



FCC TEST REPORT

REPORT NO.: RF930619H01
MODEL NO.: WLAN-Mobile Adapter 2202,
WN6301C-26B
RECEIVED: Jul. 19, 2004
TESTED: Jun. 25 to Jul. 29, 2004 and Sep. 07, 2004

APPLICANT: Nortel Networks Inc.

ADDRESS: 4655 Great America Parkway Santa Clara CA
95054 USA

ISSUED BY: Advance Data Technology Corporation

LAB LOCATION: No. 81-1, Lu Liao Keng, 9 Ling, Wu Lung Tsuen,
Chiung Lin Hsiang, Hsin Chu Hsien,
Taiwan, R.O.C.

This test report consists of 166 pages in total. It may be duplicated completely for legal use with the approval of the applicant. It should not be reproduced except in full, without the written approval of our laboratory. The client should not use it to claim product endorsement by CNLA, A2LA or any government agencies. The test results in the report only apply to the tested sample. The test results in this report are traceable to the national or international standards.



0536
ILAC MRA



No. 2177-01



Table of Contents

1.	CERTIFICATION	6
2.	SUMMARY OF TEST RESULTS.....	7
3.	GENERAL INFORMATION	10
3.1	GENERAL DESCRIPTION OF EUT.....	10
3.2	DESCRIPTION OF TEST MODES.....	12
3.3	GENERAL DESCRIPTION OF APPLIED STANDARDS.....	13
3.4	DESCRIPTION OF SUPPORT UNITS.....	14
3.5	CONFIGURATION OF SYSTEM UNDER TEST.....	14
4.	TEST TYPES AND RESULTS (FOR PART 802.11B)	15
4.1	CONDUCTED EMISSION MEASUREMENT.....	15
4.1.1	LIMITS OF CONDUCTED EMISSION MEASUREMENT	15
4.1.2	TEST INSTRUMENTS	15
4.1.3	TEST PROCEDURES	16
4.1.4	DEVIATION FROM TEST STANDARD	16
4.1.5	TEST SETUP	17
4.1.6	EUT OPERATING CONDITIONS.....	17
4.1.7	TEST RESULTS	18
4.2	RADIATED EMISSION MEASUREMENT.....	20
4.2.1	LIMITS OF RADIATED EMISSION MEASUREMENT	20
4.2.2	TEST INSTRUMENTS	21
4.2.3	TEST PROCEDURES	22
4.2.4	DEVIATION FROM TEST STANDARD	22
4.2.5	TEST SETUP	23
4.2.6	EUT OPERATING CONDITIONS.....	23
4.2.7	TEST RESULTS	24
4.2.8	TEST RESULTS - DSSS.....	25
4.2.9	TEST RESULTS - OFDM	28
4.3	6DB BANDWIDTH MEASUREMENT.....	32
4.3.1	LIMITS OF 6DB BANDWIDTH MEASUREMENT	32
4.3.2	TEST INSTRUMENTS	32
4.3.3	TEST PROCEDURE	33
4.3.4	DEVIATION FROM TEST STANDARD	33
4.3.5	TEST SETUP	33
4.3.6	EUT OPERATING CONDITIONS.....	33
4.3.7	TEST RESULTS -DSSS	34
4.3.8	TEST RESULTS -OFDM	38
4.4	MAXIMUM PEAK OUTPUT POWER	43
4.4.1	LIMITS OF MAXIMUM PEAK OUTPUT POWER MEASUREMENT	43
4.4.2	INSTRUMENTS.....	43
4.4.3	TEST PROCEDURES	44
4.4.4	TEST SETUP	44



4.4.5	EUT OPERATING CONDITIONS.....	44
4.4.6	TEST RESULTS -DSSS	45
	TEST RESULTS -OFDM	46
4.5	POWER SPECTRAL DENSITY MEASUREMENT	47
4.5.1	LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT.....	47
4.5.2	TEST INSTRUMENTS	47
4.5.3	TEST PROCEDURE	48
4.5.4	DEVIATION FROM TEST STANDARD	48
4.5.5	TEST SETUP	48
4.5.6	EUT OPERATING CONDITION	48
4.5.7	TEST RESULTS-DSSS	49
4.5.8	TEST RESULTS-OFDM	53
4.6	BAND EDGES MEASUREMENT	58
4.6.1	LIMITS OF BAND EDGES MEASUREMENT	58
4.6.2	TEST INSTRUMENTS	58
4.6.3	TEST PROCEDURE	58
4.6.4	DEVIATION FROM TEST STANDARD	58
4.6.5	EUT OPERATING CONDITION	58
4.6.6	TEST RESULTS –DSSS	59
4.6.7	TEST RESULTS –OFDM	62
4.7	ANTENNA REQUIREMENT	65
4.7.1	STANDARD APPLICABLE	65
4.7.2	ANTENNA CONNECTED CONSTRUCTION.....	65
5.	TEST TYPES AND RESULTS (FOR PART 802.11A)	66
5.1	CONDUCTED EMISSION MEASUREMENT	66
5.1.1	LIMITS OF CONDUCTED EMISSION MEASUREMENT	66
5.1.2	TEST INSTRUMENTS	66
5.1.3	TEST PROCEDURES	67
5.1.4	DEVIATION FROM TEST STANDARD	67
5.1.5	TEST SETUP	68
5.1.6	EUT OPERATING CONDITIONS.....	68
5.1.7	TEST RESULTS	69
5.2	RADIATED EMISSION MEASUREMENT	71
5.2.1	LIMITS OF RADIATED EMISSION MEASUREMENT	71
5.2.2	LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS	72
5.2.3	TEST INSTRUMENTS	73
5.2.4	TEST PROCEDURES	74
5.2.5	DEVIATION FROM TEST STANDARD	74
5.2.6	TEST SETUP	75
5.2.7	EUT OPERATING CONDITIONS.....	75
5.2.8	TEST RESULTS	76
	FOR FREQUENCY 5.15~5.35GHZ.....	88
5.3	PEAK TRANSMIT POWER MEASUREMENT	88
5.3.1	LIMITS OF PEAK TRANSMIT POWER MEASUREMENT	88



5.3.2	TEST INSTRUMENTS	89
5.3.3	TEST PROCEDURE	90
5.3.4	TEST SETUP	90
5.3.5	EUT OPERATING CONDITIONS.....	90
5.3.6	TEST RESULTS	91
5.4	PEAK POWER EXCURSION MEASUREMENT.....	107
5.4.1	LIMITS OF PEAK POWER EXCURSION MEASUREMENT	107
5.4.2	TEST INSTRUMENTS	107
5.4.3	TEST PROCEDURE	108
5.4.4	DEVIATION FROM TEST STANDARD	108
5.4.5	TEST SETUP	108
5.4.6	EUT OPERATING CONDITIONS.....	108
5.4.7	TEST RESULTS	109
5.5	PEAK POWER SPECTRAL DENSITY MEASUREMENT.....	118
5.5.1	LIMITS OF PEAK POWER SPECTRAL DENSITY MEASUREMENT	118
5.5.2	TEST INSTRUMENTS	118
5.5.3	TEST PROCEDURES	119
5.5.4	DEVIATION FROM TEST STANDARD	119
5.5.5	TEST SETUP	119
5.5.6	EUT OPERATING CONDITIONS.....	119
5.5.7	TEST RESULTS	120
5.6	FREQUENCY STABILITY	129
5.6.1	LIMITS OF FREQUENCY STABILITY MEASUREMENT	129
5.6.2	TEST INSTRUMENTS	129
5.6.3	TEST PROCEDURE	129
5.6.4	DEVIATION FROM TEST STANDARD	130
5.6.5	TEST SETUP	130
5.6.6	EUT OPERATING CONDITION	130
5.6.7	TEST RESULTS	131
5.7	BAND EDGES MEASUREMENT	132
5.7.1	TEST INSTRUMENTS	132
5.7.2	TEST PROCEDURE	132
5.7.3	EUT OPERATING CONDITION	132
5.7.4	TEST RESULTS	133
	FOR FREQUENCY 5.725~5.850GHZ.....	138
5.8	6DB BANDWIDTH MEASUREMENT.....	138
5.8.1	LIMITS OF 6DB BANDWIDTH MEASUREMENT	138
5.8.2	TEST INSTRUMENTS	138
5.8.3	TEST PROCEDURE	139
5.8.4	DEVIATION FROM TEST STANDARD	139
5.8.5	TEST SETUP	139
5.8.6	EUT OPERATING CONDITIONS.....	139
5.8.7	TEST RESULTS	140
5.9	MAXIMUM PEAK OUTPUT POWER	146



5.9.1	LIMITS OF PEAK TRANSMIT POWER MEASUREMENT	146
5.9.2	TEST INSTRUMENTS	146
5.9.3	TEST PROCEDURE	147
5.9.4	TEST SETUP	147
5.9.5	EUT OPERATING CONDITIONS.....	147
5.9.6	TEST RESULTS	148
5.10	POWER SPECTRAL DENSITY MEASUREMENT	149
5.10.1	LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT.....	149
5.10.2	TEST INSTRUMENTS	149
5.10.3	TEST PROCEDURE	150
5.10.4	DEVIATION FROM TEST STANDARD	150
5.10.5	TEST SETUP	150
5.10.6	EUT OPERATING CONDITION	150
5.10.7	TEST RESULTS	151
5.11	BAND EDGES MEASUREMENT	157
5.11.1	LIMITS OF BAND EDGES MEASUREMENT	157
5.11.2	TEST INSTRUMENTS	157
5.11.3	TEST PROCEDURE	157
5.11.4	DEVIATION FROM TEST STANDARD	157
5.11.5	EUT OPERATING CONDITION	158
5.11.6	TEST RESULTS	158
5.12	ANTENNA REQUIREMENT	163
5.12.1	STANDARD APPLICABLE	163
5.12.2	ANTENNA CONNECTED CONSTRUCTION.....	163
6.	PHOTOGRAPHS OF THE TEST CONFIGURATION	164
7.	INFORMATION ON THE TESTING LABORATORIES.....	166



1. CERTIFICATION

PRODUCT : Nortel Networks WLAN-Mobile Adapter 2202
BRAND NAME : Nortel Networks, Arcadyan
MODEL NO. : WLAN-Mobile Adapter 2202, WN6301C-26B
TESTED: Jun. 25 to Jul. 29, 2004 and Sep. 07, 2004
APPLICANT : Nortel Networks Inc.
TEST ITEM: ENGINEERING SAMPLE
STANDARDS : 47 CFR Part 15, Subpart C (Section 15.247),
Subpart E (Section 15.407), ANSI C63.4-2001

The above equipment (Model: WLAN-Mobile Adapter 2202, WN6301C-26B) have been tested by **Advance Data Technology Corporation**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

PREPARED BY : Amanda Chu , **DATE:** Sep. 15, 2004
(Amanda Chu)

TECHNICAL ACCEPTANCE : Hank Chung , **DATE:** Sep. 15, 2004
Responsible for RF (Hank Chung)

APPROVED BY : Eric Lin , **DATE:** Sep. 15, 2004
(Eric Lin, Manager)



2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: 47 CFR Part 15, Subpart C			
Standard Section	Test Type and Limit	Result	REMARK
15.207	AC Power Conducted Emission	PASS	Meet the requirement of limit Minimum passing margin is -19.23dBuV at 0.173MHz
15.247(a)(2)	Spectrum Bandwidth of a Direct Sequence Spread Spectrum System Limit: min. 500kHz	PASS	Meet the requirement of limit
15.247(b)	Maximum Peak Output Power Limit: max. 30dBm	PASS	Meet the requirement of limit
15.247(c)	Transmitter Radiated Emissions FCC Limit: Table 15.209	PASS	Meet the requirement of limit Minimum passing margin is -3.00dBuV at 2386.00MHz
15.247(d)	Power Spectral Density Limit: max. 8dBm	PASS	Meet the requirement of limit
15.247(c)	Band Edge Measurement Limit: 20 dB less than the peak value of fundamental frequency	PASS	Meet the requirement of limit



for freq. 5.15~5.35GHz :

APPLIED STANDARD: 47 CFR Part 15, Subpart E			
Standard Section	Test Type	Result	REMARK
15.407(b)(5)	AC Power Conducted Emission	PASS	Meet the requirement of limit Minimum passing margin is -20.39dBuV at 0.173MHz
15.407(b/1/2/3) (b)(5)	Electric Field Strength Spurious Emissions, 30MHz ~ 40000MHz	PASS	Meet the requirement of limit Minimum passing margin is -3.2dBuV at 5350.00MHz & 15960MHz
15.407(a/1/2/3)	Peak Transmit Power	PASS	Meet the requirement of limit
15.407(a)(6)	Peak Power Excursion	PASS	Meet the requirement of limit
15.407(a/1/2/3)	Peak Power Spectral Density	PASS	Meet the requirement of limit
15.407(g)	Frequency Stability	PASS	Meet the requirement of limit



for freq. 5.725~5.850GHz :

APPLIED STANDARD: 47 CFR Part 15, Subpart C			
Standard Section	Test Type and Limit	Result	REMARK
15.207	AC Power Conducted Emission	PASS	Meet the requirement of limit Minimum passing margin is -20.39dBuV at 0.173MHz
15.247(a)(2)	Spectrum Bandwidth of a Direct Sequence Spread Spectrum System Limit: min. 500kHz	PASS	Meet the requirement of limit
15.247(b)	Maximum Peak Output Power Limit: max. 30dBm	PASS	Meet the requirement of limit
15.247(c)	Transmitter Radiated Emissions FCC Limit: Table 15.209	PASS	Meet the requirement of limit Minimum passing margin is -3.00dBuV at 11490.00MHz
15.247(d)	Power Spectral Density Limit: max. 8dBm	PASS	Meet the requirement of limit
15.247(c)	Band Edge Measurement Limit: 20 dB less than the peak value of fundamental frequency	PASS	Meet the requirement of limit



3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

PRODUCT	Nortel Networks WLAN-Mobile Adapter 2202
MODEL NO.	WLAN-Mobile Adapter 2202, WN6301C-26B
POWER SUPPLY	DC 3.1~3.6V from host equipment
MODULATION	DSSS, OFDM
TRANSFER RATE	802.11b and draft 802.11g: 1/2/5.5/6/9/11/12/18/24/36/48/54Mbps 802.11a:6 to 54Mbps (Turbo mode: up to 108Mbps *see note 1)
FREQUENCY RANGE	802.11b and draft 802.11g: 2400MHz ~ 2483.5MHz 802.11a: 5.15~5.35GHz and 5.725~5.850GHz
NUMBER OF CHANNEL	802.11b and draft 802.11g: 11 802.11a: 13 for Normal mode / 5 for Turbo mode
CHANNEL SPACING	802.11b and draft 802.11g: 5MHz 802.11a: 20MHz for Normal mode / 40MHz for Turbo mode
MAX. OUTPUT POWER	802.11b: 22.2dBm / draft 802.11g: 23.2dBm 802.11a: 5.15~5.25GHz : 16.25dBm, 5.15~5.35GHz : 21.40dBm 802.11a: 5.725~5.850GHz: 19.15dBm
DATA CABLE	NA
ANTENNA TYPE	Dualband PCB antenna
I/O PORTS	NA
ASSOCIATED DEVICES	NA

NOTE:

1. This EUT is capable of providing data rates of up to 108Mbps in Turbo Mode depending upon reception quality.



2. The EUT is a Nortel Networks WLAN-Mobile Adapter 2202, which contains two radios capable of simultaneous 802.11b/g (2.4GHz) and 802.11a (5GHz) operations.
3. The EUT has two model names which are identical to each other in all aspects except for the followings:

Brand	Model Name
Nortel Networks	WLAN-Mobile Adapter 2202
Arcadyan	WN6301C-26B

From the above models, model: **WLAN-Mobile Adapter 2202** was selected as representative model for the test and its data was recorded in this report.

4. For more detailed features description, please refer to the manufacturer's specifications or User's Manual.



3.2 DESCRIPTION OF TEST MODES

For 802.11b: Eleven channels are provided to this EUT.

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

NOTE:

1. Below 1 GHz, the channel 1, 6, and 11 were pre-tested in chamber. The channel 11, worst case one, was chosen for final test.
2. Above 1 GHz, the channel 1, 6, and 11 were tested individually.
3. Transfer rate, 11Mbps with CCK technique and 6Mbps with OFDM technique, the worst case, were chosen for final test.
4. "Turbo Mode" allows data rates of up to 108Mbps. At data rates higher than 12Mbps the PA gain is reduced to improve signal fidelity. The device was, therefore, tested in turbo mode at the data rate that produced the highest output power for turbo mode (12Mbps).

For 802.11a: Thirteen Channels are provided to this EUT for Normal mode.

Channel	Frequency	Channel	Frequency
1	5180 MHz	8	5320 MHz
2	5200 MHz	9	5745MHz
3	5220 MHz	10	5765MHz
4	5240 MHz	11	5785MHz
5	5260 MHz	12	5805MHz
6	5280 MHz	13	5825MHz
7	5300 MHz		

Five Channels are provided to this EUT for Turbo Mode.

Channel	Frequency	Channel	Frequency
1	5210 MHz	4	5760MHz
2	5250 MHz	5	5800MHz
3	5290 MHz		

NOTE:

- 1..The EUT was tested in both normal mode (channel bandwidth of approximately 20MHz) and turbo mode (channel bandwidth of approximately 40MHz).
2. "Normal Mode" allows data rates of up to 54Mbps. The device was, therefore, tested in Normal mode at the data rate that produced the highest output power for normal mode (6Mbps).
3. "Turbo Mode" allows data rates of up to 108Mbps. At data rates higher than 12Mbps the PA gain is reduced to improve signal fidelity. The device was, therefore, tested in turbo mode at the data rate that produced the highest output power for turbo mode (12Mbps).
4. Channel 1, 4, 5, 8, 9 and 13 are the closest frequencies to the band edge, were chosen for final test of Normal Mode.
5. Channel 1~ 5 were chosen for final test of turbo mode.



3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a Nortel Networks WLAN-Mobile Adapter 2202 According to the specifications of the manufacturer; it must comply with the requirements of the following standards:

**47 CFR Part 15, Subpart C. (15.247),
Subpart E (15.407). ANSI C63.4 : 2001**

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

NOTE: The EUT is also considered as a kind of computer peripheral, because the connection to computer is necessary for typical use. It has been verified to comply with the requirements of 47CFR Part 15, Subpart B, Class B (DoC). The test report has been issued separately.



3.4 DESCRIPTION OF SUPPORT UNITS

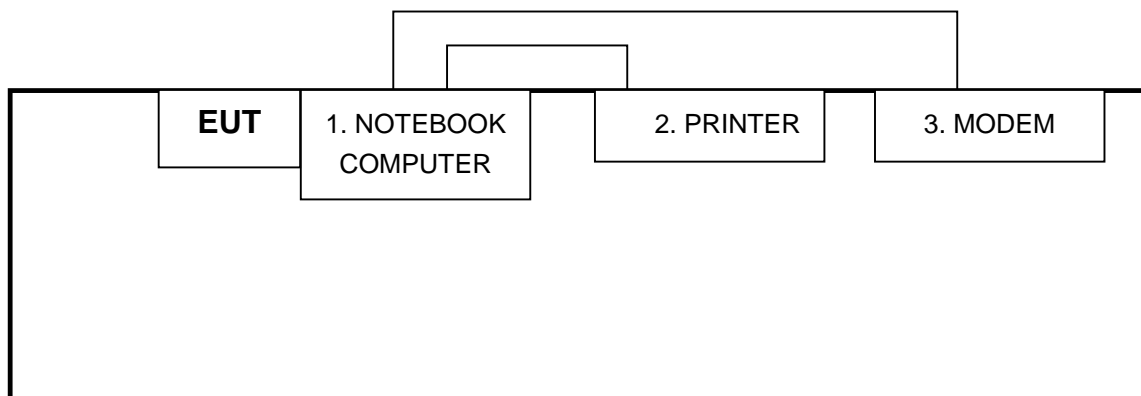
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

No.	Product	Brand	Model No.	Serial No.	FCC ID
1	NOTEBOOK COMPUTER	DELL	C600	6DRV601	FCC DoC
2	PRINTER	HP	C2642A	MY79F1C3MZ	B94C2642X
3	MODEM	ACEEX	1414	0206026776	IFAXDM1414

No.	Signal cable description
1	NA
2	1.8 m foil shielded wire, terminal by frame, PS2 Connector, w/o Core.
3	1.2 m braid shielded wire, terminated with DB25 and DB9 connector via metallic frame, w/o core.

Note: 1. All power cords of the above support units are unshielded (1.8m).

3.5 CONFIGURATION OF SYSTEM UNDER TEST



NOTE: Please refer to the photos of test configuration in Item 6 also.



4. TEST TYPES AND RESULTS (FOR PART 802.11g)

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)	
	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

- NOTES:**
- (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.
 - (3) All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
*ROHDE & SCHWARZ Test Receiver	ESCS 30	847124/029	Dec. 04, 2004
*ROHDE & SCHWARZ LISN (for EUT)	ESHS-Z5	848773/004	Nov. 04, 2004
*KYORITSU LISN (for peripheral)	KNW-407	8/1395/12	Jul. 23, 2005
*RF Cable (JETBAO)	RG233/U	Cable_CA_01	Jul. 02, 2005
*Terminator(for KYORITSU)	50	3	May 10, 2005
*Software	Cond-V2e	NA	NA

Note:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in ADT Shielded Room No. A.
3. The VCCI Con A Registration No. is C-817.
4. * = These equipment are used for the final measurement.
5. The measurement uncertainty is 2.53 dB, which is calculated as per the document CISPR 16-4



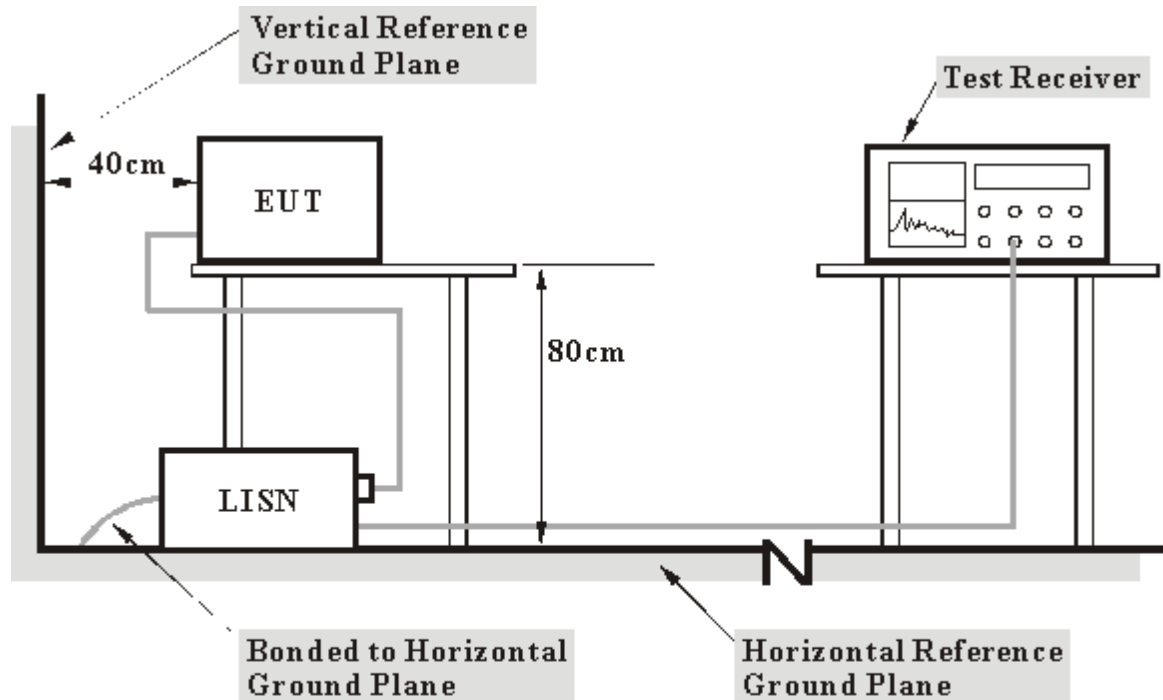
4.1.3 TEST PROCEDURES

- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- c. The frequency range from 150 kHz to 30 MHz was searched. Emission levels over 10dB under the prescribed limits could not be reported

4.1.4 DEVIATION FROM TEST STANDARD

No deviation

4.1.5 TEST SETUP



- Note:**
1. Support units were connected to second LISN.
 2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

4.1.6 EUT OPERATING CONDITIONS

- a. Plug the EUT into the support unit 1 (Notebook computer) which placed on a testing table.
- b. The support unit 1 (Notebook computer)) ran a test program “Art 4.6 b 6” to enable EUT under transmission condition continuously at specific channel frequency.
- c. Personal computer sends "H" messages to modem.
- d. Personal computer sends "H" messages to printer, and the printer prints them on paper.

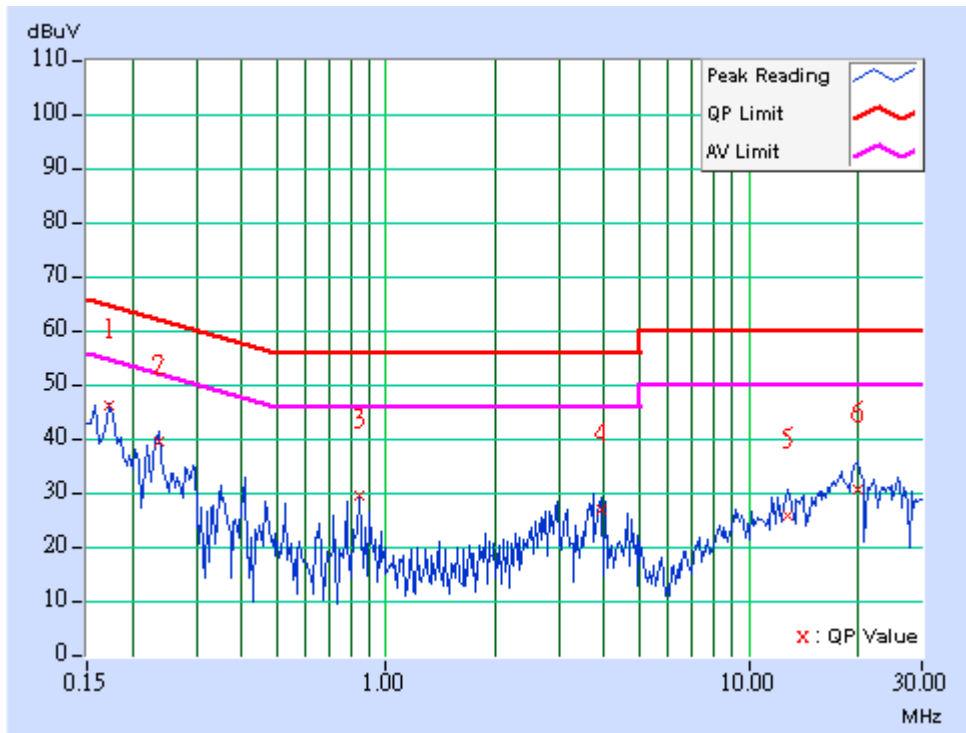


4.1.7 TEST RESULTS

EUT	Nortel Networks WLAN-Mobile Adapter 2202		
MODEL	WLAN-Mobile Adapter 2202		
MODE	Channel 11	6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	27deg. C, 59%RH, 963 hPa	TESTED BY	Sky Liao

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.173	0.25	44.78	-	45.03	-	64.79	54.79	-19.77	-
2	0.236	0.28	38.25	-	38.53	-	62.24	52.24	-23.71	-
3	0.845	0.27	28.30	-	28.57	-	56.00	46.00	-27.43	-
4	3.910	0.40	25.47	-	25.87	-	56.00	46.00	-30.13	-
5	12.805	1.02	24.61	-	25.63	-	60.00	50.00	-34.37	-
6	20.043	1.40	29.46	-	30.86	-	60.00	50.00	-29.14	-

- NOTES: (1) "": Undetectable
 (2) Q.P. and AV. are abbreviations of quasi-peak and average.
 (3) "-": The Quasi-peak reading value also meets an average limit, thus measurement with the average detector is unnecessary.
 (4) The emission levels of other frequencies were very low against the limit.
 (5) Correction Factor = Insertion loss + Cable loss
 (6) Margin value = Emission level - Limit value

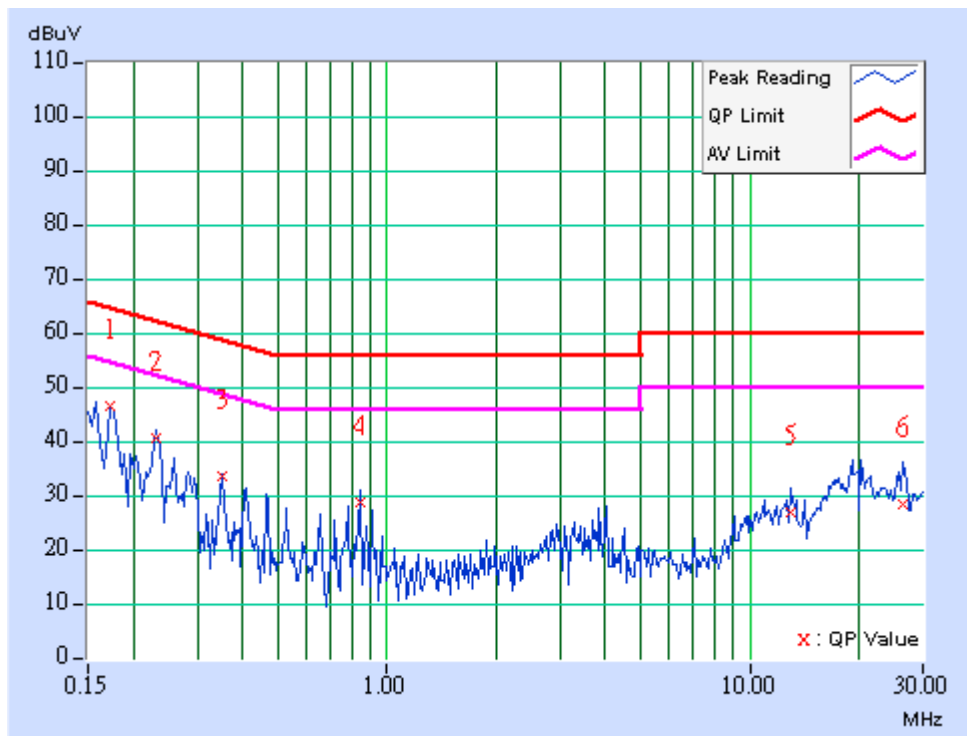




EUT	Nortel Networks WLAN-Mobile Adapter 2202		
MODEL	WLAN-Mobile Adapter 2202		
MODE	Channel 11	6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	27deg. C, 59%RH, 963 hPa	TESTED BY	Sky Liao

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.173	0.25	45.32	-	45.57	-	64.79	54.79	-19.23	-
2	0.232	0.28	39.40	-	39.68	-	62.38	52.38	-22.69	-
3	0.349	0.23	32.60	-	32.83	-	58.98	48.98	-26.16	-
4	0.841	0.27	27.86	-	28.13	-	56.00	46.00	-27.87	-
5	12.984	0.94	25.80	-	26.74	-	60.00	50.00	-33.26	-
6	26.543	1.20	27.33	-	28.53	-	60.00	50.00	-31.47	-

- NOTES: (1) "": Undetectable
 (2) Q.P. and AV. are abbreviations of quasi-peak and average.
 (3) "-": The Quasi-peak reading value also meets an average limit, thus measurement with the average detector is unnecessary.
 (4) The emission levels of other frequencies were very low against the limit.
 (5) Correction Factor = Insertion loss + Cable loss
 (6) Margin value = Emission level - Limit value





4.2 RADIATED EMISSION MEASUREMENT

4.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

Field strength limits are at the distance of 3 meters, emissions radiated outside of the specified bands, shall be according to the general radiated limits in 15.209 as following:

Frequencies (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.



4.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
HP Spectrum Analyzer	8594ER	3829U04676	Sep 01 ,2005
ADVANTEST Spectrum Analyzer	R3271A	85060311	Jun 16, 2005
CHASE RF Pre_Amplifier	CPA9232	1057	May. 10, 2005
HP Pre_Amplifier	8449B	3008A01922	Oct. 13, 2004
ROHDE & SCHWARZ Test Receiver	ESVS 10	849231 /019	Sep. 30, 2004
CHASE Broadband Antenna	VULB9168	138	May.22, 2005
Schwarzbeck Horn_Antenna	3115	5619	Jun 16, 2005
Schwarzbeck Horn_Antenna	BBHA 9170	BBHA9170192	Feb. 16, 2005
SCHWARZBECK Tunable Dipole Antenna	UHAP	897	Mar. 07, 2005
SCHWARZBECK Tunable Dipole Antenna	VHAP	880	Mar. 07, 2005
RF Switches (ARNITSU)	CS-201	1565157	Dec. 01, 2004
RF CABLE (Chaintek) 1GHz-20GHz	SF102	22054-2	Feb. 10. 2005
RF Cable(RICHTEC)	9913-30M	STCCAB-30M-1 GHz-021	Dec. 01, 2004
Software	AS60P8	NA	NA
CHANCE MOST Antenna Tower	AT-100	0203	NA
CHANCE MOST Turn Table	TT-100	0203	NA

- Note: 1. The calibration interval of the above test instruments is 12 months (36 months for Tunable Dipole Antenna) and the calibrations are traceable to NML/ROC and NIST/USA.
2. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
3. The test was performed in ADT Open Site No. C.
4. The FCC Site Registration No. is 656396.
5. The VCCI Site Registration No. is R-1626.
6. The CANADA Site Registration No. is IC 4824-3.
7. The measurement uncertainty is 3.56 dB, which is calculated as per the document CISPR 16-4



4.2.3 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10 dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10 dB margin would be re-tested one by one using the quasi-peak method or average method as specified and then reported in Data sheet peak mode and QP mode.

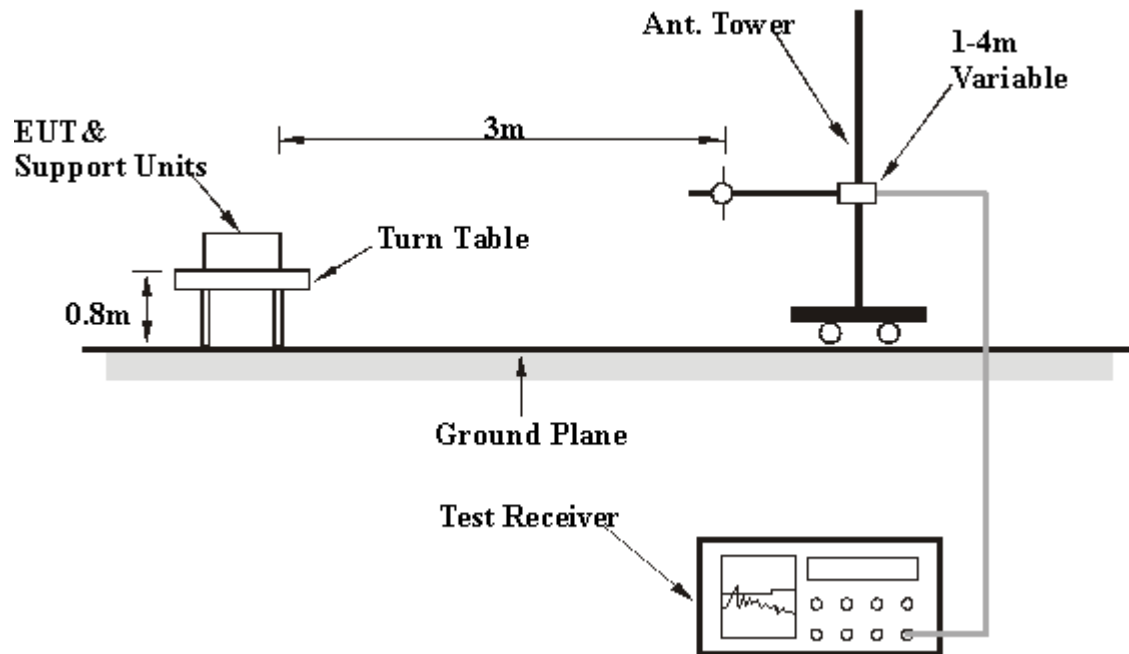
NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection at frequency below 1GHz.
2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 300 Hz for Average detection (AV) at frequency above 1GHz.

4.2.4 DEVIATION FROM TEST STANDARD

No deviation

4.2.5 TEST SETUP



For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

4.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6



4.2.7 TEST RESULTS

EUT	Nortel Networks WLAN-Mobile Adapter 2202	MODEL	WLAN-Mobile Adapter 2202
MODE	Channel 11	FREQUENCY RANGE	30-1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION & BANDWIDTH	Quasi-Peak, 120kHz
ENVIRONMENTAL CONDITIONS	24deg. C, 69%RH, 963 hPa	TESTED BY	Wen Yu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	167.24	25.40 QP	43.50	-18.10	1.81 H	51	14.50	10.90
2	172.03	25.70 QP	43.50	-17.80	1.71 H	75	15.20	10.50
3	259.84	31.80 QP	46.00	-14.20	1.14 H	102	16.30	15.50
4	344.07	35.10 QP	46.00	-10.90	1.19 H	220	18.40	16.80
5	432.06	28.40 QP	46.00	-17.60	1.00 H	230	8.90	19.50
6	455.07	33.90 QP	46.00	-12.10	1.00 H	269	13.80	20.10
7	872.44	28.80 QP	46.00	-17.20	1.05 H	305	0.80	28.00
8	933.88	33.40 QP	46.00	-12.60	1.00 H	3	4.00	29.40
9	983.04	32.40 QP	54.00	-21.60	1.00 H	8	2.50	29.80

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	67.53	29.80 QP	40.00	-10.20	1.32 V	70	23.80	6.00
2	200.00	23.00 QP	43.50	-20.50	1.12 V	358	13.20	9.80
3	344.06	29.60 QP	46.00	-16.40	1.36 V	268	12.80	16.80
4	432.06	28.60 QP	46.00	-17.40	1.33 V	321	9.20	19.50
5	440.00	25.90 QP	46.00	-20.10	1.23 V	2	6.20	19.70
6	454.87	32.80 QP	46.00	-13.20	1.28 V	4	12.70	20.10
7	480.00	24.30 QP	46.00	-21.70	1.16 V	329	3.40	20.90
8	560.00	26.60 QP	46.00	-19.40	1.00 V	119	3.60	23.00
9	600.00	26.90 QP	46.00	-19.10	1.00 V	313	4.30	22.60
10	872.44	29.10 QP	46.00	-16.90	1.49 V	350	1.10	28.00
11	933.88	36.00 QP	46.00	-10.00	1.52 V	284	6.60	29.40

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.



