

# **FCC Test Report**

Product Name	ASUS Tablet
Model No	K00F
FCC ID.	MSQK00F

Applicant	ASUSTeK COMPUTER INC.
Address	4F, No. 150, LI-TE Rd., PEITOU, TAIPEI 112, TAIWAN

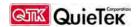
Date of Receipt	Jul. 25, 2013
Issue Date	Aug. 16, 2013
Report No.	137501R-RFUSP42V01
Report Version	V1.0





The test results relate only to the samples tested.

The test report shall not be reproduced except in full without the written approval of QuieTek Corporation. This report must not be used to claim product endorsement by TAF or any agency of the U.S. Government



# Test Report Certification

Issue Date: Aug. 16, 2013

Report No.: 137501R-RFUSP42V01



Product Name	ASUS Tablet
Applicant	ASUSTeK COMPUTER INC.
Address	4F, No. 150, LI-TE Rd., PEITOU, TAIPEI 112, TAIWAN
Manufacturer	Wistron InfoComm(Kunshan) Co., Ltd.
Model No.	K00F
FCC ID.	MSQK00F
EUT Rated Voltage	AC 100-240V, 50/60Hz
EUT Test Voltage	AC 120V/60Hz
Trade Name	ASUS
Applicable Standard	FCC CFR Title 47 Part 15 Subpart C: 2012
	ANSI C63.4: 2003, ANSI C63.10: 2009, KDB 558074
Test Result	Complied

The test results relate only to the samples tested.

The test report shall not be reproduced except in full without the written approval of QuieTek Corporation. This report must not be used to claim product endorsement by TAF or any agency of the U.S. Government

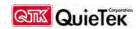
Documented By	:	( )
	_	(Senior Adm. Specialist / Joanne Lin)

Tested By :

(Assistant Engineer / Nowal Kuo)

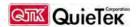
Approved By :

(Manager / Vincent Lin )



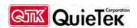
# TABLE OF CONTENTS

De	scription	Page
1.	GENERAL INFORMATION	
1.1.	EUT Description	
1.2.	Operational Description	
1.3.	Tested System Details	
1.4.	Configuration of Tested System	
1.5.	EUT Exercise Software	
1.6.	Test Facility	
2.	Conducted Emission	10
2.1.	Test Equipment	10
2.2.	Test Setup	
2.3.	Limits	
2.4.	Test Procedure	
2.5.	Uncertainty	
2.6.	Test Result of Conducted Emission	
3.	Peak Power Output	14
3.1.	Test Equipment	12
3.2.	Test Setup	
3.3.	Limits	
3.4.	Test Procedure	
3.5.	Uncertainty	
3.6.	Test Result of Peak Power Output	
4.	Radiated Emission	19
4.1.	Test Equipment	19
4.2.	Test Setup	19
4.3.	Limits	20
4.4.	Test Procedure	21
4.5.	Uncertainty	21
4.6.	Test Result of Radiated Emission	
5.	RF antenna conducted test	38
5.1.	Test Equipment	38
5.2.	Test Setup	38
5.3.	Limits	38
5.4.	Test Procedure	38
5.5.	Uncertainty	39
5.6.	Test Result of RF antenna conducted test	
6.	Band Edge	88
6.1.	Test Equipment	
6.2.	Test Setup	
6.3.	Limits	89
6.4.	Test Procedure	89
6.5.	Uncertainty	89
6.6.	Test Result of Band Edge	89
	-	



7.	Occupied Bandwidth	91
7.1.	Test Equipment	91
7.2.	Test Setup	91
7.3.	Limits	91
7.4.	Test Procedure	
7.5.	Uncertainty	
7.6.	Test Result of Occupied Bandwidth	
8.	Power Density	91
8.1.	Test Equipment	91
8.2.	Test Setup	91
8.3.	Limits	91
8.4.	Test Procedure	91
8.5.	Uncertainty	91
8.6.	Test Result of Power Density	
9.	EMI Reduction Method During Compliance Testing	91

Attachment 1: EUT Test Photographs
Attachment 2: EUT Detailed Photographs



## 1. GENERAL INFORMATION

# 1.1. EUT Description

Product Name	ASUS Tablet	
Trade Name	ASUS	
Model No.	K00F	
FCC ID.	MSQK00F	
Frequency Range	2412-2462MHz for 802.11b/g/n-20BW, 2422-2452MHz for 802.11n-40BW	
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 150Mbps	
Type of Modulation 802.11b:DSSS (DBPSK, DQPSK, CCK)		
	802.11g/n:OFDM (BPSK, QPSK, 16QAM, 64QAM)	
Antenna Type	PIFA Antenna	
Antenna Gain	Refer to the table "Antenna List"	
Channel Control	Auto	
Power Adapter	MFR: ASUS, M/N: PA-1070-07	
	Input: AC 100-240V~0.25A, 50/60Hz	
	Output: DC 5.2V, 1.35A	
USB Cable	Non-Shielded, 0.9m	
Contain Module	REALTEK / RTL8723BS	

## **Antenna List**

N	Vo.	Manufacturer	Part No.	Antenna Type	Peak Gain
1		ACON	ME102 WIFI Antenna	PIFA Antenna	1.21 dBi for 2.4 GHz

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 00.	2452 MHz	Channel 10:	2457 MHz	Channel 11.	2462 MHz		

#### 802.11n-40MHz Center 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		

- 1. The EUT is an ASUS Tablet with a built-in 2.4GHz WLAN and Bluetooth transceiver, this report for WLAN.
- 2. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.
- 3. 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 \( \cdot 802.11n(20M-BW) \) is 7.2Mbps and \( \cdot 802.11n(40M-BW) \) is 15Mbps)
- 4. 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.
- 5. The radiation measurements are performed in X, Y, Z axis positioning. Only the worst case is shown in the report.

Test Mode:	Mode 1: Transmit (802.11b 1Mbps)
	Mode 2: Transmit (802.11g 6Mbps)
	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)
	Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)



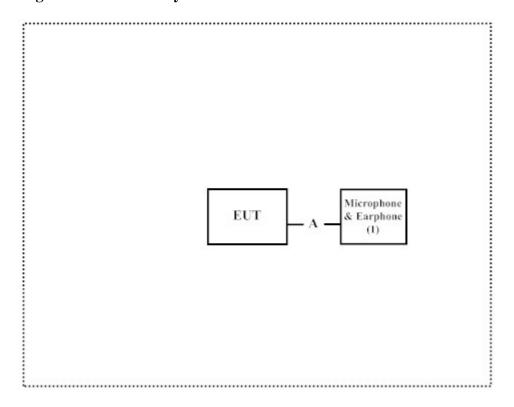
## 1.3. Tested System Details

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	Microphone & Earphone	PCHOME	N/A	N/A	N/A

Signa	al Cable Type	Signal cable Description				
A	Microphone & Earphone Cable	Non-Shielded, 1.2m				

## 1.4. Configuration of Tested System



#### 1.5. EUT Exercise Software

- (1) Setup the EUT as shown in Section 1.4
- (2) Execute software "WiFi Test.exe V1.0" on the EUT.
- (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: <a href="http://www.quietek.com/">http://www.quietek.com/</a>

Site Description: File on

Federal Communications Commission

FCC Engineering Laboratory 7435 Oakland Mills Road Columbia, MD 21046

Registration Number: 92195

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

Linkou Dist. New Taipei City 24451,

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

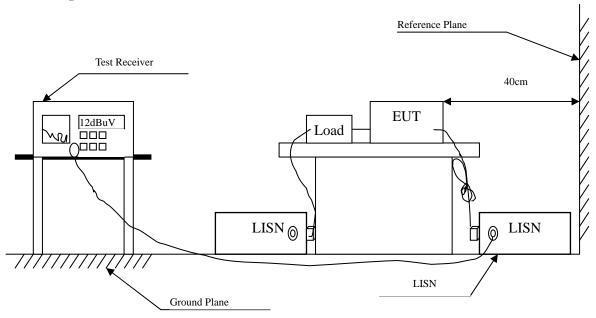
# 2.1. Test Equipment

	Equipment	Manufacturer	Model No. / Serial No.	Last Cal.	Remark
X	Test Receiver	R & S	ESCS 30 / 825442/018	Sep., 2012	
X	Artificial Mains Network	R & S	ENV4200 / 848411/10	Feb., 2013	Peripherals
X	LISN	R & S	ESH3-Z5 / 825562/002	Feb., 2013	EUT
	DC LISN	Schwarzbeck	8226 / 176	Mar., 2013	EUT
X	Pulse Limiter	R & S	ESH3-Z2 / 357.8810.52	Feb., 2013	
	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	Limits									
MHz	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 C63.10: 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 : ASUS Tablet

Test Item : Conducted Emission Test

Power Line : Line 1

Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2437MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV	dB	dBuV
Line 1					
Quasi-Peak					
0.170	9.697	43.540	53.237	-12.192	65.429
0.209	9.699	35.640	45.339	-18.975	64.314
0.244	9.701	34.200	43.901	-19.413	63.314
1.119	9.740	31.350	41.090	-14.910	56.000
1.552	9.770	33.930	43.700	-12.300	56.000
2.896	9.810	33.810	43.620	-12.380	56.000
Average					
0.170	9.697	32.150	41.847	-13.582	55.429
0.209	9.699	24.660	34.359	-19.955	54.314
0.244	9.701	23.900	33.601	-19.713	53.314
1.119	9.740	22.160	31.900	-14.100	46.000
1.552	9.770	24.610	34.380	-11.620	46.000
2.896	9.810	23.410	33.220	-12.780	46.000

- 1. All Reading Levels are Quasi-Peak and average value.
- 2. "means the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor



Test Item : Conducted Emission Test

Power Line : Line 2

Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2437MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV	dB	dBuV
Line 2					_
Quasi-Peak					
0.189	9.678	37.610	47.288	-17.598	64.886
0.494	9.692	28.730	38.422	-17.749	56.171
1.990	9.780	28.890	38.670	-17.330	56.000
2.962	9.800	27.170	36.970	-19.030	56.000
4.396	9.820	26.250	36.070	-19.930	56.000
15.634	9.960	33.710	43.670	-16.330	60.000
Average					
0.189	9.678	25.610	35.288	-19.598	54.886
0.494	9.692	24.140	33.832	-12.339	46.171
1.990	9.780	20.390	30.170	-15.830	46.000
2.962	9.800	18.150	27.950	-18.050	46.000
4.396	9.820	18.030	27.850	-18.150	46.000
15.634	9.960	24.700	34.660	-15.340	50.000

- 1. All Reading Levels are Quasi-Peak and average value.
- 2. " means the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor



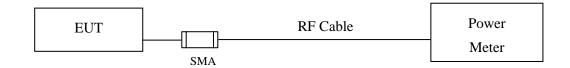
## 3. Peak Power Output

## 3.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
X	Power Meter	Anritsu	ML2495A/6K00003357	May, 2013
X	Power Sensor	Anritsu	MA2411B/0738448	Jun., 2013
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



#### 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 KDB 558074 for compliance to FCC 47CFR 15.247 requirements. The maximum peak conducted output power using KDB 558074 section 9.1.3 PKPM1 Peak power meter method.

## 3.5. Uncertainty

± 1.27 dB



# 3.6. Test Result of Peak Power Output

Product : ASUS Tablet

Test Item : Peak Power Output Data

Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11b 1Mbps)

Channel No	Frequency (MHz)	For d		e Power ata Rate (N	ſlbps)	Peak Power	Required	Result
		1	2	5.5	11	1	Limit	
			Measur					
01	2412	13.07				15.8	<30dBm	Pass
06	2437	13.09	13.09	13.08	13.08	15.75	<30dBm	Pass
11	2462	13.38				16.02	<30dBm	Pass



Test Item : Peak Power Output Data

Test Site : No.3 OATS

Test Mode : Mode 2: Transmit (802.11g 6Mbps)

Channel No	Eraguanay		F	or diffe	Peak Power	Required						
	Frequency (MHz)	6	9	12	18	24	36	48	54	6	Limit	Result
01	2412	13.35							-	22.2	<30dBm	Pass
06	2437	13.3	13.28	13.25	13.2	13.17	13.15	13.12	13.1	22.21	<30dBm	Pass
11	2462	13.2								22.15	<30dBm	Pass



Test Item : Peak Power Output Data

Test Site : No.3 OATS

Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)

	F		F	or diffe	Peak Power	Daguirad						
Channel No	Frequency (MHz)	7.2	14.4	21.7	28.9	43.3	57.8	65	72.2	7.2	Required Limit	Result
			Measurement Level (dBm)									
01	2412	12.22	!						-	21.03	<30dBm	Pass
06	2437	12.17	12.16	12.14	12.11	12.09	12.08	12.08	12.07	21.06	<30dBm	Pass
11	2462	12.07								20.92	<30dBm	Pass



Test Item : Peak Power Output Data

Test Site : No.3 OATS

Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)

	F		F	or diffe	Peak Power	Daguirad						
Channel No	Frequency (MHz)	15	30	45	60	90	120	135	150	15	Required Limit	Result
03	2422	12.41							1	21.19	<30dBm	Pass
06	2437	12.13	12.13	12.12	12.11	12.1	12.08	12.08	12.07	20.92	<30dBm	Pass
09	2452	12.38								21.15	<30dBm	Pass



#### 4. Radiated Emission

## 4.1. Test Equipment

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

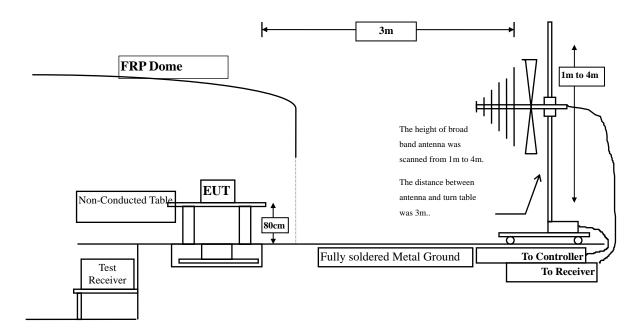
Test Site	Equipment		Manufacturer	Model No./Serial No.	Last Cal.
⊠Site # 3	X	Loop Antenna	Teseq	HLA6120 / 26739	Jul., 2013
	X	Bilog Antenna	Schaffner Chase	CBL6112B/2673	Sep., 2012
	X	Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2012
	X	Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2013
	X	Pre-Amplifier	Agilent	8447D/2944A09549	Sep., 2012
	X	Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2013
	X	Test Receiver	R & S	ESCS 30/ 825442/018	Sep., 2012
	X	Coaxial Cable	QuieTek	QTK-CABLE/ CAB5	Feb., 2013
	X	Controller	QuieTek	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.

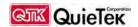
2. The test instruments marked with "X" are used to measure the final test results.

## 4.2. Test Setup

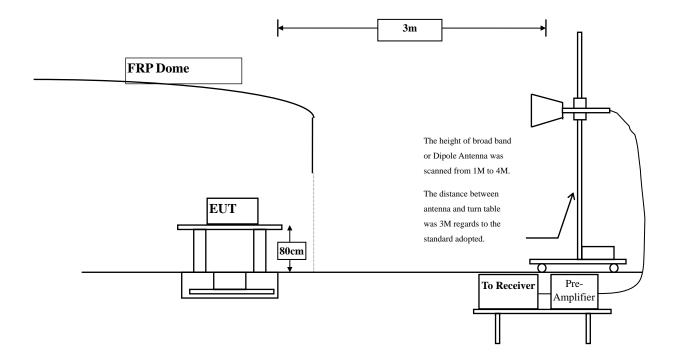
Radiated Emission Below 1GHz



Page: 19 of 134



Radiated Emission Above 1GHz

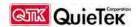


## 4.3. Limits

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	Field strength (microvolts/meter)	Measurement distance (meter)				
0.009-0.490	2400/F(kHz)	300				
0.490-1.705	24000/F(kHz)	30				
1.705-30	30	30				
30-88	100	3				
88-216	150	3				
216-960	200	3				
Above 960	500	3				

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



#### 4.4. Test Procedure

The EUT was setup according to ANSI C63.10: 2009 and tested according to DTS test procedure of 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 C63.10: 2009 on radiated measurement.

The resolution bandwidth below 30MHz setting on the field strength meter is 9kHz and 30MHz~1GHz is 120kHz and above 1GHz is 1MHz.

Radiated emission measurements below 30MHz are made using Loop Antenna and 30MHz~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 frequency range from 9kHz to 10th harmonics is checked.

#### 4.5. Uncertainty

- ± 3.9 dB above 1GHz
- ± 3.8 dB below 1GHz



#### 4.6. Test Result of Radiated Emission

Product : ASUS Tablet

Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

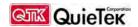
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2412MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
<b>Peak Detector:</b>					
4824.000	3.261	38.720	41.981	-32.019	74.000
7236.000	10.650	37.390	48.040	-25.960	74.000
9648.000	13.337	36.020	49.356	-24.644	74.000
Average Detector:					
Vertical					
<b>Peak Detector:</b>					
4824.000	6.421	38.560	44.981	-29.019	74.000
7236.000	11.495	37.700	49.195	-24.805	74.000
9648.000	13.807	35.600	49.406	-24.594	74.000

#### **Average Detector:**

--

- 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.



