

FC

Test Report

Product Name	WLAN MODULE
Model No	CMN-851
FCC ID.	CKECMN851

Applicant	Japan Radio Co.,Ltd.
Address	1011 SW Klickitat Way, Suite 201B, Seattle, WA 98134 U.S.A.

Date of Receipt	Aug. 15, 2011
Issue Date	Sep. 29, 2011
Report No.	118318R-RFUSP42V01
Report Version	V1.0

The test results relate only to the samples tested.

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

Test Report Certification

Issue Date: Sep. 29, 2011

Report No.: 118318R-RFUSP42V01



Accredited by NIST (NVLAP)

NVLAP Lab Code: 200533-0

Product Name	WLAN MODULE
Applicant	Japan Radio Co.,Ltd.
Address	1011 SW Klickitat Way, Suite 201B, Seattle, WA 98134 U.S.A.
Manufacturer	Maintek Computer (Suzhou) Co., Ltd.
Model No.	CMN-851
EUT Rated Voltage	DC 3.3V
EUT Test Voltage	AC 120V/60Hz
Trade Name	Japan Radio Co.,Ltd.
Applicable Standard	FCC CFR Title 47 Part 15 Subpart C: 2010 ANSI C63.4: 2009
Test Result	Complied



The test results relate only to the samples tested.

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Documented By :

Genie Chang

(Senior Adm. Specialist / Genie Chang)



Tested By :

Jack Hsu

(Assistant Engineer / Jack Hsu)



Approved By :

Vincent Lin

(Manager / Vincent Lin)

Testing Laboratory

0914

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1. GENERAL INFORMATION

1.1. EUT Description

Product Name	WLAN MODULE
Trade Name	Japan Radio Co.,Ltd.
Model No.	CMN-851
FCC ID.	CKECMN851
Frequency Range	802.11b/g/n-20MHz:2412-2462MHz,802.11n-40MHz:2422-2452MHz
Number of Channels	802.11b/g/n-20MHz: 11, n-40MHz: 7
Data Speed	802.11b: 1-11Mbps, 802.11g: 6-54Mbps, 802.11n: up to 300Mbps
Channel separation	802.11b/g/n-20MHz: 5 MHz
Type of Modulation	802.11b:DSSS DBPSK, DQPSK, CCK 802.11g/n: OFDM BPSK, QPSK, 16QAM, 64QAM
Antenna Type	Chip Antenna
Antenna Gain	Refer to the table "Antenna List"
Channel Control	Auto
Host System	MFR: Ricoh Company, Ltd. / M/N: PJ WX4130N

Antenna List

No.	Manufacturer	Part No.	Peak Gain
1	TAIYO YUDEN	AH 104N2450D1	2.1dBi in 2.4GHz

Note: The antenna of EUT is conform to FCC 15.203

802.11b/g/n-20MHz Center Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 01:	2412 MHz	Channel 02:	2417 MHz	Channel 03:	2422 MHz	Channel 04:	2427 MHz
Channel 05:	2432 MHz	Channel 06:	2437 MHz	Channel 07:	2442 MHz	Channel 08:	2447 MHz
Channel 09:	2452 MHz	Channel 10:	2457 MHz	Channel 11:	2462 MHz		

802.11n-40MHz (2.4G Band) Center Working Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 03:	2422 MHz	Channel 04:	2427 MHz	Channel 05:	2432 MHz	Channel 06:	2437 MHz
Channel 07:	2442 MHz	Channel 08:	2447 MHz	Channel 09:	2452 MHz		

Note:

1. This device is a WLAN MODULE with a built-in 2.4GHz WLAN transceiver.
2. This module is "Limited Modular Approval" (LMA).
3. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.
4. Lowest and highest data rates are tested in each mode. Only worst case is shown in the report. (802.11b is 1Mbps 、802.11g is 6Mbps 、802.11n(20M-BW) is 14.4Mbps and 、802.11n(40M-BW) is 30Mbps).
5. These tests are conducted on a sample for the purpose of demonstrating compliance of 802.11b/g/n transmitter with Part 15 Subpart C Paragraph 15.247 of spread spectrum devices.

1.2. Operational Description

The EUT is a WLAN MODULE with a built-in 2.4GHz and 5GHz WLAN transceiver. This device provided four kinds of transmitting speed 1, 2, 5.5 and 11Mbps and the device of RF carrier is DBPSK, DQPSK and CCK (IEEE 802.11b). The device provided of eight kinds of transmitting speed 6, 9, 12, 18, 24, 36, 48 and 54Mbps the device of RF carrier is BPSK, QPSK, 16QAM and 64QAM (IEEE 802.11a/g).

The device provided of eight kinds of transmitting speed 14.4,28.9,43.3,57.8,86.7,115.6,130 and 144.4Mbps in 802.11n(20M-BW) mode and 30,60,90,120,180,240,270 and 300 Mbps(40M-BW) the device of RF carrier is BPSK, QPSK, 16QAM and 64QAM (IEEE 802.11n), the IEEE 802.11n is Multiple In, Multiple Out” (MIMO) technology.

The device adapts direct sequence spread spectrum modulation. The antenna provides diversity function to improve the receiving function and the antennas to support 2(Transmit) × 2(Receive) MIMO technology.

This Plug-In PC, compliant with IEEE 802.11a/b/g/n, is a high-efficiency Wireless LAN adapter. It allows your computer to connect to a wireless network and to share resources, such as files or printers without being bound to the network wires. Operation in 2.4GHz Direct Sequence Spread Spectrum (DSSS) and Orthogonal Frequency Division Multiplexing (OFDM) radio transmission, the Plug-In PC Wired Equivalent Protection (WEP) algorithm is used. In addition, its standard compliance ensures that it can communicate with any IEEE 802.11a/b/g/n network.

The Device no radar detection and no ad-hoc operation in the DFS band, another information please refer to users manual.

Test Mode:	Mode 1: Transmit (802.11b 1Mbps)
	Mode 2: Transmit (802.11g 6Mbps)
	Mode 3: Transmit - 802.11n-20BW_13Mbps(2.4G Band)
	Mode 4: Transmit - 802.11n-40BW_27Mbps(2.4G Band)

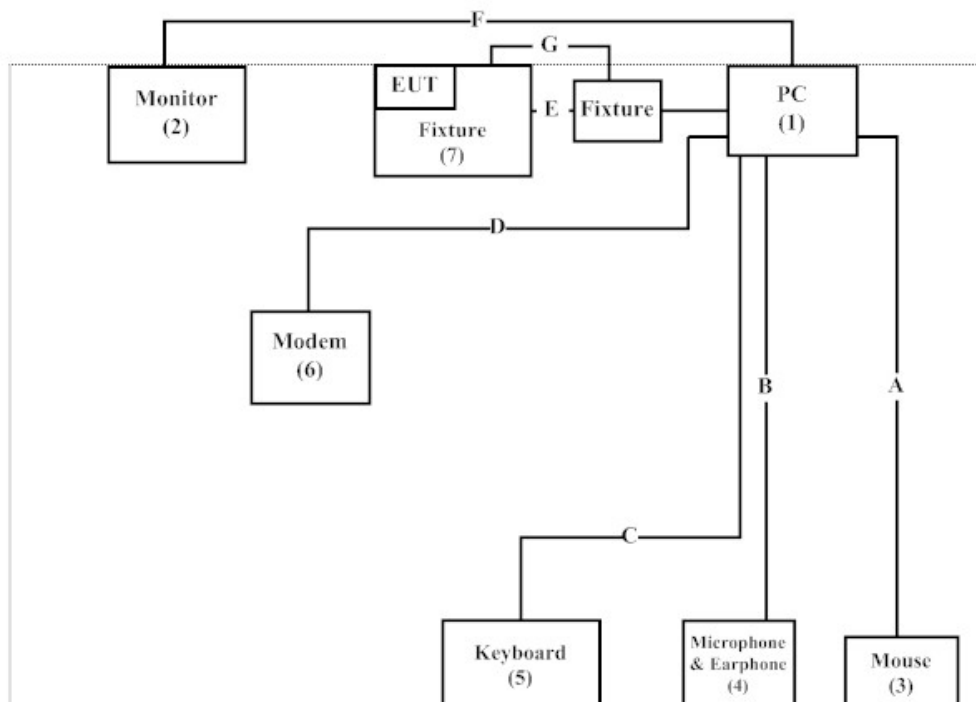
1.3. Tested System Details

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

Product	Manufacturer	Model No.	Serial No.	Power Cord
(1) PC	Hp Compaq	dc7800p	JPA83100ZW	Non-Shielded, 1.8m
(2) Monitor	LG	W2261VT	907YHZK07373	Non-Shielded, 1.8m
(3) USB Mouse	DELL	MO56UC	G0X01JK0	N/A
(4) Microphone & Earphone	Ergotech	ET-E201	N/A	N/A
(5) Keyboard	Logitech	Y-U0009	LZ027HU	N/A
(6) Modem	ACEEX	DM-1414	0102027558	Non-Shielded, 1.8m
(7) Fixture	JRC.	N/A	N/A	N/A

Signal Cable Type	Signal cable Description
A Mouse Cable	Shielded, 1.8m
B Earphone & Microphone Cable	Non-Shielded, 1.2m
C Keyboard Cable	Shielded, 1.8m
D Modem Cable	Shielded, 1.5m
E HDMI Cable	Shielded, 1.0m
F VGA Cable	Shielded, 1.6m
G Signal Cable	Non-Shielded, 0.23m

1.4. Configuration of Tested System



1.5. EUT Exercise Software

- (1) Setup the EUT as shown in Section 1.4.
- (2) Execute “ART” program on the PC.
- (3) Configure the test mode, the test channel, and the data rate.
- (4) Press “OK” to start the continuous Transmit.
- (5) Verify that the EUT works properly.

1.6. Test Facility

Ambient conditions in the laboratory:

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	20-35
Humidity (%RH)	25-75	50-65
Barometric pressure (mbar)	860-1060	950-1000

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

Site Description: File on
Federal Communications Commission
FCC Engineering Laboratory
7435 Oakland Mills Road
Columbia, MD 21046
Registration Number: 92195



Accreditation on NVLAP
NVLAP Lab Code: 200533-0



Site Name: Quietek Corporation
Site Address: No. 5-22, 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

FCC Accreditation Number: TW1014



2. Conducted Emission

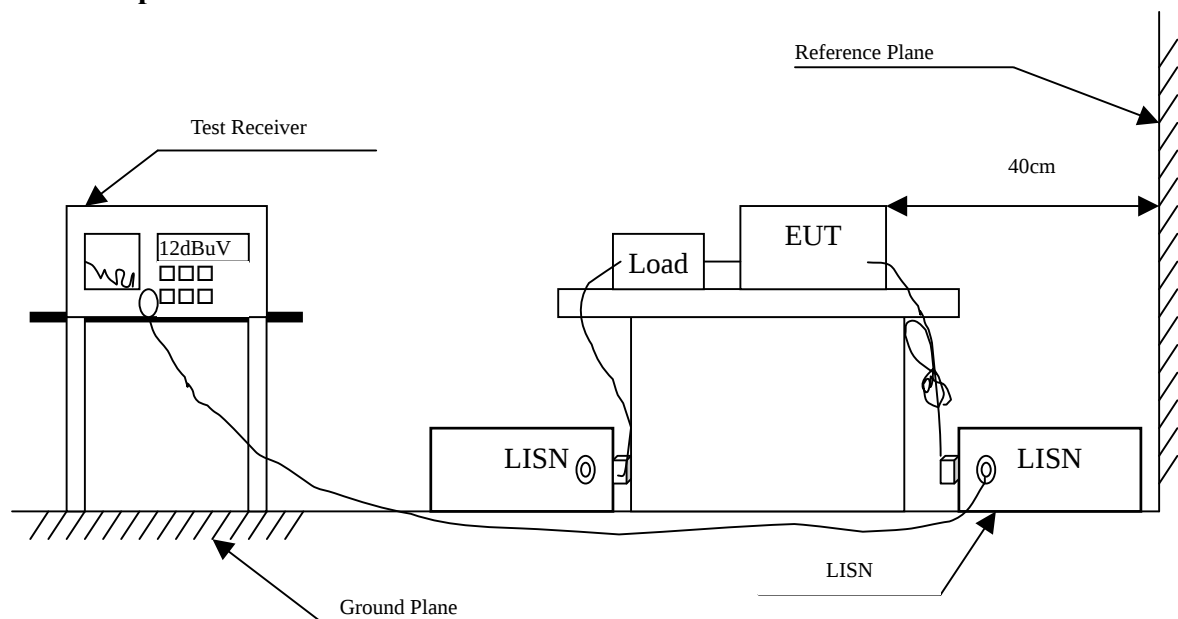
2.1. Test Equipment

	Equipment	Manufacturer	Model No. / Serial No.	Last Cal.	Remark
X	Test Receiver	R & S	ESCS 30 / 825442/018	Sep., 2011	
X	Artificial Mains Network	R & S	ENV4200 / 848411/10	Feb., 2011	Peripherals
X	LISN	R & S	ESH3-Z5 / 825562/002	Feb., 2011	EUT
	DC LISN	Schwarzbeck	8226 / 176	Mar, 2011	EUT
X	Pulse Limiter	R & S	ESH3-Z2 / 357.8810.52	Feb., 2011	
	No.1 Shielded Room				

Note:

1. All equipments are calibrated every one year.
2. The test instruments marked by "X" are used to measure the final test results.

2.2. Test Setup



2.3. Limits

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

2.4. Test Procedure

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm /50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs.)

Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 2009 on conducted measurement.

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

2.5. Uncertainty

± 2.26 dB

2.6. Test Result of Conducted Emission

Product : WLAN MODULE
 Test Item : Conducted Emission Test
 Power Line : Line 1
 Test Mode : Mode 4: Transmit - 802.11n-40BW_27Mbps(2.4G Band) (2437MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV	Margin dB	Limit dBuV
Line 1					
Quasi-Peak					
0.202	9.705	47.020	56.725	-7.789	64.514
0.271	9.662	46.460	56.122	-22.878	79.000(*)
0.337	9.650	45.040	54.690	-24.31	79.000(*)
0.423	9.642	46.560	56.202	-1.998	58.200
0.490	9.640	49.480	59.120	-19.88	79.000(*)
0.543	9.640	46.440	56.080	-16.92	73.000(*)
0.674	9.630	48.260	57.890	-15.11	73.000(*)
0.844	9.652	45.780	55.432	-0.568	56.000
2.455	9.680	42.120	51.800	-4.200	56.000
Average					
0.202	9.705	44.480	54.185	-0.329	54.514
0.271	9.662	44.070	53.732	-12.268	66.000(*)
0.337	9.650	42.170	51.820	-14.18	66.000(*)
0.423	9.642	33.880	43.522	-4.678	48.200
0.490	9.640	32.580	42.220	-23.78	66.000(*)
0.543	9.640	36.990	46.630	-13.37	60.000(*)
0.674	9.630	45.140	54.770	-5.23	60.000(*)
0.844	9.652	29.430	39.082	-6.918	46.000
2.455	9.680	33.030	42.710	-3.290	46.000

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. “ ” means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor
4. “*”:This signal is conducted emission out from test fixture, the fixture for Class A digital device and FCC part 15.107 limit.

Product : WLAN MODULE
 Test Item : Conducted Emission Test
 Power Line : Line 2
 Test Mode : Mode 4: Transmit - 802.11n-40BW_27Mbps(2.4G Band) (2437MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level	dB	dBuV
	dB	dBuV	dBuV		
Line 2					
Quasi-Peak					
0.205	9.713	46.580	56.293	-8.136	64.429
0.271	9.672	46.100	55.772	-23.228	79.000(*)
0.341	9.659	44.840	54.499	-6.044	60.543
0.478	9.640	48.200	57.840	-21.16	79.000(*)
0.541	9.640	46.920	56.560	-16.44	73.000(*)
0.673	9.650	47.460	57.110	-15.89	73.000(*)
0.845	9.673	46.100	55.773	-0.227	56.000
0.898	9.670	43.560	53.230	-2.770	56.000
2.291	9.680	43.280	52.960	-3.040	56.000
Average					
0.205	9.713	43.320	53.033	-1.396	54.429
0.271	9.672	43.550	53.222	-12.778	66.000(*)
0.341	9.659	40.130	49.789	-0.754	50.543
0.478	9.640	36.490	46.130	-19.87	66.000(*)
0.541	9.640	37.150	46.790	-13.21	60.000(*)
0.673	9.650	44.210	53.860	-6.14	60.000(*)
0.845	9.673	29.950	39.623	-6.377	46.000
0.898	9.670	27.690	37.360	-8.640	46.000
2.291	9.680	35.920	45.600	-0.400	46.000

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. “ ” means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor
4. “*”:This signal is conducted emission out from test fixture, the fixture for Class A digital device and FCC part 15.107 limit.

3. Peak Power Output

3.1. Test Equipment

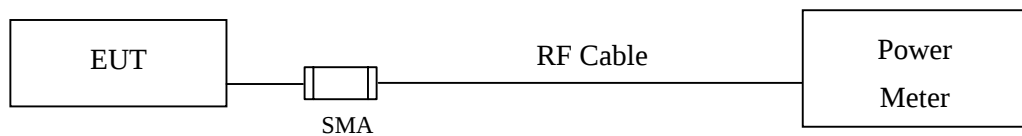
	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
X	Power Meter	Anritsu	ML2495A/6K00003357	May, 2011
X	Power Sensor	Anritsu	MA2411B/0738448	Jun, 2011

Note:

1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
2. The test instruments marked with "X" are used to measure the final test results.

3.2. Test Setup

Conducted Measurement



3.3. Limits

The maximum peak power shall be less 1 Watt.

