



FCC TEST REPORT

REPORT NO.: RF920501R02

MODEL NO.: G11FNF-PC

RECEIVED: May 01, 2003

TESTED: May 08 to 15, 2003

APPLICANT: Proxim Corporation

ADDRESS: 935 Stewart Drive, Sunnyvale, CA 94085, USA

ISSUED BY: Advance Data Technology Corporation

LAB LOCATION: No. 81-1, Lu Liao Keng, 9 Ling, Wu Lung Tsuen,
Chiung Lin Hsiang, Hsin Chu Hsien,
Taiwan, R.O.C.

This test report consists of 101 pages in total. It may be duplicated completely for legal use with the approval of the applicant. It should not be reproduced except in full, without the written approval of our laboratory. The client should not use it to claim product endorsement by CNLA, NVLAP or any government agencies. The test results in the report only apply to the tested sample.



Lab Code: 200376-0

Table of Contents

1	CERTIFICATION.....	4
2	SUMMARY OF TEST RESULTS.....	5
3	GENERAL INFORMATION	6
3.1	GENERAL DESCRIPTION OF EUT.....	6
3.2	DESCRIPTION OF TEST MODES.....	7
3.3	GENERAL DESCRIPTION OF APPLIED STANDARDS	7
3.4	DESCRIPTION OF SUPPORT UNITS.....	8
4	TEST TYPES AND RESULTS	9
4.1	CONDUCTED EMISSION MEASUREMENT.....	9
4.1.1	LIMITS OF CONDUCTED EMISSION MEASUREMENT.....	9
4.1.2	TEST INSTRUMENTS	9
4.1.3	TEST SETUP	10
4.1.4	EUT OPERATING CONDITIONS	11
4.1.5	TEST RESULTS.....	12
4.2	RADIATED EMISSION MEASUREMENT	18
4.2.1	LIMITS OF RADIATED EMISSION MEASUREMENT.....	18
4.2.2	TEST INSTRUMENTS	19
4.2.3	TEST PROCEDURES	20
4.2.4	TEST SETUP	21
4.2.5	EUT OPERATING CONDITIONS	21
4.2.6	TEST RESULTS (A).....	22
4.2.7	TEST RESULTS (A) - DSSS	23
4.2.8	TEST RESULTS (A) -OFDM.....	26
4.2.9	TEST RESULTS (B).....	29
4.2.10	TEST RESULTS (B) - DSSS	30
4.2.11	TEST RESULTS (B) -OFDM.....	33
4.2.12	TEST RESULTS (C).....	36
4.2.13	TEST RESULTS (C) - DSSS	37
4.2.14	TEST RESULTS (C) -OFDM.....	40
4.3	6dB BANDWIDTH MEASUREMENT	43
4.3.1	LIMITS OF 6dB BANDWIDTH MEASUREMENT.....	43
4.3.2	TEST INSTRUMENTS	43
4.3.3	TEST PROCEDURE	44
4.3.4	TEST SETUP	44
4.3.5	EUT OPERATING CONDITIONS	44



4.3.6	TEST RESULTS-DSSS	45
4.3.7	TEST RESULTS-OFDM.....	53
4.4	MAXIMUM PEAK OUTPUT POWER	61
4.4.1	LIMITS OF MAXIMUM PEAK OUTPUT POWER MEASUREMENT	61
4.4.2	TEST INSTRUMENTS	61
4.4.3	TEST PROCEDURES	62
4.4.4	TEST SETUP	62
4.4.5	EUT OPERATING CONDITIONS	62
4.4.6	TEST RESULTS(A)-DSSS.....	63
4.4.7	TEST RESULTS(A)-OFDM.....	63
4.4.8	TEST RESULTS(B)-DSSS.....	64
4.4.9	TEST RESULTS(B)-OFDM.....	64
4.4.10	TEST RESULTS(C)-DSSS.....	65
4.4.11	TEST RESULTS(C)-OFDM.....	65
4.5	POWER SPECTRAL DENSITY MEASUREMENT	66
4.5.1	LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT.....	66
4.5.2	TEST INSTRUMENTS	66
4.5.3	TEST PROCEDURE	67
4.5.4	TEST SETUP	67
4.5.5	EUT OPERATING CONDITIONS	67
4.5.6	TEST RESULTS-DSSS	68
4.5.7	TEST RESULTS-OFDM.....	76
4.6	BAND EDGES MEASUREMENT.....	84
4.6.1	LIMITS OF BAND EDGES MEASUREMENT.....	84
4.6.2	TEST INSTRUMENTS	84
4.6.3	TEST PROCEDURE	84
4.6.4	EUT OPERATING CONDITION.....	84
4.6.5	TEST RESULTS - DSSS.....	85
4.6.6	TEST RESULTS-OFDM.....	91
4.7	ANTENNA REQUIREMENT.....	97
4.7.1	STANDARD APPLICABLE.....	97
4.7.2	ANTENNA CONNECTED CONSTRUCTION	97
5	PHOTOGRAPHS OF THE TEST CONFIGURATION.....	98
6	INFORMATION ON THE TESTING LABORATORIES.....	101



1 CERTIFICATION

PRODUCT : 802.11b/g Cardbus

BRAND NAME : Proxim

MODEL NO. : G11FNF-PC

APPLICANT : Proxim Corporation

STANDARDS : 47 CFR Part 15, Subpart C (Section 15.247),
ANSI C63.4-1992

We, **Advance Data Technology Corporation**, hereby certify that one sample of the designation has been tested in our facility from May 08 to 15, 2003. The test record, data evaluation and Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions herein specified.

CHECKED BY: Amanda Chu, **DATE:** May 16, 2003
(Amanda Chu)

APPROVED BY: Eric Lin, **DATE:** May 16, 2003
(Eric Lin, Manager)

2 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: 47 CFR Part 15, Subpart C			
Standard Section	Test Type and Limit	Result	REMARK
15.207	AC Power Conducted Emission Limit: 48dB _{UV}	PASS	Meet the requirement of limit Minimum passing margin is -16.17 dB _{UV} at 0.170 MHz
15.247(a)(2)	Spectrum Bandwidth of a Direct Sequence Spread Spectrum System Limit: min. 500kHz	PASS	Meet the requirement of limit
15.247(b)	Maximum Peak Output Power Limit: max. 30dBm	PASS	Meet the requirement of limit
15.247(c)	Transmitter Radiated Emissions Limit: Table 15.209	PASS	Meet the requirement of limit Minimum passing margin is -1.5 dB _{UV} at 2484.00MHz
15.247(d)	Power Spectral Density Limit: max. 8dBm	PASS	Meet the requirement of limit
15.247(e)	Band Edge Measurement Limit: 20 dB less than the peak value of fundamental frequency	PASS	Meet the requirement of limit



3 GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

PRODUCT	802.11b/g Cardbus
MODEL NO.	G11FNF-PC
POWER SUPPLY	3.3VDC from host equipment
MODULATION TYPE	CCK, OFDM, DBPSK, DQPSK
RADIO TECHNOLOGY	DSSS, OFDM
TRANSFER RATE	1/2/5.5/6/9/11/12/18/24/36/48/54Mbps
FREQUENCY RANGE	2412MHz ~ 2462MHz
NUMBER OF CHANNEL	11
OUTPUT POWER	15.92dBm
ANTENNA TYPE	Integral antenna & Omni directional (mono-pole) Antenna & Omni directional (dipole) Antenna
DATA CABLE	NA
I/O PORTS	NA
ASSOCIATED DEVICES	NA

NOTE:

1. There are three types of antennas provided to this EUT, please refer to the following table:

No.	Model No.	Gain (dBi)	Antenna Type / Connector
1	NA	1	Integral antenna / without connector
2	AOU24-OD-55-B	5	Omni directional (mono-pole) Antenna / MMCX connector
3	AIN24-OC-0202	3	Omni directional (dipole) Antenna / MMCX connector

2. The EUT operates in the 2.4GHz frequency spectrum with throughput of up to 54Mbps.
3. The EUT complies with IEEE 802.11g draft standards, and backwards compatible with IEEE 802.11b products.
4. For a more detailed features description, please refer to the manufacturer's specifications or User's Manual.

3.2 DESCRIPTION OF TEST MODES

Eleven channels are provided in this EUT.

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

NOTE:

1. Below 1 GHz, for Antenna 1&3, the channel 1, 6, and 11 were pre-tested in chamber. The channel 11, worst case one, was chosen for final test.
2. Below 1 GHz, for Antenna 2, the channel 2, 6, and 10 were pre-tested in chamber. The channel 11, worst case one, was chosen for final test.
3. Above 1 GHz, for Antenna 1&3, the channel 1, 6, and 11 were tested individually.
4. Above 1 GHz, for Antenna 2, the channel 2, 6, and 10 were tested individually.
5. Test result (A) is for antenna 1, test result (B) is for antenna 2 and test result (C) is for antenna 3, which were mentioned on section 3.1.
6. Transfer rate, 11Mbps with CCK technique and 54Mbps with OFDM technique, the worst case, were chosen for final test.
7. These antennas shall be tested in combination with 20 FT extention cable (LMR400) + surge_arrester (010997)+EUT. After pre-tested in chamber, the EUT + antenna is the worst case.

3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a 802.11b/g Cardbus. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC CFR 47 Part 15, Subpart C. (15.247)

ANSI C63.4 : 1992

All tests have been performed and recorded as per the above standards.

NOTE: The EUT is also considered as a kind of computer peripheral, because the connection to computer is necessary for typical use. It has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (DoC). The test report has been issued separately.



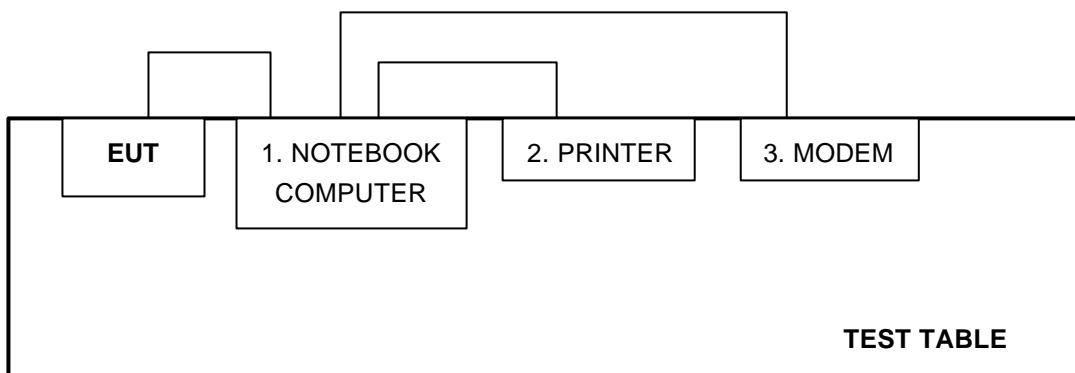
3.4 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

No.	Product	Brand	Model No.	Serial No.	FCC ID
1	NOTEBOOK COMPUTER	DELL	PP01L	TW-09C748-12800-17Q-C504	FCC DoC
2	PRINTER	HP	C2642A	MY7961C1M2	B94C2642X
3	MODEM	ACEEX	1414	0206026777	IFAXDM1414

No.	Signal cable description
1	NA
2	1.8m braid shielded wire, terminated with DB25 and Centronics connector via metallic frame, w/o core
3	1.0 m braid shielded wire, terminated with DB25 and DB9 connector via metallic frame, w/o core.

