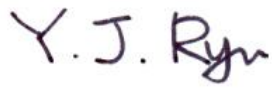


EMC TEST REPORT

Project No.	LBE073507	Revision No.	02
Applicant	Name of organization	Samsung Electronics Co., Ltd.	
	Address	416 Maetan 3-Dong, Yeongtong-Gu, Suwon-Si, Gyeonggi-Do 443-742 Korea	
	Date of application	2007.12.27	
EUT Equipment Under Test	Type of device	Class B personal computers and peripherals	
	Equipment authorization	☐ Declaration of Conformity ☒ Certification ☐ Verification	
	FCC ID	A3LML3471ND	
	Kind of product	Printer	
	Model No.	ML-3471ND	
		Variant Model No.	ML-3470D
	Manufacturer	1) Samsung Electronics Co.,Ltd. 259, Gongdan-Dong, Gumi-City, Gyeongsangbuk-Do, 730-030 Korea 2) Samsung Electronics(Shandong) Digital Printing Co., Ltd. 264209, Samsung Road, Weihai Hi-Tech IDZ, Shandong Province, China 3) Weihai Shin Heung Digital Electronics Co., Ltd. 98, Samsung Road, Weihai Hi- Tech. IDZ, Shandong Province, P.R.China	
Applied Standards		FCC Part 15, Subpart B / ANSI C63.4-2003	
Issue date		2008.01.10	
Test result : Complied The equipment under test has found to be compliant with the applied standards. (Refer to the attached test result for more detail.)			
Tested by : Young Ju, Ryu		Reviewed by : No Cheon, Park	
			

This report is the test result about the sphere accredited by KOLAS which signed the Mutual Recognition Arrangement of International Laboratory Accreditation Cooperation.
 The test results in this report only apply to the tested sample. This report must not be reproduced, except in full, without written permission from SEC EMC Laboratory.



SEC EMC Laboratory

416 Maetan 3-Dong, Yeongtong-Gu, Suwon-Si, Gyeonggi-Do, 443-742 Korea
 Tel: 82 31 277 7752, Fax: 82 31 277 7753

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1. Summary of test results

1.1 Emission

The EUT has been tested according to the following specifications:

Applied	Test type	Applied standard	Result	Remarks
☒	Conducted Disturbance	FCC Part 15 Subpart B	Complied	Meets Class B Limit Minimum margin is 12.2 dB at 0.150 MHz
☒	Radiated Disturbance		Complied	Meets Class B Limit Minimum margin is 5.5 dB at 215.724 MHz

2. General Information

2.1 Test facility

The SEC EMC Laboratory is located on Samsung Electronics Co., Ltd. at 416 Maetan 3-Dong, Yeongtong-Gu, Suwon-Si, Gyeonggi-Do, South Korea.

All testing are performed in Semi-anechoic chambers conforming to the site attenuation Characteristics defined by ANSI C63.4, CISPR 22, 16-1 and 16-2. and Shielded rooms.

The SEC EMC Laboratory is operated as testing laboratory in accordance with the requirements of ISO/IEC 17025:2005.

2.2 Accreditation and listing

Laboratory Qualifications		Remarks
	KOLAS(Korea Laboratory Accreditation Scheme)	Accredited : 124
	Radio Research Laboratory	Accredited : KR0004
	FCC(Federal Communications Commission)	Accredited : KR0004
	National Voluntary Laboratory Accreditation Program	Lab Code: 200623-0
	Norges Elektriske Materiekkontroll	Accredited : ELA 195
	VCCI (Voluntary Control Council for Interference by Information Technology Equipment)	C-2421,R-2224
	China Quality Certification Center	5-053, 5-054
	TUV Rhineland	H9354285
	GOST(GOSTSTANDART)	ROSTEST
	Elektrotechnicky Zkusebni Ustav	Reg. No.: 001
	IC(Industry Canada)	Assigned Code: 5871

3. Test Setup configuration

3.1 Test Peripherals

The following is a listing of the EUT and peripherals utilized during the performance of EMC test:

Description	Model No.	Serial No.	Manufacturer	FCC ID
Printer	ML-3471ND	-	Samsung	A3LML3471ND
Note PC	PP01X	CN-03J010-12961-2 9N-2853	Dell	DoC
AC Adapter	ADP-90FB	TH-06G356-17971-2 9C-27ET	Delta	-
USB Mouse	IntelliMouse	2332227-9	Dell	DoC

3.2 EUT operating mode

To achieve compliance applied standard specification, the following mode(s) were made during compliance testing:

Operating Mode 1	USB Printing
Operating Mode 2	Parallel Printing
Operating Mode 3	LAN Printing
Operating Mode 4	Standby

3.3 Details of Sampling

Customer selected, single unit.

3.4 Used cable description

The EUT is configured, installed, arranged and operated in a manner consistent with typical applications. Interface cables/loads/devices are connected to at least one of each type of interface port of the EUT, and where practical, each cable shall be terminated in a device typical of actual usage. The type(s) of interconnecting cables to be used and the interface port (of the EUT) to which these were connected;

Connected cable	Length [m]	Shielded [Y/N]	Note
Power	1.8	No	-
USB	1.8	Yes	From PC to EUT From PC to Mouse
LPT	1.8	Yes	From PC to EUT

3.5 EUT Description

The following features describe EUT represented by this report:

Item	Specification	Remarks
Print Speed	Black and White : Up to 33 PPM in A4(35 PPM in Letter)	-
Resolution	Printer: Up to 1200 x 1200 dpi(effective output)	-
First print out time	From Standby Mode : Less than 8.5 seconds From ColdBoot : Less than 25 seconds	-
Warm-up time	Less than 15 seconds	-
Power Rating	110 ~ 127 VAC, 6.5A, 50/60 Hz	-
Power Consumption	Printing : 600 W Power Save mode : Less than 10 W	-
Noise Level	Printing mode: Less than 54 dBA Standby mode : Less than 39 dBA Warm-up: Less than 50dBA	-
Consumable life	Black Toner Cartridge : Approx. 4,000 A4/Letter pages at 5% Coverage	-
Duty cycle (Max. Monthly Volume)	Print: 20,000 pages	-
Weight	12.7 kg (including consumables)	-
Package weight	3.1 kg	-
External dimensions (W x D x H)	400 x 435 x 284 mm(15.7 x 17.1 x 11.2 in)	-
Operating Environment	Temperature : 10 ~ 32 °C (50 ~ 90 °F) Humidity : 20 ~ 80 % RH	-
Printer Language	PCL6, PostScript3, PCL5e	-
Memory	64MB (MAX320MB)	-
Interface	USB 2.0, IEEE1284, Ethernet 10/100 Base TX, WLAN	-
OS compatibility	- Windows 98/Me/NT4.0/2000/XP(32/64bit)/2003 Server(32/64bit) - Mac OS 8.6~9.2/10.1~10.4 - Various Linux OS including Red Hat 8~9, Fedora Core 1~4, - Mandrake 9.2~10.1, and SuSE 8.2~9.2 - NetWare 4.x, 5.x, 6.x - Unix HP-UX, Solaris, SunOS, SCO UNIX	-

3.6 Clock Frequencies

Kind of Clocks	Frequency[MHz]	Kind of Clocks	Frequency[MHz]
Main Source	12	Video	12
CPU Internal	400	SDRAM	100
USB Device	12	Network Device	25

3.7 Operating mode condition

The system was configured for testing in typical fashion use. Cable were attached to each of the available I/O port. Where applicable, peripherals were attached to the I/O cables.
This EUT is supporting the USB, Parallel and Network(LAN) printing.

