

DATA OF RADIATION TEST

UL Apex Co., Ltd. Head Office EMC Lab.
No.2 Semi Anechoic Chamber
Report No. : 24BE0174-H0

Applicant : Brother
Kind of Equipment : Wireless LAN Card
Model No. : NC-7100
Serial No. :
Power : AC120V/60Hz
Mode : 2462MHz IEEE802.11g 54Mbps
Remarks : In-Antenna
Date : 11/16/2003
Test Distance : 3 m
Temperature : 23 °C
Humidity : 60 %
Regulation : FCC Part15C § 15.209(a)

Engineer : Naoki Sakamoto

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS		MARGIN	
			HOR [dB μV]	VER [dB μV]					HOR [dB μV/m]	VER [dB μV/m]	HOR [dB]	VER [dB]		
1.	66.80	BB	38.0	39.5	5.9	23.6	1.0	6.0	27.3	28.8	40.0	12.7	11.2	
2.	100.12	BB	37.9	34.3	8.4	23.3	1.2	6.0	30.2	26.6	43.5	13.3	16.9	
3.	133.83	BB	38.6	32.0	13.9	23.3	1.5	6.0	36.7	30.1	43.5	6.8	13.4	
4.	167.09	BB	30.6	26.8	15.2	23.2	1.7	6.0	30.3	26.5	43.5	13.2	17.0	
5.	200.48	BB	39.8	31.9	16.2	23.3	1.9	6.0	40.6	32.7	43.5	2.9	10.8	
6.	233.95	BB	39.7	29.2	16.7	23.0	2.1	6.0	41.5	31.0	46.0	4.5	15.0	
7.	267.30	BB	40.9	29.5	17.9	23.1	2.2	6.0	43.9	32.5	46.0	2.1	13.5	
8.	300.60	BB	42.8	37.5	14.4	23.2	2.3	6.0	42.3	37.0	46.0	3.7	9.0	
9.	367.30	BB	39.6	31.7	16.4	23.1	2.6	6.1	41.6	33.7	46.0	4.4	12.3	
10.	399.99	BB	40.9	32.4	17.3	23.2	2.7	6.2	43.9	35.4	46.0	2.1	10.6	
11.	500.00	BB	32.7	28.1	18.2	23.0	3.1	6.2	37.2	32.6	46.0	8.8	13.4	
12.	601.38	BB	38.1	31.1	19.6	23.2	3.1	6.1	43.7	36.7	46.0	2.3	9.3	
13.	902.50	BB	29.5	21.6	21.3	23.0	4.4	6.1	38.3	30.4	46.0	7.7	15.6	

CALCULATION: READING + ANT. FACTOR + CABLE LOSS - AMP. GAIN + ATTEN.

All other spurious emissions were less than 20dB for the limit.
ANT. TYPE:30-300MHz:Biconical, 300-1000MHz:Logperiodic, 1GHz:Horn

Out of Band Radiated Emission : 1-25GHz

DATA OF SPURIOUS EMISSIONS(1GHz to 25GHz)

UL Apex Co., Ltd.
EMC HEAD OFFICE DIVISON No.2 SEMI ANECHOIC CHAMBER

COMPANY : Brother REPORT NO : 24BE0174-HO-1
EQUIPMENT : Wireless LAN Card REGULATION : Fcc Part15 Subpart C 15.247(c)
MODEL : NC-7100 TEST DISTANCE : 3m(1 to 10GHz) and 1 m(10 to 25GHz)
S/N : BR1-009 DATE : 2003/12/05
POWER : AC120V/60Hz TEMPERATURE : 22°C
MODE : Tx 2412MHz(802.11b 11MHz) HUMIDITY : 39%
Remarks : Ext Antenna
Engineer : Naoki Sakamoto

