

FCC TEST REPORT

for

47 CFR Part 15 Subpart C and IC RSS-210

Equipment : U.S. Robotics MAXg ADSL Gateway

Trade Name : USR

Model No. : USR9108

FCC ID : IXM-DLGBR01

IC ID : 550A-15032

Filing Type : Certification

Applicant : Universal Scientific Industrial Co., Ltd.
: 141, Lane 351, Taiping Road, Sec. 1, Tsao Tuen, Nan-Tou,
Taiwan

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- The data shown in this test report were carried out on Jun. 09, 2005 at **Sporton International Inc. LAB.**



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History of this test report

Original Report Issue Date: Jun. 15, 2005

☒ No additional attachment.

☐ Additional attachment were issued as following record:

Attachment No.	Issue Date	Description



1. General Description of Equipment under Test

1.1. Applicant

Universal Scientific Industrial Co., Ltd.

141, Lane 351, Taiping Road, Sec. 1, Tsao Tuen, Nan-Tou, Taiwan

1.2 Manufacturer

Universal Scientific Industrial Co., Ltd.

141, Lane 351, Taiping Road, Sec. 1, Tsao Tuen, Nan-Tou, Taiwan

1.3 Basic Description of Equipment under Test

Equipment	: U.S. Robotics MAXg ADSL Gateway
Trade	: USR
Model No.	: USR9108
Power Supply Type	: Linear
AC Power Cord	: AC120V, Non-shielded, Wall-mount, 1.8meter, 2pin
Charger 1	: OEM, AD-091A2B
Charger 2	: DVE, DV-91AUP
ADSL component	: Annex A and Annex B

1.4 Feature of Equipment under Test

Product Feature & Specification				
1. Modulation Type	802.11b: DSSS(CCK/DQPSK/DBPSK) 802.11g: OFDM(64QAM/16QAM/DQPSK/DBPSK)			
2. Frequency Range	2400 MHz ~ 2483.5 MHz			
3. Number of Channels	11 Channels			
4. Carrier Frequency of each channel	$2412 + (n-1) \times 5 \text{ MHz}; n = 1 \sim 11$			
5. Channel Bandwidth	22MHz-802.11b 20MHz-802.11g			
6. Maximum Output Power to Antenna (Normal condition)	802.11b: 19.27 dBm 802.11g: 19.13 dBm			
7. Type of Antenna Connector	① Reverse SMA ② N/A			
8. Antenna Type	① Dipole antenna ② PCB antenna			
9. Antenna Gain	2 dBi			
10. Function Type	Transmitter		Transceiver	V
11. Power Rating (DC/AC , Voltage)	DC 9V			
12. Temperature / Humidity Range	0°C to 40°C			



2 Test Configuration of Equipment under Test

2.1 Test Manner

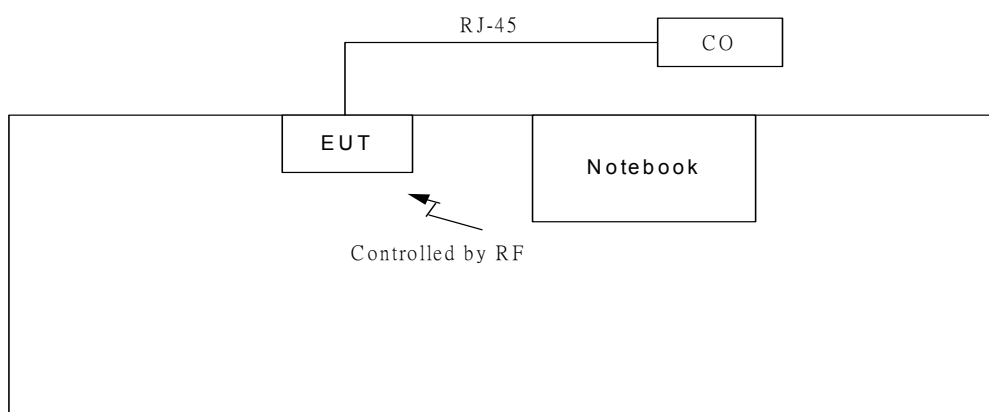
- a. The EUT has been associated with peripherals pursuant to ANSI C63.4-2003 and configuration operated in a manner tended to maximize its emission characteristics in a typical application.
- b. For spurious emission below 1GHz, only one channel of each application was tested because it is not related to channel selection.
- c. The EUT is programmed to transmit signal continuously for all testings.
- d. Frequency range investigated: conduction 150 kHz to 30 MHz, radiation 30 MHz to 25000MHz.

2.2 Test Mode

Application	802.11b	802.11g
Radiated Emission	Mode 1: Tx Ch01(2412MHz) Mode 2: Tx Ch06(2437MHz) Mode 3: Tx Ch11(2462MHz)	Mode 4: Tx Ch01(2412MHz) Mode 5: Tx Ch06(2437MHz) for OEM Charger Mode 6: Tx Ch06 (2437MHz) Mode 7: Tx Ch11(2462MHz)
Conducted Emission	Mode 1: Link Mode for OEM Charger Mode 2: Link Mode for DVE Charger	

Remark: 1. The transmitting antenna is fixed dipole, so the testings are using this antenna.
2. The radiated emission is based on DVE charger, except mode 5.

2.3 Connection Diagram of Test System



2.4 Ancillary Equipment List

Item	Equipment	Model No.	Serial No.
1.	Notebook (DELL)	PP05L	N/A



3. RF Utility

The programmed RF Utility is either installed in EUT or Notebook to provide channel selection, power level, data rate and the application type. RF Utility can send transmitting signal for all testings.



4. General Information of Test

Test Site Location : No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park,
Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.
TEL : 886-3-327-3456
FAX : 886-3-318-0055

Test Site No : CO01-HY, 03CH06-HY

4.1 Test Voltage

120V/ 60Hz

4.2 Standard for Methods of Measurement

ANSI C63.4-2003

4.3 Test in Compliance with

47 CFR Part 15 Subpart C and IC RSS-210 Issue 5

4.4 Frequency Range Investigated

- a. Conduction: from 150 kHz to 30 MHz
- b. Radiation: from 30 MHz to 25000 MHz

4.5 Test Distance

The test distance of radiated emission from antenna to EUT is 3 m.



5. Test Data and Test Result

5.1 List of Measurements and Examinations

FCC Rule	IC RSS-210 Issue 5	Description of Test	Result	Section
15.247(a)(2)	Amendment 1	6dB Bandwidth	Pass	5.2
15.247(d)	§ 6.2.2 (o) (b) & Amendment 1	Power Spectral Density	Pass	5.3
15.247 (c)	§ 6.3	100kHz Bandwidth of Frequency Band Edges	Pass	5.4
15.247(b)	§ 6.2.2 (o) (b) & Amendement 1	Maximum Peak Output Power	Pass	5.5
15.207	§ 6.6	Conducted Emission	Pass	5.6
15.209(a)	§ 6.3	Radiated Emission	Pass	5.7
15.203 15.247(b)(4)	NA	Antenna Requirement	Pass	5.8

5.2 6dB Bandwidth Measurement

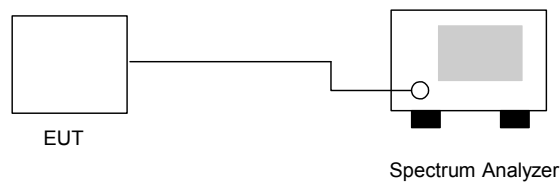
5.2.1 Measuring Instruments :

As described in chapter 6 of this test report.

5.2.2 Test Procedure :

1. The transmitter output was connected to the spectrum analyzer directly.
2. Set RBW of spectrum analyzer to 100kHz and VBW to 100kHz.
3. The 6 dB bandwidth is defined as the frequency range where the power is higher than the peak power minus 6dB.

5.2.3 Test Setup Layout :



5.2.4 Test Result :

- Application Type : 802.11b
- Temperature : 24°C
- Relative Humidity : 52%
- Test Enginner : Jay

Channel	Frequency (MHz)	6dB Emission bandwidth (MHz)	Limits (MHz)	Plot Ref. No.
01	2412	10.82	0.5	Mode 1
06	2437	10.40	0.5	Mode 2
11	2462	10.56	0.5	Mode 3



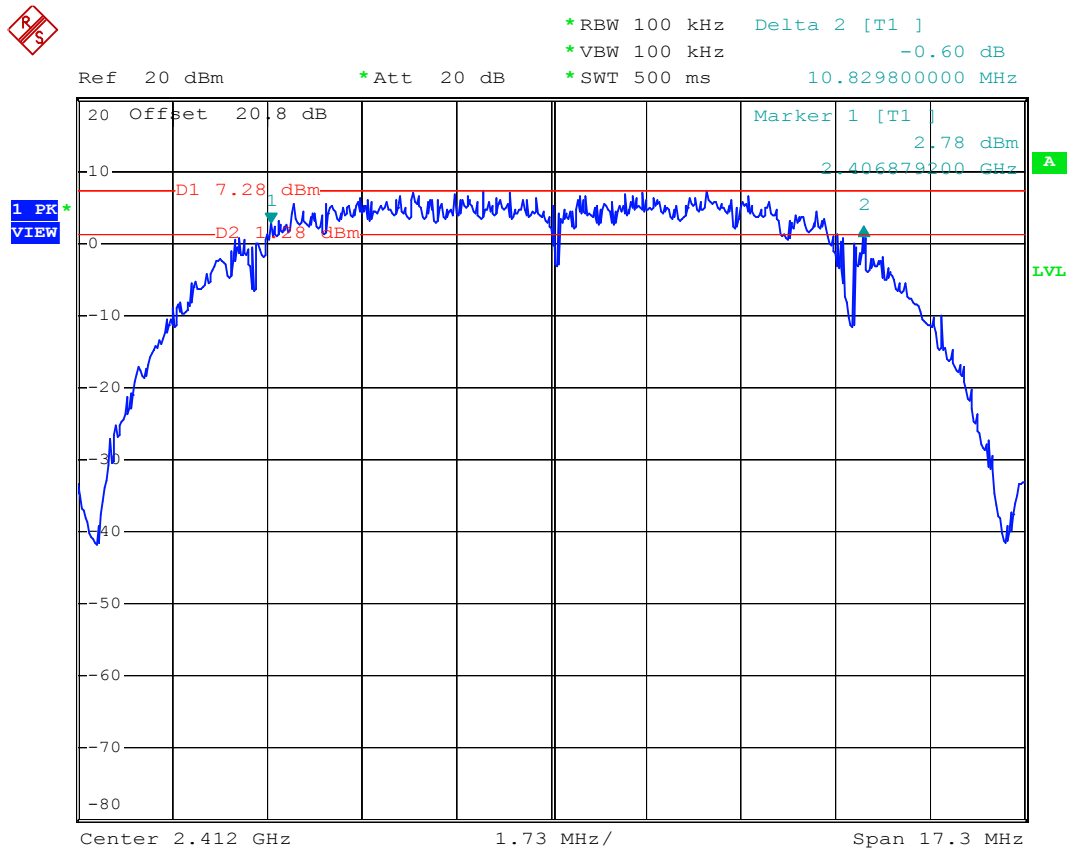
- Application Type : 802.11g
- Temperature : 24°C
- Relative Humidity : 52%
- Test Enginner : Jay

Channel	Frequency (MHz)	6dB Emission bandwidth (MHz)	Limits (MHz)	Plot Ref. No.
01	2412	13.72	0.5	Mode 4
06	2437	12.60	0.5	Mode 5
11	2462	10.04	0.5	Mode 6