- Test Voltage : AC 120 V, 60 Hz

3.8 Measurement uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus: (According to CISPR 16-4 and UKAS Lab 34.)

3.8.1 Emission

Test type		Measurement uncertainty (C.L. 95 %, k = 2)
Conducted disturbance	Mains Port	± 2.8 dB
Radiated disturbance	Horizontal	± 5.1 dB
	Vertical	± 5.09 dB

4. Results of individual test

4.1 Conducted disturbance

Both conducted lines are measured in Quasi-Peak and Average mode, including the worst-case data points for each tested configuration.

The EUT measured in accordance with the methods described in standards.

Limits for conducted disturbance at mains ports of class A

Frequency range Limits MHz	Limits dB(μ V)	
	Quasi-peak	Average
0,15 to 0,50	79	66
0,50 to 30	73	60

Note 1: 1 μ V is regarded as 0 dB.
Note 2: If the average limit is met in the measurement with quasi-peak detector, the measurement with average detector at the same frequency is unnecessary.
Note 3: The lower limit shall apply at the transition frequency.

Limits for conducted disturbance at the mains ports of class B

Frequency range Limits MHz	Limits dB(μ V)	
	Quasi-peak	Average
0,15 to 0,50	66 to 56	56 to 46
0,50 to 5	56	46
5 to 30	60	50

Note 1: 1 μ V is regarded as 0 dB.
Note 2: The limits shall decreases linearly with the logarithm of the frequency in the range 150 - 500 kHz.
Note 3: If the average limit is met in the measurement with quasi-peak detector, the measurement with average detector is unnecessary.
Note 4: The lower limit shall apply at the transition frequency.

4.1.1 Test instrumentation

Test instrumentation used in the Conducted disturbance test was as follows:

Test instrumentation	Model name	Manufacturer	Serial or Firmware (No./Ver.)	Calibration	
				Date	Interval (Month)
Test Software	EMC 32	R&S	Ver 5.20.2	N/A	N/A
Measuring receiver	ESCI	R&S	100368	2007-06-01	12
Artificial mains network	ENV216	R&S	100117	2007-09-03	12
Artificial mains network	ESH3-Z5	R&S	100262	2007-09-03	12

4.1.2 Photograph of the test Configuration

(Front)



(Rear)



4.1.3 Test results

Operating condition	USB Printing			
Test date	2008-01-04	Test engineer		Young Ju, Ryu
Climate condition	Ambient temperature	24.4 °C	Relative humidity	31 %
	Atmospheric pressure	101.9 kPa		
Test place	Shielded room #1			
Note	* QP : Quasi-peak, AV: Average * Level (QP or AV) = Meter Reading(QP or AV) + Corr.(LISN Insertion loss + Cable loss) * Margin = Limit - Level			

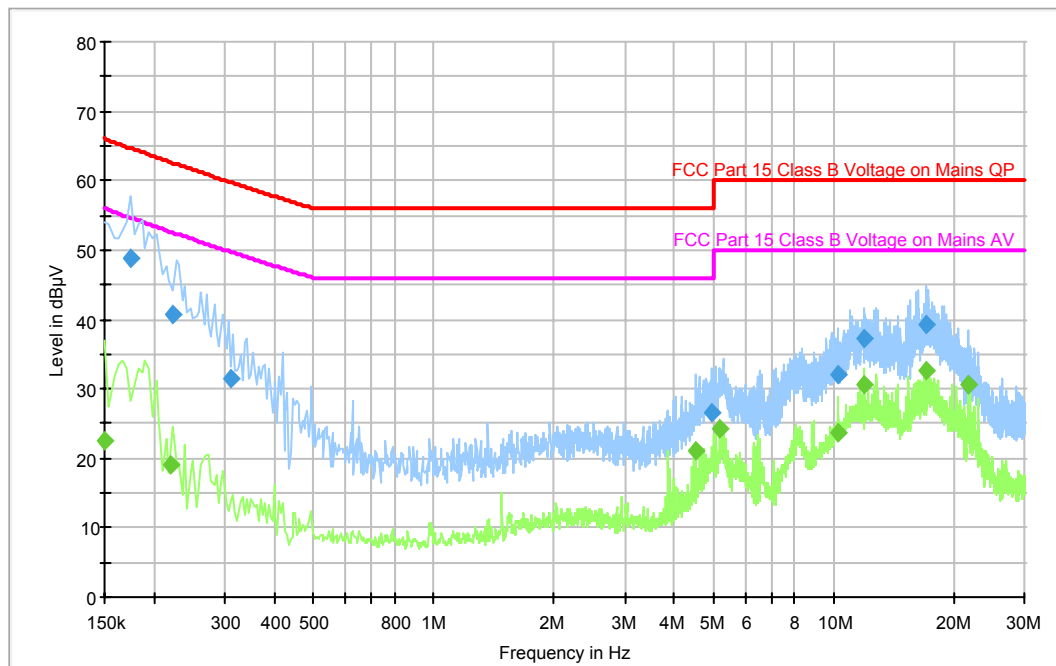
Scan Setup: FCC Part 15 Class_B with ENV 2-Line-LISN fin [EMI conducted]

Hardware Setup:
Level Unit:

Voltage with ENV 2-Line-LISN
dB μ V

Subrange	Detectors	IF Bandwidth	Meas. Time	Receiver
150kHz - 30MHz	QuasiPeak; Average	9kHz	15s	ESC1 3

FCC Part 15 Class_B with ENV 2-Line-LISN



Final Measurement Detector 2

Frequency (MHz)	Average (dB μ V)	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
0.150 000	22.6	L1	9.6	33.4	56.0
0.218 500	19.0	L1	9.6	33.7	52.7
4.540 500	21.1	N	9.8	24.9	46.0
5.168 500	24.1	L1	9.8	25.9	50.0
10.311 500	23.6	L1	9.9	26.4	50.0
11.892 500	30.5	N	10.0	19.5	50.0
17.068 500	32.5	N	10.1	17.5	50.0
21.664 500	30.5	N	10.2	19.5	50.0

Final Measurement Detector 1

Frequency (MHz)	QuasiPeak (dB μ V)	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
0.174 500	48.9	N	9.6	15.8	64.7
0.222 500	40.9	L1	9.6	21.7	62.5
0.310 500	31.3	L1	9.6	28.4	59.8
4.956 500	26.6	L1	9.8	29.4	56.0
10.284 500	32.1	L1	9.9	27.9	60.0
11.952 500	37.2	L1	10.0	22.8	60.0
17.068 500	39.4	L1	10.1	20.6	60.0
21.668 500	30.7	N	10.2	29.3	60.0

