FCC COMPLIANCE REPORT

for

Compex Systems Pte Ltd

WIRELESS-G 26DBM NETWORK MINI PCI ADAPTER

Model Number : IWAVEPORT WLM54GP26

Prepared for : Compex Systems Pte Ltd
135 Joo Seng Road, #08-01 PM Industrial Building Singapore
Address : 368363

Prepared By : NS Technology Co., Ltd.
Address : Chenwu Industrial Zone, Houjie Town, Dongguan City, Guangdong, China

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Report Number : NSE-F0051115
Date of Test : May 12, 2007
Date of Report : May 12, 2007

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NS Technology Co., Ltd.

Applicant: **Address:**	Compex Systems Pte Ltd 135 Joo Seng Road, #08-01 PM Industrial Building Singapore 368363		
Manufacturer: **Address:**	Compex Systems Pte Ltd 135 Joo Seng Road, #08-01 PM Industrial Building Singapore 368363		
E.U.T:	WIRELESS-G 26DBM NETWORK MINI PCI ADAPTER		
Model Number:	IWAVERPORT WLM54GP26		
Trade Name:	Compex	**Serial No.:**	------
Date of Receipt:	April 23 , 2007	**Date of Test:**	April 23-May 10 , 2007
Test Specification:	FCC Part 15 Subpart C: February, 2006 ANSI C63.4:2003		
Test Result:	The equipment under test was found to be compliance with the requirements of the standards applied.		

Issue Date: May 13, 2007

Tested by:	Reviewed by:	Approved by:
Kelly / Engineer	Chris Du / Supervisor	Steven Lee / Manager

Other Aspects:
None.

Abbreviations: OK/P=passed fail/F=failed n.a/N=not applicable E.U.T=equipment under tested

1. GENERAL PRODUCT INFORMATION

1.1. Product Function

Refer to Technical Construction Form and User Manual.

1.2. Description of Device (EUT)

E.U.T.	:	WIRELESS-G 26DBM NETWORK MINI PCI ADAPTER
Model No.	:	IWAVERPORT WLM54GP26
System Input Voltage	:	DC 24 (ADAPTER INPUT AC 120V/60Hz)
Operation Frequency		2.412GHz-2.462GHz(Total 11channels,interval 5MHz)
Modulation		OFDM,DSSS

1.3. Difference between Model Numbers

N/A.

1.4. Independent Operation Modes

The basic operation modes are:

Channel	Operation Frequency(MHz)	Channel	Operation frequency(MHz)
CH1	2.412	CH7	2.442
CH2	2.417	CH8	2.447
CH3	2.422	CH9	2.452
CH4	2.427	CH10	2.457
CH5	2.432	CH11	2.462
CH6	2.437		

The tested mode are:

1.4.1. 802.11b/g: CH1 (2.412GHz),

1.4.2. 802.11b/g: CH6 (2.437GHz)

1.4.3. 802.11b/g: CH6 (2.462GHz)

1.5. Test Supporting System

1.5.1.PC

Model Number	:	8179
Serial Number	:	99PZTL5
Manufacturer	:	IBM

1.5.2.Monitor

Model Number	:	vs17e
Serial Number	:	CND6270KVM
Manufacturer	:	HP
Data Cable	:	Shielded, Undetachable, 1.5m

1.5.3.Keyboard(PS II)

Model Number	:	MU29J
Serial Number	:	23-039797
Manufacturer	:	IBM
Data Cable	:	Shielded, Undetachable, 1.8m

1.5.4.Printer

Model Number	:	B161A
Serial Number	:	C48220005L73317358
Manufacturer	:	EPSON
Data Cable	:	Shielded, Detachable, 1.5m

1.5.5.Mouse(PSII)

Model Number	:	PR-R6764
Manufacturer	:	Primax
Data Cable	:	Shielded, Detachable, 1.5m

1.5.6.Mouse(USB)

Model Number	:	800DP1
Manufacturer	:	STONE
Data Cable	:	Shielded, Undetachable, 1.8m

2. TEST SITES

2.1. Test Facilities

EMC Lab **:** Certificated by TUV Rheinland, Germany.
Date of registration: July 28, 2003

Certificated by FCC, USA
Registration No.: 897109
Date of registration: October 10, 2003

Certificated by VCCI, Japan
Registration No.: R-1798 & C-1926
Date of registration: January 30, 2004

Certificated by CNAL, CHINA
Registration No.: L1744
Date of registration: November 25, 2004

Certificated by Intertek ETL SEMKO
Registration No.: TMP-013
Date of registration: June 11, 2005

Certificated by TUV/PS, Hong Kong
Date of registration: December 1, 2005

Certificated by Industry Canada
Registration No.: 5936
Date of registration: March 24, 2006

Certificated by ATCB, America
Date of registration: August 03, 2006

Name of Firm **:** NS Technology Co., Ltd.

Site Location **:** Chenwu Industrial Zone, Houjie Town, Dongguan City, Guangdong, China

2.2. List of Test and Measurement Instruments

2.2.1. For conducted emission test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Test Receiver	Rohde & Schwarz	ESCS30	100199	Mar. 24,07	Mar.24,08
L.I.S.N.#1	Rohde & Schwarz	ESH2-Z5	100071	Mar. 24,07	Mar.24,08
L.I.S.N.#2(AUX)	Rohde & Schwarz	ESH3-Z5	100317	Mar. 24,07	Mar.24,08

2.2.2. For radiated emission test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Test Receiver	Rohde & Schwarz	ESCS30	100340	Mar. 24,07	Mar.24,08
Spectrum Analyzer	HP	8593E	3448U00806	Mar. 24,07	Mar.24,08
Amplifier	Agilent	8447D	2944A10488	May 2,07	May 2,08
Bilog Antenna	EMCO	3142B	00022050	May 2,07	May 2,08
Horn Antenna	EMCO	3117	00062558	May 4,07	May 4,08
Signal Generator	HP	8648A	3426A01263	Apr. 11,07	Apr. 11,07
Amplifier	EMCO	PEC-38-30M 18G-12-SFF	00075634	May 4,07	May 4,08

2.2.3. For Maximum output power conducted test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Spectrum Analyzer	HP	8593E	3448U00806	Mar. 24,07	Mar.24,08
S.G.	Agilent	E8257C	MY43320668	May 4,07	May 4,08
Oscllоscope	Tektronix	TKS 1012	C019167	May 2,07	May 2,08
Detector	Narda	4503A	FSCM99899	NA	NA

2.2.4. For maximum power density test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Spectrum Analyzer	HP	8593E	3448U00806	Mar. 24,07	Mar.24,08

2.2.5. For bandwidth test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Spectrum Analyzer	HP	8593E	3448U00806	Mar. 24,07	Mar.24,08

2.2.6. For band edge test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Spectrum Analyzer	HP	8593E	3448U00806	Mar. 24,07	Mar.24,08
Horn Antenna	EMCO	3117	00062558	May 4,07	May 4,08
Bilog Antenna	EMCO	3142B	00022050	May 2,07	May 2,08

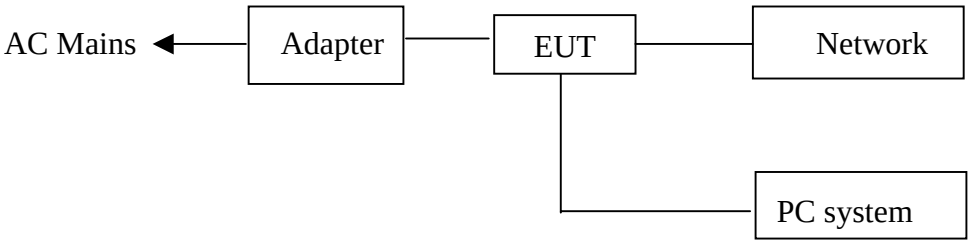
3. TEST SET-UP AND OPERATION MODES

3.1. Principle of Configuration Selection

Emission: The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the Operating Instructions. And the

3.2. Block Diagram of Test Set-up

System Diagram of Connections Between EUT and Simulators



(EUT: WIRELESS-G 26DBM NETWORK MINI PCI ADPATER)

3.3. Test Operation Mode and Test Software

Refer to Test Setup in clause 4 & 5.

3.4. Special Accessories and Auxiliary Equipment

None.

3.5. Countermeasures to Achieve EMC Compliance

None.

4. EMISSION TEST RESULTS

4.1. Conducted Emission Test

4.1.1Test limits

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56 *	56 to 46 *
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency.

4.1.2. Test produce

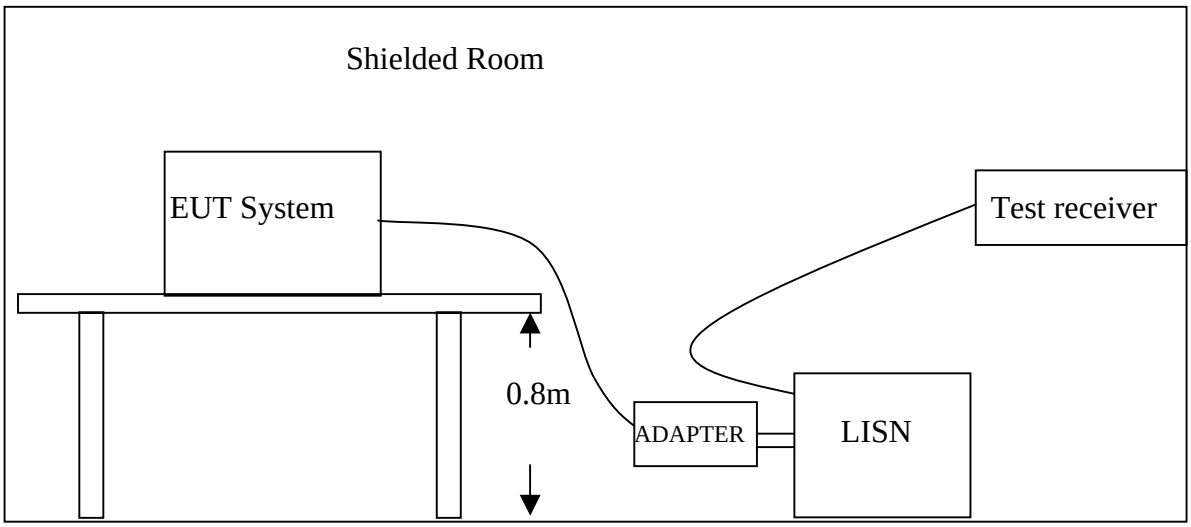
The EUT was put on a wooden table which was 0.8metre high above the ground and connected to the AC mains through a Artificial Mains Network (A.M.N). The mains lead in excess of 1 m separating the EUT from the AMN was folded back and forth parallel to the lead so as to form a bundle with a length of 0.3m to 0.4m.

The EUT was kept 0.4m from any other earthed conducting surface. Both sides of AC line were checked to find out the maximum conducted emission levels according to the test procedure during conducted emission test.

The bandwidth of the test receiver (R&S ESCS30) was set at 9KHz.

The frequency range from 150 KHz to 30 MHz was investigated.

4.1.3. Test set-up diagram



4.1.4. Test Result

Pass

Tests was performed on 802.11b and 802.11g mode, on each operation mode, all kinds of modulations(OFDM and DSSS) and the typical data rate(1Mbps, 11Mbps, 54Mbps) has been evaluated for the power conducted emission. The worst case of the result when operated on 802.11b employed the DSSS modulation with the 11Mbps and operated on 802.11g employed the OFDM modulation with the 1Mbps has been recorded and reported as following:

Test data of 802.11b@ CH 11

Conducted Emission at The Mains Terminals Test					
Frequency (MHz)	Reading (dBμV)			Limit (dBμV)	
	Quasi-Peak	Average	Ports	Quasi-Peak	Average
0.233	47.6	28.1	Neutral	62.3	52.3
0.345	39.7	30.4	Neutral	59.1	49.1
1.111	38.6	29.6	Neutral	56.0	46.0
1.725	38.7	29.2	Neutral	56.0	46.0
3.454	36.3	32.4	Neutral	56.0	46.0
7.646	37.3	34.7	Neutral	60.0	50.0
0.246	45.1	26.8	Line	61.9	51.9
0.336	38.6	34.0	Line	59.3	49.3
1.111	36.6	31.9	Line	56.0	46.0
3.700	39.1	35.2	Line	56.0	46.0
6.285	37.5	36.2	Line	60.0	50.0
10.125	38.3	35.2	Line	60.0	50.0

Notes: 1. Test uncertainty: ±1.99dB at a level of confidence of 95%.

Test data of 802.11b@ CH 6

Conducted Emission at The Mains Terminals Test					
Frequency (MHz)	Reading (dBμV)			Limit (dBμV)	
	Quasi-Peak	Average	Ports	Quasi-Peak	Average
0.152	44.1	20.4	Neutral	65.9	55.9
0.341	36.9	30.1	Neutral	59.2	49.2
1.236	34.6	30.2	Neutral	56.0	46.0
3.700	35.7	32.9	Neutral	56.0	46.0
6.285	36.3	34.2	Neutral	60.0	50.0
10.233	34.3	33.4	Neutral	60.0	50.0
0.223	41.6	25.5	Line	62.7	52.7
0.337	35.6	33.6	Line	59.3	49.3
0.989	36.8	33.18	Line	56.0	46.0
1.725	35.4	32.38	Line	56.0	46.0
3.700	38.3	35.1	Line	56.0	46.0
6.285	39.7	36.1	Line	60.0	50.0

Notes: Notes: 1. Test uncertainty: ±1.99dB at a level of confidence of 95%.

