ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT INTENTIONAL RADIATOR CERTIFICATION TO FCC PART 15 SUBPART C REQUIREMENT

OF

Mini PC for Android

MODEL No.: YY-01

BRAND NAME: N/A

FCC ID: P3R-YY01

REPORT NO: KAD120705007E

ISSUE DATE: August 14, 2012

Prepared for

YUANYI ELECTRONICS TECHNOLOGY CO., LTD.
No. 1, Qinghua Road, Xinji, Nancheng, Dongguan City, Guangdong

Prepared by

DONGGUAN EMTEK CO., LTD.

No.281, Guantai Road, Nancheng District,
Dongguan, Guangdong, China
TEL: 86-769-22807078
FAX: 86-769-22807079

VERIFICATION OF COMPLIANCE

Applicant:	YUANYI ELECTRONICS TECHNOLOGY CO., LTD. No. 1, Qinghua Road, Xinji, Nancheng, Dongguan City, Guangdong
Manufacturer:	YUANYI ELECTRONICS TECHNOLOGY CO., LTD. No. 1, Qinghua Road, Xinji, Nancheng, Dongguan City, Guangdong
Product Description:	Mini PC for Android
Brand Name:	N/A
Model Number:	YY-01
Serial Number:	N/A
File Number:	KAD120705007E
Date of Test:	July 05, 2012 to August 01, 2012

We hereby certify that:

The above equipment was tested by DONGGUAN EMTEK CO., LTD. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.4 (2009) and the energy emitted by the sample EUT tested as described in this report is in compliance with conducted and radiated emission limits of FCC Rules Part 15.247. also, the model complies with Canadian RSS-210 Issue 6 standard.

The test results of this report relate only to the tested sample identified in this report.

Approved By

Sam.Lv / Q.A. Manager
DONGGUAN EMTEK CO., LTD.

Table of Contents

1. GENERAL INFORMATION

1.1 Product Description

A major technical descriptions of EUT is described as following:

A). Standards: WLAN802.11b/g
B). Operation Frequency: 2400-2480MHz
C). Modulation: 802.11b: DSSS
802.11g: OFDM
D). Number of Channel: 11 channels
E). Data Rate: 802.11b: 11Mbps; 802.11g: 54Mbps
F). Transmit Power: 16.79dBm (802.11b); 14.83dBm (802.11g)
G). Antenna GAIN: 0dBi
H). Antenna Type: Internal PCB antenna
I). Power Supply: DC 5V come from adapter
Adapter: Model:S050S200A3
Input: AC 100-240V, 50/60Hz, 0.5A Max
Output: DC5V, 2.0A

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2412	5	2432	9	2452
2	2417	6	2437	10	2457
3	2422	7	2442	11	2462
4	2427	8	2447		

Note:
1. This device is a 2.4GHz Mini PC for Android included 802.11b, 802.11g 2.4GHz transceiver function.
2. Test of channel was included the lowest middle and highest frequency in highest data rate and to perform the test, then record on this report.

1.2 Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for FCC ID: P3R-YY01 filing to comply with Section 15.247 of the FCC Part 15, Subpart C Rules. The composite system (receiver) is compliance with Subpart B is authorized under a DoC procedure.

1.3 Test Methodology

Both conducted and radiated testing were performed according to the procedures in ANSI C63.4 (2003). Radiated testing was performed at an antenna to EUT distance 3 meters.

Tested in accordance with Jan 2012 KDB558074 for compliance to FCC 47CFR 15.247 requirements.

1.4 Special Accessories

Not available for this EUT intended for grant.

1.5 Equipment Modifications

Not available for this EUT intended for grant.

1.6 Test Facility

Site Description

EMC Lab. : Accredited by CNAS, 2012.07.04
The certificate is valid until 2015.07.03
The Laboratory has been assessed and proved to be in compliance with CNAS/CL01:2006
The Certificate Registration Number is L3150

Accredited by TUV Product Service Group 2011.07.05
Accredited by TUV Rheinland Shenzhen 2011.05.12
The certificate is valid until 2012.11.12
The Laboratory has been assessed according to the requirements ISO/IEC 17025: 2005

Accredited by FCC, Aug. 18, 2011
The Certificate Number is 247565

Accredited by Industry Canada, January 13, 2011
The Certificate Registration Number. is 46405-9444

Name of Firm : DONGGUAN EMTEK CO., LTD

Site Location : No.281, Guantai Road, Nancheng District,
Dongguan, Guangdong, China

2. System Test Configuration

2.1 EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

2.2 EUT Exercise

The Transmitter was operated in the normal operating mode. the Tx frequency was fixed which was for the purpose of the measurements.

2.3 Test Procedure

2.3.1 Conducted Emissions

The EUT is a placed on as turn table which is 0.8 m above ground plane. According to the requirements in Section 13.1.4.1 of ANSI C63.4-2009.Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-Peak and average detector mode.

2.3.2 Radiated Emissions

The EUT is a placed on as turn table which is 0.8 m above ground plane. The turn table shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the max. emission, the relative positions of this hand-held transmitter(EUT) was rotated through three orthogonal axes according to the requirements in Section 13.1.4.1 of ANSI C63.4-2009.

2.4 Configuration of Tested System

Fig. 2-1 Configuration of Tested System

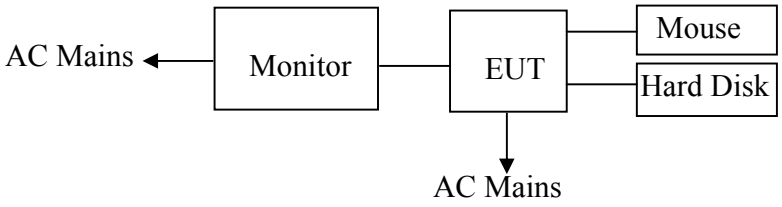


Table 2-1 Equipment Used in Tested System

Item	Equipment	Mfr/Brand	Model/Type No.	FCC ID	Series No.	Note
1.	Mini PC for Android	N/A	CT704	P3R-YY01	N/A	***EUT***
2.	LCD Monitor	DELL	E1909WF	N/A	N/A	
3.	Mouse	DELL	M-UAR DEL7	N/A	N/A	
4.	Hard Disk	Kesuo	M-06	N/A	N/A	

Note:

(1) Unless otherwise denoted as EUT in『Remark』column , device(s) used in tested system is a support equipment.

3. Description of test modes

The Transmitter of EUT is a Mini PC for Android and powered by adapter. This is Digital Transmission system(DTS) and have four type of modulation DBPSK DQPSK CCK&OFDM.
The equipment enables high-speed access without wires to network assets, and uses the WLAN802.11b/g/ protocol to achieve wireless communications.

The 3 channels of lower, medium and higher were chosen for test.

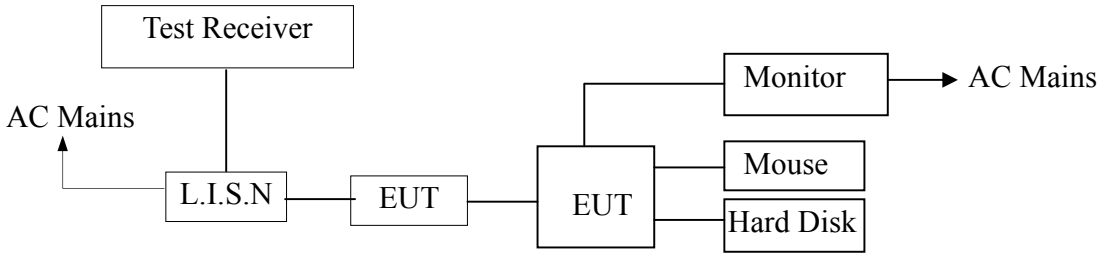
IEEE802.11b/g:
1. For lowest channel : 2412MHz(Channel 1)
2. For middle channel : 2437MHz(Channel 6)
3. For highest channel: 2462MHz(Channel 11)

4. Conducted Emissions Test

4.1 Measurement Procedure:

1. The EUT was placed on a table, which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. Repeat above procedures until all frequency measured was complete.

4.2 Test SET-UP (Block Diagram of Configuration)



4.3 Measurement Equipment Used:

Conducted Emission Test Site # 4					
EQUIPMENT TYPE	**MFR**	**MODEL NUMBER**	**SERIAL NUMBER**	**Last Cal.**	**Due date**
Test Receiver	Rohde & Schwarz	ESCS30	828985/018	05/29/2012	05/29/2013
L.I.S.N	Rohde & Schwarz	ESH2-Z5	834549/005	05/29/2012	05/29/2013
L.I.S.N	Rohde & Schwarz	ESH2-Z5	834549/005	05/29/2012	05/29/2013
50ΩCoaxial Switch	Anritsu	MP59B	M20531	005/29/2012	05/29/2013

4.4 Conducted Emission Limit

(7) Conducted Emission

Frequency(MHz)	Quasi-peak	Average
0.15-0.5	66-56	56-46
0.5-5.0	56	46
5.0-30.0	60	50

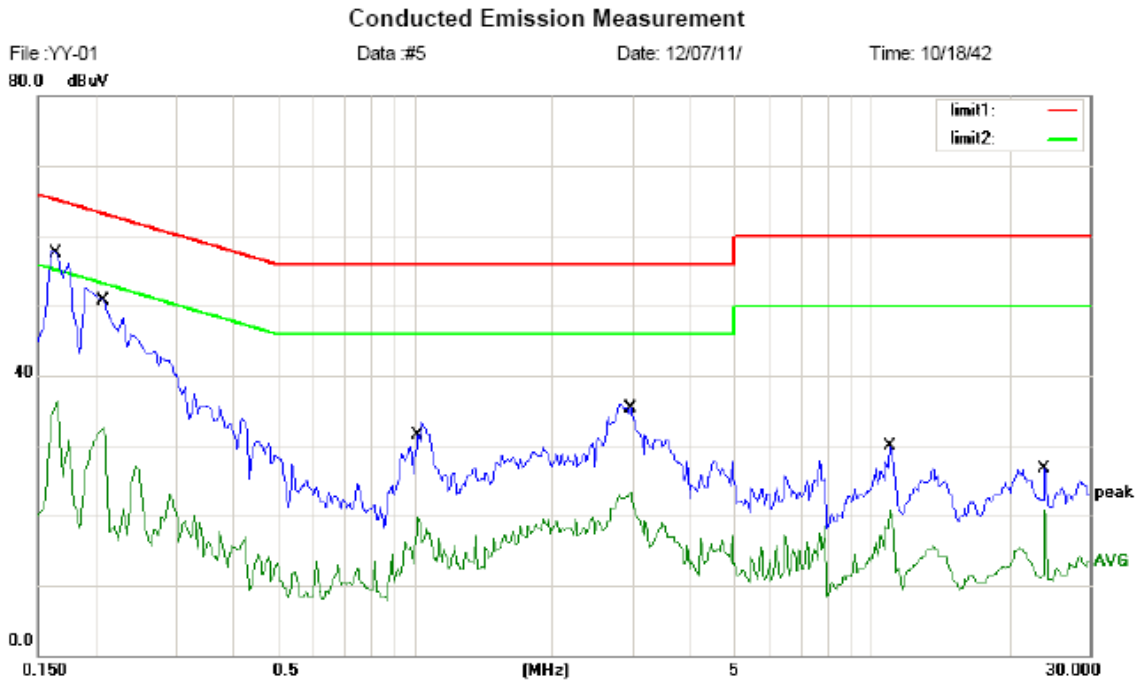
Note:

1. The lower limit shall apply at the transition frequencies
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

4.5 Measurement Result:

PASS.

