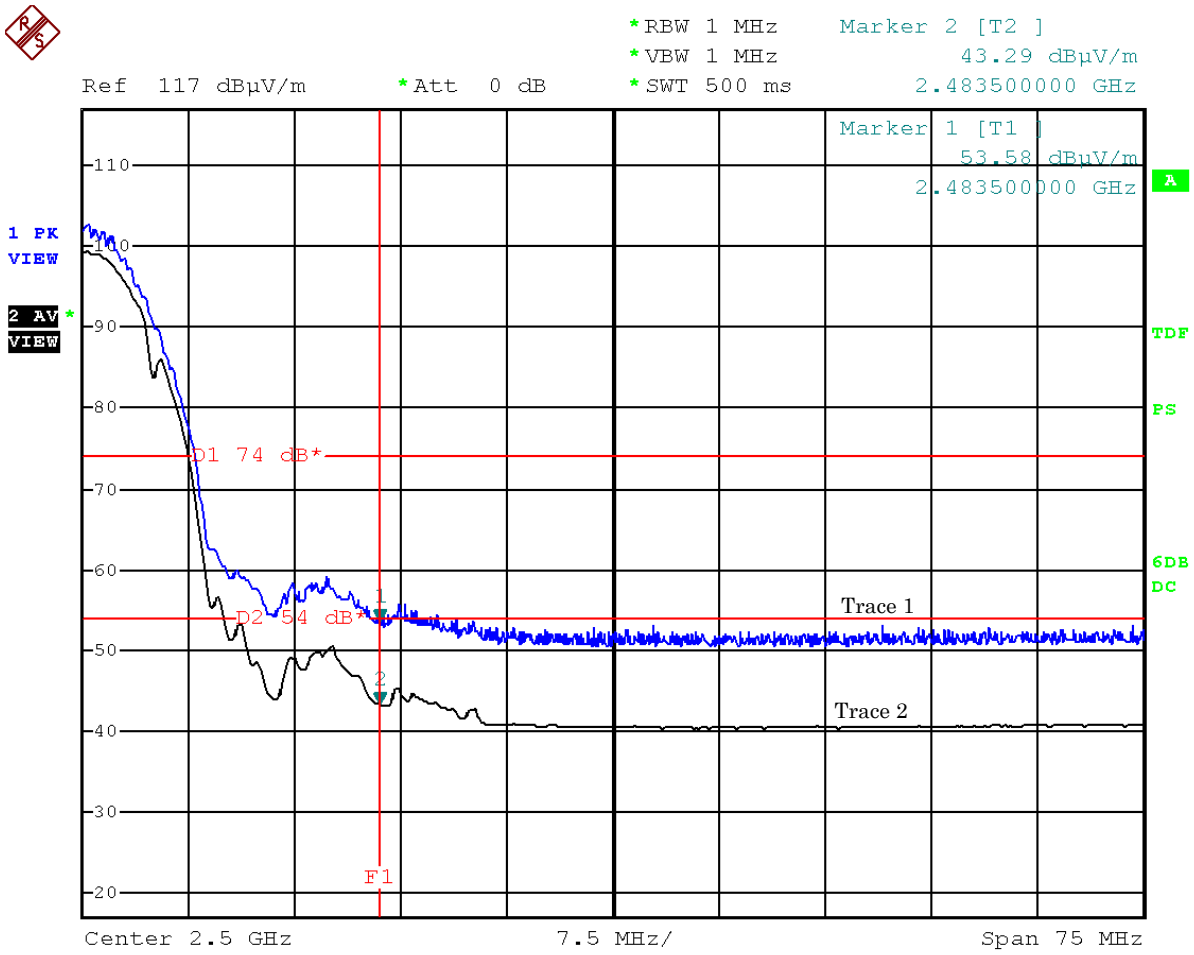
Note: The trace 1 is Peak detection. The trace 2 is Average detection.

Mode of EUT : TX(11ch: 2462 MHz, data rate : 1Mbps(IEEE 802.11b))
Antenna Polarization : Horizontal



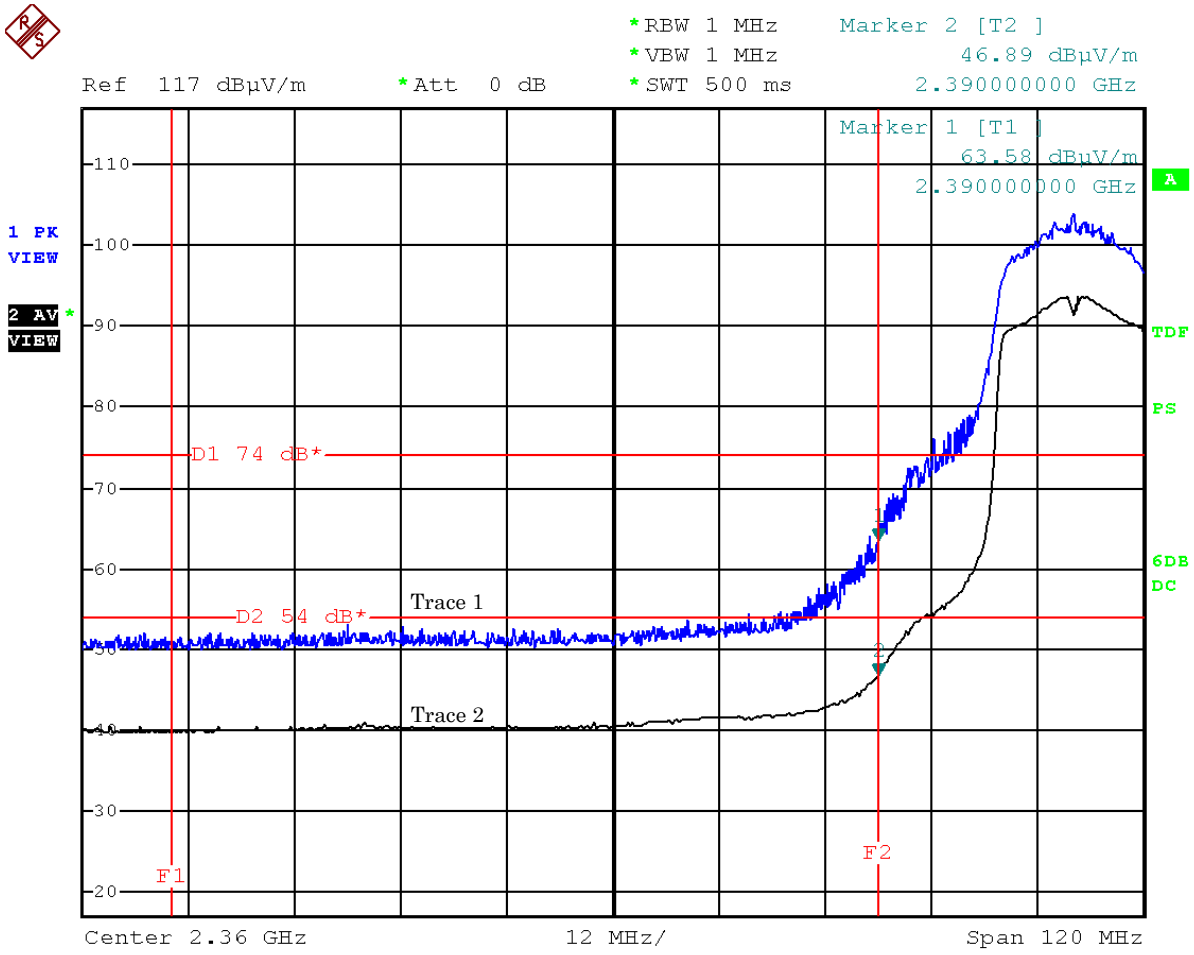
Note: The trace 1 is Peak detection. The trace 2 is Average detection.

