



FCC TEST REPORT

REPORT NO.: RF930909H01F
MODEL NO.: AT-WCU201G
RECEIVED: Dec. 28, 2005
TESTED: Jan. 26 to Feb. 07, 2006

APPLICANT: Allied Telesyn Inc.
ADDRESS: 3200 North First Street San Jose, CA 95134

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 80 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.





Table of Contents

1	CERTIFICATION.....	4
2	SUMMARY OF TEST RESULTS.....	5
3	GENERAL INFORMATION	6
3.1	GENERAL DESCRIPTION OF EUT.....	6
3.2	DESCRIPTION OF TEST MODES.....	7
3.2.1	TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL:.....	8
3.3	GENERAL DESCRIPTION OF APPLIED STANDARDS	10
3.4	DESCRIPTION OF SUPPORT UNITS.....	11
3.5	CONFIGURATION OF SYSTEM UNDER TEST	12
4	TEST TYPES AND RESULTS.....	13
4.1	CONDUCTED EMISSION MEASUREMENT	13
4.1.1	LIMITS OF CONDUCTED EMISSION MEASUREMENT	13
4.1.2	TEST INSTRUMENTS	13
4.1.3	TEST PROCEDURES.....	14
4.1.4	TEST SETUP	14
4.1.5	EUT OPERATING CONDITIONS.....	15
4.1.6	TEST RESULTS.....	16
4.2	RADIATED EMISSION MEASUREMENT	18
4.2.1	LIMITS OF RADIATED EMISSION MEASUREMENT	18
4.2.2	TEST INSTRUMENTS	19
4.2.3	TEST PROCEDURES.....	20
4.2.4	TEST SETUP	21
4.2.5	EUT OPERATING CONDITIONS.....	21
4.2.6	TEST RESULTS.....	22
4.2.7	TEST RESULTS –DSSS	24
4.2.8	TEST RESULTS -OFDM	27
4.3	6dB BANDWIDTH MEASUREMENT	31
4.3.1	LIMITS OF 6dB BANDWIDTH MEASUREMENT	31
4.3.2	TEST INSTRUMENTS	31
4.3.3	TEST PROCEDURE	32
4.3.4	TEST SETUP	32
4.3.5	EUT OPERATING CONDITIONS.....	32
4.3.6	TEST RESULTS-DSSS.....	33
4.3.7	TEST RESULTS-OFDM.....	37
4.4	MAXIMUM PEAK OUTPUT POWER	42



4.4.1	LIMITS OF MAXIMUM PEAK OUTPUT POWER MEASUREMENT	42
4.4.2	TEST INSTRUMENTS	42
4.4.3	TEST PROCEDURES	43
4.4.4	TEST SETUP	43
4.4.5	EUT OPERATING CONDITIONS	43
4.4.6	TEST RESULTS- DSSS	44
4.4.7	TEST RESULTS- OFDM	45
4.5	POWER SPECTRAL DENSITY MEASUREMENT	46
4.5.1	LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT	46
4.5.2	TEST INSTRUMENTS	46
4.5.3	TEST PROCEDURE	47
4.5.4	TEST SETUP	47
4.5.5	EUT OPERATING CONDITIONS	47
4.5.6	TEST RESULTS-DSSS	48
4.5.7	TEST RESULTS-OFDM	52
4.6	BAND EDGES MEASUREMENT	57
4.6.1	LIMITS OF BAND EDGES MEASUREMENT	57
4.6.2	TEST INSTRUMENTS	57
4.6.3	TEST PROCEDURE	57
4.6.4	EUT OPERATING CONDITION	57
4.6.5	TEST RESULTS –DSSS	58
4.6.6	TEST RESULTS –OFDM	65
4.7	ANTENNA REQUIREMENT	76
4.7.1	STANDARD APPLICABLE	76
4.7.2	ANTENNA CONNECTED CONSTRUCTION	76
5	PHOTOGRAPHS OF THE TEST CONFIGURATION	77
6	INFORMATION ON THE TESTING LABORATORIES	80



1 CERTIFICATION

PRODUCT : 802.11 b/g Wireless USB Adapter
BRAND NAME : ATI
MODEL NO. : AT-WCU201G
TESTED: Jan. 26 to Feb. 07, 2006
APPLICANT : Allied Telesyn Inc.
TEST ITEM: ENGINEERING SAMPLE
STANDARDS : 47 CFR Part 15, Subpart C (Section 15.247),
ANSI C63.4-2001

The above equipment (Model: AT-WCU201G) has 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 : Midoli Peng , **DATE:** Feb. 07, 2006
(Midoli Peng)

TECHNICAL ACCEPTANCE : Hank Chung , **DATE:** Feb. 07, 2006
Responsible for RF (Hank Chung)

APPROVED BY : May Chen , **DATE:** Feb. 07, 2006
(May Chen, Deputy 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 -15.33 dB at 0.376 MHz
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 -0.9dB at 9748.00MHz
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	802.11 b/g Wireless USB Adapter
MODEL NO.	AT-WCU201G
POWER SUPPLY	5Vdc from host equipment
MODULATION TYPE	CCK, OFDM, DBPSK, DQPSK
RADIO TECHNOLOGY	DSSS, OFDM
TRANSFER RATE	1/2/5.5/6/9/11/12/18/24/36/48/54Mbps (Turbo mode at channel 6: up to 108Mbps)
FREQUENCY RANGE	2412MHz ~ 2462MHz
NUMBER OF CHANNEL	11
OUTPUT POWER	802.11b: 90.157mW 802.11g: 67.764mW
ANTENNA TYPE	Chip antenna, gain: 0dBi
DATA CABLE	USB cable (shielded, 0.2m)
ASSOCIATED DEVICES	NA

NOTE:

1. The EUT operates in both the 2.4GHz Bands and compatibility with 802.11b, 802.11g technology.
2. The EUT complies with IEEE 802.11g standards, and backwards compatible with IEEE 802.11b products.
3. The above EUT information was declared by the manufacturer and 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/g: 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		

For 802.11g turbo mode: One channel is provided to this EUT

Channel	Frequency
6	2437 MHz



3.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL:

EUT configure mode	Applicable to				Description
	PLC	RE<1G	RE≥1G	APCM	
-	X	X	X	X	NA

Where PLC: Power Line Conducted Emission RE<1G RE: Radiated Emission below 1GHz
 RE≥1G: Radiated Emission above 1GHz APCM: Antenna Port Conducted Measurement

Power Line Conducted Emission Test:

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11g	1 to 11	11	OFDM	BPSK	6

Radiated Emission Test (Below 1 GHz):

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11g	1 to 11	11	OFDM	BPSK	6

Radiated Emission Test (Above 1 GHz):

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11b	1 to 11	1, 6, 11	DSSS	CCK	11
802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6
802.11g turbo	6	6	OFDM	BPSK	12

**Bandedge Measurement:**

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11b	1 to 11	1, 11	DSSS	CCK	11
802.11g	1 to 11	1, 11	OFDM	BPSK	6
802.11g turbo	6	6	OFDM	BPSK	12

Antenna Port Conducted Measurement:

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11b	1 to 11	1, 6, 11	DSSS	CCK	11
802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6
802.11g turbo	6	6	OFDM	BPSK	12



3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is an 802.11 b/g Wireless USB Adapter. 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)
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 47 CFR 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.

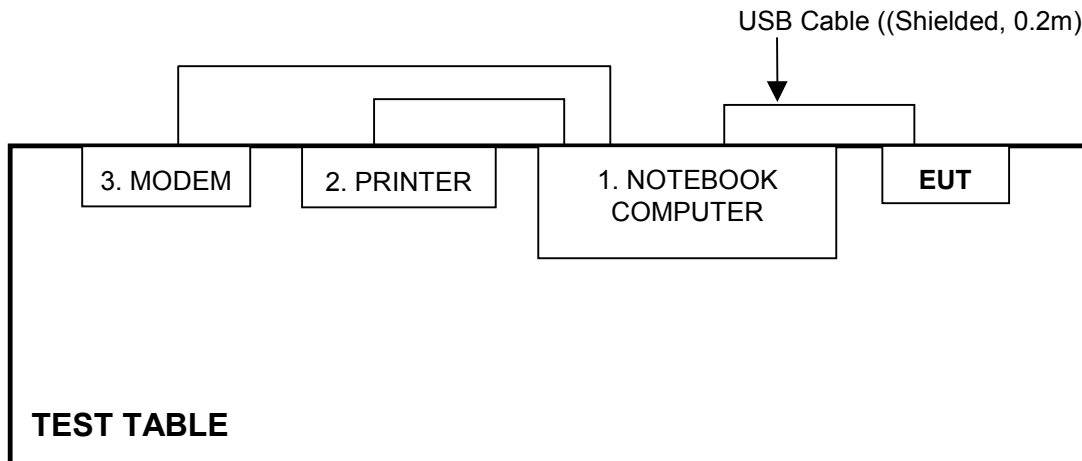
NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	NOTEBOOK COMPUTER	Dell	PP01L	TW-09c748-12800- 165-3171	FCC DoC
2	PRINTER	HP	C2642A	MY79F1C3MZ	B94C2642X
3	MODEM	ACEEX	1414	0206026776	IFAXDM1414

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	NA
2	1.9m braid shielded wire, terminated with DB25 and Centronics connector via metallic frame, w/o core
3	1.0 m braid shielded wire, terminated with DB25 and DB9 connector via metallic frame, w/o core.

NOTE: All power cords of the above support units are non-shielded (1.8m).

