5 TEST TYPES AND RESULTS (For Dual Chain (TX))

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	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.

5.1.2 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	Jan. 09, 2006
LISN ROHDE & SCHWARZ	ESH3-Z5	100312	Feb. 15, 2006
LISN ROHDE & SCHWARZ	ESH2-Z5	100104	Feb. 15, 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 1.
3. The VCCI Site Registration No. is C-2040.

5.1.3 TEST PROCEDURES

d. 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.

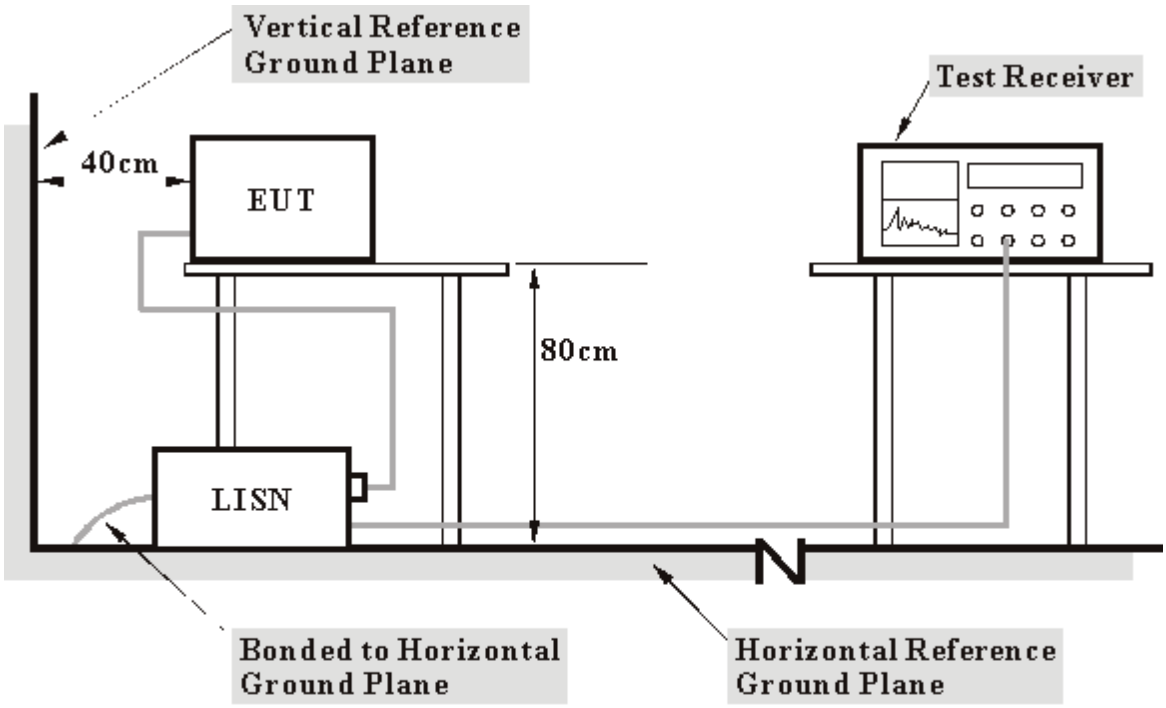
e. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

f. 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

a. Connected the EUT with extended mini PCI card to a notebook system placed on a testing table.
b. The notebook system ran a test program (provided by manufacturer) to enable EUT under transmission/receiving condition continuously at specific channel frequency.
c. The notebook system show “H” messages on its screen.
d. Repeated item c.

5.1.7 TEST RESULTS

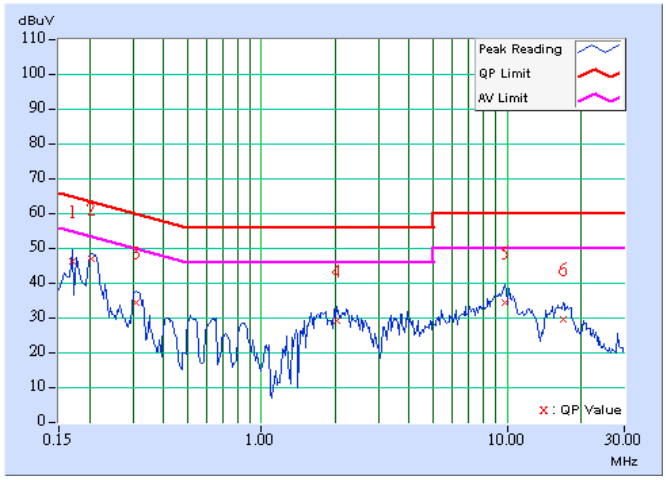
Conducted Worst Case Data
802.11g OFDM modulation

EUT	High Speed Wireless Network Adapter	**MEASUREMENT DETAIL**	
MODEL	AV10	**PHASE**	Line 1
CHANNEL	Channel 1	**6dB BANDWIDTH**	9 kHz
MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	20deg. C, 74%RH, 991hPa
TRANSFER RATE	6Mbps	**INPUT POWER (SYSTEM)**	120Vac, 60 Hz
TEST CONFIGURE MODE	**2**	**TEST MODE**	Dual chain
TESTED BY	Scott Yang		

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	45.52	-	45.62	-	64.98	54.98	-19.36	-
2	0.205	0.11	46.31	-	46.42	-	63.42	53.42	-17.00	-
3	0.310	0.11	33.57	-	33.68	-	59.97	49.97	-26.28	-
4	2.039	0.21	28.69	-	28.90	-	56.00	46.00	-27.10	-
5	9.859	0.42	33.67	-	34.09	-	60.00	50.00	-25.91	-
6	16.879	0.75	28.96	-	29.71	-	60.00	50.00	-30.29	-

*(The test data is in accordance with ADT Report No.: RF940316L11.)

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.

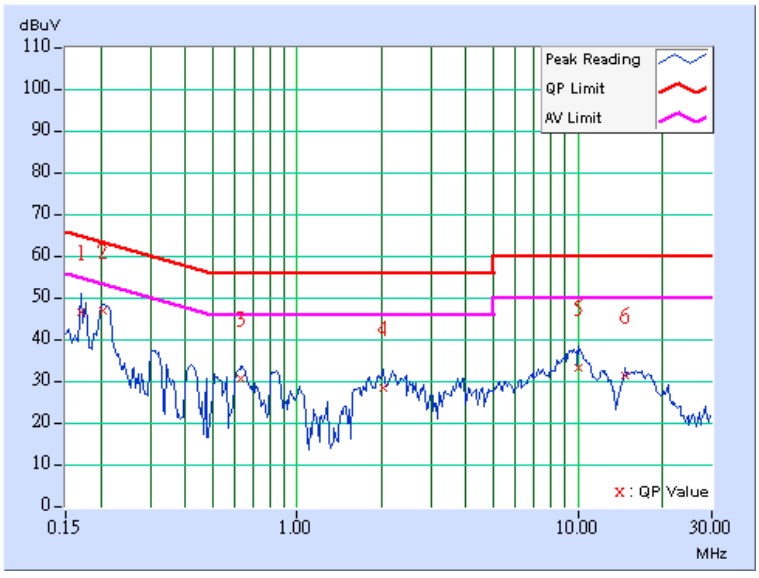


EUT	High Speed Wireless Network Adapter	MEASUREMENT DETAIL	
MODEL	AV10	PHASE	Line 2
CHANNEL	Channel 1	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	20deg. C, 74%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST CONFIGURE MODE	2	TEST MODE	Dual chain
TESTED BY	Scott Yang		

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	46.01	-	46.11	-	64.98	54.98	-18.88	-
2	0.205	0.10	46.41	-	46.51	-	63.42	53.42	-16.91	-
3	0.632	0.13	30.22	-	30.35	-	56.00	46.00	-25.65	-
4	2.022	0.21	28.04	-	28.25	-	56.00	46.00	-27.75	-
5	10.047	0.40	32.90	-	33.30	-	60.00	50.00	-26.70	-
6	14.785	0.49	31.01	-	31.50	-	60.00	50.00	-28.50	-

*(The test data is in accordance with ADT Report No.: RF940316L11.)

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.

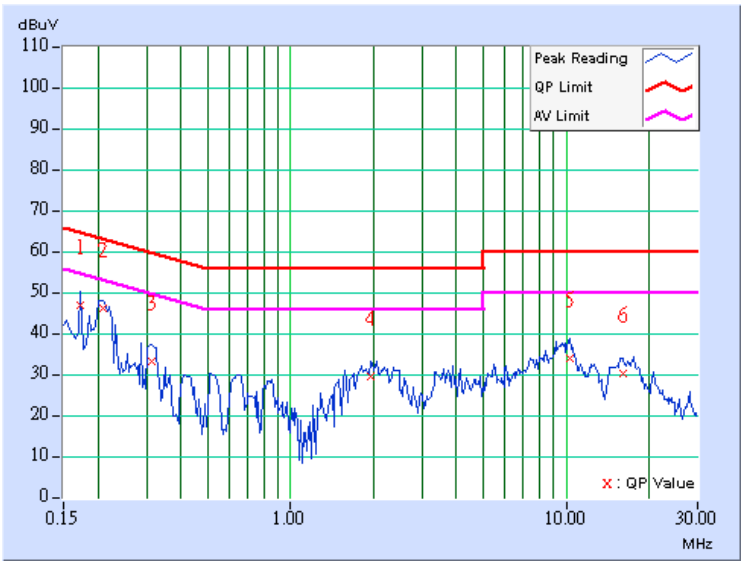


EUT	High Speed Wireless Network Adapter	MEASUREMENT DETAIL	
MODEL	AV10	PHASE	Line 1
CHANNEL	Channel 6	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	20deg. C, 74%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST CONFIGURE MODE	2	TEST MODE	Dual chain
TESTED BY	Scott Yang		

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	0.173	0.10	46.37	-	46.47	-	64.79	54.79	-18.32	-
2	0.209	0.11	45.57	-	45.68	-	63.26	53.26	-17.58	-
3	0.314	0.11	32.74	-	32.85	-	59.86	49.86	-27.01	-
4	1.953	0.21	28.79	-	29.00	-	56.00	46.00	-27.00	-
5	10.324	0.43	33.26	-	33.69	-	60.00	50.00	-26.31	-
6	16.051	0.70	29.55	-	30.25	-	60.00	50.00	-29.75	-

*(The test data is in accordance with ADT Report No.: RF940316L11.)

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.

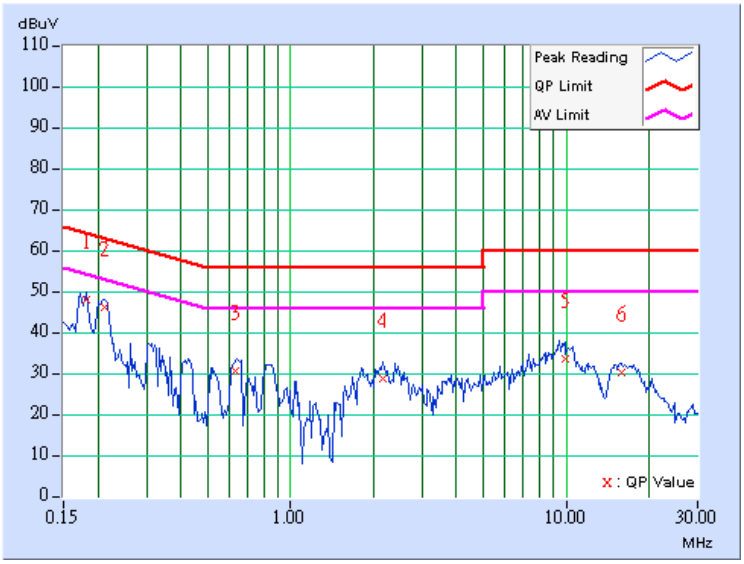


EUT	High Speed Wireless Network Adapter	MEASUREMENT DETAIL	
MODEL	AV10	PHASE	Line 2
CHANNEL	Channel 6	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	20deg. C, 74%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST CONFIGURE MODE	2	TEST MODE	Dual chain
TESTED BY	Scott Yang		

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.181	0.10	47.51	-	47.61	-	64.43	54.43	-16.82	-
2	0.213	0.10	45.71	-	45.81	-	63.11	53.11	-17.30	-
3	0.631	0.13	30.22	-	30.35	-	56.00	46.00	-25.65	-
4	2.176	0.22	28.22	-	28.44	-	56.00	46.00	-27.56	-
5	9.922	0.40	33.02	-	33.42	-	60.00	50.00	-26.58	-
6	15.824	0.51	29.83	-	30.34	-	60.00	50.00	-29.66	-

*(The test data is in accordance with ADT Report No.: RF940316L11.)

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.

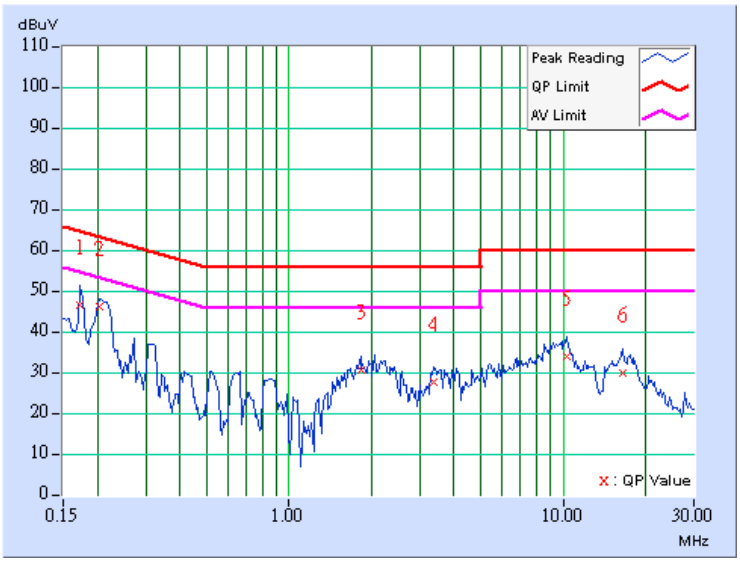


EUT	High Speed Wireless Network Adapter	MEASUREMENT DETAIL	
MODEL	AV10	PHASE	Line 1
CHANNEL	Channel 11	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	20deg. C, 74%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST CONFIGURE MODE	2	TEST MODE	Dual chain
TESTED BY	Scott Yang		

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.173	0.10	45.89	-	45.99	-	64.79	54.79	-18.80	-
2	0.205	0.11	45.53	-	45.64	-	63.42	53.42	-17.78	-
3	1.828	0.20	29.98	-	30.18	-	56.00	46.00	-25.82	-
4	3.391	0.26	27.01	-	27.27	-	56.00	46.00	-28.73	-
5	10.285	0.43	33.50	-	33.93	-	60.00	50.00	-26.07	-
6	16.430	0.72	29.29	-	30.01	-	60.00	50.00	-29.99	-

*(The test data is in accordance with ADT Report No.: RF940316L11.)

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.

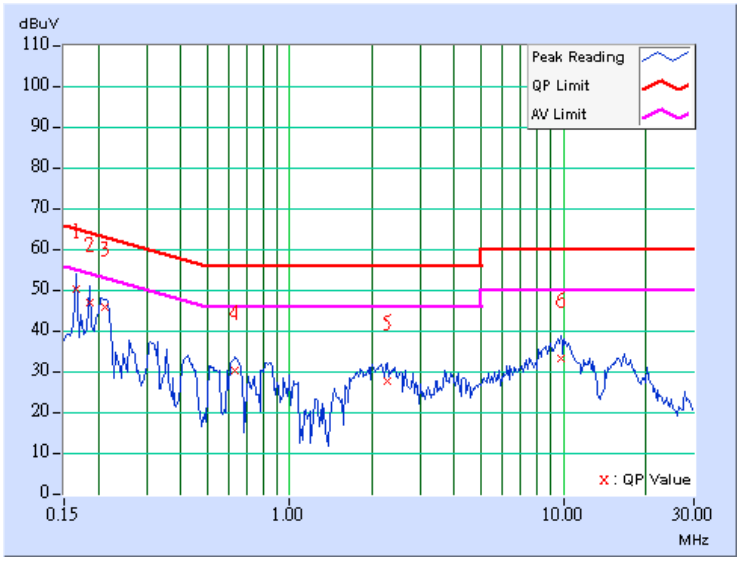


EUT	High Speed Wireless Network Adapter	MEASUREMENT DETAIL	
MODEL	AV10	PHASE	Line 2
CHANNEL	Channel 11	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	20deg. C, 74%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST CONFIGURE MODE	2	TEST MODE	Dual chain
TESTED BY	Scott Yang		

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.166	0.10	49.86	-	49.96	-	65.18	55.18	-15.22	-
2	0.185	0.10	46.59	-	46.69	-	64.25	54.25	-17.56	-
3	0.213	0.10	45.59	-	45.69	-	63.11	53.11	-17.42	-
4	0.630	0.13	29.94	-	30.07	-	56.00	46.00	-25.93	-
5	2.277	0.22	27.43	-	27.65	-	56.00	46.00	-28.35	-
6	9.840	0.40	33.01	-	33.41	-	60.00	50.00	-26.59	-

*(The test data is in accordance with ADT Report No.: RF940316L11.)

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.



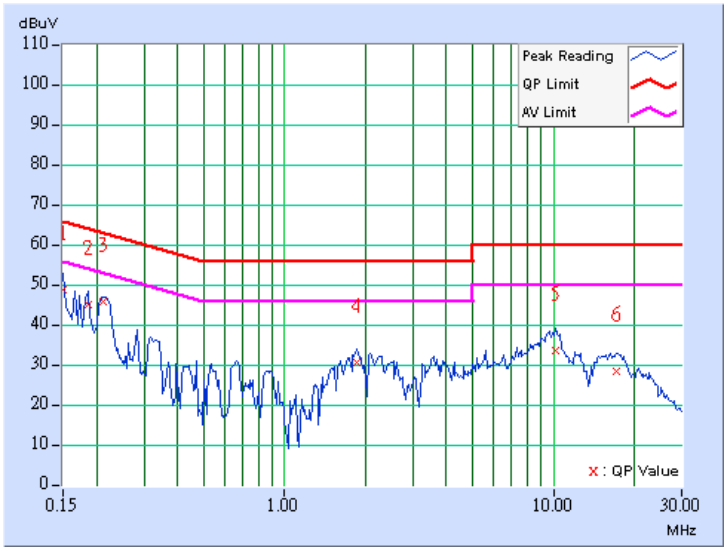
802.11g Turbo OFDM modulation

EUT	High Speed Wireless Network Adapter	**MEASUREMENT DETAIL**	
MODEL	AV10	**PHASE**	Line 1
CHANNEL	Channel 6	**6dB BANDWIDTH**	9 kHz
MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	20deg. C, 74%RH, 991hPa
TRANSFER RATE	12Mbps	**INPUT POWER (SYSTEM)**	120Vac, 60 Hz
TEST CONFIGURE MODE	**2**	**TEST MODE**	Dual chain
TESTED BY	Scott Yang		

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	0.10	48.05	-	48.15	-	66.00	56.00	-17.85	-
2	0.185	0.11	44.52	-	44.63	-	64.25	54.25	-19.62	-
3	0.213	0.11	45.17	-	45.28	-	63.11	53.11	-17.83	-
4	1.863	0.21	30.02	-	30.23	-	56.00	46.00	-25.77	-
5	10.125	0.43	32.99	-	33.42	-	60.00	50.00	-26.58	-
6	17.148	0.76	27.61	-	28.37	-	60.00	50.00	-31.63	-

*(The test data is in accordance with ADT Report No.: RF940316L11.)

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.

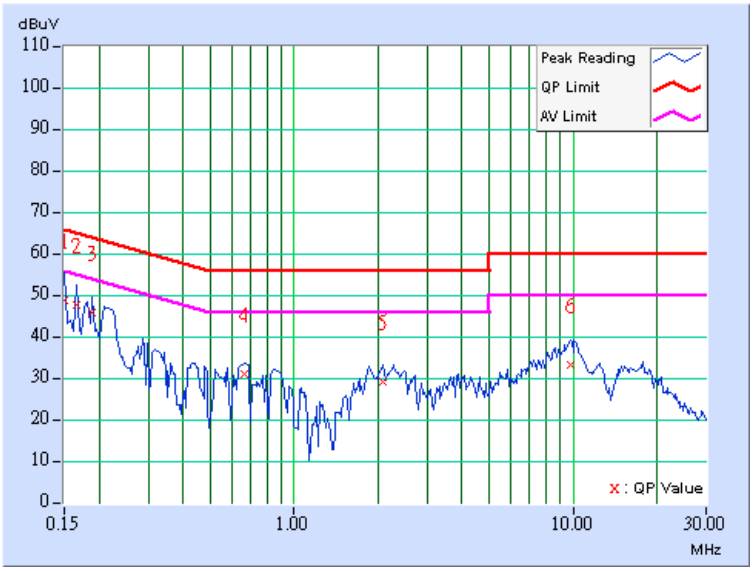


EUT	High Speed Wireless Network Adapter	MEASUREMENT DETAIL	
MODEL	AV10	PHASE	Line 2
CHANNEL	Channel 6	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	20deg. C, 74%RH, 991hPa
TRANSFER RATE	12Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST CONFIGURE MODE	2	TEST MODE	Dual chain
TESTED BY	Scott Yang		

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.150	0.10	48.44	-	48.54	-	66.00	56.00	-17.46	-
2	0.166	0.10	47.27	-	47.37	-	65.18	55.18	-17.81	-
3	0.189	0.10	45.38	-	45.48	-	64.08	54.08	-18.60	-
4	0.662	0.13	30.55	-	30.68	-	56.00	46.00	-25.32	-
5	2.094	0.21	28.95	-	29.16	-	56.00	46.00	-26.84	-
6	9.777	0.40	33.12	-	33.52	-	60.00	50.00	-26.48	-

*(The test data is in accordance with ADT Report No.: RF940316L11.)

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.



RADIATED EMISSION MEASUREMENT

5.1.8 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.

5.1.9 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.

5.1.10 TEST PROCEDURES

1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
3. 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.
4. 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.
5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
6. 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:

a. 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.

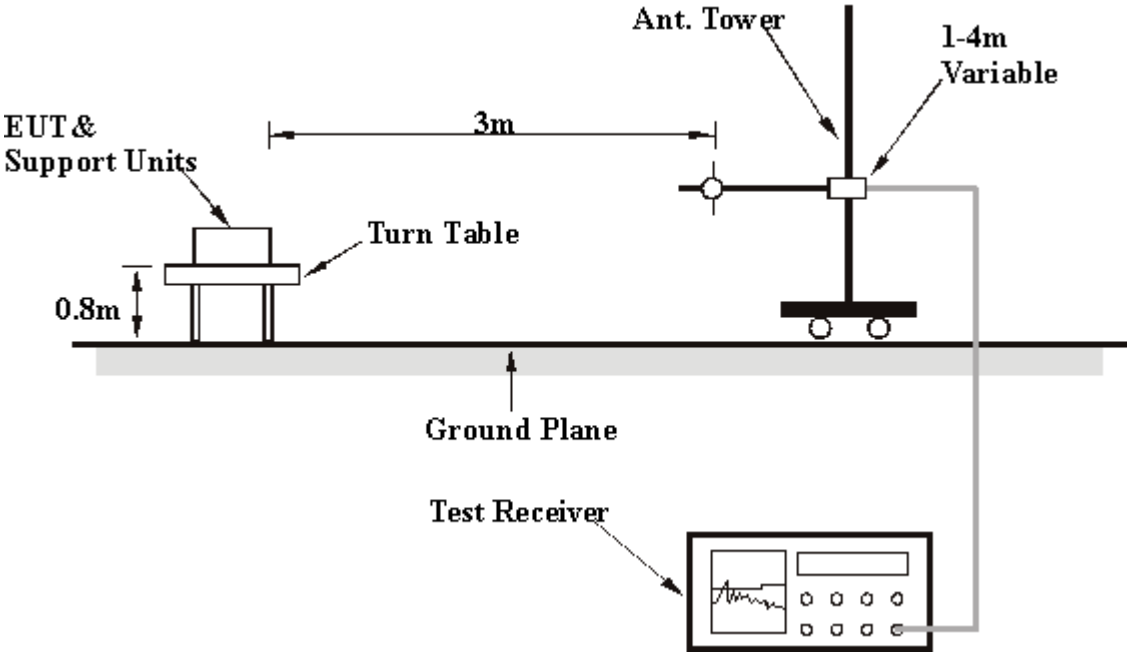
b. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz for Peak detection at frequency above 1GHz.

c. 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.

