

ELECTROMAGNETIC EMISSION COMPLIANCE REPORT FOR LOW-POWER, NON-LICENSED TRANSMITTER

Test Report No. : E065R-033

ARG No. : A063A-176

Applicant : Bluebird Soft Inc.

Address : 558-5, Sinsa-Dong, Gangnam-Gu, Seoul, Korea

Manufacturer : Bluebird Soft Inc.

Address : 558-5, Sinsa-Gong, Gangnam-Gu, Seoul Korea

Type of Equipment : PDA(Personal Digital Assistants)

FCC ID. : SS4BIP150X

Model Name : BM-150

Serial number : None

Total page of Report : 37 pages (including this page)

Date of Incoming : April 20, 2006

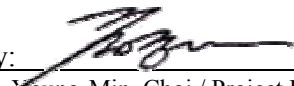
Date of issue : May 22, 2006

SUMMARY

The equipment complies with the regulation; **FCC Part 15 Subpart C Section 15.247.**

This test report only contains the result of a single test of the sample supplied for the examination.

It is not a generally valid assessment of the features of the respective products of the mass-production.

Prepared by: 
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EMC-003(Rev.0)

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1. VERIFICATION OF COMPLIANCE

APPLICANT : Bluebird Soft Inc.
ADDRESS : 558-5, Sinsa-Dong, Gangnam-Gu, Seoul, Korea
CONTACT PERSON : Mr. Myung-Hoon, Kim / Assistant Quality Manager
TELEPHONE NO : +82-2-548-0740
FCC ID : SS4BIP150X
MODEL NO/NAME : BM-150
SERIAL NUMBER : N/A
DATE : May 22, 2006

EQUIPMENT CLASS	<i>DTS - DIGITAL TRANSMISSION SYSTEM</i>
KIND OF EQUIPMENT	PDA(Personal Digital Assistants)
THIS REPORT CONCERNS	ORIGINAL GRANT
MEASUREMENT PROCEDURES	ANSI C63.4: 2003
TYPE OF EQUIPMENT TESTED	PRE-PRODUCTION
KIND OF EQUIPMENT AUTHORIZATION REQUESTED	CERTIFICATION
EQUIPMENT WILL BE OPERATED UNDER FCC RULES PART(S)	FCC PART 15 SUBPART C Section 15.247
MODIFICATIONS ON THE EQUIPMENT TO ACHIEVE COMPLIANCE	No.
FINAL TEST WAS CONDUCTED ON	3 METER(S) OPEN AREA TEST SITE

-. The above equipment was tested by ONETECH Corp. for compliance with the requirement set forth in the FCC Rules and Regulations. This said equipment in the configuration described in this report, shows the maximum emission levels emanating from equipment are within the compliance requirements.

2. TEST SUMMARY

2.1 Test items and results

SECTION	TEST ITEMS	RESULTS
15.247 (a) (2)	Minimum 6dB Bandwidth	Met the Limit / PASS
15.247 (b) (3)	Maximum Peak Output Power	Met the Limit / PASS
15.247 (b) (5)	Radio Frequency Exposure Level	Met the Limit / PASS
15.247 (c)	100 kHz Bandwidth Outside the Frequency Band	Met the Limit / PASS
15.247 (c)	Radiated Emission which fall in the Restricted Band	Met the Limit / PASS
15.247 (d)	Peak Power Spectral Density	Met the Limit / PASS
15.109	Radiated Emission Limits	Met the Limit / PASS
15.107	Conducted Limits	Met the Limit / PASS
15.203	Antenna Requirement	Met requirement / PASS

2.2 Additions, deviations, exclusions from standards

No additions, deviations or exclusions have been made from standard.

2.3 Related Submittal(s) / Grant(s)

Original submittal only

2.4 Purpose of the test

To determine whether the equipment under test fulfills the requirements of the regulation stated in section 2.1.

2.5 Test Methodology

Radiated testing was performed according to the procedures in ANSI C63.4: 2003. Radiated testing was performed at a distance of 3 meters from EUT to the antenna.

2.6 Test Facility

The Electromagnetic compatibility measurement facilities are located on at 307-51 Daessangryung-Ri, Chowol-Eup, Kwangju-City, Kyunggi-Do, 464-080, Korea. Description details of test facilities were submitted to the Federal Communications Commission on August 30, 2005 (Registration Number: 340658), accredited by KOLAS (Korea Laboratory Accreditation Scheme, No: 85) and approved by TUV, DNV and MIC (Ministry of Information and Communications in Korea) according to the requirement of ISO17025.

3. GENERAL INFORMATION

3.1 Product Description

The Bluebird Soft Inc., Model BM-150 (referred to as the EUT in this report) is a PDA (Personal Digital Assistants) which has 802.11b WLAN module and data uploading/downloading mode via USB port. The device is consists of cradle and the EUT and the cradle shall be connected to a personal computer, so the report for cradle shall be issued by other test report. The product specification described herein was obtained from product data sheet or user's manual.

DEVICE TYPE	PDA(Personal Digital Assistants)
SPREAD SPECTRUM TYPE	DSSS
STANDARD	IEEE 802.11b
OPERATING FREQUENCY	2412 - 2462 MHz
OUTPUT POWER	15dBm
USED WLAN	MFG.: SAMSUNG, Model Name: SWL-2350C
DATA TRANSFER RATE	Max. 11 Mbps
CHANNEL	11 Channels
MODULATION TYPE	DBPSK, DQPSK, CCK
ANTENNA	Planer Inverted F Antenna Mfg.: KOSAN I&T / Model No.: KIN-DU2-BS01
ANTENNA GAIN	-3 dBi
USED AC/DC ADAPTOR	Mfg.: AULT KOREA / Model No.: PW118KA0503N52
LIST OF EACH OSC. ORCRY. FREQ.(FREQ.>=1MHz)	13 MHz, 24.576 MHz, 26 MHz and 14.7456 MHz
NUMBER OF LAYER	8 Layers
POWER REQUIREMENT	DC 5V, 3A from an AC/DC Adaptor
EXTERNAL CONNECTOR	FCI 19pin 0.8pitch IO receptacle socket

3.2 Alternative type(s)/model(s); also covered by this test report.

No other model differences have been mentioned.

4. EUT MODIFICATIONS

None

5. SYSTEM TEST CONFIGURATION

5.1 Justification

This device was configured for testing in a typical way as a normal customer is supposed to be used. During the test, the following components were installed inside of the EUT.

DEVICE TYPE	MANUFACTURER	MODEL/PART NUMBER	FCC ID
WLAN Board	Samsung	SWL-2350C	N/A
Main Board	Bluebird Soft Inc	BM-150 Rev 0.1	N/A
Camera Board	N/A	N/A	N/A
Key Board	Bluebird Soft Inc	BM150-Key	N/A
LCD	N/A	N/A	N/A
Cradle Main Board	SCR-150	Hwail Elec.	N/A
Cradle Sub Board	KOSNEY_Sub	Hwail Elec.	N/A

5.3 Peripheral equipment

Defined as equipment needed for correct operation of the EUT, but not considered as tested:

Model	Manufacturer	FCC ID	Description	Connected to
BM-150	Bluebird Soft Inc.	SS4BIP150X	PDA(Personal Digital Assistants) (EUT)	Cradle
BM-150	Bluebird Soft Inc.	DoC	Cradle(EUT)	Host
PW118KA0503N52	Ault Korea	N/A	AC/DC Adaptor	EUT
PP01L	Dell Computer	DoC	Notebook PC (HOST)	Cradle
020-0470	Cardinal	GDE0196	Modem	Host
2225C	HP	DS16XU2225	Printer	Host

5.4 Mode of operation during the test

The EUT has following 2 operating condition, so two modes were tested and each test results were recorded.

1. After connecting the EUT to the PC via USB cable, the data were continuously read and written from the PC to the EUT.
2. The EUT was operated with wireless LAN mode during the test.

5.5 Configuration of Test System

Line Conducted Test: The EUT was connected to adaptor and the power of adaptor was connected to LISN. All supporting equipments were connected to another LISN. Preliminary Power lines Conducted Emission tests were performed by using the procedure in ANSI C63.4: 2003 7.2.3 to determine the worse operating conditions.

Radiated Emission Test: Preliminary radiated emissions test were conducted using the procedure in ANSI C63.4: 2003 8.3.1.1 and 13.1.4.1 to determine the worse operating conditions. Final radiated emission tests were conducted at 3meter open area test site.

The turntable was rotated through 360 degrees and the EUT was tested by positioned three orthogonal planes to obtain the highest reading on the field strength meter. Once maximum reading was determined, the search antenna was raised and lowered in both vertical and horizontal polarization.

5.6 Antenna Requirement

For intentional device, according to 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.

Antenna Construction:

The transmitter antenna of the EUT is installed inside of the EUT, so no consideration of replacement by the user.

6. PRELIMINARY TEST

6.1 AC Power line Conducted Emissions Tests

During Preliminary Tests, the following operating mode was investigated

Operation Mode	The Worse operating condition
Data were continuously read and write by USB Port	X
Wireless LAN mode	X

6.2 General Radiated Emissions Tests

During Preliminary Tests, the following operating modes were investigated

Operation Mode	The Worse operating condition
Data were continuously read and write by USB Port	X
Wireless LAN mode	X

7. MINIMUM 6dB BANDWIDTH

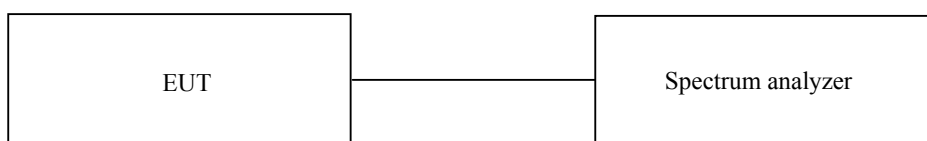
7.1 Operating environment

Temperature : 21 °C

Relative humidity : 39 %

7.2 Test set-up

The antenna output of the EUT was connected to the spectrum analyzer. The resolution bandwidth is set to 100 kHz, and peak detection was used. The 6dB bandwidth is defined as the total spectrum over which the power is higher than the peak power minus 6 dB.