Operating condition	Parallel Printing			
Test date	2008-01-04	Test engineer		Young Ju, Ryu
Climate condition	Ambient temperature	24.4 ℃	Relative humidity	31 %
	Atmospheric pressure	101.9 kPa		
Test place	Shielded room #1			
Note	* QP : Quasi-peak, AV: Average * Level (QP or AV) = Meter Reading(QP or AV) + Corr.(LISN Insertion loss + Cable loss) * Margin = Limit - Level			

Scan Setup: FCC Part 15 Class_B with ENV 2-Line-LISN fin [EMI conducted]

Hardware Setup:
Level Unit:

Voltage with ENV 2-Line-LISN
dB μ V

Subrange
150kHz - 30MHz

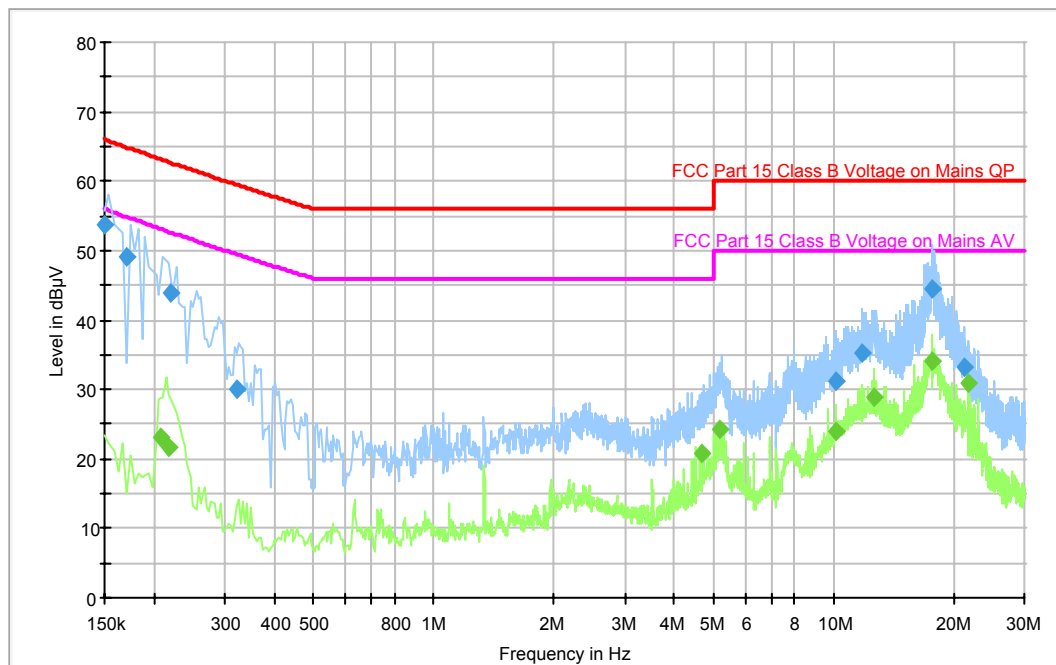
Detectors
QuasiPeak; Average

IF Bandwidth
9kHz

Meas. Time
15s

Receiver
ESCI 3

FCC Part 15 Class_B with ENV 2-Line-LISN



Final Measurement Detector 1

Frequency (MHz)	QuasiPeak (dB μ V)	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
0.150 000	53.8	L1	9.6	12.2	66.0
0.170 500	49.2	N	9.6	15.7	64.9
0.218 500	44.0	N	9.6	18.7	62.7
0.322 500	30.0	N	9.6	29.4	59.5
10.172 500	31.2	N	9.9	28.8	60.0
11.815 500	35.2	L1	10.0	24.8	60.0
17.643 500	44.5	N	10.1	15.5	60.0
21.116 500	33.3	N	10.2	26.7	60.0

Final Measurement Detector 2

Frequency (MHz)	Average (dB μ V)	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
0.206 500	23.2	N	9.6	30.0	53.2
0.217 500	21.8	N	9.6	30.9	52.7
4.680 500	20.9	N	9.8	25.1	46.0
5.168 500	24.2	N	9.8	25.8	50.0
10.120 500	23.8	L1	9.9	26.2	50.0
12.687 500	28.9	L1	10.0	21.1	50.0
17.588 500	34.1	N	10.1	15.9	50.0
21.664 500	30.8	N	10.2	19.2	50.0

Operating condition	LAN Printing			
Test date	2008-01-04	Test engineer		Young Ju, Ryu
Climate condition	Ambient temperature	24.4 ℃	Relative humidity	31 %
	Atmospheric pressure	101.9 kPa		
Test place	Shielded room #1			
Note	* QP : Quasi-peak, AV: Average * Level (QP or AV) = Meter Reading(QP or AV) + Corr.(LISN Insertion loss + Cable loss) * Margin = Limit - Level			

Scan Setup: FCC Part 15 Class_B with ENV 2-Line-LISN fin [EMI conducted]

Hardware Setup:
Level Unit:

Voltage with ENV 2-Line-LISN
dB μ V

Subrange
150kHz - 30MHz

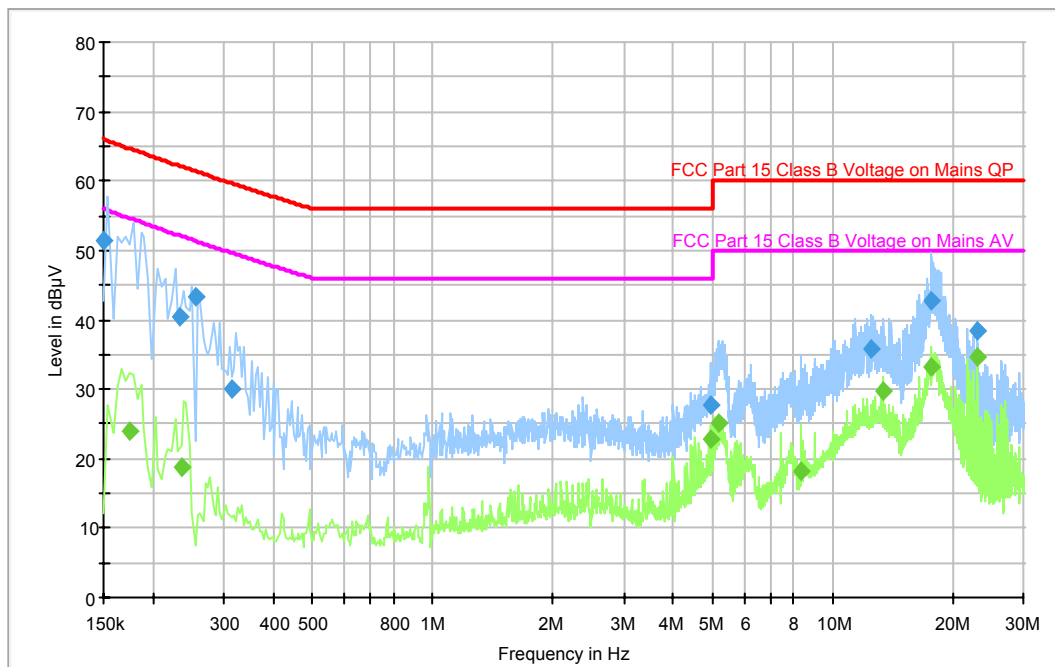
Detectors
QuasiPeak; Average

IF Bandwidth
9kHz

Meas. Time
15s

Receiver
ESCI 3

FCC Part 15 Class_B with ENV 2-Line-LISN



Final Measurement Detector 1

Frequency (MHz)	QuasiPeak (dB μ V)	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
0.150 000	51.4	N	9.6	14.6	66.0
0.233 500	40.5	N	9.6	21.7	62.1
0.254 500	43.3	N	9.6	18.1	61.4
0.314 500	30.0	L1	9.6	29.6	59.7
4.964 500	27.8	L1	9.8	28.2	56.0
12.536 500	35.8	N	10.0	24.2	60.0
17.672 500	42.7	N	10.1	17.3	60.0
23.128 500	38.5	N	10.3	21.5	60.0

