



# FCC TEST REPORT

**REPORT NO.:** RF930102A07

**MODEL NO.:** 3200 Series

**RECEIVED:** Jan. 2, 2004

**TESTED:** Jan. 5 ~ 11, 2004

**APPLICANT:** AVERATEC Inc.

**ADDRESS:** 80 ICON FOOTHILL RANCH,  
CA 92610 USA

**ISSUED BY:** Advance Data Technology Corporation

**LAB LOCATION:** 47 14th Lin, Chiapau Tsun, Linko, Taipei,  
Taiwan, R.O.C.

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ILAC MRA



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## 1 CERTIFICATION

**PRODUCT:** Notebook PC with 802.11b/g Wireless LAN  
**BRAND NAME:** AVERATEC  
**MODEL NO:** 3200 Series  
**TEST ITEM:** ENGINEERING SAMPLE  
**APPLICANT:** AVERATEC Inc.  
**STANDARDS:** 47 CFR FCC Part 15, Subpart C (Section 15.247)  
ANSI C63.4-1992

We, **Advance Data Technology Corporation**, hereby certify that one sample the designation has been tested in our facility from Jan. 5 ~ 11, 2004. The test record, data evaluation and Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions herein specified.

**PREPARED BY:**                     *Yemmy Soong*                     , **DATE:**           Jan. 27, 2004            
( Yemmy Soong )

**APPROVED BY:**                     *Mike Su.*                     , **DATE:**           Jan. 27, 2004            
( Mike Su, Manager )

## 2 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

<b>APPLIED STANDARD: 47 CFR FCC Part 15, Subpart C</b>			
<b>Standard Section</b>	<b>Test Type and Limit</b>	<b>Result</b>	<b>REMARK</b>
15.207	AC Power Conducted Emission	PASS	Meet the requirement of limit Minimum passing margin is -12.77dB at 0.193MHz
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 Limit: Table 15.209	PASS	Meet the requirement of limit Minimum passing margin is -4.55dB at 2390.00MHz
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

**Note:** The information of measurement uncertainty is available upon the customer's request.



### 3 GENERAL INFORMATION

#### 3.1 GENERAL DESCRIPTION OF EUT

<b>PRODUCT</b>	Notebook PC with 802.11b/g Wireless LAN
<b>MODEL NO.</b>	3200 Series
<b>POWER SUPPLY</b>	19Vdc from power adapter
<b>MODULATION TYPE</b>	802.11b: CCK, DQPSK, DBPSK 802.11g: OFDM
<b>TRANSFER RATE</b>	802.11b: 1/2/5.5/11Mbps 802.11g: Up to 54Mbps
<b>FREQUENCY RANGE</b>	2.412GHz ~ 2.462GHz
<b>NUMBER OF CHANNEL</b>	11
<b>OUTPUT POWER</b>	802.11b: 15.06dBm 802.11g: 15.14dBm
<b>ANTENNA TYPE</b>	2x inverted-F built on Notebook panel left/right up Peak gain: 0.83dBi (left-up) Peak gain: -0.19dBi (right-up)
<b>TEMPERATURE RANGE</b>	Operating Temperature : 5°C~35°C Storage Temperature : -20°C~ 60°C
<b>DATA CABLE</b>	NA
<b>I/O PORTS</b>	One type II PCMCIA card sockets. Three USB2.0 connectors. One 15 pins D-sub connector for external monitor. One Line Out phone jack for external Speaker. One Mic In phone jack for external Microphone. One RJ-11 jack for internal 56Kbps V.90 modem. One RJ-45 jack for internal 10/100M bit Ethernet LAN. One S-Video port for TV set. One IrDA port, support SIR/ FIR One IEEE1394 port DC-In jack
<b>ASSOCIATED DEVICES</b>	AC/DC adapter

**NOTE:**

1. The EUT is a Notebook PC with 802.11g Wireless LAN with built in Mini PCI module (brand: GEMTEK, model: WMIB-100GS). The Mini PCI module is compatible with 802.11b and 802.11g devices.
2. For more detailed features description, please refer to the manufacturer's specifications or User's Manual.

### 3.2 DESCRIPTION OF TEST MODES

The EUT has three types of configuration:

Component	Configuration 1	Configuration 2	Configuration 3
<b>AMD CPU</b>	Athlon XP-M 1800+	Athlon XP-M 2000+	Athlon XP-M 2200+
<b>Combo ODD</b>	Combo QSI_SBW242B	Hitachi-LG Combo (CD R/W)_GCC-4241N	Combo QSI_SBW242B
<b>Hitachi HDD</b>	40GB	80GB	80GB
<b>Hydix LCD panel</b>	12.1" XGA		
<b>Hynix RAM</b>	0+256MB		
<b>WLAN</b>	Gemtek WMIB-100GS		
<b>AC Adapter</b>	Lite-On, PA-1600-05 I/P: 100-240V, 1.5A; O/P: 19Vdc, 3.16A, 60W max. Non-shielded DC 2-pin (1.8m) with a ferrite core		

All three types were pre-tested and the worst emission level was found on **Configuration 3**. Therefore only this configuration was selected as the representative for the final test.

The EUT has two inverted F antenna built-in the left up and right up the LCD panel . The antenna gains are left up (0.83dBi) and right up (-0.19dBi). Both were pre-tested and the worst emission level was found when tested with antenna left up (0.83dBi). Therefore only this left up antenna was used for the test.

The EUT was tested with DSSS and OFDM techniques.

Eleven channels were provided to the EUT during the test:

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		

**NOTE:**

1. Below 1GHz, the channel 1, 6, and 11 were pre-tested in chamber. The channel 11, the worst case, was chosen for final test.
2. Above 1GHz, the channel 1, 6, and 11 were tested individually.
3. Transfer rate, 11Mbps with CCK technique and 6Mbps with OFDM technique, the worst cases, were chosen for final test.

### 3.3 DESCRIPTION OF APPLIED STANDARDS

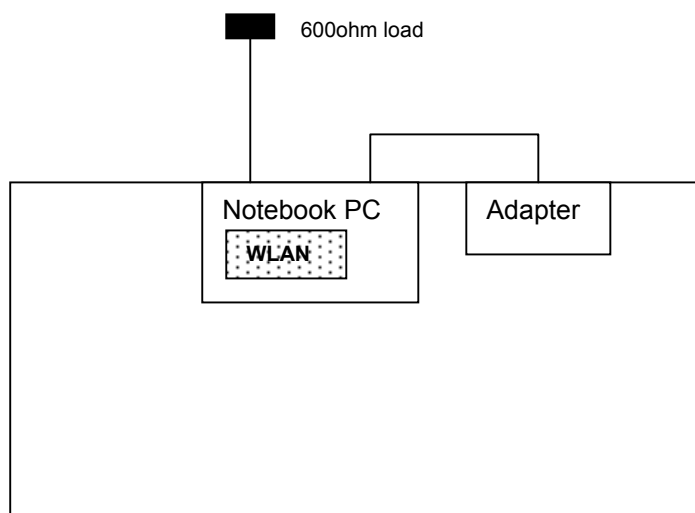
The EUT is a Notebook PC with 802.11b/g Wireless LAN module installed, according to the specifications of the manufacturer, it must comply with the requirements of the following standards:

**FCC 47 CFR Part 15, Subpart C. (15.247)**  
**ANSI C63.4: 1992**

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

### 3.4 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with its power adapter.







## 4 TEST TYPES AND RESULTS

### 4.1 CONDUCTED EMISSION MEASUREMENT

#### 4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dB $\mu$ 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.



#### 4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
ROHDE & SCHWARZ Test Receiver	ESCS 30	838251/021	Jan. 4, 2005
ROHDE & SCHWARZ Artificial Mains Network (for EUT)	ESH3-Z5	100218	Dec. 9, 2004
ROHDE & SCHWARZ Artificial Mains Network (for peripherals)	ESH3-Z5	100219	Dec. 9, 2004
ROHDE & SCHWARZ Artificial Mains Network (for peripherals)	ESH3-Z5	100220	Dec. 9, 2004
ROHDE & SCHWARZ 4-wire ISN	ENY41	837032/016	Nov. 19, 2004
ROHDE & SCHWARZ 2-wire ISN	ENY22	837497/016	Nov. 19, 2004
Software	Cond-V3	NA	NA
RF cable (JYEBAO)	5D-FB	Cable-C10.01	May 1, 2004
SUHNER Terminator (For ROHDE & SCHWARZ LISN)	65BNC-5001	E1-010770	Mar. 24, 2004
SUHNER Terminator (For ROHDE & SCHWARZ LISN)	65BNC-5001	E1-010773	Apr. 6, 2004

- 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. “\*”: These equipment are used for conducted telecom port test only (if tested).
  3. The test was performed in ADT Shielded Room No. 10.
  4. The VCCI Site Registration No. is C-1312.

