Spectrum Research & Testing Lab., Inc. No. 101-10, Ling 8, Shan-Tong Li, Chung-Li City, Taoyuan, Taiwan	**TEST REPORT**	Reference No.:C07011706 Report No.:FCCC07011706 FCCID: VDVISAFE123 Page:1 of 66 Date: May. 18, 2007

Product Name:	MPEG 4 Wireless IP Camera
Model No.:	ISI-WS201
Applicant:	ISAFE TECHNOLOGY INC. Bldg. G, 4F-2, No.3-1, Yuan Qu St. NanKang, Taipei, Taiwan,115, R.O.C.
Date of Receipt:	Jan. 17, 2007
Finished date of Test:	May. 16, 2007
Applicable Standards:	47 CFR Part 15, Subpart C ANSI C63.4:2003

We, **Spectrum Research & Testing Laboratory Inc.**, hereby certify that one sample of the above was tested in our laboratory with positive results according to the above-mentioned standards. The records in the report are an accurate account of the results. Details of the results are given in the subsequent pages of this report.

Tested By: _____, Date: 5/18/2007
(John Yu)

Approved By: _____, Date: 5/18/2007
(Johnson Ho, Director)

NVLAP®
Lab Code: 200099-0

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1. DOCUMENT POLICY AND TEST STATEMENT

1.1 DOCUMENT POLICY

- The report shall not be reproduced except in full, without the written approval of SRT Lab, Inc.
- The report must not be used by the applicant to claim that the product is endorsed by NVLAP, TÜV, NEMKO and SRT.
- The NVLAP logo applies only to the applicable standards specified in this report.

1.2 TEST STATEMENT

- The test results in the report apply only to the unit tested by SRT Lab.
- There was no deviation from the requirements of test standards during the test.
- AC power source, 120 Vac/60 Hz, was used during the test.

1.3 EUT MODIFICATION

- No modification in SRT Lab.

2. DESCRIPTION OF EUT AND TEST MODE

2.1 GENERAL DESCRIPTION OF EUT

PRODUCT	MPEG 4 WIRELESS IP CAMERA
MODEL NO.	ISI-WS201
POWER SUPPLY	DC 12V 1.2A
FREQUENCY BAND	IEEE 802.11b/g: 2412~2462MHz
CARRIER FREQUENCY	2.4GHz
NUMBER OF CHANNEL	11
CHANNEL SPACING	IEEE 802.11b/g: 50MHz
RATED RF OUTPUT POWER	b: 14dBm, g: 12dBm
MODULATION TYPE	IEEE802.11g:OFDM(QAM) IEEE802.11b:DSSS(CCK)
DUTY CYCLE	50 %
MODE OF OPERATION	Duplex
BIT RATE OF TRANSMISSION	1~54Mbps
ANTENNA TYPE	dipole
ANTENNA GAIN	2 dBi
OPERATING TEMPERATURE RANGE	0~50℃
CHANNEL BANDWIDTH	5 MHz

NOTE :
For more detailed information, please refer to the EUT's specification or user's manual provided by manufacturer.

2.2 DESCRIPTION OF EUT INTERNAL DEVICE

DEVICE	BRAND / MAKER	MODEL	FCC ID/DOC	REMARK
N/A				

2.3 DESCRIPTION OF TEST MODE

11 channels are provided by EUT. The 3 channels of lower, medium and higher were chosen for test.

There are test modes for each test configuration as below:

Mode		Modulation Type	Channel	Frequency (MHz)
1	IEEE 802.11g	OFDM(QAM)	CH1	2412
2			CH6	2437
3			CH11	2462
4	IEEE 802.11b	DSSS(CCK)	CH1	2412
5			CH6	2437
6			CH11	2462

NOTE :

1. Below 1 GHz, the channel 1, 6, and 11 were pre-tested in chamber.
2. Above 1 GHz, the channel 1, 6 and 11 were tested individually

2.4 DESCRIPTION OF SUPPORT UNIT

The EUT was configured by the requirement of ANSI C63.4:2003. All interface ports were connected to the appropriate support units via specific cables. The support units and cables are listed below.

NO	DEVICE	BRAND	MODEL	FCC ID/DOC	CABLE
1	NOTEBOOK	DELL	PP01L	DOC	1.5m unshielded power cord
2	WIRELESS ROUTER	D-LINK	DI-624	DOC	N/A
3	MONITOR	N/A	N/A	N/A	1.5m unshielded power cable 1.2m shielded data cable

NOTE : For the actual test configuration, please refer to the photos of testing.

3. DESCRIPTION OF APPLIED STANDARDS

The EUT is a kind of wireless product. According to the specifications provided by the applicant, it must comply with the requirements of the following standards:

47 CFR Part 15, Subpart C

ANSI C63.4:2003

All tests have been performed and recorded as the above standards.

4. CONDUCTED EMISSION TEST

4.1 LIMIT

Frequency (MHz)	Class A (dBμV)		Class B (dBμV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 - 0.5	79	66	66 - 56	56 - 46
0.50 - 5.0	73	60	56	46
5.0 - 30.0	73	60	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 0.50 MHz.

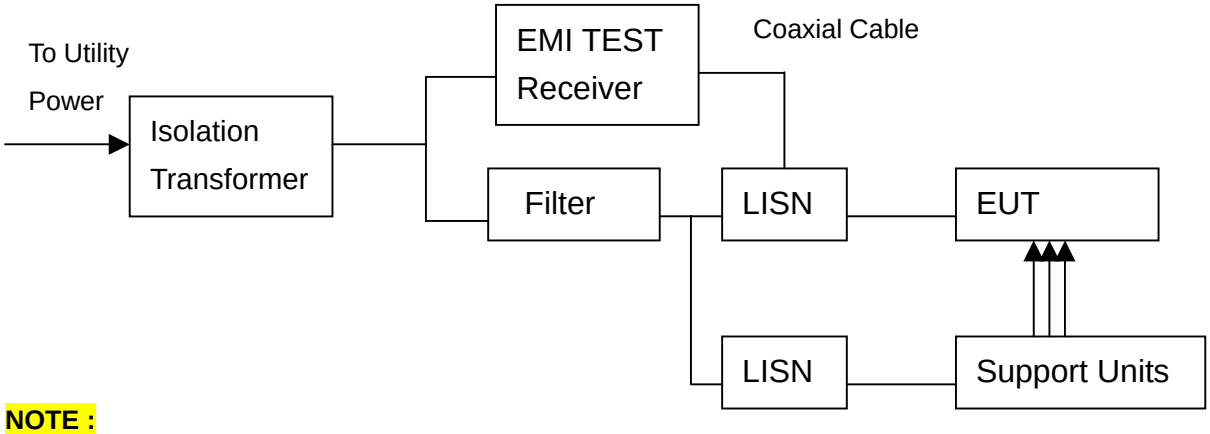
4.2 TEST EQUIPMENT

The following test equipment was used for the test:

EQUIPMENT/ FACILITIES	SPECIFICATIONS	MANUFACTURER	MODEL#/ SERIAL#	DUE DATE OF CAL. & CAL. CENTER
EMI TEST RECEIVER	9 kHz TO 2750 MHz	ROHDE & SCHWARZ	ESCS30/ 830245/012	AUG. 2007 ETC
LISN (for EUT)	50 μH, 50 ohm	SOLAR ELECTRONICS	8012-50-R-24-BNC / 924839	JUN. 2007 ETC
LISN (for Peripheral)	50μH, 50 ohm	SOLAR ELECTRONICS	9252-50-R-24-BNC / 951318	JUN. 2007 ETC
50 ohm TERMINATOR	50 ohm	HP	11593A/ 4	MAR. 2008 ETC
COAXIAL CABLE	3m	SUNCITY	J400/ 3M	JUL. 2007 SRT
ISOLATION TRANSFORMER	N/A	APC	AFC-11015/ F102040016	N/A
FILTER	2 LINE, 30A	FIL.COIL	FC-943/ 771	N/A
GROUND PLANE	2.3M (H) x 2.4M (W)	SRT	N/A	N/A
GROUND PLANE	2.4M (H) x 2.4M (W)	SRT	N/A	N/A

NOTE: The calibration interval of the above test equipment is one year and the calibrations are traceable to NML/ROC and NIST/USA.

4.3 TEST SETUP



NOTE :

1. The EUT was put on a wooden table with 0.8m height above ground plane, and 0.4m away from reference ground plane (> 2mx2m).
2. For the actual test configuration, please refer to the photos of testing.
3. The serial no. of the LISN connected to EUT is 951318.
4. The serial no. of the LISN connected to support units is 924839.

4.4 TEST PROCEDURE

The EUT was tested according to the requirement of ANSI C63.4:2003 and CISRP22:2003. The frequency spectrum from 0.15 MHz to 30 MHz was investigated. The LISN used was 50 ohm/50µH as specified. All readings were quasi-peak and average values with 10 kHz resolution bandwidth of the test receiver. The EUT system was operated in all typical methods by users. Both lines of the power mains of EUT were measured and the cables connected to EUT and support units were moved to find the maximum emission levels for each frequency.
First, Find the margin or higher points at least 6 points by software, then use manual to find the maximum data. The procedure is referred on the test procedure of SRT LAB.

4.5 EUT OPERATING CONDITION

1. Set the EUT under normal condition continuously at the link mode.
2. The EUT used programs to control channels when it was tested for RF power and emission.
3. EUT accessed data from Wireless LAN.

4.6 TEST RESULT

Temperature:	26 °C	Humidity:	62 %RH
Frequency Range:	0.15 – 30 MHz	Tested Mode:	IEEE 802.11b
Receiver Detector:	Q.P. and AV.	Modulation Type:	DSSS(CCK)
Tested By:	John Yu	Tested Channel:	CH1: 2412MHz
		Tested Date:	May. 02, 2007

Power Line Measured : Line

Freq. (MHz)	Correct. Factor (dB)	Reading Value (dBμV)		Emission Level (dBμV)		Limit (dBμV)		Margin (dB)	
		Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
0.180	0.30	44.54	34.39	44.84	34.69	79.00	66.00	-34.46	-31.61
0.183	0.30	44.20	30.66	44.50	30.96	79.00	66.00	-36.80	-35.34
0.773	0.20	37.04	33.41	37.24	33.61	73.00	60.00	-35.96	-26.59
1.368	0.15	33.24	26.07	33.39	26.22	73.00	60.00	-39.76	-33.93
13.932	0.25	34.54	25.40	34.79	25.65	73.00	60.00	-38.46	-34.60
15.830	0.27	27.70	16.67	27.97	16.94	73.00	60.00	-45.30	-43.33

Power Line Measured : Neutral

Freq. (MHz)	Correct. Factor (dB)	Reading Value (dBμV)		Emission Level (dBμV)		Limit (dBμV)		Margin (dB)	
		Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
0.177	0.30	43.66	33.26	43.96	33.56	79.00	66.00	-35.34	-32.74
0.180	0.30	44.56	34.18	44.86	34.48	79.00	66.00	-34.44	-31.82
0.783	0.20	33.60	19.83	33.80	20.03	73.00	60.00	-39.40	-40.17
2.754	0.17	31.16	16.77	31.33	16.94	73.00	60.00	-41.84	-43.23
14.287	0.25	30.58	19.24	30.83	19.49	73.00	60.00	-42.42	-40.76
15.287	0.26	30.30	17.85	30.56	18.11	73.00	60.00	-42.70	-42.15

NOTE :

1. Measurement uncertainty is +/-1.32dB
2. Emission level = Reading valus + Correction factor
3. Correction Factor = Cable loss + Insertion loss of LISN
4. Margin value = Emission level - Limit
5. The emission of other frequencies was very low against the limit.
6. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.

Temperature:	26 °C	Humidity:	50 %RH
Ferquency Range:	0.15 – 30 MHz	Tested Mode:	IEEE 802.11b
Receiver Detector:	Q.P. and AV.	Modulation Type:	DSSS(CCK)
Tested By:	John Yu	Tested Channel:	CH6: 2437MHz
		Tested Date:	May. 02, 2007

Power Line Measured : Line

Freq. (MHz)	Correct. Factor (dB)	Reading Value (dBμV)		Emission Level (dBμV)		Limit (dBμV)		Margin (dB)	
		Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
0.177	0.30	42.96	33.27	43.26	33.57	79.00	66.00	-36.04	-32.73
0.180	0.30	43.84	34.16	44.14	34.46	79.00	66.00	-35.16	-31.84
0.778	0.20	36.44	31.72	36.64	31.92	73.00	60.00	-35.56	-28.28
1.438	0.15	32.10	18.89	32.25	19.04	73.00	60.00	-40.90	-41.11
14.277	0.25	34.24	24.62	34.49	24.87	73.00	60.00	-38.76	-35.38
15.297	0.26	31.48	19.88	31.74	20.14	73.00	60.00	-41.52	-40.12

Power Line Measured : Neutral

Freq. (MHz)	Correct. Factor (dB)	Reading Value (dBμV)		Emission Level (dBμV)		Limit (dBμV)		Margin (dB)	
		Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
0.177	0.30	43.08	32.88	43.38	33.18	79.00	66.00	-35.92	-33.12
0.180	0.30	43.82	33.65	44.12	33.95	79.00	66.00	-35.18	-32.35
0.778	0.20	34.40	28.41	34.60	28.61	73.00	60.00	-38.60	-31.59
2.091	0.16	31.64	21.47	31.80	21.63	73.00	60.00	-41.36	-38.53
14.054	0.25	32.80	20.02	33.05	20.27	73.00	60.00	-40.20	-39.97
15.543	0.26	28.78	15.99	29.04	16.25	73.00	60.00	-44.20	-44.01

NOTE :

1. Measurement uncertainty is +/-1.32dB
2. Emission level = Reading valus + Correction factor
3. Correction Factor = Cable loss + Insertion loss of LISN
4. Margin value = Emission level - Limit
5. The emission of other frequencies were very low against the limit.
6. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.

Temperature:	26 °C	Humidity:	50 %RH
Ferquency Range:	0.15 – 30 MHz	Tested Mode:	IEEE 802.11b
Receiver Detector:	Q.P. and AV.	Modulation Type:	DSSS(CCK)
Tested By:	John Yu	Tested Channel:	CH11: 2462MHz
		Tested Date:	Jun. 25, 2004

Power Line Measured : Line

Freq. (MHz)	Correct. Factor (dB)	Reading Value (dBμV)		Emission Level (dBμV)		Limit (dBμV)		Margin (dB)	
		Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
0.177	0.30	42.84	33.10	43.14	33.40	79.00	66.00	-36.16	-32.90
0.180	0.30	43.82	34.02	44.12	34.32	79.00	66.00	-35.18	-31.98
0.773	0.20	37.28	33.38	37.48	33.58	73.00	60.00	-35.72	-26.62
1.200	0.14	30.26	16.99	30.40	17.13	73.00	60.00	-42.74	-43.01
14.297	0.25	34.72	24.73	34.97	24.98	73.00	60.00	-38.28	-35.26
15.072	0.25	32.48	20.89	32.73	21.14	73.00	60.00	-40.52	-39.11

Power Line Measured : Neutral

Freq. (MHz)	Correct. Factor (dB)	Reading Value (dBμV)		Emission Level (dBμV)		Limit (dBμV)		Margin (dB)	
		Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
0.177	0.30	42.96	32.91	43.26	33.21	79.00	66.00	-36.04	-33.09
0.180	0.30	43.86	33.83	44.16	34.13	79.00	66.00	-35.14	-32.17
0.778	0.20	34.30	29.36	34.50	29.56	73.00	60.00	-38.70	-30.64
1.735	0.15	32.12	21.82	32.27	21.97	73.00	60.00	-40.88	-38.18
14.328	0.25	33.24	20.47	33.49	20.72	73.00	60.00	-39.76	-39.53
15.861	0.27	28.52	15.89	28.79	16.16	73.00	60.00	-44.48	-44.11

NOTE :

1. Measurement uncertainty is +/-1.32dB
2. Emission level = Reading valus + Correction factor
3. Correction Factor = Cable loss + Insertion loss of LISN
4. Margin value = Emission level - Limit
5. The emission of other frequencies were very low against the limit.
6. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.

Temperature:	26 °C	Humidity:	50 %RH
Ferquency Range:	0.15 – 30 MHz	Tested Mode:	IEEE 802.11g
Receiver Detector:	Q.P. and AV.	Modulation Type:	OFDM(QAM)
Tested By:	John Yu	Tested Channel:	CH1: 2412MHz
		Tested Date:	Jun. 23, 2004

Power Line Measured : Line

Freq. (MHz)	Correct. Factor (dB)	Reading Value (dBμV)		Emission Level (dBμV)		Limit (dBμV)		Margin (dB)	
		Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
0.171	0.30	42.66	31.45	42.96	31.75	79.00	66.00	-36.34	-34.56
0.174	0.30	41.30	30.37	41.60	30.67	79.00	66.00	-37.70	-35.63
0.572	0.24	36.06	34.30	36.30	34.54	73.00	60.00	-36.94	-25.70
1.715	0.15	33.78	30.30	33.93	30.45	73.00	60.00	-39.22	-29.68
14.226	0.25	29.12	20.18	29.37	20.43	73.00	60.00	-43.88	-39.82
21.550	0.39	19.10	12.39	19.49	12.78	73.00	60.00	-53.90	-47.61

Power Line Measured : Neutral

Freq. (MHz)	Correct. Factor (dB)	Reading Value (dBμV)		Emission Level (dBμV)		Limit (dBμV)		Margin (dB)	
		Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
0.171	0.30	43.54	34.45	43.84	34.75	79.00	66.00	-35.46	-31.55
0.174	0.30	42.20	33.31	42.50	33.61	79.00	66.00	-36.80	-32.69
0.514	0.24	38.20	37.08	38.44	37.32	73.00	60.00	-34.80	-22.92
1.309	0.15	33.26	26.74	33.41	26.89	73.00	60.00	-39.74	-33.26
14.105	0.25	30.24	22.36	30.49	22.61	73.00	60.00	-42.76	-37.64
15.010	0.25	26.00	16.49	26.25	16.74	73.00	60.00	-47.00	-43.51

NOTE :

1. Measurement uncertainty is +/-1.32dB
2. Emission level = Reading valus + Correction factor
3. Correction Factor = Cable loss + Insertion loss of LISN
4. Margin value = Emission level - Limit
5. The emission of other frequencies were very low against the limit.
6. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.