7.3 Test equipment used

	Model Number	Manufacturer	Description	Serial Number	Last Cal.
■ -	8564E	HP	Spectrum Analyzer	3650A00756	July 18, 2005

All test equipment used is calibrated on a regular basis.

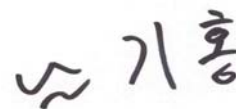
7.4 Test data**7.4.1 Test data for 821.11b**

-. Test Date : May 01, 2006

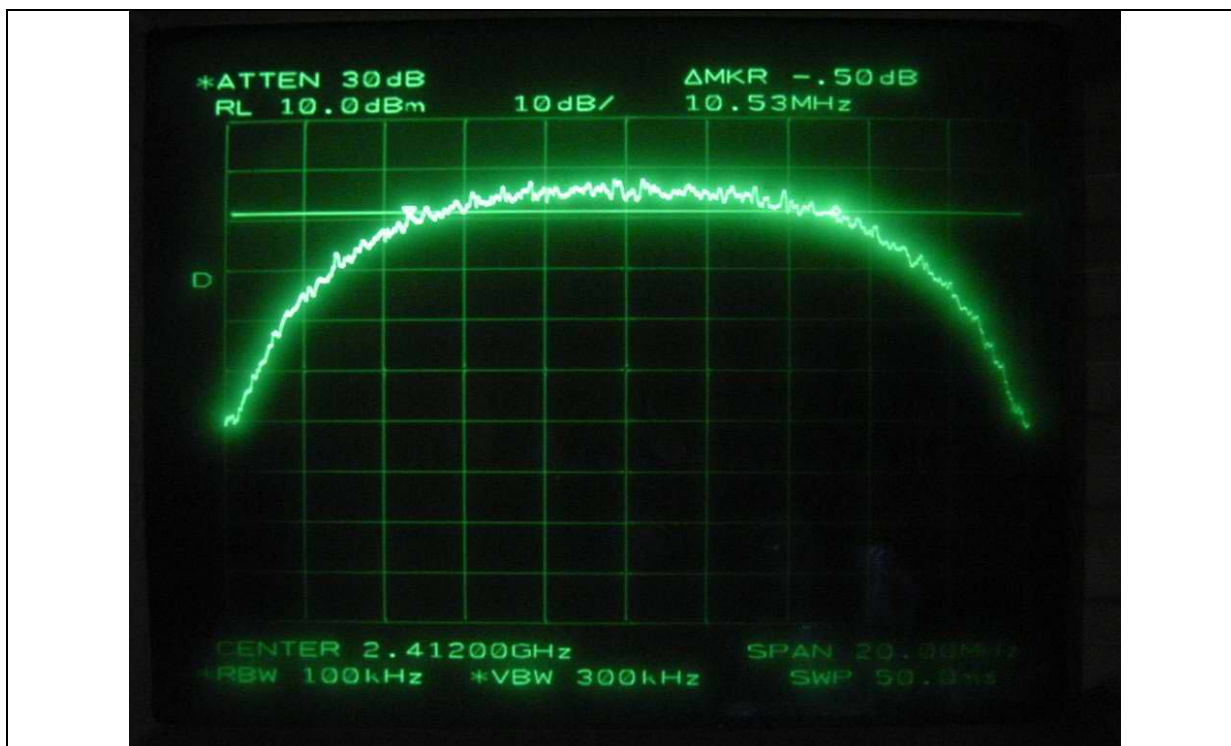
-. Test Result : Pass

CHANNEL	FREQUENCY(MHz)	MEASURED VLAUE (kHz)	LIMIT (kHz)	MARGIN (kHz)
Low	2412	10530	500	-10030
Middle	2437	10130	500	-9630
High	2462	10470	500	-9970

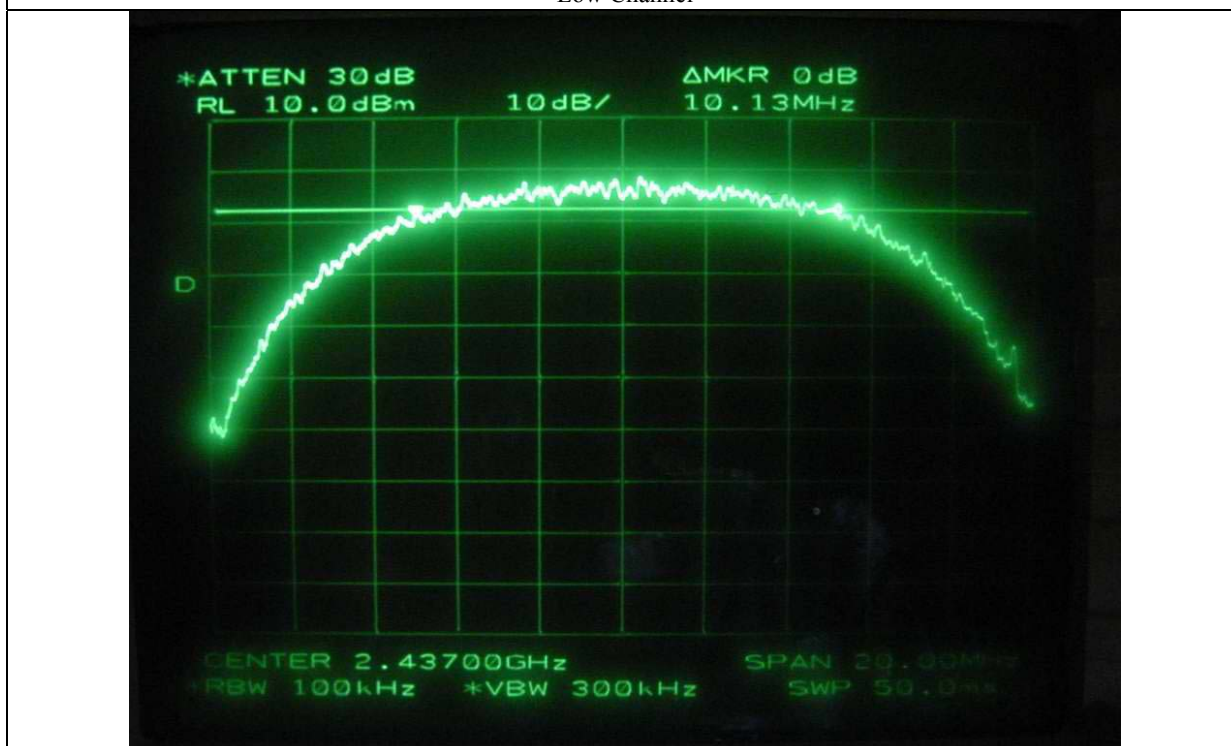
Remark: See next page for an overview sweep performed with peak detector.



Tested by: Ki-Hong, Nam / Test Engineer



Low Channel



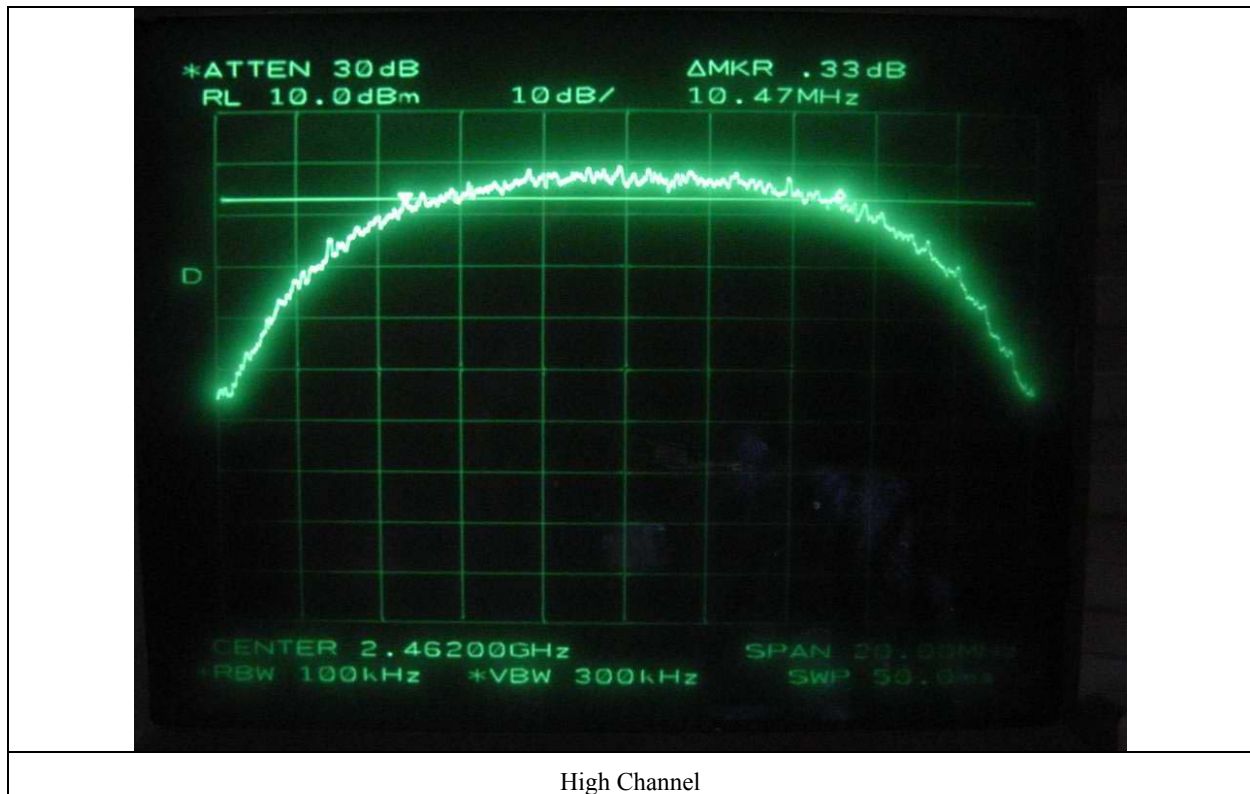
Middle Channel

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8. MAXIMUM PEAK OUTPUT POWER

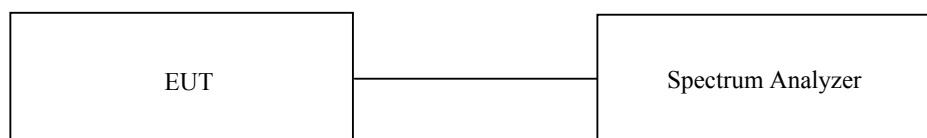
8.1 Operating environment

Temperature : 21 °C

Relative humidity : 39 %

8.2 Test set-up

The maximum peak output power was measured with the spectrum analyzer connected to the antenna output of the EUT. The spectrum analyzer's internal channel power integration function is used to integrate the power over a bandwidth greater than or equal to the 99% bandwidth. The EUT was operating in transmit mode at the appropriate center frequency.



