FCC TEST REPORT

REPORT NO.: RF930906L10
MODEL NO.: AP-1001g-P
RECEIVED: Sep. 06, 2004
TESTED: Sep. 06 ~ Nov. 03, 2004
ISSUED: Dec. 22, 2004

APPLICANT: RFNet Technologies Pte Ltd.

ADDRESS: Unit 233, Innovation Center Blk 2, 18 Nanyang Drive Singapore

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.

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ILAC MRA

No. 2177-01

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1. CERTIFICATION

PRODUCT:	Wireless AP/Bridge
BRAND NAME:	RFNet
OEM BRAND NAME:	Digi
MODEL NO.:	AP-1001g-P
APPLICANT:	RFNet Technologies Pte Ltd.
TEST SAMPLE:	Engineering Sample
TESTED:	Sep. 06 ~ Nov. 03, 2004
STANDARDS:	FCC Part 15, Subpart C (Section 15.247), ANSI C63.4-2003

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

PREPARED BY : Andrea Hsia , **DATE:** Dec. 22, 2004
(Andrea Hsia)

TECHNICAL ACCEPTANCE : Gary Chang , **DATE:** Dec. 22, 2004
Responsible for RF
(Gary Chang)

APPROVED BY : Cody Chang , **DATE:** Dec. 22, 2004
(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 –10.19dB at 0.154MHz
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 –1.81dBat 57.21MHz
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	9kz~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	Wireless AP/Bridge
MODEL NO.	AP-1001g-P
POWER SUPPLY	12Vdc from POE
MODULATION TYPE	CCKQPSK, 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)
FREQUENCY RANGE	2412 ~ 2462MHz
NUMBER OF CHANNEL	11 (for Normal mode), 1 (for Turbo mode)
CHANNEL SPACING	5MHz
OUTPUT POWER	63.53mW
DATA CABLE	NA
ANTENNA TYPE	External: Patch antenna with 0.52dBi antenna gain Internal: PCB printed Antenna with –2dBi
I/O PORTS	RJ45
ASSOCIATED DEVICES	NA

NOTE:

1. The POE is part of the Support Units not EUT.
2. The EUT operates in the 2.4GHz frequency spectrum with throughput of up to 54Mbps.
3. This EUT is capable of providing data rates of up to 108Mbps in Turbo Mode depending upon reception quality.
4. The brands as below are identical to each other expect for their brands due to marketing requirement.

Brand	Model	Remark
RFNet	AP-1001g-P	Only brand different
Digi	AP-1001g-P	Only brand different

5. The above EUT information was declared by the manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.

3.2 DESCRIPTION OF TEST MODES

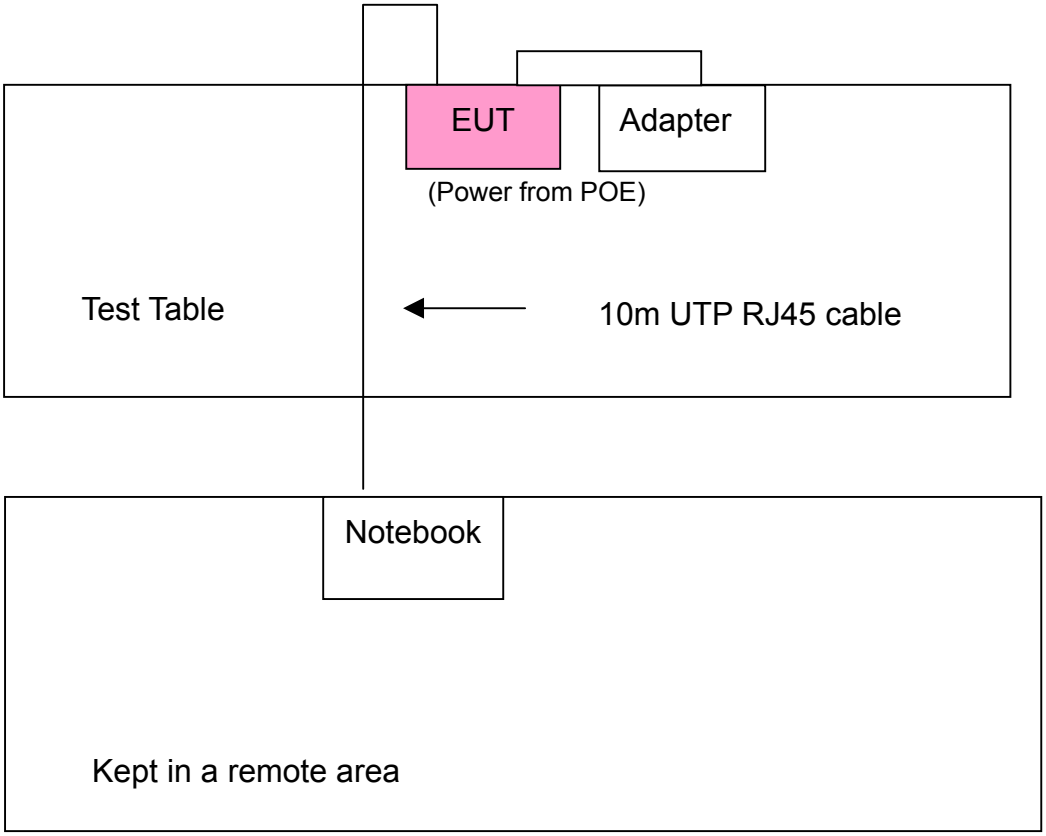
Eleven channels are provided to this EUT.

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

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

Channel	Frequency
6	2437 MHz

3.2.1 CONFIGURATION OF SYSTEM UNDER TEST



3.2.2 TEST MODE APPLICABILITY:

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

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

Power Line Conducted Emission Test:

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

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

Radiated Emission Test (Below 1 GHz):

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

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

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

Radiated Emission Test (Above 1 GHz):

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

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

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

Bandedge Measurement:

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

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

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

Antenna Port Conducted Measurement:

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

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

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

3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a Wireless AP/Bridge. 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	12130898320	E2K24CLNS
2	POWER ADAPTER	Sunfone	ACTM-09	NA	NA

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

4. TEST TYPES AND RESULTS

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	100291	Nov. 16, 2005
RF signal cable Woken	5D-FB	Cable-HYC01-01	Mar. 02, 2005
LISN ROHDE & SCHWARZ	ESH3-Z5	100312	Mar. 03, 2005
LISN ROHDE & SCHWARZ	ESH2-Z5	100104	Mar. 02, 2005
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 1.
3. The VCCI Site Registration No. is C-2040.

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.

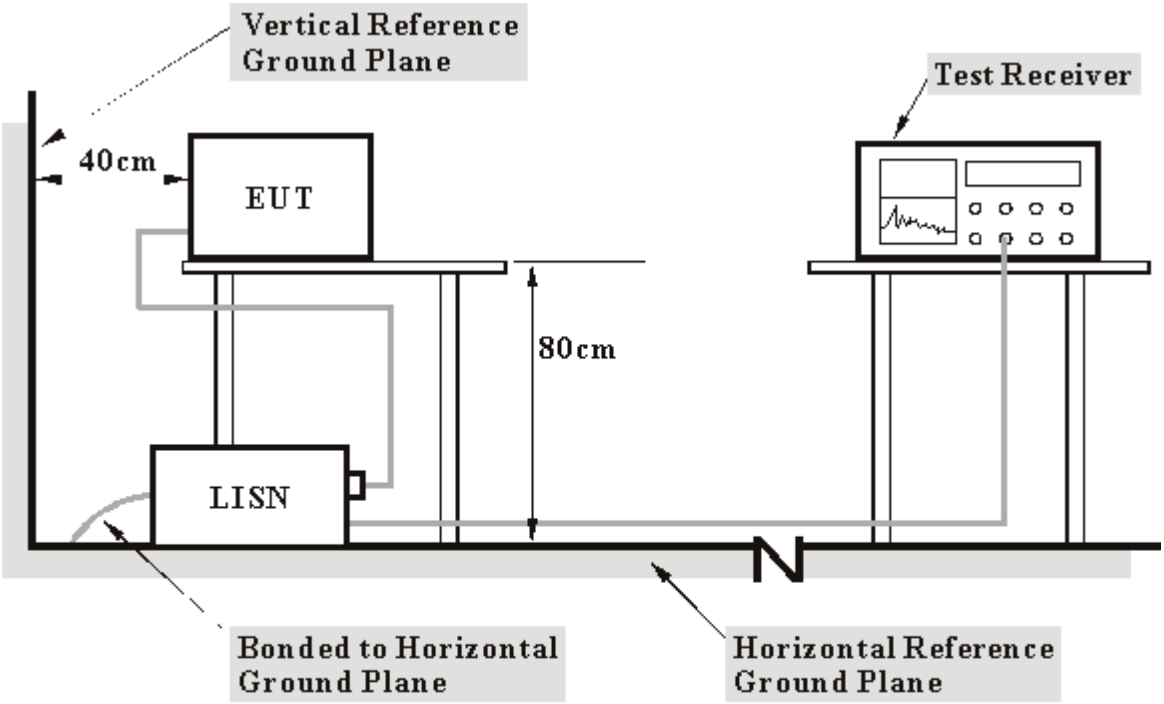
b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

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

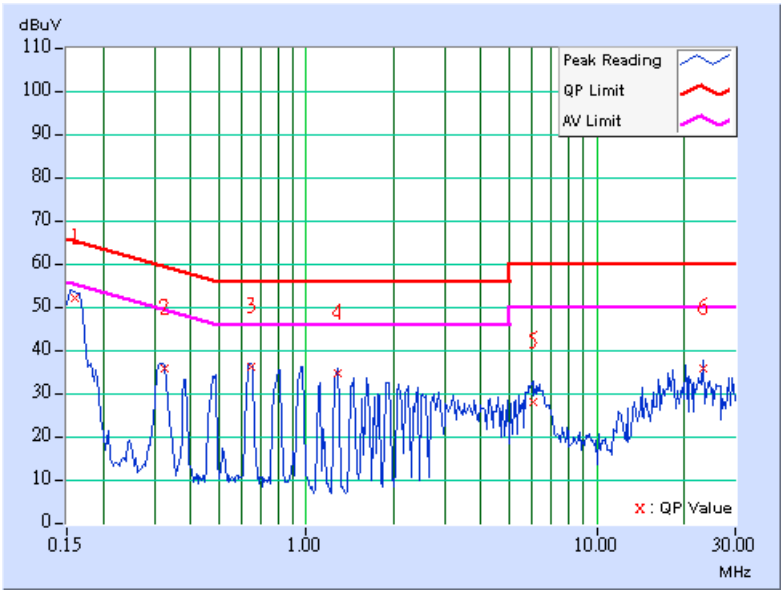
4.1.7 TEST RESULTS

Conducted Worst-Case Data

EUT	Wireless AP/Bridge	**MODEL**	AP-1001g-P
CHANNEL	Channel 1	**6dB BANDWIDTH**	9 kHz
MODULATION TYPE	BPSK	**TRANSFER RATE**	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 991hPa	**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	0.160	0.11	51.20	-	51.31	-	65.44	55.44	-14.13	-
2	0.324	0.12	34.64	-	34.76	-	59.59	49.59	-24.83	-
3	0.646	0.13	35.31	-	35.44	-	56.00	46.00	-20.56	-
4	1.285	0.15	33.68	-	33.83	-	56.00	46.00	-22.17	-
5	6.029	0.26	26.99	-	27.25	-	60.00	50.00	-32.75	-
6	23.131	1.11	34.82	-	35.93	-	60.00	50.00	-24.07	-

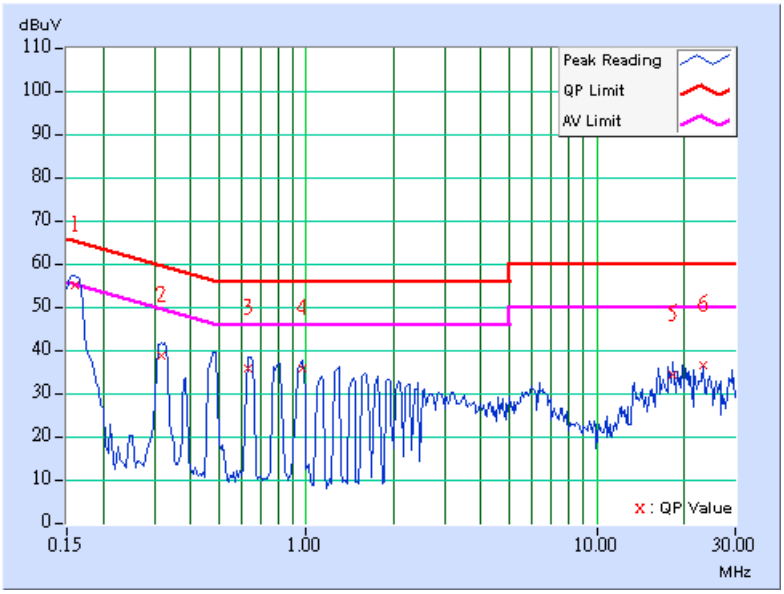
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	Wireless AP/Bridge	**MODEL**	AP-1001g-P
CHANNEL	Channel 1	**6dB BANDWIDTH**	9 kHz
MODULATION TYPE	BPSK	**TRANSFER RATE**	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 991hPa	**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	0.160	0.10	54.67	-	54.77	-	65.47	55.47	-10.70	-
2	0.319	0.11	38.30	-	38.41	-	59.73	49.73	-21.31	-
3	0.634	0.12	35.29	-	35.41	-	56.00	46.00	-20.59	-
4	0.966	0.15	35.20	-	35.35	-	56.00	46.00	-20.65	-
5	18.306	0.69	33.59	-	34.28	-	60.00	50.00	-25.72	-
6	23.130	0.68	35.97	-	36.65	-	60.00	50.00	-23.35	-

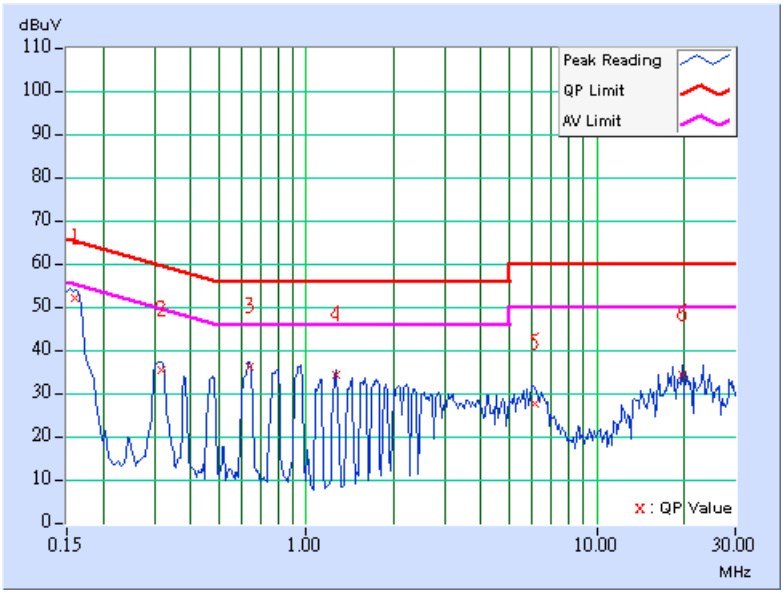
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	Wireless AP/Bridge	**MODEL**	AP-1001g-P
CHANNEL	Channel 6	**6dB BANDWIDTH**	9 kHz
MODULATION TYPE	BPSK	**TRANSFER RATE**	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 991hPa	**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	0.160	0.11	51.31	-	51.42	-	65.45	55.45	-14.03	-
2	0.318	0.12	34.41	-	34.53	-	59.76	49.76	-25.23	-
3	0.636	0.13	35.38	-	35.51	-	56.00	46.00	-20.49	-
4	1.270	0.15	33.47	-	33.62	-	56.00	46.00	-22.38	-
5	6.094	0.27	26.89	-	27.16	-	60.00	50.00	-32.84	-
6	19.710	1.01	33.32	-	34.33	-	60.00	50.00	-25.67	-

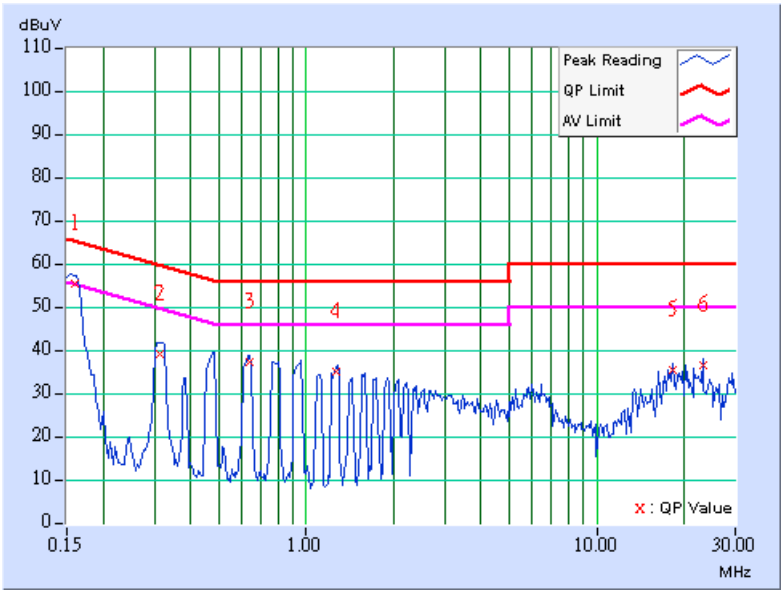
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT	Wireless AP/Bridge	**MODEL**	AP-1001g-P
CHANNEL	Channel 6	**6dB BANDWIDTH**	9 kHz
MODULATION TYPE	BPSK	**TRANSFER RATE**	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 991hPa	**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	0.160	0.10	54.99	-	55.09	-	65.44	55.44	-10.35	-
2	0.315	0.11	38.65	-	38.76	-	59.83	49.83	-21.06	-
3	0.636	0.12	36.87	-	36.99	-	56.00	46.00	-19.01	-
4	1.276	0.15	34.56	-	34.71	-	56.00	46.00	-21.29	-
5	18.243	0.69	34.95	-	35.64	-	60.00	50.00	-24.36	-
6	23.130	0.68	35.87	-	36.55	-	60.00	50.00	-23.45	-

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



EUT	Wireless AP/Bridge	**MODEL**	AP-1001g-P
CHANNEL	Channel 11	**6dB BANDWIDTH**	9 kHz
MODULATION TYPE	BPSK	**TRANSFER RATE**	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 991hPa	**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	0.156	0.11	52.03	-	52.14	-	65.69	55.69	-13.55	-
2	0.314	0.12	34.07	-	34.19	-	59.86	49.86	-25.67	-
3	0.631	0.13	34.80	-	34.93	-	56.00	46.00	-21.07	-
4	0.959	0.15	34.21	-	34.36	-	56.00	46.00	-21.64	-
5	6.115	0.27	28.17	-	28.44	-	60.00	50.00	-31.56	-
6	18.246	0.94	34.16	-	35.10	-	60.00	50.00	-24.90	-

REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
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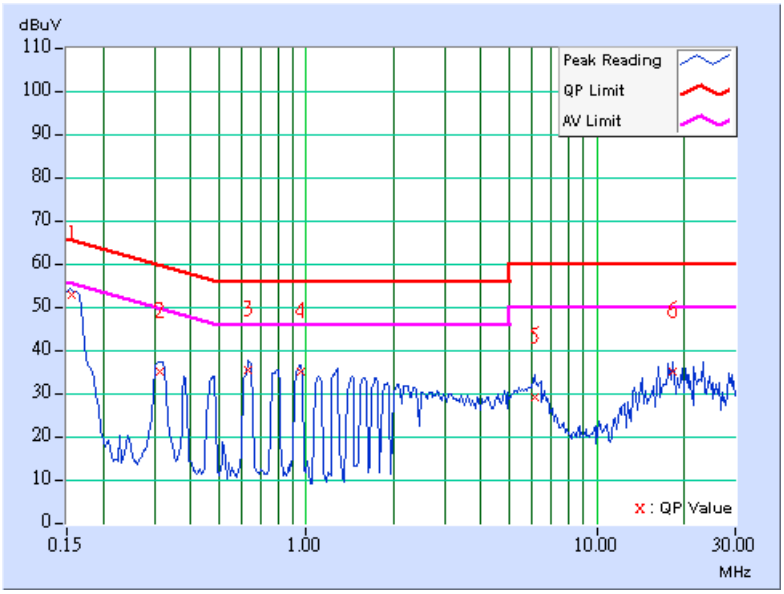
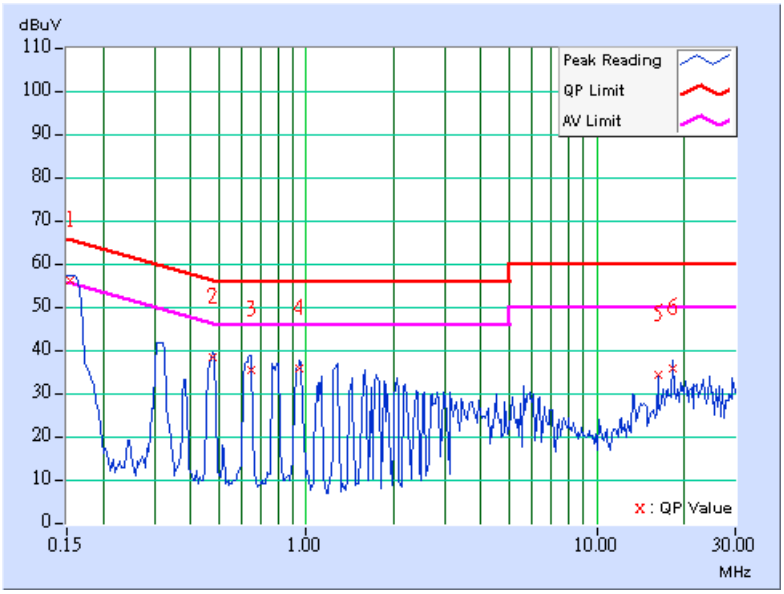
6. Emission Level = Correction Factor + Reading Value.



