FCC TEST REPORT

REPORT NO.:	RF930712H02
MODEL NO.:	T60H835
RECEIVED:	Jul. 13, 2004
TESTED:	Jul. 15 to Aug. 02, 2004

APPLICANT:	HON HAI PRECISION IND. CO., LTD. HSINCHU SCIENCE PARK BRANCH OFFICE
ADDRESS:	5F-1,5 Hsin-An Road Hsinchu, Science-Based Industrial Park Taiwan, R.O.C.

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.

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0536 No. 2177-01

ILAC MRA

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1. CERTIFICATION

PRODUCT :	802.11a/b/g MiniPCI module
BRAND NAME :	FOXCONN
MODEL NO. :	T60H835
TESTED:	Jul. 15 to Aug. 02, 2004
APPLICANT :	HON HAI PRECISION IND. CO., LTD. HSINCHU SCIENCE PARK BRANCH OFFICE
TEST ITEM:	ENGINEERING SAMPLE
STANDARDS :	47 CFR Part 15, Subpart C (Section 15.247), Subpart E (Section 15.407), ANSI C63.4-2001

The above equipment (Model: T60H835) have been tested by **Advance Data Technology Corporation**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

PREPARED BY : Carol Liao , **DATE:** Aug. 04, 2004
(Carol Liao)

TECHNICAL ACCEPTANCE : Hank Chung , **DATE:** Aug. 04, 2004
Responsible for RF
(Hank Chung)

APPROVED BY : , **DATE:** Aug. 04, 2004
(Eric Lin, Manager)

2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: 47 CFR Part 15, Subpart C			
Standard Section	**Test Type and Limit**	**Result**	**REMARK**
15.207	AC Power Conducted Emission	PASS	Meet the requirement of limit Minimum passing margin is –19.21dBuV at 0.175MHz
15.247(a)(2)	Spectrum Bandwidth of a Direct Sequence Spread Spectrum System Limit: min. 500kHz	PASS	Meet the requirement of limit
15.247(b)	Maximum Peak Output Power Limit: max. 30dBm	PASS	Meet the requirement of limit
15.247(c)	Transmitter Radiated Emissions FCC Limit: Table 15.209	PASS	Meet the requirement of limit Minimum passing margin is –1.0dBuV at 2390.0MHz
15.247(d)	Power Spectral Density Limit: max. 8dBm	PASS	Meet the requirement of limit
15.247(c)	Band Edge Measurement Limit: 20 dB less than the peak value of fundamental frequency	PASS	Meet the requirement of limit

for freq. 5.15~5.35GHz：

APPLIED STANDARD: 47 CFR Part 15, Subpart E			
Standard Section	**Test Type**	**Result**	**REMARK**
15.407(b)(5)	AC Power Conducted Emission	PASS	Meet the requirement of limit Minimum passing margin is –17.85dBuV at 0.173MHz
15.407(b/1/2/3) (b)(5)	Electric Field Strength Spurious Emissions, 30MHz ~ 40000MHz	PASS	Meet the requirement of limit Minimum passing margin is –2.30dBuV at 66.87MHz
15.407(a/1/2/3)	Peak Transmit Power	PASS	Meet the requirement of limit
15.407(a)(6)	Peak Power Excursion	PASS	Meet the requirement of limit
15.407(a/1/2/3)	Peak Power Spectral Density	PASS	Meet the requirement of limit
15.407(g)	Frequency Stability	PASS	Meet the requirement of limit

for freq. 5.725~5.850GHz：

APPLIED STANDARD: 47 CFR Part 15, Subpart C			
Standard Section	**Test Type and Limit**	**Result**	**REMARK**
15.207	AC Power Conducted Emission	PASS	Meet the requirement of limit Minimum passing margin is –17.85dBuV at 0.173MHz
15.247(a)(2)	Spectrum Bandwidth of a Direct Sequence Spread Spectrum System Limit: min. 500kHz	PASS	Meet the requirement of limit
15.247(b)	Maximum Peak Output Power Limit: max. 30dBm	PASS	Meet the requirement of limit
15.247(c)	Transmitter Radiated Emissions FCC Limit: Table 15.209	PASS	Meet the requirement of limit Minimum passing margin is –1.2dBuV at 11490.00MHz
15.247(d)	Power Spectral Density Limit: max. 8dBm	PASS	Meet the requirement of limit
15.247(c)	Band Edge Measurement Limit: 20 dB less than the peak value of fundamental frequency	PASS	Meet the requirement of limit

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

PRODUCT	802.11a/b/g MiniPCI module
MODEL NO.	T60H835
POWER SUPPLY	DC 3.3V from host equipment
MODULATION	DSSS, OFDM
TRANSFER RATE	802.11b and draft 802.11g: 1/2/5.5/6/9/11/12/18/24/36/48/54Mbps 802.11a:6 to 54Mbps (Turbo mode: up to 108Mbps *see note 1)
FREQUENCY RANGE	802.11b and draft 802.11g: 2400MHz ~ 2483.5MHz 802.11a: 5.15~5.35GHz and 5.725~5.850GHz
NUMBER OF CHANNEL	802.11b and draft 802.11g: 11 802.11a: 13 for Normal mode / 5 for Turbo mode
CHANNEL SPACING	802.11b and draft 802.11g: 5MHz 802.11a: 20MHz for Normal mode / 40MHz for Turbo mode
Max. OUTPUT POWER	802.11b: 20.02dBm / draft 802.11g: 21.51dBm 802.11a: 19.54dBm
DATA CABLE	NA
ANTENNA TYPE	PIFA Antenna
I/O PORTS	NA
ASSOCIATED DEVICES	NA

NOTE:

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

2. The EUT is a 802.11a/b/g MiniPCI module, which contains two radios capable of simultaneous 802.11b/g (2.4GHz) and 802.11a (5GHz) operations.

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: Eleven channels are provided to this EUT.

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

NOTE:

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

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

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

Five Channels are provided to this EUT for Turbo Mode.

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

NOTE:

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

3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is an 802.11a/b/g MiniPCI module According to the specifications of the manufacturer; it must comply with the requirements of the following standards:

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

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

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

3.4 DESCRIPTION OF SUPPORT UNITS

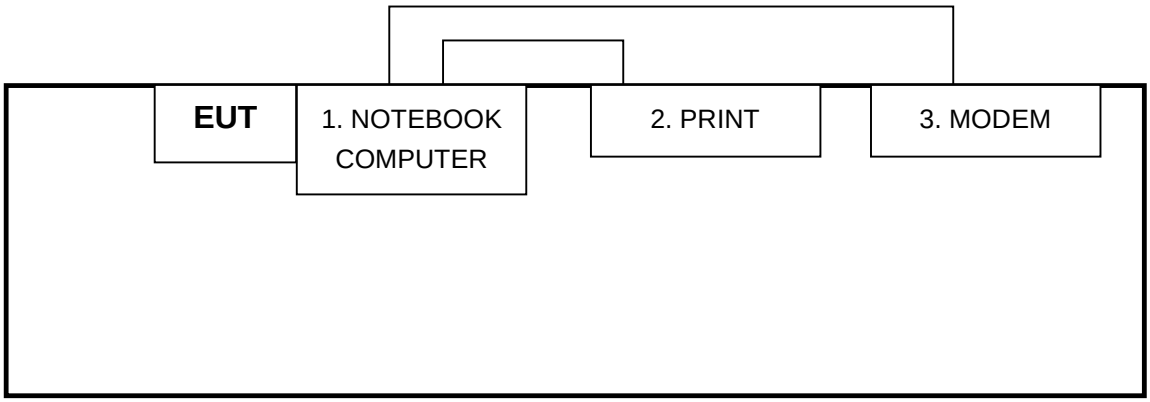
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

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

No.	Signal cable description
1	NA
2	1.8 m foil shielded wire, terminal by frame, PS2 Connector, w/o Core.
3	1.0 m braid shielded wire, terminated with DB25 and DB9 connector via metallic frame, w/o core.

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

3.5 CONFIGURATION OF SYSTEM UNDER TEST



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

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

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 - 0.5	79	66	66 - 56	56 - 46
0.50 - 5.0	73	60	56	46
5.0 - 30.0	73	60	60	50

NOTES: (1) The lower limit shall apply at the transition frequencies.

(2) The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 MHz.

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

4.1.2 TEST INSTRUMENTS

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

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

4.1.3 TEST PROCEDURES

a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.

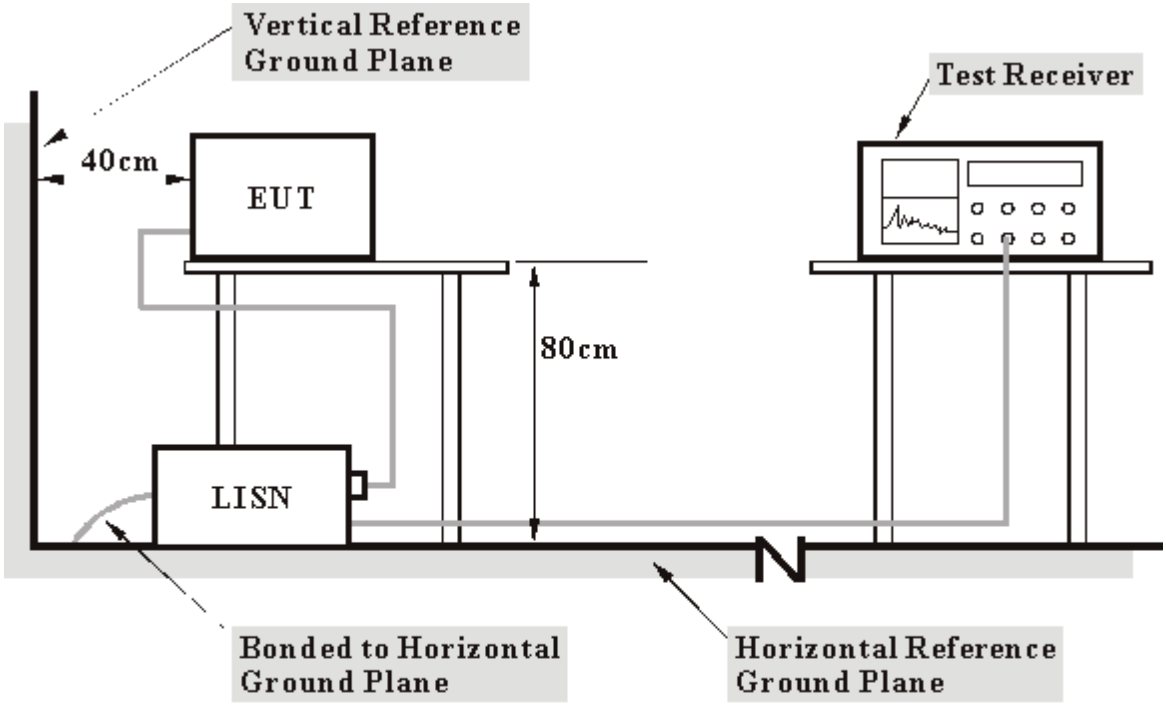
b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

c. The frequency range from 150 kHz to 30 MHz was searched. Emission levels over 10dB under the prescribed limits could not be reported

4.1.4 DEVIATION FROM TEST STANDARD

No deviation

4.1.5 TEST SETUP



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

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

4.1.6 EUT OPERATING CONDITIONS

a. Plug the EUT into the support unit 1 (Notebook computer) which placed on a testing table.

b. The support unit 1 (Notebook computer) ran a test program “Art 485” to enable EUT under transmission condition continuously at specific channel frequency.

c. Notebook computer sends "H" messages to modem.

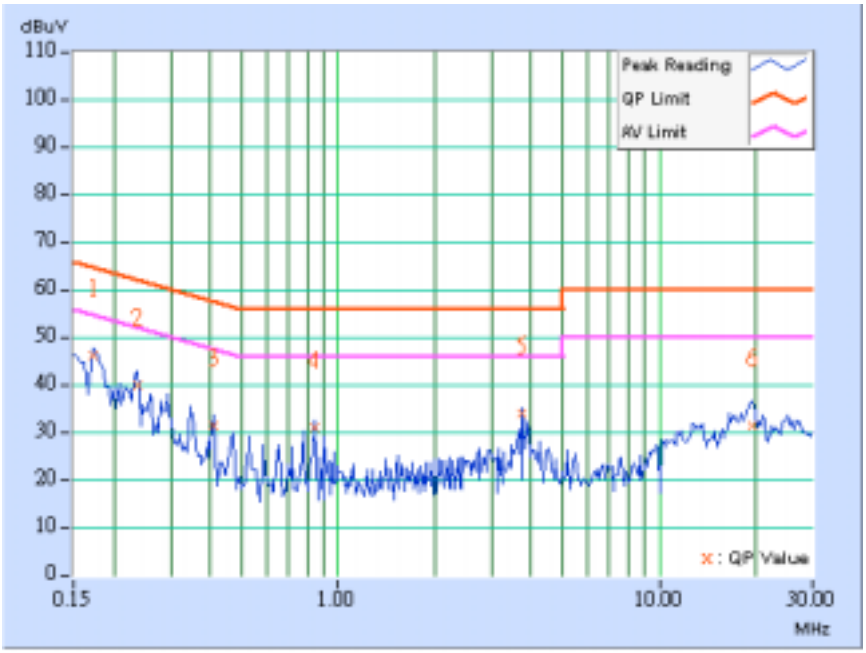
d. Notebook computer sends "H" messages to printer, and the printer prints them on paper.

4.1.7 TEST RESULTS

EUT	802.11a/b/g MiniPCI module		
MODEL	T60H835		
MODE	Channel 11	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	26deg. C, 62%RH, 967 hPa	**TESTED BY**	Sky Liao

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.173	0.25	44.99	-	45.24	-	64.79	54.79	-19.56	-
2	0.236	0.28	38.75	-	39.03	-	62.24	52.24	-23.21	-
3	0.408	0.20	30.07	-	30.27	-	57.69	47.69	-27.42	-
4	0.841	0.27	29.85	-	30.12	-	56.00	46.00	-25.88	-
5	3.754	0.39	32.68	-	33.07	-	56.00	46.00	-22.93	-
6	19.578	1.38	30.10	-	31.48	-	60.00	50.00	-28.52	-

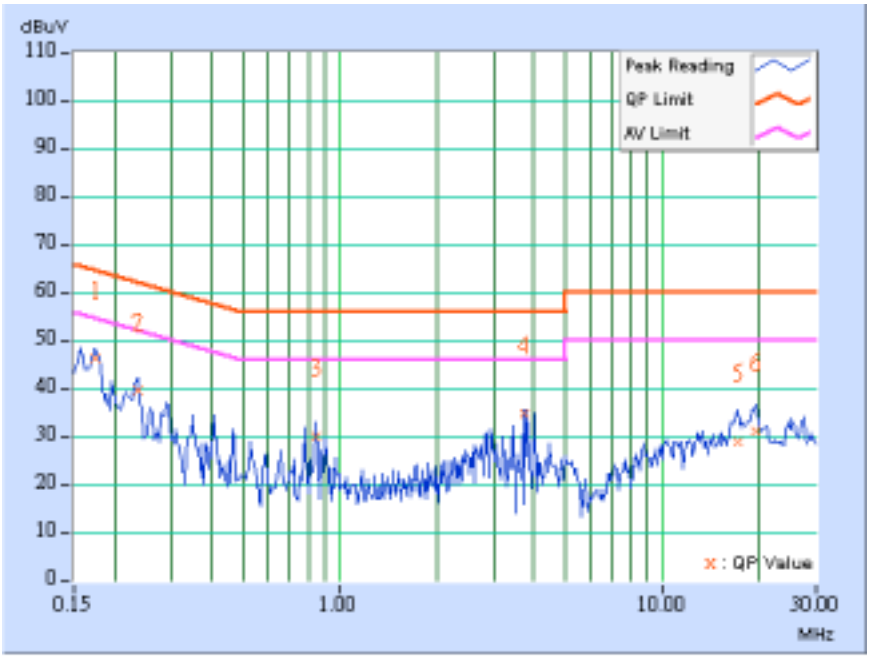
NOTES: (1) "*": Undetectable
(2) Q.P. and AV. are abbreviations of quasi-peak and average.
(3) "-": The Quasi-peak reading value also meets an average limit, thus measurement with the average detector is unnecessary.
(4) The emission levels of other frequencies were very low against the limit.
(5) Correction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



EUT	802.11a/b/g MiniPCI module		
MODEL	T60H835		
MODE	Channel 11	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	26deg. C, 62%RH, 967 hPa	**TESTED BY**	Sky Liao

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	**0.175**	**0.25**	**45.27**	**-**	**45.52**	**-**	**64.73**	**54.73**	**-19.21**	**-**
2	0.236	0.28	38.39	-	38.67	-	62.24	52.24	-23.57	-
3	0.845	0.27	28.97	-	29.24	-	56.00	46.00	-26.76	-
4	3.742	0.39	33.73	-	34.12	-	56.00	46.00	-21.88	-
5	17.063	1.14	27.88	-	29.02	-	60.00	50.00	-30.98	-
6	19.500	1.19	29.82	-	31.01	-	60.00	50.00	-28.99	-

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



4.2 RADIATED EMISSION MEASUREMENT

4.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

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

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

NOTE:

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

4.2.2 TEST INSTRUMENTS

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

Note: 1. The calibration interval of the above test instruments is 12 months (36 months for Tunable Dipole Antenna)and the calibrations are traceable to NML/ROC and NIST/USA.
2. * = 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. C.
5. The FCC Site Registration No. is 656396.
6. The VCCI Site Registration No. is R-1626.
7. The CANADA Site Registration No. is IC 4824-3.
8. The measurement uncertainty is 3.56 dB, which is calculated as per the document CISPR 16-4

4.2.3 TEST PROCEDURES

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

f. If the emission level of the EUT in peak mode was 10 dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10 dB margin would be re-tested one by one using the quasi-peak method or average method as specified and then reported in Data sheet peak mode and QP mode.

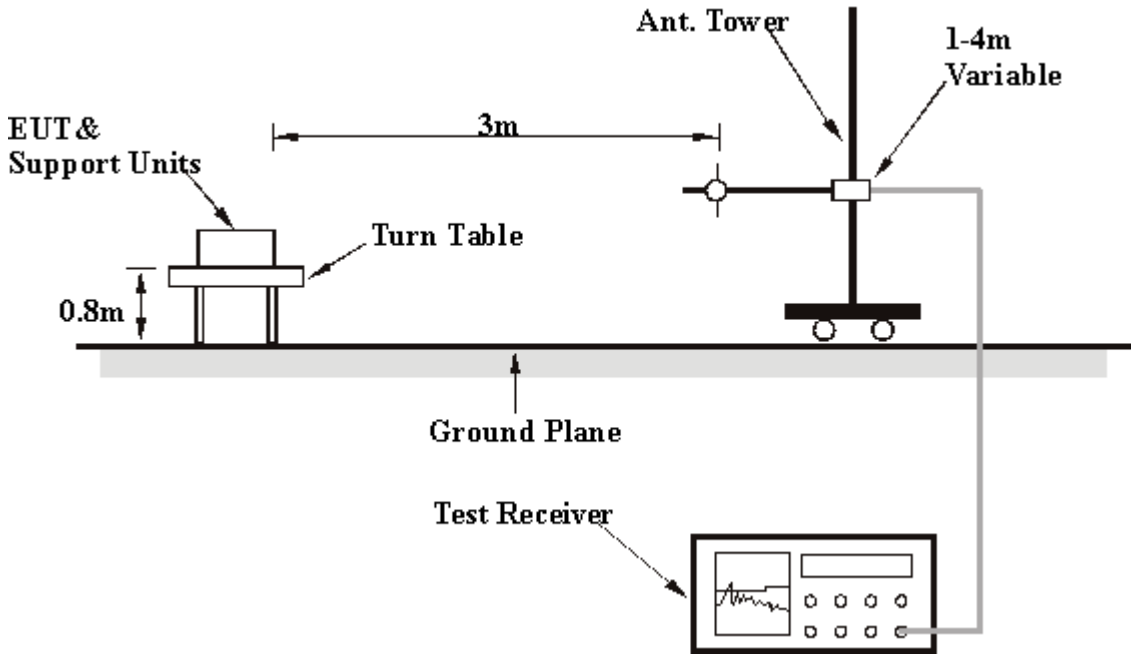
NOTE:

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

4.2.4 DEVIATION FROM TEST STANDARD

No deviation

4.2.5 TEST SETUP



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

4.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6

4.2.7 TEST RESULTS

EUT	802.11a/b/g MiniPCI module	**MODEL**	T60H835
MODE	Channel 11	**FREQUENCY RANGE**	30-1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**DETECTOR FUNCTION & BANDWIDTH**	Quasi-Peak, 120kHz
ENVIRONMENTAL CONDITIONS	27deg. C, 59%RH, 967 hPa	**TESTED BY**	Tony Chen

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	66.87	37.70 QP	40.00	-2.30	2.33 H	354	26.30	11.40
2	133.68	37.10 QP	43.50	-6.40	2.09 H	341	24.60	12.50
3	166.99	32.90 QP	43.50	-10.60	2.42 H	29	19.30	13.70
4	200.59	33.80 QP	43.50	-9.70	2.30 H	3	22.70	11.10
5	233.95	37.60 QP	46.00	-8.40	1.22 H	312	25.20	12.40
6	240.03	26.40 QP	46.00	-19.60	1.45 H	253	13.80	12.60
7	300.57	33.50 QP	46.00	-12.50	1.11 H	317	18.50	15.10
8	333.93	37.50 QP	46.00	-8.50	1.03 H	2	21.60	16.00
9	384.05	26.60 QP	46.00	-19.40	1.00 H	83	9.20	17.40

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	67.33	27.30 QP	40.00	-12.70	1.22 V	23	15.90	11.40
2	133.98	29.90 QP	43.50	-13.60	1.02 V	344	17.40	12.50
3	167.04	28.50 QP	43.50	-15.00	1.05 V	26	14.80	13.60
4	200.84	30.70 QP	43.50	-12.80	1.00 V	247	19.70	11.10
5	234.15	35.50 QP	46.00	-10.50	1.01 V	254	23.10	12.40
6	300.47	33.90 QP	46.00	-12.10	1.66 V	2	18.80	15.10
7	333.78	36.40 QP	46.00	-9.60	2.00 V	153	20.40	16.00
8	528.06	24.00 QP	46.00	-22.00	1.02 V	3	3.10	20.80

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

4.2.8 TEST RESULTS - DSSS

EUT	802.11a/b/g MiniPCI module	**Model**	T60H835
MODE	Channel 1	**FREQUENCY RANGE**	1000MHz~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**DETECTOR FUNCTION & BANDWIDTH**	Peak (PK) Average (AV) 1 MHz
ENVIRONMENTAL CONDITIONS	27deg. C, 59%RH, 967 hPa	**TESTED BY**	Tony Chen

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2386.00	52.70 PK	74.00	-21.30	1.26 H	290	20.20	32.60
1	2386.00	43.40 AV	54.00	-10.60	1.26 H	290	10.80	32.60
2	2390.00	50.40 PK	74.00	-23.60	1.21 H	124	16.60	33.80
3	*2412.00	108.60 PK			1.62 H	247	78.70	29.90
3	*2412.00	100.90 AV			1.62 H	247	71.00	29.90
4	2688.00	48.10 PK	74.00	-25.90	1.15 H	302	17.20	30.90
5	4824.00	55.90 PK	74.00	-18.10	1.52 H	185	19.60	36.20
5	4824.00	44.70 AV	54.00	-9.30	1.52 H	185	8.50	36.20
6	7236.00	52.20 PK	74.00	-21.80	1.51 H	266	10.60	41.70
6	7236.00	43.60 AV	54.00	-10.40	1.51 H	266	1.90	41.70

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2386.00	50.10 PK	74.00	-23.90	1.00 V	123	17.50	32.60
2	2390.00	51.40 PK	74.00	-22.60	1.24 V	222	17.60	33.80
2	2390.00	40.80 AV	54.00	-13.20	1.24 V	222	7.00	33.80
3	*2412.00	108.20 PK			1.57 V	235	78.30	29.90
3	*2412.00	100.70 AV			1.57 V	235	70.80	29.90
4	2688.00	45.60 PK	74.00	-28.40	1.30 V	100	14.70	30.90
5	4824.00	54.00 PK	74.00	-20.00	1.67 V	233	17.80	36.20
5	4824.00	42.00 AV	54.00	-12.00	1.67 V	233	5.80	36.20
6	7236.00	55.40 PK	74.00	-18.60	1.21 V	266	13.70	41.70
6	7236.00	46.90 AV	54.00	-7.10	1.21 V	266	5.20	41.70

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

EUT	802.11a/b/g MiniPCI module	**MODEL**	T60H835
MODE	Channel 6	**FREQUENCY RANGE**	1000MHz~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**DETECTOR FUNCTION & BANDWIDTH**	Peak (PK) Average (AV) 1 MHz
ENVIRONMENTAL CONDITIONS	27deg. C, 59%RH, 967 hPa	**TESTED BY**	Tony Chen

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	110.30 PK			1.58 H	244	80.30	30.00
1	*2437.00	102.50 AV			1.58 H	244	72.50	30.00
2	2688.00	50.60 PK	74.00	-23.40	1.02 H	360	19.70	30.90
3	4874.00	53.80 PK	74.00	-20.20	1.14 H	253	17.40	36.50
3	4874.00	43.00 AV	54.00	-11.00	1.14 H	253	6.60	36.50
4	7311.00	47.90 PK	74.00	-26.10	1.10 H	12	6.20	41.80

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	*2437.00	110.70 PK			1.53 V	238	80.70	30.00
1	*2437.00	102.80 AV			1.53 V	238	72.80	30.00
2	2688.00	44.40 PK	74.00	-29.60	1.00 V	322	13.50	30.90
3	4874.00	47.30 PK	74.00	-26.70	1.02 V	15	10.90	36.50
4	7311.00	50.80 PK	74.00	-23.20	1.35 V	257	9.00	41.80

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

EUT	802.11a/b/g MiniPCI module	**MODEL**	T60H835
MODE	Channel 11	**FREQUENCY RANGE**	1000MHz~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**DETECTOR FUNCTION & BANDWIDTH**	Peak (PK) Average (AV) 1 MHz
ENVIRONMENTAL CONDITIONS	27deg. C, 59%RH, 967 hPa	**TESTED BY**	Tony Chen

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	108.20 PK			1.56 H	242	78.20	30.10
1	*2462.00	100.90 AV			1.56 H	242	70.80	30.10
2	2483.50	50.30 PK	74.00	-23.70	1.24 H	114	20.20	30.10
3	2498.00	56.50 PK	74.00	-17.50	1.06 H	34	24.80	31.60
3	2498.00	37.50 AV	54.00	-16.50	1.06 H	34	5.80	31.60
4	2688.00	50.30 PK	74.00	-23.70	1.30 H	21	19.40	30.90
5	4924.00	51.10 PK	74.00	-22.90	1.10 H	250	14.40	36.70
5	4924.00	41.60 AV	54.00	-12.40	1.10 H	250	4.90	36.70
6	7386.00	48.20 PK	74.00	-25.80	1.42 H	3	6.30	41.80

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	110.40 PK			1.58 V	240	80.30	30.10
1	*2462.00	102.90 AV			1.58 V	240	72.80	30.10
2	2483.50	51.30 PK	74.00	-22.70	1.47 V	145	21.20	30.10
2	2483.50	42.70 AV	54.00	-11.30	1.47 V	145	12.60	30.10
3	2498.00	48.50 PK	74.00	-25.50	1.40 V	354	16.80	31.60
4	2688.00	49.40 PK	74.00	-24.60	1.00 V	68	18.50	30.90
5	4924.00	47.60 PK	74.00	-26.40	1.48 V	112	10.90	36.70
6	7386.00	49.00 PK	74.00	-25.00	1.44 V	260	7.10	41.80

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

4.2.9 TEST RESULTS - OFDM

EUT	802.11a/b/g MiniPCI module	**MODEL**	T60H835
MODE	Channel 1	**FREQUENCY RANGE**	1000MHz~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**DETECTOR FUNCTION & BANDWIDTH**	Peak (PK) Average (AV) 1 MHz
ENVIRONMENTAL CONDITIONS	27deg. C, 59%RH, 967 hPa	**TESTED BY**	Tony Chen

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	2320.00	48.60 PK	74.00	-25.40	1.00 H	152	18.20	30.40
2	2390.00	52.30 PK	74.00	-21.70	1.64 H	258	18.50	33.80
2	**2390.00**	**53.00 AV**	**54.00**	**-1.00**	**1.64 H**	**258**	**19.20**	**33.80**
3	*2412.00	107.20 PK			1.61 H	245	77.30	29.90
3	*2412.00	98.10 AV			1.61 H	245	68.20	29.90
4	2688.00	48.60 PK	74.00	-25.40	1.15 H	24	17.70	30.90
5	4824.00	52.40 PK	74.00	-21.60	1.14 H	12	16.10	36.20
5	4824.00	41.00 AV	54.00	-13.00	1.14 H	12	4.80	36.20
6	7236.00	50.10 PK	74.00	-23.90	1.75 H	25	8.40	41.70

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2320.00	43.70 PK	74.00	-30.30	1.27 V	131	13.30	30.40
2	2390.00	62.40 PK	74.00	-11.60	1.57 V	147	28.60	33.80
2	2390.00	52.30 AV	54.00	-1.70	1.57 V	147	18.50	33.80
3	*2412.00	107.70 PK			1.59 V	238	77.80	29.90
3	*2412.00	97.40 AV			1.59 V	238	67.50	29.90
4	2688.00	46.10 PK	74.00	-27.90	1.04 V	68	15.20	30.90
5	4824.00	55.00 PK	74.00	-19.00	1.10 V	21	18.80	36.20
5	4824.00	42.00 AV	54.00	-12.00	1.10 V	21	5.80	36.20
6	7236.00	53.20 PK	74.00	-20.80	1.81 V	32	11.60	41.70
6	7236.00	42.20 AV	54.00	-11.80	1.81 V	32	0.60	41.70

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

EUT	802.11a/b/g MiniPCI module	**MODEL**	T60H835
MODE	Channel 6	**FREQUENCY RANGE**	1000MHz~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**DETECTOR FUNCTION & BANDWIDTH**	Peak (PK) Average (AV) 1 MHz
ENVIRONMENTAL CONDITIONS	27deg. C, 59%RH, 967 hPa	**TESTED BY**	Tony Chen

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	109.50 PK			1.55 H	241	79.50	30.00
1	*2437.00	99.20 AV			1.55 H	241	69.20	30.00
2	2688.00	50.20 PK	74.00	-23.80	1.35 H	24	19.40	30.90
3	4874.00	47.80 PK	74.00	-26.20	1.15 H	177	11.40	36.50
4	7311.00	48.10 PK	74.00	-25.90	1.42 H	360	6.40	41.80

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	*2437.00	109.20 PK			1.55 V	241	79.20	30.00
1	*2437.00	99.70 AV			1.55 V	241	69.70	30.00
2	2688.00	47.10 PK	74.00	-26.90	1.08 V	360	16.20	30.90
3	4874.00	44.20 PK	74.00	-29.80	1.11 V	126	7.70	36.50
4	7311.00	46.90 PK	74.00	-27.10	1.41 V	258	5.20	41.80

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

EUT	802.11a/b/g MiniPCI module	**MODEL**	T60H835
MODE	Channel 11	**FREQUENCY RANGE**	1000MHz~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**DETECTOR FUNCTION & BANDWIDTH**	Peak (PK) Average (AV) 1 MHz
ENVIRONMENTAL CONDITIONS	27deg. C, 59%RH, 967 hPa	**TESTED BY**	Tony Chen

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	106.70 PK			1.57 H	243	76.70	30.10
1	*2462.00	97.40 AV			1.57 H	243	67.30	30.10
2	2483.50	61.30 PK	74.00	-12.70	1.56 H	258	31.20	30.10
2	2483.50	50.50 AV	54.00	-3.50	1.56 H	258	20.30	30.10
3	2489.00	50.00 PK	74.00	-24.00	1.38 H	134	19.80	30.20
4	2688.00	50.40 PK	74.00	-23.60	1.34 H	144	19.50	30.90
5	4924.00	46.90 PK	74.00	-27.10	1.15 H	251	10.20	36.70
6	7386.00	47.70 PK	74.00	-26.30	1.30 H	241	5.80	41.80

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	109.70 PK			1.49 V	240	79.70	30.10
1	*2462.00	99.70 AV			1.49 V	240	69.70	30.10
2	2483.50	62.30 PK	74.00	-11.70	1.47 V	245	32.20	30.10
2	2483.50	52.80 AV	54.00	-1.20	1.47 V	245	22.60	30.10
3	2491.00	48.90 PK	74.00	-25.10	1.50 V	106	13.30	35.60
4	2688.00	49.80 PK	74.00	-24.20	1.17 V	101	18.90	30.90
5	4924.00	47.90 PK	74.00	-26.10	1.13 V	112	11.20	36.70
6	7386.00	46.80 PK	74.00	-27.20	1.20 V	243	5.00	41.80

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

EUT	802.11a/b/g MiniPCI module	**MODEL**	T60H835
MODE	Turbo Channel 6	**FREQUENCY RANGE**	1000MHz~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**DETECTOR FUNCTION & BANDWIDTH**	Peak (PK) Average (AV) 1 MHz
ENVIRONMENTAL CONDITIONS	27deg. C, 59%RH, 967 hPa	**TESTED BY**	Tony Chen

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	105.80 PK			1.59 H	244	75.80	30.00
1	*2437.00	96.70 AV			1.59 H	244	66.70	30.00
2	2688.00	50.10 PK	74.00	-23.90	1.32 H	225	19.20	30.90
3	4874.00	49.60 PK	74.00	-24.40	1.47 H	236	13.10	36.50
4	7311.00	48.10 PK	74.00	-25.90	1.24 H	236	6.30	41.80

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	106.30 PK			1.55 V	240	76.30	30.00
1	*2437.00	97.50 AV			1.55 V	240	67.50	30.00
2	2688.00	46.30 PK	74.00	-27.70	1.24 V	47	15.40	30.90
3	4874.00	44.50 PK	74.00	-29.50	1.24 V	256	8.10	36.50
4	7311.00	48.00 PK	74.00	-26.00	1.45 V	53	6.30	41.80

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

4.3 6dB BANDWIDTH MEASUREMENT

4.3.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

4.3.2 TEST INSTRUMENTS

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

Note:

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

4.3.3 TEST PROCEDURE

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

4.3.4 DEVIATION FROM TEST STANDARD

No deviation

4.3.5 TEST SETUP

4.3.6 EUT OPERATING CONDITIONS

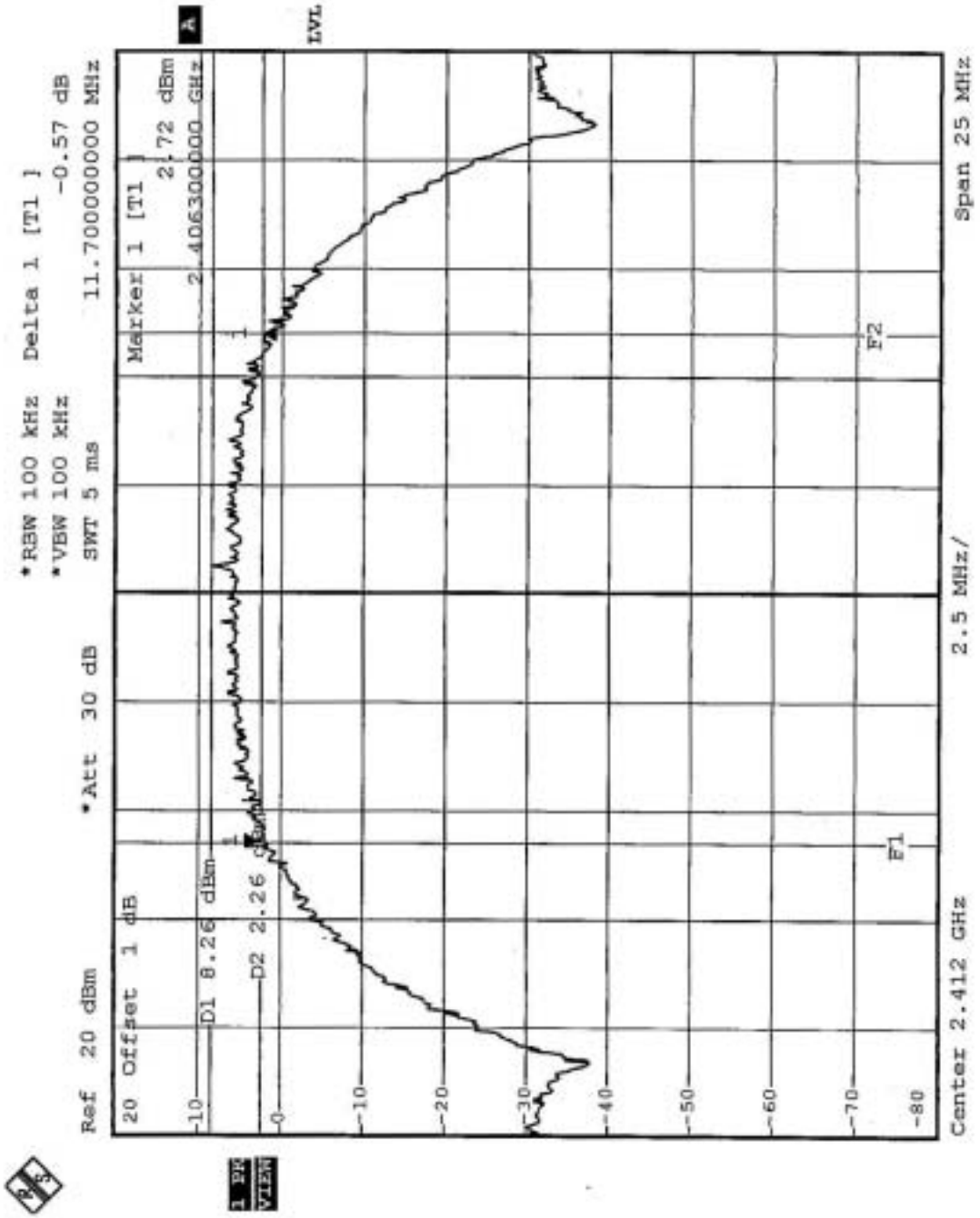
The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.3.7 TEST RESULTS -DSSS

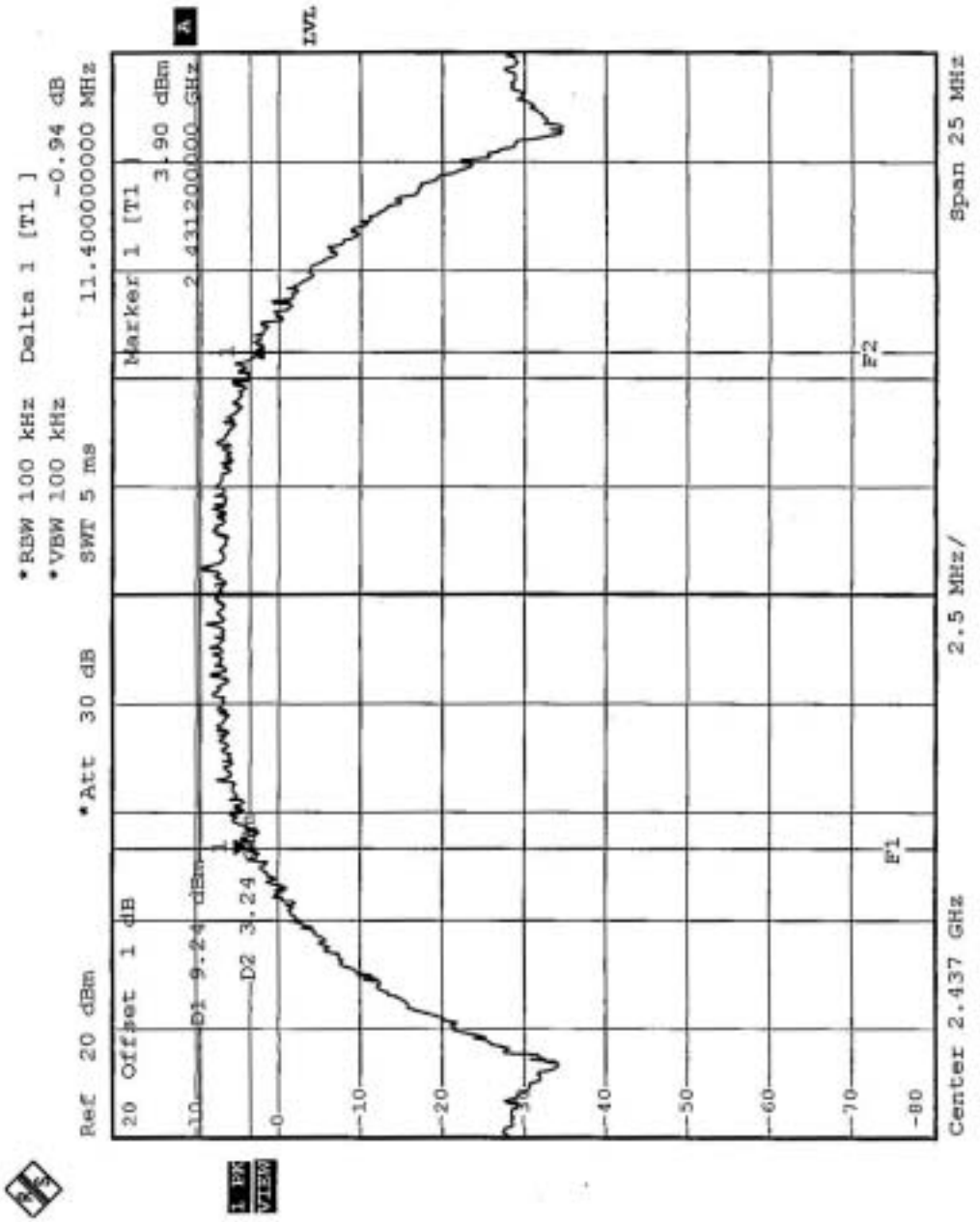
EUT	802.11a/b/g MiniPCI module		
MODEL	T60H835	**ENVIRONMENTAL CONDITIONS**	27deg. C, 59%RH, 967 hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	**TESTED BY**	Sky Liao

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	11.7	0.5	PASS
6	2437	11.4	0.5	PASS
11	2462	11.3	0.5	PASS

