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

OF

Notebook

MODEL No.: NBPC1028

BRAND NAME: COBY

FCC ID: S7INBPC1028

REPORT NO: KA09086005E

ISSUE DATE: August 20, 2009

Prepared for

Coby Communications Ltd.
Unit C-E, 8/F, PO Shau Centre, 115 How Ming Stree, Kowloon, Hongkong

Prepared by

DONGGUAN EMTEK CO., LTD

No.281, Guantai Road, Nancheng District,
Dongguan, Guangdong, China
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VERIFICATION OF COMPLIANCE

Applicant:	Coby Communications Ltd. Unit C-E, 8/F, PO Shau Centre, 115 How Ming Stree, Kowloon, Hongkong
Manufacturer:	SHENZHEN COBY COMMUNICATIONS LTD. Block 2-3, TaoXia 2nd Industrial Zone, LongHua Town, BaoAn District, ShenZhen City, China
Product Description:	Notebook
Brand Name:	COBY
Model Number:	NBPC1028
Serial Number:	N/A
File Number:	KA09086005E
Date of Test:	August 06, 2009 to August 20, 2009

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 (2003) 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

Nicol Lee / 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: 2400-2483.5MHz
C). Modulation: OFDM (11g), BPSK, QPSK, CCK (11b)
D). Number of Channel: 11
E). Data Rate: 54Mbps(11g), 11Mbps(11b)
F). Transmit Power: 13dBm
G). Antenna GAIN: -2dBi
H). Antenna Type: WLAN 802.11b/g Mini-Card
I). Power Supply: AC 100-240V 50/60Hz by AC adaptor or DC 11.1V, 2200mA
LI-ion recharge battery

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 Notebook included 802.11b and 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: S7INBPC1028 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.

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, 2005.11.02
The certificate is valid until 2010.11
The Laboratory has been assessed and proved to be in compliance with CNAS/CL01:2006(identical to ISO/IEC17025:2005)
The Certificate Registration Number is L2291

Accredited by TUV Rheinland Shenzhen, 2008.5
The certificate is valid until 2009.12
The Laboratory has been assessed according to the requirements ISO/IEC 17025

Accredited by FCC, Nov. 05, 2008
The Certificate Registration Number is 247565.

Accredited by Industry Canada, May 24, 2008
The Certificate Registration Number is 46405-4480

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 C63.4-2003.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 C63.4-2003.

2.4 Configuration of Tested System

Fig. 2-1 Configuration of Tested System

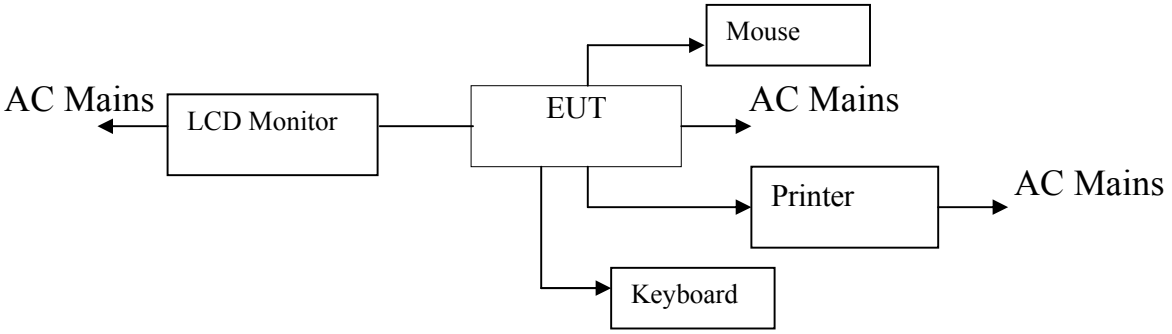


Table 2-1 Equipment Used in Tested System

Item	Equipment	Mfr/Brand	Model/Type No.	FCC ID	Series No.	Note
1.	Notebook	COBY	NBPC1028	S7INBPC1028	N/A	***EUT***
2.	LCD Monitor	DELL	E1909WF	N/A	N/A	
3.	Printer	HP	Q5911A	N/A	CNCK512065	
4.	Keyboard	DELL	L30U	N/A	ON277F	
5.	Mouse	DELL	M-UAR DEL7	N/A	XN966	

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 Notebook and powered by host equipment. This is Digital Transmission system(DTS) and have four type of modulation DBPSK DQPSK CCK&OFDM. The data rates are 54Mbps.
The equipment enables high-speed access without wires to network assets. This adapter uses the WLAN802.11b/g protocol to enable wireless communications between the host computer and computers, in the same way that the computer would use an Ethernet adapter.

1. For lowest channel : 2412MHz(Channel 1)
2. For middle channel : 2442MHz(Channel 6)
3. For highest channel: 2472MHz(Channel 11)

EUT operating conditions:

The EUT exercise program used during conducted testing was designed to exercise the EUT in a manner similar to typical use, The exercise sequence is listed as below:

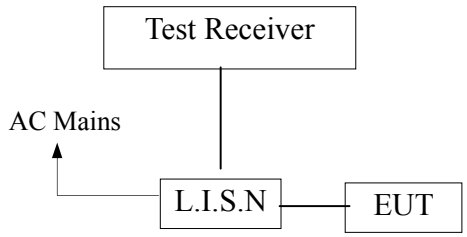
1. Setup the EUT and simulators as shown on 2.4.
2. Turn on the power of all equipments.
3. The EUT Ping with the wireless router.
4. Repeat the above steps.

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.**	**CAL DUE.**
Test Receiver	Rohde & Schwarz	ESCS30	828985/018	05/29/2009	05/29/2010
L.I.S.N	Rohde & Schwarz	ESH2-Z5	834549/005	05/29/2009	05/29/2010
L.I.S.N	Rohde & Schwarz	ESH2-Z5	834549/005	05/29/2009	05/29/2010
50ΩCoaxial Switch	Anritsu	MP59B	M20531	005/29/2009	05/29/2010

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:

Date of Test:	August 14, 2009	Temperature:	22℃
Frequency Detector:	0.15~30MHz	Humidity:	50%
Test Result:	PASS	Test Mode:	ON

Test Line	Frequency MHz	Emission Level QP dB(μV)	Emission Level AV dB(μV)	Limits QP dB(μV)	Limits AV dB(μV)	Margin QP dB(μV)	Margin AV dB(μV)
Neutral	0.462	50.23	40.35	56.66	46.66	-6.43	-6.31
	0.554	45.12	33.24	56.00	46.00	-10.88	-12.76
	0.630	44.67	36.24	56.00	46.00	-11.33	-9.76
	0.758	45.89	34.25	56.00	46.00	-10.11	-11.75
	1.046	43.88	32.69	56.00	46.00	-12.12	-13.31
	21.902	45.90	36.42	60.00	50.00	-14.10	-13.58
Line	0.462	50.35	40.45	56.66	46.66	-6.31	-6.21
	0.630	45.88	38.25	56.00	46.00	-10.12	-7.75
	0.734	46.04	38.24	56.00	46.00	-9.96	-7.76
	0.950	43.68	35.57	56.00	46.00	-12.32	-10.43
	1.326	43.63	34.69	56.00	46.00	-12.37	-11.31
	21.89	45.65	37.68	60.00	50.00	-14.35	-12.32

4.6 Conducted Measurement Photos:

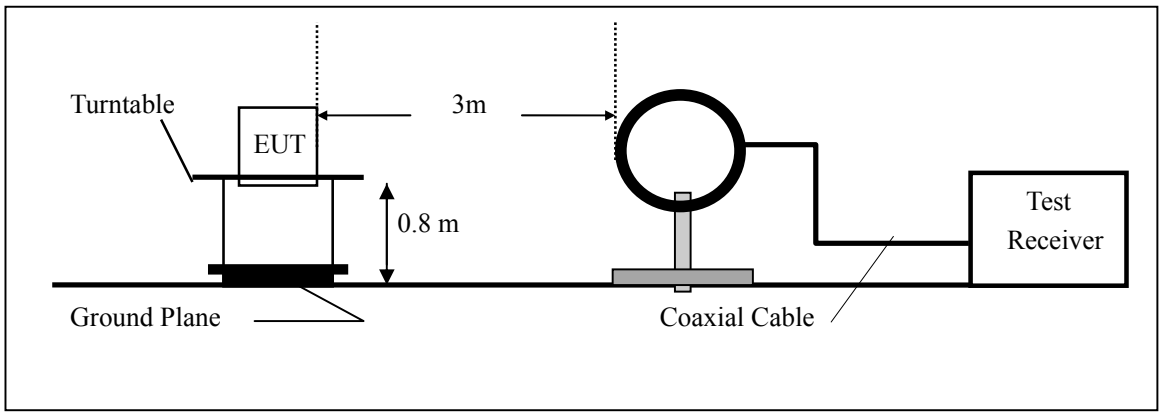
5. Radiated Emission Test

5.1 Measurement Procedure

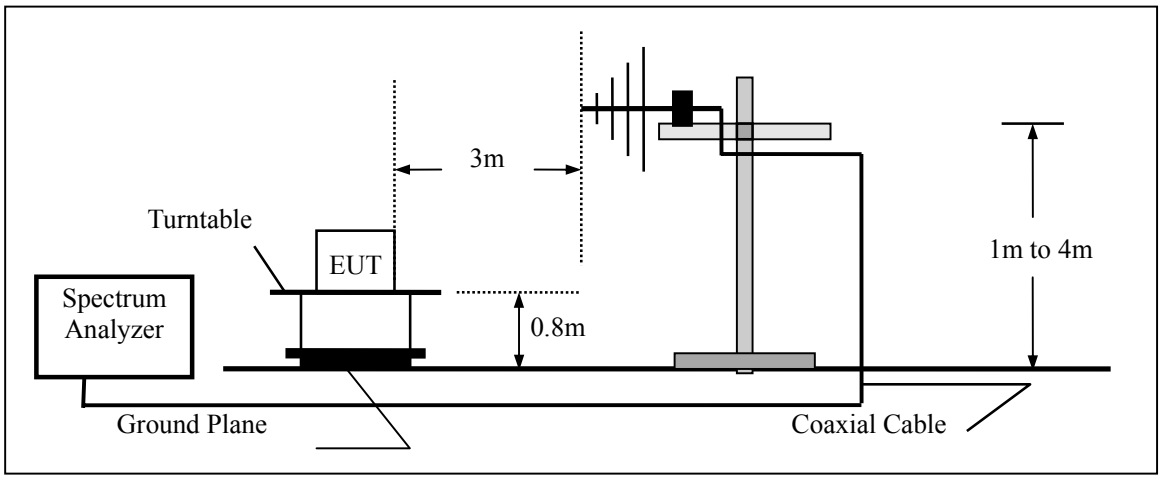
1 The EUT was placed on a turn table which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
4. Repeat above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