5.2.5 6dB Bandwidth

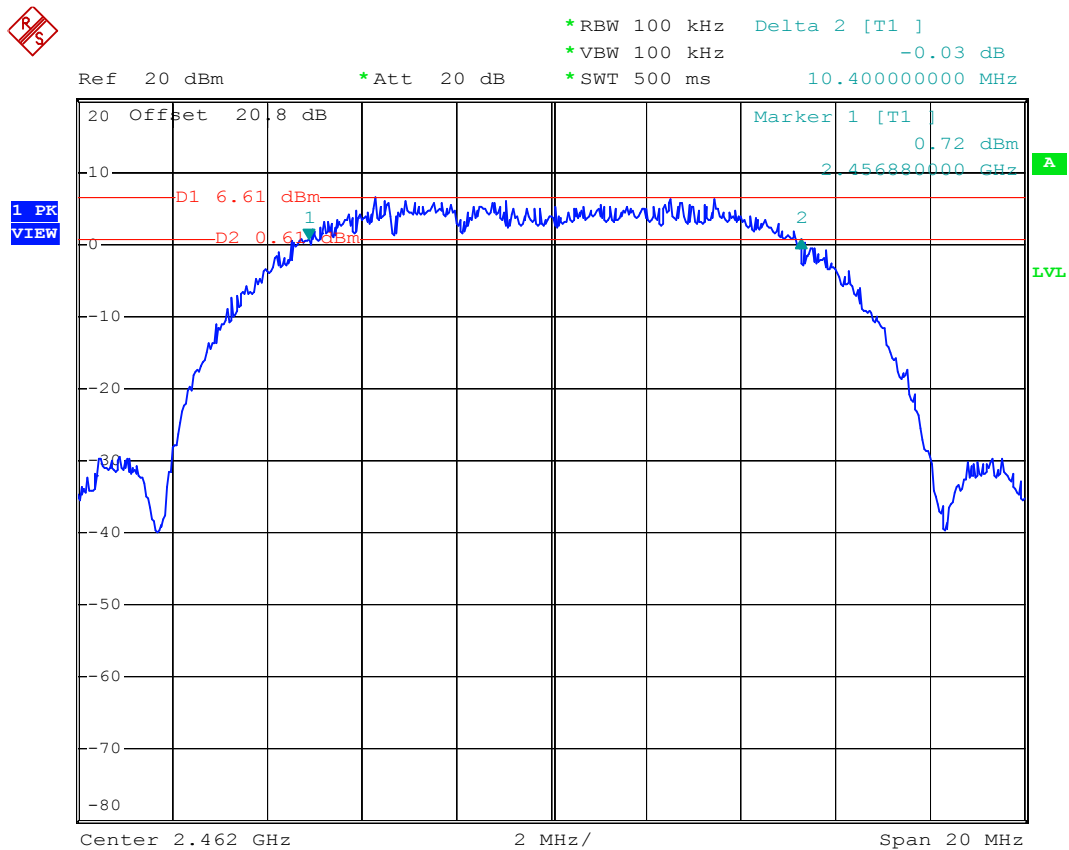
Mode 1 : 802.11b Tx CH01 (2412MHz)



Date: 2.JUN.2005 19:20:17



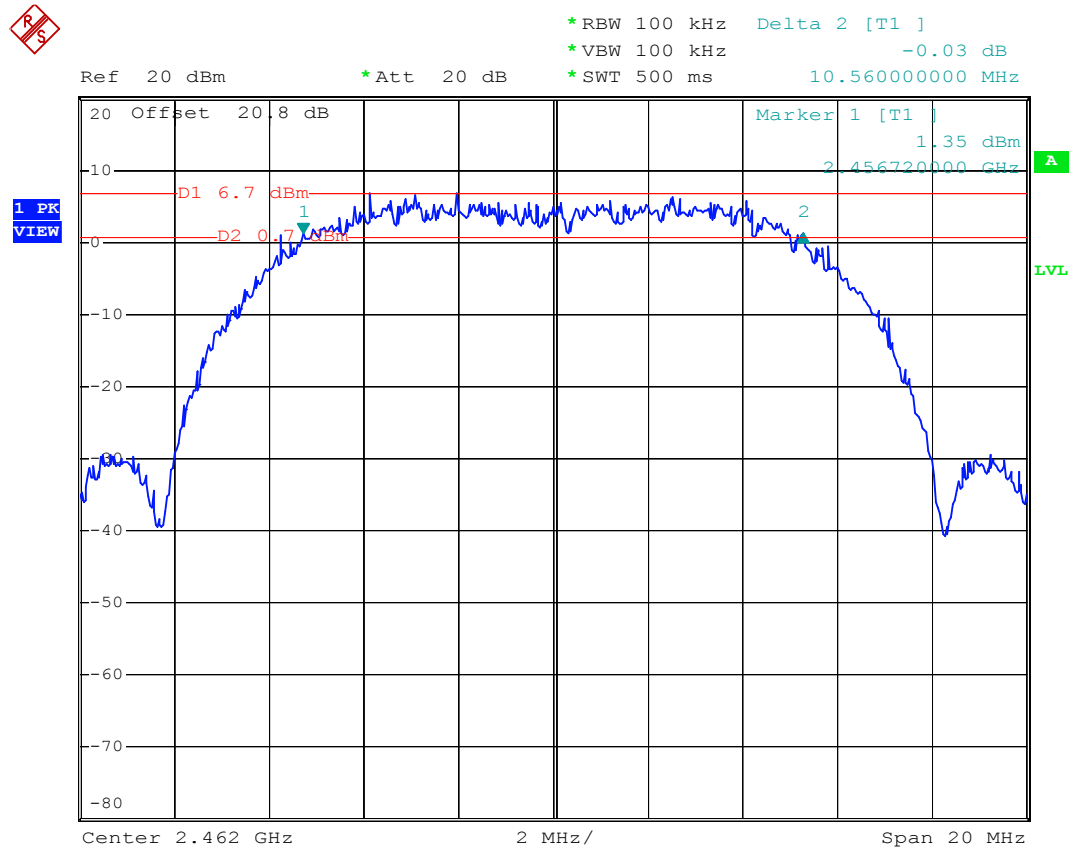
Mode 2 : 802.11b Tx CH06 (2437MHz)



Date: 2.JUN.2005 21:42:35



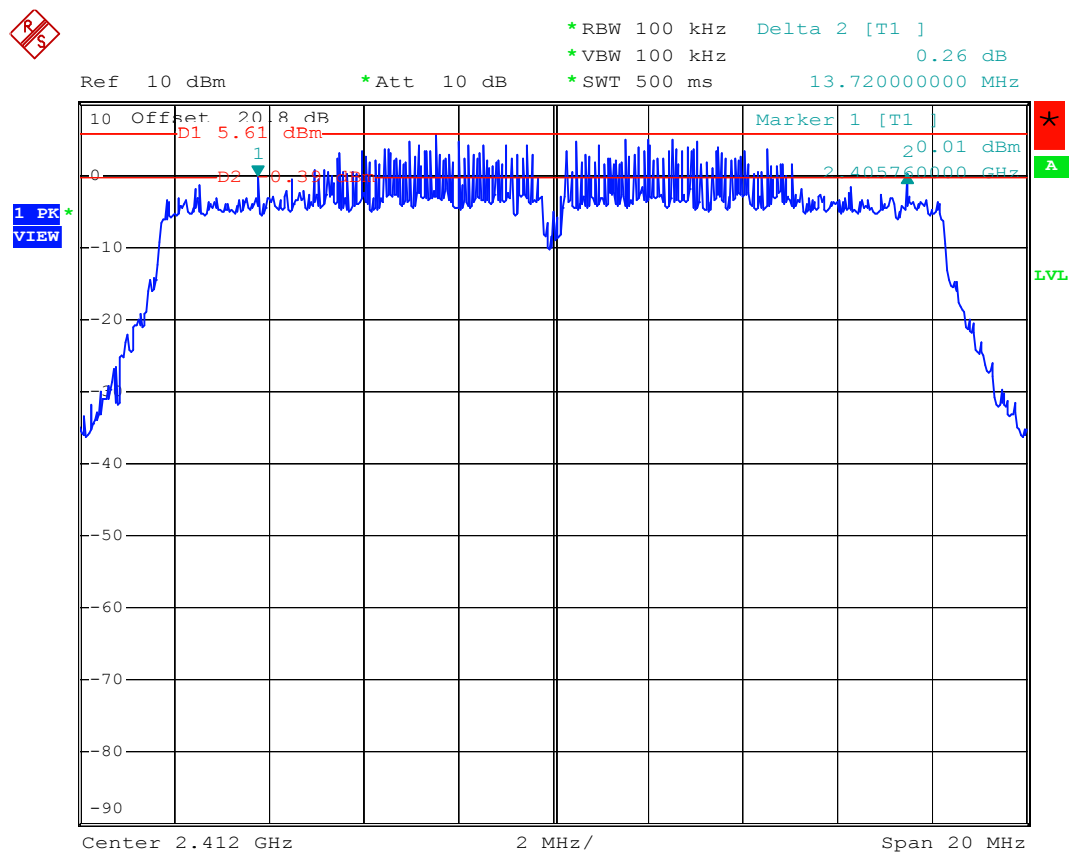
Mode 3 : 802.11b Tx CH11(2462MHz)



Date: 2.JUN.2005 21:45:48



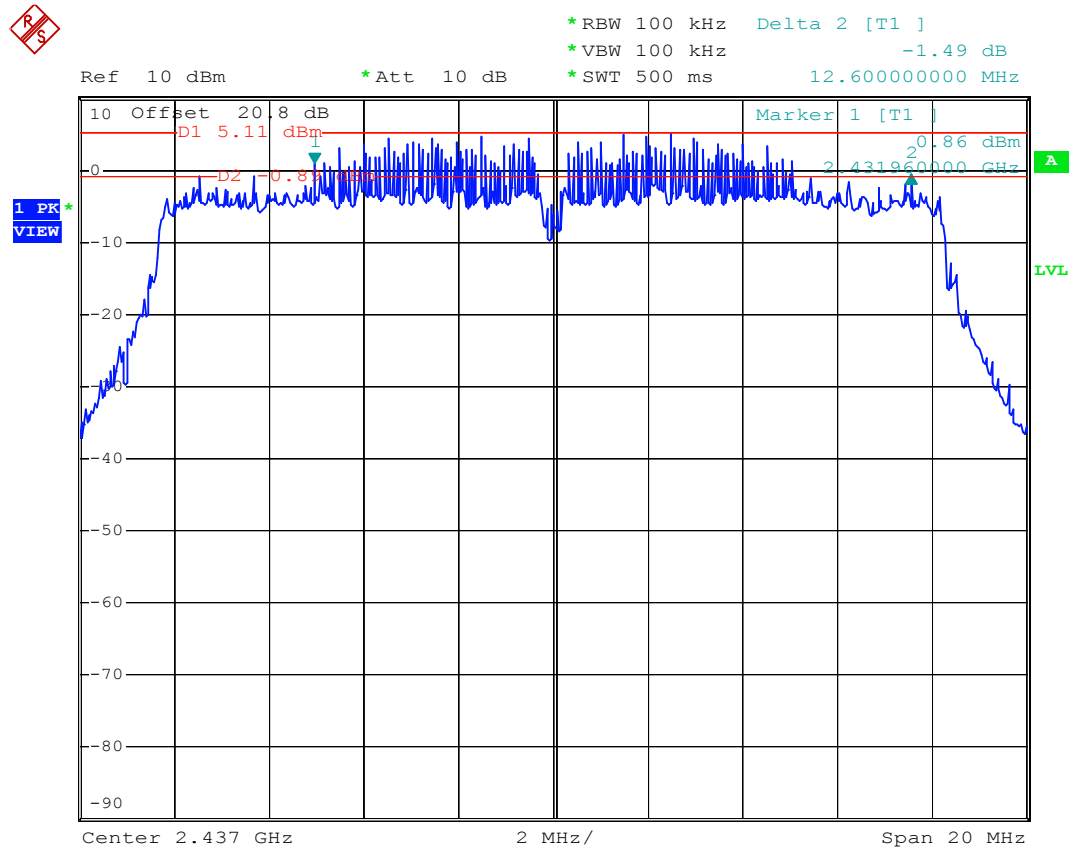
Mode 4 : 802.11g Tx CH01 (2412MHz)



Date: 2.JUN.2005 22:05:17



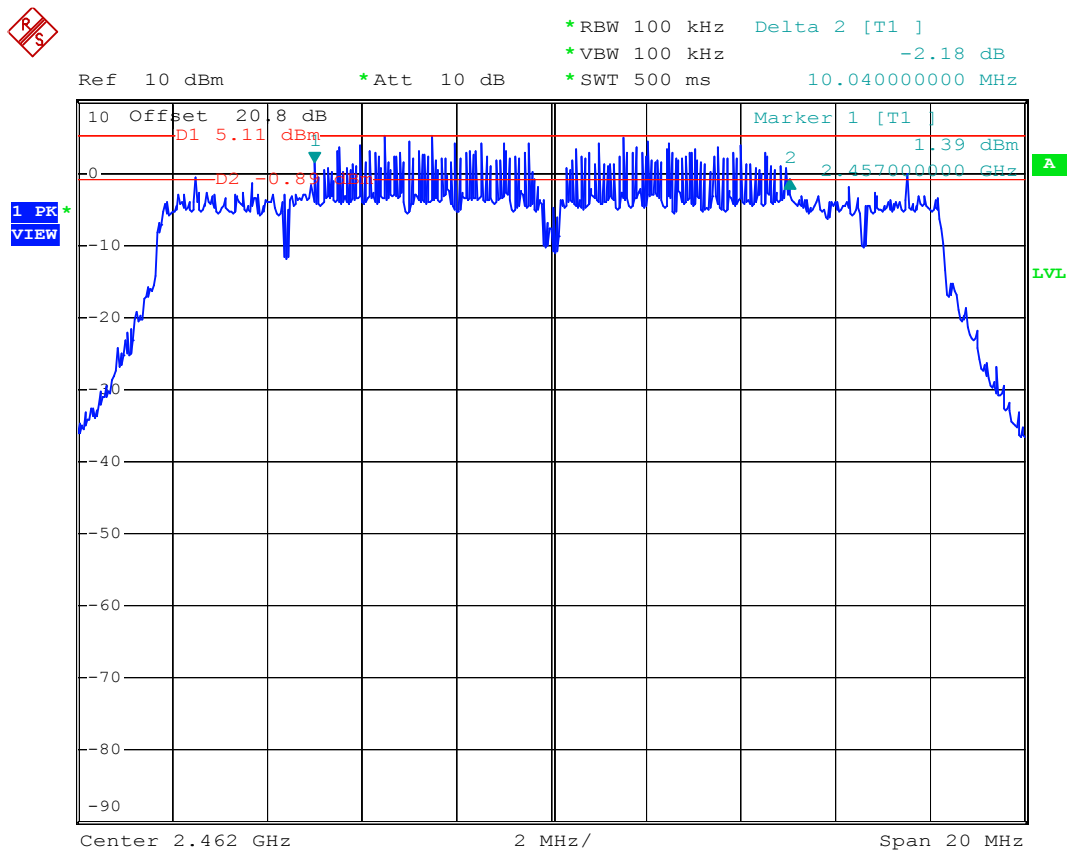
Mode 5 : 802.11g Tx CH06 (2437MHz)



