FCC TEST REPORT

REPORT NO.:	RF930701H02
MODEL NO.:	WSR-8001, MP-52, WSR-8002
RECEIVED:	Jul. 01, 2004
TESTED:	Sep. 03 to 16, 2004

APPLICANT:	SENAO INTERNATIONAL CO., LTD.
ADDRESS:	2F, NO. 531 CHUNG CHENG RD., HSIN-TIEN, TAIPEI, TAIWAN, R. O. C.

ISSUED BY:	Advance Data Technology Corporation
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1. CERTIFICATION

PRODUCT :	Wireless AP
BRAND NAME :	SENAO, Trapeze, Engenius
MODEL NO. :	WSR-8001, MP-52, WSR-8002
TESTED:	Sep. 03 to 16, 2004
APPLICANT :	SENAO INTERNATIONAL CO., LTD.
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: WSR-8001) have been tested by **Advance Data Technology Corporation**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

PREPARED BY : Amanda Chu , **DATE:** Sep. 21, 2004
(Amanda Chu)

TECHNICAL ACCEPTANCE : Hank Chung , **DATE:** Sep. 21, 2004
Responsible for RF
(Hank Chung)

APPROVED BY : , **DATE:** Sep. 21, 2004
(Eric Lin, Manager)

2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

for freq 2.4GHz

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 –9.74dBuV at 0.798MHz
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 –4.8dBuV at 2390.00MHz
15.247(d)	Power Spectral Density Limit: max. 8dBm	PASS	Meet the requirement of limit
15.247(c)	Band Edge Measurement Limit: 20 dB less than the peak value of fundamental frequency	PASS	Meet the requirement of limit

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 –9.55dBuV at 0.320MHz
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 –1.9dBuV at 10640.00MHz
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 –9.55dBuV at 0.320MHz
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 –1.5dBuV at 11600.00MHz
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	Wireless AP
MODEL NO.	WSR-8001, MP-52, WSR-8002
POWER SUPPLY	AC 12 V from AC adapter or DC 48 V from POE
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: 18.93dBm / draft 802.11g: 20.09dBm 802.11a: 18.22dBm
DATA CABLE	NA
ANTENNA TYPE	PCB Dipole Antenna
I/O PORTS	RJ 45 port x 1, Console port x 1
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 has three model names which are identical to each other in all aspects except for the followings:

Model Name	Brand	Difference
WSR-8001	SENAO	With POE
	Trapeze	With POE
MP-52	Engenius	With POE
WSR-8002	SENAO	With adapter

From the above models, model: WSR-8001 & WSR-8002 was selected as representative model for the test and its data was recorded in this report.

3. The EUT was powered either adapter or POE (Power Over Ethernet):

Adapter:	
Brand:	AMIGO
Model No.:	AM-121000
Input power :	120V, 60Hz, 20W
Output power :	12V, 1000 mA, DC cable: 1.8m/without core/nonshiled

POE:	
Brand:	PowerDsine
Model No.:	PowerDsine 6001
Input power :	100-240V, 50-60Hz, 0.34-0.17A, AC cable: 1.8m, without core
Output power :	48V
*The POE supplied power to EUT via POE port, only used on testing.	

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

5. 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. The EUT was pre-tested in chamber as the following test modes:

Test Mode	POWER
Mode A	**Wth Adapter**
Mode B	Wth POE

   The worst radiated emission was found in **Mode A**, the worst case one, was chosen for final test.
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	5745 MHz
3	5220 MHz	10	5765 MHz
4	5240 MHz	11	5785 MHz
5	5260 MHz	12	5805 MHz
6	5280 MHz	13	5825 MHz
7	5300 MHz		

Five Channels are provided to this EUT for Turbo Mode.

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

NOTE:

1..The EUT was tested in both normal mode (channel bandwidth of approximately 20MHz) and turbo mode (channel bandwidth of approximately 40MHz).

2. “Normal Mode” allows data rates of up to 54Mbps. The device was, therefore, tested in Normal mode at the data rate that produced the highest output power for normal mode (6Mbps).

3. “Turbo Mode” allows data rates of up to 108Mbps. At data rates higher than 12Mbps the PA gain is reduced to improve signal fidelity. The device was, therefore, tested in turbo mode at the data rate that produced the highest output power for turbo mode (12Mbps).

4. Channel 1, 4, 5, 8, 9 and 13 are the closest frequencies to the band edge, were chosen for final test of Normal Mode.

5. Channel 1~ 5 were chosen for final test of turbo mode.

3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a Wireless AP. 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.

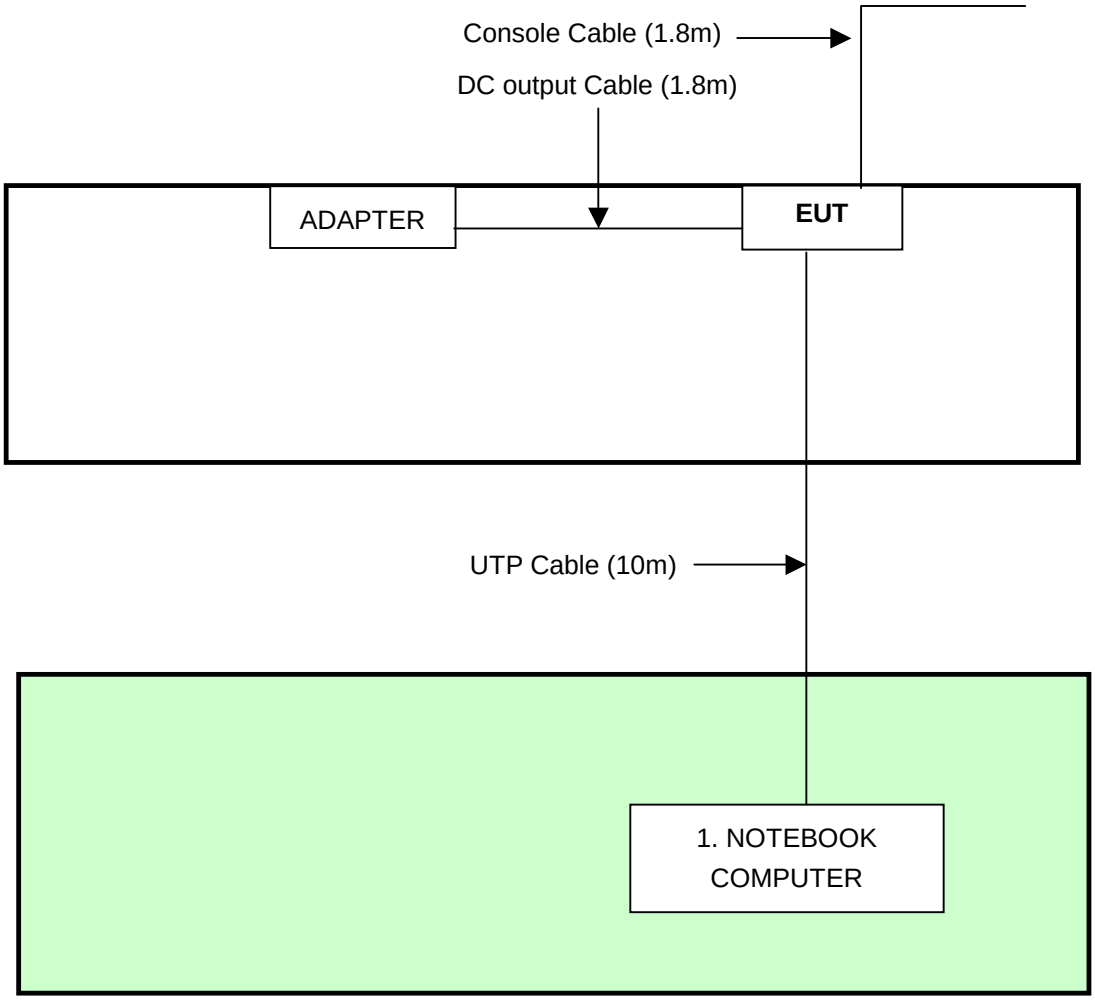
NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	Notebook Computer	DELL	PP01L	TW-09C748-12800 -1A3-1999	FCC DoC

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	NA

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

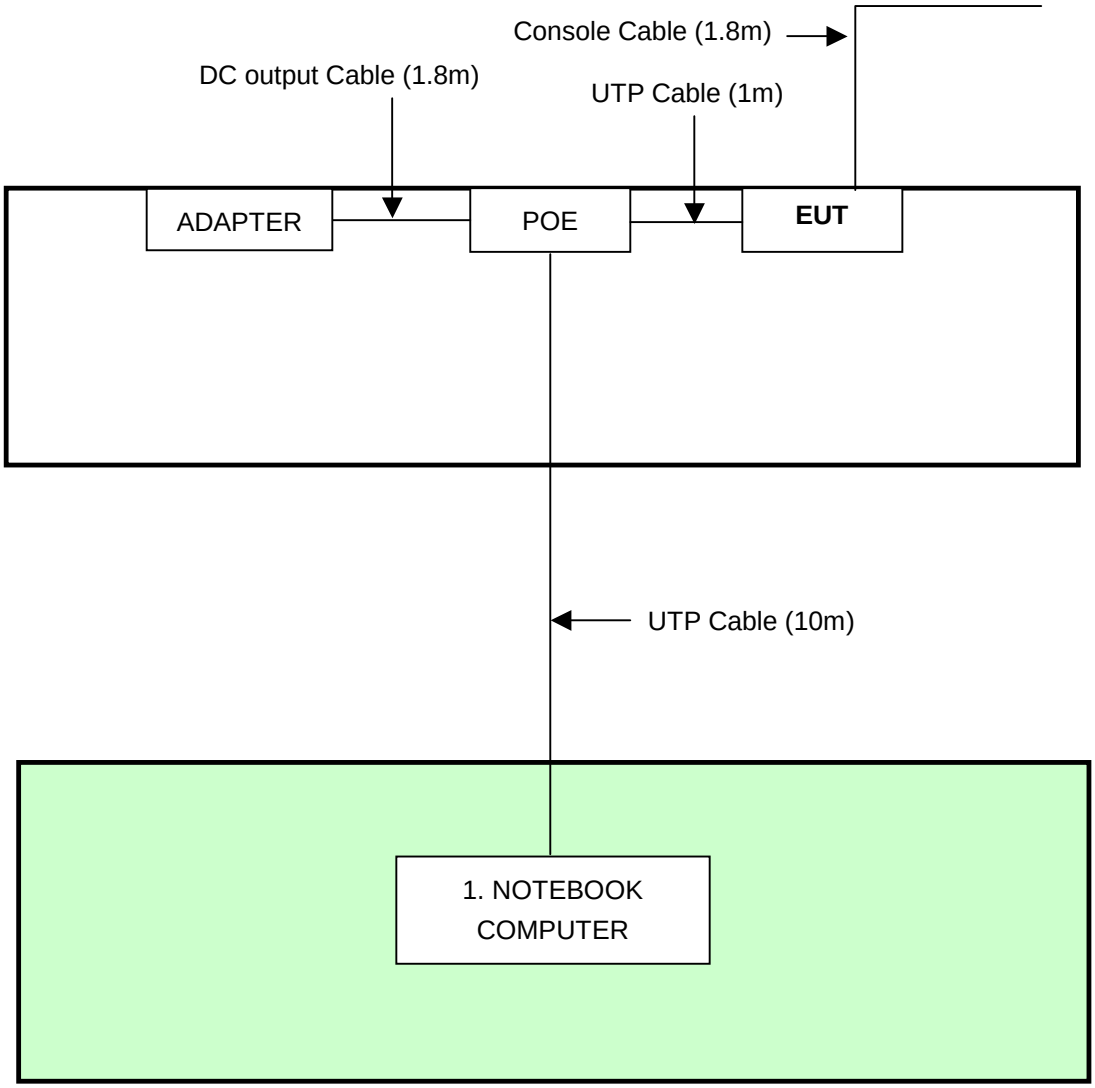
3.5 CONFIGURATION OF SYSTEM UNDER TEST

WITH ADAPTER:



NOTE: 1. Support unit 1 was kept in the control room during the test.
2. Please refer to the photos of test configuration in Item 5 also.

WITH POE:



NOTE: 1. Support unit 1 was kept in the control room during the test.

2. Please refer to the photos of test configuration in Item 5 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.

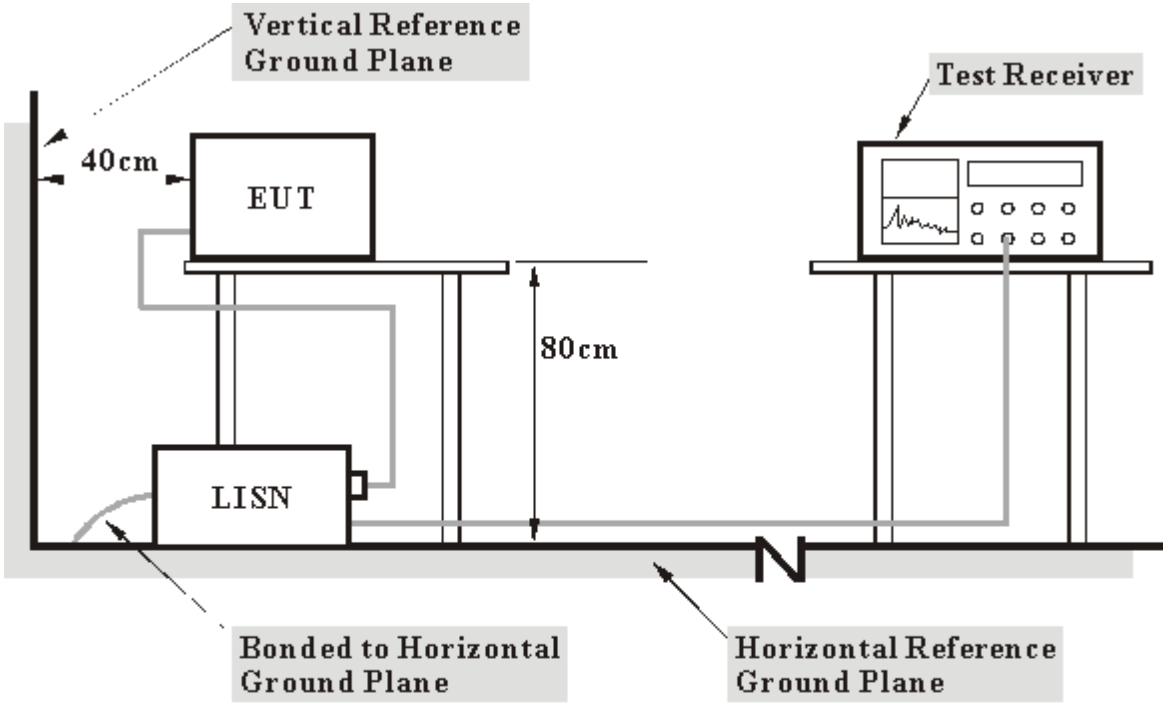
b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

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

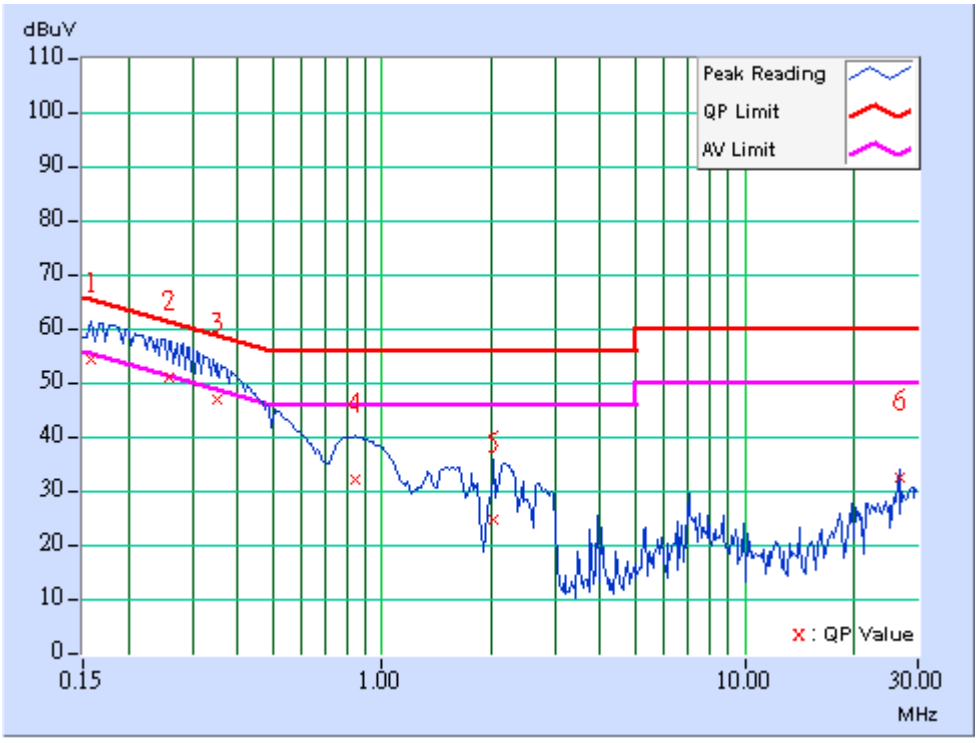
a. Placed the EUT on the testing table.
b. Prepared another computer system to act as a communication partner and placed it outside of testing area.
c. The communication partner run test program “ART-TP.exe” to enable EUT under transmission/receiving condition continuously at specific channel frequency via UTP cable and wireless.

4.1.7 TEST RESULTS -WITH ADAPTER

EUT	Wireless AP	**MODEL**	WSR-8002
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**	Tony Chen

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	0.158	0.22	53.18	-	53.40	-	65.58	55.58	-12.18	-
2	0.259	0.27	49.53	-	49.80	-	61.46	51.46	-11.66	-
3	0.349	0.23	45.70	-	45.93	-	58.98	48.98	-13.06	-
4	0.841	0.27	30.76	-	31.03	-	56.00	46.00	-24.97	-
5	2.029	0.30	23.52	-	23.82	-	56.00	46.00	-32.18	-
6	26.609	1.43	31.22	-	32.65	-	60.00	50.00	-27.35	-

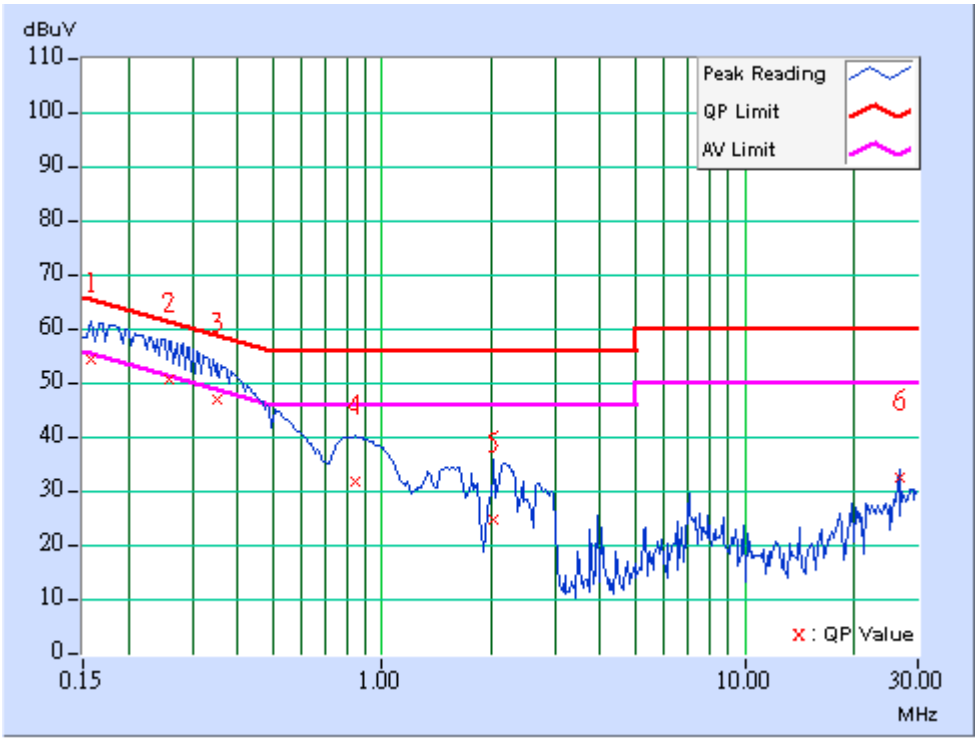
NOTES: (1) "*": Undetectable
(2) Q.P. and AV. are abbreviations of quasi-peak and average.
(3) "-": The Quasi-peak reading value also meets an average limit, thus measurement with the average detector is unnecessary.
(4) The emission levels of other frequencies were very low against the limit.
(5) Correction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



EUT	Wireless AP	**MODEL**	WSR-8002
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**	Tony Chen

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	0.158	0.22	53.18	-	53.40	-	65.58	55.58	-12.18	-
2	0.259	0.27	49.53	-	49.80	-	61.46	51.46	-11.66	-
3	0.349	0.23	45.70	-	45.93	-	58.98	48.98	-13.06	-
4	0.841	0.27	30.76	-	31.03	-	56.00	46.00	-24.97	-
5	2.029	0.30	23.52	-	23.82	-	56.00	46.00	-32.18	-
6	26.609	1.20	31.22	-	32.42	-	60.00	50.00	-27.58	-

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

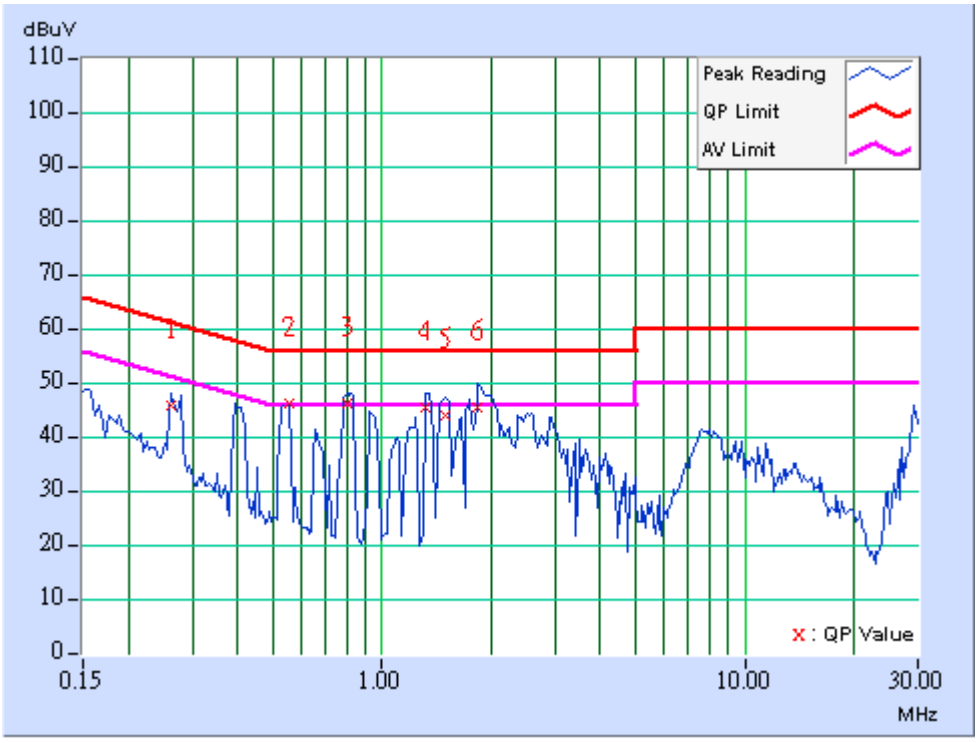


4.1.8 TEST RESULTS -WITH POE

EUT	Wireless AP	**MODEL**	WSR-8001
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**	Tony Chen

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	0.263	0.27	45.49	-	45.76	-	61.33	51.33	-15.57	-
2	0.552	0.23	45.88	32.94	46.11	33.17	56.00	46.00	-9.89	-12.83
3	**0.798**	**0.27**	**45.99**	**33.39**	**46.26**	**33.66**	**56.00**	**46.00**	**-9.74**	**-12.34**
4	1.314	0.30	45.43	-	45.73	-	56.00	46.00	-10.27	-
5	1.490	0.30	43.73	-	44.03	-	56.00	46.00	-11.97	-
6	1.838	0.30	45.28	-	45.58	-	56.00	46.00	-10.42	-

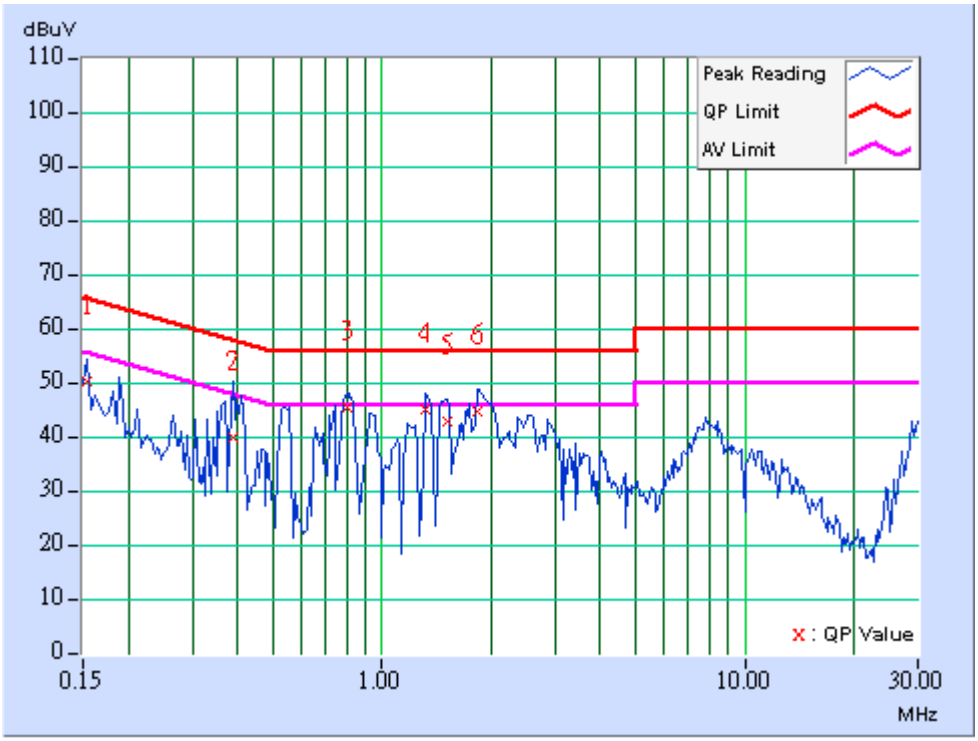
NOTES: (1) "*": Undetectable
(2) Q.P. and AV. are abbreviations of quasi-peak and average.
(3) "-": The Quasi-peak reading value also meets an average limit, thus measurement with the average detector is unnecessary.
(4) The emission levels of other frequencies were very low against the limit.
(5) Correction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



EUT	Wireless AP	**MODEL**	WSR-8001
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**	Tony Chen

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	0.154	0.21	50.11	-	50.32	-	65.79	55.79	-15.47	-
2	0.388	0.21	39.72	-	39.93	-	58.10	48.10	-18.17	-
3	0.798	0.27	45.33	-	45.60	-	56.00	46.00	-10.40	-
4	1.314	0.30	44.87	-	45.17	-	56.00	46.00	-10.83	-
5	1.517	0.30	42.74	-	43.04	-	56.00	46.00	-12.96	-
6	1.834	0.30	44.37	-	44.67	-	56.00	46.00	-11.33	-

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



4.2 RADIATED EMISSION MEASUREMENT

4.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

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

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

NOTE:

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

4.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
*HP Spectrum Analyzer	8594ER	3829U04676	Sep. 01, 2005
*ADVANTEST Spectrum Analyzer	R3271A	85060311	Jun. 16, 2005
*CHASE RF Pre_Amplifier	CPA9232	1057	May 10, 2005
*HP Pre_Amplifier	8449B	3008A01922	Oct. 13, 2004
*ROHDE & SCHWARZ Test Receiver	ESVS 10	849231 /019	Sep. 30, 2004
*CHASE Broadband Antenna	VULB9168	138	May 22, 2005
*Schwarzbeck Horn_Antenna	3115	5619	Jun. 16, 2005
*SCHWARZBECK 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. 09. 2005
*RF Cable(RICHTEC)	9913-30M	STCCAB-30M-1 GHz-021	Dec. 01, 2004
*Software	AS60P8	NA	NA
*CHANCE MOST Antenna Tower	AT-100	0203	NA
*CHANCE MOST Turn Table	TT-100	0203	NA

Note: 1. The calibration interval of the above test instruments is 12 months (36 months for Tunable Dipole Antenna)and the calibrations are traceable to NML/ROC and NIST/USA.
2. * = 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 10 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.

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

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

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

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

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

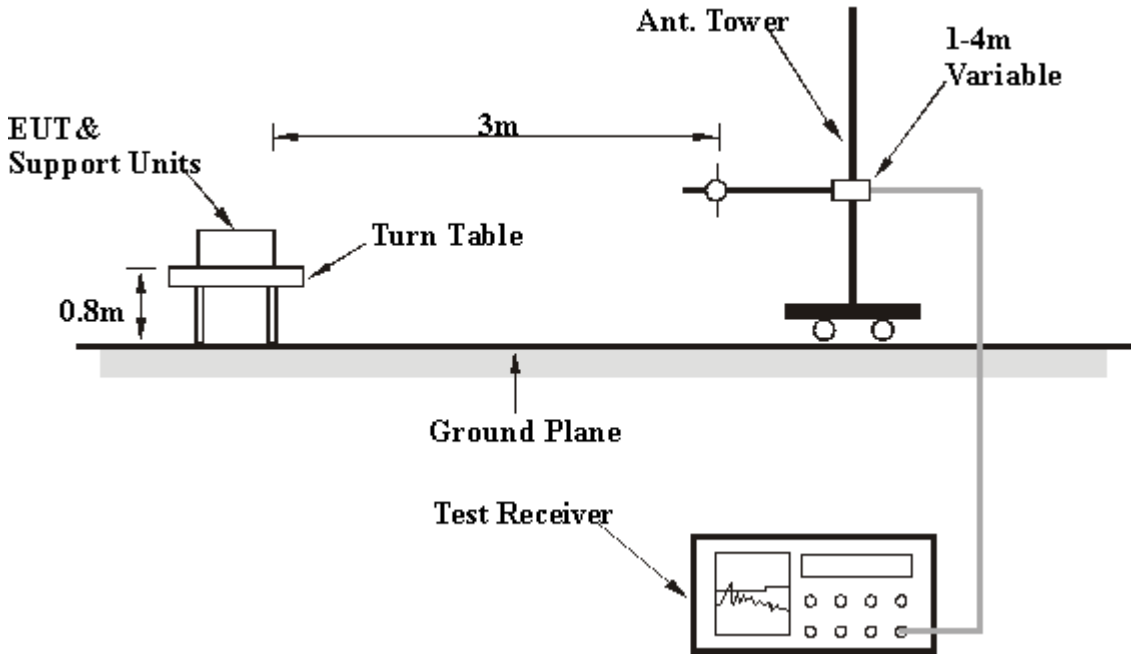
NOTE:

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	Wireless AP	**MODEL**	WSR-8002
MODE	Channel 11, With Adapter	**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	160.00	32.40 QP	43.50	-11.10	1.99 H	357	21.00	11.40
2	200.00	32.30 QP	43.50	-11.20	1.53 H	350	22.70	9.60
3	320.01	31.60 QP	46.00	-14.40	1.00 H	15	15.80	15.80
4	399.99	31.30 QP	46.00	-14.70	1.00 H	201	12.90	18.40
5	440.01	32.90 QP	46.00	-13.10	1.00 H	27	13.70	19.30
6	520.00	32.60 QP	46.00	-13.40	1.79 H	3	11.00	21.50
7	549.99	35.80 QP	46.00	-10.20	1.68 H	217	13.00	22.80
8	600.00	33.80 QP	46.00	-12.20	1.46 H	3	11.40	22.30
9	719.99	29.10 QP	46.00	-16.90	1.25 H	16	4.20	24.80
10	879.99	33.90 QP	46.00	-12.10	1.00 H	13	6.60	27.40

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	120.00	28.90 QP	43.50	-14.60	1.00 V	207	16.80	12.10
2	125.00	29.90 QP	43.50	-13.60	1.37 V	23	17.40	12.50
3	160.00	35.00 QP	43.50	-8.50	1.03 V	202	23.60	11.40
4	360.00	27.90 QP	46.00	-18.10	1.09 V	6	10.90	17.10
5	440.00	32.30 QP	46.00	-13.70	1.16 V	295	13.10	19.30
6	550.00	35.00 QP	46.00	-11.00	1.00 V	91	12.30	22.80
7	559.99	26.80 QP	46.00	-19.20	1.39 V	136	4.10	22.70
8	679.99	25.30 QP	46.00	-20.70	1.82 V	78	1.60	23.70
9	719.99	27.70 QP	46.00	-18.30	1.56 V	253	2.90	24.80
10	879.99	30.20 QP	46.00	-15.80	1.00 V	219	2.80	27.40

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

EUT	Wireless AP	**MODEL**	WSR-8001
MODE	Channel 11, With POE	**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	220.00	33.70 QP	46.00	-12.30	1.40 H	210	23.40	10.30
2	250.00	26.70 QP	46.00	-19.30	1.14 H	208	12.70	14.00
3	360.00	33.70 QP	46.00	-12.30	1.04 H	239	16.60	17.10
4	500.02	34.80 QP	46.00	-11.20	1.04 H	258	14.10	20.70
5	750.01	28.70 QP	46.00	-17.30	1.17 H	225	2.60	26.10
6	880.00	36.10 QP	46.00	-9.90	1.00 H	223	8.70	27.40

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	80.00	32.80 QP	40.00	-7.20	1.04 V	250	24.80	8.00
2	249.99	33.40 QP	46.00	-12.60	1.20 V	360	19.40	14.00
3	500.00	33.10 QP	46.00	-12.90	1.02 V	241	12.40	20.70
4	550.00	37.10 QP	46.00	-8.90	1.24 V	227	14.30	22.80
5	600.00	30.70 QP	46.00	-15.30	1.47 V	255	8.40	22.30
6	720.00	29.40 QP	46.00	-16.60	1.45 V	210	4.60	24.80
7	880.00	28.10 QP	46.00	-17.90	2.10 V	325	0.70	27.40

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

4.2.8 TEST RESULTS - DSSS

EUT	Wireless AP	**Model**	WSR-8002
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	2360.00	48.60 PK	74.00	-25.40	1.22 H	347	18.00	30.60
2	2390.00	43.60 PK	74.00	-30.40	1.20 H	333	9.80	33.80
3	*2412.00	100.10 PK			1.20 H	333	70.20	29.90
3	*2412.00	93.30 AV			1.20 H	333	63.40	29.90
4	2688.00	39.70 PK	74.00	-34.30	1.22 H	236	8.80	30.90
5	4824.00	46.00 PK	74.00	-28.00	1.62 H	343	9.80	36.20
6	7236.00	47.70 PK	74.00	-26.30	1.02 H	5	6.00	41.70
7	9648.00	50.50 PK	74.00	-23.50	1.01 H	284	5.60	44.90

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2360.00	54.60 PK	74.00	-19.40	1.19 V	34	24.00	30.60
1	2360.00	43.40 AV	54.00	-10.60	1.19 V	34	12.80	30.60
2	2390.00	52.40 PK	74.00	-21.60	1.00 V	88	18.60	33.80
2	2390.00	44.60 AV	54.00	-9.40	1.00 V	88	10.80	33.80
3	*2412.00	108.10 PK			1.00 V	88	78.20	29.90
3	*2412.00	101.50 AV			1.00 V	88	71.60	29.90
4	2688.00	45.40 PK	74.00	-28.60	1.20 V	12	14.50	30.90
5	4824.00	50.90 PK	74.00	-23.10	1.05 V	1	14.70	36.20
6	7236.00	48.10 PK	74.00	-25.90	1.08 V	4	6.40	41.70
7	9648.00	51.00 PK	74.00	-23.00	1.40 V	8	6.10	44.90
7	9648.00	39.80 AV	54.00	-14.20	1.40 V	8	-5.10	44.90

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

EUT	Wireless AP	**MODEL**	WSR-8002
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	100.80 PK			1.20 H	334	70.80	30.00
1	*2437.00	93.70 AV			1.20 H	334	63.70	30.00
2	2688.00	42.80 PK	74.00	-31.20	1.22 H	235	11.90	30.90
3	4874.00	46.90 PK	74.00	-27.10	1.27 H	329	10.40	36.50
4	7311.00	49.10 PK	74.00	-24.90	1.79 H	356	7.30	41.80
5	9748.00	51.30 PK	74.00	-22.70	1.43 H	117	6.70	44.60
5	9748.00	40.20 AV	54.00	-13.80	1.43 H	117	-4.40	44.60

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	108.60 PK			1.18 V	61	78.60	30.00
1	*2437.00	101.60 AV			1.18 V	61	71.60	30.00
2	2688.00	49.40 PK	74.00	-24.60	1.23 V	13	18.60	30.90
3	4874.00	52.40 PK	74.00	-21.60	1.74 V	8	15.90	36.50
3	4874.00	40.70 AV	54.00	-13.30	1.74 V	8	4.20	36.50
4	7311.00	50.20 PK	74.00	-23.80	1.64 V	40	8.40	41.80
5	9748.00	50.80 PK	74.00	-23.20	1.67 V	298	6.20	44.60

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

EUT	Wireless AP	**MODEL**	WSR-8002
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	100.70 PK			1.20 H	339	70.60	30.10
1	*2462.00	93.50 AV			1.20 H	339	63.40	30.10
2	2483.50	53.30 PK	74.00	-20.70	1.20 H	339	23.20	30.10
2	2483.50	37.00 AV	54.00	-17.00	1.20 H	339	6.90	30.10
3	2688.00	42.10 PK	74.00	-31.90	1.40 H	242	11.20	30.90
4	4924.00	45.70 PK	74.00	-28.30	1.41 H	11	9.00	36.70
5	7386.00	49.00 PK	74.00	-25.00	1.21 H	0	7.20	41.80
6	9848.00	50.40 PK	74.00	-23.60	1.16 H	0	6.00	44.40

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	110.50 PK			1.13 V	309	80.40	30.10
1	*2462.00	104.00 AV			1.13 V	309	73.90	30.10
2	2483.50	54.30 PK	74.00	-19.70	1.13 V	309	24.20	30.10
2	2483.50	47.50 AV	54.00	-6.50	1.13 V	309	17.40	30.10
3	2688.00	49.20 PK	74.00	-24.80	1.23 V	10	18.30	30.90
4	4924.00	52.40 PK	74.00	-21.60	1.79 V	357	15.70	36.70
4	4924.00	40.80 AV	54.00	-13.20	1.79 V	357	4.10	36.70
5	7386.00	49.10 PK	74.00	-24.90	1.40 V	23	7.30	41.80
6	9848.00	51.00 PK	74.00	-23.00	1.61 V	9	6.60	44.40
6	9848.00	40.80 AV	54.00	-13.20	1.61 V	9	-3.60	44.40

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

4.2.9 TEST RESULTS - OFDM

EUT	Wireless AP	**MODEL**	WSR-8002
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	2360.00	48.00 PK	74.00	-26.00	1.21 H	347	17.40	30.60
2	2390.00	49.30 PK	74.00	-24.70	1.24 H	73	15.50	33.80
3	*2412.00	97.50 PK			1.24 H	73	67.60	29.90
3	*2412.00	88.20 AV			1.24 H	73	58.30	29.90
4	2688.00	37.80 PK	74.00	-36.20	1.38 H	127	7.00	30.90
5	4824.00	43.40 PK	74.00	-30.60	1.70 H	357	7.20	36.20
6	7236.00	48.10 PK	74.00	-25.90	1.42 H	18	6.40	41.70
7	9648.00	51.90 PK	74.00	-22.10	1.43 H	23	7.00	44.90
7	9648.00	39.30 AV	54.00	-14.70	1.43 H	23	-5.60	44.90

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2360.00	54.30 PK	74.00	-19.70	1.21 V	43	23.70	30.60
1	2360.00	43.40 AV	54.00	-10.60	1.21 V	43	12.80	30.60
2	2390.00	57.90 PK	74.00	-16.10	1.24 V	88	24.10	33.80
2	**2390.00**	**49.20 AV**	**54.00**	**-4.80**	**1.24 V**	**88**	**15.40**	**33.80**
3	*2412.00	106.10 PK			1.24 V	88	76.20	29.90
3	*2412.00	97.40 AV			1.24 V	88	67.50	29.90
4	2688.00	42.20 PK	74.00	-31.80	1.21 V	293	11.40	30.90
5	4824.00	45.20 PK	74.00	-28.80	1.61 V	5	9.00	36.20
6	7236.00	48.70 PK	74.00	-25.30	1.53 V	43	7.00	41.70
7	9648.00	51.10 PK	74.00	-22.90	1.25 V	16	6.20	44.90
7	9648.00	39.50 AV	54.00	-14.50	1.25 V	16	-5.40	44.90

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

EUT	Wireless AP	**MODEL**	WSR-8002
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	99.30 PK			1.23 H	173	69.30	30.00
1	*2437.00	90.60 AV			1.23 H	173	60.60	30.00
2	2688.00	39.00 PK	74.00	-35.00	1.14 H	126	8.10	30.90
3	4874.00	51.40 PK	74.00	-22.60	1.24 H	30	14.90	36.50
3	4874.00	37.90 AV	54.00	-16.10	1.24 H	30	1.40	36.50
4	7311.00	49.20 PK	74.00	-24.80	1.43 H	348	7.40	41.80
5	9748.00	50.60 PK	74.00	-23.40	1.33 H	81	6.00	44.60

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	107.80 PK			1.22 V	89	77.80	30.00
1	*2437.00	99.30 AV			1.22 V	89	69.30	30.00
2	2688.00	45.60 PK	74.00	-28.40	1.31 V	298	14.70	30.90
3	4874.00	55.50 PK	74.00	-18.50	1.05 V	232	19.00	36.50
3	4874.00	42.40 AV	54.00	-11.60	1.05 V	232	5.90	36.50
4	7311.00	49.90 PK	74.00	-24.10	1.46 V	6	8.10	41.80
5	9748.00	51.30 PK	74.00	-22.70	1.18 V	337	6.70	44.60
5	9748.00	39.60 AV	54.00	-14.40	1.18 V	337	-5.00	44.60

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

EUT	Wireless AP	**MODEL**	WSR-8002
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	99.70 PK			1.25 H	71	69.60	30.10
1	*2462.00	91.60 AV			1.25 H	71	61.50	30.10
2	2483.50	47.50 PK	74.00	-26.50	1.25 H	71	17.40	30.10
3	2688.00	41.90 PK	74.00	-32.10	1.59 H	245	11.00	30.90
4	4924.00	43.20 PK	74.00	-30.80	1.59 H	355	6.50	36.70
5	7386.00	48.10 PK	74.00	-25.90	1.48 H	354	6.30	41.80
6	9848.00	51.20 PK	74.00	-22.80	1.59 H	356	6.80	44.40
6	9848.00	39.60 AV	54.00	-14.40	1.59 H	356	-4.80	44.40

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	109.00 PK			1.27 V	110	78.90	30.10
1	*2462.00	100.80 AV			1.27 V	110	70.70	30.10
2	2483.50	56.80 PK	74.00	-17.20	1.27 V	110	26.70	30.10
2	2483.50	48.50 AV	54.00	-5.50	1.27 V	110	18.40	30.10
3	2688.00	50.50 PK	74.00	-23.50	1.23 V	13	19.60	30.90
4	4924.00	45.30 PK	74.00	-28.70	1.68 V	12	8.60	36.70
5	7386.00	48.90 PK	74.00	-25.10	1.17 V	31	7.10	41.80
6	9848.00	50.80 PK	74.00	-23.20	1.51 V	16	6.40	44.40