5.2 Test SET-UP (Block Diagram of Configuration)

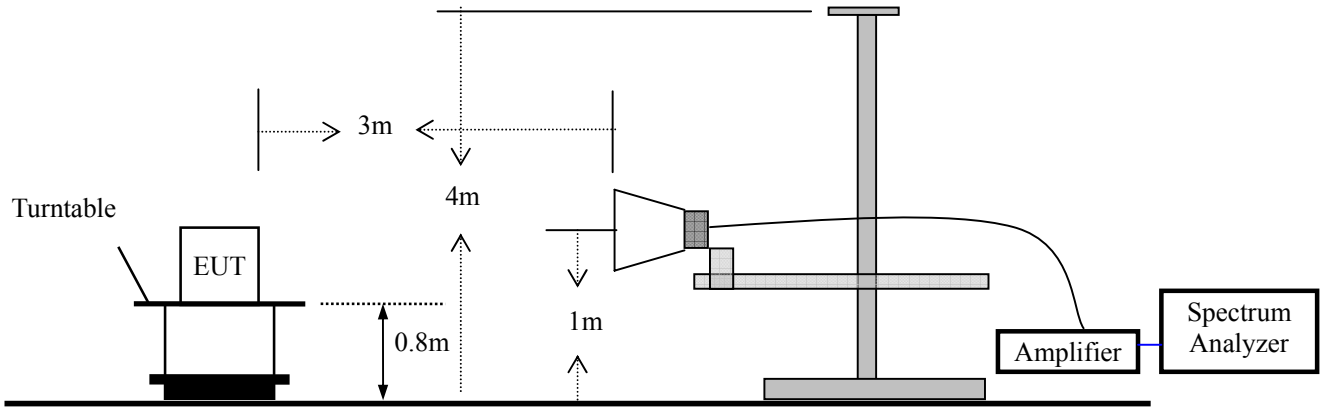
(A) Radiated Emission Test Set-Up, Frequency Below 30MHz



(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.
Spectrum Analyzer	Rohde & Schwarz	FSP7	839511/010	05/29/2009	05/29/2010
Spectrum Analyzer	HP	E4407B	839840481	05/29/2009	05/29/2010
EMI Test Receiver	Rohde & Schwarz	ESU	1302.6005.26	05/29/2009	05/29/2010
Pre-Amplifier	HP	8447D	2944A07999	05/29/2009	05/29/2010
Bilog Antenna	Schwarzbeck	VULB9163	142	05/29/2009	05/29/2010
Loop Antenna	ARA	PLA-1030/B	1029	05/29/2009	05/29/2010
Horn Antenna	Schwarzbeck	BBHA9170	BBHA9170399	05/29/2009	05/29/2010
Horn Antenna	Schwarzbeck	BBHA 9120	D143	05/29/2009	05/29/2010

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 :	08/18/2009
Frequency Range:	30~1000MHz	Temperature :	28 ℃
Test Result:	PASS	Humidity :	65 %
Measured Distance:	3m	Test By:	Jees

Freq. (MHz)	Ant.Pol. H/V	Emission Level (dBuV)	Limit 3m (dBuV/m)	Margin (dB)	Note
31.46	V	34.62	40	-5.38	PK
135.67	V	35.11	43.5	-8.39	PK
238.45	V	35.36	43.5	-8.14	PK
514.54	V	38.69	46	-7.31	PK
757.84	V	40.47	46	-5.53	PK
827.43	V	40.61	46	-5.39	PK
35.94	H	35.14	40	-4.86	PK
156.91	H	38.61	43.5	-4.89	PK
246.71	H	39.91	46	-6.09	PK
506.78	H	40.67	46	-5.33	PK
667.89	H	36.94	46	-9.06	PK
830.87	H	40.45	46	-5.55	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 :	08/18/2009
Frequency Range:	30~1000MHz	Temperature :	28 ℃
Test Result:	PASS	Humidity :	65 %
Measured Distance:	3m	Test By:	Jees

Freq. (MHz)	Ant.Pol. H/V	Emission Level (dBuV)	Limit 3m (dBuV/m)	Margin (dB)	Note
32.65	V	34.68	40	-5.32	PK
114.67	V	38.62	43.5	-4.88	PK
238.84	V	41.58	46	-4.42	PK
365.25	V	41.18	46	-4.82	PK
479.68	V	40.51	46	-5.49	PK
698.35	V	37.54	46	-8.46	PK
38.68	H	34.62	40	-5.38	PK
141.81	H	38.61	43.5	-4.89	PK
250.49	H	4..51	46	-5.49	PK
380.52	H	41.25	46	-4.75	PK
523.50	H	40.32	46	-5.68	PK
667.86	H	40.15	46	-5.85	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 :	08/18/2009
Frequency Range:	30~1000MHz	Temperature :	28 ℃
Test Result:	PASS	Humidity :	65 %
Measured Distance:	3m	Test By:	Jees

Freq. (MHz)	Ant.Pol. H/V	Emission Level (dBuV)	Limit 3m (dBuV/m)	Margin (dB)	Note
37.34	V	35.40	40	-4.60	PK
128.54	V	38.68	43.5	-5.82	PK
280.43	V	41.68	46	-4.32	PK
345.87	V	41.51	46	-4.49	PK
538.14	V	40.66	46	-5.34	PK
639.34	V	41.44	46	-4.56	PK
35.87	H	35.36	40	-4.64	PK
118.34	H	38.51	43.5	-5.99	PK
285.94	H	41.54	46	-4.46	PK
359.97	H	39.64	46	-6.36	PK
634.71	H	40.15	46	-5.85	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 :	08/18/2009
Frequency Range:	Above 1GHz	Temperature :	28 ℃
Test Result:	PASS	Humidity :	65 %
Measured Distance:	3m	Test By:	Jees

Freq.	Ant.Pol.	Emission Level(dBuV)		Limit 3m(dBuV/m)		Margin(dB)	
(MHz)	H/V	PK	AV	PK	AV	PK	AV
4824.21	V	51.35	44.57	74.00	54.00	-22.65	-9.43
7236.16	V	45.61	41.33	74.00	54.00	-28.39	-12.67
9648.37	V	42.35	38.63	74.00	54.00	-31.65	-15.37
12060.56	V	40.63	37.25	74.00	54.00	-33.37	-16.75
14472.35	V	37.31	32.47	74.00	54.00	-36.69	-21.53
16884.56	V	36.45	31.96	74.00	54.00	-37.55	-22.04
4824.47	H	52.64	46.35	74.00	54.00	-21.36	-7.65
7236.27	H	45.93	40.69	74.00	54.00	-28.07	-13.31
9647.69	H	43.54	38.60	74.00	54.00	-30.46	-15.40
12060.37	H	41.37	37.32	74.00	54.00	-32.63	-16.68
14472.82	H	39.68	34.36	74.00	54.00	-34.32	-19.64
16884.37	H	37.69	31.57	74.00	54.00	-36.31	-22.43

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) The average measurement was not performed when the peak measured data under the limit of average detection.

Operation Mode:	802.11b(Channel 6)	Test Date :	08/18/2009
Frequency Range:	Above 1GHz	Temperature :	28 ℃
Test Result:	PASS	Humidity :	65 %
Measured Distance:	3m	Test By:	Jees

Freq.	Ant.Pol.	Emission Level(dBuV)		Limit 3m(dBuV/m)		Margin(dB)	
(MHz)	H/V	PK	AV	PK	AV	PK	AV
4874.23	V	51.23	44.35	74.00	54.00	-22.77	-9.65
7310.12	V	48.31	42.69	74.00	54.00	-25.69	-11.31
9748.71	V	47.35	40.35	74.00	54.00	-26.65	-13.65
12185.37	V	44.31	40.14	74.00	54.00	-29.69	-13.86
14622.23	V	42.67	38.96	74.00	54.00	-31.33	-15.04
17059.24	V	39.64	36.12	74.00	54.00	-34.36	-17.88
4873.15	H	49.34	42.47	74.00	54.00	-24.66	-11.53
7311.50	H	52.47	46.44	74.00	54.00	-21.53	-7.56
9747.62	H	49.47	43.47	74.00	54.00	-24.53	-10.53
12184.38	H	45.63	39.62	74.00	54.00	-28.37	-14.38
14624.27	H	43.61	36.35	74.00	54.00	-30.39	-17.65
17058.33	H	39.14	33.25	74.00	54.00	-34.86	-20.75

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) The average measurement was not performed when the peak measured data under the limit of average detection.

