FCC TEST REPORT (15.247)

REPORT NO.:	RF940502L04
MODEL NO.:	AT-WA7400
RECEIVED:	May 02, 2005
TESTED:	May 11 ~ Jun. 06, 2005
ISSUED:	Jun. 09, 2005

APPLICANT:	Delta Networks, Inc.
ADDRESS:	252, Shang Ying Road, Kuei San Taoyuan Shien 333, Taiwan, R.O.C.

ISSUED BY:	Advance Data Technology Corporation
LAB ADDRESS:	No. 47, 14th Ling, Chia Pau Tsuen, Lin Kou Hsiang 244, Taipei Hsien, Taiwan, R.O.C.
TEST LOCATION:	No. 19, Hwa Ya 2nd Rd., Wen Hwa Tsuen, Kwei Shan Hsiang, Taoyuan Hsien 333, Taiwan, R.O.C.

0528
ILAC MRA

No. 2177-01

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1. CERTIFICATION

PRODUCT:	ENTERPRISE WLAN AP
BRAND NAME:	ATI
MODEL NO.:	AT-WA7400
APPLICANT:	Delta Networks, Inc.
TEST SAMPLE:	ENGINEERING SAMPLE
TESTED:	May 11 ~ Jun. 06, 2005
STANDARDS:	FCC Part 15, Subpart C (Section 15.247), ANSI C63.4-2003

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

PREPARED BY : Andrea Hsia , **DATE:** Jun. 09, 2005
(Andrea Hsia)

TECHNICAL ACCEPTANCE : Gary Chang , **DATE:** Jun. 09, 2005
Responsible for RF
(Gary Chang)

APPROVED BY : , **DATE:** Jun. 09, 2005
(Cody Chang, Deputy Manager)

2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 15, Subpart C (Section 15.247)			
Standard Section	**Test Type and Limit**	**Result**	**Remark**
15.207	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is –6.60dB at 0.166MHz
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(d)	Radiated Emissions Limit: Table 15.209	PASS	Meet the requirement of limit. Minimum passing margin is –0.48dB at 2483.50MHz
15.247(e)	Power Spectral Density Limit: max. 8dBm	PASS	Meet the requirement of limit.
15.247(d)	Band Edge Measurement Limit: 20dB less than the peak value of fundamental frequency	PASS	Meet the requirement of limit.

2.1 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4:

Measurement	Frequency	Uncertainty
Conducted emissions	9kHz~30MHz	2.44 dB
Radiated emissions	30MHz ~ 200MHz	3.73 dB
	200MHz ~1000MHz	3.74 dB
	1GHz ~ 18GHz	2.20 dB
	18GHz ~ 40GHz	1.88 dB

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

EUT	ENTERPRISE WLAN AP
MODEL NO.	AT-WA7400
POWER SUPPLY	5Vdc from AC Adapter
MODULATION TYPE	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
MODULATION TECHNOLOGY	DSSS, OFDM
TRANSFER RATE	802.11b:11/5.5/2/1Mbps 802.11g: 54/48/36/24/18/12/9/6Mbps (Turbo mode: up to 108Mbps *see Note 2) 802.11a: 54/48/36/24/18/12/9/6Mbps (Turbo mode: up to 108Mbps *see Note 2)
FREQUENCY RANGE	802.11b & 802.11g: 2.412 ~ 2.462GHz 802.11a: 5.150 ~ 5.350GHz and 5.725 ~ 5.850GHz
NUMBER OF CHANNEL	802.11b & 802.11g: 11 for Normal mode / 1 for Turbo mode 802.11a: 13 for Normal mode / 5 for Turbo mode
CHANNEL SPACING	802.11b & 802.11g: 5MHz 802.11a: 20MHz for Normal mode / 40MHz for Turbo mode
OUTPUT POWER	101.625mW for 802.11b 100.231mW for 802.11g 47.753mW for 5.150 ~ 5.350GHz 40.179mW for 5.725 ~ 5.850GHz
ANTENNA TYPE	Dipole Antenna with 1.8dBi gain for 2.4GHz band Dipole Antenna with 2.8dBi gain for 5.0GHz band
DATA CABLE	NA
I/O PORTS	RJ45
ASSOCIATED DEVICES	NA

NOTE:

1. The EUT was tested with the following adapter:

BRAND:	DVE
MODEL :	DSA-0151F-05
INPUT :	100-240Vac, 50/60Hz, 0.4A
OUTPUT :	5.0Vdc, 2.8A
POWER LINE:	DC 1.8m non-shielded cable without core

2. The EUT operates in both the 5GHz and 2.4GHz Bands and compatibility with 802.11a and 802.11b, 802.11g technology.
3. This EUT is capable of providing data rates of up to 108 Mbps in Turbo mode depending upon reception quality.
4. 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

Operated in 2400 ~ 2483.5MHz band:

For 802.11b/g: Eleven channels are provided to this EUT for normal mode.

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

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

Channel	Frequency
6	2437 MHz

Operated in 5725 ~ 5850MHz band:

For 802.11a: Five channels are provided to this EUT for normal mode.

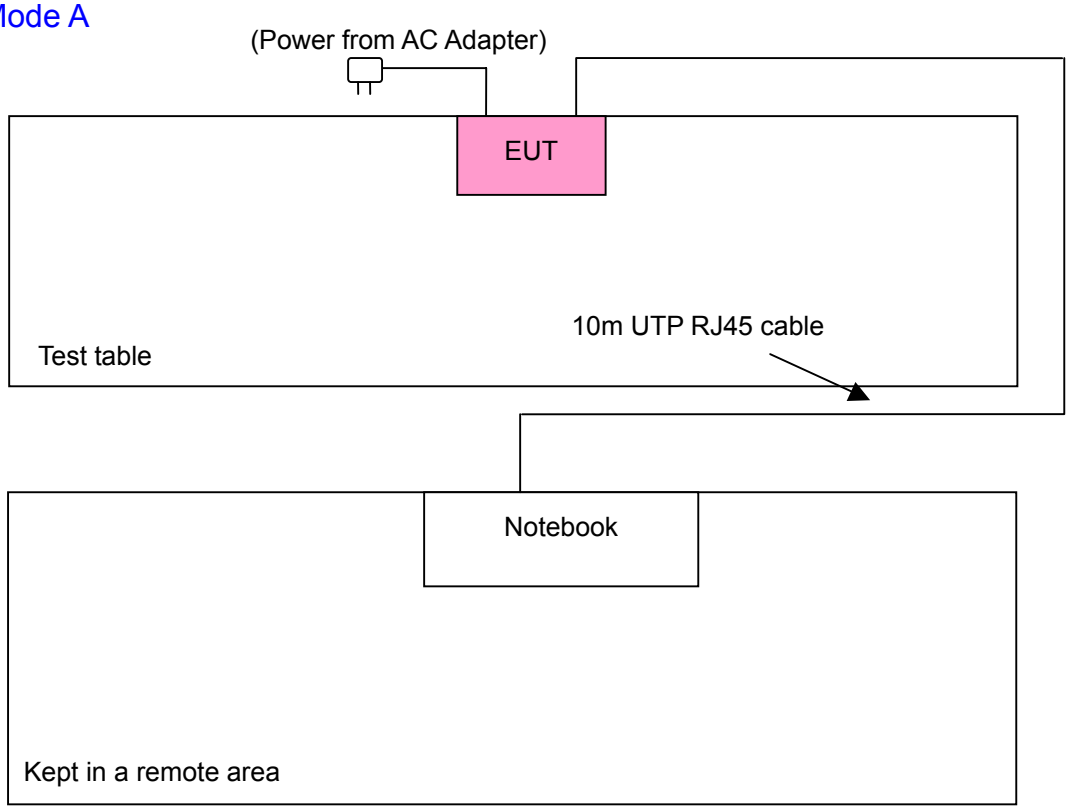
Channel	Frequency
1	5745 MHz
2	5765 MHz
3	5785 MHz
4	5805 MHz
5	8525 MHz

For 802.11a: Two channels are provided to this EUT for turbo mode.

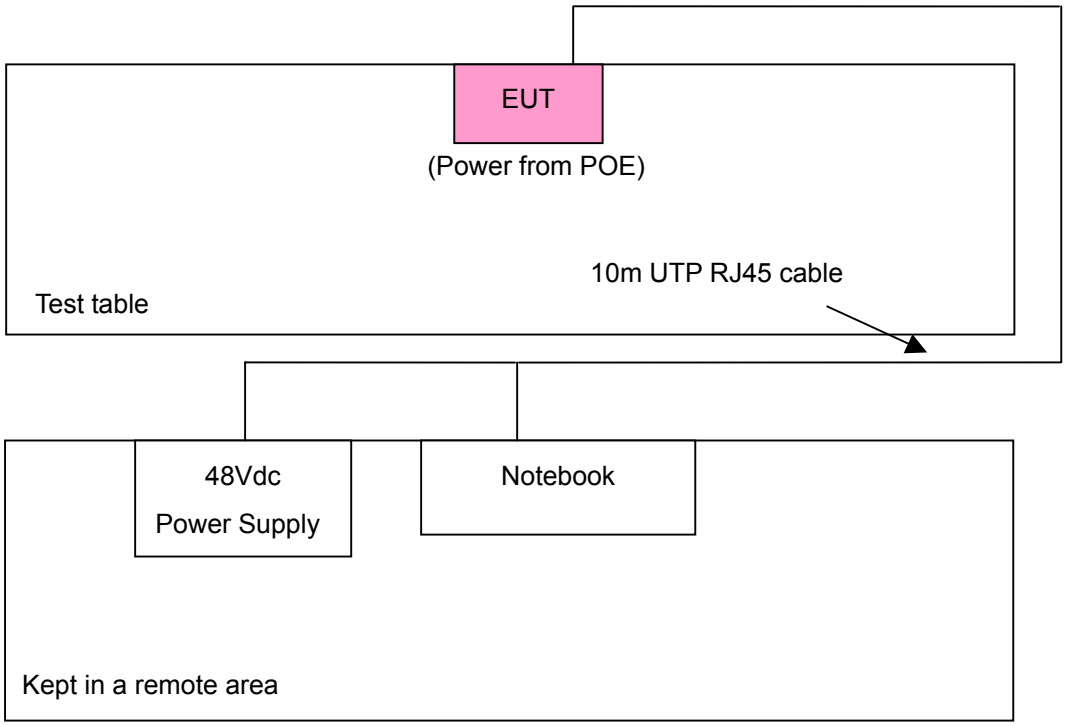
Channel	Frequency
1	5760 MHz
2	5800 MHz

3.2.1 CONFIGURATION OF SYSTEM UNDER TEST

Test Mode A



Test Mode B



3.2.2 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL:

EUT configure mode	Applicable to				Description
	PLC	RE<1G	RE≥1G	APCM	
1	v	v	Note1	Note 2	Power from AC adapter
2	v	v	Note1	Note 2	Power from POE

Where PLC: Power Line Conducted Emission RE<1G RE: Radiated Emission below 1GHz
RE≥1G: Radiated Emission above 1GHz APCM: Antenna Port Conducted Measurement
Note 1: No effect on Radiated Emission above 1GHz.
Note 2: No effect on Conducted RF measurement.

Power Line Conducted Emission Test:

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

EUT configure mode	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
1	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6
2	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6
1	802.11a	1 to 5	3	OFDM	BPSK	6
2	802.11a	1 to 5	3	OFDM	BPSK	6

Radiated Emission Test (Below 1 GHz):

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

EUT configure mode	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
1	802.11g	1 to 11	11	OFDM	BPSK	6
2	802.11g	1 to 11	11	OFDM	BPSK	6
1	802.11a	1 to 5	3	OFDM	BPSK	6
2	802.11a	1 to 5	3	OFDM	BPSK	6

Radiated Emission Test (Above 1 GHz):

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

EUT configure mode	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
1	802.11b	1 to 11	1, 6, 11	DSSS	CCK	11
1	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6
1	802.11g Turbo	6	6	OFDM	BPSK	12
1	802.11a	1 to 5	1, 3, 5	OFDM	BPSK	6
1	802.11a Turbo	1 to 2	1, 2	OFDM	BPSK	12

Bandedge Measurement:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11b	1 to 11	1, 11	DSSS	CCK	11
802.11g	1 to 11	1, 11	OFDM	BPSK	6
802.11g Turbo	6	6	OFDM	BPSK	12
802.11a	1 to 5	1, 5	OFDM	BPSK	6
802.11a Turbo	1 to 2	1, 2	OFDM	BPSK	12

Antenna Port Conducted Measurement:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11b	1 to 11	1, 6, 11	DSSS	CCK	11
802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6
802.11g Turbo	6	6	OFDM	BPSK	12
802.11a	1 to 5	1, 3, 5	OFDM	BPSK	6
802.11a Turbo	1 to 2	1, 2	OFDM	BPSK	12

3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is an ENTERPRISE WLAN AP. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC Part 15, Subpart C. (15.247)
ANSI C63.4-2003

All test items 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 FCC 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	PP05L	20838027664	E2K24CLNS
2	DC POWER SUPPLY	Topward	6603D	700637	FCC DoC Approved

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

NOTE 1: All power cords of the above support units are non shielded (1.8m).

NOTE 2: Item 1 act as a communication partner to transfer data.

4. TEST TYPES AND RESULTS (802.11b & g 2412~2462MHz Band)

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

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

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

4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
Test Receiver ROHDE & SCHWARZ	ESCS30	100288	Nov. 06, 2005
RF signal cable Woken	5D-FB	Cable-HyC02-01	Jan. 09, 2006
LISN ROHDE & SCHWARZ	ESH2-Z5	100100	Jan. 20, 2006
LISN ROHDE & SCHWARZ	ESH3-Z5	100311	Jan. 20, 2006
Software ADT	ADT_Cond_V3	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 HwaYa Shielded Room 3.
3. The VCCI Site Registration No. is C-2047.

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.

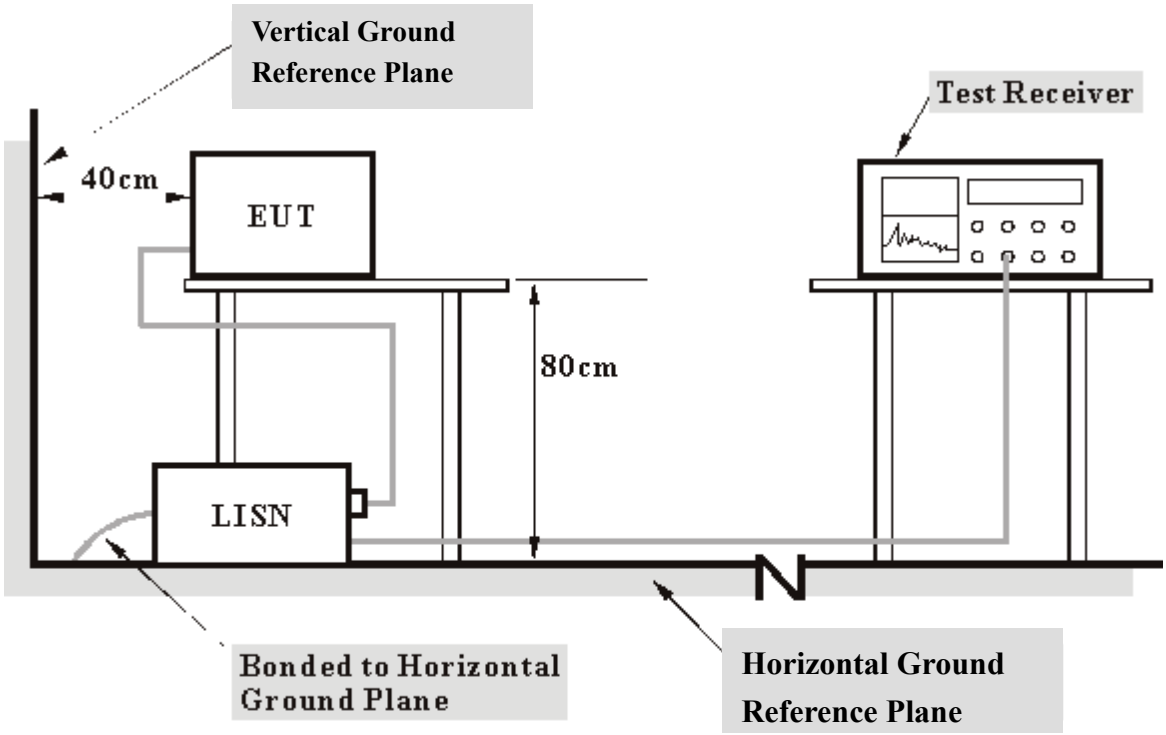
b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

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 notebook system to act as a communication partner and placed it outside of testing area.
c. The communication partner run a test program (provided by manufacturer) to enable EUT under transmission/receiving condition continuously at specific channel frequency via an RJ45 cable.
d. The communication partner sent data to EUT by command "PING".

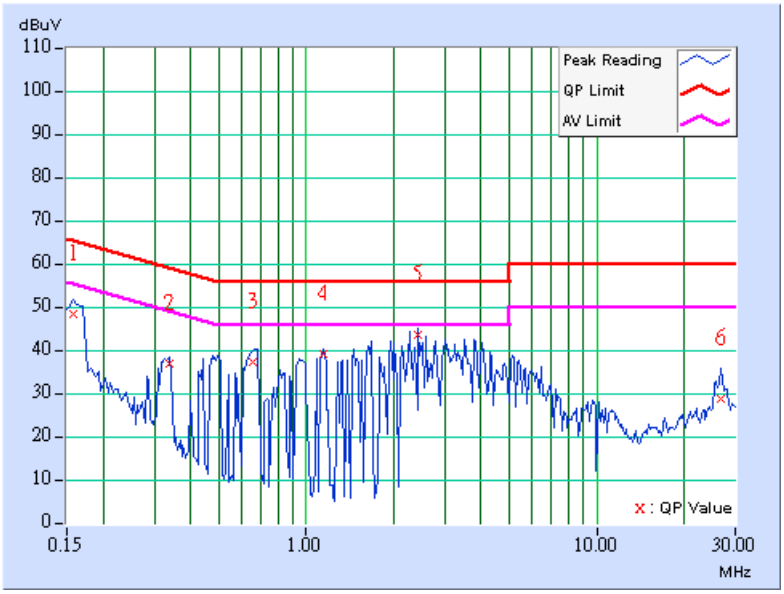
4.1.7 TEST RESULTS

Conducted Worst-Case Data (Power from AC Adapter)

EUT	ENTERPRISE WLAN AP	**MEASUREMENT DETAIL**	
MODEL	AT-WA7400	**PHASE**	Line 1
CHANNEL	Channel 1	**6dB BANDWIDTH**	9 kHz
MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	20deg. C, 60%RH, 991hPa
TRANSFER RATE	6Mbps	**INPUT POWER (SYSTEM)**	120Vac, 60 Hz
TEST MODE	1	**TESTED BY**	Match Tsui

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.158	0.10	47.24	41.09	47.34	41.19	65.58	55.58	-18.24	-14.39
2	0.338	0.10	35.58	-	35.68	-	59.26	49.26	-23.58	-
3	0.658	0.14	36.23	23.84	36.37	23.98	56.00	46.00	-19.63	-22.02
4	1.145	0.20	38.14	24.80	38.34	25.00	56.00	46.00	-17.66	-21.00
5	2.426	0.20	42.34	24.32	42.54	24.52	56.00	46.00	-13.46	-21.48
6	26.684	1.30	27.67	-	28.97	-	60.00	50.00	-31.03	-

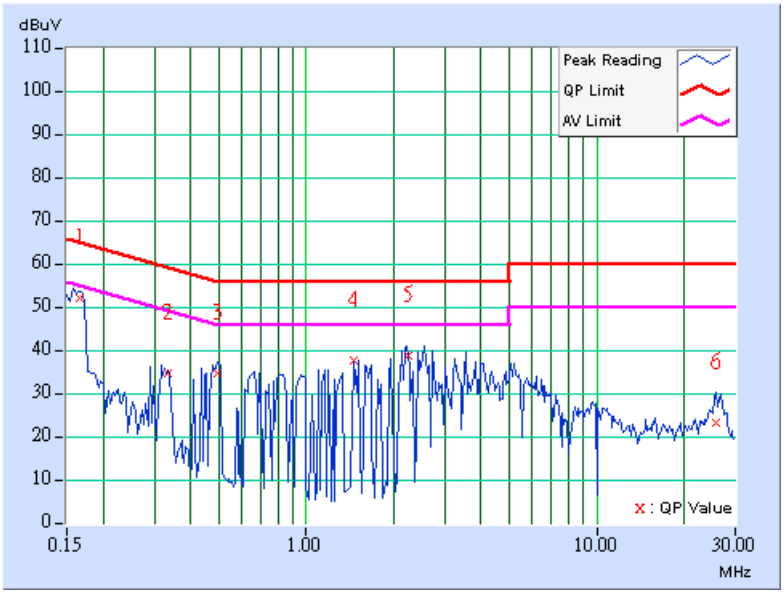
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	ENTERPRISE WLAN AP	MEASUREMENT DETAIL	
MODEL	AT-WA7400	PHASE	Line 2
CHANNEL	Channel 1	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	20deg. C, 60%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	1	TESTED BY	Match Tsui

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.166	0.10	51.18	48.34	51.28	48.44	65.18	55.18	-13.90	-6.74
2	0.334	0.10	33.78	-	33.88	-	59.36	49.36	-25.48	-
3	0.498	0.12	33.62	-	33.74	-	56.04	46.04	-22.30	-
4	1.449	0.20	36.66	21.40	36.86	21.60	56.00	46.00	-19.14	-24.40
5	2.251	0.20	37.93	12.62	38.13	12.58	56.00	46.00	-17.87	-33.42
6	25.621	1.02	22.17	-	23.19	-	60.00	50.00	-36.81	-

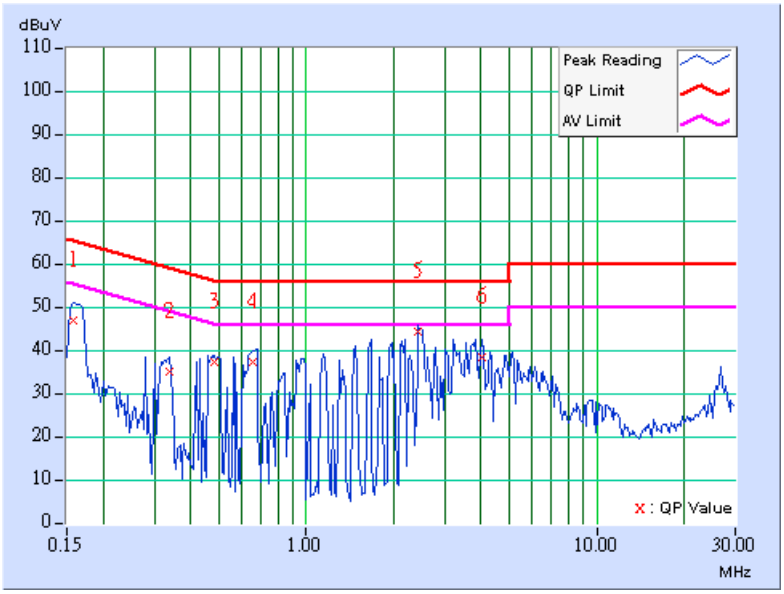
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	ENTERPRISE WLAN AP	MEASUREMENT DETAIL	
MODEL	AT-WA7400	PHASE	Line 1
CHANNEL	Channel 6	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	20deg. C, 60%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	1	TESTED BY	Match Tsui

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.158	0.10	46.86	40.34	46.96	40.44	65.58	55.58	-18.62	-15.14
2	0.338	0.10	35.09	-	35.19	-	59.26	49.26	-24.07	-
3	0.482	0.11	37.35	26.21	37.46	26.32	56.30	46.30	-18.84	-19.98
4	0.658	0.14	37.29	25.18	37.43	25.32	56.00	46.00	-18.57	-20.68
5	2.438	0.20	44.28	26.53	44.48	26.73	56.00	46.00	-11.52	-19.27
6	4.016	0.20	38.45	18.44	38.65	18.64	56.00	46.00	-17.35	-27.36

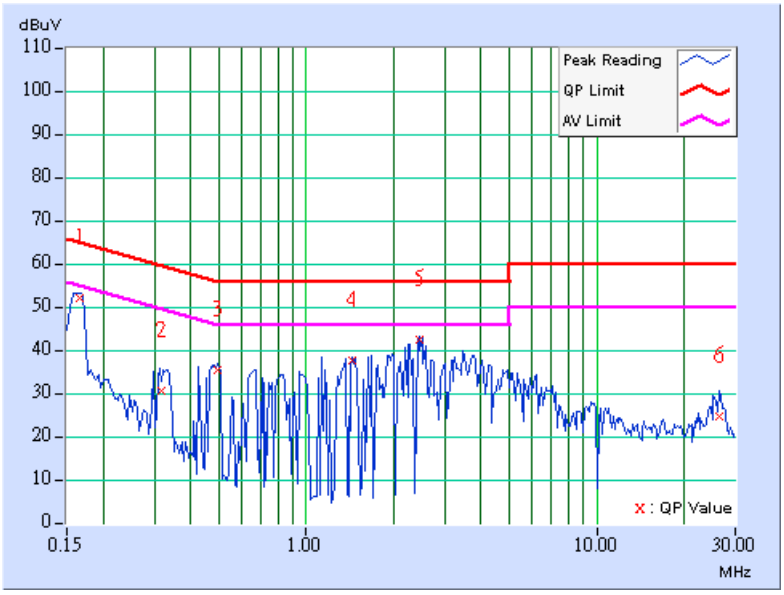
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	ENTERPRISE WLAN AP	MEASUREMENT DETAIL	
MODEL	AT-WA7400	PHASE	Line 2
CHANNEL	Channel 6	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	20deg. C, 60%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	1	TESTED BY	Match Tsui

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	**0.166**	**0.10**	**51.24**	**48.48**	**51.34**	**48.58**	**65.18**	**55.18**	**-13.84**	**-6.60**
2	0.317	0.10	29.63	-	29.73	-	59.79	49.79	-30.06	-
3	0.498	0.12	34.57	-	34.69	-	56.04	46.04	-21.35	-
4	1.445	0.20	36.68	19.19	36.88	19.39	56.00	46.00	-19.12	-26.61
5	2.445	0.20	41.42	23.41	41.62	23.61	56.00	46.00	-14.38	-22.39
6	26.578	1.06	23.84	-	24.90	-	60.00	50.00	-35.10	-

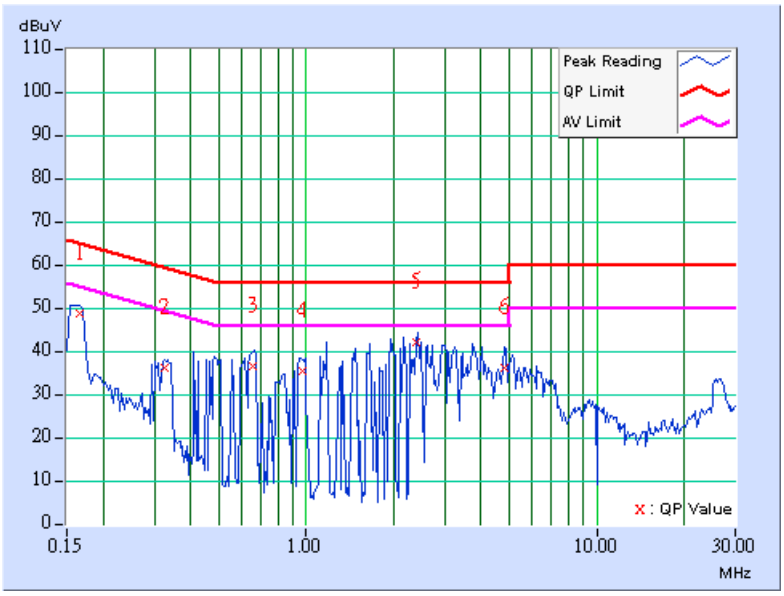
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	ENTERPRISE WLAN AP	MEASUREMENT DETAIL	
MODEL	AT-WA7400	PHASE	Line 1
CHANNEL	Channel 11	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	20deg. C, 60%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	1	TESTED BY	Match Tsui

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.166	0.10	48.71	47.76	48.81	47.86	65.18	55.18	-16.37	-7.32
2	0.326	0.10	36.18	-	36.28	-	59.56	49.56	-23.28	-
3	0.658	0.14	36.39	24.14	36.53	24.28	56.00	46.00	-19.47	-21.72
4	0.971	0.20	35.45	-	35.65	-	56.00	46.00	-20.35	-
5	2.406	0.20	41.85	23.52	42.05	23.72	56.00	46.00	-13.95	-22.28
6	4.809	0.21	36.14	13.77	36.35	13.98	56.00	46.00	-19.65	-32.02

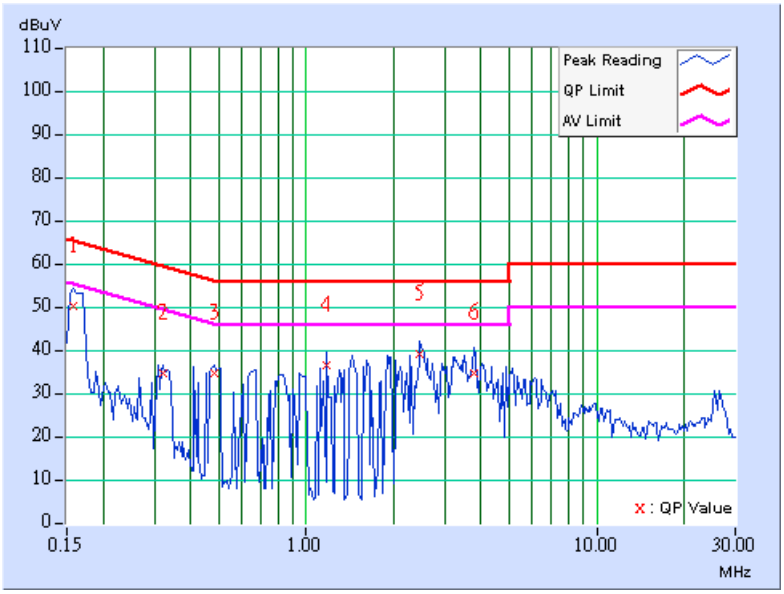
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	ENTERPRISE WLAN AP	MEASUREMENT DETAIL	
MODEL	AT-WA7400	PHASE	Line 2
CHANNEL	Channel 11	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	20deg. C, 60%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	1	TESTED BY	Match Tsui

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.158	0.10	50.00	41.78	50.10	41.88	65.58	55.58	-15.48	-13.70
2	0.322	0.10	34.50	-	34.60	-	59.66	49.66	-25.06	-
3	0.482	0.11	34.66	-	34.77	-	56.30	46.30	-21.53	-
4	1.172	0.20	36.65	20.71	36.85	20.91	56.00	46.00	-19.15	-25.09
5	2.457	0.20	38.98	21.68	39.18	21.88	56.00	46.00	-16.82	-24.12
6	3.785	0.20	34.66	-	34.86	-	56.00	46.00	-21.14	-

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

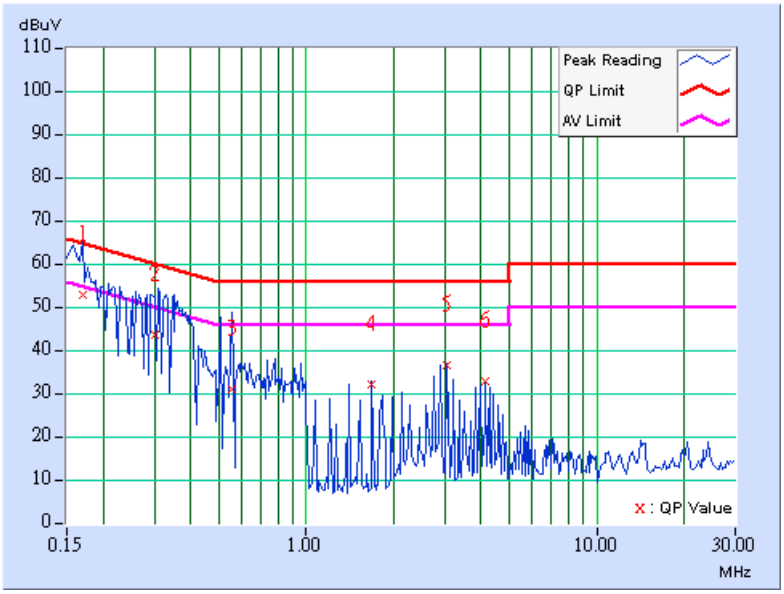


Conducted Worst-Case Data (Power from POE)

EUT	ENTERPRISE WLAN AP	MEASUREMENT DETAIL	
MODEL	AT-WA7400	PHASE	Line 1
CHANNEL	Channel 1	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	22deg. C, 62%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	2	TESTED BY	Match Tsui

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.170	0.11	52.51	22.48	52.62	22.59	64.98	54.98	-12.37	-32.40
2	0.303	0.11	43.19	24.77	43.30	24.88	60.15	50.15	-16.85	-25.27
3	0.552	0.14	30.59	-	30.73	-	56.00	46.00	-25.27	-
4	1.680	0.25	31.90	-	32.15	-	56.00	46.00	-23.85	-
5	3.051	0.33	36.29	35.73	36.62	36.06	56.00	46.00	-19.38	-9.94
6	4.116	0.39	32.66	-	33.05	-	56.00	46.00	-22.95	-

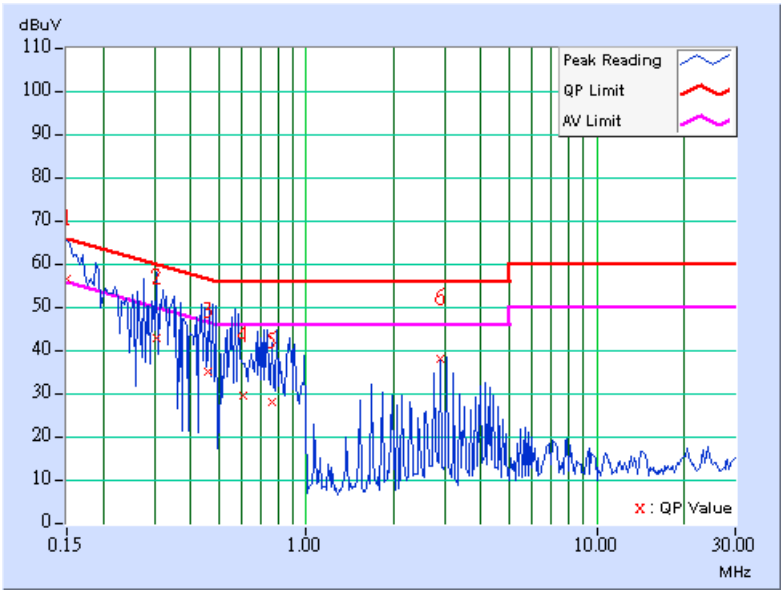
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	ENTERPRISE WLAN AP	MEASUREMENT DETAIL	
MODEL	AT-WA7400	PHASE	Line 2
CHANNEL	Channel 1	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	22deg. C, 62%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	2	TESTED BY	Match Tsui

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.150	0.11	56.43	30.37	56.54	30.48	66.00	56.00	-9.46	-25.52
2	0.306	0.11	42.68	29.12	42.79	29.23	60.07	50.07	-17.28	-20.84
3	0.458	0.12	34.82	-	34.94	-	56.74	46.74	-21.79	-
4	0.611	0.16	29.40	-	29.56	-	56.00	46.00	-26.44	-
5	0.764	0.19	27.71	-	27.90	-	56.00	46.00	-28.10	-
6	2.899	0.32	38.01	37.52	38.33	37.84	56.00	46.00	-17.67	-8.16

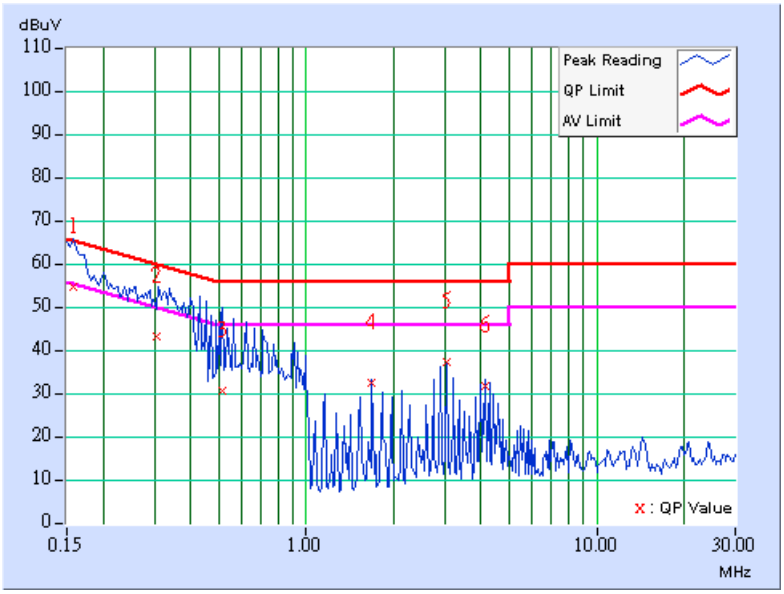
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	ENTERPRISE WLAN AP	MEASUREMENT DETAIL	
MODEL	AT-WA7400	PHASE	Line 1
CHANNEL	Channel 6	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	22deg. C, 62%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	2	TESTED BY	Match Tsui