8.3 Test equipment used

Model Number	Manufacturer	Description	Serial Number	Last Cal.
■ - 8564E	HP	Spectrum Analyzer	3650A00756	July 10, 2005

All test equipment used is calibrated on a regular basis.

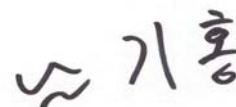
8.4 Test data

-. Test Date : May 01, 2006

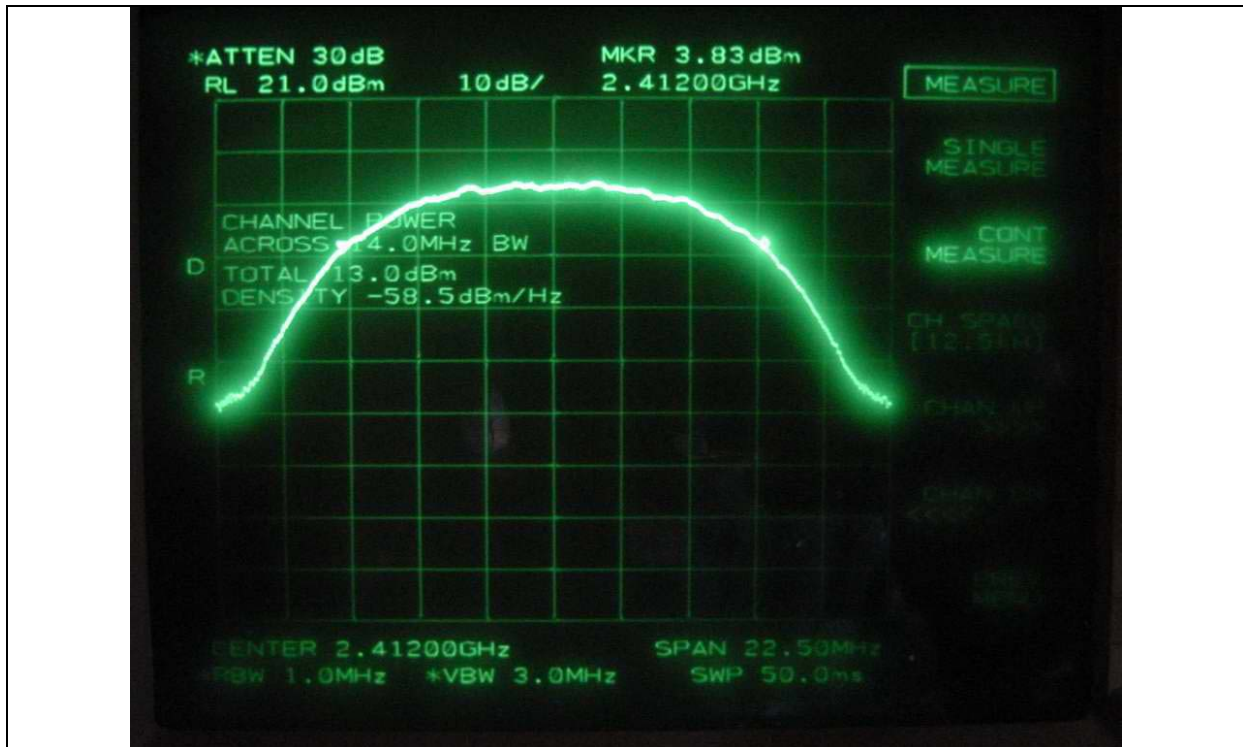
-. Test Result : Pass

CHANNEL	FREQUENCY (MHz)	99% Occupied Bandwidth (MHz)	MEASURED VLAUE (dBm)	LIMIT (dBm)	MARGIN (dB)
Low	2412	13.95	13.00	30.0	-17.00
Middle	2437	13.88	13.90	30.0	-16.10
High	2462	14.03	15.20	30.0	-14.80

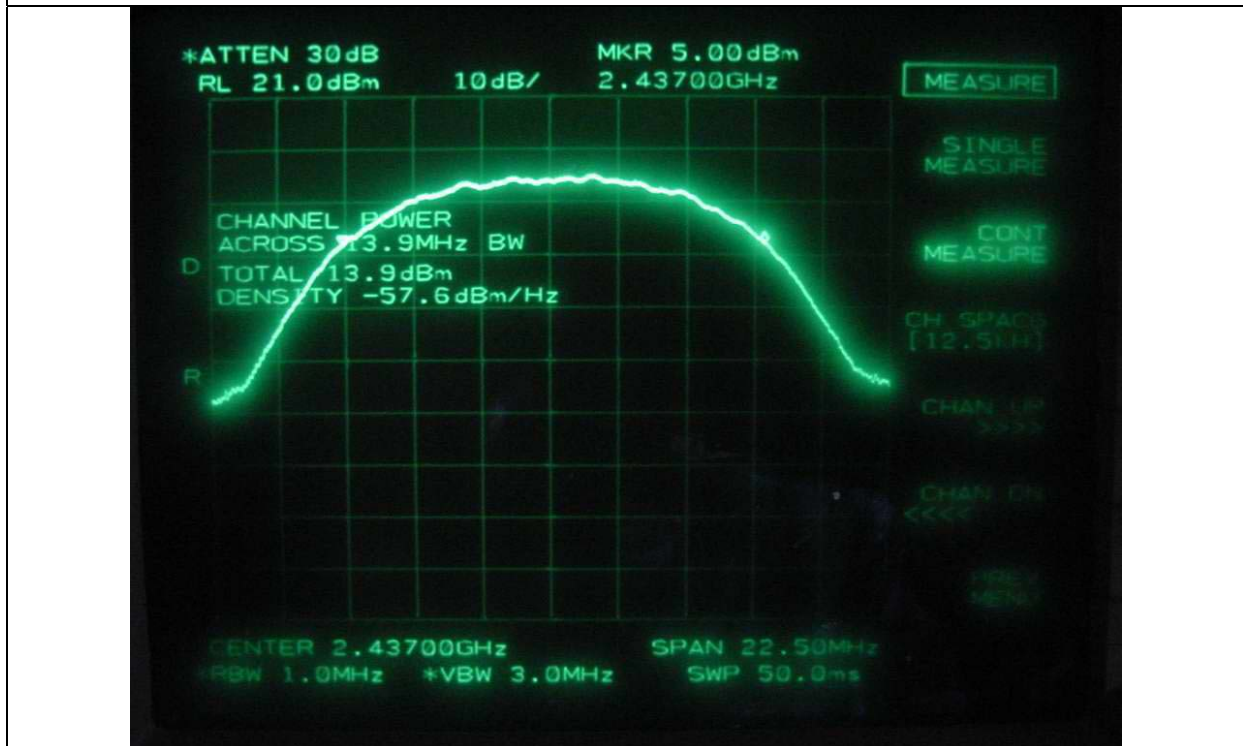
Remark: See next page for an overview sweep performed with peak detector.



Tested by: Ki-Hong, Nam / Test Engineer



Low Channel



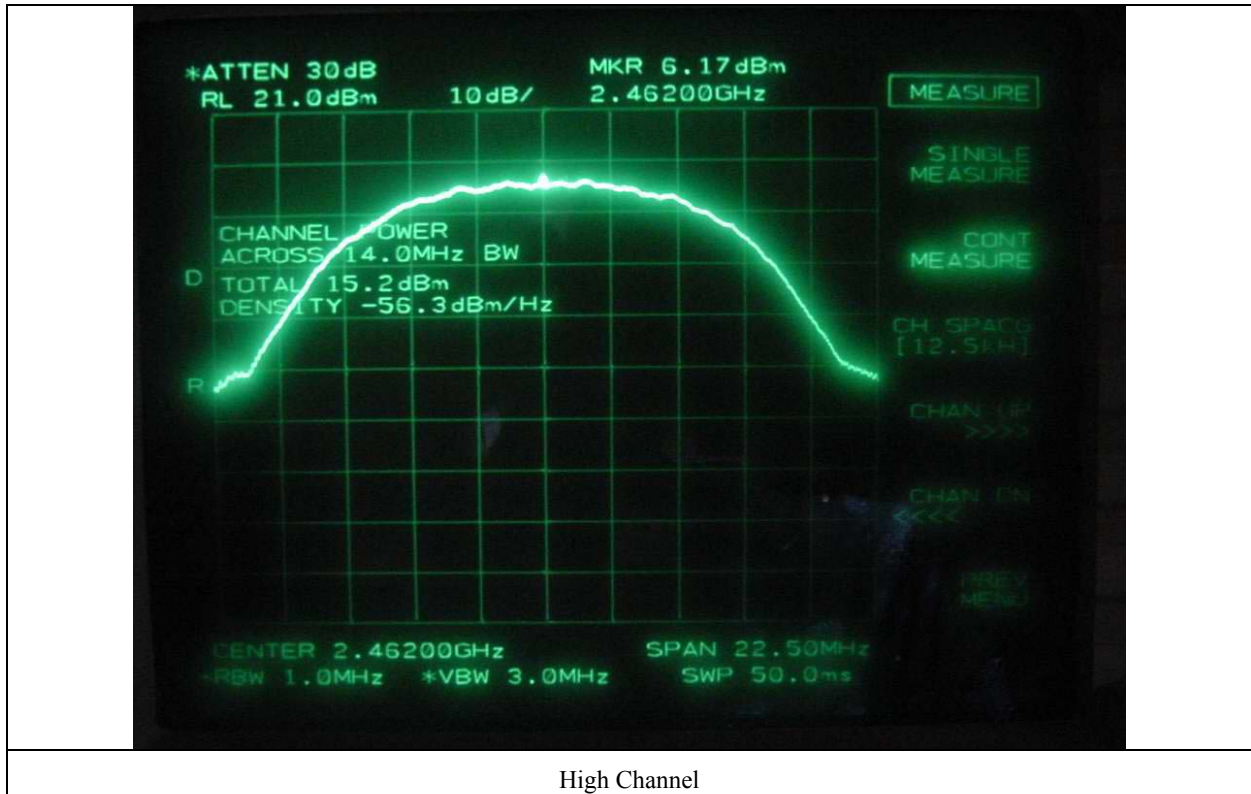
Middle Channel

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9. RADIO FREQUENCY EXPOSURE

9.1 RF Exposure Limit

According to the FCC rule §1.1310, the limit for General Population/Uncontrolled exposure is 1mW/cm² for the device operating 1,500~100,000 MHz.