EUT	Wireless AP/Bridge	**MODEL**	AP-1001g-P
CHANNEL	Channel 11	**6dB BANDWIDTH**	9 kHz
MODULATION TYPE	BPSK	**TRANSFER RATE**	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 991hPa	**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	**0.154**	**0.10**	**55.50**	**-**	**55.60**	**-**	**65.79**	**55.79**	**-10.19**	**-**
2	0.476	0.12	37.97	-	38.09	-	56.41	46.41	-18.32	-
3	0.646	0.12	34.85	-	34.97	-	56.00	46.00	-21.03	-
4	0.951	0.15	35.32	-	35.47	-	56.00	46.00	-20.53	-
5	16.230	0.66	33.66	-	34.32	-	60.00	50.00	-25.68	-
6	18.244	0.69	35.09	-	35.78	-	60.00	50.00	-24.22	-

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	ESI7	100033	Jun, 08, 2005
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100040	Jun. 03, 2005
BILOG Antenna SCHWARZBECK	VULB9168	9168-153	Feb. 03, 2005
HORN Antenna SCHWARZBECK	9120D	9120D-408	Feb. 03, 2005
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA 9170243	Feb. 23, 2005
Preamplifier Agilent	8447D	2944A10634	Jan. 14, 2005
Preamplifier Agilent	8449B	3008A01911	Sep. 21, 2005
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	218183/4	Mar. 05, 2005
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	218195/4	Mar. 05, 2005
Software ADT.	ADT_Radiated_V5.14	NA	NA
Antenna Tower inn-co GmbH	MA 4000	013303	NA
Antenna Tower Controller inn-co GmbH	CO2000	017303	NA
Turn Table ADT.	TT100.	TT93021703	NA
Turn Table Controller ADT.	SC100.	SC93021703	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 2.

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 IC4924-3.

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

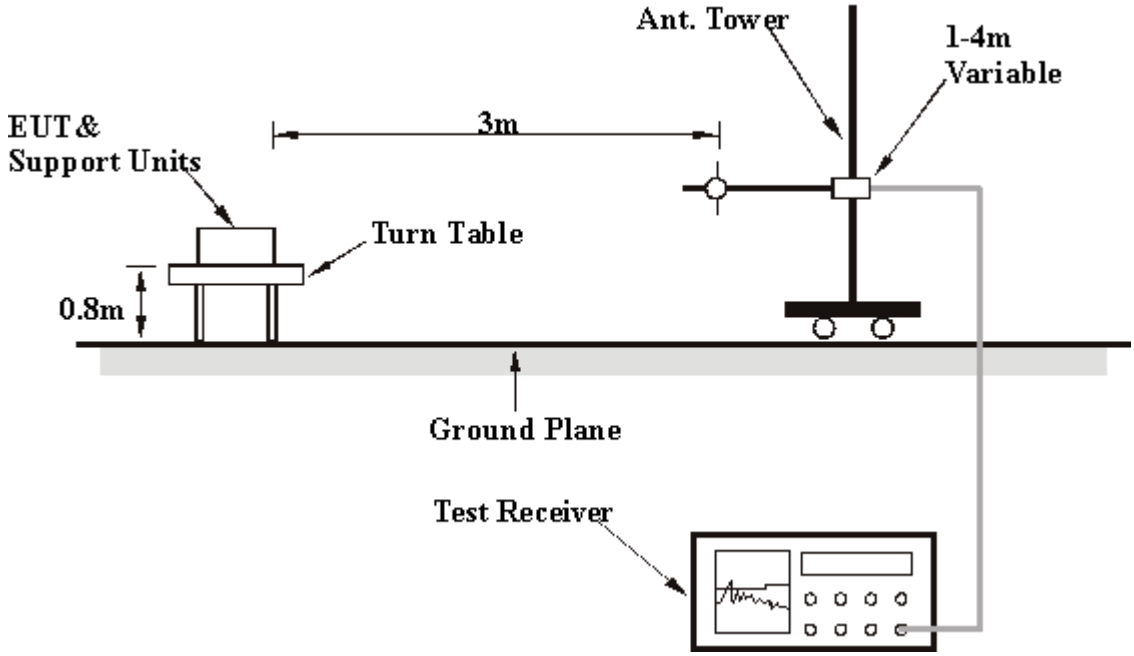
NOTE:

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

EUT	Wireless AP/Bridge	**MODEL**	AP-1001g-P
CHANNEL	Channel 1	**FREQUENCY RANGE**	Below 1000MHz
MODULATION TYPE	BPSK	**TRANSFER RATE**	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	24 deg. C, 66% RH, 991hPa	**TEST 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	57.21	28.21 QP	40.00	-11.79	1.00 H	4	13.87	14.34
2	144.69	28.78 QP	43.50	-14.72	1.00 H	10	14.52	14.26
3	218.56	34.35 QP	46.00	-11.65	1.00 H	4	22.43	11.92
4	393.51	40.45 QP	46.00	-5.55	1.00 H	253	23.63	16.82
5	440.16	36.51 QP	46.00	-9.49	1.50 H	58	18.62	17.88
6	550.96	34.86 QP	46.00	-11.14	1.50 H	142	15.02	19.84
7	770.62	36.17 QP	46.00	-9.83	1.50 H	256	12.46	23.72
8	881.42	39.93 QP	46.00	-6.07	1.00 H	307	15.06	24.87

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	43.61	38.15 QP	40.00	-1.85	1.00 V	154	22.21	15.94
2	**57.21**	**38.19 QP**	**40.00**	**-1.81**	**1.00 V**	**220**	**23.85**	**14.34**
3	393.51	39.40 QP	46.00	-6.60	1.00 V	322	22.58	16.82
4	440.16	36.66 QP	46.00	-9.34	1.50 V	55	18.78	17.88
5	550.96	34.35 QP	46.00	-11.65	1.00 V	31	14.51	19.84
6	659.82	31.20 QP	46.00	-14.80	1.00 V	202	9.15	22.05
7	770.62	36.54 QP	46.00	-9.46	1.50 V	331	12.83	23.72
8	881.42	41.58 QP	46.00	-4.42	1.00 V	61	16.71	24.87

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 (without Cradle)

EUT	Wireless AP/Bridge	**MODEL**	AP-1001g-P
CHANNEL	Channel 1	**FREQUENCY RANGE**	1 ~ 25GHz
MODULATION TYPE	CCK	**TRANSFER RATE**	11Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25 deg. C, 62% RH, 991hPa	**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	1100.00	50.87 PK	74.00	-23.13	1.18 H	164	22.95	27.92
1	1100.00	48.36 AV	45.00	-5.64	1.18 H	164	20.44	27.90
2	2372.00	59.60 PK	74.00	-14.40	1.43 H	307	28.04	31.56
2	2372.00	51.89 AV	54.00	-2.11	1.43 H	307	20.33	31.56
3	*2412.00	110.40 PK			1.43 H	307	78.70	31.70
3	*2412.00	102.69 AV			1.43 H	307	70.99	31.70
4	2688.00	48.29 PK	74.00	-25.71	1.00 H	0	15.59	32.70
5	4824.00	51.34 PK	74.00	-22.66	1.23 H	337	13.76	37.58
5	4824.00	42.03 AV	54.00	-11.97	1.23 H	337	4.45	37.58
6	7236.00	60.28 PK	74.00	-13.72	1.45 H	260	16.15	44.14
6	7236.00	49.78 AV	54.00	-4.22	1.45 H	260	5.65	44.14

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	1100.00	53.47 PK	74.00	-20.53	1.32 V	27	25.55	27.92
1	1100.00	50.58 AV	54.00	-3.42	1.32 V	27	22.66	27.92
2	2372.00	50.52 PK	74.00	-23.48	1.09 V	242	18.96	31.56
2	2372.00	43.21 AV	54.00	-10.79	1.09 V	242	11.65	31.56
3	*2412.00	100.81 PK			1.09 V	242	69.11	31.70
3	*2412.00	93.50 AV			1.09 V	242	61.80	31.70
4	2688.00	44.91 PK	74.00	-29.09	1.05 V	223	12.21	32.70
5	4824.00	53.71 PK	74.00	-20.29	1.42 V	314	16.13	37.58
5	4824.00	44.69 AV	54.00	-9.31	1.42 V	314	7.11	37.58
6	7236.00	62.19 PK	74.00	-11.81	1.38 V	47	18.06	44.14
6	7236.00	51.74 AV	54.00	-2.26	1.38 V	47	7.61	44.14

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

EUT	Wireless AP/Bridge	**MODEL**	AP-1001g-P
CHANNEL	Channel 6	**FREQUENCY RANGE**	1 ~ 25GHz
MODULATION TYPE	CCK	**TRANSFER RATE**	11Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25 deg. C, 62% RH, 991hPa	**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	1100.00	49.65 PK	74.00	-24.35	1.10 H	157	21.73	27.92
2	*2437.00	111.74 PK			1.37 H	311	79.89	31.85
2	*2437.00	103.75 AV			1.37 H	311	71.90	31.85
3	2688.00	48.54 PK	74.00	-25.46	1.00 H	357	15.84	32.70
4	4874.00	52.69 PK	74.00	-21.31	1.42 H	351	15.03	37.66
4	4874.00	43.87 AV	54.00	-10.13	1.42 H	351	6.21	37.66
5	7311.00	60.24 PK	74.00	-13.76	1.43 H	228	15.91	44.33
5	7311.00	50.11 AV	54.00	-3.89	1.43 H	228	5.78	44.33

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	1100.00	54.14 PK	74.00	-19.86	1.32 V	24	26.22	27.92
1	1100.00	51.01 AV	54.00	-2.99	1.32 V	24	23.09	27.92
2	*2437.00	101.10 PK			1.00 V	327	69.25	31.85
2	*2437.00	93.79 AV			1.00 V	327	61.94	31.85
3	2688.00	45.17 PK	74.00	-28.83	1.04 V	248	12.47	32.70
4	4874.00	54.17 PK	74.00	-19.83	1.06 V	347	16.51	37.66
4	4874.00	45.05 AV	54.00	-8.95	1.06 V	347	7.39	37.66
5	7311.00	61.78 PK	74.00	-12.22	1.70 V	50	17.45	44.33
5	7311.00	51.51 AV	54.00	-2.49	1.70 V	50	7.18	44.33

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

EUT	Wireless AP/Bridge	**MODEL**	AP-1001g-P
CHANNEL	Channel 11	**FREQUENCY RANGE**	1 ~ 25GHz
MODULATION TYPE	CCK	**TRANSFER RATE**	11Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25 deg. C, 62% RH, 991hPa	**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	1100.00	50.94 PK	74.00	-23.06	1.49 H	165	23.02	27.92
1	1100.00	49.36 AV	54.00	-4.64	1.49 H	165	21.44	27.92
2	*2462.00	112.71 PK			1.09 H	355	80.71	32.00
2	*2462.00	104.14 AV			1.09 H	355	72.14	32.00
3	2487.90	60.51 PK	74.00	-13.49	1.09 H	355	28.35	32.16
3	2487.90	51.94 AV	54.00	-2.06	1.09 H	355	19.78	32.16
4	2688.00	49.31 PK	74.00	-24.69	1.00 H	314	16.61	32.70
5	4924.00	51.84 PK	74.00	-22.16	1.43 H	348	14.10	37.74
5	4924.00	40.88 AV	54.00	-13.12	1.43 H	348	3.14	37.74
6	7386.00	57.93 PK	74.00	-16.07	1.12 H	204	13.36	44.57
6	7386.00	47.61 AV	54.00	-6.39	1.12 H	204	3.04	44.57

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	1100.00	54.84 PK	74.00	-19.16	1.34 V	20	26.92	27.92
1	1100.00	51.77 AV	54.00	-2.23	1.34 V	20	23.85	27.92
2	*2462.00	100.23 PK			1.02 V	300	68.23	32.00
2	*2462.00	92.92 AV			1.02 V	300	60.92	32.00
3	2487.90	48.92 PK	74.00	-25.08	1.02 V	300	16.76	32.16
4	2688.00	45.16 PK	74.00	-28.84	1.00 V	243	12.46	32.70
5	4924.00	55.61 PK	74.00	-18.39	1.33 V	320	17.87	37.74
5	4924.00	44.94 AV	54.00	-9.06	1.33 V	320	7.20	37.74
6	7386.00	60.24 PK	74.00	-13.76	1.00 V	318	15.67	44.57
6	7386.00	50.12 AV	54.00	-3.88	1.00 V	318	5.55	44.57

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

802.11g OFDM modulation

EUT	Wireless AP/Bridge	**MODEL**	AP-1001g-P
CHANNEL	Channel 1	**FREQUENCY RANGE**	1 ~ 25GHz
MODULATION TYPE	BPSK	**TRANSFER RATE**	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24 deg. C, 66% RH, 991hPa	**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	1100.00	51.31 PK	74.00	-22.69	1.43 H	168	23.39	27.92
1	1100.00	49.10 AV	54.00	-4.90	1.43 H	168	21.18	27.92
2	2372.00	61.74 PK	74.00	-12.26	1.17 H	301	30.18	31.56
2	2372.00	51.57 AV	54.00	-2.43	1.17 H	301	20.01	31.56
3	*2412.00	108.31 PK			1.17 H	301	76.61	31.70
3	*2412.00	98.14 AV			1.17 H	301	66.44	31.70
4	2688.00	49.71 PK	74.00	-24.29	1.00 H	328	17.01	32.70
5	4824.00	50.59 PK	74.00	-23.41	1.06 H	303	13.01	37.58
6	7236.00	59.54 PK	74.00	-14.46	1.43 H	255	15.41	44.14
6	7236.00	47.41 AV	54.00	-6.59	1.43 H	255	3.28	44.14

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	1100.00	54.07 PK	74.00	-19.93	1.35 V	32	26.15	27.92
1	1100.00	51.08 AV	54.00	-2.92	1.35 V	32	23.16	27.92
2	2372.00	53.01 PK	74.00	-20.99	1.04 V	251	21.45	31.56
2	2372.00	43.08 AV	54.00	-10.92	1.04 V	251	11.52	31.56
3	*2412.00	99.58 PK			1.04 V	251	67.88	31.70
3	*2412.00	89.65 AV			1.04 V	251	57.95	31.70
4	2688.00	45.39 PK	74.00	-28.61	1.00 V	217	12.69	32.70
5	4824.00	52.89 PK	74.00	-21.11	1.06 V	316	15.31	37.58
5	4824.00	40.25 AV	54.00	-13.75	1.06 V	316	2.67	37.58
6	7236.00	62.47 PK	74.00	-11.53	1.03 V	316	18.34	44.14
6	7236.00	48.76 AV	54.00	-5.24	1.03 V	316	4.63	44.14

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

EUT	Wireless AP/Bridge	**MODEL**	AP-1001g-P
CHANNEL	Channel 6	**FREQUENCY RANGE**	1 ~ 25GHz
MODULATION TYPE	BPSK	**TRANSFER RATE**	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24 deg. C, 66% RH, 991hPa	**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	1100.00	50.00 PK	74.00	-24.00	1.27 H	144	22.08	27.92
1	1100.00	47.10 AV	54.00	-6.90	1.27 H	144	19.18	27.92
2	*2437.00	111.92 PK			1.12 H	312	80.07	31.85
2	*2437.00	101.66 AV			1.12 H	312	69.81	31.85
3	2688.00	50.13 PK	74.00	-23.87	1.00 H	328	17.43	32.70
3	2688.00	45.90 AV	54.00	-8.10	1.00 H	328	13.20	32.70
4	4874.00	49.13 PK	74.00	-24.87	1.00 H	31	11.47	37.66
5	7311.00	56.88 PK	74.00	-17.12	1.58 H	295	12.56	44.33
5	7311.00	43.79 AV	54.00	-10.21	1.58 H	295	-0.53	44.33

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	1100.00	52.08 PK	74.00	-21.92	1.34 V	32	24.16	27.92
1	1100.00	49.44 AV	54.00	-4.56	1.34 V	32	21.52	27.92
2	*2437.00	99.77 PK			1.06 V	241	67.92	31.85
2	*2437.00	89.97 AV			1.06 V	241	58.12	31.85
3	2688.00	43.20 PK	74.00	-30.80	1.00 V	237	10.50	32.70
4	4874.00	51.63 PK	74.00	-22.37	1.09 V	307	13.97	37.66
4	4874.00	40.52 AV	54.00	-13.48	1.09 V	307	2.86	37.66
5	7311.00	61.39 PK	74.00	-12.61	1.02 V	313	17.07	44.33
5	7311.00	45.78 AV	54.00	-8.22	1.02 V	313	1.46	44.33

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

EUT	Wireless AP/Bridge	**MODEL**	AP-1001g-P
CHANNEL	Channel 11	**FREQUENCY RANGE**	1 ~ 25GHz
MODULATION TYPE	BPSK	**TRANSFER RATE**	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24 deg. C, 66% RH, 991hPa	**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	1100.00	52.41 PK	74.00	-21.59	1.45 H	164	24.49	27.92
1	1100.00	49.14 AV	54.00	-4.86	1.45 H	164	21.22	27.92
2	*2462.00	111.28 PK			1.35 H	321	79.28	32.00
2	*2462.00	101.22 AV			1.35 H	321	69.22	32.00
3	2483.50	59.92 PK	74.00	-14.08	1.35 H	321	27.79	32.13
3	2483.50	49.86 AV	54.00	-4.14	1.35 H	321	17.73	32.13
4	2688.00	51.24 PK	74.00	-22.76	1.00 H	339	18.54	32.70
4	2688.00	45.74 AV	54.00	-8.26	1.00 H	339	13.04	32.70
5	4924.00	49.94 PK	74.00	-24.06	1.00 H	309	12.20	37.74
6	7386.00	57.67 PK	74.00	-16.33	1.40 H	344	13.10	44.57
6	7386.00	43.50 AV	54.00	-10.50	1.40 H	344	-1.07	44.57