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.158	0.11	54.53	25.85	54.64	25.96	65.58	55.58	-10.94	-29.62
2	0.304	0.11	42.85	25.08	42.96	25.19	60.12	50.12	-17.16	-24.93
3	0.517	0.14	30.26	-	30.40	-	56.00	46.00	-25.60	-
4	1.676	0.25	32.23	-	32.48	-	56.00	46.00	-23.52	-
5	3.047	0.33	37.08	35.54	37.41	35.87	56.00	46.00	-18.59	-10.13
6	4.117	0.39	31.54	-	31.93	-	56.00	46.00	-24.07	-

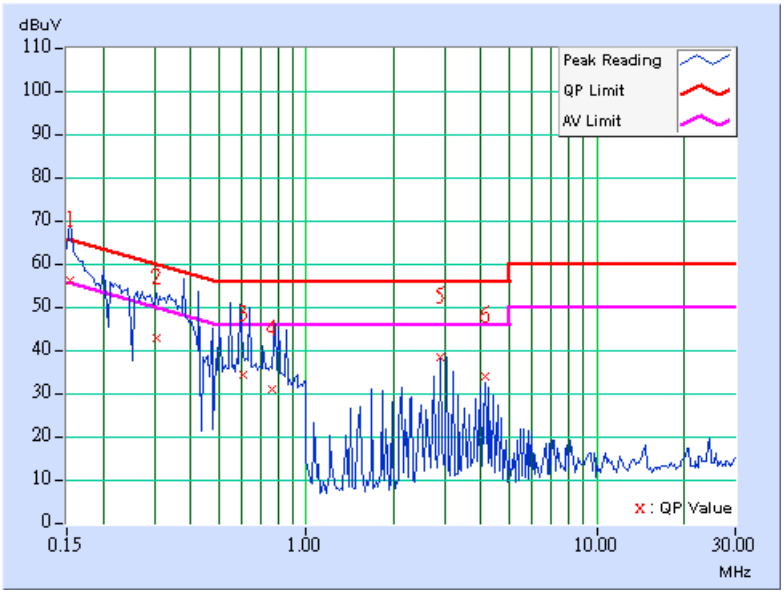
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	ENTERPRISE WLAN AP	MEASUREMENT DETAIL	
MODEL	AT-WA7400	PHASE	Line 2
CHANNEL	Channel 6	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	22deg. C, 62%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	2	TESTED BY	Match Tsui

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.154	0.11	55.91	30.37	56.02	30.48	65.79	55.79	-9.77	-25.31
2	0.306	0.11	42.56	28.96	42.67	29.07	60.09	50.09	-17.42	-21.02
3	0.608	0.16	33.89	-	34.05	-	56.00	46.00	-21.95	-
4	0.762	0.19	30.89	-	31.08	-	56.00	46.00	-24.92	-
5	2.895	0.32	38.17	37.70	38.49	38.02	56.00	46.00	-17.51	-7.98
6	4.113	0.39	33.80	-	34.19	-	56.00	46.00	-21.81	-

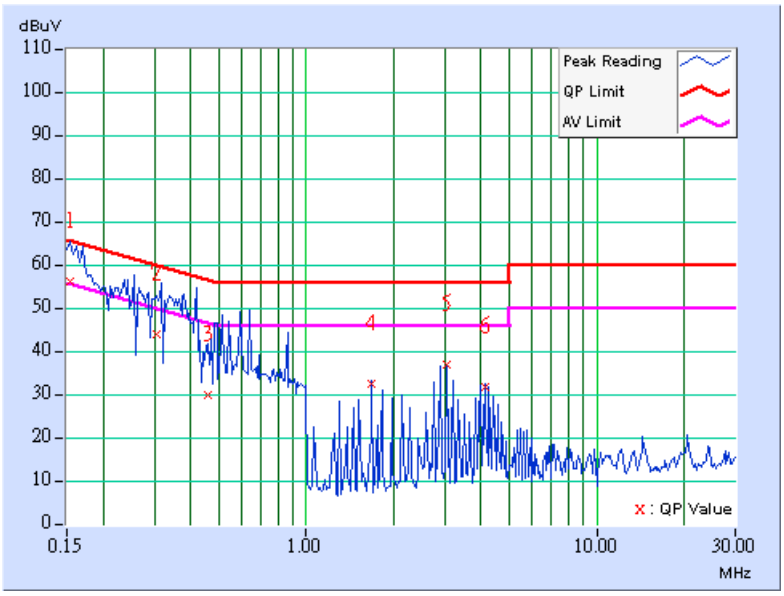
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	ENTERPRISE WLAN AP	MEASUREMENT DETAIL	
MODEL	AT-WA7400	PHASE	Line 1
CHANNEL	Channel 11	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	22deg. C, 62%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	2	TESTED BY	Match Tsui

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.154	0.11	55.90	29.64	56.01	29.75	65.79	55.79	-9.78	-26.04
2	0.306	0.11	43.66	24.76	43.77	24.87	60.08	50.08	-16.31	-25.21
3	0.456	0.12	29.71	-	29.83	-	56.76	46.76	-26.93	-
4	1.676	0.25	32.13	-	32.38	-	56.00	46.00	-23.62	-
5	3.047	0.33	36.50	35.89	36.83	36.22	56.00	46.00	-19.17	-9.78
6	4.113	0.39	31.43	-	31.82	-	56.00	46.00	-24.18	-

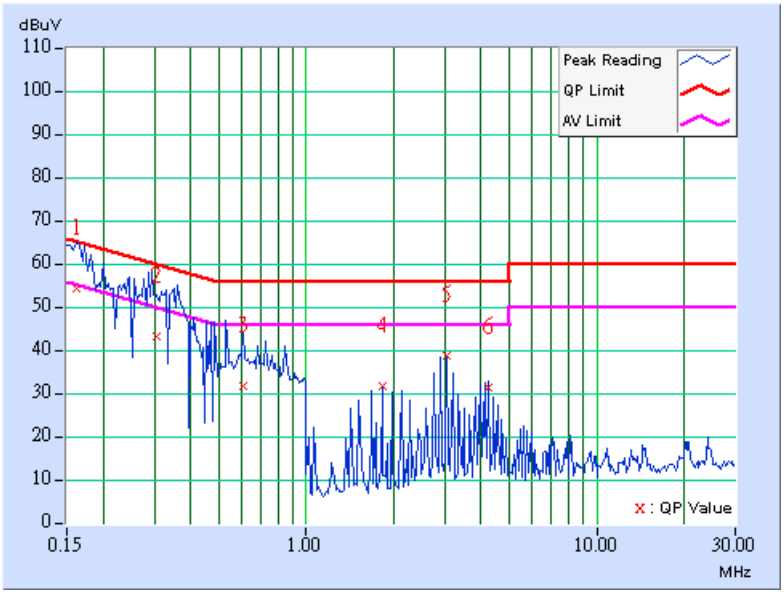
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	ENTERPRISE WLAN AP	MEASUREMENT DETAIL	
MODEL	AT-WA7400	PHASE	Line 2
CHANNEL	Channel 11	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	22deg. C, 62%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	2	TESTED BY	Match Tsui

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.162	0.11	54.07	23.68	54.18	23.79	65.38	55.38	-11.20	-31.59
2	0.307	0.11	43.00	27.96	43.11	28.07	60.04	50.04	-16.93	-21.97
3	0.607	0.15	31.54	-	31.69	-	56.00	46.00	-24.31	-
4	1.828	0.26	31.53	-	31.79	-	56.00	46.00	-24.21	-
5	3.047	0.33	38.41	38.04	38.74	38.37	56.00	46.00	-17.26	-7.63
6	4.262	0.39	31.07	-	31.46	-	56.00	46.00	-24.54	-

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



4.2 RADIATED EMISSION MEASUREMENT

4.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

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

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

NOTE:

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

4.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
Test Receiver ROHDE & SCHWARZ	ESIB7	100188	Dec. 19, 2005
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100039	Nov. 21, 2005
BILOG Antenna SCHWARZBECK	VULB9168	9168-157	Jan. 22, 2006
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-407	Jan. 16, 2006
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA 9170241	Feb. 23, 2006
Preamplifier Agilent	8449B	3008A01961	Nov. 09, 2005
Preamplifier Agilent	8447D	2944A10629	Nov. 09, 2005
RF signal cable HUBER+SUHNER	SUCOFLEX 104	218182/4	Feb. 17, 2006
RF signal cable HUBER+SUHNER	SUCOFLEX 104	218194/4	Feb. 17, 2006
Software ADT.	ADT_Radiated_V5.14	NA	NA
Antenna Tower ADT.	AT100	AT93021702	NA
Turn Table ADT.	TT100.	TT93021702	NA
Controller ADT.	SC100.	SC93021702	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 HwaYa Chamber 1.

3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.

4. The IC Site Registration No. is IC4924-2.

4.2.3 TEST PROCEDURES

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi- anechoic. 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 lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

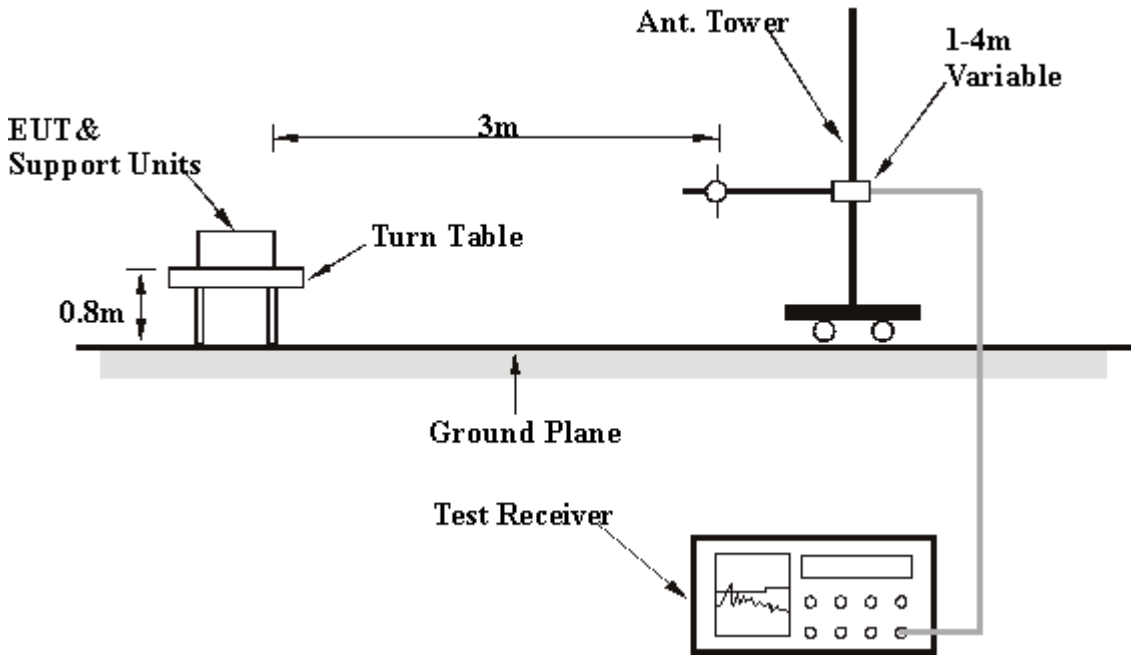
NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection 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 10 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

Below 1GHz Worst-Case Data (Power from AC Adapter)

EUT	ENTERPRISE WLAN AP	MEASUREMENT DETAIL	
MODEL	AT-WA7400	FREQUENCY RANGE	Below 1000MHz
CHANNEL	Channel 11	DETECTOR FUNCTION	Quasi-Peak
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	1	TESTED BY	Match Tsui

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	31.94	23.86 QP	40.00	-16.14	2.50 H	208	10.18	13.68
2	179.68	29.43 QP	43.50	-14.07	1.75 H	262	16.69	12.74
3	249.66	38.08 QP	46.00	-7.92	1.25 H	103	25.00	13.08
4	391.56	30.43 QP	46.00	-15.57	1.00 H	346	13.99	16.44
5	440.16	37.64 QP	46.00	-8.36	2.00 H	352	19.98	17.66
6	500.42	36.90 QP	46.00	-9.10	1.75 H	88	18.30	18.59
7	560.68	29.45 QP	46.00	-16.55	1.50 H	106	9.57	19.88
8	624.83	32.09 QP	46.00	-13.91	1.25 H	283	10.85	21.24
9	722.02	29.80 QP	46.00	-16.20	1.00 H	355	7.04	22.76
10	770.62	33.15 QP	46.00	-12.85	1.00 H	175	9.61	23.53
11	881.42	32.79 QP	46.00	-13.21	1.00 H	343	8.05	24.74
12	914.47	29.31 QP	46.00	-16.69	1.00 H	160	4.06	25.25

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	31.94	27.95 QP	40.00	-12.05	1.75 V	316	14.28	13.68
2	63.05	35.60 QP	40.00	-4.40	1.00 V	355	22.49	13.11
3	109.70	32.92 QP	43.50	-10.58	1.25 V	298	21.18	11.74
4	181.62	28.10 QP	43.50	-15.40	1.50 V	355	15.52	12.58
5	218.56	31.80 QP	46.00	-14.20	1.00 V	244	20.21	11.59
6	249.66	34.88 QP	46.00	-11.12	1.75 V	31	21.80	13.08
7	440.16	32.96 QP	46.00	-13.04	1.25 V	28	15.30	17.66
8	500.42	36.09 QP	46.00	-9.91	1.00 V	343	17.49	18.59
9	624.83	30.32 QP	46.00	-15.68	1.00 V	322	9.09	21.24
10	770.62	31.95 QP	46.00	-14.05	1.50 V	232	8.42	23.53
11	881.42	32.87 QP	46.00	-13.13	1.25 V	262	8.13	24.74
12	990.28	38.50 QP	54.00	-15.50	1.00 V	70	12.85	25.66

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

Below 1GHz Worst-Case Data (Power from POE)

EUT	ENTERPRISE WLAN AP	MEASUREMENT DETAIL	
MODEL	AT-WA7400	FREQUENCY RANGE	Below 1000MHz
CHANNEL	Channel 11	DETECTOR FUNCTION	Quasi-Peak
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	22deg. C, 60%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	2	TESTED BY	Match Tsui

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	142.75	32.62 QP	43.50	-10.88	1.00 H	268	18.34	14.27
2	218.56	35.90 QP	46.00	-10.10	1.00 H	229	24.31	11.59
3	249.66	37.52 QP	46.00	-8.48	1.00 H	43	24.44	13.08
4	377.96	33.68 QP	46.00	-12.32	1.00 H	19	17.56	16.12
5	500.42	35.86 QP	46.00	-10.14	1.50 H	37	17.26	18.59
6	770.62	36.29 QP	46.00	-9.71	1.00 H	295	12.76	23.53

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	63.05	34.77 QP	40.00	-5.23	1.00 V	22	21.66	13.11
2	94.15	33.22 QP	43.50	-10.28	1.00 V	277	22.94	10.28
3	142.75	34.84 QP	43.50	-8.66	1.50 V	352	20.56	14.27
4	249.66	34.30 QP	46.00	-11.70	1.00 V	172	21.22	13.08
5	399.34	33.98 QP	46.00	-12.02	1.50 V	232	17.35	16.62
6	770.62	34.41 QP	46.00	-11.59	1.50 V	73	10.88	23.53

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

802.11b DSSS modulation

EUT	ENTERPRISE WLAN AP	MEASUREMENT DETAIL	
MODEL	AT-WA7400	FREQUENCY RANGE	1 ~ 25GHz
CHANNEL	Channel 1	DETECTOR FUNCTION	Peak(PK) Average (AV)
MODULATION TYPE	CCK	ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH, 991hPa
TRANSFER RATE	11Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Match Tsui		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2386.00	61.91 PK	74.00	-12.09	1.33 H	29	30.95	30.96
1	2386.00	51.29 AV	54.00	-2.71	1.33 H	29	20.33	30.96
2	*2412.00	112.18 PK			1.33 H	29	81.12	31.06
2	*2412.00	104.12 AV			1.33 H	29	73.06	31.06
3	4824.00	52.42 PK	74.00	-21.58	1.10 H	23	15.99	36.43
3	4824.00	45.14 AV	54.00	-8.86	1.10 H	23	8.71	36.43
4	7236.00	55.35 PK	74.00	-18.65	1.13 H	329	13.09	42.25
4	7236.00	44.82 AV	54.00	-9.18	1.13 H	329	2.56	42.25

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	2280.00	54.39 PK	74.00	-19.61	1.21 V	332	23.85	30.54
1	2280.00	43.99 AV	54.00	-10.01	1.21 V	332	13.45	30.54
2	2386.00	58.26 PK	74.00	-15.74	1.32 V	79	27.30	30.96
2	2386.00	48.11 AV	54.00	-5.89	1.32 V	79	17.15	30.96
3	*2412.00	110.60 PK			1.32 V	79	79.54	31.06
3	*2412.00	103.33 AV			1.32 V	79	72.27	31.06
4	4824.00	53.63 PK	74.00	-20.37	1.24 V	195	17.20	36.43
4	4824.00	47.34 AV	54.00	-6.66	1.24 V	195	10.91	36.43
5	7236.00	58.51 PK	74.00	-15.49	1.23 V	360	16.25	42.25
5	7236.00	49.66 AV	54.00	-4.34	1.23 V	360	7.40	42.25

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

EUT	ENTERPRISE WLAN AP	MEASUREMENT DETAIL	
MODEL	AT-WA7400	FREQUENCY RANGE	1 ~ 25GHz
CHANNEL	Channel 6	DETECTOR FUNCTION	Peak(PK) Average (AV)
MODULATION TYPE	CCK	ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH, 991hPa
TRANSFER RATE	11Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Match Tsui		

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	115.48 PK			1.33 H	82	84.31	31.17
1	*2437.00	108.40 AV			1.33 H	82	77.23	31.17
2	4874.00	55.80 PK	74.00	-18.20	1.12 H	12	19.26	36.54
2	4874.00	48.01 AV	54.00	-5.99	1.12 H	12	11.47	36.54
3	7311.00	50.44 PK	74.00	-23.56	1.11 H	330	7.98	42.46
3	7311.00	40.15 AV	54.00	-13.85	1.11 H	330	-2.31	42.46

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2320.00	62.20 PK	74.00	-11.80	1.18 V	350	31.50	30.70
1	2320.00	51.40 AV	54.00	-2.60	1.18 V	350	20.70	30.70
2	*2437.00	114.89 PK			1.04 V	80	83.72	31.17
2	*2437.00	107.25 AV			1.04 V	80	76.08	31.17
3	4874.00	55.35 PK	74.00	-18.65	1.21 V	210	18.81	36.54
3	4874.00	48.40 AV	54.00	-5.60	1.21 V	210	11.86	36.54
4	7311.00	55.50 PK	74.00	-18.50	1.28 V	355	13.04	42.46
4	7311.00	45.01 AV	54.00	-8.99	1.28 V	355	2.55	42.46

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

EUT	ENTERPRISE WLAN AP	MEASUREMENT DETAIL	
MODEL	AT-WA7400	FREQUENCY RANGE	1 ~ 25GHz
CHANNEL	Channel 11	DETECTOR FUNCTION	Peak(PK) Average (AV)
MODULATION TYPE	CCK	ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH, 991hPa
TRANSFER RATE	11Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Match Tsui		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	115.40 PK			1.26 H	52	84.12	31.28
1	*2462.00	108.41 AV			1.26 H	52	77.13	31.28
2	2487.00	57.10 PK	74.00	-16.90	1.26 H	52	25.72	31.38
2	2487.00	49.20 AV	54.00	-4.80	1.26 H	52	17.82	31.38
3	4924.00	57.10 PK	74.00	-16.90	1.08 H	28	20.44	36.66
3	4924.00	49.50 AV	54.00	-4.50	1.08 H	28	12.84	36.66
4	7386.00	57.11 PK	74.00	-16.89	1.11 H	330	14.52	42.59
4	7386.00	48.01 AV	54.00	-5.99	1.11 H	330	5.42	42.59

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	2280.00	56.48 PK	74.00	-17.52	1.20 V	350	25.94	30.54
1	2280.00	46.28 AV	54.00	-7.72	1.20 V	350	15.74	30.54
2	*2462.00	114.59 PK			1.03 V	81	83.31	31.28
2	*2462.00	106.50 AV			1.03 V	81	75.22	31.28
3	2487.00	60.08 PK	74.00	-13.92	1.03 V	81	28.70	31.38
3	2487.00	50.64 AV	54.00	-3.36	1.03 V	81	19.26	31.38
4	4924.00	57.10 PK	74.00	-16.90	1.08 V	30	20.44	36.66
4	4924.00	49.55 AV	54.00	-4.45	1.08 V	30	12.89	36.66
5	7386.00	57.40 PK	74.00	-16.60	1.09 V	296	14.81	42.59
5	7386.00	47.60 AV	54.00	-6.40	1.09 V	296	5.01	42.59

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

802.11g OFDM modulation

EUT	ENTERPRISE WLAN AP	MEASUREMENT DETAIL	
MODEL	AT-WA7400	FREQUENCY RANGE	1 ~ 25GHz
CHANNEL	Channel 1	DETECTOR FUNCTION	Peak(PK) Average (AV)
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Match Tsui		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	65.91 PK	74.00	-8.09	1.33 H	76	34.94	30.97
1	2390.00	51.22 AV	54.00	-2.78	1.33 H	76	20.25	30.97
2	*2412.00	110.31 PK			1.33 H	76	79.25	31.06
2	*2412.00	99.93 AV			1.33 H	76	68.87	31.06
3	7236.00	55.88 PK	74.00	-18.12	1.39 H	234	13.62	42.25
3	7236.00	41.95 AV	54.00	-12.05	1.39 H	234	-0.31	42.25

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	2280.00	52.03 PK	74.00	-21.97	1.20 V	342	21.49	30.54
1	2280.00	41.14 AV	54.00	-12.86	1.20 V	342	10.60	30.54
2	2390.00	67.34 PK	74.00	-6.66	1.05 V	79	36.37	30.97
2	2390.00	51.23 AV	54.00	-2.77	1.05 V	79	20.26	30.97
3	*2412.00	109.10 PK			1.05 V	79	78.04	31.06
3	*2412.00	99.20 AV			1.05 V	79	68.14	31.06
4	4824.00	50.89 PK	74.00	-23.11	1.05 V	33	14.46	36.43
4	4824.00	37.64 AV	54.00	-16.36	1.05 V	33	1.21	36.43
5	7236.00	57.15 PK	74.00	-16.85	1.06 V	16	14.89	42.25
5	7236.00	42.87 AV	54.00	-11.13	1.06 V	16	0.61	42.25

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

EUT	ENTERPRISE WLAN AP	MEASUREMENT DETAIL	
MODEL	AT-WA7400	FREQUENCY RANGE	1 ~ 25GHz
CHANNEL	Channel 6	DETECTOR FUNCTION	Peak(PK) Average (AV)
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Match Tsui		

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	111.89 PK			1.06 H	323	80.72	31.17
1	*2437.00	102.47 AV			1.06 H	323	71.30	31.17
2	4874.00	52.88 PK	74.00	-21.12	1.40 H	244	16.34	36.54
2	4874.00	38.48 AV	54.00	-15.52	1.40 H	244	1.94	36.54

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2320.00	54.52 PK	74.00	-19.48	1.21 V	350	23.82	30.70
1	2320.00	43.80 AV	54.00	-10.20	1.21 V	350	13.10	30.70
2	*2437.00	112.08 PK			1.03 V	79	80.91	31.17
2	*2437.00	102.07 AV			1.03 V	79	70.90	31.17
3	4874.00	53.22 PK	74.00	-20.78	1.04 V	55	16.68	36.54
3	4874.00	39.84 AV	54.00	-14.16	1.04 V	55	3.30	36.54
4	7311.00	60.50 PK	74.00	-13.50	1.09 V	342	18.04	42.46
4	7311.00	43.28 AV	54.00	-10.72	1.09 V	342	0.82	42.46

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

EUT	ENTERPRISE WLAN AP	MEASUREMENT DETAIL	
MODEL	AT-WA7400	FREQUENCY RANGE	1 ~ 25GHz
CHANNEL	Channel 11	DETECTOR FUNCTION	Peak(PK) Average (AV)
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Match Tsui	TEST MODE	A

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2462.00	110.27 PK			1.28 H	107	78.99	31.28
1	*2462.00	100.66 AV			1.28 H	107	69.38	31.28
2	**2483.50**	**73.52 PK**	**74.00**	**-0.48**	**1.28 H**	**107**	**42.15**	**31.37**
2	2483.50	49.94 AV	54.00	-4.06	1.28 H	107	18.57	31.37
3	7386.00	56.77 PK	74.00	-17.23	1.35 H	348	14.17	42.59
3	7386.00	42.75 AV	54.00	-11.25	1.35 H	348	0.15	42.59

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	2280.00	51.64 PK	74.00	-22.36	1.15 V	356	21.10	30.54
1	2280.00	40.99 AV	54.00	-13.01	1.15 V	356	10.45	30.54
2	*2462.00	110.03 PK			1.28 V	79	78.75	31.28
2	*2462.00	99.80 AV			1.28 V	79	68.52	31.28
3	2483.50	71.59 PK	74.00	-2.41	1.28 V	79	40.22	31.37
3	2483.50	50.48 AV	54.00	-3.52	1.28 V	79	19.11	31.37
4	4924.00	51.24 PK	74.00	-22.76	1.07 V	310	14.58	36.66
4	4924.00	38.21 AV	54.00	-15.79	1.07 V	310	1.55	36.66
5	7386.00	57.85 PK	74.00	-16.15	1.10 V	346	15.25	42.59
5	7386.00	43.49 AV	54.00	-10.51	1.10 V	346	0.89	42.59

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

802.11g Turbo OFDM modulation

EUT	ENTERPRISE WLAN AP	MEASUREMENT DETAIL	
MODEL	AT-WA7400	FREQUENCY RANGE	1 ~ 25GHz
CHANNEL	Channel 6	DETECTOR FUNCTION	Peak(PK) Average (AV)
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH, 991hPa
TRANSFER RATE	12Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Match Tsui		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	65.86 PK	74.00	-8.14	1.30 H	29	34.89	30.97
1	2390.00	51.04 AV	54.00	-2.96	1.30 H	29	20.07	30.97
2	*2437.00	109.01 PK			1.30 H	29	77.84	31.17
2	*2437.00	99.34 AV			1.30 H	29	68.17	31.17
3	2483.50	65.28 PK	74.00	-8.72	1.30 H	29	33.91	31.37
3	2483.50	49.56 AV	54.00	-4.44	1.30 H	29	18.19	31.37
4	7311.00	55.76 PK	74.00	-18.24	1.32 H	120	13.30	42.46
4	7311.00	42.00 AV	54.00	-12.00	1.32 H	120	-0.46	42.46

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	2280.00	51.12 PK	74.00	-22.88	1.17 V	360	20.58	30.54
1	2280.00	40.97 AV	54.00	-13.03	1.17 V	360	10.43	30.54
2	2390.00	64.83 PK	74.00	-9.17	1.05 V	80	33.86	30.97
2	2390.00	49.79 AV	54.00	-4.21	1.05 V	80	18.82	30.97
3	*2437.00	108.32 PK			1.05 V	80	77.15	31.17
3	*2437.00	98.98 AV			1.05 V	80	67.81	31.17
4	2483.50	64.86 PK	74.00	-9.14	1.05 V	80	33.49	31.37
4	2483.50	48.62 AV	54.00	-5.38	1.05 V	80	17.25	31.37
5	4874.00	48.28 PK	74.00	-25.72	1.03 V	40	11.74	36.54
5	4874.00	35.65 AV	54.00	-18.35	1.03 V	40	-0.89	36.54
6	7311.00	56.34 PK	74.00	-17.66	1.22 V	360	13.88	42.46
6	7311.00	40.30 AV	54.00	-13.70	1.22 V	360	-2.16	42.46

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

4.3 6dB BANDWIDTH MEASUREMENT

4.3.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

4.3.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
SPECTRUM ANALYZER	FSEK 30	100049	Aug. 12, 2005

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

4.3.3 TEST PROCEDURE

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

4.3.4 DEVIATION FROM TEST STANDARD

No deviation

4.3.5 TEST SETUP

4.3.6 EUT OPERATING CONDITIONS

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

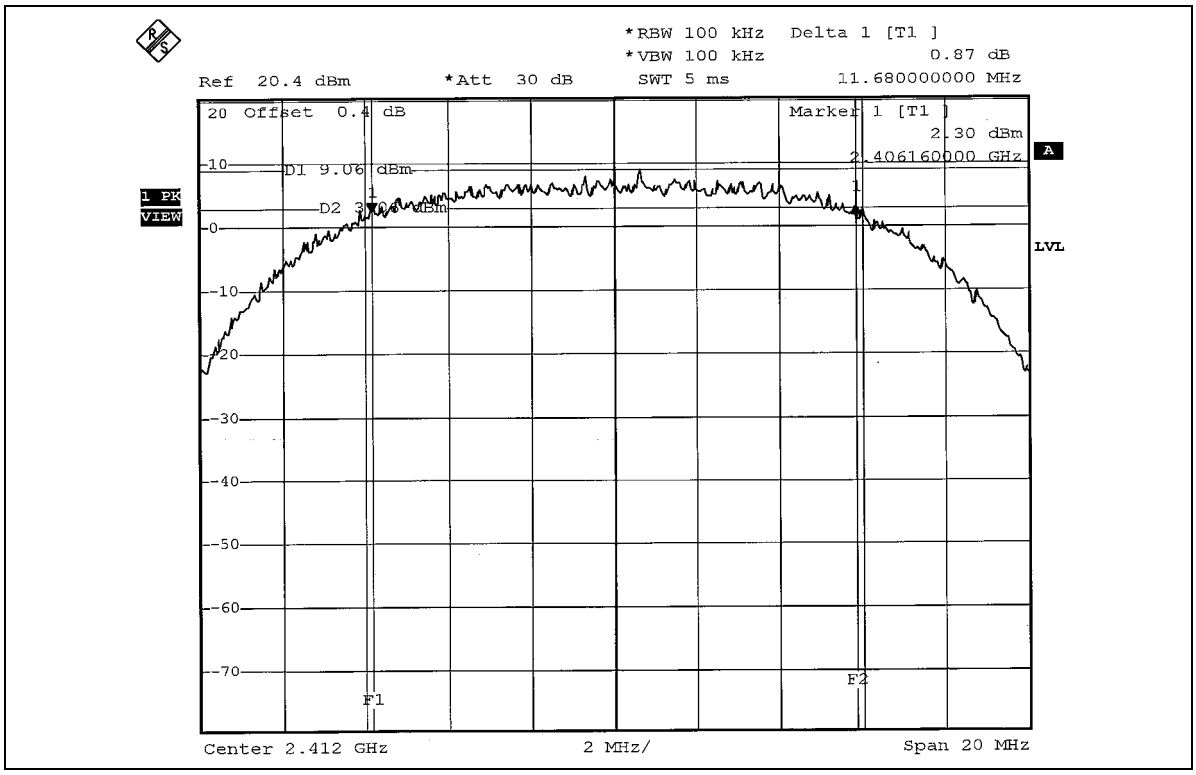
4.3.7 TEST RESULTS

802.11b DSSS modulation

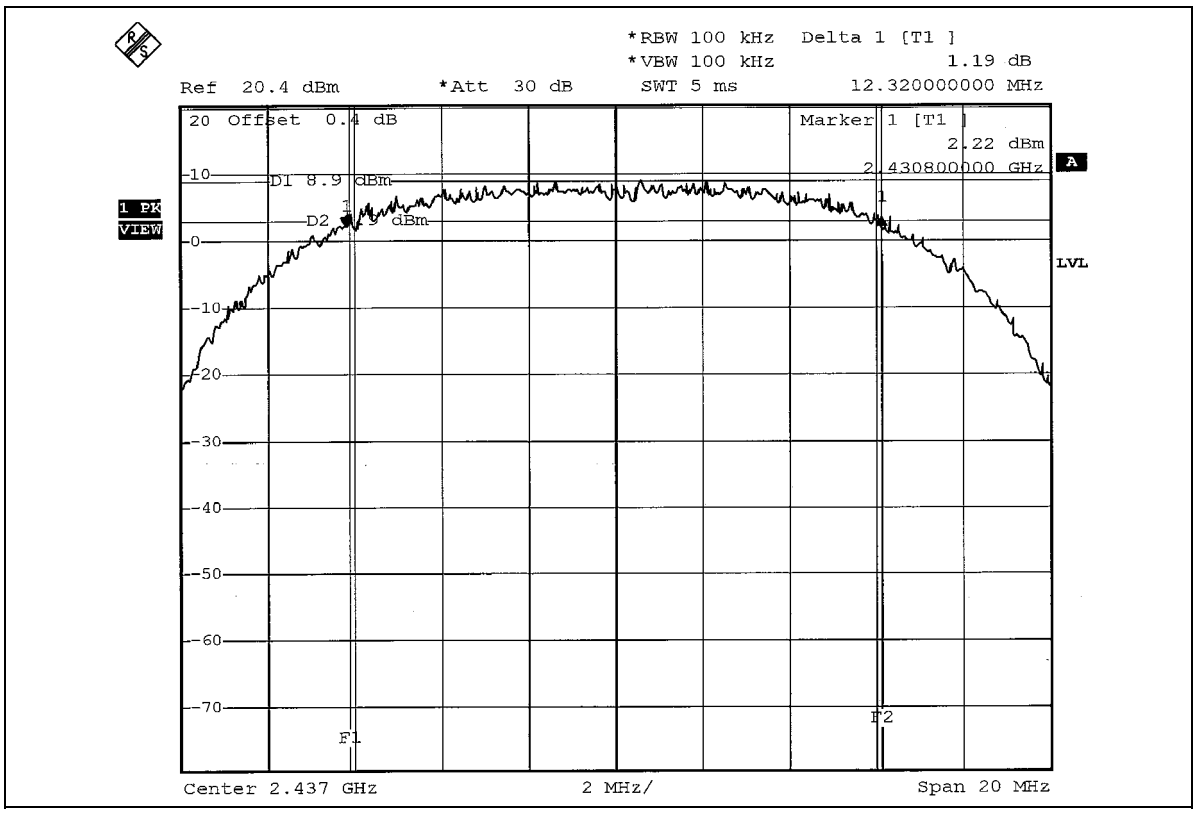
EUT	ENTERPRISE WLAN AP	**MODEL**	AT-WA7400
MODULATION TYPE	CCK	**TRANSFER RATE**	11Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	24deg.C, 63%RH, 991hPa
TESTED BY	Match Tsui		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	11.68	0.5	PASS
6	2437	12.32	0.5	PASS
11	2462	11.24	0.5	PASS