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

EUT	Wireless AP	**MODEL**	WSR-8002
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	97.00 PK			1.23 H	173	67.00	30.00
1	*2437.00	88.90 AV			1.23 H	173	58.90	30.00
2	2688.00	38.70 PK	74.00	-35.30	1.23 H	233	7.80	30.90
3	4874.00	43.60 PK	74.00	-30.40	1.70 H	140	7.10	36.50
4	7311.00	48.30 PK	74.00	-25.70	1.36 H	19	6.50	41.80
5	9748.00	51.30 PK	74.00	-22.70	1.55 H	25	6.70	44.60
5	9748.00	40.10 AV	54.00	-13.90	1.55 H	25	-4.50	44.60

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	105.60 PK			1.24 V	95	75.60	30.00
1	*2437.00	97.20 AV			1.24 V	95	67.20	30.00
2	2688.00	45.10 PK	74.00	-28.90	1.19 V	170	14.20	30.90
3	4874.00	45.50 PK	74.00	-28.50	1.84 V	7	9.00	36.50
4	7311.00	48.50 PK	74.00	-25.50	1.74 V	23	6.70	41.80
5	9748.00	50.80 PK	74.00	-23.20	1.59 V	43	6.20	44.60

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

4.3 6dB BANDWIDTH MEASUREMENT

4.3.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

4.3.2 TEST INSTRUMENTS

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

Note:

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

4.3.3 TEST PROCEDURE

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

4.3.4 DEVIATION FROM TEST STANDARD

No deviation

4.3.5 TEST SETUP

4.3.6 EUT OPERATING CONDITIONS

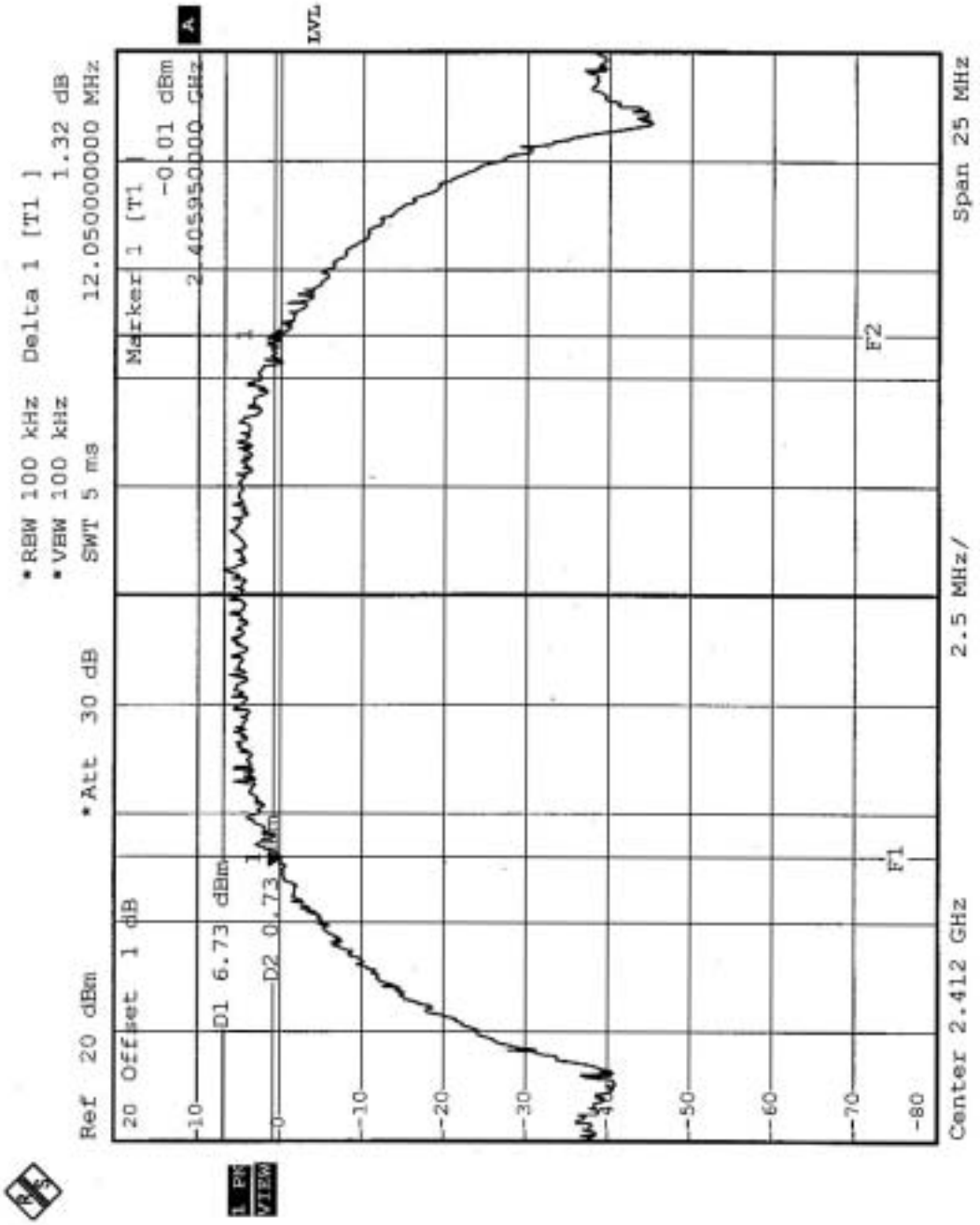
The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.3.7 TEST RESULTS -DSSS

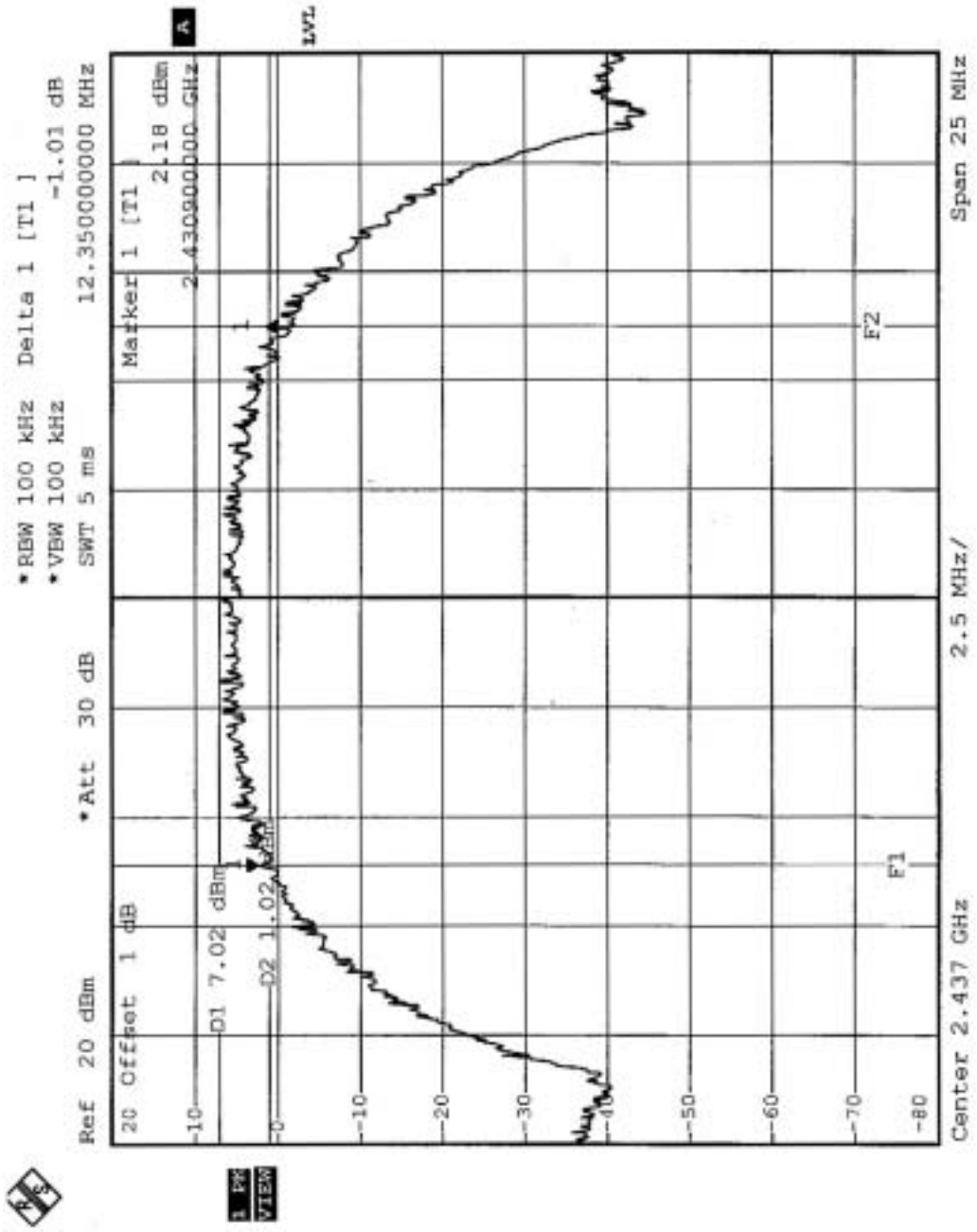
EUT	Wireless AP		
MODEL	WSR-8002	**ENVIRONMENTAL CONDITIONS**	27deg. C, 59%RH, 967 hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	**TESTED BY**	Tony Chen

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	12.05	0.5	PASS
6	2437	12.35	0.5	PASS
11	2462	11.50	0.5	PASS

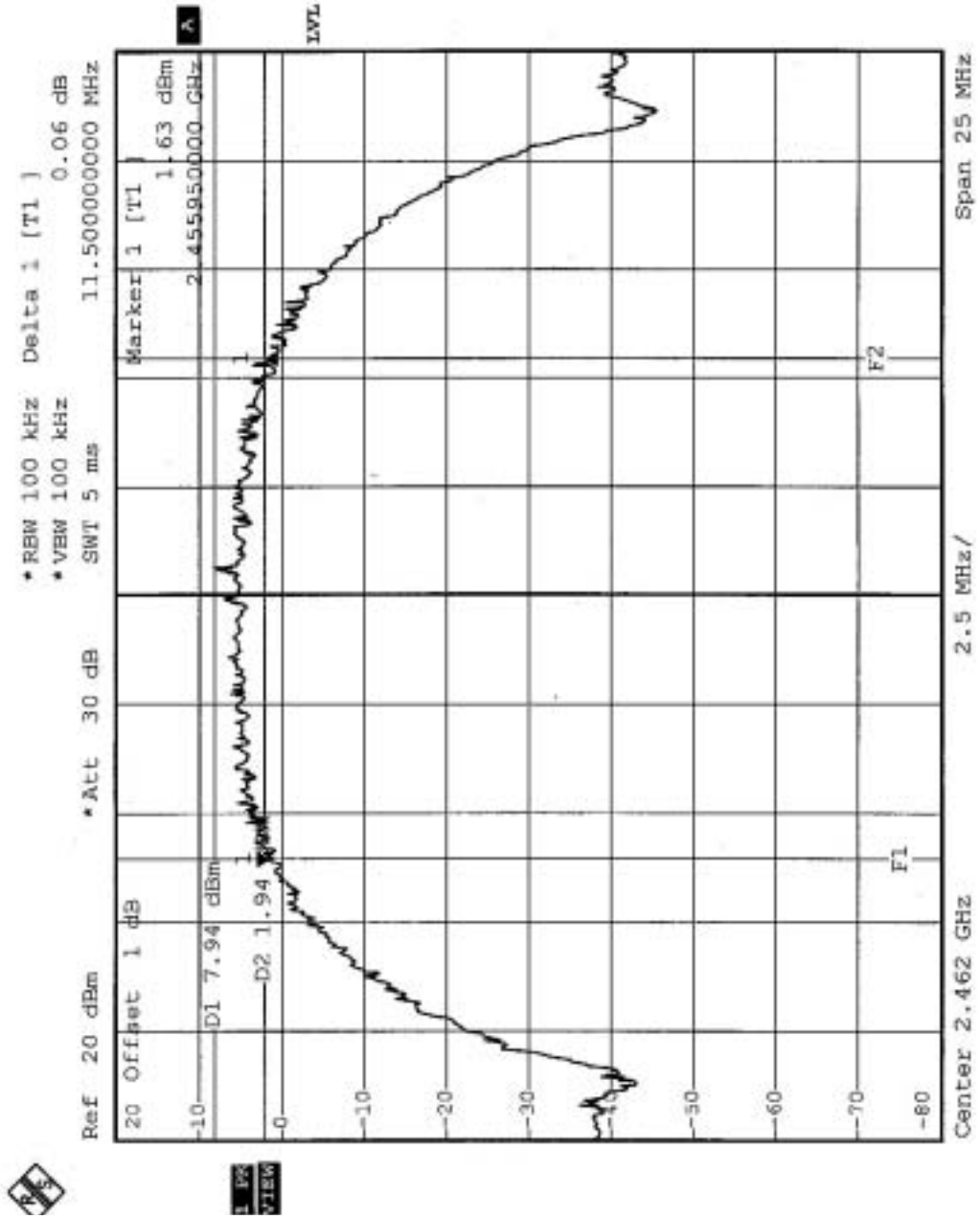
CH1


RBW 100 kHz
VBW 100 kHz
SWT 5 ms
Att 30 dB
Offset 1 dB
Ref 20 dBm
Delta 1 [T1]
1.32 dB
12.05000000 MHz
Marker 1 [T1]
-0.01 dBm
2.40595000 GHz
D1 6.73 dBm
D2 0.73 dBm
F1
F2
Center 2.412 GHz
2.5 MHz/
Span 25 MHz

CH6


RBW 100 kHz
VBW 100 kHz
SWT 5 ms
Att 30 dB
Ref 20 dBm
Offset 1 dB
Delta 1 [T1]
-1.01 dB
12.350000000 MHz
Marker 1 [T1]
2.18 dBm
2.430900000 GHz
D1 7.02 dBm
D2 1.02 dBm
F1
F2
Center 2.437 GHz
2.5 MHz/
Span 25 MHz
LVL
VIEW

CH11

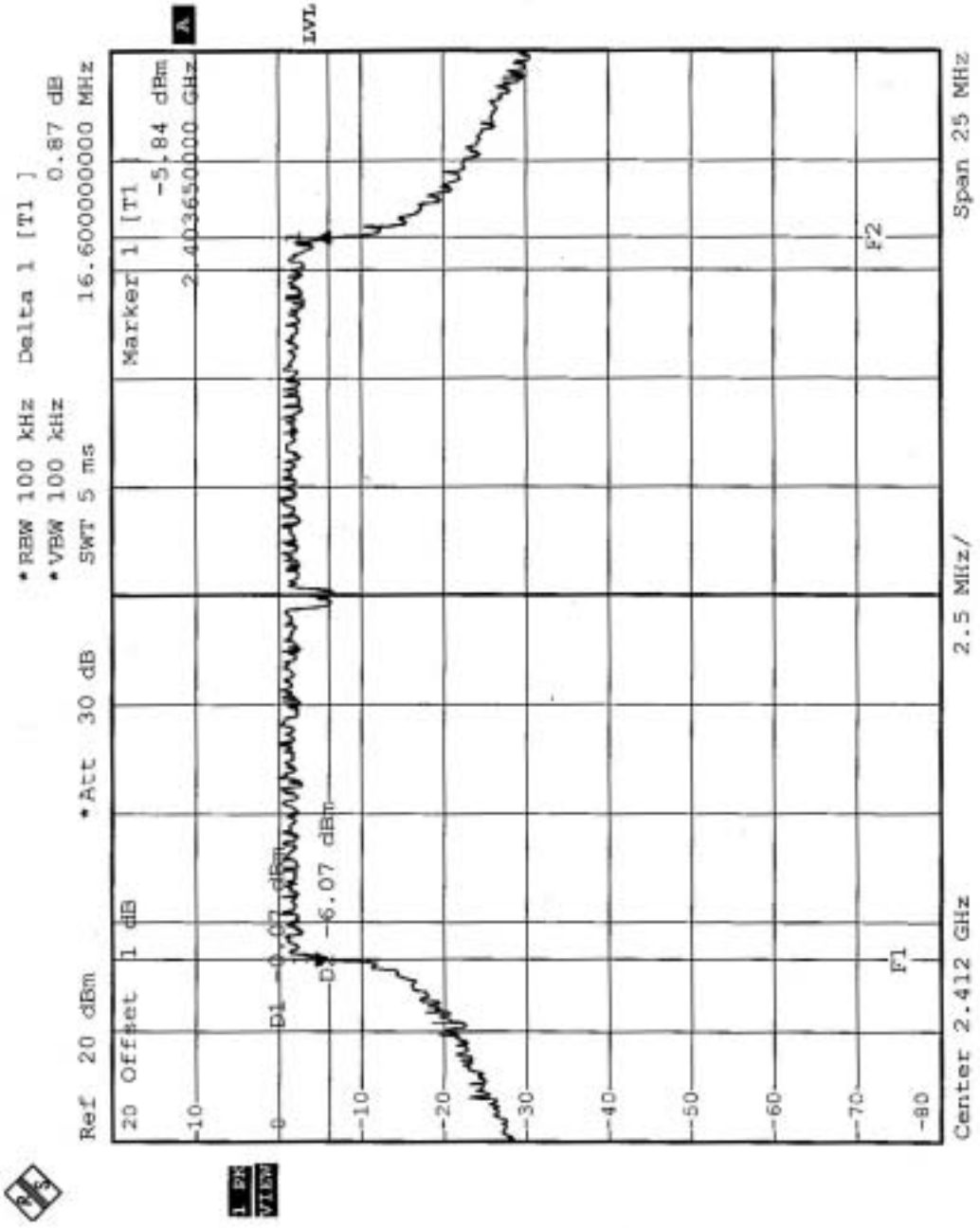

Ref 20 dBm
20 Offset 1 dB
*Att 30 dB
*RBW 100 kHz
*VBW 100 kHz
SWT 5 ms
Delta 1 [T1]
0.06 dB
11.500000000 MHz
Marker 1 [T1]
1.63 dBm
2.455950000 GHz
D1 7.94 dBm
D2 1.94
F1
F2
Center 2.462 GHz
2.5 MHz/
Span 25 MHz

4.3.8 TEST RESULTS -OFDM

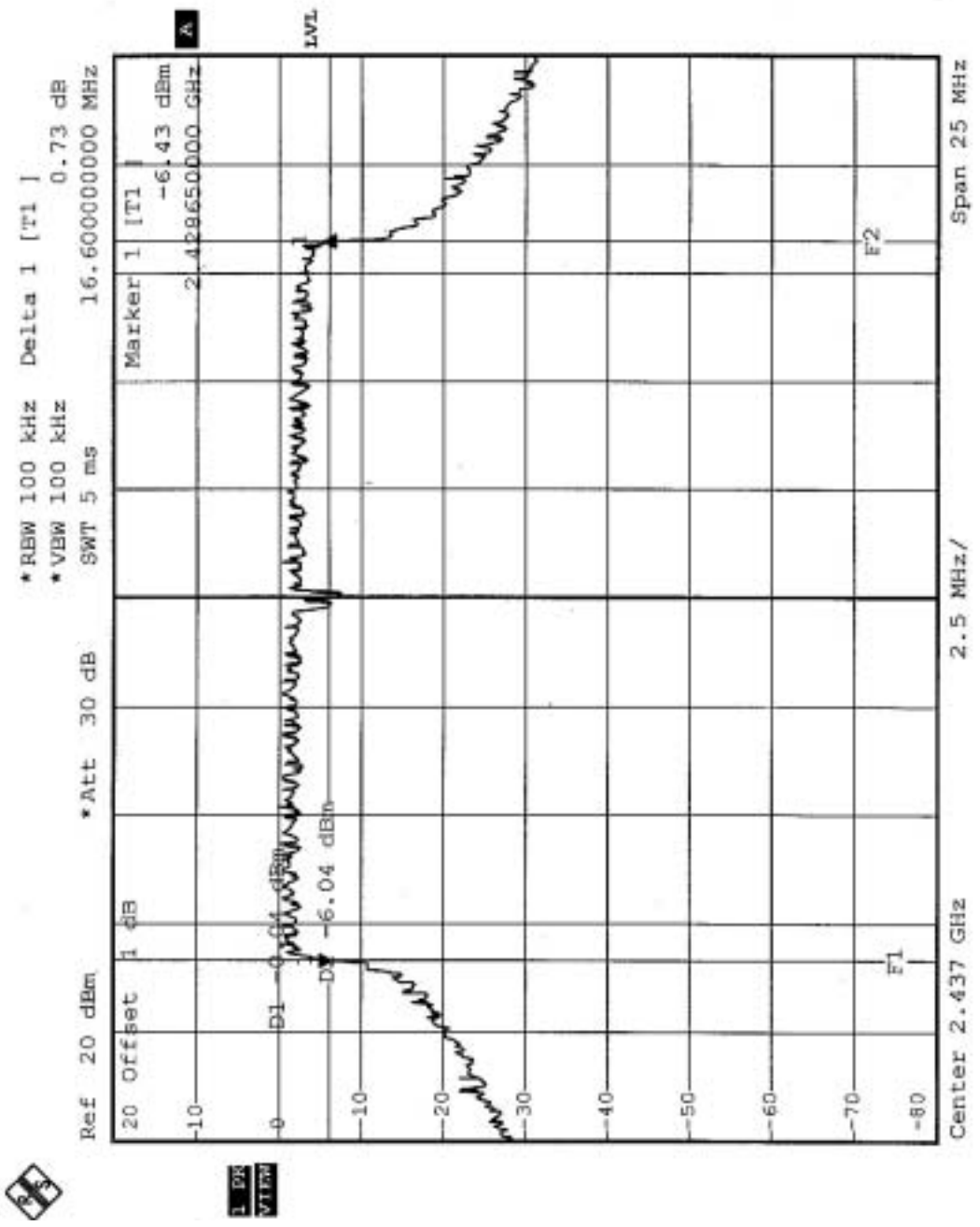
EUT	Wireless AP		
MODEL	WSR-8002	**ENVIRONMENTAL CONDITIONS**	27deg. C, 59%RH, 967 hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	**TESTED BY**	Tony Chen

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	16.6	0.5	PASS
6	2437	16.6	0.5	PASS
11	2462	16.6	0.5	PASS
Turbo 6	2437	33	0.5	PASS

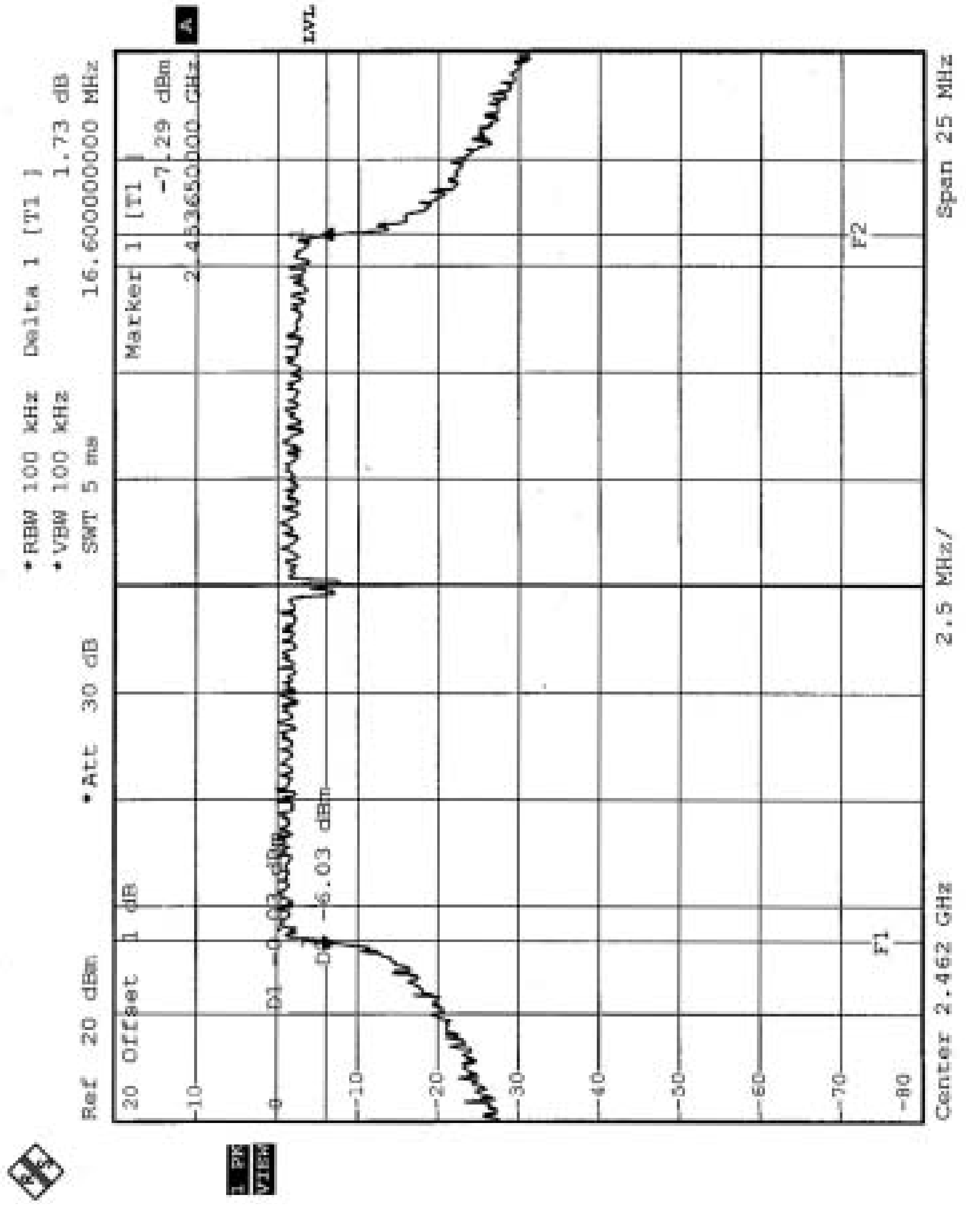
CH1


Ref 20 dBm
20 Offset
1 dB
• Att 30 dB
• RBW 100 kHz
• VBW 100 kHz
SWT 5 ms
Delta 1 [T1]
0.87 dB
16.600000000 MHz
Marker 1 [T1
-5.84 dBm
2.403650000 GHz
D1 -0.87 dBm
D2 -6.07 dBm
F1
F2
Center 2.412 GHz
2.5 MHz/
Span 25 MHz

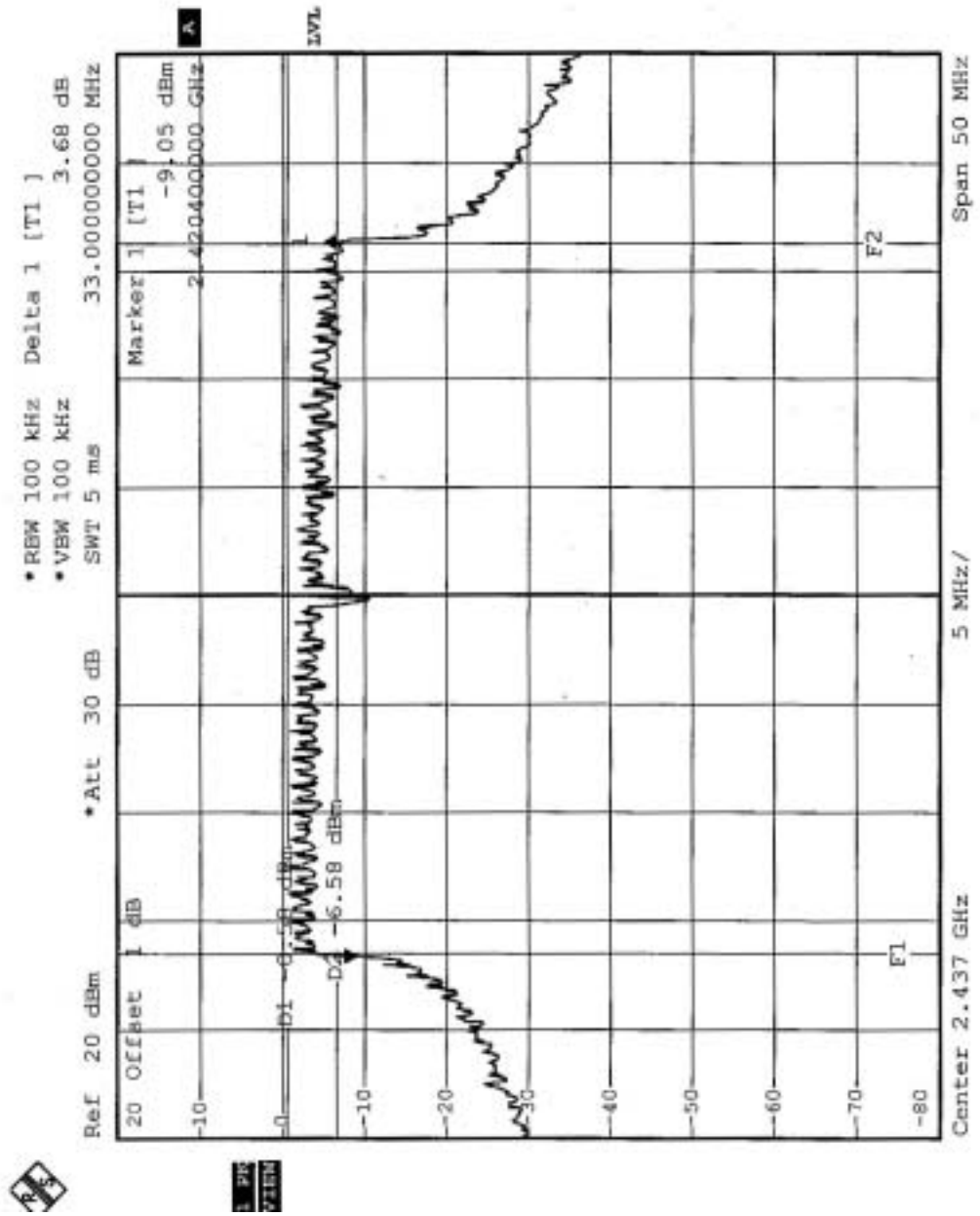
CH6


RBW 100 kHz
VBW 100 kHz
SWT 5 ms
Att 30 dB
Ref 20 dBm
Offset 1 dB
Delta 1 [T1] 0.73 dB
16.600000000 MHz
Marker 1 [T1] -6.43 dBm
2.428650000 GHz
-6.04 dBm
Center 2.437 GHz
2.5 MHz/
Span 25 MHz
LVL
D1
D2
F1
F2

CH11


Ref 20 dBm
*Att 30 dB
*RBW 100 kHz
*VBW 100 kHz
SWT 5 ms
Delta 1 [T1]
1.73 dB
16.60000000 MHz
Marker 1 [T1]
-7.29 dBm
20 Offset 1 dB
D1 -6.03 dBm
F1
F2
LVL
Center 2.462 GHz
2.5 MHz/
Span 25 MHz

Turbo CH6


RBW 100 kHz
VBW 100 kHz
SWT 5 ms
Att 30 dB
Offset 1 dB
Ref 20 dBm
Delta 1 [T1] 3.68 dB
33.000000000 MHz
Marker 1 [T1]
-9.05 dBm
2.420400000 GHz
-6.58 dBm
Center 2.437 GHz
5 MHz/
Span 50 MHz
F1
F2

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

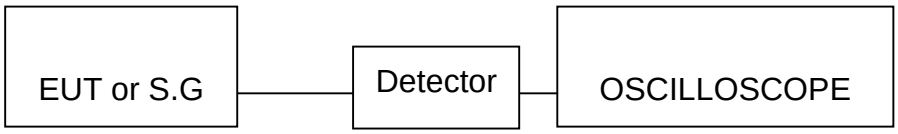
Note:

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	Wireless AP		
INPUT POWER (SYSTEM)	120Vac, 60Hz	**MODEL**	WSR-8002
TESTED BY	Tony Chen	**ENVIRONMENTAL CONDITIONS**	27deg. C, 59%RH, 967 hPa

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	18.68	30	PASS
6	2437	18.93	30	PASS
11	2462	18.88	30	PASS

4.4.7 TEST RESULTS -OFDM

EUT	Wireless AP		
INPUT POWER (SYSTEM)	120Vac, 60Hz	**MODEL**	WSR-8002
TESTED BY	Tony Chen	**ENVIRONMENTAL CONDITIONS**	27deg. C, 59%RH, 967 hPa

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	19.89	30	PASS
6	2437	20.09	30	PASS
11	2462	20.02	30	PASS
Turbo 6	2437	20.06	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.

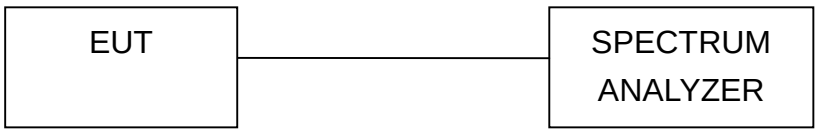
4.5.3 TEST PROCEDURE

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

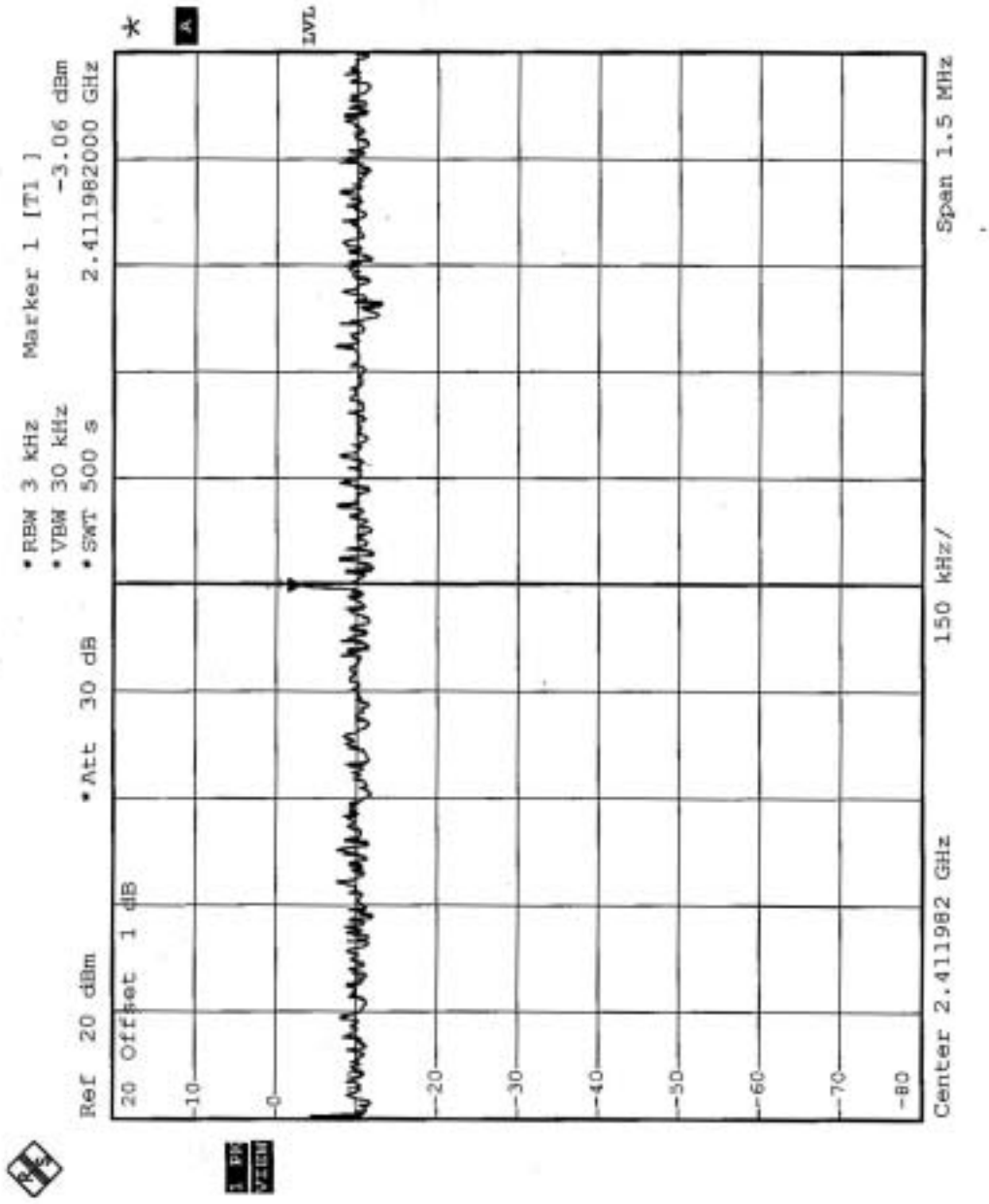
Same as Item 4.3.6

4.5.7 TEST RESULTS-DSSS

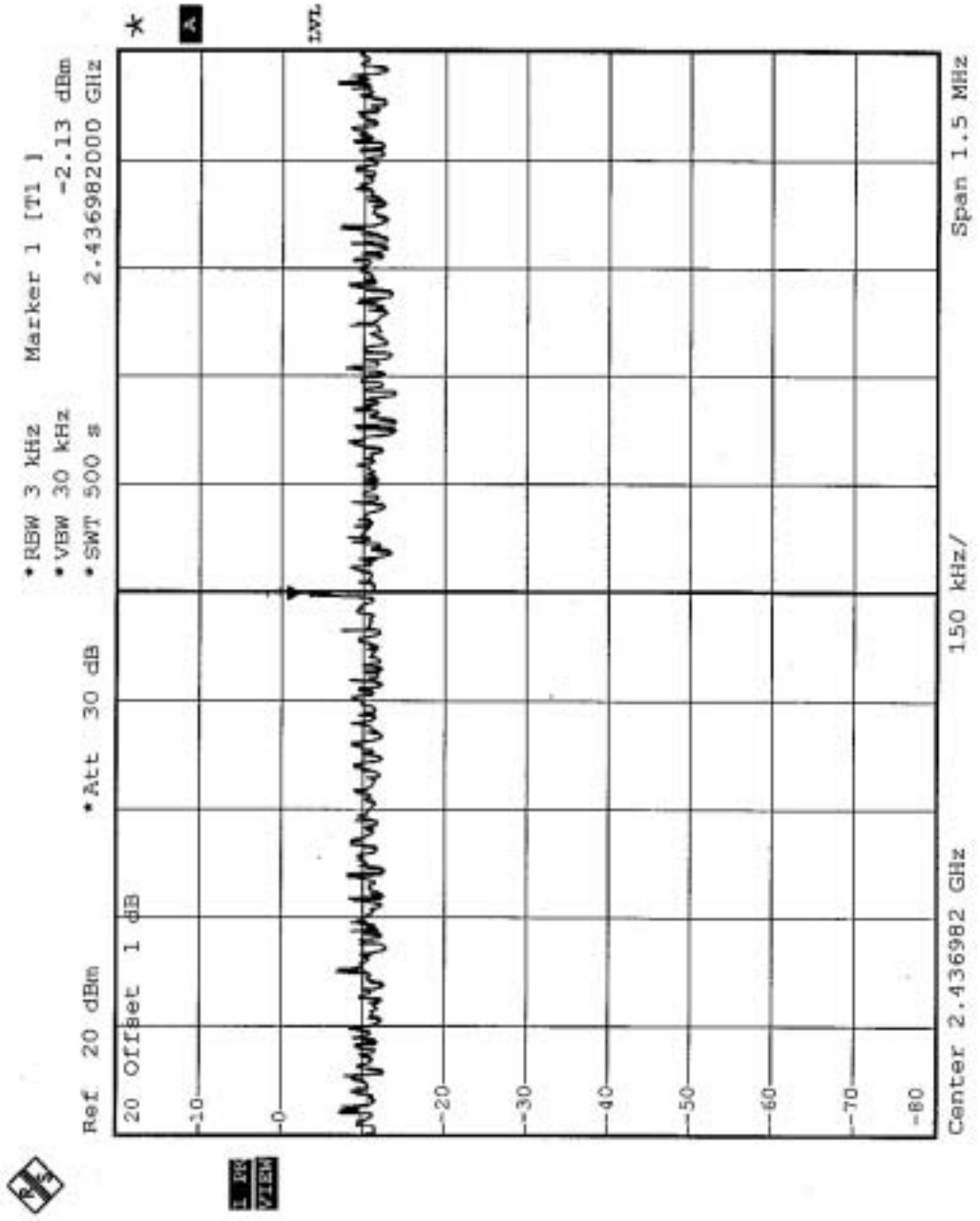
EUT	Wireless AP		
INPUT POWER (SYSTEM)	120Vac, 60Hz	**MODEL**	WSR-8002
TESTED BY	Tony Chen	**ENVIRONMENTAL CONDITIONS**	27deg. C, 59%RH, 967 hPa

CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-3.06	8	PASS
6	2437	-2.13	8	PASS
11	2462	-2.8	8	PASS

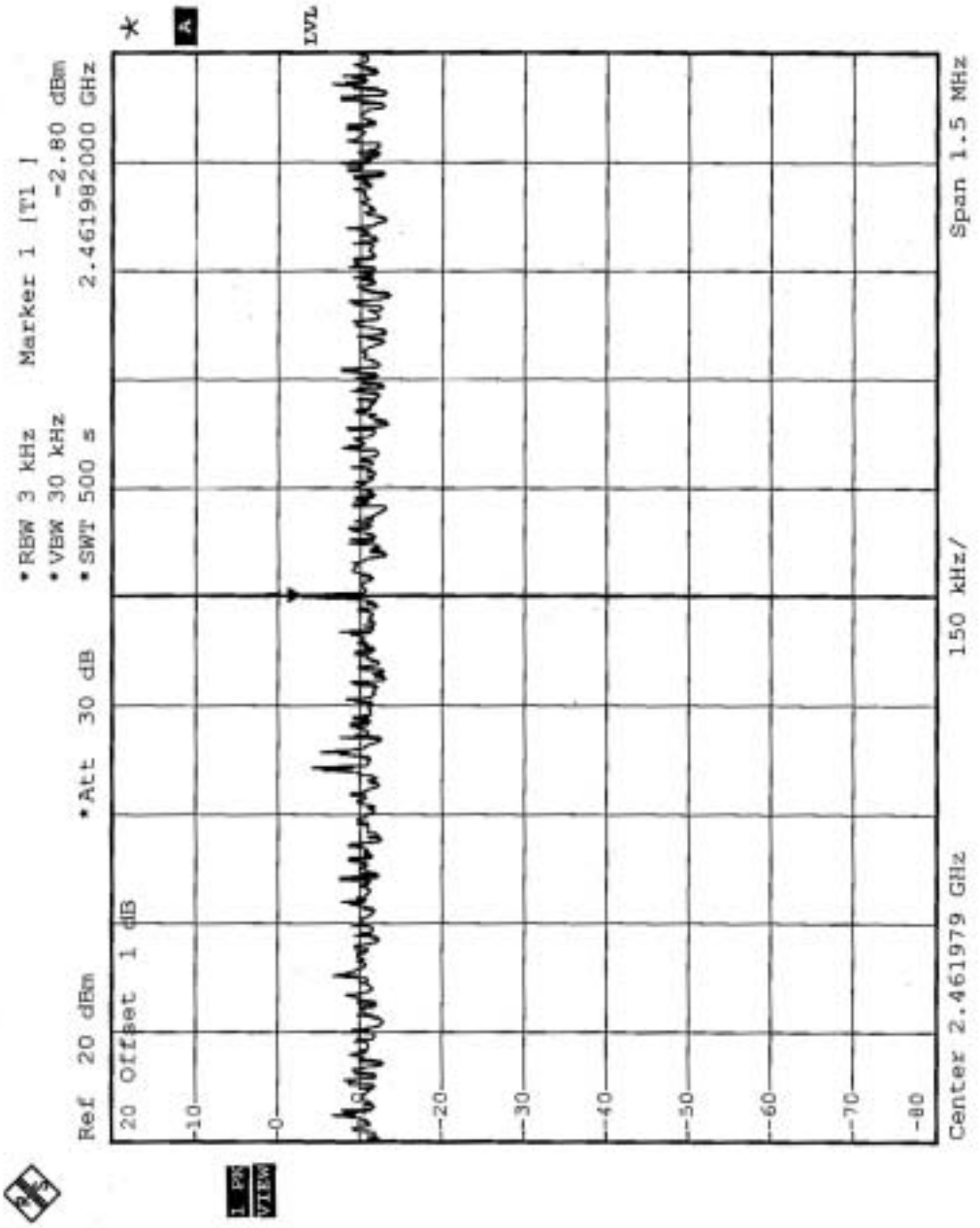
CH1


Ref 20 dBm
20 Offset 1 dB
Att 30 dB
RBW 3 kHz
VBW 30 kHz
SWT 500 s
Marker 1 [T1]
-3.06 dBm
2.411982000 GHz
Center 2.411982 GHz
150 kHz/
Span 1.5 MHz
-10
0
-20
-30
-40
-50
-60
-70
-80