Test data of 802.11b@ CH 1

Conducted Emission at The Mains Terminals Test					
Frequency (MHz)	Reading (dBμV)			Limit (dBμV)	
	Quasi-Peak	Average	Ports	Quasi-Peak	Average
0.156	43.6	19.8	Neutral	65.7	55.7
0.227	38.9	22.9	Neutral	62.6	52.6
0.341	35.7	31.1	Neutral	59.2	49.2
1.359	34.3	30.5	Neutral	56.0	46.0
3.700	36.7	32.9	Neutral	56.0	46.0
6.285	37.9	34.4	Neutral	60.0	50.0
0.156	46.3	22.6	Line	65.7	55.7
0.248	39.1	25.1	Line	61.8	51.8
0.334	38.7	34.3	Line	59.4	49.4
1.111	37.9	33.1	Line	56.0	46.0
3.700	38.6	35.2	Line	56.0	46.0
10.233	37.7	35.0	Line	60.0	50.0

Notes: 1. Test uncertainty: ±1.99dB at a level of confidence of 95%.

4.2. Radiated Emission Test

4.2.1. Test limits

Frequencies (MHz)	Field strength uV/meter	Measurement distance (meters)
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

4.2.2. Test produce

The EUT was placed on a turn table which was 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was set 3 meters away from the receiving antenna which was mounted on a antenna tower. At the frequency band of 30MHz to 1GHz,The measuring antenna moved up and down to find out the maximum emission level. It moved from 1 to 4 m for horizontal and vertical polarizations. The broadband antenna (calibrated by dipole antenna) was used as a receiving antenna. At the frequency band of 1GHz to 25GHz,The measuring antenna moved from 1 to 4 m for horizontal and vertical polarization. The horn antenna was used as a receiving antenna.

The resolution bandwidth and video bandwidth of the test receiver was 120 KHz for Quasi-peak detection at frequency below 1GHz.

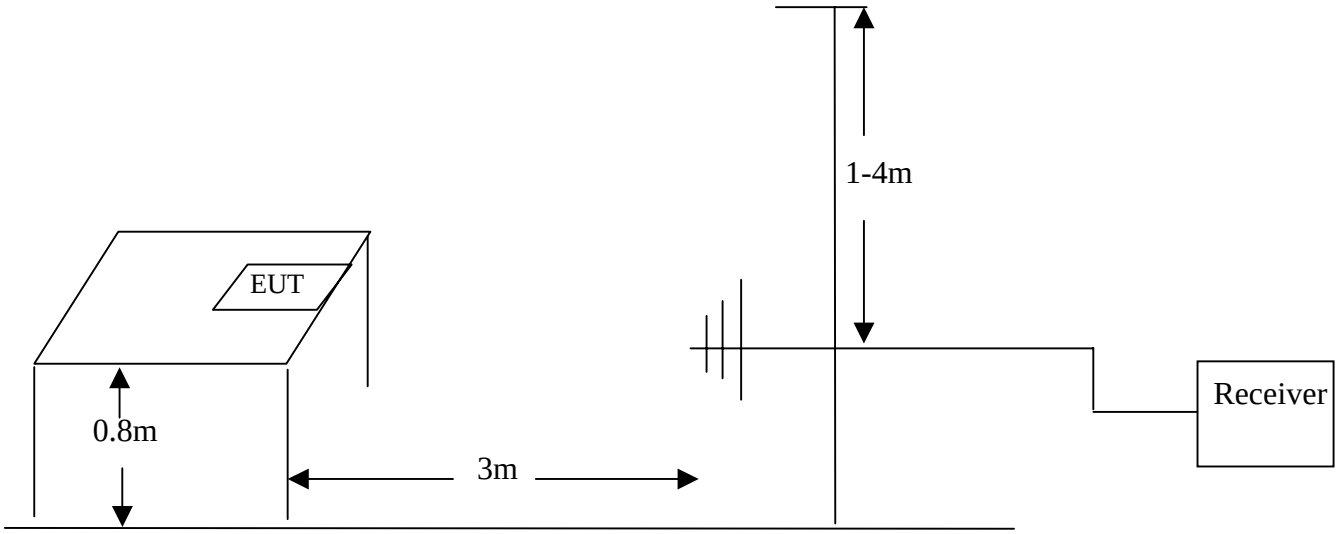
The resolution bandwidth and video bandwidth of the test receiver was1MHz for Peak detection at frequency below 1GHz. was 1MHz above 1GHz.

The resolution bandwidth of the test receiver was1MHz and the video bandwidth are 10Hz for Average detection at frequency above 1GHz.

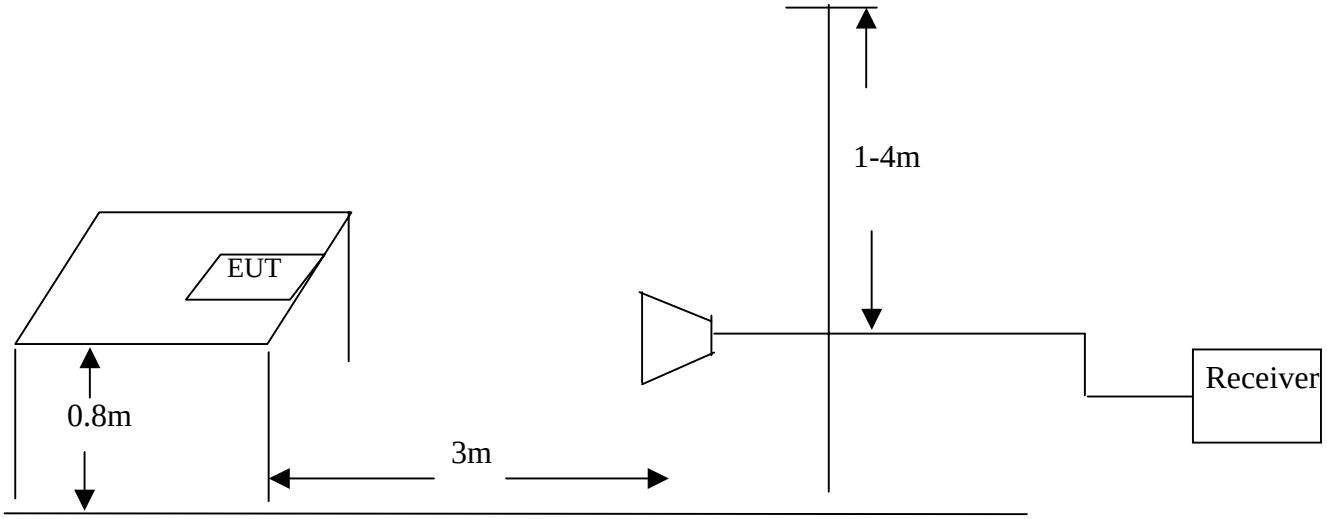
The EUT was tested in Chamber Site.

4.2.3 Test Setup Diagram

4.2.3.1. Frequency range: 30MHz-1000MHz



4.2.3.2. Frequency range: 1 GHz -25GHz



4.2.4.Test Result

Tests was performed on 802.11b and 802.11g mode, on each operation mode, all kinds of modulations(OFDM and DSSS) and the typical data rate(1Mbps, 11Mbps, 54Mbps) has been evaluated for the power conducted emission. The worst case of the result when t operated on 802.11b employed the DSSS modulation with the 11Mbps and operated on 802.11g employed the OFDM modulation with the 11Mbps has been recorded and reported as following:

Test data of 802.11b@ CH 1

Frequency MHz	Antenna Factor dB	Cable Loss dB	Meter Reading dBμV	Emission Level dBμV/m	Over Limits dB	Limits dBμV/m	Detector	Polarity	Result
162.89	11.60	1.98	20.17	33.75	-9.75	43.50	QP	H	PASS
262.488	14.00	2.62	28.00	44.62	-1.38	46.00	QP	H	PASS
344.280	15.75	3.08	18.19	37.02	-8.98	46.00	QP	H	PASS
1502.25	27.81	2.15	18.68	48.64	-25.36	74.00	PK	H	PASS
1502.25	27.81	2.15	6.36	36.32	-17.68	54.00	AV	H	PASS
1602.00	28.48	2.16	23.14	53.78	-20.22	74.00	PK	H	PASS
1602.00	28.48	2.16	11.32	41.96	-12.04	54.00	AV	H	PASS
9862.00	37.83	2.69	25.02	65.54	-8.46	74.00	PK	H	PASS
9862.00	37.83	2.69	10.62	51.14	-2.86	54.00	AV	H	PASS
48.43	11.70	0.98	23.96	33.64	-6.36	40.00	QP	V	PASS
88.59	10.78	1.39	21.95	34.12	-9.38	43.50	QP	V	PASS
155.13	11.37	1.92	26.62	35.91	-7.59	43.50	QP	V	PASS
1099.25	27.31	2.11	21.15	50.57	-23.43	74.00	PK	V	PASS
1099.25	27.31	2.11	9.65	39.07	-14.93	54.00	AV	V	PASS
1607.25	28.51	2.16	22.16	52.83	-21.17	74.00	PK	V	PASS
1607.25	28.51	2.16	10.20	40.87	-13.13	54.00	AV	V	PASS
15468.5	41.67	3.03	20.25	64.95	-9.05	74.00	PK	V	PASS
15468.5	41.67	3.03	7.65	52.35	-1.65	54.00	AV	V	PASS

Notes: 1. The readings were Quasi-Peak values below 1GHz.
The readings were Peak values + Average values above1GHz
2. Emission Level = Antenna Factor + Cable Loss + Meter Reading
3. Test uncertainty: ±4.76dB at a level of confidence of 95%.

Test data of 802.11b@ CH 6

Frequency MHz	Antenna Factor dB	Cable Loss dB	Meter Reading dBμV	Emission Level dBμV/m	Over Limits dB	Limits dBμV/m	Detector	Polarity	Result
162.89	11.60	1.98	20.65	34.32	-9.18	43.50	QP	H	PASS
262.430	14.00	2.62	26.30	42.92	-3.08	46.00	QP	H	PASS
344.280	15.75	3.08	17.53	36.36	-9.64	46.00	QP	H	PASS
1502.25	27.81	2.15	20.47	50.43	-23.57	74.00	PK	H	PASS
1502.25	27.81	2.15	9.85	39.81	-14.19	54.00	AV	H	PASS
1602.00	29.48	2.16	23.28	53.92	-20.08	74.00	PK	H	PASS
1602.00	29.48	2.16	10.50	42.14	-11.86	54.00	AV	H	PASS
15468.5	41.67	3.03	19.42	64.12	-9.88	74.00	PK	H	PASS
15468.5	41.67	3.03	6.30	51.00	-3.00	54.00	AV	H	PASS
48.43	11.70	0.98	22.96	35.64	-4.36	40.00	QP	V	PASS
89.96	10.78	1.39	22.95	37.12	-6.38	43.50	QP	V	PASS
154.98	11.37	1.92	23.62	36.91	-12.97	43.50	QP	V	PASS
1602.00	28.48	2.16	21.58	52.22	-21.78	74.00	PK	V	PASS
1602.00	28.48	2.16	8.65	39.29	-14.71	54.00	AV	V	PASS
1987.00	31.02	2.20	22.88	56.10	-17.90	74.00	PK	V	PASS
1987.00	31.02	2.20	11.30	44.52	-9.48	54.00	AV	V	PASS
7309.75	36.84	2.53	27.70	67.07	-6.93	74.00	PK	V	PASS
7309.75	36.84	2.53	13.62	52.99	-1.11	54.00	AV	V	PASS

Notes: Notes: 1. The readings were Quasi-Peak values below 1GHz.
The readings were Peak values + Average values above1GHz
2. Emission Level = Antenna Factor + Cable Loss + Meter Reading
3. Test uncertainty: ±4.76dB at a level of confidence of 95%.