Operation Mode:	802.11b (Channel 11)	Test Date :	08/18/2009
Frequency Range:	Above 1GHz	Temperature :	28 ℃
Test Result:	PASS	Humidity :	65 %
Measured Distance:	3m	Test By:	Jees

Freq.	Ant.Pol.	Emission Level(dBuV)		Limit 3m(dBuV/m)		Margin(dB)	
(MHz)	H/V	PK	AV	PK	AV	PK	AV
4923.28	V	51.42	44.53	74.00	54.00	-22.58	-9.47
7386.12	V	49.35	43.57	74.00	54.00	-24.65	-10.43
9848.34	V	47.35	42.36	74.00	54.00	-26.65	-11.64
12310.21	V	45.93	37.61	74.00	54.00	-28.07	-16.39
14772.61	V	42.63	36.90	74.00	54.00	-31.37	-17.10
17234.28	V	40.36	35.62	74.00	54.00	-33.64	-18.38
4923.25	H	50.66	44.69	74.00	54.00	-23.34	-9.31
7386.45	H	46.69	41.63	74.00	54.00	-27.31	-12.37
9848.35	H	47.61	41.47	74.00	54.00	-26.39	-12.53
12310.21	H	44.98	39.65	74.00	54.00	-29.02	-14.35
14772.61	H	43.55	38.37	74.00	54.00	-30.45	-15.63
17234.28	H	40.58	36.97	74.00	54.00	-33.42	-17.03

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) The average measurement was not performed when the peak measured data under the limit of average detection.

Operation Mode:	802.11g(Channel 1)	Test Date :	08/18/2009
Frequency Range:	Above 1GHz	Temperature :	28 ℃
Test Result:	PASS	Humidity :	65 %
Measured Distance:	3m	Test By:	Jees

Freq.	Ant.Pol.	Emission Level(dBuV)		Limit 3m(dBuV/m)		Margin(dB)	
(MHz)	H/V	PK	AV	PK	AV	PK	AV
4824.15	V	52.63	46.62	74.00	54.00	-21.37	-7.38
7236.25	V	48.61	42.61	74.00	54.00	-25.39	-11.39
9648.42	V	45.94	40.69	74.00	54.00	-28.06	-13.31
12060.44	V	42.64	37.25	74.00	54.00	-31.36	-16.75
1447236	V	38.64	33.47	74.00	54.00	-35.36	-20.53
16884.35	V	36.45	32.96	74.00	54.00	-37.55	-21.04
4824.34	H	52.58	46.35	74.00	54.00	-21.42	-7.65
7236.37	H	46.36	40.69	74.00	54.00	-27.64	-13.31
9647.67	H	44.92	38.60	74.00	54.00	-29.08	-15.40
12060.24	H	43.68	37.32	74.00	54.00	-30.32	-16.68
14472.60	H	40.51	36.62	74.00	54.00	-33.49	-17.38
16884.46	H	38.61	35.61	74.00	54.00	-35.39	-18.39

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) The average measurement was not performed when the peak measured data under the limit of average detection.

Operation Mode:	802.11g(Channel 6)	Test Date :	08/18/2009
Frequency Range:	Above 1GHz	Temperature :	28 ℃
Test Result:	PASS	Humidity :	65 %
Measured Distance:	3m	Test By:	Jees

Freq.	Ant.Pol.	Emission Level(dBuV)		Limit 3m(dBuV/m)		Margin(dB)	
(MHz)	H/V	PK	AV	PK	AV	PK	AV
4874.10	V	52.15	45.69	74.00	54.00	-21.85	-8.31
7310.32	V	48.67	43.54	74.00	54.00	-25.33	-10.46
9748.52	V	46.61	41.81	74.00	54.00	-27.39	-12.19
12185.23	V	44.62	40.25	74.00	54.00	-29.38	-13.75
14622.32	V	42.67	38.96	74.00	54.00	-31.33	-15.04
17059.36	V	39.64	36.12	74.00	54.00	-34.36	-17.88
4874.32	H	49.62	43.25	74.00	54.00	-24.38	-10.75
7310.56	H	53.51	47.61	74.00	54.00	-20.49	-6.39
9748.63	H	48.61	43.14	74.00	54.00	-25.39	-10.86
12185.23	H	46.36	40.36	74.00	54.00	-27.64	-13.64
14622.32	H	42.66	37.36	74.00	54.00	-31.34	-16.64
17059.36	H	39.63	34.69	74.00	54.00	-34.37	-19.31

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) The average measurement was not performed when the peak measured data under the limit of average detection.

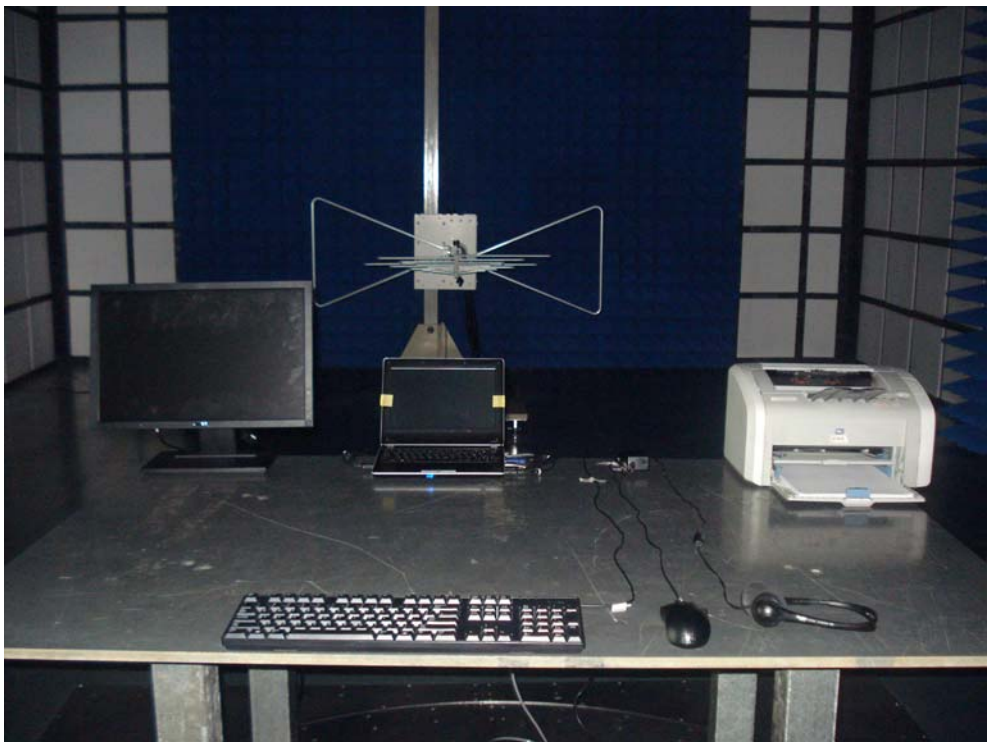
Operation Mode:	802.11g(Channel 11)	Test Date :	08/18/2009
Frequency Range:	Above 1GHz	Temperature :	28 ℃
Test Result:	PASS	Humidity :	65 %
Measured Distance:	3m	Test By:	Jees

Freq.	Ant.Pol.	Emission Level(dBuV)		Limit 3m(dBuV/m)		Margin(dB)	
(MHz)	H/V	PK	AV	PK	AV	PK	AV
4923.28	V	52.36	46.12	74.00	54.00	-21.64	-7.88
7386.12	V	50.18	42.62	74.00	54.00	-23.82	-11.38
9848.34	V	48.61	41.51	74.00	54.00	-25.39	-12.49
12310.21	V	46.39	38.11	74.00	54.00	-27.61	-15.89
14772.61	V	44.32	35.12	74.00	54.00	-29.68	-18.88
17234.28	V	41.64	37.36	74.00	54.00	-32.36	-16.64
4923.25	H	51.32	46.95	74.00	54.00	-22.68	-7.05
7386.45	H	49.93	44.25	74.00	54.00	-24.07	-9.75
9848.35	H	47.61	42.42	74.00	54.00	-26.39	-11.58
12310.21	H	45.61	42.10	74.00	54.00	-28.39	-11.90
14772.61	H	42.36	38.62	74.00	54.00	-31.64	-15.38
17234.28	H	39.61	35.93	74.00	54.00	-34.39	-18.07

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) The average measurement was not performed when the peak measured data under the limit of average detection.

5.6 Radiated Measurement Photos:

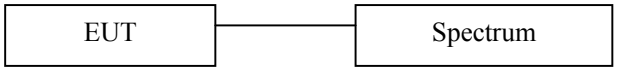


6. Occupied Bandwidth test

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:

Same as 4.3 Radiated Emission Measurement.

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 :	08/18/2009
Test By:	Andy	Temperature :	28 ℃
Test Result:	PASS	Humidity :	65 %

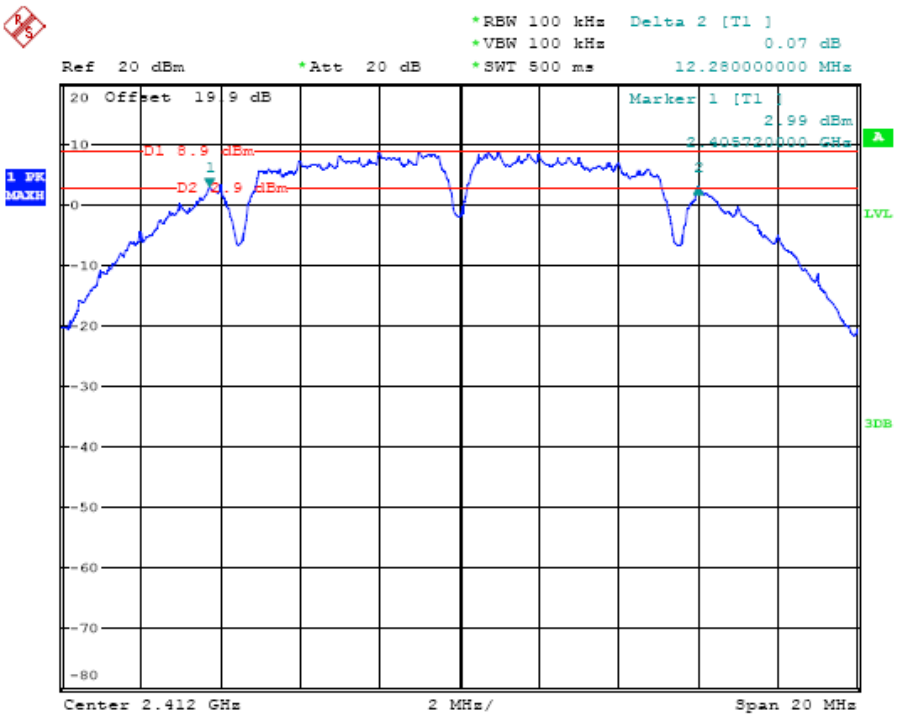
802.11b:

Channel number	Channel frequency (MHz)	Measurement level (MHz)	Required Limit (KHz)
1	2412	12.28	>500
6	2437	12.32	>500
11	2462	12.12	>500

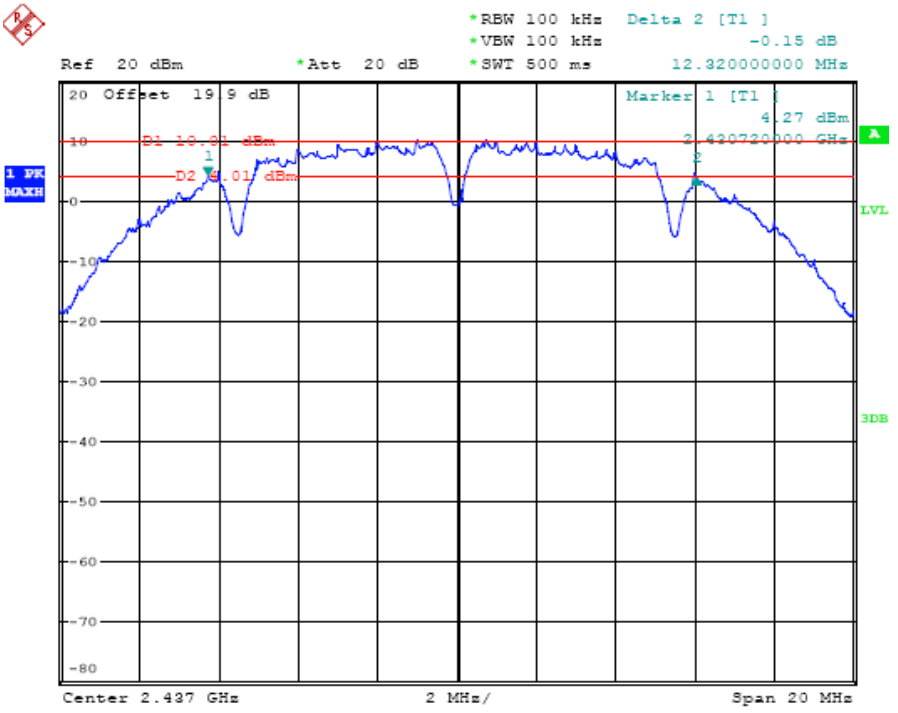
802.11g:

Channel number	Channel frequency (MHz)	Measurement level (MHz)	Required Limit (KHz)
1	2412	16.44	>500
6	2437	16.36	>500
11	2462	16.40	>500