Mode of EUT : TX(11ch: 2462 MHz, data rate : 1Mbps(IEEE 802.11b))
Antenna Polarization : Vertical



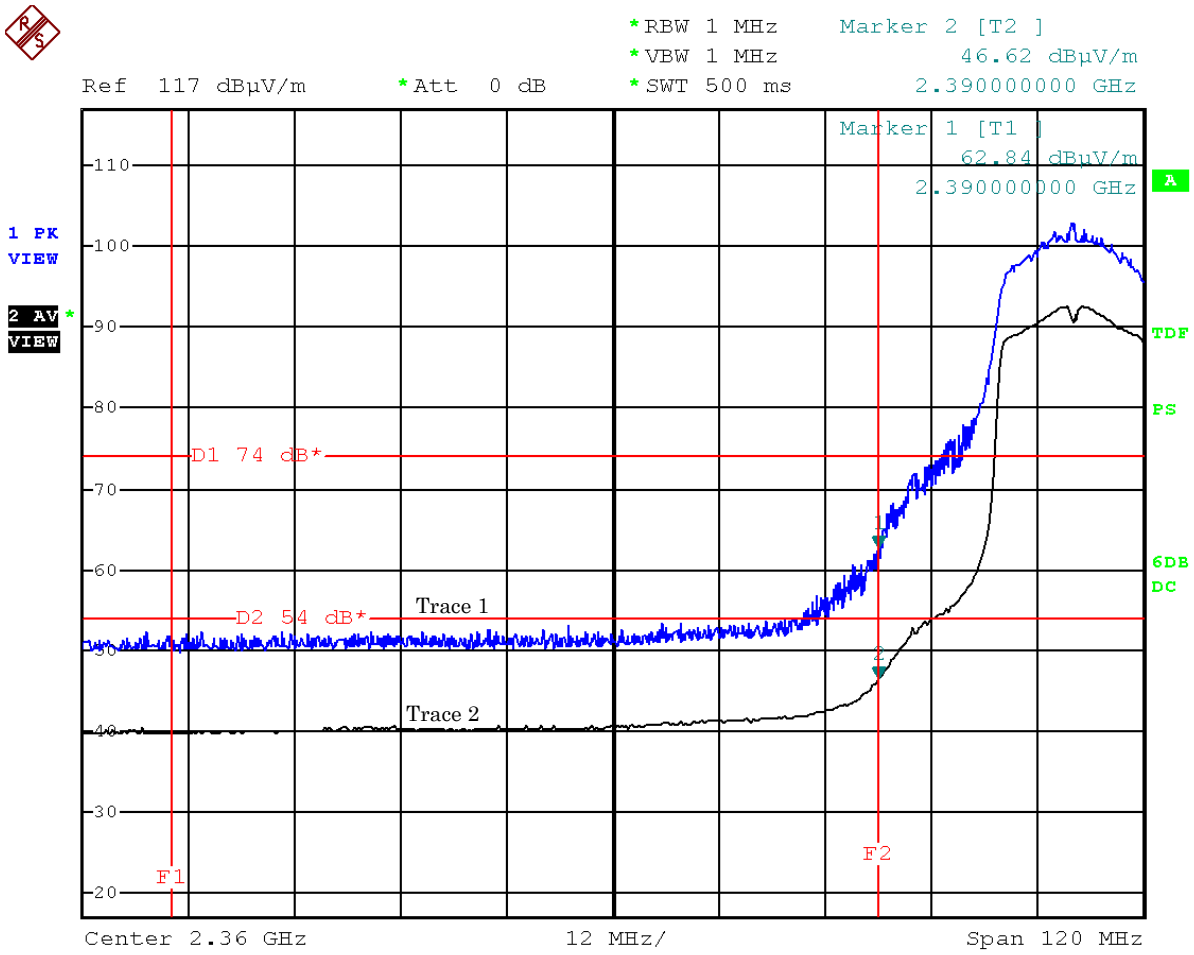
Note: The trace 1 is Peak detection. The trace 2 is Average detection.

Mode of EUT : TX(1ch: 2412 MHz, data rate : 6Mbps(IEEE 802.11g))
Antenna Polarization : Horizontal