Temperature:	26 °C	Humidity:	50 %RH
Ferquency Range:	0.15 – 30 MHz	Tested Mode:	IEEE 802.11g
Receiver Detector:	Q.P. and AV.	Modulation Type:	OFDM(QAM)
Tested By:	John Yu	Tested Channel:	CH6: 2437MHz
		Tested Date:	Jun. 25, 2004

Power Line Measured : Line

Freq. (MHz)	Correct. Factor (dB)	Reading Value (dBμV)		Emission Level (dBμV)		Limit (dBμV)		Margin (dB)	
		Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
0.171	0.30	42.56	32.71	42.86	33.01	79.00	66.00	-36.44	-33.29
0.399	0.27	42.20	41.21	42.47	41.48	79.00	66.00	-36.80	-24.79
0.572	0.24	39.16	37.13	39.40	37.37	73.00	60.00	-33.84	-22.88
1.368	0.15	36.32	26.31	36.47	26.46	73.00	60.00	-36.68	-33.69
14.582	0.25	34.70	23.33	34.95	23.58	73.00	60.00	-38.30	-36.67
15.707	0.27	30.46	23.06	30.73	23.33	73.00	60.00	-42.54	-36.94

Power Line Measured : Neutral

Freq. (MHz)	Correct. Factor (dB)	Reading Value (dBμV)		Emission Level (dBμV)		Limit (dBμV)		Margin (dB)	
		Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
0.171	0.30	43.14	32.89	43.44	33.19	79.00	66.00	-35.86	-33.11
0.399	0.27	42.52	41.32	42.79	41.59	79.00	66.00	-36.48	-24.68
0.572	0.24	40.52	38.88	40.76	39.12	73.00	60.00	-32.48	-21.12
1.715	0.15	37.38	32.18	37.53	32.33	73.00	60.00	-35.62	-27.82
14.287	0.25	26.60	15.49	26.85	15.74	73.00	60.00	-46.40	-44.51
17.614	0.28	31.64	25.60	31.92	25.88	73.00	60.00	-41.36	-34.40

NOTE :

1. Measurement uncertainty is +/-1.32dB
2. Emission level = Reading valus + Correction factor
3. Correction Factor = Cable loss + Insertion loss of LISN
4. Margin value = Emission level - Limit
5. The emission of other frequencies were very low against the limit.
6. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.

Temperature:	26 °C	Humidity:	50 %RH
Ferquency Range:	0.15 – 30 MHz	Tested Mode:	IEEE 802.11g
Receiver Detector:	Q.P. and AV.	Modulation Type:	OFDM(QAM)
Tested By:	John Yu	Tested Channel:	CH11: 2462MHz
		Tested Date:	Jun. 25, 2004

Power Line Measured : Line

Freq. (MHz)	Correct. Factor (dB)	Reading Value (dBμV)		Emission Level (dBμV)		Limit (dBμV)		Margin (dB)	
		Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
0.477	0.25	45.16	46.51	45.41	46.76	79.00	66.00	-33.84	-22.49
0.48	0.25	44.32	41.73	44.57	41.98	79.00	66.00	-34.68	-24.27
0.773	0.20	41.46	39.25	41.66	39.45	73.00	60.00	-31.54	-20.75
1.725	0.15	38.32	33.46	38.47	33.61	73.00	60.00	-34.68	-26.54
14.145	0.25	38.42	27.42	38.67	27.67	73.00	60.00	-34.58	-32.58
27.003	0.43	19.68	16.48	20.11	16.91	73.00	60.00	-53.32	-43.53

Power Line Measured : Neutral

Freq. (MHz)	Correct. Factor (dB)	Reading Value (dBμV)		Emission Level (dBμV)		Limit (dBμV)		Margin (dB)	
		Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
0.477	0.25	46.58	45.35	46.83	45.60	79.00	66.00	-33.42	-20.65
0.480	0.25	45.90	43.69	46.15	43.94	79.00	66.00	-33.10	-22.31
0.773	0.20	42.72	40.33	42.92	40.53	73.00	60.00	-30.28	-19.67
1.368	0.15	39.26	33.38	39.41	33.53	73.00	60.00	-33.74	-26.62
3.776	0.19	29.12	12.37	29.31	12.56	73.00	60.00	-43.88	-46.63
17.778	0.29	30.68	22.53	30.97	22.82	73.00	60.00	-42.32	37.47

NOTE :

1. Measurement uncertainty is +/-1.32dB
2. Emission level = Reading valus + Correction factor
3. Correction Factor = Cable loss + Insertion loss of LISN
4. Margin value = Emission level - Limit
5. The emission of other frequencies were very low against the limit.
6. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.

5. RADIATED EMISSION TEST

5.1 LIMIT

FCC Part 15, Subpart B limit of radiated emission for frequency below 1000 MHz

FREQUENCY (MHz)	Class A (at 3m)	Class B (at 3m)
	dBμV/m	dBμV/m
30 to 88	50.0	40.0
88 to 216	53.5	43.5
216 to 960	56.0	46.0
Above 960	64.0	54.0

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBμV/m) = 20 log Emission level (μV/m).

FCC Part 15, Subpart B limit of radiated emission for frequency above 1000 MHz

FREQUENCY (MHz)	Class A (dBμV/m) (at 3m)		Class B (dBμV/m) (at 3m)	
	PK.	AV.	PK.	AV.
Above 1000	80.0	60.0	74.0	54.0

5.2 TEST EQUIPMENT

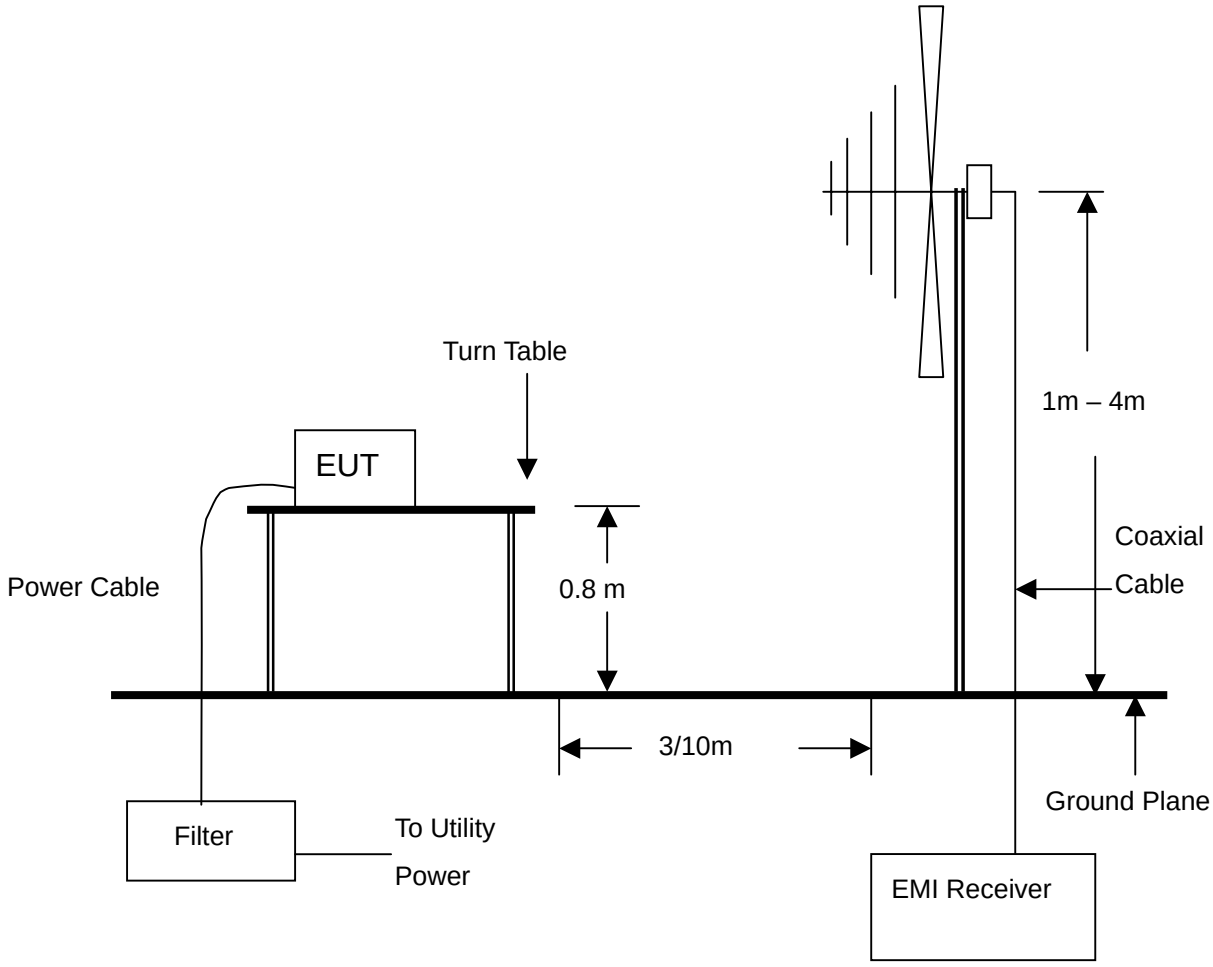
The following test equipment was used during the radiated emission test:

EQUIPMENT/ FACILITIES	SPECIFICATIONS	MANUFACTURER	MODEL#/ SERIAL#	DUE DATE OF CAL. & CAL. CENTER
EMI TEST RECEIVER	9 kHz TO 2750 MHz	ROHDE & SCHWARZ	ESCS30/ 830245/012	AUG. 2007 R&S
BI-LOG ANTENNA	25 MHz TO 2 GHz	EMCO	3142/ 9701-1124	APR. 2008 SRT
SPECTRUM ANALYZER	9 KHz TO 26.5 GHz	HP	8593E/ 3710A03220	MAY 2008 ETC
PRE-AMPLIFIER	1 GHz TO 26.5 GHz	HP	8449B/ 3008A01019	DEC. 2007 ETC
HORN ANTENNA	1 GHz TO 18 GHz	EMCO	3115/ 9602-4681	JAN. 2008 ETC
OATS	3 – 10 M MEASUREMENT	SRT	SRT-1	APR. 2008 SRT
COAXIAL CABLE	25M	SUNCITY	J400/ 25M	AUG. 2007 SRT
FILTER	2 LINE, 30A	FIL.COIL	FC-943/ 869	N/A
FREQUENCY CONVERTER	N/A	APC	AFC-1KW/ 860612	AUG. 2007 SRT

NOTE:

1. The calibration interval of the above test equipment is one year and the calibrations are traceable to NML/ROC and NIST/USA.
2. The Open Area Test Site (SRT-1) is registered by FCC with No. 90957 and VCCI with No. R-1081.
3. The Open Area Test Site (SRT-2) is registered by FCC with No. 98458 and VCCI with No. R-1168.

5.3 TEST SET-UP



NOTE :

1. The EUT system was put on a wooden table with 0.8m heights above a ground plane.
2. For the actual test configuration, please refer to the photos of testing.

5.4 TEST PROCEDURE

The EUT was tested according to the requirement of ANSI C63.4:2003 and CISPR 22:2003. The measurements were made at an open area test site with 10 meter measurement distance under 1 GHz and with 3m distance above 1GHz. The frequency spectrum measured started from 30 MHz. Under 1 GHz, all readings were quasi-peak values with 120 kHz resolution bandwidth of the test receiver. Above 1 GHz, the measurements were made at an open area test site with 3 meter measurement distance and all readings were peak or average values with 1 MHz resolution bandwidth of the test receiver. The EUT system was operated in all typical methods by users. The cables connected to EUT and support units were moved to find the maximum emission levels for each frequency.
First, Find the margin or higher points at least 6 points by software, then use manual to find the maximum data. The procedure is referred on the test procedure of SRT LAB.

5.5 EUT OPERATING CONDITION

Same as section 4.5 of this report.

5.6 TEST RESULT

Temperature:	27 °C	Humidity:	54 %RH
Ferquency Range:	30M – 1GHz	Measured Distance:	3m
Receiver Detector:	Q.P.	Tested Mode:	IEEE 802.11b
Tested By:	John Yu	Tested Channel:	CH 1 : 2412MHz
Tested Date:	May. 07, 2007	Modulation Type:	DSSS(CCK)

Antenna Polarization:Horizontal

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
624.9925	4.68	19.64	11.4	35.7	46.0	-10.3	45	2.28
648.0025	4.75	19.98	11.0	35.7	46.0	-10.3	65	1.92
656.2350	4.79	20.24	13.9	38.9	46.0	-7.1	250	2.28
718.7375	5.09	22.12	13.6	40.8	46.0	-5.2	158	2.01
781.2375	5.28	22.98	13.4	41.7	46.0	-4.3	102	2.17
843.7425	5.55	23.26	14.0	42.8	46.0	-3.2	230	2.31

Antenna Polarization:Vertical

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
718.7375	5.09	22.12	14.3	41.5	46.0	-4.5	350	1.11
781.2375	5.28	22.98	12.3	40.6	46.0	-5.4	20	1.05
843.3730	5.55	23.26	10.7	39.5	46.0	-6.5	40	1.12
656.2350	4.79	20.24	17.3	42.3	46.0	-3.7	100	1.08
468.7400	3.96	17.88	13.1	34.9	46.0	-11.1	80	1.33
624.3993	4.68	19.64	11.9	36.2	46.0	-9.8	110	1.38

NOTE :

1. Measurement uncertainty is +/-2dB.
2. "*": Measurement does not apply for this frequency.
3. Emissiom Level = Reading Value + Ant. Factor + Cable Loss.
4. The field strength of other emission frequencies were very low against the limit.

Temperature:	27 °C	Humidity:	54 %RH
Ferquency Range:	30M – 1GHz	Measured Distance:	3m
Receiver Detector:	Q.P.	Tested Mode:	IEEE 802.11b
Tested By:	John Yu	Tested Channel:	CH 6 : 2437MHz
Tested Date:	May. 07, 2007	Modulation Type:	DSSS(CCK)

Antenna Polarization:Horizontal

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
624.8952	4.68	19.64	10.3	34.6	46.0	-11.4	45	2.45
649.2500	4.76	19.99	11.3	36.0	46.0	-10.0	241	2.23
657.2540	4.80	20.28	12.1	37.2	46.0	-8.8	25	1.94
720.2561	5.09	22.20	10.2	37.5	46.0	-8.5	36	2.45
780.2586	5.27	23.00	11.2	39.5	46.0	-6.5	85	2.36
843.2589	5.55	23.26	11.4	40.2	46.0	-5.8	52	1.84

Antenna Polarization:Vertical

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
718.2563	5.09	22.12	12.4	39.6	46.0	-6.4	105	1.32
782.0125	5.28	22.96	12.5	40.7	46.0	-5.3	114	1.25
843.2570	5.55	23.26	12.6	41.4	46.0	-4.6	25	1.36
656.3256	4.79	20.24	13.3	38.3	46.0	-7.7	11	1.25
469.2356	3.97	17.89	12.3	34.2	46.0	-11.8	42	1.22
624.3570	4.68	19.64	12.3	36.6	46.0	-9.4	25	1.42

NOTE :

1. Measurement uncertainty is +/-2dB.
2. "*": Measurement does not apply for this frequency.
3. Emissiom Level = Reading Value + Ant. Factor + Cable Loss.
4. The field strength of other emission frequencies were very low against the limit.

Temperature:	27 °C	Humidity:	54 %RH
Ferquency Range:	30M – 1GHz	Measured Distance:	3m
Receiver Detector:	Q.P.	Tested Mode:	IEEE 802.11b
Tested By:	John Yu	Tested Channel:	CH 11 : 2462MHz
Tested Date:	May. 07, 2007	Modulation Type:	DSSS(CCK)

Antenna Polarization:Horizontal

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
623.3250	4.67	19.63	11.2	35.5	46.0	-10.5	85	2.32
646.3258	4.75	19.96	10.3	35.0	46.0	-11.0	125	2.36
655.3258	4.79	20.20	11.4	36.3	46.0	-9.7	254	2.45
717.3658	5.08	22.08	11.3	38.5	46.0	-7.5	52	2.25
780.2963	5.27	23.00	10.3	38.6	46.0	-7.4	20	2.39
842.2154	5.54	23.24	10.5	39.3	46.0	-6.7	114	1.75

Antenna Polarization:Vertical

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
717.3658	5.08	22.08	12.1	39.3	46.0	-6.7	252	1.34
780.2365	5.27	23.00	12.3	40.6	46.0	-5.4	222	1.45
842.3698	5.54	23.24	12.4	41.2	46.0	-4.8	124	1.58
656.2547	4.79	20.24	12.3	37.3	46.0	-8.7	25	1.36
467.3698	3.96	17.87	11.9	33.7	46.0	-12.3	11	1.45
623.5890	4.67	19.63	12.1	36.4	46.0	-9.6	57	1.34

NOTE :

1. Measurement uncertainty is +/-2dB.
2. "*": Measurement does not apply for this frequency.
3. Emissiom Level = Reading Value + Ant. Factor + Cable Loss.
4. The field strength of other emission frequencies were very low against the limit.