3.4. Test Procedure

The EUT was tested according to DTS test procedure of Mar. 2005 KDB558074 for compliance to FCC 47CFR 15.247 requirements.

3.5. Uncertainty

± 1.27 dB

3.6. Test Result of Peak Power Output

Product : WLAN MODULE
 Test Item : Peak Power Output Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11b 1Mbps)

CHAIN A

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)				Peak Power	Required Limit	Result
		1	2	5.5	11	1		
		Measurement Level (dBm)						
01	2412	14.19	--	--	--	16.66	<30dBm	Pass
06	2437	13.66	13.64	13.63	13.6	16.41	<30dBm	Pass
11	2462	13.63	--	--	--	16.38	<30dBm	Pass

Note: Peak Power Output Value = Reading value on peak power meter + cable loss

Product : WLAN MODULE
 Test Item : Peak Power Output Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11g 6Mbps)

CHAIN A

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Peak Power	Required Limit	Result
		6	9	12	18	24	36	48	54	6		
		Measurement Level (dBm)										
01	2412	15.02	--	--	--	--	--	--	--	23.9	<30dBm	Pass
06	2437	14.91	14.91	14.86	14.85	14.83	14.81	14.82	14.8	23.86	<30dBm	Pass
11	2462	14.82	--	--	--	--	--	--	--	23.47	<30dBm	Pass

Note: Peak Power Output Value =Reading value on peak power meter + cable loss

Product : WLAN MODULE
 Test Item : Peak Power Output Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit - 802.11n-20BW_13Mbps(2.4G Band)

CHAIN A

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Peak Power
		6	9	12	18	24	36	48	54	6
		Measurement Level (dBm)								
01	2412	12.3	--	--	--	--	--	--	--	22.08
06	2437	11.86	11.86	11.84	11.83	11.81	11.79	11.79	11.77	21.82
11	2462	11.87	--	--	--	--	--	--	--	21.82

Note: Peak Power Output Value =Reading value on peak power meter + cable loss

CHAIN B

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Peak Power
		6	9	12	18	24	36	48	54	6
		Measurement Level (dBm)								
01	2412	11.43	--	--	--	--	--	--	--	21.46
06	2437	11.73	11.73	11.71	11.7	11.68	11.67	11.65	11.64	21.77
11	2462	11.88	--	--	--	--	--	--	--	21.87

Note: Peak Power Output Value =Reading value on peak power meter + cable loss

CHAIN A+B

Channel	Frequency (MHz)	Data Rata (Mbps)	Chain A Power (dBm)	Chain B Power (dBm)	Chain A+B Power (dBm)	Limit (dBm)	Result
1	2412	HT8	22.08	21.46	24.79	<30dBm	Pass
6	2437	HT8	21.82	21.77	24.81	<30dBm	Pass
11	2462	HT8	21.82	21.87	24.86	<30dBm	Pass

Note: Peak Power Output Value =Reading value on peak power meter + cable loss

Product : WLAN MODULE
 Test Item : Peak Power Output Data
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit - 802.11n-40BW_27Mbps(2.4G Band)

CHAIN A

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Peak Power
		6	9	12	18	24	36	48	54	6
		Measurement Level (dBm)								
3	2422	12.21	--	--	--	--	--	--	--	22.3
6	2437	12.29	12.27	12.26	12.26	12.24	12.23	12.22	12.2	22.33
9	2452	11.85	--	--	--	--	--	--	--	22.08

Note: Peak Power Output Value =Reading value on peak power meter + cable loss

CHAIN B

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Peak Power
		6	9	12	18	24	36	48	54	6
		Measurement Level (dBm)								
3	2422	11.34	--	--	--	--	--	--	--	21.96
6	2437	11.9	11.88	11.87	11.85	11.83	11.83	11.82	11.8	22.14
9	2452	11.7	--	--	--	--	--	--	--	22.12

Note: Peak Power Output Value =Reading value on peak power meter + cable loss

CHAIN A+B

Channel	Frequency (MHz)	Data Rata (Mbps)	Chain A Power (dBm)	Chain B Power (dBm)	Chain A+B Power (dBm)	Limit (dBm)	Result
3	2422	HT8	22.30	21.96	25.14	<30dBm	Pass
6	2437	HT8	22.33	22.14	25.25	<30dBm	Pass
9	2452	HT8	22.08	22.12	25.11	<30dBm	Pass

Note: Peak Power Output Value =Reading value on peak power meter + cable loss

4. Radiated Emission

4.1. Test Equipment

The following test equipment are used during the radiated emission test:

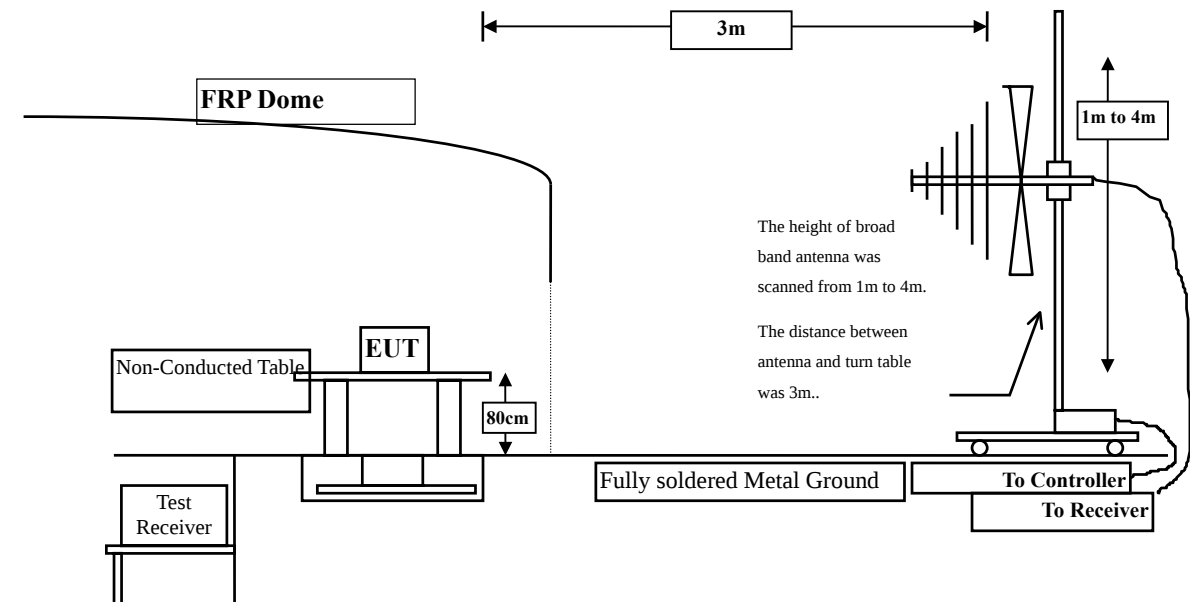
Test Site		Equipment	Manufacturer	Model No./Serial No.	Last Cal.
☒ Site # 3	X	Bilog Antenna	Schaffner Chase	CBL6112B/2673	Sep., 2011
	X	Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2011
	X	Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2011
	X	Pre-Amplifier	QTK	QTK-AMP-03 / 0003	May, 2011
	X	Pre-Amplifier	QTK	AP-180C / CHM_0906076	Sep., 2011
	X	Pre-Amplifier	MITEQ	AMF-4D-180400-45-6P/ 925975	Mar, 2011
	X	Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2011
	X	Test Receiver	R & S	ESCS 30/ 825442/018	Sep., 2011
	X	Coaxial Cable	QuietTek	QTK-CABLE/ CAB5	Feb., 2011
	X	Controller	QuietTek	QTK-CONTROLLER/ CTRL3	N/A
	X	Coaxial Switch	Anritsu	MP59B/6200265729	N/A

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

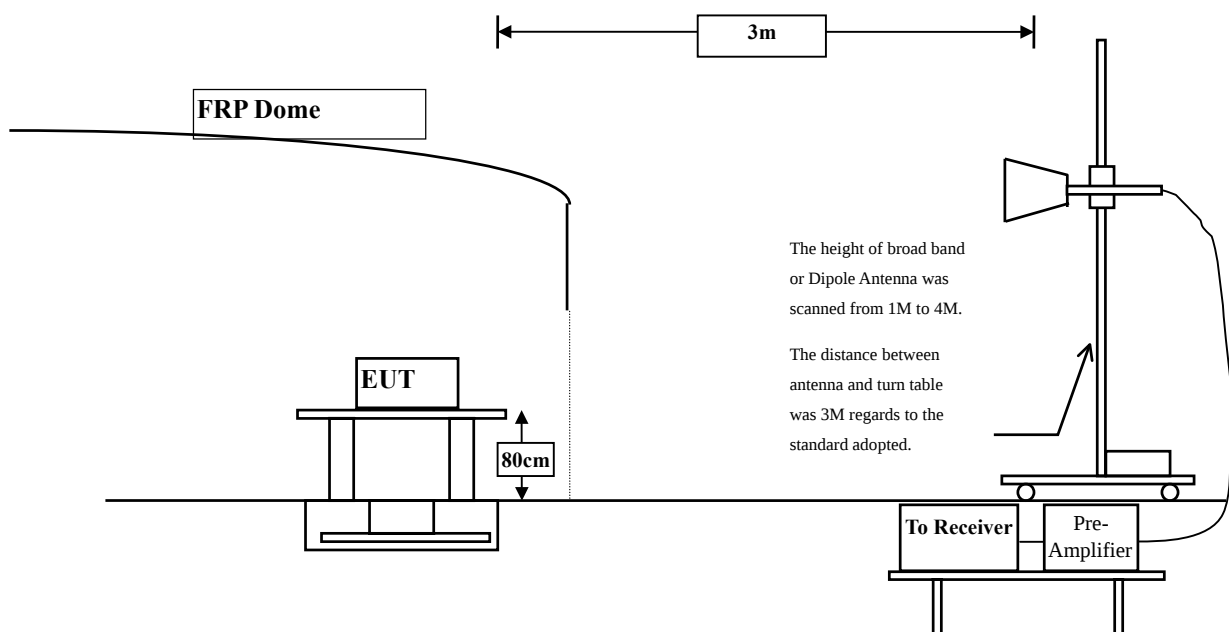
2. The test instruments marked with "X" are used to measure the final test results.

4.2. Test Setup

Radiated Emission Below 1GHz



Radiated Emission Above 1GHz



4.3. Limits

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

FCC Part 15 Subpart C Paragraph 15.209(a) Limits		
Frequency MHz	uV/m @3m	dBuV/m@3m
30-88	100	40
88-216	150	43.5
216-960	200	46
Above 960	500	54

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

4.4. Test Procedure

The EUT was setup according to ANSI C63.4, 2009 and tested according to DTS test procedure of Mar. 2005 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 between 1 meter and 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 C63.4:2009 on radiated measurement.

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

Radiated emission measurements below 1GHz are made using broadband Bilog antenna and above 1GHz are made using Horn Antennas.

The measurement is divided into the Preliminary Measurement and the Final Measurement.

The suspected frequencies are searched for in Preliminary Measurement with the measurement antenna kept pointed at the source of the emission both in azimuth and elevation, with the polarization of the antenna oriented for maximum response. The antenna is pointed at an angle towards the source of the emission, and the EUT is rotated in both height and polarization to maximize the measured emission. The emission is kept within the illumination area of the 3 dB bandwidth of the antenna.

The worst radiated emission is measured in the Open Area Test Site on the Final Measurement.

The measurement frequency range from 30MHz - 10th Harmonic of fundamental was investigated.

4.5. Uncertainty

± 3.9 dB above 1GHz

± 3.8 dB below 1GHz

4.6. Test Result of Radiated Emission

Product : WLAN MODULE
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2412MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
4824.000	3.261	39.950	43.211	-30.789	74.000
7236.000	10.650	36.790	47.440	-26.560	74.000
9648.000	13.337	36.970	50.306	-23.694	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4824.000	6.421	42.460	48.881	-25.119	74.000
7236.000	11.495	35.920	47.415	-26.585	74.000
9648.000	13.807	35.940	49.746	-24.254	74.000
Average Detector:					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : WLAN MODULE
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2437 MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4874.000	3.038	40.140	43.177	-30.823	74.000
7311.000	11.795	35.600	47.394	-26.606	74.000
9748.000	12.635	37.600	50.235	-23.765	74.000
Average					
Detector:					
--					
Vertical					
Peak Detector:					
4874.000	5.812	40.590	46.401	-27.599	74.000
7311.000	12.630	35.510	48.139	-25.861	74.000
9748.000	13.126	37.040	50.166	-23.834	74.000
Average					
Detector:					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : WLAN MODULE
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2462 MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
4924.000	2.858	41.640	44.497	-29.503	74.000
7386.000	12.127	35.800	47.928	-26.072	74.000
9848.000	12.852	36.670	49.523	-24.477	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4924.000	5.521	41.600	47.120	-26.880	74.000
7386.000	13.254	35.610	48.864	-25.136	74.000
9848.000	13.367	36.560	49.927	-24.073	74.000
Average Detector:					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : WLAN MODULE
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2412MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4824.000	3.261	46.570	49.831	-24.169	74.000
7236.000	10.650	44.750	55.400	-18.600	74.000
9648.000	13.337	35.650	48.986	-25.014	74.000
Average					
Detector:					
7236.000	10.650	25.340	35.990	-18.010	54.000
Vertical					
Peak Detector:					
4824.000	6.421	47.190	53.611	-20.389	74.000
7236.000	11.495	45.020	56.515	-17.485	74.000
9648.000	13.807	36.300	50.106	-23.894	74.000
Average					
Detector:					
7236.000	11.495	26.060	37.555	-16.445	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : WLAN MODULE
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2437 MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4874.000	3.038	45.050	48.087	-25.913	74.000
7311.000	11.795	40.470	52.264	-21.736	74.000
9748.000	12.635	36.930	49.565	-24.435	74.000
Average					
Detector:					
--					
Vertical					
Peak Detector:					
4874.000	5.812	45.990	51.801	-22.199	74.000
7311.000	12.630	40.070	52.699	-21.301	74.000
9748.000	13.126	36.870	49.996	-24.004	74.000
Average					
Detector:					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : WLAN MODULE
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2462 MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
4924.000	2.858	46.660	49.517	-24.483	74.000
7386.000	12.127	39.240	51.368	-22.632	74.000
9848.000	12.852	36.610	49.463	-24.537	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4924.000	5.521	48.170	53.690	-20.310	74.000
7386.000	13.254	38.070	51.324	-22.676	74.000
9848.000	13.367	36.670	50.037	-23.963	74.000
Average Detector:					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : WLAN MODULE
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit - 802.11n-20BW_13Mbps(2.4G Band) (2412MHz)

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

Horizontal

Peak Detector:

4924.000	5.521	48.170	53.690	-20.310	74.000
7386.000	13.254	38.070	51.324	-22.676	74.000
9848.000	13.367	36.670	50.037	-23.963	74.000

Average

Detector:

--

Vertical

Peak Detector:

4824.000	6.421	40.090	46.511	-27.489	74.000
7236.000	11.495	36.700	48.195	-25.805	74.000
9648.000	13.807	36.470	50.276	-23.724	74.000

Average

Detector:

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Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : WLAN MODULE
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit - 802.11n-20BW_13Mbps(2.4G Band) (2437 MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4874.000	3.038	37.850	40.887	-33.113	74.000
7311.000	11.795	35.460	47.254	-26.746	74.000
9748.000	12.635	36.760	49.395	-24.605	74.000
Average					
Detector:					
--					
Vertical					
Peak Detector:					
4874.000	5.812	38.310	44.121	-29.879	74.000
7311.000	12.630	35.550	48.179	-25.821	74.000
9748.000	13.126	36.830	49.956	-24.044	74.000
Average					
Detector:					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : WLAN MODULE
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit - 802.11n-20BW_13Mbps(2.4G Band) (2462 MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
4924.000	2.858	39.150	42.007	-31.993	74.000
7386.000	12.127	35.420	47.548	-26.452	74.000
9848.000	12.852	36.870	49.723	-24.277	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4924.000	5.521	40.400	45.920	-28.080	74.000
7386.000	13.254	35.100	48.354	-25.646	74.000
9848.000	13.367	36.230	49.597	-24.403	74.000
Average Detector:					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : WLAN MODULE
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit - 802.11n-40BW_27Mbps(2.4G Band) (2422MHz)

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

Horizontal

Peak Detector:

4844.000	3.171	37.640	40.811	-33.189	74.000
7266.000	11.162	37.120	48.282	-25.718	74.000
9688.000	12.964	37.220	50.185	-23.815	74.000

Average

Detector:

--

Vertical

Peak Detector:

4844.000	6.178	39.310	45.488	-28.512	74.000
7266.000	11.982	35.900	47.882	-26.118	74.000
9688.000	13.507	37.410	50.918	-23.082	74.000

Average

Detector:

--

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : WLAN MODULE
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit - 802.11n-40BW_27Mbps(2.4G Band) (2437 MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4874.000	3.038	37.130	40.167	-33.833	74.000
7311.000	11.795	35.270	47.064	-26.936	74.000
9748.000	12.635	36.470	49.105	-24.895	74.000
Average					
Detector:					
--					
Vertical					
Peak Detector:					
4874.000	5.812	38.160	43.971	-30.029	74.000
7311.000	12.630	35.470	48.099	-25.901	74.000
9748.000	13.126	36.750	49.876	-24.124	74.000
Average					
Detector:					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : WLAN MODULE
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit - 802.11n-40BW_27Mbps(2.4G Band) (2452 MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4924.000	2.858	38.320	41.177	-32.823	74.000
7386.000	12.127	35.850	47.978	-26.022	74.000
9848.000	12.852	36.890	49.743	-24.257	74.000
Average					
Detector:					
--					
Vertical					
Peak Detector:					
4924.000	5.521	37.640	43.160	-30.840	74.000
7386.000	13.254	34.890	48.144	-25.856	74.000
9848.000	13.367	36.400	49.767	-24.233	74.000
Average					
Detector:					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : WLAN MODULE
Test Item : General Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2437 MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
100.325	-7.150	46.192	39.042	-4.458	43.500
398.600	-2.900	41.552	38.652	-7.348	46.000
507.725	-1.525	36.856	35.331	-10.669	46.000
672.625	2.190	33.353	35.543	-10.457	46.000
832.675	3.440	34.154	37.594	-8.406	46.000
932.100	3.600	31.172	34.772	-11.228	46.000
Vertical					
73.650	-14.630	50.348	35.718	-4.282	40.000
151.250	-9.890	48.161	38.271	-5.229	43.500
255.525	-5.370	42.285	36.915	-9.085	46.000
505.300	-3.000	38.604	35.604	-10.396	46.000
665.350	0.020	38.496	38.516	-7.484	46.000
832.675	2.550	36.895	39.445	-6.555	46.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : WLAN MODULE
 Test Item : General Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2437 MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
151.250	-16.170	49.218	33.048	-10.452	43.500
398.600	-2.900	41.608	38.708	-7.292	46.000
507.725	-1.525	35.971	34.446	-11.554	46.000
699.300	1.890	35.428	37.318	-8.682	46.000
847.225	3.405	35.841	39.246	-6.754	46.000
932.100	3.600	30.767	34.367	-11.633	46.000
Vertical					
93.050	-9.550	46.520	36.970	-6.530	43.500
224.000	-4.450	41.762	37.312	-8.688	46.000
507.725	-2.935	39.578	36.643	-9.357	46.000
665.350	0.020	37.033	37.053	-8.947	46.000
832.675	2.550	36.786	39.336	-6.664	46.000
915.125	4.490	31.186	35.676	-10.324	46.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : WLAN MODULE
 Test Item : General Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit - 802.11n-20BW_13Mbps(2.4G Band) (2437 MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
100.325	-7.150	45.927	38.777	-4.723	43.500
253.100	-9.650	41.823	32.173	-13.827	46.000
398.600	-2.900	41.394	38.494	-7.506	46.000
592.600	2.660	31.034	33.694	-12.306	46.000
699.300	1.890	34.627	36.517	-9.483	46.000
847.225	3.405	34.961	38.366	-7.634	46.000
Vertical					
37.275	-9.445	47.403	37.958	-2.042	40.000
214.300	-4.340	42.266	37.926	-5.574	43.500
507.725	-2.935	38.629	35.694	-10.306	46.000
752.650	0.950	37.585	38.535	-7.465	46.000
844.800	2.890	35.985	38.875	-7.125	46.000
932.100	4.550	31.467	36.017	-9.983	46.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : WLAN MODULE
 Test Item : General Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit - 802.11n-40BW_27Mbps(2.4G Band) (2437 MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
100.325	-7.150	45.643	38.493	-5.007	43.500
299.175	-9.470	44.957	35.487	-10.513	46.000
398.600	-2.900	40.179	37.279	-8.721	46.000
507.725	-1.525	36.357	34.832	-11.168	46.000
699.300	1.890	35.247	37.137	-8.863	46.000
847.225	3.405	34.482	37.887	-8.113	46.000
Vertical					
54.250	-16.860	51.890	35.030	-4.970	40.000
151.250	-9.890	50.488	40.598	-2.902	43.500
236.125	-4.565	41.949	37.384	-8.616	46.000
500.450	-3.140	38.481	35.341	-10.659	46.000
665.350	0.020	35.620	35.640	-10.360	46.000
832.675	2.550	36.021	38.571	-7.429	46.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

5. RF antenna conducted test

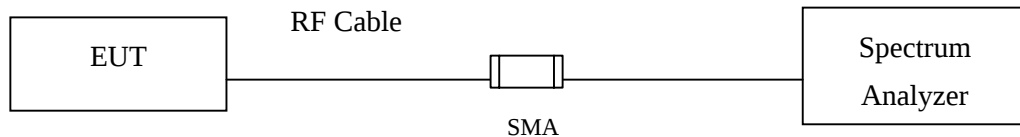
5.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2011
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2011
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2011

- Note:
1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
 2. The test instruments marked with “X” are used to measure the final test results.

5.2. Test Setup

RF antenna Conducted Measurement:



5.3. Limits

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

5.4. Test Procedure

The EUT was tested according to DTS test procedure of Mar. 2005 KDB558074 for compliance to FCC 47CFR 15.247 requirements.

Set RBW = 100 kHz, Set VBW > RBW, scan up through 10th harmonic.

5.5. Uncertainty

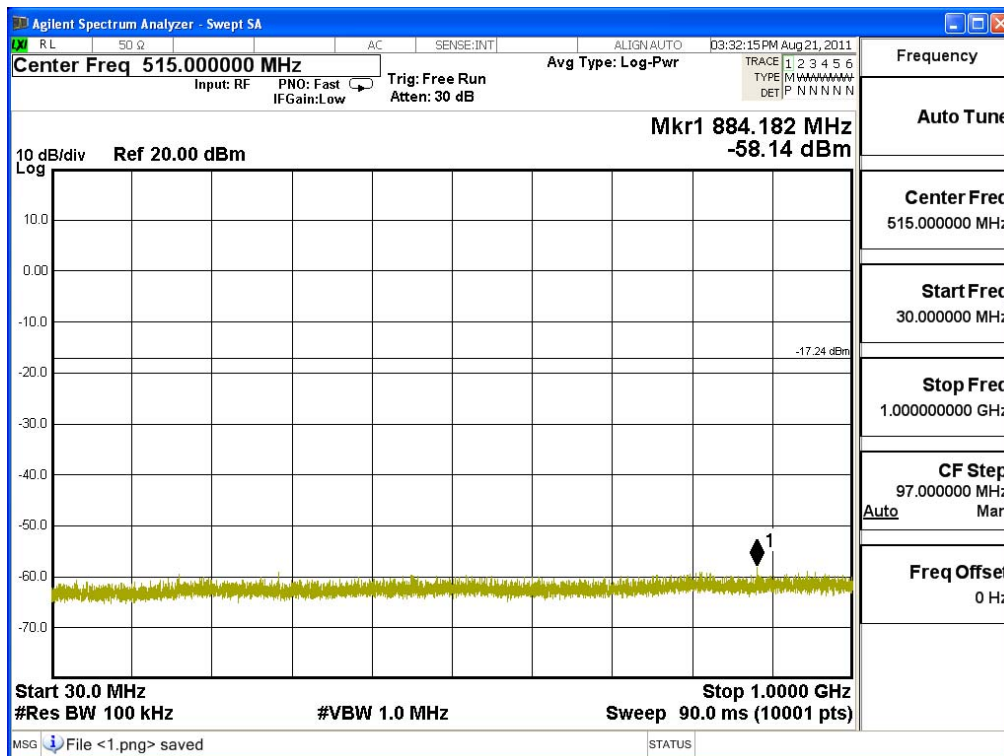
The measurement uncertainty

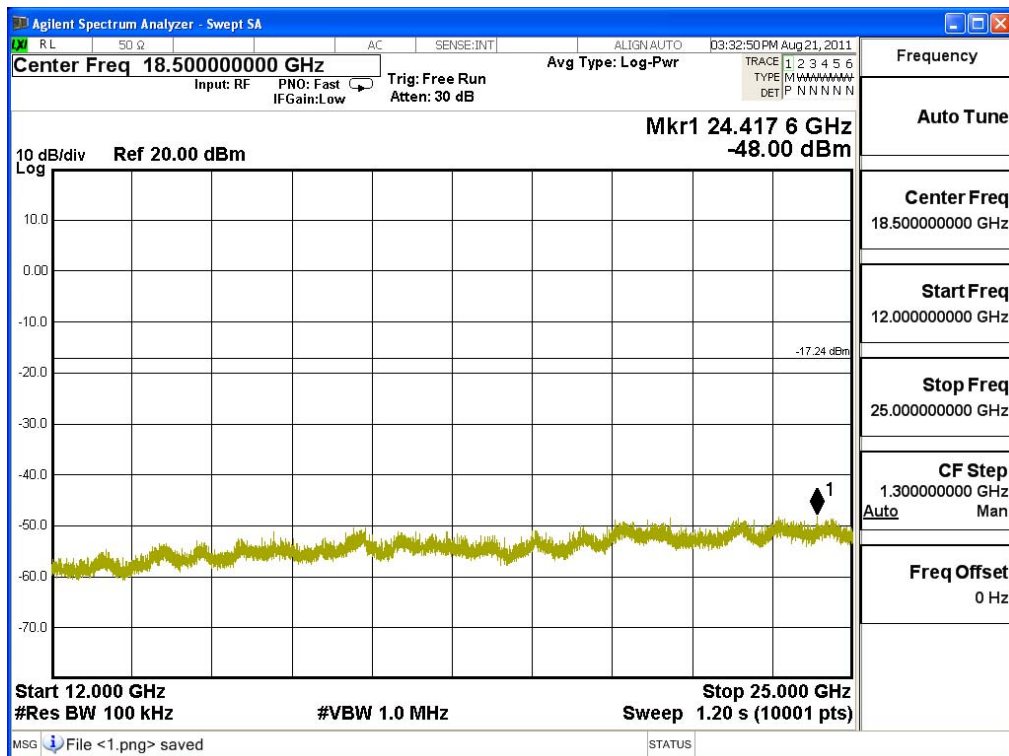
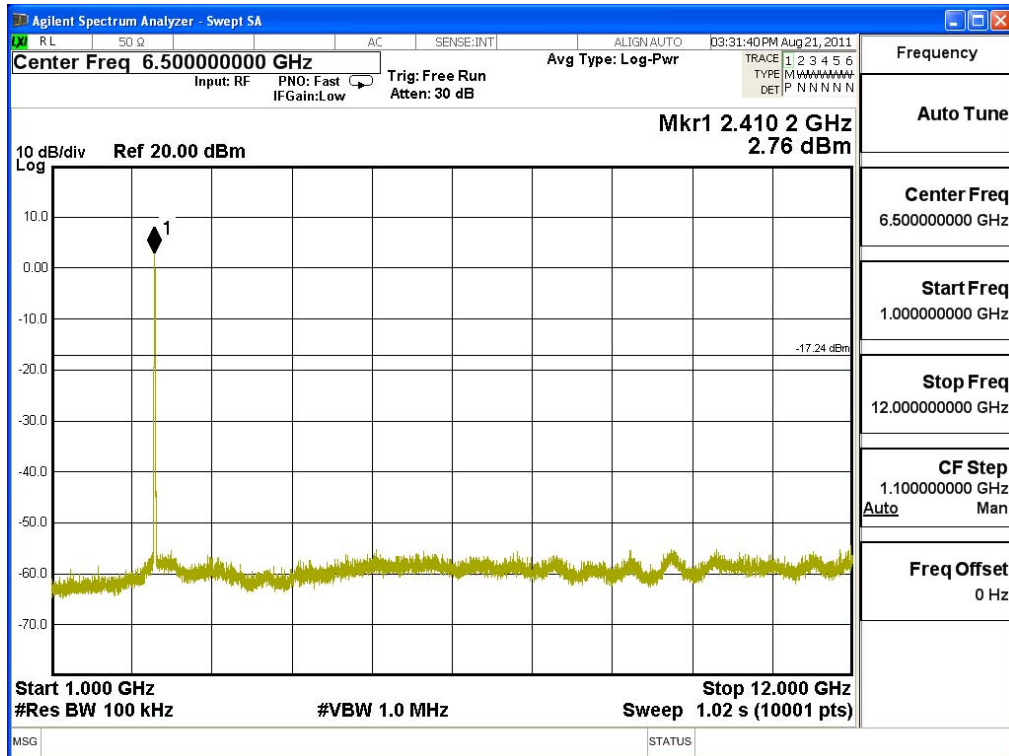
Conducted is defined as $\pm 1.27\text{dB}$

5.6. Test Result of RF antenna conducted test

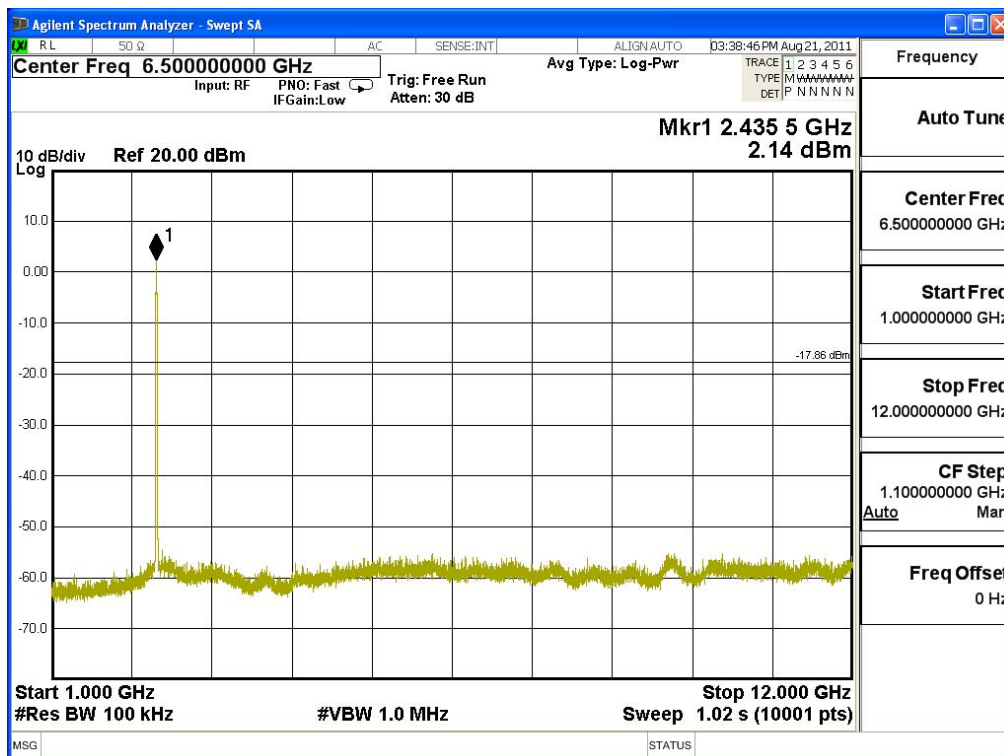
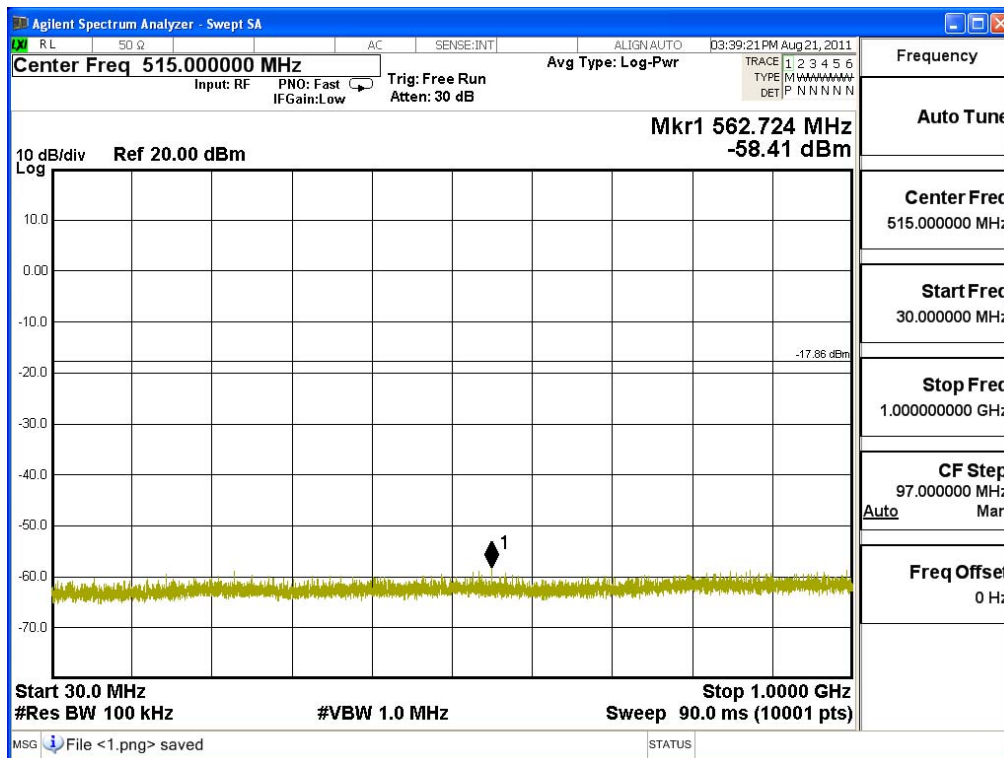
Product : WLAN MODULE
 Test Item : RF antenna conducted test
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11b 1Mbps)