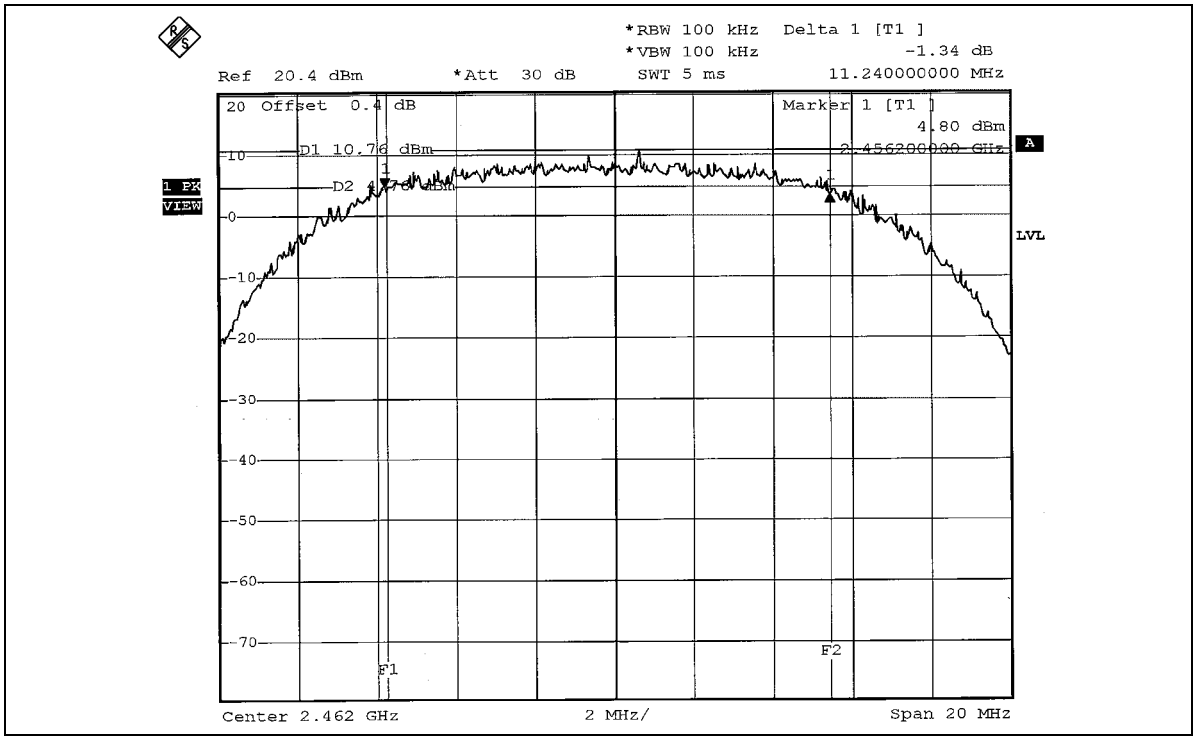
CH 1


*RBW 100 kHz
*VBW 100 kHz
SWT 5 ms
Delta 1 [T1]
0.87 dB
11.680000000 MHz
Ref 20.4 dBm
*Att 30 dB
20 Offset 0.4 dB
Marker 1 [T1]
2.30 dBm
2.406160000 GHz
D1 9.06 dBm
D2 3.0 dBm
1 PK
VIEW
A
LVL
F1
F2
Center 2.412 GHz
2 MHz/
Span 20 MHz

CH 6


*RBW 100 kHz
*VBW 100 kHz
SWT 5 ms
Delta 1 [T1]
1.19 dB
12.320000000 MHz
Ref 20.4 dBm
*Att 30 dB
20 Offset 0.4 dB
Marker 1 [T1]
2.22 dBm
2.430800000 GHz
D1 8.9 dBm
D2 3.0 dBm
1 PK
VIEW
A
LVL
F1
F2
Center 2.437 GHz
2 MHz/
Span 20 MHz

CH 11

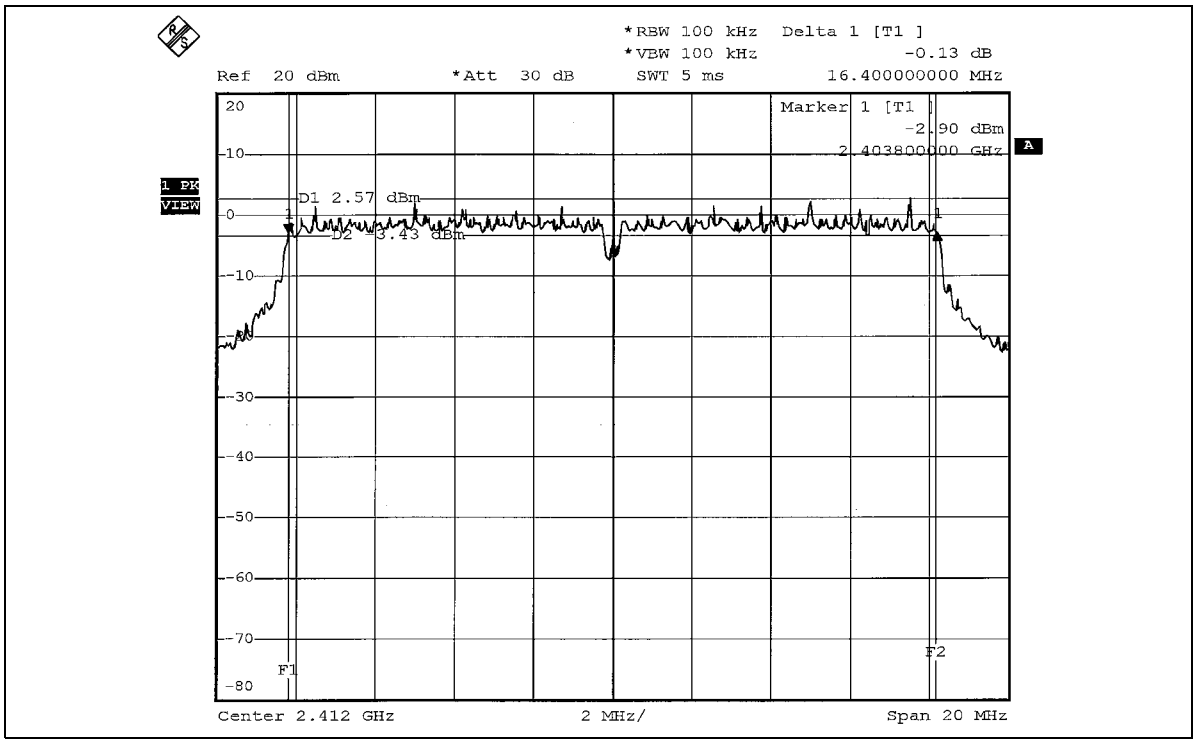

*RBW 100 kHz
*VBW 100 kHz
SWT 5 ms
Delta 1 [T1]
-1.34 dB
11.240000000 MHz
Ref 20.4 dBm
*Att 30 dB
20 Offset 0.4 dB
Marker 1 [T1]
4.80 dBm
2.456200000 GHz
D1 10.76 dBm
D2 4.76 dBm
1 PK
VIEW
A
LVL
10
0
-10
-20
-30
-40
-50
-60
-70
F1
F2
Center 2.462 GHz
2 MHz/
Span 20 MHz

802.11g OFDM modulation

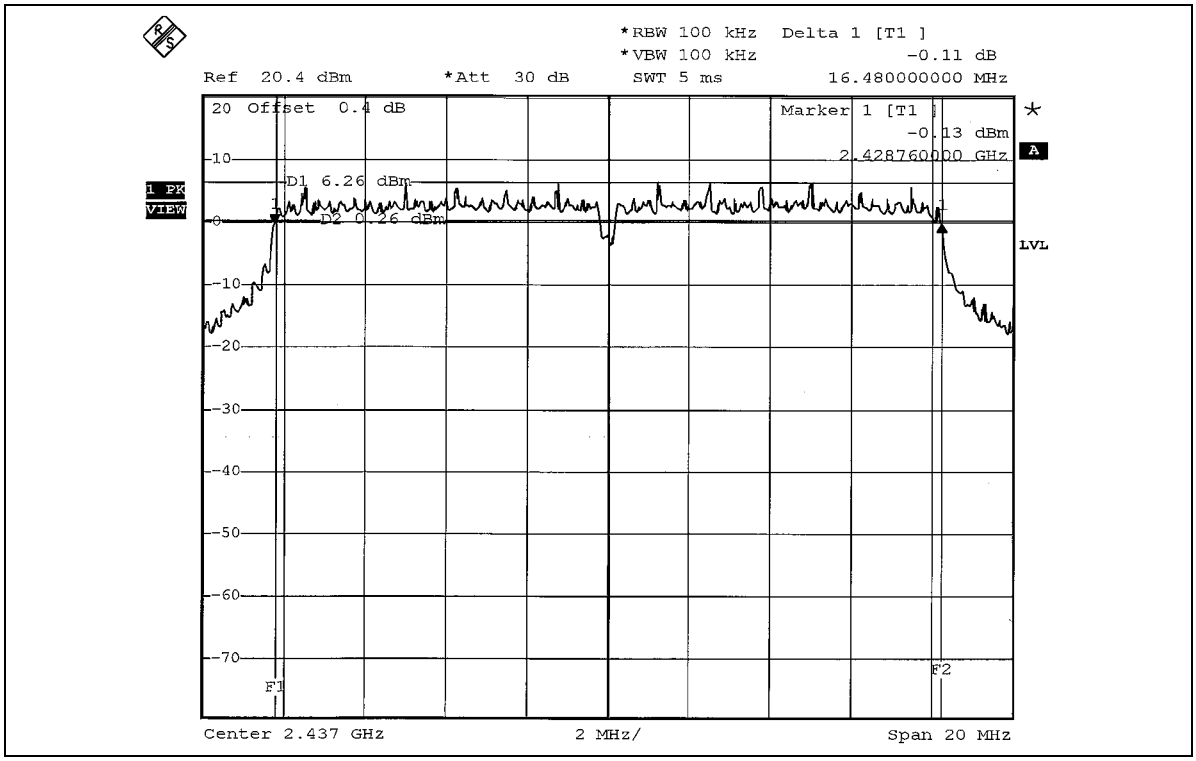
EUT	ENTERPRISE WLAN AP	**MODEL**	AT-WA7400
MODULATION TYPE	BPSK	**TRANSFER RATE**	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	24deg.C, 63%RH, 991hPa
TESTED BY	Match Tsui		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	16.40	0.5	PASS
6	2437	16.48	0.5	PASS
11	2462	16.44	0.5	PASS

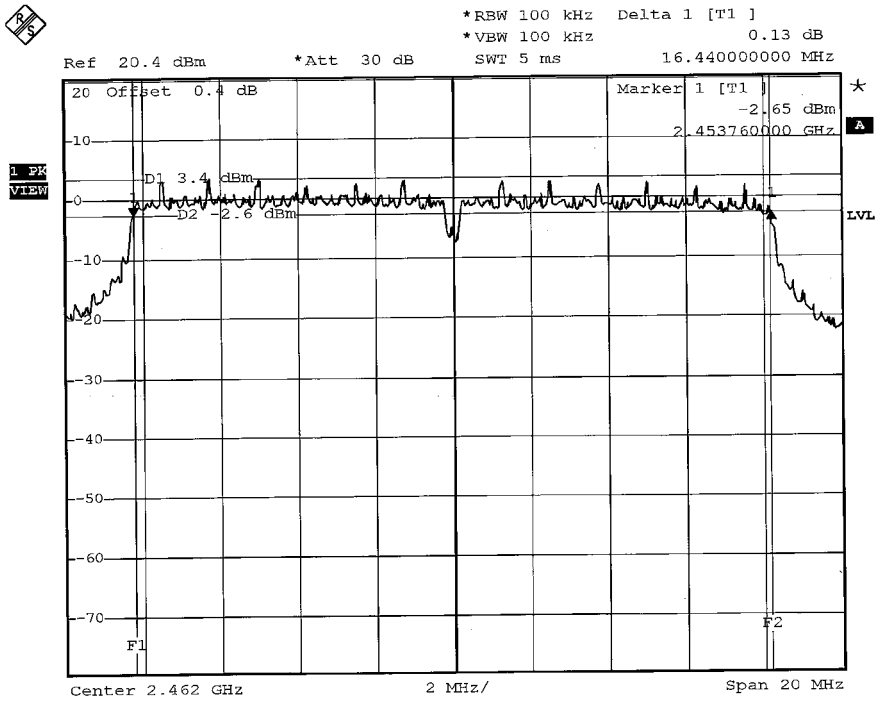
CH 1


*RBW 100 kHz
*VBW 100 kHz
SWT 5 ms
Delta 1 [T1]
-0.13 dB
16.400000000 MHz
Ref 20 dBm
*Att 30 dB
Marker 1 [T1]
-2.90 dBm
2.403800000 GHz
1 PK
VIEW
D1 2.57 dBm
D2 3.43 dBm
F1
F2
Center 2.412 GHz
2 MHz/
Span 20 MHz

CH 6


*RBW 100 kHz
*VBW 100 kHz
SWT 5 ms
Delta 1 [T1]
-0.11 dB
16.480000000 MHz
Ref 20.4 dBm
*Att 30 dB
20 Offset 0.4 dB
Marker 1 [T1]
-0.13 dBm
2.428760000 GHz
1 PK
VIEW
D1 6.26 dBm
D2 0.26 dBm
LVL
F1
F2
Center 2.437 GHz
2 MHz/
Span 20 MHz

CH 11

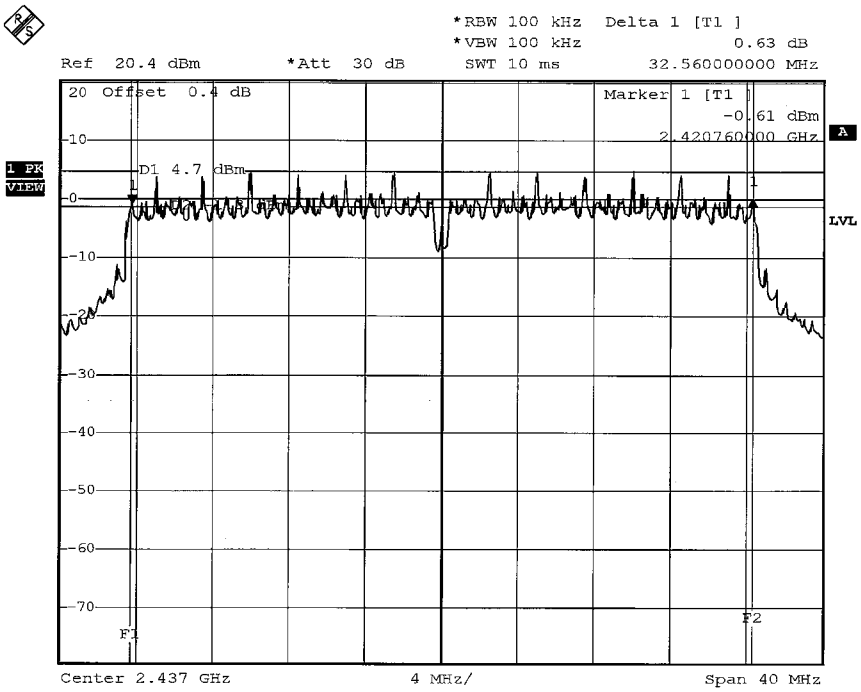

*RBW 100 kHz
*VBW 100 kHz
SWT 5 ms
Delta 1 [T1]
0.13 dB
16.440000000 MHz
Ref 20.4 dBm
*Att 30 dB
20 Offset 0.4 dB
Marker 1 [T1]
-2.65 dBm
2.453760000 GHz
1 PK
VIEW
D1 3.4 dBm
D2 -2.6 dBm
LVL
F1
F2
Center 2.462 GHz
2 MHz/
Span 20 MHz

802.11g Turbo OFDM modulation

EUT	ENTERPRISE WLAN AP	**MODEL**	AT-WA7400
MODULATION TYPE	BPSK	**TRANSFER RATE**	12Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	24deg.C, 63%RH, 991hPa
TESTED BY	Match Tsui		

CHANNEL	CHANNEL FREQUENCY (MHz)	6 dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
6	2437	32.56	0.5	PASS

CH 6


*RBW 100 kHz
*VBW 100 kHz
Delta 1 [T1]
0.63 dB
Ref 20.4 dBm
*Att 30 dB
SWT 10 ms
32.560000000 MHz
20 Offset 0.4 dB
Marker 1 [T1]
-0.61 dBm
2.420760000 GHz
1 PK
VIEW
D1 4.7 dBm
LVL
F1
F2
Center 2.437 GHz
4 MHz/
Span 40 MHz

4.4 MAXIMUM PEAK OUTPUT POWER

4.4.1 LIMITS OF MAXIMUM PEAK OUTPUT POWER MEASUREMENT

The Maximum Peak Output Power Measurement is 30dBm.

4.4.2 INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSEK30	100049	Aug. 12, 2005
AGILENT SIGNAL GENERATOR	E8257C	MY43320668	Dec. 31, 2005
TEKTRONIX OSCILLOSCOPE	TDS 1012	C019167	Feb. 01, 2006
NARDA DETECTOR	4503A	FSCM99899	NA

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

4.4.1 TEST PROCEDURES

1. A detector was used on the output port of the EUT. An oscilloscope was used to read the 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 reading on oscilloscope. Record the power level.

4.4.2 DEVIATION FROM TEST STANDARD

No deviation

4.4.3 TEST SETUP

4.4.4 EUT OPERATING CONDITIONS

Same as Item 4.3.6

4.4.3 TEST RESULTS

802.11b DSSS modulation

EUT	ENTERPRISE WLAN AP	**MODEL**	AT-WA7400
MODULATION TYPE	CCK	**TRANSFER RATE**	11Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	24deg.C, 63%RH, 991hPa
TESTED BY	Match Tsui		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	64.565	18.10	30	PASS
6	2437	100.925	20.04	30	PASS
11	2462	101.625	20.07	30	PASS

802.11g OFDM modulation

EUT	ENTERPRISE WLAN AP	**MODEL**	AT-WA7400
MODULATION TYPE	BPSK	**TRANSFER RATE**	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	24deg.C, 63%RH, 991hPa
TESTED BY	Match Tsui		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	44.978	16.53	30	PASS
6	2437	100.231	20.01	30	PASS
11	2462	50.699	17.05	30	PASS

802.11g Turbo OFDM modulation

EUT	ENTERPRISE WLAN AP	**MODEL**	AT-WA7400
MODULATION TYPE	BPSK	**TRANSFER RATE**	12Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	24deg.C, 63%RH, 991hPa
TESTED BY	Match Tsui		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
6	2437	63.680	18.04	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	FSEK30	100049	Aug. 12, 2005

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

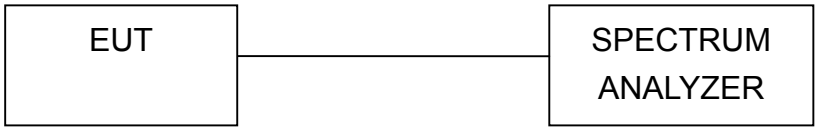
4.5.3 TEST PROCEDURE

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 3kHz RBW and 30kHz VBW, set sweep time = span/3kHz. The power spectral density was measured and recorded.
The sweep time is allowed to be longer than span/3kHz for a full response of the mixer in the spectrum analyzer.

4.5.4 DEVIATION FROM TEST STANDARD

No deviation

4.5.5 TEST SETUP



4.5.6 EUT OPERATING CONDITION

Same as Item 4.3.6

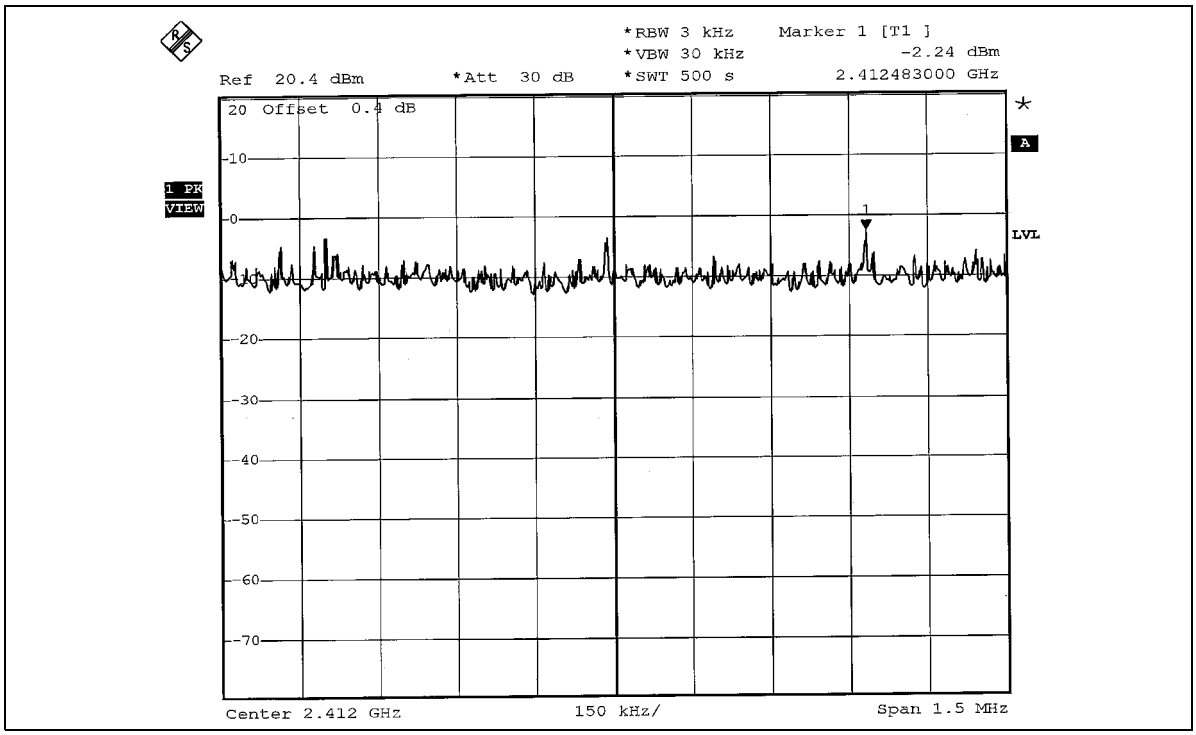
4.5.7 TEST RESULTS

802.11b DSSS modulation

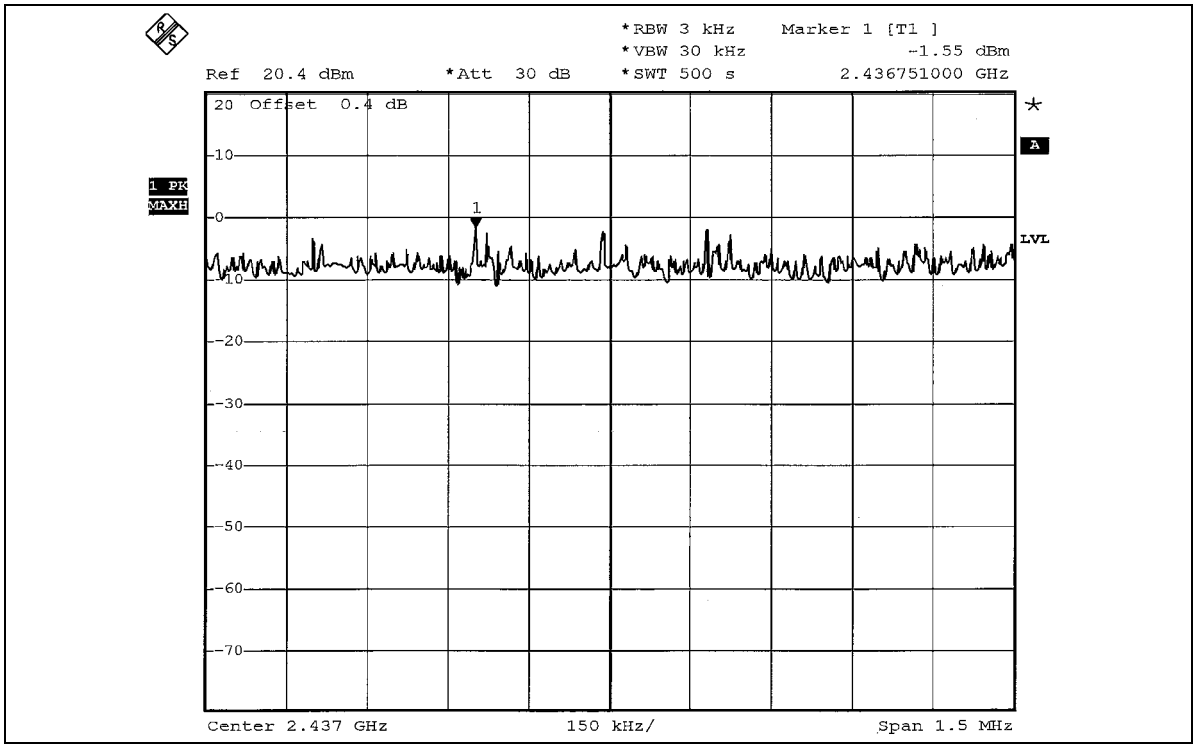
EUT	ENTERPRISE WLAN AP	**MODEL**	AT-WA7400
MODULATION TYPE	CCK	**TRANSFER RATE**	11Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	24deg.C, 63%RH, 991hPa
TESTED BY	Match Tsui		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-2.24	8	PASS
6	2437	-1.55	8	PASS
11	2462	-1.60	8	PASS

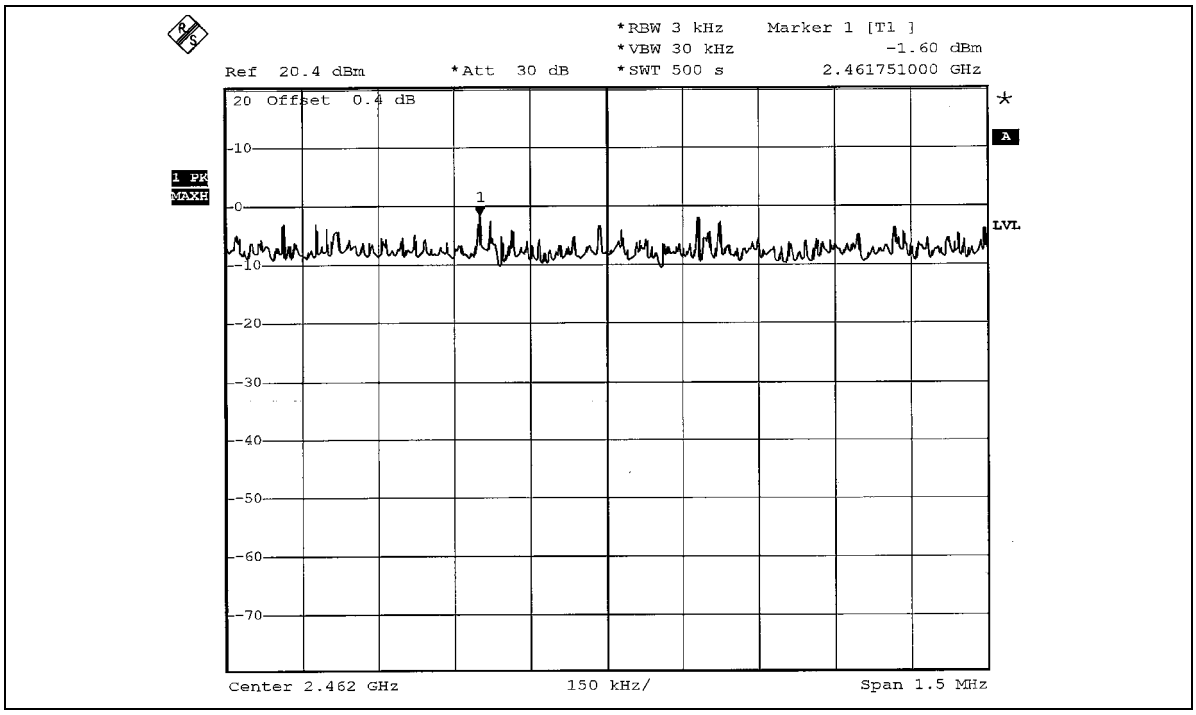
CH 1


*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-2.24 dBm
2.412483000 GHz
Ref 20.4 dBm
*Att 30 dB
20 Offset 0.4 dB
1 PK VIEW
A
LVL
-10
0
-20
-30
-40
-50
-60
-70
Center 2.412 GHz
150 kHz/
Span 1.5 MHz

CH 6


*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-1.55 dBm
2.436751000 GHz
Ref 20.4 dBm
*Att 30 dB
20 Offset 0.4 dB
1 PK MAXH
A
LVL
-10
0
-10
-20
-30
-40
-50
-60
-70
Center 2.437 GHz
150 kHz/
Span 1.5 MHz

CH 11

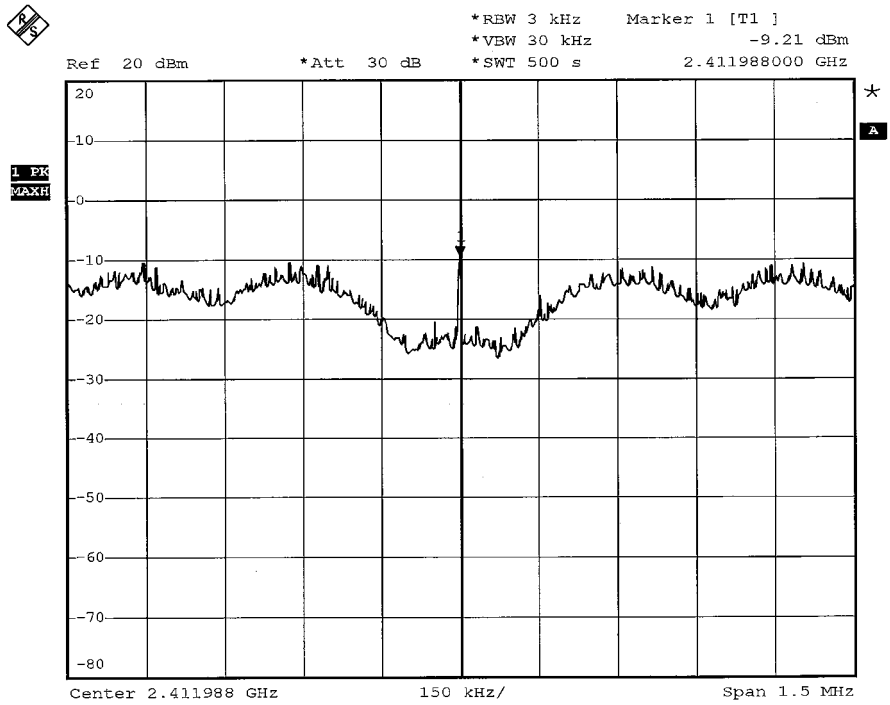

*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-1.60 dBm
2.461751000 GHz
Ref 20.4 dBm
*Att 30 dB
20 Offset 0.4 dB
1 PK MAXH
A
LVL
Center 2.462 GHz
150 kHz/
Span 1.5 MHz

802.11g OFDM modulation

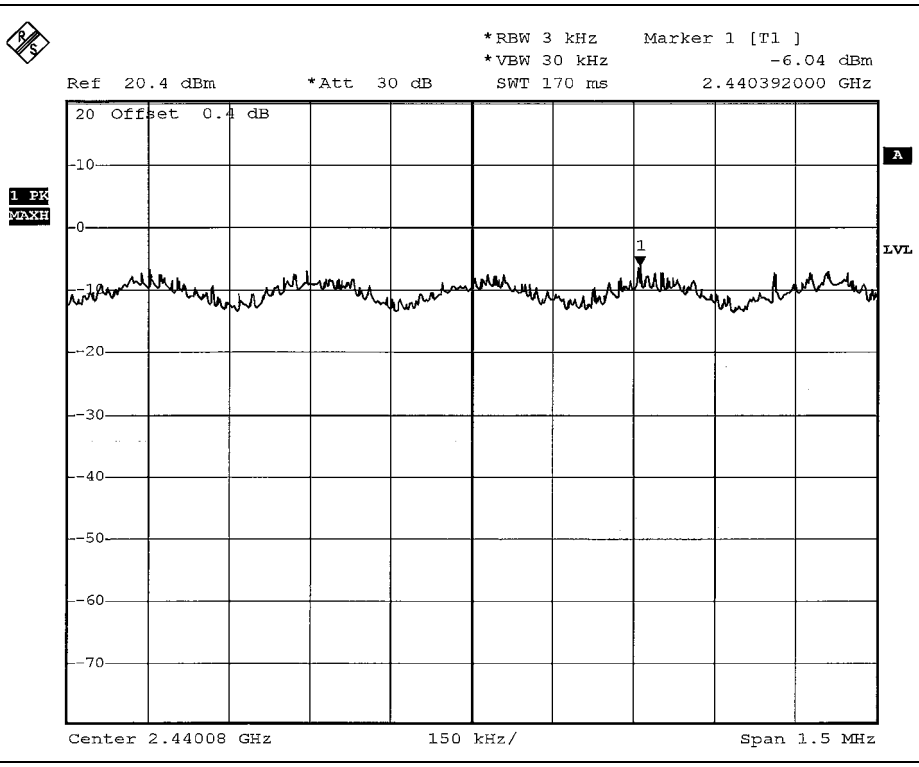
EUT	ENTERPRISE WLAN AP	**MODEL**	AT-WA7400
MODULATION TYPE	BPSK	**TRANSFER RATE**	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	24deg.C, 63%RH, 991hPa
TESTED BY	Match Tsui		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-9.21	8	PASS
6	2437	-6.04	8	PASS
11	2462	-8.51	8	PASS

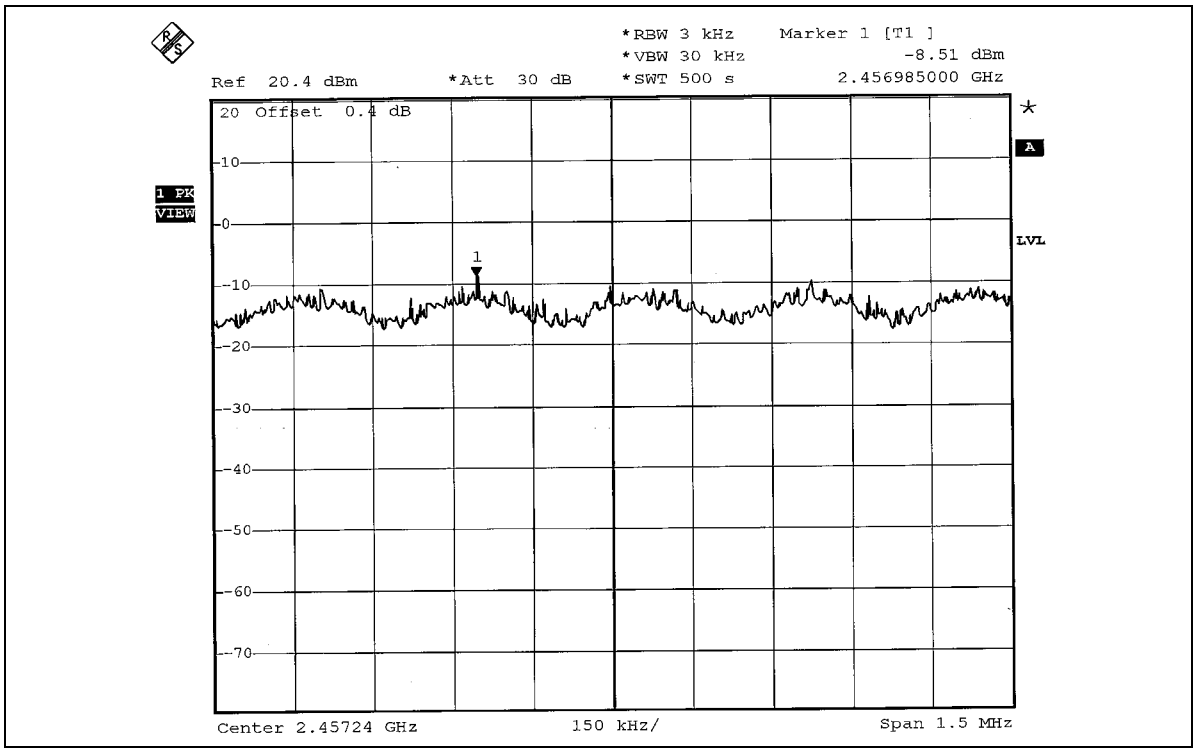
CH 1


*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-9.21 dBm
2.411988000 GHz
Ref 20 dBm
*Att 30 dB
1 PK
MAXH
A
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
Center 2.411988 GHz
150 kHz/
Span 1.5 MHz

CH 6


*RBW 3 kHz
*VBW 30 kHz
SWT 170 ms
Marker 1 [T1]
-6.04 dBm
2.440392000 GHz
Ref 20.4 dBm
*Att 30 dB
20 Offset 0.4 dB
1 PK
MAXH
A
LVL
10
0
-10
-20
-30
-40
-50
-60
-70
Center 2.44008 GHz
150 kHz/
Span 1.5 MHz

CH 11

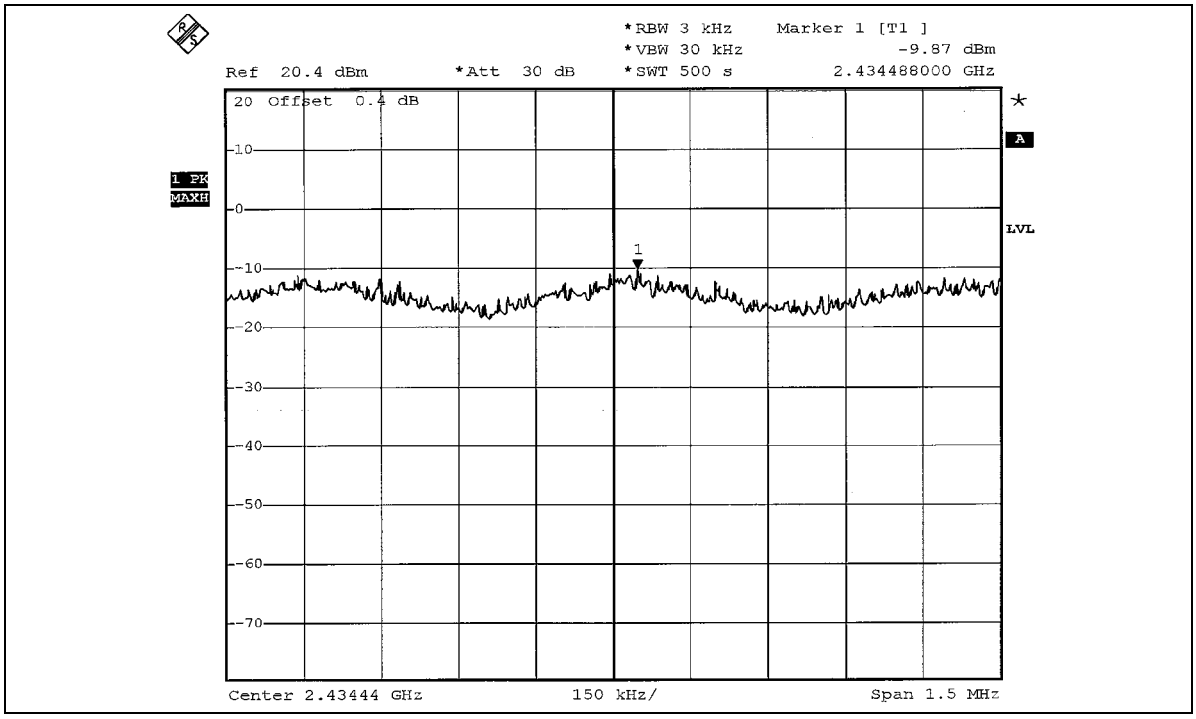

*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-8.51 dBm
2.456985000 GHz
Ref 20.4 dBm
*Att 30 dB
20 Offset 0.4 dB
1 PK
VIEW
A
LVL
10
0
-10
-20
-30
-40
-50
-60
-70
Center 2.45724 GHz
150 kHz/
Span 1.5 MHz

802.11g Turbo OFDM modulation

EUT	ENTERPRISE WLAN AP	**MODEL**	AT-WA7400
MODULATION TYPE	BPSK	**TRANSFER RATE**	12Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	24deg.C, 63%RH, 991hPa
TESTED BY	Match Tsui		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
6	2437	-9.87	8	PASS

CH 6


*RBW 3 kHz
Marker 1 [T1]
*VBW 30 kHz
-9.87 dBm
Ref 20.4 dBm
*Att 30 dB
*SWT 500 s
2.434488000 GHz
20 Offset 0.4 dB
1 PK
MAXH
A
LVL
10
0
-10
-20
-30
-40
-50
-60
-70
1
Center 2.43444 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 100kHz Resolution Bandwidth).