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	1100.00	54.31 PK	74.00	-19.69	1.35 V	38	26.39	27.92
1	1100.00	50.78 AV	54.00	-3.22	1.35 V	38	22.86	27.92
2	*2462.00	99.51 PK			1.34 V	220	67.51	32.00
2	*2462.00	89.92 AV			1.34 V	220	57.92	32.00
3	2483.50	48.15 PK	74.00	-25.85	1.34 V	220	16.02	32.13
4	2688.00	44.87 PK	74.00	-29.13	1.00 V	243	12.17	32.70
5	4924.00	51.14 PK	74.00	-22.86	1.06 V	316	13.40	37.74
5	4924.00	39.74 AV	54.00	-14.26	1.06 V	316	2.00	37.74
6	7386.00	59.91 PK	74.00	-14.09	1.61 V	8	15.34	44.57
6	7386.00	45.19 AV	54.00	-8.81	1.61 V	8	0.62	44.57

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

802.11g Turbo OFDM modulation (without Cradle)

EUT	Wireless AP/Bridge	**MODEL**	AP-1001g-P
CHANNEL	Channel 6	**FREQUENCY RANGE**	1 ~ 25GHz
MODULATION TYPE	BPSK	**TRANSFER RATE**	12Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 62%RH, 991hPa	**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	1100.00	50.95 PK	74.00	-23.05	1.00 H	20	23.03	27.92
1	1100.00	46.77 AV	54.00	-7.23	1.00 H	20	18.85	27.92
2	2390.00	60.99 PK	74.00	-13.01	1.09 H	349	29.38	31.61
2	2390.00	51.09 AV	54.00	-2.91	1.09 H	349	19.48	31.61
3	*2437.00	108.76 PK			1.09 H	349	76.91	31.85
3	*2437.00	98.86 AV			1.09 H	349	67.01	31.85
4	2483.50	60.29 PK	74.00	-13.71	1.09 H	349	28.16	32.13
4	2483.50	51.84 AV	54.00	-2.16	1.09 H	349	19.71	32.13
5	2688.00	53.72 PK	74.00	-20.28	1.00 H	329	21.02	32.70
5	2688.00	46.10 AV	54.00	-7.90	1.00 H	329	13.40	32.70
6	4874.00	48.83 PK	74.00	-25.17	1.08 H	146	11.17	37.66
7	7311.00	55.00 PK	74.00	-19.00	1.63 H	292	10.68	44.33
7	7311.00	42.70 AV	54.00	-11.30	1.63 H	292	-1.62	44.33

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	1100.00	53.01 PK	74.00	-20.99	1.46 V	323	25.09	27.92
1	1100.00	49.35 AV	54.00	-4.65	1.46 V	323	21.43	27.92
2	2390.00	48.92 PK	74.00	-25.08	1.02 V	86	17.31	31.61
3	*2437.00	97.39 PK			1.02 V	86	65.54	31.85
3	*2437.00	87.32 AV			1.02 V	86	55.47	31.85
4	2483.50	50.37 PK	74.00	-23.63	1.02 V	86	18.24	32.13
4	2483.50	40.30 AV	54.00	-13.70	1.02 V	86	8.17	32.13
5	2688.00	46.31 PK	74.00	-27.69	1.00 V	2	13.61	32.70
6	4874.00	50.88 PK	74.00	-23.12	1.00 V	23	13.22	37.66
6	4874.00	36.45 AV	54.00	-17.55	1.00 V	23	-1.21	37.66
7	7311.00	57.31 PK	74.00	-16.69	1.01 V	314	12.99	44.33
7	7311.00	43.41 AV	54.00	-10.59	1.01 V	314	-0.91	44.33

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.

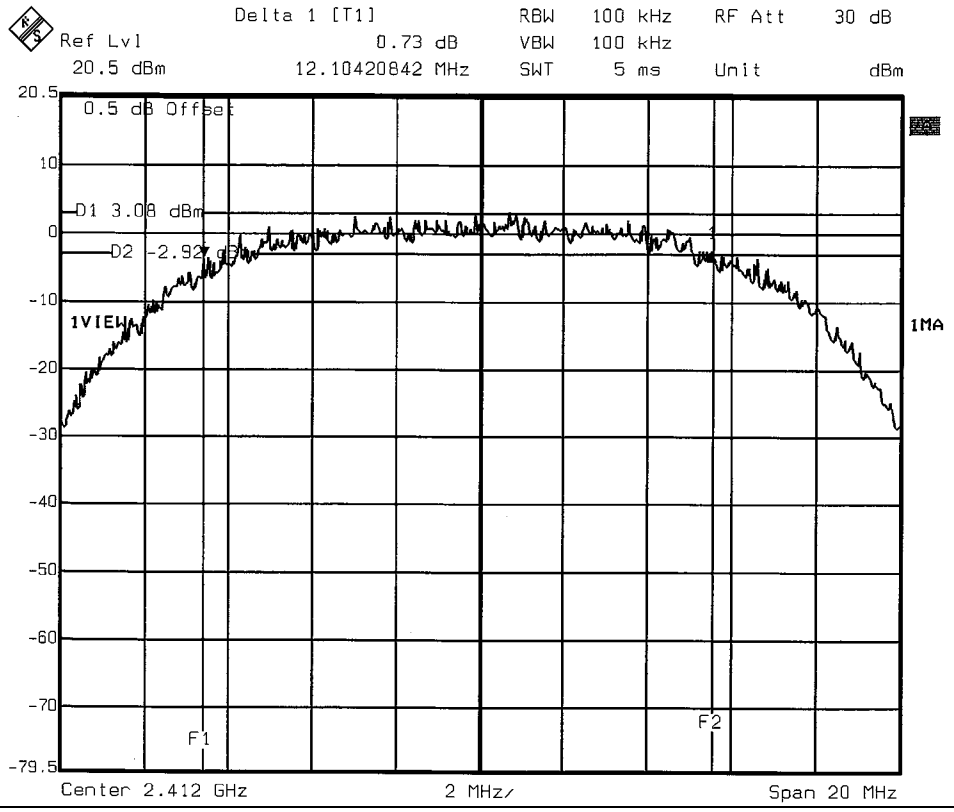
4.3.7 TEST RESULTS

802.11b DSSS modulation

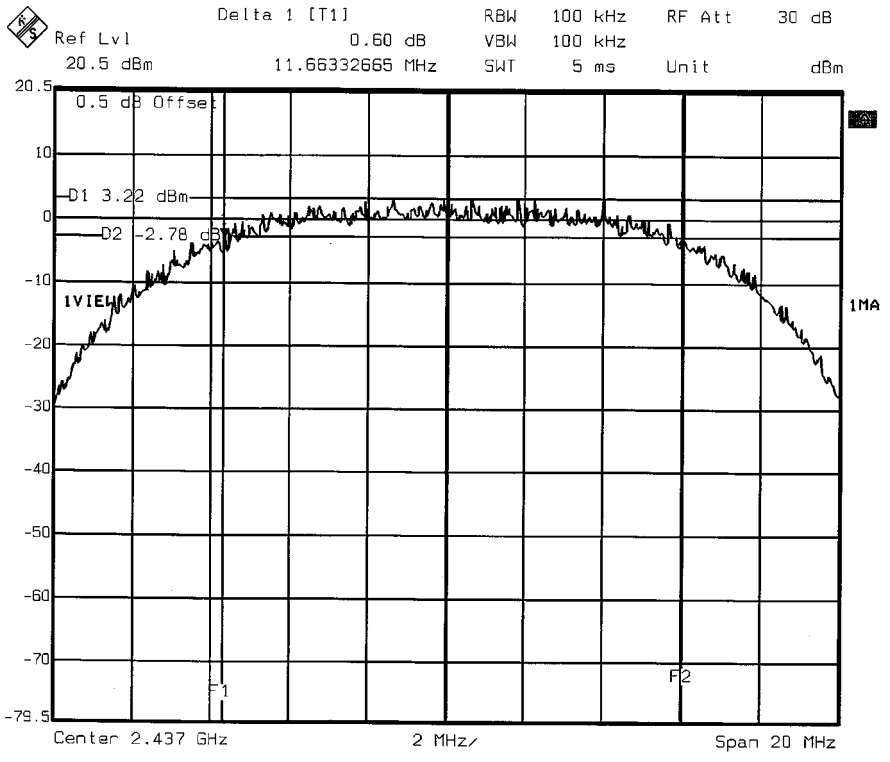
EUT	Wireless AP/Bridge	**MODEL**	AP-1001g-P
MODULATION TYPE	CCK	**TRANSFER RATE**	11Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	24deg.C, 64%RH, 991hPa
TESTED BY	Leo Hung		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	12.10	0.5	PASS
6	2437	11.66	0.5	PASS
11	2462	12.06	0.5	PASS

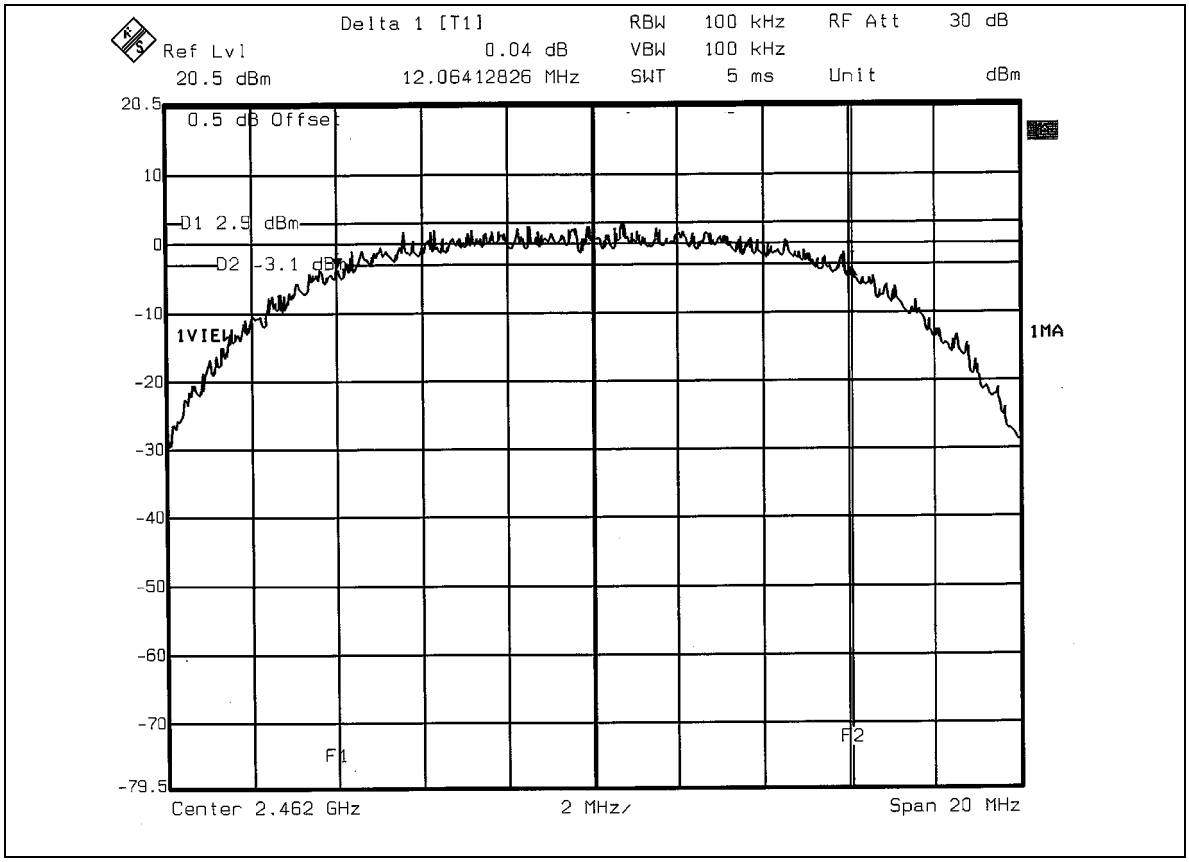
CH1


Delta 1 [T1]
0.73 dB
12.10420842 MHz
RBW 100 kHz
VBW 100 kHz
SWT 5 ms
RF Att 30 dB
Unit dBm
Ref Lvl
20.5 dBm
0.5 dB Offset
D1 3.08 dBm
D2 -2.92 dBm
1VIEW
1MA
F1
F2
Center 2.412 GHz
2 MHz/
Span 20 MHz

CH6


Delta 1 [T1]
0.60 dB
11.66332665 MHz
RBW 100 kHz
VBW 100 kHz
SWT 5 ms
RF Att 30 dB
Unit dBm
Ref Lvl
20.5 dBm
0.5 dB Offset
D1 3.22 dBm
D2 -2.78 dBm
1VIEW
1MA
F1
F2
Center 2.437 GHz
2 MHz/
Span 20 MHz

CH11

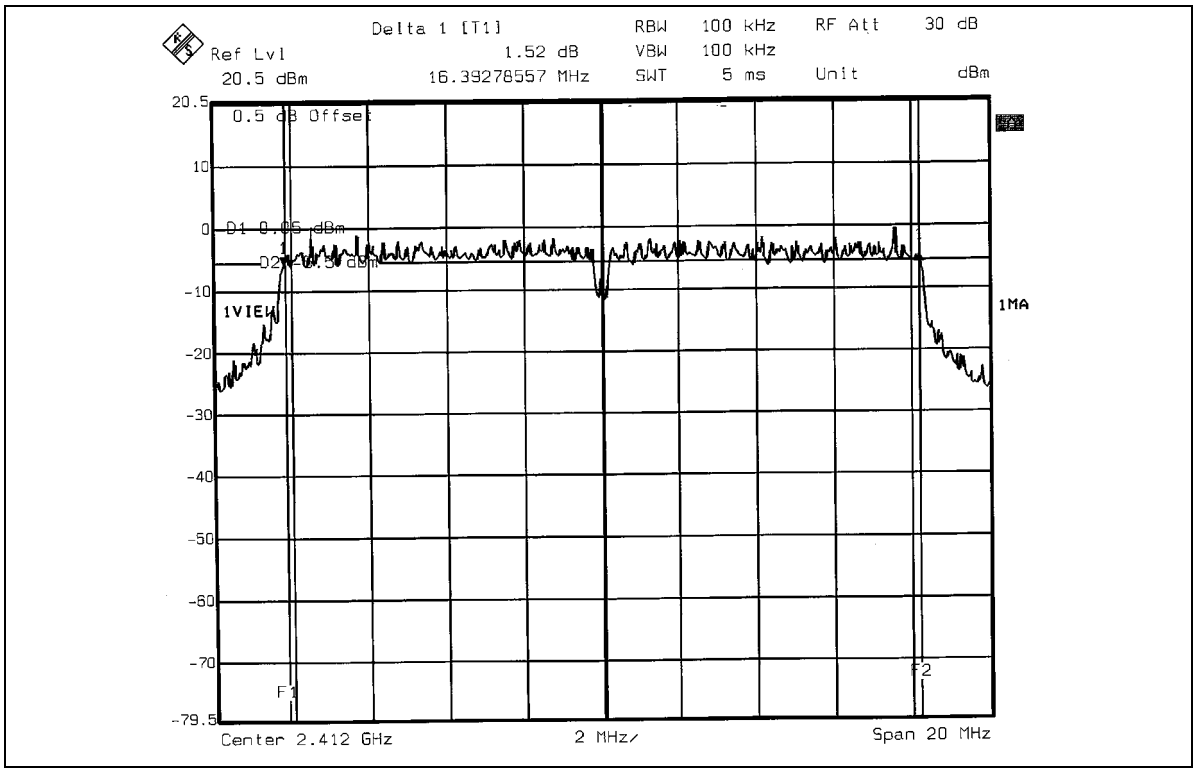

Delta 1 [T1]
RBW 100 kHz
RF Att 30 dB
Ref Lvl
0.04 dB
VBW 100 kHz
20.5 dBm
12.06412826 MHz
SWT 5 ms
Unit dBm
0.5 dB Offset
D1 2.9 dBm
D2 -3.1 dBm
1VIEW
1MA
F1
F2
20.5
10
0
-10
-20
-30
-40
-50
-60
-70
-79.5
Center 2.462 GHz
2 MHz/
Span 20 MHz

802.11g OFDM modulation

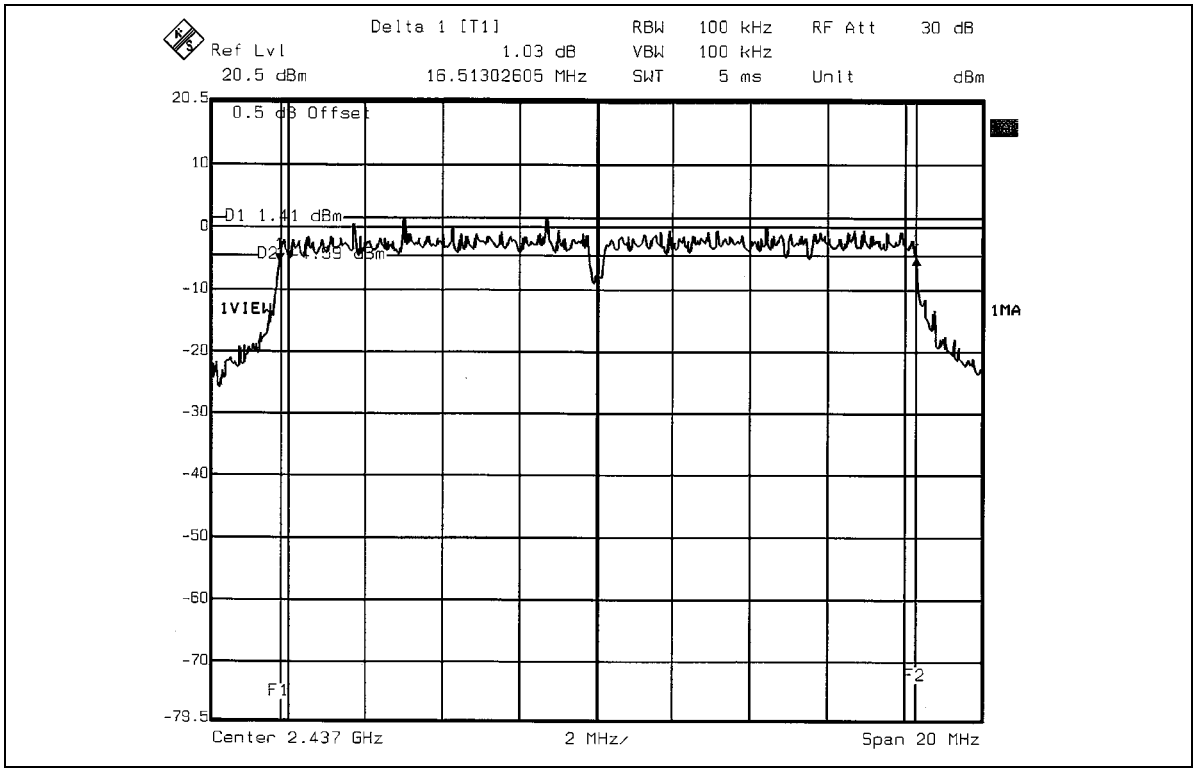
EUT	Wireless AP/Bridge	**MODEL**	AP-1001g-P
MODULATION TYPE	BPSK	**TRANSFER RATE**	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	24deg.C, 64%RH, 991hPa
TESTED BY	Leo Hung		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	16.39	0.5	PASS
6	2437	16.51	0.5	PASS
11	2462	16.51	0.5	PASS