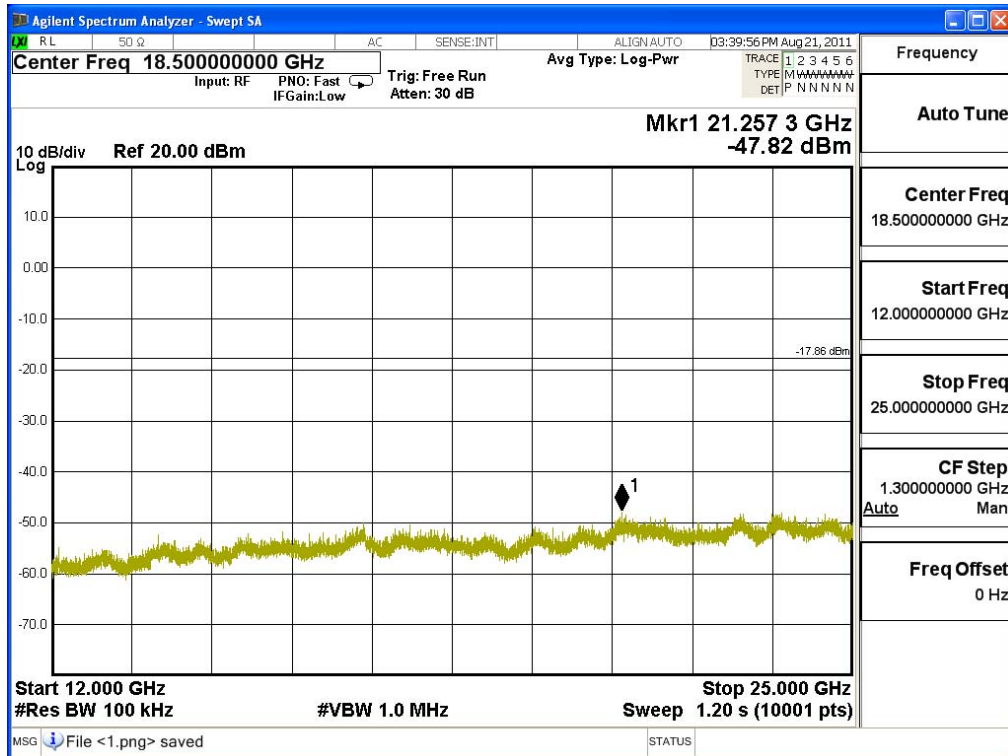
Channel 01 (2412MHz) 30MHz-25GHz-Chain A



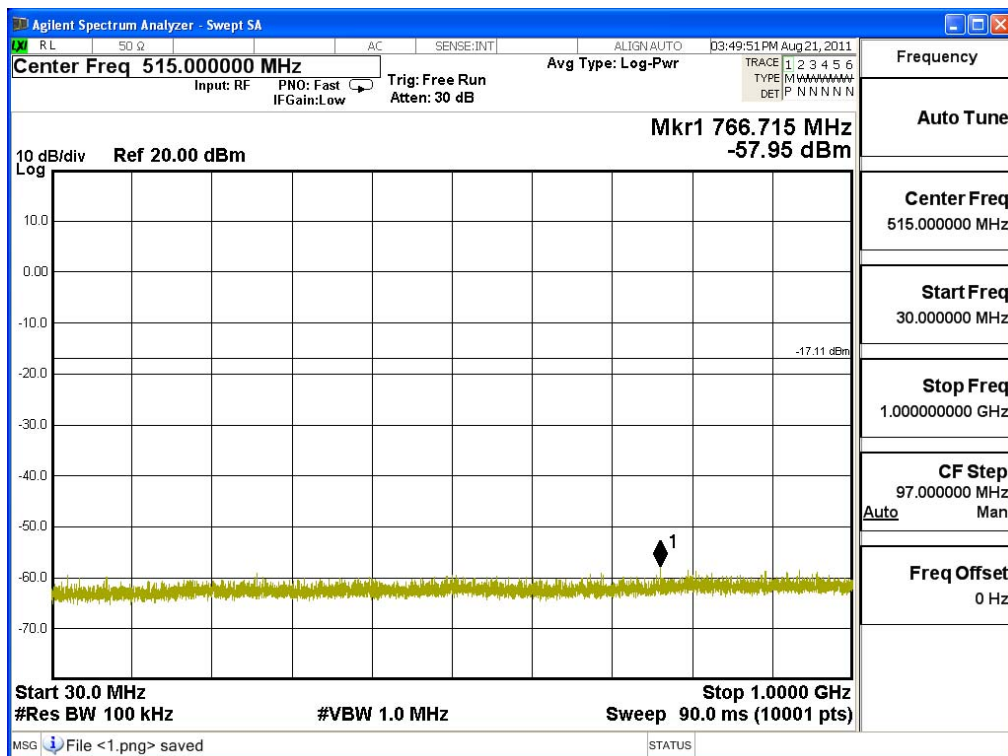


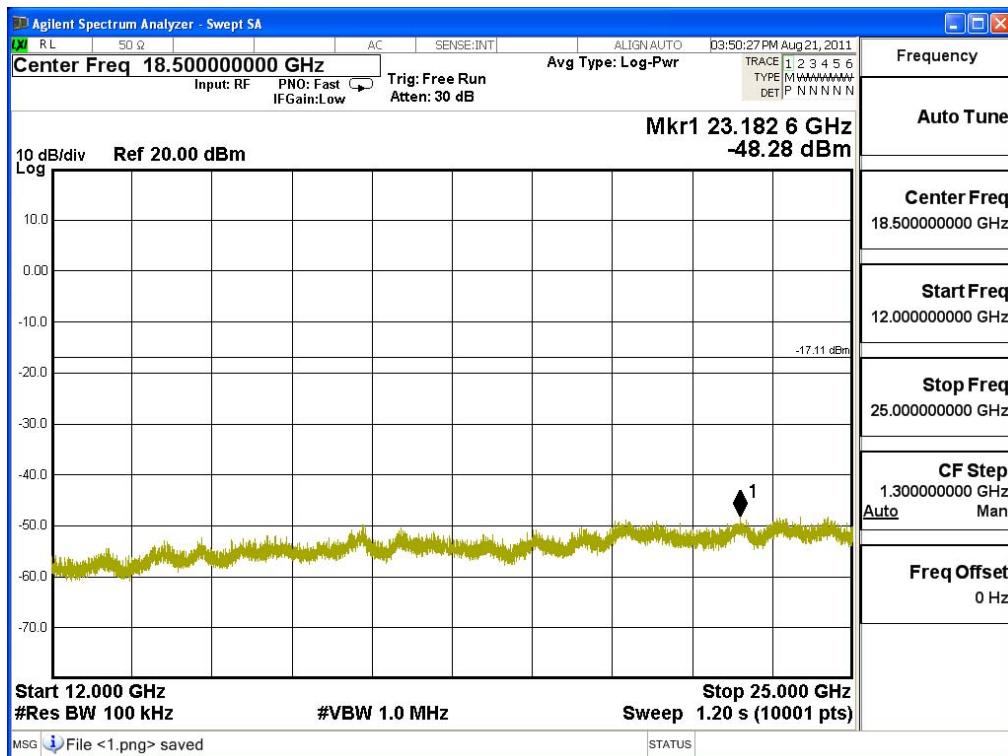
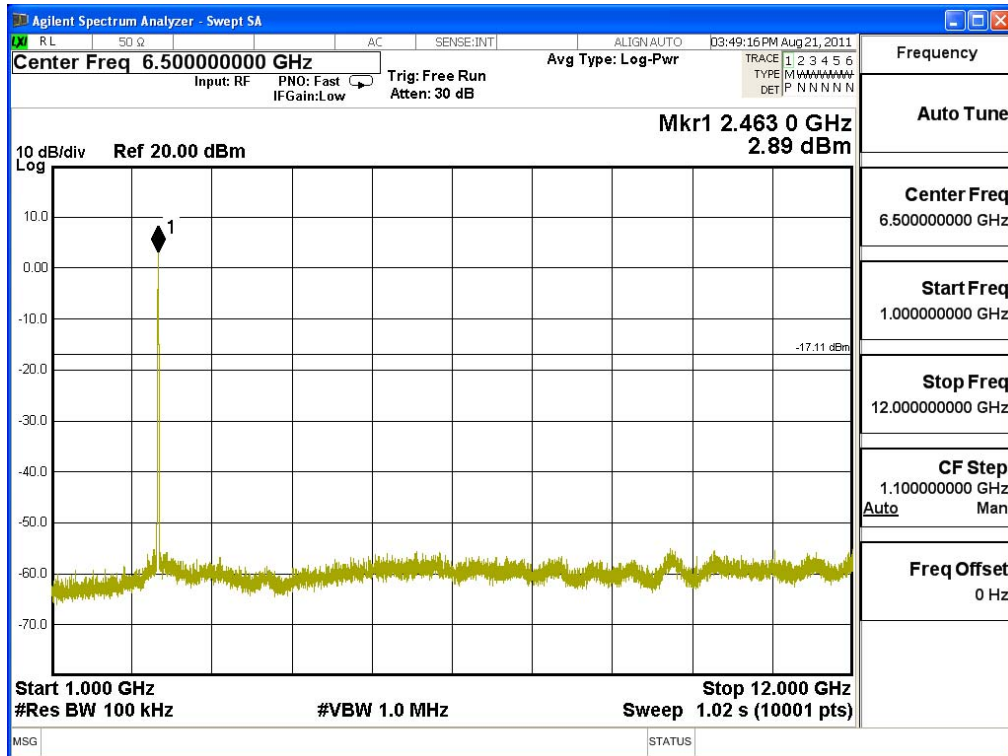
Channel 06 (2437MHz) 30MHz -25GHz-Chain A





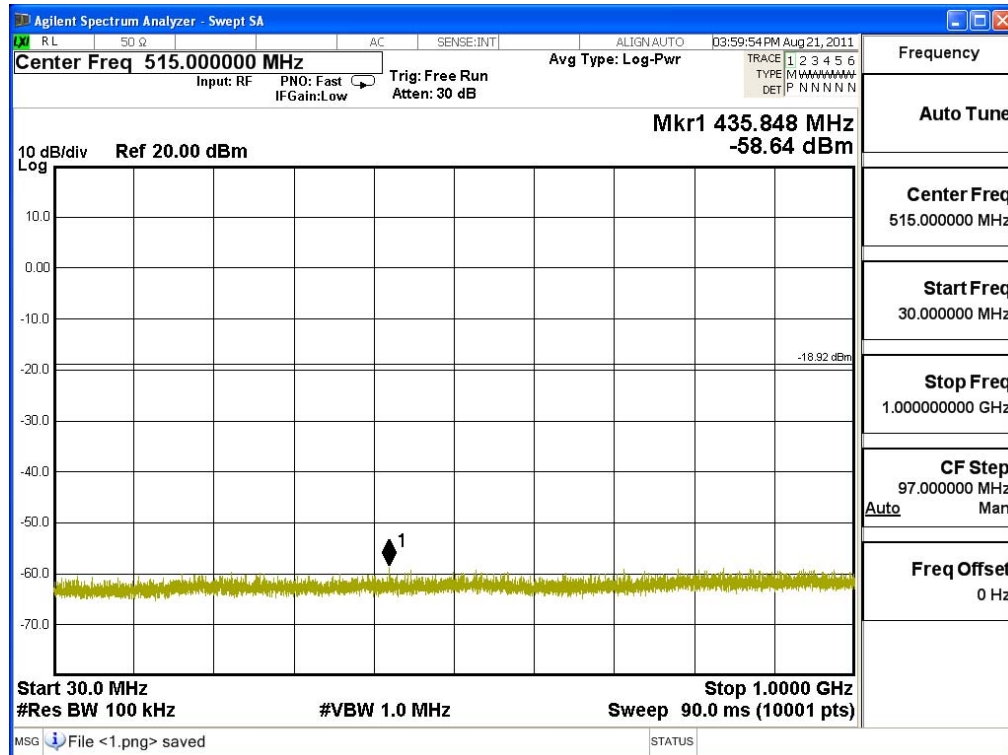
Channel 11 (2462MHz) 30MHz -25GHz-Chain A

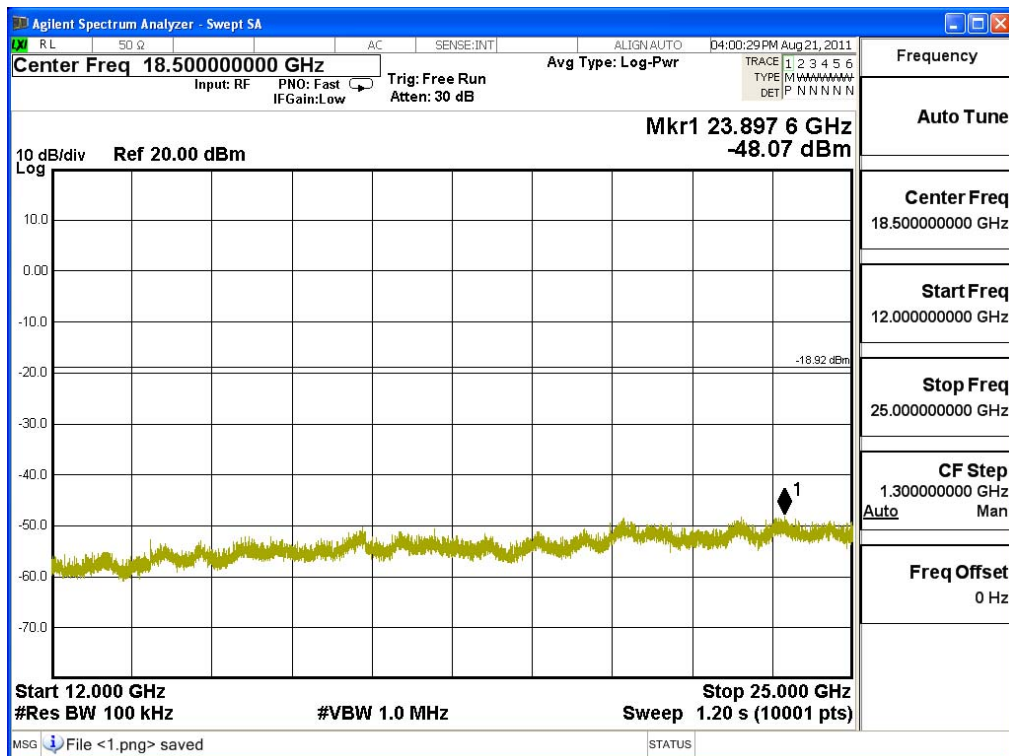
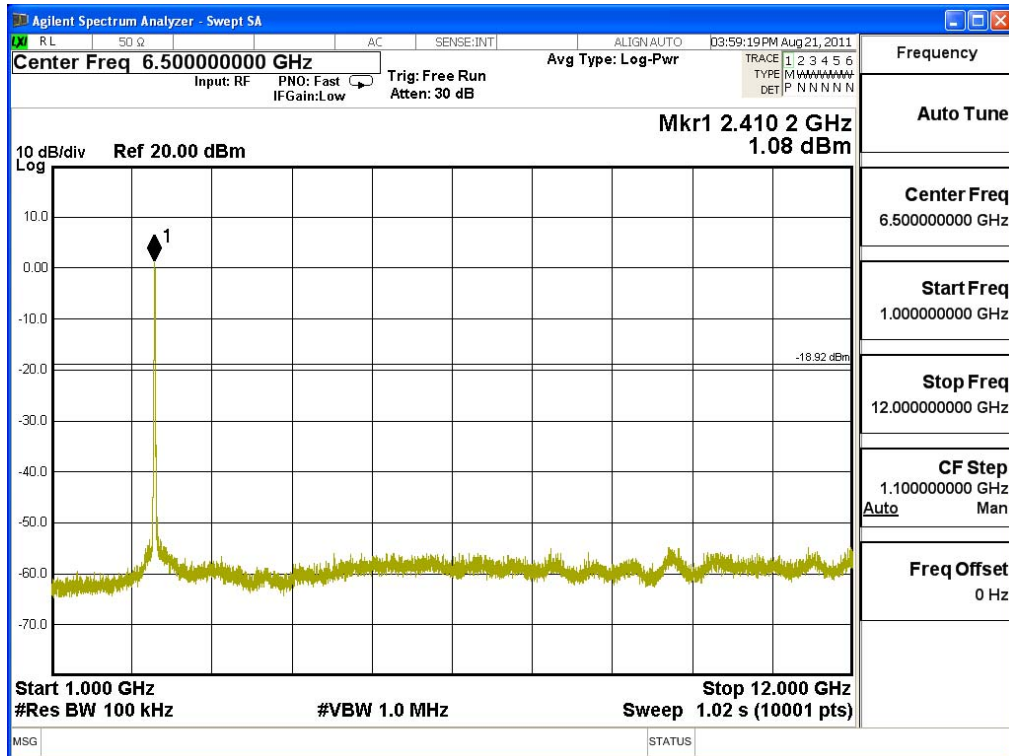