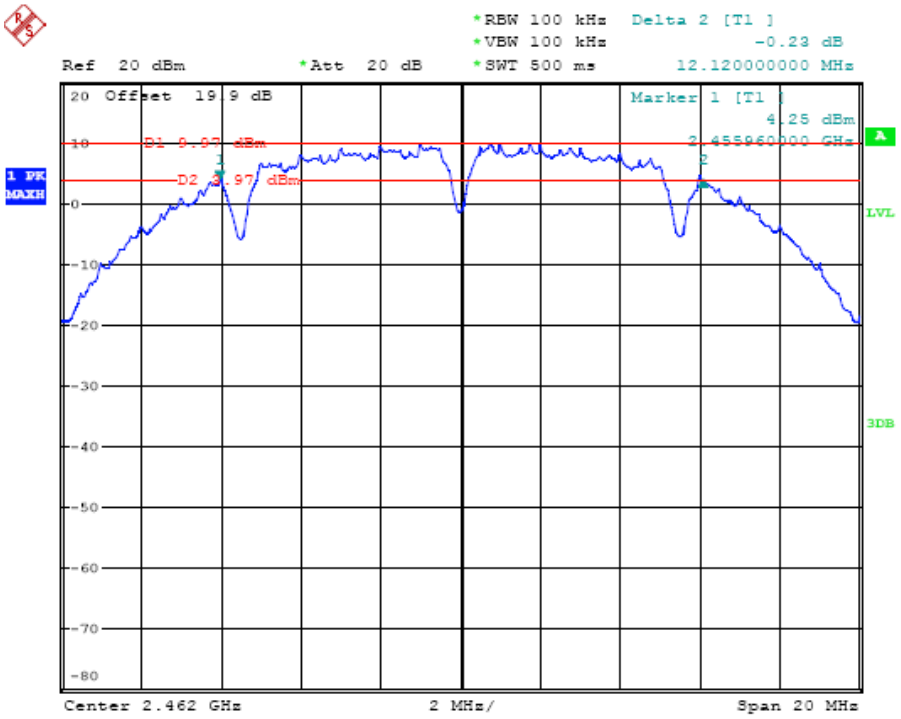
802.11b Channel 1



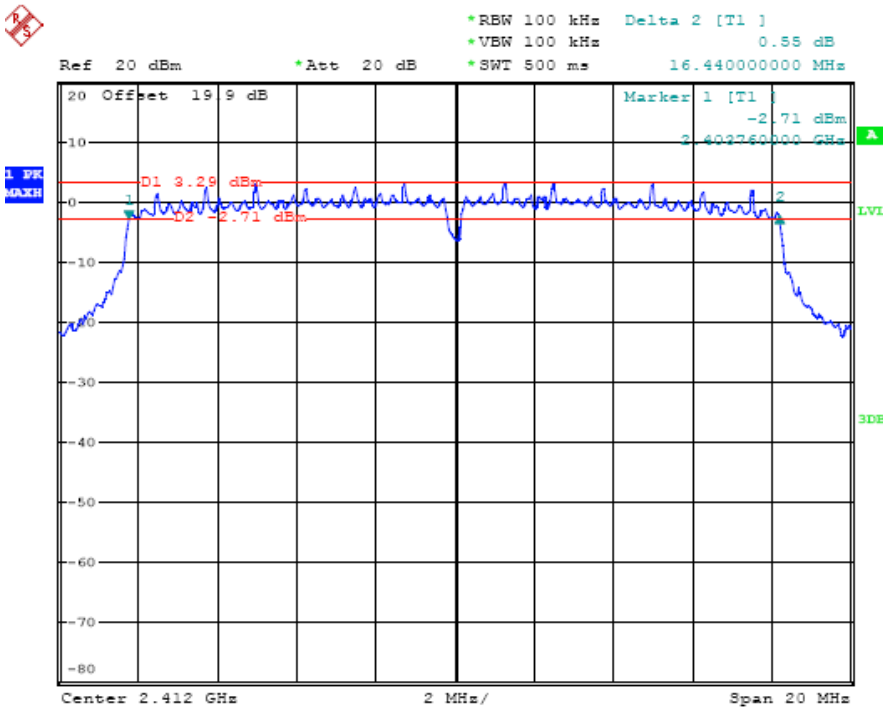
Channel 6



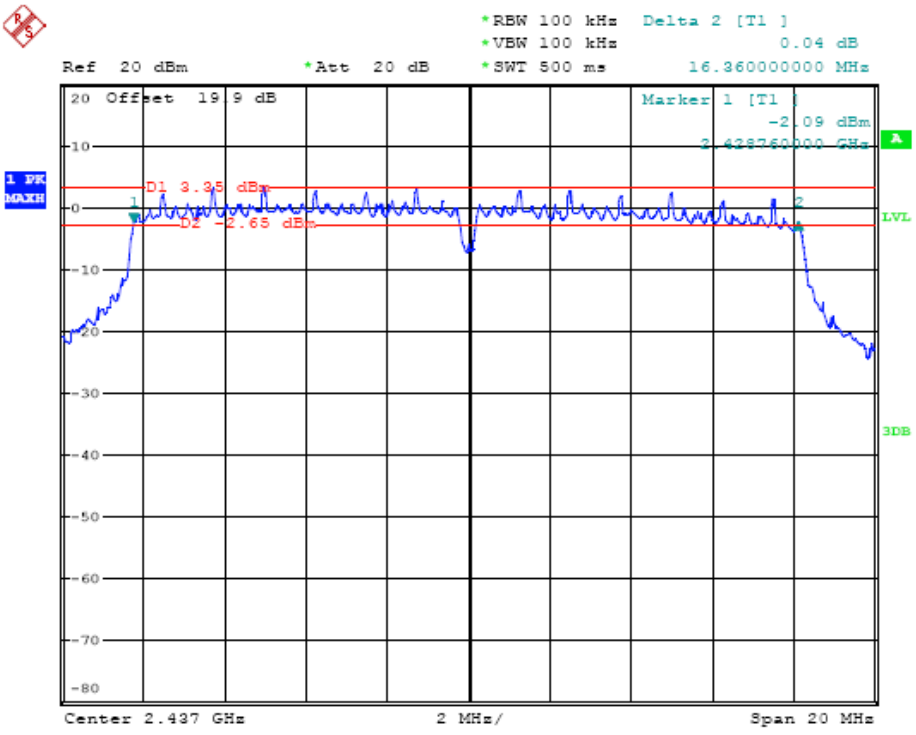
Channel 11



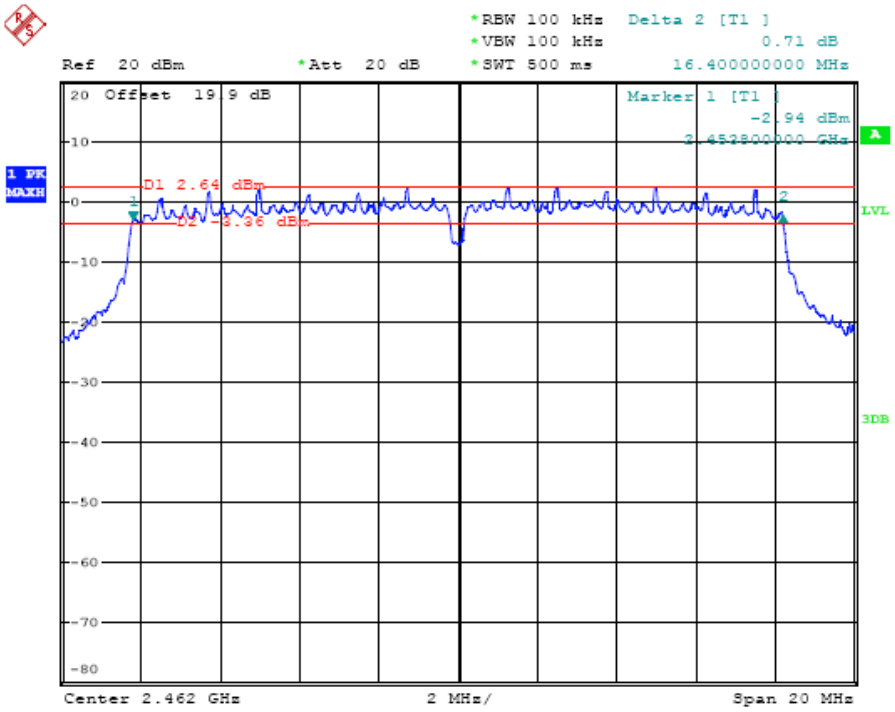
802.11g Channel 1



Channel 6



Channel 11

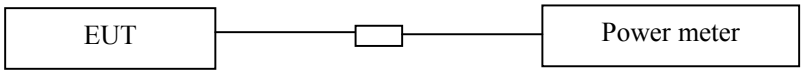


7. MAX IMUM PEAK OUTPUT POWER TEST

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	05/29/2009	05/29/2010
Power sensor	Boonton	51011-EMC	31184	05/29/2009	05/29/2010

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 :	08/18/2009
Test By:	Andy	Temperature :	28 ℃
Test Result:	PASS	Humidity :	65 %

802.11b

Channel number	Channel Frequency (MHz)	Peak Power output(dBm)	Peak Power Limit(W)	Pass/Fail
1	2412.00	11.89	1W(30dBm)	PASS
6	2437.00	12.56	1W(30dBm)	PASS
11	2462.00	12.13	1W(30dBm)	PASS

802.11g

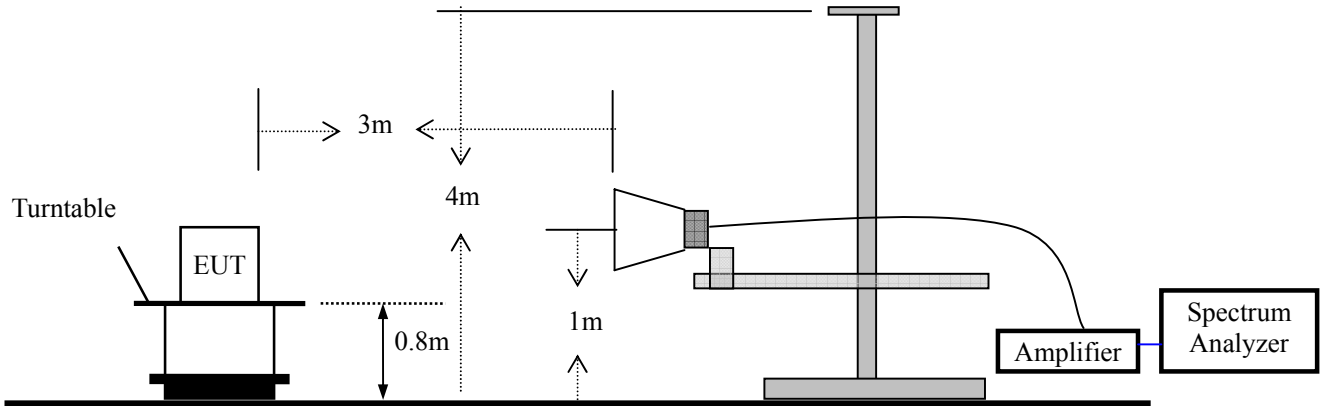
Channel number	Channel Frequency (MHz)	Peak Power output(dBm)	Peak Power Limit(W)	Pass/Fail
1	2412.00	12.11	1W(30dBm)	PASS
6	2437.00	12.64	1W(30dBm)	PASS
11	2462.00	12.26	1W(30dBm)	PASS

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 4.3 Radiated Emission Measurement.

8.4 Measurement Results:

Refer to attached data chart.

Spectrum Detector:	PK	Test Date :	August 18, 2009
Test By:	Andy	Temperature :	28 ℃
Test Result:	PASS	Humidity :	65 %

802.11b:

1.Conducted Test

Frequency (MHz)	Peak Power Output(dBm)	Emission read Value(dBm)	Result of Band edge(dBc)	Band edge Limit(dBc)
<2400	10.11	-22.94	33.05	>20dBc
>2483.5	12.54	-44.82	57.36	>20dBc

2.Radiated emission test

Frequency (MHz)	Antenna polarization (H/V)	Emission (dBuV/m)		Band edge Limit (dBuV/m)	
		PK	AV	PK	AV
<2400	V	45.61	39.48	74.00	54.00
>2483.5	V	43.12	38.79	74.00	54.00

802.11g:

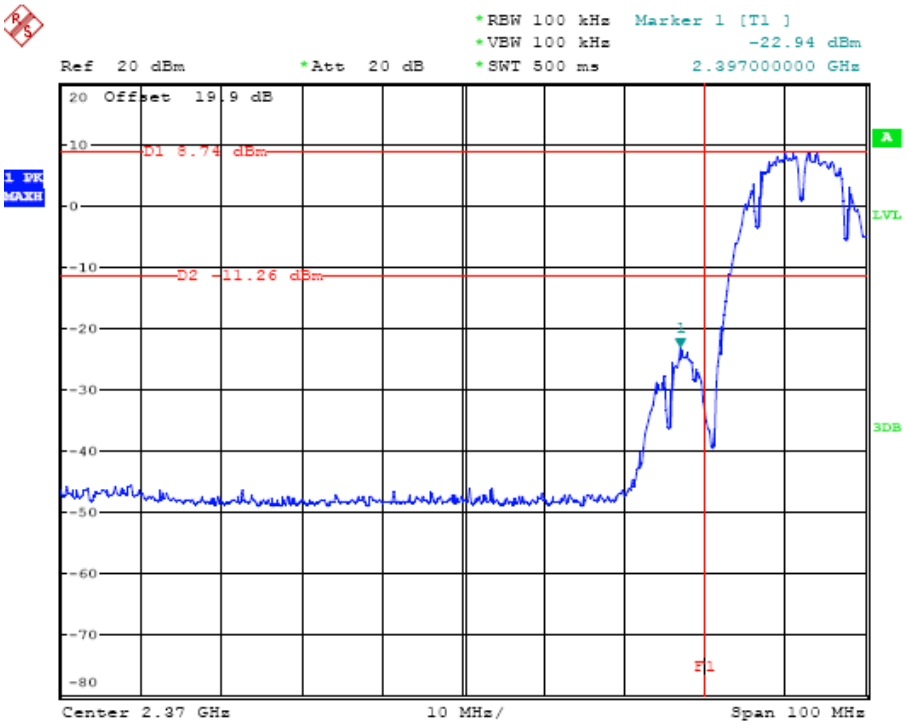
1.Conducted Test

Frequency (MHz)	Peak Power Output(dBm)	Emission read Value(dBm)	Result of Band edge(dBc)	Band edge Limit(dBc)
<2400	8.96	-27.99	36.95	>20dBc
>2483.5	9.63	-41.91	51.54	>20dBc

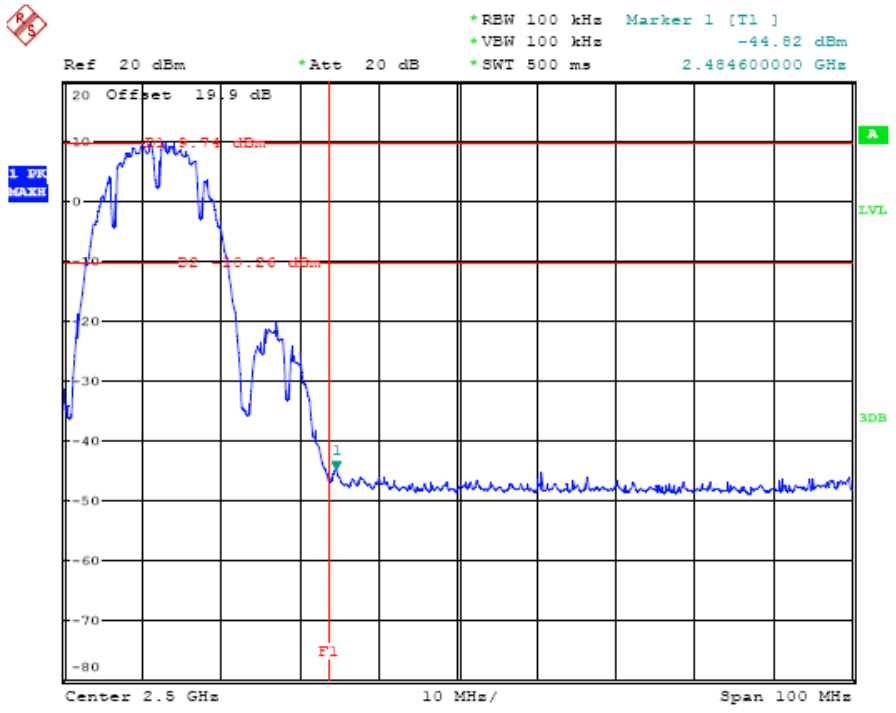
2.Radiated emission test

Frequency (MHz)	Antenna polarization (H/V)	Emission (dBuV/m)		Band edge Limit (dBuV/m)	
		PK	AV	PK	AV
<2400	V	46.78	41.17	74.00	54.00
>2483.5	V	44.45	40.12	74.00	54.00