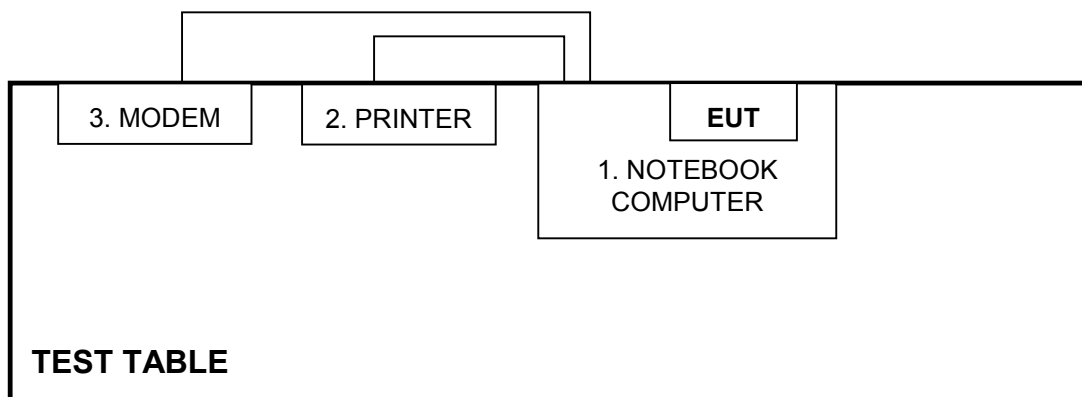
3.5 CONFIGURATION OF SYSTEM UNDER TEST

With USB Cable:



NOTE: 1. Please refer to the photos of test configuration in Item 5 also.

Without USB Cable:



NOTE: 1. Please refer to the photos of test configuration in Item 5 also.



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 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. All emanations from a class 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

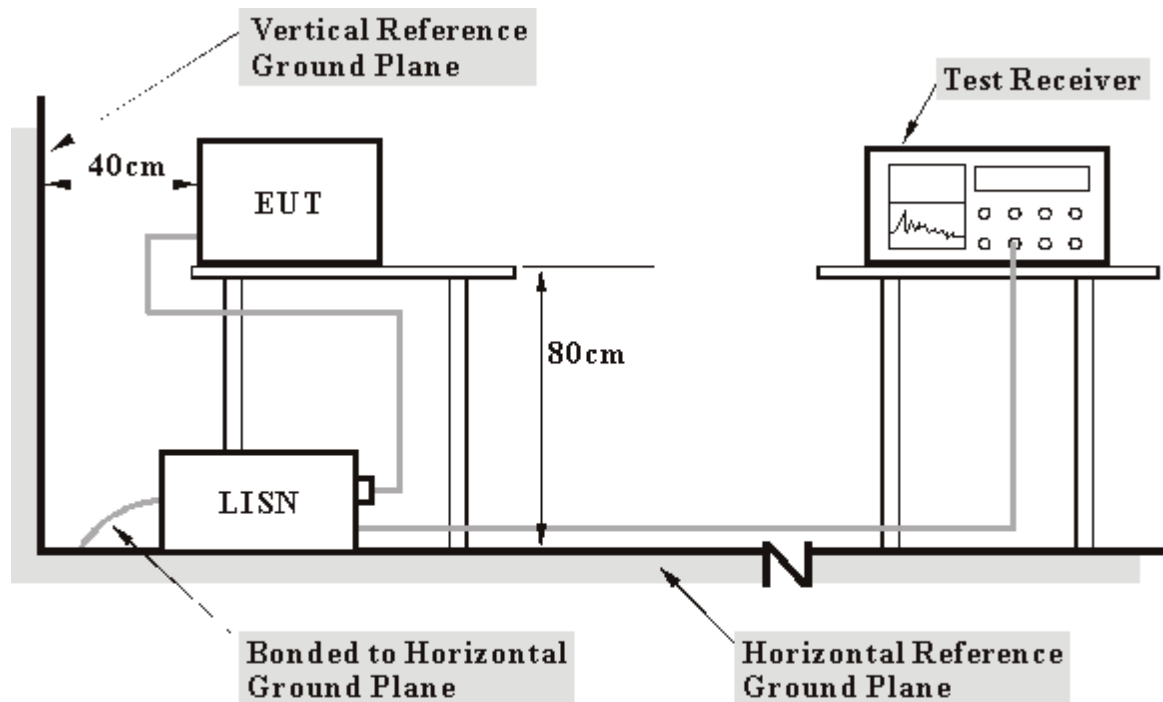
DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
Test Receiver	ESCS 30	100375	Sep. 19, 2006
Line-Impedance Stabilization Network(for EUT)	ENV-216	100071	Nov. 10, 2006
ROHDE & SCHWARZ LISN	ESH3-Z5	848773/004	Oct. 24, 2006
RF Signal Cable	RG233	COBCAB9K-30MHz	Dec. 10, 2006
Impedance-stabilization-network	ENY 41	838119/024	Jan. 09, 2007
Impedance-stabilization-network	ENY 22	837497/019	Jan. 09, 2007
Current Probe	SMZ11	18001	Jul. 13, 2006
Current Probe	SMZ11	18013	Jul. 13, 2006

- 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. B.
 3. The VCCI Con B Registration No. is C-2193.

4.1.3 TEST PROCEDURES

- a. The EUT/HOST was placed 0.4 meters from the conducting wall of the shielded room with EUT/HOST 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/HOST 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 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.



4.1.5 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 v52build10.exe" to enable EUT under transmission condition continuously at specific channel frequency.
- c. Notebook computer sends "H" messages to modem.
- d. Notebook computer sends "H" messages to printer, and the printer prints them on paper.

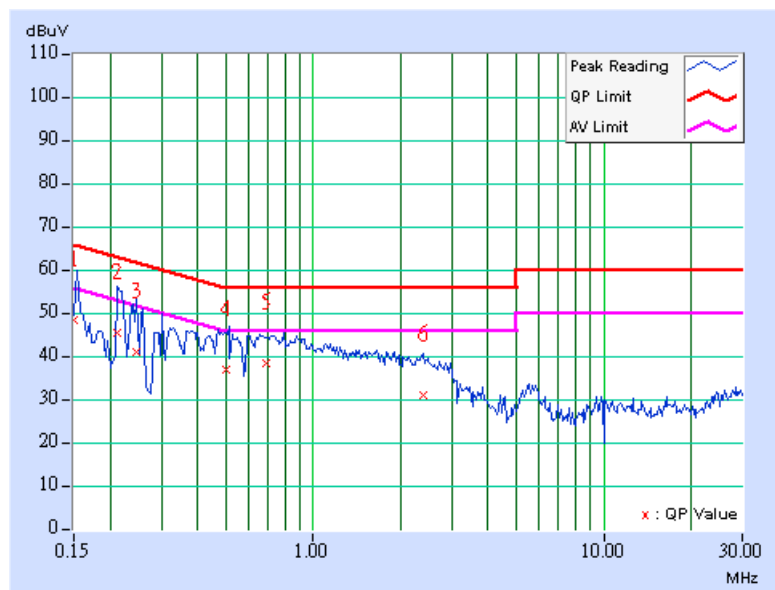


4.1.6 TEST RESULTS

EUT	802.11 b/g Wireless USB Adapter	MODEL	AT-WCU201G
MODE	Without USB Cable, Channel 11	6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	22 deg. C, 66%RH, 968 hPa	TESTED BY	Eric Lee

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	0.150	9.48	39.27	-	48.75	-	66.00
2	0.213	9.21	36.43	-	45.64	-	63.11	53.11	-17.47	-
3	0.248	9.21	31.71	-	40.92	-	61.84	51.84	-20.92	-
4	0.500	9.18	27.65	-	36.83	-	56.00	46.00	-19.17	-
5	0.685	9.20	29.30	-	38.50	-	56.00	46.00	-17.50	-
6	2.388	9.26	21.93	-	31.19	-	56.00	46.00	-24.81	-

- 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.

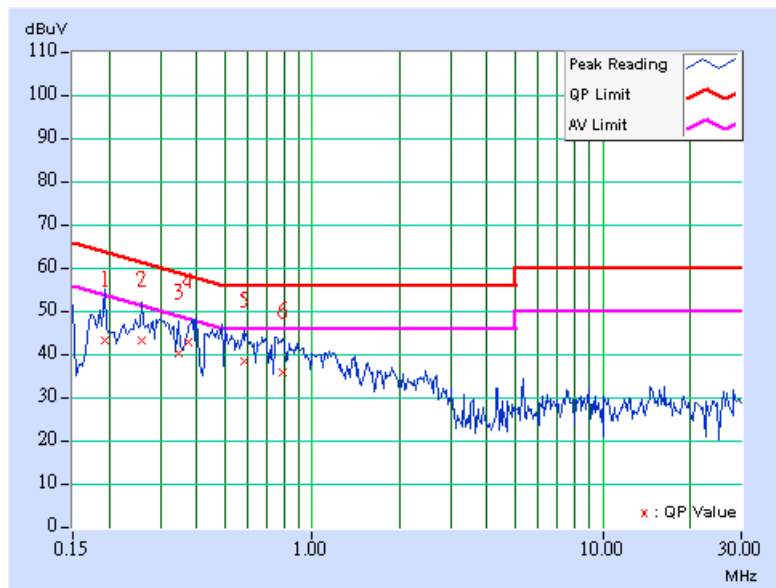




EUT	802.11 b/g Wireless USB Adapter	MODEL	AT-WCU201G
MODE	Without USB Cable, Channel 11	6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	22 deg. C, 66%RH, 968 hPa	TESTED BY	Eric Lee

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	9.19	34.06	-	43.25	-	63.91
2	0.259	9.20	34.01	-	43.21	-	61.45	51.45	-18.24	-
3	0.345	9.22	31.25	-	40.47	-	59.07	49.07	-18.61	-
4	0.376	9.23	33.81	-	43.04	-	58.37	48.37	-15.33	-
5	0.588	9.22	29.32	-	38.54	-	56.00	46.00	-17.46	-
6	0.795	9.20	26.67	-	35.87	-	56.00	46.00	-20.13	-

- 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.