4.6.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSEK30	100049	Aug. 12, 2005

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

4.6.3 TEST PROCEDURE

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

The spectrum plots (Peak RBW=VBW=100kHz ; Average RBW=1MHz, VBW=10Hz) are attached on the following pages.

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

The spectrum plots are attached on the following 18 images. D2 line indicates the highest level, and D1 line indicates the 20dB offset below D2. It shows compliance with the requirement in part 15.247(d).

802.11b DSSS modulation

NOTE 1: The band edge emission plot on page 62 shows 53.32dBc between carrier maximum power and local maximum emission in restrict band (2.3860GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 112.18dBuV/m (Peak), so the maximum field strength in restrict band is 112.18-53.32=58.86dBuV/m which is under 74dBuV/m limit.

The band edge emission plot of on page 62 shows 56.70dBc between carrier maximum power and local maximum emission in restrict band (2.3868GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 104.12dBuV/m (Average), so the maximum field strength in restrict band is 104.12-56.70=47.42dBuV/m which is under 54dBuV/m limit.

NOTE 2: The band edge emission plot on page 63 shows 49.96dBc between carrier maximum power and local maximum emission in restrict band (2.4864GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.7 is 115.40dBuV/m (Peak), so the maximum field strength in restrict band is 115.40-49.96=65.44dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on page 64 shows 58.38dBc between carrier maximum power and local maximum emission in restrict band (2.4874GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.7 is 108.41dBuV/m (Average), so the maximum field strength in restrict band is 108.41-58.38=50.03dBuV/m which is under 54dBuV/m limit.

802.11g OFDM modulation

NOTE 1: The band edge emission plot on page 65 shows 45.68dBc between carrier maximum power and local maximum emission in restrict band (2.3884GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 110.31dBuV/m (Peak), so the maximum field strength in restrict band is 110.31-45.68=64.63dBuV/m which is under 74dBuV/m limit.

The band edge emission plot of on page 65 shows 48.57dBc 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 4.2.7 is 99.93dBuV/m (Average), so the maximum field strength in restrict band is 99.93-48.57=51.36dBuV/m which is under 54dBuV/m limit.

NOTE 2: The band edge emission plot on page 66 shows 45.73dBc 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 4.2.7 is 110.27dBuV/m (Peak), so the maximum field strength in restrict band is 110.27-45.73=64.54dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on page 67 shows 50.98dBc 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 4.2.7 is 100.66dBuV/m (Average), so the maximum field strength in restrict band is 100.66-50.98=49.68dBuV/m which is under 54dBuV/m limit.

802.11g Turbo OFDM modulation

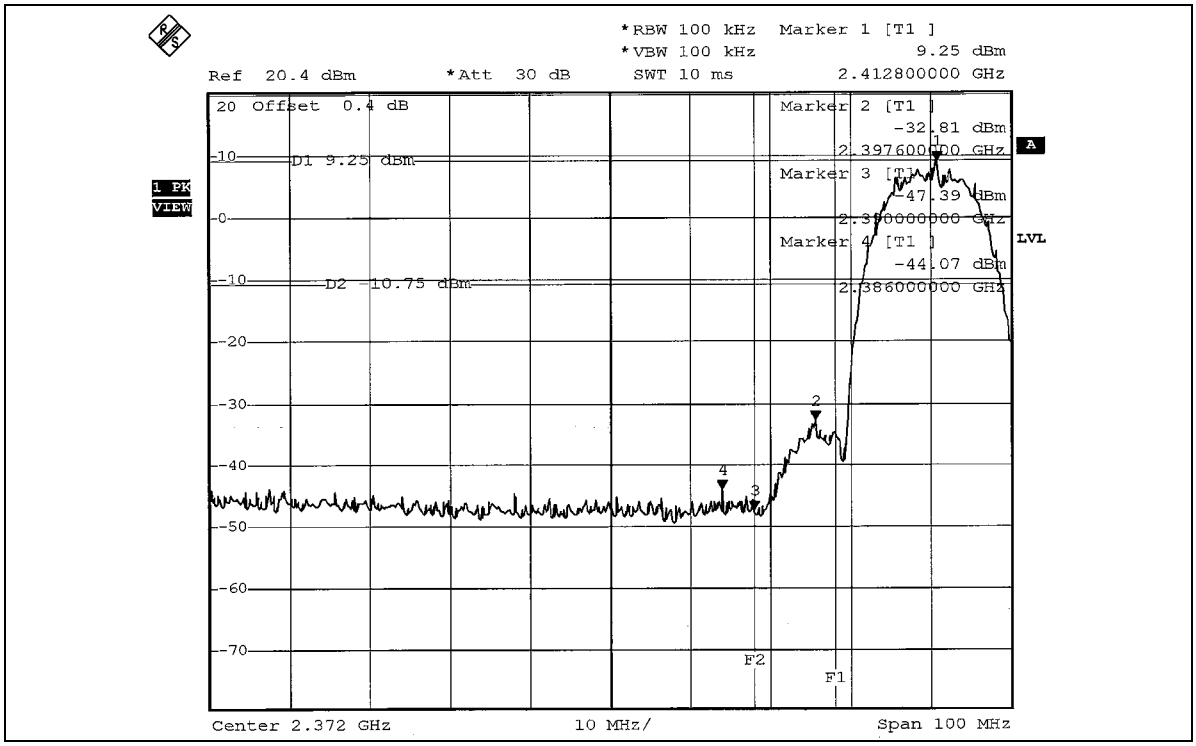
NOTE 1: The band edge emission plot on page 68 shows 47.06dBc between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 6 at the item 4.2.7 is 110.03dBuV/m (Peak), so the maximum field strength in restrict band is 109.01-47.06=61.95dBuV/m which is under 74dBuV/m limit.

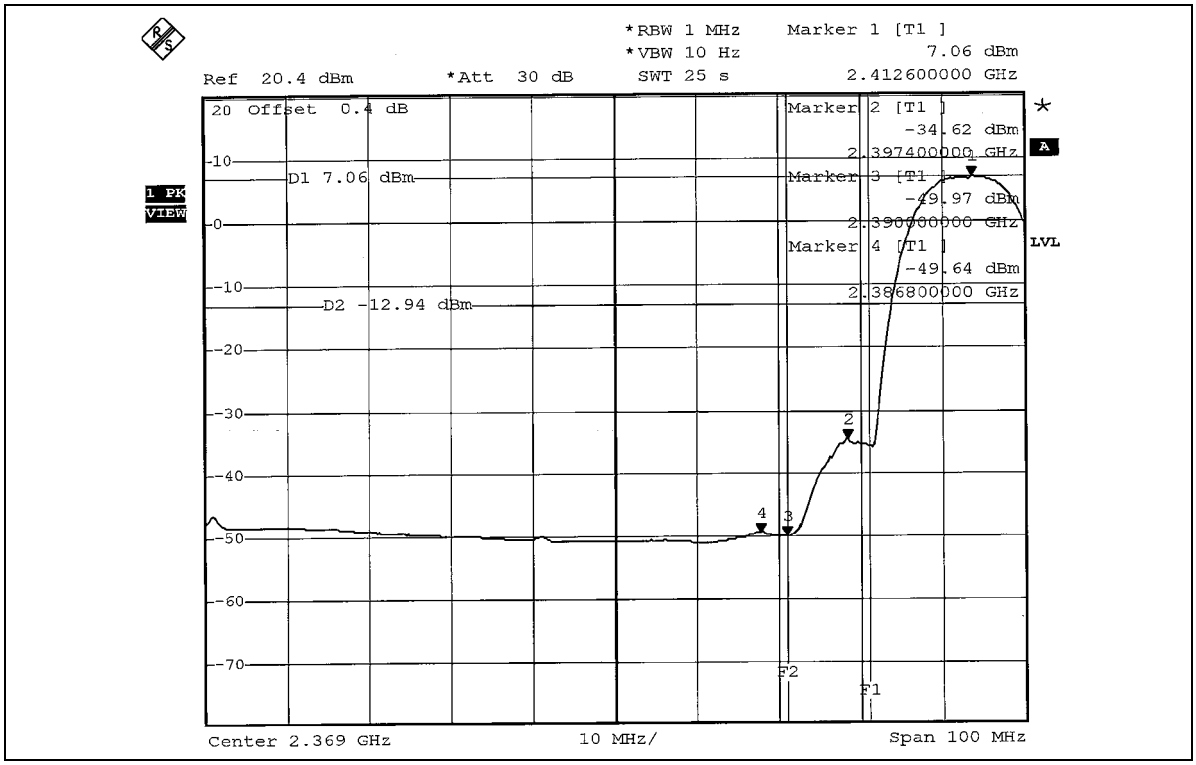
The band edge emission plot of on page 68 shows 48.22dBc between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 6 at the item 4.2.7 is 99.80dBuV/m (Average), so the maximum field strength in restrict band is 99.34-48.22=51.12dBuV/m which is under 54dBuV/m limit.

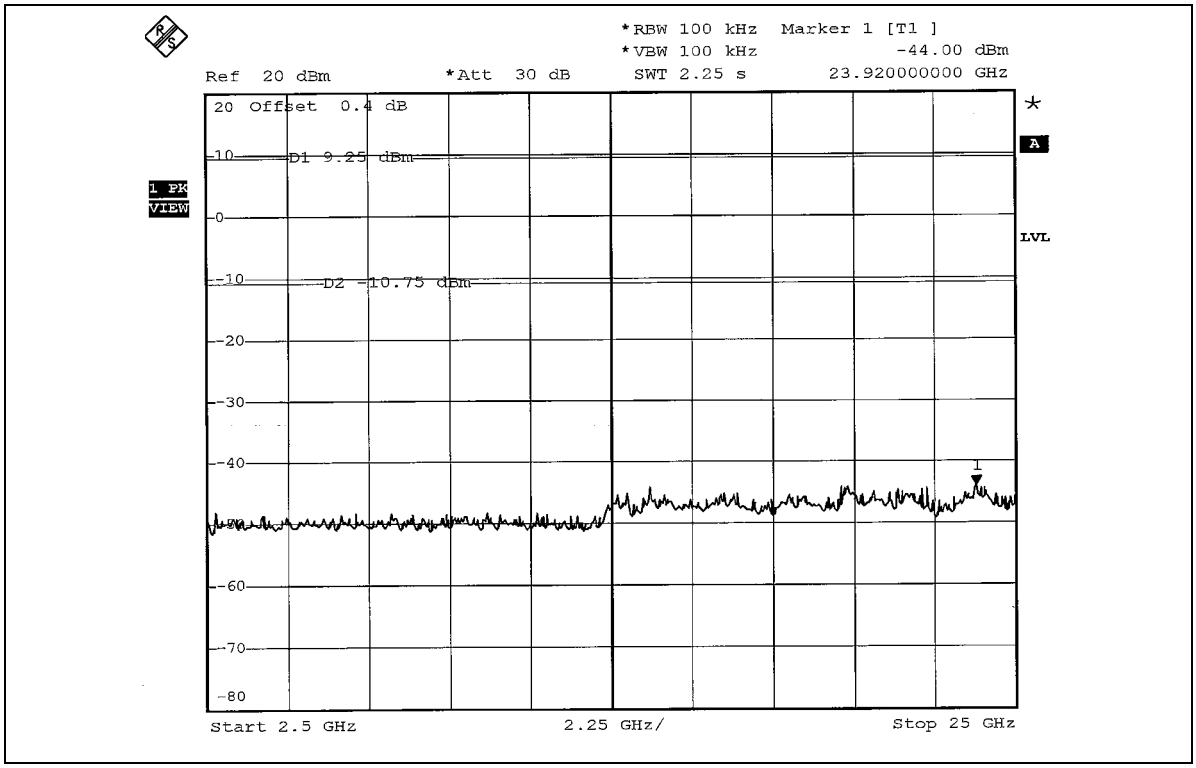
NOTE 2: The band edge emission plot on page 69 shows 50.24dBc between carrier maximum power and local maximum emission in restrict band (2.4871GHz). The emission of carrier strength list in the test result of channel 6 at the item 4.2.7 is 110.03dBuV/m (Peak), so the maximum field strength in restrict band is 109.01-50.24=58.77dBuV/m which is under 74dBuV/m limit.

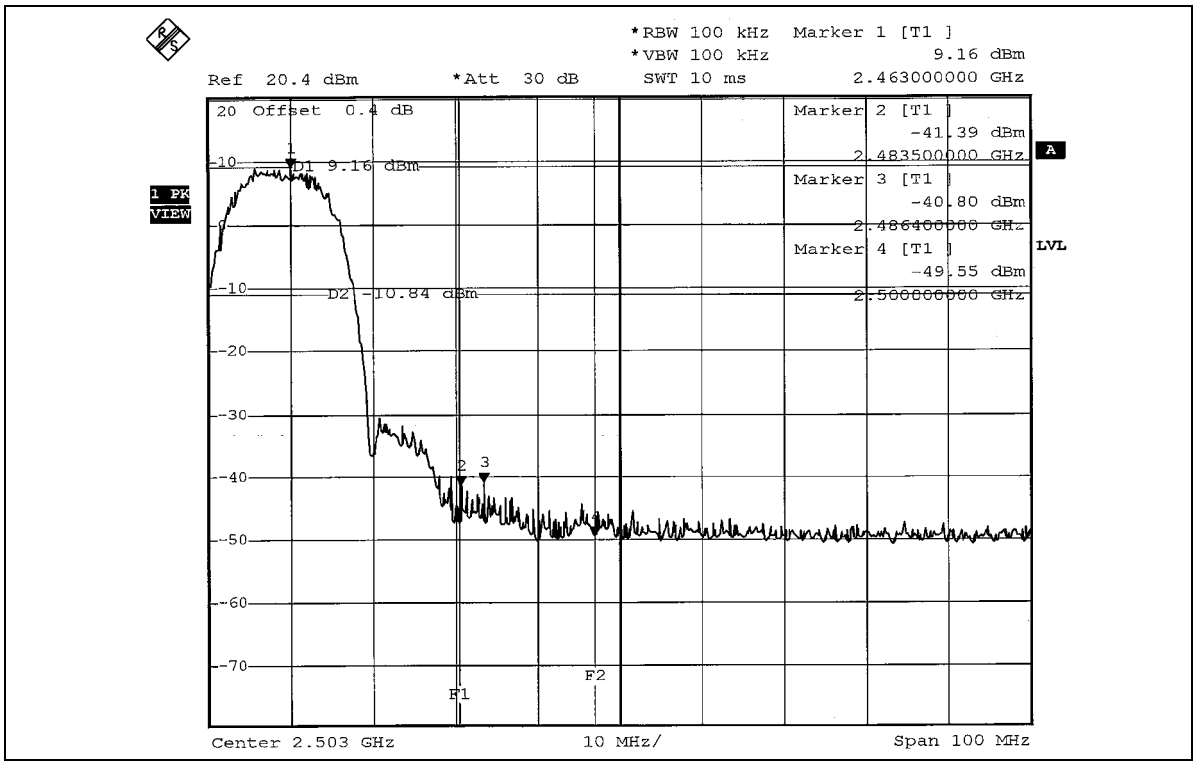
The band edge emission plot on page 70 shows 51.63dBc between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 6 at the item 4.2.7 is 99.80dBuV/m (Average), so the maximum field strength in restrict band is 99.34-51.63=47.71dBuV/m which is under 54dBuV/m limit.

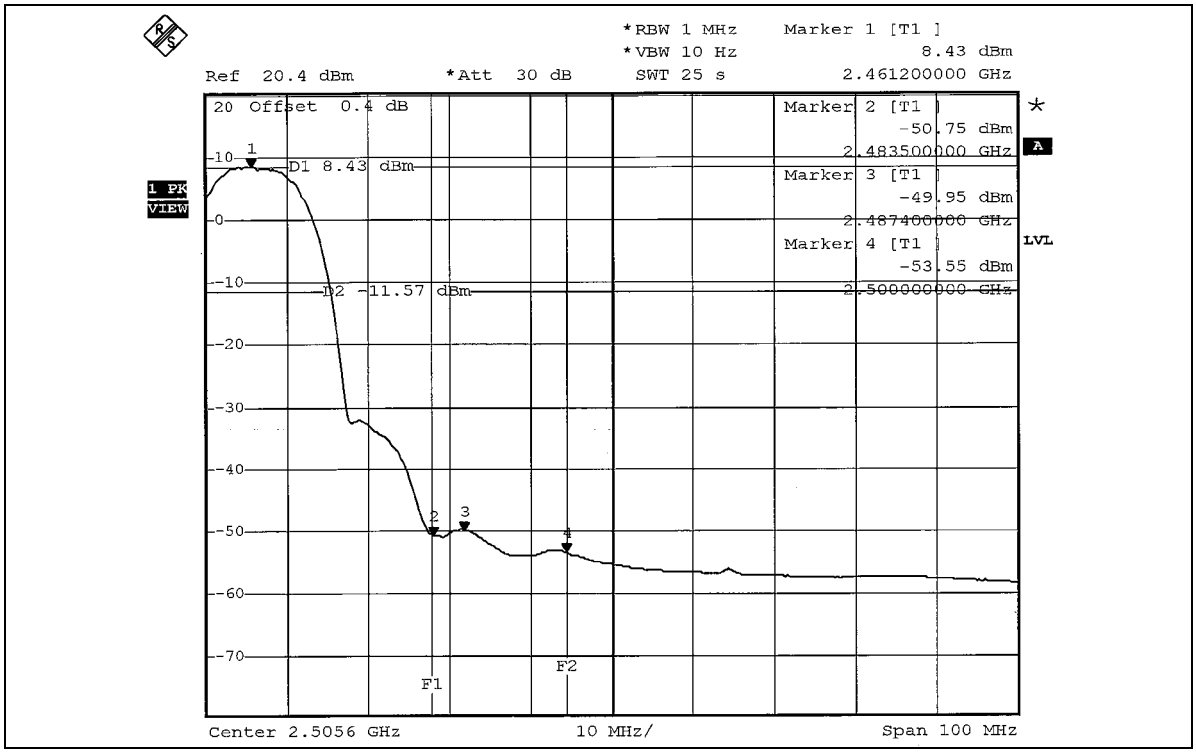
802.11b DSSS modulation

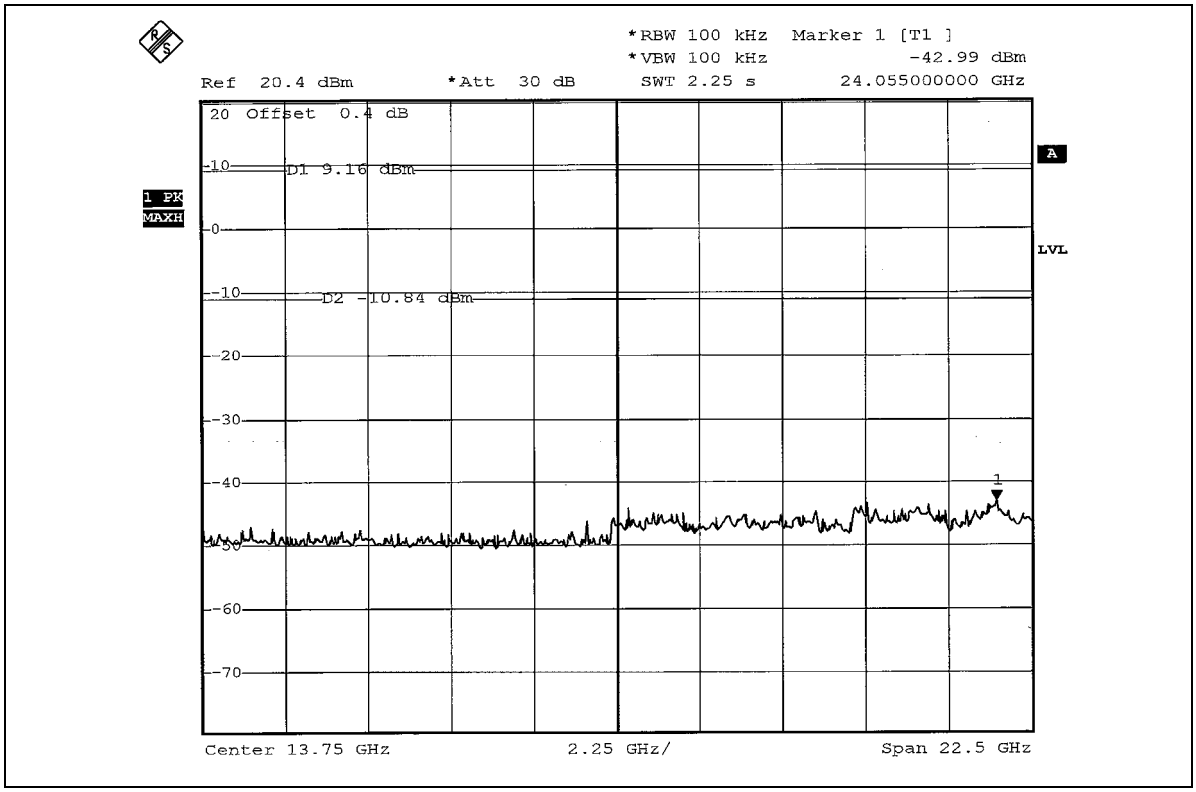




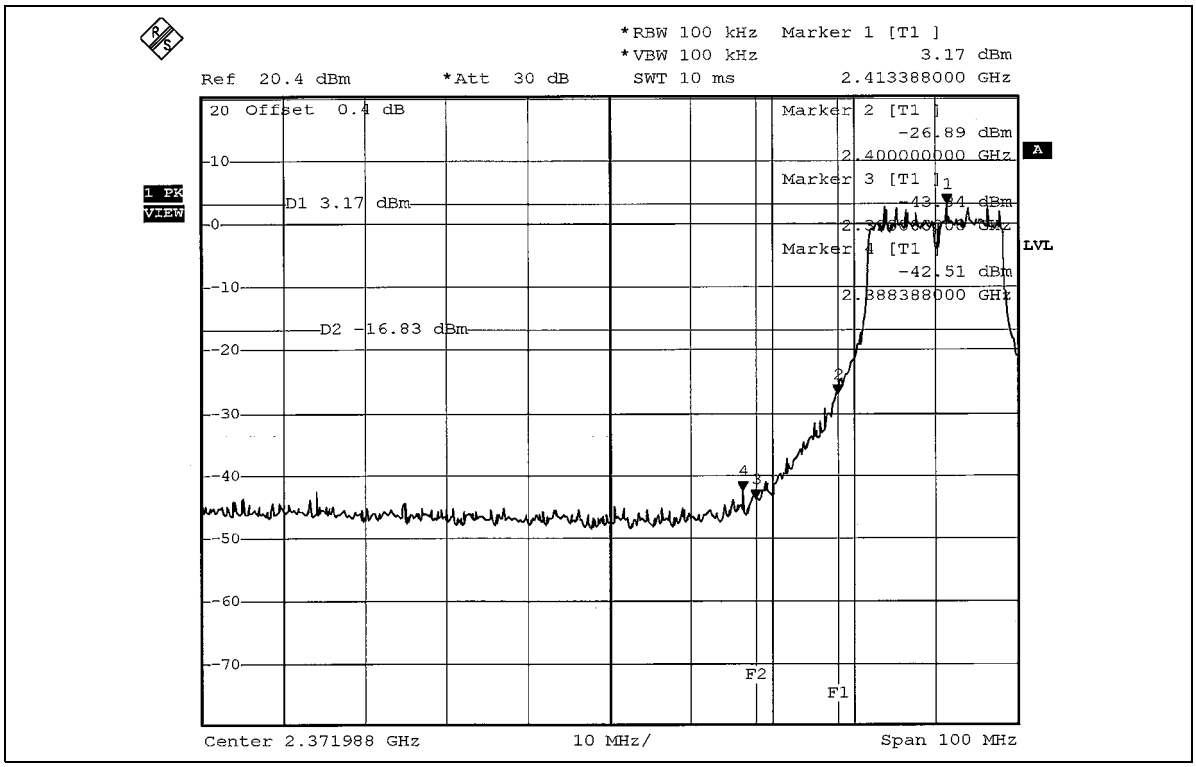

*RBW 100 kHz
*VBW 100 kHz
Marker 1 [T1]
-44.00 dBm
23.920000000 GHz
Ref 20 dBm
*Att 30 dB
SWT 2.25 s
20 Offset 0.4 dB
D1 9.25 dBm
D2 -10.75 dBm
1 PK VIEW
A
LVL
Start 2.5 GHz
2.25 GHz/
Stop 25 GHz

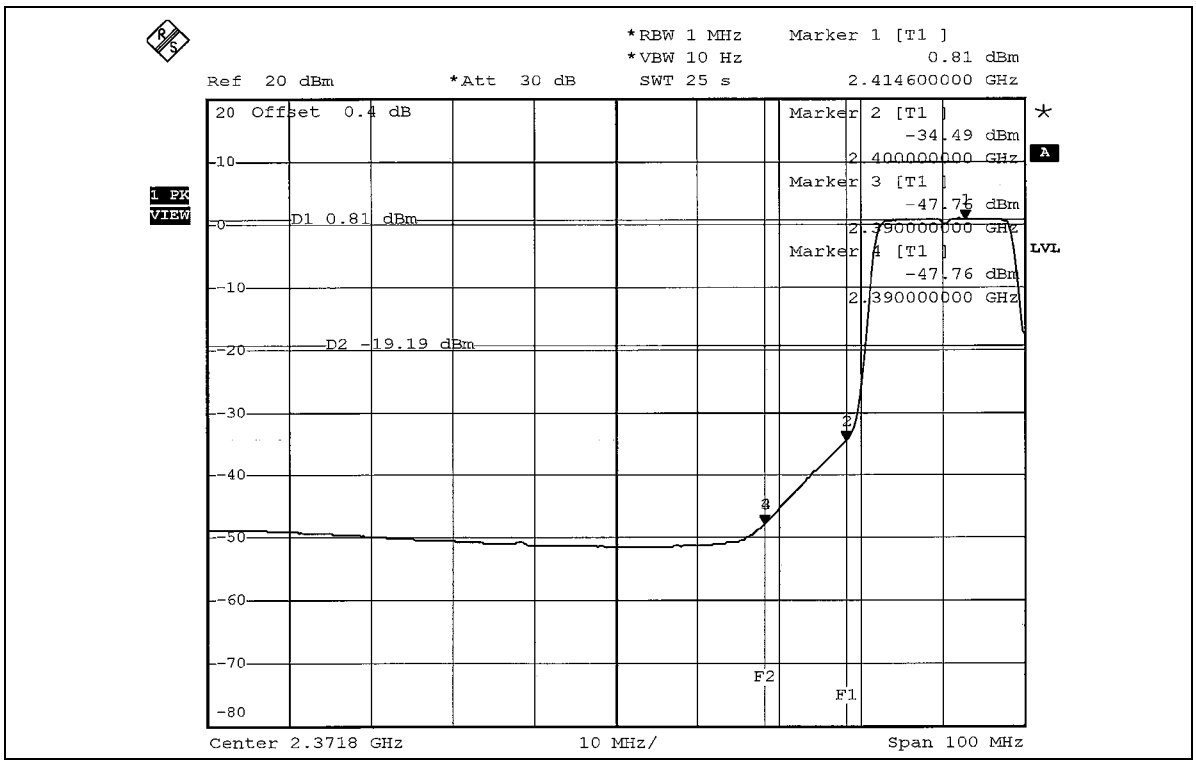

*RBW 100 kHz
*VBW 100 kHz
Marker 1 [T1]
9.16 dBm
2.463000000 GHz
Ref 20.4 dBm
*Att 30 dB
SWT 10 ms
20 Offset 0.4 dB
D1 9.16 dBm
D2 -10.84 dBm
Marker 2 [T1]
-41.39 dBm
2.483500000 GHz
Marker 3 [T1]
-40.80 dBm
2.486400000 GHz
Marker 4 [T1]
-49.55 dBm
2.500800000 GHz
1 PK VIEW
A
LVL
F1
F2
Center 2.503 GHz
10 MHz/
Span 100 MHz

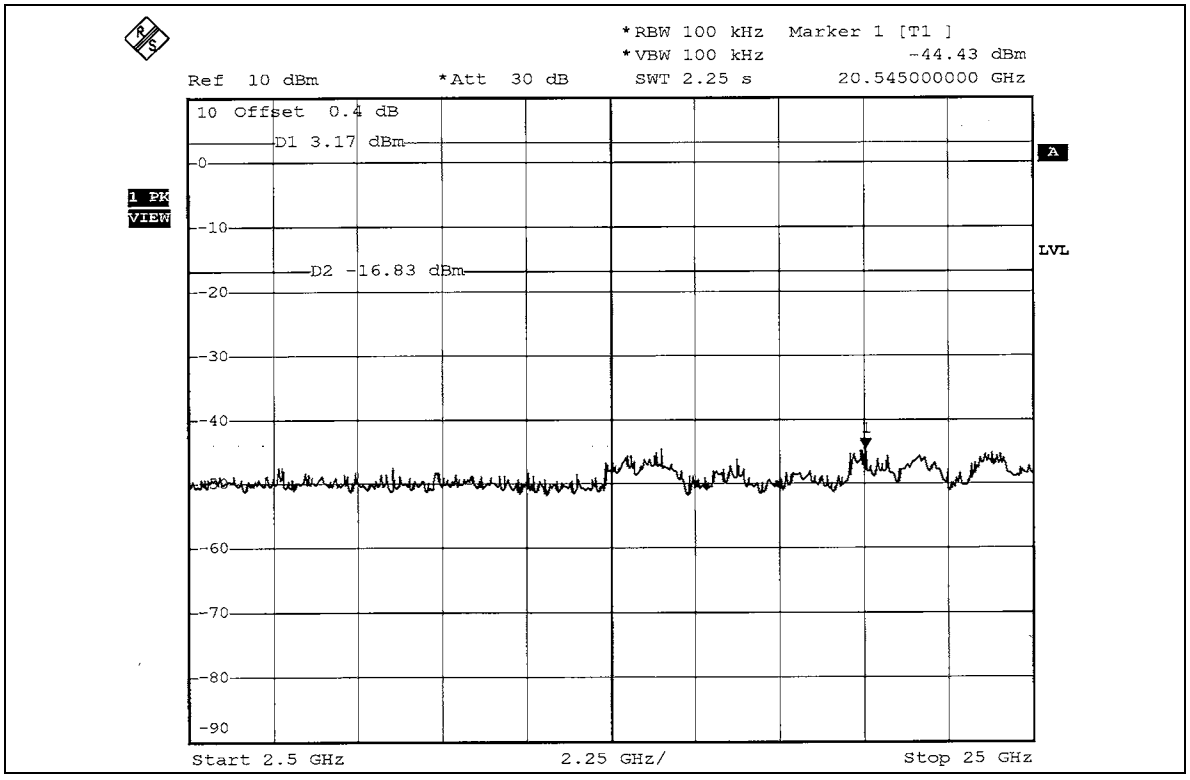

*RBW 1 MHz
*VBW 10 Hz
Ref 20.4 dBm
*Att 30 dB
SWT 25 s
Marker 1 [T1]
8.43 dBm
2.461200000 GHz
20 Offset 0.4 dB
Marker 2 [T1]
-50.75 dBm
2.483500000 GHz
Marker 3 [T1]
-49.95 dBm
2.487400000 GHz
Marker 4 [T1]
-53.55 dBm
2.500000000 GHz
D1 8.43 dBm
D2 -11.57 dBm
1 PK VIEW
A
LVL
F1
F2
Center 2.5056 GHz
10 MHz/
Span 100 MHz

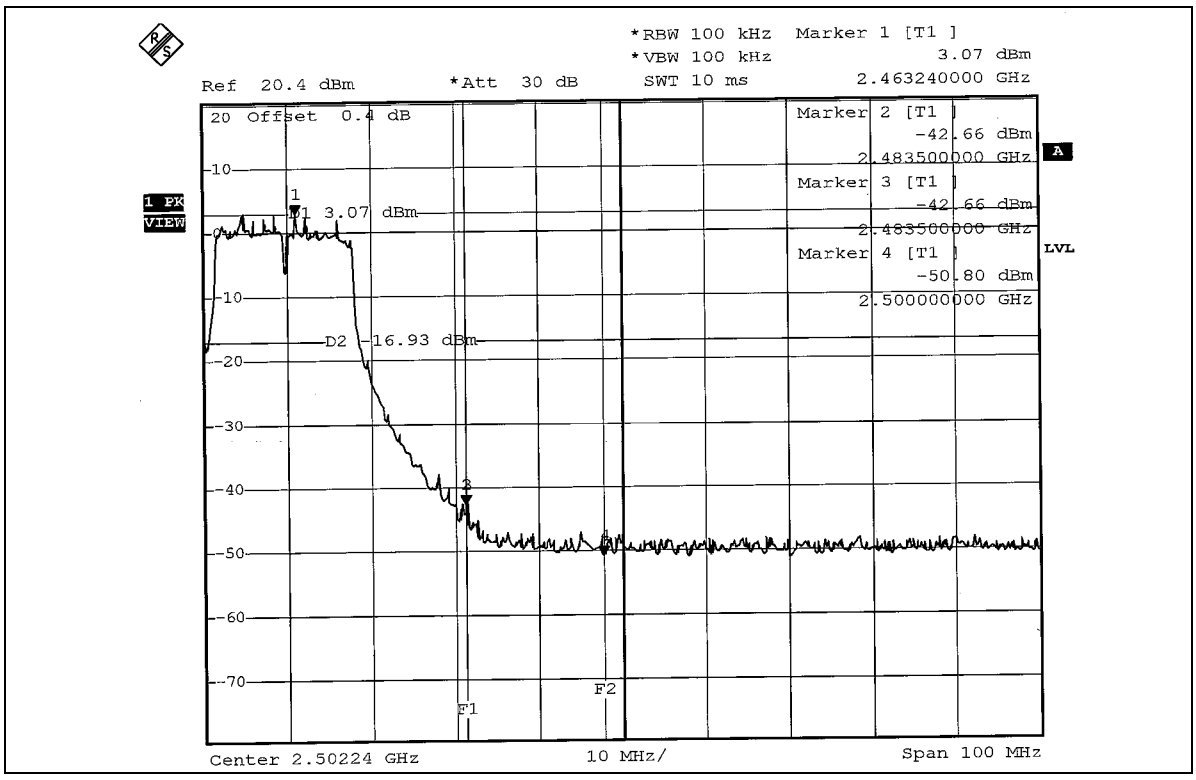

*RBW 100 kHz
*VBW 100 kHz
Ref 20.4 dBm
*Att 30 dB
SWT 2.25 s
Marker 1 [T1]
-42.99 dBm
24.055000000 GHz
20 Offset 0.4 dB
D1 9.16 dBm
D2 -10.84 dBm
1 PK MAXH
A
LVL
Center 13.75 GHz
2.25 GHz/
Span 22.5 GHz