5.1.11 DEVIATION FROM TEST STANDARD

No deviation

5.1.12 TEST SETUP



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

5.1.13 EUT OPERATING CONDITIONS

For finding the maximum radiated emission under this dual chain operation mode. The beam-forming coefficients has been adjusted to swing 30 degrees each step and pre-scans reveal that the maximum radiated emission is independent of the beam-forming coefficients, and hence the all dual chain operation is measured under the condition that both chains are output at same phase.

5.1.14 TEST RESULTS

Below 1GHz Worst Case Data (Antenna 1)

EUT	High Speed Wireless Network Adapter	**MEASUREMENT DETAIL**	
MODEL	AV10	**FREQUENCY RANGE**	Below 1000MHz
CHANNEL	Channel 11	**DETECTOR FUNCTION**	Quasi-Peak
MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	22eg. C, 56RH, 991hPa
TRANSFER RATE	6Mbps	**INPUT POWER (SYSTEM)**	120Vac, 60 Hz
TEST MODE	**1**	**TEST MODE**	Dual chain
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	99.98	38.14 QP	43.50	-5.36	1.75 H	319	27.40	10.74
2	133.03	40.88 QP	43.50	-2.62	2.00 H	184	27.16	13.72
3	168.02	39.83 QP	43.50	-3.67	1.25 H	199	25.95	13.88
4	195.23	39.93 QP	43.50	-3.57	1.50 H	1	28.42	11.51
5	236.05	39.46 QP	46.00	-6.54	1.25 H	169	26.80	12.66
6	282.71	41.92 QP	46.00	-4.08	1.00 H	121	27.83	14.09
7	331.30	35.43 QP	46.00	-10.57	1.00 H	283	20.39	15.04
8	453.77	40.22 QP	46.00	-5.78	1.50 H	1	22.26	17.96
9	510.14	40.79 QP	46.00	-5.21	1.50 H	4	22.00	18.79
10	570.40	38.51 QP	46.00	-7.49	1.25 H	121	18.38	20.13
11	601.50	36.43 QP	46.00	-9.57	1.50 H	10	15.52	20.91
12	920.30	38.31 QP	46.00	-7.69	1.00 H	175	13.00	25.31
13	951.40	35.27 QP	46.00	-10.73	1.25 H	13	9.66	25.61

*(The test data is in accordance with ADT Report No.: RF940316L11.)

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.

EUT	High Speed Wireless Network Adapter	MEASUREMENT DETAIL	
MODEL	AV10	FREQUENCY RANGE	Below 1000MHz
CHANNEL	Channel 11	DETECTOR FUNCTION	Quasi-Peak
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	22eg. C, 56RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	1	TEST MODE	Dual chain
TESTED BY	Match Tsui		

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	66.93	31.69 QP	40.00	-8.31	1.00 V	208	19.01	12.68
2	98.04	36.16 QP	43.50	-7.34	1.25 V	40	25.57	10.59
3	195.23	33.08 QP	43.50	-10.42	1.75 V	52	21.57	11.51
4	453.77	38.66 QP	46.00	-7.34	1.00 V	58	20.69	17.96
5	512.08	37.42 QP	46.00	-8.58	1.25 V	79	18.59	18.83
6	570.40	35.41 QP	46.00	-10.59	1.00 V	256	15.27	20.13
7	801.72	36.98 QP	46.00	-9.02	1.25 V	76	13.27	23.72
8	848.38	34.51 QP	46.00	-11.49	1.25 V	91	10.40	24.11
9	902.81	38.83 QP	46.00	-7.17	1.25 V	103	13.69	25.13
10	943.63	35.87 QP	46.00	-10.13	1.00 V	82	10.33	25.55

*(The test data is in accordance with ADT Report No.: RF940316L11.)

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 (Antenna 2)

EUT	High Speed Wireless Network Adapter	**MEASUREMENT DETAIL**	
MODEL	AV10	**FREQUENCY RANGE**	Below 1000MHz
CHANNEL	Channel 11	**DETECTOR FUNCTION**	Quasi-Peak
MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	22eg. C, 56RH, 991hPa
TRANSFER RATE	6Mbps	**INPUT POWER (SYSTEM)**	120Vac, 60 Hz
TEST MODE	**2**	**TEST MODE**	Dual chain
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	99.98	41.25 QP	43.50	-2.25	2.00 H	157	30.51	10.74
2	133.03	40.12 QP	43.50	-3.38	2.00 H	10	26.40	13.72
3	183.57	40.12 QP	43.50	-3.38	2.00 H	4	27.69	12.43
4	228.28	36.47 QP	46.00	-9.53	1.50 H	25	24.31	12.16
5	280.76	40.65 QP	46.00	-5.35	1.00 H	25	26.58	14.07
6	335.19	34.32 QP	46.00	-11.68	1.00 H	286	19.19	15.13
7	401.28	38.11 QP	46.00	-7.89	1.00 H	292	21.44	16.67
8	453.77	38.47 QP	46.00	-7.53	1.50 H	22	20.51	17.96
9	570.40	36.89 QP	46.00	-9.11	1.50 H	352	16.76	20.13
10	902.81	34.54 QP	46.00	-11.46	2.00 H	220	9.40	25.13

*(The test data is in accordance with ADT Report No.: RF940316L11.)

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.

EUT	High Speed Wireless Network Adapter	MEASUREMENT DETAIL	
MODEL	AV10	FREQUENCY RANGE	Below 1000MHz
CHANNEL	Channel 11	DETECTOR FUNCTION	Quasi-Peak
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	22eg. C, 56RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	2	TEST MODE	Dual chain
TESTED BY	Match Tsui		

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	66.93	32.06 QP	40.00	-7.94	1.00 V	19	19.38	12.68
2	101.92	37.82 QP	43.50	-5.68	1.50 V	34	26.87	10.94
3	133.03	32.62 QP	43.50	-10.88	2.00 V	79	18.90	13.72
4	183.57	36.38 QP	43.50	-7.12	2.00 V	73	23.95	12.43
5	354.63	34.73 QP	46.00	-11.27	2.00 V	346	19.15	15.57
6	453.77	37.76 QP	46.00	-8.24	1.00 V	22	19.80	17.96
7	570.40	34.72 QP	46.00	-11.28	1.00 V	271	14.59	20.13
8	663.71	34.42 QP	46.00	-11.58	1.00 V	283	12.65	21.77
9	902.81	34.83 QP	46.00	-11.17	2.00 V	313	9.70	25.13

*(The test data is in accordance with ADT Report No.: RF940316L11.)

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.

802.11g OFDM modulation (Antenna 1)

EUT	High Speed Wireless Network Adapter	MEASUREMENT DETAIL	
MODEL	AV10	FREQUENCY RANGE	1 ~ 25GHz
CHANNEL	Channel 1	DETECTOR FUNCTION	Peak(PK) Average (AV)
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	22eg. C, 56RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	1	TEST MODE	Dual chain
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	2016.00	45.96 PK	74.00	-28.04	1.34 H	137	16.55	29.41
1	2016.00	43.30 AV	54.00	-10.70	1.34 H	137	13.89	29.41
2	2320.00	54.19 PK	74.00	-19.81	1.38 H	298	23.49	30.70
2	2320.00	46.96 AV	54.00	-7.04	1.38 H	298	16.26	30.70
3	2390.00	55.21 PK	74.00	-18.79	1.10 H	33	24.24	30.97
3	2390.00	45.16 AV	54.00	-8.84	1.10 H	33	14.19	30.97
4	*2412.00	101.45 PK			1.10 H	33	70.39	31.06
4	*2412.00	91.31 AV			1.10 H	33	60.25	31.06
5	4824.00	49.79 PK	74.00	-24.21	1.22 H	312	13.36	36.43
5	4824.00	35.39 AV	54.00	-18.61	1.22 H	312	-1.04	36.43

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	2016.00	54.70 PK	74.00	-19.30	1.01 V	52	25.29	29.41
1	**2016.00**	**53.39 AV**	**54.00**	**-0.61**	**1.01 V**	**52**	**23.98**	**29.41**
2	2320.00	61.72 PK	74.00	-12.28	1.22 V	82	31.02	30.70
2	2320.00	50.52 AV	54.00	-3.48	1.22 V	82	19.82	30.70
3	2390.00	67.25 PK	74.00	-6.75	1.32 V	63	36.28	30.97
3	2390.00	50.08 AV	54.00	-3.92	1.32 V	63	19.11	30.97
4	*2412.00	110.18 PK			1.10 V	52	79.12	31.06
4	*2412.00	99.36 AV			1.10 V	52	68.30	31.06
5	2688.00	43.78 PK	74.00	-30.22	1.22 V	98	12.00	31.78
5	2688.00	37.11 AV	54.00	-16.89	1.22 V	98	5.33	31.78
6	4824.00	54.91 PK	74.00	-19.09	1.01 V	112	18.48	36.43
6	4824.00	39.14 AV	54.00	-14.86	1.01 V	112	2.71	36.43

*(The test data is in accordance with ADT Report No.: RF940316L11.)

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	High Speed Wireless Network Adapter	MEASUREMENT DETAIL	
MODEL	AV10	FREQUENCY RANGE	1 ~ 25GHz
CHANNEL	Channel 6	DETECTOR FUNCTION	Peak(PK) Average (AV)
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	22eg. C, 56RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	1	TEST MODE	Dual chain
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	2016.00	45.92 PK	74.00	-28.08	1.01 H	328	16.51	29.41
1	2016.00	42.54 AV	54.00	-11.46	1.01 H	328	13.13	29.41
2	2320.00	54.91 PK	74.00	-19.09	1.10 H	297	24.21	30.70
2	2320.00	48.12 AV	54.00	-5.88	1.10 H	297	17.42	30.70
3	*2437.00	105.53 PK			1.58 H	21	74.36	31.17
3	*2437.00	95.93 AV			1.58 H	21	64.76	31.17
4	4874.00	51.41 PK	74.00	-22.59	1.01 H	19	14.87	36.54
4	4874.00	37.72 AV	54.00	-16.28	1.01 H	19	1.18	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	2016.00	51.76 PK	74.00	-22.24	1.22 V	237	22.35	29.41
1	2016.00	49.69 AV	54.00	-4.31	1.22 V	237	20.28	29.41
2	2320.00	58.35 PK	74.00	-15.65	1.18 V	83	27.65	30.70
2	2320.00	50.30 AV	54.00	-3.70	1.18 V	83	19.60	30.70
3	*2437.00	111.88 PK			1.31 V	208	80.71	31.17
3	*2437.00	101.82 AV			1.31 V	208	70.65	31.17
4	2688.00	43.91 PK	74.00	-30.09	1.18 V	52	12.13	31.78
4	2688.00	36.89 AV	54.00	-17.11	1.18 V	52	5.11	31.78
5	4874.00	57.67 PK	74.00	-16.33	1.25 V	36	21.13	36.54
5	4874.00	43.56 AV	54.00	-10.44	1.25 V	36	7.02	36.54

*(The test data is in accordance with ADT Report No.: RF940316L11.)

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	High Speed Wireless Network Adapter	MEASUREMENT DETAIL	
MODEL	AV10	FREQUENCY RANGE	1 ~ 25GHz
CHANNEL	Channel 11	DETECTOR FUNCTION	Peak(PK) Average (AV)
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	22eg. C, 56RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	1	TEST MODE	Dual chain
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	2016.00	46.10 PK	74.00	-27.90	1.01 H	289	16.69	29.41
1	2016.00	43.61 AV	54.00	-10.39	1.01 H	289	14.20	29.41
2	2320.00	55.08 PK	74.00	-18.92	1.37 H	299	24.38	30.70
2	2320.00	48.39 AV	54.00	-5.61	1.37 H	299	17.69	30.70
3	*2462.00	100.84 PK			1.25 H	21	69.56	31.28
3	*2462.00	92.29 AV			1.25 H	21	61.01	31.28
4	2483.50	54.63 PK	74.00	-19.37	1.25 H	21	23.26	31.37
4	2483.50	44.70 AV	54.00	-9.30	1.25 H	21	13.33	31.37

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	2016.00	52.62 PK	74.00	-21.38	1.01 V	43	23.21	29.41
1	2016.00	51.19 AV	54.00	-2.81	1.01 V	43	21.78	29.41
2	2320.00	59.23 PK	74.00	-14.77	1.21 V	82	28.53	30.70
2	2320.00	50.91 AV	54.00	-3.09	1.21 V	82	20.21	30.70
3	*2462.00	108.10 PK			1.11 V	12	76.82	31.28
3	*2462.00	98.34 AV			1.11 V	12	67.06	31.28
4	2483.50	58.46 PK	74.00	-15.54	1.11 V	12	27.09	31.37
4	2483.50	47.43 AV	54.00	-6.57	1.11 V	12	16.06	31.37
5	2688.00	42.70 PK	74.00	-31.30	1.45 V	311	10.92	31.78
5	2688.00	35.69 AV	54.00	-18.31	1.45 V	311	3.91	31.78
6	4924.00	45.69 PK	74.00	-28.31	1.01 V	360	9.03	36.66
6	4924.00	33.48 AV	54.00	-20.52	1.01 V	360	-3.18	36.66

*(The test data is in accordance with ADT Report No.: RF940316L11.)

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

EUT	High Speed Wireless Network Adapter	MEASUREMENT DETAIL	
MODEL	AV10	FREQUENCY RANGE	1 ~ 25GHz
CHANNEL	Channel 6	DETECTOR FUNCTION	Peak(PK) Average (AV)
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	22eg. C, 56RH, 991hPa
TRANSFER RATE	12Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	**1**	TEST MODE	Dual chain
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	2016.00	43.97 PK	74.00	-30.03	1.03 H	289	14.56	29.41
1	2016.00	41.06 AV	54.00	-12.94	1.03 H	289	11.65	29.41
2	2320.00	54.71 PK	74.00	-19.29	1.10 H	352	24.01	30.70
2	2320.00	44.46 AV	54.00	-9.54	1.10 H	352	13.76	30.70
3	2390.00	55.08 PK	74.00	-18.92	1.21 H	282	24.11	30.97
3	2390.00	45.49 AV	54.00	-8.51	1.21 H	282	14.52	30.97
4	*2437.00	101.66 PK			1.21 H	282	70.49	31.17
4	*2437.00	92.37 AV			1.21 H	282	61.20	31.17
5	2483.50	55.46 PK	74.00	-18.54	1.21 H	282	24.09	31.37
5	2483.50	45.06 AV	54.00	-8.94	1.21 H	282	13.69	31.37
6	4874.00	51.71 PK	74.00	-22.29	1.04 H	1	15.17	36.54
6	4874.00	38.09 AV	54.00	-15.91	1.04 H	1	1.55	36.54

*(The test data is in accordance with ADT Report No.: RF940316L11.)

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	High Speed Wireless Network Adapter	MEASUREMENT DETAIL	
MODEL	AV10	FREQUENCY RANGE	1 ~ 25GHz
CHANNEL	Channel 6	DETECTOR FUNCTION	Peak(PK) Average (AV)
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	22eg. C, 56RH, 991hPa
TRANSFER RATE	12Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	**1**	TEST MODE	Dual chain
TESTED BY	Match Tsui		

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	2016.00	51.16 PK	74.00	-22.84	1.01 V	54	21.75	29.41
1	2016.00	49.23 AV	54.00	-4.77	1.01 V	54	19.82	29.41
2	2320.00	59.13 PK	74.00	-14.87	1.20 V	81	28.43	30.70
2	2320.00	50.85 AV	54.00	-3.15	1.20 V	81	20.15	30.70
3	2390.00	65.72 PK	74.00	-8.28	1.13 V	107	34.75	30.97
3	2390.00	52.48 AV	54.00	-1.52	1.13 V	107	21.51	30.97
4	*2437.00	110.50 PK			1.13 V	107	79.33	31.17
4	*2437.00	101.11 AV			1.13 V	107	69.94	31.17
5	2483.50	67.30 PK	74.00	-6.70	1.13 V	107	35.93	31.37
5	2483.50	51.66 AV	54.00	-2.34	1.13 V	107	20.29	31.37
6	2688.00	43.71 PK	74.00	-30.29	1.24 V	100	11.93	31.78
6	2688.00	37.86 AV	54.00	-16.14	1.24 V	100	6.08	31.78
7	4874.00	55.92 PK	74.00	-18.08	1.13 V	108	19.38	36.54
7	4874.00	41.88 AV	54.00	-12.12	1.13 V	108	5.34	36.54

*(The test data is in accordance with ADT Report No.: RF940316L11.)

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 (Antenna 2)

EUT	High Speed Wireless Network Adapter	**MEASUREMENT DETAIL**	
MODEL	AV10	**FREQUENCY RANGE**	1 ~ 25GHz
CHANNEL	Channel 1	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	22eg. C, 56RH, 991hPa
TRANSFER RATE	6Mbps	**INPUT POWER (SYSTEM)**	120Vac, 60 Hz
TEST MODE	**2**	**TEST MODE**	Dual chain
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	99.08 PK			1.46 H	69	66.92	32.16
1	*2462.00	89.86 AV			1.46 H	69	57.70	32.16
2	2688.00	41.61 PK	74.00	-32.39	1.14 H	24	8.76	32.85
3	4924.00	47.24 PK	74.00	-26.76	1.35 H	125	9.10	38.14

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	2390.00	59.50 PK	74.00	-14.50	1.68 V	172	27.63	31.87
1	2390.00	51.60 AV	54.00	-2.40	1.68 V	172	19.73	31.87
2	*2412.00	107.50 PK			1.68 V	172	75.54	31.96
2	*2412.00	98.18 AV			1.68 V	172	66.22	31.96
3	2688.00	42.93 PK	74.00	-31.07	1.62 V	21	10.08	32.85
4	4824.00	48.81 PK	74.00	-25.19	1.32 V	21	10.98	37.83

*(The test data is in accordance with ADT Report No.: RF940316L11.)

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	High Speed Wireless Network Adapter	MEASUREMENT DETAIL	
MODEL	AV10	FREQUENCY RANGE	1 ~ 25GHz
CHANNEL	Channel 6	DETECTOR FUNCTION	Peak(PK) Average (AV)
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	22eg. C, 56RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	**2**	TEST MODE	Dual chain
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	100.53 PK			1.27 H	270	68.47	32.06
1	*2437.00	90.77 AV			1.27 H	270	58.71	32.06
2	4874.00	49.98 PK	74.00	-24.02	1.52 H	221	12.00	37.98

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	111.30 PK			1.42 V	236	79.24	32.06
1	*2437.00	100.61 AV			1.42 V	236	68.55	32.06
2	2688.00	45.61 PK	74.00	-28.39	1.25 V	201	12.76	32.85
3	4874.00	57.13 PK	74.00	-16.87	1.32 V	21	19.15	37.98
3	4874.00	43.40 AV	54.00	-10.60	1.32 V	21	5.42	37.98

*(The test data is in accordance with ADT Report No.: RF940316L11.)

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	High Speed Wireless Network Adapter	MEASUREMENT DETAIL	
MODEL	AV10	FREQUENCY RANGE	1 ~ 25GHz
CHANNEL	Channel 11	DETECTOR FUNCTION	Peak(PK) Average (AV)
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	22eg. C, 56RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	**2**	TEST MODE	Dual chain
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	95.06 PK			1.20 H	93	62.90	32.16
1	*2462.00	85.56 AV			1.20 H	93	53.40	32.16
2	2688.00	40.22 PK	74.00	-33.78	1.24 H	152	7.37	32.85
3	4924.00	46.15 PK	74.00	-27.85	1.62 H	165	8.01	38.14

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	*2462.00	103.77 PK			1.08 V	214	71.61	32.16
1	*2462.00	91.94 AV			1.08 V	214	59.78	32.16
2	2483.50	58.24 PK	74.00	-15.76	1.08 V	214	26.00	32.24
2	2483.50	49.74 AV	54.00	-4.26	1.08 V	214	17.50	32.24
3	2688.00	44.00 PK	74.00	-30.00	1.52 V	121	11.15	32.85
4	4924.00	46.64 PK	74.00	-27.36	1.16 V	100	8.50	38.14

*(The test data is in accordance with ADT Report No.: RF940316L11.)

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

EUT	High Speed Wireless Network Adapter	MEASUREMENT DETAIL	
MODEL	AV10	FREQUENCY RANGE	1 ~ 25GHz
CHANNEL	Channel 6	DETECTOR FUNCTION	Peak(PK) Average (AV)
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	22eg. C, 56RH, 991hPa
TRANSFER RATE	12Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	2	TEST MODE	Dual chain
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	2016.00	45.12 PK	74.00	-28.88	1.01 H	136	15.71	29.41
1	2016.00	42.09 AV	54.00	-11.91	1.01 H	136	12.68	29.41
2	2360.00	49.27 PK	74.00	-24.73	1.32 H	54	18.42	30.85
2	2360.00	41.75 AV	54.00	-12.25	1.32 H	54	10.90	30.85
3	2390.00	57.47 PK	74.00	-16.53	1.14 H	288	26.50	30.97
3	2390.00	46.51 AV	54.00	-7.49	1.14 H	288	15.54	30.97
4	*2437.00	100.73 PK			1.14 H	288	69.56	31.17
4	*2437.00	91.21 AV			1.14 H	288	60.04	31.17
5	2483.50	54.25 PK	74.00	-19.75	1.14 H	288	22.88	31.37
5	2483.50	44.67 AV	54.00	-9.33	1.14 H	288	13.30	31.37
6	4874.00	49.44 PK	74.00	-24.56	1.01 H	138	12.90	36.54
6	4874.00	35.75 AV	54.00	-18.25	1.01 H	138	-0.79	36.54

*(The test data is in accordance with ADT Report No.: RF940316L11.)

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	High Speed Wireless Network Adapter	MEASUREMENT DETAIL	
MODEL	AV10	FREQUENCY RANGE	1 ~ 25GHz
CHANNEL	Channel 6	DETECTOR FUNCTION	Peak(PK) Average (AV)
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	22eg. C, 56RH, 991hPa
TRANSFER RATE	12Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	**2**	TEST MODE	Dual chain
TESTED BY	Match Tsui		

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	2016.00	53.30 PK	74.00	-20.70	1.01 V	49	23.89	29.41
1	2016.00	51.70 AV	54.00	-2.30	1.01 V	49	22.29	29.41
2	2360.00	60.46 PK	74.00	-13.54	1.16 V	31	29.61	30.85
2	2360.00	51.28 AV	54.00	-2.72	1.16 V	31	20.43	30.85
3	2390.00	66.43 PK	74.00	-7.57	1.27 V	276	35.46	30.97
3	2390.00	52.12 AV	54.00	-1.88	1.27 V	276	21.15	30.97
4	*2437.00	110.86 PK			1.28 V	276	79.69	31.17
4	*2437.00	101.16 AV			1.28 V	276	69.99	31.17
5	2483.50	64.80 PK	74.00	-9.20	1.27 V	276	33.43	31.37
5	2483.50	51.18 AV	54.00	-2.82	1.27 V	276	19.81	31.37
6	2688.00	43.57 PK	74.00	-30.43	1.17 V	328	11.79	31.78
6	2688.00	37.40 AV	54.00	-16.60	1.17 V	328	5.62	31.78
7	4874.00	55.88 PK	74.00	-18.12	1.01 V	360	19.34	36.54
7	4874.00	41.34 AV	54.00	-12.66	1.01 V	360	4.80	36.54

*(The test data is in accordance with ADT Report No.: RF940316L11.)

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.

5.2 6dB BANDWIDTH MEASUREMENT

5.2.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

5.2.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
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.