4.2.8 TEST RESULTS - DSSS

EUT	Nortel Networks WLAN-Mobile Adapter 2202	Model	WLAN-Mobile Adapter 2202
MODE	Channel 1	FREQUENCY RANGE	1000MHz~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION & BANDWIDTH	Peak (PK) Average (AV) 1 MHz
ENVIRONMENTAL CONDITIONS	28deg. C, 55%RH, 963 hPa	TESTED BY	Wen Yu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2386.00	63.80 PK	74.00	-10.20	1.56 H	87	31.20	32.60
1	2386.00	51.00 AV	54.00	-3.00	1.56 H	87	18.50	32.60
2	2390.00	57.50 PK	74.00	-16.50	1.54 H	88	23.70	33.80
2	2390.00	49.80 AV	54.00	-4.20	1.54 H	88	16.00	33.80
3	*2412.00	114.50 PK			1.53 H	87	84.60	29.90
3	*2412.00	106.70 AV			1.53 H	87	76.80	29.90
4	4824.00	55.80 PK	74.00	-18.20	1.63 H	84	19.60	36.20
4	4824.00	45.10 AV	54.00	-8.90	1.63 H	84	8.90	36.20
5	7236.00	53.10 PK	74.00	-20.90	1.17 H	6	11.50	41.70
5	7236.00	40.90 AV	54.00	-13.10	1.17 H	6	-0.70	41.70
6	9648.00	55.20 PK	74.00	-18.80	1.66 H	24	10.30	44.90
6	9648.00	43.50 AV	54.00	-10.50	1.66 H	24	-1.40	44.90

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2386.00	54.70 PK	74.00	-19.30	1.77 V	196	22.10	32.60
1	2386.00	41.80 AV	54.00	-12.20	1.77 V	196	9.20	32.60
2	2390.00	48.80 PK	74.00	-25.20	1.63 V	251	15.00	33.80
3	*2412.00	105.80 PK			1.62 V	250	75.90	29.90
3	*2412.00	98.30 AV			1.62 V	250	68.50	29.90
4	4824.00	60.10 PK	74.00	-13.90	1.60 V	252	23.80	36.20
4	4824.00	48.20 AV	54.00	-5.80	1.60 V	252	11.90	36.20
5	7236.00	53.80 PK	74.00	-20.20	1.52 V	250	12.20	41.70
5	7236.00	42.80 AV	54.00	-11.20	1.52 V	250	1.10	41.70
6	9648.00	57.20 PK	74.00	-16.80	1.03 V	73	12.20	44.90
6	9648.00	46.90 AV	54.00	-7.10	1.03 V	73	2.00	44.90

- NOTE:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. The limit value is defined as per 15.247
 6. “ * ” : Fundamental frequency



EUT	Nortel Networks WLAN-Mobile Adapter 2202	MODEL	WLAN-Mobile Adapter 2202
MODE	Channel 6	FREQUENCY RANGE	1000MHz~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION & BANDWIDTH	Peak (PK) Average (AV) 1 MHz
ENVIRONMENTAL CONDITIONS	28deg. C, 55%RH, 963 hPa	TESTED BY	Wen Yu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	113.00 PK			1.35 H	360	83.00	30.00
1	*2437.00	105.30 AV			1.35 H	360	75.40	30.00
2	4874.00	55.40 PK	74.00	-18.60	1.70 H	124	18.90	36.50
2	4874.00	43.40 AV	54.00	-10.60	1.70 H	124	6.90	36.50
3	7311.00	54.60 PK	74.00	-19.40	1.46 H	72	12.90	41.80
3	7311.00	43.40 AV	54.00	-10.60	1.46 H	72	1.70	41.80
4	9748.00	56.20 PK	74.00	-17.80	1.78 H	60	11.60	44.60
4	9748.00	44.90 AV	54.00	-9.10	1.78 H	60	0.30	44.60

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	103.40 PK			1.03 V	116	73.50	30.00
1	*2437.00	95.50 AV			1.03 V	116	65.50	30.00
2	4874.00	58.60 PK	74.00	-15.40	1.44 V	350	22.20	36.50
2	4874.00	47.60 AV	54.00	-6.40	1.44 V	350	11.10	36.50
3	7311.00	56.10 PK	74.00	-17.90	1.14 V	4	14.30	41.80
3	7311.00	45.10 AV	54.00	-8.90	1.14 V	4	3.40	41.80
4	9748.00	57.30 PK	74.00	-16.70	1.64 V	333	12.70	44.60
4	9748.00	48.30 AV	54.00	-5.70	1.64 V	333	3.60	44.60

- NOTE:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. The limit value is defined as per 15.247
 6. “ * ” : Fundamental frequency



EUT	Nortel Networks WLAN-Mobile Adapter 2202	MODEL	WLAN-Mobile Adapter 2202
MODE	Channel 11	FREQUENCY RANGE	1000MHz~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION & BANDWIDTH	Peak (PK) Average (AV) 1 MHz
ENVIRONMENTAL CONDITIONS	28deg. C, 55%RH, 963 hPa	TESTED BY	Wen Yu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	112.90 PK			1.44 H	90	82.90	30.10
1	*2462.00	105.30 AV			1.44 H	90	75.30	30.10
2	2483.50	56.60 PK	74.00	-17.40	1.45 H	91	26.50	30.10
2	2483.50	49.00 AV	54.00	-5.00	1.45 H	91	18.90	30.10
3	2487.00	57.40 PK	74.00	-16.60	1.27 H	201	27.20	30.10
3	2487.00	50.10 AV	54.00	-3.90	1.27 H	201	20.00	30.10
4	4924.00	55.90 PK	74.00	-18.10	1.30 H	37	19.20	36.70
4	4924.00	44.00 AV	54.00	-10.00	1.30 H	37	7.30	36.70
5	7386.00	54.60 PK	74.00	-19.40	1.73 H	100	12.70	41.80
5	7386.00	43.40 AV	54.00	-10.60	1.73 H	100	1.60	41.80
6	9848.00	55.30 PK	74.00	-18.70	1.24 H	111	10.90	44.40
6	9848.00	44.00 AV	54.00	-10.00	1.24 H	111	-0.40	44.40

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	103.70 PK			1.88 V	257	73.70	30.10
1	*2462.00	96.30 AV			1.88 V	257	66.30	30.10
2	2483.50	47.40 PK	74.00	-26.60	1.44 V	90	17.30	30.10
3	2487.00	51.30 PK	74.00	-22.70	1.47 V	111	21.20	30.10
3	2487.00	43.20 AV	54.00	-10.80	1.47 V	111	13.10	30.10
4	4924.00	54.70 PK	74.00	-19.30	1.45 V	285	18.00	36.70
4	4924.00	42.00 AV	54.00	-12.00	1.45 V	285	5.30	36.70
5	7386.00	55.20 PK	74.00	-18.80	1.74 V	91	13.30	41.80
5	7386.00	44.20 AV	54.00	-9.80	1.74 V	91	2.40	41.80
6	9848.00	56.60 PK	74.00	-17.40	1.63 V	50	12.20	44.40
6	9848.00	47.80 AV	54.00	-6.20	1.63 V	50	3.40	44.40

- NOTE:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. The limit value is defined as per 15.247
 6. “ * ” : Fundamental frequency



4.2.9 TEST RESULTS - OFDM

EUT	Nortel Networks WLAN-Mobile Adapter 2202	MODEL	WLAN-Mobile Adapter 2202
MODE	Channel 1	FREQUENCY RANGE	1000MHz~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION & BANDWIDTH	Peak (PK) Average (AV) 1 MHz
ENVIRONMENTAL CONDITIONS	28deg. C, 55%RH, 963 hPa	TESTED BY	Wen Yu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	60.10 PK	74.00	-13.90	1.36 H	359	26.30	33.80
1	2390.00	49.90 AV	54.00	-4.10	1.36 H	359	16.10	33.80
2	*2412.00	105.00 PK			1.01 H	57	75.10	29.90
2	*2412.00	96.70 AV			1.01 H	57	66.80	29.90
3	4824.00	58.70 PK	74.00	-15.30	1.22 H	0	22.50	36.20
3	4824.00	43.50 AV	54.00	-10.50	1.22 H	0	7.30	36.20
4	7236.00	52.80 PK	74.00	-21.20	1.85 H	331	11.10	41.70
4	7236.00	39.00 AV	54.00	-15.00	1.85 H	331	-2.70	41.70
5	9648.00	54.90 PK	74.00	-19.10	1.21 H	58	10.00	44.90
5	9648.00	41.80 AV	54.00	-12.20	1.21 H	58	-3.10	44.90

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	55.60 PK	74.00	-18.40	1.98 V	131	21.80	33.80
1	2390.00	45.60 AV	54.00	-8.40	1.98 V	131	11.80	33.80
2	*2412.00	103.00 PK			1.99 V	132	73.10	29.90
2	*2412.00	92.90 AV			1.99 V	132	63.00	29.90
3	4824.00	54.60 PK	74.00	-19.40	1.59 V	138	18.40	36.20
3	4824.00	39.80 AV	54.00	-14.20	1.59 V	138	3.60	36.20
4	7236.00	52.40 PK	74.00	-21.60	1.75 V	135	10.70	41.70
4	7236.00	39.10 AV	54.00	-14.90	1.75 V	135	-2.60	41.70
5	9648.00	55.20 PK	74.00	-18.80	1.44 V	329	10.30	44.90
5	9648.00	41.80 AV	54.00	-12.20	1.44 V	329	-3.10	44.90

- NOTE:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. The limit value is defined as per 15.247
 6. " * " : Fundamental frequency



EUT	Nortel Networks WLAN-Mobile Adapter 2202	MODEL	WLAN-Mobile Adapter 2202
MODE	Channel 6	FREQUENCY RANGE	1000MHz~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION & BANDWIDTH	Peak (PK) Average (AV) 1 MHz
ENVIRONMENTAL CONDITIONS	28deg. C, 55%RH, 963 hPa	TESTED BY	Wen Yu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	110.40 PK			1.13 H	355	80.40	30.00
1	*2437.00	100.60 AV			1.13 H	355	70.60	30.00
2	4874.00	65.60 PK	74.00	-8.40	1.00 H	18	29.10	36.50
2	4874.00	50.10 AV	54.00	-3.90	1.00 H	18	13.70	36.50
3	7311.00	55.70 PK	74.00	-18.30	1.43 H	21	13.90	41.80
3	7311.00	41.30 AV	54.00	-12.70	1.43 H	21	-0.50	41.80
4	9748.00	55.10 PK	74.00	-18.90	1.16 H	275	10.50	44.60
4	9748.00	42.00 AV	54.00	-12.00	1.16 H	275	-2.70	44.60

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	104.00 PK			2.02 V	132	74.00	30.00
1	*2437.00	93.70 AV			2.02 V	132	63.70	30.00
2	4874.00	60.50 PK	74.00	-13.50	1.49 V	162	24.10	36.50
2	4874.00	45.60 AV	54.00	-8.40	1.49 V	162	9.20	36.50
3	7311.00	56.10 PK	74.00	-17.90	1.14 V	4	14.30	41.80
3	7311.00	41.00 AV	54.00	-13.00	1.14 V	4	-0.80	41.80
4	9748.00	54.70 PK	74.00	-19.30	1.08 V	176	10.10	44.60
4	9748.00	42.00 AV	54.00	-12.00	1.08 V	176	-2.70	44.60

- NOTE:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. The limit value is defined as per 15.247
 6. “ * ” : Fundamental frequency



EUT	Nortel Networks WLAN-Mobile Adapter 2202	MODEL	WLAN-Mobile Adapter 2202
MODE	Channel 11	FREQUENCY RANGE	1000MHz~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION & BANDWIDTH	Peak (PK) Average (AV) 1 MHz
ENVIRONMENTAL CONDITIONS	28deg. C, 55%RH, 963 hPa	TESTED BY	Wen Yu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	107.90 PK			1.11 H	360	77.90	30.10
1	*2462.00	98.80 AV			1.11 H	360	68.70	30.10
2	2483.50	59.00 PK	74.00	-15.00	1.12 H	1	28.90	30.10
2	2483.50	49.80 AV	54.00	-4.20	1.12 H	1	19.70	30.10
3	4924.00	62.60 PK	74.00	-11.40	1.32 H	30	25.90	36.70
3	4924.00	45.50 AV	54.00	-8.50	1.32 H	30	8.80	36.70
4	7386.00	53.10 PK	74.00	-20.90	1.50 H	339	11.20	41.80
4	7386.00	39.70 AV	54.00	-14.30	1.50 H	339	-2.20	41.80
5	9848.00	55.50 PK	74.00	-18.50	1.23 H	264	11.10	44.40
5	9848.00	42.10 AV	54.00	-11.90	1.23 H	264	-2.30	44.40

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	100.40 PK			1.56 V	106	70.30	30.10
1	*2462.00	90.80 AV			1.56 V	106	60.80	30.10
2	2483.50	51.40 PK	74.00	-22.60	1.57 V	107	21.30	30.10
2	2483.50	41.90 AV	54.00	-12.10	1.57 V	107	11.80	30.10
3	4924.00	55.70 PK	74.00	-18.30	1.52 V	140	19.00	36.70
3	4924.00	40.30 AV	54.00	-13.70	1.52 V	140	3.60	36.70
4	7386.00	52.10 PK	74.00	-21.90	1.61 V	157	10.30	41.80
4	7386.00	39.00 AV	54.00	-15.00	1.61 V	157	-2.80	41.80
5	9848.00	55.30 PK	74.00	-18.70	1.37 V	52	10.90	44.40
5	9848.00	42.00 AV	54.00	-12.00	1.37 V	52	-2.40	44.40

- NOTE:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. The limit value is defined as per 15.247
 6. " * " : Fundamental frequency



EUT	Nortel Networks WLAN-Mobile Adapter 2202	MODEL	WLAN-Mobile Adapter 2202
MODE	Turbo Channel 6	FREQUENCY RANGE	1000MHz~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION & BANDWIDTH	Peak (PK) Average (AV) 1 MHz
ENVIRONMENTAL CONDITIONS	28deg. C, 55%RH, 963 hPa	TESTED BY	Wen Yu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	107.60 PK			1.35 H	6	77.60	30.00
1	*2437.00	98.20 AV			1.35 H	6	68.20	30.00
2	4874.00	63.40 PK	74.00	-10.60	1.00 H	19	26.90	36.50
2	4874.00	49.00 AV	54.00	-5.00	1.00 H	19	12.50	36.50
3	7311.00	52.10 PK	74.00	-21.90	1.41 H	348	10.40	41.80
3	7311.00	39.00 AV	54.00	-15.00	1.41 H	348	-2.80	41.80
4	9748.00	54.10 PK	74.00	-19.90	1.31 H	315	9.40	44.60
4	9748.00	41.40 AV	54.00	-12.60	1.31 H	315	-3.30	44.60

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	100.70 PK			2.03 V	135	70.80	30.00
1	*2437.00	91.20 AV			2.03 V	135	61.20	30.00
2	4874.00	58.70 PK	74.00	-15.30	1.36 V	167	22.20	36.50
2	4874.00	44.30 AV	54.00	-9.70	1.36 V	167	7.80	36.50
3	7311.00	51.50 PK	74.00	-22.50	1.25 V	139	9.80	41.80
3	7311.00	38.70 AV	54.00	-15.30	1.25 V	139	-3.10	41.80
4	9748.00	55.10 PK	74.00	-18.90	1.47 V	280	10.50	44.60
4	9748.00	41.30 AV	54.00	-12.70	1.47 V	280	-3.30	44.60

- NOTE:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. The limit value is defined as per 15.247
 6. “ * ” : Fundamental frequency



4.3 6dB BANDWIDTH MEASUREMENT

4.3.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

4.3.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSP40	100037	May. 06, 2005

Note:

1. The measurement uncertainty is 226Hz, which is calculated as per the document ETSI TR 100 028.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

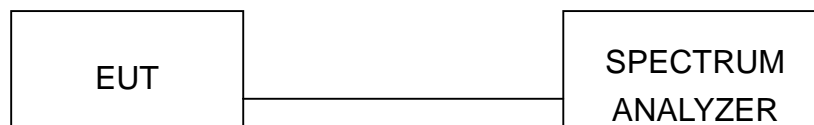
4.3.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 100kHz RBW and 100kHz VBW. The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6 dB.

4.3.4 DEVIATION FROM TEST STANDARD

No deviation

4.3.5 TEST SETUP



4.3.6 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.



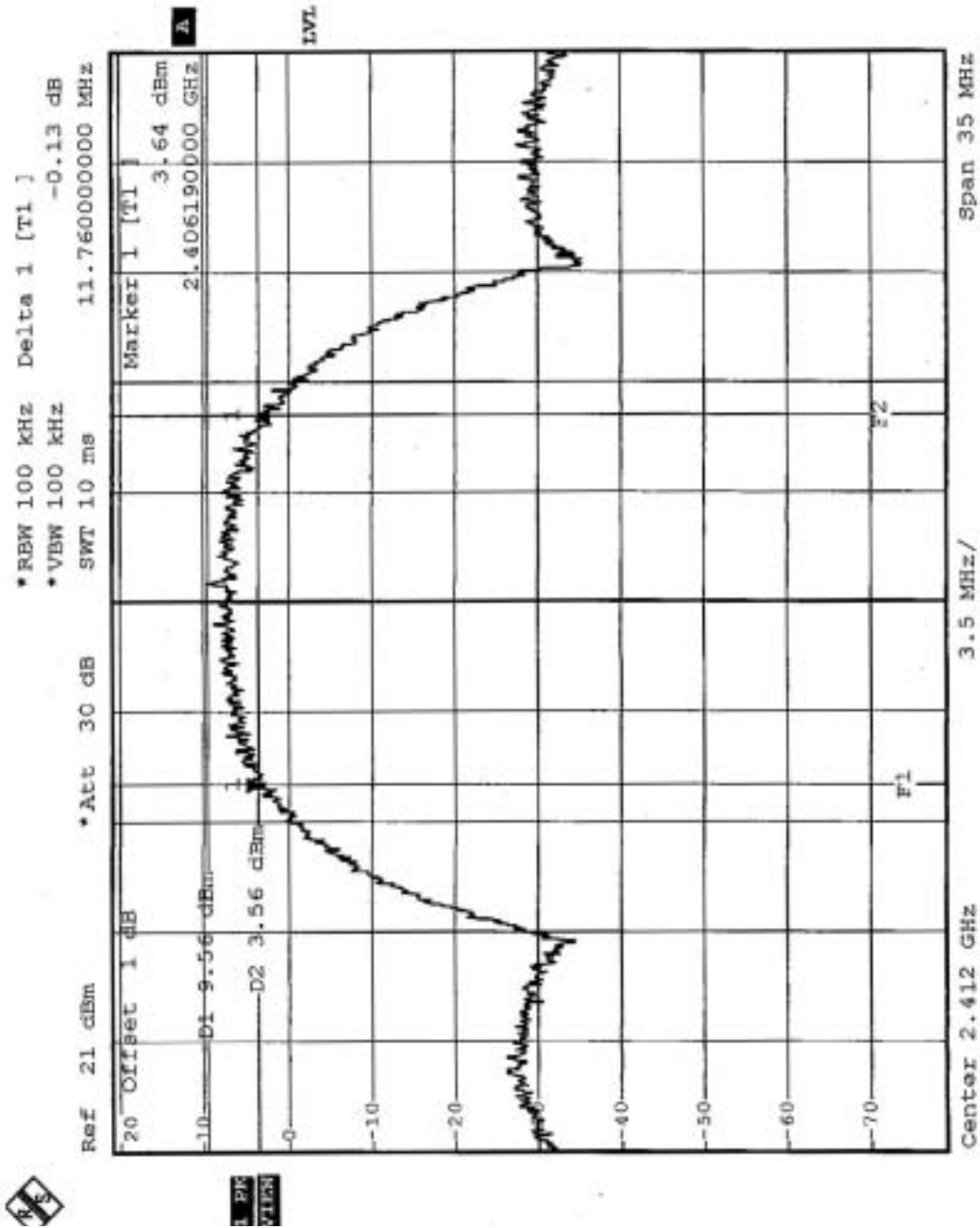
4.3.7 TEST RESULTS -DSSS

EUT	Nortel Networks WLAN-Mobile Adapter 2202		
MODEL	WLAN-Mobile Adapter 2202	ENVIRONMENTAL CONDITIONS	21deg. C, 65%RH, 963 hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	TESTED BY	Sky Liao

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	11.76	0.5	PASS
6	2437	12.11	0.5	PASS
11	2462	11.55	0.5	PASS

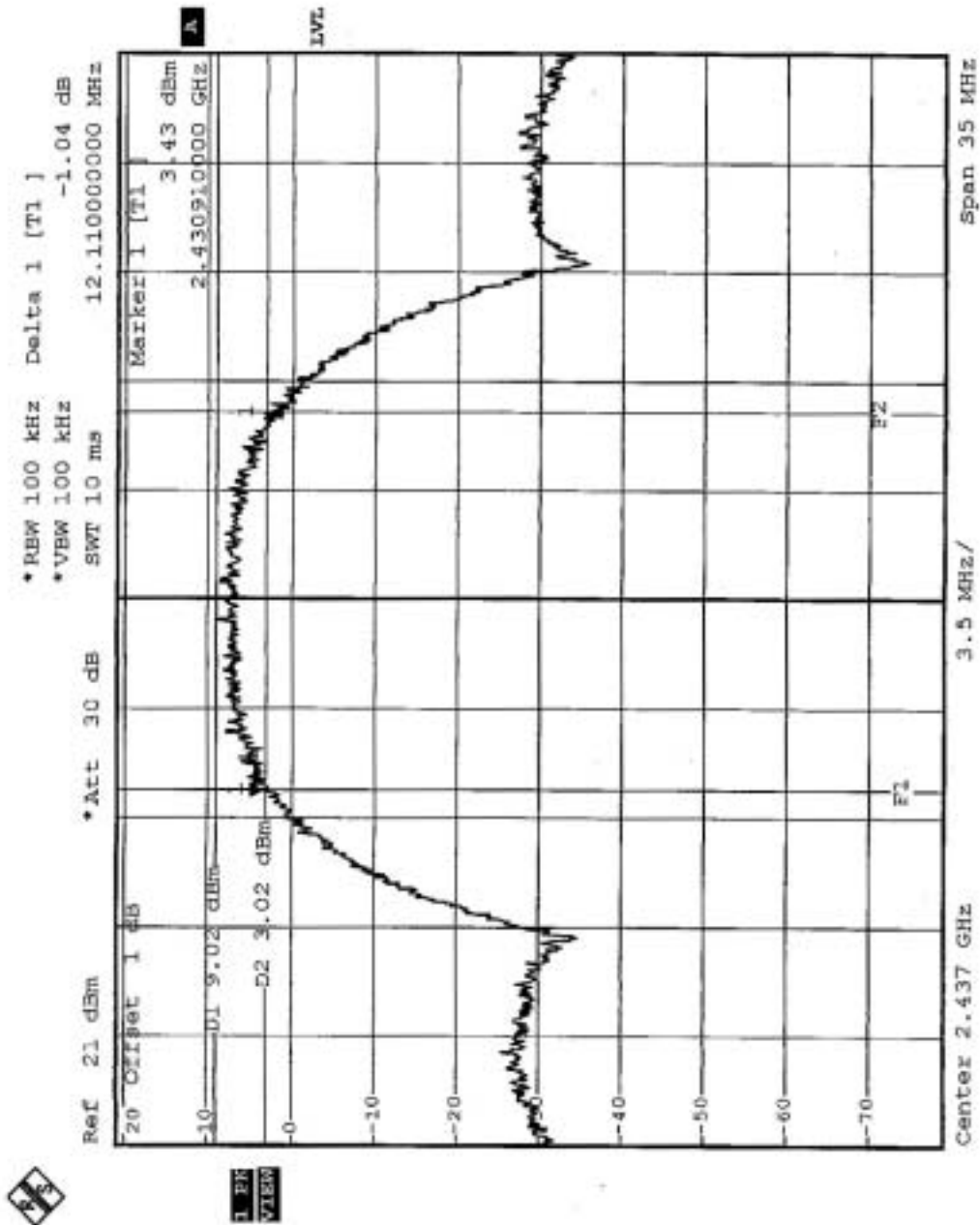


CH1



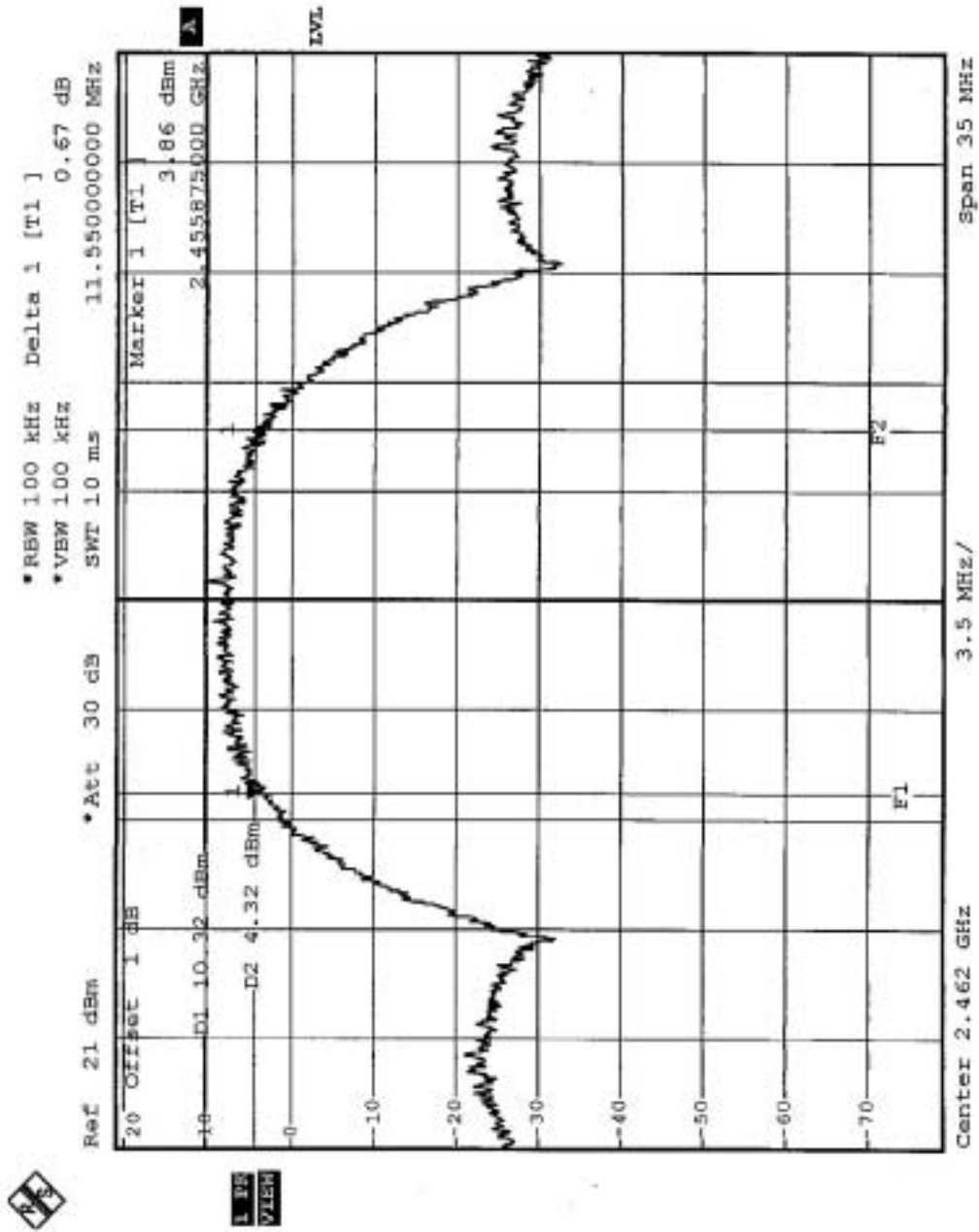


CH6





CH11





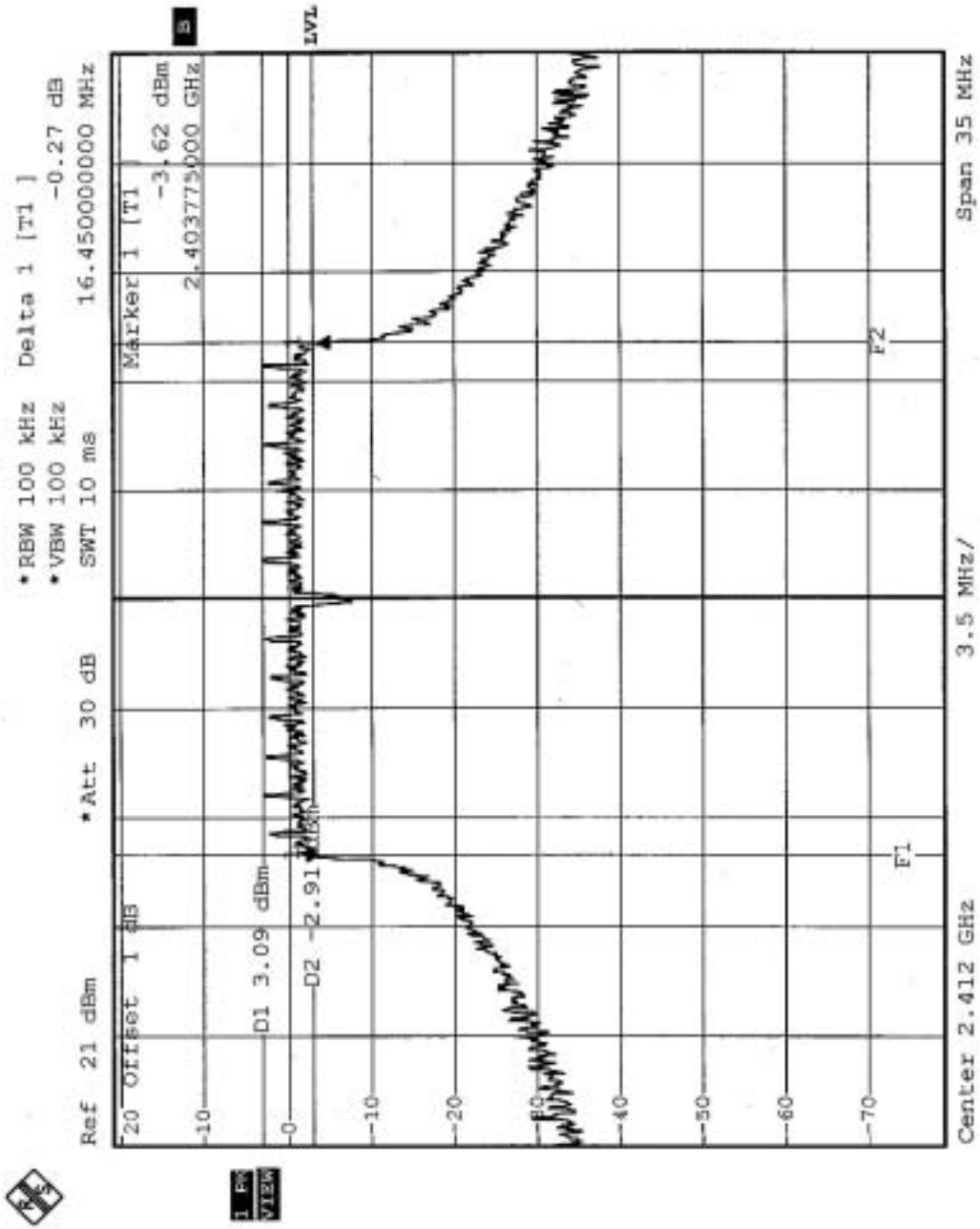
4.3.8 TEST RESULTS -OFDM

EUT	Nortel Networks WLAN-Mobile Adapter 2202		
MODEL	WLAN-Mobile Adapter 2202	ENVIRONMENTAL CONDITIONS	21deg. C, 65%RH, 963 hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	TESTED BY	Sky Liao

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	16.45	0.5	PASS
6	2437	16.38	0.5	PASS
11	2462	16.45	0.5	PASS
Turbo 6	2437	31.9	0.5	PASS

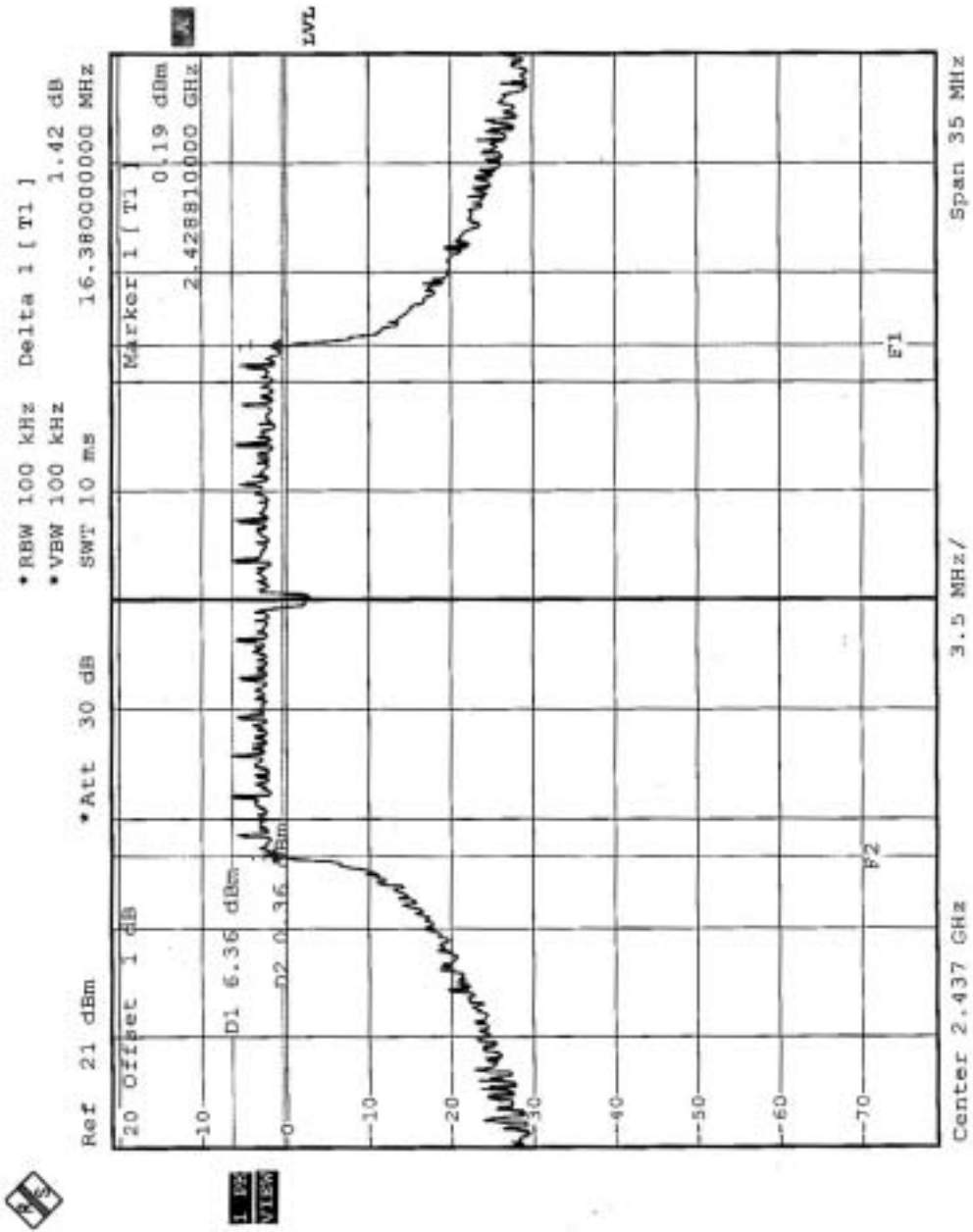


CH1



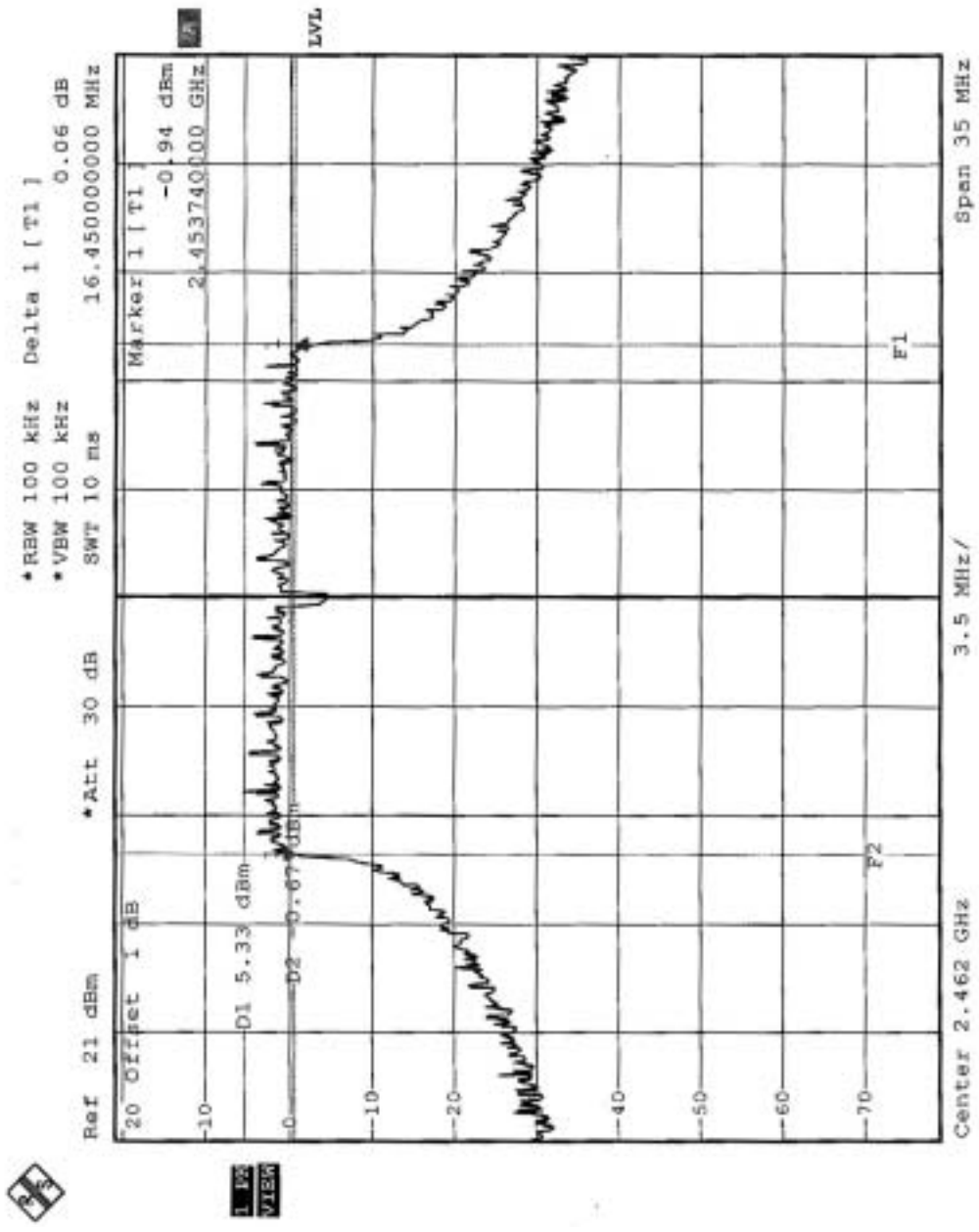


CH6



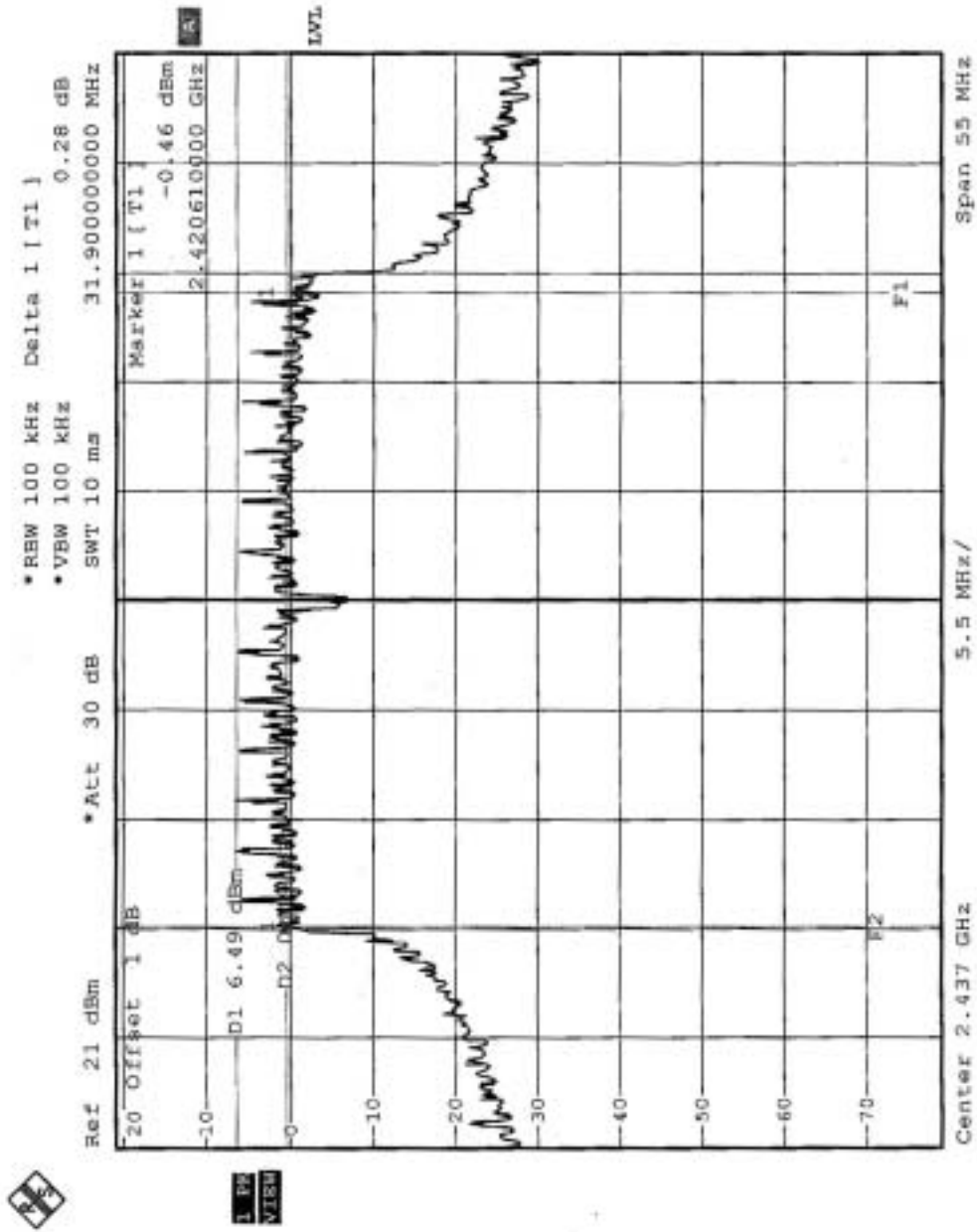


CH11





Turbo CH6





4.4 MAXIMUM PEAK OUTPUT POWER

4.4.1 LIMITS OF MAXIMUM PEAK OUTPUT POWER MEASUREMENT

The Maximum Peak Output Power Measurement is 30dBm.

4.4.2 INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSP40	100037	May 06, 2005
R&S SIGNAL GENERATOR	SMP04	100011	May 28, 2005
TEKTRONIX OSCILLOSCOPE	TDS 220	B027241	Jun. 29, 2005
NARDA DETECTOR	4503A	FSCM99899	NA

Note:

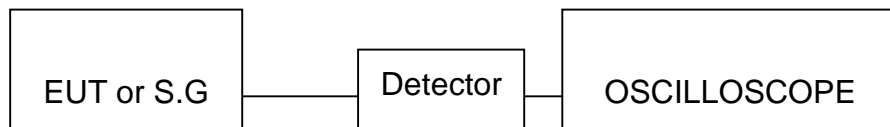
1. The measurement uncertainty is 1.25dB, which is calculated as per the document ETSI TR 100 028.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.



4.4.3 TEST PROCEDURES

1. A detector was used on the output port of the EUT. An oscilloscope was used to read the peak response of the detector.
2. Replaced the EUT by the signal generator. The center frequency of the S.G was adjusted to the center frequency of the measured channel.
3. Adjusted the power to have the same peak reading on oscilloscope. Record the power level.

4.4.4 TEST SETUP



4.4.5 EUT OPERATING CONDITIONS

Same as Item 4.3.6



4.4.6 TEST RESULTS -DSSS

EUT	Nortel Networks WLAN-Mobile Adapter 2202		
INPUT POWER (SYSTEM)	120Vac, 60Hz	MODEL	WLAN-Mobile Adapter 2202
TESTED BY	Sky Liao	ENVIRONMENTAL CONDITIONS	30deg. C, 57%RH, 963 hPa

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (DBM)	PASS/FAIL
1	2412	21.7	30	PASS
6	2437	21.25	30	PASS
11	2462	22.2	30	PASS



TEST RESULTS -OFDM

EUT	Nortel Networks WLAN-Mobile Adapter 2202		
INPUT POWER (SYSTEM)	120Vac, 60Hz	MODEL	WLAN-Mobile Adapter 2202
TESTED BY	Sky Liao	ENVIRONMENTAL CONDITIONS	30deg. C, 57%RH, 963 hPa

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	20.8	30	PASS
6	2437	23.2	30	PASS
11	2462	22.1	30	PASS
Turbo 6	2437	22.8	30	PASS



4.5 POWER SPECTRAL DENSITY MEASUREMENT

4.5.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm.

4.5.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSP40	100037	May. 06, 2005

Note:

1. The measurement uncertainty is 1.02dB, which is calculated as per the document ETSI TR 100 028.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.5.3 TEST PROCEDURE

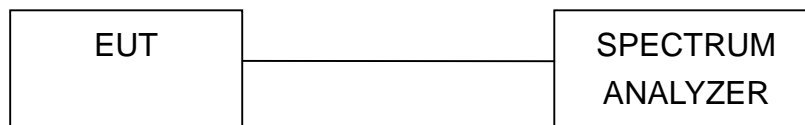
The transmitter output was connected to the spectrum analyzer through an attenuator, the bandwidth of the fundamental frequency was measured with the spectrum analyzer using 3 kHz RBW and 30 kHz VBW, set sweep time = span/3 kHz. The power spectral density was measured and recorded.

The sweep time is allowed to be longer than span/3 kHz for a full response of the mixer in the spectrum analyzer.