Temperature:	27 °C	Humidity:	54 %RH
Ferquency Range:	1-25GHz	Measured Distance:	3m
Receiver Detector:	PK. or AV.	Tested Mode:	IEEE 802.11b
Tested By:	John Yu	Tested Channel:	CH 1 : 2412MHz
Tested Date:	May. 07, 2007	Modulation Type:	DSSS(CCK)

Antenna Polarization: Horizontal

Frequency (MHz)	Corret Factor (dB)	Antenna Factor (dB/m)	Reading (dBμV)		Emission (dBμV/m)		Limit (dBμV/m)		Margin (dB)		AZ(°)	EL(m)
			PK	AV	PK	AV	PK	AV	PK	AV		
2412.00	-32.18	28.56	106.2	83.2	102.6	79.6	N/A	N/A	N/A	N/A	245.0	1.31
2400.00	-32.16	28.00	59.3	47.2	55.1	43.0	74.0	54.0	-18.9	-11.0	141.0	1.25
2393.20	-32.19	27.99	55.0	44.3	50.8	40.1	74.0	54.0	-23.2	-13.9	254.0	1.42
2425.63	-32.20	28.05	57.6	39.8	53.4	35.6	74.0	54.0	-20.6	-18.4	25.0	1.34
4824.00	-30.41	33.66	59.2	40.1	62.4	43.3	74.0	54.0	-11.6	-10.7	125.0	1.23
7236.00	-28.98	36.29	*	*	*	*	74.0	54.0	*	*	*	*

Antenna Polarization: Vertical

Frequency (MHz)	Corret Factor (dB)	Antenna Factor (dB/m)	Reading (dBμV)		Emission (dBμV/m)		Limit (dBμV/m)		Margin (dB)		AZ(°)	EL(m)
			PK	AV	PK	AV	PK	AV	PK	AV		
2412.00	-32.18	28.02	110.3	85.2	106.1	81.0	N/A	N/A	N/A	N/A	95.0	1.26
2400.00	-32.16	28.00	60.2	44.6	56.0	40.4	74.0	54.0	-18.0	-13.6	37.1	1.42
2393.20	-32.19	27.99	61.2	43.8	57.0	39.6	74.0	54.0	-17.0	-14.4	256.0	1.32
2425.63	-32.20	28.05	58.5	42.2	54.3	38.0	74.0	54.0	-19.7	-16.0	254.0	1.45
4824.00	-30.41	33.66	60.5	40.3	63.7	43.5	74.0	54.0	-10.3	-10.5	132.0	1.24
7236.00	-28.98	36.29	56.3	37.4	63.6	44.7	74.0	54.0	-10.4	-9.3	74.0	1.42

NOTE :

1. Measurement uncertainty is +/-2dB.
2. "*": Measurement does not apply for this frequency.
3. Emission Level = Reading Value + Ant. Factor + Cable Loss.
4. The field strength of other emission frequencies were very low against the limit.

Temperature:	27 °C	Humidity:	54 %RH
Ferquency Range:	1-25GHz	Measured Distance:	3m
Receiver Detector:	PK. or AV.	Tested Mode:	IEEE 802.11b
Tested By:	John Yu	Tested Channel:	CH 6 : 2437MHz
Tested Date:	May. 07, 2007	Modulation Type:	DSSS(CCK)

Antenna Polarization: Horizontal

Frequency (MHz)	Corret Factor (dB)	Antenna Factor (dB/m)	Reading (dBμV)		Emission (dBμV/m)		Limit (dBμV/m)		Margin (dB)		AZ(°)	EL(m)
			PK	AV	PK	AV	PK	AV	PK	AV		
2437.00	-32.18	28.56	112.4	86.3	108.7	82.7	N/A	N/A	N/A	N/A	125.0	1.42
2400.00	-32.16	28.00	58.3	44.3	54.1	40.1	74.0	54.0	-19.9	-13.9	200.0	1.62
2391.26	-32.19	27.98	57.5	44.8	53.3	40.6	74.0	54.0	-20.7	-13.4	154.0	1.24
2421.65	-32.19	28.04	54.5	41.9	50.3	37.7	74.0	54.0	-23.7	-16.3	165.0	1.52
4874.00	-30.28	33.70	56.3	39.0	59.7	42.4	74.0	54.0	-14.3	-11.6	110.0	1.29
7311.00	-29.07	36.35	*	*	*	*	74.0	54.0	*	*	*	*

Antenna Polarization: Vertical

Frequency (MHz)	Corret Factor (dB)	Antenna Factor (dB/m)	Reading (dBμV)		Emission (dBμV/m)		Limit (dBμV/m)		Margin (dB)		AZ(°)	EL(m)
			PK	AV	PK	AV	PK	AV	PK	AV		
2437.00	-32.18	28.02	113.9	87.2	109.7	83.0	N/A	N/A	N/A	N/A	131.0	1.61
2400.00	-32.16	28.00	60.2	43.5	56.0	39.3	74.0	54.0	-18.0	-14.7	194.0	1.54
2391.26	-32.19	27.98	59.3	42.9	55.1	38.7	74.0	54.0	-18.9	-15.3	136.0	1.25
2421.65	-32.19	28.04	60.3	47.0	56.1	42.8	74.0	54.0	-17.9	-11.2	251.0	1.36
4874.00	-30.28	33.70	60.4	39.5	63.8	42.9	74.0	54.0	-10.2	-11.1	36.0	1.38
7311.00	-29.07	36.35	57.3	38.5	64.6	45.8	74.0	54.0	-9.4	-8.2	157.0	1.45

NOTE :

1. Measurement uncertainty is +/-2dB.
2. "*": Measurement does not apply for this frequency.
3. Emission Level = Reading Value + Ant. Factor + Cable Loss.
4. The field strength of other emission frequencies were very low against the limit.

Temperature:	27 °C	Humidity:	54 %RH
Ferquency Range:	1-25GHz	Measured Distance:	3m
Receiver Detector:	PK. or AV.	Tested Mode:	IEEE 802.11b
Tested By:	John Yu	Tested Channel:	CH 11 : 2462MHz
Tested Date:	May. 07, 2007	Modulation Type:	DSSS(CCK)

Antenna Polarization: Horizontal

Frequency (MHz)	Corret Factor (dB)	Antenna Factor (dB/m)	Reading (dBμV)		Emission (dBμV/m)		Limit (dBμV/m)		Margin (dB)		AZ(°)	EL(m)
			PK	AV	PK	AV	PK	AV	PK	AV		
2462.00	-32.18	28.56	113.5	86.2	109.9	82.6	N/A	N/A	N/A	N/A	245.0	1.36
2400.00	-32.16	28.00	58.0	43.6	53.8	39.4	74.0	54.0	-20.2	-14.6	141.0	1.25
2389.25	-32.20	27.98	57.4	42.9	53.2	38.7	74.0	54.0	-20.8	-15.3	85.0	1.46
2423.85	-32.20	28.05	53.5	47.3	49.3	43.1	74.0	54.0	-24.7	-10.9	25.0	1.54
4924.00	-30.23	33.74	56.3	37.1	59.8	40.6	74.0	54.0	-14.2	-13.4	41.0	1.52
7386.00	-28.94	36.41	*	*	*	*	74.0	54.0	*	*	*	*

Antenna Polarization: Vertical

Frequency (MHz)	Corret Factor (dB)	Antenna Factor (dB/m)	Reading (dBμV)		Emission (dBμV/m)		Limit (dBμV/m)		Margin (dB)		AZ(°)	EL(m)
			PK	AV	PK	AV	PK	AV	PK	AV		
2462.00	-32.18	28.02	113.8	86.0	109.6	81.9	N/A	N/A	N/A	N/A	124.0	1.25
2400.00	-32.16	28.00	59.7	46.9	55.5	42.7	74.0	54.0	-18.5	-11.3	24.0	1.34
2389.25	-32.20	27.98	58.2	45.7	54.0	41.5	74.0	54.0	-20.0	-12.5	52.0	1.25
2423.85	-32.20	28.05	56.2	46.1	52.0	41.9	74.0	54.0	-22.0	-12.1	44.0	1.25
4924.00	-30.23	33.74	57.2	36.9	60.7	40.4	74.0	54.0	-13.3	-13.6	343.0	1.62
7386.00	-28.94	36.41	54.2	36.1	61.7	43.6	74.0	54.0	-12.3	-10.4	114.0	1.42

NOTE :

1. Measurement uncertainty is +/-2dB.
2. "*": Measurement does not apply for this frequency.
3. Emission Level = Reading Value + Ant. Factor + Cable Loss.
4. The field strength of other emission frequencies were very low against the limit.

Temperature:	27 °C	Humidity:	54 %RH
Ferquency Range:	30M – 1GHz	Measured Distance:	3m
Receiver Detector:	Q.P.	Tested Mode:	IEEE 802.11g
Tested By:	John Yu	Tested Channel:	CH 1 : 2412MHz
Tested Date:	May. 07, 2007	Modulation Type:	OFDM(QAM)

Antenna Polarization:Horizontal

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
624.9925	4.68	19.64	10.3	34.6	46.0	-11.4	310	2.08
649.9900	4.76	19.99	10.2	34.9	46.0	-11.1	80	2.12
657.2450	4.80	20.28	11.9	37.0	46.0	-9.0	110	2.04
687.4850	4.96	21.11	9.3	35.4	46.0	-10.6	40	2.15
718.7375	5.09	22.12	12.3	39.5	46.0	-6.5	160	1.87
781.2375	5.28	22.98	11.3	39.6	46.0	-6.4	10	2.18

Antenna Polarization:Vertical

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
486.7400	4.05	17.96	9.3	31.3	46.0	-14.7	135	1.41
624.9925	4.68	19.64	12.3	36.6	46.0	-9.4	340	1.19
649.9900	4.76	19.99	12.1	36.8	46.0	-9.2	10	1.07
687.4850	4.96	21.11	10.0	36.1	46.0	-9.9	350	1.08
718.7375	5.09	22.12	13.1	40.3	46.0	-5.7	40	1.16
781.2375	5.28	22.98	12.9	41.2	46.0	-4.8	220	1.08

NOTE :

1. Measurement uncertainty is +/-2dB.
2. "*": Measurement does not apply for this frequency.
3. Emissiom Level = Reading Value + Ant. Factor + Cable Loss.
4. The field strength of other emission frequencies were very low against the limit.

Temperature:	27 °C	Humidity:	54 %RH
Ferquency Range:	30M – 1GHz	Measured Distance:	3m
Receiver Detector:	Q.P.	Tested Mode:	IEEE 802.11g
Tested By:	John Yu	Tested Channel:	CH 6 : 2437MHz
Tested Date:	May. 07, 2007	Modulation Type:	OFDM(QAM)

Antenna Polarization:Horizontal

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
623.2587	4.67	19.63	11.2	35.5	46.0	-10.5	14	2.25
648.2358	4.75	19.98	11.5	36.2	46.0	-9.8	52	2.23
656.3245	4.79	20.24	11.3	36.3	46.0	-9.7	41	2.03
686.2587	4.95	21.08	10.3	36.3	46.0	-9.7	25	1.74
717.2587	5.08	22.08	11.9	39.1	46.0	-6.9	36	2.32
782.3256	5.28	22.96	11.4	39.6	46.0	-6.4	52	2.35

Antenna Polarization:Vertical

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
485.3658	4.05	17.95	10.2	32.2	46.0	-13.8	41	1.39
623.2587	4.67	19.63	11.9	36.2	46.0	-9.8	54	1.25
648.2358	4.75	19.98	11.9	36.6	46.0	-9.4	45	1.46
686.2587	4.95	21.08	12.0	38.0	46.0	-8.0	124	1.49
717.2587	5.08	22.08	12.5	39.7	46.0	-6.3	225	1.71
782.3256	5.28	22.96	12.1	40.3	46.0	-5.7	128	1.46

NOTE :

1. Measurement uncertainty is +/-2dB.
2. "*": Measurement does not apply for this frequency.
3. Emissiom Level = Reading Value + Ant. Factor + Cable Loss.
4. The field strength of other emission frequencies were very low against the limit.

Temperature:	27 °C	Humidity:	54 %RH
Ferquency Range:	30M – 1GHz	Measured Distance:	3m
Receiver Detector:	Q.P.	Tested Mode:	IEEE 802.11g
Tested By:	John Yu	Tested Channel:	CH 11 : 2462MHz
Tested Date:	May. 07, 2007	Modulation Type:	OFDM(QAM)

Antenna Polarization:Horizontal

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
625.3254	4.68	19.65	10.9	35.2	46.0	-10.8	25	2.35
647.2587	4.75	19.97	10.7	35.4	46.0	-10.6	41	2.54
655.3250	4.79	20.20	11.9	36.9	46.0	-9.1	74	2.29
688.3587	4.97	21.14	11.4	37.5	46.0	-8.5	14	2.45
719.3250	5.09	22.16	11.1	38.4	46.0	-7.6	25	2.47
780.3256	5.27	23.00	11.2	39.5	46.0	-6.5	36	1.79

Antenna Polarization:Vertical

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
487.2548	4.06	17.97	11.2	33.2	46.0	-12.8	214	1.62
625.3254	4.68	19.65	11.4	35.7	46.0	-10.3	211	1.54
647.2587	4.75	19.97	12.3	37.0	46.0	-9.0	252	1.52
688.3587	4.97	21.14	13.5	39.6	46.0	-6.4	11	1.41
719.3250	5.09	22.16	13.4	40.7	46.0	-5.3	35	1.65
780.3256	5.27	23.00	12.9	41.2	46.0	-4.8	45	1.52

NOTE :

1. Measurement uncertainty is +/-2dB.
2. "*": Measurement does not apply for this frequency.
3. Emissiom Level = Reading Value + Ant. Factor + Cable Loss.
4. The field strength of other emission frequencies were very low against the limit.

Temperature:	27 °C	Humidity:	54 %RH
Ferquency Range:	1-25GHz	Measured Distance:	3m
Receiver Detector:	PK. or AV.	Tested Mode:	IEEE 802.11g
Tested By:	John Yu	Tested Channel:	CH 1 : 2412MHz
Tested Date:	May. 07, 2007	Modulation Type:	OFDM(QAM)

Antenna Polarization: Horizontal

Frequency (MHz)	Corret Factor (dB)	Antenna Factor (dB/m)	Reading (dBμV)		Emission (dBμV/m)		Limit (dBμV/m)		Margin (dB)		AZ(°)	EL(m)
			PK	AV	PK	AV	PK	AV	PK	AV		
2412.00	-32.18	28.56	104.2	81.2	100.6	77.6	N/A	N/A	N/A	N/A	45.0	1.35
2400.00	-32.16	28.00	58.2	41.9	54.0	37.7	74.0	54.0	-20.0	-16.3	25.0	1.45
2392.10	-32.19	27.98	54.2	43.6	50.0	39.4	74.0	54.0	-24.0	-14.6	152.0	1.63
2420.32	-32.19	28.04	56.2	47.1	52.0	42.9	74.0	54.0	-22.0	-11.1	78.0	1.25
4824.00	-30.41	33.66	57.2	34.2	60.4	37.4	74.0	54.0	-13.6	-16.6	325.0	1.45
7236.00	-28.98	36.29	*	*	*	*	74.0	54.0	*	*	147.0	1.41

Antenna Polarization: Vertical

Frequency (MHz)	Corret Factor (dB)	Antenna Factor (dB/m)	Reading (dBμV)		Emission (dBμV/m)		Limit (dBμV/m)		Margin (dB)		AZ(°)	EL(m)
			PK	AV	PK	AV	PK	AV	PK	AV		
2412.00	-32.18	28.02	108.4	83.2	104.2	79.0	N/A	N/A	N/A	N/A	14.0	1.26
2400.00	-32.16	28.00	59.2	47.2	55.0	43.0	74.0	54.0	-19.0	-11.0	23.0	1.47
2392.10	-32.19	27.98	58.2	41.2	54.0	37.0	74.0	54.0	-20.0	-17.0	254.0	1.37
2420.32	-32.19	28.04	57.5	43.3	53.3	39.1	74.0	54.0	-20.7	-14.9	244.0	1.42
4824.00	-30.41	33.66	59.3	40.1	62.5	43.3	74.0	54.0	-11.5	-10.7	22.0	1.36
7236.00	-28.98	36.29	55.2	35.0	62.5	42.3	74.0	54.0	-11.5	-11.7	38.0	1.25

NOTE :

1. Measurement uncertainty is +/-2dB.
2. "*": Measurement does not apply for this frequency.
3. Emission Level = Reading Value + Ant. Factor + Cable Loss.
4. The field strength of other emission frequencies were very low against the limit.

Temperature:	27 °C	Humidity:	54 %RH
Ferquency Range:	1-25GHz	Measured Distance:	3m
Receiver Detector:	PK. or AV.	Tested Mode:	IEEE 802.11g
Tested By:	John Yu	Tested Channel:	CH 6 : 2437MHz
Tested Date:	May. 07, 2007	Modulation Type:	OFDM(QAM)

Antenna Polarization: Horizontal

Frequency (MHz)	Corret Factor (dB)	Antenna Factor (dB/m)	Reading (dBμV)		Emission (dBμV/m)		Limit (dBμV/m)		Margin (dB)		AZ(°)	EL(m)
			PK	AV	PK	AV	PK	AV	PK	AV		
2437.00	-32.18	28.56	110.4	85.1	106.8	81.5	N/A	N/A	N/A	N/A	124.0	1.52
2400.00	-32.16	28.00	57.2	45.9	53.0	41.7	74.0	54.0	-21.0	-12.3	266.0	1.25
2387.26	-32.21	27.97	56.9	48.0	52.7	43.8	74.0	54.0	-21.3	-10.2	25.0	1.42
2421.39	-32.19	28.04	*	*	*	*	74.0	54.0	*	*	*	*
4874.00	-30.28	33.70	55.1	36.1	58.5	39.5	74.0	54.0	-15.5	-14.5	214.0	1.36
7311.00	-29.07	36.35	*	*	*	*	74.0	54.0	*	*	*	*

Antenna Polarization: Vertical

Frequency (MHz)	Corret Factor (dB)	Antenna Factor (dB/m)	Reading (dBμV)		Emission (dBμV/m)		Limit (dBμV/m)		Margin (dB)		AZ(°)	EL(m)
			PK	AV	PK	AV	PK	AV	PK	AV		
2437.00	-32.18	28.02	112.5	86.3	108.3	82.1	N/A	N/A	N/A	N/A	145.0	1.51
2400.00	-32.16	28.00	59.2	48.0	55.0	43.8	74.0	54.0	-19.0	-10.2	157.0	1.32
2387.26	-32.21	27.97	58.6	44.1	54.4	39.9	74.0	54.0	-19.6	-14.1	132.0	1.45
2421.39	-32.19	28.04	55.9	40.1	51.7	35.9	74.0	54.0	-22.3	-18.1	250.0	1.62
4874.00	-30.28	33.70	56.9	38.9	60.3	42.3	74.0	54.0	-13.7	-11.7	44.0	1.45
7311.00	-29.07	36.35	*	*	*	*	74.0	54.0	*	*	*	*

NOTE :

1. Measurement uncertainty is +/-2dB.
2. "*": Measurement does not apply for this frequency.
3. Emission Level = Reading Value + Ant. Factor + Cable Loss.
4. The field strength of other emission frequencies were very low against the limit.