Test data of 802.11b@ CH 11

Frequency MHz	Antenna Factor dB	Cable Loss dB	Meter Reading dBμV	Emission Level dBμV/m	Over Limits dB	Limits dBμV/m	Detector	Polarity	Result
163.58	11.60	1.98	20.00	33.58	-9.92	43.50	QP	H	PASS
262.488	14.00	2.62	27.65	44.27	-1.73	46.00	QP	H	PASS
344.280	15.75	3.08	18.20	37.03	-8.97	46.00	QP	H	PASS
1007.00	27.21	2.10	24.92	54.23	-19.77	74.00	PK	H	PASS
1007.00	27.21	2.10	11.30	40.61	-13.39	54.00	AV	H	PASS
1602.00	28.48	2.16	22.75	54.23	-20.61	74.00	PK	H	PASS
1602.00	28.48	2.16	9.85	40.93	-13.97	54.00	AV	H	PASS
15468.5	41.67	3.03	19.47	64.17	-9.83	74.00	PK	H	PASS
15468.5	41.67	3.03	7.32	52.02	-1.98	54.00	AV	H	PASS
48.43	11.70	0.98	26.01	36.69	-3.31	40.00	QP	V	PASS
90.14	10.78	1.39	25.33	37.50	-6.00	43.50	QP	V	PASS
155.13	11.37	1.92	26.95	40.24	-3.26	43.50	QP	V	PASS
1502.25	27.81	2.15	21.93	51.89	-22.11	74.00	PK	V	PASS
1502.25	27.81	2.15	8.65	38.61	-15.39	54.00	AV	V	PASS
1602.00	28.48	2.16	25.96	56.60	-17.40	74.00	PK	V	PASS
1602.00	28.48	2.16	11.40	42.04	-11.96	54.00	AV	V	PASS
15438.0	41.62	3.03	18.94	63.59	-10.41	74.00	PK	V	PASS
15438.0	41.62	3.03	5.96	50.61	-3.39	54.00	AV	V	PASS

Notes: 1. The readings were Quasi-Peak values below 1GHz.
The readings were Peak values + Average values above1GHz
2. Emission Level = Antenna Factor + Cable Loss + Meter Reading
3. Test uncertainty: ±4.76dB at a level of confidence of 95%.

Test data of 802.11g@ CH 1

Frequency MHz	Antenna Factor dB	Cable Loss dB	Meter Reading dBμV	Emission Level dBμV/m	Over Limits dB	Limits dBμV/m	Detector	Polarity	Result
162.89	11.60	1.98	23.40	36.98	-6.52	43.50	QP	H	PASS
262.488	14.00	2.62	28.36	44.98	-1.02	46.00	QP	H	PASS
343.280	15.75	3.08	18.30	37.13	-8.87	46.00	QP	H	PASS
1103.25	27.31	2.11	23.24	52.66	-21.34	74.00	PK	H	PASS
1103.25	27.31	2.11	10.32	39.74	-14.26	54.00	AV	H	PASS
1598.50	28.46	2.16	22.22	52.84	-21.16	74.00	PK	H	PASS
1598.50	28.46	2.16	8.50	39.12	-14.88	54.00	AV	H	PASS
15468.5	41.67	3.03	19.70	64.40	-9.60	74.00	PK	H	PASS
15468.5	41.67	3.03	6.23	50.93	-3.07	54.00	AV	H	PASS
48.20	11.70	0.98	22.15	34.83	-5.17	40.00	QP	V	PASS
88.14	10.78	1.39	20.95	33.12	-10.38	43.50	QP	V	PASS
154.13	11.37	1.92	24.62	37.91	-5.59	43.50	QP	V	PASS
1502.25	27.81	2.15	21.01	50.97	-23.03	74.00	PK	V	PASS
1502.25	27.81	2.15	5.41	35.37	-18.63	54.00	AV	V	PASS
1598.50	28.46	2.16	21.01	50.97	-23.03	74.00	PK	V	PASS
1598.50	28.46	2.16	8.62	39.24	-14.76	54.00	AV	V	PASS
15468.5	41.67	3.03	19.42	64.12	-9.88	74.00	PK	V	PASS
15468.5	41.67	3.03	6.00	50.07	-3.93	54.00	AV	V	PASS

Notes: 1. The readings were Quasi-Peak values below 1GHz.
The readings were Peak values + Average values above1GHz
2. Emission Level = Antenna Factor + Cable Loss + Meter Reading
3. Test uncertainty: ±4.76dB at a level of confidence of 95%.

Test data of 802.11g@ CH 6

Frequency MHz	Antenna Factor dB	Cable Loss dB	Meter Reading dBμV	Emission Level dBμV/m	Over Limits dB	Limits dBμV/m	Detector	Polarity	Result
162.89	11.60	1.98	20.54	34.12	-9.38	43.50	QP	H	PASS
262.460	14.00	2.62	26.85	43.47	-2.53	46.00	QP	H	PASS
343.725	15.75	3.08	16.83	35.66	-10.34	46.00	QP	H	PASS
1099.75	27.31	2.11	20.99	50.41	-23.59	74.00	PK	H	PASS
1099.75	27.31	2.11	8.35	37.77	-16.23	54.00	AV	H	PASS
1607.25	28.51	2.16	24.45	55.12	-18.88	74.00	PK	H	PASS
1607.25	28.51	2.16	11.30	41.97	-12.03	54.00	AV	H	PASS
9719.25	37.72	2.68	19.93	60.33	-13.67	74.00	PK	H	PASS
9719.25	37.72	2.68	6.33	49.41	-4.59	54.00	AV	H	PASS
48.43	11.70	0.98	22.56	35.24	-4.76	40.00	QP	V	PASS
89.96	10.78	1.39	20.05	32.22	-11.28	43.50	QP	V	PASS
154.13	11.37	1.92	21.33	34.62	-8.88	43.50	QP	V	PASS
1598.50	28.46	2.16	23.60	54.22	-19.78	74.00	PK	V	PASS
1598.50	28.46	2.16	9.65	40.27	-13.73	54.00	AV	V	PASS
1607.25	28.51	2.16	24.45	55.12	-18.88	74.00	PK	V	PASS
1607.25	28.51	2.16	11.32	41.99	-12.01	54.00	AV	V	PASS
9719.25	37.72	2.68	21.30	61.70	-12.30	74.00	PK	V	PASS
9719.25	37.72	2.68	7.50	47.90	-6.10	54.00	AV	V	PASS

Notes: Notes: 1. The readings were Quasi-Peak values below 1GHz.
The readings were Peak values + Average values above1GHz
2. Emission Level = Antenna Factor + Cable Loss + Meter Reading
3. Test uncertainty: ±4.76dB at a level of confidence of 95%.

Test data of 802.11g@ CH 11

Frequency MHz	Antenna Factor dB	Cable Loss dB	Meter Reading dBμV	Emission Level dBμV/m	Over Limits dB	Limits dBμV/m	Detector	Polarity	Result
162.17	11.60	1.98	19.86	33.44	-10.06	43.50	QP	H	PASS
262.36	14.00	2.62	27.98	44.6	-1.4	46.00	QP	H	PASS
343.12	15.75	3.08	22.34	41.17	-4.83	46.00	QP	H	PASS
1502.25	27.81	2.15	19.07	49.03	-24.97	74.00	PK	H	PASS
1502.25	27.81	2.15	8.11	38.07	-15.97	54.00	AV	H	PASS
1602.00	28.48	2.16	23.42	54.06	-19.94	74.00	PK	H	PASS
1602.00	28.48	2.16	10.62	41.26	-12.74	54.00	AV	H	PASS
15590.5	41.83	3.04	19.48	64.35	-9.65	74.00	PK	H	PASS
15590.5	41.83	3.04	7.65	52.52	-1.48	54.00	AV	H	PASS
48.43	11.70	0.98	24.96	37.64	-2.36	40.00	QP	V	PASS
88.23	10.78	1.39	25.13	37.30	-6.20	43.50	QP	V	PASS
156.30	11.37	1.92	20.95	34.24	-9.26	43.50	QP	V	PASS
1502.25	27.81	2.15	20.01	49.97	-24.03	74.00	PK	V	PASS
1502.25	27.81	2.15	8.30	38.26	-15.74	54.00	AV	V	PASS
1598.50	28.46	2.16	20.37	50.99	-23.01	74.00	PK	V	PASS
1598.50	28.46	2.16	7.60	38.22	-15.78	54.00	AV	V	PASS
15514.2	41.73	3.03	20.10	64.86	-9.14	74.00	PK	V	PASS
15514.2	41.73	3.03	6.54	47.24	-6.76	54.00	AV	V	PASS

Notes: 1. The readings were Quasi-Peak values below 1GHz.
The readings were Peak values + Average values above1GHz
2. Emission Level = Antenna Factor + Cable Loss + Meter Reading
3. Test uncertainty: ±4.76dB at a level of confidence of 95%.

4.3. Maximum Conducted Output Power

4.3.1. Test limits

The maximum conducted output power shall less than 1W(30dBm).

4.3.2. Test produce

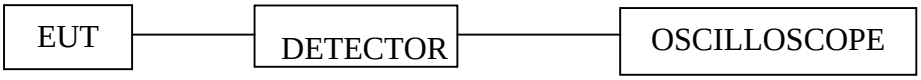
1.A detector was used on the output port of the EUT. An oscilloscope was used to read the response of the detector.

2.Replaced the EUT by the signal generator. The center frequency of the S.G. was adjusted to the center frequency of the measured channel.

3. Adjusted the power to have the same reading on SA. Record the power level.

4. Set the EUT work on the CH1, CH6,CH11 individually.

4.3.3. Test setup diagram



4.3.4. Test result

Tests was performed on 802.11b and 802.11g mode, on each operation mode, all kinds of modulations(OFDM and DSSS) and the typical data rate(1Mbps, 11Mbps, 54Mbps) has been evaluated for the power conducted emission. The worst case of the result when operated on 802.11b employed the DSSS modulation with the 11Mbps and operated on 802.11g employed the OFDM modulation with the 1Mbps has been recorded and reported as following:

Test Channel	Frequency GHz	Output power dBm	Limit dBm	Test result
The worst case test data of 802.11b				
CH1	2.412	25.12	30	PASS
CH6	2.437	24.83	30	PASS
CH11	2.462	25.60	30	PASS
The worst case test data of 802.11g				
CH1	2.412	24.98	30	PASS
CH6	2.437	24.24	30	PASS
CH11	2.462	25.03	30	PASS

4.4. Maximum Power Spectral Density Conducted

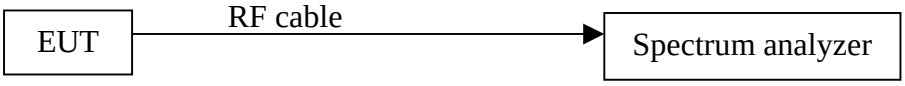
4.4.1. Test limits

The maximum power spectral density conducted shall not be greater than 8dBm in any 3kHz band interval of continuous transmission.

4.4.2. Test produce

1.The EUT was placed on a turntable which is 0.8m above ground plane.
2. Direct connect EUT RF output port to the Spectrum Analyzer
3. Set the EUT work on the CH1, CH6,CH11 individually.
4. Set SPA Center Frequency = Operation frequency, RBW=3kHz,VBW=30kHz' Span=1.5MHz,Sweep time=Span/3kHz
5. Set SPA trace max hold, then view.