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
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
<b>Peak Detector:</b>					
4874.000	3.038	38.940	41.977	-32.023	74.000
7311.000	11.795	36.840	48.634	-25.366	74.000
9748.000	12.635	36.880	49.515	-24.485	74.000
Average Detector:					
Vertical					
<b>Peak Detector:</b>					
4874.000	5.812	38.360	44.171	-29.829	74.000
7311.000	12.630	36.430	49.059	-24.941	74.000
9748.000	13.126	36.570	49.696	-24.304	74.000

#### **Average Detector:**

--

- 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.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

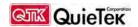
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2462 MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4924.000	2.858	38.520	41.377	-32.623	74.000
7386.000	12.127	36.210	48.338	-25.662	74.000
9848.000	12.852	36.530	49.383	-24.617	74.000
<b>Average Detector:</b>					
Vertical					
Peak Detector:					
4924.000	5.521	38.610	44.130	-29.870	74.000
7386.000	13.254	36.310	49.564	-24.436	74.000
9848.000	13.367	36.480	49.847	-24.153	74.000

#### **Average Detector:**

--

- 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.



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
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
<b>Peak Detector:</b>					
4824.000	3.261	39.600	42.861	-31.139	74.000
7236.000	10.650	37.160	47.810	-26.190	74.000
9648.000	13.337	36.110	49.446	-24.554	74.000
<b>Average Detector:</b>					
Vertical					
<b>Peak Detector:</b>					
4824.000	6.421	38.900	45.321	-28.679	74.000
7236.000	11.495	37.150	48.645	-25.355	74.000
9648.000	13.807	35.640	49.446	-24.554	74.000

#### **Average Detector:**

--

- 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.



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					
<b>Peak Detector:</b>					
4874.000	3.038	38.190	41.227	-32.773	74.000
7311.000	11.795	36.500	48.294	-25.706	74.000
9748.000	12.635	36.430	49.065	-24.935	74.000
<b>Average Detector:</b>					
<b>Peak Detector:</b>					
4874.000	5.812	38.510	44.321	-29.679	74.000
7311.000	12.630	36.640	49.269	-24.731	74.000
9748.000	13.126	35.650	48.776	-25.224	74.000

## **Average Detector:**

--

- 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.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2462 MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4924.000	2.858	38.530	41.387	-32.613	74.000
7386.000	12.127	36.930	49.058	-24.942	74.000
9848.000	12.852	36.780	49.633	-24.367	74.000
Average Detector:					
Vertical					
Peak Detector:					
4924.000	5.521	38.590	44.110	-29.890	74.000
7386.000	13.254	35.940	49.194	-24.806	74.000
9848.000	13.367	35.490	48.857	-25.143	74.000

#### **Average Detector:**

--

- 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.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)(2412MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
<b>Peak Detector:</b>					
4824.000	3.261	39.480	42.741	-31.259	74.000
7236.000	10.650	37.560	48.210	-25.790	74.000
9648.000	13.337	36.500	49.836	-24.164	74.000
Average Detector:					
Vertical					
<b>Peak Detector:</b>					
4824.000	6.421	38.550	44.971	-29.029	74.000
7236.000	11.495	36.850	48.345	-25.655	74.000
9648.000	13.807	35.950	49.756	-24.244	74.000

#### **Average Detector:**

--

- 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.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

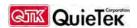
Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2437 MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4874.000	3.038	38.290	41.327	-32.673	74.000
7311.000	11.795	36.090	47.884	-26.116	74.000
9748.000	12.635	36.660	49.295	-24.705	74.000
Average Detector:					
Vertical					
Peak Detector:					
4874.000	5.812	38.280	44.091	-29.909	74.000
7311.000	12.630	36.190	48.819	-25.181	74.000
9748.000	13.126	36.020	49.146	-24.854	74.000

## **Average Detector:**

--

- 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.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode: Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2462 MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4924.000	2.858	38.530	41.387	-32.613	74.000
7386.000	12.127	35.970	48.098	-25.902	74.000
9848.000	12.852	36.480	49.333	-24.667	74.000
<b>Average Detector:</b>					
Vertical					
Peak Detector:					
4924.000	5.521	37.550	43.070	-30.930	74.000
7386.000	13.254	35.620	48.874	-25.126	74.000
9848.000	13.367	36.030	49.397	-24.603	74.000

#### **Average Detector:**

--

- 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.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

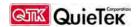
Test Mode: Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)(2422MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4844.000	3.171	38.620	41.791	-32.209	74.000
7266.000	11.162	37.140	48.302	-25.698	74.000
9688.000	12.964	35.900	48.865	-25.135	74.000
<b>Average Detector:</b>					
Vertical					
<b>Peak Detector:</b>					
4844.000	6.178	37.980	44.158	-29.842	74.000
7266.000	11.982	36.630	48.612	-25.388	74.000
9688.000	13.507	35.650	49.158	-24.842	74.000

#### **Average Detector:**

--

- 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.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (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	38.250	41.287	-32.713	74.000
7311.000	11.795	35.940	47.734	-26.266	74.000
9748.000	12.635	36.700	49.335	-24.665	74.000
<b>Average Detector:</b>					
Vertical					
Peak Detector:					
4874.000	5.812	37.380	43.191	-30.809	74.000
7311.000	12.630	36.090	48.719	-25.281	74.000
9748.000	13.126	36.100	49.226	-24.774	74.000

#### **Average Detector:**

--

- 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.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)(2452 MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4904.000	2.914	39.340	42.255	-31.745	74.000
7356.000	11.995	36.160	48.154	-25.846	74.000
9808.000	12.475	36.540	49.015	-24.985	74.000
<b>Average Detector:</b>					
Vertical					
Peak Detector:					
4904.000	35.766	37.880	43.411	-30.589	74.000
7356.000	40.699	35.620	48.624	-25.376	74.000
9808.000	41.373	35.460	48.361	-25.639	74.000

#### **Average Detector:**

-

- 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.



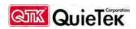
Test Item : General Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11b 1Mbps)(2437 MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
328.760	-4.609	36.406	31.797	-14.203	46.000
394.720	-2.304	36.395	34.091	-11.909	46.000
476.200	-0.252	29.015	28.763	-17.237	46.000
615.880	3.215	28.864	32.079	-13.921	46.000
658.560	2.115	27.149	29.264	-16.736	46.000
792.420	5.209	26.937	32.146	-13.854	46.000
Vertical					
394.720	-4.024	32.819	28.795	-17.205	46.000
462.620	-3.838	42.540	38.702	-7.298	46.000
528.580	-0.462	32.325	31.863	-14.137	46.000
681.840	1.484	26.266	27.750	-18.250	46.000
792.420	2.889	31.055	33.944	-12.056	46.000
858.380	0.632	31.159	31.791	-14.209	46.000

- 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.
- 8. No emission found between lowest internal used/generated frequency to 30MHz.



Test Item : General Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2437MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
328.760	-4.609	36.286	31.677	-14.323	46.000
379.200	-1.005	35.188	34.182	-11.818	46.000
528.580	1.848	39.782	41.630	-4.370	46.000
629.460	1.560	28.297	29.857	-16.143	46.000
792.420	5.209	27.341	32.550	-13.450	46.000
858.380	5.972	25.670	31.642	-14.358	46.000
Vertical					
99.840	-0.021	24.518	24.497	-19.003	43.500
396.660	-4.356	34.856	30.500	-15.500	46.000
462.620	-3.838	43.001	39.163	-6.837	46.000
528.580	-0.462	31.670	31.208	-14.792	46.000
792.420	2.889	31.336	34.225	-11.775	46.000
967.020	8.071	22.500	30.571	-23.429	54.000

- 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.
- 8. No emission found between lowest internal used/generated frequency to 30MHz.



Test Item : General Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2437MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
260.860	-5.032	35.988	30.956	-15.044	46.000
328.760	-4.609	36.625	32.016	-13.984	46.000
431.580	-2.099	30.138	28.039	-17.961	46.000
629.460	1.560	28.923	30.483	-15.517	46.000
792.420	5.209	27.428	32.637	-13.363	46.000
858.380	5.972	29.475	35.447	-10.553	46.000
Vertical					
396.660	-4.356	34.907	30.551	-15.449	46.000
528.580	-0.462	28.642	28.180	-17.820	46.000
594.540	-3.773	26.597	22.824	-23.176	46.000
697.360	1.311	24.366	25.677	-20.323	46.000
792.420	2.889	31.210	34.099	-11.901	46.000
968.960	8.191	23.037	31.228	-22.772	54.000

- 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.
- 8. No emission found between lowest internal used/generated frequency to 30MHz.



Test Item : General Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)(2437MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
125.060	-9.946	36.406	26.460	-17.040	43.500
328.760	-4.609	36.399	31.790	-14.210	46.000
394.720	-2.304	36.994	34.690	-11.310	46.000
615.880	3.215	27.733	30.948	-15.052	46.000
792.420	5.209	27.428	32.637	-13.363	46.000
858.380	5.972	28.383	34.355	-11.645	46.000
Vertical					
128.940	-4.128	31.461	27.333	-16.167	43.500
344.280	-3.171	28.640	25.470	-20.530	46.000
396.660	-4.356	34.034	29.678	-16.322	46.000
511.120	-0.261	25.542	25.281	-20.719	46.000
629.460	-3.720	26.602	22.882	-23.118	46.000
858.380	0.632	31.691	32.323	-13.677	46.000

- 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.
- 8. No emission found between lowest internal used/generated frequency to 30MHz.



#### 5. RF antenna conducted test

# 5.1. Test Equipment

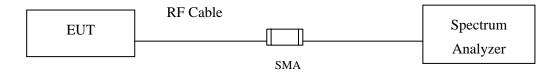
	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun., 2013
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun., 2013
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2013

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:



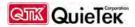
#### 5.3. Limits

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 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  $\pm$  1.27dB



## 5.6. Test Result of RF antenna conducted test

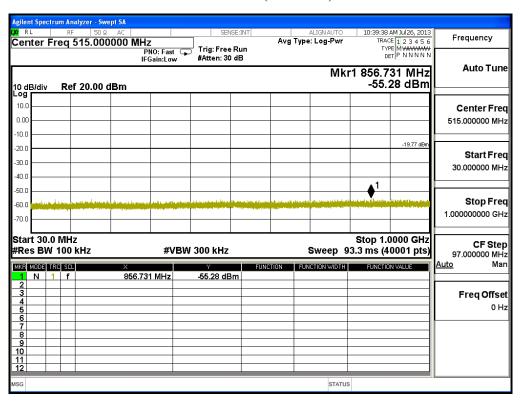
Product : ASUS Tablet

Test Item : RF antenna conducted test

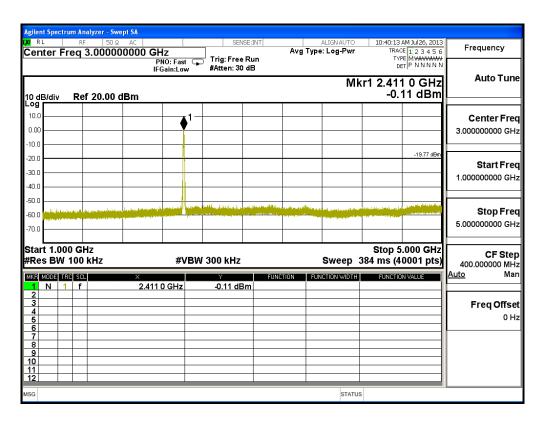
Test Site : No.3 OATS

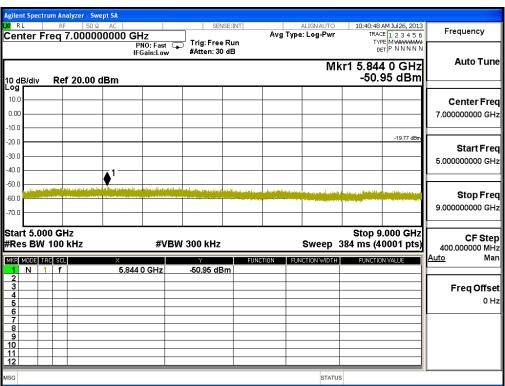
Test Mode : Mode 1: Transmit (802.11b 1Mbps)