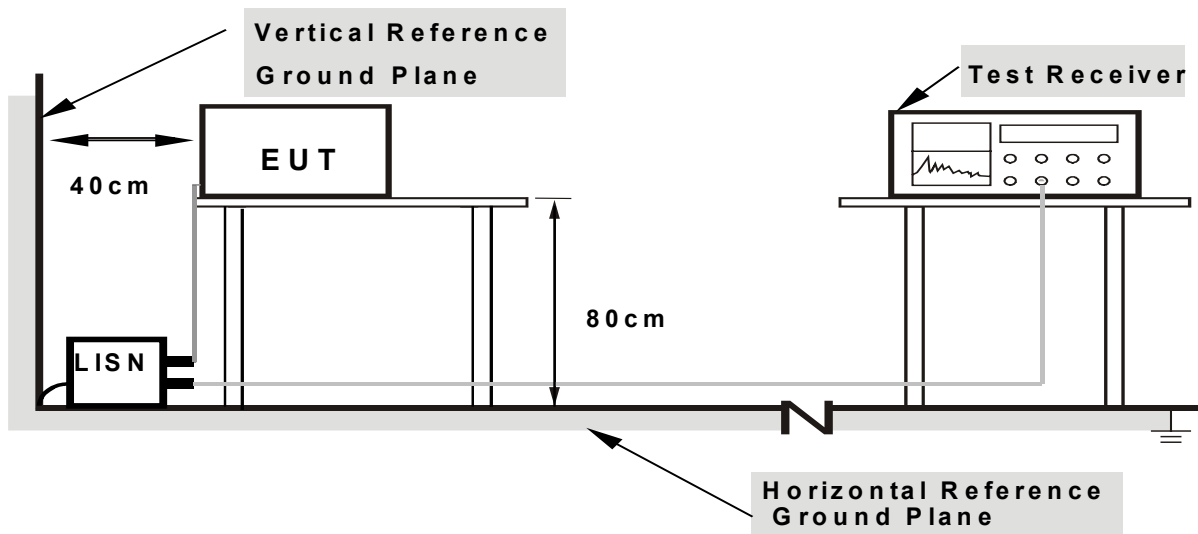
#### 4.1.3 TEST PROCEDURE

- 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) are 80 cm from EUT and at least 80 cm from other units and other metal planes

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

#### 4.1.6 EUT OPERATING CONDITIONS

The EUT ran a test program to enable it to transmit/receive continuously at specific channel frequency.

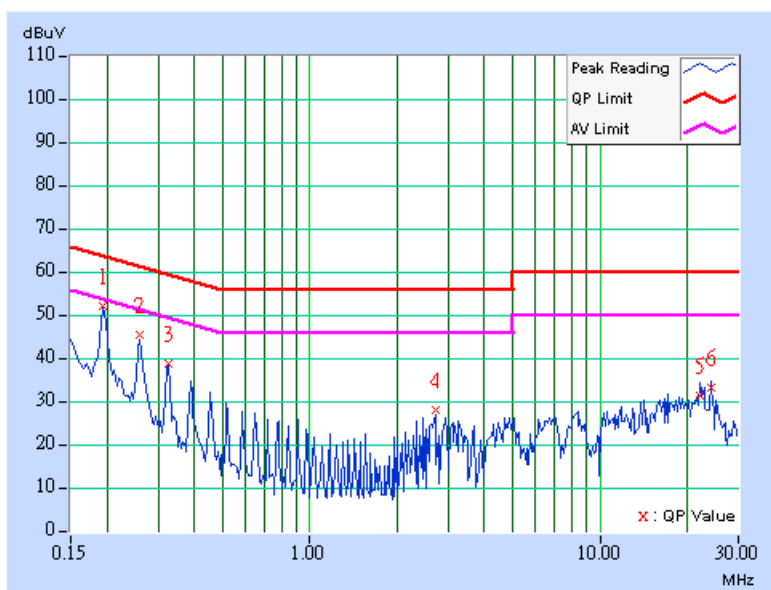


### 4.1.7 TEST RESULTS

<b>EUT</b>	Notebook PC with 802.11b/g Wireless LAN	<b>MODEL</b>	3200 Series
<b>MODE</b>	Channel 1	<b>6dB BANDWIDTH</b>	9kHz
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>PHASE</b>	Line (L)
<b>ENVIRONMENTAL CONDITIONS</b>	20 deg. C, 60% RH, 1005 hPa	<b>TESTED BY:</b> Jamison Chan	

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	0.193	0.10	51.04	-	51.14	-	63.91
2	0.259	0.10	44.47	-	44.57	-	61.45	51.45	-16.88	-
3	0.326	0.10	37.57	-	37.67	-	59.56	49.56	-21.89	-
4	2.723	0.24	27.01	-	27.25	-	56.00	46.00	-28.75	-
5	22.031	1.02	30.51	-	31.53	-	60.00	50.00	-28.47	-
6	24.145	1.15	32.14	-	33.29	-	60.00	50.00	-26.71	-

- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
  2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
  3. The emission levels of other frequencies were very low against the limit.
  4. Margin value = Emission level - Limit value
  5. Correction factor = Insertion loss + Cable loss
  6. Emission Level = Correction Factor + Reading Value.

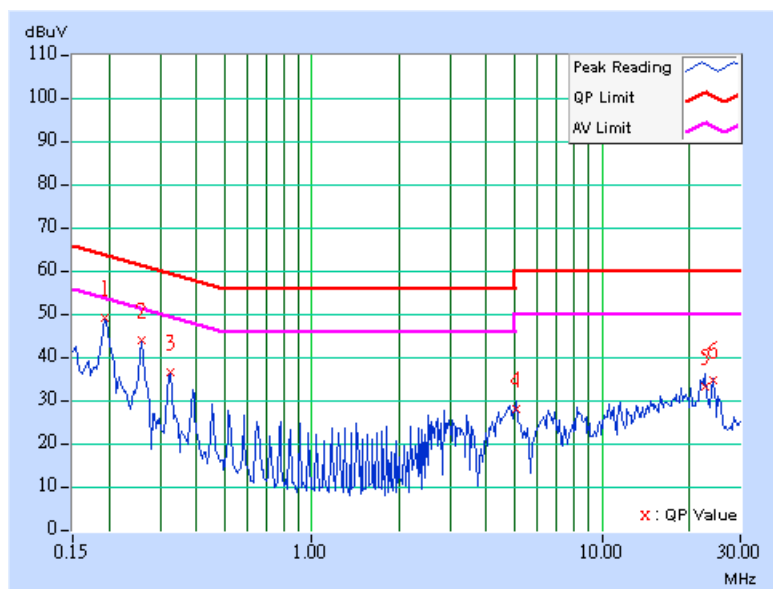




<b>EUT</b>	Notebook PC with 802.11b/g Wireless LAN	<b>MODEL</b>	3200 Series
<b>MODE</b>	Channel 1	<b>6dB BANDWIDTH</b>	9kHz
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>PHASE</b>	Neutral (N)
<b>ENVIRONMENTAL CONDITIONS</b>	20 deg. C, 60% RH, 1005 hPa	<b>TESTED BY:</b> Jamison Chan	

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	0.193	0.10	48.46	-	48.56	-	63.91
2	0.259	0.10	43.04	-	43.14	-	61.45	51.45	-18.31	-
3	0.326	0.10	35.66	-	35.76	-	59.56	49.56	-23.80	-
4	5.055	0.34	27.27	-	27.61	-	60.00	50.00	-32.39	-
5	22.813	0.91	32.35	-	33.26	-	60.00	50.00	-26.74	-
6	24.145	0.97	33.90	-	34.87	-	60.00	50.00	-25.13	-

- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
  2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
  3. The emission levels of other frequencies were very low against the limit.
  4. Margin value = Emission level - Limit value
  5. Correction factor = Insertion loss + Cable loss
  6. Emission Level = Correction Factor + Reading Value.

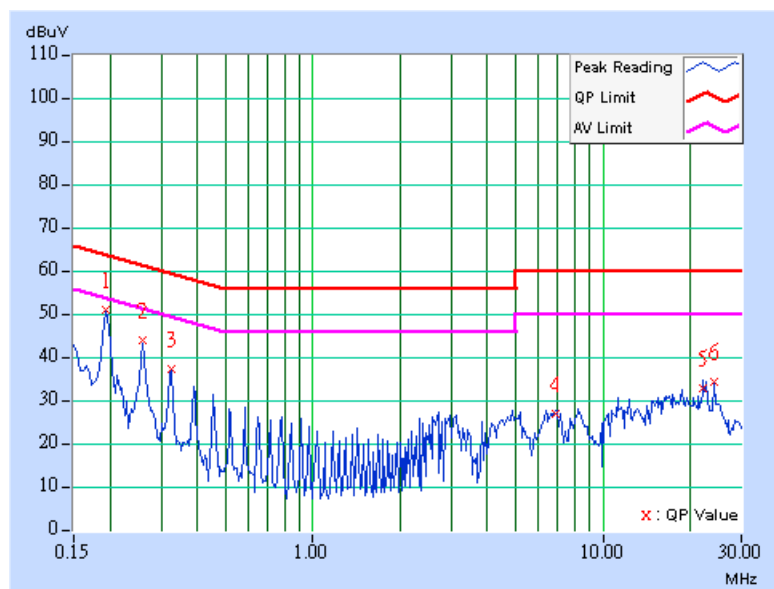




<b>EUT</b>	Notebook PC with 802.11b/g Wireless LAN	<b>MODEL</b>	3200 Series
<b>MODE</b>	Channel 6	<b>6dB BANDWIDTH</b>	9kHz
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>PHASE</b>	Line (L)
<b>ENVIRONMENTAL CONDITIONS</b>	20 deg. C, 60% RH, 1005 hPa	<b>TESTED BY:</b> Jamison Chan	

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	0.193	0.10	49.83	-	49.93	-	63.91
2	0.259	0.10	42.92	-	43.02	-	61.45	51.45	-18.43	-
3	0.326	0.10	36.14	-	36.24	-	59.56	49.56	-23.32	-
4	6.867	0.44	25.87	-	26.31	-	60.00	50.00	-33.69	-
5	22.152	1.03	31.93	-	32.96	-	60.00	50.00	-27.04	-
6	24.148	1.15	33.48	-	34.63	-	60.00	50.00	-25.37	-

- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
  2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
  3. The emission levels of other frequencies were very low against the limit.
  4. Margin value = Emission level - Limit value
  5. Correction factor = Insertion loss + Cable loss
  6. Emission Level = Correction Factor + Reading Value.