4.5.4 DEVIATION FROM TEST STANDARD

No deviation

4.5.5 TEST SETUP



4.5.6 EUT OPERATING CONDITION

Same as Item 4.3.6



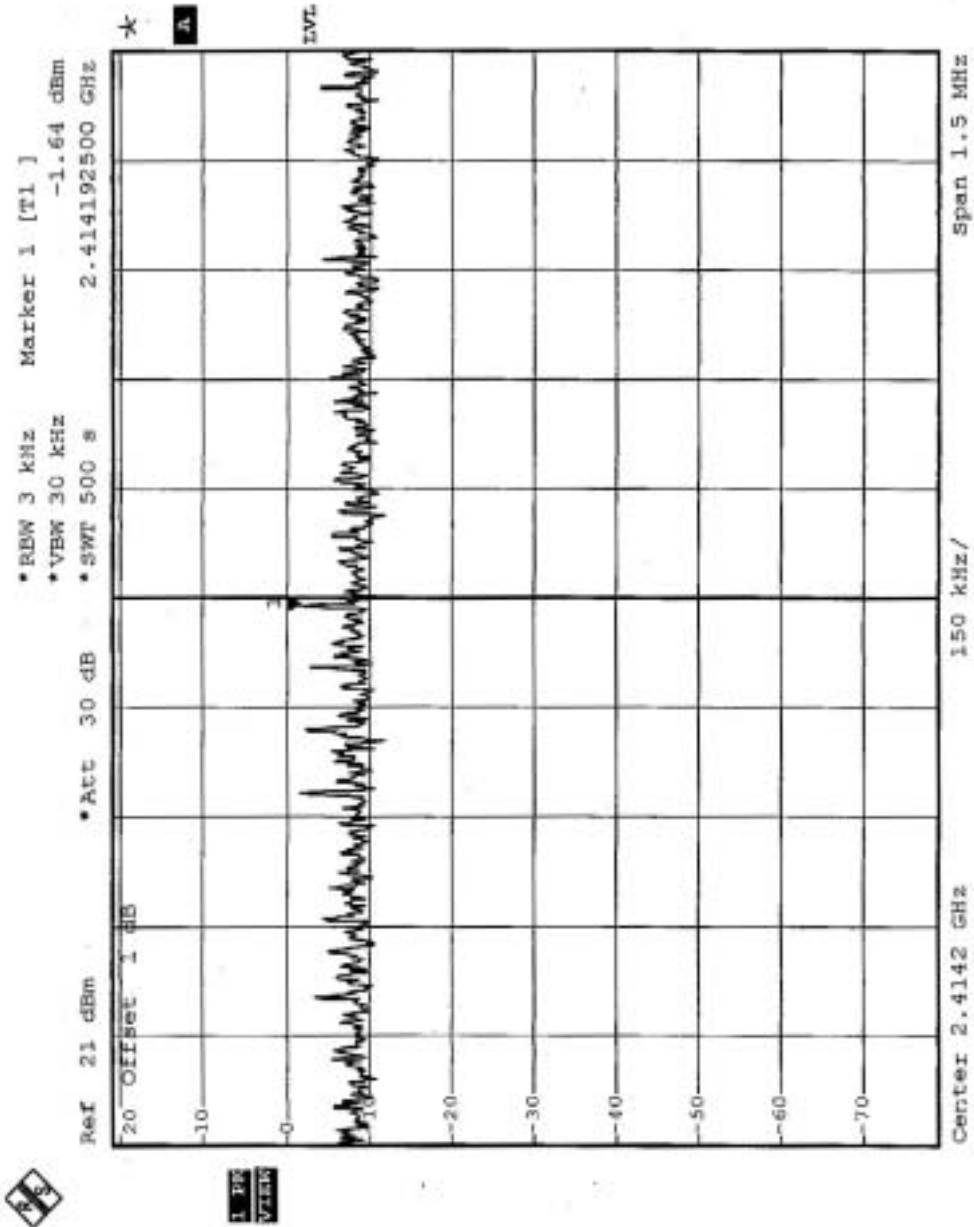
4.5.7 TEST RESULTS-DSSS

EUT	Nortel Networks WLAN-Mobile Adapter 2202		
INPUT POWER (SYSTEM)	120Vac, 60Hz	MODEL	WLAN-Mobile Adapter 2202
TESTED BY	Sky Liao	ENVIRONMENTAL CONDITIONS	21deg. C, 65%RH, 963 hPa

CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-1.64	8	PASS
6	2437	-0.96	8	PASS
11	2462	-0.7	8	PASS

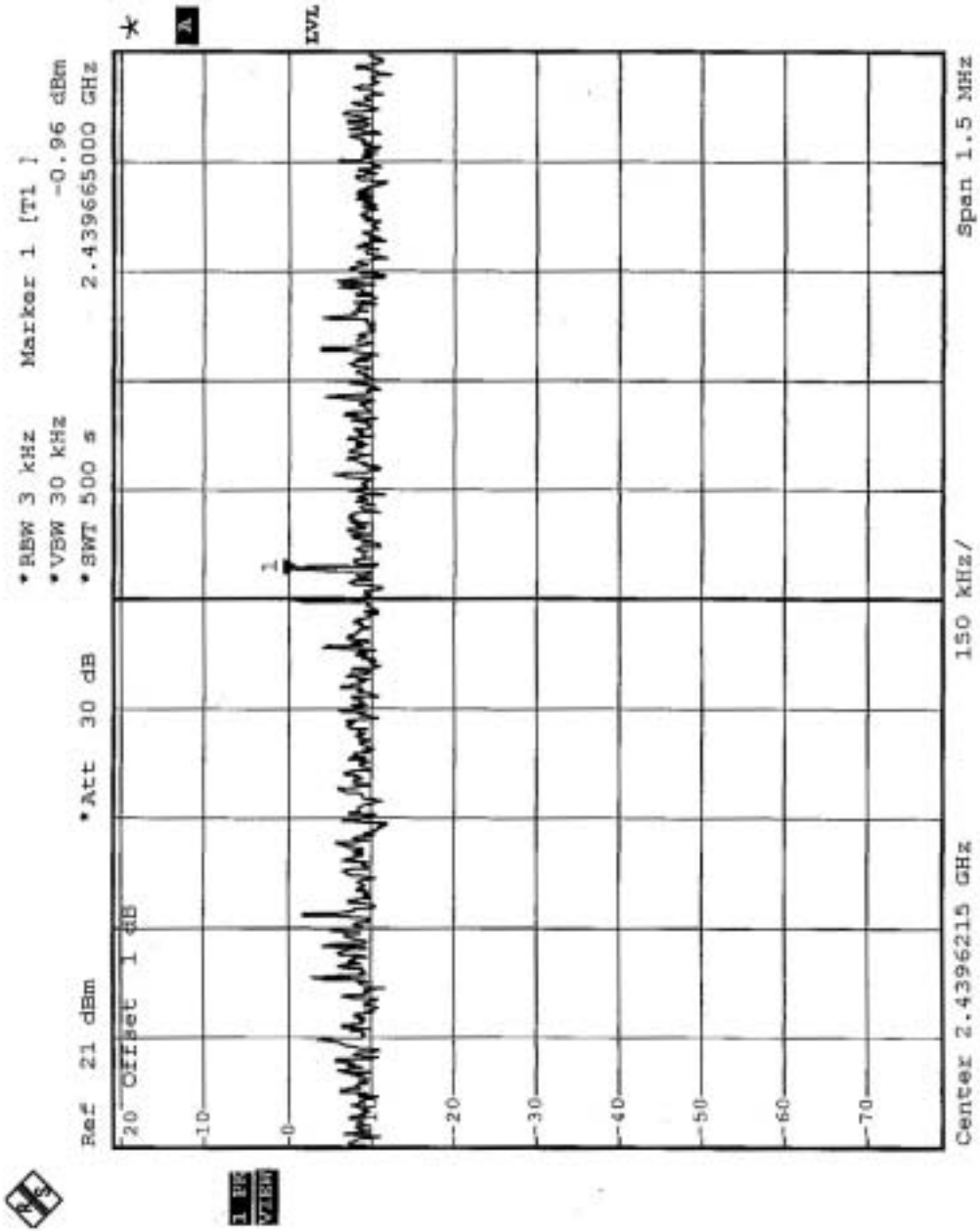


CH1



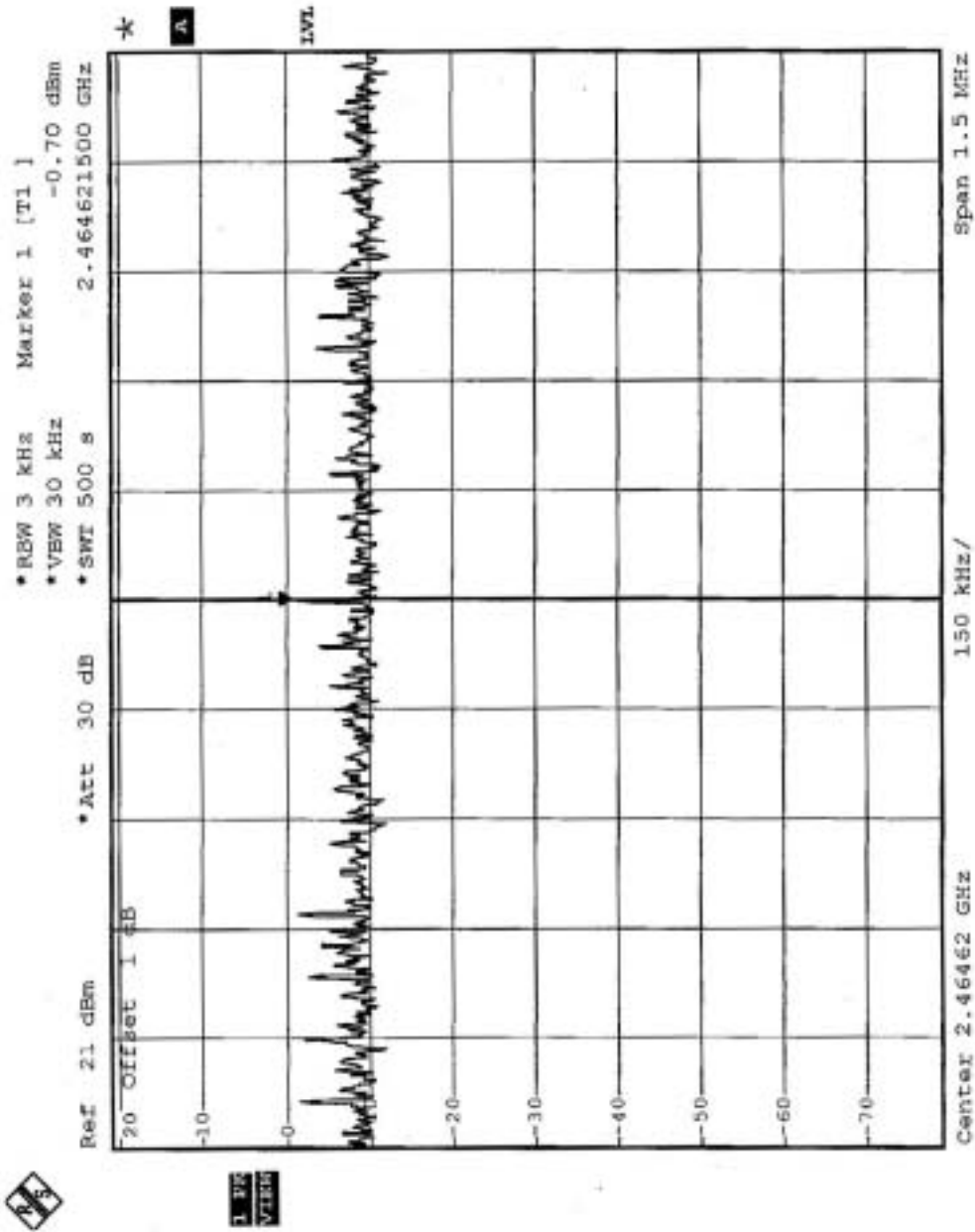


CH6





CH11





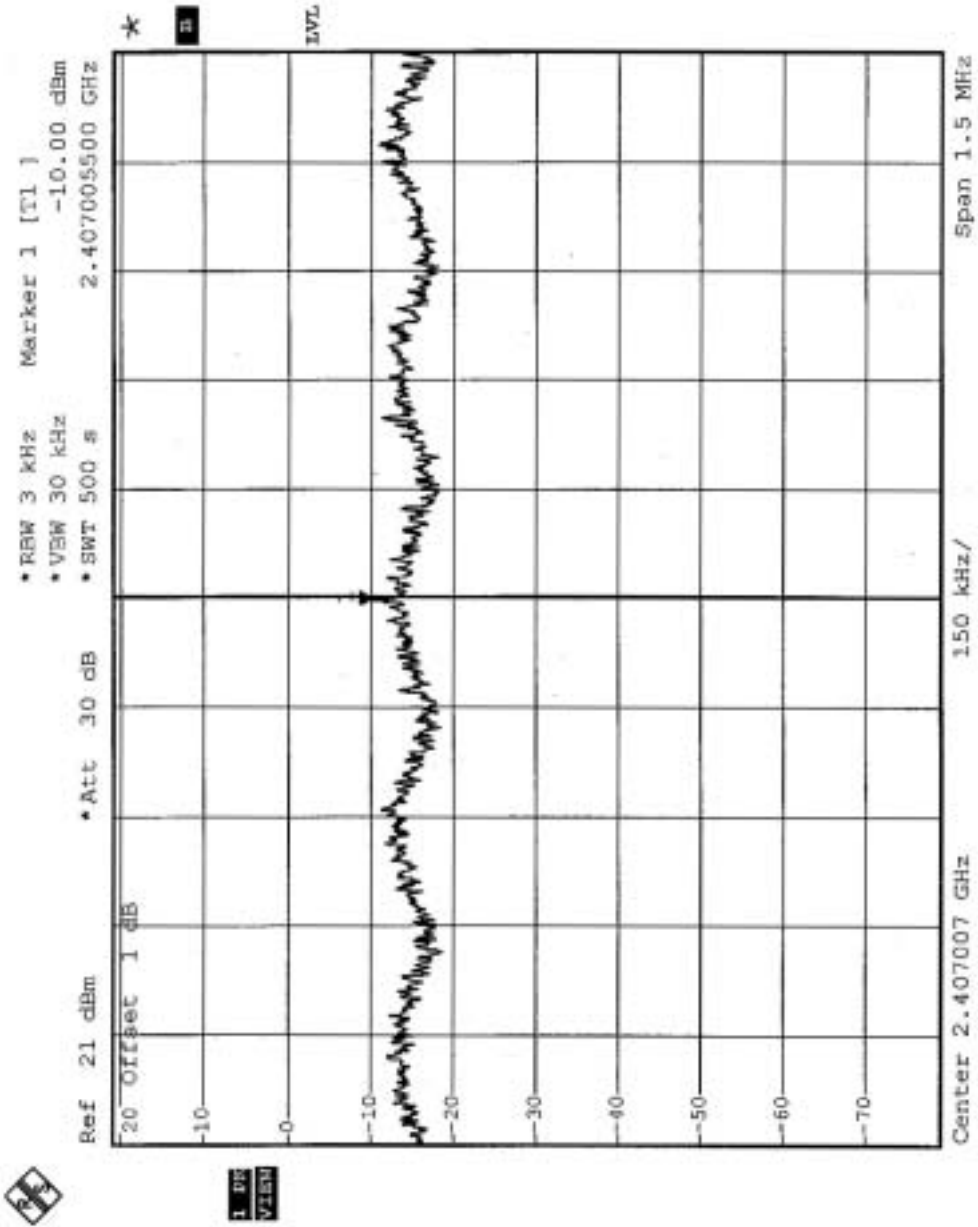
4.5.8 TEST RESULTS-OFDM

EUT	Nortel Networks WLAN-Mobile Adapter 2202		
INPUT POWER (SYSTEM)	120Vac, 60Hz	MODEL	WLAN-Mobile Adapter 2202
TESTED BY	Sky Liao	ENVIRONMENTAL CONDITIONS	21deg. C, 65%RH, 963 hPa

CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-10.00	8	PASS
6	2437	-6.49	8	PASS
11	2462	-6.81	8	PASS
Turbo 6	2437	-9.58	8	PASS

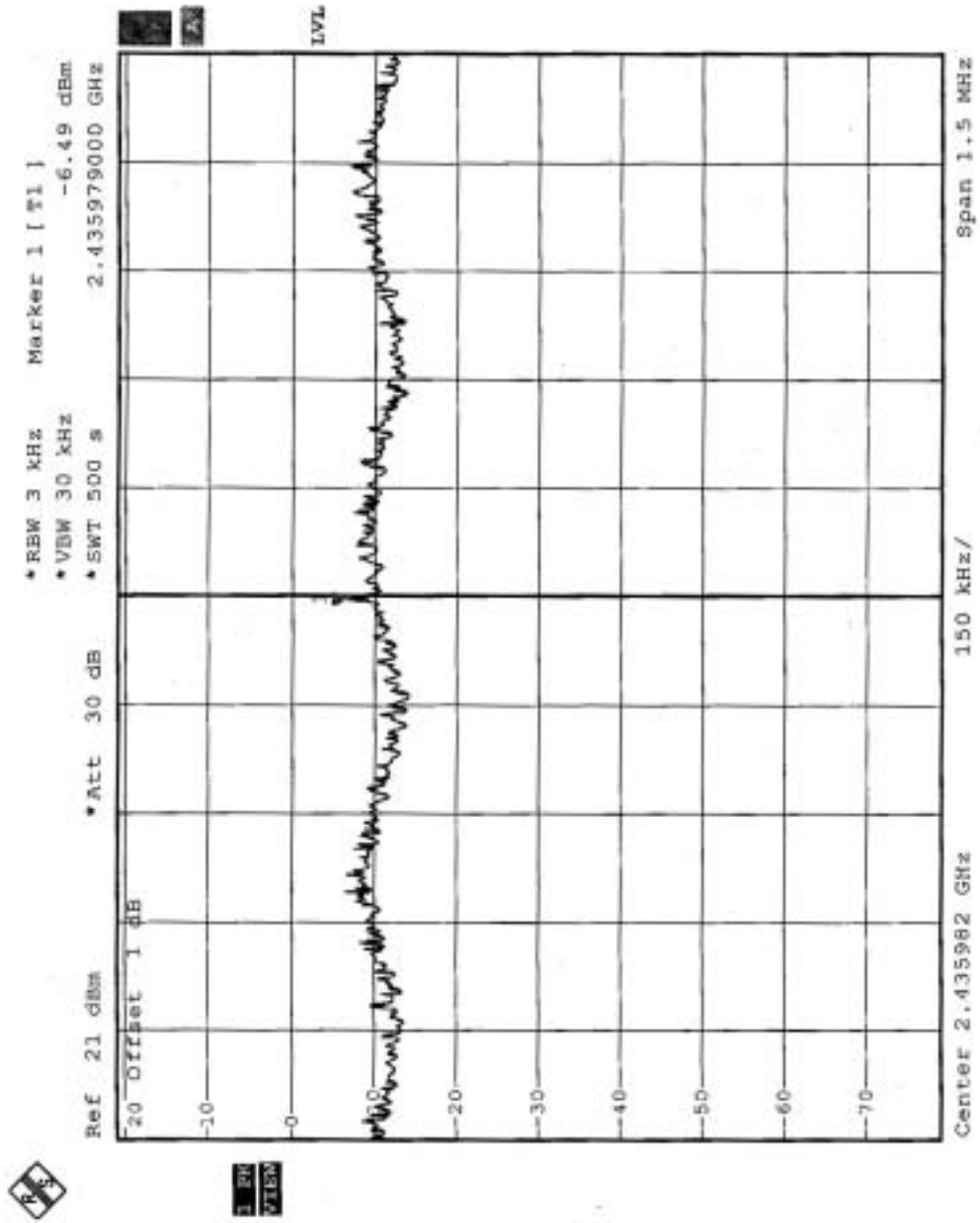


CH1



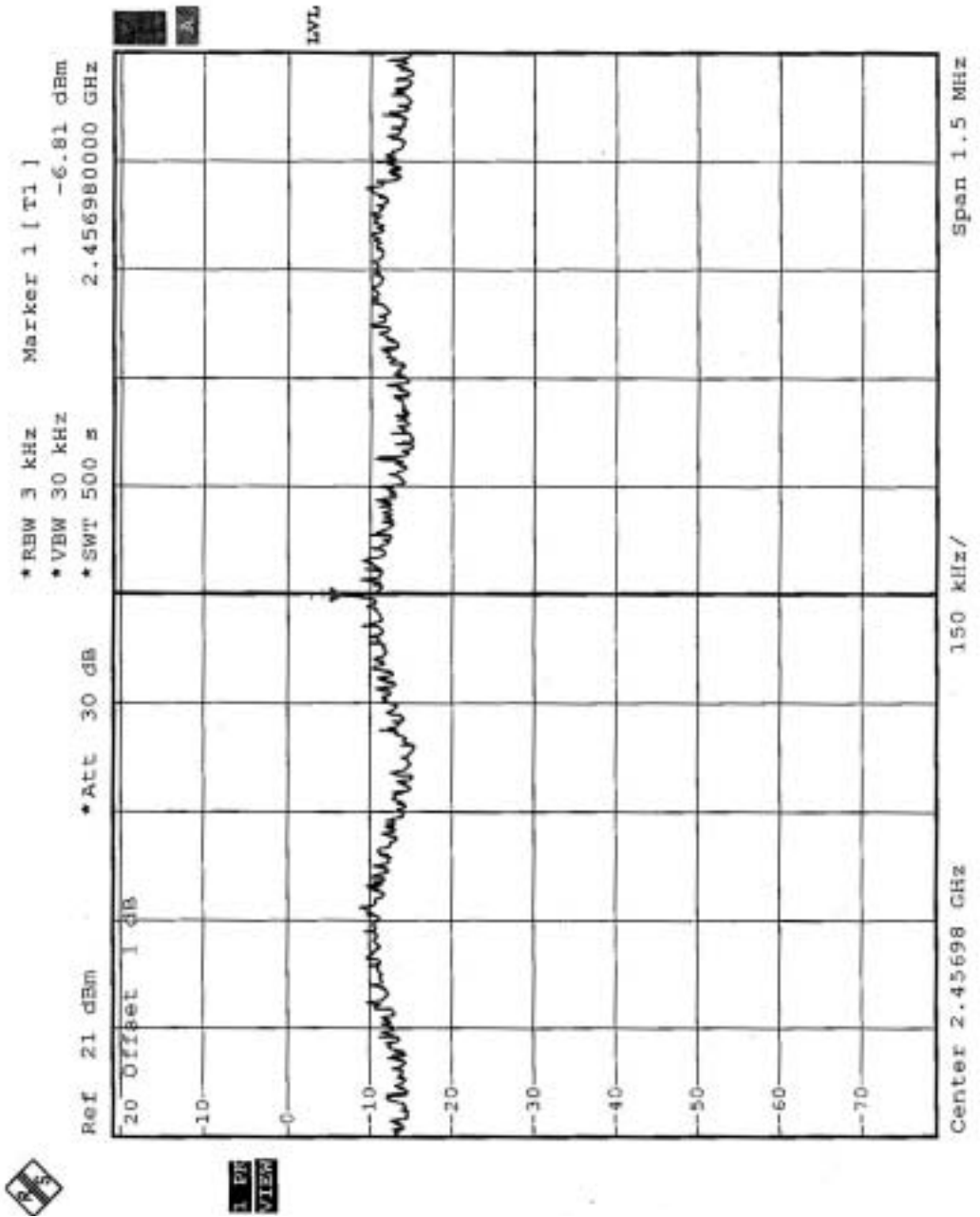


CH6



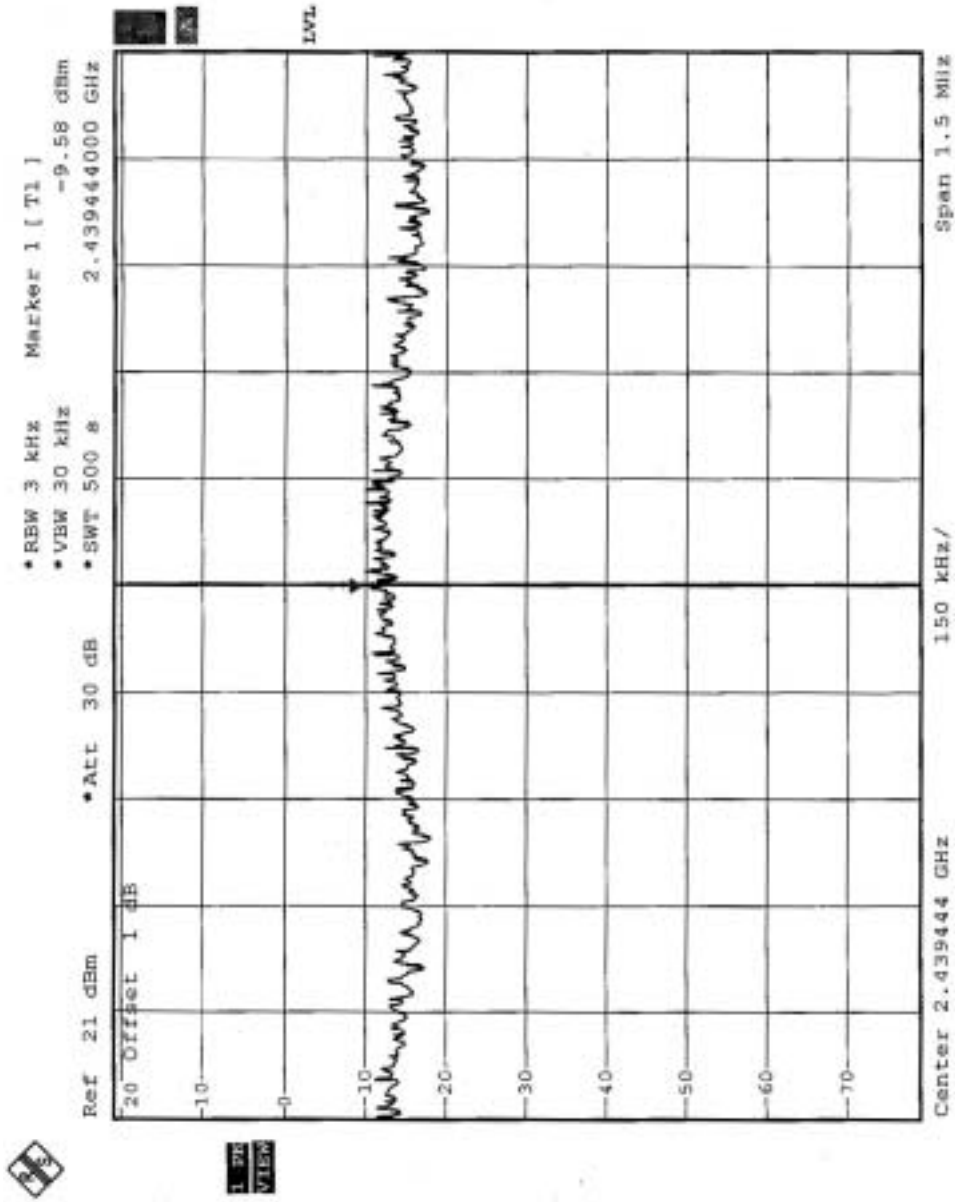


CH11





Turbo CH6





4.6 BAND EDGES MEASUREMENT

4.6.1 LIMITS OF BAND EDGES MEASUREMENT

Below -20dB of the highest emission level of operating band (in 100KHz Resolution Bandwidth).

4.6.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSP40	100037	May. 06, 2005

Note:

1. The measurement uncertainty is 2.79dB, which is calculated as per the document ETSI TR 100 028
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.6.3 TEST PROCEDURE

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

4.6.4 DEVIATION FROM TEST STANDARD

No deviation

4.6.5 EUT OPERATING CONDITION

Same as Item 4.3.6



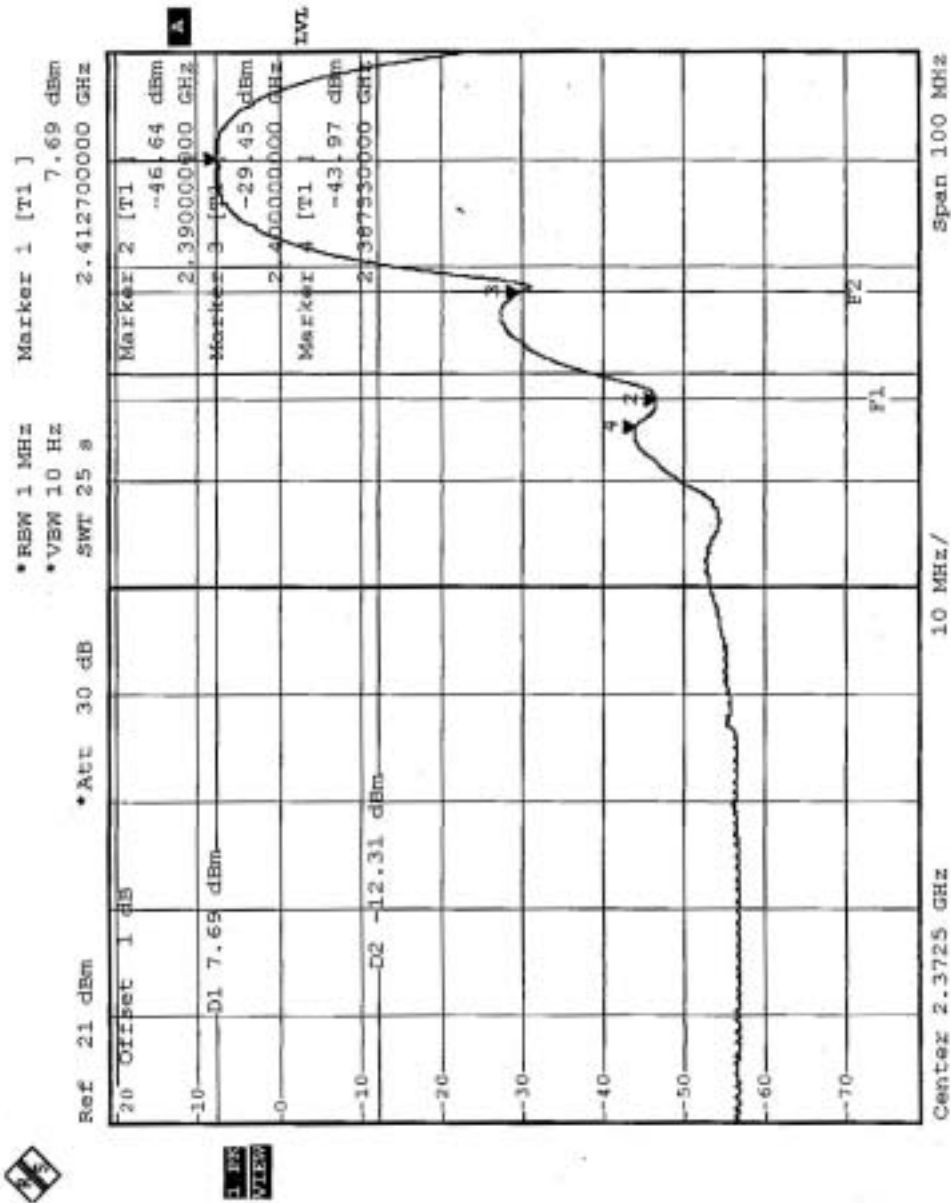
4.6.6 TEST RESULTS –DSSS

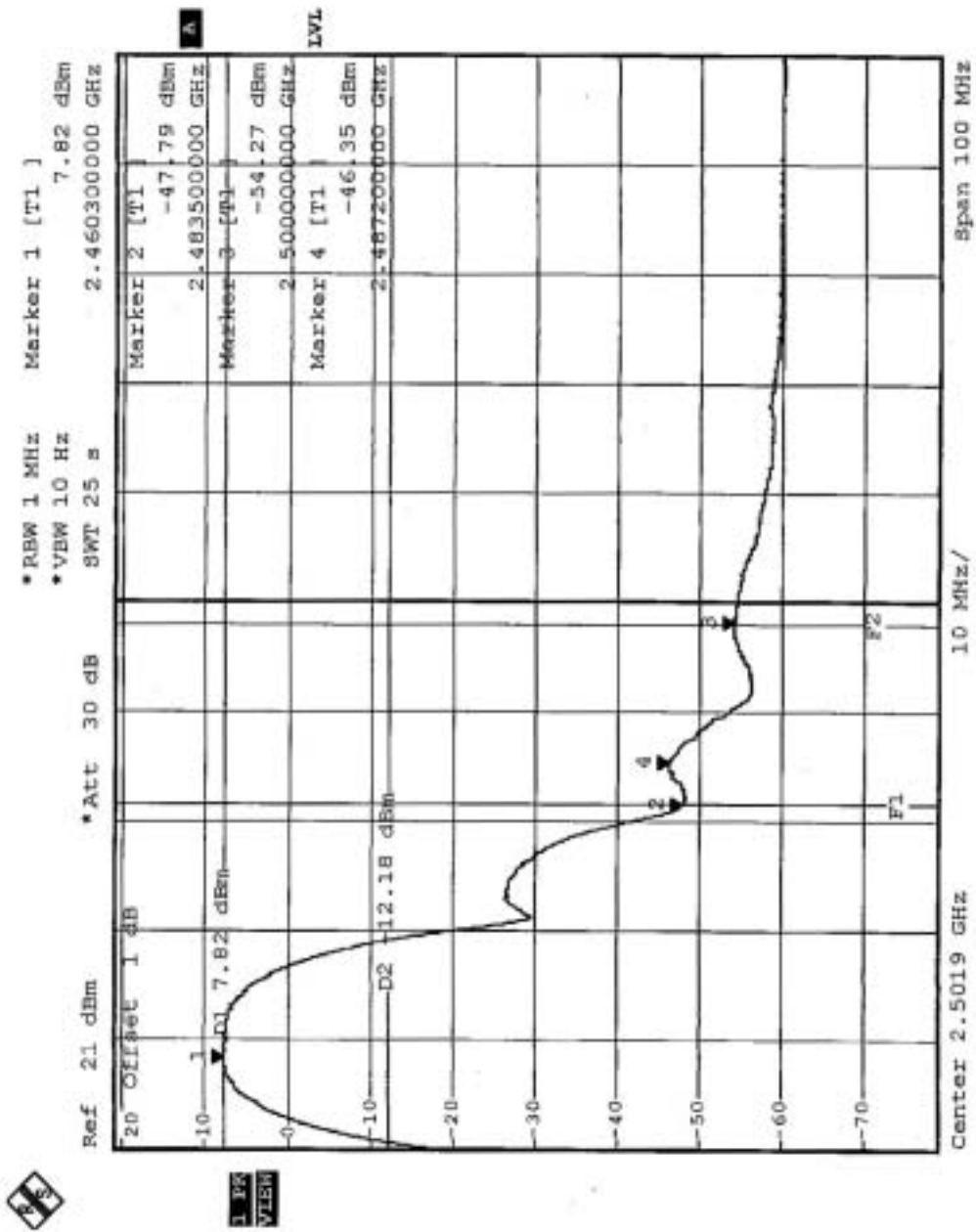
The spectrum plots are attached on the following 2 pages. D1 line indicates the highest level, and D2 line indicates the 20dB offset below D2. It shows compliance with the requirement in part 15.247(C).

Note - The delta method is only used up to 2 MHz away from the restricted bandage, The radiated emissions which located in other restricted frequency band, the result, please refer to 4.2.

NOTE (1): The band edge emission plot on the following first page shows 54.33dB delta between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2 is 106.7dBuV/m, so the maximum field strength in restrict band is $106.7-54.33=52.37$ dBuV/m which is under 54 dBuV/m limit.

NOTE (2): The band edge emission plot on the following second page shows 55.61 dB delta between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2 is 105.3dBuV/m, so the maximum field strength in restrict band is $105.3-55.61=49.69$ dBuV/m which is under 54 dBuV/m limit.







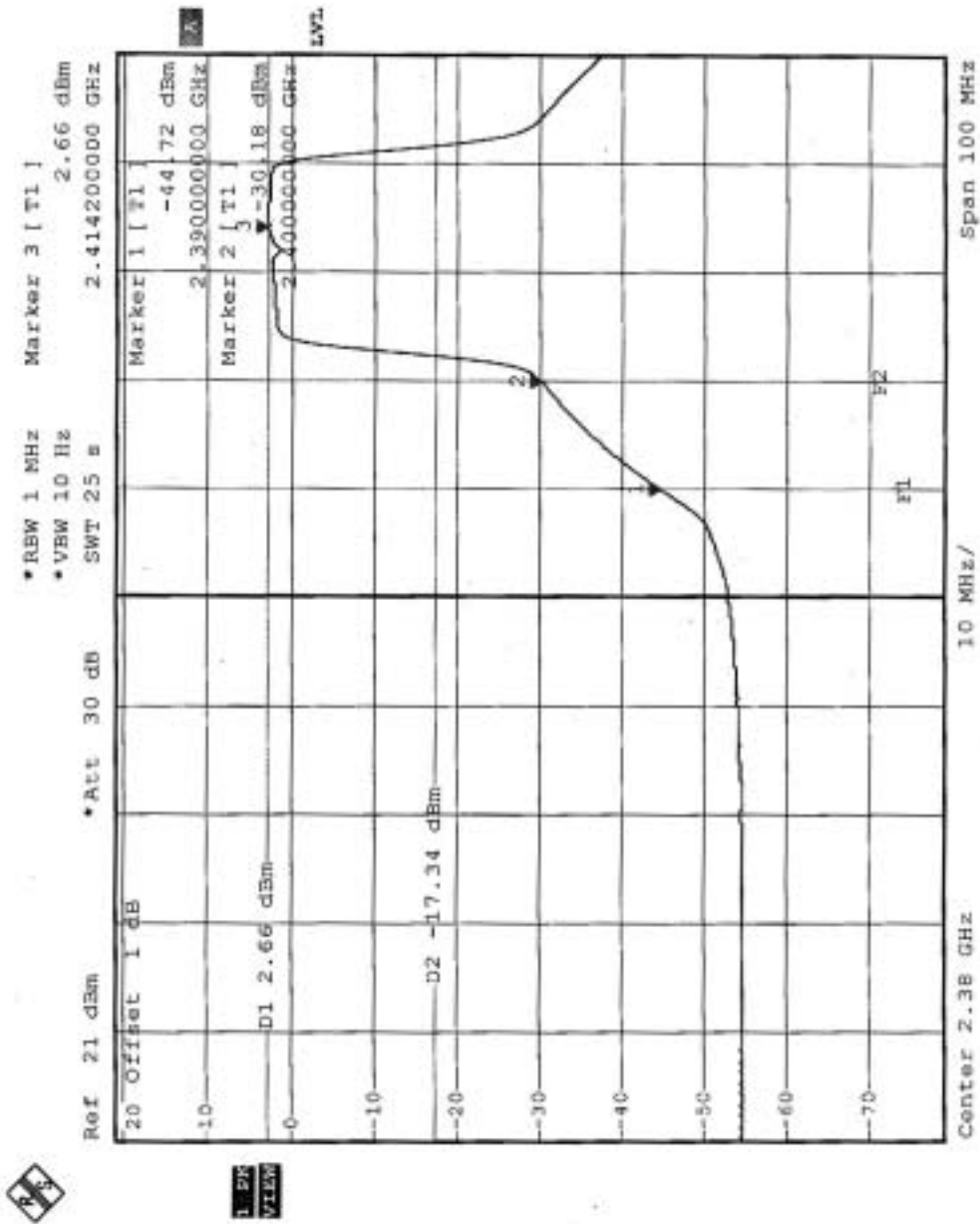
4.6.7 TEST RESULTS –OFDM

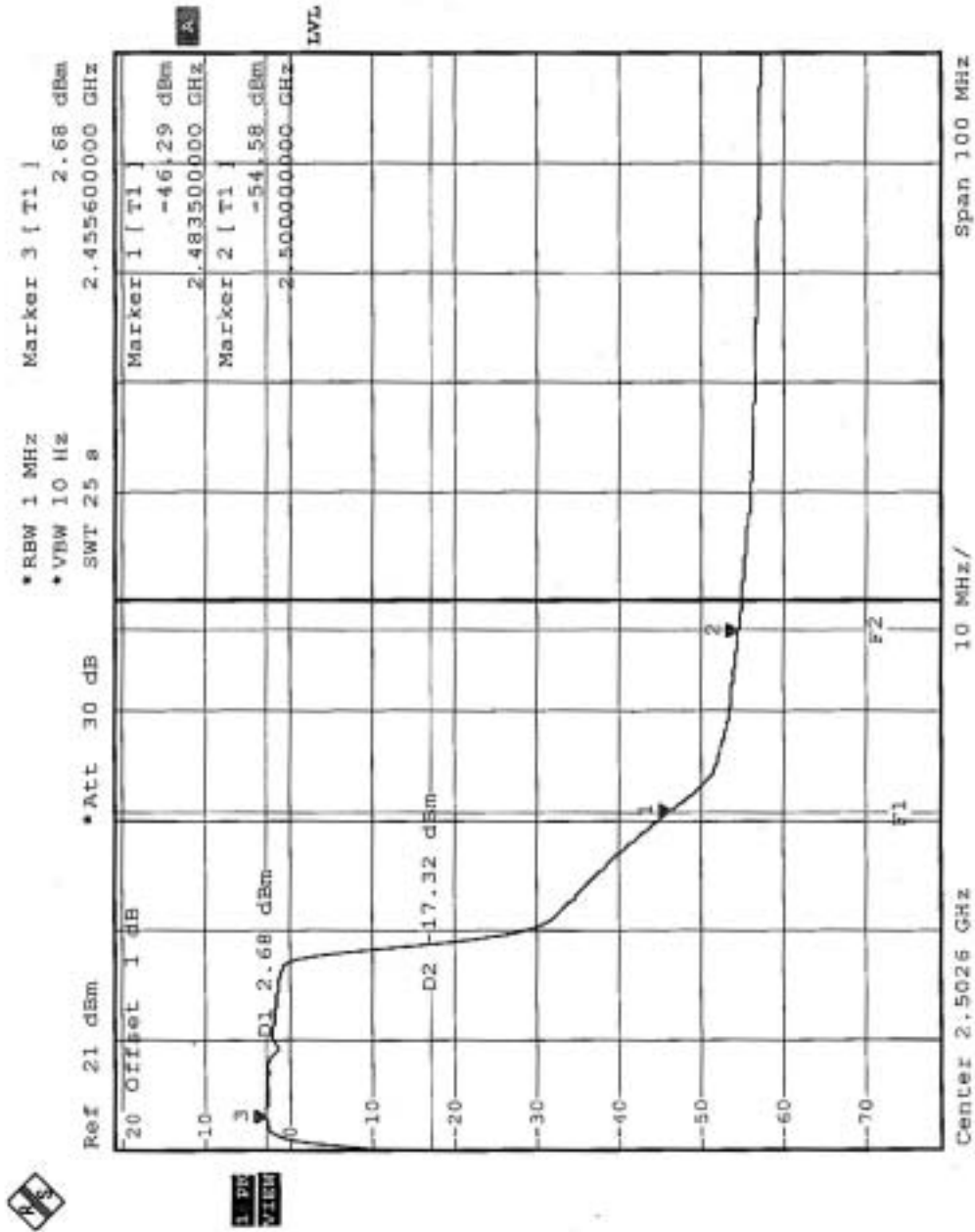
The spectrum plots are attached on the following 2 pages. D1 line indicates the highest level, and D2 line indicates the 20dB offset below D2. It shows compliance with the requirement in part 15.247(C).

Note - The delta method is only used up to 2 MHz away from the restricted bandage, The radiated emissions which located in other restricted frequency band, the result, please refer to 4.2.

NOTE (1): The band edge emission plot on the following first page shows 47.38dB delta between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2 is 96.7dBuV/m, so the maximum field strength in restrict band is $96.7-47.38=49.32$ dBuV/m which is under 54 dBuV/m limit.

NOTE (2): The band edge emission plot on the following second page shows 48.97 dB delta between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2 is 98.8dBuV/m, so the maximum field strength in restrict band is $98.8-48.97=49.83$ dBuV/m which is under 54 dBuV/m limit.







4.7 ANTENNA REQUIREMENT

4.7.1 STANDARD APPLICABLE

For intentional device, according to FCC 47 CFR Section 15.203 and RSS-210 section 6.2.2(o)(e2), an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

4.7.2 ANTENNA CONNECTED CONSTRUCTION

The antenna used in this product is Dualband PCB antenna without connector. The maximum gain of the antenna is 2dBi.