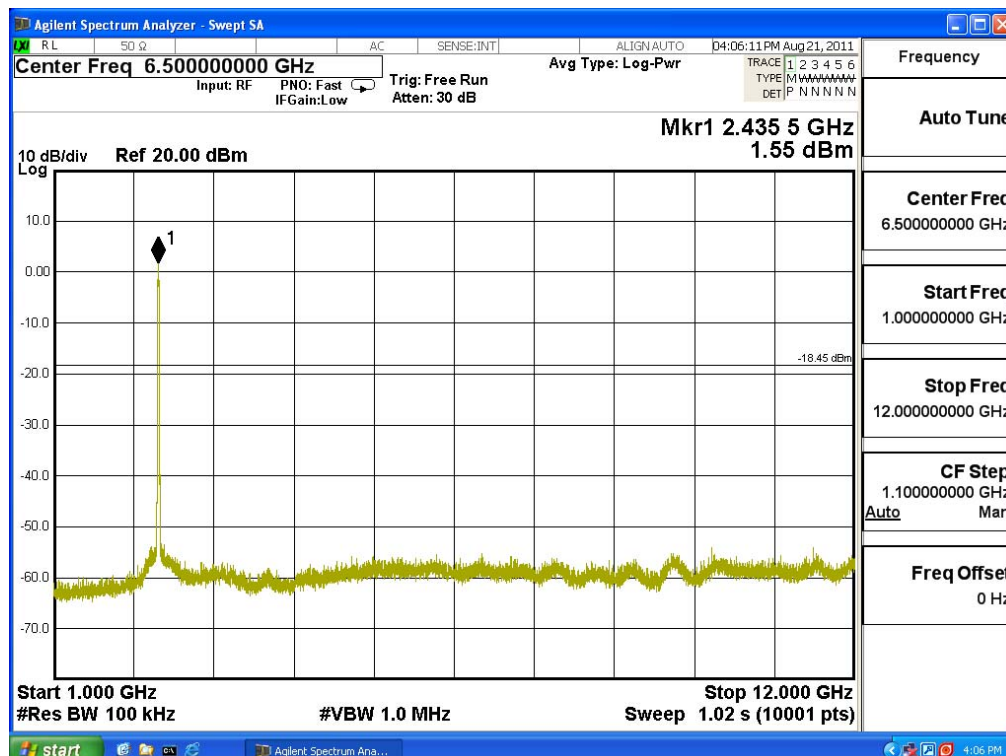
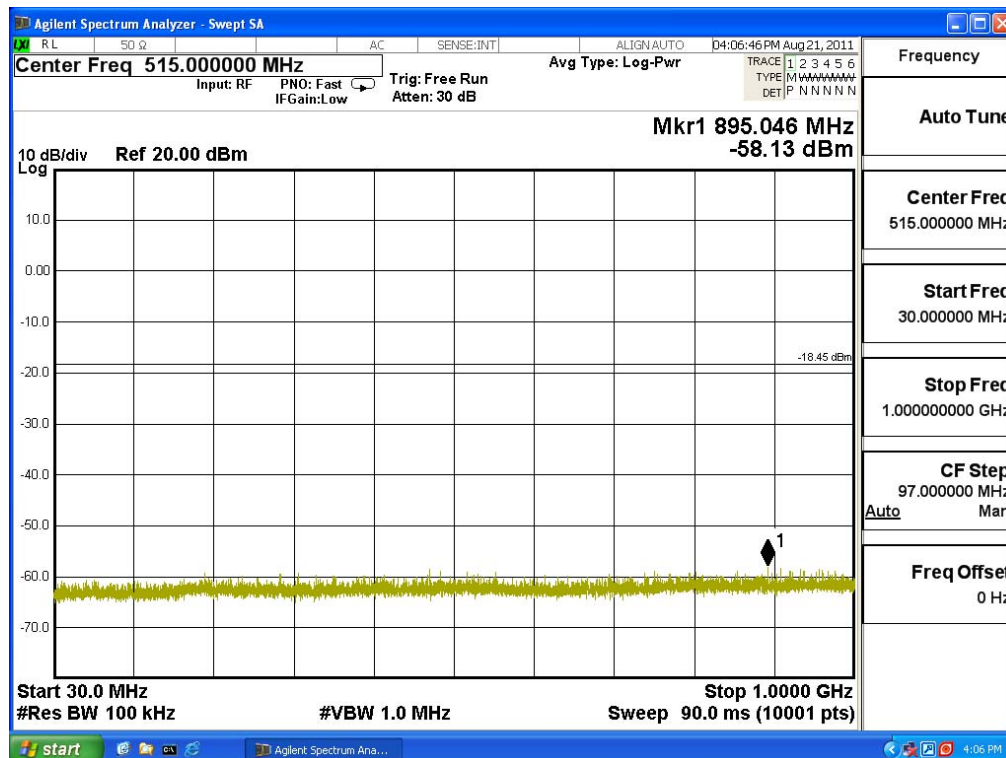
Product : WLAN MODULE
 Test Item : RF Antenna Conducted Spurious
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11g 6Mbps)

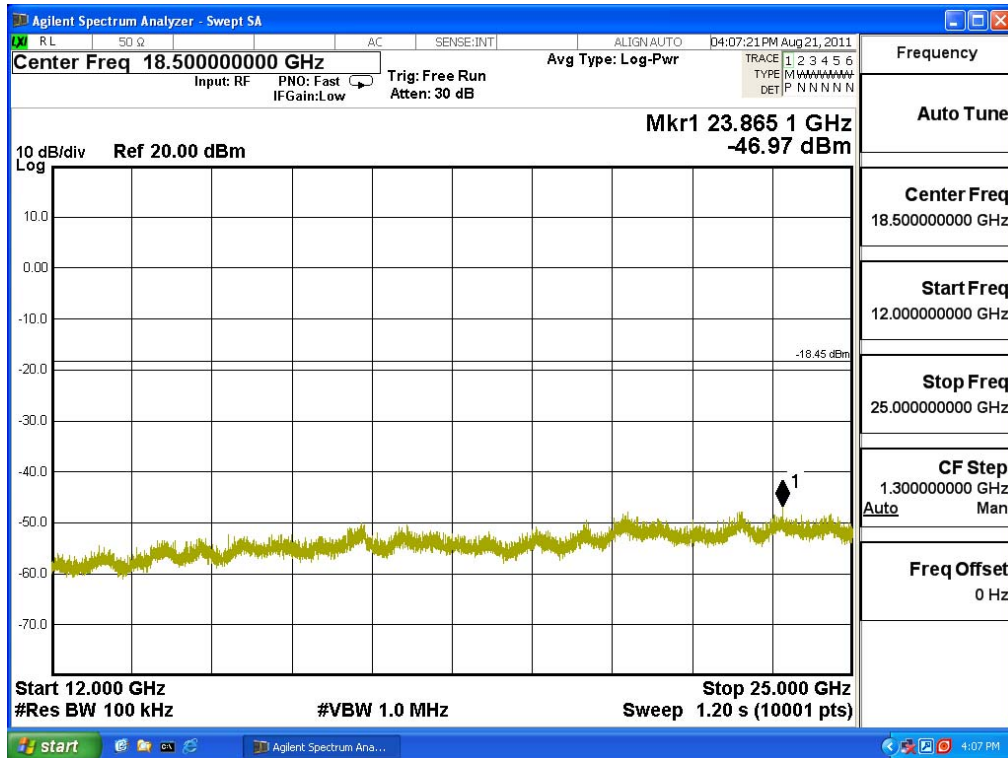
Channel 01 (2412MHz) 30MHz -25GHz-Chain A



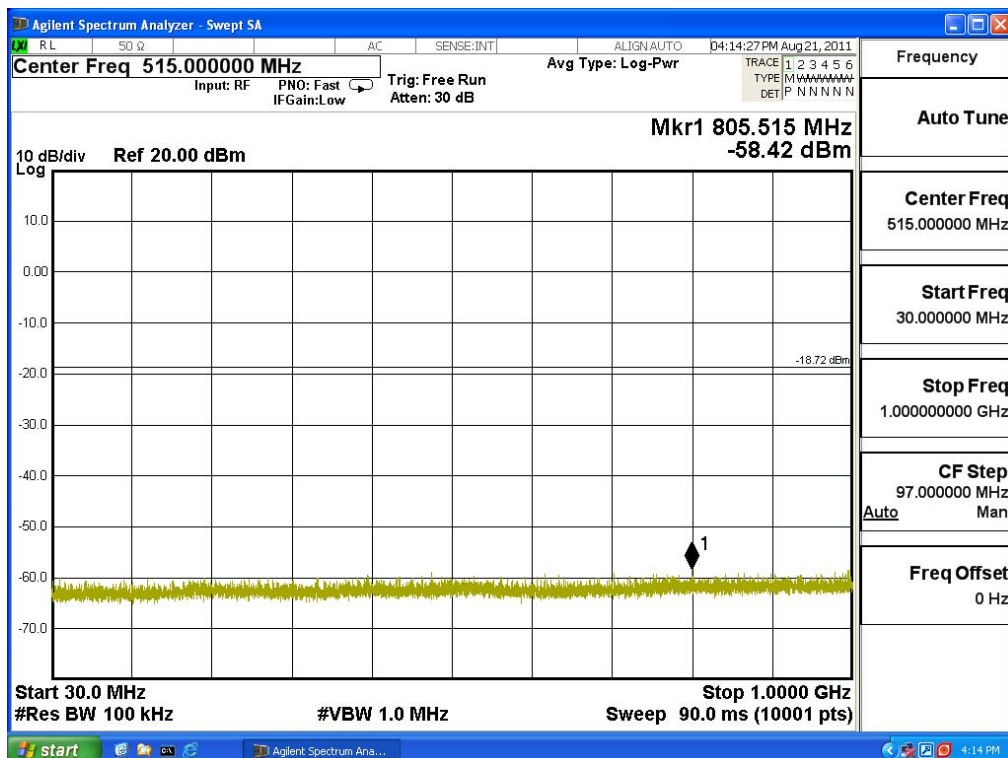


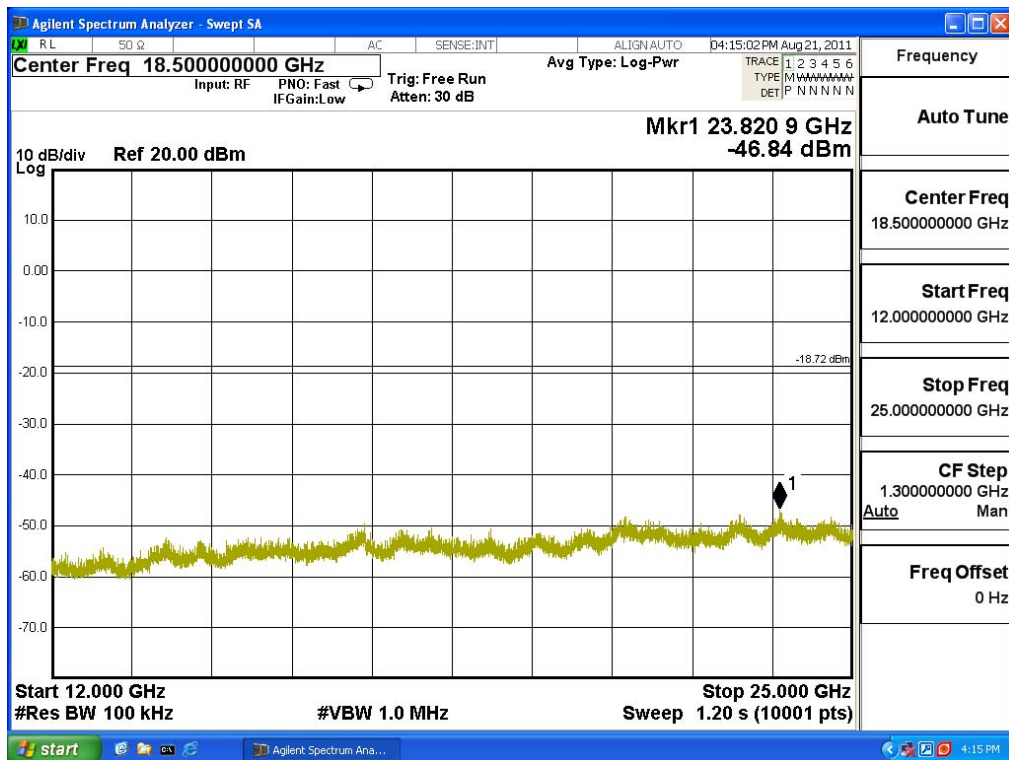
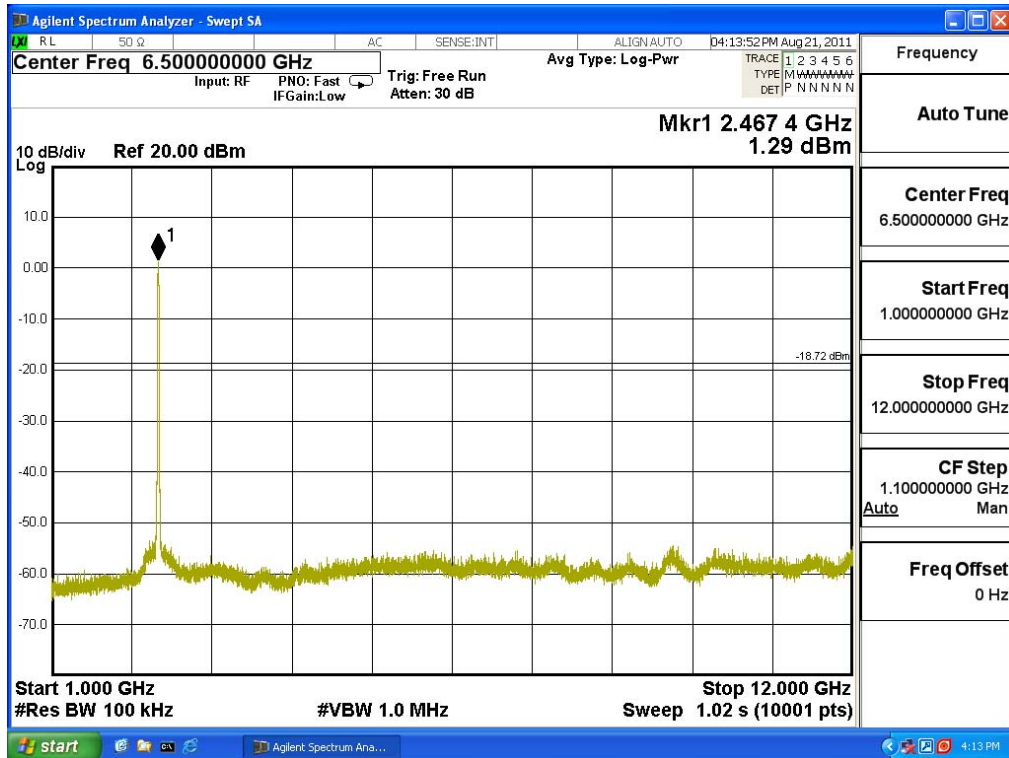
Channel 06 (2437MHz) 30MHz -25GHz-Chain A





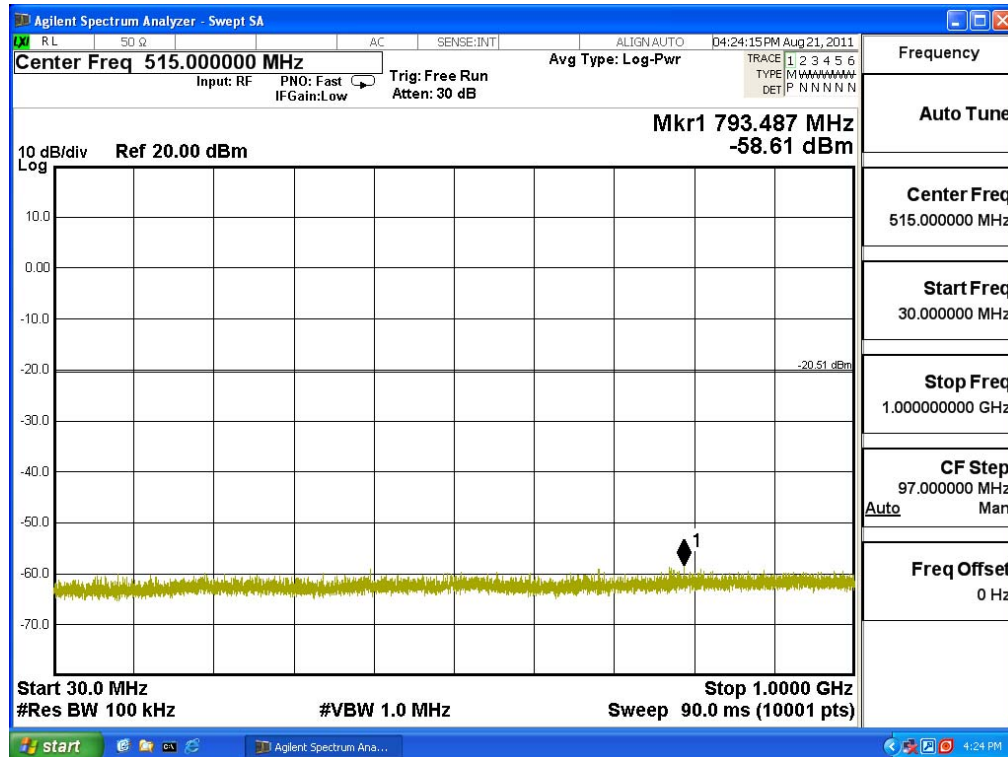
Channel 11 (2462MHz) 30MHz -25GHz-Chain A