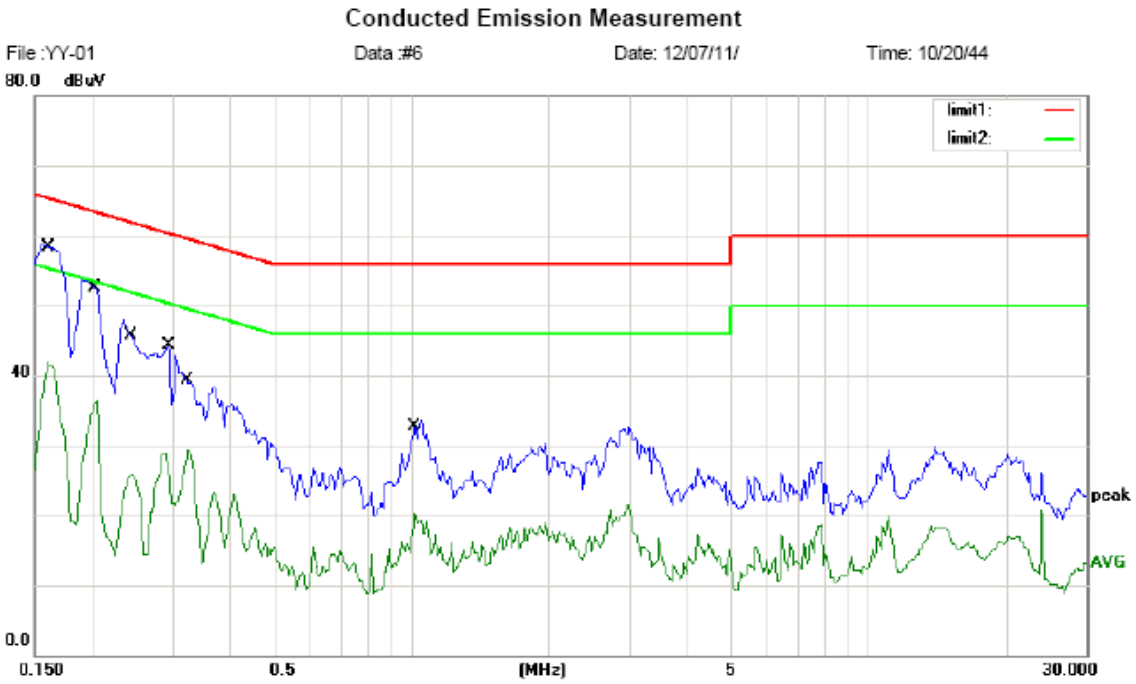
Please refer to the attached data.



Site site #1 Phase: *L1* Temperature: 25
Limit: (CE)FCC PART 15 class C_QP Power: AC 120V/60Hz Humidity: 50 %
EUT: Mini PC for Android
M/N: YY-01
Mode: ON
Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1650	54.92	0.00	54.92	65.21	-10.29	QP	
2		0.1650	36.40	0.00	36.40	55.21	-18.81	AVG	
3		0.2100	49.31	0.00	49.31	63.21	-13.90	QP	
4		0.2100	32.58	0.00	32.58	53.21	-20.63	AVG	
5		1.0200	33.26	0.00	33.26	56.00	-22.74	QP	
6		1.0200	19.65	0.00	19.65	46.00	-26.35	AVG	
7		2.9750	35.98	0.00	35.98	56.00	-20.02	QP	
8		2.9750	23.34	0.00	23.34	46.00	-22.66	AVG	
9		10.9750	29.91	0.00	29.91	60.00	-30.09	QP	
10		10.9750	20.60	0.00	20.60	50.00	-29.40	AVG	
11		24.0000	26.69	0.00	26.69	60.00	-33.31	QP	
12		24.0000	20.71	0.00	20.71	50.00	-29.29	AVG	

*:Maximum data x:Over limit !:over margin Comment: Factor build in receiver. Operator: Ken



Site site #1 Phase: N Temperature: 25
Limit: (CE)FCC PART 15 class C_QP Power: AC 120V/60Hz Humidity: 50 %
EUT: Mini PC for Android
M/N: YY-01
Mode: ON
Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1615	55.53	0.00	55.53	65.39	-9.86	QP	
2		0.1615	41.56	0.00	41.56	55.39	-13.83	AVG	
3		0.2050	50.56	0.00	50.56	63.41	-12.85	QP	
4		0.2050	36.33	0.00	36.33	53.41	-17.08	AVG	
5		0.2450	47.90	0.00	47.90	61.92	-14.02	QP	
6		0.2450	25.83	0.00	25.83	51.92	-26.09	AVG	
7		0.2900	44.39	0.00	44.39	60.52	-16.13	QP	
8		0.2900	28.86	0.00	28.86	50.52	-21.66	AVG	
9		0.3250	38.98	0.00	38.98	59.58	-20.60	QP	
10		0.3250	29.34	0.00	29.34	49.58	-20.24	AVG	
11		1.0200	33.72	0.00	33.72	56.00	-22.28	QP	
12		1.0200	20.31	0.00	20.31	46.00	-25.69	AVG	

*:Maximum data x:Over limit !:over margin Comment: Factor build in receiver. Operator: Ken

4.6 Conducted Measurement Photos:

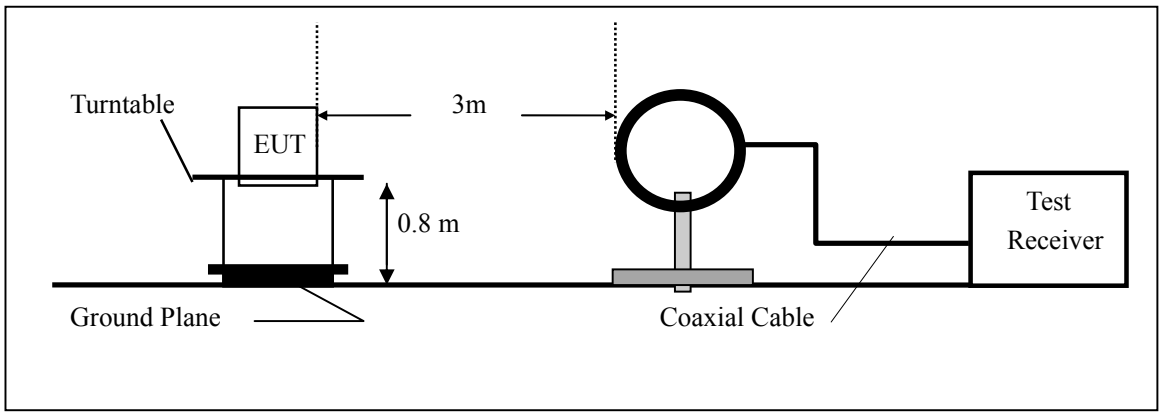
5. Radiated Emission Test

5.1 Measurement Procedure

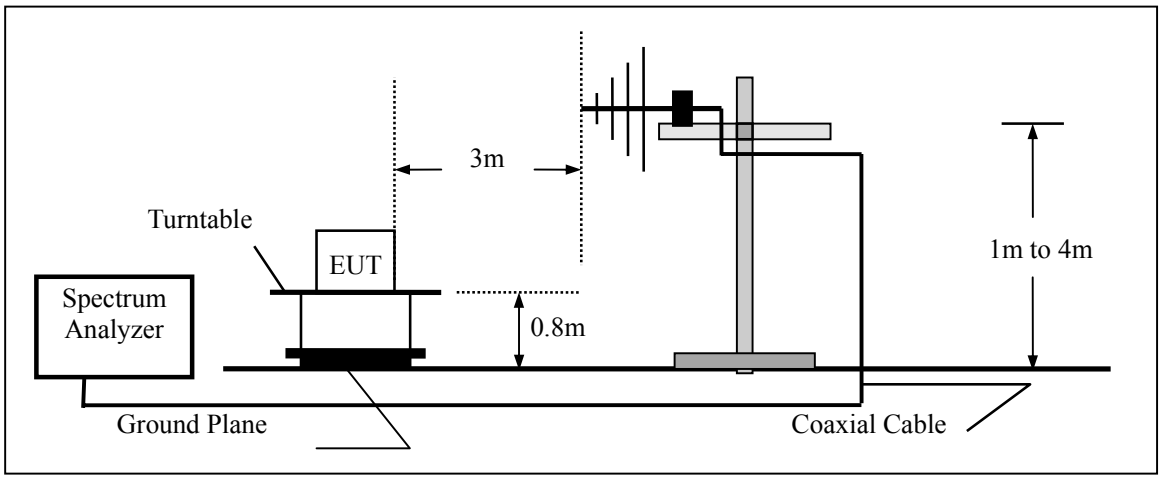
1 The EUT was placed on a turn table which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
4. Repeat above procedures until all frequency measured were complete.

5.2 Test SET-UP (Block Diagram of Configuration)

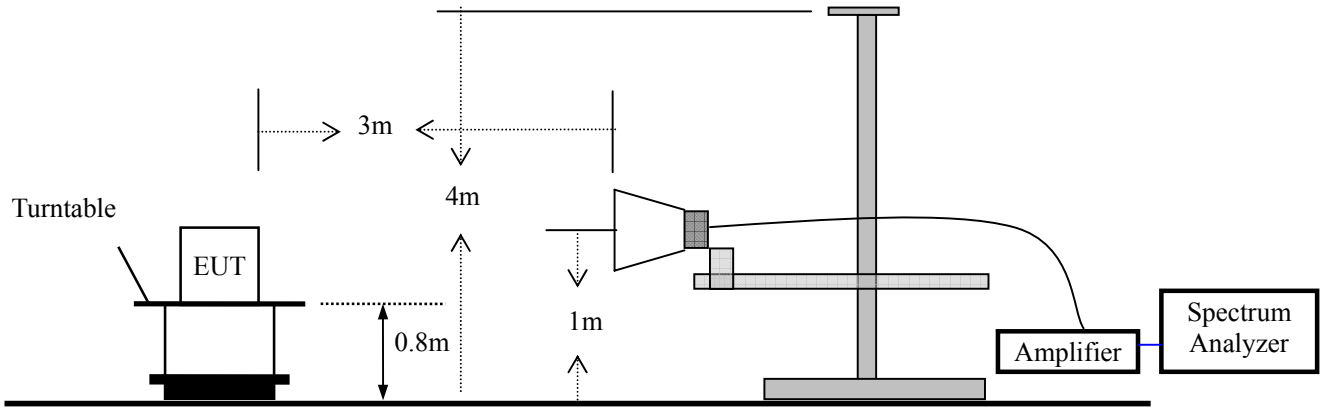
(A) Radiated Emission Test Set-Up, Frequency Below 30MHz



(B) Radiated Emission Test Set-Up, Frequency Below 1000MHz



(C) Radiated Emission Test Set-Up, Frequency above 1000MHz



5.3 Measurement Equipment Used:

EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
EMI Test Receiver	Rohde & Schwarz	ESU	1302.6005.26	05/29/2012	05/29/2013
Pre-Amplifier	HP	8447D	2944A07999	05/29/2012	05/29/2013
Bilog Antenna	Schwarzbeck	VULB9163	142	05/29/2012	05/29/2013
Loop Antenna	ARA	PLA-1030/B	1029	05/29/2012	05/29/2013
Horn Antenna	Schwarzbeck	BBHA9170	BBHA9170399	05/29/2012	05/29/2013
Horn Antenna	Schwarzbeck	BBHA 9120	D143	05/29/2012	05/29/2013
Cable	Schwarzbeck	AK9513	ACRX1	05/29/2012	05/29/2013
Cable	Schwarzbeck	N/A	FP2RX2	05/29/2012	05/29/2013
Cable	Schwarzbeck	AK9513	CRPX1	05/29/2012	05/29/2013
Cable	Schwarzbeck	AK9513	CRRX2	05/29/2012	05/29/2013

5.4 Radiated emission limit

FCC Class B Limit at 3m

Frequency	Distance	Field Strength	
MHz	Meter	uV/m	dBuV/m
30~88	3	100	40.0
88~216	3	150	43.5
216~960	3	200	46.0
Above 960	3	500	54.0

Note: The frequencies above 1000MHz, as measured using instrumentation with a peak detector function was corresponding to 20dB above maximum permitted average limit.