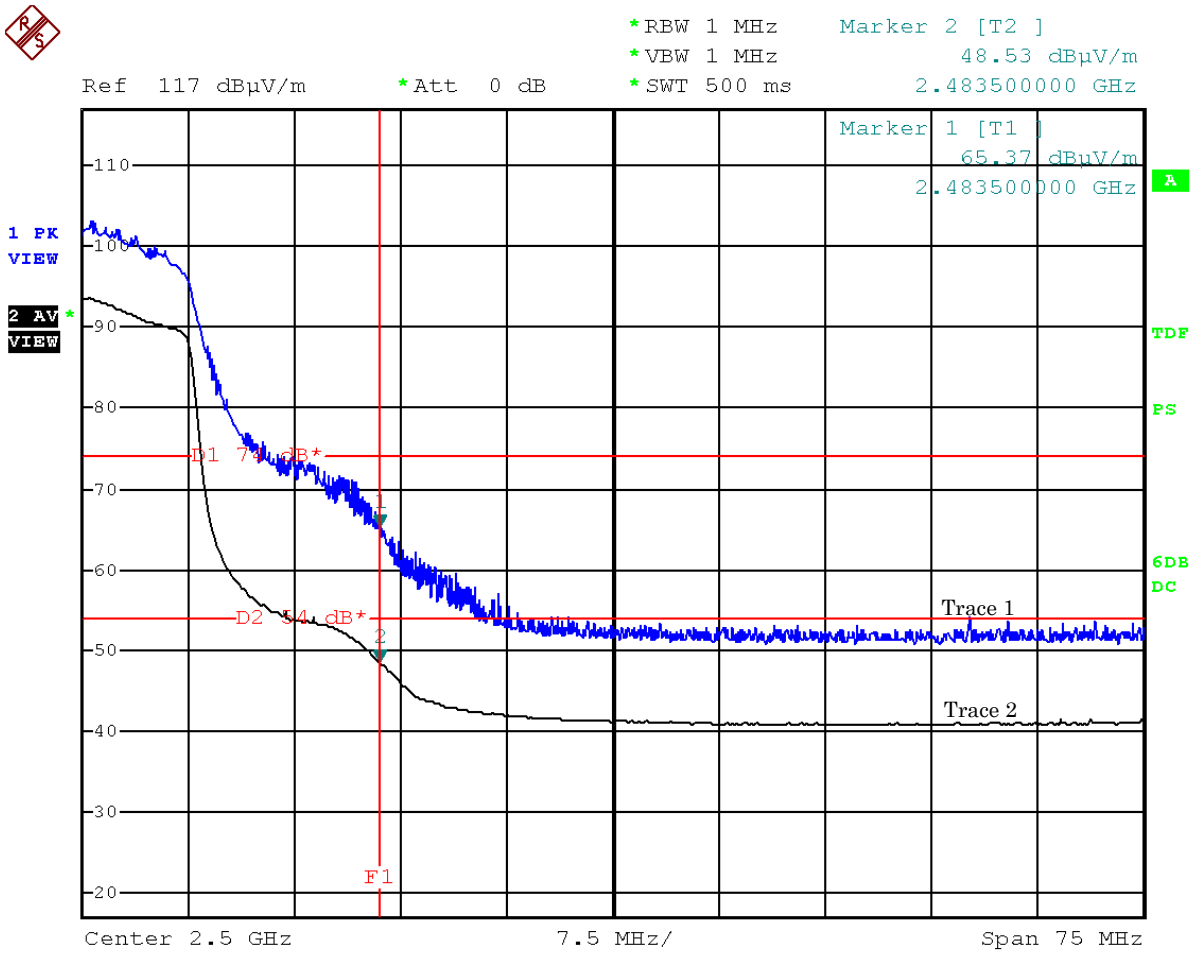
Note: The trace 1 is Peak detection. The trace 2 is Average detection.

Mode of EUT : TX(1ch: 2412 MHz, data rate : 6Mbps(IEEE 802.11g))
Antenna Polarization : Vertical



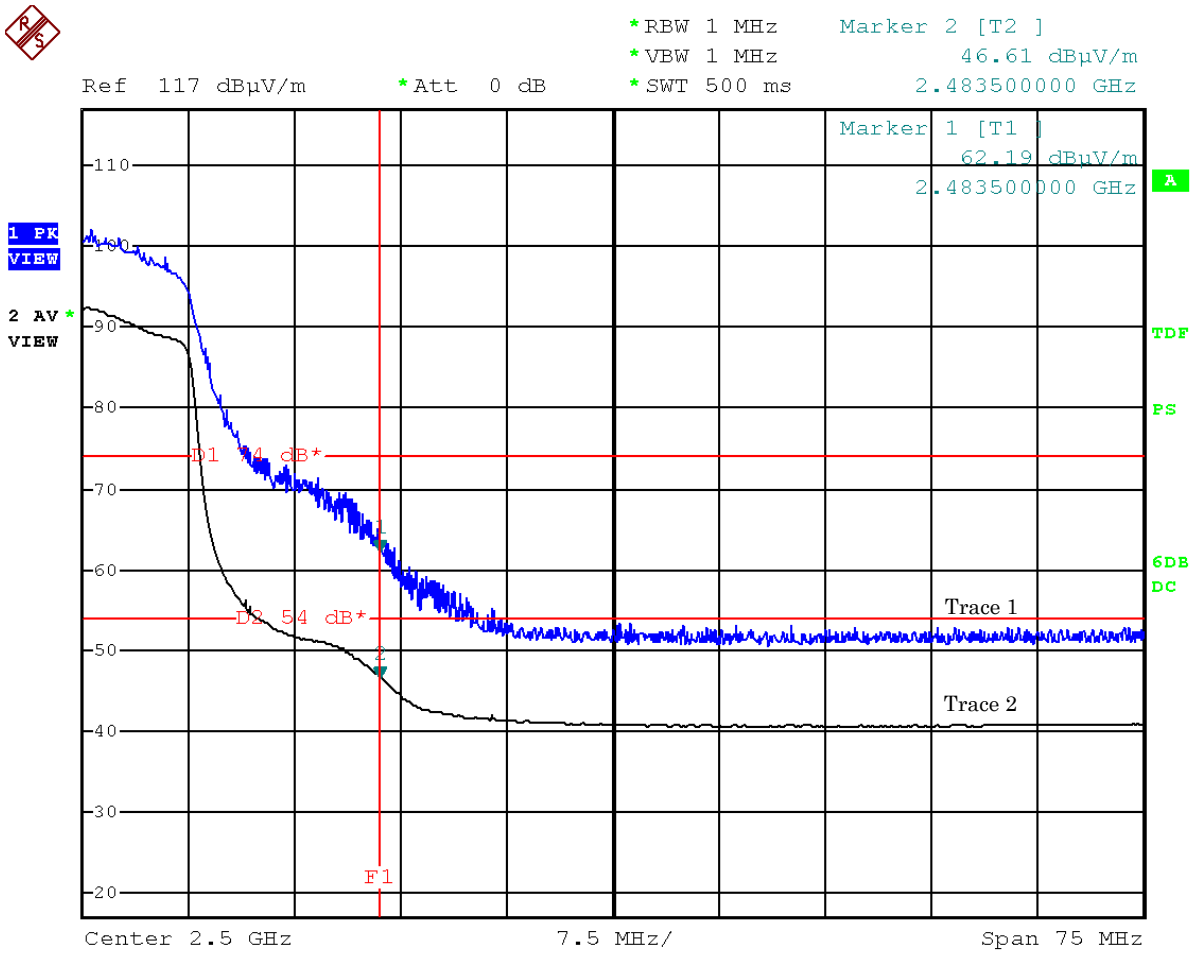
Note: The trace 1 is Peak detection. The trace 2 is Average detection.

