FCC Part15.247 Test Report

Product Name ： 802.11a/b/g/n WLAN Module

Model No. ： 95.0209T02

FCC ID ： TC2N1101

Applicant ： RoKu

Address ： 12980 Saratoga Avenue, Suite D, Saratoga, CA 95070 USA

Date of Receipt ： 2009/09/17

Issued Date ： 2009/10/22

Report No. ： 099S059R-RF-US-P05V01

Report Version ： V1.0

Test Report Certification

Issued Date : 2009/10/22
Report No. : 099S059R-RF-US-P05V01

QuieTek

Product Name	:	802.11a/b/g/n WLAN Module
Applicant	:	Roku
Address	:	12980 Saratoga Avenue, Suite D, Saratoga, CA 95070 USA
Manufacturer	:	Foxconn
Address	:	No 1925 , Nanle road, Songjiang Export Processing Zone , Shanghai , China 201613
Model No.	:	95.0209T02
FCC ID	:	TC2N1101
EUT Voltage	:	5Vdc, 2.5A
Trade Name	:	Roku
Applicable Standard	:	FCC CFR Title 47 Part 15 Subpart C: 2008 ANSI C63.4: 2003
Test Result	:	Complied
Performed Location	:	SuZhou EMC laboratory No.99 Hongye Rd., Suzhou Industrial Park Loufeng Hi-Tech Development Zone., SuZhou, China TEL: +86-512-6251-5088 / FAX: +86-512-6251-5098 FCC Registration Number: 800392

Documented By : Alice Ni
(Engineering ADM: Alice Ni)

Reviewed By : Marlin chen
(Engineering Supervisor: Marlin Chen)

Approved By : Dream Cao
(Engineering Manager: Dream Cao)

Laboratory Information

We , **QuieTek Corporation**, are an independent EMC and safety consultancy that was established the whole facility in our laboratories. The test facility has been accredited by the following accreditation Bodies in compliance with ISO 17025, EN 45001 and Guide 25:

Taiwan R.O.C.	**:**	**BSMI, DGT, CNLA**
Germany	**:**	**TUV Rheinland**
Norway	**:**	**Nemko, DNV**
USA	**:**	**FCC, NVLAP**
Japan	**:**	**VCCI**

The related certificate for our laboratories about the test site and management system can be downloaded from QuieTek Corporation's Web Site : http://tw.quietek.com/modules/myalbum/
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:

HsinChu Testing Laboratory :
No.75-2, 3rd Lin, Wangye Keng, Yonghxing Tsuen, Qionglin Shiang, Hsinchu County 307, Taiwan, R.O.C.
TEL:+886-3-592-8858 / FAX:+886-3-592-8859 E-Mail : service@quietek.com

NVLAP Lab Code : 200347-0
1313

LinKou Testing Laboratory :
No. 5, Ruei-Shu Valley, Ruei-Ping Tsuen, Lin-Kou Shiang, Taipei, Taiwan, R.O.C.
TEL : +886-2-8601-3788 / FAX : 886-2-8601-3789 E-Mail : service@quietek.com

NVLAP Lab Code: 200533-0
0914

Suzhou Testing Laboratory :
No.99 Hongye Rd., Suzhou Industrial Park Loufeng Hi-Tech Development Zone., SuZhou, China
TEL : +86-512-6251-5088 / FAX : 86-512-6251-5098 E-Mail : service@quietek.com

NVLAP Lab Code : 200743-0
1596

TABLE OF CONTENTS

1. General Information

1.1. EUT Description

Product Name	802.11a/b/g/n WLAN Module
Trade Name	Roku
Model No.	95.0209T02
FCC ID	TC2N1101
WLAN	802.11abgn
Working Voltage	5Vdc, 2.5A
Frequency Range	**For 2.4GHz Band** 802.11b/g/n(20MHz): 2412 - 2462 MHz 802.11n(40MHz): 2422 - 2452 MHz **For 5.0GHz Band** 802.11a/n(20MHz): 5180 - 5320 MHz, 5500 - 5700 MHz, 5745 - 5825 MHz 802.11n(40MHz): 5190 - 5310 MHz, 5510 - 5670 MHz, 5755 - 5795 MHz
Channel Number	**For 2.4GHz Band** 802.11b/g/n(20MHz): 11 802.11n(40MHz): 7 **For 5.0GHz Band** 802.11a/n(20MHz): 24 802.11n(40MHz): 11
Type of Modulation	802.11b: DSSS
	802.11a/g/n: OFDM
Data Rate	802.11a/g: 6/9/12/18/24/36/48/54 Mbps
	802.11b: 1/2/5.5/11 Mbps
	802.11n: up to 270 Mbps
Channel Control	Auto
Antenna Type	PIFA
Antenna Delivery	2*Tx + 2*Rx
Antenna Peak Gain	5.2dBi
AC Adapter	Manufacturer: Roku M/N: DSA-15P-05 US 050125 Input: 100-240V~, 0.5A, 50/60Hz Output: 5V, 2.5A MAX

For 2.4GHz Band

802.11b/g/n(20MHz) Working Frequency of Each Channel:							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
01	2412 MHz	02	2417 MHz	03	2422 MHz	04	2427 MHz
05	2432 MHz	06	2437 MHz	07	2442 MHz	08	2447 MHz
09	2452 MHz	10	2457 MHz	11	2462 MHz	N/A	N/A
802.11n(40MHz) Working Frequency of Each Channel:							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
03	2422 MHz	04	2427 MHz	05	2432 MHz	06	2437 MHz
07	2442 MHz	08	2447 MHz	09	2452 MHz	N/A	N/A

For 5.0GHz Band

802.11a/n(20MHz) Working Frequency of Each Channel:							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
36	5180 MHz	40	5200 MHz	44	5220 MHz	48	5240 MHz
52	5260 MHz	56	5280 MHz	60	5300 MHz	64	5320 MHz
100	5500 MHz	104	5520 MHz	108	5540 MHz	112	5560 MHz
116	5580 MHz	120	5600 MHz	124	5620 MHz	128	5640 MHz
132	5660 MHz	136	5680 MHz	140	5700 MHz	149	5745 MHz
153	5765 MHz	157	5785 MHz	161	5805 MHz	165	5825 MHz

802.11n(40MHz) Working Frequency of Each Channel:							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz	54	5270 MHz	62	5310 MHz
102	5510 MHz	110	5550 MHz	118	5590 MHz	126	5630 MHz
134	5670 MHz	151	5755 MHz	159	5795 MHz	N/A	N/A

1.2. Mode of Operation

QuieTek has verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report and defined as:

Test Mode
Mode 1: Transmit by 802.11b
Mode 2: Transmit by 802.11g
Mode 3: Transmit by 802.11a
Mode 4: Transmit by 802.11n (20MHz)
Mode 5: Transmit by 802.11n (40MHz)

Note:

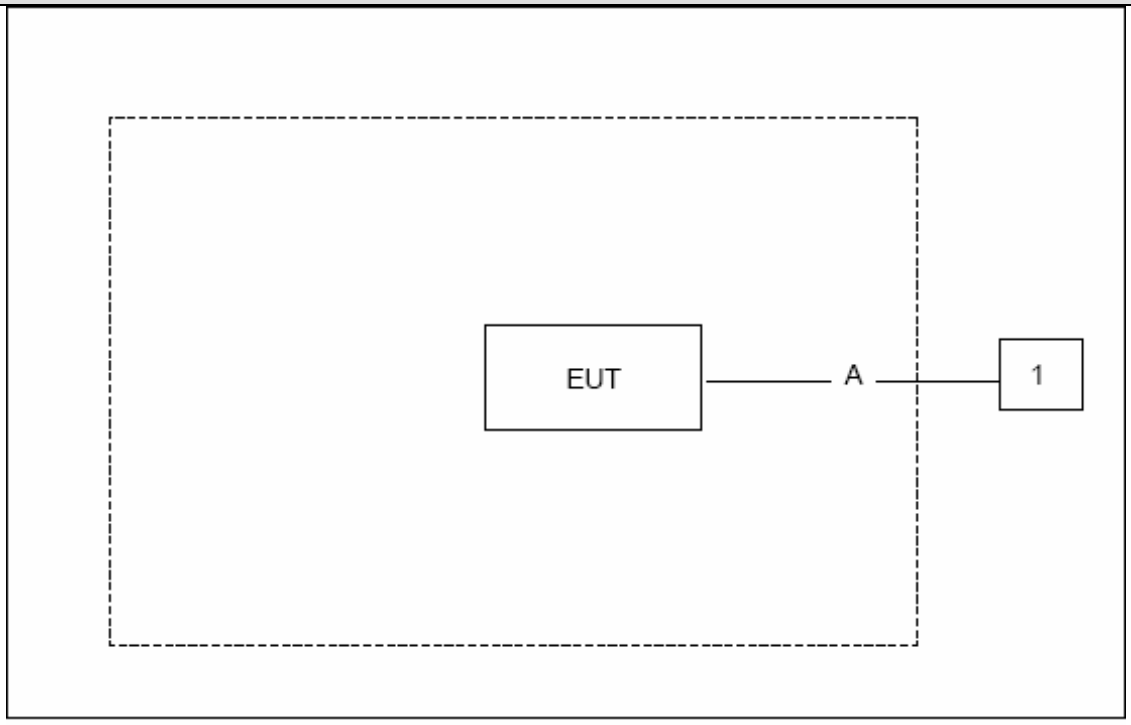
1. Regards to the frequency band operation: the lowest、middle and highest frequency of channel were selected to perform the test, then shown on this report.
2. This device is a composite device in accordance with Part 15 Subpart B regulations. The function for the receiver was measured and made a test report that the report number is 099S059R-RF-US-P06V01.

1.3. Tested System Details

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

Product		Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook	DELL	PP19L	JH097 A01	Power by adapter

1.4. Configuration of Tested System

Connection Diagram


Signal Cable Type		Signal cable Description
A	USB Cable	Shielded, 1.5m

1.5. EUT Exercise Software

1	Setup the EUT and simulators as shown on above
2	Turn on the power of equipment.
3	Input some commands in DOS system, make the EUT transmit or receive, then start test.

2. Technical Test

2.1. Summary of Test Result

☒ No deviations from the test standards

☐ Deviations from the test standards as below description:

Performed Test Item	Normative References	Test Performed	Deviation
Conducted Emission	FCC CFR Title 47 Part 15 Subpart C: 2008 Section 15.207	Yes	No
Radiated Emission	FCC CFR Title 47 Part 15 Subpart C: 2008 Section 15.209	Yes	No
RF Antenna Conducted Spurious	FCC CFR Title 47 Part 15 Subpart C: 2008 Section 15.247(d)	Yes	No
Radiated Emission Band Edge	FCC CFR Title 47 Part 15 Subpart C: 2008 15.247(d)	Yes	No
Operation Frequency Range of 20dB Bandwidth	FCC CFR Title 47 Part 15 Subpart C: 2008 15.215(c)	Yes	No
Occupied Bandwidth	FCC CFR Title 47 Part 15 Subpart C: 2008 Section 15.247(a)(2)	Yes	No
Power Output	FCC CFR Title 47 Part 15 Subpart C: 2008 Section 15.247(b)(3)	Yes	No
Power Spectral Density	FCC CFR Title 47 Part 15 Subpart C: 2008 Section 15.247(e)	Yes	No

2.2. Test Environment

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	21
Humidity (%RH)	25-75	50
Barometric pressure (mbar)	860-1060	950-1000

3. Conducted Emission

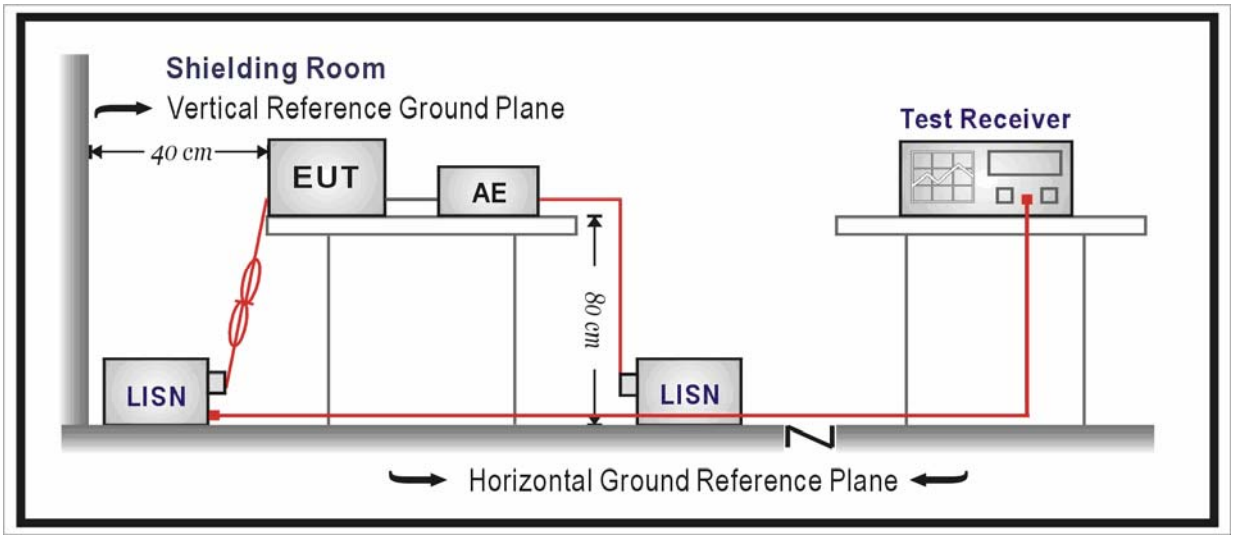
3.1. Test Equipment

Conducted Emission / SR-1

Instrument	Manufacturer	Type No.	Serial No.	Cal. Date
EMI Test Receiver	R&S	ESCI	100726	2009/02/07
Two-Line V-Network	R&S	ENV216	100013	2008/11/15
Two-Line V-Network	R&S	ENV216	100014	2008/11/15
50ohm Coaxial Switch	Anritsu	MP59B	6200464462	2008/11/25
50ohm Termination	SHX	TF2	07081401	2009/10/19
Coaxial Cable	Luthi	RG214	519358	2008/11/25
Temperature/Humidity Meter	zhicheng	ZC1-2	QT-TH004	2009/03/31

Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

3.2. Test Setup



3.3. Limit

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

Note 1: The lower limit shall apply at the transition frequencies.

Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

3.4. Test Procedure

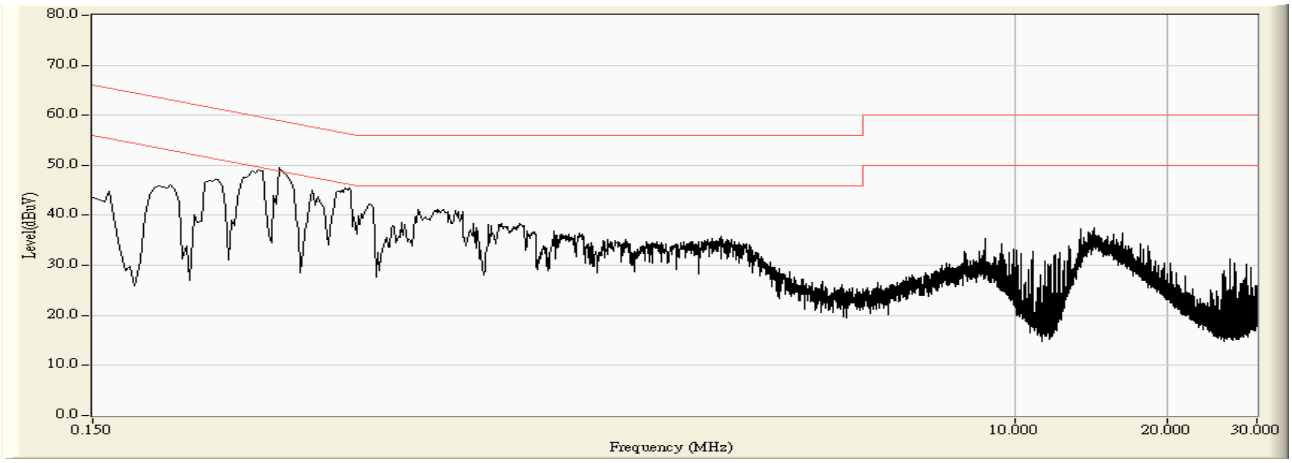
The EUT was setup according to ANSI C63.4, 2003 and tested according to DTS test procedure of Oct 2002 KDB558074 for compliance to FCC 47CFR 15.247 requirements.
The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane 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.

3.5. Uncertainty

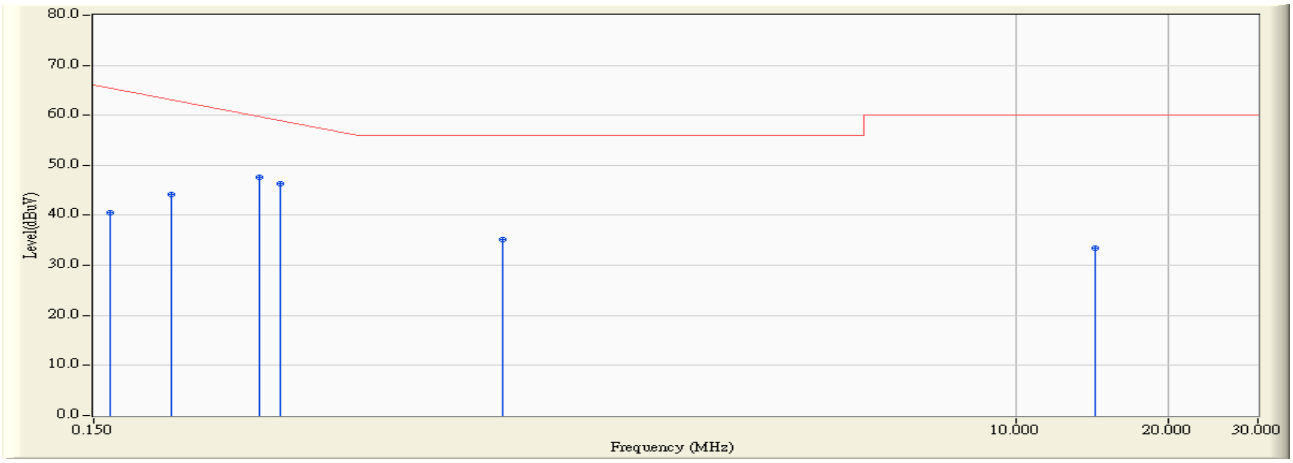
The measurement uncertainty is defined as ± 2.02 dB

3.6. Test Result

Engineer : Jame	
Site : SR-1 (Conducted Emission and Power Disturbance Test)	**Time : 2009/09/27 - 13:14**
Limit : FCC_Part15.207_00M_QP	**Margin : 10**
Probe : ENV216_100014(0.009-30MHz) - Line1	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 1**

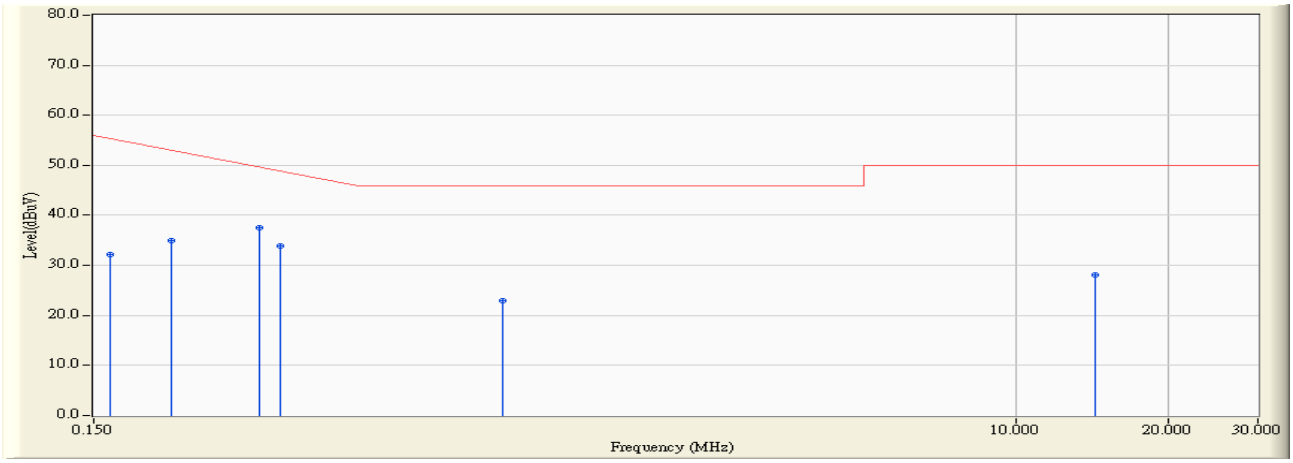


Engineer : Jame	
Site : SR-1 (Conducted Emission and Power Disturbance Test)	**Time : 2009/09/27 - 13:16**
Limit : FCC_Part15.207_00M_QP	**Margin : 0**
Probe : ENV216_100014(0.009-30MHz) - Line1	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 1**



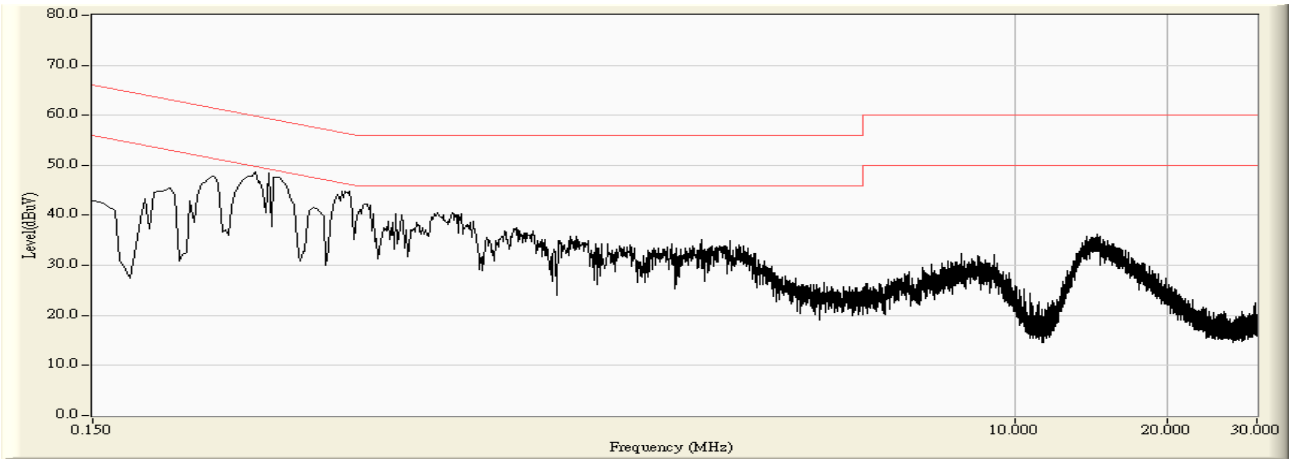
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.162	10.161	30.400	40.561	-24.800	65.361	QUASIPEAK
2		0.214	9.473	34.700	44.173	-18.876	63.049	QUASIPEAK
3	*	0.318	9.516	38.000	47.516	-12.243	59.759	QUASIPEAK
4		0.350	9.537	36.800	46.337	-12.625	58.962	QUASIPEAK
5		0.962	9.728	25.400	35.128	-20.872	56.000	QUASIPEAK
6		14.274	10.040	23.500	33.540	-26.460	60.000	QUASIPEAK

Engineer : Jame	
Site : SR-1 (Conducted Emission and Power Disturbance Test)	**Time : 2009/09/27 - 13:16**
Limit : FCC_Part15.207_00M_AV	**Margin : 0**
Probe : ENV216_100014(0.009-30MHz) - Line1	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 1**

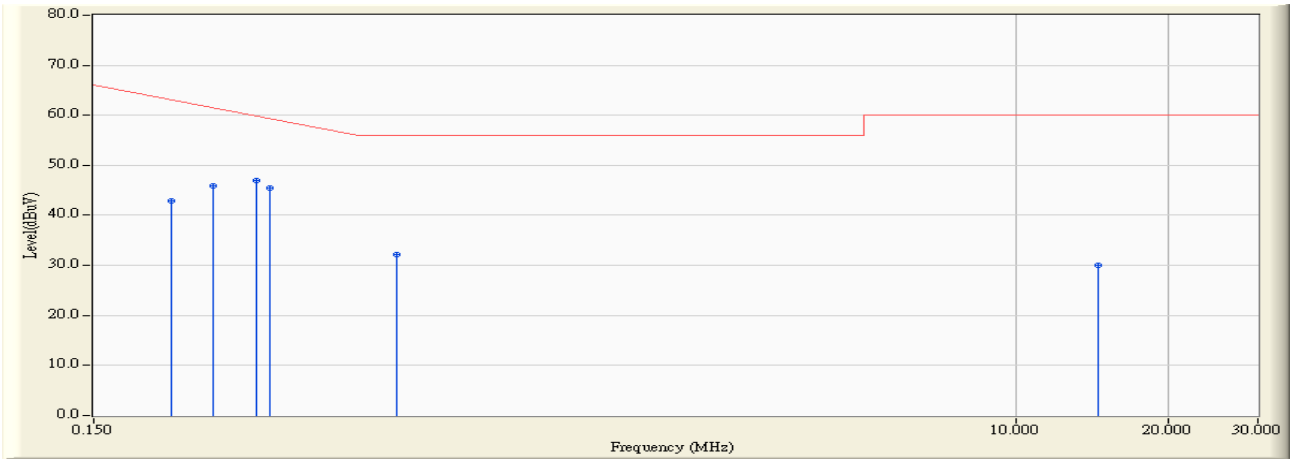


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.162	10.161	22.000	32.161	-23.200	55.361	AVERAGE
2		0.214	9.473	25.500	34.973	-18.076	53.049	AVERAGE
3	*	0.318	9.516	28.100	37.616	-12.143	49.759	AVERAGE
4		0.350	9.537	24.300	33.837	-15.125	48.962	AVERAGE
5		0.962	9.728	13.300	23.028	-22.972	46.000	AVERAGE
6		14.274	10.040	18.100	28.140	-21.860	50.000	AVERAGE

Engineer : Jame	
Site : SR-1 (Conducted Emission and Power Disturbance Test)	**Time : 2009/09/27 - 13:25**
Limit : FCC_Part15.207_00M_QP	**Margin : 0**
Probe : ENV216_100014(0.009-30MHz) - Line2	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 1**

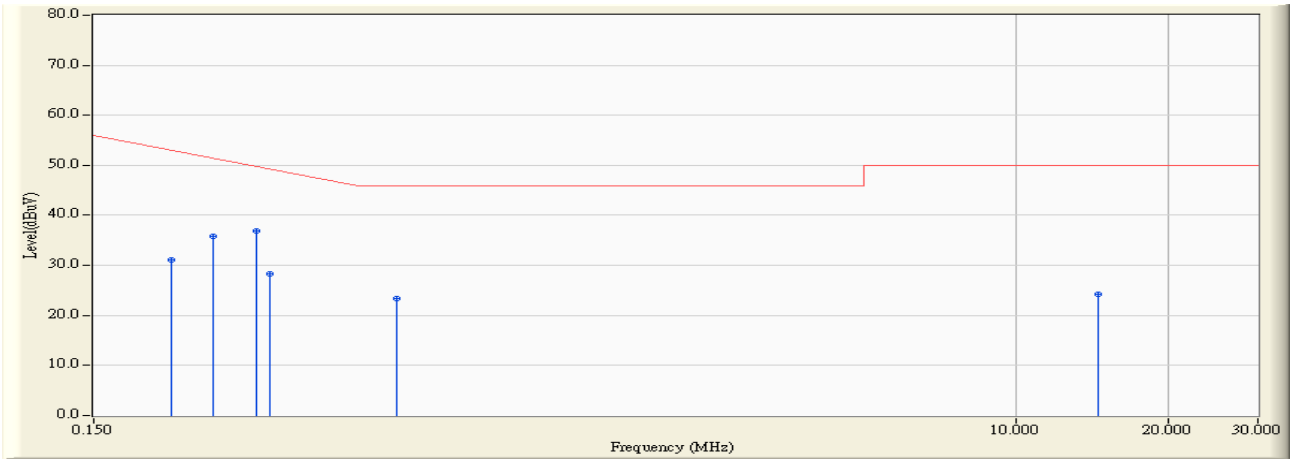


Engineer : Jame	
Site : SR-1 (Conducted Emission and Power Disturbance Test)	**Time : 2009/09/27 - 13:28**
Limit : FCC_Part15.207_00M_QP	**Margin : 0**
Probe : ENV216_100014(0.009-30MHz) - Line2	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 1**



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.214	9.600	33.400	43.000	-20.049	63.049	QUASIPEAK
2		0.258	9.583	36.300	45.883	-15.613	61.496	QUASIPEAK
3	*	0.314	9.600	37.400	47.000	-12.864	59.864	QUASIPEAK
4		0.334	9.600	35.800	45.400	-13.951	59.351	QUASIPEAK
5		0.594	9.699	22.400	32.099	-23.901	56.000	QUASIPEAK
6		14.522	10.090	20.000	30.090	-29.910	60.000	QUASIPEAK

Engineer : Jame	
Site : SR-1 (Conducted Emission and Power Disturbance Test)	**Time : 2009/09/27 - 13:28**
Limit : FCC_Part15.207_00M_AV	**Margin : 0**
Probe : ENV216_100014(0.009-30MHz) - Line2	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 1**



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.214	9.600	21.500	31.100	-21.949	53.049	AVERAGE
2		0.258	9.583	26.300	35.883	-15.613	51.496	AVERAGE
3	*	0.314	9.600	27.200	36.800	-13.064	49.864	AVERAGE
4		0.334	9.600	18.800	28.400	-20.951	49.351	AVERAGE
5		0.594	9.699	13.600	23.299	-22.701	46.000	AVERAGE
6		14.522	10.090	14.200	24.290	-25.710	50.000	AVERAGE

4. Radiated Emission

4.1. Test Equipment

☒Radiated Emission / AC-2

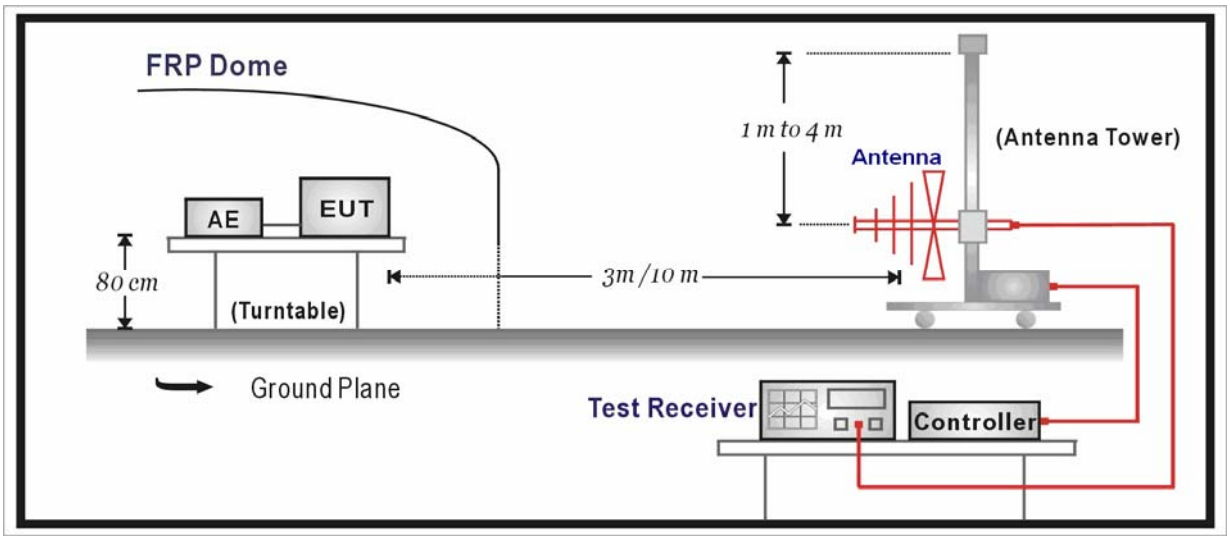
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date
Spectrum Analyzer	Agilent	E4408B	MY45102679	2008/11/12
EMI Test Receiver	R&S	ESCI	100573	2009/05/10
Preamplifier	Quietek	AP-025C	QT-AP003	2008/11/25
Preamplifier	Quietek	AP-180C	CHM-0602012	2008/11/25
Bilog Type Antenna	Schaffner	CBL6112B	2932	2008/11/22
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	496	2008/11/25
High-Pass Filter	Wainwright	WHKX2.8/18G-12SS	SN1	2009/03/03
Band Reject Filter	Wainwright	WRCG2400/2485-2375/2510-60/11SS	SN9	2009/03/03
High-Pass Filter	Wainwright	WHKX7.0/18G-8SS	SN16	2009/03/03
Low-Pass Filter	Wainwright	WLKS4500-9SS	SN2	2009/03/03
50ohm Coaxial Switch	Anritsu	MP59B	6200447304	2008/11/25
Coaxial Cable	Huber+Suhner	AC2-C	04	2008/11/25
Temperature/Humidity Meter	zhicheng	ZC1-2	QT-TH002	2009/03/31

Note 1: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

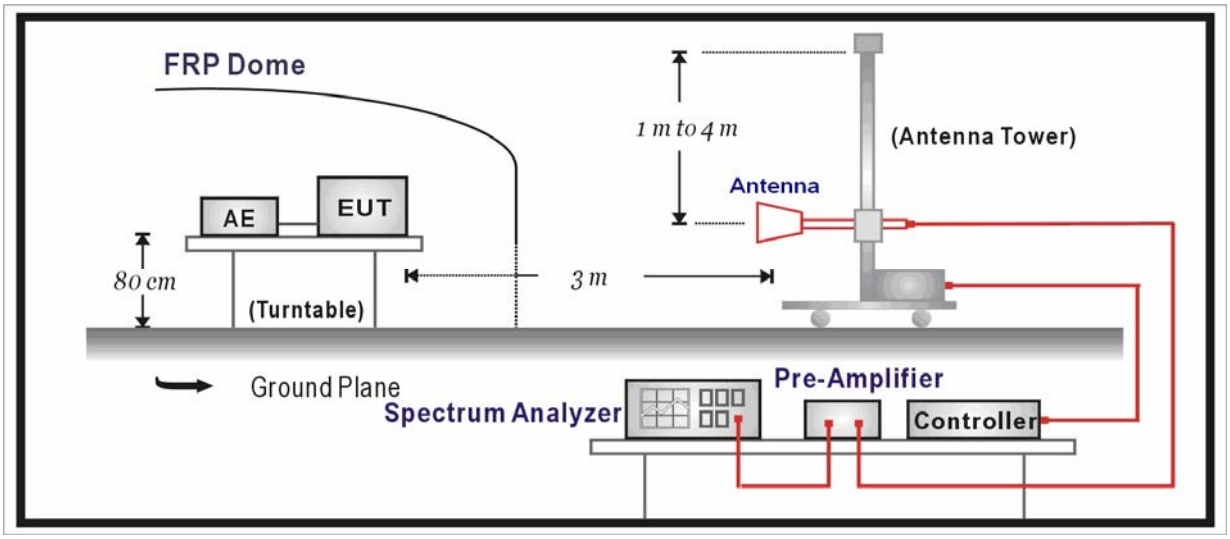
Note 2: The test instruments marked with “X” are used to measure the final test results.

4.2. Test Setup

Below 1GHz Test Setup:



Above 1GHz Test Setup:



4.3. Limit

FCC Part 15 Subpart C Paragraph 15.209		
Frequency (MHz)	Distance (m)	Level (dBuV/m)
30 - 88	3	40
88 - 216	3	43.5
216 - 960	3	46
Above 960	3	54

Note 1: The lower limit shall apply at the transition frequency.

Note 2: Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

Note 3: 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, 2003 and tested according to DTS test procedure of Oct 2002 KDB558074 for compliance to FCC 47CFR 15.247 requirements.

The EUT is placed on a turn table which is 0.8 meter above ground. The turn table is rotated 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 is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.4:2003 on radiated measurement.

The resolution bandwidth below 1GHz setting on the field strength meter is 120 kHz and above 1GHz is 1MHz.

The frequency range from 30MHz to 10th harmonic is checked.

Note: When doing emission measurement above 1GHz, the horn antenna will be bended down a little (as horn antenna has the narrow beamwidth) in order to keeping the antenna in the “cone of radiation” of EUT. The 3dB beamwidth is 60~10 degrees for H-plane and 90~10 degrees for E-plane.

4.5. Uncertainty

The measurement uncertainty above 1G is defined as ± 3.9 dB

below 1G is defined as ± 3.8 dB

4.6. Test Result

All of the test result shown indicates the worst case, and spectrum analyzer parameters setting as shown below:
Peak detector: RBW = 1MHz, VBW = 3MHz, sweep time = 200ms;
Average detector: RBW = 1MHz, VBW = 10Hz, sweep time = auto.
Measure level = Reading level + Cableloss + Antenna factor - Preamplifier gain

802.11b

Chain	CH	Antenna	Frequency (MHz)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
0	1	V	2415.160	109.19	Fundamental	/	PK
		H	414.767	32.66	46	-13.34	QP
		H	749.865	37.40	46	-8.6	QP
		V	5998.000	48.34	54	-5.66	PK
		V	5352.000	43.63	54	-10.37	PK
		V	7409.000	50.52	54	-3.48	PK
		V	14498.000	46.32	54	-7.68	PK
	6	V	2435.320	108.93	Fundamental	/	PK
		H	414.767	32.66	46	-13.34	QP
		H	749.865	37.40	46	-8.6	QP
		V	5998.000	48.34	54	-5.66	PK
		V	5352.000	43.63	54	-10.37	PK
		V	7409.000	50.52	54	-3.48	PK
		V	14498.000	46.32	54	-7.68	PK
	11	V	2458.768	108.86	Fundamental	/	PK
		H	414.767	32.66	46	-13.34	QP
		H	749.865	37.40	46	-8.6	QP
		V	5998.000	48.34	54	-5.66	PK
		V	5352.000	43.63	54	-10.37	PK
		V	7409.000	50.52	54	-3.48	PK
		V	14498.000	46.32	54	-7.68	PK
1	1	V	2415.160	107.02	Fundamental	/	PK
		H	414.767	32.66	46	-13.34	QP
		H	749.865	37.40	46	-8.6	QP
		V	5998.000	48.34	54	-5.66	PK
		V	5352.000	43.63	54	-10.37	PK

		V	7409.000	50.52	54	-3.48	PK
		V	14498.000	46.32	54	-7.68	PK
	6	V	2435.442	107.67	Fundamental	/	PK
		H	414.767	32.66	46	-13.34	QP
		H	749.865	37.40	46	-8.6	QP
		V	5998.000	48.34	54	-5.66	PK
		V	5352.000	43.63	54	-10.37	PK
		V	7409.000	50.52	54	-3.48	PK
		V	14498.000	46.32	54	-7.68	PK
	11	V	2465.200	107.04	Fundamental	/	PK
		H	414.767	32.66	46	-13.34	QP
		H	749.865	37.40	46	-8.6	QP
		V	5998.000	48.34	54	-5.66	PK
		V	5352.000	43.63	54	-10.37	PK
		V	7409.000	50.52	54	-3.48	PK
		V	14498.000	46.32	54	-7.68	PK

802.11g

Chain	CH	Antenna	Frequency (MHz)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
0	1	V	2416.480	110.486	Fundamental	/	PK
		H	414.767	32.66	46	-13.34	QP
		H	749.865	37.40	46	-8.6	QP
		V	5998.000	48.34	54	-5.66	PK
		V	5352.000	43.63	54	-10.37	PK
		V	7409.000	50.52	54	-3.48	PK
		V	14498.000	46.32	54	-7.68	PK
	6	V	2435.12	106.86	Fundamental	/	PK
		H	414.767	32.66	46	-13.34	QP
		H	749.865	37.40	46	-8.6	QP
		V	5998.000	48.34	54	-5.66	PK
		V	5352.000	43.63	54	-10.37	PK
		V	7409.000	50.52	54	-3.48	PK
		V	14498.000	46.32	54	-7.68	PK
	11	V	2458.384	109.54	Fundamental	/	PK

		H	414.767	32.66	46	-13.34	QP
		H	749.865	37.40	46	-8.6	QP
		V	5998.000	48.34	54	-5.66	PK
		V	5352.000	43.63	54	-10.37	PK
		V	7409.000	50.52	54	-3.48	PK
		V	14498.000	46.32	54	-7.68	PK
1	1	V	2407.570	106.90	Fundamental	/	PK
		H	414.767	32.66	46	-13.34	QP
		H	749.865	37.40	46	-8.6	QP
		V	5998.000	48.34	54	-5.66	PK
		V	5352.000	43.63	54	-10.37	PK
		V	7409.000	50.52	54	-3.48	PK
		V	14498.000	46.32	54	-7.68	PK
	6	V	2437.120	106.50	Fundamental	/	PK
		H	414.767	32.66	46	-13.34	QP
		H	749.865	37.40	46	-8.6	QP
		V	5998.000	48.34	54	-5.66	PK
		V	5352.000	43.63	54	-10.37	PK
		V	7409.000	50.52	54	-3.48	PK
		V	14498.000	46.32	54	-7.68	PK
	11	V	2465.05	108.14	Fundamental	/	PK
		H	414.767	32.66	46	-13.34	QP
		H	749.865	37.40	46	-8.6	QP
		V	5998.000	48.34	54	-5.66	PK
		V	5352.000	43.63	54	-10.37	PK
		V	7409.000	50.52	54	-3.48	PK
		V	14498.000	46.32	54	-7.68	PK

802.11a

Chain	CH	Antenna	Frequency (MHz)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
0	149	V	5746.210	107.04	Fundamental	/	PK
		H	414.767	32.66	46	-13.34	QP
		H	749.865	37.40	46	-8.6	QP
		V	5998.000	48.34	54	-5.66	PK
		V	5352.000	43.63	54	-10.37	PK

		V	7409.000	50.52	54	-3.48	PK
		V	14498.000	46.32	54	-7.68	PK
	157	V	5787.450	107.11	Fundamental	/	PK
		H	414.767	32.66	46	-13.34	QP
		H	749.865	37.40	46	-8.6	QP
		V	5998.000	48.34	54	-5.66	PK
		V	5352.000	43.63	54	-10.37	PK
		V	7409.000	50.52	54	-3.48	PK
		V	14498.000	46.32	54	-7.68	PK
	165	H	5824.280	107.24	Fundamental	/	PK
		H	414.767	32.66	46	-13.34	QP
		H	749.865	37.40	46	-8.6	QP
		V	5998.000	48.34	54	-5.66	PK
		V	5352.000	43.63	54	-10.37	PK
		V	7409.000	50.52	54	-3.48	PK
		V	14498.000	46.32	54	-7.68	PK
1	149	V	5746.360	107.36	Fundamental	/	PK
		H	414.767	32.66	46	-13.34	QP
		H	749.865	37.40	46	-8.6	QP
		V	5998.000	48.34	54	-5.66	PK
		V	5352.000	43.63	54	-10.37	PK
		V	7409.000	50.52	54	-3.48	PK
		V	14498.000	46.32	54	-7.68	PK
	157	V	5787.570	107.40	Fundamental	/	PK
		H	414.767	32.66	46	-13.34	QP
		H	749.865	37.40	46	-8.6	QP
		V	5998.000	48.34	54	-5.66	PK
		V	5352.000	43.63	54	-10.37	PK
		V	7409.000	50.52	54	-3.48	PK
		V	14498.000	46.32	54	-7.68	PK
	165	V	5824.330	107.51	Fundamental	/	PK
		H	414.767	32.66	46	-13.34	QP
		H	749.865	37.40	46	-8.6	QP
		V	5998.000	48.34	54	-5.66	PK
		V	5352.000	43.63	54	-10.37	PK
		V	7409.000	50.52	54	-3.48	PK
		V	14498.000	46.32	54	-7.68	PK

802.11n(20MHz)

Chain	CH	Antenna	Frequency (MHz)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
0	1	V	2417.140	110.57	Fundamental	/	PK
		H	414.767	32.66	46	-13.34	QP
		H	749.865	37.40	46	-8.6	QP
		V	5998.000	48.34	54	-5.66	PK
		V	5352.000	43.63	54	-10.37	PK
		V	7409.000	50.52	54	-3.48	PK
		V	14498.000	46.32	54	-7.68	PK
	6	V	2439.310	109.00	Fundamental	/	PK
		H	414.767	32.66	46	-13.34	QP
		H	749.865	37.40	46	-8.6	QP
		V	5998.000	48.34	54	-5.66	PK
		V	5352.000	43.63	54	-10.37	PK
		V	7409.000	50.52	54	-3.48	PK
		V	14498.000	46.32	54	-7.68	PK
	11	V	2456.416	109.96	Fundamental	/	PK
		H	414.767	32.66	46	-13.34	QP
		H	749.865	37.40	46	-8.6	QP
		V	5998.000	48.34	54	-5.66	PK
		V	5352.000	43.63	54	-10.37	PK
		V	7409.000	50.52	54	-3.48	PK
		V	14498.000	46.32	54	-7.68	PK
	149	V	5744.218	108.10	Fundamental	/	PK
		H	414.767	32.66	46	-13.34	QP
		H	749.865	37.40	46	-8.6	QP
		V	5998.000	48.34	54	-5.66	PK
		V	5352.000	43.63	54	-10.37	PK
		V	7409.000	50.52	54	-3.48	PK
		V	14498.000	46.32	54	-7.68	PK
	157	V	5784.483	108.21	Fundamental	/	PK
		H	414.767	32.66	46	-13.34	QP
		H	749.865	37.40	46	-8.6	QP
		V	5998.000	48.34	54	-5.66	PK

		V	5352.000	43.63	54	-10.37	PK
		V	7409.000	50.52	54	-3.48	PK
		V	14498.000	46.32	54	-7.68	PK
	165	V	5824.652	108.25	Fundamental	/	PK
		H	414.767	32.66	46	-13.34	QP
		H	749.865	37.40	46	-8.6	QP
		V	5998.000	48.34	54	-5.66	PK
		V	5352.000	43.63	54	-10.37	PK
		V	7409.000	50.52	54	-3.48	PK
		V	14498.000	46.32	54	-7.68	PK
1	1	V	2411.420	108.52	Fundamental	/	PK
		H	414.767	32.66	46	-13.34	QP
		H	749.865	37.40	46	-8.6	QP
		V	5998.000	48.34	54	-5.66	PK
		V	5352.000	43.63	54	-10.37	PK
		V	7409.000	50.52	54	-3.48	PK
		V	14498.000	46.32	54	-7.68	PK
	6	V	2436.620	108.42	Fundamental	/	PK
		H	414.767	32.66	46	-13.34	QP
		H	749.865	37.40	46	-8.6	QP
		V	5998.000	48.34	54	-5.66	PK
		V	5352.000	43.63	54	-10.37	PK
		V	7409.000	50.52	54	-3.48	PK
		V	14498.000	46.32	54	-7.68	PK
	11	V	2462.272	108.26	Fundamental	/	PK
		H	414.767	32.66	46	-13.34	QP
		H	749.865	37.40	46	-8.6	QP
		V	5998.000	48.34	54	-5.66	PK
		V	5352.000	43.63	54	-10.37	PK
		V	7409.000	50.52	54	-3.48	PK
		V	14498.000	46.32	54	-7.68	PK
	149	V	5744.221	106.31	Fundamental	/	PK
		H	414.767	32.66	46	-13.34	QP
		H	749.865	37.40	46	-8.6	QP
		V	5998.000	48.34	54	-5.66	PK
		V	5352.000	43.63	54	-10.37	PK
		V	7409.000	50.52	54	-3.48	PK

		V	14498.000	46.32	54	-7.68	PK
	157	V	5784.620	108.50	Fundamental	/	PK
		H	414.767	32.66	46	-13.34	QP
		H	749.865	37.40	46	-8.6	QP
		V	5998.000	48.34	54	-5.66	PK
		V	5352.000	43.63	54	-10.37	PK
		V	7409.000	50.52	54	-3.48	PK
		V	14498.000	46.32	54	-7.68	PK
	165	V	5724.118	108.72	Fundamental	/	PK
		H	414.767	32.66	46	-13.34	QP
		H	749.865	37.40	46	-8.6	QP
		V	5998.000	48.34	54	-5.66	PK
		V	5352.000	43.63	54	-10.37	PK
		V	7409.000	50.52	54	-3.48	PK
		V	14498.000	46.32	54	-7.68	PK
0+1	1	V	2408.670	107.16	Fundamental	/	PK
		H	414.767	32.66	46	-13.34	QP
		H	749.865	37.40	46	-8.6	QP
		V	5998.000	48.34	54	-5.66	PK
		V	5352.000	43.63	54	-10.37	PK
		V	7409.000	50.52	54	-3.48	PK
		V	14498.000	46.32	54	-7.68	PK
	6	V	2440.120	107.82	Fundamental	/	PK
		H	414.767	32.66	46	-13.34	QP
		H	749.865	37.40	46	-8.6	QP
		V	5998.000	48.34	54	-5.66	PK
		V	5352.000	43.63	54	-10.37	PK
		V	7409.000	50.52	54	-3.48	PK
		V	14498.000	46.32	54	-7.68	PK
	11	V	2456.752	110.63	Fundamental	/	PK
		H	414.767	32.66	46	-13.34	QP
		H	749.865	37.40	46	-8.6	QP
		V	5998.000	48.34	54	-5.66	PK
		V	5352.000	43.63	54	-10.37	PK
		V	7409.000	50.52	54	-3.48	PK
		V	14498.000	46.32	54	-7.68	PK
	149	V	5745.049	107.83	Fundamental	/	PK