5.5 Measurement Result

Operation Mode:	Channel 1	Test Date :	07/09/2012
Frequency Range:	30~1000MHz	Temperature :	25 ℃
Test Result:	PASS	Humidity :	50%
Measured Distance:	3m	Test By:	Andy

Freq. (MHz)	Ant.Pol. H/V	Emission Level (dBuV/m)	Limit 3m (dBuV/m)	Margin (dB)	Note
35.820	V	29.35	40.00	-10.65	PK
47.460	V	30.94	40.00	-9.06	PK
55.220	V	24.54	40.00	-15.46	PK
104.690	V	24.39	43.50	-19.11	PK
346.220	V	28.21	46.00	-17.79	PK
865.170	V	37.37	46.00	-8.63	PK
30.000	H	29.36	40.00	-10.64	PK
47.460	H	21.78	40.00	-18.22	PK
95.960	H	25.82	43.50	-17.68	PK
239.520	H	22.41	46.00	-23.59	PK
302.570	H	28.35	46.00	-17.65	PK
518.880	H	33.36	46.00	-12.64	PK

Note: (1) All Readings are Peak Value.
(2) Emission Level= Reading Level+ Probe Factor +Cable Loss
(3) The average measurement was not performed when the peak measured data under the limit of average detection.

Operation Mode:	Channel 6	Test Date :	07/09/2012
Frequency Range:	30~1000MHz	Temperature :	25 ℃
Test Result:	PASS	Humidity :	50 %
Measured Distance:	3m	Test By:	Andy

Freq. (MHz)	Ant.Pol. H/V	Emission Level (dBuV/m)	Limit 3m (dBuV/m)	Margin (dB)	Note
35.120	V	29.16	40.00	-10.84	PK
47.495	V	30.03	40.00	-9.97	PK
55.330	V	24.45	40.00	-15.55	PK
104.690	V	24.13	43.50	-19.37	PK
345.220	V	28.29	46.00	-17.71	PK
868.180	V	37.73	46.00	-8.27	PK
30.120	H	29.36	40.00	-10.64	PK
47.460	H	21.78	40.00	-18.22	PK
95.955	H	25.22	43.50	-18.28	PK
239.520	H	22.41	46.00	-23.59	PK
302.440	H	28.94	46.00	-17.06	PK
518.890	H	33.06	46.00	-12.94	PK

Note: (1) All Readings are Peak Value and AV.
(2) Emission Level= Reading Level+ Probe Factor +Cable Loss.
(3) The average measurement was not performed when the peak measured data under the limit of average detection.

Operation Mode:	Channel 11	Test Date :	07/09/2012
Frequency Range:	30~1000MHz	Temperature :	25 ℃
Test Result:	PASS	Humidity :	50 %
Measured Distance:	3m	Test By:	Andy

Freq. (MHz)	Ant.Pol. H/V	Emission Level (dBuV/m)	Limit 3m (dBuV/m)	Margin (dB)	Note
35.660	V	29.02	40.00	-10.98	PK
47.890	V	31.05	40.00	-8.95	PK
55.350	V	24.14	40.00	-15.86	PK
104.690	V	25.13	43.50	-18.37	PK
346.280	V	28.39	46.00	-17.61	PK
865.180	V	39.02	46.00	-6.98	PK
34.120	H	29.36	40.00	-10.64	PK
47.460	H	21.78	40.00	-18.22	PK
95.960	H	25.22	43.50	-18.28	PK
236.520	H	24.55	46.00	-21.45	PK
308.120	H	28.94	46.00	-17.06	PK
516.120	H	33.06	46.00	-12.94	PK

Note: (1) All Readings are Peak Value and AV.
(2) Emission Level= Reading Level+ Probe Factor +Cable Loss
(3) The average measurement was not performed when the peak measured data under the limit of average detection.

Operation Mode:	802.11b(Channel 1)	Test Date :	07/09/2012
Frequency Range:	Above 1GHz	Temperature :	25 ℃
Test Result:	PASS	Humidity :	50 %
Measured Distance:	3m	Test By:	Andy

Freq.	Ant.Pol.	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Margin(dB)	
(MHz)	H/V	PK	AV	PK	AV	PK	AV
4824	V	54.17	45.62	74.00	54.00	-19.83	-8.38
7236	V	60.93	42.39	74.00	54.00	-13.07	-11.61
9648	V	59.60	35.71	74.00	54.00	-14.40	-18.29
--	V	--	--	--	--	--	--
--	V	--	--	--	--	--	--
4824	H	55.64	45.42	74.00	54.00	-18.36	-8.58
7236	H	55.15	38.86	74.00	54.00	-18.85	-15.14
9648	H	58.29	36.52	74.00	54.00	-15.71	-17.48
--	H	--	--	--	--	--	--
--	H	--	--	--	--	--	--

No others harmonics emissions are higher than 20dB below the limits of 47 CFR Part 15.247.

Note: (1) All Readings are Peak Value and AV.
(2) Emission Level= Reading Level+ Probe Factor +Cable Loss.
(3) Data of measurement within this frequency range shown "--" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

Operation Mode:	802.11b(Channel 6)	Test Date :	07/09/2012
Frequency Range:	Above 1GHz	Temperature :	25 ℃
Test Result:	PASS	Humidity :	50 %
Measured Distance:	3m	Test By:	Andy

Freq.	Ant.Pol.	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Margin(dB)	
(MHz)	H/V	PK	AV	PK	AV	PK	AV
4874	V	61.63	40.84	74.00	54.00	-12.37	-13.16
7311	V	63.46	39.53	74.00	54.00	-10.54	-14.47
9748	V	58.25	42.56	74.00	54.00	-15.75	-11.44
--	V	--	--	--	--	--	--
--	V	--	--	--	--	--	--
4874	H	61.21	39.78	74.00	54.00	-12.79	-14.22
7311	H	62.39	40.44	74.00	54.00	-11.61	-13.56
9748	H	60.54	36.52	74.00	54.00	-13.46	-17.48
--	H	--	--	--	--	--	--
--	H	--	--	--	--	--	--

No others harmonics emissions are higher than 20dB below the limits of 47 CFR Part 15.247.

Note: (1) All Readings are Peak Value and AV.
(2) Emission Level= Reading Level+ Probe Factor +Cable Loss.
(3) Data of measurement within this frequency range shown "--" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

Operation Mode:	802.11b (Channel 11)	Test Date :	07/09/2012
Frequency Range:	Above 1GHz	Temperature :	25 ℃
Test Result:	PASS	Humidity :	50 %
Measured Distance:	3m	Test By:	Andy

Freq.	Ant.Pol.	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Margin(dB)	
(MHz)	H/V	PK	AV	PK	AV	PK	AV
4924	V	62.44	42.71	74.00	54.00	-11.56	-11.29
7386	V	59.75	38.26	74.00	54.00	-14.25	-15.74
9848	V	55.68	37.23	74.00	54.00	-18.32	-16.77
--	V	--	--	--	--	--	--
--	V	--	--	--	--	--	--
4924	H	62.28	39.65	74.00	54.00	-11.72	-14.35
7386	H	56.45	38.16	74.00	54.00	-17.55	-15.84
9848	H	55.76	40.12	74.00	54.00	-18.24	-13.88
--	H	--	--	--	--	--	--
--	H	--	--	--	--	--	--

No others harmonics emissions are higher than 20dB below the limits of 47 CFR Part 15.247.

Note: (1) All Readings are Peak Value and AV.
(2) Emission Level= Reading Level+ Probe Factor +Cable Loss.
(3) Data of measurement within this frequency range shown "--" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

Operation Mode:	802.11g(Channel 1)	Test Date :	07/09/2012
Frequency Range:	Above 1GHz	Temperature :	25 ℃
Test Result:	PASS	Humidity :	50 %
Measured Distance:	3m	Test By:	Andy

Freq.	Ant.Pol.	Emission Level(dBuV)		Limit 3m(dBuV/m)		Margin(dB)	
(MHz)	H/V	PK	AV	PK	AV	PK	AV
4824	V	54.75	45.27	74.00	54.00	-19.25	-8.73
7236	V	60.13	42.32	74.00	54.00	-13.87	-10.68
9648	V	56.54	40.97	74.00	54.00	-17.46	-13.03
--	V	--	--	--	--	--	--
--	V	--	--	--	--	--	--
4824	H	55.25	45.60	74.00	54.00	-18.75	-8.40
7236	H	55.32	42.05	74.00	54.00	-18.68	-11.95
9648	H	56.26	39.52	74.00	54.00	-17.74	-14.48
--	H	--	--	--	--	--	--
--	H	--	--	--	--	--	--

No others harmonics emissions are higher than 20dB below the limits of 47 CFR Part 15.247.

Note: (1) All Readings are Peak Value and AV.
(2) Emission Level= Reading Level+ Probe Factor +Cable Loss.
(3) Data of measurement within this frequency range shown "--" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

Operation Mode:	802.11g(Channel 6)	Test Date :	07/09/2012
Frequency Range:	Above 1GHz	Temperature :	25 ℃
Test Result:	PASS	Humidity :	50 %
Measured Distance:	3m	Test By:	Andy

Freq.	Ant.Pol.	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Margin(dB)	
(MHz)	H/V	PK	AV	PK	AV	PK	AV
4874	V	54.16	46.26	74.00	54.00	-19.84	-7.74
7311	V	60.78	42.08	74.00	54.00	-13.22	-11.92
9748	V	58.29	40.85	74.00	54.00	-15.71	-13.15
--	V	--	--	--	--	--	--
--	V	--	--	--	--	--	--
4874	H	62.23	42.74	74.00	54.00	-11.77	-11.26
7311	H	54.37	44.37	74.00	54.00	-19.63	-9.63
9748	H	59.28	43.02	74.00	54.00	-14.72	-10.98
--	H	--	--	--	--	--	--
--	H	--	--	--	--	--	--

No others harmonics emissions are higher than 20dB below the limits of 47 CFR Part 15.247.