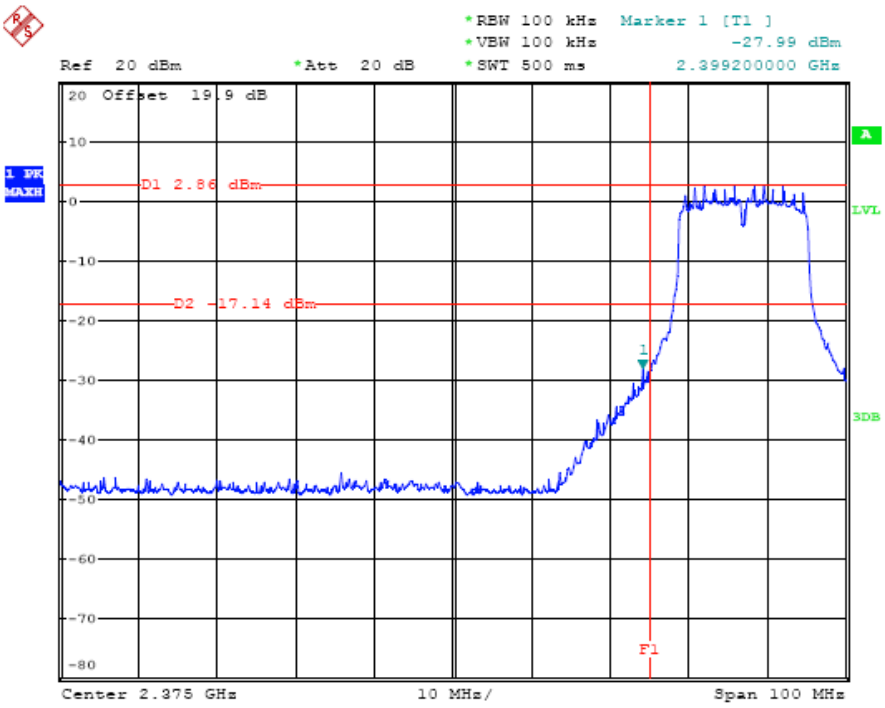
802.11b CH1



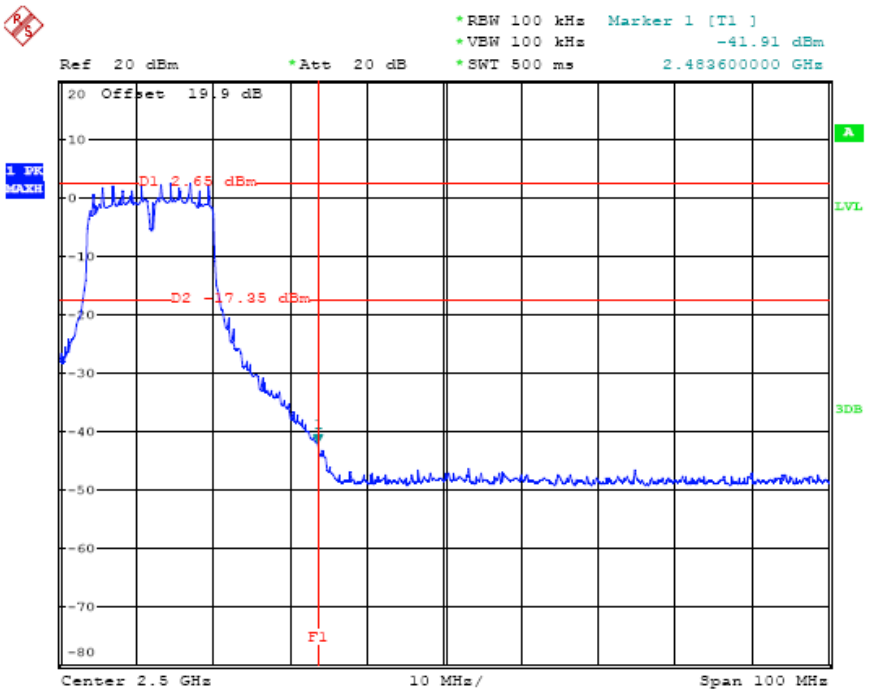
CH11



802.11g CH1



CH11



9. Power density

9.1 Test Equipment

EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Spectrum Analyzer	Rohde & Schwarz	FSP7	839511/010	05/29/2009	05/29/2010

9.2 Measuring Instruments and setting

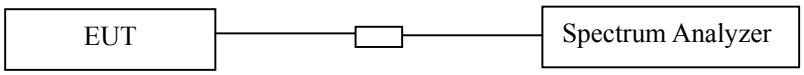
The following table is the setting of spectrum analyzer.

Spectrum analyzer	Setting
Attenuation	Auto
Span Frequency	1.5MHz
RB	3kHz
VB	30kHz
Detector	Peak
Trace	Max hold
Sweep Time	500s

9.3 Test Procedures

a. The transmitter output (antenna port) was connected to the spectrum analyzer.
b. Set RBW of spectrum analyzer to 3kHz and VBW to 30kHz, 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 1.5MHz and the sweep time to 500s and record the maximum peak value.

9.4 Block Diagram of Test setup



9.5 Limit

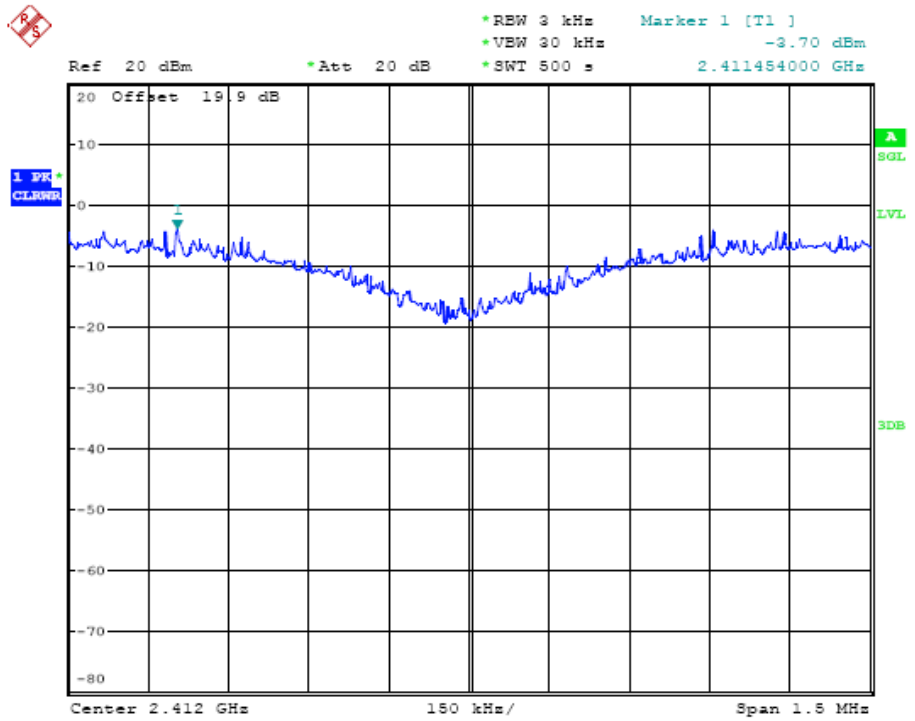
The transmitted power density averaged over any 1 second interval shall not be greater +8dBm in any 3KHz bandwidth.