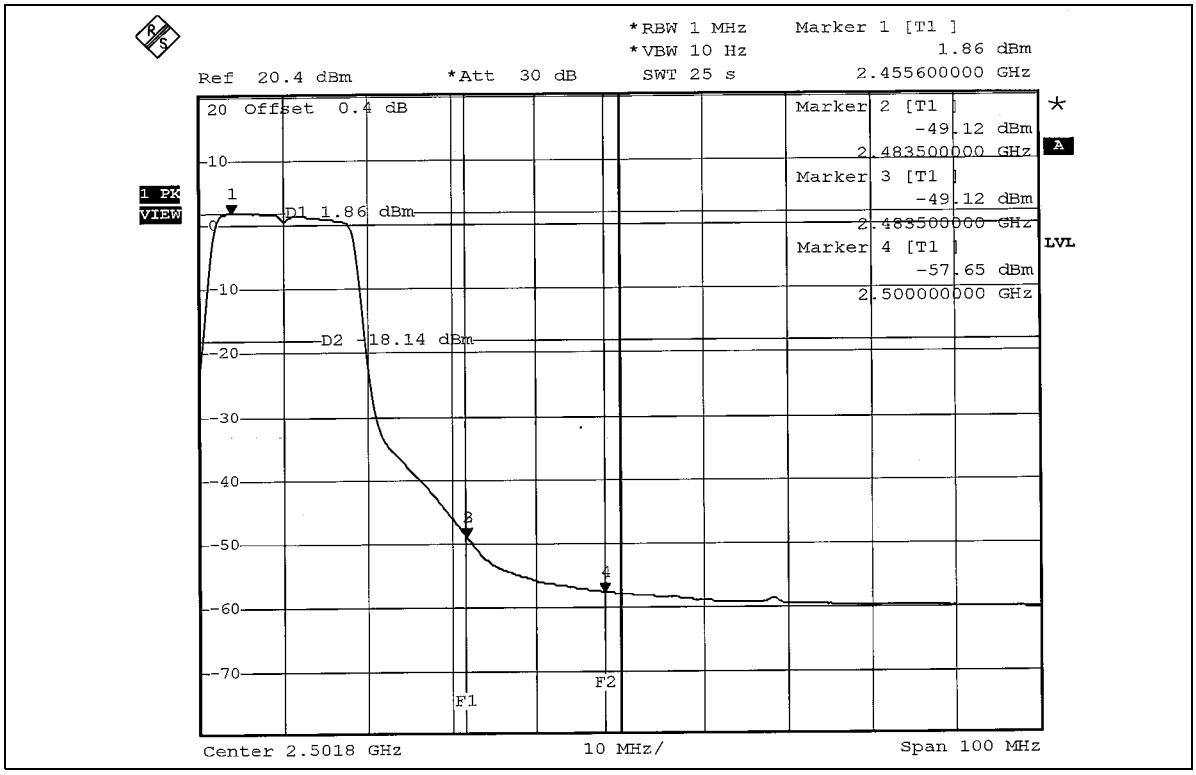
802.11g OFDM modulation

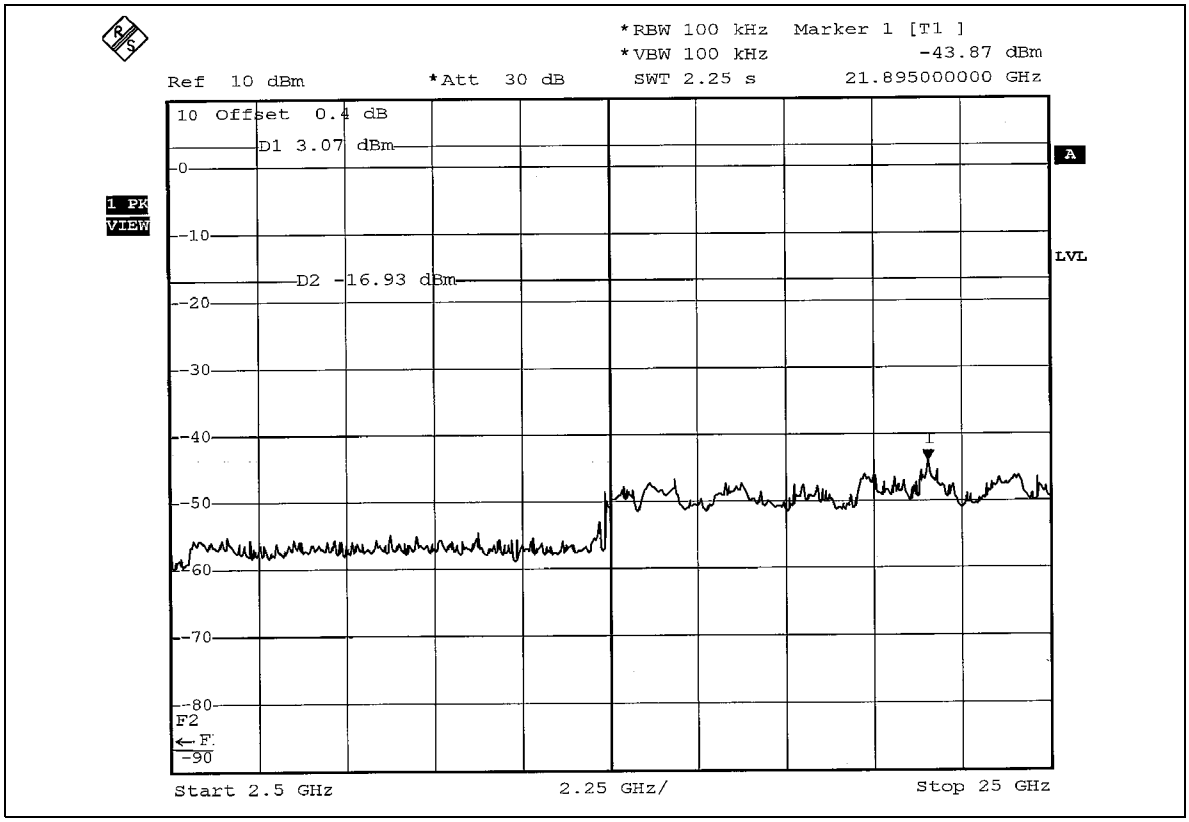




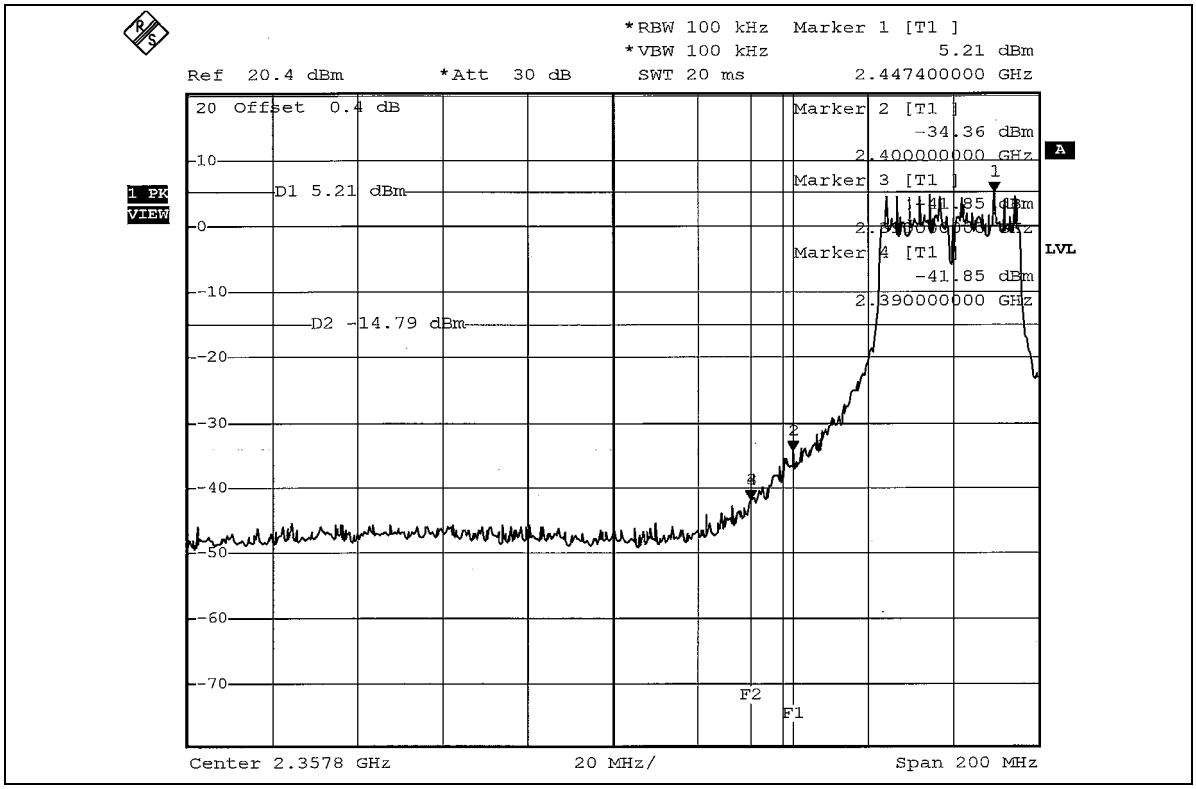

*RBW 100 kHz
*VBW 100 kHz
SWT 2.25 s
Marker 1 [T1]
-44.43 dBm
20.545000000 GHz
Ref 10 dBm
*Att 30 dB
10 Offset 0.4 dB
D1 3.17 dBm
D2 -16.83 dBm
1 PK VIEW
A
LVL
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
Start 2.5 GHz
2.25 GHz/
Stop 25 GHz

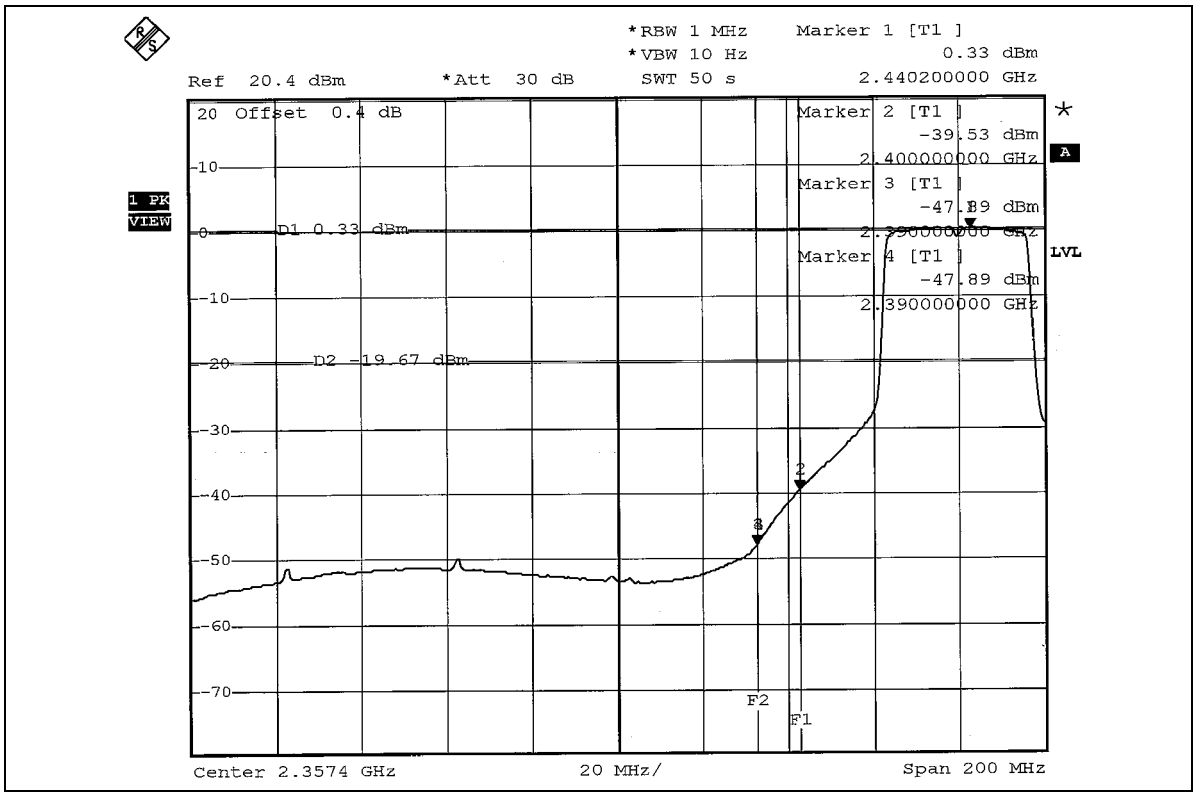

*RBW 100 kHz
*VBW 100 kHz
SWT 10 ms
Marker 1 [T1]
3.07 dBm
2.463240000 GHz
Ref 20.4 dBm
*Att 30 dB
20 Offset 0.4 dB
D1 3.07 dBm
D2 -16.93 dBm
Marker 2 [T1]
-42.66 dBm
2.483500000 GHz
Marker 3 [T1]
-42.66 dBm
2.483500000 GHz
Marker 4 [T1]
-50.80 dBm
2.500000000 GHz
1 PK VIEW
A
LVL
F1
F2
Center 2.50224 GHz
10 MHz/
Span 100 MHz

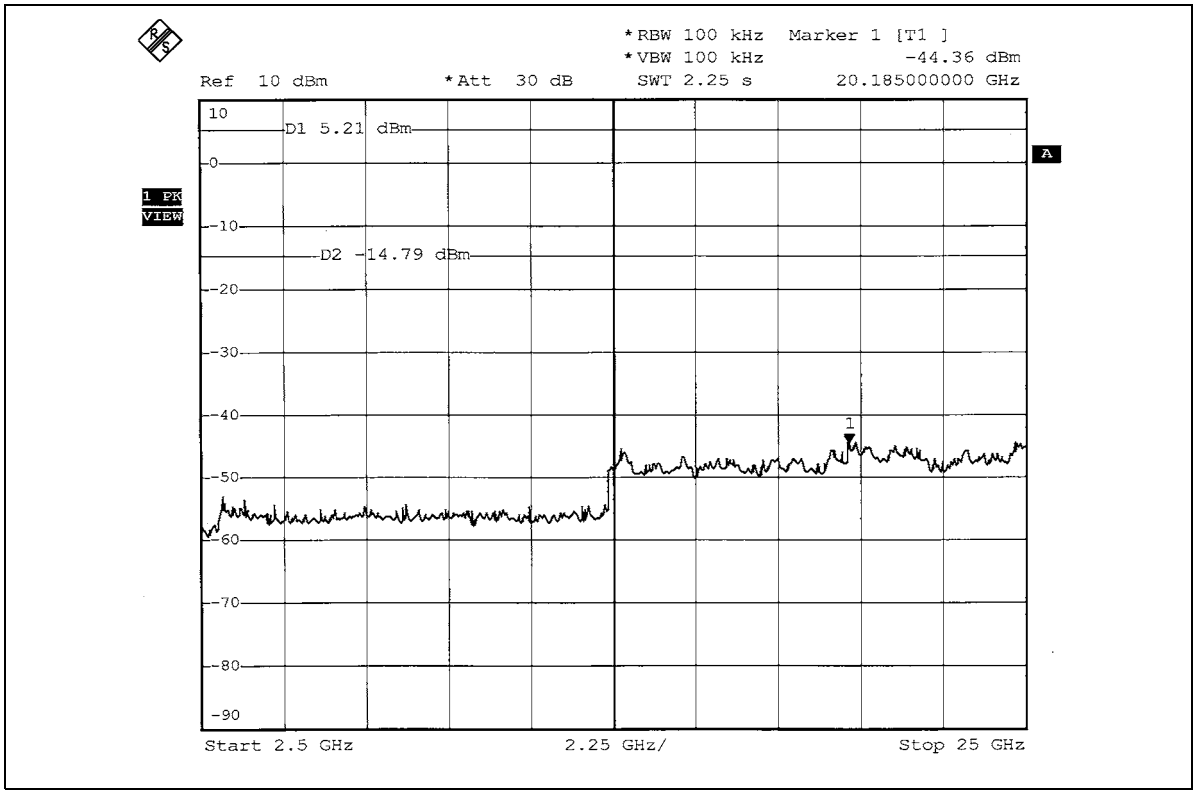

*RBW 1 MHz
*VBW 10 Hz
SWT 25 s
Marker 1 [T1]
1.86 dBm
2.455600000 GHz
Ref 20.4 dBm
*Att 30 dB
20 Offset 0.4 dB
Marker 2 [T1]
-49.12 dBm
2.483500000 GHz
Marker 3 [T1]
-49.12 dBm
2.483500000 GHz
Marker 4 [T1]
-57.65 dBm
2.500000000 GHz
1 PK
VIEW
D1 1.86 dBm
D2 -18.14 dBm
A
LVL
F1
F2
Center 2.5018 GHz
10 MHz/
Span 100 MHz

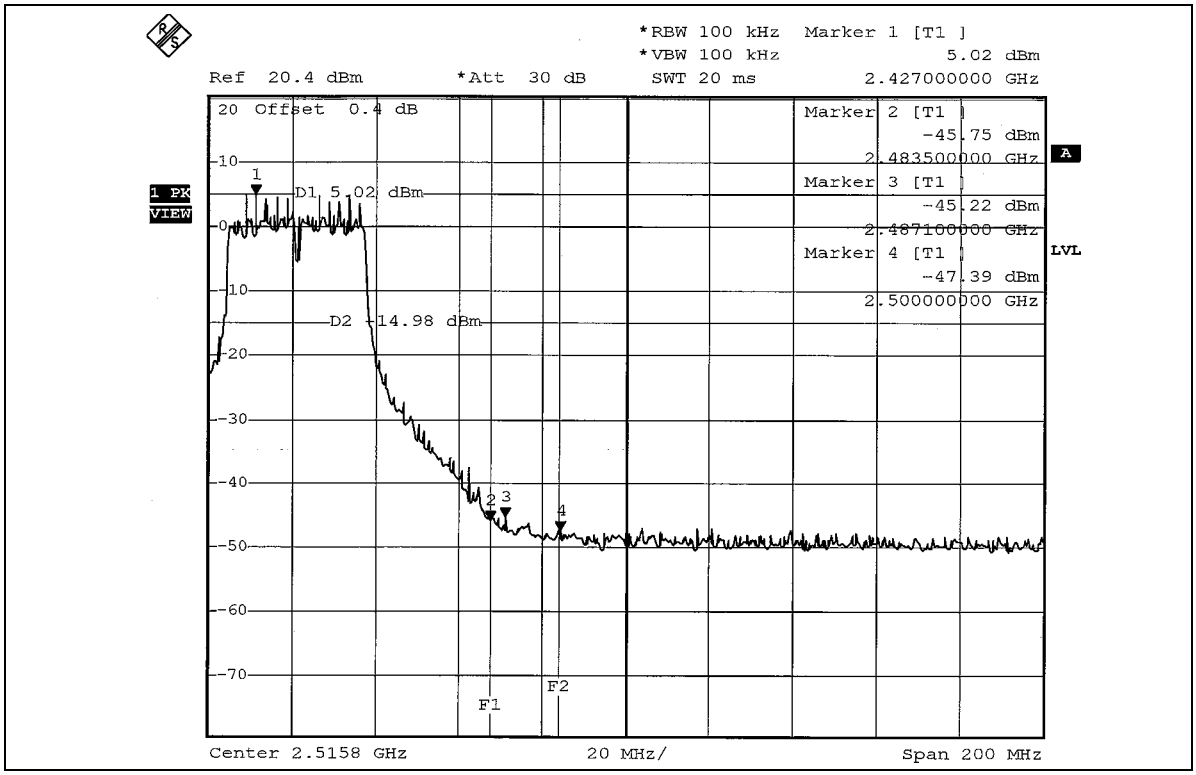

*RBW 100 kHz
*VBW 100 kHz
SWT 2.25 s
Marker 1 [T1]
-43.87 dBm
21.895000000 GHz
Ref 10 dBm
*Att 30 dB
10 Offset 0.4 dB
D1 3.07 dBm
D2 -16.93 dBm
1 PK
VIEW
A
LVL
F2
Start 2.5 GHz
2.25 GHz/
Stop 25 GHz

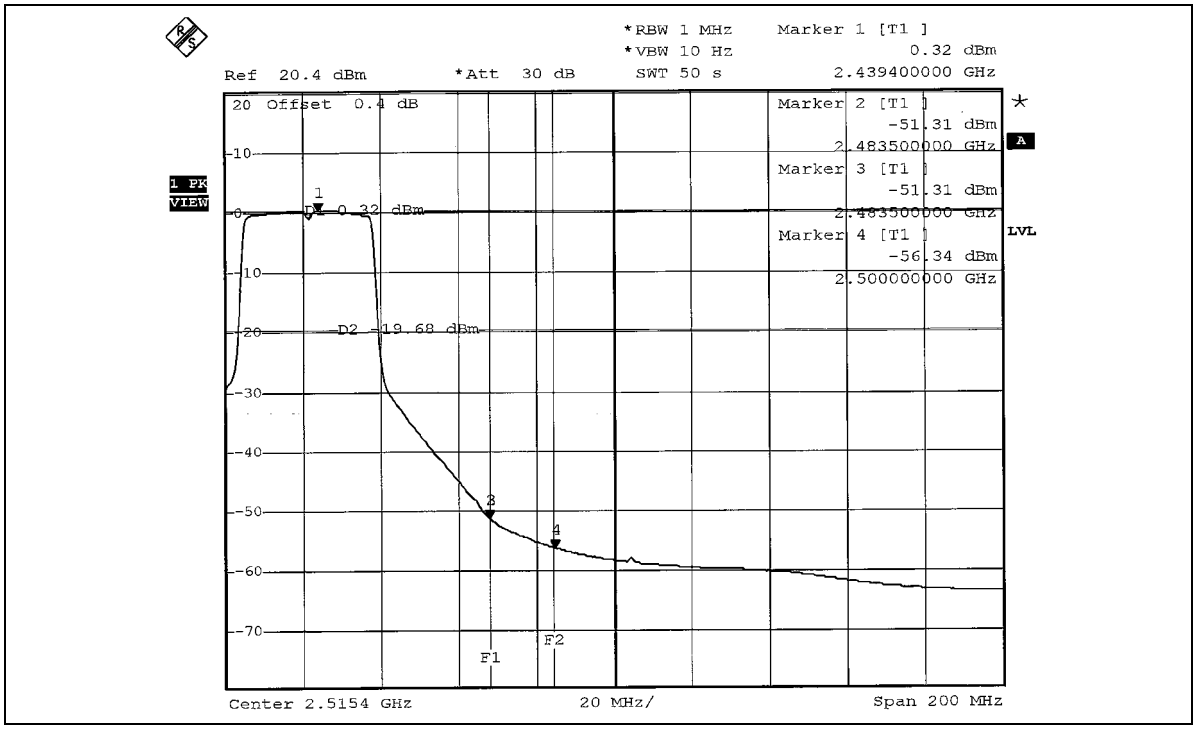
802.11g Turbo OFDM modulation

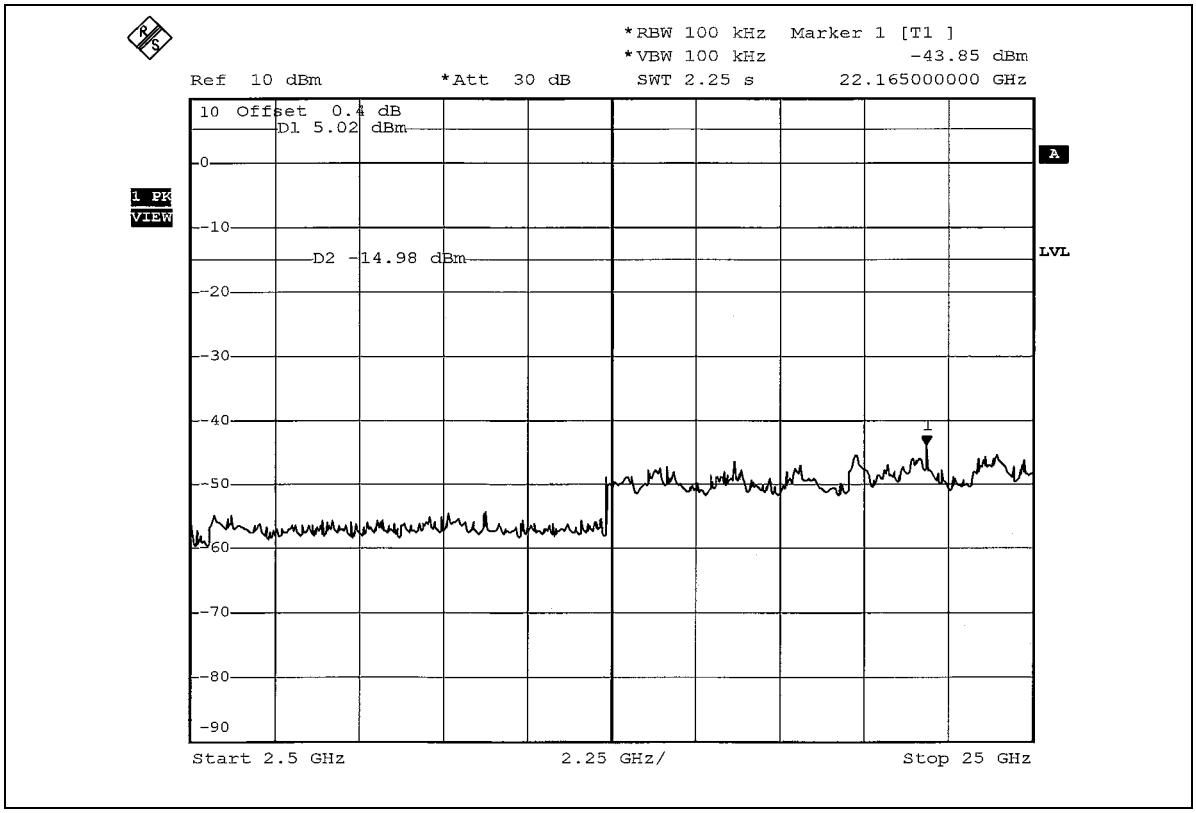





*RBW 100 kHz
*VBW 100 kHz
Marker 1 [T1]
-44.36 dBm
Ref 10 dBm
*Att 30 dB
SWT 2.25 s
20.185000000 GHz
D1 5.21 dBm
D2 -14.79 dBm
1 PK
VIEW
A
Start 2.5 GHz
2.25 GHz/
Stop 25 GHz


*RBW 100 kHz
*VBW 100 kHz
Marker 1 [T1]
5.02 dBm
Ref 20.4 dBm
*Att 30 dB
SWT 20 ms
2.427000000 GHz
20 Offset 0.4 dB
Marker 2 [T1]
-45.75 dBm
2.483500000 GHz
Marker 3 [T1]
-45.22 dBm
2.487100000 GHz
Marker 4 [T1]
-47.39 dBm
2.500000000 GHz
D1 5.02 dBm
D2 -14.98 dBm
1 PK
VIEW
A
LVL
F1
F2
Center 2.5158 GHz
20 MHz/
Span 200 MHz


*RBW 1 MHz
*VBW 10 Hz
Ref 20.4 dBm
*Att 30 dB
SWT 50 s
Marker 1 [T1]
0.32 dBm
2.439400000 GHz
20 Offset 0.4 dB
Marker 2 [T1]
-51.31 dBm
2.483500000 GHz
Marker 3 [T1]
-51.31 dBm
2.483500000 GHz
Marker 4 [T1]
-56.34 dBm
2.500000000 GHz
1 PK
VIEW
D1 0.32 dBm
D2 -19.68 dBm
A
LVL
F1
F2
Center 2.5154 GHz
20 MHz/
Span 200 MHz


*RBW 100 kHz
*VBW 100 kHz
Marker 1 [T1]
-43.85 dBm
22.165000000 GHz
Ref 10 dBm
*Att 30 dB
SWT 2.25 s
10 Offset 0.4 dB
D1 5.02 dBm
D2 -14.98 dBm
1 PK
VIEW
A
LVL
Start 2.5 GHz
2.25 GHz/
Stop 25 GHz

4.7 ANTENNA REQUIREMENT

4.7.1 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 15.247 (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 Dipole antenna with Reverse SMA connector. The maximum Gain of the antenna is 1.8dBi.

5. TEST TYPES AND RESULTS (802.11a 5725~5850MHz Band)

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.
1. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 MHz.
2. 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
Test Receiver ROHDE & SCHWARZ	ESCS30	100288	Nov. 06, 2005
RF signal cable Woken	5D-FB	Cable-HyC02-01	Jan. 09, 2006
LISN ROHDE & SCHWARZ	ESH2-Z5	100100	Jan. 20, 2006
LISN ROHDE & SCHWARZ	ESH3-Z5	100311	Jan. 20, 2006
Software ADT	ADT_Cond_V3	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 HwaYa Shielded Room 3.

3. The VCCI Site Registration No. is C-2047.

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.

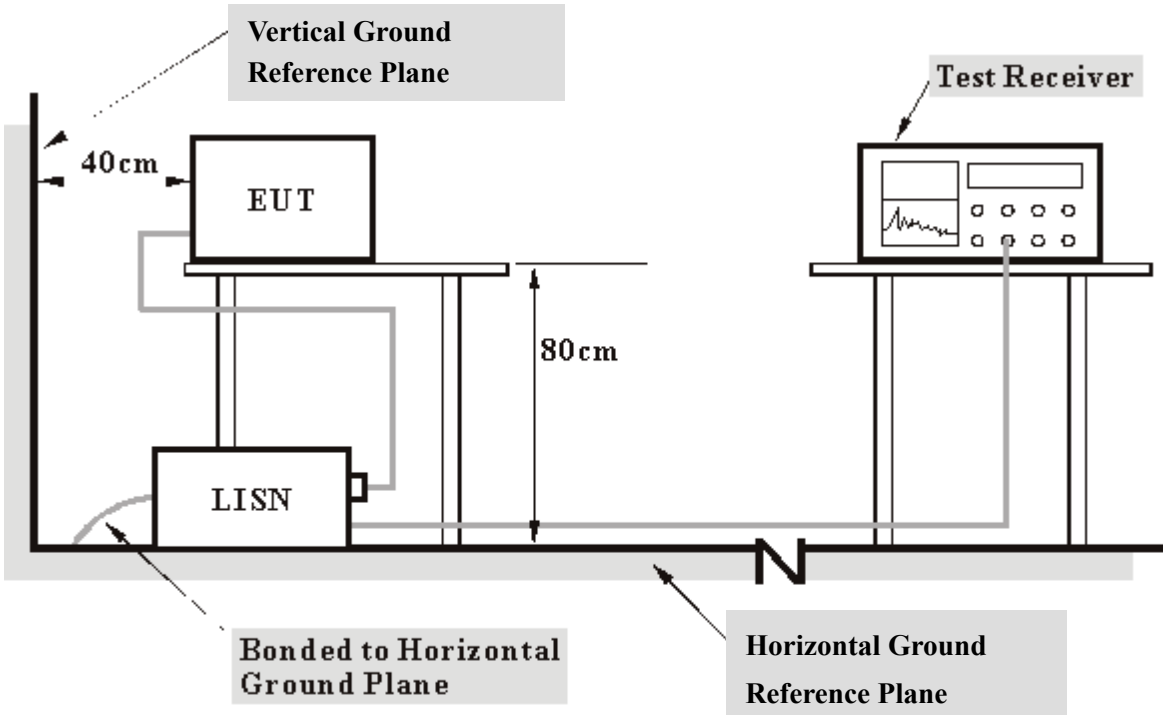
b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit – 20dB) was not recorded.