5. TEST TYPES AND RESULTS (FOR PART 802.11a)

5.1 CONDUCTED EMISSION MEASUREMENT

5.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dB μ V)	
	Quasi-peak	Average
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	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.
 3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

5.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
*ROHDE & SCHWARZ Test Receiver	ESCS 30	847124/029	Dec. 04, 2004
*ROHDE & SCHWARZ LISN (for EUT)	ESHS-Z5	848773/004	Nov. 04, 2004
*KYORITSU LISN (for peripheral)	KNW-407	8/1395/12	Jul. 23, 2005
*RF Cable (JETBAO)	RG233/U	Cable_CA_01	Jul. 02, 2005
*Terminator(for KYORITSU)	50	3	May 10, 2005
*Software	Cond-V2e	NA	NA

Note:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in ADT Shielded Room No. A.
3. The VCCI Con A Registration No. is C-817.
- 4 * = These equipment are used for the final measurement.
- 5 The measurement uncertainty is 2.53 dB, which is calculated as per the document CISPR 16-4



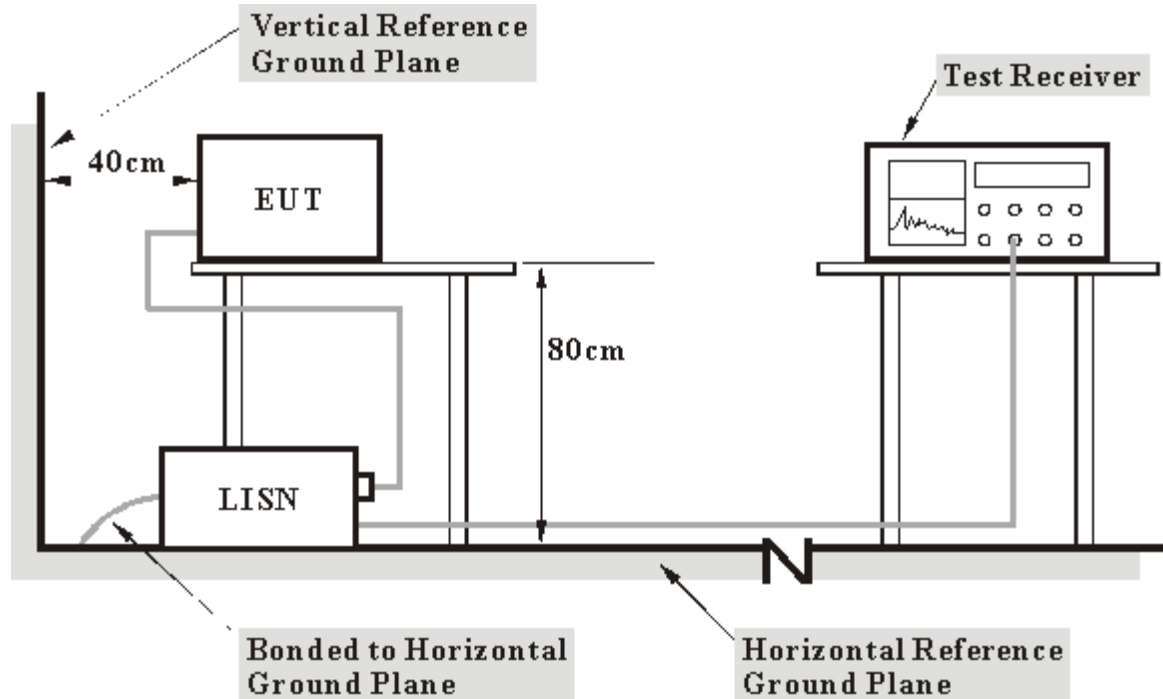
5.1.3 TEST PROCEDURES

- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- c. The frequency range from 150 kHz to 30 MHz was searched. Emission levels over 10dB under the prescribed limits could not be reported

5.1.4 DEVIATION FROM TEST STANDARD

No deviation

5.1.5 TEST SETUP



- Note:**
1. Support units were connected to second LISN.
 2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

5.1.6 EUT OPERATING CONDITIONS

- a. Placed the EUT on the testing table.
- b. Prepared another computer system to act as a communication partner and placed it outside of testing area.
- c. The communication partner run a test program “ART 485” to enable EUT under transmission/receiving condition continuously at specific channel frequency via RJ 45 cable and wireless.
- d. The communication partner sent data to EUT by command "PING".

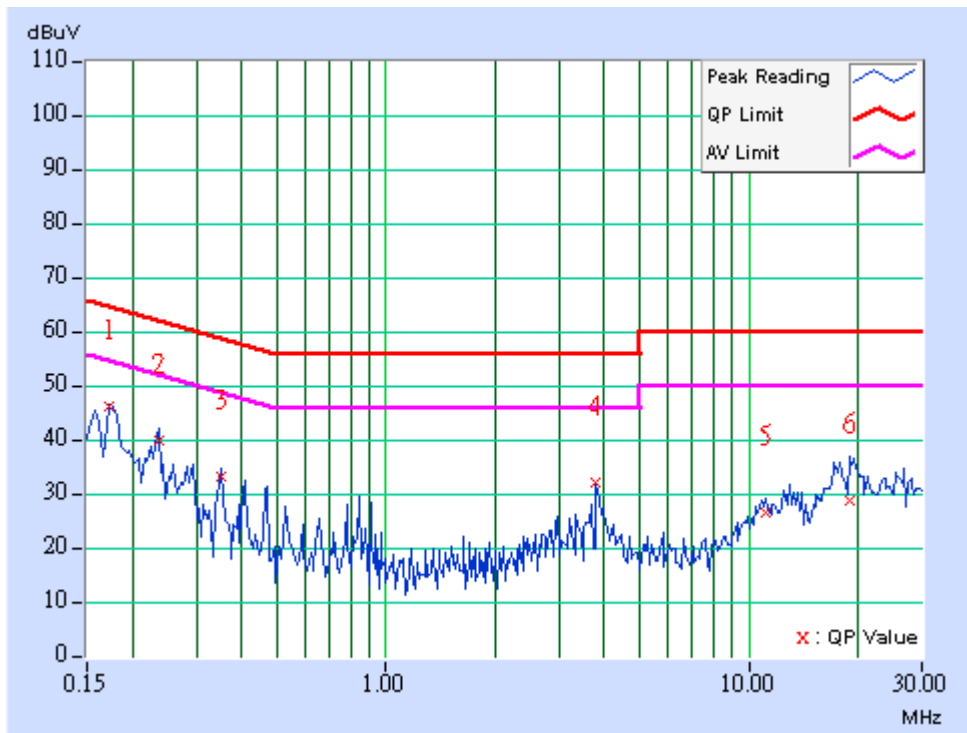


5.1.7 TEST RESULTS

EUT	Nortel Networks WLAN-Mobile Adapter 2202		
MODEL	WLAN-Mobile Adapter 2202	6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	27deg. C, 59%RH, 963 hPa	TESTED BY	Sky Liao
TEST MODE	802.11a		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.173	0.25	45.04	-	45.29	-	64.79	54.79	-19.51	-
2	0.236	0.28	38.82	-	39.10	-	62.24	52.24	-23.14	-
3	0.349	0.23	31.85	-	32.08	-	58.98	48.98	-26.91	-
4	3.801	0.39	30.86	-	31.25	-	56.00	46.00	-24.75	-
5	11.176	0.89	25.23	-	26.12	-	60.00	50.00	-33.88	-
6	18.969	1.36	27.57	-	28.93	-	60.00	50.00	-31.07	-

- NOTES: (1) "": Undetectable
 (2) Q.P. and AV. are abbreviations of quasi-peak and average.
 (3) "-": The Quasi-peak reading value also meets an average limit, thus measurement with the average detector is unnecessary.
 (4) The emission levels of other frequencies were very low against the limit.
 (5) Correction Factor = Insertion loss + Cable loss
 (6) Margin value = Emission level - Limit value

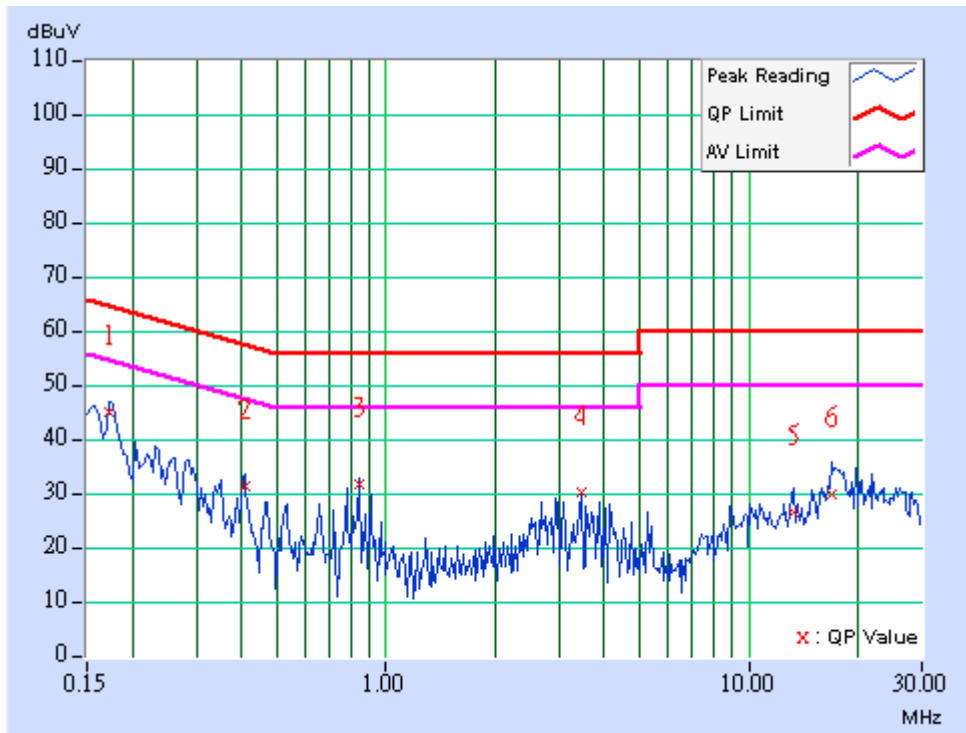




EUT	Nortel Networks WLAN-Mobile Adapter 2202		
MODEL	WLAN-Mobile Adapter 2202	6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	27deg. C, 59%RH, 963 hPa	TESTED BY	Sky Liao
TEST MODE	802.11a		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.173	0.25	44.16	-	44.41	-	64.79	54.79	-20.39	-
2	0.408	0.20	30.23	-	30.43	-	57.69	47.69	-27.26	-
3	0.841	0.27	30.78	-	31.05	-	56.00	46.00	-24.95	-
4	3.453	0.37	29.15	-	29.52	-	56.00	46.00	-26.48	-
5	13.281	0.96	25.59	-	26.55	-	60.00	50.00	-33.45	-
6	16.848	1.14	29.01	-	30.15	-	60.00	50.00	-29.85	-

- NOTES: (1) "x": Undetectable
 (2) Q.P. and AV. are abbreviations of quasi-peak and average.
 (3) "-": The Quasi-peak reading value also meets an average limit, thus measurement with the average detector is unnecessary.
 (4) The emission levels of other frequencies were very low against the limit.
 (5) Correction Factor = Insertion loss + Cable loss
 (6) Margin value = Emission level - Limit value





5.2 RADIATED EMISSION MEASUREMENT

5.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

Emissions radiated outside of the specified bands, shall be according to the general radiated limits in 15.209 as following:

Frequencies (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.



5.2.2 LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS

Frequencies (MHz)	EIRP Limit (dBm)	Equivalent Field Strength at 3m (dBμV/m) *note 3
5150~5250	-27	68.3
5250~5350	-27	68.3
5725~5825	-27 *note 1	68.3
	-17 *note 2	78.3

NOTE:

1. For frequencies 10MHz or greater above or below the band edge.
2. All emissions within the frequency range from the band edge to 10MHz above or below the band edge.
3. The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength

$$E = \frac{1000000\sqrt{30P}}{3} \mu\text{V/m}, \quad \text{where P is the eirp (Watts)}$$



5.2.3 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
HP Spectrum Analyzer	8594ER	3829U04676	Sep 01 ,2005
ADVANTEST Spectrum Analyzer	R3271A	85060311	Jun 16, 2005
CHASE RF Pre_Amplifier	CPA9232	1057	May. 10, 2005
HP Pre_Amplifier	8449B	3008A01922	Oct. 13, 2004
ROHDE & SCHWARZ Test Receiver	ESVS 10	849231 /019	Sep. 30, 2004
CHASE Broadband Antenna	VULB9168	138	May.22, 2005
Schwarzbeck Horn_Antenna	3115	5619	Jun 16, 2005
Schwarzbeck Horn_Antenna	BBHA 9170	BBHA9170192	Feb. 16, 2005
SCHWARZBECK Tunable Dipole Antenna	UHAP	897	Mar. 07, 2005
SCHWARZBECK Tunable Dipole Antenna	VHAP	880	Mar. 07, 2005
RF Switches (ARNITSU)	CS-201	1565157	Dec. 01, 2004
RF CABLE (Chaintek) 1GHz-20GHz	SF102	22054-2	Feb. 10. 2005
RF Cable(RICHTEC)	9913-30M	STCCAB-30M-1 GHz-021	Dec. 01, 2004
Software	AS60P8	NA	NA
CHANCE MOST Antenna Tower	AT-100	0203	NA
CHANCE MOST Turn Table	TT-100	0203	NA

- Note: 1. The calibration interval of the above test instruments is 12 months (36 months for Tunable Dipole Antenna) and the calibrations are traceable to NML/ROC and NIST/USA.
2. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
3. The test was performed in ADT Open Site No. C.
4. The FCC Site Registration No. is 656396.
5. The VCCI Site Registration No. is R-1626.
6. The CANADA Site Registration No. is IC 4824-3.
7. The measurement uncertainty is 3.56 dB, which is calculated as per the document CISPR 16-4



5.2.4 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 10 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

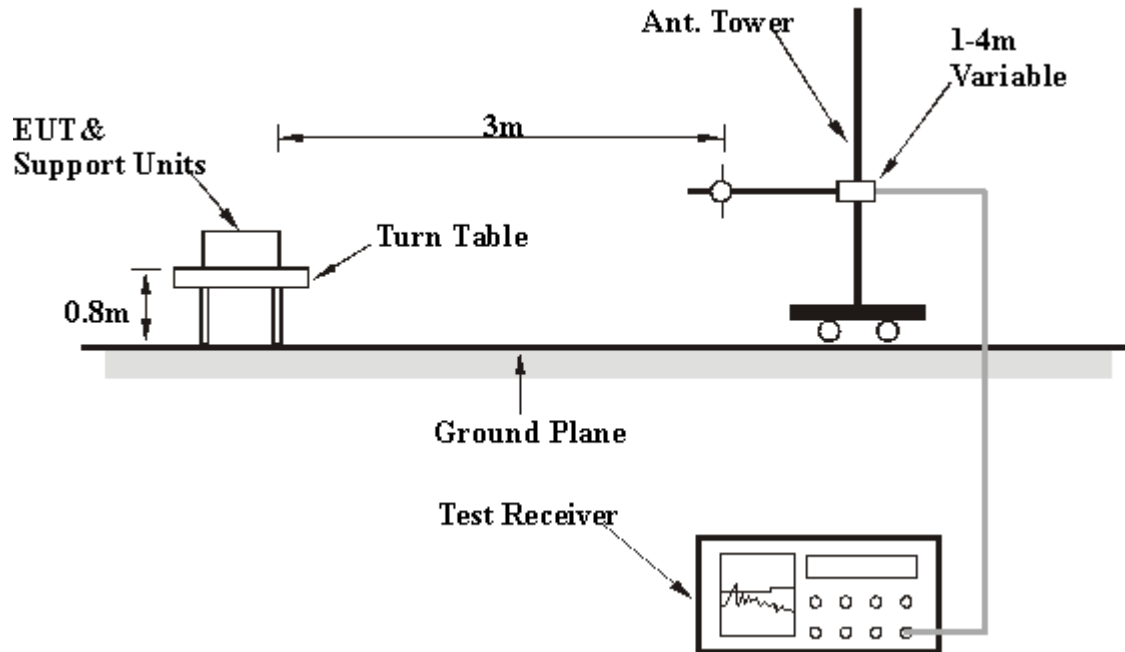
NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Peak detection (PK) and Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 300 Hz for Average detection (AV) at frequency above 1GHz.

5.2.5 DEVIATION FROM TEST STANDARD

No deviation

5.2.6 TEST SETUP



For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

5.2.7 EUT OPERATING CONDITIONS

Same as 4.1.6.

5.2.8 TEST RESULTS

EUT	Nortel Networks WLAN-Mobile Adapter 2202		
MODEL	WLAN-Mobile Adapter 2202	DETECTOR FUNCTION	Quasi-Peak
FREQUENCY RANGE	30 - 1000MHz	DETECTOR FUNCTION & BANDWIDTH	Quasi-Peak, 120kHz
ENVIRONMENTAL CONDITIONS	24 deg. C, 69%RH, 963 hPa	TESTED BY	Larry Peng

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	167.24	25.40 QP	43.50	-18.10	1.81 H	51	14.50	10.90
2	172.03	25.70 QP	43.50	-17.80	1.71 H	75	15.20	10.50
3	259.84	31.80 QP	46.00	-14.20	1.14 H	102	16.30	15.50
4	344.07	35.10 QP	46.00	-10.90	1.19 H	220	18.40	16.80
5	432.06	28.40 QP	46.00	-17.60	1.00 H	230	8.90	19.50
6	455.07	33.90 QP	46.00	-12.10	1.00 H	269	13.80	20.10
7	872.44	28.80 QP	46.00	-17.20	1.05 H	305	0.80	28.00
8	933.88	33.40 QP	46.00	-12.60	1.00 H	3	4.00	29.40
9	983.04	32.40 QP	54.00	-21.60	1.00 H	8	2.50	29.80

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	67.53	29.80 QP	40.00	-10.20	1.32 V	70	23.80	6.00
2	200.00	23.00 QP	43.50	-20.50	1.12 V	358	13.20	9.80
3	344.06	29.60 QP	46.00	-16.40	1.36 V	268	12.80	16.80
4	432.06	28.60 QP	46.00	-17.40	1.33 V	321	9.20	19.50
5	440.00	25.90 QP	46.00	-20.10	1.23 V	2	6.20	19.70
6	454.87	32.80 QP	46.00	-13.20	1.28 V	4	12.70	20.10
7	480.00	24.30 QP	46.00	-21.70	1.16 V	329	3.40	20.90
8	560.00	26.60 QP	46.00	-19.40	1.00 V	119	3.60	23.00
9	600.00	26.90 QP	46.00	-19.10	1.00 V	313	4.30	22.60
10	872.44	29.10 QP	46.00	-16.90	1.49 V	350	1.10	28.00
11	933.88	36.00 QP	46.00	-10.00	1.52 V	284	6.60	29.40

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.



STANDARD SECTION 15.407

EUT	Nortel Networks WLAN-Mobile Adapter 2202	MODEL	WLAN-Mobile Adapter 2202
MODE	Normal Mode	CHANNEL	1
FREQUENCY RANGE	1000MHz~40000MHz	DETECTOR FUNCTION & BANDWIDTH	Peak (PK) Average (AV) 1 MHz
ENVIRONMENTAL CONDITIONS	30 deg. C, 60%RH, 963 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Wen Yu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5150.00	58.00 PK	74.00	-16.00	1.15 H	353	21.00	37.00
1	#5150.00	47.50 AV	54.00	-6.50	1.15 H	353	10.50	37.00
2	*5180.00	109.50 PK			1.14 H	352	72.50	37.00
2	*5180.00	99.00 AV			1.14 H	352	62.00	37.00
3	10360.00	59.50 PK	68.30	-8.80	1.54 H	333	14.80	44.70
4	#15540.00	62.10 PK	74.00	-11.90	1.46 H	13	13.50	48.60
4	#15540.00	49.00 AV	54.00	-5.00	1.46 H	13	0.40	48.60

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5150.00	56.80 PK	74.00	-17.20	1.87 V	155	19.80	37.00
1	#5150.00	46.90 AV	54.00	-7.10	1.87 V	155	9.90	37.00
2	*5180.00	108.30 PK			1.86 V	154	71.30	37.00
2	*5180.00	98.40 AV			1.86 V	154	61.40	37.00
3	10360.00	61.90 PK	68.30	-6.40	1.11 V	345	17.20	44.70
4	#15540.00	61.70 PK	74.00	-12.30	1.38 V	61	13.10	48.60
4	#15540.00	49.00 AV	54.00	-5.00	1.38 V	61	0.40	48.60

NOTE:

1. Emission level = Raw value + Correction Factor
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency
6. "# " : The radiated frequency falling in the restricted band.



STANDARD SECTION 15.407

EUT	Nortel Networks WLAN-Mobile Adapter 2202	MODEL	WLAN-Mobile Adapter 2202
MODE	Normal Mode	CHANNEL	4
FREQUENCY RANGE	1000MHz~40000MHz	DETECTOR FUNCTION & BANDWIDTH	Peak (PK) Average (AV) 1 MHz
ENVIRONMENTAL CONDITIONS	30 deg. C, 60%RH, 963 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Wen Yu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	109.20 PK			1.37 H	333	72.20	37.00
1	*5240.00	99.10 AV			1.37 H	333	62.10	37.00
2	10480.00	58.10 PK	68.30	-10.20	1.09 H	330	13.10	45.00
3	#15720.00	61.20 PK	74.00	-12.80	1.37 H	336	13.20	48.00
3	#15720.00	47.80 AV	54.00	-6.20	1.37 H	336	-0.20	48.00

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	109.20 PK			1.55 V	157	72.20	37.00
1	*5240.00	98.60 AV			1.55 V	157	61.60	37.00
2	10480.00	60.10 PK	68.30	-8.20	1.80 V	38	15.10	45.00
3	#15720.00	60.50 PK	74.00	-13.50	1.00 V	309	12.50	48.00
3	#15720.00	47.40 AV	54.00	-6.60	1.00 V	309	-0.60	48.00

NOTE:

1. Emission level = Raw value + Correction Factor
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency
6. "# " : The radiated frequency falling in the restricted band.



STANDARD SECTION 15.407

EUT	Nortel Networks WLAN-Mobile Adapter 2202	MODEL	WLAN-Mobile Adapter 2202
MODE	Normal Mode	CHANNEL	5
FREQUENCY RANGE	1000MHz~40000MHz	DETECTOR FUNCTION & BANDWIDTH	Peak (PK) Average (AV) 1 MHz
ENVIRONMENTAL CONDITIONS	30 deg. C, 60%RH, 963 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Wen Yu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5260.00	111.80 PK			1.03 H	350	74.80	37.00
1	*5260.00	101.10 AV			1.03 H	350	64.10	37.00
2	10520.00	59.60 PK	68.30	-8.70	1.01 H	33	14.40	45.20
3	#15780.00	61.50 PK	74.00	-12.50	1.13 H	1	13.70	47.90
3	#15780.00	48.50 AV	54.00	-5.50	1.13 H	1	0.70	47.90

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5260.00	109.10 PK			1.98 V	158	72.10	37.00
1	*5260.00	98.80 AV			1.98 V	158	61.80	37.00
2	10520.00	61.40 PK	68.30	-6.90	1.29 V	343	16.30	45.20
3	#15780.00	63.90 PK	74.00	-10.10	1.15 V	10	16.10	47.90
3	#15780.00	49.50 AV	54.00	-4.50	1.15 V	10	1.60	47.90

NOTE:

1. Emission level = Raw value + Correction Factor
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency
6. "# " : The radiated frequency falling in the restricted band.



STANDARD SECTION 15.407

EUT	Nortel Networks WLAN-Mobile Adapter 2202	MODEL	WLAN-Mobile Adapter 2202
MODE	Normal Mode	CHANNEL	8
FREQUENCY RANGE	1000MHz~40000MHz	DETECTOR FUNCTION & BANDWIDTH	Peak (PK) Average (AV) 1 MHz
ENVIRONMENTAL CONDITIONS	30 deg. C, 60%RH, 963 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Wen Yu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	108.60 PK			1.00 H	17	71.60	37.00
1	*5320.00	99.10 AV			1.00 H	17	62.00	37.00
2	#5350.00	60.50 PK	74.00	-13.50	1.01 H	18	23.50	37.00
2	#5350.00	50.80 AV	54.00	-3.20	1.01 H	18	13.70	37.00
3	#10640.00	64.90 PK	74.00	-9.10	1.42 H	29	18.60	46.30
3	#10640.00	50.20 AV	54.00	-3.80	1.42 H	29	3.90	46.30
4	#15960.00	64.70 PK	74.00	-9.30	1.00 H	358	17.40	47.30
4	#15960.00	50.80 AV	54.00	-3.20	1.00 H	358	3.50	47.30

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	109.20 PK			1.46 V	180	72.10	37.00
1	*5320.00	98.70 AV			1.46 V	180	61.70	37.00
2	#5350.00	59.50 PK	74.00	-14.50	1.46 V	180	22.50	37.00
2	#5350.00	50.70 AV	54.00	-3.30	1.46 V	180	13.60	37.00
3	#10640.00	57.50 PK	74.00	-16.50	1.32 V	346	11.20	46.30
3	#10640.00	43.00 AV	54.00	-11.00	1.32 V	346	-3.30	46.30
4	#15960.00	60.70 PK	74.00	-13.30	1.25 V	10	13.40	47.30
4	#15960.00	47.00 AV	54.00	-7.00	1.25 V	10	-0.30	47.30

NOTE:

1. Emission level = Raw value + Correction Factor
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency
6. "# " : The radiated frequency falling in the restricted band.



STANDARD SECTION 15.247

EUT	Nortel Networks WLAN-Mobile Adapter 2202	MODEL	WLAN-Mobile Adapter 2202
MODE	Normal Mode	CHANNEL	9
FREQUENCY RANGE	1000MHz~40000MHz	DETECTOR FUNCTION & BANDWIDTH	Peak (PK) Average (AV) 1 MHz
ENVIRONMENTAL CONDITIONS	30 deg. C, 60%RH, 963 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Wen Yu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#3830.00	46.30 PK	74.00	-27.70	1.00 H	18	12.70	33.60
2	*5745.00	109.20 PK			1.21 H	0	71.70	37.60
2	*5745.00	99.20 AV			1.21 H	0	61.70	37.60
3	#11490.00	61.00 PK	74.00	-13.00	1.25 H	42	9.70	51.30
3	#11490.00	48.60 AV	54.00	-5.40	1.25 H	42	-2.70	51.30
4	17235.00	63.60 PK	89.20	-25.60	1.00 H	2	11.90	51.70

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#3830.00	45.80 PK	74.00	-28.20	1.51 V	345	12.20	33.60
2	*5745.00	107.90 PK			1.34 V	242	70.30	37.60
2	*5745.00	97.20 AV			1.34 V	242	59.70	37.60
3	#11490.00	62.80 PK	74.00	-11.20	1.87 V	23	11.50	51.30
3	#11490.00	51.00 AV	54.00	-3.00	1.87 V	23	-0.30	51.30
4	17235.00	64.80 PK	87.90	-23.10	1.11 V	3	13.10	51.70

NOTE:

1. Emission level = Raw value + Correction Factor
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency
6. "# " : The radiated frequency falling in the restricted band.



STANDARD SECTION 15.247

EUT	Nortel Networks WLAN-Mobile Adapter 2202	MODEL	WLAN-Mobile Adapter 2202
MODE	Normal Mode	CHANNEL	13
FREQUENCY RANGE	1000MHz~40000MHz	DETECTOR FUNCTION & BANDWIDTH	Peak (PK) Average (AV) 1 MHz
ENVIRONMENTAL CONDITIONS	30 deg. C, 60%RH, 963 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Wen Yu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#3883.00	46.80 PK	74.00	-27.20	1.00 H	36	13.10	33.70
2	*5825.00	106.20 PK			1.05 H	283	68.50	37.70
2	*5825.00	96.70 AV			1.05 H	283	59.00	37.70
3	#11650.00	63.30 PK	74.00	-10.70	1.68 H	335	12.50	50.80
3	#11650.00	49.80 AV	54.00	-4.20	1.68 H	335	-1.00	50.80
4	17475.00	65.10 PK	68.30	-3.20	1.31 H	36	10.90	54.20

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#3883.00	46.60 PK	74.00	-27.40	1.22 V	16	13.00	33.70
2	*5825.00	104.10 PK			1.24 V	195	66.30	37.70
2	*5825.00	94.90 AV			1.24 V	195	57.20	37.70
3	#11650.00	61.60 PK	74.00	-12.40	1.58 V	4	10.80	50.80
3	#11650.00	50.80 AV	54.00	-3.20	1.58 V	4	0.00	50.80
4	17475.00	65.00 PK	68.30	-3.30	1.00 V	5	10.80	54.20

NOTE:

1. Emission level = Raw value + Correction Factor
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency
6. "# " : The radiated frequency falling in the restricted band.



STANDARD SECTION 15.407

EUT	Nortel Networks WLAN-Mobile Adapter 2202	MODEL	WLAN-Mobile Adapter 2202
MODE	Turbo Mode	CHANNEL	1
FREQUENCY RANGE	1000MHz~40000MHz	DETECTOR FUNCTION & BANDWIDTH	Peak (PK) Average (AV) 1 MHz
ENVIRONMENTAL CONDITIONS	30 deg. C, 60%RH, 963 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Wen Yu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5150.00	59.00 PK	74.00	-15.00	1.15 H	352	22.00	37.00
1	#5150.00	48.70 AV	54.00	-5.30	1.15 H	352	11.70	37.00
2	*5210.00	107.60 PK			1.14 H	351	70.50	37.00
2	*5210.00	97.30 AV			1.14 H	351	60.30	37.00
3	10420.00	58.20 PK	68.30	-10.10	1.53 H	330	13.40	44.80
4	#15630.00	61.20 PK	74.00	-12.80	1.38 H	17	12.90	48.30
4	#15630.00	48.00 AV	54.00	-6.00	1.38 H	17	-0.30	48.30

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5150.00	56.30 PK	74.00	-17.70	1.71 V	159	19.20	37.00
1	#5150.00	46.50 AV	54.00	-7.50	1.71 V	159	9.50	37.00
2	*5210.00	104.80 PK			1.70 V	158	67.80	37.00
2	*5210.00	95.10 AV			1.70 V	158	58.10	37.00
3	10420.00	58.90 PK	68.30	-9.40	1.55 V	35	14.10	44.80
4	#15630.00	60.80 PK	74.00	-13.20	1.16 V	303	12.50	48.30
4	#15630.00	47.80 AV	54.00	-6.20	1.16 V	303	-0.60	48.30

NOTE:

1. Emission level = Raw value + Correction Factor
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency
6. "# " : The radiated frequency falling in the restricted band.



STANDARD SECTION 15.407

EUT	Nortel Networks WLAN-Mobile Adapter 2202	MODEL	WLAN-Mobile Adapter 2202
MODE	Turbo Mode	CHANNEL	2
FREQUENCY RANGE	1000MHz~40000MHz	DETECTOR FUNCTION & BANDWIDTH	Peak (PK) Average (AV) 1 MHz
ENVIRONMENTAL CONDITIONS	30 deg. C, 60%RH, 963 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Wen Yu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5250.00	107.20 PK			1.20 H	353	70.10	37.00
1	*5250.00	97.00 AV			1.20 H	353	60.00	37.00
2	10500.00	57.90 PK	68.30	-10.40	1.54 H	30	12.90	45.00
3	#15750.00	60.30 PK	74.00	-13.70	1.37 H	10	12.30	48.00
3	#15750.00	47.50 AV	54.00	-6.50	1.37 H	10	-0.50	48.00

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5250.00	105.30 PK			1.55 V	152	68.30	37.00
1	*5250.00	95.60 AV			1.55 V	152	58.60	37.00
2	10500.00	59.30 PK	68.30	-9.00	1.80 V	38	14.30	45.00
3	#15750.00	60.40 PK	74.00	-13.60	1.25 V	357	12.50	48.00
3	#15750.00	47.70 AV	54.00	-6.30	1.25 V	357	-0.20	48.00

NOTE:

1. Emission level = Raw value + Correction Factor
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency
6. "# " : The radiated frequency falling in the restricted band.



STANDARD SECTION 15.407

EUT	Nortel Networks WLAN-Mobile Adapter 2202	MODEL	WLAN-Mobile Adapter 2202
MODE	Turbo Mode	CHANNEL	3
FREQUENCY RANGE	1000MHz~40000MHz	DETECTOR FUNCTION & BANDWIDTH	Peak (PK) Average (AV) 1 MHz
ENVIRONMENTAL CONDITIONS	30 deg. C, 60%RH, 963 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Wen Yu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5290.00	103.00 PK			1.01 H	267	66.00	37.00
1	*5290.00	95.70 AV			1.01 H	267	58.70	37.00
2	#5350.00	57.30 PK	74.00	-16.70	1.01 H	267	20.20	37.00
2	#5350.00	49.10 AV	54.00	-4.90	1.01 H	267	12.10	37.00
3	10580.00	60.10 PK	68.30	-8.20	1.57 H	326	14.40	45.70
4	#15870.00	58.30 PK	74.00	-15.70	1.47 H	354	10.70	47.60
4	#15870.00	46.20 AV	54.00	-7.80	1.47 H	354	-1.40	47.60

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5290.00	100.30 PK			1.45 V	181	63.30	37.00
1	*5290.00	93.00 AV			1.45 V	181	56.00	37.00
2	#5350.00	56.10 PK	74.00	-17.90	1.45 V	181	19.10	37.00
2	#5350.00	46.40 AV	54.00	-7.60	1.45 V	181	9.40	37.00
3	10580.00	61.10 PK	68.30	-7.20	1.28 V	348	15.40	45.70
4	#15870.00	61.50 PK	74.00	-12.50	1.24 V	11	13.90	47.60
4	#15870.00	48.30 AV	54.00	-5.70	1.24 V	11	0.70	47.60

NOTE:

1. Emission level = Raw value + Correction Factor
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency
6. "# " : The radiated frequency falling in the restricted band.



STANDARD SECTION 15.247

EUT	Nortel Networks WLAN-Mobile Adapter 2202	MODEL	WLAN-Mobile Adapter 2202
MODE	Turbo Mode	CHANNEL	4
FREQUENCY RANGE	1000MHz~40000MHz	DETECTOR FUNCTION & BANDWIDTH	Peak (PK) Average (AV) 1 MHz
ENVIRONMENTAL CONDITIONS	30 deg. C, 60%RH, 963 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Wen Yu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#3840.00	45.80 PK	74.00	-28.20	1.06 H	307	12.20	33.60
2	*5760.00	105.60 PK			1.19 H	0	68.00	37.60
2	*5760.00	96.60 AV			1.19 H	0	59.00	37.60
3	#11520.00	60.50 PK	74.00	-13.50	1.34 H	20	9.20	51.30
3	#11520.00	47.80 AV	54.00	-6.20	1.34 H	20	-3.50	51.30
4	17280.00	64.90 PK	68.30	-3.40	1.29 H	51	12.70	52.20

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#3840.00	46.50 PK	74.00	-27.50	1.08 V	19	12.90	33.60
2	*5760.00	101.10 PK			1.34 V	233	63.50	37.60
2	*5760.00	92.40 AV			1.34 V	233	54.80	37.60
3	#11520.00	62.00 PK	74.00	-12.00	1.51 V	21	10.70	51.30
3	#11520.00	49.30 AV	54.00	-4.70	1.51 V	21	-2.00	51.30
4	17280.00	62.20 PK	68.30	-6.10	1.57 V	317	10.00	52.20

NOTE:

1. Emission level = Raw value + Correction Factor
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency
6. "# " : The radiated frequency falling in the restricted band.



STANDARD SECTION 15.247

EUT	Nortel Networks WLAN-Mobile Adapter 2202	MODEL	WLAN-Mobile Adapter 2202
MODE	Turbo Mode	CHANNEL	5
FREQUENCY RANGE	1000MHz~40000MHz	DETECTOR FUNCTION & BANDWIDTH	Peak (PK) Average (AV) 1 MHz
ENVIRONMENTAL CONDITIONS	30 deg. C, 60%RH, 963 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Wen Yu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#3866.00	47.40 PK	74.00	-26.60	1.39 H	314	13.80	33.60
2	*5800.00	105.30 PK			1.09 H	0	67.70	37.70
2	*5800.00	96.20 AV			1.09 H	0	58.50	37.70
3	#11600.00	62.80 PK	74.00	-11.20	1.46 H	343	11.80	51.00
3	#11600.00	49.20 AV	54.00	-4.80	1.46 H	343	-1.80	51.00
4	17400.00	63.80 PK	68.30	-4.50	1.41 H	59	10.40	53.40

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#3866.00	46.20 PK	74.00	-27.80	1.35 V	320	12.60	33.60
2	*5800.00	101.50 PK			1.51 V	228	63.80	37.70
2	*5800.00	93.00 AV			1.51 V	228	55.30	37.70
3	#11600.00	62.70 PK	74.00	-11.30	1.64 V	0	11.70	51.00
3	#11600.00	50.80 AV	54.00	-3.20	1.64 V	0	-0.20	51.00
4	17400.00	63.70 PK	68.30	-4.60	1.35 V	322	10.30	53.40

NOTE:

1. Emission level = Raw value + Correction Factor
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*" : Fundamental frequency
6. "# " : The radiated frequency falling in the restricted band.



FOR FREQUENCY 5.15~5.35GHZ

5.3 PEAK TRANSMIT POWER MEASUREMENT

5.3.1 LIMITS OF PEAK TRANSMIT POWER MEASUREMENT

Frequency Band	Limit
5.15 – 5.25 GHz	The lesser of 50mW (17dBm) or $4\text{dBm} + 10\log B$
5.25 – 5.35 GHz	The lesser of 250mW (24dBm) or $11\text{dBm} + 10\log B$

Note:

1. Where B is the 26dB emission bandwidth in MHz.
2. Limit follows whichever is lower.
3. 5.15-5.25GHz: In addition, the peak power spectral density shall not exceed 4 dBm in any 1-MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
4. 5.25-5.35GHz: In addition, the peak power spectral density shall not exceed 11 dBm in any 1-MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.



5.3.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSP40	100037	May 06, 2005
R&S SIGNAL GENERATOR	SMP04	100011	May 28, 2005
TEKTRONIX OSCILLOSCOPE	TDS 220	B027241	Jun. 29, 2005
NARDA DETECTOR	4503A	FSCM99899	NA

Note:

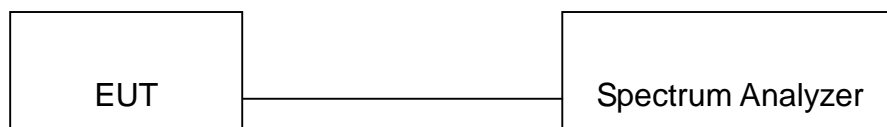
1. The measurement uncertainty is 1.25dB, which is calculated as per the document ETSI TR 100 028.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.



5.3.3 TEST PROCEDURE

1. The transmitter output was connected to the spectrum analyzer.
2. Set span to encompass the entire emission bandwidth of the signal.
3. Set RBW to 1MHz, VBW to 300kHz.
4. Using the spectrum analyzer's channel power measurement function to measure the output power.

5.3.4 TEST SETUP



5.3.5 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.