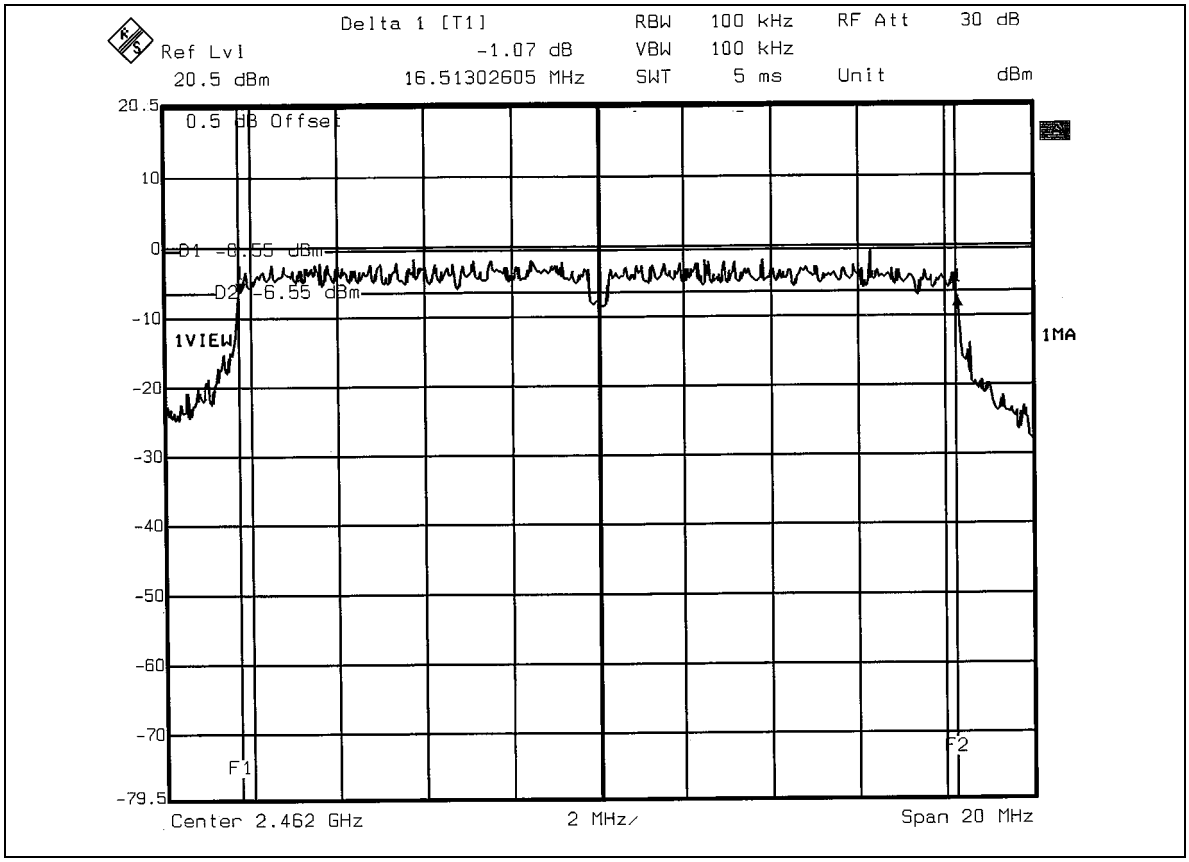
CH1


Delta 1 [T1]
1.52 dB
16.39278557 MHz
RBW 100 kHz
VBW 100 kHz
SWT 5 ms
RF Att 30 dB
Unit dBm
Ref Lvl
20.5 dBm
0.5 dB Offset
D1 0.05 dBm
D2 -0.50 dBm
1VIEW
1MA
F1
F2
Center 2.412 GHz
2 MHz/
Span 20 MHz

CH6


Delta 1 [T1]
1.03 dB
16.51302605 MHz
RBW 100 kHz
VBW 100 kHz
SWT 5 ms
RF Att 30 dB
Unit dBm
Ref Lvl
20.5 dBm
0.5 dB Offset
D1 1.41 dBm
1VIEW
1MA
F1
F2
Center 2.437 GHz
2 MHz/
Span 20 MHz

CH11

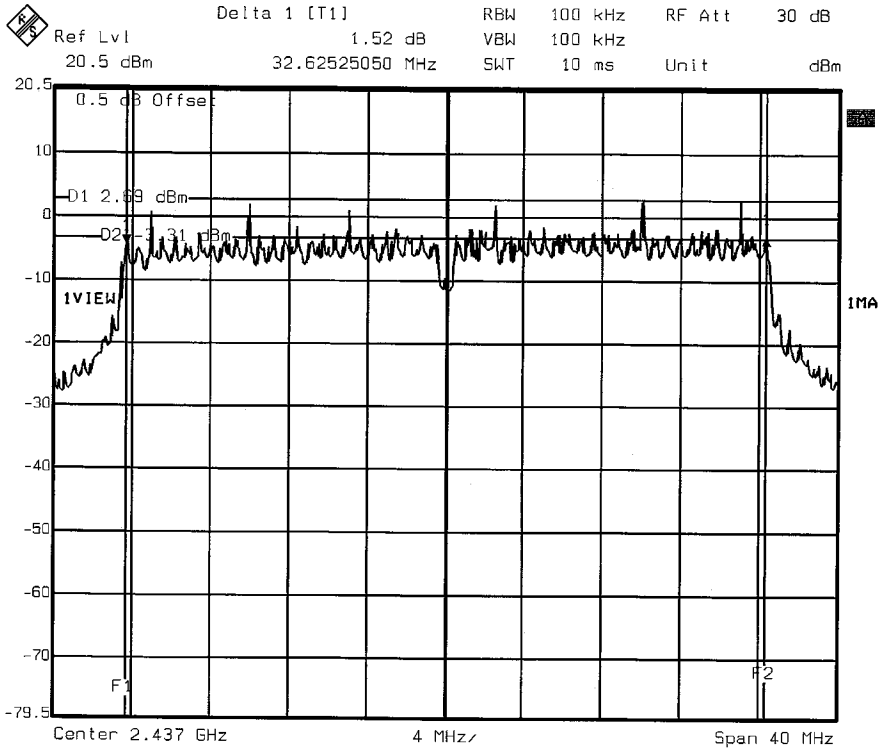

Delta 1 [T1]
-1.07 dB
16.51302605 MHz
RBW 100 kHz
VBW 100 kHz
SWT 5 ms
RF Att 30 dB
Unit dBm
Ref Lvl
20.5 dBm
0.5 dB Offset
D1 -8.55 dBm
D2 -6.55 dBm
1VIEW
1MA
F1
F2
20.5
10
0
-10
-20
-30
-40
-50
-60
-70
-79.5
Center 2.462 GHz
2 MHz/
Span 20 MHz

802.11g Turbo OFDM modulation

EUT	Wireless AP/Bridge	**MODEL**	AP-1001G-P
MODULATION TYPE	BPSK	**TRANSFER RATE**	12Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	24 deg. C, 64% RH, 991 hPa
TESTED BY	Leo Hung		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
6	2437	32.63	0.5	PASS

CH6


Delta 1 [T1]
1.52 dB
32.62525050 MHz
RBW 100 kHz
VBW 100 kHz
SWT 10 ms
RF Att 30 dB
Unit dBm
Ref Lvl
20.5 dBm
0.5 dB Offset
D1 2.69 dBm
D2 -3.31 dBm
1VIEW
1MA
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. 06, 2005
TEKTRONIX OSCILLOSCOPE	TDS 1012	C019167	Feb. 01, 2005
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..

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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	Wireless AP/Bridge	**MODEL**	AP-1001g-P
MODULATION TYPE	CCK	**TRANSFER RATE**	11Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	24deg.C, 64%RH, 991hPa
TESTED BY	Leo Hung		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	44.88	16.52	30	PASS
6	2437	50.82	17.06	30	PASS
11	2462	39.81	16.00	30	PASS

802.11g OFDM modulation

EUT	Wireless AP/Bridge	**MODEL**	AP-1001g-P
MODULATION TYPE	BPSK	**TRANSFER RATE**	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	24deg.C, 64%RH, 991hPa
TESTED BY	Leo Hung		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	50.23	17.01	30	PASS
6	2437	63.53	18.03	30	PASS
11	2462	50.23	17.01	30	PASS

802.11g Turbo OFDM modulation

EUT	Wireless AP/Bridge	**MODEL**	AP-1001G-P
MODULATION TYPE	BPSK	**TRANSFER RATE**	12Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	24 deg. C, 64% RH, 991 hPa
TESTED BY	Leo Hung		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
6	2437	50.23	17.01	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.

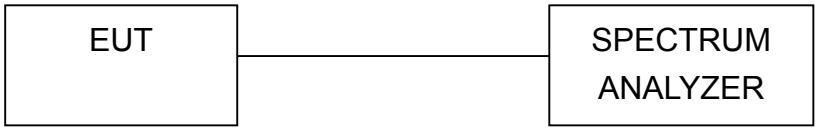
4.5.3 TEST PROCEDURE

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

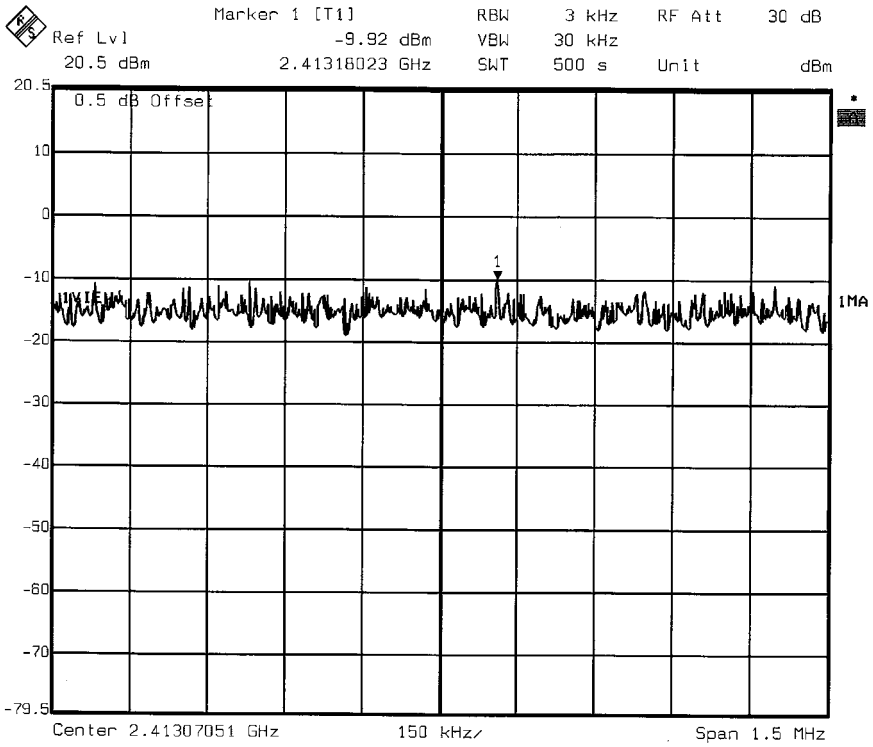
4.5.7 TEST RESULTS

802.11b DSSS modulation

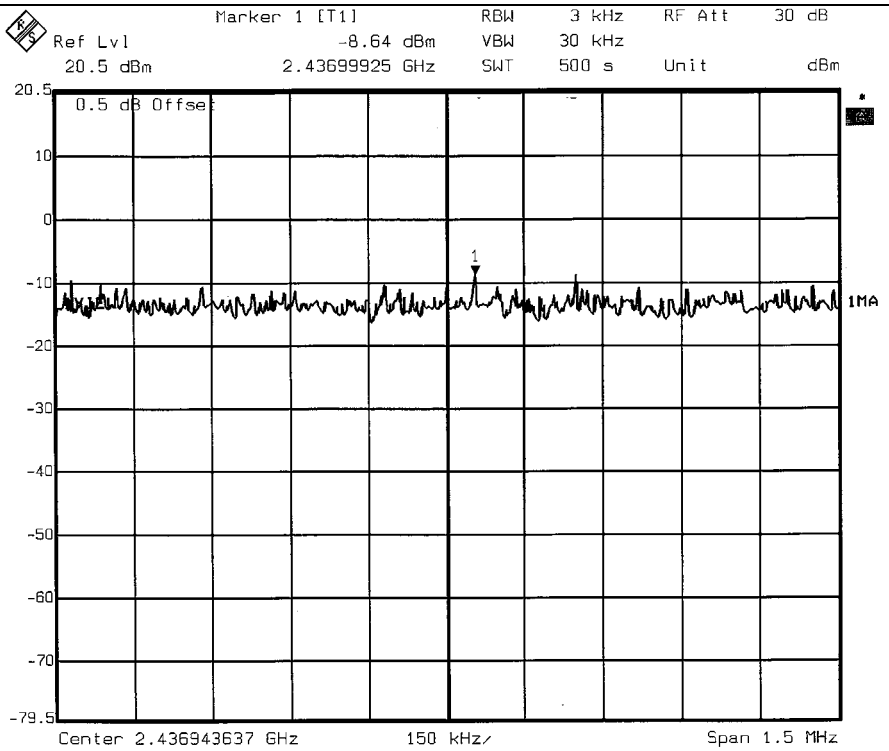
EUT	Wireless AP/Bridge	**MODEL**	AP-1001g-P
MODULATION TYPE	CCK	**TRANSFER RATE**	11Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	24deg.C, 64%RH, 991hPa
TESTED BY	Leo Hung		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-9.92	8	PASS
6	2437	-8.64	8	PASS
11	2462	-10.00	8	PASS

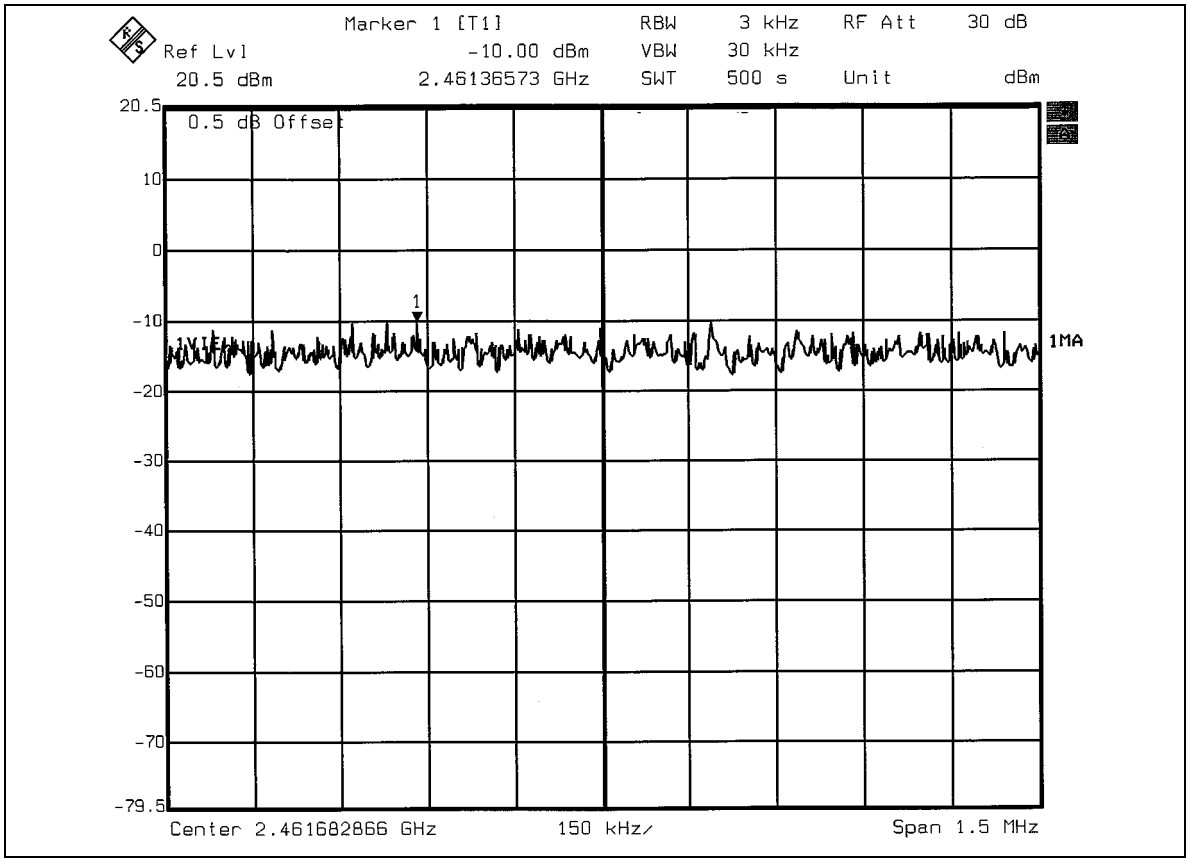
CH1


Marker 1 [T1]
RBW 3 kHz
RF Att 30 dB
Ref Lvl
-9.92 dBm
VBW 30 kHz
20.5 dBm
2.41318023 GHz
SWT 500 s
Unit dBm
0.5 dB Offset
1MA
Center 2.41307051 GHz
150 kHz/
Span 1.5 MHz

CH6


Marker 1 [T1]
RBW 3 kHz
RF Att 30 dB
Ref Lvl
-8.64 dBm
VBW 30 kHz
20.5 dBm
2.43699925 GHz
SWT 500 s
Unit dBm
0.5 dB Offset
1MA
Center 2.436943637 GHz
150 kHz/
Span 1.5 MHz

CH11

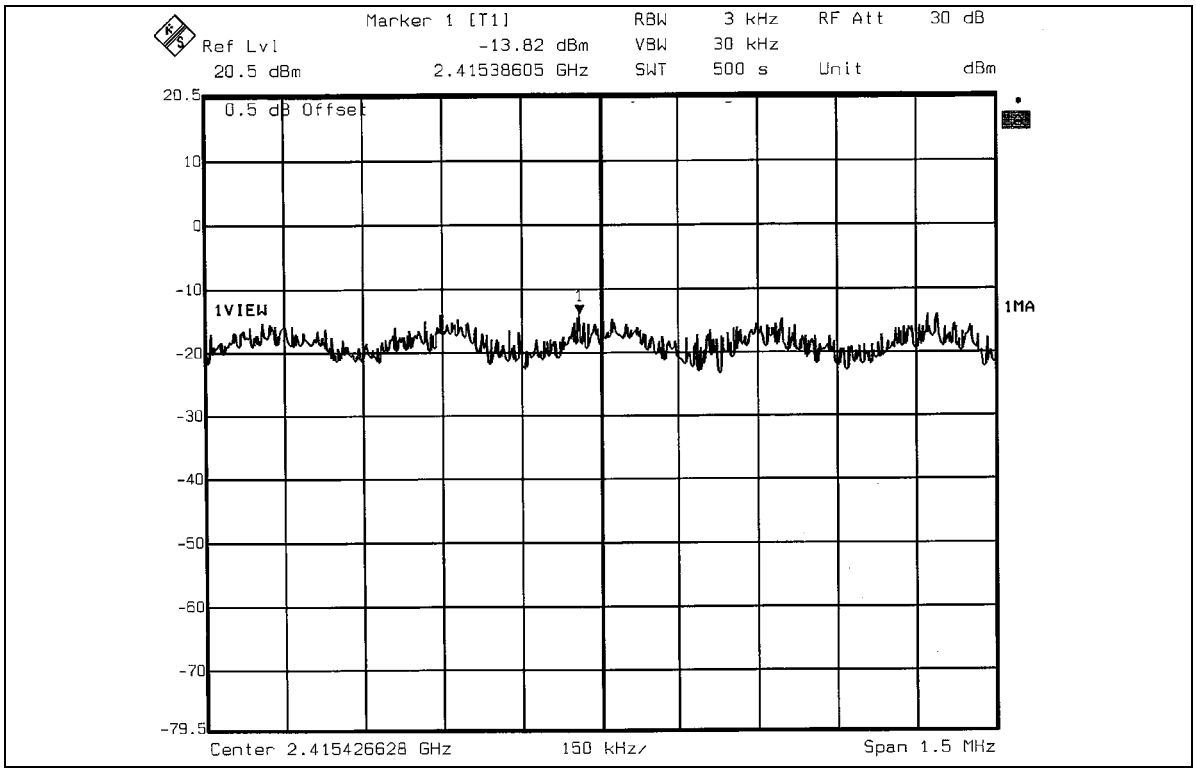

Marker 1 [T1]
RBW 3 kHz
RF Att 30 dB
Ref Lvl
-10.00 dBm
VBW 30 kHz
20.5 dBm
2.46136573 GHz
SWT 500 s
Unit dBm
0.5 dB Offset
1MA
Center 2.461682866 GHz
150 kHz/
Span 1.5 MHz