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

Same as 4.1.6

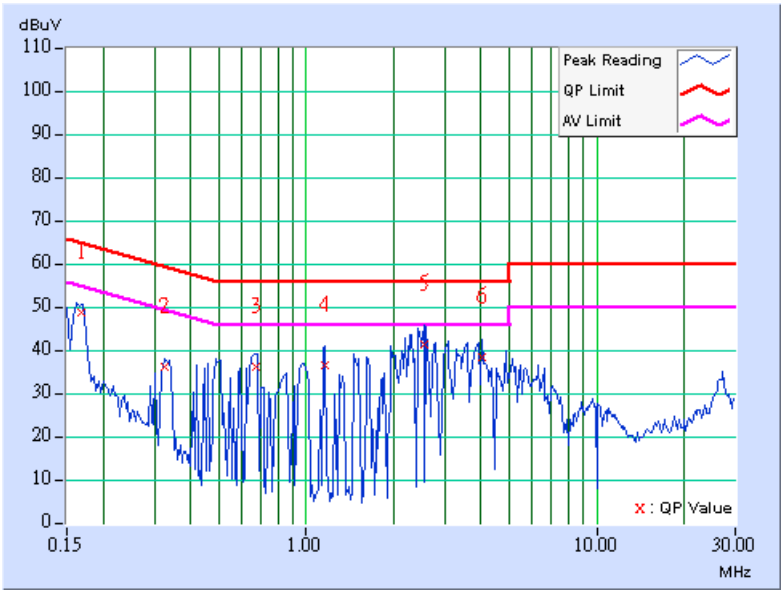
5.1.7 TEST RESULTS

Conducted Worst-Case Data (Power from AC Adapter)

EUT	ENTERPRISE WLAN AP	MEASUREMENT DETAIL	
MODEL	AT-WA7400	PHASE	Line 1
CHANNEL	Channel 3	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	20deg. C, 60%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	1	TESTED BY	Match Tsui

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.168	0.10	48.80	47.21	48.90	47.31	65.07	55.07	-16.17	-7.76
2	0.326	0.10	36.08	-	36.18	-	59.56	49.56	-23.38	-
3	0.670	0.14	36.13	20.47	36.27	20.61	56.00	46.00	-19.73	-25.39
4	1.164	0.20	36.35	23.05	36.55	23.25	56.00	46.00	-19.45	-2.75
5	2.535	0.20	41.20	22.06	41.40	22.26	56.00	46.00	-14.60	-23.74
6	4.047	0.20	38.21	20.97	38.41	21.17	56.00	46.00	-17.59	-24.83

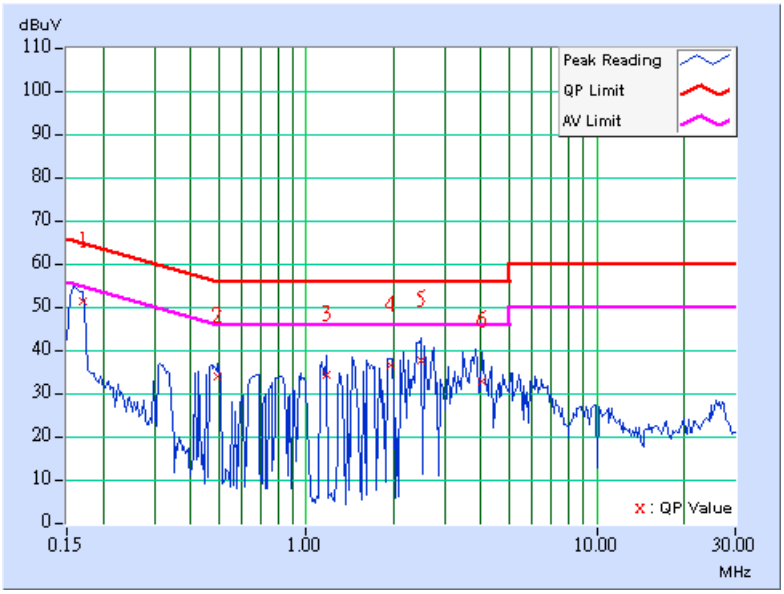
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	ENTERPRISE WLAN AP	MEASUREMENT DETAIL	
MODEL	AT-WA7400	PHASE	Line 2
CHANNEL	Channel 3	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	20deg. C, 60%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	1	TESTED BY	Match Tsui

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.170	0.10	51.33	45.09	51.43	45.19	64.98	54.98	-13.55	-9.79
2	0.497	0.12	33.92	-	34.04	-	56.06	46.06	-22.02	-
3	1.172	0.20	34.40	-	34.60	-	56.00	46.00	-21.40	-
4	1.941	0.20	36.59	19.98	36.79	20.18	56.00	46.00	-19.21	-25.82
5	2.496	0.20	37.44	17.65	37.64	17.85	56.00	46.00	-18.36	-28.15
6	4.016	0.20	32.68	-	32.88	-	56.00	46.00	-23.12	-

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

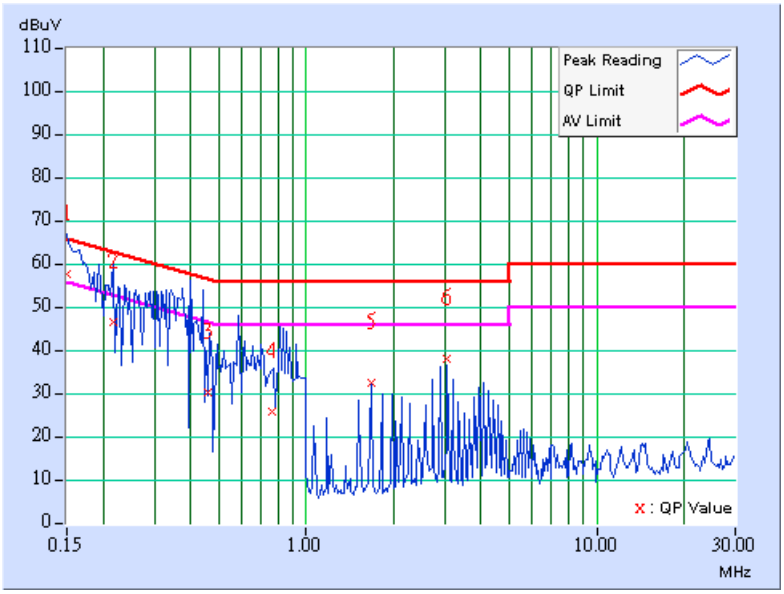


Conducted Worst-Case Data (Power from POE)

EUT	ENTERPRISE WLAN AP	MEASUREMENT DETAIL	
MODEL	AT-WA7400	PHASE	Line 1
CHANNEL	Channel 3	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	22deg. C, 62%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	2	TESTED BY	Long Chen

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.150	0.11	57.29	30.48	57.40	30.59	66.00	56.00	-8.60	-25.41
2	0.216	0.11	46.33	15.41	46.44	15.52	62.96	52.96	-16.52	-37.44
3	0.459	0.12	30.05	-	30.17	-	56.70	46.70	-26.53	-
4	0.761	0.19	25.78	-	25.97	-	56.00	46.00	-30.03	-
5	1.673	0.25	32.17	-	32.42	-	56.00	46.00	-23.58	-
6	3.039	0.33	37.86	36.27	38.19	36.60	56.00	46.00	-17.81	-9.40

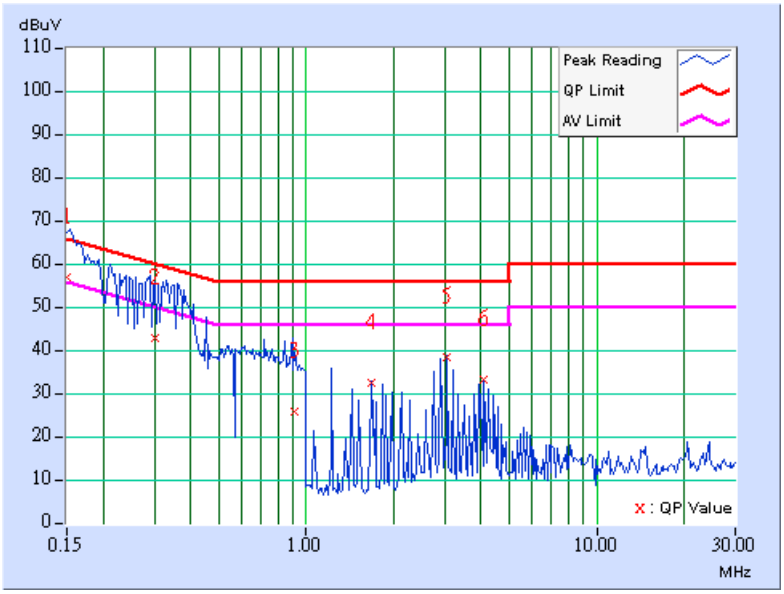
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	ENTERPRISE WLAN AP	MEASUREMENT DETAIL	
MODEL	AT-WA7400	PHASE	Line 2
CHANNEL	Channel 3	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	22deg. C, 62%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	2	TESTED BY	Long Chen

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.150	0.11	56.73	30.41	56.84	30.52	66.00	56.00	-9.16	-25.48
2	0.303	0.11	42.47	27.88	42.58	27.99	60.15	50.15	-17.57	-22.16
3	0.913	0.22	25.70	-	25.92	-	56.00	46.00	-30.08	-
4	1.672	0.25	32.10	-	32.35	-	56.00	46.00	-23.65	-
5	3.039	0.33	38.13	37.73	37.46	38.06	56.00	46.00	-18.54	-7.94
6	4.105	0.39	32.79	-	32.18	-	56.00	46.00	-23.82	-

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



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 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
Test Receiver ROHDE & SCHWARZ	ESIB7	100188	Dec. 19, 2005
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100039	Nov. 21, 2005
BILOG Antenna SCHWARZBECK	VULB9168	9168-157	Jan. 22, 2006
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-407	Jan. 16, 2006
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA 9170241	Feb. 23, 2006
Preamplifier Agilent	8449B	3008A01961	Nov. 09, 2005
Preamplifier Agilent	8447D	2944A10629	Nov. 09, 2005
RF signal cable HUBER+SUHNER	SUCOFLEX 104	218182/4	Feb. 17, 2006
RF signal cable HUBER+SUHNER	SUCOFLEX 104	218194/4	Feb. 17, 2006
Software ADT.	ADT_Radiated_V5.14	NA	NA
Antenna Tower ADT.	AT100	AT93021702	NA
Turn Table ADT.	TT100.	TT93021702	NA
Controller ADT.	SC100.	SC93021702	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 HwaYa Chamber 1.

3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.

4. The IC Site Registration No. is IC4924-2.

5.2.3 TEST PROCEDURES

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. 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 lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

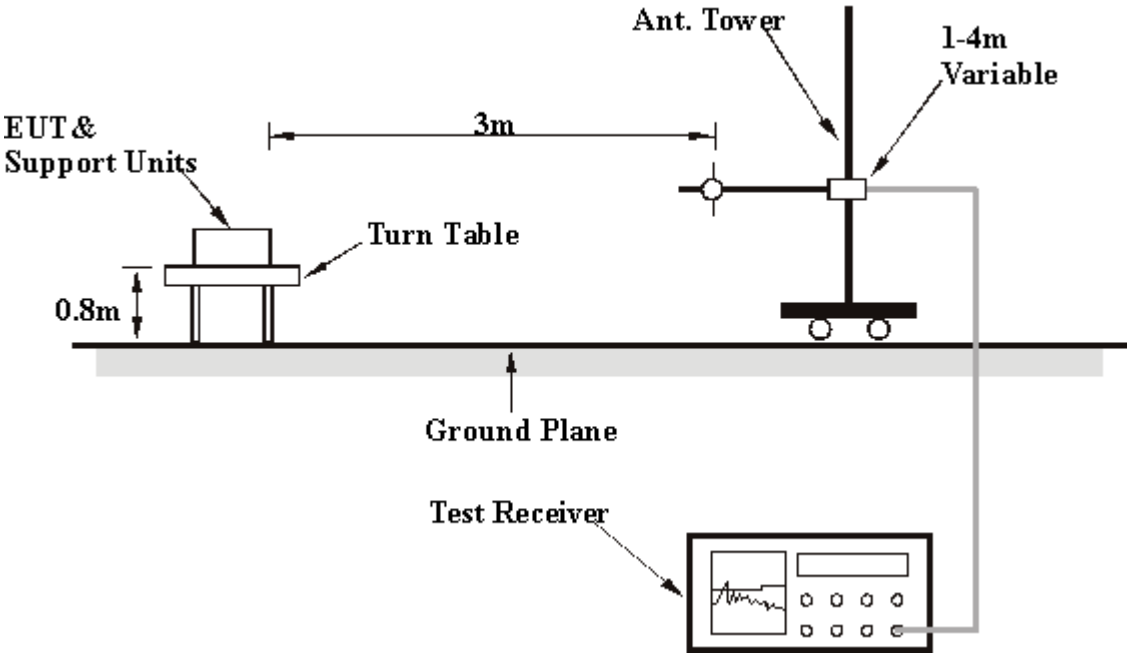
NOTE:

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 10 Hz for Average detection (AV) at frequency above 1GHz.

5.2.4 DEVIATION FROM TEST STANDARD

No deviation

5.2.5 TEST SETUP



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

5.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6

5.2.7 TEST RESULTS

Below 1GHz Worst-Case Data (Power from AC Adapter)

EUT	ENTERPRISE WLAN AP	MEASUREMENT DETAIL	
MODEL	AT-WA7400	FREQUENCY RANGE	Below 1000MHz
CHANNEL	Channel 3	DETECTOR FUNCTION	Quasi-Peak
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	1	TESTED BY	Match Tsui

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	31.94	24.61 QP	40.00	-15.39	2.00 H	229	10.93	13.68
2	249.66	37.20 QP	46.00	-8.80	1.50 H	118	24.12	13.08
3	377.96	30.83 QP	46.00	-15.17	1.00 H	172	14.71	16.12
4	440.16	38.51 QP	46.00	-7.49	2.00 H	343	20.85	17.66
5	500.42	36.79 QP	46.00	-9.21	2.00 H	94	18.19	18.59
6	560.68	29.83 QP	46.00	-16.17	1.50 H	67	9.95	19.88
7	624.83	31.59 QP	46.00	-14.41	1.50 H	268	10.35	21.24
8	770.62	32.83 QP	46.00	-13.17	1.00 H	181	9.30	23.53
9	881.42	33.52 QP	46.00	-12.48	1.00 H	328	8.78	24.74

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	31.94	24.89 QP	40.00	-15.11	2.00 V	214	11.21	13.68
2	64.99	33.20 QP	40.00	-6.80	1.00 V	13	20.31	12.90
3	105.81	32.38 QP	43.50	-11.12	1.00 V	352	21.04	11.34
4	171.90	29.44 QP	43.50	-14.06	1.00 V	226	15.94	13.50
5	218.56	30.69 QP	46.00	-15.31	1.00 V	184	19.11	11.59
6	249.66	34.96 QP	46.00	-11.04	1.00 V	238	21.88	13.08
7	440.16	35.19 QP	46.00	-10.81	1.00 V	67	17.53	17.66
8	500.42	36.21 QP	46.00	-9.79	1.00 V	10	17.62	18.59
9	624.83	31.68 QP	46.00	-14.32	1.00 V	319	10.44	21.24
10	770.62	32.31 QP	46.00	-13.69	1.50 V	64	8.78	23.53
11	881.42	31.65 QP	46.00	-14.35	1.00 V	265	6.91	24.74

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

Below 1GHz Worst-Case Data (Power from POE)

EUT	ENTERPRISE WLAN AP	**MEASUREMENT DETAIL**	
MODEL	AT-WA7400	**FREQUENCY RANGE**	Below 1000MHz
CHANNEL	Channel 3	**DETECTOR FUNCTION**	Quasi-Peak
MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	22deg. C, 60%RH, 991hPa
TRANSFER RATE	6Mbps	**INPUT POWER (SYSTEM)**	120Vac, 60 Hz
TEST MODE	2	**TESTED BY**	Long 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	142.75	31.30 QP	43.50	-12.20	1.50 H	262	17.02	14.27
2	218.56	34.53 QP	46.00	-11.47	1.00 H	232	22.95	11.59
3	249.66	37.31 QP	46.00	-8.69	1.00 H	52	24.23	13.08
4	500.42	36.07 QP	46.00	-9.93	1.50 H	43	17.48	18.59
5	599.56	33.60 QP	46.00	-12.40	1.50 H	313	12.72	20.88
6	770.62	36.37 QP	46.00	-9.63	1.00 H	295	12.84	23.53

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	63.05	35.14 QP	40.00	-4.86	1.00 V	67	22.02	13.11
2	94.15	32.80 QP	43.50	-10.70	1.00 V	262	22.52	10.28
3	142.75	34.95 QP	43.50	-8.55	1.00 V	316	20.68	14.27
4	249.66	34.45 QP	46.00	-11.55	1.00 V	172	21.37	13.08
5	500.42	33.96 QP	46.00	-12.04	1.00 V	298	15.37	18.59
6	770.62	34.87 QP	46.00	-11.13	1.50 V	67	11.34	23.53

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

802.11a OFDM modulation

EUT	ENTERPRISE WLAN AP	MEASUREMENT DETAIL	
MODEL	AT-WA7400	FREQUENCY RANGE	1 ~ 40 GHz
CHANNEL	Channel 1	DETECTOR FUNCTION	Peak(PK) Average (AV)
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Match Tsui		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#3830.00	44.77 PK	74.00	-29.23	1.00 H	220	10.82	33.95
1	#3830.00	35.27 AV	54.00	-18.73	1.00 H	220	1.32	33.95
2	*5745.00	101.10 PK			1.44 H	157	63.04	38.06
2	*5745.00	91.41 AV			1.44 H	157	53.35	38.06
3	#11490.00	61.16 PK	74.00	-12.84	1.30 H	154	13.93	47.23
3	#11490.00	47.69 AV	54.00	-6.31	1.30 H	154	0.46	47.23

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#3830.00	44.79 PK	74.00	-29.21	1.15 V	32	10.85	33.95
1	#3830.00	34.34 AV	54.00	-19.66	1.15 V	32	0.39	33.95
2	*5745.00	111.14 PK			1.16 V	53	73.08	38.06
2	*5745.00	100.79 AV			1.16 V	53	62.73	38.06
3	#11490.00	66.70 PK	74.00	-7.30	1.38 V	149	19.47	47.23
3	#11490.00	52.11 AV	54.00	-1.89	1.38 V	149	4.88	47.23

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

EUT	ENTERPRISE WLAN AP	MEASUREMENT DETAIL	
MODEL	AT-WA7400	FREQUENCY RANGE	1 ~ 40 GHz
CHANNEL	Channel 3	DETECTOR FUNCTION	Peak(PK) Average (AV)
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Match Tsui		

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	#3856.00	45.10 PK	74.00	-28.90	1.00 H	250	11.06	34.03
1	#3856.00	35.49 AV	54.00	-18.51	1.00 H	250	1.45	34.03
2	*5785.00	101.35 PK			1.38 H	160	63.20	38.15
2	*5785.00	91.58 AV			1.38 H	160	53.43	38.15
3	#11570.00	61.52 PK	74.00	-12.48	1.25 H	165	14.40	47.12
3	#11570.00	47.85 AV	54.00	-6.15	1.25 H	165	0.73	47.12

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	#3856.00	45.26 PK	74.00	-28.74	1.18 V	25	11.22	34.03
1	#3856.00	34.59 AV	54.00	-19.41	1.18 V	25	0.55	34.03
2	*5785.00	111.25 PK			1.02 V	351	73.10	38.15
2	*5785.00	101.15 AV			1.02 V	351	63.00	38.15
3	#11570.00	66.54 PK	74.00	-7.46	1.43 V	151	19.42	47.12
3	#11570.00	51.29 AV	54.00	-2.71	1.43 V	151	4.17	47.12

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

EUT	ENTERPRISE WLAN AP	MEASUREMENT DETAIL	
MODEL	AT-WA7400	FREQUENCY RANGE	1 ~ 40 GHz
CHANNEL	Channel 5	DETECTOR FUNCTION	Peak(PK) Average (AV)
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Match Tsui		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#3883.00	45.30 PK	74.00	-28.70	1.02 H	310	11.18	34.12
1	#3883.00	35.82 AV	54.00	-18.18	1.02 H	310	1.70	34.12
2	*5825.00	101.27 PK			1.42 H	198	63.06	38.21
2	*5825.00	91.62 AV			1.42 H	198	53.41	38.21
3	#11650.00	61.47 PK	74.00	-12.53	1.30 H	189	14.37	47.10
3	#11650.00	48.05 AV	54.00	-5.95	1.30 H	189	0.95	47.10

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#3883.00	45.42 PK	74.00	-28.58	1.20 V	350	11.30	34.12
1	#3883.00	35.13 AV	54.00	-18.87	1.20 V	350	1.01	34.12
2	*5825.00	110.93 PK			1.05 V	360	72.72	38.21
2	*5825.00	100.50 AV			1.05 V	360	62.29	38.21
3	#11650.00	66.19 PK	74.00	-7.81	1.38 V	160	19.09	47.10
3	#11650.00	51.43 AV	54.00	-2.57	1.38 V	160	4.33	47.10

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

802.11a Turbo OFDM modulation

EUT	ENTERPRISE WLAN AP	MEASUREMENT DETAIL	
MODEL	AT-WA7400	FREQUENCY RANGE	1 ~ 40 GHz
CHANNEL	Channel 1	DETECTOR FUNCTION	Peak(PK) Average (AV)
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 991hPa
TRANSFER RATE	12Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Match Tsui		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#3840.00	44.21 PK	74.00	-29.79	1.04 H	350	10.23	33.98
1	#3840.00	37.53 AV	54.00	-16.47	1.04 H	350	3.55	33.98
2	*5760.00	99.25 PK			1.00 H	240	61.16	38.09
2	*5760.00	89.42 AV			1.00 H	240	51.33	38.09
3	#11520.00	58.44 PK	74.00	-15.56	1.35 H	100	11.24	47.20
3	#11520.00	46.58 AV	54.00	-7.42	1.35 H	100	-0.62	47.20

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#3840.00	45.75 PK	74.00	-28.25	1.08 V	100	11.77	33.98
1	#3840.00	38.11 AV	54.00	-15.89	1.08 V	100	4.13	33.98
2	*5760.00	109.01 PK			1.13 V	352	70.92	38.09
2	*5760.00	100.08 AV			1.13 V	352	61.99	38.09
3	#11520.00	65.77 PK	74.00	-8.23	1.00 V	210	18.57	47.20
3	#11520.00	51.37 AV	54.00	-2.63	1.00 V	210	4.17	47.20

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

EUT	ENTERPRISE WLAN AP	MEASUREMENT DETAIL	
MODEL	AT-WA7400	FREQUENCY RANGE	1 ~ 40 GHz
CHANNEL	Channel 2	DETECTOR FUNCTION	Peak(PK) Average (AV)
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 991hPa
TRANSFER RATE	12Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Match Tsui		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#3866.00	45.82 PK	74.00	-28.18	1.10 H	120	11.75	34.07
1	#3866.00	38.27 AV	54.00	-15.73	1.10 H	120	4.20	34.07
2	*5800.00	100.10 PK			1.00 H	214	61.92	38.18
2	*5800.00	90.40 AV			1.00 H	214	52.22	38.18
3	#11600.00	58.63 PK	74.00	-15.37	1.35 H	52	11.56	47.07
3	#11600.00	46.26 AV	54.00	-7.74	1.35 H	52	-0.81	47.07

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#3866.00	45.21 PK	74.00	-28.79	1.18 V	350	11.14	34.07
1	#3866.00	38.34 AV	54.00	-15.66	1.18 V	350	4.27	34.07
2	*5800.00	109.35 PK			1.00 V	360	71.17	38.18
2	*5800.00	100.25 AV			1.00 V	360	62.07	38.18
3	#11600.00	66.06 PK	74.00	-7.94	1.40 V	159	18.99	47.07
3	#11600.00	51.56 AV	54.00	-2.44	1.40 V	159	4.49	47.07

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

5.3 6dB BANDWIDTH MEASUREMENT

5.3.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

5.3.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSEK30	100049	Aug. 12, 2005

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

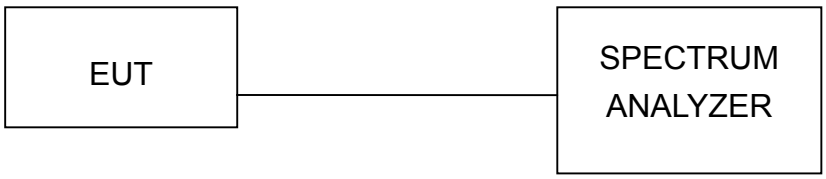
5.3.3 TEST PROCEDURE

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

5.3.4 DEVIATION FROM TEST STANDARD

No deviation

5.3.5 TEST SETUP



5.3.6 EUT OPERATING CONDITIONS

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

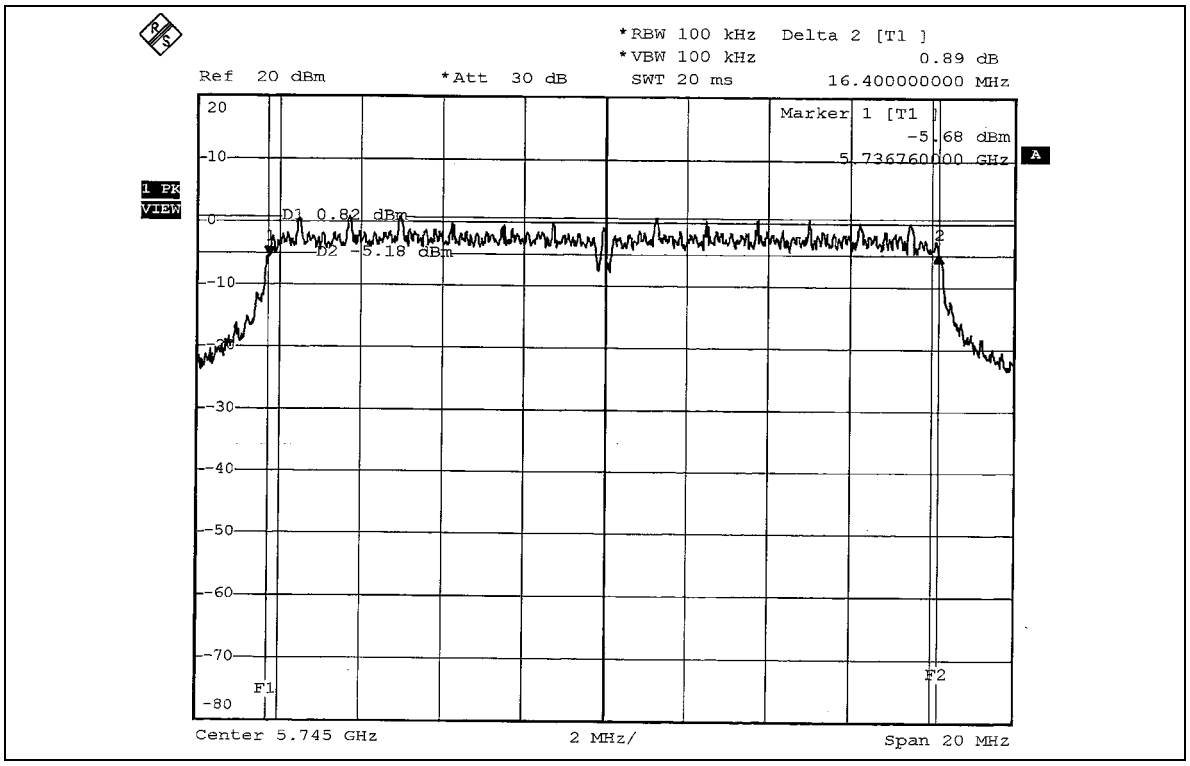
5.3.7 TEST RESULTS

802.11a OFDM modulation

EUT	ENTERPRISE WLAN AP	**MODEL**	AT-WA7400
MODULATION TYPE	BPSK	**TRANSFER RATE**	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	22deg.C, 55%RH, 991hPa
TESTED BY	Gary Chang		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	5745	16.40	0.5	PASS
3	5785	16.36	0.5	PASS
5	5825	16.32	0.5	PASS

CH 1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*VBW 100 kHz
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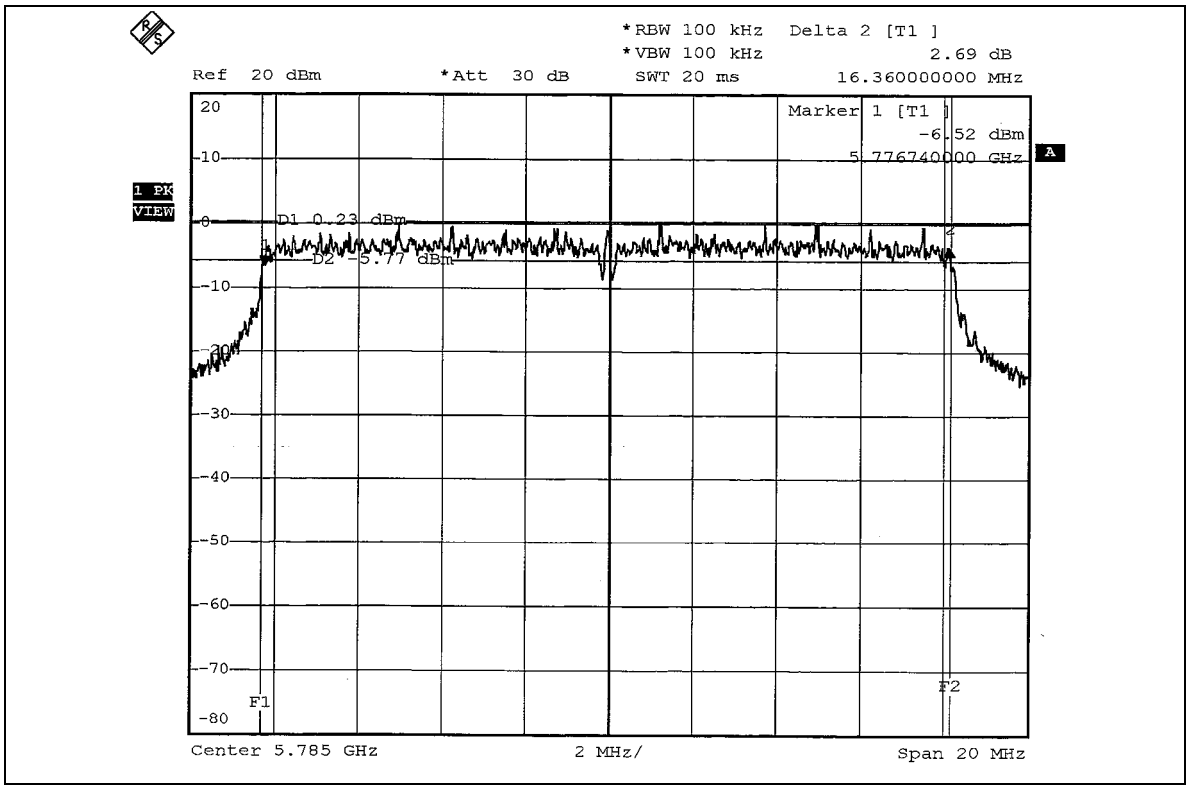
16.400000000 MHz
Ref 20 dBm
*Att 30 dB
Marker 1 [T1]
-5.68 dBm
5.736760000 GHz
1 PK
VIEW
D1 0.82 dBm
D2 -5.18 dBm
F1
F2
Center 5.745 GHz
2 MHz/
Span 20 MHz

CH 3


*RBW 100 kHz
*VBW 100 kHz
SWT 20 ms
Delta 2 [T1]
2.69 dB
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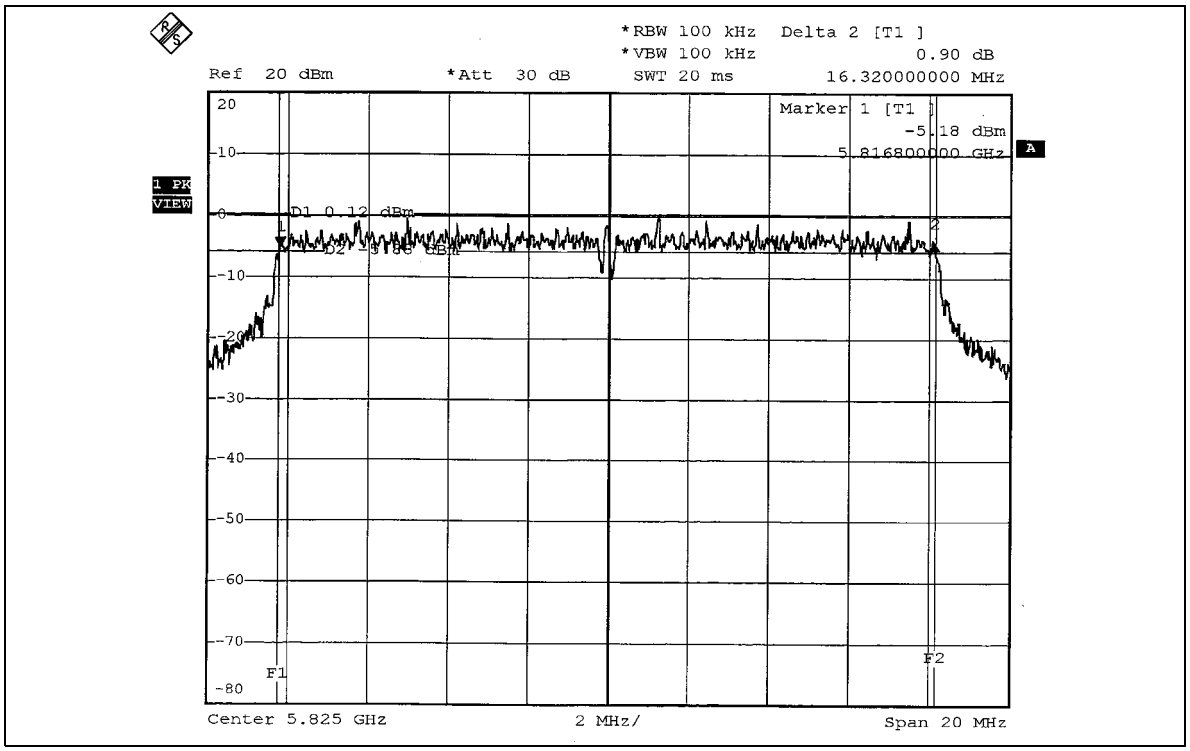
Ref 20 dBm
*Att 30 dB
Marker 1 [T1]
-6.52 dBm
5.776740000 GHz
1 PK
VIEW
D1 0.23 dBm
D2 -5.77 dBm
F1
F2
Center 5.785 GHz
2 MHz/
Span 20 MHz

CH 5

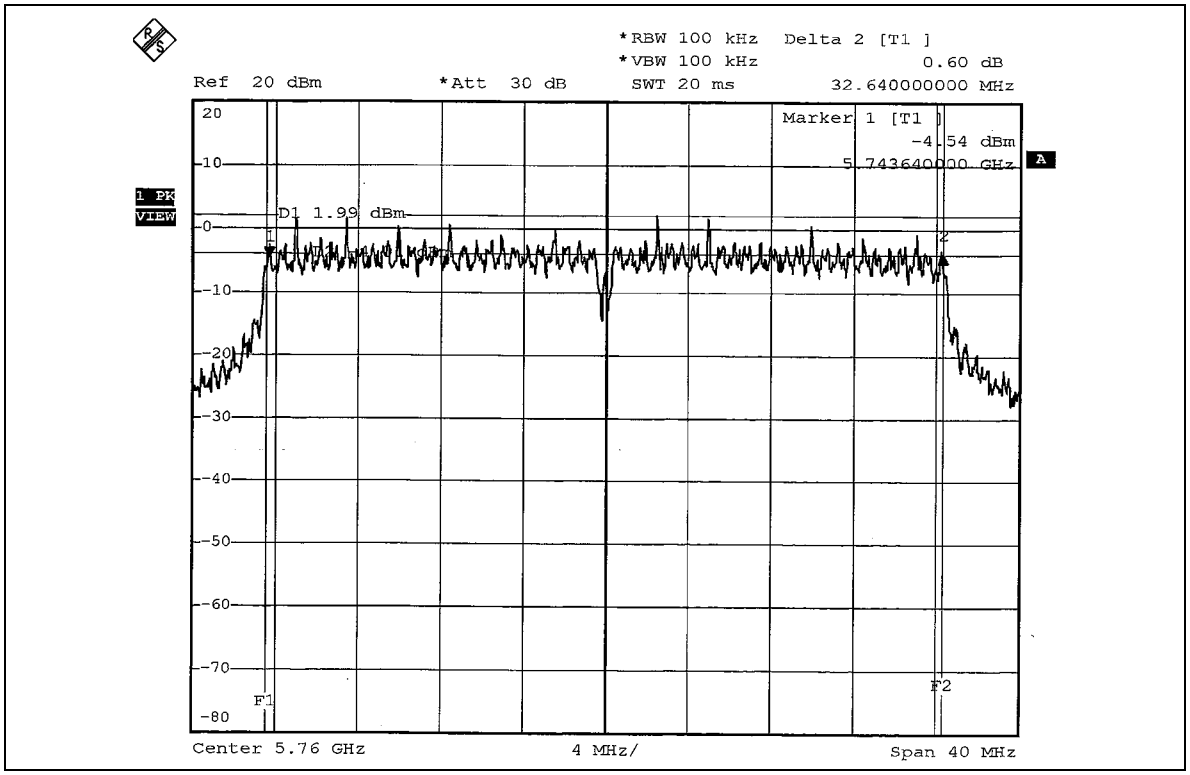

*RBW 100 kHz
*VBW 100 kHz
SWT 20 ms
Delta 2 [T1]
0.90 dB
16.320000000 MHz
Ref 20 dBm
*Att 30 dB
Marker 1 [T1]
-5.18 dBm
5.816800000 GHz
1 PK
VIEW
D1 0.12 dBm
D2 -5.18 dBm
F1
F2
Center 5.825 GHz
2 MHz/
Span 20 MHz

802.11a Turbo OFDM modulation

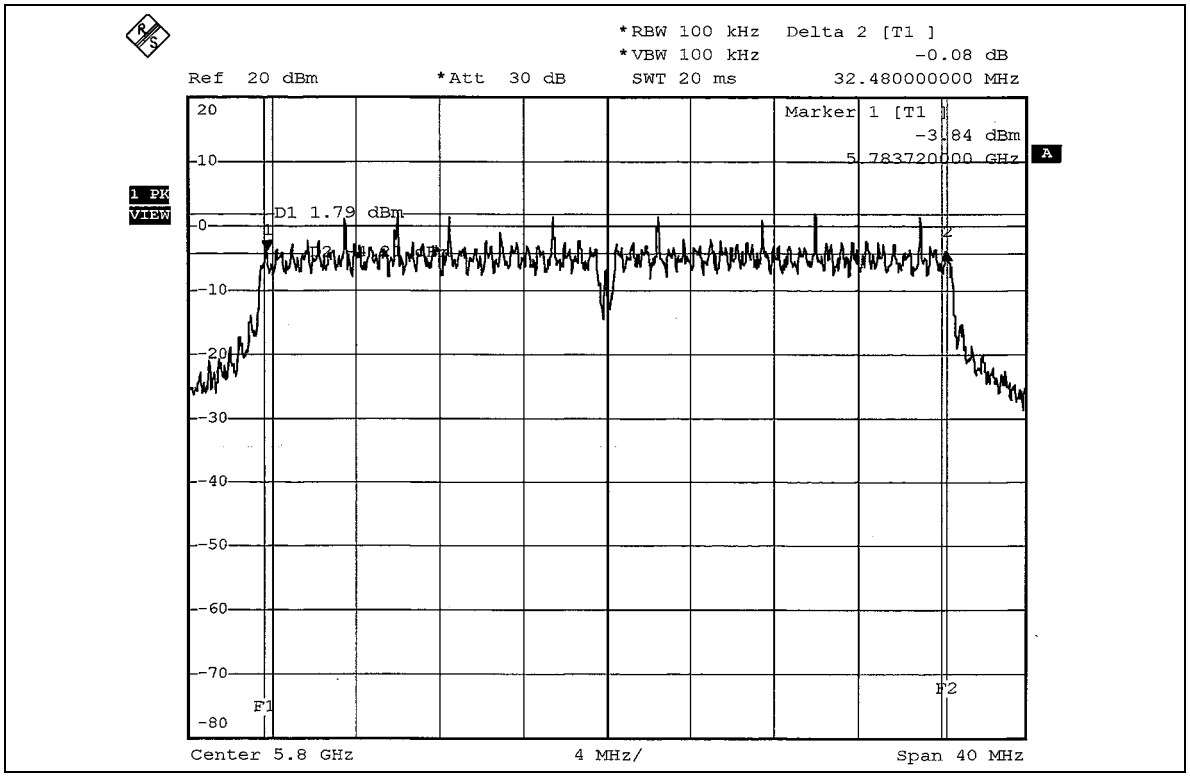
EUT	ENTERPRISE WLAN AP	**MODEL**	AT-WA7400
MODULATION TYPE	BPSK	**TRANSFER RATE**	12Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	22deg.C, 55%RH, 991hPa
TESTED BY	Gary Chang		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	5760	32.64	0.5	PASS
2	5800	32.48	0.5	PASS

CH 1


*RBW 100 kHz
*VBW 100 kHz
SWT 20 ms
Delta 2 [T1]
0.60 dB
32.640000000 MHz
Ref 20 dBm
*Att 30 dB
Marker 1 [T1]
-4.54 dBm
5.743640000 GHz
1 PK
VIEW
D1 1.99 dBm
F1
F2
Center 5.76 GHz
4 MHz/
Span 40 MHz

CH 2


*RBW 100 kHz
*VBW 100 kHz
SWT 20 ms
Delta 2 [T1]
-0.08 dB
32.480000000 MHz
Ref 20 dBm
*Att 30 dB
Marker 1 [T1]
-3.84 dBm
5.783720000 GHz
1 PK
VIEW
D1 1.79 dBm
F1
F2
Center 5.8 GHz
4 MHz/
Span 40 MHz

5.4 MAXIMUM PEAK OUTPUT POWER

5.4.1 LIMITS OF MAXIMUM PEAK OUTPUT POWER MEASUREMENT

The Maximum Peak Output Power Measurement is 30dBm.