		H	414.767	32.66	46	-13.34	QP
		H	749.865	37.40	46	-8.6	QP
		V	5998.000	48.34	54	-5.66	PK
		V	5352.000	43.63	54	-10.37	PK
		V	7409.000	50.52	54	-3.48	PK
		V	14498.000	46.32	54	-7.68	PK
	157	V	5785.328	107.82	Fundamental	/	PK
		H	414.767	32.66	46	-13.34	QP
		H	749.865	37.40	46	-8.6	QP
		V	5998.000	48.34	54	-5.66	PK
		V	5352.000	43.63	54	-10.37	PK
		V	7409.000	50.52	54	-3.48	PK
		V	14498.000	46.32	54	-7.68	PK
	165	V	5825.229	108.13	Fundamental	/	PK
		H	414.767	32.66	46	-13.34	QP
		H	749.865	37.40	46	-8.6	QP
		V	5998.000	48.34	54	-5.66	PK
		V	5352.000	43.63	54	-10.37	PK
		V	7409.000	50.52	54	-3.48	PK
		V	14498.000	46.32	54	-7.68	PK

802.11n(40MHz)

Chain	CH	Antenna	Frequency (MHz)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
0	3	V	2425.960	108.12	Fundamental	/	PK
		H	414.767	32.66	46	-13.34	QP
		H	749.865	37.40	46	-8.6	QP
		V	5998.000	48.34	54	-5.66	PK
		V	5352.000	43.63	54	-10.37	PK
		V	7409.000	50.52	54	-3.48	PK
		V	14498.000	46.32	54	-7.68	PK
	6	V	2435.343	107.63	Fundamental	/	PK
		H	414.767	32.66	46	-13.34	QP
		H	749.865	37.40	46	-8.6	QP
		V	5998.000	48.34	54	-5.66	PK

		V	5352.000	43.63	54	-10.37	PK
		V	7409.000	50.52	54	-3.48	PK
		V	14498.000	46.32	54	-7.68	PK
	9	V	2447.080	107.18	Fundamental	/	PK
		H	414.767	32.66	46	-13.34	QP
		H	749.865	37.40	46	-8.6	QP
		V	5998.000	48.34	54	-5.66	PK
		V	5352.000	43.63	54	-10.37	PK
		V	7409.000	50.52	54	-3.48	PK
		V	14498.000	46.32	54	-7.68	PK
	151	V	5756.311	107.21	Fundamental	/	PK
		H	414.767	32.66	46	-13.34	QP
		H	749.865	37.40	46	-8.6	QP
		V	5998.000	48.34	54	-5.66	PK
		V	5352.000	43.63	54	-10.37	PK
		V	7409.000	50.52	54	-3.48	PK
		V	14498.000	46.32	54	-7.68	PK
	159	V	5796.820	107.12	Fundamental	/	PK
		H	414.767	32.66	46	-13.34	QP
		H	749.865	37.40	46	-8.6	QP
		V	5998.000	48.34	54	-5.66	PK
		V	5352.000	43.63	54	-10.37	PK
		V	7409.000	50.52	54	-3.48	PK
		V	14498.000	46.32	54	-7.68	PK
1	3	V	2426.610	108.39	Fundamental	/	PK
		H	414.767	32.66	46	-13.34	QP
		H	749.865	37.40	46	-8.6	QP
		V	5998.000	48.34	54	-5.66	PK
		V	5352.000	43.63	54	-10.37	PK
		V	7409.000	50.52	54	-3.48	PK
		V	14498.000	46.32	54	-7.68	PK
	6	V	2436.530	107.34	Fundamental	/	PK
		H	414.767	32.66	46	-13.34	QP
		H	749.865	37.40	46	-8.6	QP
		V	5998.000	48.34	54	-5.66	PK
		V	5352.000	43.63	54	-10.37	PK
		V	7409.000	50.52	54	-3.48	PK

		V	14498.000	46.32	54	-7.68	PK
	9	V	2456.530	107.59	Fundamental	/	PK
		H	414.767	32.66	46	-13.34	QP
		H	749.865	37.40	46	-8.6	QP
		V	5998.000	48.34	54	-5.66	PK
		V	5352.000	43.63	54	-10.37	PK
		V	7409.000	50.52	54	-3.48	PK
		V	14498.000	46.32	54	-7.68	PK
	151	V	5754.210	107.23	Fundamental	/	PK
		H	414.767	32.66	46	-13.34	QP
		H	749.865	37.40	46	-8.6	QP
		V	5998.000	48.34	54	-5.66	PK
		V	5352.000	43.63	54	-10.37	PK
		V	7409.000	50.52	54	-3.48	PK
		V	14498.000	46.32	54	-7.68	PK
	159	V	5796.021	107.04	Fundamental	/	PK
		H	414.767	32.66	46	-13.34	QP
		H	749.865	37.40	46	-8.6	QP
		V	5998.000	48.34	54	-5.66	PK
		V	5352.000	43.63	54	-10.37	PK
		V	7409.000	50.52	54	-3.48	PK
		V	14498.000	46.32	54	-7.68	PK
0+1	3	V	2426.870	109.03	Fundamental	/	PK
		H	414.767	32.66	46	-13.34	QP
		H	749.865	37.40	46	-8.6	QP
		V	5998.000	48.34	54	-5.66	PK
		V	5352.000	43.63	54	-10.37	PK
		V	7409.000	50.52	54	-3.48	PK
		V	14498.000	46.32	54	-7.68	PK
	6	V	2440.343	107.19	Fundamental	/	PK
		H	414.767	32.66	46	-13.34	QP
		H	749.865	37.40	46	-8.6	QP
		V	5998.000	48.34	54	-5.66	PK
		V	5352.000	43.63	54	-10.37	PK
		V	7409.000	50.52	54	-3.48	PK
		V	14498.000	46.32	54	-7.68	PK
	9	V	2456.880	108.40	Fundamental	/	PK

		H	414.767	32.66	46	-13.34	QP
		H	749.865	37.40	46	-8.6	QP
		V	5998.000	48.34	54	-5.66	PK
		V	5352.000	43.63	54	-10.37	PK
		V	7409.000	50.52	54	-3.48	PK
		V	14498.000	46.32	54	-7.68	PK
	151	V	5744.214	107.42	Fundamental	/	PK
		H	414.767	32.66	46	-13.34	QP
		H	749.865	37.40	46	-8.6	QP
		V	5998.000	48.34	54	-5.66	PK
		V	5352.000	43.63	54	-10.37	PK
		V	7409.000	50.52	54	-3.48	PK
		V	14498.000	46.32	54	-7.68	PK
	159	V	5796.328	107.53	Fundamental	/	PK
		H	414.767	32.66	46	-13.34	QP
		H	749.865	37.40	46	-8.6	QP
		V	5998.000	48.34	54	-5.66	PK
		V	5352.000	43.63	54	-10.37	PK
		V	7409.000	50.52	54	-3.48	PK
		V	14498.000	46.32	54	-7.68	PK

5. RF Antenna Conducted Spurious

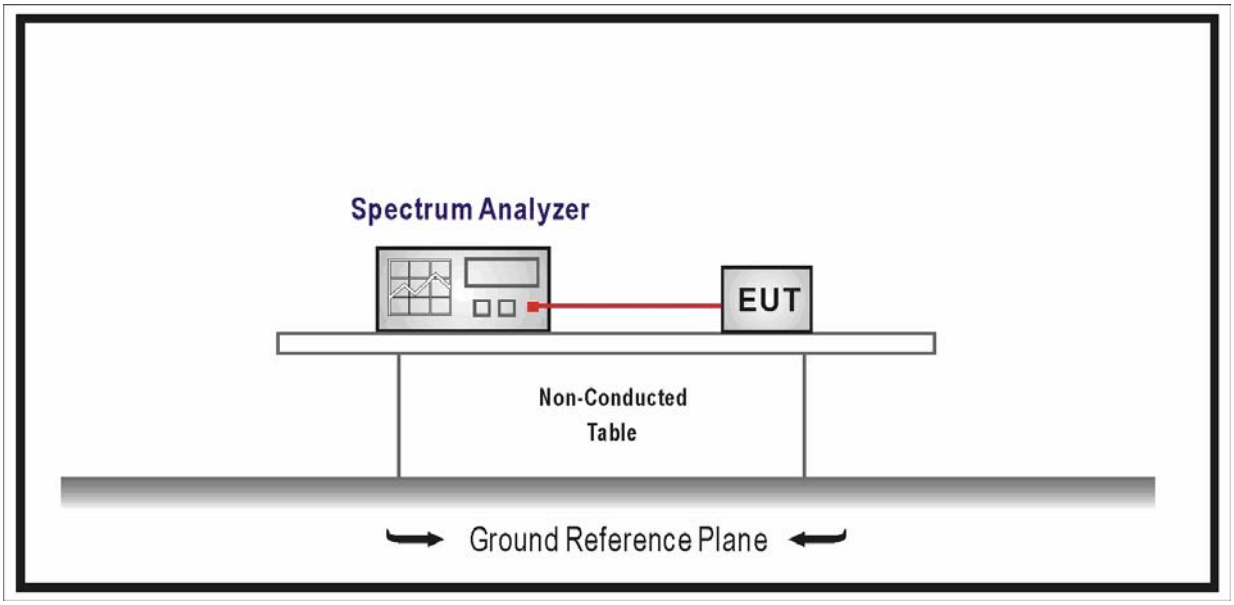
5.1. Test Equipment

RF Antenna Conducted Spurious / AC-6

Instrument	Manufacturer	Type No.	Serial No.	Cal. Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2009/06/11
Coaxial Cable	Huber+Suhner	AC6-RF	09	2008/11/25
Temperature/Humidity Meter	zhicheng	ZC1-2	QT-TH007	2009/03/30

Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

5.2. Test Setup



5.3. Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

5.4. Test Procedure

The EUT was tested according to DTS test procedure of Oct 2002 KDB558074 for compliance to FCC 47CFR 15.247 requirements.
Set RBW = 100 kHz, Set VBW > RBW, scan up through 10th harmonic.

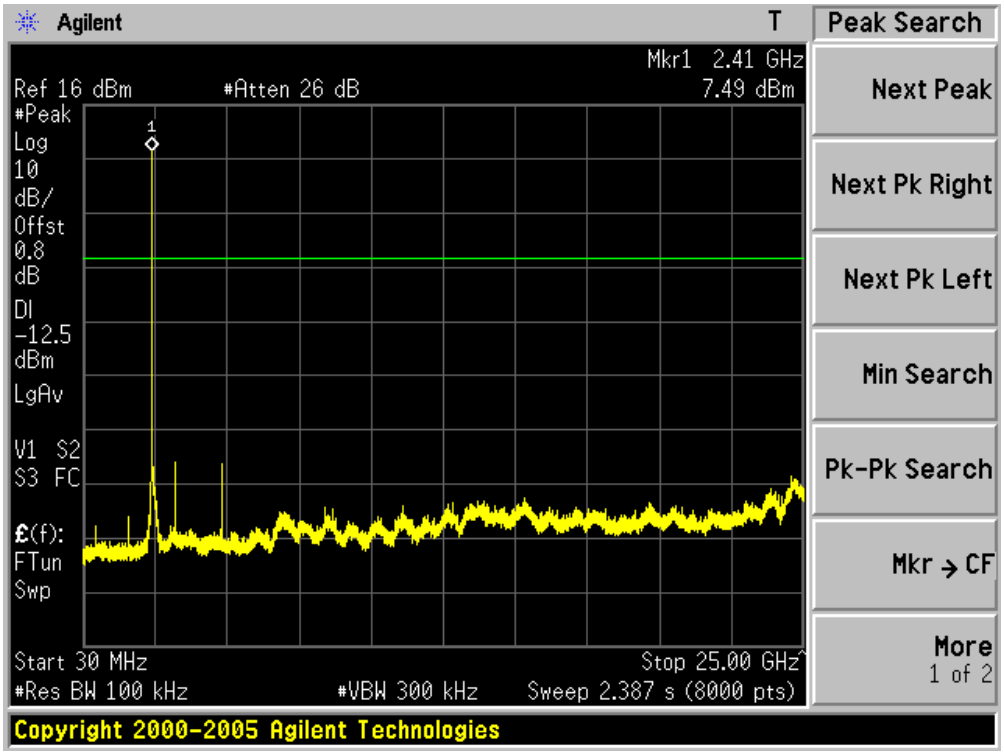
5.5. Uncertainty

The measurement uncertainty is defined as ± 1.27 dB

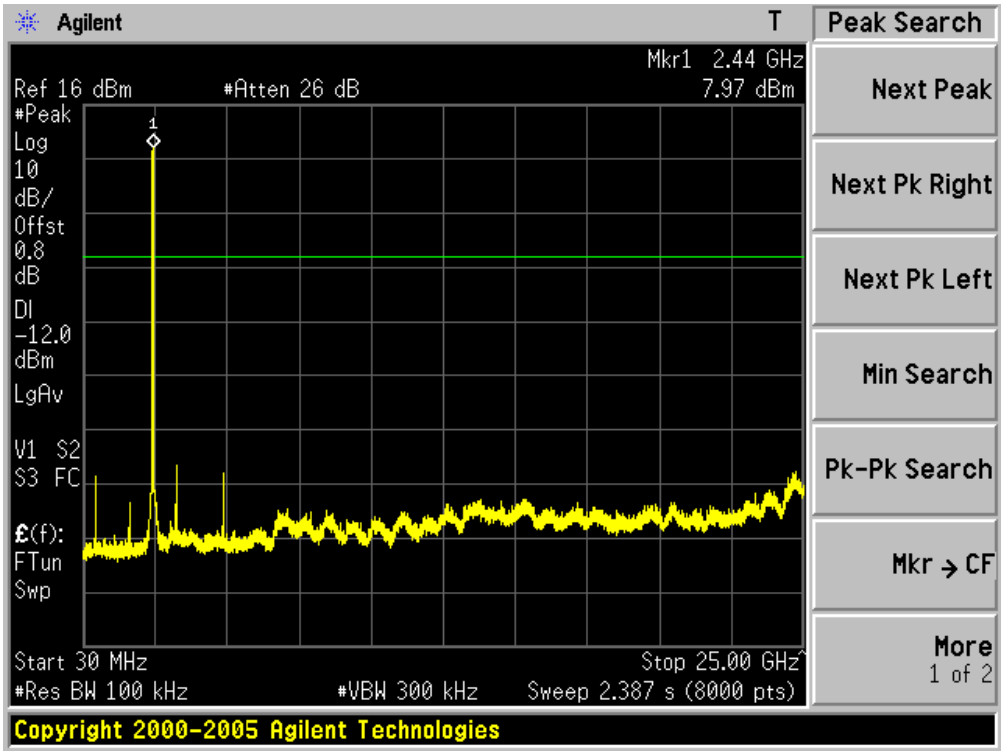
5.6. Test Result

Product	:	802.11a/b/g/n WLAN Module
Test Item	:	RF Antenna Conducted Spurious
Test Site	:	AC-6
Test Mode	:	Mode 1: Transmit by 802.11b (Chain 0)

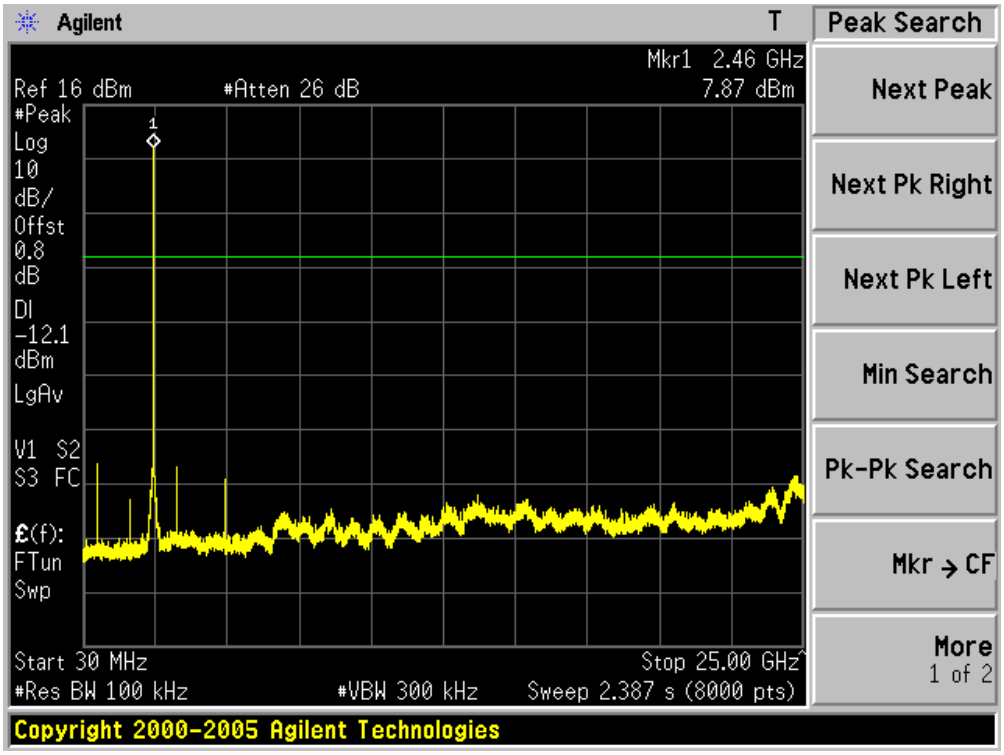
Channel 01 (2412MHz)



Channel 06 (2437MHz)

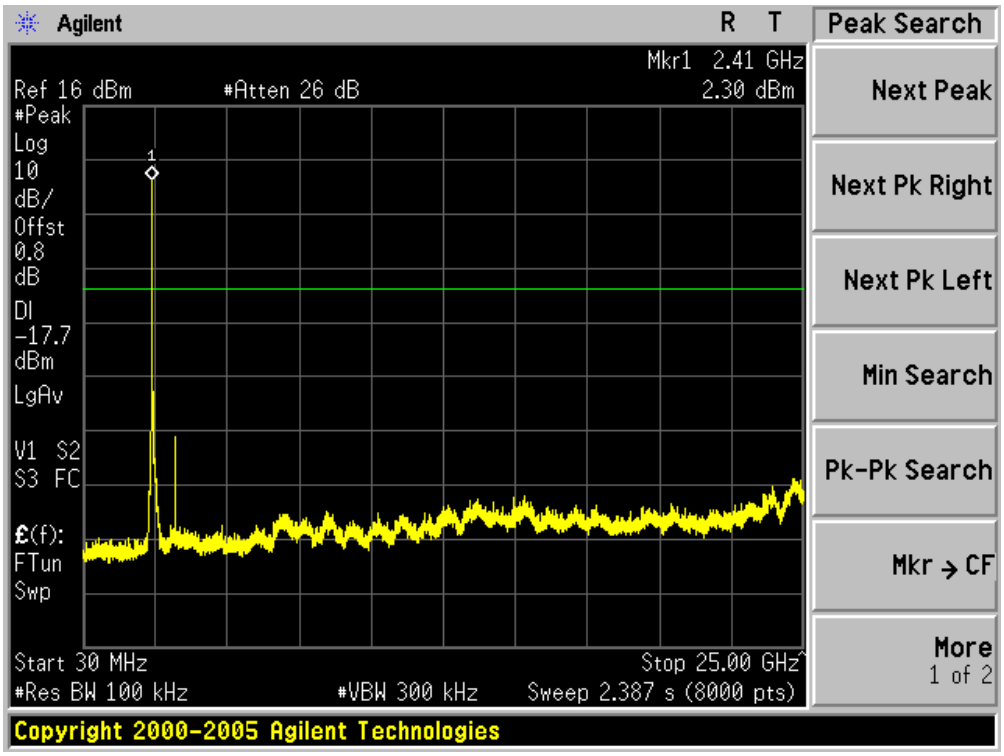


Channel 11 (2462MHz)

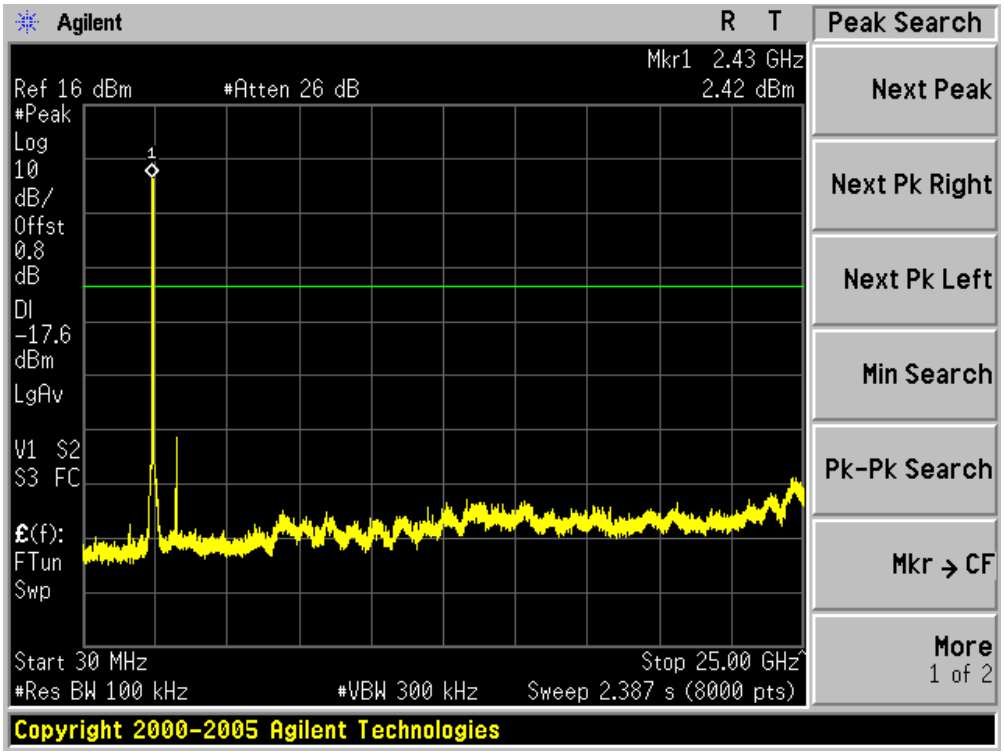


Product	:	802.11a/b/g/n WLAN Module
Test Item	:	RF Antenna Conducted Spurious
Test Site	:	AC-6
Test Mode	:	Mode 2: Transmit by 802.11g (Chain 0)

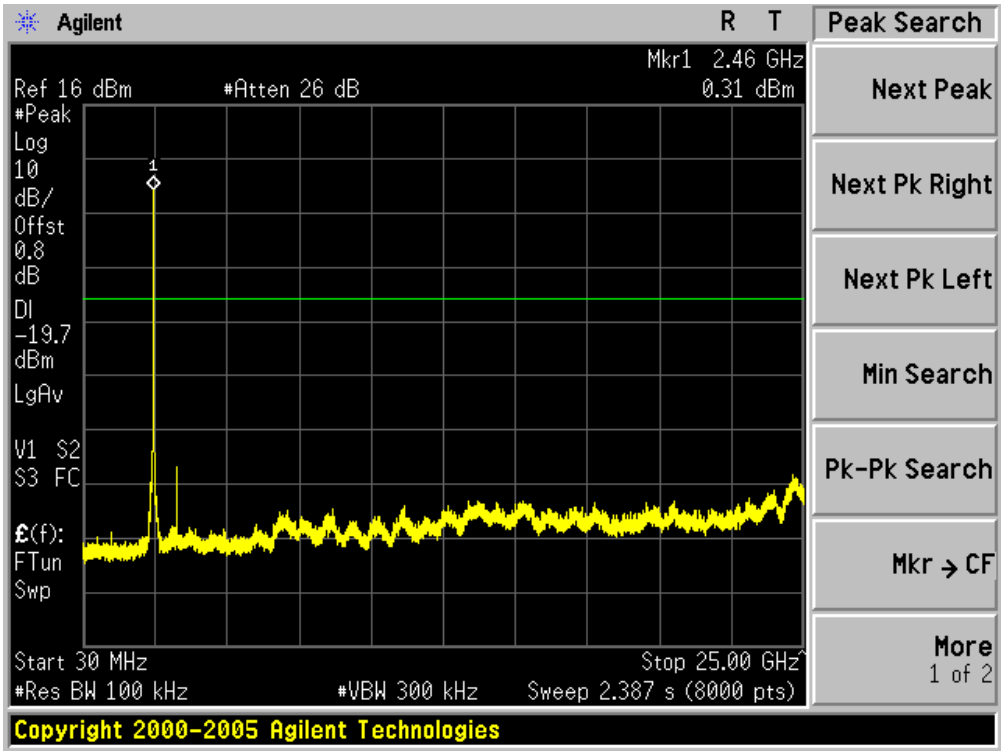
Channel 01 (2412MHz)



Channel 06 (2437MHz)

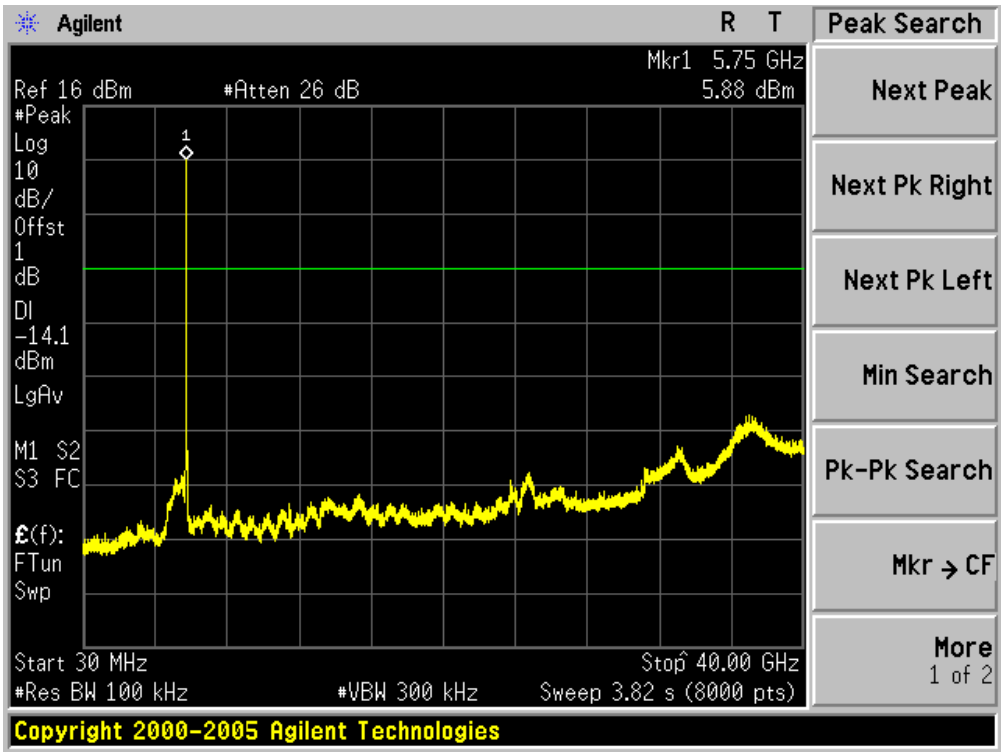


Channel 11 (2462MHz)

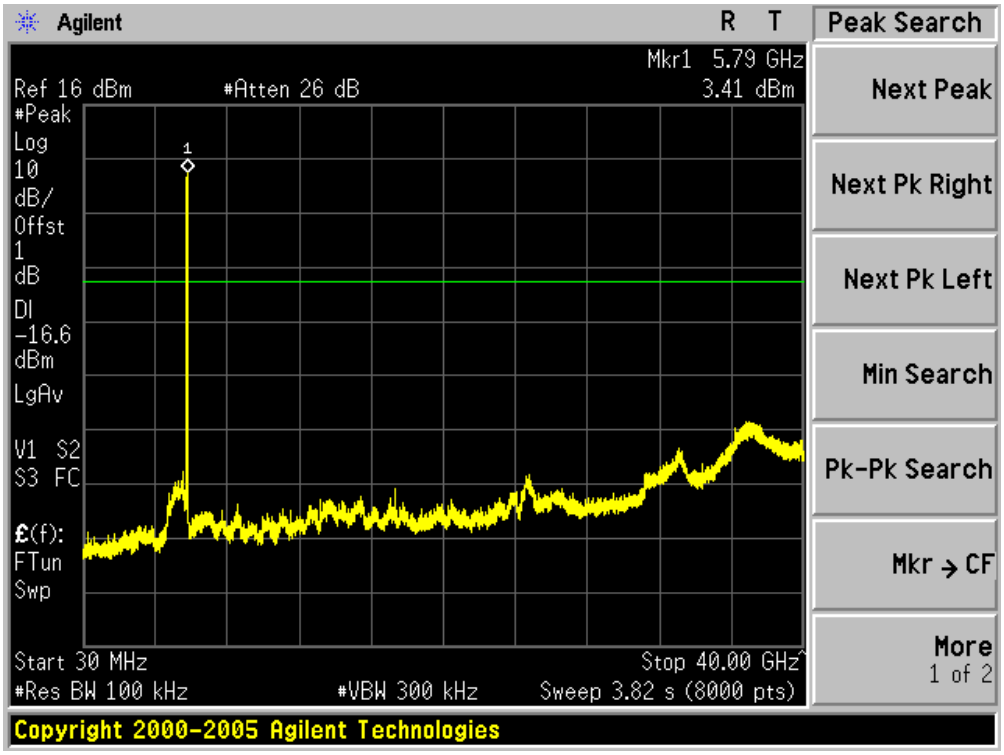


Product	:	802.11a/b/g/n WLAN Module
Test Item	:	RF Antenna Conducted Spurious
Test Site	:	AC-6
Test Mode	:	Mode 3: Transmit by 802.11a (Chain 0)

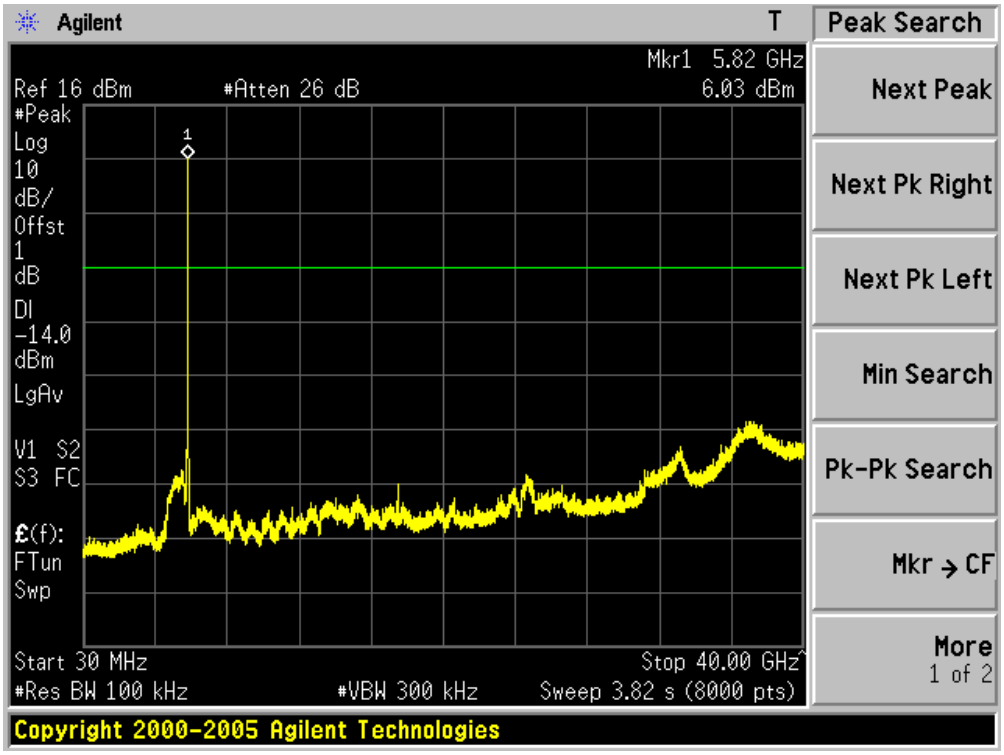
Channel 149 (5745MHz)



Channel 157 (5785MHz)

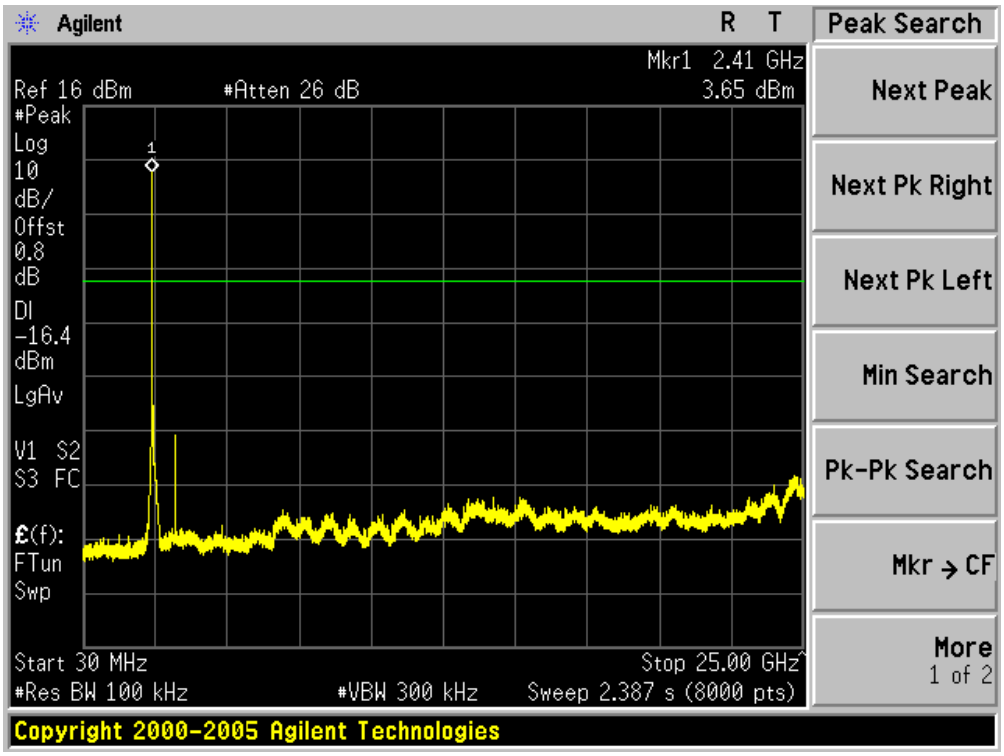


Channel 165 (5825MHz)

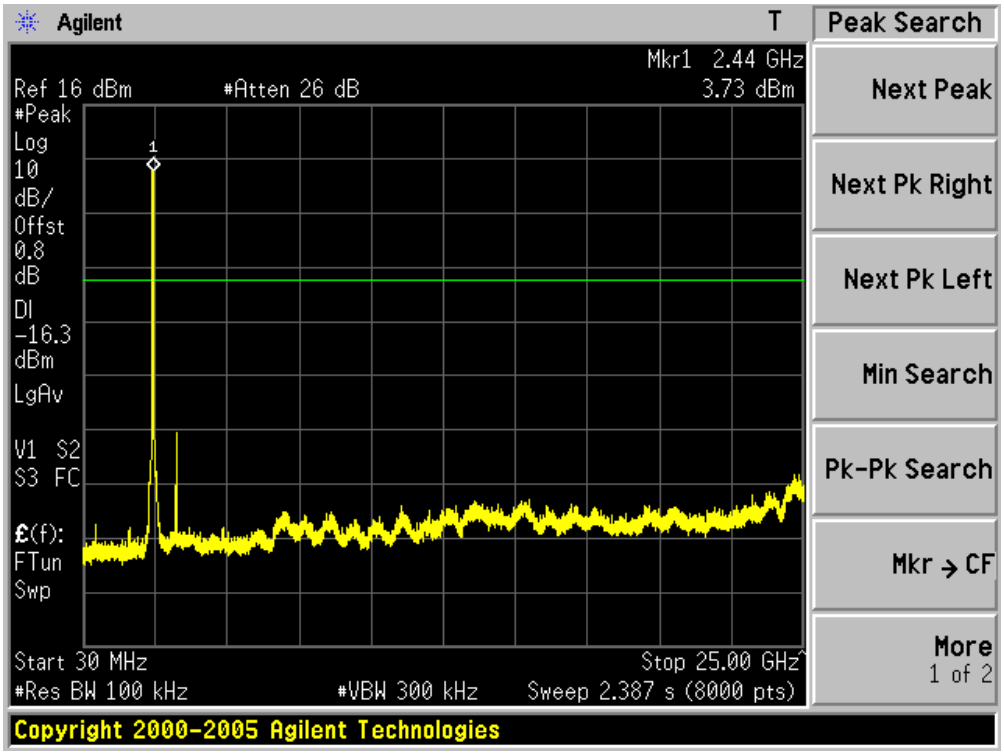


Product	:	802.11a/b/g/n WLAN Module
Test Item	:	RF Antenna Conducted Spurious
Test Site	:	AC-6
Test Mode	:	Mode 4: Transmit by 802.11n (20MHz)(Chain 0)

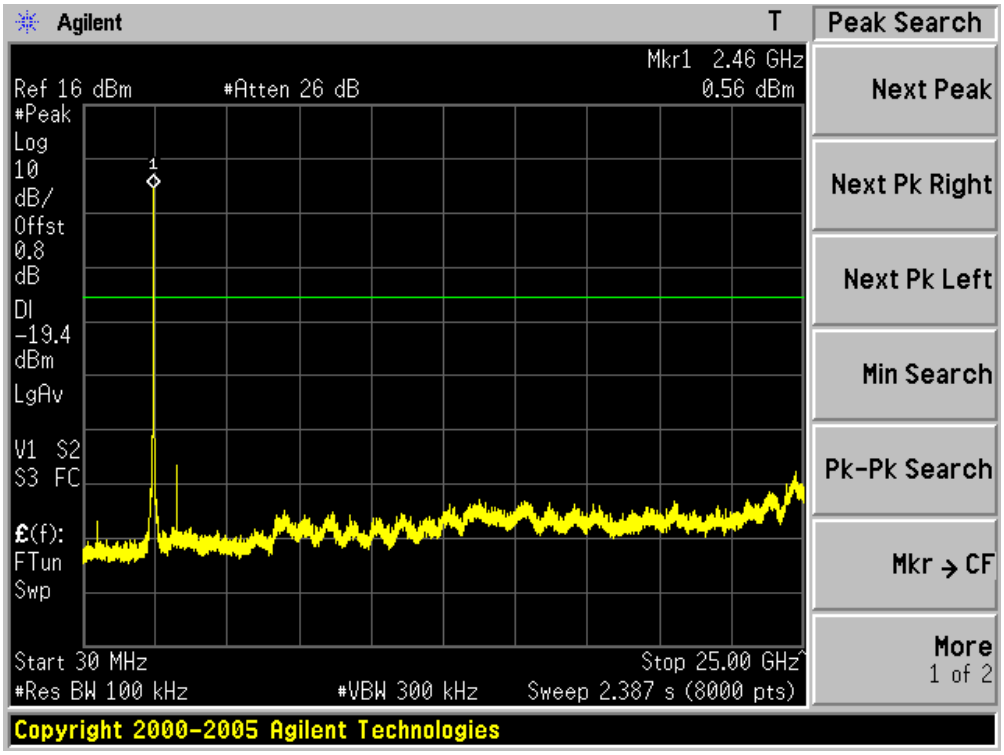
Channel 01 (2412MHz)



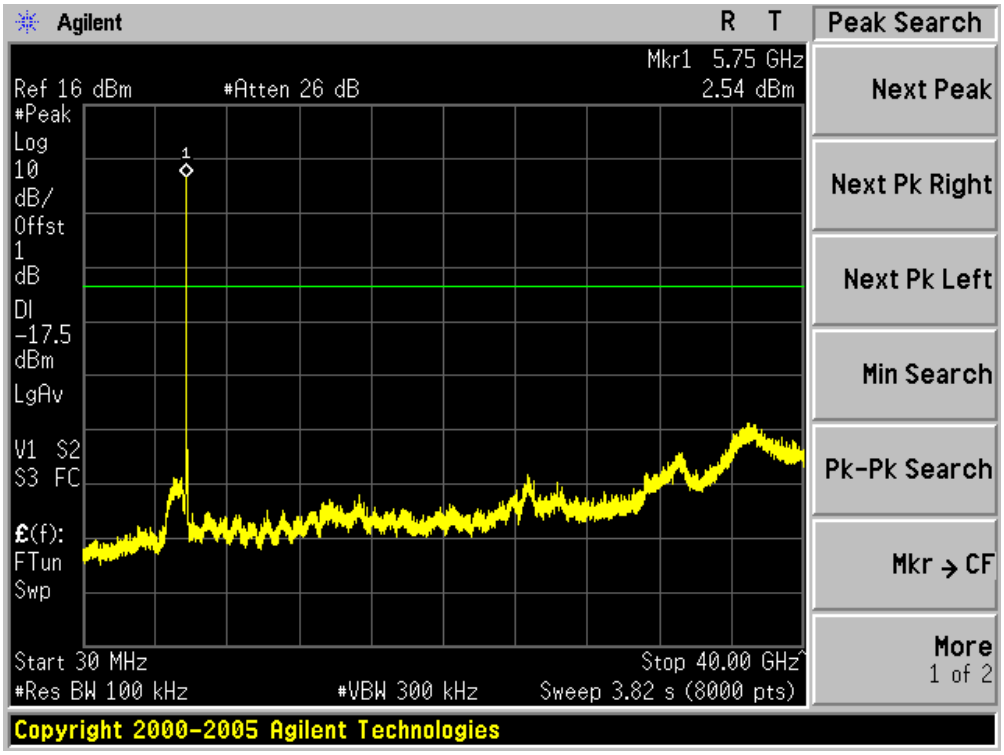
Channel 06 (2437MHz)



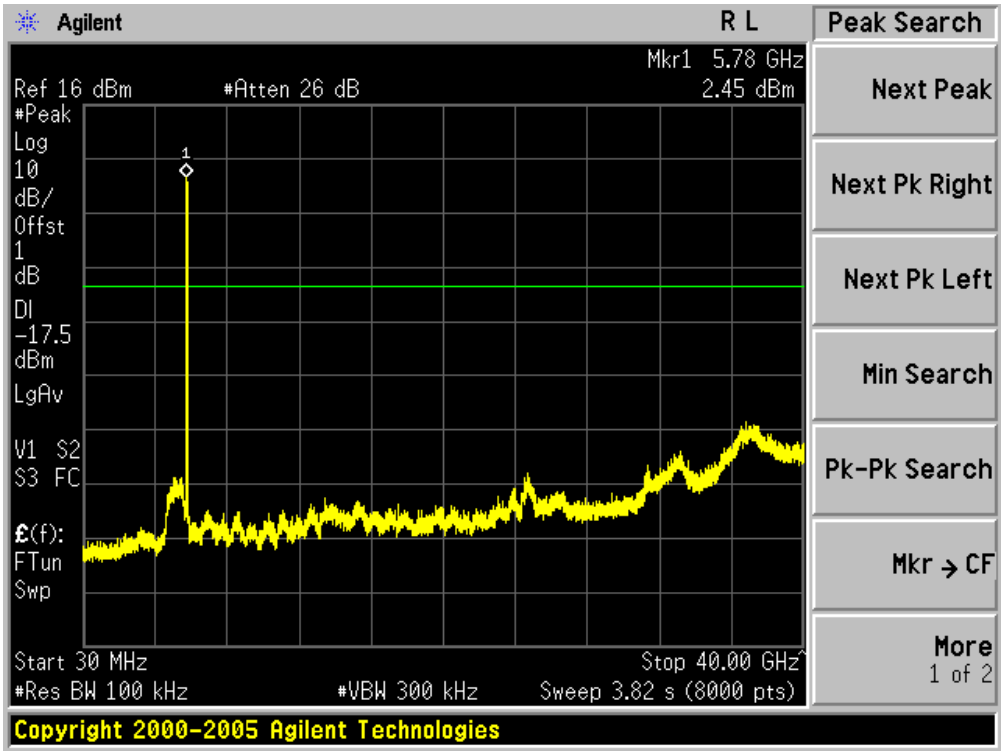
Channel 11 (2462MHz)



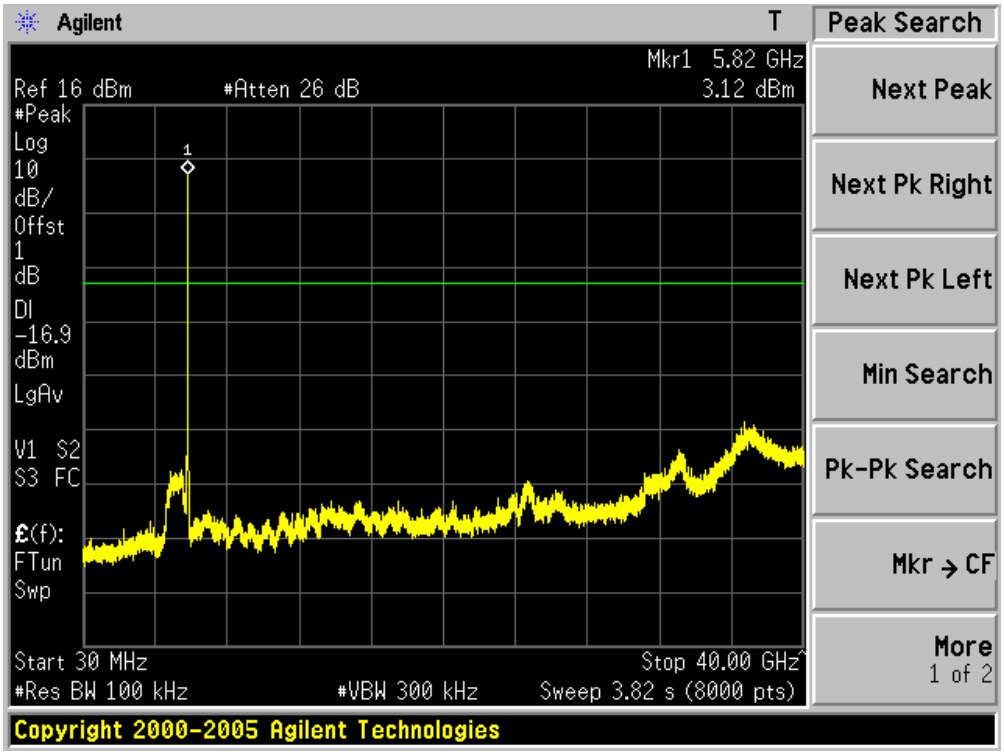
Channel 149 (5745MHz)



Channel 157 (5785MHz)

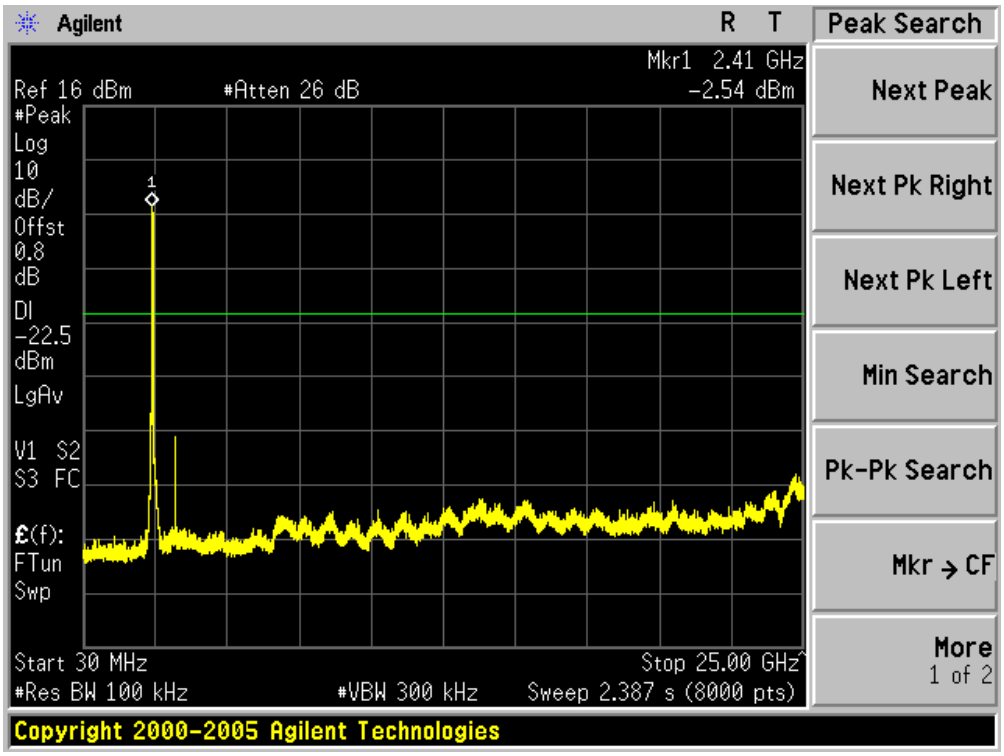


Channel 165 (5825MHz)