Note: 1. All power cords of the above support units are unshielded (1.8m).



NOTE: 1. Please refer to the photos of test configuration in Item 5 also.



4 TEST TYPES AND RESULTS

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dB μ V)	
	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. All emanations from a class B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

4.1.2 TEST INSTRUMENTS

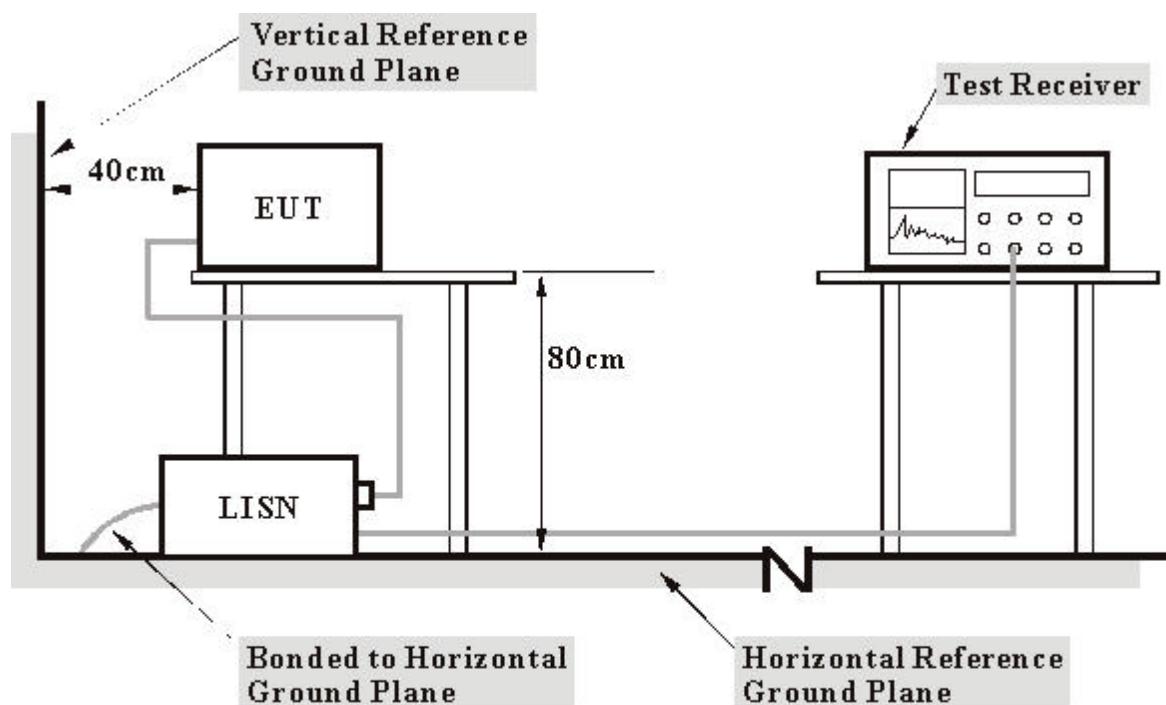
DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATION DATE
ROHDE & SCHWARZ Test Receiver	ESCS 30	847124/029	Nov. 17, 2003
ROHDE & SCHWARZ LISN (for EUT)	ESHS-Z5	848773/004	Nov. 13, 2003
KYORITSU LISN (for peripheral)	KNW-407	8/1395/12	Jul. 23, 2003
RF Cable (JETBAO)	RG233/U	Cable_CA_01	Jul. 03, 2003
Terminator(for KYORITSU)	50	#1	Apr. 11, 2004
Software	Cond-V2e	NA	NA

NOTE: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 2. The test was performed in ADT Shielded Room No. A.
 3. The VCCI Con A Registration No. is C-817.

3. TEST PROCEDURES

- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- c. The frequency range from 150 kHz to 30 MHz was searched. Emission levels over 10dB under the prescribed limits could not be reported

4.1.3 TEST SETUP



Note:

1. Support units were connected to second LISN.
2. Both of LISNs (AMIN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

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

4.1.4 EUT OPERATING CONDITIONS

- a. Connected the EUT to support unit 1 (Notebook Computer) and placed on a testing table.
- b. The Notebook Computer ran a test program (provided by manufacturer) to enable EUT under transmission condition continuously at specific channel frequency.

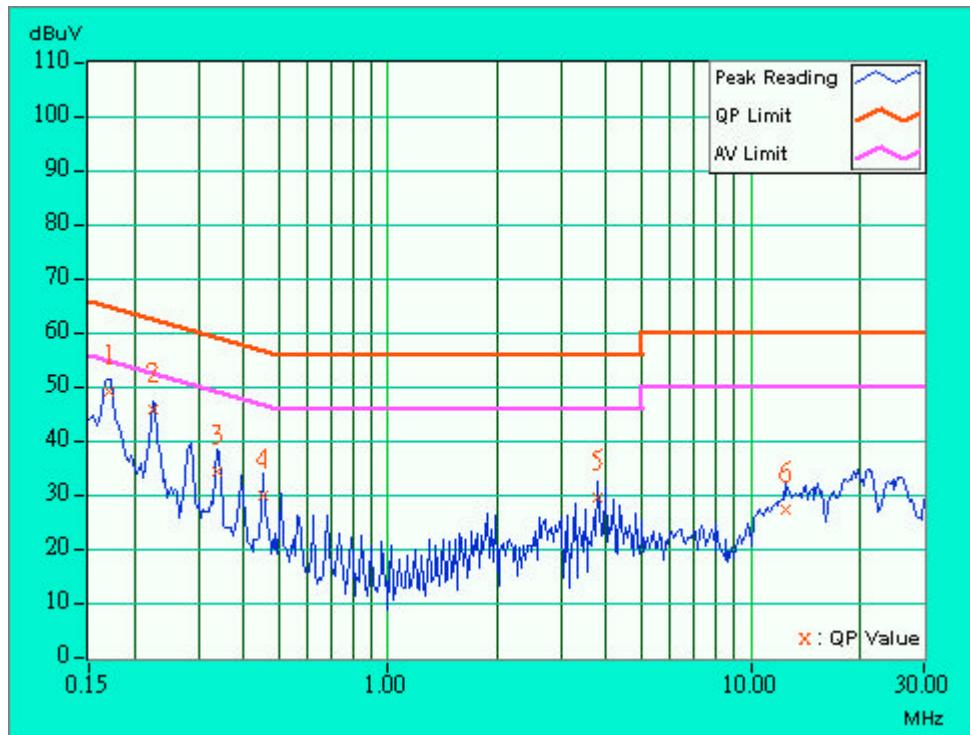
4.1.5 TEST RESULTS

EUT	802.11b/g Cardbus	MODEL	G11FNF-PC
MODE	Channel 1	6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	26 deg. C, 59%RH, 979 hPa	TESTED BY	Tony Chen

No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
			Factor	[dB (uV)]	[dB (uV)]	[dB (uV)]	(dB)	Q.P.	AV.	Q.P.
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.170	0.10	48.71	-	48.81	-	64.98	54.98	-16.17	-
2	0.224	0.10	45.06	-	45.16	-	62.66	52.66	-17.50	-
3	0.338	0.10	33.64	-	33.74	-	59.26	49.26	-25.52	-
4	0.455	0.10	29.40	-	29.50	-	56.79	46.79	-27.29	-
5	3.785	0.19	29.07	-	29.26	-	56.00	46.00	-26.74	-
6	12.435	0.70	26.73	-	27.43	-	60.00	50.00	-32.57	-

NOTES: (1) **: Undetectable

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

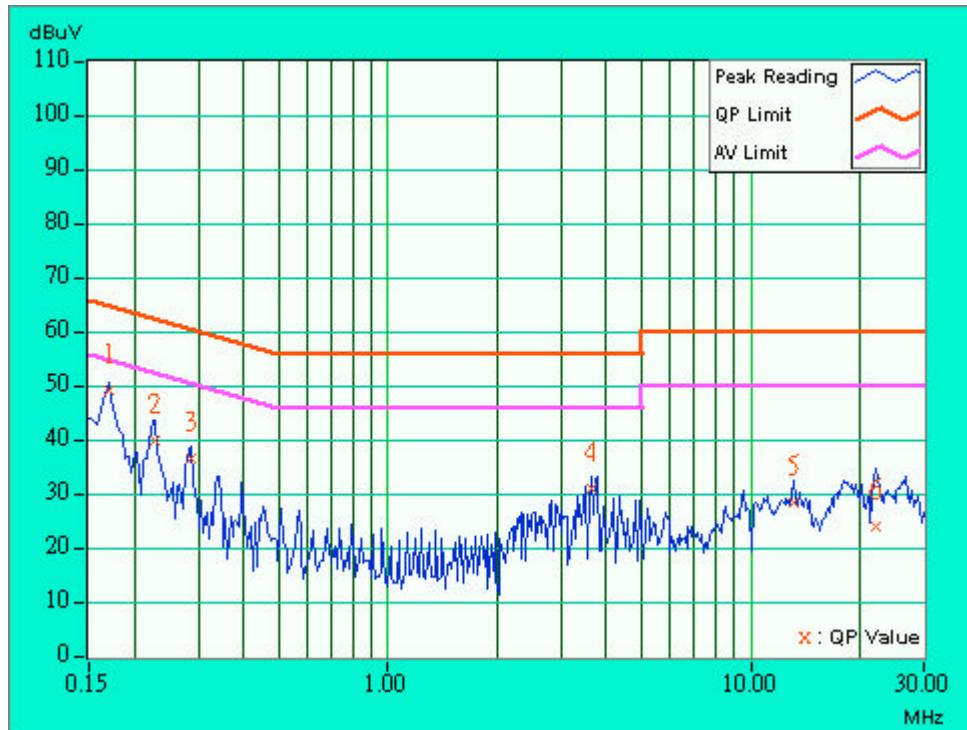


EUT	802.11b/g Cardbus	MODEL	G11FNF-PC
MODE	Channel 1	6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	26 deg. C, 59%RH, 979 hPa	TESTED BY	Tony Chen