4.4.3. Test setup diagram

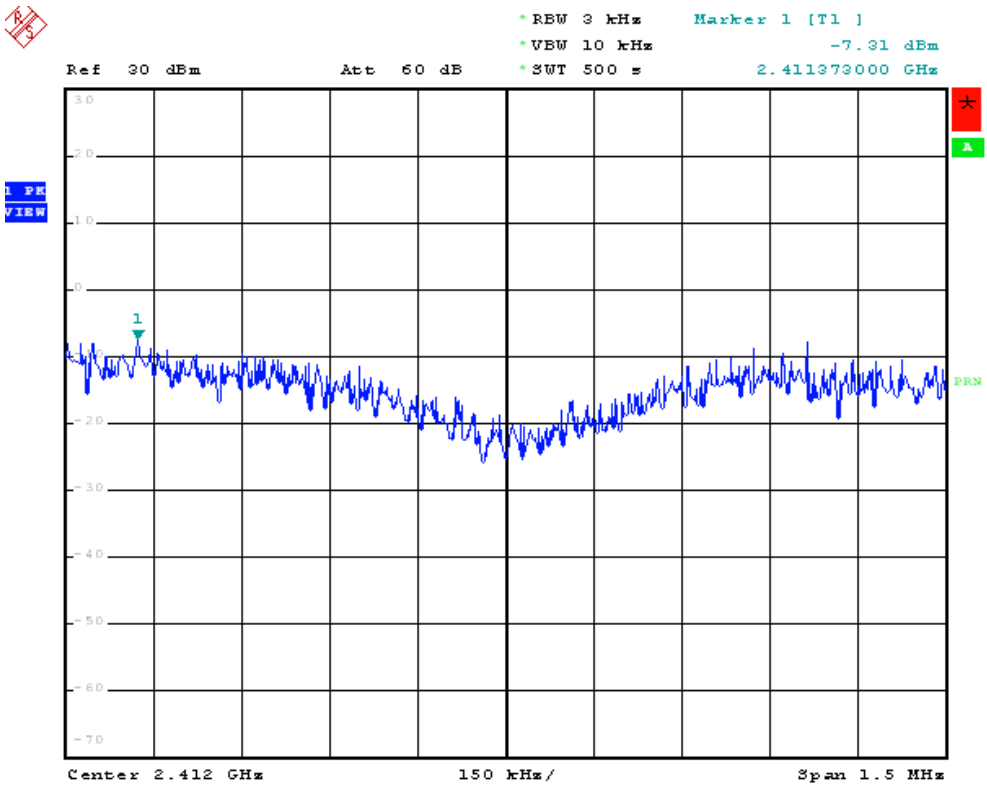


4.4.4. Test result

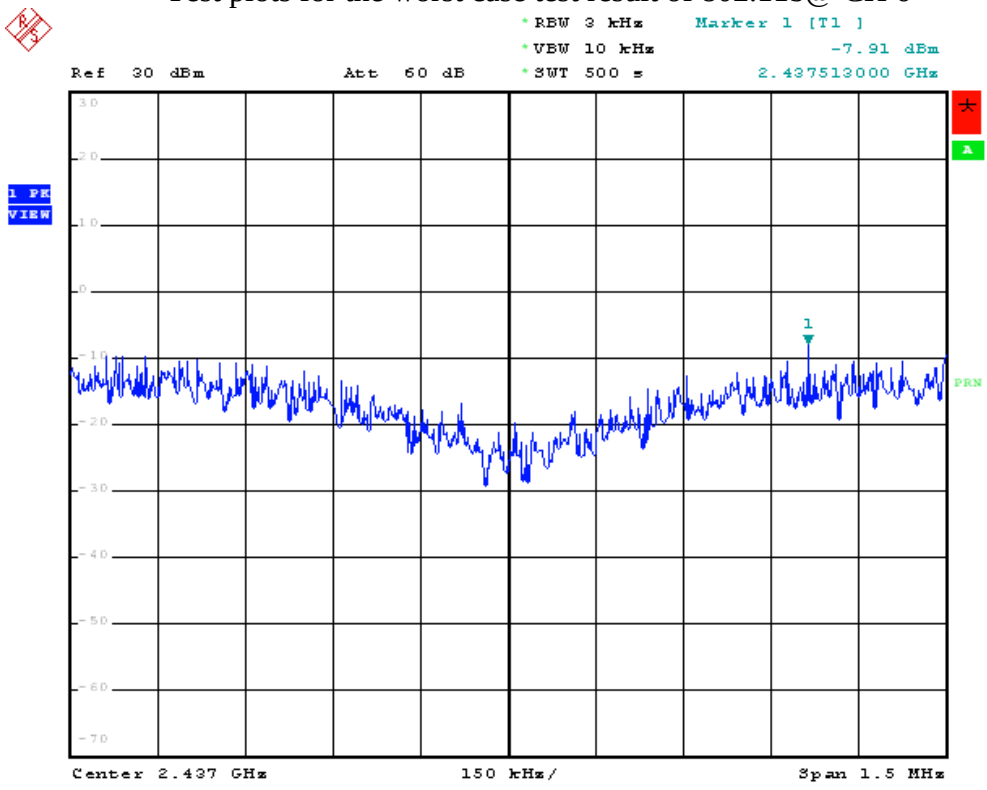
Tests was performed on 802.11b and 802.11g mode, on each operation mode, all kinds of modulations(OFDM and DSSS) and the typical data rate(1Mbps, 11Mbps, 54Mbps) has been evaluated for the power conducted emission. The worst case of the result when operated on 802.11b employed the DSSS modulation with the 11Mbps and operated on 802.11g employed the OFDM modulation with the 11Mbps has been recorded and reported as following:

Test Channel	Frequency MHz	Power Spectral density conducted dBm	Limit dBm	Test result
The worst case test data of 802.11b				
CH1	2.412	-7.31	8dBm/3kHz	PASS
CH6	2.437	-7.91		PASS
CH11	2.462	-6.96		PASS
The worst case test data of 802.11g				
CH1	2.412	-9.18	8dBm/3kHz	PASS
CH6	2.437	-10.67		PASS
CH11	2.462	-7.16		PASS

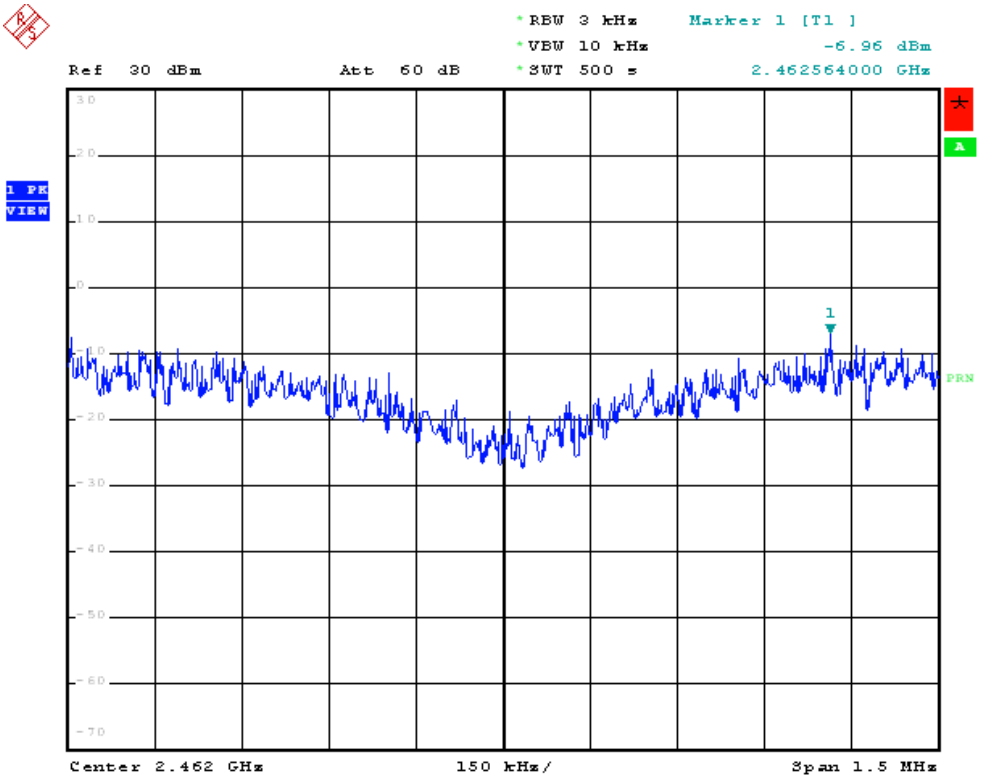
Test plots for the worst case test result of 802.11b@ CH 1



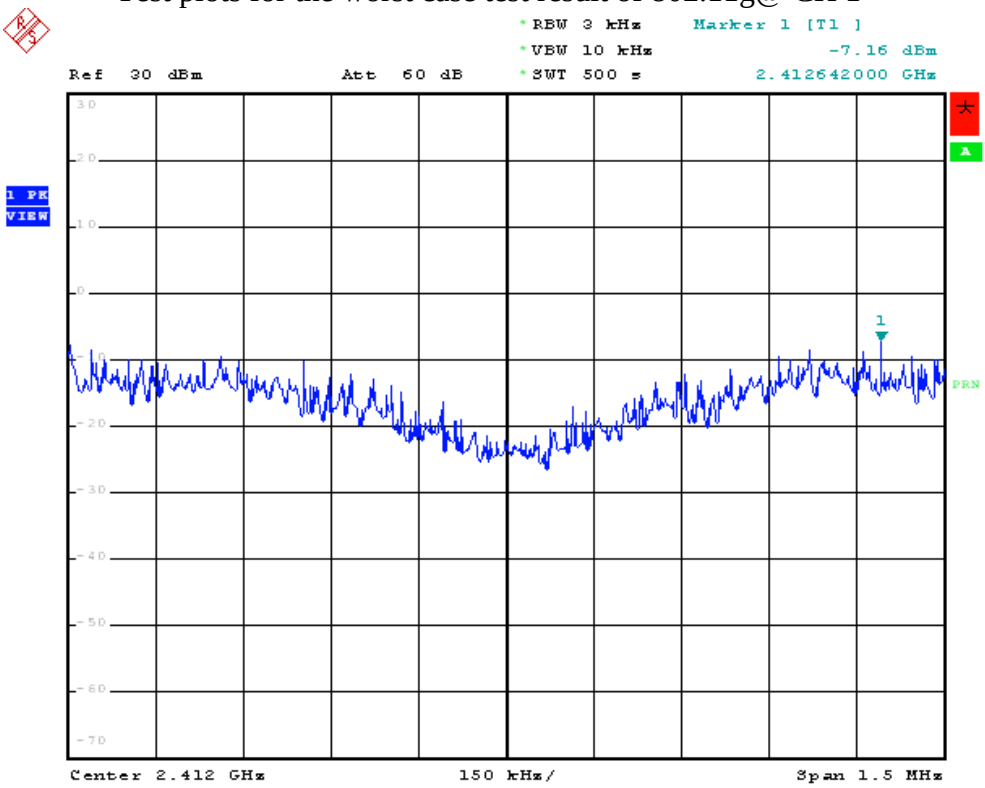
Test plots for the worst case test result of 802.11b@ CH 6



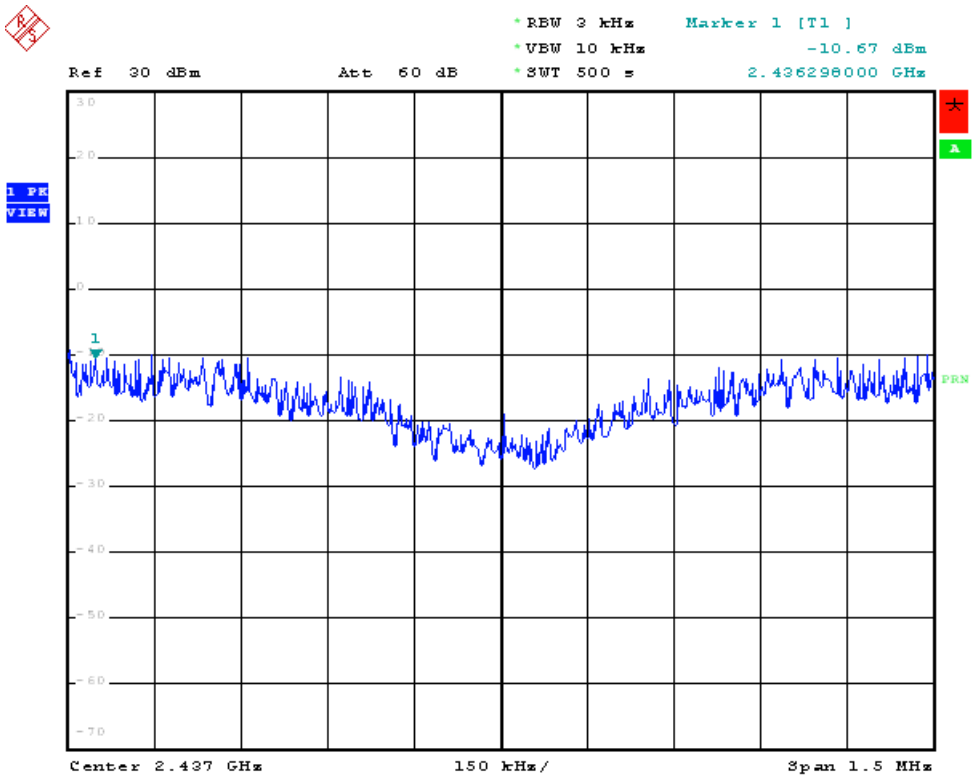
Test plots for the worst case test result of 802.11b@ CH 11



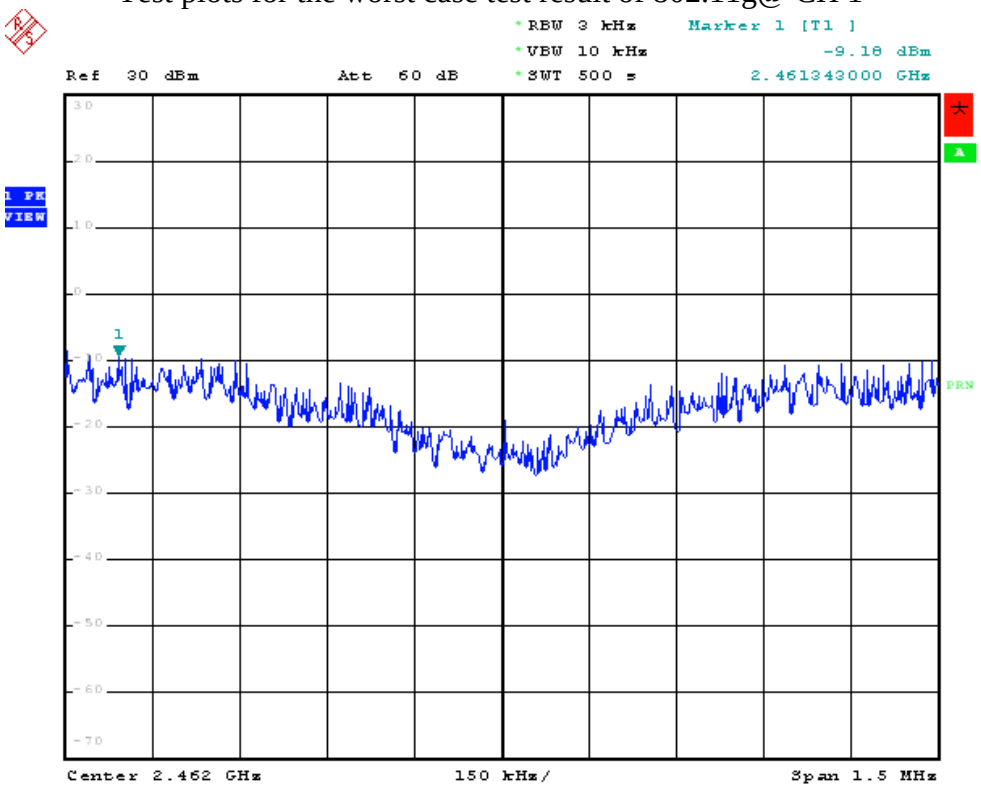
Test plots for the worst case test result of 802.11g@ CH 1



Test plots for the worst case test result of 802.11g@ CH 6



Test plots for the worst case test result of 802.11g@ CH 1



4.5. Minimum 6dB Bandwidth

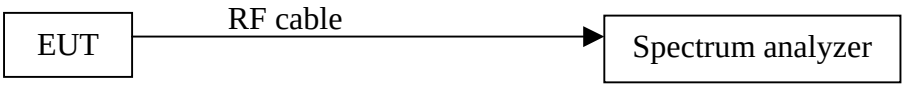
4.5.1. Test limits

The minimum 6dB bandwidth shall be at least 500kHz

4.5.2. Test produce

1.The EUT was placed on a turntable which is 0.8m above ground plane.
2.Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
3. Set the EUT work on the CH1, CH6,CH11 individually.
4. Set SPA Center Frequency = Operation frequency, RBW=100kHz,VBW=100kHz. Span=40MHz
5. Set SPA trace max hold, then view.