Note: (1) All Readings are Peak Value and AV.
(2) Emission Level= Reading Level+ Probe Factor +Cable Loss.
(3) Data of measurement within this frequency range shown "--" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

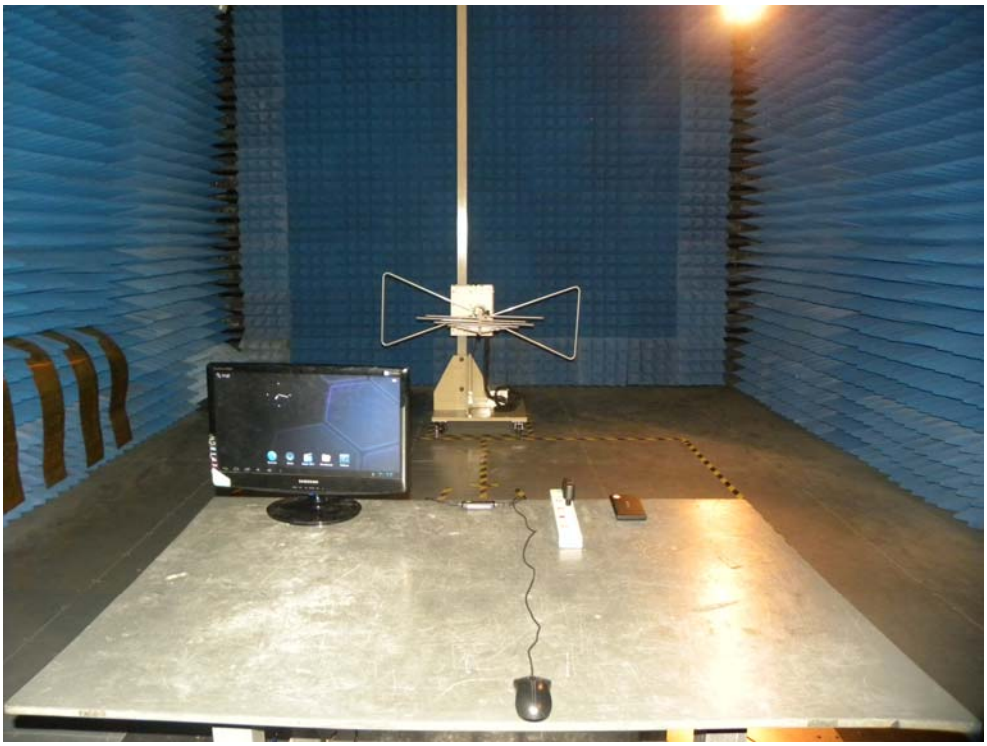
Operation Mode:	802.11g(Channel 11)	Test Date :	07/09/2012
Frequency Range:	Above 1GHz	Temperature :	25 ℃
Test Result:	PASS	Humidity :	50 %
Measured Distance:	3m	Test By:	Andy

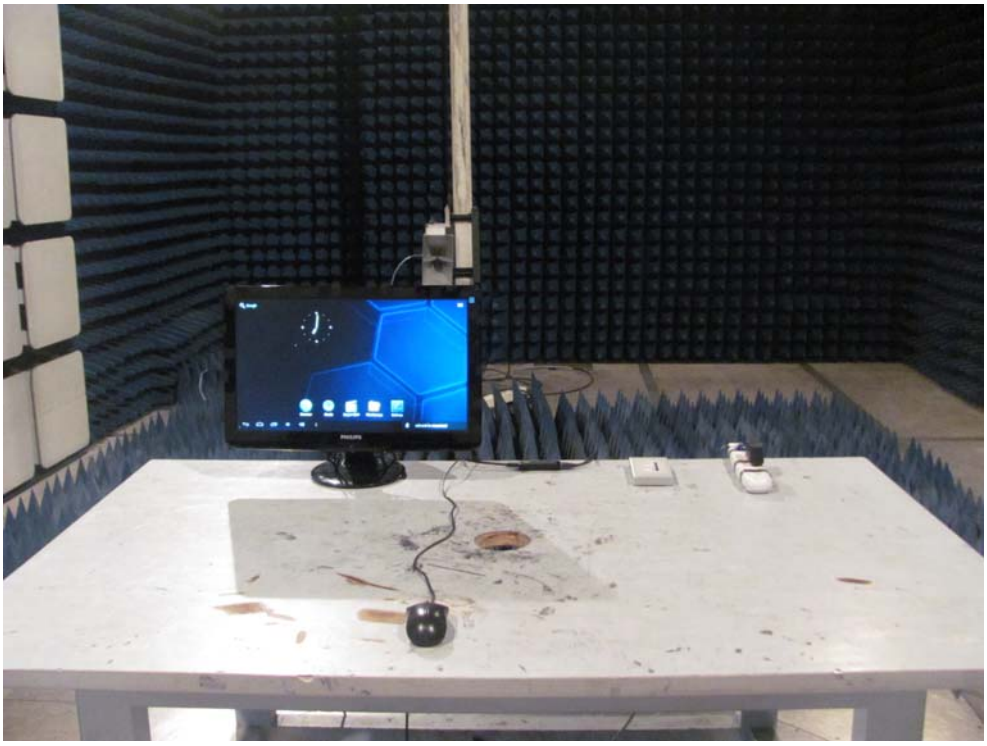
Freq.	Ant.Pol.	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Margin(dB)	
(MHz)	H/V	PK	AV	PK	AV	PK	AV
4924	V	63.27	36.74	74.00	54.00	-10.73	-17.26
7386	V	58.91	34.48	74.00	54.00	-15.09	-19.52
9848	V	54.25	44.10	74.00	54.00	-19.75	-9.90
--	V	--	--	--	--	--	--
--	V	--	--	--	--	--	--
4924	H	55.26	44.20	74.00	54.00	-18.74	-9.80
7386	H	55.49	42.28	74.00	54.00	-18.51	-11.72
9848	H	58.52	40.31	74.00	54.00	-15.48	-13.69
--	H	--	--	--	--	--	--
--	H	--	--	--	--	--	--

No others harmonics emissions are higher than 20dB below the limits of 47 CFR Part 15.247.

Note: (1) All Readings are Peak Value and AV.
(2) Emission Level= Reading Level+ Probe Factor +Cable Loss.
(3) Data of measurement within this frequency range shown "--" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

5.6 Radiated Measurement Photos:



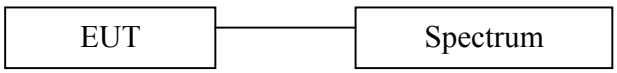


6. Occupied Bandwidth test

6.1 Measurement Procedure

The EUT was operating in IEEE 802.11b/g mode or could be controlled its channel. Printed out the test result from the spectrum by hard copy function.

6.2 Test SET-UP (Block Diagram of Configuration)



6.3 Measurement Equipment Used:

EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Spectrum Analyzer	Agilent	E4407B	88156318	05/29/2012	05/29/2013

6.4 Limit

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

6.5 Measurement Results:

Refer to attached data chart.

Spectrum Detector:	PK	Test Date :	07/09/2012
Test By:	Andy	Temperature :	25 ℃
Test Result:	PASS	Humidity :	50 %

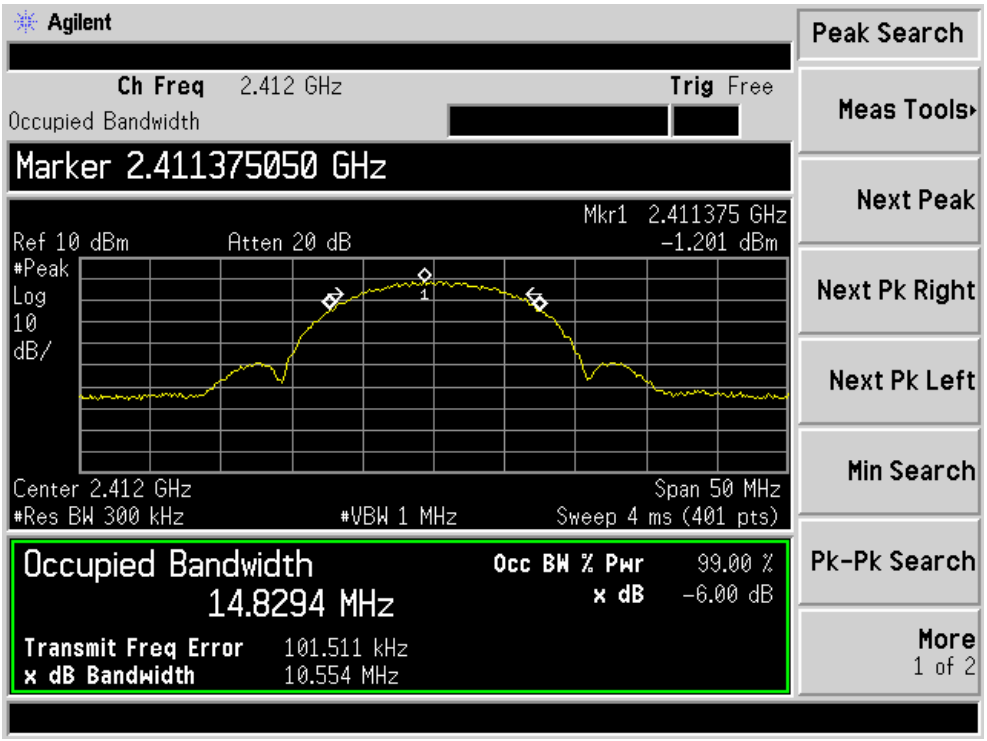
802.11b:

Channel number	Channel frequency (MHz)	Measurement level (KHz)	Required Limit (KHz)
1	2412	10554	>500
6	2437	10567	>500
11	2462	10444	>500

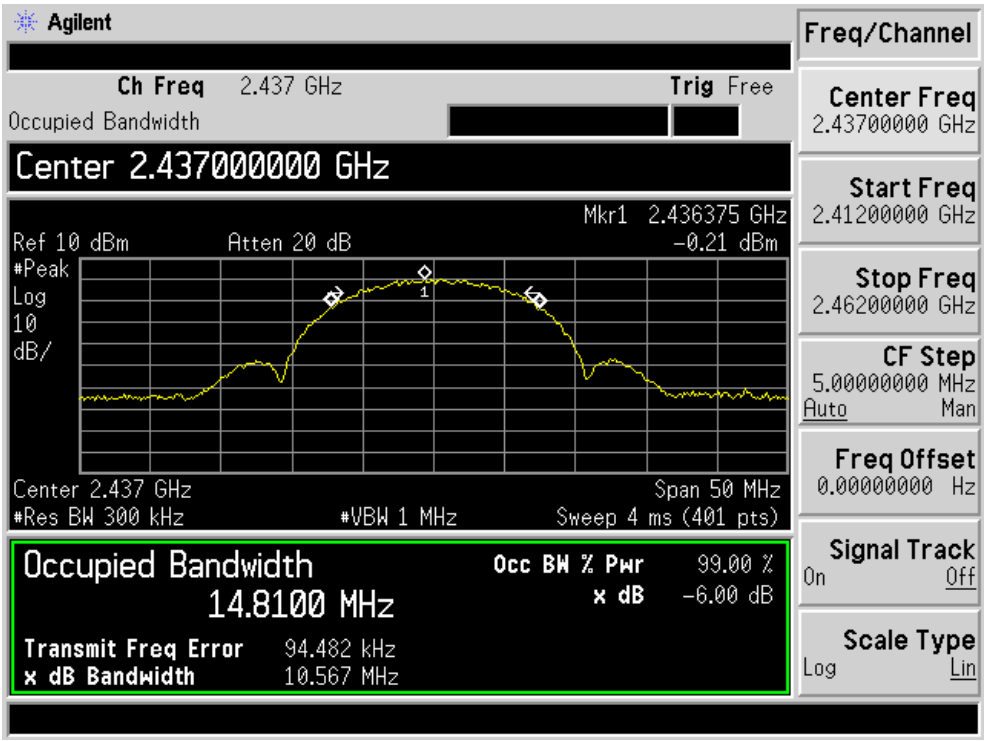
802.11g:

Channel number	Channel frequency (MHz)	Measurement level (KHz)	Required Limit (KHz)
1	2412	16528	>500
6	2437	16566	>500
11	2462	16527	>500