CH6


Ref 20 dBm
20 Offset 1 dB
*Att 30 dB
*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-2.13 dBm
2.436982000 GHz
Center 2.436982 GHz
150 kHz/
Span 1.5 MHz
-10
0
-20
-30
-40
-50
-60
-70
-80

CH11

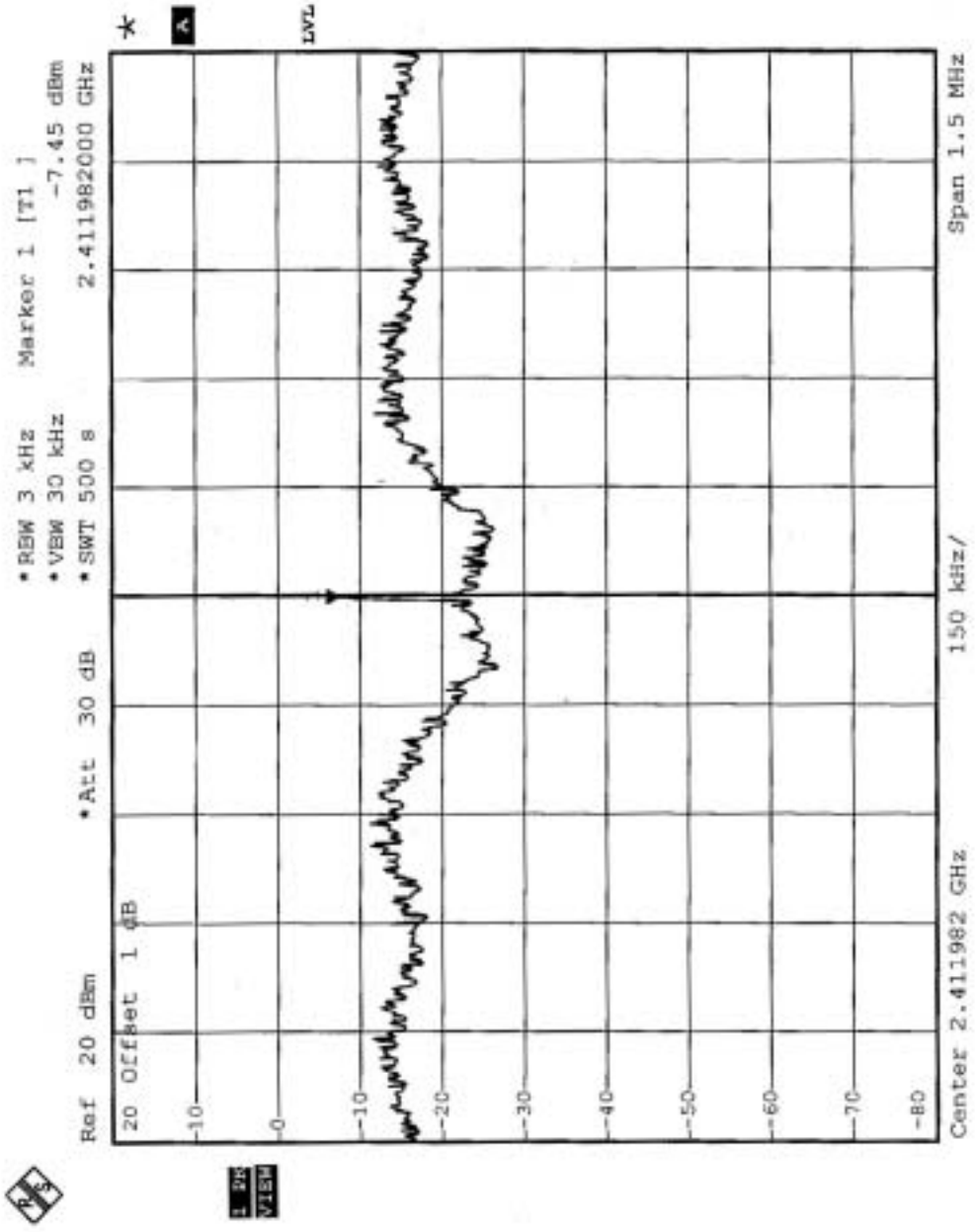

Ref 20 dBm
20 Offset 1 dB
*Att 30 dB
*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-2.80 dBm
2.461982000 GHz
Center 2.461979 GHz
150 kHz/
Span 1.5 MHz
A
LVL
1 PK
VIEW

4.5.8 TEST RESULTS-OFDM

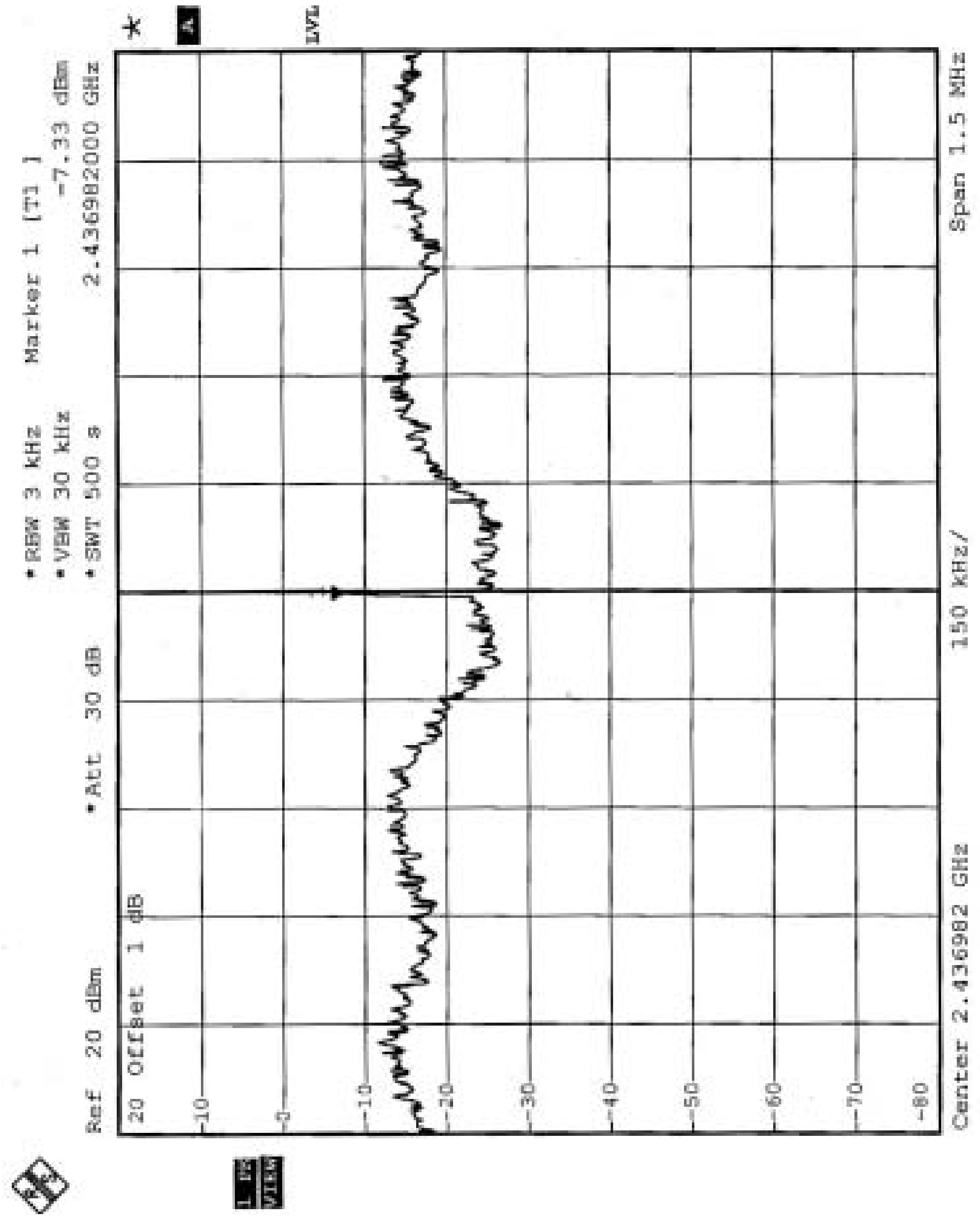
EUT	Wireless AP		
INPUT POWER (SYSTEM)	120Vac, 60Hz	**MODEL**	WSR-8002
TESTED BY	Tony Chen	**ENVIRONMENTAL CONDITIONS**	27deg. C, 59%RH, 967 hPa

CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-7.45	8	PASS
6	2437	-7.33	8	PASS
11	2462	-11.18	8	PASS
Turbo 6	2437	-8.63	8	PASS

CH1

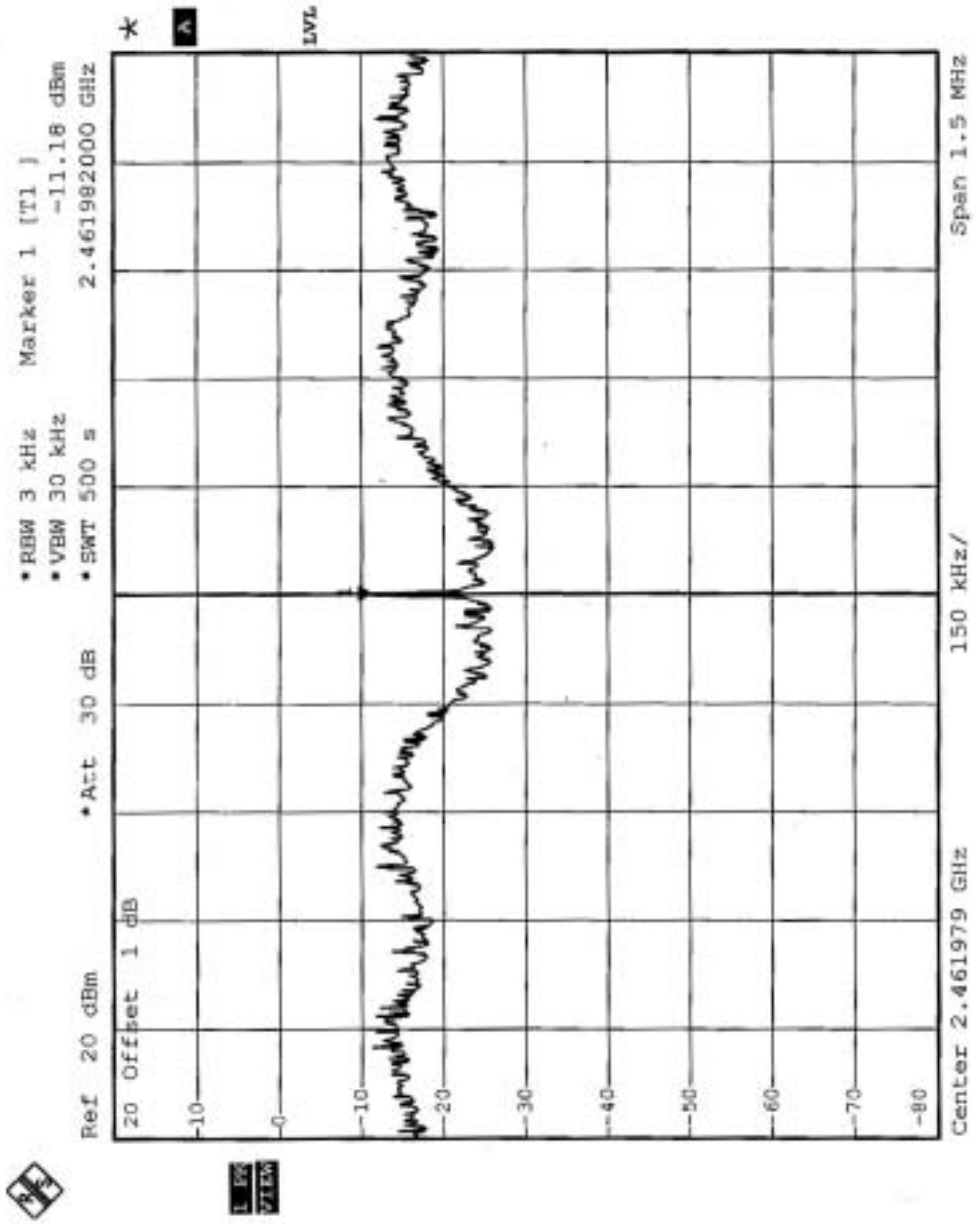

Ref 20 dBm
20 Offset 1 dB
Att 30 dB
RBW 3 kHz
VBW 30 kHz
SWT 500 s
Marker 1 [T1]
-7.45 dBm
2.411982000 GHz
Center 2.411982 GHz
150 kHz/
Span 1.5 MHz
1 PK
VIEW

CH6

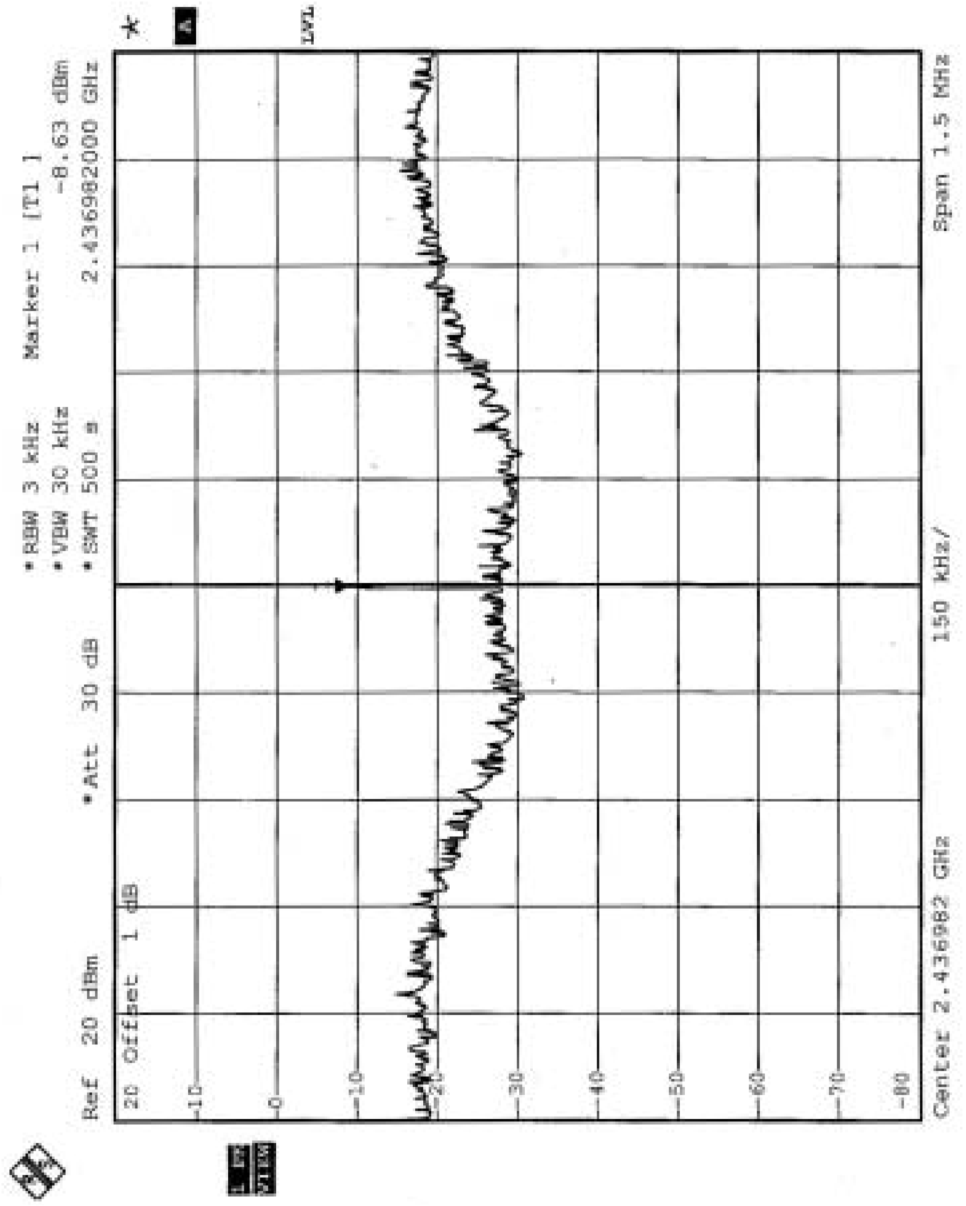


Ref 20 dBm
*Att 30 dB
*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-7.33 dBm
2.436982000 GHz
20 Offset 1 dB
1 PK VIEW
LVL
A
Center 2.436982 GHz
150 kHz/
Span 1.5 MHz

CH11


Ref 20 dBm
20 Offset 1 dB
*Att 30 dB
*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-11.18 dBm
2.461982000 GHz
LVL
Center 2.461979 GHz
150 kHz/
Span 1.5 MHz

Turbo CH6


Marker 1 [T1]
-8.63 dBm
2.43698200 GHz
*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
*Att 30 dB
Ref 20 dBm
Offset 1 dB
Center 2.436982 GHz
150 kHz/
Span 1.5 MHz

4.6 BAND EDGES MEASUREMENT

4.6.1 LIMITS OF BAND EDGES MEASUREMENT

Below –20dB of the highest emission level of operating band (in 1 MHz 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 RBW spectrum analyzer to 1 MHz and set VBW spectrum analyzer to 10 Hz with suitable frequency span including 1 MHz 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

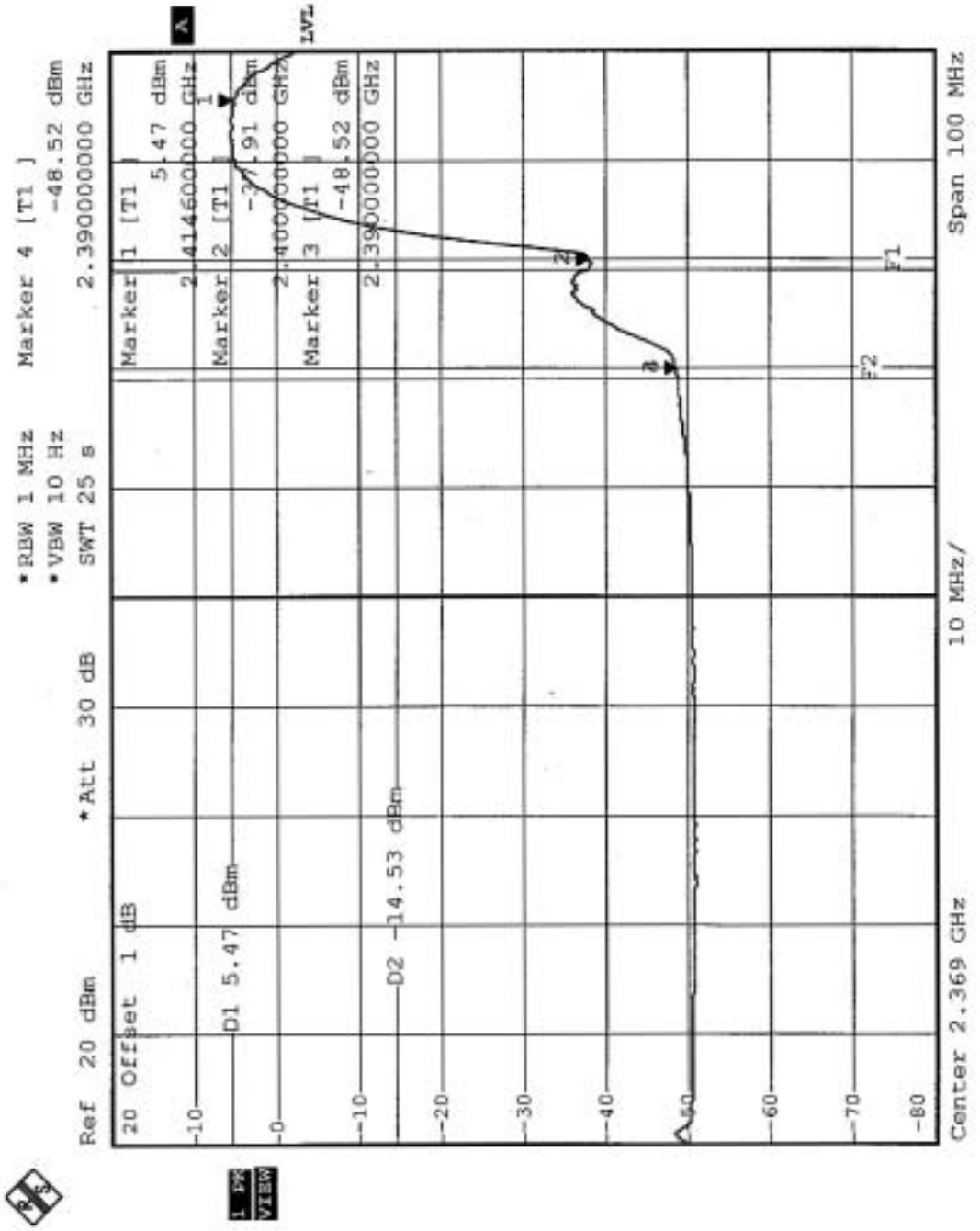
4.6.6 TEST RESULTS –DSSS

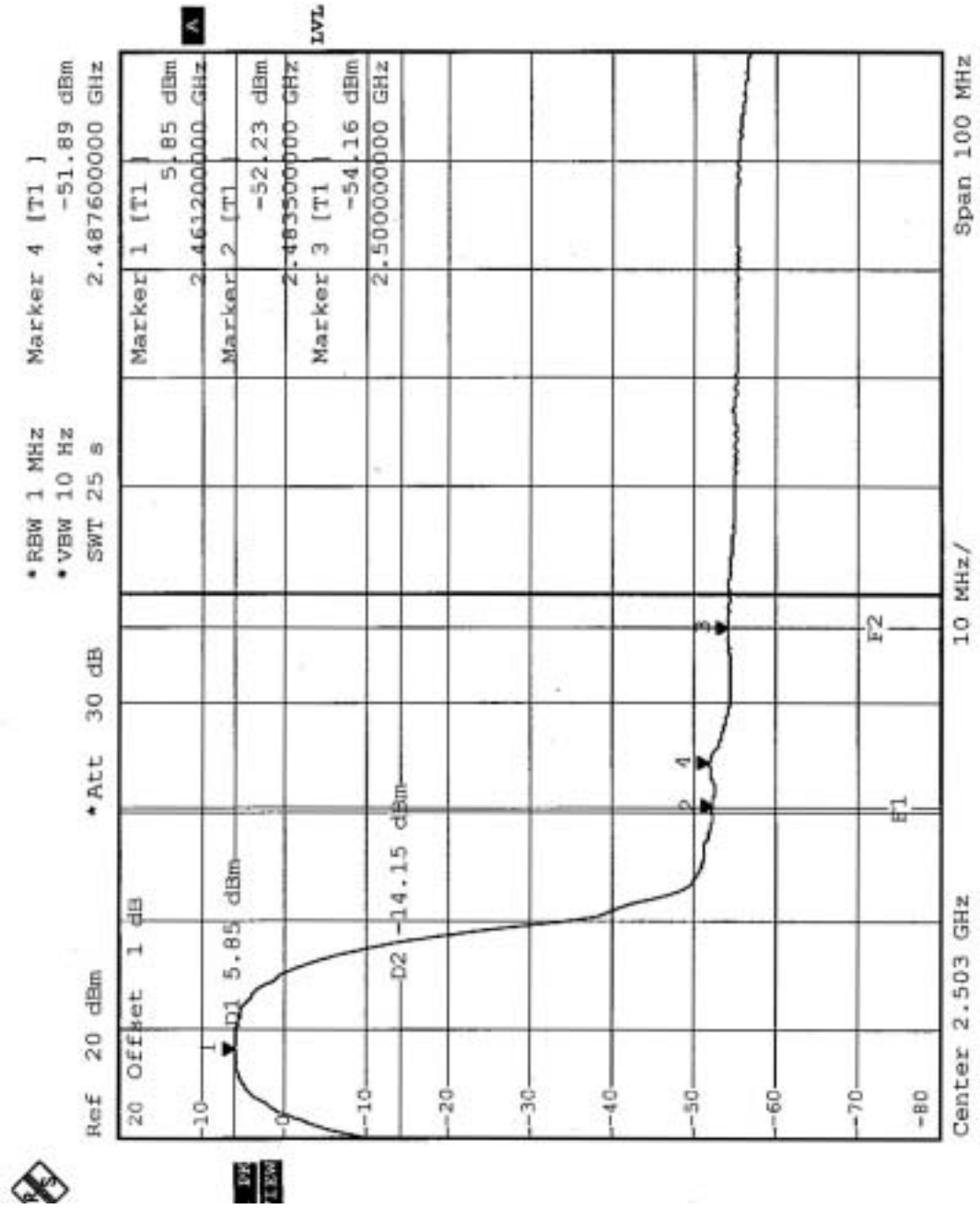
The spectrum plots are attached on the following 2 pages. D1 line indicates the highest level, and D2 line indicates the 20dB offset below D2. It shows compliance with the requirement in part 15.247(C).

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 53.99dB 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 101.5dBuV/m, so the maximum field strength in restrict band is 101.5-53.99=47.51dBuV/m which is under 54 dBuV/m limit.

NOTE (2): The band edge emission plot on the following second page shows 58.08 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 104.0dBuV/m, so the maximum field strength in restrict band is 104.0-58.08=45.92dBuV/m which is under 54 dBuV/m limit.


Ref 20 dBm
20 Offset 1 dB
*Att 30 dB
*RBW 1 MHz
*VBW 10 Hz
SWT 25 s
Marker 4 [T1]
-48.52 dBm
2.390000000 GHz
Marker 1 [T1]
5.47 dBm
2.414600000 GHz
Marker 2 [T1]
-37.91 dBm
2.400000000 GHz
Marker 3 [T1]
-48.52 dBm
2.390000000 GHz
D1 5.47 dBm
D2 -14.53 dBm
Center 2.369 GHz
10 MHz/
Span 100 MHz
F1
F2
1 PK
VIEW


RBW 1 MHz
VBW 10 Hz
SWT 25 s
Att 30 dB
Offset 1 dB
Ref 20 dBm
Marker 4 [T1]
-51.89 dBm
2.487600000 GHz
Marker 1 [T1]
5.85 dBm
2.461200000 GHz
Marker 2 [T1]
-52.23 dBm
2.483500000 GHz
Marker 3 [T1]
-54.16 dBm
2.500000000 GHz
D1 5.85 dBm
D2 -14.15 dBm
F1
F2
Center 2.503 GHz
10 MHz/
Span 100 MHz

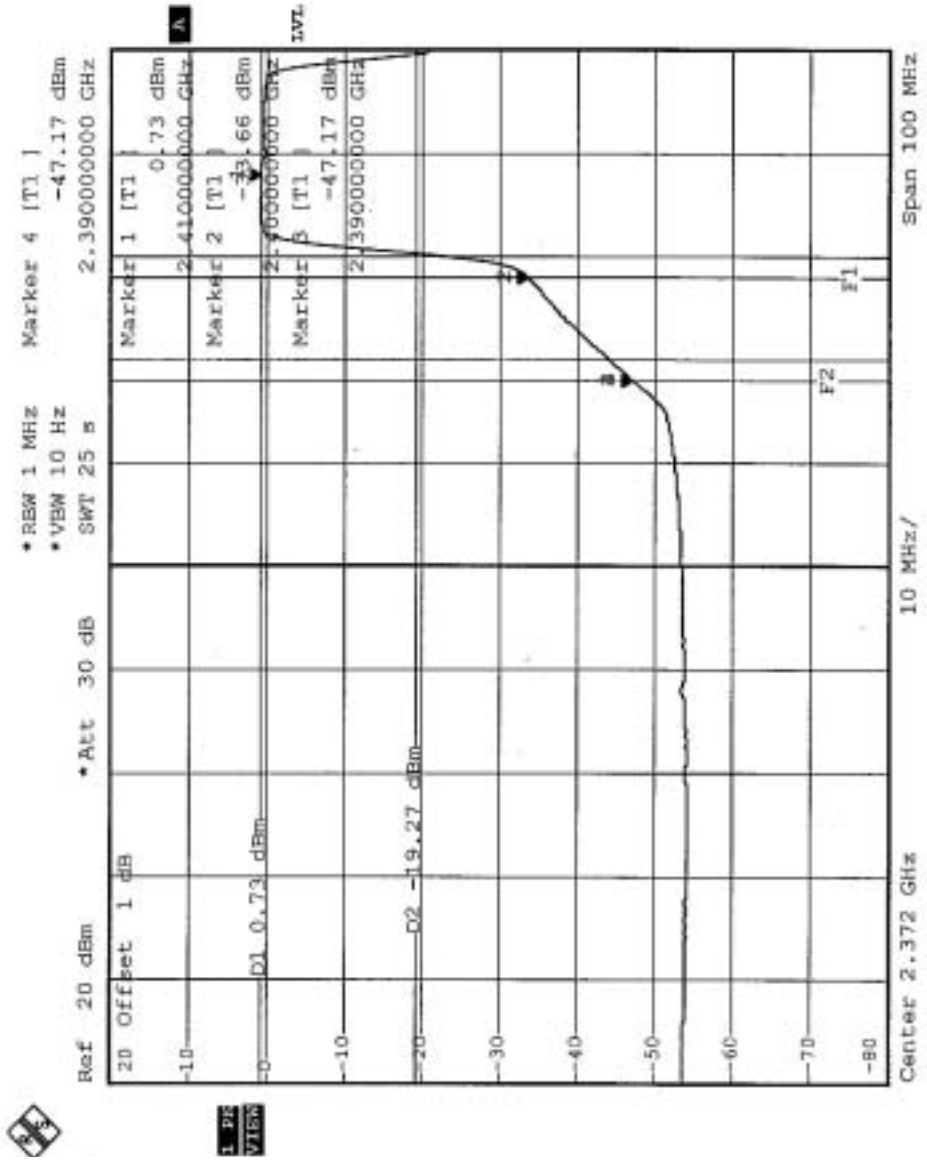
4.6.7 TEST RESULTS –OFDM

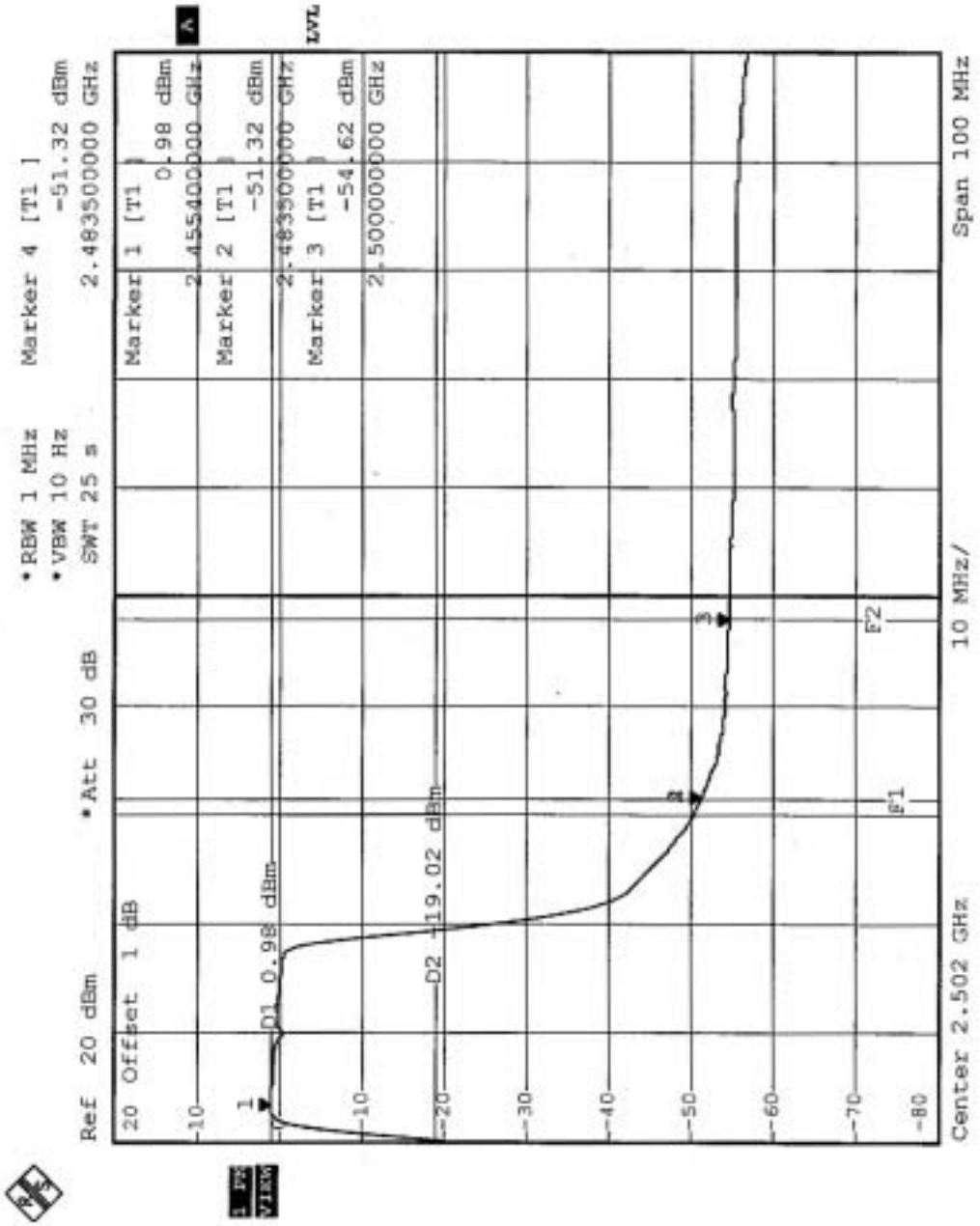
The spectrum plots are attached on the following 2 pages. D1 line indicates the highest level, and D2 line indicates the 20dB offset below D2. It shows compliance with the requirement in part 15.247(C).

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

NOTE (1): The band edge emission plot on the following first page shows 47.9dB 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 97.4dBuV/m, so the maximum field strength in restrict band is 97.4-47.9=49.5dBuV/m which is under 54 dBuV/m limit.

NOTE (2): The band edge emission plot on the following second page shows 52.3 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 100.8dBuV/m, so the maximum field strength in restrict band is 100.8-52.3=48.5 dBuV/m which is under 54 dBuV/m limit.


Ref 20 dBm
Offset 1 dB
Att 30 dB
RBW 1 MHz
VBW 10 Hz
SWT 25 s
Marker 4 [T1]
-47.17 dBm
2.390000000 GHz
Marker 1 [T1]
0.73 dBm
2.410000000 GHz
Marker 2 [T1]
-33.66 dBm
2.400000000 GHz
Marker 3 [T1]
-47.17 dBm
2.390000000 GHz
D1 0.73 dBm
D2 -19.27 dBm
F1
F2
Center 2.372 GHz
10 MHz/
Span 100 MHz


Ref 20 dBm
20 Offset 1 dB
• Att 30 dB
• RBW 1 MHz
• VBW 10 Hz
SWT 25 s
Marker 4 [T1]
-51.32 dBm
2.48350000 GHz
Marker 1 [T1]
0.98 dBm
2.45540000 GHz
Marker 2 [T1]
-51.32 dBm
2.48350000 GHz
Marker 3 [T1]
-54.62 dBm
2.50000000 GHz
D1 0.98 dBm
D2 -19.02 dBm
Center 2.502 GHz
10 MHz/
Span 100 MHz
F1
F2
1 PK
VIEW

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 PCB Dipole Antenna with UFL connector. The maximum Gain of the antenna is 1.27 dBi.

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.

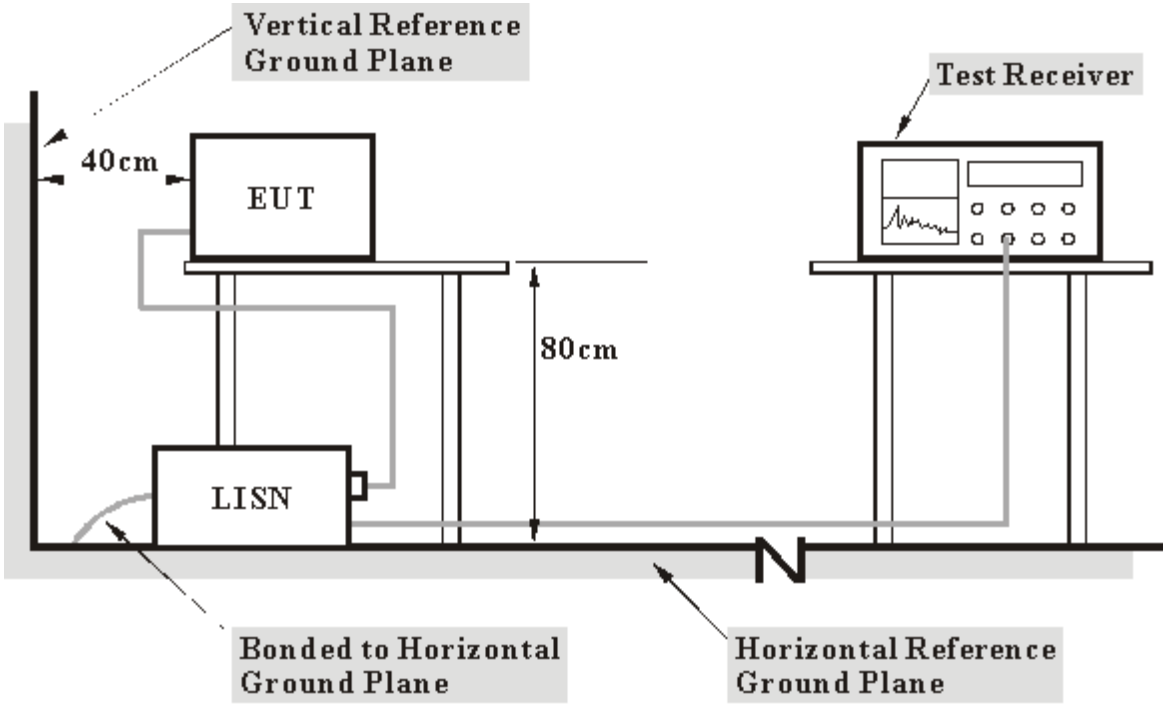
b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

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

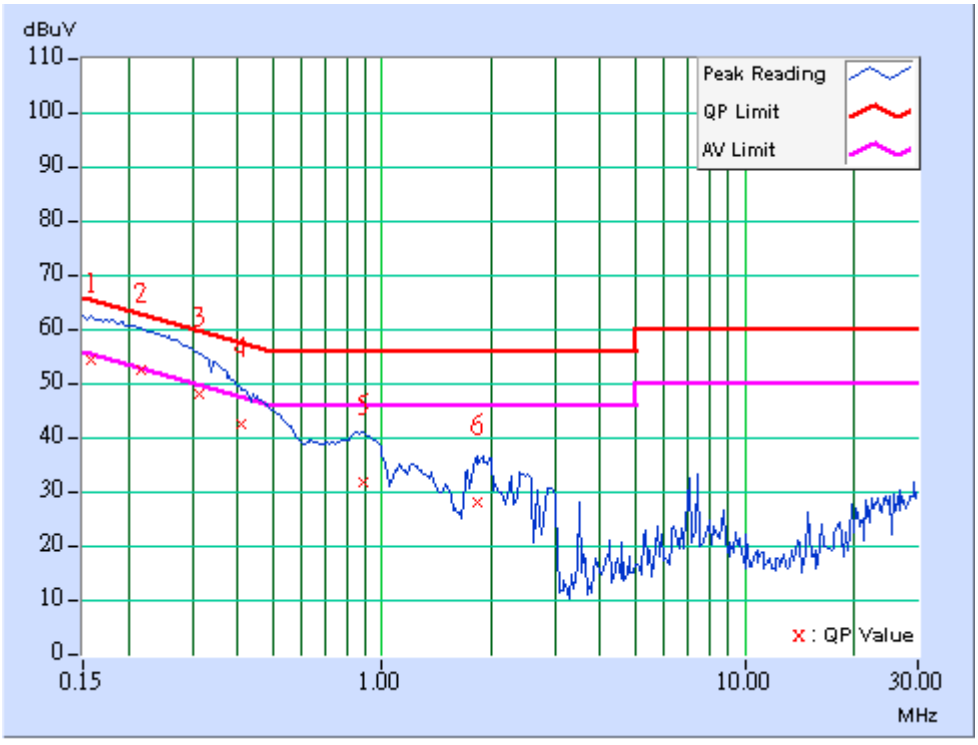
a. Placed the EUT on the testing table.
b. Prepared another computer system to act as a communication partner and placed it outside of testing area.
c. The communication partner run test program “ART-TP.exe” to enable EUT under transmission/receiving condition continuously at specific channel frequency via UTP cable and wireless.