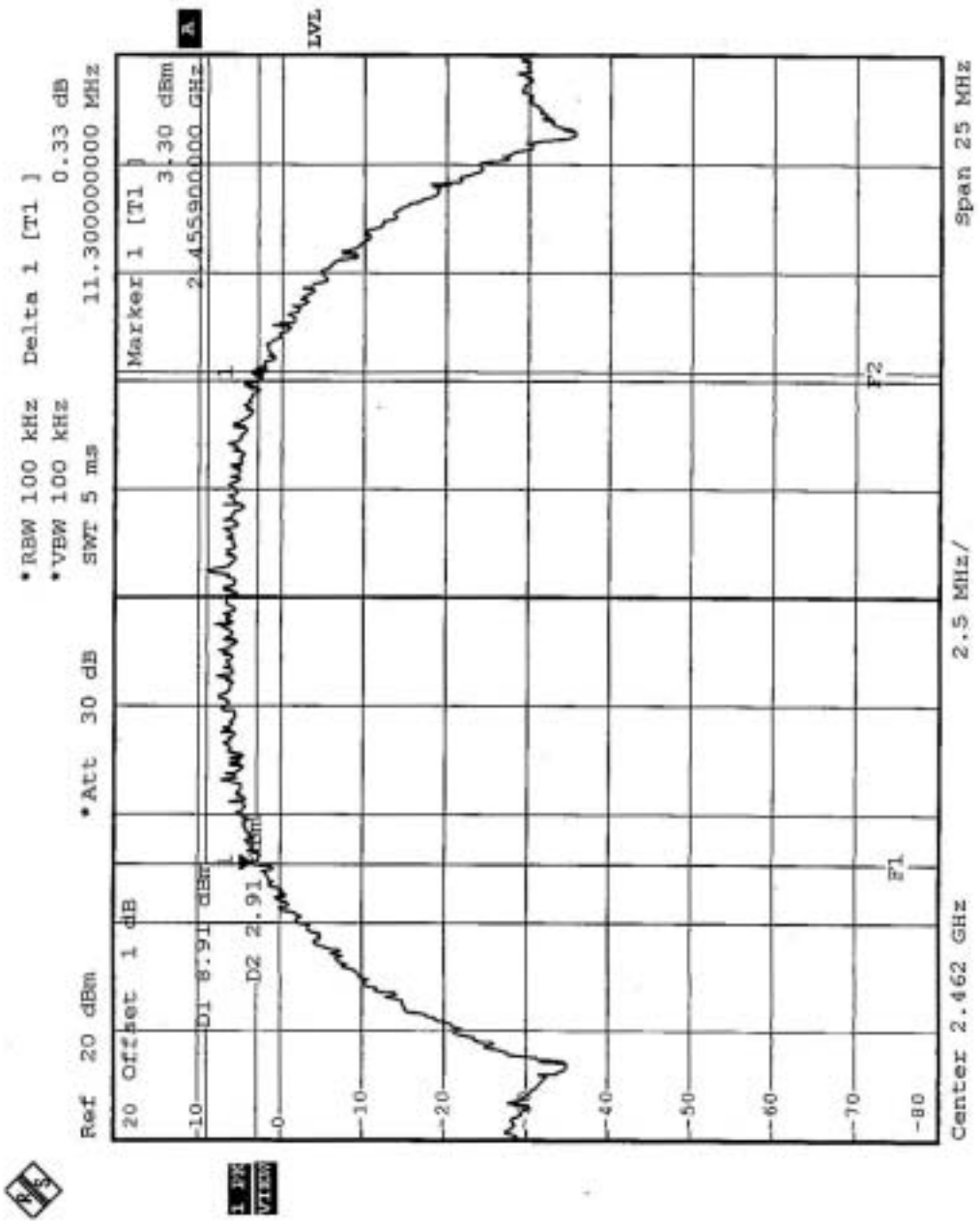
CH1


*RBW 100 kHz
*VBW 100 kHz
SWT 5 ms
Delta 1 [T1]
-0.57 dB
11.700000000 MHz
Marker 1 [T1]
2.72 dBm
2.406300000 GHz
*Att 30 dB
Ref 20 dBm
20 Offset 1 dB
D1 8.26 dBm
D2 2.26 dB
F1
F2
Center 2.412 GHz
2.5 MHz/
Span 25 MHz

CH6


RBW 100 kHz
VBW 100 kHz
SWT 5 ms
Delta 1 [T1]
-0.94 dB
11.400000000 MHz
Att 30 dB
Marker 1 [T1
3.90 dBm
2.431200000 GHz
Ref 20 dBm
Offset 1 dB
D1 9.24 dBm
D2 3.24 dB
F1
F2
Center 2.437 GHz
2.5 MHz/
Span 25 MHz

CH11

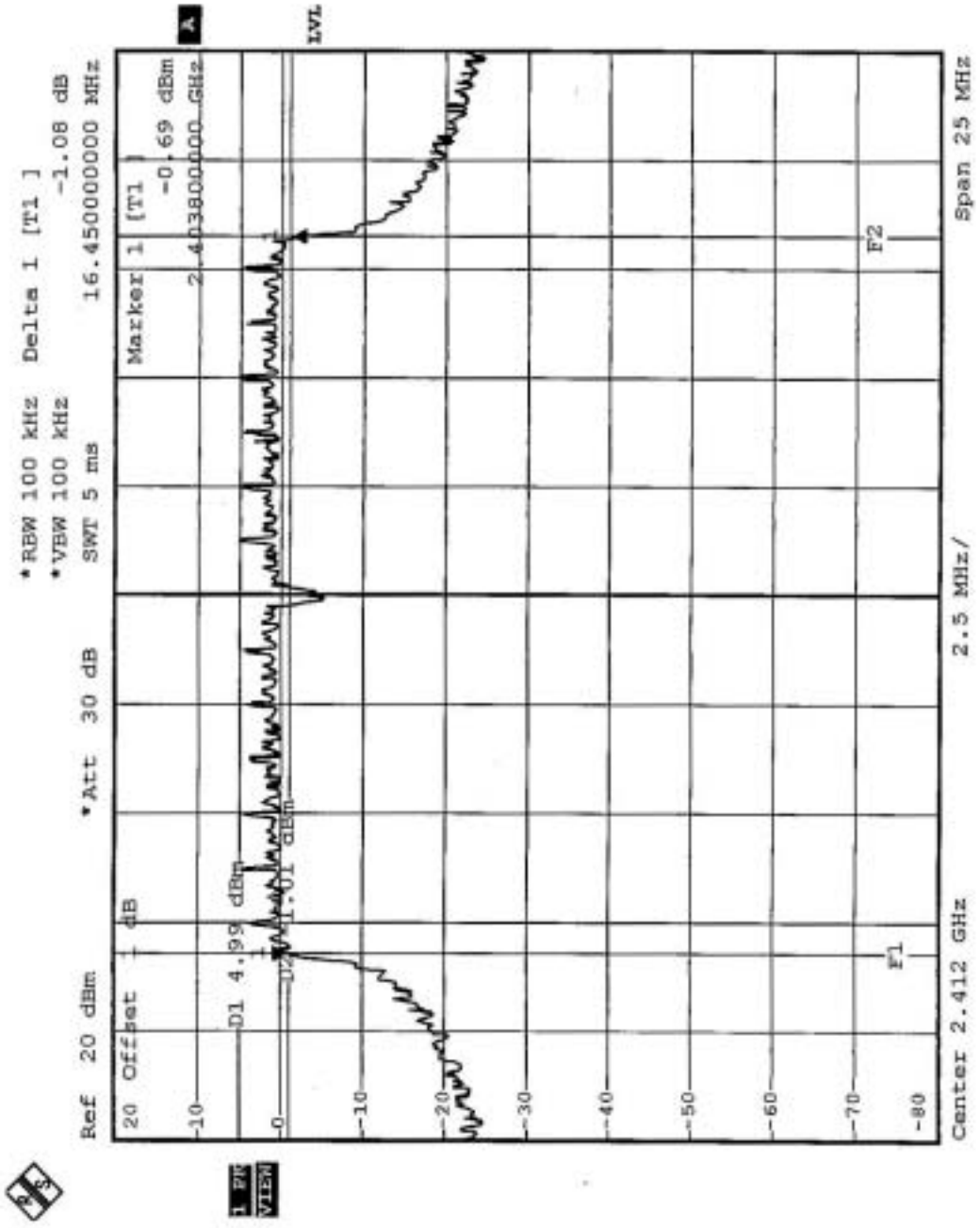

Ref 20 dBm
20 Offset 1 dB
*Att 30 dB
*RBW 100 kHz
*VBW 100 kHz
SWT 5 ms
Delta 1 [T1]
0.33 dB
11.30000000 MHz
Marker 1 [T1]
3.30 dBm
2.45500000 GHz
D1 8.91 dBm
D2 2.91 dBm
LVL
Center 2.462 GHz
2.5 MHz/
Span 25 MHz
F1
F2

4.3.8 TEST RESULTS -OFDM

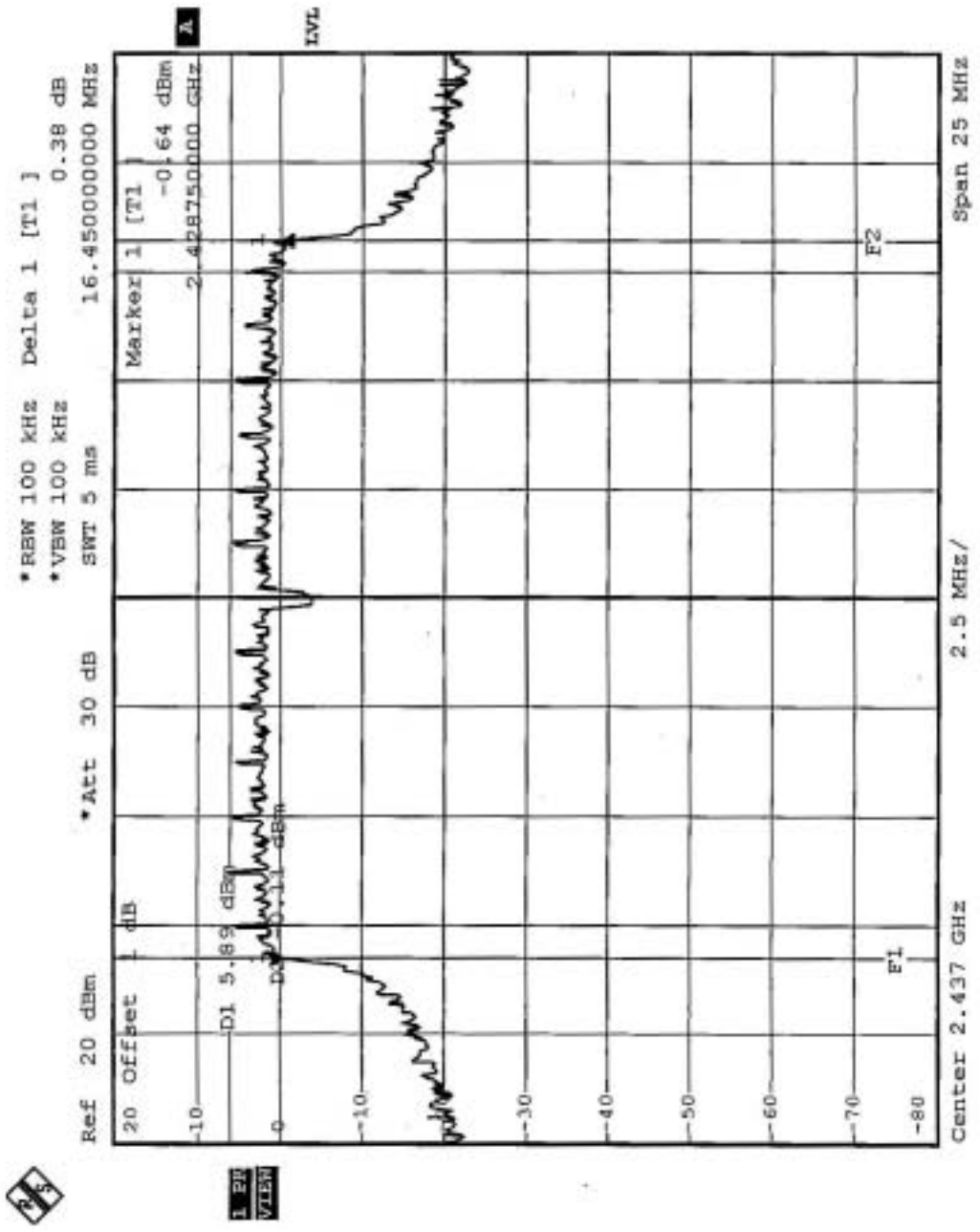
EUT	802.11a/b/g MiniPCI module		
MODEL	T60H835	**ENVIRONMENTAL CONDITIONS**	27deg. C, 59%RH, 967 hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	**TESTED BY**	Sky Liao

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	16.45	0.5	PASS
6	2437	16.45	0.5	PASS
11	2462	16.15	0.5	PASS
Turbo 6	2437	31.5	0.5	PASS

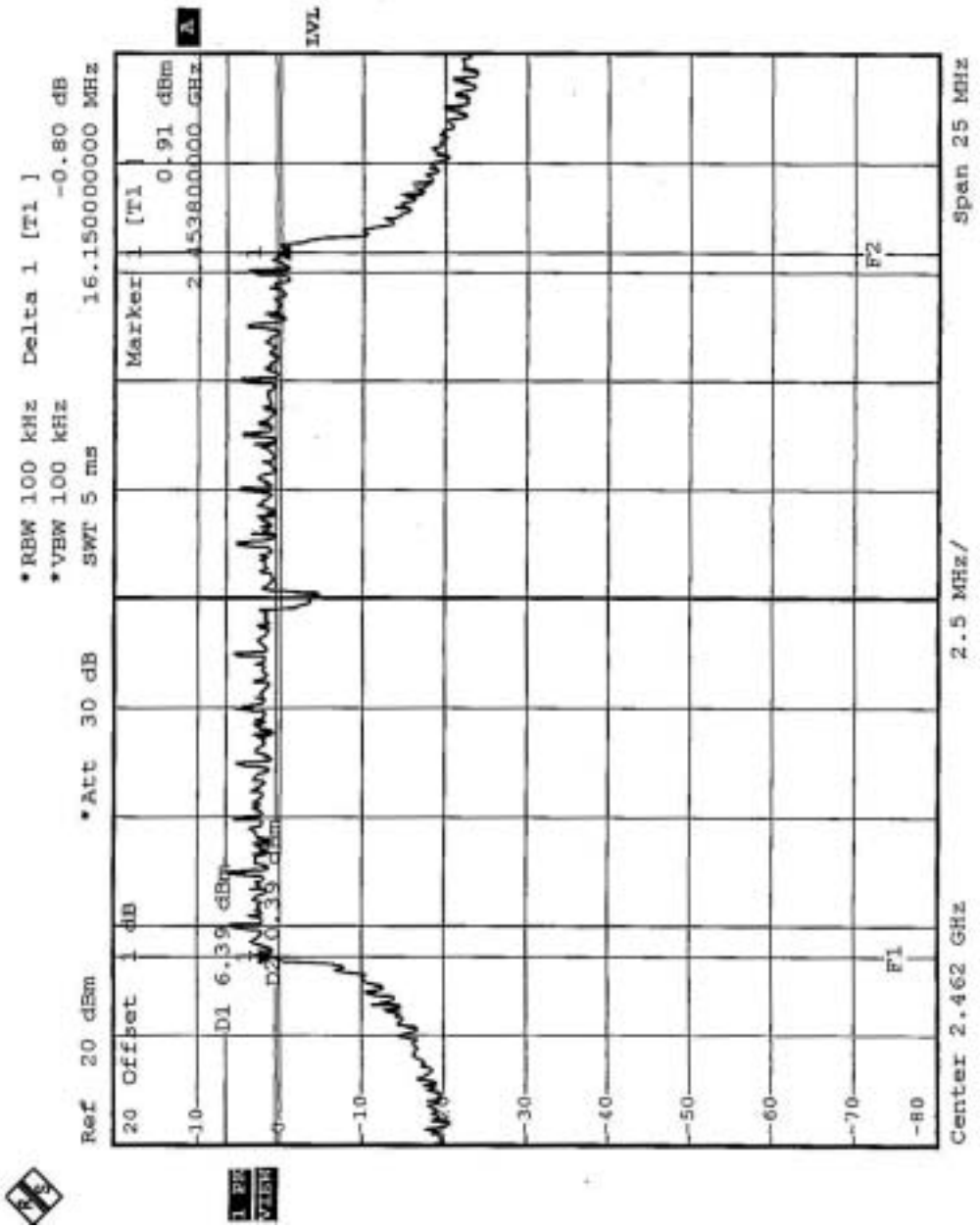
CH1


RBW 100 kHz
VBW 100 kHz
SWT 5 ms
Delta 1 [T1]
-1.08 dB
16.450000000 MHz
Att 30 dB
Marker 1 [T1]
-0.69 dBm
2.403800000 GHz
Ref 20 dBm
Offset dB
D1 4.99 dBm
D2 -1.01 dBm
F1
F2
Center 2.412 GHz
2.5 MHz/
Span 25 MHz

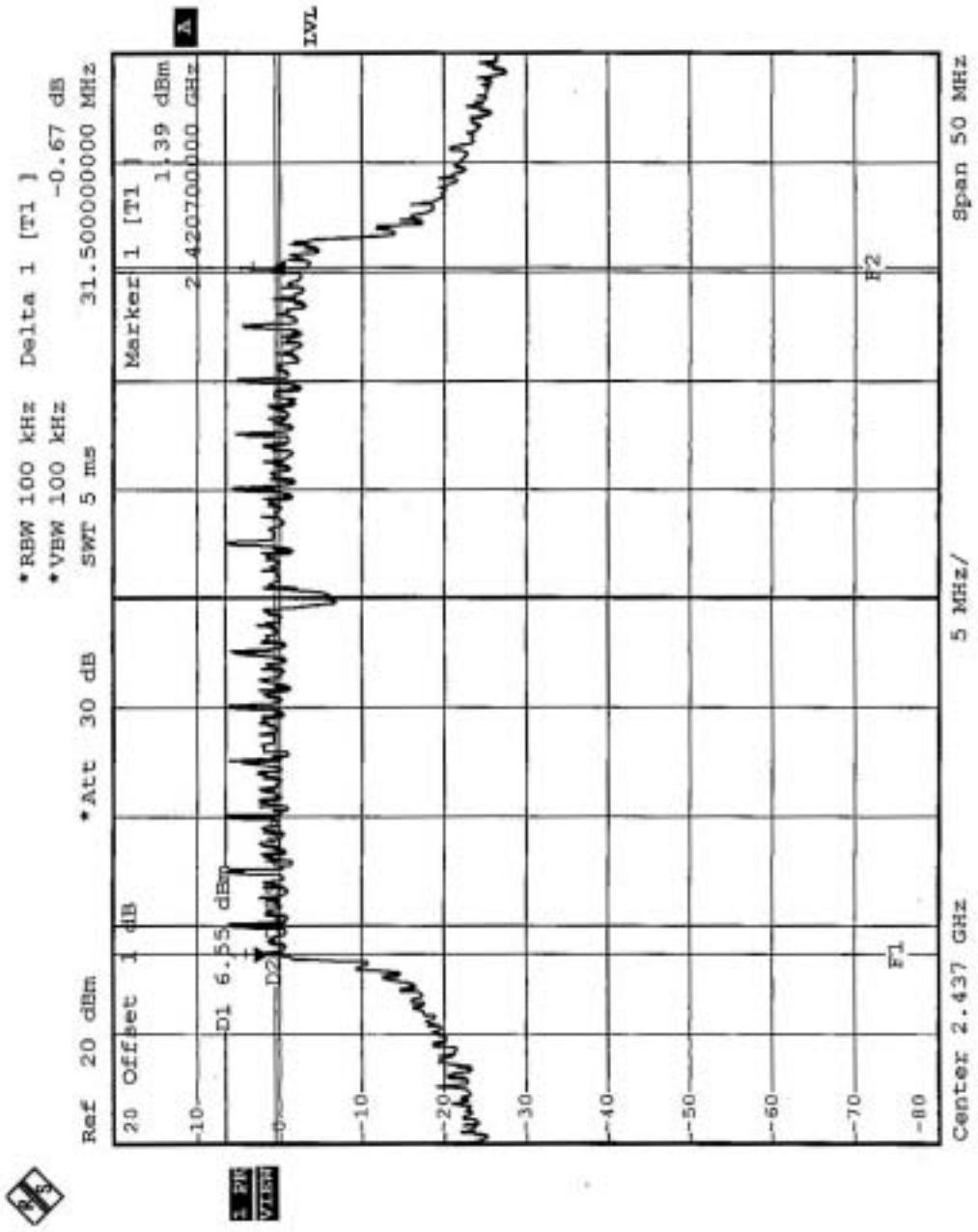
CH6


*RBW 100 kHz
Delta 1 [T1]
0.38 dB
*VBW 100 kHz
16.450000000 MHz
*Att 30 dB
SWT 5 ms
Marker 1 [T1]
-0.64 dBm
2.428750000 GHz
Ref 20 dBm
Offset dB
D1 5.89 dBm
Center 2.437 GHz
2.5 MHz/
Span 25 MHz
F1
F2

CH11


*RBW 100 kHz
*VBW 100 kHz
SWT 5 ms
Delta 1 [T1]
-0.80 dB
16.150000000 MHz
Marker 1 [T1]
0.91 dBm
2.453800000 GHz
*Att 30 dB
Ref 20 dBm
20 Offset 1 dB
D1 6.39 dBm
D2 0.39 dBm
Center 2.462 GHz
2.5 MHz/
Span 25 MHz
F1
F2
VIEW
CLRWR

Turbo CH6


RBW 100 kHz
Delta 1 [T1]
-0.67 dB
VBW 100 kHz
SWT 5 ms
31.500000000 MHz
Att 30 dB
Marker 1 [T1]
1.39 dBm
2.420700000 GHz
Ref 20 dBm
Offset 1 dB
D1 6.55 dBm
D2
F1
F2
Center 2.437 GHz
5 MHz/
Span 50 MHz

4.4 MAXIMUM PEAK OUTPUT POWER

4.4.1 LIMITS OF MAXIMUM PEAK OUTPUT POWER MEASUREMENT

The Maximum Peak Output Power Measurement is 30dBm.

4.4.2 INSTRUMENTS

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

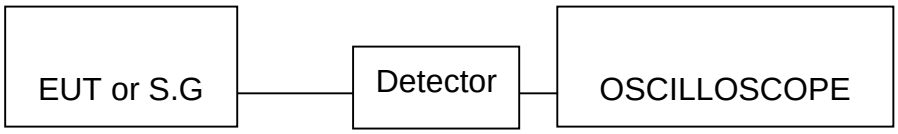
Note:

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

4.4.3 TEST PROCEDURES

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

4.4.4 TEST SETUP



4.4.5 EUT OPERATING CONDITIONS

Same as Item 4.3.6

4.4.6 TEST RESULTS -DSSS

EUT	802.11a/b/g MiniPCI module		
INPUT POWER (SYSTEM)	120Vac, 60Hz	**MODEL**	T60H835
TESTED BY	Sky Liao	**ENVIRONMENTAL CONDITIONS**	27deg. C, 59%RH, 967 hPa

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	18.86	30	PASS
6	2437	20.02	30	PASS
11	2462	19.48	30	PASS

4.4.7 TEST RESULTS -OFDM

EUT	802.11a/b/g MiniPCI module		
INPUT POWER (SYSTEM)	120Vac, 60Hz	**MODEL**	T60H835
TESTED BY	Sky Liao	**ENVIRONMENTAL CONDITIONS**	27deg. C, 59%RH, 967 hPa

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	21.23	30	PASS
6	2437	21.51	30	PASS
11	2462	20.46	30	PASS
Turbo 6	2437	21.33	30	PASS

4.5 POWER SPECTRAL DENSITY MEASUREMENT

4.5.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm.

4.5.2 TEST INSTRUMENTS

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

Note:

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

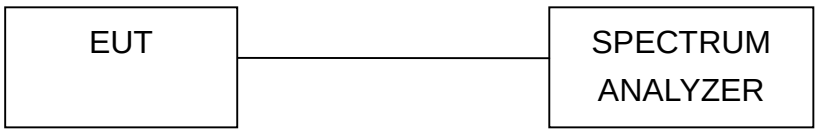
4.5.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer through an attenuator, the bandwidth of the fundamental frequency was measured with the spectrum analyzer using 3 kHz RBW and 30 kHz VBW, set sweep time = span/3 kHz. The power spectral density was measured and recorded.
The sweep time is allowed to be longer than span/3 kHz for a full response of the mixer in the spectrum analyzer.

4.5.4 DEVIATION FROM TEST STANDARD

No deviation

4.5.5 TEST SETUP



4.5.6 EUT OPERATING CONDITION

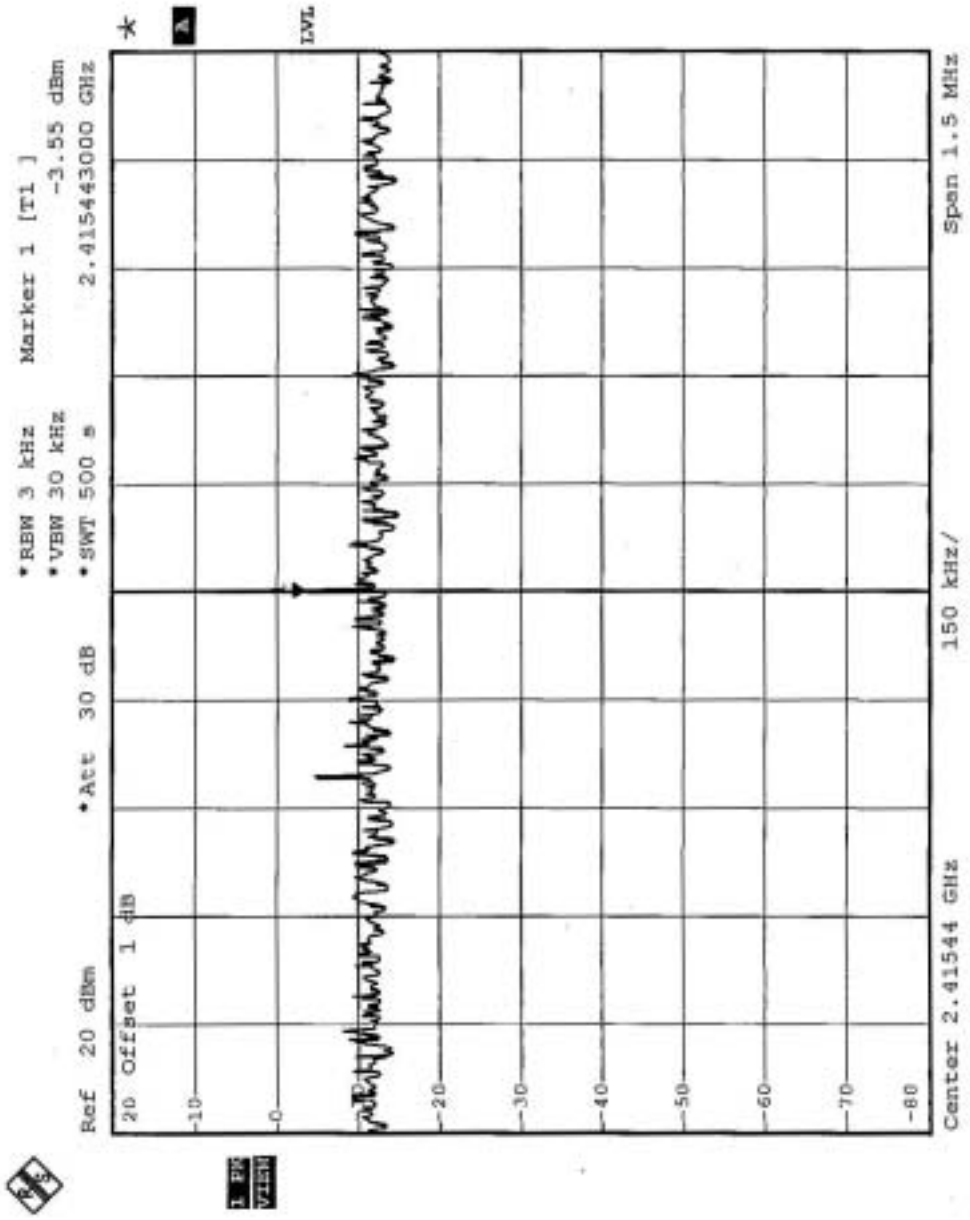
Same as Item 4.3.6

4.5.7 TEST RESULTS-DSSS

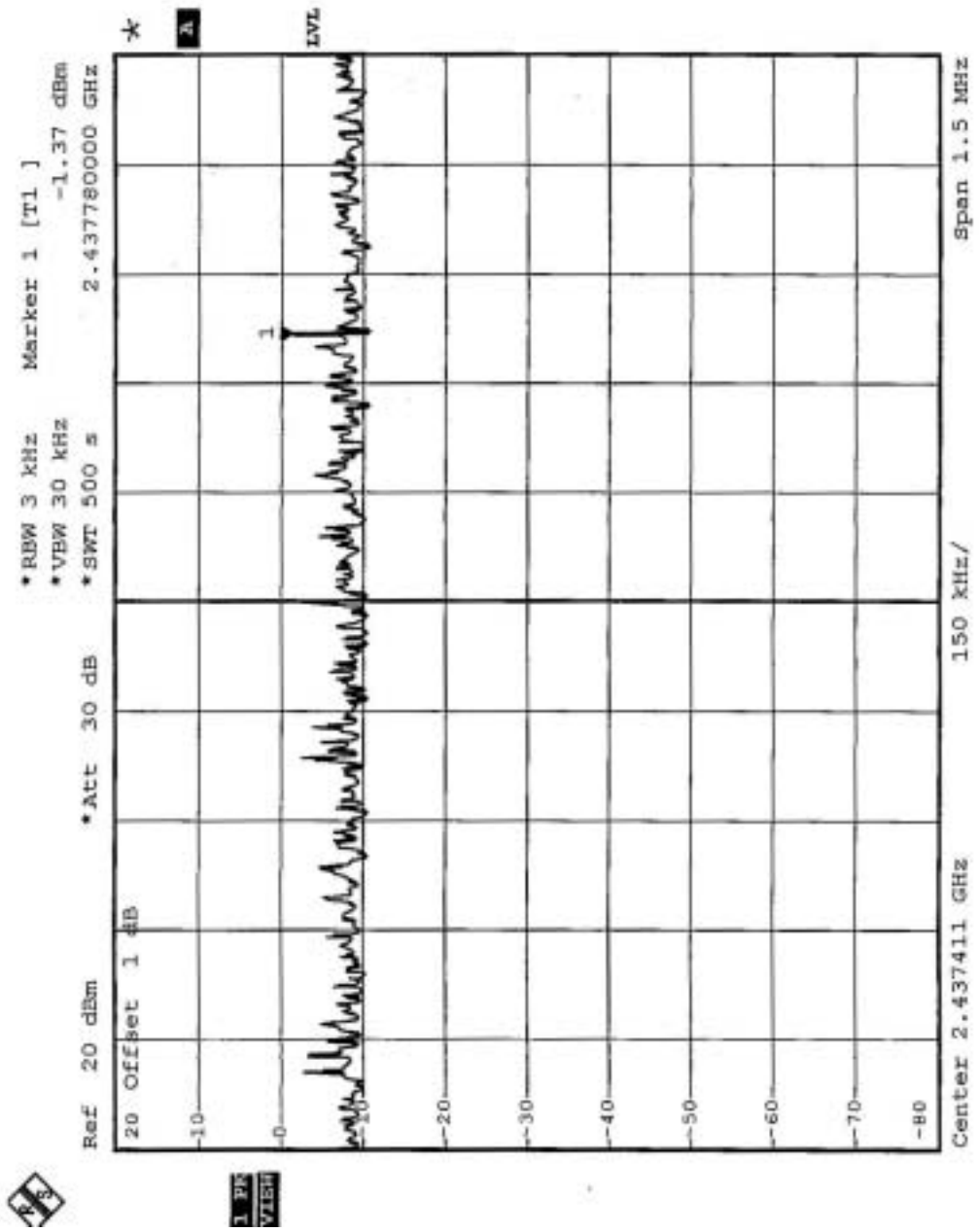
EUT	802.11a/b/g MiniPCI module		
INPUT POWER (SYSTEM)	120Vac, 60Hz	**MODEL**	T60H835
TESTED BY	Sky Liao	**ENVIRONMENTAL CONDITIONS**	27deg. C, 59%RH, 967 hPa

CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-3.55	8	PASS
6	2437	-1.37	8	PASS
11	2462	-3.63	8	PASS

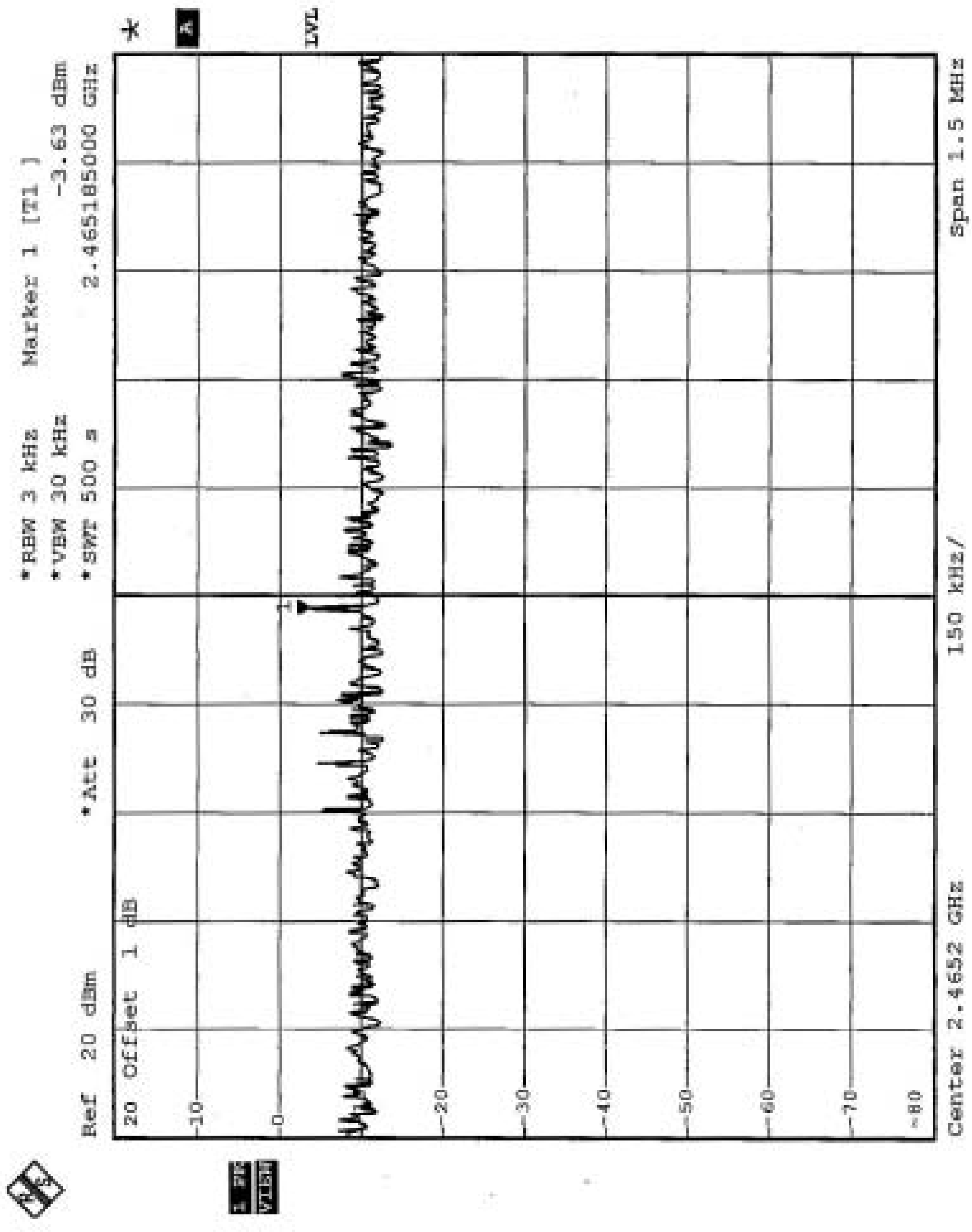
CH1


Ref 20 dBm
Offset 1 dB
Att 30 dB
RBW 3 kHz
VBW 30 kHz
SWT 500 s
Marker 1 [T1]
-3.55 dBm
2.41543000 GHz
Center 2.41544 GHz
150 kHz/
Span 1.5 MHz
1 PK
VIEW

CH6


Ref 20 dBm
20 Offset 1 dB
*Att 30 dB
*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-1.37 dBm
2.437780000 GHz
Center 2.437411 GHz
150 kHz/
Span 1.5 MHz

CH11

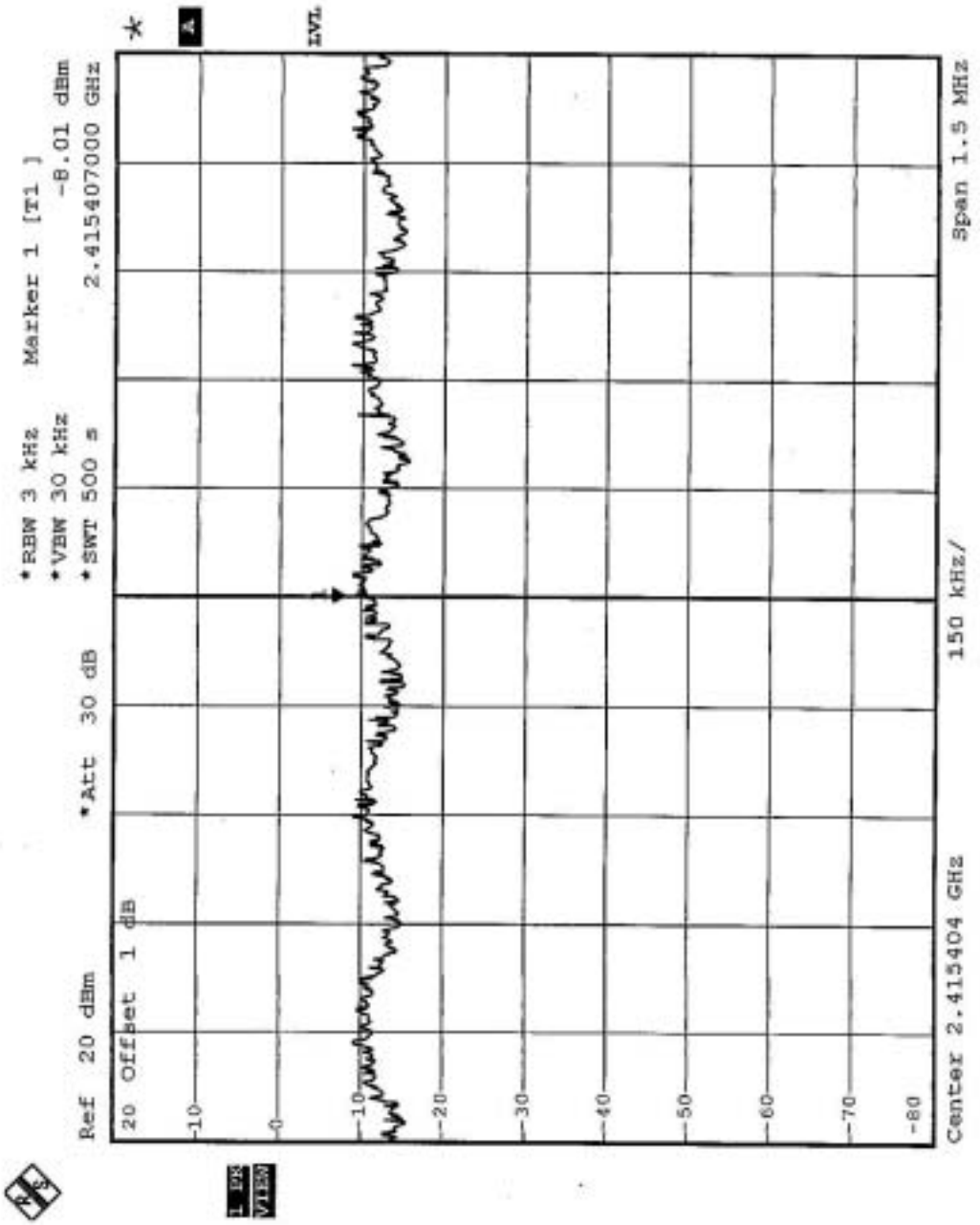

*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-3.63 dBm
2.46518500 GHz
Ref 20 dBm
*Att 30 dB
20 Offset 1 dB
Center 2.4652 GHz
150 kHz/
Span 1.5 MHz

4.5.8 TEST RESULTS-OFDM

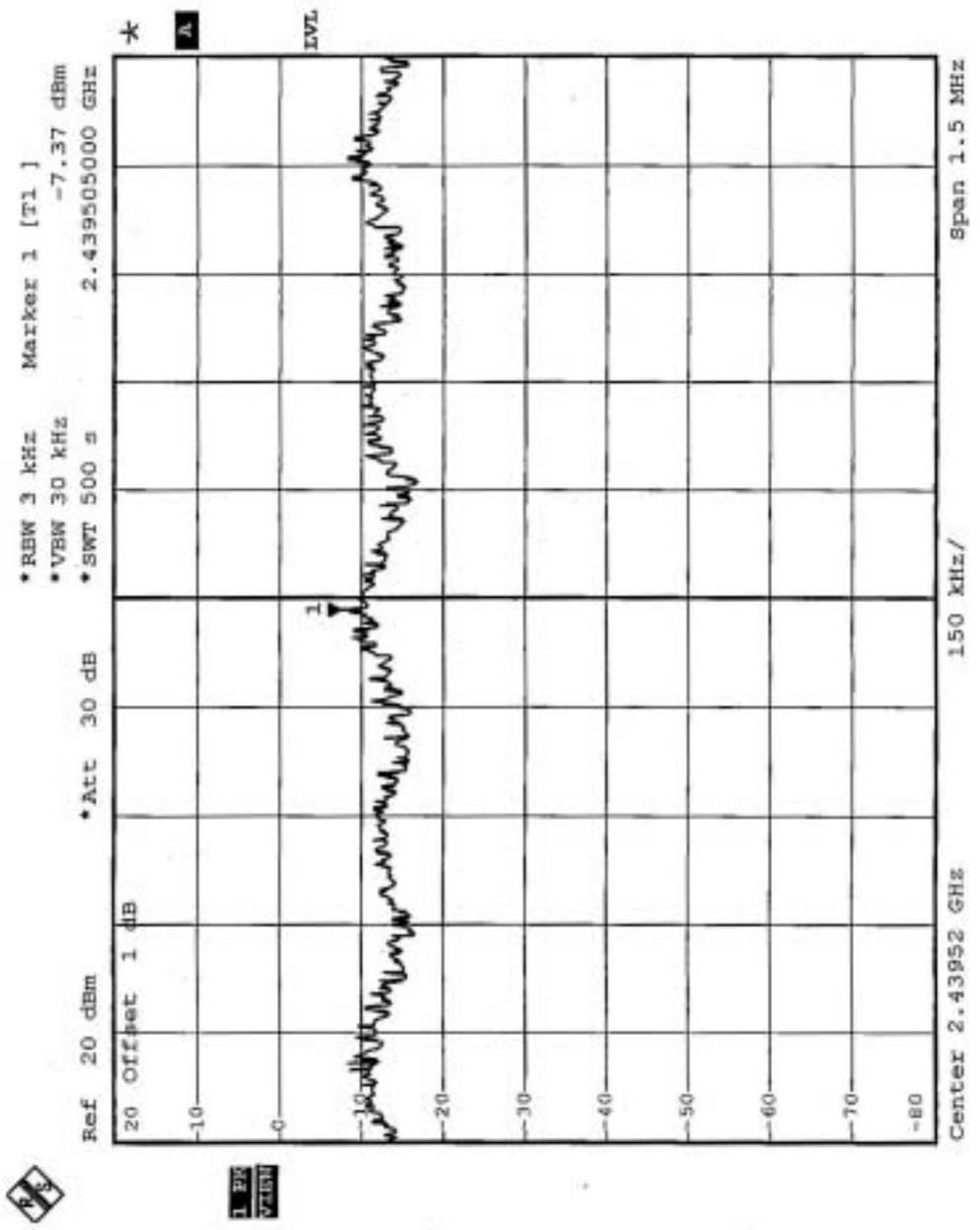
EUT	802.11a/b/g MiniPCI module		
INPUT POWER (SYSTEM)	120Vac, 60Hz	**MODEL**	T60H835
TESTED BY	Sky Liao	**ENVIRONMENTAL CONDITIONS**	27deg. C, 59%RH, 967 hPa

CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-8.01	8	PASS
6	2437	-7.37	8	PASS
11	2462	-6.68	8	PASS
Turbo 6	2437	-10.43	8	PASS

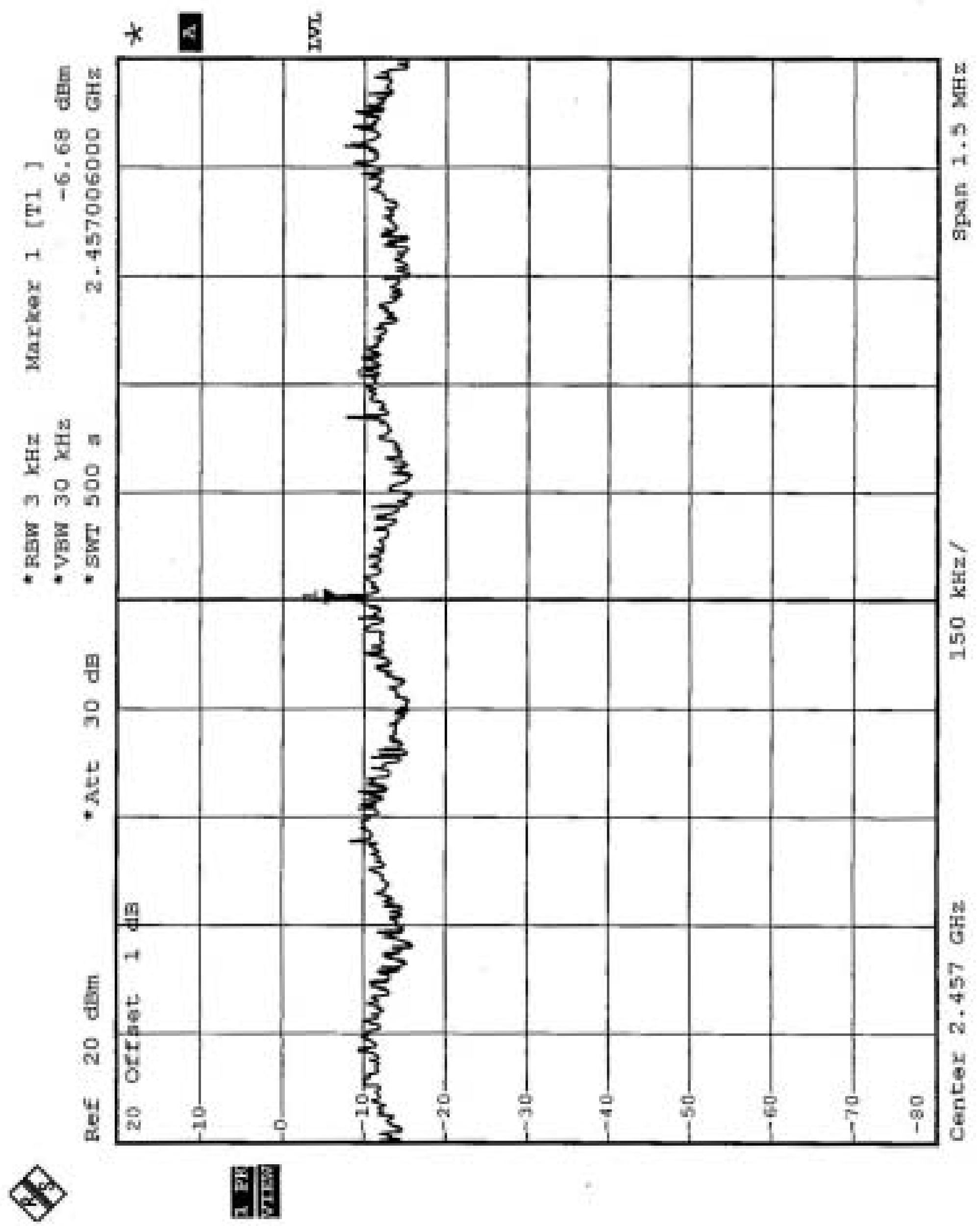
CH1


Ref 20 dBm
20 Offset 1 dB
*Att 30 dB
*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-8.01 dBm
2.415407000 GHz
Center 2.415404 GHz
150 kHz/
Span 1.5 MHz
1 PK
VIEW

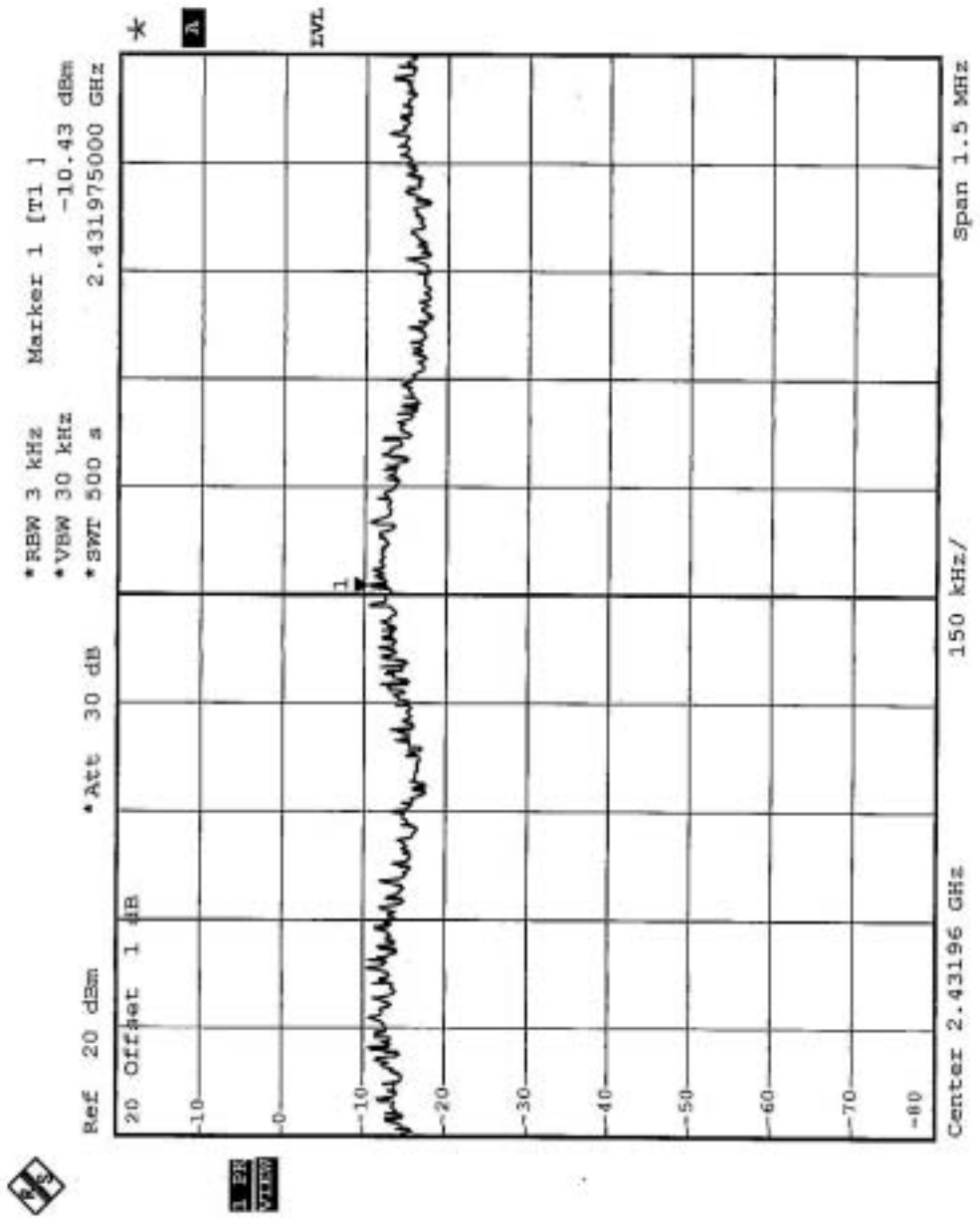
CH6


Ref 20 dBm
20 Offset 1 dB
*Att 30 dB
*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-7.37 dBm
2.439505000 GHz
Center 2.43952 GHz
150 kHz/
Span 1.5 MHz

CH11


*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-6.68 dBm
2.45700600 GHz
Ref 20 dBm
*Att 30 dB
Offset 1 dB
Center 2.457 GHz
150 kHz/
Span 1.5 MHz

Turbo CH6


Ref 20 dBm
20 Offset 1 dB
*Att 30 dB
*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-10.43 dBm
2.431975000 GHz
Center 2.43196 GHz
150 kHz/
Span 1.5 MHz
1VIEW
1 EN VIEW

4.6 BAND EDGES MEASUREMENT

4.6.1 LIMITS OF BAND EDGES MEASUREMENT

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

4.6.2 TEST INSTRUMENTS

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

Note:

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

4.6.3 TEST PROCEDURE

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

4.6.4 DEVIATION FROM TEST STANDARD

No deviation

4.6.5 EUT OPERATING CONDITION

Same as Item 4.3.6

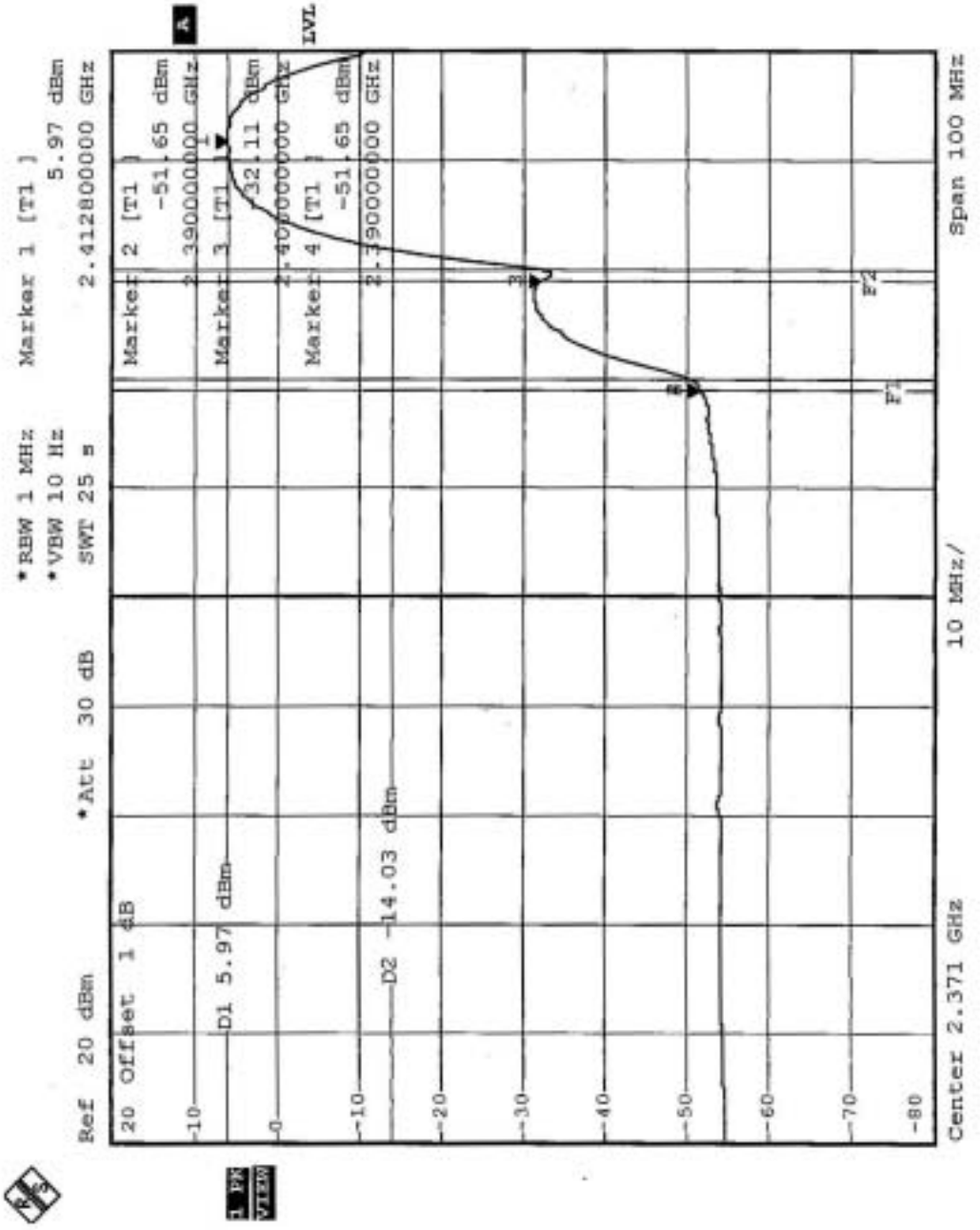
4.6.6 TEST RESULTS –DSSS

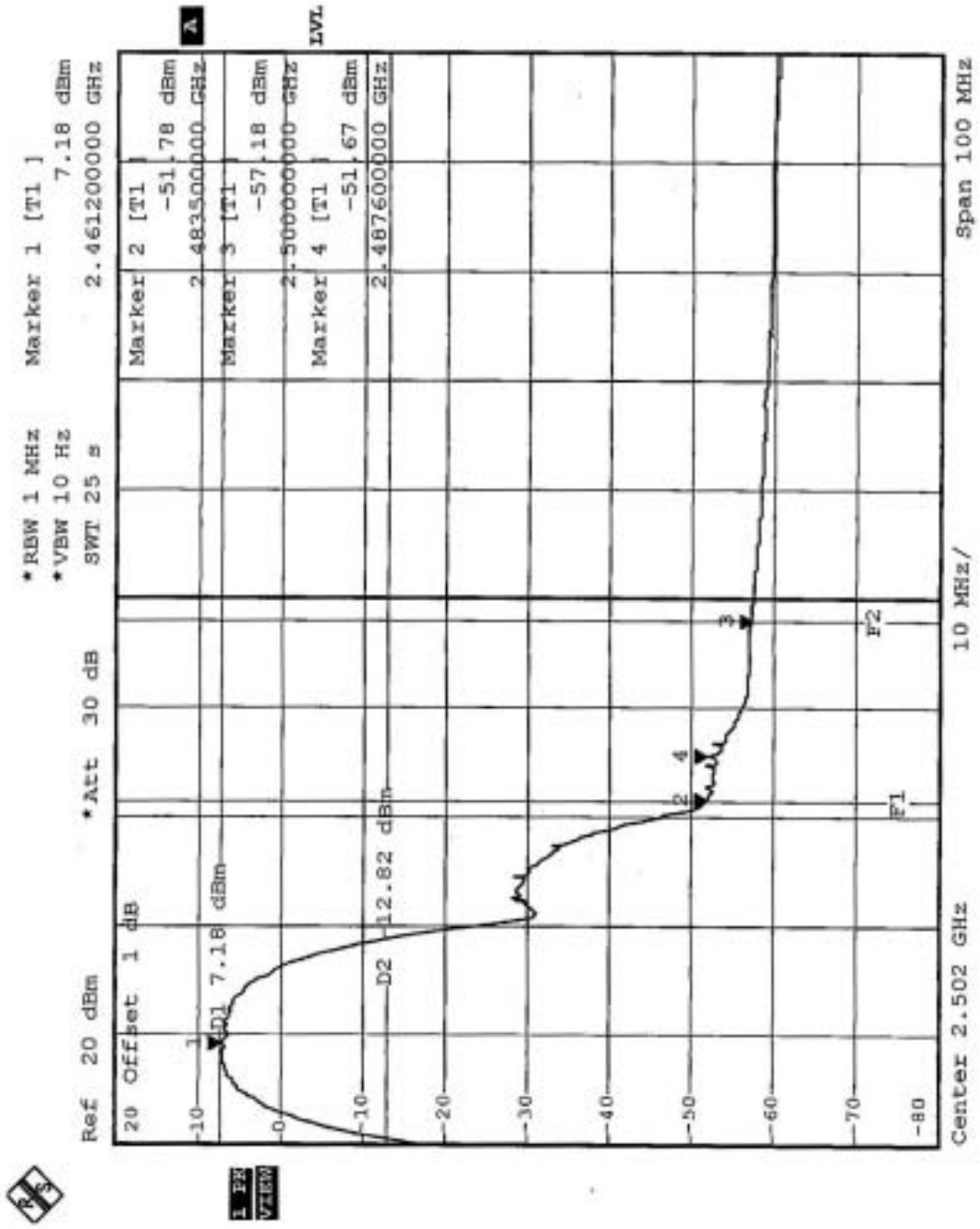
The spectrum plots are attached on the following 2 pages. D1 line indicates the highest level, and D2 line indicates the 20dB offset below D2. It shows compliance with the requirement in part 15.247(C).

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

NOTE (1): The band edge emission plot on the following first page shows 57.62dB delta between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2 is 100.9dBuV/m, so the maximum field strength in restrict band is 100.9-57.62=43.28dBuV/m which is under 54 dBuV/m limit.

NOTE (2): The band edge emission plot on the following second page shows 58.96 dB delta between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2 is 102.9dBuV/m, so the maximum field strength in restrict band is 102.9-58.96=43.94dBuV/m which is under 54 dBuV/m limit.


RBW 1 MHz
VBW 10 Hz
SWT 25 s
Att 30 dB
Offset 1 dB
Ref 20 dBm
Marker 1 [T1]
5.97 dBm
2.412800000 GHz
Marker 2 [T1]
-51.65 dBm
2.390000000 GHz
Marker 3 [T1]
32.11 dBm
2.400000000 GHz
Marker 4 [T1]
-51.65 dBm
2.390000000 GHz
D1 5.97 dBm
D2 -14.03 dBm
Center 2.371 GHz
10 MHz/
Span 100 MHz
LVL


RBW 1 MHz
VBW 10 Hz
SWT 25 s
Marker 1 [T1]
7.18 dBm
2.461200000 GHz
Marker 2 [T1]
-51.78 dBm
2.483500000 GHz
Marker 3 [T1]
-57.18 dBm
2.500000000 GHz
Marker 4 [T1]
-51.67 dBm
2.487600000 GHz
Ref 20 dBm
Offset 1 dB
Att 30 dB
D1 7.18 dBm
D2 12.82 dBm
Center 2.502 GHz
10 MHz/
Span 100 MHz
F1
F2
1 PK
VIEW

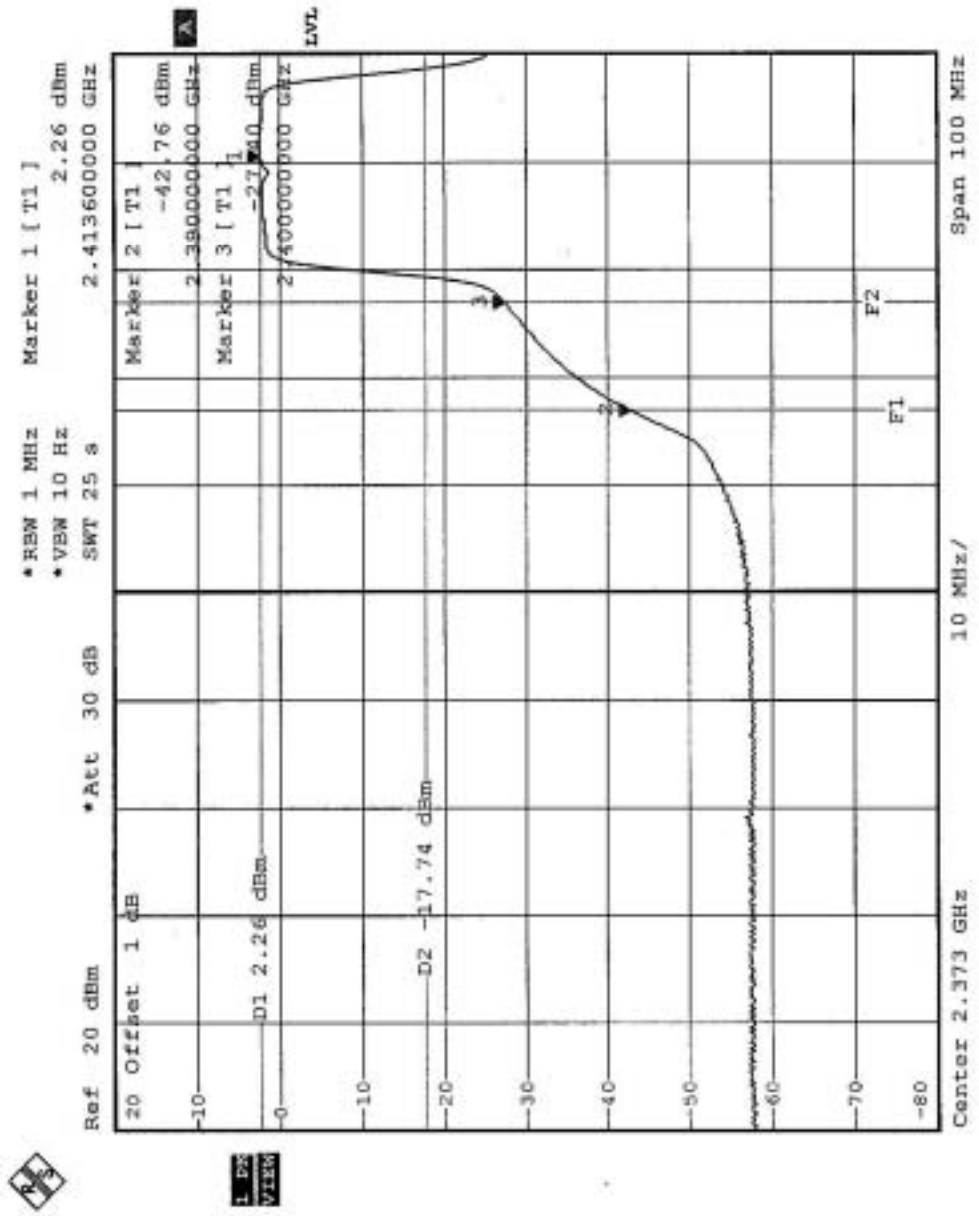
4.6.7 TEST RESULTS –OFDM

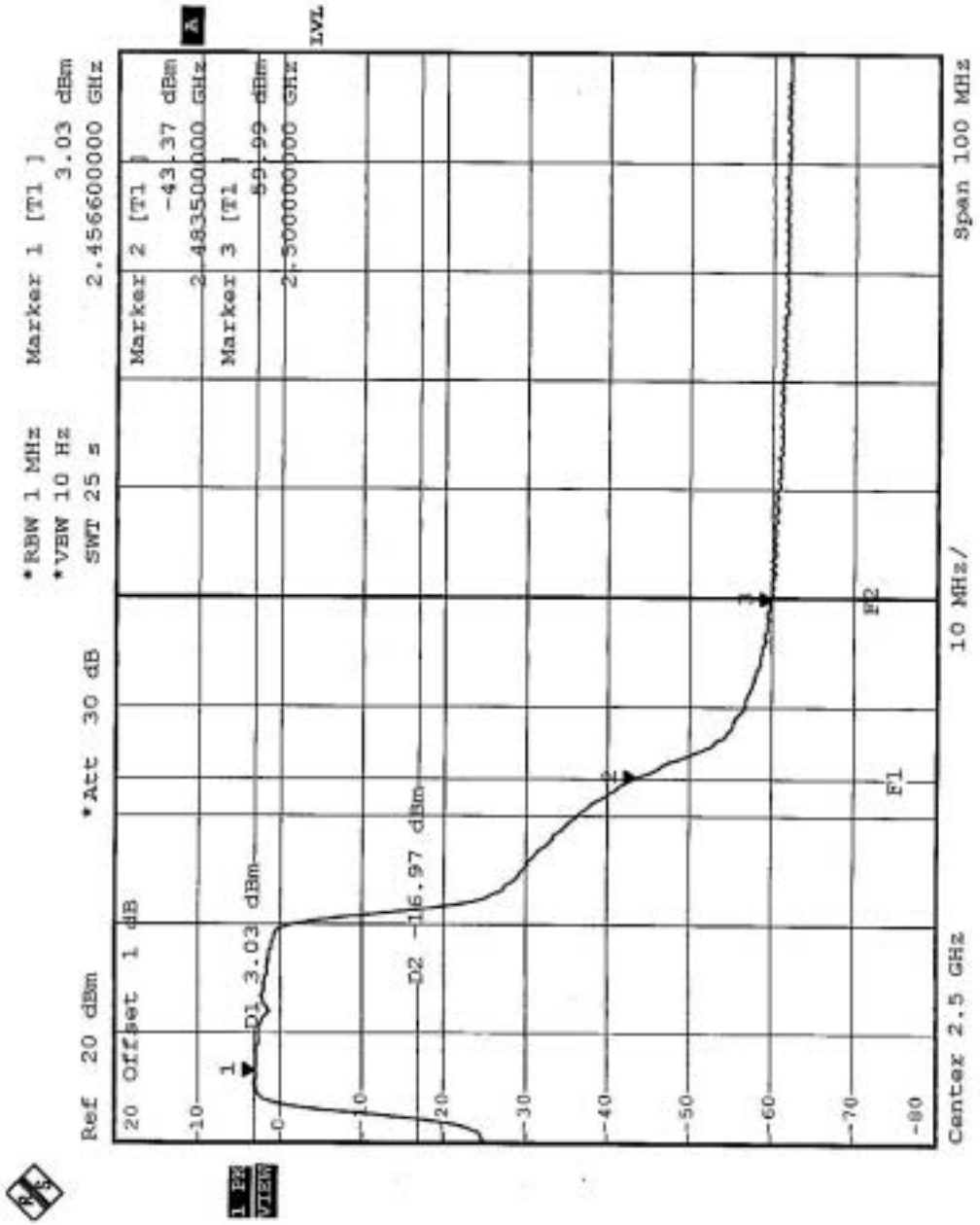
The spectrum plots are attached on the following 2 pages. D1 line indicates the highest level, and D2 line indicates the 20dB offset below D2. It shows compliance with the requirement in part 15.247(C).

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

NOTE (1): The band edge emission plot on the following first page shows 45.02dB delta between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2 is 98.1dBuV/m, so the maximum field strength in restrict band is 98.1-45.02=53.08dBuV/m which is under 54 dBuV/m limit.

NOTE (2): The band edge emission plot on the following second page shows 46.4 dB delta between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2 is 99.7dBuV/m, so the maximum field strength in restrict band is 99.7-46.4=53.3 dBuV/m which is under 54 dBuV/m limit.


RBW 1 MHz
VBW 10 Hz
SWT 25 s
Marker 1 [T1]
2.26 dBm
2.41360000 GHz
Att 30 dB
Offset 1 dB
Ref 20 dBm
Marker 2 [T1]
-42.76 dBm
2.39000000 GHz
Marker 3 [T1]
-27.40 dBm
2.40000000 GHz
D1 2.26 dBm
D2 -17.74 dBm
F1
F2
LVL
Center 2.373 GHz
10 MHz/
Span 100 MHz


*RBW 1 MHz
*VBW 10 Hz
SWT 25 s
Marker 1 [T1]
3.03 dBm
2.456600000 GHz
Marker 2 [T1]
-43.37 dBm
2.483500000 GHz
Marker 3 [T1]
-89.99 dBm
2.500000000 GHz
Ref 20 dBm
20 Offset 1 dB
*Att 30 dB
D1 3.03 dBm
D2 -16.97 dBm
F1
F2
Center 2.5 GHz
10 MHz/
Span 100 MHz

4.7 ANTENNA REQUIREMENT

4.7.1 STANDARD APPLICABLE

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

4.7.2 ANTENNA CONNECTED CONSTRUCTION

The antenna used in this product is PIFA Antenna with Hirose connector. The maximum Gain of the antenna is -2dBi.

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

5.1 CONDUCTED EMISSION MEASUREMENT

5.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dBμV)	
	Quasi-peak	Average
0.15-0.5 0.5-5 5-30	66 to 56 56 60	56 to 46 46 50

NOTE:
1. The lower limit shall apply at the transition frequencies.
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 MHz.
3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

5.1.2 TEST INSTRUMENTS

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

Note:

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

5.1.3 TEST PROCEDURES

a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.

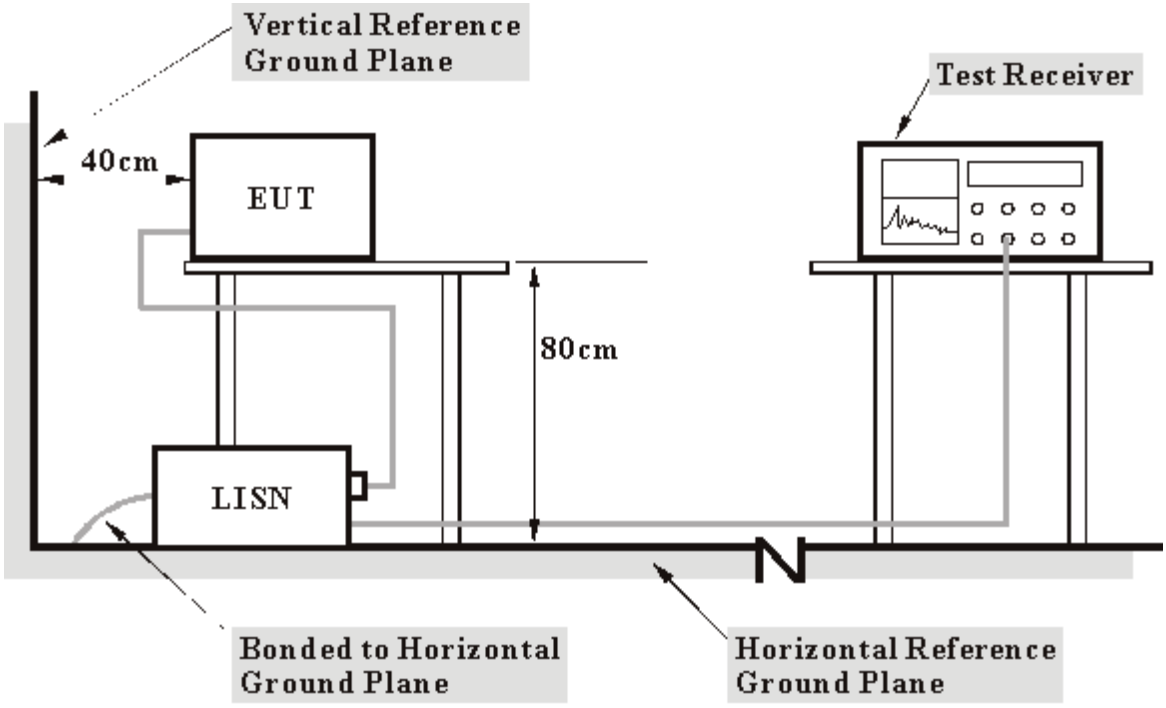
b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

c. The frequency range from 150 kHz to 30 MHz was searched. Emission levels over 10dB under the prescribed limits could not be reported

5.1.4 DEVIATION FROM TEST STANDARD

No deviation

5.1.5 TEST SETUP



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

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

5.1.6 EUT OPERATING CONDITIONS

a. 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 485” to enable EUT under transmission condition continuously at specific channel frequency.

c. Notebook computer sends "H" messages to modem.

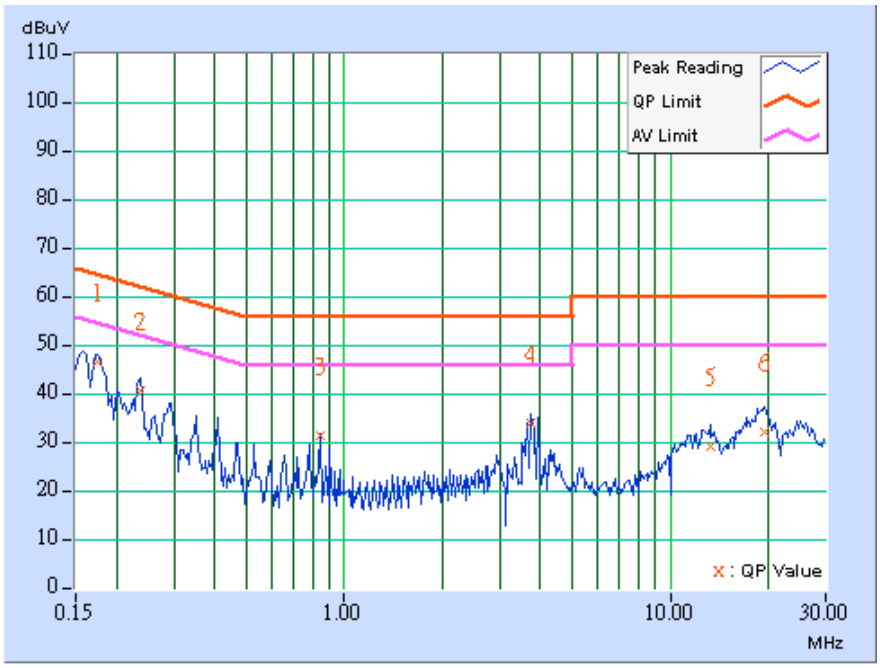
d. Notebook computer sends "H" messages to printer, and the printer prints them on paper.

5.1.7 TEST RESULTS

EUT	802.11a/b/g MiniPCI module		
MODEL	T60H835	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	26deg. C, 62%RH, 967 hPa	**TESTED BY**	Sky Liao
TEST MODE	802.11a		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.176	0.25	45.32	-	45.57	-	64.68	54.68	-19.11	-
2	0.236	0.28	39.51	-	39.79	-	62.24	52.24	-22.45	-
3	0.841	0.27	29.97	-	30.24	-	56.00	46.00	-25.76	-
4	3.754	0.39	32.74	-	33.13	-	56.00	46.00	-22.87	-
5	13.316	1.07	27.91	-	28.98	-	60.00	50.00	-31.02	-
6	19.402	1.38	30.74	-	32.12	-	60.00	50.00	-27.88	-

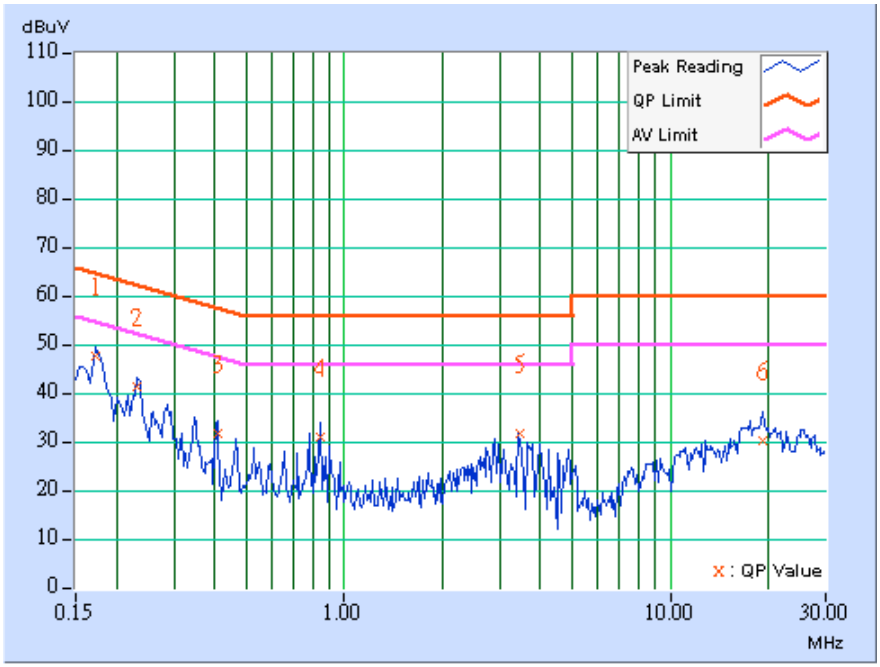
NOTES: (1) "*": Undetectable
(2) Q.P. and AV. are abbreviations of quasi-peak and average.
(3) "-": The Quasi-peak reading value also meets an average limit, thus measurement with the average detector is unnecessary.
(4) The emission levels of other frequencies were very low against the limit.
(5) Correction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



EUT	802.11a/b/g MiniPCI module		
MODEL	T60H835	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	26deg. C, 62%RH, 967 hPa	**TESTED BY**	Sky Liao
TEST MODE	802.11a		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	**0.173**	**0.25**	**46.70**	**-**	**46.95**	**-**	**64.79**	**54.79**	**-17.85**	**-**
2	0.232	0.28	40.24	-	40.52	-	62.38	52.38	-21.85	-
3	0.408	0.20	30.50	-	30.70	-	57.69	47.69	-26.99	-
4	0.845	0.27	29.91	-	30.18	-	56.00	46.00	-25.82	-
5	3.438	0.37	30.65	-	31.02	-	56.00	46.00	-24.98	-
6	19.289	1.19	29.15	-	30.34	-	60.00	50.00	-29.66	-

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



5.2 RADIATED EMISSION MEASUREMENT

5.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

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

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

NOTE:

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

5.2.2 LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS

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

NOTE:

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

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

5.2.3 TEST INSTRUMENTS

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

Note: 1. The calibration interval of the above test instruments is 12 months (36 months for Tunable Dipole Antenna)and the calibrations are traceable to NML/ROC and NIST/USA.
2. * = 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. C.
5. The FCC Site Registration No. is 656396.
6. The VCCI Site Registration No. is R-1626.
7. The CANADA Site Registration No. is IC 4824-3.
8. The measurement uncertainty is 3.56 dB, which is calculated as per the document CISPR 16-4

5.2.4 TEST PROCEDURES

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

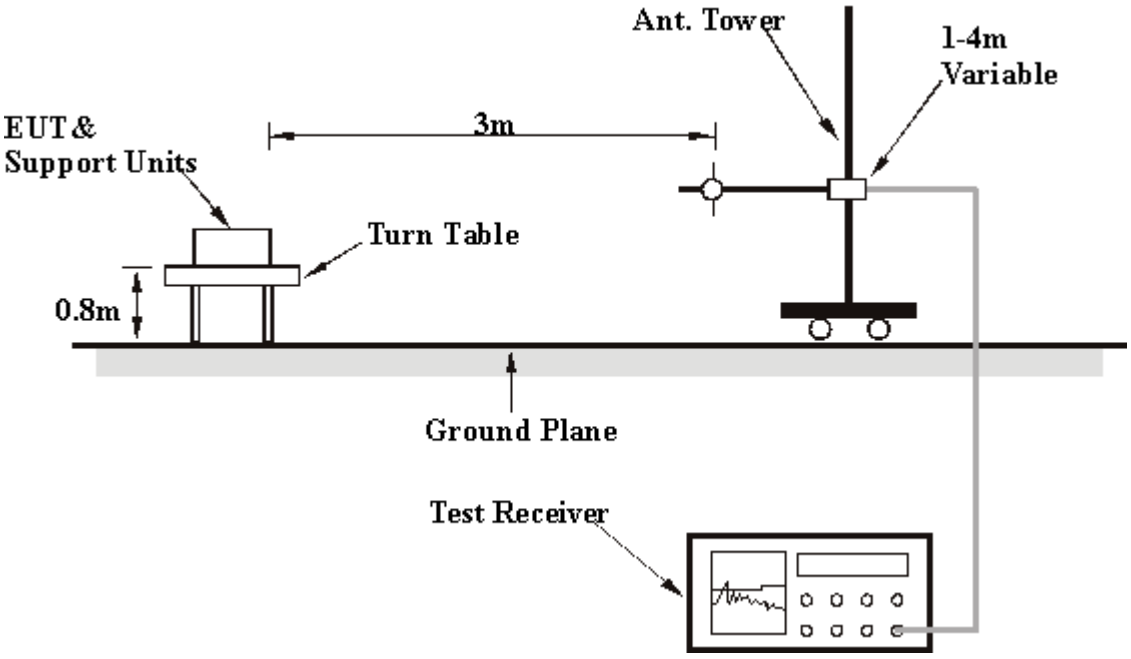
NOTE:

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

5.2.5 DEVIATION FROM TEST STANDARD

No deviation

5.2.6 TEST SETUP



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

5.2.7 EUT OPERATING CONDITIONS

Same as 4.1.6.