No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin		
			Factor	[dB (uV)]	[dB (uV)]	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
				[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.170	0.10	0.10	48.53	-	48.63	-	64.98	54.98	-16.35	-
2	0.228	0.10	0.10	39.08	-	39.18	-	62.52	52.52	-23.34	-
3	0.287	0.10	0.10	35.78	-	35.88	-	60.62	50.62	-24.74	-
4	3.617	0.18	0.18	30.21	-	30.39	-	56.00	46.00	-25.61	-
5	13.188	0.56	0.56	27.62	-	28.18	-	60.00	50.00	-31.82	-
6	22.168	0.79	0.79	23.22	-	24.01	-	60.00	50.00	-35.99	-

NOTES: (1) "": Undetectable

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



EUT	802.11b/g Cardbus	MODEL	G11FNF-PC
MODE	Channel 6	6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	26 deg. C, 59%RH, 979 hPa	TESTED BY	Tony Chen

No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
			Factor	[dB (uV)]	[dB (uV)]		[dB (uV)]		(dB)	
					[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.
1	0.170	0.10	48.53	-	48.63	-	64.98	54.98	-16.35	-
2	0.224	0.10	40.59	-	40.69	-	62.66	52.66	-21.97	-
3	0.283	0.10	36.22	-	36.32	-	60.73	50.73	-24.41	-
4	0.338	0.10	32.05	-	32.15	-	59.26	49.26	-27.11	-
5	3.793	0.19	29.96	-	30.15	-	56.00	46.00	-25.85	-
6	12.063	0.68	23.89	-	24.57	-	60.00	50.00	-35.43	-

NOTES: (1) "": Undetectable

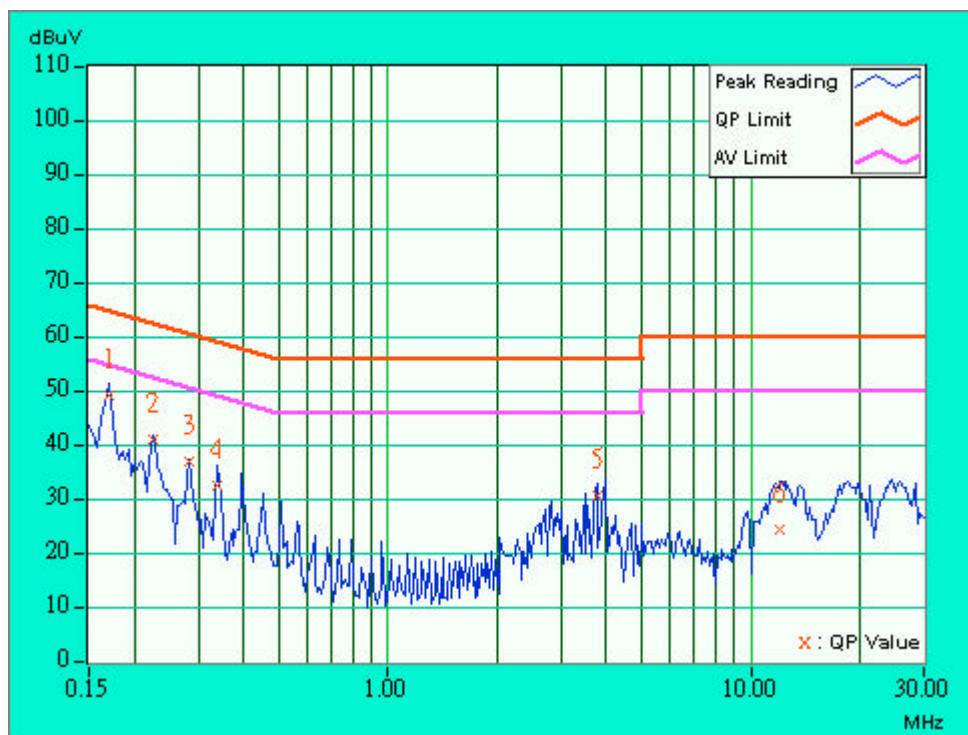
(2) Q.P. and AV. are abbreviations of quasi-peak and average.

(3) "-": The Quasi-peak reading value also meets an average limit, thus measurement with the average detector is unnecessary.

(4) The emission levels of other frequencies were very low against the limit.

(5) Correction Factor = Insertion loss + Cable loss

(6) Margin value = Emission level - Limit value

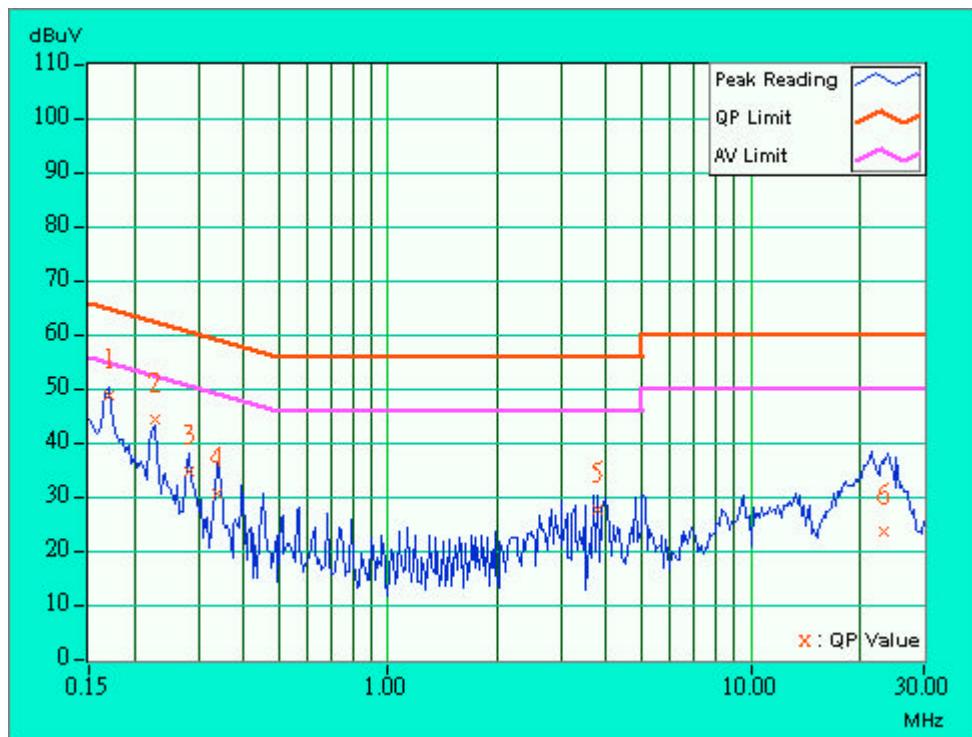


EUT	802.11b/g Cardbus	MODEL	G11FNF-PC
MODE	Channel 6	6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	26 deg. C, 59%RH, 979 hPa	TESTED BY	Tony Chen

No	Freq.	Corr.	Reading Value	Emission Level		Limit		Margin	
				Factor	[dB (uV)]	Q.P.	AV.	Q.P.	AV.
					[MHz]				
No	Freq.	Corr.	Reading Value	Factor	[dB (uV)]	Q.P.	AV.	Q.P.	AV.
1	0.170	0.10	47.91	-	48.01	-	64.98	54.98	-16.97
2	0.228	0.10	43.75	-	43.85	-	62.52	52.52	-18.67
3	0.283	0.10	34.00	-	34.10	-	60.73	50.73	-26.63
4	0.338	0.10	30.05	-	30.15	-	59.26	49.26	-29.11
5	3.785	0.19	27.00	-	27.19	-	56.00	46.00	-28.81
6	23.203	0.83	22.96	-	23.79	-	60.00	50.00	-36.21

NOTES: (1) "": Undetectable

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

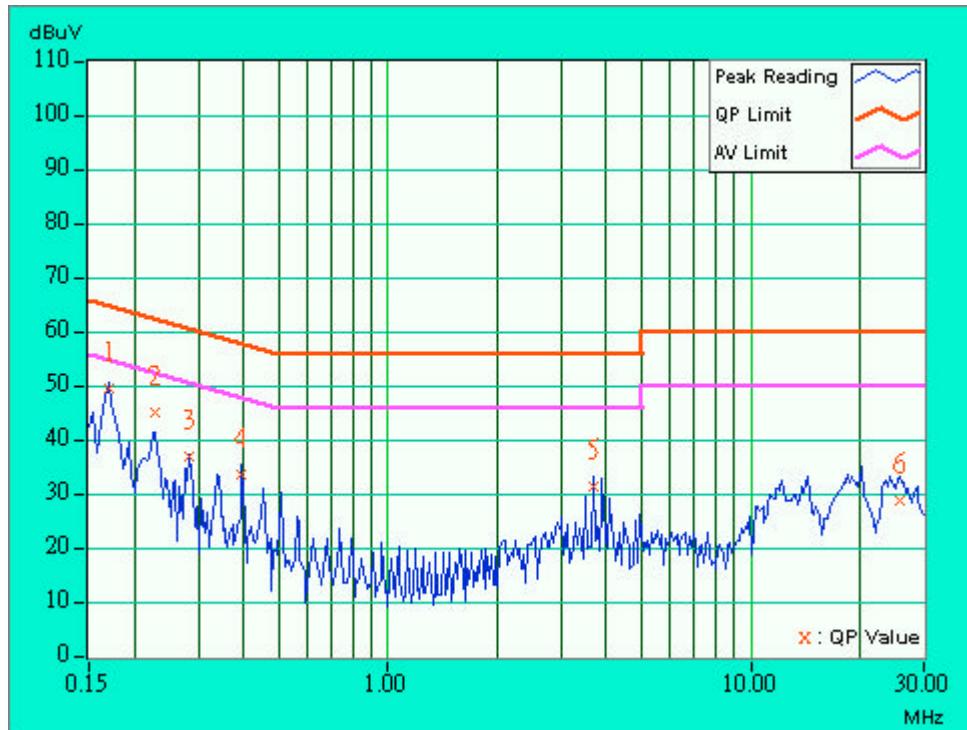


EUT	802.11b/g Cardbus	MODEL	G11FNF-PC
MODE	Channel 11	6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	26 deg. C, 59%RH, 979 hPa	TESTED BY	Tony Chen

No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin		
			Factor	[dB (uV)]	[dB (uV)]	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
				[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.170	0.10	0.10	48.31	-	48.41	-	64.98	54.98	-16.57	-
2	0.228	0.10	0.10	43.85	-	43.95	-	62.52	52.52	-18.57	-
3	0.283	0.10	0.10	36.00	-	36.10	-	60.73	50.73	-24.63	-
4	0.396	0.10	0.10	32.44	-	32.54	-	57.93	47.93	-25.39	-
5	3.676	0.18	0.18	30.19	-	30.37	-	56.00	46.00	-25.63	-
6	25.801	1.20	1.20	27.81	-	29.01	-	60.00	50.00	-30.99	-

