



TEST REPORT

Product Name : IEEE802.11g WLAN Cardbus Adapter

Model Number : DWL-G680

Data Applies to : WCB-G11

Brand Name : D-Link

FCC ID : KA2DWLG680A1

Applicant : D-LINK Corporation

Address : No. 8, Li-shing Road VII, Science-based Industrial
Park, Hsinchu, Taiwan R.O.C.

Received Date : January 24, 2005

Tested Date : January 24 ~ February 02, 2005

Issued by

**Compliance Certification Services Inc.
Hsinchu Lab.**

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Notes :

1. This report will be invalid if duplicated or photocopied in part.
2. This report refers only to the specimen(s) submitted to testing, and be invalid as separately used.
3. This report is invalid without examination stamp and signature of this institute.
4. The tested specimen(s) will be preserved for thirty days from the data issued.
5. The report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.





Test Report Certification

Product Name : IEEE802.11g WLAN Cardbus Adapter
Model Number : DWL-G680
Data Applies to : WCB-G11
Brand Name : D-Link
FCC ID : KA2DWLG680A1
Applicant : D-LINK Corporation

Measurement Standard :

FCC 47 C.F.R. Part 15, Subpart B and Subpart C (2004)
ANSI C63.4 (2003)

Tested By : Stan Peng, **Date** : February 04, 2005
(Stan Peng)
Approved By : C.F. Wu, **Date** : February 04, 2005
(C.F. Wu, Manager)



WE HEREBY CERTIFY THAT: The measurements shown in the attachment were made in accordance with the procedures indicated, and the energy emitted by the equipment was found to be within the limits applicable. We assume full responsibility for the accuracy and completeness of these measurements and vouch for the qualifications of all persons taking them.



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1. GENERAL INFORMATION

1.1 General Statement

MEASUREMENT DEVIATION : Comply with standard in full

TRACEABILITY : This test result is traceable to National or International std.

1.2 General Description of EUT & Power

Product Name	IEEE802.11g WLAN Cardbus Adapter
Model Number	DWL-G680
Data Applies to	WCB-G11
Operating Frequency	◆IEEE 802.11b/g ISM Band USA(FCC) : 2.412GHz ~ 2.462GHz (CH1 ~ CH11)
Channel Number	11 channel for 802.11b/g
Channel Spacing	5MHz
Modulation	◆IEEE 802.11g (OFDM / DSSS) : 48/54 Mbps (QAM-64), 24/36 Mbps (QAM-16), 12/18 Mbps (QPSK) , 6/9 Mbps (BPSK) , 5.5/11 Mbps (CCK) , 2 Mbps (DQPSK) , 1 Mbps (DBPSK) ◆IEEE 802.11b (DSSS) : 5.5/11 Mbps (CCK) , 2 Mbps (DQPSK), 1 Mbps (DBPSK)
Advanced Mode	802.11g turbo mode
Frequency Selection	BY SOFTWARE
Antenna Type	Printed Antenna, Antenna Gain : 0dBi
Power Source	3.3VDC (From Notebook PC)



1.3 Tested Channel

The following channel were evaluated in this test report.

2.4~2.4835GHz

For 802.11b / normal 802.11g mode

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

For 802.11g turbo mode

Channel	Carrier center frequency fc (MHz)
-----	2437



1.4 Description of Peripherals

(1) Notebook PC

MANUFACTURER : COMPAQ CORP.
MODEL NUMBER : N800V
SERIAL NUMBER : 5Y33KSQZM0W4 1YR
FCC : DOC
INPUT POWER : 18.5VDC,65W,3.5A
POWER CORD : Unshielded, Detachable, 1.8m

Adapter

MANUFACTURER : COMPAQ CORP.
MODEL NUMBER : PPP009L
SERIAL NUMBER : 4809673805
INPUT POWER : 100-240VAC 50/60Hz,1.6A
OUTPUT POWER : 18.5VDC, 65W, 3.5A

(2) Printer

MANUFACTURER : HP CORP.
MODEL NUMBER : C6431D
SERIAL NUMBER : CN19T6S011
FCC ID : DOC
POWER SOURCE : 100-240VAC,50/60Hz,0.7A
SIGNAL CABLE : Shielded , Undetachable , 1.8m

(3) Notebook PC

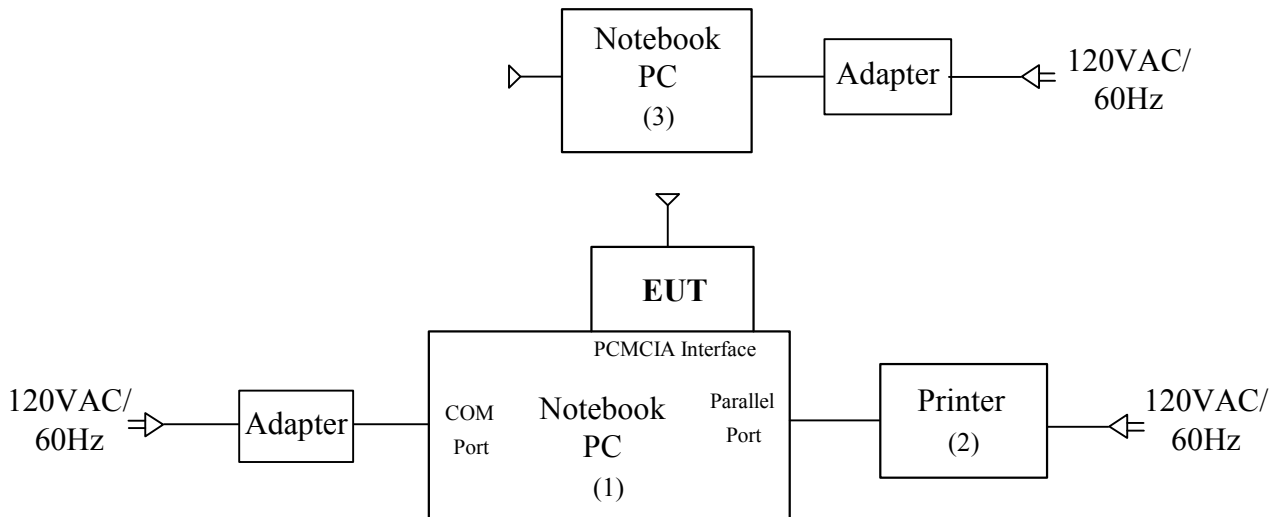
MANUFACTURER : COMPAQ CORP.
MODEL NUMBER : N800V
SERIAL NUMBER : 5Y31KSQZD1TJ 1YR
FCC : DOC
INPUT POWER : 18.5VDC,65W,3.5A
POWER CORD : Unshielded, Detachable, 1.8m

Adapter

MANUFACTURER : COMPAQ CORP.
MODEL NUMBER : PPP009L
SERIAL NUMBER : 4809672405
INPUT POWER : 100-240VAC 50/60Hz,1.6A
OUTPUT POWER : 18.5VDC, 65W, 3.5A



1.5 EUT & Peripherals Setup Diagram



The indicated numbers (1)(2).....,please refer to item 1.4

1.6 EUT Operating Procedure

1. Set up all computers like the setup diagram.
2. The “**Atheros Radio Test <ART> Revision 5.1 BUILD #8**” software was used for testing.

(1) TX Mode :

⇒ **Tx Data Rate:11Mbps long** (802.11b Mode) **6Mbps** (802.11g Mode)
108Mbps (802.11g Turbo Mode)

⇒ **Toggle output mode = TX99**

⇒ **Target Power:** 802.11b Mode Channel 1 (2412MHz) = **18**
802.11b Mode Channel 6 (2437MHz) = **20**
802.11b Mode Channel 11 (2462MHz) = **18**

Target Power: 802.11g Mode Channel 1 (2412MHz) = **17**
802.11g Mode Channel 6 (2437MHz) = **19**
802.11g Mode Channel 11 (2462MHz) = **17**

⇒ **“ b “ => Toggle turbo mode**

Target Power: 802.11g Turbo Mode Channel Middle (2437MHz) = **20**

⇒ **“ a “ => Toggle Antenna A or B**

For Radiated: Antenna B

For Conducted: Antenna A

(2) RX Mode :

⇒ **Continuous RF <R>eceive mode**

3. All of the function are under run.

4. Start test.



1.7 Description of Laboratory

SITE DESCRIPTION

FCC Certificate NO. : 90585
BSMI Certificate NO. : SL2-IN-E-0002
NVLAP Lab Code : 200118-0
CNLA Certificate NO. : CNLA-ZL97018E
VCCI Certificate NO. : R-1189, C-1250
TÜV Rheinland Certificate NO. : 10008375

NAME OF SITE : Compliance Certification Services Inc. Hsinchu Lab.

SITE LOCATION : Rm.258, Bldg.17, NO.195 , Sec. 4, Chung Hsing Rd.,
Chu-Tung Chen. Hsin-Chu, Taiwan 310 R.O.C.

1.8 Summary of Test Results

The EUT has been tested according to the following specifications :

APPLIED STANDARD : FCC 47 C.F.R. Part 15, Subpart B and Subpart C			
Standard Section	Test Item and Limit	Result	REMARK
15.107 15.207	AC Power Conducted Emission Limit : Sec 15.107	PASS	Meet the requirement of limit
15.247(a)(2)	Spectrum Bandwidth of a Orthogonal Frequency Division Multiplex System Limit : 6dB bandwidth > 500KHz	PASS	Meet the requirement of limit
15.247(b)	Maximum Peak Output Power Limit : max. 30dBm	PASS	Meet the requirement of limit
15.109 15.205 15.209	Transmitter Radiated Emissions Limit : Table 15.209	PASS	Meet the requirement of limit
15.247(e)	Power Spectral Density Limit : max. 8dBm	PASS	Meet the requirement of limit
15.247(d)	Out of Band Emission and Restricted Band Radiation Limit:20dB less than peak value of fundamental frequency Restricted band Limit:Table 15.209	PASS	Meet the requirement of limit



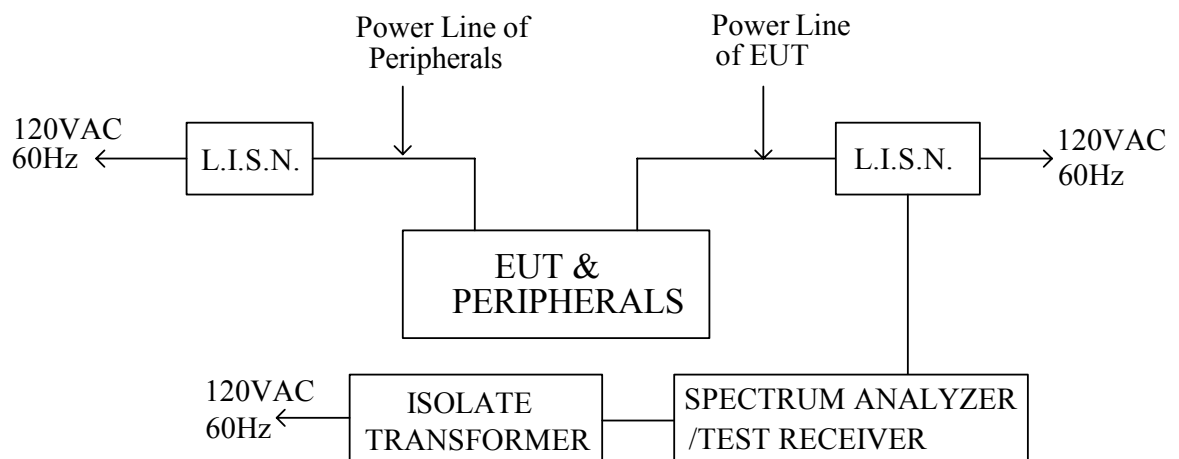
2. CONDUCTED POWERLINE TEST

2.1 Test Equipments

The following test equipments are used during the conducted powerline tests :

Manufacturer or Type	Model No.	Serial No.	Date of Calibration	Calibration Period	Remark
HP SPECTRUM ANALYZER & DISPLAY	8594E	3801A05627	April 26, 2004	1 Year	PRETEST
SOLAR ISOLATION TRANSFORMER	7032-1	N/A	N/A	N/A	FINAL
EMCO L.I.S.N.	3850/2	9311-1025 9401-1028	January 10, 2005 For Characteristic impedance May 18, 2004 For Insertion loss	1 Year	FINAL
R & S TEST RECEIVER	ESHS 30	838550/003	February 11, 2004	1 Year	FINAL
KEENE SHIELDED ROOM	5983	No.1	N/A	N/A	FINAL
R & S PULSE LIMIT	EHS3Z2	357.8810.52	July 10, 2004	1 Year	FINAL
N TYPE COAXIAL CABLE	-----	-----	July 10, 2004	1 Year	FINAL
50 Ω TERMINATOR	-----	-----	July 10, 2004	1 Year	FINAL

2.2 Test Setup





2.3 Conducted Power Line Emission Limit

For unintentional device, according to § 15.107(a) Line Conducted Emission Limits is as following :

Frequency (MHz)	Maximum RF Line Voltage (dB μ V)			
	CLASS A		CLASS B	
	Q.P.	Ave.	Q.P.	Ave.
0.15 - 0.50	79	66	66-56	56-46
0.50 - 5.00	73	60	56	46
5.00 - 30.0	73	60	60	50

For intentional device, according to § 15.207(a) Line Conducted Emission Limit is same as above table.

2.4 Test Procedure

The test procedure is performed in a 12ft×12ft×8ft(L×W×H) shielded room. The EUT along with its peripherals were placed on a 1.0m(W)× 1.5m(L) and 0.8m in height wooden table and the EUT was adjusted to maintain a 0.4 meter space from a vertical reference plane. The EUT was connected to power mains through a line impedance stabilization network (LISN) which provides 50 ohm coupling impedance for measuring instrument and the chasis ground was bounded to the horizontal ground plane of shielded room. All peripherals were connected to the second LISN and the chasis ground also bounded to the horizontal ground plane of shielded room. The excess power cable between the EUT and the LISN was bundled. The power cables of peripherals were unbundled. All connecting cables of EUT and peripherals were moved to find the maximum emission.

2.5 Uncertainty of Conducted Emission

The uncertainty of conducted emission is ± 1.36 dB.

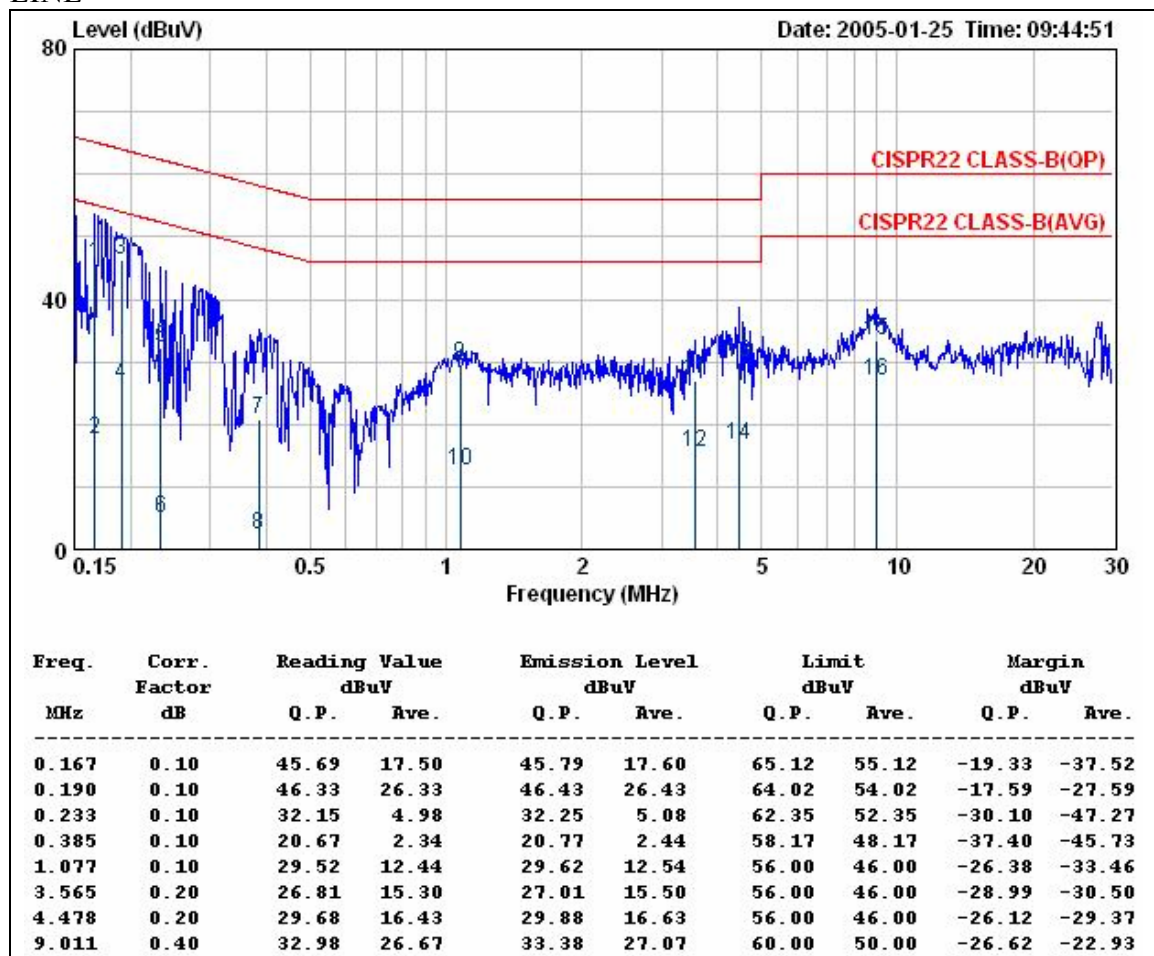


2.6 Conducted RF Voltage Measurement

The frequency spectrum from 0.15 MHz to 30 MHz was investigated. All emissions not reported are much lower than the prescribed limits.