5.2.8 TEST RESULTS

EUT	802.11a/b/g MiniPCI module		
MODEL	T60H835	**DETECTOR FUNCTION**	Quasi-Peak
FREQUENCY RANGE	30 - 1000MHz	**DETECTOR FUNCTION & BANDWIDTH**	Quasi-Peak, 120kHz
ENVIRONMENTAL CONDITIONS	27deg. C, 59%RH, 967 hPa	**TESTED BY**	Tony Chen

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	**66.87**	**37.70 QP**	**40.00**	**-2.30**	**2.33 H**	**354**	**26.30**	**11.40**
2	133.68	37.10 QP	43.50	-6.40	2.09 H	341	24.60	12.50
3	166.99	32.90 QP	43.50	-10.60	2.42 H	29	19.30	13.70
4	200.59	33.80 QP	43.50	-9.70	2.30 H	3	22.70	11.10
5	233.95	37.60 QP	46.00	-8.40	1.22 H	312	25.20	12.40
6	240.03	26.40 QP	46.00	-19.60	1.45 H	253	13.80	12.60
7	300.57	33.50 QP	46.00	-12.50	1.11 H	317	18.50	15.10
8	333.93	37.50 QP	46.00	-8.50	1.03 H	2	21.60	16.00
9	384.05	26.60 QP	46.00	-19.40	1.00 H	83	9.20	17.40

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	67.33	27.30 QP	40.00	-12.70	1.22 V	23	15.90	11.40
2	133.98	29.90 QP	43.50	-13.60	1.02 V	344	17.40	12.50
3	167.04	28.50 QP	43.50	-15.00	1.05 V	26	14.80	13.60
4	200.84	30.70 QP	43.50	-12.80	1.00 V	247	19.70	11.10
5	234.15	35.50 QP	46.00	-10.50	1.01 V	254	23.10	12.40
6	300.47	33.90 QP	46.00	-12.10	1.66 V	2	18.80	15.10
7	333.78	36.40 QP	46.00	-9.60	2.00 V	153	20.40	16.00
8	528.06	24.00 QP	46.00	-22.00	1.02 V	3	3.10	20.80

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

STANDARD SECTION 15.407

EUT	802.11a/b/g MiniPCI module	**MODEL**	T60H835
MODE	Normal Mode	**CHANNEL**	1
FREQUENCY RANGE	1000MHz~40000MHz	**DETECTOR FUNCTION & BANDWIDTH**	Peak (PK) Average (AV) 1 MHz
ENVIRONMENTAL CONDITIONS	32 deg. C, 65%RH, 967 hPa	**INPUT POWER (SYSTEM)**	120Vac, 60Hz
TESTED BY	Wen Yu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5150.00	47.00 PK	74.00	-27.00	1.22 H	148	9.90	37.00
2	*5180.00	98.80 PK			1.22 H	148	61.80	37.00
2	*5180.00	89.10 AV			1.22 H	148	52.00	37.00
3	10360.00	57.20 PK	68.30	-11.10	1.41 H	116	12.50	44.70

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5150.00	57.00 PK	74.00	-17.00	1.00 V	255	19.90	37.00
1	#5150.00	47.20 AV	54.00	-6.80	1.00 V	255	10.10	37.00
2	*5180.00	108.80 PK			1.00 V	255	71.80	37.00
2	*5180.00	99.00 AV			1.00 V	255	62.00	37.00
3	10360.00	58.80 PK	68.30	-9.50	1.96 V	131	14.10	44.70

NOTE:

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

STANDARD SECTION 15.407

EUT	802.11a/b/g MiniPCI module	**MODEL**	T60H835
MODE	Normal Mode	**CHANNEL**	4
FREQUENCY RANGE	1000MHz~40000MHz	**DETECTOR FUNCTION & BANDWIDTH**	Peak (PK) Average (AV) 1 MHz
ENVIRONMENTAL CONDITIONS	32 deg. C, 65%RH, 967 hPa	**INPUT POWER (SYSTEM)**	120Vac, 60Hz
TESTED BY	Wen Yu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	96.40 PK			1.02 H	280	59.30	37.00
1	*5240.00	87.10 AV			1.02 H	280	50.00	37.00
2	10480.00	58.70 PK	68.30	-9.60	1.64 H	96	13.70	45.00

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	110.20 PK			1.10 V	260	73.20	37.00
1	*5240.00	100.50 AV			1.10 V	260	63.50	37.00
2	10480.00	57.10 PK	68.30	-11.20	1.81 V	2	12.10	45.00

NOTE:

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

STANDARD SECTION 15.407

EUT	802.11a/b/g MiniPCI module	**MODEL**	T60H835
MODE	Normal Mode	**CHANNEL**	5
FREQUENCY RANGE	1000MHz~40000MHz	**DETECTOR FUNCTION & BANDWIDTH**	Peak (PK) Average (AV) 1 MHz
ENVIRONMENTAL CONDITIONS	32 deg. C, 65%RH, 967 hPa	**INPUT POWER (SYSTEM)**	120Vac, 60Hz
TESTED BY	Wen Yu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5260.00	97.60 PK			1.18 H	4	60.60	37.00
1	*5260.00	88.20 AV			1.18 H	4	51.20	37.00
2	10520.00	60.10 PK	68.30	-8.20	1.69 H	120	15.00	45.20

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5260.00	111.50 PK			1.59 V	259	74.50	37.00
1	*5260.00	101.20 AV			1.59 V	259	64.10	37.00
2	10520.00	60.00 PK	68.30	-8.30	2.15 V	262	14.80	45.20

NOTE:

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

STANDARD SECTION 15.407

EUT	802.11a/b/g MiniPCI module	**MODEL**	T60H835
MODE	Normal Mode	**CHANNEL**	8
FREQUENCY RANGE	1000MHz~40000MHz	**DETECTOR FUNCTION & BANDWIDTH**	Peak (PK) Average (AV) 1 MHz
ENVIRONMENTAL CONDITIONS	32 deg. C, 65%RH, 967 hPa	**INPUT POWER (SYSTEM)**	120Vac, 60Hz
TESTED BY	Wen Yu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	102.30 PK			1.17 H	156	65.30	37.00
1	*5320.00	92.20 AV			1.17 H	156	55.20	37.00
2	#5350.00	48.80 PK	74.00	-25.20	1.77 H	98	11.70	37.00
3	#10640.00	64.30 PK	74.00	-9.70	1.77 H	98	18.00	46.30
3	#10640.00	49.80 AV	54.00	-4.20	1.77 H	98	3.50	46.30

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	110.90 PK			1.00 V	90	73.90	37.00
1	*5320.00	101.20 AV			1.00 V	90	64.20	37.00
2	#5350.00	57.40 PK	74.00	-16.60	1.00 V	90	20.30	37.00
2	#5350.00	47.60 AV	54.00	-6.40	1.00 V	90	10.60	37.00
3	#10640.00	63.20 PK	74.00	-10.80	1.53 V	201	16.90	46.30
3	#10640.00	49.30 AV	54.00	-4.70	1.53 V	201	3.00	46.30

NOTE:

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

STANDARD SECTION 15.247

EUT	802.11a/b/g MiniPCI module	**MODEL**	T60H835
MODE	Normal Mode	**CHANNEL**	9
FREQUENCY RANGE	1000MHz~40000MHz	**DETECTOR FUNCTION & BANDWIDTH**	Peak (PK) Average (AV) 1 MHz
ENVIRONMENTAL CONDITIONS	32 deg. C, 65%RH, 967 hPa	**INPUT POWER (SYSTEM)**	120Vac, 60Hz
TESTED BY	Wen Yu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5745.00	104.70 PK			1.44 H	285	67.10	37.60
1	*5745.00	95.40 AV			1.44 H	285	57.90	37.60
2	#11490.00	66.20 PK	74.00	-7.80	1.61 H	103	14.90	51.30
2	#11490.00	52.70 AV	54.00	-1.30	1.61 H	103	1.40	51.30

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5745.00	113.00 PK			1.53 V	257	75.40	37.60
1	*5745.00	102.60 AV			1.53 V	257	65.10	37.60
2	#11490.00	66.40 PK	74.00	-7.60	1.43 V	180	15.00	51.30
2	**#11490.00**	**52.80 AV**	**54.00**	**-1.20**	**1.43 V**	**180**	**1.40**	**51.30**

NOTE:

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

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STANDARD SECTION 15.247

EUT	802.11a/b/g MiniPCI module	**MODEL**	T60H835
MODE	Normal Mode	**CHANNEL**	13
FREQUENCY RANGE	1000MHz~40000MHz	**DETECTOR FUNCTION & BANDWIDTH**	Peak (PK) Average (AV) 1 MHz
ENVIRONMENTAL CONDITIONS	32 deg. C, 65%RH, 967 hPa	**INPUT POWER (SYSTEM)**	120Vac, 60Hz
TESTED BY	Wen Yu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5825.00	100.70 PK			1.50 H	36	63.00	37.70
1	*5825.00	91.00 AV			1.50 H	36	53.30	37.70
2	#11650.00	64.30 PK	74.00	-9.70	1.63 H	0	13.50	50.80
2	#11650.00	51.10 AV	54.00	-2.90	1.63 H	0	0.30	50.80

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	*5825.00	111.90 PK			1.51 V	261	74.20	37.70
1	*5825.00	101.90 AV			1.51 V	261	64.20	37.70
2	#11650.00	66.20 PK	74.00	-7.80	1.65 V	29	15.40	50.80
2	#11650.00	51.30 AV	54.00	-2.70	1.65 V	29	0.50	50.80

NOTE:

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

STANDARD SECTION 15.407

EUT	802.11a/b/g MiniPCI module	**MODEL**	T60H835
MODE	Turbo Mode	**CHANNEL**	1
FREQUENCY RANGE	1000MHz~40000MHz	**DETECTOR FUNCTION & BANDWIDTH**	Peak (PK) Average (AV) 1 MHz
ENVIRONMENTAL CONDITIONS	32 deg. C, 65%RH, 967 hPa	**INPUT POWER (SYSTEM)**	120Vac, 60Hz
TESTED BY	Wen Yu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5150.00	46.70 PK	74.00	-27.30	1.18 H	150	9.70	37.00
2	*5210.00	95.80 PK			1.18 H	150	58.80	37.00
2	*5210.00	86.70 AV			1.18 H	150	49.70	37.00
3	10420.00	58.40 PK	68.30	-9.90	1.63 H	98	13.60	44.80

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	#5150.00	54.50 PK	74.00	-19.50	1.28 V	262	17.50	37.00
1	#5150.00	45.90 AV	54.00	-8.10	1.28 V	262	8.90	37.00
2	*5210.00	103.60 PK			1.28 V	262	66.60	37.00
2	*5210.00	95.00 AV			1.28 V	262	58.00	37.00
3	10420.00	58.00 PK	68.30	-10.30	1.76 V	34	13.20	44.80

NOTE:

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

STANDARD SECTION 15.407

EUT	802.11a/b/g MiniPCI module	**MODEL**	T60H835
MODE	Turbo Mode	**CHANNEL**	2
FREQUENCY RANGE	1000MHz~40000MHz	**DETECTOR FUNCTION & BANDWIDTH**	Peak (PK) Average (AV) 1 MHz
ENVIRONMENTAL CONDITIONS	32 deg. C, 65%RH, 967 hPa	**INPUT POWER (SYSTEM)**	120Vac, 60Hz
TESTED BY	Wen Yu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5250.00	93.70 PK			1.33 H	2	56.70	37.00
1	*5250.00	84.80 AV			1.33 H	2	47.70	37.00
2	10500.00	54.90 PK	68.30	-13.40	1.36 H	345	9.90	45.00

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5250.00	106.80 PK			1.11 V	259	69.80	37.00
1	*5250.00	97.10 AV			1.11 V	259	60.00	37.00
2	10500.00	55.90 PK	68.30	-12.40	1.74 V	30	10.90	45.00

NOTE:

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

STANDARD SECTION 15.407

EUT	802.11a/b/g MiniPCI module	**MODEL**	T60H835
MODE	Turbo Mode	**CHANNEL**	3
FREQUENCY RANGE	1000MHz~40000MHz	**DETECTOR FUNCTION & BANDWIDTH**	Peak (PK) Average (AV) 1 MHz
ENVIRONMENTAL CONDITIONS	32 deg. C, 65%RH, 967 hPa	**INPUT POWER (SYSTEM)**	120Vac, 60Hz
TESTED BY	Wen Yu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5290.00	95.30 PK			1.12 H	328	58.30	37.00
1	*5290.00	86.10 AV			1.12 H	328	49.10	37.00
2	#5350.00	43.70 PK	74.00	-30.30	1.12 H	328	6.70	37.00
3	10580.00	58.90 PK	68.30	-9.40	1.93 H	100	13.20	45.70

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5290.00	106.40 PK			1.00 V	94	69.40	37.00
1	*5290.00	98.90 AV			1.00 V	94	61.90	37.00
2	#5350.00	54.80 PK	74.00	-19.20	1.00 V	94	17.80	37.00
2	#5350.00	47.30 AV	54.00	-6.70	1.00 V	94	10.30	37.00
3	10580.00	58.10 PK	68.30	-10.20	1.50 V	23	12.40	45.70

NOTE:

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

STANDARD SECTION 15.247

EUT	802.11a/b/g MiniPCI module	**MODEL**	T60H835
MODE	Turbo Mode	**CHANNEL**	4
FREQUENCY RANGE	1000MHz~40000MHz	**DETECTOR FUNCTION & BANDWIDTH**	Peak (PK) Average (AV) 1 MHz
ENVIRONMENTAL CONDITIONS	32 deg. C, 65%RH, 967 hPa	**INPUT POWER (SYSTEM)**	120Vac, 60Hz
TESTED BY	Wen Yu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5760.00	99.30 PK			1.58 H	136	61.70	37.60
1	*5760.00	90.50 AV			1.58 H	136	52.90	37.60
2	#11520.00	63.40 PK	74.00	-10.60	1.67 H	104	12.10	51.30
2	#11520.00	51.20 AV	54.00	-2.80	1.67 H	104	-0.10	51.30

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5760.00	109.10 PK			1.04 V	312	71.50	37.60
1	*5760.00	99.70 AV			1.04 V	312	62.10	37.60
2	#11520.00	66.00 PK	74.00	-8.00	1.81 V	192	14.70	51.30
2	#11520.00	52.60 AV	54.00	-1.40	1.81 V	192	1.30	51.30

NOTE:

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

STANDARD SECTION 15.247

EUT	802.11a/b/g MiniPCI module	**MODEL**	T60H835
MODE	Turbo Mode	**CHANNEL**	5
FREQUENCY RANGE	1000MHz~40000MHz	**DETECTOR FUNCTION & BANDWIDTH**	Peak (PK) Average (AV) 1 MHz
ENVIRONMENTAL CONDITIONS	32 deg. C, 65%RH, 967 hPa	**INPUT POWER (SYSTEM)**	120Vac, 60Hz
TESTED BY	Wen Yu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5800.00	98.80 PK			1.02 H	147	61.10	37.70
1	*5800.00	90.40 AV			1.02 H	147	52.70	37.70
2	#11600.00	63.10 PK	74.00	-10.90	1.50 H	4	12.10	51.00
2	#11600.00	50.80 AV	54.00	-3.20	1.50 H	4	-0.20	51.00

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5800.00	109.30 PK			1.12 V	313	71.60	37.70
1	*5800.00	100.20 AV			1.12 V	313	62.50	37.70
2	#11600.00	62.40 PK	74.00	-11.60	2.01 V	33	11.40	51.00
2	#11600.00	51.20 AV	54.00	-2.80	2.01 V	33	0.20	51.00

NOTE:

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

FOR FREQUENCY 5.15~5.35GHZ

5.3 PEAK TRANSMIT POWER MEASUREMENT

5.3.1 LIMITS OF PEAK TRANSMIT POWER MEASUREMENT

Frequency Band	Limit
5.15 – 5.25 GHz	The lesser of 50mW (17dBm) or 4dBm + 10logB
5.25 – 5.35 GHz	The lesser of 250mW (24dBm) or 11dBm + 10logB

Note:

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

5.3.2 TEST INSTRUMENTS

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

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

5.3.3 TEST PROCEDURE

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

5.3.4 TEST SETUP

5.3.5 EUT OPERATING CONDITIONS

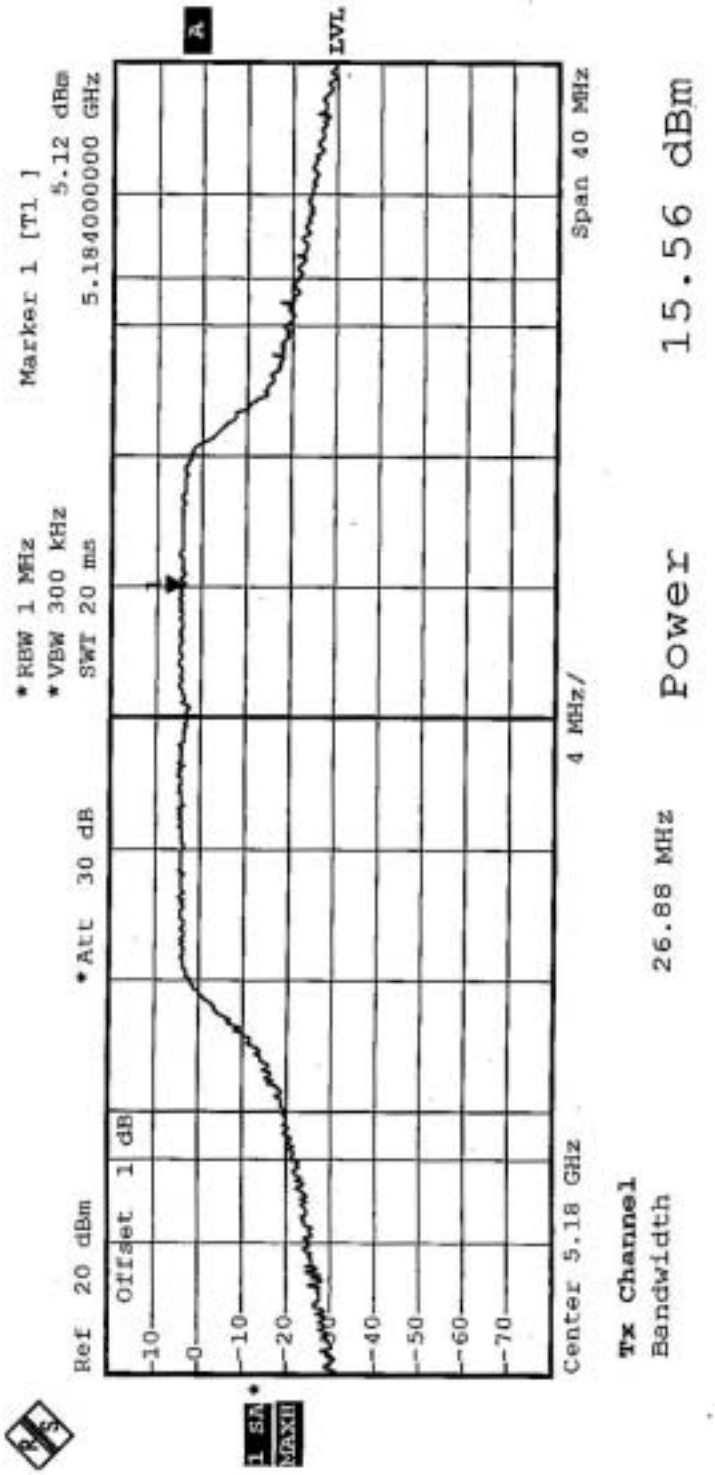
The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.

5.3.6 TEST RESULTS

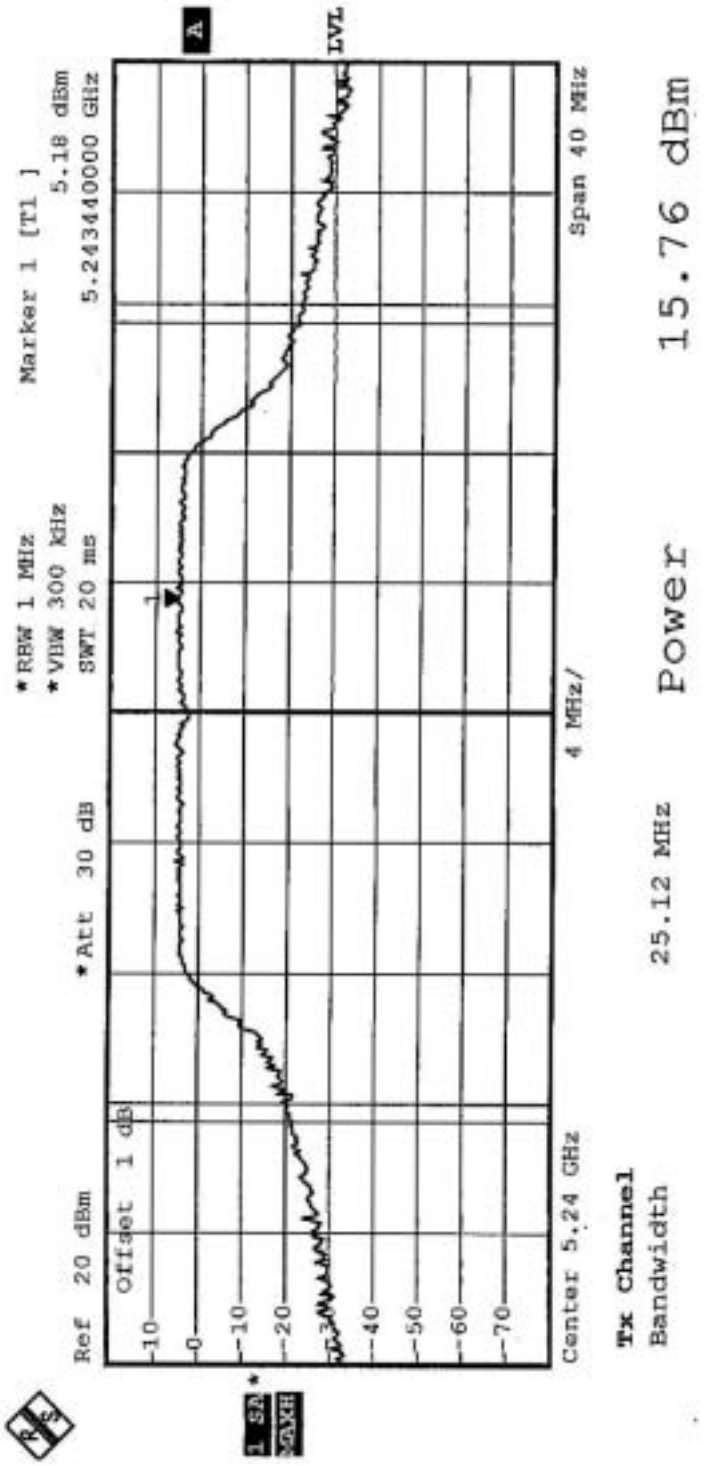
EUT	802.11a/b/g MiniPCI module	**MODEL**	T60H835
MODE	Normal	**INPUT POWER (SYSTEM)**	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	27eg. C, 59RH, 967 hPa	**TESTED BY**	Sky Liao

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	26dBc Occupied Bandwidth (MHz)	PASS/FAIL
1	5180	15.56	17.00	26.88	PASS
4	5240	15.76	17.00	25.12	PASS
5	5260	18.01	24.00	26.48	PASS
8	5320	19.35	24.00	27.52	PASS

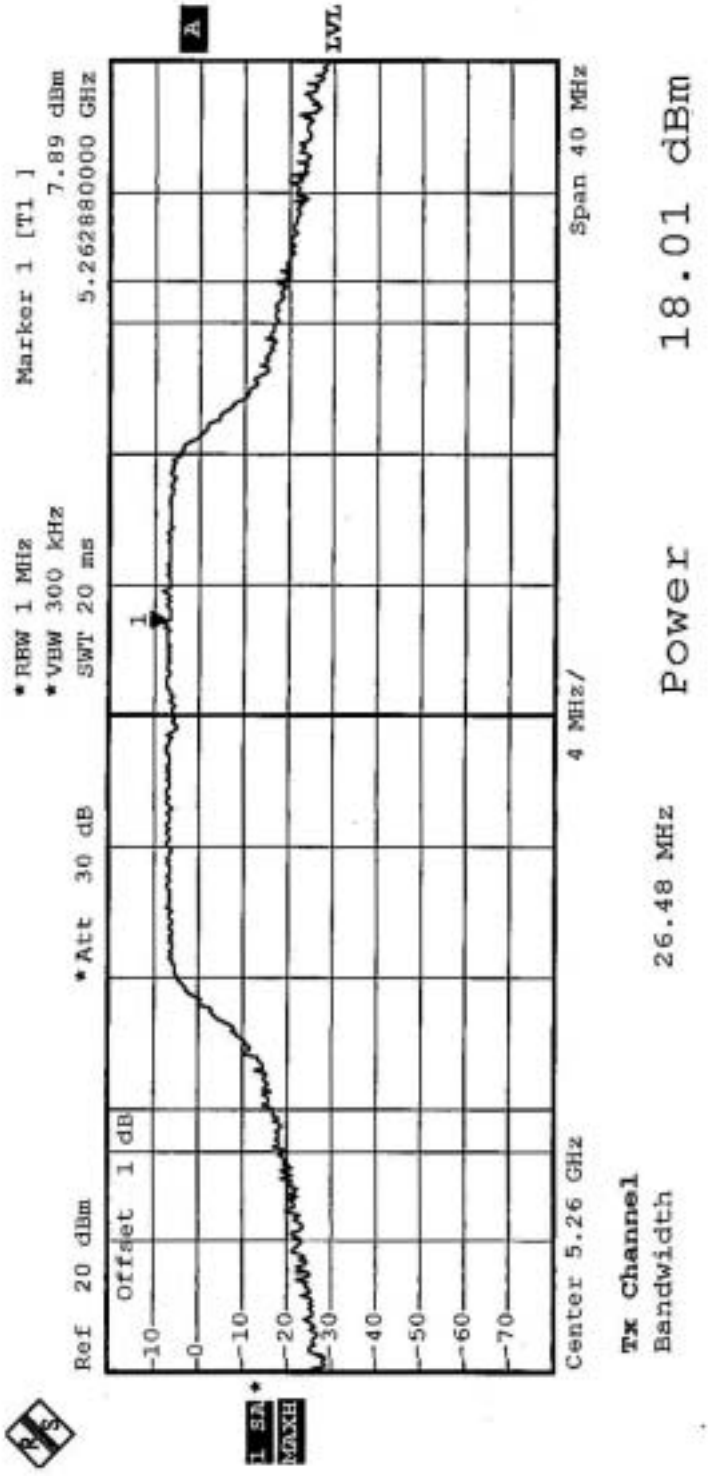
CHANNEL 1


Ref 20 dBm
Offset 1 dB
10
0
-10
-20
-30
-40
-50
-60
-70
* Att 30 dB
* RBW 1 MHz
* VBW 300 kHz
SWT 20 ms
Marker 1 [T1]
5.12 dBm
5.184000000 GHz
A
LVL
Center 5.18 GHz
4 MHz/
Span 40 MHz
Tx Channel
Bandwidth
26.88 MHz
Power
15.56 dBm
1 SA
MAXH

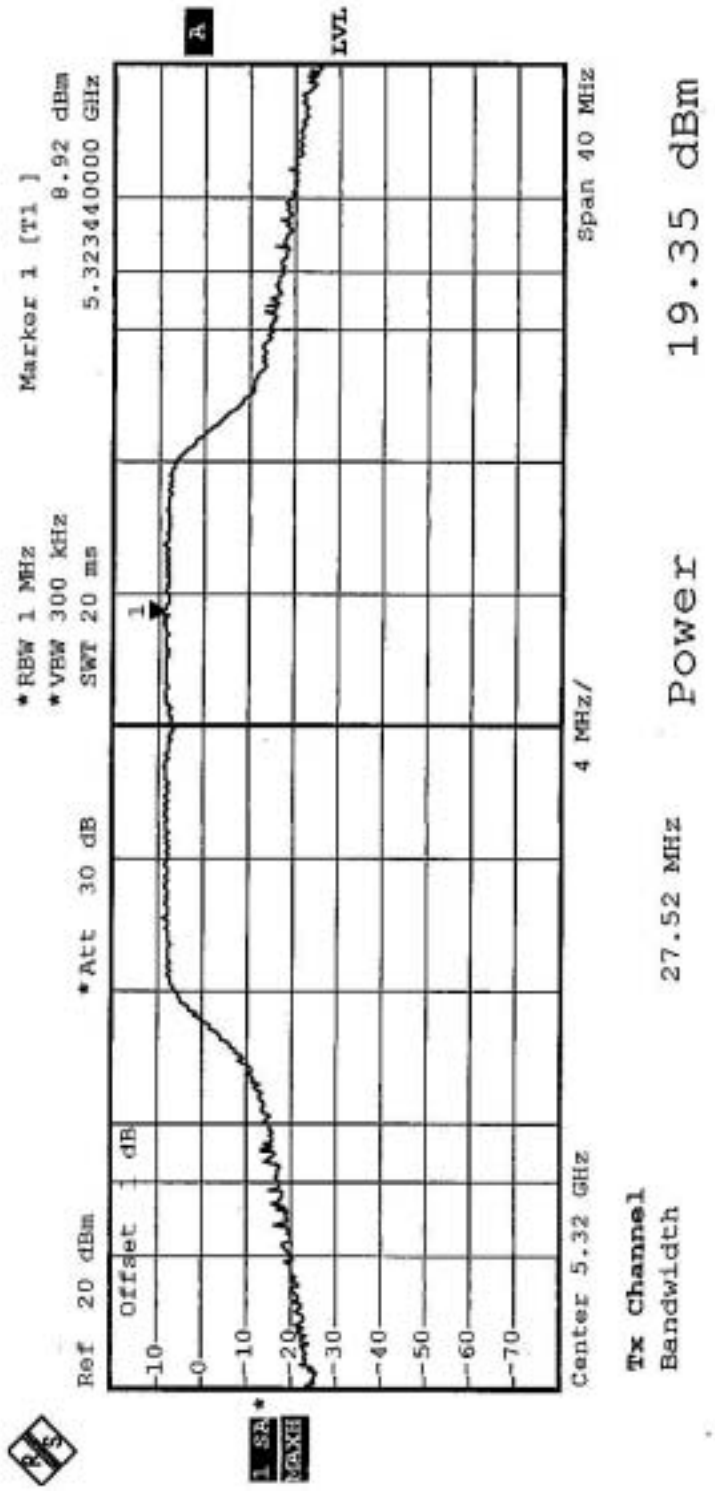
CHANNEL 4


Ref 20 dBm
Offset 1 dB
10
0
-10
-20
-30
-40
-50
-60
-70
*Att 30 dB
*RBW 1 MHz
*VBW 300 kHz
SWT 20 ms
Marker 1 [T1]
5.18 dBm
5.243440000 GHz
A
LVL
Center 5.24 GHz
4 MHz/
Span 40 MHz
Tx Channel
Bandwidth
25.12 MHz
Power
15.76 dBm
1 SA
MAXH

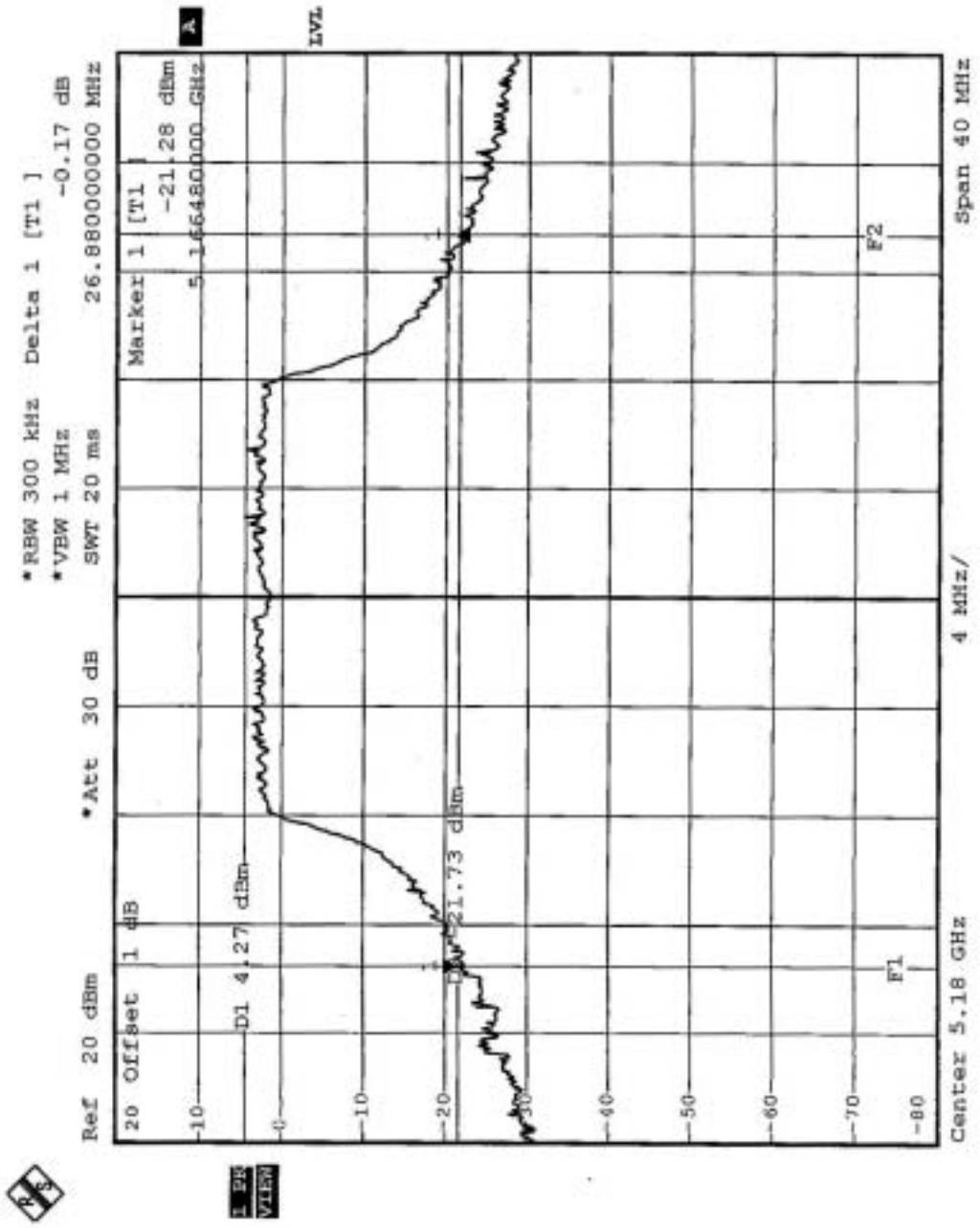
CHANNEL 5


Ref 20 dBm
Offset 1 dB
*Att 30 dB
*RBW 1 MHz
*VBW 300 kHz
SWT 20 ms
Marker 1 [T1]
7.89 dBm
5.26280000 GHz
Center 5.26 GHz
4 MHz/
Span 40 MHz
Tx Channel
Bandwidth
26.48 MHz
Power
18.01 dBm

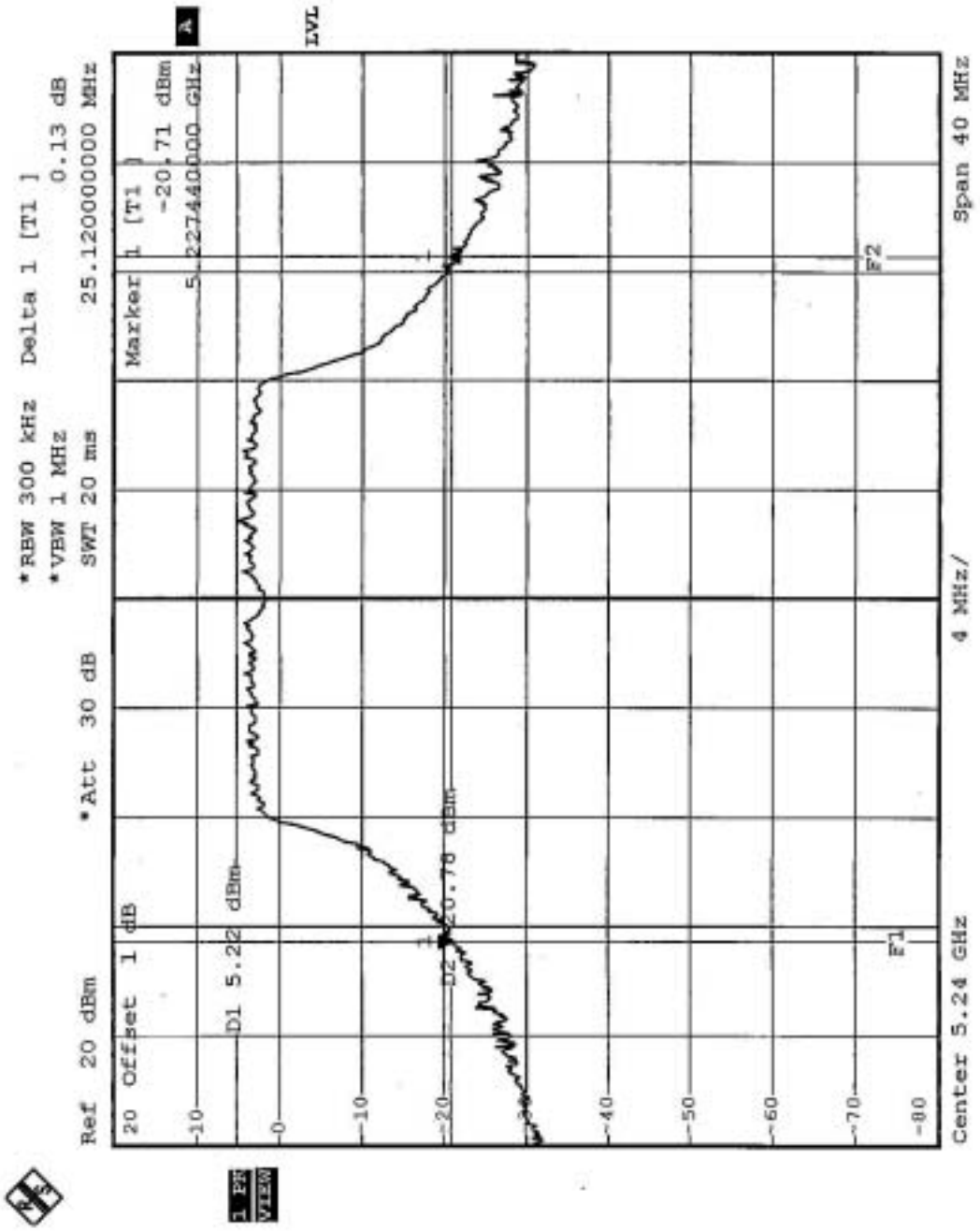
CHANNEL 8


Ref 20 dBm
Offset 1 dB
10
0
10
20
30
40
50
60
70
*Att 30 dB
*RBW 1 MHz
*VBW 300 kHz
SWT 20 ms
Marker 1 [T1]
8.92 dBm
5.323440000 GHz
A
LVL
Center 5.32 GHz
4 MHz/
Span 40 MHz
Tx Channel
Bandwidth
27.52 MHz
Power
19.35 dBm

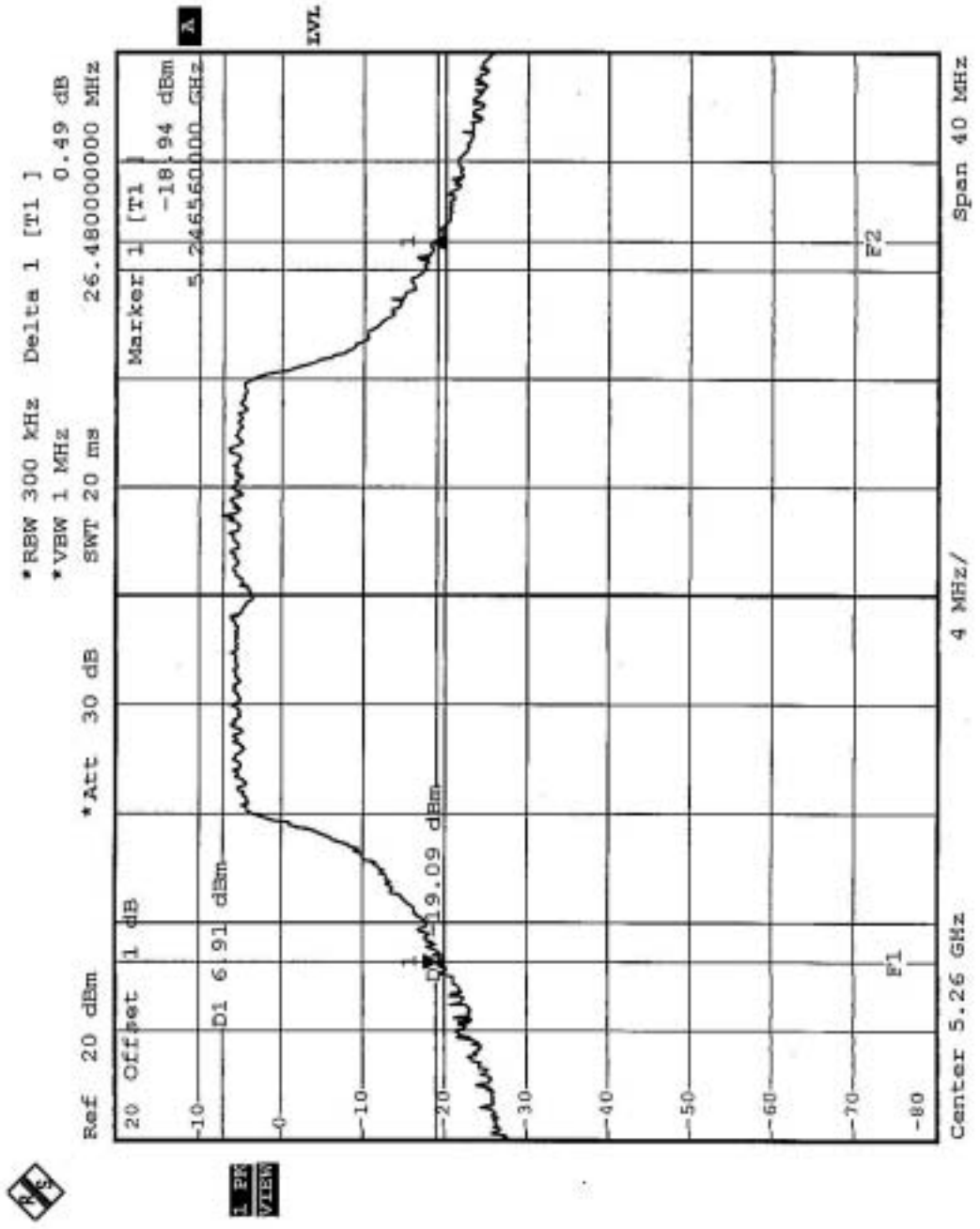
CHANNEL 1


RBW 300 kHz
VBW 1 MHz
SWT 20 ms
Att 30 dB
Ref 20 dBm
Offset 1 dB
D1 4.27 dBm
21.73 dBm
Marker 1 [T1]
-21.28 dBm
5.166480000 GHz
Delta 1 [T1]
-0.17 dB
26.880000000 MHz
Center 5.18 GHz
4 MHz/
Span 40 MHz
F1
F2
LVL