Date: 2.JUN.2005 22:00:28



Mode 6 : 802.11g Tx CH11 (2462MHz)



Date: 2.JUN.2005 21:53:13

5.3 Power Spectral Density Measurement

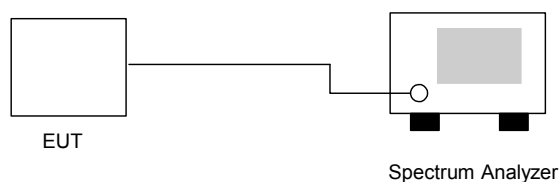
5.3.1 Measuring Instruments :

As described in chapter 6 of this test report.

5.3.2 Test Procedure :

1. The transmitter output was connected to spectrum analyzer directly.
2. The spectrum analyzer's resolution bandwidth was set at 3kHz RBW and 30kHz VBW as that of the fundamental frequency. Set the sweep time=span/3kHz.
3. The power spectral density was measured and recorded.
4. The sweep time is allowed to be longer than span/3kHz for a full response of the mixer in the spectrum analyzer.

5.3.3 Test Setup Layout :



5.3.4 Test Result :

- Application Type : 802.11b
- Temperature : 24°C
- Relative Humidity : 52%
- Test Enginner : Jay

Channel	Frequency (MHz)	Power Spectral Density (dBm)	Limits (dBm)	Plot Ref. No.
01	2412	-7.30	8	Mode 1
06	2437	-7.32	8	Mode 2
11	2462	-7.60	8	Mode 3

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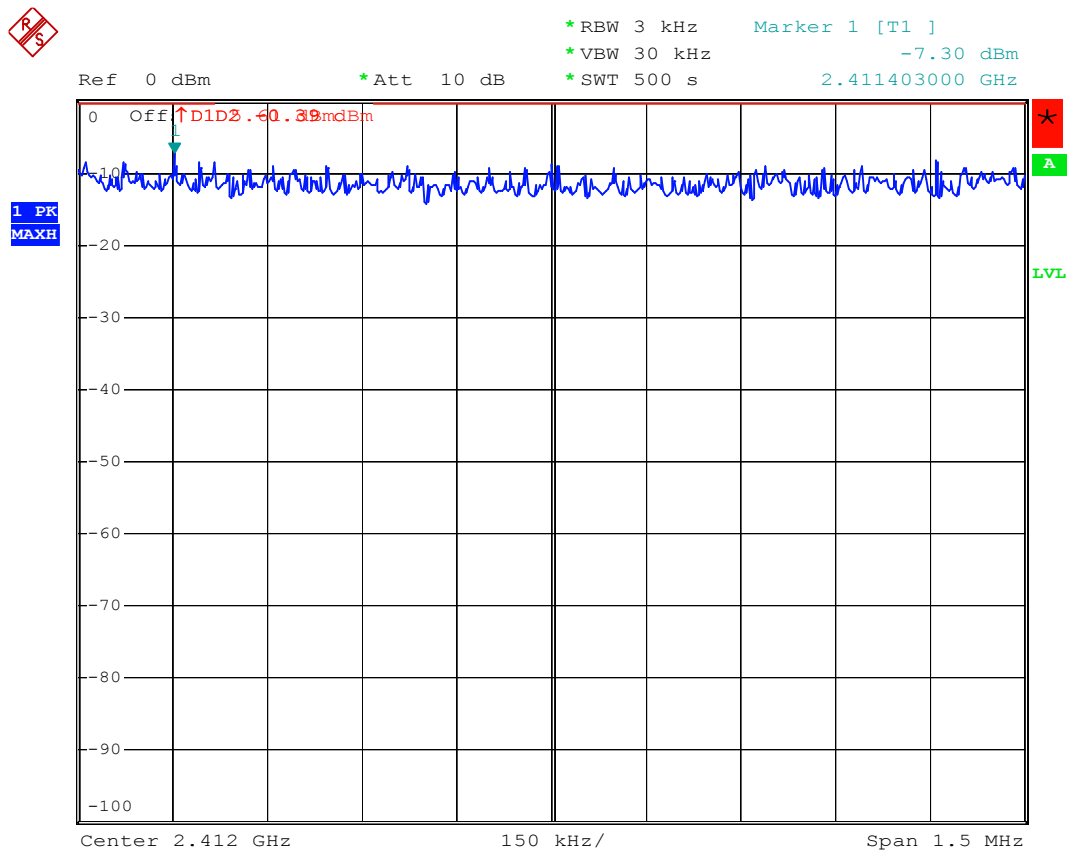
- Application Type : 802.11g
- Temperature : 24°C
- Relative Humidity : 52%
- Test Enginner : Jay

Channel	Frequency (MHz)	Power Spectral Density (dBm)	Limits (dBm)	Plot Ref. No.
01	2412	-9.92	8	Mode 4
06	2437	-8.17	8	Mode 5
11	2462	-10.29	8	Mode 6



5.3.5 Power Spectral Density

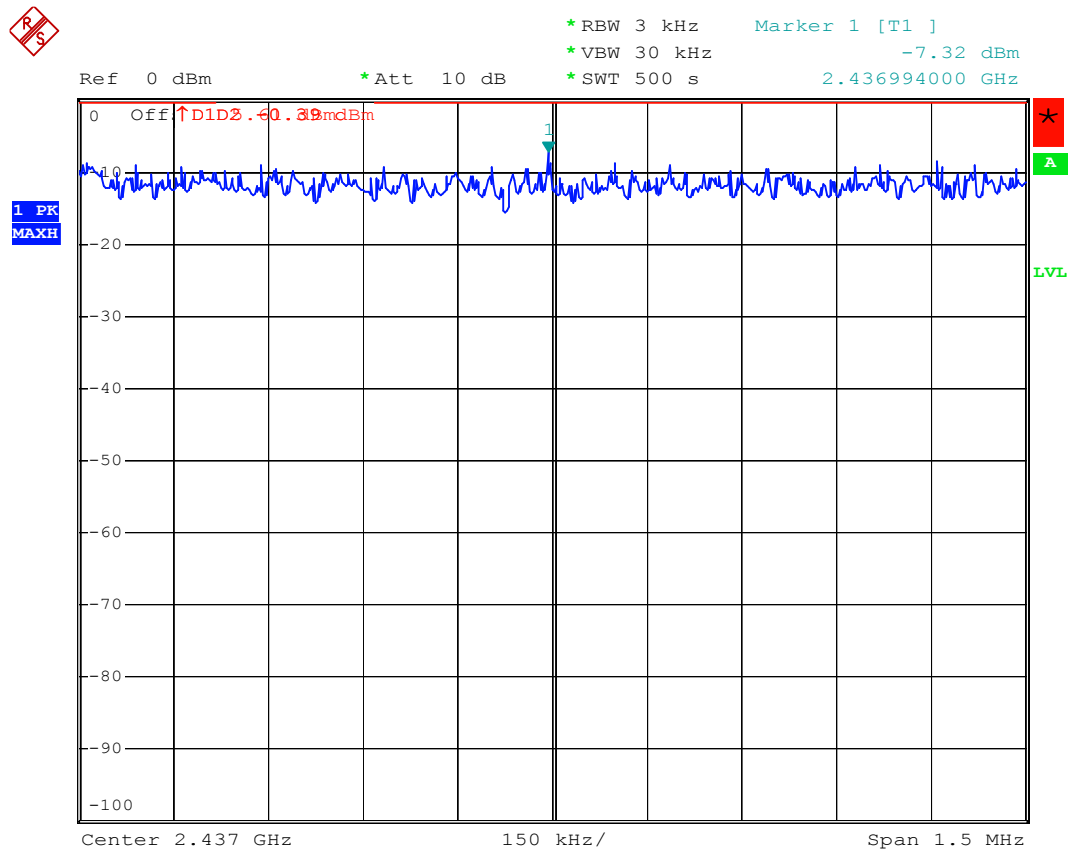
Mode 1 : 802.11b Tx CH01(2412MHz)



Date: 2.JUN.2005 22:28:56



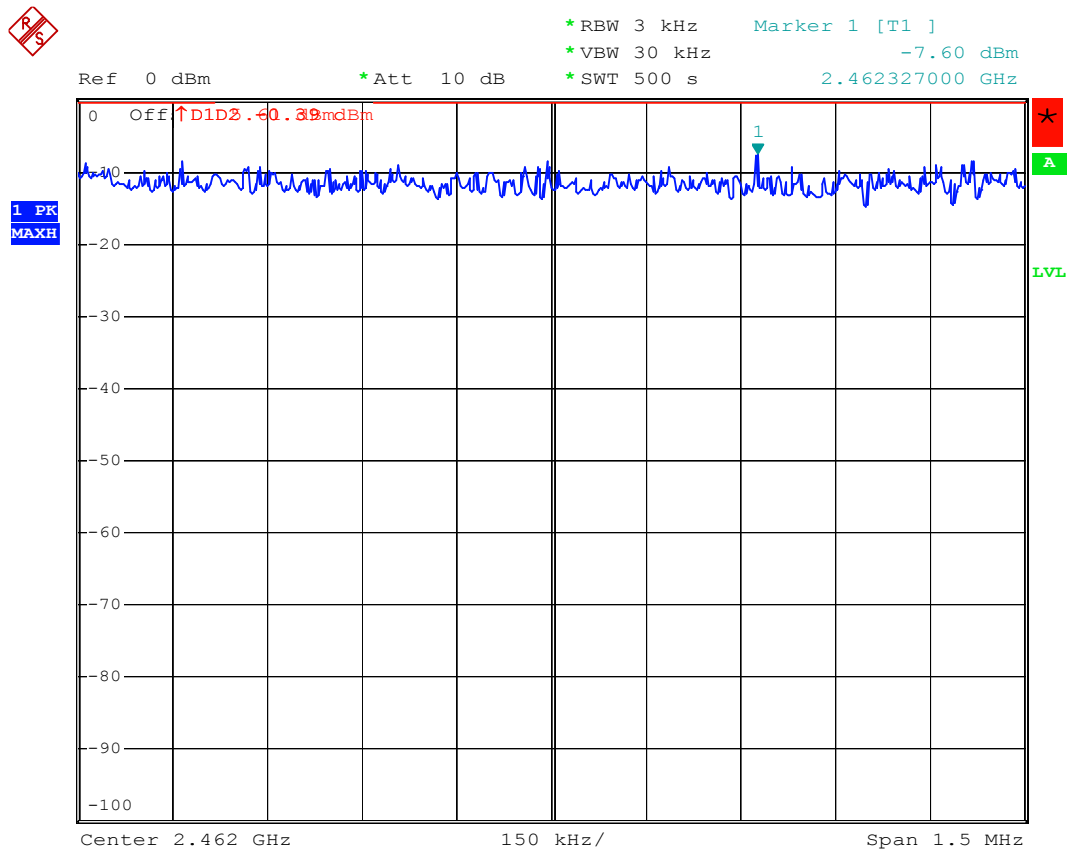
Mode 2 : 802.11b Tx CH06 (2437MHz)