PK DETECT : RBW 1MHz VBW 1MHz

No.	FREQ [MHz]	T/R READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	High-Pass or Atten [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + High Pass(Atten).												
1	1401.8	45.5	48.3	24.3	37.3	5.0	10.0	47.5	50.3	74.0	26.5	23.7
2	1909.0	46.3	47.8	30.7	36.9	5.7	10.0	55.8	57.3	74.0	18.2	16.7
3	2261.0	48.0	48.0	30.7	36.9	6.0	10.0	57.8	57.8	74.0	16.2	16.2
4	2390.0	47.7	48.1	30.5	36.9	6.3	10.0	57.6	58.0	74.0	16.4	16.0
5	2687.9	47.7	50.3	30.7	36.9	6.4	10.0	57.9	60.5	74.0	16.1	13.5
6	4824.0	46.0	52.8	35.7	36.8	8.9	1.0	54.8	61.6	74.0	19.2	12.4
7	7236.0	44.0	44.1	37.7	36.5	11.0	0.5	56.7	56.8	74.0	17.3	17.2
8	9648.0	43.9	44.2	37.2	37.2	12.9	0.5	57.3	57.6	74.0	16.7	16.4
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + High Pass - Dfac												
9	12060.0	44.3	44.8	40.3	36.8	14.4	0.5	53.2	53.7	74.0	20.8	20.3
10	14472.0	43.8	44.5	43.0	35.3	15.7	0.6	58.3	59.0	74.0	15.7	15.0
11	16884.0	43.9	44.0	44.7	36.4	17.3	0.4	60.4	60.5	74.0	13.6	13.5
12	19296.0	44.5	44.7	40.8	35.9	18.6	0.9	59.4	59.6	74.0	14.6	14.4
13	21708.0	44.3	43.9	40.5	36.6	19.7	0.6	59.0	58.6	74.0	15.0	15.4
14	24120.0	44.4	44.6	40.2	36.5	20.9	1.7	61.2	61.4	74.0	12.8	12.6

AV DETECT : RBW1MHz VBW10Hz

No.	FREQ [MHz]	T/R READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	High-Pass or Atten [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + High Pass(Atten).												
1	1401.8	34.0	34.4	24.3	37.3	5.0	10.0	36.0	36.4	54.0	18.0	17.6
2	1909.0	33.5	33.7	30.7	36.9	5.7	10.0	43.0	43.2	54.0	11.0	10.8
3	2260.1	35.8	38.1	30.7	36.9	6.0	10.0	45.6	47.9	54.0	8.4	6.1
4	2390.0	33.5	39.3	30.5	36.9	6.3	10.0	43.4	49.2	54.0	10.6	4.8
5	2687.9	40.4	40.5	30.7	36.9	6.4	10.0	50.6	50.7	54.0	3.4	3.3
6	4824.0	33.6	39.1	35.7	36.8	8.9	1.0	42.4	47.9	54.0	11.6	6.1
7	7236.0	32.3	32.4	37.7	36.5	11.0	0.5	45.0	45.1	54.0	9.0	8.9
8	9648.0	32.1	32.2	37.2	37.2	12.9	0.5	45.5	45.6	54.0	8.5	8.4
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + High Pass - Dfac												
9	12060.0	32.2	32.1	40.3	36.8	14.4	0.5	41.1	41.0	54.0	12.9	13.0
10	14472.0	32.4	32.3	43.0	35.3	15.7	0.6	46.9	46.8	54.0	7.1	7.2
11	16884.0	33.0	32.2	44.7	36.4	17.3	0.4	49.5	48.7	54.0	4.5	5.3
12	19296.0	33.4	32.3	40.8	35.9	18.6	0.9	48.3	47.2	54.0	5.7	6.8
13	21708.0	33.6	32.8	40.5	36.6	19.7	0.6	48.3	47.5	54.0	5.7	6.5
14	24120.0	33.7	33.0	40.2	36.5	20.9	1.7	50.5	49.8	54.0	3.5	4.2

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.5 dB
Atten : 1GHz to 3.5GHz
High Pass Filter : 3.5GHz to 25GHz(3.5GHz Pass)
*Except for the above table : All other spurious emissions were less than 20dB for the limit.

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DATA OF SPURIOUS EMISSIONS(1GHz to 25GHz)

UL Apex Co., Ltd.
EMC HEAD OFFICE DIVISON No.2 SEMI ANECHOIC CHAMBER

COMPANY : Brother REPORT NO : 24BE0174-HO-1
EQUIPMENT : Wireless LAN Card REGULATION : Fcc Part15 Subpart C 15.247(c)
MODEL : NC-7100 TEST DISTANCE : 3m(1 to 10GHz) and 1 m(10 to 25GHz)
S/N : BR1-009 DATE : 2003/12/05
POWER : AC120V/60Hz TEMPERATURE : 22℃
MODE : Tx 2437MHz(802.11b 11M) HUMIDITY : 39%
Remarks : Ext Antenna