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
ADVANTEST Spectrum Analyzer	R3271A	85060311	July 07, 2006
HP Pre_Amplifier	8449B	3008A01922	Oct. 02, 2006
ROHDE & SCHWARZ Test Receiver	ESCS30	100287	Dec. 08, 2006
CHASE Broadband Antenna	VULB9168	138	Dec. 21, 2006
Schwarzbeck Horn_Antenna	BBHA9120	D124	Dec. 11, 2006
Schwarzbeck Horn_Antenna	BBHA 9170	BBHA9170153	Jan. 30, 2006
SCHWARZBECK Biconical Antenna	VHBA9123	459	Jun. 26, 2006
SCHWARZBECK Periodic Antenna	UPA6108	1148	Jun. 26, 2006
RF Switches (ARNITSU)	CS-201	1565157	NA
RF CABLE (Chaintek) 1GHz-20GHz	SF102	22054-2	Nov. 16. 2006
RF Cable(RICHTEC)	9913-30M	STCCAB-30M- 1GHz-021	Jul. 16, 2006
Software	ADT_Radiated_V 5.14	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 Periodic 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 following table is for the measurement uncertainty, which is calculated as per the document CISPR 16-4. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Measurement	Value
Radiated emissions (30MHz-1GHz)	2.98 dB
Radiated emissions (1GHz ~18GHz)	2.21 dB
Radiated emissions (18GHz ~20GHz)	1.88 dB



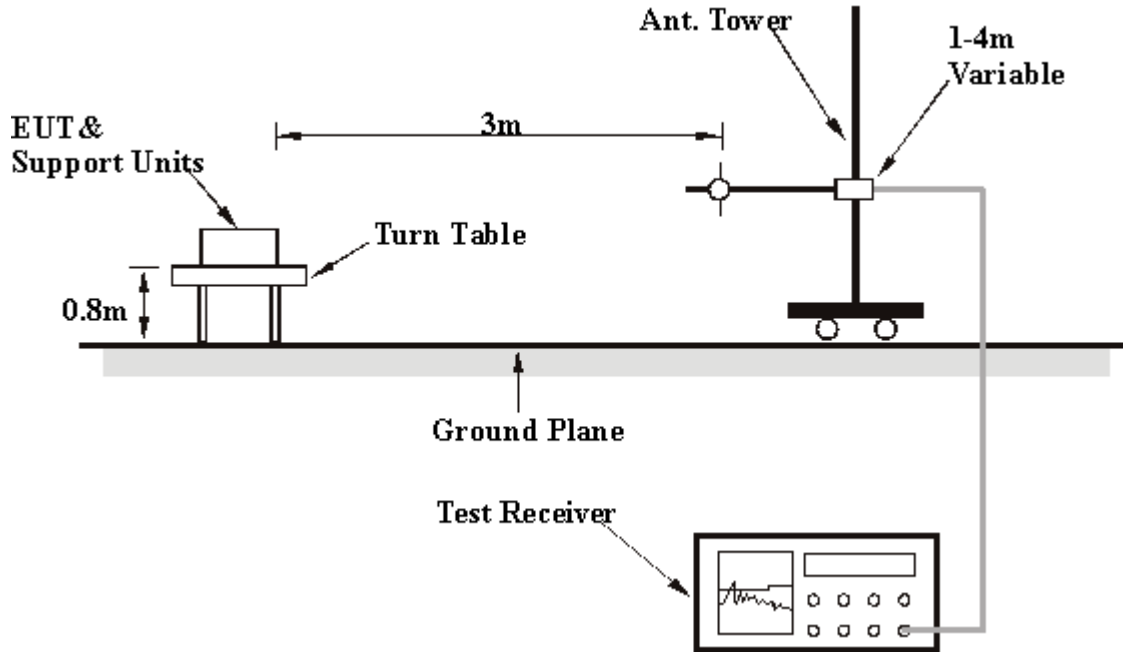
4.2.3 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 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 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 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.

4.2.4 TEST SETUP



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

4.2.5 EUT OPERATING CONDITIONS

Same as 4.1.5.



4.2.6 TEST RESULTS

EUT	802.11 b/g Wireless USB Adapter	MODEL	AT-WCU201G
MODE	Channel 11, With USB Cable	FREQUENCY RANGE	30-1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION & BANDWIDTH	Quasi-Peak, 120kHz
ENVIRONMENTAL CONDITIONS	20 deg. C, 60%RH, 968 hPa	TESTED BY	Eric Lee

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	200.00	31.50 QP	43.50	-12.00	1.42 H	29	22.60	8.90
2	202.00	26.50 QP	43.50	-17.00	1.04 H	111	17.60	8.90
3	271.30	29.70 QP	46.00	-16.30	1.47 H	54	15.80	13.80
4	331.32	35.60 QP	46.00	-10.40	1.00 H	219	15.80	19.80
5	354.60	35.30 QP	46.00	-10.70	1.54 H	98	14.60	20.70
6	446.30	41.20 QP	46.00	-4.80	1.28 H	95	17.70	23.50
7	744.40	34.50 QP	46.00	-11.50	1.34 H	94	4.70	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	133.30	34.50 QP	43.50	-9.00	1.19 V	2	19.90	14.60
2	197.23	32.30 QP	43.50	-11.20	1.56 V	229	15.50	16.90
3	200.03	30.20 QP	43.50	-13.30	1.74 V	346	13.40	16.80
4	266.00	31.80 QP	46.00	-14.20	1.84 V	68	13.90	17.90
5	326.30	34.30 QP	46.00	-11.70	1.01 V	245	16.70	17.60
6	407.20	34.20 QP	46.00	-11.80	1.03 V	65	16.60	17.60
7	445.10	38.30 QP	46.00	-7.70	1.52 V	24	19.00	19.30
8	960.00	34.30 QP	46.00	-11.70	1.10 V	326	2.60	31.70

- 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.



EUT	802.11 b/g Wireless USB Adapter	MODEL	AT-WCU201G
MODE	Channel 11, Without USB Cable	FREQUENCY RANGE	30-1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION & BANDWIDTH	Quasi-Peak, 120kHz
ENVIRONMENTAL CONDITIONS	20 deg. C, 60%RH, 968 hPa	TESTED BY	Eric Lee

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	199.99	30.50 QP	43.50	-13.00	1.25 H	336	21.70	8.90
2	271.31	31.40 QP	46.00	-14.60	1.50 H	56	17.60	13.80
3	331.50	35.00 QP	46.00	-11.00	1.99 H	37	15.20	19.80
4	356.00	36.80 QP	46.00	-9.20	1.64 H	54	16.10	20.70
5	466.20	40.00 QP	46.00	-6.00	1.51 H	5	14.80	25.20
6	744.53	36.70 QP	46.00	-9.30	2.00 H	9	6.90	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	133.33	32.10 QP	43.50	-11.40	1.19 V	2	17.60	14.60
2	198.01	33.20 QP	43.50	-10.30	1.56 V	229	16.40	16.80
3	200.00	29.90 QP	43.50	-13.60	1.08 V	91	13.10	16.80
4	250.00	25.60 QP	46.00	-20.40	1.20 V	2	8.50	17.10
5	265.98	30.50 QP	46.00	-15.50	1.43 V	2	12.60	17.90
6	326.20	32.50 QP	46.00	-13.50	1.01 V	245	14.90	17.60
7	407.20	35.20 QP	46.00	-10.80	1.36 V	64	17.60	17.60
8	445.10	37.20 QP	46.00	-8.80	1.40 V	61	18.00	19.30
9	960.00	35.40 QP	46.00	-10.60	1.25 V	64	3.70	31.70

- 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.



4.2.7 TEST RESULTS –DSSS

EUT	802.11 b/g Wireless USB Adapter	MODEL	AT-WCU201G
MODE	Channel 1	FREQUENCY RANGE	1000~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION & BANDWIDTH	Peak (PK) Average (AV) 1 MHz
ENVIRONMENTAL CONDITIONS	30 deg. C, 55%RH, 968 hPa	TESTED BY	Sky Liao

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	2375.00	47.50 PK	74.00	-26.50	1.48 H	156	16.80	30.70
2	2390.00	47.40 PK	74.00	-26.60	1.42 H	1	13.60	33.80
3	*2412.00	105.10 PK			1.42 H	1	75.20	29.90
3	*2412.00	98.30 AV			1.42 H	1	68.40	29.90
4	4824.00	56.80 PK	74.00	-17.20	1.52 H	232	20.60	36.20
4	4824.00	45.90 AV	54.00	-8.10	1.52 H	232	9.70	36.20
5	7236.00	55.00 PK	74.00	-19.00	1.81 H	0	13.30	41.70
5	7236.00	46.10 AV	54.00	-7.90	1.81 H	0	4.40	41.70
6	9648.00	53.90 PK	74.00	-20.10	1.71 H	248	9.00	44.90
6	9648.00	46.30 AV	54.00	-7.70	1.71 H	248	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	2375.00	49.40 PK	74.00	-24.60	1.59 V	61	18.70	30.70
2	2390.00	50.40 PK	74.00	-23.60	1.05 V	0	16.60	33.80
3	*2412.00	108.10 PK			1.05 V	0	78.20	29.90
3	*2412.00	102.30 AV			1.05 V	0	72.40	29.90
4	4824.00	58.80 PK	74.00	-15.20	1.52 V	42	22.60	36.20
4	4824.00	47.40 AV	54.00	-6.60	1.52 V	42	11.20	36.20
5	7236.00	54.10 PK	74.00	-19.90	1.90 V	325	12.40	41.70
5	7236.00	46.50 AV	54.00	-7.50	1.90 V	325	4.80	41.70
6	9648.00	53.90 PK	74.00	-20.10	1.71 V	248	9.00	44.90
6	9648.00	46.30 AV	54.00	-7.70	1.71 V	248	1.40	44.90

- 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.
 5. The limit value is defined as per 15.247
 6. “ * “ : Fundamental frequency



EUT	802.11 b/g Wireless USB Adapter	MODEL	AT-WCU201G
MODE	Channel 6	FREQUENCY RANGE	1000~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION & BANDWIDTH	Peak (PK) Average (AV) 1 MHz
ENVIRONMENTAL CONDITIONS	30 deg. C, 55%RH, 968 hPa	TESTED BY	Sky Liao