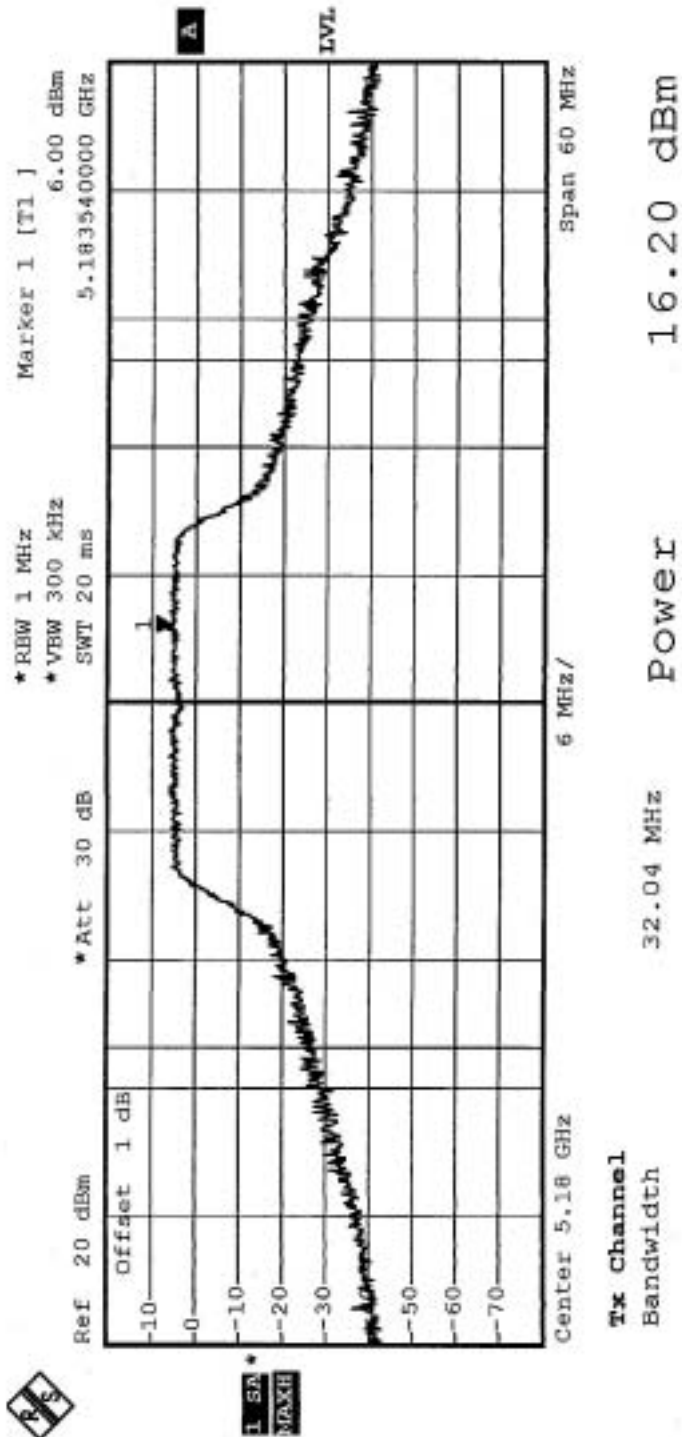
5.3.6 TEST RESULTS

EUT	Nortel Networks WLAN-Mobile Adapter 2202	MODEL	WLAN-Mobile Adapter 2202
MODE	Normal	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	27eg. C, 59RH, 963 hPa	TESTED BY	Wen Yu

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	26dBc Occupied Bandwidth (MHz)	PASS/FAIL
1	5180	16.2	17.00	32.04	PASS
4	5240	16.1	17.00	30.36	PASS
5	5260	21.4	24.00	42.12	PASS
8	5320	19.2	24.00	34.80	PASS

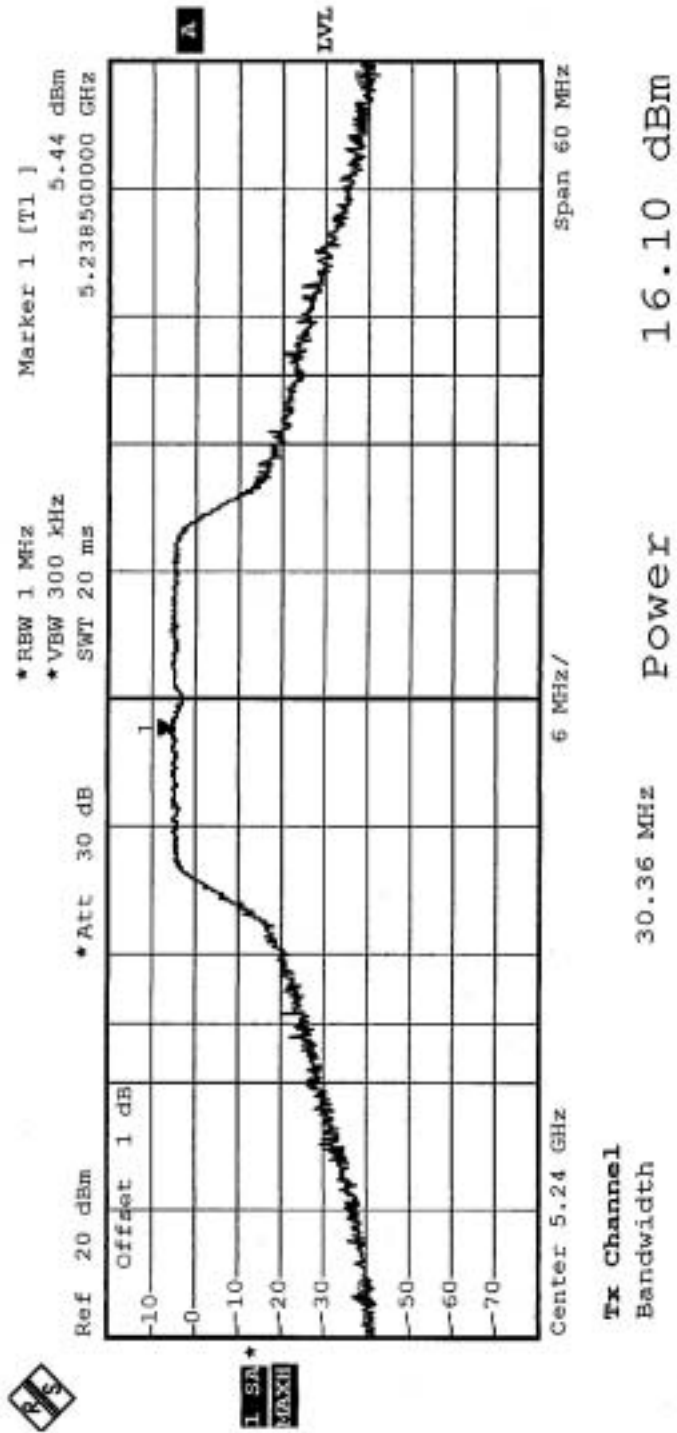


CHANNEL 1



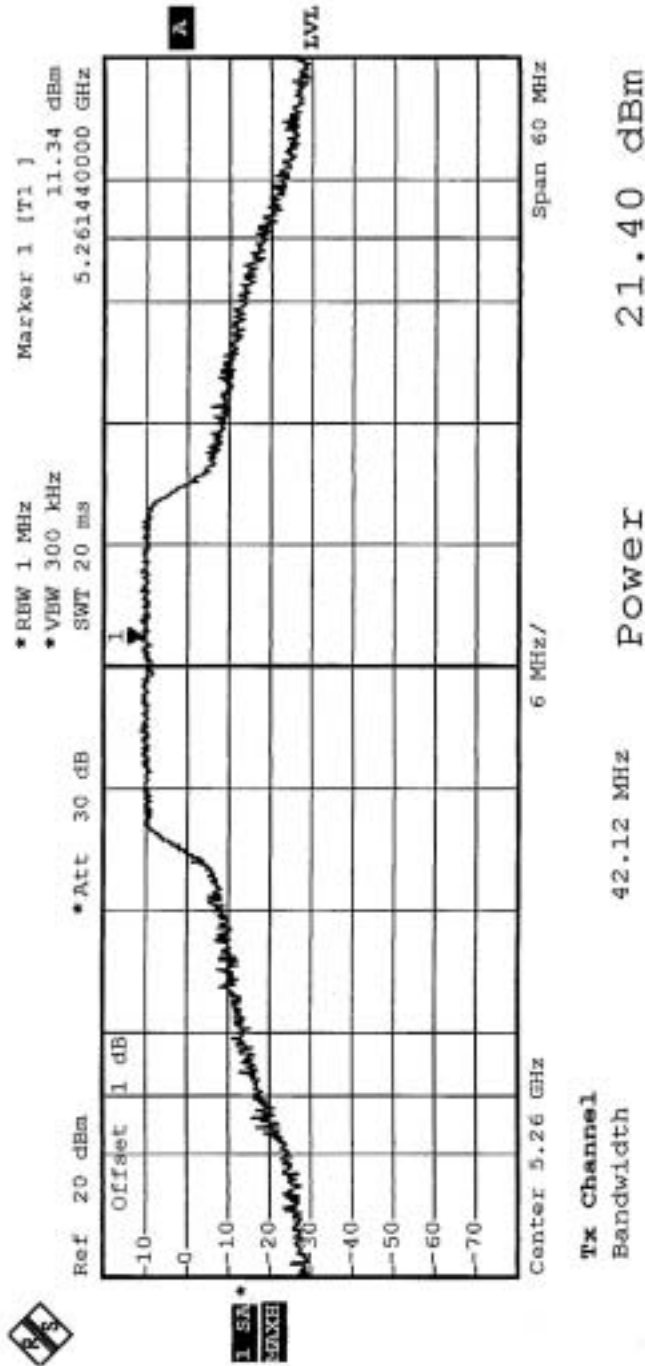


CHANNEL 4



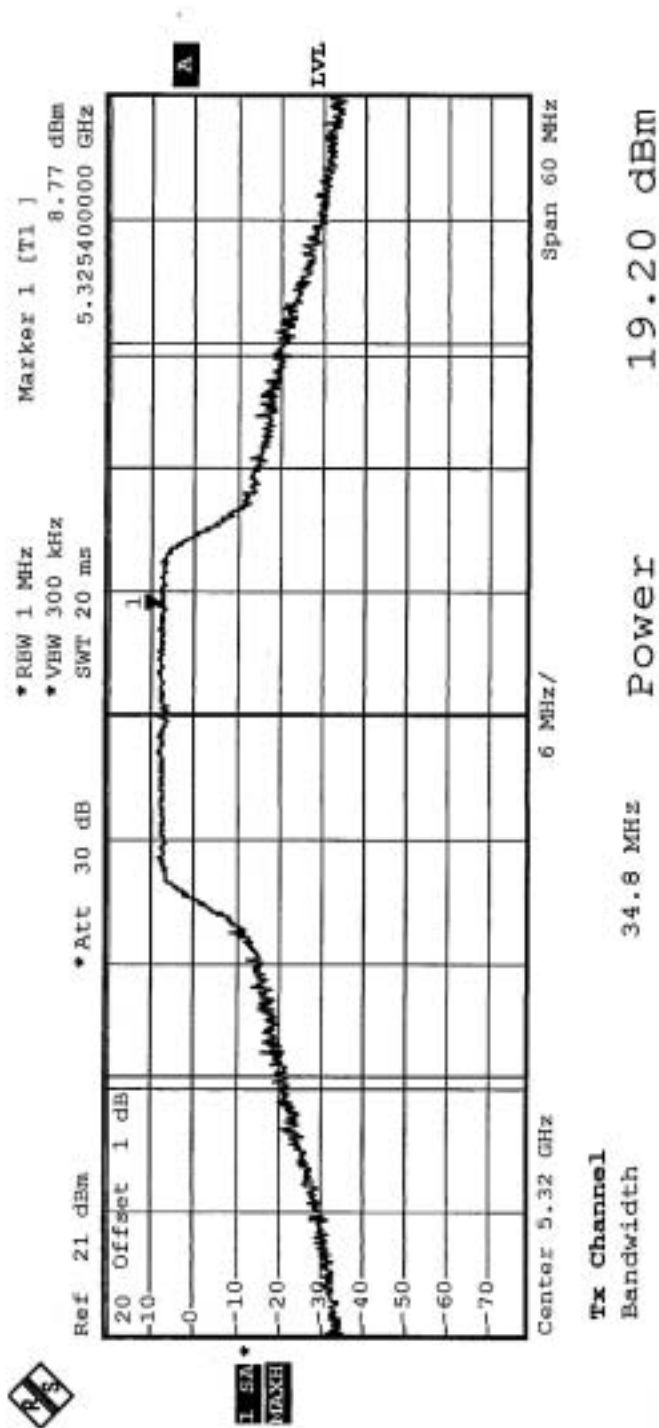


CHANNEL 5



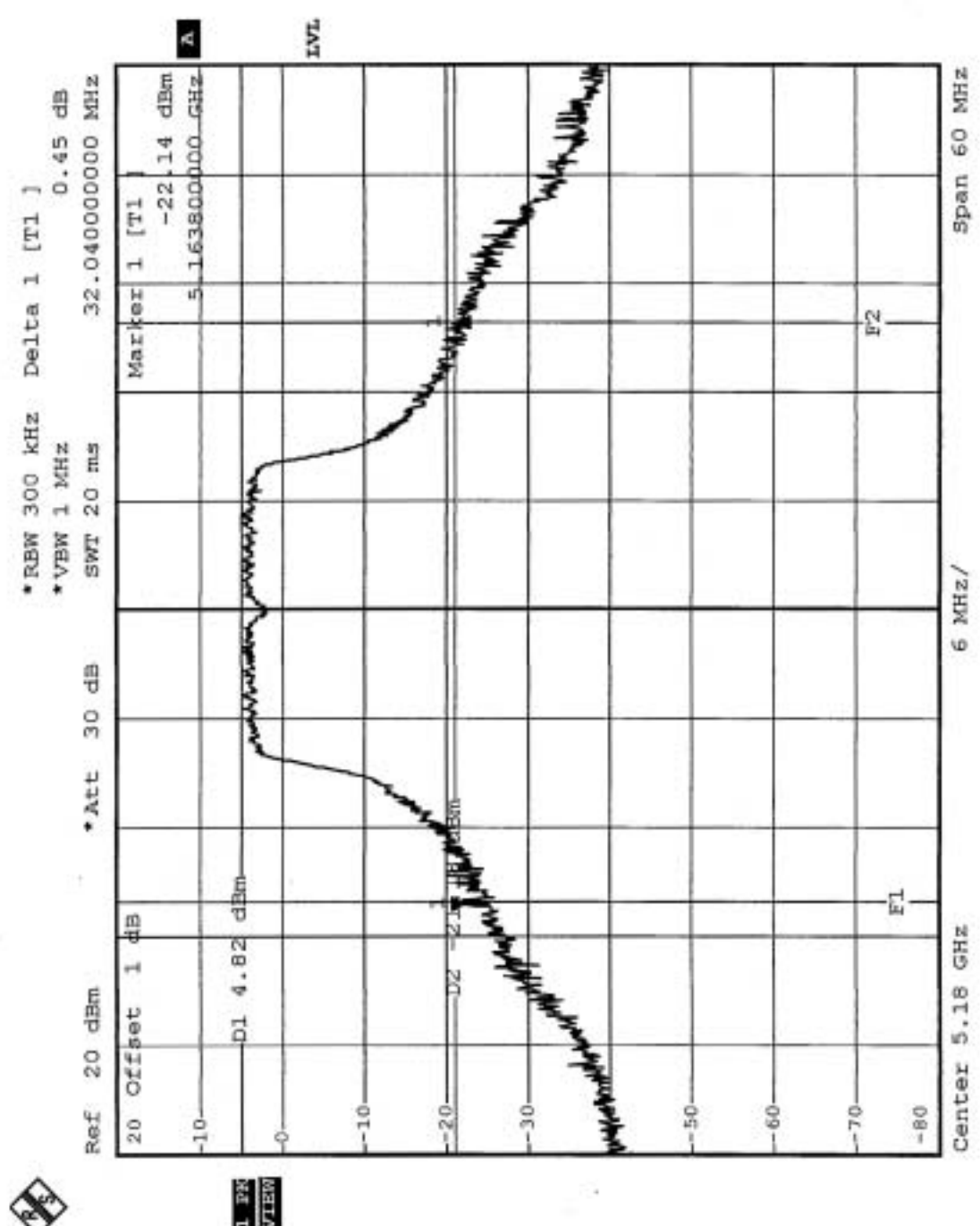


CHANNEL 8



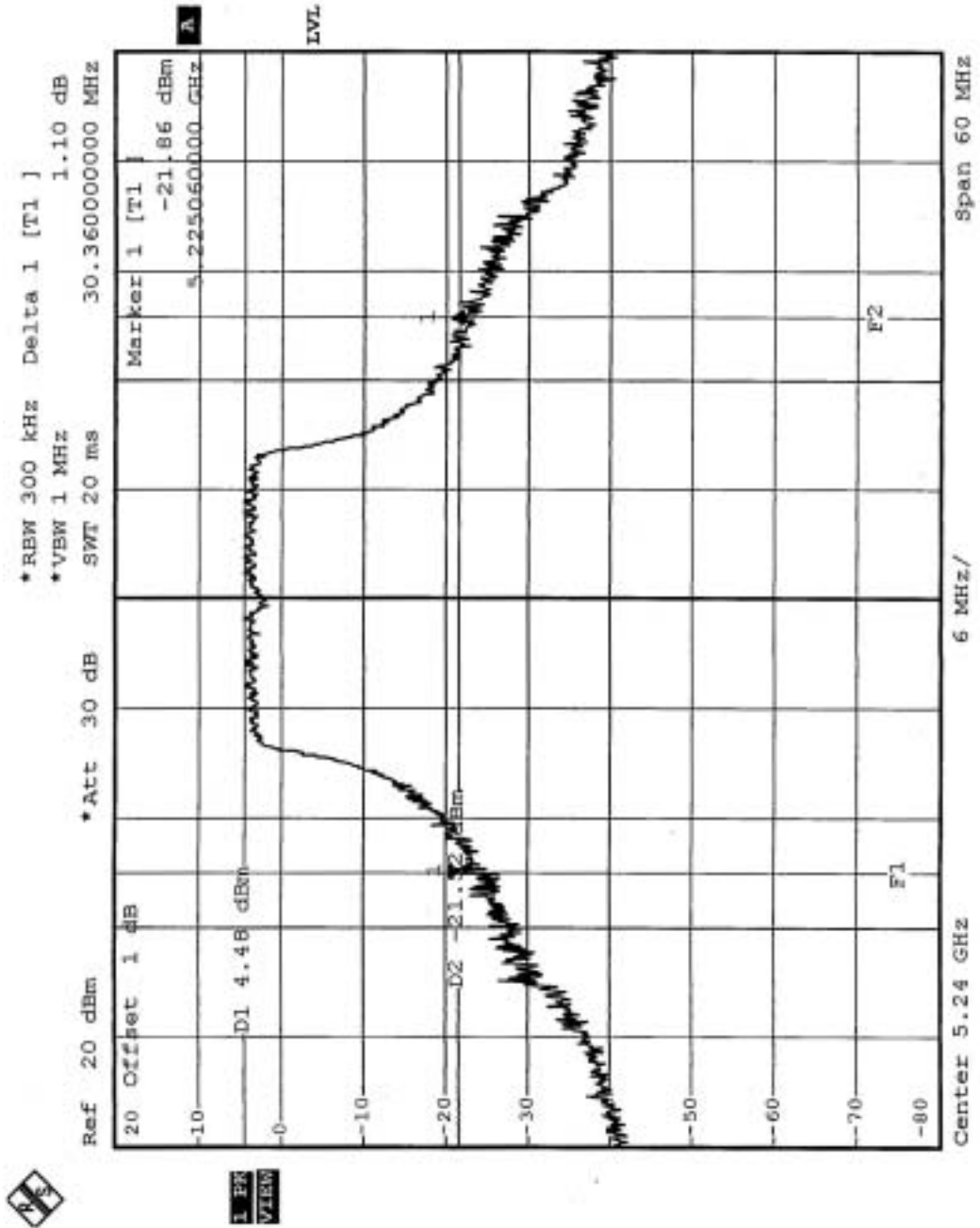


CHANNEL 1



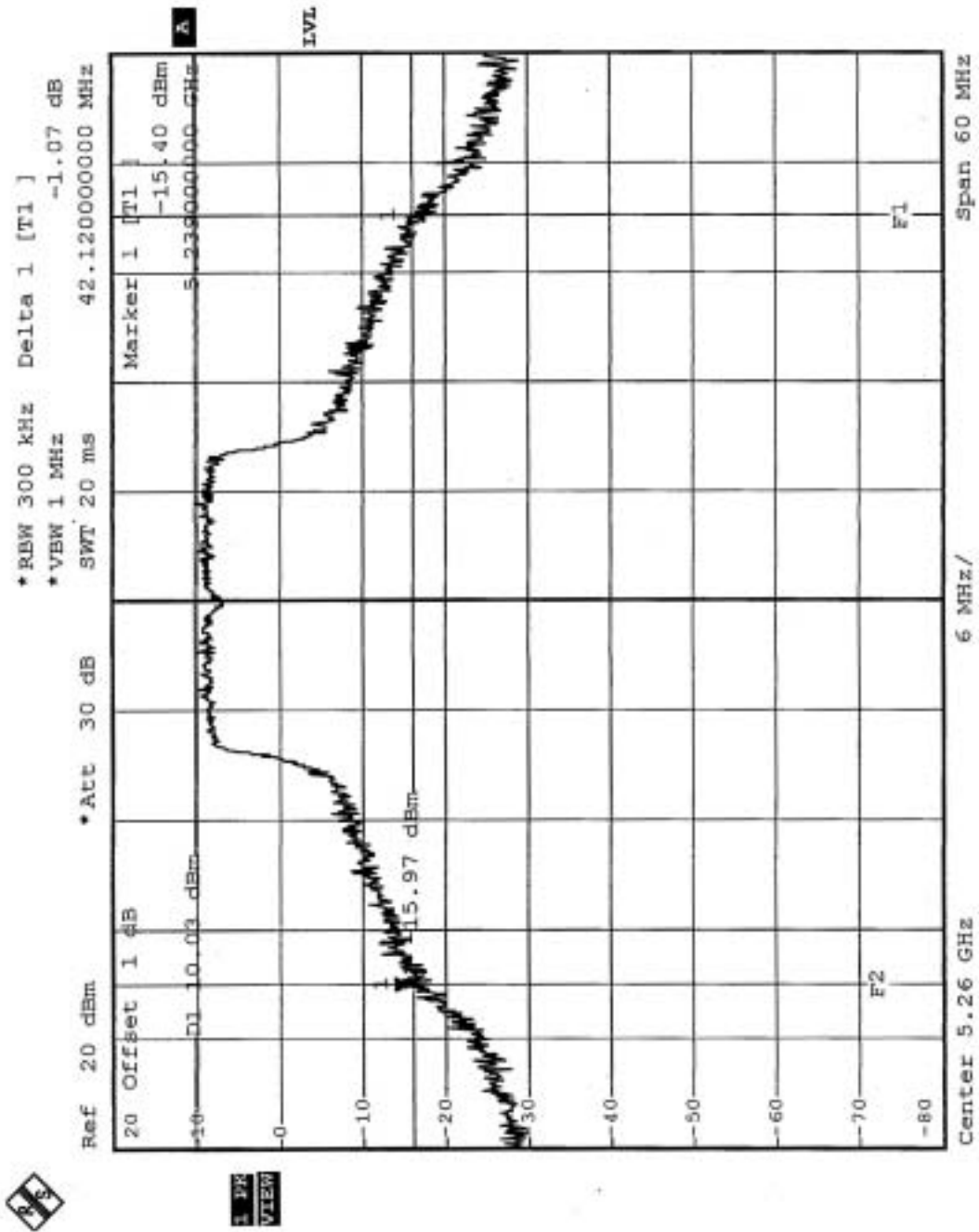


CHANNEL 4



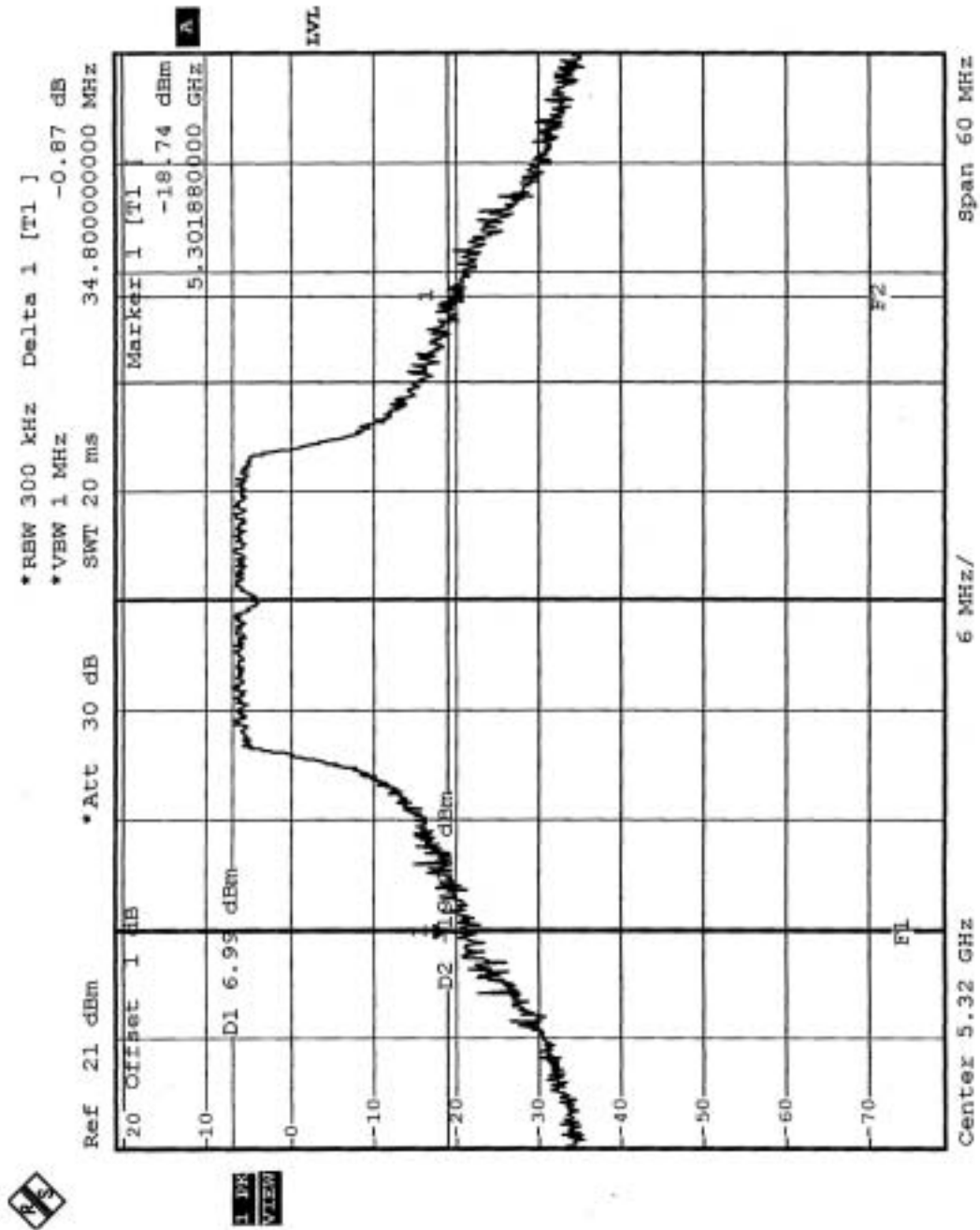


CHANNEL 5





CHANNEL 8



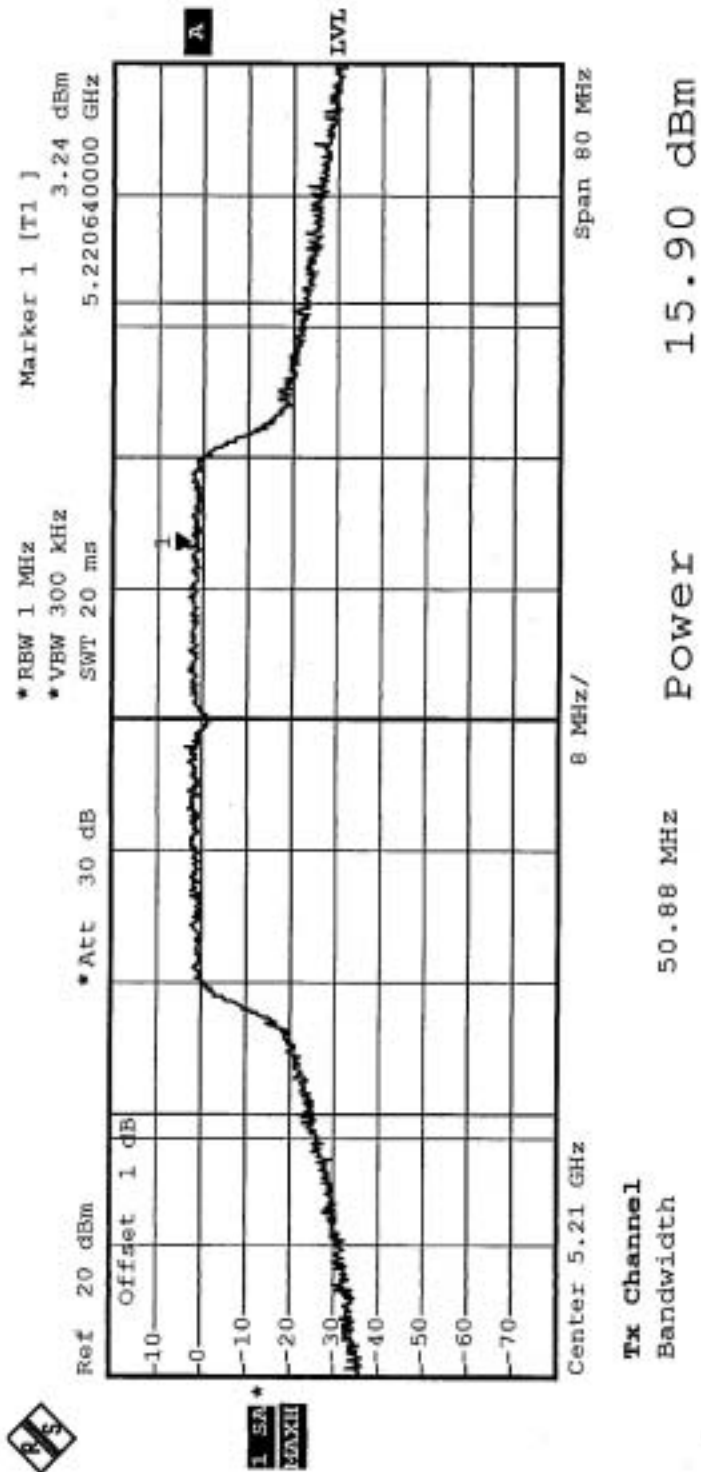


EUT	Nortel Networks WLAN-Mobile Adapter 2202	MODEL	WLAN-Mobile Adapter 2202
MODE	Turbo	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	27eg. C, 59RH, 963 hPa	TESTED BY	Wen Yu

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	26dBc Occupied Bandwidth (MHz)	PASS/FAIL
1	5210	15.90	17.00	50.88	PASS
2	5250	16.25	17.00	48.00	PASS
3	5290	18.21	24.00	51.84	PASS

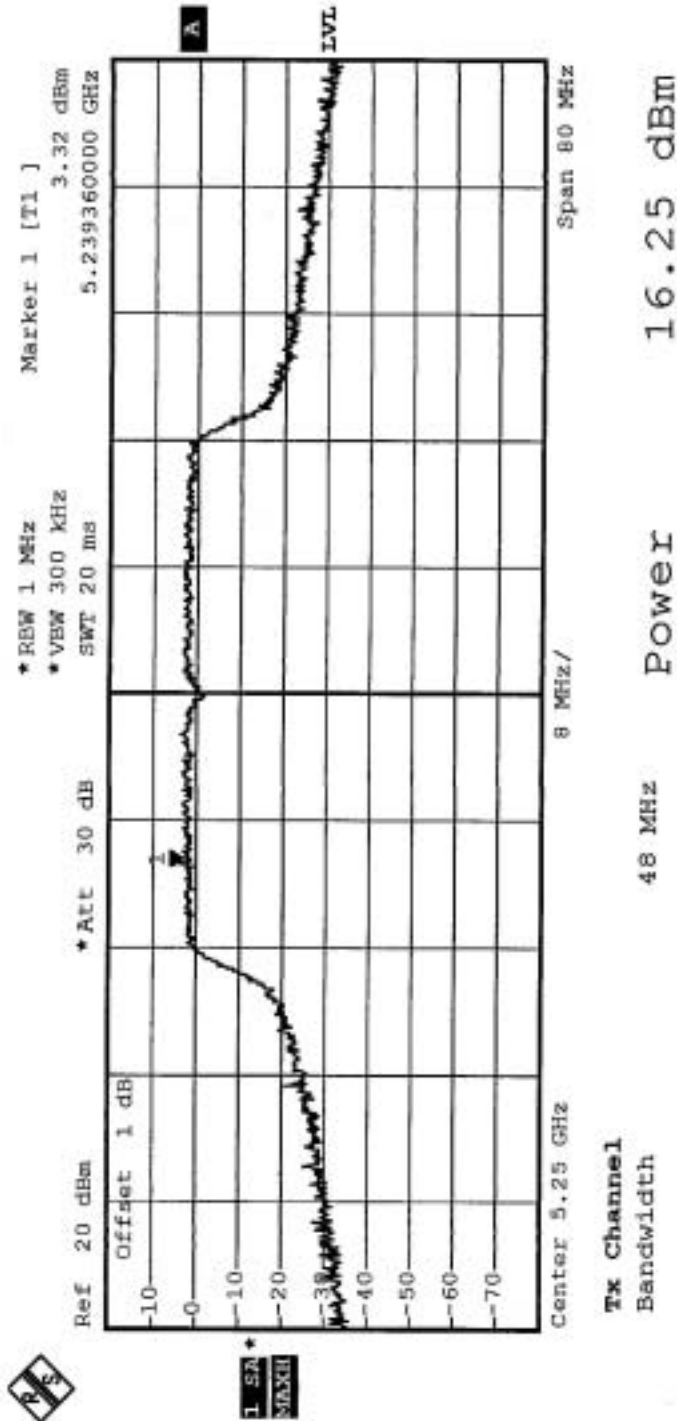


CHANNEL 1



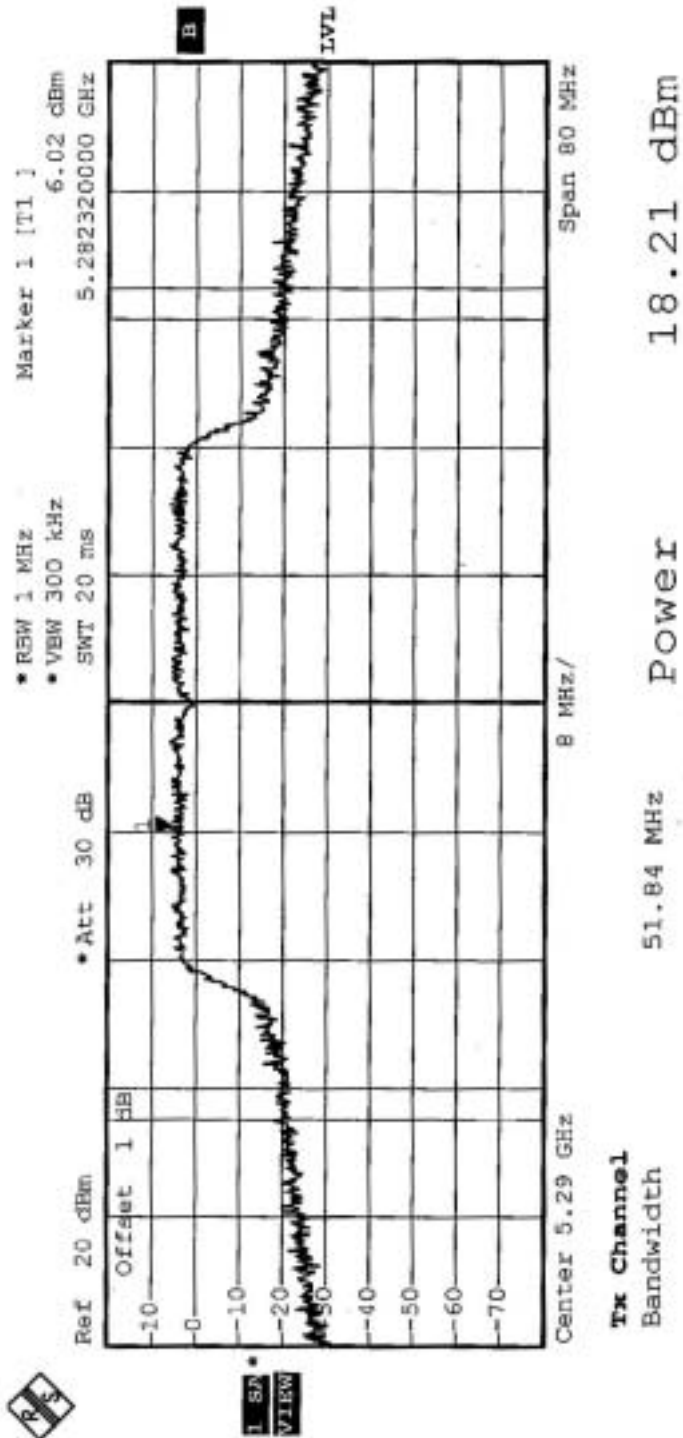


CHANNEL 2



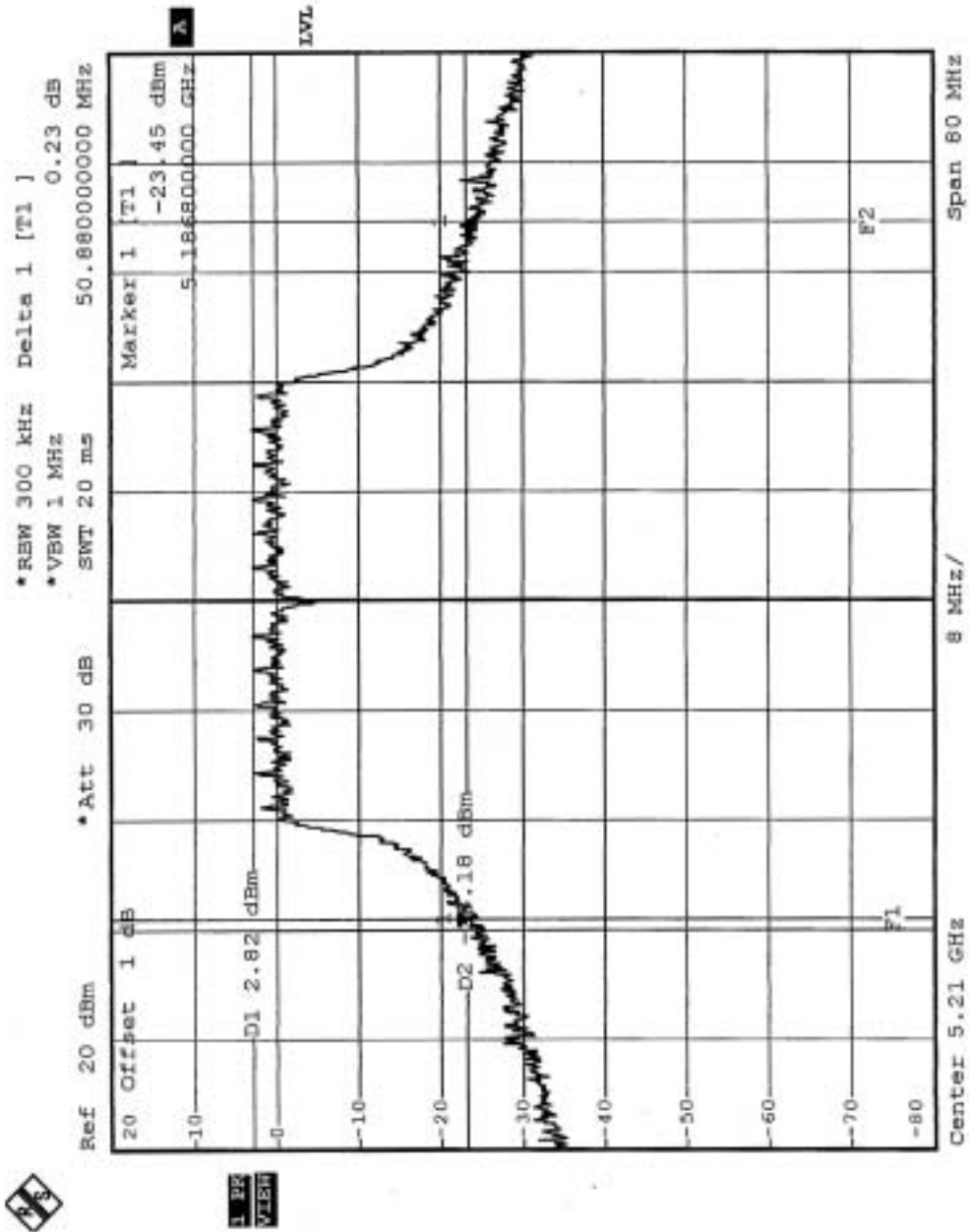


CHANNEL 3



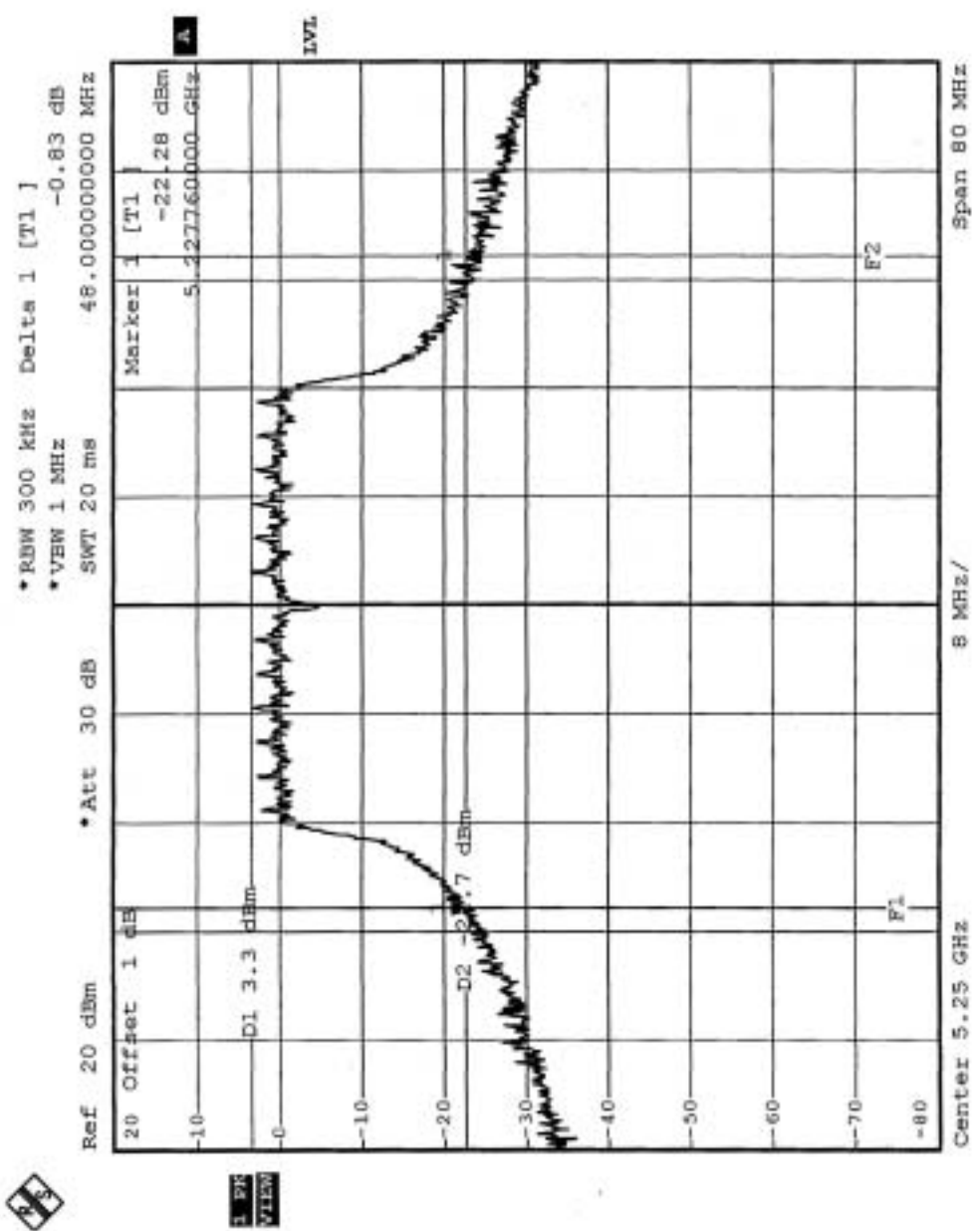


CHANNEL 1



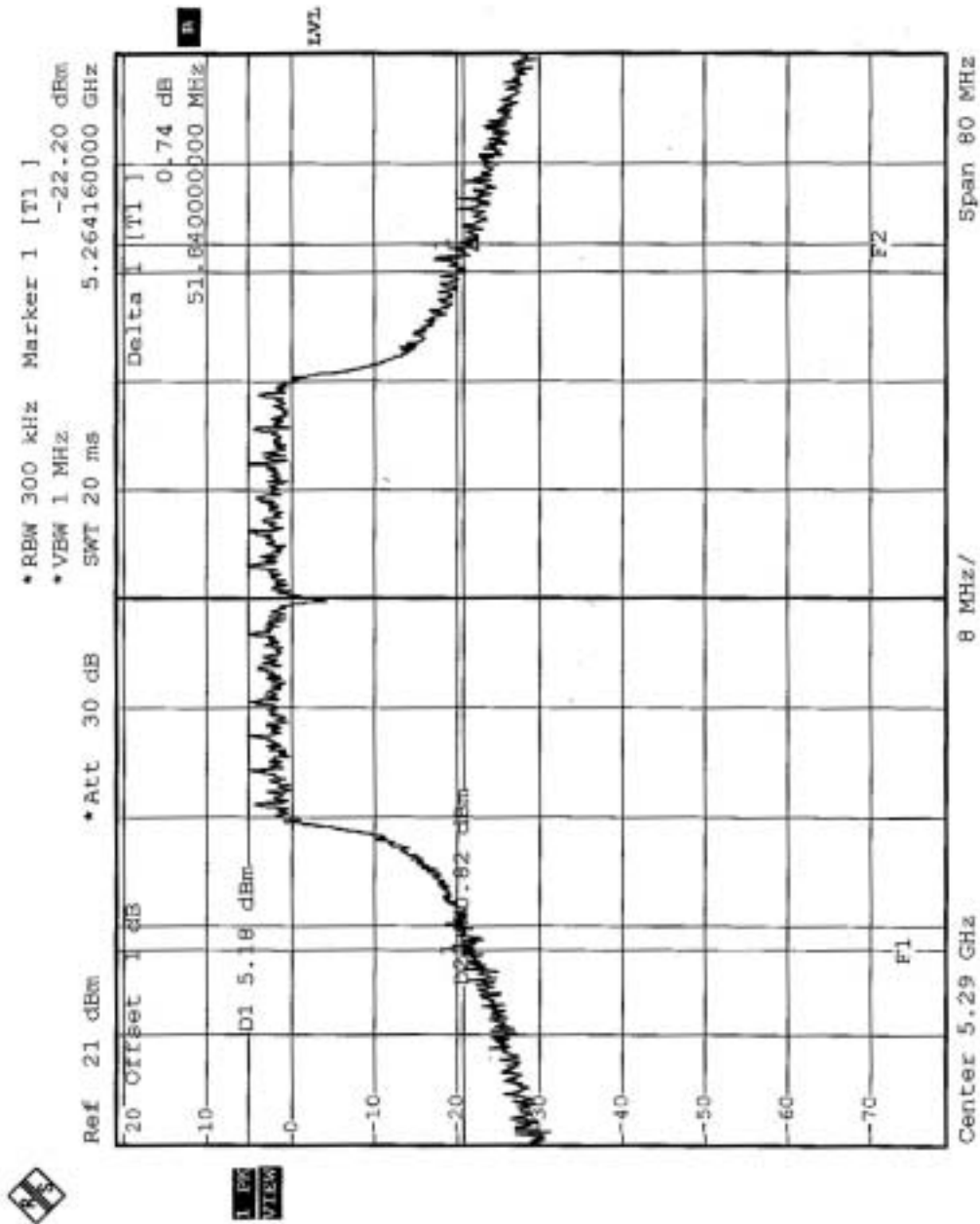


CHANNEL 2





CHANNEL 3





5.4 PEAK POWER EXCURSION MEASUREMENT

5.4.1 LIMITS OF PEAK POWER EXCURSION MEASUREMENT

Frequency Band	Limit
5.15 – 5.25 GHz	13dB
5.25 – 5.35 GHz	13dB
5.725 – 5.825 GHz	13dB

5.4.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSP30	100019	Dec. 19, 2004

Note:

1. The measurement uncertainty is 1.24dB, which is calculated as per the document ETSI TR 100 028.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.