Company	D-LINK Corporation	Test Date	2005/01/25
Product Name	IEEE802.11g WLAN Cardbus Adapter	Test By	Stan Peng
Model Name	DWL-G680	TEMP & Humidity	26.1°C, 62%

LINE



REMARKS :

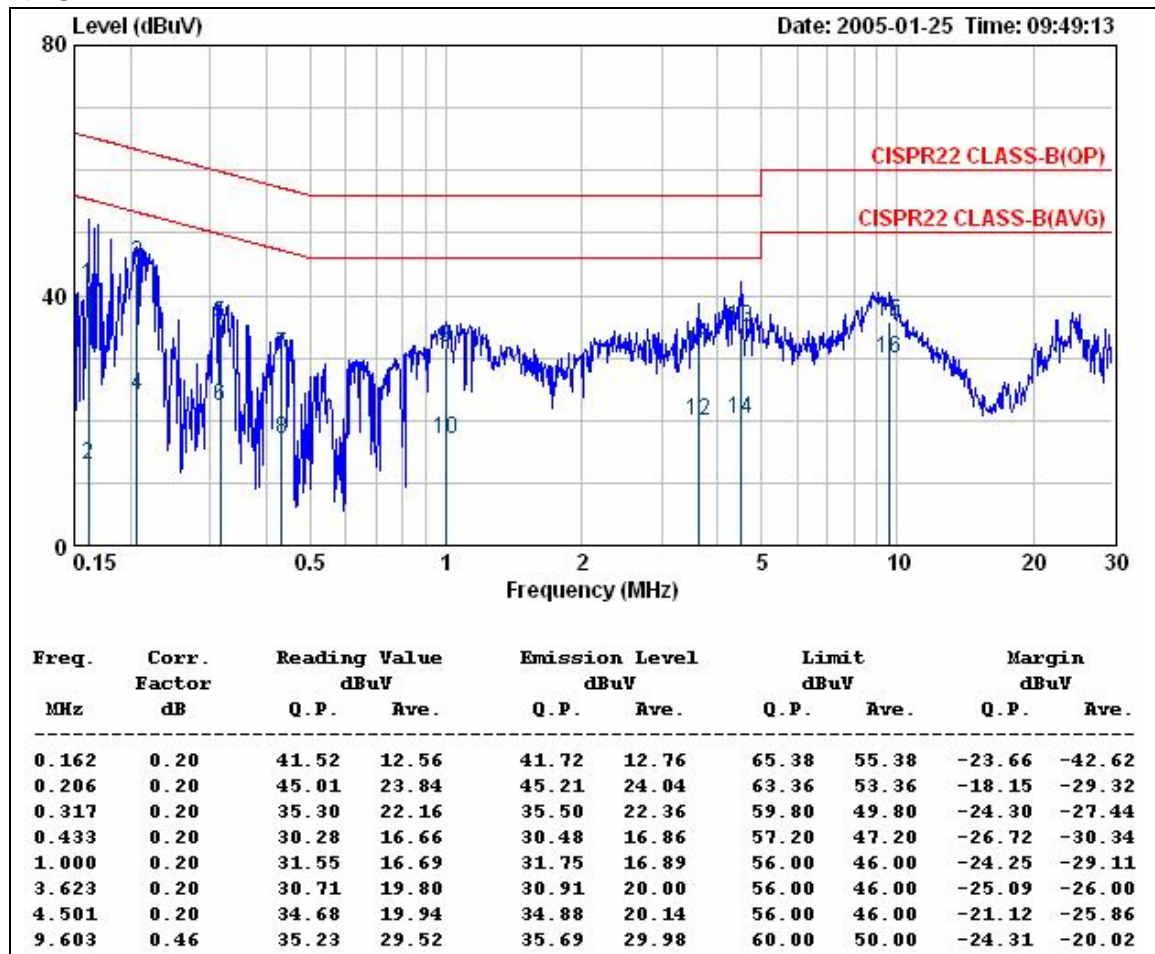
1. Correction Factor = Insertion loss + cable loss
2. Margin value = Emission level – Limit value
3. All emission below 1GHz at 802.11b/g and 802.11g turbo mode are all the same, so the 802.11g mode chosen as representative in final test.
4. According to technical experiences, all spurious emission of 802.11g mode at channel 1,6,11 are almost the same below 1GHz, so that the channel 1 was chosen as representative in final test.



The frequency spectrum from 0.15 MHz to 30 MHz was investigated. All emissions not reported are much lower than the prescribed limits.

Company	D-LINK Corporation	Test Date	2005/01/25
Product Name	IEEE802.11g WLAN Cardbus Adapter	Test By	Stan Peng
Model Name	DWL-G680	TEMP & Humidity	26.1°C, 62%

NEUTRAL



REMARKS :

1. Correction Factor = Insertion loss + cable loss
2. Margin value = Emission level – Limit value
3. All emission below 1GHz at 802.11b/g and 802.11g turbo mode are all the same, so the 802.11g mode chosen as representative in final test.
4. According to technical experiences, all spurious emission of 802.11g mode at channel 1,6,11 are almost the same below 1GHz, so that the channel 1 was chosen as representative in final test.



2.7 Photos of Conduction Test





3. RADIATED EMISSION TEST

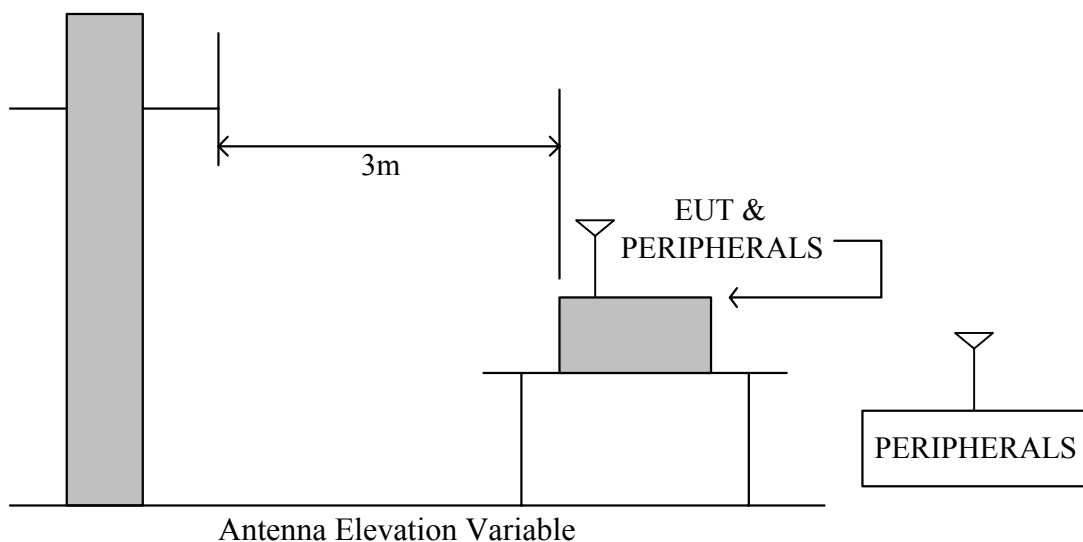
3.1 Test Equipments

The following test equipments are utilized in making the measurements contained in this report.

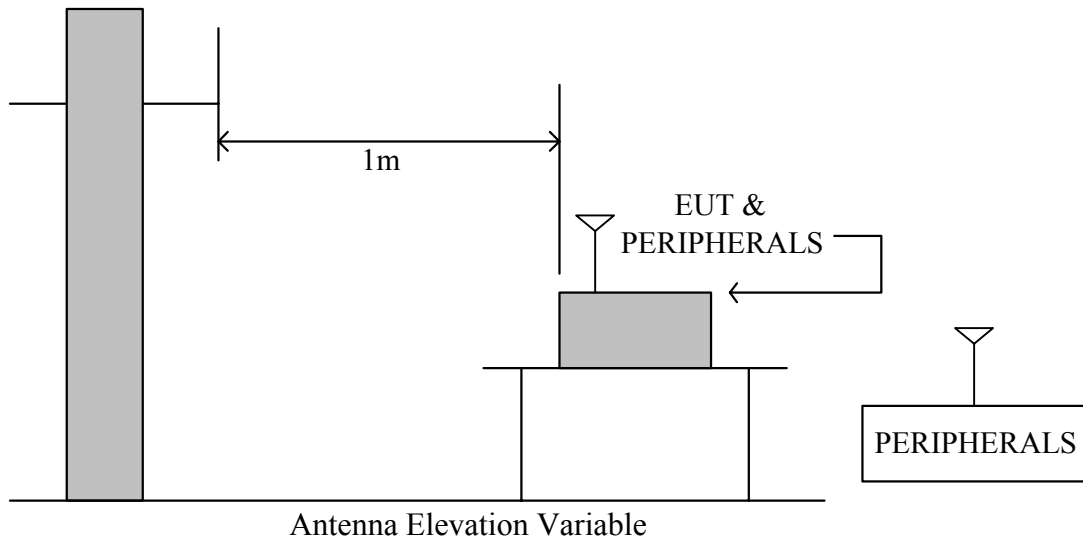
Manufacturer or Type	Model No	Serial No	Date of Calibration	Calibration Period	Remark
CHASE BI-LOG ANTENNA	CBL6112B	2421	June 15, 2004	1 Year	FINAL
R/S SPECTRUM ANALYZER	FSEK30	835253/002	September 06, 2004	1 Year	FINAL
R/S EMI TEST RECEIVER	ESCS30	83548/008	September 05, 204	1 Year	FINAL
OPEN SITE	-----	No.2	May 07, 2004	1 Year	FINAL
N TYPE COAXIAL CABLE	CHA9525	4	June 03, 2004	1 Year	FINAL
Com-power Horn Antenna	AH-118	10089	April 09, 2004	1 Year	FINAL
HP Pre-amplifier	8449B	3008A01471	November 24, 2004	1 Year	FINAL
NardaMicrowave Pre-amplifier	DBS-1840N813	016	July 27, 2004	1 Year	FINAL
HP High pass filter	84300/80038	002	CAL. ON USE	1 Year	FINAL
HP High pass filter	84300/80039	003	CAL. ON USE	1 Year	FINAL
Com-Power Horn Antenna	AH-840	3077	February 25, 2004	1 Year	FINAL

3.2 Test Setup

The diagram below shows the test setup that is utilized to make the measurements for emission below 1GHz.



The diagram below shows the test setup that is utilized to make the measurements for emission above 1GHz.



3.3 Radiation Limit

For unintentional device, according to § 15.109(a), except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values :

Frequency (MHz)	Distance (Meters)	Radiated (dBμV/M)	Radiated (μV/M)
30-88	3	40.0	100
88-216	3	43.5	150
216-960	3	46.0	200
Above 960	3	54.0	500

For intentional device, according to § 15.209(a), the general requirement of field strength of radiated emissions from intentional radiators at a distance of 3 meters shall not exceed the above table. According to § 15.247(d), in any 100kHz bandwidth outside the frequency band in which the EUT is operating, the radiofrequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of desired power.



3.4 Test Procedures

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 10 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. During performing radiated emission below 1GHz, the EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. During performing radiated emission above 1GHz, the EUT was set 1 meters away from the interference-receiving antenna.
- 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 polarization 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 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 peak, quasi-peak or average method as specified and then reported in a data sheet.

NOTE :

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

3.5 Uncertainty of Radiated Emission

The uncertainty of radiated emission is ± 2.72 dB.



3.6 Radiated RF Noise Measurement

The frequency spectrum from 30 MHz to 1000 MHz was investigated. All emissions not reported are much lower than the prescribed limits.
All readings are quasi-peak values.

Company	D-LINK Corporation	Test Date	2005/01/25
Product Name	IEEE802.11g WLAN Cardbus Adapter	Test By	Stan Peng
Model Name	DWL-G680	TEMP & Humidity	26.1°C, 62%

Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading at 3m(dBμV)		Limits (dBμV/m)	Emission Level at 3m(dBμV/m)	
			Horizontal	Vertical		Horizontal	Vertical
30.00	17.01	0.97	*	*	40.00	*	*
239.99	12.14	3.84	9.30	6.60	46.00	25.27	22.57
250.01	12.72	4.01	2.30	2.90	46.00	19.03	19.63
319.98	14.49	4.41	13.20	3.80	46.00	32.10	22.70
359.98	16.45	4.63	10.60	2.10	46.00	31.68	23.18
400.05	18.41	4.85	15.20	5.60	46.00	38.46	28.86
479.97	17.95	5.12	6.50	0.80	46.00	29.57	23.87
1000.00	27.43	7.66	*	*	54.00	*	*

REMARKS :

1. * Undetectable
2. Emission level (dBμV/m) = Antenna Factor (dB/m) + Cable loss (dB) + Meter Reading (dBμV).
3. All emission below 1GHz at 802.11b/g and 802.11g turbo mode are all the same, so the 802.11g mode chosen as representative in final test.
4. According to technical experiences, all spurious emission of 802.11g mode at channel 1,6,11 are almost the same below 1GHz, so that the channel 1 was chosen as representative in final test.



The frequency spectrum above 1 GHz for Receiver was investigated. All emissions not reported are much lower than the prescribed limits. Readings are both peak and average values.

Company	D-LINK Corporation	Test Date	2005/01/31
Product Name	IEEE802.11g WLAN Cardbus Adapter	Test By	Stan Peng
Model Name	DWL-G680	TEMP & Humidity	14.6°C, 71%

CH1 (2412MHz) RX				Measurement Distance at 1m Horizontal polarity							
Freq. (MHz)	Reading (dBμV)	AF (dBμV)	Cable (dB)	Pre-amp (dB)	Dist (dB)	Filter (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Mark (P/Q/A)	Height (Meter)
3216.06	46.82	31.57	4.05	35.68	9.50	0.00	37.26	74	-36.74	P	1.0
3216.06	39.01	31.57	4.05	35.68	9.50	0.00	29.45	54	-24.55	A	1.0
4824.01	43.56	34.44	5.08	35.16	9.50	0.00	38.42	74	-35.58	P	1.0
4824.01	31.98	34.44	5.08	35.16	9.50	0.00	26.84	54	-27.16	A	1.0
9648.05	45.52	38.54	8.29	36.44	9.50	0.00	46.41	74	-27.59	P	1.0
9648.05	34.02	38.54	8.29	36.44	9.50	0.00	34.91	54	-19.09	A	1.0

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain.
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
4. The result basic equation calculation as follow :
Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit
5. The test limit is 3M limit.
6. The frequency was searched to 18GHz.
7. The other emission levels were very low against the limit.



The frequency spectrum above 1 GHz for Receiver was investigated. All emissions not reported are much lower than the prescribed limits. Readings are both peak and average values.

Company	D-LINK Corporation	Test Date	2005/01/31
Product Name	IEEE802.11g WLAN Cardbus Adapter	Test By	Stan Peng
Model Name	DWL-G680	TEMP & Humidity	14.6°C, 71%

CH1 (2412MHz) RX				Measurement Distance at 1m Vertical polarity							
Freq. (MHz)	Reading (dBμV)	AF (dBμV)	Cable (dB)	Pre-amp (dB)	Dist (dB)	Filter (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Mark (P/Q/A)	Height (Meter)
3215.94	45.77	31.57	4.05	35.68	9.50	0.00	36.21	74	-37.79	P	1.0
3215.94	36.85	31.57	4.05	35.68	9.50	0.00	27.29	54	-26.71	A	1.0
4824.05	44.26	34.44	5.08	35.16	9.50	0.00	39.12	74	-34.88	P	1.0
4824.05	32.84	34.44	5.08	35.16	9.50	0.00	27.70	54	-26.30	A	1.0
9648.02	45.02	38.54	8.29	36.44	9.50	0.00	45.91	74	-28.09	P	1.0
9648.02	33.45	38.54	8.29	36.44	9.50	0.00	34.34	54	-19.66	A	1.0

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain.
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
4. The result basic equation calculation as follow :
Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit
5. The test limit is 3M limit.
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The frequency spectrum above 1 GHz for Receiver was investigated. All emissions not reported are much lower than the prescribed limits. Readings are both peak and average values.

Company	D-LINK Corporation	Test Date	2005/01/31
Product Name	IEEE802.11g WLAN Cardbus Adapter	Test By	Stan Peng
Model Name	DWL-G680	TEMP & Humidity	14.6°C, 71%

CH6 (2437MHz) RX				Measurement Distance at 1m Horizontal polarity							
Freq. (MHz)	Reading (dBμV)	AF (dBμV)	Cable (dB)	Pre-amp (dB)	Dist (dB)	Filter (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Mark (P/Q/A)	Height (Meter)
3249.99	47.37	31.55	4.08	35.65	9.50	0.00	37.85	74	-36.15	P	1.0
3249.99	40.00	31.55	4.08	35.65	9.50	0.00	30.48	54	-23.52	A	1.0
7311.06	43.56	39.78	6.79	35.64	9.50	0.00	44.99	74	-29.01	P	1.0
7311.06	32.76	39.78	6.79	35.64	9.50	0.00	34.19	54	-19.81	A	1.0
9747.96	46.02	38.53	8.33	36.60	9.50	0.00	46.78	74	-27.22	P	1.0
9747.96	35.41	38.53	8.33	36.60	9.50	0.00	36.17	54	-17.83	A	1.0

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain.
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
4. The result basic equation calculation as follow :
Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit
5. The test limit is 3M limit.
6. The frequency was searched to 18GHz.
7. The other emission levels were very low against the limit.



The frequency spectrum above 1 GHz for Receiver was investigated. All emissions not reported are much lower than the prescribed limits. Readings are both peak and average values.

Company	D-LINK Corporation	Test Date	2005/01/31
Product Name	IEEE802.11g WLAN Cardbus Adapter	Test By	Stan Peng
Model Name	DWL-G680	TEMP & Humidity	14.6°C, 71%

CH6 (2437MHz) RX				Measurement Distance at 1m Vertical polarity							
Freq. (MHz)	Reading (dBμV)	AF (dBμV)	Cable (dB)	Pre-amp (dB)	Dist (dB)	Filter (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Mark (P/Q/A)	Height (Meter)
3249.98	46.57	31.55	4.08	35.65	9.50	0.00	37.05	74	-36.95	P	1.0
3249.98	37.84	31.55	4.08	35.65	9.50	0.00	28.32	54	-25.68	A	1.0
7311.01	44.12	39.78	6.79	35.64	9.50	0.00	45.55	74	-28.45	P	1.0
7311.01	32.68	39.78	6.79	35.64	9.50	0.00	34.11	54	-19.89	A	1.0
9747.85	45.68	38.53	8.33	36.60	9.50	0.00	46.44	74	-27.56	P	1.0
9747.85	34.04	38.53	8.33	36.60	9.50	0.00	34.80	54	-19.20	A	1.0

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain.
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
4. The result basic equation calculation as follow :
Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit
5. The test limit is 3M limit.
6. The frequency was searched to 18GHz.
7. The other emission levels were very low against the limit.



The frequency spectrum above 1 GHz for Receiver was investigated. All emissions not reported are much lower than the prescribed limits. Readings are both peak and average values.

Company	D-LINK Corporation	Test Date	2005/01/31
Product Name	IEEE802.11g WLAN Cardbus Adapter	Test By	Stan Peng
Model Name	DWL-G680	TEMP & Humidity	14.6°C, 71%

CH11 (2462MHz) RX				Measurement Distance at 1m Horizontal polarity							
Freq. (MHz)	Reading (dBμV)	AF (dBμV)	Cable (dB)	Pre-amp (dB)	Dist (dB)	Filter (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Mark (P/Q/A)	Height (Meter)
3282.96	47.21	31.53	4.12	35.62	9.50	0.00	37.74	74	-36.26	P	1.0
3282.96	39.76	31.53	4.12	35.62	9.50	0.00	30.29	54	-23.71	A	1.0
7385.99	43.77	39.75	6.84	35.62	9.50	0.00	45.24	74	-28.76	P	1.0
7385.99	32.63	39.75	6.84	35.62	9.50	0.00	34.10	54	-19.90	A	1.0
9848.06	45.03	38.52	8.37	36.76	9.50	0.00	45.65	74	-28.35	P	1.0
9848.06	34.98	38.52	8.37	36.76	9.50	0.00	35.60	54	-18.40	A	1.0

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain.
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
4. The result basic equation calculation as follow :
Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit
5. The test limit is 3M limit.
6. The frequency was searched to 18GHz.
7. The other emission levels were very low against the limit.