NOTES: (1) "": Undetectable

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

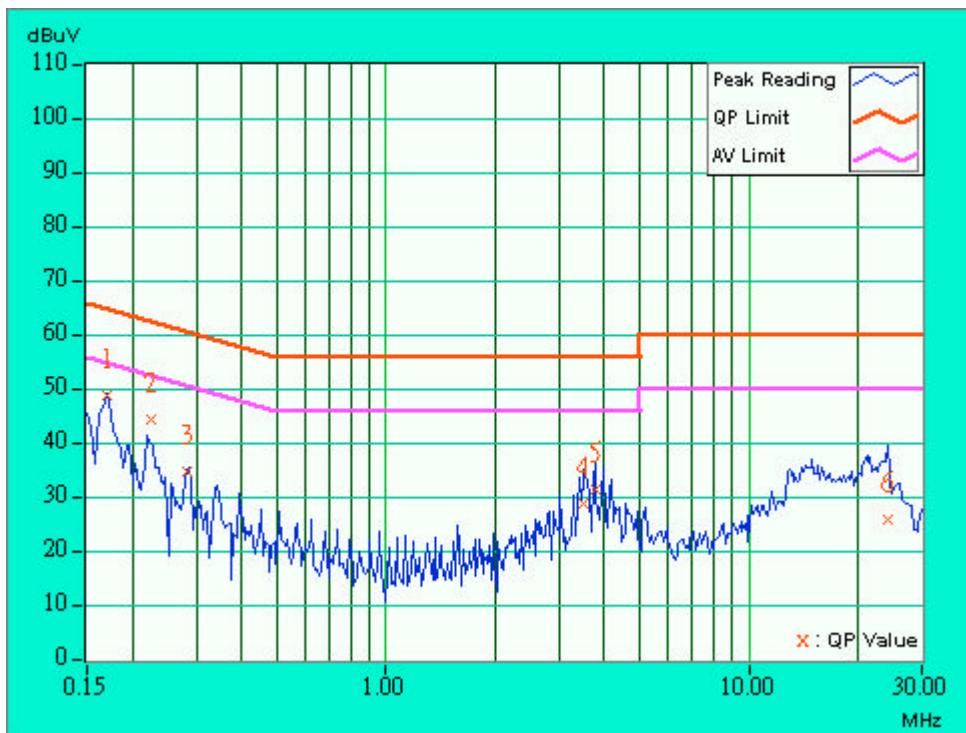


EUT	802.11b/g Cardbus	MODEL	G11FNF-PC
MODE	Channel 11	6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	26 deg. C, 59%RH, 979 hPa	TESTED BY	Tony Chen

No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin		
			Factor	[dB (uV)]	[dB (uV)]	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
				[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.170	0.10	0.10	47.86	-	47.96	-	64.98	54.98	-17.02	-
2	0.224	0.10	0.10	43.45	-	43.55	-	62.66	52.66	-19.11	-
3	0.283	0.10	0.10	33.94	-	34.04	-	60.73	50.73	-26.69	-
4	3.512	0.18	0.18	27.91	-	28.09	-	56.00	46.00	-27.91	-
5	3.791	0.19	0.19	30.57	-	30.76	-	56.00	46.00	-25.24	-
6	24.082	0.86	0.86	25.00	-	25.86	-	60.00	50.00	-34.14	-

NOTES: (1) "": Undetectable

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



4.2 RADIATED EMISSION MEASUREMENT

4.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

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

Frequencies (MHz)	Field Strength of Fundamental	
	uV/m	dBuV/m
30-88	100	40.0
88-216	150	43.5
216-960	200	46.0
Above 960	500	54.0

NOTE:

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

4.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
HP Spectrum Analyzer	8594ER	3829U04676	Jul. 14, 2003
ADVANTEST Spectrum Analyzer	R3271A	85060311	May 21, 2003
CHASE RF Pre_Amplifier	CPA9232	1057	Apr. 24, 2004
HP Pre_Amplifier	8449B	3008A01281	June 27, 2004
ROHDE & SCHWARZ Test Receiver	ESVS 10	849231 /019	Nov. 03, 2003
CHASE Broadband Antenna	CBL6111c	2730	Jul 17, 2003
Schwarzbeck Horn_Antenna	BBHA9120-D1	D123	Jul. 31, 2003
SCHWARZBECK Tunable Dipole Antenna	UHAP	897	Mar. 07, 2005
SCHWARZBECK Tunable Dipole Antenna	VHAP	880	Mar. 07, 2005
RF Switches (ARNITSU)	CS-201	1565157	Jul. 29, 2003
RF CABLE (Chaintek) 1GHz-20GHz	Ak 9515-D	001	Aug, 20.2003
RF Cable(RICHTEC)	9913-30M	STCCAB-30M- 1GHz-021	Nov. 5, 2003
Software	AS60P8	NA	NA
CHANCE MOST Antenna Tower	AT-100	0203	NA
CHANCE MOST Turn Table	TT-100	0203	NA

Note: 1. The calibration interval of the above test instruments is 12 months (36 months for Tunable Dipole Antenna)and the calibrations are traceable to NML/ROC and NIST/USA.

2. * = These equipment are used for the final measurement.
3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
4. The test was performed in ADT Open Site No. C.
5. The FCC Site Registration No. is 656396.
6. The VCCI Site Registration No. is R-1626.

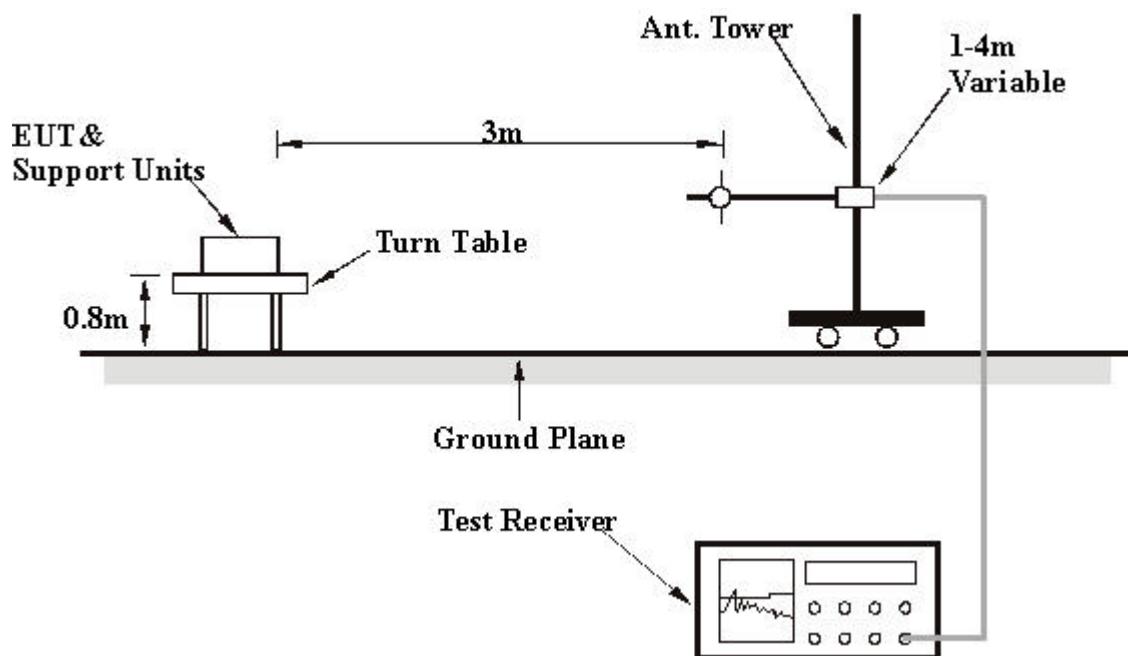
4.2.3 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 10 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10 dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10 dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

NOTE:

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

4.2.4 TEST SETUP



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

4.2.5 EUT OPERATING CONDITIONS

Same as 4.1.5.



4.2.6 TEST RESULTS (A)

EUT	802.11b/g Cardbus	MODEL	G11FNF-PC
MODE	Channel 11	FREQUENCY RANGE	30-1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	20 deg. C, 84 % RH, 979 hPa	TESTED BY	Eric Lee

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	67.25	22.8 QP	40.00	-17.20	1.14 H	8	17.10	5.70
2	132.10	27.8 QP	43.50	-15.70	1.54 H	360	15.90	11.90
3	138.10	33.8 QP	43.50	-9.70	1.09 H	181	22.00	11.80
4	224.09	31.2 QP	46.00	-14.80	1.55 H	24	21.30	9.90
5	249.65	29.5 QP	46.00	-16.50	1.26 H	264	16.30	13.20
6	352.02	39.0 QP	46.00	-7.00	1.24 H	60	23.40	15.60
7	384.02	28.5 QP	46.00	-17.50	1.43 H	335	12.00	16.50
8	480.03	31.7 QP	46.00	-14.30	1.63 H	119	12.80	18.90
9	492.00	32.0 QP	46.00	-14.00	1.74 H	199	12.90	19.10
10	544.00	34.9 QP	46.00	-11.10	1.35 H	159	13.90	21.00

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	67.74	30.2 QP	40.00	-9.80	1.49 V	97	24.50	5.70
2	138.00	25.7 QP	43.50	-17.80	1.24 V	192	13.90	11.80
3	200.00	36.3 QP	43.50	-7.20	1.43 V	295	27.30	9.00
4	224.62	26.7 QP	46.00	-19.30	1.54 V	111	16.70	10.00
5	250.00	26.1 QP	46.00	-19.90	1.11 V	54	12.90	13.20
6	350.00	29.8 QP	46.00	-16.20	1.52 V	229	14.20	15.60
7	384.00	22.5 QP	46.00	-23.50	1.04 V	113	6.00	16.50
8	480.00	36.0 QP	46.00	-10.00	1.25 V	91	17.10	18.90
9	492.00	30.1 QP	46.00	-15.90	1.57 V	41	11.00	19.10
10	512.05	32.8 QP	46.00	-13.20	1.08 V	275	13.40	19.40

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

4.2.7 TEST RESULTS (A) - DSSS

EUT	802.11b/g Cardbus	MODEL	G11FNF-PC
MODE	Channel 1	FREQUENCY RANGE	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average(AV)
ENVIRONMENTAL CONDITIONS	19 deg. C, 76%RH, 979 hPa	TESTED BY	Eric Lee

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	61.3 PK	74.00	-12.70	1.11 H	324	32.10	29.20
1	2390.00	47.9 AV	54.00	-6.10	1.11 H	324	18.70	29.20
2	*2412.00	98.8 PK			1.28 H	239	68.90	29.90
2	*2412.00	93.3 AV			1.28 H	239	63.40	29.90
3	2484.00	56.9 PK	74.00	-17.10	1.29 H	279	26.80	30.10
3	2484.00	44.2 AV	54.00	-9.80	1.29 H	279	14.10	30.10
4	4824.00	38.7 PK	74.00	-35.30	1.00 H	24	3.10	35.60