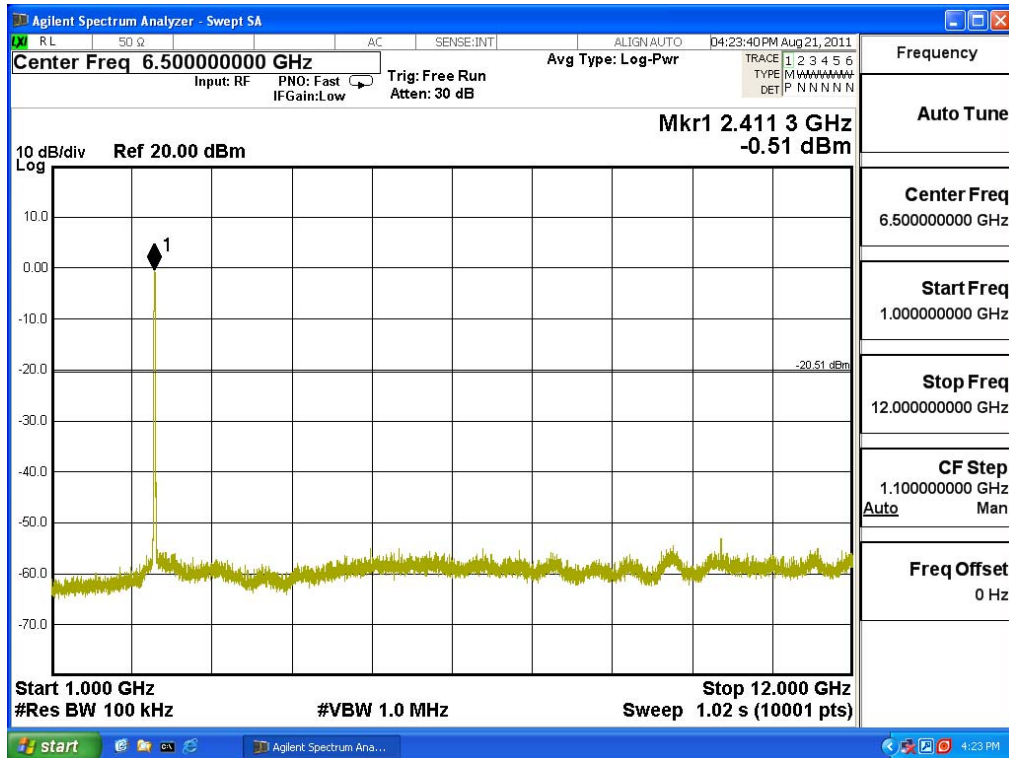




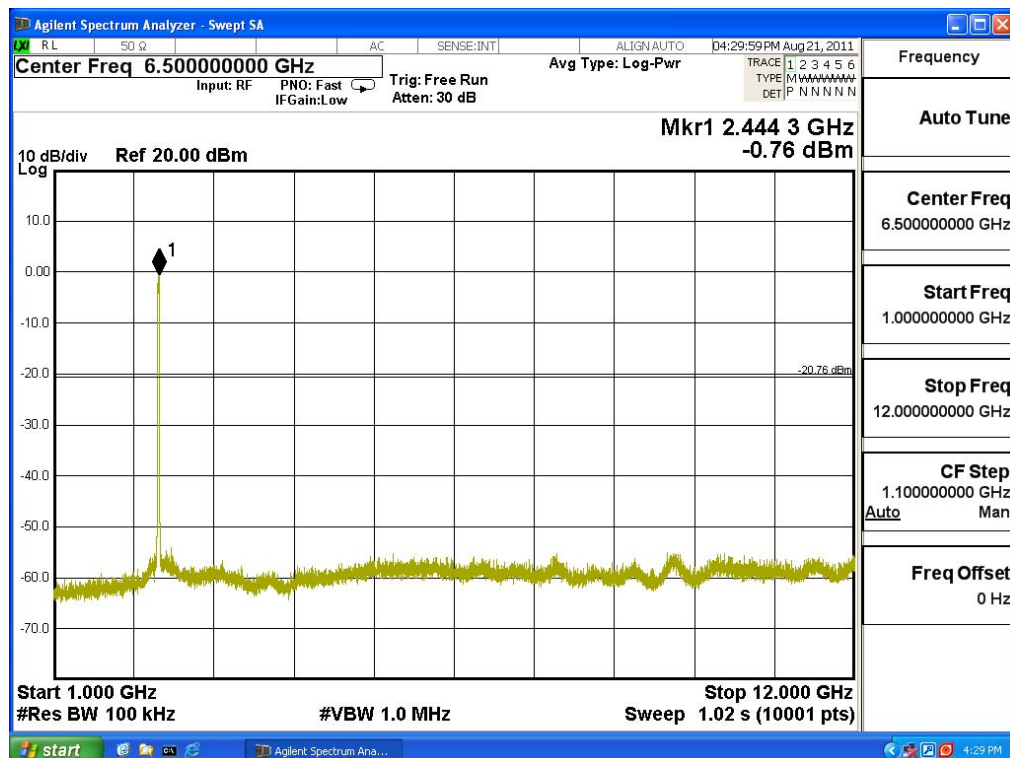
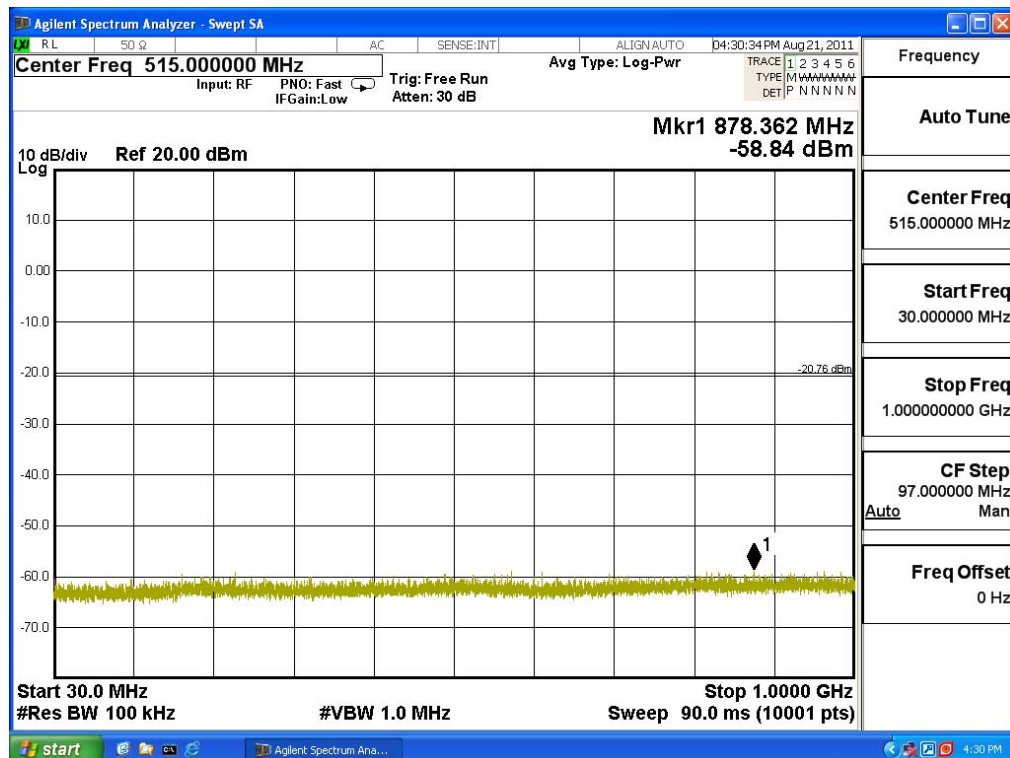
Product : WLAN MODULE
 Test Item : RF Antenna Conducted Spurious
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit - 802.11n-20BW_13Mbps(2.4G Band)

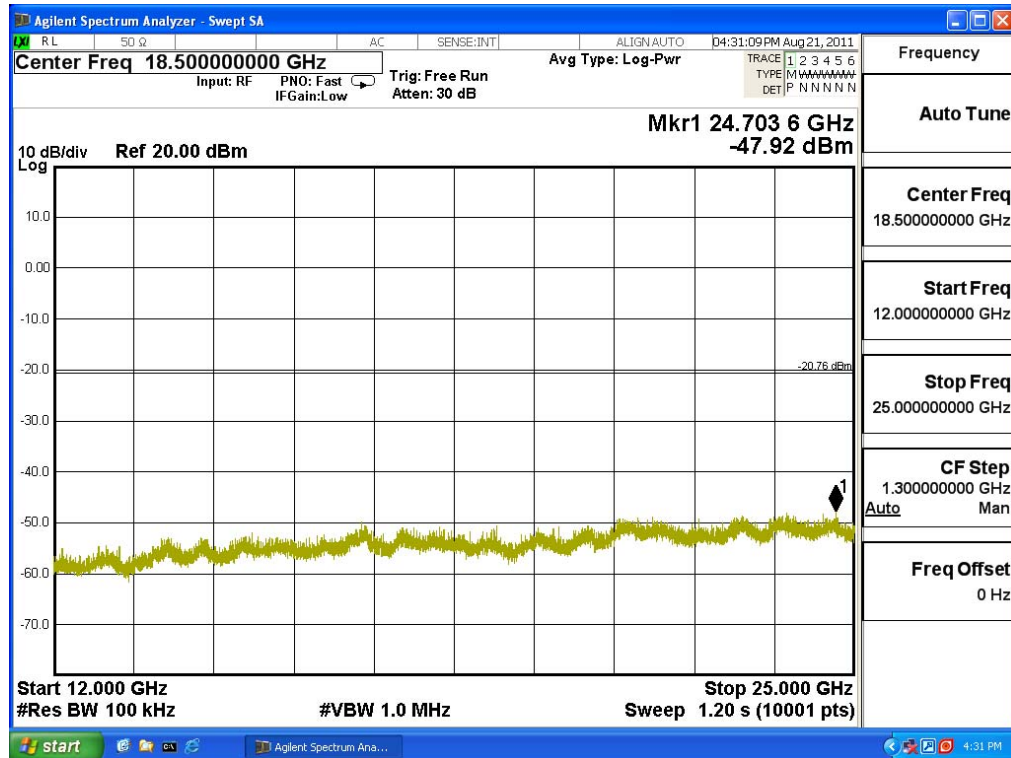
Channel 01 (2412MHz) 30MHz -25GHz-Chain A



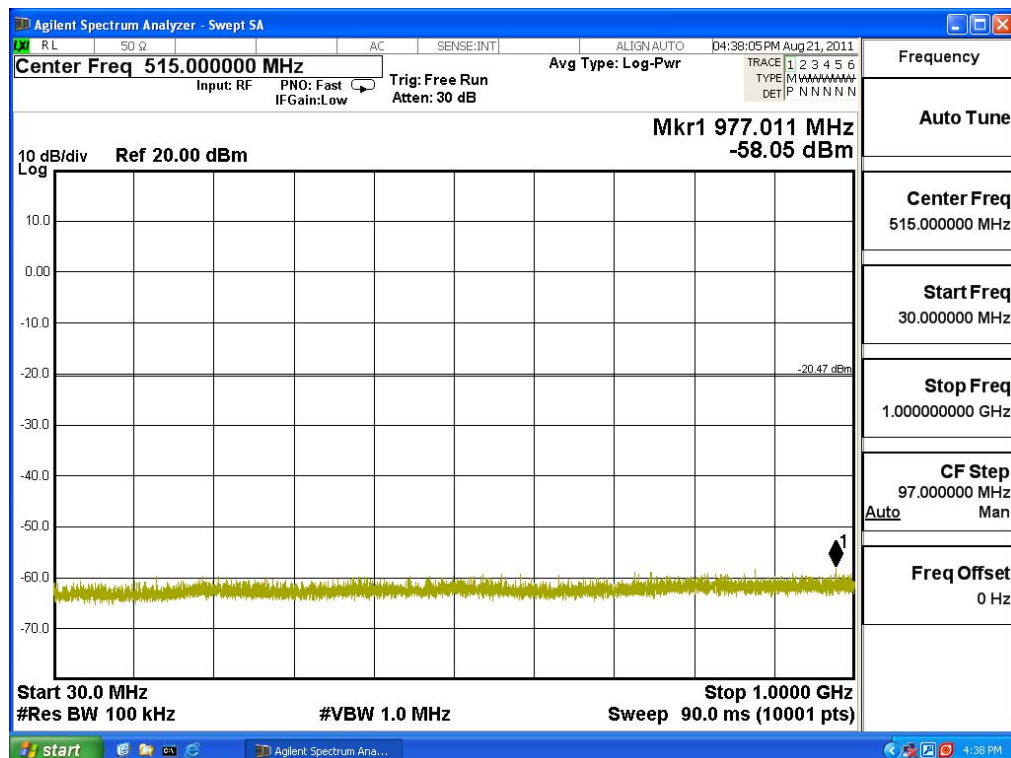


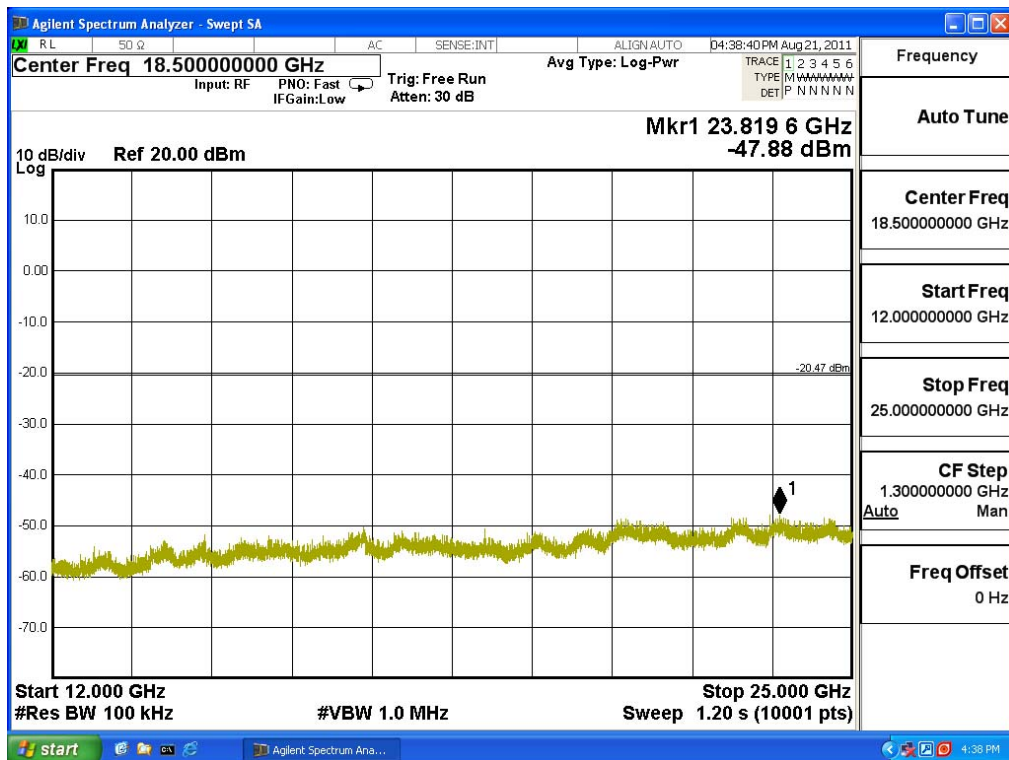
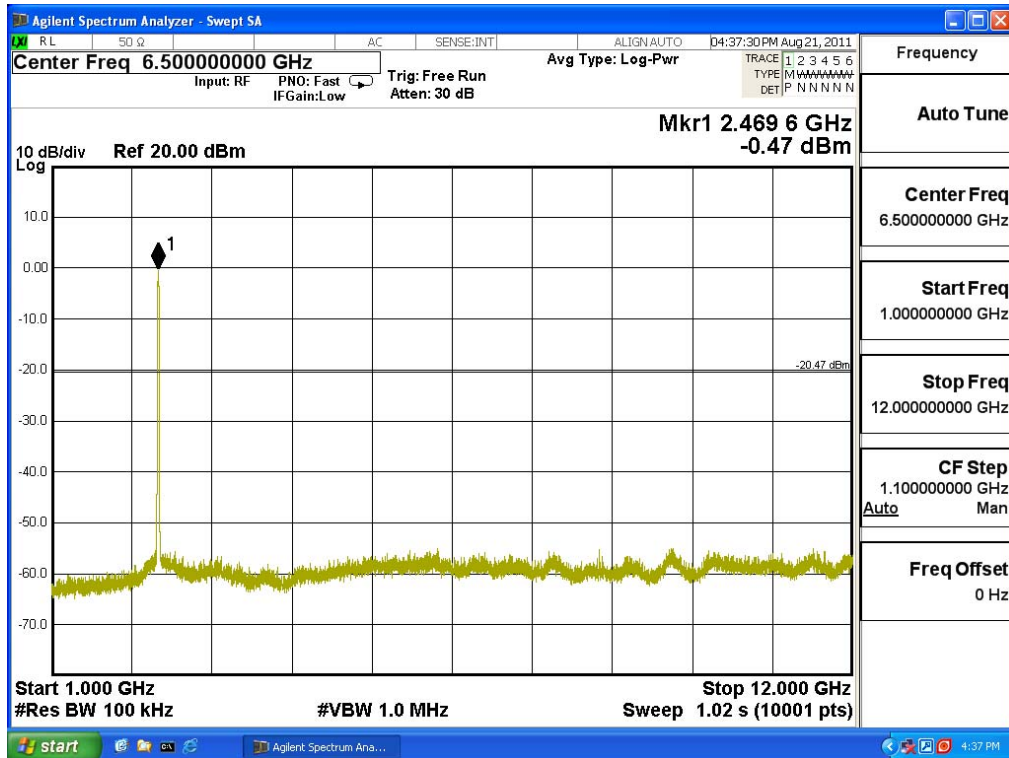
Channel 06 (2437MHz) 30MHz -25GHz-Chain A