The frequency spectrum above 1 GHz for Receiver was investigated. All emissions not reported are much lower than the prescribed limits. Readings are both peak and average values.

Company	D-LINK Corporation	Test Date	2005/01/31
Product Name	IEEE802.11g WLAN Cardbus Adapter	Test By	Stan Peng
Model Name	DWL-G680	TEMP & Humidity	14.6°C, 71%

CH11 (2462MHz) RX				Measurement Distance at 1m Vertical polarity							
Freq. (MHz)	Reading (dBμV)	AF (dBμV)	Cable (dB)	Pre-amp (dB)	Dist (dB)	Filter (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Mark (P/Q/A)	Height (Meter)
3280.99	46.87	31.53	4.12	35.62	9.50	0.00	37.40	74	-36.60	P	1.0
3280.99	38.79	31.53	4.12	35.62	9.50	0.00	29.32	54	-24.68	A	1.0
7386.07	43.85	39.75	6.84	35.62	9.50	0.00	45.32	74	-28.68	P	1.0
7386.07	32.16	39.75	6.84	35.62	9.50	0.00	33.63	54	-20.37	A	1.0
9847.83	45.24	38.52	8.37	36.76	9.50	0.00	45.86	74	-28.14	P	1.0
9847.83	34.26	38.52	8.37	36.76	9.50	0.00	34.88	54	-19.12	A	1.0

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain.
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
4. The result basic equation calculation as follow :
Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit
5. The test limit is 3M limit.
6. The frequency was searched to 18GHz.
7. The other emission levels were very low against the limit.



The frequency spectrum above 1 GHz for Transmitter was investigated. All emissions not reported are much lower than the prescribed limits. Readings are both peak and average values.

Company	D-LINK Corporation	Test Date	2005/01/31
Product Name	IEEE802.11g WLAN Cardbus Adapter	Test By	Stan Peng
Model Name	DWL-G680	TEMP & Humidity	14.6°C, 71%

CH1 (2412MHz) TX				Measurement Distance at 1m Horizontal polarity							
Freq. (MHz)	Reading (dBμV)	AF (dBμV)	Cable (dB)	Pre-amp (dB)	Dist (dB)	Filter (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Mark (P/Q/A)	Height (Meter)
* 2385.30	33.90	31.81	3.57	0.00	9.50	0.00	59.78	74.00	-14.22	P	1.00
* 2385.30	22.20	31.81	3.57	0.00	9.50	0.00	48.08	54.00	-5.92	A	1.00
2399.90	43.10	31.80	3.58	0.00	9.50	0.00	68.98	90.93	-21.95	P	1.00
2399.90	34.40	31.80	3.58	0.00	9.50	0.00	60.28	84.15	-23.87	A	1.00
2412.66	85.06	31.79	3.58	0.00	9.50	0.00	110.93	Fundamental Frequency		P	1.00
2412.66	78.28	31.79	3.58	0.00	9.50	0.00	104.15			A	1.00
* 2320.05	51.84	31.88	3.54	35.30	9.50	0.00	42.46	74.00	-31.54	P	1.00
* 2320.05	46.21	31.88	3.54	35.30	9.50	0.00	36.83	54.00	-17.17	A	1.00
* 4824.03	47.64	34.44	5.08	35.16	9.50	2.00	44.51	74.00	-29.49	P	1.00
* 4824.03	39.35	34.44	5.08	35.16	9.50	2.00	36.22	54.00	-17.78	A	1.00
* 7250.00	45.91	39.80	6.75	35.65	9.50	2.00	49.31	74.00	-24.69	P	1.00
* 7250.00	34.48	39.80	6.75	35.65	9.50	2.00	37.88	54.00	-16.12	A	1.00
9647.88	49.62	38.54	8.29	36.44	9.50	0.61	51.12	90.93	-39.81	P	1.00
9647.88	43.59	38.54	8.29	36.44	9.50	0.61	45.09	84.15	-39.06	A	1.00
* 12063.30	-----	-----	-----	-----	9.50	0.80	-----	-----	-----	-----	1.00
* 14475.96	-----	-----	-----	-----	9.50	0.67	-----	-----	-----	-----	1.00
16888.62	-----	-----	-----	-----	9.50	0.43	-----	-----	-----	-----	1.00
* 19301.28	-----	-----	-----	-----	9.50	1.96	-----	-----	-----	-----	1.00
21713.94	-----	-----	-----	-----	9.50	0.81	-----	-----	-----	-----	1.00
24126.60	-----	-----	-----	-----	9.50	2.90	-----	-----	-----	-----	1.00

Note :

1. The measurement was searched to 10th harmonic, Remark “---” means that the emissions level is too low to be measured.
2. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)
3. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
4. Remark “*” means the Restricted band.
5. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
6. The result basic equation calculation is as follow:
Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit
7. The other emission levels were very low against the limit
8. The test limit distance is 3M limit.
9. For 802.11b mode at 11Mbps.



The frequency spectrum above 1 GHz for Transmitter was investigated. All emissions not reported are much lower than the prescribed limits. Readings are both peak and average values.

Company	D-LINK Corporation	Test Date	2005/01/31
Product Name	IEEE802.11g WLAN Cardbus Adapter	Test By	Stan Peng
Model Name	DWL-G680	TEMP & Humidity	14.6°C, 71%

CH1 (2412MHz) TX				Measurement Distance at 1m Vertical polarity							
Freq. (MHz)	Reading (dBμV)	AF (dBμV)	Cable (dB)	Pre-amp (dB)	Dist (dB)	Filter (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Mark (P/Q/A)	Height (Meter)
* 2385.60	25.20	31.81	3.57	0.00	9.50	0.00	51.08	74.00	-22.92	P	1.00
* 2385.60	14.00	31.81	3.57	0.00	9.50	0.00	39.88	54.00	-14.12	A	1.00
2399.90	34.50	31.80	3.58	0.00	9.50	0.00	60.38	83.85	-23.47	P	1.00
2399.90	25.30	31.80	3.58	0.00	9.50	0.00	51.18	77.31	-26.13	A	1.00
2412.78	77.98	31.79	3.58	0.00	9.50	0.00	103.85	Fundamental Frequency		P	1.00
2412.78	71.44	31.79	3.58	0.00	9.50	0.00	97.31			A	1.00
* 2319.91	49.19	31.88	3.54	35.30	9.50	0.00	39.81	74.00	-34.19	P	1.00
* 2319.91	42.08	31.88	3.54	35.30	9.50	0.00	32.70	54.00	-21.30	A	1.00
* 4823.91	45.68	34.44	5.08	35.16	9.50	2.00	42.55	74.00	-31.45	P	1.00
* 4823.91	37.96	34.44	5.08	35.16	9.50	2.00	34.83	54.00	-19.17	A	1.00
* 7250.00	45.20	39.80	6.75	35.65	9.50	2.00	48.60	74.00	-25.40	P	1.00
* 7250.00	34.38	39.80	6.75	35.65	9.50	2.00	37.78	54.00	-16.22	A	1.00
9647.99	49.09	38.54	8.29	36.44	9.50	0.61	50.59	83.85	-33.26	P	1.00
9647.99	43.18	38.54	8.29	36.44	9.50	0.61	44.68	77.31	-32.63	A	1.00
* 12063.90	-----	-----	-----	-----	9.50	0.80	-----	-----	-----	-----	1.00
* 14476.68	-----	-----	-----	-----	9.50	0.67	-----	-----	-----	-----	1.00
16889.46	-----	-----	-----	-----	9.50	0.43	-----	-----	-----	-----	1.00
* 19302.24	-----	-----	-----	-----	9.50	1.96	-----	-----	-----	-----	1.00
21715.02	-----	-----	-----	-----	9.50	0.81	-----	-----	-----	-----	1.00
24127.80	-----	-----	-----	-----	9.50	2.90	-----	-----	-----	-----	1.00

Note :

1. The measurement was searched to 10th harmonic, Remark “---” means that the emissions level is too low to be measured.
2. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)
3. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
4. Remark “*” means the Restricted band.
5. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
6. The result basic equation calculation is as follow:
Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit
7. The other emission levels were very low against the limit
8. The test limit distance is 3M limit.
9. For 802.11b mode at 11Mbps.



The frequency spectrum above 1 GHz for Transmitter was investigated. All emissions not reported are much lower than the prescribed limits. Readings are both peak and average values.

Company	D-LINK Corporation	Test Date	2005/01/31
Product Name	IEEE802.11g WLAN Cardbus Adapter	Test By	Stan Peng
Model Name	DWL-G680	TEMP & Humidity	14.6°C, 71%

CH6 (2437MHz) TX				Measurement Distance at 1m Horizontal polarity							
Freq. (MHz)	Reading (dBμV)	AF (dBμV)	Cable (dB)	Pre-amp (dB)	Dist (dB)	Filter (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Mark (P/Q/A)	Height (Meter)
2435.73	86.88	31.76	3.59	0.00	9.50	0.00	112.74	Fundamental Frequency		P	1.00
2435.73	79.64	31.76	3.59	0.00	9.50	0.00	105.50			A	1.00
* 2320.02	53.47	31.88	3.54	35.30	9.50	0.00	44.09	74.00	-29.91	P	1.00
* 2320.02	47.95	31.88	3.54	35.30	9.50	0.00	38.57	54.00	-15.43	A	1.00
* 4873.88	55.94	34.77	5.10	35.20	9.50	1.80	52.91	74.00	-21.09	P	1.00
* 4873.88	42.78	34.77	5.10	35.20	9.50	1.80	39.75	54.00	-14.25	A	1.00
* 7310.93	59.78	39.78	6.79	35.64	9.50	2.00	63.21	74.00	-10.79	P	1.00
* 7310.93	49.26	39.78	6.79	35.64	9.50	2.00	52.69	54.00	-1.31	A	1.00
9747.80	58.52	38.53	8.33	36.60	9.50	0.55	59.83	92.74	-32.91	P	1.00
9747.80	53.17	38.53	8.33	36.60	9.50	0.55	54.48	85.50	-31.02	A	1.00
* 12178.65	-----	-----	-----	-----	9.50	0.80	-----	-----	-----	-----	1.00
14614.38	-----	-----	-----	-----	9.50	0.61	-----	-----	-----	-----	1.00
17050.11	-----	-----	-----	-----	9.50	0.52	-----	-----	-----	-----	1.00
* 19485.84	-----	-----	-----	-----	9.50	2.18	-----	-----	-----	-----	1.00
21921.57	-----	-----	-----	-----	9.50	0.73	-----	-----	-----	-----	1.00
24357.30	-----	-----	-----	-----	9.50	2.53	-----	-----	-----	-----	1.00

Note :

- The measurement was searched to 10th harmonic, Remark "---" means that the emissions level is too low to be measured.
- AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)
- Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
- Remark "*" means the Restricted band.
- Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
- The result basic equation calculation is as follow:
Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit
- The other emission levels were very low against the limit
- The test limit distance is 3M limit.
- The test data marked in gray background means the EUT emission data is located in the margin uncertainty range of emission limits.
- For 802.11b mode at 11Mbps.



The frequency spectrum above 1 GHz for Transmitter was investigated. All emissions not reported are much lower than the prescribed limits. Readings are both peak and average values.

Company	D-LINK Corporation	Test Date	2005/01/31
Product Name	IEEE802.11g WLAN Cardbus Adapter	Test By	Stan Peng
Model Name	DWL-G680	TEMP & Humidity	14.6°C, 71%

CH6 (2437MHz) TX				Measurement Distance at 1m Vertical polarity							
Freq. (MHz)	Reading (dBμV)	AF (dBμV)	Cable (dB)	Pre-amp (dB)	Dist (dB)	Filter (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Mark (P/Q/A)	Height (Meter)
2438.50	79.42	31.76	3.59	0.00	9.50	0.00	105.27	Fundamental Frequency		P	1.00
2438.50	72.37	31.76	3.59	0.00	9.50	0.00	98.22			A	1.00
* 2319.96	50.73	31.88	3.54	35.30	9.50	0.00	41.35	74.00	-32.65	P	1.00
* 2319.96	43.61	31.88	3.54	35.30	9.50	0.00	34.23	54.00	-19.77	A	1.00
* 4873.86	56.35	34.77	5.10	35.20	9.50	1.80	53.32	74.00	-20.68	P	1.00
* 4873.86	42.23	34.77	5.10	35.20	9.50	1.80	39.20	54.00	-14.80	A	1.00
* 7311.00	60.50	39.78	6.79	35.64	9.50	2.00	63.93	74.00	-10.07	P	1.00
* 7311.00	49.91	39.78	6.79	35.64	9.50	2.00	53.34	54.00	-0.66	A	1.00
9747.80	59.98	38.53	8.33	36.60	9.50	0.55	61.29	85.27	-23.99	P	1.00
9747.80	55.71	38.53	8.33	36.60	9.50	0.55	57.02	78.22	-21.21	A	1.00
* 12192.50	-----	-----	-----	-----	9.50	0.80	-----	-----	-----	-----	1.00
14631.00	-----	-----	-----	-----	9.50	0.60	-----	-----	-----	-----	1.00
17069.50	-----	-----	-----	-----	9.50	0.53	-----	-----	-----	-----	1.00
* 19508.00	-----	-----	-----	-----	9.50	2.21	-----	-----	-----	-----	1.00
21946.50	-----	-----	-----	-----	9.50	0.72	-----	-----	-----	-----	1.00
24385.00	-----	-----	-----	-----	9.50	2.48	-----	-----	-----	-----	1.00

Note :

- The measurement was searched to 10th harmonic, Remark "---" means that the emissions level is too low to be measured.
- AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)
- Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
- Remark "*" means the Restricted band.
- Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
- The result basic equation calculation is as follow:
Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit
- The other emission levels were very low against the limit
- The test limit distance is 3M limit.
- The test data marked in gray background means the EUT emission data is located in the margin uncertainty range of emission limits.
- For 802.11b mode at 11Mbps.



The frequency spectrum above 1 GHz for Transmitter was investigated. All emissions not reported are much lower than the prescribed limits. Readings are both peak and average values.

Company	D-LINK Corporation	Test Date	2005/01/31
Product Name	IEEE802.11g WLAN Cardbus Adapter	Test By	Stan Peng
Model Name	DWL-G680	TEMP & Humidity	14.6°C, 71%

CH11 (2462MHz) TX				Measurement Distance at 1m Horizontal polarity							
Freq. (MHz)	Reading (dBμV)	AF (dBμV)	Cable (dB)	Pre-amp (dB)	Dist (dB)	Filter (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Mark (P/Q/A)	Height (Meter)
2462.78	82.55	31.74	3.60	0.00	9.50	0.00	108.39	Fundamental Frequency		P	1.00
2462.78	76.01	31.74	3.60	0.00	9.50	0.00	101.85			A	1.00
* 2483.50	32.60	31.72	3.61	0.00	9.50	0.00	58.43	74.00	-15.57	P	1.00
* 2483.50	20.60	31.72	3.61	0.00	9.50	0.00	46.43	54.00	-7.57	A	1.00
* 2483.60	37.00	31.72	3.61	0.00	9.50	0.00	62.83	74.00	-11.17	P	1.00
* 2483.60	25.30	31.72	3.61	0.00	9.50	0.00	51.13	54.00	-2.87	A	1.00
* 2319.95	51.94	31.88	3.54	35.30	9.50	0.00	42.56	74.00	-31.44	P	1.00
* 2319.95	44.67	31.88	3.54	35.30	9.50	0.00	35.29	54.00	-18.71	A	1.00
* 4923.87	50.47	35.10	5.12	35.24	9.50	1.60	47.55	74.00	-26.45	P	1.00
* 4923.87	44.74	35.10	5.12	35.24	9.50	1.60	41.82	54.00	-12.18	A	1.00
* 7386.75	58.18	39.75	6.84	35.62	9.50	2.00	61.65	74.00	-12.35	P	1.00
* 7386.75	48.49	39.75	6.84	35.62	9.50	2.00	51.96	54.00	-2.04	A	1.00
9847.76	54.34	38.52	8.37	36.76	9.50	0.49	55.46	88.39	-32.94	P	1.00
9847.76	48.08	38.52	8.37	36.76	9.50	0.49	49.20	81.85	-32.66	A	1.00
* 12313.90	-----	-----	-----	-----	9.50	0.80	-----	-----	-----	-----	1.00
14776.68	-----	-----	-----	-----	9.50	0.48	-----	-----	-----	-----	1.00
17239.46	-----	-----	-----	-----	9.50	0.60	-----	-----	-----	-----	1.00
* 19702.24	-----	-----	-----	-----	9.50	2.40	-----	-----	-----	-----	1.00
* 22165.02	-----	-----	-----	-----	9.50	0.70	-----	-----	-----	-----	1.00
24627.80	-----	-----	-----	-----	9.50	2.12	-----	-----	-----	-----	1.00

Note :

- The measurement was searched to 10th harmonic, Remark "---" means that the emissions level is too low to be measured.
- AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)
- Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
- Remark "*" means the Restricted band.
- Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
- The result basic equation calculation is as follow:
Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit
- The other emission levels were very low against the limit
- The test limit distance is 3M limit.
- The test data marked in gray background means the EUT emission data is located in the margin uncertainty range of emission limits.
- For 802.11b mode at 11Mbps.



The frequency spectrum above 1 GHz for Transmitter was investigated. All emissions not reported are much lower than the prescribed limits. Readings are both peak and average values.