Date: 2.JUN.2005 22:26:12



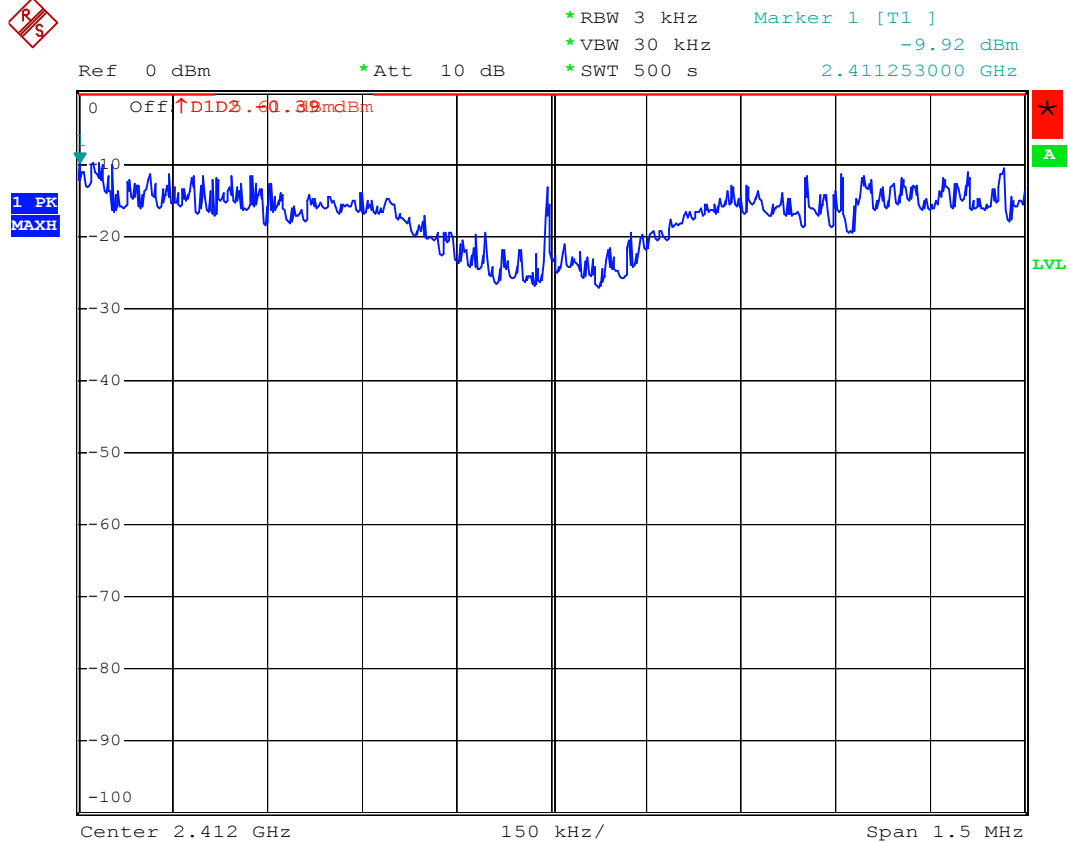
Mode 3 : 802.11b Tx CH11 (2462MHz)



Date: 2.JUN.2005 22:21:45



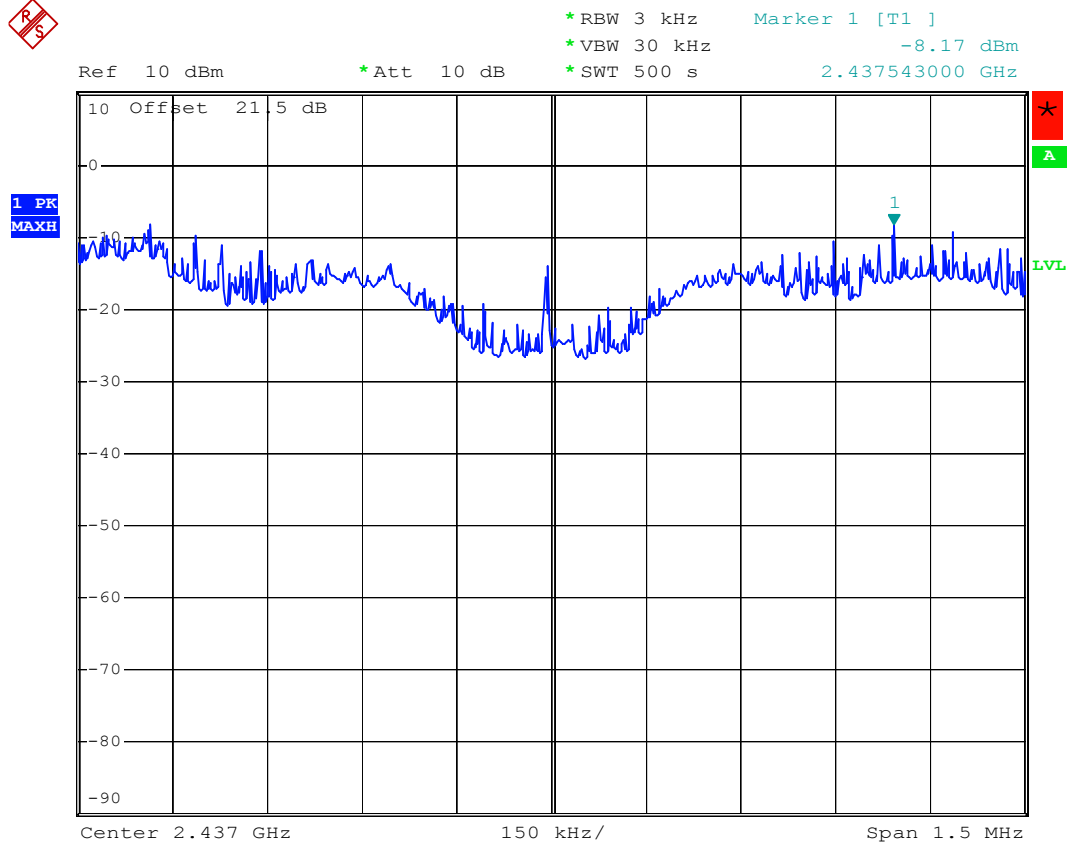
Mode 4 : 802.11g Tx CH01(2412MHz)



Date: 2.JUN.2005 22:17:06



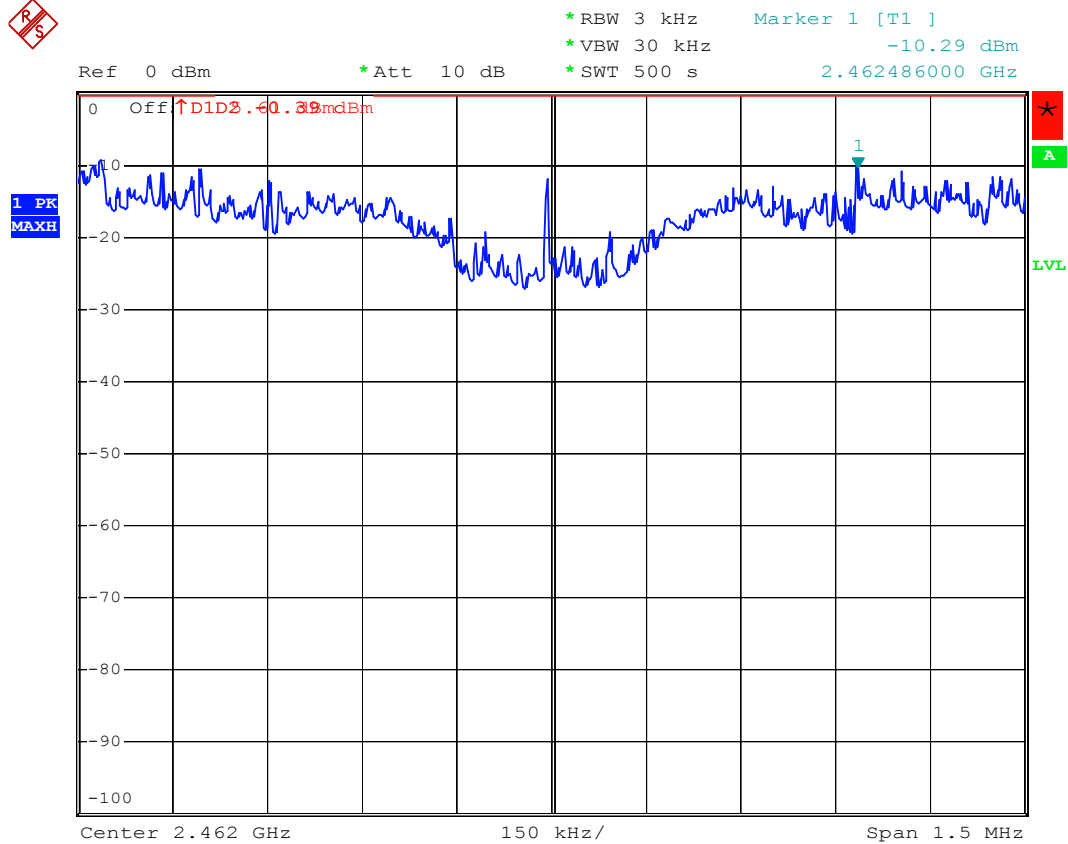
Mode 5 : 802.11g Tx CH06 (2437MHz)



Date: 13.JUN.2005 12:10:48



Mode 6 : 802.11g Tx CH11 (2462MHz)



Date: 2.JUN.2005 22:19:46



5.4 Band Edges Measurement

5.4.1 Measuring Instruments :

As described in chapter 6 of this test report.

5.4.2 Test Procedure :

1. The transmitter output was connected to the spectrum analyzer via a low lose cable.
2. Set both RBW and VBW of spectrum analyzer to 100kHz with suitable frequency span including 100 kHz bandwidth from band edge.
3. The band edges was measured and recorded.

5.4.3 Test Result :

- Application Type : 802.11b / g
- Temperature : 24°C
- Relative Humidity : 52%
- Test Enginner : Jay

- Test Result in lower band (Channel 1) : PASS
- Test Result in higher band (Channel 11) : PASS

5.4.4 Note on Band Edge Emission

➤802.11b

CH01 (Horizontal)

Frequency	Level	Over	Limit	Read	Cable	Detect
		Limit	Line	Level	Loss	
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	Mode
2390.00	54.53	-19.47	74.00	55.07	4.43	Peak
2390.00	43.14	-10.86	54.00	43.68	4.43	Average

CH01 (Vertical)

Frequency	Level	Over	Limit	Read	Cable	Detect
		Limit	Line	Level	Loss	
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	Mode
2390.00	60.42	-13.58	74.00	60.96	4.43	Peak
2390.00	47.00	-7.00	54.00	47.54	4.43	Average

**CH11 (Horizontal)**

Frequency	Level	Over	Limit	Read	Cable	Detect
		Limit	Line	Level	Loss	
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	Mode
2483.50	53.15	-20.85	74.00	53.73	4.52	Peak
2483.50	42.40	-11.60	54.00	42.98	4.52	Average

CH11 (Vertical)

Frequency	Level	Over	Limit	Read	Cable	Detect
		Limit	Line	Level	Loss	
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	Mode
2483.50	54.82	-19.18	74.00	55.40	4.52	Peak
2483.50	45.77	-8.23	54.00	46.35	4.52	Average

➤802.11g**CH01 (Horizontal)**

Frequency	Level	Over	Limit	Read	Cable	Detect
		Limit	Line	Level	Loss	
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	Mode
2390.00	59.38	-14.62	74.00	59.92	4.43	Peak
2390.00	42.81	-11.19	54.00	43.35	4.43	Average

CH01 (Vertical)

Frequency	Level	Over	Limit	Read	Cable	Detect
		Limit	Line	Level	Loss	
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	Mode
2390.00	68.32	-5.68	74.00	68.86	4.43	Peak
2390.00	48.04	-5.96	54.00	48.58	4.43	Average

CH11 (Horizontal)

Frequency	Level	Over	Limit	Read	Cable	Detect
		Limit	Line	Level	Loss	
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	Mode
2483.50	53.87	-20.13	74.00	54.44	4.52	Peak
2483.50	43.59	-10.41	54.00	44.17	4.52	Average



CH11 (Vertical)