5.1.7 TEST RESULTS-ADAPTER

EUT	Wireless AP		
MODEL	WSR-8002	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	26deg. C, 62%RH, 967 hPa	**TESTED BY**	Tony Chen
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	0.158	0.22	54.04	-	54.26	-	65.58	55.58	-11.32	-
2	0.216	0.29	52.12	-	52.41	-	62.96	52.96	-10.54	-
3	0.314	0.24	47.74	-	47.98	-	59.86	49.86	-11.88	-
4	0.408	0.20	42.36	-	42.56	-	57.69	47.69	-15.13	-
5	0.892	0.28	31.41	-	31.69	-	56.00	46.00	-24.31	-
6	1.826	0.30	27.97	-	28.27	-	56.00	46.00	-27.73	-

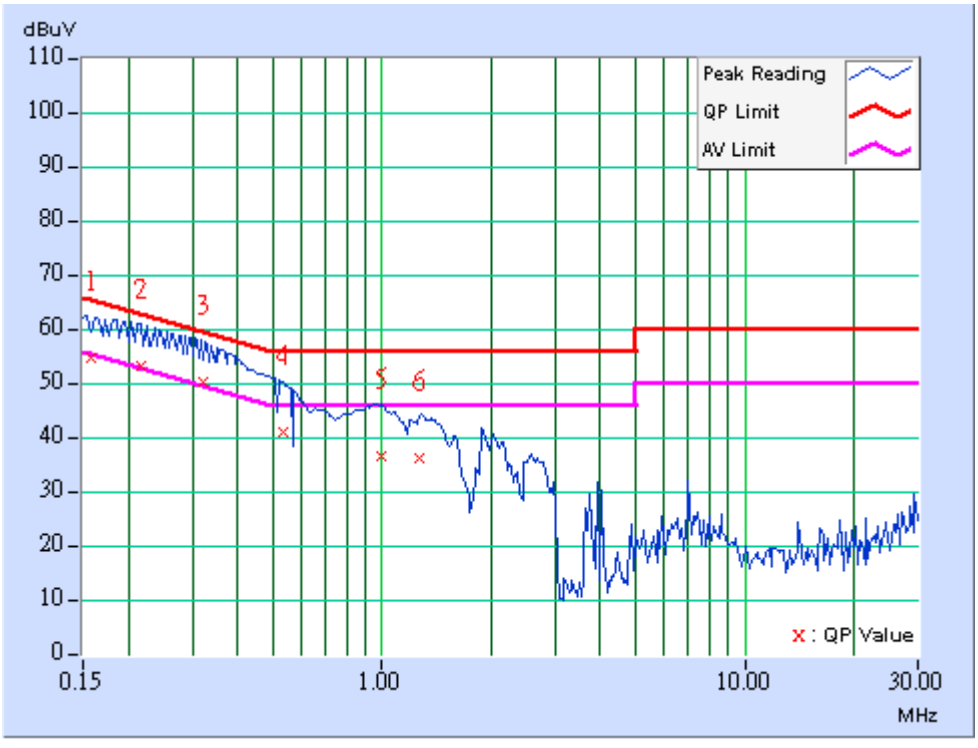
NOTES: (1) "*": Undetectable
(2) Q.P. and AV. are abbreviations of quasi-peak and average.
(3) "-": The Quasi-peak reading value also meets an average limit, thus measurement with the average detector is unnecessary.
(4) The emission levels of other frequencies were very low against the limit.
(5) Correction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



EUT	Wireless AP		
MODEL	WSR-8002	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	26deg. C, 62%RH, 967 hPa	**TESTED BY**	Tony Chen
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	0.157	0.21	54.52	-	54.73	-	65.60	55.60	-10.86	-
2	0.216	0.29	53.07	30.31	53.36	30.60	62.96	52.96	-9.59	-22.35
3	**0.320**	**0.24**	**49.91**	**22.63**	**50.15**	**22.87**	**59.70**	**49.70**	**-9.55**	**-26.83**
4	0.531	0.22	40.93	-	41.15	-	56.00	46.00	-14.85	-
5	0.998	0.30	36.42	-	36.72	-	56.00	46.00	-19.28	-
6	1.275	0.30	35.91	-	36.21	-	56.00	46.00	-19.79	-

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

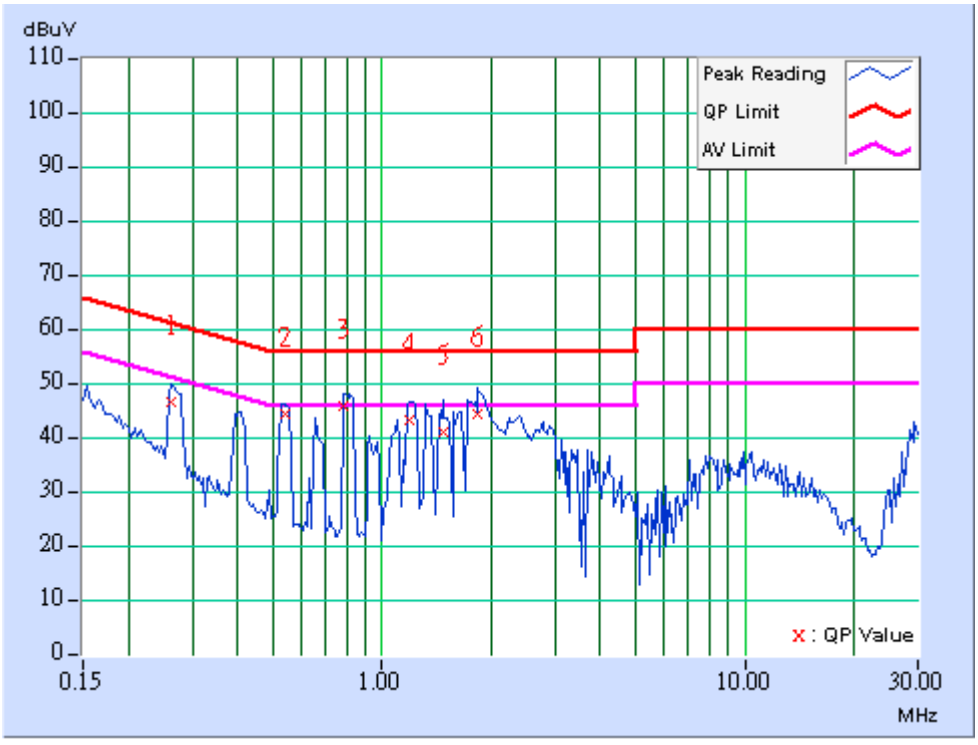


5.1.8 TEST RESULTS-POE

EUT	Wireless AP		
MODEL	WSR-8001	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	26deg. C, 62%RH, 967 hPa	**TESTED BY**	Tony Chen
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	0.263	0.27	46.30	-	46.57	-	61.33	51.33	-14.76	-
2	0.541	0.22	44.18	-	44.40	-	56.00	46.00	-11.60	-
3	0.787	0.26	45.75	30.71	46.01	30.97	56.00	46.00	-9.99	-15.03
4	1.193	0.30	42.97	-	43.27	-	56.00	46.00	-12.73	-
5	1.478	0.30	40.88	-	41.18	-	56.00	46.00	-14.82	-
6	1.838	0.30	44.32	-	44.62	-	56.00	46.00	-11.38	-

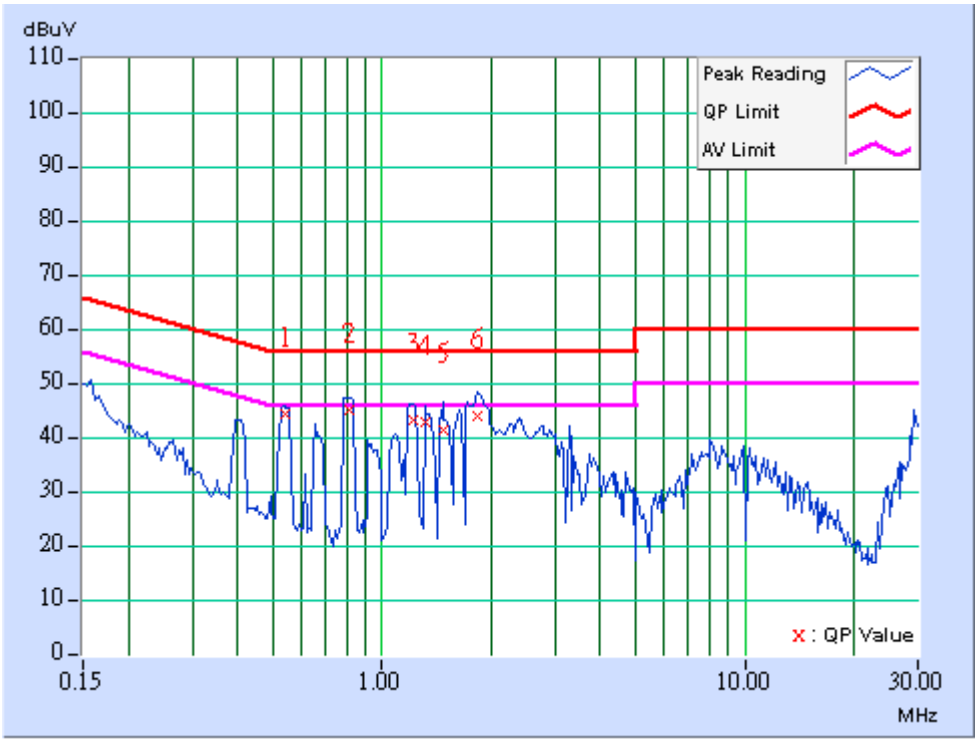
NOTES: (1) "*": Undetectable
(2) Q.P. and AV. are abbreviations of quasi-peak and average.
(3) "-": The Quasi-peak reading value also meets an average limit, thus measurement with the average detector is unnecessary.
(4) The emission levels of other frequencies were very low against the limit.
(5) Correction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



EUT	Wireless AP		
MODEL	WSR-8001	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	26deg. C, 62%RH, 967 hPa	**TESTED BY**	Tony Chen
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	0.541	0.22	44.06	-	44.28	-	56.00	46.00	-11.72	-
2	0.814	0.27	45.05	-	45.32	-	56.00	46.00	-10.68	-
3	1.220	0.30	43.14	-	43.44	-	56.00	46.00	-12.56	-
4	1.310	0.30	42.58	-	42.88	-	56.00	46.00	-13.12	-
5	1.470	0.30	41.16	-	41.46	-	56.00	46.00	-14.54	-
6	1.834	0.30	43.95	-	44.25	-	56.00	46.00	-11.75	-

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	Sep. 01, 2005
*ADVANTEST Spectrum Analyzer	R3271A	85060311	Jun. 16, 2005
*CHASE RF Pre_Amplifier	CPA9232	1057	May 10, 2005
*HP Pre_Amplifier	8449B	3008A01922	Oct. 13, 2004
*ROHDE & SCHWARZ Test Receiver	ESVS 10	849231 /019	Sep. 30, 2004
*CHASE Broadband Antenna	VULB9168	138	May 22, 2005
*Schwarzbeck Horn_Antenna	3115	5619	Jun. 16, 2005
*SCHWARZBECK 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. 09. 2005
*RF Cable(RICHTEC)	9913-30M	STCCAB-30M-1 GHz-021	Dec. 01, 2004
*Software	AS60P8	NA	NA
*CHANCE MOST Antenna Tower	AT-100	0203	NA
*CHANCE MOST Turn Table	TT-100	0203	NA

Note: 1. The calibration interval of the above test instruments is 12 months (36 months for Tunable Dipole Antenna)and the calibrations are traceable to NML/ROC and NIST/USA.
2. * = 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 10 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.

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

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

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

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

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

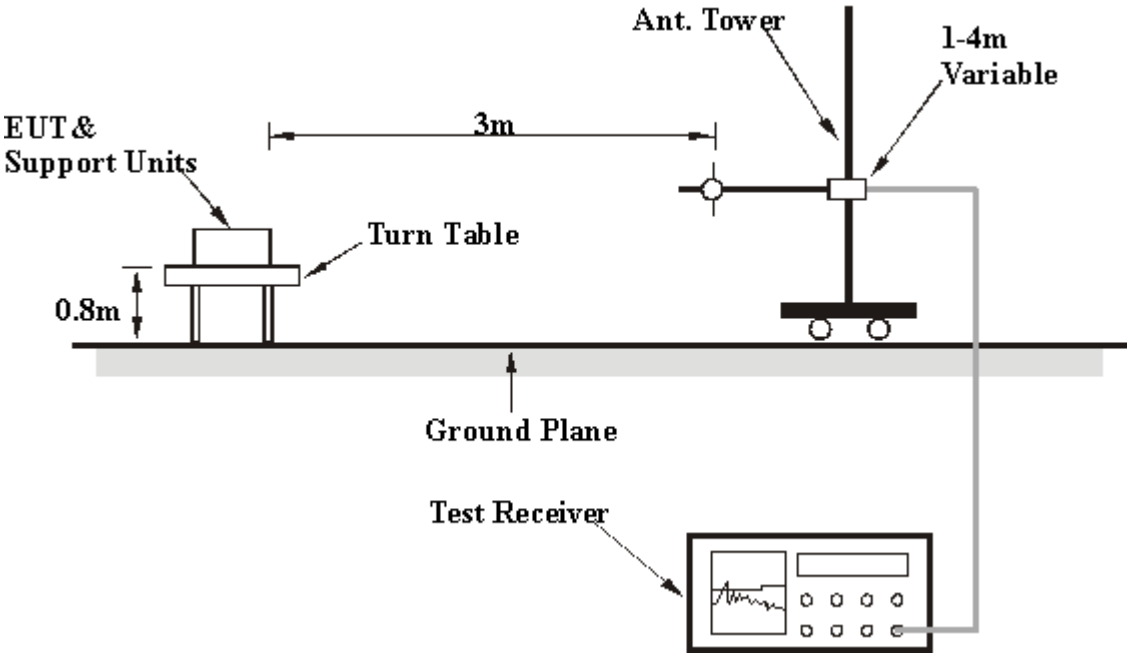
NOTE:

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

5.2.5 DEVIATION FROM TEST STANDARD

No deviation

5.2.6 TEST SETUP



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

5.2.7 EUT OPERATING CONDITIONS

Same as 4.1.6.

5.2.8 TEST RESULTS

EUT	Wireless AP		
FREQUENCY RANGE	30 - 1000MHz	**MODEL**	WSR-8002
ENVIRONMENTAL CONDITIONS	27deg. C, 59%RH, 967 hPa	**DETECTOR FUNCTION**	Quasi-Peak
TEST MODE	WITH ADAPTER	**DETECTOR FUNCTION & BANDWIDTH**	Quasi-Peak, 120kHz

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	160.00	33.80 QP	43.50	-9.70	1.24 H	210	22.40	11.40
2	200.00	33.90 QP	43.50	-9.60	1.11 H	117	24.30	9.60
3	320.01	32.80 QP	46.00	-13.20	1.04 H	236	17.00	15.80
4	400.00	34.10 QP	46.00	-11.90	1.18 H	222	15.70	18.40
5	440.01	32.90 QP	46.00	-13.10	1.00 H	27	13.70	19.30
6	549.99	35.80 QP	46.00	-10.20	1.68 H	217	13.00	22.80
7	550.00	36.80 QP	46.00	-9.20	1.47 H	236	14.00	22.80
8	600.00	33.80 QP	46.00	-12.20	1.46 H	3	11.40	22.30
9	719.99	29.10 QP	46.00	-16.90	1.25 H	16	4.20	24.80
10	879.99	33.90 QP	46.00	-12.10	1.00 H	13	6.60	27.40

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	120.00	30.50 QP	43.50	-13.00	1.24 V	350	18.40	12.10
2	125.00	29.90 QP	43.50	-13.60	1.37 V	23	17.40	12.50
3	160.00	36.20 QP	43.50	-7.30	1.20 V	258	24.80	11.40
4	360.00	30.10 QP	46.00	-15.90	1.10 V	251	13.00	17.10
5	440.00	33.50 QP	46.00	-12.50	1.20 V	314	14.20	19.30
6	559.99	26.80 QP	46.00	-19.20	1.39 V	136	4.10	22.70
7	680.00	26.40 QP	46.00	-19.60	1.23 V	21	2.70	23.70
8	719.99	27.70 QP	46.00	-18.30	1.56 V	253	2.90	24.80

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.

EUT	Wireless AP		
FREQUENCY RANGE	30 - 1000MHz	**MODEL**	WSR-8001
ENVIRONMENTAL CONDITIONS	27deg. C, 59%RH, 967 hPa	**DETECTOR FUNCTION**	Quasi-Peak
TEST MODE	WITH POE	**DETECTOR FUNCTION & BANDWIDTH**	Quasi-Peak, 120kHz

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	220.00	32.80 QP	46.00	-13.20	1.18 H	131	22.50	10.30
2	250.00	28.40 QP	46.00	-17.60	1.52 H	218	14.40	14.00
3	360.00	33.30 QP	46.00	-12.70	1.00 H	207	16.20	17.10
4	500.02	33.10 QP	46.00	-12.90	1.00 H	274	12.50	20.70
5	750.01	27.90 QP	46.00	-18.10	1.00 H	3	1.70	26.10
6	879.99	34.80 QP	46.00	-11.20	1.00 H	344	7.40	27.40

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	80.00	31.20 QP	40.00	-8.80	1.10 V	285	23.20	8.00
2	249.99	32.00 QP	46.00	-14.00	1.04 V	3	18.00	14.00
3	500.00	32.70 QP	46.00	-13.30	1.10 V	128	12.00	20.70
4	549.99	36.10 QP	46.00	-9.90	1.18 V	269	13.30	22.80
5	600.00	29.90 QP	46.00	-16.10	1.00 V	23	7.50	22.30
6	720.00	28.00 QP	46.00	-18.00	1.83 V	263	3.20	24.80
7	880.00	28.80 QP	46.00	-17.20	1.81 V	71	1.40	27.40

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

STANDARD SECTION 15.407

EUT	Wireless AP	**MODEL**	WSR-8002
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	42.20 PK	74.00	-31.80	1.60 H	273	5.20	37.00
2	*5180.00	96.90 PK			1.60 H	273	59.90	37.00
2	*5180.00	88.70 AV			1.60 H	273	51.70	37.00
3	10360.00	51.60 PK	68.30	-16.70	1.28 H	288	6.90	44.70

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	#5150.00	46.60 PK	74.00	-27.40	1.28 V	251	9.60	37.00
2	*5180.00	101.50 PK			1.28 V	251	64.50	37.00
2	*5180.00	93.40 AV			1.28 V	251	56.40	37.00
3	10360.00	56.90 PK	68.30	-11.40	1.22 V	110	12.20	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	Wireless AP	**MODEL**	WSR-8002
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	97.50 PK			1.25 H	42	60.50	37.00
1	*5240.00	89.10 AV			1.25 H	42	52.10	37.00
2	10480.00	52.10 PK	68.30	-16.20	1.26 H	329	7.10	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	111.00 PK			1.24 V	83	73.90	37.00
1	*5240.00	102.10 AV			1.24 V	83	65.10	37.00
2	10480.00	57.30 PK	68.30	-11.00	1.05 V	122	12.30	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	Wireless AP	**MODEL**	WSR-8002
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	95.80 PK			1.04 H	148	58.70	37.00
1	*5260.00	87.60 AV			1.04 H	148	50.60	37.00
2	10520.00	49.50 PK	68.30	-18.80	1.28 H	284	4.30	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	107.90 PK			1.03 V	306	70.90	37.00
1	*5260.00	99.40 AV			1.03 V	306	62.40	37.00
2	10520.00	59.30 PK	68.30	-9.00	1.00 V	255	14.10	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	Wireless AP	**MODEL**	WSR-8002
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	95.10 PK			1.62 H	14	58.10	37.00
1	*5320.00	87.40 AV			1.62 H	14	50.40	37.00
2	#5350.00	40.30 PK	74.00	-33.70	1.62 H	14	3.30	37.00
3	#10640.00	59.80 PK	74.00	-14.20	1.66 H	22	13.50	46.30
3	#10640.00	48.30 AV	54.00	-5.70	1.66 H	22	2.00	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	108.80 PK			1.27 V	210	71.80	37.00
1	*5320.00	100.80 AV			1.27 V	210	63.80	37.00
2	#5350.00	53.60 PK	74.00	-20.40	1.27 V	210	16.60	37.00
2	#5350.00	46.10 AV	54.00	-7.90	1.27 V	210	9.10	37.00
3	#10640.00	64.50 PK	74.00	-9.50	1.60 V	23	18.20	46.30
3	**#10640.00**	**52.10 AV**	**54.00**	**-1.90**	**1.60 V**	**23**	**5.80**	**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	Wireless AP	**MODEL**	WSR-8002
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	97.00 PK			1.38 H	270	59.40	37.60
1	*5745.00	89.00 AV			1.38 H	270	51.40	37.60
2	#11490.00	58.10 PK	74.00	-15.90	1.28 H	27	6.80	51.30
2	#11490.00	47.40 AV	54.00	-6.60	1.28 H	27	-3.90	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	107.00 PK			1.39 V	136	69.40	37.60
1	*5745.00	98.90 AV			1.39 V	136	61.30	37.60
2	#11490.00	62.90 PK	74.00	-11.10	1.21 V	143	11.60	51.30
2	#11490.00	50.70 AV	54.00	-3.30	1.21 V	143	-0.60	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	Wireless AP	**MODEL**	WSR-8002
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	96.90 PK			1.36 H	274	59.20	37.70
1	*5825.00	88.00 AV			1.36 H	274	50.30	37.70
2	#11650.00	61.90 PK	74.00	-12.10	1.59 H	12	11.10	50.80
2	#11650.00	49.50 AV	54.00	-4.50	1.59 H	12	-1.30	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	107.00 PK			1.37 V	146	69.20	37.70
1	*5825.00	98.10 AV			1.37 V	146	60.40	37.70
2	#11650.00	64.30 PK	74.00	-9.70	1.15 V	311	13.50	50.80
2	#11650.00	52.20 AV	54.00	-1.80	1.15 V	311	1.40	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	Wireless AP	**MODEL**	WSR-8002
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	44.00 PK	74.00	-30.00	1.24 H	114	7.00	37.00
2	*5210.00	93.20 PK			1.66 H	8	56.20	37.00
2	*5210.00	84.80 AV			1.66 H	8	47.80	37.00
3	10420.00	51.60 PK	68.30	-16.70	1.34 H	13	6.80	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	1.02 V	241	17.50	37.00
1	#5150.00	46.30 AV	54.00	-7.70	1.02 V	241	9.30	37.00
2	*5210.00	104.90 PK			1.64 V	113	67.90	37.00
2	*5210.00	96.70 AV			1.64 V	113	59.70	37.00
3	10420.00	55.30 PK	68.30	-13.00	1.34 V	353	10.50	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	Wireless AP	**MODEL**	WSR-8002
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	91.40 PK			1.48 H	356	54.40	37.00
1	*5250.00	83.60 AV			1.48 H	356	46.60	37.00
2	10500.00	52.10 PK	68.30	-16.20	1.39 H	323	7.10	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	105.70 PK			1.22 V	85	68.70	37.00
1	*5250.00	97.60 AV			1.22 V	85	60.60	37.00
2	10500.00	54.80 PK	68.30	-13.50	1.24 V	126	9.80	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	Wireless AP	**MODEL**	WSR-8002
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	92.20 PK			1.90 H	354	55.20	37.00
1	*5290.00	84.10 AV			1.90 H	354	47.10	37.00
2	#5350.00	41.00 PK	74.00	-33.00	1.90 H	354	4.00	37.00
3	10580.00	53.40 PK	68.30	-14.90	1.50 H	51	7.70	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	105.70 PK			1.30 V	133	68.70	37.00
1	*5290.00	97.20 AV			1.30 V	133	60.20	37.00
2	#5350.00	54.50 PK	74.00	-19.50	1.30 V	133	17.50	37.00
2	#5350.00	46.00 AV	54.00	-8.00	1.30 V	133	9.00	37.00
3	10580.00	56.20 PK	68.30	-12.10	1.31 V	97	10.50	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	Wireless AP	**MODEL**	WSR-8002
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	93.70 PK			1.44 H	244	56.10	37.60
1	*5760.00	85.50 AV			1.44 H	244	47.90	37.60
2	#11520.00	60.20 PK	74.00	-13.80	1.52 H	347	8.90	51.30
2	#11520.00	48.20 AV	54.00	-5.80	1.52 H	347	-3.10	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	105.10 PK			1.41 V	156	67.50	37.60
1	*5760.00	95.70 AV			1.41 V	156	58.10	37.60
2	#11520.00	64.60 PK	74.00	-9.40	1.58 V	8	13.30	51.30
2	#11520.00	52.00 AV	54.00	-2.00	1.58 V	8	0.70	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	Wireless AP	**MODEL**	WSR-8002
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	94.70 PK			1.31 H	308	57.00	37.70
1	*5800.00	86.90 AV			1.31 H	308	49.20	37.70
2	#11600.00	61.70 PK	74.00	-12.30	1.69 H	9	10.70	51.00
2	#11600.00	48.70 AV	54.00	-5.30	1.69 H	9	-2.30	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	105.90 PK			1.31 V	181	68.20	37.70
1	*5800.00	96.90 AV			1.31 V	181	59.20	37.70
2	#11600.00	64.10 PK	74.00	-9.90	1.74 V	6	13.10	51.00
2	**#11600.00**	**52.50 AV**	**54.00**	**-1.50**	**1.74 V**	**6**	**1.50**	**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	FSP40	100037	May 06, 2005
R&S SIGNAL GENERATOR	SMP04	100011	May 28, 2005
TEKTRONIX OSCILLOSCOPE	TDS 220	B027241	Jun. 29, 2005
NARDA DETECTOR	4503A	FSCM99899	NA

Note:

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

5.3.3 TEST PROCEDURE

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

5.3.4 TEST SETUP

5.3.5 EUT OPERATING CONDITIONS

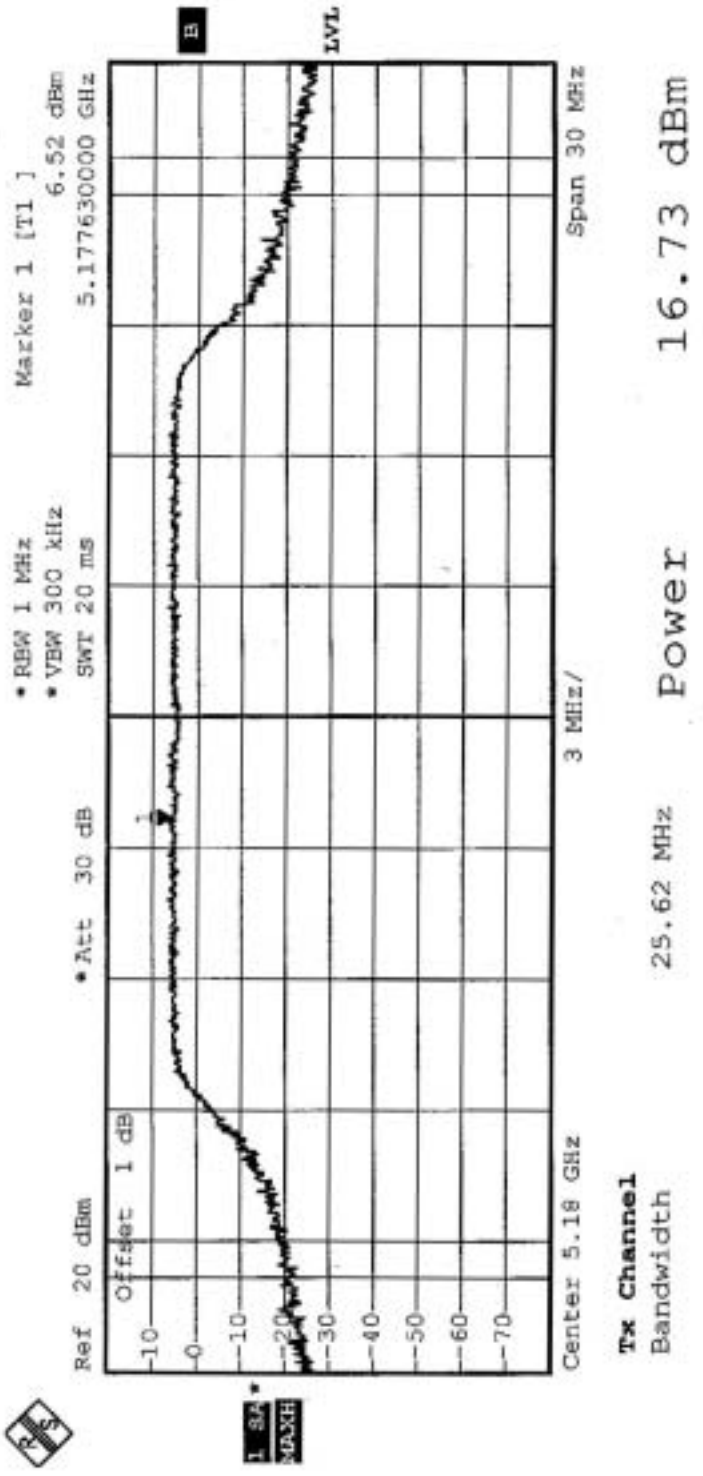
The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.

5.3.6 TEST RESULTS

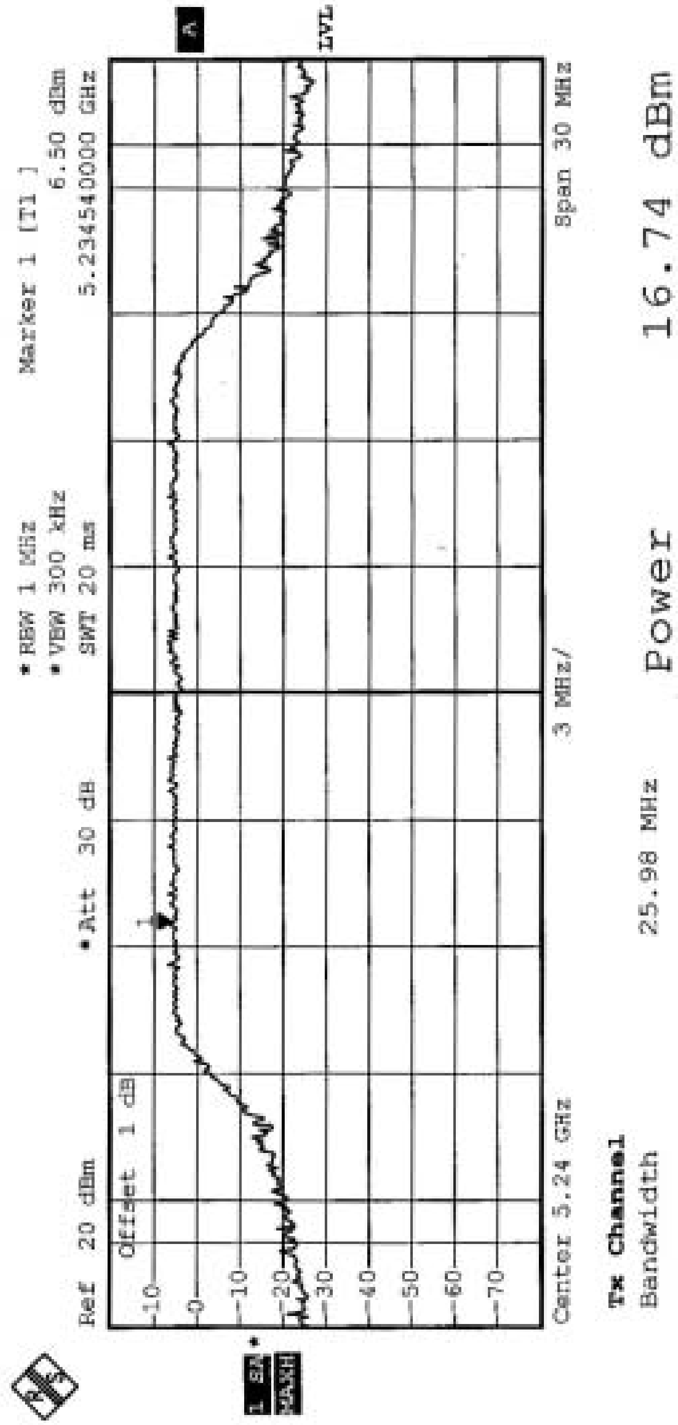
EUT	Wireless AP	**MODEL**	WSR-8002
MODE	Normal	**INPUT POWER (SYSTEM)**	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	27eg. C, 59RH, 967 hPa	**TESTED BY**	Tony Chen

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	26dBc Occupied Bandwidth (MHz)	PASS/FAIL
1	5180	16.73	17.00	25.62	PASS
4	5240	16.74	17.00	25.98	PASS
5	5260	17.24	24.00	26.16	PASS
8	5320	17.30	24.00	27.24	PASS

CHANNEL 1

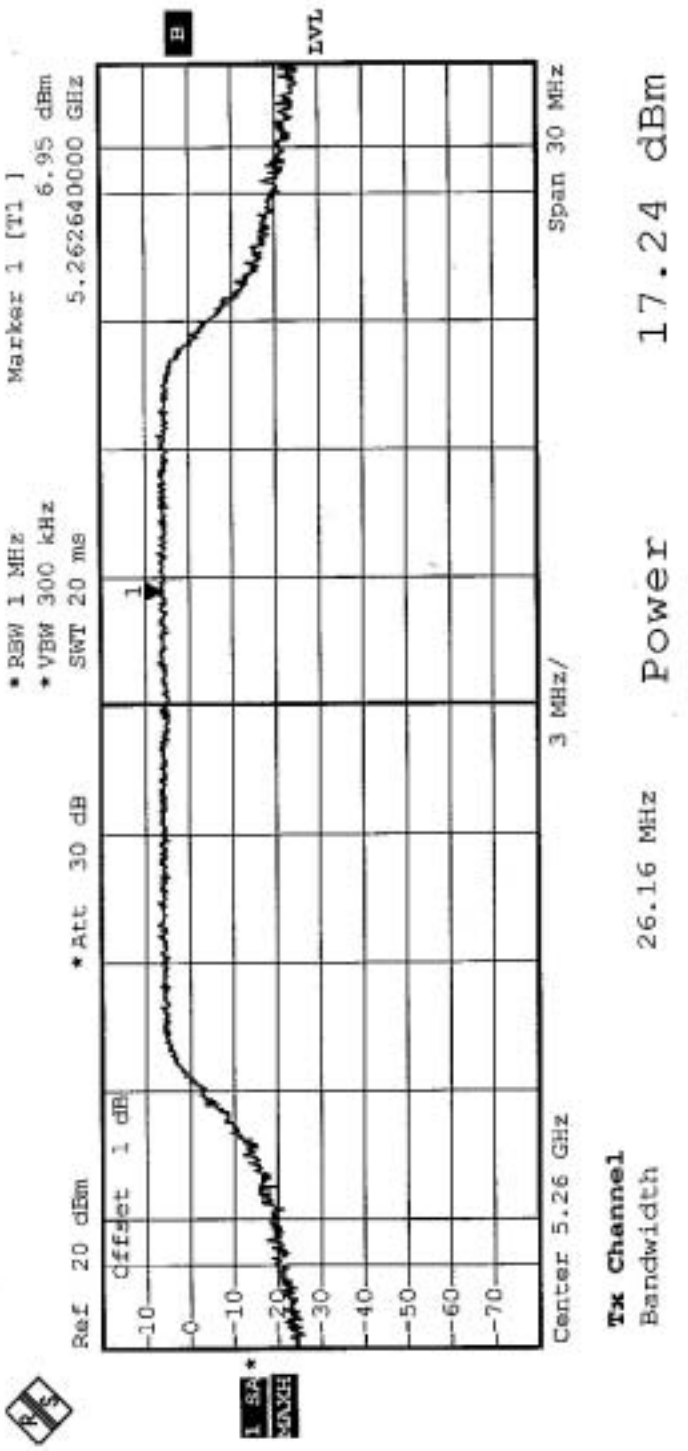

Ref 20 dBm
Offset 1 dB
10
0
-10
-20
-30
-40
-50
-60
-70
Att 30 dB
RBW 1 MHz
VBW 300 kHz
SWT 20 ms
Marker 1 [T1]
6.52 dBm
5.17763000 GHz
LVL
Center 5.18 GHz
3 MHz/
Span 30 MHz
Tx Channel
Bandwidth
25.62 MHz
Power
16.73 dBm

CHANNEL 4

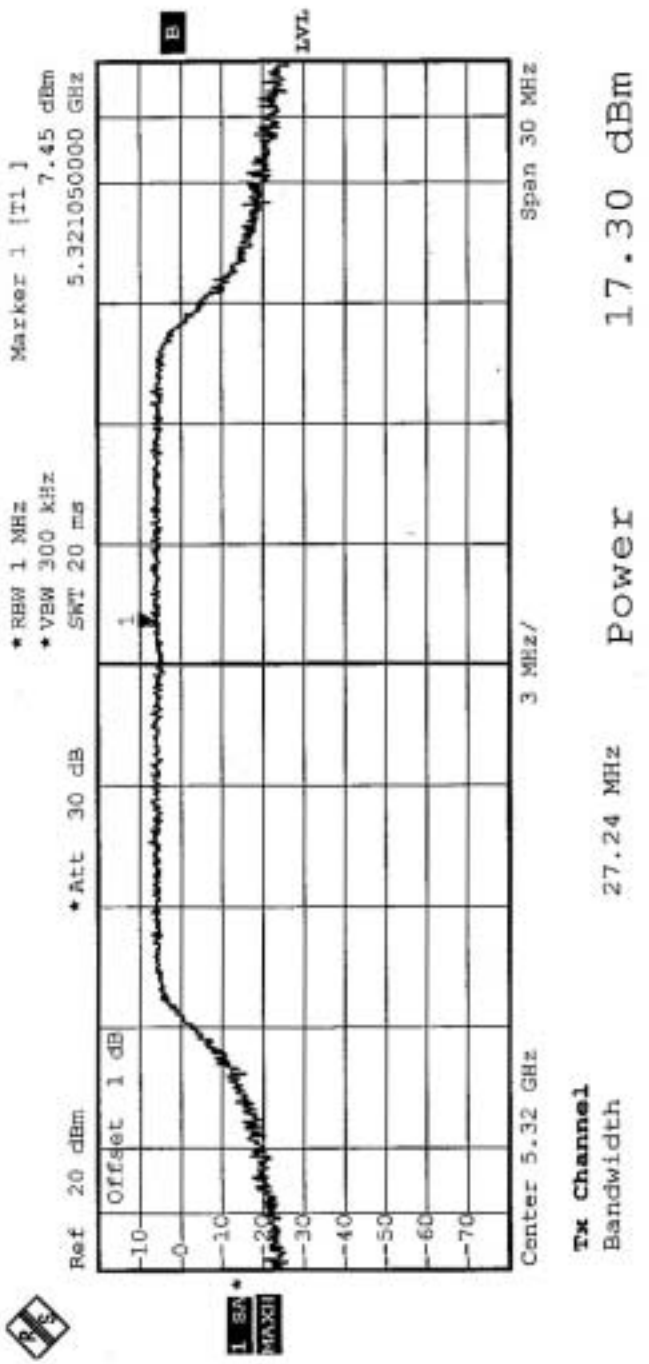


Marker 1 [T1]
6.50 dBm
5.23454000 GHz
* RBW 1 MHz
* VBW 300 kHz
SWT 20 ms
* Att 30 dB
Ref 20 dBm
Offset 1 dB
LVL
Center 5.24 GHz
3 MHz/
Span 30 MHz
Tx Channel
Bandwidth 25.98 MHz
Power 16.74 dBm

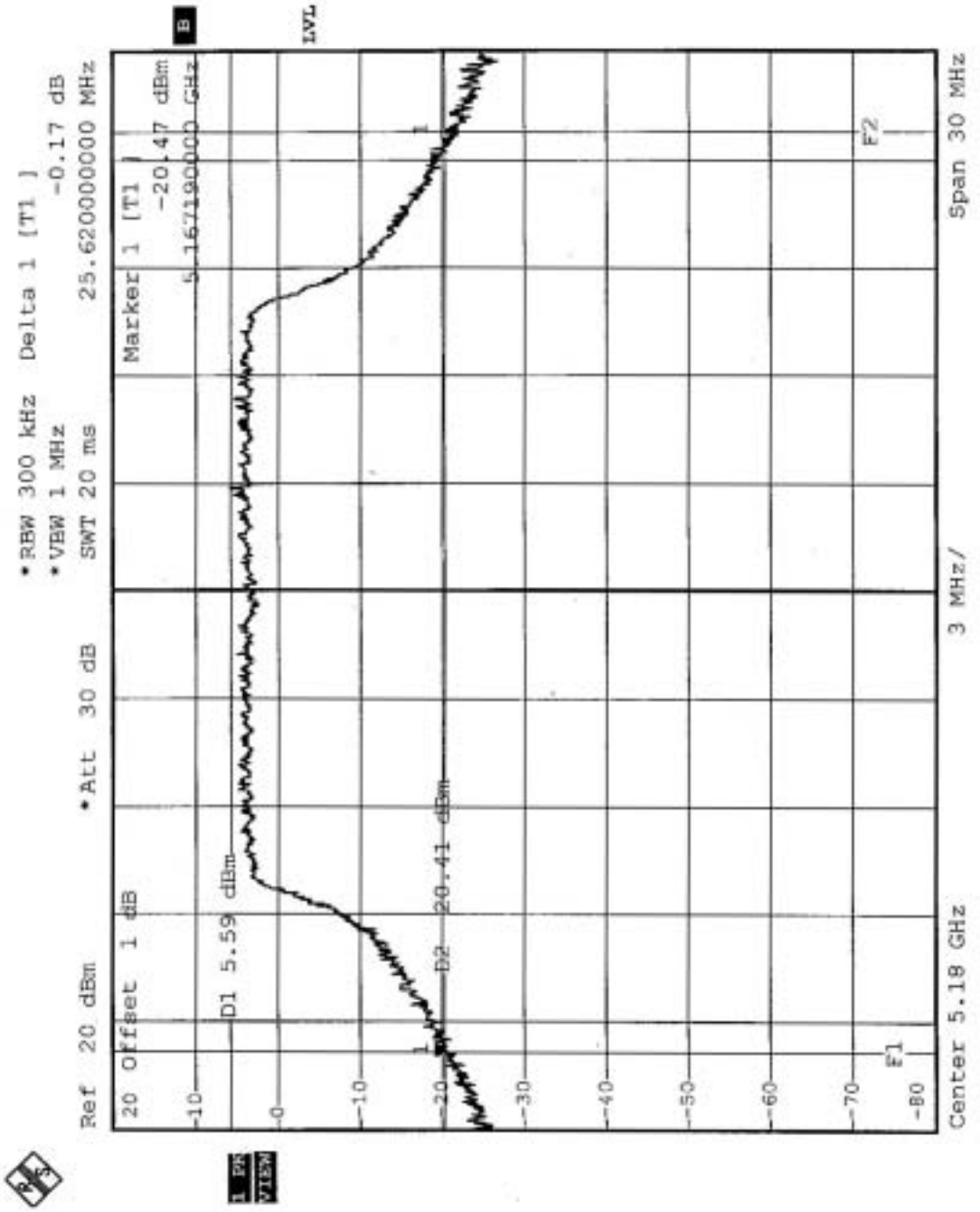
CHANNEL 5


Ref 20 dBm
Offset 1 dB
10
0
-10
-20
-30
-40
-50
-60
-70
Center 5.26 GHz
3 MHz/
Span 30 MHz
* Att 30 dB
* RBW 1 MHz
* VBW 300 kHz
SWT 20 ms
Marker 1 [T1]
6.95 dBm
5.262640000 GHz
1
B
LVL
Tx Channel
Bandwidth
26.16 MHz
Power
17.24 dBm