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	61.3 PK	74.00	-12.70	1.10 V	21	32.10	29.20
1	2390.00	49.0 AV	54.00	-5.00	1.10 V	21	19.80	29.20
2	*2412.00	97.0 PK			1.21 V	148	67.10	29.90
2	*2412.00	92.8 AV			1.21 V	148	62.90	29.90
3	2484.00	56.4 PK	74.00	-17.60	1.26 V	239	26.30	30.10
3	2484.00	45.1 AV	54.00	-8.90	1.26 V	239	15.00	30.10
4	4824.00	39.2 PK	74.00	-34.80	1.01 V	32	3.60	35.60

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



EUT	802.11b/g Cardbus	MODEL	G11FNF-PC
MODE	Channel 6	FREQUENCY RANGE	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	19 deg. C, 76%RH, 979 hPa	TESTED BY	Eric Lee

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	54.5 PK	74.00	-19.50	1.15 H	247	25.30	29.20
1	2390.00	43.3 AV	54.00	-10.70	1.15 H	247	14.10	29.20
2	2437.00	98.0 PK			1.24 H	51	68.00	30.00
2	2437.00	93.4 AV			1.24 H	51	63.40	30.00
3	2484.00	56.8 PK	74.00	-17.20	1.30 H	122	26.70	30.10
3	2484.00	44.4 AV	54.00	-9.60	1.30 H	122	14.30	30.10
4	4874.00	39.3 PK	74.00	-34.70	1.01 H	352	3.60	35.70

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	54.5 PK	74.00	-19.50	1.24 V	14	25.20	29.20
1	2390.00	44.5 AV	54.00	-9.50	1.24 V	14	15.20	29.20
2	2437.00	96.9 PK			1.20 V	150	66.90	30.00
2	2437.00	92.4 AV			1.20 V	150	62.40	30.00
3	2484.00	58.6 PK	74.00	-15.40	1.62 V	248	28.50	30.10
3	2484.00	46.4 AV	54.00	-7.60	1.62 V	248	16.20	30.10
4	4874.00	38.7 PK	74.00	-35.30	1.00 V	21	3.00	35.70

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



EUT	802.11b/g Cardbus	MODEL	G11FNF-PC
MODE	Channel 11	FREQUENCY RANGE	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	19 deg. C, 76%RH, 979 hPa	TESTED BY	Eric Lee

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	55.8 PK	74.00	-18.20	1.01 H	340	26.60	29.20
1	2390.00	43.7 AV	54.00	-10.30	1.01 H	340	14.50	29.20
2	2462.00	97.0 PK			1.30 H	298	66.90	30.10
2	2462.00	92.8 AV			1.30 H	298	62.70	30.10
3	2484.00	55.5 PK	74.00	-18.50	1.22 H	49	25.40	30.10
3	2484.00	49.8 AV	54.00	-4.20	1.22 H	49	19.70	30.10
4	4924.00	38.9 PK	74.00	-35.10	1.09 H	50	3.00	35.90

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	57.2 PK	74.00	-16.80	1.02 V	23	28.00	29.20
1	2390.00	45.5 AV	54.00	-8.50	1.02 V	23	16.20	29.20
2	2462.00	97.1 PK			1.25 V	146	67.00	30.10
2	2462.00	93.9 AV			1.25 V	146	63.80	30.10
3	2484.00	56.0 PK	74.00	-18.00	1.25 V	351	25.90	30.10
3	2484.00	48.1 AV	54.00	-5.90	1.25 V	351	18.00	30.10
4	4924.00	38.6 PK	74.00	-35.40	1.03 V	251	2.70	35.90

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



4.2.8 TEST RESULTS (A) -OFDM

EUT	802.11b/g Cardbus	MODEL	G11FNF-PC
MODE	Channel 1	FREQUENCY RANGE	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average(AV)
ENVIRONMENTAL CONDITIONS	19 deg. C, 76%RH, 979 hPa	TESTED BY	Eric Lee

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	59.7 PK	74.00	-14.30	1.09 H	309	30.50	29.20
1	2390.00	48.9 AV	54.00	-5.10	1.09 H	309	19.70	29.20
2	*2412.00	98.6 PK			1.04 H	203	68.70	29.90
2	*2412.00	90.6 AV			1.04 H	203	60.70	29.90
3	2484.00	55.5 PK	74.00	-18.50	1.24 H	41	25.40	30.10
3	2484.00	44.6 AV	54.00	-9.40	1.24 H	41	14.50	30.10
4	4824.00	38.6 PK	74.00	-35.40	1.25 H	41	3.00	35.60

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	58.3 PK	74.00	-15.70	1.01 V	199	29.00	29.20
1	2390.00	47.9 AV	54.00	-6.10	1.01 V	199	18.60	29.20
2	*2412.00	99.0 PK			1.00 V	204	69.10	29.90
2	*2412.00	90.8 AV			1.00 V	204	60.90	29.90
3	2484.00	58.4 PK	74.00	-15.60	1.42 V	241	28.20	30.10
3	2484.00	46.7 AV	54.00	-7.30	1.42 V	241	16.60	30.10
4	4824.00	38.5 PK	74.00	-35.50	1.24 V	315	2.90	35.60

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



EUT	802.11b/g Cardbus	MODEL	G11FNF-PC
MODE	Channel 6	FREQUENCY RANGE	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	19 deg. C, 76%RH, 979 hPa	TESTED BY	Eric Lee

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	2336.00	48.3 PK	74.00	-25.70	1.02 H	333	19.20	29.10
2	*2437.00	99.1 PK			1.01 H	300	69.10	30.00
2	*2437.00	91.0 AV			1.01 H	300	61.00	29.10
3	2496.00	52.2 PK	74.00	-21.80	1.09 H	279	22.40	29.80
3	2496.00	44.7 AV	54.00	-9.30	1.09 H	279	14.90	30.00
4	4874.00	40.8 PK	74.00	-33.20	1.00 H	24	5.10	35.70

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	57.6 PK	74.00	-16.40	1.02 V	218	28.40	29.20
1	2390.00	46.2 AV	54.00	-7.80	1.02 V	218	17.00	29.20
2	*2437.00	98.9 PK			1.00 V	130	68.90	30.00
2	*2437.00	90.3 AV			1.00 V	130	60.30	30.00
3	2484.00	58.2 PK	74.00	-15.80	1.03 V	247	28.10	30.10
3	2484.00	47.0 AV	54.00	-7.00	1.03 V	247	16.90	30.10
4	4874.00	40.7 PK	74.00	-33.30	1.21 V	20	5.00	35.70

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



EUT	802.11b/g Cardbus	MODEL	G11FN-PC
MODE	Channel 11	FREQUENCY RANGE	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	19 deg. C, 76%RH, 979 hPa	TESTED BY	Eric Lee

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	55.5 PK	74.00	-18.50	1.01 H	360	26.20	29.20
1	2390.00	43.8 AV	54.00	-10.20	1.01 H	360	14.50	29.20
2	*2462.00	98.9 PK			1.09 H	351	68.80	30.10
2	*2462.00	90.3 AV			1.09 H	351	60.20	30.10
3	2496.00	59.6 PK	74.00	-14.40	1.06 H	302	29.80	29.80
3	2496.00	48.7 AV	54.00	-5.30	1.06 H	302	18.90	29.80
4	4924.00	40.7 PK	74.00	-33.30	1.11 H	23	4.80	35.90

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	58.2 PK	74.00	-15.80	1.04 V	245	28.90	29.20
1	2390.00	45.5 AV	54.00	-8.50	1.04 V	245	16.20	29.20
2	*2462.00	99.1 PK			1.01 V	123	69.00	30.10
2	*2462.00	90.2 AV			1.01 V	123	60.10	30.10
3	2484.00	60.7 PK	74.00	-13.30	1.21 V	352	30.60	30.10
3	2484.00	48.7 AV	54.00	-5.30	1.21 V	352	18.60	30.10
4	4924.00	40.8 PK	74.00	-33.20	1.09 V	301	4.90	35.90

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



4.2.9 TEST RESULTS (B)

EUT	802.11b/g Cardbus	MODEL	G11FNF-PC
MODE	Channel 10	FREQUENCY RANGE	30-1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	20 deg. C, 84 % RH, 979 hPa	TESTED BY	Eric Lee

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	68.00	27.2 QP	40.00	-12.80	1.50 H	39	-74.60	101.80
2	132.05	26.9 QP	43.50	-16.60	1.28 H	298	-74.90	101.80
3	138.01	35.2 QP	43.50	-8.30	1.47 H	57	-66.60	101.80
4	224.02	20.3 QP	46.00	-25.70	1.22 H	329	-81.50	101.80
5	249.50	30.1 QP	46.00	-15.90	1.54 H	24	-71.70	101.80
6	251.09	30.0 QP	46.00	-16.00	1.25 H	48	-71.80	101.80
7	384.03	29.1 QP	46.00	-16.90	1.00 H	0	-72.70	101.80
8	480.02	35.1 QP	46.00	-10.90	1.44 H	191	-66.70	101.80
9	491.06	32.1 QP	46.00	-13.90	1.57 H	297	-69.70	101.80
10	544.01	34.0 QP	46.00	-12.00	1.22 H	254	-67.80	101.80

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	66.24	30.2 QP	40.00	-9.80	1.00 V	24	-71.60	101.80
2	138.00	25.3 QP	43.50	-18.20	1.26 V	21	-76.50	101.80
3	200.00	35.2 QP	43.50	-8.30	1.03 V	224	-66.60	101.80
4	224.70	27.3 QP	46.00	-18.70	1.21 V	353	-74.50	101.80
5	249.10	26.1 QP	46.00	-19.90	1.05 V	249	-75.70	101.80
6	250.00	23.9 QP	46.00	-22.10	1.54 V	27	-77.90	101.80
7	350.08	30.4 QP	46.00	-15.60	1.24 V	33	-71.40	101.80
8	384.01	26.9 QP	46.00	-19.10	1.57 V	347	-74.90	101.80
9	480.01	36.1 QP	46.00	-9.90	1.24 V	21	-65.70	101.80
10	512.09	33.1 QP	46.00	-12.90	1.10 V	209	-68.70	101.80

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

4.2.10 TEST RESULTS (B) - DSSS

EUT	802.11b/g Cardbus	MODEL	G11FNF-PC
MODE	Channel 2	FREQUENCY RANGE	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average(AV)
ENVIRONMENTAL CONDITIONS	19 deg. C, 76%RH, 979 hPa	TESTED BY	Eric Lee