Final Measurement Detector 2

Frequency (MHz)	Average (dB μ V)	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
0.173 500	24.0	L1	9.6	30.7	54.7
0.234 500	18.7	N	9.6	33.4	52.1
4.964 500	22.9	L1	9.8	23.1	46.0
5.172 500	25.1	N	9.8	24.9	50.0
8.332 500	18.1	L1	9.9	31.9	50.0
13.420 500	29.7	N	10.0	20.3	50.0
17.675 500	33.3	N	10.1	16.7	50.0
23.128 500	34.7	N	10.3	15.3	50.0

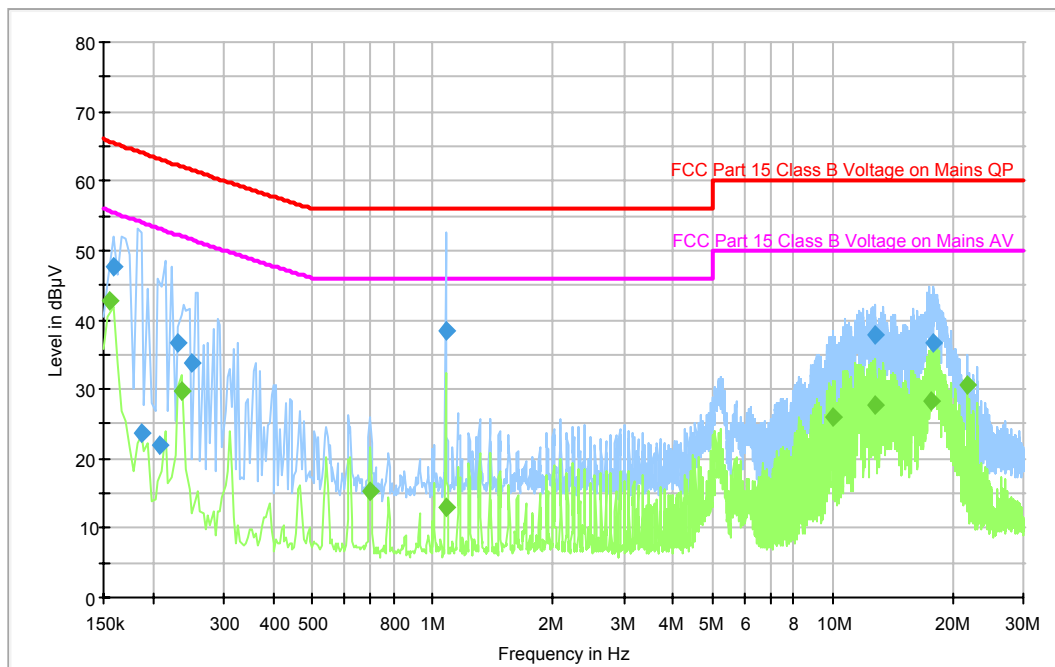
Operating condition	Standby			
Test date	2008-01-04	Test engineer		Young Ju, Ryu
Climate condition	Ambient temperature	24.4 ℃	Relative humidity	31 %
	Atmospheric pressure	101.9 kPa		
Test place	Shielded room #1			
Note	* QP : Quasi-peak, AV: Average * Level (QP or AV) = Meter Reading(QP or AV) + Corr.(LISN Insertion loss + Cable loss) * Margin = Limit - Level			

Scan Setup: FCC Part 15 Class_B with ENV 2-Line-LISN fin [EMI conducted]

Hardware Setup: Voltage with ENV 2-Line-LISN
Level Unit: dB μ V

Subrange	Detectors	IF Bandwidth	Meas. Time	Receiver
150kHz - 30MHz	QuasiPeak; Average	9kHz	15s	ESCI 3

FCC Part 15 Class_B with ENV 2-Line-LISN



Final Measurement Detector 1

Frequency (MHz)	QuasiPeak (dB μ V)	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
0.158 500	47.7	N	9.6	17.9	65.5
0.186 500	23.8	N	9.6	40.3	64.1
0.206 500	21.8	N	9.6	41.4	63.2
0.229 500	36.7	N	9.6	25.6	62.3
0.250 500	33.8	N	9.6	27.8	61.5
1.084 500	38.5	L1	9.7	17.5	56.0
12.736 500	38.0	L1	10.0	22.0	60.0
17.892 500	36.8	L1	10.1	23.2	60.0

Final Measurement Detector 2

Frequency (MHz)	Average (dB μ V)	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
0.154 500	42.6	N	9.6	13.1	55.7
0.234 500	29.8	N	9.6	22.3	52.1
0.694 500	15.3	L1	9.7	30.7	46.0
1.083 500	13.0	L1	9.7	33.0	46.0
10.000 500	26.1	N	9.9	23.9	50.0
12.739 500	27.8	L1	10.0	22.2	50.0
17.648 500	28.4	L1	10.1	21.6	50.0
21.664 500	30.5	N	10.2	19.5	50.0

4.2 Radiated disturbance

Of those disturbances above ($L - 20\text{dB}$), where L is the limit level in logarithmic units, record at least the disturbance levels and the frequencies of the six highest disturbances.

The following data lists the significant emission frequencies, measured levels, correction factors (for antenna and cables), orientation of table, polarization and height of antenna, the corrected reading, the limit, and the amount of margin. All measurements were taken utilizing quasi-peak detection unless stated otherwise.

Measurements were performed at an antenna to EUT distance of 10 meters and elevated between 1 and 4 meters. Both vertical and horizontal antenna polarizations were measured.

Limits for radiated disturbance of ITE at a measuring distance of 10 m

Frequency range Limits MHz	Quasi-peak Limits dB dB($\mu\text{V/m}$)	
	Class A	Class B
30 to 230	40	30
230 to 1000	47	37

Note 1: The lower limit shall apply at the transition frequency.
Note 2: Additional provisions may be required for cases where interference occurs.
Note 3: 1 $\mu\text{V/m}$ is regarded as 0 dB.