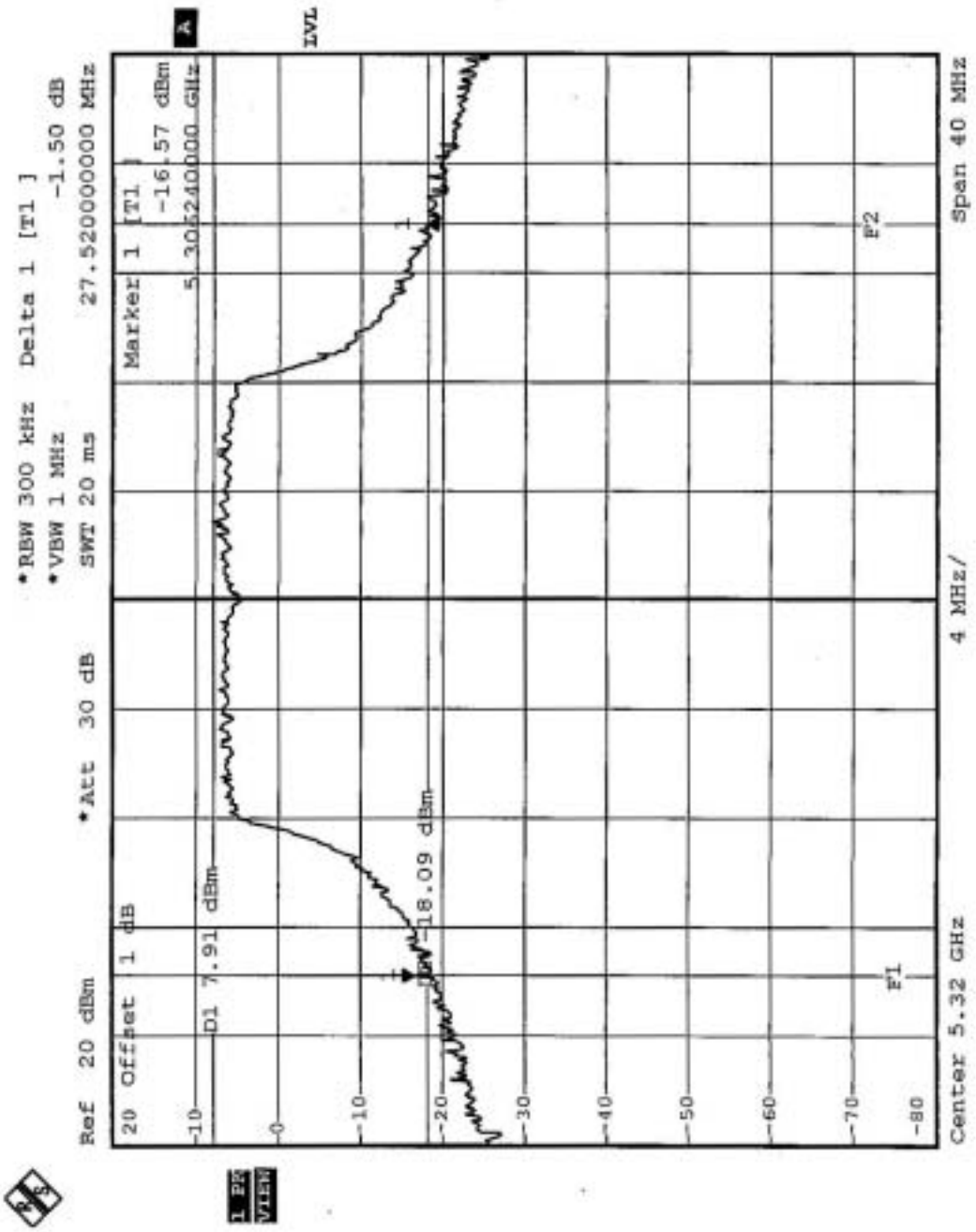
CHANNEL 4


*RBW 300 kHz
*VBW 1 MHz
Delta 1 [T1]
0.13 dB
25.120000000 MHz
SWT 20 ms
*Att 30 dB
Marker 1 [T1]
-20.71 dBm
5.227440000 GHz
Ref 20 dBm
Offset 1 dB
D1 5.22 dBm
D2 -20.78 dBm
Center 5.24 GHz
4 MHz/
Span 40 MHz
F1
F2
1 PK VIEW

CHANNEL 5


RBW 300 kHz
VBW 1 MHz
SWT 20 ms
Att 30 dB
Ref 20 dBm
Offset 1 dB
D1 6.91 dBm
D2 19.09 dBm
Delta 1 [T1]
0.49 dB
26.480000000 MHz
Marker 1 [T1]
-18.94 dBm
5.246560000 GHz
LVL
Center 5.26 GHz
4 MHz/
Span 40 MHz
F1
F2

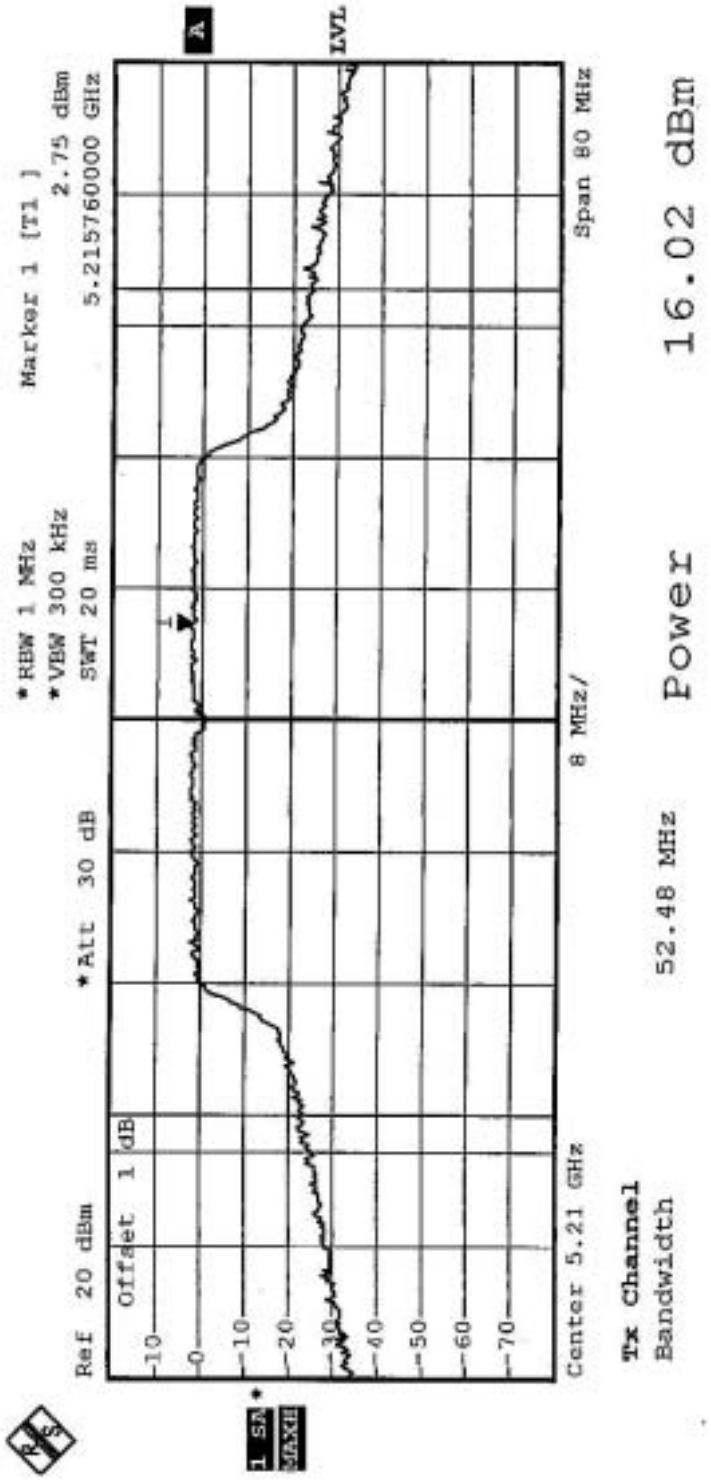
CHANNEL 8


RBW 300 kHz
VBW 1 MHz
SWT 20 ms
Att 30 dB
Ref 20 dBm
Offset 1 dB
Delta 1 [T1]
-1.50 dB
27.52000000 MHz
Marker 1 [T1]
-16.57 dBm
5.30524000 GHz
D1 7.91 dBm
-18.09 dBm
Center 5.32 GHz
4 MHz/
Span 40 MHz
VIEW

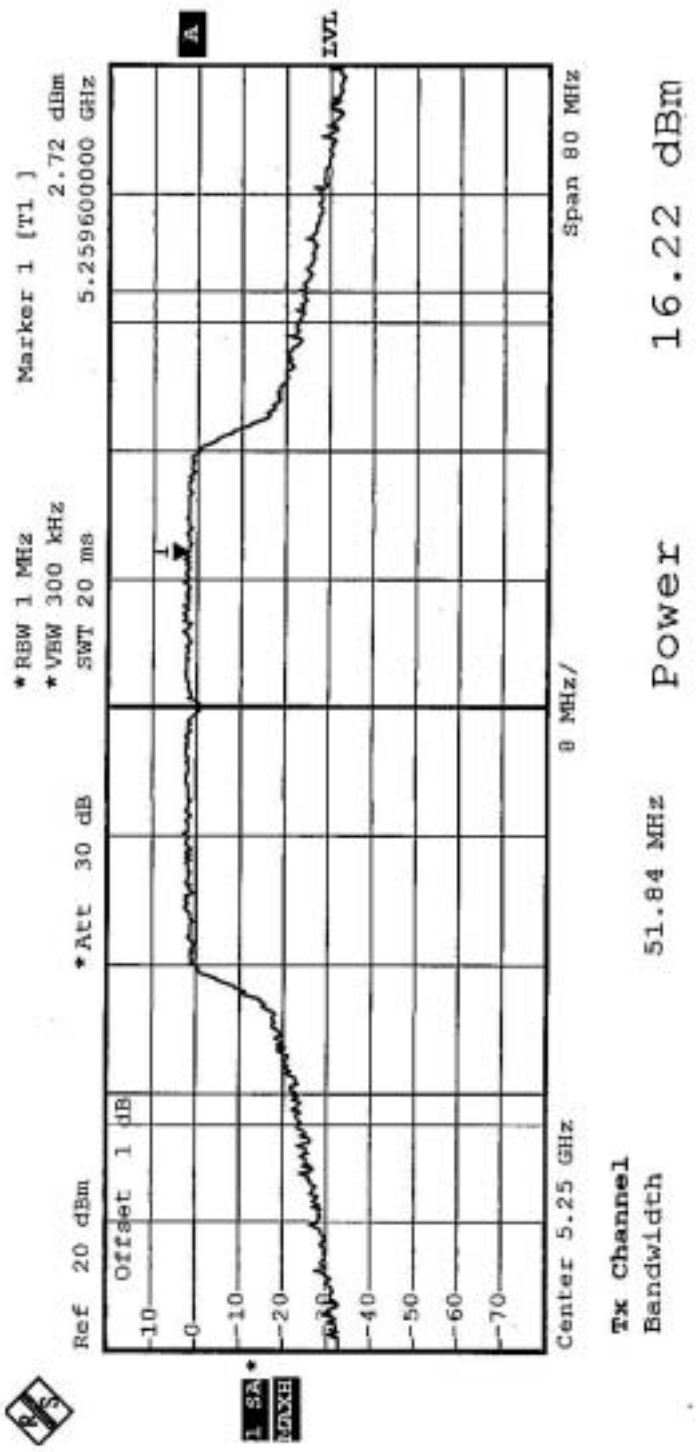
EUT	802.11a/b/g MiniPCI module	**MODEL**	T60H835
MODE	Turbo	**INPUT POWER (SYSTEM)**	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	27eg. C, 59RH, 967 hPa	**TESTED BY**	Sky Liao

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	26dBc Occupied Bandwidth (MHz)	PASS/FAIL
1	5210	16.02	17.00	52.48	PASS
2	5250	16.22	17.00	51.84	PASS
3	5290	19.50	24.00	52.80	PASS

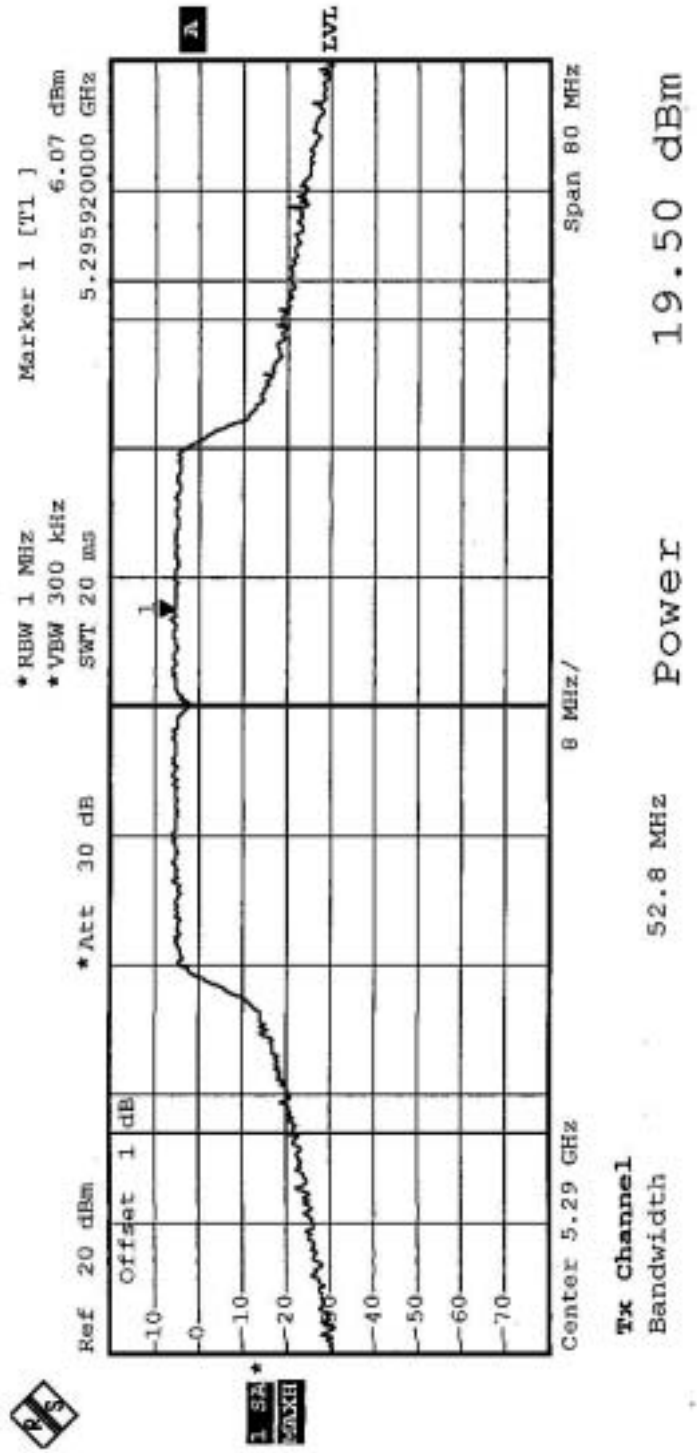
CHANNEL 1


Ref 20 dBm
Offset 1 dB
10
0
10
20
30
40
50
60
70
*Att 30 dB
*RBW 1 MHz
*VBW 300 kHz
SWT 20 ms
Marker 1 [T1]
2.75 dBm
5.215760000 GHz
A
LVL
Span 80 MHz
8 MHz/
Center 5.21 GHz
1 SA
MAXH
Tx Channel
Bandwidth
52.48 MHz
Power
16.02 dBm

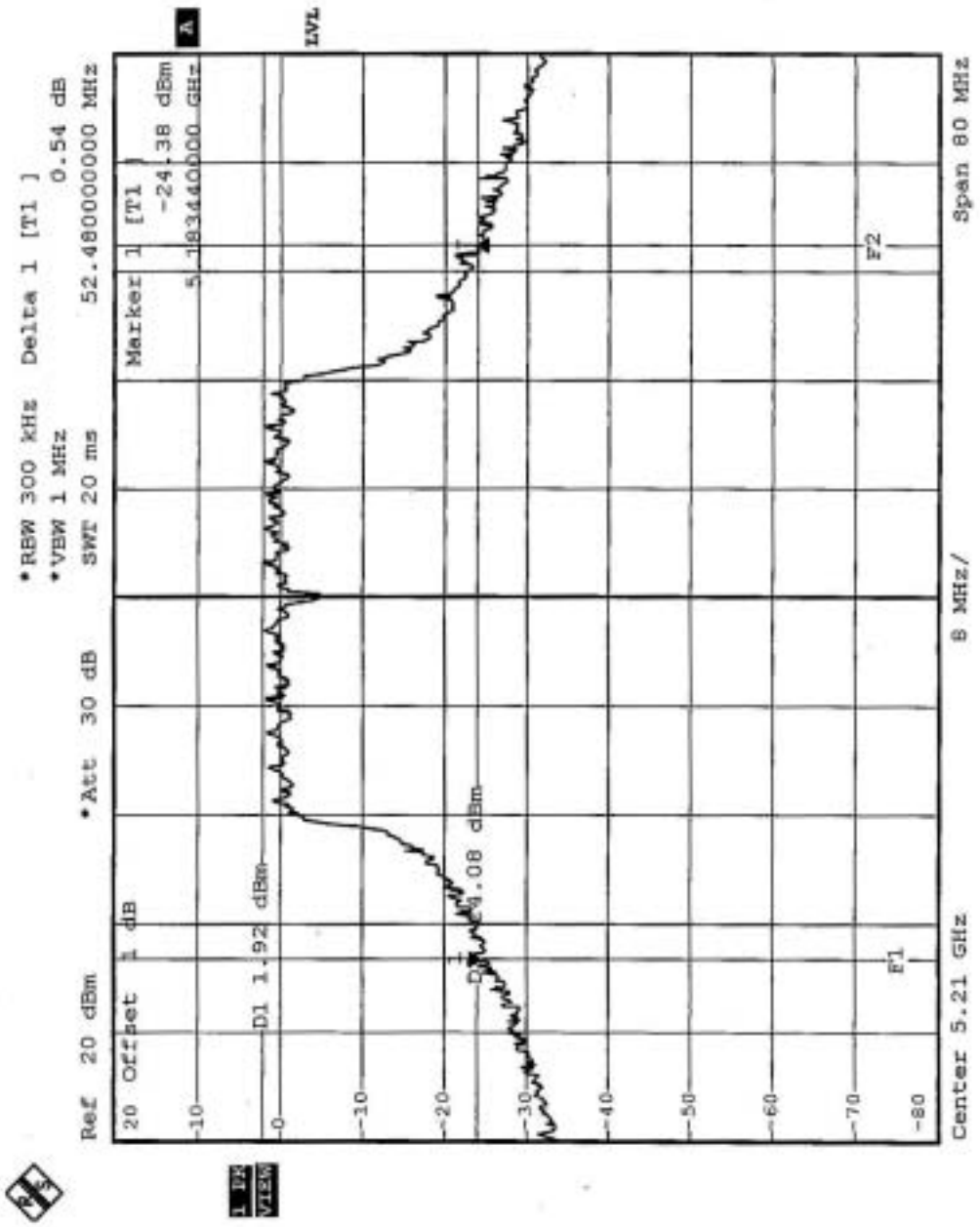
CHANNEL 2


Ref 20 dBm
Offset 1 dB
*Att 30 dB
*RBW 1 MHz
*VBW 300 kHz
SWT 20 ms
Marker 1 [T1]
2.72 dBm
5.259600000 GHz
A
LVL
Center 5.25 GHz
8 MHz/
Span 80 MHz
Tx Channel
Bandwidth
51.84 MHz
Power
16.22 dBm

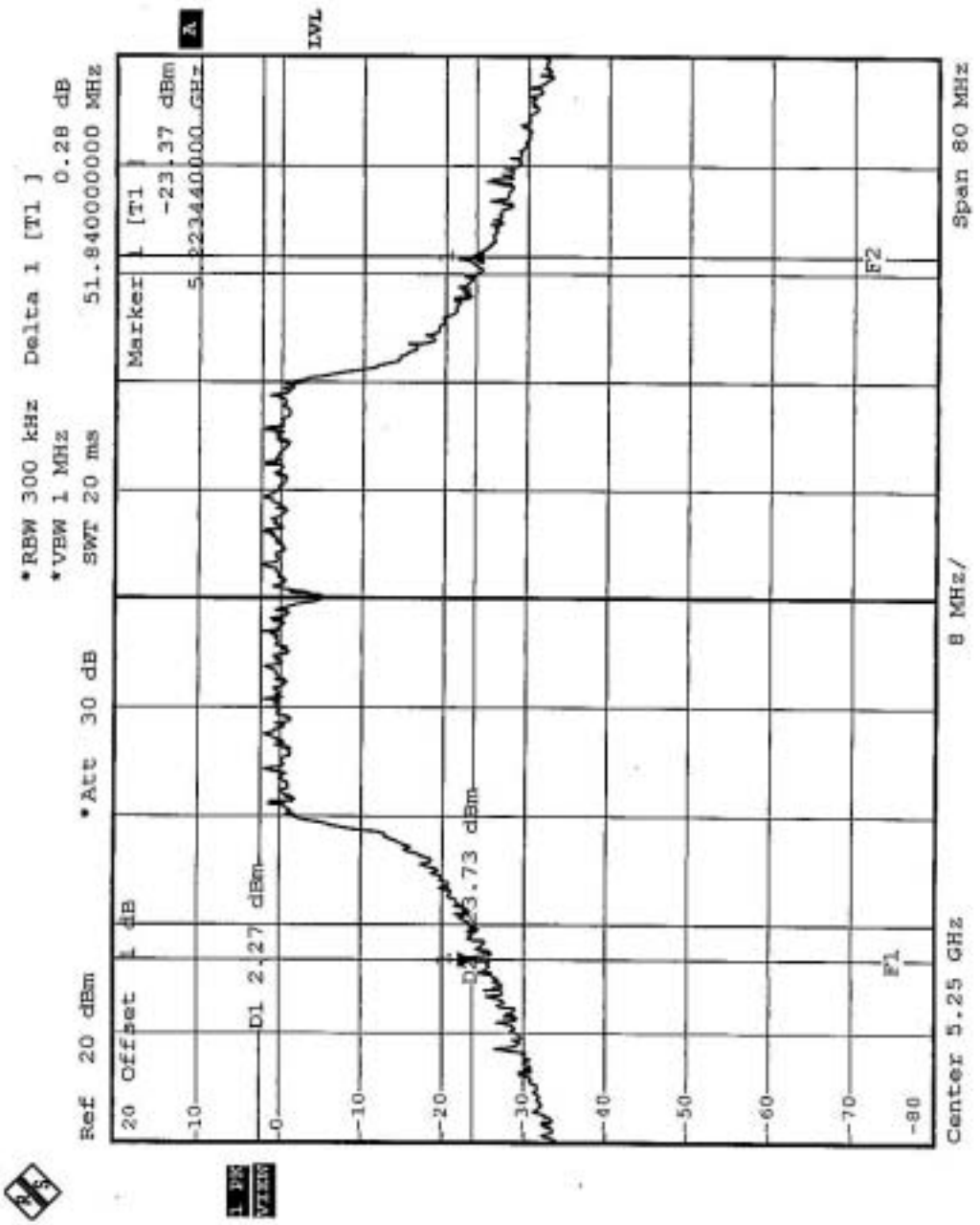
CHANNEL 3


Ref 20 dBm
Offset 1 dB
*Att 30 dB
*RBW 1 MHz
*VBW 300 kHz
SWT 20 ms
Marker 1 [T1]
6.07 dBm
5.295920000 GHz
A
LVL
Center 5.29 GHz
8 MHz/
Span 80 MHz
Tx Channel
Bandwidth
52.8 MHz
Power
19.50 dBm

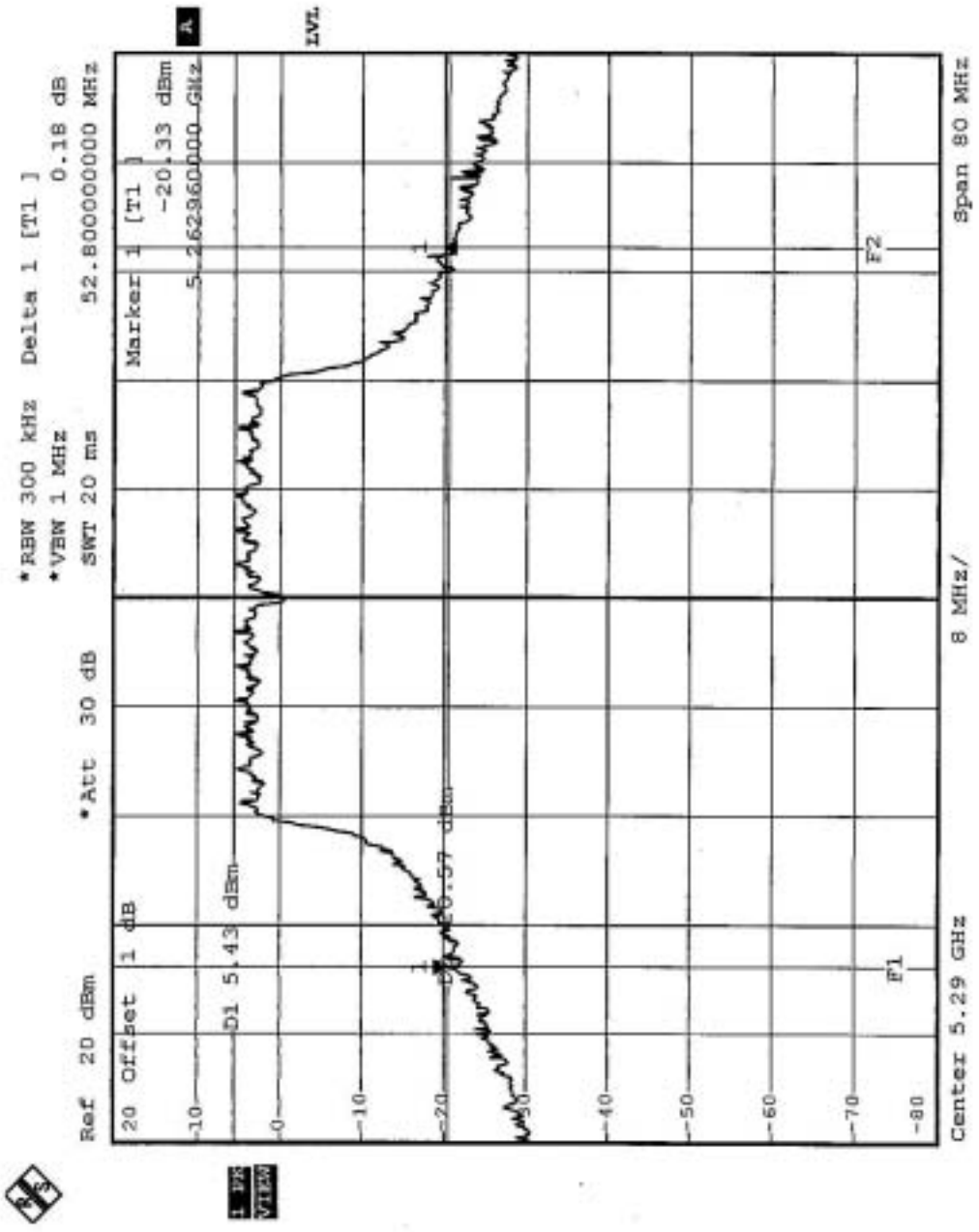
CHANNEL 1


RBW 300 kHz
VBW 1 MHz
SWT 20 ms
Att 30 dB
Offset 1 dB
Ref 20 dBm
Delta 1 [T1]
0.54 dB
52.480000000 MHz
Marker 1 [T1]
-24.38 dBm
5.183440000 GHz
D1 1.92 dBm
D2 -4.08 dBm
F1
F2
LVL
Center 5.21 GHz
8 MHz/
Span 80 MHz

CHANNEL 2


RBW 300 kHz
VBW 1 MHz
SWT 20 ms
Att 30 dB
Ref 20 dBm
Offset dB
Delta 1 [T1]
0.28 dB
51.94000000 MHz
Marker 1 [T1]
-23.37 dBm
5.23440000 GHz
D1 2.27 dBm
D2 -23.73 dBm
F1
F2
Center 5.25 GHz
8 MHz/
Span 80 MHz

CHANNEL 3


RBW 300 kHz
VBW 1 MHz
SWT 20 ms
Att 30 dB
Ref 20 dBm
Offset 1 dB
D1 5.43 dBm
Delta 1 [T1] 0.18 dB
52.800000000 MHz
Marker 1 [T1] -20.33 dBm
5.262960000 GHz
Center 5.29 GHz
8 MHz/
Span 80 MHz
F1
F2

5.4 PEAK POWER EXCURSION MEASUREMENT

5.4.1 LIMITS OF PEAK POWER EXCURSION MEASUREMENT

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

5.4.2 TEST INSTRUMENTS

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

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

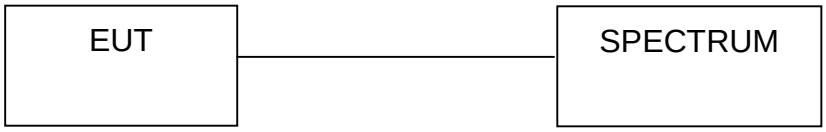
5.4.3 TEST PROCEDURE

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

5.4.4 DEVIATION FROM TEST STANDARD

No deviation

5.4.5 TEST SETUP



5.4.6 EUT OPERATING CONDITIONS

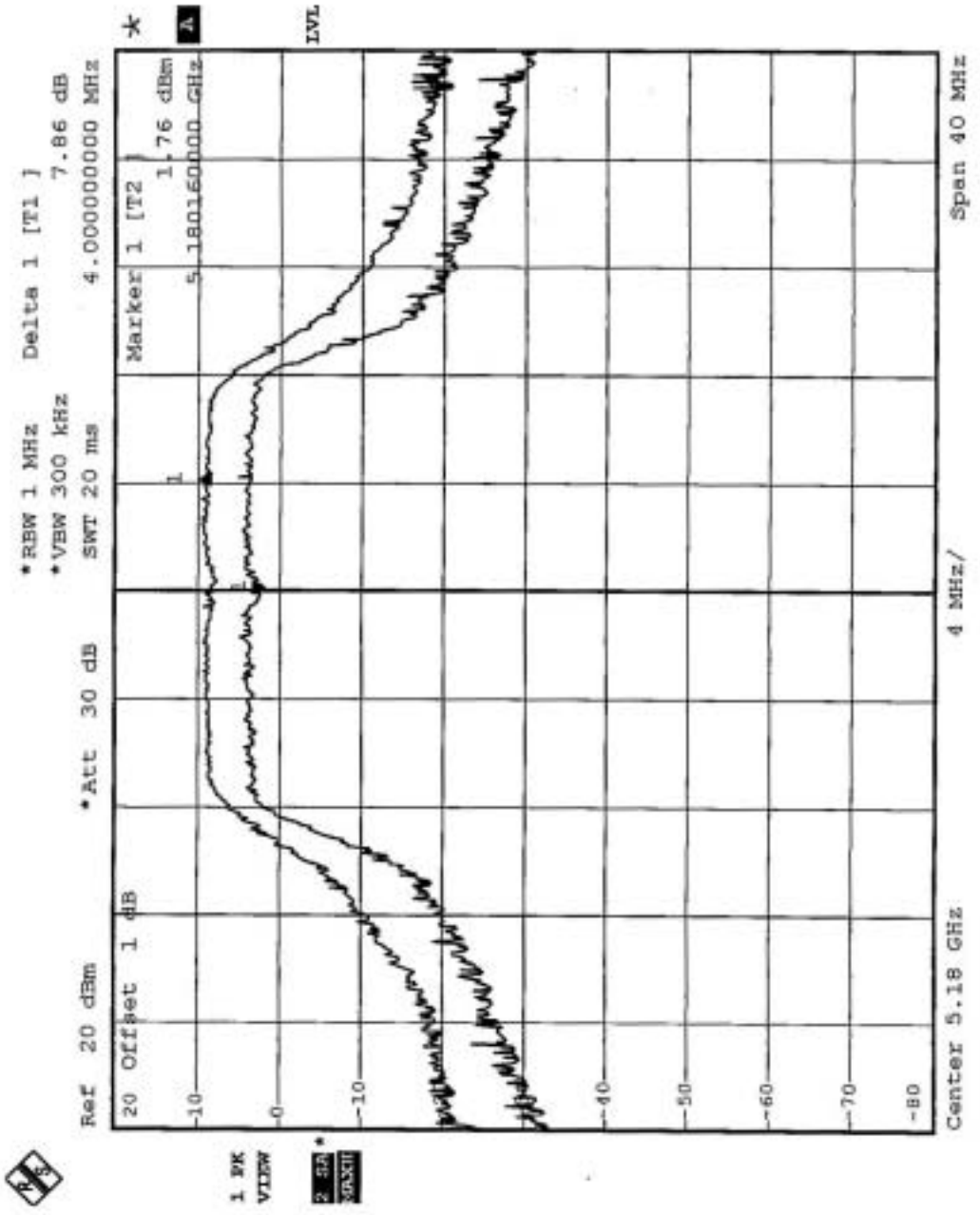
The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.

5.4.7 TEST RESULTS

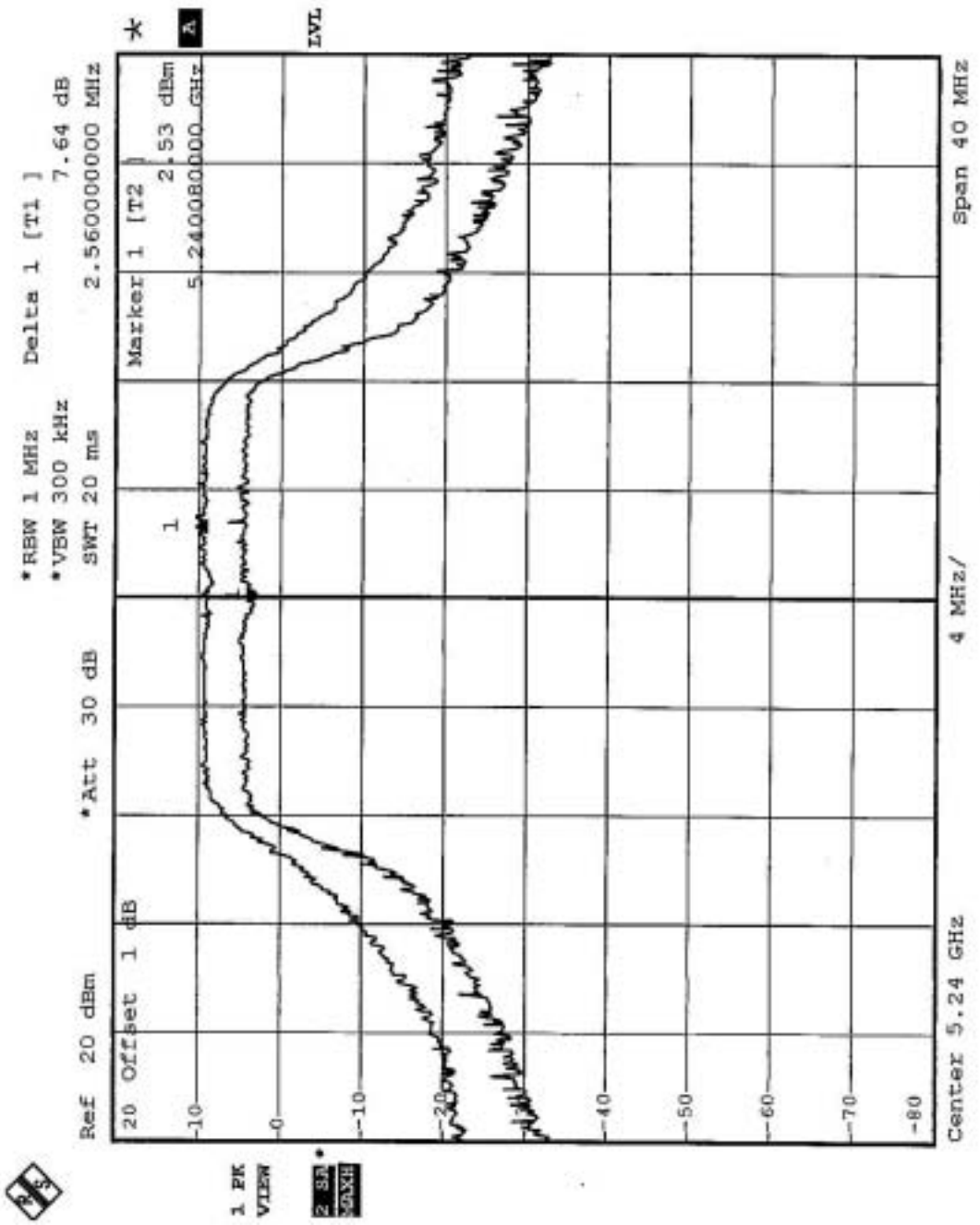
EUT	802.11a/b/g MiniPCI module	**MODEL**	T60H835
MODE	Normal	**INPUT POWER (SYSTEM)**	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	27eg. C, 59RH, 967 hPa	**TESTED BY**	Sky Liao

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)	PEAK to AVERAGE EXCURSION LIMIT (dB)	PASS/FAIL
1	5180	7.86	13	PASS
4	5240	7.64	13	PASS
5	5260	7.59	13	PASS
8	5320	7.85	13	PASS

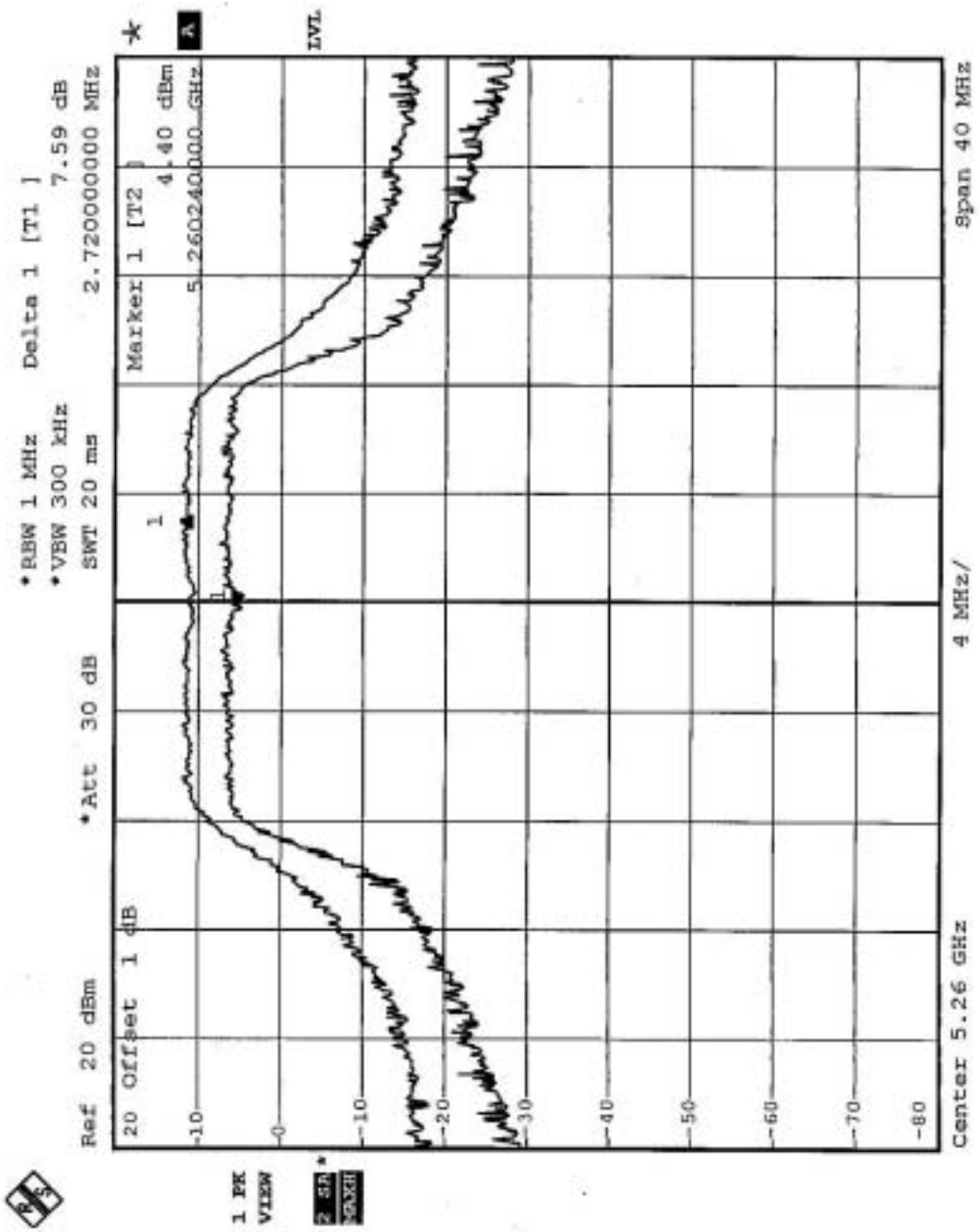
CHANNEL 1


Ref 20 dBm
20 Offset 1 dB
*Att 30 dB
*RBW 1 MHz
*VBW 300 kHz
SWT 20 ms
Delta 1 [T1]
7.86 dB
4.000000000 MHz
Marker 1 [T2]
1.76 dBm
5.180160000 GHz
Center 5.18 GHz
4 MHz/
Span 40 MHz
1 PK
VIEW
MAXH
LVL

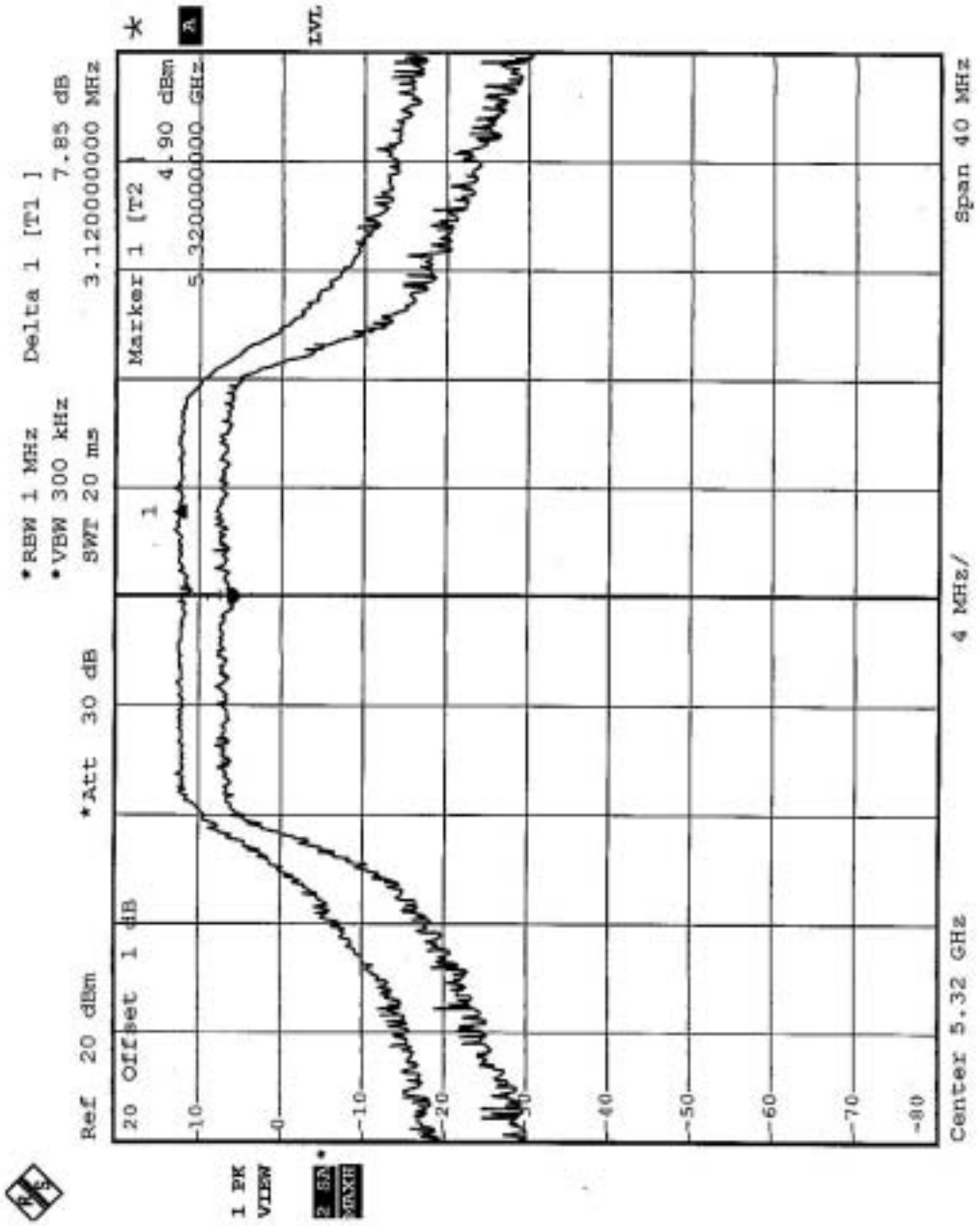
CHANNEL 4


Ref 20 dBm
20 Offset 1 dB
*Att 30 dB
*RBW 1 MHz
*VBW 300 kHz
SWT 20 ms
Delta 1 [T1]
7.64 dB
2.56000000 MHz
Marker 1 [T2]
2.53 dBm
5.24008000 GHz
Center 5.24 GHz
4 MHz/
Span 40 MHz
1 PK VIEW
2 SA MAXH