Company	D-LINK Corporation	Test Date	2005/01/31
Product Name	IEEE802.11g WLAN Cardbus Adapter	Test By	Stan Peng
Model Name	DWL-G680	TEMP & Humidity	14.6°C, 71%

CH11 (2462MHz) TX				Measurement Distance at 1m Vertical polarity							
Freq. (MHz)	Reading (dBμV)	AF (dBμV)	Cable (dB)	Pre-amp (dB)	Dist (dB)	Filter (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Mark (P/Q/A)	Height (Meter)
2462.66	75.98	31.74	3.60	0.00	9.50	0.00	101.82	Fundamental Frequency		P	1.00
2462.66	69.06	31.74	3.60	0.00	9.50	0.00	94.90			A	1.00
* 2483.50	25.80	31.72	3.61	0.00	9.50	0.00	51.63	74.00	-22.37	P	1.00
* 2483.50	14.20	31.72	3.61	0.00	9.50	0.00	40.03	54.00	-13.97	A	1.00
* 2488.27	30.90	31.71	3.61	0.00	9.50	0.00	56.73	74.00	-17.27	P	1.00
* 2488.27	18.70	31.71	3.61	0.00	9.50	0.00	44.53	54.00	-9.47	A	1.00
* 2320.06	49.79	31.88	3.54	35.30	9.50	0.00	40.41	74.00	-33.59	P	1.00
* 2320.06	42.50	31.88	3.54	35.30	9.50	0.00	33.12	54.00	-20.88	A	1.00
* 4923.78	45.61	35.10	5.12	35.24	9.50	1.60	42.69	74.00	-31.31	P	1.00
* 4923.78	37.00	35.10	5.12	35.24	9.50	1.60	34.08	54.00	-19.92	A	1.00
* 7387.62	57.46	39.74	6.84	35.62	9.50	2.00	60.93	74.00	-13.07	P	1.00
* 7387.62	46.19	39.74	6.84	35.62	9.50	2.00	49.66	54.00	-4.34	A	1.00
9847.96	53.05	38.52	8.37	36.76	9.50	0.49	54.16	81.82	-27.66	P	1.00
9847.96	48.71	38.52	8.37	36.76	9.50	0.49	49.82	74.90	-25.08	A	1.00
* 12313.30	-----	-----	-----	-----	9.50	0.80	-----	-----	-----	-----	1.00
14775.96	-----	-----	-----	-----	9.50	0.48	-----	-----	-----	-----	1.00
17238.62	-----	-----	-----	-----	9.50	0.60	-----	-----	-----	-----	1.00
* 19701.28	-----	-----	-----	-----	9.50	2.40	-----	-----	-----	-----	1.00
* 22163.94	-----	-----	-----	-----	9.50	0.70	-----	-----	-----	-----	1.00
24626.60	-----	-----	-----	-----	9.50	2.12	-----	-----	-----	-----	1.00

Note :

1. The measurement was searched to 10th harmonic, Remark “---” means that the emissions level is too low to be measured.
2. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)
3. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
4. Remark “*” means the Restricted band.
5. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
6. The result basic equation calculation is as follow:
Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit
7. The other emission levels were very low against the limit
8. The test limit distance is 3M limit.
9. For 802.11b mode at 11Mbps.



The frequency spectrum above 1 GHz for Transmitter was investigated. All emissions not reported are much lower than the prescribed limits. Readings are both peak and average values.

Company	D-LINK Corporation	Test Date	2005/01/31
Product Name	IEEE802.11g WLAN Cardbus Adapter	Test By	Stan Peng
Model Name	DWL-G680	TEMP & Humidity	14.6°C, 71%

CH1 (2412MHz) TX				Measurement Distance at 1m Horizontal polarity							
Freq. (MHz)	Reading (dBμV)	AF (dBμV)	Cable (dB)	Pre-amp (dB)	Dist (dB)	Filter (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Mark (P/Q/A)	Height (Meter)
* 2389.90	42.40	31.81	3.57	0.00	9.50	0.00	68.28	74.00	-5.72	P	1.00
* 2389.90	26.10	31.81	3.57	0.00	9.50	0.00	51.98	54.00	-2.02	A	1.00
2399.90	57.80	31.80	3.58	0.00	9.50	0.00	83.68	90.36	-6.68	P	1.00
2399.90	44.00	31.80	3.58	0.00	9.50	0.00	69.88	80.07	-10.19	A	1.00
2410.40	84.49	31.79	3.58	0.00	9.50	0.00	110.36	Fundamental Frequency		P	1.00
2410.40	74.20	31.79	3.58	0.00	9.50	0.00	100.07			A	1.00
* 2320.02	46.25	31.88	3.54	35.30	9.50	0.00	36.87	74.00	-37.13	P	1.00
* 2320.02	36.03	31.88	3.54	35.30	9.50	0.00	26.65	54.00	-27.35	A	1.00
* 4824.45	46.64	34.44	5.08	35.16	9.50	2.00	43.51	74.00	-30.49	P	1.00
* 4824.45	35.77	34.44	5.08	35.16	9.50	2.00	32.64	54.00	-21.36	A	1.00
* 7250.00	52.31	39.80	6.75	35.65	9.50	2.00	55.71	74.00	-18.29	P	1.00
* 7250.00	40.12	39.80	6.75	35.65	9.50	2.00	43.52	54.00	-10.48	A	1.00
9648.37	48.06	38.54	8.29	36.44	9.50	0.61	49.56	90.36	-40.80	P	1.00
9648.37	36.85	38.54	8.29	36.44	9.50	0.61	38.35	80.07	-41.72	A	1.00
* 12052.00	-----	-----	-----	-----	9.50	0.80	-----	-----	-----	-----	1.00
14462.40	-----	-----	-----	-----	9.50	0.65	-----	-----	-----	-----	1.00
16872.80	-----	-----	-----	-----	9.50	0.42	-----	-----	-----	-----	1.00
* 19283.20	-----	-----	-----	-----	9.50	1.94	-----	-----	-----	-----	1.00
21693.60	-----	-----	-----	-----	9.50	0.82	-----	-----	-----	-----	1.00
24104.00	-----	-----	-----	-----	9.50	2.93	-----	-----	-----	-----	1.00

Note :

- The measurement was searched to 10th harmonic, Remark "---" means that the emissions level is too low to be measured.
- AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)
- Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
- Remark "*" means the Restricted band.
- Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
- The result basic equation calculation is as follow:
Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit
- The other emission levels were very low against the limit
- The test limit distance is 3M limit.
- The test data marked in gray background means the EUT emission data is located in the margin uncertainty range of emission limits.
- For normal 802.11g mode at 6Mbps.



The frequency spectrum above 1 GHz for Transmitter was investigated. All emissions not reported are much lower than the prescribed limits. Readings are both peak and average values.

Company	D-LINK Corporation	Test Date	2005/01/31
Product Name	IEEE802.11g WLAN Cardbus Adapter	Test By	Stan Peng
Model Name	DWL-G680	TEMP & Humidity	14.6°C, 71%

CH1 (2412MHz) TX				Measurement Distance at 1m Vertical polarity							
Freq. (MHz)	Reading (dBμV)	AF (dBμV)	Cable (dB)	Pre-amp (dB)	Dist (dB)	Filter (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Mark (P/Q/A)	Height (Meter)
* 2389.90	33.50	31.81	3.57	0.00	9.50	0.00	59.38	74.00	-14.62	P	1.00
* 2389.90	18.70	31.81	3.57	0.00	9.50	0.00	44.58	54.00	-9.42	A	1.00
2399.90	51.40	31.80	3.58	0.00	9.50	0.00	77.28	82.87	-5.59	P	1.00
2399.90	37.00	31.80	3.58	0.00	9.50	0.00	62.88	72.99	-10.11	A	1.00
2409.83	77.00	31.79	3.58	0.00	9.50	0.00	102.87	Fundamental Frequency		P	1.00
2409.83	67.12	31.79	3.58	0.00	9.50	0.00	92.99			A	1.00
* 2320.02	48.40	31.88	3.54	35.30	9.50	0.00	39.02	74.00	-34.98	P	1.00
* 2320.02	39.99	31.88	3.54	35.30	9.50	0.00	30.61	54.00	-23.39	A	1.00
* 4824.00	43.41	34.44	5.08	35.16	9.50	2.00	40.28	74.00	-33.72	P	1.00
* 4824.00	32.84	34.44	5.08	35.16	9.50	2.00	29.71	54.00	-24.29	A	1.00
* 7250.00	55.00	39.80	6.75	35.65	9.50	2.00	58.40	74.00	-15.60	P	1.00
* 7250.00	42.26	39.80	6.75	35.65	9.50	2.00	45.66	54.00	-8.34	A	1.00
9648.37	50.84	38.54	8.29	36.44	9.50	0.61	52.34	82.87	-30.53	P	1.00
9648.37	38.94	38.54	8.29	36.44	9.50	0.61	40.44	72.99	-32.55	A	1.00
* 12049.15	-----	-----	-----	-----	9.50	0.80	-----	-----	-----	-----	1.00
14458.98	-----	-----	-----	-----	9.50	0.65	-----	-----	-----	-----	1.00
16868.81	-----	-----	-----	-----	9.50	0.42	-----	-----	-----	-----	1.00
* 19278.64	-----	-----	-----	-----	9.50	1.93	-----	-----	-----	-----	1.00
21688.47	-----	-----	-----	-----	9.50	0.82	-----	-----	-----	-----	1.00
24098.30	-----	-----	-----	-----	9.50	2.94	-----	-----	-----	-----	1.00

Note :

1. The measurement was searched to 10th harmonic, Remark “---” means that the emissions level is too low to be measured.
2. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)
3. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
4. Remark “*” means the Restricted band.
5. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
6. The result basic equation calculation is as follow:
Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit
7. The other emission levels were very low against the limit
8. The test limit distance is 3M limit.
9. For normal 802.11g mode at 6Mbps.



The frequency spectrum above 1 GHz for Transmitter was investigated. All emissions not reported are much lower than the prescribed limits. Readings are both peak and average values.

Company	D-LINK Corporation	Test Date	2005/01/31
Product Name	IEEE802.11g WLAN Cardbus Adapter	Test By	Stan Peng
Model Name	DWL-G680	TEMP & Humidity	14.6°C, 71%

CH6 (2437MHz) TX				Measurement Distance at 1m Horizontal polarity							
Freq. (MHz)	Reading (dBμV)	AF (dBμV)	Cable (dB)	Pre-amp (dB)	Dist (dB)	Filter (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Mark (P/Q/A)	Height (Meter)
2433.57	85.40	31.77	3.59	0.00	9.50	0.00	111.26	Fundamental Frequency		P	1.00
2433.57	75.71	31.77	3.59	0.00	9.50	0.00	101.57			A	1.00
* 2319.98	48.88	31.88	3.54	35.30	9.50	0.00	39.50	74.00	-34.50	P	1.00
* 2319.98	40.49	31.88	3.54	35.30	9.50	0.00	31.11	54.00	-22.89	A	1.00
* 4871.30	51.36	34.75	5.10	35.20	9.50	1.81	48.33	74.00	-25.67	P	1.00
* 4871.30	39.34	34.75	5.10	35.20	9.50	1.81	36.31	54.00	-17.69	A	1.00
* 7311.00	61.77	39.78	6.79	35.64	9.50	2.00	65.20	74.00	-8.80	P	1.00
* 7311.00	48.86	39.78	6.79	35.64	9.50	2.00	52.29	54.00	-1.71	A	1.00
9749.30	47.26	38.53	8.33	36.60	9.50	0.55	48.57	91.26	-42.69	P	1.00
9749.30	36.18	38.53	8.33	36.60	9.50	0.55	37.49	81.57	-44.08	A	1.00
* 12167.85	-----	-----	-----	-----	9.50	0.80	-----	-----	-----	-----	1.00
14601.42	-----	-----	-----	-----	0.00	0.62	-----	-----	-----	-----	1.00
17034.99	-----	-----	-----	-----	0.00	0.51	-----	-----	-----	-----	1.00
* 19468.56	-----	-----	-----	-----	0.00	2.16	-----	-----	-----	-----	1.00
21902.13	-----	-----	-----	-----	0.00	0.74	-----	-----	-----	-----	1.00
24335.70	-----	-----	-----	-----	0.00	2.56	-----	-----	-----	-----	1.00

Note :

1. The measurement was searched to 10th harmonic, Remark "---" means that the emissions level is too low to be measured.
2. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)
3. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
4. Remark "*" means the Restricted band.
5. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
6. The result basic equation calculation is as follow:
Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit
7. The other emission levels were very low against the limit
8. The test limit distance is 3M limit.
9. The test data marked in gray background means the EUT emission data is located in the margin uncertainty range of emission limits.
10. For normal 802.11g mode at 6Mbps.



The frequency spectrum above 1 GHz for Transmitter was investigated. All emissions not reported are much lower than the prescribed limits. Readings are both peak and average values.

Company	D-LINK Corporation	Test Date	2005/01/31
Product Name	IEEE802.11g WLAN Cardbus Adapter	Test By	Stan Peng
Model Name	DWL-G680	TEMP & Humidity	14.6°C, 71%

CH6 (2437MHz) TX				Measurement Distance at 1m Vertical polarity							
Freq. (MHz)	Reading (dBμV)	AF (dBμV)	Cable (dB)	Pre-amp (dB)	Dist (dB)	Filter (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Mark (P/Q/A)	Height (Meter)
2435.97	77.30	31.76	3.59	0.00	9.50	0.00	103.16	Fundamental Frequency		P	1.00
2435.97	66.55	31.76	3.59	0.00	9.50	0.00	92.41			A	1.00
* 2320.05	50.74	31.88	3.54	35.30	9.50	0.00	41.36	74.00	-32.64	P	1.00
* 2320.05	44.12	31.88	3.54	35.30	9.50	0.00	34.74	54.00	-19.26	A	1.00
* 4874.83	45.81	34.77	5.10	35.20	9.50	1.80	42.78	74.00	-31.22	P	1.00
* 4874.83	33.69	34.77	5.10	35.20	9.50	1.80	30.66	54.00	-23.34	A	1.00
* 7312.39	59.29	39.78	6.79	35.64	9.50	2.00	62.72	74.00	-11.28	P	1.00
* 7312.39	47.28	39.78	6.79	35.64	9.50	2.00	50.71	54.00	-3.29	A	1.00
9748.22	48.44	38.53	8.33	36.60	9.50	0.55	49.75	83.16	-33.41	P	1.00
9748.22	37.69	38.53	8.33	36.60	9.50	0.55	39.00	72.41	-33.41	A	1.00
* 12179.85	-----	-----	-----	-----	9.50	0.80	-----	-----	-----	-----	1.00
14615.82	-----	-----	-----	-----	9.50	0.61	-----	-----	-----	-----	1.00
17051.79	-----	-----	-----	-----	9.50	0.52	-----	-----	-----	-----	1.00
* 19487.76	-----	-----	-----	-----	9.50	2.19	-----	-----	-----	-----	1.00
21923.73	-----	-----	-----	-----	9.50	0.73	-----	-----	-----	-----	1.00
24359.70	-----	-----	-----	-----	9.50	2.52	-----	-----	-----	-----	1.00

Note :

1. The measurement was searched to 10th harmonic, Remark “---” means that the emissions level is too low to be measured.
2. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)
3. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
4. Remark “*” means the Restricted band.
5. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
6. The result basic equation calculation is as follow:
Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit
7. The other emission levels were very low against the limit
8. The test limit distance is 3M limit.
9. For normal 802.11g mode at 6Mbps.



The frequency spectrum above 1 GHz for Transmitter was investigated. All emissions not reported are much lower than the prescribed limits. Readings are both peak and average values.

Company	D-LINK Corporation	Test Date	2005/01/31
Product Name	IEEE802.11g WLAN Cardbus Adapter	Test By	Stan Peng
Model Name	DWL-G680	TEMP & Humidity	14.6°C, 71%

CH11 (2462MHz) TX				Measurement Distance at 1m Horizontal polarity							
Freq. (MHz)	Reading (dBμV)	AF (dBμV)	Cable (dB)	Pre-amp (dB)	Dist (dB)	Filter (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Mark (P/Q/A)	Height (Meter)
2464.70	81.64	31.74	3.60	0.00	9.50	0.00	107.48	Fundamental Frequency		P	1.00
2464.70	71.68	31.74	3.60	0.00	9.50	0.00	97.52			A	1.00
* 2483.50	39.80	31.72	3.61	0.00	9.50	0.00	65.63	74.00	-8.37	P	1.00
* 2483.50	24.80	31.72	3.61	0.00	9.50	0.00	50.63	54.00	-3.37	A	1.00
* 2483.60	40.40	31.72	3.61	0.00	9.50	0.00	66.23	74.00	-7.77	P	1.00
* 2483.60	24.80	31.72	3.61	0.00	9.50	0.00	50.63	54.00	-3.37	A	1.00
* 2320.05	47.06	31.88	3.54	35.30	9.50	0.00	37.68	74.00	-36.32	P	1.00
* 2320.05	37.12	31.88	3.54	35.30	9.50	0.00	27.74	54.00	-26.26	A	1.00
* 4920.68	44.62	35.08	5.11	35.24	9.50	1.62	41.69	74.00	-32.31	P	1.00
* 4920.68	34.16	35.08	5.11	35.24	9.50	1.62	31.23	54.00	-22.77	A	1.00
* 7390.61	59.48	39.74	6.85	35.62	9.50	2.00	62.95	74.00	-11.05	P	1.00
* 7390.61	46.21	39.74	6.85	35.62	9.50	2.00	49.68	54.00	-4.32	A	1.00
9847.66	49.15	38.52	8.37	36.76	9.50	0.49	50.27	87.48	-37.21	P	1.00
9847.66	36.84	38.52	8.37	36.76	9.50	0.49	37.96	77.52	-39.56	A	1.00
* 12323.50	-----	-----	-----	-----	9.50	0.80	-----	-----	-----	-----	1.00
14788.20	-----	-----	-----	-----	9.50	0.47	-----	-----	-----	-----	1.00
17252.90	-----	-----	-----	-----	9.50	0.60	-----	-----	-----	-----	1.00
* 19717.60	-----	-----	-----	-----	9.50	2.42	-----	-----	-----	-----	1.00
* 22182.30	-----	-----	-----	-----	9.50	0.70	-----	-----	-----	-----	1.00
24647.00	-----	-----	-----	-----	9.50	2.09	-----	-----	-----	-----	1.00

Note :

- The measurement was searched to 10th harmonic, Remark “---” means that the emissions level is too low to be measured.
- AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)
- Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
- Remark “*” means the Restricted band.
- Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
- The result basic equation calculation is as follow:
Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit
- The other emission levels were very low against the limit
- The test limit distance is 3M limit.
- For normal 802.11g mode at 6Mbps.



The frequency spectrum above 1 GHz for Transmitter was investigated. All emissions not reported are much lower than the prescribed limits. Readings are both peak and average values.