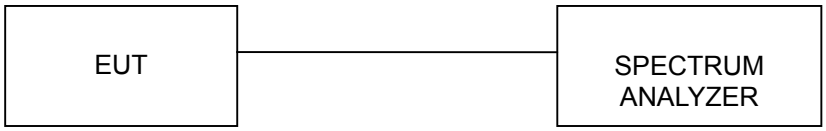
5.2.3 TEST PROCEDURE

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

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

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

5.2.7 TEST RESULTS

802.11g OFDM modulation

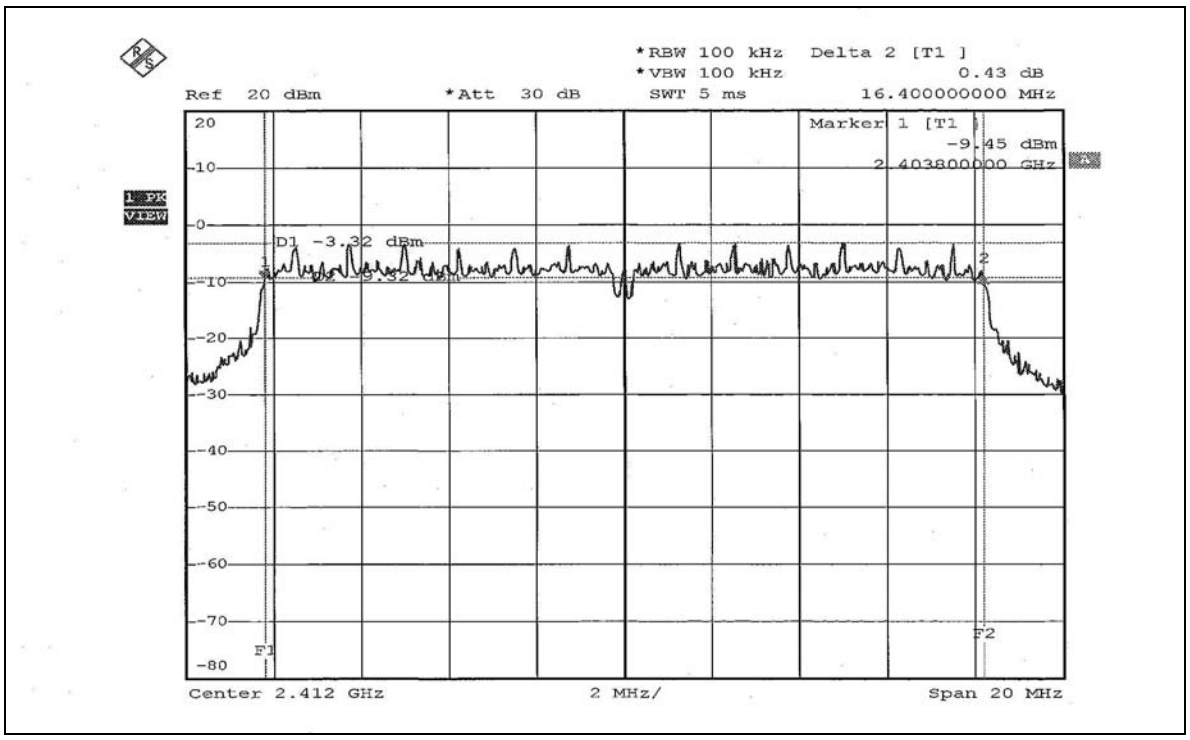
EUT	High Speed Wireless Network Adapter	**MODEL**	AV10
MODULATION TYPE	BPSK	**TRANSFER RATE**	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	24deg.C, 53%RH, 991hPa
TEST MODE	Dual chain	**TESTED BY**	Gary Chang

CHANNEL	CHANNEL FREQUENCY (MHz)	6 dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS/FAIL
		Chain 0	Chain 1		
1	2412	16.40	16.36	0.5	PASS
6	2437	16.36	16.36	0.5	PASS
11	2462	16.44	16.36	0.5	PASS

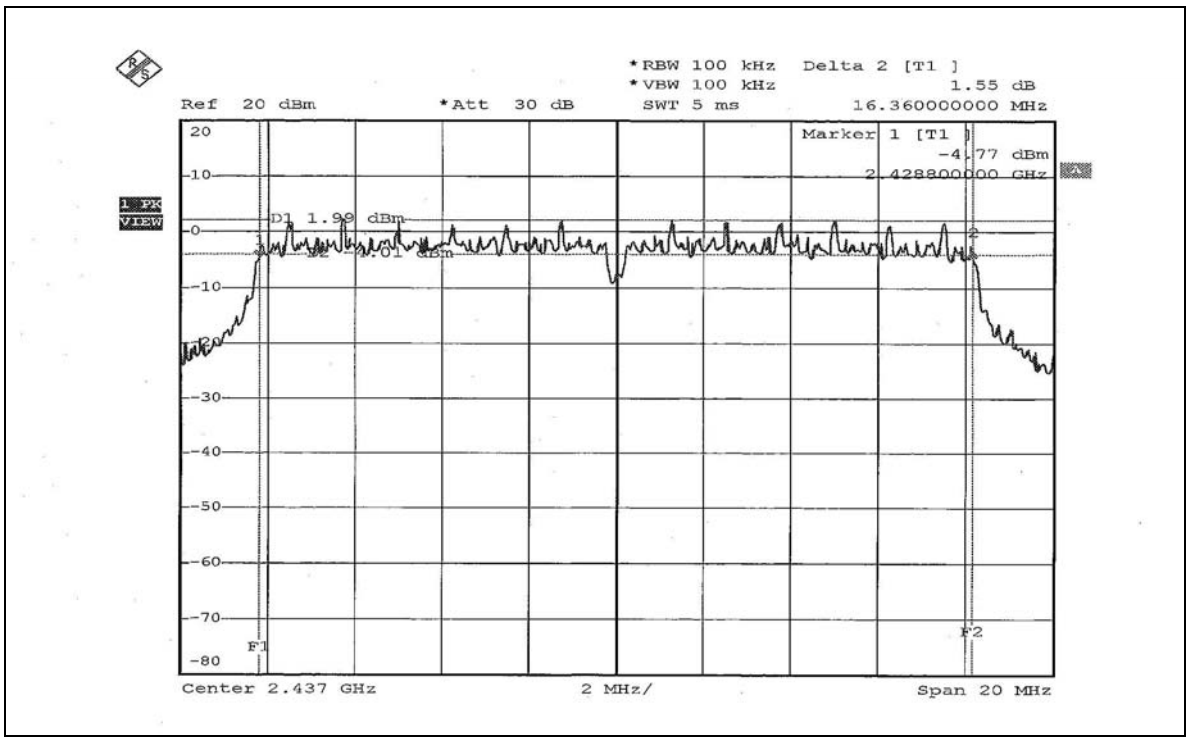
*(The test data is in accordance with ADT Report No.: RF940316L11.)

For Dual Chain (Chain 0):

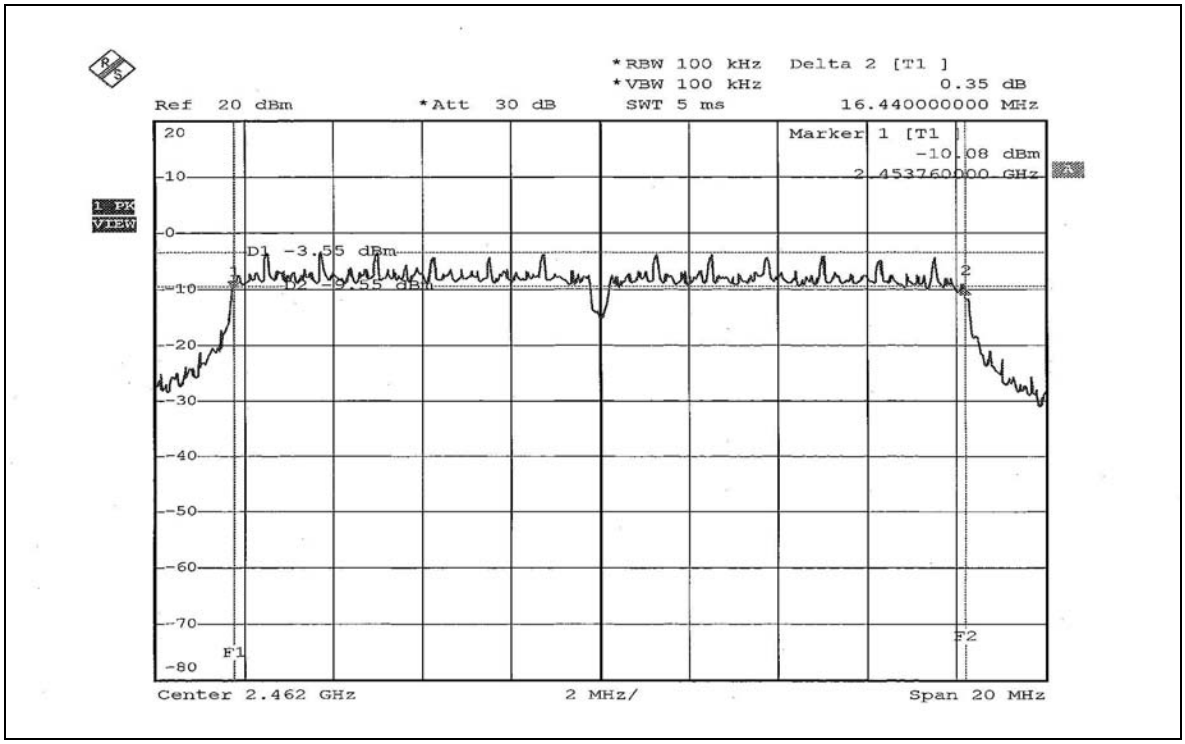
CH1



CH6

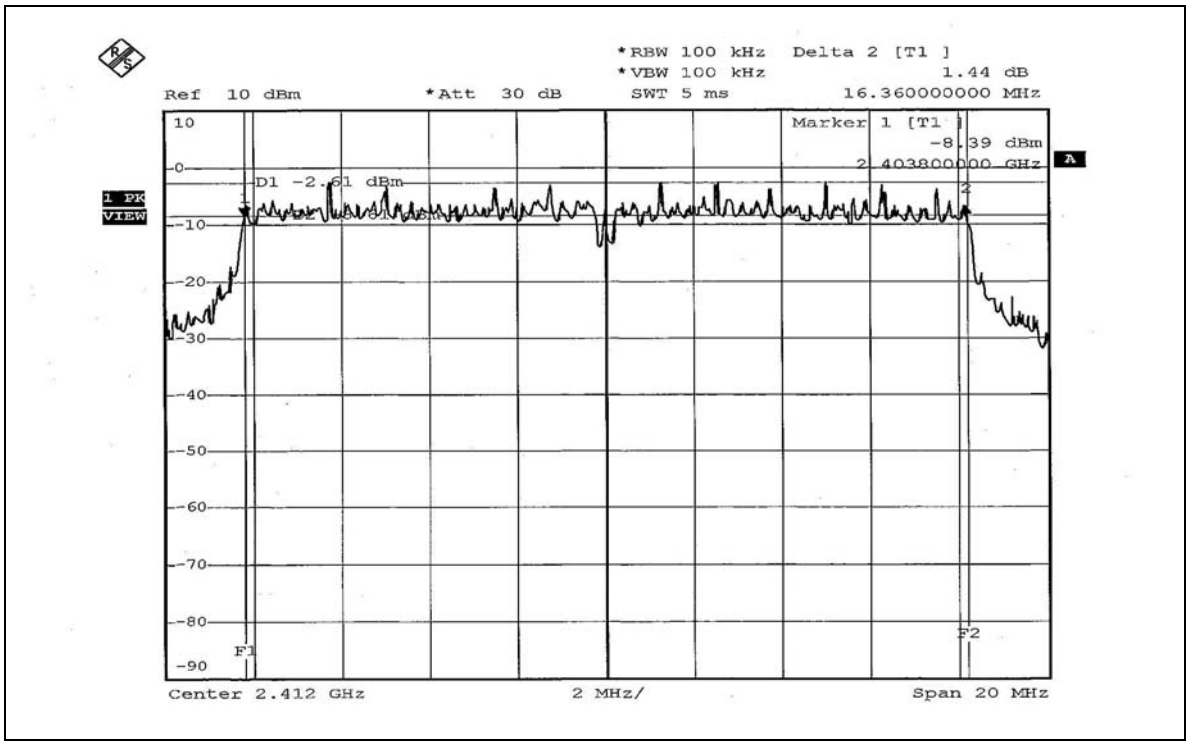


CH11

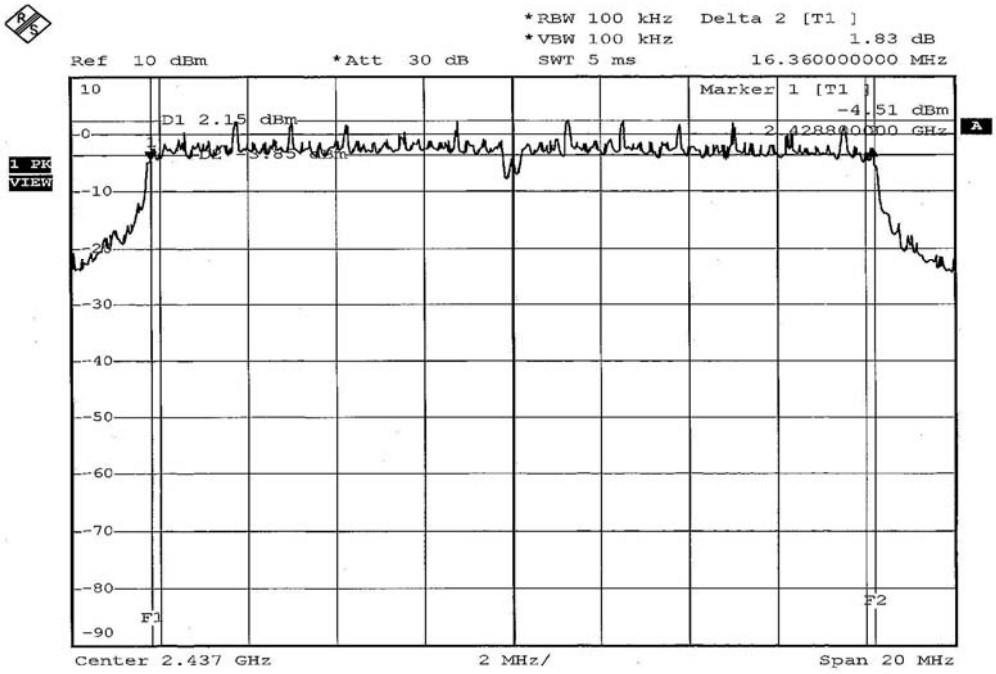


For Dual Chain (Chain 1):

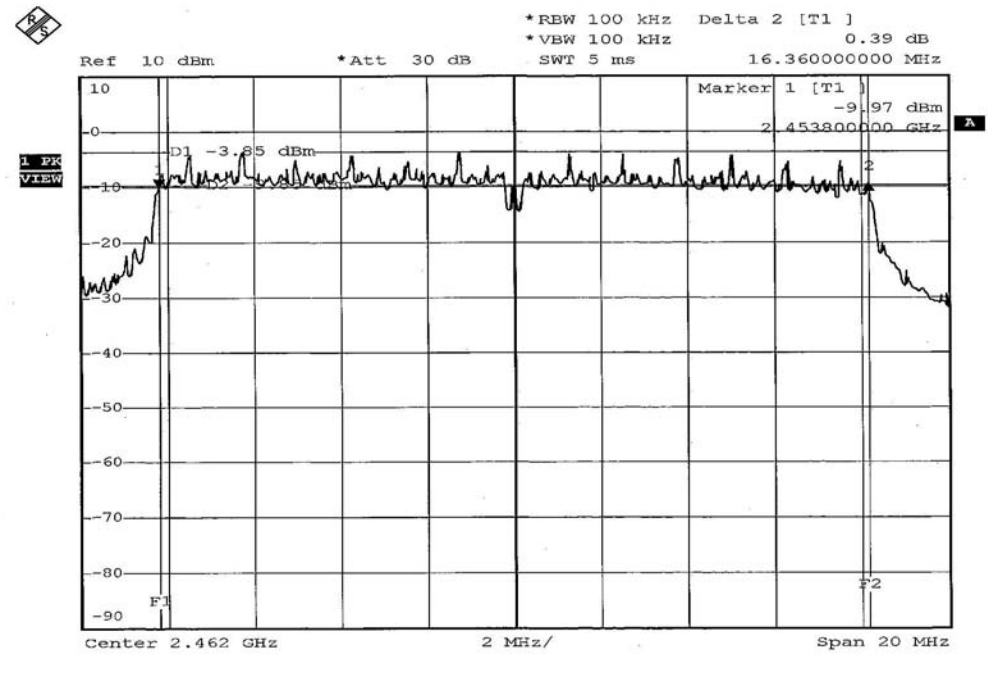
CH1



CH6


*RBW 100 kHz
*VBW 100 kHz
SWT 5 ms
Delta 2 [T1]
1.83 dB
16.360000000 MHz
Ref 10 dBm
*Att 30 dB
Marker 1 [T1]
-4.51 dBm
D1 2.15 dBm
1 PK VIEW
A
F1
F2
Center 2.437 GHz
2 MHz/
Span 20 MHz

CH11


*RBW 100 kHz
*VBW 100 kHz
SWT 5 ms
Delta 2 [T1]
0.39 dB
16.360000000 MHz
Ref 10 dBm
*Att 30 dB
Marker 1 [T1]
-9.97 dBm
D1 -3.85 dBm
1 PK VIEW
A
F1
F2
Center 2.462 GHz
2 MHz/
Span 20 MHz

802.11g Turbo OFDM modulation

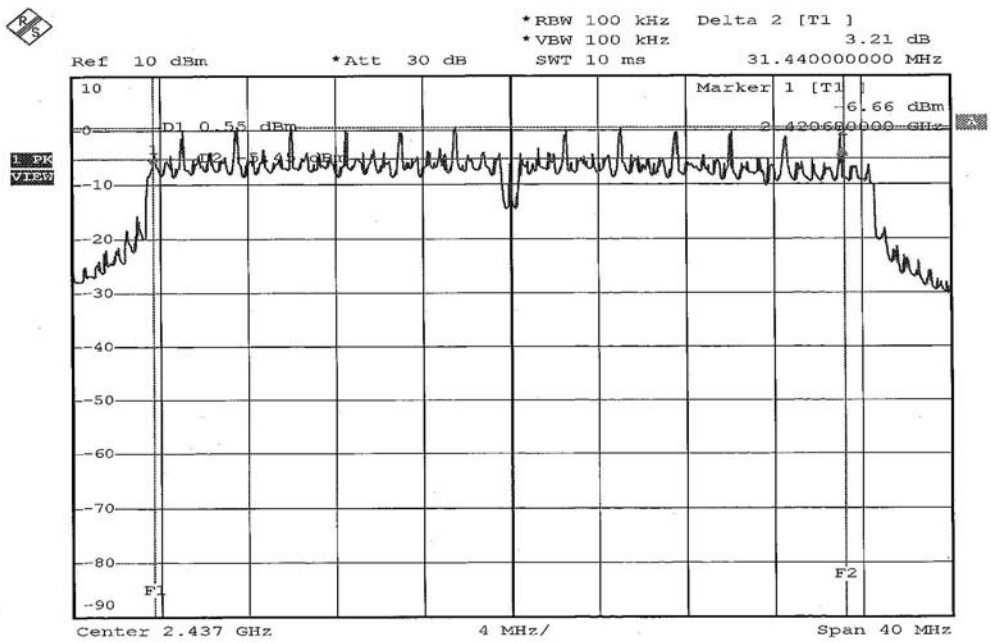
EUT	High Speed Wireless Network Adapter	**MODEL**	AV10
MODULATION TYPE	BPSK	**TRANSFER RATE**	12Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	24deg.C, 53%RH, 991hPa
TEST MODE	Dual chain	**TESTED BY**	Gary Chang

CHANNEL	CHANNEL FREQUENCY (MHz)	6 dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS/FAIL
		Chain 0	Chain 1		
6	2437	31.44	31.28	0.5	PASS

*(The test data is in accordance with ADT Report No.: RF940316L11.)

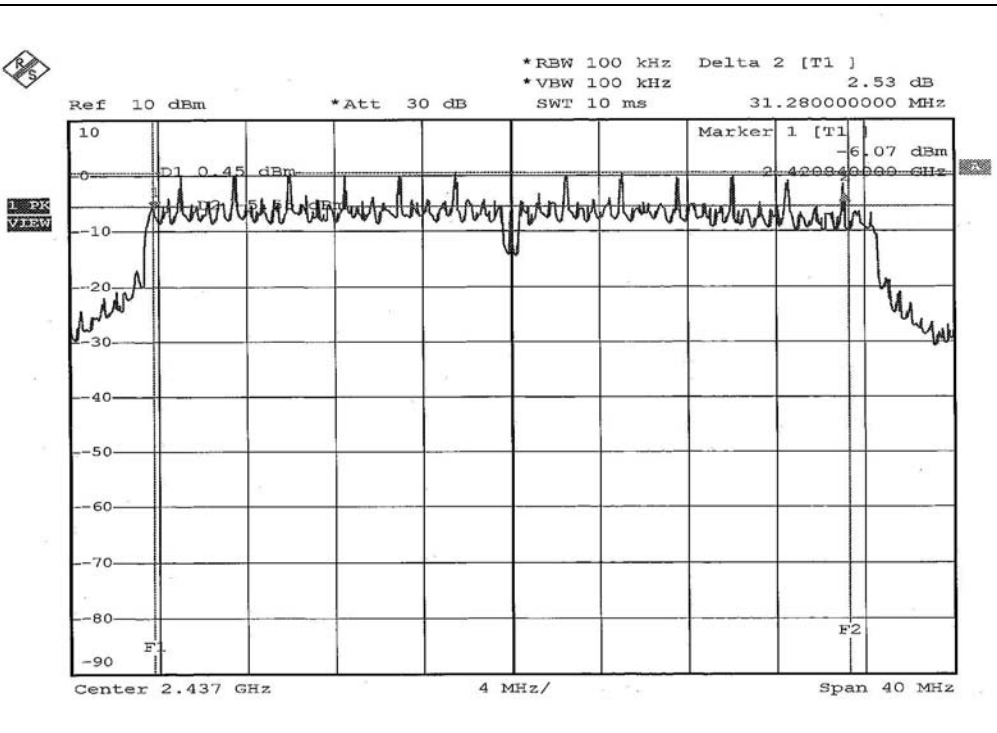
For Dual Chain (Chain 0):

CH6



For Dual Chain (Chain 1):

CH6



5.3 MAXIMUM PEAK OUTPUT POWER

5.3.1 LIMITS OF MAXIMUM PEAK OUTPUT POWER MEASUREMENT

The Maximum Peak Output Power Measurement is 30dBm. .

5.3.2 TEST 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 220	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.

5.3.3 TEST PROCEDURES

A detector was used on the output port of the EUT. An oscilloscope was used to peak the response of the detector.

Replaced the EUT by the signal generator. The center frequency of the S.G was adjusted to the center frequency of the measured channel.

Adjusted the power to have the same peak reading on oscilloscope. Record the power level.

5.3.4 DEVIATION FROM TEST STANDARD

No deviation

5.3.5 TEST SETUP

5.3.6 EUT OPERATING CONDITIONS

Same as Item 4.3.6

5.3.7 TEST RESULTS

802.11g OFDM modulation

EUT	High Speed Wireless Network Adapter	MODEL	AV10
MODULATION TYPE	BPSK	TRANSFER RATE	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	24deg.C, 53%RH, 991hPa
TEST MODE	Dual chain	TESTED BY	Gary Chang

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)		PEAK POWER OUTPUT (dBm)		TOTAL PEAK POWER (mW)	TOTAL PEAK POWER (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
		Chain 0	Chain 1	Chain 0	Chain 1				
1	2412	20.137	20.045	13.04	13.02	40.182	16.04	30	PASS
2	2417	63.387	63.826	18.02	18.05	127.213	21.05	30	PASS
3	2422	64.121	63.387	18.07	18.02	127.508	21.06	30	PASS
6	2437	64.714	63.533	18.11	18.03	128.247	21.08	30	PASS
9	2452	63.680	63.973	18.04	18.06	127.653	21.06	30	PASS
10	2457	63.826	64.417	18.05	18.09	128.243	21.08	30	PASS
11	2462	20.184	20.464	13.05	13.11	40.648	16.09	30	PASS

*(The test data is in accordance with ADT Report No.: RF940316L11.)