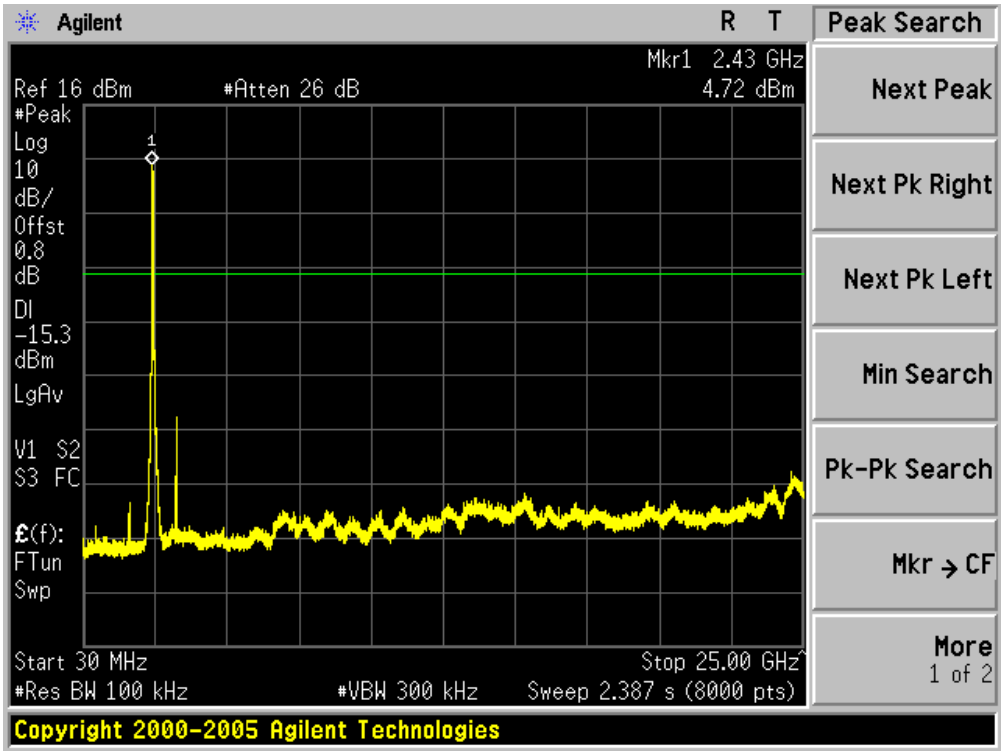


Product	:	802.11a/b/g/n WLAN Module
Test Item	:	RF Antenna Conducted Spurious
Test Site	:	AC-6
Test Mode	:	Mode 5: Transmit by 802.11n (40MHz) (Chain 0)

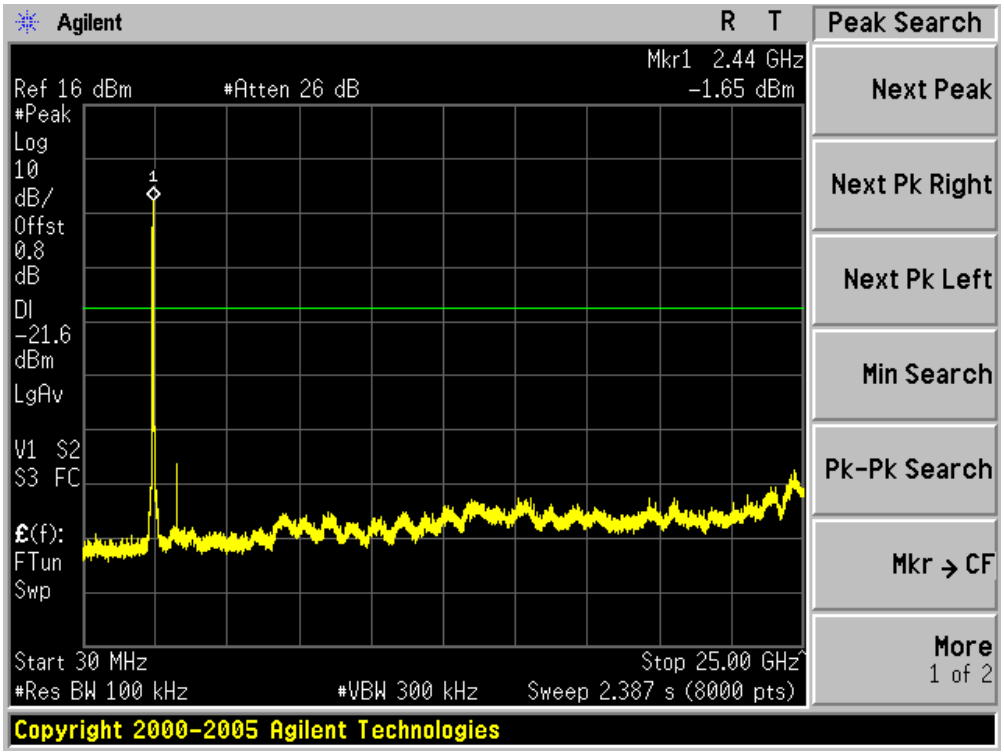
Channel 03 (2422MHz)



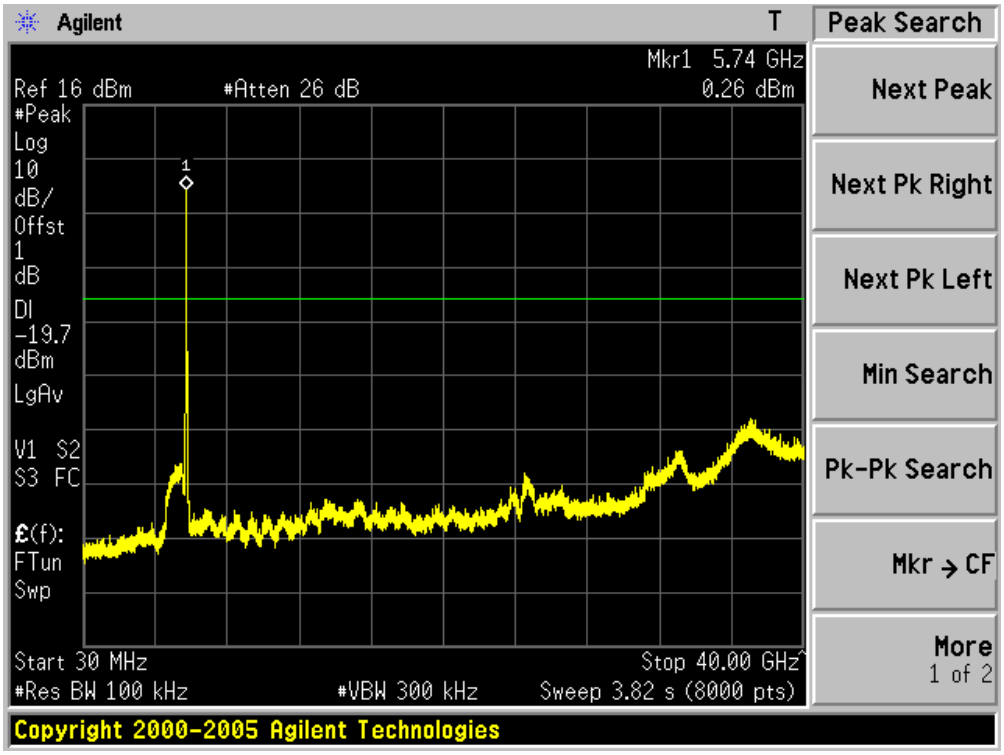
Channel 06 (2437MHz)



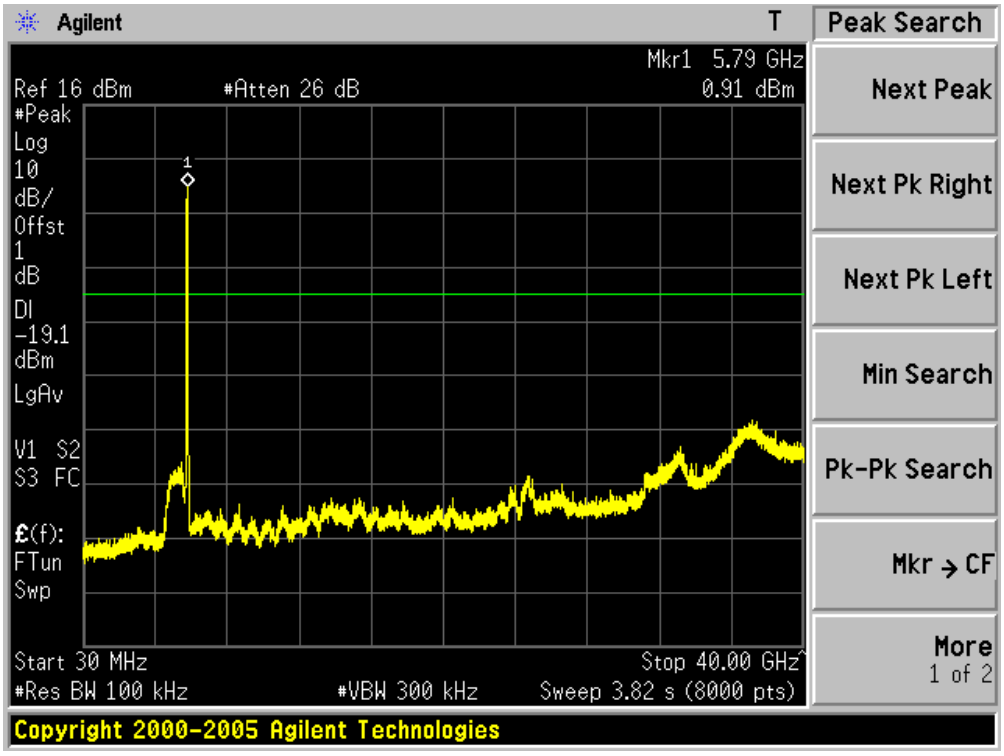
Channel 09 (2452MHz)



Channel 151 (5755MHz)

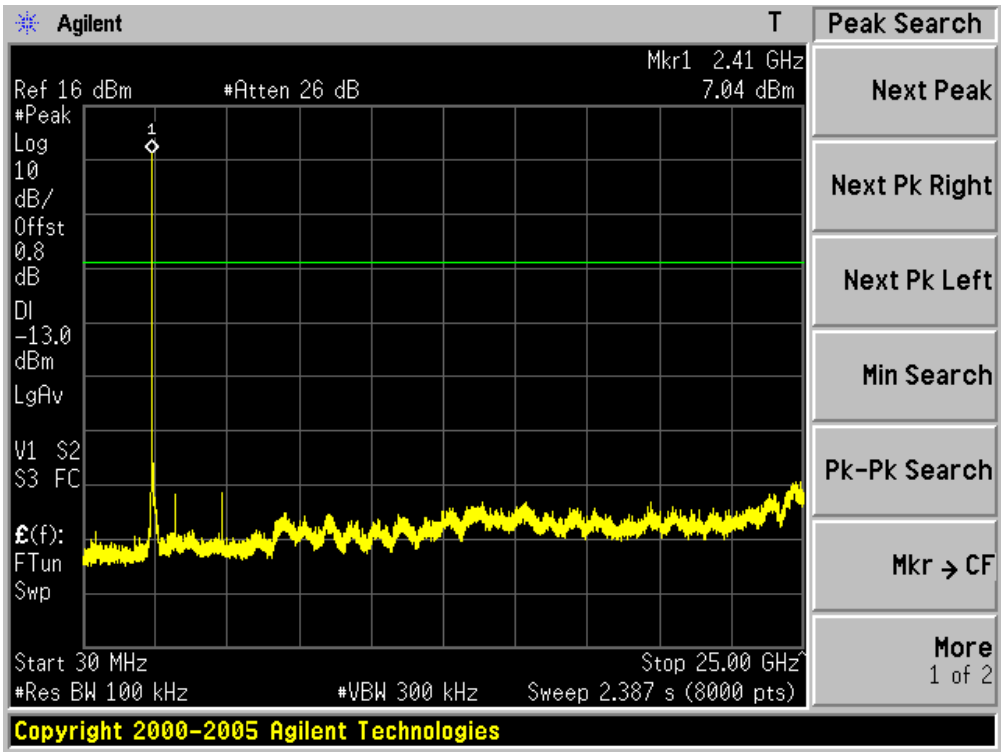


Channel 159 (5795MHz)

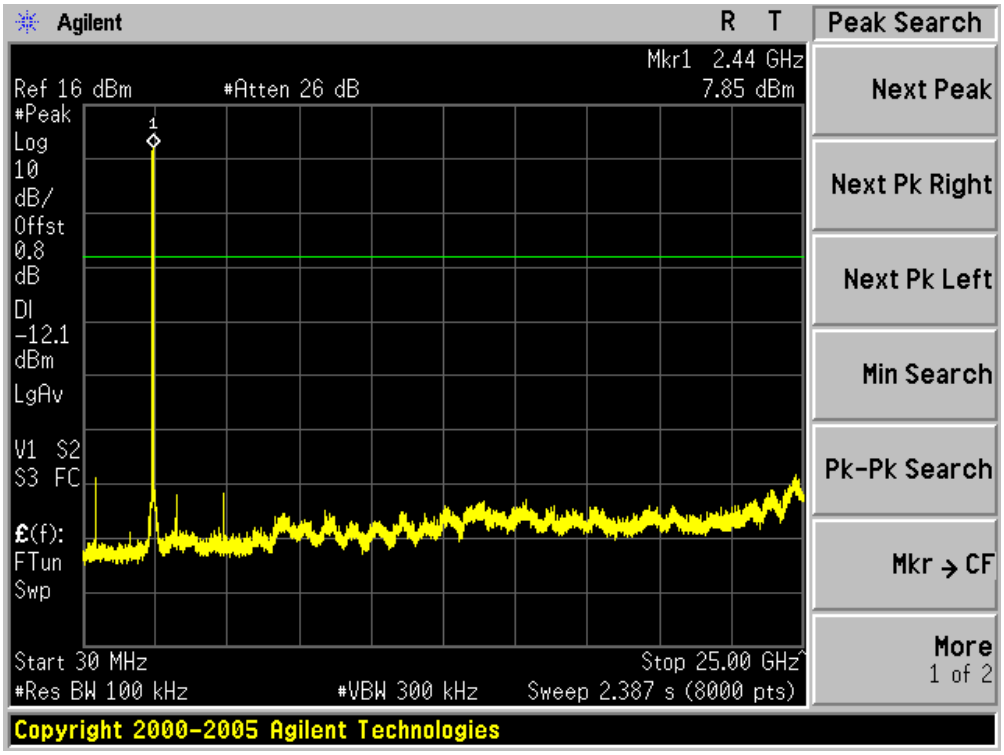


Product	:	802.11a/b/g/n WLAN Module
Test Item	:	RF Antenna Conducted Spurious
Test Site	:	AC-6
Test Mode	:	Mode 1: Transmit by 802.11b (Chain 1)

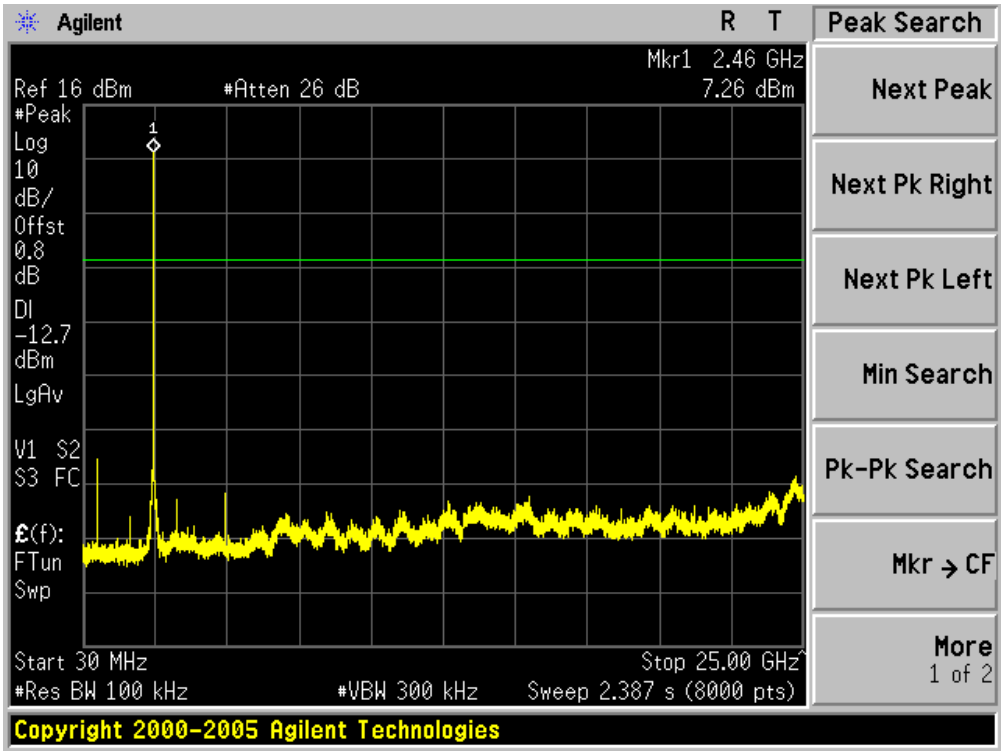
Channel 01 (2412MHz)



Channel 06 (2437MHz)

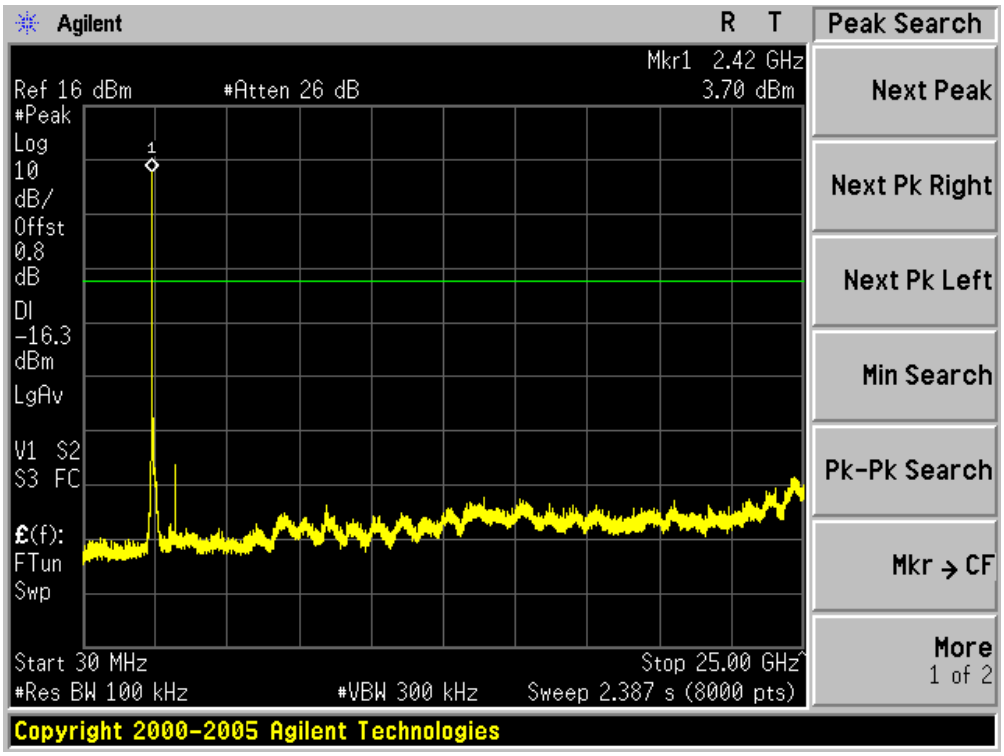


Channel 11 (2462MHz)

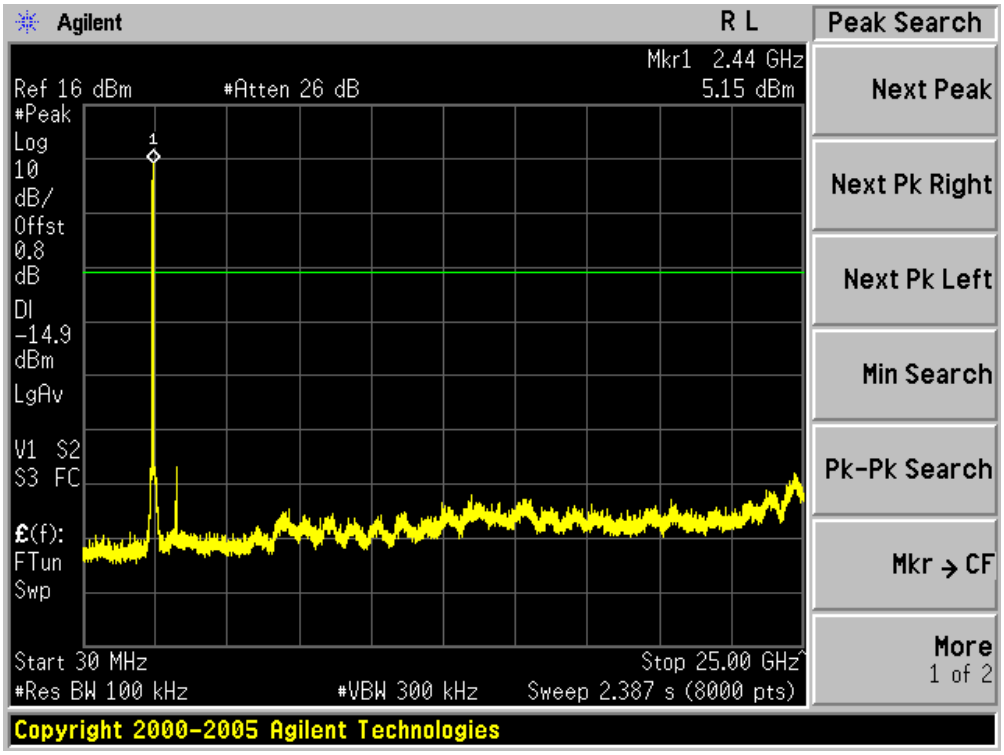


Product	:	802.11a/b/g/n WLAN Module
Test Item	:	RF Antenna Conducted Spurious
Test Site	:	AC-6
Test Mode	:	Mode 2: Transmit by 802.11g (Chain 1)

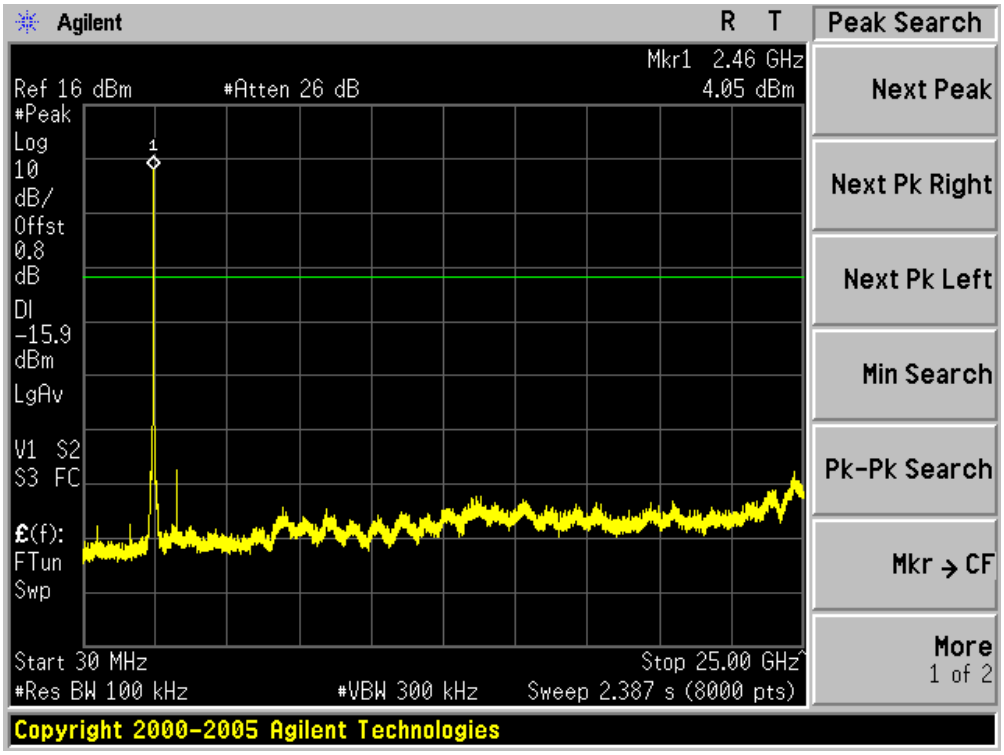
Channel 01 (2412MHz)



Channel 06 (2437MHz)

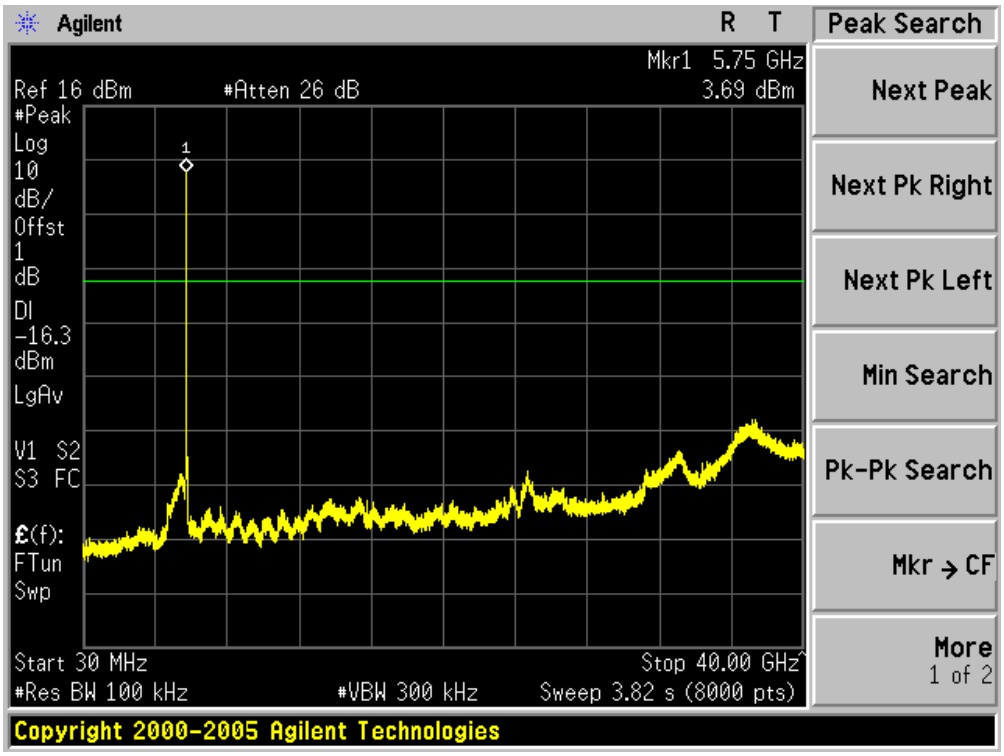


Channel 11 (2462MHz)

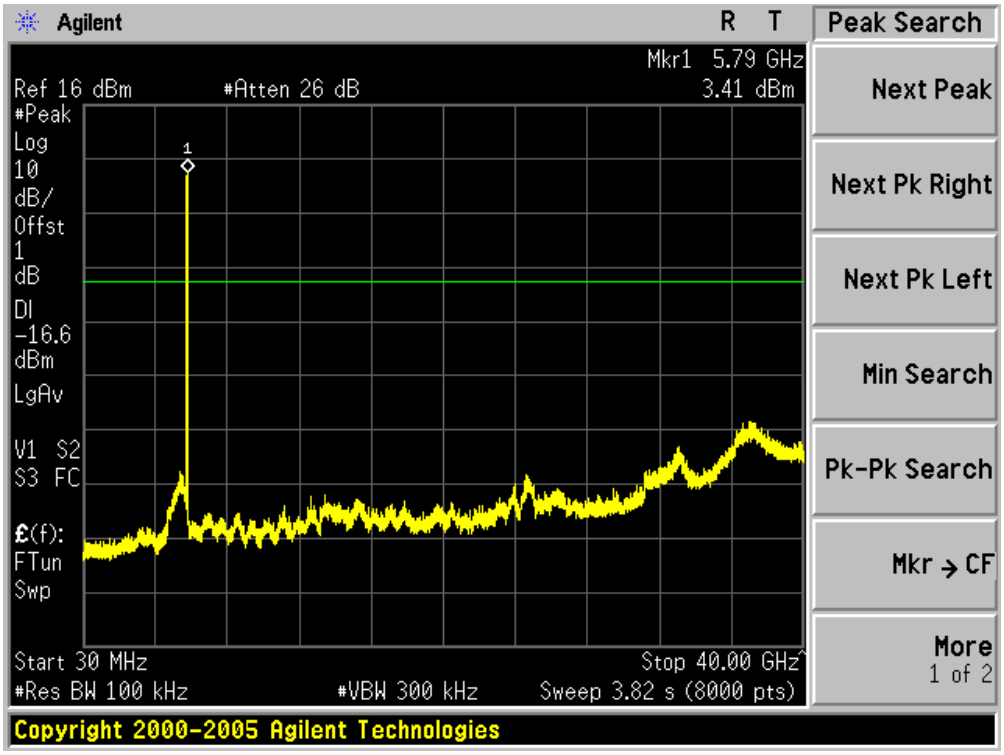


Product	:	802.11a/b/g/n WLAN Module
Test Item	:	RF Antenna Conducted Spurious
Test Site	:	AC-6
Test Mode	:	Mode 3: Transmit by 802.11a (Chain 1)

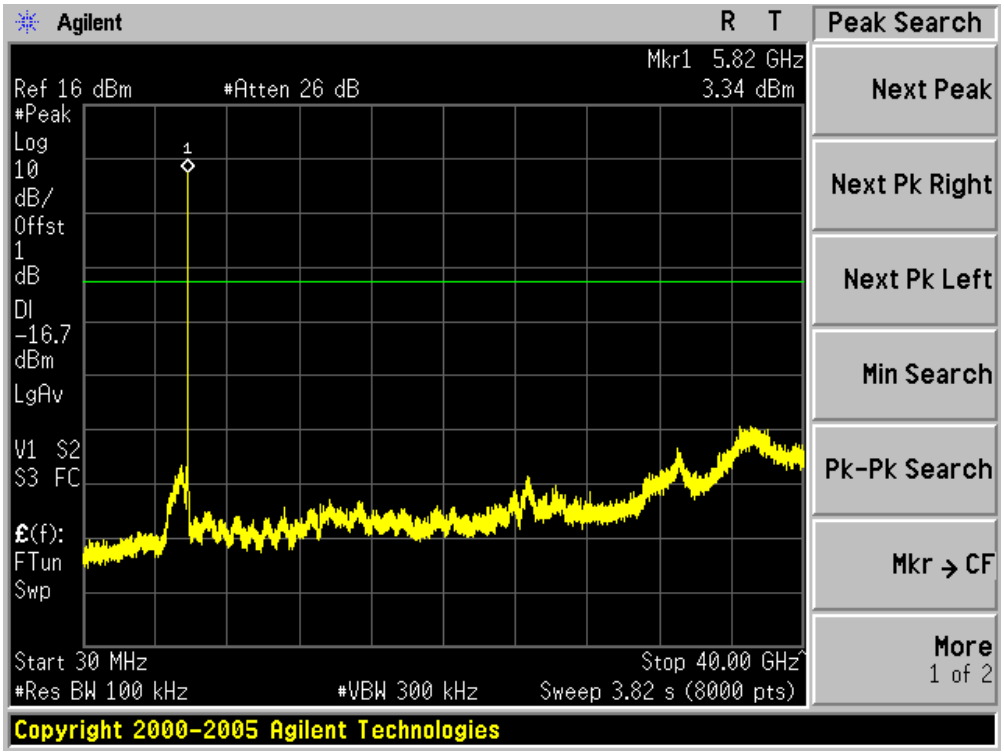
Channel 149 (5745MHz)



Channel 157 (5785MHz)

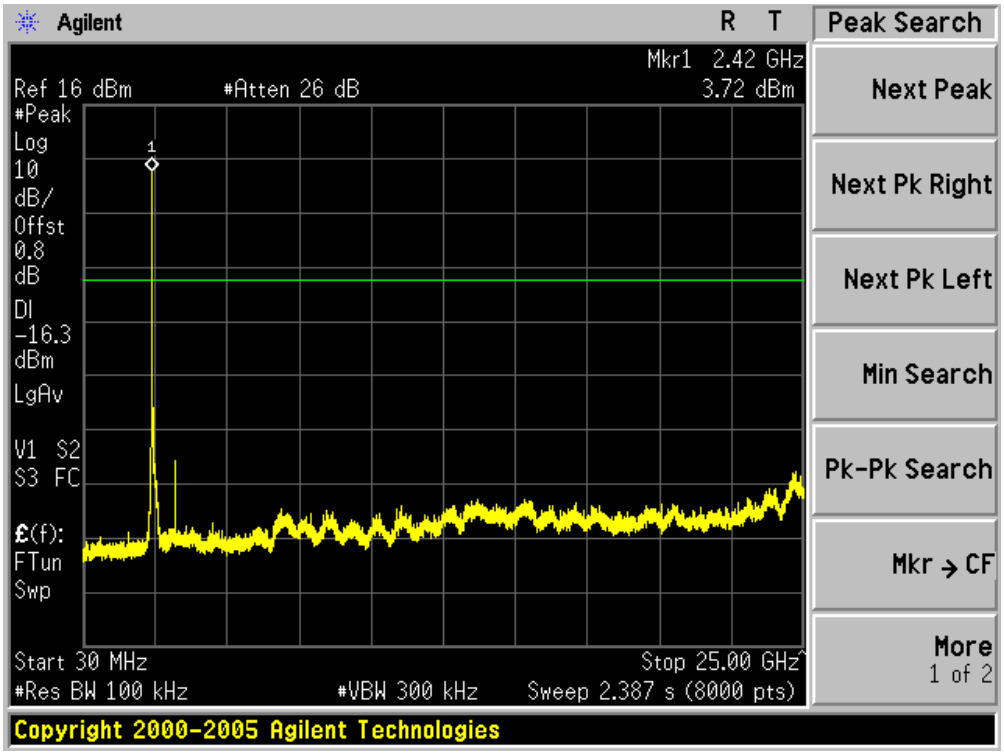


Channel 165 (5825MHz)

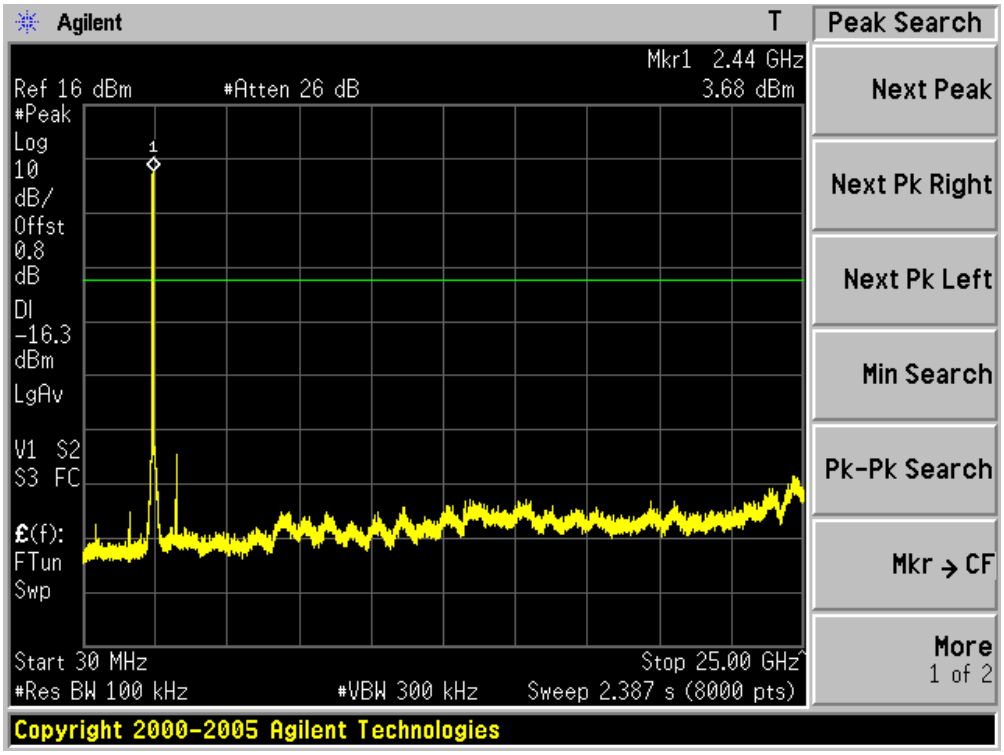


Product	:	802.11a/b/g/n WLAN Module
Test Item	:	RF Antenna Conducted Spurious
Test Site	:	AC-6
Test Mode	:	Mode 4: Transmit by 802.11n (20MHz) (Chain 1)

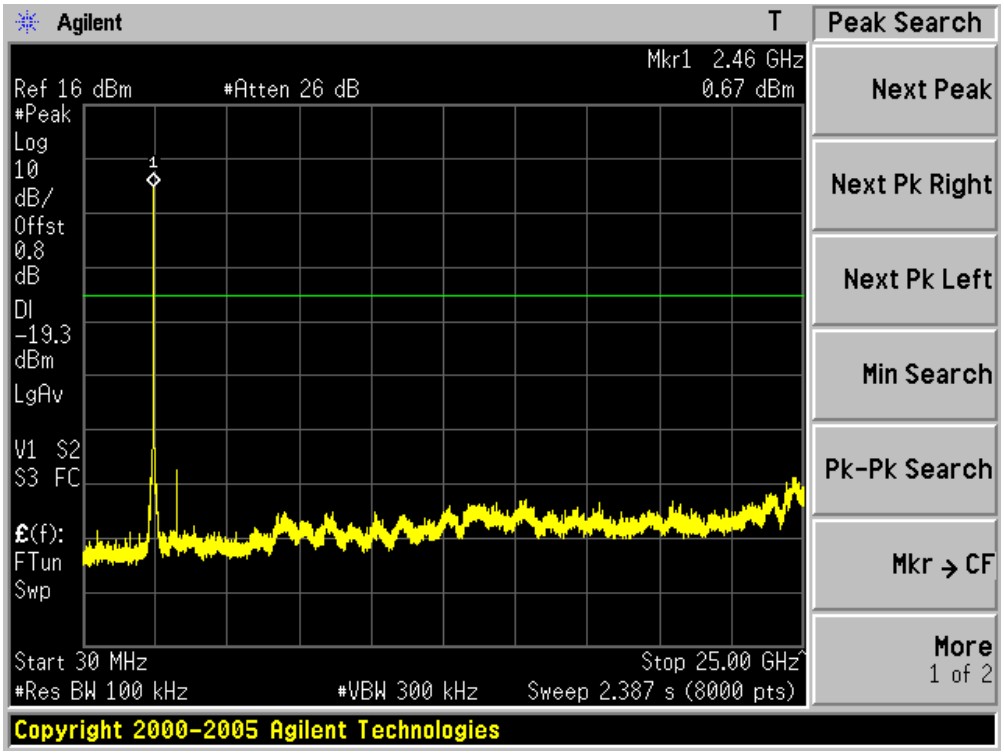
Channel 01 (2412MHz)



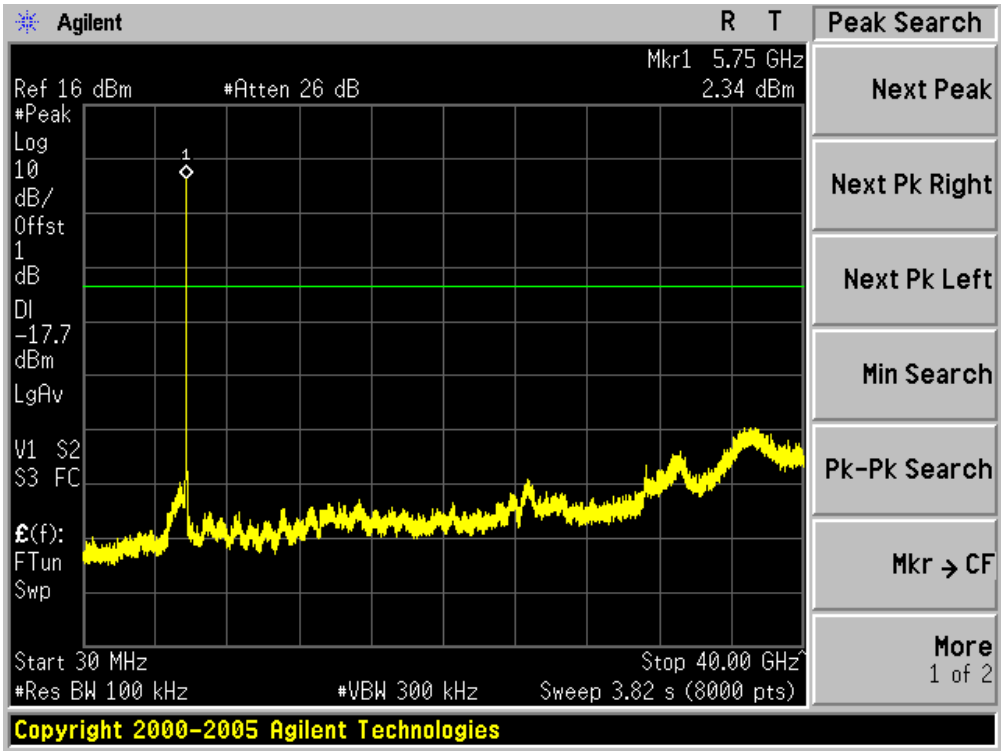
Channel 06 (2437MHz)



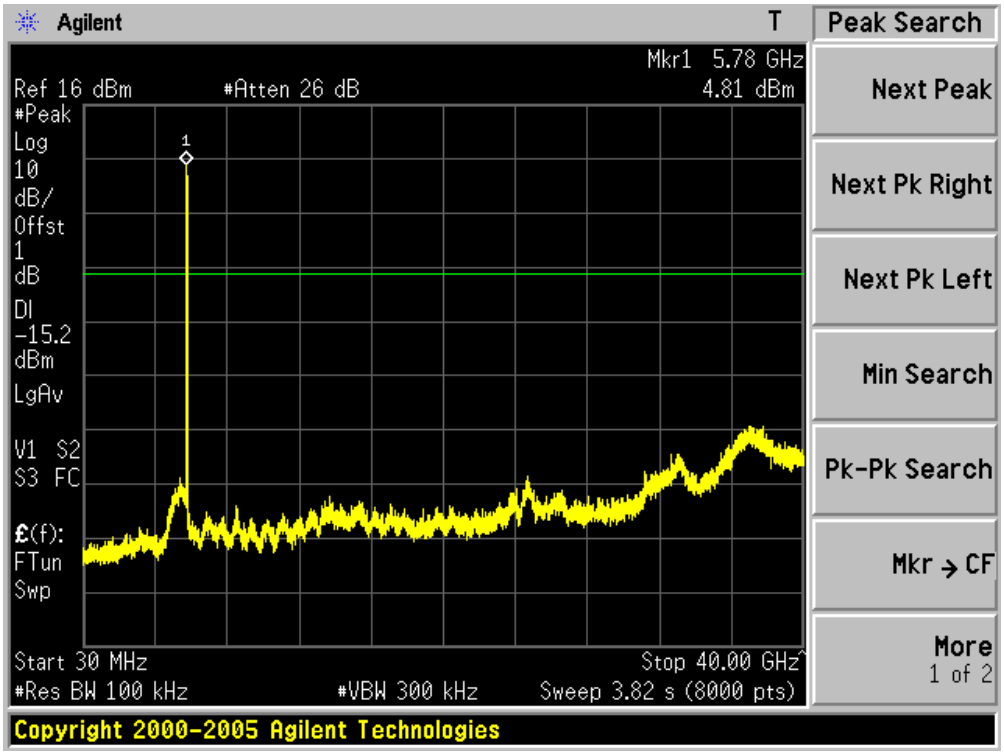
Channel 11 (2462MHz)



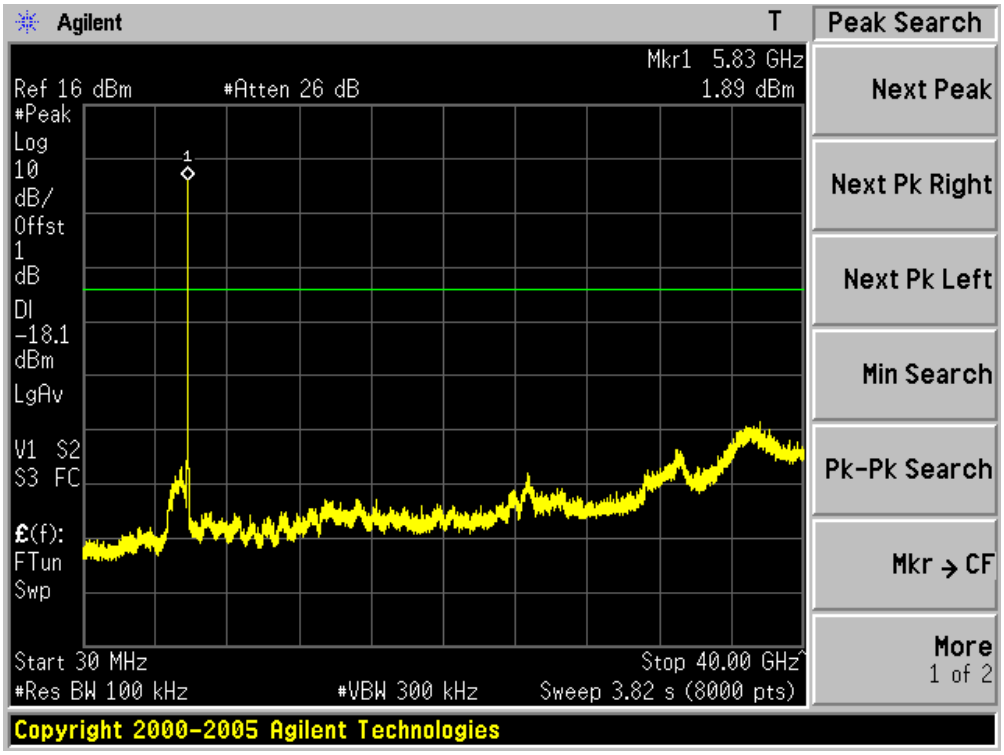
Channel 149 (5745MHz)



Channel 157 (5785MHz)

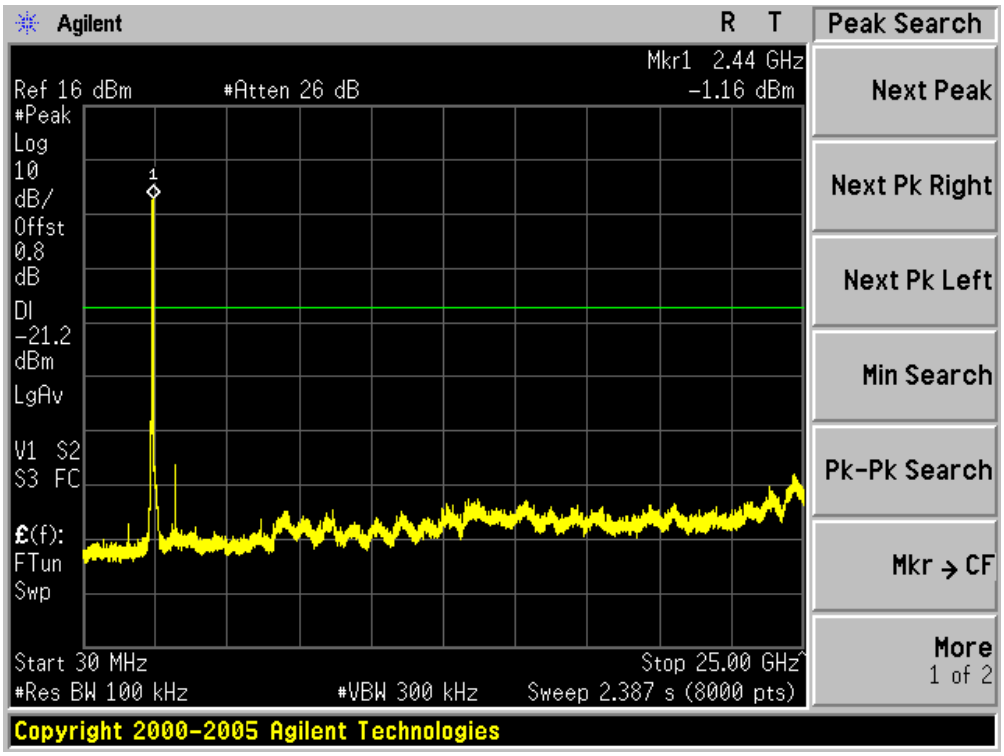


Channel 165 (5825MHz)