9.2 EUT Description

Kind of EUT	INDUSTRIAL PDA with WLAN 802.11b
Operating Frequency Band	☒ WLAN: 2412 ~ 2462 MHz ☐ WLAN: 5180 ~ 5320 MHz / 5500 ~ 5700 MHz ☐ WLAN: 5745 ~ 5825 MHz ☐ Bluetooth: 2402 ~ 2480MHz
Device Category	☒ Portable (<20cm separation) and Hand-held operation only ☐ Mobile (>20cm separation) ☐ Others
Max. Output Power	WLAN: 15.2 dBm (33.1mW) @ 2462 MHz
Used Antenna	Single Antenna
Used Antenna Gain	WLAN: -3 dBi
Exposure Evaluation Applied	☐ MPE ☐ SAR ☒ N/A

9.3 Test Result

According to the rule, §1.1307(b) (1) and §2.1093,

SO, THE DEVICE MEETS THE RF EXPOSURE REQUIREMENT.

10. 100 kHz BANDWIDTH OUTSIDE THE FREQUENCY BAND

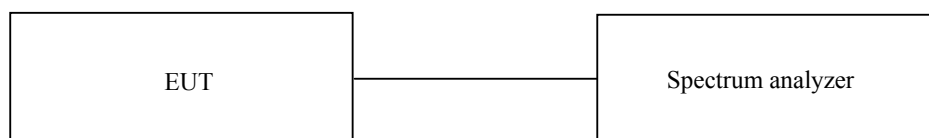
10.1 Operating environment

Temperature : 21 °C

Relative humidity : 39 %

10.2 Test set-up for conducted measurement

The antenna output of the EUT was connected to the spectrum analyzer. The resolution and video bandwidth is set to 100 kHz, and peak detection was used.



10.3 Test set-up for radiated measurement

The radiated emissions measurements were performed on the 3meters, open-field test site. The EUT was placed on a non-conductive turntable approximately 0.8 meters above the ground plane.

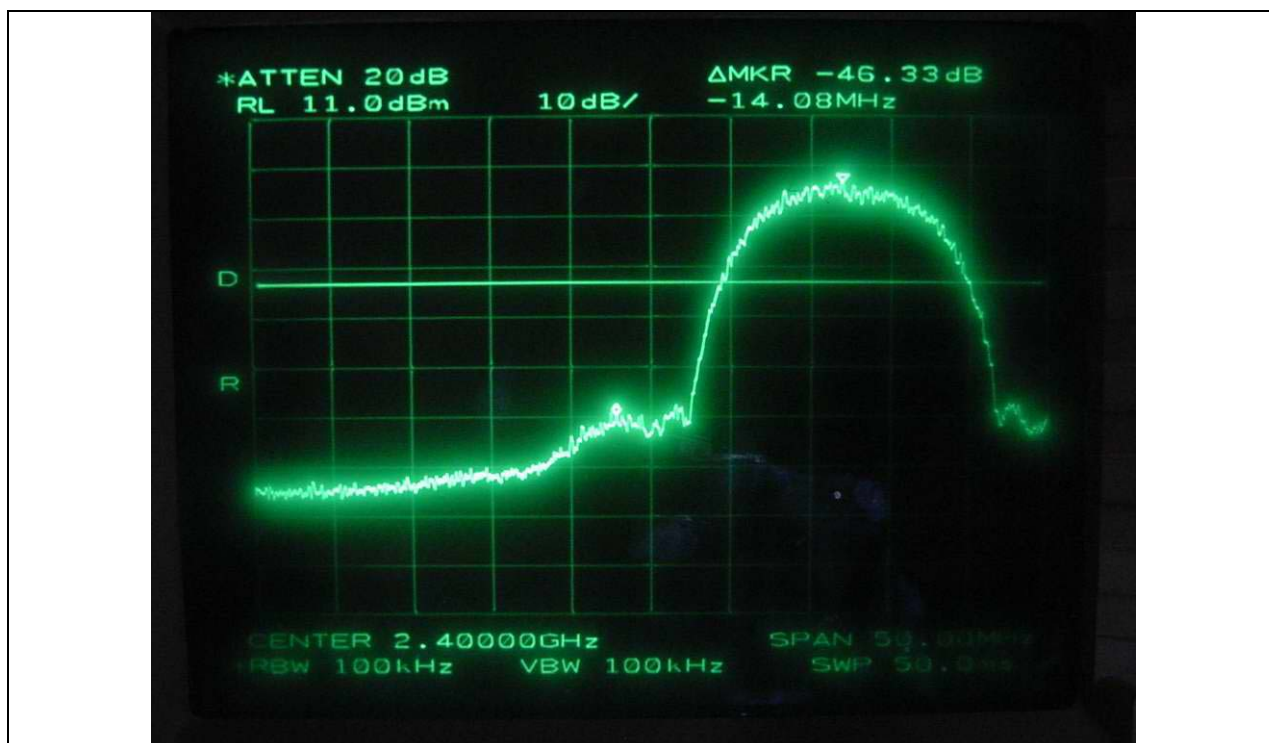
The frequency spectrum from 30MHz to 25GHz was scanned and maximum emission levels at each frequency recorded. The system was rotated 360°, and the antenna was varied in the height between 1.0 and 4.0 meters in order to determine the maximum emission levels. This procedure was performed for horizontal and vertical polarization of the receiving antenna.

10.4 Test equipment used

Model Number	Manufacturer	Description	Serial Number	Last Cal.
■ - 8564E	Hewlett-Packard	Spectrum Analyzer	3650A00756	July 18, 2005
■ - 83051A	Agilent	Preamplifier	3950M00201	June 09, 2005
■ - MA220	HD	Turn Table	N/A	N/A
■ - HD240	HD	Antenna Mast	N/A	N/A
■ - BBHA9170	Schwarzbeck	Horn Antenna	BBHA9170178	June 06, 2005
■ - YSE 500B	YoungShin Eng.	Frequency Converter	950413001	N/A
■ - ETCR-10	DaeHa	Automatic Voltage Com.	N/A	N/A

All test equipment used is calibrated on a regular basis.