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	56.1 PK	74.00	-17.90	1.12 H	354	25.70	30.40
1	2390.00	46.4 AV	54.00	-7.60	1.12 H	354	16.00	30.40
2	*2417.00	99.5 PK			1.54 H	82	68.90	30.60
2	*2417.00	91.0 AV			1.54 H	82	60.40	30.60
3	2484.00	56.1 PK	74.00	-17.90	1.07 H	59	25.10	31.00
3	2484.00	45.6 AV	54.00	-8.40	1.07 H	59	14.70	31.00
4	4834.00	43.8 PK	74.00	-30.20	1.15 H	129	7.50	36.30

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	59.7 PK	74.00	-14.30	1.06 V	323	29.30	30.40
1	2390.00	48.4 AV	54.00	-5.60	1.06 V	323	18.00	30.40
2	*2417.00	110.9 PK			1.01 V	148	80.30	30.60
2	*2417.00	99.8 AV			1.01 V	148	69.20	30.60
3	2484.00	57.9 PK	74.00	-16.10	1.45 V	239	26.90	31.00
3	2484.00	46.2 AV	54.00	-7.80	1.45 V	239	15.20	31.00
4	4834.00	44.5 PK	74.00	-29.50	1.32 V	51	8.20	36.30

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



EUT	802.11b/g Cardbus	MODEL	G11FNF-PC
MODE	Channel 6	FREQUENCY RANGE	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	19 deg. C, 76%RH, 979 hPa	TESTED BY	Eric Lee

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	56.0 PK	74.00	-18.00	1.12 H	303	25.60	30.40
1	2390.00	45.4 AV	54.00	-8.60	1.12 H	303	15.00	30.40
2	*2437.00	100.6 PK			1.59 H	127	69.90	30.70
2	*2437.00	92.6 AV			1.59 H	127	61.90	30.70
3	2484.00	57.3 PK	74.00	-16.70	1.02 H	47	26.30	31.00
3	2484.00	45.8 AV	54.00	-8.20	1.02 H	47	14.90	31.00
4	4874.00	46.3 PK	74.00	-27.70	1.23 H	64	9.80	36.50

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	57.0 PK	74.00	-17.00	1.33 V	25	26.60	30.40
1	2390.00	46.4 AV	54.00	-7.60	1.33 V	25	16.00	30.40
2	*2437.00	111.9 PK			1.03 V	50	81.20	30.70
2	*2437.00	99.0 AV			1.03 V	50	68.30	30.70
3	2484.00	57.8 PK	74.00	-16.20	1.54 V	159	26.80	31.00
3	2484.00	47.7 AV	54.00	-6.30	1.54 V	159	16.70	31.00
4	4874.00	45.4 PK	74.00	-28.60	1.36 V	63	8.90	36.50

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



EUT	802.11b/g Cardbus	MODEL	G11FNF-PC
MODE	Channel 10	FREQUENCY RANGE	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	19 deg. C, 76%RH, 979 hPa	TESTED BY	Eric Lee

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	55.0 PK	74.00	-19.00	1.00 H	2	24.60	30.40
1	2390.00	46.2 AV	54.00	-7.80	1.00 H	2	15.80	30.40
2	*2457.00	99.4 PK			1.50 H	39	68.60	30.80
2	*2457.00	92.6 AV			1.50 H	39	61.80	30.80
3	2484.00	57.0 PK	74.00	-17.00	1.62 H	36	26.00	31.00
3	2484.00	47.3 AV	54.00	-6.70	1.62 H	36	16.30	31.00
4	4914.00	45.4 PK	74.00	-28.60	1.34 H	68	8.80	36.60

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	55.7 PK	74.00	-18.30	1.50 V	24	25.30	30.40
1	2390.00	46.5 AV	54.00	-7.50	1.50 V	24	16.10	30.40
2	*2457.00	111.2 PK			1.68 V	72	80.30	30.80
2	*2457.00	99.8 AV			1.68 V	72	69.00	30.80
3	2484.00	59.2 PK	74.00	-14.80	1.72 V	223	28.20	31.00
3	2484.00	50.8 AV	54.00	-3.20	1.72 V	223	19.80	31.00
4	4914.00	45.5 PK	74.00	-28.50	1.26 V	84	8.90	36.60

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

4.2.11 TEST RESULTS (B) -OFDM

EUT	802.11b/g Cardbus	MODEL	G11FNF-PC
MODE	Channel 2	FREQUENCY RANGE	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average(AV)
ENVIRONMENTAL CONDITIONS	19 deg. C, 76%RH, 979 hPa	TESTED BY	Eric Lee

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	58.7 PK	74.00	-15.30	1.29 H	332	28.30	30.40
1	2390.00	48.2 AV	54.00	-5.80	1.29 H	332	17.80	30.40
2	*2417.00	97.0 PK			1.24 H	184	66.50	30.60
2	*2417.00	87.5 AV			1.24 H	184	56.90	30.60
3	2484.00	56.1 PK	74.00	-17.90	1.03 H	237	25.10	31.00
3	2484.00	45.2 AV	54.00	-8.80	1.03 H	237	14.20	31.00
4	4834.00	43.5 PK	74.00	-30.50	1.30 H	300	7.20	36.30

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	62.2 PK	74.00	-11.80	1.09 V	247	31.80	30.40
1	2390.00	51.2 AV	54.00	-2.80	1.09 V	247	20.80	30.40
2	*2417.00	106.9 PK			1.01 V	150	76.30	30.60
2	*2417.00	95.8 AV			1.01 V	150	65.20	30.60
3	2484.00	57.9 PK	74.00	-16.10	1.24 V	328	27.00	31.00
3	2484.00	46.2 AV	54.00	-7.80	1.24 V	328	15.20	31.00
4	4834.00	44.6 PK	74.00	-29.40	1.39 V	359	8.30	36.30

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



EUT	802.11b/g Cardbus	MODEL	G11FNF-PC
MODE	Channel 6	FREQUENCY RANGE	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	19 deg. C, 76%RH, 979 hPa	TESTED BY	Eric Lee

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	54.5 PK	74.00	-19.50	1.00 H	277	24.10	30.40
1	2390.00	44.6 AV	54.00	-9.40	1.00 H	277	14.20	30.40
2	*2437.00	96.0 PK			1.39 H	263	65.40	30.70
2	*2437.00	87.0 AV			1.39 H	263	56.30	30.70
3	2484.00	56.3 PK	74.00	-17.70	1.35 H	142	25.30	31.00
3	2484.00	45.2 AV	54.00	-8.80	1.35 H	142	14.20	31.00
4	4874.00	44.4 PK	74.00	-29.60	1.12 H	2	7.90	36.50

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	56.8 PK	74.00	-17.20	1.00 V	17	26.30	30.40
1	2390.00	45.7 AV	54.00	-8.30	1.00 V	17	15.20	30.40
2	*2437.00	107.6 PK			1.00 V	136	76.90	30.70
2	*2437.00	97.6 AV			1.00 V	136	66.90	30.70
3	2484.00	47.8 PK	74.00	-26.20	1.43 V	269	16.90	31.00
4	4874.00	45.7 PK	74.00	-28.30	1.53 V	342	9.20	36.50

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



EUT	802.11b/g Cardbus	MODEL	G11FNF-PC
MODE	Channel 10	FREQUENCY RANGE	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	19 deg. C, 76%RH, 979 hPa	TESTED BY	Eric Lee

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	55.4 PK	74.00	-18.60	1.03 H	57	25.00	30.40
1	2390.00	44.7 AV	54.00	-9.30	1.03 H	57	14.20	30.40
2	*2457.00	96.0 PK			1.52 H	112	65.20	30.80
2	*2457.00	87.2 AV			1.52 H	112	56.40	30.80
3	2484.00	61.2 PK	74.00	-12.80	1.11 H	267	30.20	31.00
3	2484.00	49.6 AV	54.00	-4.40	1.11 H	267	18.70	31.00
4	4914.00	43.9 PK	74.00	-30.10	1.09 H	38	7.30	36.60

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	56.1 PK	74.00	-17.90	1.04 V	79	25.70	30.40
1	2390.00	45.7 AV	54.00	-8.30	1.04 V	79	15.20	30.40
2	*2457.00	108.6 PK			1.03 V	139	77.80	30.80
2	*2457.00	96.9 AV			1.03 V	139	66.10	30.80
3	2484.00	64.6 PK	74.00	-9.40	1.03 V	240	33.70	31.00
3	2484.00	51.8 AV	54.00	-2.20	1.03 V	240	20.80	31.00
4	4914.00	45.5 PK	74.00	-28.50	1.61 V	49	8.90	36.60

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



4.2.12 TEST RESULTS (C)

EUT	802.11b/g Cardbus	MODEL	G11FNF-PC
MODE	Channel 11	FREQUENCY RANGE	30-1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	20 deg. C, 84 % RH, 979 hPa	TESTED BY	Eric Lee

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	66.85	30.4 QP	40.00	-9.60	1.42 H	92	24.80	5.60
2	132.03	25.1 QP	43.50	-18.40	1.23 H	0	13.20	11.90
3	137.75	33.1 QP	43.50	-10.40	1.51 H	235	21.30	11.80
4	224.01	29.9 QP	46.00	-16.10	1.48 H	214	19.90	9.90
5	249.65	29.5 QP	46.00	-16.50	1.26 H	264	16.30	13.20
6	351.99	34.7 QP	46.00	-11.30	1.12 H	292	19.10	15.60
7	384.02	28.5 QP	46.00	-17.50	1.43 H	335	12.00	16.50
8	480.00	34.3 QP	46.00	-11.70	1.87 H	25	15.40	18.90
9	491.59	30.7 QP	46.00	-15.30	1.77 H	191	11.60	19.10
10	544.02	33.8 QP	46.00	-12.20	1.22 H	238	12.80	21.00

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	60.40	25.9 QP	40.00	-14.10	1.00 V	67	20.60	5.30
2	137.75	24.7 QP	43.50	-18.80	1.27 V	192	12.90	11.80
3	199.24	35.2 QP	43.50	-8.30	1.03 V	264	26.10	9.00
4	224.69	25.3 QP	46.00	-20.70	1.62 V	230	15.30	10.00
5	249.40	24.5 QP	46.00	-21.50	1.26 V	38	11.40	13.10
6	251.96	29.0 QP	46.00	-17.00	1.15 V	197	15.50	13.50
7	350.23	29.3 QP	46.00	-16.70	1.44 V	224	13.70	15.60
8	384.01	22.0 QP	46.00	-24.00	1.58 V	239	5.50	16.50
9	480.01	35.3 QP	46.00	-10.70	1.28 V	91	16.30	18.90
10	512.05	32.1 QP	46.00	-13.90	1.06 V	125	12.70	19.40

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

4.2.13 TEST RESULTS (C) - DSSS

EUT	802.11b/g Cardbus	MODEL	G11FN-PC
MODE	Channel 1	FREQUENCY RANGE	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average(AV)
ENVIRONMENTAL CONDITIONS	19 deg. C, 76%RH, 979 hPa	TESTED BY	Eric Lee