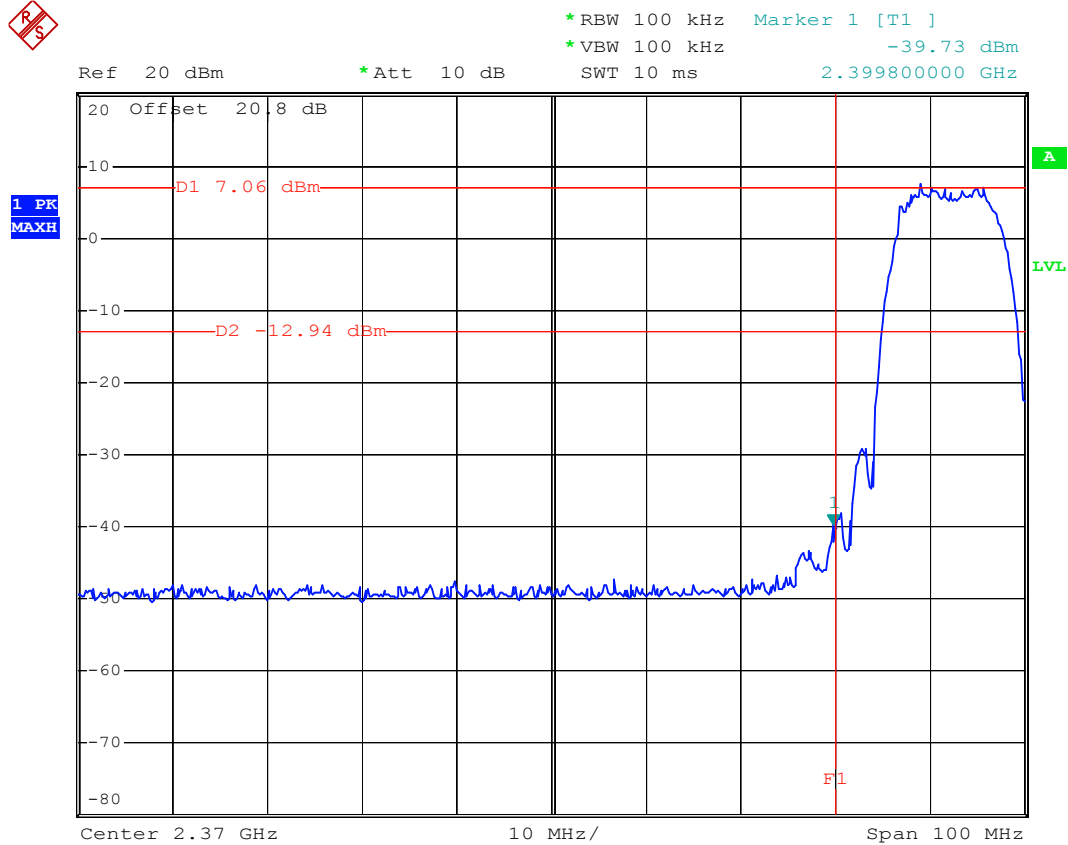
Frequency	Level	Over	Limit	Read	Cable	Detect
(MHz)	(dBuV/m)	Limit	Line	Level	Loss	Mode
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	Mode
2483.50	61.07	-12.93	74.00	61.65	4.52	Peak
2483.50	46.61	-7.39	54.00	47.19	4.52	Average

*Remark: The data above can refer to radiated emission in section 5.7.



5.4.5 20dB Band Edge

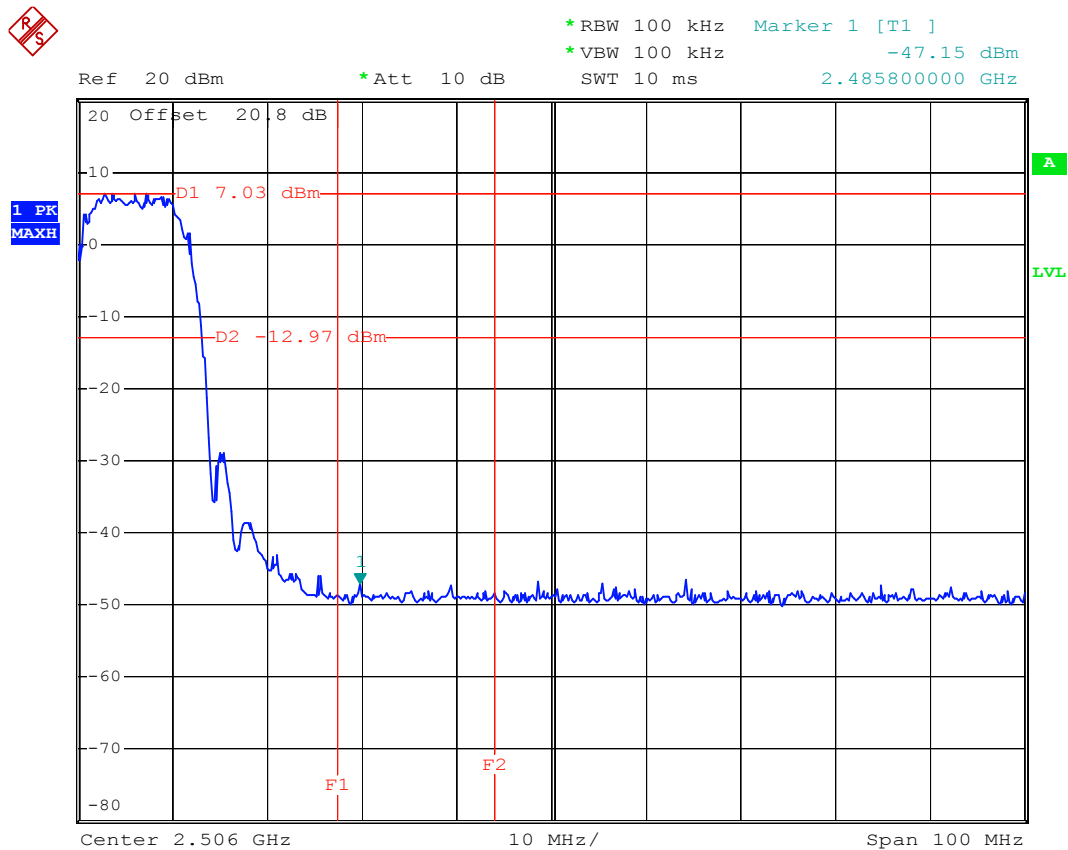
802.11b Tx CH01 (2412MHz)



Date: 2.JUN.2005 22:31:11



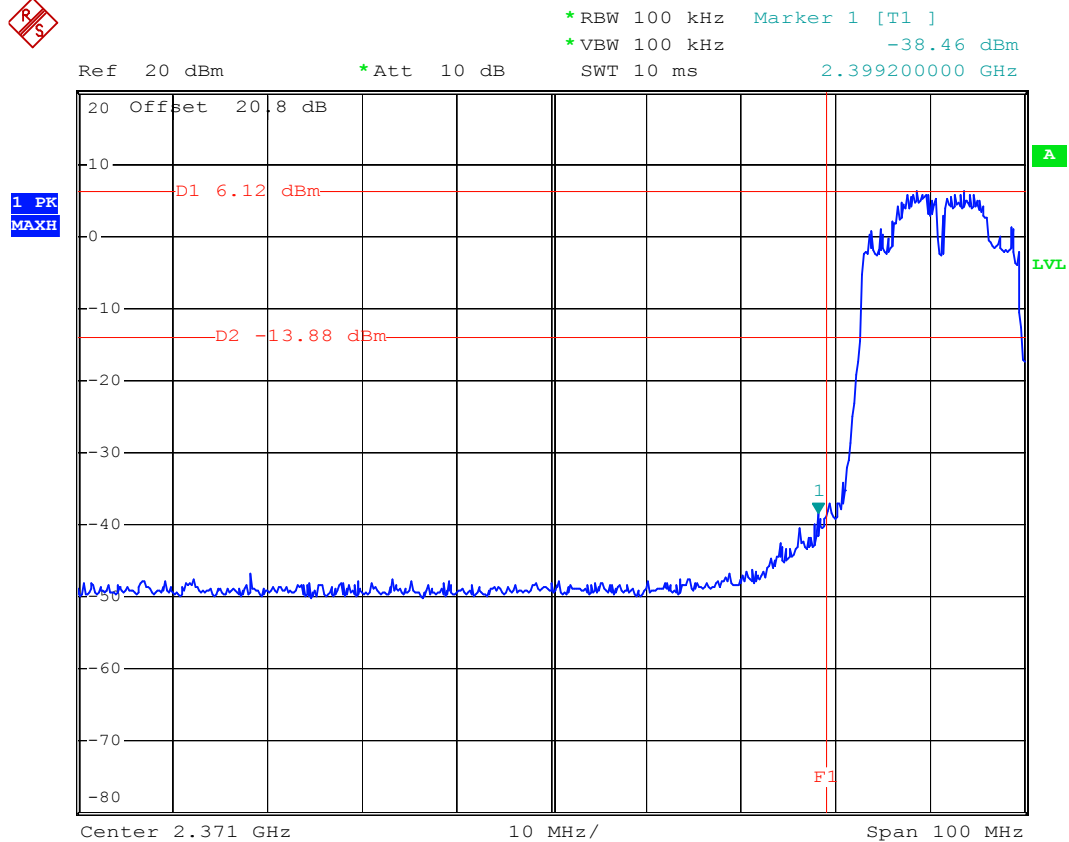
802.11b Tx CH11 (2462MHz)



Date: 2.JUN.2005 22:39:45



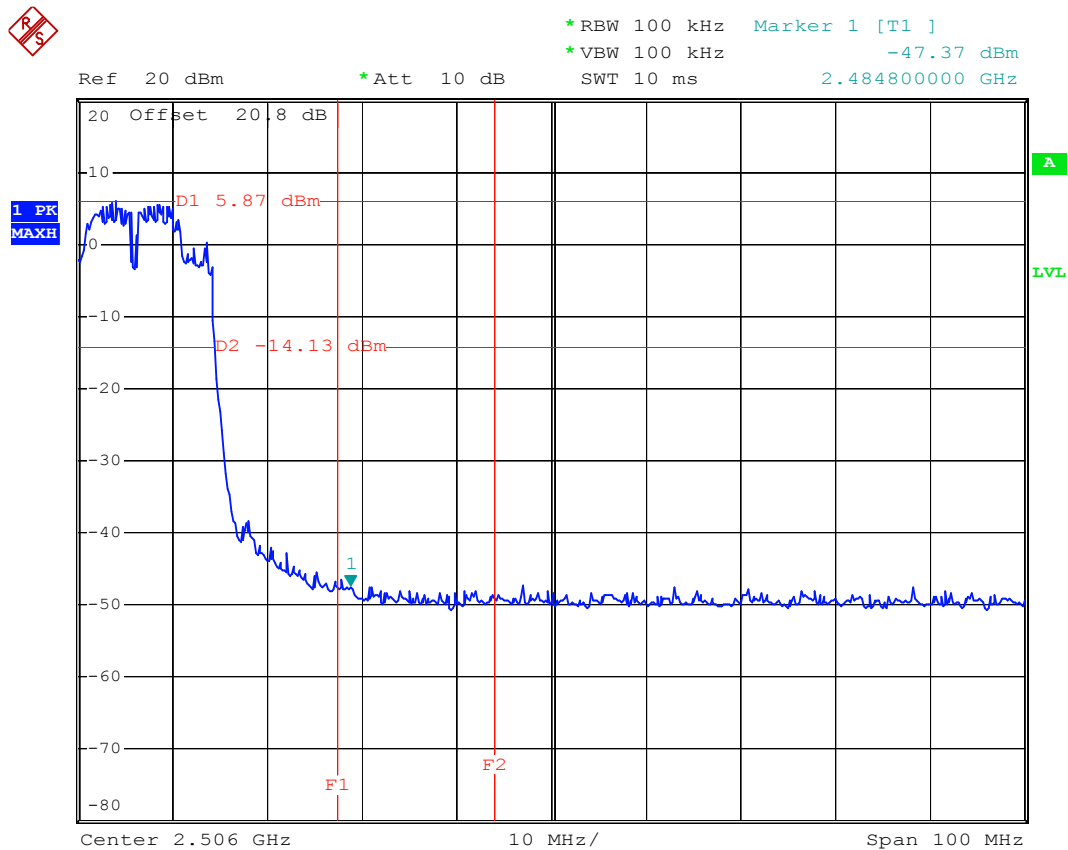
802.11g Tx CH01 (2412MHz)



Date: 2.JUN.2005 22:35:28



802.11g Tx CH11 (2462MHz)



Date: 2.JUN.2005 22:41:35

5.5 Peak Output Power Measurement

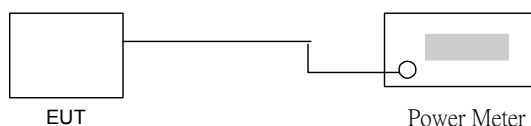
5.5.1 Measuring Instruments :

As described in chapter 6 of this test report.

5.5.2 Test Procedure :

The antenna port (RF output) of the EUT was connected to the input (RF input) of a power meter.
The power is equal to the reading level on power meter plus cable loss at the EUT antenna terminal.