Engineer : Naoki Sakamoto

PK DETECT : RBW 1MHz VBW 1MHz

No.	FREQ [MHz]	T/R READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	High-Pass or Atten [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + High Pass(Atten).												
1	1402.0	47.0	47.8	24.3	37.3	5.0	10.0	49.0	49.8	74.0	25.0	24.2
2	1909.0	44.4	46.0	30.7	36.9	5.7	10.0	53.9	55.5	74.0	20.1	18.5
3	2266.7	45.0	49.1	30.7	36.9	6.0	10.0	54.8	58.9	74.0	19.2	15.1
4	2687.9	47.2	48.9	30.7	36.9	6.4	10.0	57.4	59.1	74.0	16.6	14.9
5	4874.0	53.8	54.3	36.0	36.8	9.0	1.0	63.0	63.5	74.0	11.0	10.5
6	7311.0	44.4	44.6	37.8	36.6	11.1	0.5	57.2	57.4	74.0	16.8	16.6
7	9748.0	43.8	43.6	36.9	37.2	13.0	0.5	57.0	56.8	74.0	17.0	17.2
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + High Pass - Dfac												
8	12185.0	44.6	44.2	41.0	36.7	14.3	0.5	54.2	53.8	74.0	19.8	20.2
9	14622.0	43.6	44.5	43.2	35.5	15.9	0.6	58.3	59.2	74.0	15.7	14.8
10	17059.0	44.2	44.4	44.8	36.2	17.8	0.4	61.5	61.7	74.0	12.5	12.3
11	19496.0	43.9	43.9	40.5	36.2	19.0	1.0	58.7	58.7	74.0	15.3	15.3
12	21933.0	43.9	44.4	40.6	36.0	19.6	0.9	59.5	60.0	74.0	14.5	14.0
13	24370.0	44.2	44.0	40.3	36.9	21.0	2.2	61.3	61.1	74.0	12.7	12.9

AV DETECT : RBW1MHz VBW10Hz

No.	FREQ [MHz]	T/R READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	High-Pass or Atten [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + High Pass(Atten).												
1	1402.0	34.5	34.5	24.3	37.3	5.0	10.0	36.5	36.5	54.0	17.5	17.5
2	1909.0	33.0	33.4	30.7	36.9	5.7	10.0	42.5	42.9	54.0	11.5	11.1
3	2266.7	32.5	40.0	30.7	36.9	6.0	10.0	42.3	49.8	54.0	11.7	4.2
4	2687.9	36.6	39.9	30.7	36.9	6.4	10.0	46.8	50.1	54.0	7.2	3.9
5	4874.0	40.6	40.7	36.0	36.8	9.0	1.0	49.8	49.9	54.0	4.2	4.1
6	7311.0	32.1	32.2	37.8	36.6	11.1	0.5	44.9	45.0	54.0	9.1	9.0
7	9748.0	32.0	32.0	36.9	37.2	13.0	0.5	45.2	45.2	54.0	8.8	8.8
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + High Pass - Dfac												
8	12185.0	32.5	32.2	41.0	36.7	14.3	0.5	42.1	41.8	54.0	11.9	12.2
9	14622.0	32.5	32.0	43.2	35.5	15.9	0.6	47.2	46.7	54.0	6.8	7.3
10	17059.0	33.2	32.6	44.8	36.2	17.8	0.4	50.5	49.9	54.0	3.5	4.1
11	19496.0	33.6	32.5	40.5	36.2	19.0	1.0	48.4	47.3	54.0	5.6	6.7
12	21933.0	33.7	32.8	40.6	36.0	19.6	0.9	49.3	48.4	54.0	4.7	5.6
13	24370.0	33.5	33.0	40.3	36.9	21.0	2.2	50.6	50.1	54.0	3.4	3.9

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.5 dB

Atten : 1GHz to 3.5GHz

High Pass Filter : 3.5GHz to 25GHz(3.5GHz Pass)

*Except for the above table : All other spurious emissions were less than 20dB for the limit.

DATA OF SPURIOUS EMISSIONS(1GHz to 25GHz)

UL Apex Co., Ltd.
EMC HEAD OFFICE DIVISON No.2 SEMI ANECHOIC CHAMBER

COMPANY : Brother
EQUIPMENT : Wireless LAN Card
MODEL : NC-7100
S/N : BR1-009
POWER : AC120V/60Hz
MODE : Tx 2462MHz(802.11b 11MHz)
Remarks : Ext Antenna

REPORT NO : 24BE0174-HO-1
REGULATION : Fcc Part15 Subpart C 15.247(c)
TEST DISTANCE : 3m(1 to 10GHz) and 1 m(10 to 25GHz)
DATE : 2003/12/05
TEMPERATURE : 22℃
HUMIDITY : 39%