Temperature:	27 °C	Humidity:	54 %RH
Ferquency Range:	1-25GHz	Measured Distance:	3m
Receiver Detector:	PK. or AV.	Tested Mode:	IEEE 802.11g
Tested By:	John Yu	Tested Channel:	CH 11 : 2462MHz
Tested Date:	May. 07, 2007	Modulation Type:	OFDM(QAM)

Antenna Polarization: Horizontal

Frequency (MHz)	Corret Factor (dB)	Antenna Factor (dB/m)	Reading (dBμV)		Emission (dBμV/m)		Limit (dBμV/m)		Margin (dB)		AZ(°)	EL(m)
			PK	AV	PK	AV	PK	AV	PK	AV		
2462.00	-32.18	28.56	110.5	85.0	106.8	81.4	N/A	N/A	N/A	N/A	247.0	1.23
2400.00	-32.16	28.00	57.2	45.1	53.0	40.9	74.0	54.0	-21.0	-13.1	45.0	1.45
2390.12	-32.20	27.98	56.2	47.1	52.0	42.9	74.0	54.0	-22.0	-11.1	154.0	1.36
2423.54	-32.20	28.05	*	*	*	*	74.0	54.0	*	*	*	*
4924.00	-30.23	33.74	55.2	39.0	58.7	42.5	74.0	54.0	-15.3	-11.5	265.0	1.23
7386.00	-28.94	36.41	*	*	*	*	74.0	54.0	*	*	*	*

Antenna Polarization: Vertical

Frequency (MHz)	Corret Factor (dB)	Antenna Factor (dB/m)	Reading (dBμV)		Emission (dBμV/m)		Limit (dBμV/m)		Margin (dB)		AZ(°)	EL(m)
			PK	AV	PK	AV	PK	AV	PK	AV		
2462.00	-32.18	28.02	108.2	83.2	104.0	79.1	N/A	N/A	N/A	N/A	52.0	1.54
2400.00	-32.16	28.00	58.2	42.3	54.0	38.1	74.0	54.0	-20.0	-15.9	74.0	1.42
2390.12	-32.20	27.98	57.3	46.1	53.1	41.9	74.0	54.0	-20.9	-12.1	85.0	1.36
2423.54	-32.20	28.05	54.2	44.2	50.0	40.0	74.0	54.0	-24.0	-14.0	75.0	1.19
4924.00	-30.23	33.74	56.3	34.9	59.8	38.4	74.0	54.0	-14.2	-15.6	175.0	1.27
7386.00	-28.94	36.41	*	*	*	*	74.0	54.0	*	*	*	*

NOTE :

1. Measurement uncertainty is +/-2dB.
2. "*": Measurement does not apply for this frequency.
3. Emission Level = Reading Value + Ant. Factor + Cable Loss.
4. The field strength of other emission frequencies were very low against the limit.

6. 6 dB Bandwidth

6.1 LIMIT

Frequency Range (MHz)	Min. Limit (kHz)
2400 ~ 2483.5	500

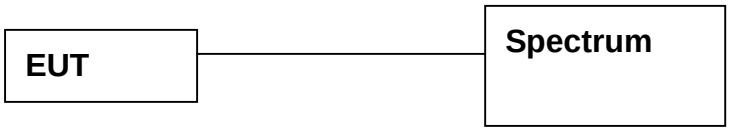
6.2 TEST EQUIPMENT

The following test equipment was used during the test:

EQUIPMENT/ FACILITIES	SPECIFICATIONS	MANUFACTURER	MODEL#/ SERIAL#	DUE DATE OF CAL. & CAL. CENTER
SPECTRUM	9kHz-7GHz	ROHDE & SCHWARZ	FSP7/ 839511/010	APR. 2008 R&S

NOTE: The calibration interval of the above test equipment is one year and the calibrations are traceable to NML/ROC and NIST/USA.

6.3 TEST SET-UP



The EUT was connected to a spectrum through a 50Ω RF cable.

6.4 TEST PROCEDURE

The EUT could be controlled its channel.
Printed out the test result from the spectrum by hard copy function.

6.5 EUT OPERATING CONDITION

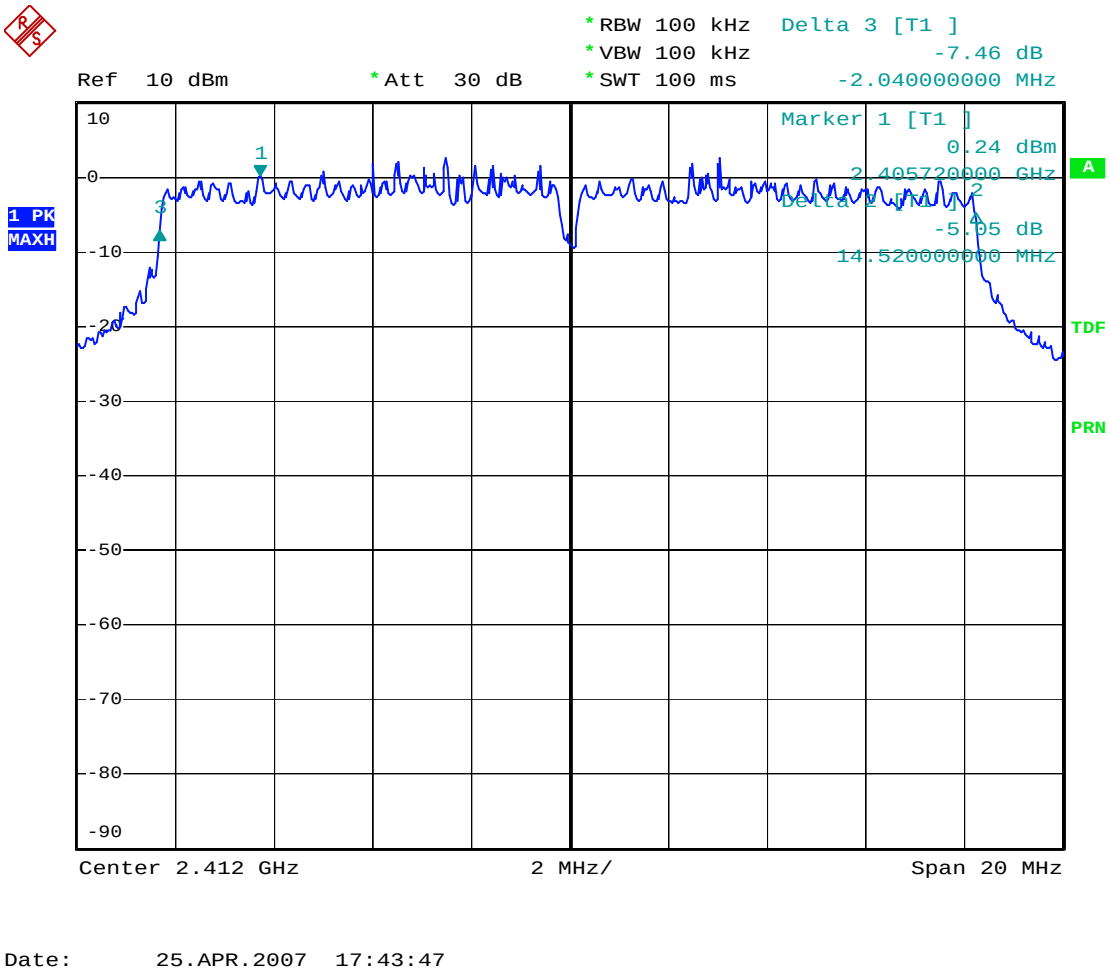
Same as section 4.5 of this report.

6.6 TEST RESULT

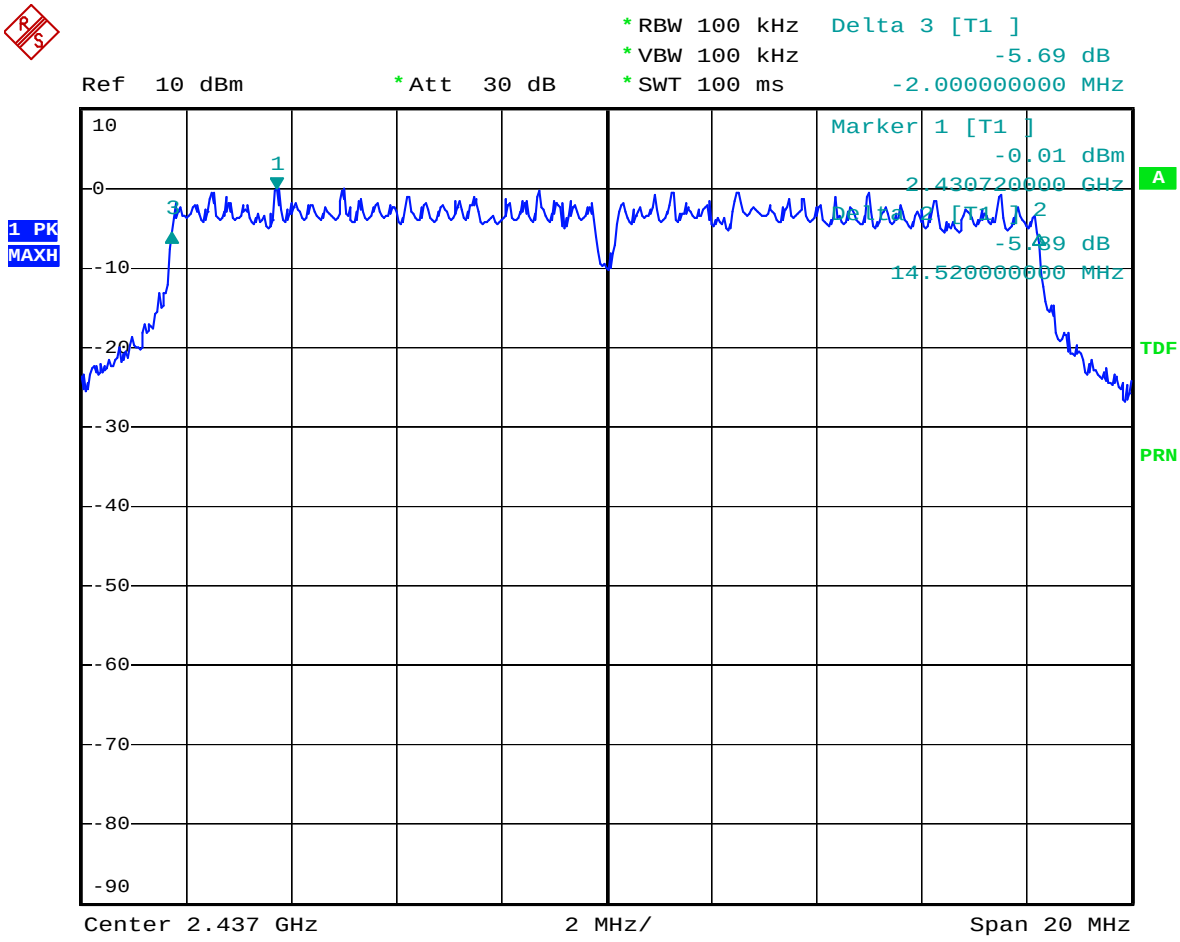
Temperature:	26°C	Humidity:	55%RH
Spectrum Detector:	PK	Tested by:	John Yu
Tested Date:	Apr. 25, 2007	Test Mode:	IEEE 802.11b
Test Result:	PASS		

CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	6dB DOWN BW (MHz)
1	2412	16.43
6	2437	16.38
11	2462	16.45

CH1:

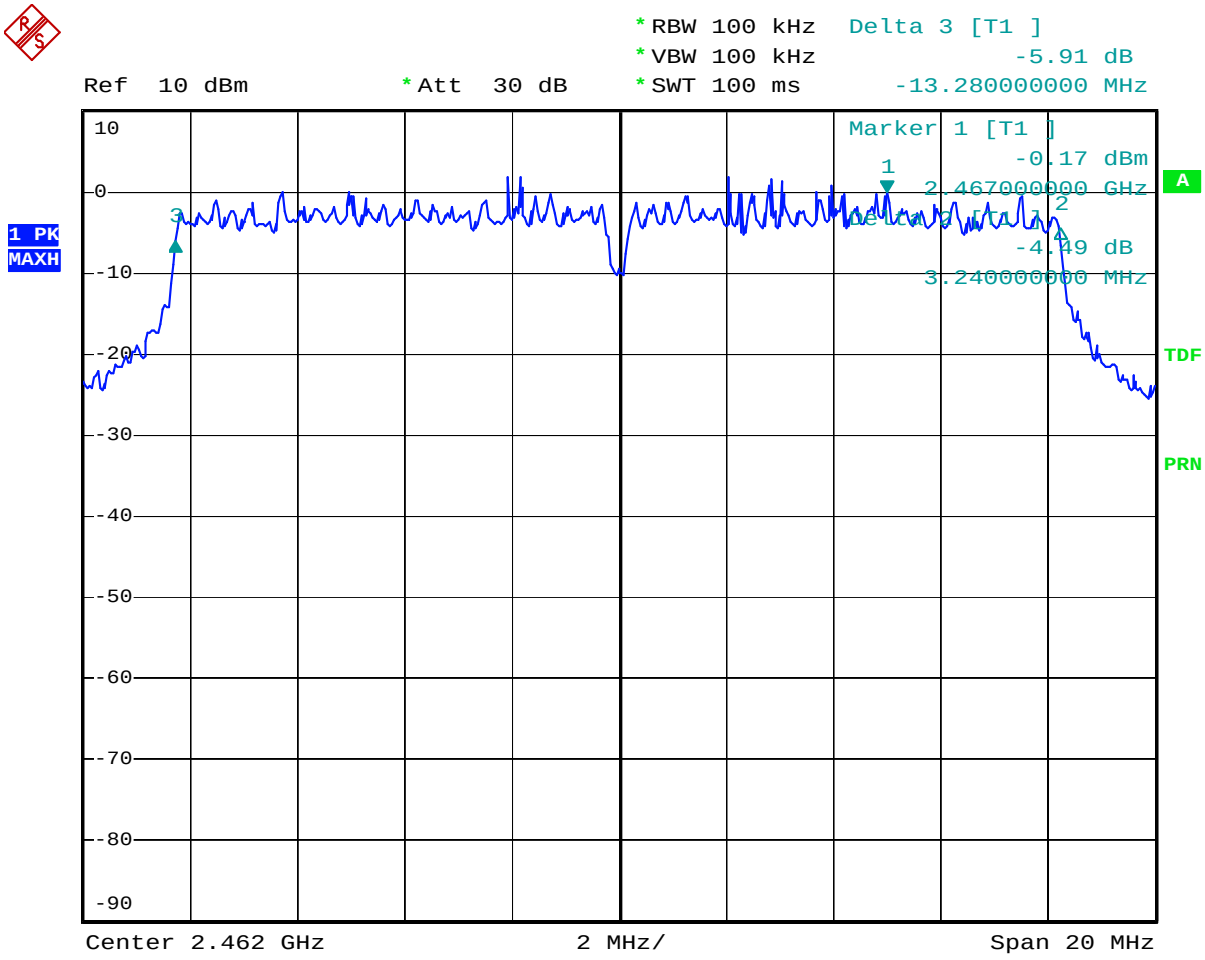


CH6:



Date: 25.APR.2007 17:10:43

CH11:

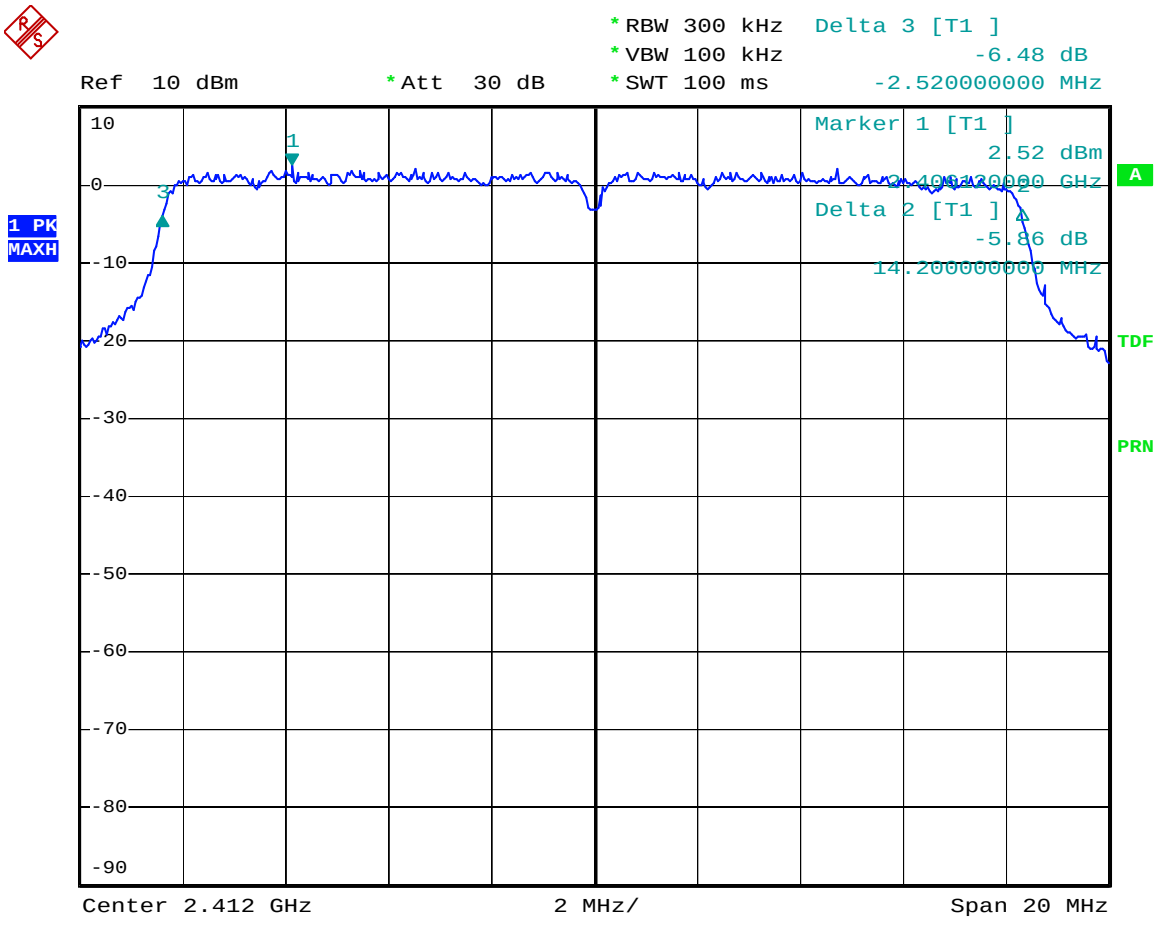


Date: 25.APR.2007 17:07:36

Temperature:	26°C	Humidity:	55%RH
Spectrum Detector:	PK	Tested by:	John Yu
Tested Date:	Apr. 25, 2007	Test Mode:	IEEE 802.11g
Test Result:	PASS		