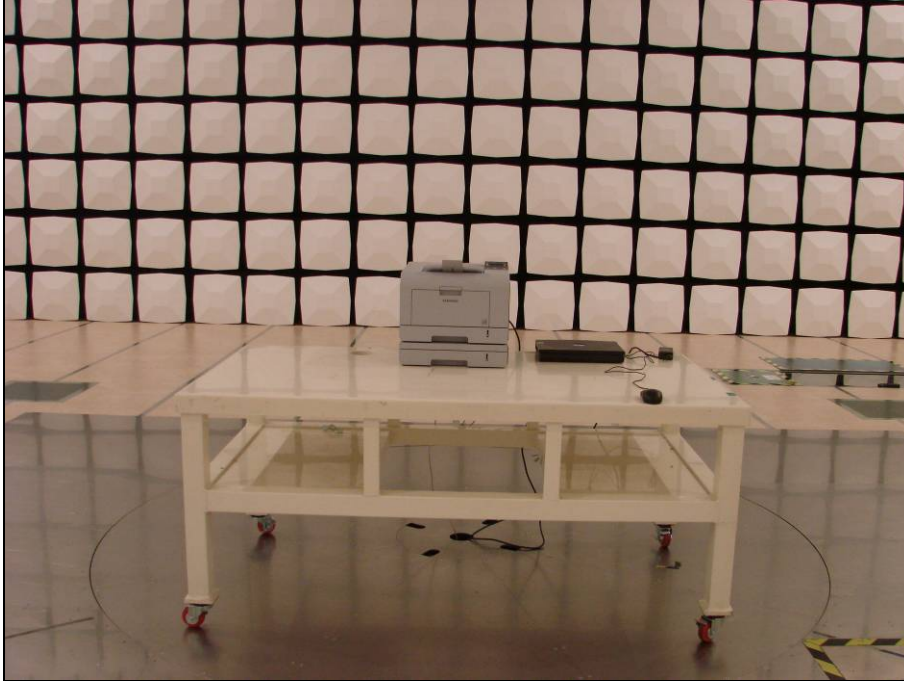
4.2.1 Test instrumentation

Test instrumentation used in the Radiated disturbance was as follows:

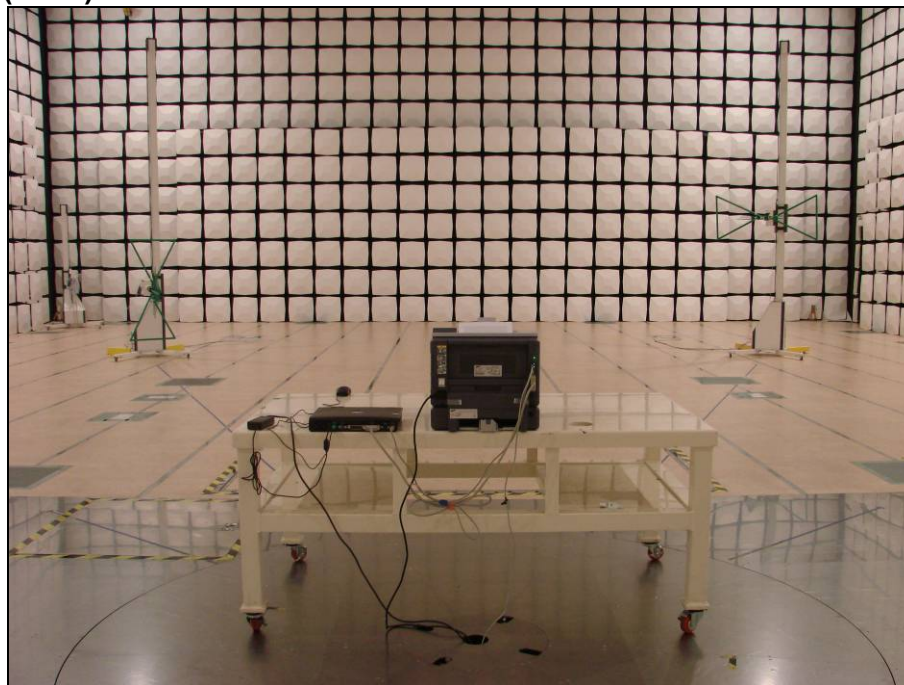
Test instrumentation	Model name	Manufacturer	Serial or Firmware (No./Ver.)	Calibration	
				Date	Interval (Month)
Bi-con Antenna	CBL6112D	SCHAFFNER	22602	2006-06-26	24
Bi-con Antenna	CBL6112D	SCHAFFNER	22601	2007-04-02	24
EMI Receiver	ESIB-26	R&S	100289	2007-03-22	12
EMI Receiver	ESIB-26	R&S	100287	2007-04-10	12
AMPLIFIER	310N	SONOMA	186467	2007-03-17	12
AMPLIFIER	310N	SONOMA	251673	2007-03-17	12
Ant Mast	MA4000	INN CO	-	N/A	N/A
Ant Mast	MA4000	INN CO	-	N/A	N/A
Mast Controller	CO2000	INN CO	-	N/A	N/A
Test software	EP5/RE	TOYO	VER 3.1.20	N/A	N/A
RF Selector	NS4900	TOYO	-	N/A	N/A

4.2.2 Photograph of the test Configuration

(Front)

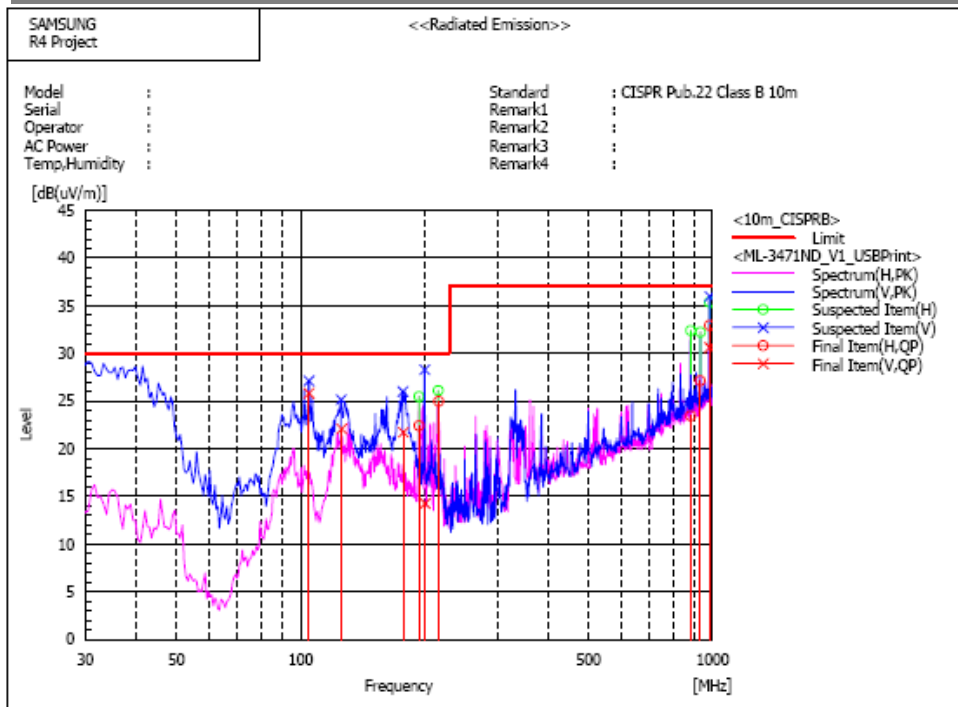


(Rear)