5.4.2 INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSEK30	100049	Aug. 12, 2005
AGILENT SIGNAL GENERATOR	E8257C	MY43320668	Dec. 31, 2005
TEKTRONIX OSCILLOSCOPE	TDS 1012	C019167	Feb. 01, 2006
NARDA DETECTOR	4503A	FSCM99899	NA

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

5.4.3 TEST PROCEDURES

1. A detector was used on the output port of the EUT. An oscilloscope was used to read the 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 reading on oscilloscope. Record the power level.

5.4.4 DEVIATION FROM TEST STANDARD

No deviation

5.4.5 TEST SETUP

5.4.6 EUT OPERATING CONDITIONS

Same as Item 5.3.6

5.4.7 TEST RESULTS

802.11a OFDM modulation

EUT	ENTERPRISE WLAN AP	**MODEL**	AT-WA7400
MODULATION TYPE	BPSK	**TRANSFER RATE**	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	22deg.C, 55%RH, 991hPa
TESTED BY	Gary Chang		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	5745	35.645	15.52	30	PASS
3	5785	36.141	15.58	30	PASS
5	5825	28.510	14.55	30	PASS

802.11a Turbo OFDM modulation

EUT	ENTERPRISE WLAN AP	**MODEL**	AT-WA7400
MODULATION TYPE	BPSK	**TRANSFER RATE**	12Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	22deg.C, 55%RH, 991hPa
TESTED BY	Gary Chang		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	5760	39.994	16.02	30	PASS
2	5800	40.179	16.04	30	PASS

5.5 POWER SPECTRAL DENSITY MEASUREMENT

5.5.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm.

5.5.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSEK30	100049	Aug. 12, 2005

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

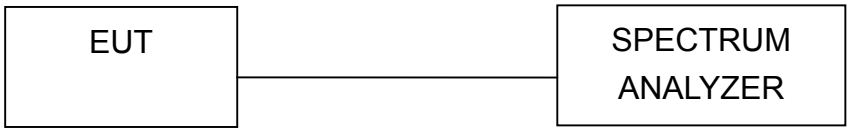
5.5.3 TEST PROCEDURE

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.

5.5.4 DEVIATION FROM TEST STANDARD

No deviation

5.5.5 TEST SETUP



5.5.6 EUT OPERATING CONDITION

Same as Item 5.3.6

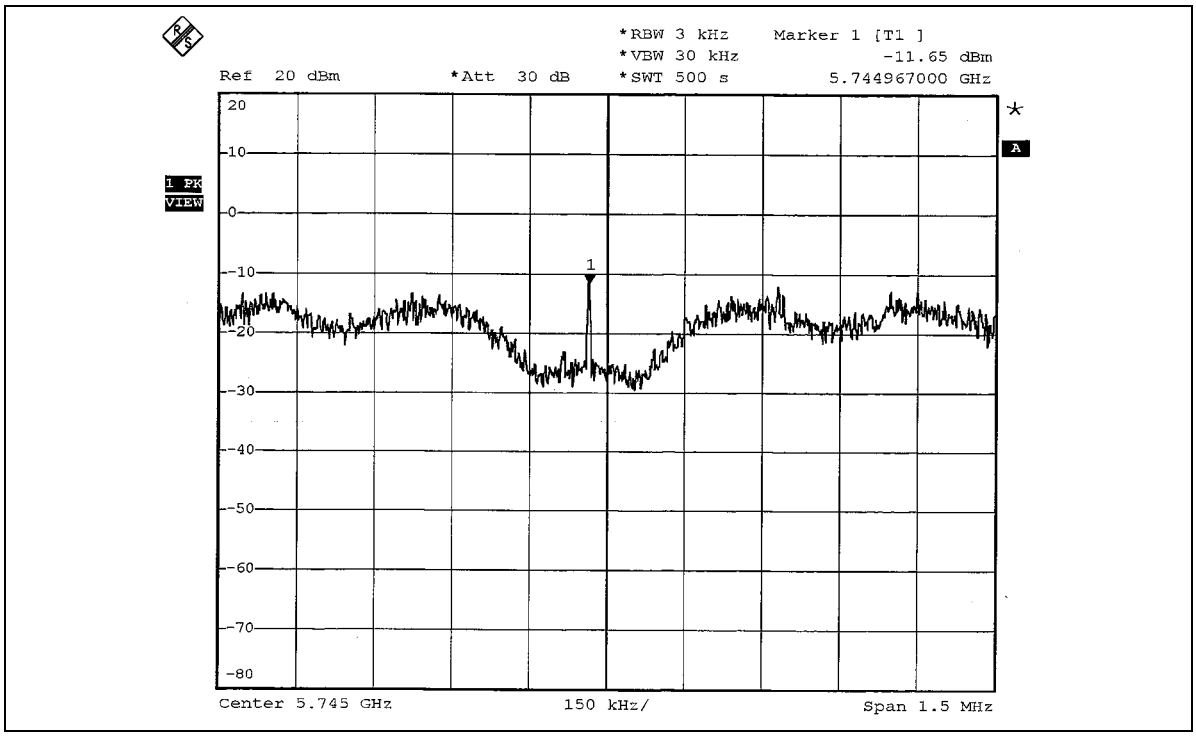
5.5.7 TEST RESULTS

802.11a OFDM modulation

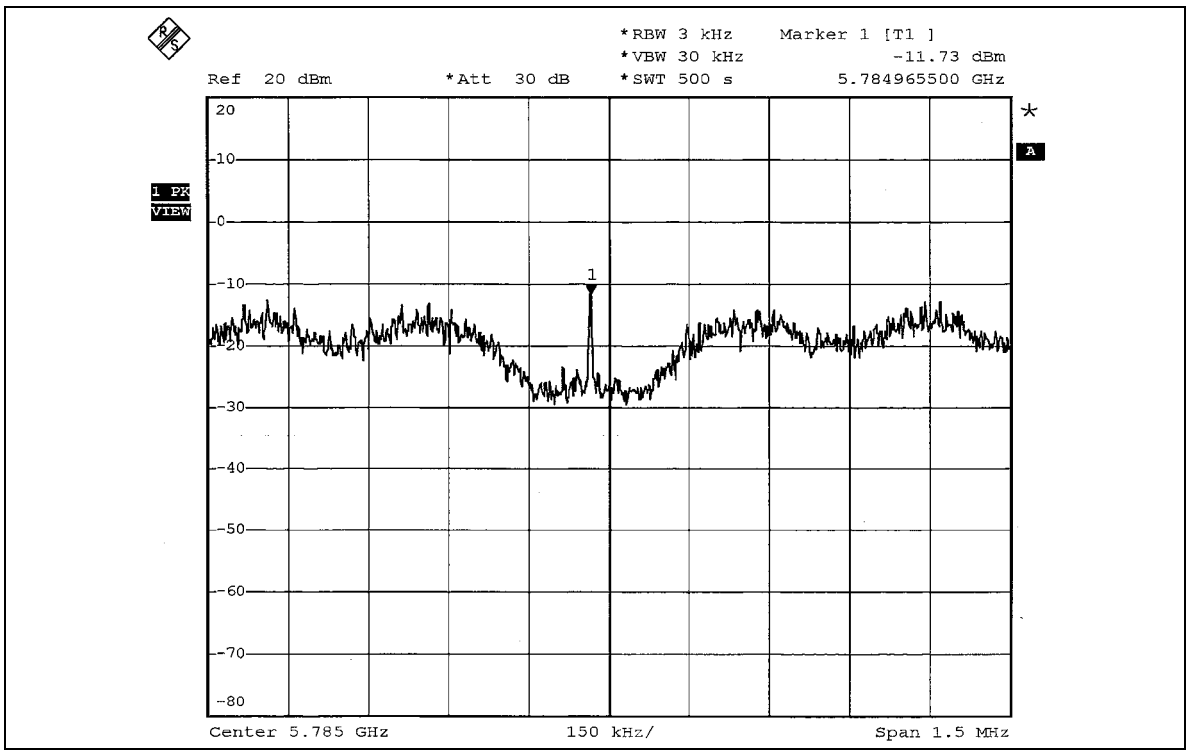
EUT	ENTERPRISE WLAN AP	**MODEL**	AT-WA7400
MODULATION TYPE	BPSK	**TRANSFER RATE**	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	22deg.C, 55%RH, 991hPa
TESTED BY	Gary Chang		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	5745	-11.65	8	PASS
3	5785	-11.73	8	PASS
5	5825	-11.87	8	PASS

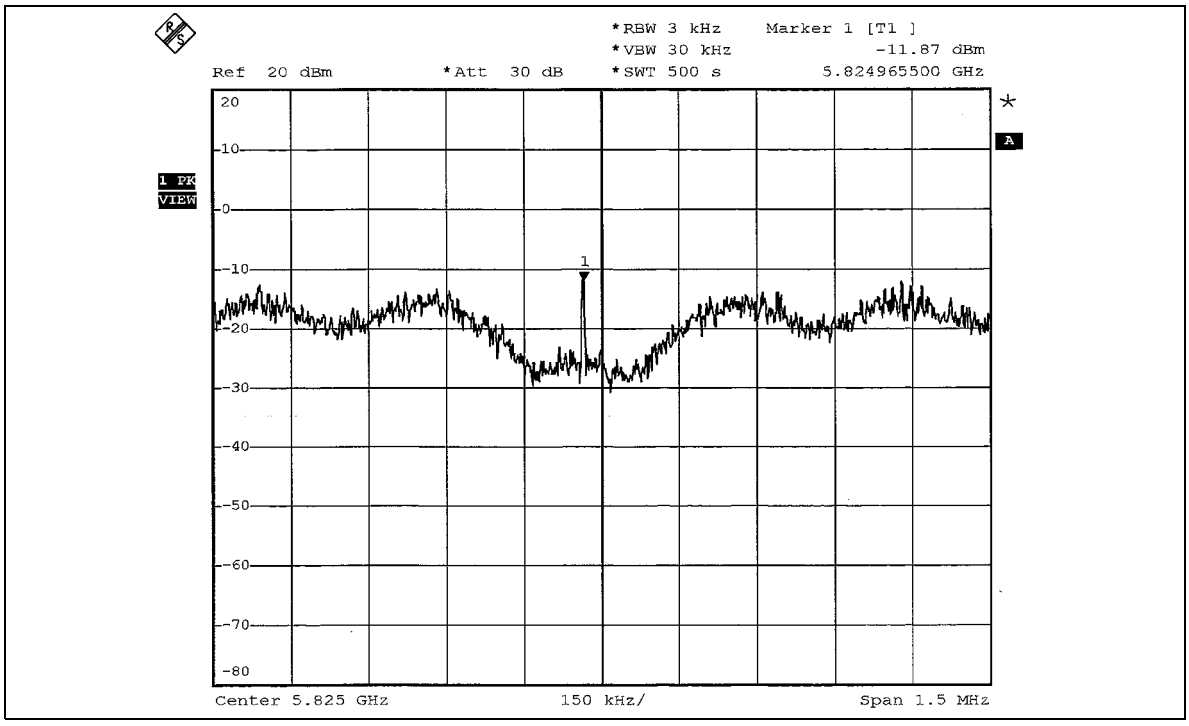
CH 1


*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-11.65 dBm
5.744967000 GHz
Ref 20 dBm
*Att 30 dB
1 PK VIEW
A
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
Center 5.745 GHz
150 kHz/
Span 1.5 MHz

CH 3


*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-11.73 dBm
5.784965500 GHz
Ref 20 dBm
*Att 30 dB
1 PK VIEW
A
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
Center 5.785 GHz
150 kHz/
Span 1.5 MHz

CH 5

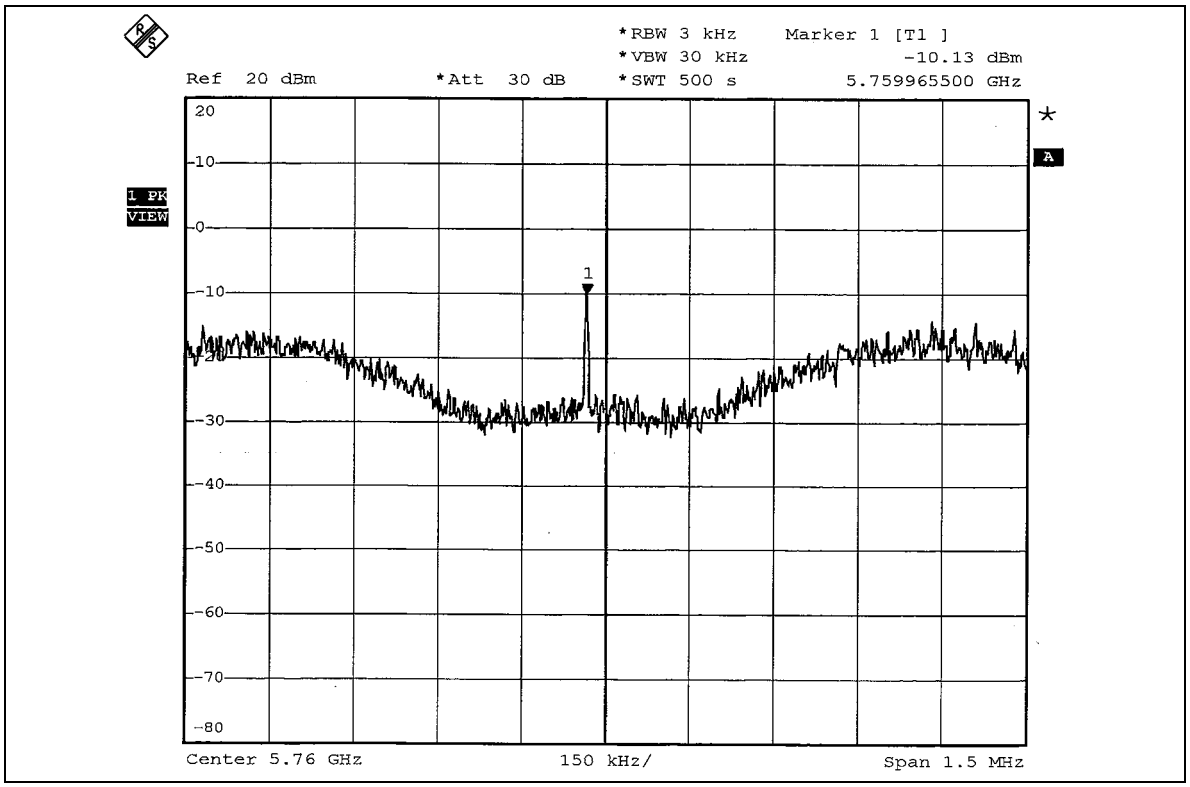

*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-11.87 dBm
5.824965500 GHz
Ref 20 dBm
*Att 30 dB
1 PK
VIEW
A
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
Center 5.825 GHz
150 kHz/
Span 1.5 MHz

802.11a Turbo OFDM modulation

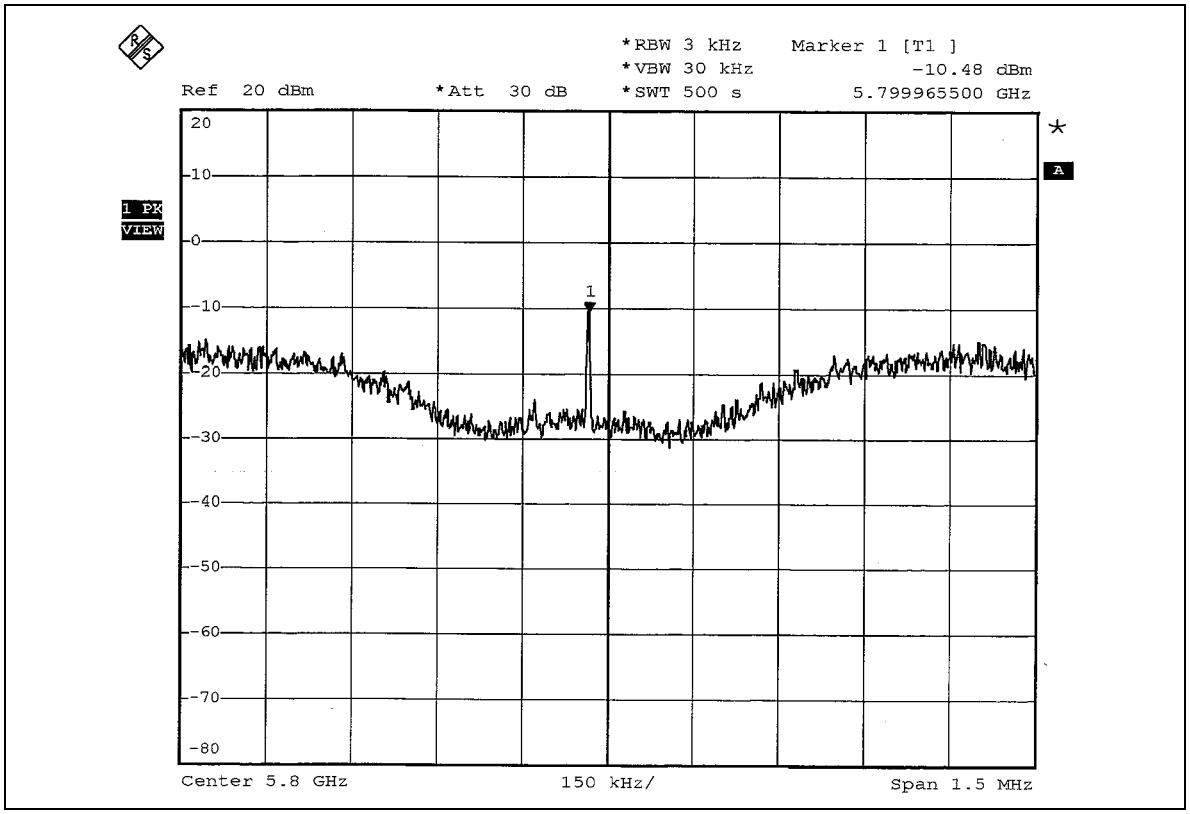
EUT	ENTERPRISE WLAN AP	**MODEL**	AT-WA7400
MODULATION TYPE	BPSK	**TRANSFER RATE**	12Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	22deg.C, 55%RH, 991hPa
TESTED BY	Gary Chang		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	5760	-10.13	8	PASS
2	5800	-10.48	8	PASS

CH 1


*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-10.13 dBm
5.759965500 GHz
Ref 20 dBm
*Att 30 dB
1 PK
VIEW
A
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
Center 5.76 GHz
150 kHz/
Span 1.5 MHz

CH 2


*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-10.48 dBm
5.799965500 GHz
Ref 20 dBm
*Att 30 dB
1 PK
VIEW
A
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
Center 5.8 GHz
150 kHz/
Span 1.5 MHz

5.6 BAND EDGES MEASUREMENT

5.6.1 LIMITS OF BAND EDGES MEASUREMENT

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

5.6.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSEK30	100049	Aug. 12, 2005

NOTES:
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

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 MHz bandwidth from band edge. The band edges was measured and recorded.

5.6.4 DEVIATION FROM TEST STANDARD

No deviation

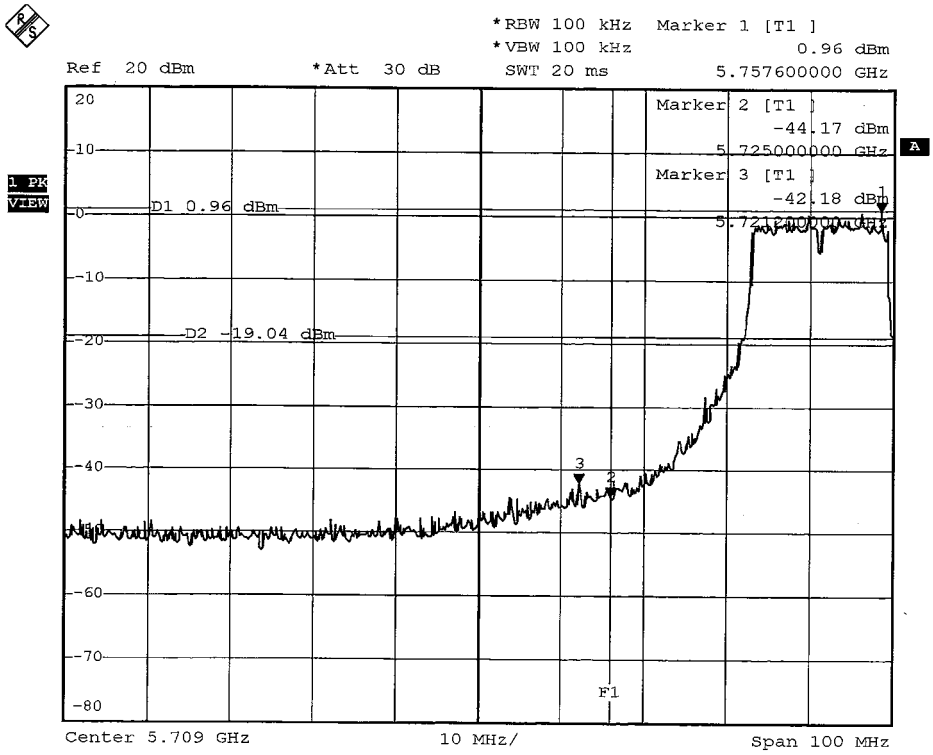
5.6.5 EUT OPERATING CONDITION

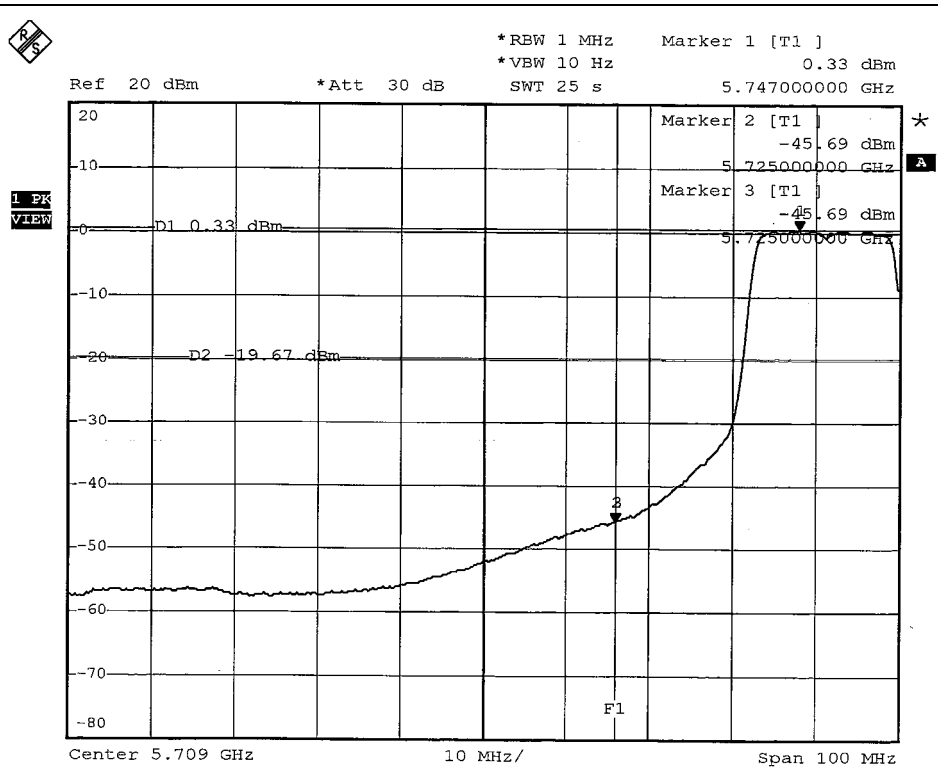
Same as Item 5.9.6

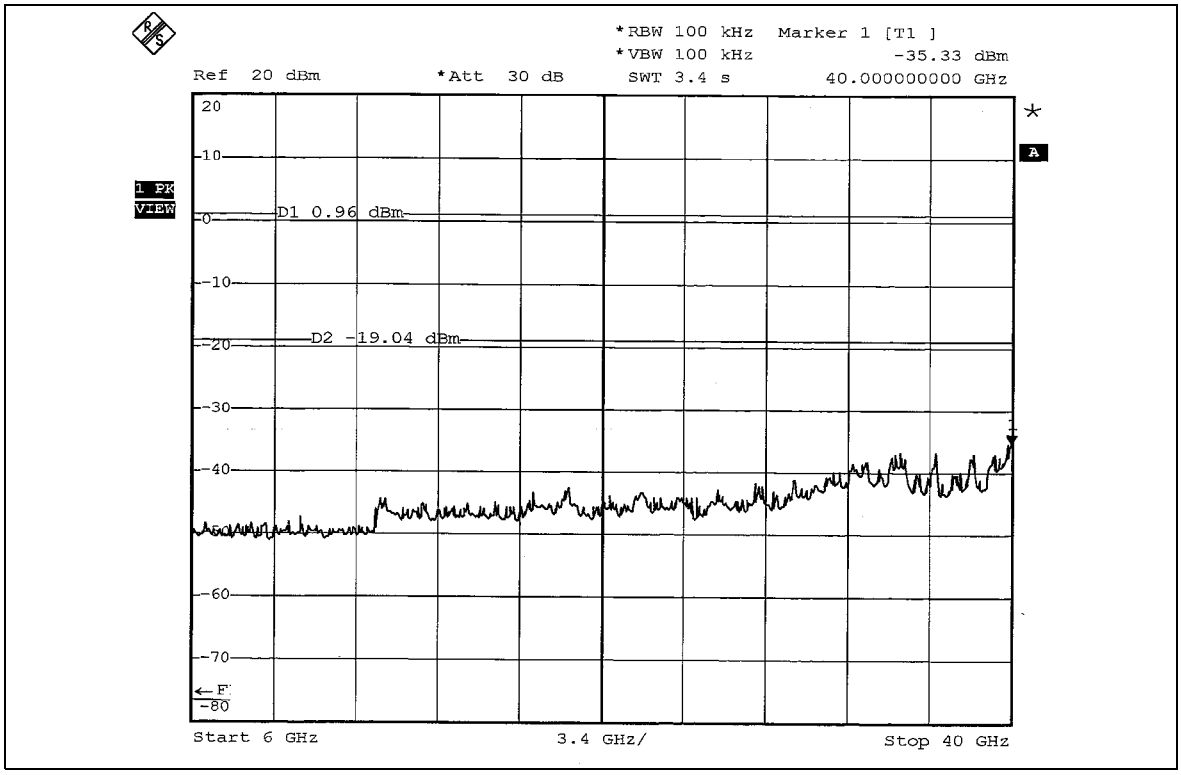
5.6.6 TEST RESULTS

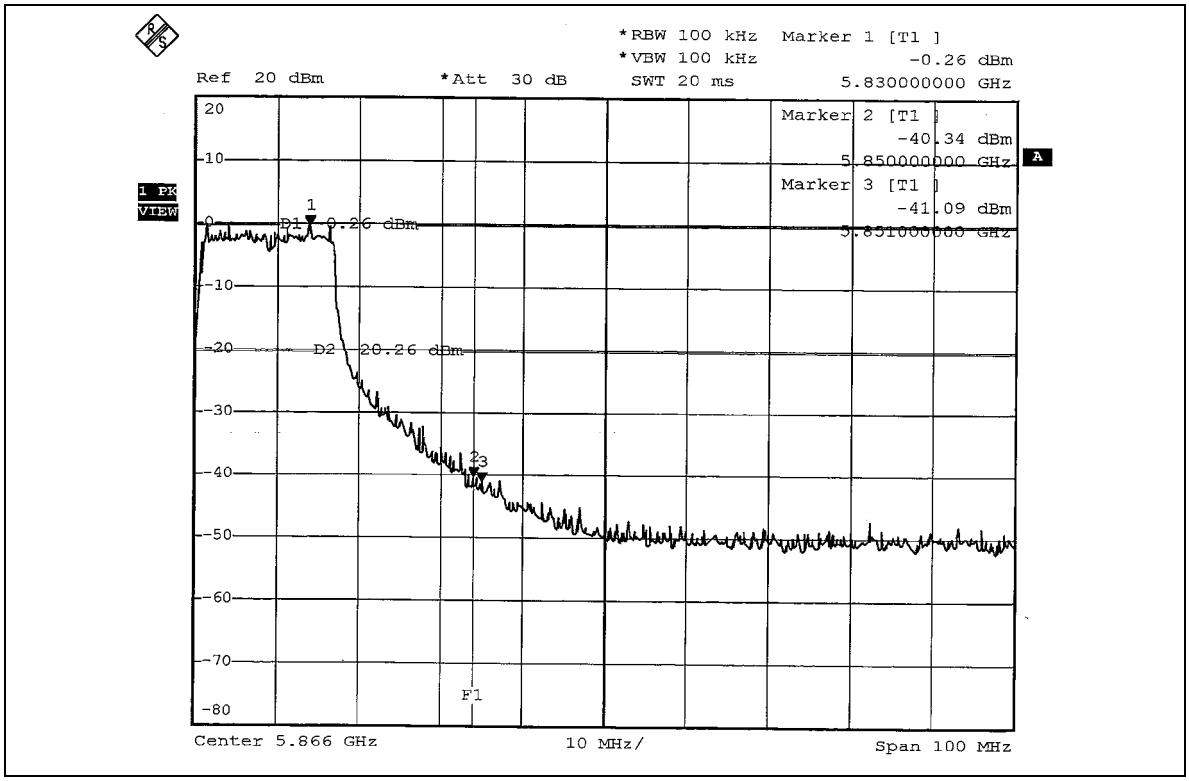
The spectrum plots are attached on the following pages. D2 line indicates the highest level, D1 line indicates the 20dB offset below D2. It shows compliance with the requirement in part 15.247(d).

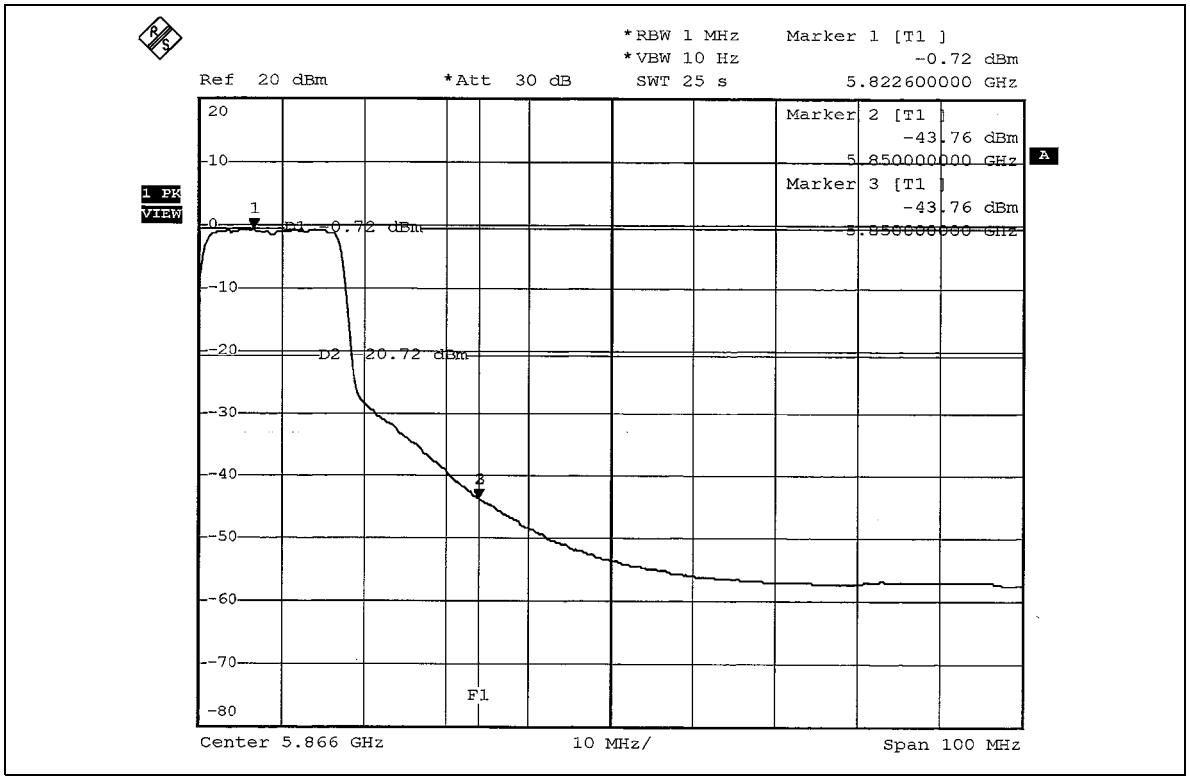
802.11a OFDM modulation

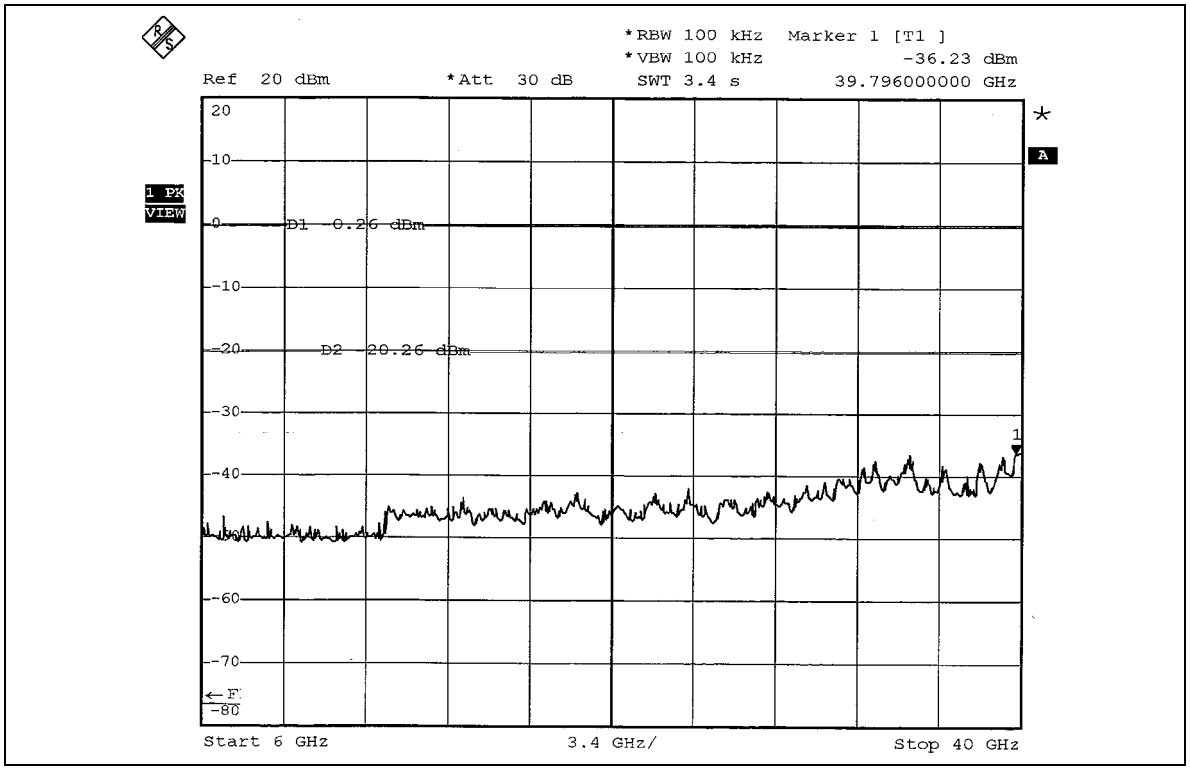




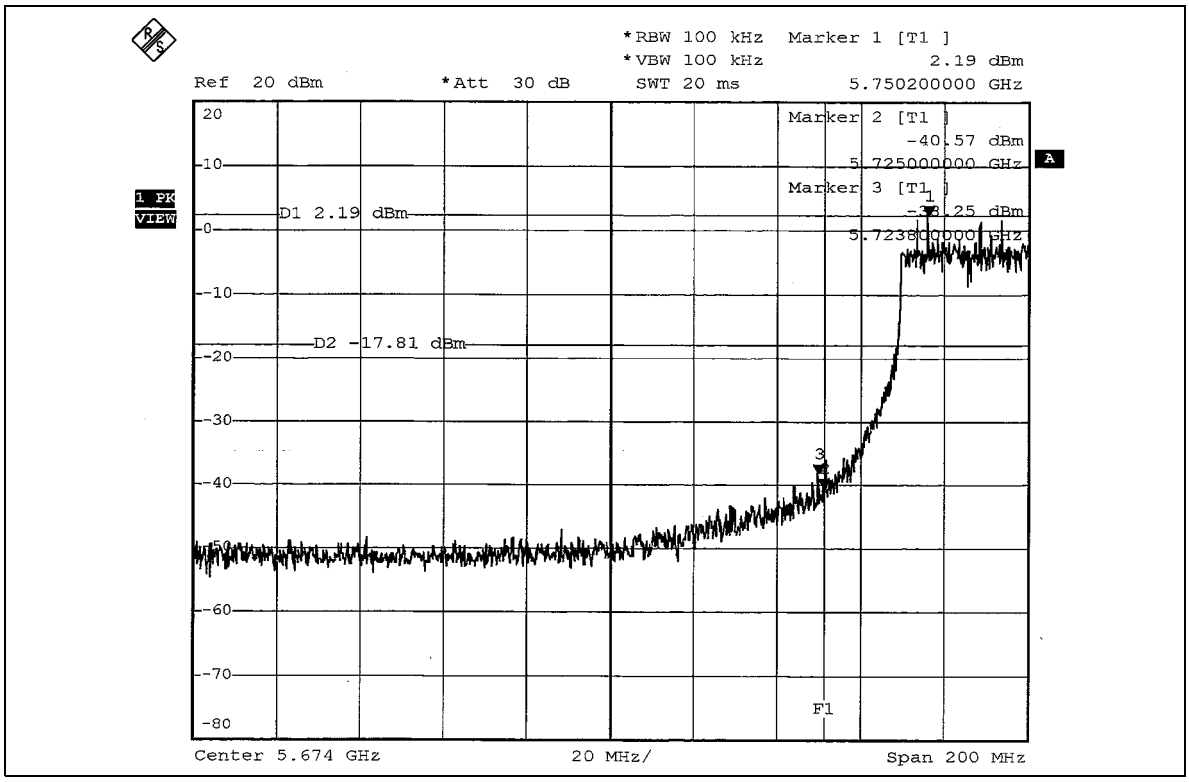

*RBW 100 kHz
*VBW 100 kHz
SWT 3.4 s
Marker 1 [T1]
-35.33 dBm
40.000000000 GHz
Ref 20 dBm
*Att 30 dB
1 PK
VIEW
D1 0.96 dBm
D2 -19.04 dBm
Start 6 GHz
3.4 GHz/
Stop 40 GHz