Company	D-LINK Corporation	Test Date	2005/01/31
Product Name	IEEE802.11g WLAN Cardbus Adapter	Test By	Stan Peng
Model Name	DWL-G680	TEMP & Humidity	14.6°C, 71%

CH11 (2462MHz) TX				Measurement Distance at 1m Vertical polarity							
Freq. (MHz)	Reading (dBμV)	AF (dBμV)	Cable (dB)	Pre-amp (dB)	Dist (dB)	Filter (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Mark (P/Q/A)	Height (Meter)
2466.20	74.88	31.73	3.61	0.00	9.50	0.00	100.72	Fundamental Frequency		P	1.00
2466.20	64.69	31.73	3.61	0.00	9.50	0.00	90.53			A	1.00
* 2483.50	32.80	31.72	3.61	0.00	9.50	0.00	58.63	74.00	-15.37	P	1.00
* 2483.50	17.80	31.72	3.61	0.00	9.50	0.00	43.63	54.00	-10.37	A	1.00
* 2483.60	32.00	31.72	3.61	0.00	9.50	0.00	57.83	74.00	-16.17	P	1.00
* 2483.60	17.50	31.72	3.61	0.00	9.50	0.00	43.33	54.00	-10.67	A	1.00
* 2320.06	48.54	31.88	3.54	35.30	9.50	0.00	39.16	74.00	-34.84	P	1.00
* 2320.06	38.21	31.88	3.54	35.30	9.50	0.00	28.83	54.00	-25.17	A	1.00
* 4920.70	45.33	35.08	5.11	35.24	9.50	1.62	42.40	74.00	-31.60	P	1.00
* 4920.70	33.36	35.08	5.11	35.24	9.50	1.62	30.43	54.00	-23.57	A	1.00
* 7388.82	58.36	39.74	6.84	35.62	9.50	2.00	61.83	74.00	-12.17	P	1.00
* 7388.82	46.42	39.74	6.84	35.62	9.50	2.00	49.89	54.00	-4.11	A	1.00
9847.64	50.99	38.52	8.37	36.76	9.50	0.49	52.11	80.72	-28.61	P	1.00
9847.64	38.45	38.52	8.37	36.76	9.50	0.49	39.57	70.53	-30.96	A	1.00
* 12331.00	-----	-----	-----	-----	9.50	0.80	-----	-----	-----	-----	1.00
14797.20	-----	-----	-----	-----	9.50	0.46	-----	-----	-----	-----	1.00
17263.40	-----	-----	-----	-----	9.50	0.61	-----	-----	-----	-----	1.00
* 19729.60	-----	-----	-----	-----	9.50	2.43	-----	-----	-----	-----	1.00
* 22195.80	-----	-----	-----	-----	9.50	0.70	-----	-----	-----	-----	1.00
24662.00	-----	-----	-----	-----	9.50	2.07	-----	-----	-----	-----	1.00

Note :

1. The measurement was searched to 10th harmonic, Remark "---" means that the emissions level is too low to be measured.
2. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)
3. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
4. Remark "*" means the Restricted band.
5. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
6. The result basic equation calculation is as follow:
Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit
7. The other emission levels were very low against the limit
8. The test limit distance is 3M limit.
9. For normal 802.11g mode at 6Mbps.



The frequency spectrum above 1 GHz for Transmitter was investigated. All emissions not reported are much lower than the prescribed limits. Readings are both peak and average values.

Company	D-LINK Corporation	Test Date	2005/02/01
Product Name	IEEE802.11g WLAN Cardbus Adapter	Test By	Stan Peng
Model Name	DWL-G680	TEMP & Humidity	13.9°C, 60%

(2437MHz) TX				Measurement Distance at 1m Horizontal polarity							
Freq. (MHz)	Reading (dBμV)	AF (dBμV)	Cable (dB)	Pre-amp (dB)	Dist (dB)	Filter (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Mark (P/Q/A)	Height (Meter)
* 2389.90	45.10	31.81	3.57	0.00	9.50	0.00	70.98	74.00	-3.02	P	1.01
* 2389.90	26.90	31.81	3.57	0.00	9.50	0.00	52.78	54.00	-1.22	A	1.01
2399.90	49.70	31.80	3.58	0.00	9.50	0.00	75.58	88.98	-13.40	P	1.01
2399.90	35.10	31.80	3.58	0.00	9.50	0.00	60.98	79.32	-18.34	A	1.01
2431.34	83.12	31.77	3.59	0.00	9.50	0.00	108.98	Fundamental Frequency		P	1.00
2431.34	73.46	31.77	3.59	0.00	9.50	0.00	99.32			A	1.00
* 2483.50	44.20	31.72	3.61	0.00	9.50	0.00	70.03	74.00	-3.97	P	1.01
* 2483.50	27.10	31.72	3.61	0.00	9.50	0.00	52.93	54.00	-1.07	A	1.01
* 2483.60	45.50	31.72	3.61	0.00	9.50	0.00	71.33	74.00	-2.67	P	1.01
* 2483.60	27.00	31.72	3.61	0.00	9.50	0.00	52.83	54.00	-1.17	A	1.01
3386.50	51.38	31.47	4.22	35.51	9.50	0.00	42.05	88.98	-46.93	P	1.00
3386.50	41.00	31.47	4.22	35.51	9.50	0.00	31.67	79.32	-47.65	A	1.00
* 4874.36	44.63	34.77	5.10	35.20	9.50	1.80	41.60	74.00	-32.40	P	1.00
* 4874.36	34.02	34.77	5.10	35.20	9.50	1.80	30.99	54.00	-23.01	A	1.00
* 7314.60	58.82	39.77	6.79	35.64	9.50	2.00	62.25	74.00	-11.75	P	1.03
* 7314.60	45.76	39.77	6.79	35.64	9.50	2.00	49.19	54.00	-4.81	A	1.03
9774.86	47.36	38.52	8.34	36.64	9.50	0.54	48.62	88.98	-40.36	P	1.02
9774.86	35.64	38.52	8.34	36.64	9.50	0.54	36.90	79.32	-42.42	A	1.02
* 12156.70	-----	-----	-----	-----	9.50	0.80	-----	-----	-----	-----	1.00
14588.04	-----	-----	-----	-----	9.50	0.63	-----	-----	-----	-----	1.00
17019.38	-----	-----	-----	-----	9.50	0.51	-----	-----	-----	-----	1.00
* 19450.72	-----	-----	-----	-----	9.50	2.14	-----	-----	-----	-----	1.00
21882.06	-----	-----	-----	-----	9.50	0.75	-----	-----	-----	-----	1.00
24313.40	-----	-----	-----	-----	9.50	2.60	-----	-----	-----	-----	1.00

Note :

- The measurement was searched to 10th harmonic, Remark “---” means that the emissions level is too low to be measured.
- AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)
- Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
- Remark “*” means the Restricted band.
- Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
- The result basic equation calculation is as follow:
Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit
- The other emission levels were very low against the limit
- The test limit distance is 3M limit.
- The test data marked in gray background means the EUT emission data is located in the margin uncertainty range of emission limits.
- For 802.11g turbo mode at 108Mbps.



The frequency spectrum above 1 GHz for Transmitter was investigated. All emissions not reported are much lower than the prescribed limits. Readings are both peak and average values.

Company	D-LINK Corporation	Test Date	2005/02/01
Product Name	IEEE802.11g WLAN Cardbus Adapter	Test By	Stan Peng
Model Name	DWL-G680	TEMP & Humidity	13.9°C, 60%

(2437MHz) TX				Measurement Distance at 1m Vertical polarity							
Freq. (MHz)	Reading (dBμV)	AF (dBμV)	Cable (dB)	Pre-amp (dB)	Dist (dB)	Filter (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Mark (P/Q/A)	Height (Meter)
* 2389.90	30.60	31.81	3.57	0.00	9.50	0.00	56.48	74.00	-17.52	P	1.11
* 2389.90	17.40	31.81	3.57	0.00	9.50	0.00	43.28	54.00	-10.72	A	1.11
2399.90	40.50	31.80	3.58	0.00	9.50	0.00	66.38	81.30	-14.93	P	1.11
2399.90	25.40	31.80	3.58	0.00	9.50	0.00	51.28	71.20	-19.93	A	1.11
2424.49	75.44	31.78	3.59	0.00	9.50	0.00	101.30	Fundamental Frequency		P	1.00
2424.49	65.34	31.78	3.59	0.00	9.50	0.00	91.20			A	1.00
* 2483.50	34.60	31.72	3.61	0.00	9.50	0.00	60.43	74.00	-13.57	P	1.11
* 2483.50	18.20	31.72	3.61	0.00	9.50	0.00	44.03	54.00	-9.97	A	1.11
* 2483.60	35.70	31.72	3.61	0.00	9.50	0.00	61.53	74.00	-12.47	P	1.11
* 2483.60	18.30	31.72	3.61	0.00	9.50	0.00	44.13	54.00	-9.87	A	1.11
3386.42	46.15	31.47	4.22	35.51	9.50	0.00	36.82	81.30	-44.48	P	1.10
3386.42	34.05	31.47	4.22	35.51	9.50	0.00	24.72	71.20	-46.48	A	1.10
* 4873.80	46.27	34.77	5.10	35.20	9.50	1.80	43.24	74.00	-30.76	P	1.10
* 4873.80	34.30	34.77	5.10	35.20	9.50	1.80	31.27	54.00	-22.73	A	1.10
* 7315.56	61.48	39.77	6.79	35.64	9.50	2.00	64.91	74.00	-9.09	P	1.11
* 7315.56	47.61	39.77	6.79	35.64	9.50	2.00	51.04	54.00	-2.96	A	1.11
9748.02	48.70	38.53	8.33	36.60	9.50	0.55	50.01	81.30	-31.29	P	1.05
9748.02	36.87	38.53	8.33	36.60	9.50	0.55	38.18	71.20	-33.02	A	1.05
14546.94	-----	-----	-----	-----	9.50	0.66	-----	-----	-----	-----	1.00
16971.43	-----	-----	-----	-----	9.50	0.48	-----	-----	-----	-----	1.00
* 19395.92	-----	-----	-----	-----	9.50	2.08	-----	-----	-----	-----	1.00
21820.41	-----	-----	-----	-----	9.50	0.77	-----	-----	-----	-----	1.00
24244.90	-----	-----	-----	-----	9.50	2.71	-----	-----	-----	-----	1.00

Note :

- The measurement was searched to 10th harmonic, Remark "---" means that the emissions level is too low to be measured.
- AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)
- Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
- Remark "*" means the Restricted band.
- Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
- The result basic equation calculation is as follow:
Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit
- The other emission levels were very low against the limit
- The test limit distance is 3M limit.
- For 802.11g turbo mode at 108Mbps.

3.7 Photos of Open Site







4. 6dB BANDWIDTH MEASUREMENT

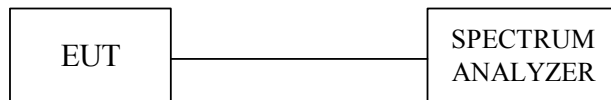
4.1 Test Equipments

Description & Manufacturer	Model No.	Serial No.	Date Of Calibration	Calibration Period
ROHDE & SCHWARZ SPECTRUM ANALYZER	FSEK30	835253/002	September 06, 2004	1 Year

Note :

1. The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.2 Test Setup



4.3 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is >500KHz

4.4 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 1MHz VBW. The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB.

4.5 Uncertainty of Conducted Emission

The uncertainty of conducted emission is ± 200 KHz.



4.6 Test Results

Company	D-LINK Corporation	Test Date	2005/01/31
Product Name	IEEE802.11g WLAN Cardbus Adapter	Test By	Stan Peng
Model Name	DWL-G680	TEMP & Humidity	14.6°C, 71%

Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	11.97	0.5	PASS
6	2437	11.82	0.5	PASS
11	2462	11.97	0.5	PASS

Note : For 802.11b Mode

Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	16.43	0.5	PASS
6	2437	16.38	0.5	PASS
11	2462	16.43	0.5	PASS

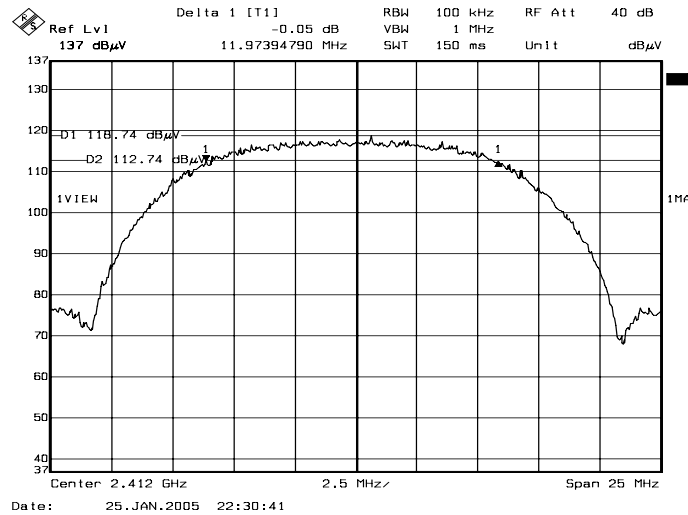
Note : For normal 802.11g Mode

Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
-----	2437	32.86	0.5	PASS

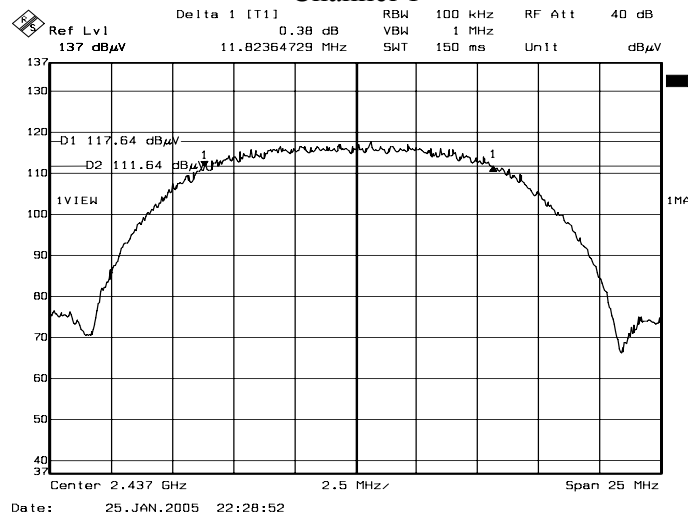
Note : For 802.11g turbo mode



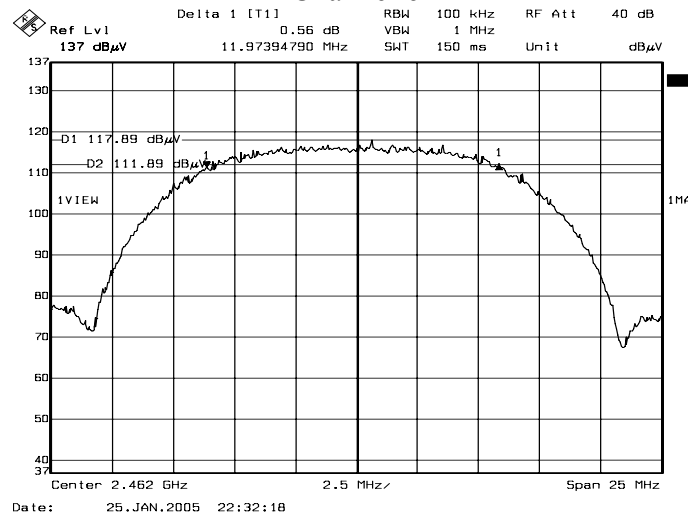
4.7 Photo of 6db Bandwidth Measurement



Channel 1

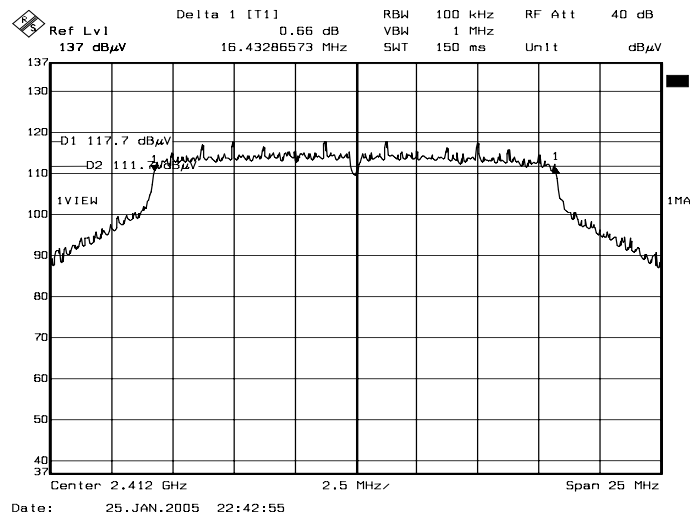


Channel 6

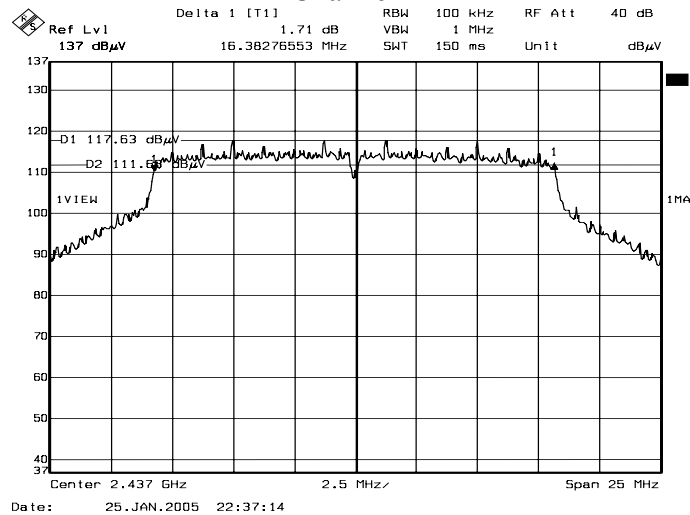


Channel 11

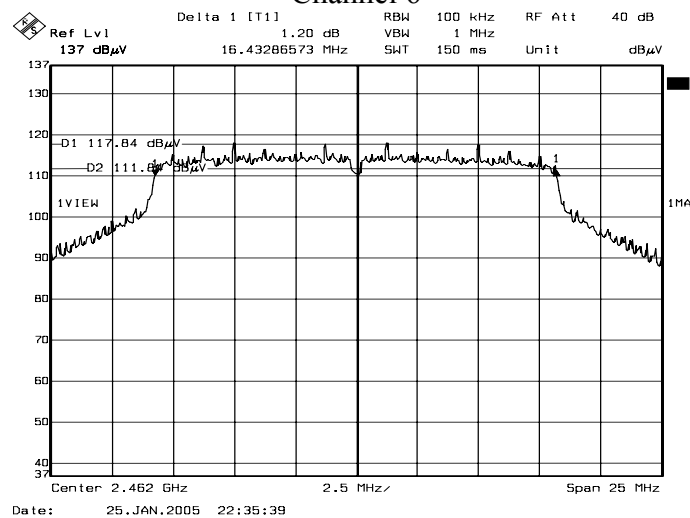
Note: For 802.11b Mode



Channel 1

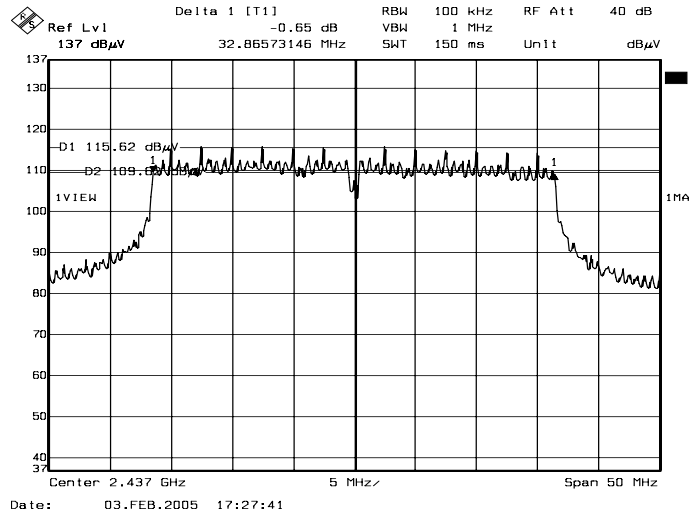


Channel 6



Channel 11

Note: For normal 802.11g Mode



Channel Middle
Note: For 802.11g turbo mode



5. MAXIMUM PEAK OUTPUT POWER

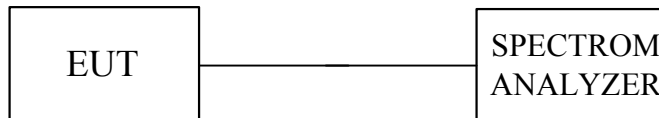
5.1 Test Equipments

Description & Manufacturer	Model No.	Serial No.	Date Of Calibration	Calibration Period
ROHDE & SCHWARZ SPECTRUM ANALYZER	FSEK30	835253/002	September 06, 2004	1 Year

Note :

1. The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

5.2 Test Setup



5.3 Limits of Maximum Peak Output Power

The Maximum Peak Output Power Measurement is 30dBm.