4.5.3. Test setup diagram

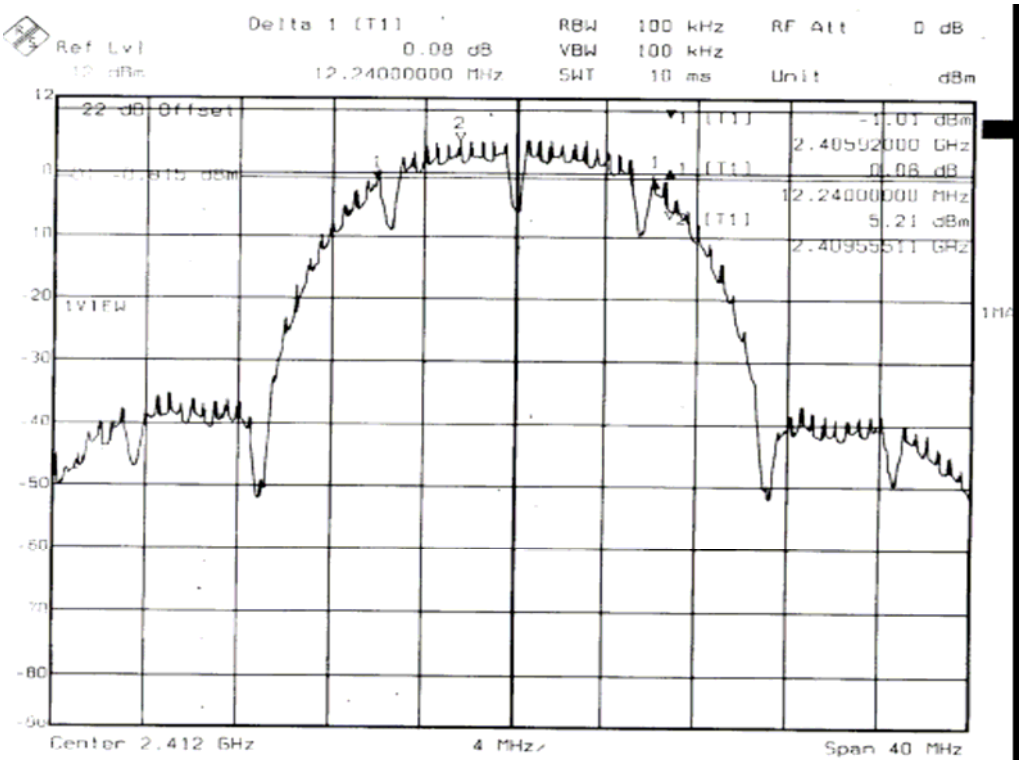


4.5.4. Test result

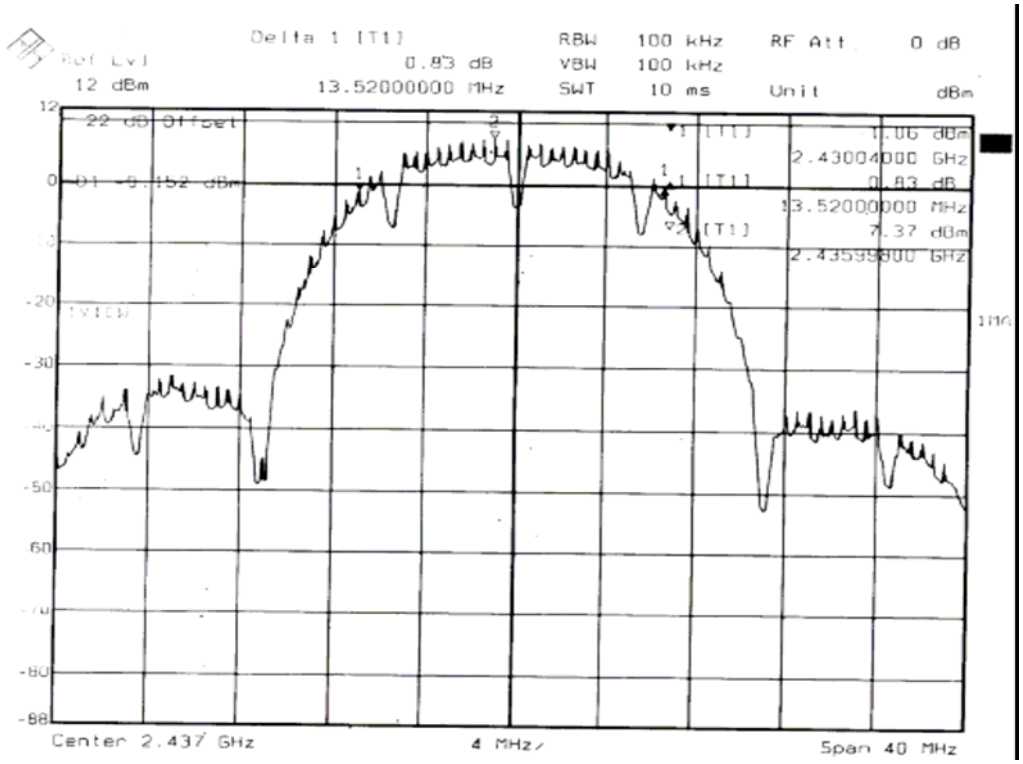
Tests was performed on 802.11b and 802.11g mode, on each operation mode, all kinds of modulations(OFDM and DSSS) and the typical data rate(1Mbps, 11Mbps, 54Mbps) has been evaluated for the power conducted emission. The worst case when operated on 802.11b employed the DSSS modulation with the 11Mbps and operated on 802.11g employed the OFDM modulation with the 1Mbps has been recorded and reported as following:

Test Channel	Frequency MHz	6dB bandwidth MHz	Limit	Test result
The worst case test data of 802.11b				
CH1	2412	12.24	>500kHz	PASS
CH6	2437	13.52		PASS
CH11	2462	13.52		PASS
The worst case test data of 802.11g				
CH1	2412	16.64	>500kHz	PASS
CH6	2437	16.64		PASS
CH11	2462	16.64		PASS

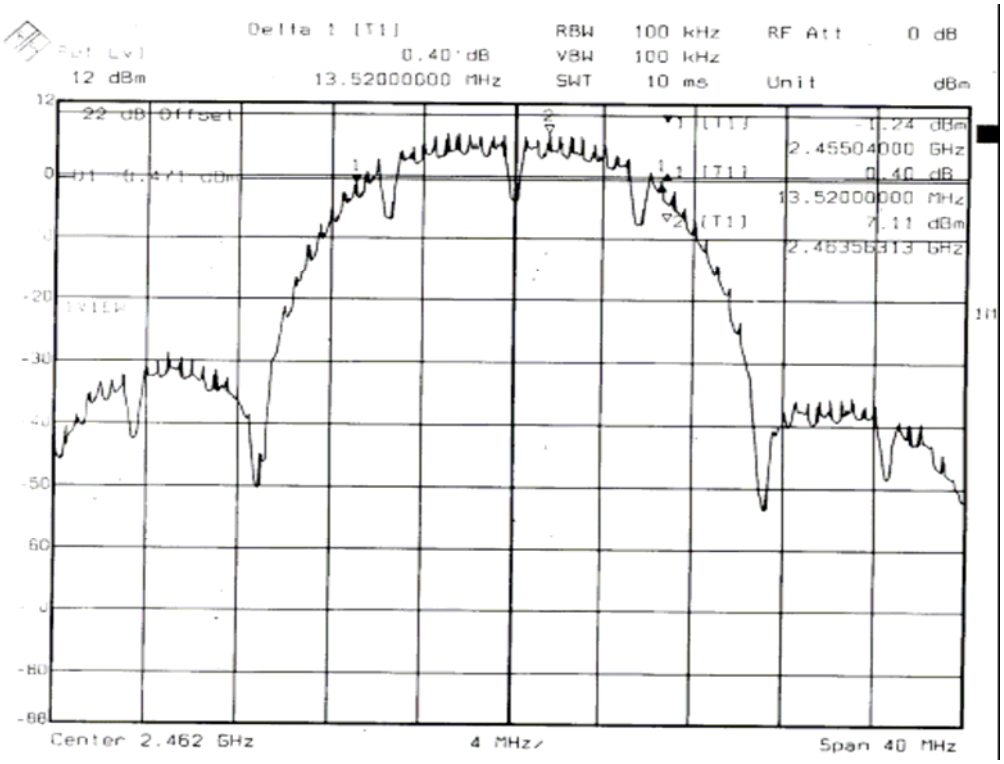
Test plots for the worst case test bandwidth of 802.11b@ CH 1



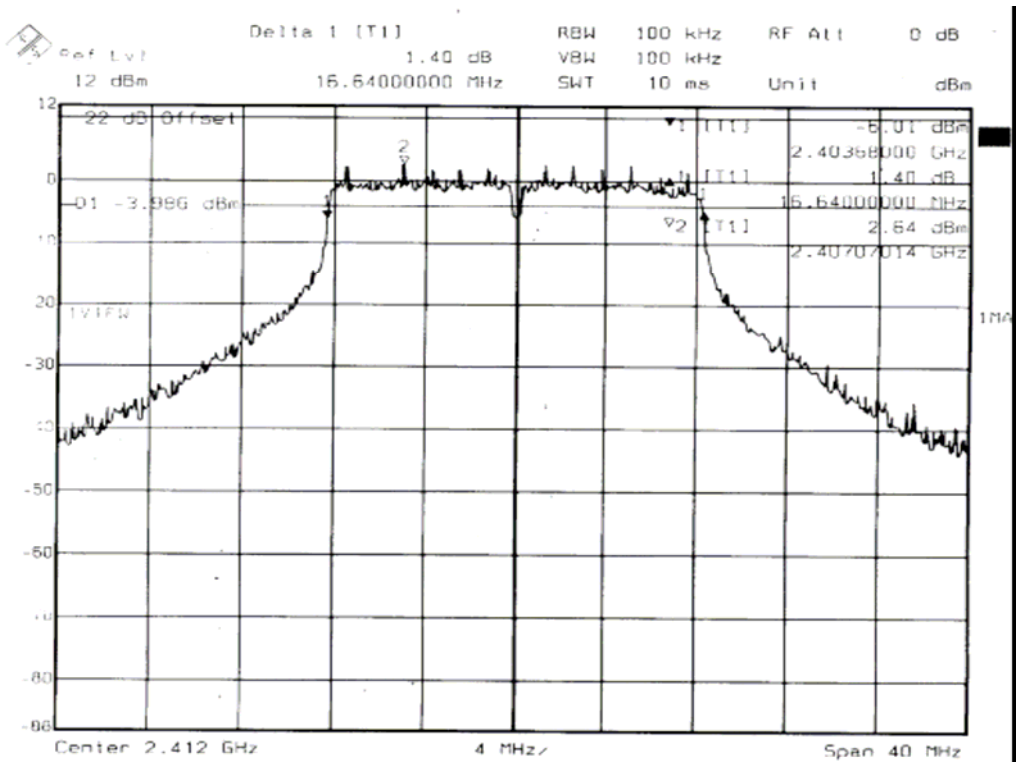
Test plots for the worst case test bandwidth of 802.11b@ CH 6