4.2.3 Test results (30 MHz ~ 1 GHz)

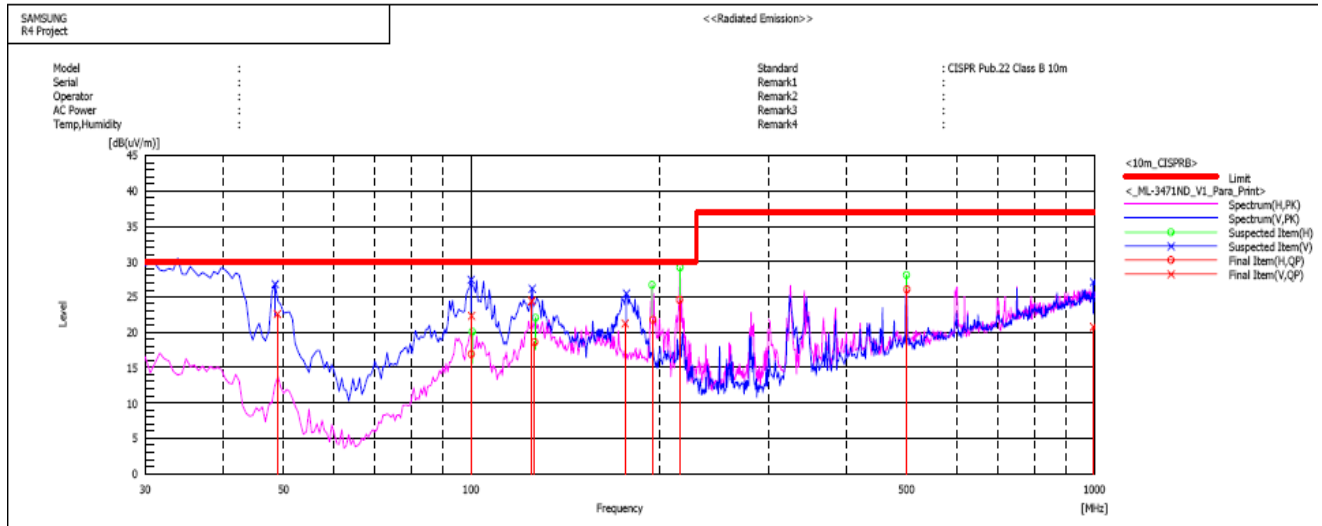
Operating condition	USB Printing			
Test date	2007-12-27	Test engineer		Young Ju, Ryu
Climate condition	Ambient temperature	24.1 ℃	Relative humidity	32 %
	Atmospheric pressure	101.9 kPa		
Test place	10m Semi-Anechoic Chamber #1			
Note	* Receiving antenna mode : Horizontal, Vertical * Test distance : 10 m (RF Semi Anechoic Chamber) * Result = Reading + c.f (Antenna factor + Cable loss- Amp Gain) * Margin = Limit – Result			



Final Result

No.	Frequency (P)	Reading	c.f	Result	Limit	Margin	Height	Angle	System
	[MHz]	[dB(uV)]	[dB(1/m)]	[dB(uV/m)]	[dB(uV/m)]	[dB]	[cm]	[deg]	
1	194.053	H 42.4	-20.0	22.4	30.0	7.6	226.0	50.8	1
2	104.753	V 44.4	-18.6	25.8	30.0	4.2	109.0	283.3	2
3	216.644	H 44.9	-19.9	25.0	30.0	5.0	400.0	235.3	1
4	125.780	V 40.1	-18.0	22.1	30.0	7.9	106.0	271.1	2
5	884.738	H 27.0	-3.5	23.5	37.0	13.5	301.0	312.9	1
6	177.453	V 41.1	-19.4	21.7	30.0	8.3	133.0	324.1	2
7	933.893	H 29.7	-2.6	27.1	37.0	9.9	323.0	249.0	1
8	200.417	V 34.7	-20.4	14.3	30.0	15.7	155.0	321.5	2
9	983.103	H 34.5	-1.5	33.0	37.0	4.0	322.0	239.6	1
10	983.089	V 31.9	-1.2	30.7	37.0	6.3	224.0	18.4	2

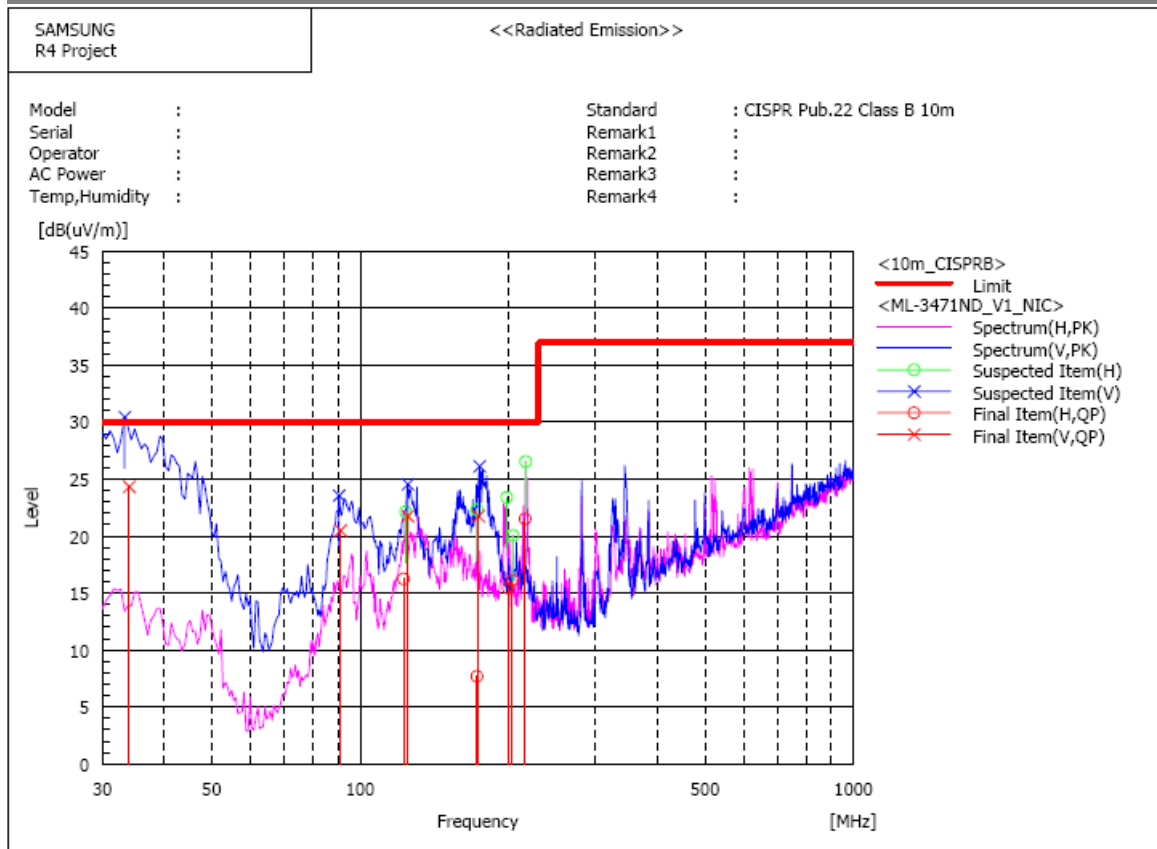
Operating condition	Parallel Printing			
Test date	2007-12-27	Test engineer		Young Ju, Ryu
Climate condition	Ambient temperature	24.1 ℃	Relative humidity	32 %
	Atmospheric pressure	101.9 kPa		
Test place	10m Semi-Anechoic Chamber #1			
Note	* Receiving antenna mode : Horizontal, Vertical * Test distance : 10 m (RF Semi Anechoic Chamber) * Result = Reading + c.f (Antenna factor + Cable loss- Amp Gain) * Margin = Limit – Result			