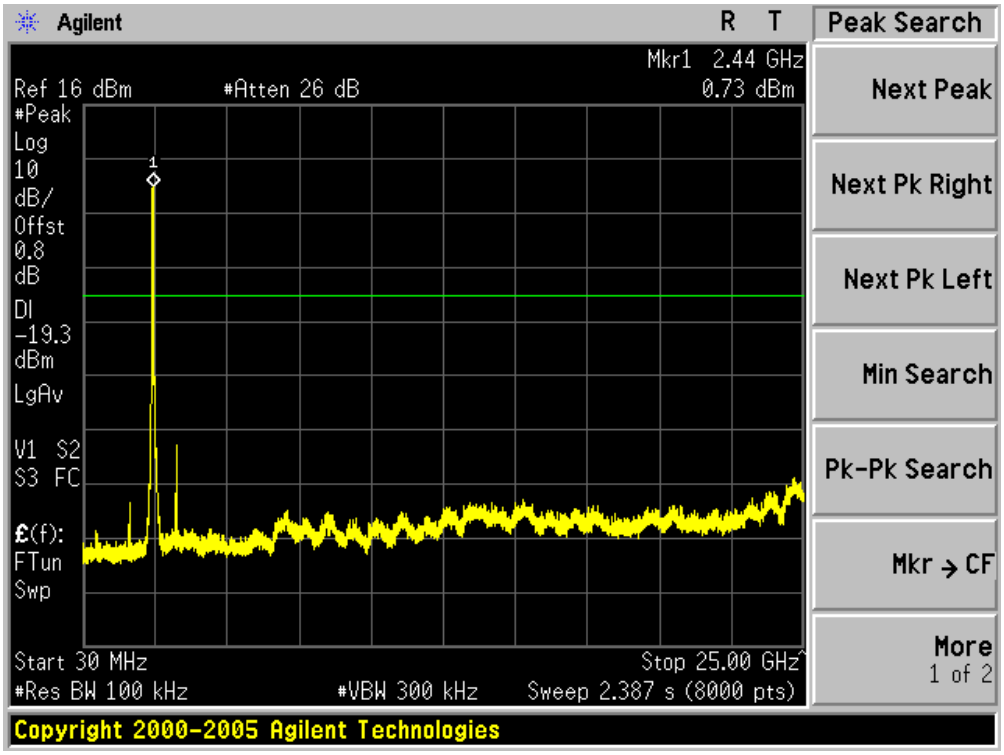


Product	:	802.11a/b/g/n WLAN Module
Test Item	:	RF Antenna Conducted Spurious
Test Site	:	AC-6
Test Mode	:	Mode 5: Transmit by 802.11n (40MHz) (Chain 1)

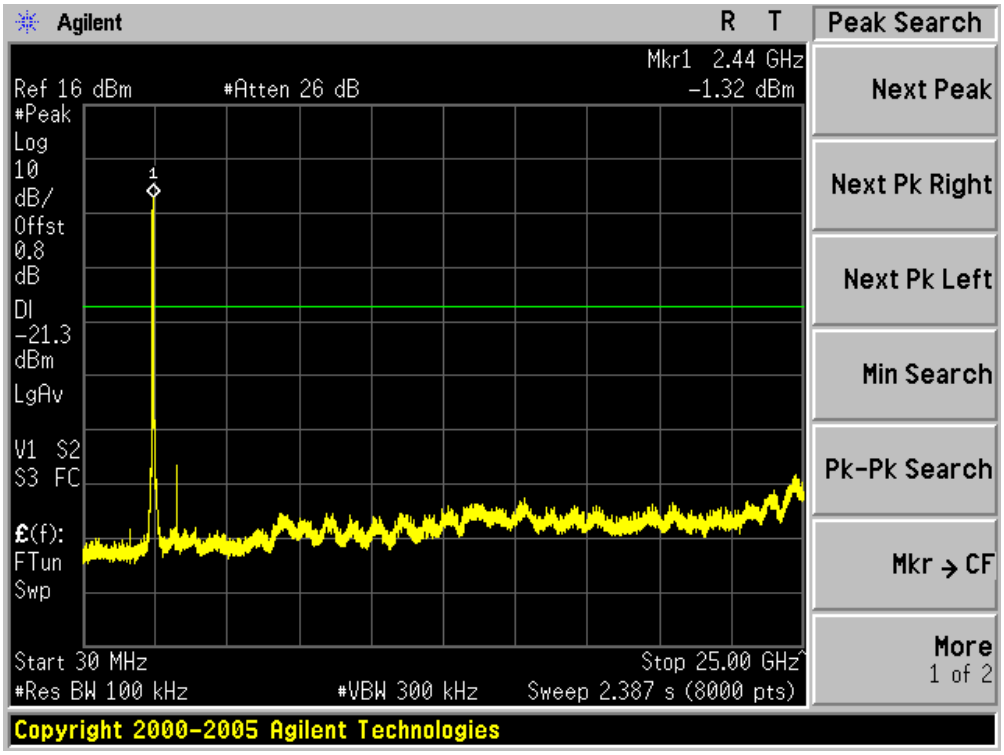
Channel 03 (2422MHz)



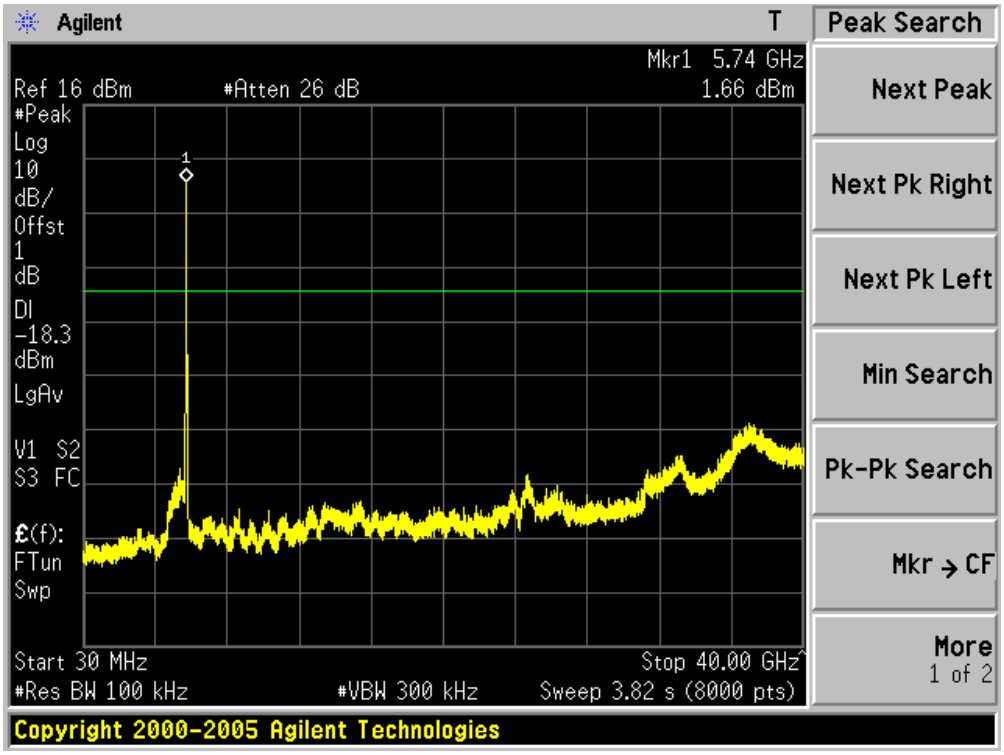
Channel 06 (2437MHz)



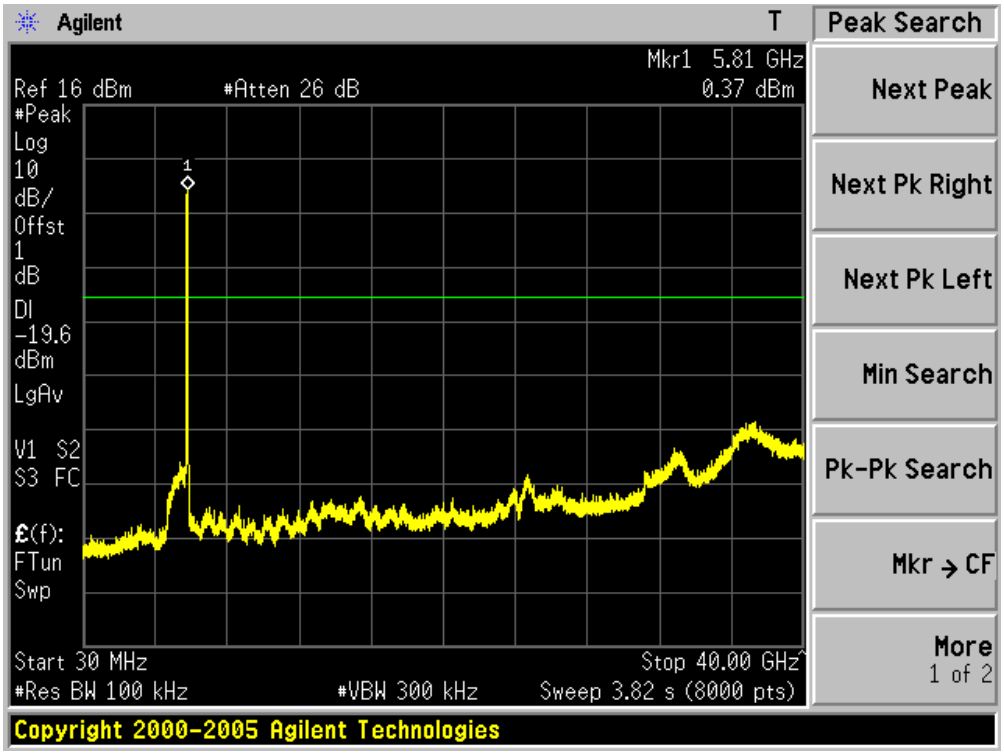
Channel 09 (2452MHz)



Channel 151 (5755MHz)



Channel 159 (5795MHz)



6. Radiated Emission Band Edge

6.1. Test Equipment

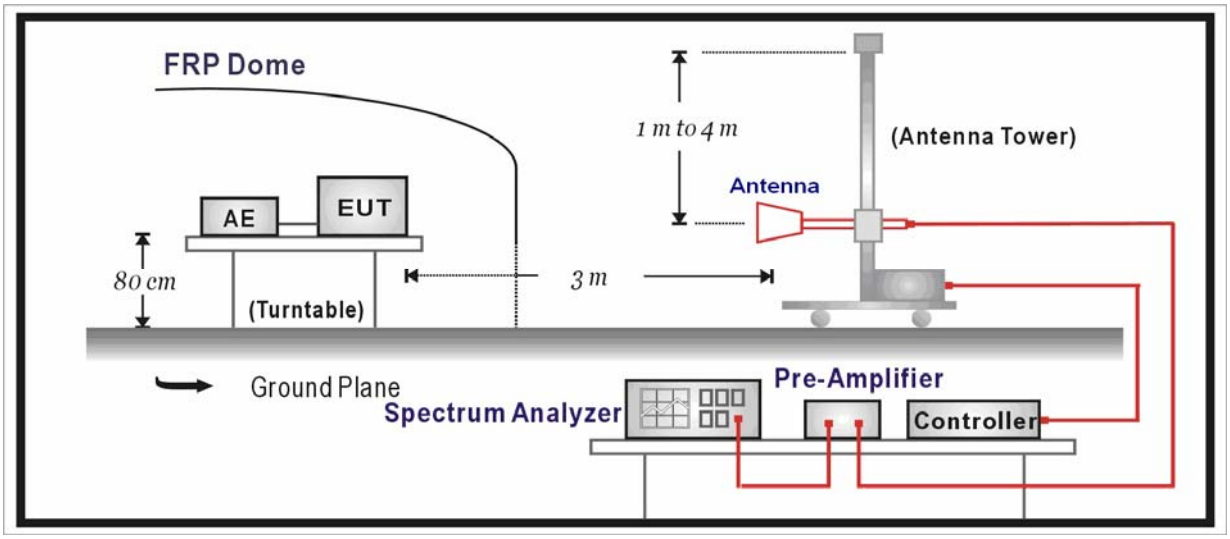
☒Radiated Emission / AC-2

Instrument	Manufacturer	Type No.	Serial No.	Cal. Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2009/06/11
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	496	2008/11/25
Coaxial Cable	Huber+Suhner	AC2-C	04	2008/11/25
Temperature/Humidity Meter	zhicheng	ZC1-2	QT-TH002	2009/03/31

Note 1: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

Note 2: The test instruments marked with “X” are used to measure the final test results.

6.2. Test Setup



6.3. Limit

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a) of FCC part 15, must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

6.4. Test Procedure

The EUT was setup according to ANSI C63.4, 2003 and tested according to DTS test procedure of Oct 2002 KDB558074 for compliance to FCC 47CFR 15.247 requirements.
The EUT is placed on a turn table which is 0.8 meter above ground. The turn table is rotated 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 is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.4:2003 on radiated measurement.

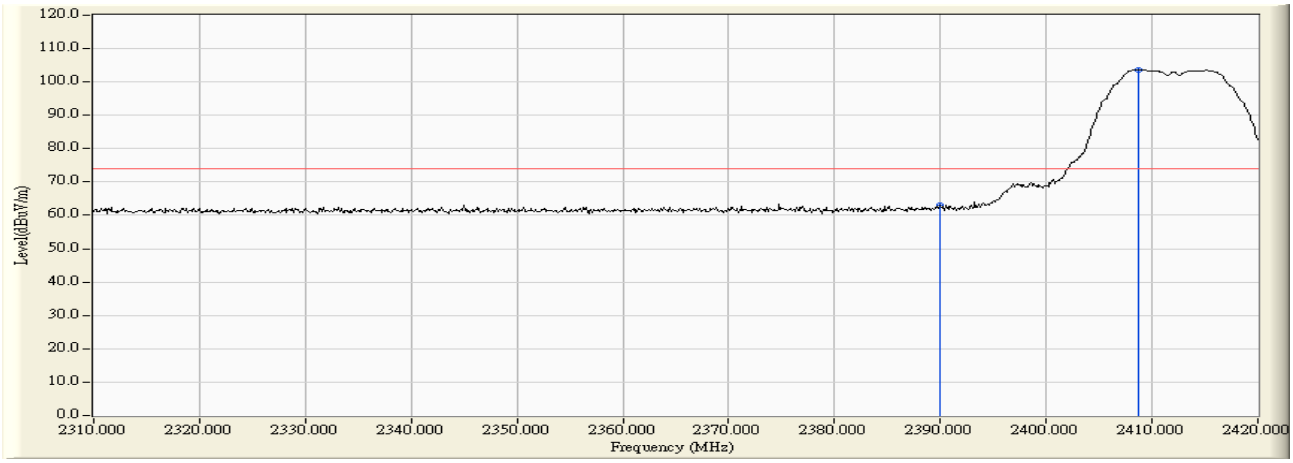
6.5. Uncertainty

The measurement uncertainty above 1G is defined as ± 3.9 dB

6.6. Test Result

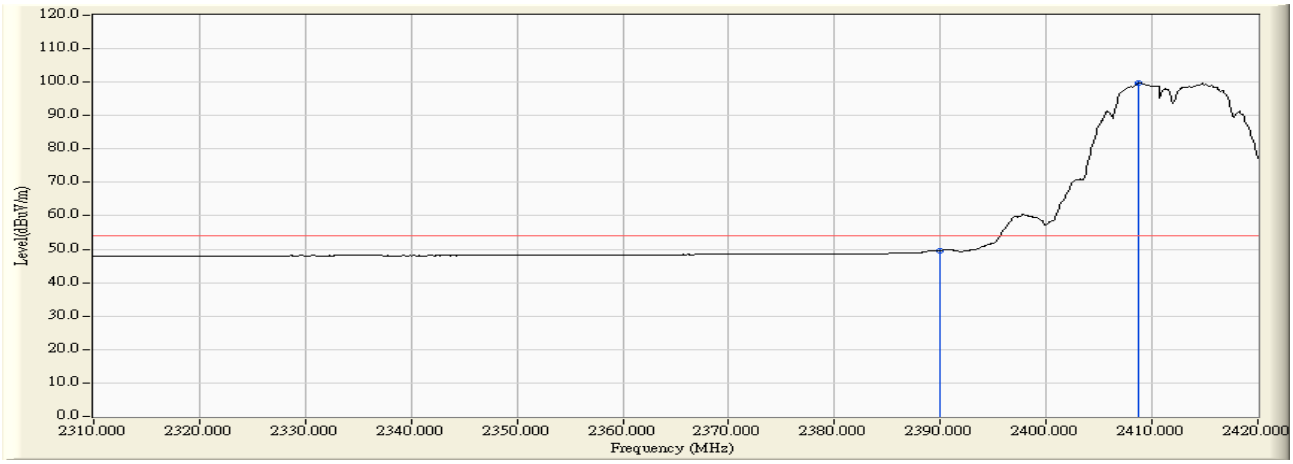
Peak detector: RBW = 1MHz, VBW = 3MHz, sweep time = 200ms;
Average detector: RBW = 1MHz, VBW = 10Hz, sweep time = auto.

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/15 - 23:28**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
Probe : 9120D_499(1-18GHz) - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 1: Transmit at channel 2412MHz By 802.11b(Chain 0)**



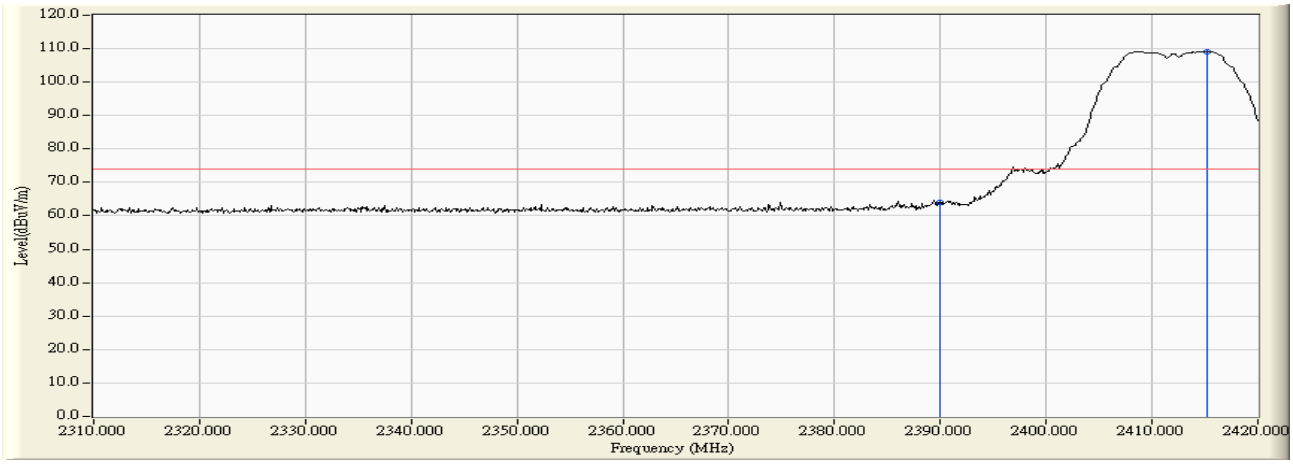
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2390.000	31.184	31.730	62.914	-11.056	73.970	PEAK
2	*	2408.780	31.188	72.508	103.696	N/A	N/A	PEAK

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/15 - 23:28**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
Probe : 9120D_499(1-18GHz) - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 1: Transmit at channel 2412MHz By 802.11b(Chain 0)**



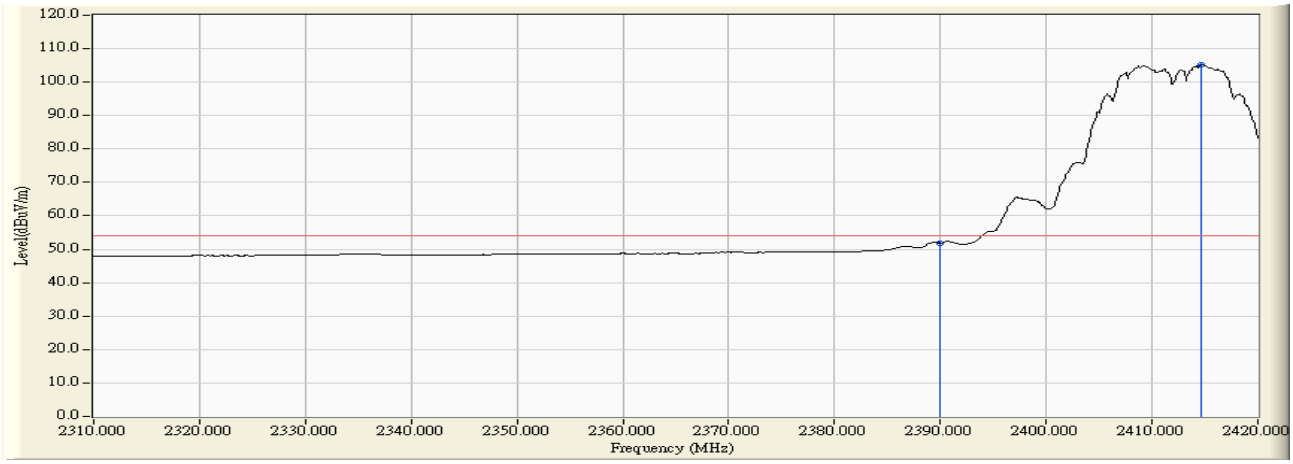
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2390.000	31.184	18.340	49.524	-4.446	53.970	AVERAGE
2	*	2408.780	31.188	68.588	99.776	N/A	N/A	AVERAGE

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/15 - 23:32**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
Probe : 9120D_499(1-18GHz) - VERTICAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 1: Transmit at channel 2412MHz By 802.11b(Chain 0)**



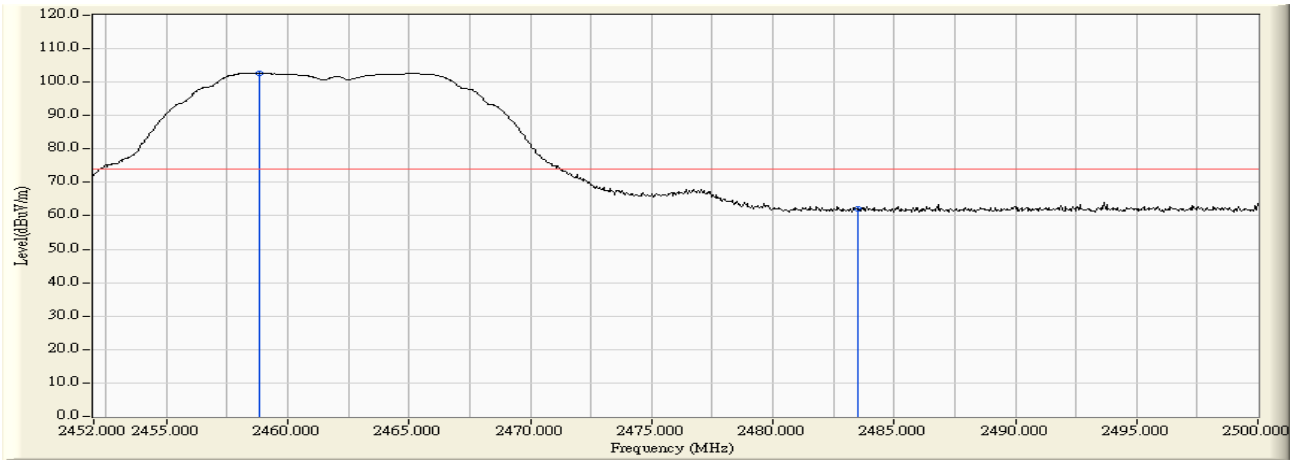
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2390.000	31.184	32.723	63.907	-10.063	73.970	PEAK
2	*	2415.160	31.193	78.004	109.197	N/A	N/A	PEAK

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/15 - 23:33**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
Probe : 9120D_499(1-18GHz) - VERTICAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 1: Transmit at channel 2412MHz By 802.11b(Chain 0)**



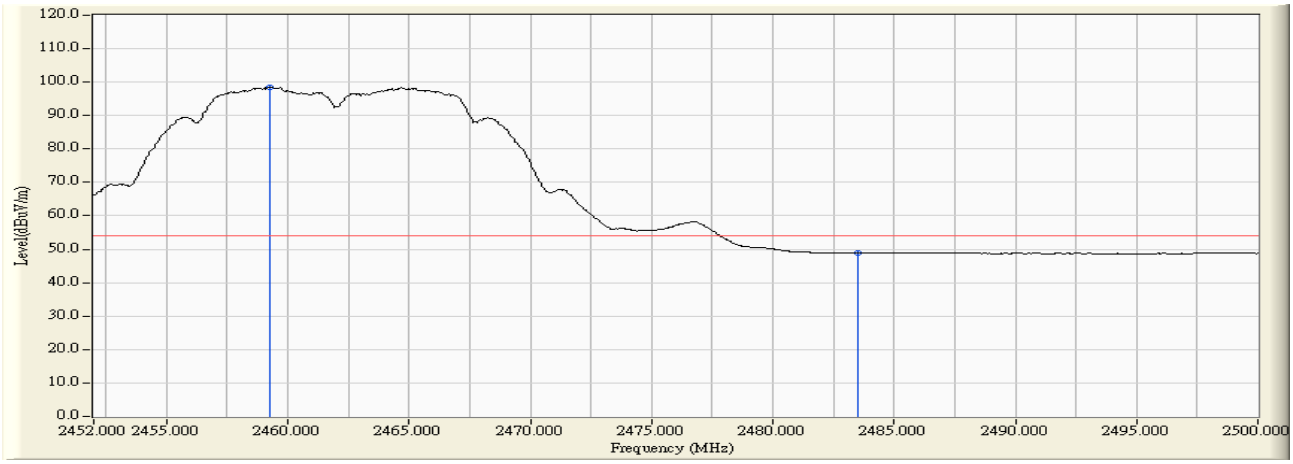
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2390.000	31.184	20.682	51.866	-2.104	53.970	AVERAGE
2	*	2414.610	31.193	74.051	105.244	N/A	N/A	AVERAGE

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/15 - 23:37**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
Probe : 9120D_499(1-18GHz) - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 1: Transmit at channel 2462MHz By 802.11b(Chain 0)**



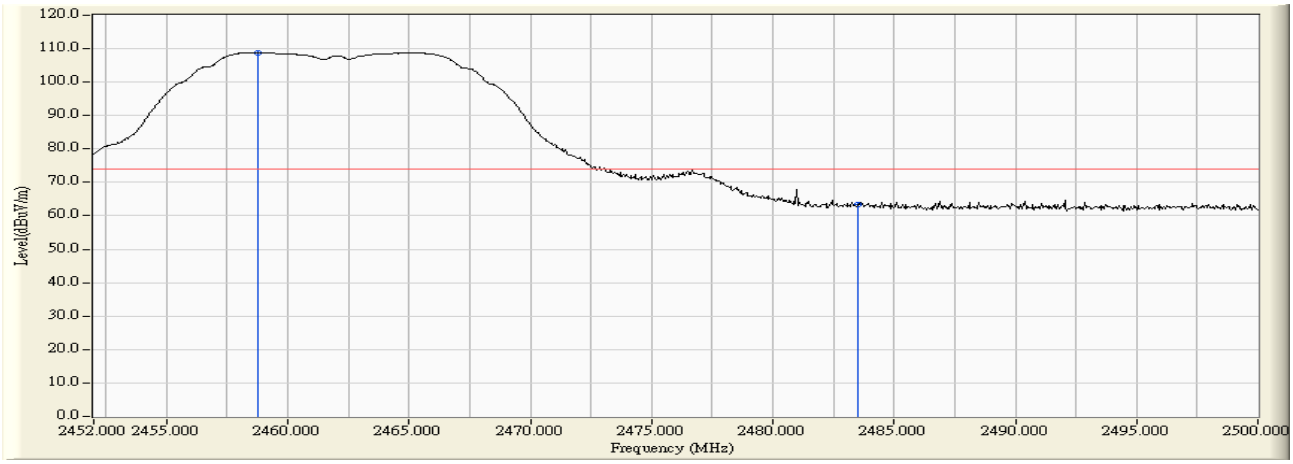
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2458.816	31.224	71.559	102.783	N/A	N/A	PEAK
2		2483.500	31.212	30.795	62.007	-11.963	73.970	PEAK

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/15 - 23:37**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
Probe : 9120D_499(1-18GHz) - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 1: Transmit at channel 2462MHz By 802.11b(Chain 0)**



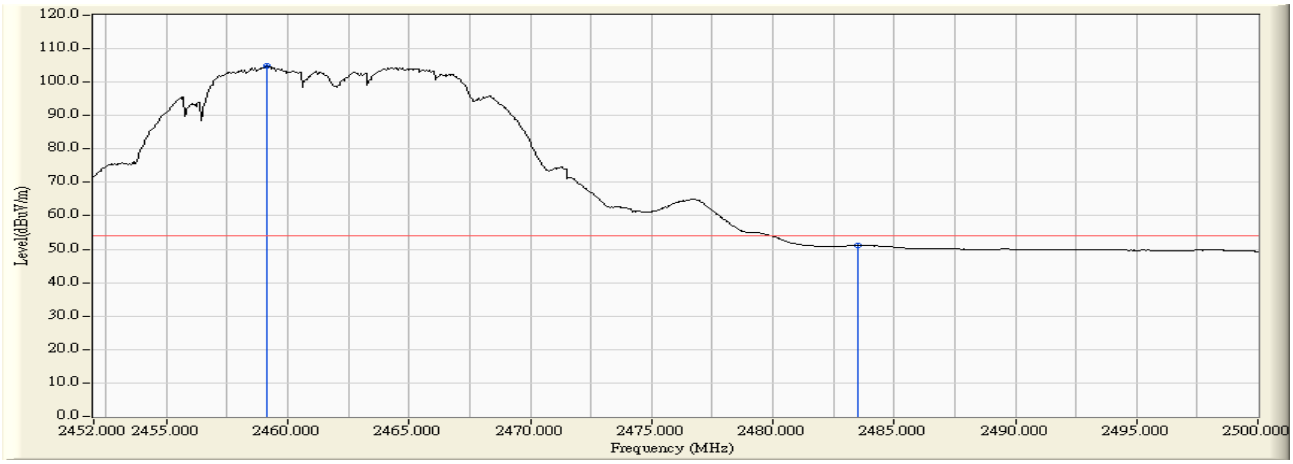
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2459.248	31.224	67.157	98.381	N/A	N/A	AVERAGE
2		2483.500	31.212	17.810	49.022	-4.948	53.970	AVERAGE

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/15 - 23:40**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
Probe : 9120D_499(1-18GHz) - VERTICAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 1: Transmit at channel 2462MHz By 802.11b(Chain 0)**



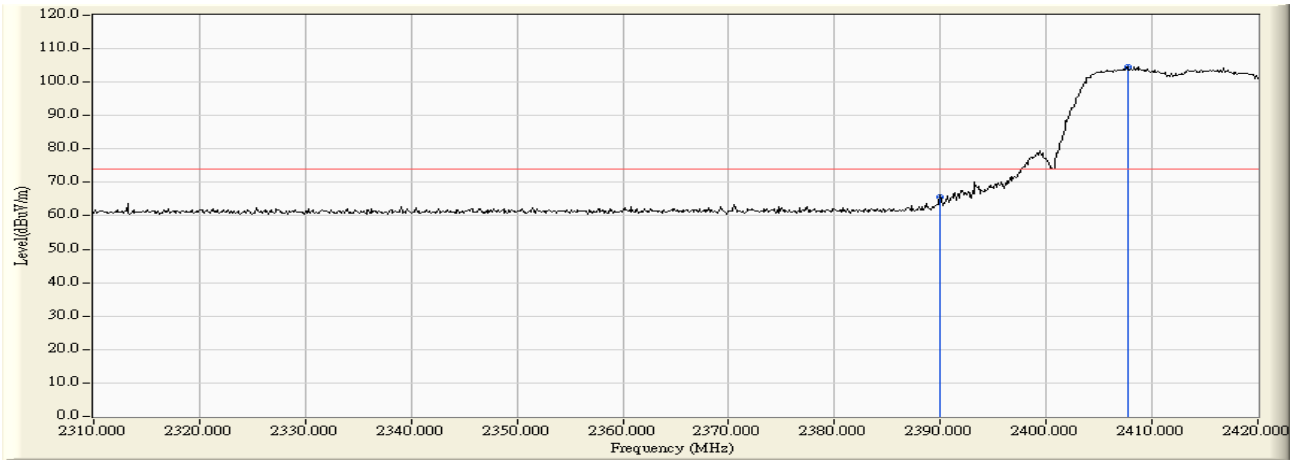
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2458.768	31.224	77.635	108.859	N/A	N/A	PEAK
2		2483.500	31.212	32.037	63.249	-10.721	73.970	PEAK

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/15 - 23:40**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
Probe : 9120D_499(1-18GHz) - VERTICAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 1: Transmit at channel 2462MHz By 802.11b(Chain 0)**



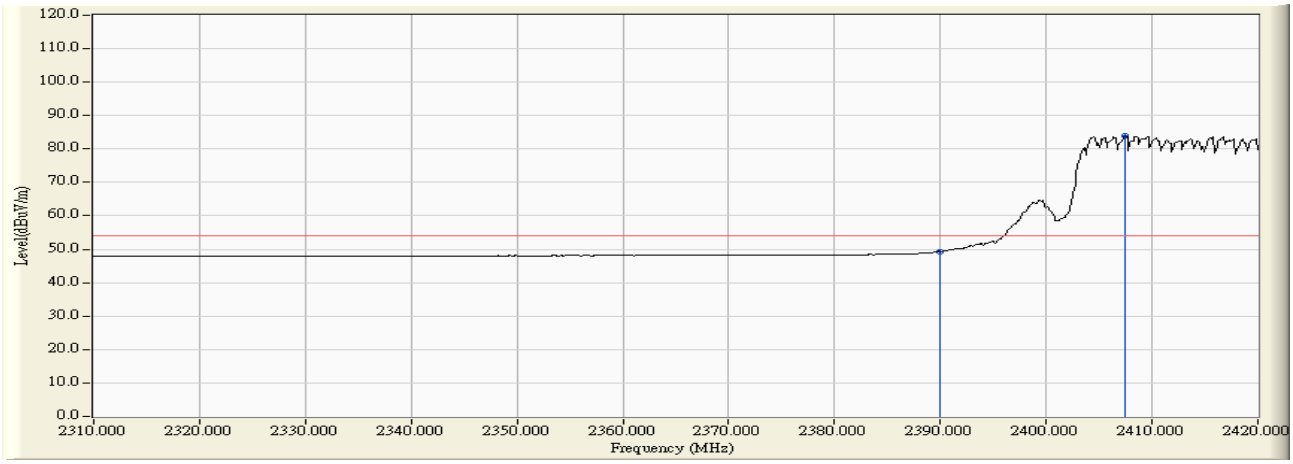
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2459.152	31.224	73.516	104.740	N/A	N/A	AVERAGE
2		2483.500	31.212	19.937	51.149	-2.821	53.970	AVERAGE

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/15 - 23:44**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
Probe : 9120D_499(1-18GHz) - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 2: Transmit at channel 2412MHz By 802.11g(Chain 0)**



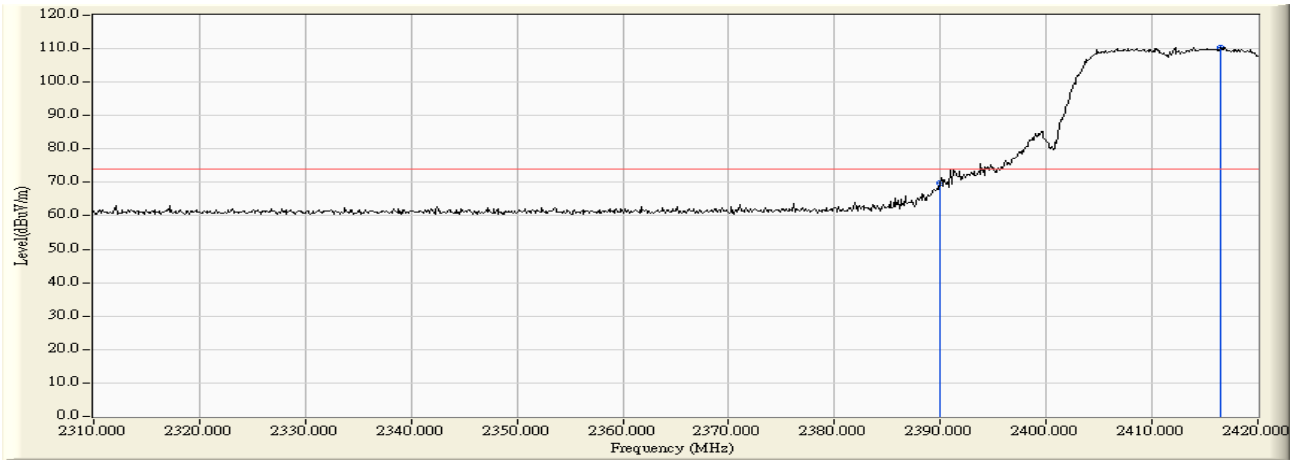
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2390.000	31.184	34.554	65.738	-8.232	73.970	PEAK
2	*	2407.680	31.188	73.413	104.601	N/A	N/A	PEAK

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/15 - 23:45**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
Probe : 9120D_499(1-18GHz) - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 2: Transmit at channel 2412MHz By 802.11g(Chain 0)**



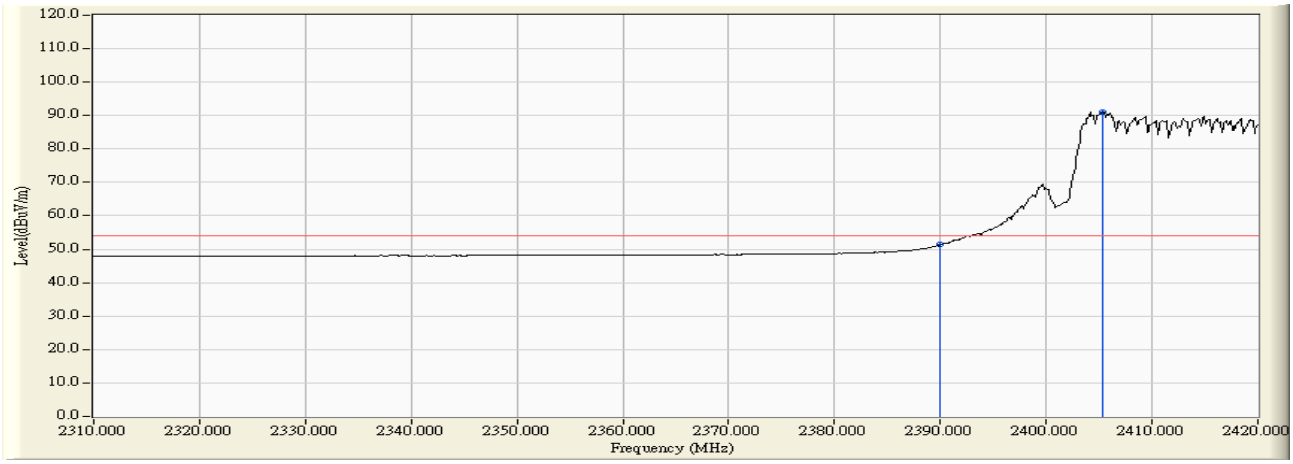
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2390.000	31.184	18.153	49.337	-4.633	53.970	AVERAGE
2	*	2407.460	31.187	52.686	83.873	N/A	N/A	AVERAGE

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/15 - 23:47**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
Probe : 9120D_499(1-18GHz) - VERTICAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 2: Transmit at channel 2412MHz By 802.11g(Chain 0)**



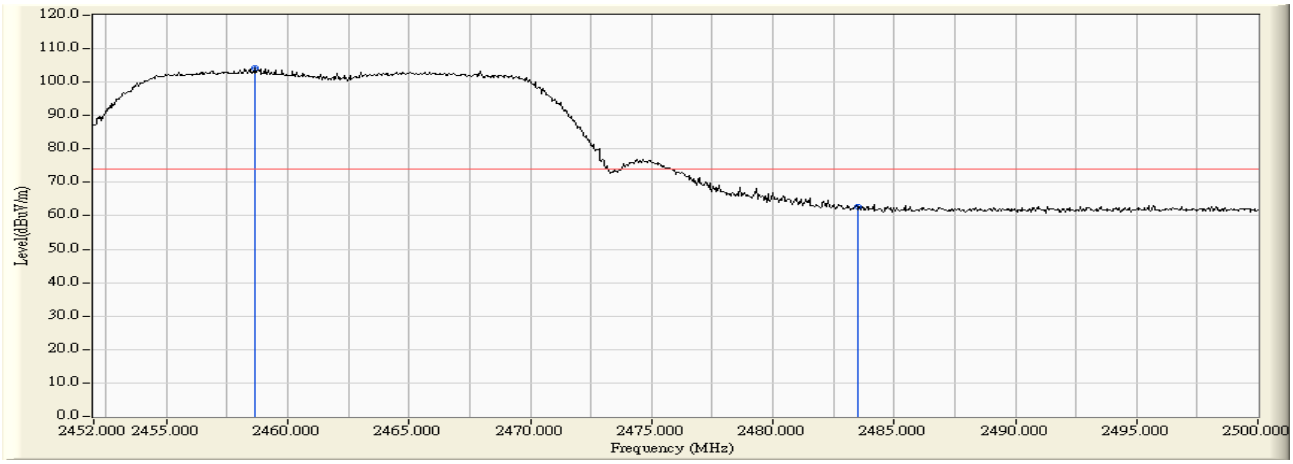
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2390.000	31.184	38.658	69.842	-4.128	73.970	PEAK
2	*	2416.480	31.194	79.292	110.486	N/A	N/A	PEAK

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/15 - 23:48**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
Probe : 9120D_499(1-18GHz) - VERTICAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 2: Transmit at channel 2412MHz By 802.11g(Chain 0)**



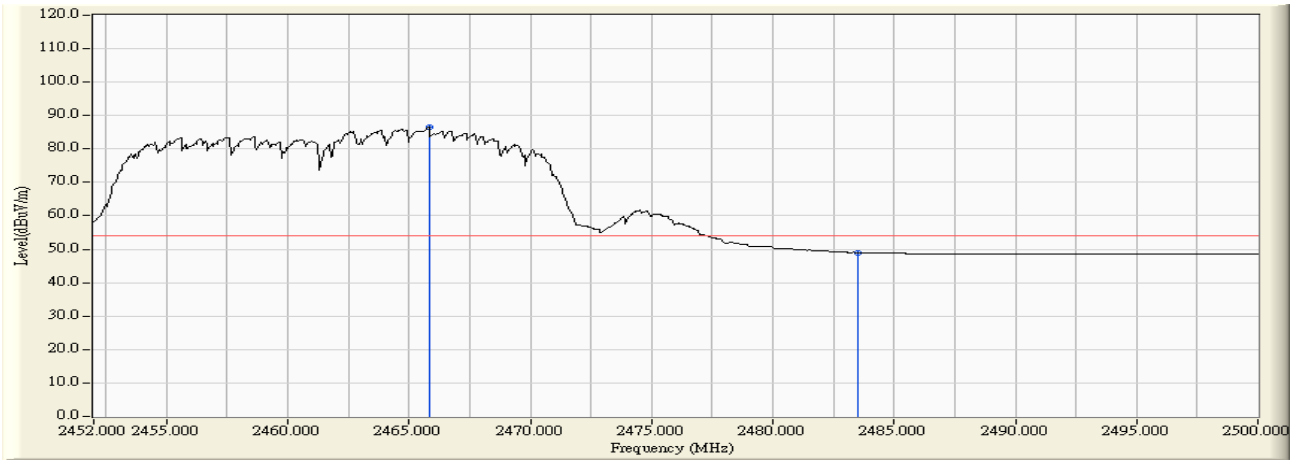
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2390.000	31.184	20.138	51.322	-2.648	53.970	AVERAGE
2	*	2405.370	31.186	59.824	91.010	N/A	N/A	AVERAGE

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/15 - 23:52**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
Probe : 9120D_499(1-18GHz) - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 2: Transmit at channel 2462MHz By 802.11g(Chain 0)**



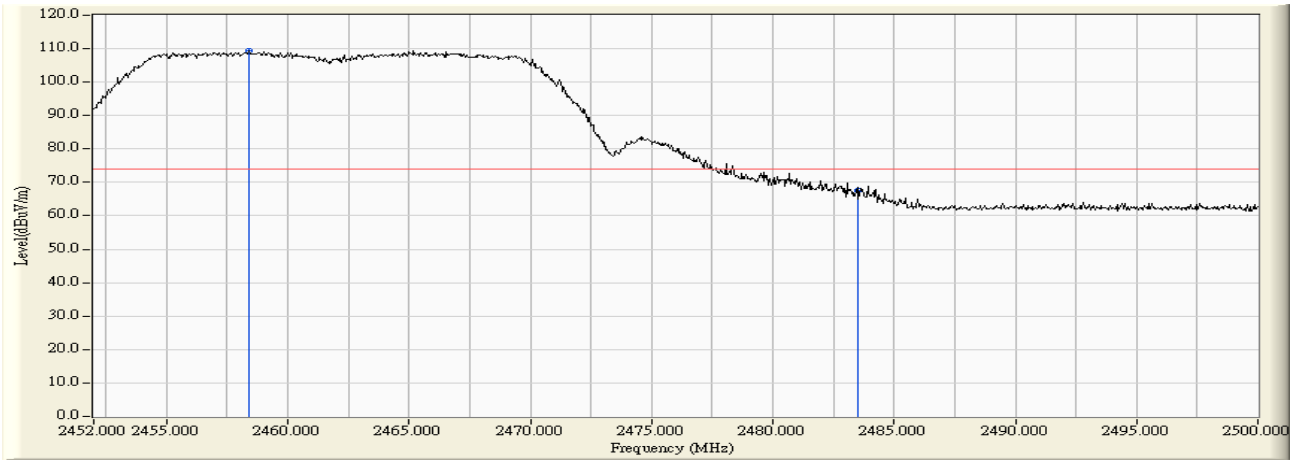
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2458.672	31.224	73.094	104.318	N/A	N/A	PEAK
2		2483.500	31.212	31.398	62.610	-11.360	73.970	PEAK

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/15 - 23:52**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
Probe : 9120D_499(1-18GHz) - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 2: Transmit at channel 2462MHz By 802.11g(Chain 0)**



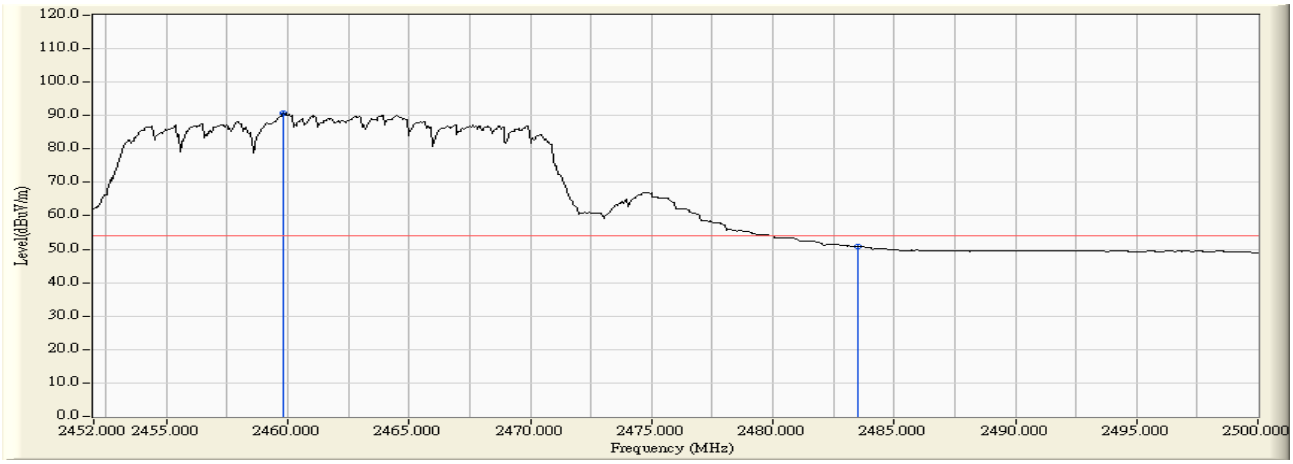
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2465.824	31.223	55.248	86.471	N/A	N/A	AVERAGE
2		2483.500	31.212	17.802	49.014	-4.956	53.970	AVERAGE