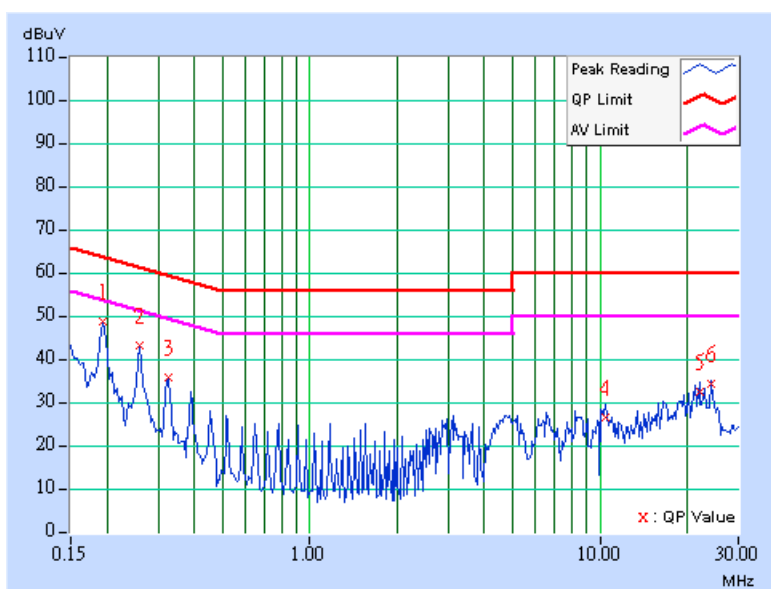




<b>EUT</b>	Notebook PC with 802.11b/g Wireless LAN	<b>MODEL</b>	3200 Series
<b>MODE</b>	Channel 6	<b>6dB BANDWIDTH</b>	9kHz
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>PHASE</b>	Neutral (N)
<b>ENVIRONMENTAL CONDITIONS</b>	20 deg. C, 60% RH, 1005 hPa	<b>TESTED BY:</b> Jamison Chan	

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	0.193	0.10	47.82	-	47.92	-	63.91
2	0.259	0.10	42.44	-	42.54	-	61.45	51.45	-18.91	-
3	0.326	0.10	35.04	-	35.14	-	59.56	49.56	-24.42	-
4	10.504	0.52	25.74	-	26.26	-	60.00	50.00	-33.74	-
5	22.094	0.88	31.78	-	32.66	-	60.00	50.00	-27.34	-
6	24.145	0.97	33.36	-	34.33	-	60.00	50.00	-25.67	-

- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
  2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
  3. The emission levels of other frequencies were very low against the limit.
  4. Margin value = Emission level - Limit value
  5. Correction factor = Insertion loss + Cable loss
  6. Emission Level = Correction Factor + Reading Value.

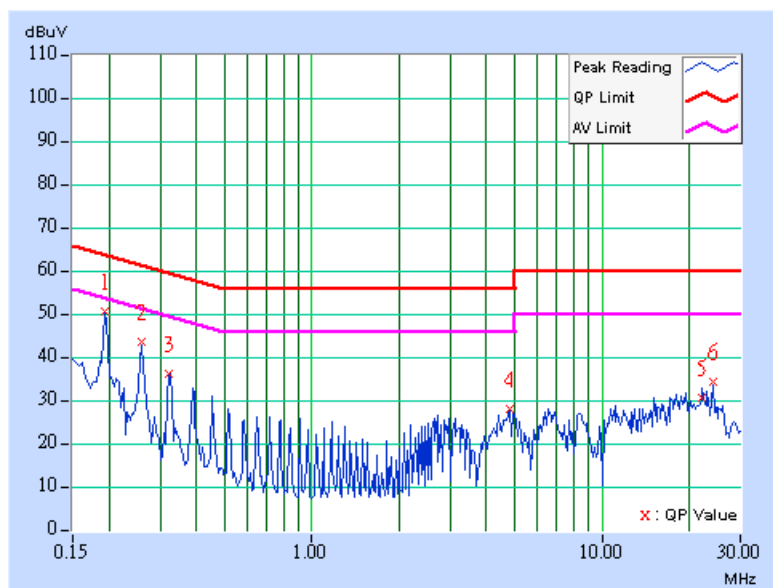




<b>EUT</b>	Notebook PC with 802.11b/g Wireless LAN	<b>MODEL</b>	3200 Series
<b>MODE</b>	Channel 11	<b>6dB BANDWIDTH</b>	9kHz
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>PHASE</b>	Line (L)
<b>ENVIRONMENTAL CONDITIONS</b>	20 deg. C, 60% RH, 1005 hPa	<b>TESTED BY:</b> Jamison Chan	

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	0.193	0.10	49.67	-	49.77	-	63.91
2	0.259	0.10	42.60	-	42.70	-	61.45	51.45	-18.75	-
3	0.322	0.10	35.30	-	35.40	-	59.66	49.66	-24.26	-
4	4.797	0.34	27.08	-	27.42	-	56.00	46.00	-28.58	-
5	22.215	1.03	29.58	-	30.61	-	60.00	50.00	-29.39	-
6	24.148	1.15	33.24	-	34.39	-	60.00	50.00	-25.61	-

- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
  2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
  3. The emission levels of other frequencies were very low against the limit.
  4. Margin value = Emission level - Limit value
  5. Correction factor = Insertion loss + Cable loss
  6. Emission Level = Correction Factor + Reading Value.



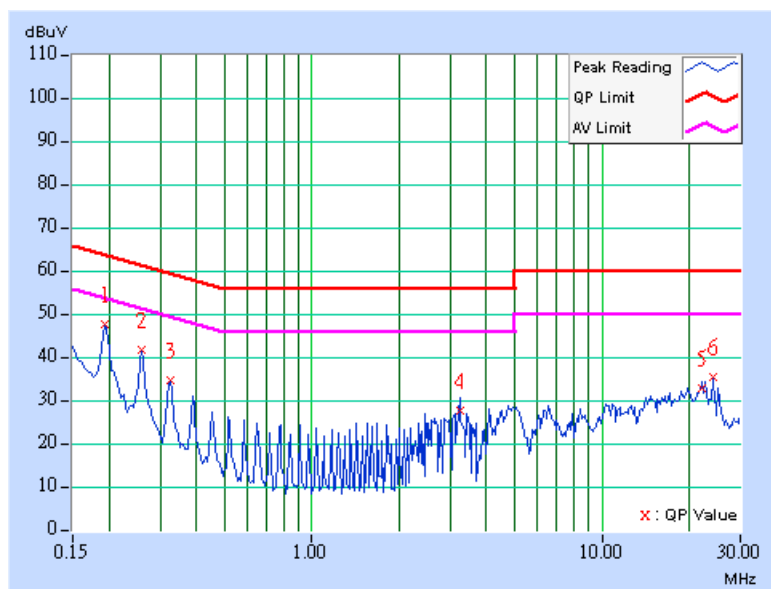




<b>EUT</b>	Notebook PC with 802.11b/g Wireless LAN	<b>MODEL</b>	3200 Series
<b>MODE</b>	Channel 11	<b>6dB BANDWIDTH</b>	9kHz
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>PHASE</b>	Neutral (N)
<b>ENVIRONMENTAL CONDITIONS</b>	20 deg. C, 60% RH, 1005 hPa	<b>TESTED BY:</b> Jamison Chan	

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	0.193	0.10	46.73	-	46.83	-	63.91
2	0.259	0.10	40.85	-	40.95	-	61.45	51.45	-20.50	-
3	0.326	0.10	33.81	-	33.91	-	59.56	49.56	-25.65	-
4	3.238	0.26	26.95	-	27.21	-	56.00	46.00	-28.79	-
5	22.211	0.89	32.01	-	32.90	-	60.00	50.00	-27.10	-
6	24.148	0.97	34.58	-	35.55	-	60.00	50.00	-24.45	-

- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
  2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
  3. The emission levels of other frequencies were very low against the limit.
  4. Margin value = Emission level - Limit value
  5. Correction factor = Insertion loss + Cable loss
  6. Emission Level = Correction Factor + Reading Value.





## 4.2 RADIATED EMISSION MEASUREMENT

### 4.2.1 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.



## 4.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
* HP Spectrum Analyzer	8594E	3911A07465	July 7, 2004
* HP Preamplifier	8447D	2944A10386	Aug. 12, 2004
* HP Preamplifier	8449B	3008A01924	Oct. 12, 2004
* HP Preamplifier	8449B	3008A01638	Oct. 17, 2004
SCHWARZBECK Tunable Dipole Antenna	VHA 9103	NA	Nov. 15, 2004
SCHWARZBECK Tunable Dipole Antenna	UHA 9105	977	
SCHAFFNER TEST RECEIVER	SCR 3501	409	Jan. 26, 2004
* SCHAFFNER BILOG Antenna	CBL6111C	2727	July 15, 2004
* SCHWARZBECK Horn Antenna	BBHA9120-D1	D130	June 30, 2004
* EMCO Horn Antenna	3115	9312-4192	Mar. 23, 2004
* ADT. Turn Table	TT100	0201	NA
* ADT. Tower	AT100	0201	NA
* Software	ADT_Radiated_V5.14	NA	NA
* ANRITSU RF Switches	MP59B	6100237246	Oct. 17, 2004
* TIMES RF cable	LMR-600	CABLE-ST10-01	Oct. 17, 2004

- 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. "\*" = These equipment are used for the final measurement.
  3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
  4. The test was performed in ADT Open Site No. 10.
  5. The VCCI Site Registration No. is R-1625.