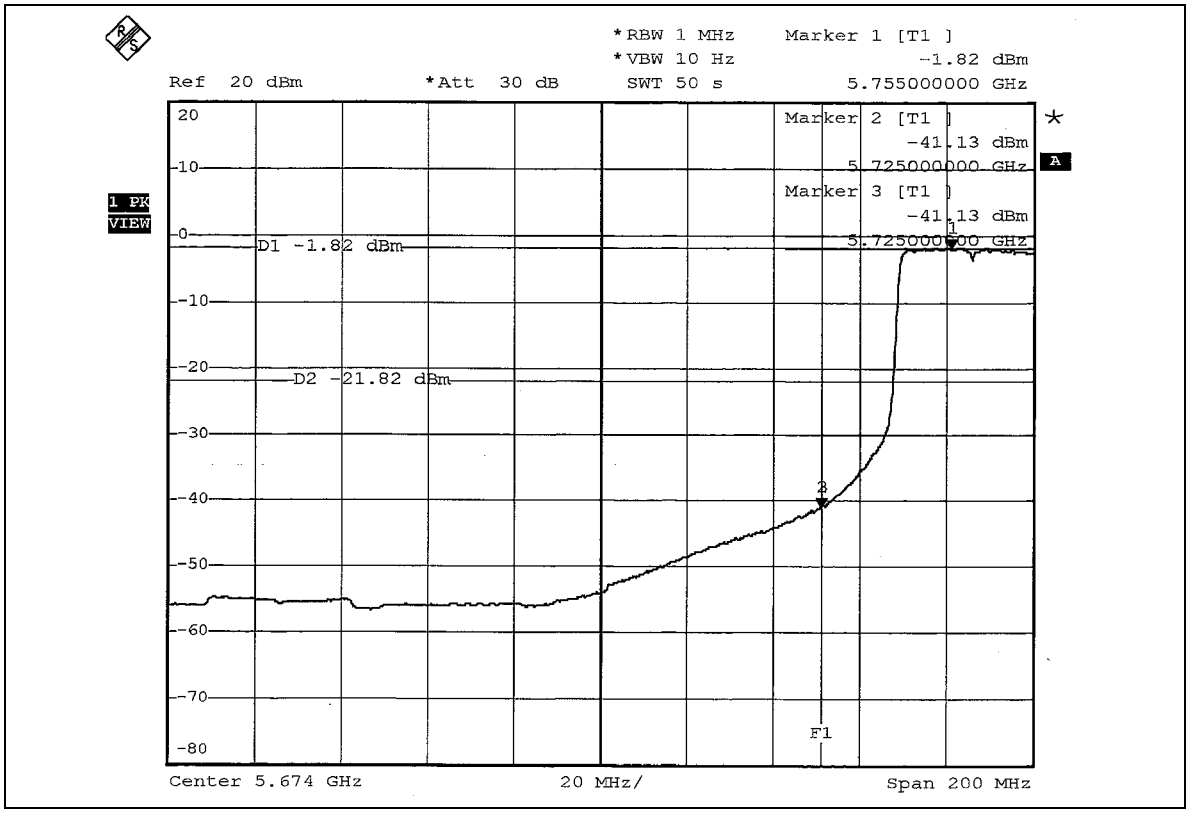

*RBW 100 kHz
*VBW 100 kHz
SWT 20 ms
Marker 1 [T1]
-0.26 dBm
5.830000000 GHz
Marker 2 [T1]
-40.34 dBm
5.850000000 GHz
Marker 3 [T1]
-41.09 dBm
5.851000000 GHz
Ref 20 dBm
*Att 30 dB
1 PK
VIEW
D1 -0.26 dBm
D2 -20.26 dBm
F1
Center 5.866 GHz
10 MHz/
Span 100 MHz

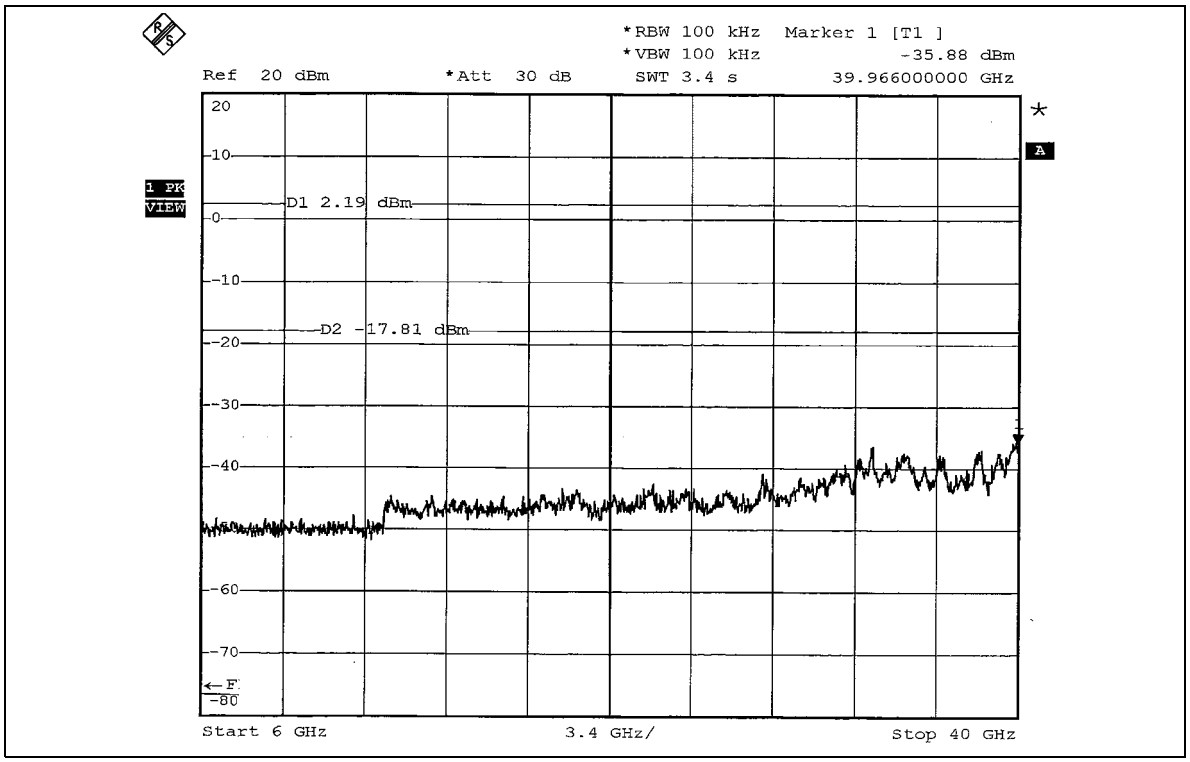

*RBW 1 MHz
*VBW 10 Hz
Ref 20 dBm
*Att 30 dB
SWT 25 s
Marker 1 [T1]
-0.72 dBm
5.822600000 GHz
Marker 2 [T1]
-43.76 dBm
5.850000000 GHz
Marker 3 [T1]
-43.76 dBm
5.850000000 GHz
1 PK
VIEW
D1 -0.72 dBm
D2 -20.72 dBm
F1
Center 5.866 GHz
10 MHz/
Span 100 MHz

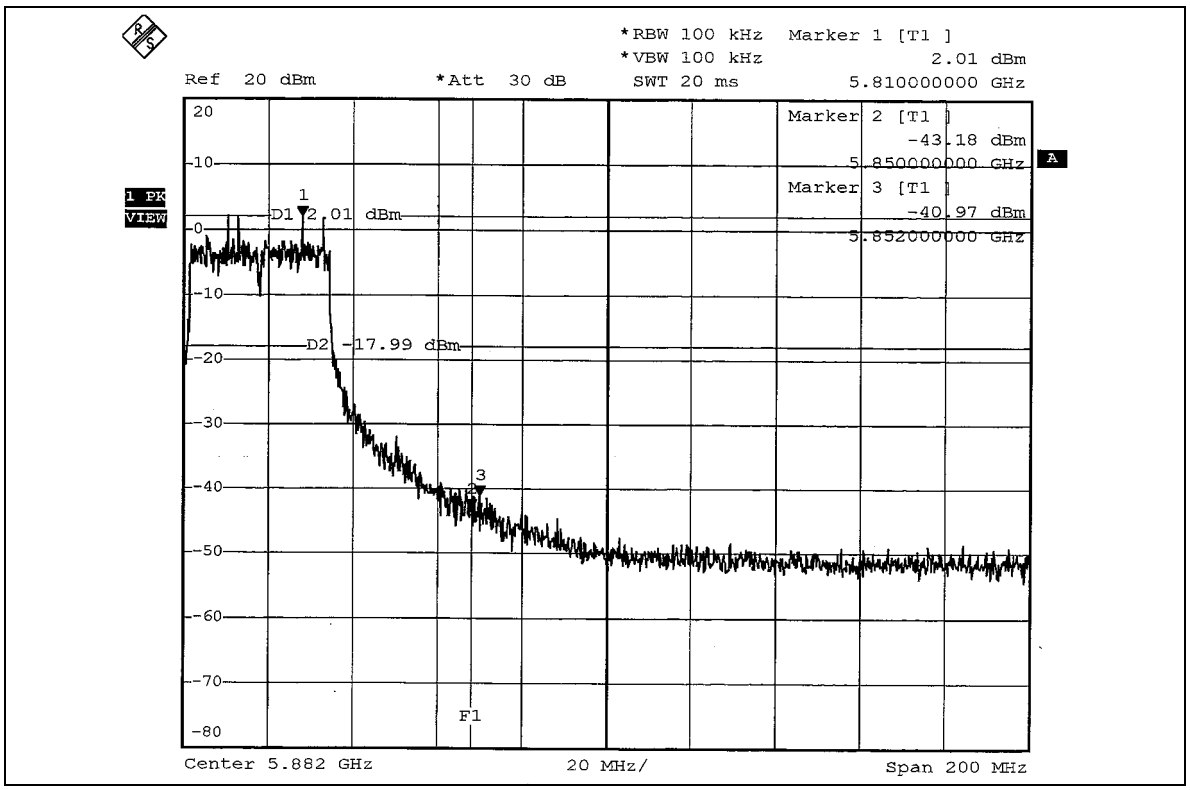

*RBW 100 kHz
*VBW 100 kHz
Ref 20 dBm
*Att 30 dB
SWT 3.4 s
Marker 1 [T1]
-36.23 dBm
39.796000000 GHz
1 PK
VIEW
D1 -0.26 dBm
D2 -20.26 dBm
Start 6 GHz
3.4 GHz/
Stop 40 GHz

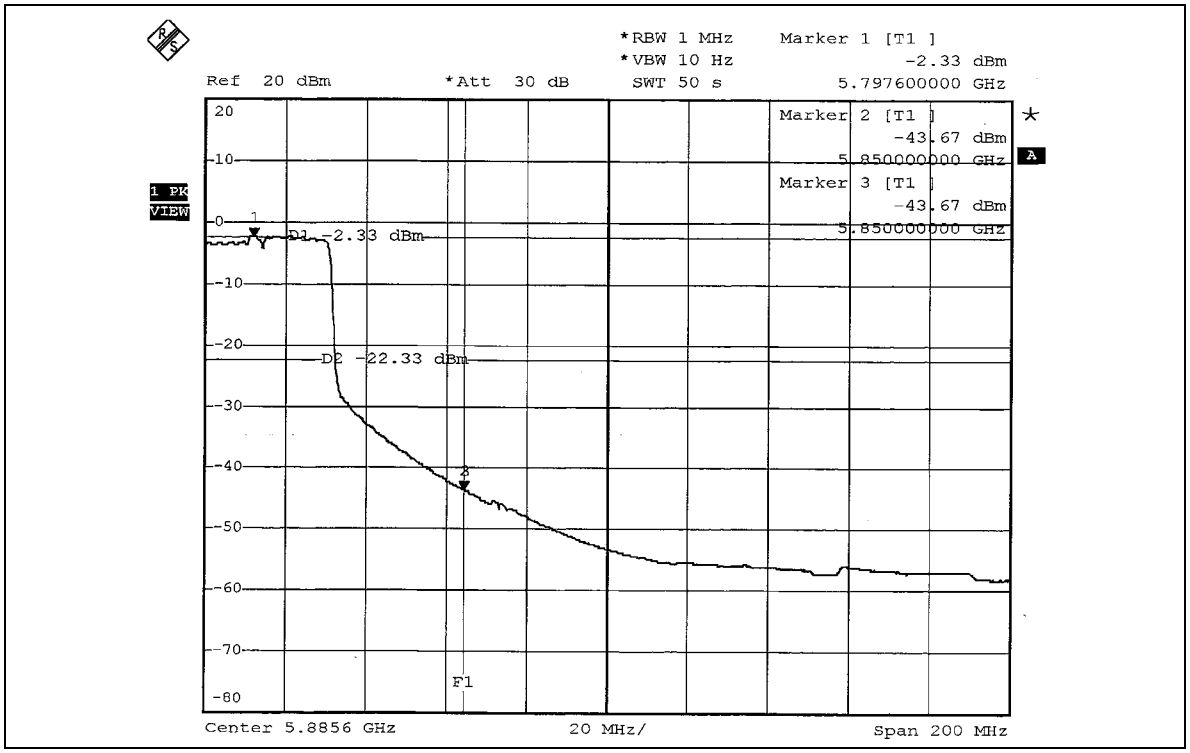
802.11a Turbo OFDM modulation

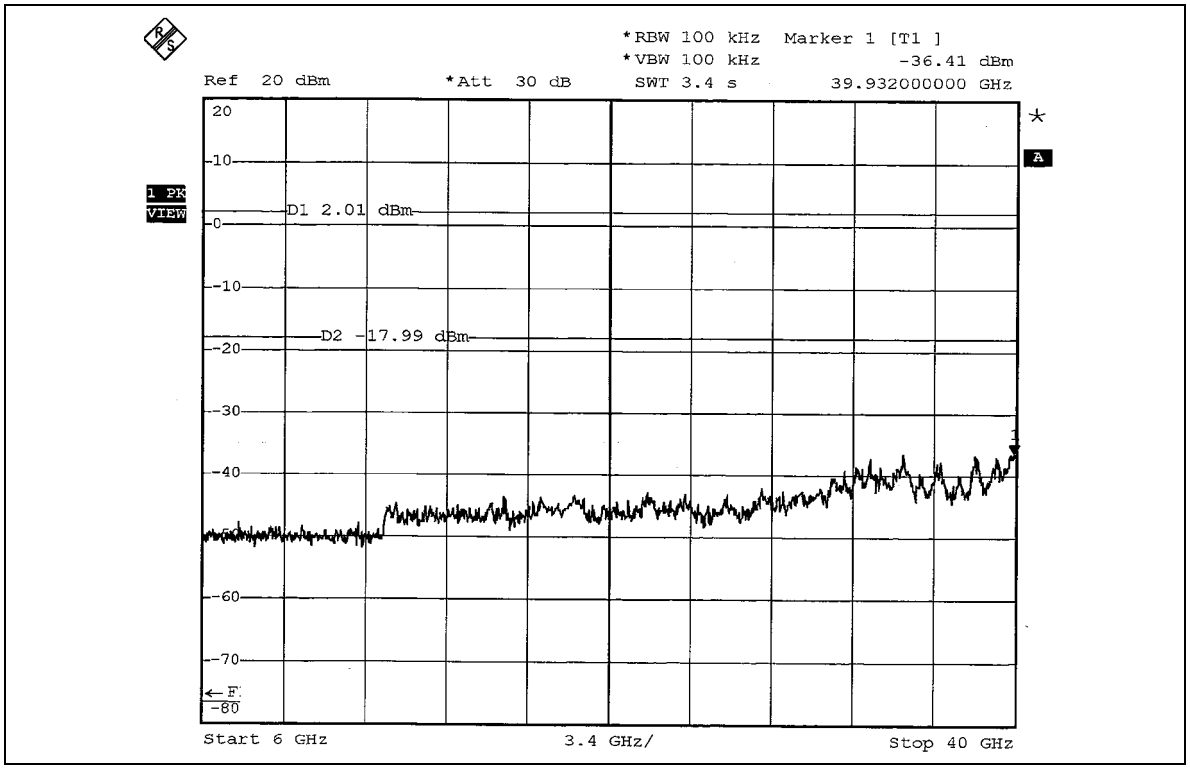





*RBW 100 kHz
*VBW 100 kHz
SWT 3.4 s
Marker 1 [T1]
-35.88 dBm
39.966000000 GHz
Ref 20 dBm
*Att 30 dB
D1 2.19 dBm
D2 -17.81 dBm
1 PK
VIEW
A
Start 6 GHz
3.4 GHz/
Stop 40 GHz


*RBW 100 kHz
*VBW 100 kHz
SWT 20 ms
Marker 1 [T1]
2.01 dBm
5.810000000 GHz
Ref 20 dBm
*Att 30 dB
Marker 2 [T1]
-43.18 dBm
5.850000000 GHz
Marker 3 [T1]
-40.97 dBm
5.852000000 GHz
D1 2.01 dBm
D2 -17.99 dBm
1 PK
VIEW
A
F1
Center 5.882 GHz
20 MHz/
Span 200 MHz


*RBW 1 MHz
*VBW 10 Hz
SWT 50 s
Marker 1 [T1]
-2.33 dBm
5.797600000 GHz
Ref 20 dBm
*Att 30 dB
Marker 2 [T1]
-43.67 dBm
5.850000000 GHz
Marker 3 [T1]
-43.67 dBm
5.850000000 GHz
1 PK
VIEW
D1 -2.33 dBm
D2 -22.33 dBm
F1
Center 5.8856 GHz
20 MHz/
Span 200 MHz


*RBW 100 kHz
*VBW 100 kHz
SWT 3.4 s
Marker 1 [T1]
-36.41 dBm
39.932000000 GHz
Ref 20 dBm
*Att 30 dB
1 PK
VIEW
D1 2.01 dBm
D2 -17.99 dBm
Start 6 GHz
3.4 GHz/
Stop 40 GHz

5.7 ANTENNA REQUIREMENT

5.7.1 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 15.247(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.

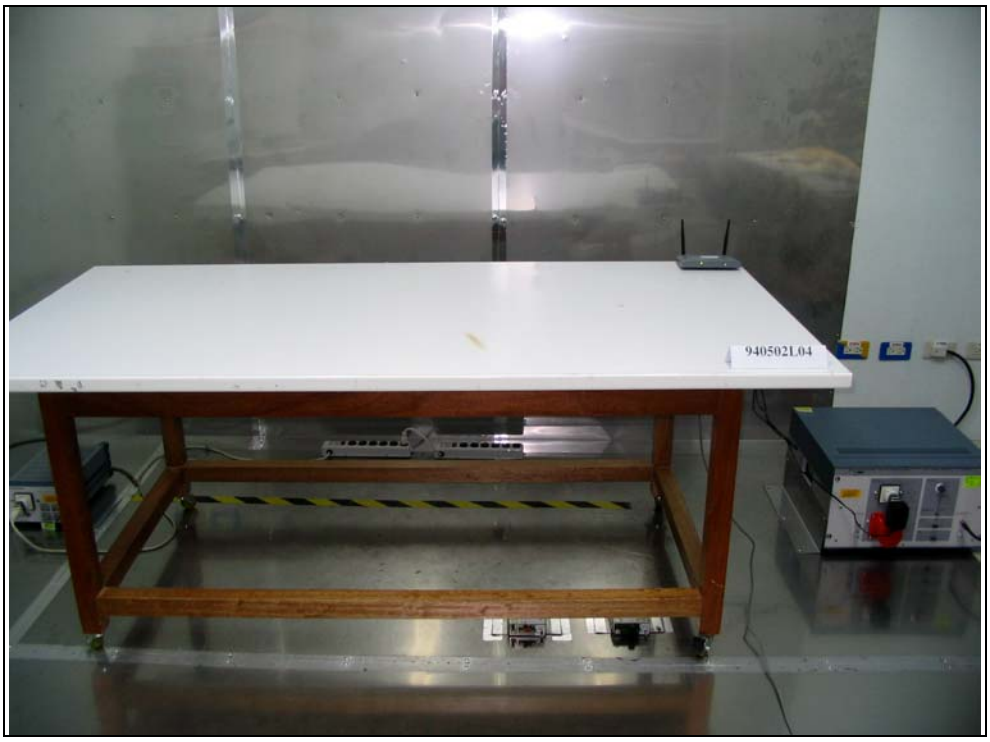
5.7.2 ANTENNA CONNECTED CONSTRUCTION

The antenna used in this product is Dipole antenna with Reverse SMA connector.
The maximum Gain of the antenna is 2.8dBi.

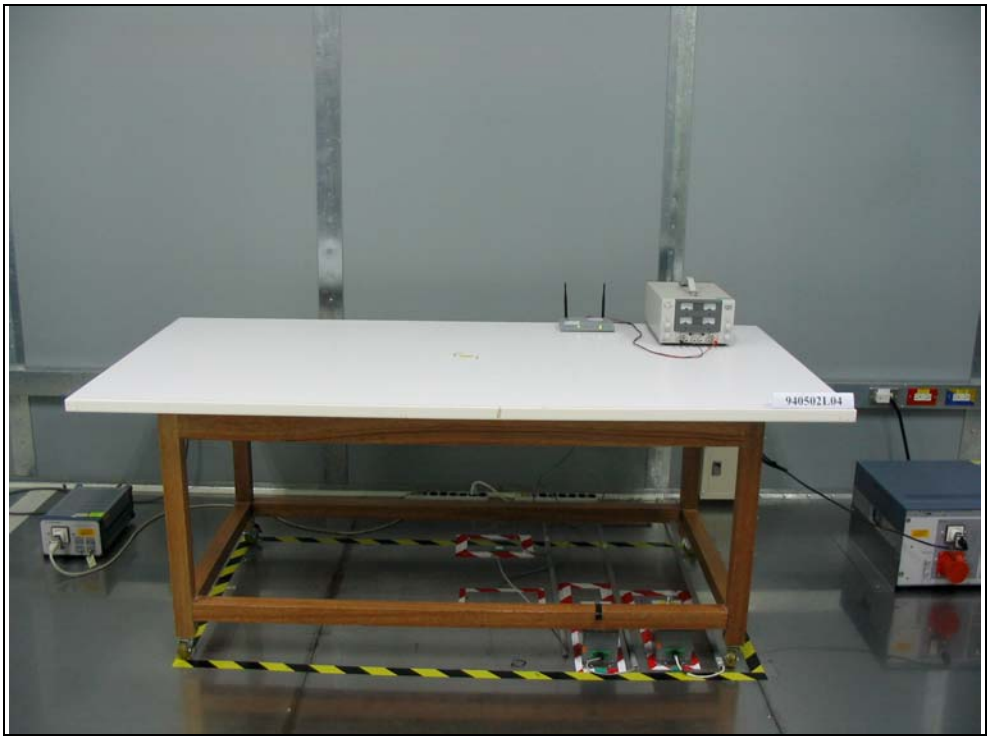
6. PHOTOGRAPHS OF THE TEST CONFIGURATION

CONDUCTED EMISSION TEST

Test Mode 1

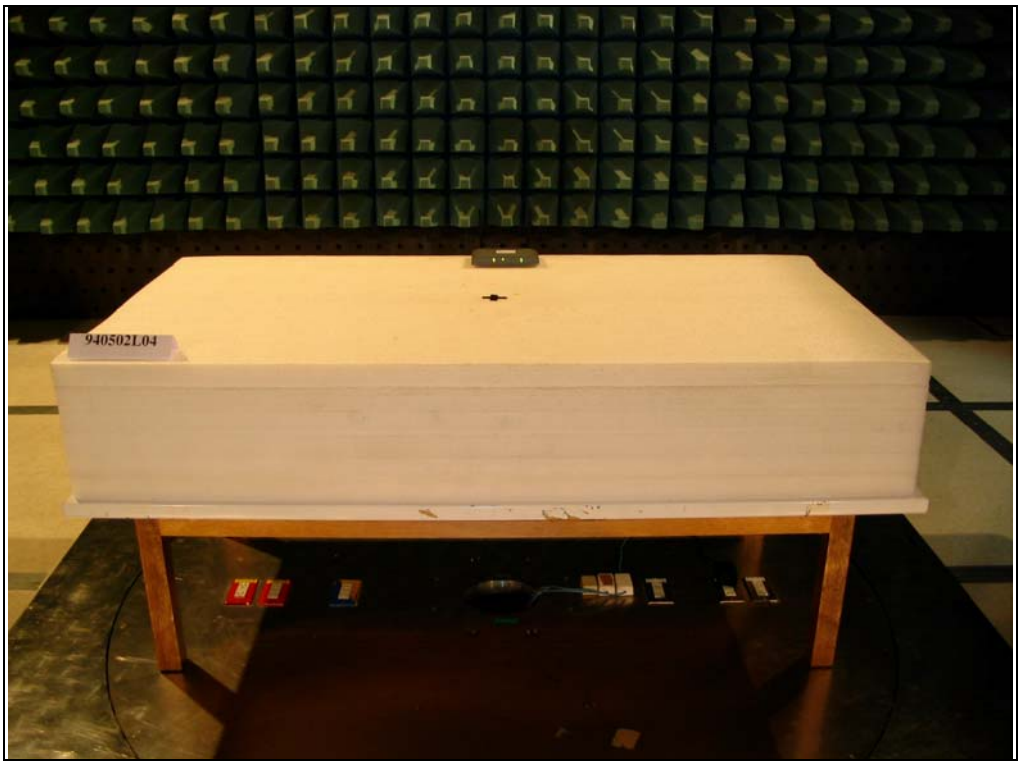


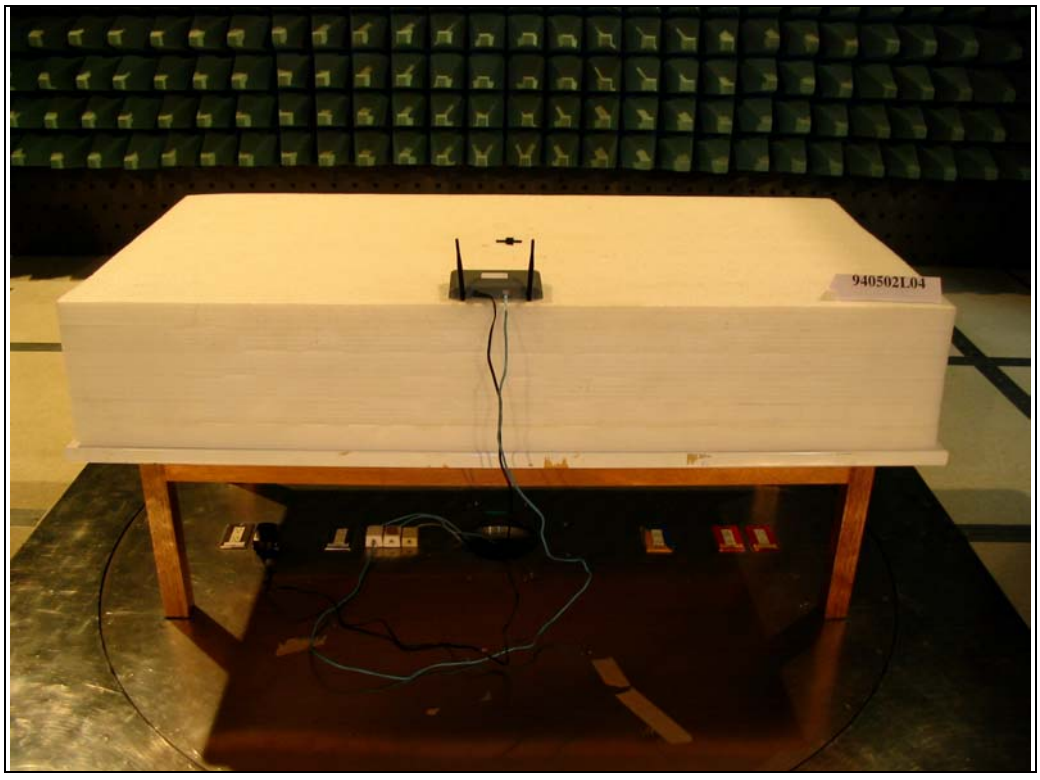
Test Mode 2



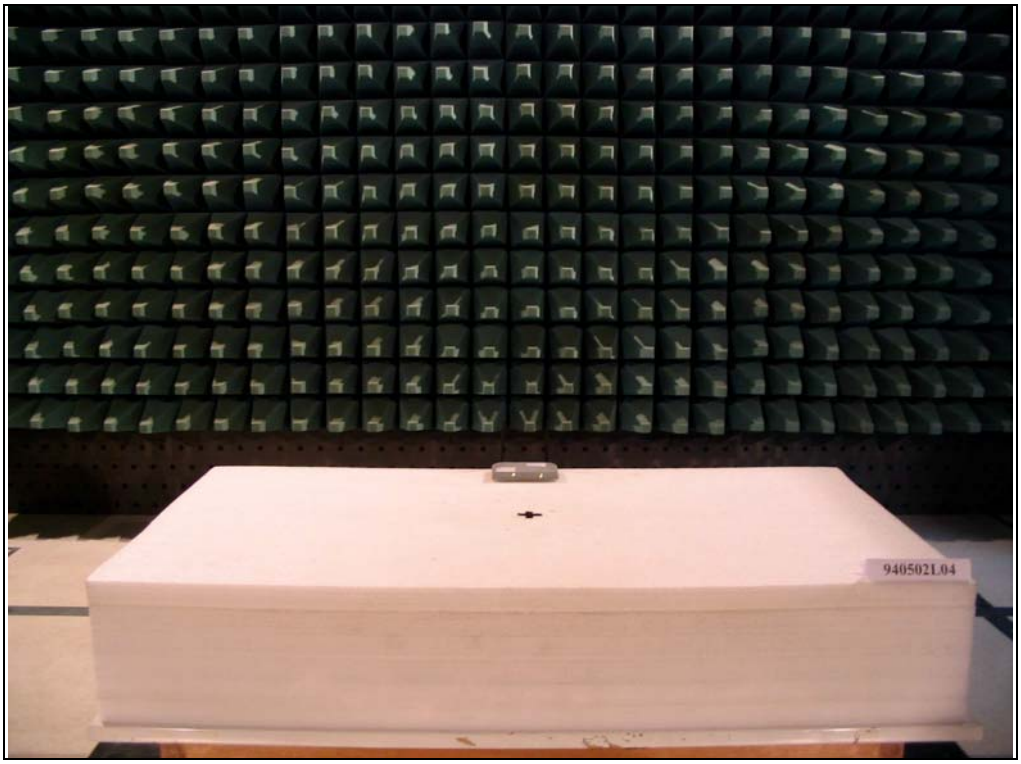
RADIATED EMISSION TEST

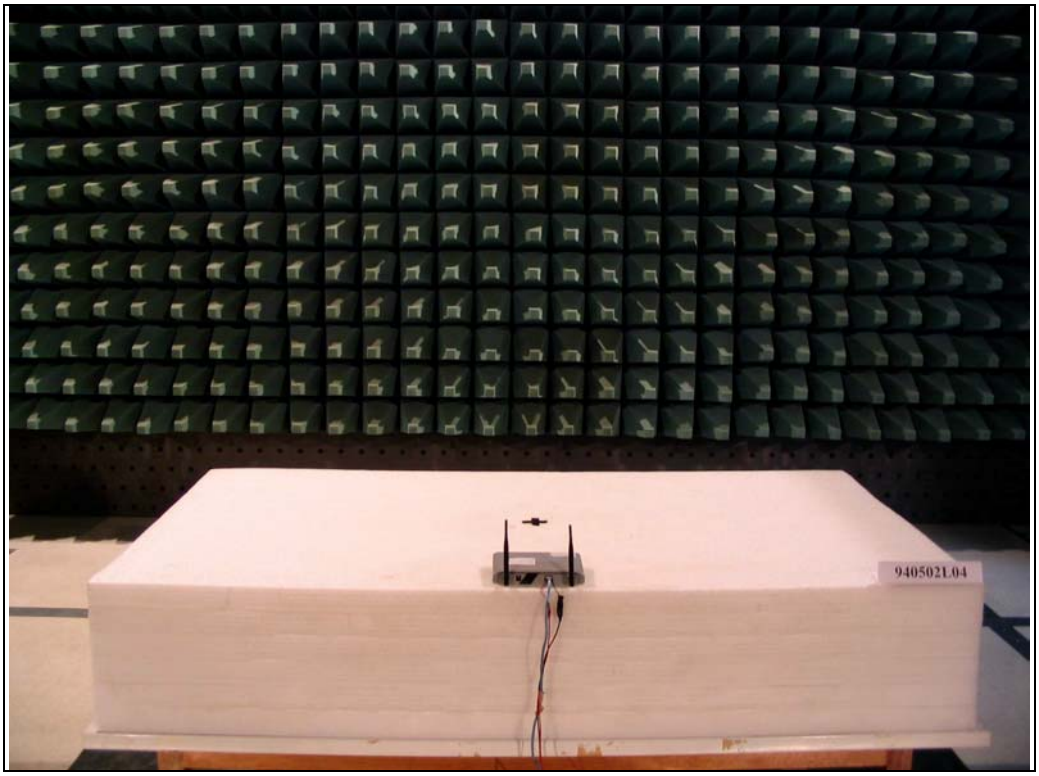
Test Mode 1





Test Mode 2





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.

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:
Tel: 886-3-3183232
Fax: 886-3-3185050

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

Web Site: www.adt.com.tw

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