802.11g OFDM modulation

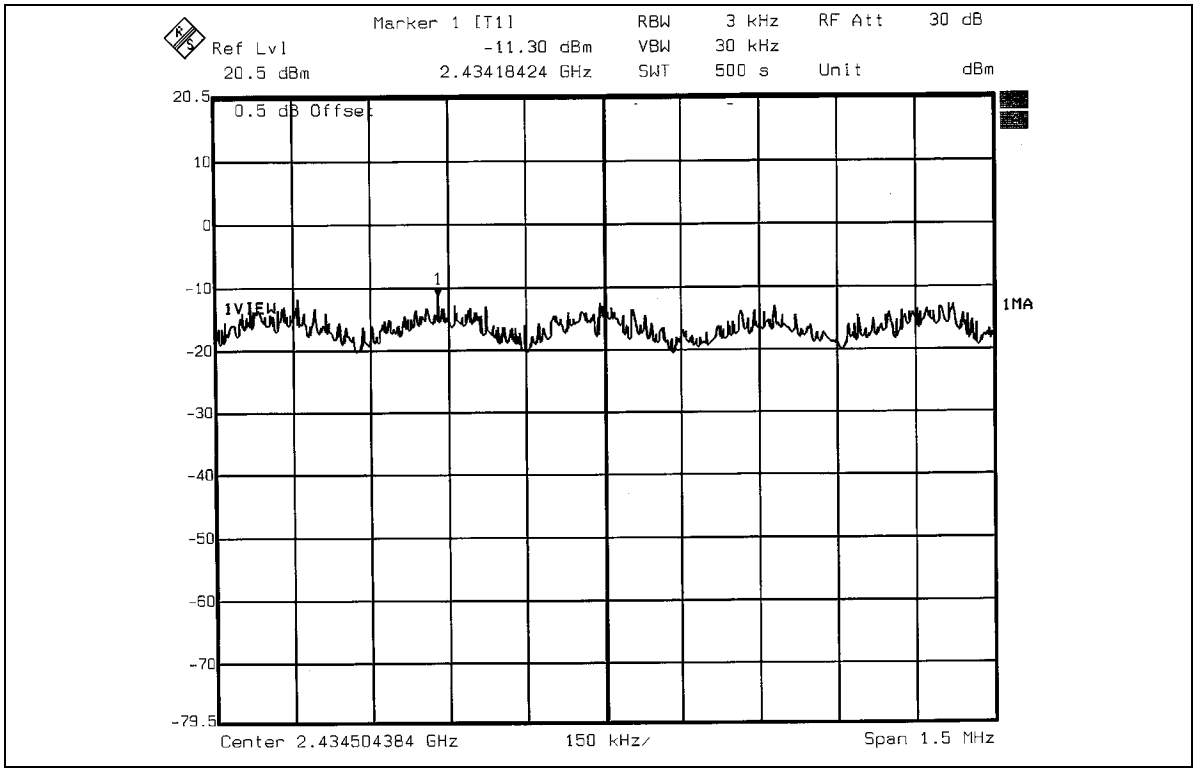
EUT	Wireless AP/Bridge	**MODEL**	AP-1001g-P
MODULATION TYPE	BPSK	**TRANSFER RATE**	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	24deg.C, 64%RH, 991hPa
TESTED BY	Leo Hung		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-13.82	8	PASS
6	2437	-11.30	8	PASS
11	2462	-13.17	8	PASS

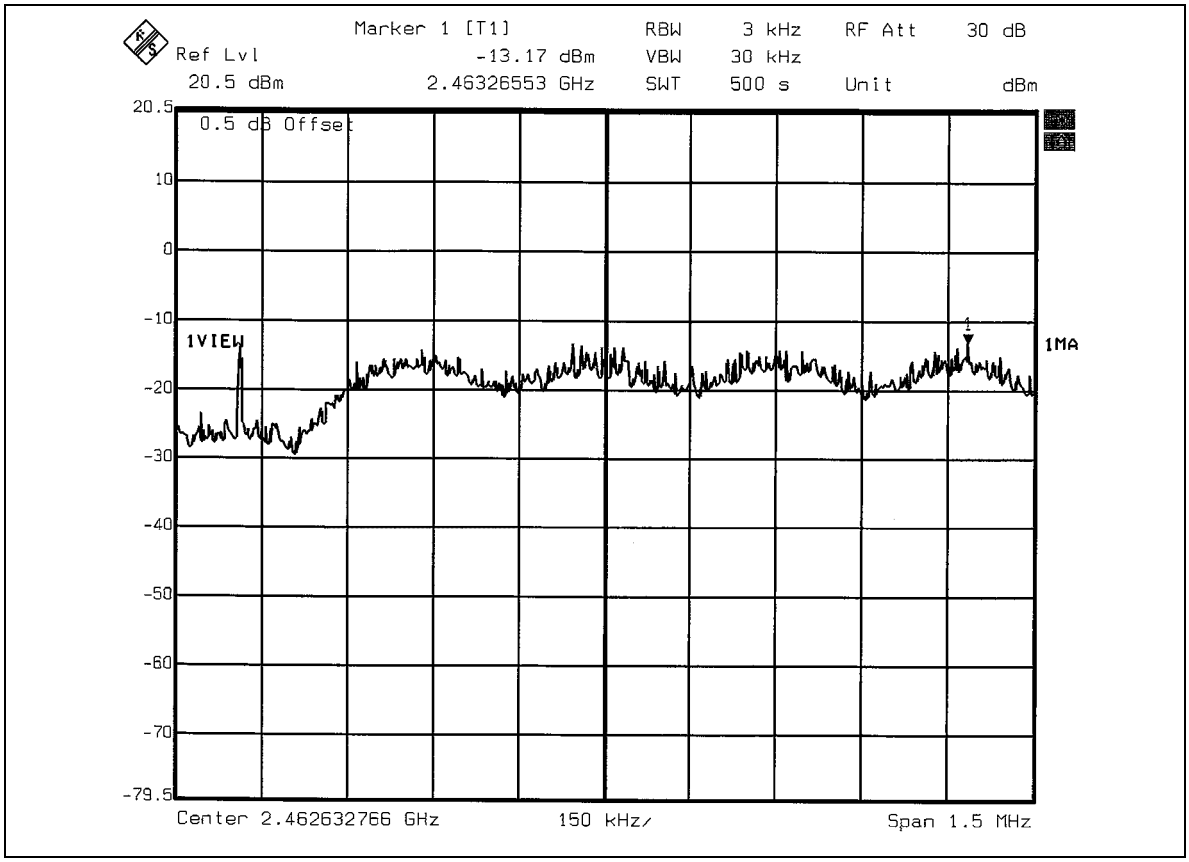
CH1


Marker 1 [T1]
RBW 3 kHz
RF Att 30 dB
Ref Lvl
-13.82 dBm
VBW 30 kHz
20.5 dBm
2.41538605 GHz
SWT 500 s
Unit dBm
0.5 dB Offset
1VIEW
1MA
Center 2.415426628 GHz
150 kHz/
Span 1.5 MHz

CH6


Marker 1 [T1]
RBW 3 kHz
RF Att 30 dB
Ref Lvl
-11.30 dBm
VBW 30 kHz
20.5 dBm
2.43418424 GHz
SWT 500 s
Unit dBm
0.5 dB Offset
1VIEW
1MA
Center 2.434504384 GHz
150 kHz/
Span 1.5 MHz

CH11

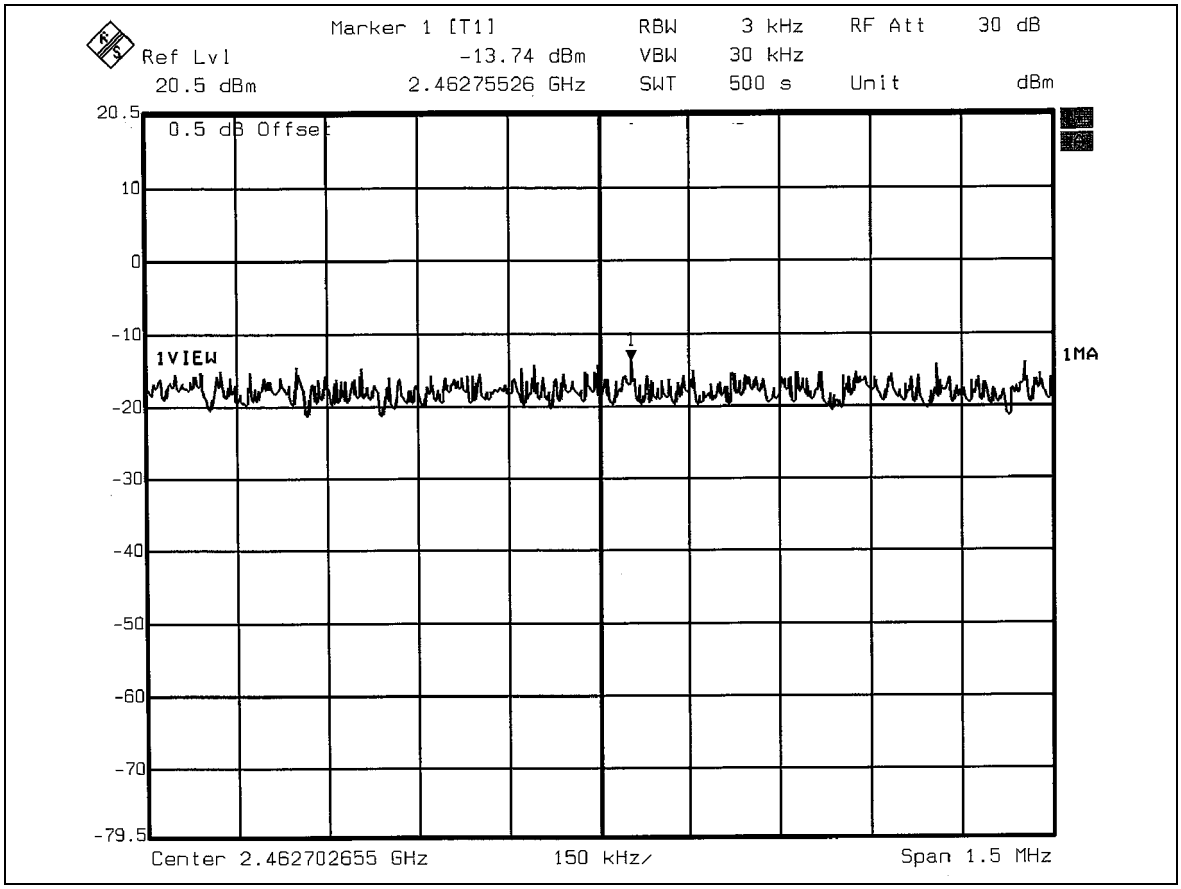

Marker 1 [T1]
RBW 3 kHz
RF Att 30 dB
Ref Lvl
-13.17 dBm
VBW 30 kHz
20.5 dBm
2.46326553 GHz
SWT 500 s
Unit dBm
0.5 dB Offset
1VIEW
1MA
20.5
10
0
-10
-20
-30
-40
-50
-60
-70
-79.5
Center 2.462632766 GHz
150 kHz/
Span 1.5 MHz

802.11g Turbo OFDM modulation

EUT	Wireless AP/Bridge	**MODEL**	AP-1001G-P
MODULATION TYPE	BPSK	**TRANSFER RATE**	12Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	24 deg. C, 64% RH, 991 hPa
TESTED BY	Leo Hung		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
6	2437	-13.74	8	PASS

CH6


Marker 1 [T1]
-13.74 dBm
2.46275526 GHz
RBW 3 kHz
VBW 30 kHz
SWT 500 s
RF Att 30 dB
Unit dBm
Ref Lvl
20.5 dBm
0.5 dB Offset
1VIEW
1MA
20.5
10
0
-10
-20
-30
-40
-50
-60
-70
-79.5
Center 2.462702655 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, 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 51 shows 53.66dBc between carrier maximum power and local maximum emission in restrict band (2.3854GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 110.40dBuV/m (Peak), so the maximum field strength in restrict band is 110.40-53.66=56.74dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on page 51 shows 54.08dBc between carrier maximum power and local maximum emission in restrict band (2.38744GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 102.69dBuV/m (Average), so the maximum field strength in restrict band is 102.69-54.08=48.61dBuV/m which is under 54dBuV/m limit.

NOTE 2: The band edge emission plot on page 52 shows 51.65dBc between carrier maximum power and local maximum emission in restrict band (2.4865GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.7 is 112.71dBuV/m (Peak), so the maximum field strength in restrict band is 112.71-51.65=61.06dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on page 53 shows 53.52dBc 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 11 at the item 4.2.7 is 104.14dBuV/m (Average), so the maximum field strength in restrict band is 104.14-53.52=50.62dBuV/m which is under 54dBuV/m limit.

802.11g OFDM modulation

NOTE 3: The band edge emission plot on page 54 shows 44.78dBc 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 108.31dBuV/m (Peak), so the maximum field strength in restrict band is 108.31-44.78=63.53dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on page 54 shows 46.54dBc 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 98.14dBuV/m (Average), so the maximum field strength in restrict band is 98.14-46.54=51.60dBuV/m which is under 54dBuV/m limit.

NOTE 4: The band edge emission plot on page 55 shows 45.76dBc between carrier maximum power and local maximum emission in restrict band (2.4810GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.7 is 111.28dBuV/m (Peak), so the maximum field strength in restrict band is 111.28-45.76=65.52dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on page 56 shows 48.50dBc 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 101.22dBuV/m (Average), so the maximum field strength in restrict band is 101.22-48.50=52.72dBuV/m which is under 54dBuV/m limit.

802.11g Turbo OFDM modulation

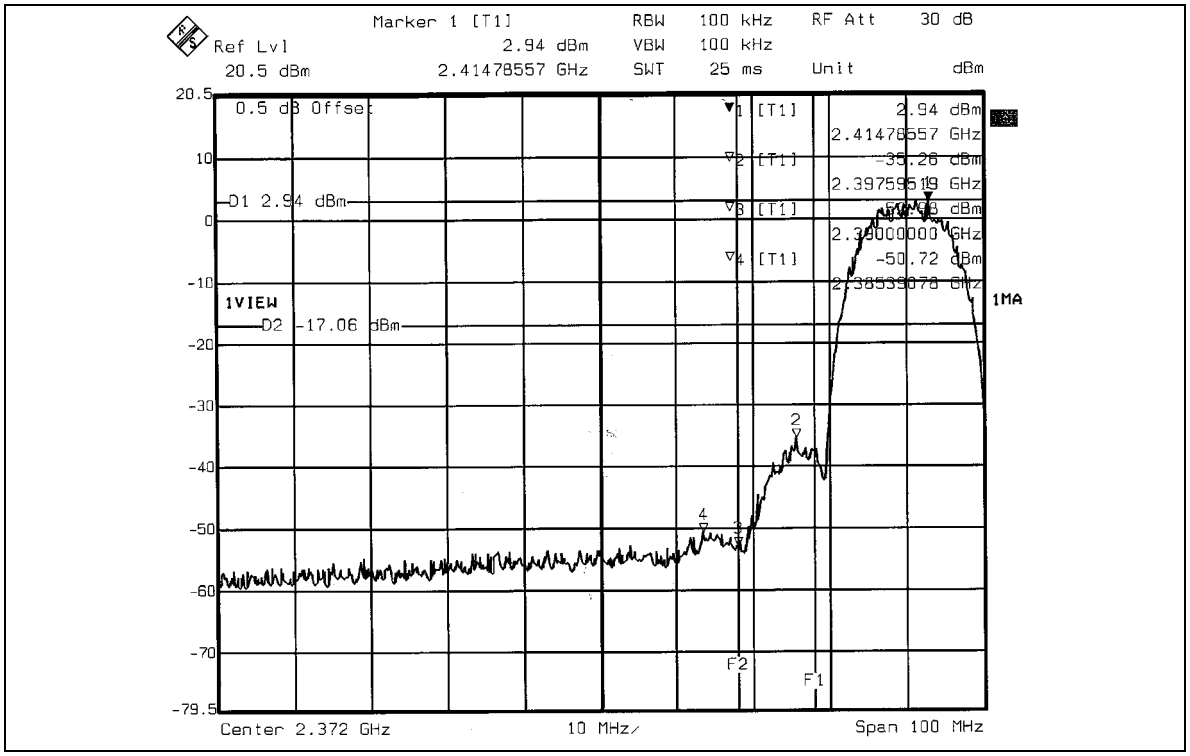
NOTE 5: The band edge emission plot on page 57 shows 49.73dBc between carrier maximum power and local maximum emission in restrict band (2.4398GHz). The emission of carrier strength list in the test result of channel 6 at the item 4.2.7 is 108.76dBuV/m (Peak), so the maximum field strength in restrict band is 108.76-49.73=59.03dBuV/m which is under 74dBuV/m limit.

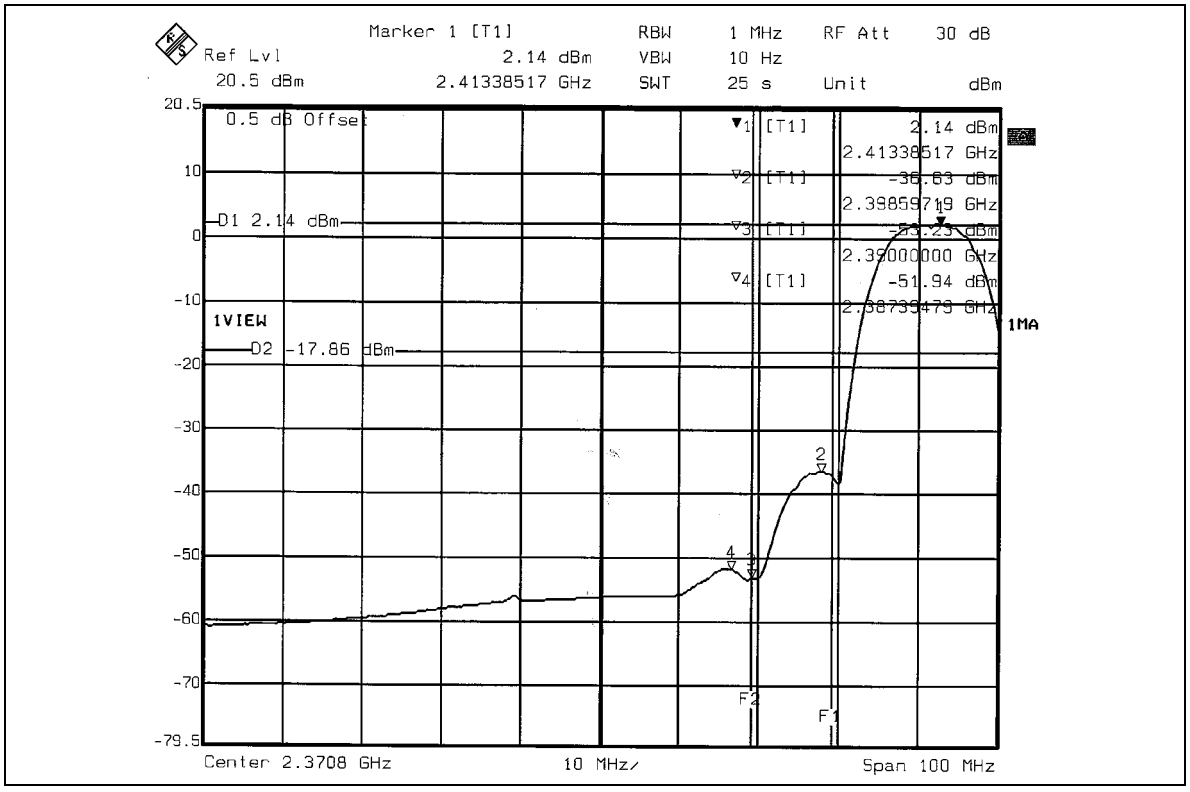
The band edge emission plot on page 57 shows 48.02dBc between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 6 at the item 4.2.7 is 98.86dBuV/m (Average), so the maximum field strength in restrict band is 98.86-48.02=50.84dBuV/m which is under 54dBuV/m limit.