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	62.8 PK	74.00	-11.20	1.62 H	269	33.60	29.20
1	2390.00	49.3 AV	54.00	-4.70	1.62 H	269	20.10	29.20
2	*2412.00	102.8 PK			1.24 H	257	72.90	29.90
2	*2412.00	95.3 AV			1.24 H	257	65.40	29.90
3	2484.00	55.2 PK	74.00	-18.80	1.02 H	2	25.10	30.10
3	2484.00	44.3 AV	54.00	-9.70	1.02 H	2	14.20	30.10
4	4824.00	42.0 PK	74.00	-32.00	1.13 H	103	6.40	35.60

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	65.1 PK	74.00	-8.90	1.13 V	103	35.90	29.20
1	2390.00	50.5 AV	54.00	-3.50	1.13 V	103	21.30	29.20
2	*2412.00	105.9 PK			1.05 V	147	76.00	29.90
2	*2412.00	95.8 AV			1.05 V	147	65.90	29.90
3	2484.00	56.1 PK	74.00	-17.90	1.02 V	47	25.90	30.10
3	2484.00	45.4 AV	54.00	-8.60	1.02 V	47	15.20	30.10
4	4824.00	42.5 PK	74.00	-31.50	1.34 V	51	6.90	35.60

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



EUT	802.11b/g Cardbus	MODEL	G11FNF-PC
MODE	Channel 6	FREQUENCY RANGE	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	19 deg. C, 76%RH, 979 hPa	TESTED BY	Eric Lee

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	54.4 PK	74.00	-19.60	1.36 H	328	25.10	29.20
1	2390.00	44.5 AV	54.00	-9.50	1.36 H	328	15.20	29.20
2	*2437.00	106.1 PK			1.30 H	160	76.10	30.00
2	*2437.00	97.9 AV			1.30 H	160	67.90	30.00
3	2484.00	54.4 PK	74.00	-19.60	1.21 H	13	24.30	30.10
3	2484.00	45.0 AV	54.00	-9.00	1.21 H	13	14.90	30.10
4	4874.00	43.3 PK	74.00	-30.70	1.62 H	321	7.60	35.70

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	55.8 PK	74.00	-18.20	1.32 V	187	26.60	29.20
1	2390.00	45.4 AV	54.00	-8.60	1.32 V	187	16.20	29.20
2	*2437.00	106.1 PK			1.03 V	154	76.10	30.00
2	*2437.00	96.5 AV			1.03 V	154	66.50	30.00
3	2484.00	57.5 PK	74.00	-16.50	1.57 V	49	27.30	30.10
3	2484.00	46.4 AV	54.00	-7.60	1.57 V	49	16.20	30.10
4	4874.00	39.8 PK	74.00	-34.20	1.06 V	112	4.10	35.70

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



EUT	802.11b/g Cardbus	MODEL	G11FNF-PC
MODE	Channel 11	FREQUENCY RANGE	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	19 deg. C, 76%RH, 979 hPa	TESTED BY	Eric Lee

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	54.3 PK	74.00	-19.70	1.03 H	2	25.10	29.20
1	2390.00	44.1 AV	54.00	-9.90	1.03 H	2	14.90	29.20
2	*2462.00	106.2 PK			1.24 H	150	76.10	30.10
2	*2462.00	96.5 AV			1.24 H	150	66.40	30.10
3	2484.00	61.3 PK	74.00	-12.70	1.00 H	251	31.20	30.10
3	2484.00	48.4 AV	54.00	-5.60	1.00 H	251	18.30	30.10
4	4924.00	38.3 PK	74.00	-35.70	1.63 H	325	2.40	35.90

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	58.2 PK	74.00	-15.80	1.40 V	222	29.00	29.20
1	2390.00	45.8 AV	54.00	-8.20	1.40 V	222	16.60	29.20
2	*2462.00	107.2 PK			1.00 V	20	77.10	30.10
2	*2462.00	97.0 AV			1.00 V	20	66.90	30.10
3	2484.00	60.1 PK	74.00	-13.90	1.00 V	247	30.00	30.10
3	2484.00	49.5 AV	54.00	-4.50	1.00 V	247	19.40	30.10
4	4924.00	39.0 PK	74.00	-35.00	1.25 V	41	3.10	35.90

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

4.2.14 TEST RESULTS (C) -OFDM

EUT	802.11b/g Cardbus	MODEL	G11FNF-PC
MODE	Channel 1	FREQUENCY RANGE	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average(AV)
ENVIRONMENTAL CONDITIONS	19 deg. C, 76%RH, 979 hPa	TESTED BY	Eric Lee

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	64.3 PK	74.00	-9.70	1.64 H	298	35.10	29.20
1	2390.00	52.1 AV	54.00	-1.90	1.64 H	298	22.90	29.20
2	*2412.00	101.1 PK			1.22 H	154	71.20	29.90
2	*2412.00	93.4 AV			1.22 H	154	63.50	29.90
3	2484.00	55.7 PK	74.00	-18.30	1.02 H	47	25.60	30.10
3	2484.00	45.0 AV	54.00	-9.00	1.02 H	47	14.90	30.10
4	4824.00	41.5 PK	74.00	-32.50	1.33 H	301	5.90	35.60

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	64.2 PK	74.00	-9.80	1.29 V	264	35.00	29.20
1	2390.00	52.1 AV	54.00	-1.90	1.29 V	264	22.90	29.20
2	*2412.00	102.9 PK			1.01 V	148	73.00	29.90
2	*2412.00	93.8 AV			1.01 V	148	63.90	29.90
3	2484.00	56.7 PK	74.00	-17.30	1.57 V	41	26.60	30.10
3	2484.00	45.4 AV	54.00	-8.60	1.57 V	41	15.20	30.10
4	4824.00	41.5 PK	74.00	-32.50	1.33 V	301	5.90	35.60

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



EUT	802.11b/g Cardbus	MODEL	G11FNF-PC
MODE	Channel 6	FREQUENCY RANGE	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	19 deg. C, 76%RH, 979 hPa	TESTED BY	Eric Lee

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	55.7 PK	74.00	-18.30	1.28 H	264	26.50	29.20
1	2390.00	43.0 AV	54.00	-11.00	1.28 H	264	13.80	29.20
2	*2437.00	102.7 PK			1.33 H	168	72.70	30.00
2	*2437.00	94.0 AV			1.33 H	168	64.00	30.00
3	2484.00	55.2 PK	74.00	-18.80	1.25 H	320	25.10	30.10
3	2484.00	44.1 AV	54.00	-9.90	1.25 H	320	14.00	30.10
4	4874.00	41.6 PK	74.00	-32.40	1.55 H	247	5.90	35.70

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	54.4 PK	74.00	-19.60	1.30 V	272	25.20	29.20
1	2390.00	42.1 AV	54.00	-11.90	1.30 V	272	12.90	29.20
2	*2437.00	103.3 PK			1.01 V	136	73.30	30.00
2	*2437.00	94.1 AV			1.01 V	136	64.10	30.00
3	2484.00	58.6 PK	74.00	-15.40	1.57 V	254	28.50	30.10
3	2484.00	46.7 AV	54.00	-7.30	1.57 V	254	16.60	30.10
4	4874.00	42.0 PK	74.00	-32.00	1.39 V	100	6.30	35.70

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



EUT	802.11b/g Cardbus	MODEL	G11FNF-PC
MODE	Channel 11	FREQUENCY RANGE	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	19 deg. C, 76%RH, 979 hPa	TESTED BY	Eric Lee

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	58.4 PK	74.00	-15.60	1.65 H	298	29.20	29.20
1	2390.00	44.1 AV	54.00	-9.90	1.65 H	298	14.90	29.20
2	*2462.00	104.0 PK			1.23 H	190	74.00	30.10
2	*2462.00	93.3 AV			1.23 H	190	63.20	30.10
3	2484.00	66.1 PK	74.00	-7.90	1.44 H	10	36.00	30.10
3	2484.00	52.5 AV	54.00	-1.50	1.44 H	10	22.40	30.10
4	4924.00	41.8 PK	74.00	-32.20	1.62 H	247	5.90	35.90

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	56.1 PK	74.00	-17.90	1.32 V	288	26.90	29.20
1	2390.00	43.1 AV	54.00	-10.90	1.32 V	288	13.90	29.20
2	*2462.00	104.0 PK			1.01 V	129	74.00	30.10
2	*2462.00	93.1 AV			1.01 V	129	63.00	30.10
3	2484.00	64.5 PK	74.00	-9.50	1.01 V	158	34.40	30.10
3	2484.00	52.2 AV	54.00	-1.80	1.01 V	158	22.10	30.10
4	4924.00	41.3 PK	74.00	-32.70	1.28 V	54	5.40	35.90

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



4.3 6dB BANDWIDTH MEASUREMENT

4.3.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

4.3.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSP	1093.4495.30	Dec. 19, 2003

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.