10.5. Test data for conducted emission



Low Channel



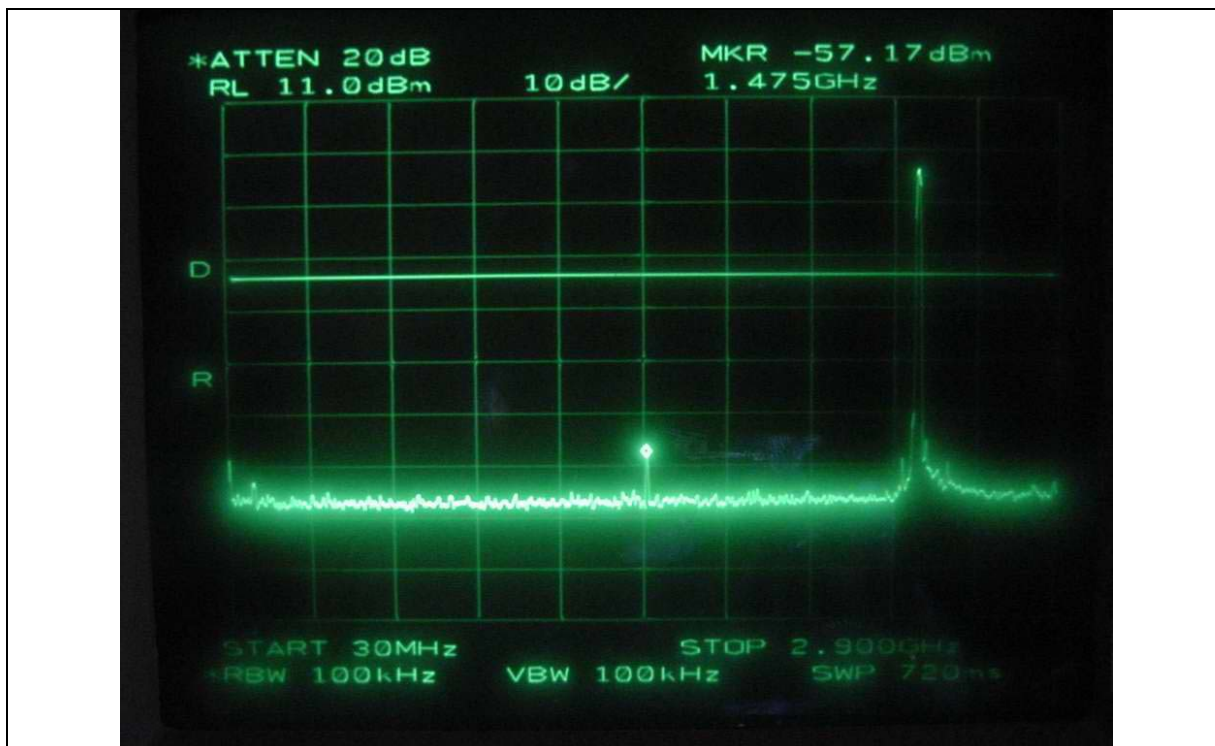
High Channel

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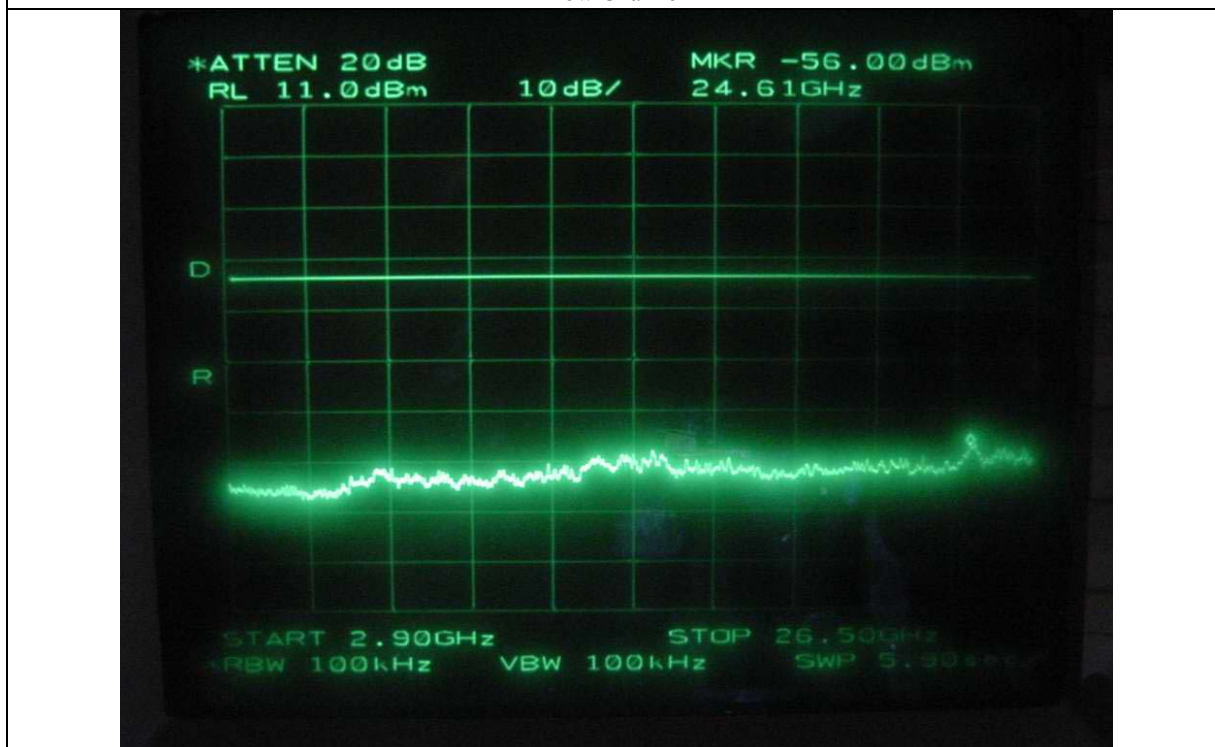
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Low Channel



Low Channel

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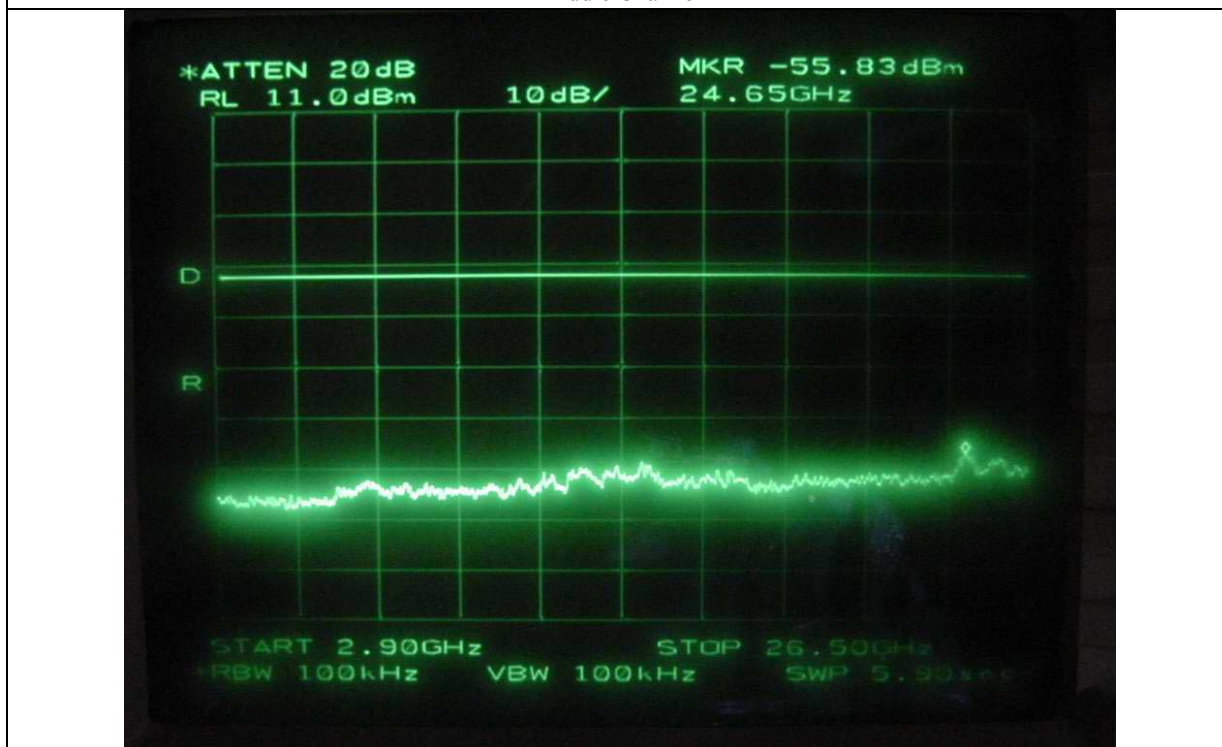
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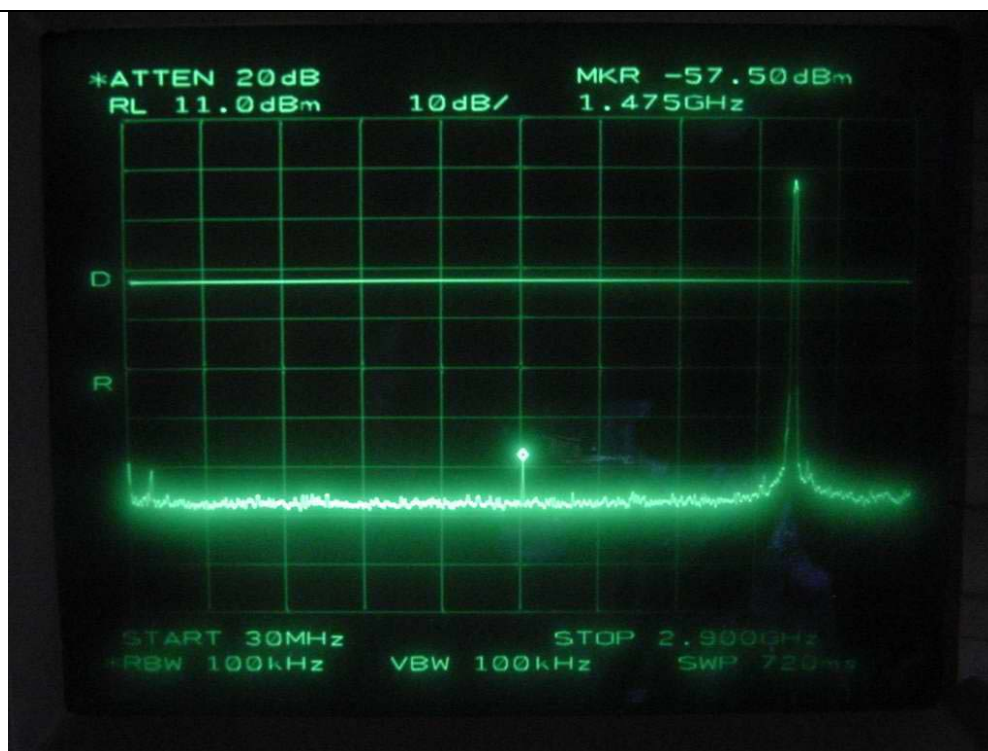
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Middle Channel



Middle Channel



High Channel



High Channel

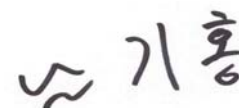
10.6. Test data for radiated emission**10.6.1 Operating condition: 802.11b Mode****10.6.1.1 Radiated Emission which fall in the Restricted Band**

- Test Date : May 03, 2006
- Resolution bandwidth : 1 MHz for Peak and Average Mode
- Video bandwidth : 1 MHz for Peak Mode, 10Hz for Average Mode
- Frequency range : 1 GHz ~ 25GHz
- Measurement distance : 3m
- Operating Condition : Low / High Channel
- Result : PASSED BY -26.23 dB at Low Channel

Frequency (MHz)	Reading (dBuV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Dist. Factor	Total (dBuV/m)	Limits (dBuV/m)	Margin (dB)
Test Data for Low Channel										
2389.47	35.67	Peak	H	27.64	1.33	26.10		38.54	74.0	-35.46
	35.83	Peak	V					38.70	74.0	-35.30
	24.83	Average	H					27.70	54.0	-26.30
	24.90	Average	V					27.77	54.0	-26.23
Test Data for High Channel										
2483.50	35.17	Peak	H	27.59	1.33	26.10		37.99	74.0	-36.02
	35.33	Peak	V					38.15	74.0	-35.86
	23.67	Average	H					26.49	54.0	-27.52
	23.50	Average	V					26.32	54.0	-27.69