5.5.3 Test Setup Layout :



5.5.4 Test Result :

- Application Type : 802.11b
- Temperature : 24°C
- Relative Humidity : 52%
- Test Enginner : Jay

Channel	Frequency (MHz)	Measured Output Power (dBm)	Limits (Watt/dBm)
01	2412	19.23	1W/30 dBm
06	2437	19.27	1W/30 dBm
11	2462	19.06	1W/30 dBm



- Application Type : 802.11g
- Temperature : 24°C
- Relative Humidity : 52%
- Test Enginner : Jay

Channel	Frequency (MHz)	Measured Output Power (dBm)	Limits (Watt/dBm)
01	2412	19.13	1W/30 dBm
06	2437	19.05	1W/30 dBm
11	2462	19.03	1W/30 dBm



5.6 Conducted Emission Measurement

5.6.1 Measuring Instruments

As described in chapter 6 of this test Report.

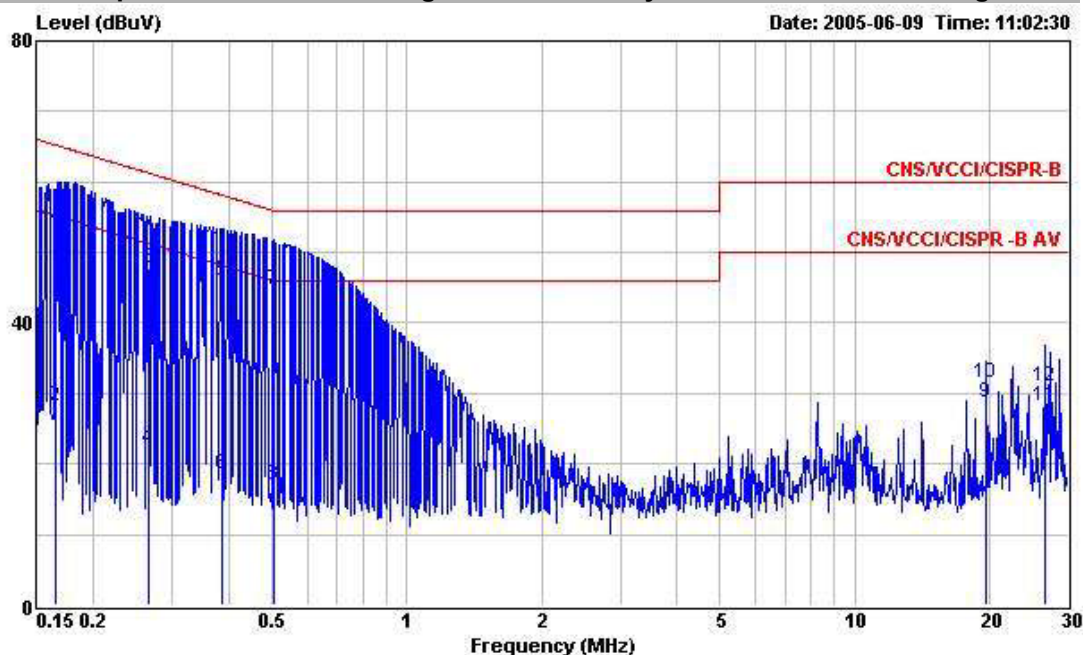
5.6.2 Test Procedures

- a. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
- b. Connect EUT to the power port of the line impedance stabilization network (LISN).
- c. All the support units are connect to the other LISN.
- d. The LISN provides 50 ohm coupling impedance for the measuring instrument.
- e. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
- f. Both sides of AC line were checked for maximum conducted interference.
- g. The frequency range from 150 kHz to 30 MHz was searched.
- h. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.

**5.6.3 Test Data****5.4.1 Frequency Range of Test : 150kHz to 30 MHz**

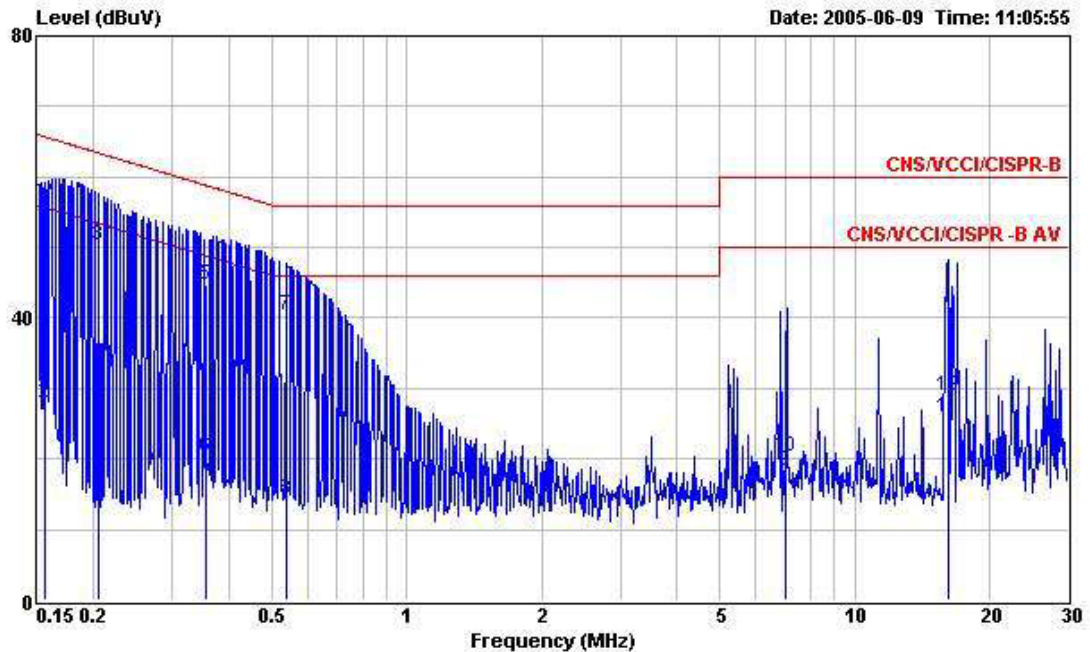
- Test Mode : Mode 1
- Temperature : 24°C
- Relative Humidity : 52%

■ The test that passed at minimum margin was marked by the frame in the following table.



Site : CO01-HY
Condition : CNS/VCCI/CISPR-B 2005 2001/008 LINE
EUT : Wireless/Wire ADSL
Power : 120Vac/60Hz
Model : FD560212
Memo : Ping N/B + Charer:OEM

	Freq	Level	Over	Limit	Read	Probe	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.165	52.49	-12.74	65.23	52.37	0.10	0.02	QP
2	0.165	28.09	-27.14	55.23	27.97	0.10	0.02	Average
3	0.266	47.84	-13.40	61.24	47.71	0.10	0.03	QP
4	0.266	22.11	-29.13	51.24	21.98	0.10	0.03	Average
5	0.387	46.09	-12.04	58.13	45.94	0.10	0.05	QP
6	0.387	18.49	-29.64	48.13	18.34	0.10	0.05	Average
7	0.505	44.63	-11.37	56.00	44.48	0.10	0.05	QP
8	0.505	16.92	-29.08	46.00	16.77	0.10	0.05	Average
9	19.711	28.71	-21.29	50.00	28.28	0.30	0.13	Average
10	19.711	31.46	-28.54	60.00	31.03	0.30	0.13	QP
11	26.610	28.23	-21.77	50.00	27.58	0.43	0.22	Average
12	26.610	31.03	-28.97	60.00	30.38	0.43	0.22	QP



Site : CO01-HY
Condition : CNS/VCCI/CISPR-B 2005 2001/008 NEUTRAL
EUT : Wireless/Wire ADSL
Power : 120Vac/60Hz
Model : FD560212
Memo : Ping N/B + Charer:OEM

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.156	51.81	-13.89	65.70	51.69	0.10	0.02	QP
2	0.156	28.01	-27.69	55.70	27.89	0.10	0.02	Average
3	0.205	50.24	-13.17	63.41	50.12	0.10	0.02	QP
4	0.205	21.45	-31.96	53.41	21.33	0.10	0.02	Average
5	0.355	44.57	-14.27	58.84	44.43	0.10	0.04	QP
6	0.355	20.27	-28.57	48.84	20.13	0.10	0.04	Average
7	0.541	40.34	-15.66	56.00	40.19	0.10	0.05	QP
8	0.541	14.14	-31.86	46.00	13.99	0.10	0.05	Average
9	7.040	18.24	-31.76	50.00	17.89	0.26	0.09	Average
10	7.040	20.20	-39.80	60.00	19.85	0.26	0.09	QP
11	16.228	25.88	-24.12	50.00	25.46	0.30	0.12	Average
12	16.228	28.92	-31.08	60.00	28.50	0.30	0.12	QP

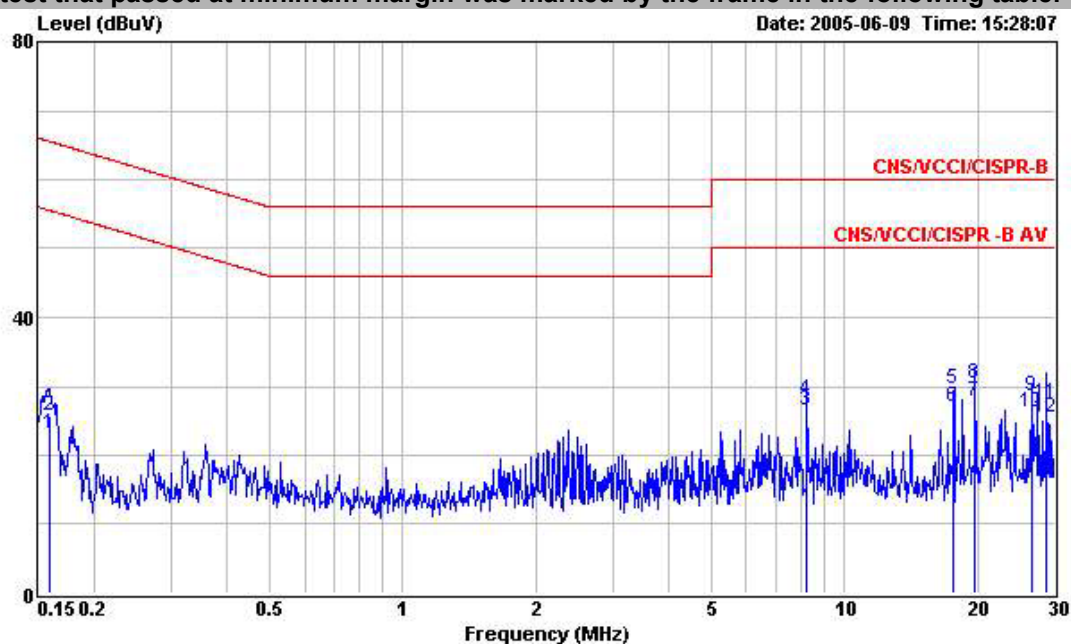
Test Engineer :

Jay



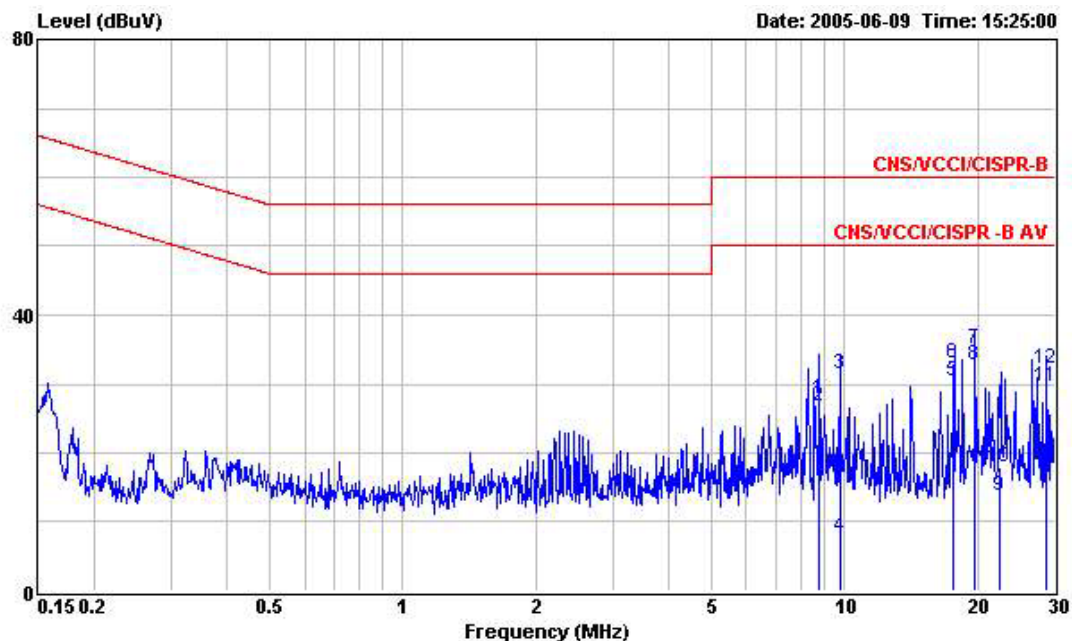
- Test Mode : Mode 2
- Temperature : 24°C
- Relative Humidity : 52%

■ The test that passed at minimum margin was marked by the frame in the following table.