5.4 Test Procedure

1. The spectrum shall be set as follows :
Span : 1.5 times channel integration bandwidth.
RBW : 1MHz
VBW : 3MHz
Detector : Peak
Sweep : Single trace
2. Compute the combined power of all signal responses contained in the trace by covering all the data points.
3. For 99% occupied BW, place the markers at the frequency at which 0.5% of the power lies to the right of the right marker and 0.5% of the power lies to the left of the left marker.
4. The peak output power is the channel power integrated over 99% bandwidth.

5.5 Uncertainty of Conducted Emission

The uncertainty of conducted emission is ± 1.82 dB.



5.6 Test Results

Company	D-LINK Corporation	Test Date	2005/02/02
Product Name	IEEE802.11g WLAN Cardbus Adapter	Test By	Stan Peng
Model Name	DWL-G680	TEMP & Humidity	12.4°C, 68%

Channel	Channel Frequency (MHz)	Peak Power Output (dBm)	Peak Power Limit (dBm)	Pass / Fail
1	2412	22.43	30	PASS
6	2437	24.20	30	PASS
11	2462	21.75	30	PASS

Note :

1. For 802.11b mode.
2. At final test to get the worst-case emission at 11Mbps.
3. Cable loss = 0.5dB.
4. The results are calculated as the following equation :
$$\text{Peak Power Output} = \text{Peak Power Reading} + \text{Cable loss}$$

Channel	Channel Frequency (MHz)	Peak Power Output (dBm)	Peak Power Limit (dBm)	Pass / Fail
1	2412	21.84	30	PASS
6	2437	23.28	30	PASS
11	2462	20.84	30	PASS

Note :

1. For normal 802.11g mode.
2. At final test to get the worst-case emission at 6Mbps.
3. Cable loss = 0.5dB.
4. The results are calculated as the following equation :
$$\text{Peak Power Output} = \text{Peak Power Reading} + \text{Cable loss}$$

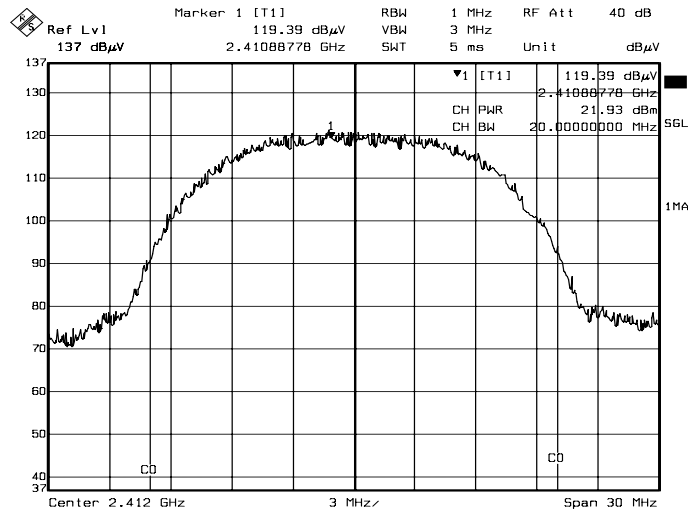
Channel	Channel Frequency (MHz)	Peak Power Output (dBm)	Peak Power Limit (dBm)	Pass / Fail
Middle	2437	24.13	30	PASS

Note :

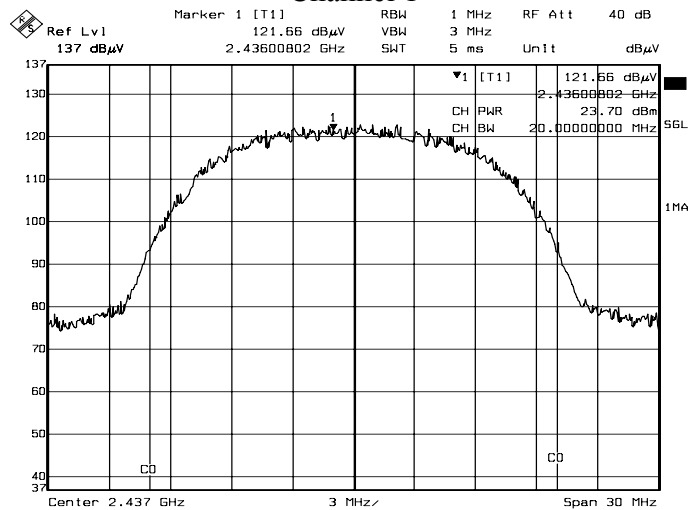
1. For 802.11g turbo mode.
2. At final test to get the worst-case emission at 108Mbps.
3. Cable loss = 0.5dB.
4. The results are calculated as the following equation :
$$\text{Peak Power Output} = \text{Peak Power Reading} + \text{Cable loss}$$



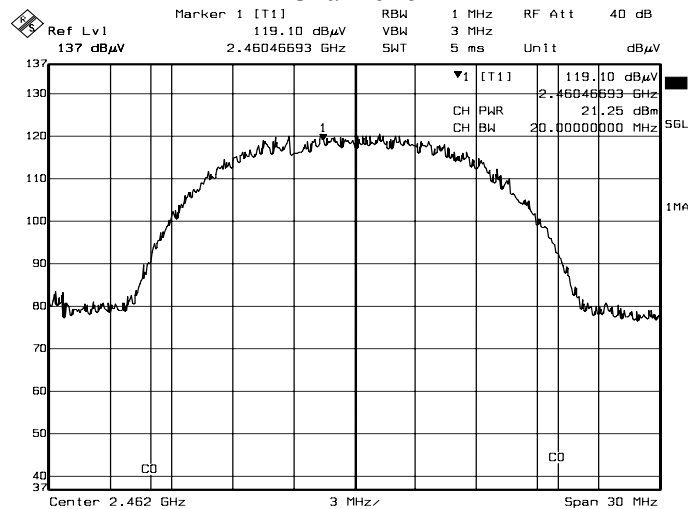
5.7 Photo of Maximum Peak Output Power Measurement



Channel 1

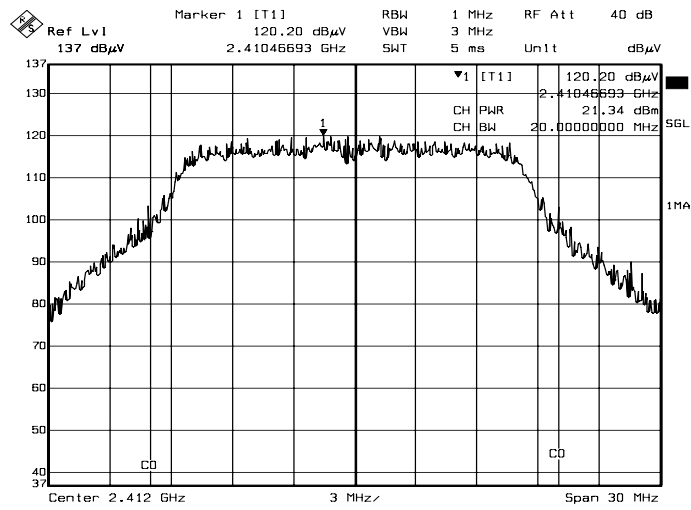


Channel 6

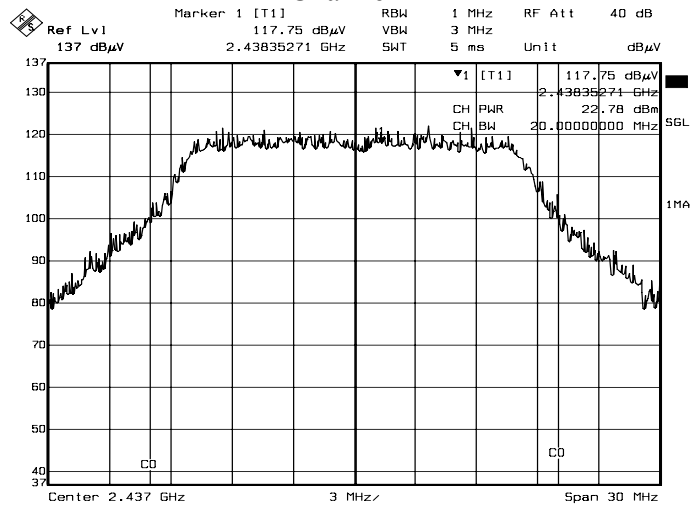


Channel 11

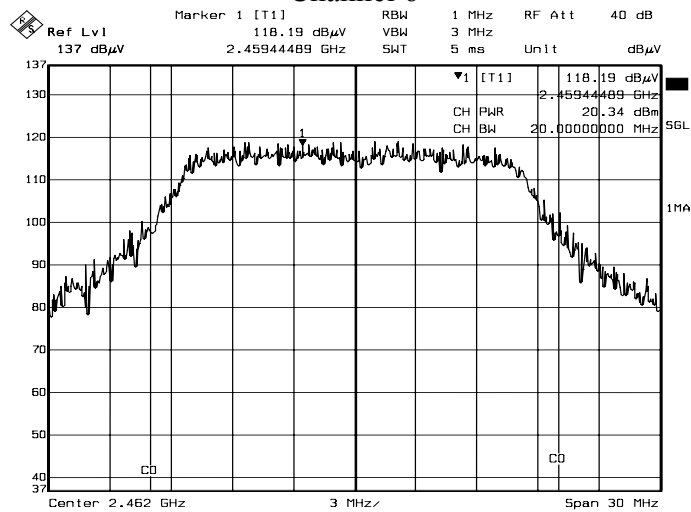
Note: For 802.11b Mode



Channel 1

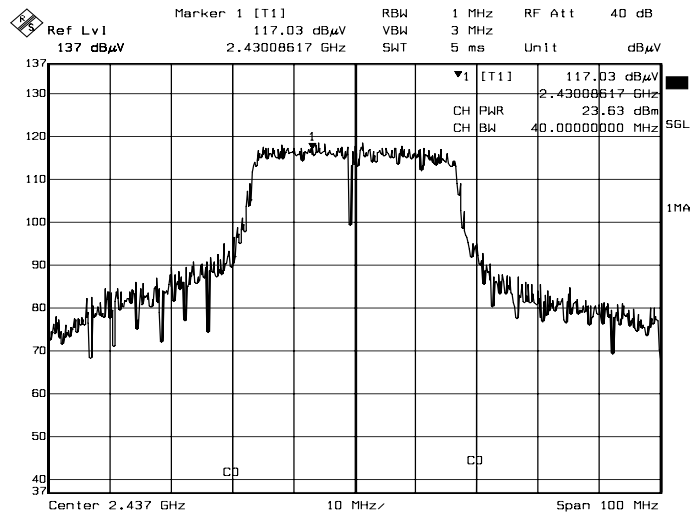


Channel 6



Channel 11

Note: For normal 802.11g Mode





6. POWER SPECTRAL DENSITY MEASUREMENT

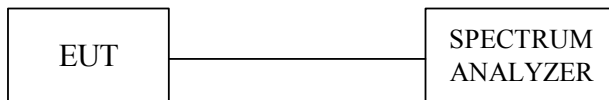
6.1 Test Equipments

Description & Manufacturer	Model No.	Serial No.	Date Of Calibration	Calibration Period
ROHDE & SCHWARZ SPECTRUM ANALYZER	FSEK30	835253/002	September 06, 2004	1 Year

Note :

1. The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

6.2 Test Setup



6.3 Limits of Power Spectral Density Measurement

The Maximum Power Spectral Density Measurement is 8dBm/3KHz.



6.4 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.

6.5 Uncertainty of Conducted Emission

The uncertainty of conducted emission is $\pm 1.82\text{dB}$.

6.6 Test Results

Company	D-LINK Corporation	Test Date	2005/01/31
Product Name	IEEE802.11g WLAN Cardbus Adapter	Test By	Stan Peng
Model Name	DWL-G680	TEMP & Humidity	14.6°C, 71%

Channel	Channel Frequency (MHz)	Final RF Power Level in 3KHz BW (dBm)	Maxmum Limit (dBm)	Pass / Fail
1	2412	-7.68	8	PASS
6	2437	-4.34	8	PASS
11	2462	-7.21	8	PASS

Note : For 11Mbps (802.11b mode) at finial test to get the worst-case emission at 11Mbps.

Channel	Channel Frequency (MHz)	Final RF Power Level in 3KHz BW (dBm)	Maxmum Limit (dBm)	Pass / Fail
1	2412	-8.71	8	PASS
6	2437	-6.80	8	PASS
11	2462	-8.88	8	PASS

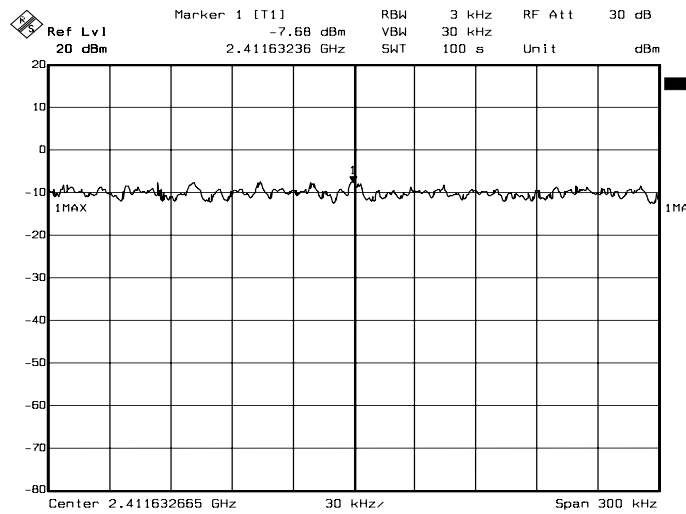
Note : For 6Mbps (normal 802.11g mode) at finial test to get the worst-case emission at 6Mbps.

Channel	Channel Frequency (MHz)	Final RF Power Level in 3KHz BW (dBm)	Maxmum Limit (dBm)	Pass / Fail
Middle	2437	-8.59	8	PASS

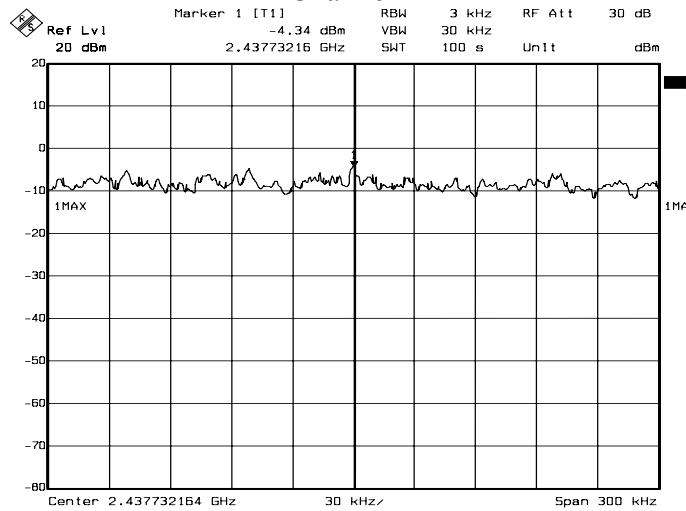
Note : For 108Mbps (802.11g turbo mode) at finial test to get the worst-case emission at 108Mbps.