Tabulated test data for Restricted Band

Remark: "H": Horizontal, "V": Vertical



Tested by: Ki-Hong, Nam / Test Engineer

10.6.1.2 Spurious & Harmonic Radiated Emission

- Test Date : May 03, 2006
- Resolution bandwidth : 1 MHz for Peak and Average Mode for the emissions fall in restricted band,
100 kHz for Peak Mode for the emissions outside restricted band
- Video bandwidth : 1 MHz for Peak Mode, 10Hz for Average Mode
- Frequency range : 1 GHz ~ 25 GHz
- Measurement distance : 3m
- Result : PASSED BY -22.32 dB at High Channel

Frequency (GHz)	Reading (dBuV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Dist. Factor	Total (dBuV/m)	Limits (dBuV/m)	Margin (dB)
Test Data for Low Channel										
2.412	45.83	Peak	V	27.62	1.33			74.78	-	
	46.27	Peak	V					75.22	-	
4.824	34.10	Peak	H	31.30	2.67	26.10		41.97	74.00	-32.03
	23.50	Average	H					31.37	54.00	-22.63
Test Data for Middle Channel										
2.437	47.67	Peak	V	27.61	1.33			76.61	-	
	47.98	Peak	V					76.92	-	
4.874	33.95	Peak	V	31.37	2.67	26.10		41.89	74.00	-32.11
	23.50	Average	H					31.44	54.00	-22.56
Test Data for High Channel										
2.462	47.90	Peak	H	27.60	1.33			76.83	-	
	48.33	Peak	V					77.26	-	
4.924	33.50	Peak	H	31.44	2.67	26.10		41.51	74.00	-32.49
	23.67	Average	H					31.68	54.00	-22.32

Tabulated test data for Restricted Band

Remark: "H": Horizontal, "V": Vertical

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11. PEAK POWER SPECTRUL DENSITY

11.1 Operating environment

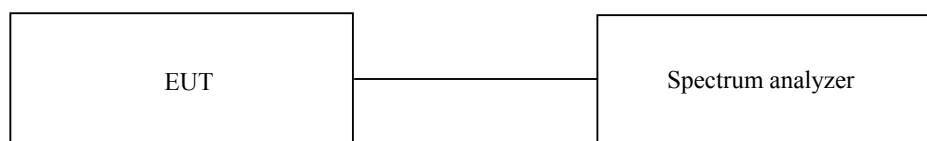
Temperature : 21 °C

Relative humidity : 39 %

11.2 Test set-up

The antenna output of the EUT was connected to the spectrum analyzer. The resolution bandwidth is set to 3 kHz, the video bandwidth is set to 3 times the resolution bandwidth, and sweep time was set to span / 3 kHz. The sweep time was allowed to be longer than span / 3 kHz for a full response of the mixer in the spectrum analyzer.

The maximum level from the EUT in a 3 kHz bandwidth was measured with above condition.



11.3 Test equipment used

	Model Number	Manufacturer	Description	Serial Number	Last Cal.
■ -	8564E	Hewlett-Packard	Spectrum Analyzer	3650A00756	July 18, 2005

All test equipment used is calibrated on a regular basis.

11.4 Test data**11.4.1 Test data for 821.11b**

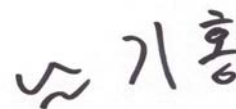
-. Test Date : May 02, 2006

-. Test Result : Pass

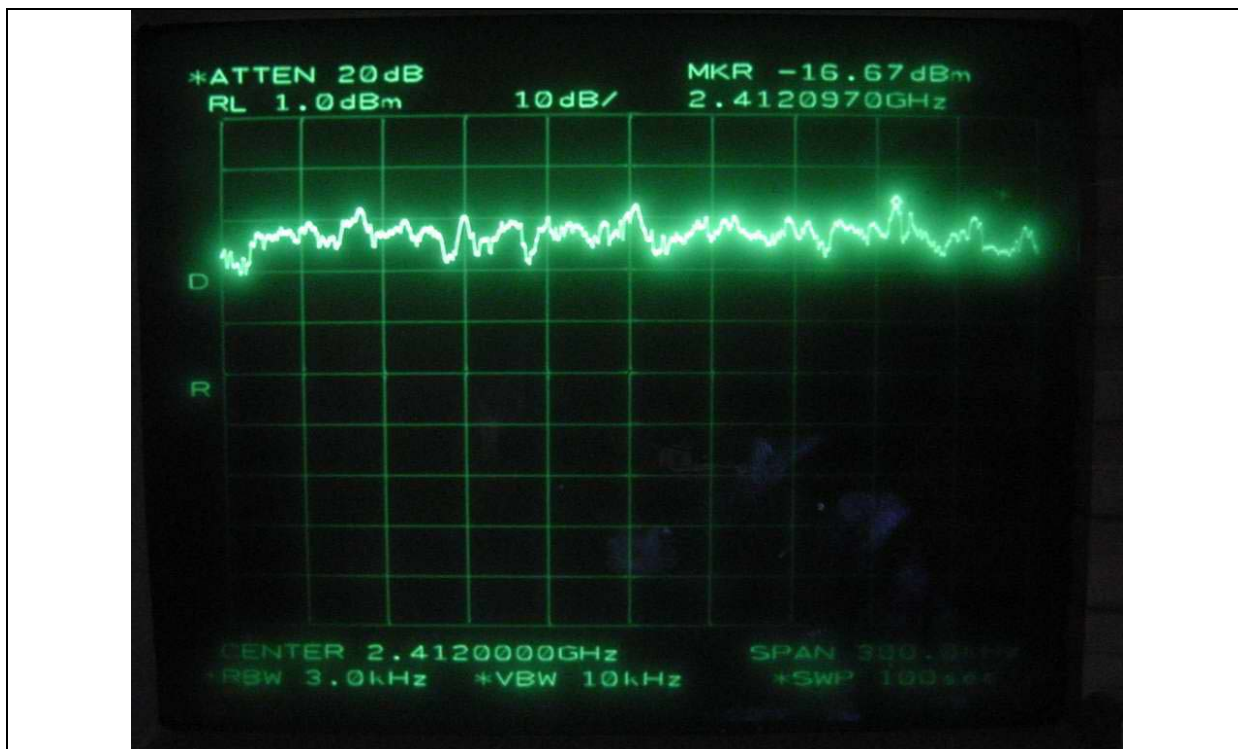
CHANNEL	FREQUENCY(MHz)	MEASURED VLAUE (dBm)	LIMIT (dBm)	MARGIN (dB)
Low	2412	-16.67	8.00	-24.67
Middle	2437	-15.33	8.00	-23.33
High	2462	-14.67	8.00	-22.67

Remark: See next page for an overview sweep performed with peak detector.

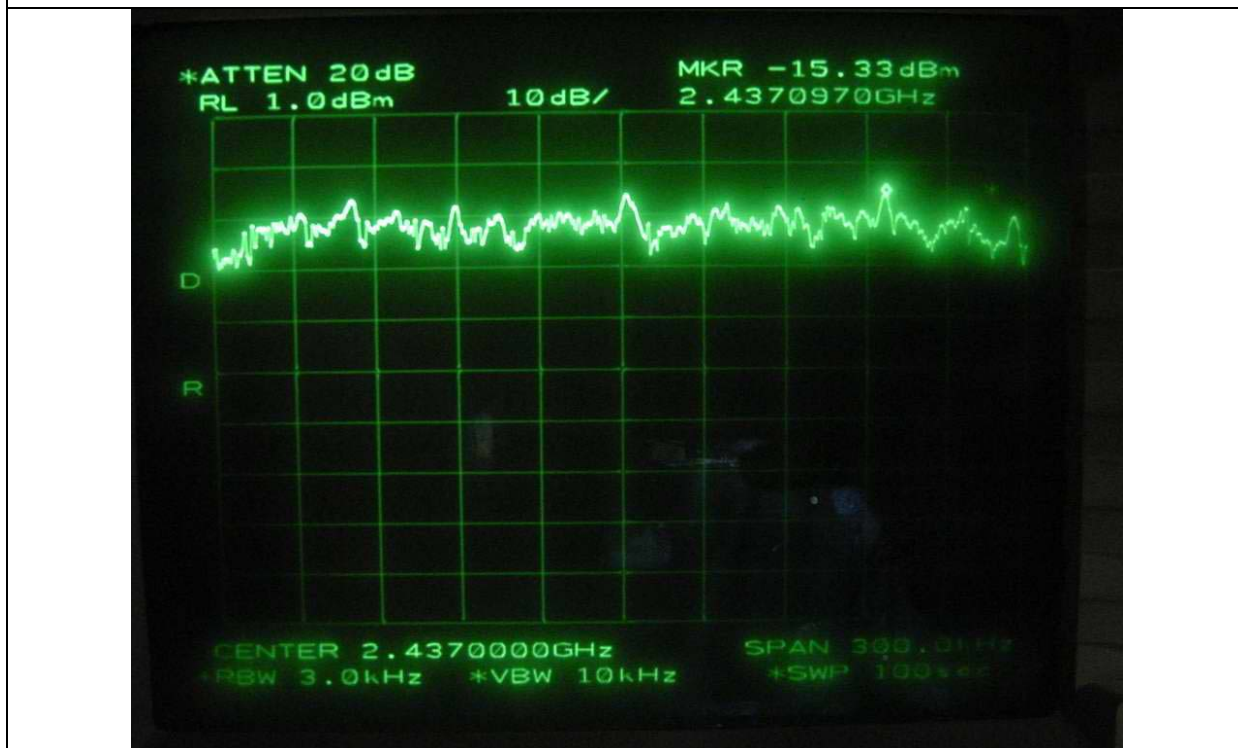
See next page for measurement data.