Final Result

No.	Frequency [MHz]	(P)	Reading QP [dB(uV)]	c.f [dB(1/m)]	Result QP [dB(uV/m)]	Limit [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]	System	Remark
1	100.089	H	35.7	-18.8	16.9	30.0	13.1	400.0	294.8	1	
2	126.461	H	35.7	-17.1	18.6	30.0	11.4	367.0	101.7	1	
3	48.843	V	45.5	-22.9	22.6	30.0	7.4	158.0	99.7	2	
4	195.693	H	41.6	-19.9	21.7	30.0	8.3	379.0	40.5	1	
5	100.094	V	41.5	-19.2	22.3	30.0	7.7	158.0	358.3	2	
6	215.724	H	44.4	-19.9	24.5	30.0	5.5	272.0	262.1	1	
7	125.011	V	42.4	-18.0	24.4	30.0	5.6	132.0	51.9	2	
8	176.376	V	40.7	-19.4	21.3	30.0	8.7	100.0	336.8	2	
9	499.977	H	35.0	-8.9	26.1	37.0	10.9	183.0	259.8	1	
10	995.785	V	21.7	-0.9	20.8	37.0	16.2	265.0	359.1	2	

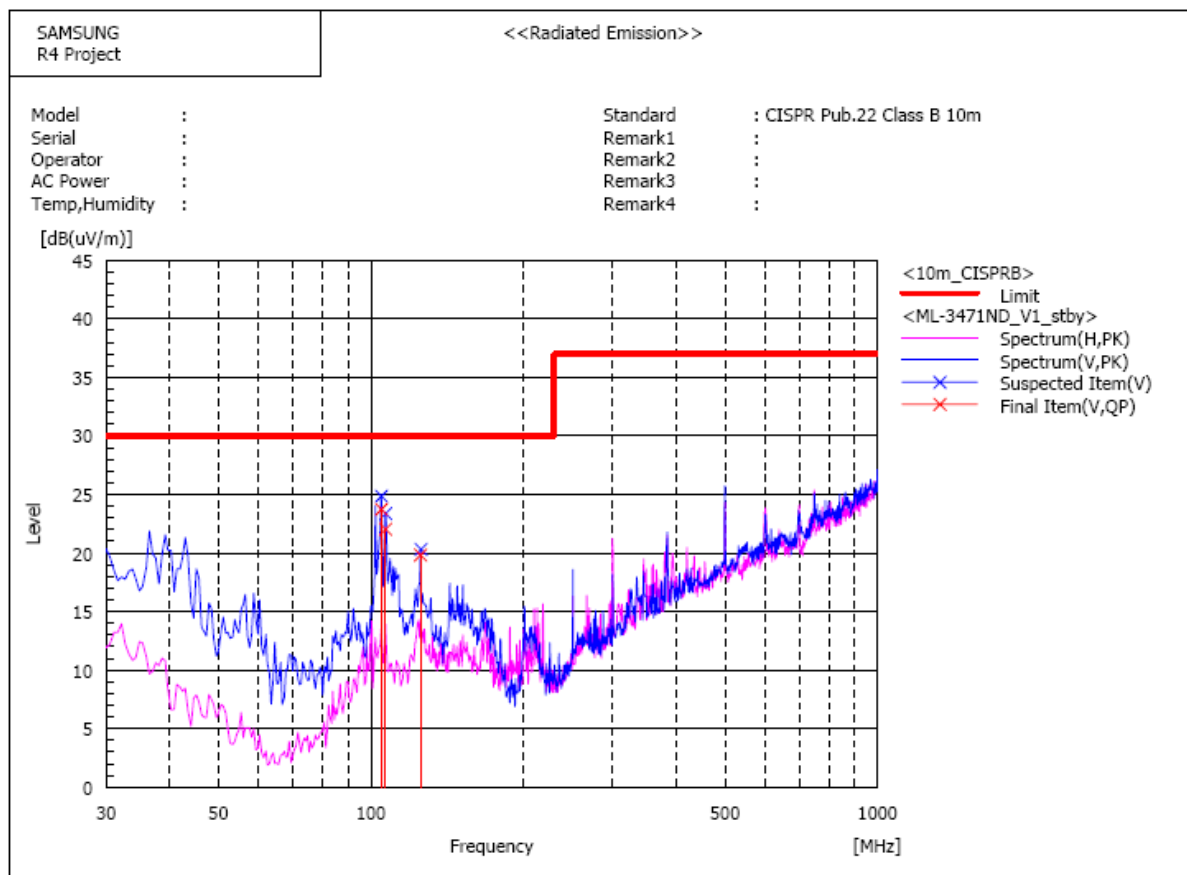
Operating condition	LAN Printing			
Test date	2007-12-27	Test engineer		Young Ju, Ryu
Climate condition	Ambient temperature	24.1 ℃	Relative humidity	32 %
	Atmospheric pressure	101.9 kPa		
Test place	10m Semi-Anechoic Chamber #1			
Note	* Receiving antenna mode : Horizontal, Vertical * Test distance : 10 m (RF Semi Anechoic Chamber) * Result = Reading + c.f (Antenna factor + Cable loss- Amp Gain) * Margin = Limit – Result			



Final Result

No.	Frequency [MHz]	(P)	Reading QP [dB(uV)]	c.f [dB(1/m)]	Result QP [dB(uV/m)]	Limit [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]	System
1	122.273	H	33.5	-17.2	16.3	30.0	13.7	353.0	84.0	1
2	91.069	V	41.2	-20.7	20.5	30.0	9.5	100.0	347.0	2
3	172.410	H	27.3	-19.6	7.7	30.0	22.3	392.0	221.4	1
4	124.752	V	39.8	-18.0	21.8	30.0	8.2	132.0	281.6	2
5	199.491	H	35.2	-19.8	15.4	30.0	14.6	392.0	53.3	1
6	173.671	V	41.3	-19.5	21.8	30.0	8.2	100.0	334.2	2
7	203.274	H	36.0	-19.9	16.1	30.0	13.9	308.0	23.9	1
8	215.713	H	41.4	-19.9	21.5	30.0	8.5	362.0	207.0	1
9	33.990	V	39.9	-15.5	24.4	30.0	5.6	119.0	1.9	2

Operating condition	Standby			
Test date	2007-12-27	Test engineer		Young Ju, Ryu
Climate condition	Ambient temperature	24.1 °C	Relative humidity	32 %
	Atmospheric pressure	101.9 kPa		
Test place	10m Semi-Anechoic Chamber #1			
Note	* Receiving antenna mode : Horizontal, Vertical * Test distance : 10 m (RF Semi Anechoic Chamber) * Result = Reading + c.f (Antenna factor + Cable loss- Amp Gain) * Margin = Limit – Result			