Engineer : Naoki Sakamoto

PK DETECT : RBW 1MHz VBW 1MHz

No.	FREQ [MHz]	T/R READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	High-Pass or Atten [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + High Pass(Atten).												
1	1401.8	46.6	47.0	24.3	37.3	5.0	10.0	48.6	49.0	74.0	25.4	25.0
2	1909.0	43.7	45.7	30.7	36.9	5.7	10.0	53.2	55.2	74.0	20.8	18.8
3	2258.0	44.7	50.2	30.7	36.9	6.0	10.0	54.5	60.0	74.0	19.5	14.0
4	2483.9	44.6	49.7	30.7	36.9	6.3	10.0	54.7	59.8	74.0	19.3	14.2
5	2687.9	46.4	50.0	30.7	36.9	6.4	10.0	56.6	60.2	74.0	17.4	13.8
6	4924.0	56.0	57.4	36.3	36.8	9.0	1.0	65.5	66.9	74.0	8.5	7.1
7	7386.0	43.3	43.5	37.9	36.6	11.1	0.5	56.2	56.4	74.0	17.8	17.6
8	9848.0	43.1	42.8	36.6	37.3	13.1	0.5	56.0	55.7	74.0	18.0	18.3
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + High Pass - Dfac												
9	12310.0	43.6	43.2	41.6	36.6	14.6	0.5	54.2	53.8	74.0	19.8	20.2
10	14772.0	42.8	43.5	43.3	35.6	15.9	0.6	57.5	58.2	74.0	16.5	15.8
11	17234.0	43.7	43.6	45.2	36.2	17.5	0.3	61.0	60.9	74.0	13.0	13.1
12	19696.0	43.8	44.0	40.6	36.0	18.8	1.3	59.0	59.2	74.0	15.0	14.8
13	22158.0	44.3	44.2	40.6	35.7	19.9	1.4	61.0	60.9	74.0	13.0	13.1
14	24620.0	44.1	44.2	40.4	36.9	21.1	2.6	61.8	61.9	74.0	12.2	12.1

AV DETECT : RBW1MHz VBW10Hz

No.	FREQ [MHz]	T/R READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	High-Pass or Atten [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + High Pass(Atten).												
1	1401.8	34.8	34.7	24.3	37.3	5.0	10.0	36.8	36.7	54.0	17.2	17.3
2	1909.0	32.8	33.3	30.7	36.9	5.7	10.0	42.3	42.8	54.0	11.7	11.2
3	2258.0	32.8	39.8	30.7	36.9	6.0	10.0	42.6	49.6	54.0	11.4	4.4
4	2483.9	33.2	38.9	30.7	36.9	6.3	10.0	43.3	49.0	54.0	10.7	5.0
5	2687.9	37.0	41.3	30.7	36.9	6.4	10.0	47.2	51.5	54.0	6.8	2.5
6	4924.0	41.0	42.0	36.3	36.8	9.0	1.0	50.5	51.5	54.0	3.5	2.5
7	7386.0	31.9	32.0	37.9	36.6	11.1	0.5	44.8	44.9	54.0	9.2	9.1
8	9848.0	31.9	32.1	36.6	37.3	13.1	0.5	44.8	45.0	54.0	9.2	9.0
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + High Pass - Dfac												
9	12310.0	32.4	32.2	41.6	36.6	14.6	0.5	43.0	42.8	54.0	11.0	11.2
10	14772.0	32.6	31.7	43.3	35.6	15.9	0.6	47.3	46.4	54.0	6.7	7.6
11	17234.0	33.3	32.4	45.2	36.2	17.5	0.3	50.6	49.7	54.0	3.4	4.3
12	19696.0	33.5	32.6	40.6	36.0	18.8	1.3	48.7	47.8	54.0	5.3	6.2
13	22158.0	33.6	32.6	40.6	35.7	19.9	1.4	50.3	49.3	54.0	3.7	4.7
14	24620.0	33.3	33.1	40.4	36.9	21.1	2.6	51.0	50.8	54.0	3.0	3.2

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.5 dB
Atten : 1GHz to 3.5GHz
High Pass Filter : 3.5GHz to 25GHz(3.5GHz Pass)

*Except for the above table : All other spurious emissions were less than 20dB for the limit.