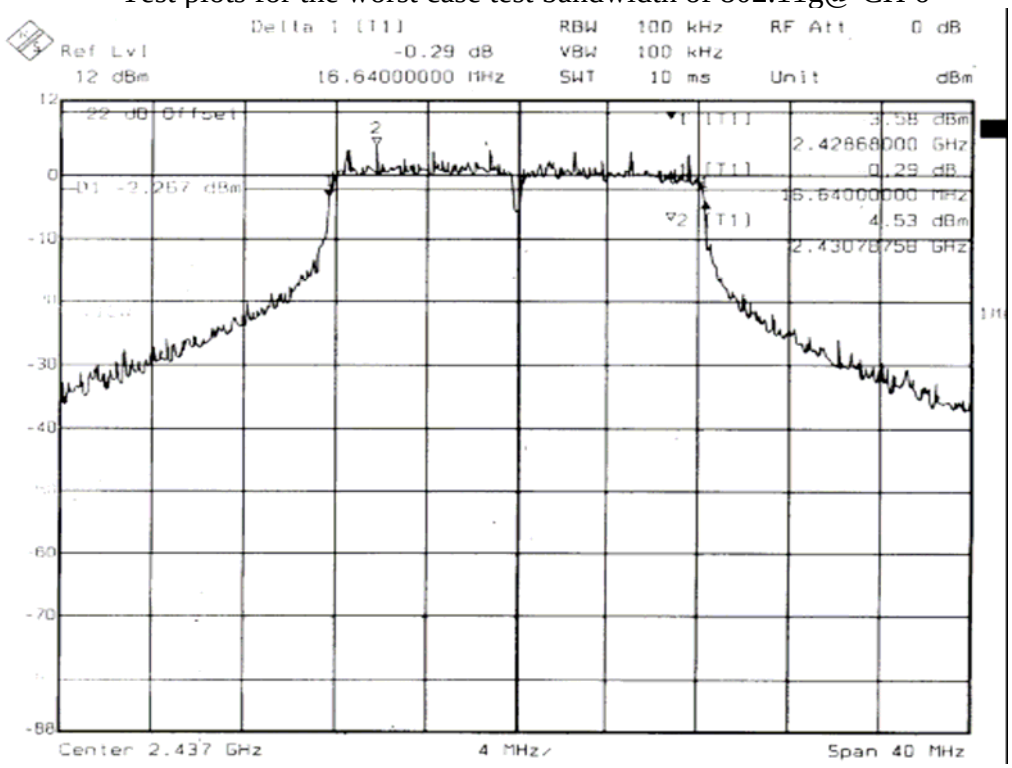
Test plots for the worst case test bandwidth of 802.11b@ CH 11



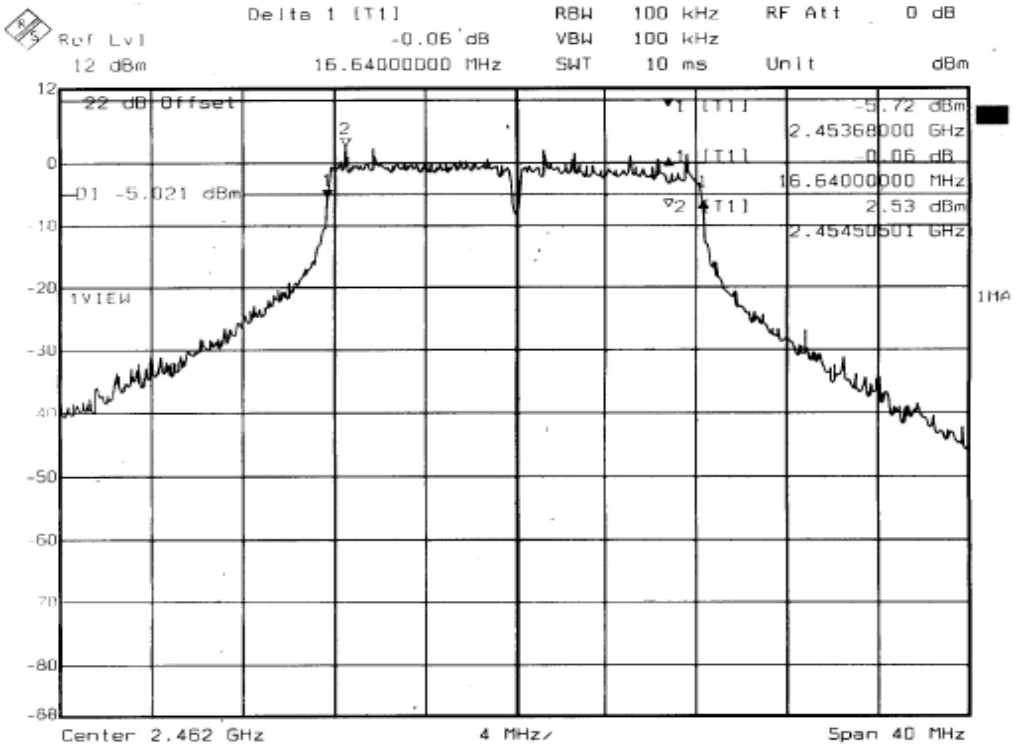
Test plots for the worst case test bandwidth of 802.11g@ CH 1



Test plots for the worst case test bandwidth of 802.11g@ CH 6



Test plots for the worst case test result of 802.11g@ CH 11



4.6. Band edge test

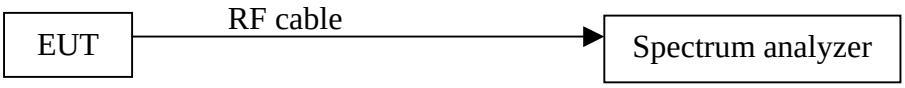
4.6.1. Test limits

In any 100kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produce by the intentional radiator shall be at least 20dB below that in 100kHz bandwidth within the band that contains the highest level of the desired power.

4.6.2. Test produce

1.The EUT was placed on a turntable which is 0.8m above ground plane.
2. Set EUT as continuous transmitting mode.
3. Set the EUT work on the CH1, CH6,CH11 individually.
4. Set SPA Frequency = Operation frequency, for PK: RBW=VBW=100kHz.
5. Set SPA trace max hold, then view.

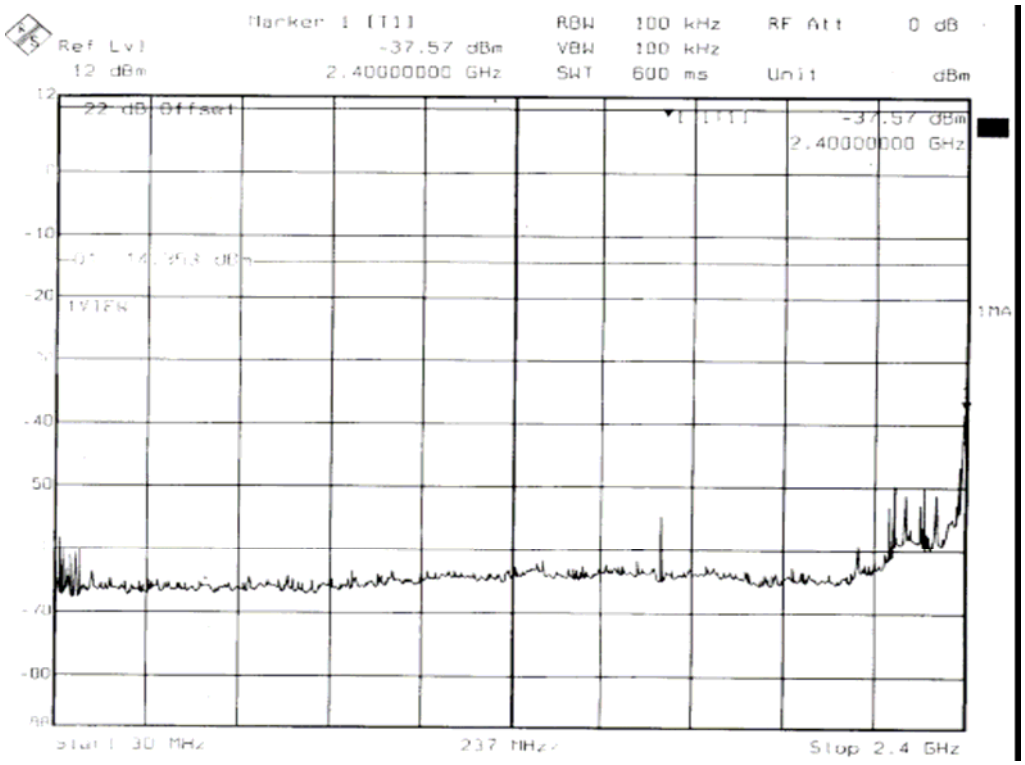
4.6.3. Test setup diagram

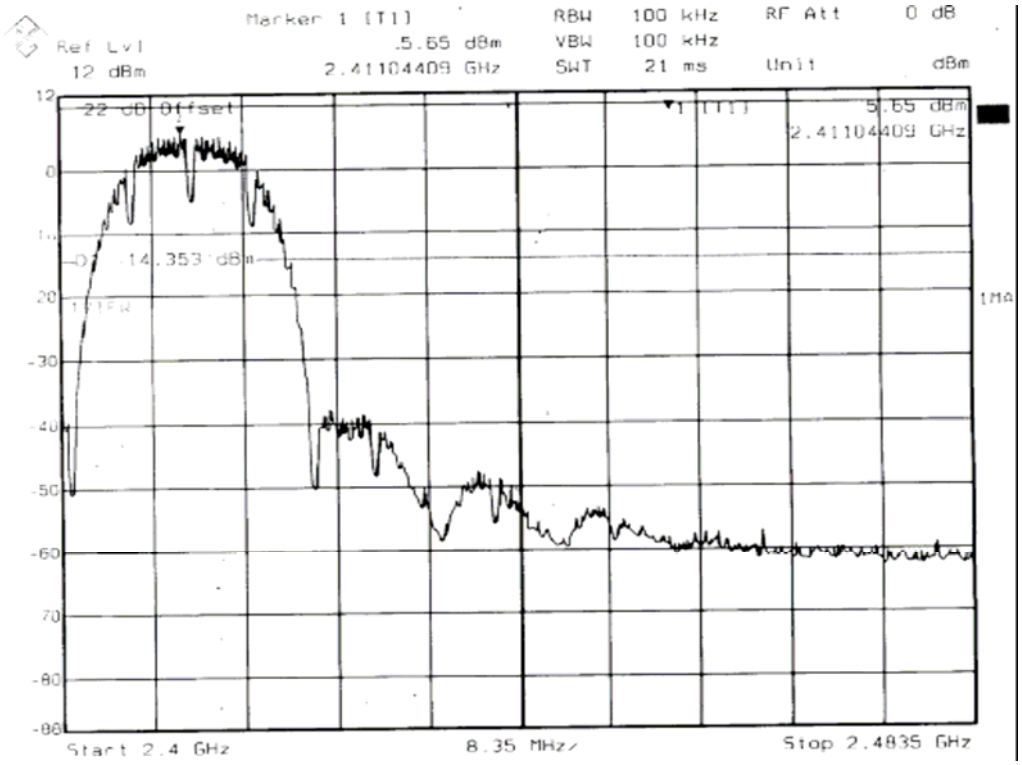


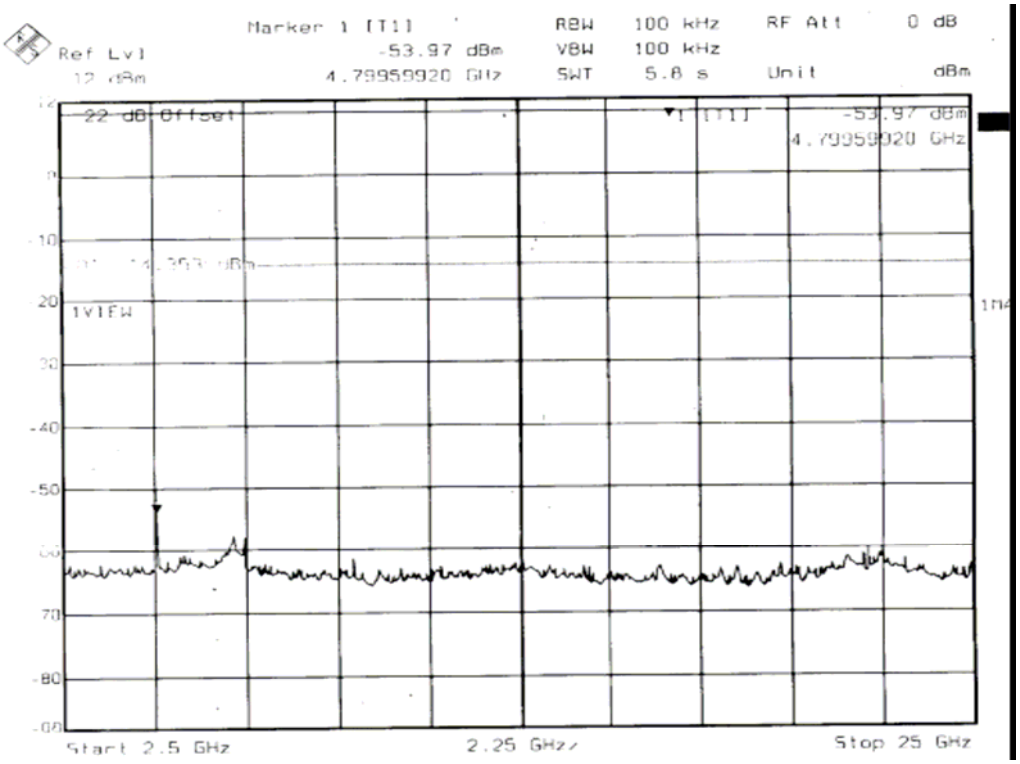
4.6.4. Test result

Tests was performed on 802.11b and 802.11g mode, on each operation mode, all kinds of modulations(OFDM and DSSS) and the typical data rate(1Mbps, 11Mbps, 54Mbps) has been evaluated for the power conducted emission. Only the worst case of test result of CH1 and CH11 has been recorded and reported. D2 line indicates the highest level, and D1 line indicates the 20dB offset below D2. It shows compliance with the requirement in part 15.247(d).The details see nether plots.