## **Channel 01 (2412MHz)**

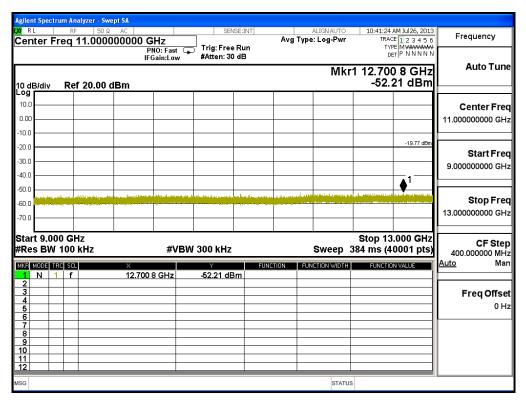


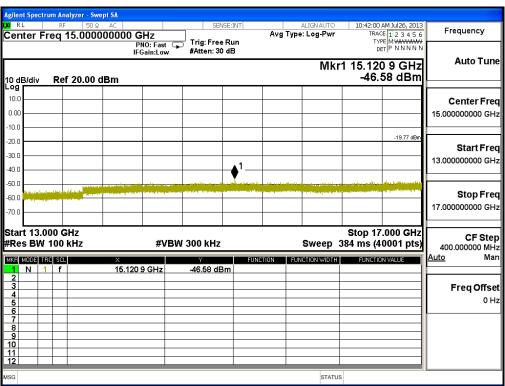




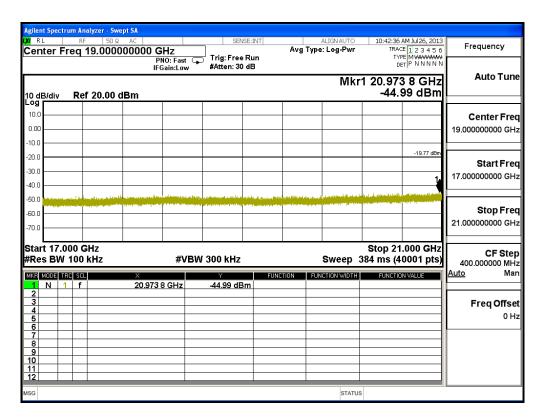


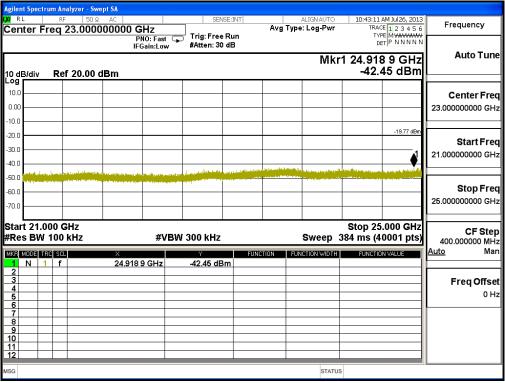


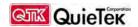




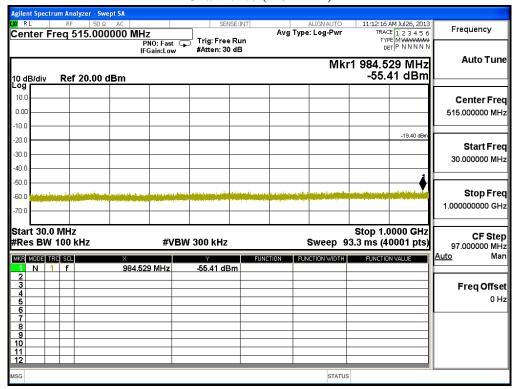


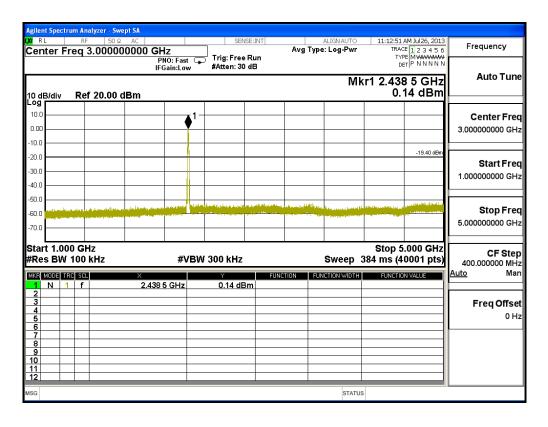


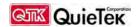


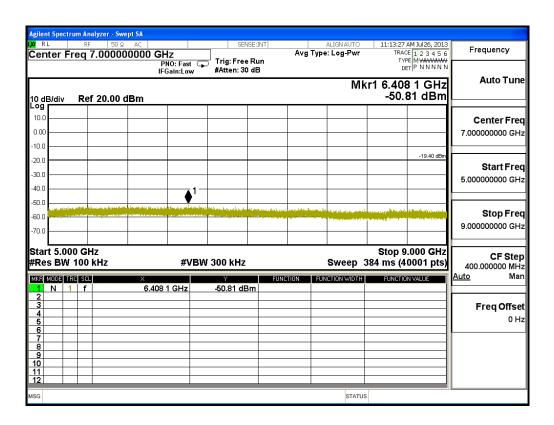


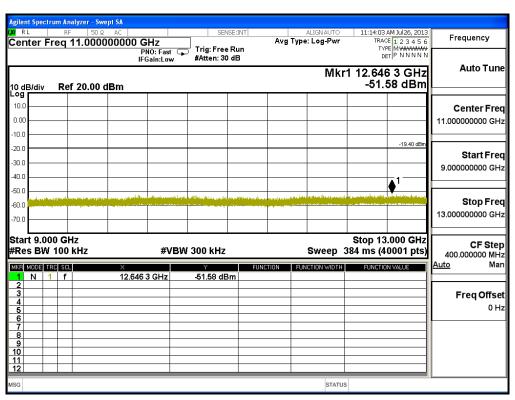
## **Channel 06 (2437MHz)**



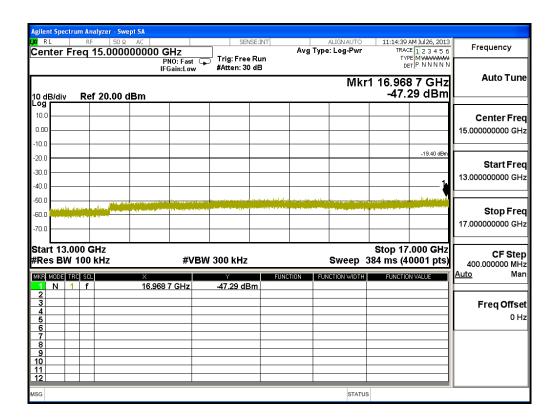


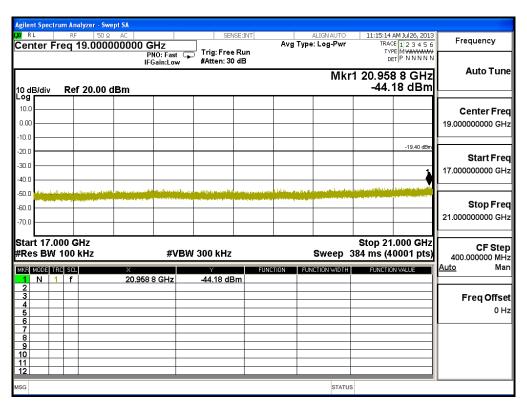


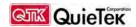


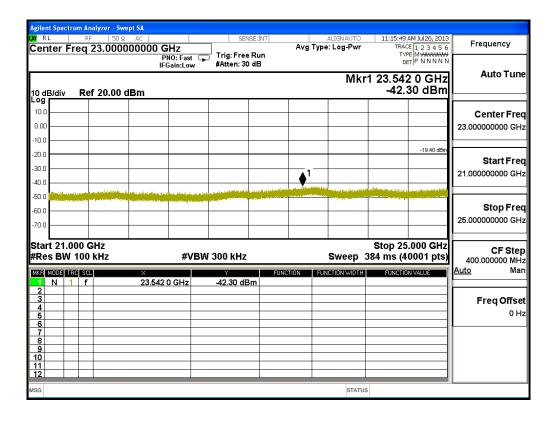






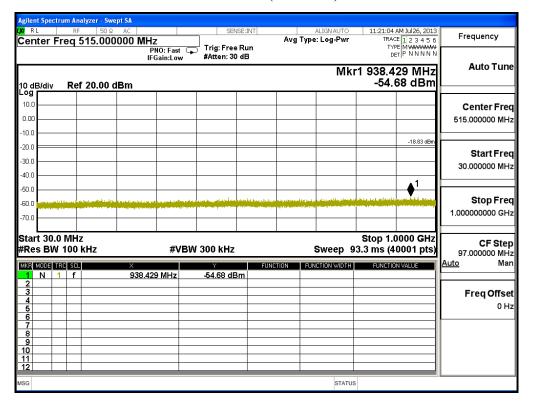


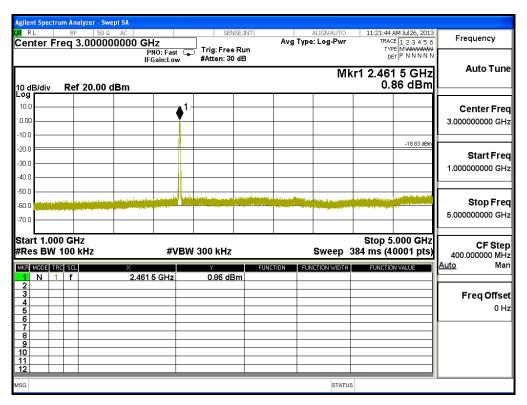




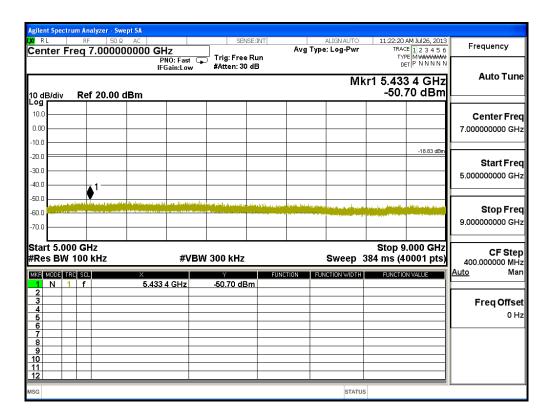


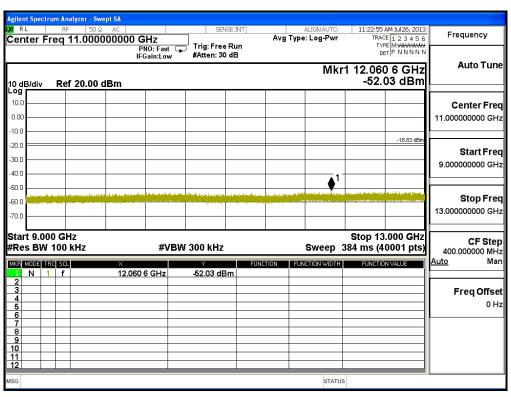
## **Channel 11 (2462MHz)**



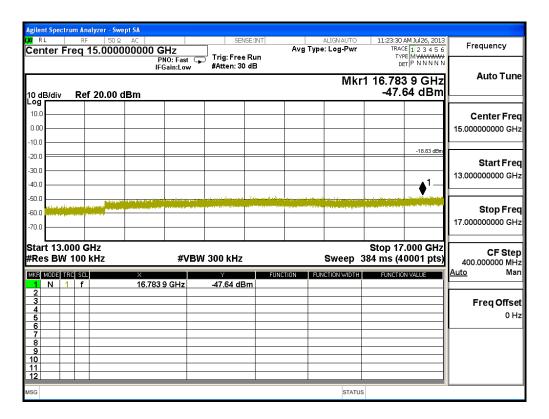


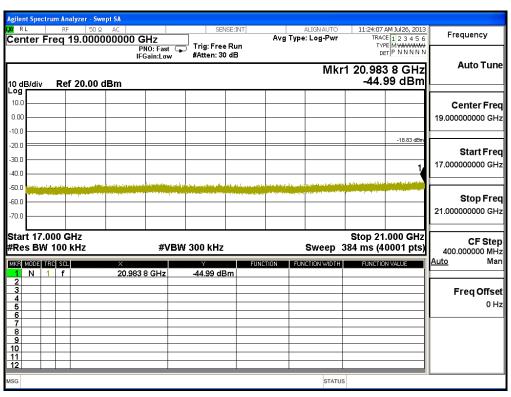




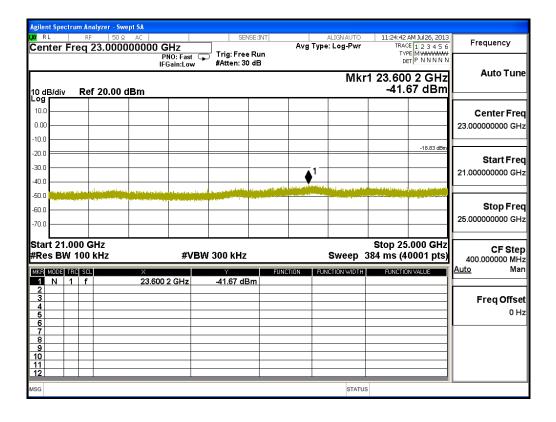














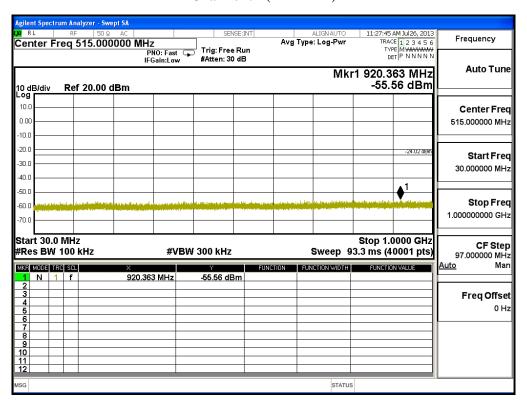
Product : ASUS Tablet

Test Item : RF Antenna Conducted Spurious

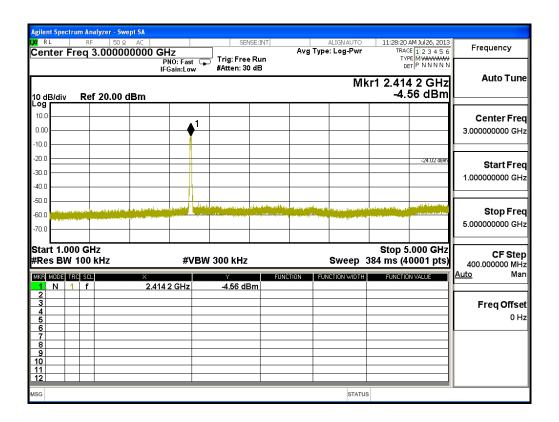
Test Site : No.3 OATS

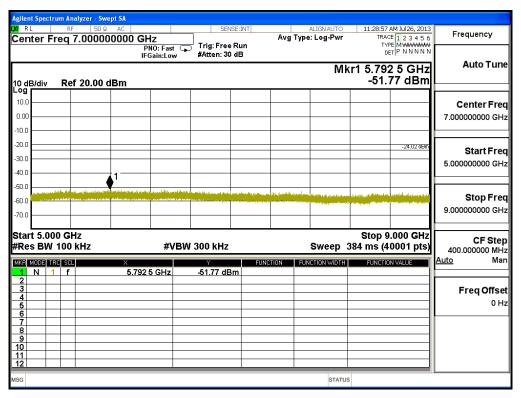
Test Mode : Mode 2: Transmit (802.11g 6Mbps)