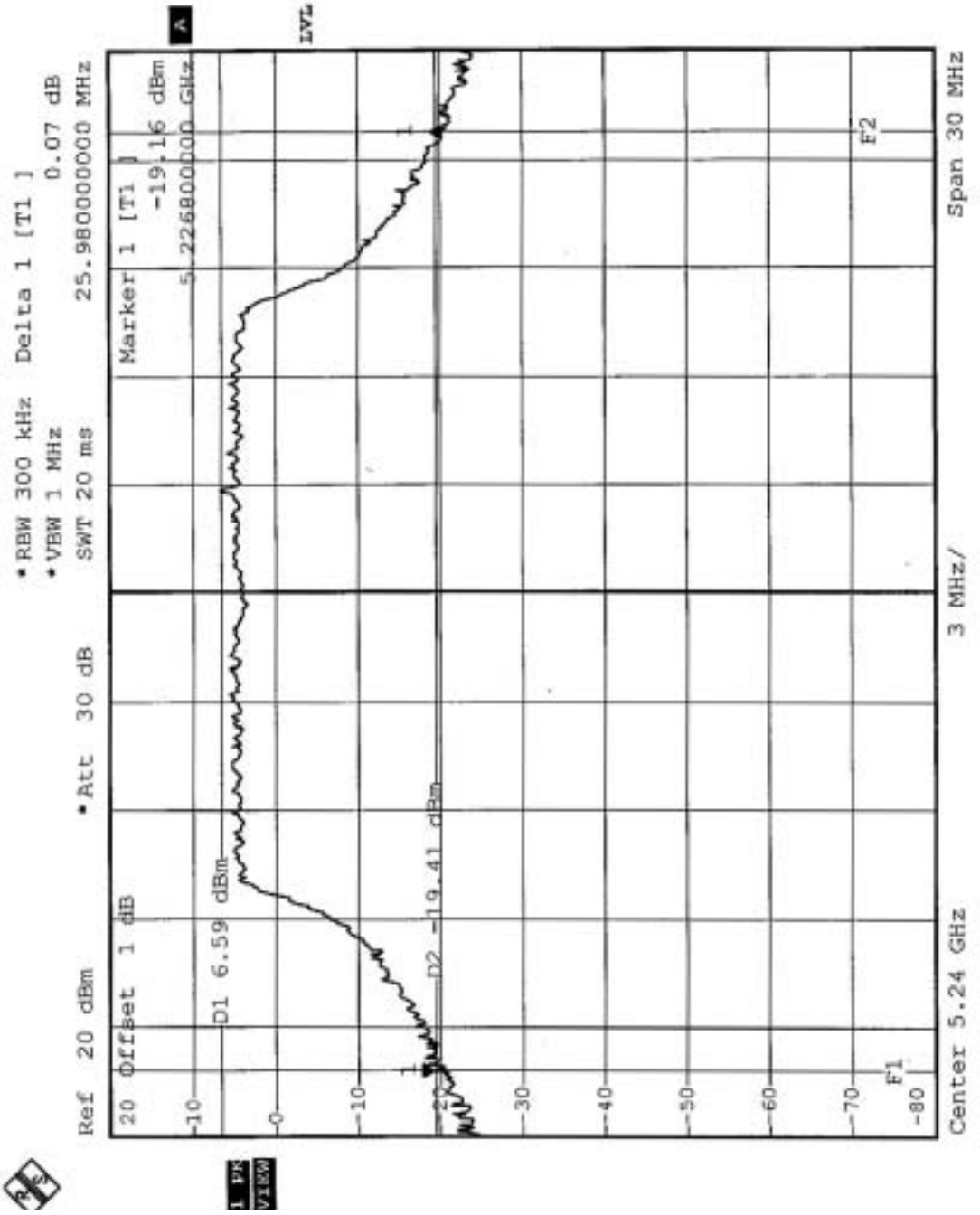
CHANNEL 8


Ref 20 dBm
Offset 1 dB
*Att 30 dB
*RBW 1 MHz
*VBW 300 kHz
SWT 20 ms
Marker 1 [T1]
7.45 dBm
5.321050000 GHz
Center 5.32 GHz
3 MHz/
Span 30 MHz
Tx Channel
Bandwidth
27.24 MHz
Power
17.30 dBm

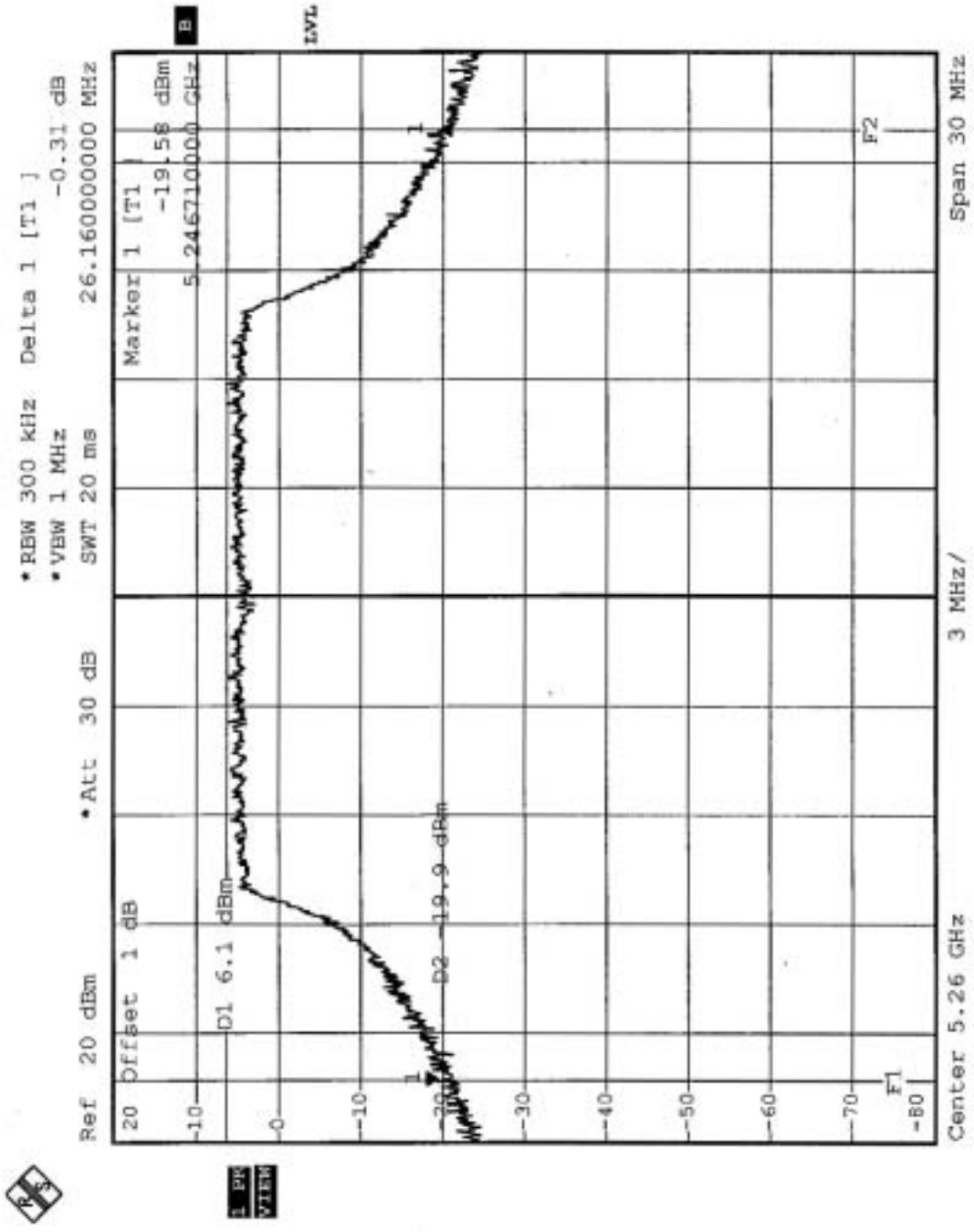
CHANNEL 1


RBW 300 kHz
VBW 1 MHz
SWT 20 ms
Att 30 dB
Offset 1 dB
Ref 20 dBm
Delta 1 [T1]
-0.17 dB
25.620000000 MHz
Marker 1 [T1]
-20.47 dBm
5.167190000 GHz
D1 5.59 dBm
D2 20.41 dBm
Center 5.18 GHz
3 MHz/
Span 30 MHz
F1
F2
LVL

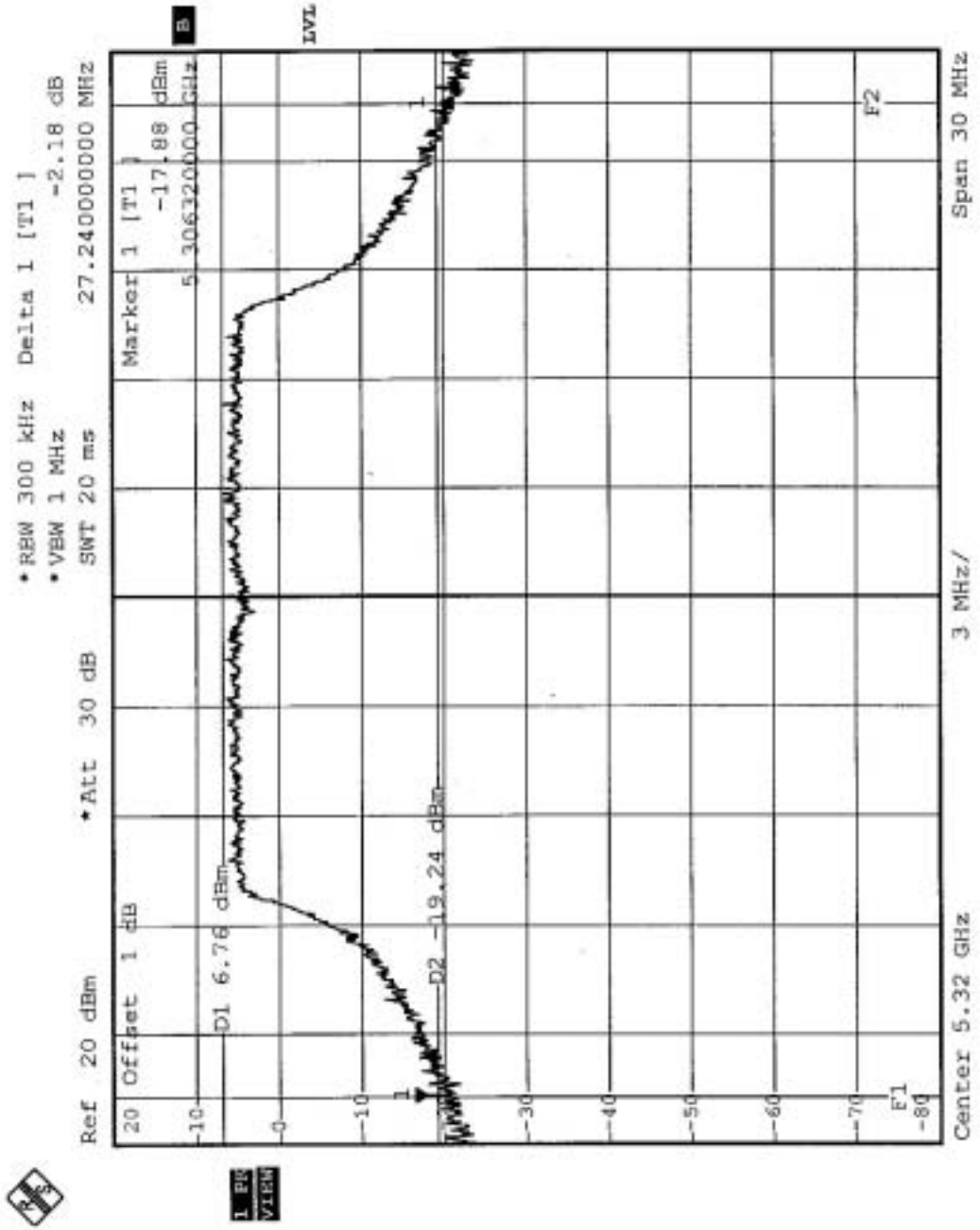
CHANNEL 4


Ref 20 dBm
Offset 1 dB
Att 30 dB
SWT 20 ms
VBW 1 MHz
RBW 300 kHz
Delta 1 [T1]
0.07 dB
25.980000000 MHz
Marker 1 [T1]
-19.16 dBm
5.226800000 GHz
D1 6.59 dBm
D2 -19.41 dBm
Center 5.24 GHz
3 MHz/
Span 30 MHz
F1
F2

CHANNEL 5


RBW 300 kHz
VBW 1 MHz
SWT 20 ms
Att 30 dB
Ref 20 dBm
Offset 1 dB
Delta 1 [T1]
-0.31 dB
26.160000000 MHz
Marker 1 [T1]
-19.58 dBm
5.246710000 GHz
D1 6.1 dBm
D2 -19.9 dBm
Center 5.26 GHz
3 MHz/
Span 30 MHz
F1
F2

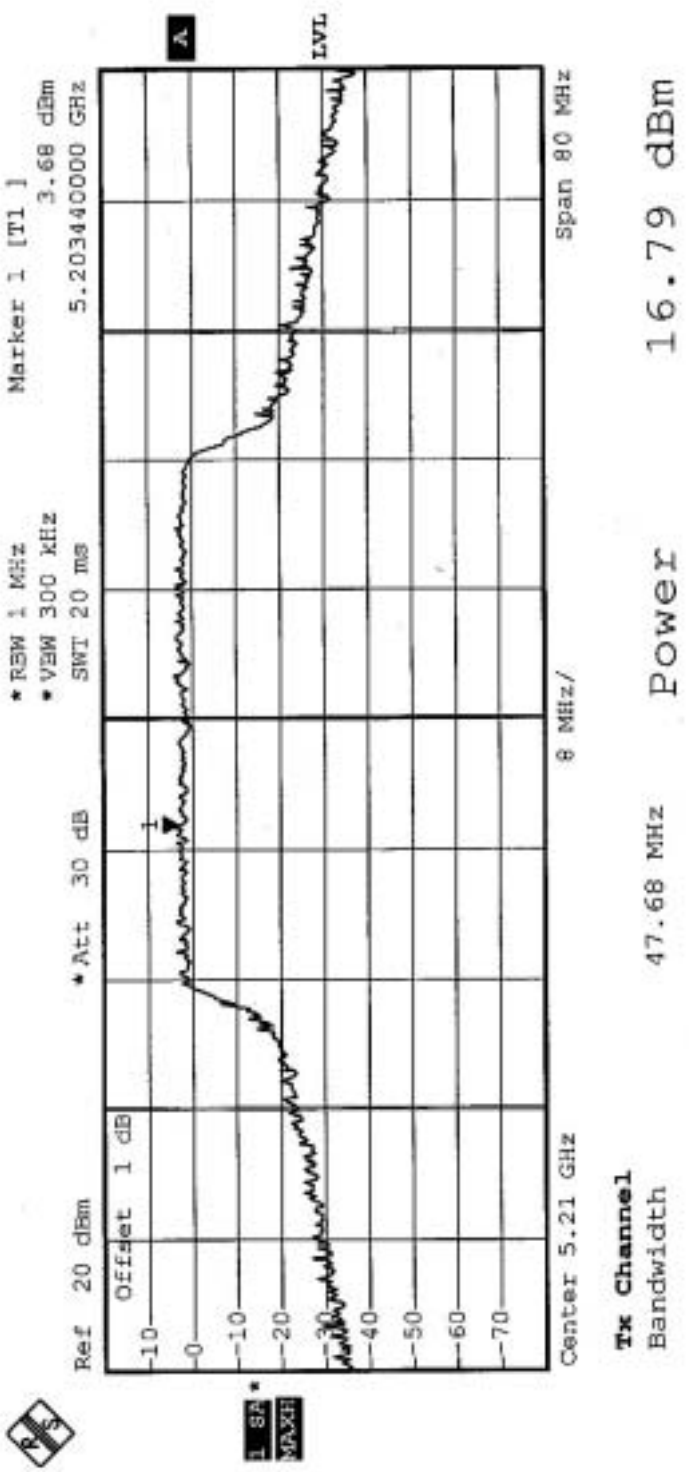
CHANNEL 8


RBW 300 kHz
VBW 1 MHz
SWT 20 ms
Delta 1 [T1]
-2.18 dB
27.240000000 MHz
Marker 1 [T1]
-17.98 dBm
5.30632000 GHz
Ref 20 dBm
Offset 1 dB
Att 30 dB
D1 6.76 dBm
D2 -19.24 dBm
Center 5.32 GHz
3 MHz/
Span 30 MHz
F1
F2

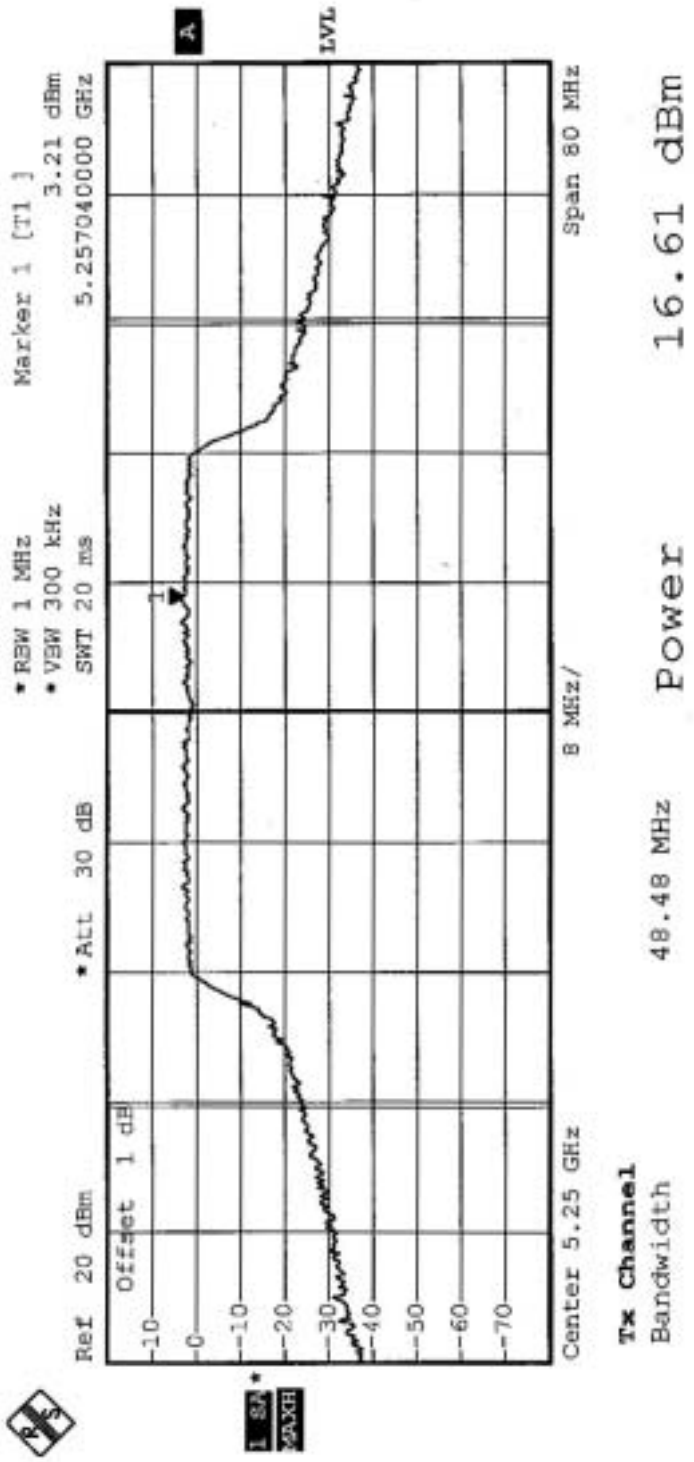
EUT	Wireless AP	**MODEL**	WSR-8002
MODE	Turbo	**INPUT POWER (SYSTEM)**	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	27eg. C, 59RH, 967 hPa	**TESTED BY**	Tony Chen

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	26dBc Occupied Bandwidth (MHz)	PASS/FAIL
1	5210	16.79	17.00	47.68	PASS
2	5250	16.61	17.00	48.48	PASS
3	5290	18.22	24.00	50.88	PASS

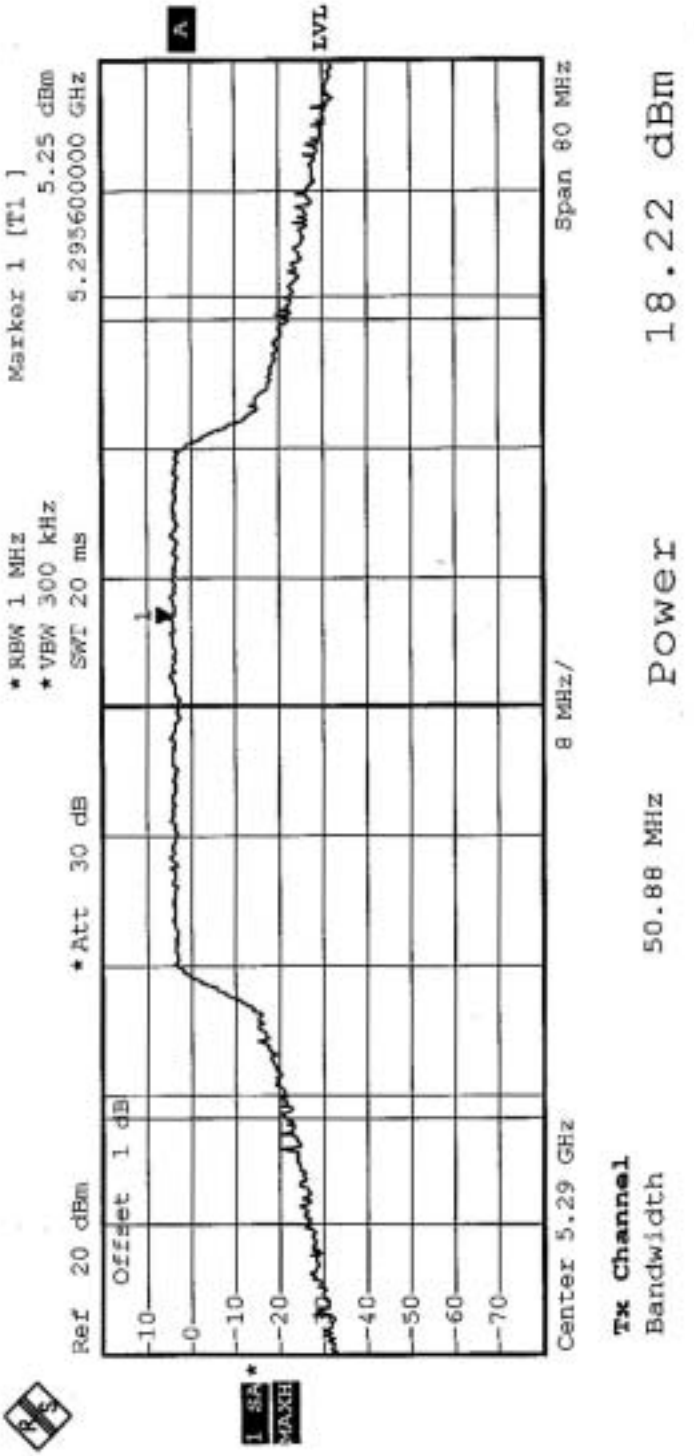
CHANNEL 1


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]
3.68 dBm
5.203440000 GHz
A
LVL
Center 5.21 GHz
8 MHz/
Span 80 MHz
1 SA
MAXH
Tx Channel
Bandwidth
47.68 MHz
Power
16.79 dBm

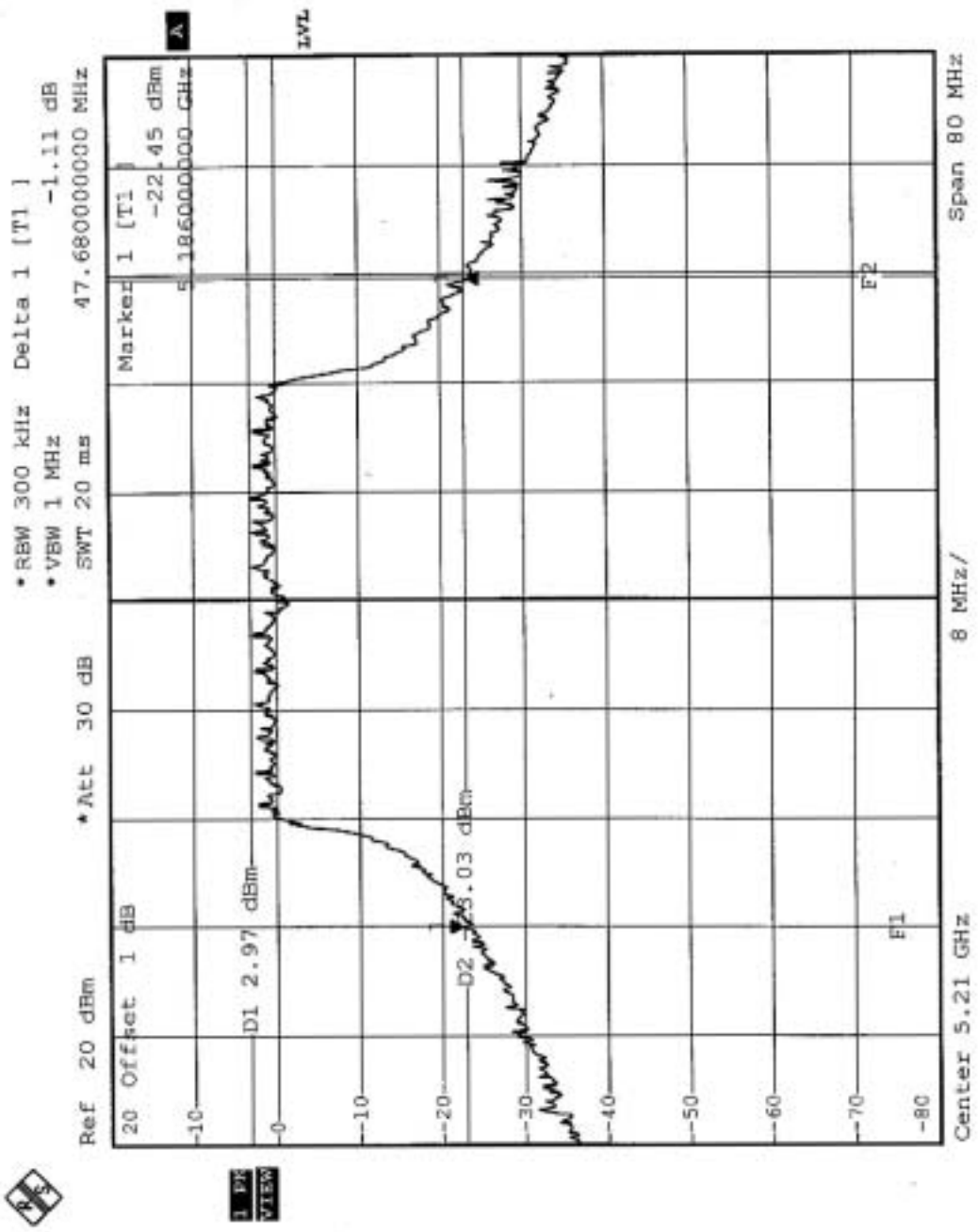
CHANNEL 2


Ref 20 dBm
Offset 1 dB
* Att 30 dB
* RBW 1 MHz
* VBW 300 kHz
SWT 20 ms
Marker 1 [T1]
3.21 dBm
5.257040000 GHz
A
LVL
Center 5.25 GHz
8 MHz/
Span 80 MHz
Tx Channel
Bandwidth
48.48 MHz
Power
16.61 dBm

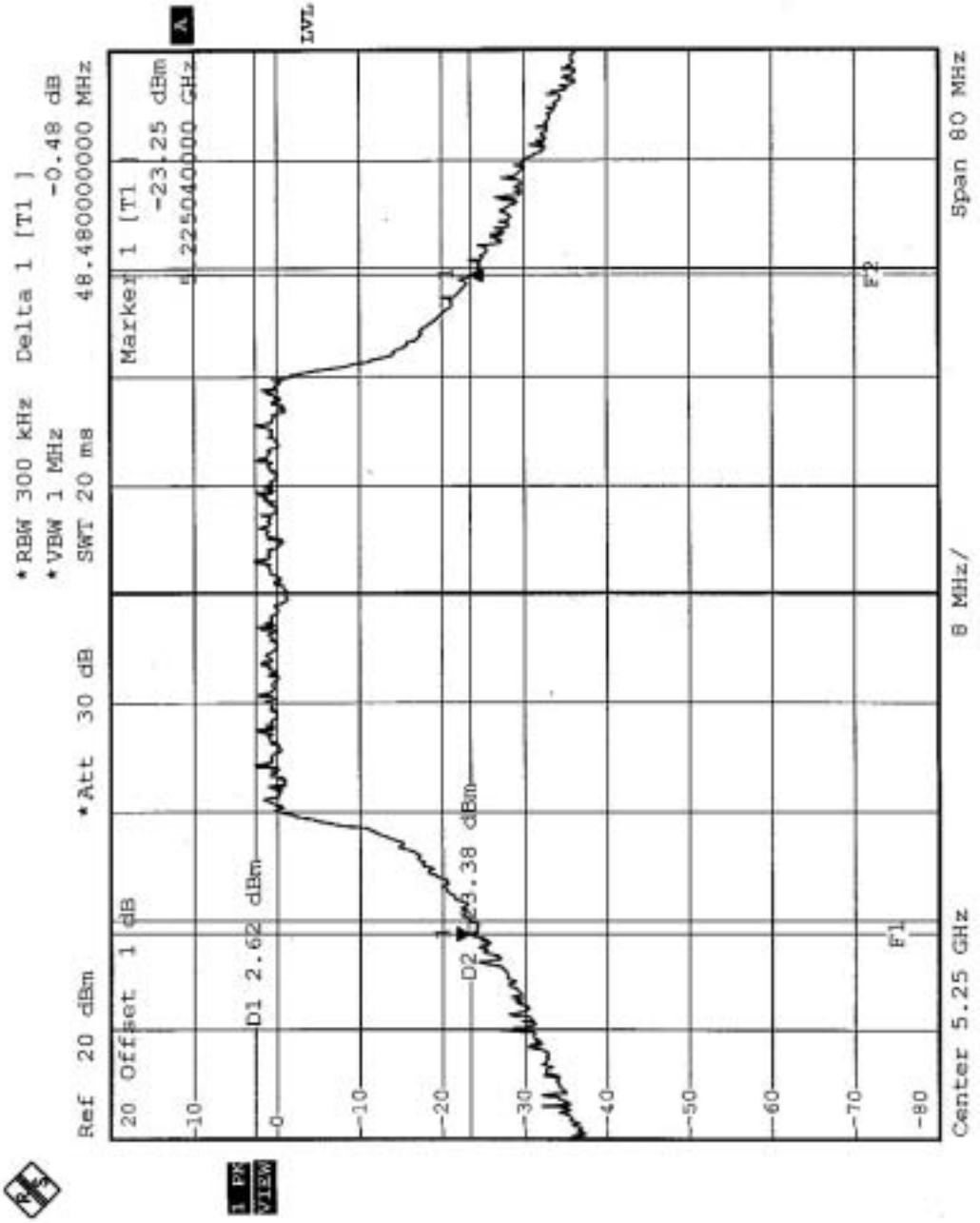
CHANNEL 3


Ref 20 dBm
Offset 1 dB
* Att 30 dB
* RBW 1 MHz
* VBW 300 kHz
SWT 20 ms
Marker 1 [T1]
5.25 dBm
5.295600000 GHz
Center 5.29 GHz
8 MHz/
Span 80 MHz
Tx Channel
Bandwidth
50.88 MHz
Power
18.22 dBm

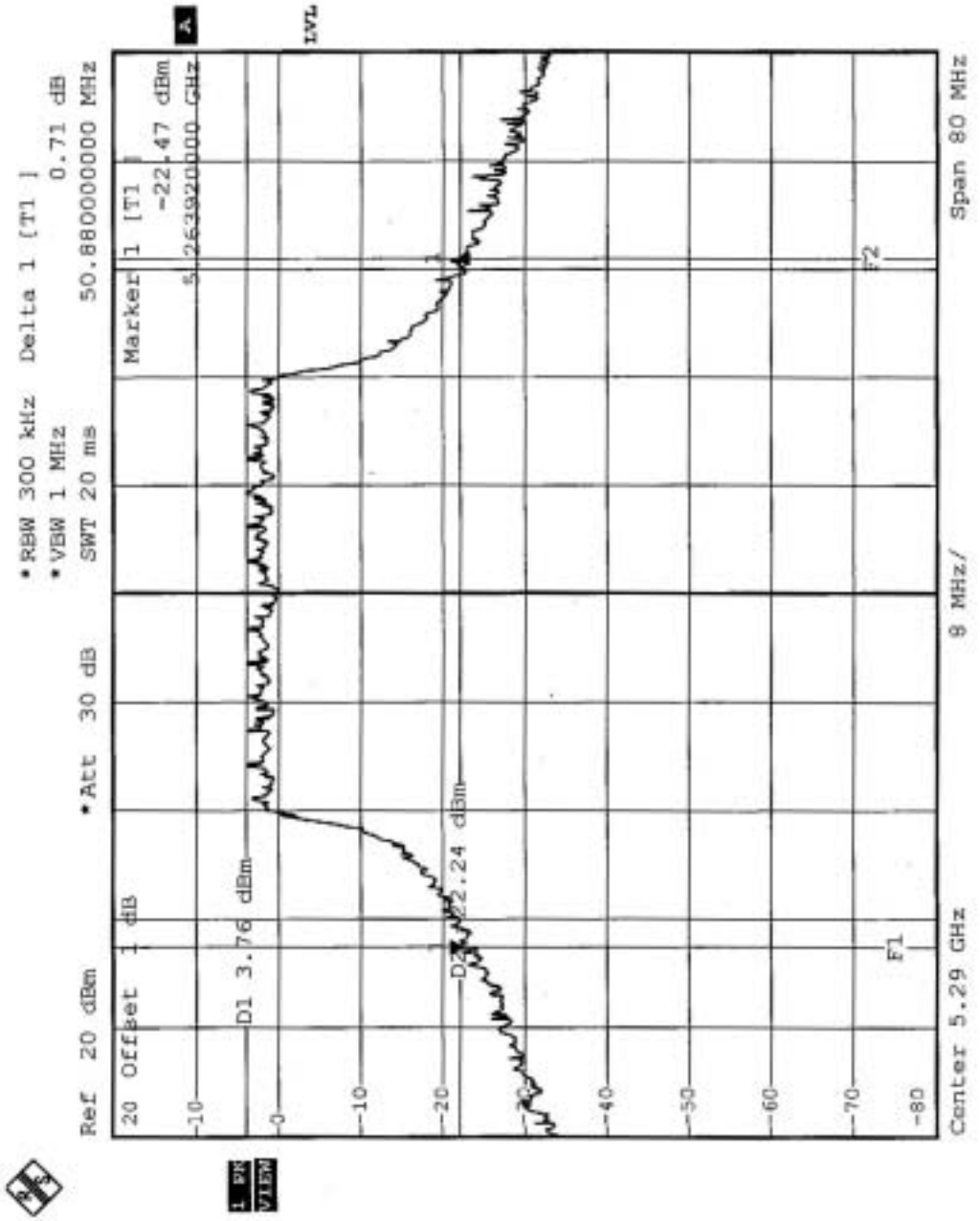
CHANNEL 1


RBW 300 kHz
VBW 1 MHz
SWT 20 ms
Att 30 dB
Offset 1 dB
Ref 20 dBm
Delta 1 [T1]
-1.11 dB
47.680000000 MHz
Marker 1 [T1]
-22.45 dBm
5.186000000 GHz
D1 2.97 dBm
D2 -3.03 dBm
F1
F2
Center 5.21 GHz
8 MHz/
Span 80 MHz

CHANNEL 2


RBW 300 kHz
VBW 1 MHz
SWT 20 ms
Att 30 dB
Offset 1 dB
Ref 20 dBm
Delta 1 [T1]
-0.48 dB
48.480000000 MHz
Marker 1 [T1]
-23.25 dBm
5.225040000 GHz
D1 2.62 dBm
D2 -3.38 dBm
Center 5.25 GHz
8 MHz/
Span 80 MHz
1 PK VIEW

CHANNEL 3


RBW 300 kHz
VBW 1 MHz
SWT 20 ms
Att 30 dB
Offset 1 dB
Ref 20 dBm
Delta 1 [T1]
0.71 dB
50.680000000 MHz
Marker 1 [T1]
-22.47 dBm
5.263920000 GHz
D1 3.76 dBm
D2 -22.24 dBm
F1
F2
Center 5.29 GHz
8 MHz/
Span 80 MHz
1 PK
VIEW

5.4 PEAK POWER EXCURSION MEASUREMENT

5.4.1 LIMITS OF PEAK POWER EXCURSION MEASUREMENT

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

5.4.2 TEST INSTRUMENTS

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

Note:

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

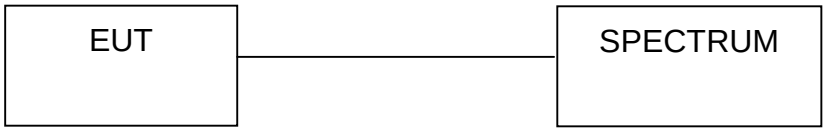
5.4.3 TEST PROCEDURE

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

5.4.4 DEVIATION FROM TEST STANDARD

No deviation

5.4.5 TEST SETUP



5.4.6 EUT OPERATING CONDITIONS

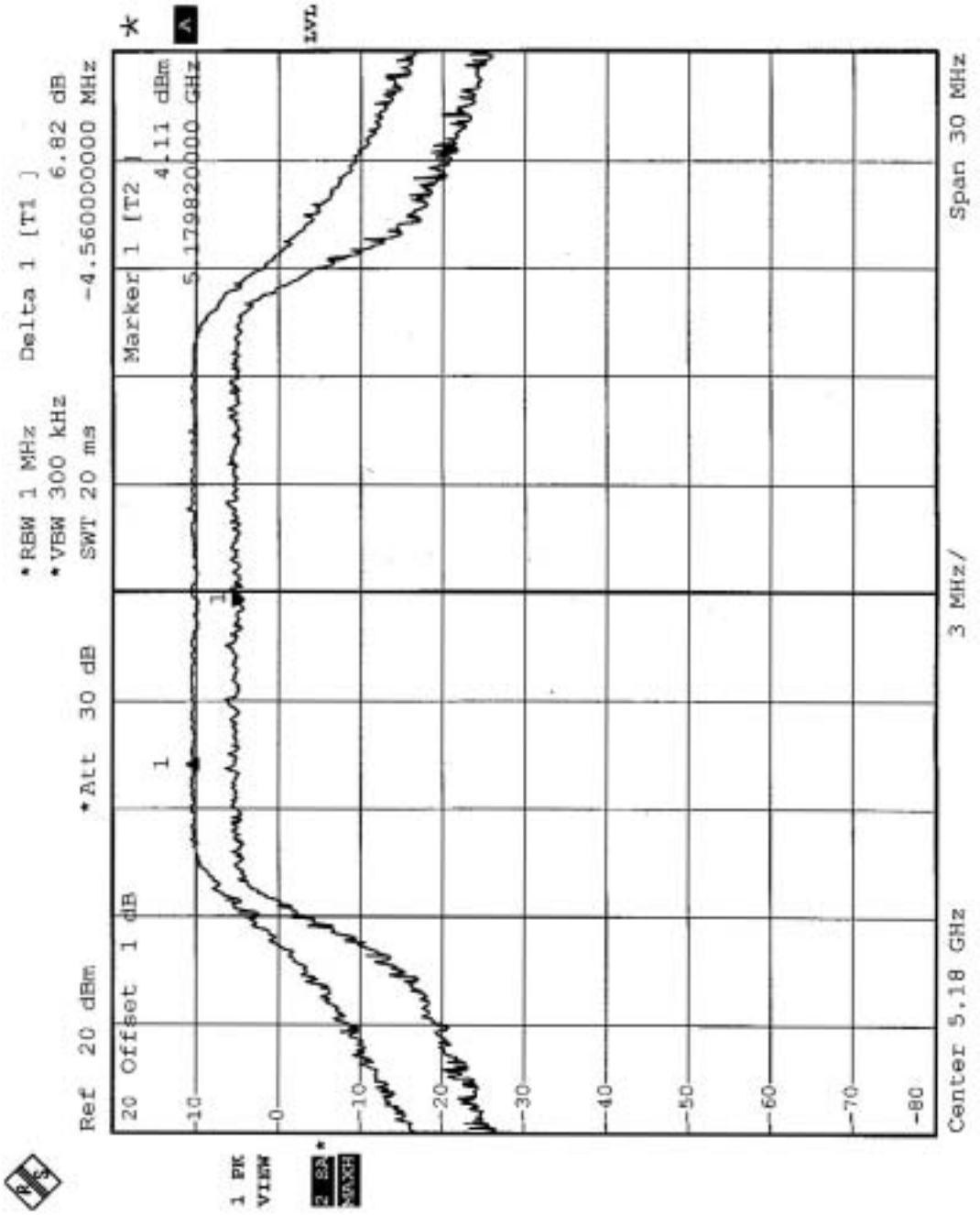
The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.