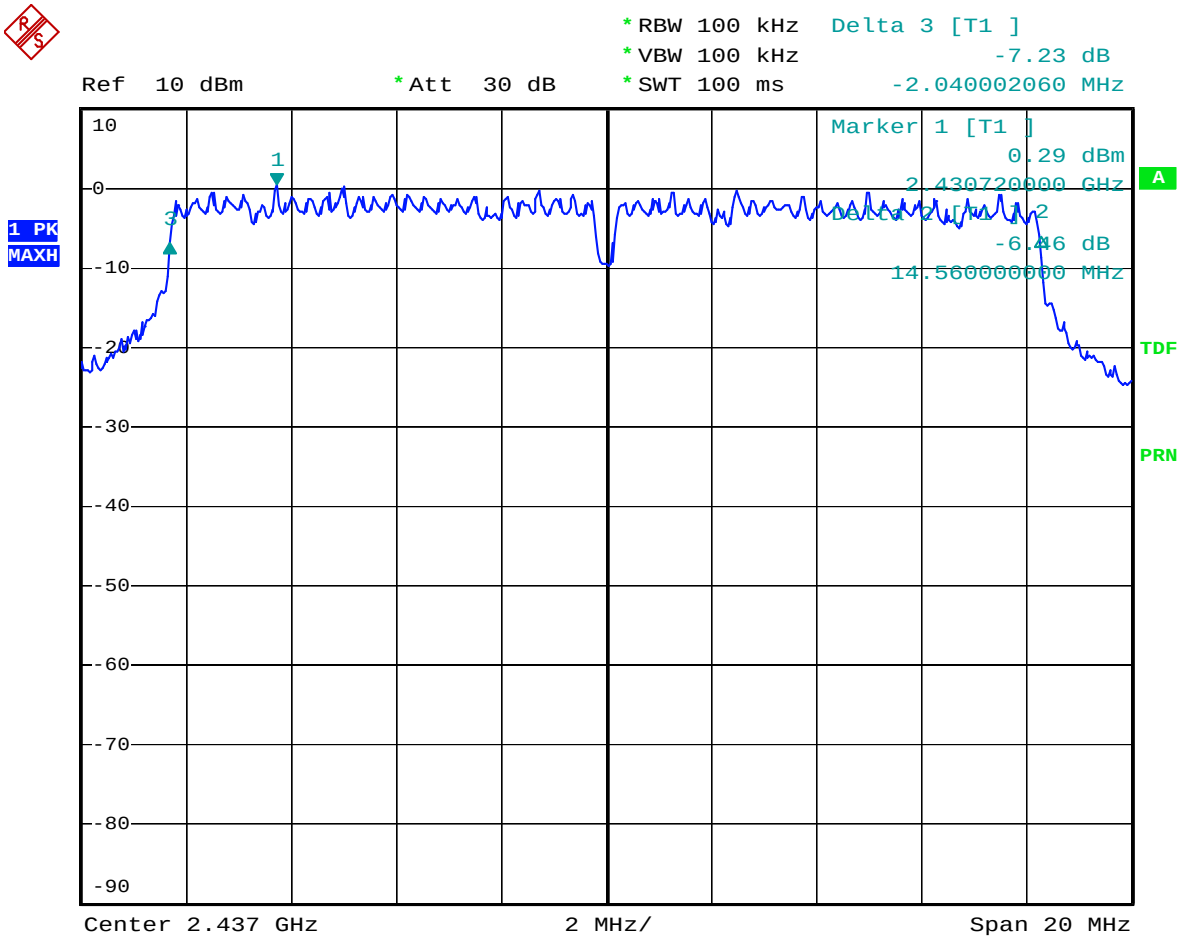
CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	6dB DOWN BW (MHz)
1	2412	16.45
6	2437	16.43
11	2462	16.42

CH1:



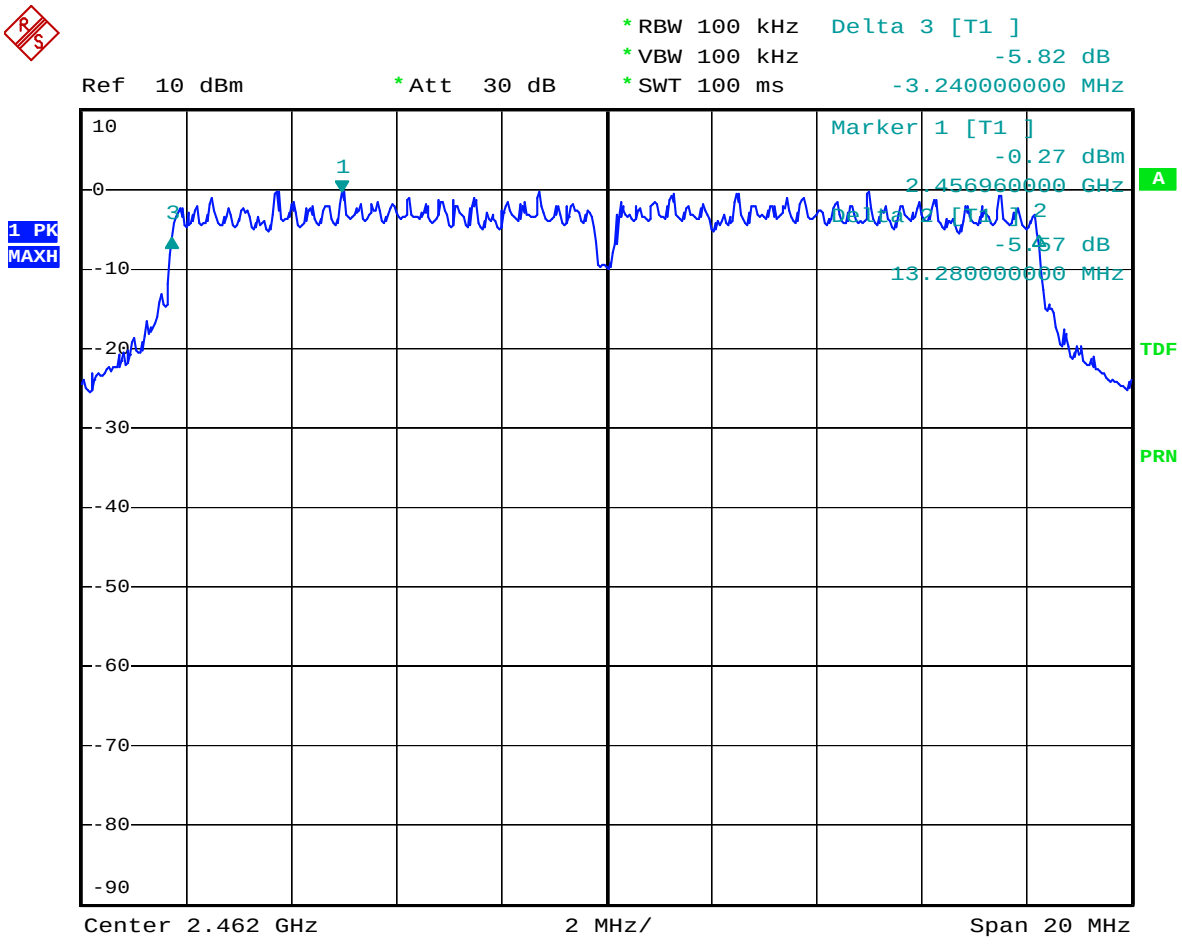
Date: 25.APR.2007 15:03:44

CH6:



Date: 25.APR.2007 15:21:41

CH11:



Date: 25.APR.2007 15:25:30

7 PEAK POWER TEST

7.1 LIMIT

FCC Part15, Subpart C Section 15.247.

Frequency Range (MHz)	Limit(w)				
	Quantity of Hopping Channel	50	25	15	75
902-928		1(30dBm)	0.125(21dBm)	NA	NA
2400-2483.5		NA	NA	0.125(21dBm)	1(30dBm)
5725-5850		NA	NA	NA	1(30dBm)

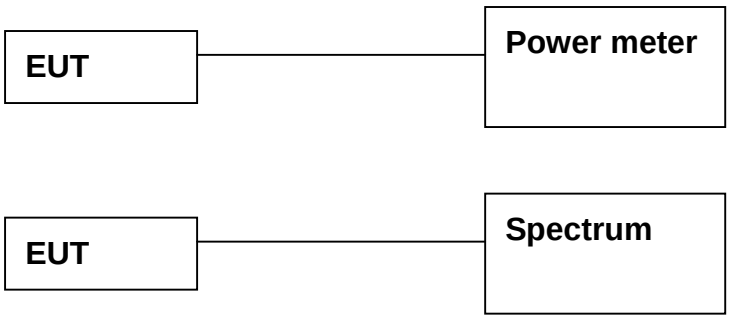
7.2 TEST EQUIPMENT

The following test equipment was used during the test：

Equipment/ Facilities	Specifications	Manufacturer	Model#/ Serial#	Due Date of Cal. & Cal. Center
SPECTRUM	9kHz-7GHz	ROHDE & SCHWARZ	FSP7/ 839511/010	MAR. 2008 ETC
POWER METER	N/A	BOONTON	4232A/ 29001	MAY 2008 ETC
POWER SENSOR	DC-18GHz 0.3μW-100mW 50Ω	BOONTON	51011-EMC/ 31184	JUN. 2007 ETC

NOTE: The calibration interval of the above test equipment is one year and the calibrations are traceable to NML/ROC and NIST/USA.

7.3 TEST SET-UP



The EUT was connected to a spectrum through a 50Ω RF cable.

7.4 TEST PROCEDURE

The EUT could control its channel.
Printed out the test result from the spectrum by hard copy function.
Recorded the read value of the power meter.

7.5 EUT OPERATING CONDITION

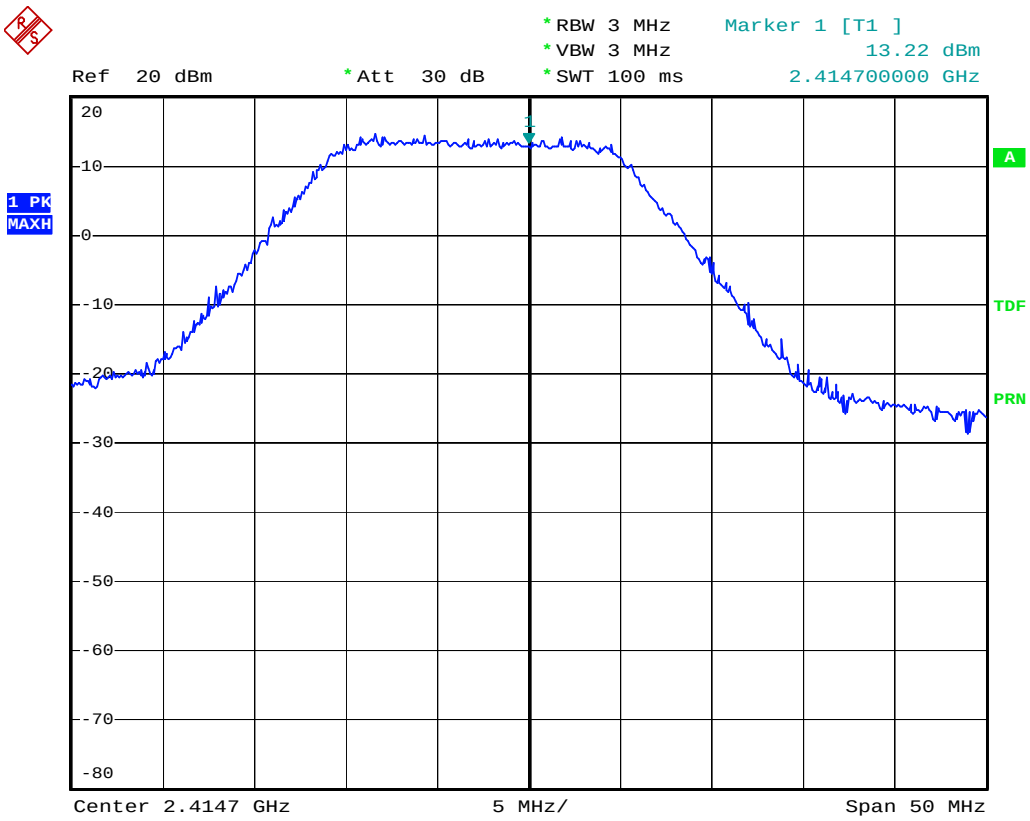
Same as section 4.5 of this report.

7.6 TEST RESULT

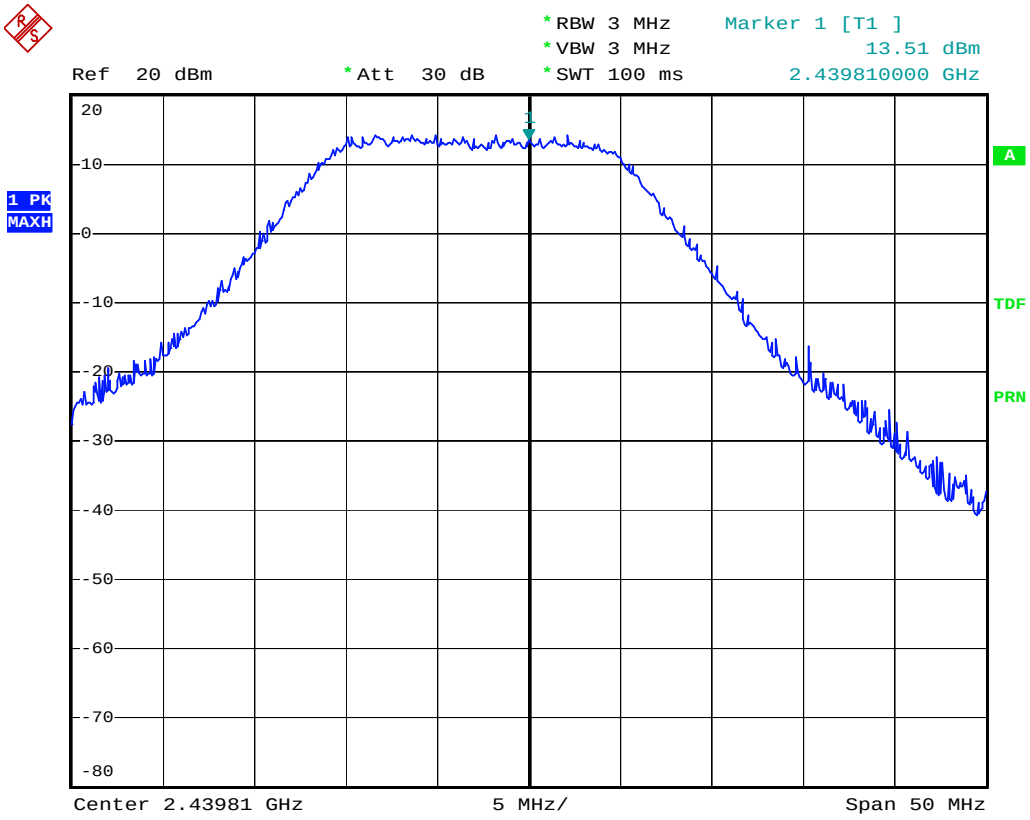
Temperature:	23°C	Humidity:	65%RH
Spectrum Detector:	PK	Tested by:	John Yu
Tested Date:	Apr. 25, 2007	Test Mode:	IEEE802.11b
Test Result:	PASS		

Channel Number	Channel Frequency (MHz)	Peak Output Power (dBm)	Peak Power Limit (dBm)
1	2412.0000	13.22	30
6	2437.0000	13.51	30
11	2462.0000	12.79	30

CH0:

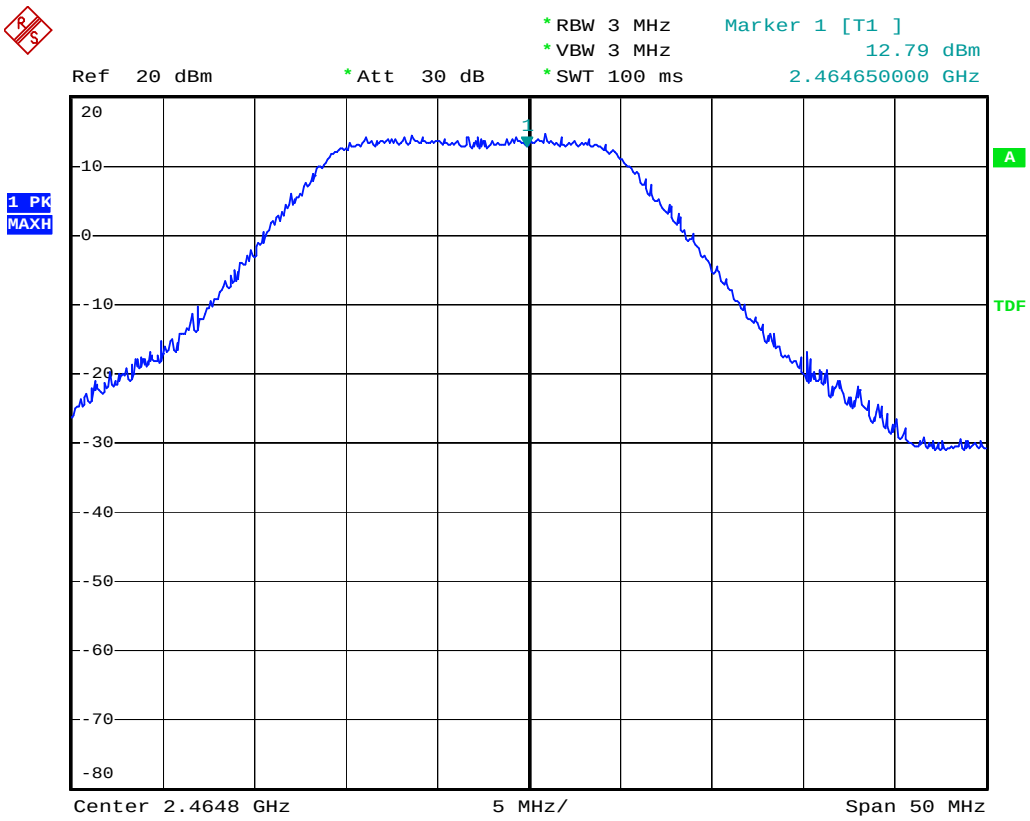

*RBW 3 MHz
*VBW 3 MHz
*SWT 100 ms
Marker 1 [T1]
13.22 dBm
2.414700000 GHz
Ref 20 dBm
*Att 30 dB
1 PK
MAXH
A
TDF
PRN
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
Center 2.4147 GHz
5 MHz/
Span 50 MHz
Date: 25.APR.2007 20:32:33