Mode of EUT : TX(11ch: 2462 MHz, data rate : 6Mbps(IEEE 802.11g))
Antenna Polarization : Horizontal



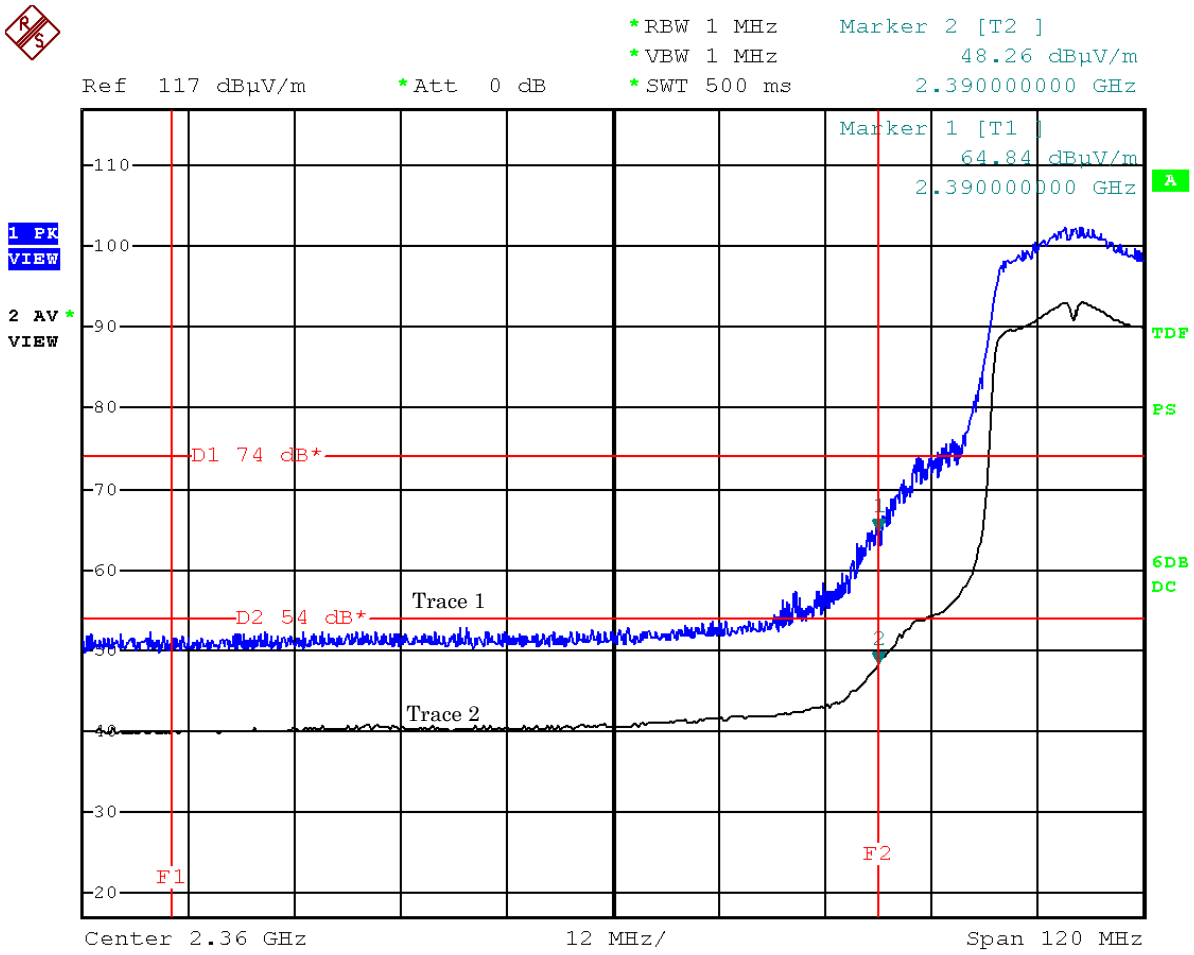
Note: The trace 1 is Peak detection. The trace 2 is Average detection.

Mode of EUT : TX(11ch: 2462 MHz, data rate : 6Mbps(IEEE 802.11g))
Antenna Polarization : Vertical