CHANNEL 5


RBW 1 MHz
VBW 300 kHz
SWT 20 ms
Att 30 dB
Offset 1 dB
Ref 20 dBm
Delta 1 [T1]
7.59 dB
2.720000000 MHz
Marker 1 [T2]
4.40 dBm
5.260240000 GHz
Center 5.26 GHz
4 MHz/
Span 40 MHz
1 PK
VIEW
2 SA
MAXH

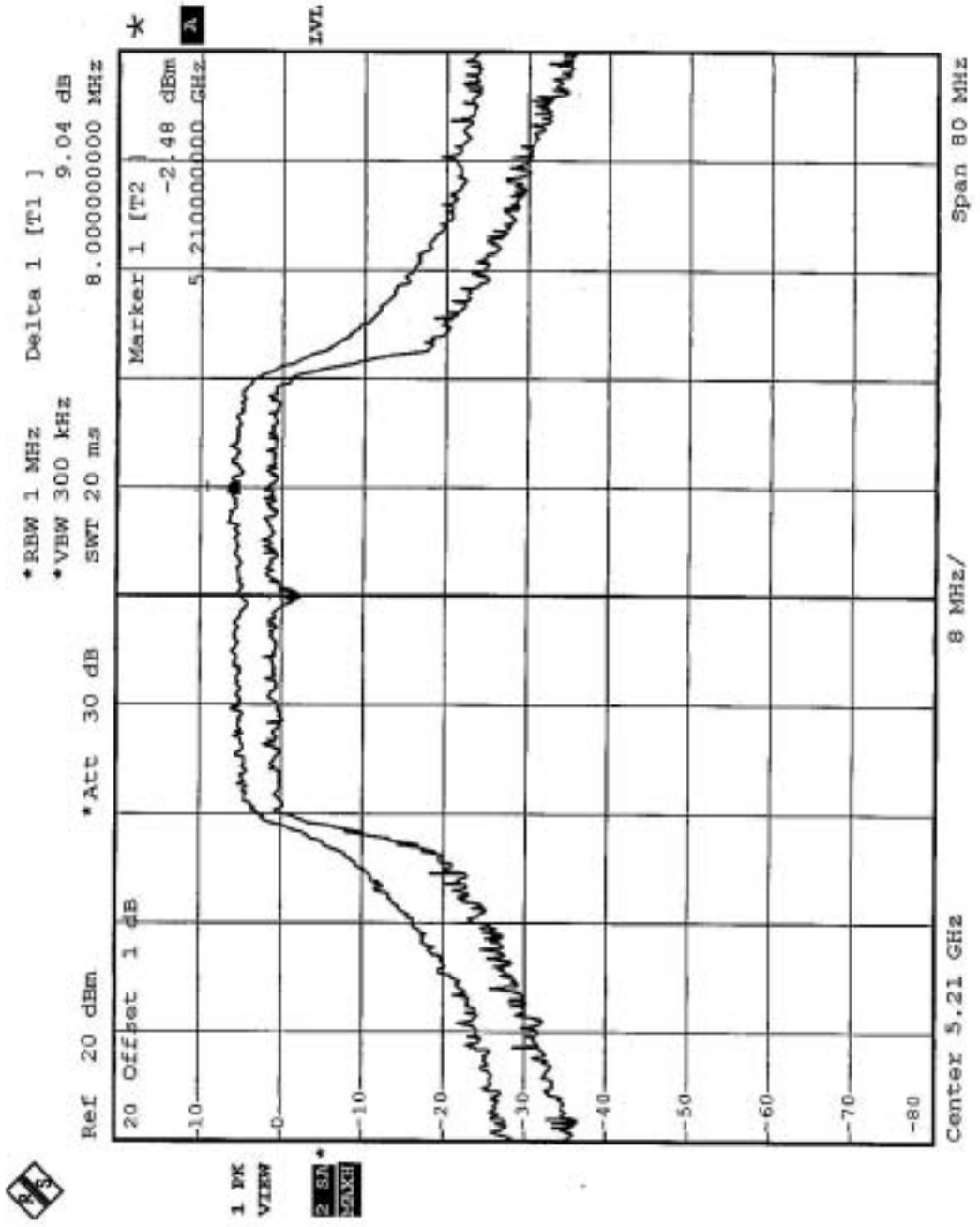
CHANNEL 8


RBW 1 MHz
VBW 300 kHz
SWT 20 ms
Delta 1 [T1]
7.85 dB
3.120000000 MHz
Marker 1 [T2]
4.90 dBm
5.320000000 GHz
Ref 20 dBm
Offset 1 dB
Att 30 dB
Center 5.32 GHz
Span 40 MHz
4 MHz/
1 PK
VIEW
2 BA
MAXH

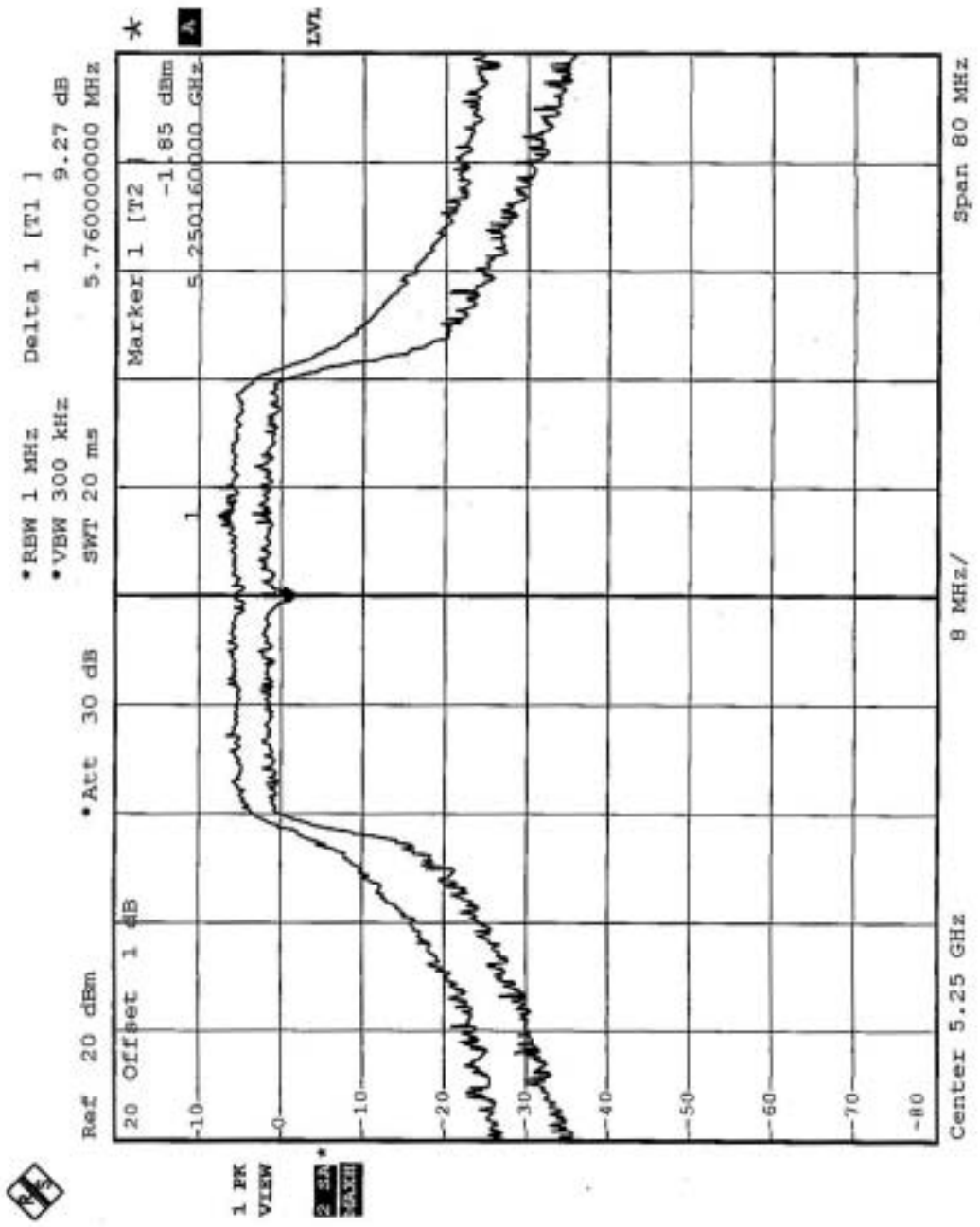
EUT	802.11a/b/g MiniPCI module	**MODEL**	T60H835
MODE	Turbo	**INPUT POWER (SYSTEM)**	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	27eg. C, 59RH, 967 hPa	**TESTED BY**	Sky Liao

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)	PEAK to AVERAGE EXCURSION LIMIT (dB)	PASS/FAIL
1	5210	9.04	13	PASS
2	5250	9.27	13	PASS
3	5290	8.69	13	PASS

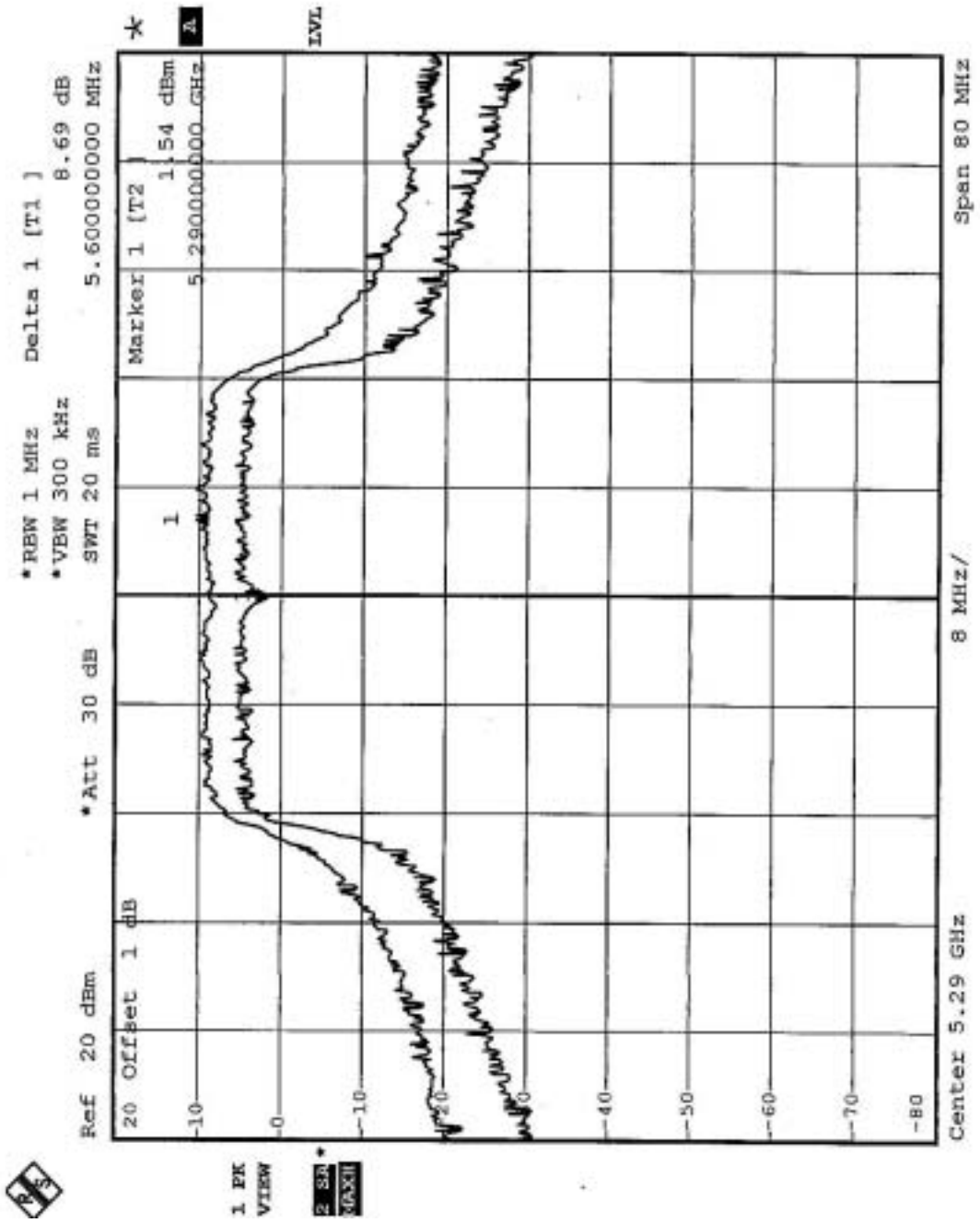
CHANNEL 1


Ref 20 dBm
Offset 1 dB
*Att 30 dB
*RBW 1 MHz
*VBW 300 kHz
SWT 20 ms
Delta 1 [T1]
9.04 dB
8.000000000 MHz
Marker 1 [T2]
-2.48 dBm
5.210000000 GHz
Center 5.21 GHz
8 MHz/
Span 80 MHz
1 PK
VIEW
2 SA
MAXH

CHANNEL 2


RBW 1 MHz
VBW 300 kHz
SWT 20 ms
Delta 1 [T1]
9.27 dB
5.760000000 MHz
Marker 1 [T2]
-1.85 dBm
5.250160000 GHz
Ref 20 dBm
Offset 1 dB
Att 30 dB
Center 5.25 GHz
8 MHz/
Span 80 MHz
1 PK
VIEW
2 SA
MAXH

CHANNEL 3


RBW 1 MHz
VBW 300 kHz
SWT 20 ms
Att 30 dB
Offset 1 dB
Ref 20 dBm
Delta 1 [T1]
8.69 dB
5.600000000 MHz
Marker 1 [T2]
11.54 dBm
5.290000000 GHz
Center 5.29 GHz
8 MHz/
Span 80 MHz
1 PK VIEW
2 SR MAXH

5.5 PEAK POWER SPECTRAL DENSITY MEASUREMENT

5.5.1 LIMITS OF PEAK POWER SPECTRAL DENSITY MEASUREMENT

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

5.5.2 TEST INSTRUMENTS

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

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

5.5.3 TEST PROCEDURES

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

5.5.4 DEVIATION FROM TEST STANDARD

No deviation

5.5.5 TEST SETUP

5.5.6 EUT OPERATING CONDITIONS

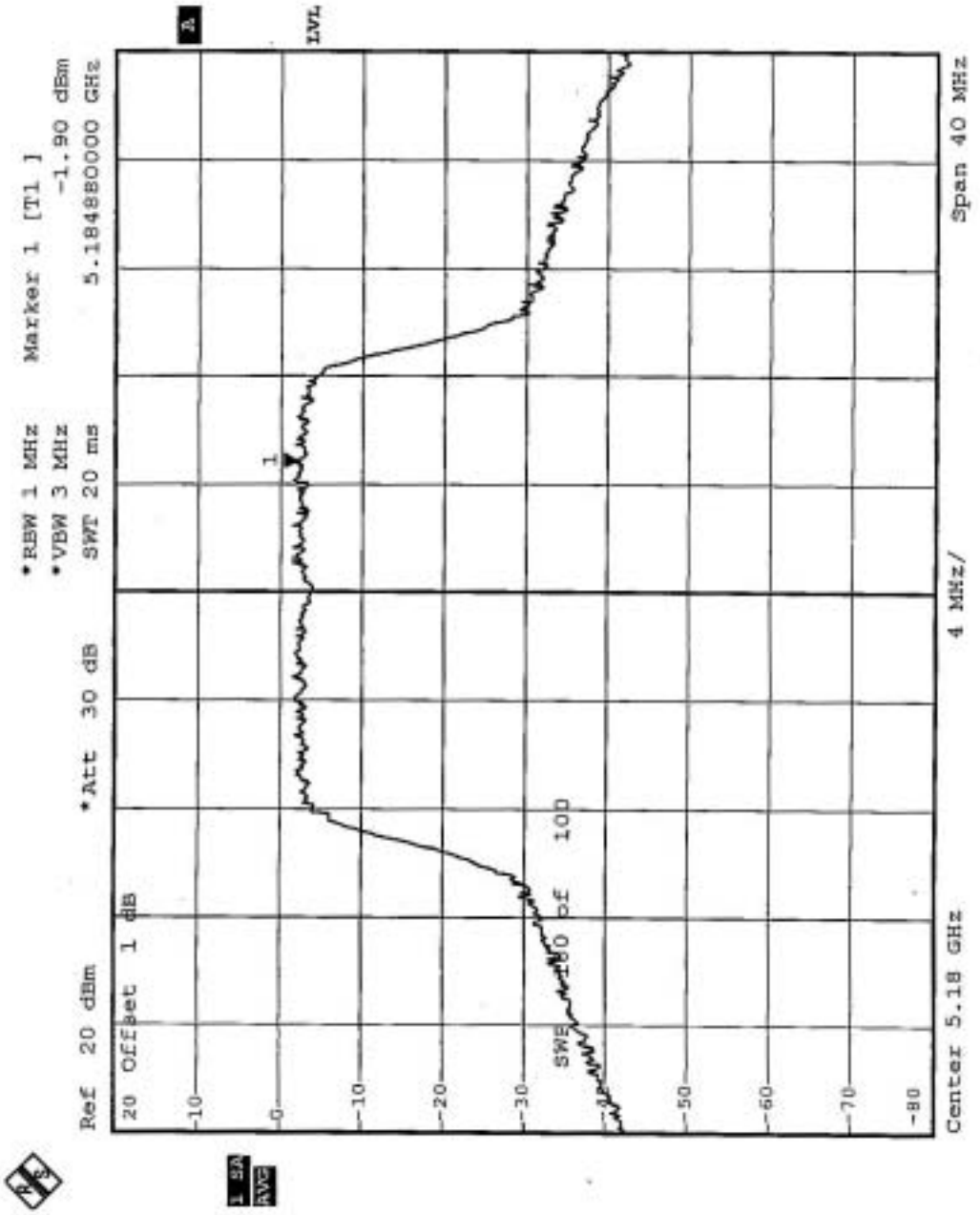
Same as 5.3.6

5.5.7 TEST RESULTS

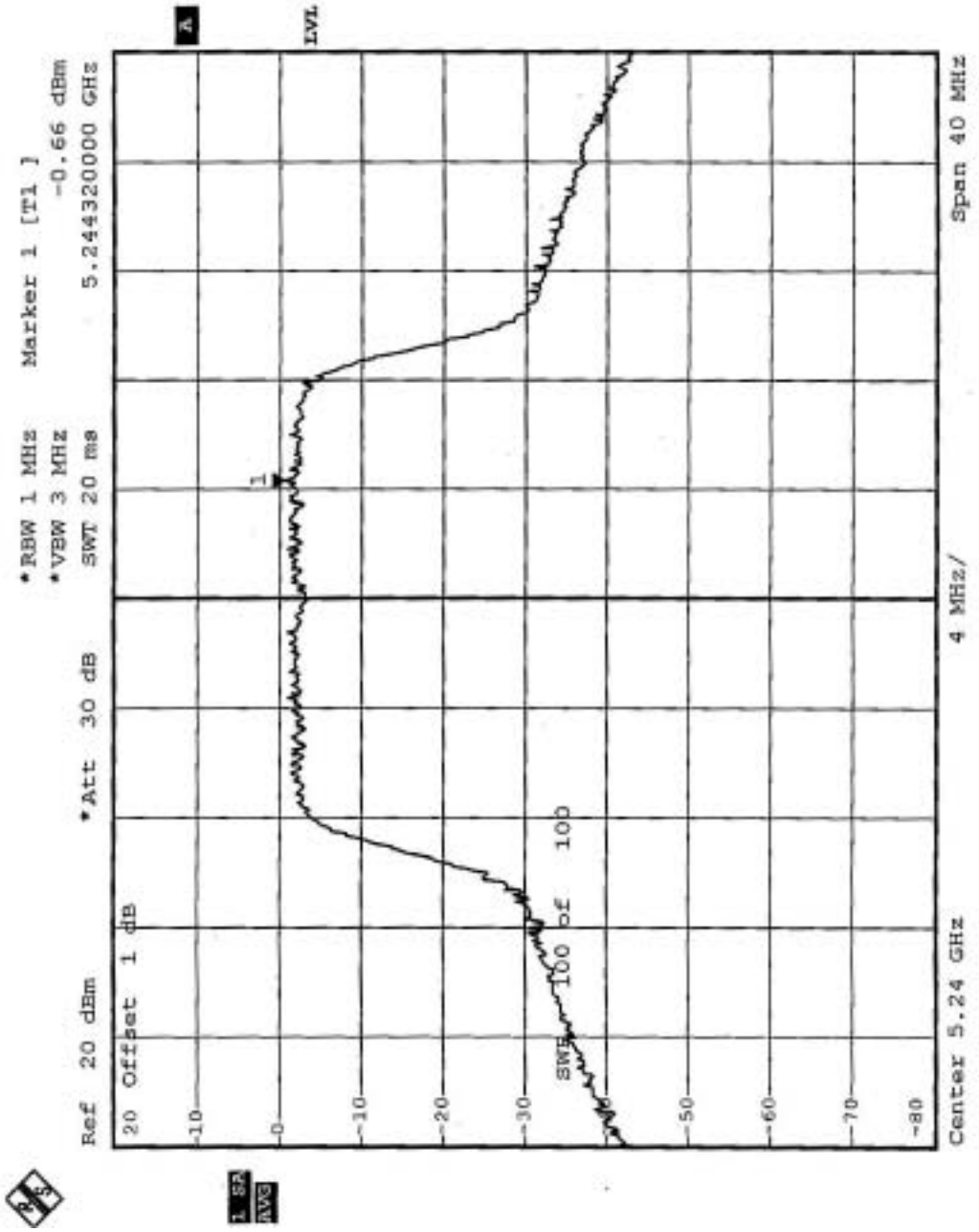
EUT	802.11a/b/g MiniPCI module	**MODEL**	T60H835
MODE	Normal	**INPUT POWER (SYSTEM)**	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	27eg. C, 59RH, 967 hPa	**TESTED BY**	Sky Liao

CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 1 MHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	5180	-1.90	4	PASS
4	5240	-0.66	4	PASS
5	5260	0.96	11	PASS
8	5320	1.67	11	PASS

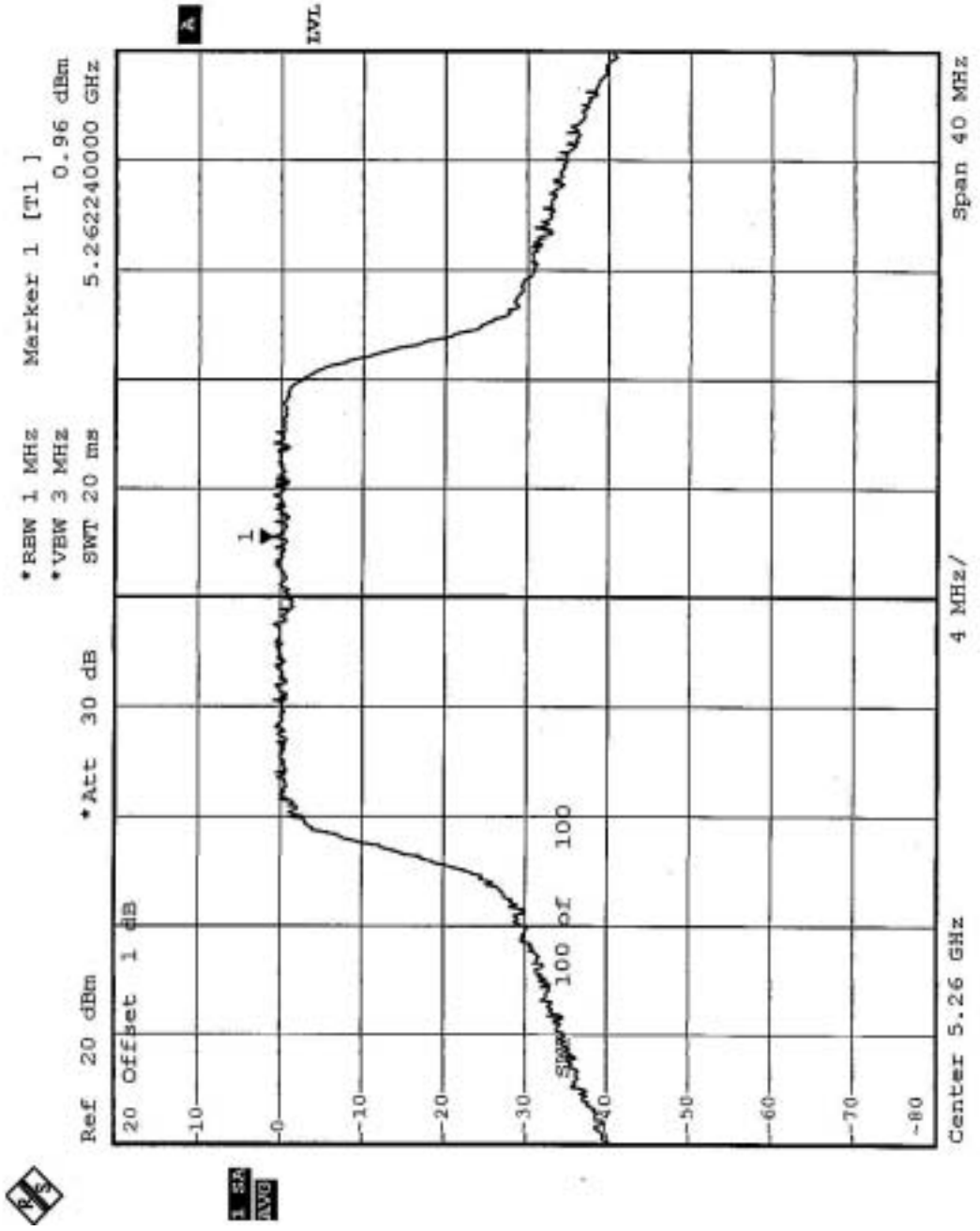
CHANNEL 1


Ref 20 dBm
Offset 1 dB
*Att 30 dB
*VBW 3 MHz
SWT 20 ms
*RBW 1 MHz
Marker 1 [T1]
-1.90 dBm
5.18488000 GHz
Center 5.18 GHz
4 MHz/
Span 40 MHz
1 AA
AVG

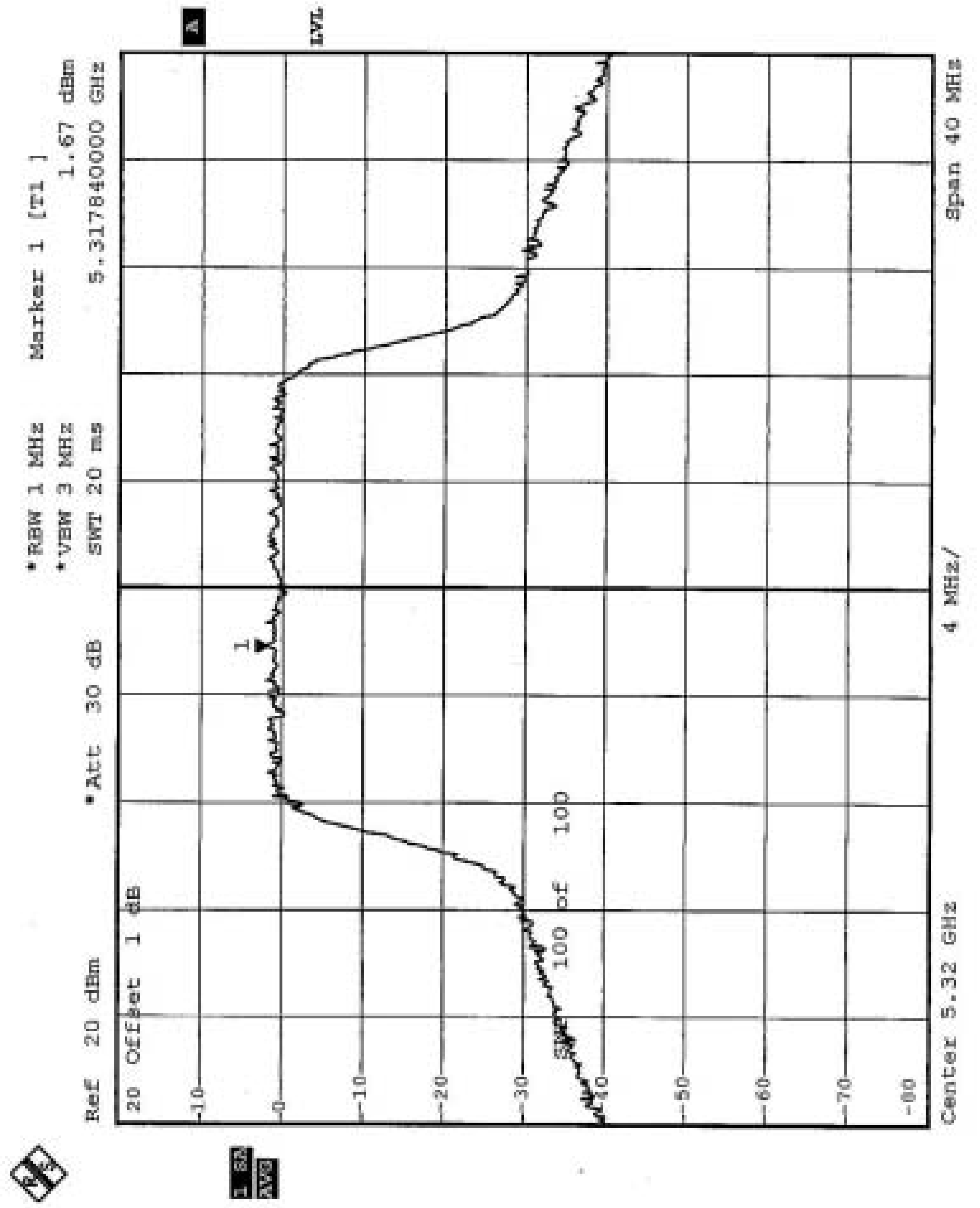
CHANNEL 4


A
1VL
Marker 1 [T1]
-0.66 dBm
5.244320000 GHz
*RBW 1 MHz
*VBW 3 MHz
SWT 20 ms
*Att 30 dB
Ref 20 dBm
20 Offset 1 dB
Span 40 MHz
4 MHz/
Center 5.24 GHz
SWT 100 pt 100
1 SA
AVG

CHANNEL 5


Ref 20 dBm
Offset 1 dB
*Att 30 dB
*VBW 3 MHz
SWT 20 ms
*RBW 1 MHz
Marker 1 [T1]
0.96 dBm
5.262240000 GHz
Center 5.26 GHz
4 MHz/
Span 40 MHz
1 SA
AVG
LVL

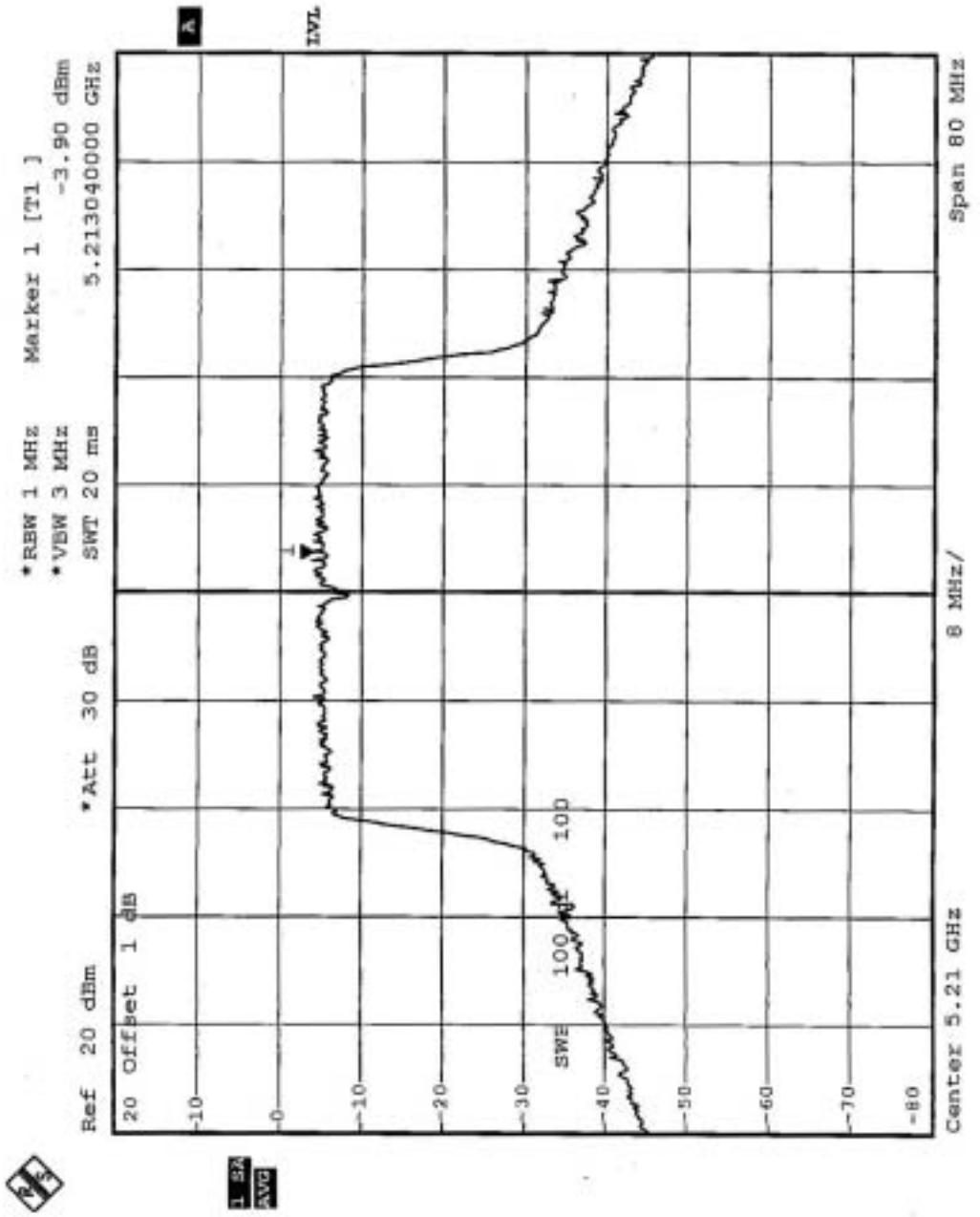
CHANNEL 8


Marker 1 [T1]
1.67 dBm
5.31784000 GHz
*RBW 1 MHz
*VBW 3 MHz
SWT 20 ms
*Att 30 dB
Ref 20 dBm
Offset 1 dB
100 of 100
LVL
Center 5.32 GHz
4 MHz/
Span 40 MHz

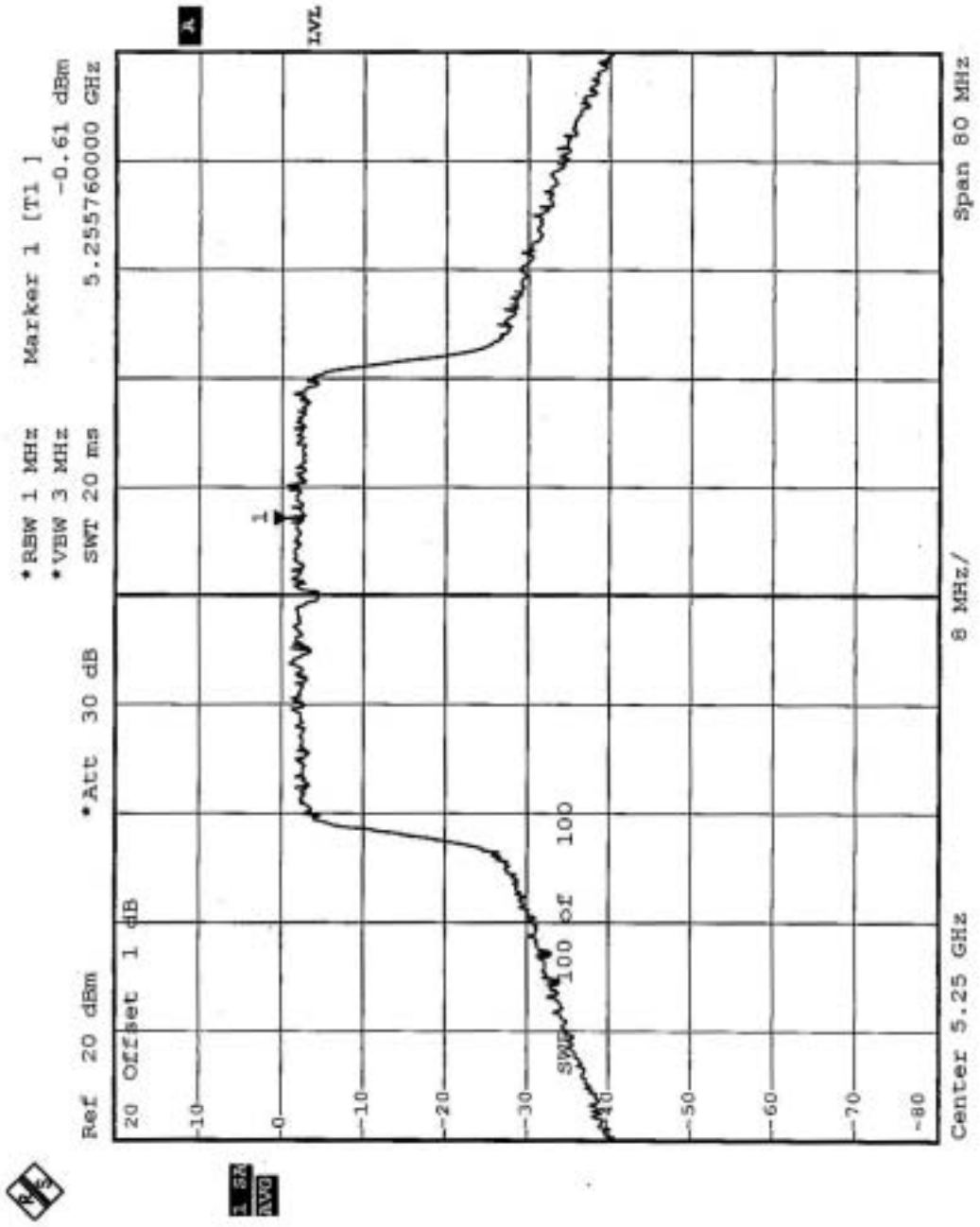
EUT	802.11a/b/g MiniPCI module	**MODEL**	T60H835
MODE	Turbo	**INPUT POWER (SYSTEM)**	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	27eg. C, 59RH, 967 hPa	**TESTED BY**	Sky Liao

CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 1 MHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	5210	-3.90	4	PASS
2	5250	-0.61	4	PASS
3	5290	-0.77	11	PASS

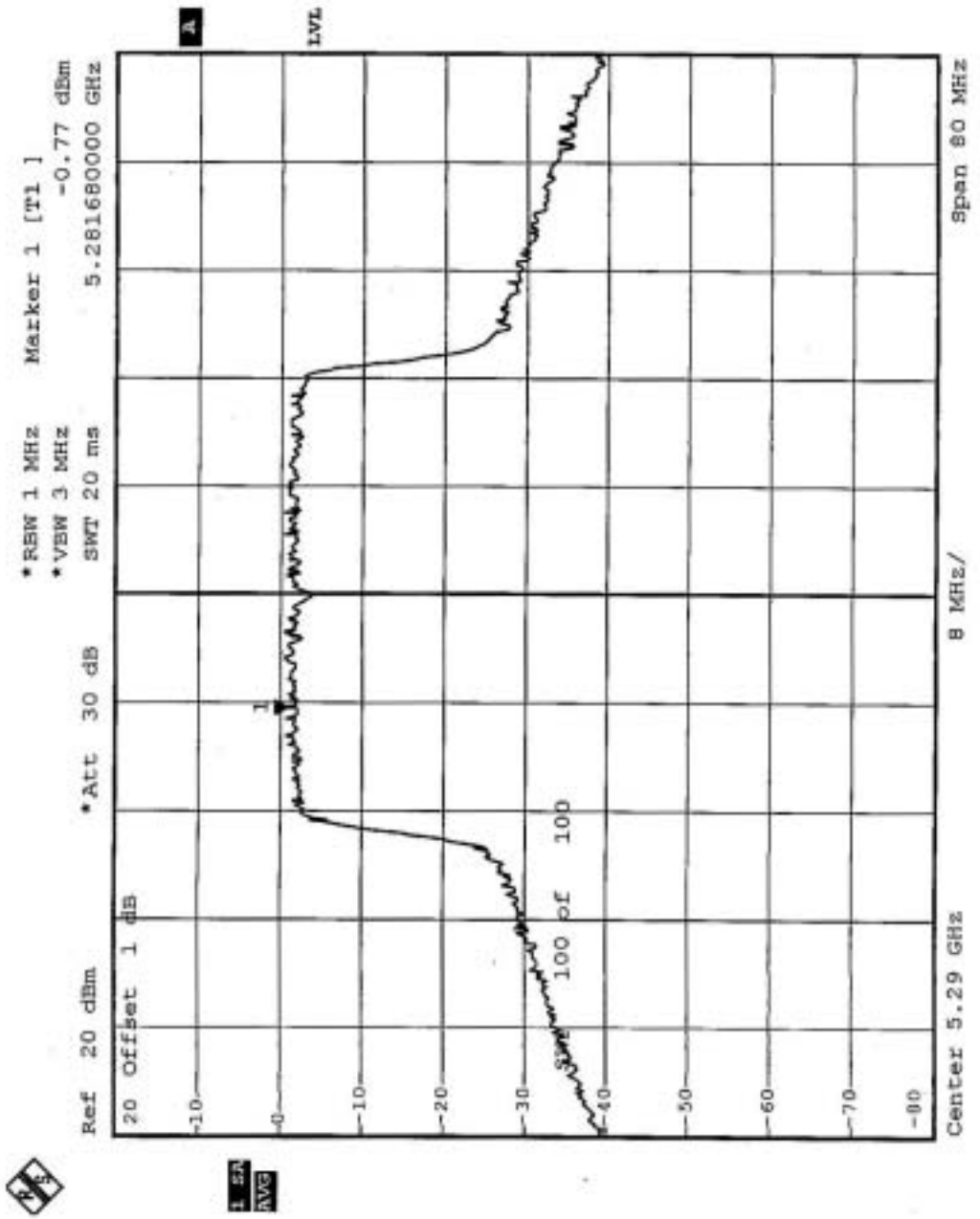
CHANNEL 1


Ref 20 dBm
20 Offset 1 dB
*Att 30 dB
*RBW 1 MHz
*VBW 3 MHz
SWT 20 ms
Marker 1 [T1]
-3.90 dBm
5.213040000 GHz
Center 5.21 GHz
8 MHz/
Span 80 MHz
1 SA
AVG