CH6:



Date: 25.APR.2007 20:30:28

CH11:

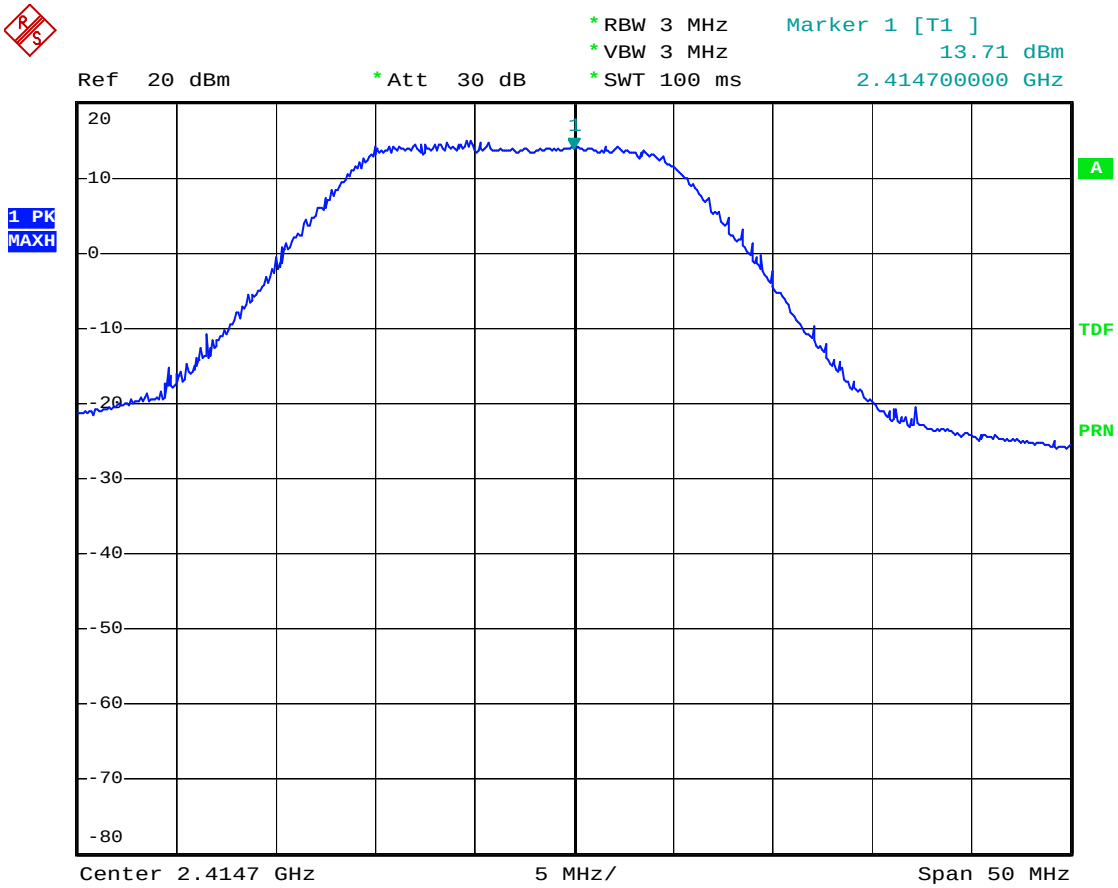


Date: 25.APR.2007 20:28:54

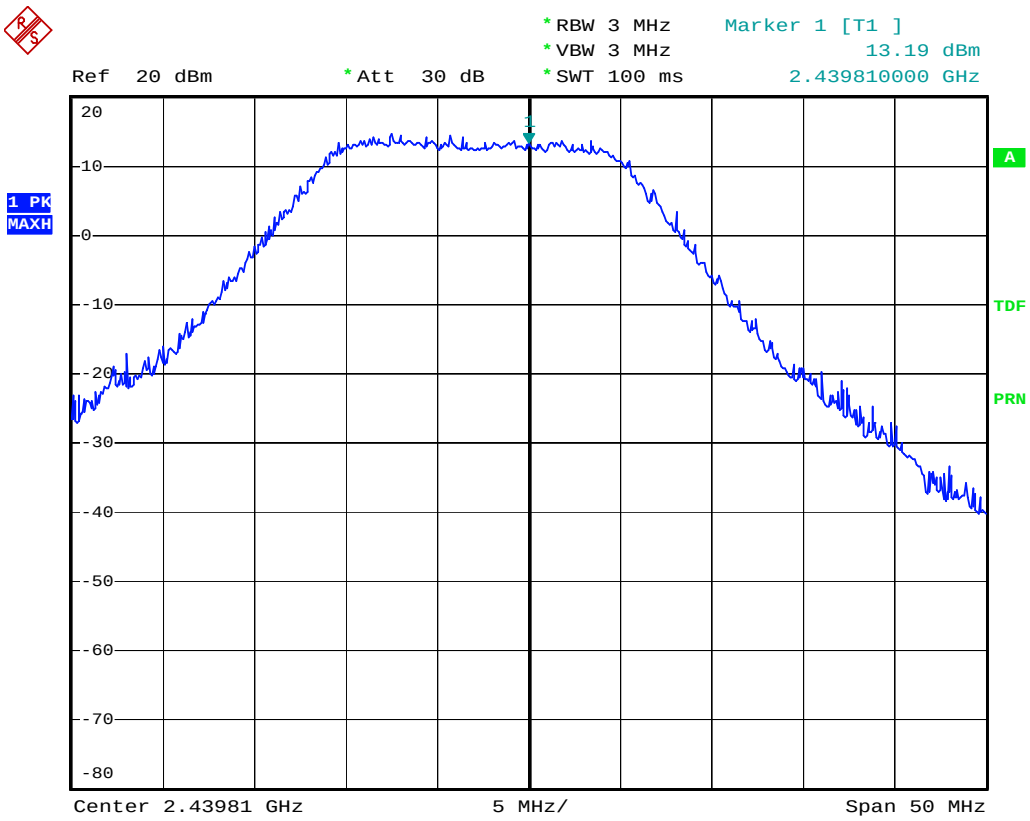
Temperature:	23°C	Humidity:	65%RH
Spectrum Detector:	PK	Tested by:	John Yu
Tested Date:	Apr. 25, 2007	Test Mode:	IEEE802.11g
Test Result:	PASS		

Channel Number	Channel Frequency (MHz)	Peak Output Power (dBm)	Peak Power Limit (dBm)
1	2412.0000	13.71	30
6	2437.0000	13.19	30
11	2462.0000	12.99	30

CH0:

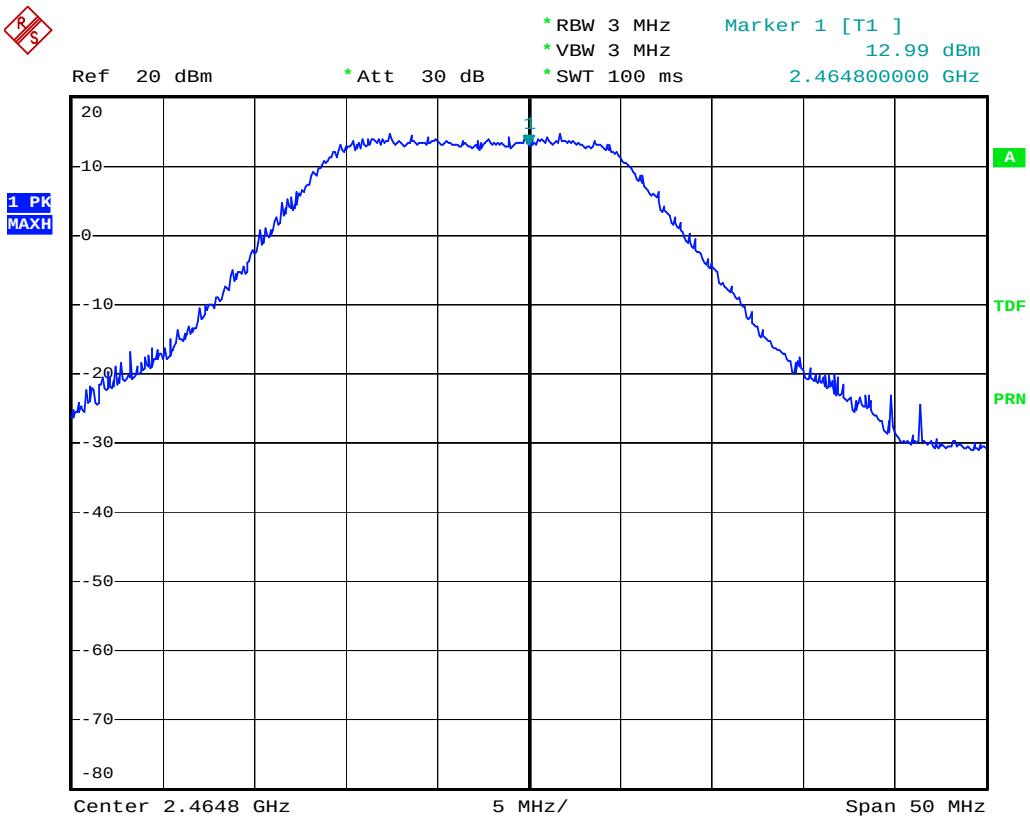


CH6:



Date: 25.APR.2007 18:20:00

CH11:



Date: 25.APR.2007 18:21:57

8 BAND EDGE TEST

8.2 LIMIT

FCC Part15, Subpart C Section 15.247(d). In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

OPERATING FREQUENCY RANGE (MHz)	SPURIOUS EMISSION FREQUENCY (MHz)	LIMIT	
		Peak power ration to emission(dBc)	Emission level(dBuV/m)
902-928	<902	>20	NA
	>928	>20	NA
	960-1240	NA	54
2400-2483.5	<2400	>20	NA
	>2483.5-2500	NA	54
5725-5850	<5350-5460	NA	54
	<5725	>20	NA
	>5850	>20	NA

8.2 TEST EQUIPMENT

The following test equipment was used during the test：

Equipment/ Facilities	Specification	Manufacturer	Model#/ Serial#	Due Date of Cal. & Cal. Center
SPECTRUM	9kHz-7GHz	ROHDE & SCHWARZ	FSP7/ 839511/010	APR. 2008 R&S
EMI TEST RECEIVER	9 kHz TO 2750 MHz	ROHDE & SCHWARZ	ESCS30/ 830245/012	OCT. 2007 ETC
SPECTRUM	9KHz-26.5GHz	HP	8953E/ 3710A03220	MAY 2008 ETC
PRE-AMPLIFIER	1GHz-26.5GHz Gain:30dB	HP	8449B/ 3008A01019	NOV. 2007 ETC
BI-LOG ANTENNA	25 MHz TO 2 GHz	EMCO	3142/ 9701-1124	FEB. 2008 SRT
HORN ANTENNA	1GHz to 18GHz	EMCO	3115/ 9602-4681	DEC. 2007 ETC
OATS	3 - 10 M measurement	SRT	SRT-1	APR. 2008 SRT

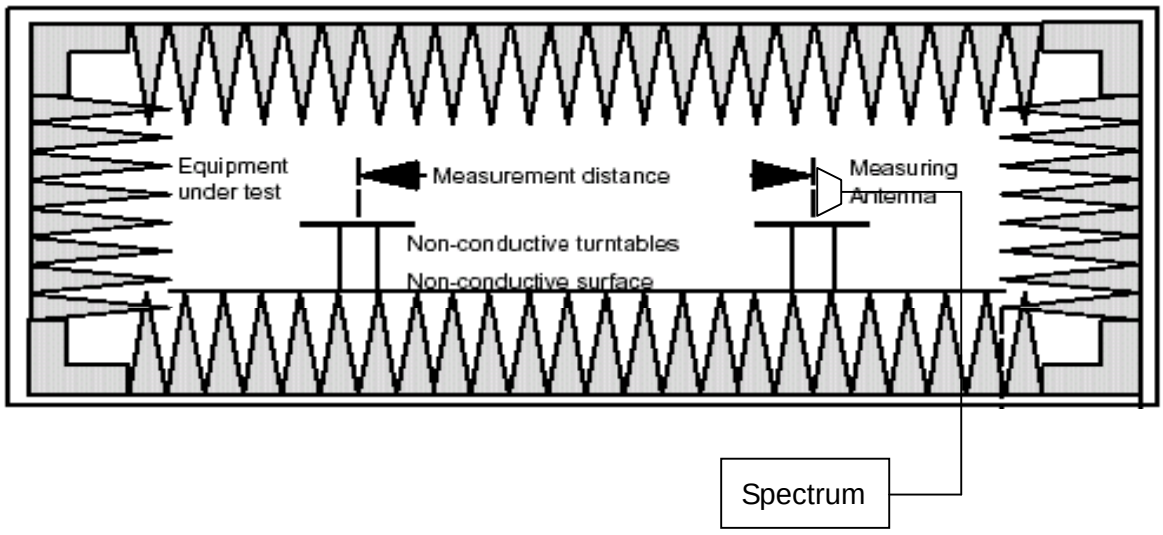
NOTE: The calibration interval of the above test equipment is one year and the calibrations are traceable to NML/ROC and NIST/USA.

8.3 TEST SET-UP

FOR RF CONDUCTED TEST (dBc)

The EUT was connected to the spectrum through a 50Ω RF cable.

FOR RADIATED EMISSION TEST



NOTE :

3. The EUT system was put on a wooden table with 0.8m heights above a ground plane.
4. For the actual test configuration, please refer to the photos of testing.

8.4 TEST PROCEDURE

1. The EUT could be controlled its channel.
   Printed out the test result from the spectrum by hard copy function.
2. The EUT was tested according to the requirement of ANSI C63.4 and CISPR 22.
   The measurements were made at an open area test site with 10 meter measurement distance under 1 GHz and with 3m distance above 1GHz. The frequency spectrum measured started from 30 MHz. Under 1 GHz. All readings were quasi-peak values with 120 kHz resolution bandwidth of the test receiver. Above 1 GHz, the measurements were made at an open area test site with 3 meter measurement distance and all readings were peak and average values with 1 MHz resolution bandwidth of the test receiver. The EUT system was operated in all typical methods by users. The cables connected to EUT and support units were moved to find the maximum emission levels for each frequency.

8.5 EUT OPERATING CONDITION

Same as section 4.5 of this report.

8.6 TEST RESULT

Temperature:	23°C	Humidity:	65%RH
Spectrum Detector:	PK & AV	Tested by:	John Yu
Tested Date:	Apr. 25, 2007	Test Mode:	IEEE 802.11b
Test Result:	PASS		

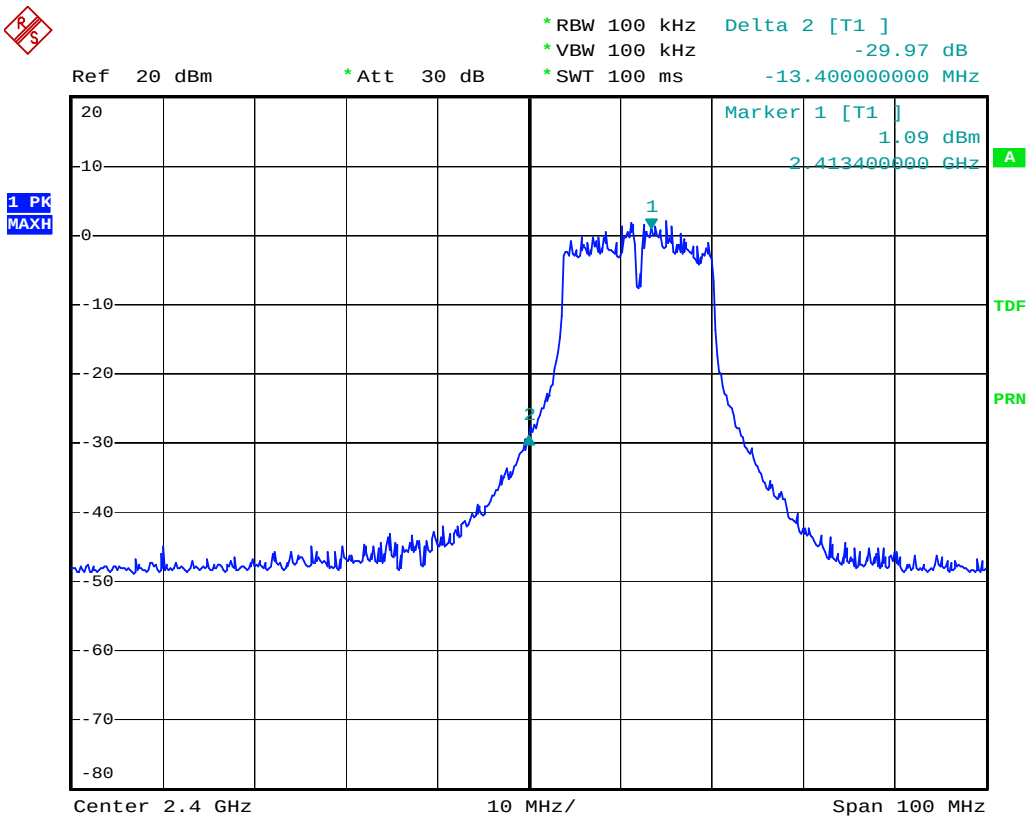
1.Conducted test

Frequency (MHz)	PEAK POWER OUTPUT (dBm)	Result of Band edge (dBc)	Band edge LIMIT (dBc)
<2400	1.09	29.97	>20dBc
>2483.5	-0.23	48.42	>20dBc