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HUMIDITY : 39%

Engineer : Naoki Sakamoto

PK DETECT : RBW 1MHz VBW 1MHz

No.	FREQ [MHz]	T/R READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	High-Pass or Atten [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + High Pass(Atten).												
1	1401.8	47.0	47.2	24.3	37.3	5.0	10.0	49.0	49.2	74.0	25.0	24.8
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5	2687.9	47.1	50.0	30.7	36.9	6.4	10.0	57.3	60.2	74.0	16.7	13.8
6	4824.0	41.3	42.2	35.7	36.8	8.9	1.0	50.1	51.0	74.0	23.9	23.0
7	7236.0	43.2	43.7	37.7	36.5	11.0	0.5	55.9	56.4	74.0	18.1	17.6
8	9648.0	43.4	43.3	37.2	37.2	12.9	0.5	56.8	56.7	74.0	17.2	17.3
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + High Pass - Dfac												
9	12060.0	43.7	43.3	40.3	36.8	14.4	0.5	52.6	52.2	74.0	21.4	21.8
10	14472.0	43.5	43.7	43.0	35.3	15.7	0.6	58.0	58.2	74.0	16.0	15.8
11	16884.0	44.0	43.4	44.7	36.4	17.3	0.4	60.5	59.9	74.0	13.5	14.1
12	19296.0	44.1	44.4	40.8	35.9	18.6	0.9	59.0	59.3	74.0	15.0	14.7
13	21708.0	44.2	44.1	40.5	36.6	19.7	0.6	58.9	58.8	74.0	15.1	15.2
14	24120.0	44.4	44.3	40.2	36.5	20.9	1.7	61.2	61.1	74.0	12.8	12.9

AV DETECT : RBW1MHz VBW10Hz

No.	FREQ [MHz]	T/R READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	High-Pass or Atten [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + High Pass(Atten).												
1	1401.8	34.6	34.9	24.3	37.3	5.0	10.0	36.6	36.9	54.0	17.4	17.1
2	1909.0	33.0	33.7	30.7	36.9	5.7	10.0	42.5	43.2	54.0	11.5	10.8
3	2260.1	33.3	39.5	30.7	36.9	6.0	10.0	43.1	49.3	54.0	10.9	4.7
4	2390.0	34.1	39.7	30.5	36.9	6.3	10.0	44.0	49.6	54.0	10.0	4.4
5	2687.9	38.0	40.9	30.7	36.9	6.4	10.0	48.2	51.1	54.0	5.8	2.9
6	4824.0	31.0	31.0	35.7	36.8	8.9	1.0	39.8	39.8	54.0	14.2	14.2
7	7236.0	32.3	32.2	37.7	36.5	11.0	0.5	45.0	44.9	54.0	9.0	9.1
8	9648.0	32.2	32.0	37.2	37.2	12.9	0.5	45.6	45.4	54.0	8.4	8.6
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + High Pass - Dfac												
9	12060.0	32.5	33.0	40.3	36.8	14.4	0.5	41.4	41.9	54.0	12.6	12.1
10	14472.0	32.3	32.3	43.0	35.3	15.7	0.6	46.8	46.8	54.0	7.2	7.2
11	16884.0	32.9	32.5	44.7	36.4	17.3	0.4	49.4	49.0	54.0	4.6	5.0
12	19296.0	33.0	32.7	40.8	35.9	18.6	0.9	47.9	47.6	54.0	6.1	6.4
13	21708.0	33.3	33.0	40.5	36.6	19.7	0.6	48.0	47.7	54.0	6.0	6.3
14	24120.0	33.2	33.2	40.2	36.5	20.9	1.7	50.0	50.0	54.0	4.0	4.0

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.5 dB

Atten : 1GHz to 3.5GHz

High Pass Filter : 3.5GHz to 25GHz(3.5GHz Pass)

*Except for the above table : All other spurious emissions were less than 20dB for the limit.

DATA OF SPURIOUS EMISSIONS(1GHz to 25GHz)

UL Apex Co., Ltd.
EMC HEAD OFFICE DIVISON No.2 SEMI ANECHOIC CHAMBER

COMPANY : Brother
EQUIPMENT : Wireless LAN Card
MODEL : NC-7100
S/N : BR1-009
POWER : AC120V/60Hz
MODE : Tx 2437MHz(802.11g 36MHz)
Remarks : Ext Antenna

REPORT NO : 24BE0174-HO-1
REGULATION : Fcc Part15 Subpart C 15.247(c)
TEST DISTANCE : 3m(1 to 10GHz) and 1 m(10 to 25GHz)
DATE : 2003/12/05
TEMPERATURE : 22℃
HUMIDITY : 39%