### 4.2.3 TEST PROCEDURE

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meters 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 peak, quasi-peak or average method as specified and then reported in a data sheet.

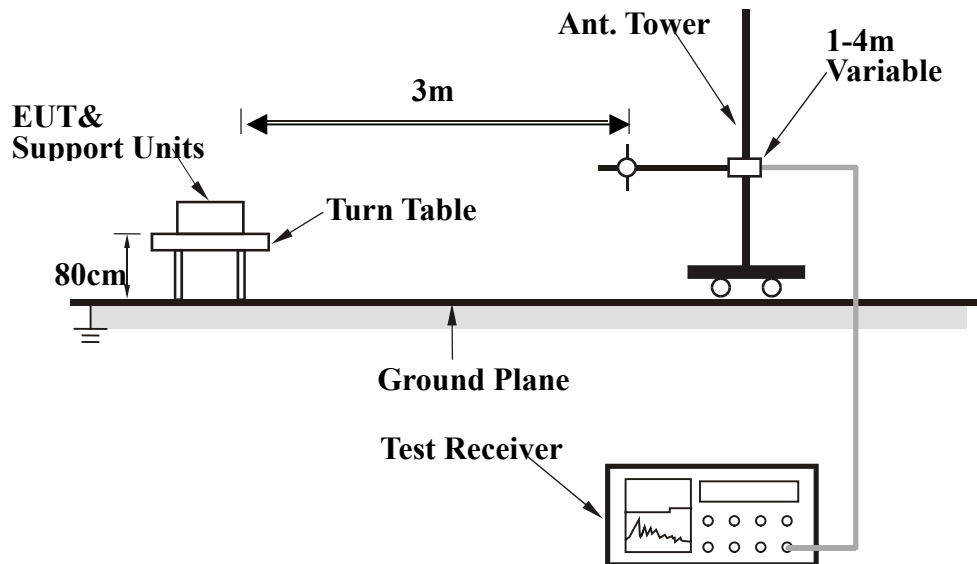
**NOTE:**

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for 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.

### 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.



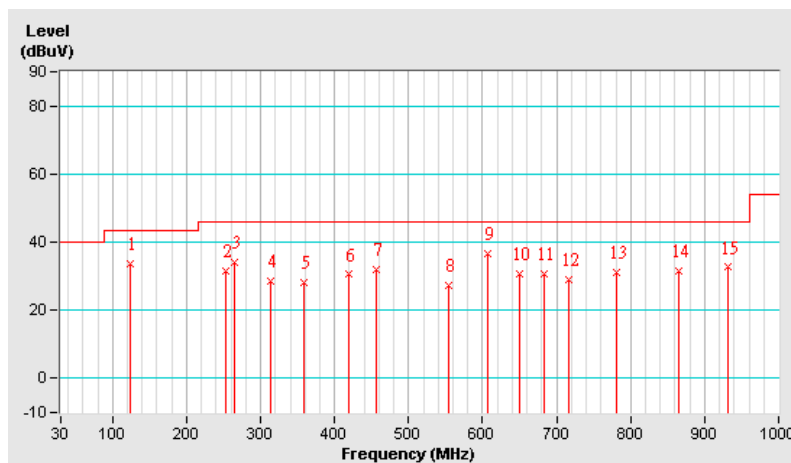
### 4.2.7 TEST RESULTS

<b>EUT</b>	Notebook PC with 802.11b/g Wireless LAN	<b>MODEL</b>	3200 Series
<b>MODE</b>	Channel 11	<b>FREQUENCY RANGE</b>	Below 1000MHz
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>DETECTOR FUNCTION</b>	Quasi-Peak
<b>ENVIRONMENTAL CONDITIONS</b>	20 deg. C, 70% RH, 1005 hPa	<b>TESTED BY:</b> Steven Lu	

#### 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	123.31	33.71 QP	43.50	-9.79	2.50 H	238	21.15	12.56
2	253.55	31.68 QP	46.00	-14.32	1.00 H	55	18.21	13.47
3	265.21	33.98 QP	46.00	-12.02	1.00 H	46	20.10	13.88
4	313.81	28.48 QP	46.00	-17.52	2.50 H	115	13.02	15.46
5	358.52	28.04 QP	46.00	-17.96	1.00 H	286	11.40	16.64
6	418.78	30.48 QP	46.00	-15.52	2.50 H	115	12.17	18.31
7	455.71	31.88 QP	46.00	-14.12	2.50 H	307	12.50	19.38
8	554.85	27.31 QP	46.00	-18.69	3.00 H	304	6.05	21.26
9	607.33	36.61 QP	46.00	-9.39	4.00 H	217	13.92	22.70
10	650.10	30.77 QP	46.00	-15.23	1.00 H	310	7.52	23.25
11	683.15	30.73 QP	46.00	-15.27	1.00 H	337	6.99	23.73
12	716.19	29.17 QP	46.00	-16.83	1.00 H	343	4.74	24.42
13	780.34	31.14 QP	46.00	-14.86	2.00 H	298	5.62	25.51
14	865.87	31.42 QP	46.00	-14.58	1.00 H	40	4.96	26.46
15	931.96	32.62 QP	46.00	-13.38	1.00 H	58	5.11	27.50

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
  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.



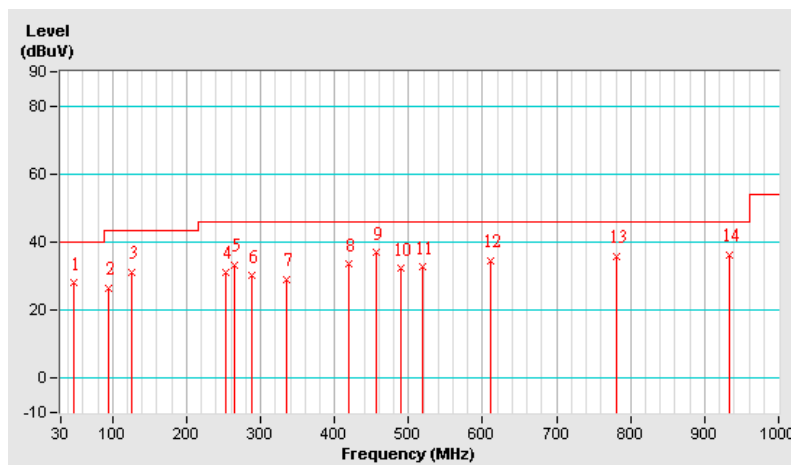


<b>EUT</b>	Notebook PC with 802.11b/g Wireless LAN	<b>MODEL</b>	3200 Series
<b>MODE</b>	Channel 11	<b>FREQUENCY RANGE</b>	Below 1000MHz
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>DETECTOR FUNCTION</b>	Quasi-Peak
<b>ENVIRONMENTAL CONDITIONS</b>	20 deg. C, 70% RH, 1005 hPa	<b>TESTED BY:</b> Steven Lu	

**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	47.49	28.00 QP	40.00	-12.00	3.00 V	22	13.72	14.28
2	94.15	26.57 QP	43.50	-16.93	2.50 V	223	16.77	9.80
3	125.25	31.01 QP	43.50	-12.49	1.50 V	16	18.31	12.70
4	253.55	30.98 QP	46.00	-15.02	2.00 V	334	17.51	13.47
5	265.21	33.33 QP	46.00	-12.67	2.00 V	10	19.45	13.88
6	288.54	30.12 QP	46.00	-15.88	1.50 V	10	15.29	14.83
7	335.19	28.92 QP	46.00	-17.08	1.50 V	28	12.90	16.03
8	418.78	33.44 QP	46.00	-12.56	1.50 V	37	15.13	18.31
9	455.71	36.86 QP	46.00	-9.14	1.00 V	109	17.47	19.38
10	488.76	32.21 QP	46.00	-13.79	1.00 V	346	12.36	19.85
11	519.86	32.67 QP	46.00	-13.33	1.00 V	19	12.22	20.45
12	611.22	34.55 QP	46.00	-11.45	1.00 V	127	11.80	22.75
13	780.34	35.72 QP	46.00	-10.28	1.50 V	43	10.21	25.51
14	933.91	36.37 QP	46.00	-9.63	1.00 V	340	8.84	27.53

- REMARKS:**
1. Emission level(dBUV/m)=Raw Value(dBUV) + Correction Factor(dB/m)
  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.