802.11g Turbo OFDM modulation

EUT	High Speed Wireless Network Adapter	**MODEL**	AV10
MODULATION TYPE	BPSK	**TRANSFER RATE**	12Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	24deg.C, 53%RH, 991hPa
TEST MODE	Dual chain	**TESTED BY**	Gary Chang

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)		PEAK POWER OUTPUT (dBm)		TOTAL PEAK POWER (mW)	TOTAL PEAK POWER (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
		Chain 0	Chain 1	Chain 0	Chain 1				
6	2437	32.509	31.842	15.12	15.03	64.351	18.09	30	PASS

*(The test data is in accordance with ADT Report No.: RF940316L11.)

5.4 POWER SPECTRAL DENSITY MEASUREMENT

5.4.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm.

5.4.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
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.

5.4.3 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.

5.4.4 DEVIATION FROM TEST STANDARD

No deviation

5.4.5 TEST SETUP

5.4.6 EUT OPERATING CONDITIONS

Same as 4.3.6

5.4.7 TEST RESULTS

802.11g OFDM modulation

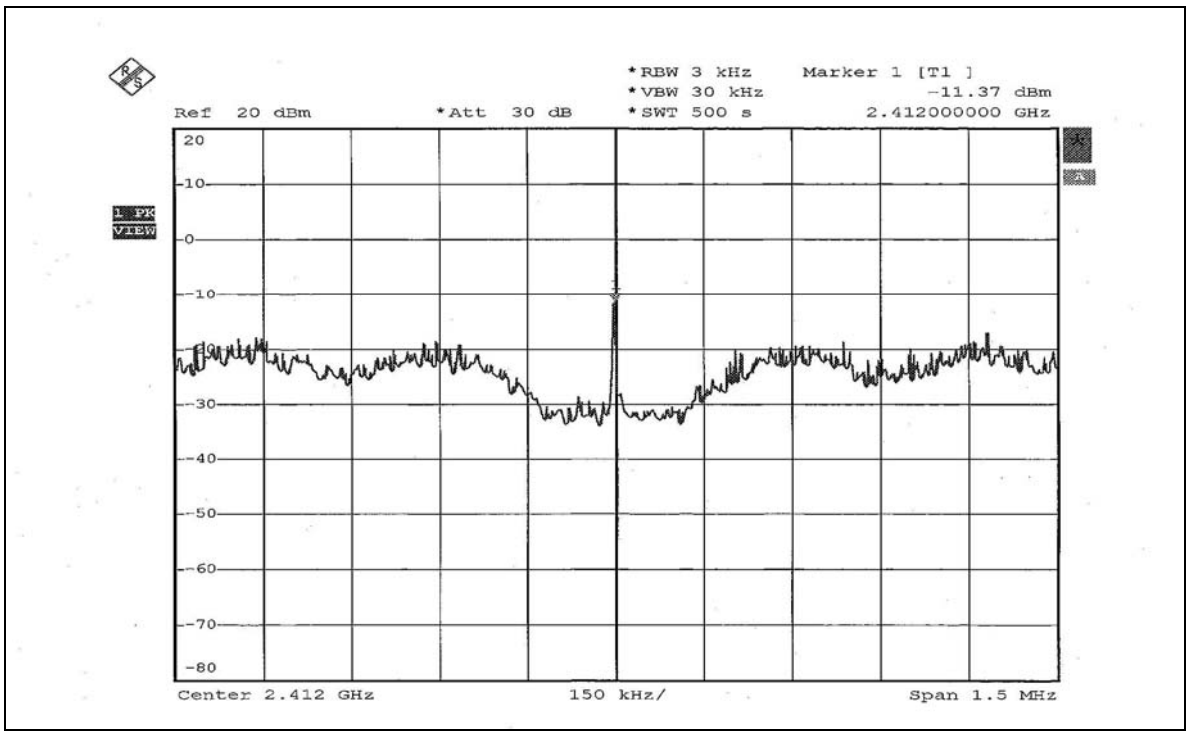
EUT	High Speed Wireless Network Adapter	MODEL	AV10
MODULATION TYPE	BPSK	TRANSFER RATE	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	24deg.C, 53%RH, 991hPa
TEST MODE	Dual chain	TESTED BY	Gary Chang

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)		MAXIMUM LIMIT (dBm)	PASS/FAIL
		Chain 0	Chain 1		
1	2412	-11.37	-11.56	8	PASS
6	2437	-9.87	-10.26	8	PASS
11	2462	-11.45	-11.93	8	PASS

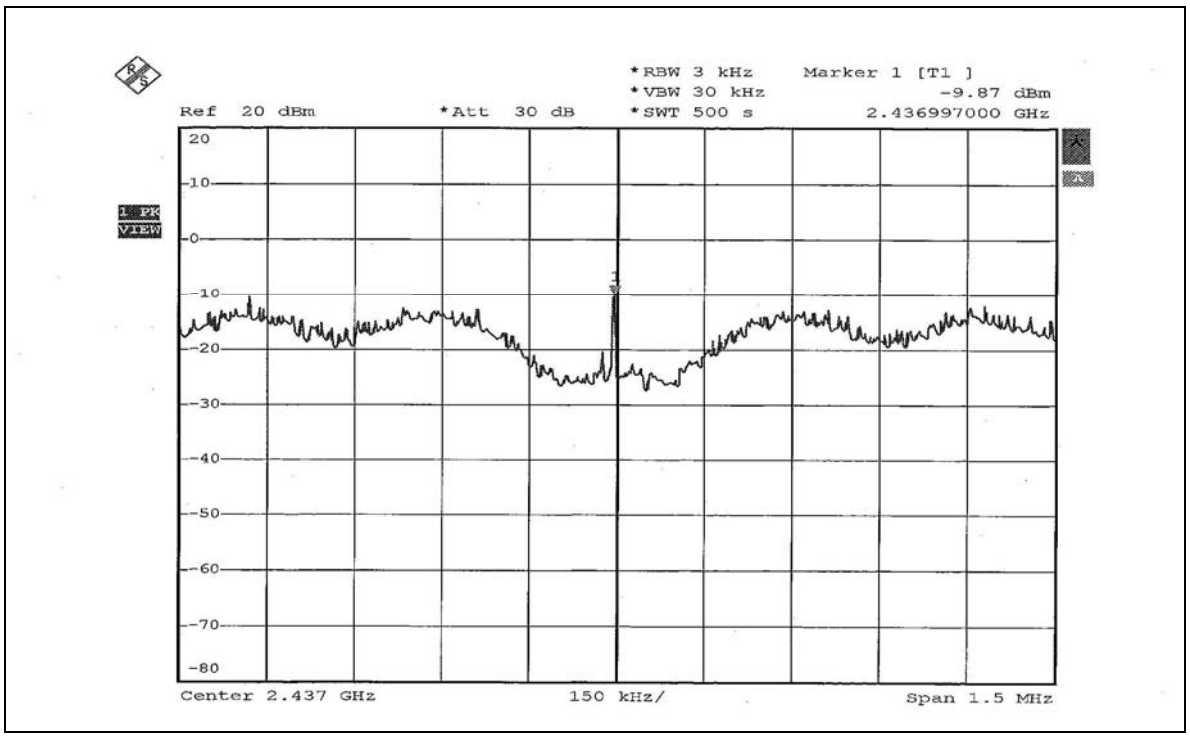
*(The test data is in accordance with ADT Report No.: RF940316L11.)

For Dual Chain (Chain 0):

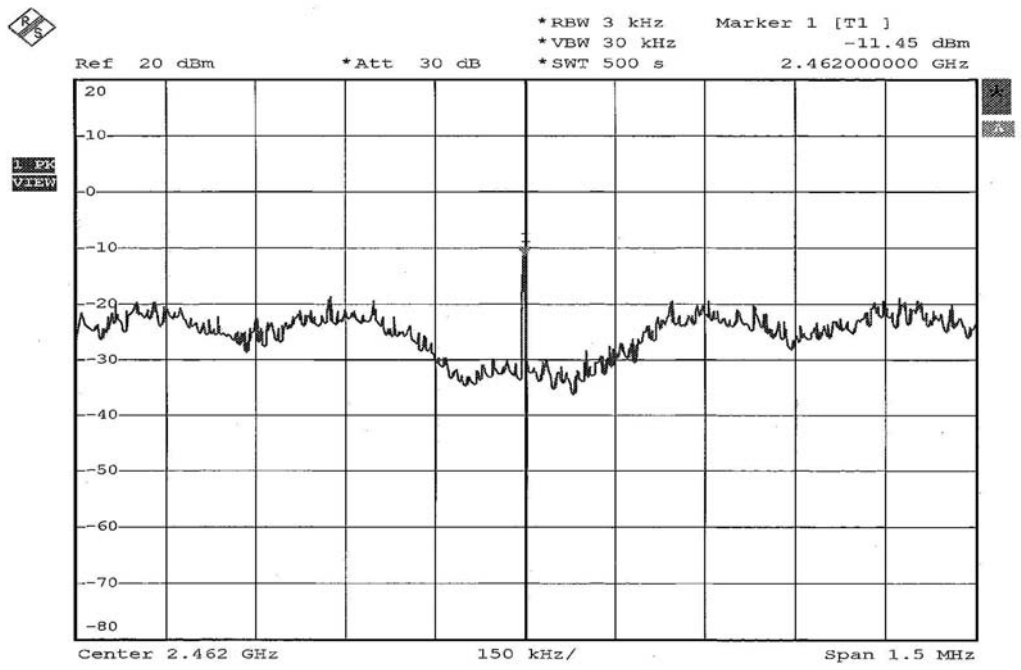
CH1



CH6

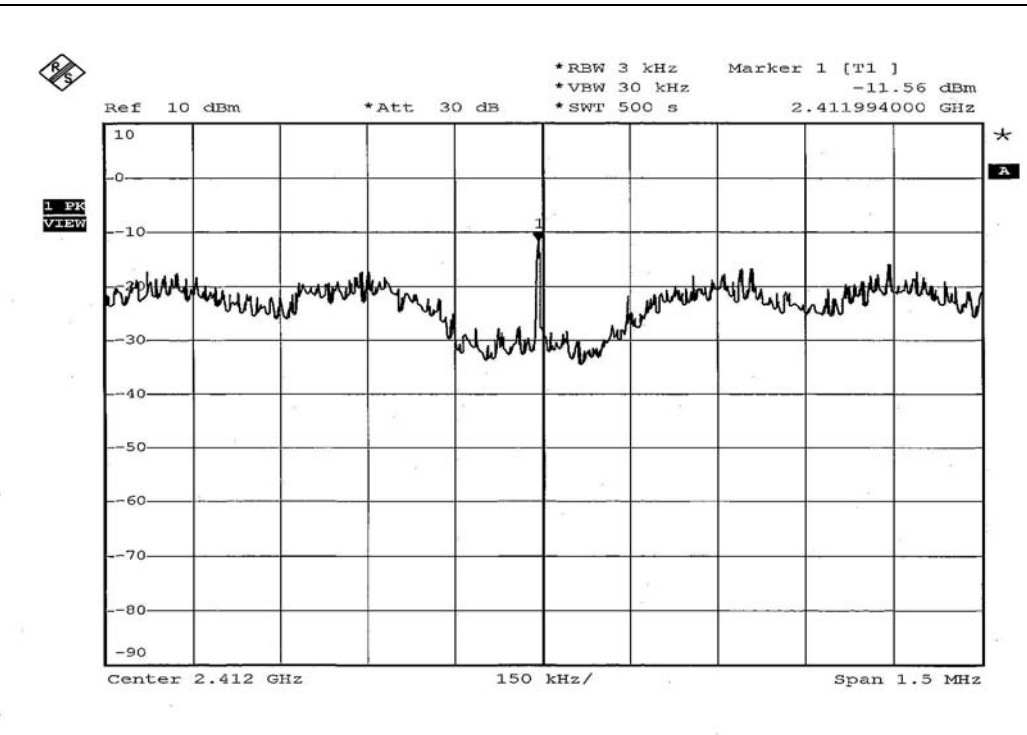


CH11

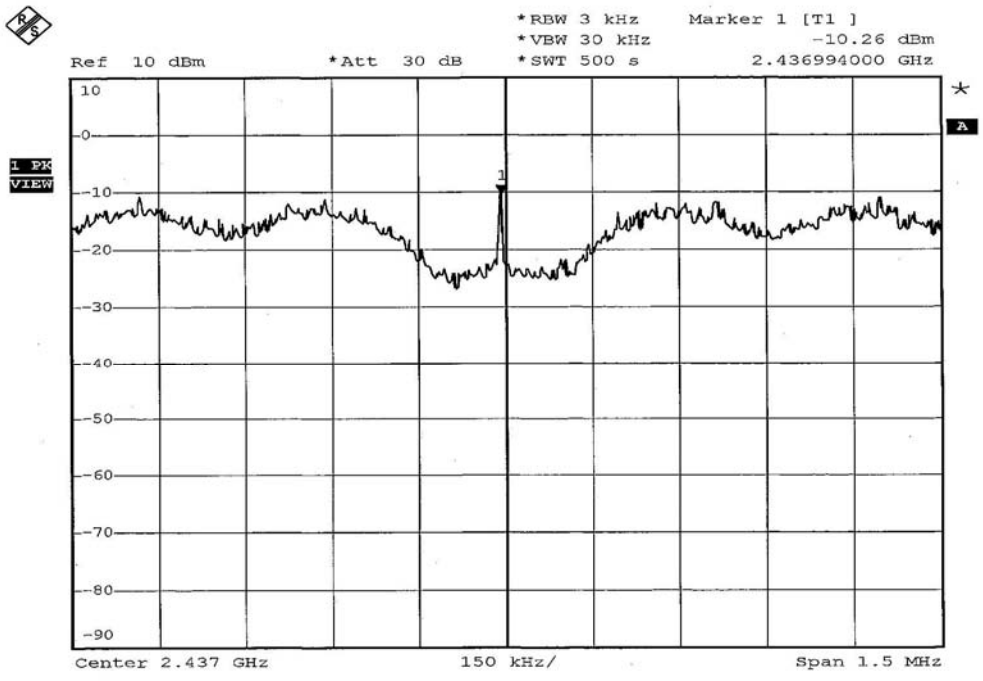


For Dual Chain (Chain 1):

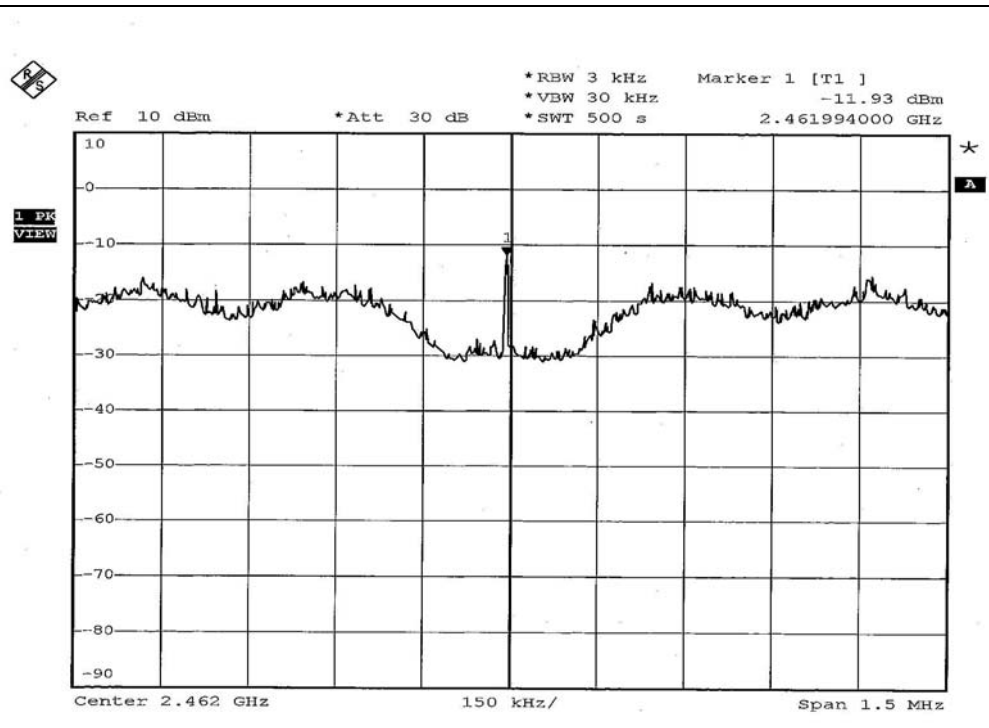
CH1



CH6


*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-10.26 dBm
2.436994000 GHz
Ref 10 dBm
*Att 30 dB
1 PK
VIEW
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
A
Center 2.437 GHz
150 kHz/
Span 1.5 MHz

CH11


*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-11.93 dBm
2.461994000 GHz
Ref 10 dBm
*Att 30 dB
1 PK
VIEW
10
0
-10
-30
-40
-50
-60
-70
-80
-90
A
Center 2.462 GHz
150 kHz/
Span 1.5 MHz

802.11g Turbo OFDM modulation

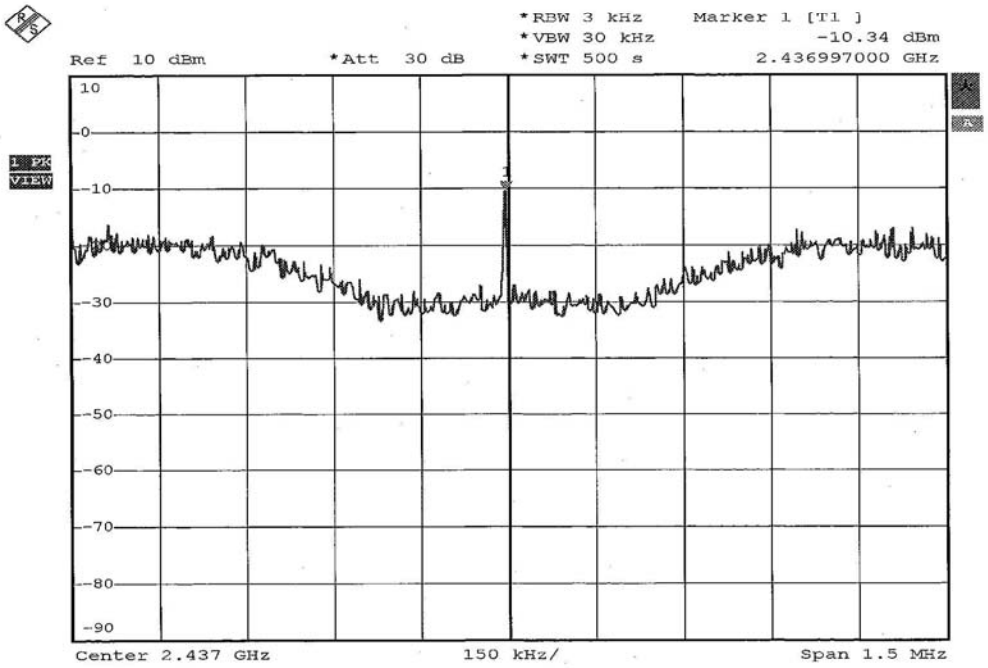
EUT	High Speed Wireless Network Adapter	**MODEL**	AV10
MODULATION TYPE	BPSK	**TRANSFER RATE**	12Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	24deg.C, 53%RH, 991hPa
TEST MODE	Dual chain	**TESTED BY**	Gary Chang

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)		MAXIMUM LIMIT (dBm)	PASS/FAIL
		Chain 0	Chain 1		
6	2437	-10.34	-10.25	8	PASS

*(The test data is in accordance with ADT Report No.: RF940316L11.)

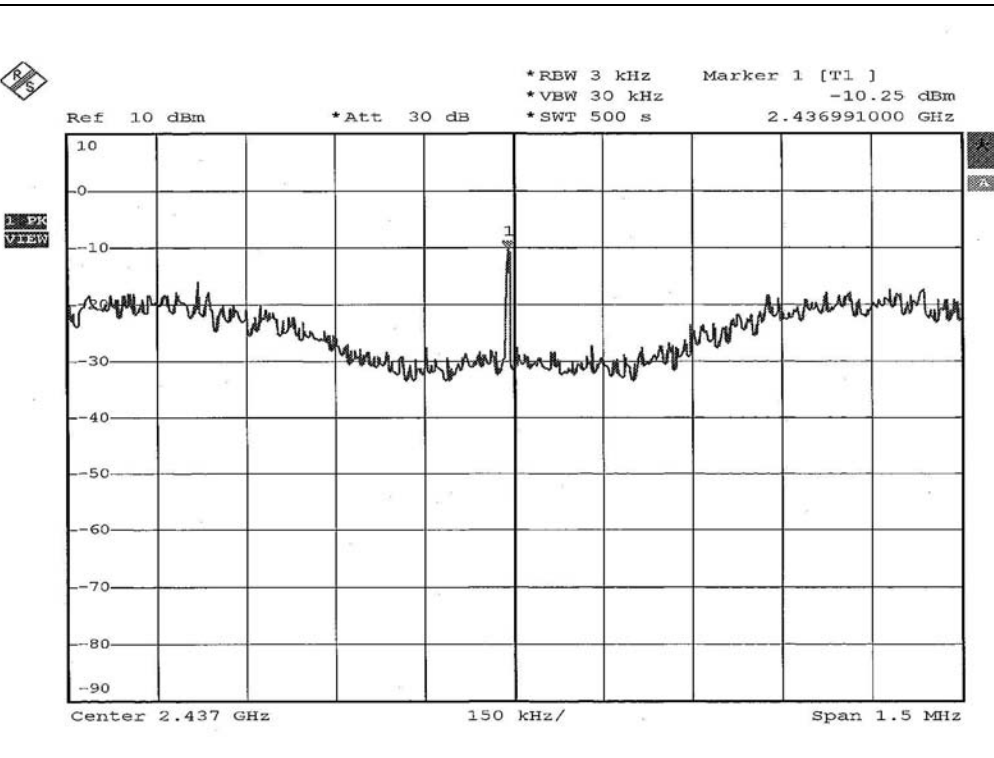
For Dual Chain (Chain 0):

CH6



For Dual Chain (Chain 1):

CH6



5.5 BAND EDGES MEASUREMENT

5.5.1 LIMITS OF BAND EDGES MEASUREMENT

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

5.5.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
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.

5.5.3 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 100MHz 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.

5.5.4 DEVIATION FROM TEST STANDARD

No deviation

5.5.5 EUT OPERATING CONDITION

Same as Item 4.3.6

5.5.6 TEST RESULTS

The spectrum plots are attached on the following 24 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).

802.11g OFDM modulation

For test configure mode 1 (Antenna 1)

NOTE 1: The band edge emission plot on page 153 shows 47.15dBc 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 5.2.7 is 110.18dBuV/m (Peak), so the maximum field strength in restrict band is 110.18-47.15=63.03dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on page 153 shows 47.38dBc 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 5.2.7 is 99.36dBuV/m (Average), so the maximum field strength in restrict band is 99.36-47.38=51.98dBuV/m which is under 54dBuV/m limit.

NOTE 2: The band edge emission plot on page 154 shows 43.84dBc between carrier maximum power and local maximum emission in restrict band (2.4863GHz). The emission of carrier strength list in the test result of channel 11 at the item 5.2.7 is 108.10dBuV/m (Peak), so the maximum field strength in restrict band is 108.10-43.84=64.26dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on page 155 shows 49.31dBc 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 5.2.7 is 98.34dBuV/m (Average), so the maximum field strength in restrict band is 98.34-49.31=49.03dBuV/m which is under 54dBuV/m limit.