Site : CO01-HY
Condition : CNS/VCCI/CISPR-B 2005 2001/008 LINE
EUT : Wireless/Wire ADSL
Power : 120Vac/60Hz
Model : FD560212
Memo : Ping N/E + Charer:DVE

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.158	23.06	-32.51	55.57	22.94	0.10	0.02	Average
2	0.158	25.59	-39.98	65.57	25.47	0.10	0.02	QP
3	8.228	26.50	-23.50	50.00	26.12	0.28	0.10	Average
4	8.228	28.12	-31.88	60.00	27.74	0.28	0.10	QP
5	17.693	29.64	-30.36	60.00	29.21	0.30	0.13	QP
6	17.693	27.09	-22.91	50.00	26.66	0.30	0.13	Average
7	19.710	27.74	-22.26	50.00	27.31	0.30	0.13	Average
8	19.710	30.38	-29.62	60.00	29.95	0.30	0.13	QP
9	26.549	28.62	-31.38	60.00	27.97	0.43	0.22	QP
10	26.549	26.17	-23.83	50.00	25.52	0.43	0.22	Average
11	28.689	27.42	-32.58	60.00	26.69	0.48	0.25	QP
12	28.689	25.56	-24.44	50.00	24.83	0.48	0.25	Average



Site : CO01-HY
Condition : CNS/VCCI/CISPR-B 2005 2001/008 NEUTRAL
EUT : Wireless/Wire ADSL
Power : 120Vac/60Hz
Model : FD560212
Memo : Ping N/B + Charer:DVE

	Freq	Level	Over	Limit	Read	Probe	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	8.717	27.88	-32.12	60.00	27.50	0.28	0.10	QP
2	8.717	26.83	-23.17	50.00	26.45	0.28	0.10	Average
3	9.760	31.32	-28.68	60.00	30.91	0.30	0.11	QP
4	9.760	7.77	-42.23	50.00	7.36	0.30	0.11	Average
5	17.694	30.51	-19.49	50.00	30.08	0.30	0.13	Average
6	17.694	33.06	-26.94	60.00	32.63	0.30	0.13	QP
7	19.707	35.15	-24.85	60.00	34.72	0.30	0.13	QP
8	19.707	32.69	-17.31	50.00	32.26	0.30	0.13	Average
9	22.571	13.69	-36.31	50.00	13.18	0.35	0.16	Average
10	22.571	18.01	-41.99	60.00	17.50	0.35	0.16	QP
11	28.684	29.63	-20.37	50.00	28.90	0.48	0.25	Average
12	28.684	32.11	-27.89	60.00	31.38	0.48	0.25	QP

Test Engineer :

Jay

5.7 Radiated Emission Measurement

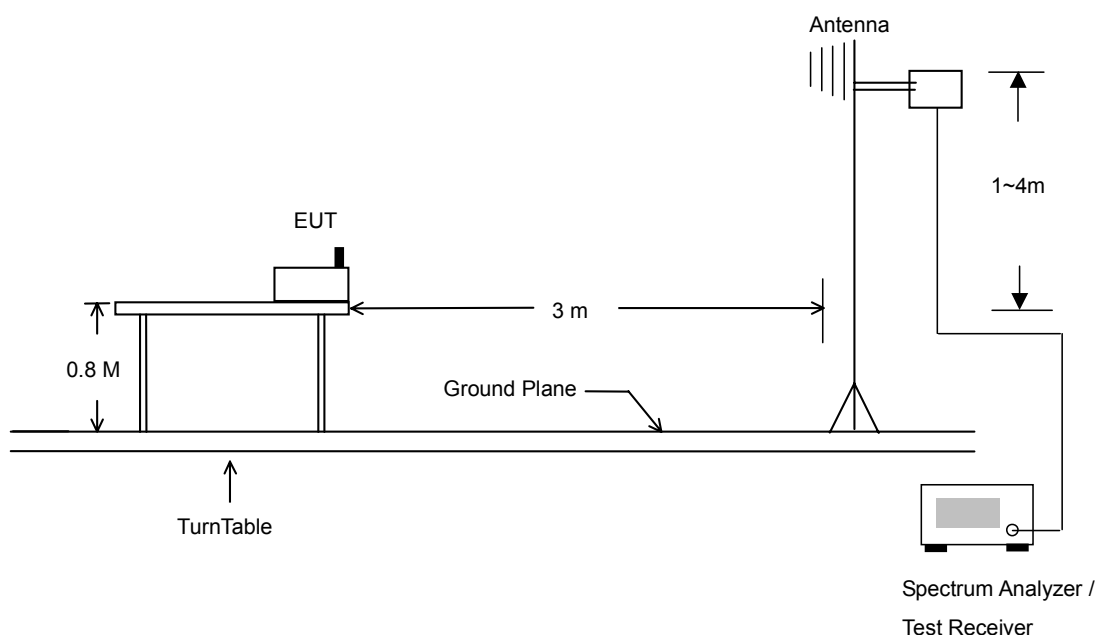
5.7.1 Measuring Instruments

As described in chapter 6 of this Report.

5.7.2 Test Procedures

1. The EUT was placed on a rotatable table top 0.8 meter above ground.
2. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiation.
4. The antenna is a broadband antenna and its height is varied between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function and specified bandwidth with Maximum Hold Mode.
7. For testing below 1GHz, If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the quasi-peak method and reported.
8. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in average mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

5.7.3 Typical Test Setup Layout of Radiated Emission





5.7.4 Test Data

- Temperature : 26C
- Relative Humidity : 58
- Test Engineer : Jay
- Test Mode : Mode 1
- Polarization : Horizontal

■ The test that passed at minimum margin was marked by the frame in the following table.

	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1 @	2390.00	54.53	-19.47	74.00	55.07	4.43	Peak
2 @	2390.00	43.14	-10.86	54.00	43.68	4.43	Average
3 @	2412.00	103.93			104.49	4.43	Peak
4 @	2412.00	97.29			97.85	4.43	Average
5 @	2494.00	52.98	-21.02	74.00	53.56	4.55	Peak
6 @	2494.00	41.76	-12.24	54.00	42.34	4.55	Average

Remark: #3 and #4 Fundamental Signal

	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1 @	4824.00	49.92	-24.08	74.00	46.22	6.61	Peak
2 @	4824.00	41.46	-12.54	54.00	37.76	6.61	Average

	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1 @	7234.00	58.11	-15.89	74.00	47.93	7.36	Peak
2 @	7234.00	52.05	-1.95	54.00	41.87	7.36	Average

	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1 @	9648.00	57.95	-16.05	74.00	46.96	8.98	Peak
2 @	9648.00	52.40	-1.60	54.00	41.40	8.98	Average



- Polarization : Vertical

■ The test that passed at minimum margin was marked by the frame in the following table.

	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1 @	2390.00	60.42	-13.58	74.00	60.96	4.43	Peak
2 @	2390.00	47.00	-7.00	54.00	47.54	4.43	Average
3 @	2412.00	112.30			112.85	4.43	Peak
4 @	2412.00	103.04			103.60	4.43	Average
5 @	2484.00	54.12	-19.88	74.00	54.70	4.52	Peak
6 @	2484.00	42.43	-11.57	54.00	43.01	4.52	Average

Remark: # 3 and #4 Fundamental Signal

	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1 @	4824.00	51.02	-22.98	74.00	47.32	6.61	Peak
2 @	4824.00	46.17	-7.83	54.00	42.47	6.61	Average

	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1 @	7238.00	59.86	-14.14	74.00	49.68	7.37	Peak
2 @	7238.00	53.69	-0.31	54.00	43.52	7.37	Average

	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1 @	9648.00	60.95	-13.05	74.00	49.96	8.98	Peak
2 @	9648.00	52.23	-1.77	54.00	41.23	8.98	Average



- Test Mode : Mode 2
- Polarization : Horizontal

■ The test that passed at minimum margin was marked by the frame in the following table.

	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1 @	1624.00	53.11	-20.89	74.00	57.56	3.49	Peak
2 @	1624.00	47.84	-6.16	54.00	52.29	3.49	Average
3 @	2328.00	53.85	-20.15	74.00	54.37	4.34	Peak
4 @	2328.00	41.90	-12.10	54.00	42.42	4.34	Average
5 @	2437.00	96.35			96.92	4.46	Average
6 @	2437.00	103.45			104.03	4.46	Peak
7 @	2488.00	41.71	-12.29	54.00	42.30	4.52	Average
8 @	2488.00	52.75	-21.25	74.00	53.34	4.52	Peak

Remark: #5 and #6 Fundamental Signal

	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1 @	7314.00	59.28	-14.72	74.00	48.92	7.39	Peak
2 @	7314.00	48.88	-5.12	54.00	38.52	7.39	Average

	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1 @	9748.00	56.77	-17.23	74.00	45.61	9.07	Peak
2 @	9748.00	51.25	-2.75	54.00	40.09	9.07	Average



- Polarization : Vertical

■ The test that passed at minimum margin was marked by the frame in the following table.

	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1 @	1624.00	52.59	-21.41	74.00	57.04	3.49	Peak
2 @	1624.00	49.83	-4.17	54.00	54.28	3.49	Average
3 @	2390.00	53.90	-20.10	74.00	54.44	4.43	Peak
4 @	2390.00	43.60	-10.40	54.00	44.14	4.43	Average
5 @	2437.00	103.73			104.30	4.46	Average
6 @	2437.00	113.06			113.64	4.46	Peak
7 @	2500.00	42.70	-11.30	54.00	43.28	4.55	Average
8 @	2500.00	53.53	-20.47	74.00	54.11	4.55	Peak

Remark: #5 and #6 Fundamental Signal

	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1 @	3248.00	47.79	-26.21	74.00	47.61	5.55	Peak
2 @	4874.00	51.12	-22.88	74.00	47.32	6.57	Peak
3 @	4874.00	45.29	-8.71	54.00	41.50	6.57	Average

	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1 @	7314.00	59.64	-14.36	74.00	49.28	7.39	Peak
2 @	7314.00	52.37	-1.63	54.00	42.01	7.39	Average

	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1 @	9748.00	58.06	-15.94	74.00	46.90	9.07	Peak
2 @	9748.00	52.98	-1.02	54.00	41.82	9.07	Average

- Test Mode : Mode 3
- Polarization : Horizontal

■ The test that passed at minimum margin was marked by the frame in the following table.

	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1 @	1638.00	54.78	-19.22	74.00	59.03	3.52	Peak
2 @	1638.00	46.08	-7.92	54.00	50.33	3.52	Average
3 @	2328.00	53.27	-20.73	74.00	53.79	4.34	Peak
4 @	2328.00	41.92	-12.08	54.00	42.44	4.34	Average
5 @	2462.00	96.57			97.15	4.49	Average
6 @	2462.00	102.75			103.33	4.49	Peak
7 @	2483.50	42.40	-11.60	54.00	42.98	4.52	Average
8 @	2483.50	53.15	-20.85	74.00	53.73	4.52	Peak

Remark: #5 and #6 Fundamental Signal

	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1 @	7378.00	56.64	-17.36	74.00	46.07	7.43	Peak
2 @	7378.00	52.32	-1.68	54.00	41.76	7.43	Average

	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1 @	9848.00	57.12	-16.88	74.00	45.79	9.17	Peak
2 @	9848.00	49.71	-4.29	54.00	38.38	9.17	Average



- Polarization : Vertical

■ The test that passed at minimum margin was marked by the frame in the following table.

	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1 @	2388.00	54.19	-19.81	74.00	54.75	4.40	Peak
2 @	2388.00	43.66	-10.34	54.00	44.22	4.40	Average
3 @	2462.00	111.54			112.12	4.49	Peak
4 @	2462.00	102.92			103.50	4.49	Average
5 @	2483.50	54.82	-19.18	74.00	55.40	4.52	Peak
6 @	2483.50	45.77	-8.23	54.00	46.35	4.52	Average

Remark: #3 and #4 Fundamental Signal

	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1 @	3284.00	49.47	-24.53	74.00	49.22	5.65	Peak
2 @	3284.00	41.45	-12.55	54.00	41.20	5.65	Average
3 @	4924.00	52.56	-21.44	74.00	48.65	6.55	Peak
4 @	4924.00	41.03	-12.97	54.00	37.13	6.55	Average

	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1 @	7378.00	60.01	-13.99	74.00	49.45	7.43	Peak
2 @	7378.00	52.76	-1.24	54.00	42.20	7.43	Average

	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1 @	9848.00	58.61	-15.39	74.00	47.28	9.17	Peak
2 @	9848.00	52.11	-1.89	54.00	40.78	9.17	Average



- Test Mode : Mode 4
- Polarization : Horizontal

■ The test that passed at minimum margin was marked by the frame in the following table.