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Low Channel



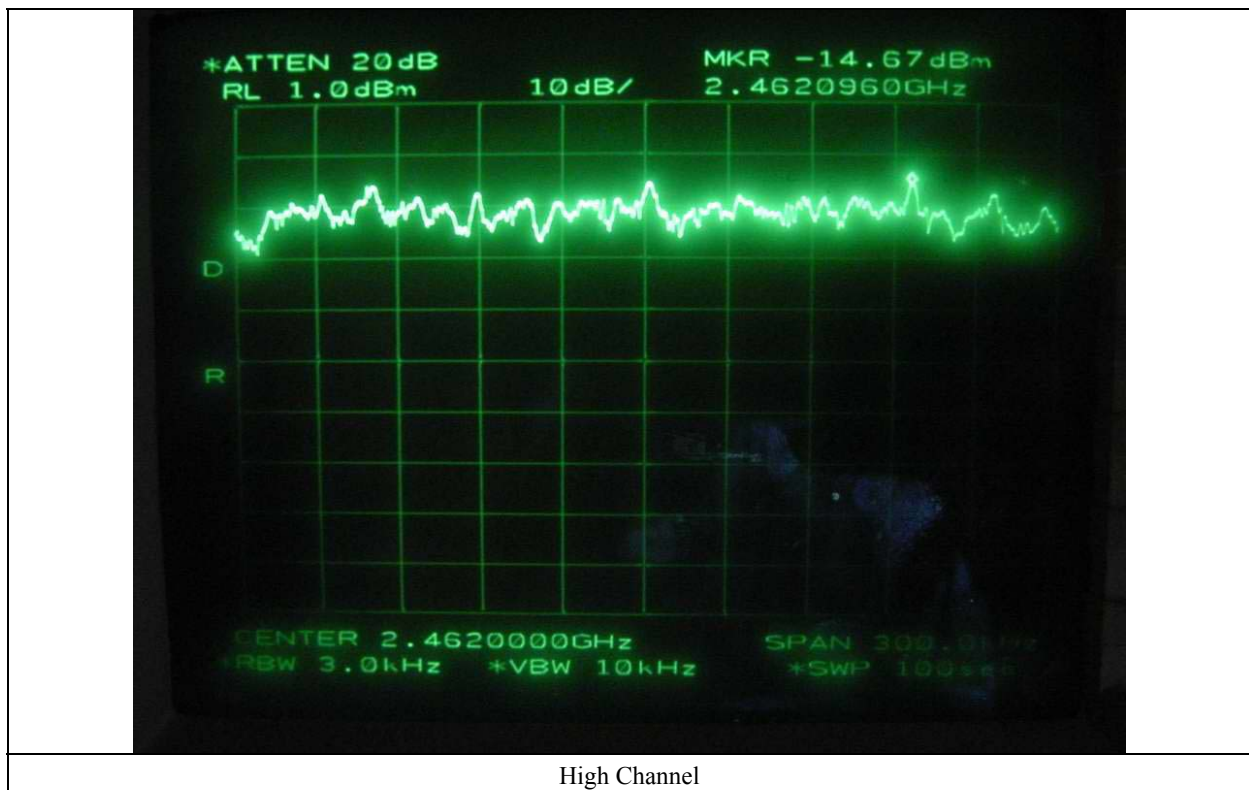
Middle Channel

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EMC-003(Rov.0)

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High Channel

12. RADIATED EMISSION TEST, GENERAL REQUIREMENT

12.1 Operating environment

Temperature : 12 °C

Relative humidity : 66 %

12.2 Test set-up

The radiated emissions measurements were on the 3 meters, open-field test site. The EUT and other support equipment were placed on a non-conductive turntable above the ground plane. The interconnecting cables from outside test site were inserted into ferrite clamps at the point where the cables reach the turntable.

The frequency spectrum from 30MHz to 1000MHz was scanned and emission levels maximized at each frequency recorded. The system was rotated 360°, and the antenna was varied in height between 1.0 and 4.0 meters in order to determine the maximum emission levels. This procedure was performed for both horizontal and vertical polarization of the receiving antenna.

12.3 Measurement uncertainty

Radiated emission electric field intensity, 30 MHz ~ 300 MHz : ± 4.43 dB

Radiated emission electric field intensity, 300 MHz ~ 1000 MHz : ± 3.80 dB

Measurement uncertainty is calculated in accordance with WECC 19-1990. The measurement uncertainty is given with a confidence of 95% with the coverage factor, $k=2$.

12.4 Test equipment used

	Model Number	Manufacturer	Description	Serial Number	Last Cal.
■ -	ESVS10	Rohde & Schwarz	EMI Test Receiver	827864/005	Dec. 20, 2005
■ -	MA240	HD GmbH	Antenna Master	N/A	N/A
■ -	HD100	HD GmbH	Position Controller	N/A	N/A
■ -	DS420S	HD GmbH	Turn Table	N/A	N/A
■ -	VHA9103	Schwarzbeck	Biconical Antenna	91031852	Feb. 13, 2006
■ -	9108-A(494)	Schwarzbeck	Log Periodic Antenna	62281001	Feb. 13, 2006

All test equipment used is calibrated on a regular basis.

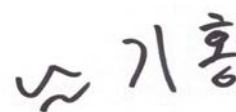
12.5 Test data**12.5.1 Operating Mode: Data were continuously read and write by USB Port**

- Type of Test : FCC Class B
- Test Date : May 06, 2006
- Resolution bandwidth : 120 kHz
- Frequency range : 30MHz ~ 1000MHz
- Measurement distance : 3m
- Test result : Passed by -7.11 dB at 34.84 MHz

Frequency (MHz)	Reading (dBuV)	Ant. Pol. (H/V)	Ant. Factor (dB/m)	Cable Loss	Emission Level(dBuV/m)	Limits (dBuV/m)	Margin (dB)
34.84	15.10	V	16.70	1.09	32.89	40.00	-7.11
166.63	12.30	V	15.18	2.40	29.88	43.52	-13.64
202.83	14.10	H	16.26	2.82	33.18	43.52	-10.34
263.53	13.80	H	17.37	3.45	34.62	46.02	-11.40
353.68	17.00	H	16.10	4.21	37.31	46.02	-8.71
440.86	10.60	H	17.95	4.48	33.03	46.02	-12.99

Tabulated test data for Radiated Electromagnetic Field

Remark: "H": Horizontal, "V": Vertical



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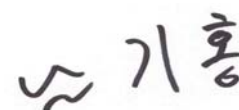
12.5.2 Operating Mode: Wireless LAN mode

- Type of Test : FCC Class B
- Test Date : May 06, 2006
- Resolution bandwidth : 120 kHz
- Frequency range : 30MHz ~ 1000MHz
- Measurement distance : 3m
- Test result : Passed by -10.21 dB at 311.01 MHz

Frequency (MHz)	Reading (dBuV)	Ant. Pol. (H/V)	Ant. Factor (dB/m)	Cable Loss	Emission Level(dBuV/m)	Limits (dBuV/m)	Margin (dB)
74.50	12.30	V	5.93	1.59	19.82	40.00	-20.18
121.08	14.10	H	12.76	2.02	28.88	43.52	-14.64
141.43	13.50	H	14.29	2.39	30.18	43.52	-13.34
204.42	12.10	H	16.30	2.84	31.24	43.52	-12.28
311.01	16.90	V	15.02	3.89	35.81	46.02	-10.21
334.27	10.40	H	15.63	4.07	30.10	46.02	-15.92

Tabulated test data for Radiated Electromagnetic Field

Remark: "H": Horizontal, "V": Vertical



Tested by: Ki-Hong, Nam / Test Engineer

13. CONDUCTED EMISSION TEST

13.1 Operating environment

Temperature : 21 °C

Relative humidity : 38 %

13.2 Test set-up

The EUT was placed on a wooden table, 0.8 meters height above the floor. The EUT was connected to adaptor and the Power of adaptor was fed through a 50 ohm/ 50 uH Artificial Mains Network (AMN). The ground plane was electrically bonded to the reference ground system and all power lines were filtered from ambient.

13.3 Measurement uncertainty

Conducted emission, quasi-peak detection : ± 2.93 dB

Conducted emission, average detection : ± 2.93 dB

Measurement uncertainty is calculated in accordance with WECC 19-1990. The measurement uncertainty is given with a confidence of 95% with the coverage factor, $k=2$.

13.4 Test equipment used

Model Number	Manufacturer	Description	Serial Number	Last Cal.
■ - ESHS10	Rohde & Schwarz	EMI Test Receiver	834467/007	May 19, 2005
■ - NSLK 8126	Schwarzbeck	AMN	8126-404	Aug, 10, 2005
■ - 3825/2	EMCO	AMN	9109-1867	July 18, 2005

All test equipment used is calibrated on a regular basis.

13.5 Test data

13.5.1 Operating condition: Data were continuously read and write by USB Port

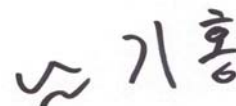
- Type of Test : FCC Class B
- Test Date : May 06, 2006
- Resolution bandwidth : 9 kHz
- Frequency range : 0.15MHz ~ 30MHz
- Test Result : PASSED BY -7.88 dB at 0.20 MHz with Peak Detector

Frequency (MHz)	Line	Peak (dBuV)		Margin (dB)
		Emission level	Q.P Limits	
0.20	H	55.73	63.61	-7.88
0.27	H	46.00	61.27	-15.27
0.40	H	39.40	57.85	-18.45
0.67	H	35.83	56.00	-20.17
2.61	N	40.52	56.00	-15.48
23.66	N	40.24	60.00	-19.76
Frequency (MHz)	Line	Average (dBuV)		Margin (dB)
		Emission level	Limits	
0.20	H	41.59	53.61	-12.02
0.27	H	33.32	51.27	-17.95
0.40	H	30.88	47.85	-16.97
2.61	N	28.97	46.00	-17.03