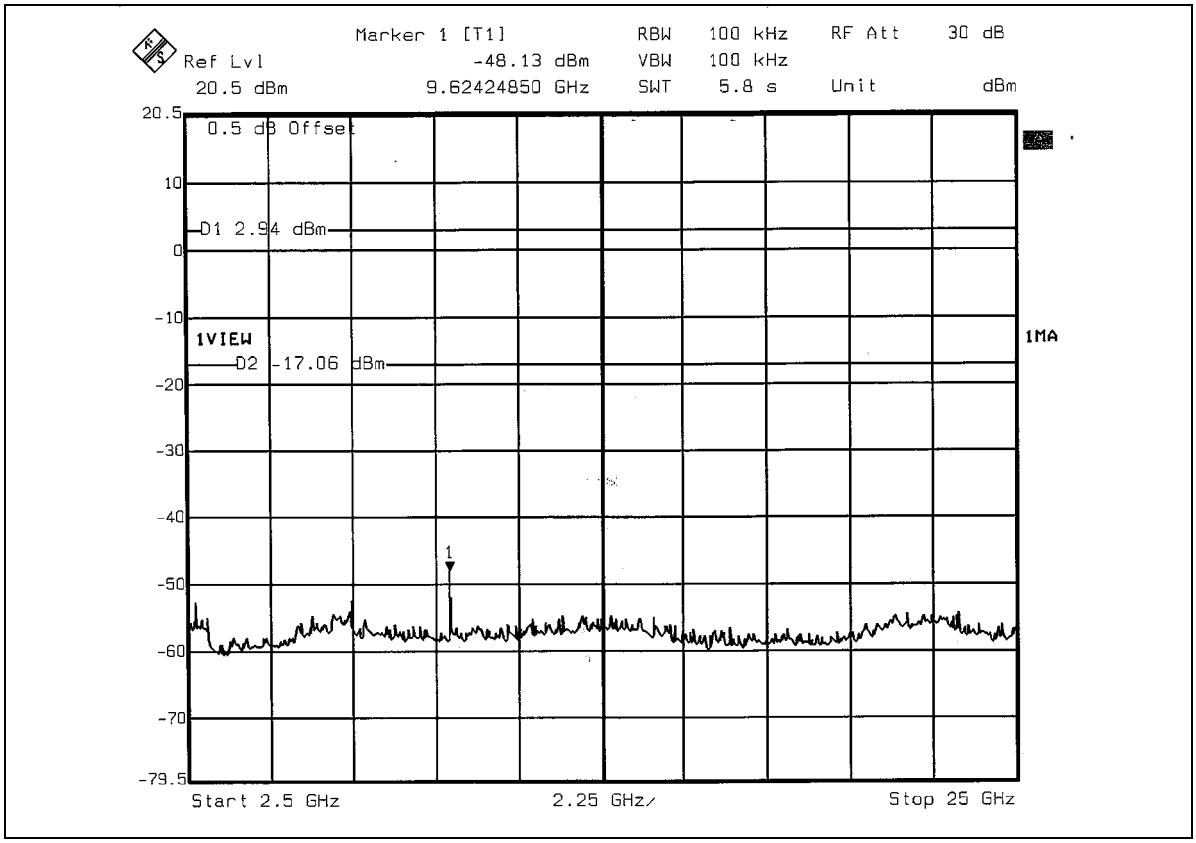
NOTE 6: The band edge emission plot on page 58 shows 49.46dBc between carrier maximum power and local maximum emission in restrict band (2.4843GHz). The emission of carrier strength list in the test result of channel 6 at the item 4.2.7 is 108.76dBuV/m (Peak), so the maximum field strength in restrict band is 108.76-49.46=59.30dBuV/m which is under 74dBuV/m limit.

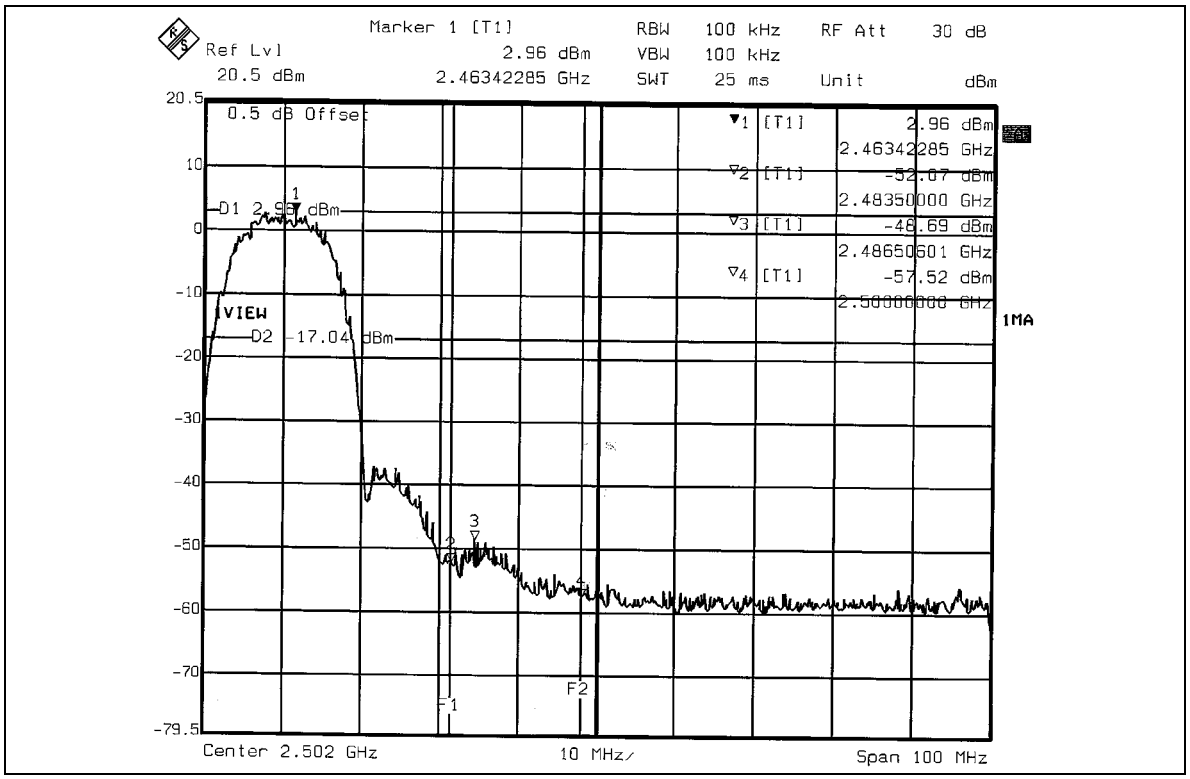
The band edge emission plot on page 59 shows 47.12dBc between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 6 at the item 4.2.7 is 98.86dBuV/m (Average), so the maximum field strength in restrict band is 98.86-47.12=51.84dBuV/m which is under 54dBuV/m limit.

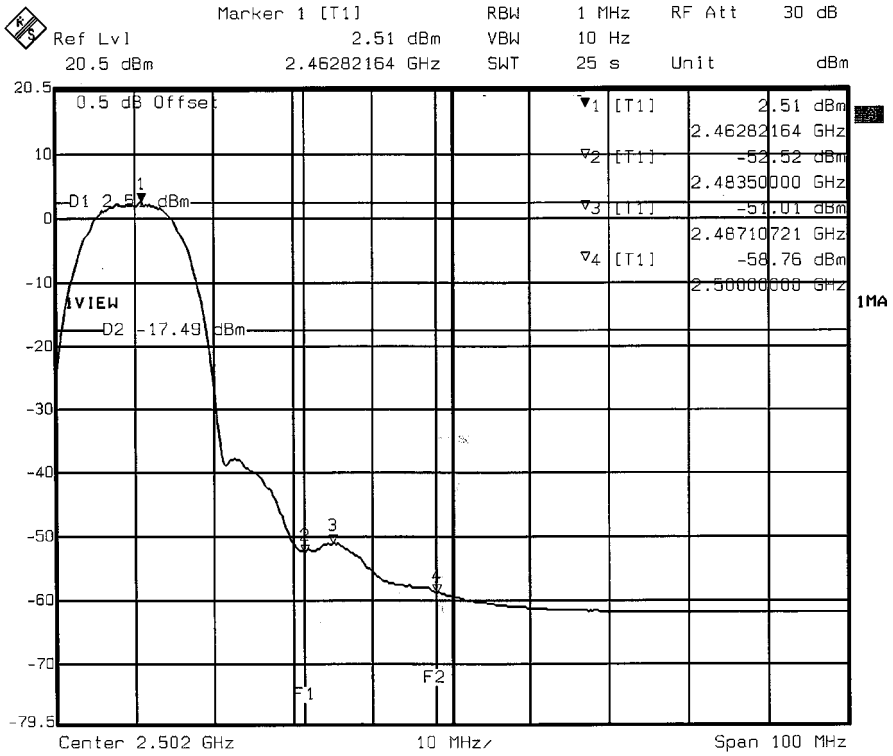
802.11b DSSS modulation

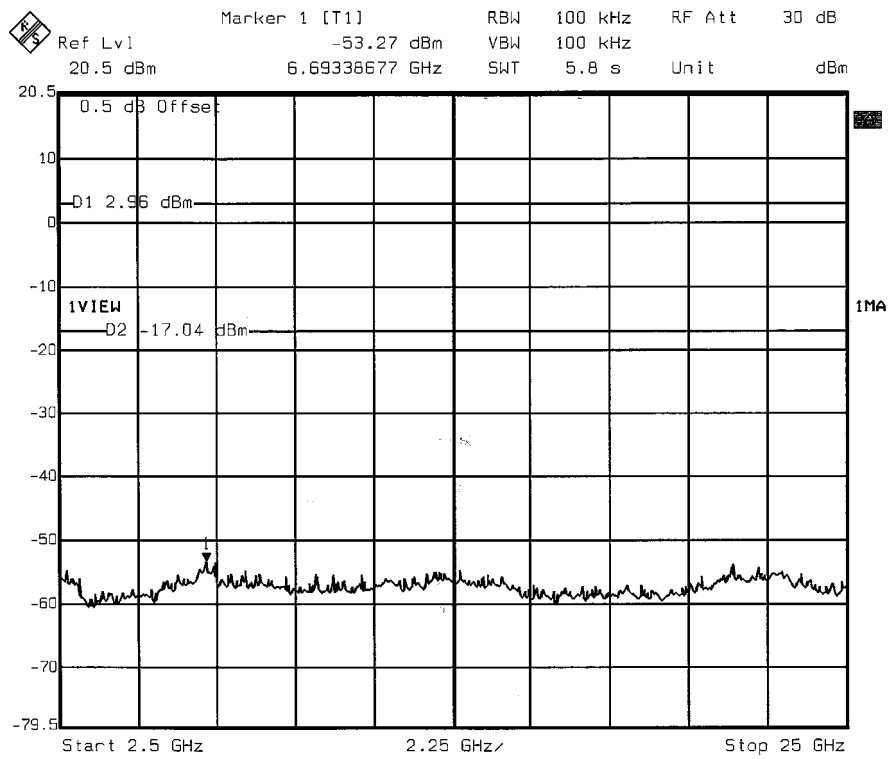




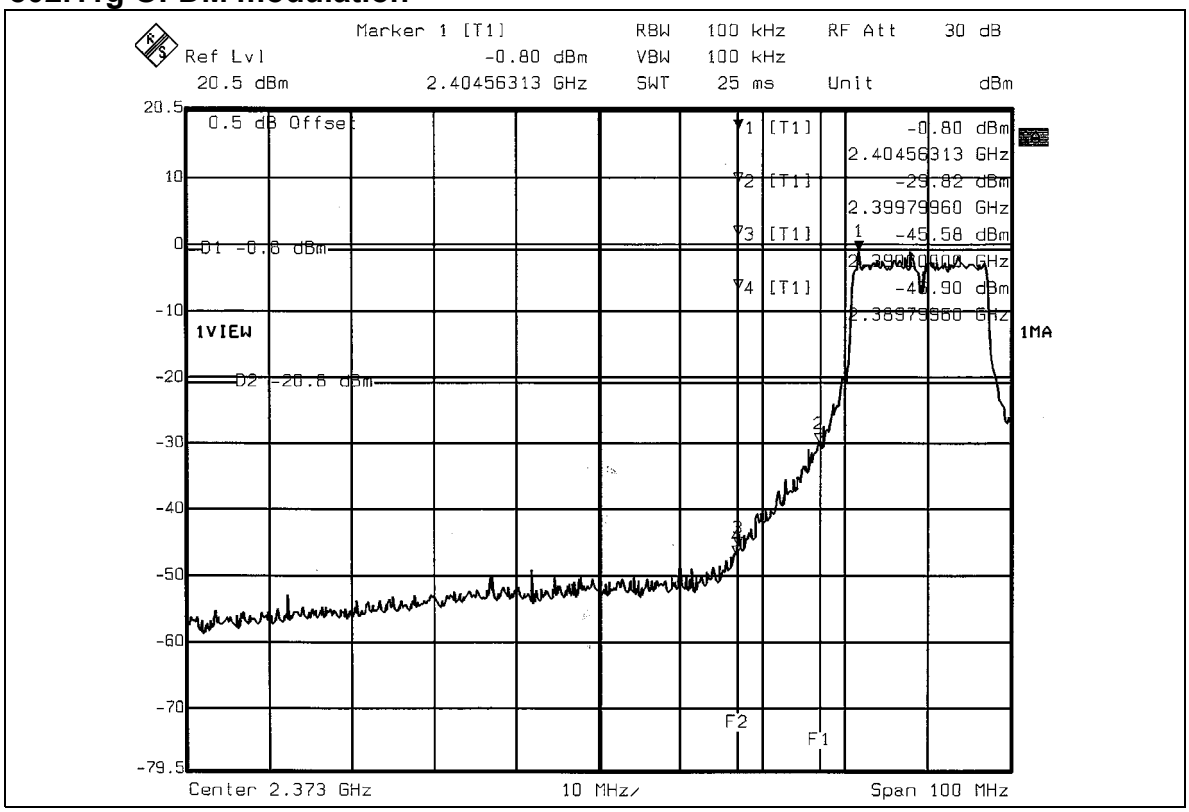

Marker 1 [T1]
Ref Lvl
20.5 dBm
-48.13 dBm
9.62424850 GHz
RBW 100 kHz
VBW 100 kHz
SWT 5.8 s
RF Att 30 dB
Unit dBm
0.5 dB Offset
D1 2.94 dBm
1VIEW
D2 -17.06 dBm
1MA
Start 2.5 GHz
2.25 GHz/
Stop 25 GHz

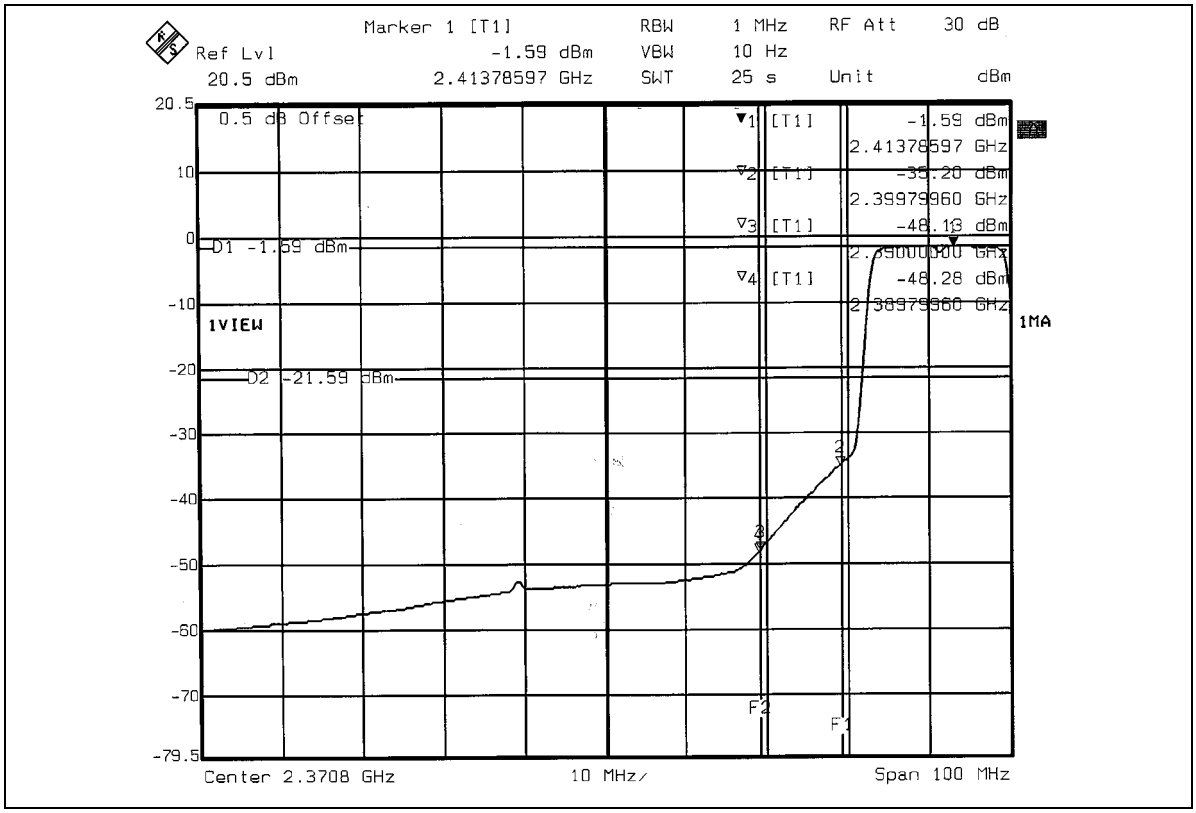

Marker 1 [T1]
Ref Lvl
20.5 dBm
2.96 dBm
2.46342285 GHz
RBW 100 kHz
VBW 100 kHz
SWT 25 ms
RF Att 30 dB
Unit dBm
0.5 dB Offset
D1 2.96 dBm
1VIEW
D2 -17.04 dBm
1MA
▼1 [T1] 2.96 dBm 2.46342285 GHz
▽2 [T1] -52.07 dBm 2.48350000 GHz
▽3 [T1] -48.69 dBm 2.48650601 GHz
▽4 [T1] -57.52 dBm 2.50000000 GHz
F1
F2
Center 2.502 GHz
10 MHz/
Span 100 MHz