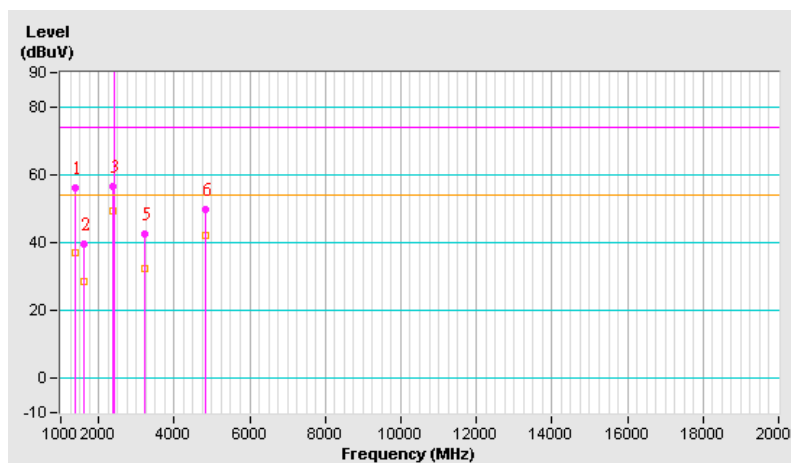




<b>EUT</b>	Notebook PC with 802.11b/g Wireless LAN	<b>MODEL</b>	3200 Series
<b>MODE</b>	Channel 1	<b>FREQUENCY RANGE</b>	1000MHz – 24835MHz
<b>MODULATION</b>	CCK		
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>DETECTOR FUNCTION</b>	Peak (PK) Average (AV)
<b>ENVIRONMENTAL CONDITIONS</b>	20 deg. C, 70% RH, 1005 hPa	<b>TESTED BY:</b> Steven Lu	

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	1395.00	56.25 PK	74.00	-17.75	1.17 H	114	27.60	28.65
1	1395.00	37.21 AV	54.00	-16.79	1.17 H	114	8.56	28.65
2	1608.00	39.66 PK	74.00	-34.34	1.22 H	333	10.64	29.02
3	2390.00	56.45 PK	74.00	-17.55	1.22 H	333	24.97	31.48
3	2390.00	49.45 AV	54.00	-4.55	1.22 H	333	17.97	31.48
4	*2412.00	110.01 PK			1.00 H	125	78.50	31.51
4	*2412.00	103.01 AV			1.00 H	125	71.50	31.51
5	3216.00	42.52 PK	74.00	-31.48	1.06 H	287	7.76	34.76
6	4824.00	49.63 PK	74.00	-24.37	1.00 H	114	11.78	37.86

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
  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. “ \* “ : Fundamental frequency



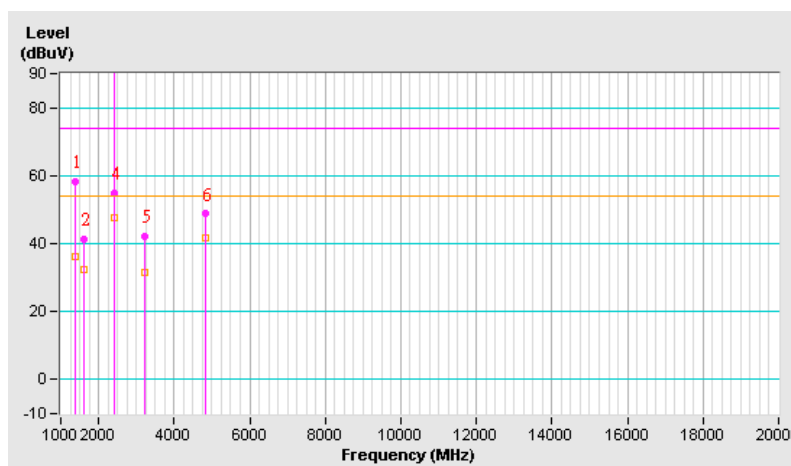




<b>EUT</b>	Notebook PC with 802.11b/g Wireless LAN	<b>MODEL</b>	3200 Series
<b>MODE</b>	Channel 1	<b>FREQUENCY RANGE</b>	1000MHz – 24835MHz
<b>MODULATION</b>	CCK		
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>DETECTOR FUNCTION</b>	Peak (PK) Average (AV)
<b>ENVIRONMENTAL CONDITIONS</b>	20 deg. C, 70% RH, 1005 hPa	<b>TESTED BY:</b> Steven Lu	

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	1395.00	58.25 PK	74.00	-15.75	1.27 V	11	29.60	28.65
1	1395.00	36.24 AV	54.00	-17.76	1.27 V	11	7.59	28.65
2	1608.00	41.20 PK	74.00	-32.80	1.40 V	252	12.18	29.02
3	*2412.00	108.34 PK			1.01 V	88	76.83	31.51
3	*2412.00	101.03 AV			1.01 V	88	69.52	31.51
4	3216.00	42.24 PK	74.00	-31.76	1.20 V	82	7.48	34.76
5	4824.00	48.75 PK	74.00	-25.25	1.20 V	82	10.90	37.86

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
  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. “ \* “ : Fundamental frequency

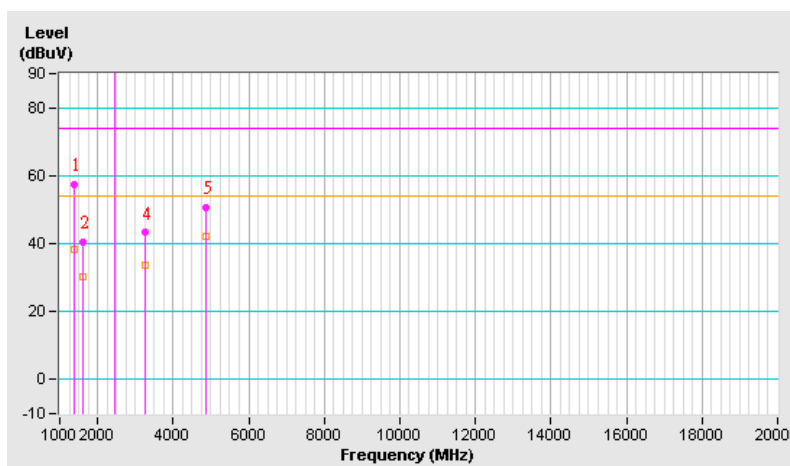




<b>EUT</b>	Notebook PC with 802.11b/g Wireless LAN	<b>MODEL</b>	3200 Series
<b>MODE</b>	Channel 6	<b>FREQUENCY RANGE</b>	1000MHz – 24835MHz
<b>MODULATION</b>	CCK		
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>DETECTOR FUNCTION</b>	Peak (PK) Average (AV)
<b>ENVIRONMENTAL CONDITIONS</b>	20 deg. C, 70% RH, 1005 hPa	<b>TESTED BY:</b> Steven Lu	

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	1395.00	57.52 PK	74.00	-16.48	1.17 H	114	28.87	28.65
1	1395.00	38.50 AV	54.00	-15.50	1.17 H	114	9.85	28.65
2	1624.00	40.32 PK	74.00	-33.68	1.20 H	333	11.22	29.10
3	*2437.00	111.21 PK			1.05 H	60	79.67	31.54
3	*2437.00	104.37 AV			1.05 H	60	72.83	31.54
4	3248.00	43.25 PK	74.00	-30.75	1.02 H	287	8.44	34.81
5	4874.00	50.63 PK	74.00	-23.37	1.40 H	100	12.69	37.94

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
  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. “ \* “ : Fundamental frequency

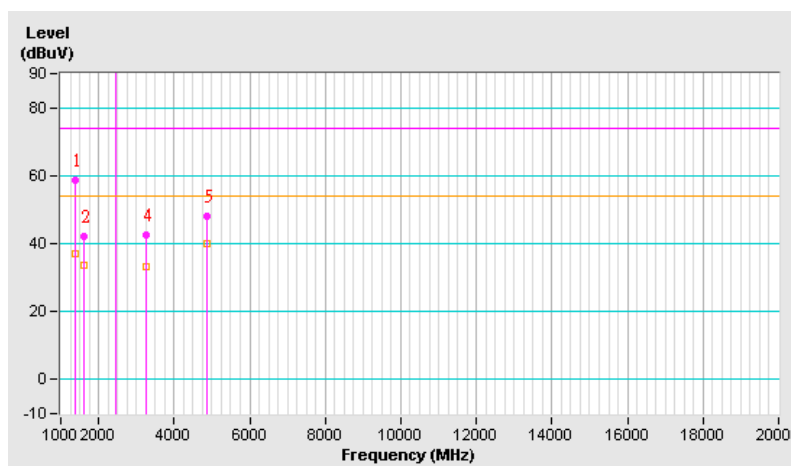




<b>EUT</b>	Notebook PC with 802.11b/g Wireless LAN	<b>MODEL</b>	3200 Series
<b>MODE</b>	Channel 6	<b>FREQUENCY RANGE</b>	1000MHz – 24835MHz
<b>MODULATION</b>	CCK		
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>DETECTOR FUNCTION</b>	Peak (PK) Average (AV)
<b>ENVIRONMENTAL CONDITIONS</b>	20 deg. C, 70% RH, 1005 hPa	<b>TESTED BY:</b> Steven Lu	

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	1395.00	58.52 PK	74.00	-15.48	1.00 V	20	29.87	28.65
1	1395.00	37.00 AV	54.00	-17.00	1.00 V	20	8.35	28.65
2	1624.00	42.21 PK	74.00	-31.79	1.40 V	252	13.11	29.10
3	*2437.00	111.17 PK			1.01 V	88	79.63	31.54
3	*2437.00	103.84 AV			1.01 V	88	72.30	31.54
4	3248.00	42.72 PK	74.00	-31.28	1.40 V	0	7.91	34.81
5	4874.00	48.02 PK	74.00	-25.98	1.20 V	90	10.08	37.94

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
  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. “ \* “ : Fundamental frequency