CHANNEL 2


Ref 20 dBm
Offset 1 dB
*Att 30 dB
*RBW 1 MHz
*VBW 3 MHz
SWT 20 ms
Marker 1 [T1]
-0.61 dBm
5.255760000 GHz
Center 5.25 GHz
8 MHz/
Span 80 MHz
SWP 100 of 100

CHANNEL 3


Ref 20 dBm
20 Offset 1 dB
*Att 30 dB
*RBW 1 MHz
*VBW 3 MHz
SWT 20 ms
Marker 1 [T1]
-0.77 dBm
5.281680000 GHz
Center 5.29 GHz
8 MHz/
Span 80 MHz
100 of 100

5.6 FREQUENCY STABILITY

5.6.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

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

5.6.2 TEST INSTRUMENTS

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

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

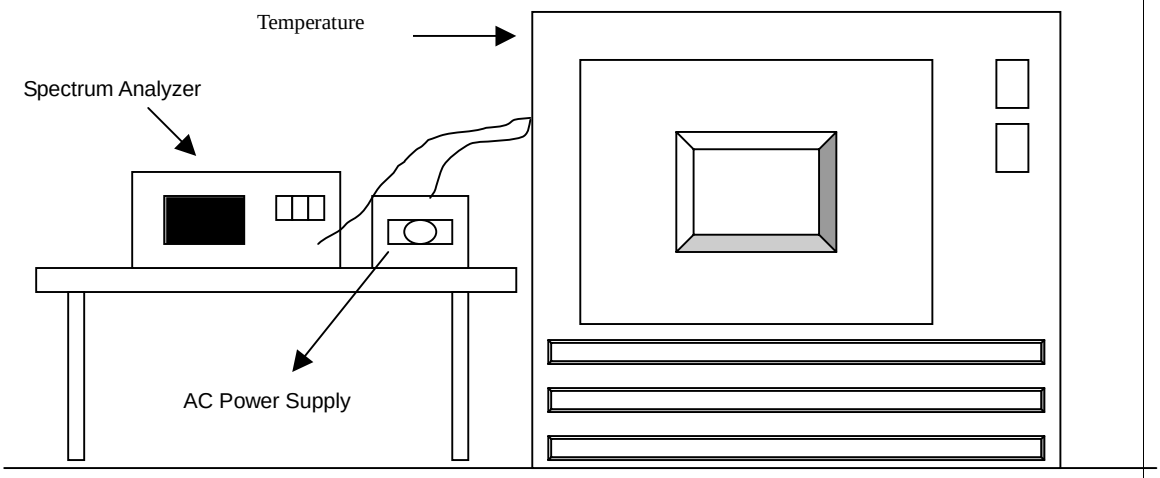
5.6.3 TEST PROCEDURE

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

5.6.4 DEVIATION FROM TEST STANDARD

No deviation

5.6.5 TEST SETUP



5.6.6 EUT OPERATING CONDITION

Same as Item 4.1.6

5.6.7 TEST RESULTS

Operating frequency: 5320MHz				Limit : ± 0.02%			
Temp. (°C)	Power supply (VAC)	2 minute		5 minute		10 minute	
		(MHz)	(%)	(MHz)	(%)	(MHz)	(%)
50	126.5	5319.9683	-0.000596%	5319.9669	-0.000622%	5319.9684	-0.000594%
	110	5319.9677	-0.000607%	5319.9667	-0.000626%	5319.9697	-0.000570%
	93.5	5319.9658	-0.000643%	5319.9699	-0.000566%	5319.9632	-0.000692%
40	126.5	5319.9569	-0.000810%	5319.9582	-0.000786%	5319.9643	-0.000671%
	110	5319.9586	-0.000778%	5319.9574	-0.000801%	5319.9603	-0.000746%
	93.5	5319.9599	-0.000754%	5319.9593	-0.000765%	5319.9620	-0.000714%
30	126.5	5319.9586	-0.000778%	5319.9583	-0.000784%	5319.9564	-0.000820%
	110	5319.9543	-0.000859%	5319.9529	-0.000885%	5319.9551	-0.000844%
	93.5	5319.9549	-0.000848%	5319.9532	-0.000880%	5319.9586	-0.000778%
20	126.5	5319.9485	-0.000968%	5319.9573	-0.000803%	5319.9433	-0.001066%
	110	5319.9464	-0.001008%	5319.9533	-0.000878%	5319.9411	-0.001107%
	93.5	5319.9433	-0.001066%	5319.9522	-0.000898%	5319.9470	-0.000996%
10	126.5	5319.9595	-0.000761%	5319.9543	-0.000859%	5319.9584	-0.000782%
	110	5319.9566	-0.000816%	5319.9571	-0.000806%	5319.9597	-0.000758%
	93.5	5319.9549	-0.000848%	5319.9583	-0.000784%	5319.9549	-0.000848%
0	126.5	5319.9685	-0.000592%	5319.9693	-0.000577%	5318.9699	-0.019363%
	110	5319.9694	-0.000575%	5319.9674	-0.000613%	5319.9689	-0.000585%
	93.5	5319.9634	-0.000688%	5319.9831	-0.000318%	5319.9654	-0.000650%
-10	126.5	5319.9764	-0.000444%	5319.9632	-0.000692%	5319.9764	-0.000444%
	110	5319.976	-0.000451%	5319.9766	-0.000440%	5319.9770	-0.000432%
	93.5	5319.9755	-0.000461%	5319.9734	-0.000500%	5319.9721	-0.000524%
-20	126.5	5319.9874	-0.000237%	5319.9874	-0.000237%	5319.9874	-0.000237%
	110	5319.9874	-0.000237%	5319.9860	-0.000263%	5319.9889	-0.000209%
	93.5	5319.9883	-0.000220%	5319.9830	-0.000320%	5319.9873	-0.000239%
-30	126.5	5319.9943	-0.000107%	5319.9971	-0.000055%	5319.9962	-0.000071%
	110	5319.9909	-0.000171%	5319.9917	-0.000156%	5319.9920	-0.000150%
	93.5	5319.994	-0.000113%	5319.9921	-0.000148%	5319.9967	-0.000062%

5.7 BAND EDGES MEASUREMENT

5.7.1 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSP	1093.4495.30	Dec. 19, 2004

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.

5.7.2 TEST PROCEDURE

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

5.7.3 EUT OPERATING CONDITION

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

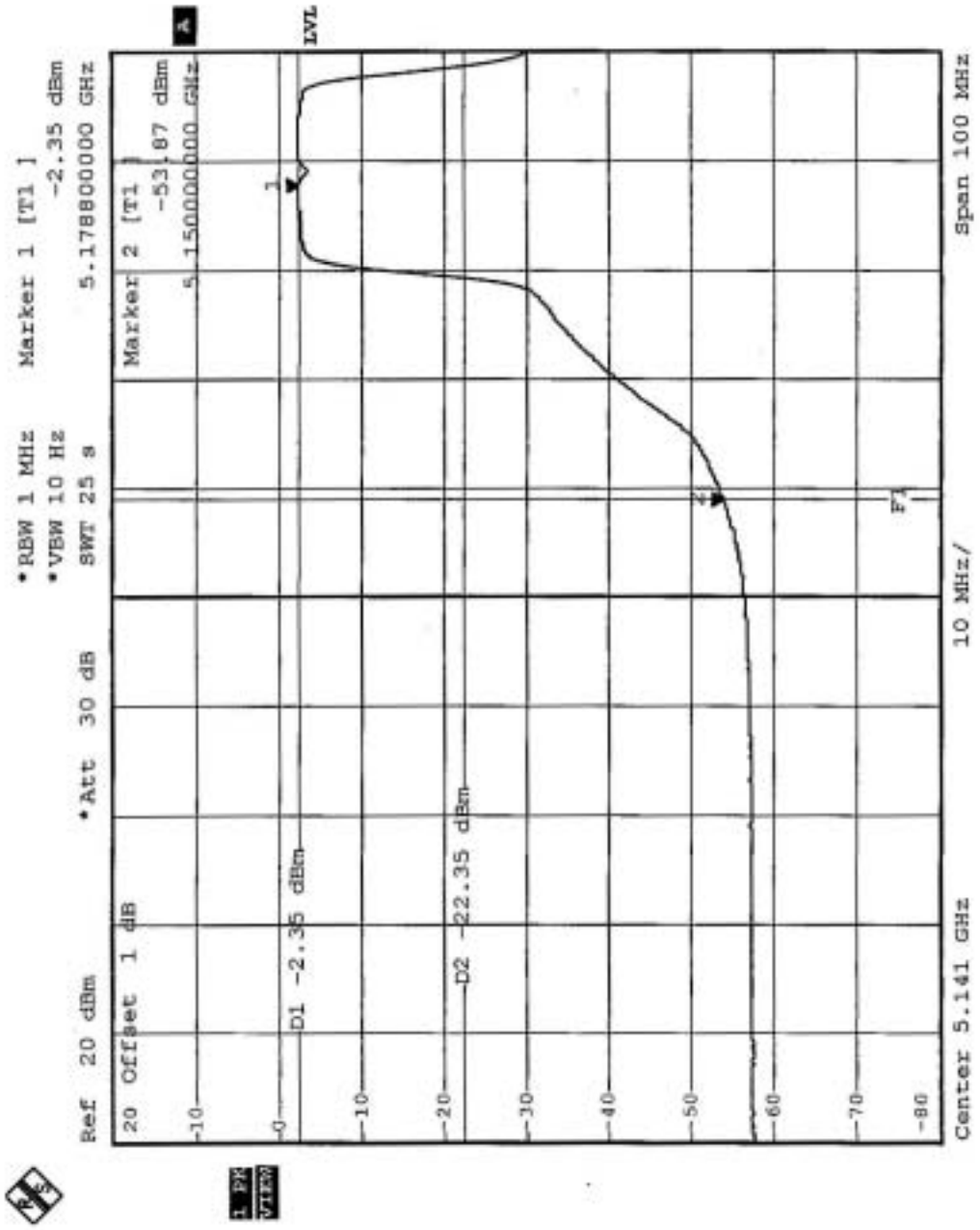
5.7.4 TEST RESULTS

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

The spectrum plots (Average RBW=1MHz, VBW=300Hz) are attached on the following 4 pages.

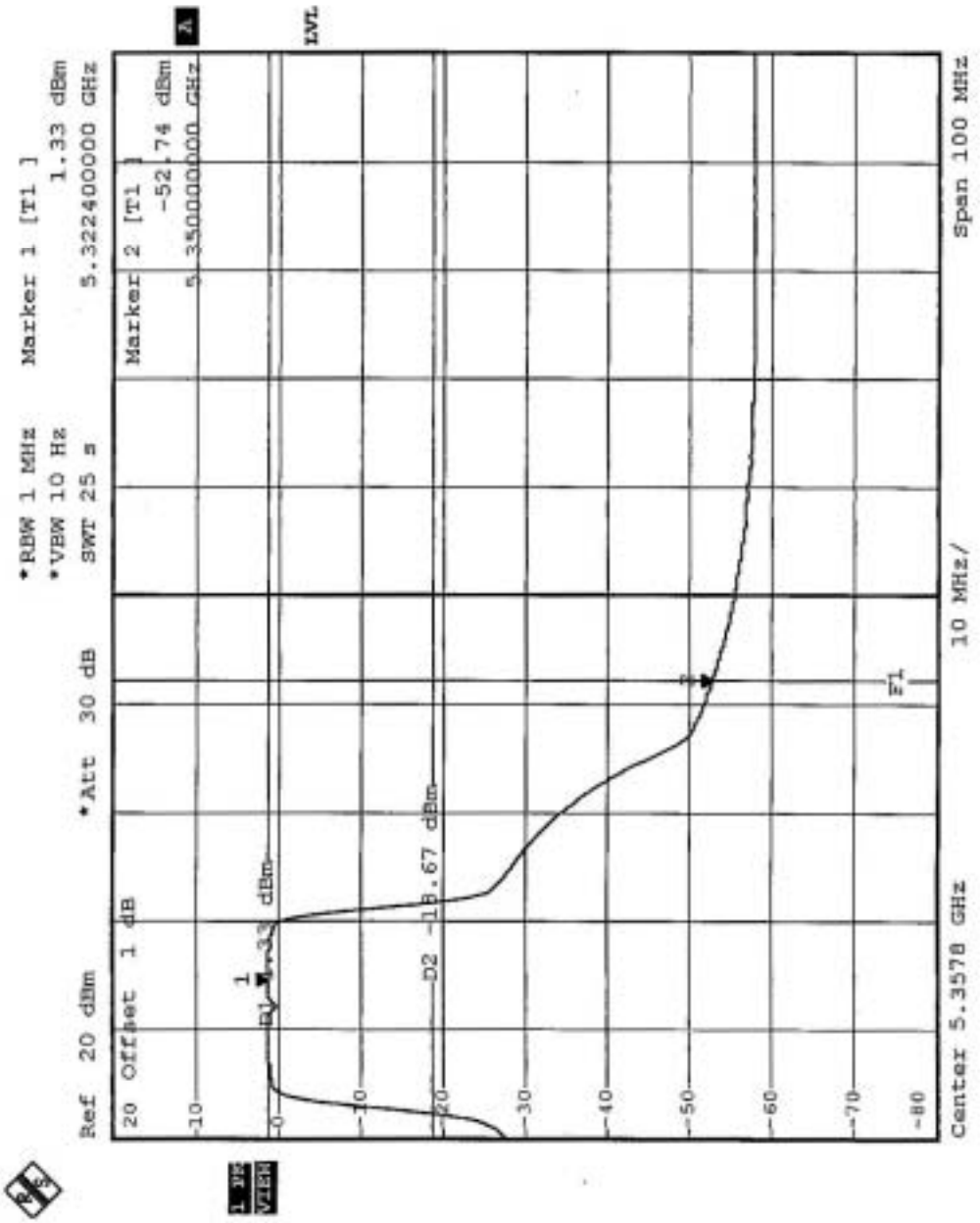
Normal Mode: Channel 1 (5180 MHz)

The band edge emission plot on the following page shows 51.52dBc (Average) between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 8 (normal mode) is 99.0dBuV/m, so the maximum field strength in restrict band is 99.0-51.52=47.48dBuV/m which is under 54dBuV/m limit.



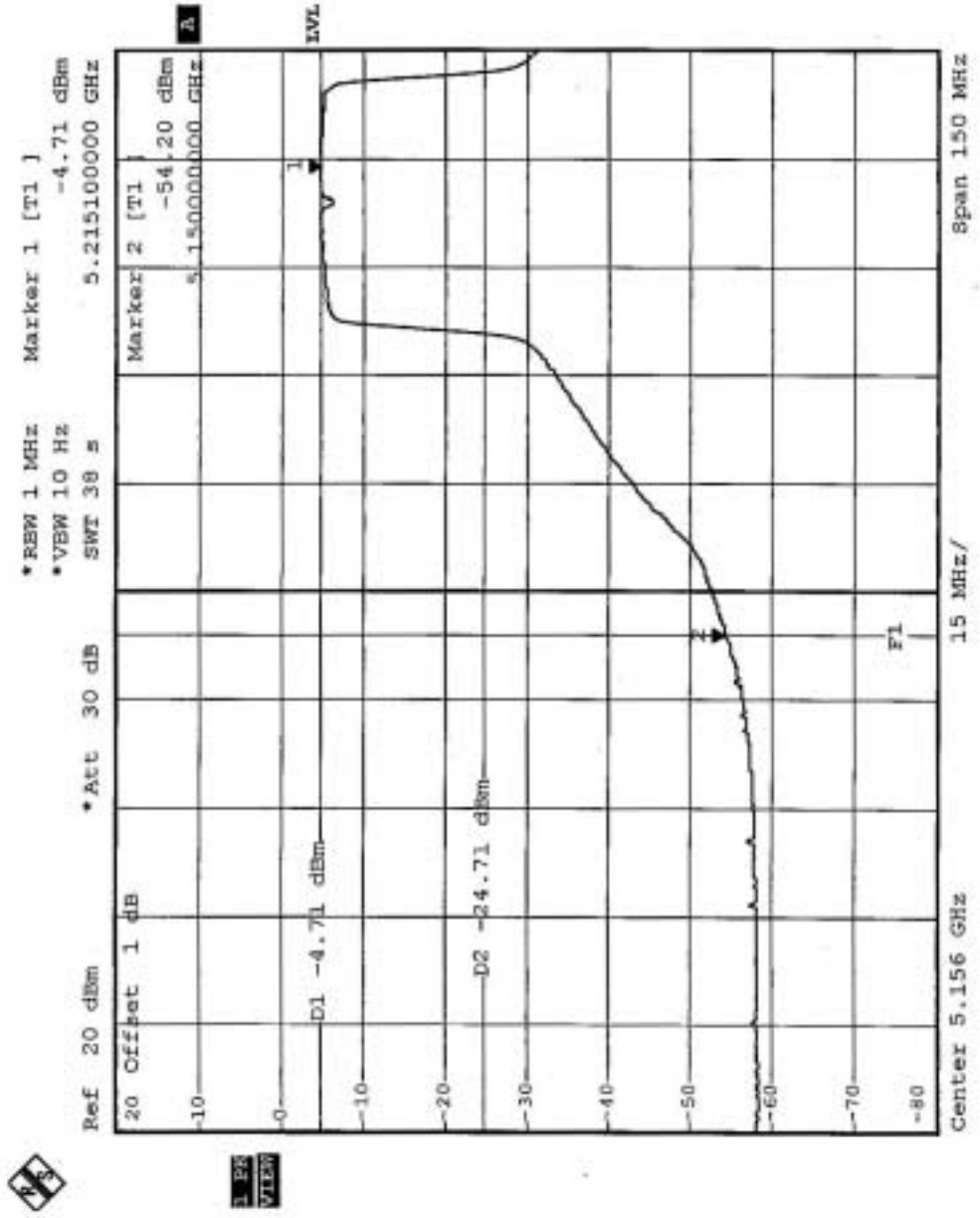
Normal Mode: Channel 8 (5320 MHz)

The band edge emission plot on the following page shows 54.07dBc (Average) between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 8 (normal mode) is 101.2dBuV/m, so the maximum field strength in restrict band is 101.2-54.07=47.13dBuV/m which is under 54dBuV/m limit.



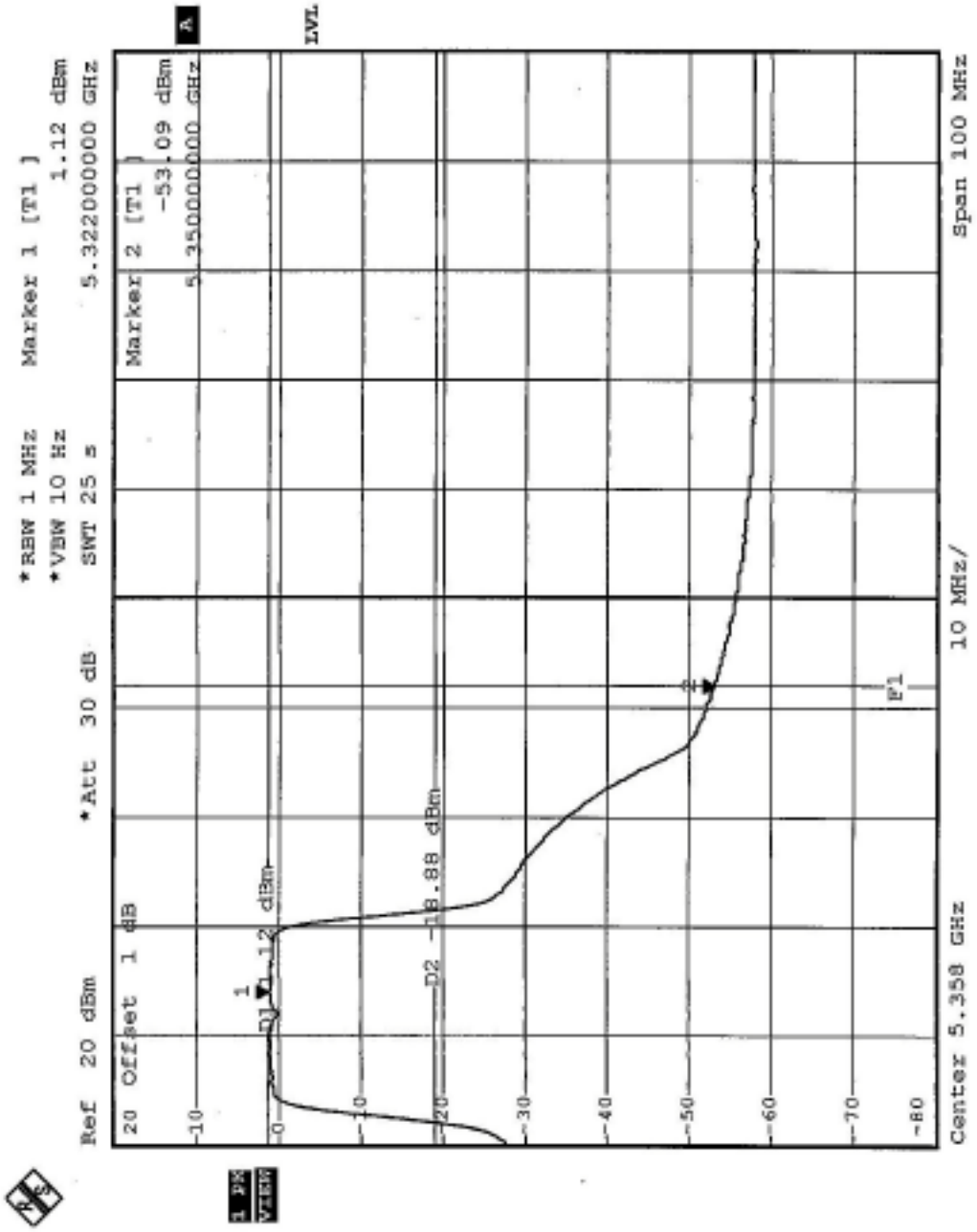
Turbo Mode: Channel 1 (5210 MHz)

The band edge emission plot on the following page shows 49.49dBc (Average) between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 8 (turbo mode) is 95.0dBuV/m, so the maximum field strength in restrict band is 95.0-49.49=45.51dBuV/m which is under 54dBuV/m limit.



Turbo Mode: Channel 3 (5290 MHz)

The band edge emission plot on the following page shows 54.21dBc (Average) between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 8 (turbo mode) is 98.9dBuV/m, so the maximum field strength in restrict band is 98.9-54.21=44.69dBuV/m which is under 54dBuV/m limit.



FOR FREQUENCY 5.725~5.850GHZ

5.8 6DB BANDWIDTH MEASUREMENT

5.8.1 LIMITS OF 6DB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

5.8.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSP	1093.4495.30	Dec. 19, 2004

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.

5.8.3 TEST PROCEDURE

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

5.8.4 DEVIATION FROM TEST STANDARD

No deviation

5.8.5 TEST SETUP

5.8.6 EUT OPERATING CONDITIONS

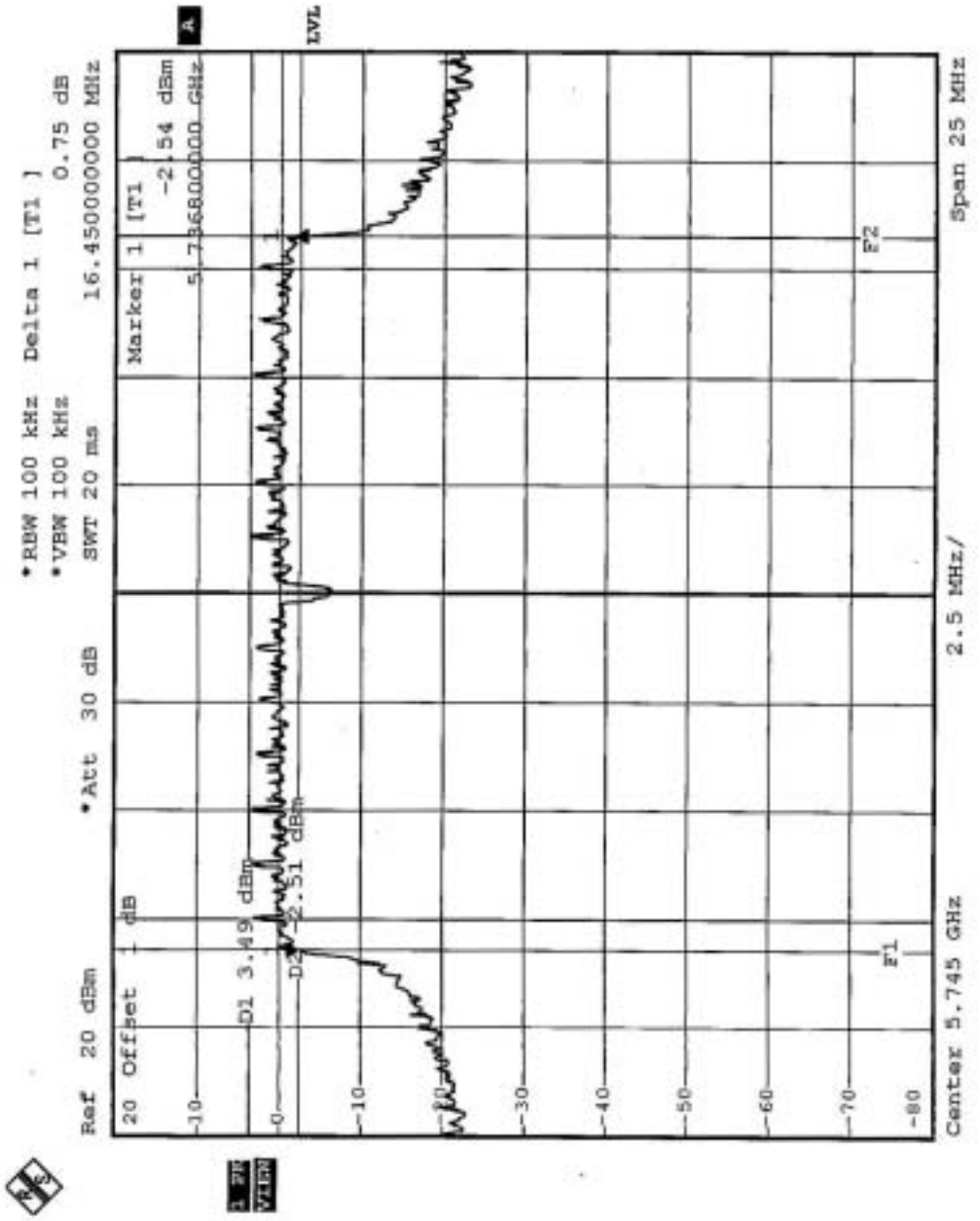
The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

5.8.7 TEST RESULTS

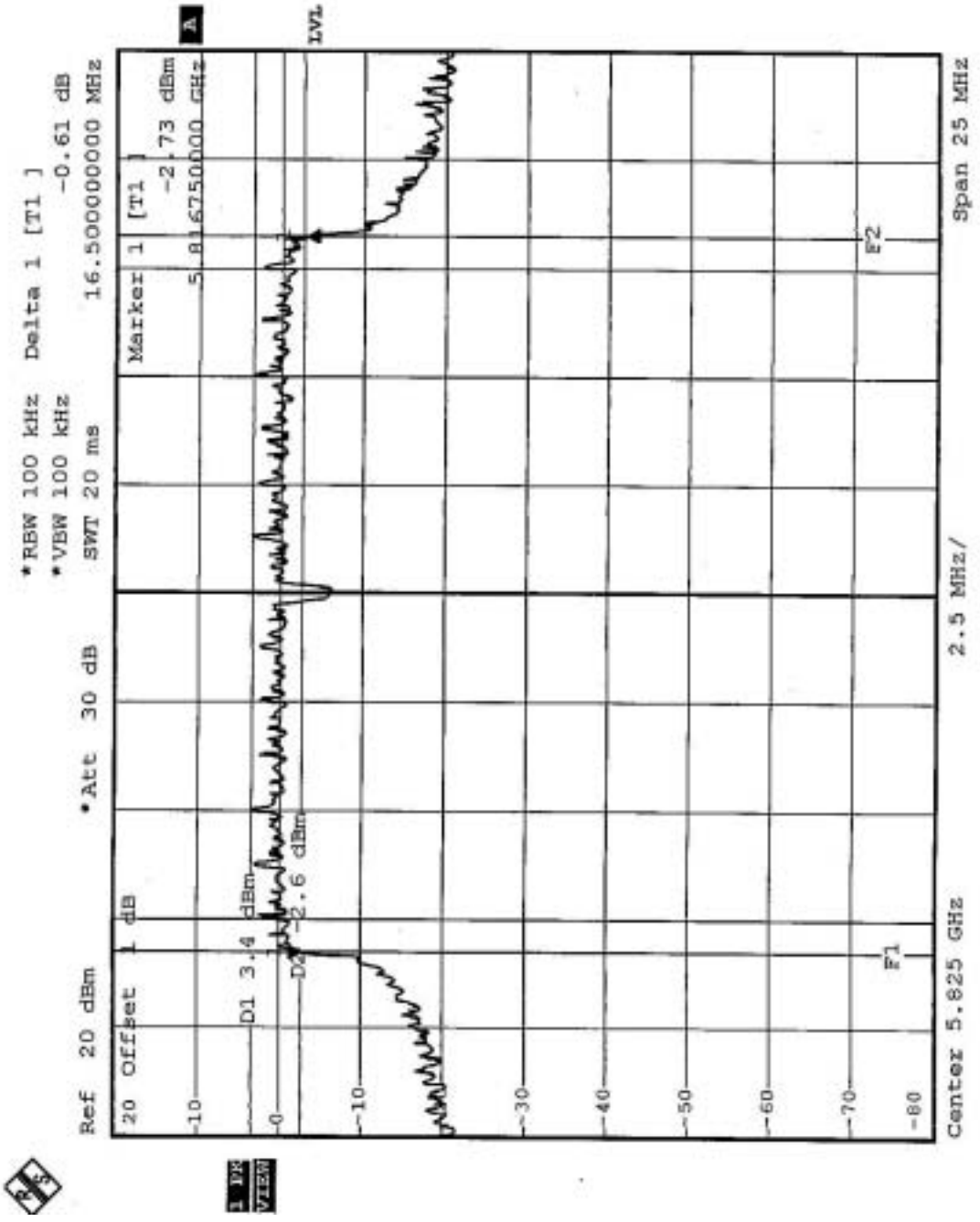
EUT	802.11a/b/g MiniPCI module	**MODEL**	T60H835
INPUT POWER (SYSTEM)	120Vac, 60Hz	**ENVIRONMENTAL CONDITIONS**	27eg. C, 59RH, 967 hPa
TEST MODE	Normal	**TEST BY**	Sky Liao

CHANNEL	CHANNEL FREQUENCY (MHz)	6 dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
9	5745	16.45	0.5	PASS
13	5825	16.50	0.5	PASS

CH9


RBW 100 kHz
VBW 100 kHz
SWT 20 ms
Delta 1 [T1]
0.75 dB
16.450000000 MHz
Marker 1 [T1
-2.54 dBm
5.736800000 GHz
Ref 20 dBm
Offset dB
Att 30 dB
D1 3.49 dBm
D2 2.51 dBm
F1
F2
Center 5.745 GHz
2.5 MHz/
Span 25 MHz

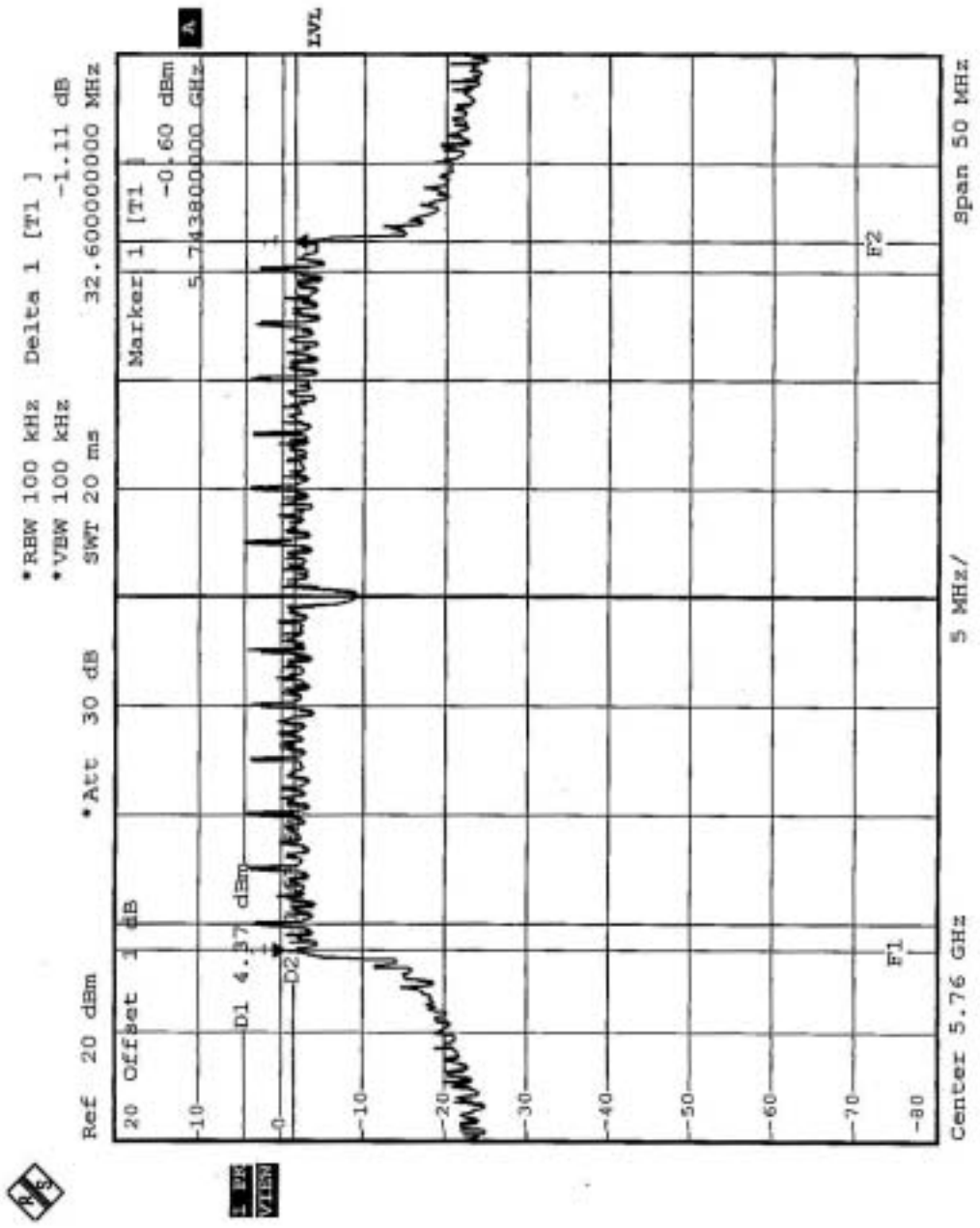
CH13


RBW 100 kHz
VBW 100 kHz
SWT 20 ms
Delta 1 [T1]
-0.61 dB
16.500000000 MHz
Att 30 dB
Ref 20 dBm
Offset 1 dB
Marker 1 [T1]
-2.73 dBm
5.816750000 GHz
D1 3.4 dBm
D2 -2.6 dBm
F1
F2
Center 5.825 GHz
2.5 MHz/
Span 25 MHz

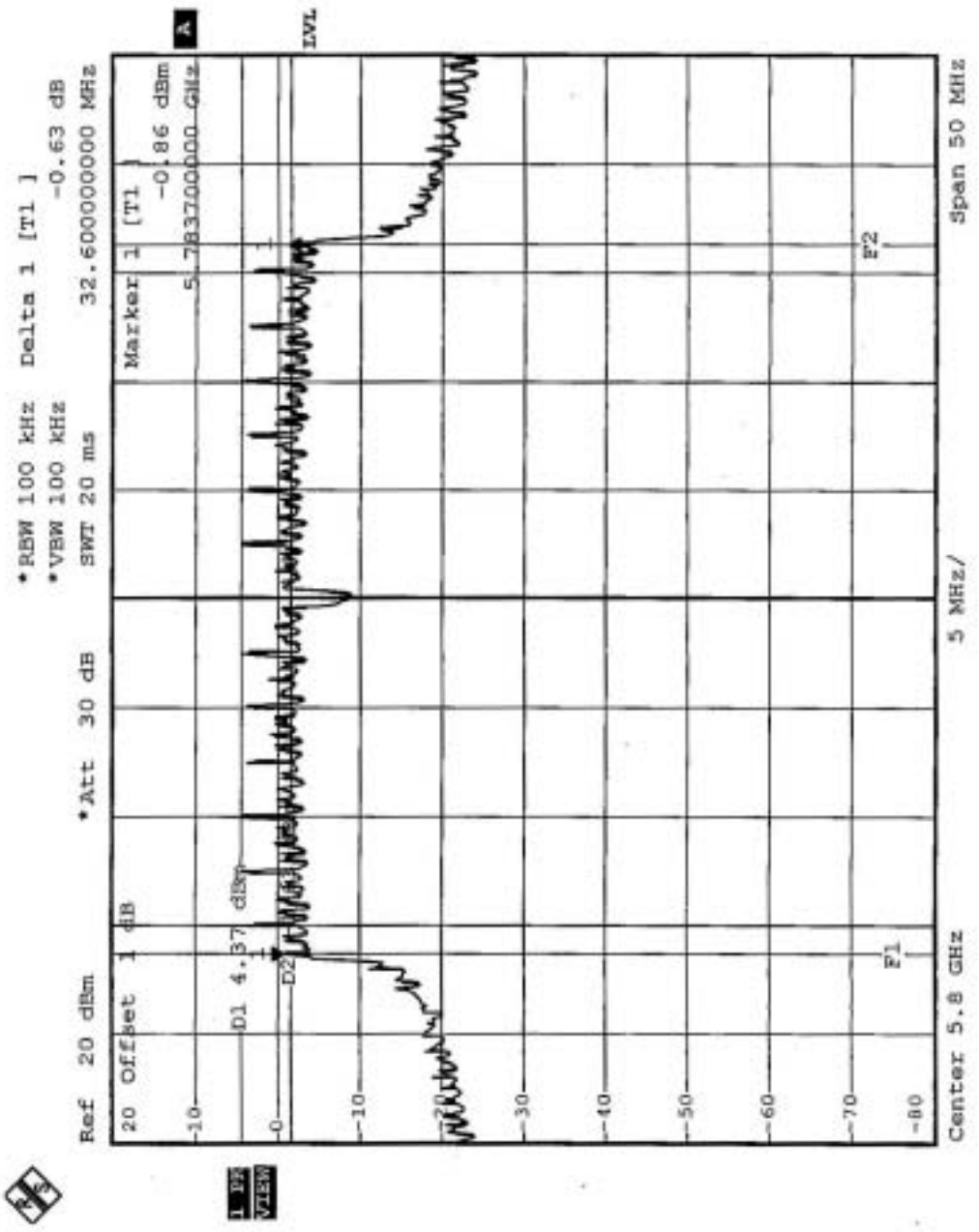
EUT	802.11a/b/g MiniPCI module	**MODEL**	T60H835
INPUT POWER (SYSTEM)	120Vac, 60Hz	**ENVIRONMENTAL CONDITIONS**	27eg. C, 59RH, 967 hPa
TEST MODE	Turbo	**TEST BY**	Sky Liao

CHANNEL	CHANNEL FREQUENCY (MHz)	6 dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
4	5760	32.6	0.5	PASS
5	5800	32.6	0.5	PASS

CH4


RBW 100 kHz
VBW 100 kHz
SWT 20 ms
Att 30 dB
Offset 1 dB
Ref 20 dBm
Delta 1 [T1]
-1.11 dB
32.600000000 MHz
Marker 1 [T1]
-0.60 dBm
5.743800000 GHz
D1 4.37 dBm
D2
F1
F2
Center 5.76 GHz
5 MHz/
Span 50 MHz
1 PK
VIEW

CH5


Ref 20 dBm
20 Offset 1 dB
*Att 30 dB
*RBW 100 kHz
*VBW 100 kHz
SWT 20 ms
Delta 1 [T1]
-0.63 dB
32.600000000 MHz
Marker 1 [T1]
-0.86 dBm
5.783700000 GHz
D1 4.37 dBm
Center 5.8 GHz
5 MHz/
Span 50 MHz

5.9 MAXIMUM PEAK OUTPUT POWER

5.9.1 LIMITS OF PEAK TRANSMIT POWER MEASUREMENT

The Maximum Peak Output Power Measurement is 30dBm.

5.9.2 TEST INSTRUMENTS

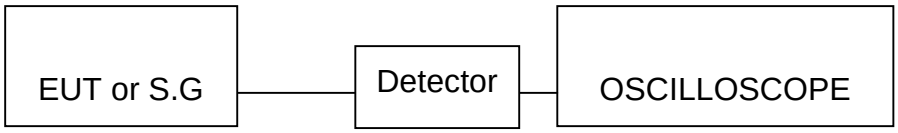
Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSP30	100019	Dec. 19, 2004

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

5.9.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer.
Set the spectrum bandwidth span to view the entire spectrum.
Using peak detector and Max-hold function for Trace 1 (RB=1MHz, VB=3MHz) and 2 (RB=1MHz, VB=30KHz).
The largest difference between Trace 1 and Trace 2 in any 1MHz band on any frequency was recorded.

5.9.4 TEST SETUP



5.9.5 EUT OPERATING CONDITIONS

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

5.9.6 TEST RESULTS

EUT	802.11a/b/g MiniPCI module	**MODEL**	T60H835
INPUT POWER (SYSTEM)	120Vac, 60Hz	**ENVIRONMENTAL CONDITIONS**	27eg. C, 59RH, 967 hPa
TEST MODE	Normal	**TEST BY**	Sky Liao

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
9	5745	19.54	30	PASS
13	5825	19.35	30	PASS

EUT	802.11a/b/g MiniPCI module	**MODEL**	T60H835
INPUT POWER (SYSTEM)	120Vac, 60Hz	**ENVIRONMENTAL CONDITIONS**	27eg. C, 59RH, 967 hPa
TEST MODE	Turbo	**TEST BY**	Sky Liao

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
4	5760	19.23	30	PASS
5	5800	19.28	30	PASS

5.10 POWER SPECTRAL DENSITY MEASUREMENT

5.10.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm.