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	107.30 PK			1.18 H	2	77.30	30.00
1	*2437.00	100.60 AV			1.18 H	2	70.60	30.00
2	4874.00	57.70 PK	74.00	-16.30	1.52 H	238	21.20	36.50
2	4874.00	45.80 AV	54.00	-8.20	1.52 H	238	9.30	36.50
3	7311.00	53.60 PK	74.00	-20.40	1.52 H	315	11.80	41.80
3	7311.00	43.60 AV	54.00	-10.40	1.52 H	315	1.80	41.80
4	9748.00	54.20 PK	74.00	-19.80	1.34 H	36	9.60	44.60
4	9748.00	46.10 AV	54.00	-7.90	1.34 H	36	1.50	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	108.50 PK			1.09 V	250	78.50	30.00
1	*2437.00	101.50 AV			1.09 V	250	71.50	30.00
2	4874.00	61.70 PK	74.00	-12.30	1.12 V	350	25.20	36.50
2	4874.00	50.90 AV	54.00	-3.10	1.12 V	350	14.40	36.50
3	7311.00	53.10 PK	74.00	-20.90	1.13 V	246	11.30	41.80
3	7311.00	44.50 AV	54.00	-9.50	1.13 V	246	2.70	41.80
4	9748.00	58.10 PK	74.00	-15.90	1.73 V	325	13.50	44.60
4	9748.00	53.10 AV	54.00	-0.90	1.73 V	325	8.50	44.60

- 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.
 5. The limit value is defined as per 15.247
 6. “ * “ : Fundamental frequency



EUT	802.11 b/g Wireless USB Adapter	MODEL	AT-WCU201G
MODE	Channel 11	FREQUENCY RANGE	1000~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION & BANDWIDTH	Peak (PK) Average (AV) 1 MHz
ENVIRONMENTAL CONDITIONS	30 deg. C, 55%RH, 968 hPa	TESTED BY	Sky Liao

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	*2462.00	104.30 PK			1.00 H	155	74.20	30.10
1	*2462.00	97.80 AV			1.00 H	155	67.80	30.10
2	2483.50	46.30 PK	74.00	-27.70	1.00 H	155	16.20	30.10
3	4924.00	53.00 PK	74.00	-21.00	1.98 H	10	16.30	36.70
3	4924.00	41.90 AV	54.00	-12.10	1.98 H	10	5.20	36.70
4	7386.00	54.60 PK	74.00	-19.40	2.00 H	348	12.80	41.80
4	7386.00	47.30 AV	54.00	-6.70	2.00 H	348	5.50	41.80
5	9848.00	54.20 PK	74.00	-19.80	1.76 H	270	9.80	44.40
5	9848.00	46.60 AV	54.00	-7.40	1.76 H	270	2.20	44.40

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	*2462.00	109.60 PK			1.08 V	250	79.50	30.10
1	*2462.00	103.00 AV			1.08 V	250	72.90	30.10
2	2483.50	51.30 PK	74.00	-22.70	1.08 V	250	21.10	30.10
2	2483.50	43.80 AV	54.00	-10.20	1.08 V	250	13.60	30.10
3	4924.00	58.80 PK	74.00	-15.20	1.79 V	237	22.10	36.70
3	4924.00	46.70 AV	54.00	-7.30	1.79 V	237	10.00	36.70
4	7386.00	55.70 PK	74.00	-18.30	2.03 V	318	13.90	41.80
4	7386.00	46.80 AV	54.00	-7.20	2.03 V	318	5.00	41.80
5	9848.00	57.80 PK	74.00	-16.20	1.70 V	346	13.40	44.40
5	9848.00	52.90 AV	54.00	-1.10	1.70 V	346	8.50	44.40

- 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.
 5. The limit value is defined as per 15.247
 6. “ * “ : Fundamental frequency



4.2.8 TEST RESULTS -OFDM

EUT	802.11 b/g Wireless USB Adapter	MODEL	AT-WCU201G
MODE	Channel 1	FREQUENCY RANGE	1000~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION & BANDWIDTH	Peak (PK) Average (AV) 1 MHz
ENVIRONMENTAL CONDITIONS	30 deg. C, 55%RH, 968 hPa	TESTED BY	Sky Liao

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	50.20 PK	74.00	-23.80	1.65 H	191	16.40	33.80
2	*2412.00	102.30 PK			1.65 H	191	72.40	29.90
2	*2412.00	93.60 AV			1.65 H	191	63.70	29.90
3	4824.00	57.80 PK	74.00	-16.20	1.25 H	120	21.60	36.20
3	4824.00	45.60 AV	54.00	-8.40	1.25 H	120	9.40	36.20
4	7236.00	53.70 PK	74.00	-20.30	1.11 H	18	12.10	41.70
4	7236.00	42.00 AV	54.00	-12.00	1.11 H	18	0.40	41.70
5	9648.00	50.30 PK	74.00	-23.70	1.32 H	20	5.40	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	2390.00	55.30 PK	74.00	-18.70	1.48 V	234	21.50	33.80
1	2390.00	47.50 AV	54.00	-6.50	1.48 V	234	13.70	33.80
2	*2412.00	107.10 PK			1.48 V	234	77.20	29.90
2	*2412.00	98.20 AV			1.48 V	234	68.30	29.90
3	4824.00	58.70 PK	74.00	-15.30	1.77 V	247	22.50	36.20
3	4824.00	44.80 AV	54.00	-9.20	1.77 V	247	8.60	36.20
4	7236.00	54.70 PK	74.00	-19.30	1.00 V	47	13.00	41.70
4	7236.00	43.70 AV	54.00	-10.30	1.00 V	47	2.00	41.70
5	9648.00	50.80 PK	74.00	-23.20	1.77 V	276	5.90	44.90

- 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.
 5. The limit value is defined as per 15.247
 6. “ * “ : Fundamental frequency



EUT	802.11 b/g Wireless USB Adapter	MODEL	AT-WCU201G
MODE	Channel 6	FREQUENCY RANGE	1000~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION & BANDWIDTH	Peak (PK) Average (AV) 1 MHz
ENVIRONMENTAL CONDITIONS	30 deg. C, 55%RH, 968 hPa	TESTED BY	Sky Liao

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	101.80 PK			1.61 H	193	71.80	30.00
1	*2437.00	93.10 AV			1.61 H	193	63.10	30.00
2	4874.00	52.50 PK	74.00	-21.50	1.20 H	35	16.00	36.50
2	4874.00	41.00 AV	54.00	-13.00	1.20 H	35	4.50	36.50
3	7311.00	54.00 PK	74.00	-20.00	1.22 H	185	12.20	41.80
3	7311.00	42.20 AV	54.00	-11.80	1.22 H	185	0.40	41.80
4	9748.00	51.20 PK	74.00	-22.80	1.22 H	331	6.60	44.60
4	9748.00	40.30 AV	54.00	-13.70	1.22 H	331	-4.30	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	106.80 PK			1.77 V	119	76.80	30.00
1	*2437.00	98.00 AV			1.77 V	119	68.00	30.00
2	4874.00	60.70 PK	74.00	-13.30	1.10 V	3	24.20	36.50
2	4874.00	47.30 AV	54.00	-6.70	1.10 V	3	10.80	36.50
3	7311.00	59.10 PK	74.00	-14.90	1.20 V	243	17.30	41.80
3	7311.00	46.40 AV	54.00	-7.60	1.20 V	243	4.60	41.80
4	9748.00	52.00 PK	74.00	-22.00	2.08 V	321	7.40	44.60
4	9748.00	40.70 AV	54.00	-13.30	2.08 V	321	-3.90	44.60

- 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.
 5. The limit value is defined as per 15.247
 6. “ * “ : Fundamental frequency



EUT	802.11 b/g Wireless USB Adapter	MODEL	AT-WCU201G
MODE	Channel 11	FREQUENCY RANGE	1000~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION & BANDWIDTH	Peak (PK) Average (AV) 1 MHz
ENVIRONMENTAL CONDITIONS	30 deg. C, 55%RH, 968 hPa	TESTED BY	Sky Liao

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	*2462.00	102.30 PK			1.54 H	236	72.20	30.10
1	*2462.00	93.70 AV			1.54 H	236	63.60	30.10
2	2483.50	51.40 PK	74.00	-22.60	1.54 H	236	21.30	30.10
2	2483.50	43.90 AV	54.00	-10.10	1.54 H	236	13.80	30.10
3	4924.00	54.20 PK	74.00	-19.80	1.34 H	116	17.50	36.70
3	4924.00	41.80 AV	54.00	-12.20	1.34 H	116	5.10	36.70
4	7386.00	53.40 PK	74.00	-20.60	1.75 H	127	11.60	41.80
4	7386.00	41.70 AV	54.00	-12.30	1.75 H	127	-0.20	41.80
5	9848.00	50.80 PK	74.00	-23.20	1.54 H	102	6.40	44.40

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	*2462.00	107.30 PK			1.36 V	239	77.20	30.10
1	*2462.00	98.20 AV			1.36 V	239	68.10	30.10
2	2483.50	55.70 PK	74.00	-18.30	1.36 V	239	25.60	30.10
2	2483.50	48.40 AV	54.00	-5.60	1.36 V	239	18.30	30.10
3	4924.00	59.90 PK	74.00	-14.10	1.68 V	346	23.20	36.70
3	4924.00	46.10 AV	54.00	-7.90	1.68 V	346	9.40	36.70
4	7386.00	53.50 PK	74.00	-20.50	1.39 V	31	11.60	41.80
4	7386.00	41.90 AV	54.00	-12.10	1.39 V	31	0.10	41.80
5	9848.00	52.50 PK	74.00	-21.50	1.61 V	233	8.10	44.40
5	9848.00	41.30 AV	54.00	-12.70	1.61 V	233	-3.10	44.40

- 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.
 5. The limit value is defined as per 15.247
 6. “ * “ : Fundamental frequency



EUT	802.11 b/g Wireless USB Adapter	MODEL	AT-WCU201G
MODE	Turbo Channel 6	FREQUENCY RANGE	1000~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION & BANDWIDTH	Peak (PK) Average (AV) 1 MHz
ENVIRONMENTAL CONDITIONS	25 deg. C, 60%RH, 968 hPa	TESTED BY	Sky Liao