For test configure mode 2 (Antenna 2)

NOTE 1: The band edge emission plot on page 156 shows 46.72dBc 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 5.2.7 is 107.50dBuV/m (Peak), so the maximum field strength in restrict band is 107.50-46.72=60.78dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on page 156 shows 47.13dBc 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 5.2.7 is 98.18dBuV/m (Average), so the maximum field strength in restrict band is 98.18-47.13=51.05dBuV/m which is under 54dBuV/m limit.

NOTE 2: The band edge emission plot on page 157 shows 46.34dBc 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 5.2.7 is 103.77dBuV/m (Peak), so the maximum field strength in restrict band is 103.77-46.34=57.43dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on page 158 shows 50.76dBc between carrier maximum power and local maximum emission in restrict band (2.4836GHz). The emission of carrier strength list in the test result of channel 11 at the item 5.2.7 is 91.94dBuV/m (Average), so the maximum field strength in restrict band is 91.94-50.76=41.18dBuV/m which is under 54dBuV/m limit.

802.11g Turbo OFDM modulation

For test configure mode 1 (Antenna 1)

NOTE 1: The band edge emission plot on page 159 shows 50.92dBc between carrier maximum power and local maximum emission in restrict band (2.3826GHz). The emission of carrier strength list in the test result of channel 6 at the item 5.2.7 is 110.50dBuV/m (Peak), so the maximum field strength in restrict band is 110.50-50.92=59.58dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on page 159 shows 50.50dBc 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 5.2.7 is 101.11dBuV/m (Average), so the maximum field strength in restrict band is 101.11-50.50=50.61dBuV/m which is under 54dBuV/m limit.

NOTE 2: The band edge emission plot on page 160 shows 51.26dBc between carrier maximum power and local maximum emission in restrict band (2.4839GHz). The emission of carrier strength list in the test result of channel 6 at the item 5.2.7 is 110.50dBuV/m (Peak), so the maximum field strength in restrict band is 110.50-51.26=59.24dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on page 161 shows 52.29dBc 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 5.2.7 is 101.11dBuV/m (Average), so the maximum field strength in restrict band is 101.11-52.29=48.82dBuV/m which is under 54dBuV/m limit.

For test configure mode 2 (Antenna 2)

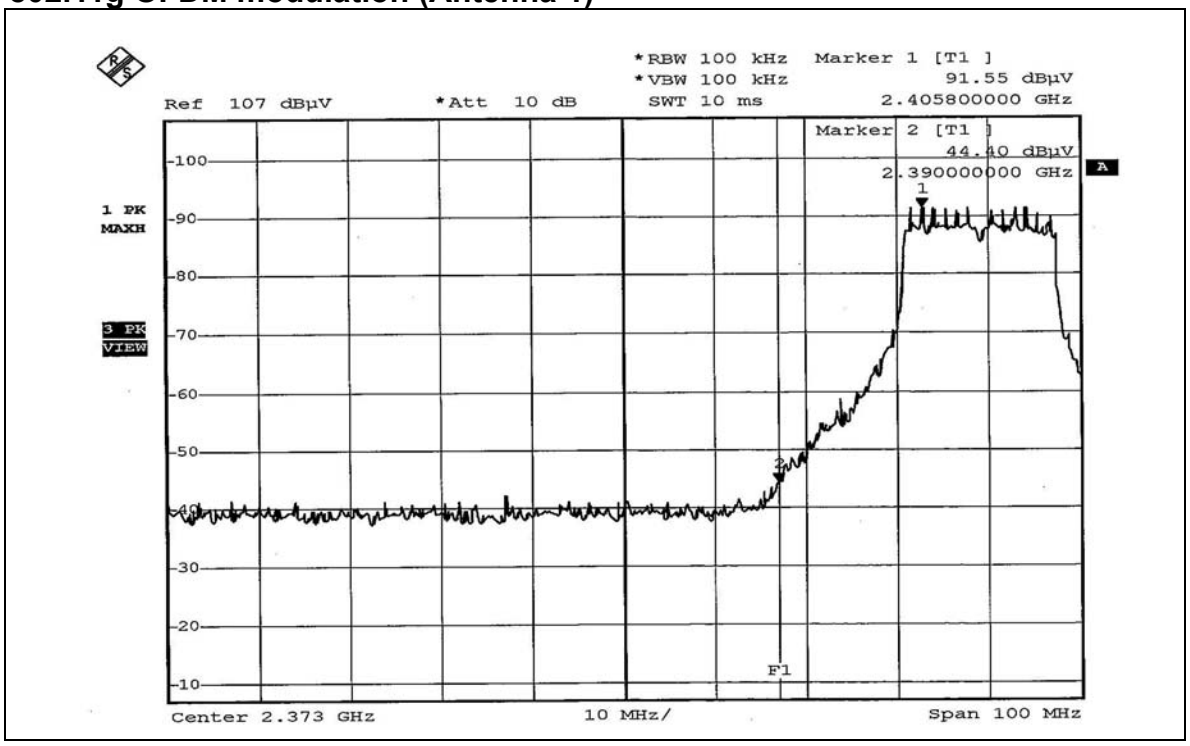
NOTE 1: The band edge emission plot on page 162 shows 49.11dBc between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 6 at the item 5.2.7 is 110.86dBuV/m (Peak), so the maximum field strength in restrict band is110.86-49.11=61.75dBuV/m which is under 74dBuV/m limit.

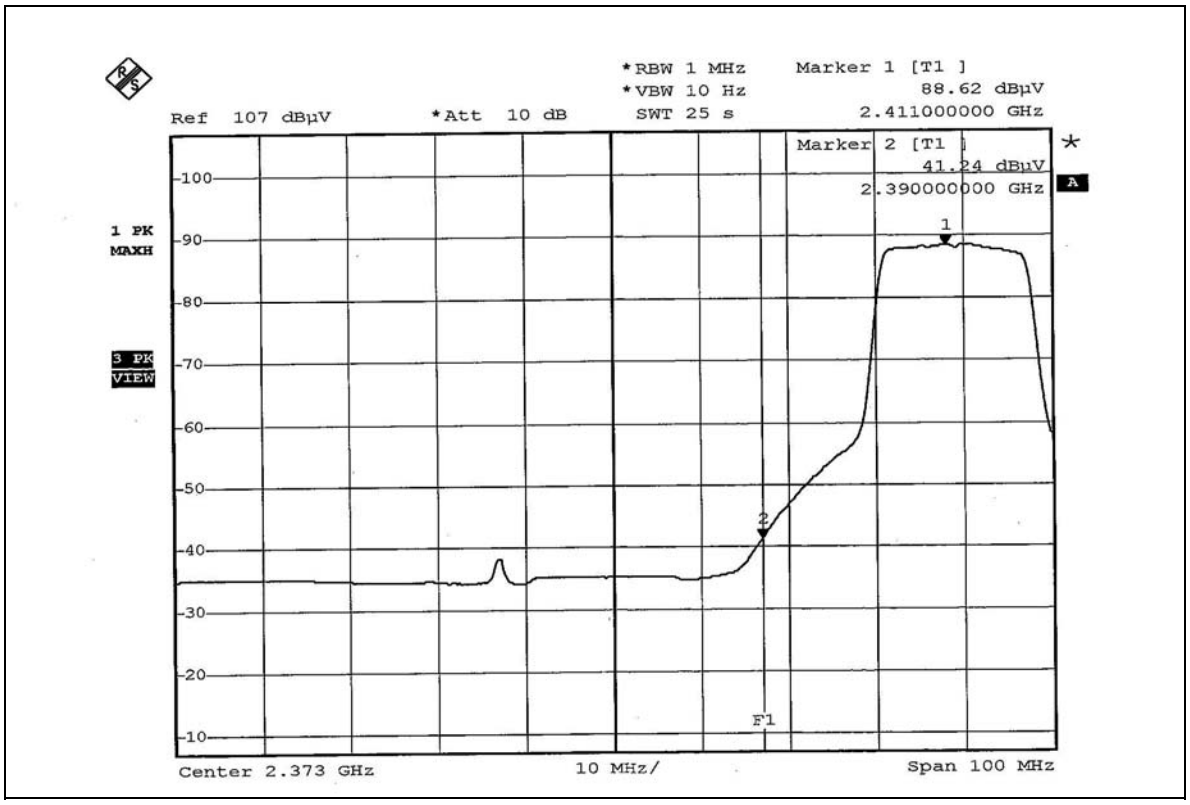
The band edge emission plot on page 162 shows 48.13dBc between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 6 at the item 5.2.7 is 101.16dBuV/m (Average), so the maximum field strength in restrict band is101.16-48.13=53.03dBuV/m which is under 54dBuV/m limit.

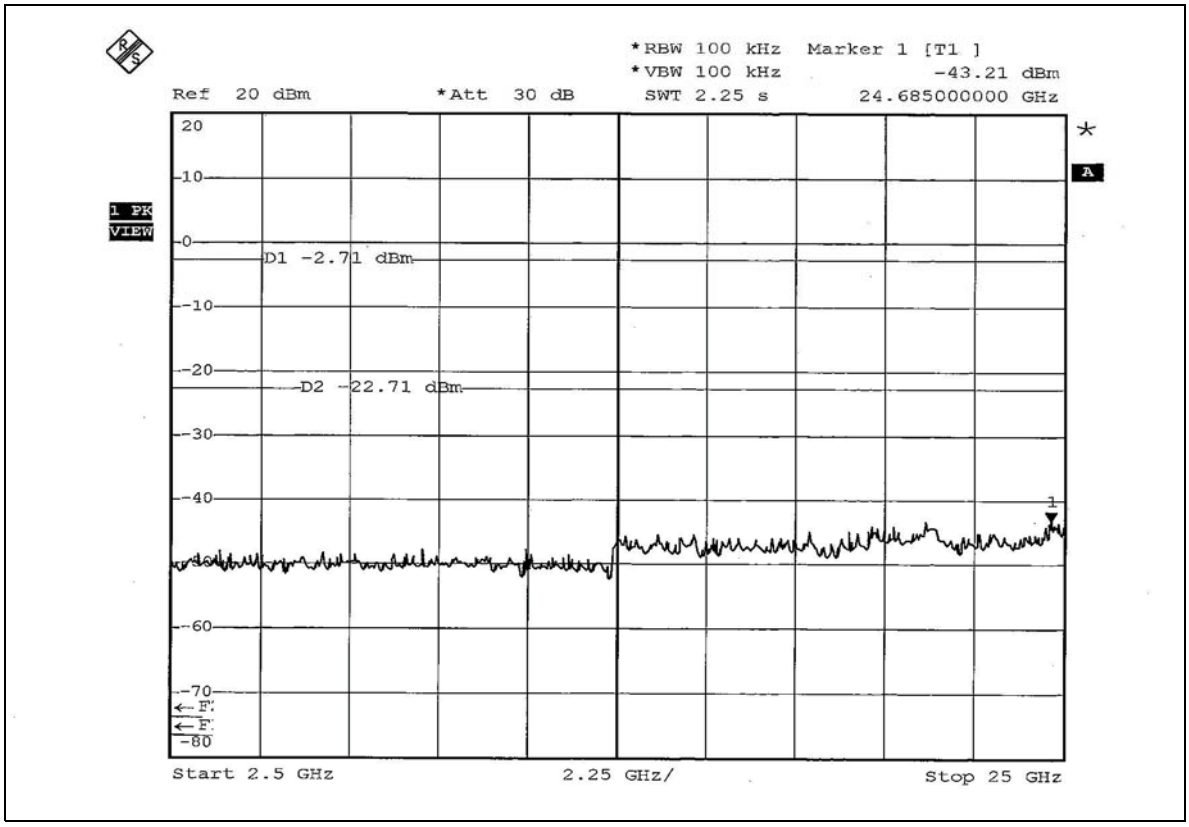
NOTE 2: The band edge emission plot on page 163 shows 51.74dBc between carrier maximum power and local maximum emission in restrict band (2.4857GHz). The emission of carrier strength list in the test result of channel 6 at the item 5.2.7 is 110.86dBuV/m (Peak), so the maximum field strength in restrict band is110.86-51.74=59.12dBuV/m which is under 74dBuV/m limit.

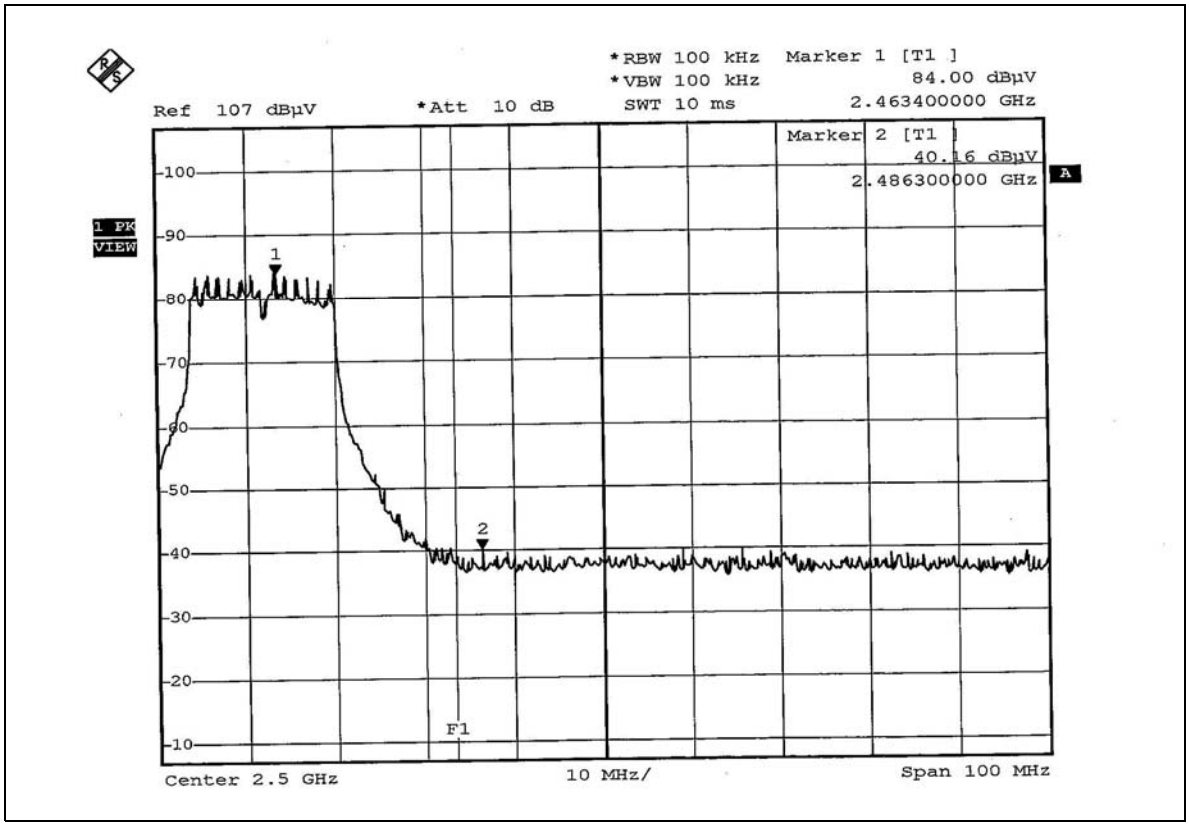
The band edge emission plot on page 164 shows 51.94dBc between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 6 at the item 5.2.7 is 101.16dBuV/m (Average), so the maximum field strength in restrict band is 101.16-51.94=49.22dBuV/m which is under 54dBuV/m limit.

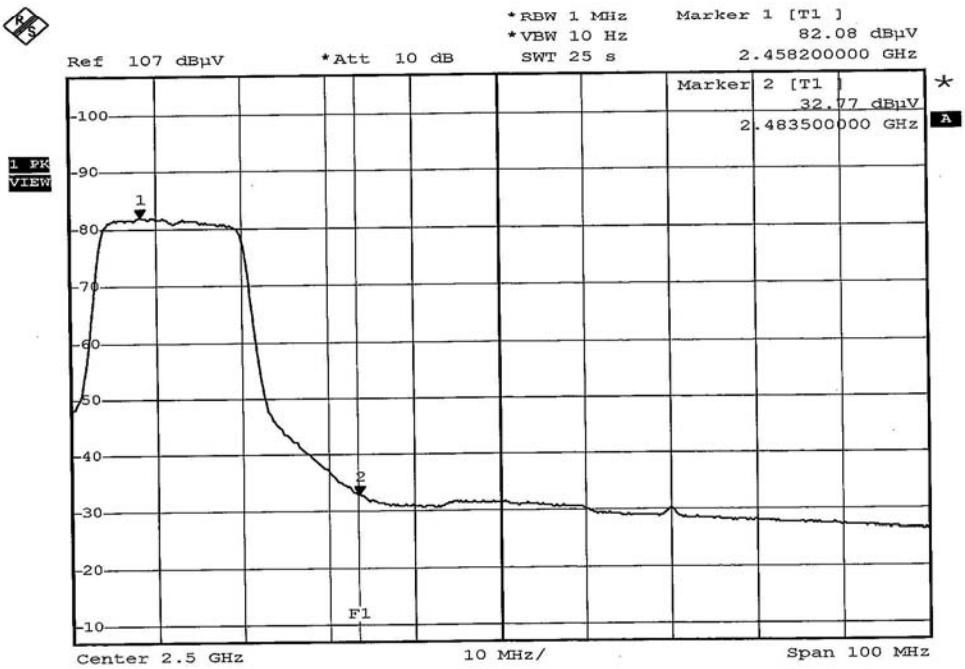
802.11g OFDM modulation (Antenna 1)

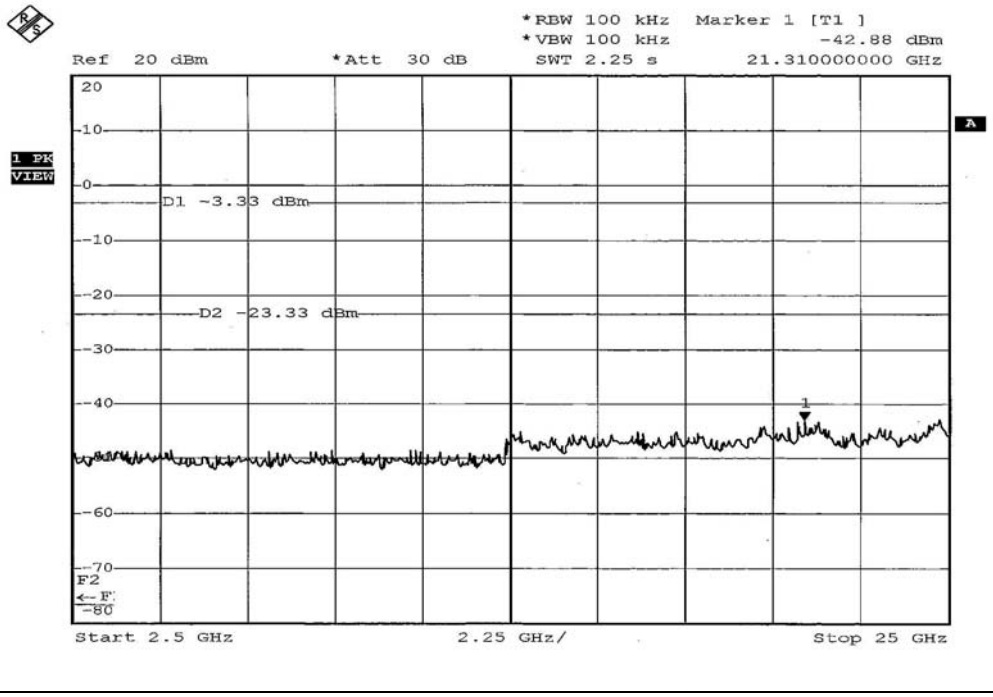




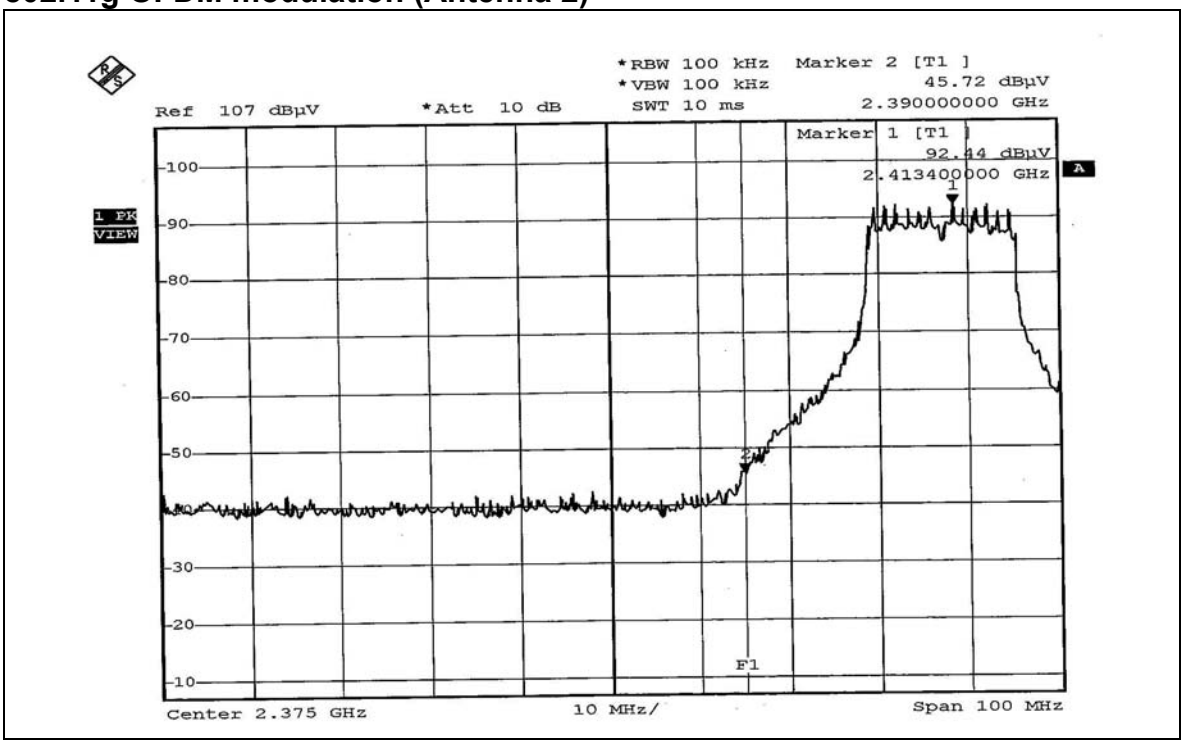

*RBW 100 kHz
*VBW 100 kHz
Marker 1 [T1]
-43.21 dBm
Ref 20 dBm
*Att 30 dB
SWT 2.25 s
24.685000000 GHz
1 PK
VIEW
D1 -2.71 dBm
D2 -22.71 dBm
Start 2.5 GHz
2.25 GHz/
Stop 25 GHz