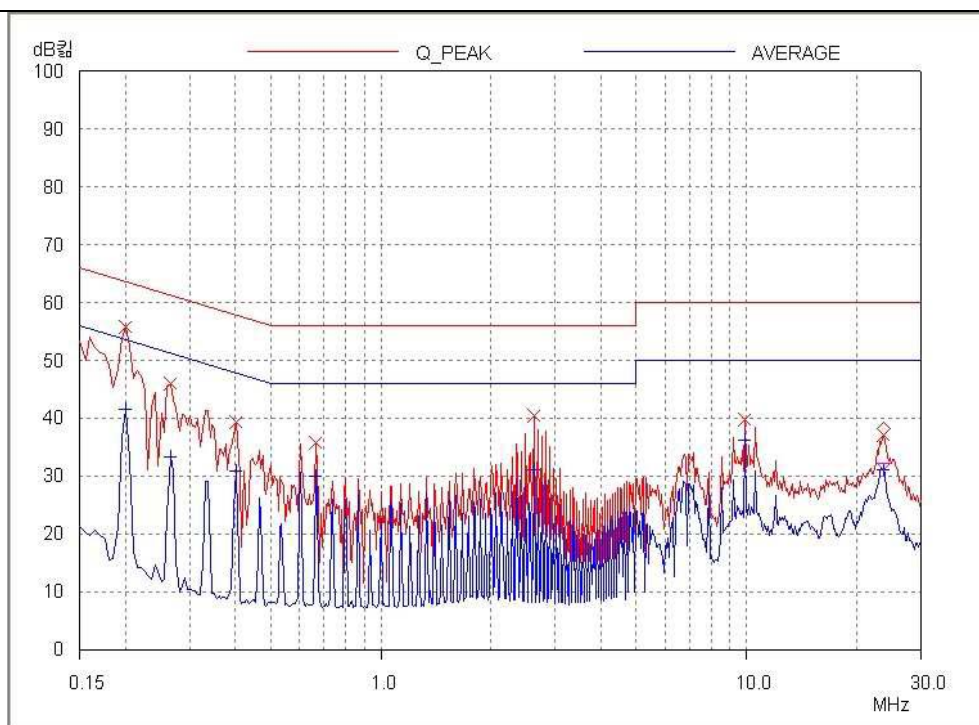
Line Conducted Emissions Tabulated Data

Remark : "H": Hot Line, "N": Neutral line

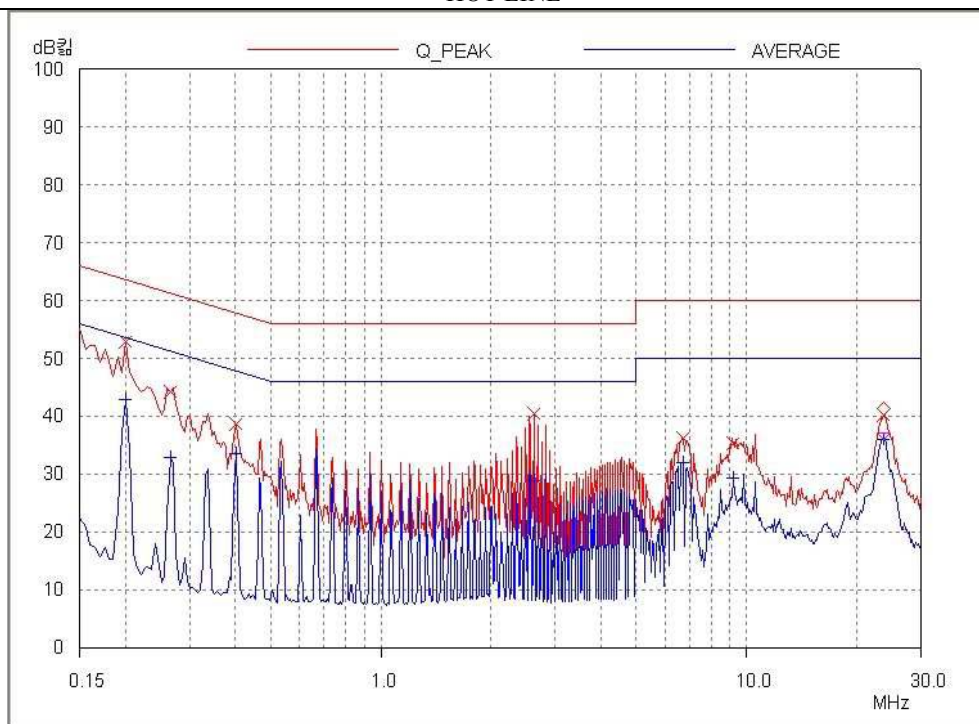
See next page for an overview sweep performed with peak and average detector.



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HOT LINE



NEUTRAL LINE

13.5.2 Operating condition: Wireless LAN mode

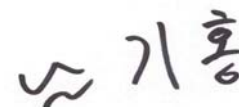
- Type of Test : FCC Class B
- Test Date : May 06, 2004
- Resolution bandwidth : 9 kHz
- Frequency range : 0.15MHz ~ 30MHz
- Test Result : PASSED BY -4.96 dB at 0.20 MHz with Peak Detector

Frequency (MHz)	Line	Peak (dBuV)		Margin (dB)
		Emission level	Q.P Limits	
0.20	N	58.65	63.61	-4.96
0.27	N	48.68	61.27	-12.59
0.33	N	42.65	59.45	-16.80
0.40	H	39.88	57.85	-17.97
23.88	H	38.89	60.00	-21.11
24.08	N	35.67	60.00	-24.33
Frequency (MHz)	Line	Average (dBuV)		Margin (dB)
		Emission level	Limits	
0.20	N	44.74	53.61	-8.87
0.27	N	33.39	51.27	-17.88
0.33	N	30.83	49.45	-18.62
0.40	H	27.23	47.85	-20.62

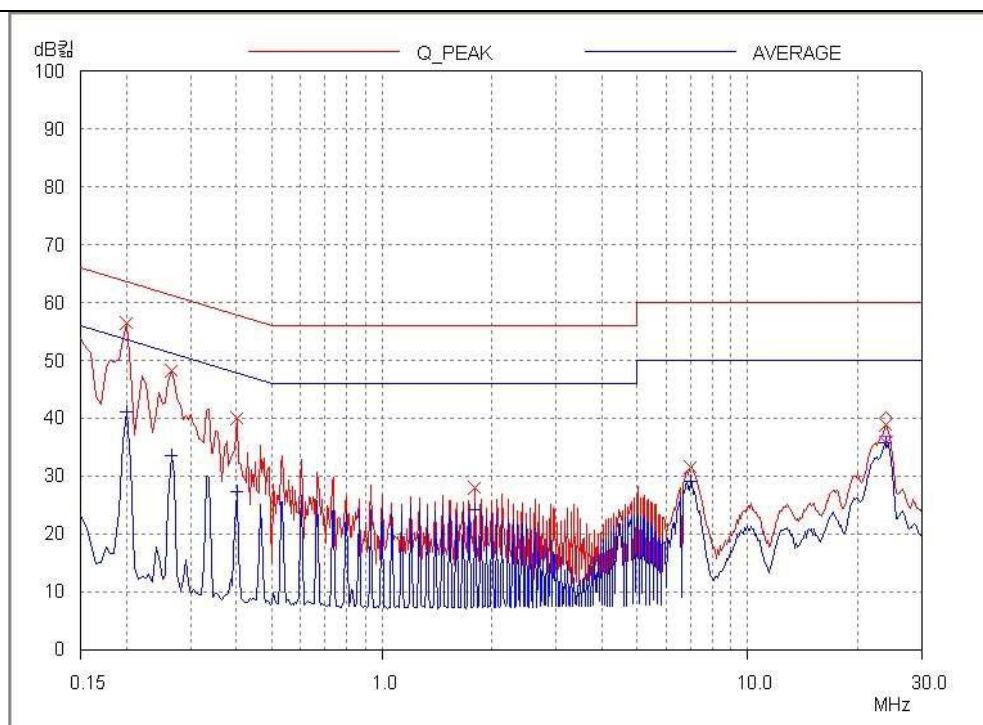
Line Conducted Emissions Tabulated Data

Remark : "H": Hot Line, "N": Neutral line

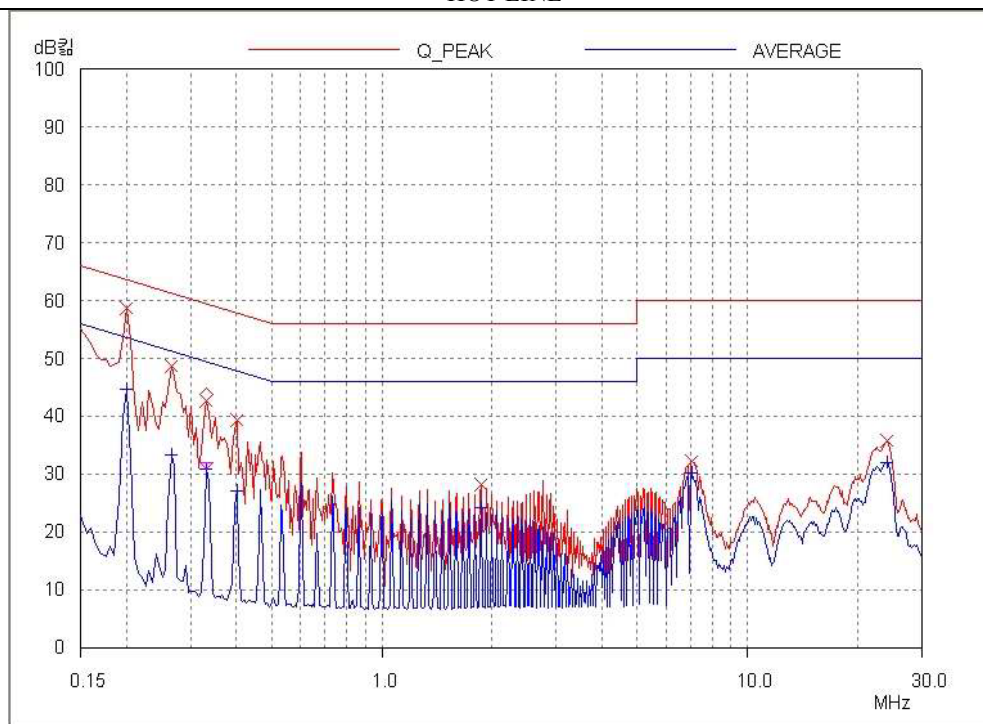
See next page for an overview sweep performed with peak and average detector.



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HOT LINE



NEUTRAL LINE