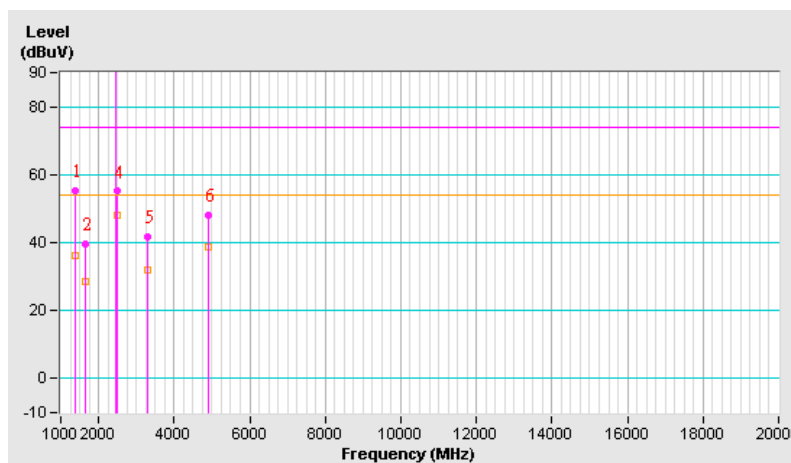




<b>EUT</b>	Notebook PC with 802.11b/g Wireless LAN	<b>MODEL</b>	3200 Series
<b>MODE</b>	Channel 11	<b>FREQUENCY RANGE</b>	1000MHz – 24835MHz
<b>MODULATION</b>	CCK		
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>DETECTOR FUNCTION</b>	Peak (PK) Average (AV)
<b>ENVIRONMENTAL CONDITIONS</b>	20 deg. C, 70% RH, 1005 hPa	<b>TESTED BY:</b> Steven Lu	

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	1395.00	55.24 PK	74.00	-18.76	1.18 H	114	26.60	28.65
1	1395.00	36.24 AV	54.00	-17.76	1.18 H	114	7.60	28.65
2	1641.00	39.55 PK	74.00	-34.45	1.40 H	317	10.37	29.18
3	*2462.00	108.90 PK			1.00 H	120	77.33	31.57
3	*2462.00	101.90 AV			1.00 H	120	70.33	31.57
4	2483.50	55.10 PK	74.00	-18.90	1.00 H	120	23.50	31.60
4	2483.50	48.10 AV	54.00	-5.90	1.00 H	120	16.50	31.60
5	3282.62	41.67 PK	74.00	-32.33	1.29 H	88	6.82	34.86
6	4924.00	48.25 PK	74.00	-25.75	1.00 H	116	10.23	38.02

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
  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. “ \* “ : Fundamental frequency

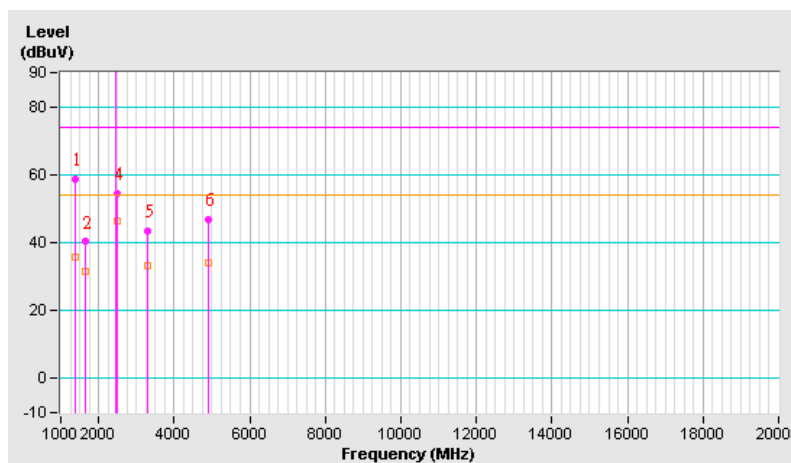




<b>EUT</b>	Notebook PC with 802.11b/g Wireless LAN	<b>MODEL</b>	3200 Series
<b>MODE</b>	Channel 11	<b>FREQUENCY RANGE</b>	1000MHz – 24835MHz
<b>MODULATION</b>	CCK		
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>DETECTOR FUNCTION</b>	Peak (PK) Average (AV)
<b>ENVIRONMENTAL CONDITIONS</b>	20 deg. C, 70% RH, 1005 hPa	<b>TESTED BY:</b> Steven Lu	

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	1395.00	58.74 PK	74.00	-15.26	1.27 V	360	30.10	28.65
1	1395.00	35.58 AV	54.00	-18.42	1.27 V	360	6.94	28.65
2	1641.00	40.21 PK	74.00	-33.79	1.32 V	250	11.03	29.18
3	*2462.00	108.40 PK			1.00 V	84	76.83	31.57
3	*2462.00	100.24 AV			1.00 V	84	68.67	31.57
4	2483.50	54.60 PK	74.00	-19.40	1.00 V	84	23.00	31.60
4	2483.50	46.44 AV	54.00	-7.56	1.00 V	84	14.84	31.60
5	3282.62	43.39 PK	74.00	-30.61	1.50 V	4	8.54	34.86
6	4924.00	46.75 PK	74.00	-27.25	1.39 V	101	8.73	38.02

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
  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. “ \* “ : Fundamental frequency

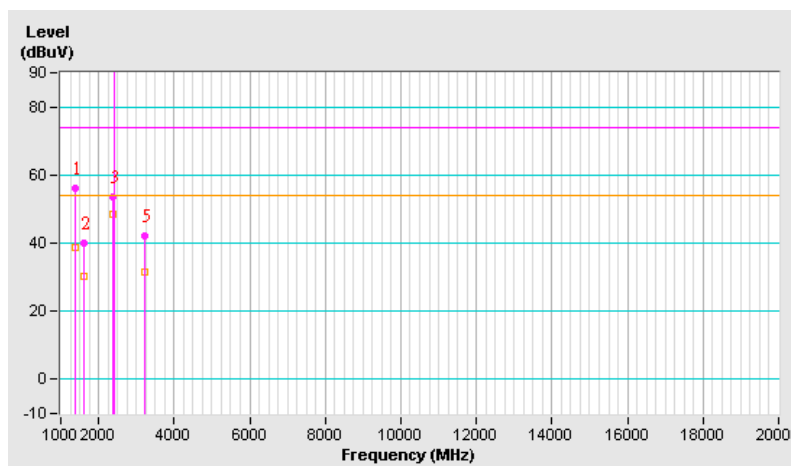




<b>EUT</b>	Notebook PC with 802.11b/g Wireless LAN	<b>MODEL</b>	3200 Series
<b>MODE</b>	Channel 1	<b>FREQUENCY RANGE</b>	1000MHz – 24835MHz
<b>MODULATION</b>	OFDM		
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>DETECTOR FUNCTION</b>	Peak (PK) Average (AV)
<b>ENVIRONMENTAL CONDITIONS</b>	20 deg. C, 70% RH, 1005 hPa	<b>TESTED BY:</b> Steven Lu	

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	1395.00	56.25 PK	74.00	-17.75	1.17 H	114	27.60	28.65
1	1395.00	38.52 AV	54.00	-15.48	1.17 H	114	9.87	28.65
2	1608.00	40.20 PK	74.00	-33.80	1.22 H	302	11.18	29.02
3	2390.00	53.44 PK	74.00	-20.56	1.32 H	60	21.96	31.48
3	2390.00	48.28 AV	54.00	-5.72	1.32 H	60	16.80	31.48
4	*2412.00	104.84 PK			1.32 H	60	73.33	31.51
4	*2412.00	99.68 AV			1.32 H	60	68.17	31.51
5	3216.00	42.27 PK	74.00	-31.73	1.33 H	90	7.51	34.76

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

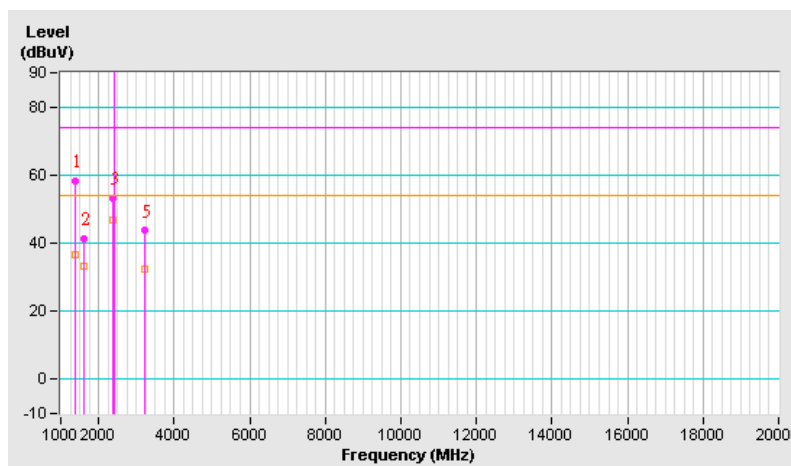




<b>EUT</b>	Notebook PC with 802.11b/g Wireless LAN	<b>MODEL</b>	3200 Series
<b>MODE</b>	Channel 1	<b>FREQUENCY RANGE</b>	1000MHz – 24835MHz
<b>MODULATION</b>	OFDM		
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>DETECTOR FUNCTION</b>	Peak (PK) Average (AV)
<b>ENVIRONMENTAL CONDITIONS</b>	20 deg. C, 70% RH, 1005 hPa	<b>TESTED BY:</b> Steven Lu	

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	1395.00	58.25 PK	74.00	-15.75	1.27 V	12	29.60	28.65
1	1395.00	36.52 AV	54.00	-17.48	1.27 V	12	7.87	28.65
2	1608.00	41.25 PK	74.00	-32.75	1.40 V	252	12.23	29.02
3	2390.00	53.11 PK	74.00	-20.89	1.20 V	88	21.63	31.48
3	2390.00	46.94 AV	54.00	-7.06	1.20 V	88	15.46	31.48
4	*2412.00	104.51 PK			1.00 V	88	73.00	31.51
4	*2412.00	98.34 AV			1.00 V	88	66.83	31.51
5	3216.00	43.63 PK	74.00	-30.37	1.20 V	85	8.87	34.76