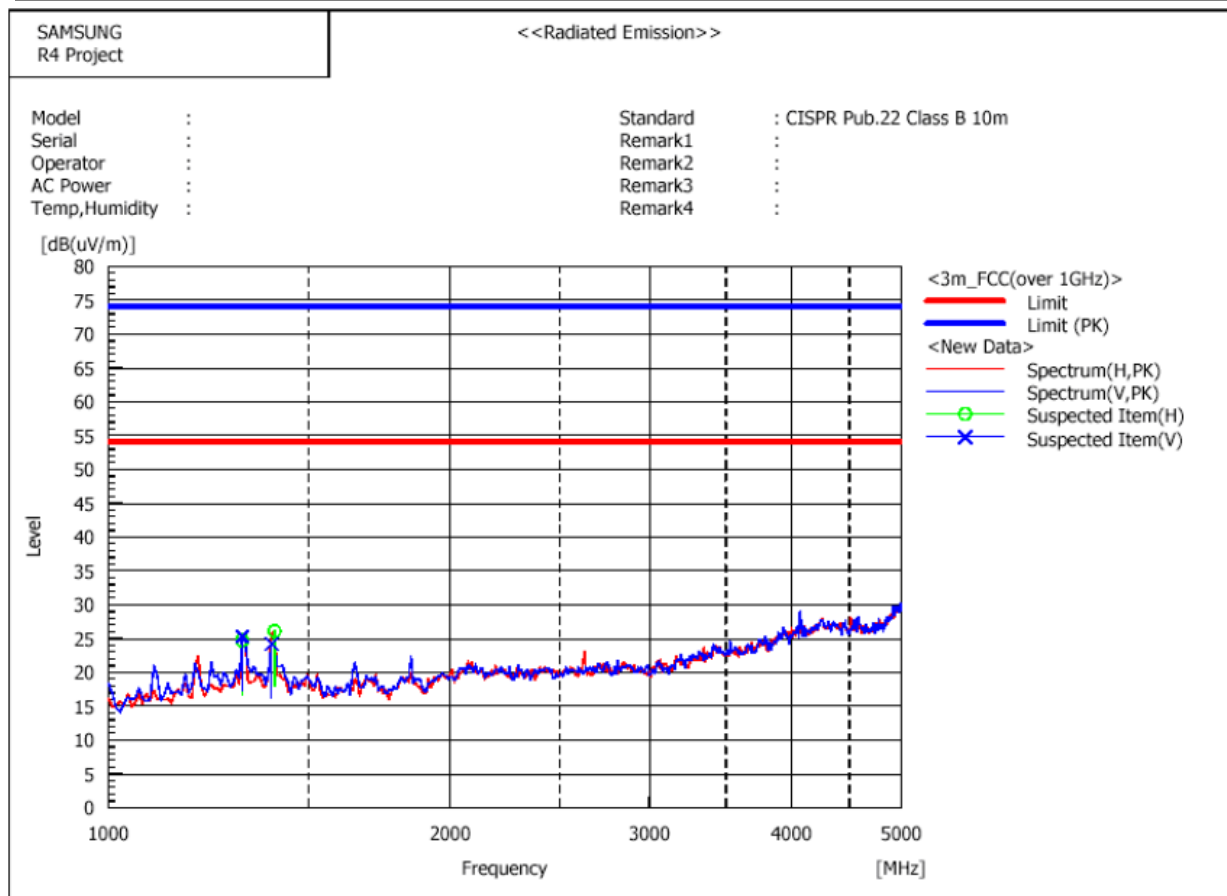


Final Result

No.	Frequency [MHz]	(P)	Reading QP [dB(μV)]	c.f [dB(1/m)]	Result QP [dB(μV/m)]	Limit [dB(μV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]	System
1	104.737	V	42.3	-18.6	23.7	30.0	6.3	133.0	245.7	2
2	108.712	V	40.5	-18.4	22.1	30.0	7.9	132.0	248.3	2
3	125.008	V	37.8	-18.0	19.8	30.0	10.2	111.0	359.5	2

4.2.4 Test results (1 GHz ~ 5 GHz)

Operating condition	USB Printing			
Test date	2007-12-27	Test engineer		Young Ju, Ryu
Climate condition	Ambient temperature	24.1 ℃	Relative humidity	32 %
	Atmospheric pressure	101.9 kPa		
Test place	10m Semi-Anechoic Chamber #1			
Note	* Receiving antenna mode : Horizontal, Vertical * Test distance : 3 m (RF Semi Anechoic Chamber) * Result = Reading + c.f (Antenna factor + Cable loss- Amp Gain) * Margin = Limit – Result			



Spectrum Selection

No.	Frequency [MHz]	(P)	Reading [dB(uV)]	c.f [dB(1/m)]	Result PK [dB(uV/m)]	Limit [dB(uV/m)]	Margin [dB]	Height [cm]	Angle [deg]
1	1312.625	V	36.4	-11.1	25.3	54.0	28.7	100.0	222.3
2	1312.625	H	35.8	-11.1	24.7	54.0	29.3	100.0	321.4
3	1392.786	V	34.9	-10.7	24.2	54.0	29.8	100.0	63.2
4	1400.802	H	36.8	-10.7	26.1	54.0	27.9	200.0	299.2

Appendix – EUT photography

Front View



Rear View



Label Location



Label

 Samsung Electronics Co., Ltd. Suwon, Korea, 443-742 Place: M264	Model: ML-3471ND Volts: AC 110-127V Hertz: 50/60 Hz Amps: 6.5A Manufactured:	FCC ID : A3LML3471ND (Printer) FCC ID : A3LSWL-2460C (WLAN) This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: i) This device may not cause harmful interference, and ii) This device must accept any interference received, including interference that may cause undesired operation. This Class B digital apparatus meets all requirements of the Canadian interference-Causing Equipment Regulations. Cet appareil numérique de la class B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada. Canadian Certification Number(RSS-210): 649E-SWL2460C (WLAN) This Class B digital apparatus complies with Canadian ICES-003 Cet appareil numérique de la classe "B" est Conforme à la norme NMB-003 du Canada. This product complies with 21 CFR Chapter 1, subchapter J.
	 51Y7 E149091 I.T.E.	
	S/N	MADE IN KOREA REV.00

 Samsung Electronics Co., Ltd. Suwon, Korea, 443-742 Place: M264	Model: ML-3470D Volts: AC 110-127V Hertz: 50/60 Hz Amps: 6.5A Manufactured:	FCC ID : A3LML3471ND (Printer) This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: i) This device may not cause harmful interference, and ii) This device must accept any interference received, including interference that may cause undesired operation. This Class B digital apparatus meets all requirements of the Canadian interference-Causing Equipment Regulations. Cet appareil numérique de la class B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada. This Class B digital apparatus complies with Canadian ICES-003 Cet appareil numérique de la classe "B" est Conforme à la norme NMB-003 du Canada. This product complies with 21 CFR Chapter 1, subchapter J.
	 51Y7 E149091 I.T.E.	
	S/N	MADE IN KOREA REV.00