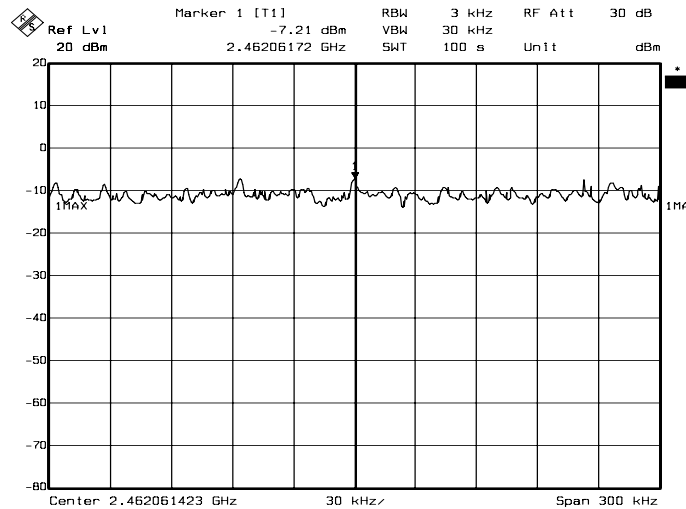
6.7 Photo of Power Spectral Density Measurement



Channel 1

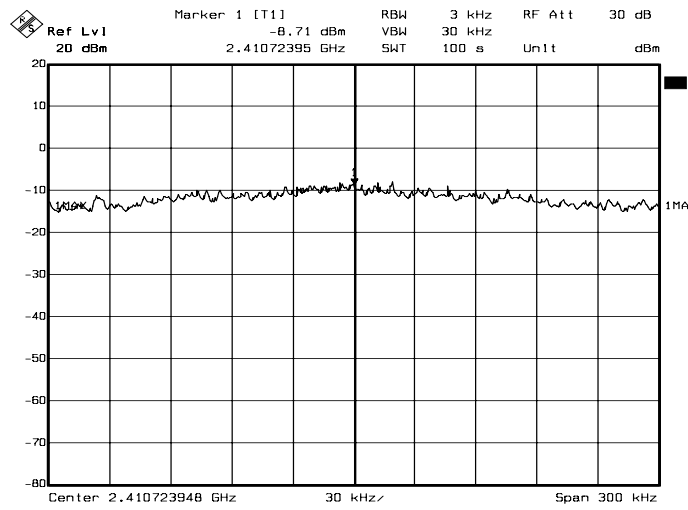


Channel 6

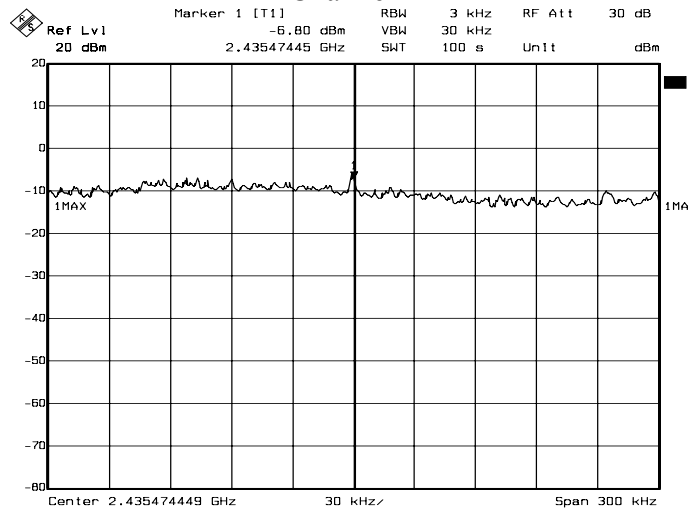


Channel 11

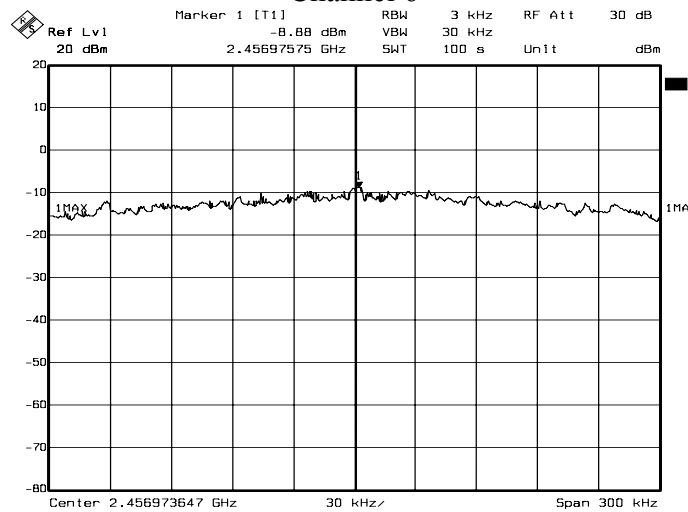
Note: For 802.11b Mode



Channel 1

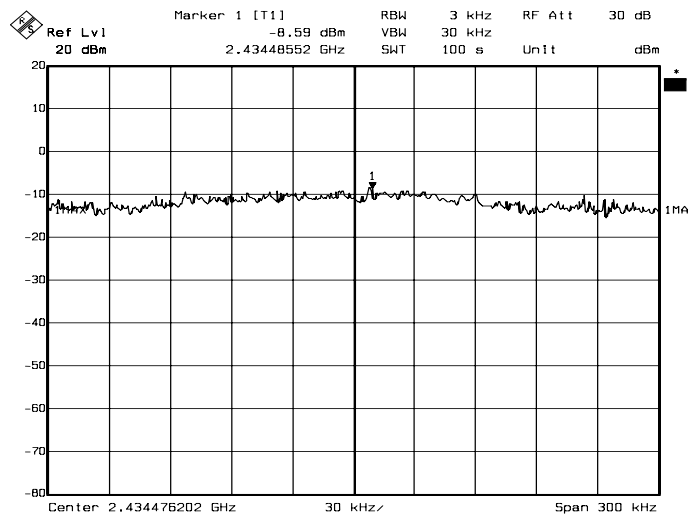


Channel 6



Channel 11

Note: For normal 802.11g Mode





7. BAND EDGE MEASUREMENT

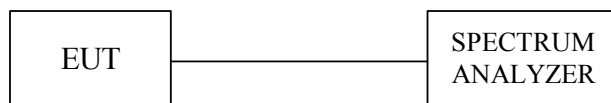
7.1 Test Equipments

Description & Manufacturer	Model No.	Serial No.	Date Of Calibration	Calibration Period
ROHDE & SCHWARZ SPECTRUM ANALYZER	FSEK30	835253/002	September 06, 2004	1 Year

Note :

1. The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

7.2 Test Setup



7.3 Limits of Band Edge Emissions Measurement

1. Below -20dB of the highest emission level in operating band.
2. Fall in the restricted bands listed in section 15.205. The maximum permitted average field strength is listed in section 15.209.

7.4 Test Procedure

The band edge compliance of RF radiated emission should be measured by following the guidance in ANSI C63.4 with respect to maximizing the emission by rotating the EUT, measuring the emission while the EUT is situated in three orthogonal planes (if appropriate), adjusting the measurement antenna height and polarization etc. Set RBW and VBM to 1MHz to measure the peak field strength and set RBW to 1MHz and VBW to 10Hz to measure the average radiated field strength.

The conducted RF band edge was measured by using a spectrum analyzer. Set span wide enough to capture the highest in-band emission and the emission at the band edge. Set RBW and VBW to 100kHz, to measure the conducted peak band edge.

7.5 Uncertainty of Conducted Emission

The uncertainty of conducted emission is ± 1.82 dB.



7.6 Test Results

A. Conducted

Refer to 7.7 photo of out band Emission measurement

B. Radiated

Company	D-LINK Corporation	Test Date	2005/02/02
Product Name	IEEE802.11g WLAN Cardbus Adapter	Test By	Stan Peng
Model Name	DWL-G680	TEMP & Humidity	12.4°C, 68%

For 802.11b mode

Refer to the section 3.6, the measured radiated band edge emissions are listed below :

Band edge Frequency (MHz)		Measured radiated band edge field strength (dBuV/m)		Radiated band edge field strength limit (dBuV/m)		Test result
		Horizontal	Vertical	Horizontal	Vertical	
2399.90	PK	68.98	60.38	90.93	83.85	PASS
	AV	60.28	51.18	84.15	77.31	
2483.50	PK	58.43	51.63	74.00	74.00	PASS
	AV	46.43	40.03	54.00	54.00	

For normal 802.11g mode

Refer to the section 3.6, the measured radiated band edge emissions are listed below :

Band edge Frequency (MHz)		Measured radiated band edge field strength (dBuV/m)		Radiated band edge field strength limit (dBuV/m)		Test result
		Horizontal	Vertical	Horizontal	Vertical	
2399.90	PK	83.68	77.28	90.36	82.87	PASS
	AV	69.88	62.88	80.07	72.99	
2483.50	PK	65.63	58.63	74.00	74.00	PASS
	AV	50.63	43.63	54.00	54.00	

For 802.11g turbo mode

Refer to the section 3.6, the measured radiated band edge emissions are listed below :

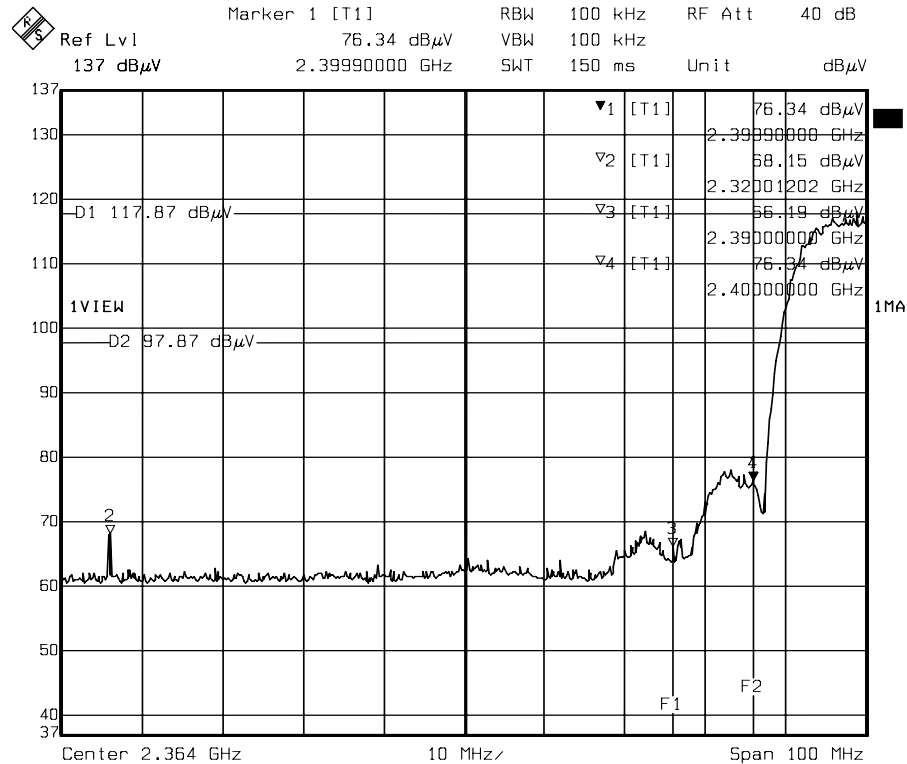
Band edge Frequency (MHz)		Measured radiated band edge field strength (dBuV/m)		Radiated band edge field strength limit (dBuV/m)		Test result
		Horizontal	Vertical	Horizontal	Vertical	
2399.90	PK	75.58	66.38	88.98	81.30	PASS
	AV	60.98	52.18	79.32	71.20	
2483.50	PK	70.03	60.43	74.00	74.00	PASS
	AV	52.93	44.03	54.00	54.00	

Note : Radiated band edge field strength is measured according to measurement procedure ANSI C63.4-2003.