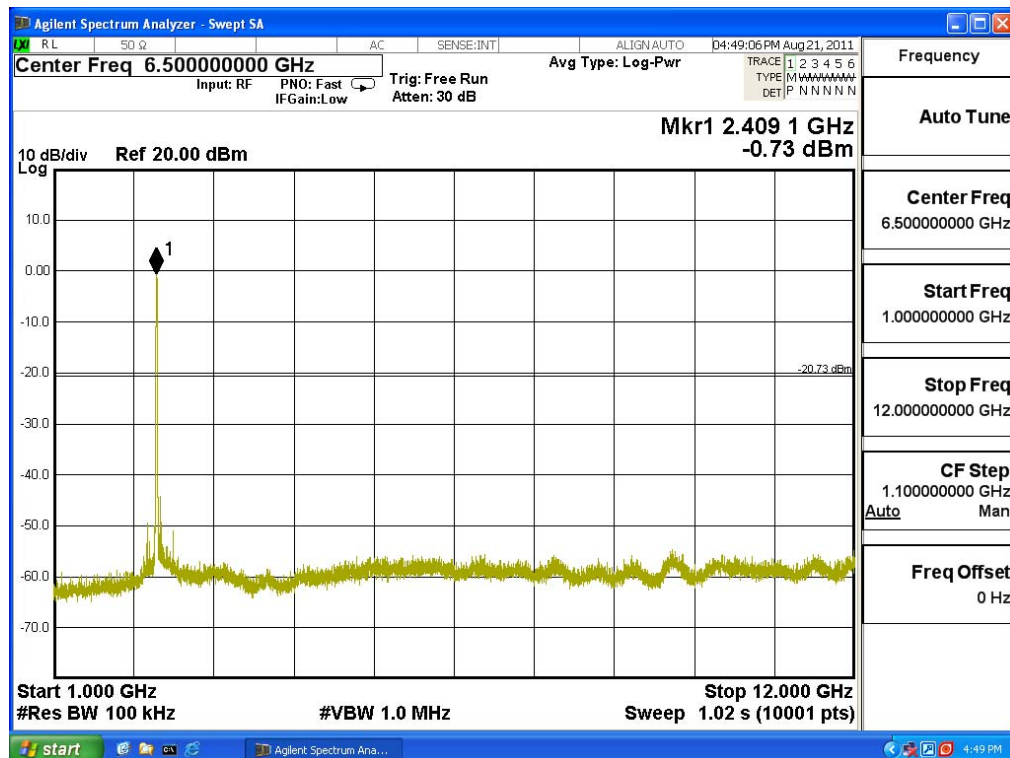
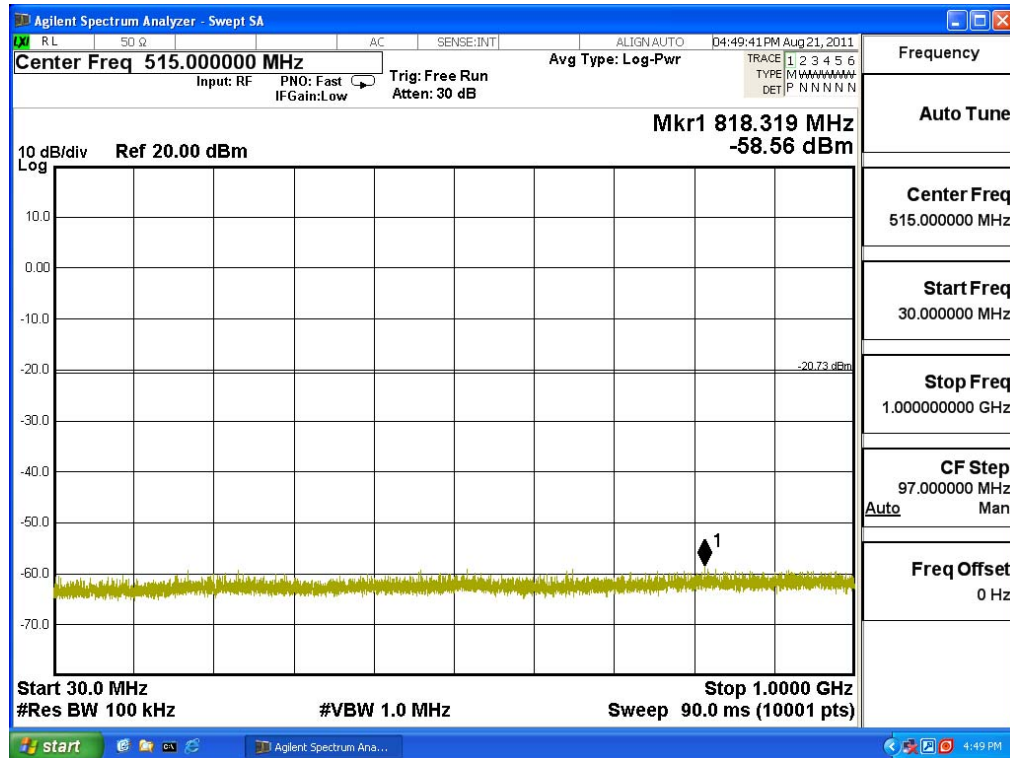


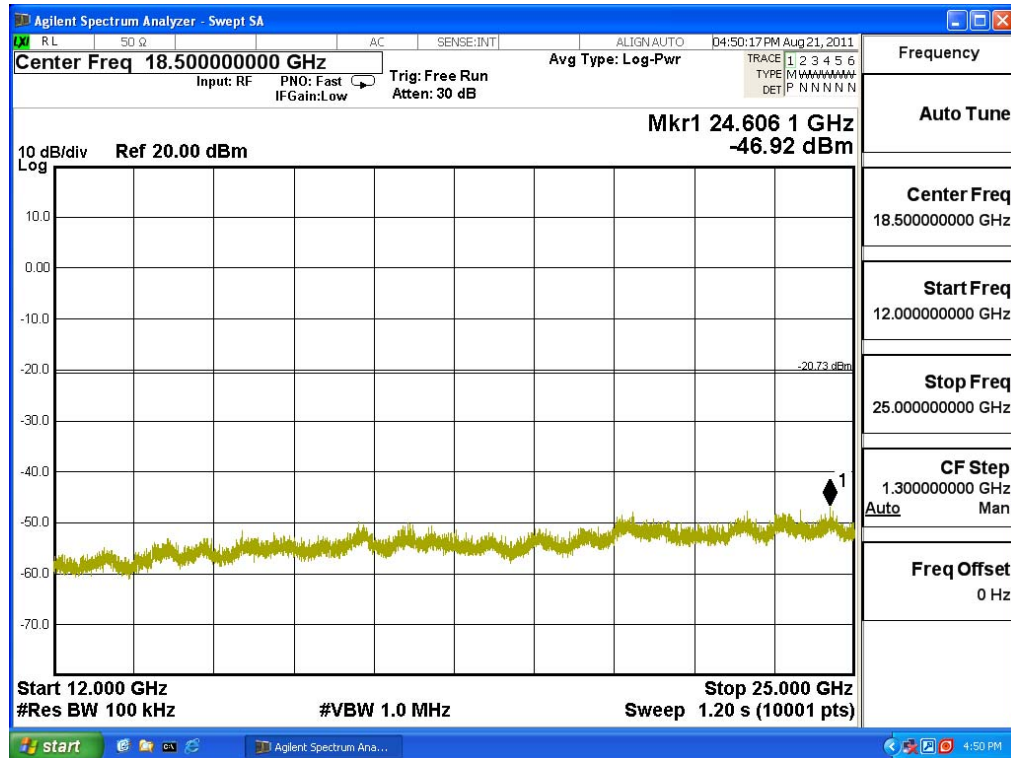
Channel 11 (2462MHz) 30MHz -25GHz-Chain A



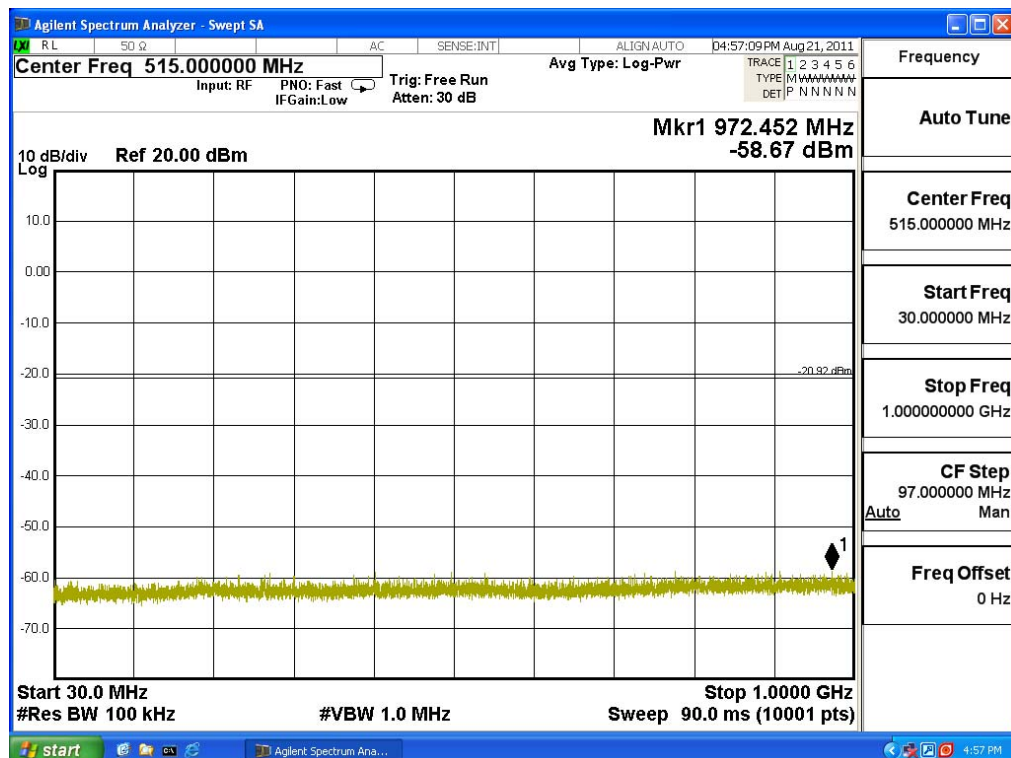


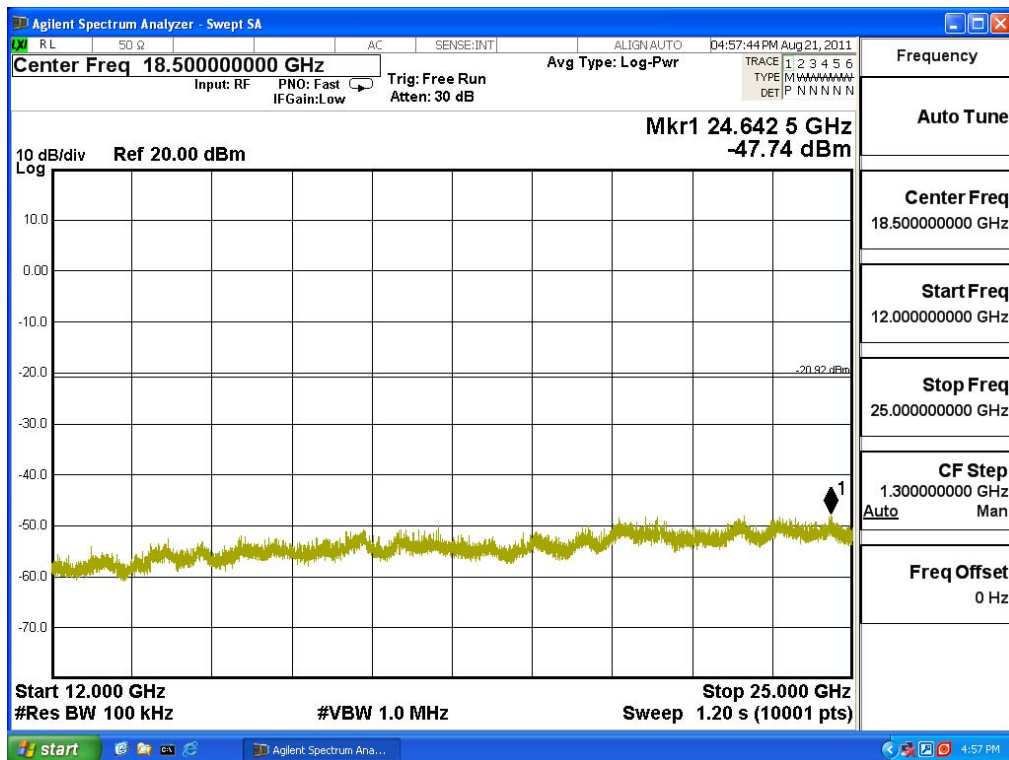
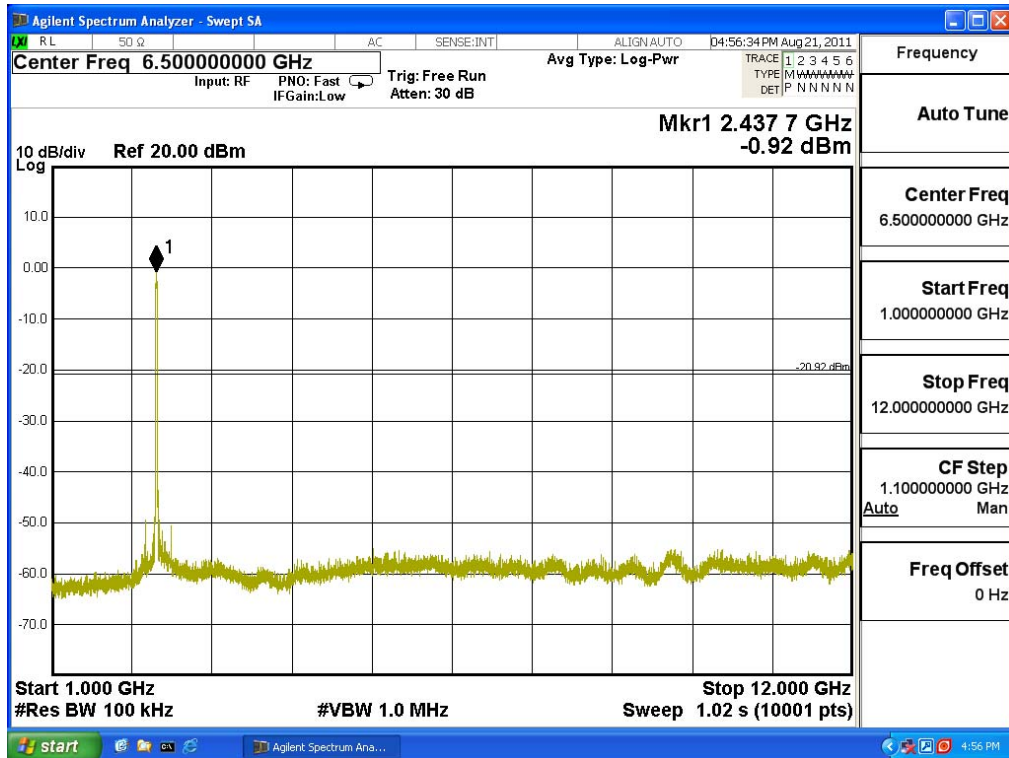
Channel 01 (2412MHz) 30MHz -25GHz-Chain B



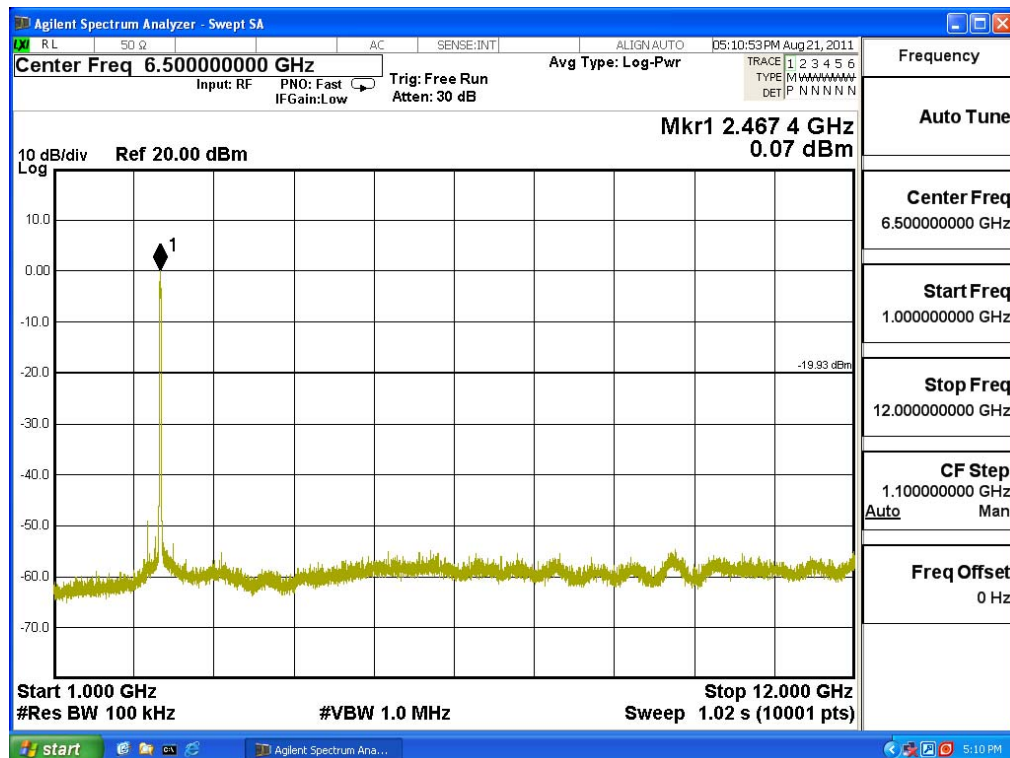
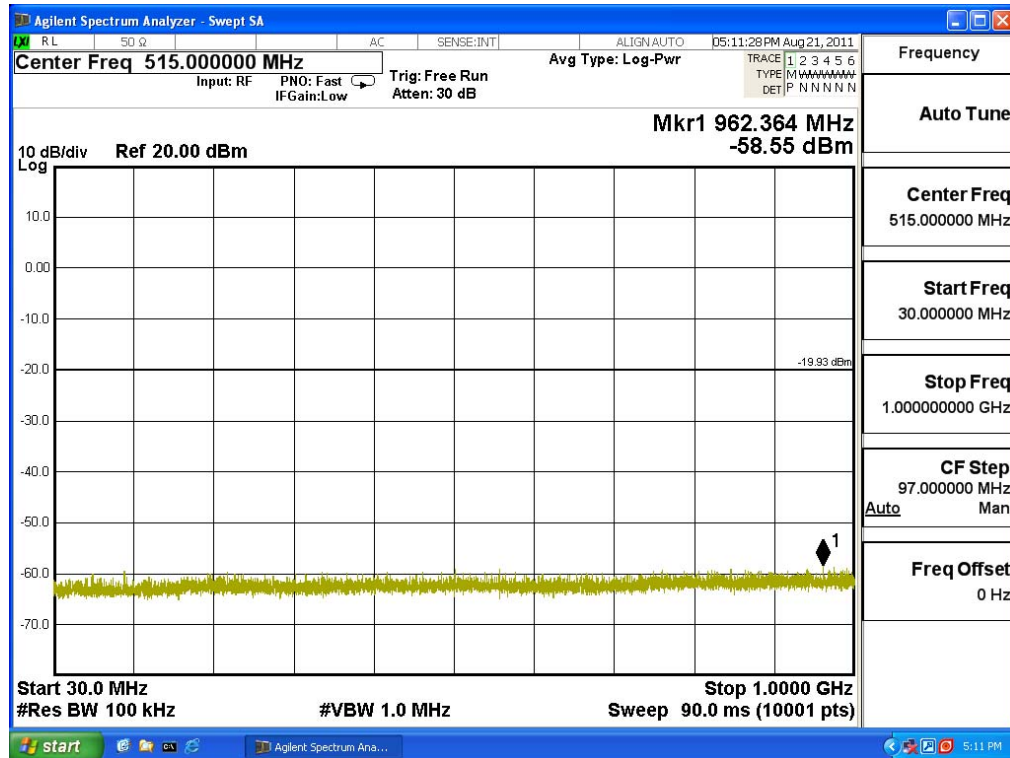