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/15 - 23:55**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
Probe : 9120D_499(1-18GHz) - VERTICAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 2: Transmit at channel 2462MHz By 802.11g(Chain 0)**



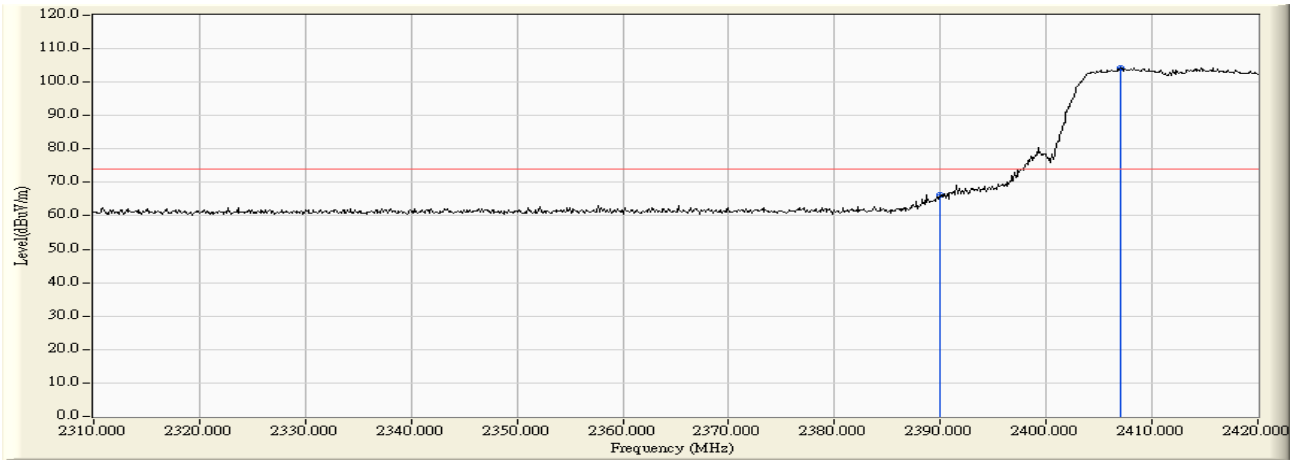
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2458.384	31.224	78.318	109.542	N/A	N/A	PEAK
2		2483.500	31.212	36.474	67.686	-6.284	73.970	PEAK

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/15 - 23:55**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
Probe : 9120D_499(1-18GHz) - VERTICAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 2: Transmit at channel 2462MHz By 802.11g(Chain 0)**



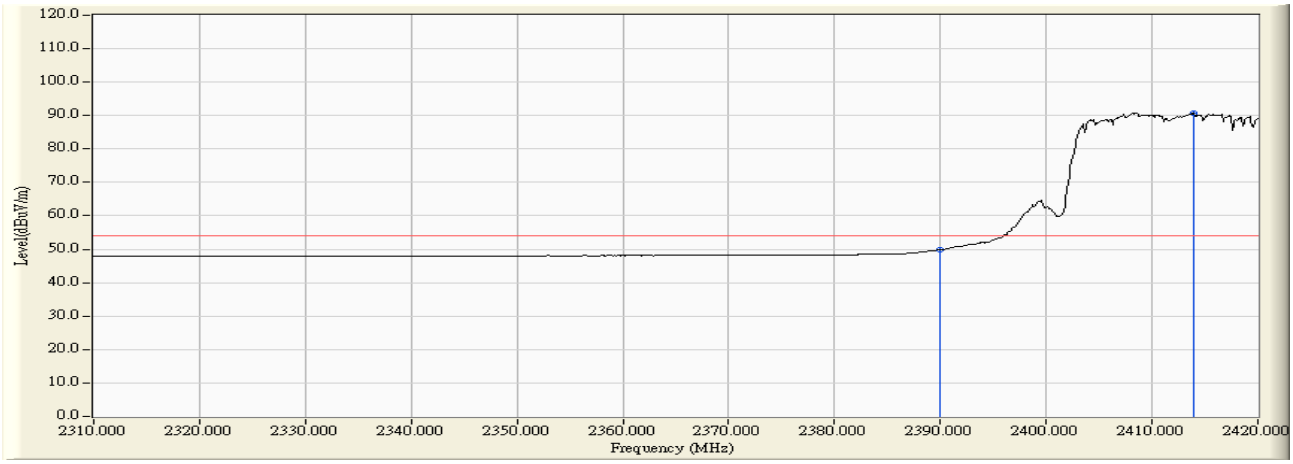
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2459.824	31.224	59.493	90.717	N/A	N/A	AVERAGE
2		2483.500	31.212	19.586	50.798	-3.172	53.970	AVERAGE

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 00:09**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
Probe : 9120D_499(1-18GHz) - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 3: Transmit at channel 2412MHz By 802.11n(20MHz)(Chain 0)**



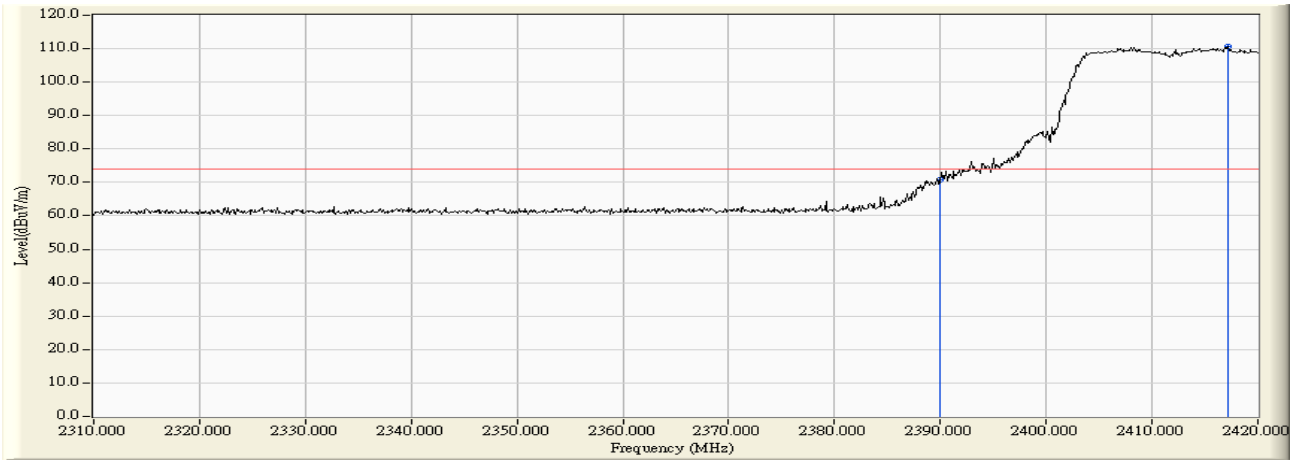
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2390.000	31.184	34.984	66.168	-7.802	73.970	PEAK
2	*	2407.020	31.187	73.153	104.340	N/A	N/A	PEAK

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 00:09**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
Probe : 9120D_499(1-18GHz) - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 3: Transmit at channel 2412MHz By 802.11n(20MHz)(Chain 0)**



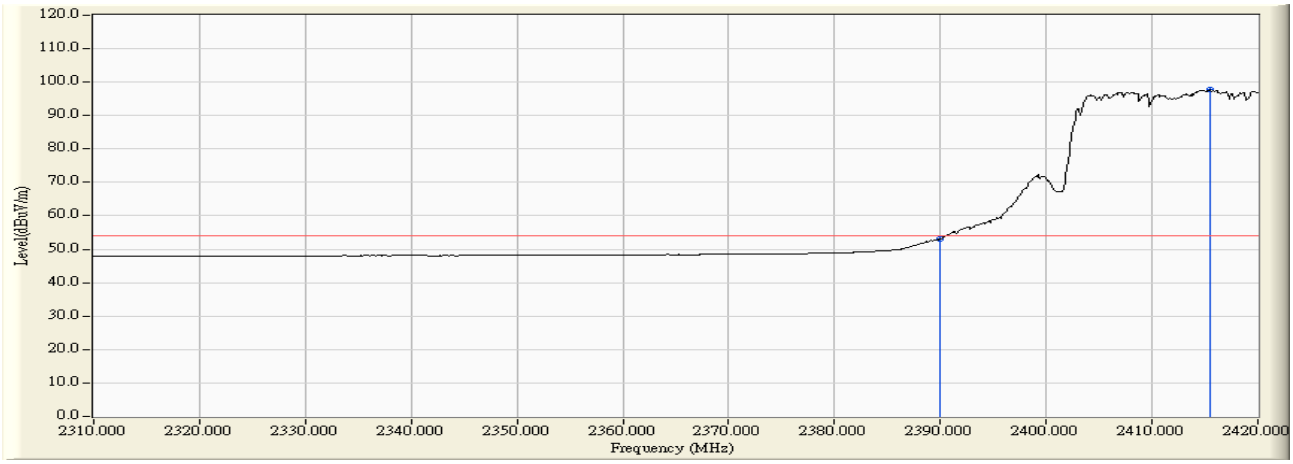
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2390.000	31.184	18.721	49.905	-4.065	53.970	AVERAGE
2	*	2413.950	31.192	59.537	90.729	N/A	N/A	AVERAGE

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 00:12**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
Probe : 9120D_499(1-18GHz) - VERTICAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 3: Transmit at channel 2412MHz By 802.11n(20MHz)(Chain 0)**



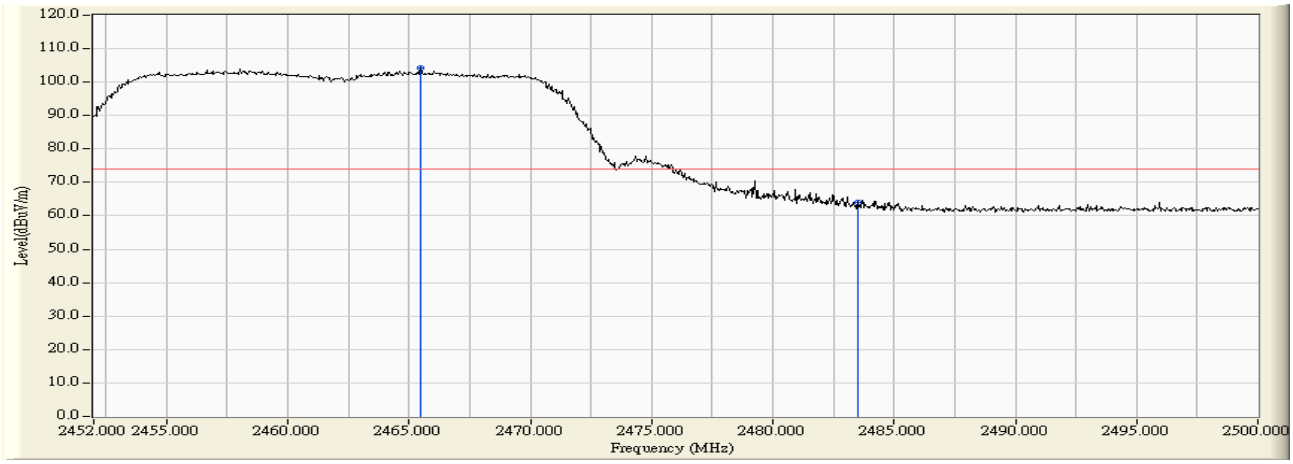
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2390.000	31.184	39.523	70.707	-3.263	73.970	PEAK
2	*	2417.140	31.194	79.371	110.566	N/A	N/A	PEAK

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 00:12**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
Probe : 9120D_499(1-18GHz) - VERTICAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 3: Transmit at channel 2412MHz By 802.11n(20MHz)(Chain 0)**



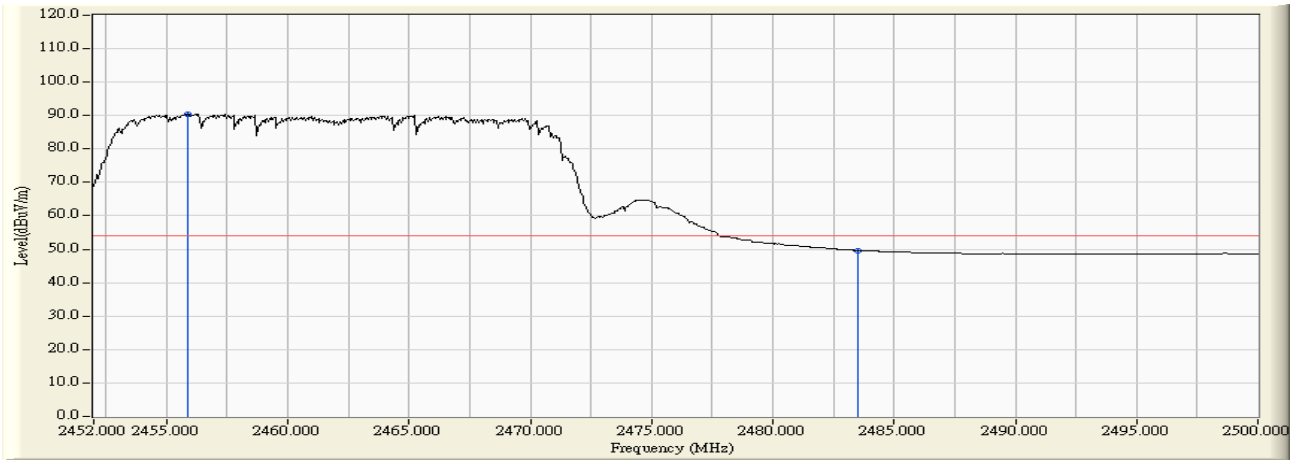
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2390.000	31.184	21.818	53.002	-0.968	53.970	AVERAGE
2	*	2415.490	31.193	66.455	97.648	N/A	N/A	AVERAGE

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 00:18**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
Probe : 9120D_499(1-18GHz) - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 3: Transmit at channel 2462MHz By 802.11n(20MHz)(Chain 0)**



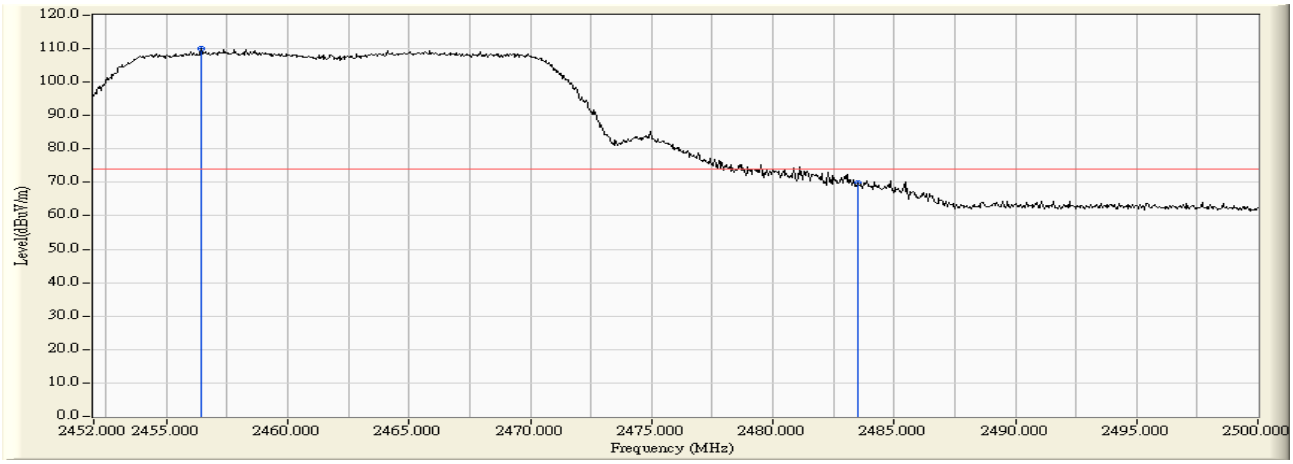
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2465.488	31.223	73.020	104.243	N/A	N/A	PEAK
2		2483.500	31.212	32.726	63.938	-10.032	73.970	PEAK

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 00:19**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
Probe : 9120D_499(1-18GHz) - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 3: Transmit at channel 2462MHz By 802.11n(20MHz)(Chain 0)**



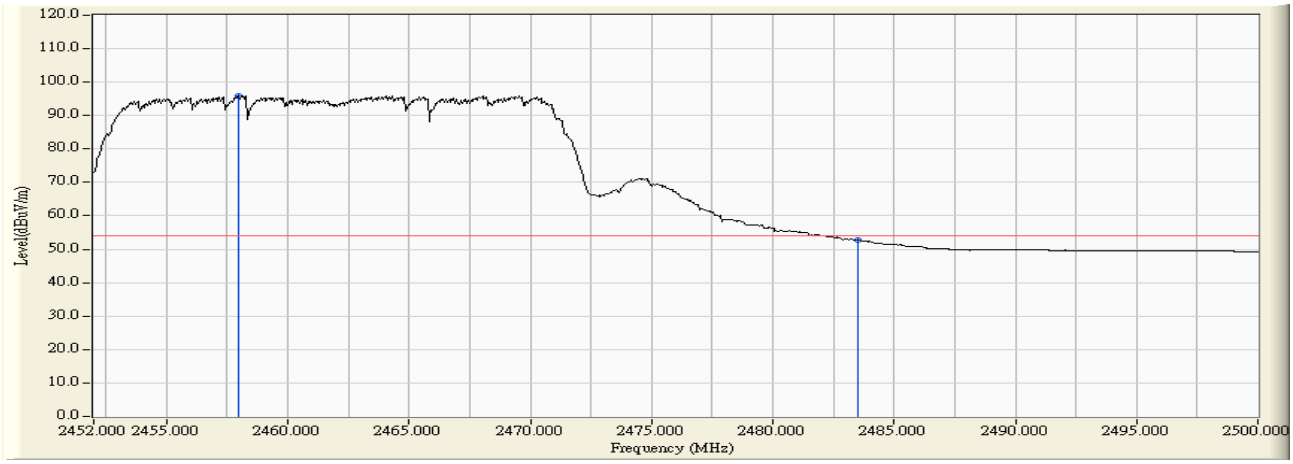
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2455.888	31.223	59.178	90.401	N/A	N/A	AVERAGE
2		2483.500	31.212	18.451	49.663	-4.307	53.970	AVERAGE

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 00:21**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
Probe : 9120D_499(1-18GHz) - VERTICAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 3: Transmit at channel 2462MHz By 802.11n(20MHz)(Chain 0)**



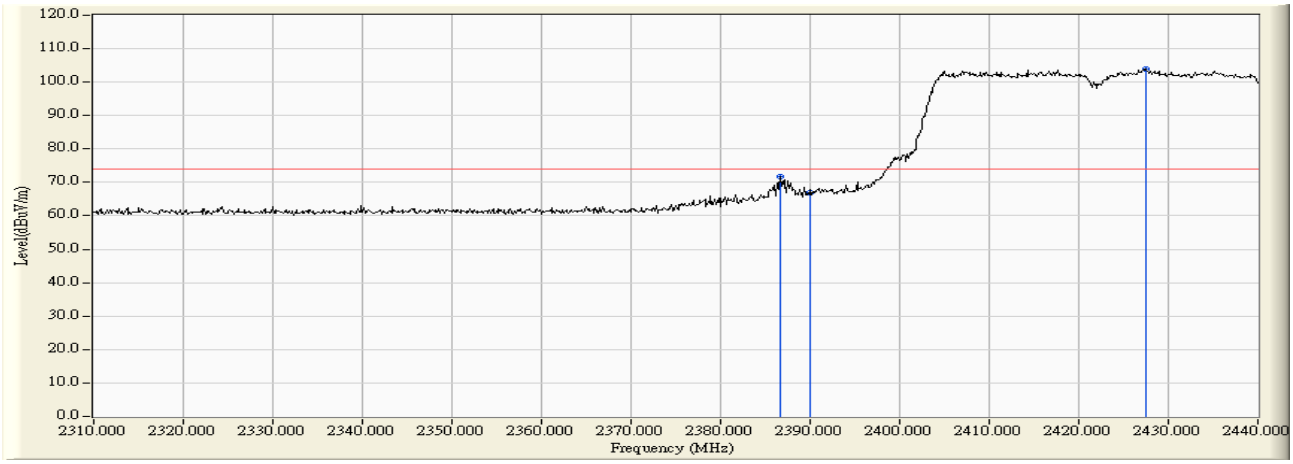
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2456.416	31.223	78.746	109.969	N/A	N/A	PEAK
2		2483.500	31.212	38.562	69.774	-4.196	73.970	PEAK

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 00:21**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
Probe : 9120D_499(1-18GHz) - VERTICAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 3: Transmit at channel 2462MHz By 802.11n(20MHz)(Chain 0)**



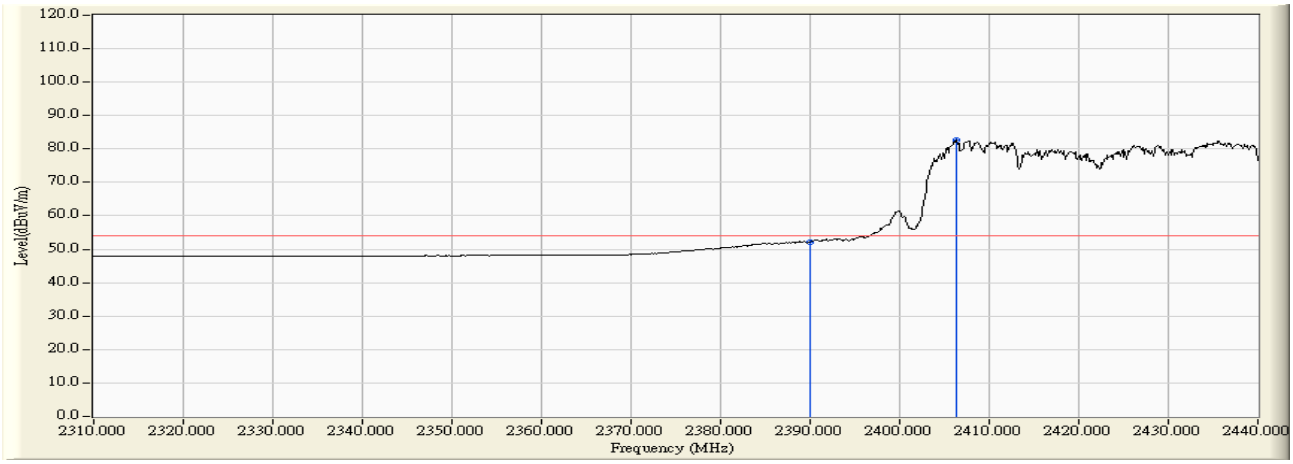
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2458.000	31.224	64.806	96.030	N/A	N/A	AVERAGE
2		2483.500	31.212	21.535	52.747	-1.223	53.970	AVERAGE

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 00:25**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
Probe : 9120D_499(1-18GHz) - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 4: Transmit at channel 2422MHz By 802.11n(40MHz)(Chain 0)**



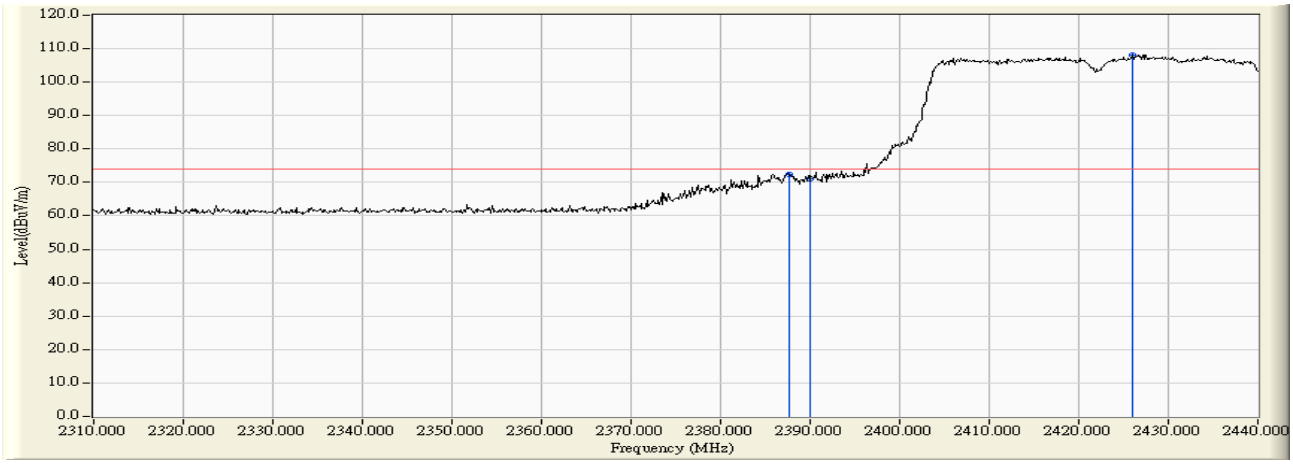
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2386.700	31.188	40.699	71.887	-2.083	73.970	PEAK
2		2390.000	31.184	35.801	66.985	-6.985	73.970	PEAK
3	*	2427.520	31.203	72.607	103.811	N/A	N/A	PEAK

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 00:26**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
Probe : 9120D_499(1-18GHz) - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 4: Transmit at channel 2422MHz By 802.11n(40MHz)(Chain 0)**



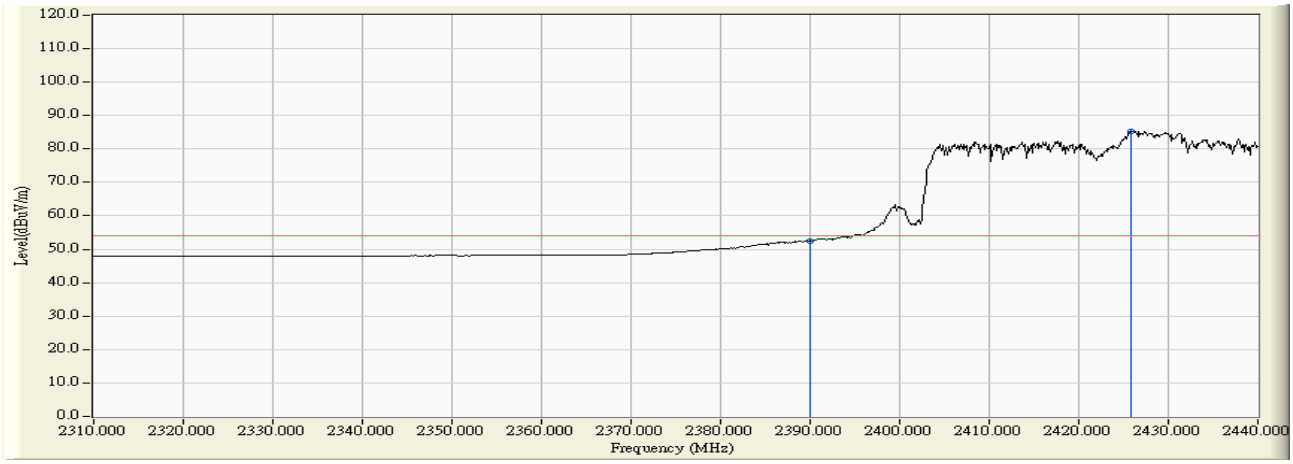
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2390.000	31.184	20.954	52.138	-1.832	53.970	AVERAGE
2	*	2406.330	31.187	51.441	82.628	N/A	N/A	AVERAGE

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 00:29**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
Probe : 9120D_499(1-18GHz) - VERTICAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 4: Transmit at channel 2422MHz By 802.11n(40MHz)(Chain 0)**



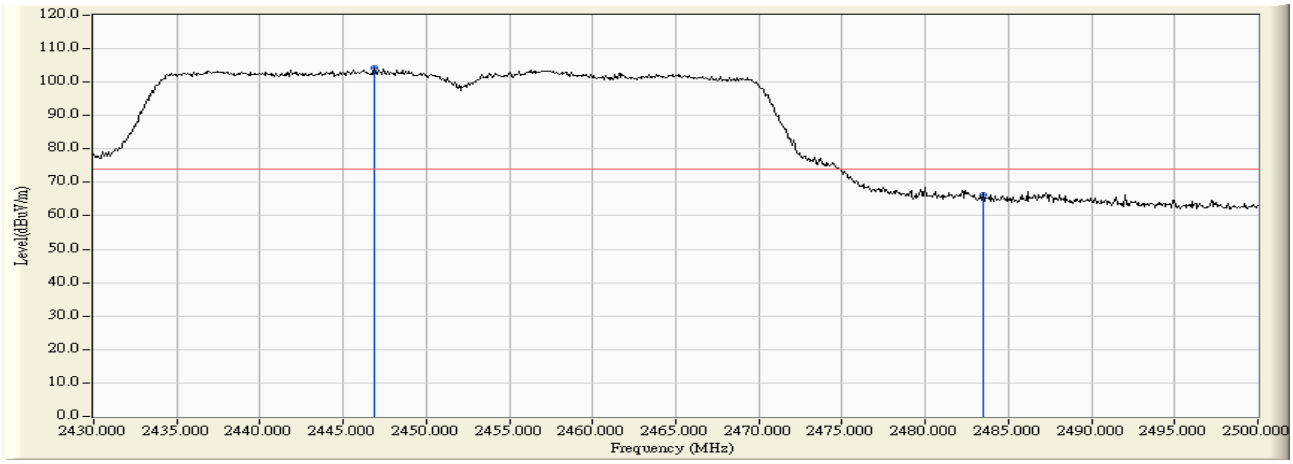
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2387.610	31.187	41.107	72.294	-1.676	73.970	PEAK
2		2390.000	31.184	39.883	71.067	-2.903	73.970	PEAK
3	*	2425.960	31.202	76.927	108.129	N/A	N/A	PEAK

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 00:35**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
Probe : 9120D_499(1-18GHz) - VERTICAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 4: Transmit at channel 2422MHz By 802.11n(40MHz)(Chain 0)**



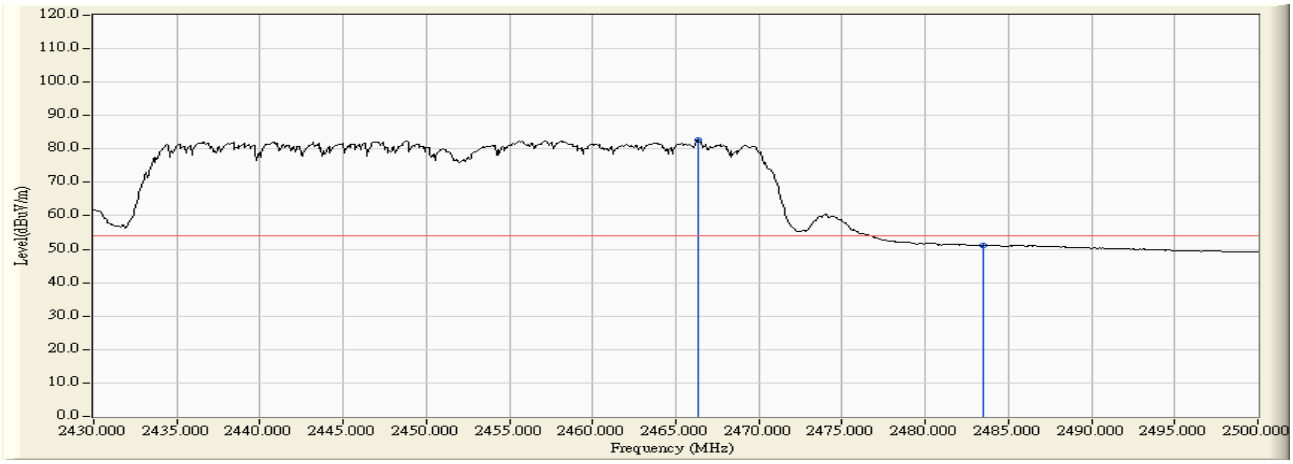
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2390.000	31.184	21.401	52.585	-1.385	53.970	AVERAGE
2	*	2425.830	31.202	54.146	85.348	N/A	N/A	AVERAGE

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 00:42**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
Probe : 9120D_499(1-18GHz) - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 4: Transmit at channel 2452MHz By 802.11n(40MHz)(Chain 0)**



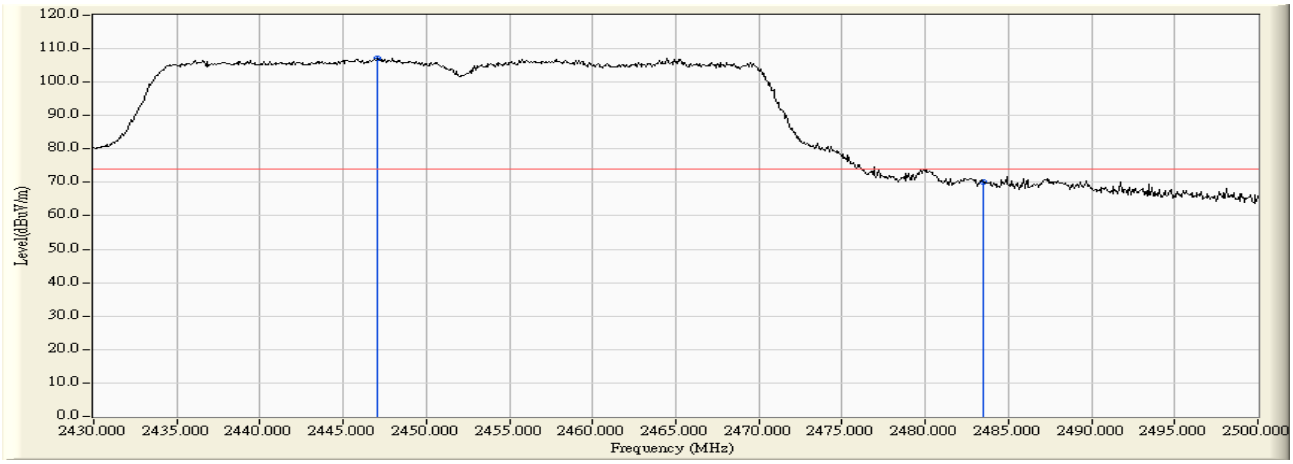
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2446.870	31.219	73.105	104.324	N/A	N/A	PEAK
2		2483.500	31.212	34.930	66.142	-7.828	73.970	PEAK

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 00:42**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
Probe : 9120D_499(1-18GHz) - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 4: Transmit at channel 2452MHz By 802.11n(40MHz)(Chain 0)**



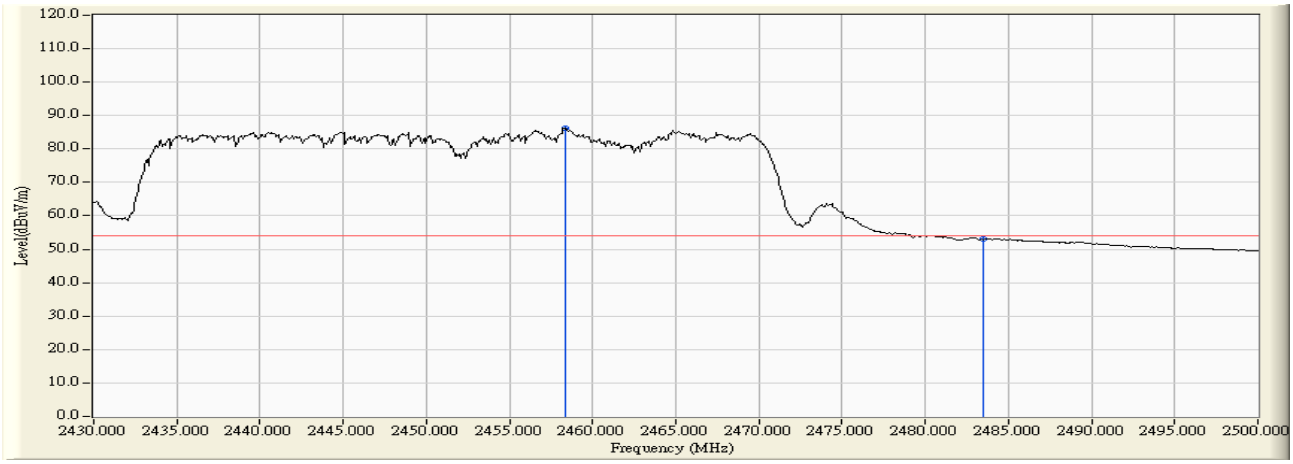
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2466.330	31.222	51.374	82.597	N/A	N/A	AVERAGE
2		2483.500	31.212	19.879	51.091	-2.879	53.970	AVERAGE

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 00:45**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
Probe : 9120D_499(1-18GHz) - VERTICAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 4: Transmit at channel 2452MHz By 802.11n(40MHz)(Chain 0)**



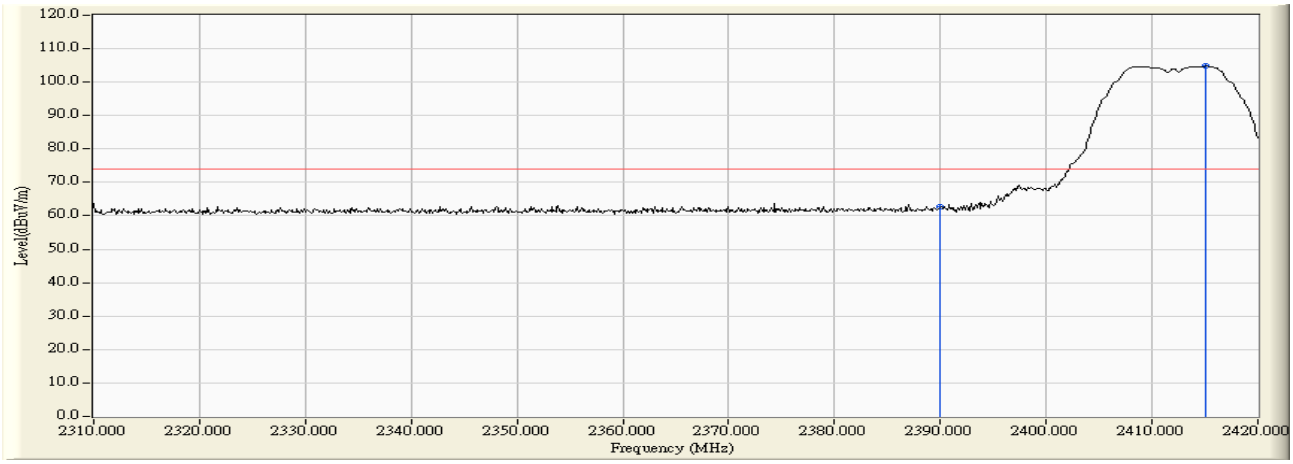
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2447.080	31.219	75.963	107.182	N/A	N/A	PEAK
2		2483.500	31.212	38.841	70.053	-3.917	73.970	PEAK

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 00:45**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
Probe : 9120D_499(1-18GHz) - VERTICAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 4: Transmit at channel 2452MHz By 802.11n(40MHz)(Chain 0)**



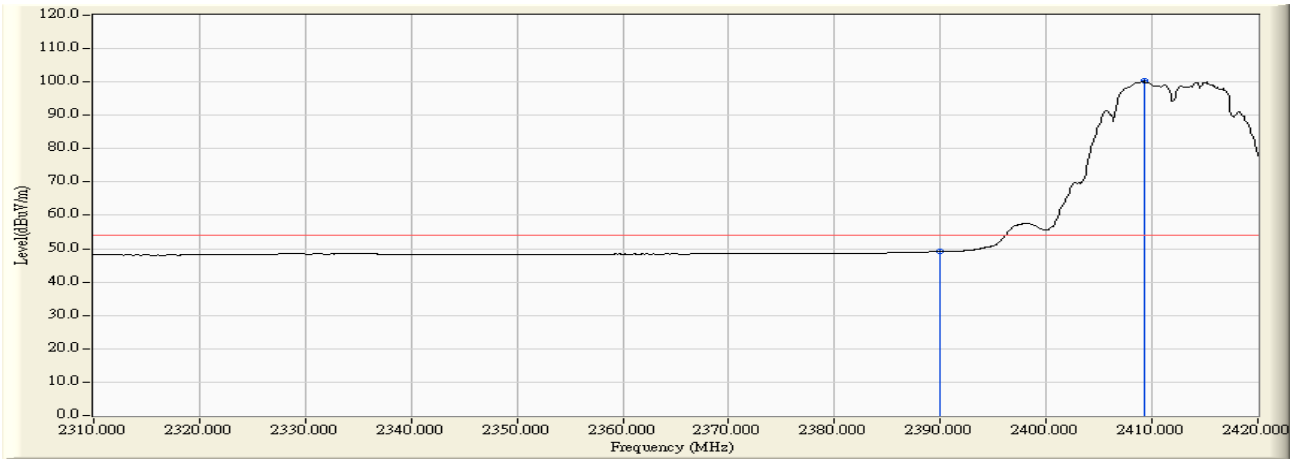
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2458.350	31.224	55.108	86.332	N/A	N/A	AVERAGE
2		2483.500	31.212	21.759	52.971	-0.999	53.970	AVERAGE

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 00:53**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
Probe : 9120D_499(1-18GHz) - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 1: Transmit at channel 2412MHz By 802.11b(Chain 1)**



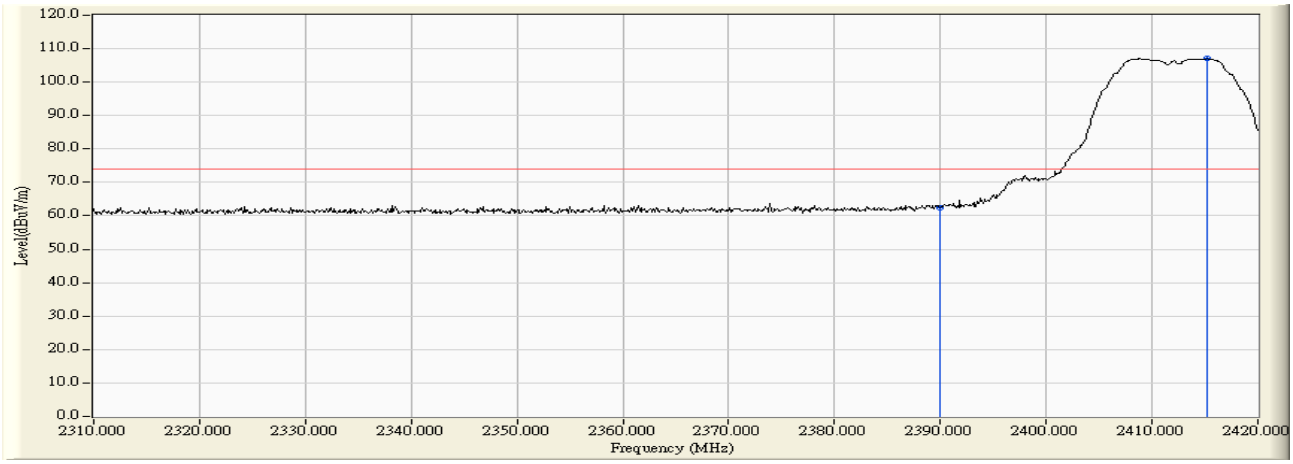
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2390.000	31.184	31.401	62.585	-11.385	73.970	PEAK
2	*	2415.050	31.193	73.549	104.742	N/A	N/A	PEAK

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 00:54**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
Probe : 9120D_499(1-18GHz) - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 1: Transmit at channel 2412MHz By 802.11b(Chain 1)**



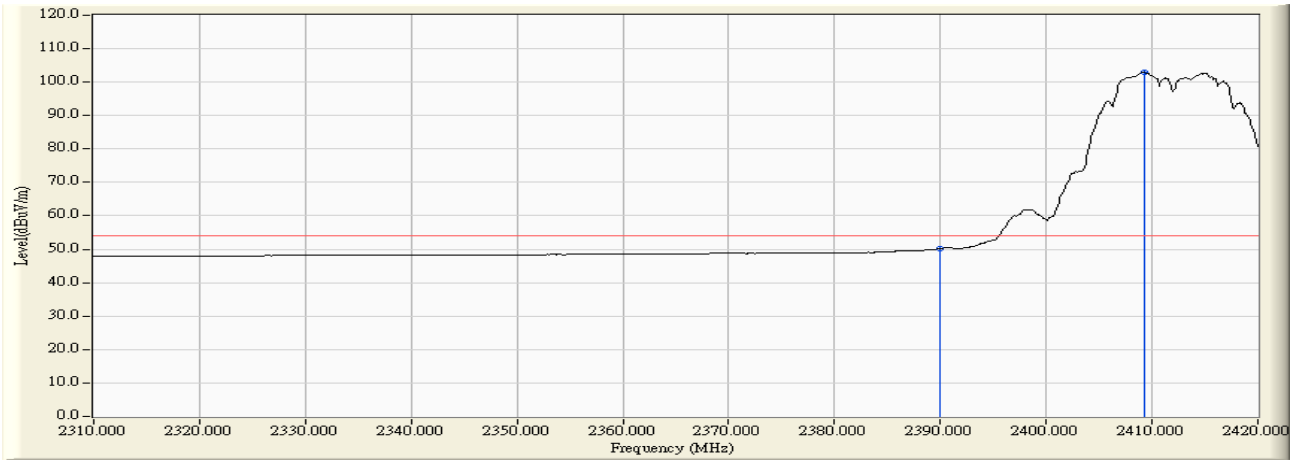
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2390.000	31.184	18.091	49.275	-4.695	53.970	AVERAGE
2	*	2409.220	31.188	69.027	100.215	N/A	N/A	AVERAGE

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 00:56**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
Probe : 9120D_499(1-18GHz) - VERTICAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 1: Transmit at channel 2412MHz By 802.11b(Chain 1)**



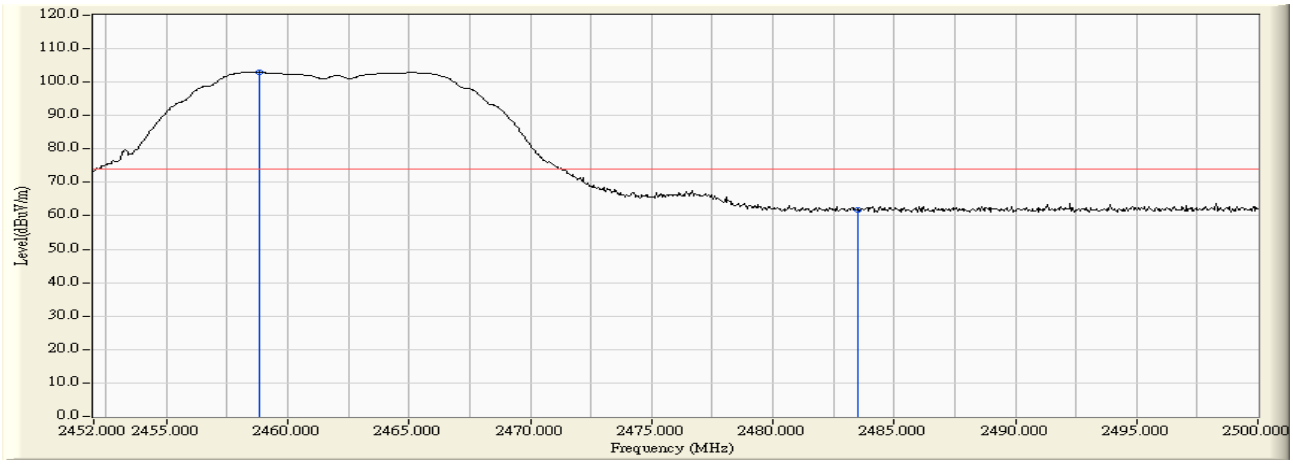
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2390.000	31.184	31.223	62.407	-11.563	73.970	PEAK
2	*	2415.160	31.193	75.829	107.022	N/A	N/A	PEAK

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 00:57**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
Probe : 9120D_499(1-18GHz) - VERTICAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 1: Transmit at channel 2412MHz By 802.11b(Chain 1)**