Engineer : Naoki Sakamoto

PK DETECT : RBW 1MHz VBW 1MHz

No.	FREQ [MHz]	T/R READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	High-Pass or Atten [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + High Pass(Atten).												
1	1402.0	46.4	46.8	24.3	37.3	5.0	10.0	48.4	48.8	74.0	25.6	25.2
2	1909.0	44.0	46.0	30.7	36.9	5.7	10.0	53.5	55.5	74.0	20.5	18.5
3	2266.7	44.9	50.7	30.7	36.9	6.0	10.0	54.7	60.5	74.0	19.3	13.5
4	2687.9	46.9	50.5	30.7	36.9	6.4	10.0	57.1	60.7	74.0	16.9	13.3
5	4874.0	43.0	41.9	36.0	36.8	9.0	1.0	52.2	51.1	74.0	21.8	22.9
6	7311.0	43.5	43.6	37.8	36.6	11.1	0.5	56.3	56.4	74.0	17.7	17.6
7	9748.0	43.4	43.3	36.9	37.2	13.0	0.5	56.6	56.5	74.0	17.4	17.5
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + High Pass - Dfac												
8	12185.0	44.0	43.8	41.0	36.7	14.3	0.5	53.6	53.4	74.0	20.4	20.6
9	14622.0	43.7	43.7	43.2	35.5	15.9	0.6	58.4	58.4	74.0	15.6	15.6
10	17059.0	43.6	43.9	44.8	36.2	17.8	0.4	60.9	61.2	74.0	13.1	12.8
11	19496.0	44.0	44.4	40.5	36.2	19.0	1.0	58.8	59.2	74.0	15.2	14.8
12	21933.0	44.5	44.1	40.6	36.0	19.6	0.9	60.1	59.7	74.0	13.9	14.3
13	24370.0	44.3	44.4	40.3	36.9	21.0	2.2	61.4	61.5	74.0	12.6	12.5

AV DETECT : RBW1MHz VBW10Hz

No.	FREQ [MHz]	T/R READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	High-Pass or Atten [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + High Pass(Atten).												
1	1402.0	34.9	34.8	24.3	37.3	5.0	10.0	36.9	36.8	54.0	17.1	17.2
2	1909.0	33.3	33.5	30.7	36.9	5.7	10.0	42.8	43.0	54.0	11.2	11.0
3	2266.7	34.0	40.2	30.7	36.9	6.0	10.0	43.8	50.0	54.0	10.2	4.0
4	2687.9	37.1	41.1	30.7	36.9	6.4	10.0	47.3	51.3	54.0	6.7	2.7
5	4874.0	31.3	31.0	36.0	36.8	9.0	1.0	40.5	40.2	54.0	13.5	13.8
6	7311.0	32.0	32.3	37.8	36.6	11.1	0.5	44.8	45.1	54.0	9.2	8.9
7	9748.0	32.2	32.2	36.9	37.2	13.0	0.5	45.4	45.4	54.0	8.6	8.6
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + High Pass - Dfac												
8	12185.0	32.5	33.0	41.0	36.7	14.3	0.5	42.1	42.6	54.0	11.9	11.4
9	14622.0	32.7	32.3	43.2	35.5	15.9	0.6	47.4	47.0	54.0	6.6	7.0
10	17059.0	33.0	32.7	44.8	36.2	17.8	0.4	50.3	50.0	54.0	3.7	4.0
11	19496.0	33.6	32.9	40.5	36.2	19.0	1.0	48.4	47.7	54.0	5.6	6.3
12	21933.0	33.5	32.8	40.6	36.0	19.6	0.9	49.1	48.4	54.0	4.9	5.6
13	24370.0	33.4	33.3	40.3	36.9	21.0	2.2	50.5	50.4	54.0	3.5	3.6

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.5 dB

Atten : 1GHz to 3.5GHz

High Pass Filter : 3.5GHz to 25GHz(3.5GHz Pass)

*Except for the above table : All other spurious emissions were less than 20dB for the limit.

DATA OF SPURIOUS EMISSIONS(1GHz to 25GHz)

UL Apex Co., Ltd.
EMC HEAD OFFICE DIVISON No.2 SEMI ANECHOIC CHAMBER

COMPANY : Brother
EQUIPMENT : Wireless LAN Card
MODEL : NC-7100
S/ N : BR1-009
POWER : AC120V/60Hz
MODE : Tx 2462MHz(802.11g 36MHz)
Remarks : Ext Antenna

REPORT NO : 24BE0174-HO-1
REGULATION : Fcc Part15 Subpart C 15.247(c)
TEST DISTANCE : 3m(1 to 10GHz) and 1 m(10 to 25GHz)
DATE : 2003/12/05
TEMPERATURE : 22℃
HUMIDITY : 39%