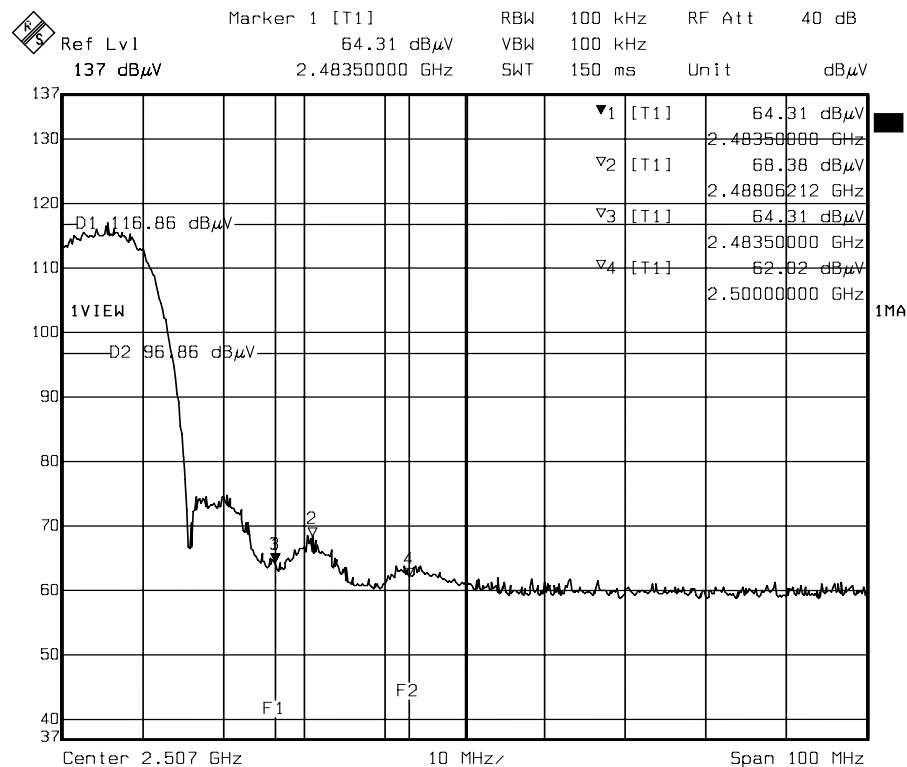
7.7 Photo of Band edge Measurement

For 802.11b Mode



Date: 25.JAN.2005 22:57:22

Lower Band edge

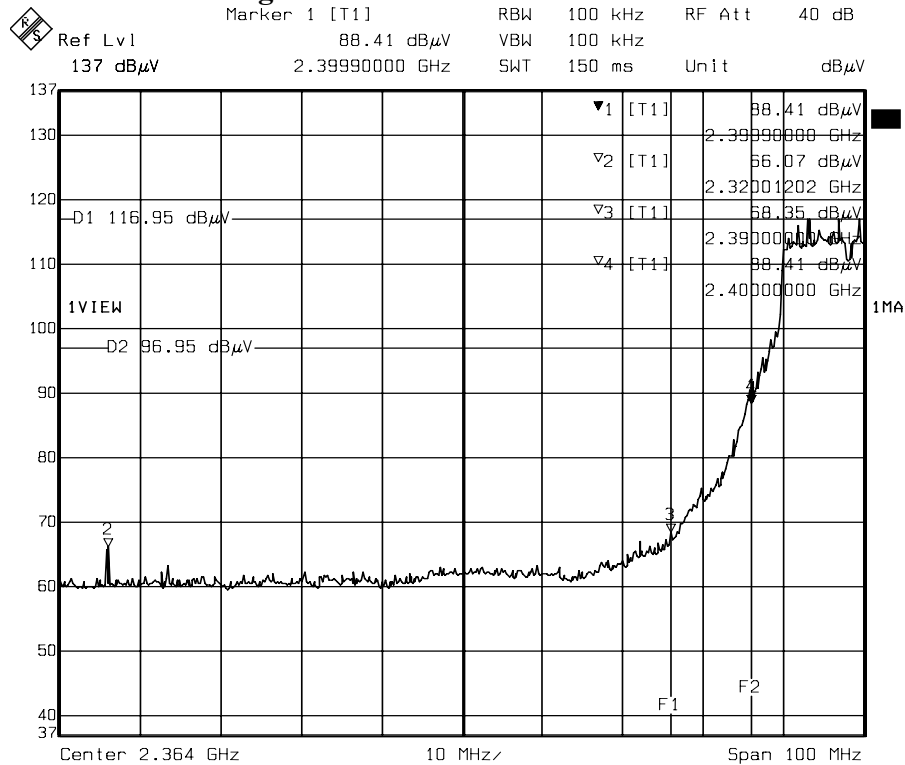


Date: 25.JAN.2005 22:59:18

Higher Band edge

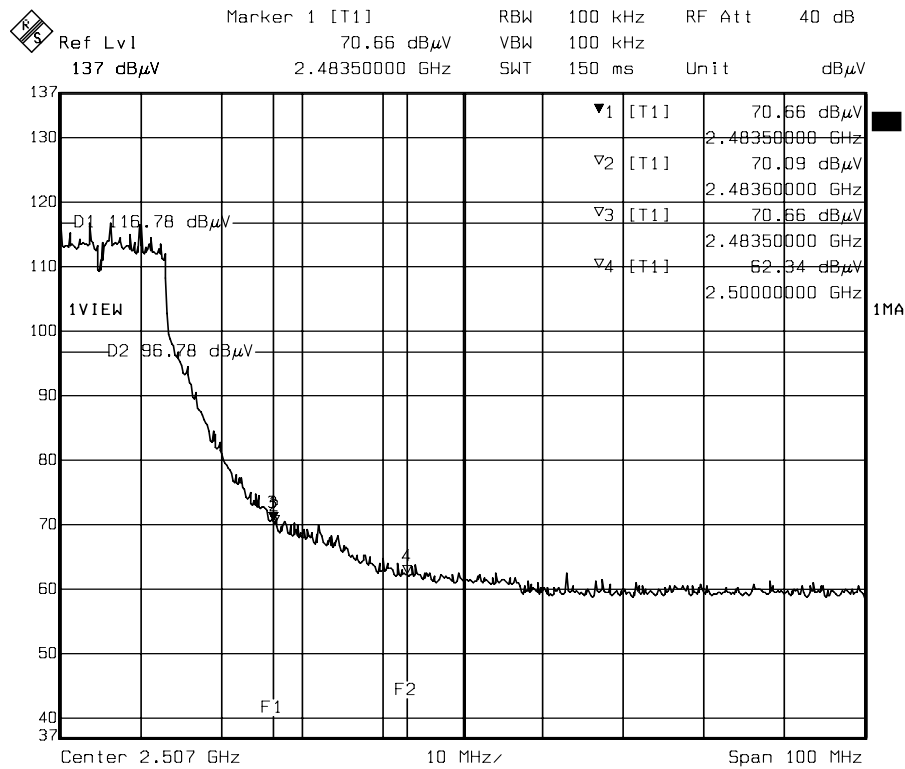


For normal 802.11g Mode



Date: 25.JAN.2005 22:51:56

Lower Band edge

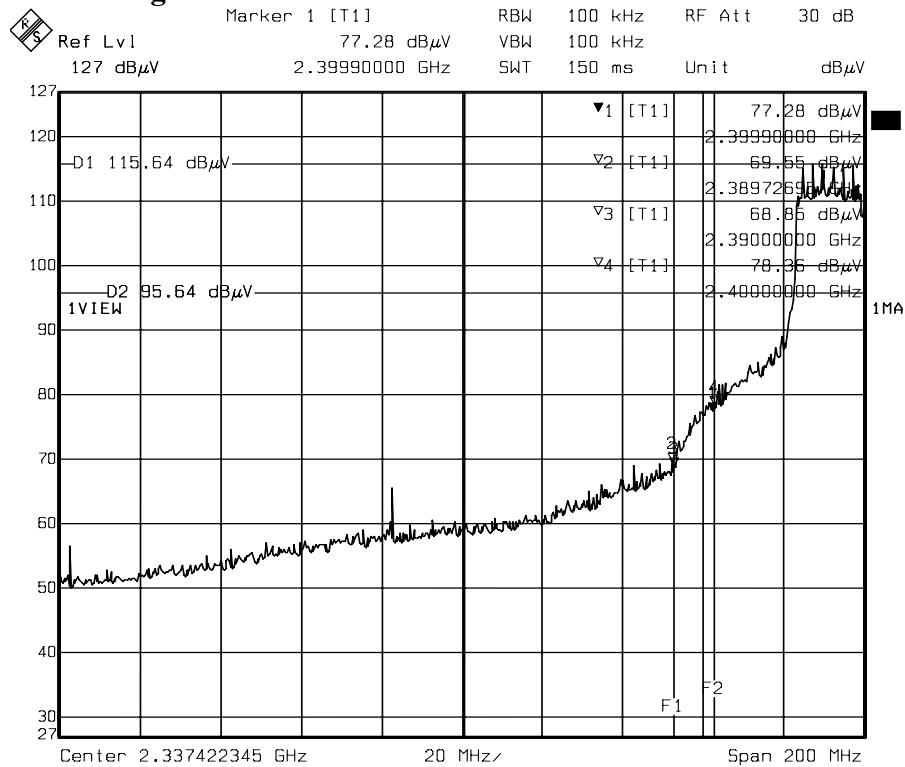


Date: 25.JAN.2005 23:02:49

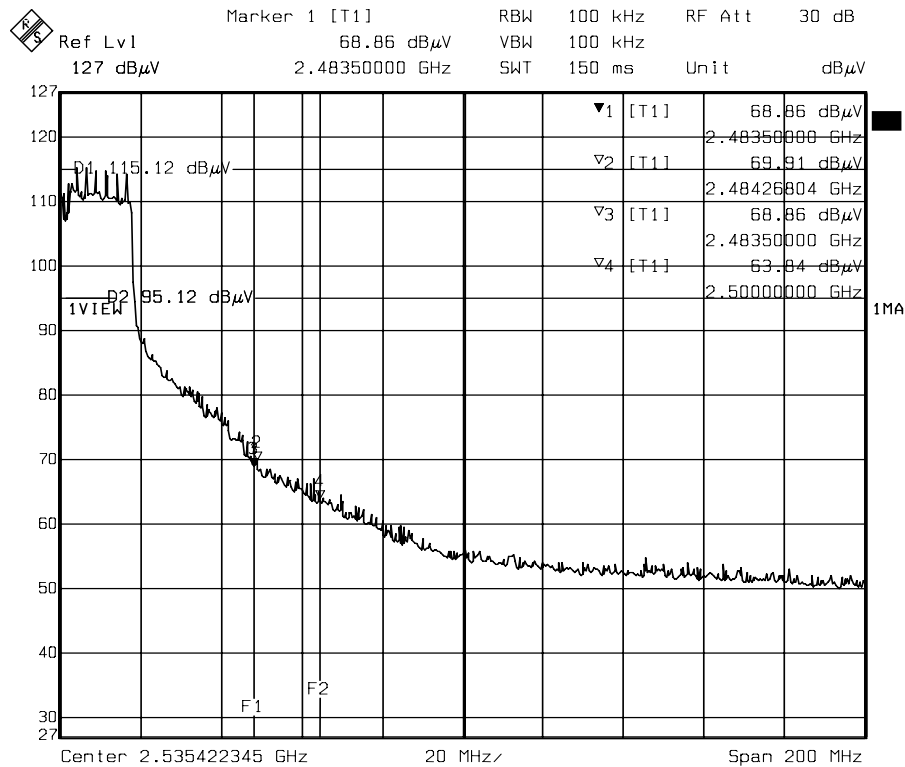
Higher Band edge



For 802.11g turbo mode



Lower Band edge

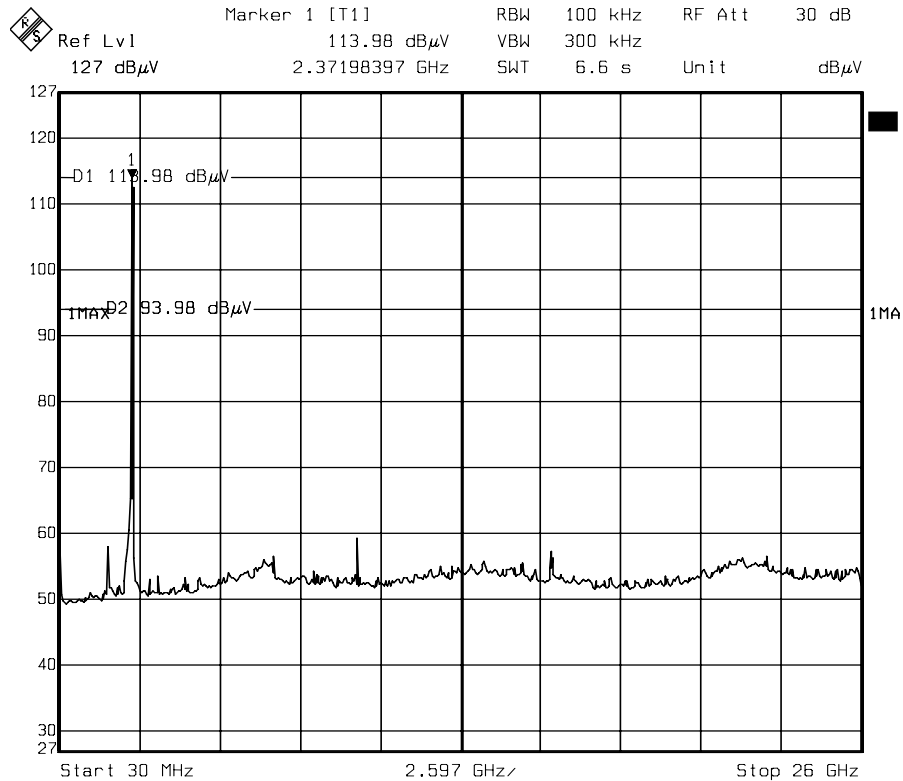


Higher Band edge

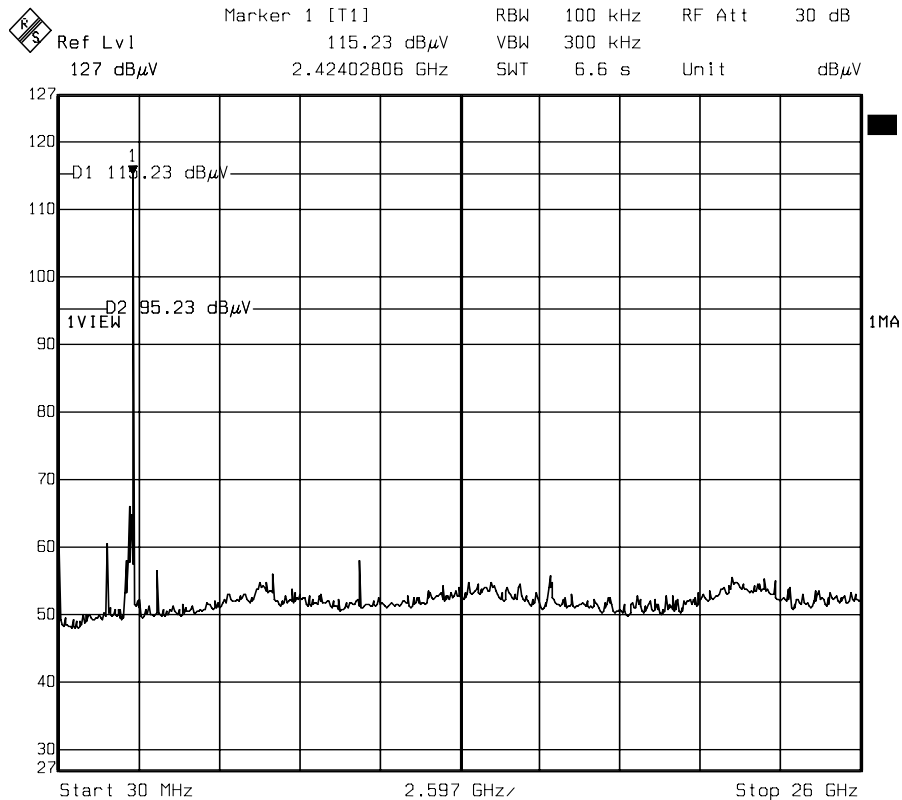


Out-of-band Spurious Emissions-conducted measurement

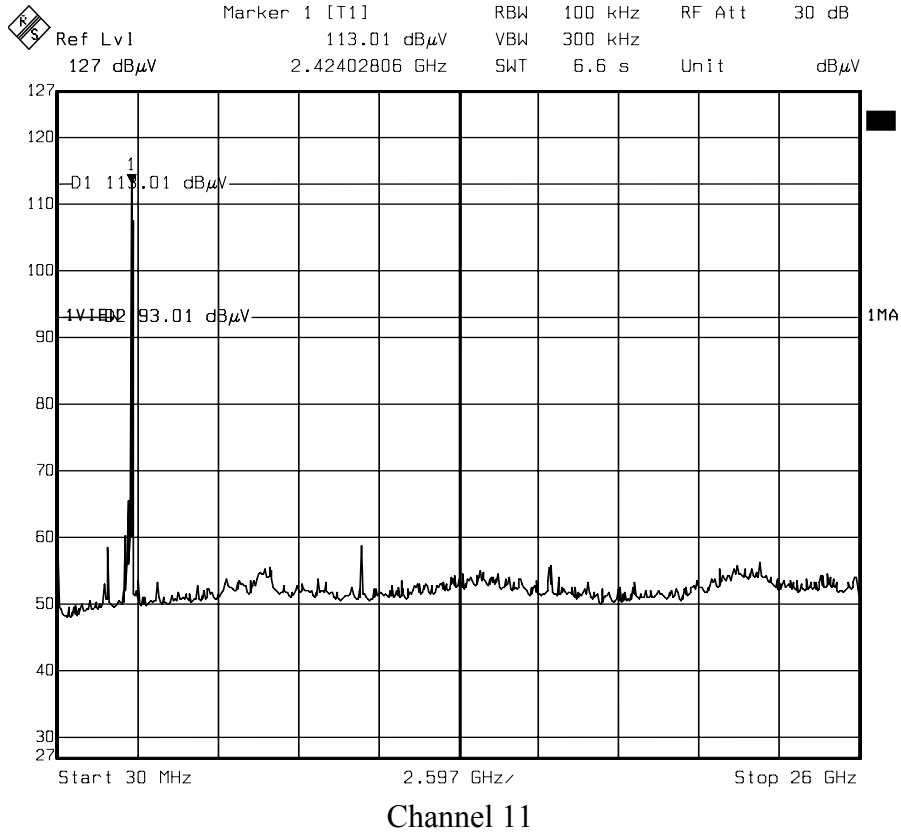
For 802.11b Mode



Channel 1

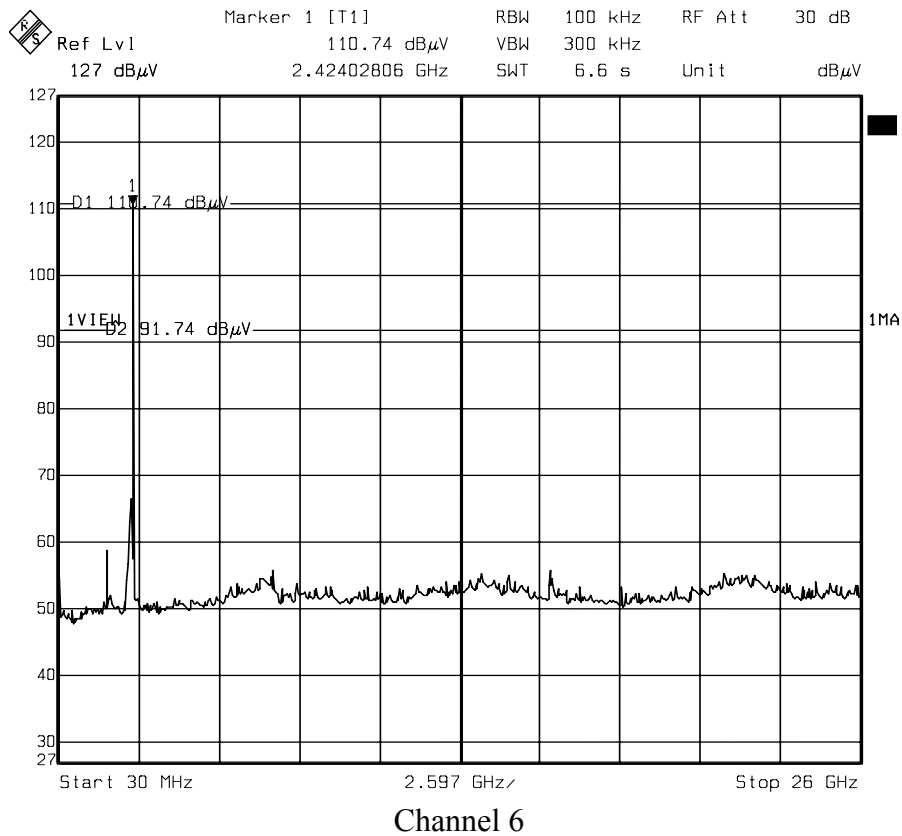
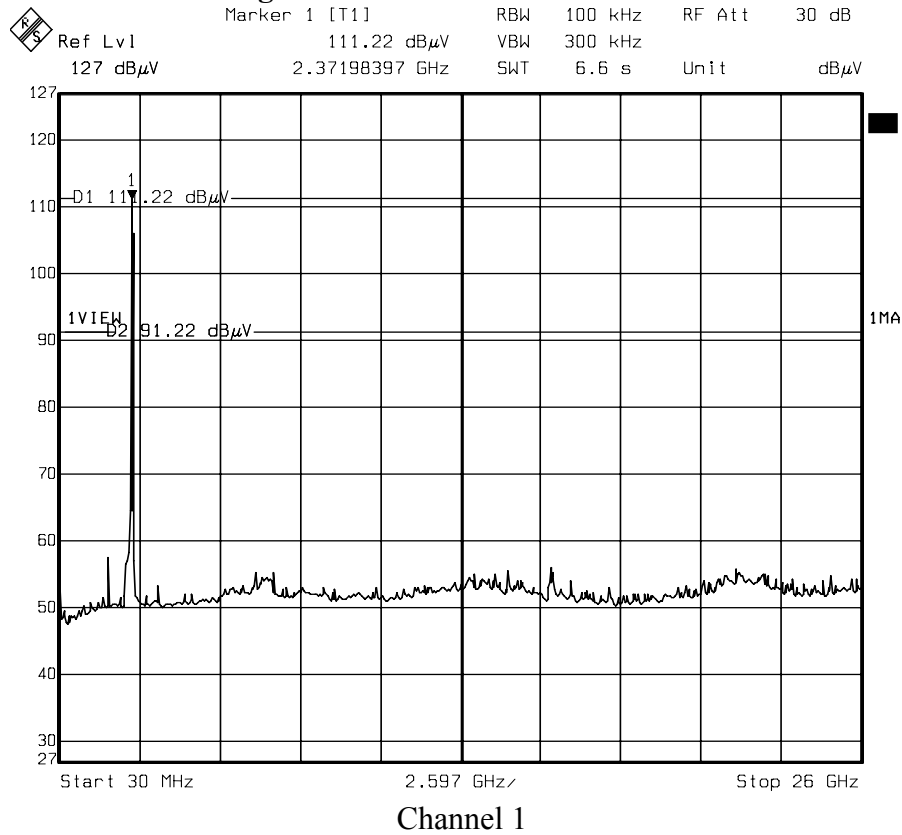


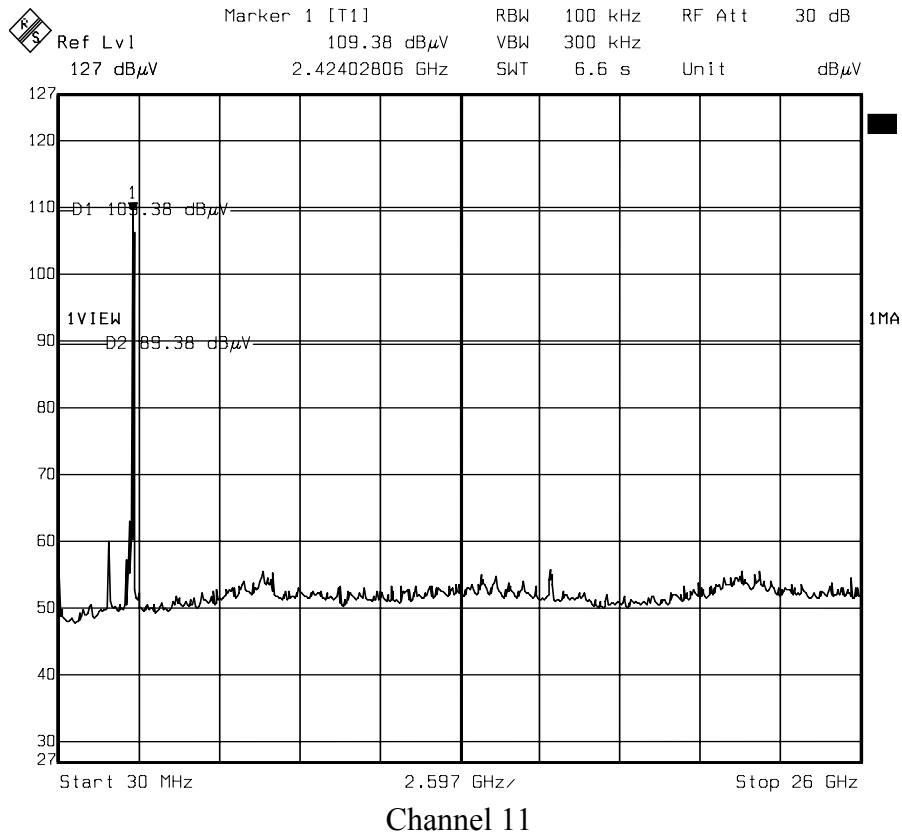
Channel 6





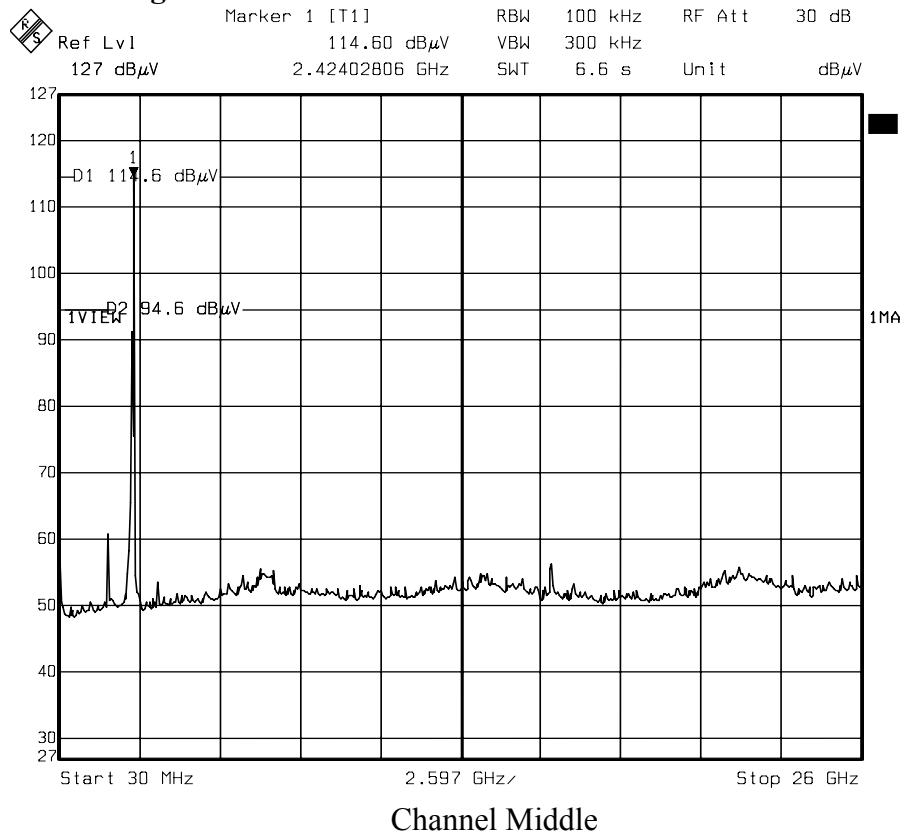
For normal 802.11g Mode







For 802.11g turbo mode





8. ANTENNA REQUIREMENT

8.1 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 (c), 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.

8.2 Antenna Connected Construction

The antenna used for this product is Printed antenna. The maximum peak Gain of this antenna is only 0dBi.