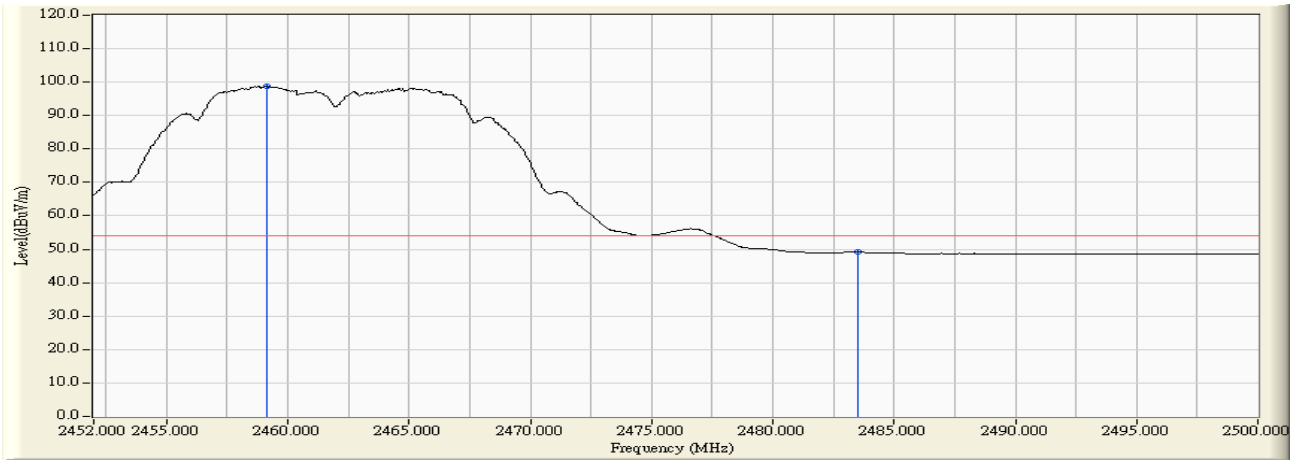
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2390.000	31.184	18.939	50.123	-3.847	53.970	AVERAGE
2	*	2409.220	31.188	71.850	103.038	N/A	N/A	AVERAGE

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 01:00**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
Probe : 9120D_499(1-18GHz) - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 1: Transmit at channel 2462MHz By 802.11b(Chain 1)**



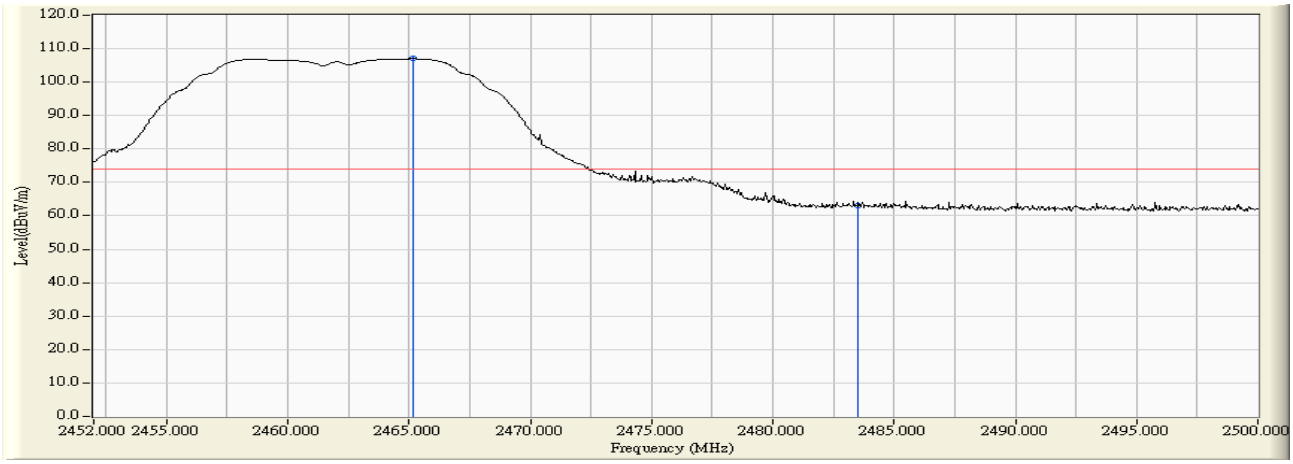
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2458.816	31.224	71.735	102.959	N/A	N/A	PEAK
2		2483.500	31.212	30.718	61.930	-12.040	73.970	PEAK

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 01:01**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
Probe : 9120D_499(1-18GHz) - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 1: Transmit at channel 2462MHz By 802.11b(Chain 1)**



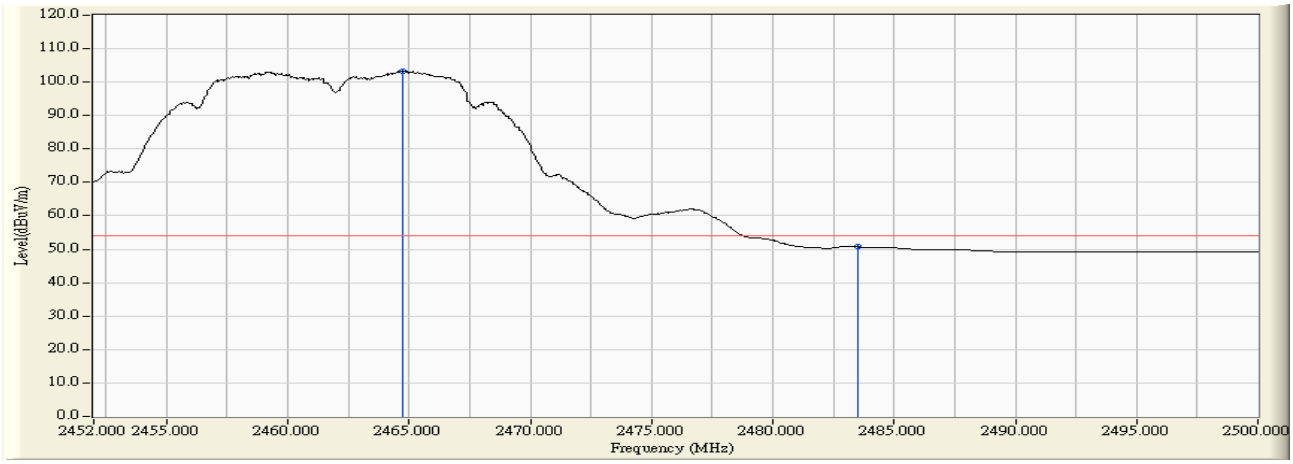
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2459.152	31.224	67.558	98.782	N/A	N/A	AVERAGE
2		2483.500	31.212	17.913	49.125	-4.845	53.970	AVERAGE

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 01:03**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
Probe : 9120D_499(1-18GHz) - VERTICAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 1: Transmit at channel 2462MHz By 802.11b(Chain 1)**



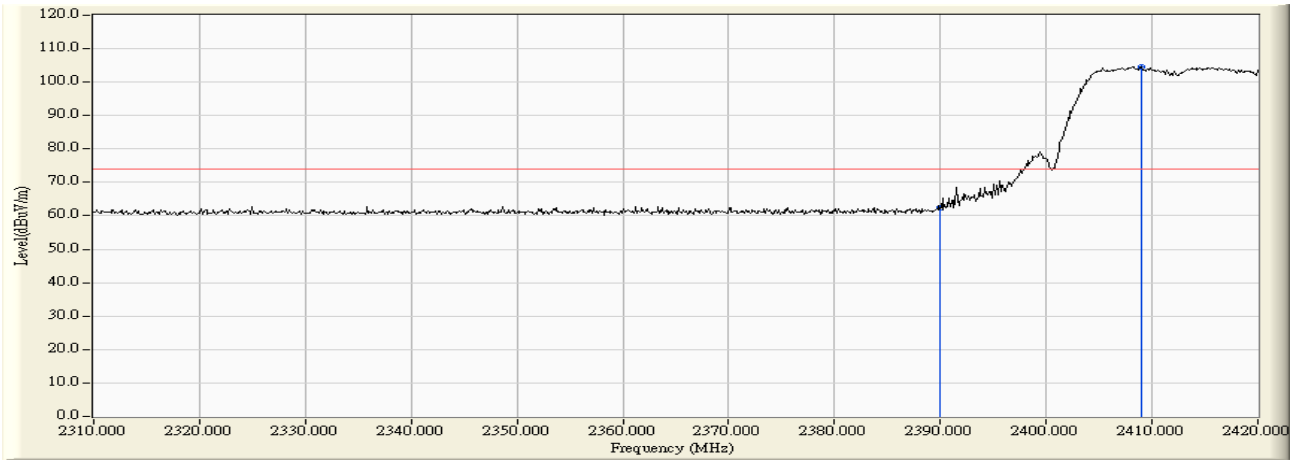
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2465.200	31.223	75.826	107.049	N/A	N/A	PEAK
2		2483.500	31.212	31.723	62.935	-11.035	73.970	PEAK

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 01:03**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
Probe : 9120D_499(1-18GHz) - VERTICAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 1: Transmit at channel 2462MHz By 802.11b(Chain 1)**



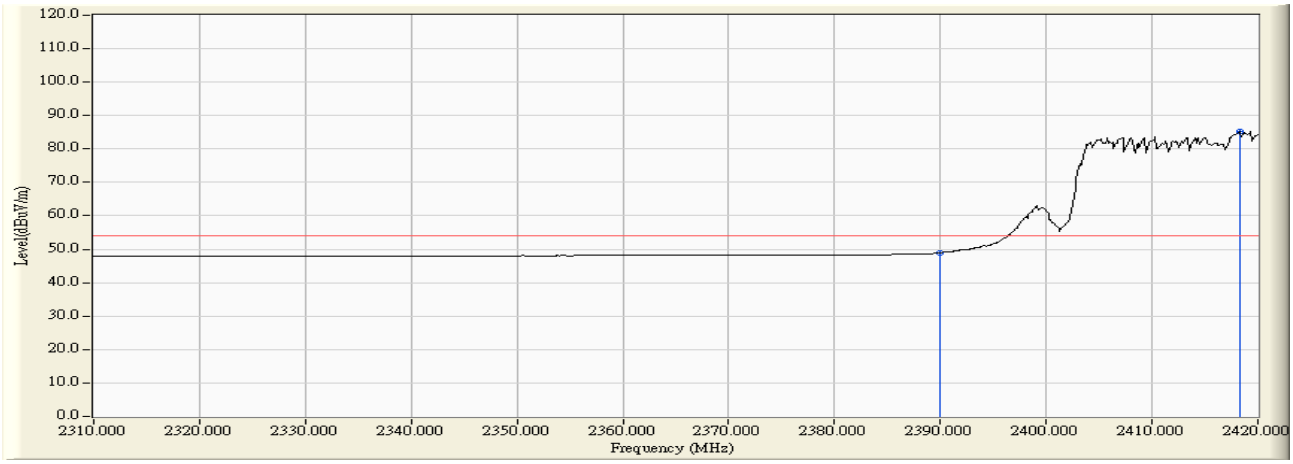
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2464.720	31.223	72.155	103.379	N/A	N/A	AVERAGE
2		2483.500	31.212	19.513	50.725	-3.245	53.970	AVERAGE

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 01:07**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
Probe : 9120D_499(1-18GHz) - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 2: Transmit at channel 2412MHz By 802.11g(Chain 1)**



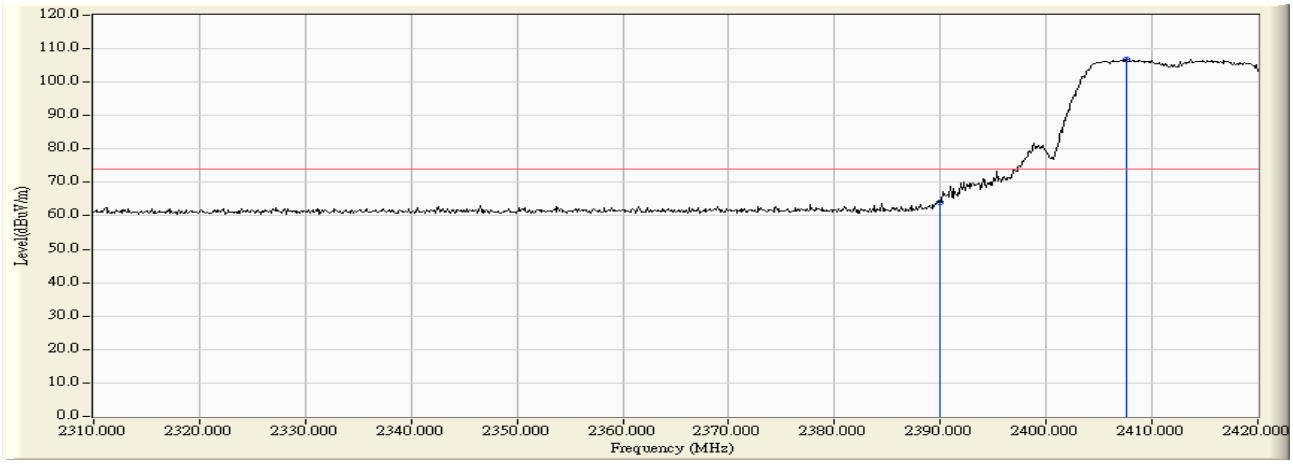
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2390.000	31.184	31.102	62.286	-11.684	73.970	PEAK
2	*	2409.000	31.188	73.458	104.646	N/A	N/A	PEAK

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 01:08**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
Probe : 9120D_499(1-18GHz) - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 2: Transmit at channel 2412MHz By 802.11g(Chain 1)**



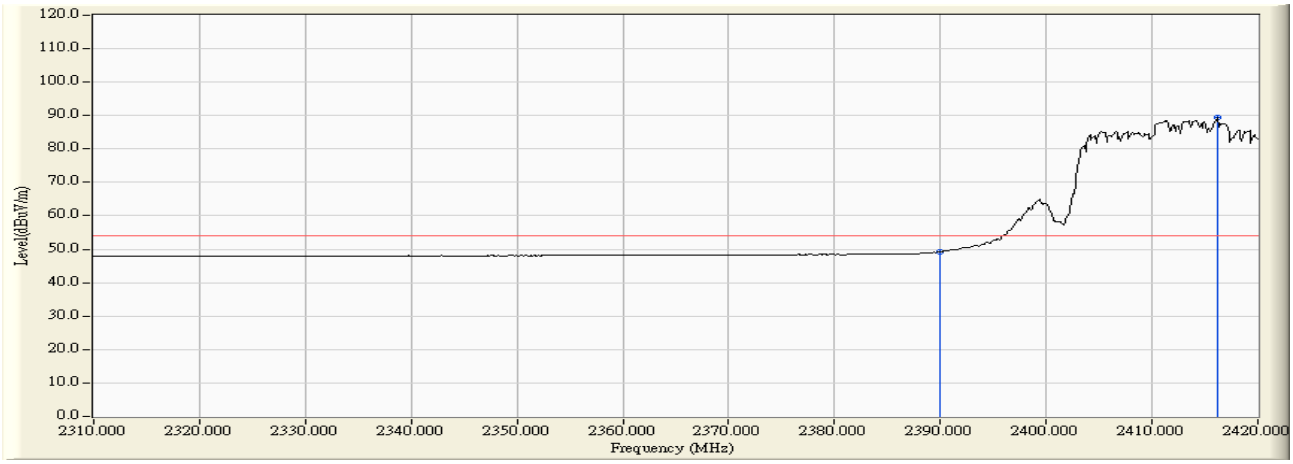
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2390.000	31.184	17.822	49.006	-4.964	53.970	AVERAGE
2	*	2418.240	31.196	54.189	85.385	N/A	N/A	AVERAGE

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 01:11**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
Probe : 9120D_499(1-18GHz) - VERTICAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 2: Transmit at channel 2412MHz By 802.11g(Chain 1)**



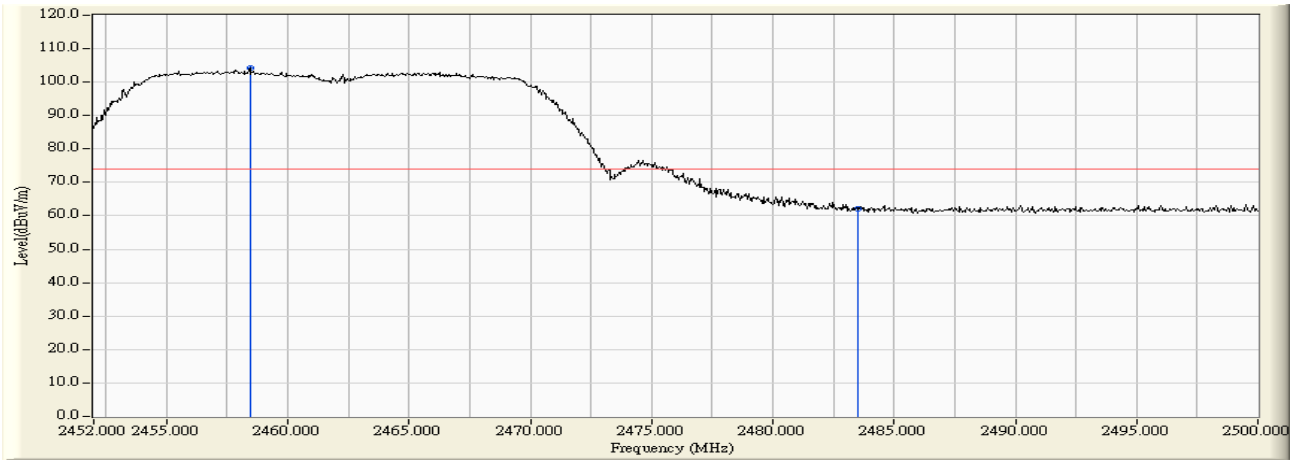
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2390.000	31.184	32.991	64.175	-9.795	73.970	PEAK
2	*	2407.570	31.188	75.715	106.903	N/A	N/A	PEAK

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 01:11**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
Probe : 9120D_499(1-18GHz) - VERTICAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 2: Transmit at channel 2412MHz By 802.11g(Chain 1)**



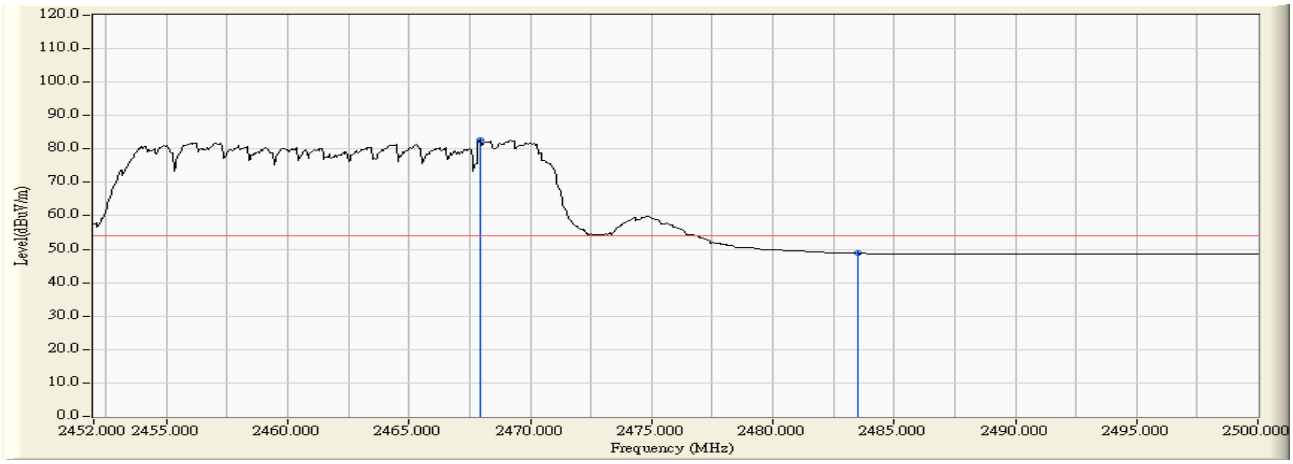
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2390.000	31.184	18.063	49.247	-4.723	53.970	AVERAGE
2	*	2416.260	31.194	58.292	89.486	N/A	N/A	AVERAGE

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 01:15**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
Probe : 9120D_499(1-18GHz) - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 2: Transmit at channel 2462MHz By 802.11g(Chain 1)**



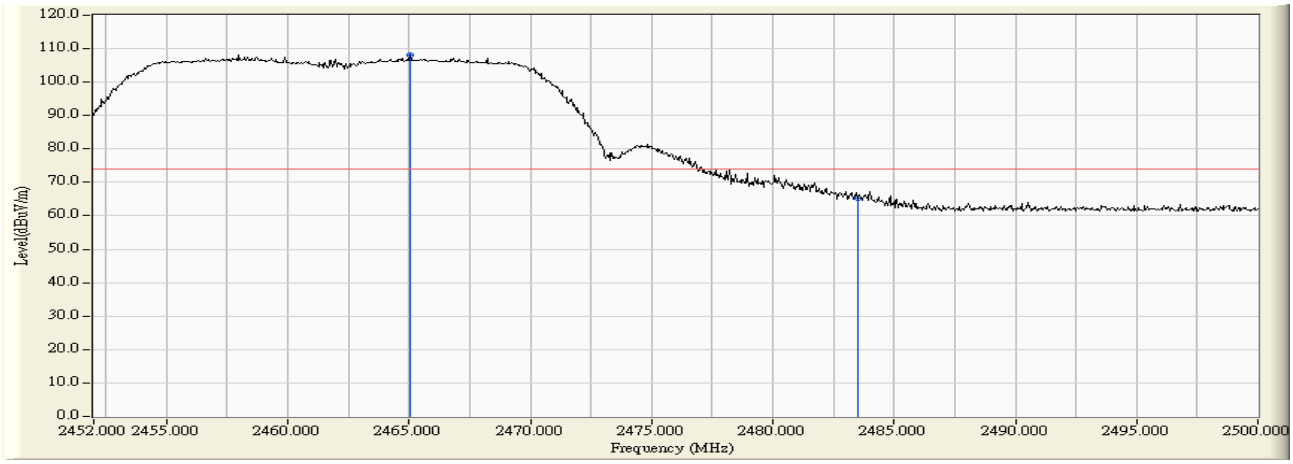
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2458.432	31.224	73.113	104.337	N/A	N/A	PEAK
2		2483.500	31.212	30.990	62.202	-11.768	73.970	PEAK

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 01:15**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
Probe : 9120D_499(1-18GHz) - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 2: Transmit at channel 2462MHz By 802.11g(Chain 1)**



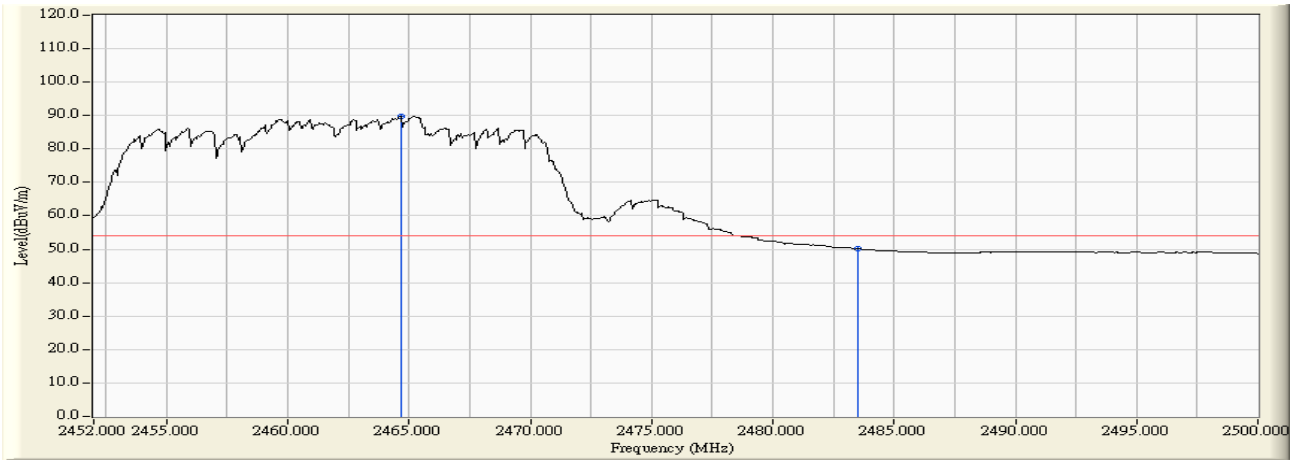
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2467.936	31.222	51.357	82.579	N/A	N/A	AVERAGE
2		2483.500	31.212	17.572	48.784	-5.186	53.970	AVERAGE

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 01:17**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
Probe : 9120D_499(1-18GHz) - VERTICAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 2: Transmit at channel 2462MHz By 802.11g(Chain 1)**



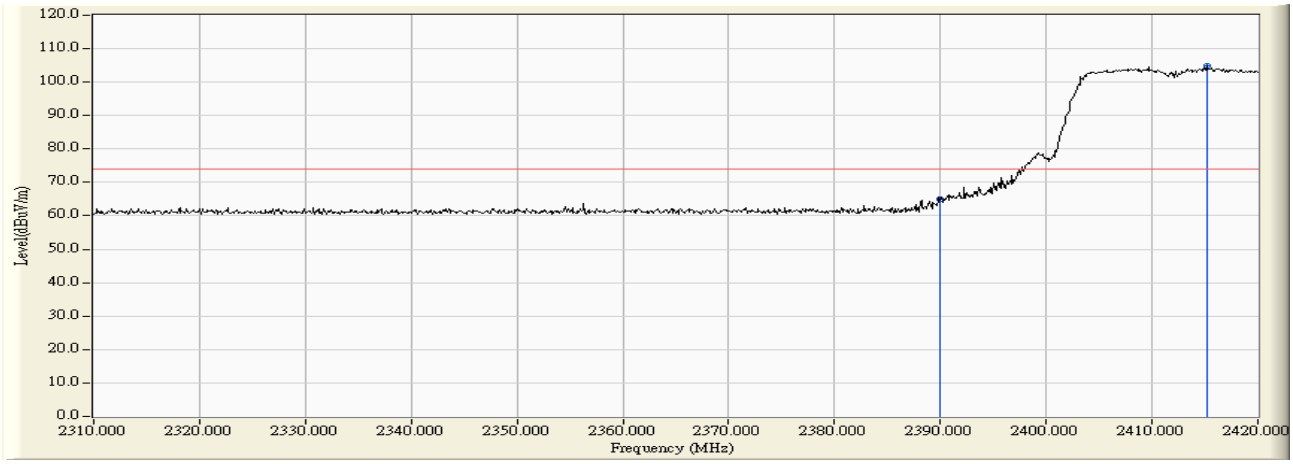
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2465.056	31.223	76.917	108.140	N/A	N/A	PEAK
2		2483.500	31.212	33.948	65.160	-8.810	73.970	PEAK

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 01:17**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
Probe : 9120D_499(1-18GHz) - VERTICAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 2: Transmit at channel 2462MHz By 802.11g(Chain 1)**



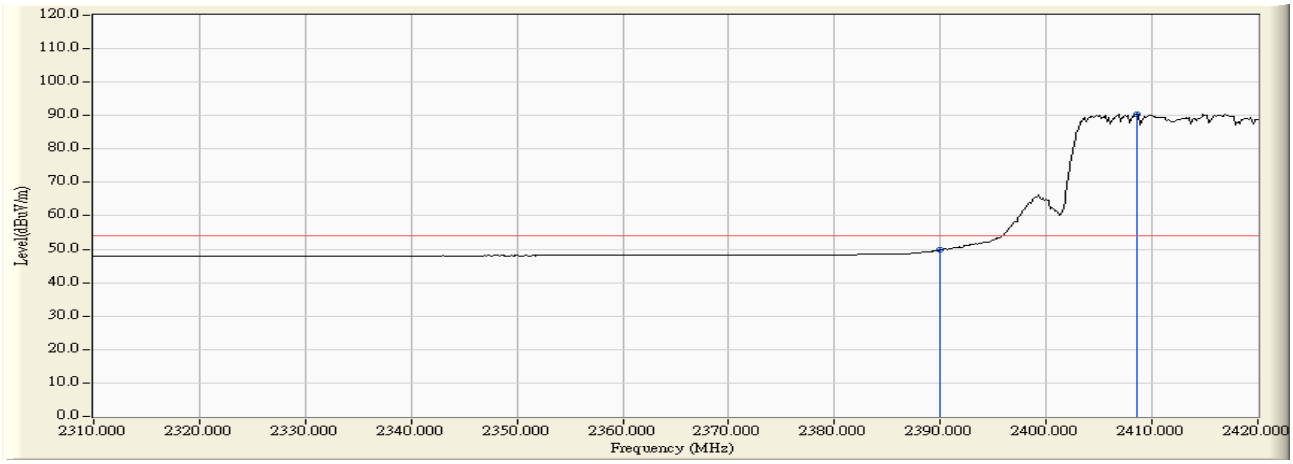
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2464.672	31.223	58.683	89.907	N/A	N/A	AVERAGE
2		2483.500	31.212	18.858	50.070	-3.900	53.970	AVERAGE

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 01:22**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
Probe : 9120D_499(1-18GHz) - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 3: Transmit at channel 2412MHz By 802.11n(20MHz)(Chain 1)**



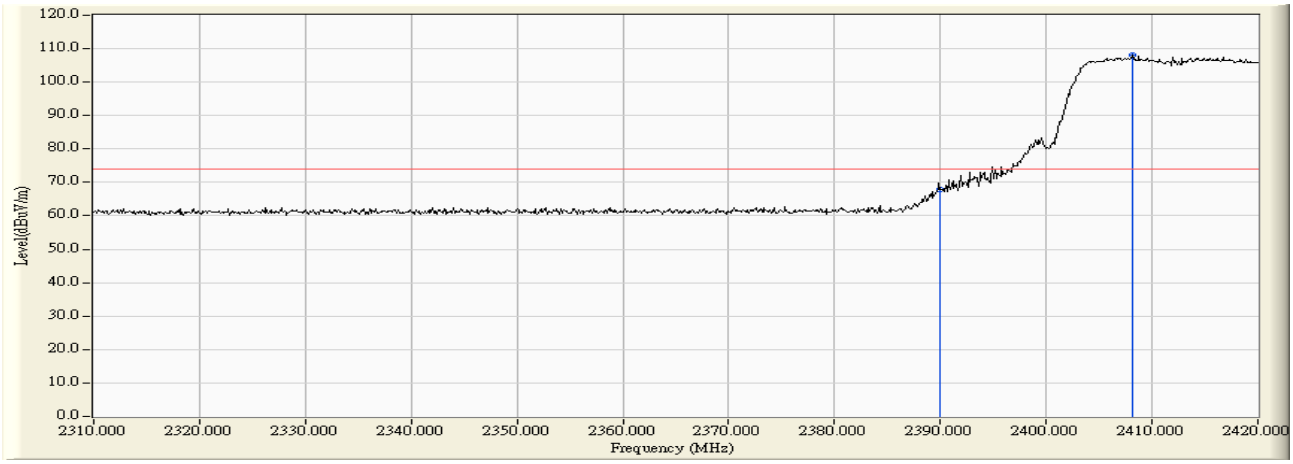
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2390.000	31.184	33.841	65.025	-8.945	73.970	PEAK
2	*	2415.160	31.193	73.697	104.890	N/A	N/A	PEAK

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 01:22**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
Probe : 9120D_499(1-18GHz) - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 3: Transmit at channel 2412MHz By 802.11n(20MHz)(Chain 1)**



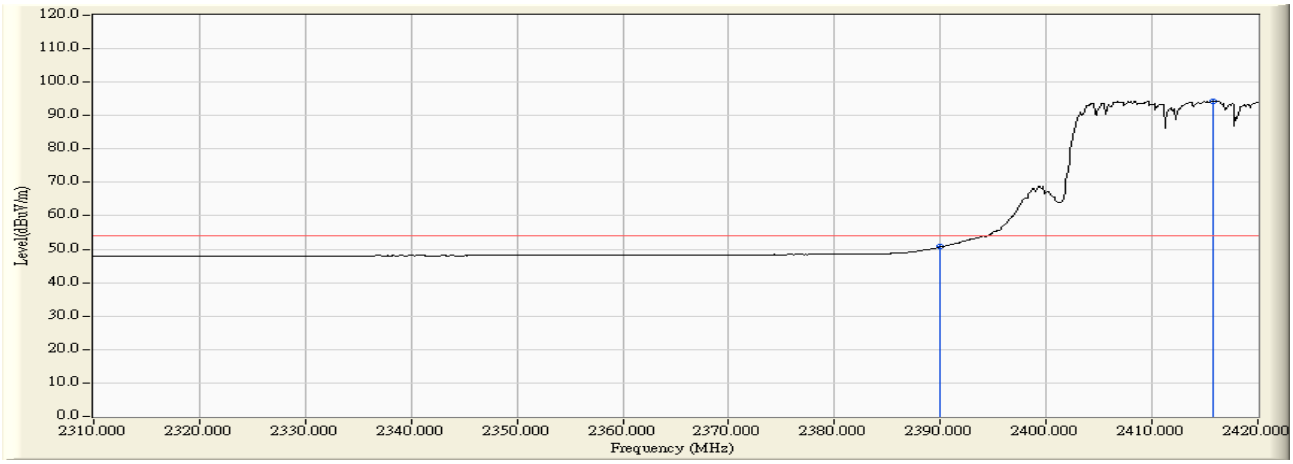
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2390.000	31.184	18.563	49.747	-4.223	53.970	AVERAGE
2	*	2408.560	31.188	59.208	90.396	N/A	N/A	AVERAGE

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 01:24**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
Probe : 9120D_499(1-18GHz) - VERTICAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 3: Transmit at channel 2412MHz By 802.11n(20MHz)(Chain 1)**



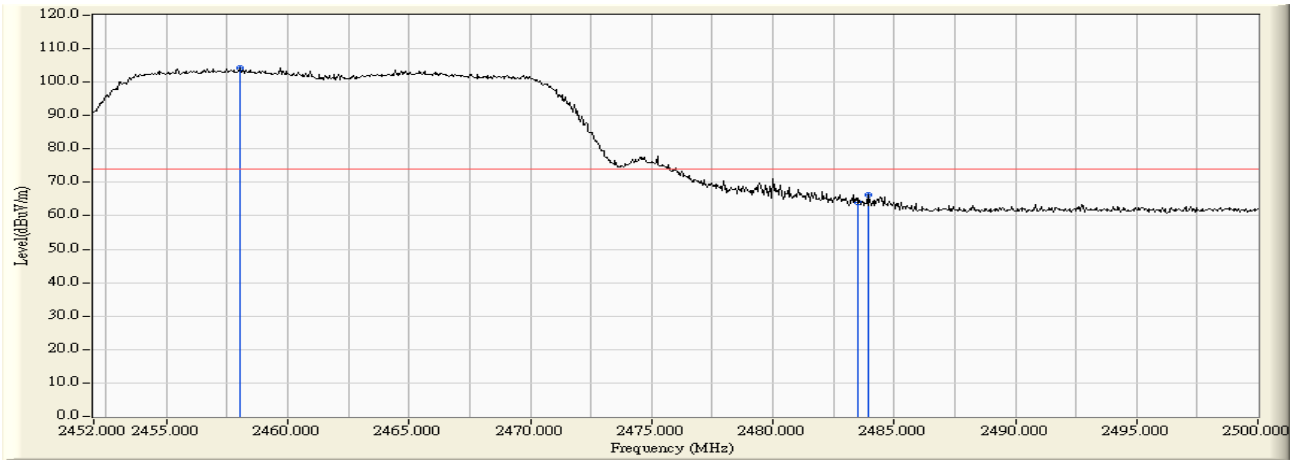
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2390.000	31.184	36.665	67.849	-6.121	73.970	PEAK
2	*	2408.120	31.188	76.868	108.056	N/A	N/A	PEAK

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 01:24**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
Probe : 9120D_499(1-18GHz) - VERTICAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 3: Transmit at channel 2412MHz By 802.11n(20MHz)(Chain 1)**



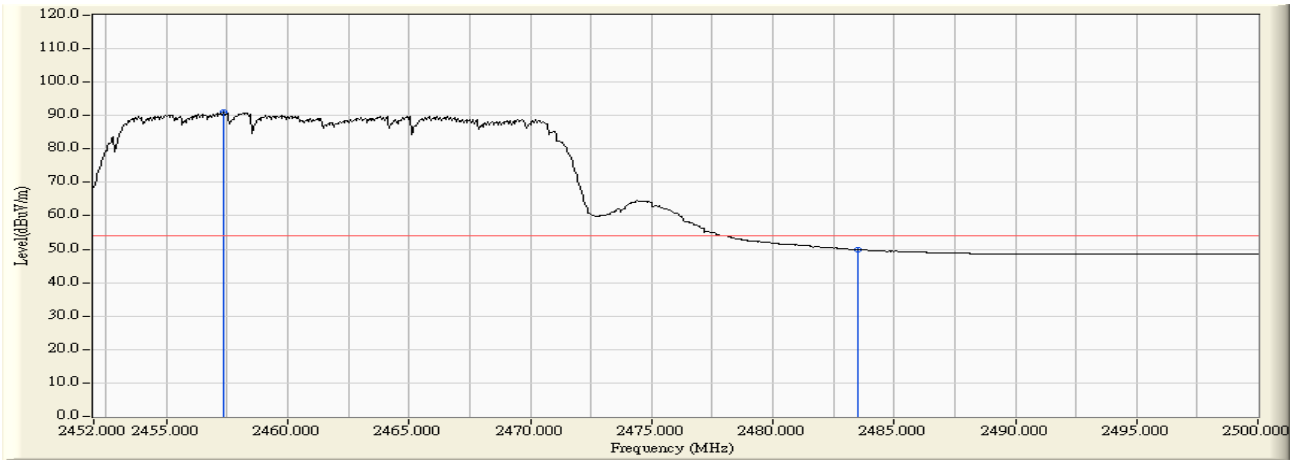
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2390.000	31.184	19.508	50.692	-3.278	53.970	AVERAGE
2	*	2415.710	31.193	63.203	94.397	N/A	N/A	AVERAGE

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 01:29**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
Probe : 9120D_499(1-18GHz) - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 3: Transmit at channel 2462MHz By 802.11n(20MHz)(Chain 1)**



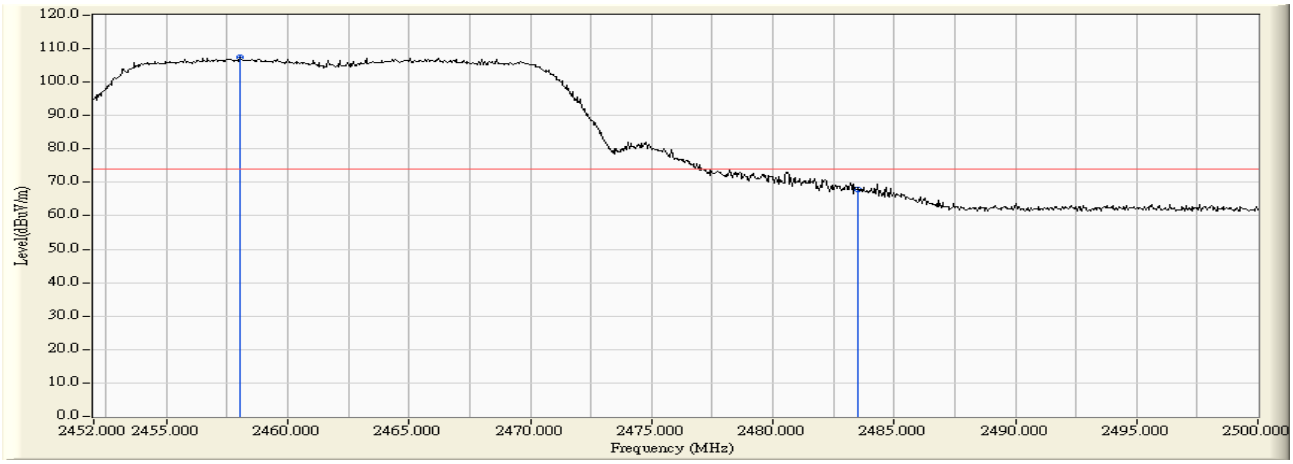
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2458.048	31.224	73.157	104.381	N/A	N/A	PEAK
2		2483.500	31.212	32.855	64.067	-9.903	73.970	PEAK
3		2483.920	31.212	35.069	66.281	-7.689	73.970	PEAK

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 01:30**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
Probe : 9120D_499(1-18GHz) - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 3: Transmit at channel 2462MHz By 802.11n(20MHz)(Chain 1)**



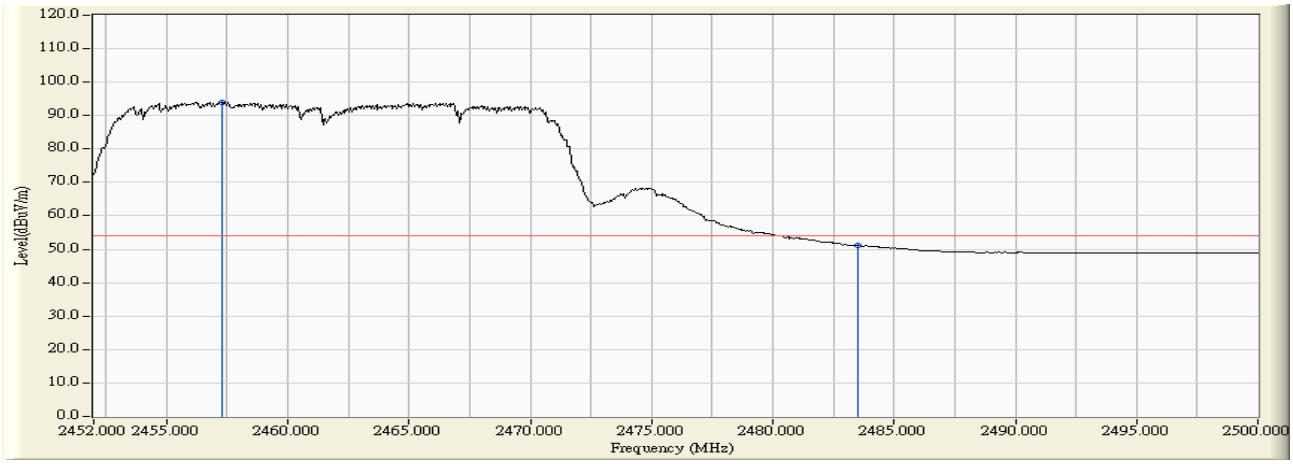
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2457.376	31.223	59.724	90.947	N/A	N/A	AVERAGE
2		2483.500	31.212	18.714	49.926	-4.044	53.970	AVERAGE

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 01:32**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
Probe : 9120D_499(1-18GHz) - VERTICAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 3: Transmit at channel 2462MHz By 802.11n(20MHz)(Chain 1)**



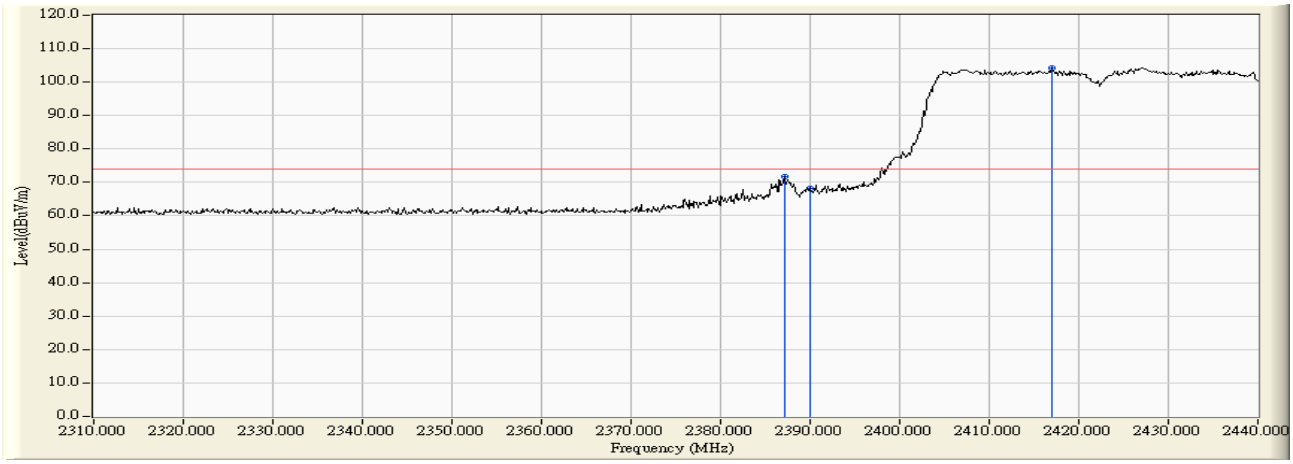
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2458.048	31.224	76.236	107.460	N/A	N/A	PEAK
2		2483.500	31.212	36.741	67.953	-6.017	73.970	PEAK

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 01:33**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
Probe : 9120D_499(1-18GHz) - VERTICAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 3: Transmit at channel 2462MHz By 802.11n(20MHz)(Chain 1)**



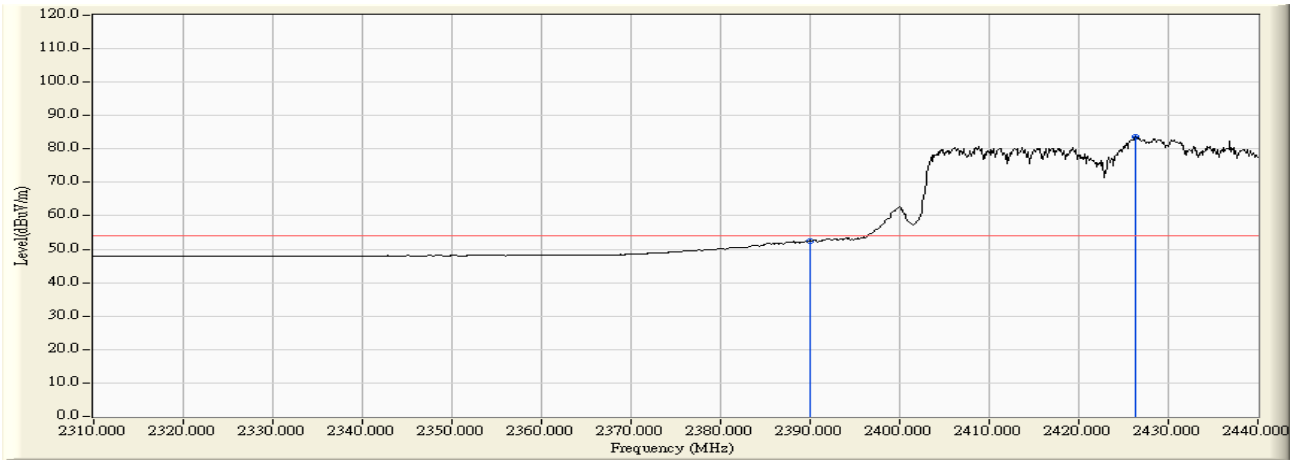
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2457.280	31.223	62.757	93.980	N/A	N/A	AVERAGE
2		2483.500	31.212	19.953	51.165	-2.805	53.970	AVERAGE

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 01:39**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
Probe : 9120D_499(1-18GHz) - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 4: Transmit at channel 2422MHz By 802.11n(40MHz)(Chain 1)**



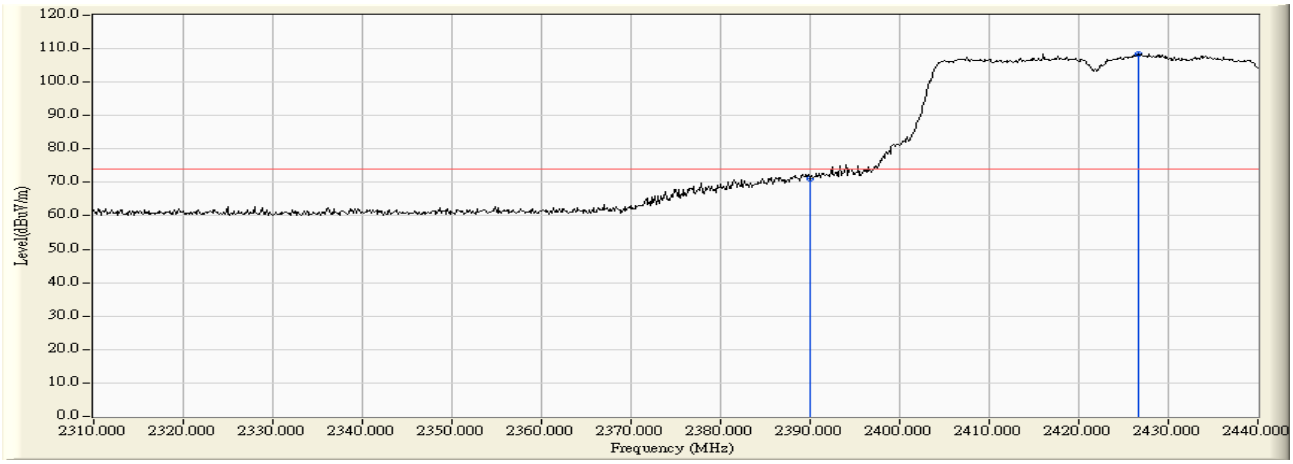
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2387.090	31.187	40.509	71.697	-2.273	73.970	PEAK
2		2390.000	31.184	36.964	68.148	-5.822	73.970	PEAK
3	*	2416.990	31.194	73.098	104.293	N/A	N/A	PEAK