5.10.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSP	1093.4495.30	Dec. 19, 2004

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.

5.10.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer through an attenuator, the bandwidth of the fundamental frequency was measured with the spectrum analyzer using 3 kHz RBW and 30 kHz VBW, set sweep time = span/3 kHz. The power spectral density was measured and recorded.
The sweep time is allowed to be longer than span/3 kHz for a full response of the mixer in the spectrum analyzer.

5.10.4 DEVIATION FROM TEST STANDARD

No deviation

5.10.5 TEST SETUP

5.10.6 EUT OPERATING CONDITION

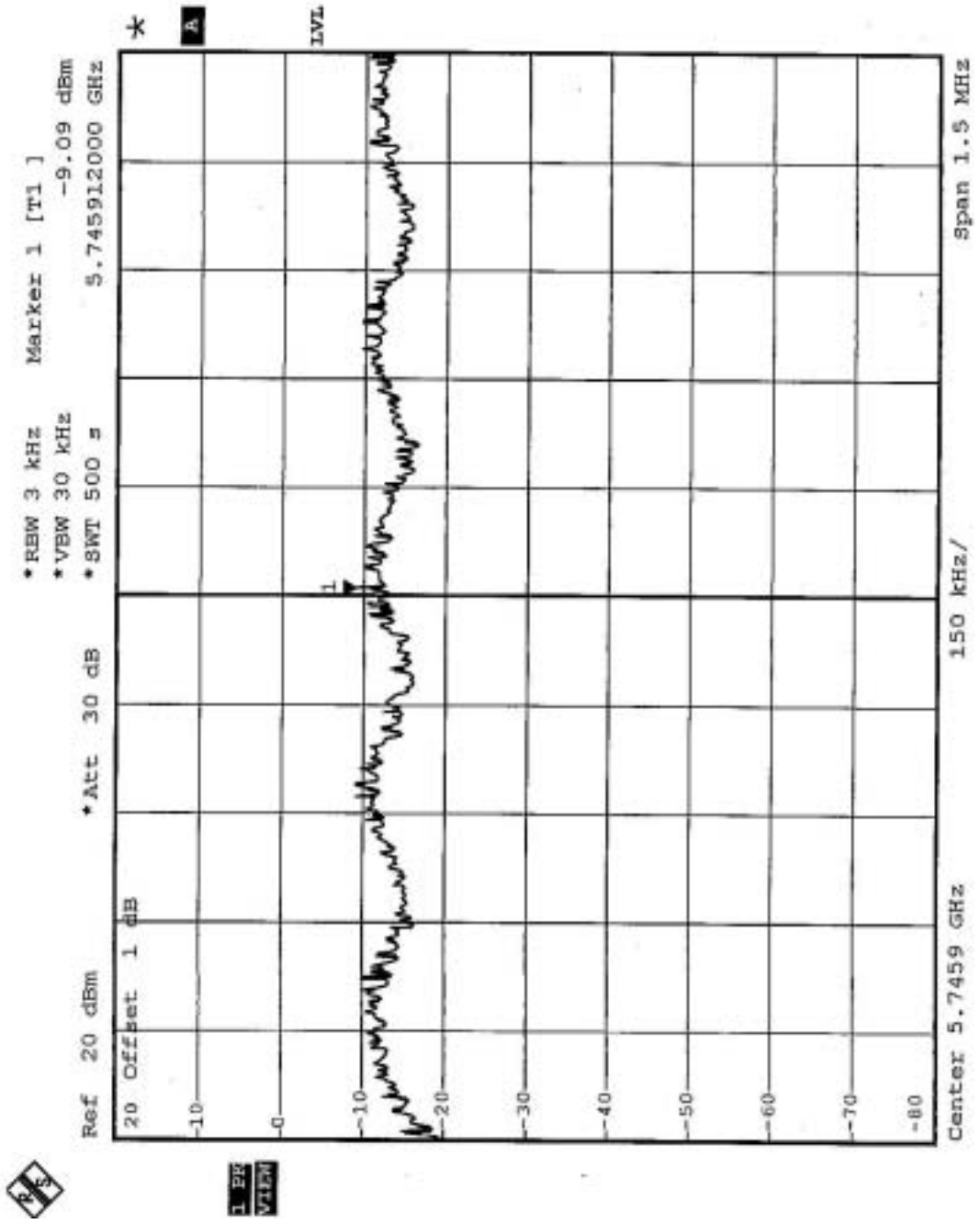
Same as Item 4.3.6

5.10.7 TEST RESULTS

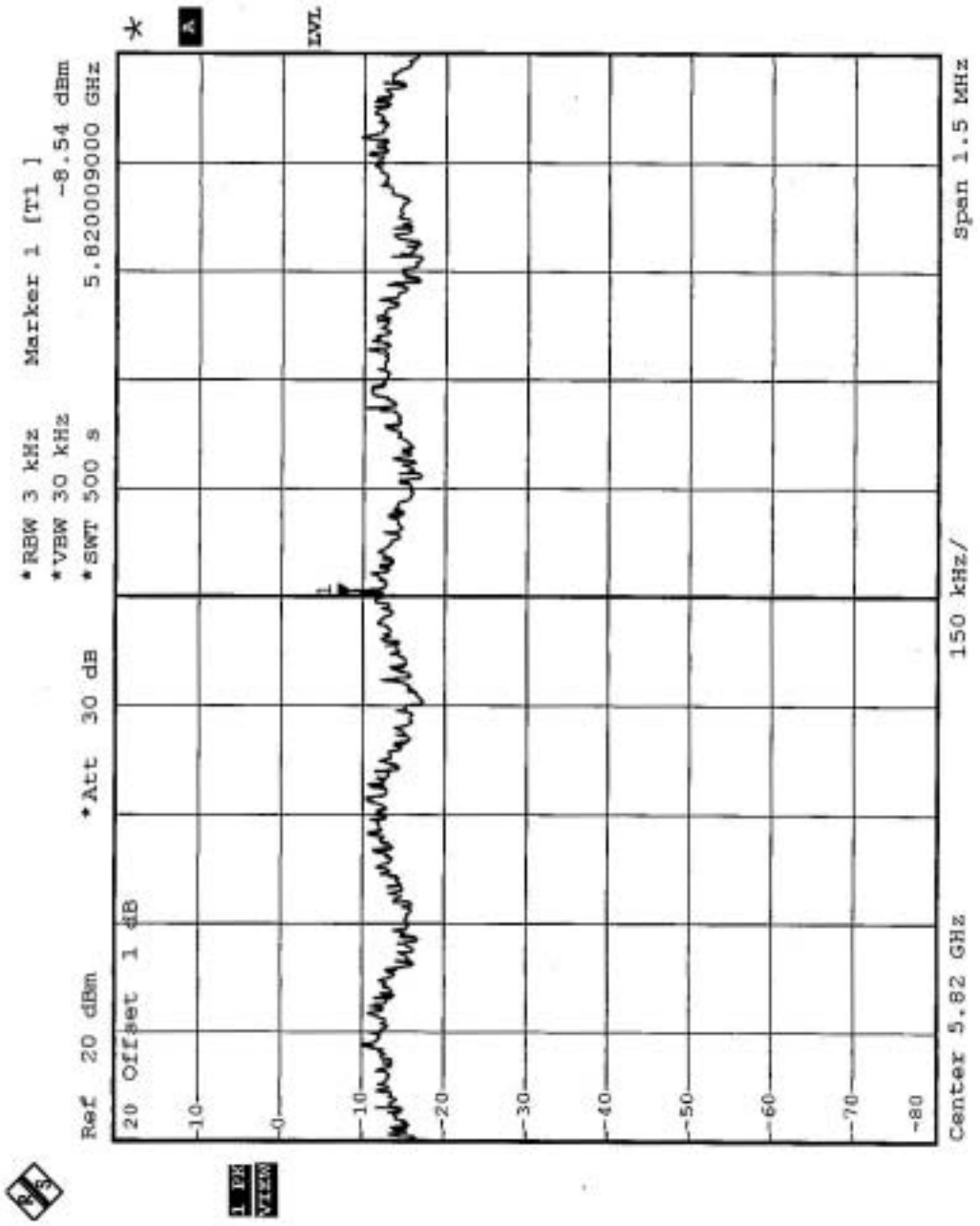
EUT	802.11a/b/g MiniPCI module	**MODEL**	T60H835
INPUT POWER (SYSTEM)	120Vac, 60Hz	**ENVIRONMENTAL CONDITIONS**	27eg. C, 59RH, 967 hPa
TEST MODE	Normal	**TEST BY**	Sky Liao

CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
9	5745	-9.09	8	PASS
13	5825	-8.54	8	PASS

CH9


Ref 20 dBm
20 Offset 1 dB
*Att 30 dB
*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-9.09 dBm
5.745912000 GHz
LVL
Center 5.7459 GHz
150 kHz/
Span 1.5 MHz

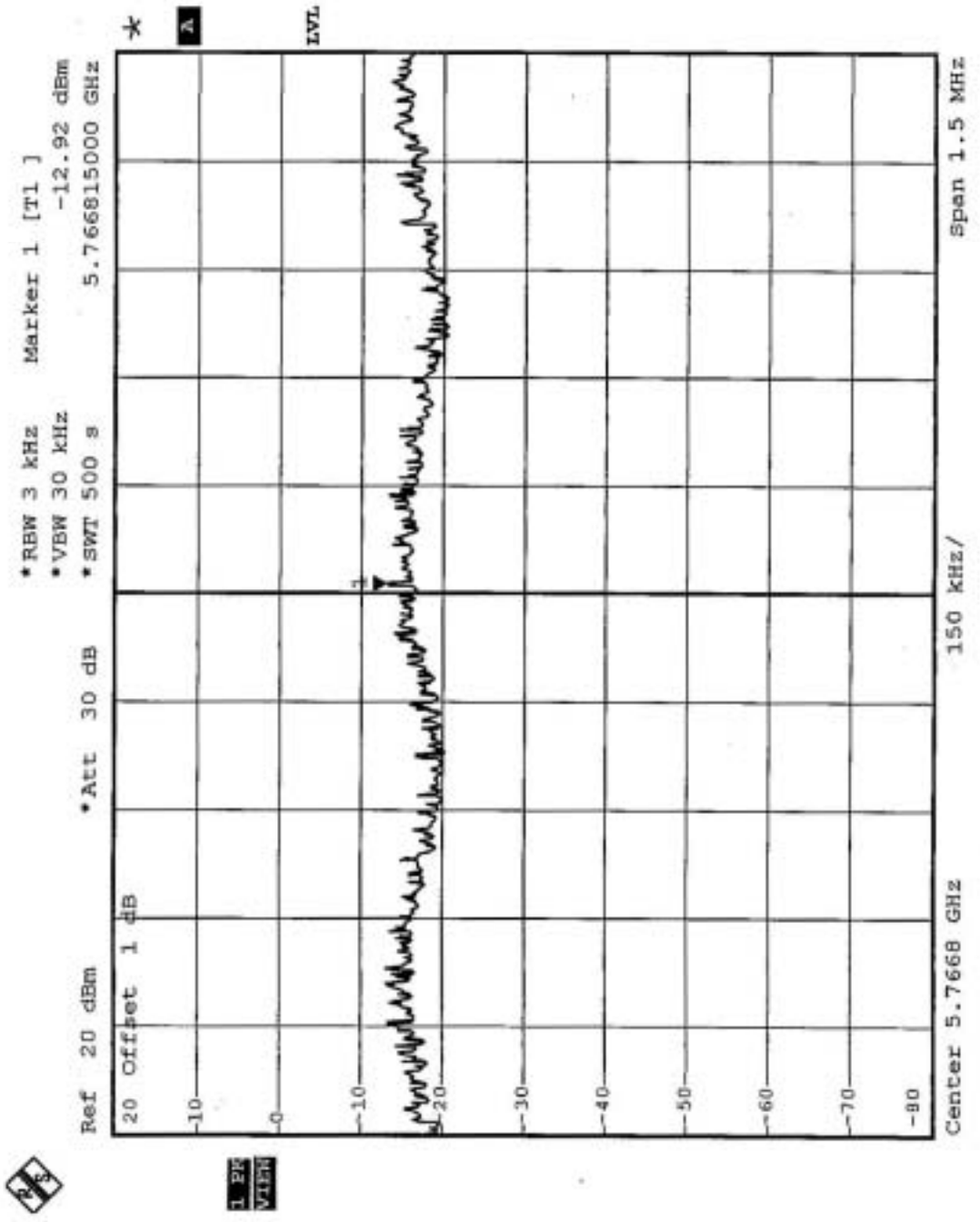
CH13


Ref 20 dBm
20 Offset 1 dB
*Att 30 dB
*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-8.54 dBm
5.820009000 GHz
Center 5.82 GHz
150 kHz/
Span 1.5 MHz
1 PK
MAXH

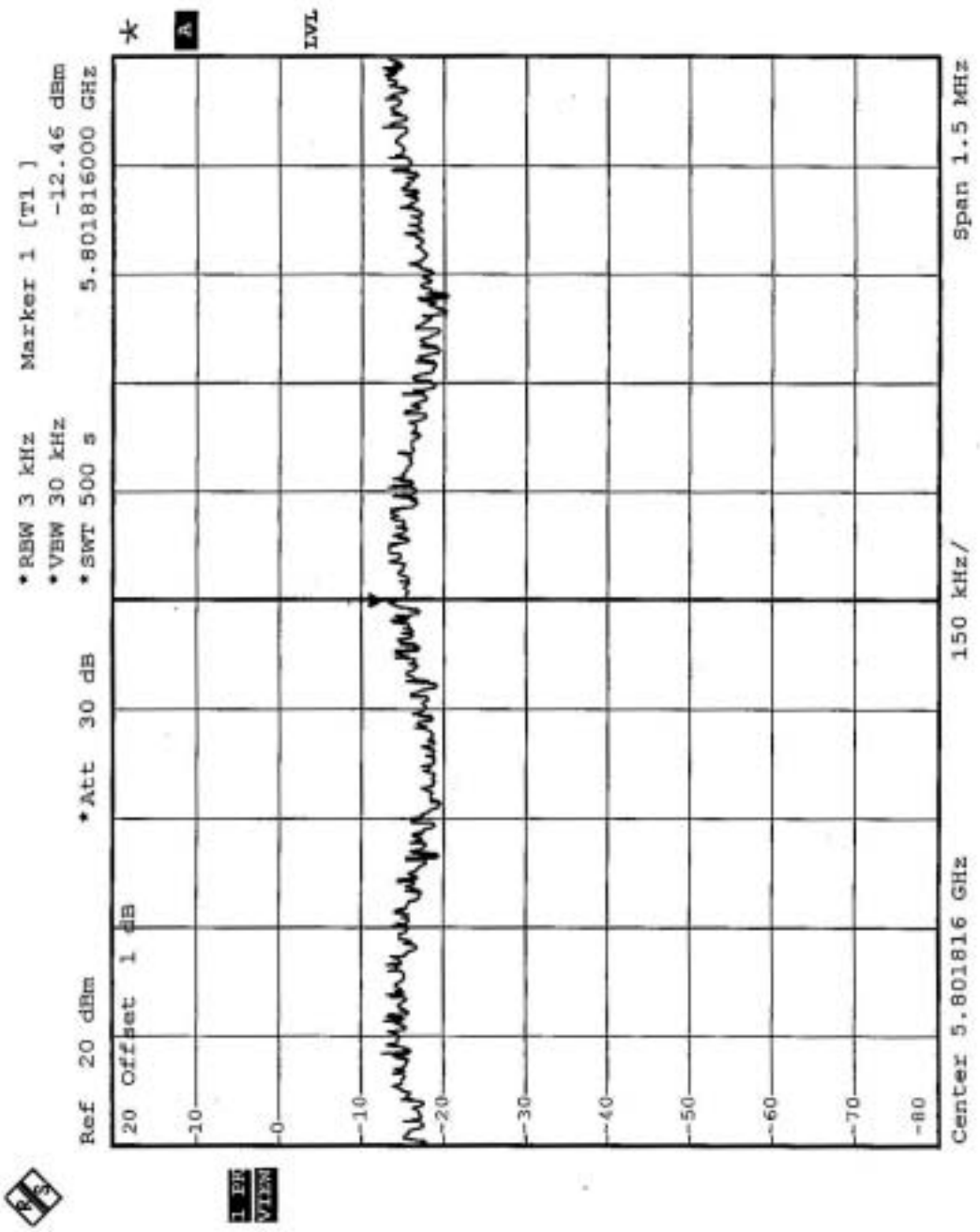
EUT	802.11a/b/g MiniPCI module	**MODEL**	T60H835
INPUT POWER (SYSTEM)	120Vac, 60Hz	**ENVIRONMENTAL CONDITIONS**	27eg. C, 59RH, 967 hPa
TEST MODE	Turbo	**TEST BY**	Sky Liao

CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
4	5760	-12.92	8	PASS
5	5800	-12.46	8	PASS

CH4


Ref 20 dBm
20 Offset 1 dB
*Att 30 dB
*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-12.92 dBm
5.766815000 GHz
Center 5.7668 GHz
150 kHz/
Span 1.5 MHz
LVL

CH5


Ref 20 dBm
20 Offset 1 dB
*Att 30 dB
*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-12.46 dBm
5.801816000 GHz
Center 5.801816 GHz
150 kHz/
Span 1.5 MHz
1 PK
VIEW
A
LVL

5.11 BAND EDGES MEASUREMENT

5.11.1 LIMITS OF BAND EDGES MEASUREMENT

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

5.11.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSP	1093.4495.30	Dec. 19, 2004

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.

5.11.3 TEST PROCEDURE

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

5.11.4 DEVIATION FROM TEST STANDARD

No deviation

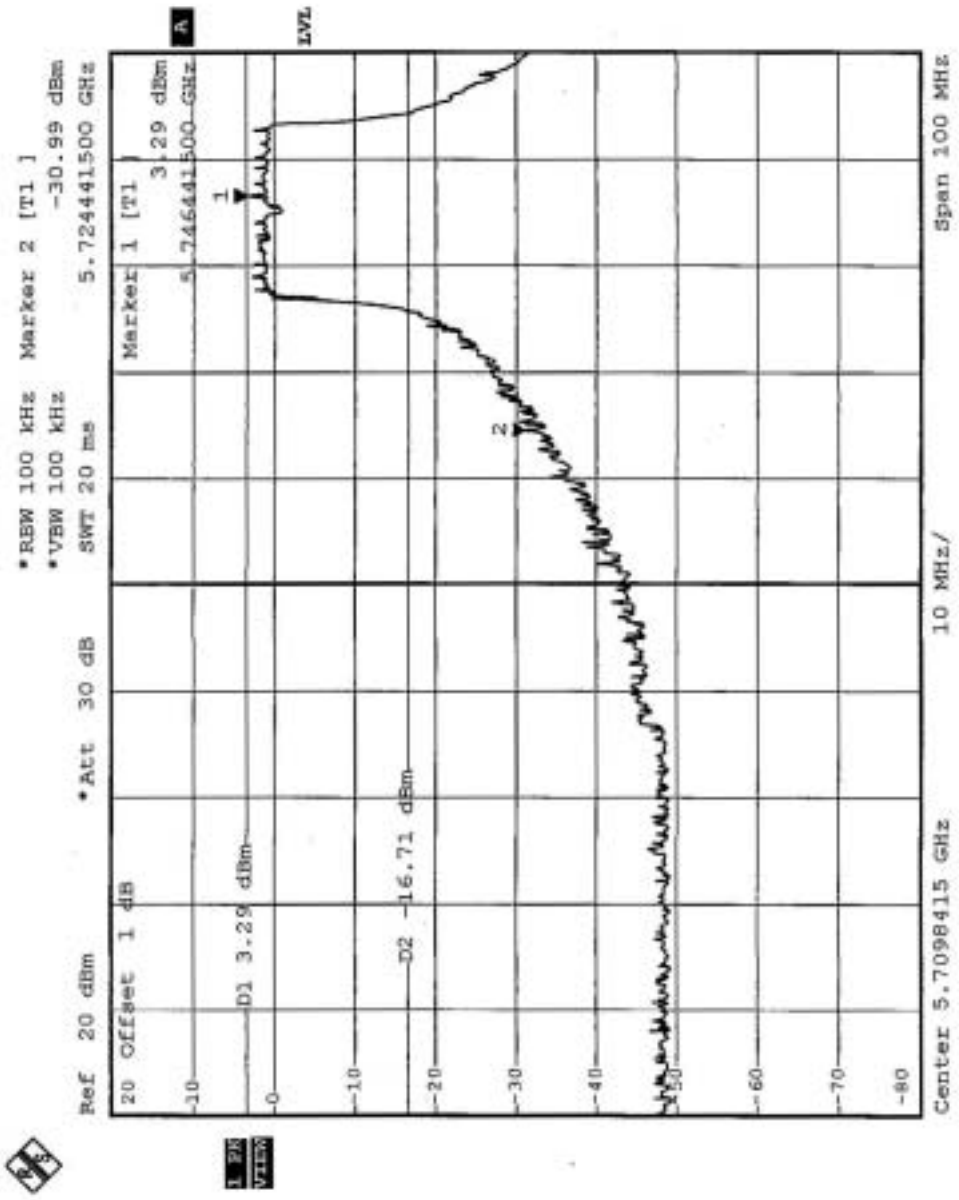
5.11.5 EUT OPERATING CONDITION

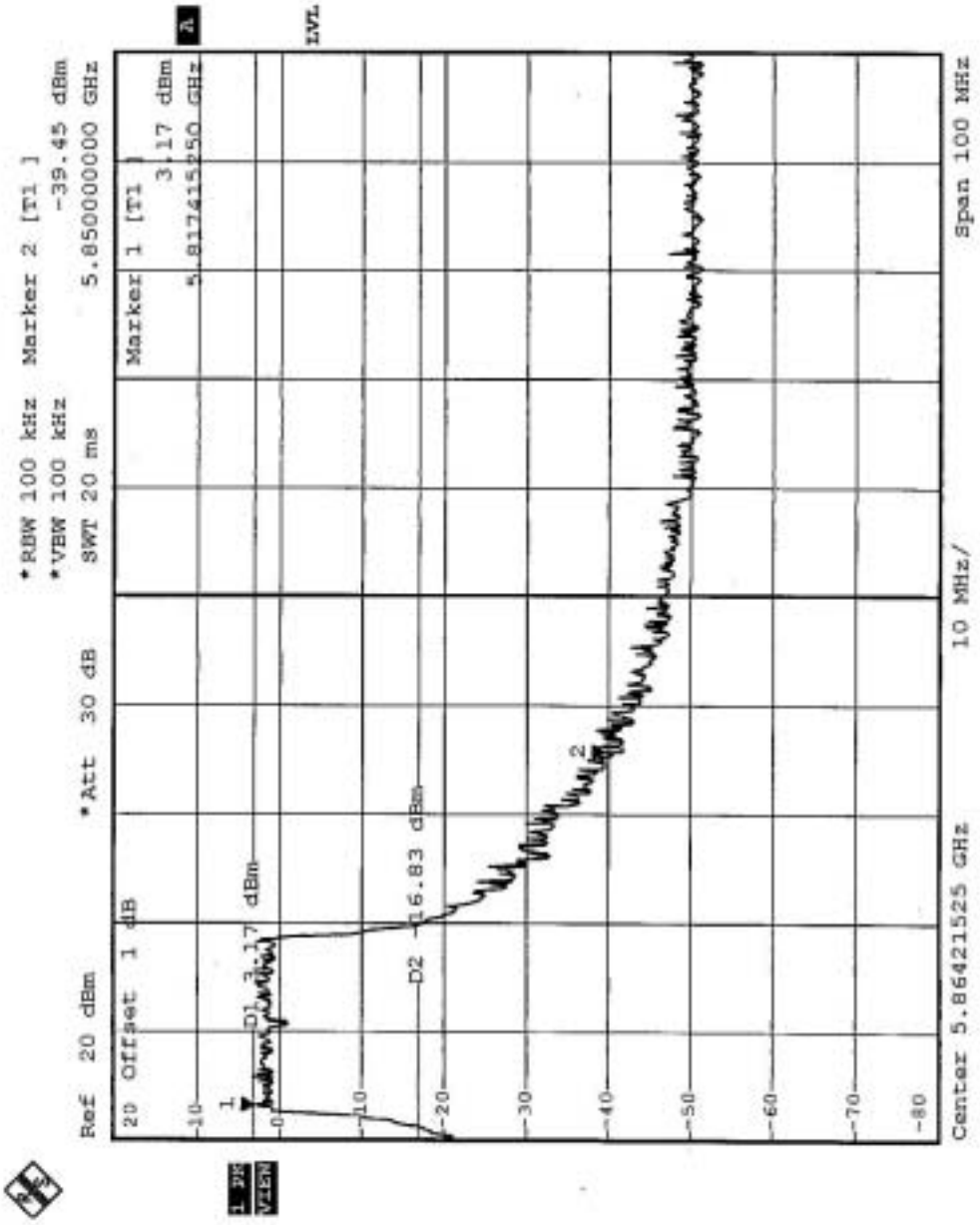
Same as Item 4.3.6

5.11.6 TEST RESULTS

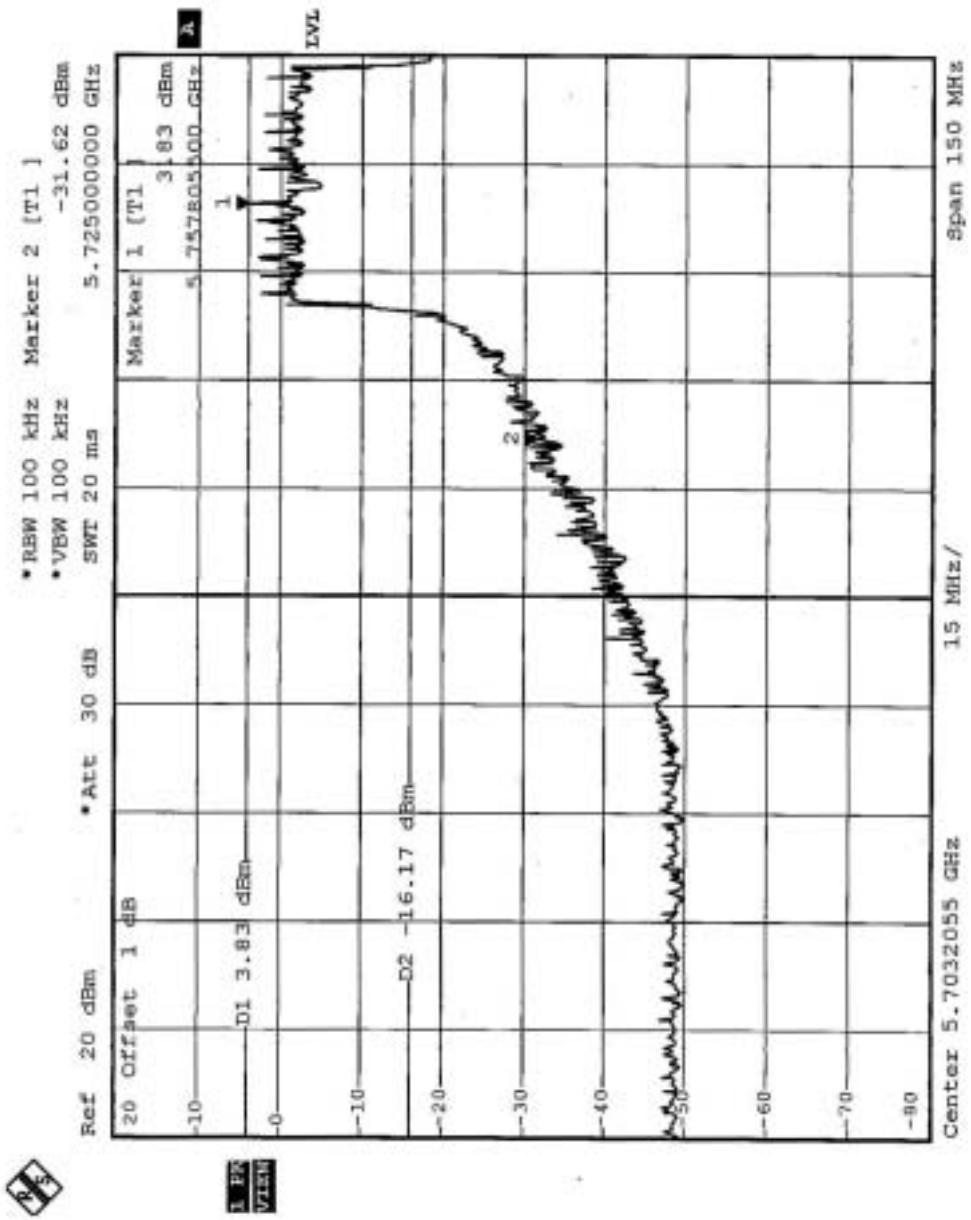
The spectrum plots are attached on the following pages. D1 line indicates the highest level, D2 line indicates the 20dB offset below D1. It shows compliance with the requirement in part 15.247(C).

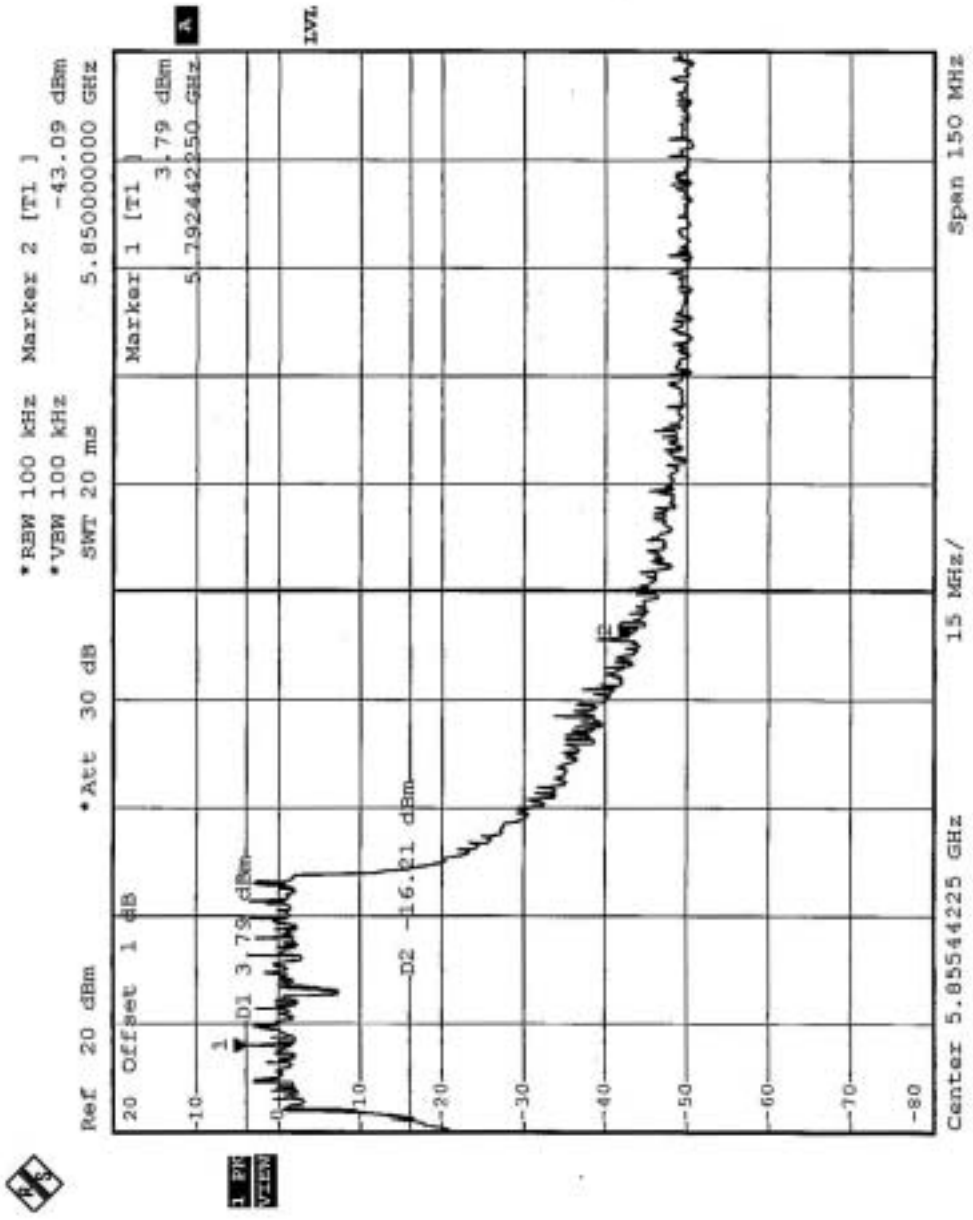
Normal Mode


Ref 20 dBm
20 Offset 1 dB
*Att 30 dB
*RBW 100 kHz
*VBW 100 kHz
SWT 20 ms
Marker 2 [T1]
-30.99 dBm
5.724441500 GHz
Marker 1 [T1]
3.29 dBm
5.746441500 GHz
D1 3.29 dBm
D2 -16.71 dBm
Center 5.7098415 GHz
10 MHz/
Span 100 MHz


RBW 100 kHz
VBW 100 kHz
SWT 20 ms
Att 30 dB
Offset 1 dB
Ref 20 dBm
Marker 2 [T1]
-39.45 dBm
5.850000000 GHz
Marker 1 [T1]
3.17 dBm
5.817415250 GHz
D1 3.17 dBm
D2 16.83 dBm
Center 5.86421525 GHz
10 MHz/
Span 100 MHz

Turbo Mode


RBW 100 kHz
VBW 100 kHz
SWT 20 ms
Marker 2 [T1]
-31.62 dBm
5.725000000 GHz
Marker 1 [T1]
3.83 dBm
5.757805500 GHz
Ref 20 dBm
Offset 1 dB
Att 30 dB
D1 3.83 dBm
D2 -16.17 dBm
Center 5.7032055 GHz
15 MHz/
Span 150 MHz


RBW 100 kHz
VBW 100 kHz
SWT 20 ms
Marker 2 [T1]
-43.09 dBm
5.85000000 GHz
Marker 1 [T1]
3.79 dBm
5.79244250 GHz
Ref 20 dBm
Offset 1 dB
Att 30 dB
D1 3.79 dBm
D2 -16.21 dBm
Center 5.85544225 GHz
15 MHz/
Span 150 MHz

5.12 ANTENNA REQUIREMENT

5.12.1 STANDARD APPLICABLE

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

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

5.12.2 ANTENNA CONNECTED CONSTRUCTION

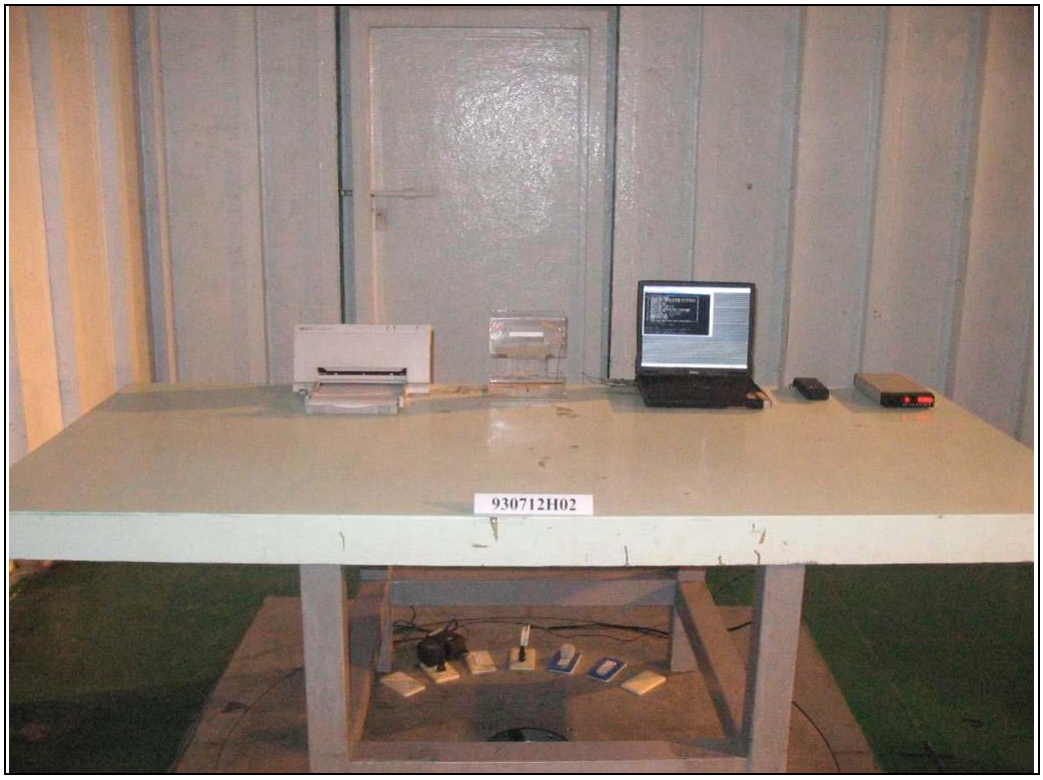
The antenna used in this product is PIFA Antenna with Hirose connector. The maximum Gain of the antenna is 0dBi.

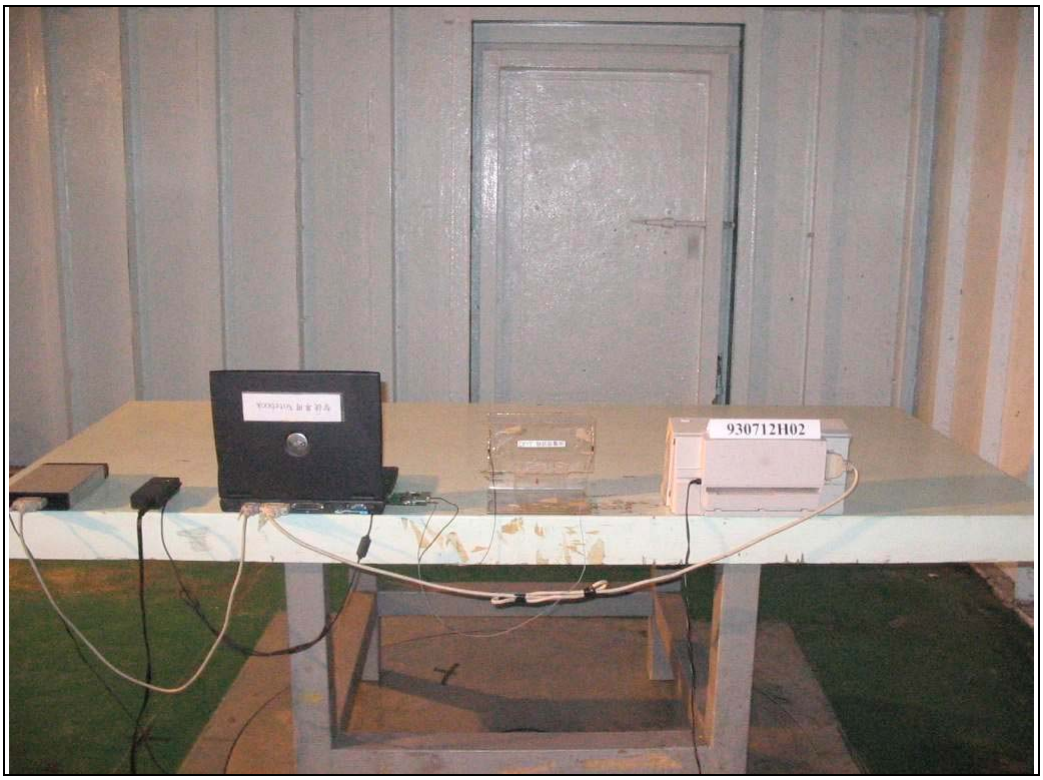
6. PHOTOGRAPHS OF THE TEST CONFIGURATION

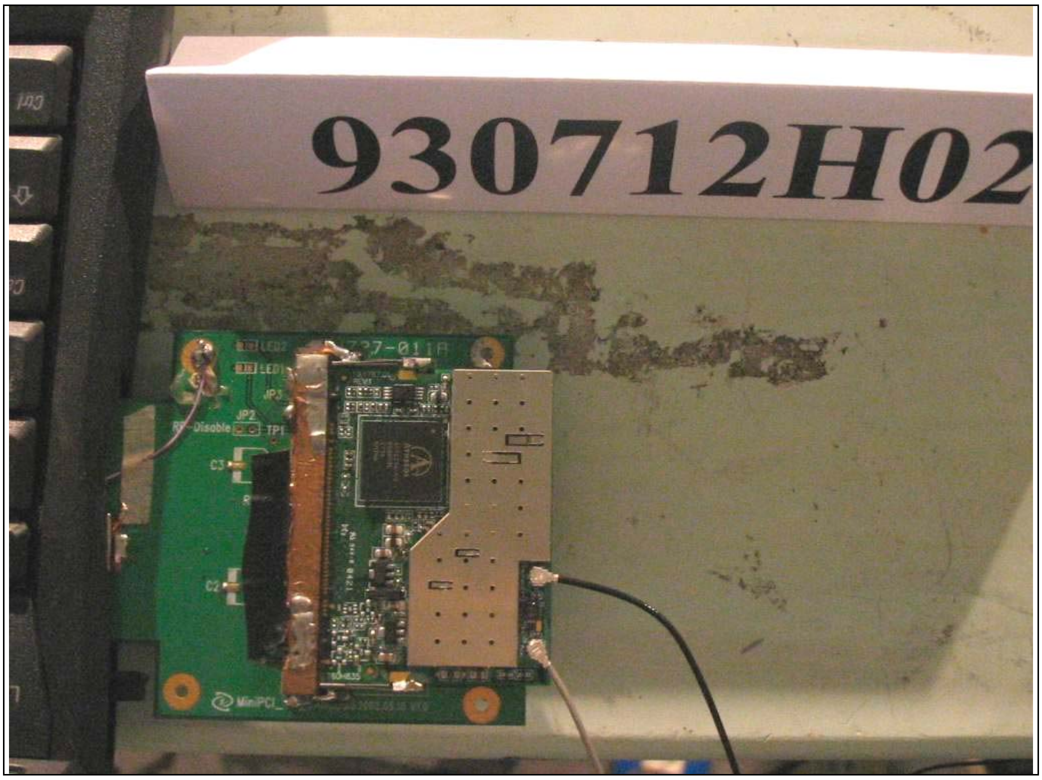
CONDUCTED EMISSION TEST


930712H02

RADIATED EMISSION TEST






930712H02

7. INFORMATION ON THE TESTING LABORATORIES

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

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

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

Linko EMC/RF Lab:
Tel: 886-2-26052180
Fax: 886-2-26052943

Hsin Chu EMC/RF Lab:
Tel: 886-3-5935343
Fax: 886-3-5935342

Hwa Ya EMC/RF/Safety/Telecom Lab:
Tel: 886-3-3183232
Fax: 886-3-3185050

Linko RF Lab.
Tel: 886-3-3270910
Fax: 886-3-3270892

Email: service@mail.adt.com.tw
Web Site: www.adt.com.tw

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