5.4.7 TEST RESULTS

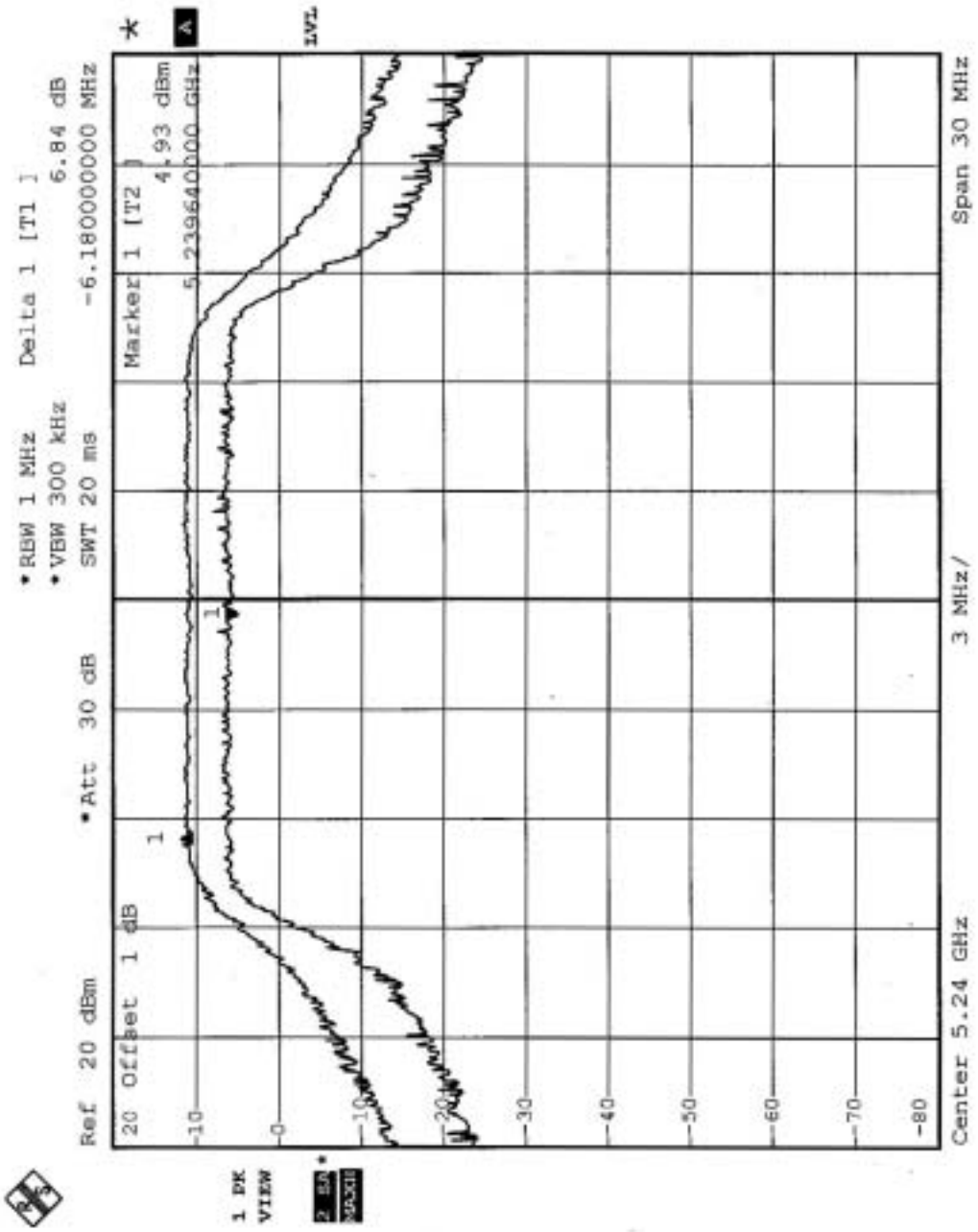
EUT	Wireless AP	**MODEL**	WSR-8002
MODE	Normal	**INPUT POWER (SYSTEM)**	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	27eg. C, 59RH, 967 hPa	**TESTED BY**	Tony Chen

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)	PEAK to AVERAGE EXCURSION LIMIT (dB)	PASS/FAIL
1	5180	6.82	13	PASS
4	5240	6.84	13	PASS
5	5260	7.37	13	PASS
8	5320	6.68	13	PASS

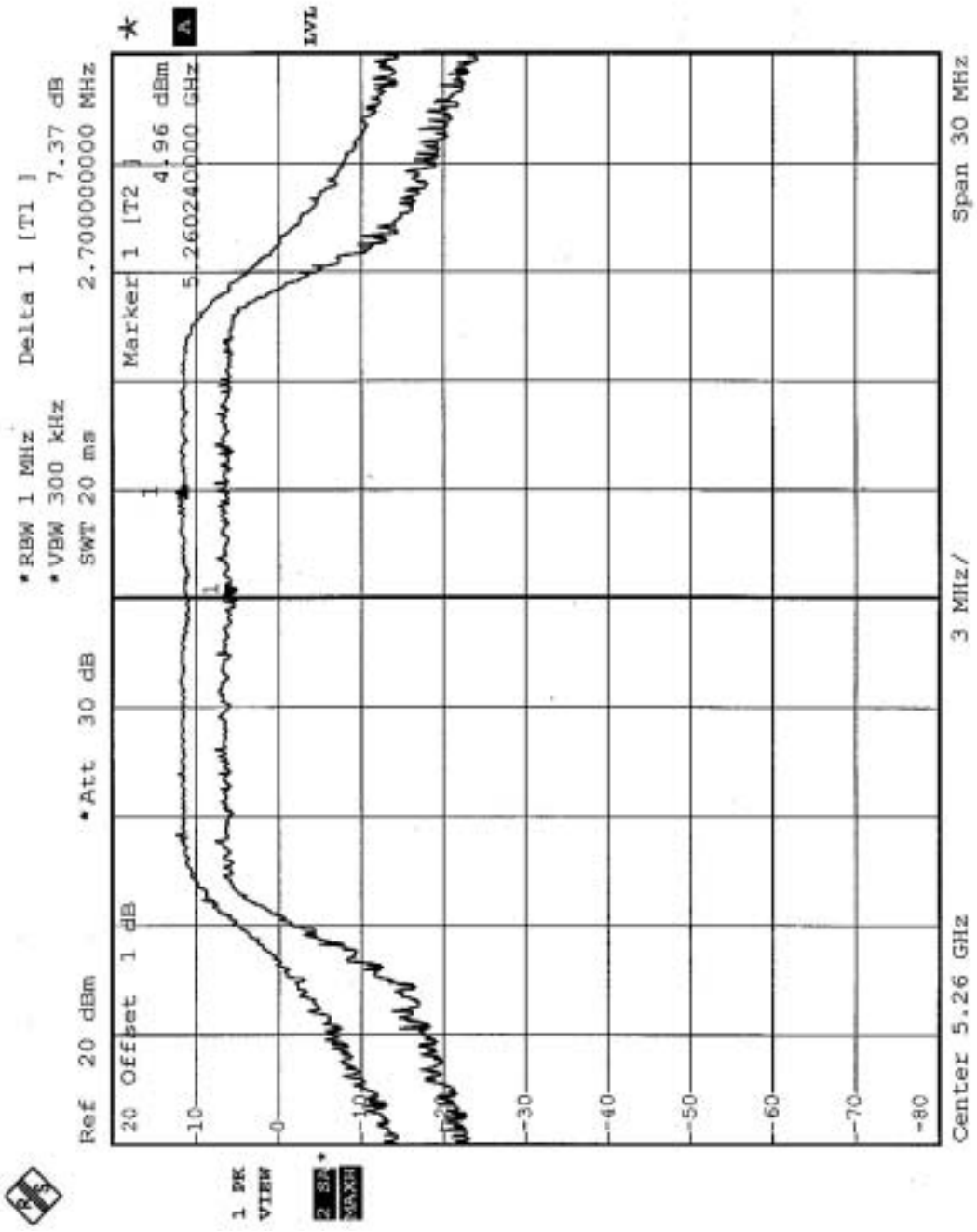
CHANNEL 1


Ref 20 dBm
20 Offset 1 dB
*Att 30 dB
*RBW 1 MHz
*VBW 300 kHz
SWT 20 ms
Delta 1 [T1]
6.82 dB
-4.56000000 MHz
Marker 1 [T2]
4.11 dBm
5.17982000 GHz
Center 5.18 GHz
3 MHz/
Span 30 MHz
1 PK VIEW
2 SA MAXH

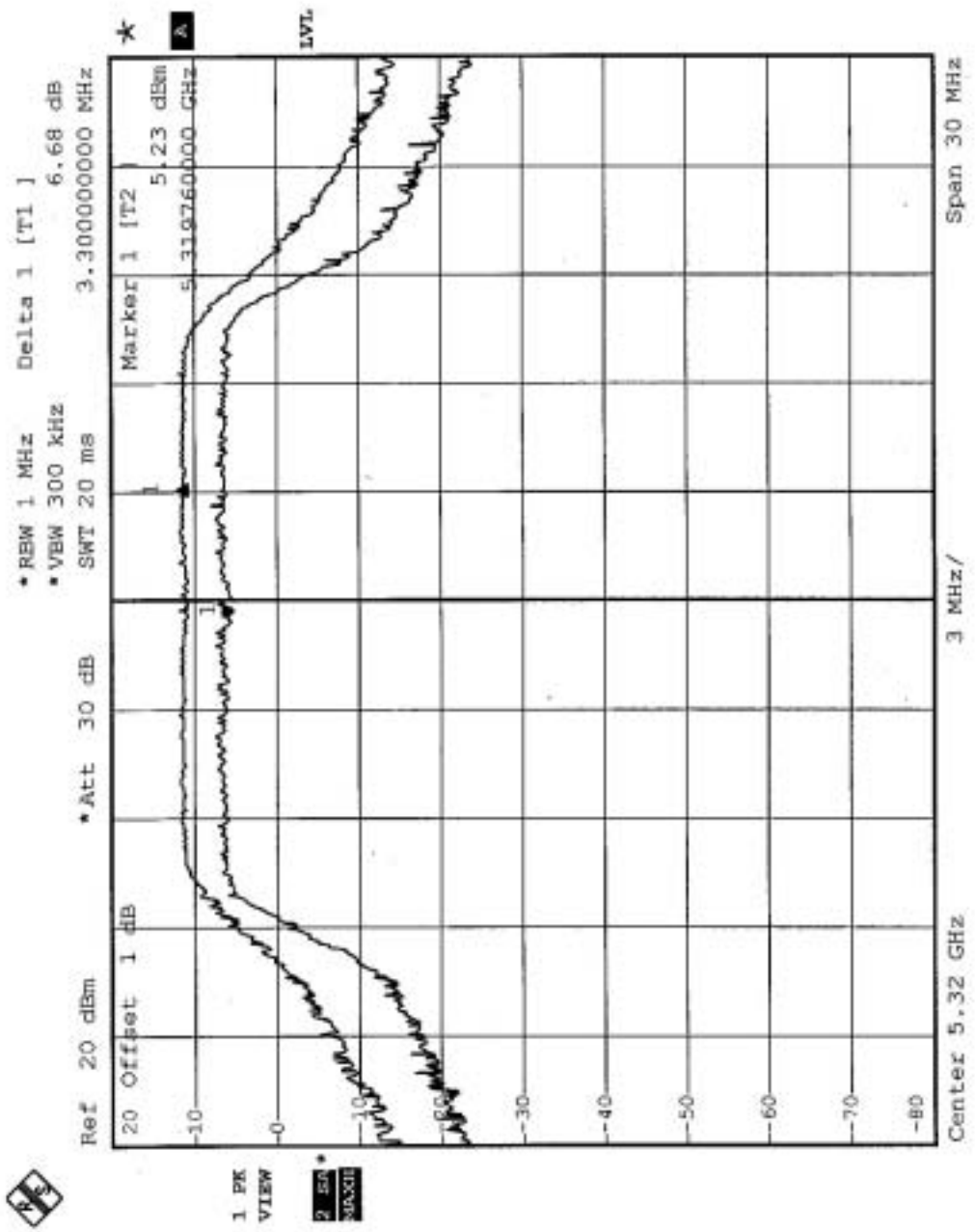
CHANNEL 4


RBW 1 MHz
VBW 300 kHz
SWT 20 ms
Att 30 dB
Offset 1 dB
Ref 20 dBm
Delta 1 [T1]
6.84 dB
-6.180000000 MHz
Marker 1 [T2]
4.93 dBm
5.239640000 GHz
Center 5.24 GHz
3 MHz/
Span 30 MHz
1 PK
VIEW

CHANNEL 5


RBW 1 MHz
VBW 300 kHz
SWT 20 ms
Delta 1 [T1]
7.37 dB
2.700000000 MHz
Marker 1 [T2]
4.96 dBm
5.260240000 GHz
Ref 20 dBm
Offset 1 dB
Att 30 dB
Center 5.26 GHz
3 MHz/
Span 30 MHz
1 PK VIEW
2 SP MAXH

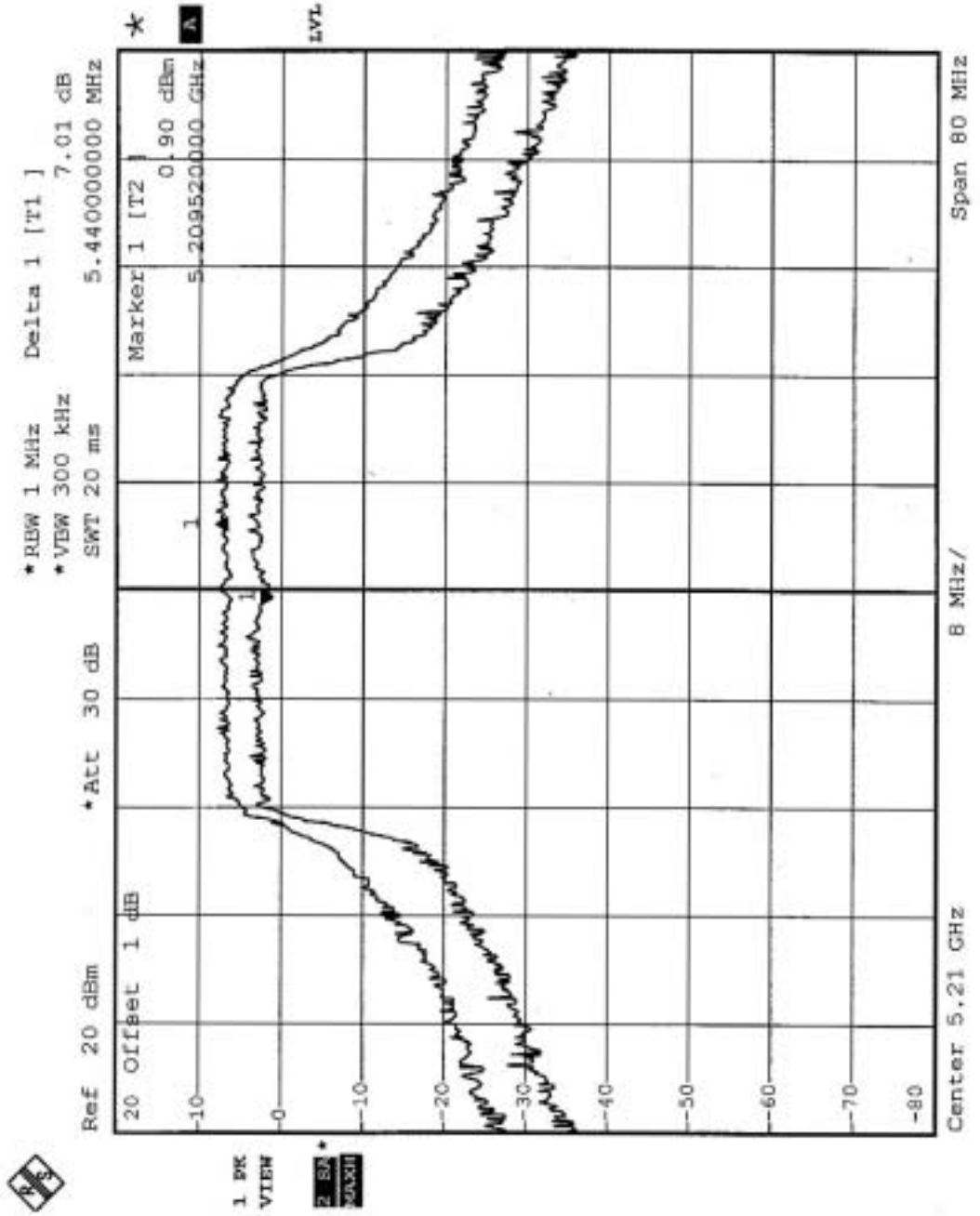
CHANNEL 8


RBW 1 MHz
VBW 300 kHz
SWT 20 ms
Delta 1 [T1]
6.68 dB
3.300000000 MHz
Marker 1 [T2]
5.23 dBm
5.319760000 GHz
Ref 20 dBm
Offset 1 dB
Att 30 dB
Center 5.32 GHz
3 MHz/
Span 30 MHz
1 PK
VIEW
MAXH

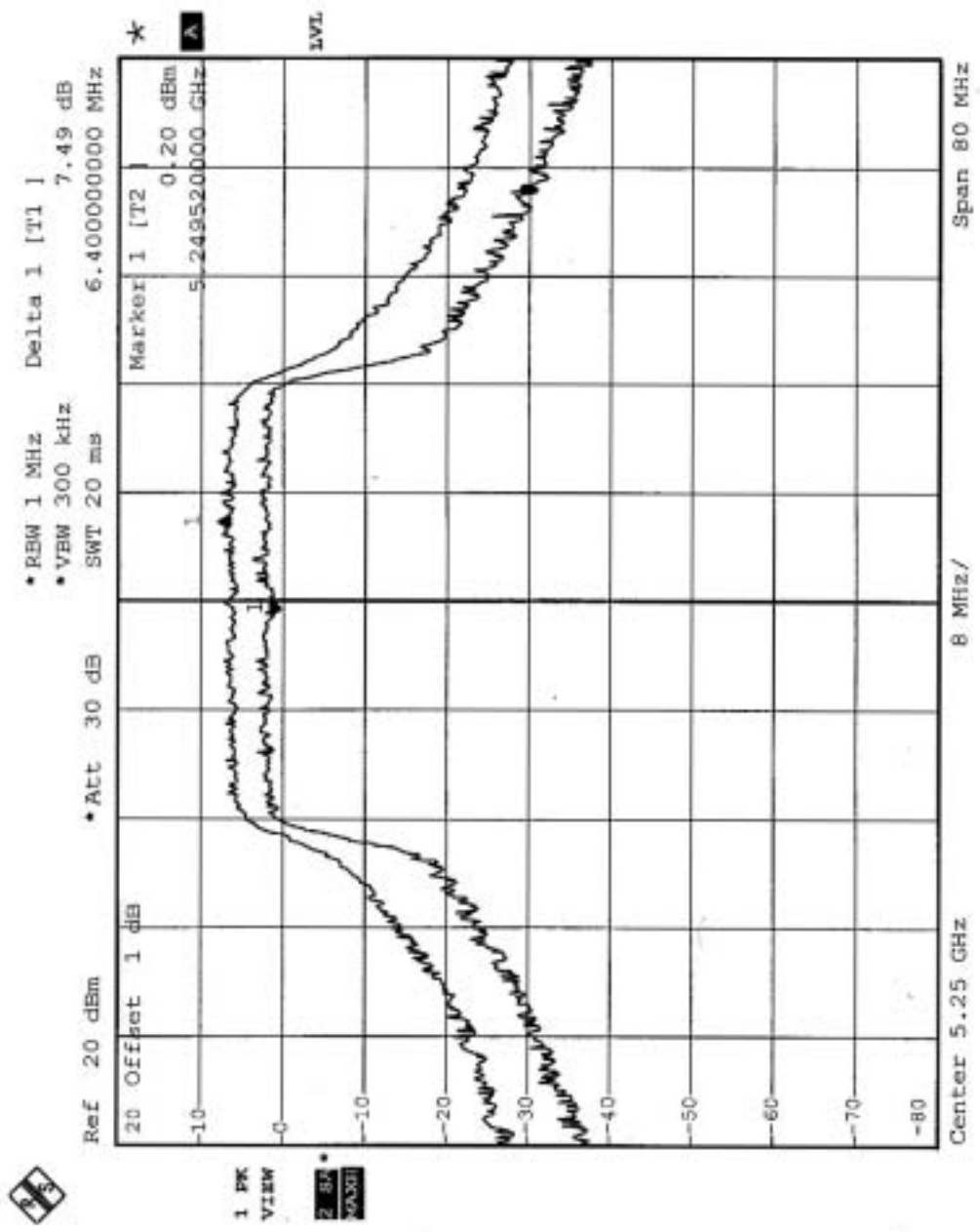
EUT	Wireless AP	**MODEL**	WSR-8002
MODE	Turbo	**INPUT POWER (SYSTEM)**	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	27eg. C, 59RH, 967 hPa	**TESTED BY**	Tony Chen

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)	PEAK to AVERAGE EXCURSION LIMIT (dB)	PASS/FAIL
1	5210	7.01	13	PASS
2	5250	7.49	13	PASS
3	5290	6.76	13	PASS

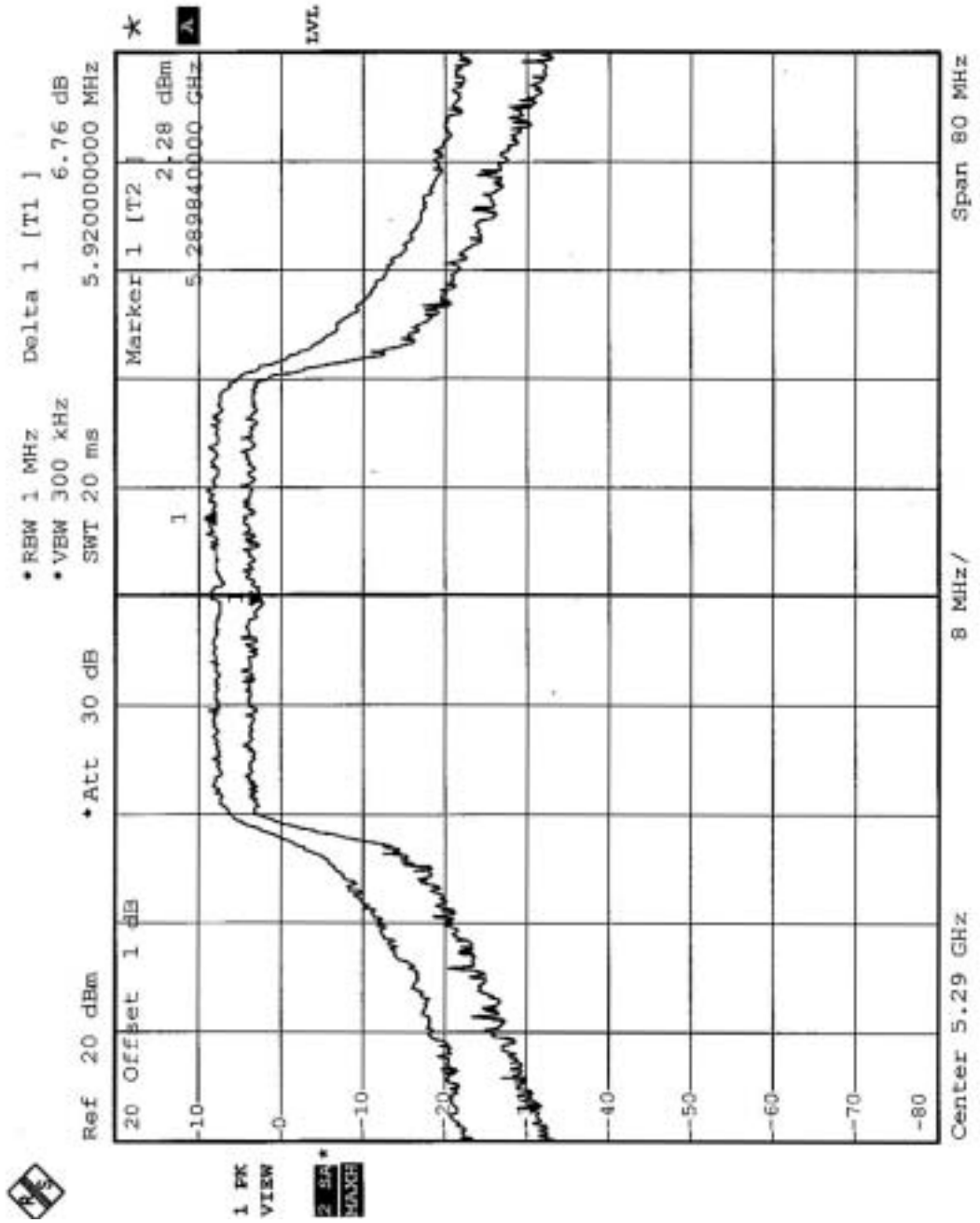
CHANNEL 1


Ref 20 dBm
20 Offset 1 dB
*Att 30 dB
*RBW 1 MHz
*VBW 300 kHz
SWT 20 ms
Delta 1 [T1]
7.01 dB
5.440000000 MHz
Marker 1 [T2]
0.90 dBm
5.209520000 GHz
Center 5.21 GHz
8 MHz/
Span 80 MHz
1 PK
VIEW
2 SP
MAXH

CHANNEL 2


RBW 1 MHz
VBW 300 kHz
SWT 20 ms
Att 30 dB
Offset 1 dB
Ref 20 dBm
Delta 1 [T1]
7.49 dB
6.400000000 MHz
Marker 1 [T2]
0.20 dBm
5.249520000 GHz
Center 5.25 GHz
8 MHz/
Span 80 MHz
1 PK
VIEW
2 BK
MAXH

CHANNEL 3


Ref 20 dBm
20 Offset 1 dB
*Att 30 dB
*RBW 1 MHz
*VBW 300 kHz
SWT 20 ms
Delta 1 [T1]
6.76 dB
5.920000000 MHz
Marker 1 [T2]
2.28 dBm
5.289840000 GHz
Center 5.29 GHz
8 MHz/
Span 80 MHz
1 PK
VIEW
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	FSP40	100037	May 06, 2005

Note:

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

5.5.3 TEST PROCEDURES

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

5.5.4 DEVIATION FROM TEST STANDARD

No deviation

5.5.5 TEST SETUP

5.5.6 EUT OPERATING CONDITIONS

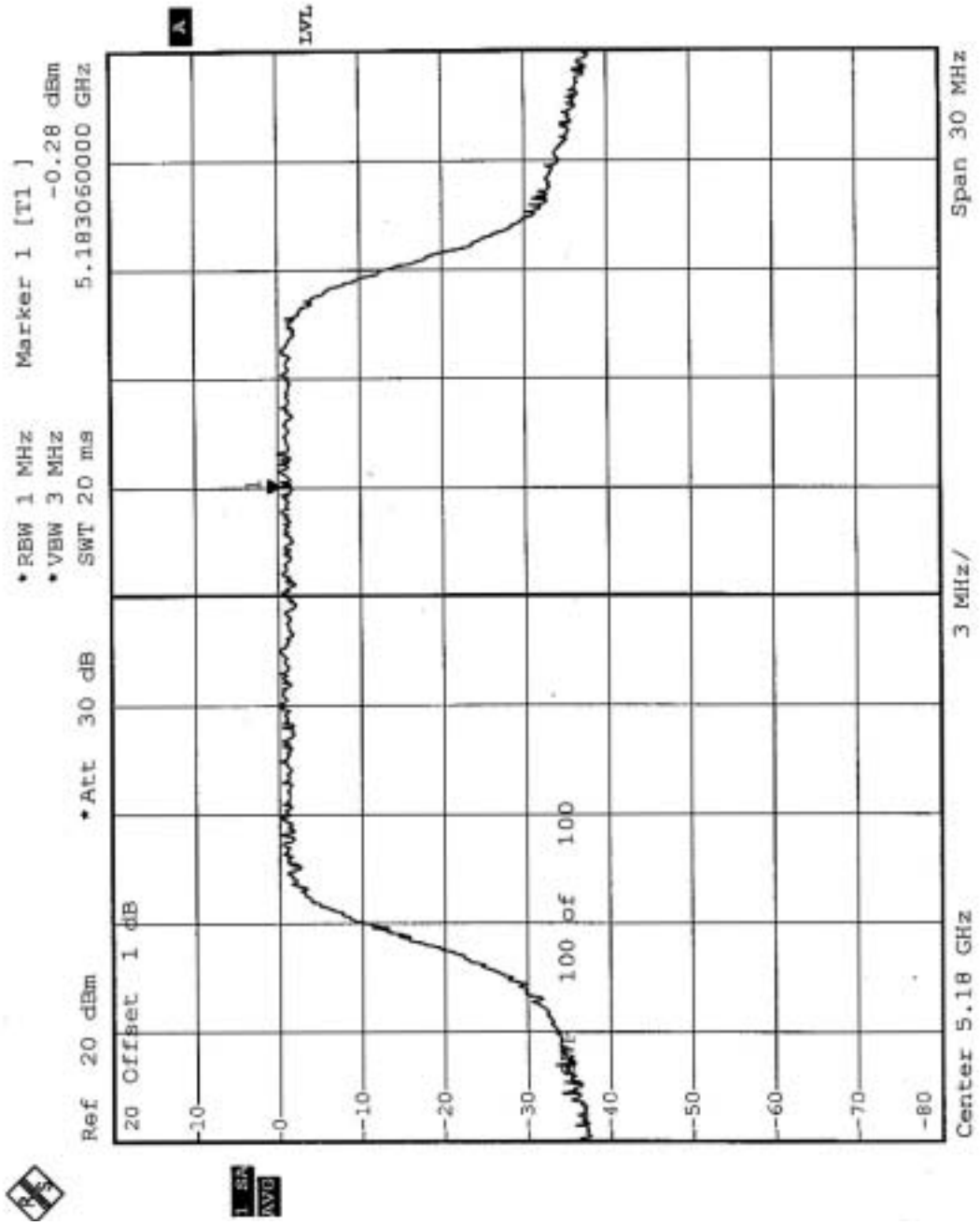
Same as 5.3.6

5.5.7 TEST RESULTS

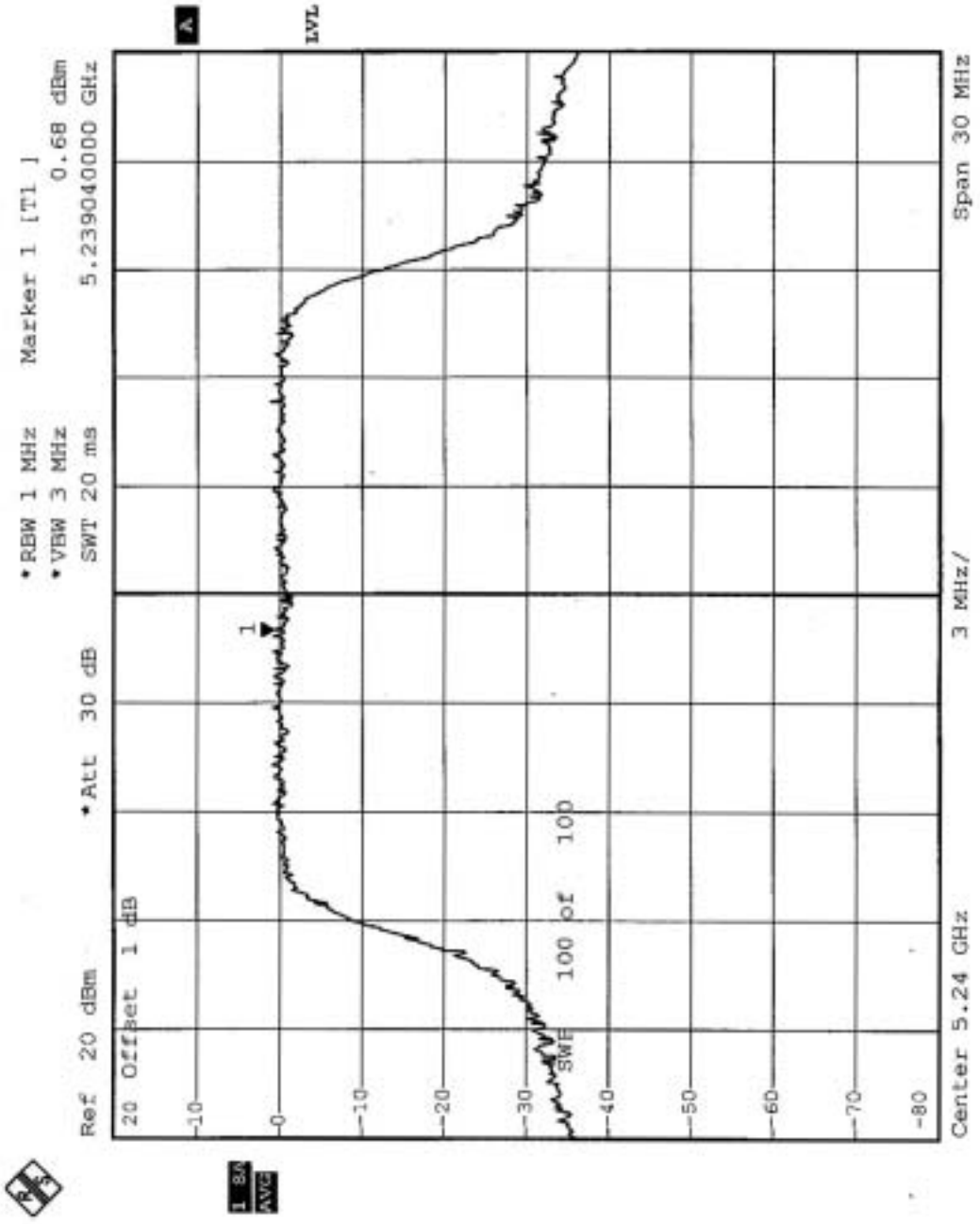
EUT	Wireless AP	**MODEL**	WSR-8002
MODE	Normal	**INPUT POWER (SYSTEM)**	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	27eg. C, 59RH, 967 hPa	**TESTED BY**	Tony Chen

CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 1 MHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	5180	-0.28	4	PASS
4	5240	0.68	4	PASS
5	5260	1.57	11	PASS
8	5320	1.54	11	PASS

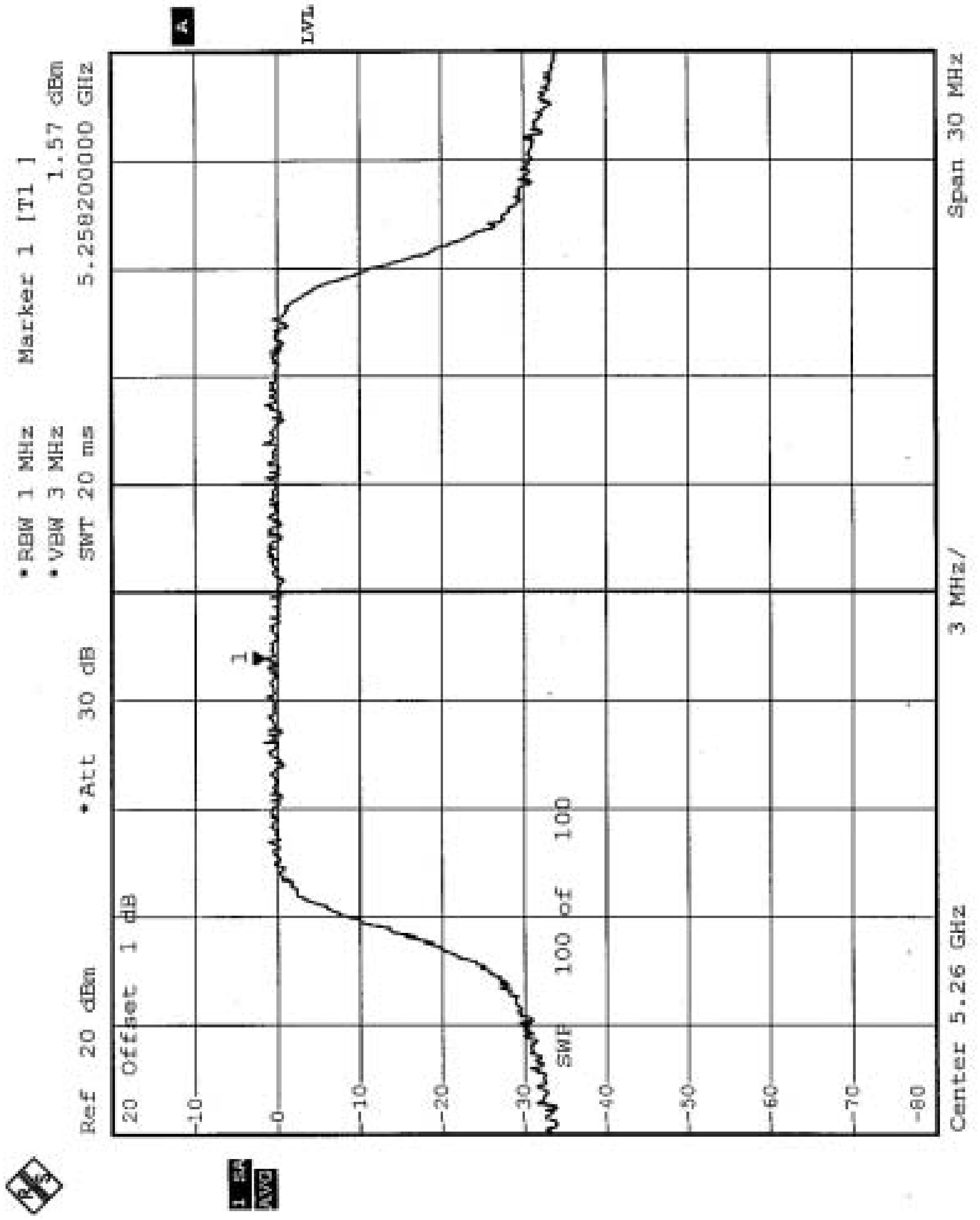
CHANNEL 1


Ref 20 dBm
20 Offset 1 dB
*Att 30 dB
*RBW 1 MHz
*VBW 3 MHz
SWT 20 ms
Marker 1 [T1]
-0.28 dBm
5.183060000 GHz
100 of 100
Center 5.18 GHz
3 MHz/
Span 30 MHz
1 SR
AVG

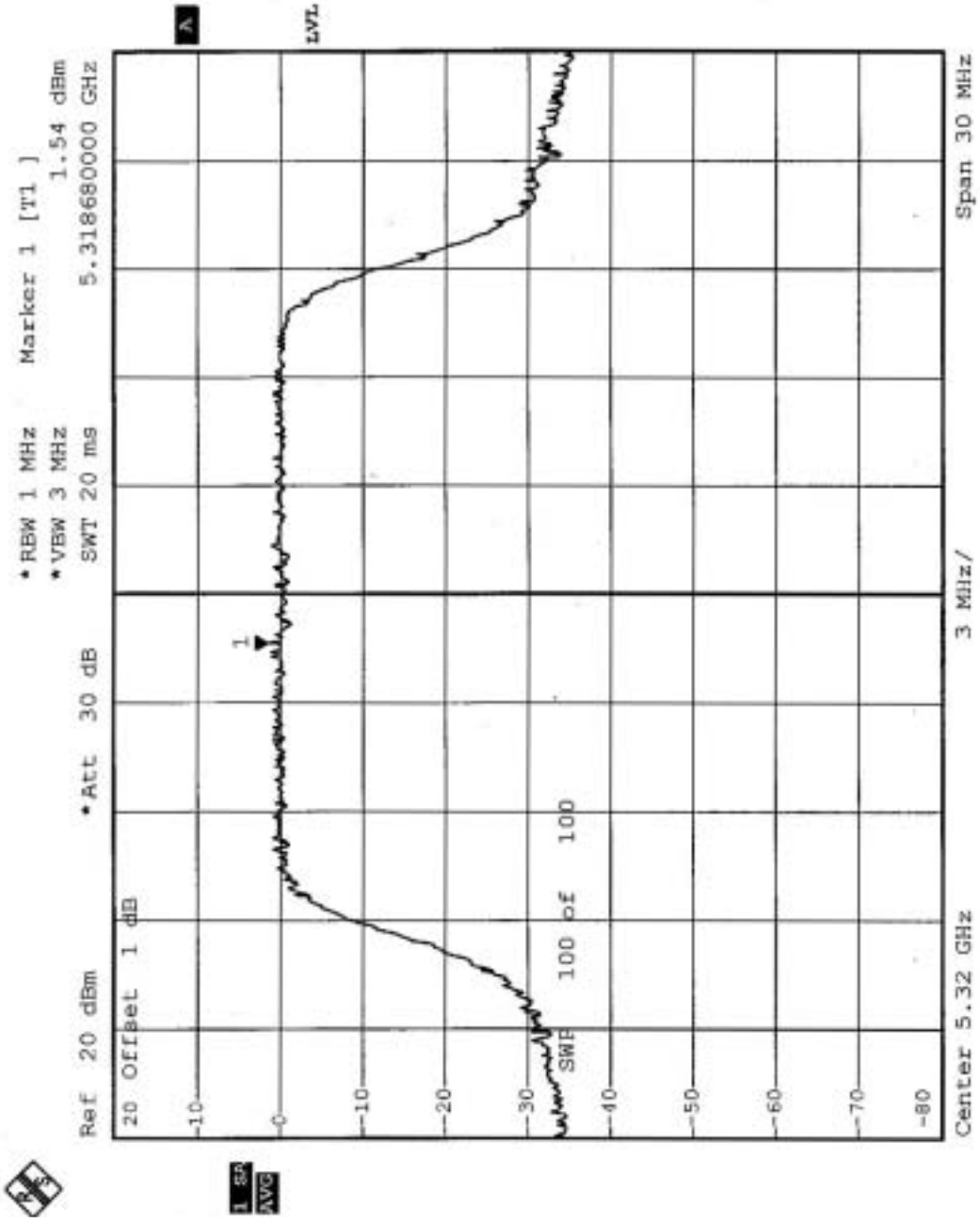
CHANNEL 4


Ref 20 dBm
20 Offset 1 dB
*Att 30 dB
*VBW 3 MHz
SWT 20 ms
*RBW 1 MHz
Marker 1 [T1]
0.68 dBm
5.239040000 GHz
Center 5.24 GHz
3 MHz/
Span 30 MHz
100 of 100
SWP
LVL
1 RM
AVG

CHANNEL 5


Marker 1 [T1]
1.57 dBm
5.25820000 GHz
RBW 1 MHz
VBW 3 MHz
SWT 20 ms
Att 30 dB
Ref 20 dBm
Offset 1 dB
SWP 100 of 100
Center 5.26 GHz
3 MHz/
Span 30 MHz
LVL

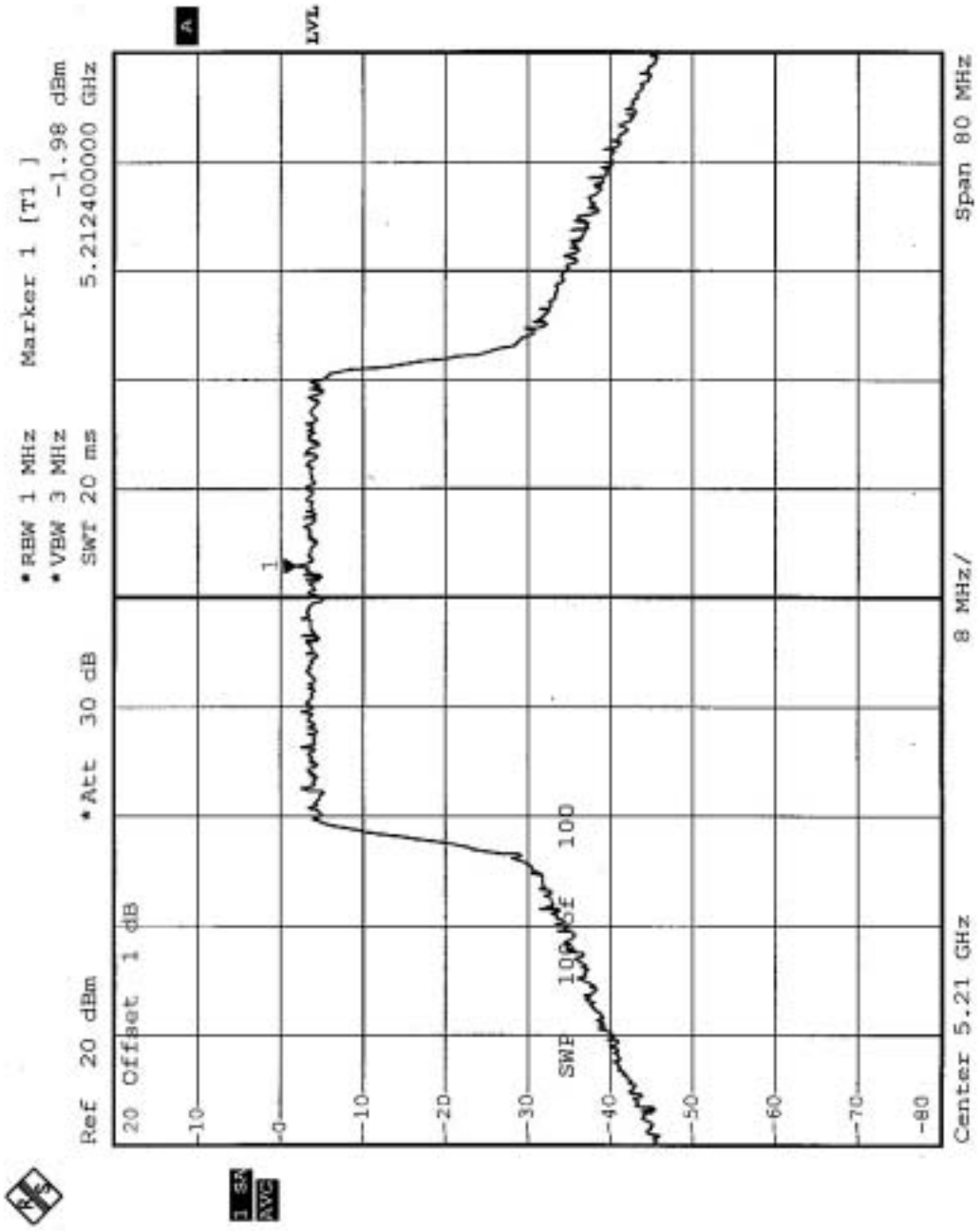
CHANNEL 8


Marker 1 [T1]
1.54 dBm
5.31868000 GHz
RBW 1 MHz
VBW 3 MHz
SWT 20 ms
Att 30 dB
Ref 20 dBm
Offset 1 dB
Center 5.32 GHz
3 MHz/
Span 30 MHz
1 SA
AVG