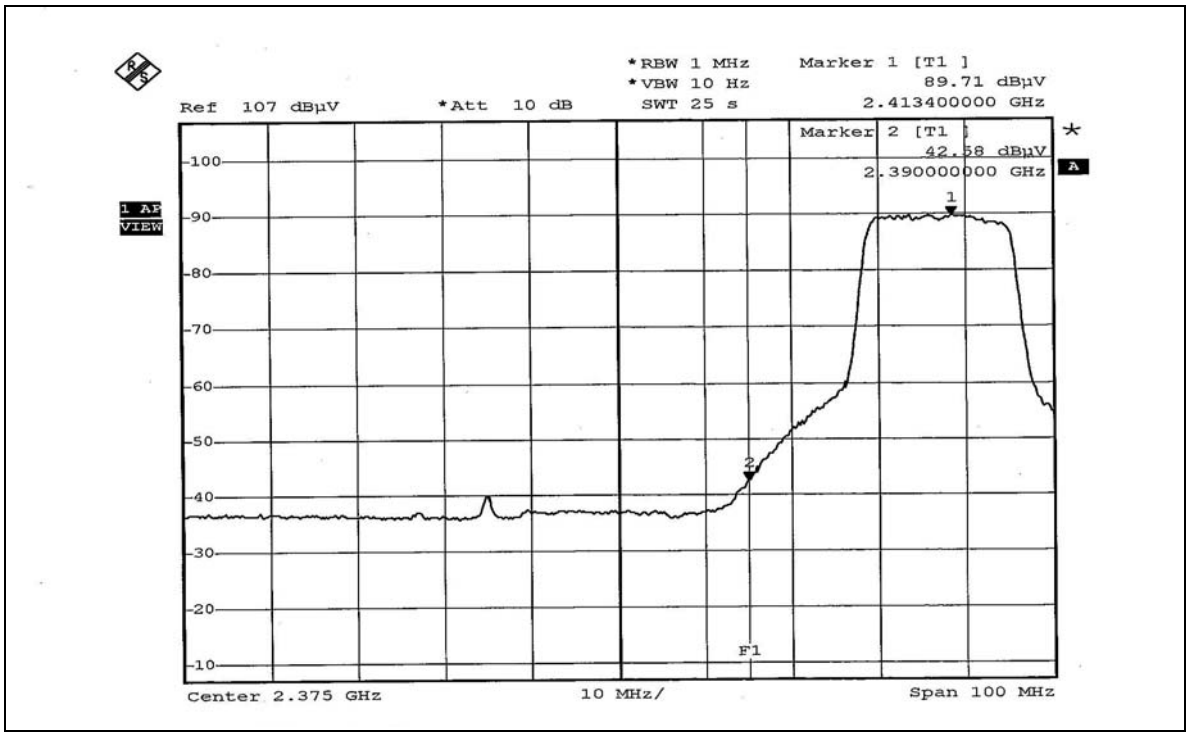

*RBW 100 kHz
*VBW 100 kHz
Marker 1 [T1]
84.00 dBµV
SWT 10 ms
2.463400000 GHz
Ref 107 dBµV
*Att 10 dB
Marker 2 [T1]
40.16 dBµV
2.486300000 GHz
1 PK
VIEW
F1
Center 2.5 GHz
10 MHz/
Span 100 MHz

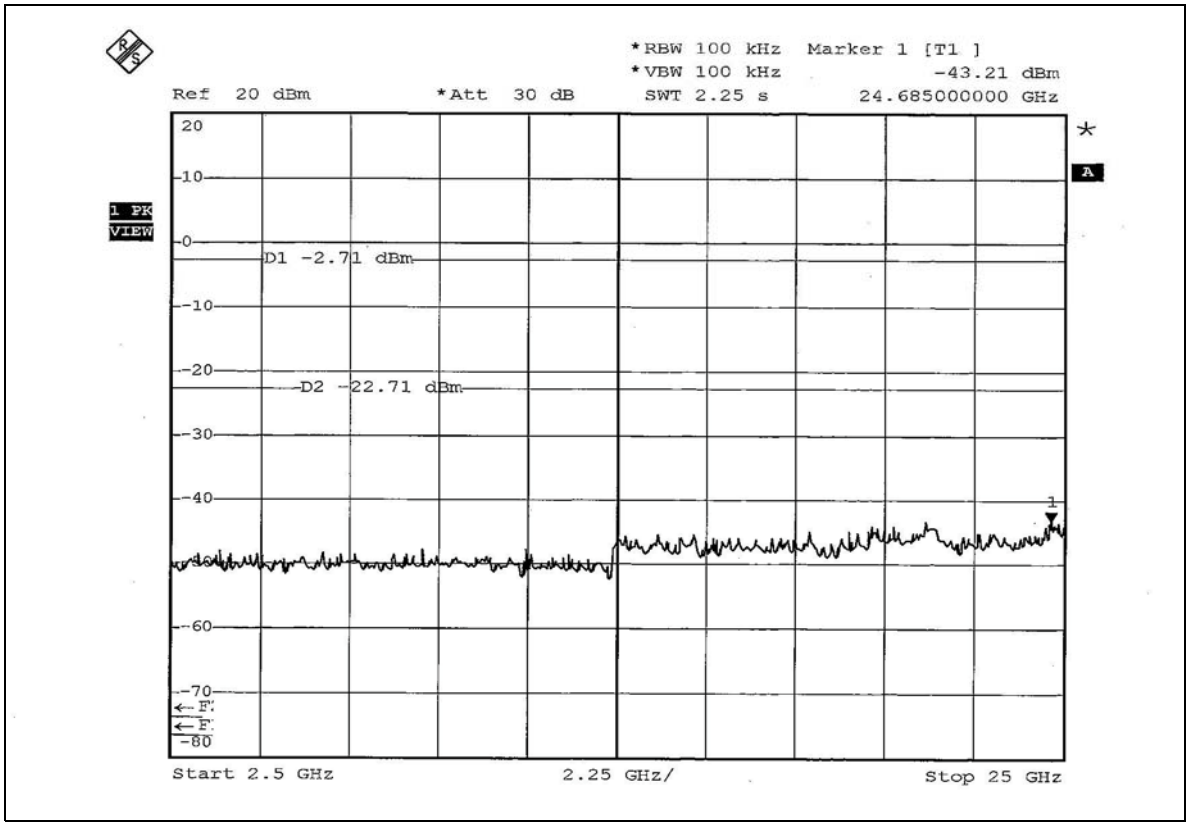

*RBW 1 MHz
*VBW 10 Hz
SWT 25 s
Marker 1 [T1]
82.08 dBµV
2.458200000 GHz
Ref 107 dBµV
*Att 10 dB
Marker 2 [T1]
32.77 dBµV
2.483500000 GHz
1 PK
VIEW
-100
-90
-80
-70
-60
-50
-40
-30
-20
-10
F1
Center 2.5 GHz
10 MHz/
Span 100 MHz

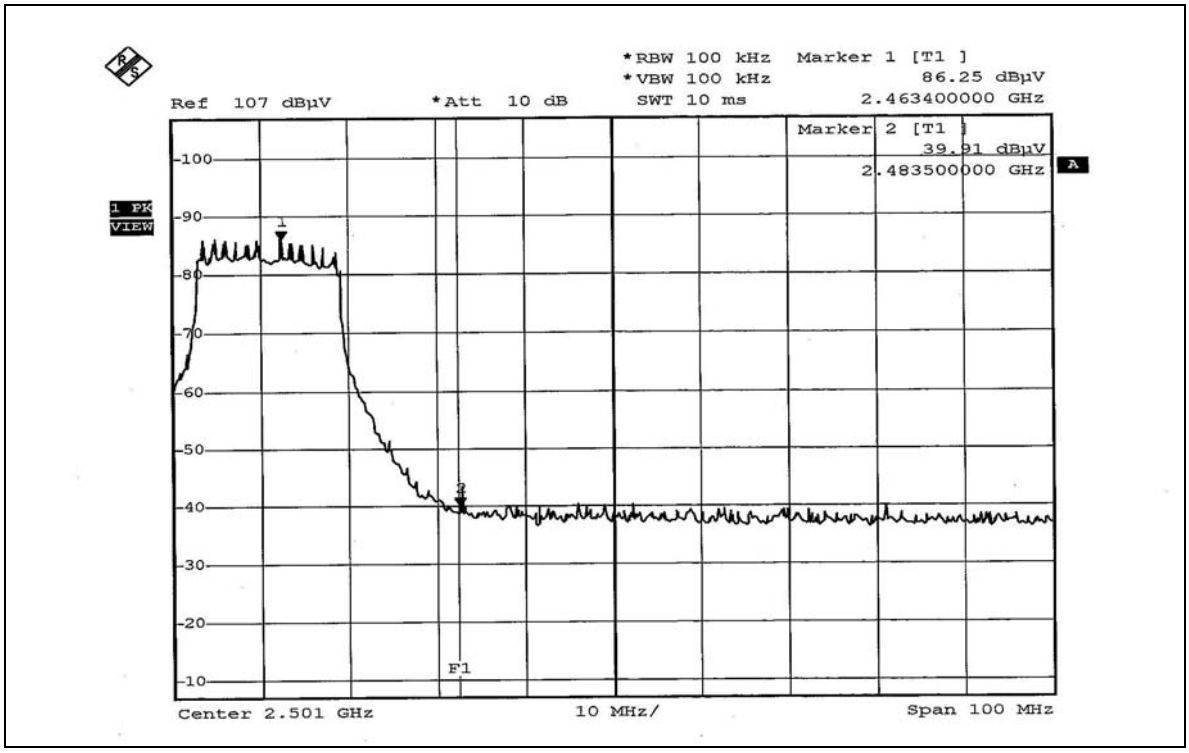

*RBW 100 kHz
*VBW 100 kHz
SWT 2.25 s
Marker 1 [T1]
-42.88 dBm
21.310000000 GHz
Ref 20 dBm
*Att 30 dB
1 PK
VIEW
20
10
0
D1 -3.33 dBm
-10
-20
D2 -23.33 dBm
-30
-40
-60
-70
F2
-80
Start 2.5 GHz
2.25 GHz/
Stop 25 GHz

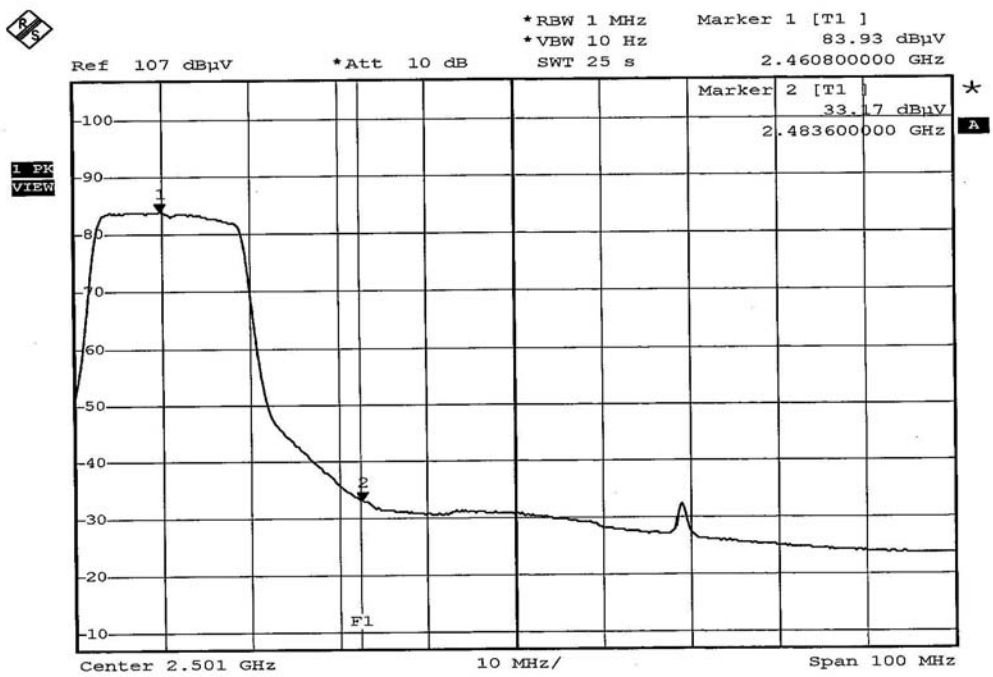
802.11g OFDM modulation (Antenna 2)

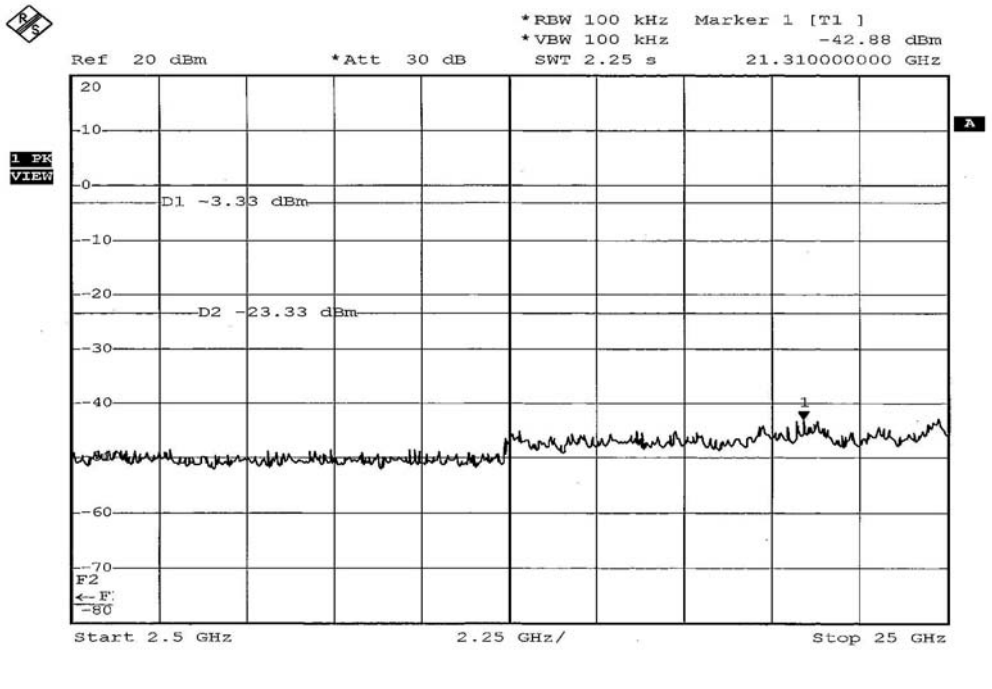




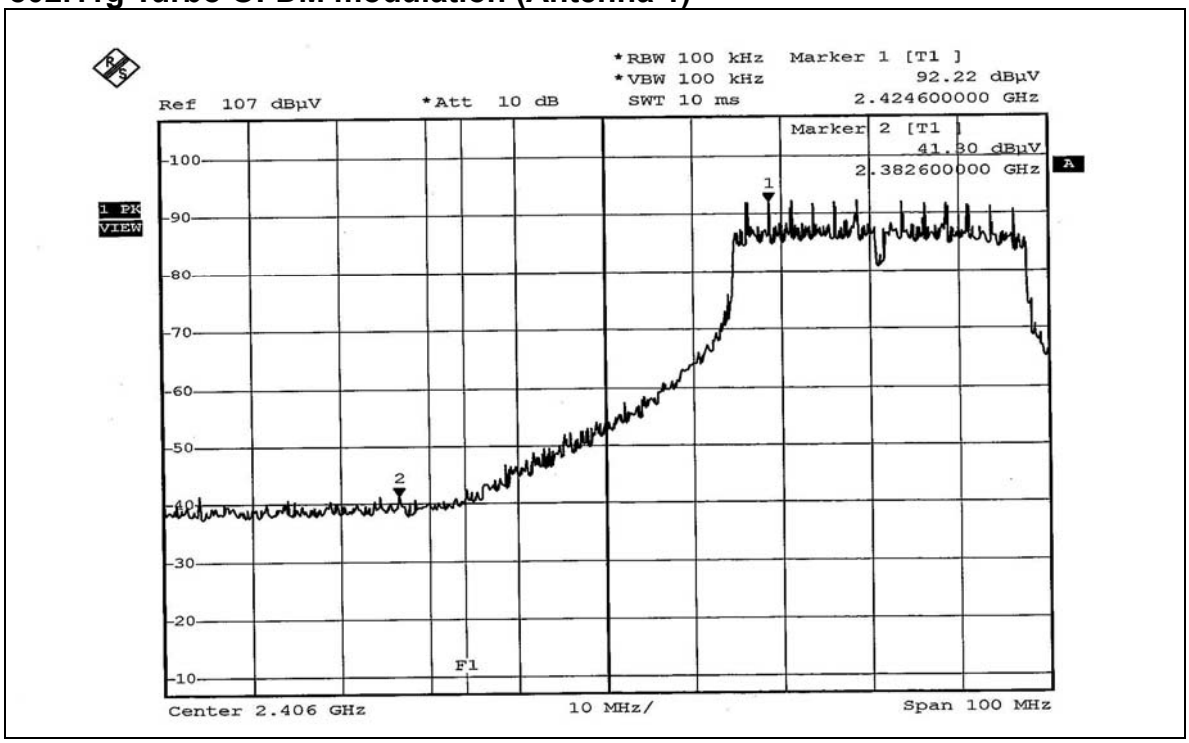

*RBW 100 kHz
*VBW 100 kHz
SWT 2.25 s
Marker 1 [T1]
-43.21 dBm
24.685000000 GHz
Ref 20 dBm
*Att 30 dB
1 PK
VIEW
D1 -2.71 dBm
D2 -22.71 dBm
Start 2.5 GHz
2.25 GHz/
Stop 25 GHz

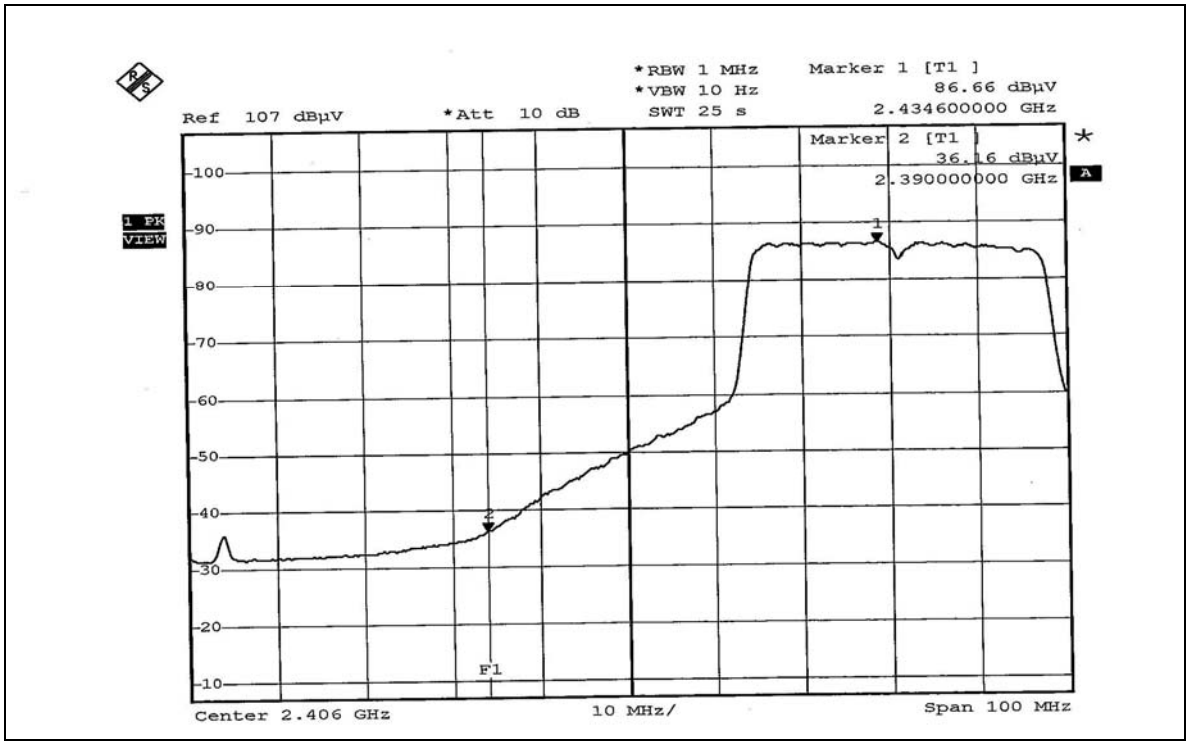

*RBW 100 kHz
*VBW 100 kHz
SWT 10 ms
Marker 1 [T1]
86.25 dBµV
2.463400000 GHz
Marker 2 [T1]
39.91 dBµV
2.483500000 GHz
Ref 107 dBµV
*Att 10 dB
1 PK
VIEW
F1
Center 2.501 GHz
10 MHz/
Span 100 MHz

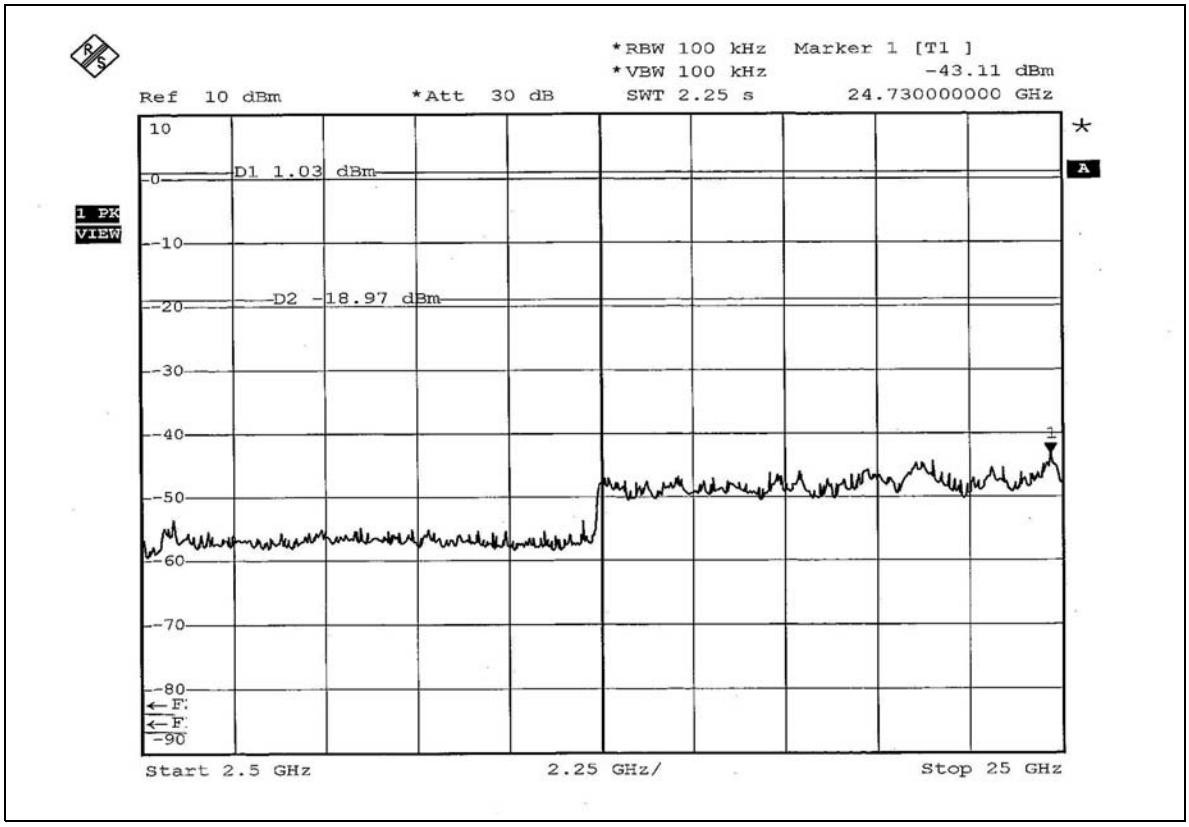

*RBW 1 MHz
*VBW 10 Hz
SWT 25 s
Marker 1 [T1]
83.93 dBµV
2.460800000 GHz
Ref 107 dBµV
*Att 10 dB
Marker 2 [T1]
33.17 dBµV
2.483600000 GHz
1 PK
VIEW
A
100
90
80
70
60
50
40
30
20
10
F1
Center 2.501 GHz
10 MHz/
Span 100 MHz