Engineer : Naoki Sakamoto

PK DETECT : RBW 1MHz VBW 1MHz

No.	FREQ [MHz]	T/R READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	High-Pass or Atten [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + High Pass(Atten).												
1	1401.8	46.8	47.1	24.3	37.3	5.0	10.0	48.8	49.1	74.0	25.2	24.9
2	1909.0	44.0	46.0	30.7	36.9	5.7	10.0	53.5	55.5	74.0	20.5	18.5
3	2258.0	45.0	50.1	30.7	36.9	6.0	10.0	54.8	59.9	74.0	19.2	14.1
4	2483.9	46.7	51.0	30.7	36.9	6.3	10.0	56.8	61.1	74.0	17.2	12.9
5	2687.9	46.8	51.5	30.7	36.9	6.4	10.0	57.0	61.7	74.0	17.0	12.3
6	4924.0	42.5	42.4	36.3	36.8	9.0	1.0	52.0	51.9	74.0	22.0	22.1
7	7386.0	43.4	43.3	37.9	36.6	11.1	0.5	56.3	56.2	74.0	17.7	17.8
8	9848.0	43.3	43.3	36.6	37.3	13.1	0.5	56.2	56.2	74.0	17.8	17.8
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + High Pass - Dfac												
9	12310.0	43.8	43.4	41.6	36.6	14.6	0.5	54.4	54.0	74.0	19.6	20.0
10	14772.0	43.3	43.7	43.3	35.6	15.9	0.6	58.0	58.4	74.0	16.0	15.6
11	17234.0	43.8	44.0	45.2	36.2	17.5	0.3	61.1	61.3	74.0	12.9	12.7
12	19696.0	44.1	44.2	40.6	36.0	18.8	1.3	59.3	59.4	74.0	14.7	14.6
13	22158.0	44.2	44.3	40.6	35.7	19.9	1.4	60.9	61.0	74.0	13.1	13.0
14	24620.0	44.0	43.9	40.4	36.9	21.1	2.6	61.7	61.6	74.0	12.3	12.4

AV DETECT : RBW1MHz VBW10Hz

No.	FREQ [MHz]	T/R READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	High-Pass or Atten [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + High Pass(Atten).												
1	1401.8	34.9	34.8	24.3	37.3	5.0	10.0	36.9	36.8	54.0	17.1	17.2
2	1909.0	33.0	33.5	30.7	36.9	5.7	10.0	42.5	43.0	54.0	11.5	11.0
3	2258.0	33.1	40.0	30.7	36.9	6.0	10.0	42.9	49.8	54.0	11.1	4.2
4	2483.9	34.1	41.2	30.7	36.9	6.3	10.0	44.2	51.3	54.0	9.8	2.7
5	2687.9	37.1	41.2	30.7	36.9	6.4	10.0	47.3	51.4	54.0	6.7	2.6
6	4924.0	31.3	31.2	36.3	36.8	9.0	1.0	40.8	40.7	54.0	13.2	13.3
7	7386.0	32.0	32.1	37.9	36.6	11.1	0.5	44.9	45.0	54.0	9.1	9.0
8	9848.0	32.2	32.0	36.6	37.3	13.1	0.5	45.1	44.9	54.0	8.9	9.1
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + High Pass - Dfac												
9	12310.0	33.0	32.3	41.6	36.6	14.6	0.5	43.6	42.9	54.0	10.4	11.1
10	14772.0	32.8	32.0	43.3	35.6	15.9	0.6	47.5	46.7	54.0	6.5	7.3
11	17234.0	33.4	32.6	45.2	36.2	17.5	0.3	50.7	49.9	54.0	3.3	4.1
12	19696.0	33.5	32.4	40.6	36.0	18.8	1.3	48.7	47.6	54.0	5.3	6.4
13	22158.0	33.4	32.7	40.6	35.7	19.9	1.4	50.1	49.4	54.0	3.9	4.6
14	24620.0	33.0	32.9	40.4	36.9	21.1	2.6	50.7	50.6	54.0	3.3	3.4

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.5 dB

Atten : 1GHz to 3.5GHz

High Pass Filter : 3.5GHz to 25GHz(3.5GHz Pass)

*Except for the above table : All other spurious emissions were less than 20dB for the limit.