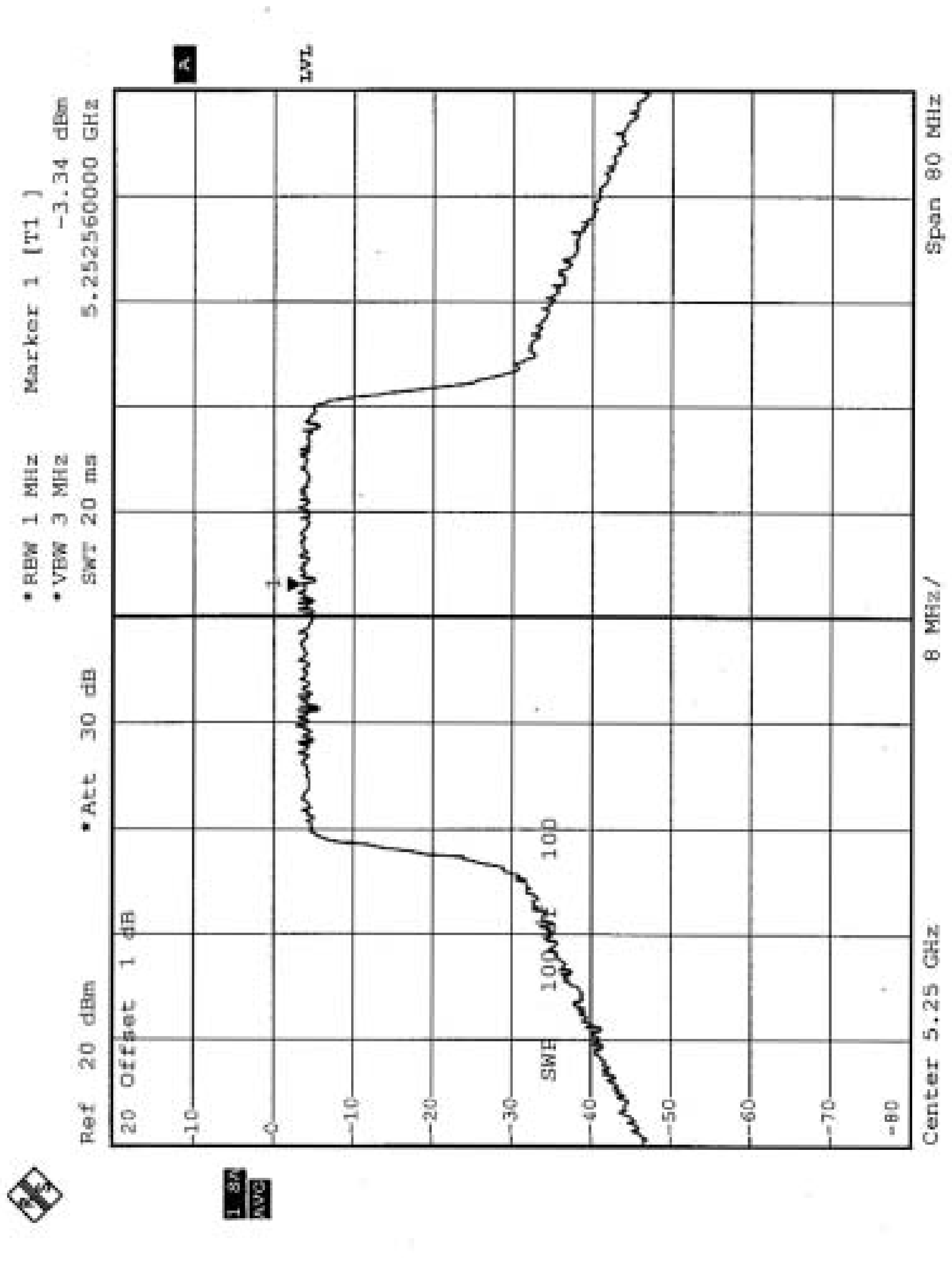
EUT	Wireless AP	**MODEL**	WSR-8002
MODE	Turbo	**INPUT POWER (SYSTEM)**	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	27eg. C, 59RH, 967 hPa	**TESTED BY**	Tony Chen

CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 1 MHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	5210	-1.98	4	PASS
2	5250	-3.34	4	PASS
3	5290	-1.88	11	PASS

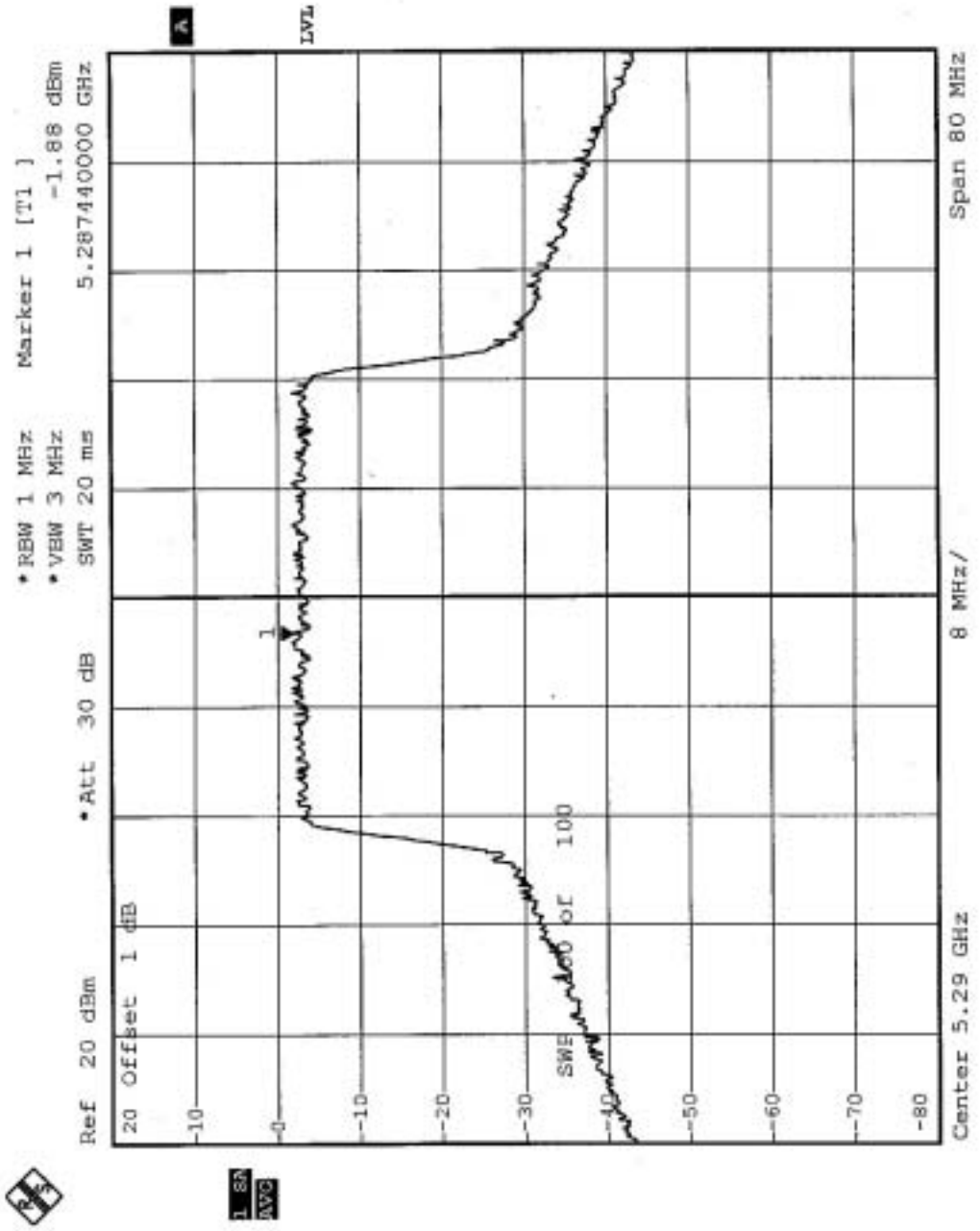
CHANNEL 1


Ref 20 dBm
20 Offset 1 dB
10
0
-10
-20
-30
-40
-50
-60
-70
-80
Att 30 dB
RBW 1 MHz
VBW 3 MHz
SWT 20 ms
Marker 1 [T1]
-1.98 dBm
5.212400000 GHz
Center 5.21 GHz
8 MHz/
Span 80 MHz
1 SA
AVG

CHANNEL 2


Marker 1 [T1]
-3.34 dBm
5.25256000 GHz
RBW 1 MHz
VBW 3 MHz
SWT 20 ms
Att 30 dB
Ref 20 dBm
Offset 1 dB
Center 5.25 GHz
8 MHz/
Span 80 MHz

CHANNEL 3


Ref 20 dBm
Offset 1 dB
Att 30 dB
RBW 1 MHz
VBW 3 MHz
SWT 20 ms
Marker 1 [T1]
-1.88 dBm
5.287440000 GHz
Center 5.29 GHz
8 MHz/
Span 80 MHz
SWEEP 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	May 17, 2005
WIT STANDARD TEMPERATURE AND HUMIDITY CHAMBER	MHU-225AU	911033	Dec. 11, 2004

Note:

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

5.6.3 TEST PROCEDURE

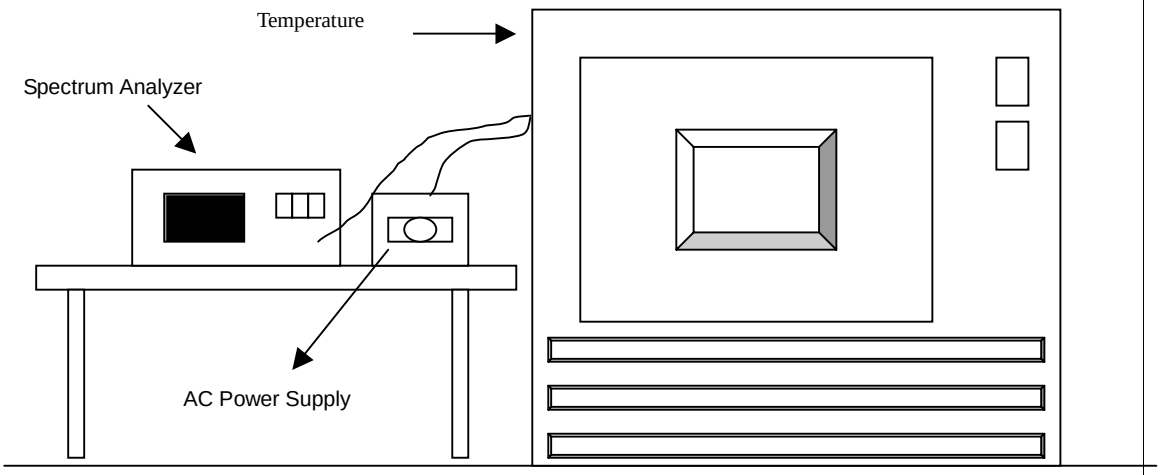
1. The EUT was placed inside the environmental test chamber and powered by nominal AC voltage.
2. Turn the EUT on and couple its output to a spectrum analyzer.
3. Turn the EUT off and set the chamber to the highest temperature specified.
4. Allow sufficient time (approximately 30 min) for the temperature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

and the frequency record.

5.6.4 DEVIATION FROM TEST STANDARD

No deviation

5.6.5 TEST SETUP



5.6.6 EUT OPERATING CONDITION

Same as Item 4.1.6

5.6.7 TEST RESULTS

Operating frequency: 5320MHz				Limit : ± 0.02%			
Temp. (°C)	Power supply (VAC)	2 minute		5 minute		10 minute	
		(MHz)	(%)	(MHz)	(%)	(MHz)	(%)
50	126.5	5319.951	-0.000921%	5319.9519	-0.000904%	5319.9571	-0.000806%
	110	5319.9564	-0.000820%	5319.955	-0.000846%	5319.9571	-0.000806%
	93.5	5319.958	-0.000789%	5319.9551	-0.000844%	5319.9579	-0.000791%
40	126.5	5319.953	-0.000883%	5319.9543	-0.000859%	5319.9530	-0.000883%
	110	5319.9539	-0.000867%	5319.9545	-0.000855%	5319.9540	-0.000865%
	93.5	5319.9529	-0.000885%	5319.9541	-0.000863%	5319.9541	-0.000863%
30	126.5	5319.95999	-0.000752%	5319.9593	-0.000765%	5319.9574	-0.000801%
	110	5319.9588	-0.000774%	5319.9587	-0.000776%	5319.9588	-0.000774%
	93.5	5319.9589	-0.000773%	5319.9585	-0.000780%	5319.9586	-0.000778%
20	126.5	5319.9819	-0.000340%	5319.98	-0.000376%	5319.9810	-0.000357%
	110	5319.9898	-0.000192%	5319.9891	-0.000205%	5319.9790	-0.000395%
	93.5	5319.9891	-0.000205%	5319.989	-0.000207%	5319.9786	-0.000402%
10	126.5	5319.9657	-0.000645%	5319.9647	-0.000664%	5319.9659	-0.000641%
	110	5319.9667	-0.000626%	5319.9657	-0.000645%	5319.9640	-0.000677%
	93.5	5319.9653	-0.000652%	5319.9662	-0.000635%	5319.9650	-0.000658%
0	126.5	5319.971	-0.000545%	5319.9710	-0.000545%	5319.9707	-0.000551%
	110	5319.9722	-0.000523%	5319.9720	-0.000526%	5319.9717	-0.000532%
	93.5	5319.9715	-0.000536%	5319.9710	-0.000545%	5319.9717	-0.000532%
-10	126.5	5319.9758	-0.000455%	5319.9750	-0.000470%	5320.0028	0.000053%
	110	5319.9759	-0.000453%	5319.9760	-0.000451%	5320.0025	0.000047%
	93.5	5319.9759	-0.000453%	5319.9755	-0.000461%	5320.0022	0.000041%
-20	126.5	5319.9771	-0.000430%	5319.9760	-0.000451%	5319.9747	-0.000476%
	110	5319.9780	-0.000414%	5319.9766	-0.000440%	5319.9744	-0.000481%
	93.5	5319.9771	-0.000430%	5319.9762	-0.000447%	5319.9738	-0.000492%
-30	126.5	5319.9743	-0.000483%	5319.9743	-0.000483%	5319.9740	-0.000489%
	110	5319.975	-0.000470%	5319.9742	-0.000485%	5319.9746	-0.000477%
	93.5	5319.9759	-0.000453%	5319.9739	-0.000491%	5319.9754	-0.000462%

5.7 BAND EDGES MEASUREMENT

5.7.1 TEST INSTRUMENTS

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

Note:

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

5.7.2 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer via a low lose cable. Set RBW spectrum analyzer to 1 MHz and set VBW spectrum analyzer to 10 Hz with suitable frequency span including 1 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.

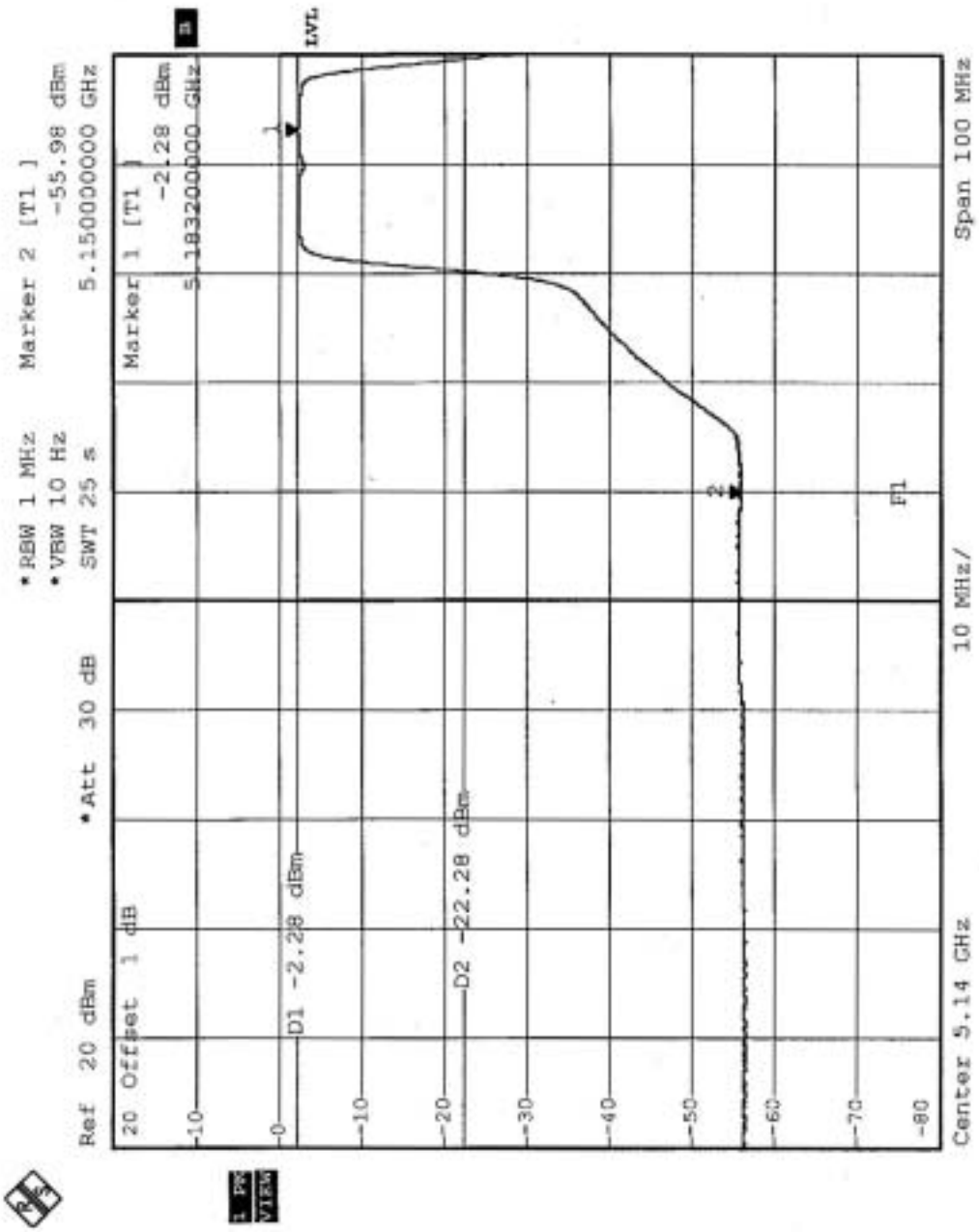
5.7.4 TEST RESULTS

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=10Hz) are attached on the following 4 pages.

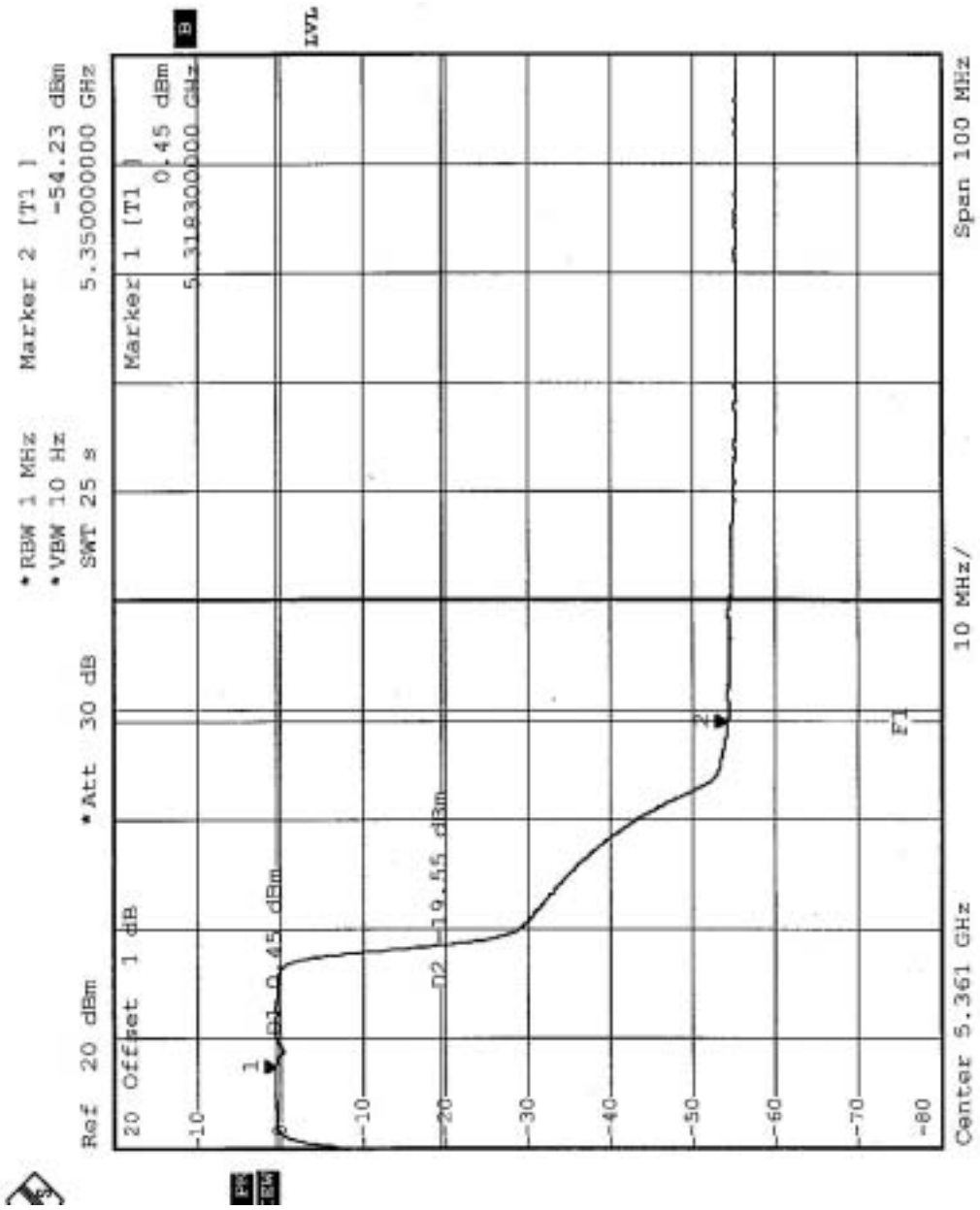
Normal Mode: Channel 1 (5180 MHz)

The band edge emission plot on the following page shows 53.7dBc (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 93.4dBuV/m, so the maximum field strength in restrict band is 93.4-53.7=39.7dBuV/m which is under 54dBuV/m limit.



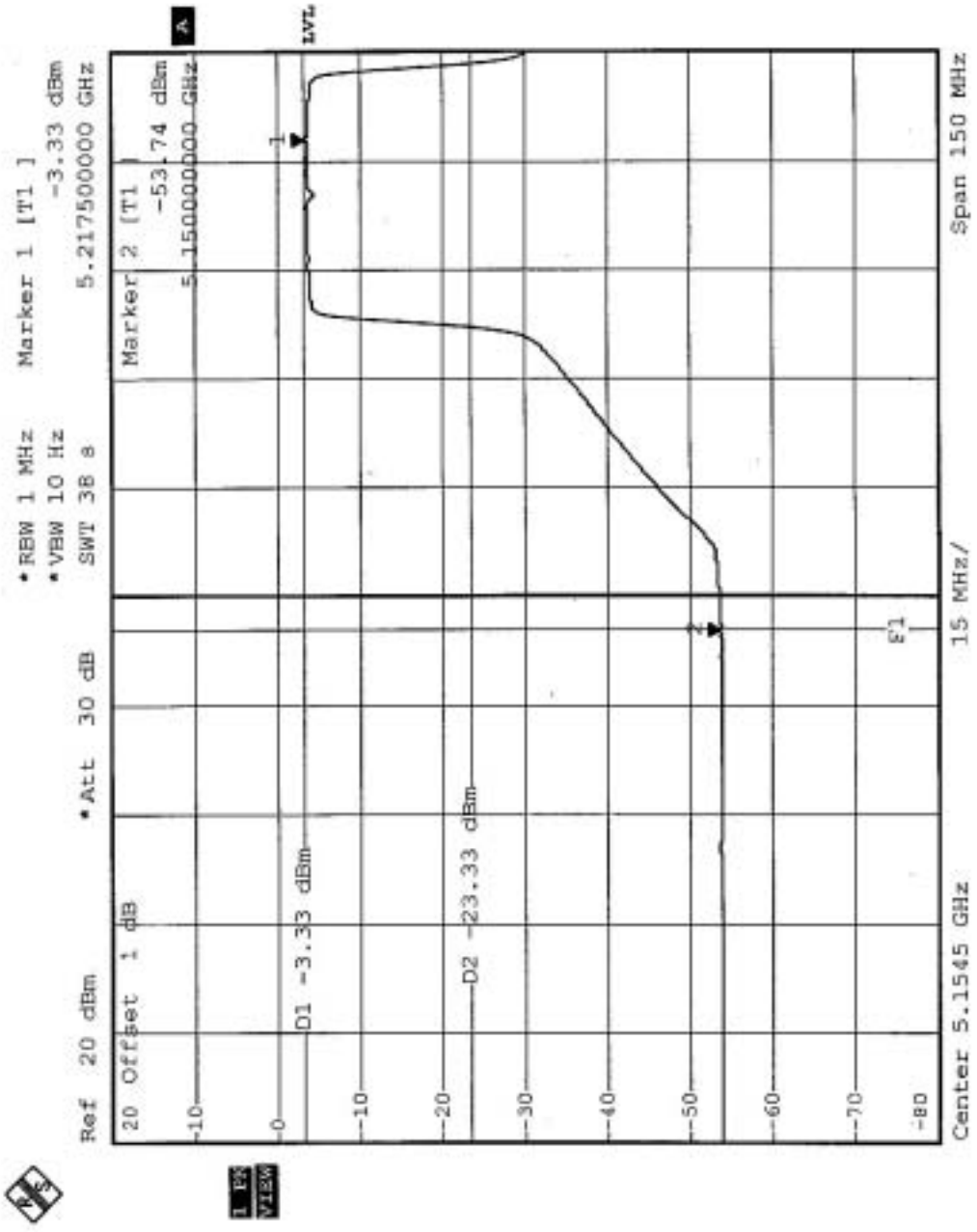
Normal Mode: Channel 8 (5320 MHz)

The band edge emission plot on the following page shows 54.68dBc (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 100.8dBuV/m, so the maximum field strength in restrict band is 100.8-54.68=46.12dBuV/m which is under 54dBuV/m limit.



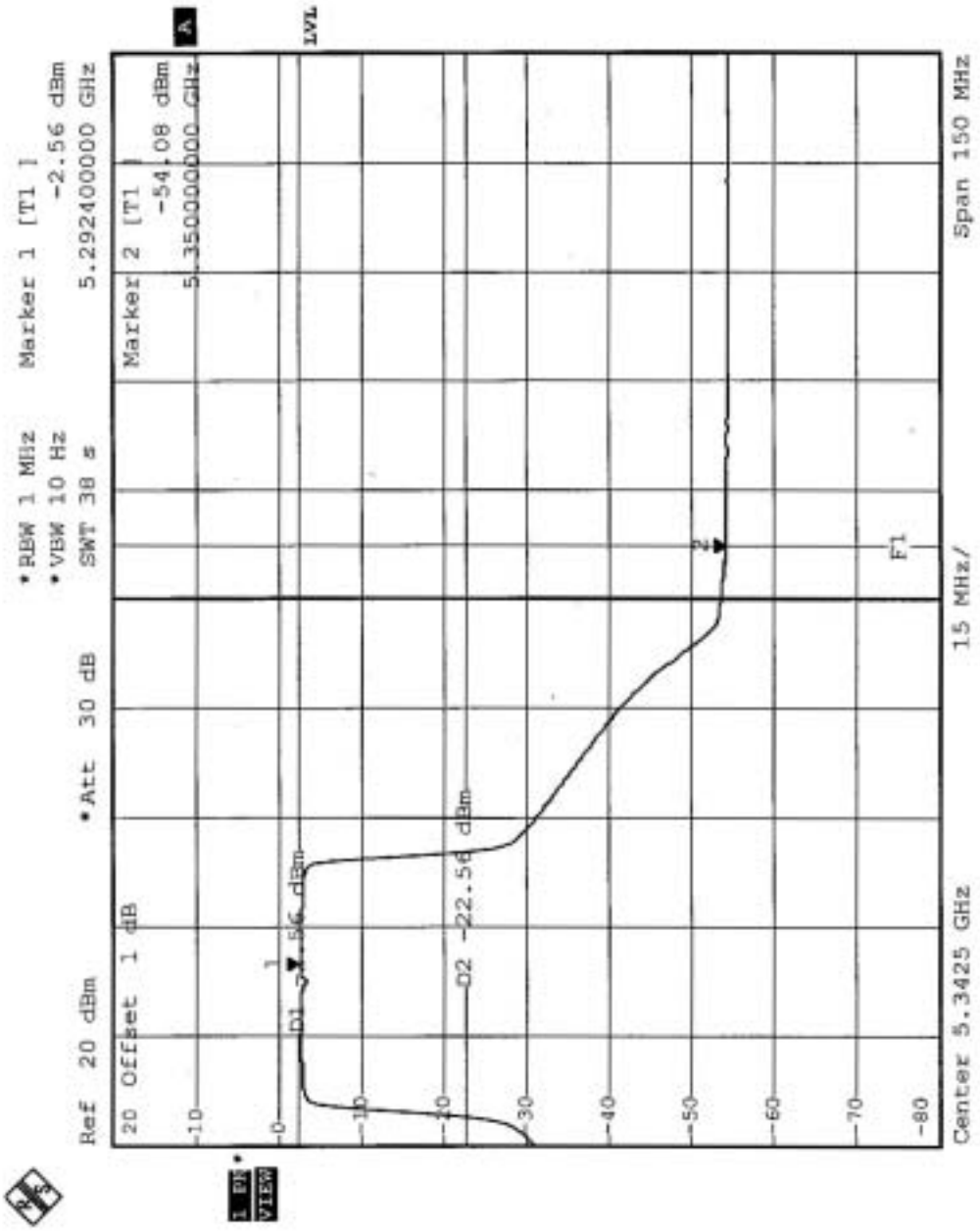
Turbo Mode: Channel 1 (5210 MHz)

The band edge emission plot on the following page shows 50.41dBc (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 96.7dBuV/m, so the maximum field strength in restrict band is 96.7-50.41=46.29dBuV/m which is under 54dBuV/m limit.



Turbo Mode: Channel 3 (5290 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 (turbo mode) is 97.2dBuV/m, so the maximum field strength in restrict band is 97.2-51.52=45.68dBuV/m which is under 54dBuV/m limit.



FOR FREQUENCY 5.725~5.850GHZ

5.8 6DB BANDWIDTH MEASUREMENT

5.8.1 LIMITS OF 6DB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

5.8.2 TEST INSTRUMENTS

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

Note:

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

5.8.3 TEST PROCEDURE

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

5.8.4 DEVIATION FROM TEST STANDARD

No deviation

5.8.5 TEST SETUP

5.8.6 EUT OPERATING CONDITIONS

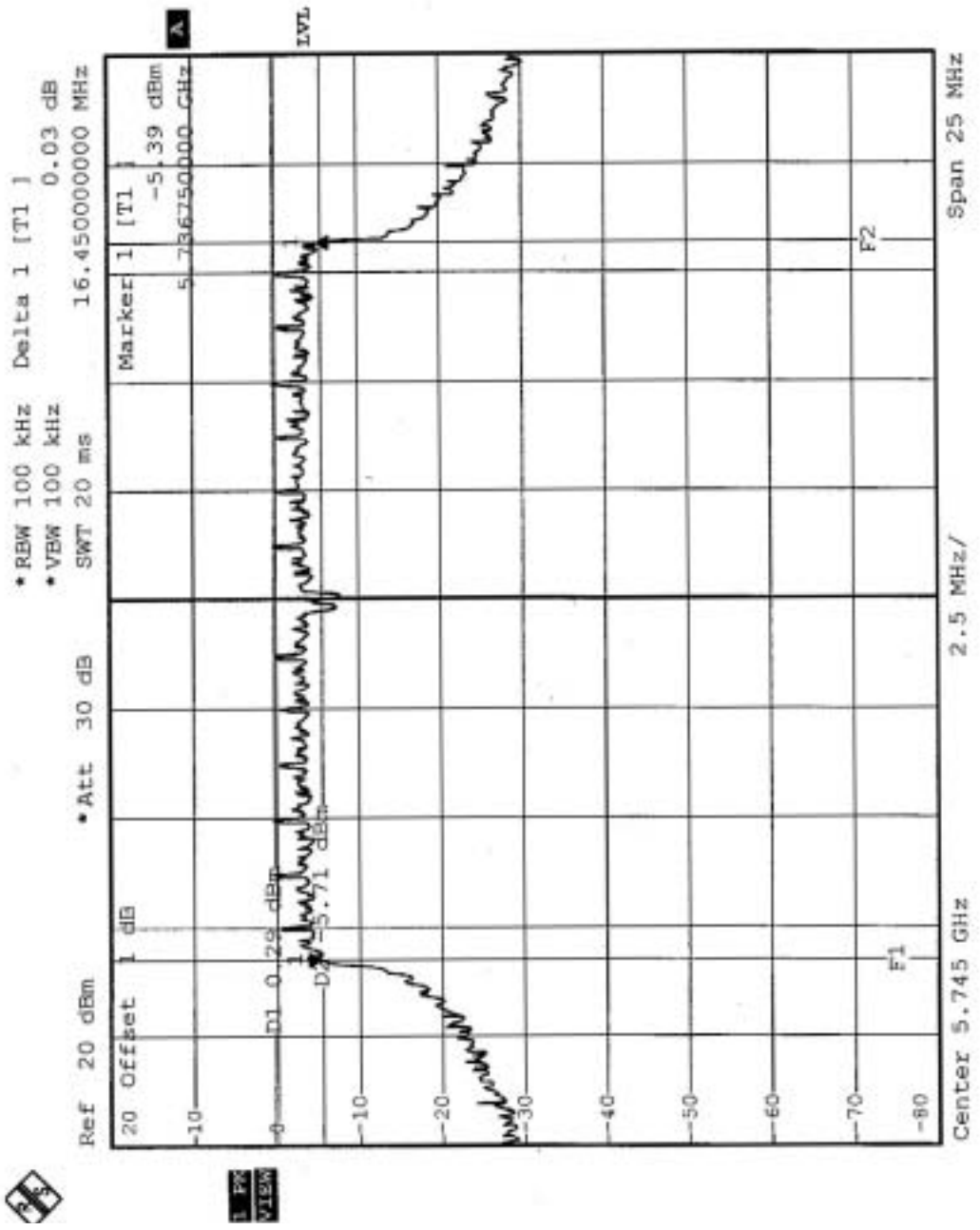
The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

5.8.7 TEST RESULTS

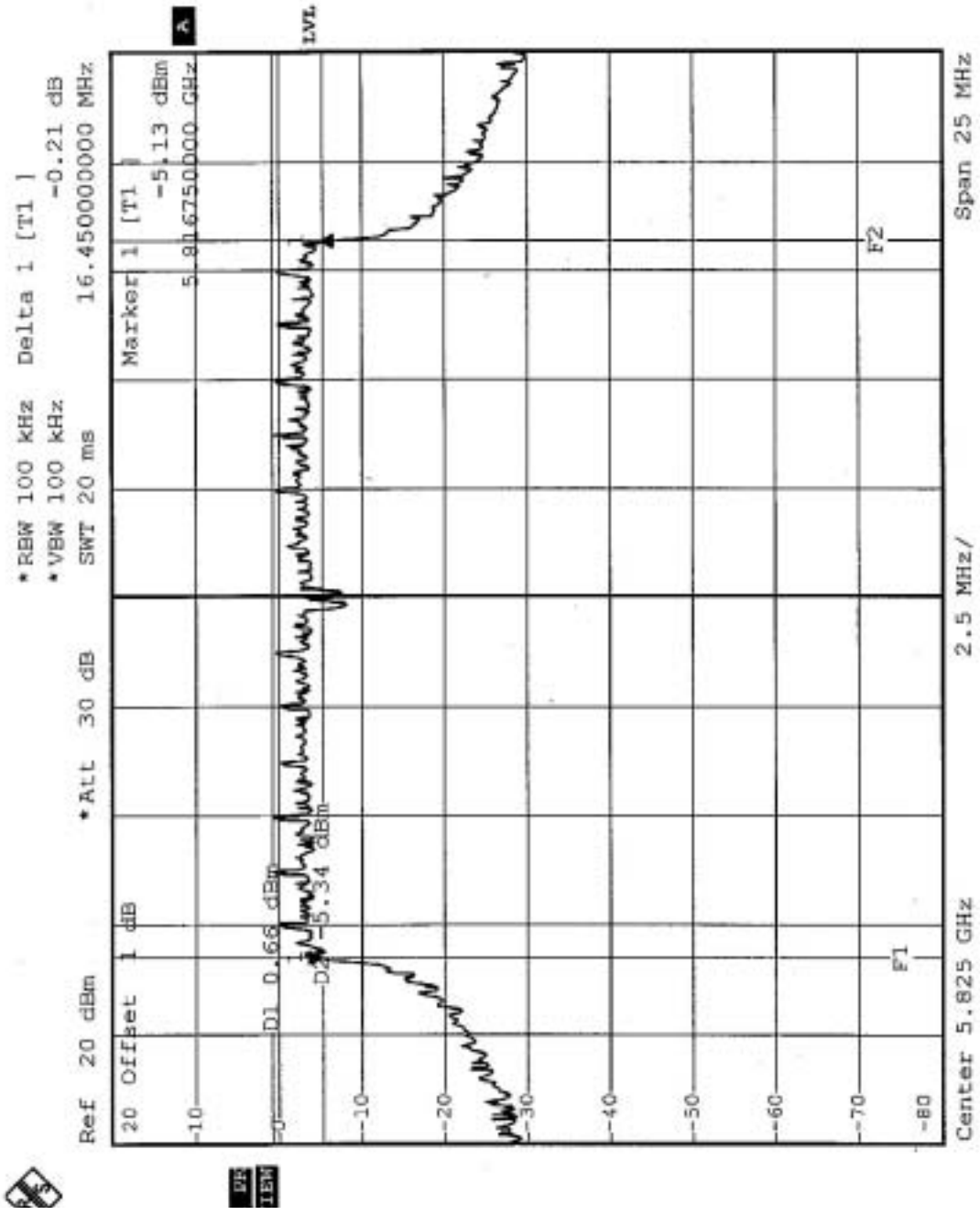
EUT	Wireless AP	**MODEL**	WSR-8002
INPUT POWER (SYSTEM)	120Vac, 60Hz	**ENVIRONMENTAL CONDITIONS**	27eg. C, 59RH, 967 hPa
TEST MODE	Normal	**TEST BY**	Tony Chen

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

CH9


RBW 100 kHz
VBW 100 kHz
SWT 20 ms
Delta 1 [T1]
0.03 dB
16.45000000 MHz
Marker 1 [T1]
-5.39 dBm
5.78675000 GHz
Att 30 dB
Ref 20 dBm
Offset 1 dB
D1 0.29 dBm
D2 -5.71 dBm
F1
F2
Center 5.745 GHz
2.5 MHz/
Span 25 MHz
VBW
MKR

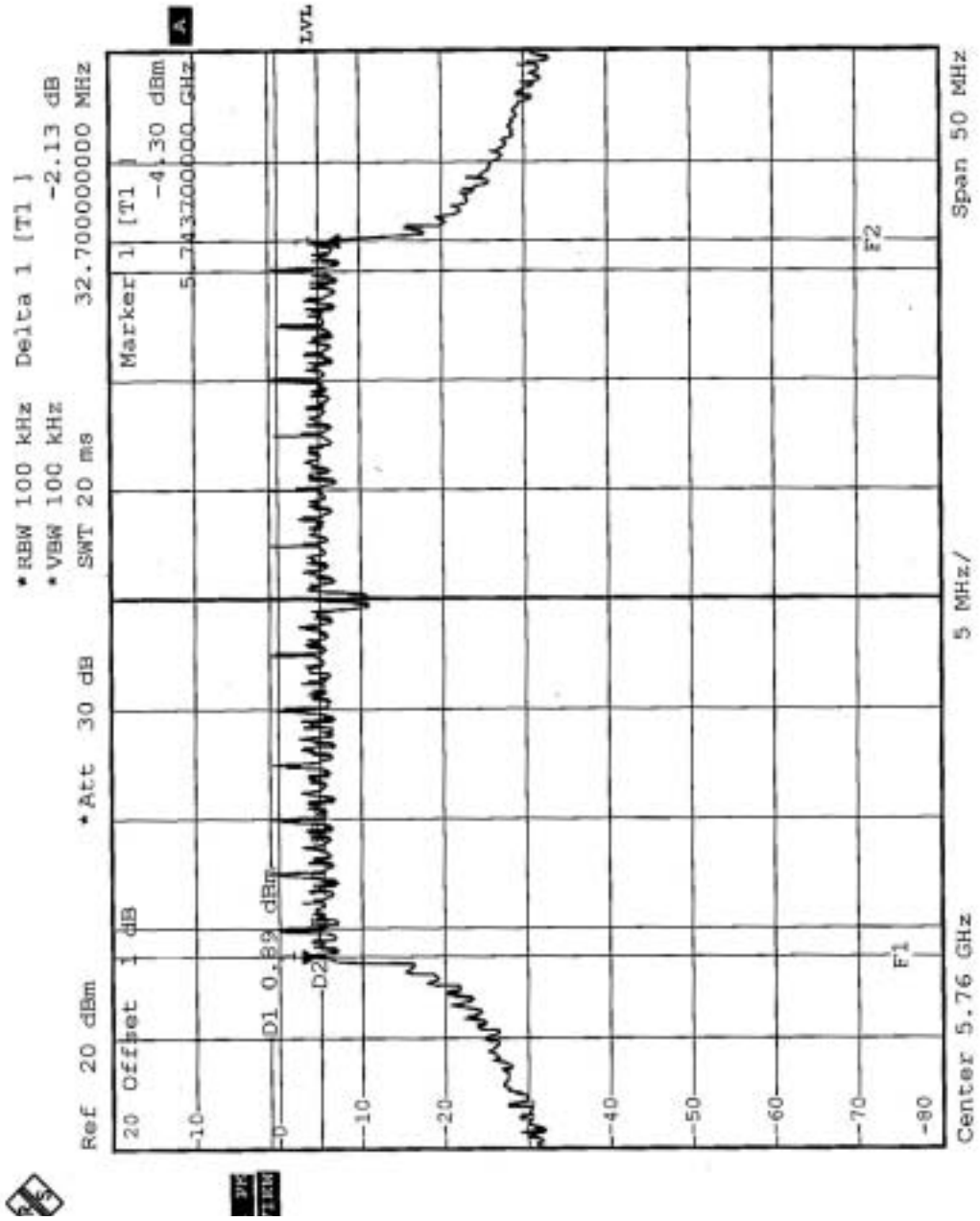
CH13


Ref 20 dBm
Offset 1 dB
*Att 30 dB
*RBW 100 kHz
*VBW 100 kHz
SWT 20 ms
Delta 1 [T1]
-0.21 dB
16.45000000 MHz
Marker 1 [T1]
-5.13 dBm
5.81675000 GHz
D1 0.66 dBm
D2 -5.34 dBm
F1
F2
Center 5.825 GHz
2.5 MHz/
Span 25 MHz
A
VIEW
MKR

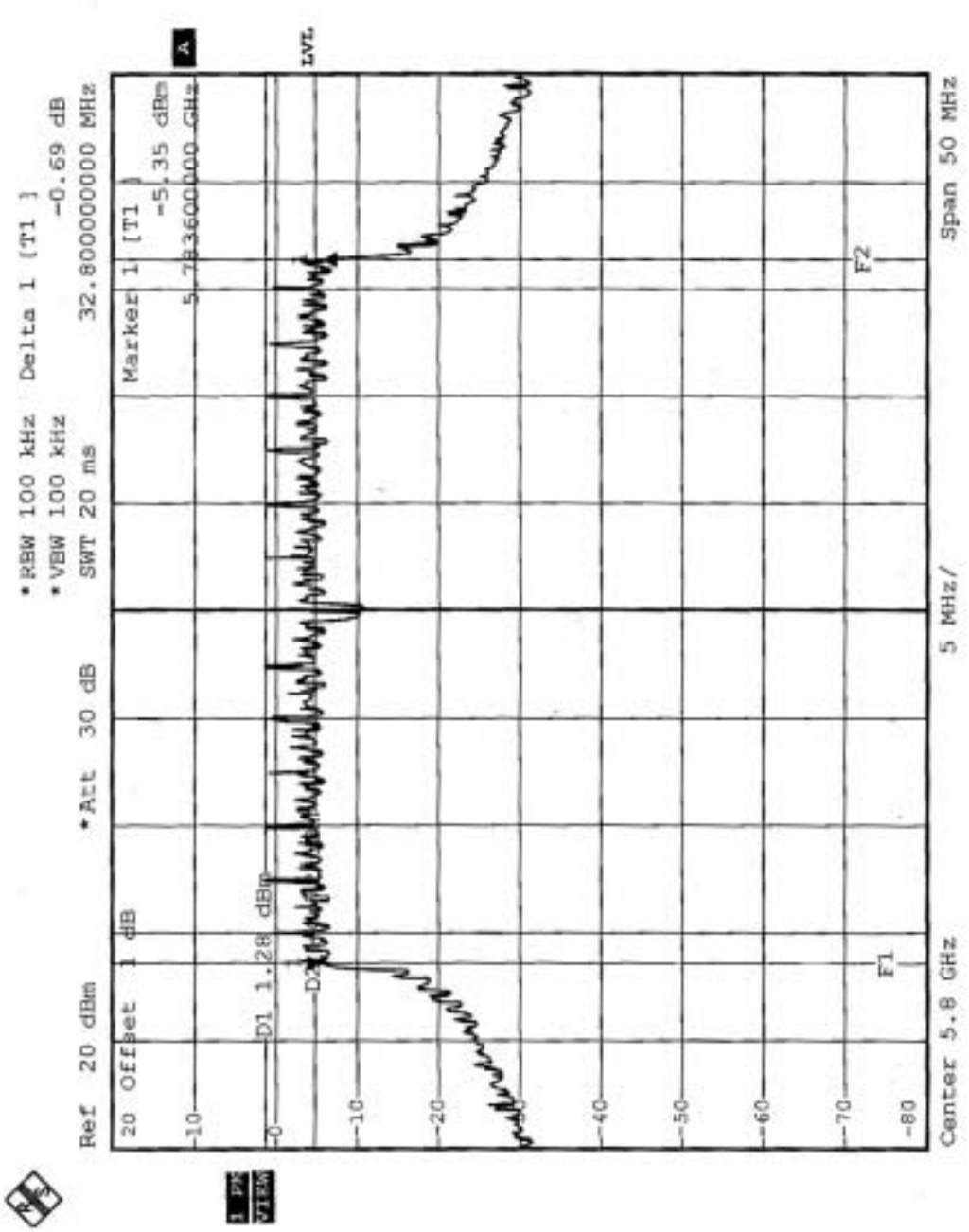
EUT	Wireless AP	MODEL	WSR-8002
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	27eg. C, 59RH, 967 hPa
TEST MODE	Turbo	TEST BY	Tony Chen

CHANNEL	CHANNEL FREQUENCY (MHz)	6 dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
4	5760	32.7	0.5	PASS
5	5800	32.8	0.5	PASS

CH4


RBW 100 kHz
VBW 100 kHz
SWT 20 ms
Delta 1 [T1]
-2.13 dB
32.700000000 MHz
Marker 1 [T1]
-4.30 dBm
5.743700000 GHz
Ref 20 dBm
Offset 1 dB
Att 30 dB
Center 5.76 GHz
5 MHz/
Span 50 MHz
D1 0.89 dBm
D2
F1
F2

CH5


RBW 100 kHz
VBW 100 kHz
SWT 20 ms
Att 30 dB
Offset 1 dB
Ref 20 dBm
Delta 1 [T1]
-0.69 dB
32.80000000 MHz
Marker 1 [T1]
-5.35 dBm
5.78360000 GHz
D1 1.28 dBm
Center 5.8 GHz
5 MHz/
Span 50 MHz
F1
F2

5.9 MAXIMUM PEAK OUTPUT POWER

5.9.1 LIMITS OF PEAK TRANSMIT POWER MEASUREMENT

The Maximum Peak Output Power Measurement is 30dBm.