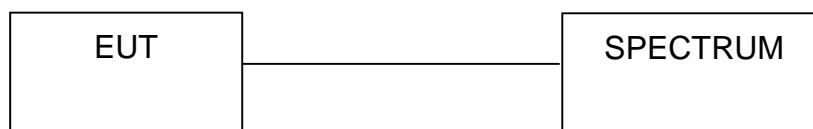
5.4.3 TEST PROCEDURE

1. The transmitter output was connected to the spectrum analyzer.
2. Set span to encompass the entire emission bandwidth of the signal.
3. Set RBW to 1MHz, VBW to 300kHz.
4. Using the spectrum analyzer's channel power measurement function to measure the output power.

5.4.4 DEVIATION FROM TEST STANDARD

No deviation

5.4.5 TEST SETUP



5.4.6 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.



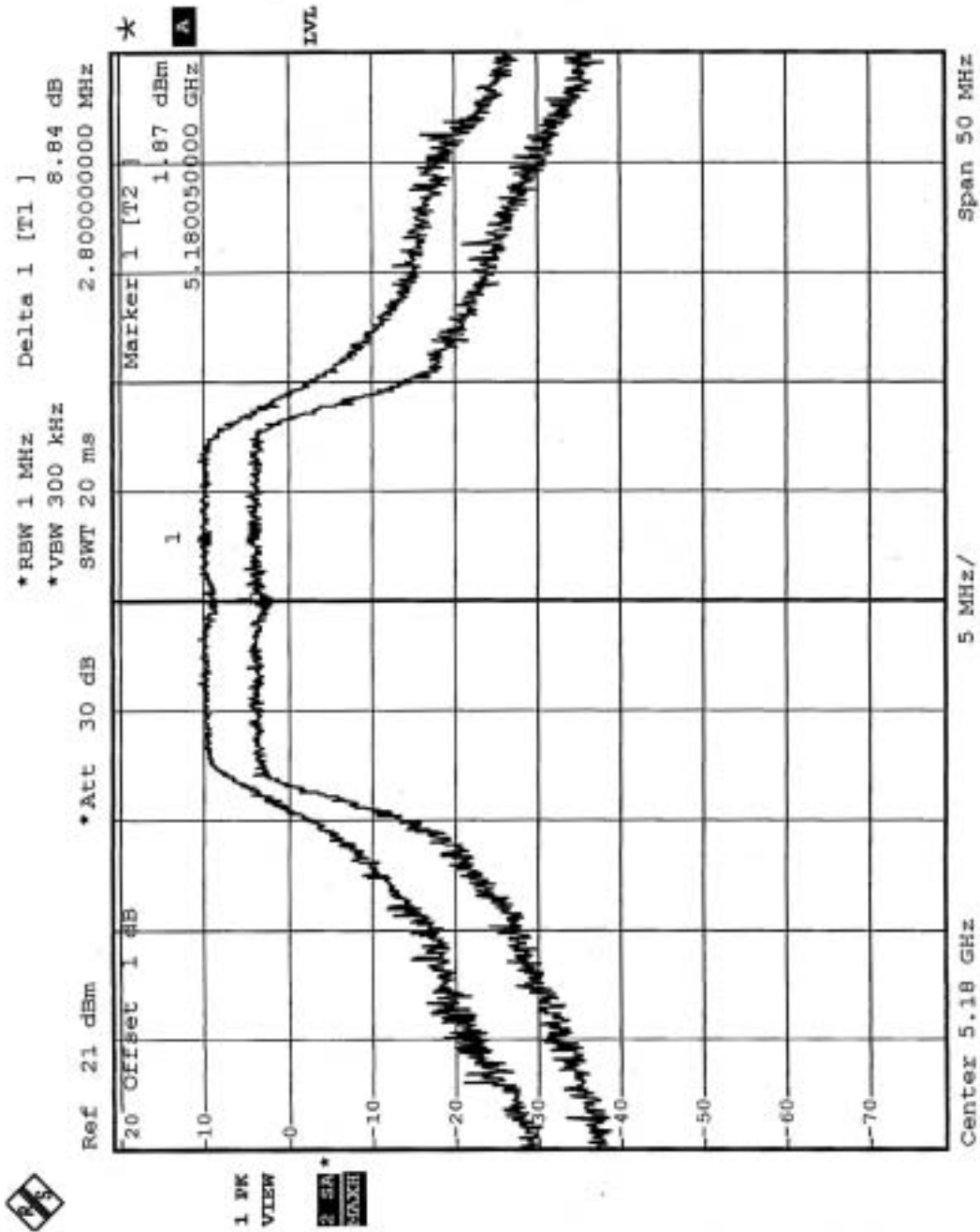
5.4.7 TEST RESULTS

EUT	Nortel Networks WLAN-Mobile Adapter 2202	MODEL	WLAN-Mobile Adapter 2202
MODE	Normal	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	27eg. C, 59RH, 963 hPa	TESTED BY	Wen Yu

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)	PEAK to AVERAGE EXCURSION LIMIT (dB)	PASS/FAIL
1	5180	8.84	13	PASS
4	5240	8.39	13	PASS
5	5260	7.42	13	PASS
8	5320	7.65	13	PASS

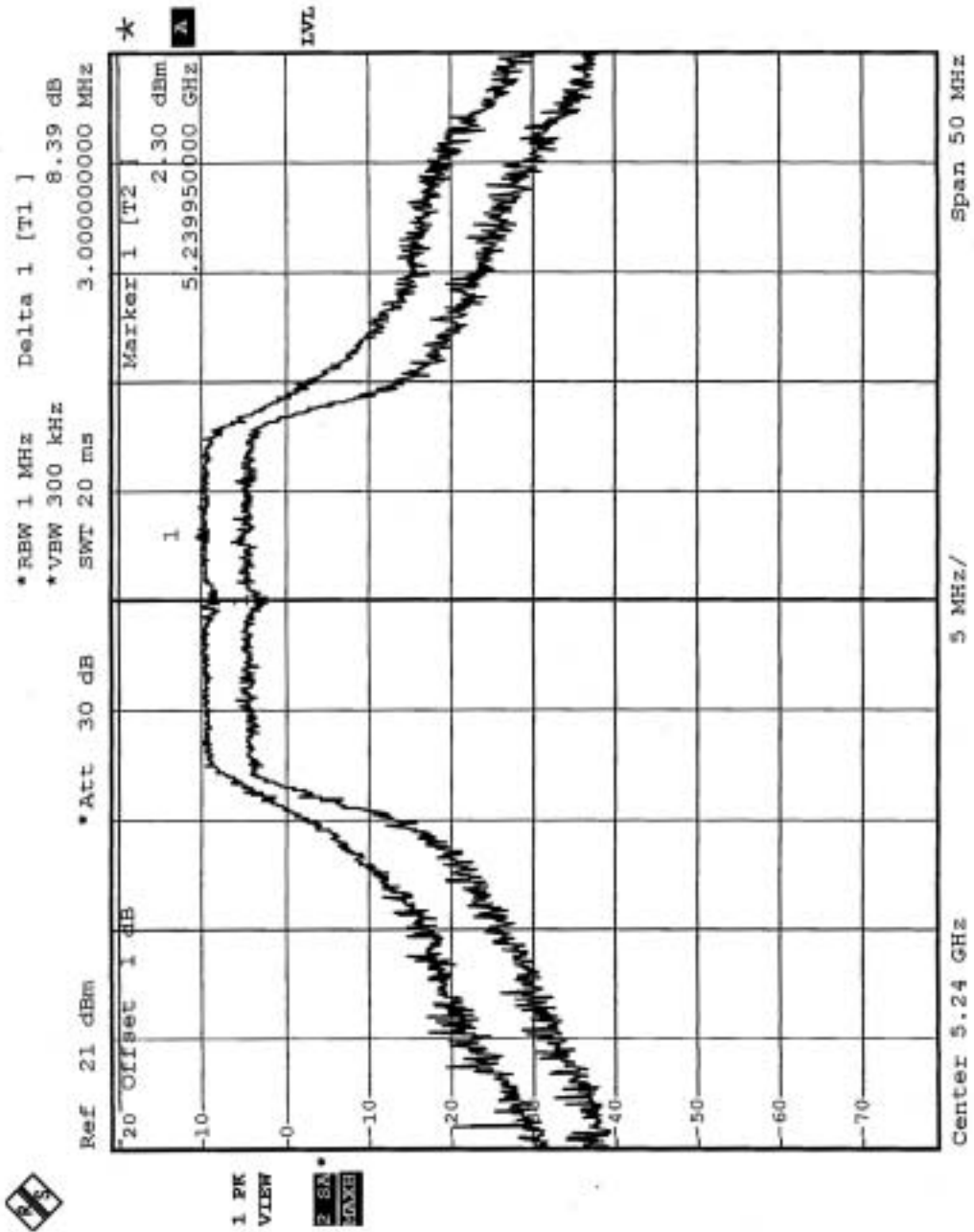


CHANNEL 1



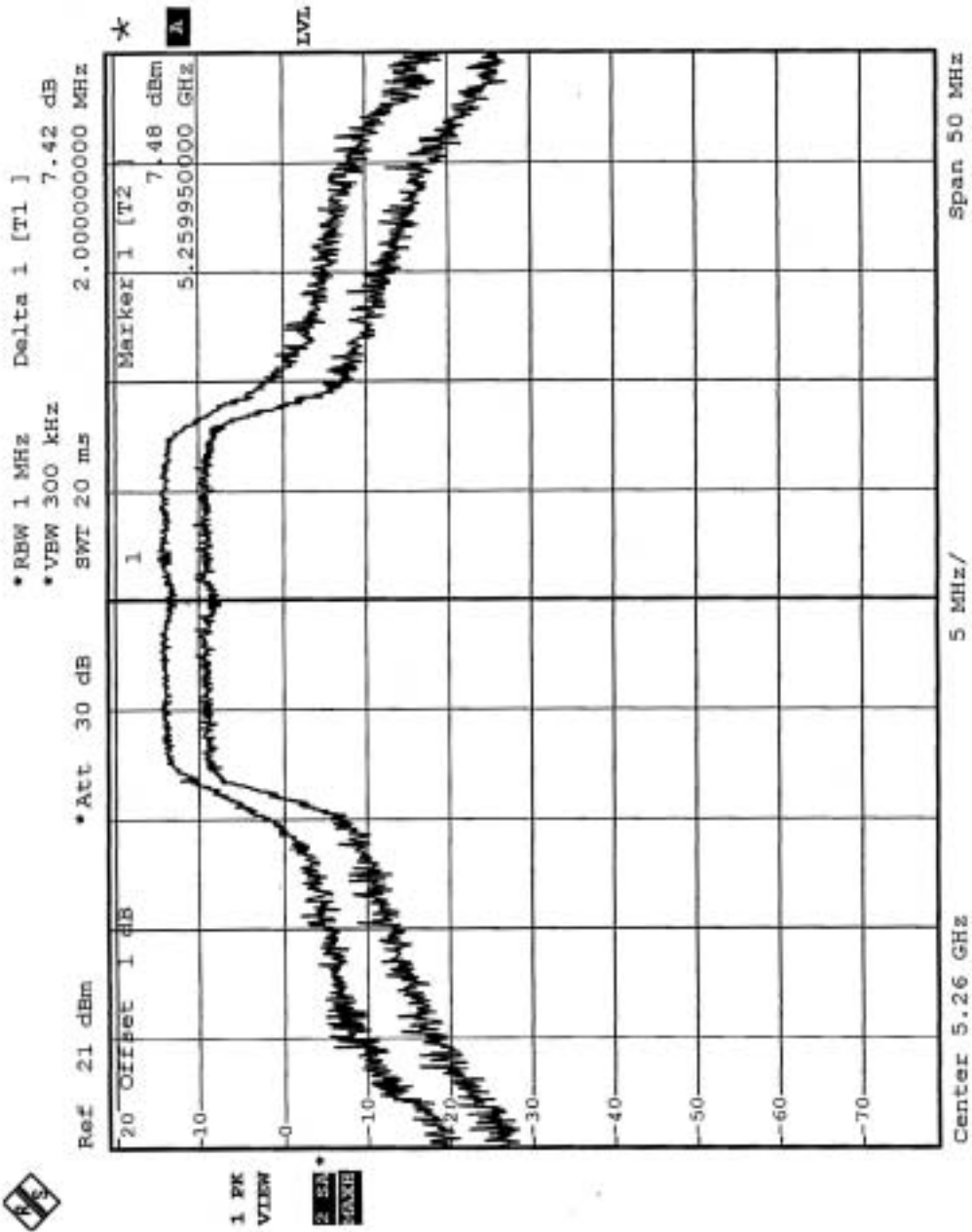


CHANNEL 4



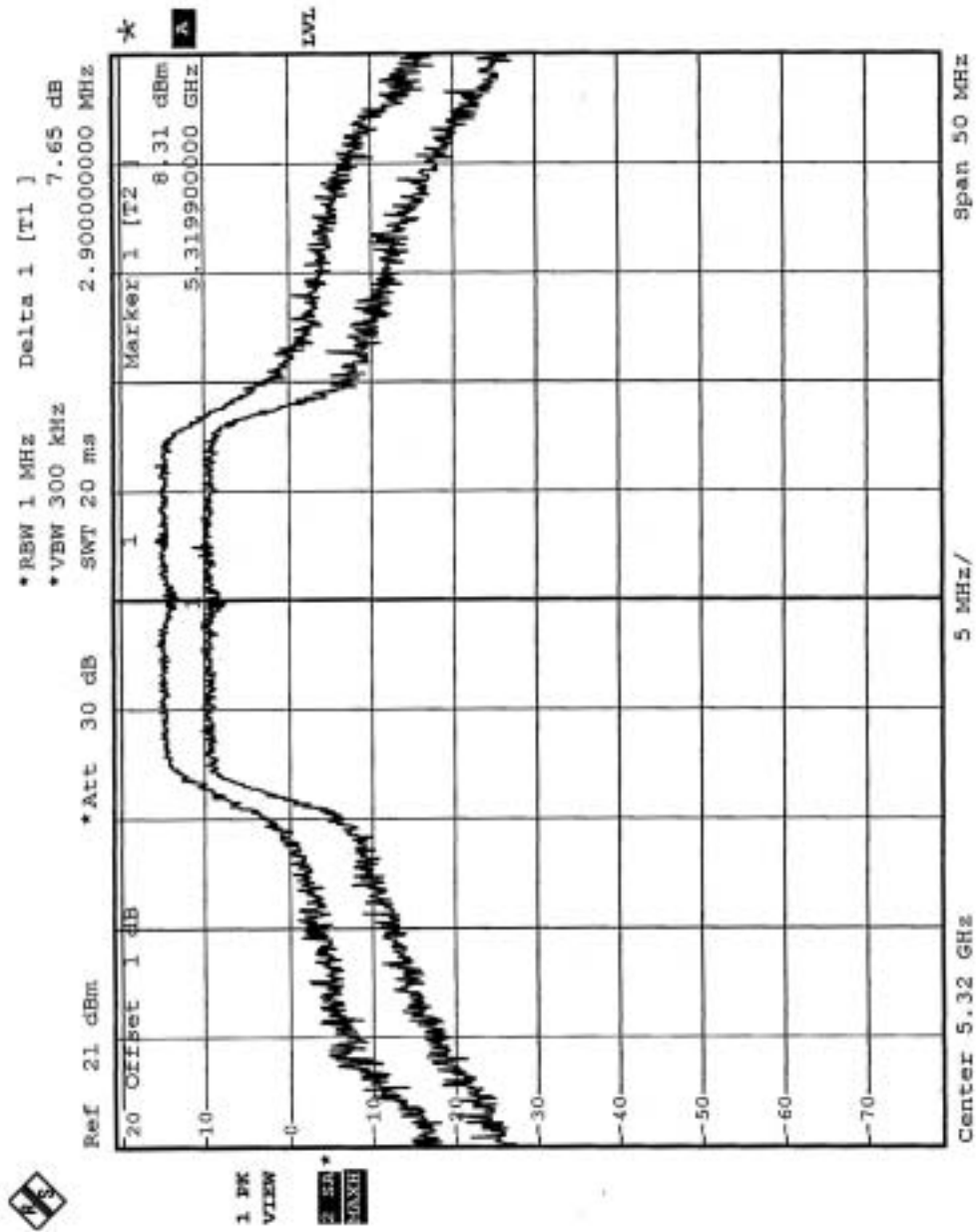


CHANNEL 5





CHANNEL 8



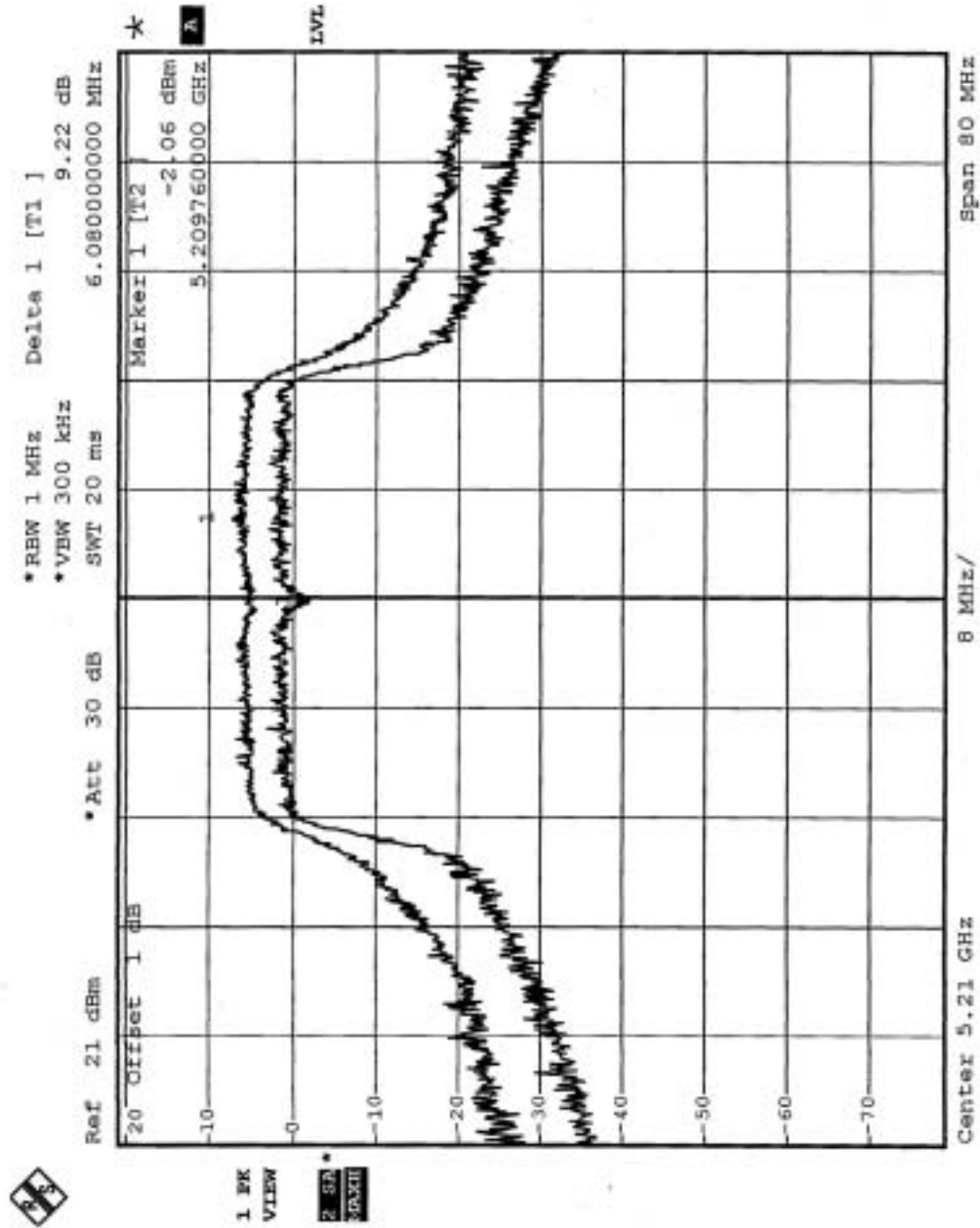


EUT	Nortel Networks WLAN-Mobile Adapter 2202	MODEL	WLAN-Mobile Adapter 2202
MODE	Turbo	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	27eg. C, 59RH, 963 hPa	TESTED BY	Wen Yu

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)	PEAK to AVERAGE EXCURSION LIMIT (dB)	PASS/FAIL
1	5210	9.22	13	PASS
2	5250	8.86	13	PASS
3	5290	9.62	13	PASS

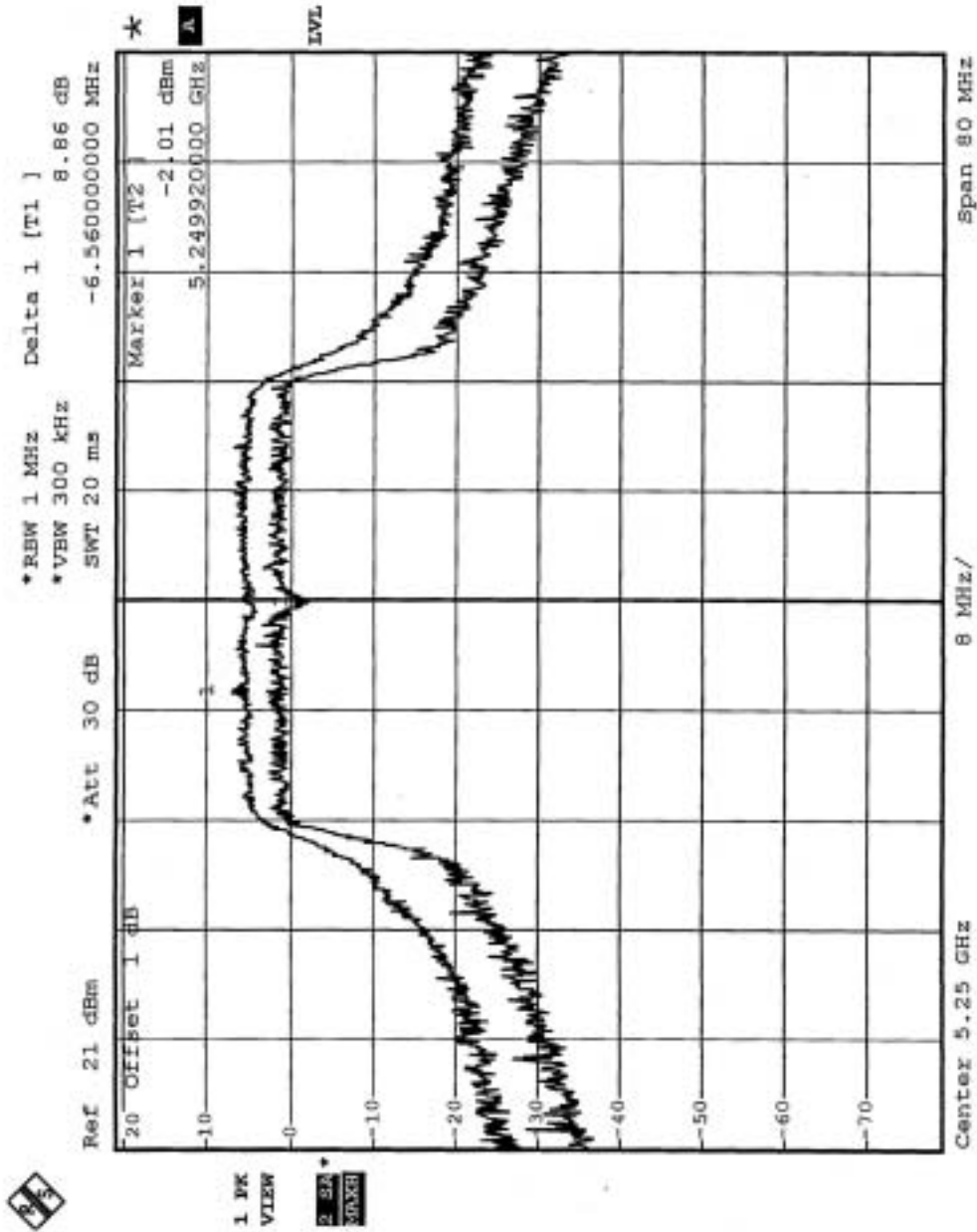


CHANNEL 1



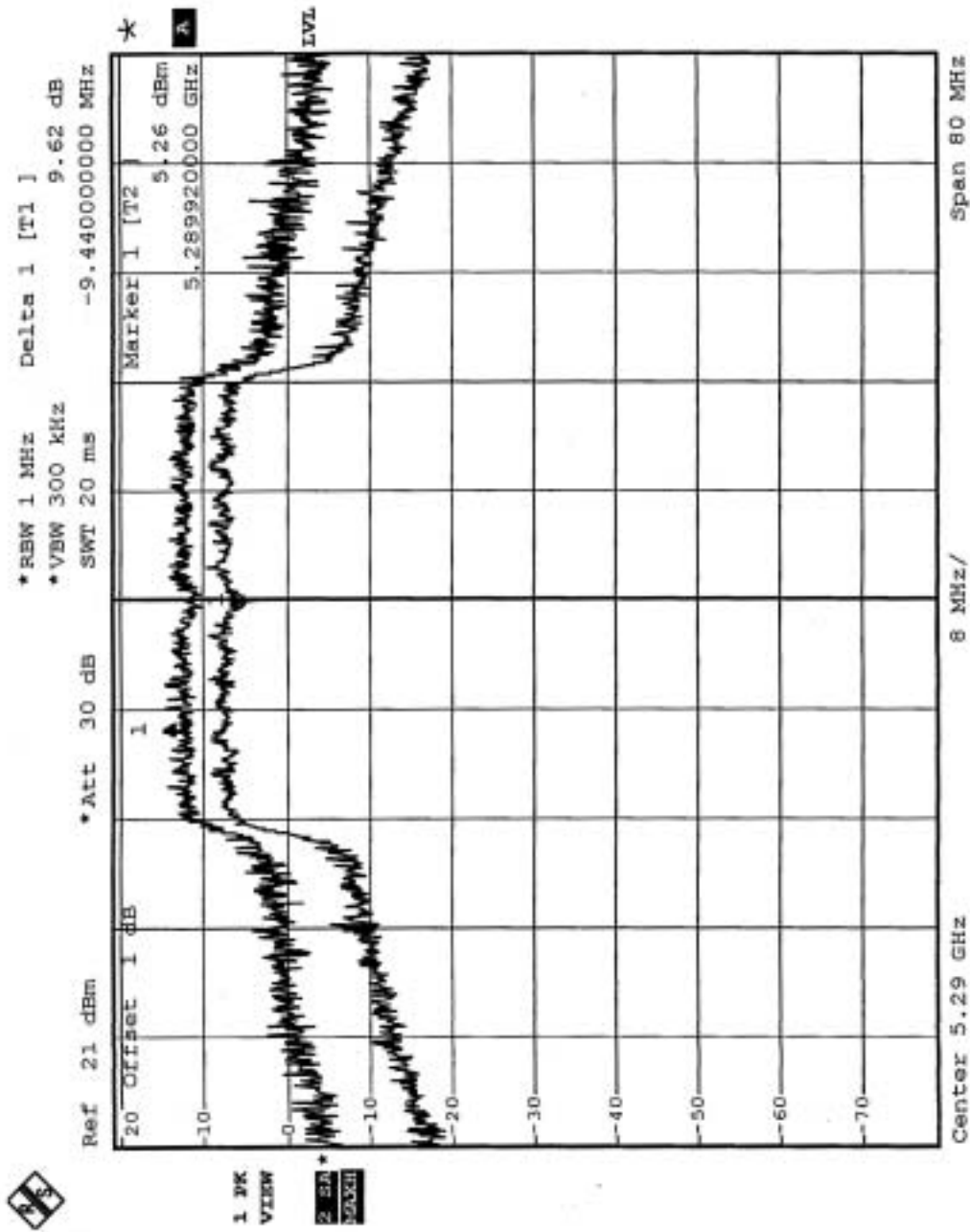


CHANNEL 2





CHANNEL 3





5.5 PEAK POWER SPECTRAL DENSITY MEASUREMENT

5.5.1 LIMITS OF PEAK POWER SPECTRAL DENSITY MEASUREMENT

Frequency Band	Limit
5.15 – 5.25 GHz	4dBm
5.25 – 5.35 GHz	11dBm
5.725 – 5.825 GHz	17dBm

5.5.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSP40	100037	May. 06, 2005

Note:

1. The measurement uncertainty is 1.02dB, which is calculated as per the document ETSI TR 100 028.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.



5.5.3 TEST PROCEDURES

The transmitter output was connected to the spectrum analyzer.
Set RBW=1MHz, VBW=3MHz. The PPSD is the highest level found across the emission in any 1MHz band.

5.5.4 DEVIATION FROM TEST STANDARD

No deviation

5.5.5 TEST SETUP



5.5.6 EUT OPERATING CONDITIONS

Same as 5.3.6



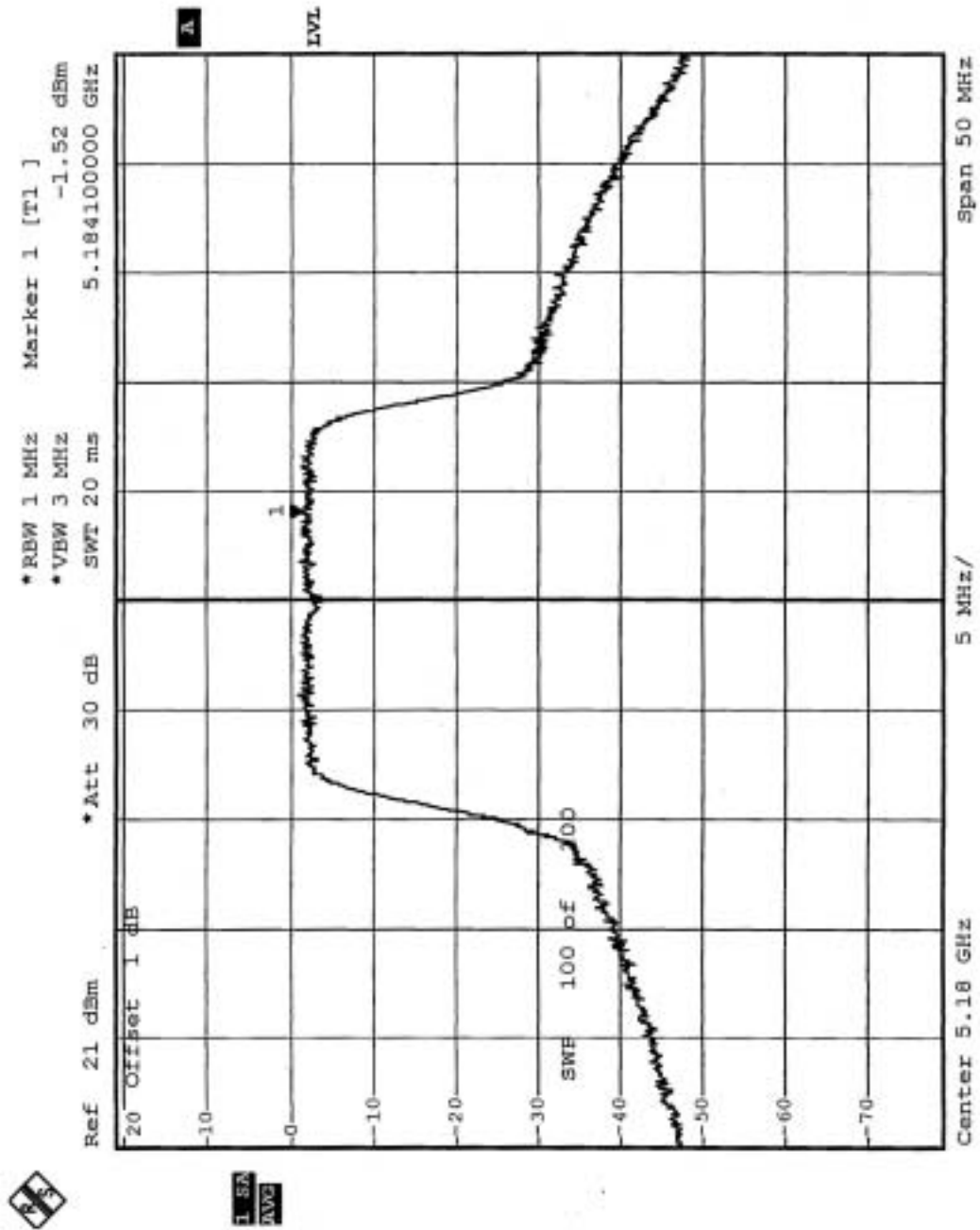
5.5.7 TEST RESULTS

EUT	Nortel Networks WLAN-Mobile Adapter 2202	MODEL	WLAN-Mobile Adapter 2202
MODE	Normal	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	27eg. C, 59RH, 963 hPa	TESTED BY	Wen Yu

CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 1 MHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	5180	-1.52	4	PASS
4	5240	-2.36	4	PASS
5	5260	4.18	11	PASS
8	5320	3.79	11	PASS

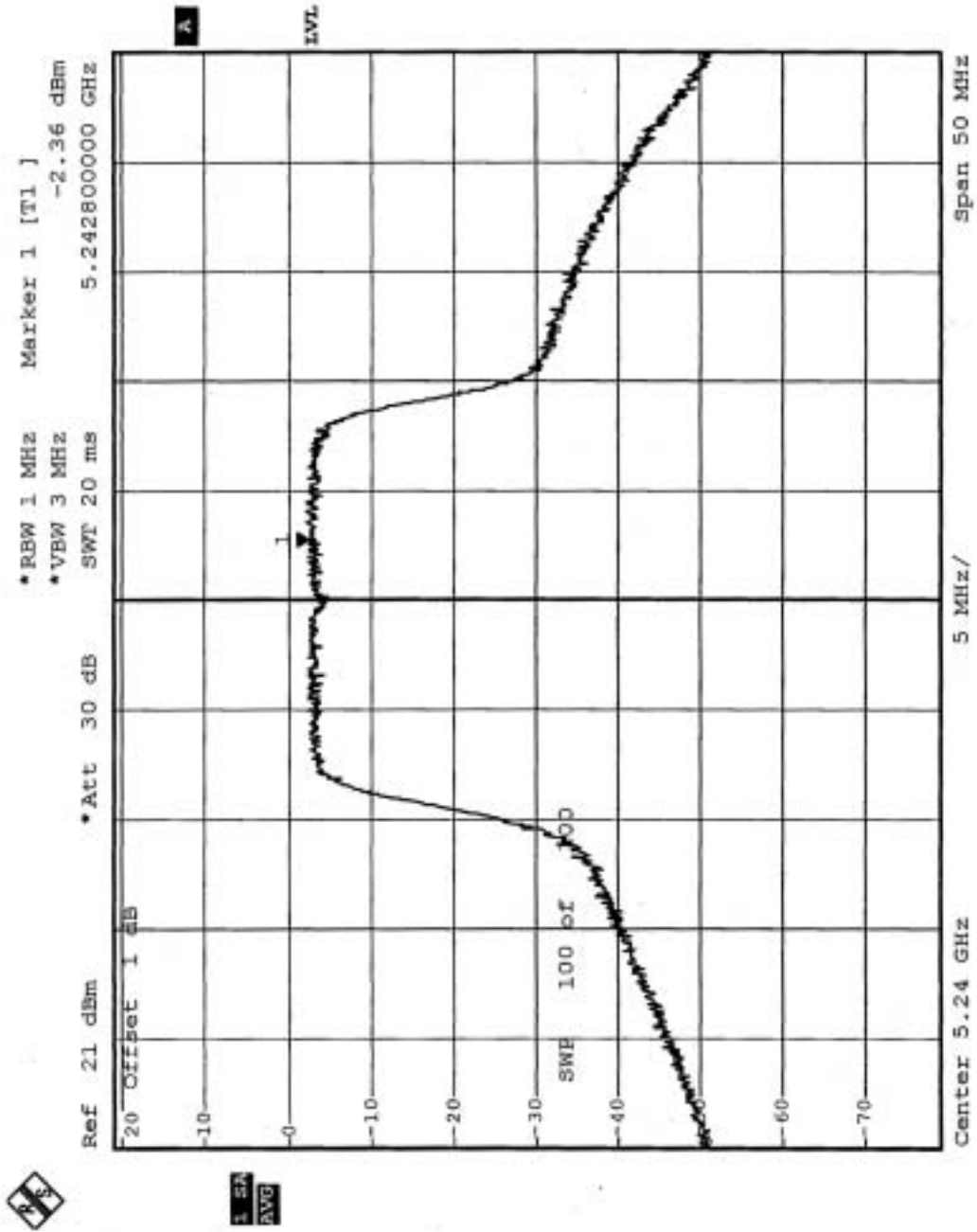


CHANNEL 1



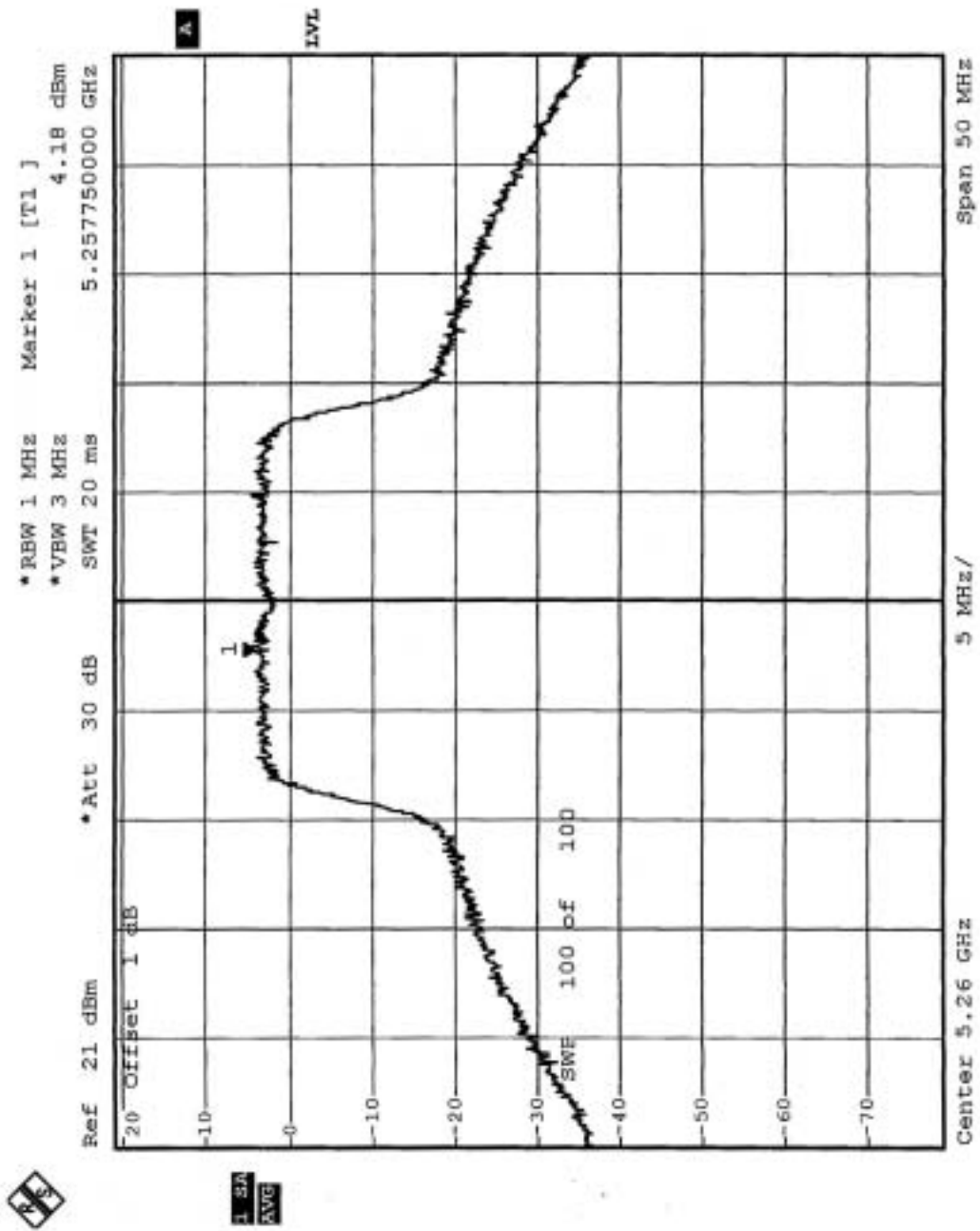


CHANNEL 4



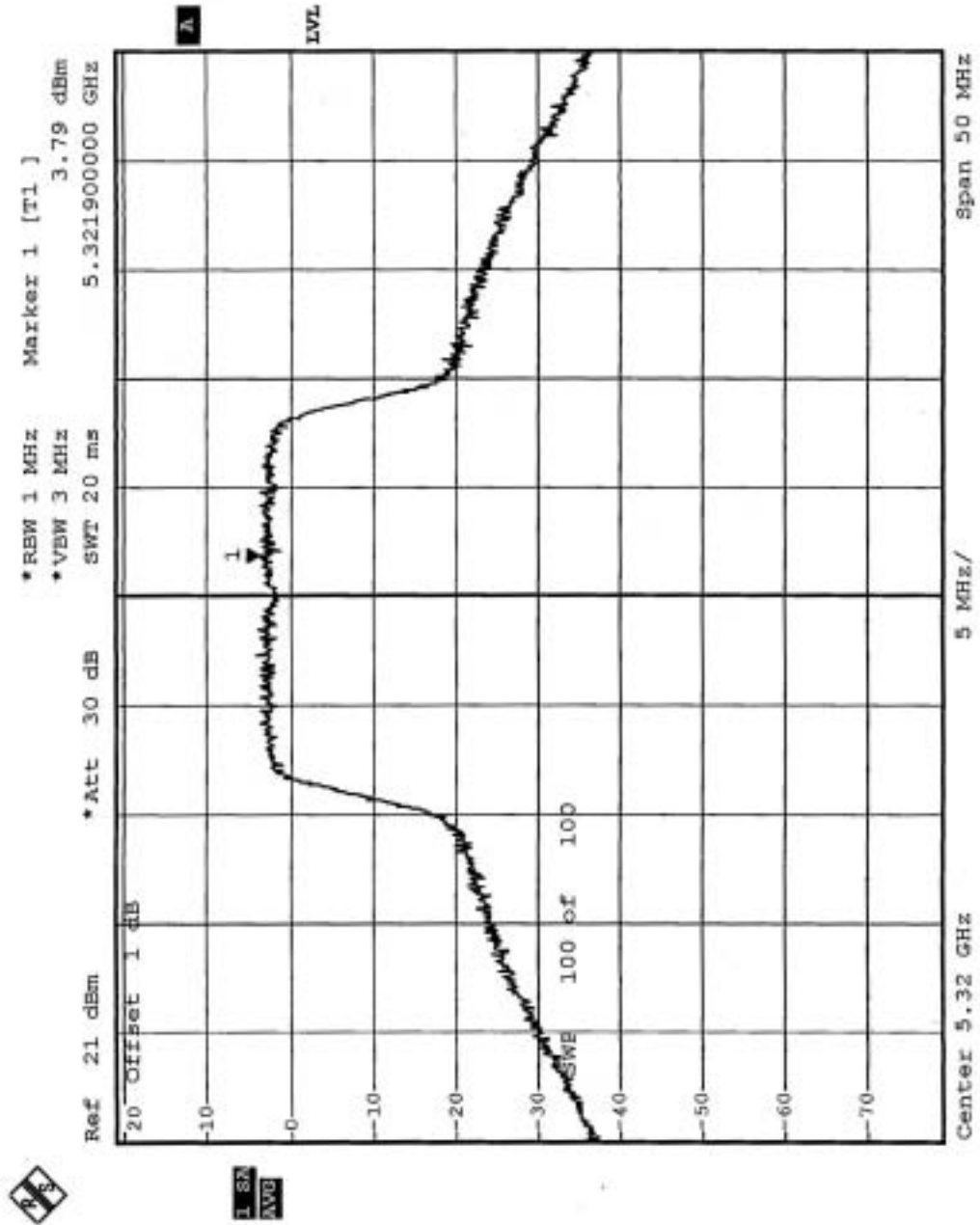


CHANNEL 5





CHANNEL 8



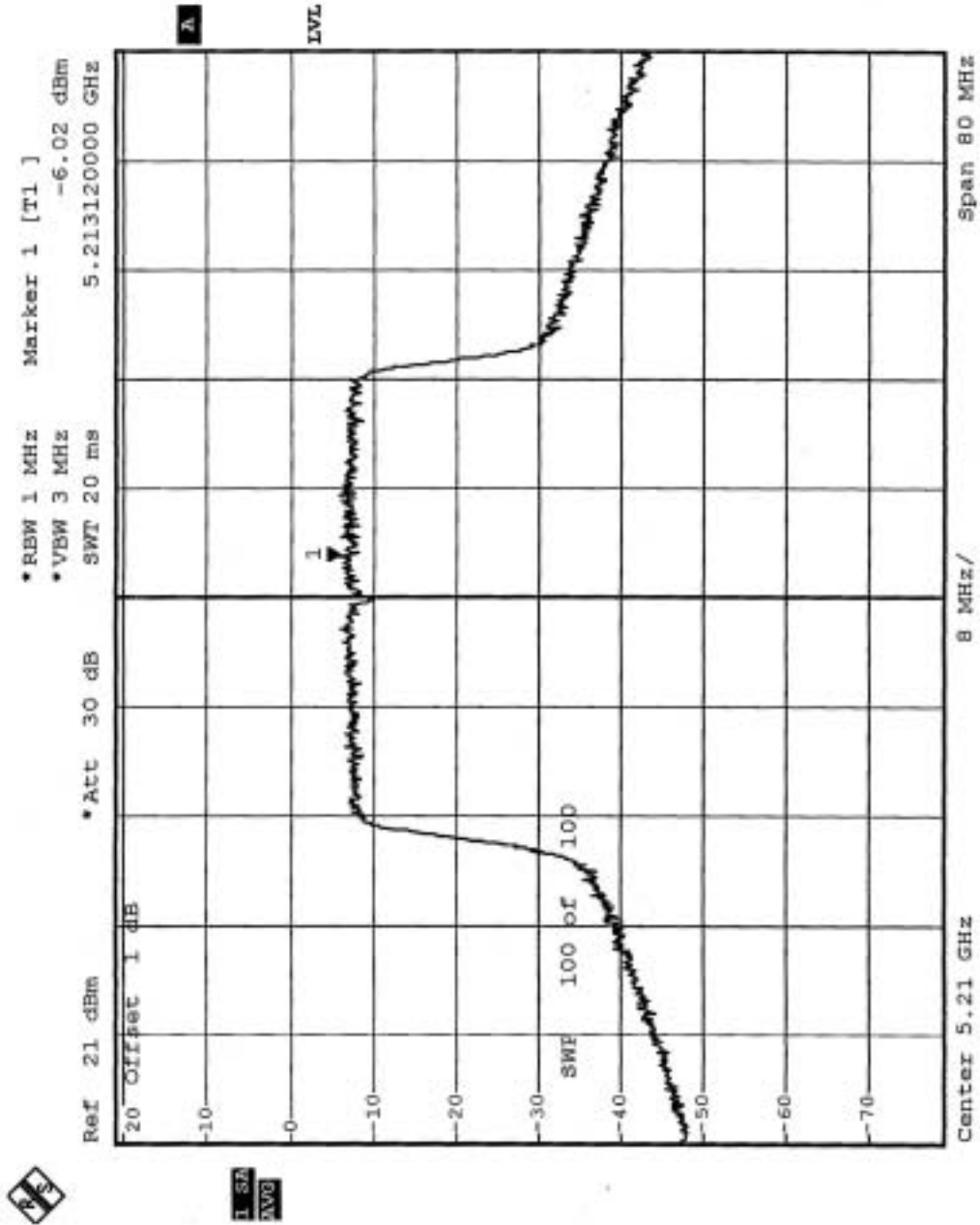


EUT	Nortel Networks WLAN-Mobile Adapter 2202	MODEL	WLAN-Mobile Adapter 2202
MODE	Turbo	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	27eg. C, 59RH, 963 hPa	TESTED BY	Wen Yu

CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 1 MHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	5210	-6.02	4	PASS
2	5250	-3.84	4	PASS
3	5290	-3.31	11	PASS

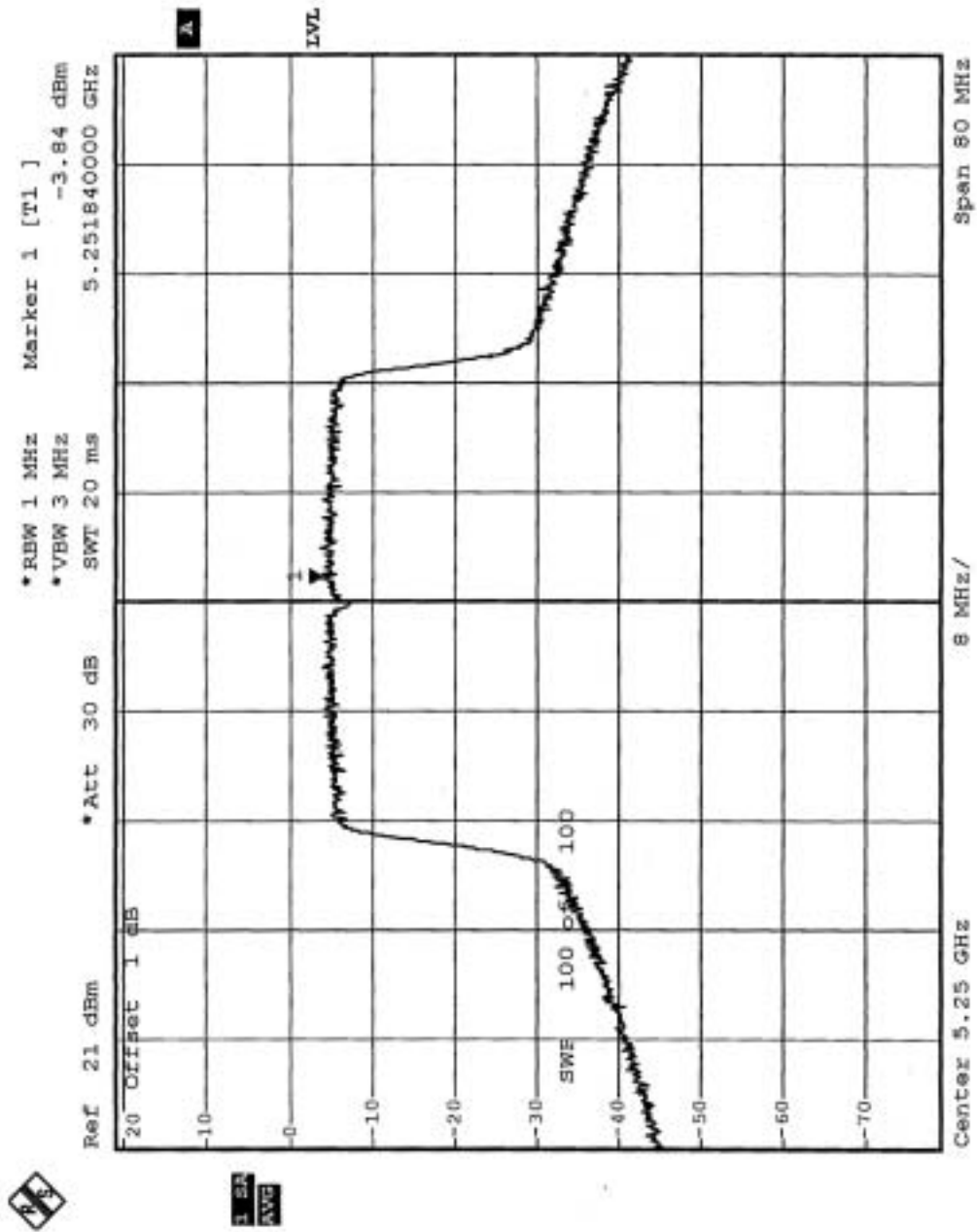


CHANNEL 1



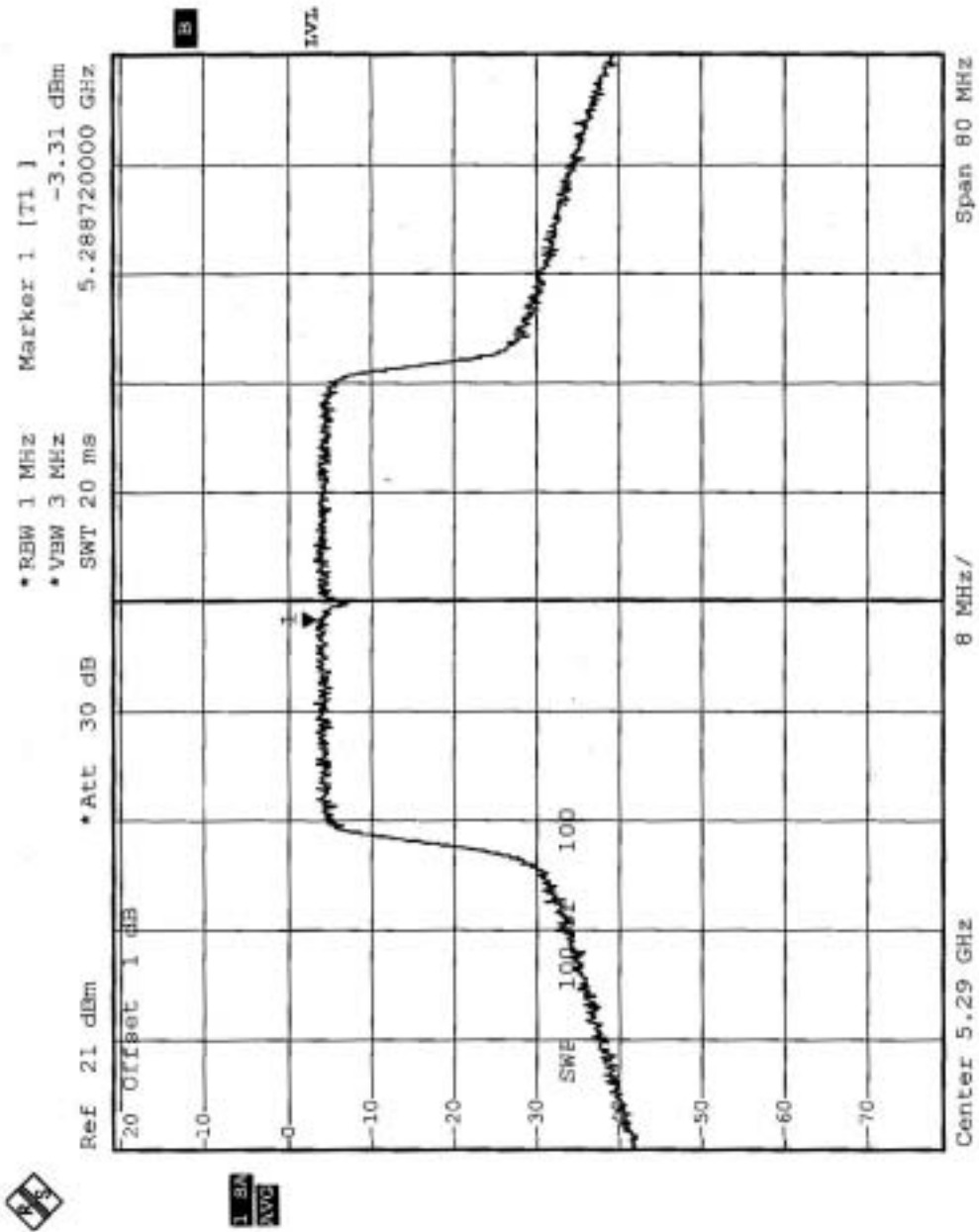


CHANNEL 2





CHANNEL 3





5.6 FREQUENCY STABILITY

5.6.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

The frequency tolerance of the carrier signal shall be maintained within +/- 0.02% of the operating frequency over a temperature variation of -30 degrees to 50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C.

5.6.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSP30	100019	May. 17, 2005
WIT STANDARD TEMPERATURE AND HUMIDITY CHAMBER	MHU-225AU	911033	Dec. 11, 2004

Note:

1. The measurement uncertainty is 203Hz, which is calculated as per the document ETSI TR 100 028.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

5.6.3 TEST PROCEDURE

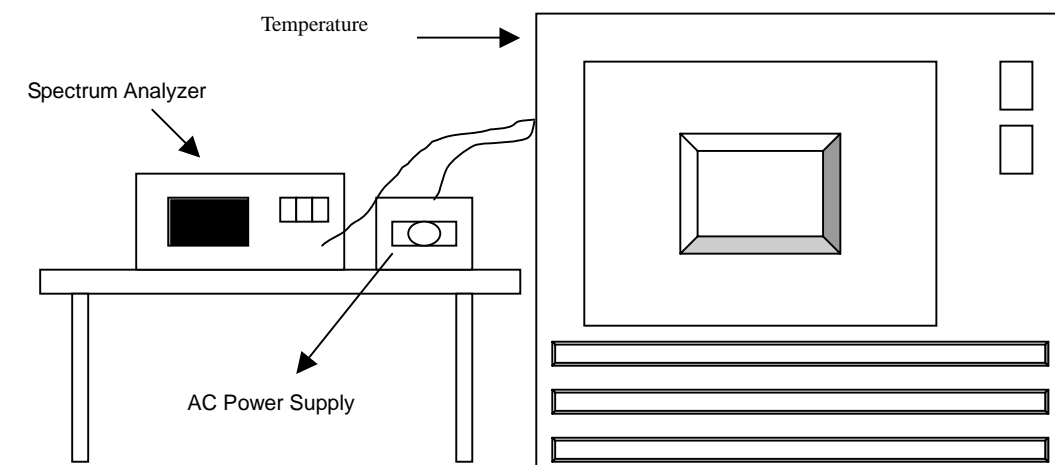
1. The EUT was placed inside the environmental test chamber and powered by nominal AC voltage.
2. Turn the EUT on and couple its output to a spectrum analyzer.
3. Turn the EUT off and set the chamber to the highest temperature specified.
4. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 minutes.
5. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.
6. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115%

and the frequency record.

5.6.4 DEVIATION FROM TEST STANDARD

No deviation

5.6.5 TEST SETUP



5.6.6 EUT OPERATING CONDITION

Same as Item 4.1.6



5.6.7 TEST RESULTS

		Operating frequency: 5320MHz				Limit : ± 0.02%	
Temp. ()	Power supply (VAC)	2 minute		5 minute		10 minute	
		(MHz)	(%)	(MHz)	(%)	(MHz)	(%)
50	126.5	5319.956	-0.000827%	5319.956	-0.000827%	5319.9570	-0.000808%
	110	5319.9574	-0.000801%	5319.9552	-0.000842%	5319.9571	-0.000806%
	93.5	5319.9583	-0.000784%	5319.9551	-0.000844%	5319.9578	-0.000793%
40	126.5	5319.9527	-0.000889%	5319.9543	-0.000859%	5319.9530	-0.000883%
	110	5319.9534	-0.000876%	5319.9545	-0.000855%	5319.9547	-0.000852%
	93.5	5319.9522	-0.000898%	5319.9541	-0.000863%	5319.9540	-0.000865%
30	126.5	5319.959	-0.000771%	5319.9593	-0.000765%	5319.9573	-0.000803%
	110	5319.9588	-0.000774%	5319.9587	-0.000776%	5319.9586	-0.000778%
	93.5	5319.9586	-0.000778%	5319.9585	-0.000780%	5319.9584	-0.000782%
20	126.5	5319.981	-0.000357%	5319.98	-0.000376%	5319.9790	-0.000395%
	110	5319.9892	-0.000203%	5319.9891	-0.000205%	5319.9790	-0.000395%
	93.5	5319.9891	-0.000205%	5319.989	-0.000207%	5319.9789	-0.000397%
10	126.5	5319.9657	-0.000645%	5319.9647	-0.000664%	5319.9660	-0.000639%
	110	5319.9667	-0.000626%	5319.9657	-0.000645%	5319.9640	-0.000677%
	93.5	5319.9653	-0.000652%	5319.9662	-0.000635%	5319.9650	-0.000658%
0	126.5	5319.971	-0.000545%	5319.9710	-0.000545%	5319.9707	-0.000551%
	110	5319.972	-0.000526%	5319.9720	-0.000526%	5319.9717	-0.000532%
	93.5	5319.9715	-0.000536%	5319.9710	-0.000545%	5319.9717	-0.000532%
-10	126.5	5319.975	-0.000470%	5319.9750	-0.000470%	5320.0028	0.000053%
	110	5319.979	-0.000395%	5319.9760	-0.000451%	5320.0025	0.000047%
	93.5	5319.978	-0.000414%	5319.9755	-0.000461%	5320.0022	0.000041%
-20	126.5	5319.9777	-0.000419%	5319.9760	-0.000451%	5319.9747	-0.000476%
	110	5319.9780	-0.000414%	5319.9766	-0.000440%	5319.9744	-0.000481%
	93.5	5319.9775	-0.000423%	5319.9762	-0.000447%	5319.9738	-0.000492%
-30	126.5	5319.9743	-0.000483%	5319.9743	-0.000483%	5319.9740	-0.000489%
	110	5319.9753	-0.000464%	5319.9742	-0.000485%	5319.9746	-0.000477%
	93.5	5319.9755	-0.000461%	5319.9739	-0.000491%	5319.9754	-0.000462%



5.7 BAND EDGES MEASUREMENT

5.7.1 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSP40	100037	May. 06, 2005

Note:

1. The measurement uncertainty is 2.79dB, which is calculated as per the document ETSI TR 100 028
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

5.7.2 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer via a low loss cable. Set RBW of spectrum analyzer to 1MHz and VBW of spectrum analyzer to 300Hz with suitable frequency span including 100 MHz bandwidth from band edge. The band edges was measured and recorded.

5.7.3 EUT OPERATING CONDITION

The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.



5.7.4 TEST RESULTS

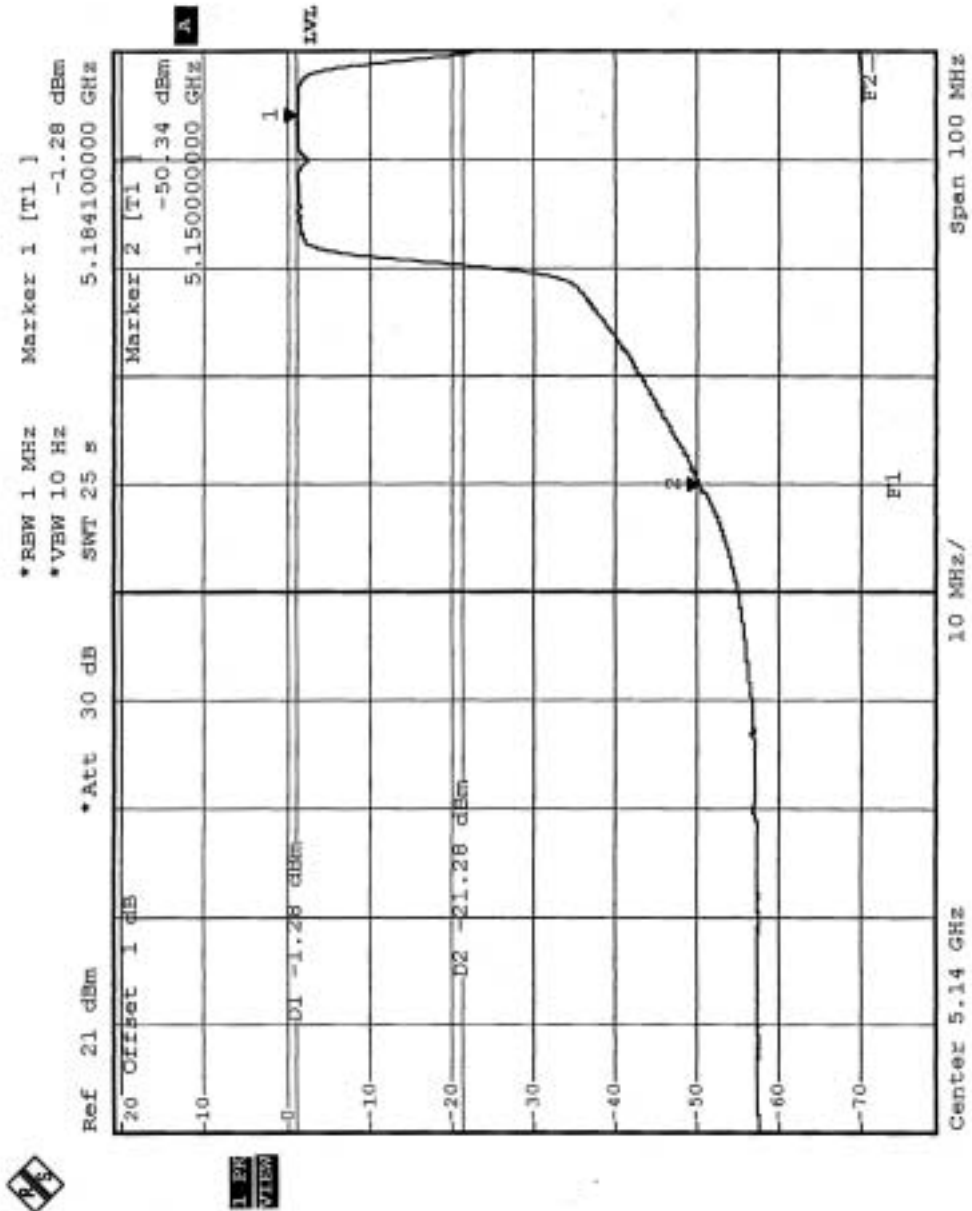
For signals in the restricted bands above and below the 5.15 to 5.35 GHz allocated band a measurement was made of the amplitude of the spurious emissions with respect to the intentional signals. The relative amplitude, in dBc, was applied to the average and peak field strength of the intentional signal made on the OATS to calculate the field strength of the unintentional signals.

The spectrum plots (Average RBW=1MHz, VBW=300Hz) are attached on the following 2 pages.



Normal Mode: Channel 1 (5180 MHz)

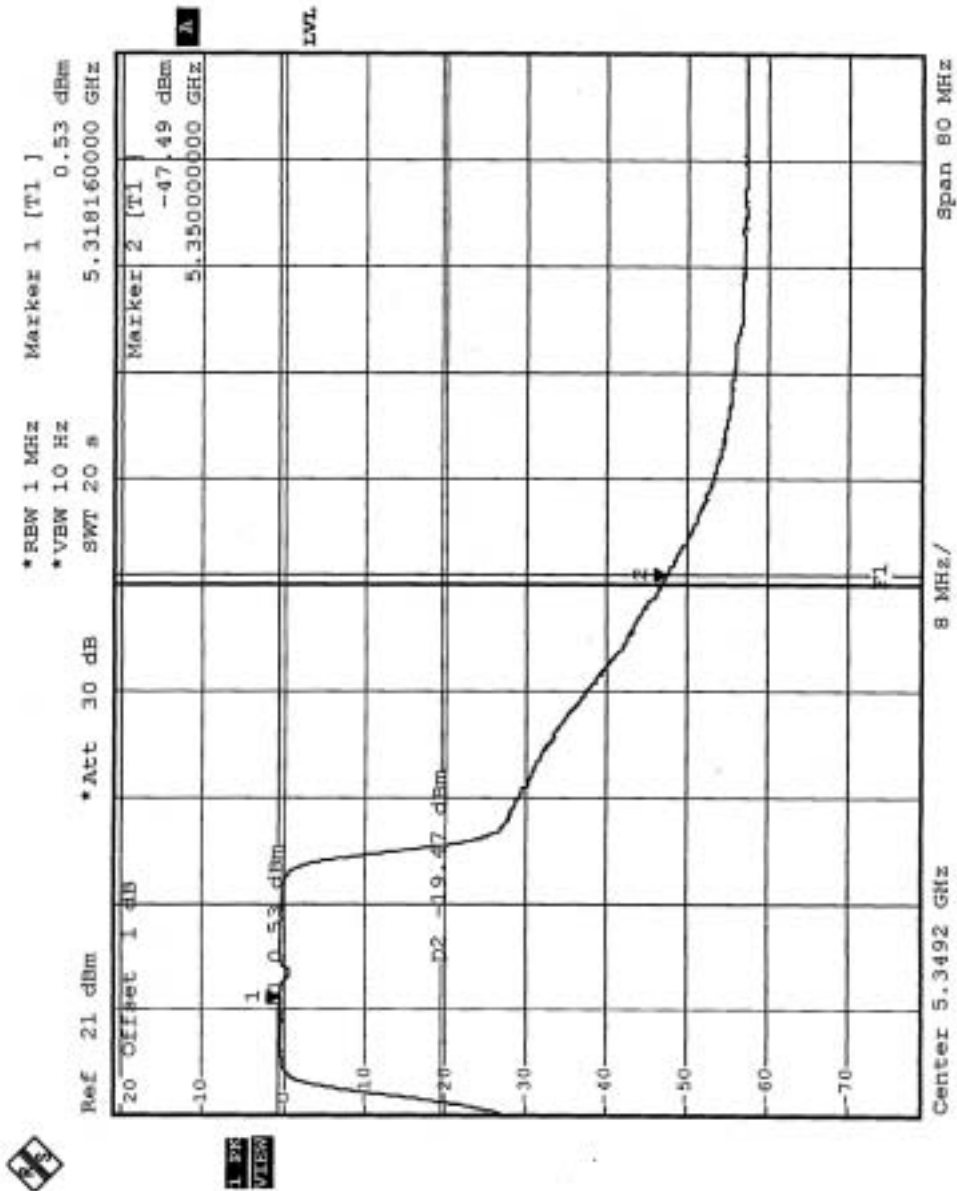
The band edge emission plot on the following page shows 51.62dBc (Average) between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 8 (normal mode) is 99.0dBuV/m, so the maximum field strength in restrict band is $99.0 - 51.62 = 47.38$ dBuV/m which is under 54dBuV/m limit.





Normal Mode: Channel 8 (5320 MHz)

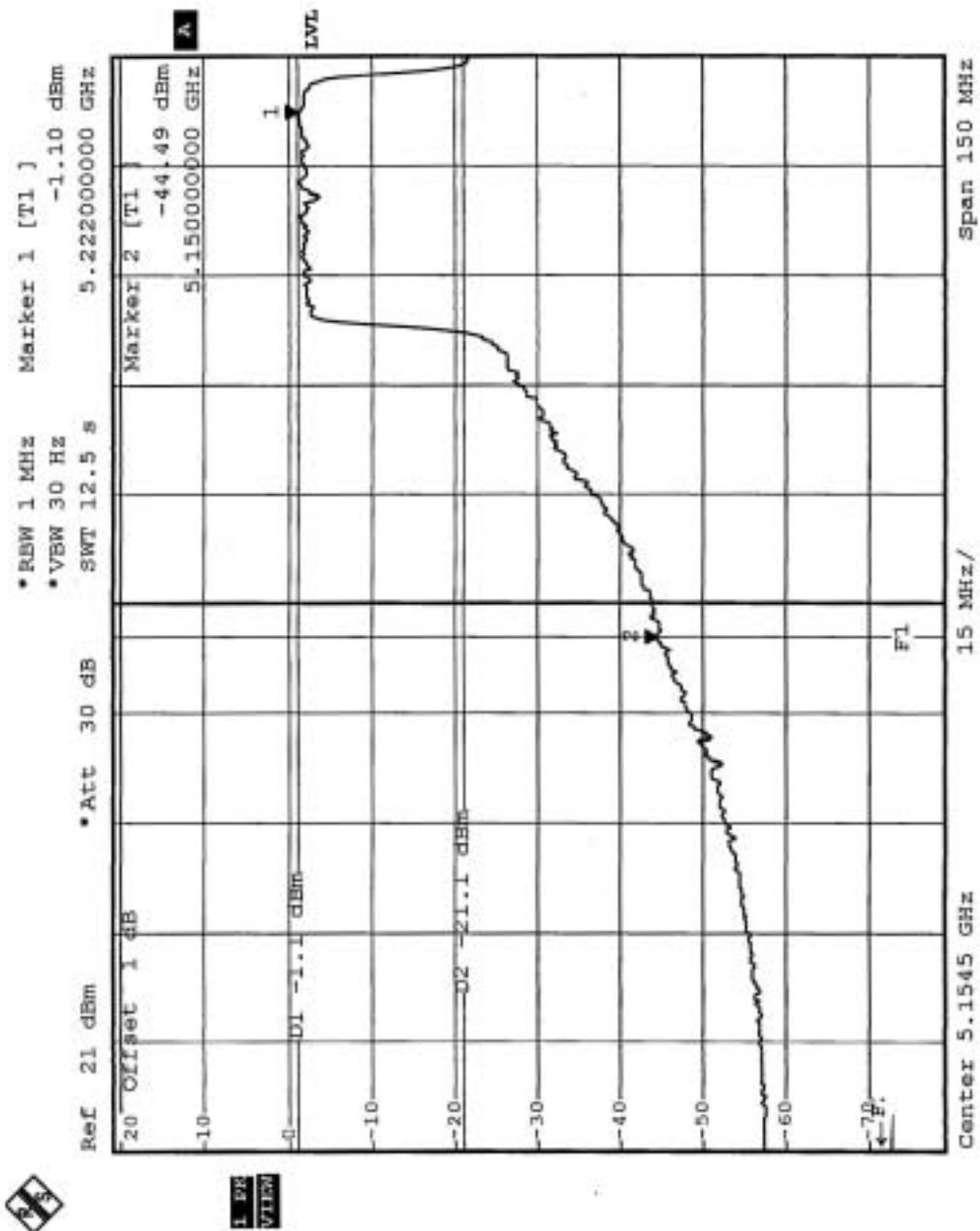
The band edge emission plot on the following page shows 48.02dBc (Average) between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 8 (normal mode) is 99.1dBuV/m, so the maximum field strength in restrict band is $99.1 - 48.02 = 51.08$ dBuV/m which is under 54dBuV/m limit.





Turbo Mode: Channel 1 (5210 MHz)

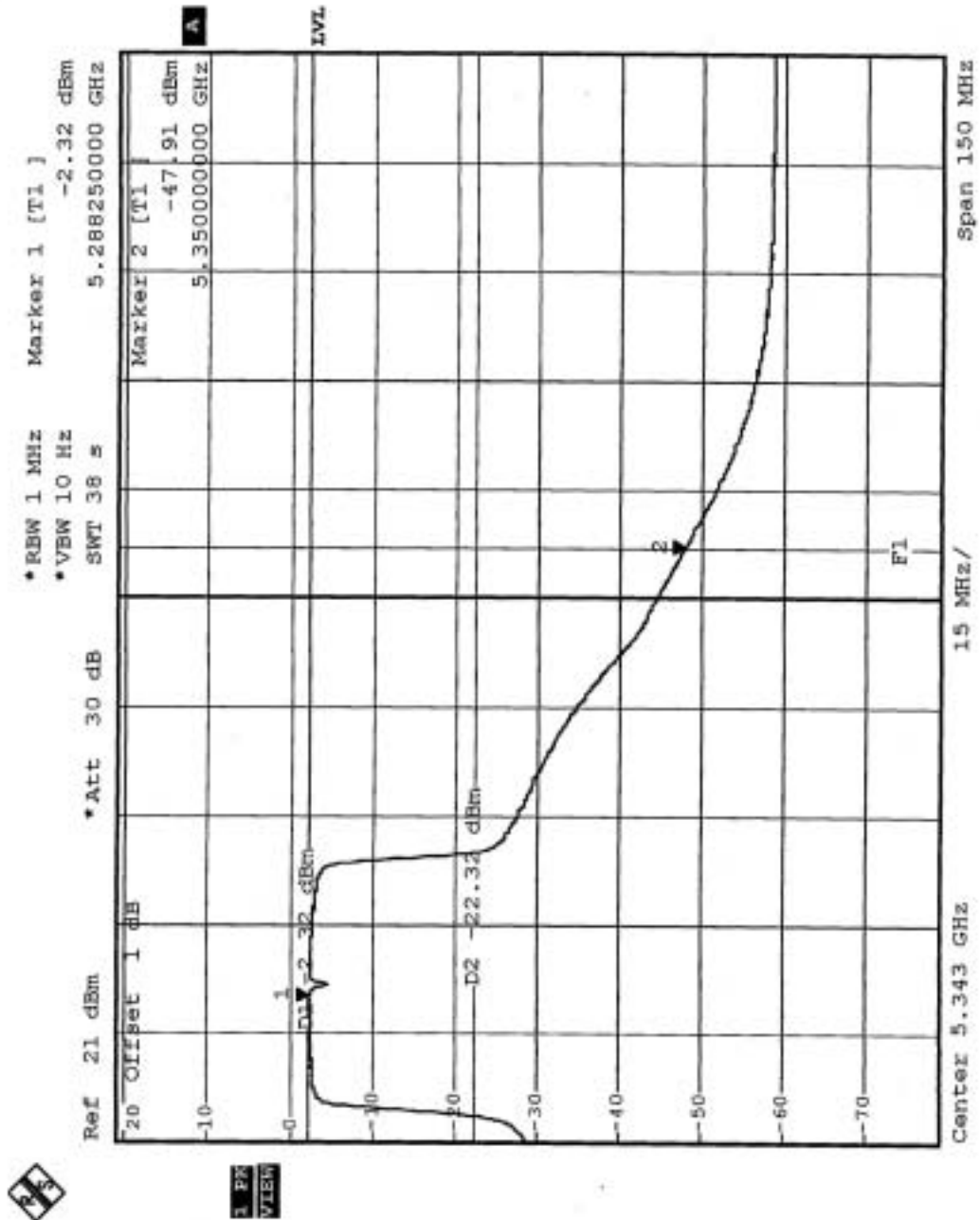
The band edge emission plot on the following page shows 43.39dBc (Average) between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 8 (turbo mode) is 97.3dBuV/m, so the maximum field strength in restrict band is $97.3 - 43.39 = 53.91$ dBuV/m which is under 54dBuV/m limit.





Turbo Mode: Channel 3 (5290 MHz)

The band edge emission plot on the following page shows 46.69dBc (Average) between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 8 (turbo mode) is 95.7dBuV/m, so the maximum field strength in restrict band is $95.7 - 46.69 = 49.01$ dBuV/m which is under 54dBuV/m limit.



FOR FREQUENCY 5.725~5.850GHZ**5.8 6DB BANDWIDTH MEASUREMENT****5.8.1 LIMITS OF 6DB BANDWIDTH MEASUREMENT**

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

5.8.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSP40	100037	May. 06, 2005

Note:

1. The measurement uncertainty is 226Hz, which is calculated as per the document ETSI TR 100 028.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

5.8.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 100 kHz RBW and 100 kHz VBW. The 6 dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6 dB.

5.8.4 DEVIATION FROM TEST STANDARD

No deviation

5.8.5 TEST SETUP



5.8.6 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.



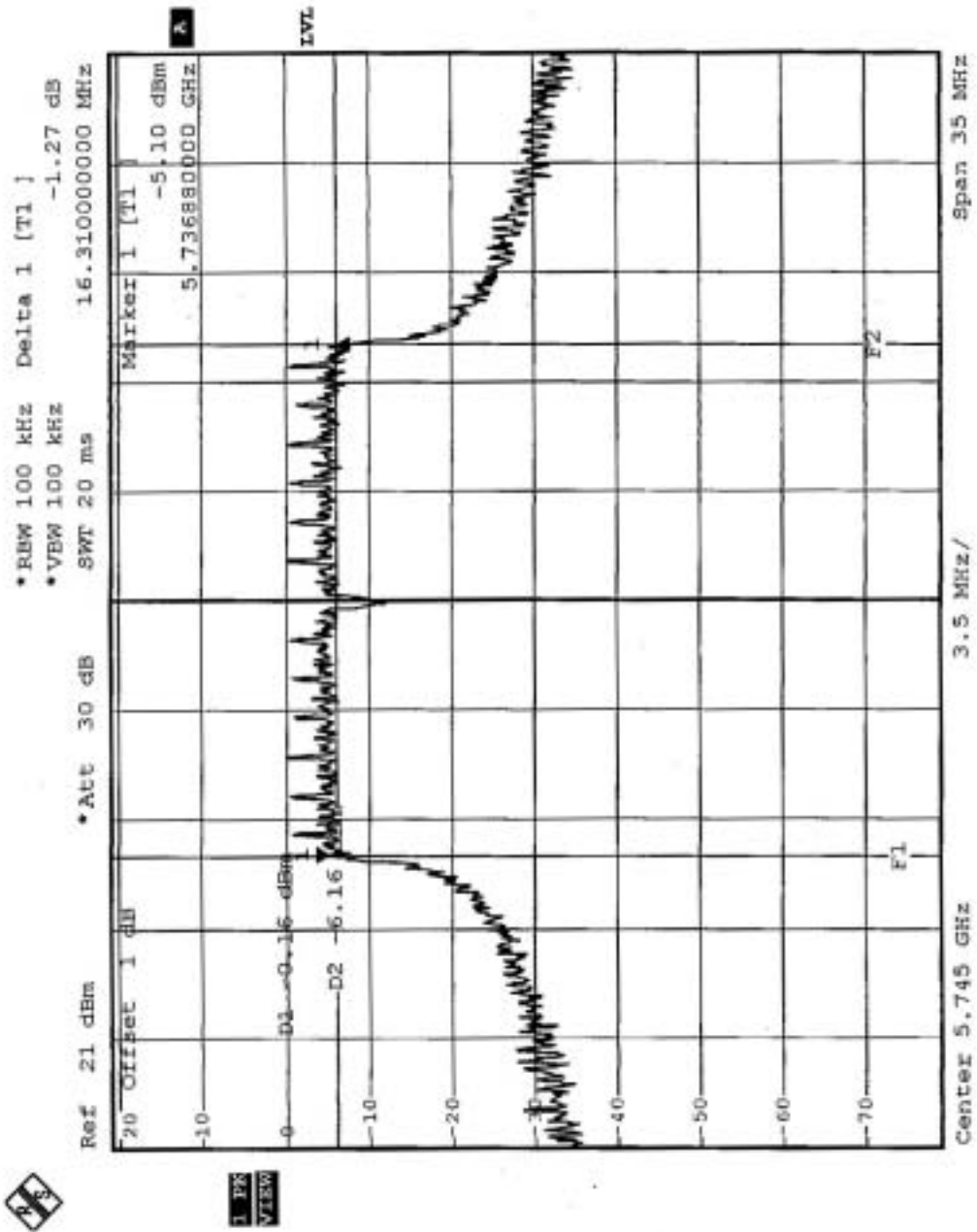
5.8.7 TEST RESULTS

EUT	Nortel Networks WLAN-Mobile Adapter 2202	MODEL	WLAN-Mobile Adapter 2202
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	27eg. C, 59RH, 963 hPa
TEST MODE	Normal	TEST BY	Tony Chen

CHANNEL	CHANNEL FREQUENCY (MHz)	6 dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
9	5745	16.31	0.5	PASS
13	5825	16.31	0.5	PASS