4.3.3 TEST PROCEDURE

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

4.3.4 TEST SETUP



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

4.3.5 EUT OPERATING CONDITIONS

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

FCC ID: HZB-G11FNFPC

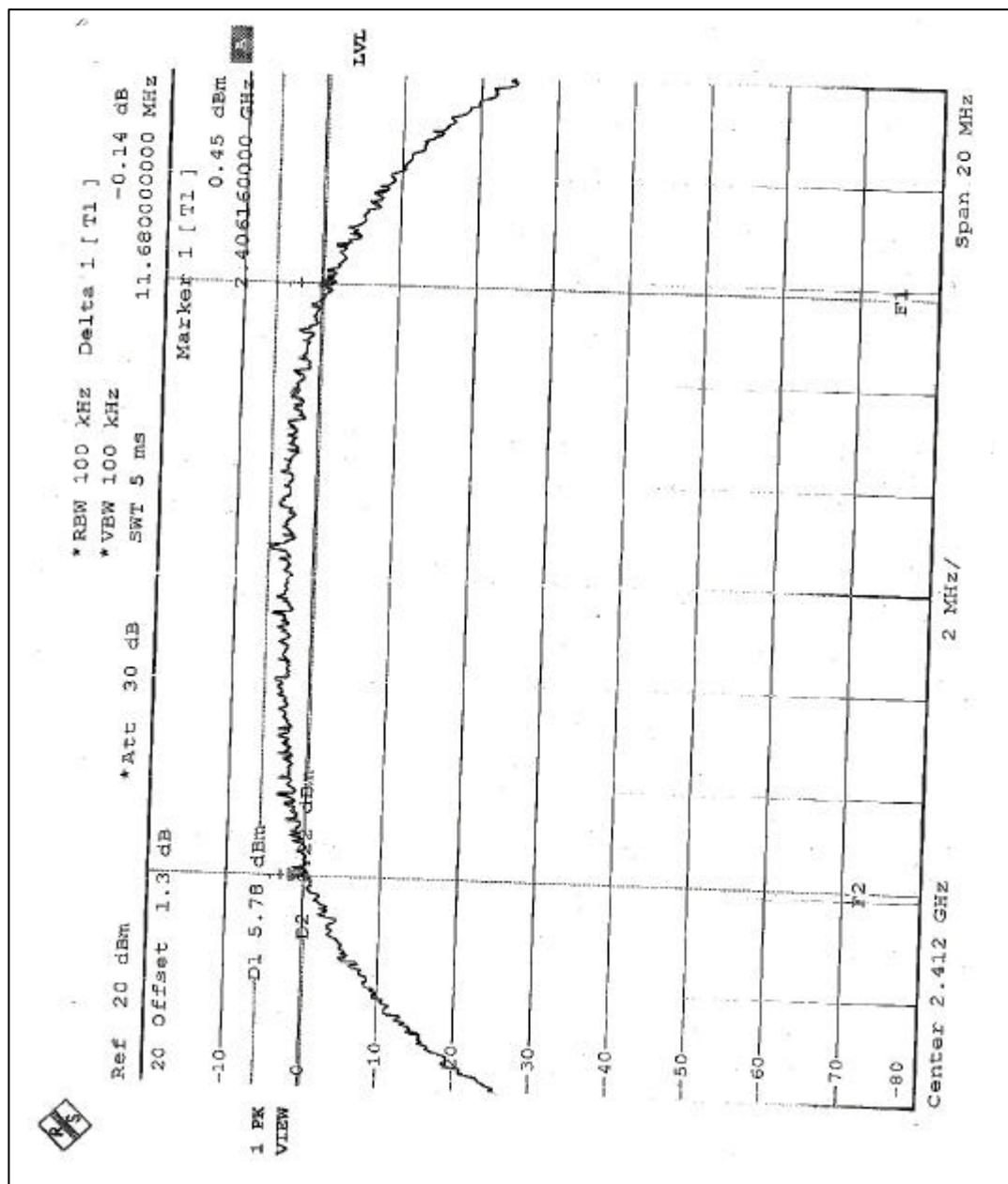


4.3.6 TEST RESULTS-DSSS

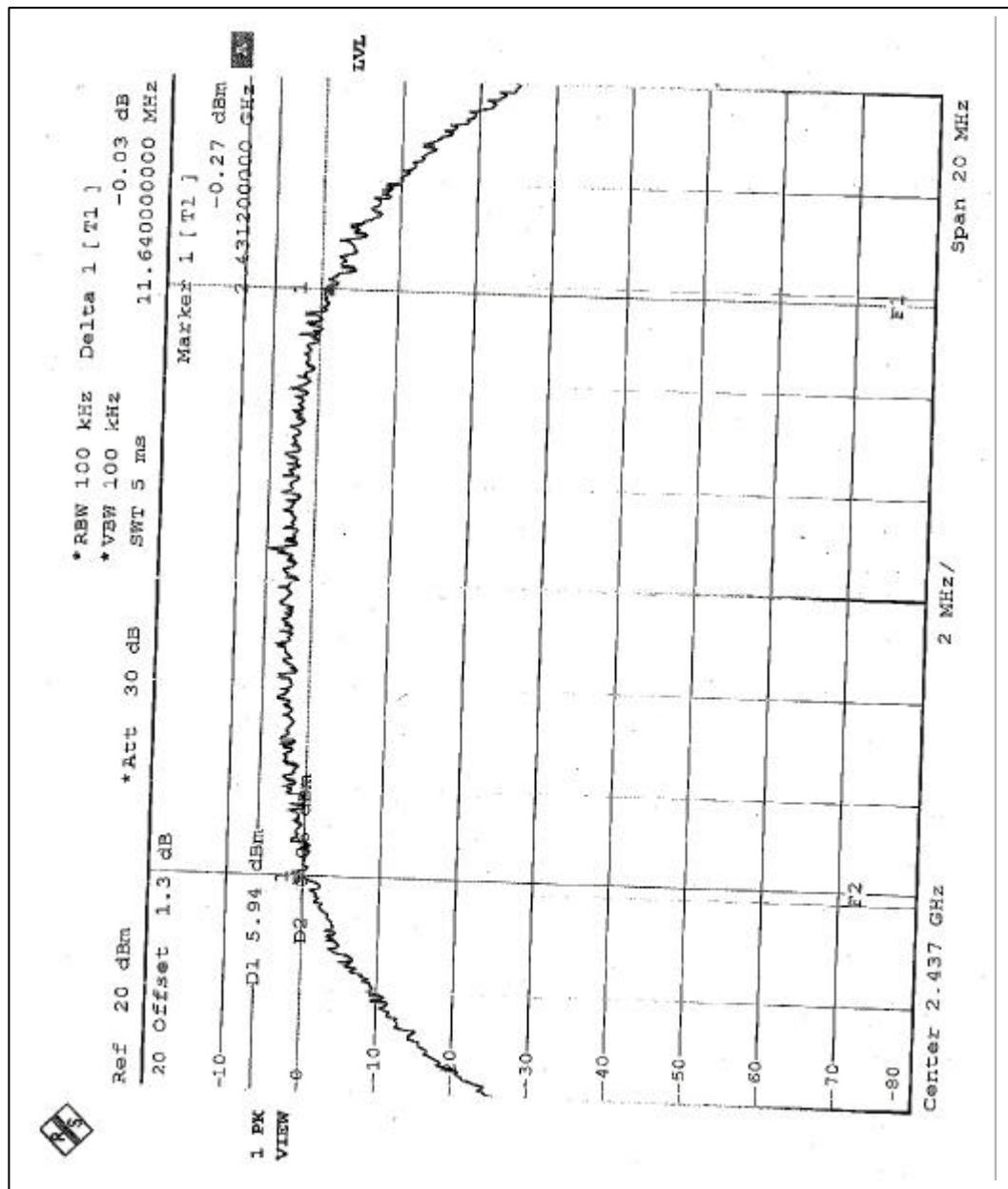
EUT	802.11b/g Cardbus	MODEL	G11FNF-PC
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	21 deg. C, 62 %RH, 979 hPa
TEST MODE	Antenna 1 & 3	TESTED BY	Hunk Chung

CHANNEL	CHANNEL FREQUENCY (MHz)	6 dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	11.68	0.5	PASS
6	2437	11.64	0.5	PASS
11	2462	11.88	0.5	PASS

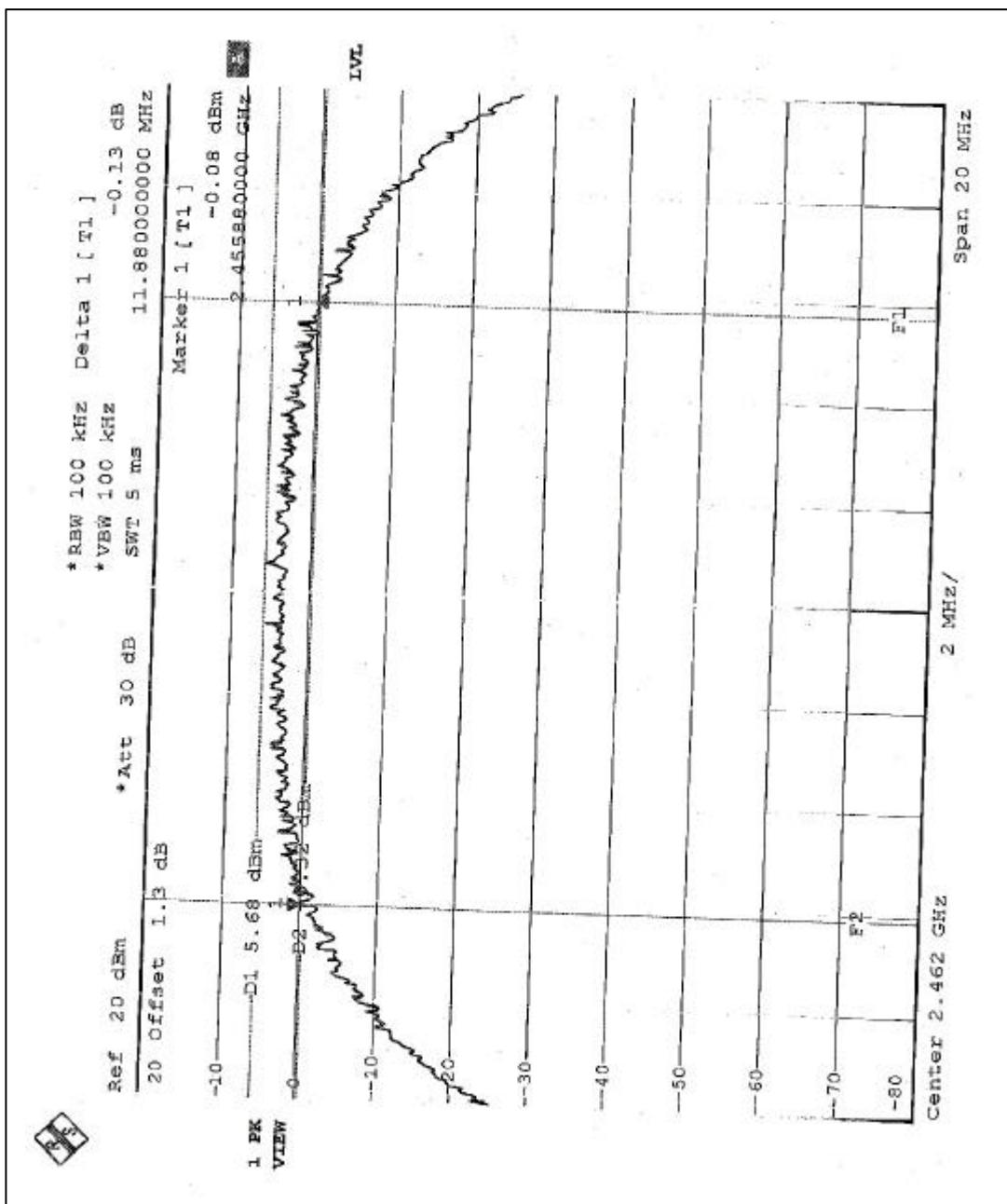
CH1



CH6



CH11



FCC ID: HZB-G11FNFPC



EUT	802.11b/g Cardbus	MODEL	G11FNF-PC
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	21 deg. C, 62 %RH, 979 hPa
TEST MODE	Antenna 2	TESTED BY	Hunk Chung

CHANNEL	CHANNEL FREQUENCY (MHz)	6 dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
2	2417	11.68	0.5	PASS
6	2437	11.64	0.5	PASS
10	2457	12.08	0.5	PASS

CH2