5.9.2 TEST INSTRUMENTS

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

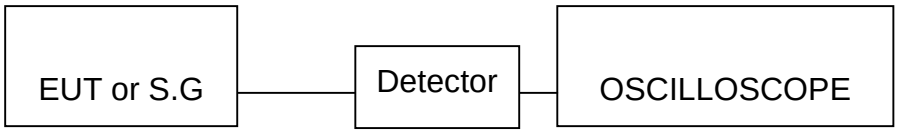
Note:

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

5.9.3 TEST PROCEDURE

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

5.9.4 TEST SETUP



5.9.5 EUT OPERATING CONDITIONS

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

5.9.6 TEST RESULTS

EUT	Wireless AP	**MODEL**	WSR-8002
INPUT POWER (SYSTEM)	120Vac, 60Hz	**ENVIRONMENTAL CONDITIONS**	27eg. C, 59RH, 967 hPa
TEST MODE	Normal	**TEST BY**	Tony Chen

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
9	5745	16.55	30	PASS
13	5825	16.51	30	PASS

EUT	Wireless AP	**MODEL**	WSR-8001
INPUT POWER (SYSTEM)	120Vac, 60Hz	**ENVIRONMENTAL CONDITIONS**	27eg. C, 59RH, 967 hPa
TEST MODE	Turbo	**TEST BY**	Tony Chen

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
4	5760	16.59	30	PASS
5	5800	16.68	30	PASS

5.10 POWER SPECTRAL DENSITY MEASUREMENT

5.10.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm.

5.10.2 TEST INSTRUMENTS

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

Note:

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

5.10.3 TEST PROCEDURE

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

5.10.4 DEVIATION FROM TEST STANDARD

No deviation

5.10.5 TEST SETUP

5.10.6 EUT OPERATING CONDITION

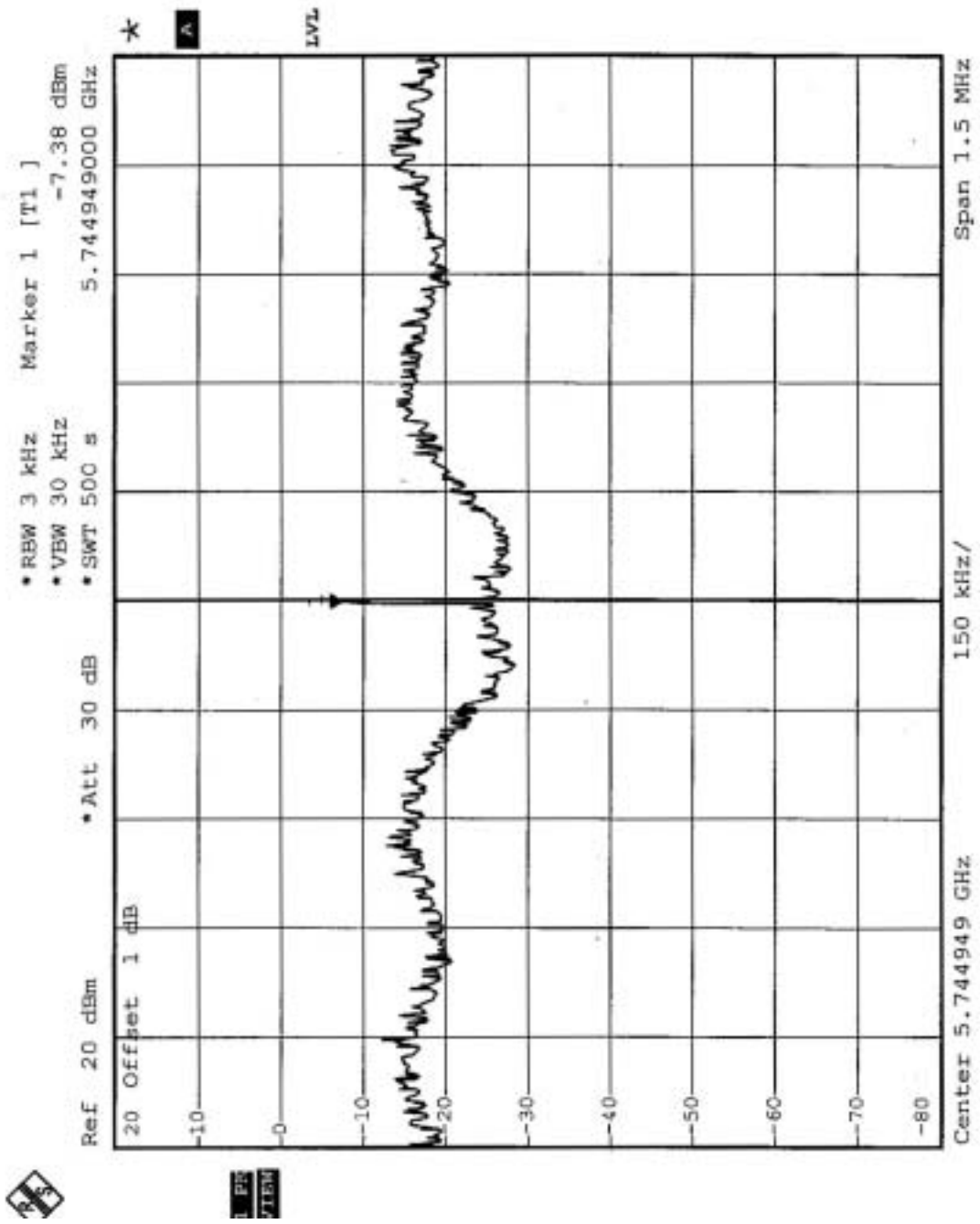
Same as Item 4.3.6

5.10.7 TEST RESULTS

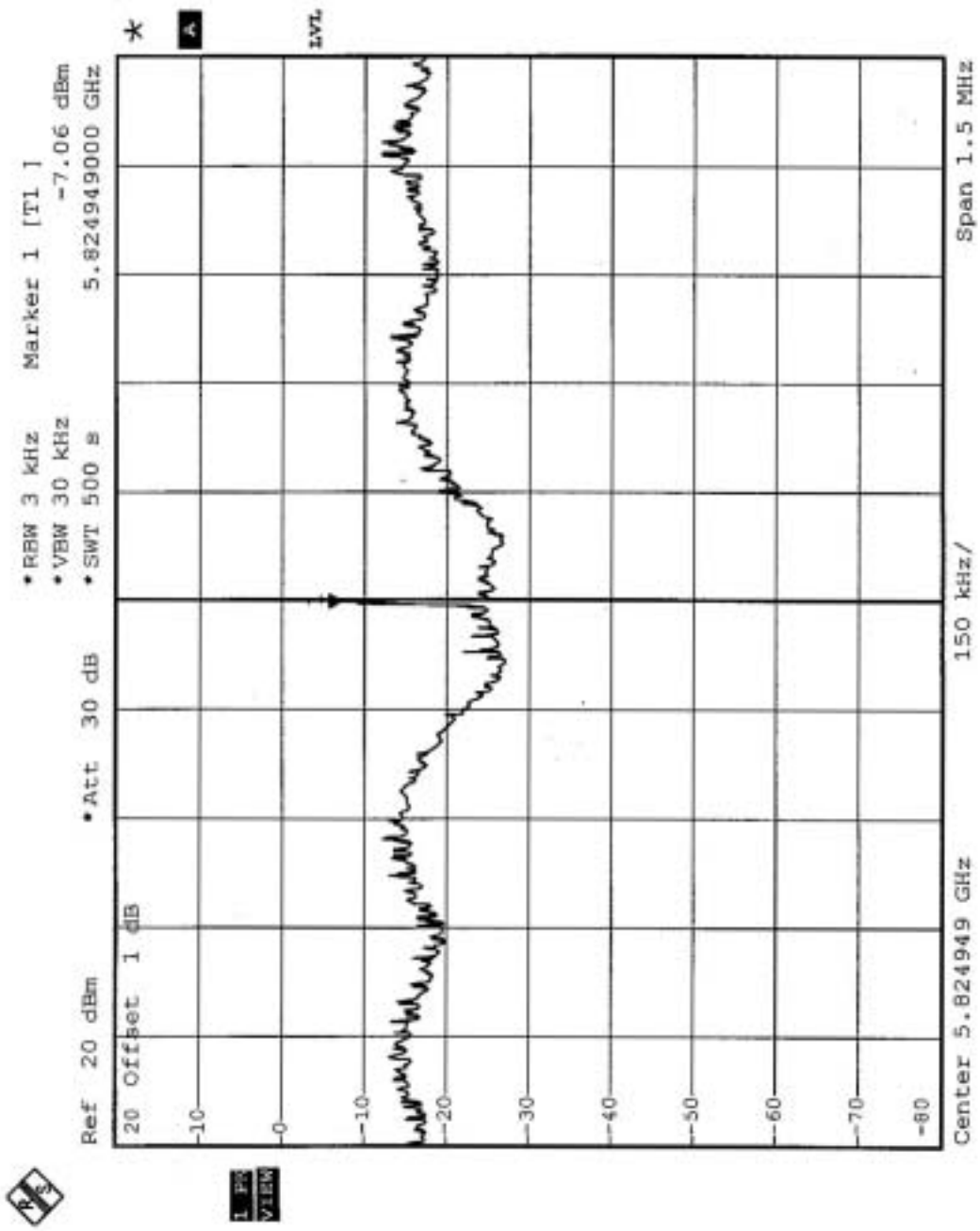
EUT	Wireless AP	**MODEL**	WSR-8002
INPUT POWER (SYSTEM)	120Vac, 60Hz	**ENVIRONMENTAL CONDITIONS**	27eg. C, 59RH, 967 hPa
TEST MODE	Normal	**TEST BY**	Tony Chen

CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
9	5745	-7.38	8	PASS
13	5825	-7.06	8	PASS

CH9


RBW 3 kHz
VBW 30 kHz
SWT 500 s
Marker 1 [T1]
-7.38 dBm
5.744949000 GHz
Ref 20 dBm
Offset 1 dB
Att 30 dB
Center 5.744949 GHz
150 kHz/
Span 1.5 MHz
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80

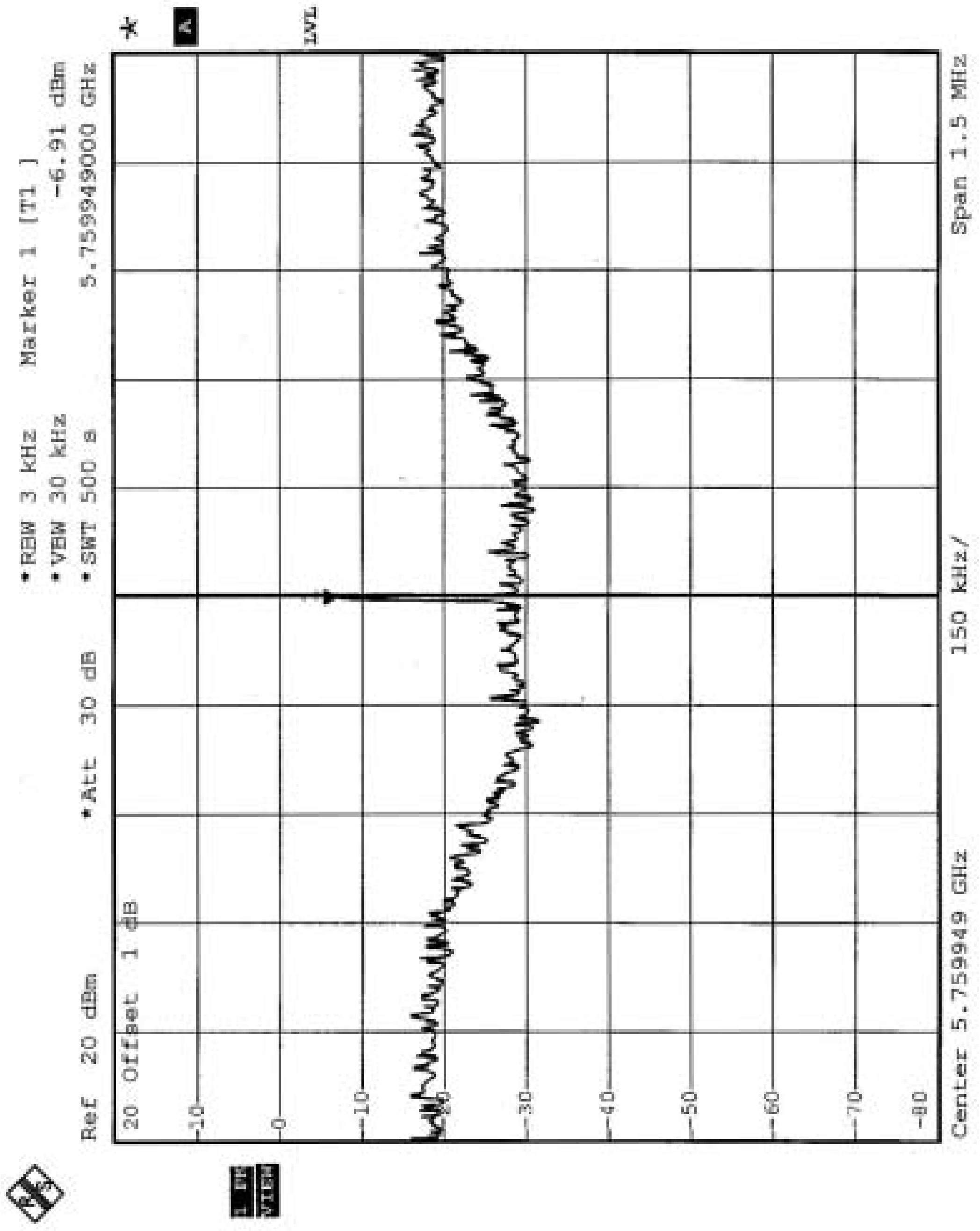
CH13


Ref 20 dBm
20 Offset 1 dB
Att 30 dB
RBW 3 kHz
VBW 30 kHz
SWT 500 s
Marker 1 [T1]
-7.06 dBm
5.824949000 GHz
Center 5.824949 GHz
150 kHz/
Span 1.5 MHz
1 PK
VIEW

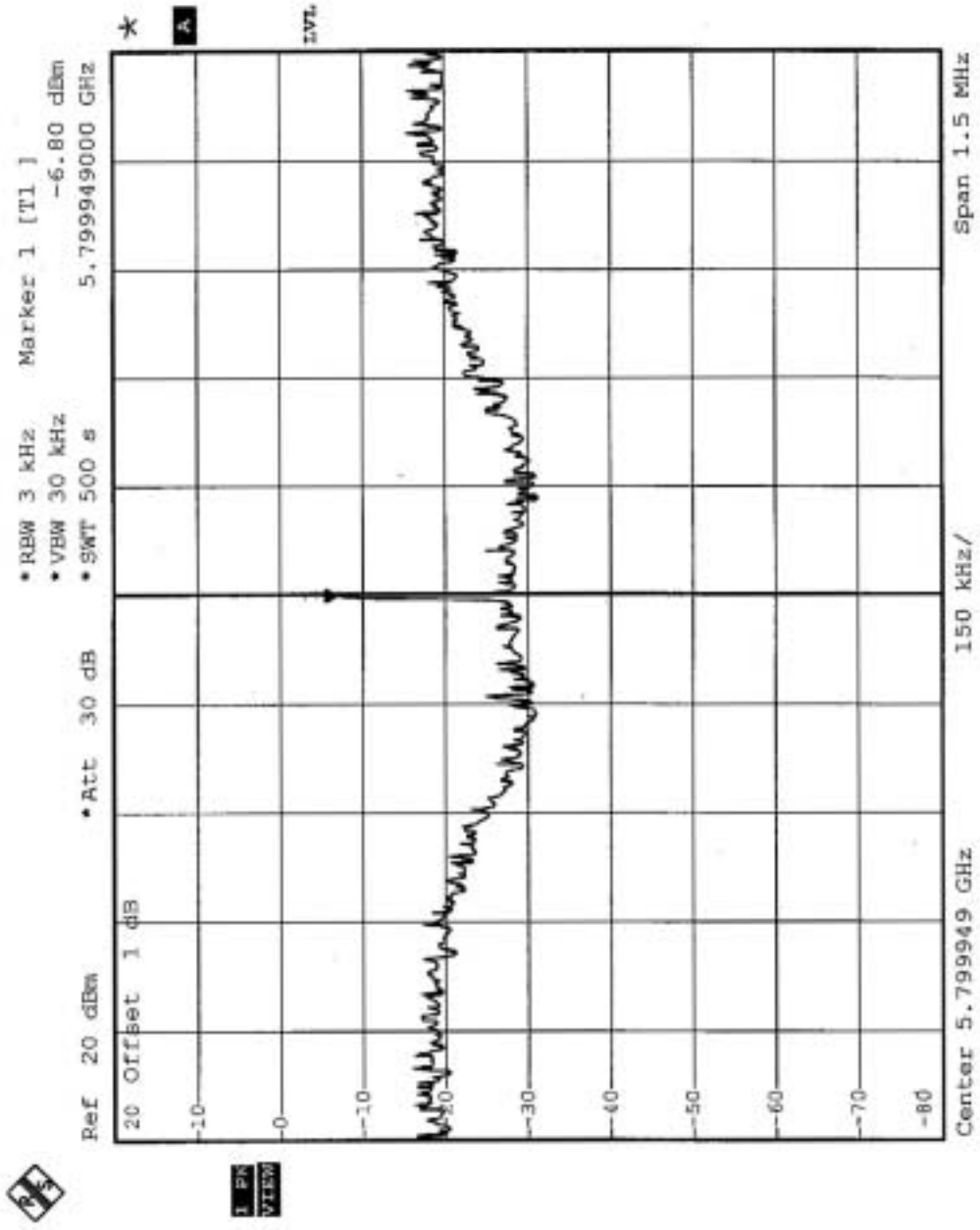
EUT	Wireless AP	MODEL	WSR-8002
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	27eg. C, 59RH, 967 hPa
TEST MODE	Turbo	TEST BY	Tony Chen

CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
4	5760	-6.91	8	PASS
5	5800	-6.8	8	PASS

CH4


Marker 1 [T1]
-6.91 dBm
5.75994900 GHz
*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Ref 20 dBm
*Att 30 dB
20 Offset 1 dB
1VL
A
Center 5.759949 GHz
150 kHz/
Span 1.5 MHz

CH5


Ref 20 dBm
20 Offset 1 dB
• Att 30 dB
• RBW 3 kHz
• VBW 30 kHz
• SWT 500 s
Marker 1 [T1]
-6.80 dBm
5.799949000 GHz
Center 5.799949 GHz
150 kHz/
Span 1.5 MHz
1 PK VIEW

5.11 BAND EDGES MEASUREMENT

5.11.1 LIMITS OF BAND EDGES MEASUREMENT

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

5.11.2 TEST INSTRUMENTS

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

Note:

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

5.11.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer via a low 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

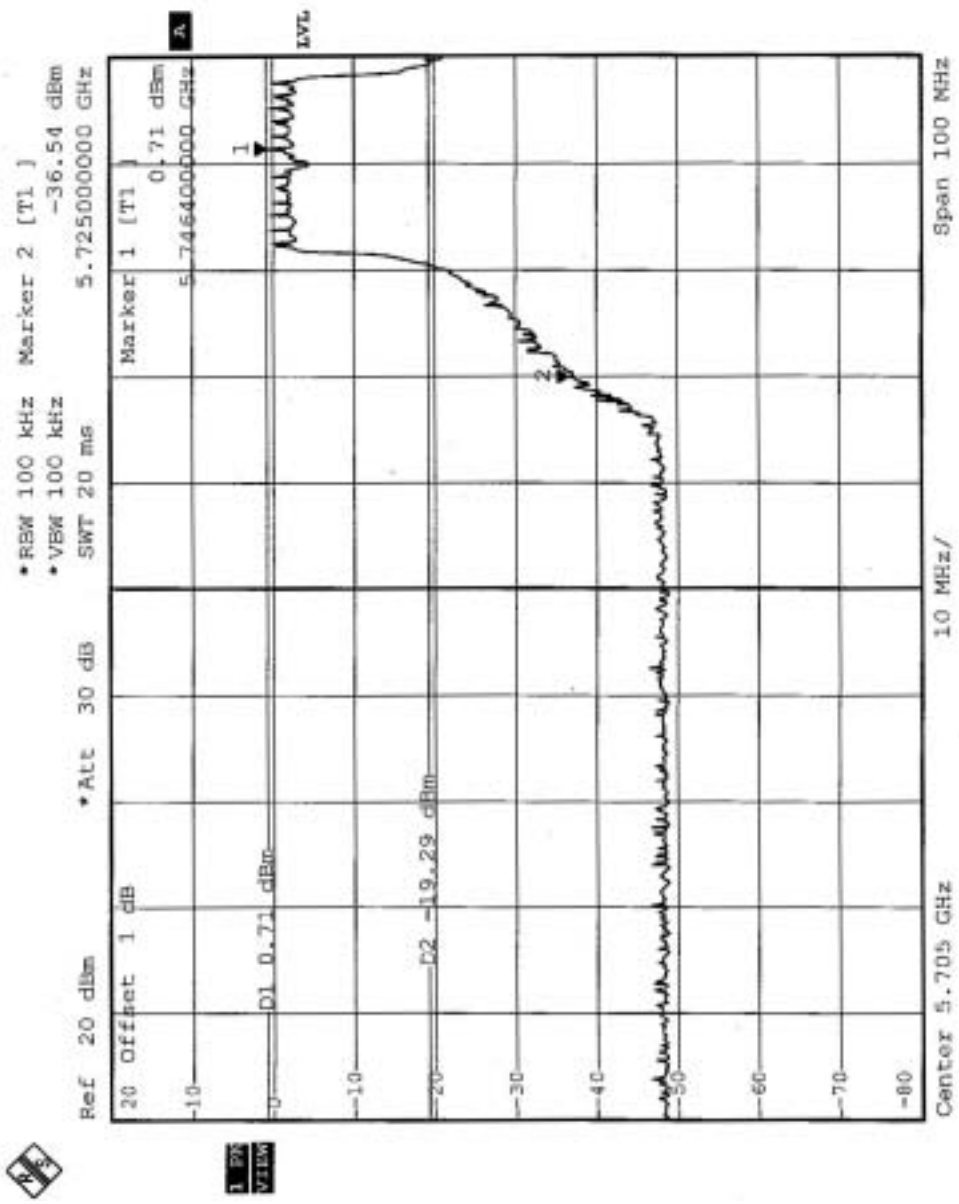
5.11.5 EUT OPERATING CONDITION

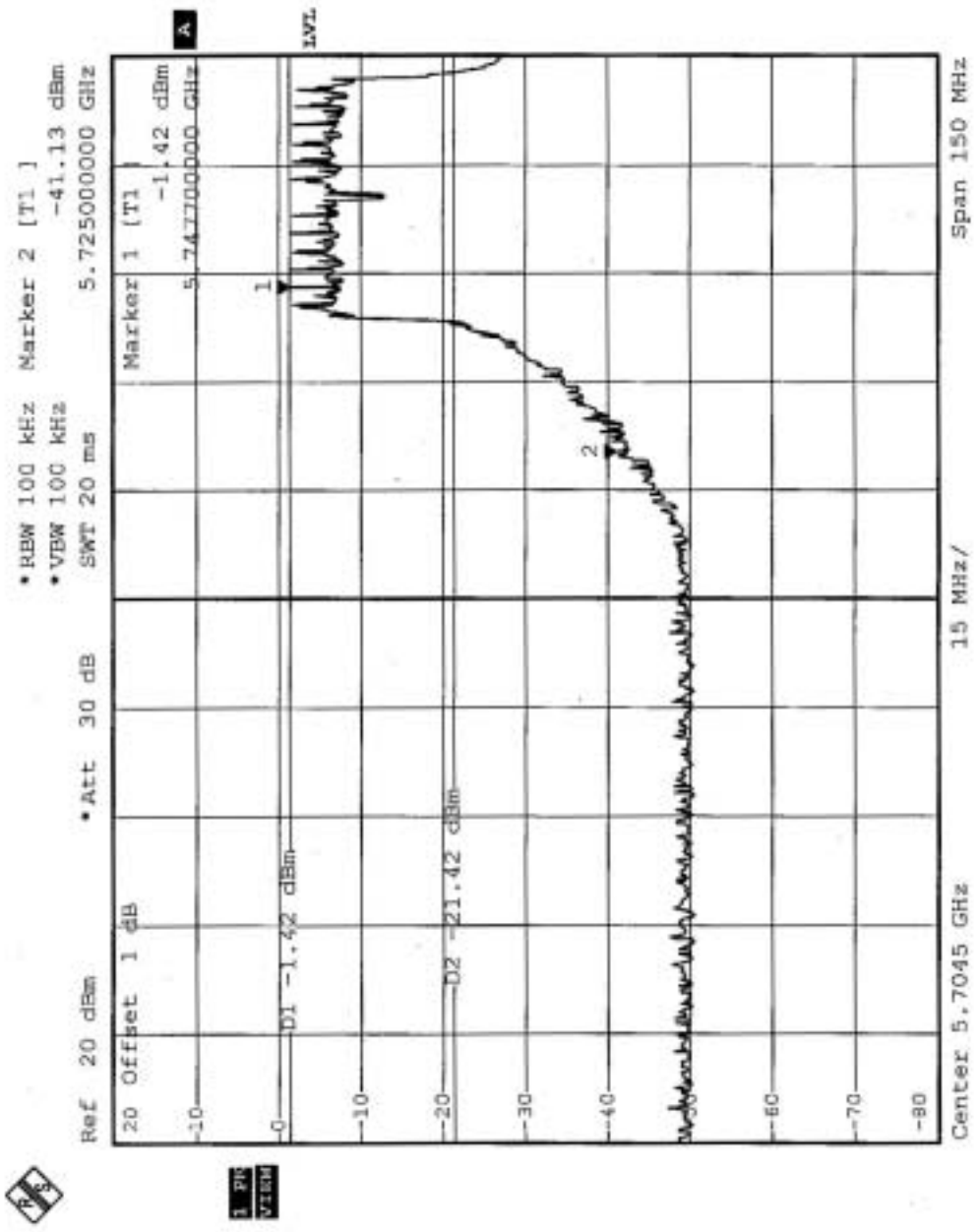
Same as Item 4.3.6

5.11.6 TEST RESULTS

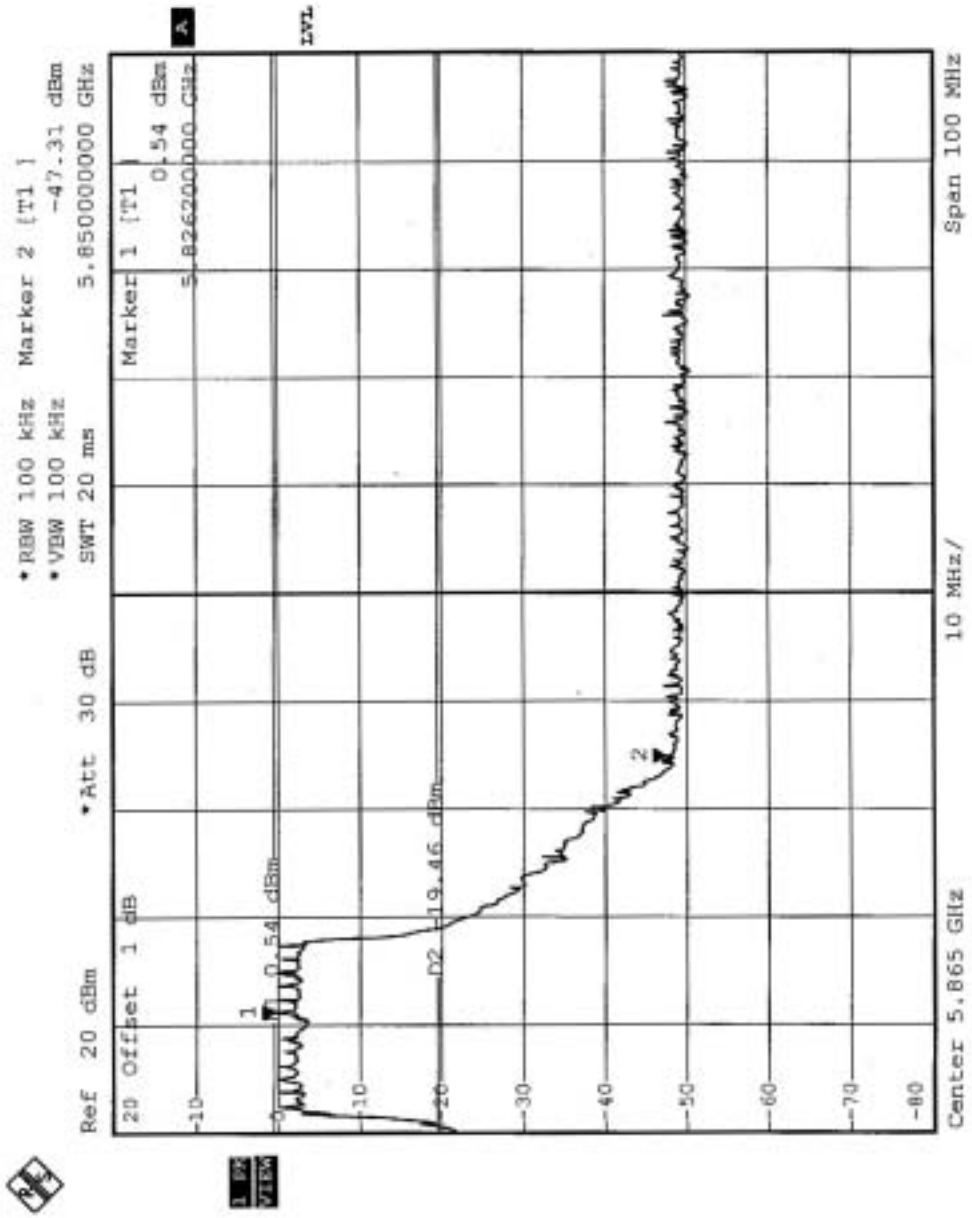
The spectrum plots are attached on the following pages. D1 line indicates the highest level, D2 line indicates the 20dB offset below D1. It shows compliance with the requirement in part 15.247(C).

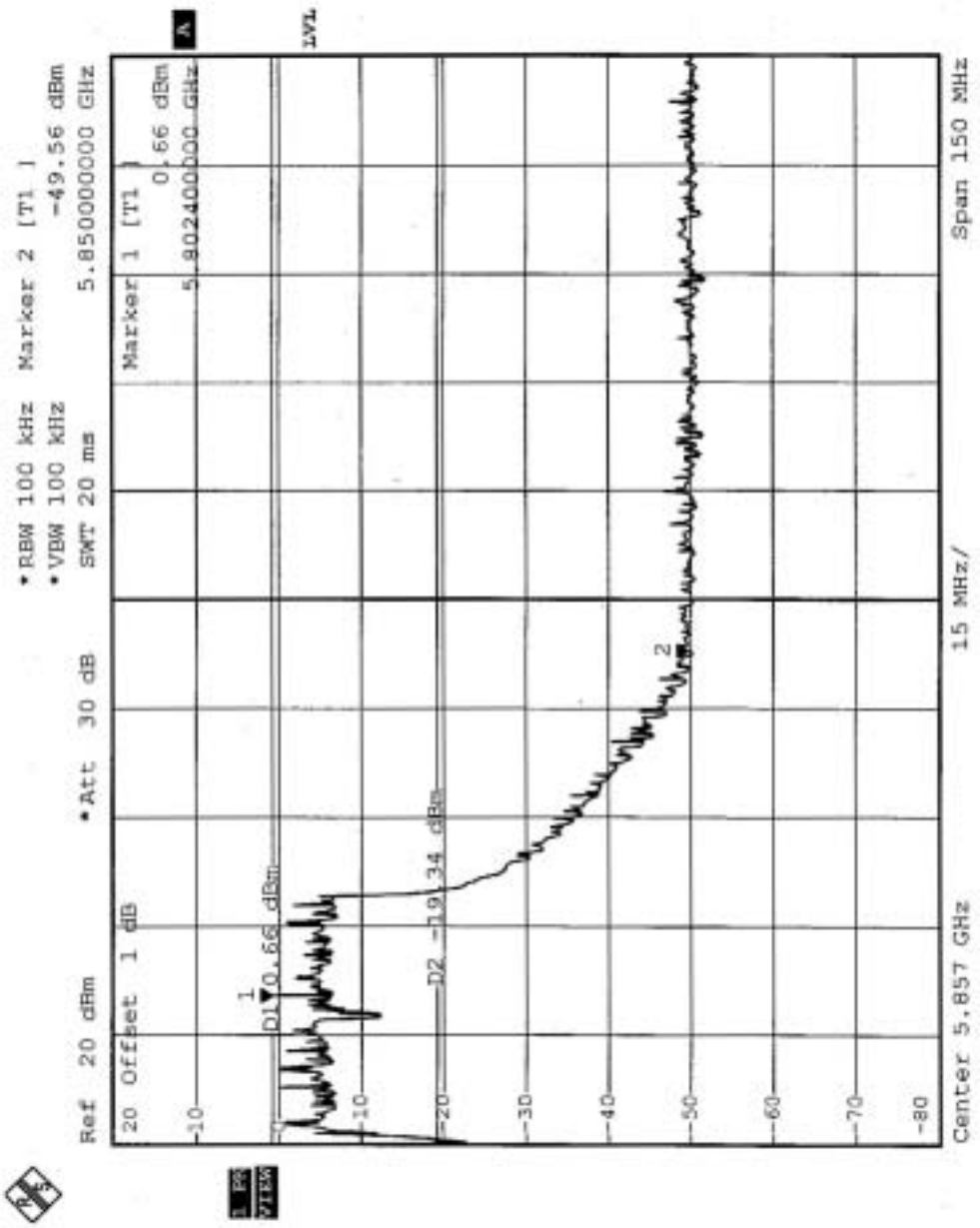
Normal Mode


RBW 100 kHz
VBW 100 kHz
SWT 20 ms
Att 30 dB
Offset 1 dB
Ref 20 dBm
Marker 2 [T1]
-36.54 dBm
5.725000000 GHz
Marker 1 [T1]
0.71 dBm
5.746400000 GHz
D1 0.71 dBm
D2 -19.29 dBm
Center 5.705 GHz
10 MHz/
Span 100 MHz


Ref 20 dBm
20 Offset 1 dB
• Att 30 dB
• RBW 100 kHz
• VBW 100 kHz
SWT 20 ms
Marker 2 [T1]
-41.13 dBm
5.725000000 GHz
Marker 1 [T1]
-1.42 dBm
5.747700000 GHz
D1 -1.42 dBm
D2 -21.42 dBm
Center 5.7045 GHz
15 MHz/
Span 150 MHz

Turbo Mode


RBW 100 kHz
VBW 100 kHz
SWT 20 ms
Marker 2 [T1]
-47.31 dBm
5.850000000 GHz
Marker 1 [T1]
0.54 dBm
5.826200000 GHz
Ref 20 dBm
Offset 1 dB
Att 30 dB
Center 5.865 GHz
10 MHz/
Span 100 MHz
0.54 dBm
D2 19.46 dBm


RBW 100 kHz
VBW 100 kHz
SWT 20 ms
Marker 2 [T1]
-49.56 dBm
5.850000000 GHz
Marker 1 [T1]
0.66 dBm
5.802400000 GHz
Ref 20 dBm
Offset 1 dB
Att 30 dB
D1 0.66 dBm
D2 -19.34 dBm
Center 5.857 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.

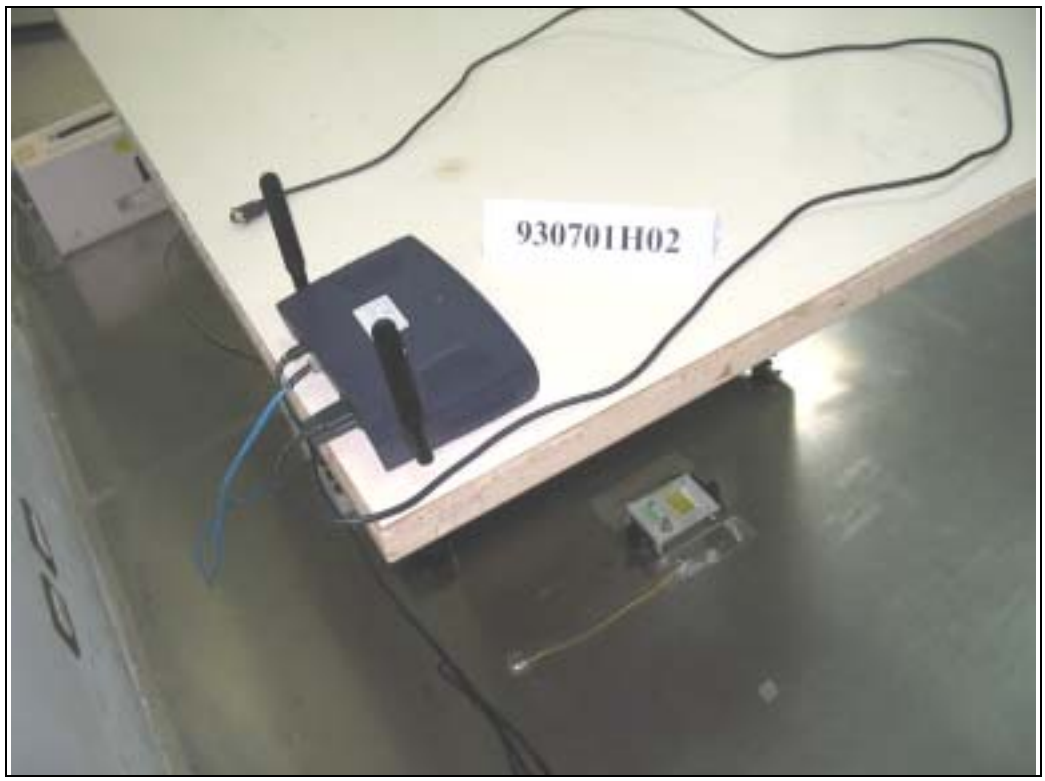
And according to FCC 47 CFR Section 15.407(a), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

5.12.2 ANTENNA CONNECTED CONSTRUCTION

The antenna used in this product is PCB Dipole Antenna with UFL connector. The maximum Gain of the antenna is 4.5 dBi.

6. PHOTOGRAPHS OF THE TEST CONFIGURATION

CONDUCTED EMISSION TEST (With Adapter)



CONDUCTED EMISSION TEST (With POE)

RADIATED EMISSION TEST (with Adapter)

RADIATED EMISSION TEST (with POE)

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, A2LA
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:
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Web Site: www.adt.com.tw

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

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