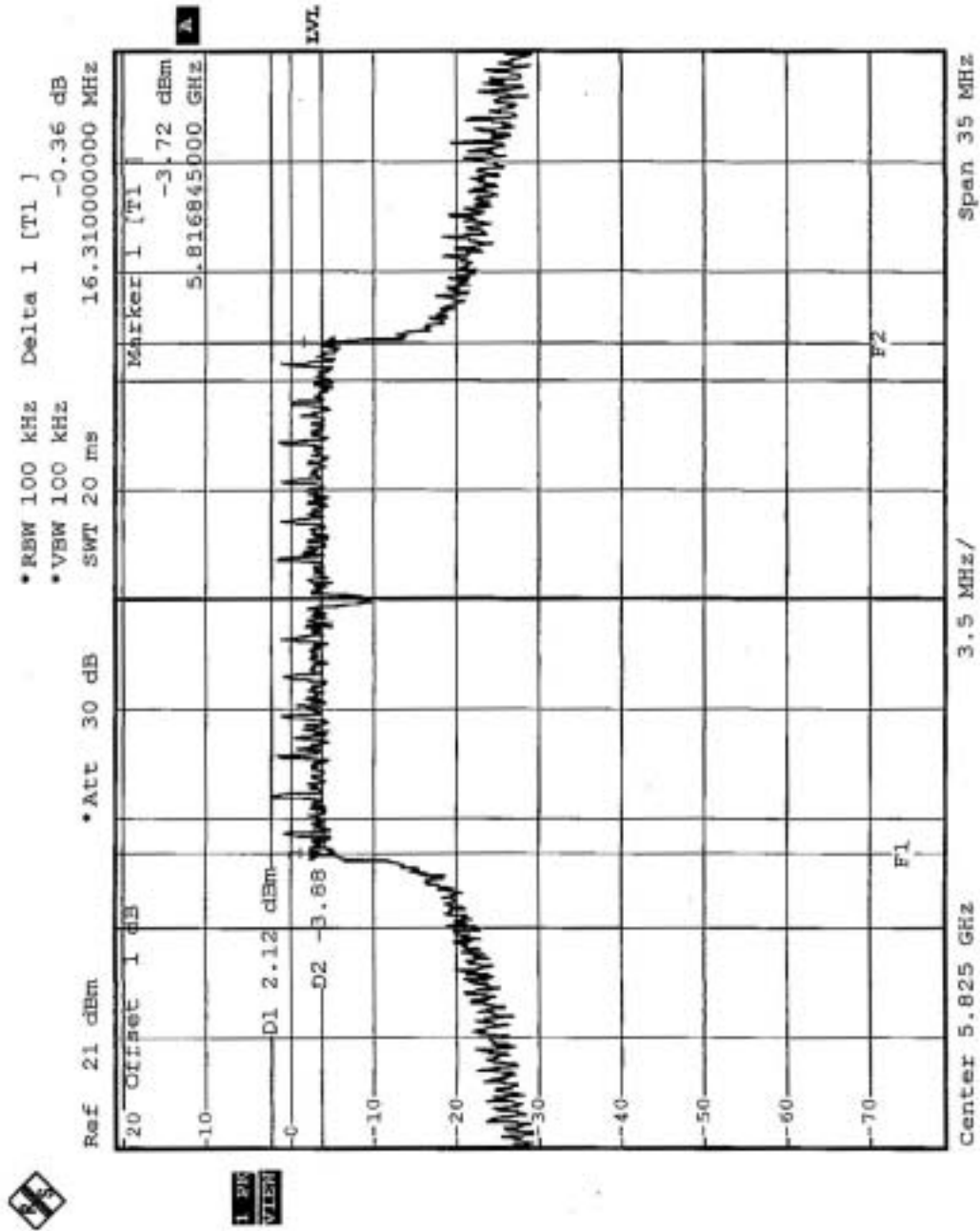


CH9





CH13



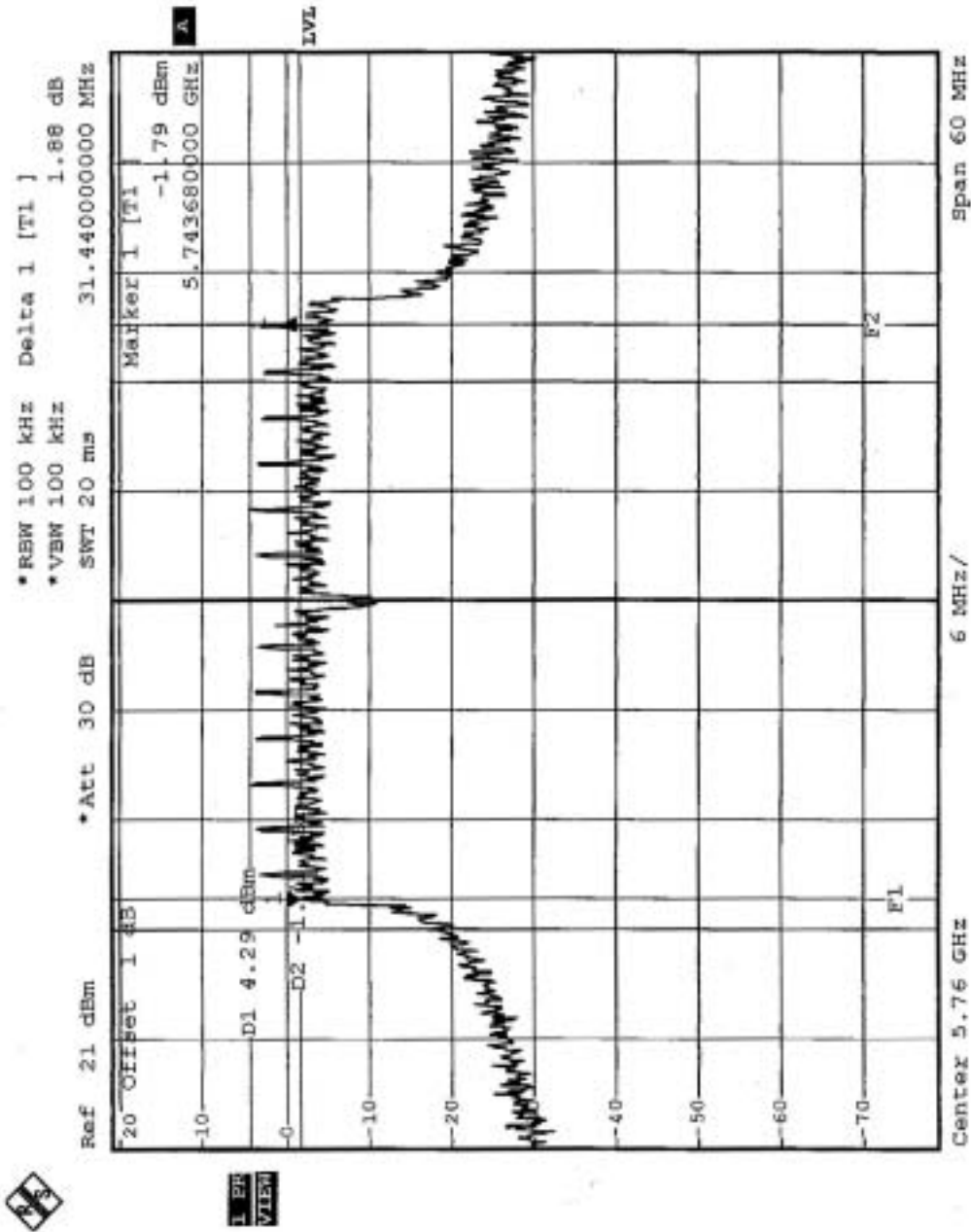


EUT	Nortel Networks WLAN-Mobile Adapter 2202	MODEL	WLAN-Mobile Adapter 2202
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	27eg. C, 59RH, 963 hPa
TEST MODE	Turbo	TEST BY	Tony Chen

CHANNEL	CHANNEL FREQUENCY (MHz)	6 dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
4	5760	31.44	0.5	PASS
5	5800	31.32	0.5	PASS

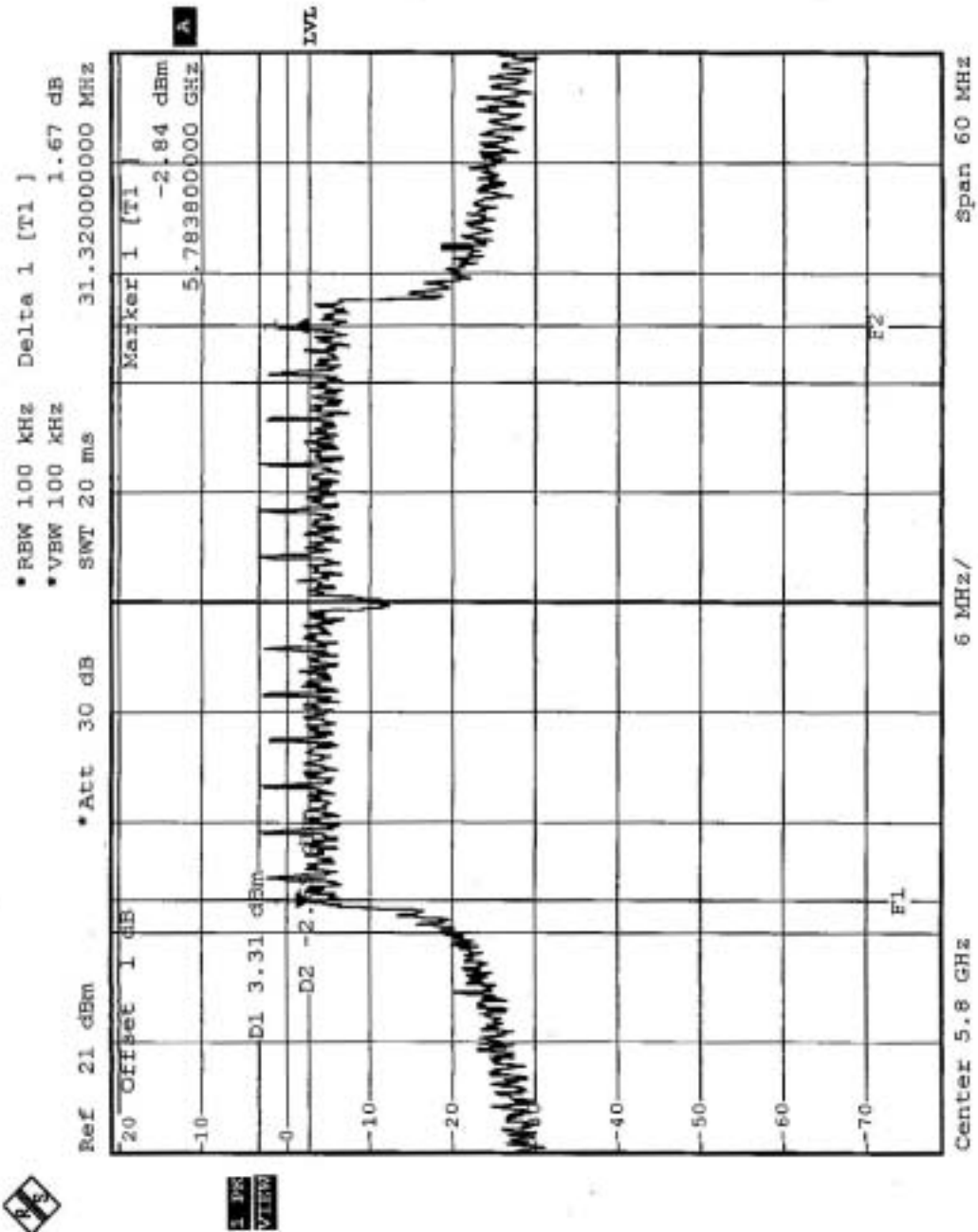


CH4





CH5





5.9 MAXIMUM PEAK OUTPUT POWER

5.9.1 LIMITS OF PEAK TRANSMIT POWER MEASUREMENT

The Maximum Peak Output Power Measurement is 30dBm.

5.9.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSP40	100037	May 06, 2005
R&S SIGNAL GENERATOR	SMP04	100011	May 28, 2005
TEKTRONIX OSCILLOSCOPE	TDS 220	B027241	Jun. 29, 2005
NARDA DETECTOR	4503A	FSCM99899	NA

Note:

1. The measurement uncertainty is 1.25dB, which is calculated as per the document ETSI TR 100 028.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

5.9.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer.

Set the spectrum bandwidth span to view the entire spectrum.

Using peak detector and Max-hold function for Trace 1 (RB=1MHz, VB=3MHz) and 2 (RB=1MHz, VB=30KHz).

The largest difference between Trace 1 and Trace 2 in any 1MHz band on any frequency was recorded.

5.9.4 TEST SETUP



5.9.5 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.



5.9.6 TEST RESULTS

EUT	Nortel Networks WLAN-Mobile Adapter 2202	MODEL	WLAN-Mobile Adapter 2202
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	27eg. C, 59RH, 963 hPa
TEST MODE	Normal	TEST BY	Wen Yu

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
9	5745	19.06	30	PASS
13	5825	19.11	30	PASS

EUT	Nortel Networks WLAN-Mobile Adapter 2202	MODEL	WLAN-Mobile Adapter 2202
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	27eg. C, 59RH, 963 hPa
TEST MODE	Turbo	TEST BY	Wen Yu

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
4	5760	19.03	30	PASS
5	5800	19.15	30	PASS



5.10 POWER SPECTRAL DENSITY MEASUREMENT

5.10.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT
The Maximum of Power Spectral Density Measurement is 8dBm.

5.10.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSP40	100037	May. 06, 2005

Note:

1. The measurement uncertainty is 1.02dB, which is calculated as per the document ETSI TR 100 028.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

5.10.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer through an attenuator, the bandwidth of the fundamental frequency was measured with the spectrum analyzer using 3 kHz RBW and 30 kHz VBW, set sweep time = span/3 kHz. The power spectral density was measured and recorded.

The sweep time is allowed to be longer than span/3 kHz for a full response of the mixer in the spectrum analyzer.

5.10.4 DEVIATION FROM TEST STANDARD

No deviation

5.10.5 TEST SETUP



5.10.6 EUT OPERATING CONDITION

Same as Item 4.3.6



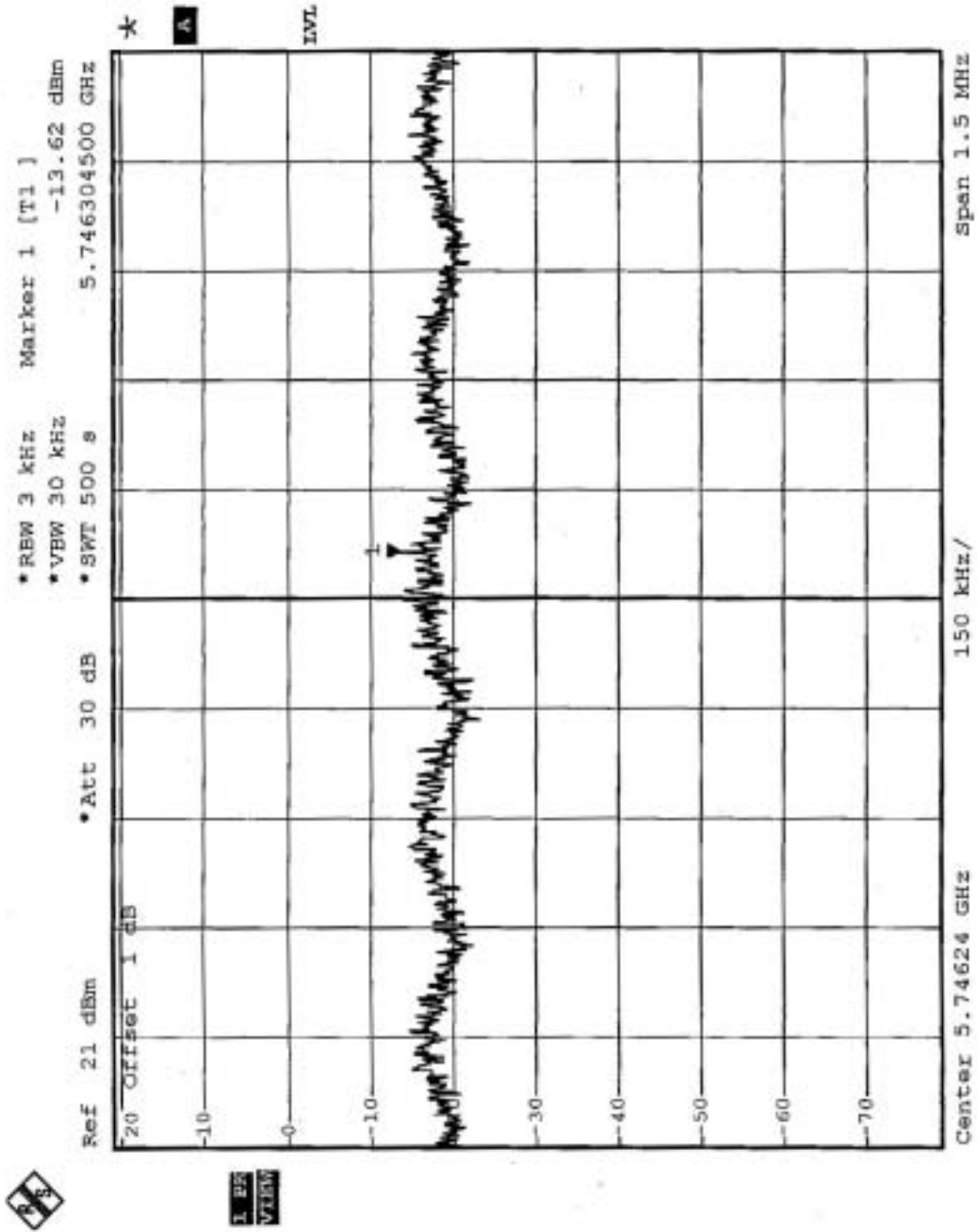
5.10.7 TEST RESULTS

EUT	Nortel Networks WLAN-Mobile Adapter 2202	MODEL	WLAN-Mobile Adapter 2202
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	27eg. C, 59RH, 963 hPa
TEST MODE	Normal	TEST BY	Tony Chen

CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
9	5745	-13.62	8	PASS
13	5825	-11.57	8	PASS

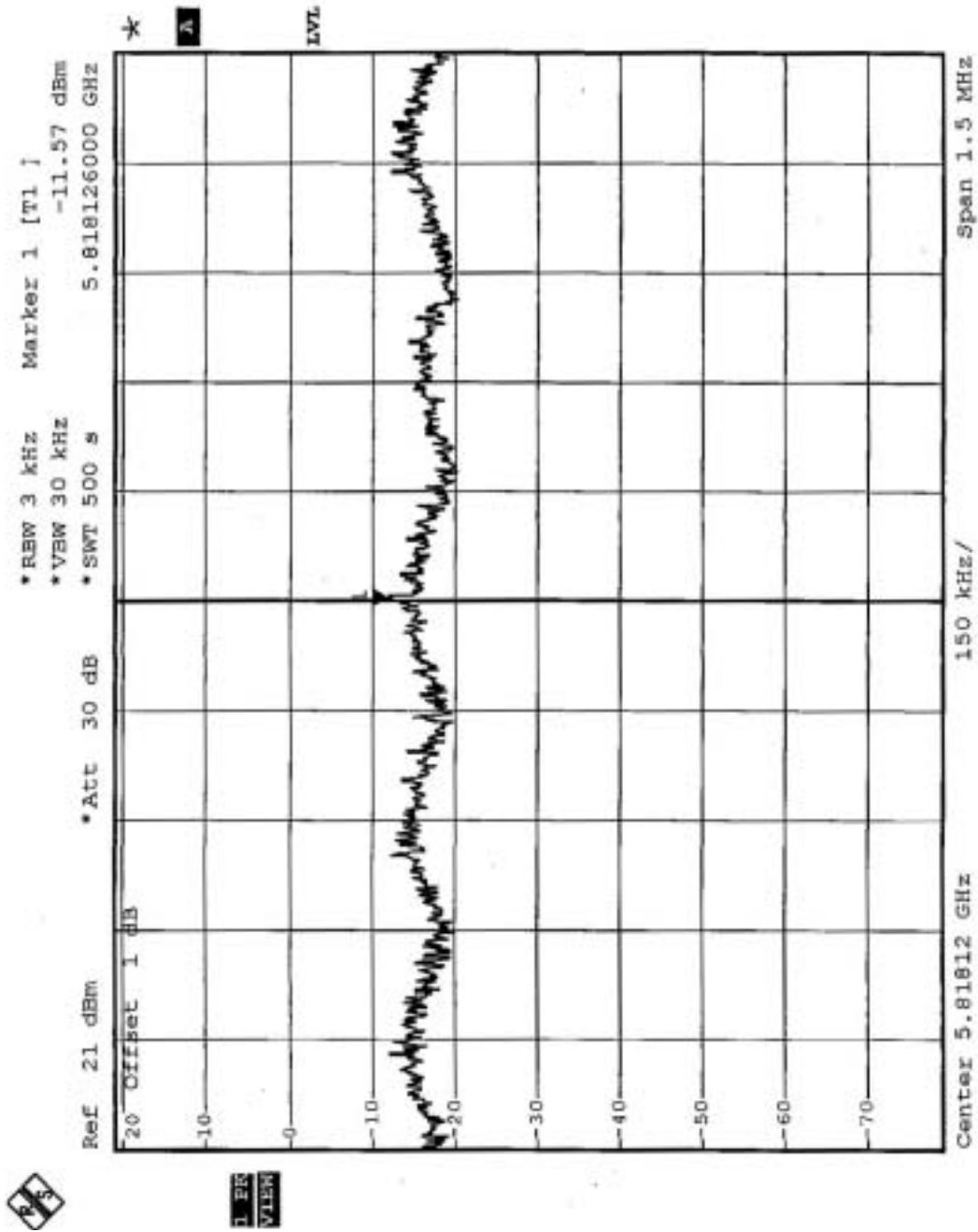


CH9





CH13



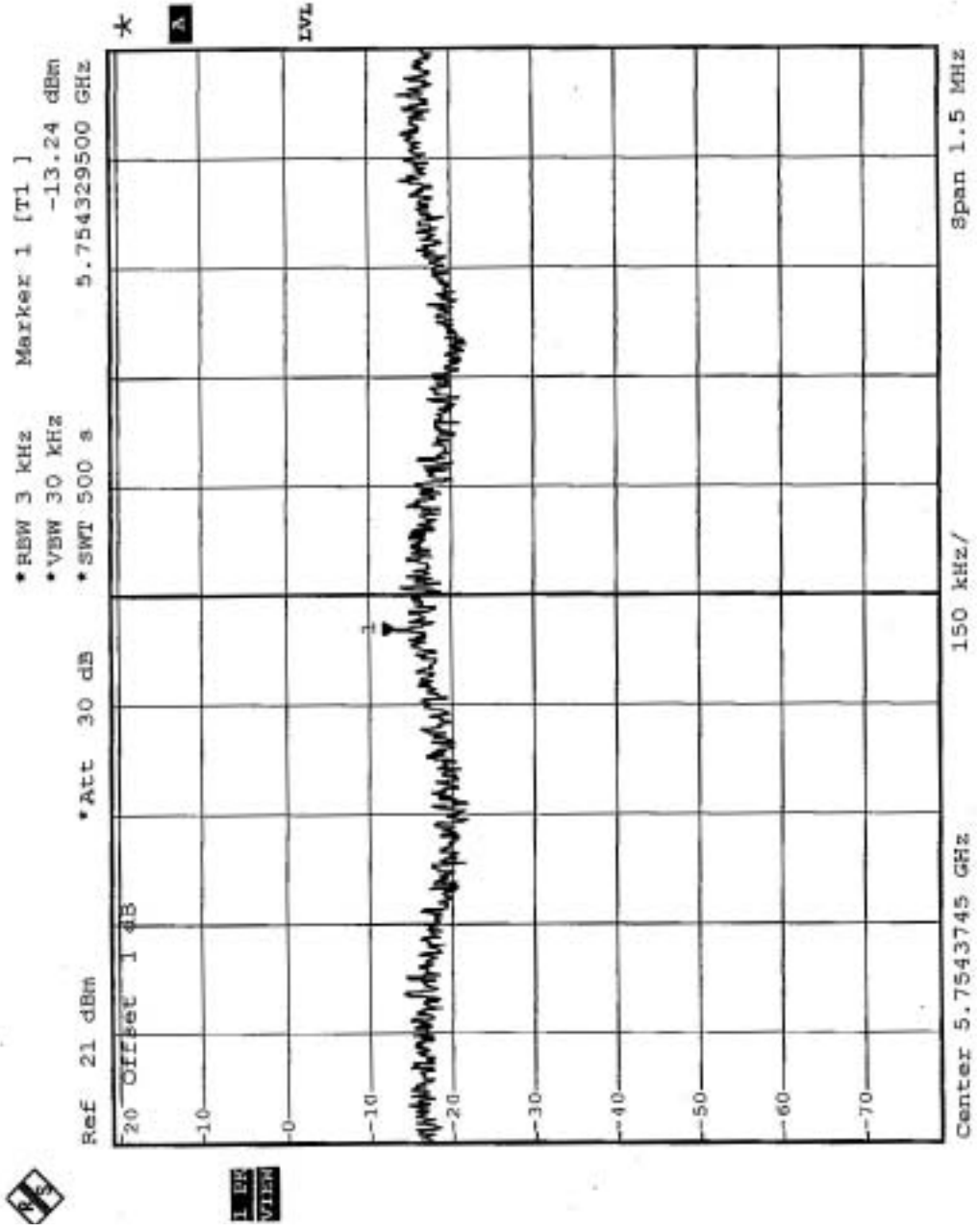


EUT	Nortel Networks WLAN-Mobile Adapter 2202	MODEL	WLAN-Mobile Adapter 2202
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	27eg. C, 59RH, 963 hPa
TEST MODE	Turbo	TEST BY	Tony Chen

CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
4	5760	-13.24	8	PASS
5	5800	-12.39	8	PASS

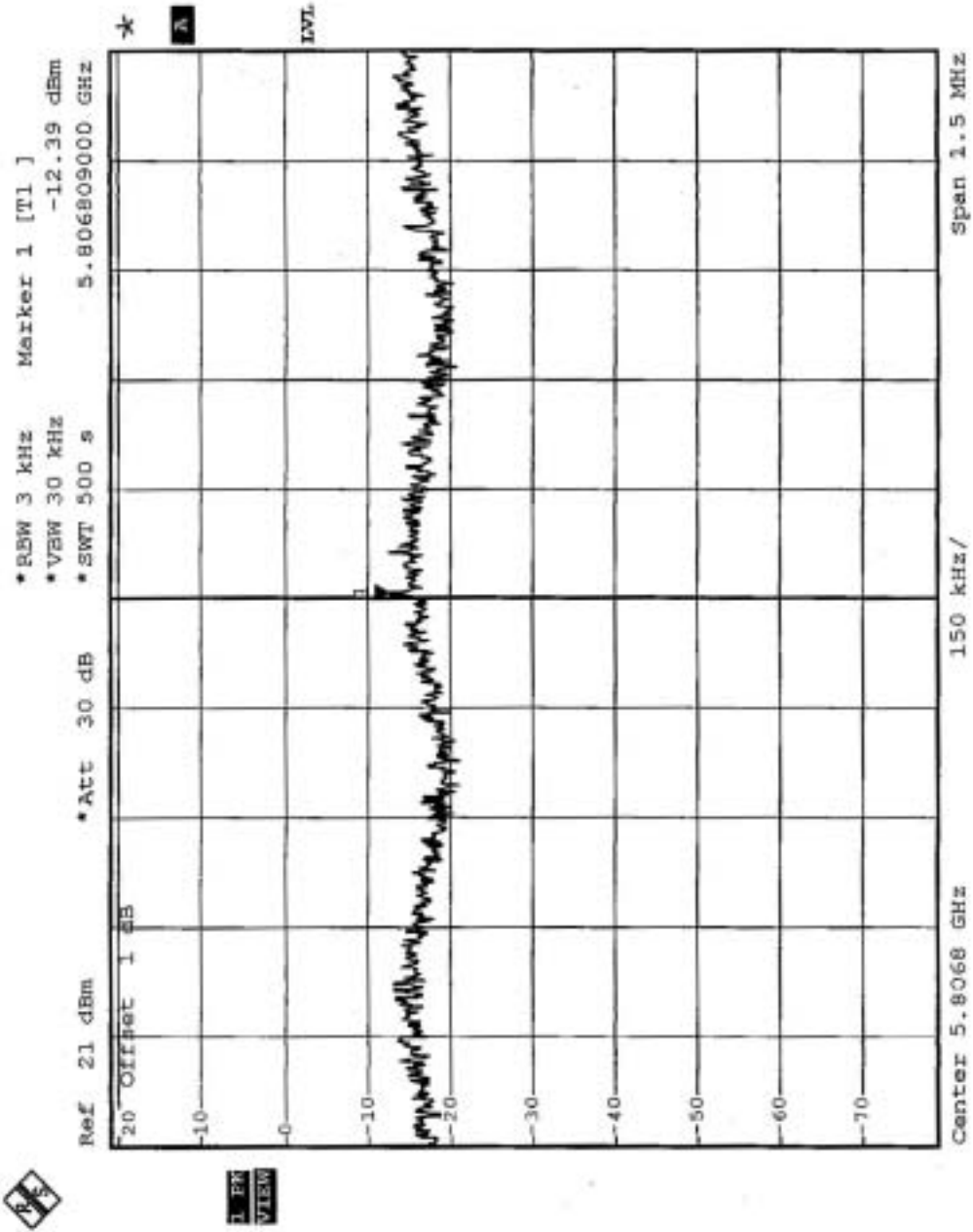


CH4





CH5





5.11 BAND EDGES MEASUREMENT

5.11.1 LIMITS OF BAND EDGES MEASUREMENT

Below -20dB of the highest emission level of operating band (in 100KHz Resolution Bandwidth).

5.11.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSP40	100037	May. 06, 2005

Note:

1. The measurement uncertainty is 2.79dB, which is calculated as per the document ETSI TR 100 028
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

5.11.3 TEST PROCEDURE

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

5.11.4 DEVIATION FROM TEST STANDARD

No deviation



5.11.5 EUT OPERATING CONDITION

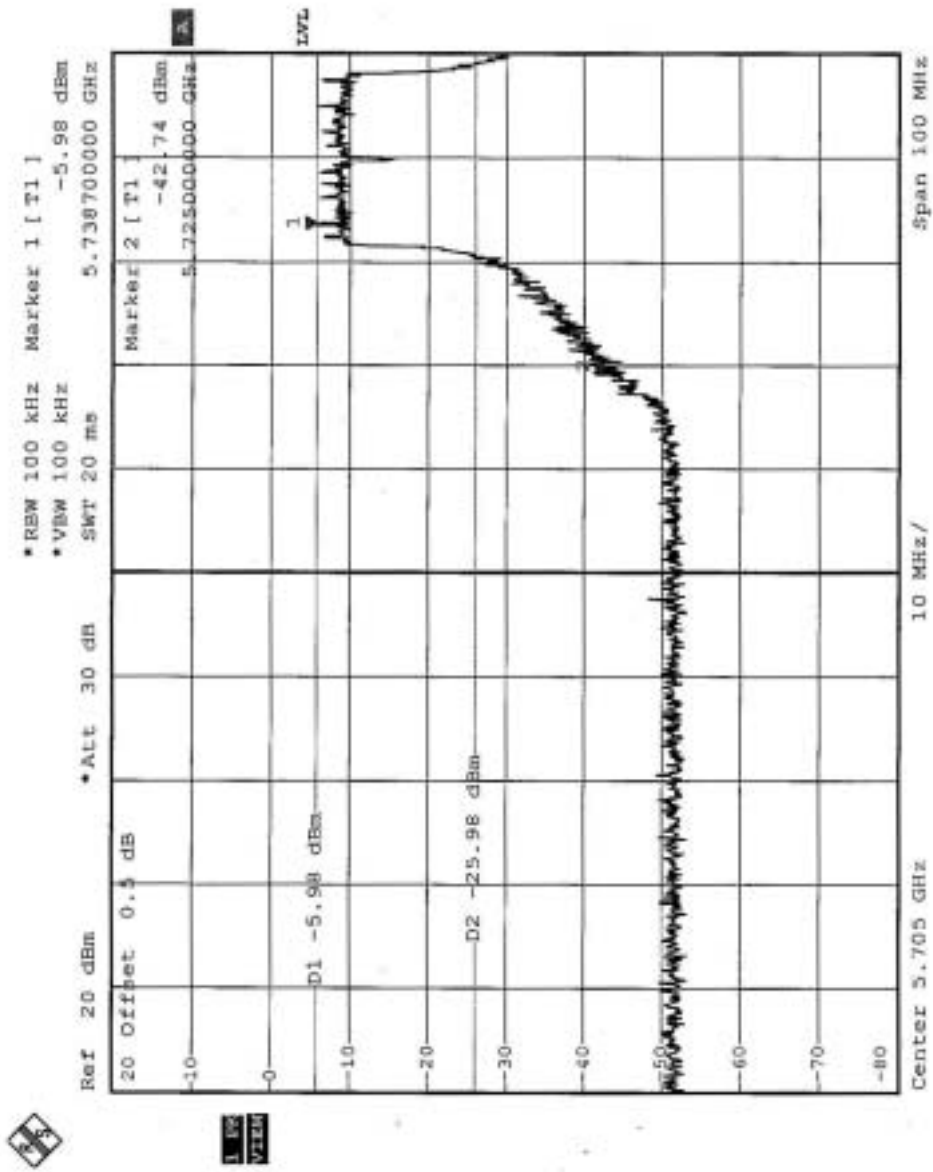
Same as Item 4.3.6

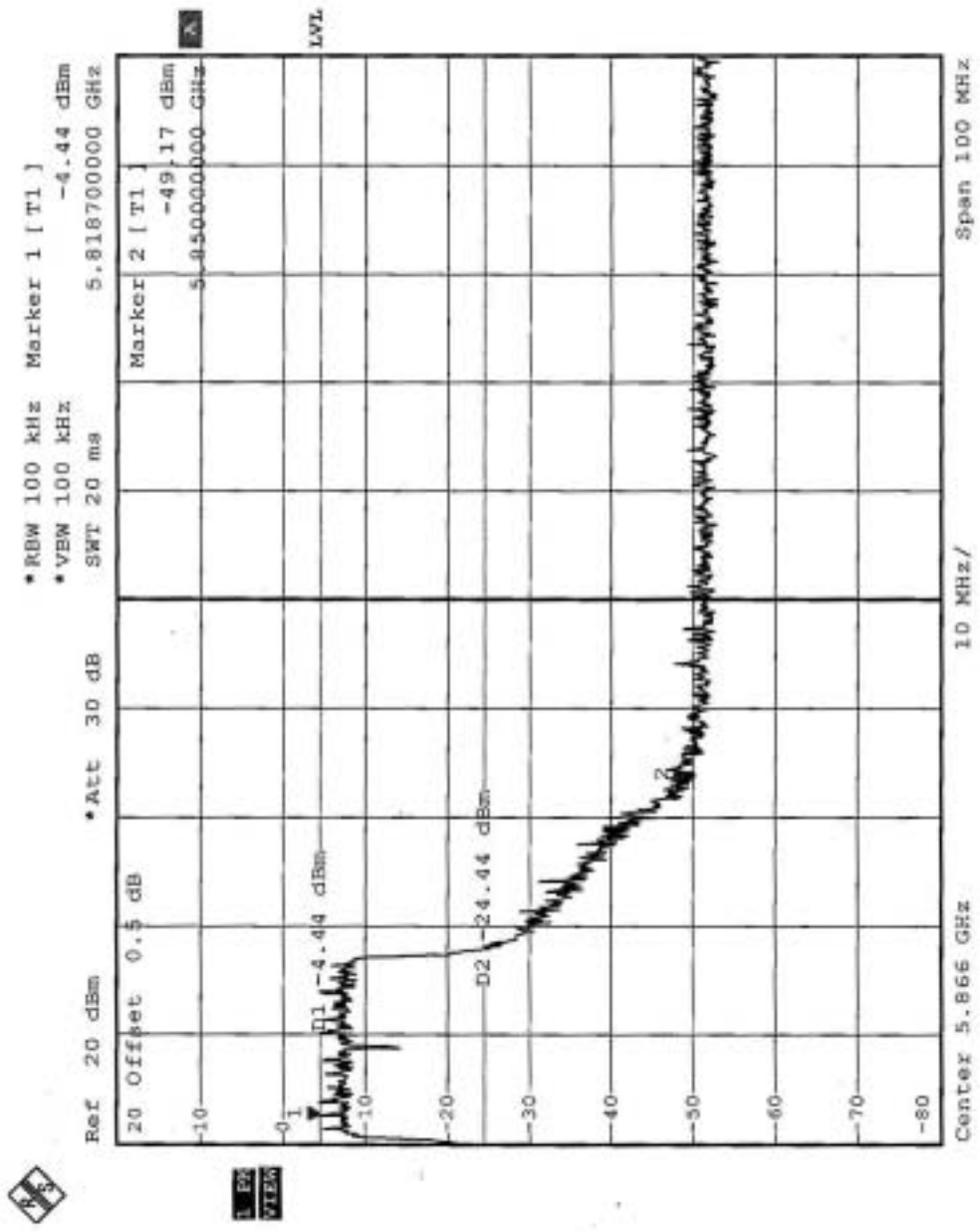
5.11.6 TEST RESULTS

The spectrum plots are attached on the following pages. D1 line indicates the highest level, D2 line indicates the 20dB offset below D1. It shows compliance with the requirement in part 15.247(C).



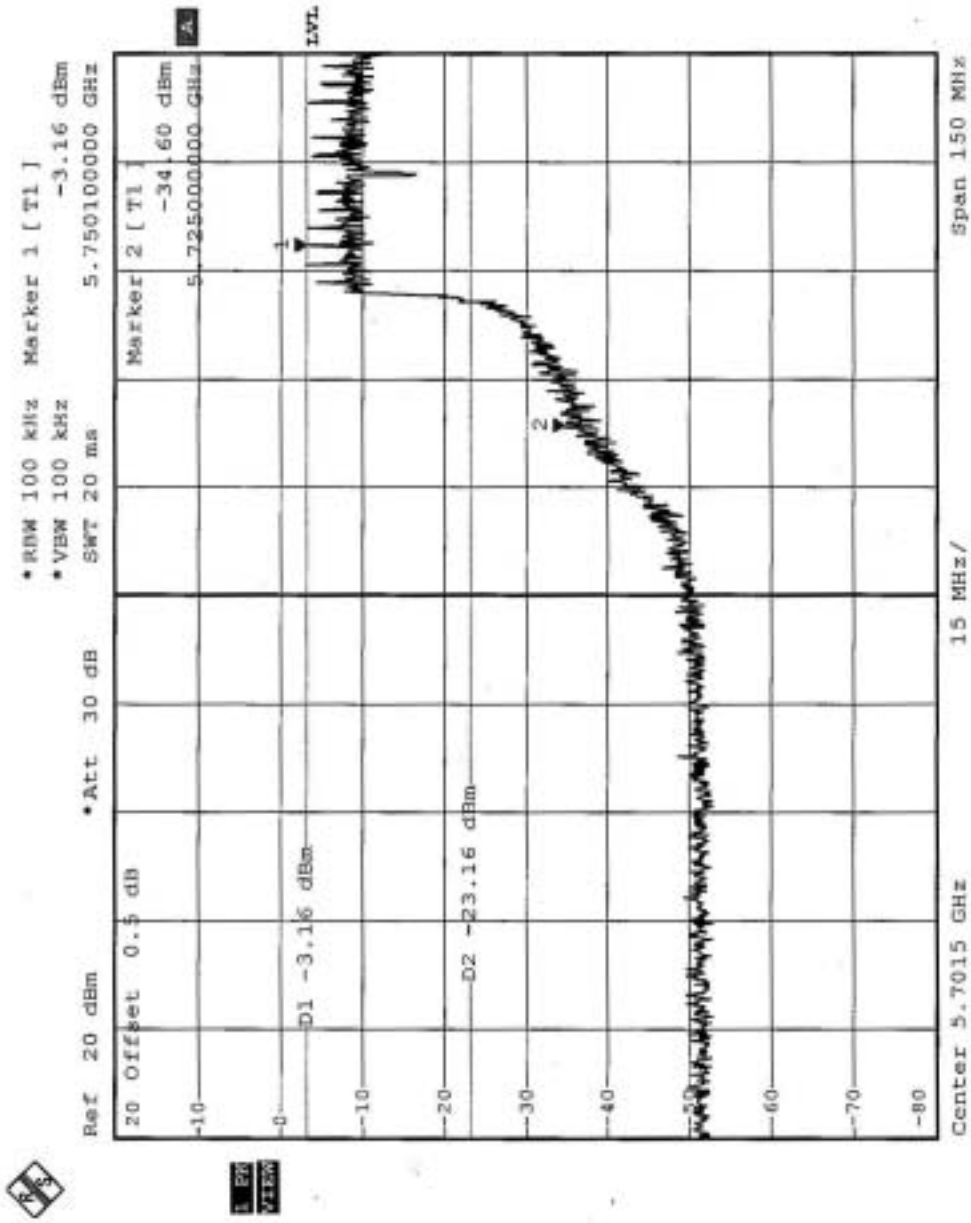
Normal Mode

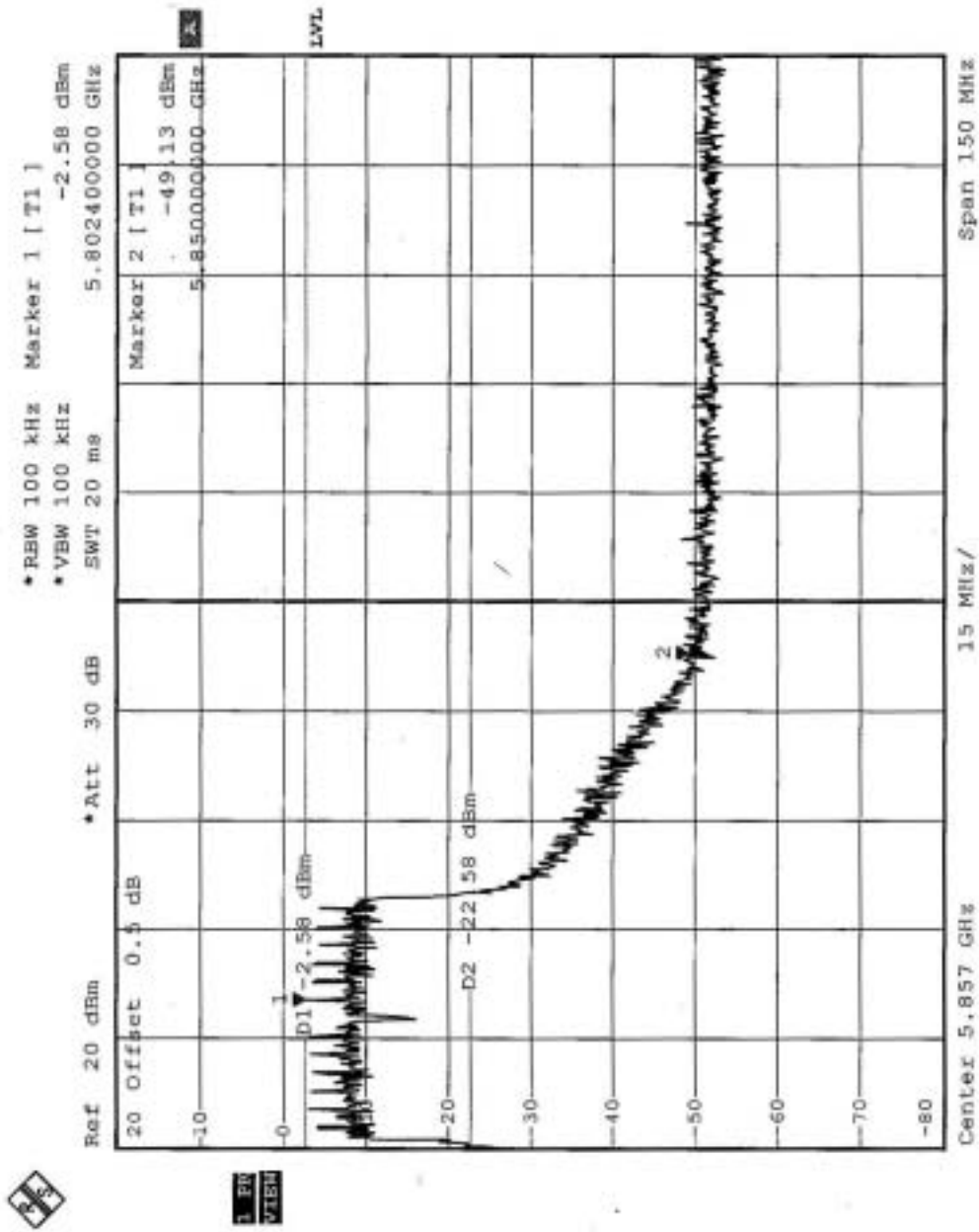






Turbo Mode







5.12 ANTENNA REQUIREMENT

5.12.1 STANDARD APPLICABLE

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

And according to FCC 47 CFR Section 15.407(a), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

5.12.2 ANTENNA CONNECTED CONSTRUCTION

The antenna used in this product is Dualband PCB antenna without connector. The maximum Gain of the antenna is 2dBi.

6. PHOTOGRAPHS OF THE TEST CONFIGURATION CONDUCTED EMISSION TEST



RADIATED EMISSION TEST





7. INFORMATION ON THE TESTING LABORATORIES

We, ADT Corp., were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025, Guide 25 or EN 45001:

USA	FCC, NVLAP, UL
Germany	TUV Rheinland
Japan	VCCI
Norway	NEMKO
Canada	INDUSTRY CANADA , CSA
R.O.C.	CNLA, BSMI, DGT
Netherlands	Telefication
Singapore	PSB , GOST-ASIA(MOU)
Russia	CERTIS(MOU)

Copies of accreditation certificates of our laboratories obtained from approval agencies can be downloaded from our web site: www.adt.com.tw/index.5/phtml. If you have any comments, please feel free to contact us at the following:

Linko EMC/RF Lab:

Tel: 886-2-26052180

Fax: 886-2-26052943

Hsin Chu EMC/RF Lab:

Tel: 886-3-5935343

Fax: 886-3-5935342

Hwa Ya EMC/RF/Safety/Telecom Lab:

Tel: 886-3-3183232

Fax: 886-3-3185050

Linko RF Lab.

Tel: 886-3-3270910

Fax: 886-3-3270892

Email: service@mail.adt.com.tw

Web Site: www.adt.com.tw

The address and road map of all our labs can be found in our web site also.