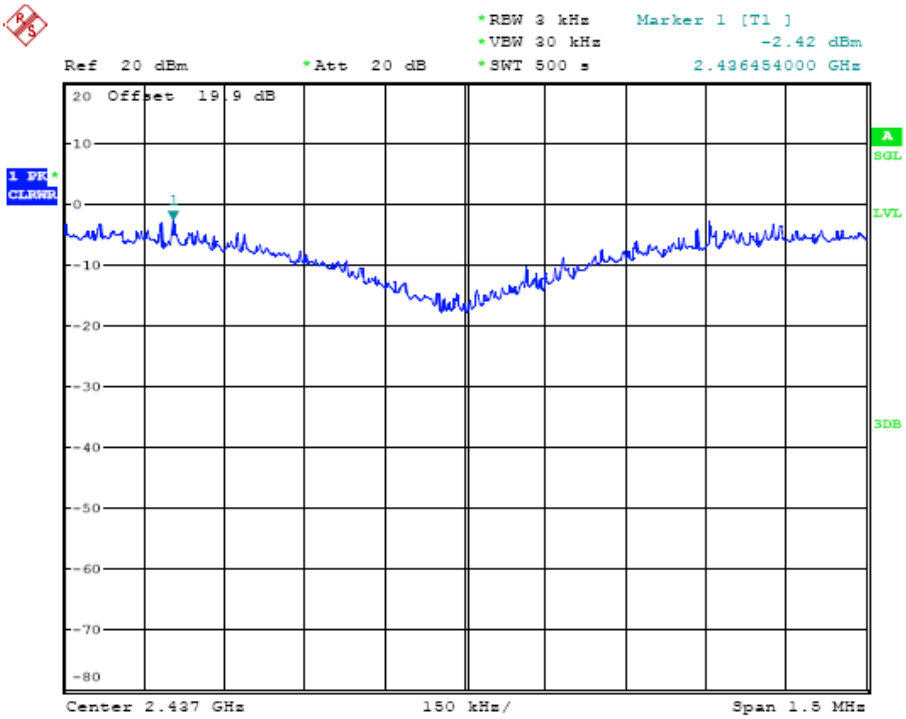
9.6. Test Result

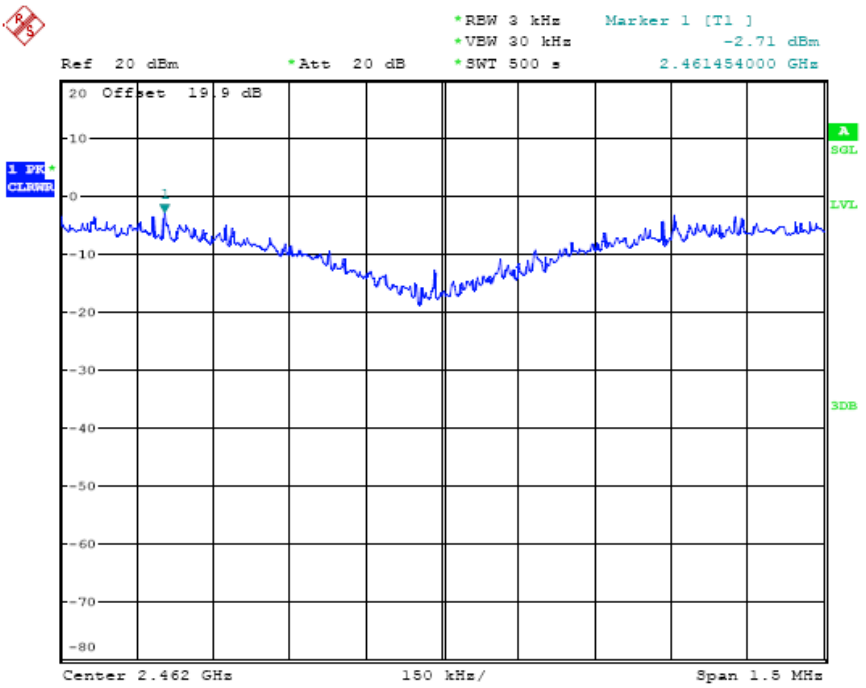
Spectrum Detector:	PK	Test Date :	07/02/2009
Test By:	Andy	Temperature :	28 ℃
Test Result:	PASS	Humidity :	65 %

802.11b

Frequency (MHz)	Measurement Level (dBm)	Required limit (dBm)	Result
2412.00	-3.70	<8dBm	PASS
2437.00	-2.42	<8dBm	PASS
2462.00	-2.71	<8dBm	PASS

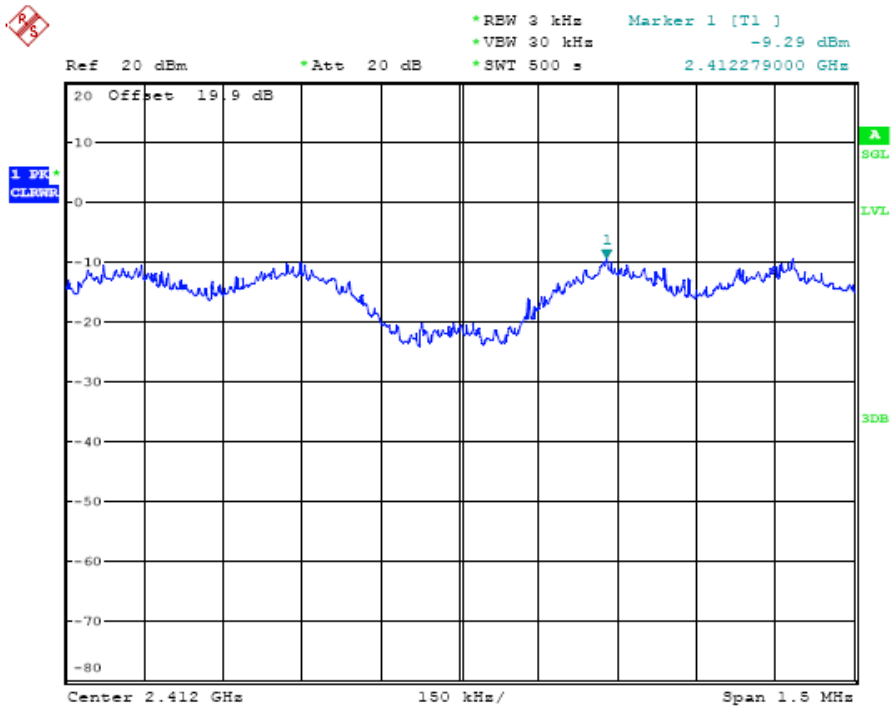


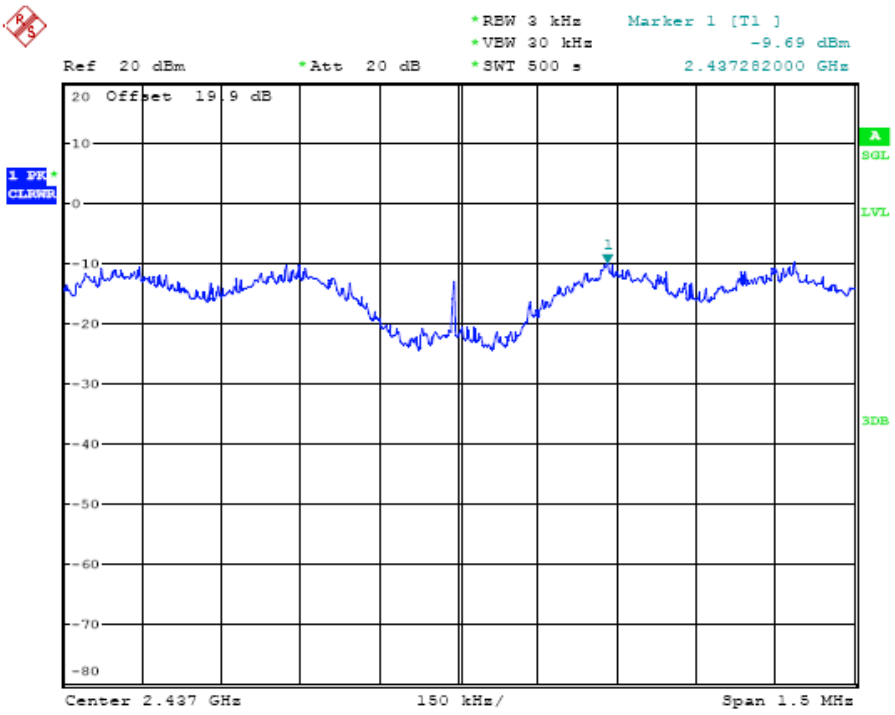

*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-2.42 dBm
2.436454000 GHz
Ref 20 dBm
*Att 20 dB
20 Offset 19.9 dB
1 PK*
CLRWR
A
SGL
LVL
3DB
Center 2.437 GHz
150 kHz/
Span 1.5 MHz

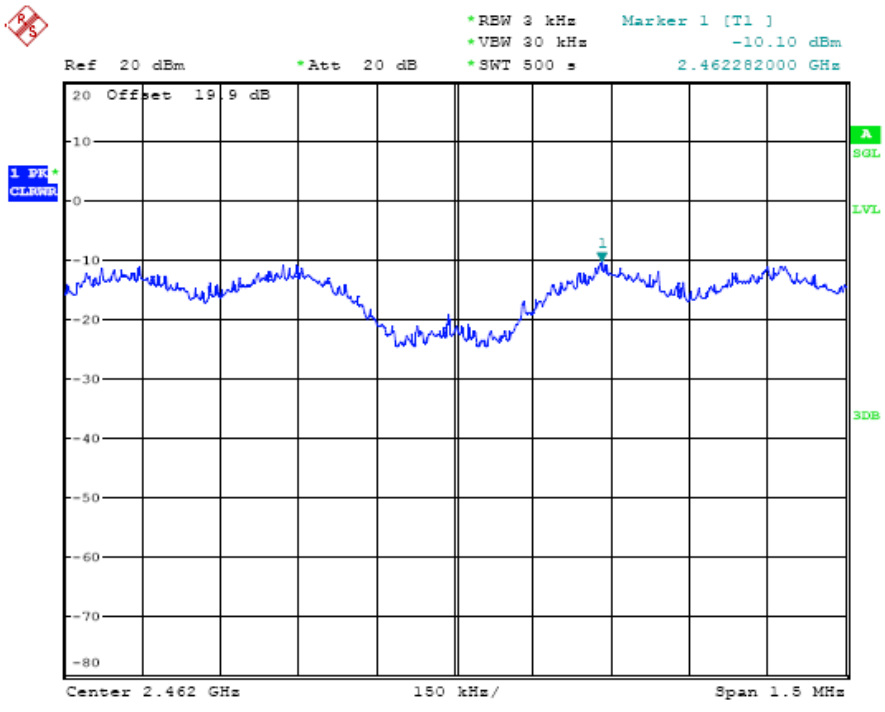

*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-2.71 dBm
2.461454000 GHz
Ref 20 dBm
*Att 20 dB
20 Offset 19.9 dB
1 PK*
CLRWR
A
SGL
LVL
3DB
Center 2.462 GHz
150 kHz/
Span 1.5 MHz

802.11g

Frequency (MHz)	Measurement Level (dBm)	Required limit (dBm)	Result
2412.00	-9.29	<8dBm	PASS
2437.00	-9.69	<8dBm	PASS
2462.00	-10.10	<8dBm	PASS




*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-9.69 dBm
2.437282000 GHz
Ref 20 dBm
*Att 20 dB
Offset 19.9 dB
1 PK
CLRWR
A
SGL
LVL
3DB
Center 2.437 GHz
150 kHz/
Span 1.5 MHz


*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-10.10 dBm
2.462282000 GHz
Ref 20 dBm
*Att 20 dB
Offset 19.9 dB
1 PK
CLRWR
A
SGL
LVL
3DB
Center 2.462 GHz
150 kHz/
Span 1.5 MHz

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 antenna is detached which the model name is NBPC1028 and no consideration of replacement. The best case gain of the antenna is -2.0dBi

11.Antenna Port Emission

11.1 Test Equipment

EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Spectrum Analyzer	Rohde & Schwarz	FSP7	839511/010	05/29/2009	05/29/2010

11.2 Measuring Instruments and setting

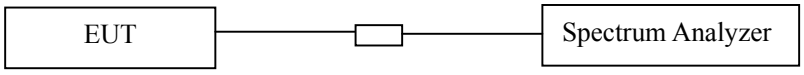
The following table is the setting of spectrum analyzer.