2.Radiated emission test

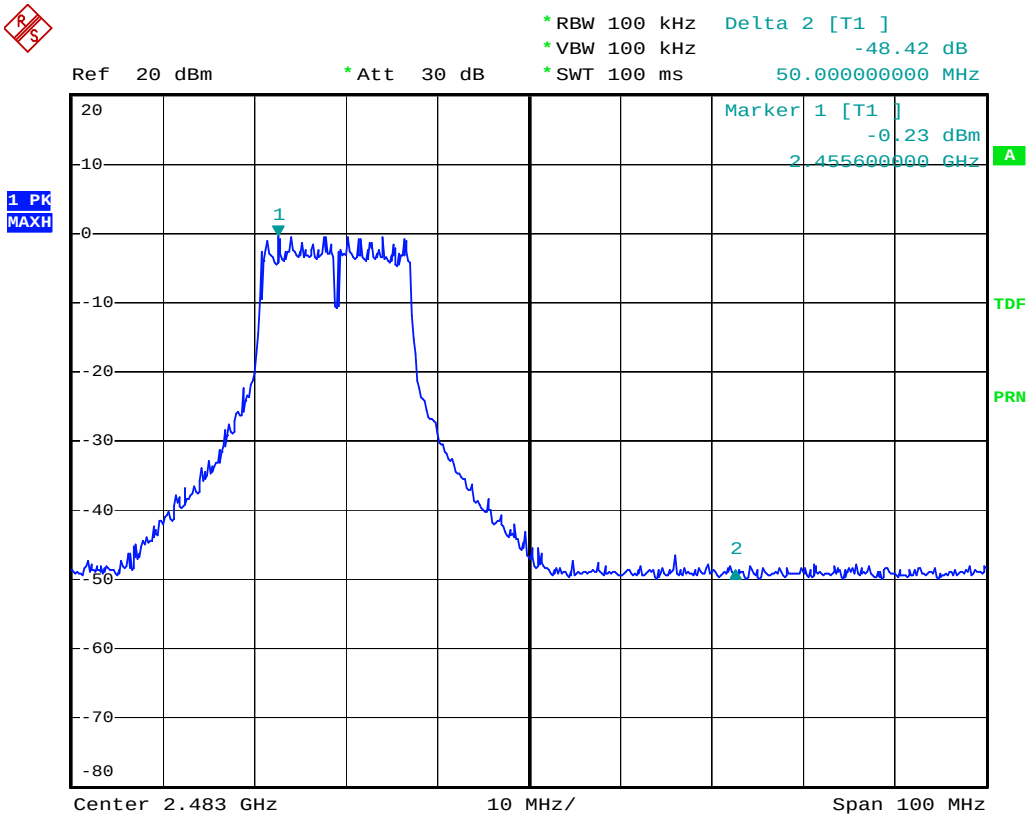
Frequency (MHz)	PEAK POWER OUTPUT (dBuV/m)	Emission read Value (dBuV/m)	Band edge LIMIT (dBuV/m)
<2400	105.3	28.5	54
>2483.5	103.6	26.3	54

<2400:



Date: 25.APR.2007 20:41:47

>2483.5:



Date: 25.APR.2007 20:50:37

Temperature:	23°C	Humidity:	65%RH
Spectrum Detector:	PK & AV	Tested by:	John Yu
Tested Date:	Apr. 25, 2007	Test Mode:	IEEE 802.11g
Test Result:	PASS		

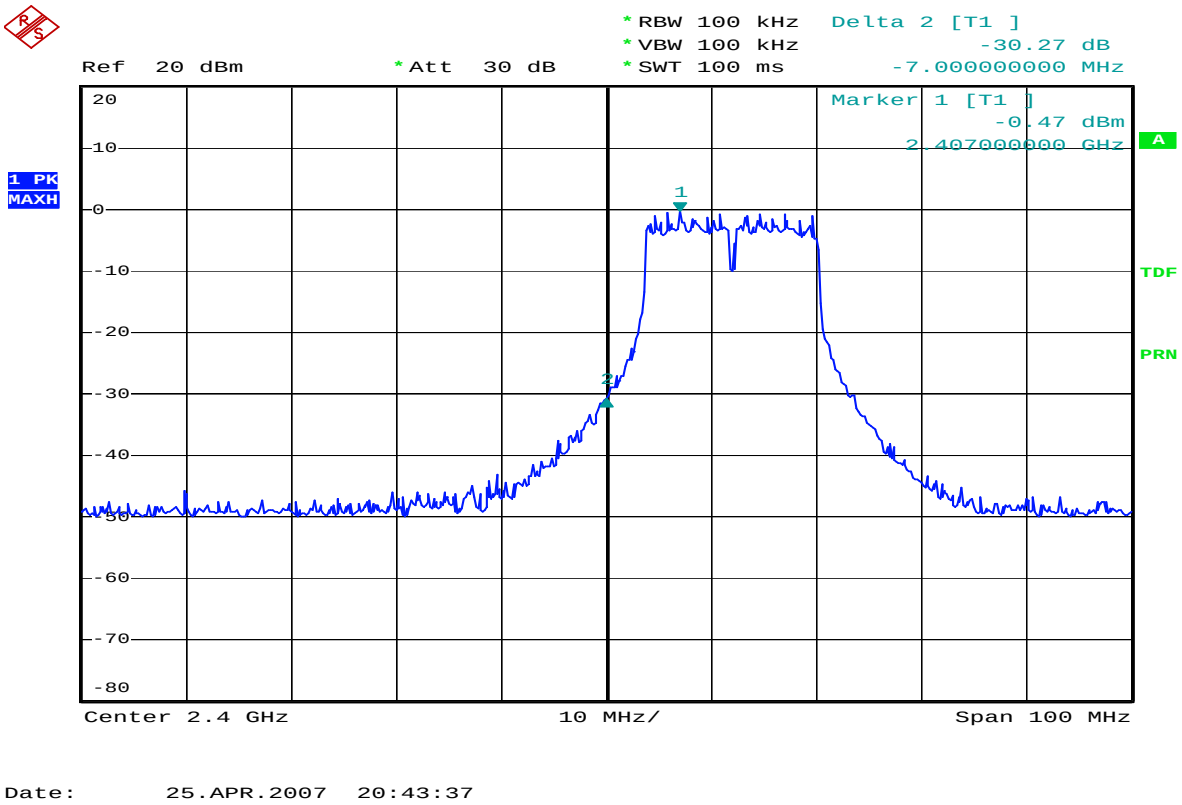
1.Conducted test

Frequency (MHz)	PEAK POWER OUTPUT (dBm)	Result of Band edge (dBc)	Band edge LIMIT (dBc)
<2400	-0.47	30.27	>20dBc
>2483.5	-0.09	48.51	>20dBc

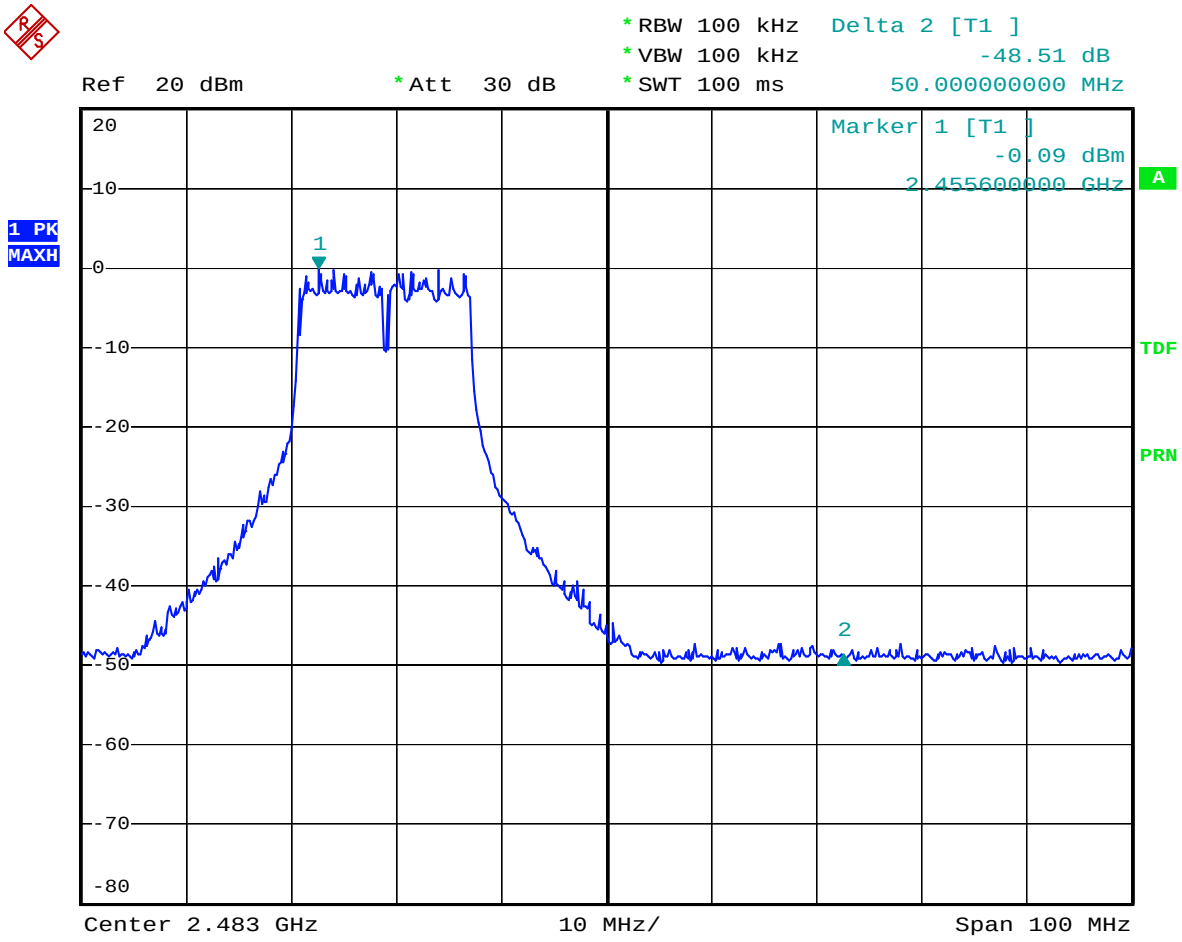
2.Radiated emission test

Frequency (MHz)	PEAK POWER OUTPUT (dBuV/m)	Emission read Value (dBuV/m)	Band edge LIMIT (dBuV/m)
<2400	109.5	32.8	54
>2483.5	110.6	37.1	54

<2400:



>2483.5:



Date: 25.APR.2007 20:48:28

9 POWER DENSITY TEST

9.1 LIMIT

FCC Part15, Subpart C section15.247

Frequency Range (MHz)	Limit (dBm/kHz)
902-928	8dBm/3kHz
2400-2483.5	
5725-5850	

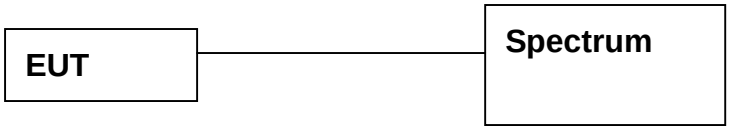
9.2 TEST EQUIPMENT

The following test equipment was used during the radiated emisssion test:

EQUIPMENT/ FACILITIES	SPECIFICATIONS	MANUFACTURER	MODEL#/ SERIAL#	DUE DATE OF CAL. & CAL. CENTER
SPECTRUM	9 kHz-7GHz	ROHDE & SCHWARZ	FSP7/ 839511/010	MAR. 2008 R & S

NOTE: The calibration interval of the above test equipment is one year and the calibrations are traceable to NML/ROC and NIST/USA.

9.3 TEST SET-UP



The EUT was connected to a spectrum through a 50Ω RF cable.

9.4 TEST PROCEDURE

The EUT was operating in transmitter mode and could be controlled its channel. Printed out the test result from the spectrum by hard copy function.

9.5 EUT OPERATING CONDITION

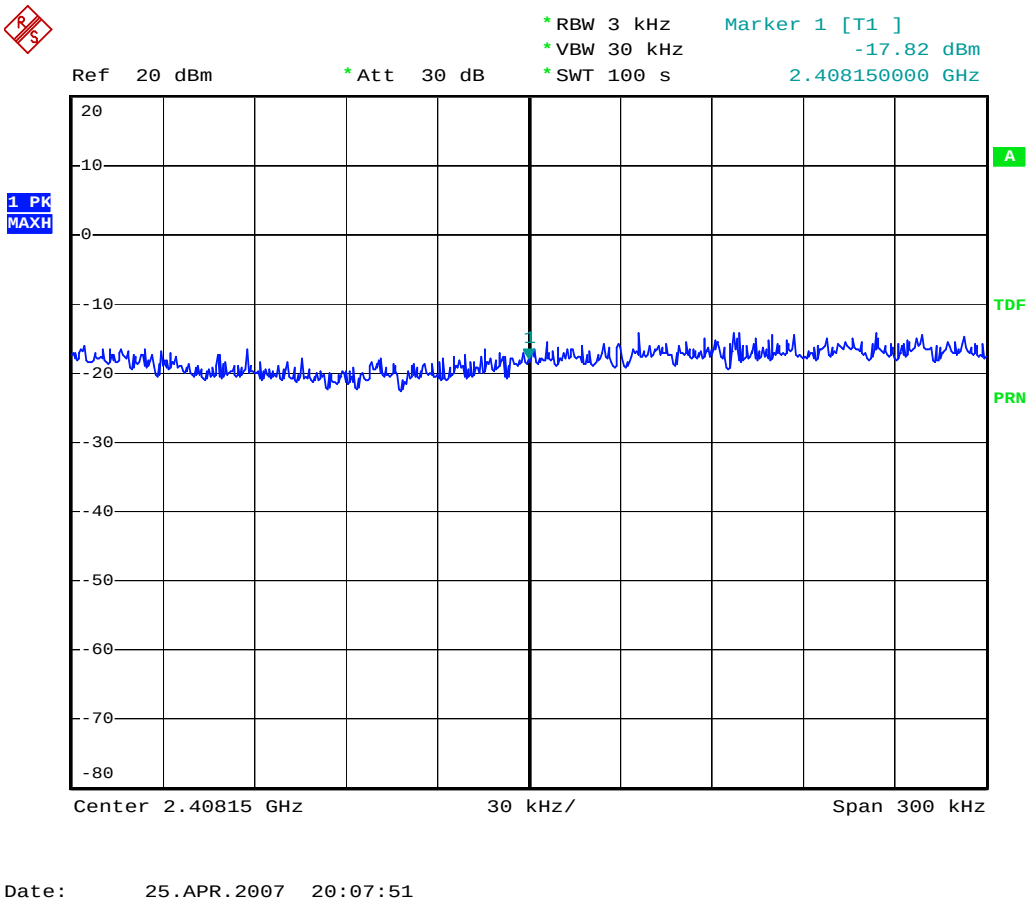
Same as section 4.5 of this report.

9.6 TEST RESULT

Temperature:	23°C	Humidity:	65%RH
Spectrum Detector:	PK.	Tested By:	John Yu
Test Date:	Apr. 25, 2007	Test Mode:	IEEE 802.11b
Tested Result:	Pass	Modulation Type:	DSSS(CCK)

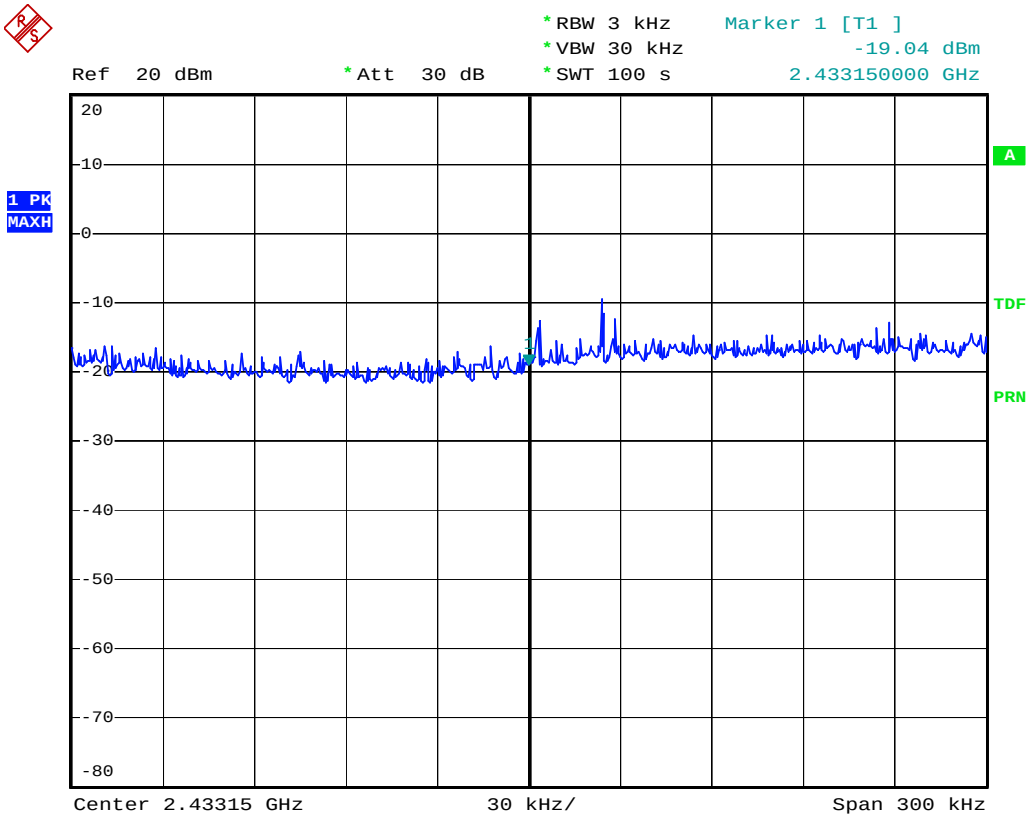
Channel Number	Channel Frequency (MHz)	RF POWER LEVEL IN 3KHz BW (dBm/3kHz)	MAXIMUM Limit (dBm/3kHz)
1	2412.0000	-17.82	8
6	2437.0000	-19.04	8
11	2462.0000	-26.32	8