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	52.50 PK	74.00	-21.50	1.52 H	20	18.80	33.70
1	2390.00	43.90 AV	54.00	-10.10	1.52 H	20	10.20	33.70
2	*2437.00	97.80 PK			1.54 H	240	67.90	29.90
2	*2437.00	89.70 AV			1.54 H	240	59.80	29.90
3	2483.50	51.40 PK	74.00	-22.60	1.11 H	5	21.30	30.10
3	2483.50	42.70 AV	54.00	-11.30	1.11 H	5	12.60	30.10
4	4874.00	52.70 PK	74.00	-21.30	1.21 H	129	17.30	35.30
4	4874.00	41.20 AV	54.00	-12.80	1.21 H	129	5.90	35.30
5	7311.00	54.40 PK	74.00	-19.60	1.71 H	129	13.80	40.70
5	7311.00	42.10 AV	54.00	-11.90	1.71 H	129	1.40	40.70
6	9748.00	49.90 PK	74.00	-24.10	1.18 H	341	6.30	43.60
6	9748.00	39.30 AV	54.00	-14.70	1.18 H	341	-4.30	43.60

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	2390.00	59.20 PK	74.00	-14.80	1.11 V	249	25.50	33.70
1	2390.00	50.70 AV	54.00	-3.30	1.11 V	249	17.00	33.70
2	*2437.00	104.50 PK			1.48 V	239	74.60	29.90
2	*2437.00	96.50 AV			1.48 V	239	66.60	29.90
3	2483.50	58.10 PK	74.00	-15.90	1.50 V	2	28.00	30.10
3	2483.50	49.50 AV	54.00	-4.50	1.50 V	2	19.40	30.10
4	4874.00	57.00 PK	74.00	-17.00	1.78 V	4	21.70	35.30
4	4874.00	45.60 AV	54.00	-8.40	1.78 V	4	10.30	35.30
5	7311.00	56.40 PK	74.00	-17.60	1.92 V	120	15.70	40.70
5	7311.00	44.60 AV	54.00	-9.40	1.92 V	120	4.00	40.70
6	9748.00	52.70 PK	74.00	-21.30	1.66 V	131	9.10	43.60
6	9748.00	41.30 AV	54.00	-12.70	1.66 V	131	-2.30	43.60

- 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.
 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	100036	Nov. 23, 2006

NOTE:

- 1.The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81.
- 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 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.

4.3.4 TEST SETUP



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

4.3.5 EUT OPERATING CONDITIONS

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



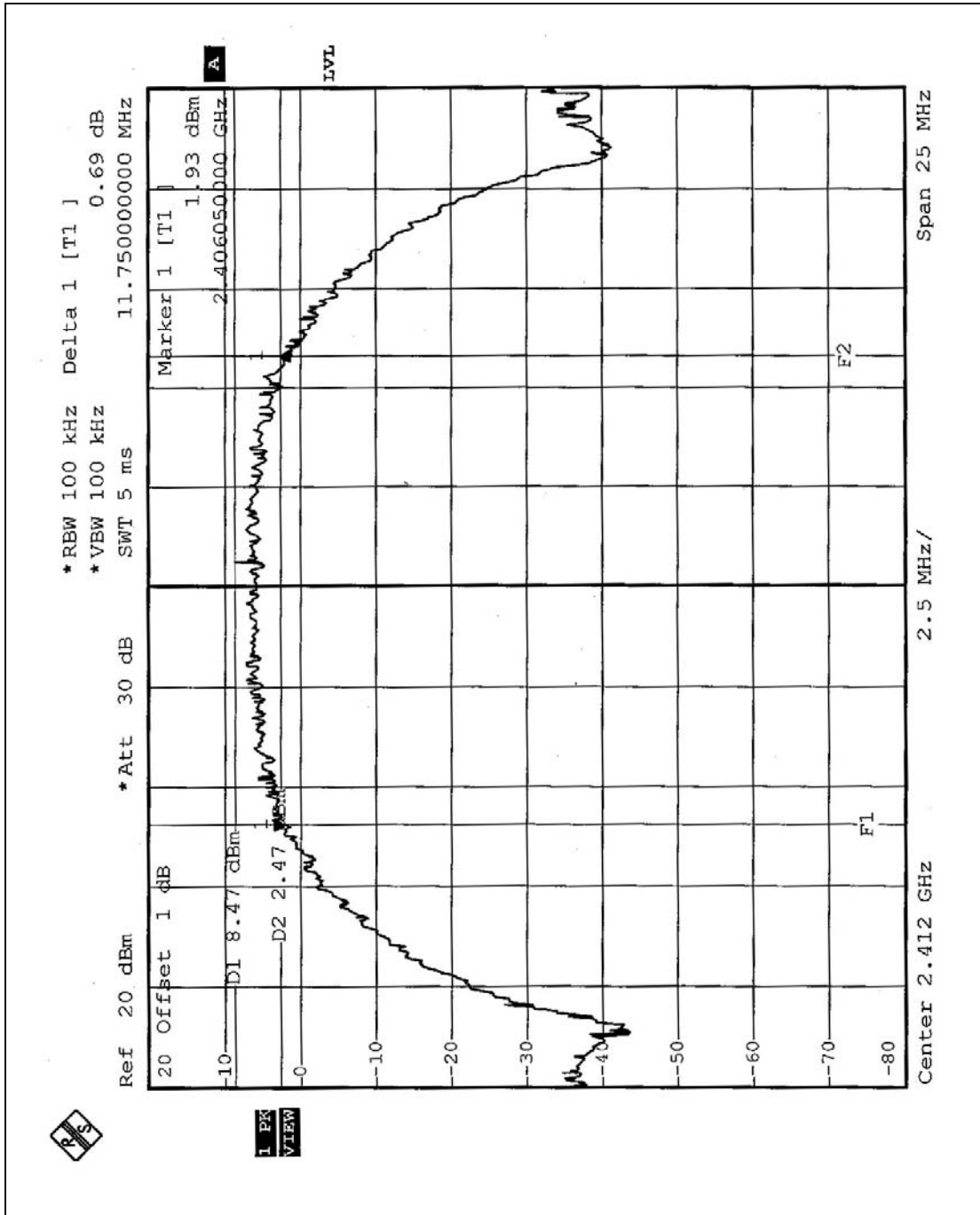
4.3.6 TEST RESULTS-DSSS

EUT	802.11 b/g Wireless USB Adapter		
MODEL	AT-WCU201G	ENVIRONMENTAL CONDITIONS	27 deg. C, 59%RH, 968 hPa
INPUT POWER (SYSTEM)	120Vac, 60 Hz	TESTED BY	Sky Liao

CHANNEL	CHANNEL FREQUENCY (MHz)	6 dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	11.75	0.5	PASS
6	2437	12.00	0.5	PASS
11	2462	12.05	0.5	PASS