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DATA OF SPURIOUS EMISSIONS(1GHz to 25GHz)

UL Apex Co., Ltd.
EMC HEAD OFFICE DIVISON No.2 SEMI ANECHOIC CHAMBER

COMPANY : Brother
EQUIPMENT : Wireless LAN Card
MODEL : NC-7100
S/N : BR1-009
POWER : AC120V/60Hz
MODE : Tx 2412MHz(802.11g 54MHz)
Remarks : Ext Antenna

REPORT NO : 24BE0174-HO-1
REGULATION : Fcc Part15 Subpart C 15.247(c)
TEST DISTANCE : 3m(1 to 10GHz) and 1 m(10 to 25GHz)
DATE : 2003/12/05
TEMPERATURE : 22℃
HUMIDITY : 39%

Engineer : Naoki Sakamoto

PK DETECT : RBW 1MHz VBW 1MHz

No.	FREQ [MHz]	T/R READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	High-Pass or Atten [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + High Pass(Atten).												
1	1401.8	45.1	48.2	24.3	37.3	5.0	10.0	47.1	50.2	74.0	26.9	23.8
2	1909.0	46.0	47.3	30.7	36.9	5.7	10.0	55.5	56.8	74.0	18.5	17.2
3	2261.0	47.8	48.1	30.7	36.9	6.0	10.0	57.6	57.9	74.0	16.4	16.1
4	2390.0	44.0	49.5	30.5	36.9	6.3	10.0	53.9	59.4	74.0	20.1	14.6
5	2687.9	47.5	49.0	30.7	36.9	6.4	10.0	57.7	59.2	74.0	16.3	14.8
6	4824.0	41.4	41.7	35.7	36.8	8.9	1.0	50.2	50.5	74.0	23.8	23.5
7	7236.0	44.3	43.9	37.7	36.5	11.0	0.5	57.0	56.6	74.0	17.0	17.4
8	9648.0	44.2	44.0	37.2	37.2	12.9	0.5	57.6	57.4	74.0	16.4	16.6
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + High Pass - Dfac												
9	12060.0	44.4	44.6	40.3	36.8	14.4	0.5	53.3	53.5	74.0	20.7	20.5
10	14472.0	44.5	44.6	43.0	35.3	15.7	0.6	59.0	59.1	74.0	15.0	14.9
11	16884.0	44.0	44.4	44.7	36.4	17.3	0.4	60.5	60.9	74.0	13.5	13.1
12	19296.0	44.7	44.8	40.8	35.9	18.6	0.9	59.6	59.7	74.0	14.4	14.3
13	21708.0	44.4	44.2	40.5	36.6	19.7	0.6	59.1	58.9	74.0	14.9	15.1
14	24120.0	44.6	44.5	40.2	36.5	20.9	1.7	61.4	61.3	74.0	12.6	12.7

AV DETECT : RBW1MHz VBW10Hz

No.	FREQ [MHz]	T/R READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	High-Pass or Atten [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + High Pass(Atten).												
1	1401.8	33.9	34.5	24.3	37.3	5.0	10.0	35.9	36.5	54.0	18.1	17.5
2	1909.0	33.6	34.0	30.7	36.9	5.7	10.0	43.1	43.5	54.0	10.9	10.5
3	2260.1	35.5	38.0	30.7	36.9	6.0	10.0	45.3	47.8	54.0	8.7	6.2
4	2390.0	33.0	35.5	30.5	36.9	6.3	10.0	42.9	45.4	54.0	11.1	8.6
5	2687.9	40.1	41.2	30.7	36.9	6.4	10.0	50.3	51.4	54.0	3.7	2.6
6	4824.0	31.0	31.1	35.7	36.8	8.9	1.0	39.8	39.9	54.0	14.2	14.1
7	7236.0	32.2	32.3	37.7	36.5	11.0	0.5	44.9	45.0	54.0	9.1	9.0
8	9648.0	32.3	32.0	37.2	37.2	12.9	0.5	45.7	45.4	54.0	8.3	8.6
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + High Pass - Dfac												
9	12060.0	32.1	32.3	40.3	36.8	14.4	0.5	41.0	41.2	54.0	13.0	12.8
10	14472.0	32.2	32.4	43.0	35.3	15.7	0.6	46.7	46.9	54.0	7.3	7.1
11	16884.0	33.1	32.4	44.7	36.4	17.3	0.4	49.6	48.9	54.0	4.4	5.1
12	19296.0	33.5	32.7	40.8	35.9	18.6	0.9	48.4	47.6	54.0	5.6	6.4
13	21708.0	33.5	32.8	40.5	36.6	19.7	0.6	48.2	47.5	54.0	5.8	6.5
14	24120.0	33.8	32.7	40.2	36.5	20.9	1.7	50.6	49.5	54.0	3.4	4.5

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.5 dB

Atten : 1GHz to 3.5GHz

High Pass Filter : 3.5GHz to 25GHz(3.5GHz Pass)

*Except for the above table : All other spurious emissions were less than 20dB for the limit.