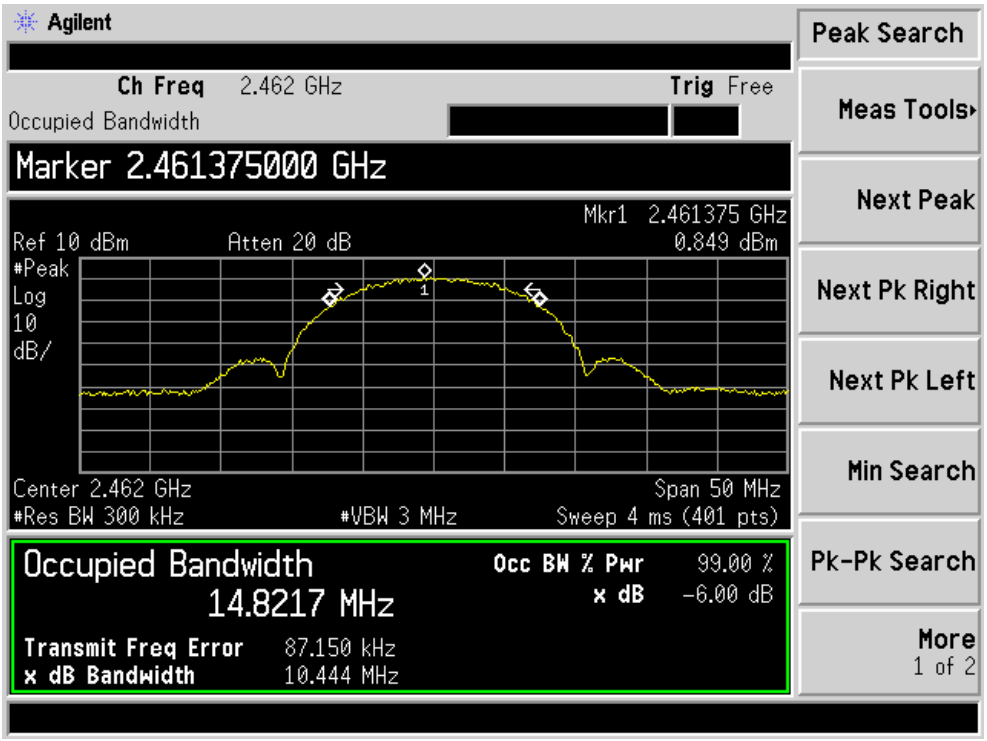
802.11b Channel 1:



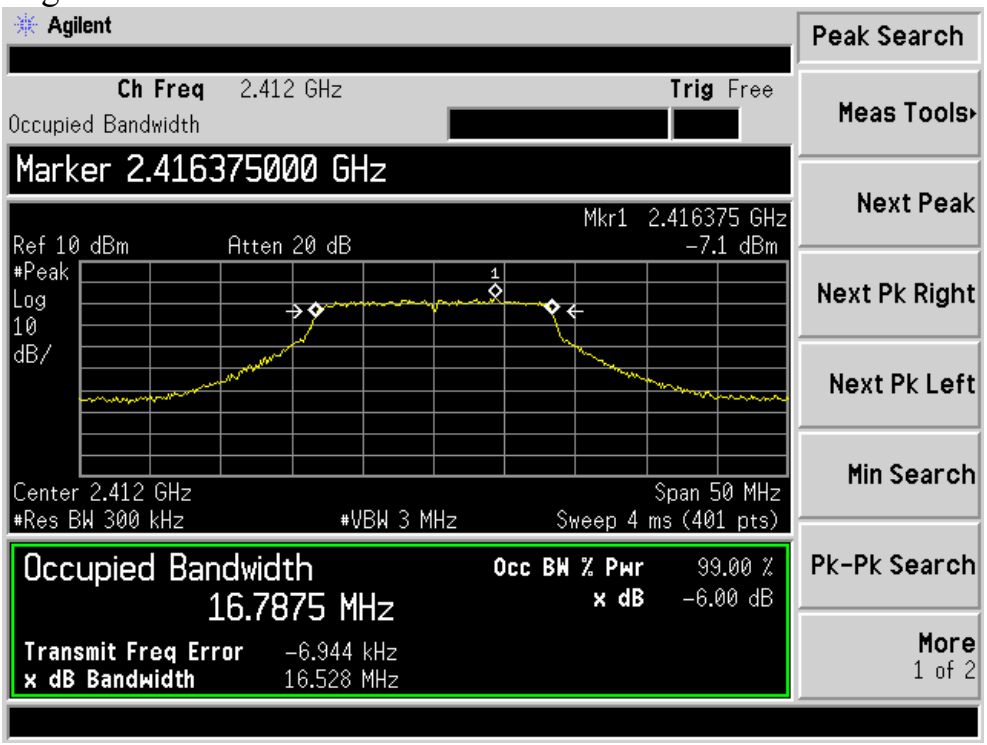
802.11b Channel 6:



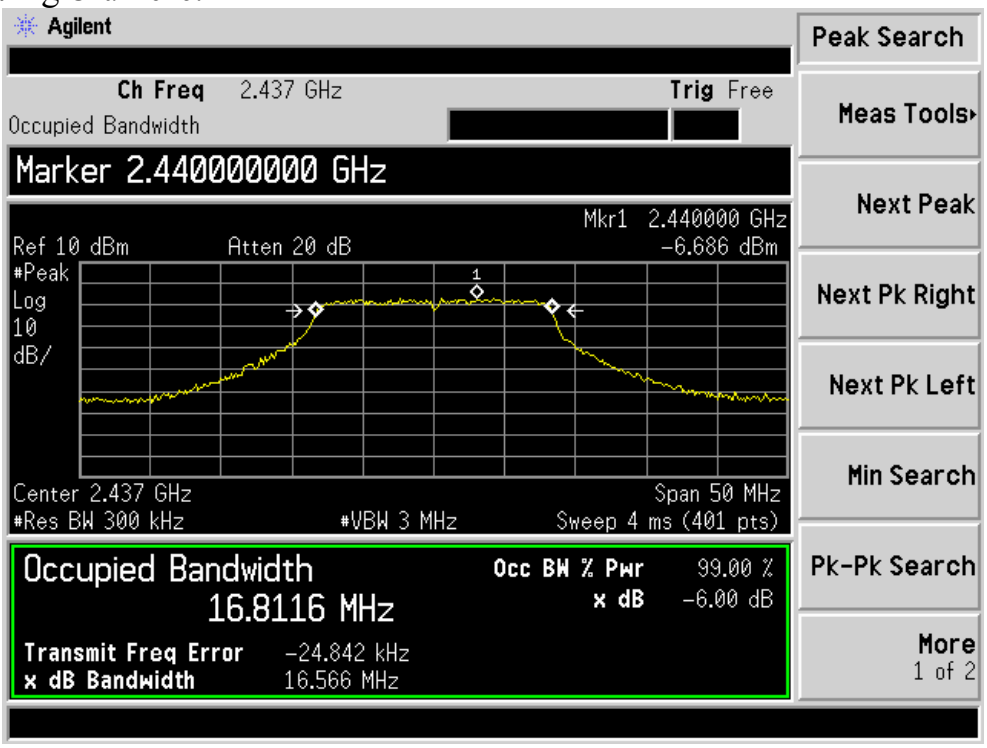
802.11b Channel 11:



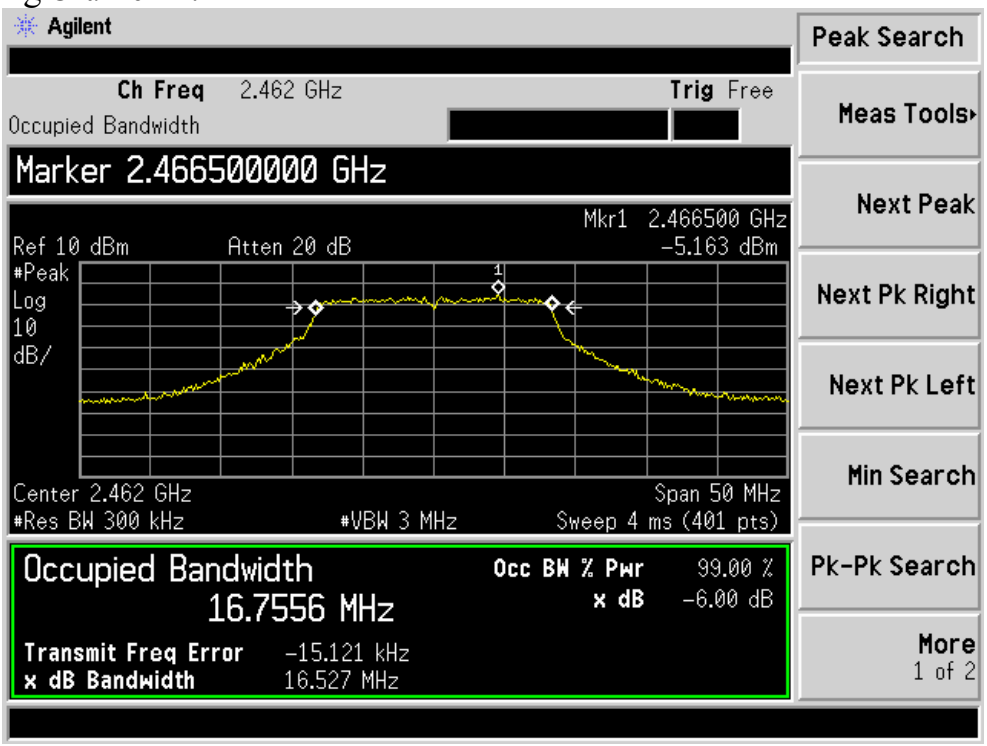
802.11g Channel 1:



802.11g Channel 6:



802.11g Channel 11:

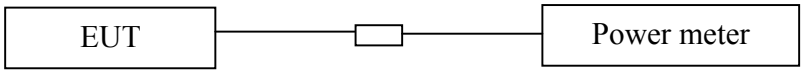


7. MAX IMUM PEAK OUTPUT POWER TEST

7.1 Measurement Procedure

a. The Transmitter output (antenna port) was connected to the power meter.
b. Turn on the EUT and power meter and then record the peak power value.
c. Repeat above procedures on all channels needed to be tested.

7.2 Test SET-UP (Block Diagram of Configuration)



7.3 Measurement Equipment Used:

EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Power meter	Boonton	4232A	29001	05/29/2012	05/29/2013
Power Attenuator	Boonton	51011-EMC	31184	05/29/2012	05/29/2013

7.4 Peak Power output limit

The maximum peak power shall be less 1Watt.

7.5 Measurement Results:
Refer to attached data chart.

Spectrum Detector:	PK	Test Date :	07/09/2012
Test By:	Andy	Temperature :	25 ℃
Test Result:	PASS	Humidity :	50 %

802.11b:

Channel number	Channel Frequency (MHz)	Peak Power output(dBm)	Peak Power Limit(W)	Pass/Fail
1	2412.00	16.12	1W(30dBm)	PASS
6	2437.00	**16.79**	1W(30dBm)	PASS
11	2462.00	16.55	1W(30dBm)	PASS

802.11g:

Channel number	Channel Frequency (MHz)	Peak Power output(dBm)	Peak Power Limit(W)	Pass/Fail
1	2412.00	14.28	1W(30dBm)	PASS
6	2437.00	14.12	1W(30dBm)	PASS
11	2462.00	14.83	1W(30dBm)	PASS

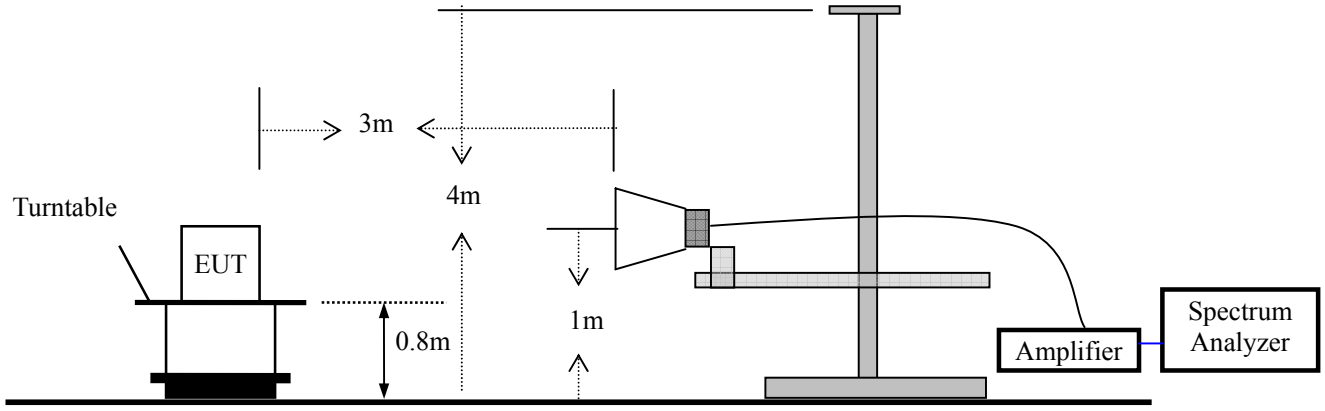
Note: According to the test, the maximum output power is 16.79dBm, which is produced at 802.11b with the data rate 2Mbps.