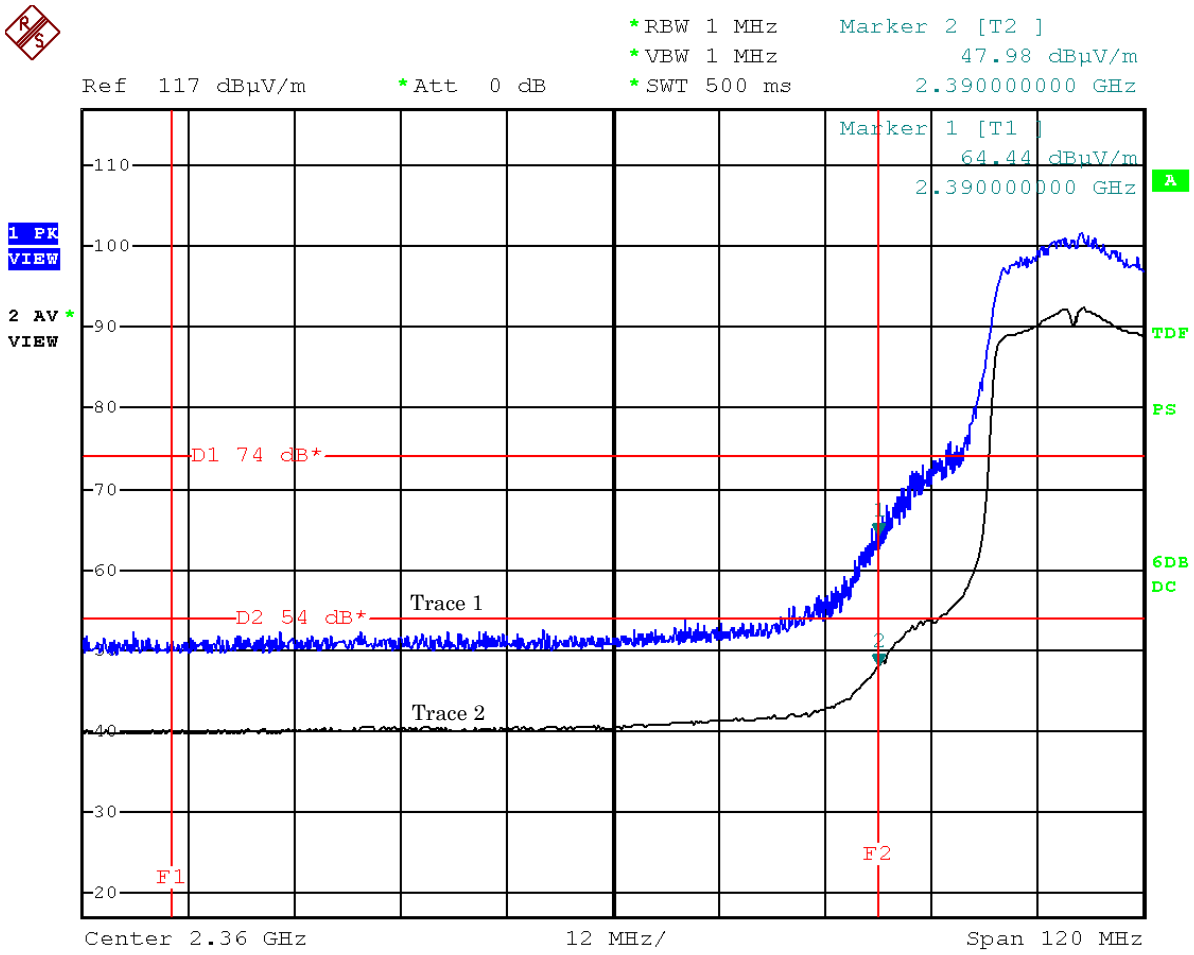
Note: The trace 1 is Peak detection. The trace 2 is Average detection.

Mode of EUT : TX(1ch: 2412 MHz, data rate : 6.5Mbps(IEEE 802.11n))
Antenna Polarization : Horizontal



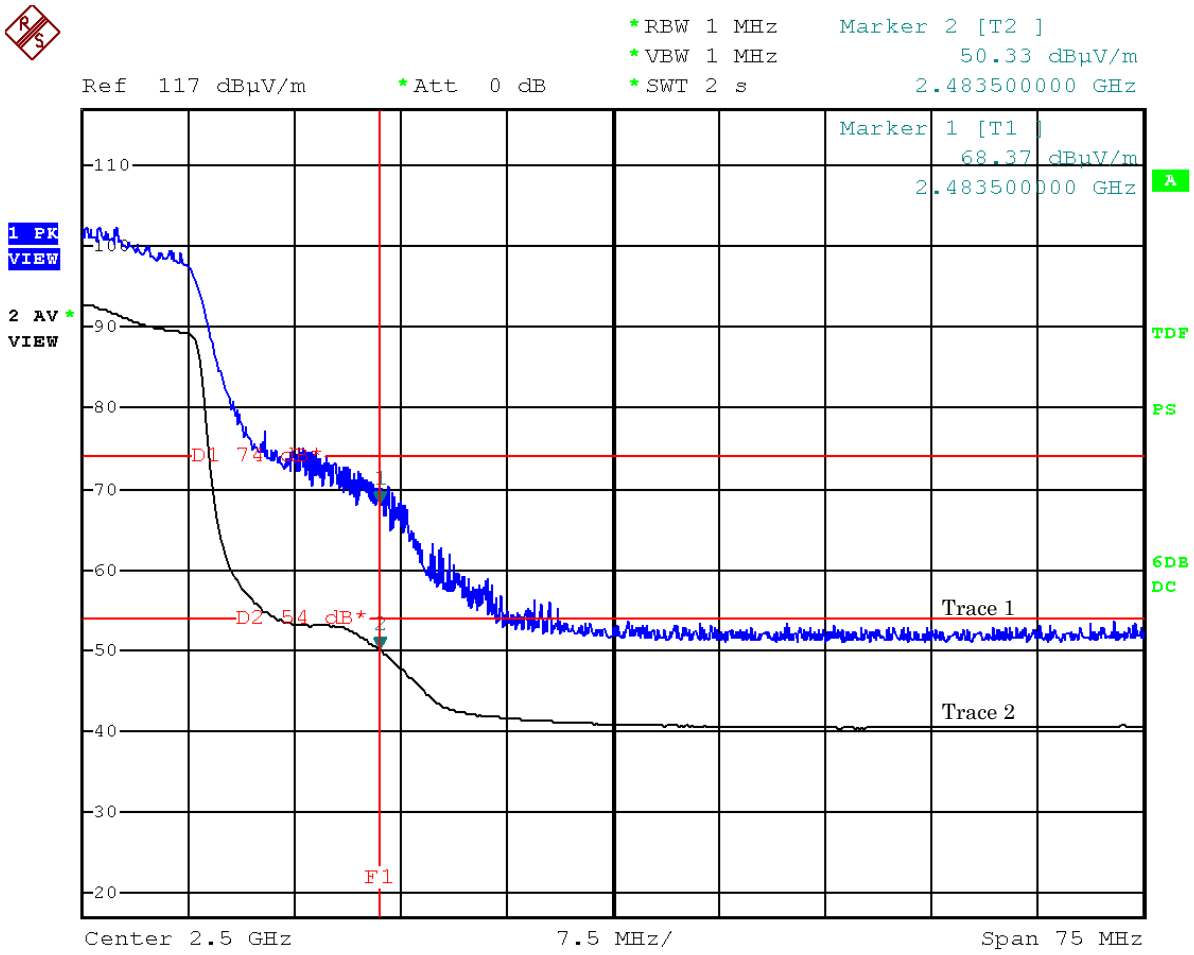
Note: The trace 1 is Peak detection. The trace 2 is Average detection.