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.

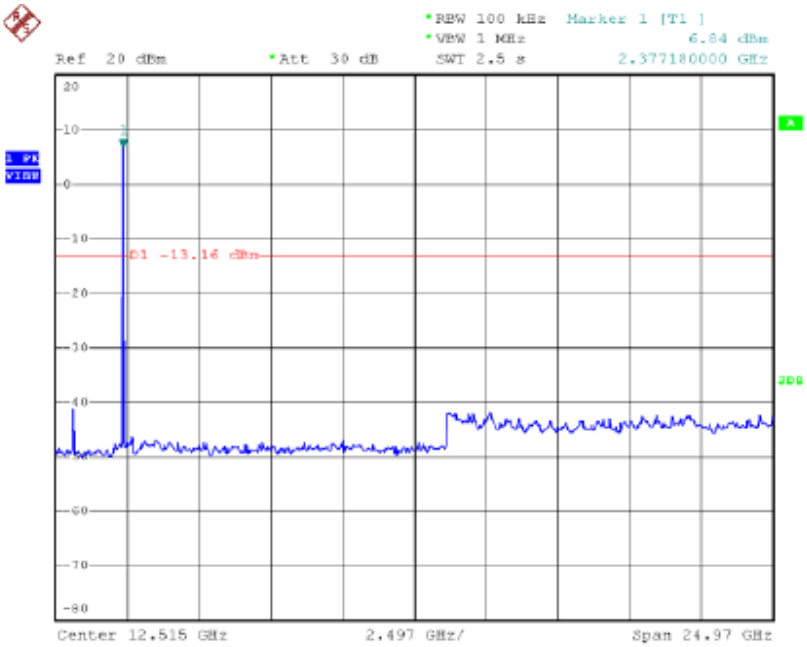
11.4 Block Diagram of Test setup



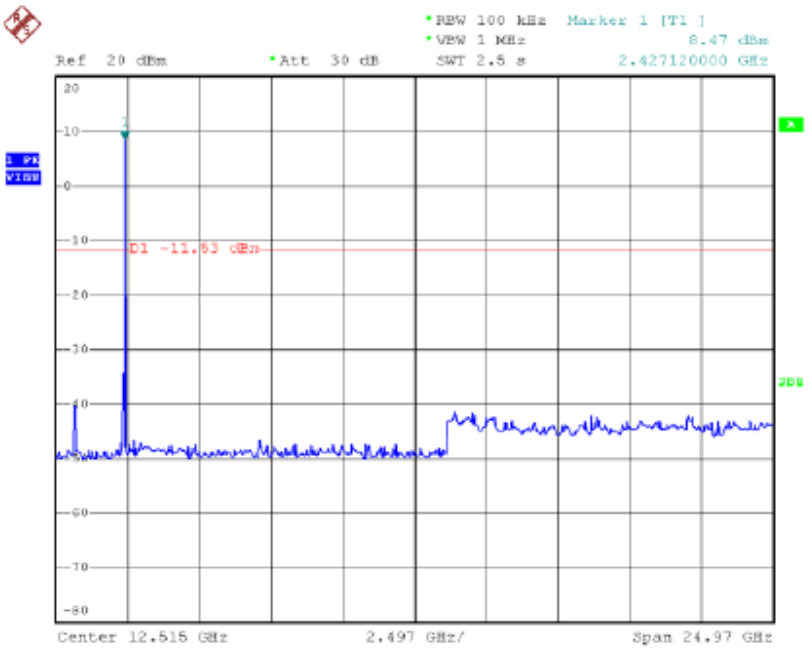
11.5. Test Result

PASS.

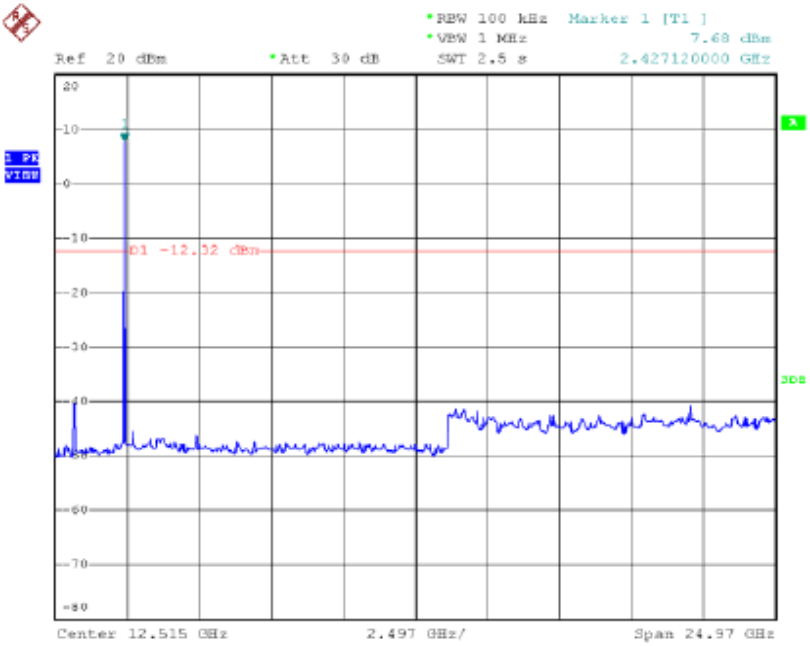
802.11b CH1



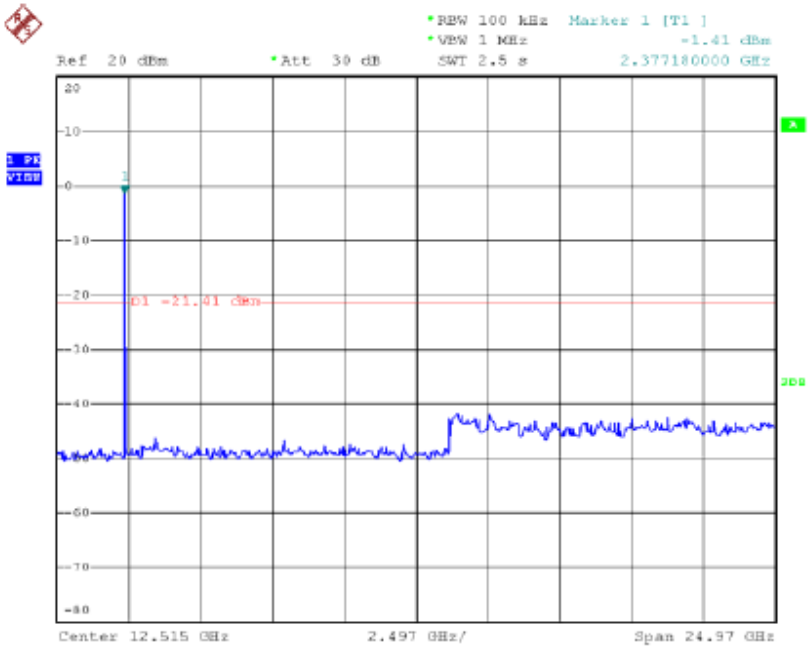
802.11b CH6



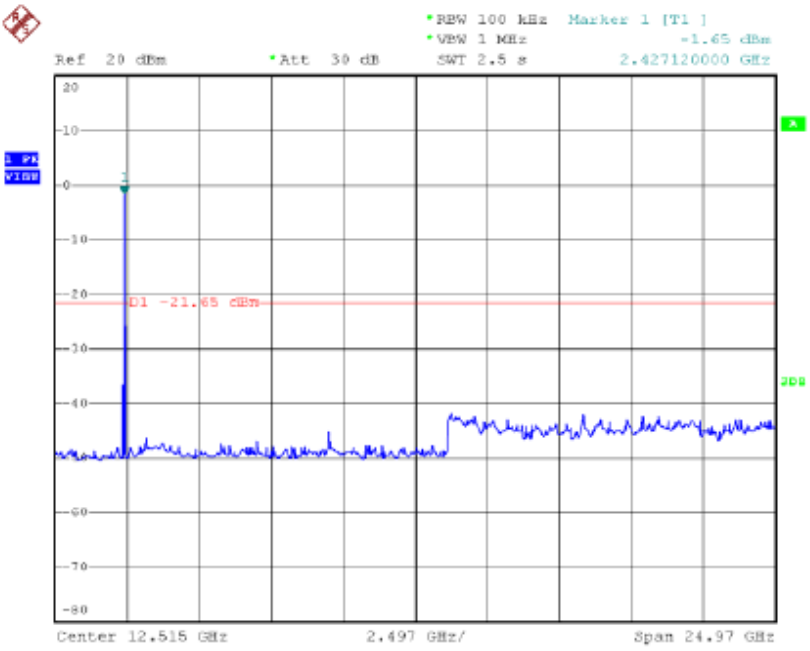
802.11b CH11



802.11g CH1



802.11g CH6



802.11g CH11