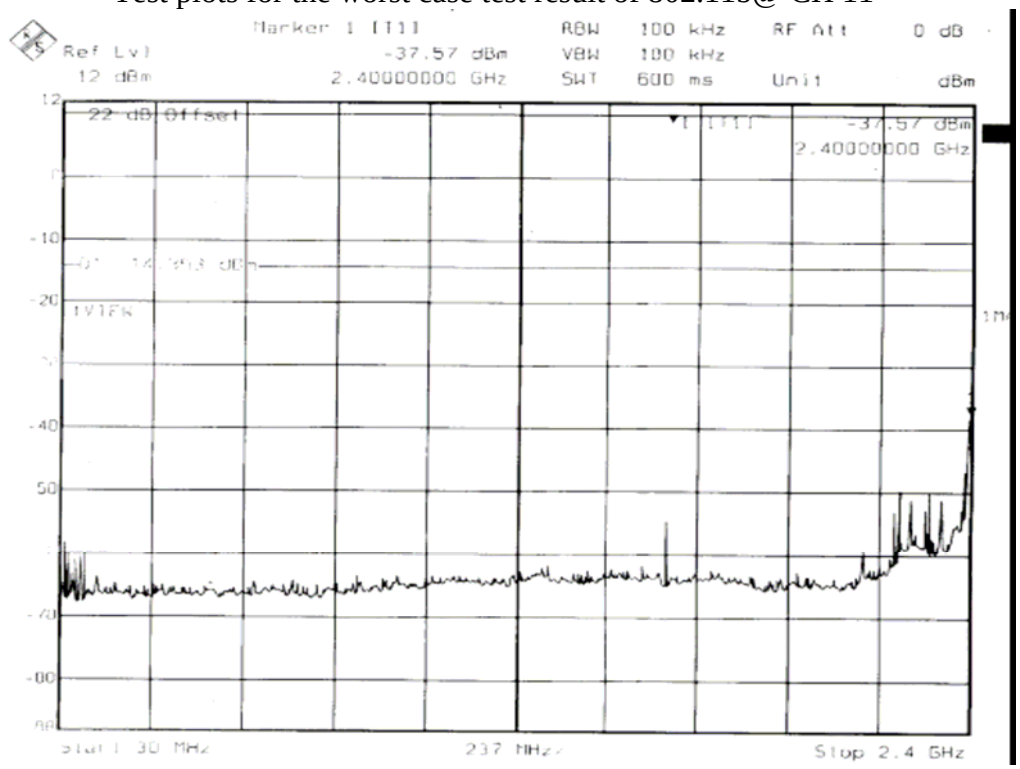
Test plots for the worst case test result of 802.11b@ CH 1

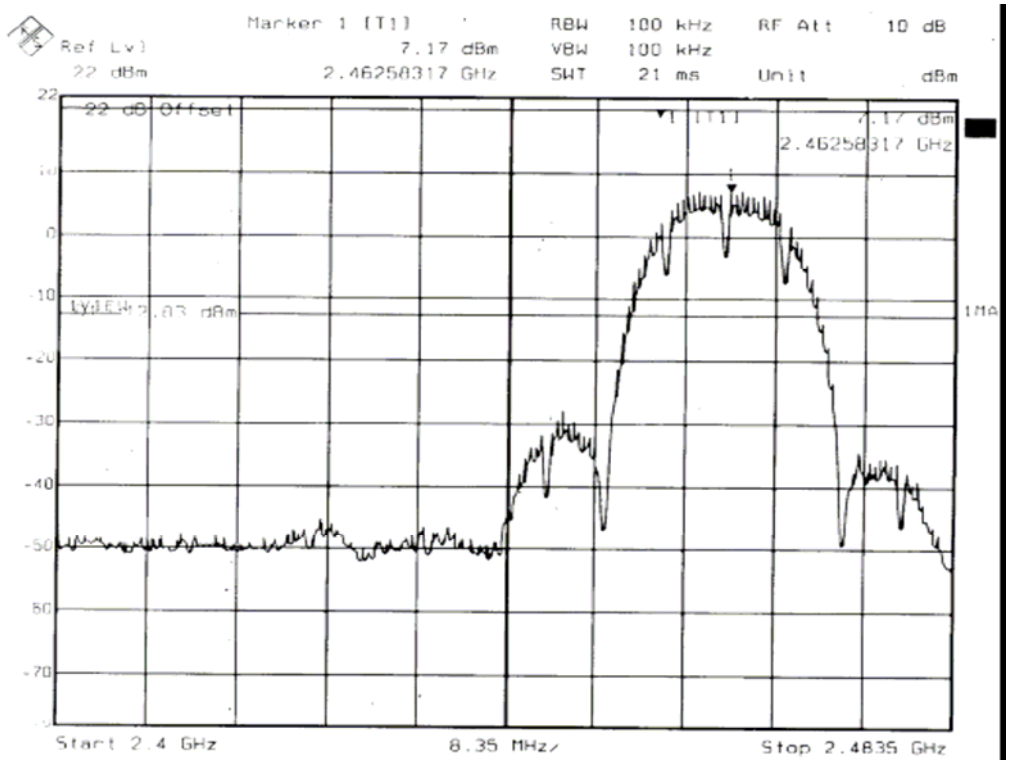

Marker 1 [T1]
RBW 100 kHz
RF Att 0 dB
Ref Lvl
-37.57 dBm
VBW 100 kHz
12 dBm
2.40000000 GHz
SWT 600 ms
Unit dBm
22 dB Offset
1 [T1]
-37.57 dBm
2.40000000 GHz
1MA
Start 30 MHz
237 MHz
Stop 2.4 GHz

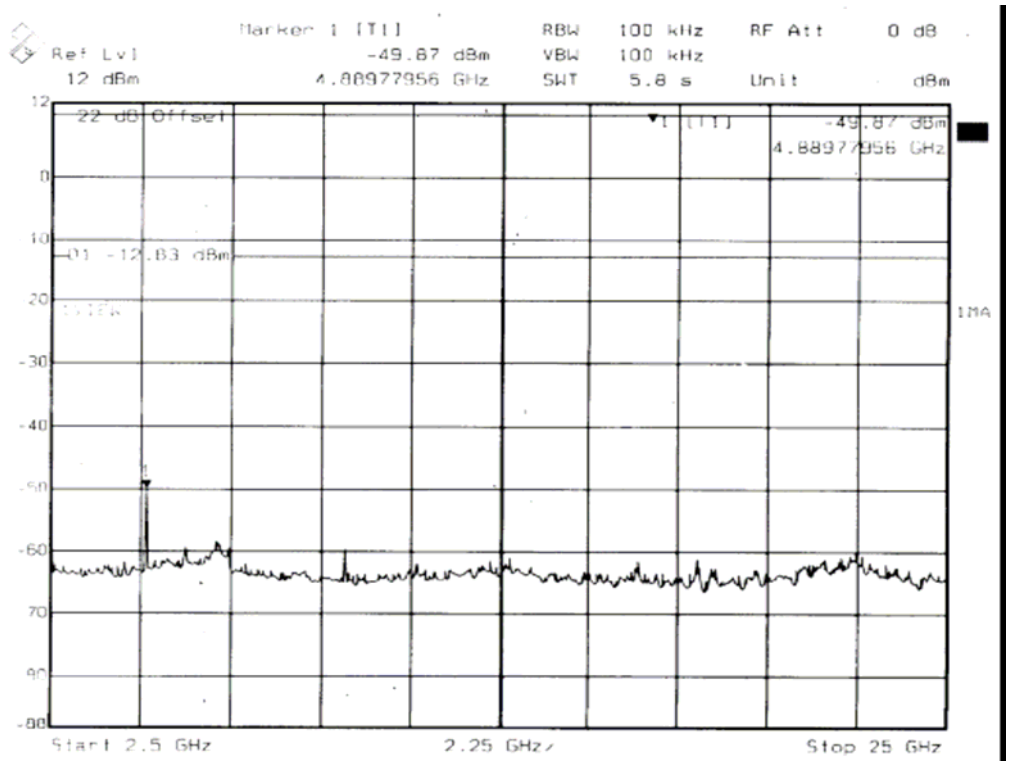

Marker 1 [T1]
RBW 100 kHz
RF Att 0 dB
Ref Lvl
5.65 dBm
VBW 100 kHz
12 dBm
2.41104409 GHz
SWT 21 ms
Unit dBm
22 dB Offset
1 [T1]
5.65 dBm
2.41104409 GHz
14.353 dBm
1MA
Start 2.4 GHz
8.35 MHz
Stop 2.4835 GHz



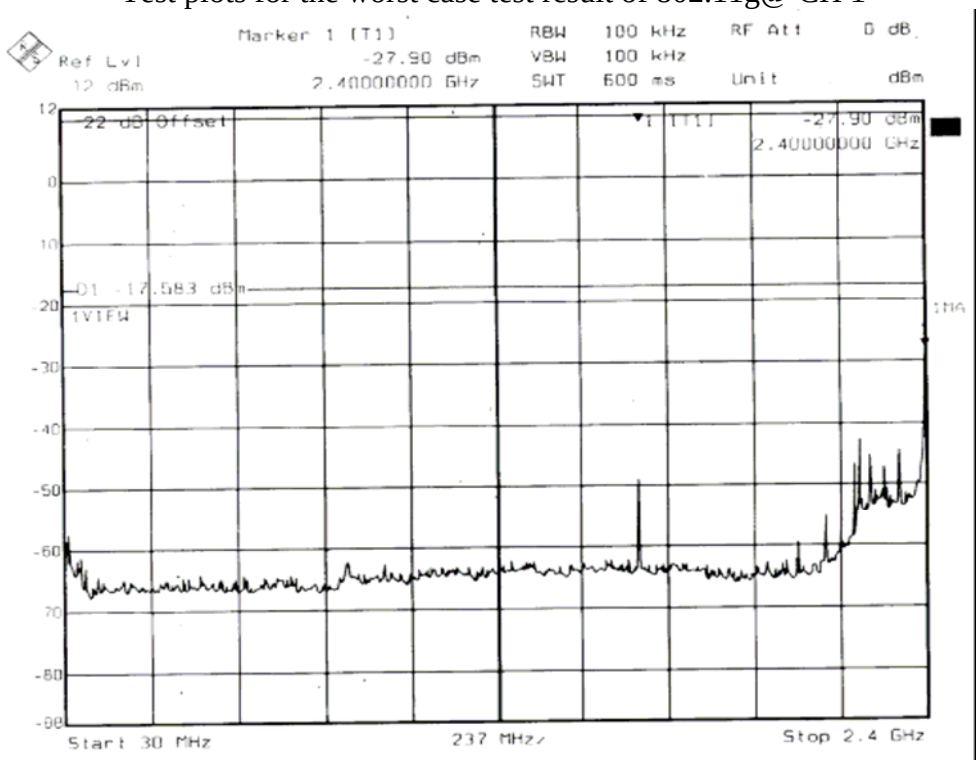
Test plots for the worst case test result of 802.11b@ CH 11