Mode of EUT : TX(1ch: 2412 MHz, data rate : 6.5Mbps(IEEE 802.11n))
Antenna Polarization : Vertical



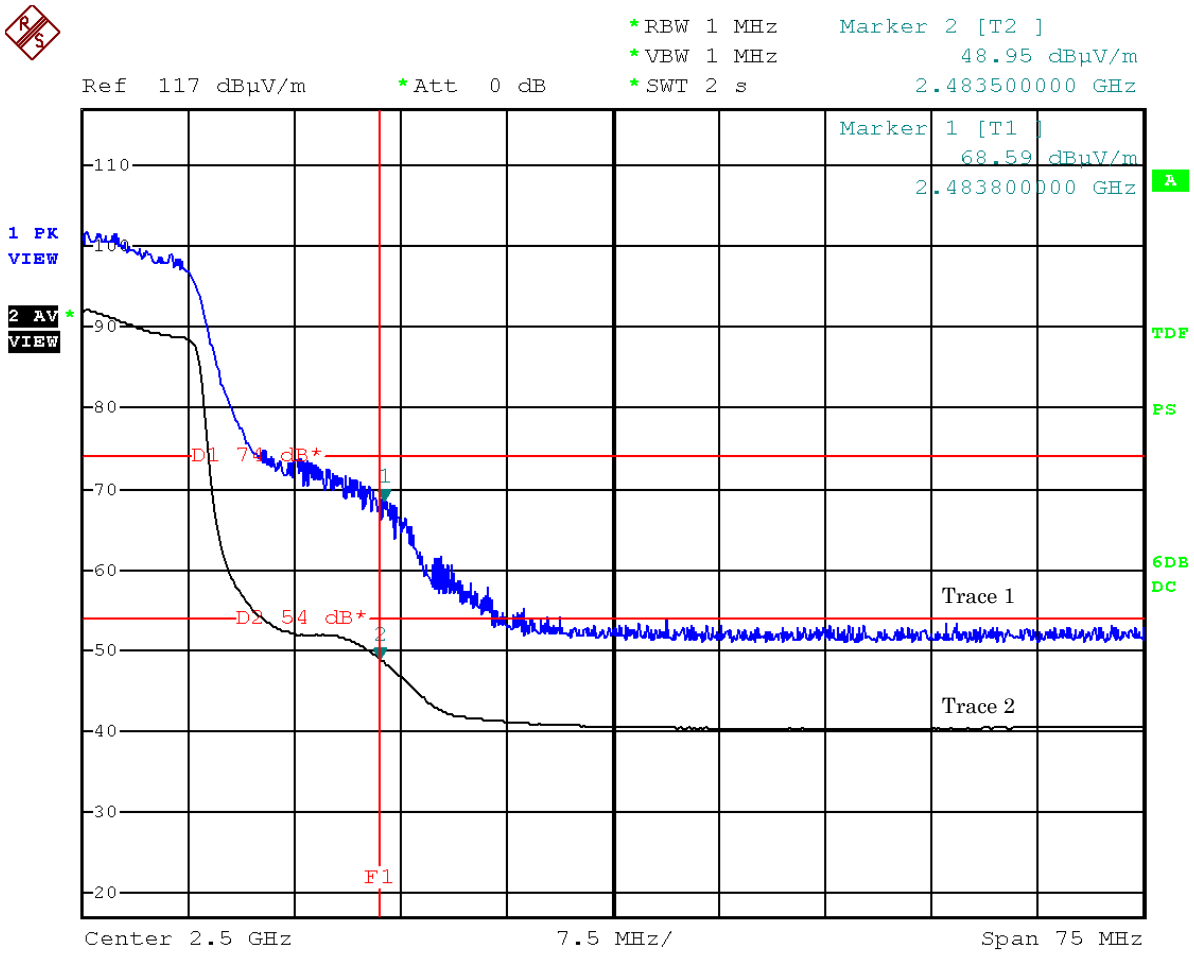
Note: The trace 1 is Peak detection. The trace 2 is Average detection.

Mode of EUT : TX(11ch: 2462 MHz, data rate : 6.5Mbps(IEEE 802.11n))
Antenna Polarization : Horizontal



Note: The trace 1 is Peak detection. The trace 2 is Average detection.

Mode of EUT : TX(11ch: 2462 MHz, data rate : 6.5Mbps(IEEE 802.11n))
Antenna Polarization : Vertical



Note: The trace 1 is Peak detection. The trace 2 is Average detection.

A.9.2 Other Spurious Emission

A.9.2.1 Other Spurious Emission(9kHz – 30MHz)

Test Date : April 5, 2011
Temp.:15°C, Humi:40%

Mode of EUT : All modes have been investigated and the worst case mode for channel (06ch: 2437MHz / IEEE802.11b, IEEE802.11g and IEEE802.11n) has been listed.

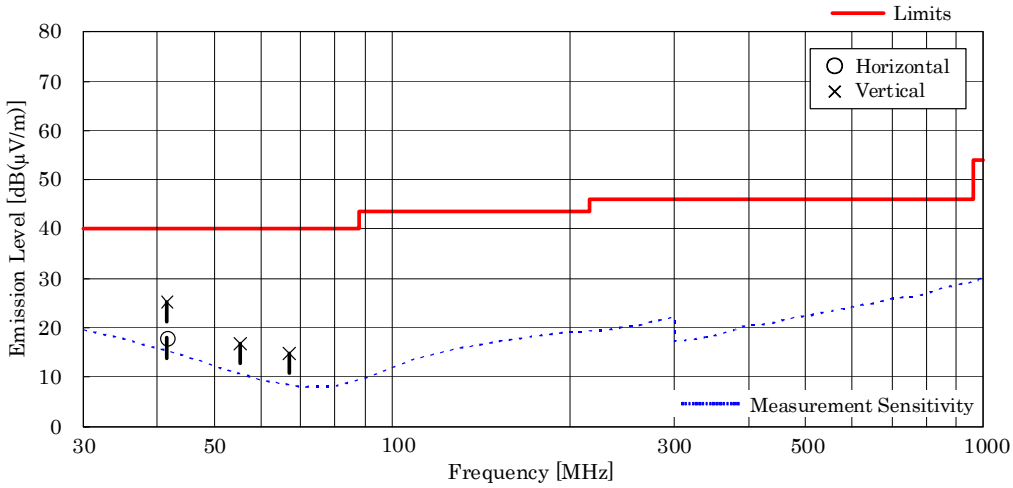
Results : No spurious emissions in the range 20dB below the limit.