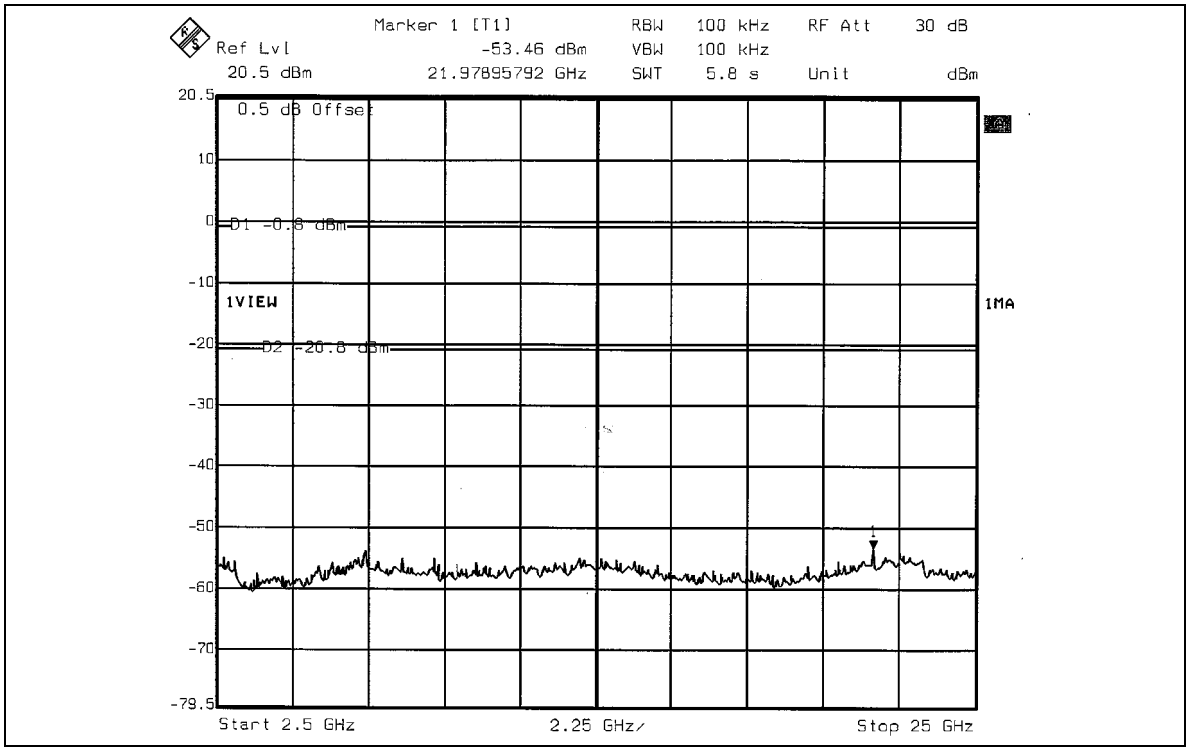

Marker 1 [T1]
RBW 1 MHz
RF Att 30 dB
Ref Lvl
2.51 dBm
VBW 10 Hz
20.5 dBm
2.46282164 GHz
SWT 25 s
Unit dBm
0.5 dB Offset
▼1 [T1] 2.51 dBm
2.46282164 GHz
▽2 [T1] -52.52 dBm
2.48350000 GHz
▽3 [T1] -51.01 dBm
2.48710721 GHz
▽4 [T1] -58.76 dBm
2.50000000 GHz
D1 2.51 dBm
1VIEW
D2 -17.49 dBm
1MA
F1
F2
Center 2.502 GHz
10 MHz/
Span 100 MHz

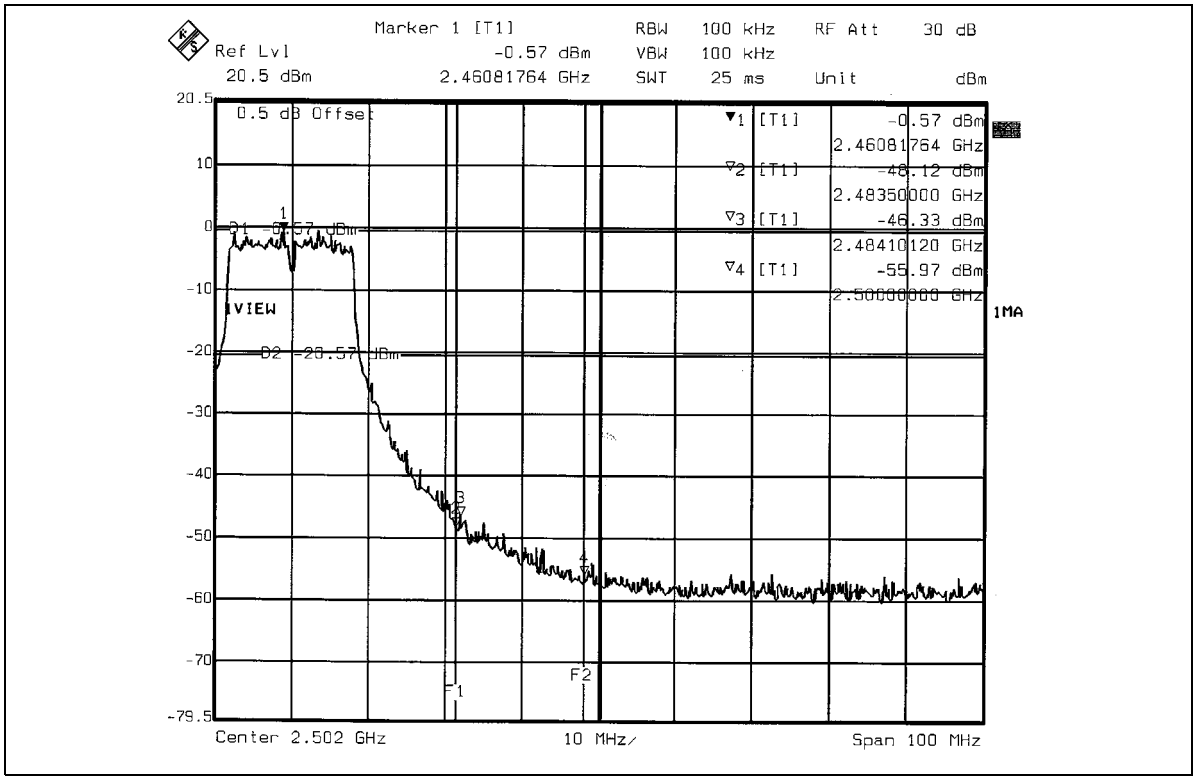

Marker 1 [T1]
RBW 100 kHz
RF Att 30 dB
Ref Lvl
-53.27 dBm
VBW 100 kHz
20.5 dBm
6.69338677 GHz
SWT 5.8 s
Unit dBm
0.5 dB Offset
D1 2.96 dBm
1VIEW
D2 -17.04 dBm
1MA
Start 2.5 GHz
2.25 GHz/
Stop 25 GHz

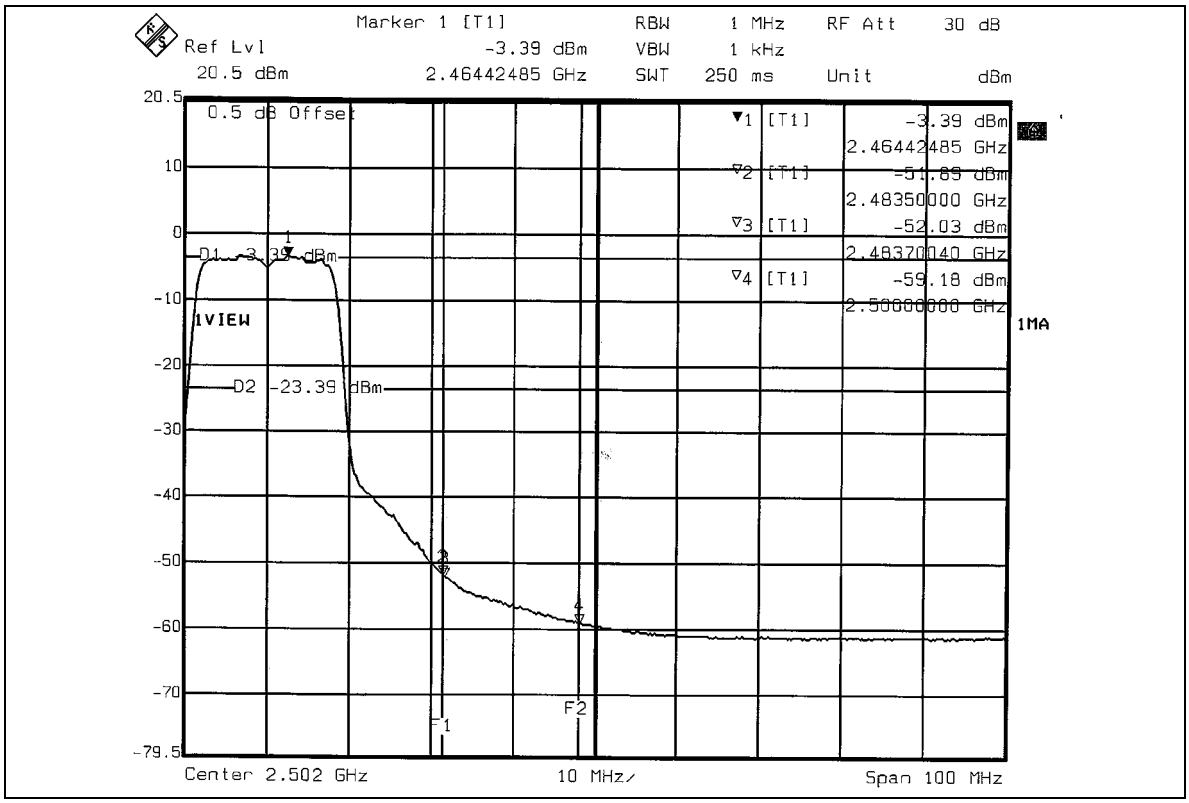
802.11g OFDM modulation

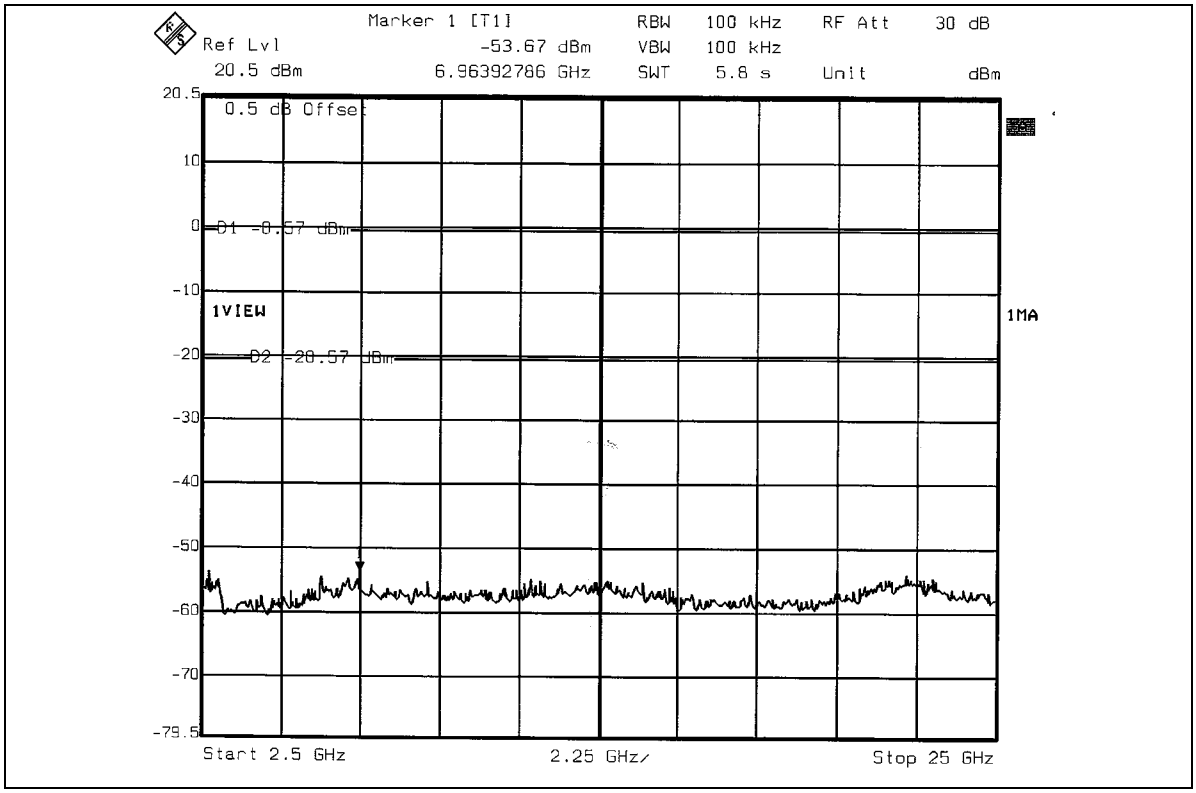




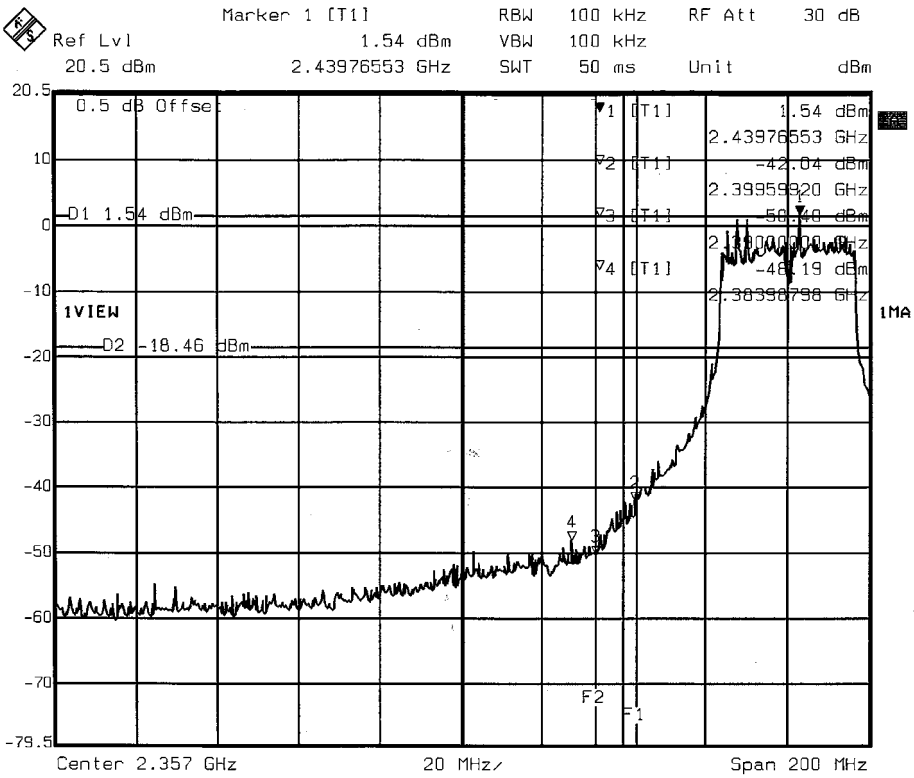

Marker 1 [T1]
Ref Lvl
20.5 dBm
-53.46 dBm
21.97895792 GHz
RBW 100 kHz
VBW 100 kHz
SWT 5.8 s
RF Att 30 dB
Unit dBm
0.5 dB Offset
D1 -0.8 dBm
1VIEW
D2 -20.8 dBm
1MA
Start 2.5 GHz
2.25 GHz/
Stop 25 GHz

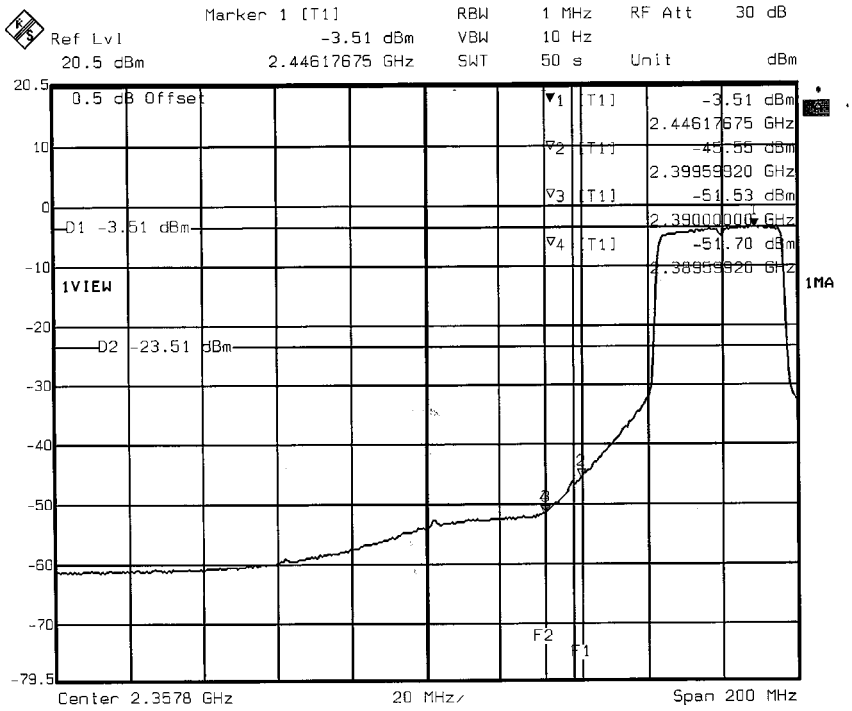

Marker 1 [T1]
Ref Lvl
20.5 dBm
-0.57 dBm
2.46081764 GHz
RBW 100 kHz
VBW 100 kHz
SWT 25 ms
RF Att 30 dB
Unit dBm
0.5 dB Offset
▼1 [T1] -0.57 dBm 2.46081764 GHz
▽2 [T1] -48.12 dBm 2.48350000 GHz
▽3 [T1] -46.33 dBm 2.48410120 GHz
▽4 [T1] -55.97 dBm 2.50000000 GHz
D1 -0.57 dBm
1VIEW
D2 -20.57 dBm
1MA
F1
F2
Center 2.502 GHz
10 MHz/
Span 100 MHz

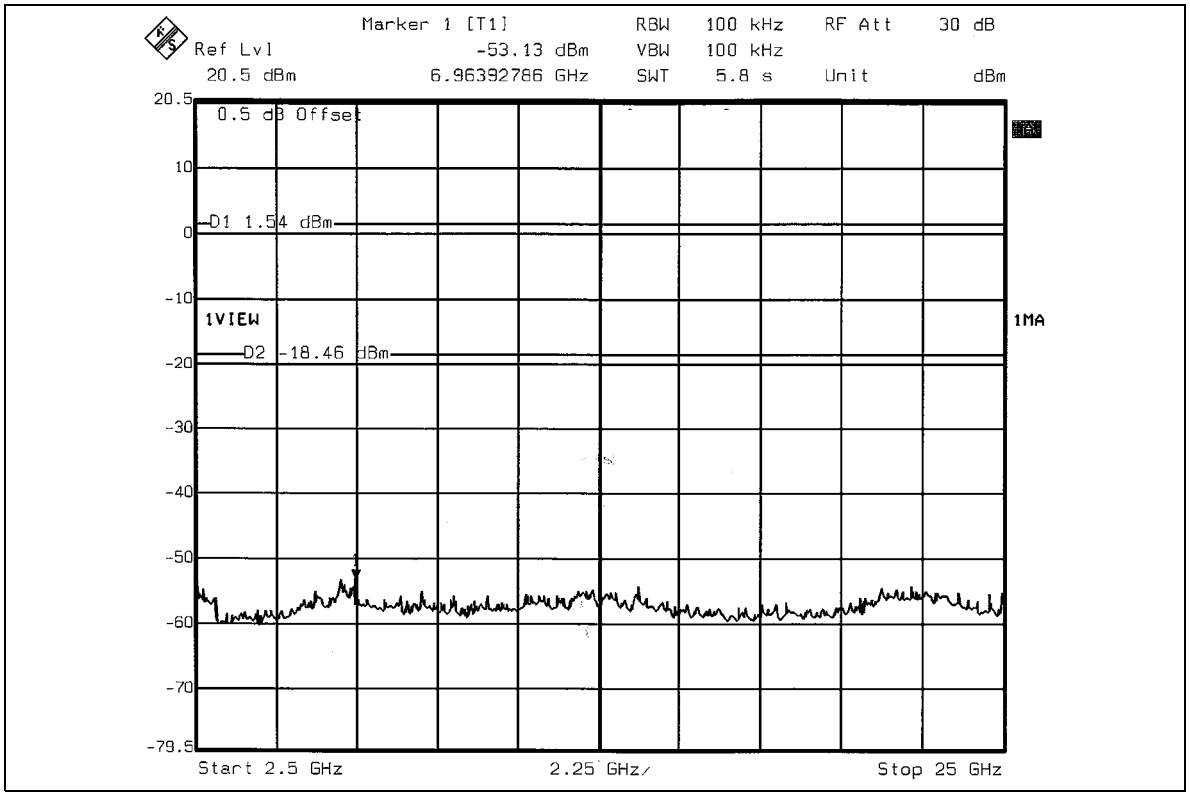

Marker 1 [T1]
RBW 1 MHz
RF Att 30 dB
Ref Lvl
-3.39 dBm
VBW 1 kHz
20.5 dBm
2.46442485 GHz
SWT 250 ms
Unit dBm
0.5 dB Offset
▼1 [T1] -3.39 dBm
2.46442485 GHz
▽2 [T1] -51.89 dBm
2.48350000 GHz
▽3 [T1] -52.03 dBm
2.48370040 GHz
▽4 [T1] -59.18 dBm
2.50000000 GHz
D1 -3.39 dBm
1VIEW
1MA
D2 -23.39 dBm
F1
F2
Center 2.502 GHz
10 MHz/
Span 100 MHz