## **Channel 01 (2412MHz)**

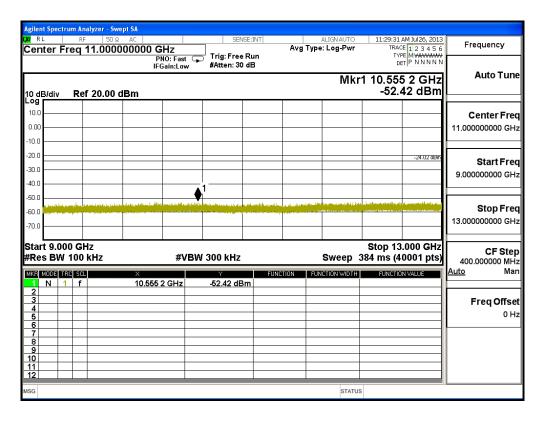


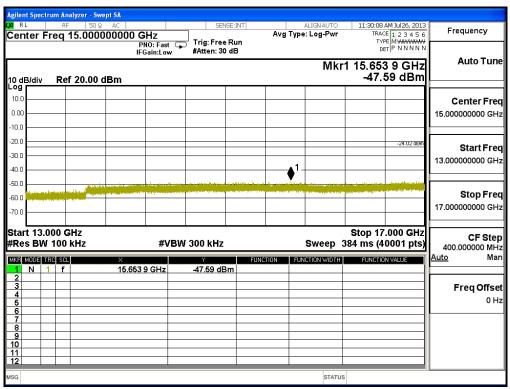




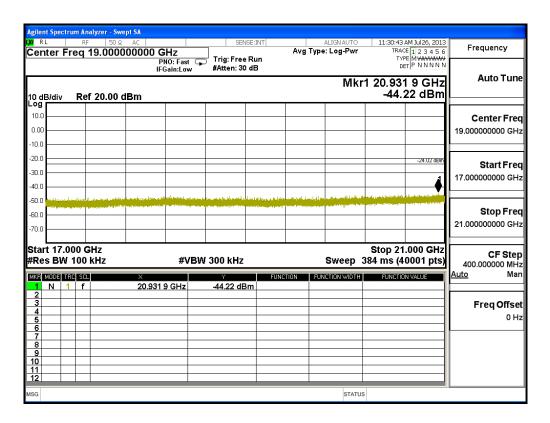


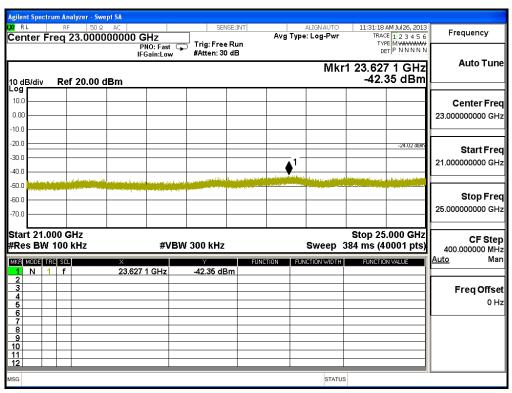






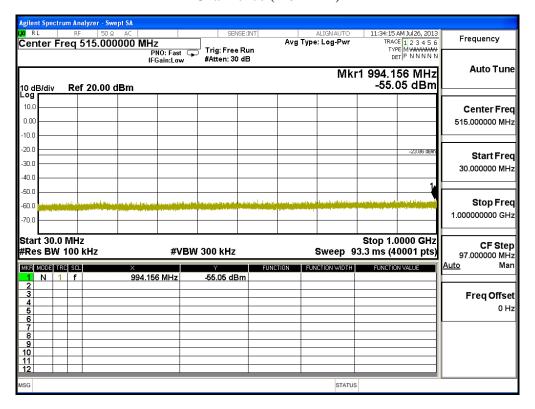


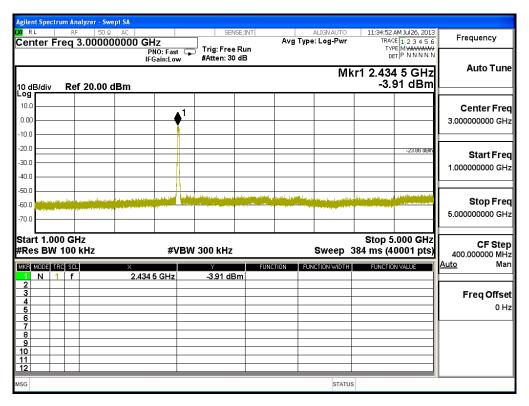


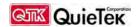


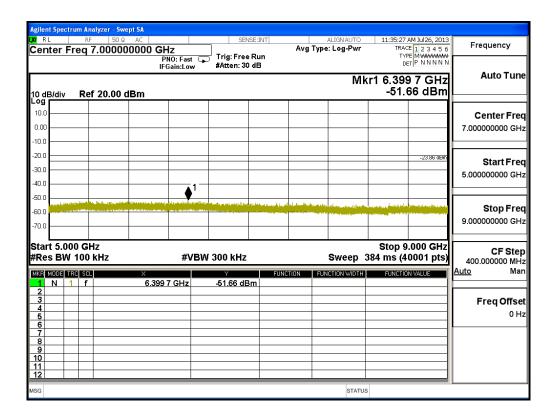


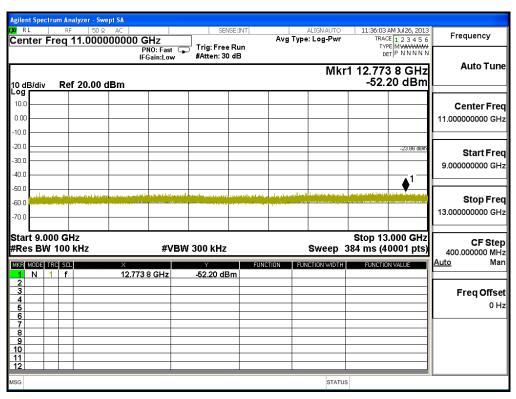
## **Channel 06 (2437MHz)**

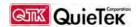


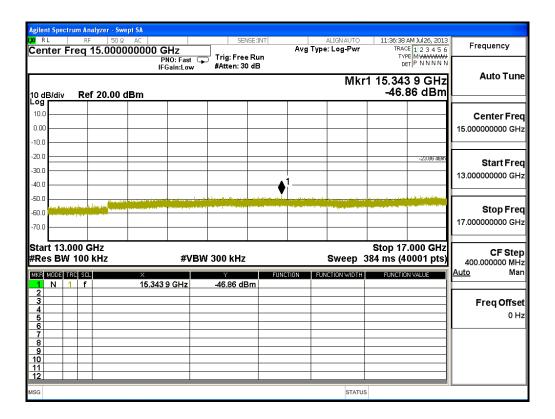


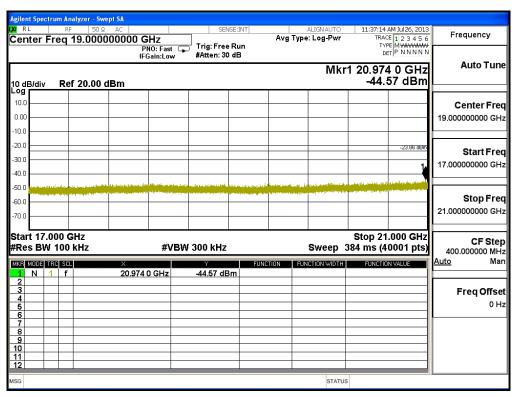


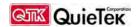


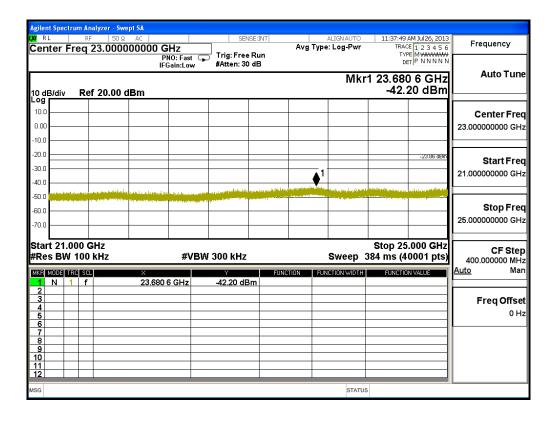






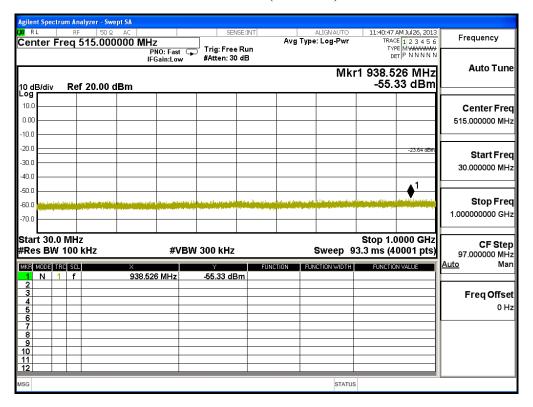


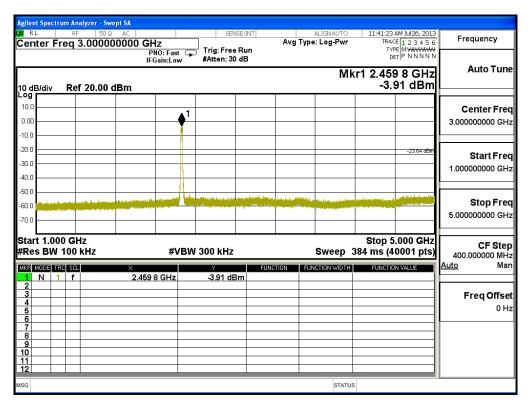




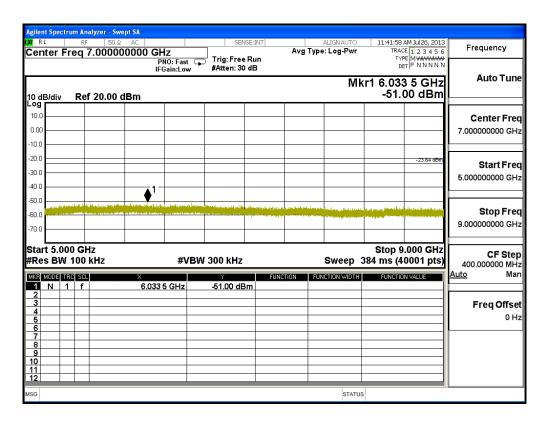


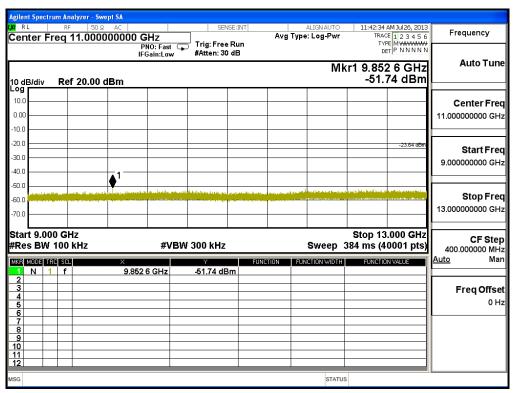
## **Channel 11 (2462MHz)**



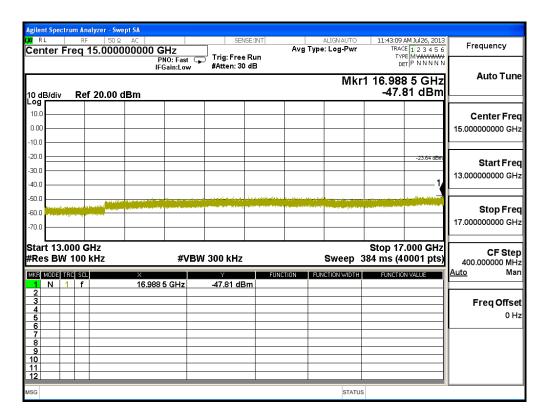


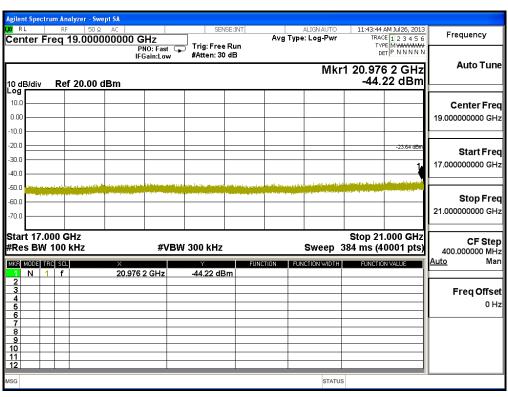


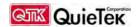


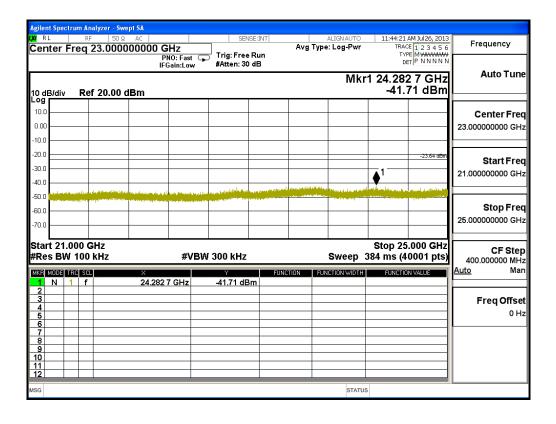














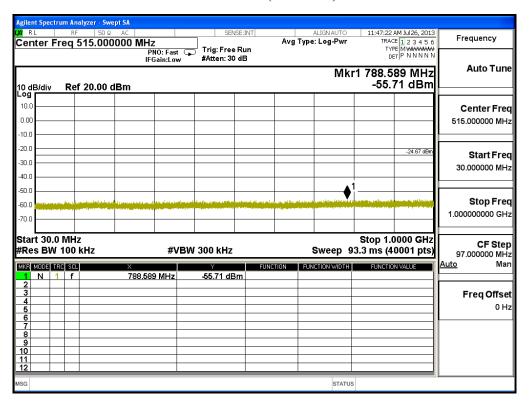
Product : ASUS Tablet

Test Item : RF Antenna Conducted Spurious

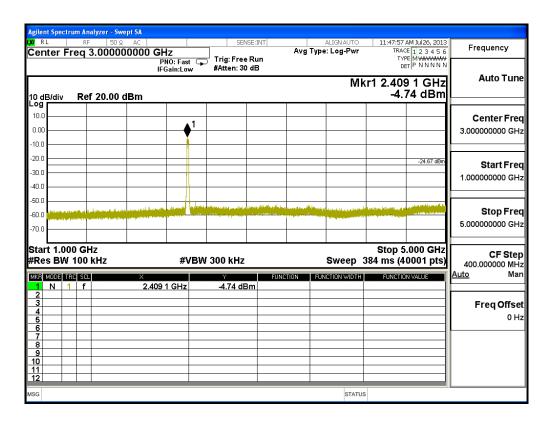
Test Site : No.3 OATS

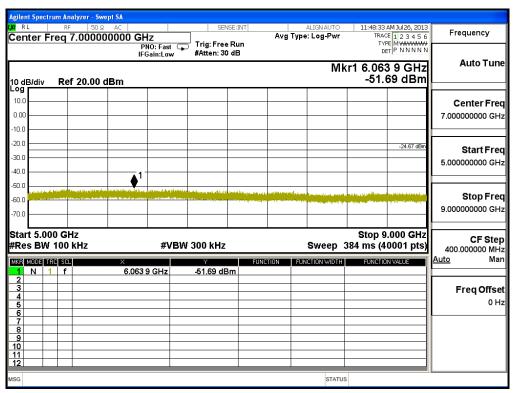
Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)