A.9.2.2 Other Spurious Emission(30MHz – 1000MHz)

Mode of EUT : All modes have been investigated and the worst case mode for channel (06ch: 2437MHz / IEEE802.11b, IEEE802.11g and IEEE802.11n) has been listed.

Test Date: April 5, 2011
Temp.: 15 °C, Humi: 40 %

Frequency [MHz]	Antenna Factor [dB(1/m)]	Cable Loss [dB]	Meter Readings [dB(μV)] Hori.	Vert.	Limits [dB(μV/m)]	Results [dB(μV/m)] Hori.	Vert.	Margin [dB]	Remarks
41.6	14.2	1.1	2.6	9.9	40.0	17.9	25.2	+14.8	-
55.3	9.4	1.3	< 0.0	6.1	40.0	< 10.7	16.8	+23.2	-
66.9	7.0	1.4	< 0.0	6.3	40.0	< 8.4	14.7	+25.3	-



NOTES
1. Test Distance : 3 m
2. The spectrum was checked from 30 MHz to 1000 MHz.
3. The symbol of "<" means "or less".
4. The symbol of ">" means "more than".
5. Calculated result at 41.6 MHz, as the worst point shown on underline:
#VALUE!
6. Test receiver setting(s) : CISPR QP 120 kHz (QP : Quasi-Peak)

A.9.2.3 Other Spurious Emission(Above 1000MHz)

Mode of EUT : TX(IEEEE802.11b / IEEEE 802.11g / IEEEE 802.11n)

Test Date: March 30, 2011
Temp.: 22 °C, Humi: 40 %

Frequency [MHz]	Antenna Factor [dB(1/m)]	Corr. Factor [dB]	Meter Readings [dB(μV)] Horizontal PK	Horizontal AVE	Vertical PK	Vertical AVE	Limits [dB(μV/m)] PK	Limits AVE	Results [dB(μV/m)] PK	Results AVE	Margin [dB]	Remarks
Test condition : Tx Low Ch												
4824.0	27.4	-20.8	42.6	33.6	42.3	33.6	74.0	54.0	49.2	40.2	+13.8	A/B
12060.0	33.7	-25.6	< 40.0	< 30.0	< 40.0	< 30.0	74.0	54.0	< 48.1	< 38.1	> +15.9	A/B
19296.0	40.4	-21.6	< 40.0	< 30.0	< 40.0	< 30.0	74.0	54.0	< 58.8	< 48.8	> + 5.2	A/B
Test condition : TX Middle Ch												
4874.0	27.3	-20.8	43.5	36.0	41.6	32.8	74.0	54.0	50.0	42.5	+11.5	A/B
7311.0	29.8	-19.0	< 40.0	< 30.0	< 40.0	< 30.0	74.0	54.0	< 50.8	< 40.8	> +13.2	A/B
12185.0	33.6	-25.4	< 40.0	< 30.0	< 40.0	< 30.0	74.0	54.0	< 48.2	< 38.2	> +15.8	A/B
19496.0	40.4	-21.6	< 40.0	< 30.0	< 40.0	< 30.0	74.0	54.0	< 58.8	< 48.8	> + 5.2	A/B
Test condition : TX High Ch												
4924.0	27.3	-20.9	44.6	38.7	43.7	37.1	74.0	54.0	51.0	45.1	+ 8.9	A/B
7386.0	29.8	-19.0	< 40.0	< 30.0	< 40.0	< 30.0	74.0	54.0	< 50.8	< 40.8	> +13.2	A/B
12310.0	33.6	-25.4	< 40.0	< 30.0	< 40.0	< 30.0	74.0	54.0	< 48.2	< 38.2	> +15.8	A/B
19696.0	40.4	-21.4	< 40.0	< 30.0	< 40.0	< 30.0	74.0	54.0	< 59.0	< 49.0	> + 5.0	A/B
22158.0	40.6	-20.6	< 40.0	< 30.0	< 40.0	< 30.0	74.0	54.0	< 60.0	< 50.0	> + 4.0	A/B

Calculated result at 19696.0 MHz, as the worst point shown on underline:

	Antenna Factor	=	40.4 dB(1/m)
	Corr. Factor	=	-21.4 dB
+)	Meter Reading	=	<30.0 dB(μV)
	Result	=	<49.0 dB(μV/m)

Minimum Margin: 54.0 - <49.0 = >4.0 (dB)

NOTES
1. Test Distance : 3 m
2. The spectrum was checked from 1 GHz to 25 GHz (10th harmonic of the highest fundamental frequency).
3. The correction factor is shown as follows:
   Corr. Factor [dB] = Cable Loss + 20dB Pad Att. - Pre-Amp. Gain [dB] (1.0 - 7.6GHz)
   Corr. Factor [dB] = Cable Loss + 10dB Pad Att. - Pre-Amp. Gain [dB] (7.6 - 18.0GHz)
   Corr. Factor [dB] = Cable Loss - Pre-Amp. Gain [dB] (over 18 GHz)
4. The symbol of "<" means "or less".
5. The symbol of ">" means "more than".
6. PK : Peak Detector / AVE : Average Detector
7. Setting of measuring instrument(s) :

	Detector Function	Resolution B.W.	Video B.W.	Sweep Time
A	Peak	1 MHz	1 MHz	AUTO
B	Peak	1 MHz	10 Hz	AUTO

Mode of EUT : RX(IEEEE802.11b / IEEEE 802.11g/IEEE 802.11n)

Test Date: March 30, 2011
Temp.: 22 °C, Humi: 40 %

Frequency [MHz]	Antenna Factor [dB(1/m)]	Corr. Factor [dB]	Meter Readings [dB(μV)] Horizontal PK	Horizontal AVE	Vertical PK	Vertical AVE	Limits [dB(μV/m)] PK	Limits AVE	Results [dB(μV/m)] PK	Results AVE	Margin [dB]	Remarks
Test condition : RX Middle Ch												
2437.0	21.6	-21.9	< 40.0	< 30.0	< 40.0	< 30.0	74.0	54.0	< 39.7	< 29.7	> +24.3	A/B
4874.0	27.3	-21.1	< 40.0	< 30.0	< 40.0	< 30.0	74.0	54.0	< 46.2	< 36.2	> +17.8	A/B
7311.0	29.8	-19.3	< 40.0	< 30.0	< 40.0	< 30.0	74.0	54.0	< 50.5	< 40.5	> +13.5	A/B

Calculated result at 4874.0 MHz, as the worst point shown on underline:

	Antenna Factor	=	27.3 dB(1/m)
	Corr. Factor	=	-21.1 dB
+)	Meter Reading	=	<30.0 dB(μV)
	Result	=	<36.2 dB(μV/m)

Minimum Margin: 54.0 - <36.2 = >13.5 (dB)

NOTES
1. Test Distance : 3 m
2. The spectrum was checked from 1 GHz to 25 GHz (10th harmonic of the highest fundamental frequency).
3. The correction factor is shown as follows:
   Corr. Factor [dB] = Cable Loss + 20dB Pad Att. - Pre-Amp. Gain [dB] (1.0 - 7.6GHz)
4. The symbol of "<" means "or less".
5. The symbol of ">" means "more than".
6. PK : Peak Detector / AVE : Average Detector
7. Setting of measuring instrument(s) :

	Detector Function	Resolution B.W.	Video B.W.	Sweep Time
A	Peak	1 MHz	1 MHz	AUTO
B	Peak	1 MHz	10 Hz	AUTO

Appendix B: Test Arrangement (Photographs)

B.1 AC Powerline Conducted Emission

This page is CONFIDENTIAL.

B.2 Radiated Emission

This page is CONFIDENTIAL.

Appendix C: Test Instruments

C.1 Channel Separation

Not Applicable

C.2 Minimum Hopping Channel

Not Applicable

C.3 Occupied Bandwidth

Type	Model	Manufacturer	ID No.	Last Cal.	Interval
Spectrum Analyzer	E4446A	Agilent	A-39	2010/9	1 Year
Attenuator	54A-10	Weinschel	D-29	2010/10	1 Year
RF Cable	SUCOFLEX102	SUHNER	C-52	2010/6	1 Year

C.4 Dwell Time

Not Applicable

C.5.1 Peak Output Power (Conduction)

Type	Model	Manufacturer	ID No.	Last Cal.	Interval
Power Meter	N1911A	Agilent	B-63	2010/6	1 Year
Power Sensor	N1921A	Agilent	B-64	2010/6	1 Year
Attenuator	54A-10	Weinschel	D-29	2010/10	1 Year
RF Cable	SUCOFLEX102	SUHNER	C-52	2010/6	1 Year

C.5.2 Peak Output Power Density (Conduction)

Type	Model	Manufacturer	ID No.	Last Cal.	Interval
Spectrum Analyzer	E4446A	Agilent	A-39	2010/9	1 Year
Attenuator	54A-10	Weinschel	D-29	2010/10	1 Year
RF Cable	SUCOFLEX102	SUHNER	C-52	2010/6	1 Year

C.6 Spurious Emission (Conduction)

Type	Model	Manufacturer	ID No.	Last Cal.	Interval
Spectrum Analyzer	E4446A	Agilent	A-39	2010/9	1 Year
Attenuator	54A-10	Weinschel	D-29	2010/10	1 Year
RF Cable	SUCOFLEX102	SUHNER	C-52	2010/6	1 Year

C.7 AC Power Conducted Emission

Type	Model	Manufacturer	ID No.	Last Cal.	Interval
Test Receiver	ESCI	Rohde & Schwarz	A-42	2010/11	1 Year
AMN (main)	KNW-407FR	Kyoritsu	D-103	2010/10	1 Year
Attenuator	MP721C	Anritsu	D-66	2010/10	1 Year
RF Cable	5D-2W	FUJIKURA	H-33	2010/5	1 Year

C.8 Radiated Emission

C.8.1 Radiated Emission 9 kHz – 30 MHz

Type	Model	Manufacturer	ID No.	Last Cal.	Interval
Test Receiver	ESCS 30	Rohde & Schwarz	A-1	2011/2	1 Year
Loop Antenna	HFH2-Z2	Rohde & Schwarz	C-3	2010/8	1 Year
RF Cable	RG213/U	Rohde & Schwarz	H-29	2010/8	1 Year

C.8.2 Radiated Emission 30MHz – 1000 MHz

Type	Model	Manufacturer	ID No.	Last Cal.	Interval
Test Receiver	ESCS 30	Rohde & Schwarz	A-1	2011/2	1 Year
Biconical Antenna	VHA9103/BBA9106	Schwarzbeck	C-30	2010/5	1 Year
Log-periodic Antenna	UHALP9108-A1	Schwarzbeck	C-31	2010/5	1 Year
RF Cable	--	----	H-1	2010/5	1 Year
Site Attenuation	--	----	H-11	2010/11	1 Year

C.8.3 Radiated Emission Above 1000 MHz

Type	Model	Manufacturer	ID No.	Last Cal.	Interval
Test Receiver	ESU26 (S/N: 100170)	Rohde & Schwarz	--	2010/4	1 Year
Test Receiver	ESCI7 (S/N: 100811/007)	Rohde & Schwarz	--	2011/1	1 Year
RF Cable	SUCOFLEX104	SUHNER	C-40-11	2010/12	1 Year
RF Cable	SUCOFLEX104	SUHNER	C-40-14	2010/12	1 Year
RF Cable	SUCOFLEX102	SUHNER	C-54	2010/12	1 Year
RF Cable	SUCOFLEX102EA	SUHNER	C-69	2010/12	1 Year
Attenuator	2-10	Weinschel	D-79	2010/10	1 Year
Attenuator	54-10	Weinschel	D-82	2010/6	1 Year
Pre-Amplifier	WJ-6611-513	Watkins Johnson	A-23	2010/12	1 Year
Pre-Amplifier	WJ-6882-824	Watkins Johnson	A-21	2010/12	1 Year
Pre-Amplifier	DBL-0618N515	DBS Microwave	A-33	2010/12	1 Year
Pre-Amplifier	BZ1804LD1	B&T Technologies	A-29	2010/12	1 Year
Band Rejection Filter	BRM50701	MICRO-TRONICS	D-93	2011/2	1 Year
Horn Antenna	91888-2	EATON	C-41-1	2010/6	1 Year
Horn Antenna	91889-2	EATON	C-41-2	2010/8	1 Year
Horn Antenna	3160-05	EMCO	C-55	2009/6	2 Years
Horn Antenna	3160-06	EMCO	C-57	2009/6	2 Years
Horn Antenna	3160-07	EMCO	C-58	2009/6	2 Years
Horn Antenna	3160-08	EMCO	C-59	2009/6	2 Years
Horn Antenna	3160-09	EMCO	C-48	2009/6	2 Years