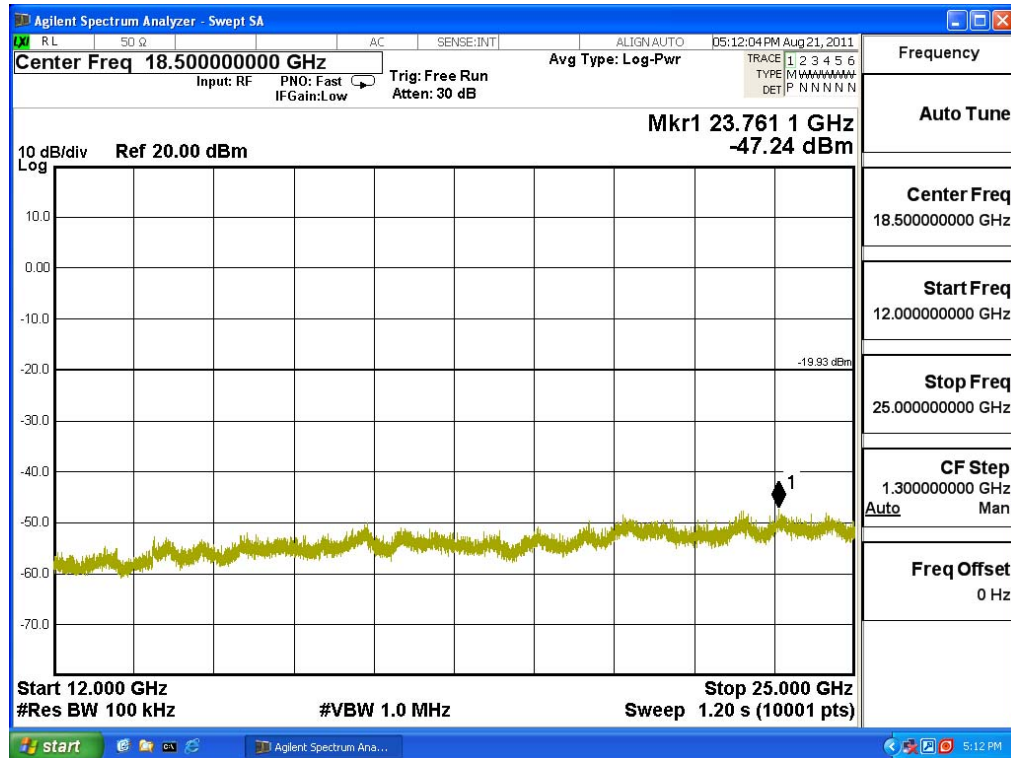
Channel 06 (2437MHz) 30MHz -25GHz-Chain B





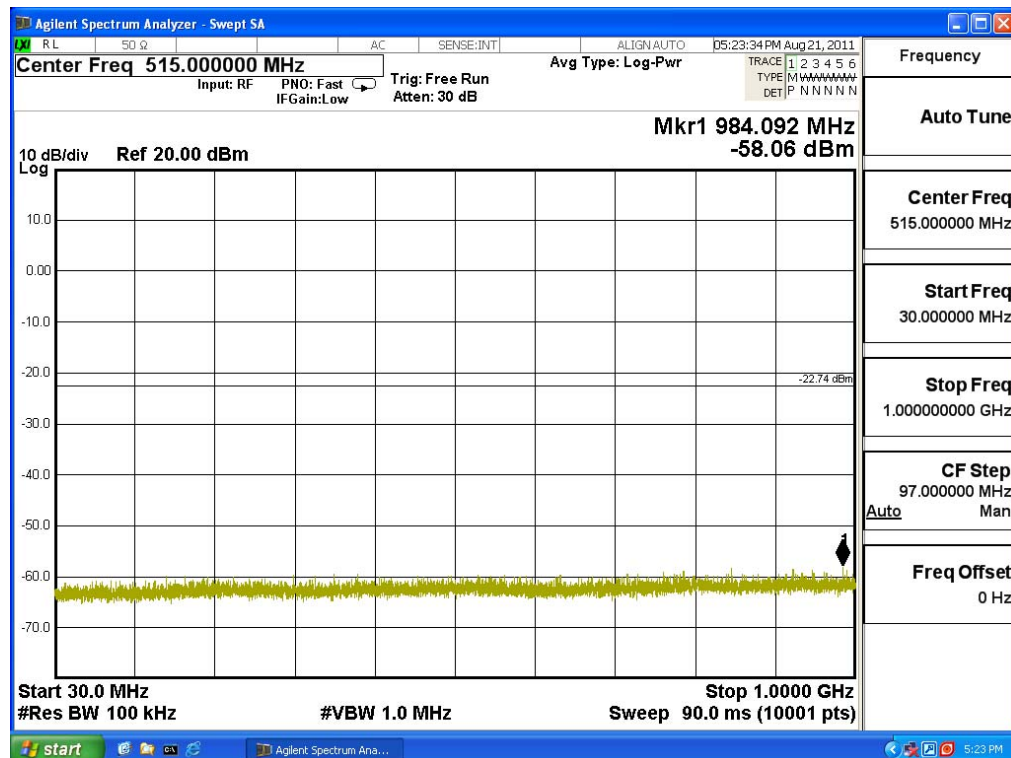
Channel 11 (2462MHz) 30MHz -25GHz-Chain B

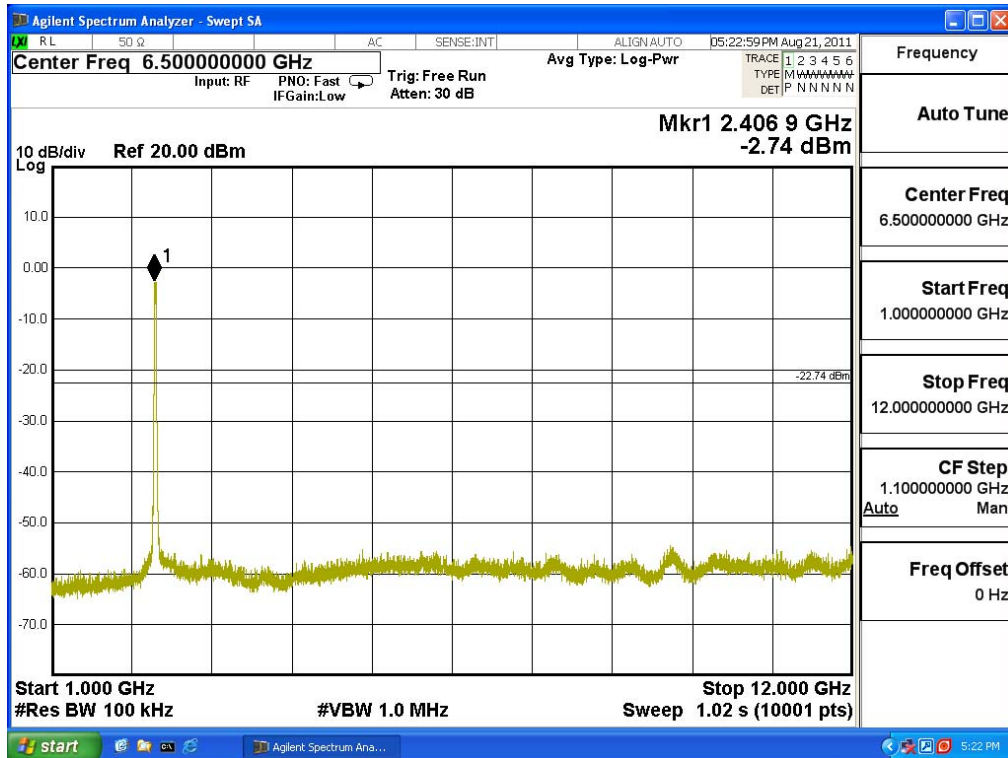




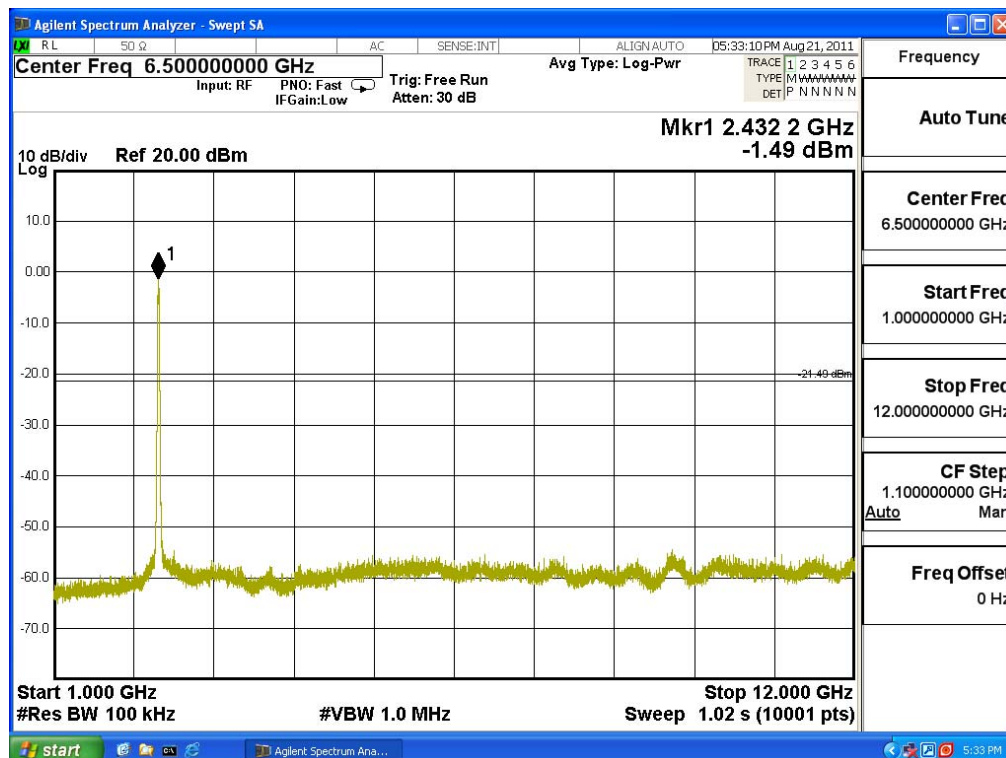
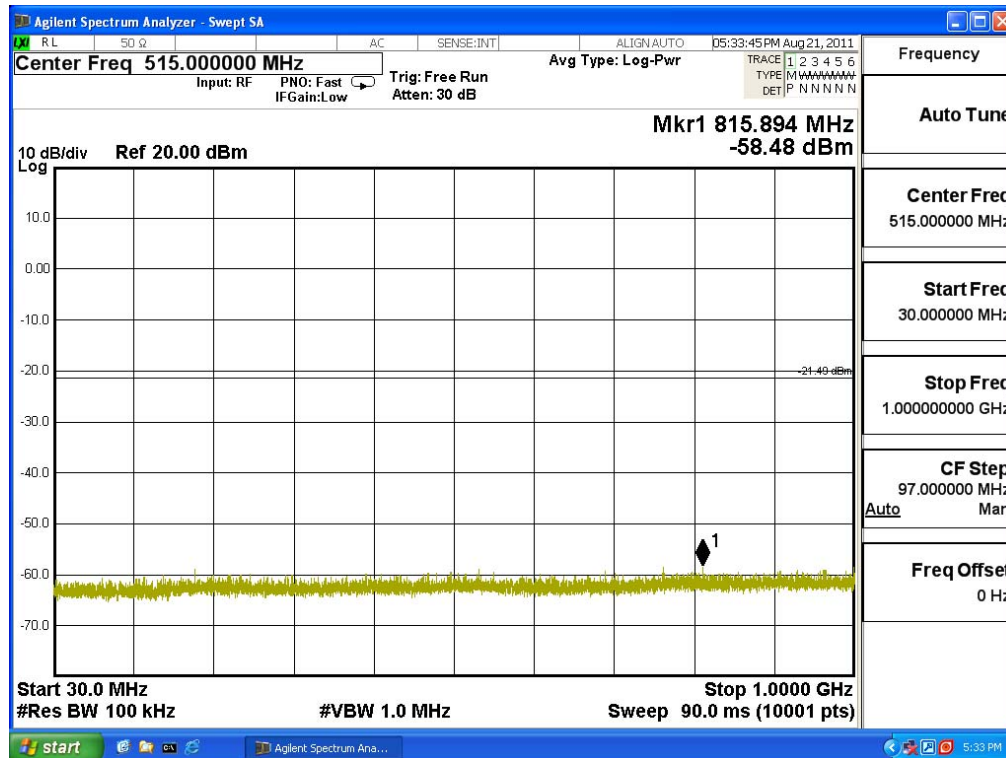
Product : WLAN MODULE
Test Item : RF Antenna Conducted Spurious
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit - 802.11n-40BW_27Mbps(2.4G Band)

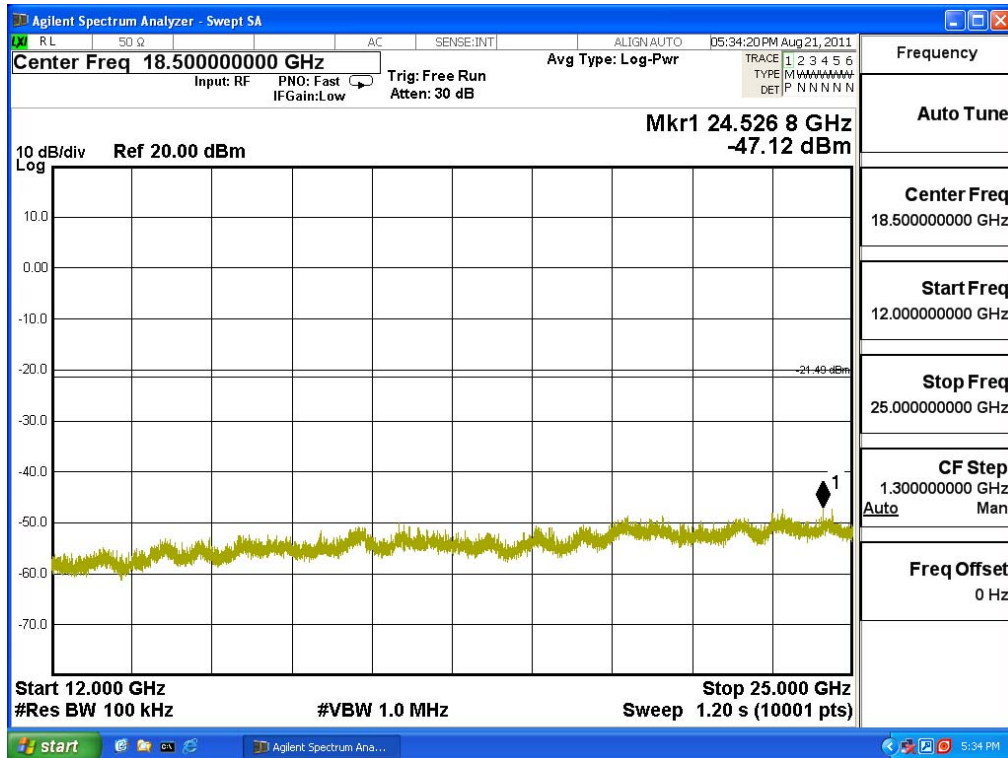
Channel 03 (2422MHz) 30MHz -25GHz-Chain A





Channel 06 (2437MHz) 30MHz -25GHz-Chain A





Channel 09 (2452MHz) 30MHz -25GHz-Chain A