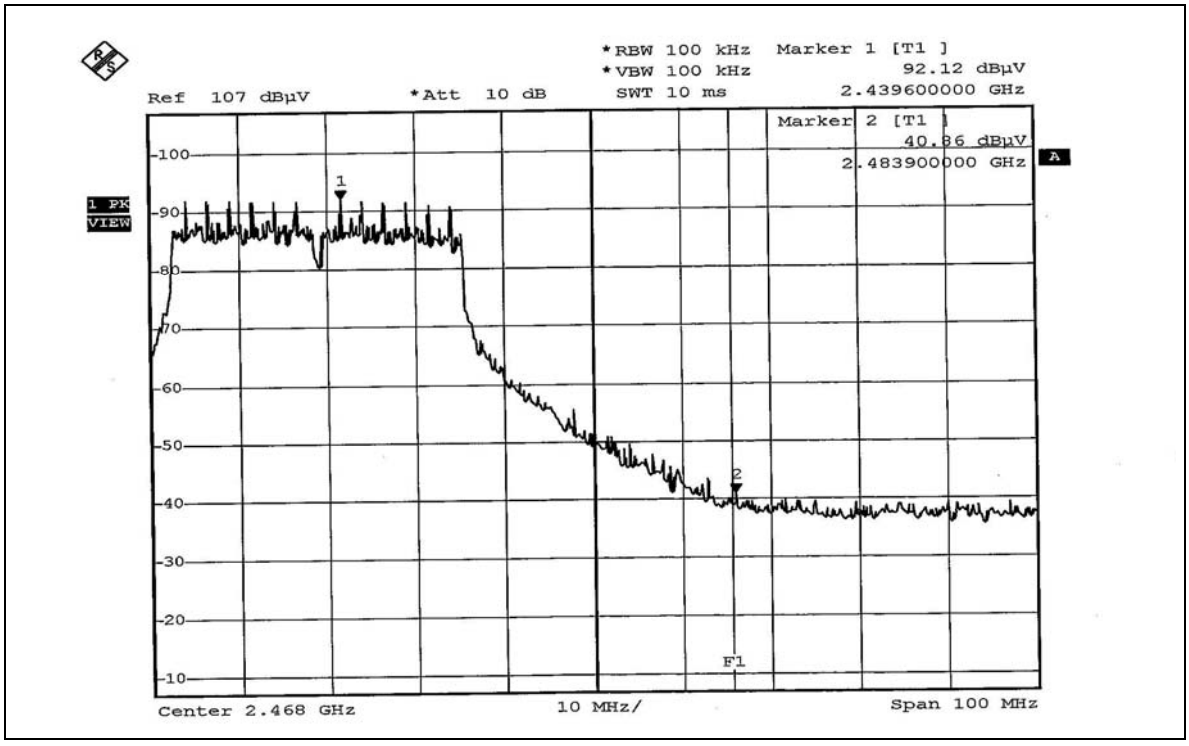

*RBW 100 kHz
*VBW 100 kHz
SWT 2.25 s
Marker 1 [T1]
-42.88 dBm
21.310000000 GHz
Ref 20 dBm
*Att 30 dB
1 PK
VIEW
A
20
10
0
D1 -3.33 dBm
-10
-20
D2 -23.33 dBm
-30
-40
-60
-70
F2
-80
Start 2.5 GHz
2.25 GHz/
Stop 25 GHz

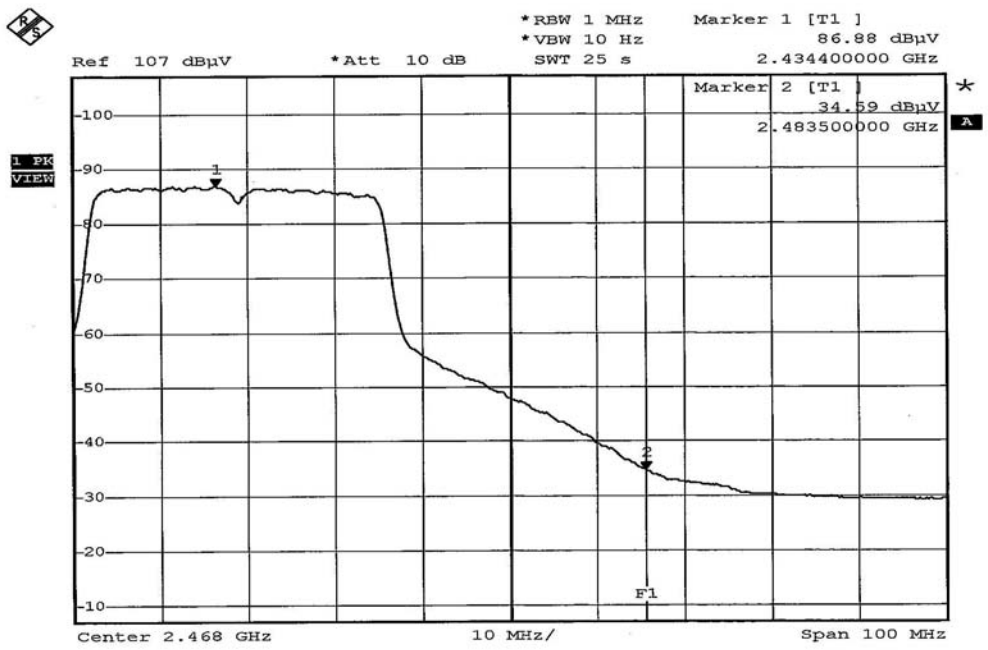
802.11g Turbo OFDM modulation (Antenna 1)

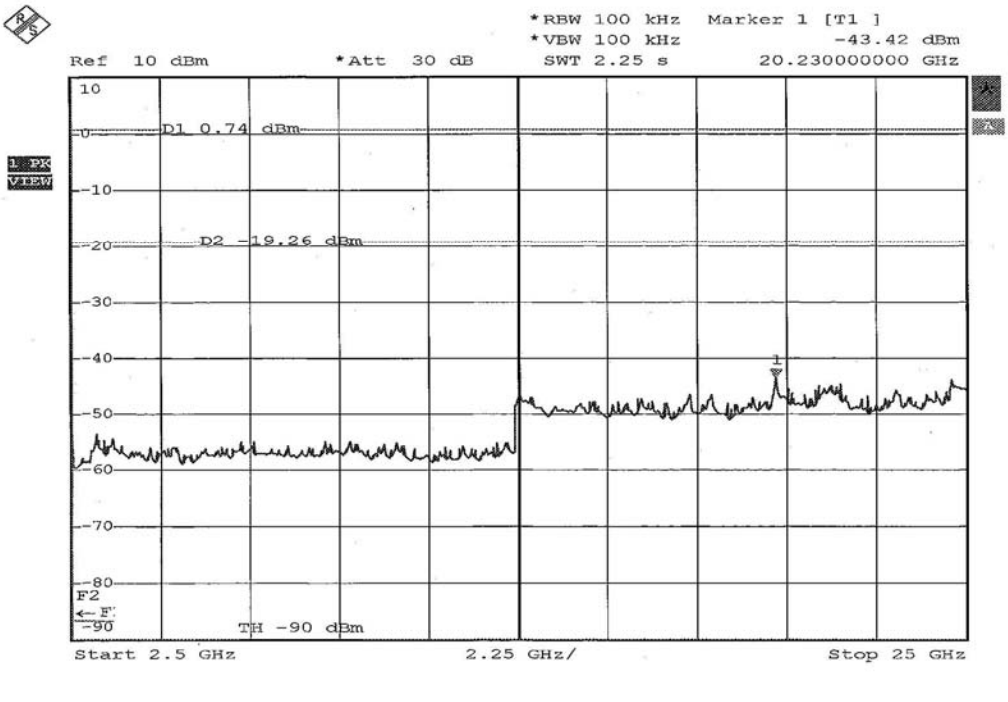




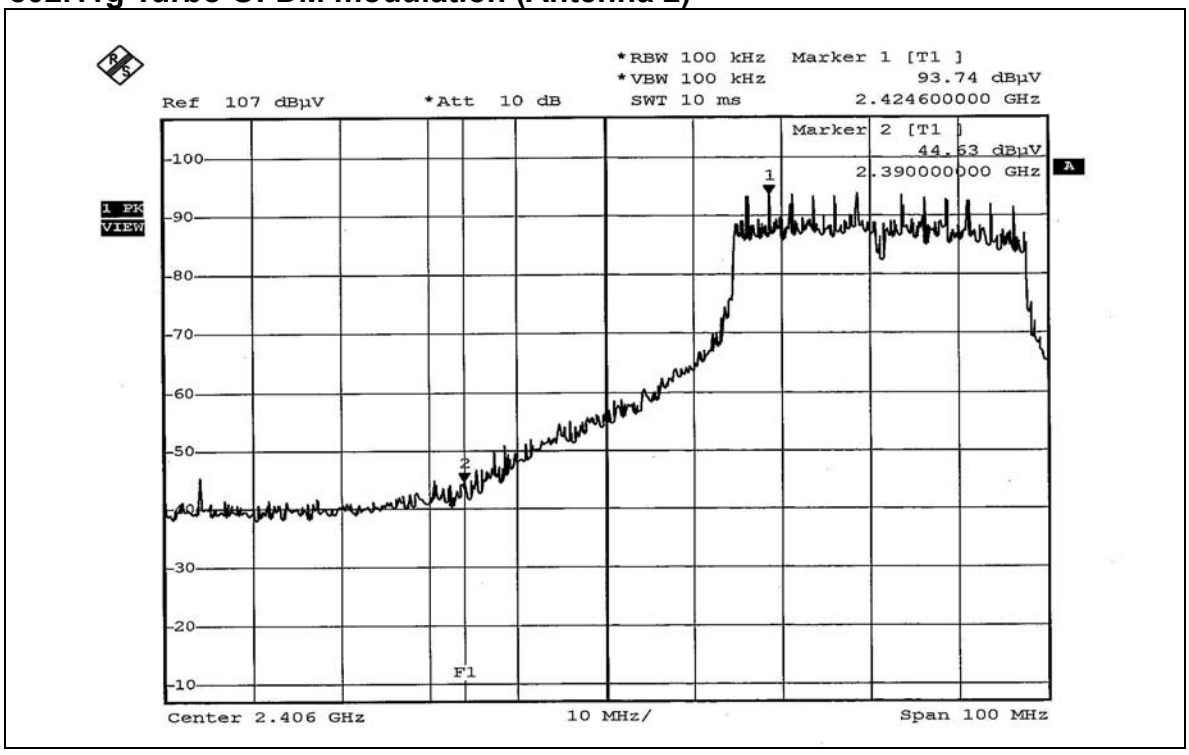

*RBW 100 kHz
*VBW 100 kHz
Marker 1 [T1]
-43.11 dBm
24.730000000 GHz
Ref 10 dBm
*Att 30 dB
SWT 2.25 s
D1 1.03 dBm
D2 -18.97 dBm
1 PK
VIEW
A
Start 2.5 GHz
2.25 GHz/
Stop 25 GHz

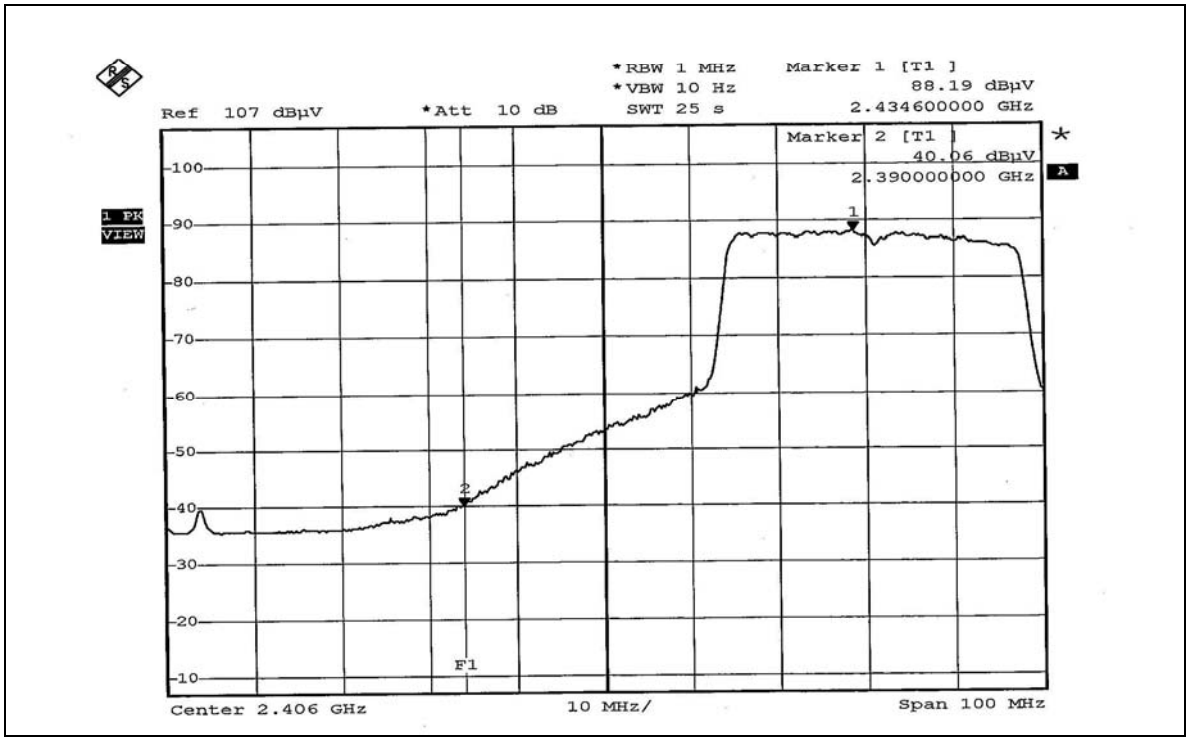

*RBW 100 kHz
*VBW 100 kHz
Marker 1 [T1]
92.12 dBµV
2.439600000 GHz
Ref 107 dBµV
*Att 10 dB
SWT 10 ms
Marker 2 [T1]
40.86 dBµV
2.483900000 GHz
1 PK
VIEW
A
F1
Center 2.468 GHz
10 MHz/
Span 100 MHz

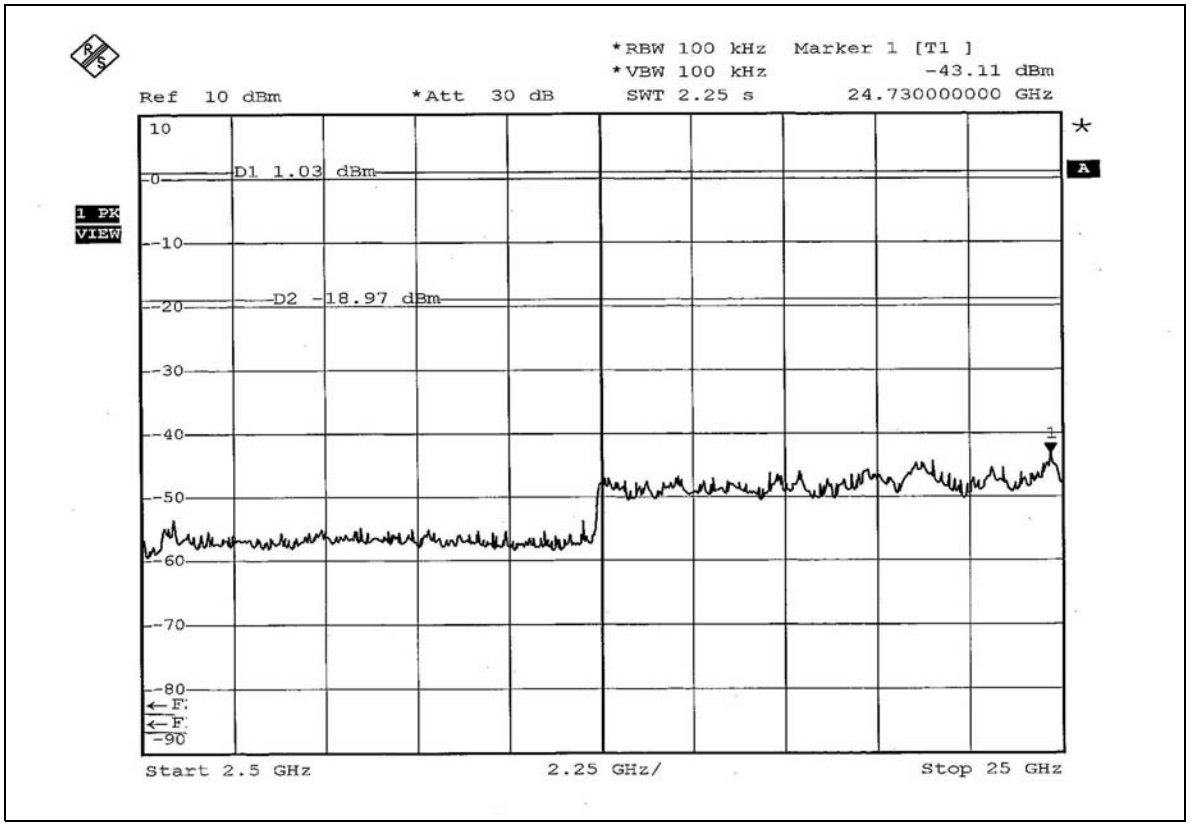

*RBW 1 MHz
*VBW 10 Hz
SWT 25 s
Marker 1 [T1]
86.88 dBµV
2.434400000 GHz
Ref 107 dBµV
*Att 10 dB
Marker 2 [T1]
34.59 dBµV
2.483500000 GHz
1 PK VIEW
100
90
80
70
60
50
40
30
20
10
F1
Center 2.468 GHz
10 MHz/
Span 100 MHz

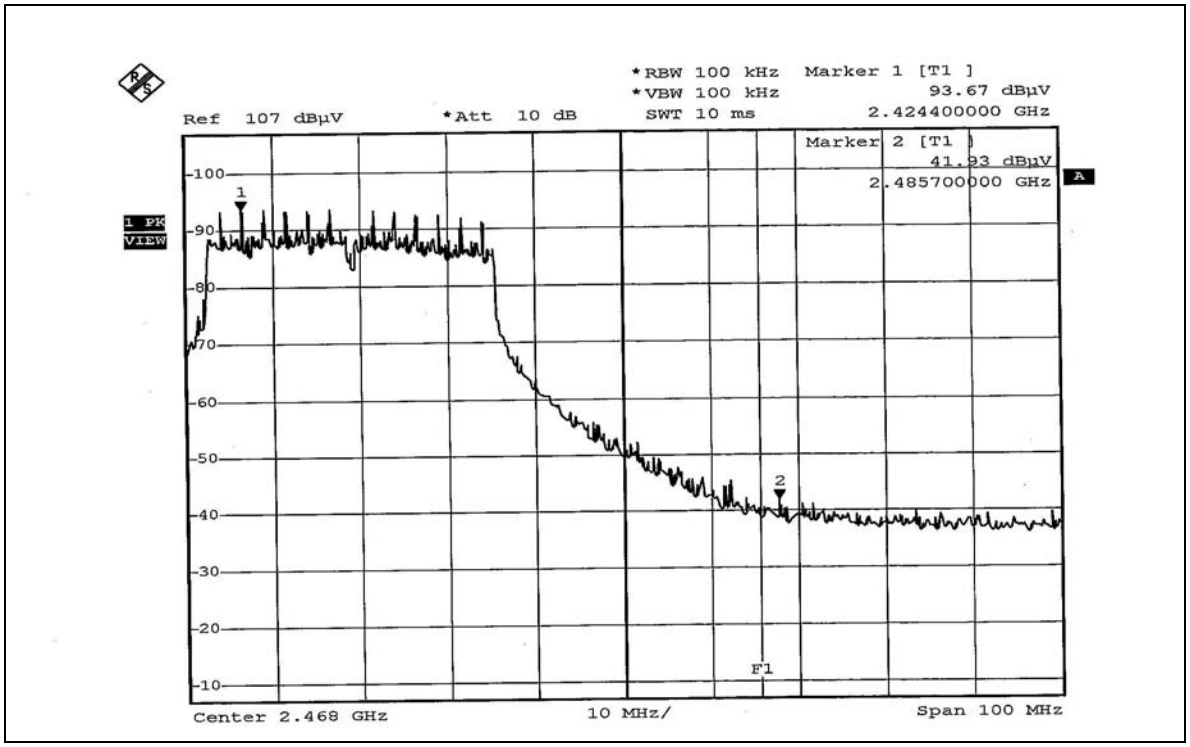

*RBW 100 kHz
*VBW 100 kHz
SWT 2.25 s
Marker 1 [T1]
-43.42 dBm
20.230000000 GHz
Ref 10 dBm
*Att 30 dB
1 PK VIEW
10
0
D1 0.74 dBm
-10
-20
D2 -19.26 dBm
-30
-40
-50
-60
-70
-80
F2
-90
TH -90 dBm
Start 2.5 GHz
2.25 GHz/
Stop 25 GHz

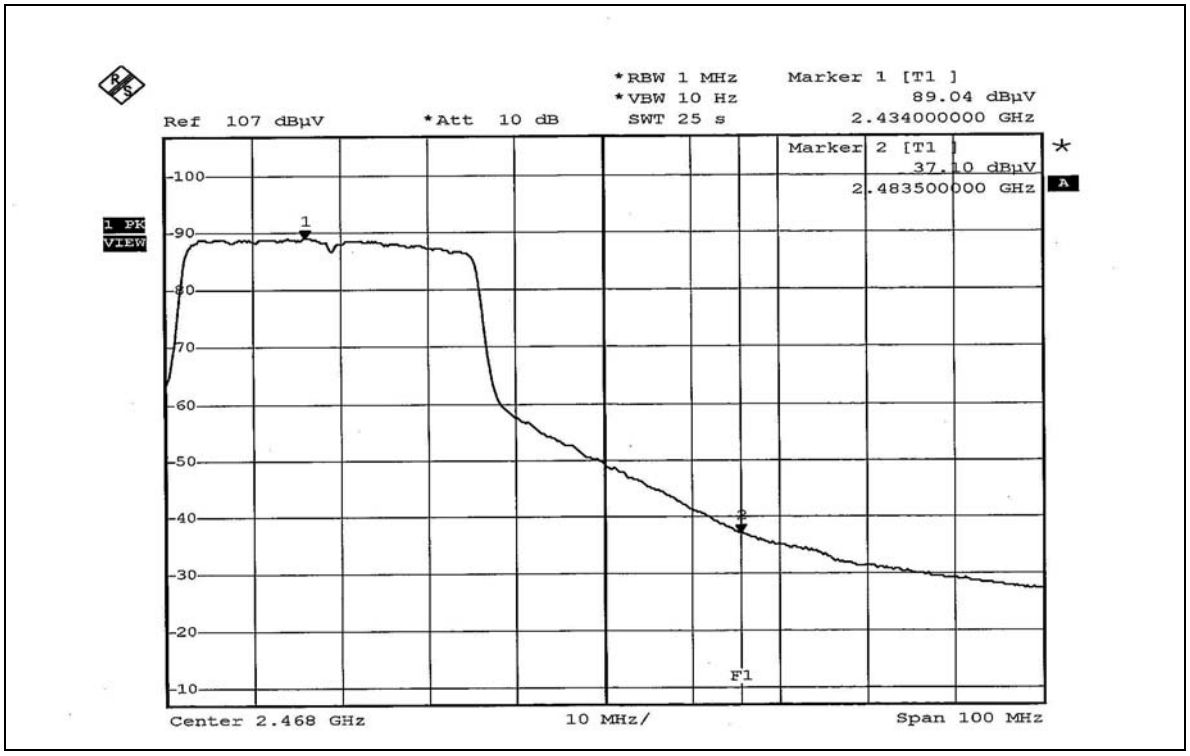
802.11g Turbo OFDM modulation (Antenna 2)

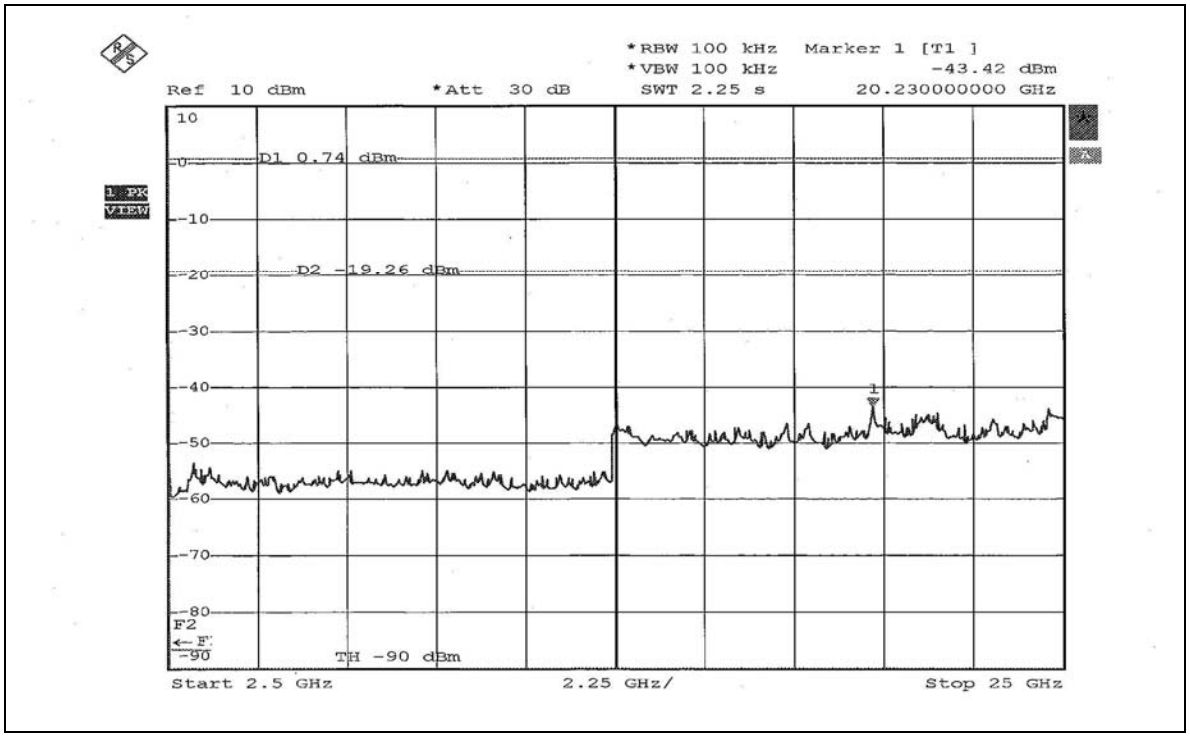





*RBW 100 kHz
*VBW 100 kHz
SWT 2.25 s
Marker 1 [T1]
-43.11 dBm
24.730000000 GHz
Ref 10 dBm
*Att 30 dB
D1 1.03 dBm
D2 -18.97 dBm
1 PK
VIEW
A
Start 2.5 GHz
2.25 GHz/
Stop 25 GHz


*RBW 100 kHz
*VBW 100 kHz
SWT 10 ms
Marker 1 [T1]
93.67 dBµV
2.424400000 GHz
Marker 2 [T1]
41.93 dBµV
2.485700000 GHz
Ref 107 dBµV
*Att 10 dB
1 PK
VIEW
A
F1
Center 2.468 GHz
10 MHz/
Span 100 MHz


*RBW 1 MHz
*VBW 10 Hz
SWT 25 s
Marker 1 [T1]
89.04 dBµV
2.434000000 GHz
Ref 107 dBµV
*Att 10 dB
Marker 2 [T1]
37.10 dBµV
2.483500000 GHz
1 PK VIEW
100
90
80
70
60
50
40
30
20
10
F1
Center 2.468 GHz
10 MHz/
Span 100 MHz


*RBW 100 kHz
*VBW 100 kHz
SWT 2.25 s
Marker 1 [T1]
-43.42 dBm
20.230000000 GHz
Ref 10 dBm
*Att 30 dB
1 PK VIEW
D1 0.74 dBm
D2 -19.26 dBm
F2
TH -90 dBm
Start 2.5 GHz
2.25 GHz/
Stop 25 GHz

5.6 ANTENNA REQUIREMENT

5.6.1 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.