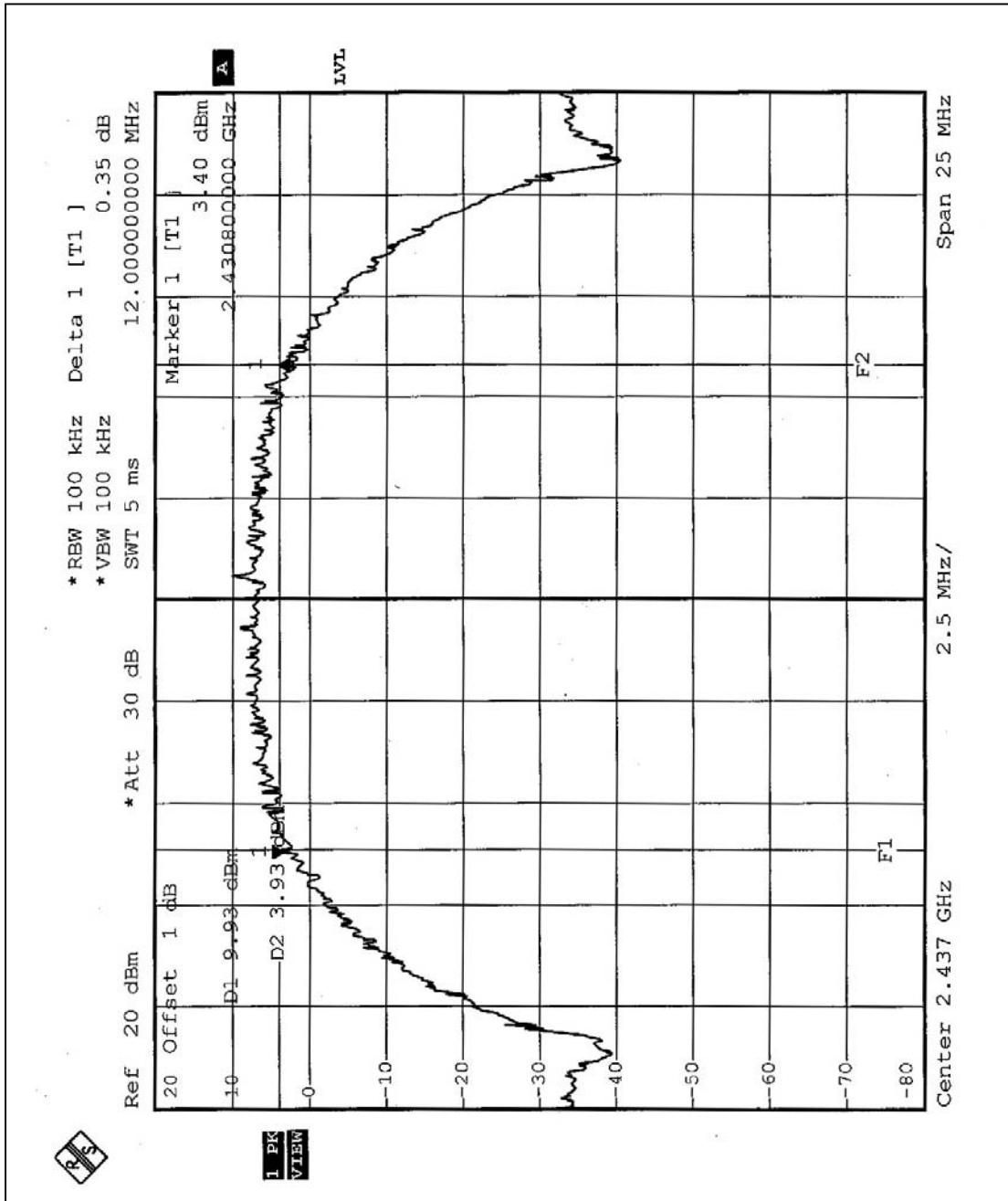


CH1



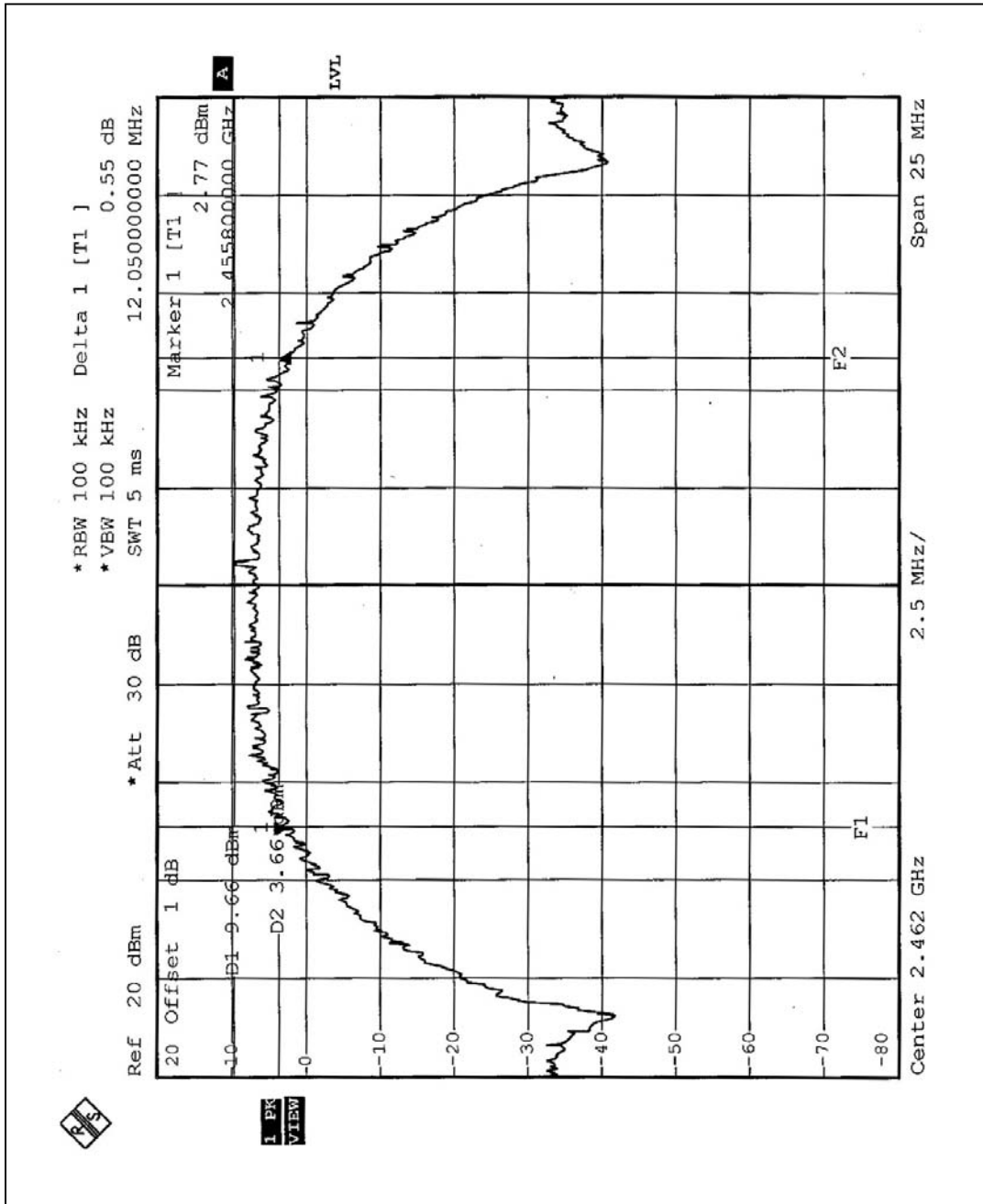


CH6





CH11





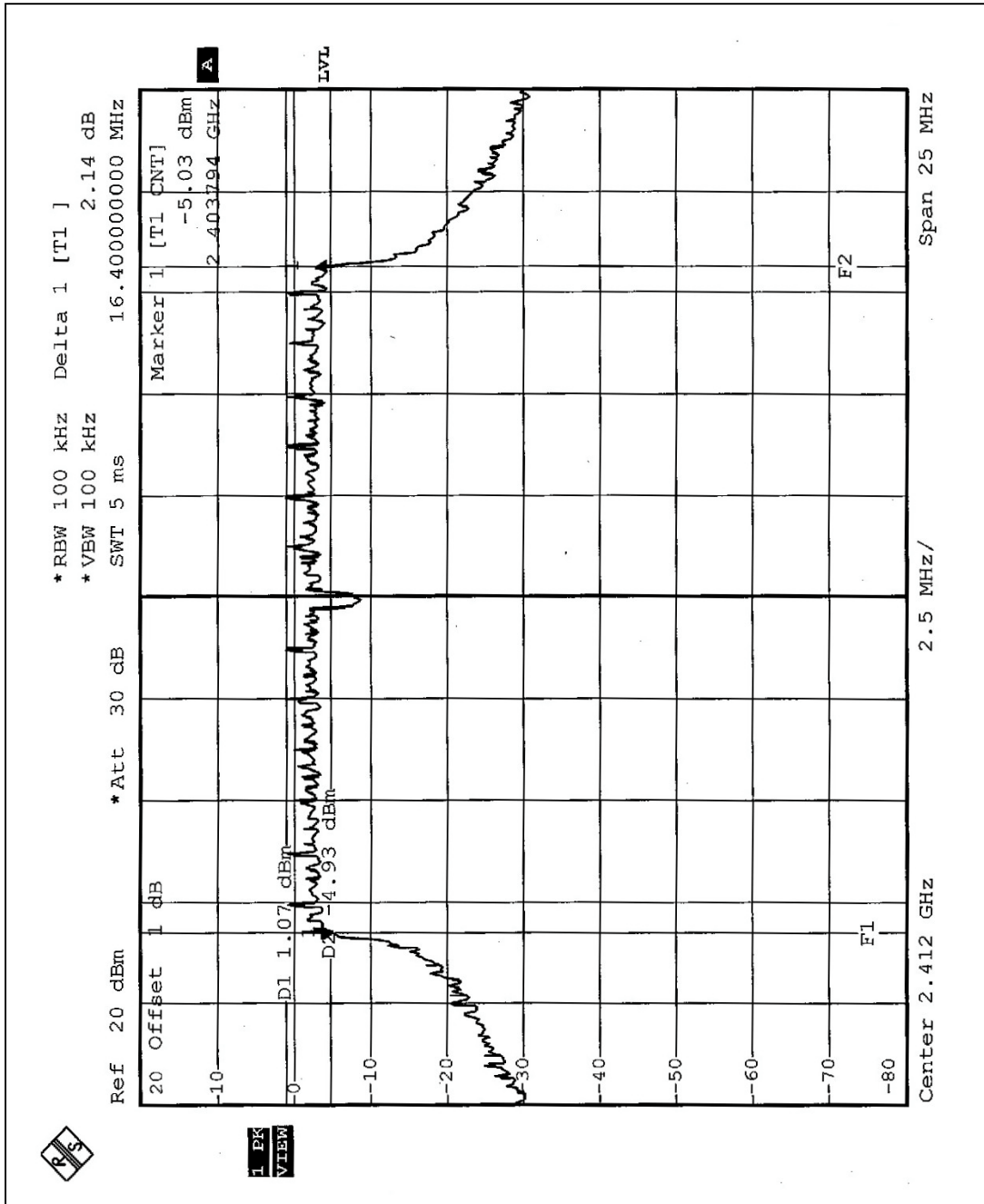
4.3.7 TEST RESULTS-OFDM

EUT	802.11 b/g Wireless USB Adapter		
MODEL	AT-WCU201G	ENVIRONMENTAL CONDITIONS	27 deg. C, 59%RH, 968 hPa
INPUT POWER (SYSTEM)	120Vac, 60 Hz	TESTED BY	Sky Liao

CHANNEL	CHANNEL FREQUENCY (MHz)	6 dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	16.4	0.5	PASS
6	2437	16.45	0.5	PASS
11	2462	16.4	0.5	PASS
Turbo 6	2437	32.7	0.5	PASS