## **Channel 01 (2412MHz)**

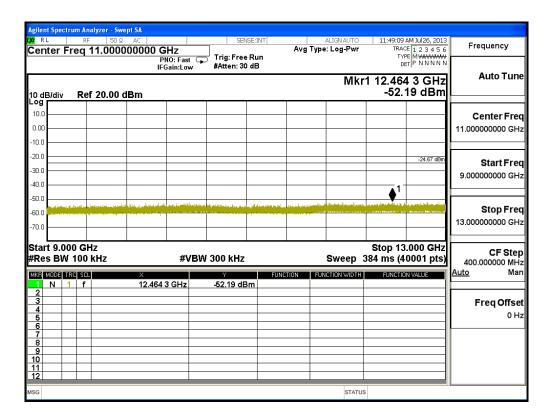


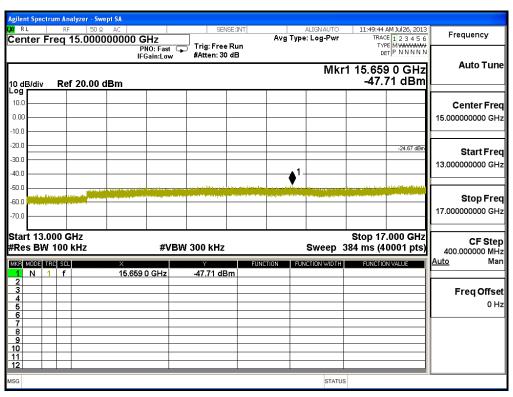




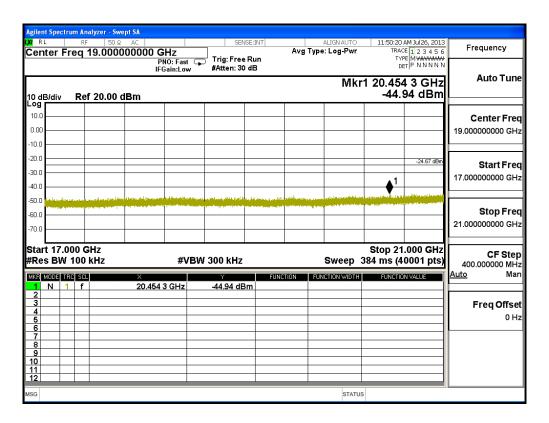


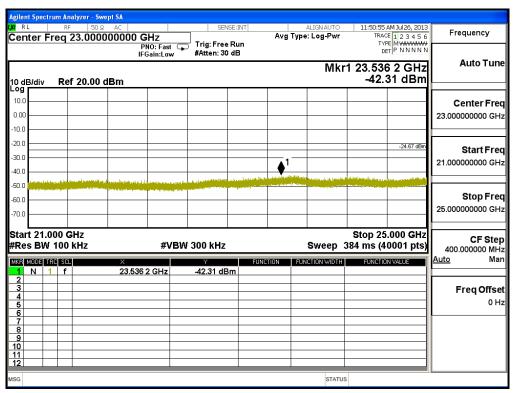






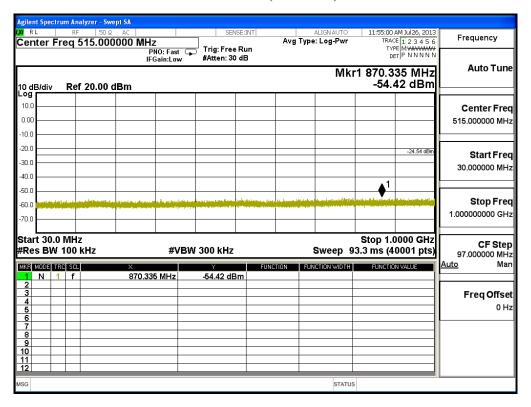


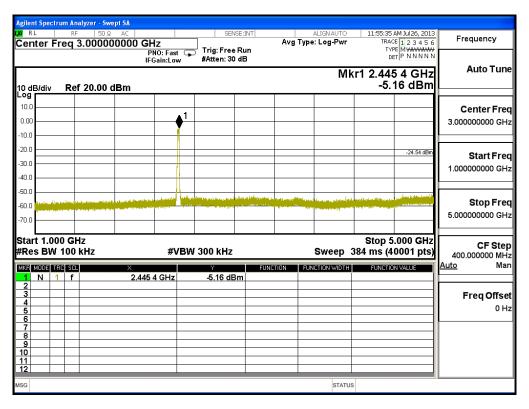




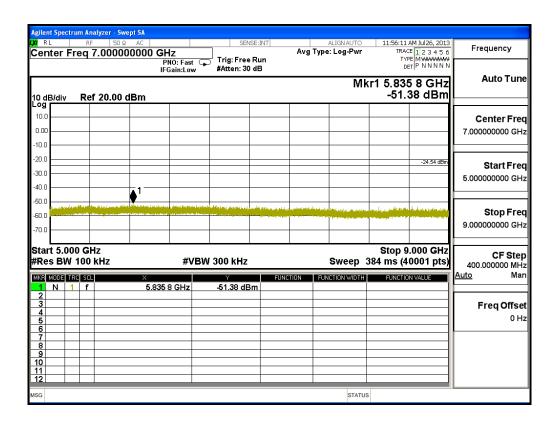


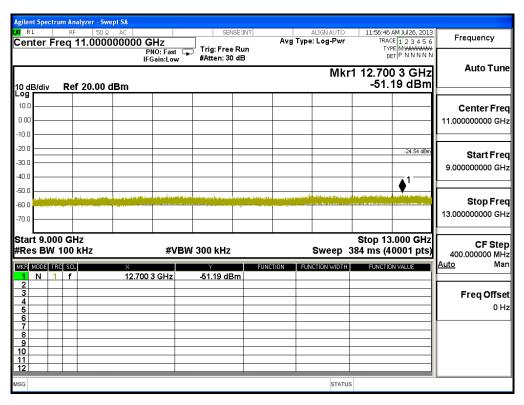
#### **Channel 06 (2437MHz)**



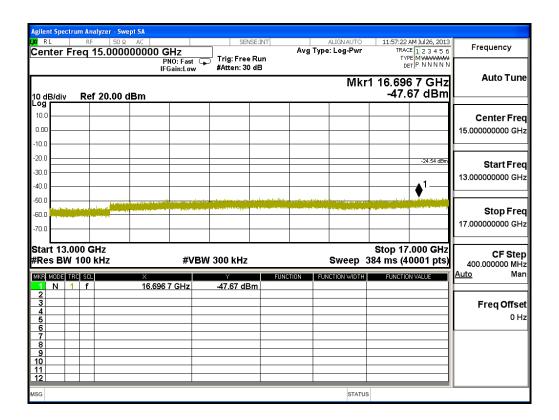


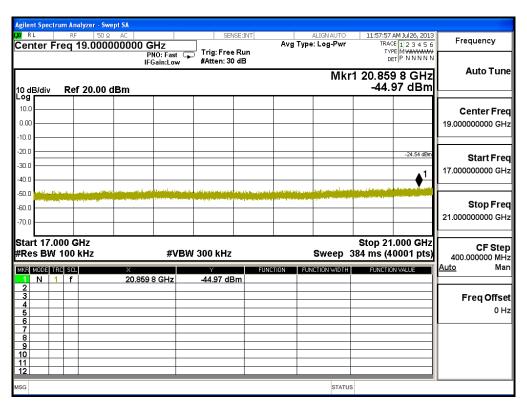




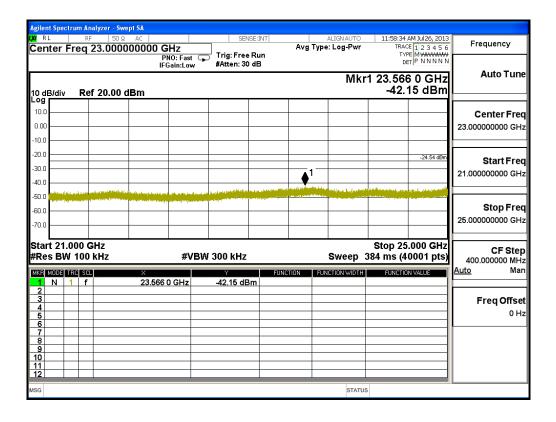






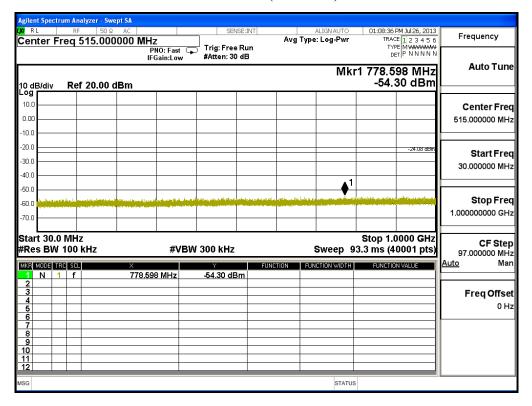


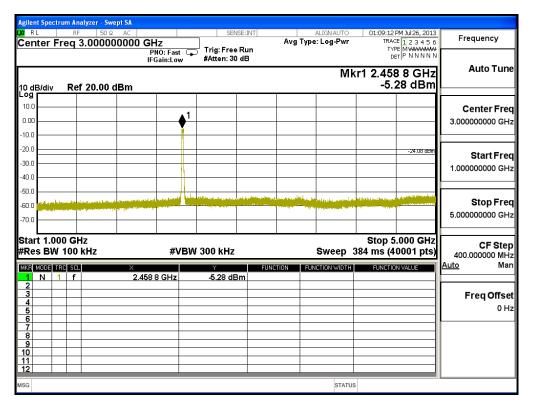


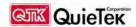


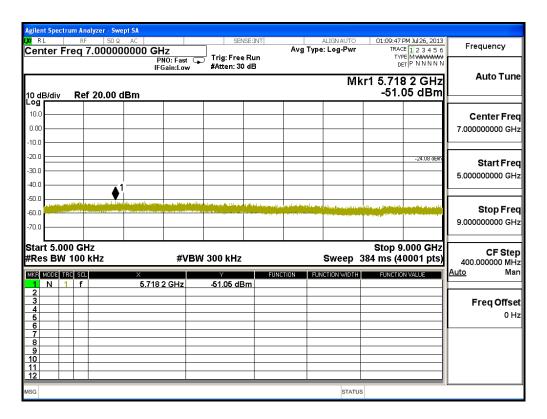


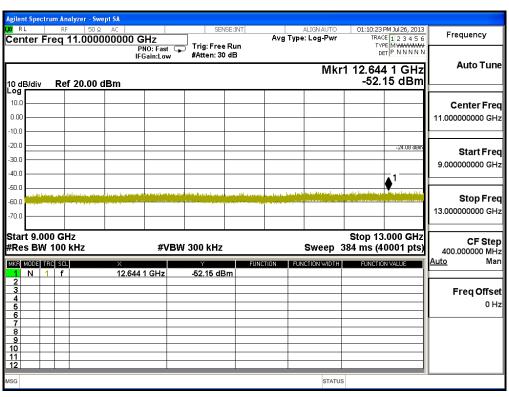
## **Channel 11 (2462MHz)**



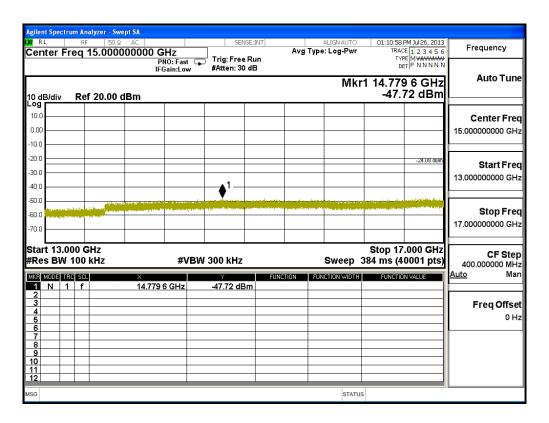


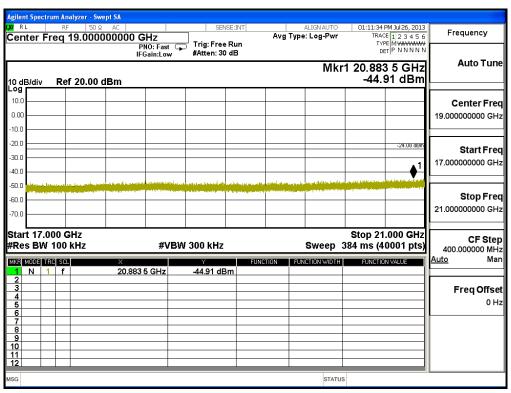


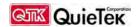


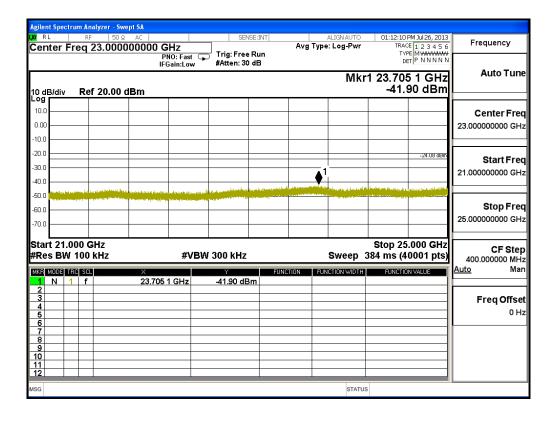














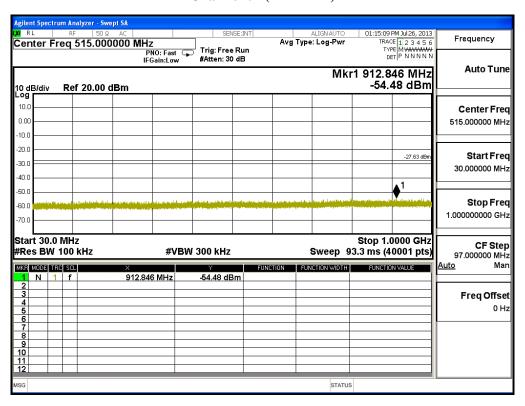
Product : ASUS Tablet

Test Item : RF Antenna Conducted Spurious

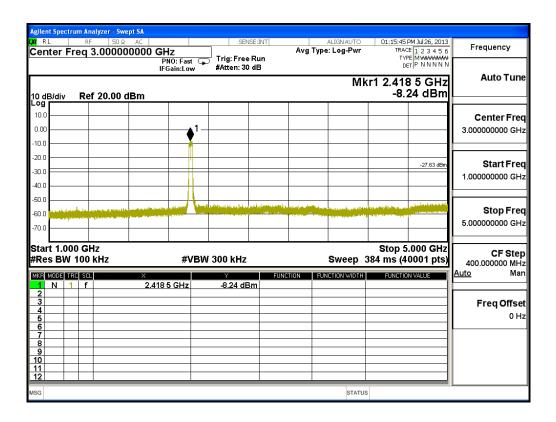
Test Site : No.3 OATS

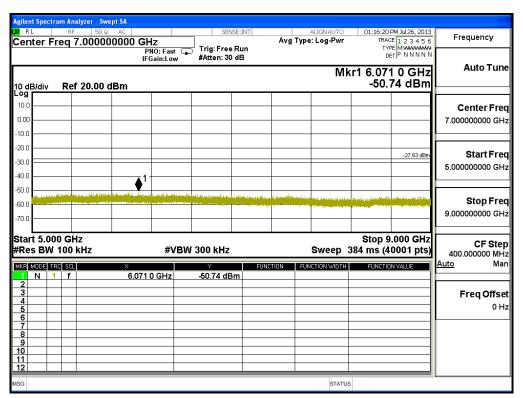
Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)

# **Channel 01 (2422MHz)**

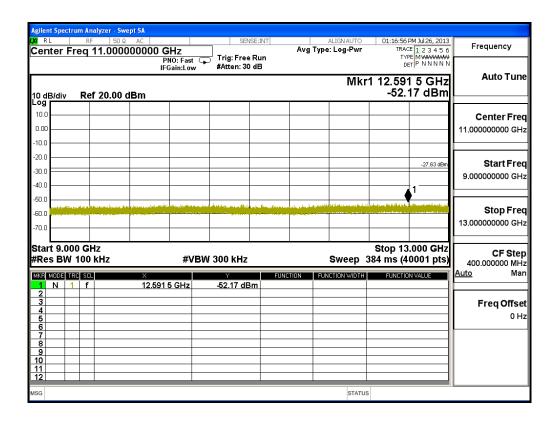


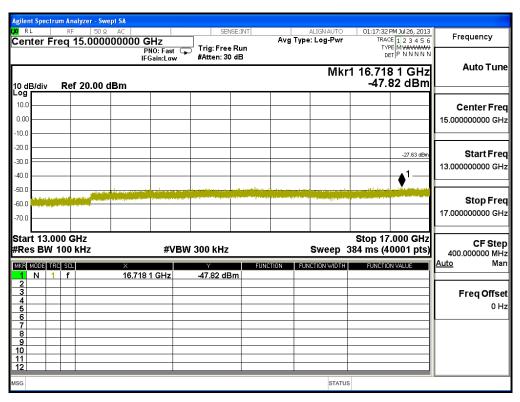




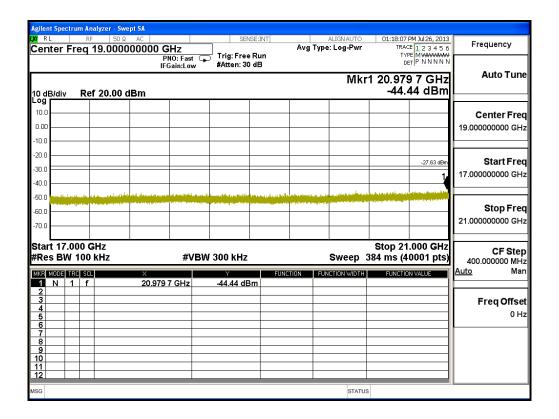


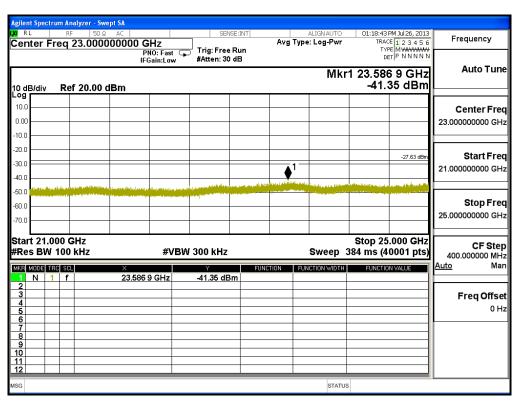






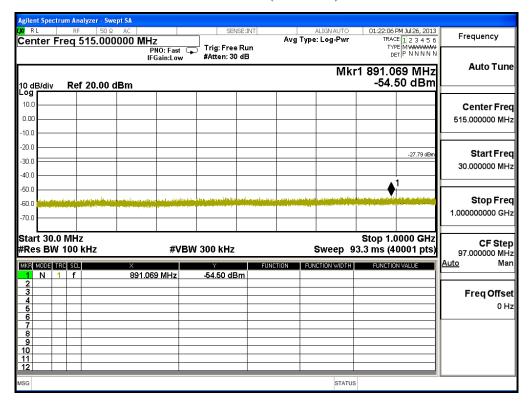


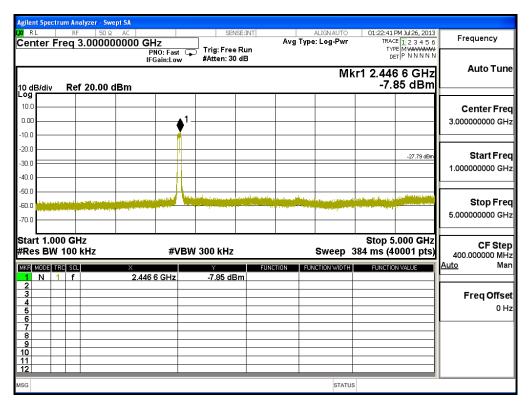




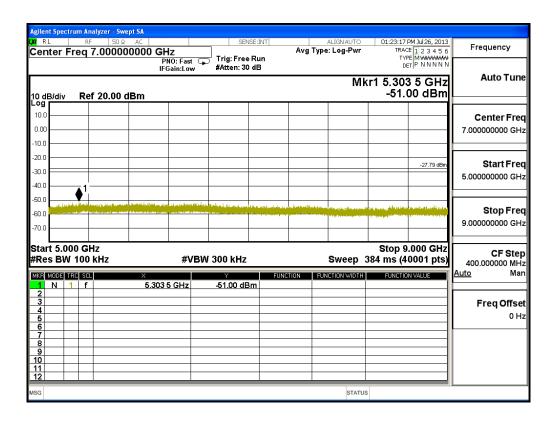


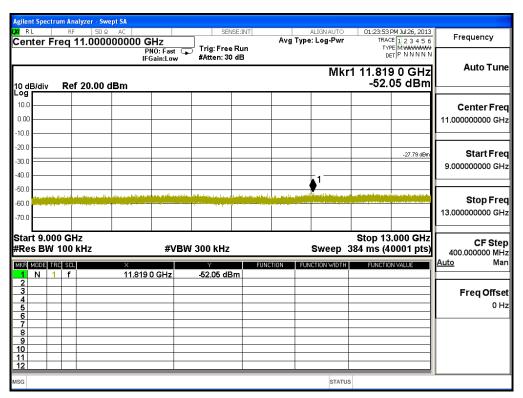
# **Channel 04 (2437MHz)**



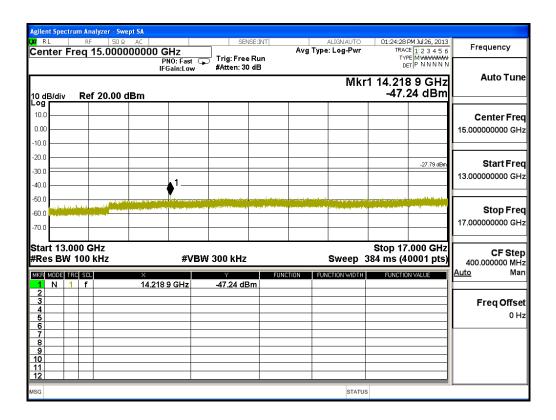


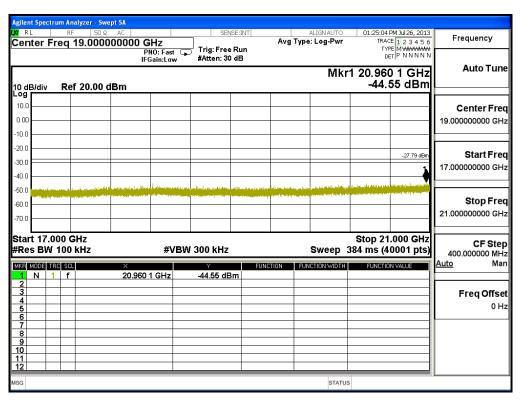


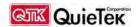


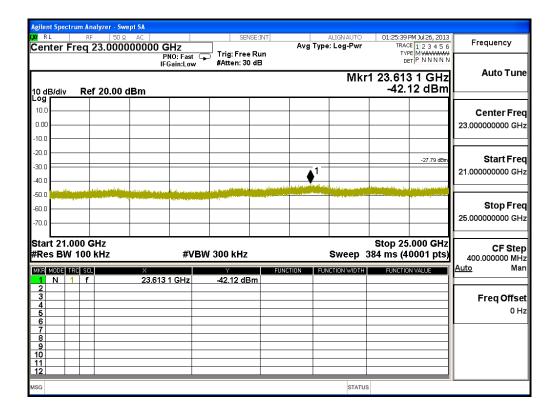






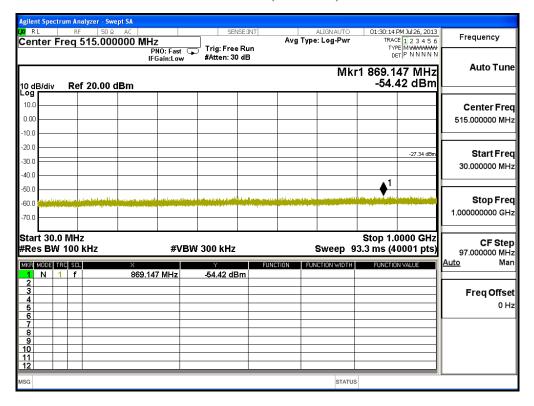


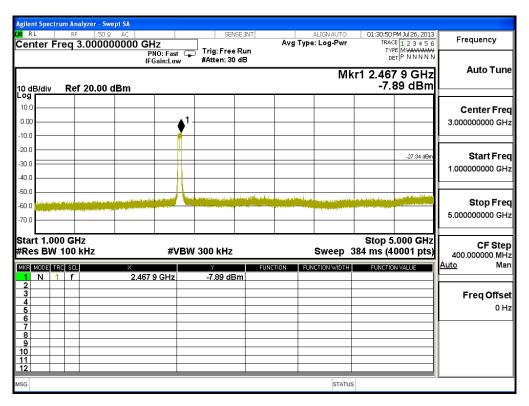




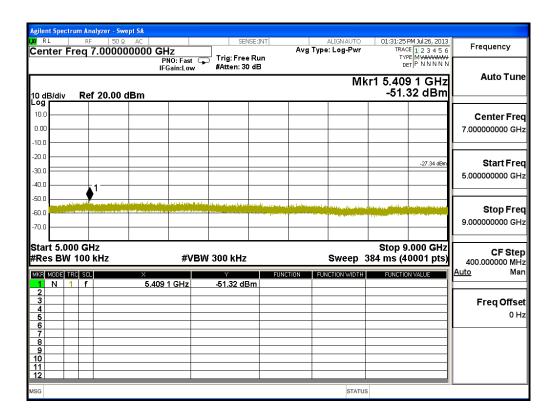


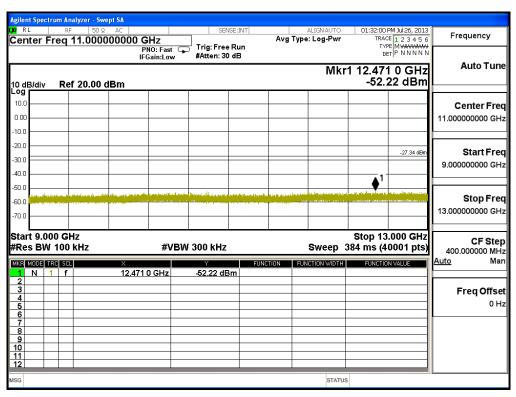
# **Channel 07 (2452MHz)**



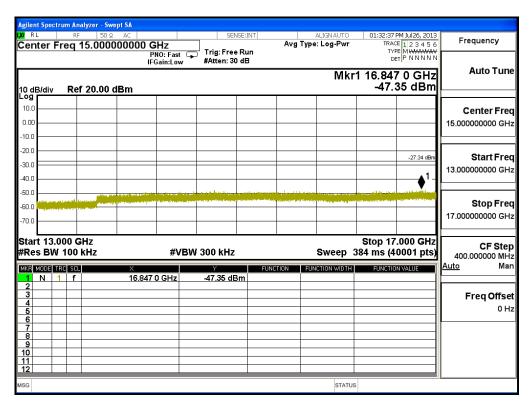


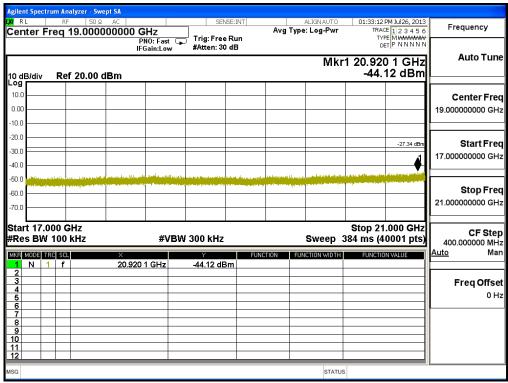




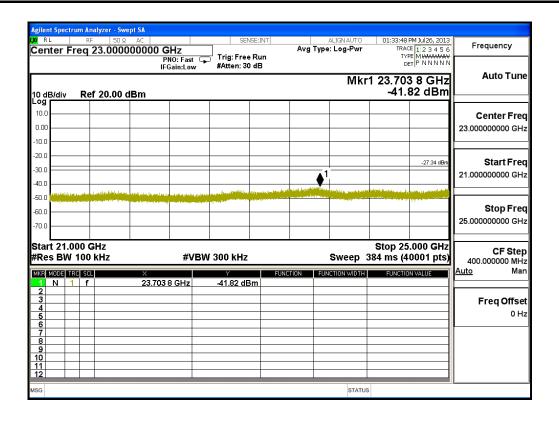














# 6. Band Edge

# **6.1.** Test Equipment

# **RF Radiated Measurement:**

The following test equipments are used during the band edge tests:

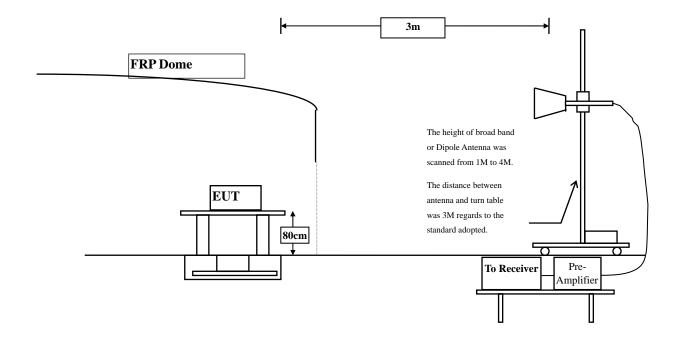
Test Site		Equipment	Manufacturer	Model No./Serial No.	Last Cal.
<b>⊠</b> Site # 3		Bilog Antenna	Schaffner Chase	CBL6112B/2673	Sep., 2012
	X	Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2012
		Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2013
	X	Pre-Amplifier	Agilent	8447D/2944A09549	Sep., 2012
	X	Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2013
		Test Receiver	R & S	ESCS 30/ 825442/018	Sep., 2012
	X	Coaxial Cable	QuieTek	QTK-CABLE/ CAB5	Feb., 2013
	X	Controller	QuieTek	QTK-CONTROLLER/ CTRL3	N/A
	X	Coaxial Switch	Anritsu	MP59B/6200265729	N/A

Note:

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

# 6.2. Test Setup

# **RF Radiated Measurement:**





#### 6.3. Limits

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

# **6.4.** Test Procedure

The EUT was setup according to ANSI C63.10: 2009 and tested according to DTS test procedure of 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 C63.10: 2009 on radiated measurement.

# 6.5. Uncertainty

- ± 3.9 dB above 1GHz
- ± 3.8 dB below 1GHz



# 6.6. Test Result of Band Edge

Product : ASUS Tablet
Test Item : Band Edge Data
Test Site : No.3 OATS

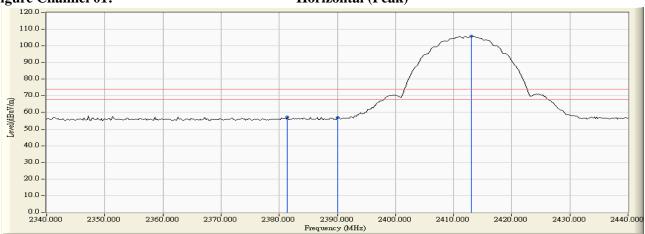
Test Mode : Mode 1: Transmit (802.11b 1Mbps)

# **RF Radiated Measurement (Horizontal):**

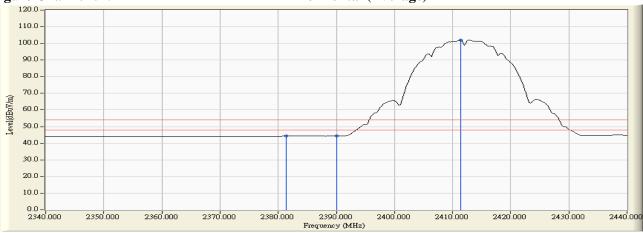
Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01 (Peak)	2381.400	31.475	25.761	57.237	74.00	54.00	Pass
01 (Peak)	2390.000	31.509	25.488	56.997	74.00	54.00	Pass
01 (Peak)	2413.000	31.646	74.184	105.830			Pass
01 (Average)	2381.400	31.475	12.813	44.289	74.00	54.00	Pass
01 (Average)	2390.000	31.509	12.846	44.355	74.00	54.00	Pass
01 (Average)	2411.400	31.634	70.342	101.976			Pass

#### Figure Channel 01:

# Horizontal (Peak)



#### Figure Channel 01:



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



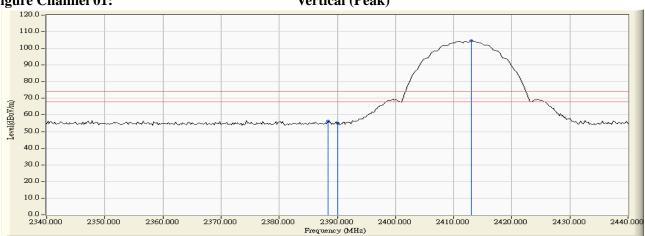
Test Mode : Mode 1: Transmit (802.11b 1Mbps)

# RF Radiated Measurement (Vertical):

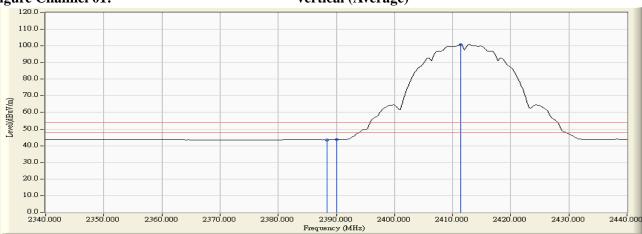
Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
Channel No.	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
01 (Peak)	2388.400	30.923	25.487	56.410	74.00	54.00	Pass
01 (Peak)	2390.000	30.915	24.036	54.951	74.00	54.00	Pass
01 (Peak)	2413.000	30.956	73.531	104.487			Pass
01 (Average)	2388.400	30.923	12.666	43.589	74.00	54.00	Pass
01 (Average)	2390.000	30.915	12.753	43.668	74.00	54.00	Pass
01 (Average)	2411.400	30.945	69.804	100.749			Pass

# Figure Channel 01:

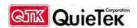
# Vertical (Peak)



## Figure Channel 01:



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



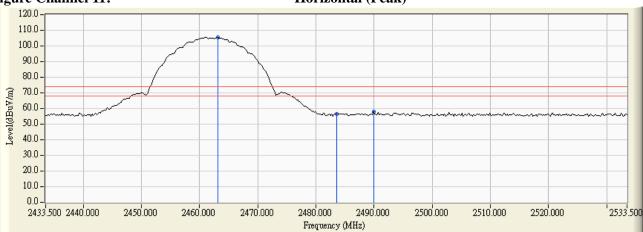
Test Mode : Mode 1: Transmit (802.11b 1Mbps)

#### **RF Radiated Measurement (Horizontal):**

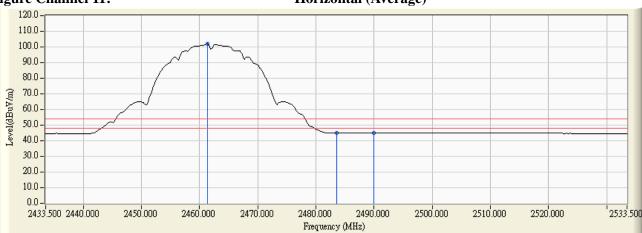
Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
11 (Peak)	2463.100	32.028	73.344	105.372			Pass
11 (Peak)	2483.500	32.182	24.075	56.257	74.00	54.00	Pass
11 (Peak)	2489.900	32.231	25.996	58.226	74.00	54.00	Pass
11 (Average)	2461.300	32.014	69.783	101.797			Pass
11 (Average)	2483.500	32.182	12.894	45.076	74.00	54.00	Pass
11 (Average)	2489.900	32.231	12.942	45.172	74.00	54.00	Pass

#### **Figure Channel 11:**

## Horizontal (Peak)



#### **Figure Channel 11:**



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



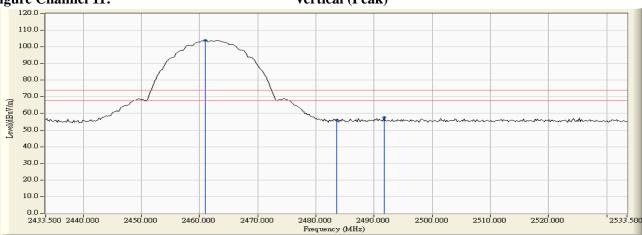
Test Mode : Mode 1: Transmit (802.11b 1Mbps)

#### **RF** Radiated Measurement (Vertical):

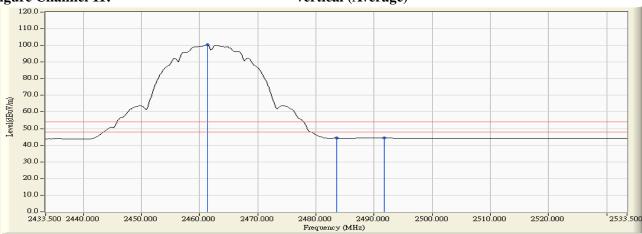
Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
11 (Peak)	2460.900	31.283	72.678	103.961			Pass
11 (Peak)	2483.500	31.435	24.519	55.954	74.00	54.00	Pass
11 (Peak)	2491.700	31.491	26.120	57.611	74.00	54.00	Pass
11 (Average)	2461.300	31.286	69.071	100.357			Pass
11 (Average)	2483.500	31.435	12.815	44.250	74.00	54.00	Pass
11 (Average)	2491.700	31.491	12.833	44.324	74.00	54.00	Pass



# Vertical (Peak)



#### **Figure Channel 11:**



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



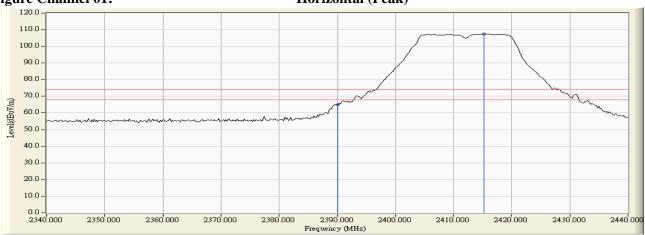
Test Mode : Mode 2: Transmit (802.11g 6Mbps)

# **RF Radiated Measurement (Horizontal):**

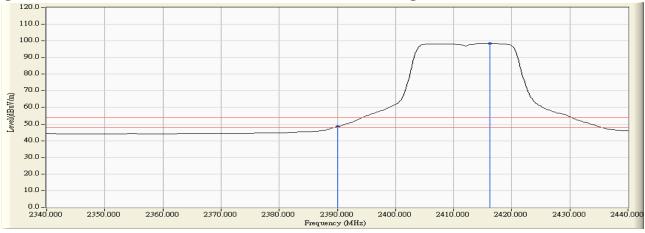
CI IN	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
Channel No.	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
01 (Peak)	2390.000	31.509	33.448	64.957	74.00	54.00	Pass
01 (Peak)	2415.200	31.662	75.753	107.416			Pass
01 (Average)	2390.000	31.509	16.940	48.449	74.00	54.00	Pass
01 (Average)	2416.200	31.671	66.829	98.499			Pass

# Figure Channel 01:

#### Horizontal (Peak)



#### Figure Channel 01:



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

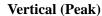


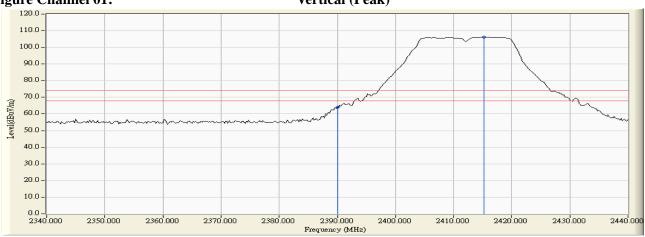
Test Mode : Mode 2: Transmit (802.11g 6Mbps)

#### **RF** Radiated Measurement (Vertical):

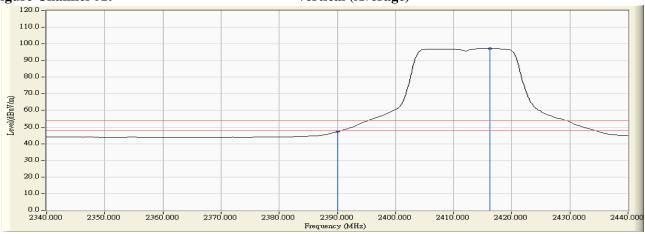
Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
Chainlei No.	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Kesuit
01 (Peak)	2390.000	30.915	33.238	64.153	74.00	54.00	Pass
01 (Peak)	2415.200	30.971	75.161	106.132			Pass
01 (Average)	2390.000	30.915	16.331	47.246	74.00	54.00	Pass
01 (Average)	2416.200	30.978	66.248	97.226			Pass







#### Figure Channel 01:



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



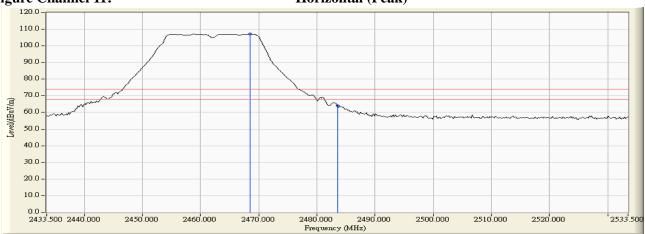
Test Mode : Mode 2: Transmit (802.11g 6Mbps)

# **RF Radiated Measurement (Horizontal):**

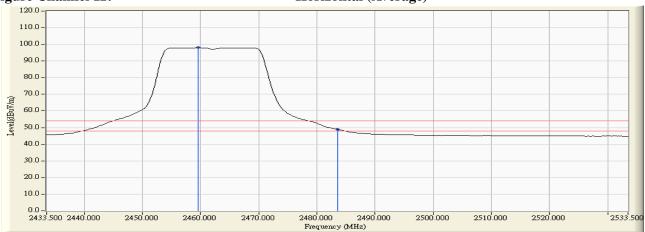
CI IN	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
Channel No.	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
11 (Peak)	2468.500	32.068	74.965	107.033			Pass
11 (Peak)	2483.500	32.182	31.896	64.078	74.00	54.00	Pass
11 (Average)	2459.500	32.001	66.059	98.059			Pass
11 (Average)	2483.500	32.182	16.730	48.912	74.00	54.00	Pass



# Horizontal (Peak)



# **Figure Channel 11:**



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



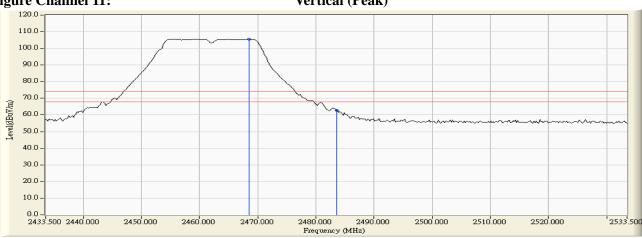
Test Mode : Mode 2: Transmit (802.11g 6Mbps)

#### **RF** Radiated Measurement (Vertical):

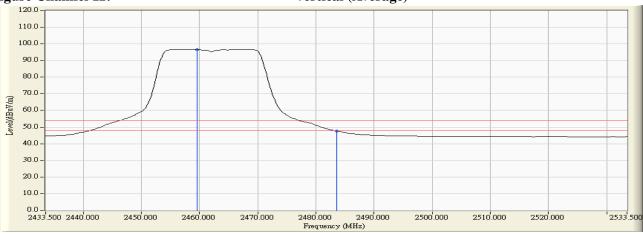
Channel No.	•		•	Emission Level		•	Result
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
11 (Peak)	2468.500	31.334	74.246	105.580	-		Pass
11 (Peak)	2483.500	31.435	31.158	62.593	74.00	54.00	Pass
11 (Average)	2459.500	31.273	65.314	96.587	-		Pass
11 (Average)	2483.500	31.435	16.305	47.740	74.00	54.00	Pass



# Vertical (Peak)



#### **Figure Channel 11:**



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



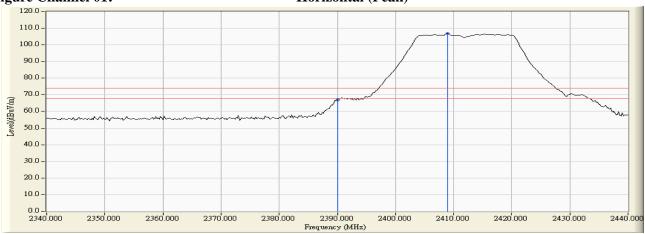
Test Mode Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)