CH1



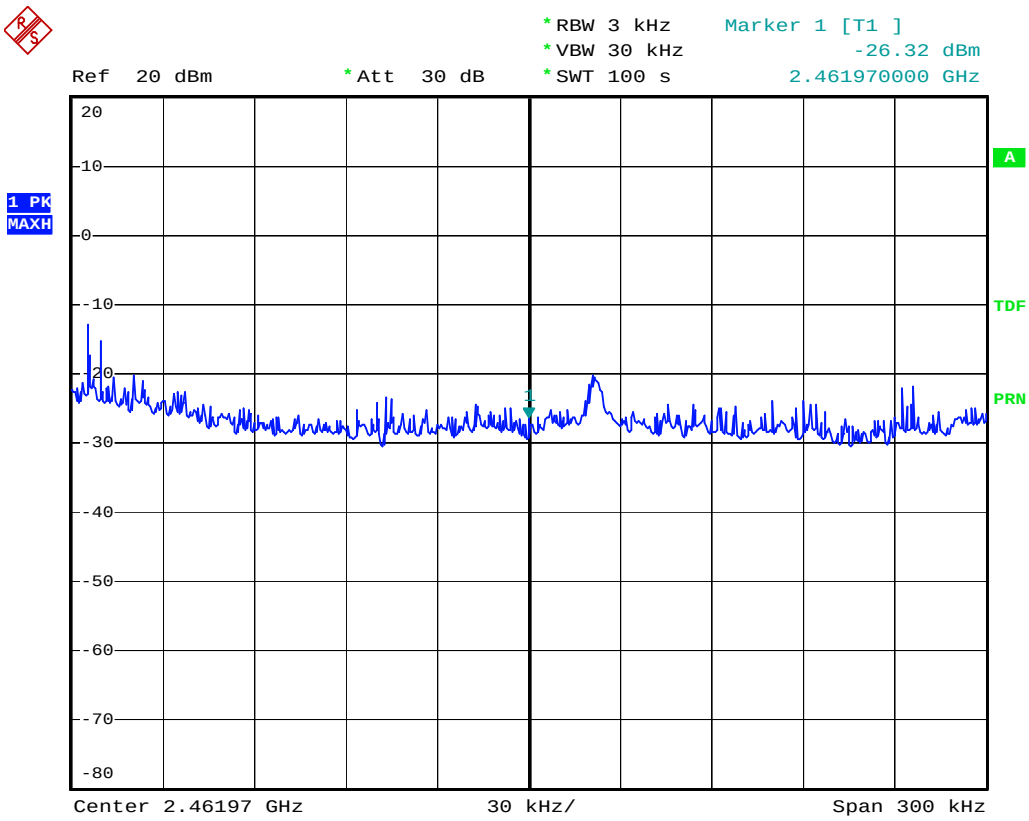
Date: 25.APR.2007 20:07:51

CH6



Date: 25.APR.2007 20:19:52

CH11:

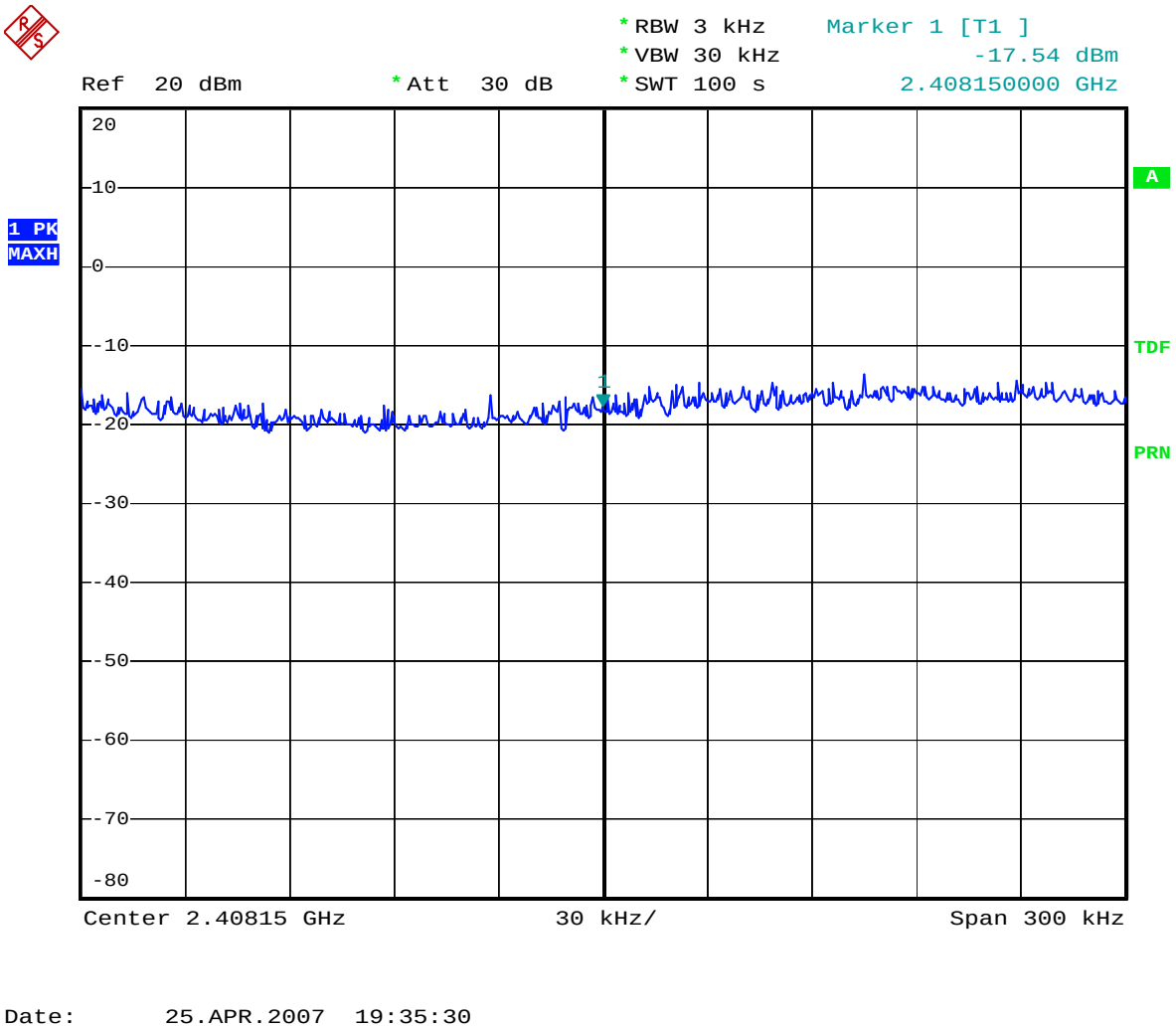


Date: 25.APR.2007 20:24:25

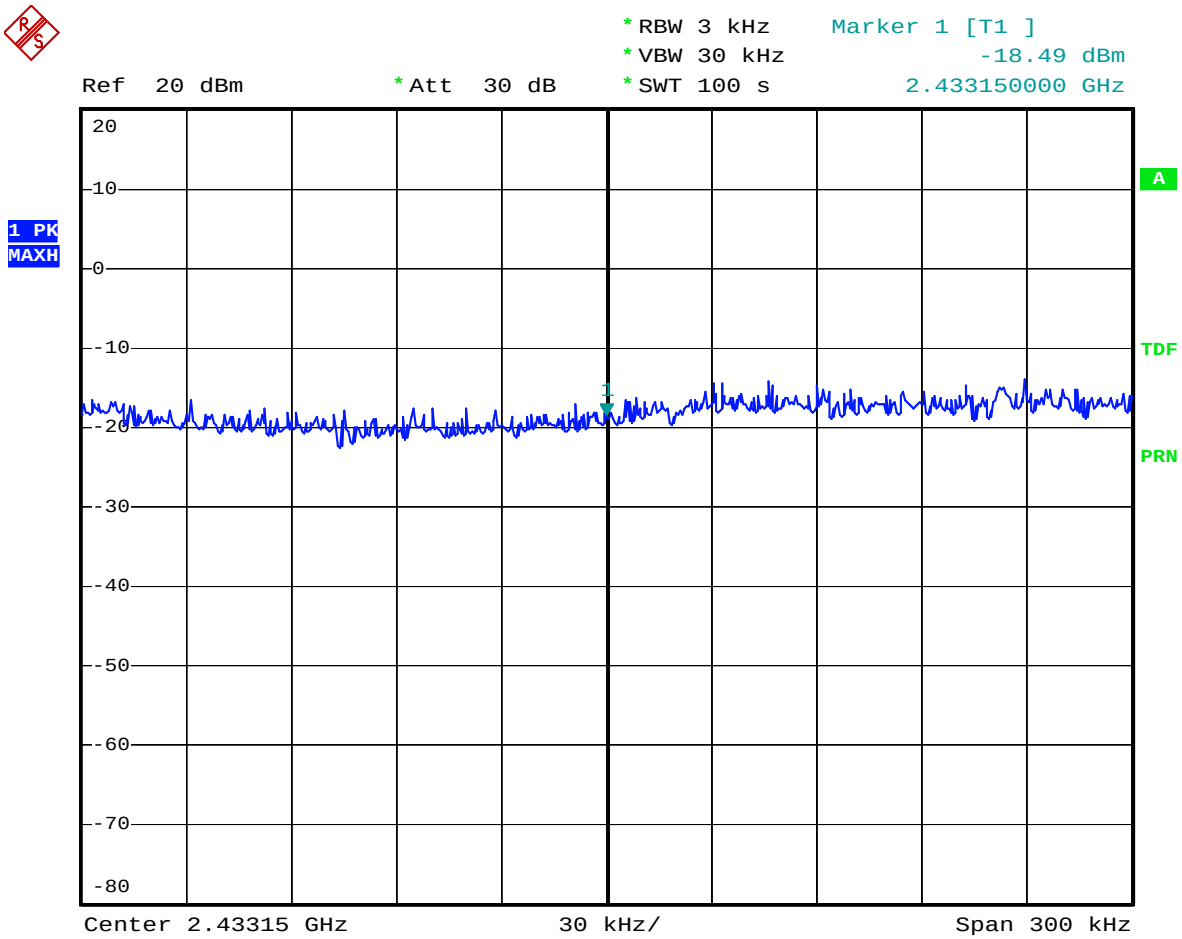
Temperature:	23°C	Humidity:	65%RH
Spectrum Detector:	PK.	Tested By:	John Yu
Test Date:	Apr. 25, 2007	Test Mode:	IEEE 802.11g
Tested Result:	Pass	Modulation Type:	OFDM(QAM)

Channel Number	Channel Frequency (MHz)	RF POWER LEVEL IN 3KHz BW (dBm/3kHz)	MAXIMUM Limit (dBm/3kHz)
1	2412.0000	-17.54	8
6	2437.0000	-18.49	8
11	2462.0000	-27.24	8

CH1:

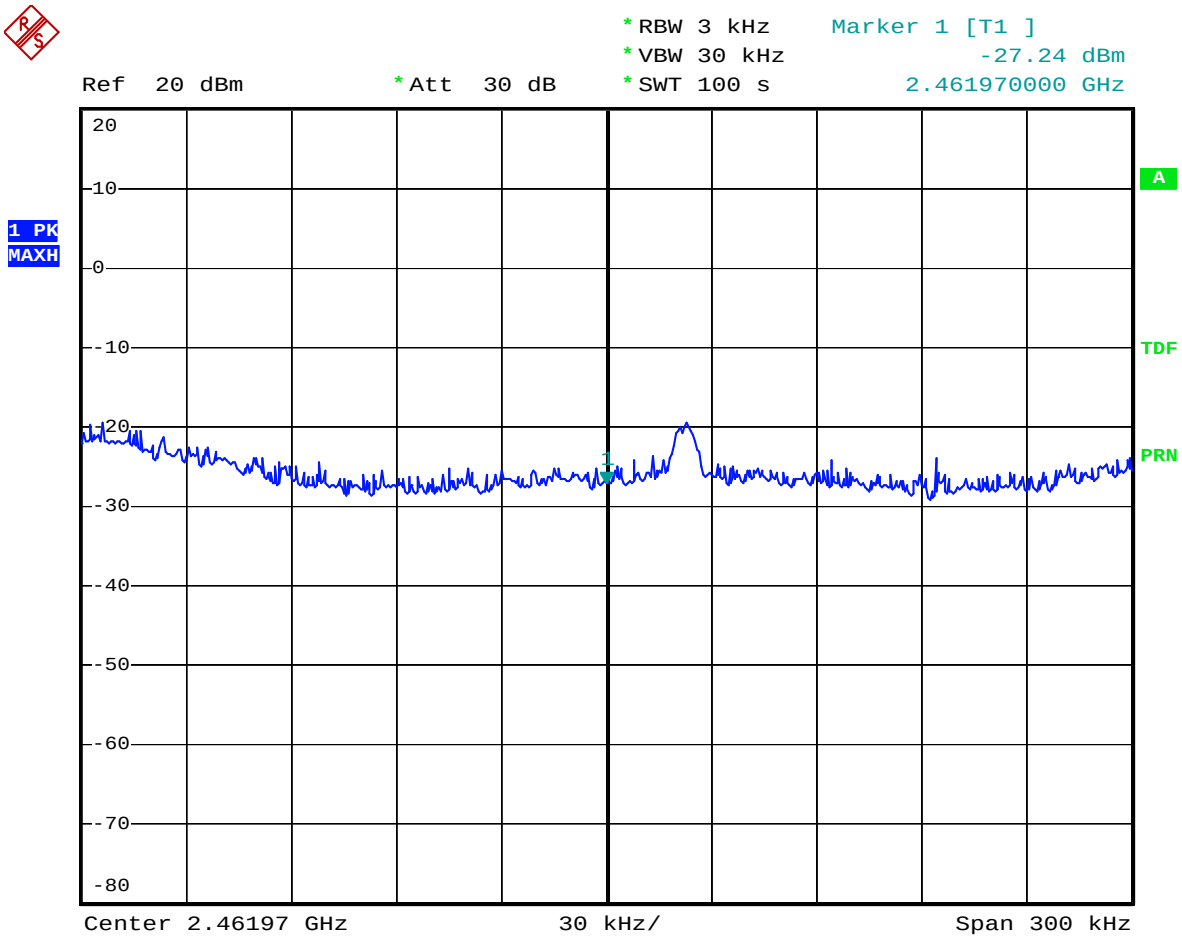


CH6:



Date: 25.APR.2007 19:27:02

CH11:



Date: 25.APR.2007 19:19:18

10. Antenna application

10.1 Antenna application

The EUT's antenna is met the requirement of FCC partC section 15.203 and 15.204.

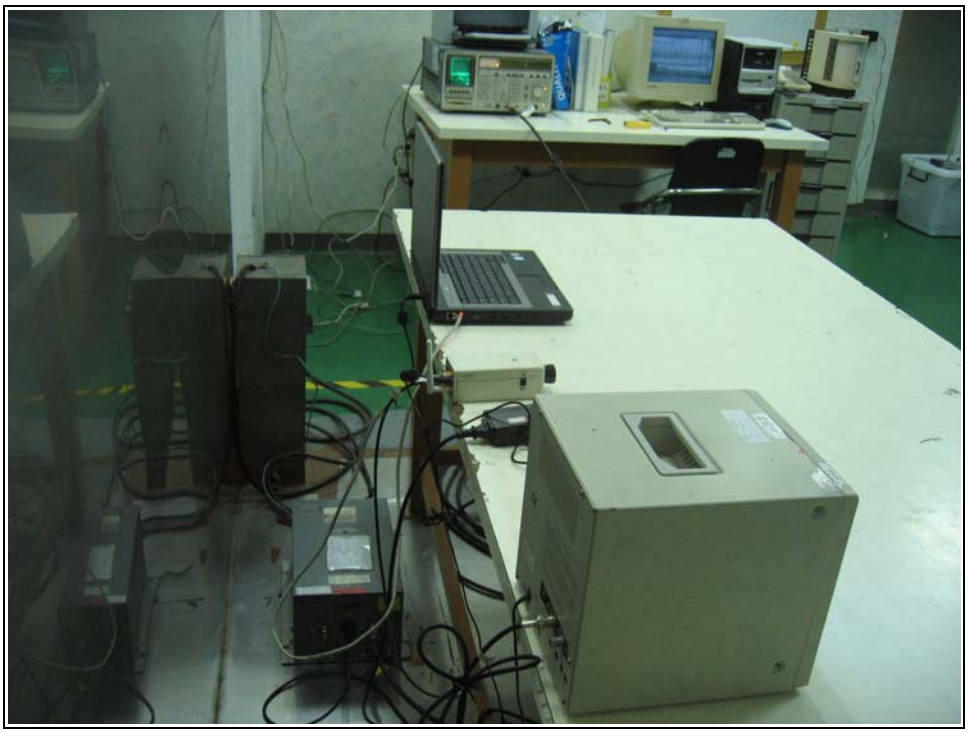
FCC part15C sextion 15.247 requirement:
Systems operating in the 2400-2483.5 MHz band that are used exclusively for fixed, point-to-point operations may employ transmitting antennas with directional gain greater than 6 dBi provided the maximum peak output power of the intentional radiatior is reduced by 1dB for erery 3dB that the directional gain of the antenna exceeds 6 dBi.

10.2 Result

The EUT's antenna used a dipole antenna (Reverse SMA Jack). The antenna's gain is 2dBi and meets the requirement.

11. PHOTOS OF TESTING

- Conducted test



- Radiated test (<1GHz)

- Radiated test (>1GHz)

12. TERMS OF ABRIVATION

AV.	Average detection
AZ(°)	Turn table azimuth
Correct.	Correction
EL(m)	Antenna height (meter)
EUT	Equipment Under Test
Horiz.	Horizontal direction
LISN	Line Impedance Stabilization Network
NSA	Normalized Site Attenuation
Q.P.	Quasi-peak detection
SRT Lab	Spectrum Research & Testing Laboratory, Inc.
Vert.	Vertical direction