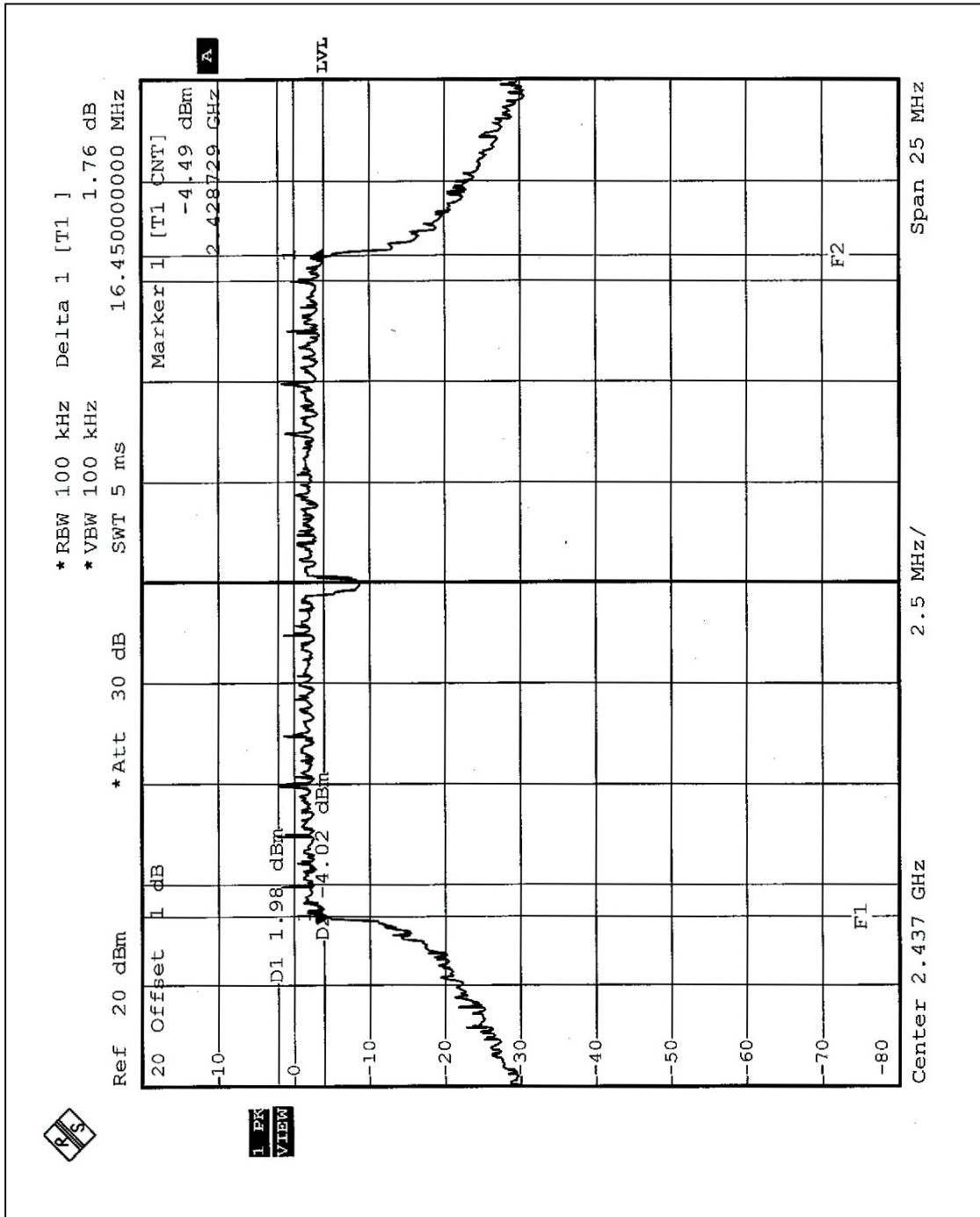


CH1



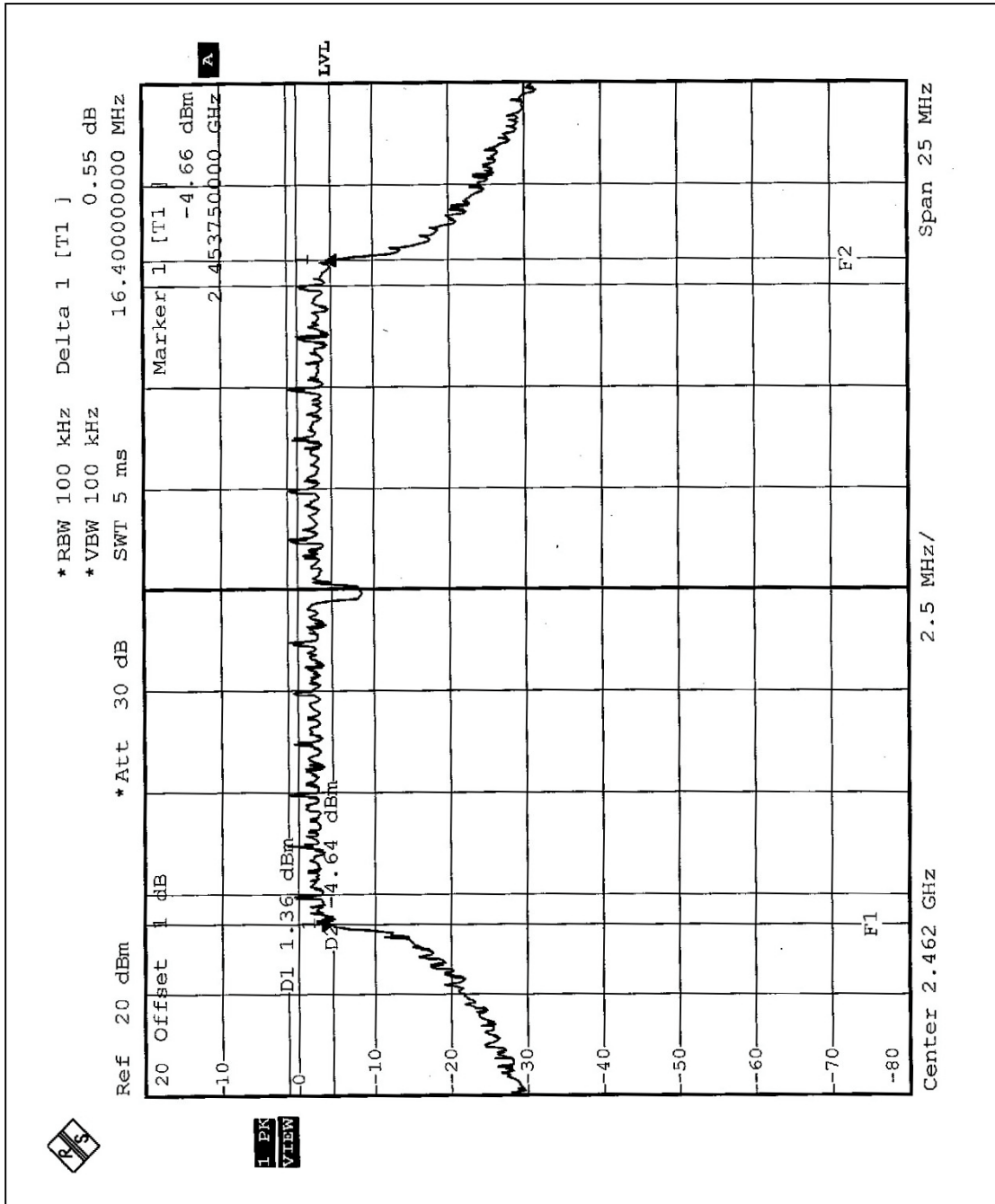


CH6



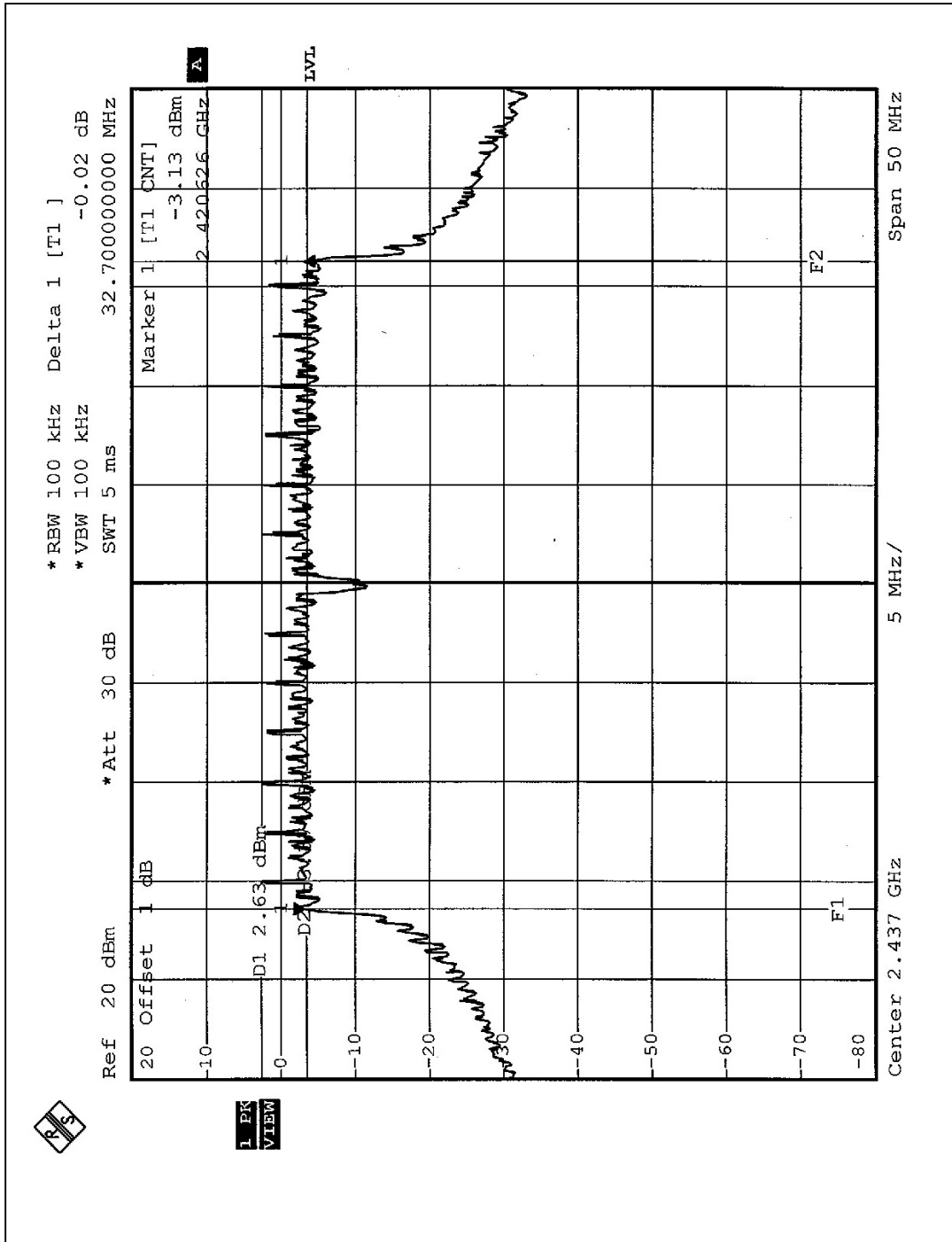


CH11





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 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSP40	100036	Nov. 23, 2006
Agilent SIGNAL GENERATOR	E8257C	MY43320668	Dec. 07, 2006
TEKTRONIX OSCILLOSCOPE	TDS380	B016335	Jun. 22, 2006
NARDA DETECTOR	4503A	FSCM99899	NA