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
  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. “ \* “ : Fundamental frequency

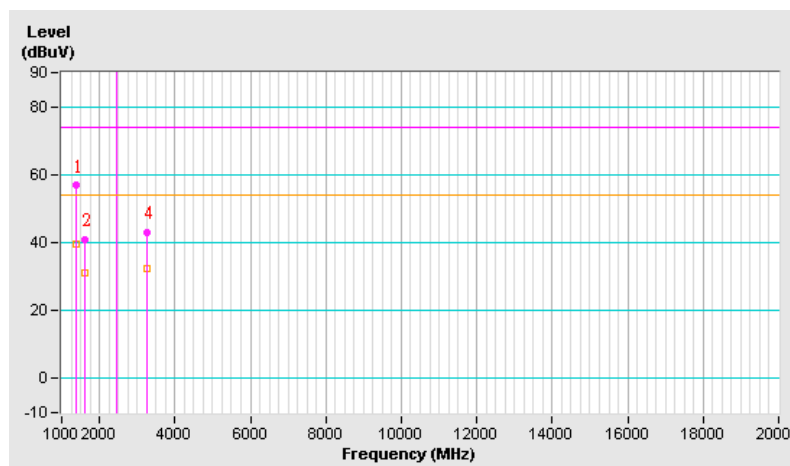




<b>EUT</b>	Notebook PC with 802.11b/g Wireless LAN	<b>MODEL</b>	3200 Series
<b>MODE</b>	Channel 6	<b>FREQUENCY RANGE</b>	1000MHz – 24835MHz
<b>MODULATION</b>	OFDM		
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>DETECTOR FUNCTION</b>	Peak (PK) Average (AV)
<b>ENVIRONMENTAL CONDITIONS</b>	20 deg. C, 70% RH, 1005 hPa	<b>TESTED BY:</b> Steven Lu	

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	1395.00	56.74 PK	74.00	-17.26	1.17 H	120	28.09	28.65
1	1395.00	39.63 AV	54.00	-14.37	1.17 H	120	10.98	28.65
2	1624.00	41.00 PK	74.00	-33.00	1.22 H	300	11.90	29.10
3	*2437.00	105.52 PK			1.32 H	54	73.98	31.54
3	*2437.00	100.50 AV			1.32 H	54	68.96	31.54
4	3248.00	42.85 PK	74.00	-31.15	1.34 H	100	8.04	34.81

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
  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. “ \* “ : Fundamental frequency



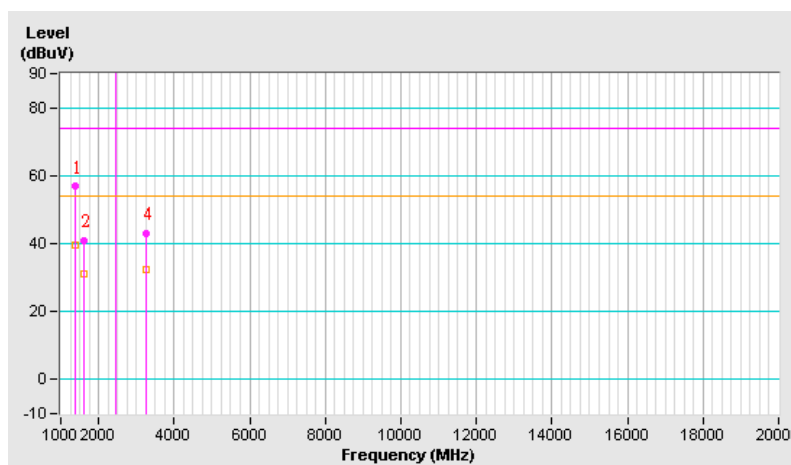




<b>EUT</b>	Notebook PC with 802.11b/g Wireless LAN	<b>MODEL</b>	3200 Series
<b>MODE</b>	Channel 6	<b>FREQUENCY RANGE</b>	1000MHz – 24835MHz
<b>MODULATION</b>	OFDM		
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>DETECTOR FUNCTION</b>	Peak (PK) Average (AV)
<b>ENVIRONMENTAL CONDITIONS</b>	20 deg. C, 70% RH, 1005 hPa	<b>TESTED BY:</b> Steven Lu	

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	1395.00	58.25 PK	74.00	-15.75	1.26 V	10	29.60	28.65
1	1395.00	36.85 AV	54.00	-17.15	1.26 V	10	8.20	28.65
2	1624.00	42.53 PK	74.00	-31.47	1.40 V	252	13.43	29.10
3	*2437.00	104.75 PK			1.20 V	88	73.21	31.54
3	*2437.00	98.52 AV			1.20 V	88	66.98	31.54
4	3248.00	43.85 PK	74.00	-30.15	1.20 V	78	9.04	34.81

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
  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. “ \* “ : Fundamental frequency

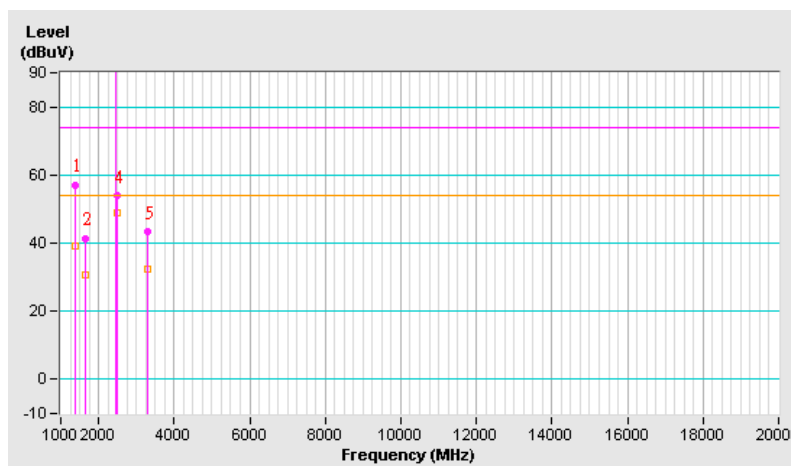




<b>EUT</b>	Notebook PC with 802.11b/g Wireless LAN	<b>MODEL</b>	3200 Series
<b>MODE</b>	Channel 11	<b>FREQUENCY RANGE</b>	1000MHz – 24835MHz
<b>MODULATION</b>	OFDM		
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>DETECTOR FUNCTION</b>	Peak (PK) Average (AV)
<b>ENVIRONMENTAL CONDITIONS</b>	20 deg. C, 70% RH, 1005 hPa	<b>TESTED BY:</b> Steven Lu	

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	1395.00	56.85 PK	74.00	-17.15	1.20 H	115	28.20	28.65
1	1395.00	38.96 AV	54.00	-15.04	1.20 H	115	10.31	28.65
2	1641.00	41.25 PK	74.00	-32.75	1.20 H	321	12.07	29.18
3	*2462.00	104.96 PK			1.32 H	68	73.39	31.57
3	*2462.00	99.89 AV			1.32 H	68	68.32	31.57
4	2483.50	53.79 PK	74.00	-20.21	1.32 H	68	22.19	31.60
4	2483.50	48.74 AV	54.00	-5.26	1.32 H	68	17.14	31.60
5	3282.00	43.25 PK	74.00	-30.75	1.40 H	96	8.40	34.85

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
  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. “ \* “ : Fundamental frequency

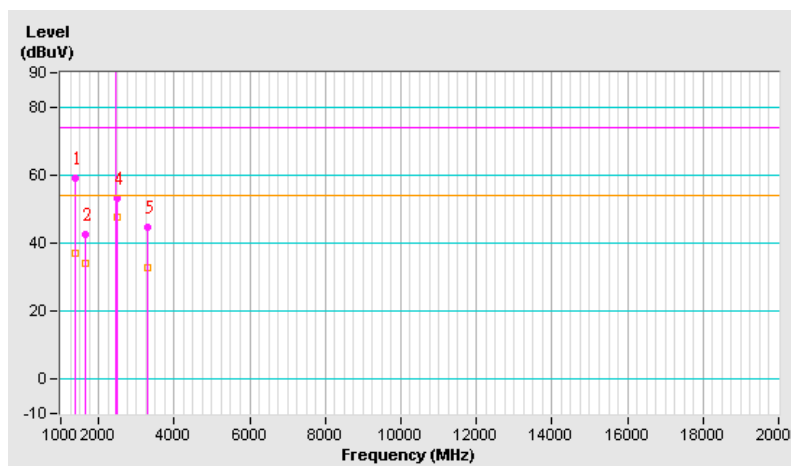




<b>EUT</b>	Notebook PC with 802.11b/g Wireless LAN	<b>MODEL</b>	3200 Series
<b>MODE</b>	Channel 11	<b>FREQUENCY RANGE</b>	1000MHz – 24835MHz
<b>MODULATION</b>	OFDM		
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>DETECTOR FUNCTION</b>	Peak (PK) Average (AV)
<b>ENVIRONMENTAL CONDITIONS</b>	20 deg. C, 70% RH, 1005 hPa	<b>TESTED BY:</b> Steven Lu	

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	1395.00	58.96 PK	74.00	-15.04	1.30 V	1	30.31	28.65
1	1395.00	36.89 AV	54.00	-17.11	1.30 V	1	8.24	28.65
2	1641.00	42.52 PK	74.00	-31.48	1.40 V	150	13.34	29.18
3	*2462.00	104.22 PK			1.20 V	88	72.65	31.57
3	*2462.00	98.68 AV			1.20 V	88	67.11	31.57
4	2483.50	53.05 PK	74.00	-20.95	1.20 V	88	21.45	31.60
4	2483.50	47.51 AV	54.00	-6.49	1.20 V	88	15.91	31.60
5	3282.00	44.63 PK	74.00	-29.37	1.20 V	78	9.78	34.85

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
  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. “ \* “ : 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
SPECTRUM ANALYZER	FSP 40	100035	Apr. 14. 2004

**NOTE:** The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

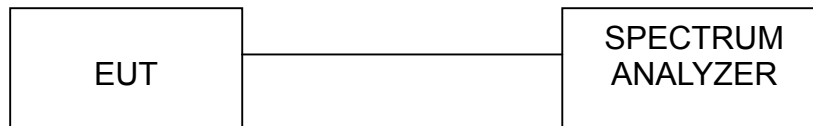
### 4.3.3 TEST PROCEDURE

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 6dB.