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 01:39**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
Probe : 9120D_499(1-18GHz) - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 4: Transmit at channel 2422MHz By 802.11n(40MHz)(Chain 1)**



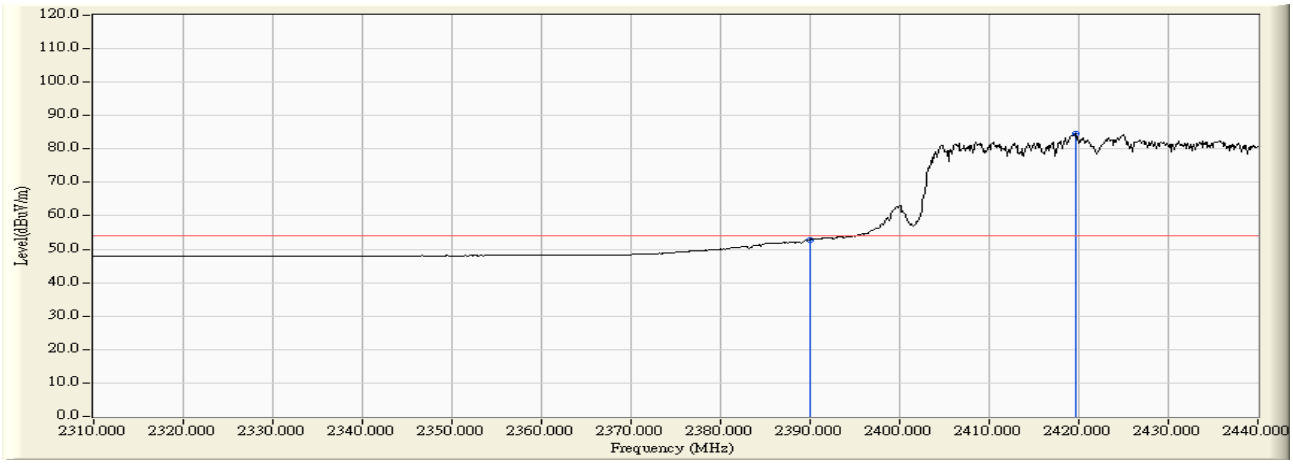
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2390.000	31.184	21.318	52.502	-1.468	53.970	AVERAGE
2	*	2426.350	31.203	52.371	83.574	N/A	N/A	AVERAGE

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 01:41**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
Probe : 9120D_499(1-18GHz) - VERTICAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 4: Transmit at channel 2422MHz By 802.11n(40MHz)(Chain 1)**



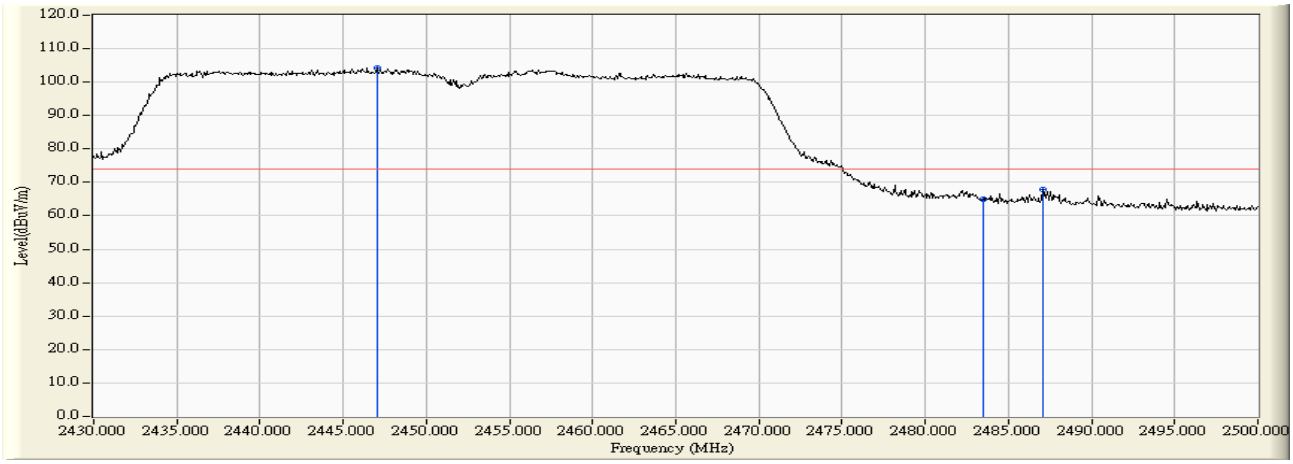
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2390.000	31.184	40.032	71.216	-2.754	73.970	PEAK
2	*	2426.610	31.203	77.194	108.397	N/A	N/A	PEAK

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 01:44**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
Probe : 9120D_499(1-18GHz) - VERTICAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 4: Transmit at channel 2422MHz By 802.11n(40MHz)(Chain 1)**



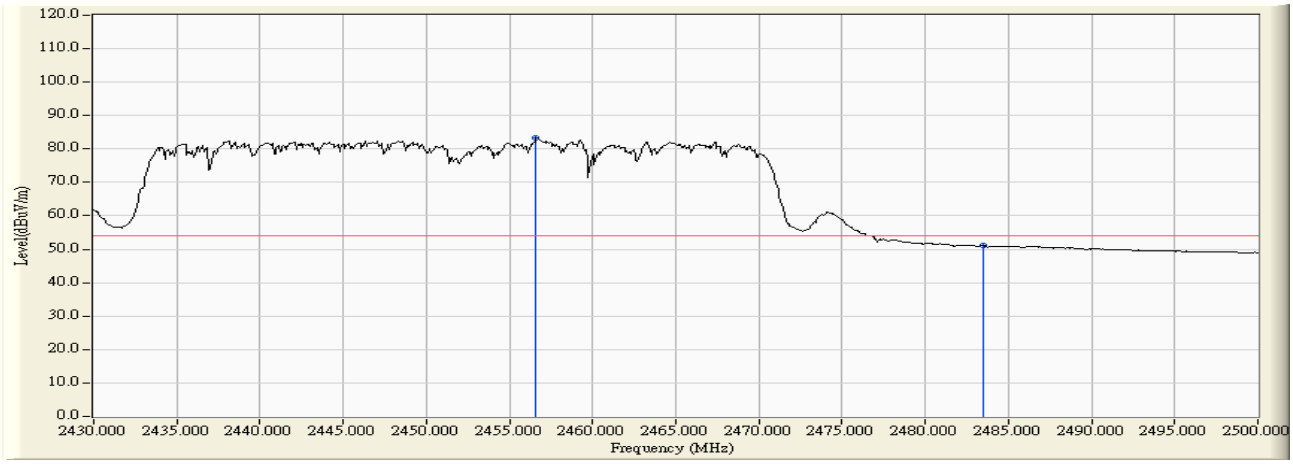
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2390.000	31.184	21.661	52.845	-1.125	53.970	AVERAGE
2	*	2419.590	31.197	53.302	84.499	N/A	N/A	AVERAGE

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 01:48**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
Probe : 9120D_499(1-18GHz) - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 4: Transmit at channel 2452MHz By 802.11n(40MHz)(Chain 1)**



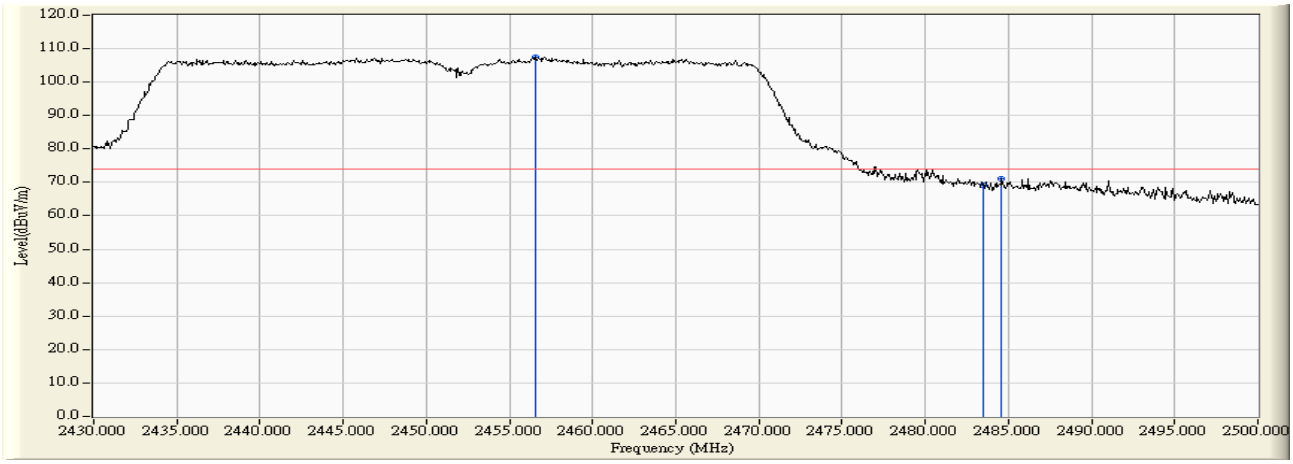
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2447.010	31.219	73.017	104.236	N/A	N/A	PEAK
2		2483.500	31.212	33.672	64.884	-9.086	73.970	PEAK
3		2487.050	31.210	36.603	67.813	-6.157	73.970	PEAK

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 01:49**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
Probe : 9120D_499(1-18GHz) - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 4: Transmit at channel 2452MHz By 802.11n(40MHz)(Chain 1)**



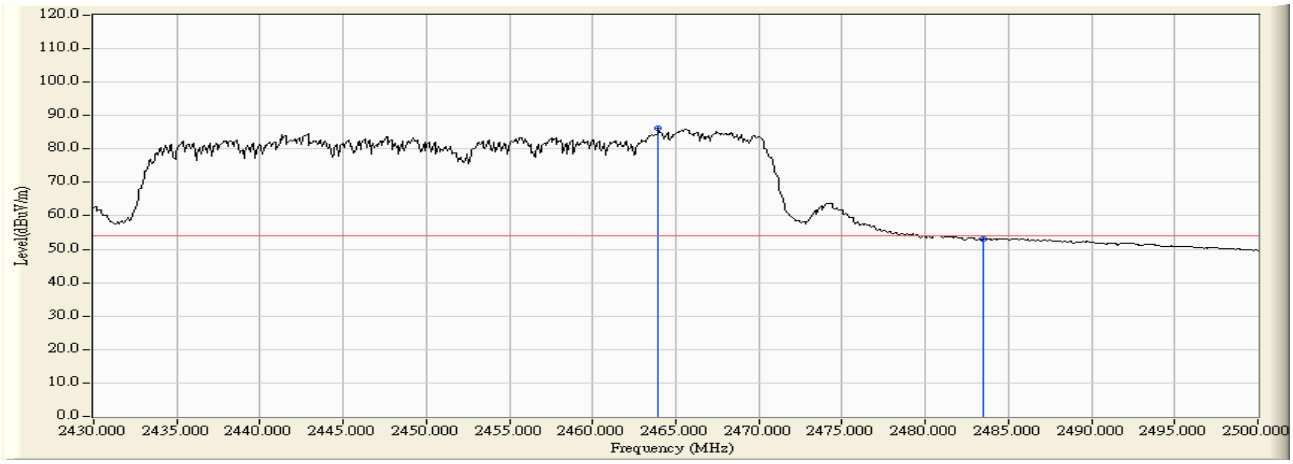
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2456.600	31.223	52.074	83.297	N/A	N/A	AVERAGE
2		2483.500	31.212	19.830	51.042	-2.928	53.970	AVERAGE

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 01:51**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
Probe : 9120D_499(1-18GHz) - VERTICAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 4: Transmit at channel 2452MHz By 802.11n(40MHz)(Chain 1)**



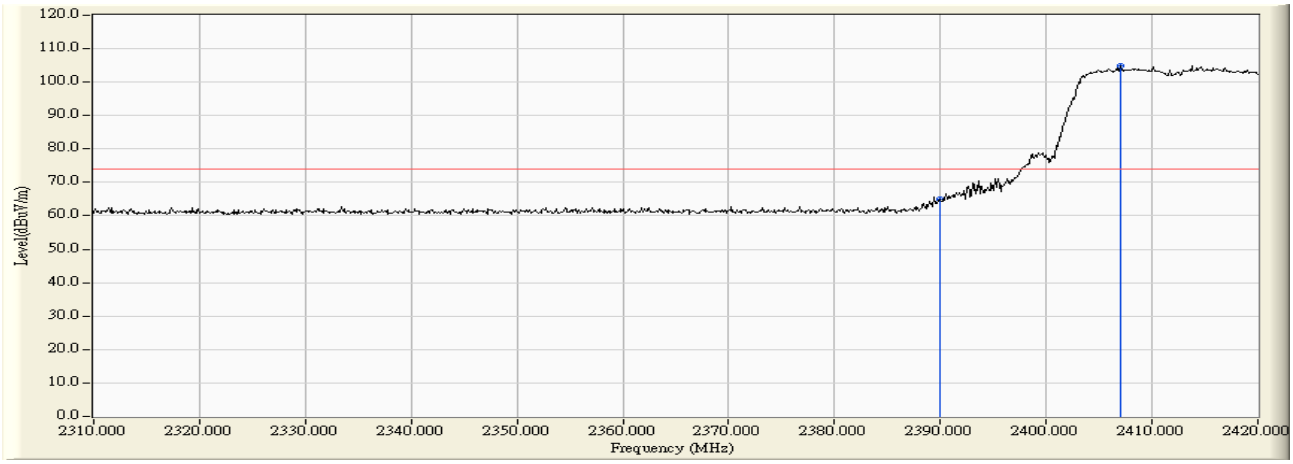
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2456.530	31.223	76.369	107.592	N/A	N/A	PEAK
2		2483.500	31.212	38.056	69.268	-4.702	73.970	PEAK
3		2484.600	31.212	39.924	71.135	-2.835	73.970	PEAK

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 01:51**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
Probe : 9120D_499(1-18GHz) - VERTICAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 4: Transmit at channel 2452MHz By 802.11n(40MHz)(Chain 1)**



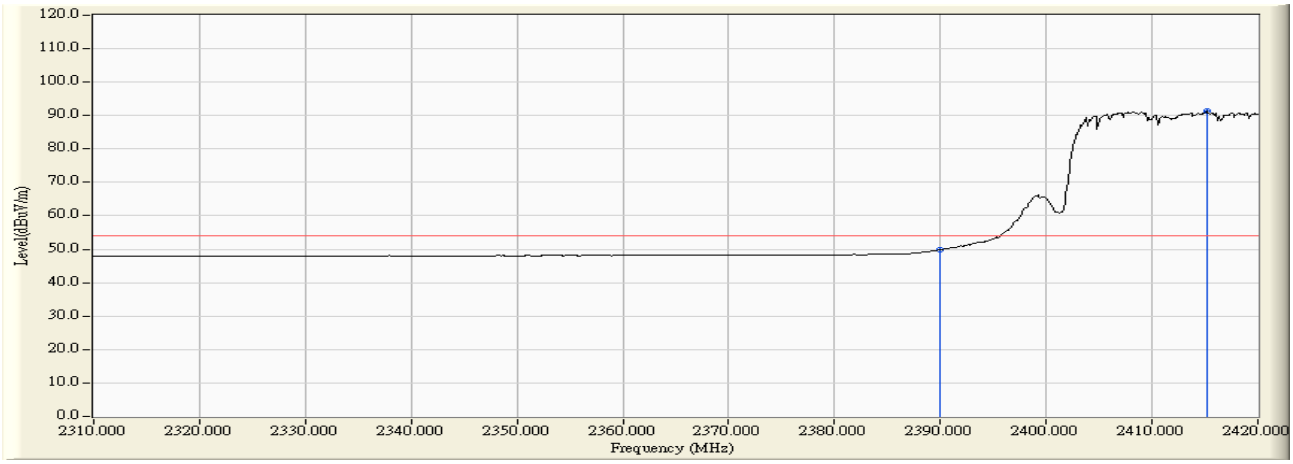
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2463.950	31.224	55.053	86.277	N/A	N/A	AVERAGE
2		2483.500	31.212	21.842	53.054	-0.916	53.970	AVERAGE

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 02:00**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
Probe : 9120D_499(1-18GHz) - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 3: Transmit at channel 2412MHz By 802.11n(20MHz)(Chain 0+1)**



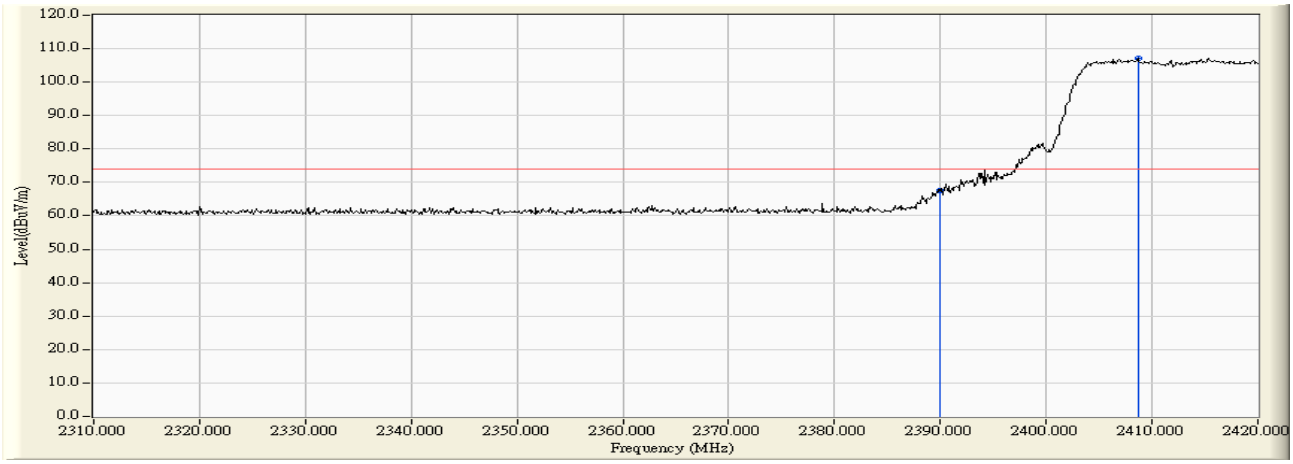
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2390.000	31.184	33.664	64.848	-9.122	73.970	PEAK
2	*	2407.020	31.187	73.605	104.792	N/A	N/A	PEAK

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 02:01**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
Probe : 9120D_499(1-18GHz) - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 3: Transmit at channel 2412MHz By 802.11n(20MHz)(Chain 0+1)**



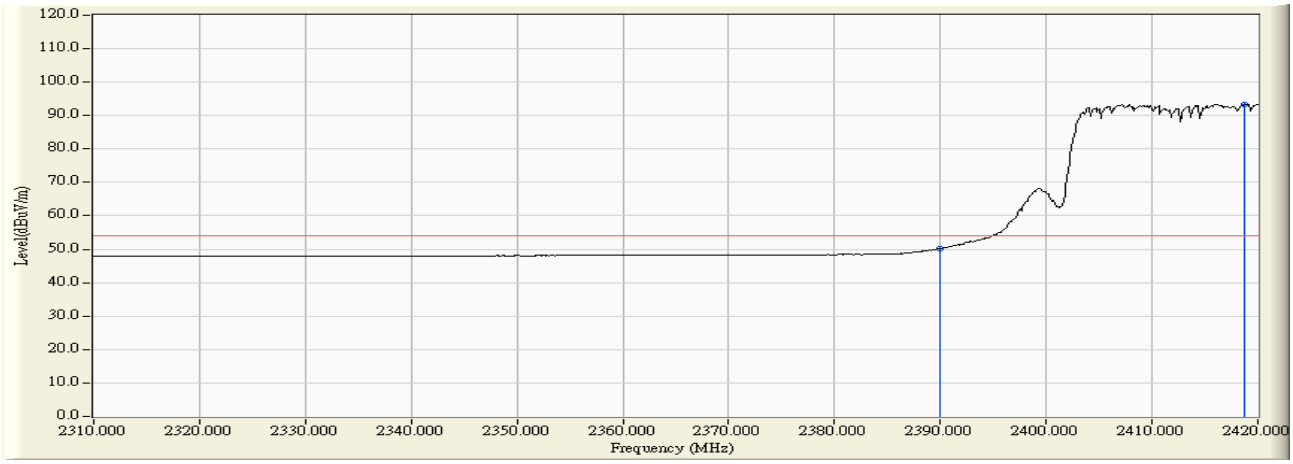
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2390.000	31.184	18.624	49.808	-4.162	53.970	AVERAGE
2	*	2415.160	31.193	60.167	91.360	N/A	N/A	AVERAGE

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 02:02**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
Probe : 9120D_499(1-18GHz) - VERTICAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 3: Transmit at channel 2412MHz By 802.11n(20MHz)(Chain 0+1)**



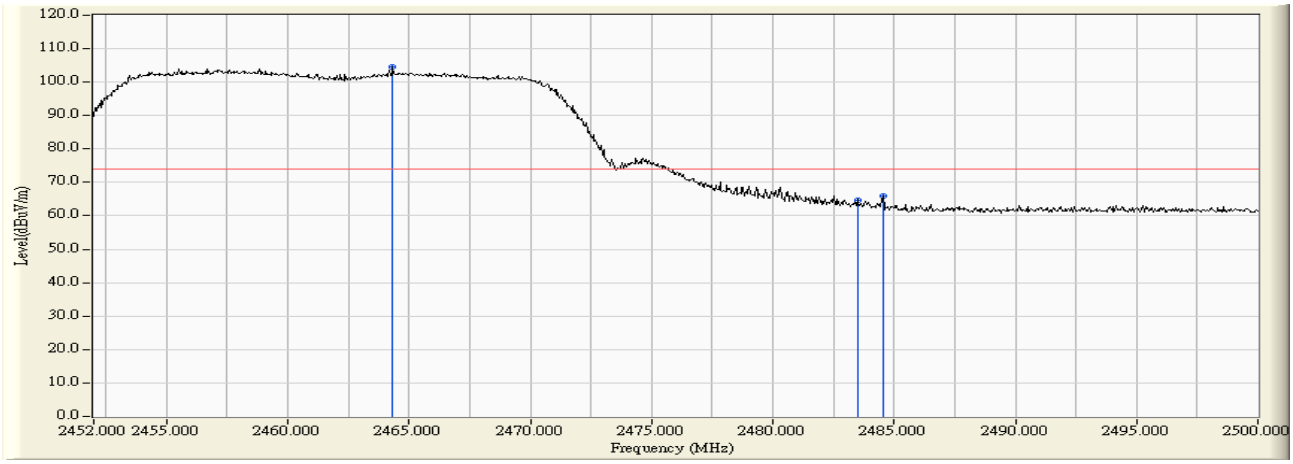
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2390.000	31.184	36.455	67.639	-6.331	73.970	PEAK
2	*	2408.670	31.188	75.974	107.162	N/A	N/A	PEAK

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 02:03**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
Probe : 9120D_499(1-18GHz) - VERTICAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 3: Transmit at channel 2412MHz By 802.11n(20MHz)(Chain 0+1)**



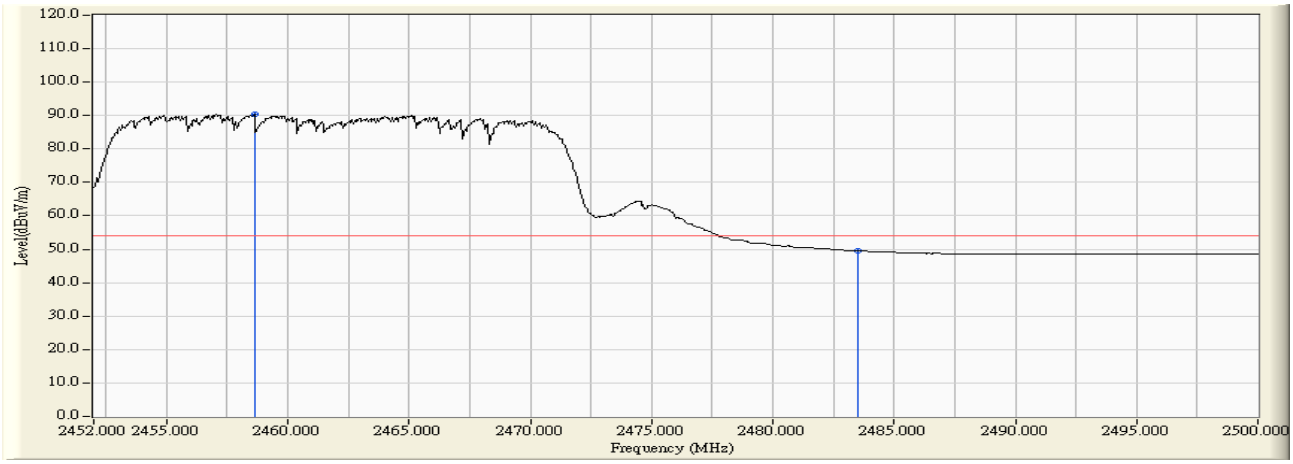
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2390.000	31.184	19.097	50.281	-3.689	53.970	AVERAGE
2	*	2418.680	31.196	62.189	93.385	N/A	N/A	AVERAGE

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 02:07**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
Probe : 9120D_499(1-18GHz) - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 3: Transmit at channel 2462MHz By 802.11n(20MHz)(Chain 0+1)**



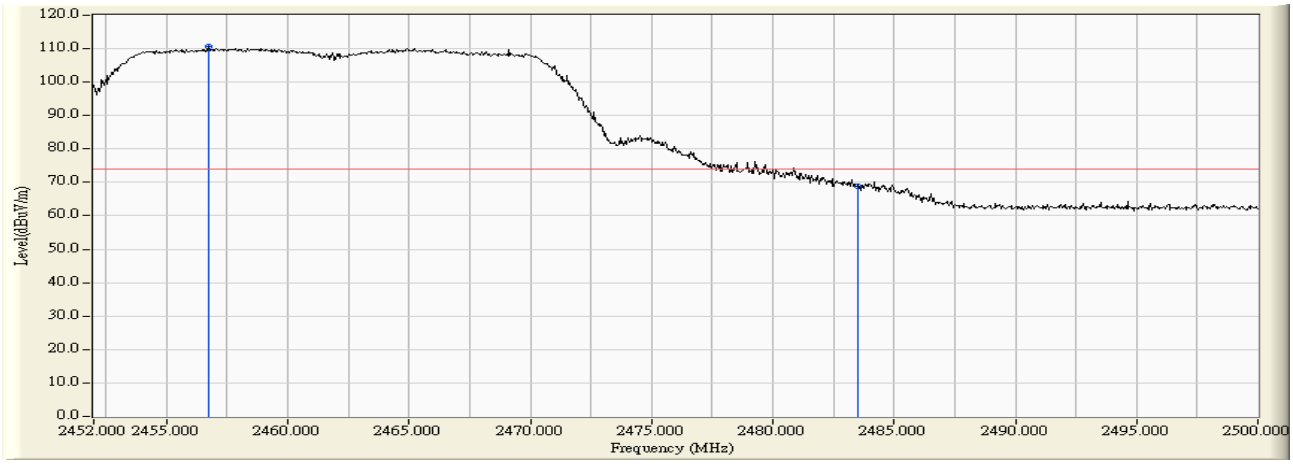
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2464.336	31.224	73.275	104.499	N/A	N/A	PEAK
2		2483.500	31.212	33.518	64.730	-9.240	73.970	PEAK
3		2484.544	31.212	34.607	65.818	-8.152	73.970	PEAK

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 02:07**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
Probe : 9120D_499(1-18GHz) - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 3: Transmit at channel 2462MHz By 802.11n(20MHz)(Chain 0+1)**



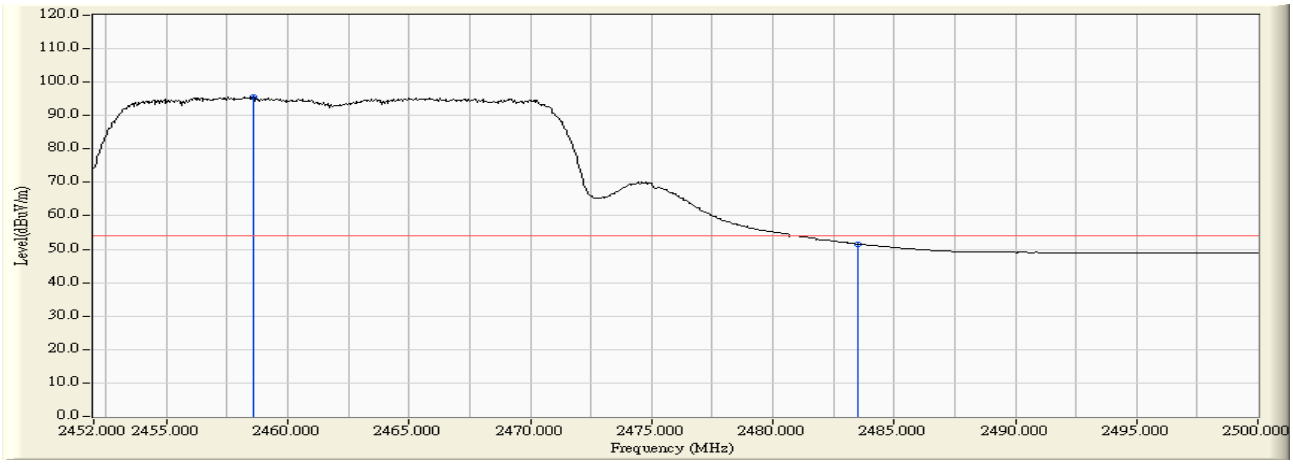
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2458.624	31.224	59.105	90.329	N/A	N/A	AVERAGE
2		2483.500	31.212	18.308	49.520	-4.450	53.970	AVERAGE

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 02:13**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
Probe : 9120D_499(1-18GHz) - VERTICAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 3: Transmit at channel 2462MHz By 802.11n(20MHz)(Chain 0+1)**



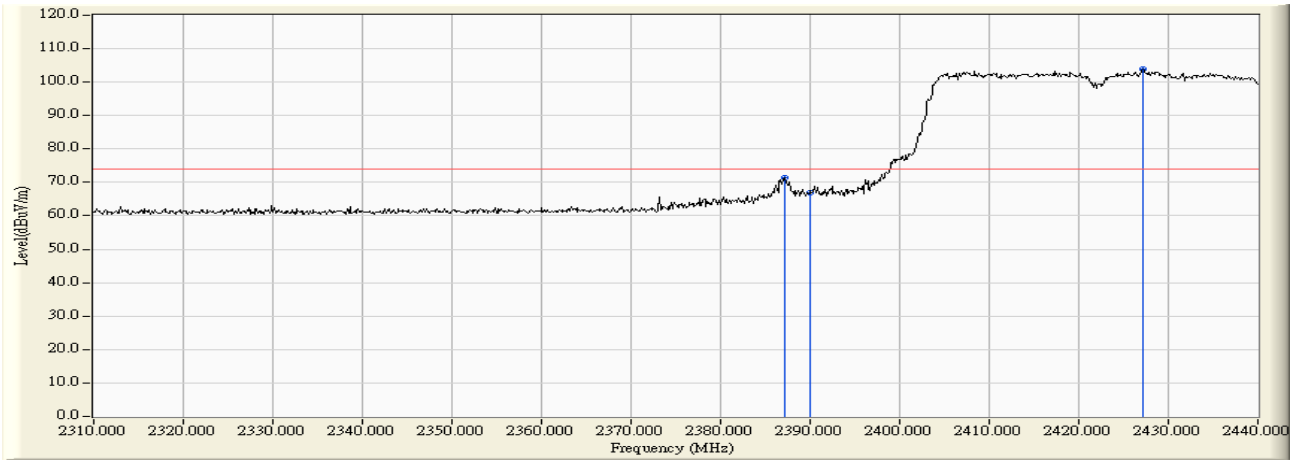
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2456.752	31.223	79.409	110.632	N/A	N/A	PEAK
2		2483.500	31.212	37.708	68.920	-5.050	73.970	PEAK

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 02:14**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
Probe : 9120D_499(1-18GHz) - VERTICAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 3: Transmit at channel 2462MHz By 802.11n(20MHz)(Chain 0+1)**



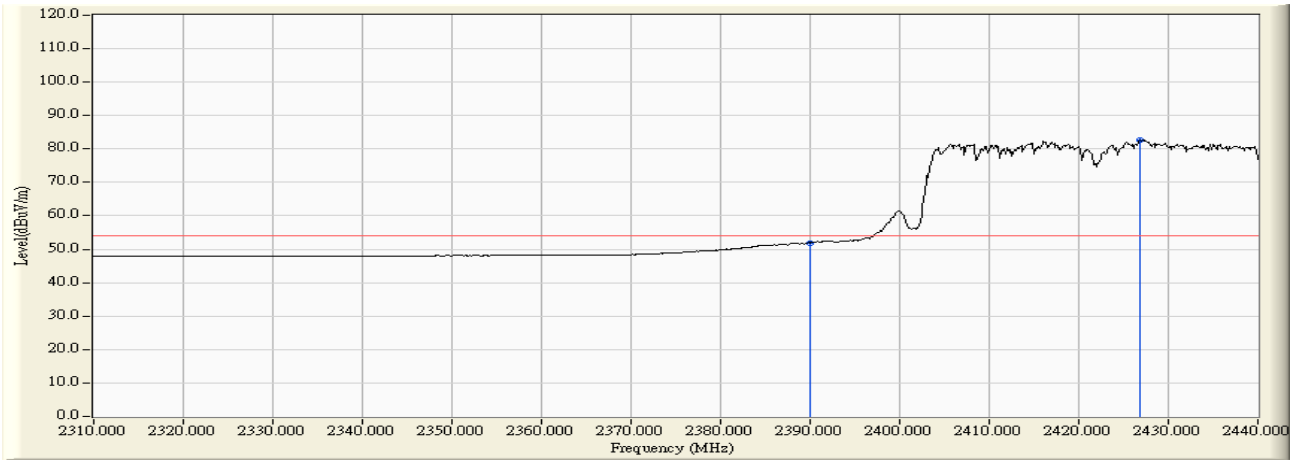
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2458.576	31.224	64.378	95.602	N/A	N/A	AVERAGE
2		2483.500	31.212	20.351	51.563	-2.407	53.970	AVERAGE

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 02:20**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
Probe : 9120D_499(1-18GHz) - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 4: Transmit at channel 2422MHz By 802.11n(40MHz)(Chain 0+1)**



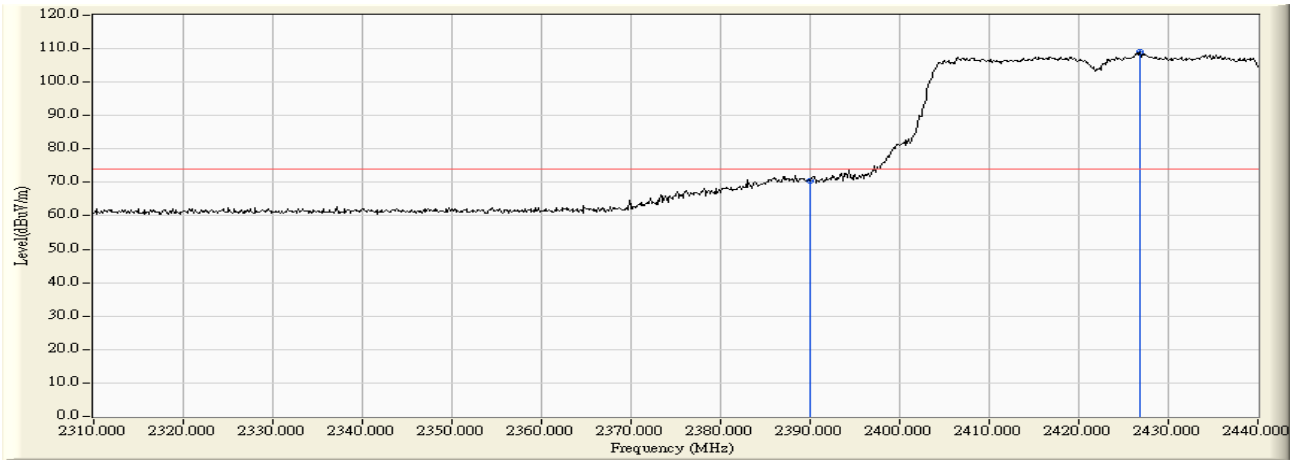
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2387.090	31.187	40.222	71.410	-2.560	73.970	PEAK
2		2390.000	31.184	35.699	66.883	-7.087	73.970	PEAK
3	*	2427.130	31.204	72.562	103.765	N/A	N/A	PEAK

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 02:20**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
Probe : 9120D_499(1-18GHz) - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 4: Transmit at channel 2422MHz By 802.11n(40MHz)(Chain 0+1)**



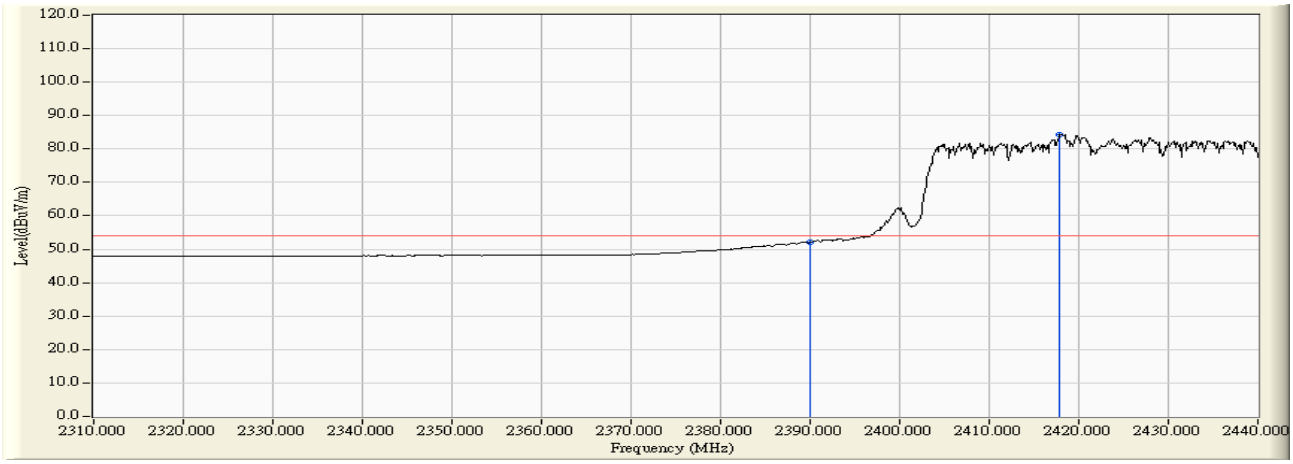
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2390.000	31.184	20.752	51.936	-2.034	53.970	AVERAGE
2	*	2426.870	31.203	51.580	82.783	N/A	N/A	AVERAGE

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 02:24**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
Probe : 9120D_499(1-18GHz) - VERTICAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 4: Transmit at channel 2422MHz By 802.11n(40MHz)(Chain 0+1)**



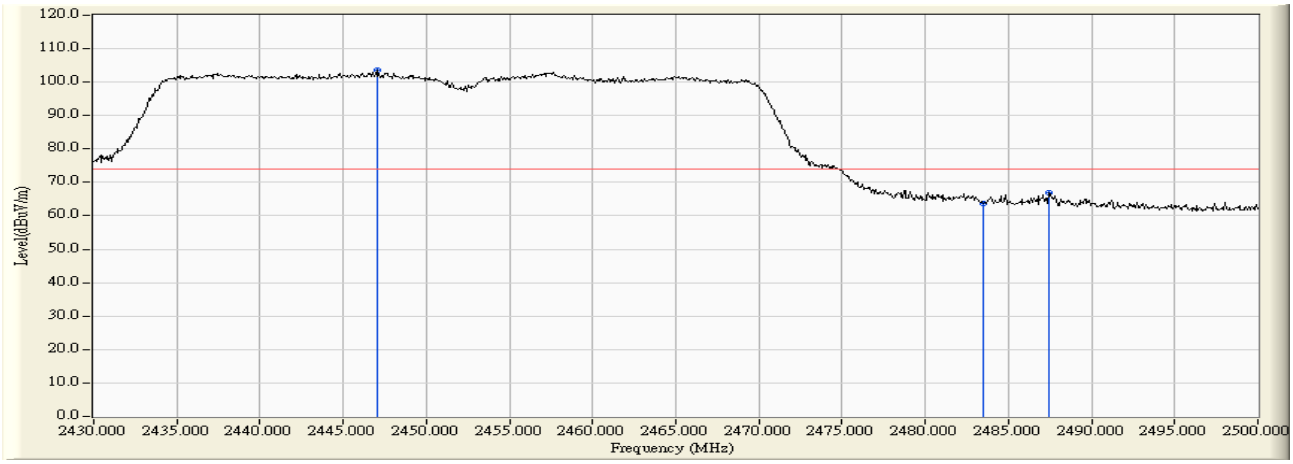
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2390.000	31.184	39.250	70.434	-3.536	73.970	PEAK
2	*	2426.870	31.203	77.834	109.037	N/A	N/A	PEAK

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 02:26**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
Probe : 9120D_499(1-18GHz) - VERTICAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 4: Transmit at channel 2422MHz By 802.11n(40MHz)(Chain 0+1)**



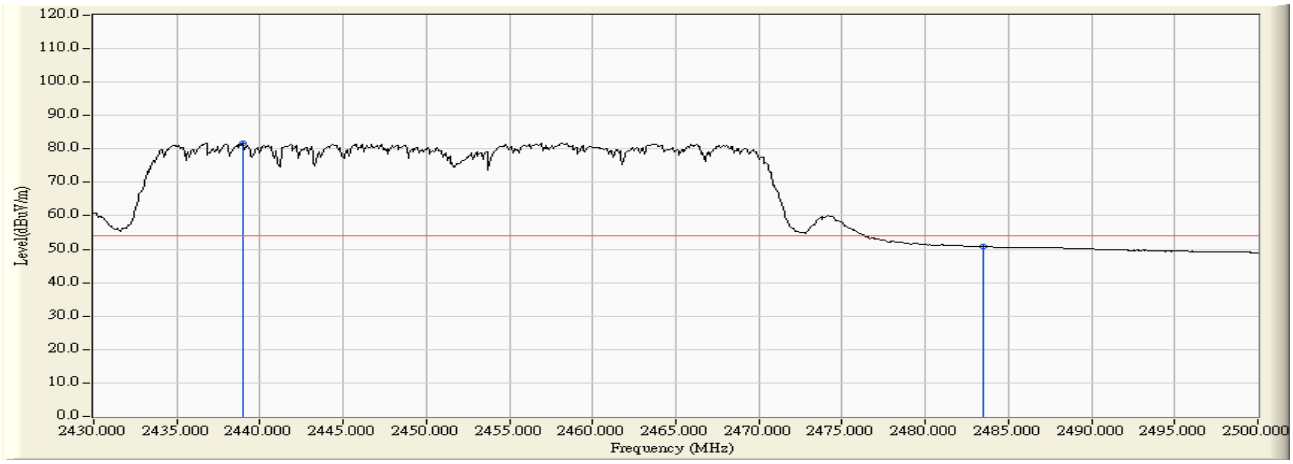
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2390.000	31.184	20.869	52.053	-1.917	53.970	AVERAGE
2	*	2417.900	31.195	53.249	84.444	N/A	N/A	AVERAGE

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 02:30**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
Probe : 9120D_499(1-18GHz) - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 4: Transmit at channel 2452MHz By 802.11n(40MHz)(Chain 0+1)**



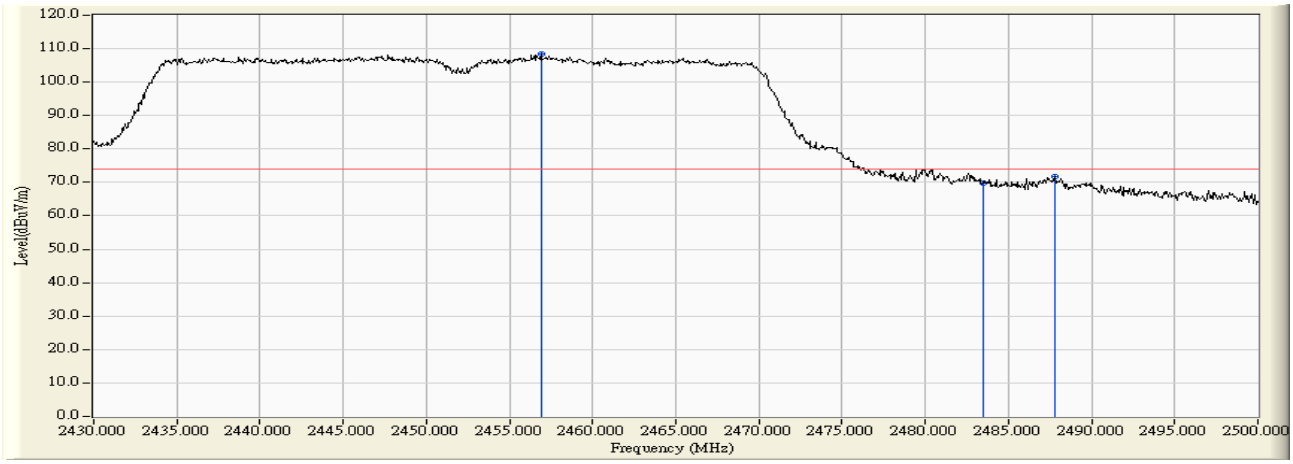
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2447.010	31.219	72.321	103.540	N/A	N/A	PEAK
2		2483.500	31.212	32.568	63.780	-10.190	73.970	PEAK
3		2487.400	31.210	35.741	66.951	-7.019	73.970	PEAK

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 02:30**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
Probe : 9120D_499(1-18GHz) - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 4: Transmit at channel 2452MHz By 802.11n(40MHz)(Chain 0+1)**



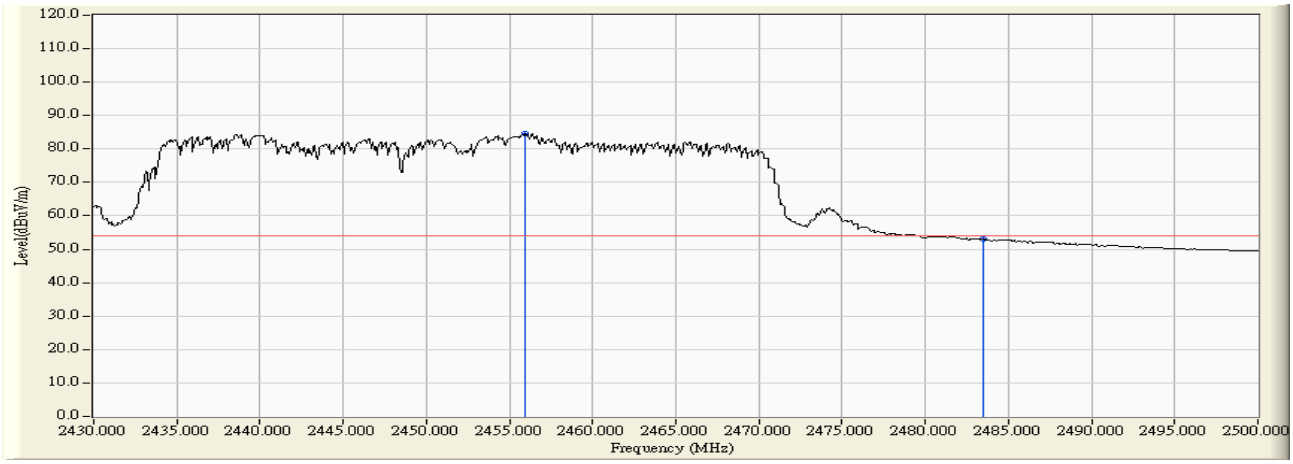
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2438.960	31.214	50.623	81.836	N/A	N/A	AVERAGE
2		2483.500	31.212	19.650	50.862	-3.108	53.970	AVERAGE

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 02:32**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 0**
Probe : 9120D_499(1-18GHz) - VERTICAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 4: Transmit at channel 2452MHz By 802.11n(40MHz)(Chain 0+1)**



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2456.880	31.223	77.184	108.407	N/A	N/A	PEAK
2		2483.500	31.212	38.722	69.934	-4.036	73.970	PEAK
3		2487.820	31.210	40.528	71.737	-2.233	73.970	PEAK

Engineer : Jame	
Site : AC-2 (3m Semi-Anechoic Chamber)	**Time : 2009/10/16 - 02:32**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 0**
Probe : 9120D_499(1-18GHz) - VERTICAL	**Power : AC 120V/60Hz**
EUT : 802.11a/b/g/n WLAN Module	**Note : Mode 4: Transmit at channel 2452MHz By 802.11n(40MHz)(Chain 0+1)**



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2455.970	31.223	53.267	84.490	N/A	N/A	AVERAGE
2		2483.500	31.212	21.810	53.022	-0.948	53.970	AVERAGE

7. Operation Frequency Range of 20dB Bandwidth

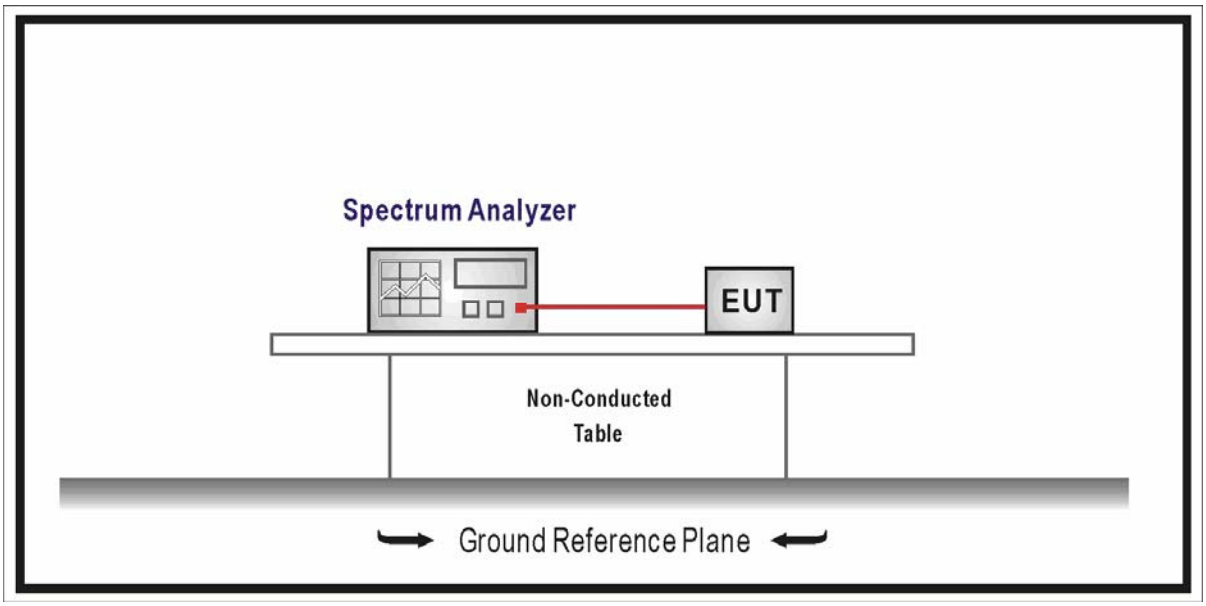
7.1. Test Equipment

Operation Frequency Range of 20dB Bandwidth / AC-6

Instrument	Manufacturer	Type No.	Serial No.	Cal. Date
Spectrum Analyzer	Agilent	N9020A	MY49100159	2009/05/06
Coaxial Cable	Huber+Suhner	AC4-RF	09	2008/11/25
Temperature/Humidity Meter	zhicheng	ZC1-2	QT-TH007	2009/03/30

Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

7.2. Test Setup



7.3. Limit

20 dB bandwidth of the emission is contained within the operation frequency band.