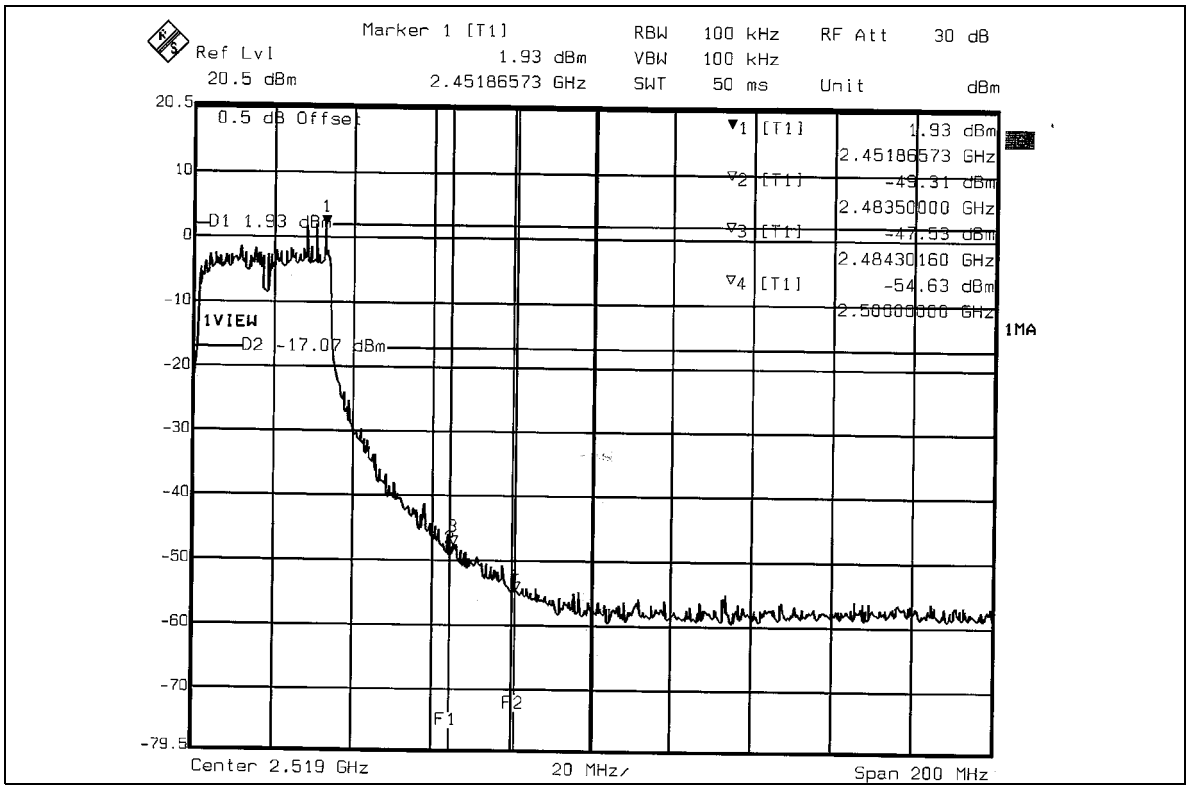

Marker 1 [T1]
RBW 100 kHz
RF Att 30 dB
Ref Lvl
-53.67 dBm
VBW 100 kHz
20.5 dBm
6.96392786 GHz
SWT 5.8 s
Unit dBm
0.5 dB Offset
D1 -8.57 dBm
1VIEW
1MA
D2 -20.57 dBm
Start 2.5 GHz
2.25 GHz/
Stop 25 GHz

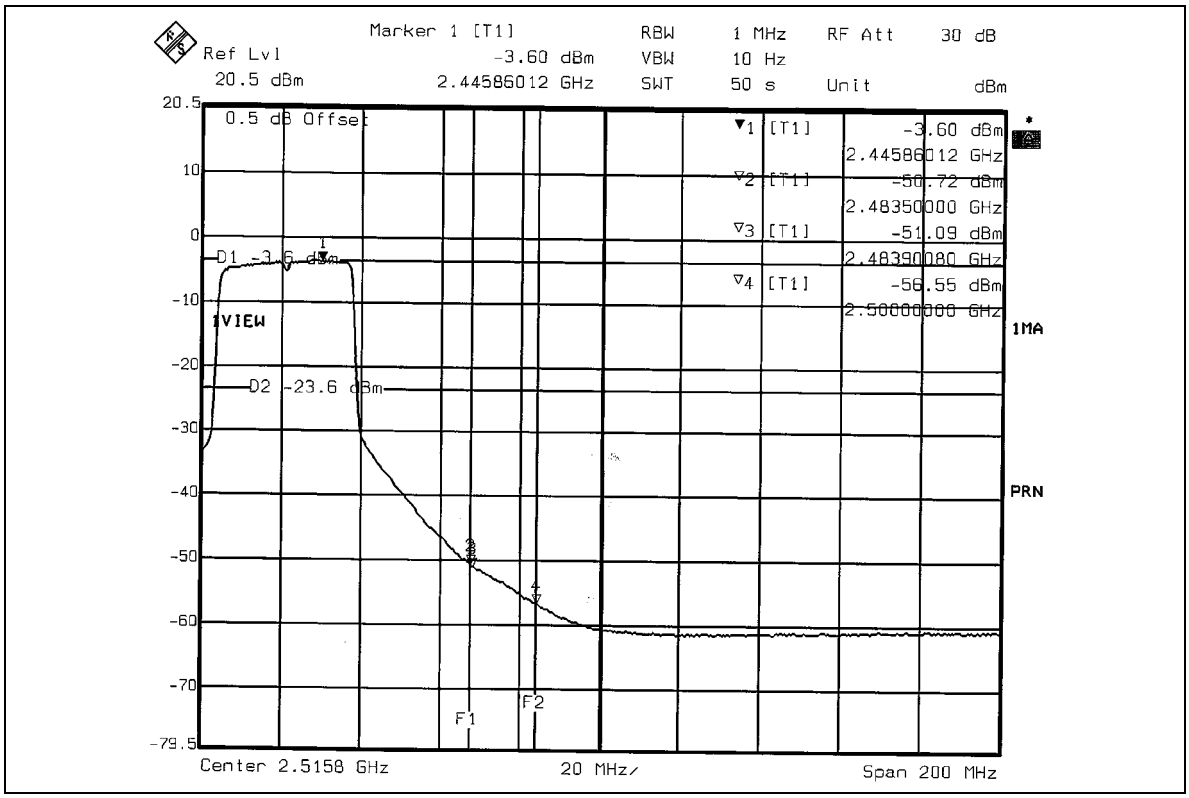
802.11g Turbo OFDM modulation

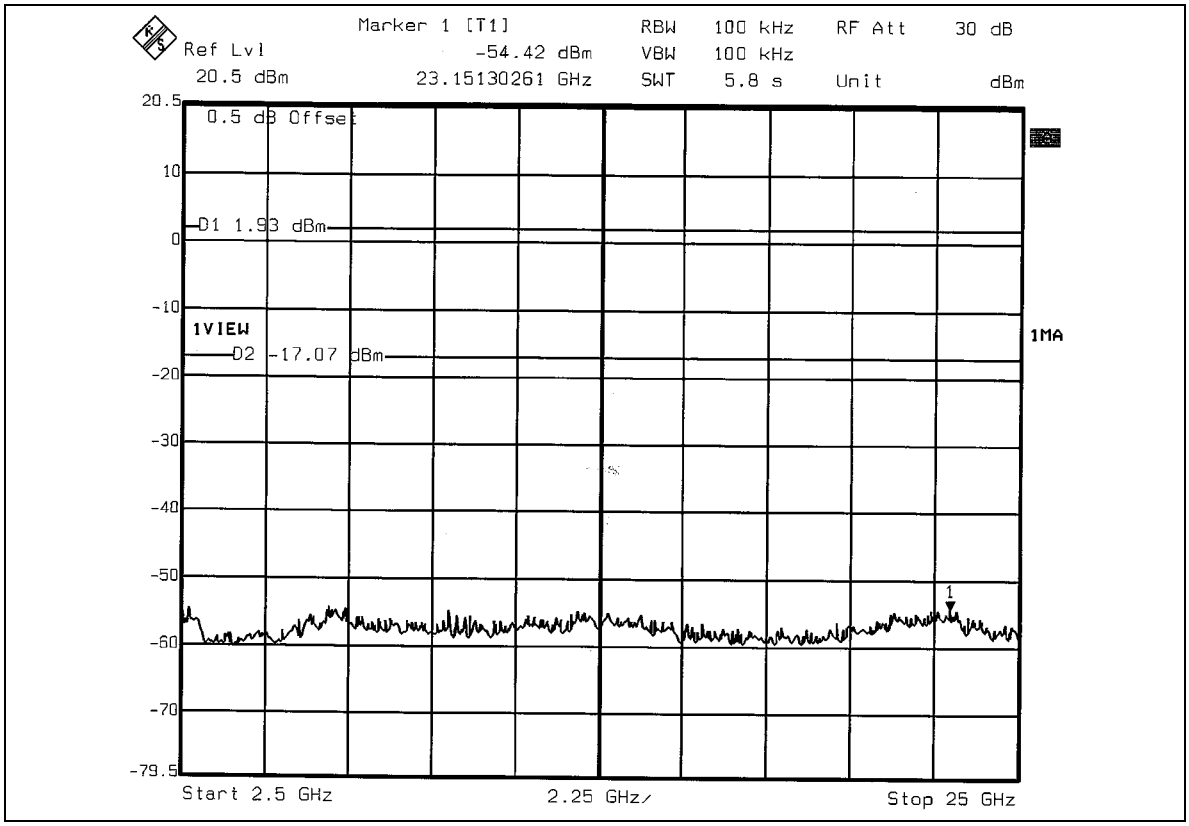





Marker 1 [T1]
Ref Lvl
20.5 dBm
-53.13 dBm
6.96392786 GHz
RBW 100 kHz
VBW 100 kHz
SWT 5.8 s
RF Att 30 dB
Unit dBm
0.5 dB Offset
D1 1.54 dBm
1VIEW
D2 -18.46 dBm
1MA
Start 2.5 GHz
2.25 GHz/
Stop 25 GHz


Marker 1 [T1]
Ref Lvl
20.5 dBm
1.93 dBm
2.45186573 GHz
RBW 100 kHz
VBW 100 kHz
SWT 50 ms
RF Att 30 dB
Unit dBm
0.5 dB Offset
D1 1.93 dBm
1VIEW
D2 -17.07 dBm
▼1 [T1] 1.93 dBm 2.45186573 GHz
▽2 [T1] -49.31 dBm 2.48350000 GHz
▽3 [T1] -47.53 dBm 2.48430160 GHz
▽4 [T1] -54.63 dBm 2.50000000 GHz
1MA
F1
F2
Center 2.519 GHz
20 MHz/
Span 200 MHz


Marker 1 [T1]
Ref Lvl
20.5 dBm
-3.60 dBm
2.44586012 GHz
RBW 1 MHz
VBW 10 Hz
SWT 50 s
RF Att 30 dB
Unit dBm
0.5 dB Offset
▼1 [T1] -3.60 dBm 2.44586012 GHz
▽2 [T1] -50.72 dBm 2.48350000 GHz
▽3 [T1] -51.09 dBm 2.48390080 GHz
▽4 [T1] -56.55 dBm 2.50000000 GHz
D1 -3.6 dBm
1VIEW
D2 -23.6 dBm
1MA
PRN
F1
F2
Center 2.5158 GHz
20 MHz/
Span 200 MHz


Marker 1 [T1]
Ref Lvl
20.5 dBm
-54.42 dBm
23.15130261 GHz
RBW 100 kHz
VBW 100 kHz
SWT 5.8 s
RF Att 30 dB
Unit dBm
0.5 dB Offset
D1 1.93 dBm
1VIEW
D2 -17.07 dBm
1MA
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.

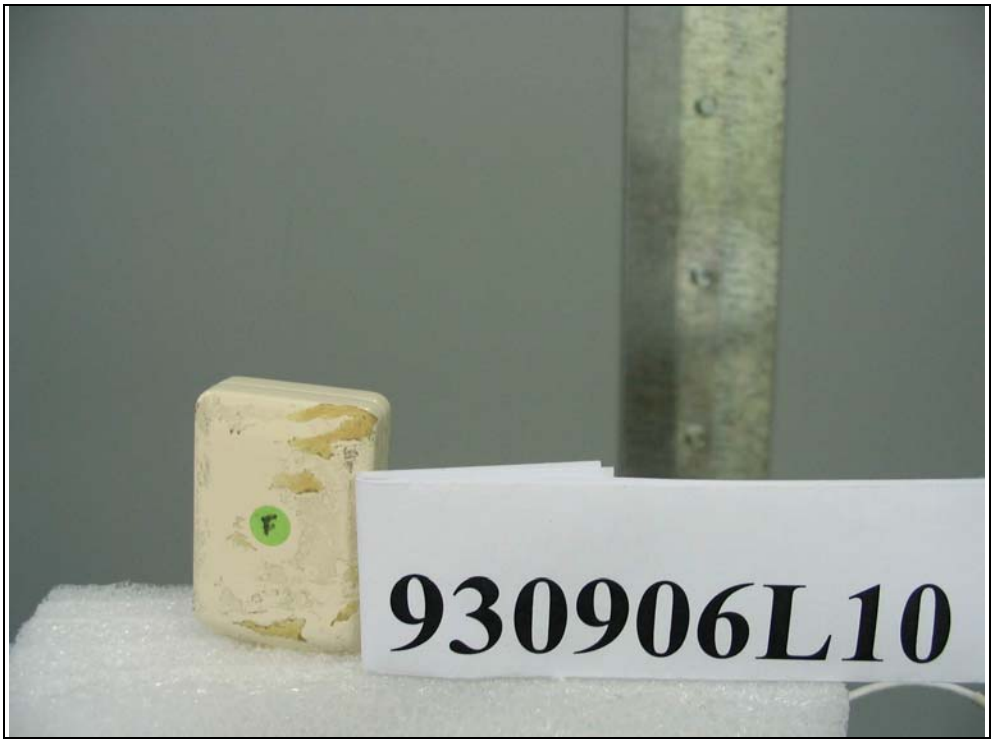
4.7.2 ANTENNA CONNECTED CONSTRUCTION

The antenna used in this product are Patch and PCB printed antennas with RSMA connector. And the maximum Gain of this antenna is 0.52dBi.

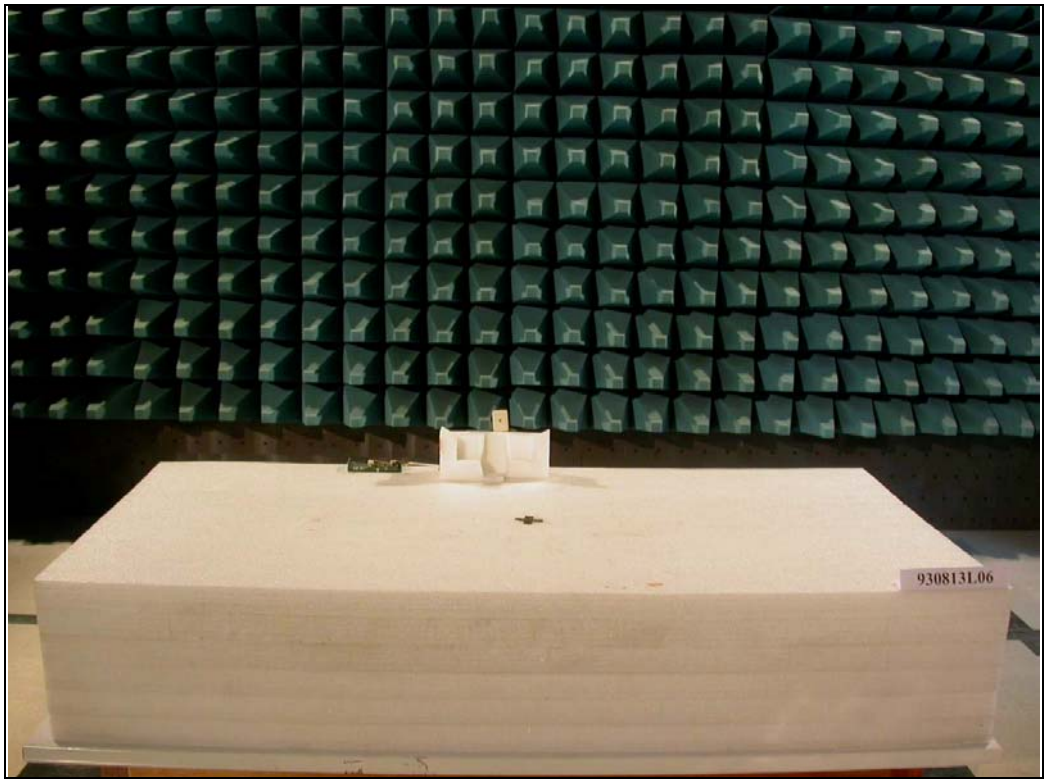
5. PHOTOGRAPHS OF THE TEST CONFIGURATION

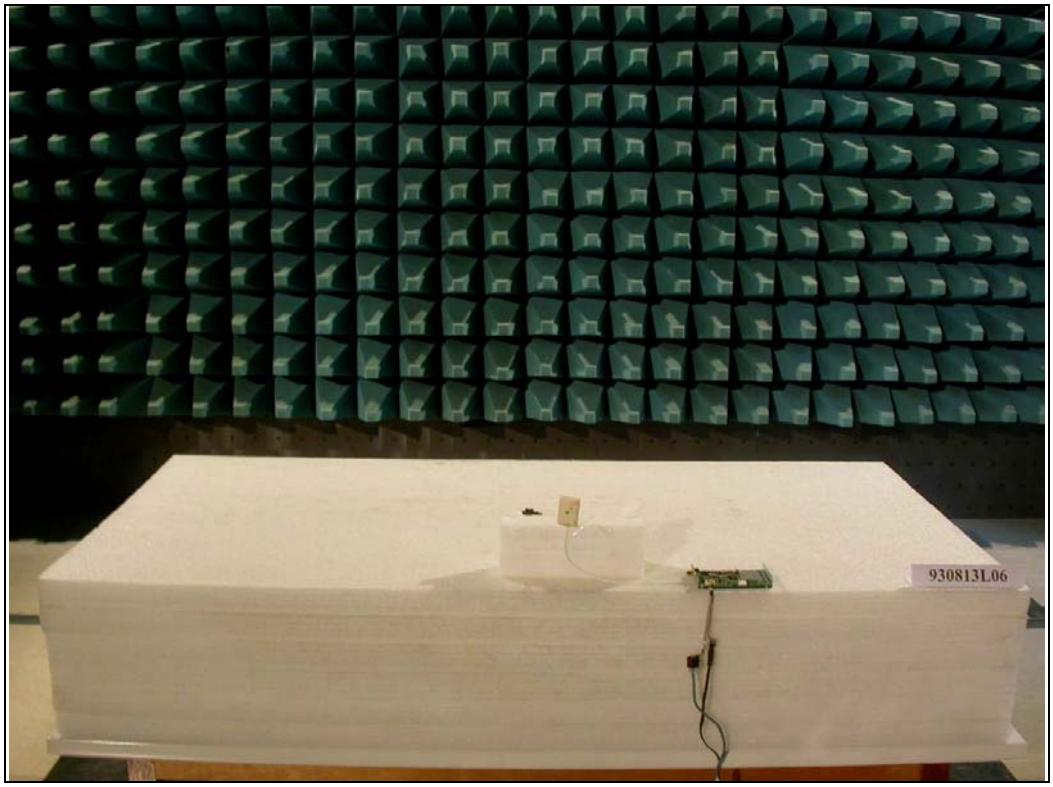
CONDUCTED EMISSION TEST

930906L10


930906L10

RADIATED EMISSION TEST





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6. 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