8. Band EDGE test

8.1 Measurement Procedure

1. The EUT was Operating in hopping mode or could be controlled its channel. Printed out test result from the spectrum by hard copy function.
2. The EUT was placed on a turn table which is 0.8m above ground plane.
3. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
4. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
5. Repeat above procedures until all frequency measured were complete.

8.2 Test SET-UP (Block Diagram of Configuration)



8.3 Measurement Equipment Used:

Same as 5.3 Radiated Emission Measurement.

8.4 Measurement Results:

Refer to attached data chart.

Test Mode: 802.11b:

Spectrum Detector:	PK/AV	Test Date :	July 09, 2012
Test By:	Andy	Temperature :	25 ℃
Test channel:	01	Humidity :	50 %

Frequency (MHz)	Polarity	Level (dBuV/m)		Limited (dBuV/m)	
		PK	AV	PK	AV
2390.000	H	60.42	42.25	74	54
2390.000	V	58.51	41.77	74	54

Spectrum Detector:	PK/AV	Test Date :	July 09, 2012
Test By:	Andy	Temperature :	25 ℃
Test channel:	11	Humidity :	50 %

Frequency (MHz)	Polarity	Level (dBuV/m)		Limited (dBuV/m)	
		PK	AV	PK	AV
2483.340	H	58.29	42.71	74	54
2484.090	V	57.35	39.94	74	54

Test Mode: 802.11g:

Spectrum Detector:	PK/AV	Test Date :	August 10, 2012
Test By:	Andy	Temperature :	25 ℃
Test channel:	01	Humidity :	50 %

Frequency (MHz)	Polarity	Level (dBuV/m)		Limited (dBuV/m)	
		PK	AV	PK	AV
2390.000	H	62.11	43.19	74	54
2390.000	V	59.51	42.79	74	54

Spectrum Detector:	PK/AV	Test Date :	August 10, 2012
Test By:	Andy	Temperature :	25 ℃
Test channel:	11	Humidity :	50 %

Frequency (MHz)	Polarity	Level (dBuV/m)		Limited (dBuV/m)	
		PK	AV	PK	AV
2483.350	H	59.33	43.17	74	54
2483.350	V	56.49	39.66	74	54

9. Power density

9.1 Test Equipment

EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
EMI Test Receiver	Rohde & Schwarz	ESU	1302.6005.26	05/29/2012	05/29/2013

9.2 Measuring Instruments and setting

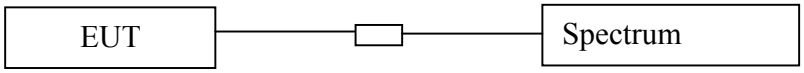
The following table is the setting of spectrum analyzer.

Spectrum analyzer	Setting
Attenuation	Auto
Span Frequency	20-40MHz
RB	100kHz
VB	300kHz
Detector	Peak
Trace	Max hold
Sweep Time	Auto couple

9.3 Test Procedures

a. The transmitter output (antenna port) was connected to the spectrum analyzer.
b. Set RBW of spectrum analyzer to 100kHz and VBW to 300kHz, Set Detector to Peak, Trace to Max Hold.
c. Mark the frequency with maximum peak power as the center of the display of the spectrum.
d. Set the span to 20MHz and the sweep time to auto and record the maximum peak value.
e. BWCF=10log(3kHz=-15.2 dB), Set offset -15.2 dBm.

9.4 Block Diagram of Test setup



9.5 Limit

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

9.6. Test Result

Spectrum Detector:	PK	Test Date :	07/09/2012
Test By:	Andy	Temperature :	25 ℃
Test Result:	PASS	Humidity :	50 %

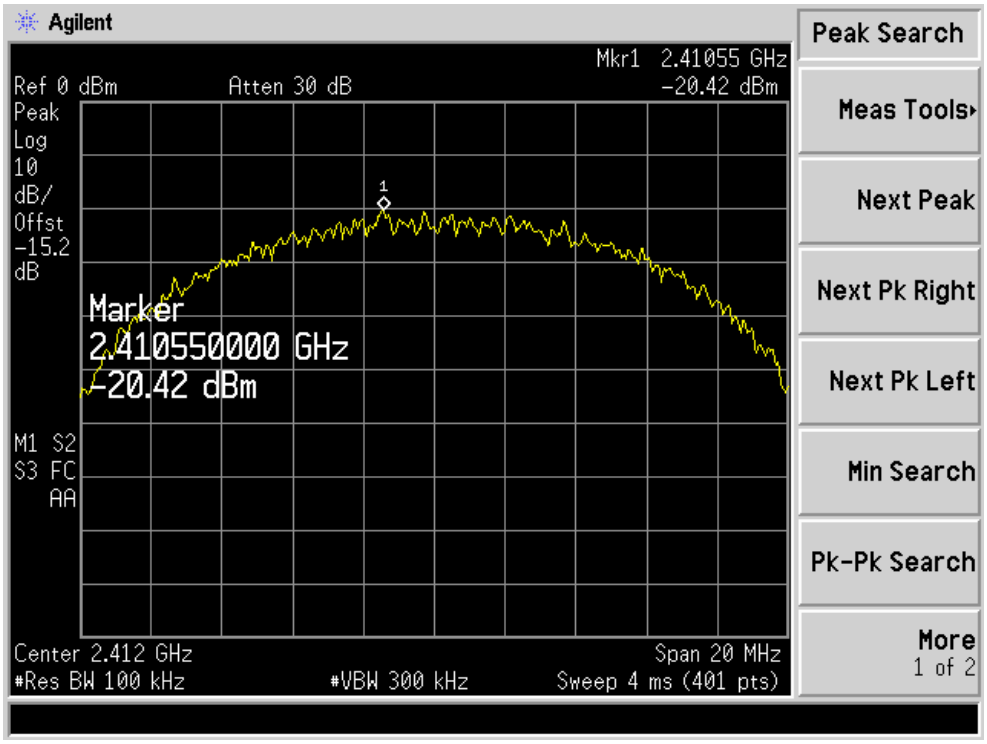
802.11b:

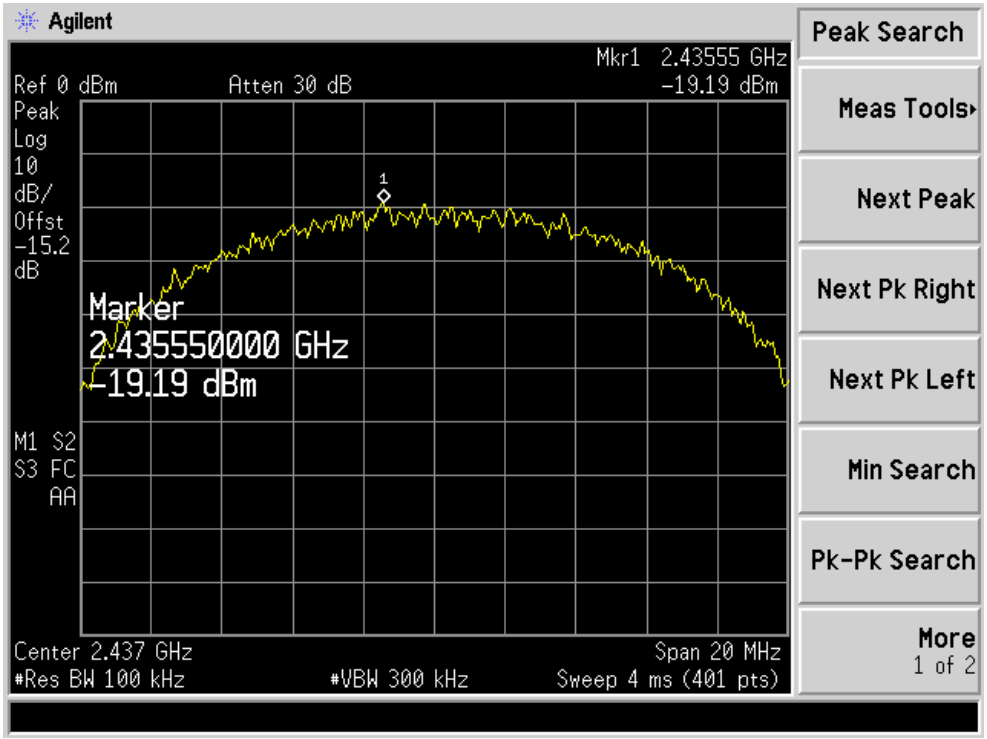
Frequency (MHz)	Measurement Level (dBm)	Required limit (dBm)	Result
2412.00	-20.42	<8dBm	PASS
2437.00	-19.19	<8dBm	PASS
2462.00	-18.00	<8dBm	PASS

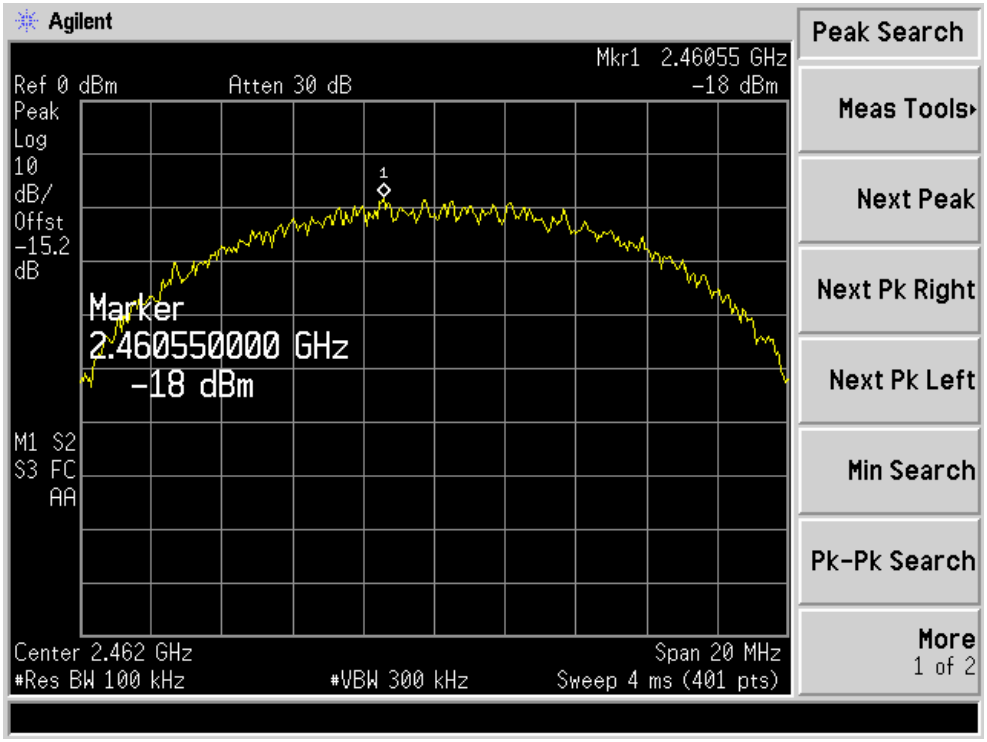
802.11g:

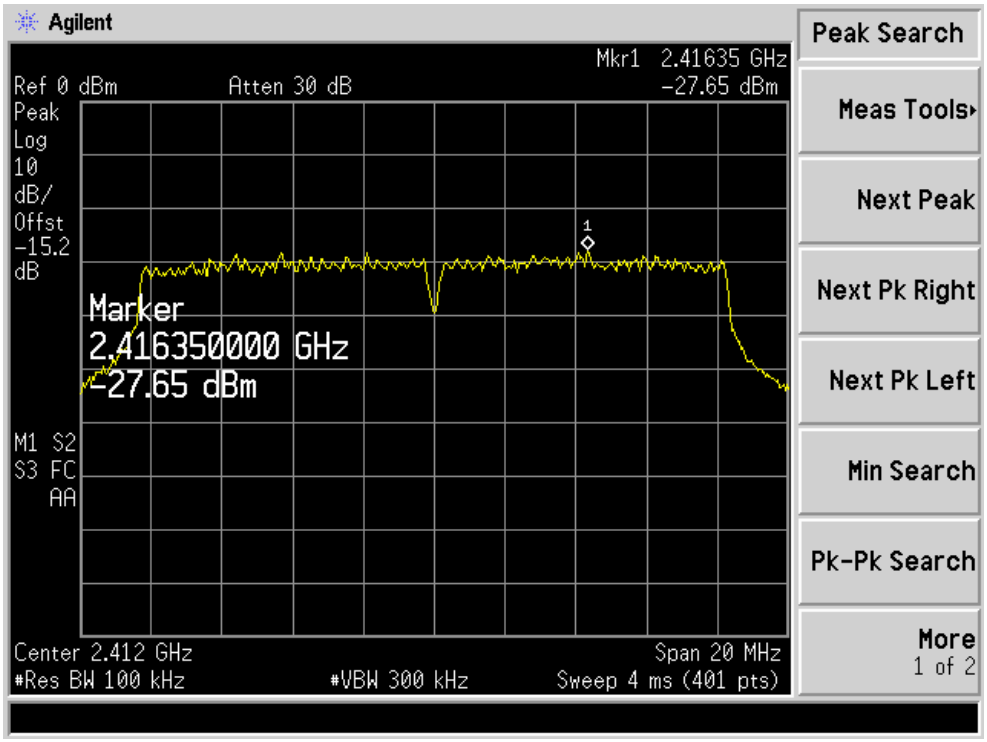
Frequency (MHz)	Measurement Level (dBm)	Required limit (dBm)	Result
2412.00	-27.65	<8dBm	PASS
2437.00	-26.16	<8dBm	PASS
2462.00	-25.32	<8dBm	PASS

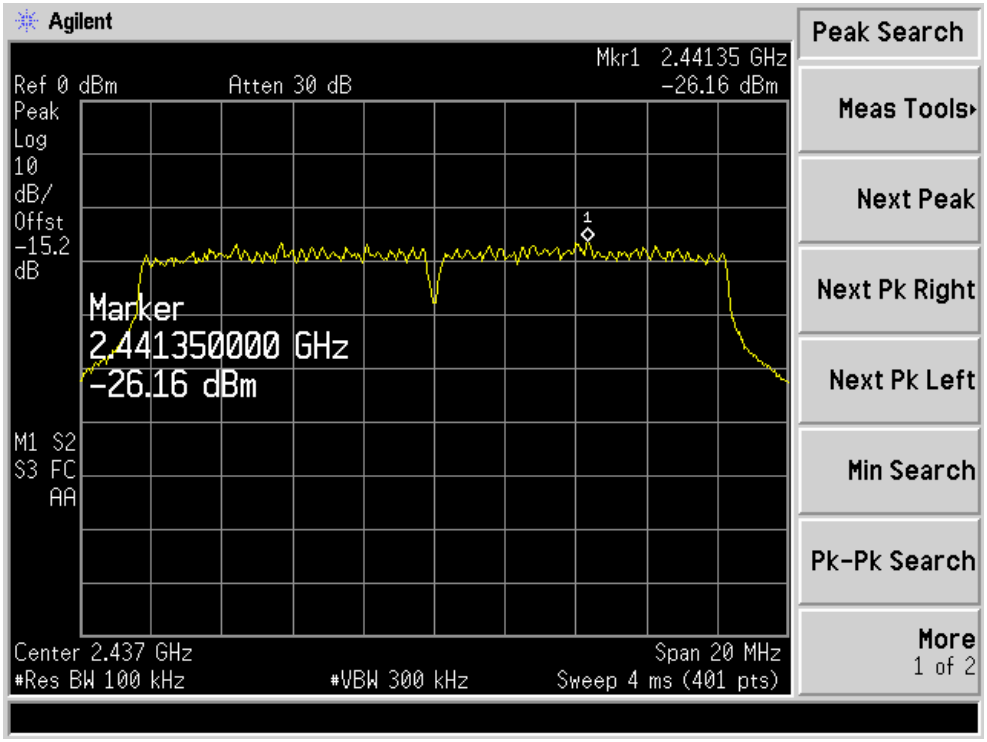
802.11b:

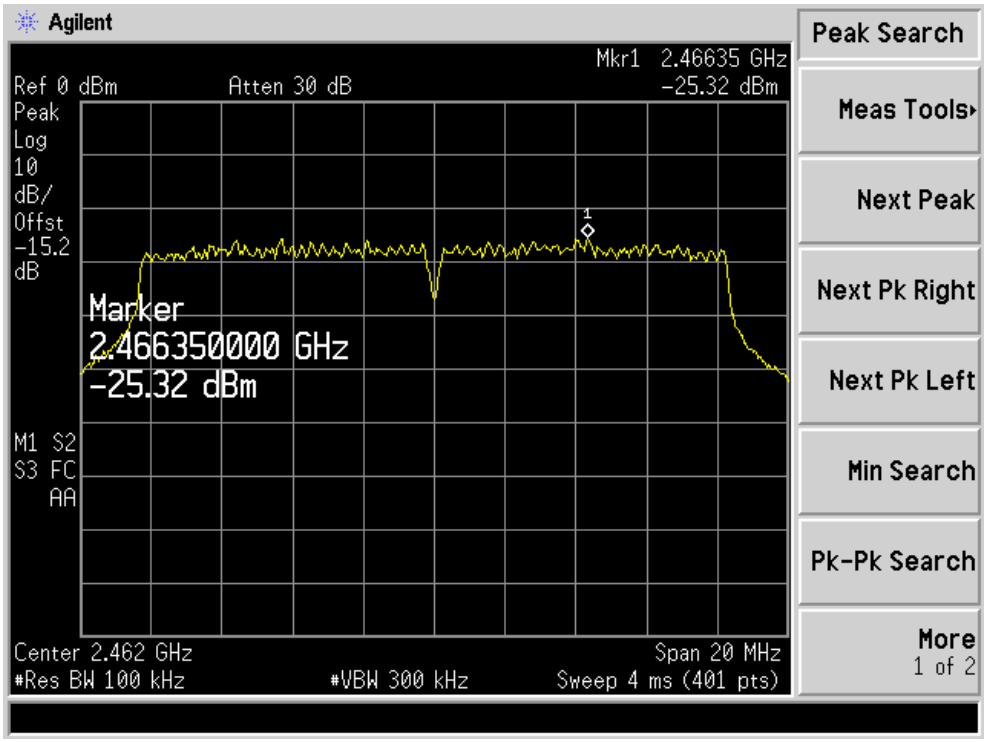

Agilent
Mkr1 2.41055 GHz
Ref 0 dBm
Atten 30 dB
-20.42 dBm
Peak
Log
10
dB/
Offst
-15.2
dB
Marker
2.410550000 GHz
-20.42 dBm
M1 S2
S3 FC
AA
Center 2.412 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 20 MHz
Sweep 4 ms (401 pts)
Peak Search
Meas Tools
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
More
1 of 2


Agilent
Mkr1 2.43555 GHz
Ref 0 dBm
Atten 30 dB
-19.19 dBm
Peak
Log
10
dB/
Offst
-15.2
dB
Marker
2.435550000 GHz
-19.19 dBm
M1 S2
S3 FC
AA
Center 2.437 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 20 MHz
Sweep 4 ms (401 pts)
Peak Search
Meas Tools
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
More
1 of 2


Agilent
Mkr1 2.46055 GHz
Ref 0 dBm
Atten 30 dB
-18 dBm
Peak
Log
10
dB/
Offst
-15.2
dB
Marker
2.460550000 GHz
-18 dBm
M1 S2
S3 FC
AA
Center 2.462 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 20 MHz
Sweep 4 ms (401 pts)
Peak Search
Meas Tools
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
More
1 of 2


Agilent
Mkr1 2.41635 GHz
Ref 0 dBm
Atten 30 dB
-27.65 dBm
Peak
Log
10
dB/
Offst
-15.2
dB
Marker
2.416350000 GHz
-27.65 dBm
M1 S2
S3 FC
AA
Center 2.412 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 20 MHz
Sweep 4 ms (401 pts)
Peak Search
Meas Tools
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
More
1 of 2


Agilent
Mkr1 2.44135 GHz
Ref 0 dBm
Atten 30 dB
-26.16 dBm
Peak
Log
10
dB/
Offst
-15.2
dB
Marker
2.441350000 GHz
-26.16 dBm
M1 S2
S3 FC
AA
Center 2.437 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 20 MHz
Sweep 4 ms (401 pts)
Peak Search
Meas Tools
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
More
1 of 2


Agilent
Mkr1 2.46635 GHz
Ref 0 dBm
Atten 30 dB
-25.32 dBm
Peak
Log
10
dB/
Offst
-15.2
dB
Marker
2.466350000 GHz
-25.32 dBm
M1 S2
S3 FC
AA
Center 2.462 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 20 MHz
Sweep 4 ms (401 pts)
Peak Search
Meas Tools
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
More
1 of 2

10 Antenna Application

10.1 Antenna requirement

The EUT'S antenna is met the requirement of FCC part 15C section 15.203.

10.2 Result

The unit is produced with a unique coupling from the transmitter to the whip antenna. The antenna is not replaceable or user serviceable. The requirements of 15.203 are met; there are no deviations or exceptions to the specification.

11. Antenna Port Emission

11.1 Test Equipment

EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
EMI Test Receiver	Rohde & Schwarz	ESU	1302.6005.26	05/29/2012	05/29/2013

11.2 Measuring Instruments and setting

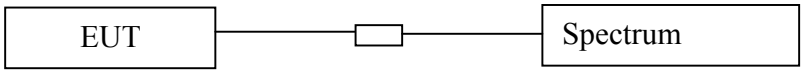
The following table is the setting of spectrum analyzer.

Spectrum analyzer	Setting
Attenuation	Auto
RB	100kHz
VB	300kHz
Detector	Peak
Trace	Max hold

11.3 Test Procedures

The conducted spurious emissions were measured conducted using a spectrum analyzer at low, mid, and hi channels, The limit was determined by attenuation 20dB of the RF peak power output.