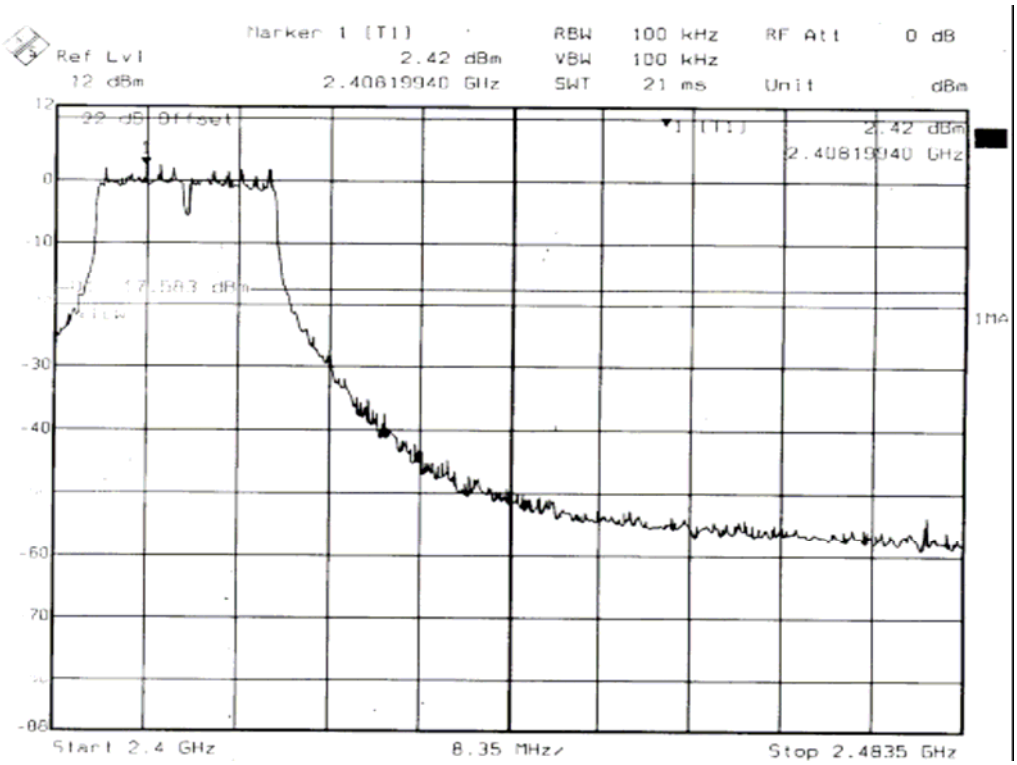


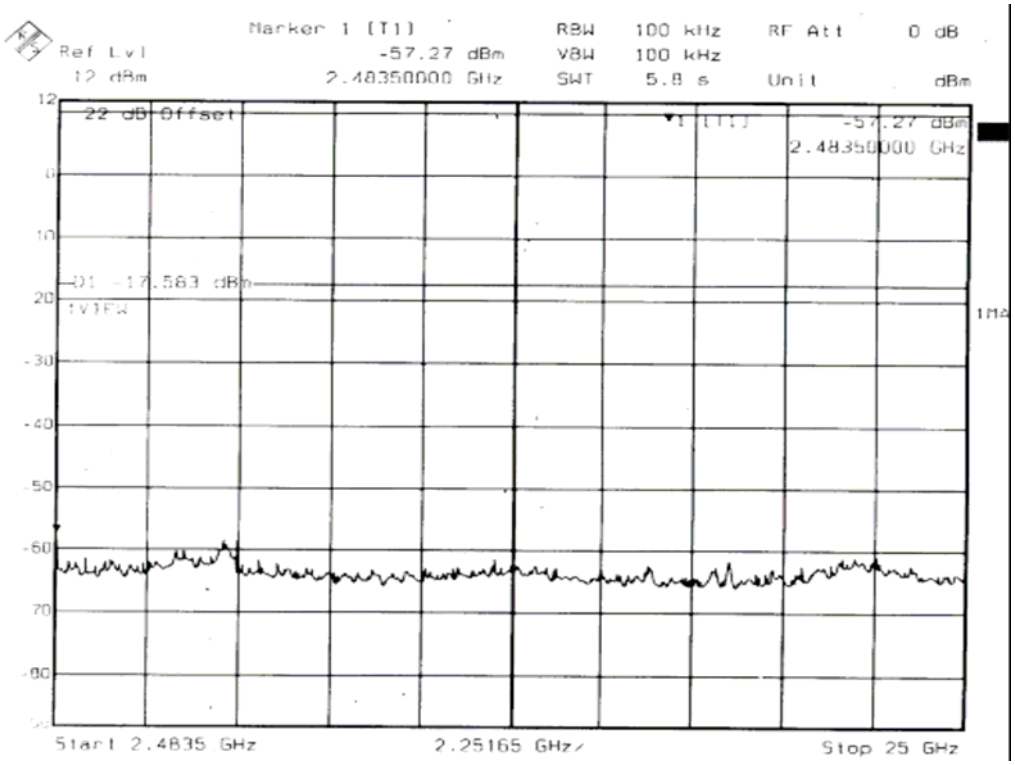

Marker 1 [T1]
RBW 100 kHz
RF Att 10 dB
Ref Lvl
7.17 dBm
VBW 100 kHz
22 dBm
2.46258317 GHz
SWT 21 ms
Unit dBm
22 dB Offset
1 [T1]
7.17 dBm
2.46258317 GHz
1MA
Start 2.4 GHz
8.35 MHz/
Stop 2.4835 GHz


Marker 1 [T1]
RBW 100 kHz
RF Att 0 dB
Ref Lvl
-49.87 dBm
VBW 100 kHz
12 dBm
4.88977956 GHz
SWT 5.8 s
Unit dBm
22 dB Offset
1 [T1]
-49.87 dBm
4.88977956 GHz
1MA
Start 2.5 GHz
2.25 GHz/
Stop 25 GHz

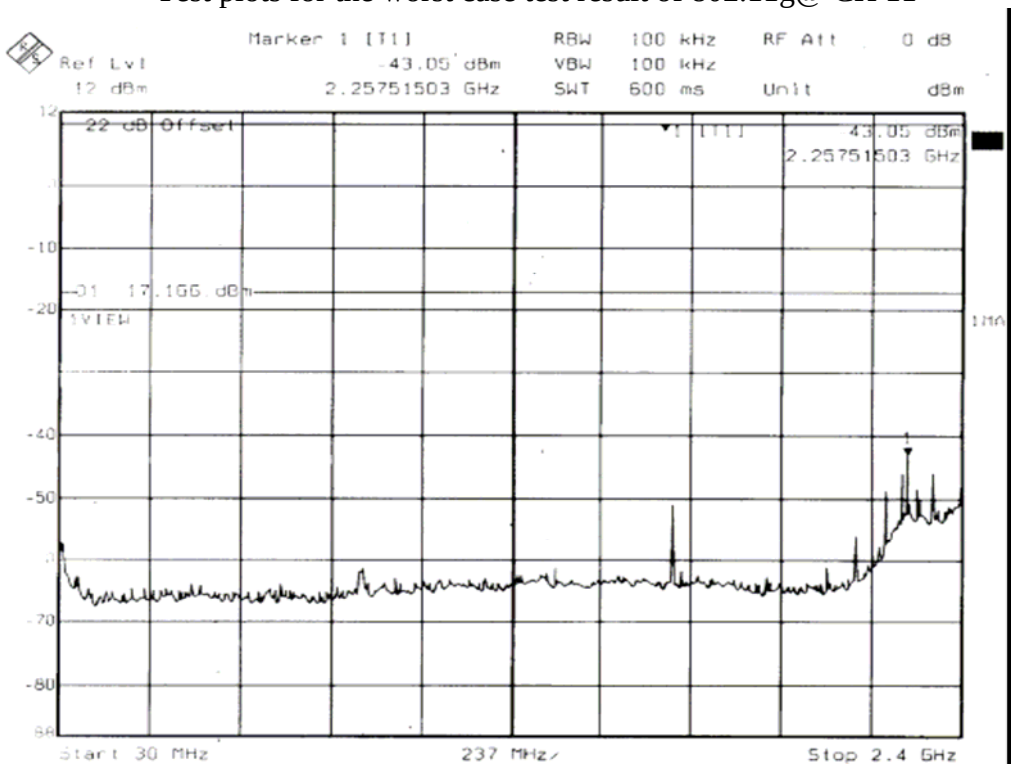
Test plots for the worst case test result of 802.11g@ CH 1

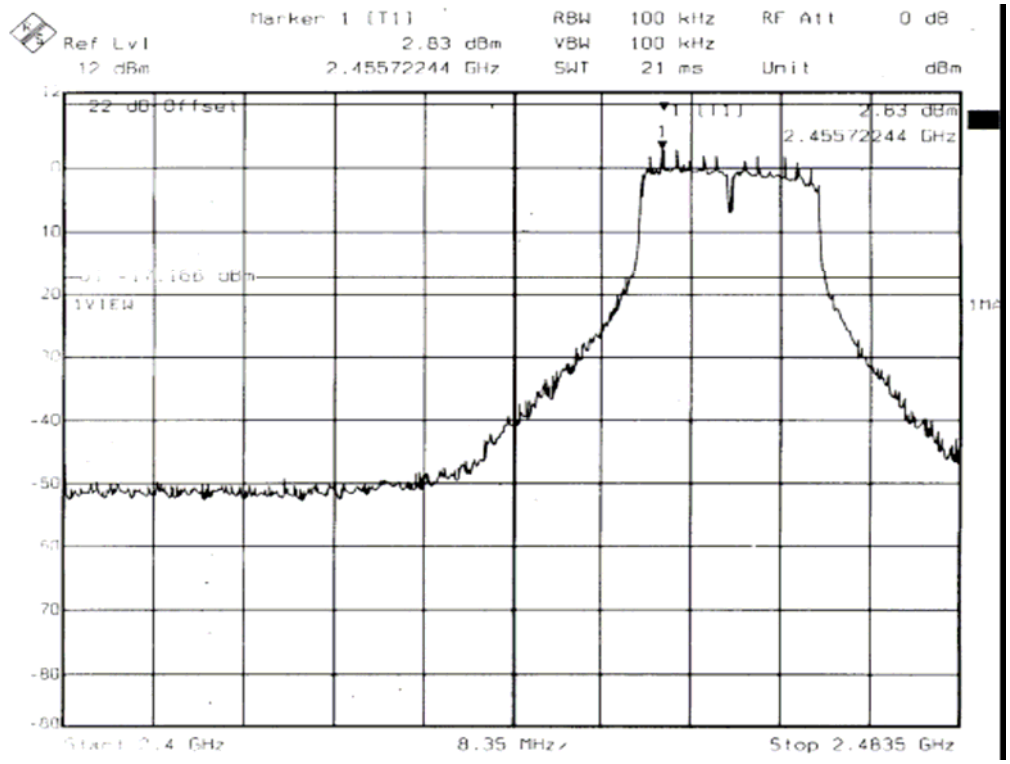


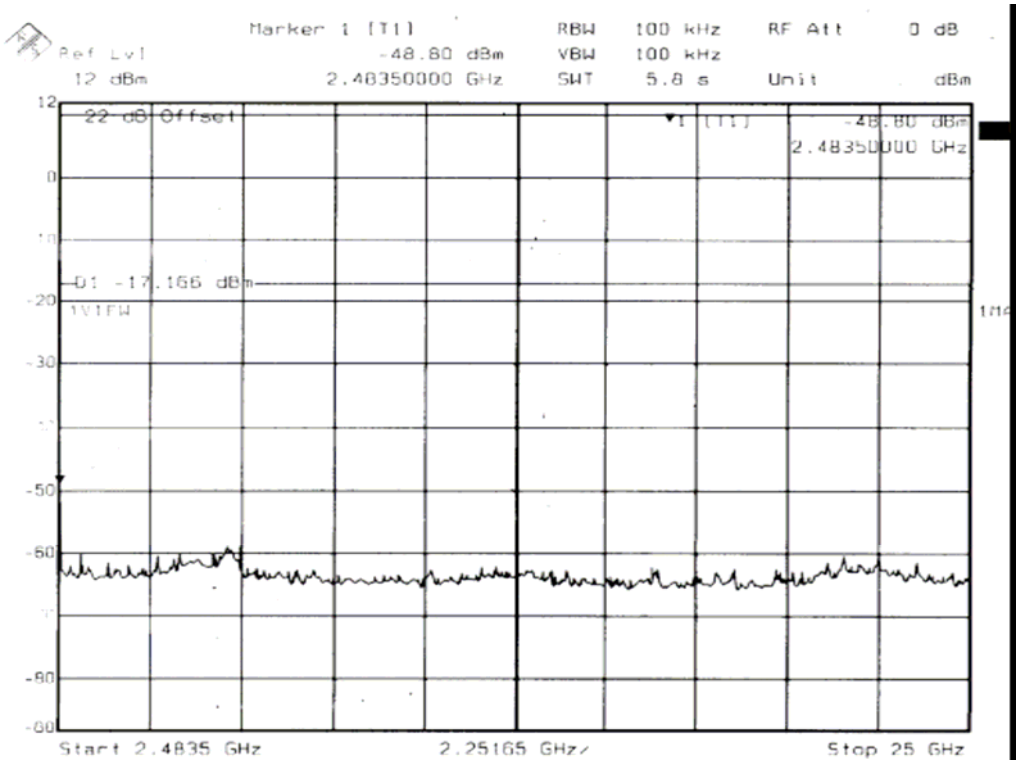




Test plots for the worst case test result of 802.11g@ CH 11




Marker 1 [T1]
RBW 100 kHz
RF Att 0 dB
Ref Lvl
2.83 dBm
VBW 100 kHz
12 dBm
2.45572244 GHz
SWT 21 ms
Unit dBm
22 dB Offset
1 [T1] 2.83 dBm
2.45572244 GHz
D1 -17.166 dBm
1VIEW
Start 2.4 GHz
8.35 MHz/
Stop 2.4835 GHz


Marker 1 [T1]
RBW 100 kHz
RF Att 0 dB
Ref Lvl
-48.80 dBm
VBW 100 kHz
12 dBm
2.48350000 GHz
SWT 5.8 s
Unit dBm
22 dB Offset
1 [T1] -48.80 dBm
2.48350000 GHz
D1 -17.166 dBm
1VIEW
Start 2.4835 GHz
2.25165 GHz/
Stop 25 GHz

4.7. Antenna requirement

4.7.1. Standard applicable

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247(b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

4.7.2.Antenna connected construction

The antenna used in this product is external antenna with connector, the maximum Gain of the antenna is 2dBi