	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1 @	2390.00	59.38	-14.62	74.00	59.92	4.43	Peak
2 @	2390.00	42.81	-11.19	54.00	43.35	4.43	Average
3 @	2412.00	99.93			100.48	4.43	Peak
4 @	2412.00	96.75			97.31	4.43	Average
5 @	2494.00	53.07	-20.93	74.00	53.65	4.55	Peak
6 @	2494.00	41.72	-12.28	54.00	42.30	4.55	Average

Remark: #3 and #4 Fundamental Signal.

- Polarization : Vertical

■ The test that passed at minimum margin was marked by the frame in the following table.

	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1 @	2390.00	68.32	-5.68	74.00	68.86	4.43	Peak
2 @	2390.00	48.04	-5.96	54.00	48.58	4.43	Average
3 @	2412.00	106.99			107.54	4.43	Peak
4 @	2412.00	101.04			101.60	4.43	Average
5 @	2484.00	53.52	-20.48	74.00	54.10	4.52	Peak
6 @	2484.00	42.70	-11.30	54.00	43.28	4.52	Average

Remark: #3 and #4 Fundamental Signal

	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1 @	7238.00	58.55	-15.45	74.00	48.38	7.37	Peak
2 @	7238.00	50.82	-3.18	54.00	40.65	7.37	Average



- Test Mode : Mode 5
- Polarization : Horizontal

■ The test that passed at minimum margin was marked by the frame in the following table.

	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1 @	108.84	25.17	-18.33	43.50	43.15	1.48	Peak
2 @	127.74	26.97	-16.53	43.50	45.23	1.55	Peak
3 @	255.99	32.19	-13.81	46.00	48.56	2.19	Peak

	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1 @	383.30	42.62	-3.38	46.00	55.22	2.90	Peak
2 @	768.30	42.11	-3.89	46.00	47.02	4.58	Peak
3 @	896.40	41.91	-4.09	46.00	47.34	5.16	Peak

- Polarization : Vertical

■ The test that passed at minimum margin was marked by the frame in the following table.

	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1 @	63.48	31.54	-8.46	40.00	55.47	1.10	Peak
2 @	76.98	32.31	-7.69	40.00	55.91	1.23	Peak
3 @	106.68	35.26	-8.24	43.50	53.57	1.47	Peak

	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1 @	749.40	36.01	-9.99	46.00	41.56	4.70	Peak
2 @	768.30	39.48	-6.52	46.00	44.39	4.58	Peak
3 @	896.40	39.15	-6.85	46.00	44.57	5.16	Peak



- Test Mode : Mode 6
- Polarization : Horizontal

The test that passed at minimum margin was marked by the frame in the following table.

	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1 @	127.74	26.83	-16.67	43.50	45.09	1.55	Peak
2 @	255.99	38.53	-7.47	46.00	54.90	2.19	Peak
3 @	299.73	31.68	-14.32	46.00	47.50	2.47	Peak

	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1 @	383.30	43.53	-2.47	46.00	56.12	2.90	QP
2 @	511.40	39.88	-6.12	46.00	50.06	3.48	Peak
3 @	768.30	41.23	-4.77	46.00	46.14	4.58	QP
4 @	799.80	41.41	-4.59	46.00	44.62	5.02	Peak
5 @	896.40	42.53	-3.47	46.00	47.96	5.16	Peak
6 @	959.40	42.07	-3.93	46.00	45.37	5.34	Peak

	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1 @	2348.00	54.29	-19.71	74.00	54.81	4.37	Peak
2 @	2348.00	41.88	-12.12	54.00	42.41	4.37	Average
3 @	2437.00	98.40			98.97	4.46	Peak
4 @	2437.00	94.60			95.17	4.46	Average
5 @	2488.00	53.50	-20.50	74.00	54.09	4.52	Peak
6 @	2488.00	41.74	-12.26	54.00	42.33	4.52	Average

Remark: #3 and #4 Fundamental Signal



Polarization : Vertical

■ The test that passed at minimum margin was marked by the frame in the following table.

	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1 @	33.78	34.23	-5.77	40.00	47.64	0.79	Peak
2 @	66.18	33.86	-6.14	40.00	57.87	1.13	Peak
3 @	74.28	33.26	-6.74	40.00	57.03	1.21	Peak

	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1 @	511.40	38.28	-7.72	46.00	48.46	3.48	Peak
2 @	768.30	39.97	-6.03	46.00	44.88	4.58	Peak
3 @	896.40	40.09	-5.91	46.00	45.52	5.16	Peak

	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1 @	2388.00	54.44	-19.56	74.00	54.99	4.40	Peak
2 @	2388.00	43.30	-10.70	54.00	43.86	4.40	Average
3 @	2437.00	106.50			107.07	4.46	Peak
4 @	2437.00	101.43			102.00	4.46	Average
5 @	2484.00	53.54	-20.46	74.00	54.12	4.52	Peak
6 @	2484.00	42.57	-11.43	54.00	43.15	4.52	Average

Remark: #3 and #4 Fundamental Signal

	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1 @	7308.00	57.97	-16.03	74.00	47.61	7.38	Peak
2 @	7308.00	51.41	-2.59	54.00	41.05	7.38	Average

	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1 @	9748.00	57.23	-16.77	74.00	46.07	9.07	Peak
2 @	9748.00	52.23	-1.77	54.00	41.07	9.07	Average



- Test Mode : Mode 7
- Polarization : Horizontal

■ The test that passed at minimum margin was marked by the frame in the following table.

	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1 @	2338.00	53.11	-20.89	74.00	53.65	4.34	Peak
2 @	2338.00	41.83	-12.17	54.00	42.39	4.40	Average
3 @	2462.00	96.58			97.15	4.49	Peak
4 @	2462.00	94.56			95.14	4.49	Average
5 @	2483.50	53.87	-20.13	74.00	54.44	4.52	Peak
6 @	2483.50	43.59	-10.41	54.00	44.17	4.52	Average

Remark: #3 and #4 Fundamental Signal

Polarization : Vertical

■ The test that passed at minimum margin was marked by the frame in the following table.

	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1 @	2388.00	54.15	-19.85	74.00	54.71	4.40	Peak
2 @	2388.00	43.02	-10.98	54.00	43.58	4.40	Average
3 @	2462.00	105.37			105.94	4.49	Peak
4 @	2462.00	99.52			100.10	4.49	Average
5 @	2483.50	61.07	-12.93	74.00	61.65	4.52	Peak
6 @	2483.50	46.61	-7.39	54.00	47.19	4.52	Average

Remark: #3 and #4 Fundamental Signal

	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	
1 @	9428.00	56.44	-17.56	74.00	45.55	8.81	Peak
2 @	9428.00	50.99	-3.01	54.00	40.10	8.81	Average

Remark: The spurious emission except listed above is too low to be taken.



5.8 Antenna Requirements

5.8.1 Standard Applicable

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no other antenna except assembled by the responsible party shall be used with the device.

And according to FCC 47 CFR Section 15.247 (b), if directional gain of transmitting antennas is greater than 6dBi, the power shall be reduced by the same level in dB comparing to gain minus 6dBi.

5.8.2 Antenna Connected Construction

The antenna used in this product is Fixed dipole with reverse SMA connector and it is considered to meet antenna requirement of FCC.

5.8.3 Antenna Gain

The antenna gain of EUT is less than 6dBi. Therefore, it is not necessary to reduce maximum peak output power limit.

6. List of Measuring Equipments Used

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Due Date	Remark
EMC Receiver	R&S	ESCS 30	100132	9kHz – 2.75GHz	Jun. 23, 2004	Jun. 23, 2005	Conduction (CO01-HY)
LISN	MessTec	NNB-2/16Z	2001/009	9kHz – 30MHz	Apr. 26, 2005	Apr. 26, 2006	Conduction (CO01-HY)
LISN (Support Unit)	MessTec	NNB-2/16Z	99081	9kHz – 30MHz	Dec. 17, 2004	Dec. 17, 2005	Conduction (CO01-HY)
EMI Filter	LINDGREN	LRE-2060	1004	< 450Hz	N/A	N/A	Conduction (CO01-HY)
EMI Filter	LINDGREN	N6006	201052	0 – 60Hz	N/A	N/A	Conduction (CO01-HY)
RF Cable-CON	Suhner Switzerland	RG223/U	CB029	9kHz – 30MHz	Dec. 23, 2004	Dec. 23, 2005	Conduction (CO01-HY)
Spectrum analyzer	Agilent	E4408B	MY44211030	9KHz-26.5GHz	Jul. 27, 2004	Jul. 26, 2005	Radiation (03CH06-HY)
Receiver	R&S	ESCS30	100356	9KHz-2.75GHz	Jul,09,2004	Jul, 10,2005	Radiation (03CH06-HY)
Controller	CT	SC100	N/A	N/A	N/A	N/A	Radiation (03CH06-HY)
Bilog Antenna	SCHAFFNER	CBL6112B	2885	30MHz -2GHz	Nov. 22, 2004	Nov. 21, 2005	Radiation (03CH06-HY)
Horn Antenna	Com-Power	AH118	071025	1G-18G	Feb. 22, 2005	Feb. 22, 2006	Radiation (03CH06-HY)
SHF-EHF Horn	SCHWARZBECK	BBHA 9170	9170-249	14G - 40G	Jun. 22, 2004	Jun. 22, 2005	Radiation (03CH06-HY)
HF Amplifier	MITEQ	AFS44	973248	0.1G - 26.5G	Nov. 23, 2004	Nov. 22, 2005	Radiation (03CH06-HY)
Amplifier	MITEQ	AMF-6F	997165	26G - 40G	Jun. 24, 2004	Jun. 24, 2005	Radiation (03CH06-HY)
Turn Table	HD	DS 420	420/650/00	0 ~ 360 degree	N/A	N/A	Radiation (03CH06-HY)
Antenna Mast	HD	MA 240	240/560/00	1 m - 4 m	N/A	N/A	Radiation (03CH06-HY)
Base Station Emulator	Agilent	E5515C	GB43460754	Qual-band	Jan. 12, 2004	Jan. 12, 2006	Base Station

7. Uncertainty Evaluation

Uncertainty of Conducted Emission Measurement (150kHz ~ 30MHz)

Contribution	Uncertainty of x_i		$u(x_i)$
	dB	Probability Distribution	
Receiver reading	0.10	Normal(k=2)	0.05
Cable loss	0.10	Normal(k=2)	0.05
AMN insertion loss	2.50	Rectangular	0.63
Receiver Spec	1.50	Rectangular	0.43
Site imperfection	1.39	Rectangular	0.80
Mismatch	+0.34/-0.35	U-shape	0.24
combined standard uncertainty Uc(y)	1.13		
Measuring uncertainty for a level of confidence of 95% U=2Uc(y)	2.26		

Uncertainty of Radiated Emission Measurement (30MHz ~ 1000MHz)

Contribution	Uncertainty of x_i		$u(x_i)$
	dB	Probability Distribution	
Receiver reading	0.41	Normal(k=2)	0.21
Antenna factor calibration	0.83	Normal(k=2)	0.42
Cable loss calibration	0.25	Normal(k=2)	0.13
Pre Amplifier Gain calibration	0.27	Normal(k=2)	0.14
RCV/SPA specification	2.50	Rectangular	0.72
Antenna Factor Interpolation for Frequency	1.00	Rectangular	0.29
Site imperfection	1.43	Rectangular	0.83
Mismatch	+0.39/-0.41	U-shaped	0.28
combined standard uncertainty Uc(y)	1.27		
Measuring uncertainty for a level of confidence of 95% U=2Uc(y)	2.54		

**Uncertainty of Radiated Emission Measurement (1GHz ~ 40GHz)**

Contribution	Uncertainty of x_i		$u(x_i)$	C_i	$C_i * u(x_i)$
	dB	Probability Distribution			
Receiver reading	± 0.10	Normal(k=1)	0.10	1	0.10
Antenna factor calibration	± 1.70	Normal(k=2)	0.85	1	0.85
Cable loss calibration	± 0.50	Normal(k=2)	0.25	1	0.25
Receiver Correction	± 2.00	Rectangular	1.15	1	1.15
Antenna Factor Directional	± 1.50	Rectangular	0.87	1	0.87
Site imperfection	± 2.80	Triangular	1.14	1	1.14
Mismatch Receiver VSWR $\Gamma_1 = 0.197$ Antenna VSWR $\Gamma_2 = 0.194$ Uncertainty = $20 \log(1 - \Gamma_1 * \Gamma_2 * \Gamma_3)$	+0.34/-0.35	U-shaped	0.244	1	0.244
Combined standard uncertainty $U_c(y)$	2.36				
Measuring uncertainty for a level of confidence of 95% $U = 2U_c(y)$	4.72				