# **RF Radiated Measurement (Horizontal):**

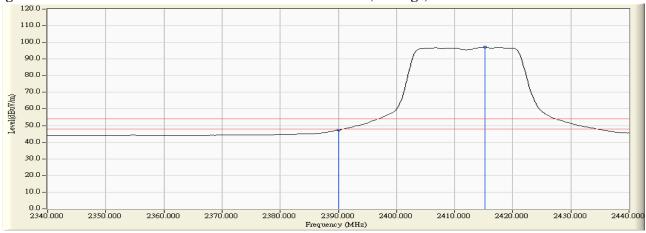
CI 1N	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
Channel No.	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Kesuit
01 (Peak)	2390.000	31.509	35.510	67.019	74.00	54.00	Pass
01 (Peak)	2409.000	31.618	75.200	106.818			Pass
01 (Average)	2390.000	31.509	15.813	47.322	74.00	54.00	Pass
01 (Average)	2415.200	31.662	65.430	97.093			Pass

# Figure Channel 01:

# Horizontal (Peak)



#### Figure Channel 01:



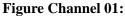
- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
  - 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
  - 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
  - "\*", means this data is the worst emission level. 4.
  - 5. Measurement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



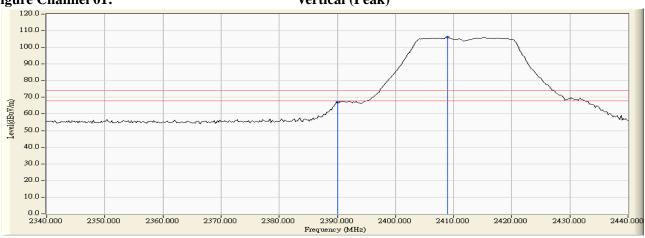
Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)

#### **RF** Radiated Measurement (Vertical):

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
Chainlei No.	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Kesuit
01 (Peak)	2390.000	30.915	36.423	67.338	74.00	54.00	Pass
01 (Peak)	2409.000	30.937	75.363	106.300			Pass
01 (Average)	2390.000	30.915	15.782	46.697	74.00	54.00	Pass
01 (Average)	2415.200	30.971	65.454	96.425			Pass







#### Figure Channel 01:



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



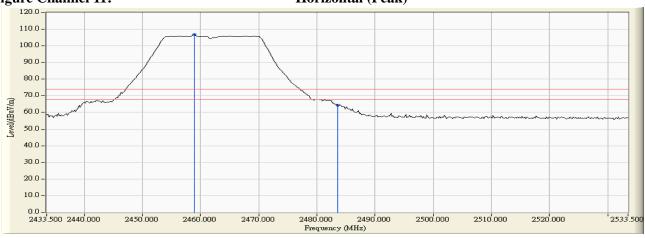
Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)

# RF Radiated Measurement (Horizontal):

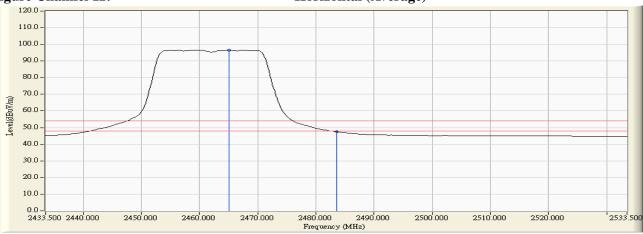
CI 1N	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
Channel No.	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
11 (Peak)	2458.900	31.997	74.719	106.715			Pass
11 (Peak)	2483.500	32.182	32.025	64.207	74.00	54.00	Pass
11 (Average)	2465.100	32.043	64.502	96.545			Pass
11 (Average)	2483.500	32.182	15.325	47.507	74.00	54.00	Pass

#### **Figure Channel 11:**

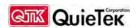
# Horizontal (Peak)



#### **Figure Channel 11:**



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



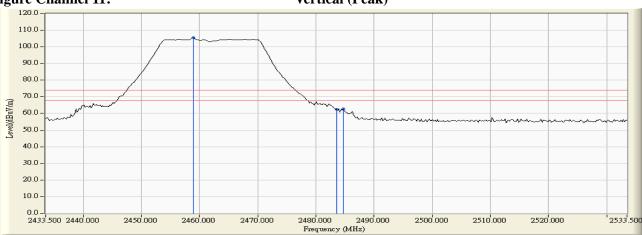
Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)

# RF Radiated Measurement (Vertical):

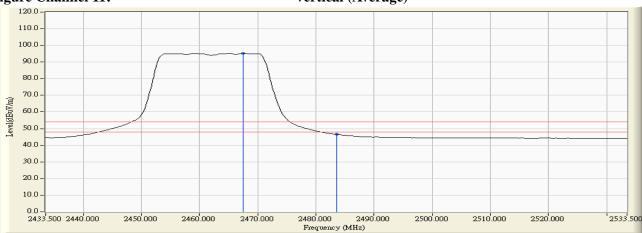
Channel No.	Frequency	Correct Factor	Reading Level	<b>Emission Level</b>	Peak Limit	Average Limit	Result
Chamilei No.	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Kesuit
11 (Peak)	2458.900	31.270	74.096	105.365			Pass
11 (Peak)	2483.500	31.435	30.831	62.266	74.00	54.00	Pass
11 (Peak)	2484.700	31.444	31.380	62.823	74.00	54.00	Pass
11 (Average)	2467.500	31.327	63.877	95.204			Pass
11 (Average)	2483.500	31.435	15.080	46.515	74.00	54.00	Pass



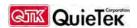




#### **Figure Channel 11:**



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



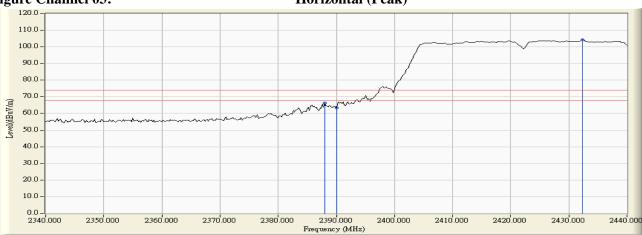
Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)

#### **RF Radiated Measurement (Horizontal):**

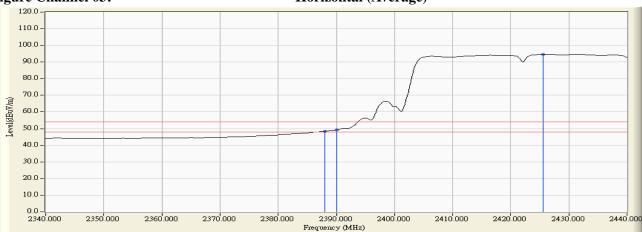
Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
03 (Peak)	2388.000	31.501	34.697	66.198	74.00	54.00	Pass
03 (Peak)	2390.000	31.509	31.754	63.263	74.00	54.00	Pass
03 (Peak)	2432.400	31.794	72.512	104.306			Pass
03 (Average)	2388.000	31.501	16.884	48.385	74.00	54.00	Pass
03 (Average)	2390.000	31.509	17.680	49.189	74.00	54.00	Pass
03 (Average)	2425.600	31.742	62.833	94.575			Pass

## Figure Channel 03:

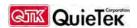
# Horizontal (Peak)



#### Figure Channel 03:



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



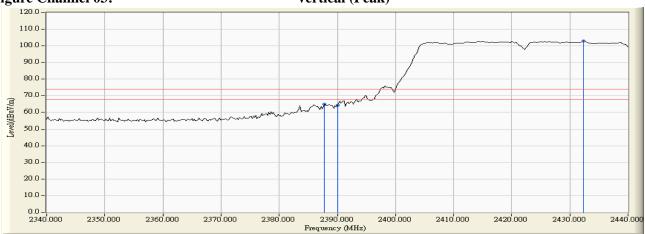
Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)

#### **RF Radiated Measurement (Vertical):**

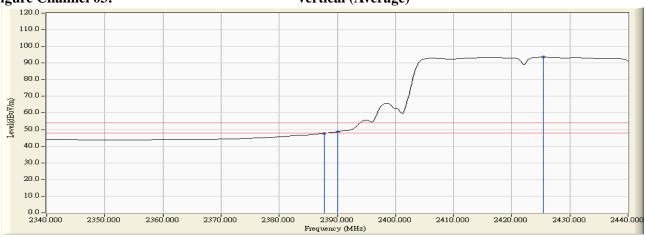
Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
Chamilei No.	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Kesuit
03 (Peak)	2387.800	30.925	34.116	65.041	74.00	54.00	Pass
03 (Peak)	2390.000	30.915	33.533	64.448	74.00	54.00	Pass
03 (Peak)	2432.400	31.088	71.876	102.964			Pass
03 (Average)	2387.800	30.925	16.845	47.770	74.00	54.00	Pass
03 (Average)	2390.000	30.915	17.694	48.609	74.00	54.00	Pass
03 (Average)	2425.400	31.040	62.469	93.509	-		Pass

#### Figure Channel 03:

## Vertical (Peak)



#### Figure Channel 03:



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



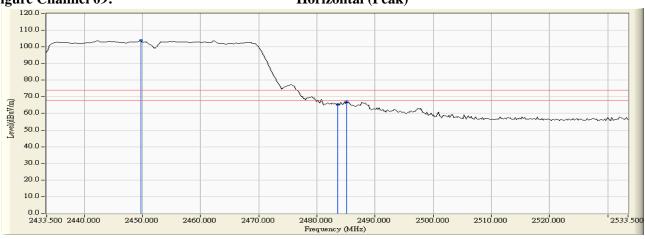
Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)

#### **RF Radiated Measurement (Horizontal):**

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
09 (Peak)	2449.700	31.926	71.860	103.786			Pass
09 (Peak)	2483.500	32.182	33.286	65.468	74.00	54.00	Pass
09 (Peak)	2485.100	32.194	34.595	66.789	74.00	54.00	Pass
09 (Average)	2454.900	31.966	62.228	94.194			Pass
09 (Average)	2483.500	32.182	17.684	49.866	74.00	54.00	Pass
09 (Average)	2485.100	32.194	16.970	49.164	74.00	54.00	Pass

# Figure Channel 09:

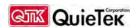
#### Horizontal (Peak)



#### **Figure Channel 03:**



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



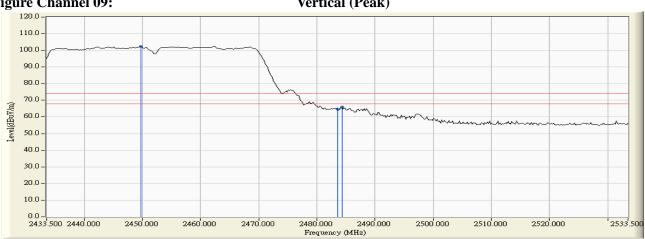
Test Mode Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)

# RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
09 (Peak)	2449.700	31.205	71.198	102.404			Pass
09 (Peak)	2483.500	31.435	33.309	64.744	74.00	54.00	Pass
09 (Peak)	2484.300	31.440	34.415	65.856	74.00	54.00	Pass
09 (Average)	2454.900	31.242	61.708	92.950			Pass
09 (Average)	2483.500	31.435	17.581	49.016	74.00	54.00	Pass
09 (Average)	2484.300	31.440	17.183	48.624	74.00	54.00	Pass

# Figure Channel 09:

# Vertical (Peak)



## Figure Channel 09:



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



# 7. Occupied Bandwidth

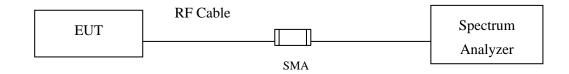
# 7.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.	
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun., 2013	
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun., 2013	
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2013	

#### 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.

# 7.2. Test Setup



# 7.3. Limits

The minimum bandwidth shall be at least 500 kHz.

# 7.4. Test Procedure

The EUT was setup according to ANSI C63.10: 2009; tested according to DTS test procedure of Jan KDB558074 for compliance to FCC 47CFR 15.247 requirements.

# 7.5. Uncertainty

 $\pm$  150Hz



# 7.6. Test Result of Occupied Bandwidth

Product : ASUS Tablet

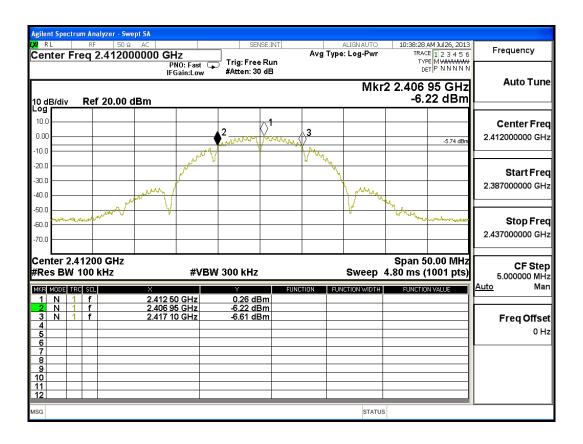
Test Item : Occupied Bandwidth Data

Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2412MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
1	2412	10150	>500	Pass

# Figure Channel 1:





Product : ASUS Tablet

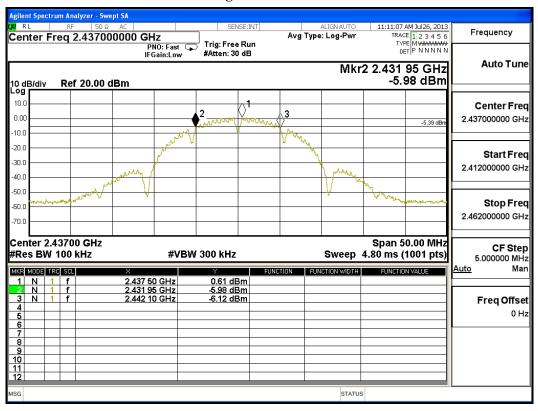
Test Item : Occupied Bandwidth Data

Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2437MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
6	2437	10150	>500	Pass

# **Figure Channel 6:**





Product : ASUS Tablet

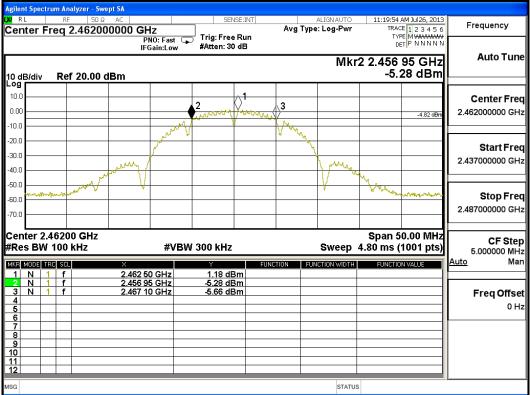
Test Item : Occupied Bandwidth Data

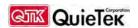
Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2462MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
11	2462	10150	>500	Pass

# Figure Channel 11:



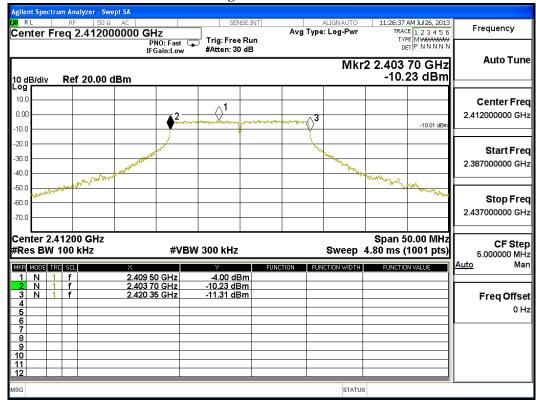


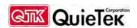
Test Item : Occupied Bandwidth Data

Test Site : No.3 OATS

Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2412MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
1	2412	16650	>500	Pass



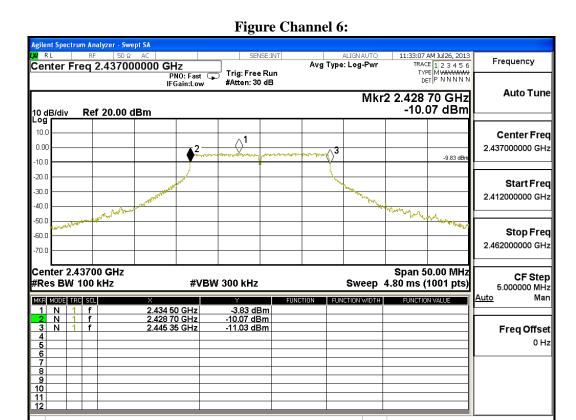


Test Item : Occupied Bandwidth Data

Test Site : No.3 OATS

Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2437MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
6	2437	16650	>500	Pass





Test Item : Occupied Bandwidth Data

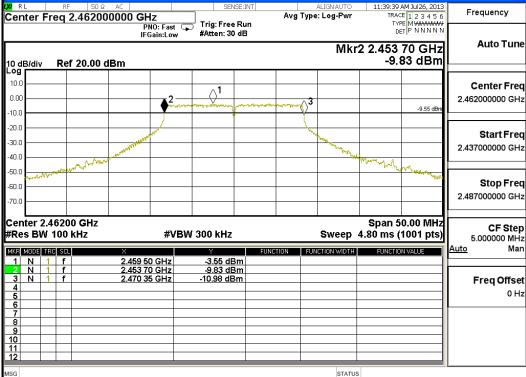
Test Site : No.3 OATS

gilent Spectrum Analyzer - Swept SA

Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2462MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
11	2462	16650	>500	Pass