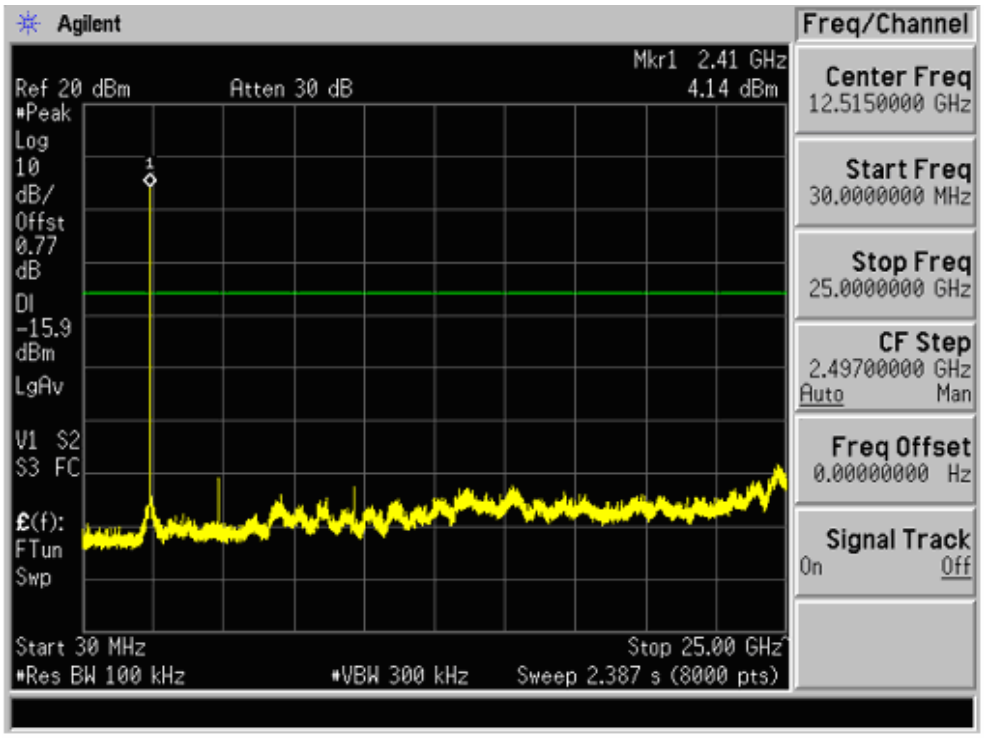
11.4 Block Diagram of Test setup



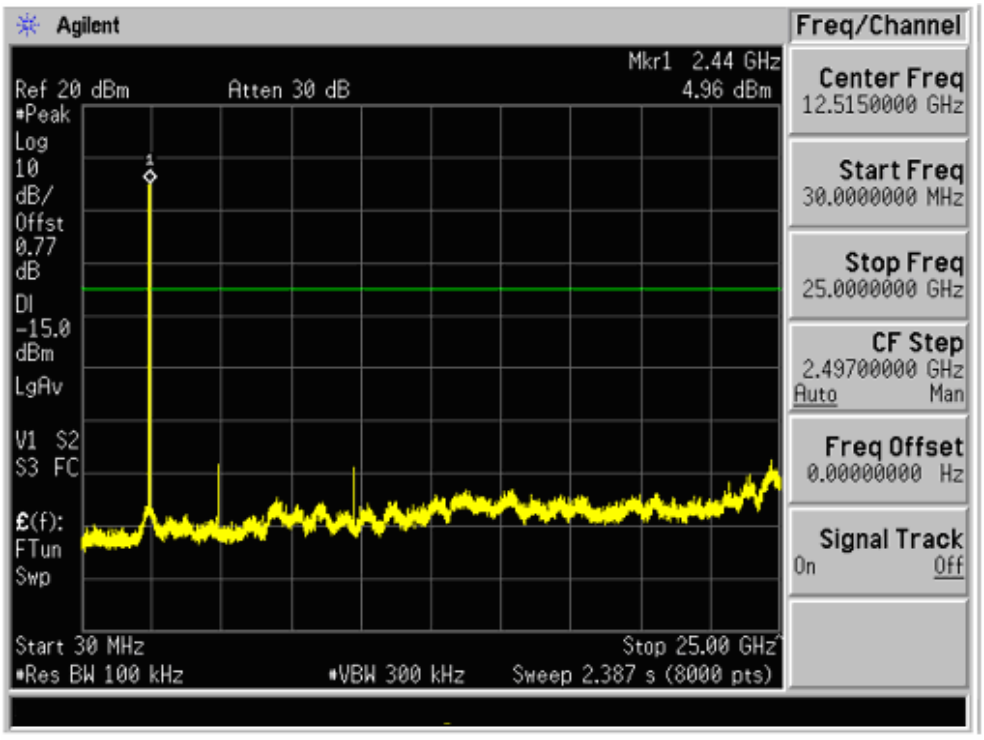
11.5. Test Result

PASS.

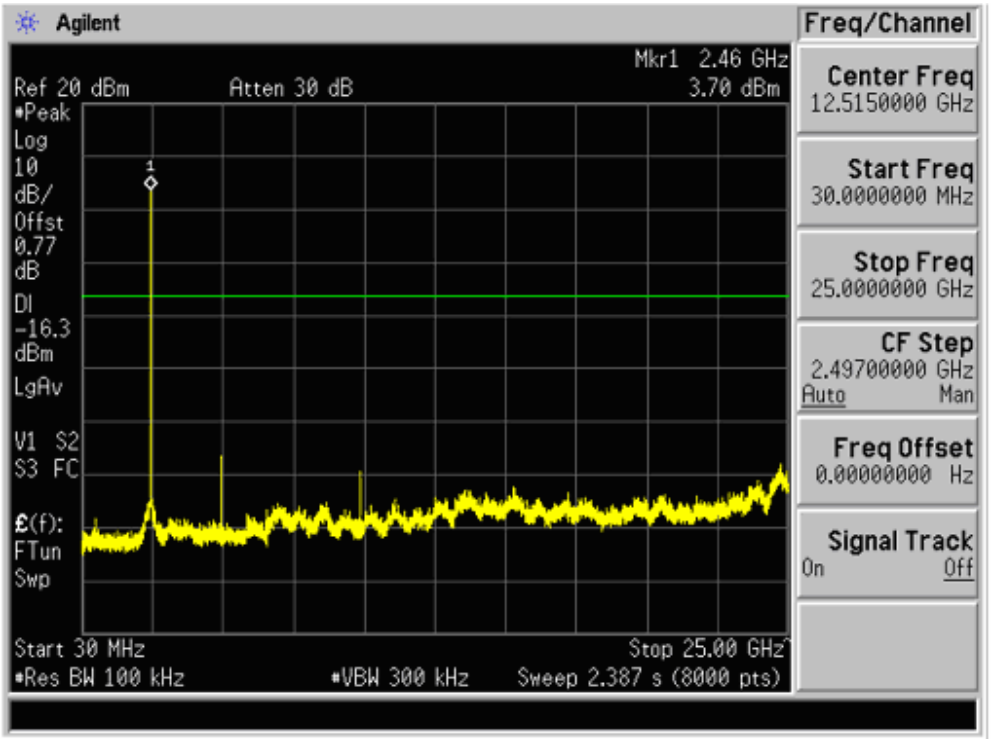
802.11b Low Channel 1:



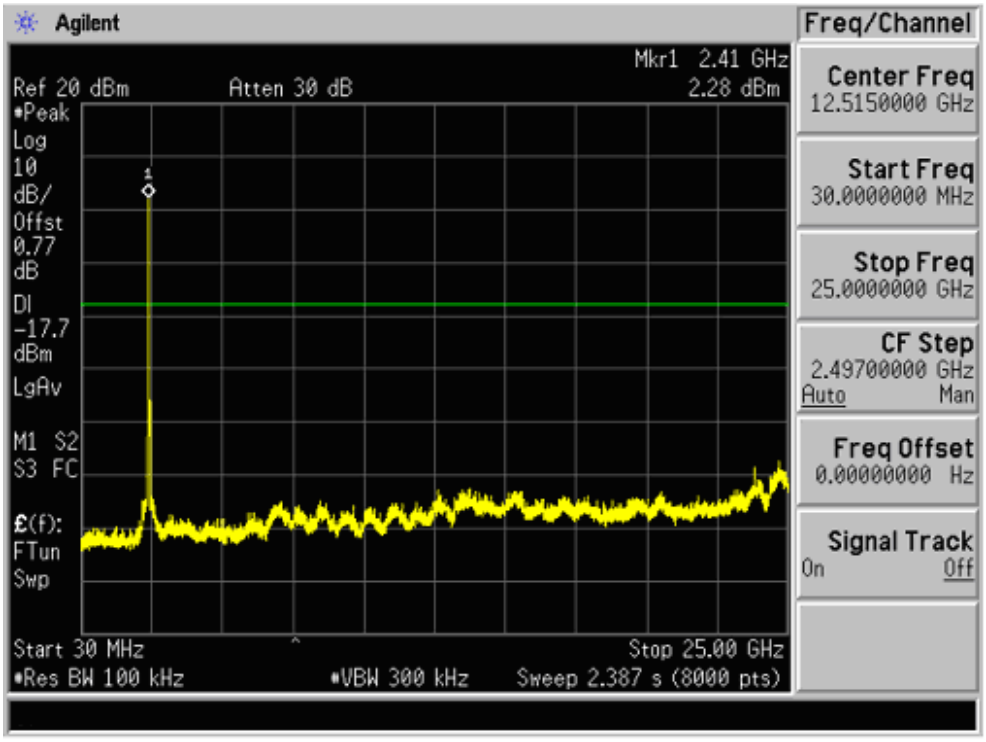
802.11b Mid Channel 6:



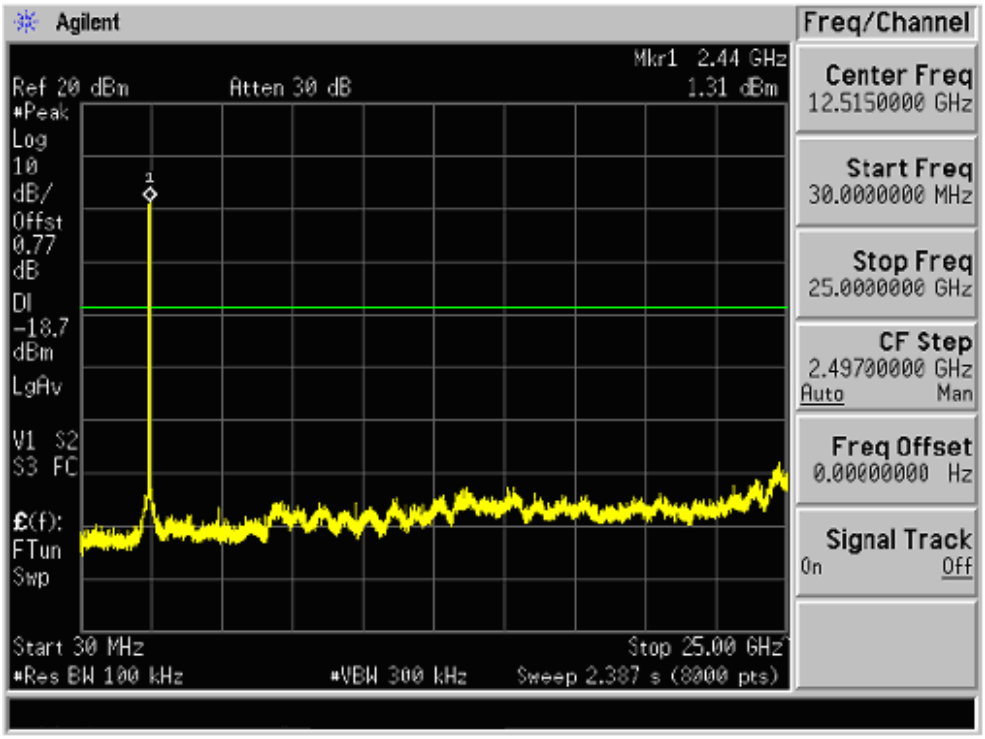
802.11b High Channel 11



802.11g Low Channel 1:



802.11g Mid Channel 6:



802.11g High Channel 11