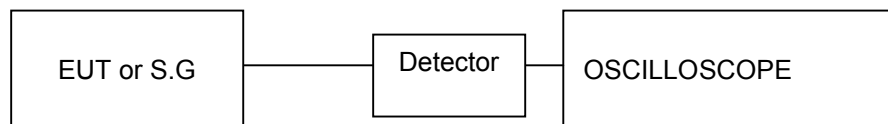
NOTE:

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 4.3.5



4.4.6 TEST RESULTS- DSSS

EUT	802.11 b/g Wireless USB Adapter		
MODEL	AT-WCU201G	ENVIRONMENTAL CONDITIONS	27 deg. C, 59%RH, 968 hPa
INPUT POWER (SYSTEM)	120Vac, 60 Hz	TESTED BY	Sky Liao

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	18.81	30	PASS
6	2437	19.55	30	PASS
11	2462	19.51	30	PASS



4.4.7 TEST RESULTS- OFDM

EUT	802.11 b/g Wireless USB Adapter		
MODEL	AT-WCU201G	ENVIRONMENTAL CONDITIONS	27 deg. C, 59%RH, 968 hPa
INPUT POWER (SYSTEM)	120Vac, 60 Hz	TESTED BY	Sky Liao

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	18.27	30	PASS
6	2437	18.31	30	PASS
11	2462	18.25	30	PASS
Turbo 6	2437	18.22	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	100036	Nov. 23, 2006

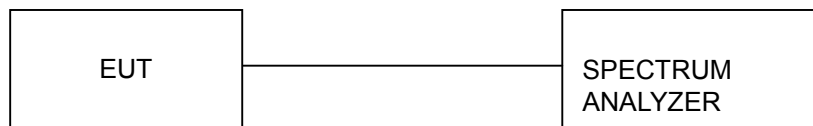
NOTE:

- 1.The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81.
- 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/3kHz. The power spectral density was measured and recorded. The sweep time is allowed to be longer than span/3KHz for a full response of the mixer in the spectrum analyzer.

4.5.4 TEST SETUP



4.5.5 EUT OPERATING CONDITIONS

Same as 4.3.5



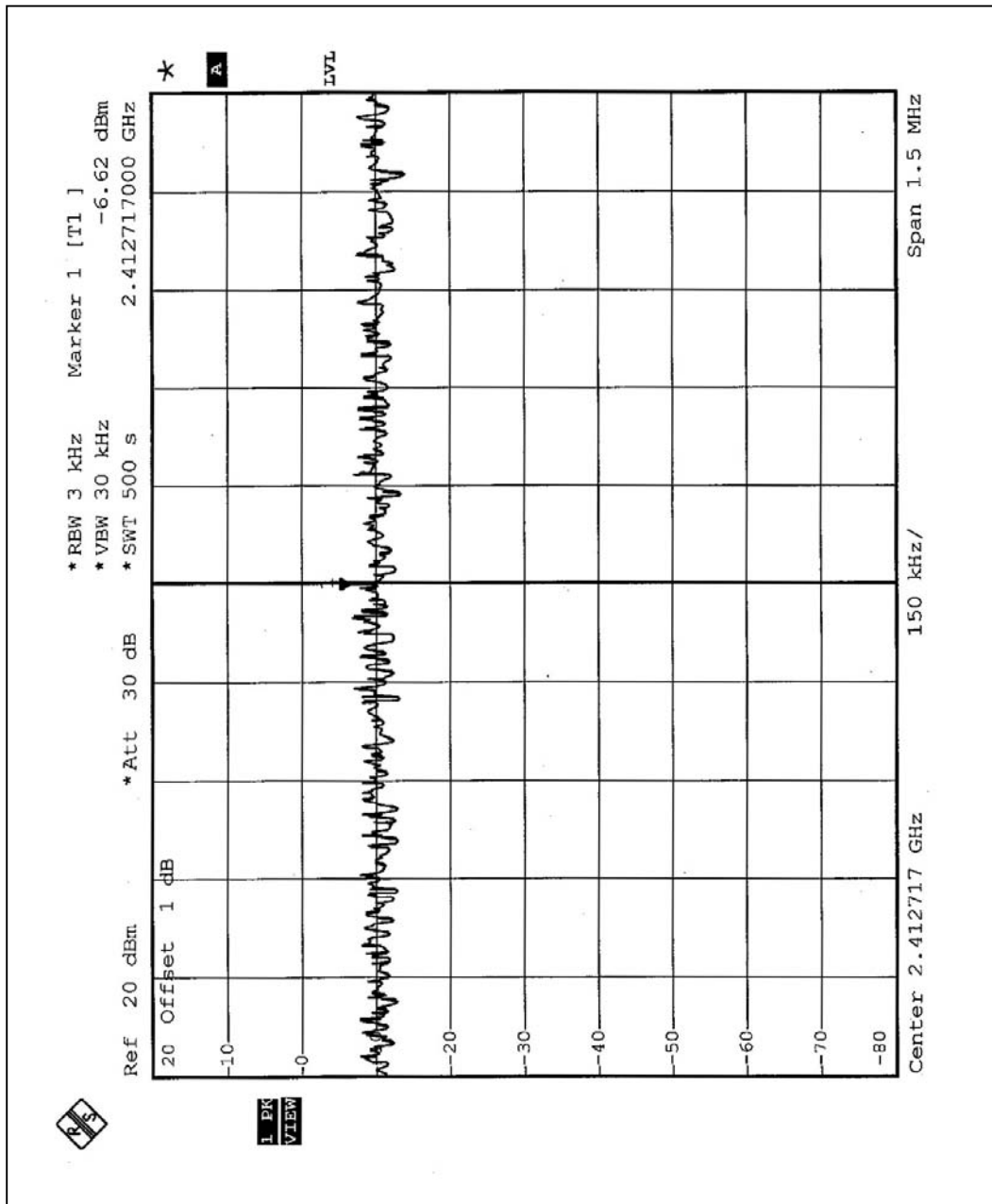
4.5.6 TEST RESULTS-DSSS

EUT	802.11 b/g Wireless USB Adapter		
MODEL	AT-WCU201G	ENVIRONMENTAL CONDITIONS	27 deg. C, 59%RH, 968 hPa
INPUT POWER (SYSTEM)	120Vac, 60 Hz	TESTED BY	Sky Liao

CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 KHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-6.62	8	PASS
6	2437	-5.54	8	PASS
11	2462	-5.25	8	PASS

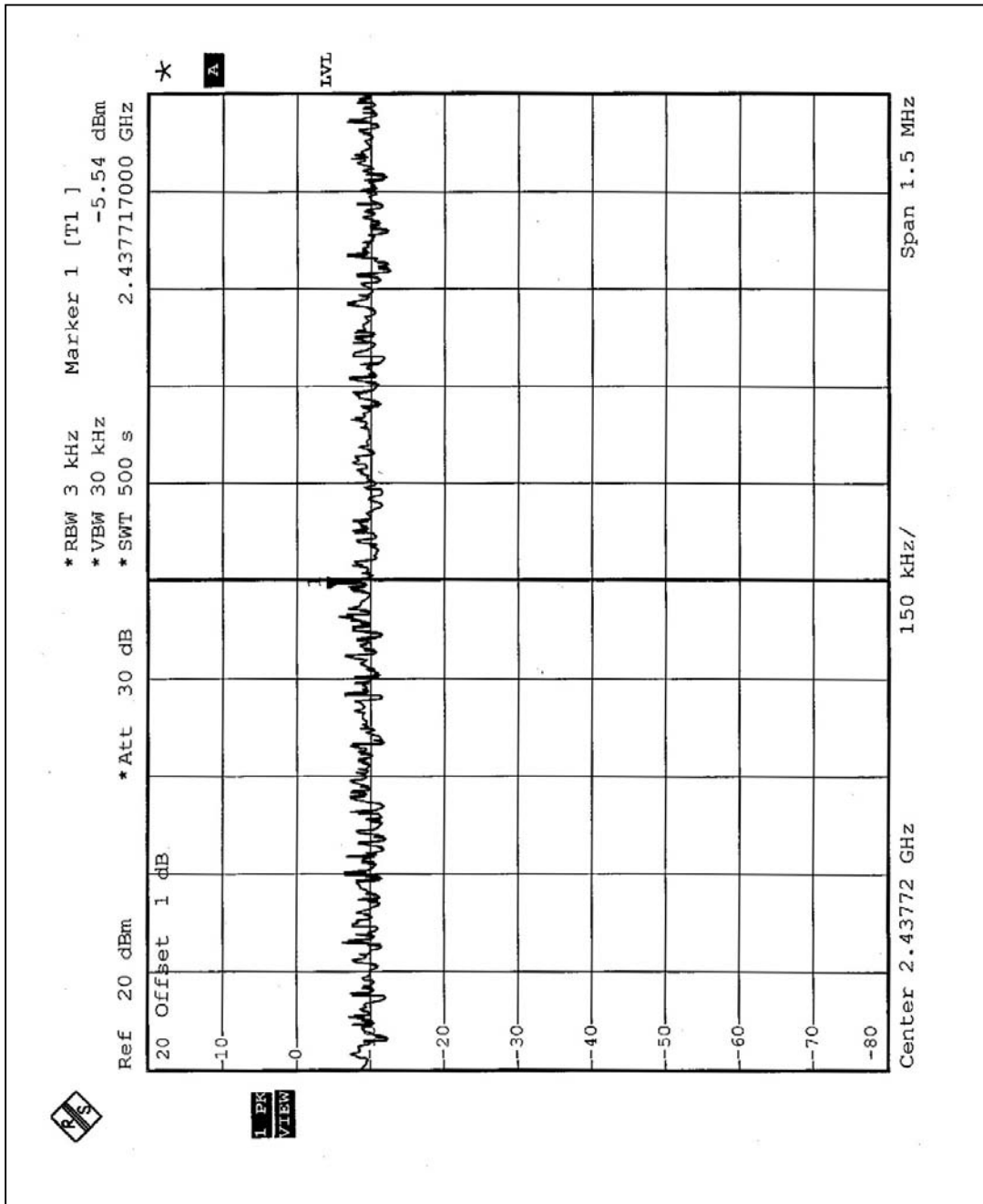


CH1





CH6





CH11