7.4. Test Procedure

The EUT was tested according to DTS test procedure of Oct 2002 KDB558074 for compliance to FCC 47CFR 15.247 requirements.
Set RBW = 100 kHz, Span greater than RBW.

7.5. Uncertainty

The measurement uncertainty is defined as ± 1 kHz

7.6. Test Result

Product	:	802.11a/b/g/n WLAN Module
Test Item	:	Operation Frequency Range of 20dB Bandwidth
Test Site	:	AC-6
Test Mode	:	Mode 1: Transmit by 802.11b (Chain 0)

Channel 01 (2412MHz)

Channel 11 (2462MHz)

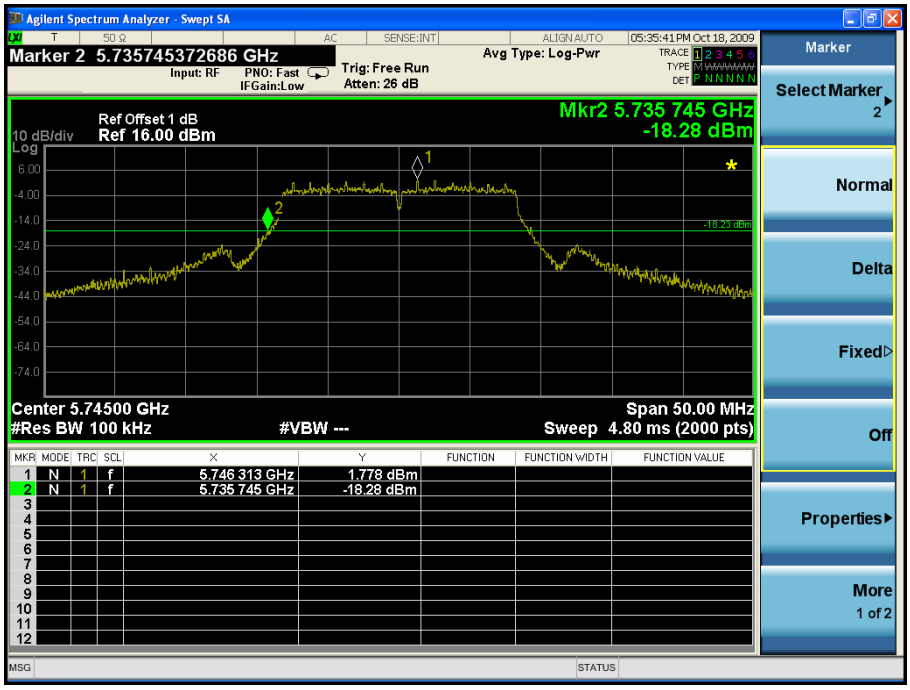
Product	:	802.11a/b/g/n WLAN Module
Test Item	:	Operation Frequency Range of 20dB Bandwidth
Test Site	:	AC-6
Test Mode	:	Mode 2: Transmit by 802.11g (Chain 0)

Channel 01 (2412MHz)

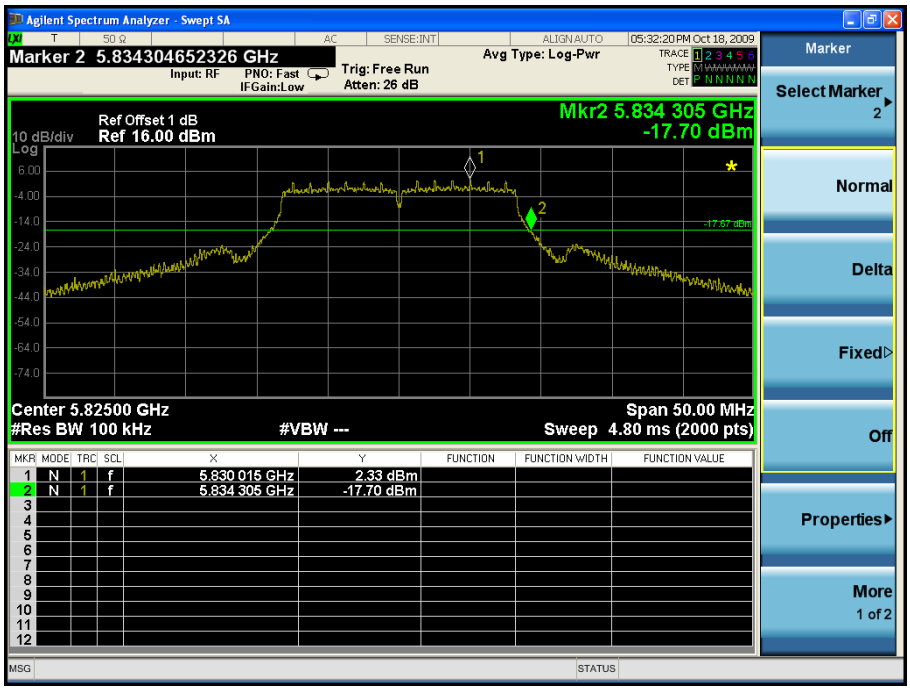
Channel 11 (2462MHz)

Product	:	802.11a/b/g/n WLAN Module
Test Item	:	Operation Frequency Range of 20dB Bandwidth
Test Site	:	AC-6
Test Mode	:	Mode 1: Transmit by 802.11a (Chain 0)

Channel 149 (5745MHz)

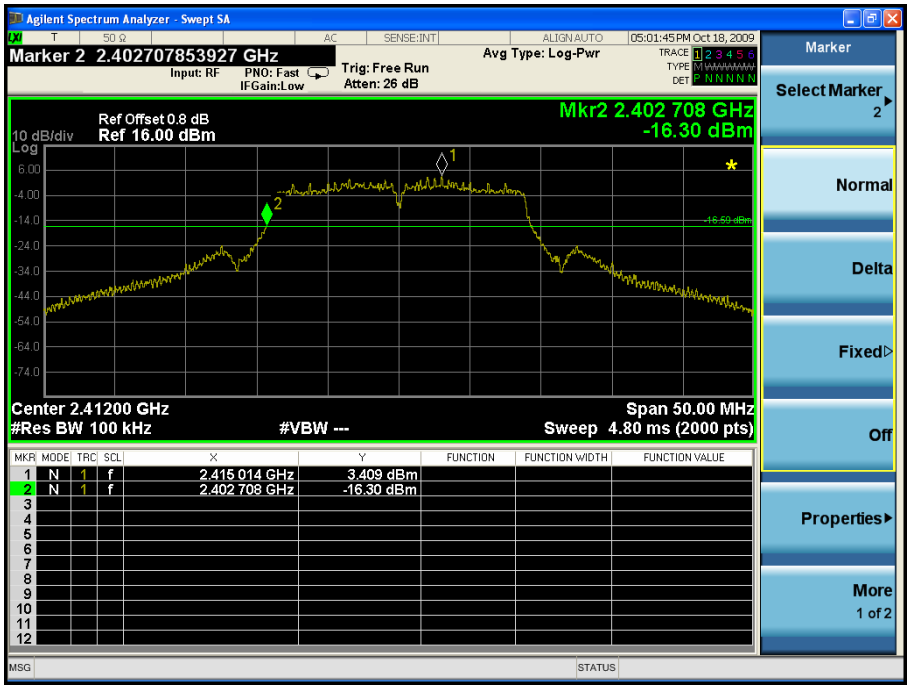


Channel 165 (5825MHz)

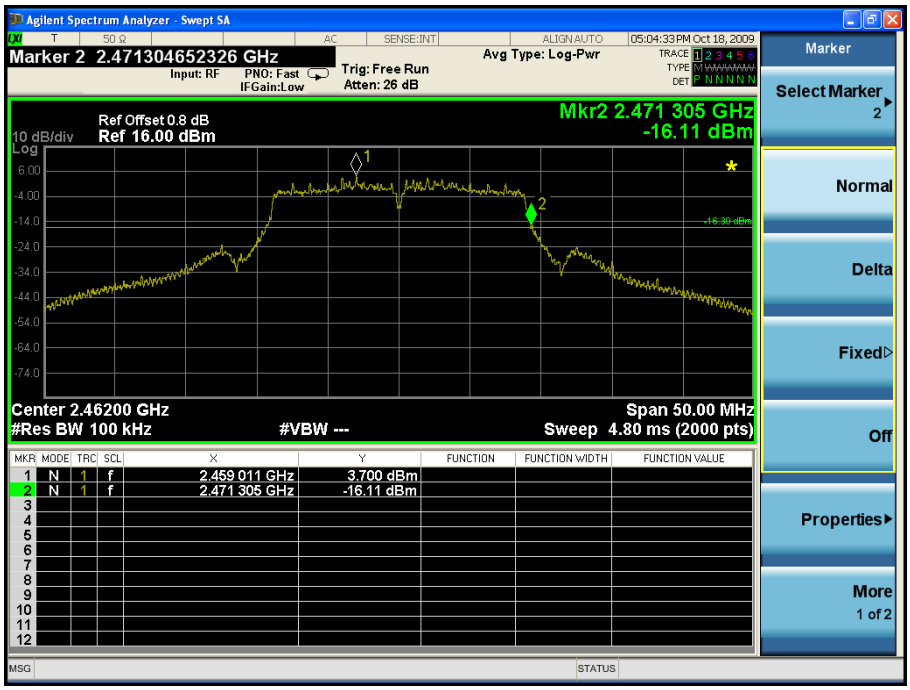


Product	:	802.11a/b/g/n WLAN Module
Test Item	:	Operation Frequency Range of 20dB Bandwidth
Test Site	:	AC-6
Test Mode	:	Mode 4: Transmit by 802.11n (20MHz) (Chain 0)

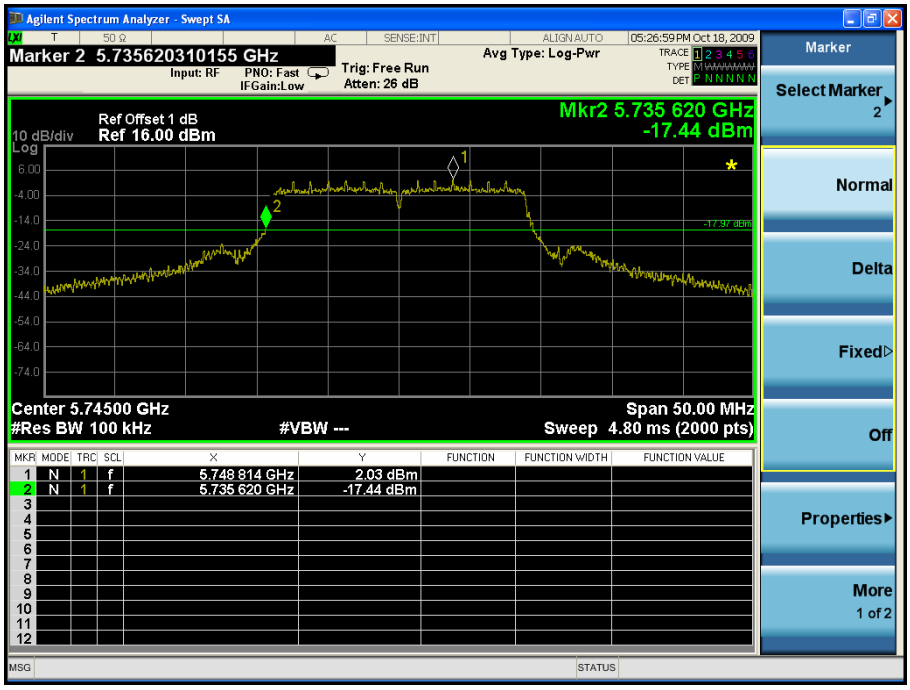
Channel 01 (2412MHz)



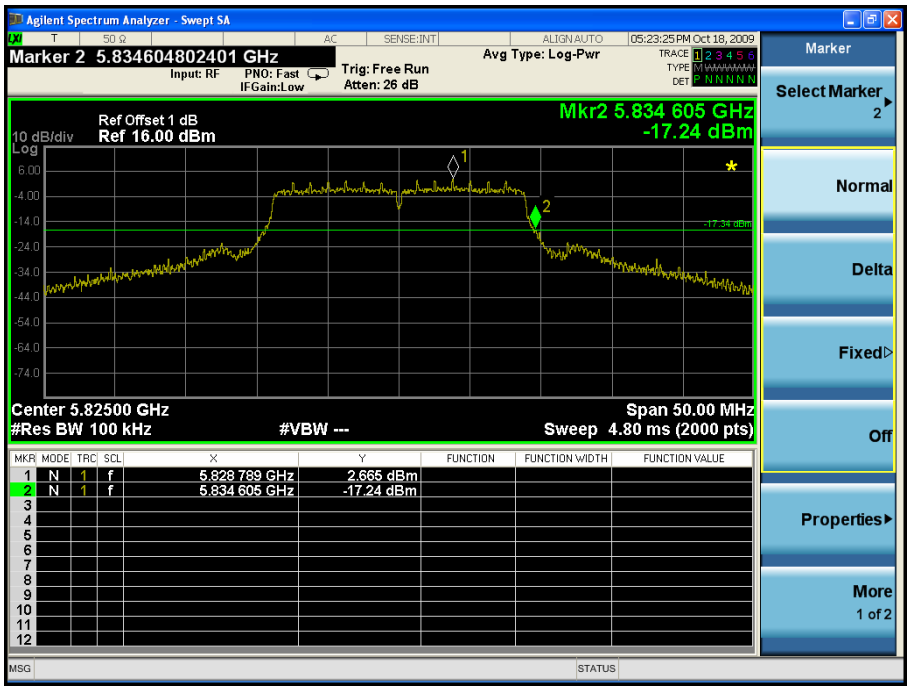
Channel 11 (2462MHz)



Channel 149 (5745MHz)



Channel 165 (5825MHz)

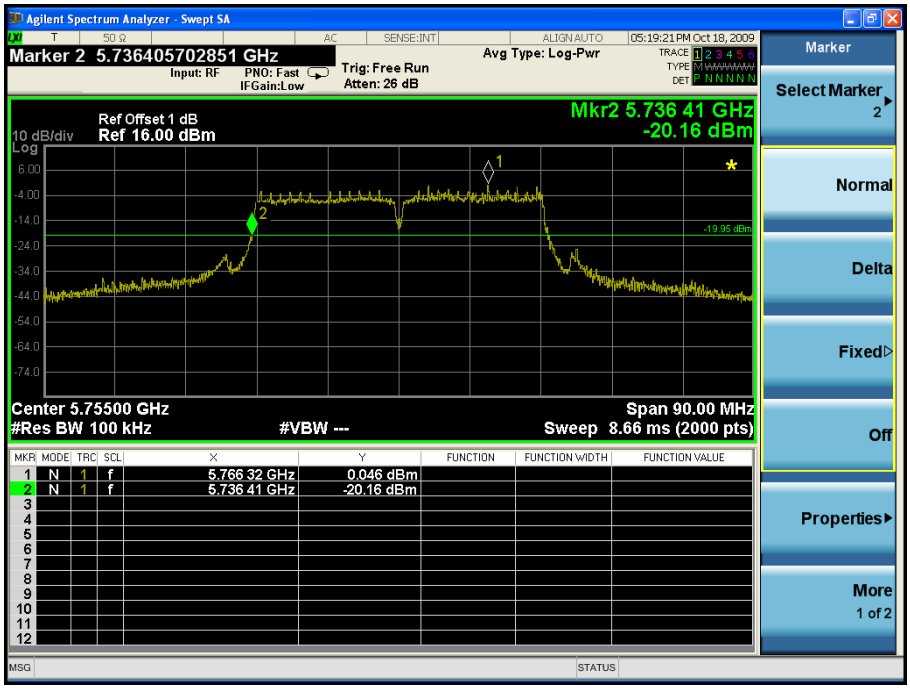


Product	:	802.11a/b/g/n WLAN Module
Test Item	:	Operation Frequency Range of 20dB Bandwidth
Test Site	:	AC-6
Test Mode	:	Mode 5: Transmit by 802.11n (40MHz) (Chain 0)

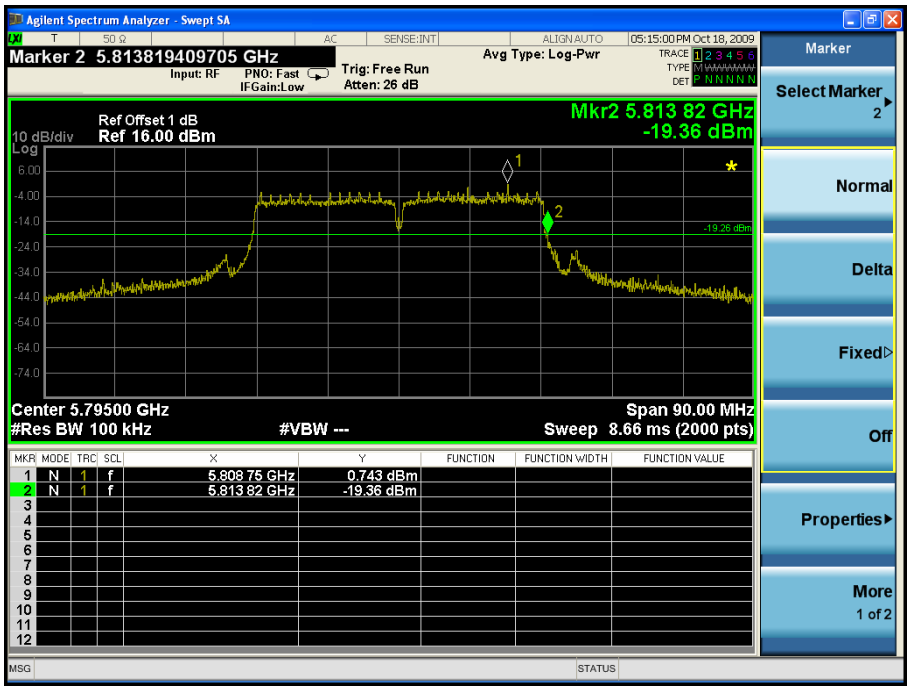
Channel 03 (2422MHz)

Channel 09 (2452MHz)

Channel 151 (5755MHz)



Channel 159 (5795MHz)



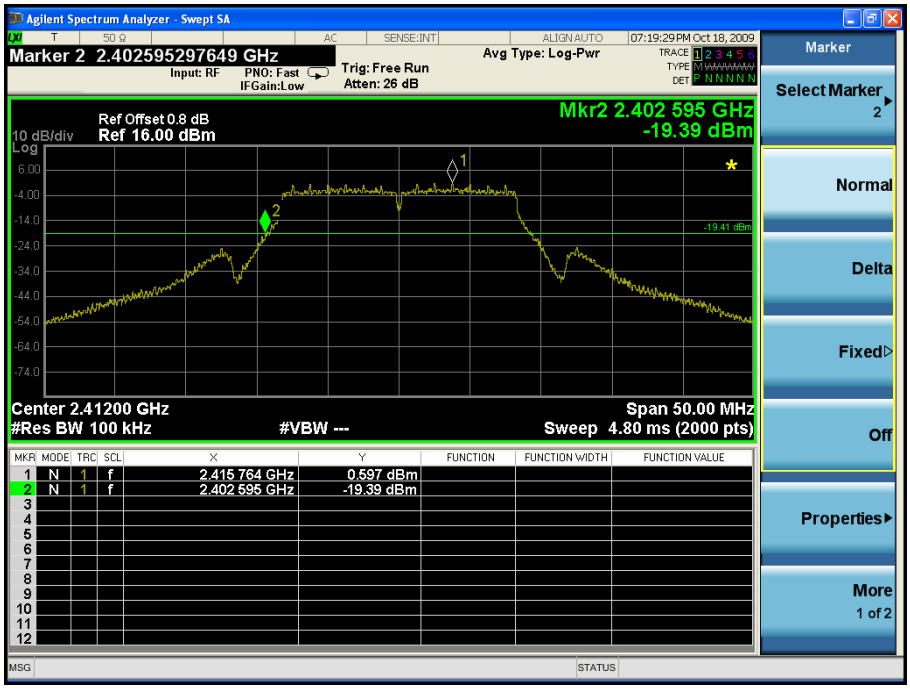
Product	:	802.11a/b/g/n WLAN Module
Test Item	:	Operation Frequency Range of 20dB Bandwidth
Test Site	:	AC-6
Test Mode	:	Mode 1: Transmit by 802.11b (Chain 1)

Channel 01 (2412MHz)

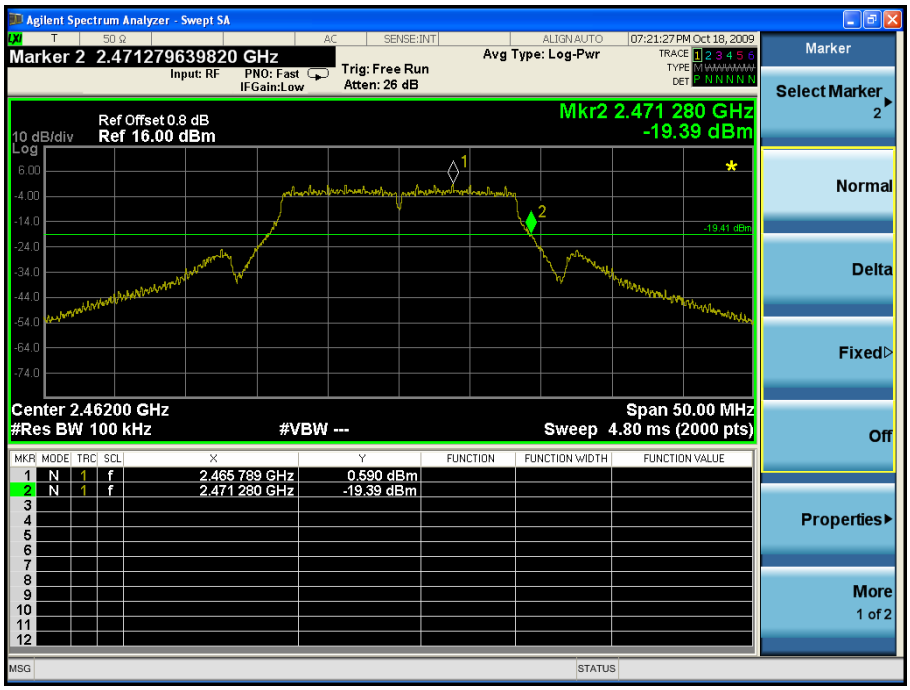
Channel 11 (2462MHz)

Product	:	802.11a/b/g/n WLAN Module
Test Item	:	Operation Frequency Range of 20dB Bandwidth
Test Site	:	AC-6
Test Mode	:	Mode 2: Transmit by 802.11g (Chain 1)

Channel 01 (2412MHz)



Channel 11 (2462MHz)



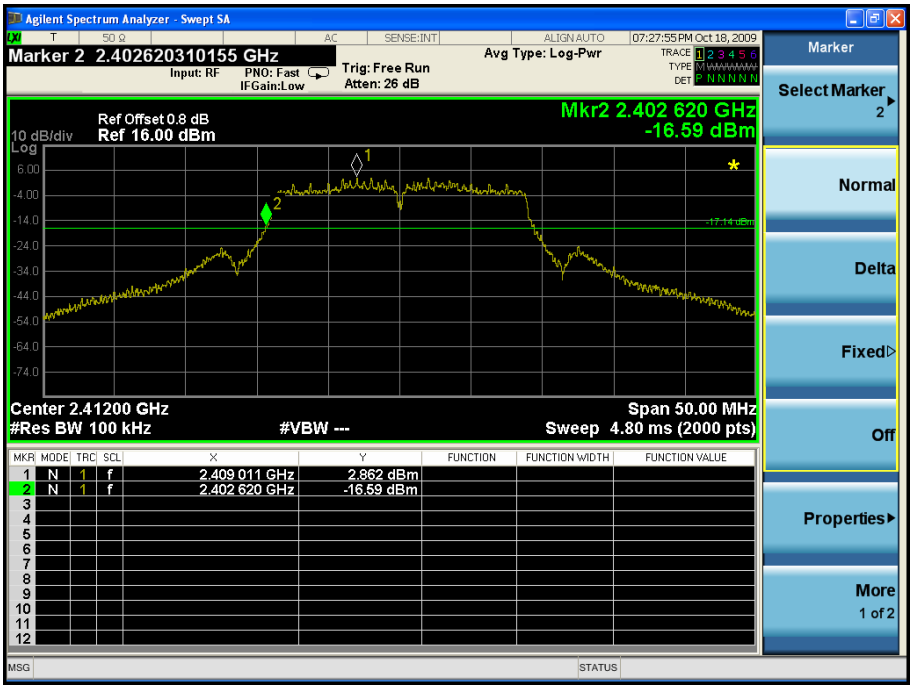
Product	:	802.11a/b/g/n WLAN Module
Test Item	:	Operation Frequency Range of 20dB Bandwidth
Test Site	:	AC-6
Test Mode	:	Mode 1: Transmit by 802.11a (Chain 1)

Channel 149 (5745MHz)

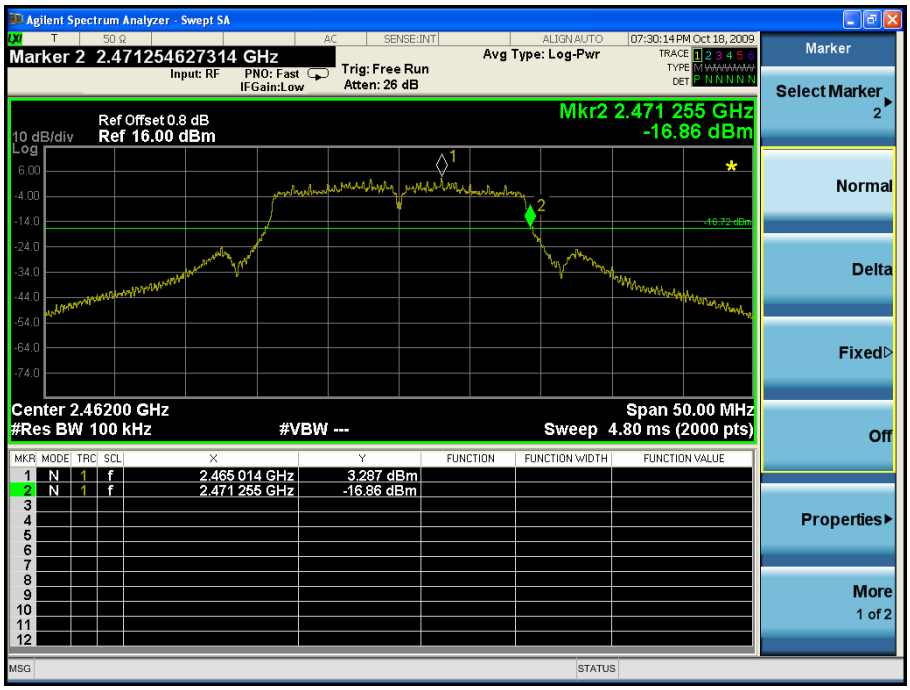
Channel 165 (5825MHz)

Product	:	802.11a/b/g/n WLAN Module
Test Item	:	Operation Frequency Range of 20dB Bandwidth
Test Site	:	AC-6
Test Mode	:	Mode 4: Transmit by 802.11n (20MHz) (Chain 1)

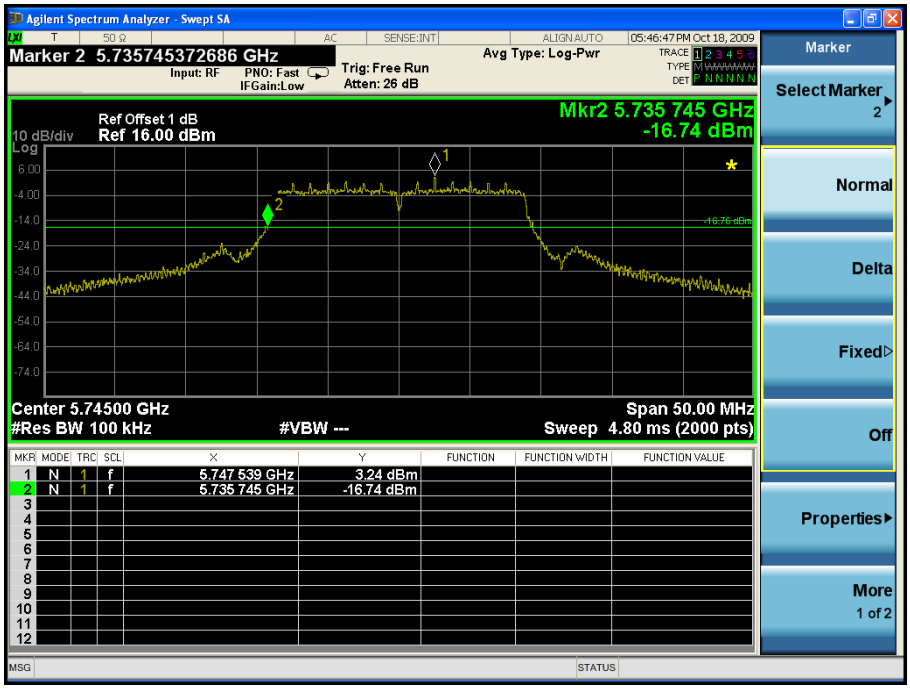
Channel 01 (2412MHz)



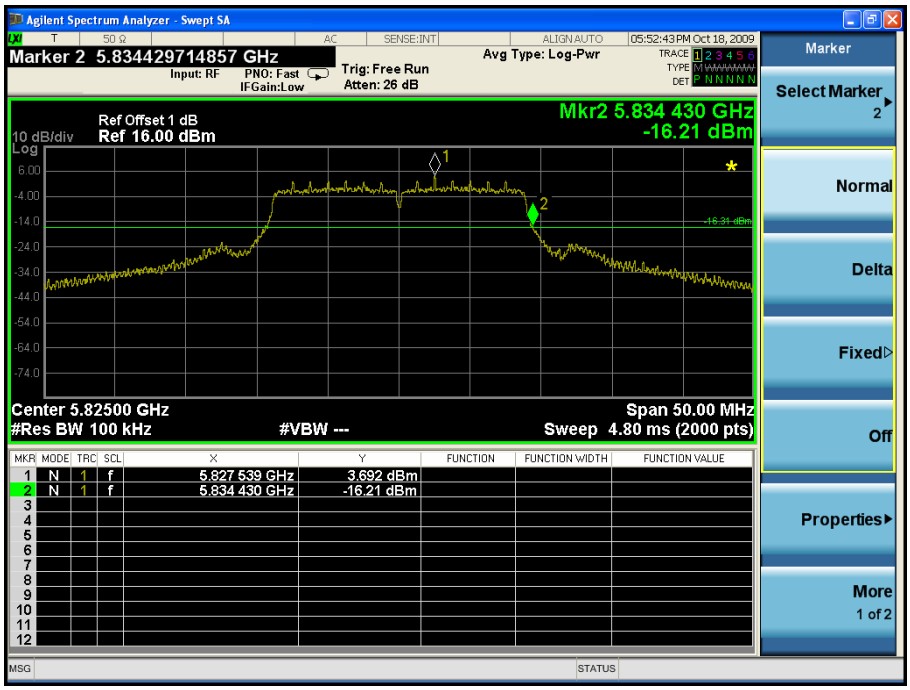
Channel 11 (2462MHz)



Channel 149 (5745MHz)



Channel 165 (5825MHz)

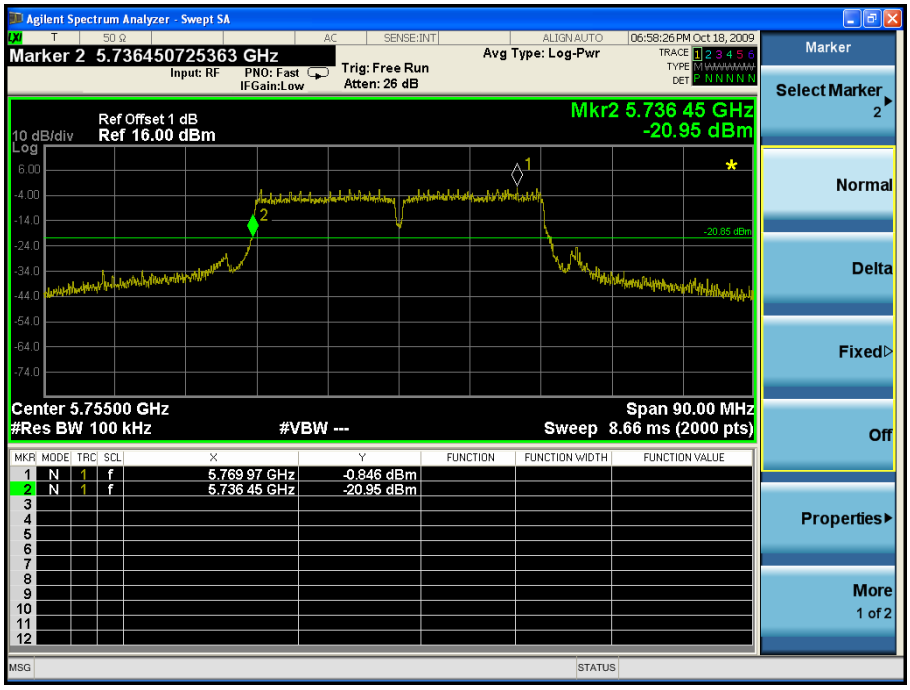


Product	:	802.11a/b/g/n WLAN Module
Test Item	:	Operation Frequency Range of 20dB Bandwidth
Test Site	:	AC-6
Test Mode	:	Mode 5: Transmit by 802.11n (40MHz) (Chain 1)

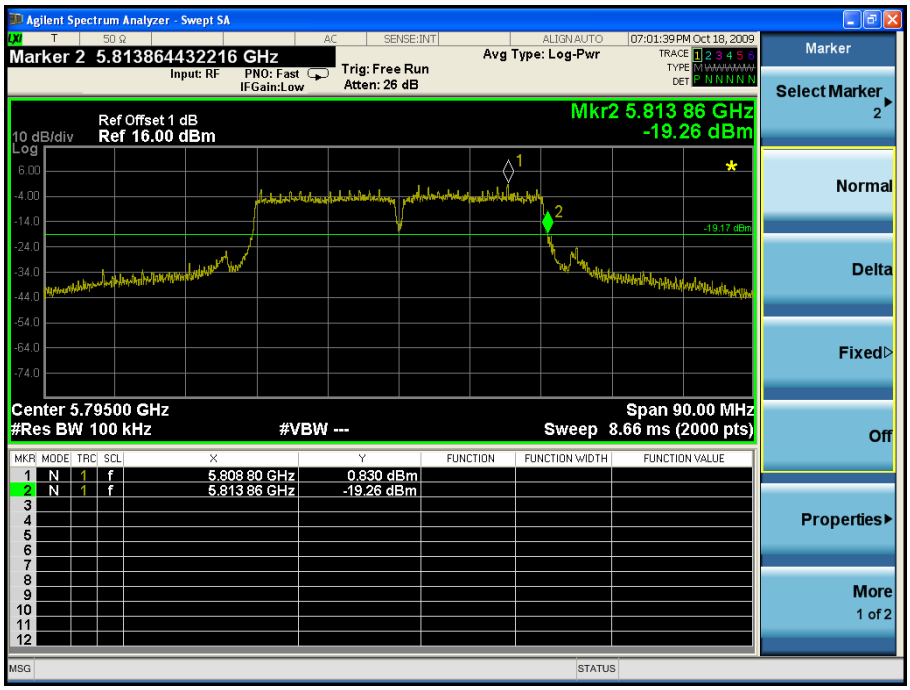
Channel 03 (2422MHz)

Channel 09 (2452MHz)

Channel 151 (5755MHz)



Channel 159 (5795MHz)



8. Occupied Bandwidth

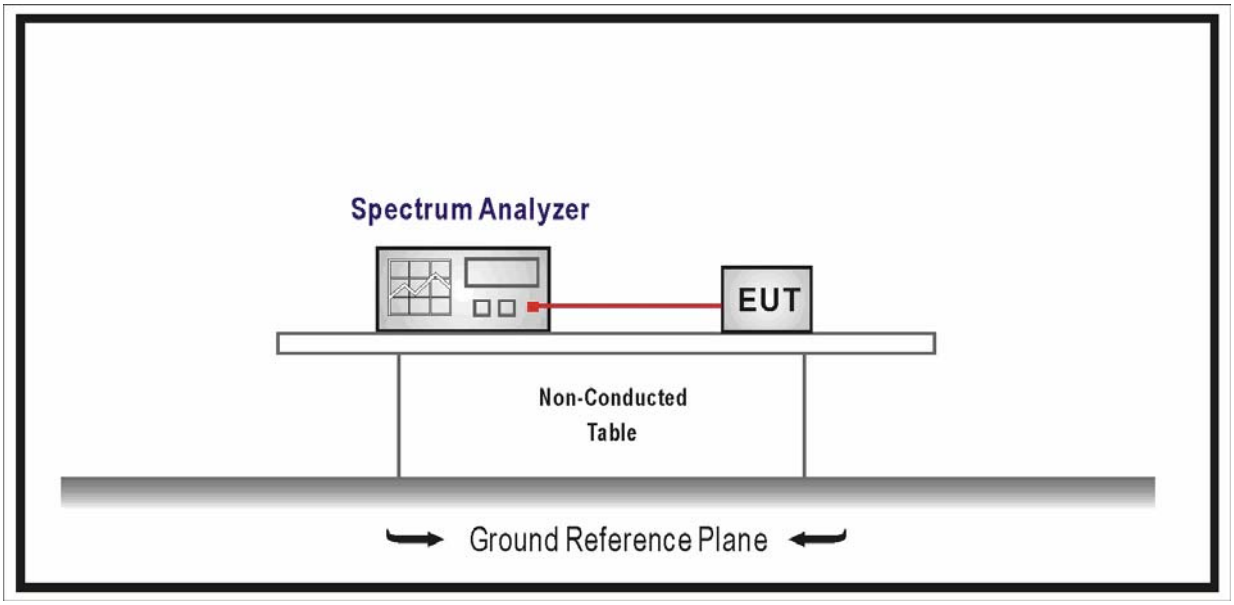
8.1. Test Equipment

Occupied Bandwidth / AC-6

Instrument	Manufacturer	Type No.	Serial No.	Cal. Date
Spectrum Analyzer	Agilent	N9020A	MY49100159	2009/05/06
Coaxial Cable	Huber+Suhner	AC6-RF	09	2008/11/25
Temperature/Humidity Meter	zhicheng	ZC1-2	QT-TH007	2009/03/30

Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

8.2. Test Setup



8.3. Limit

The minimum 6 dB bandwidth shall be at least 500 kHz.

8.4. Test Procedure

The EUT was tested according to DTS test procedure of Oct 2002 KDB558074 for compliance to FCC 47CFR 15.247 requirements.
Set RBW = 100 kHz, Span greater than RBW.

8.5. Uncertainty

The measurement uncertainty is defined as ± 1 kHz

8.6. Test Result

Product	:	802.11a/b/g/n WLAN Module
Test Item	:	6dB Occupied Bandwidth
Test Site	:	AC-6
Test Mode	:	Mode 1: Transmit by 802.11b (Chain 0)

Channel No.	Frequency (MHz)	Occupied Bandwidth (kHz)	Limit (kHz)	Result
01	2412	10130	500	Pass
06	2437	10130	500	Pass
11	2462	10155	500	Pass

Channel 01 (2412MHz)

Channel 06 (2437MHz)

Channel 11 (2462MHz)

Product	:	802.11a/b/g/n WLAN Module
Test Item	:	6dB Occupied Bandwidth
Test Site	:	AC-6
Test Mode	:	Mode 2: Transmit by 802.11g (Chain 0)

Channel No.	Frequency (MHz)	Occupied Bandwidth (kHz)	Limit (kHz)	Result
01	2412	16258	500	Pass
06	2437	16483	500	Pass
11	2462	16508	500	Pass

Channel 01 (2412MHz)

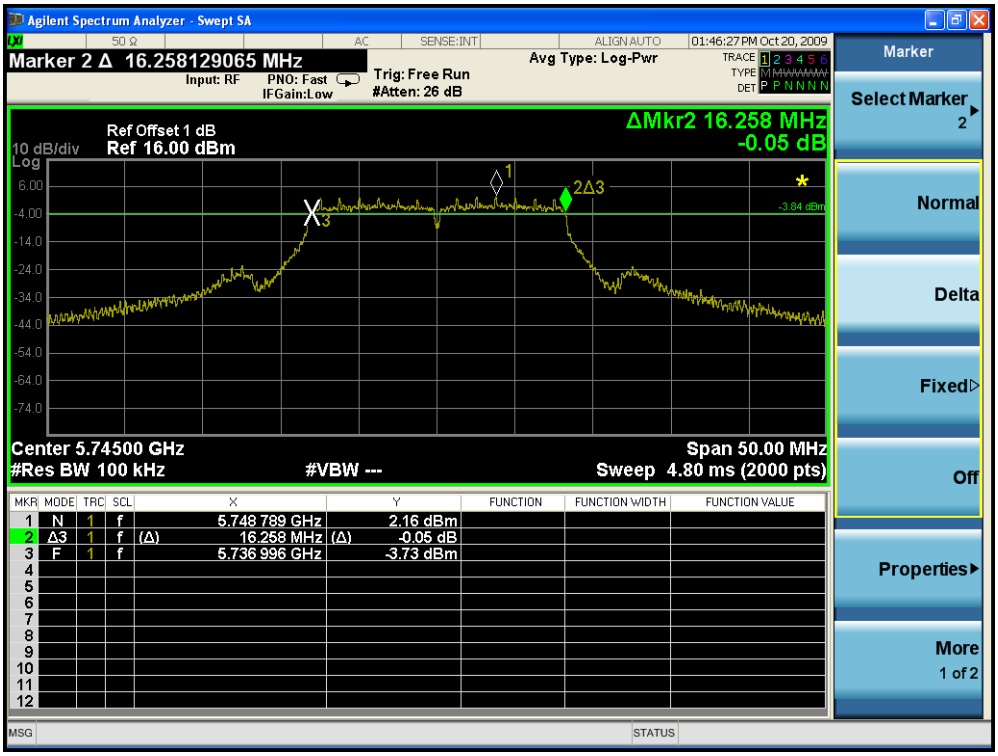
Channel 06 (2437MHz)

Channel 11 (2462MHz)

Product	:	802.11a/b/g/n WLAN Module
Test Item	:	6dB Occupied Bandwidth
Test Site	:	AC-6
Test Mode	:	Mode 3: Transmit by 802.11a (Chain 0)

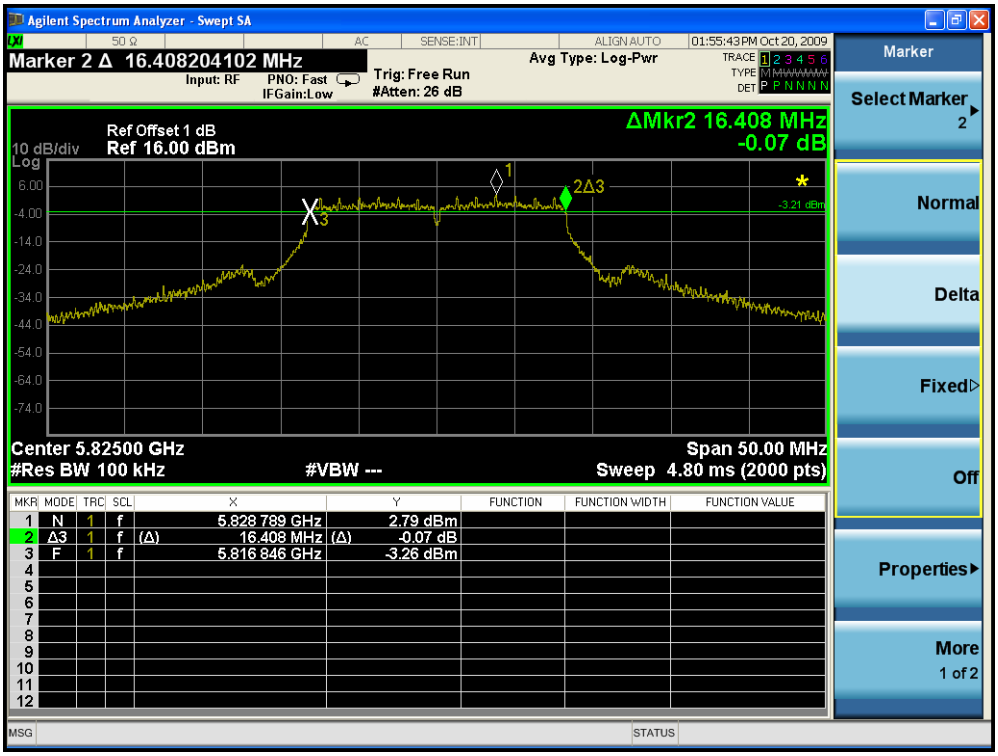
Channel No.	Frequency (MHz)	Occupied Bandwidth (kHz)	Limit (kHz)	Result
149	5745	16258	500	Pass
157	5785	16433	500	Pass
165	5825	16408	500	Pass

Channel 149 (5745MHz)



Channel 157 (5785MHz)

Channel 165 (5825MHz)



Product	:	802.11a/b/g/n WLAN Module
Test Item	:	6dB Occupied Bandwidth
Test Site	:	AC-6
Test Mode	:	Mode 4: Transmit by 802.11n (20MHz) (Chain 0)

Channel No.	Frequency (MHz)	Occupied Bandwidth (kHz)	Limit (kHz)	Result
01	2412	16958	500	Pass
06	2437	16933	500	Pass
11	2462	16733	500	Pass
149	5745	17484	500	Pass
157	5785	17434	500	Pass
165	5825	17609	500	Pass

Channel 01 (2412MHz)