# Figure Channel 11: SENSE:INT ALI AVG Type: L AVG Type: L



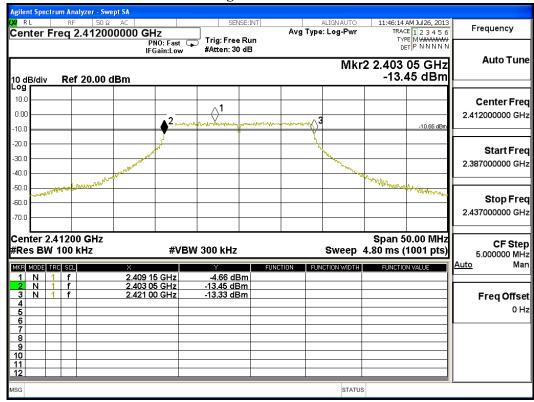


Test Item : Occupied Bandwidth Data

Test Site : No.3 OATS

Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2412MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
1	2412	17950	>500	Pass





Test Item : Occupied Bandwidth Data

Test Site : No.3 OATS

Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2437MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
6	2437	17950	>500	Pass

#### Figure Channel 6: Agilent Spectrum Analyzer - Swept SA 11:53:51 AM Jul 26, 2013 TRACE 1 2 3 4 5 6 TYPE M WWWWWW DET P N N N N N Frequency Center Freq 2.437000000 GHz Avg Type: Log-Pwr Trig: Free Run #Atten: 30 dB PNO: Fast 🖵 IFGain:Low **Auto Tune** Mkr2 2.428 05 GHz -13.78 dBm 10 dB/div Log Ref 20.00 dBm 10.0 Center Freq 0.00 2.437000000 GHz -10.68 dBr -10.0 -20.0 Start Freq -30.0 2.412000000 GHz -40.0 - Anthony Char Stop Freq 2.462000000 GHz Center 2.43700 GHz Span 50.00 MHz CF Step #Res BW 100 kHz **#VBW** 300 kHz Sweep 4.80 ms (1001 pts) 5.000000 MHz MKR MODE TRC SCL FUNCTION WIDTH Man 2.434 15 GHz 2.428 05 GHz 2.446 00 GHz -4.68 dBm -13.78 dBm -13.23 dBm Freq Offset 0 Hz

Page: 114 of 134

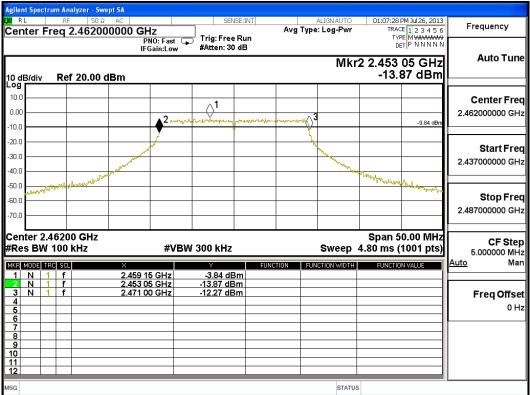


Test Item : Occupied Bandwidth Data

Test Site : No.3 OATS

Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2462MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
11	2462	17950	>500	Pass



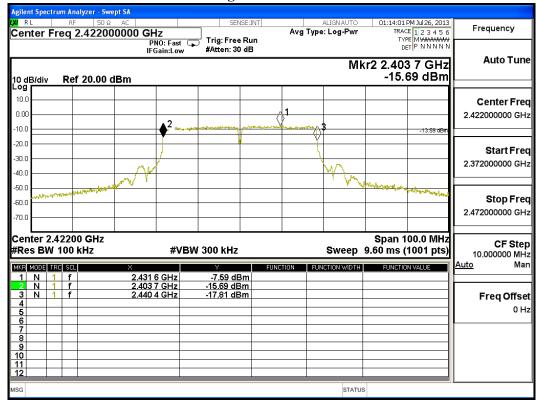


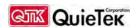
Test Item : Occupied Bandwidth Data

Test Site : No.3 OATS

Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2422MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
3	2422	36700	>500	Pass



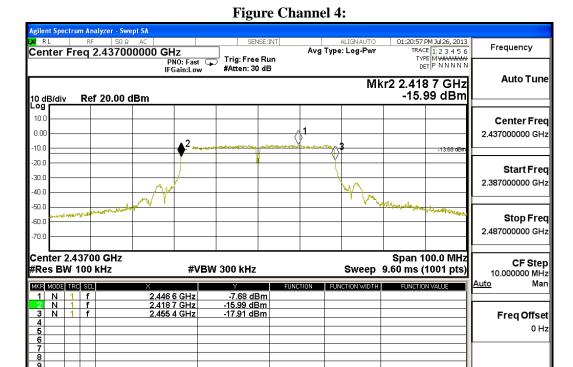


Test Item : Occupied Bandwidth Data

Test Site : No.3 OATS

Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2437MHz)

Cha	annel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
	6	2437	36700	>500	Pass



Page: 117 of 134



Test Item : Occupied Bandwidth Data

Test Site : No.3 OATS

Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2452MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
9	2452	36700	>500	Pass

#### Figure Channel 7: gilent Spectrum Analyzer - Swept SA 01:29:06 PM Jul 26, 2013 TRACE 1 2 3 4 5 6 TYPE M WWWWWW DET P N N N N N Center Freq 2.452000000 GHz Avg Type: Log-Pwr Trig: Free Run #Atten: 30 dB PNO: Fast IFGain:Low **Auto Tune** Mkr2 2.433 7 GHz -15.41 dBm 10 dB/div Log r Ref 20.00 dBm 10.0 Center Freq 0.00 2.452000000 GHz -10.0 -20.0 Start Freq -30.0 2.402000000 GHz -40.0 -50.0 Stop Freq -60.0 2.502000000 GHz -70.0 Center 2.45200 GHz #Res BW 100 kHz Span 100.0 MHz CF Step 10.000000 MHz **#VBW** 300 kHz Sweep 9.60 ms (1001 pts) -7.30 dBm -15.41 dBm -17.35 dBm 2.454 1 GHz 2.433 7 GHz 2.470 4 GHz Freq Offset 9 10 11 12 STATUS

Page: 118 of 134



#### 8. Power Density

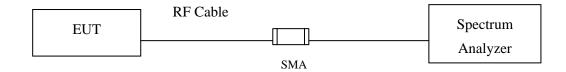
### 8.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun., 2013
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun., 2013
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2013

#### 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.

#### 8.2. Test Setup



#### 8.3. Limits

The transmitted power density averaged over any 1 second interval shall not be greater +8dBm in any 3kHz bandwidth.

#### **8.4.** Test Procedure

The EUT was setup according to ANSI C63.10, 2009; tested according to DTS test procedure of KDB 558074 for compliance to FCC 47CFR 15.247 requirements.

The maximum power spectral density using KDB 558074 section 10.2 PKPSD (peak PSD) method.

#### 8.5. Uncertainty

 $\pm$  1.27 dB



#### **8.6.** Test Result of Power Density

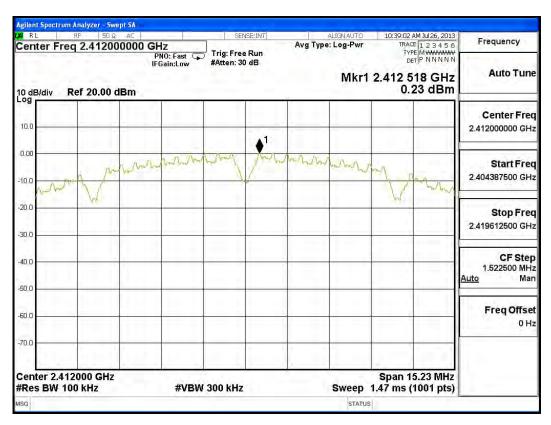
Product : ASUS Tablet

Test Item : Power Density Data

Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2412MHz)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412	0.23	< 8dBm	Pass



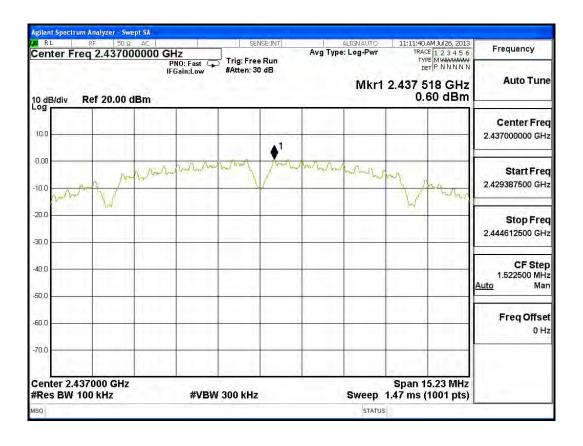


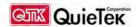
Test Item : Power Density Data

Test Site : No.3OATS

Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2437MHz)

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
6	2437	0.60	< 8dBm	Pass



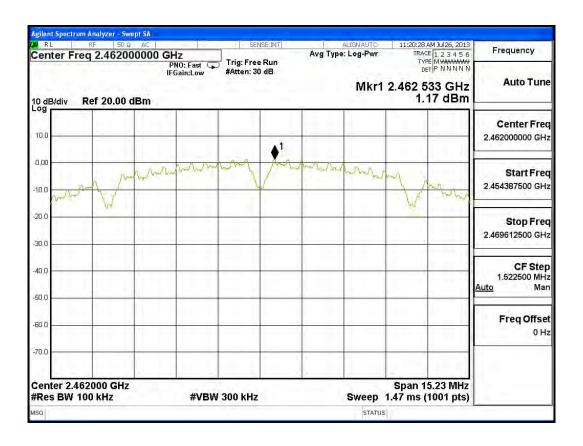


Test Item : Power Density Data

Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2462MHz)

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
11	2462	1.17	< 8dBm	Pass



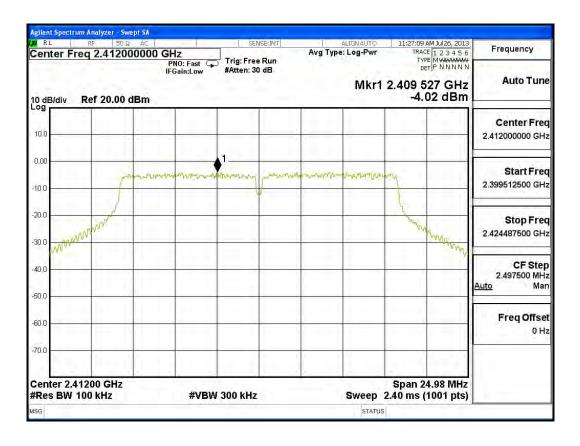


Test Item : Power Density Data

Test Site : No.3 OATS

Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2412MHz)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412	-4.02	< 8dBm	Pass



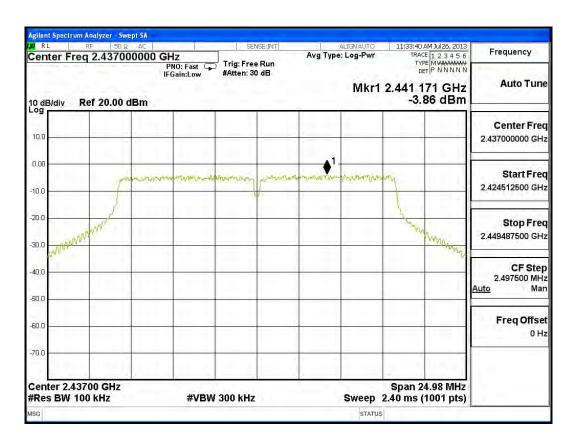


Test Item : Power Density Data

Test Site : No.3OATS

Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2437MHz)

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
6	2437	-3.86	< 8dBm	Pass



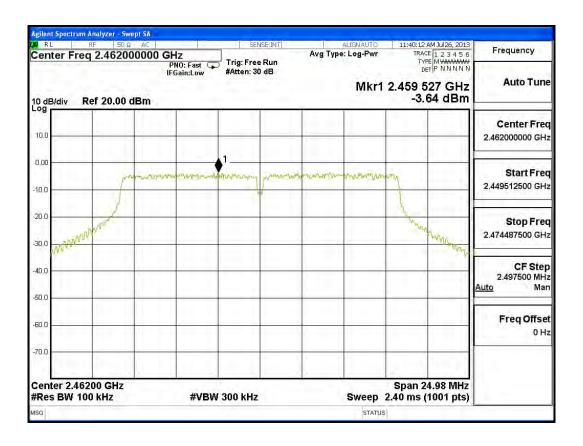


Test Item : Power Density Data

Test Site : No.3 OATS

Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2462MHz)

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
11	2462	-3.64	< 8dBm	Pass





Test Item : Power Density Data

Test Site : No.3 OATS

Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2412MHz)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412	-4.67	< 8dBm	Pass



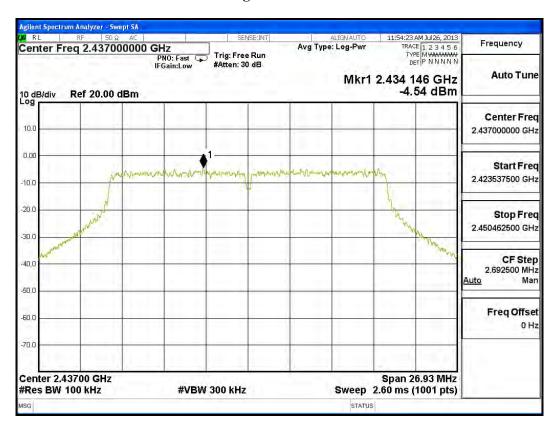


Test Item : Power Density Data

Test Site : No.3OATS

Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2437MHz)

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
6	2437	-4.54	< 8dBm	Pass



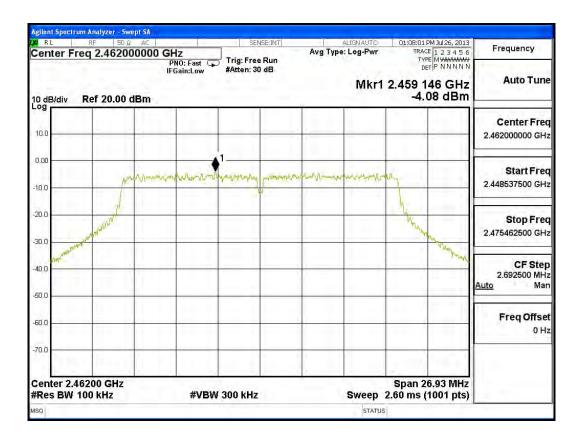


Test Item : Power Density Data

Test Site : No.3 OATS

Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2462MHz)

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
11	2462	-4.08	< 8dBm	Pass



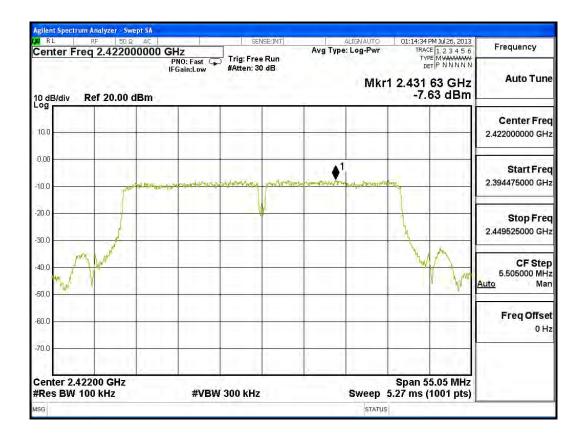


Test Item : Power Density Data

Test Site : No.3 OATS

Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2422MHz)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
3	2422	-7.63	< 8dBm	Pass



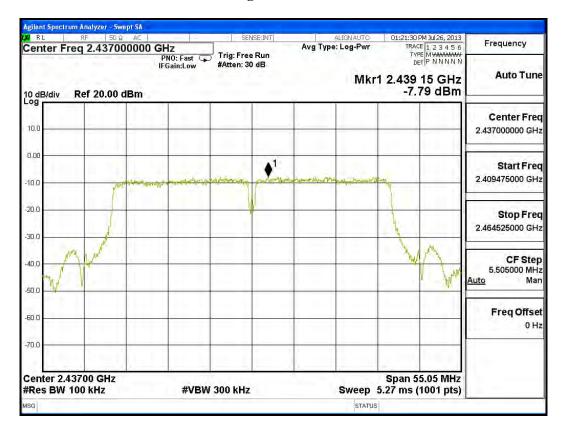


Test Item : Power Density Data

Test Site : No.3OATS

Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2437MHz)

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
6	2437	-7.79	< 8dBm	Pass



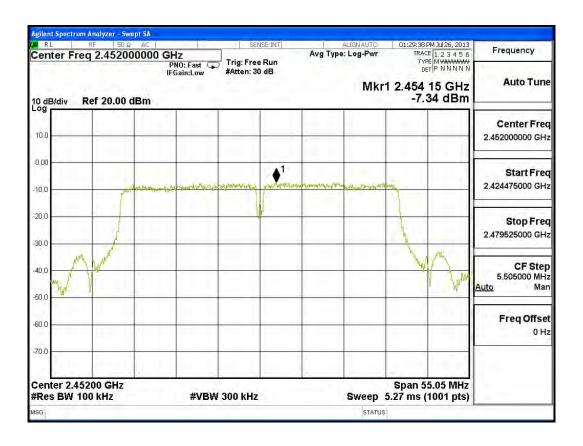


Test Item : Power Density Data

Test Site : No.3 OATS

Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2452MHz)

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
9	2452	-7.34	< 8dBm	Pass





## 9. EMI Reduction Method During Compliance Testing

No modification was made during testing.

Page: 132 of 134