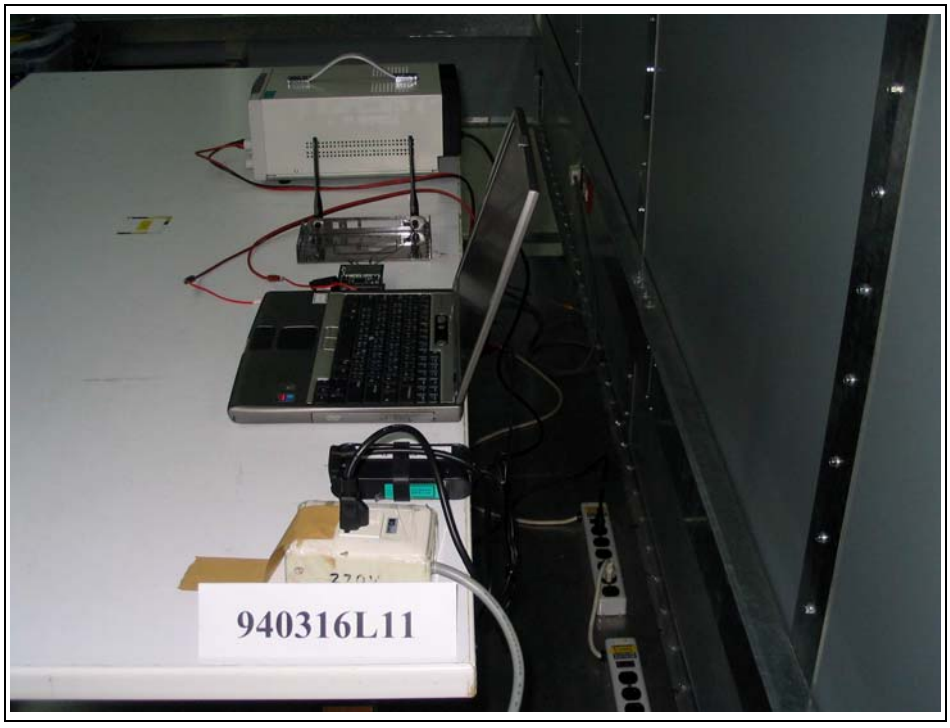
And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

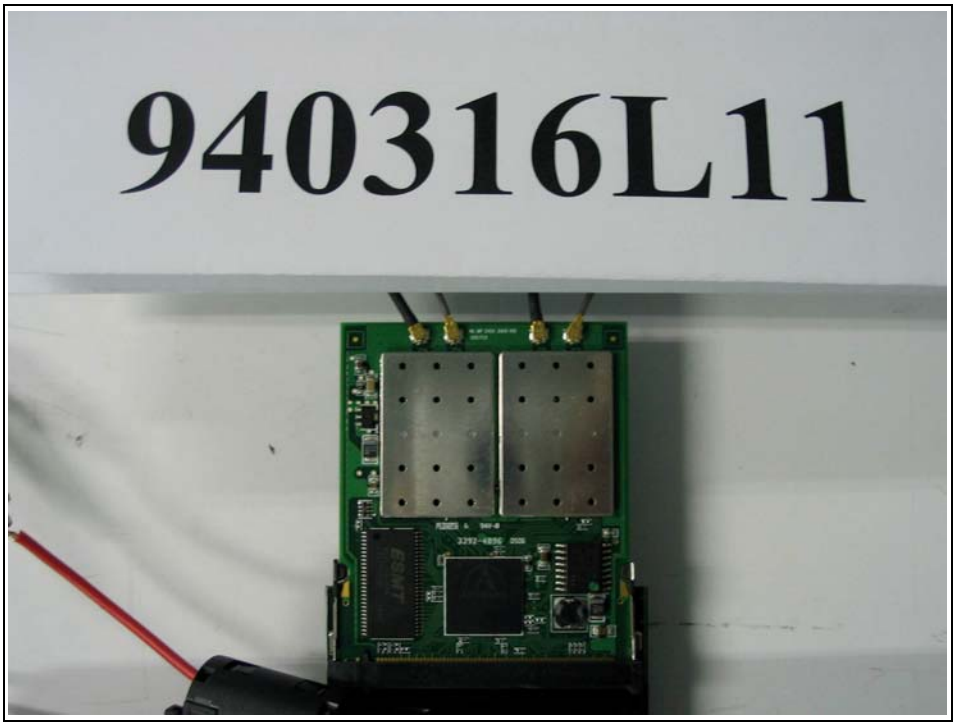
5.6.2 ANTENNA CONNECTED CONSTRUCTION

The antenna type used in this product is Dipole antenna with UFL antenna connector. The maximum Gain of this antenna is only 2.319dBi.

6 PHOTOGRAPHS OF THE TEST CONFIGURATION

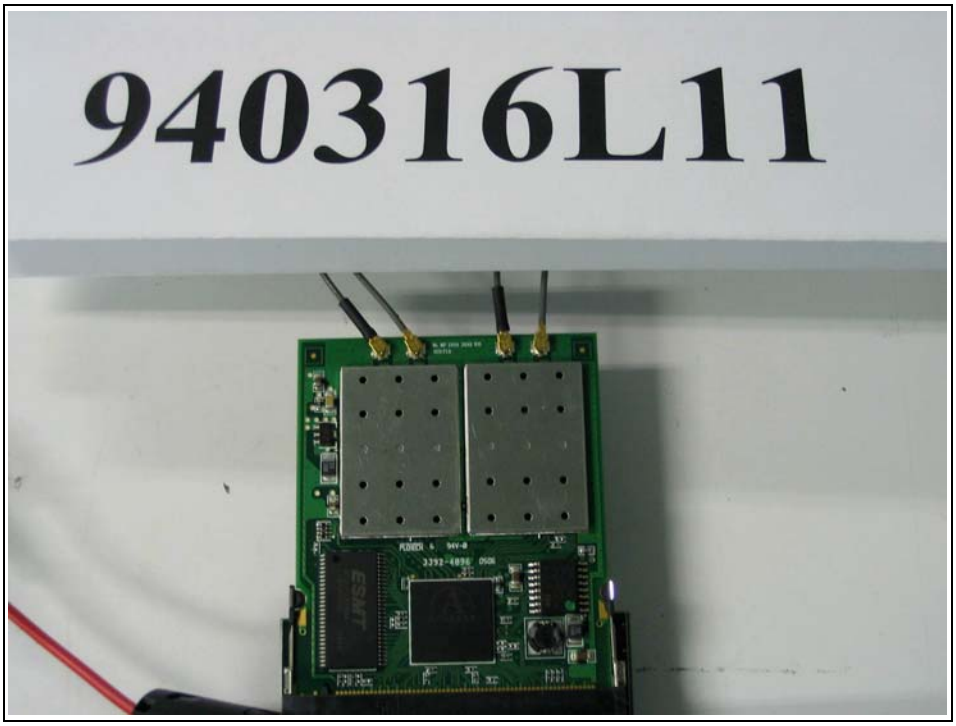
CONDUCTED EMISSION TEST (Antenna 1)




940316L11

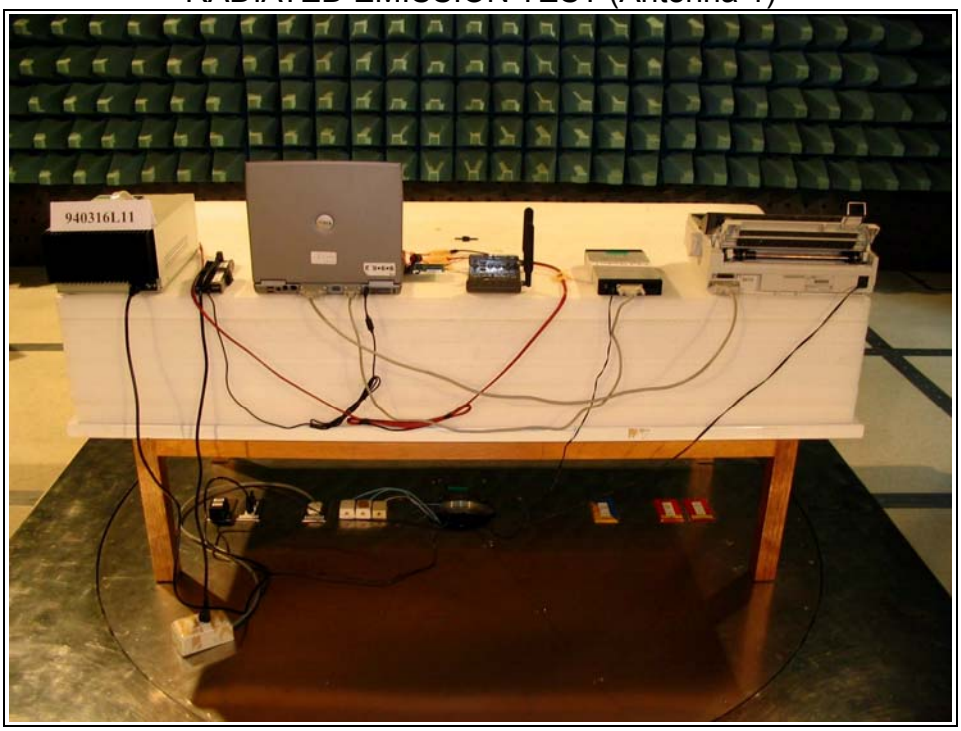
940316L11

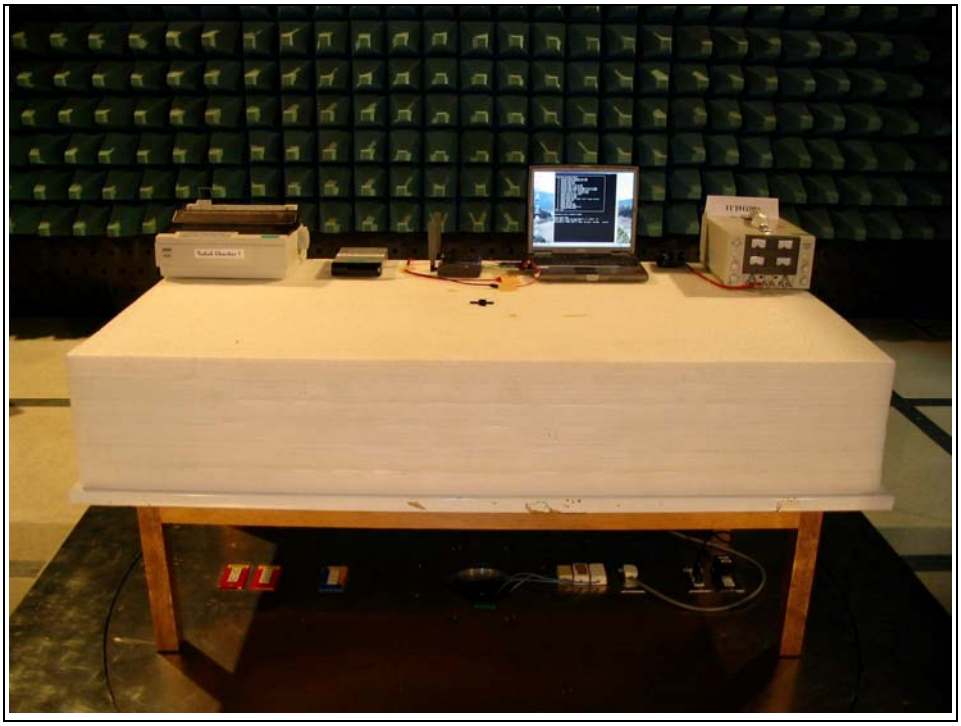
CONDUCTED EMISSION TEST (Antenna 2)


940316L11

940316L11

RADIATED EMISSION TEST (Antenna 1)





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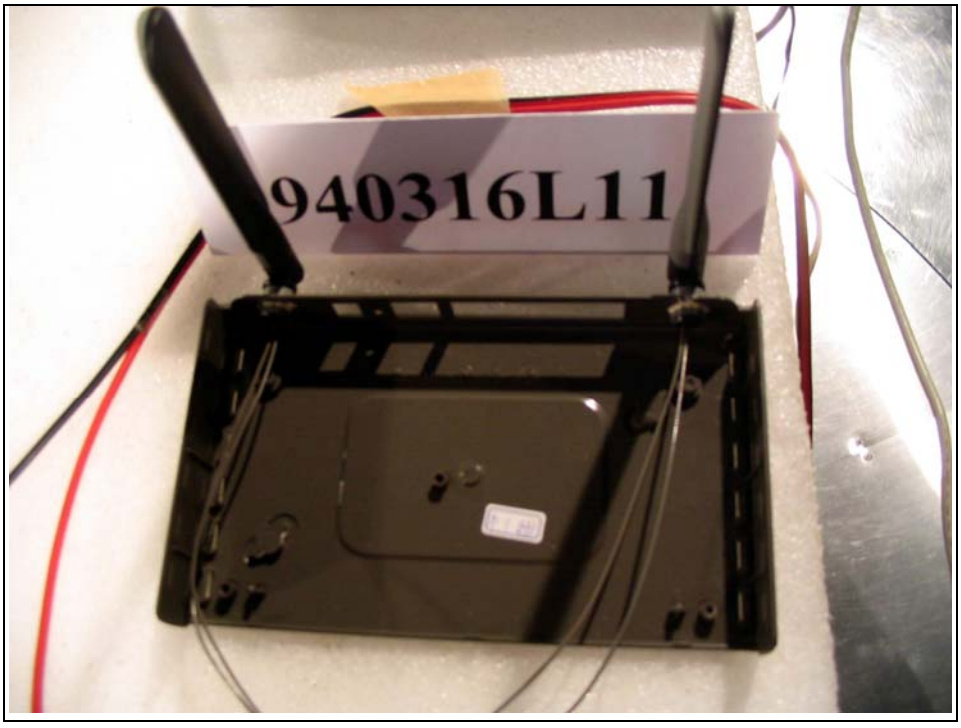
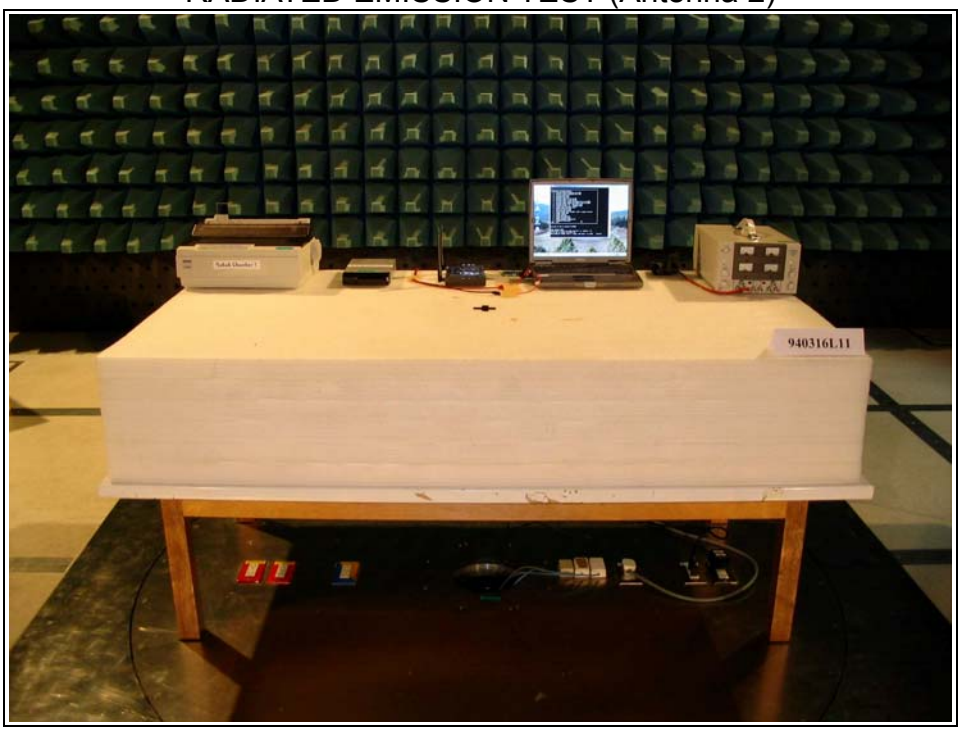
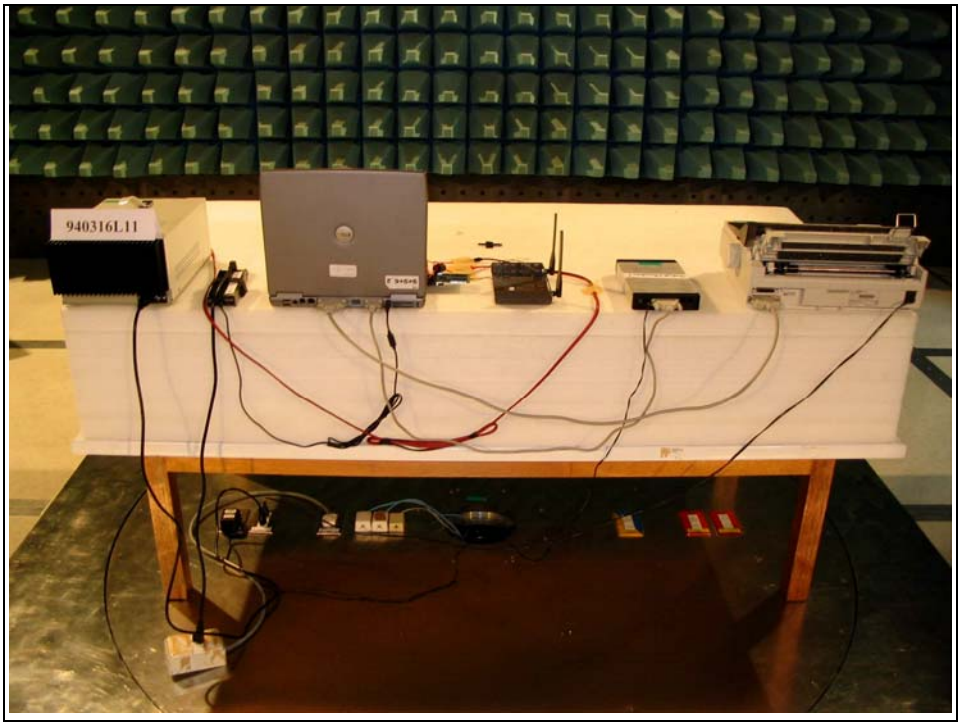

940316L11

RADIATED EMISSION TEST (Antenna 2)





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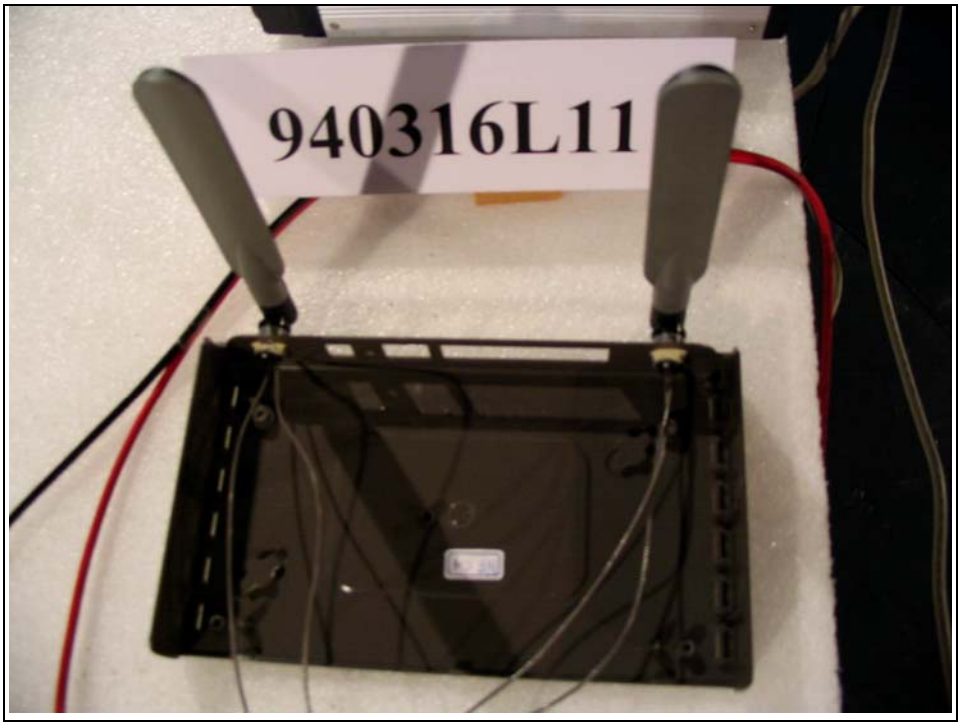
ESMT


940316L11

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.