### 4.3.4 DEVIATION FROM TEST STANDARD

No deviation.

### 4.3.5 TEST SETUP



### 4.3.6 EUT OPERATING CONDITION

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



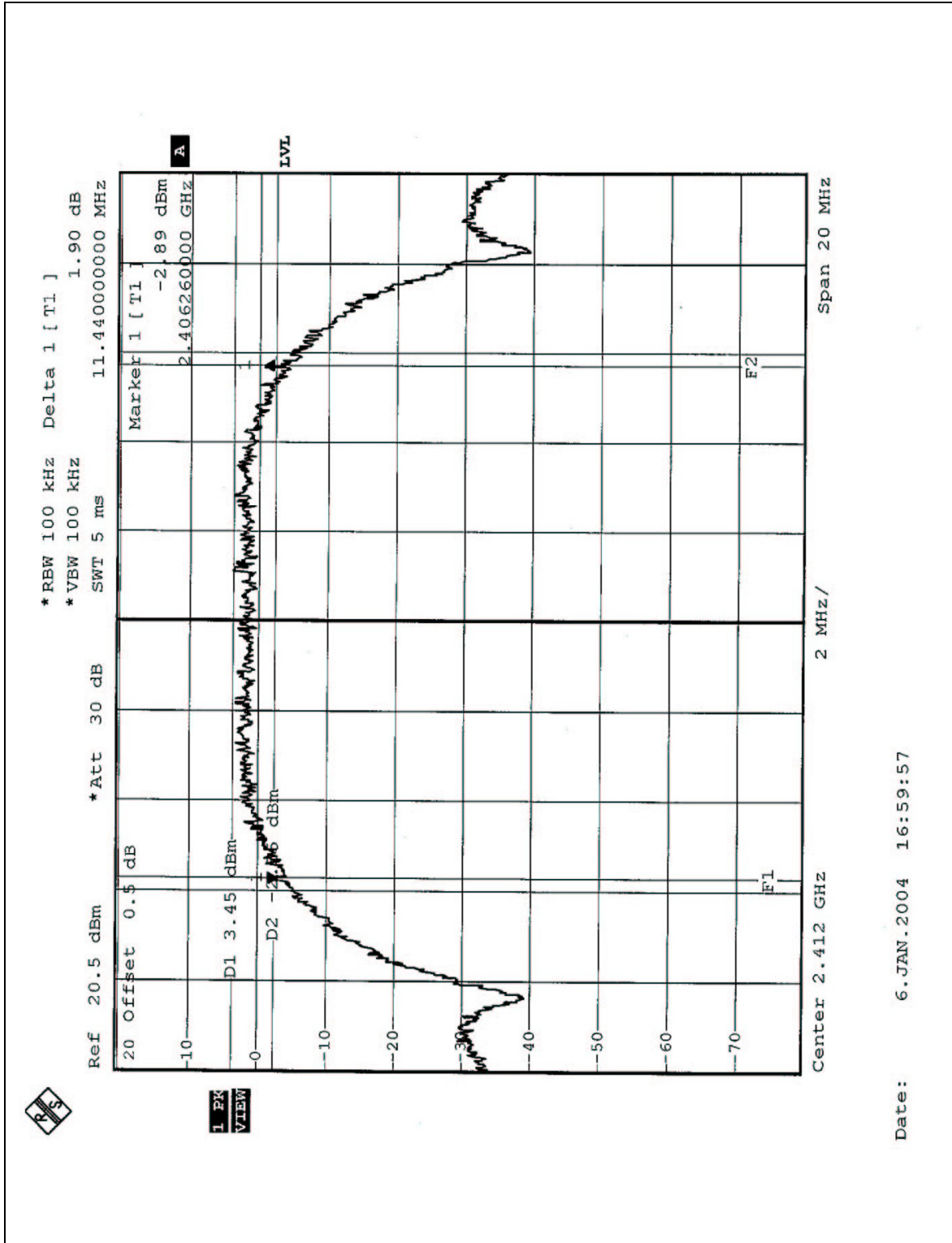
### 4.3.7 TEST RESULTS

<b>EUT</b>	Notebook PC with 802.11b/g Wireless LAN	<b>MODEL</b>	3200 Series
<b>MODULATION MODE</b>	CCK	<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz
<b>ENVIRONMENTAL CONDITIONS</b>	20deg. C, 60%RH, 1005hPa	<b>TESTED BY:</b> Jamison Chan	

<b>CHANNEL</b>	<b>CHANNEL FREQUENCY (MHz)</b>	<b>6dB BANDWIDTH (MHz)</b>	<b>MINIMUM LIMIT (MHz)</b>	<b>PASS/FAIL</b>
1	2412	11.44	0.5	PASS
6	2437	10.68	0.5	PASS
11	2462	10.60	0.5	PASS



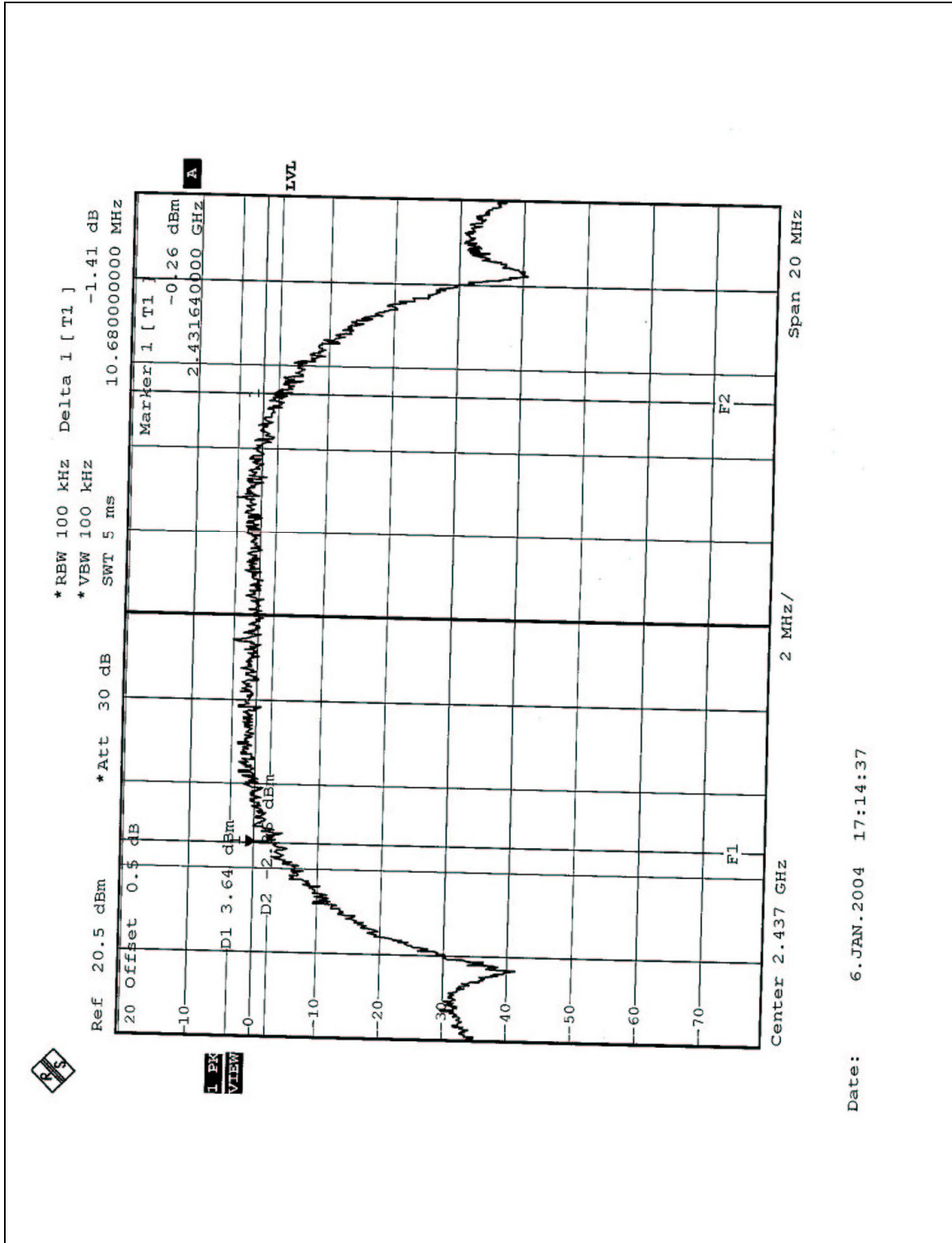
CH1



Date: 6.JAN.2004 16:59:57



CH6



Date: 6.JAN.2004 17:14:37