

# EMC TEST REPORT

<b>Project No.</b>	LBE080132	<b>Issue No.</b>	1
<b>Applicant</b>	<b>Name of organization</b>	Samsung Electronics Co., Ltd.	
	<b>Address</b>	416 Maetan 3-Dong, Yeongtong-Gu, Suwon-Si, Gyeonggi-Do 443-742 Korea	
	<b>Date of application</b>	2008. 01. 15	
<b>EUT Equipment Under Test</b>	<b>Type of device</b>	Class B personal computers and peripherals	
	<b>Equipment authorization</b>	<input type="checkbox"/> Declaration of Conformity <input checked="" type="checkbox"/> Certification <input type="checkbox"/> Verification	
	<b>FCC ID</b>	A3LSCX4500W	
	<b>Kind of product</b>	PRINTER	
	<b>Model No.</b>	SCX-4500W	
		<b>Variant Model No.</b>	None
<b>Manufacturer</b>	Samsung Electronics Shandong Digital Printing Co., Ltd. 264209, Samsung Road, Weihai Hi-Tech. IDZ, Shandong Province, P.R.China		
<b>Applied Standards</b>		FCC Part 15, Subpart B / ANSI C63.4-2003	
<b>Issue date</b>		2008. 01. 22	

**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.)

<b>Tested by</b> : Sung Jin, Sim  	<b>Reviewed by</b> : No Cheon, Park  
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**SEC EMC Laboratory**

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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
<input checked="" type="checkbox"/>	Conducted Disturbance	FCC Part 15 Subpart B	Complied	Meets Class B Limit Minimum margin is 6.1 dB at 4.3 MHz
<input checked="" type="checkbox"/>	Radiated Disturbance		Complied	Meets Class B Limit Minimum margin is 8.6 dB at 35.952 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	SCX-4500W	-	Samsung	A3LSCX4500W
Note PC	NP-Q20	I86191CWC00005	Samsung	A3LN PQ20
AC Adapter	AD-4212A	CNBA440014BASE 383BS0345	Dongguan Samsung Electro-Mechanics	-
USB Mouse	M-UAE96	LZK61923439	Logitech	DoC
Headset	Plantronics	-	Microsoft	-

### 3.2 EUT operating mode

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

Operating Mode 1	Standby
Operating Mode 2	Copy
Operating Mode 3	USB printing
Operating Mode 4	Network printing
Operating Mode 5	Wireless network printing

### 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	For EUT
USB	1.8	Yes	From PC to EUT From PC to Mouse
Cross cable	1.0	No	Between PC and EUT
Headphone	1.0	No	From earphone to PC

### 3.5 EUT Description

The following features describe EUT represented by this report:

Item	Specification	Remarks
<b>Processor</b>	CHORUS3 (ARM926EJS, 16/32 Bit Risc Architecture)	-
<b>Standard System memory</b>	64Mbyte DDR SDRAM	-
<b>Resolution</b>	1200 x 1200dpi	-
<b>Copy Quality mode</b>	Text :300 x 300 dpi Mixed :300 x 300 dpi Photo :600 x 600 dpi	-
<b>Paper Handling</b>	Paper Tray(standard) 100 Sheets 2nd Tray(optional) : NA Bypass Tray : NA	-
<b>Power Rating</b>	110~127 VAC, 4.0A, 50/60 Hz	-
<b>Power Consumption</b>	Power save mode : 8.12Watts Printing simplex : 350Watts	-
<b>Printer Language</b>	SPL	-
<b>Interfaces</b>	Hi-Speed USB2.0 Ethernet 10/100 Base TX IEEE802.11 b/g Wireless LAN	-
<b>OS compatibility</b>	Windows 2000(32bit)/XP(32/64bit)/2003(32/64bit)/Vista(32/64bit) MAC 10.3/10.5, Linux Red Hat 8~9, Fedora Core 1~3, Mandrake 9.2~10.1, and SuSE 8.2~9.2	-
<b>Modes of Operation</b>	USB Printing, copy Network Printing, wireless network printing	-
<b>Intended Class for Emissions</b>	Class B	-

### 3.6 Clock Frequencies

Kind of Clocks	Frequency[MHz]	Kind of Clocks	Frequency[MHz]
Main Source	12	Video	19.36
CPU Internal	360	SDRAM	133
USB Device	12		

### 3.7 Operating mode condition

The system was configured for testing in typical fashion use. Cables were attached to each of the available I/O Ports. Where applicable, peripherals were attached to the I/O cables. The mode of operation utilized for testing was selected to best simulate typical EUT use. The EUT is supporting the USB, copy, network, wireless network and standby mode.

- Test Voltage : AC 110 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( $\mu$ V)	
	Quasi-peak	Average
0,15 to 0,50	79	66
0,50 to 30	73	60

Note 1: 1  $\mu$ 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( $\mu$ 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  $\mu$ V is regarded as 0 dB.  
 Note 2: The limits shall decrease 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)
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
Test software	EMC32	R&S	Ver 5.20.2	N/A	N/A

#### 4.1.2 Temperature and humidity of test shielded facilities

Test date	2008-01-21	Test engineer	Sung Jin, Sim		
Climate condition	Ambient temperature	23.2 °C	Relative humidity	32 %	
	Atmospheric pressure	101.8 kPa			
Test place	Shielded room #1				

### 4.1.3 Photograph of the test Configuration

(Front)



(Rear)



### 4.1.4 Test results

<b>Operating condition</b>	Stand-by
<b>Note</b>	<ul style="list-style-type: none"> <li>* QP : Quasi-peak, AV: Average</li> <li>* Level (QP or AV) = Meter Reading(QP or AV) + Corr.(LISN Insertion loss + Cable loss)</li> <li>* Margin = Limit - Level</li> </ul>

### Test Information

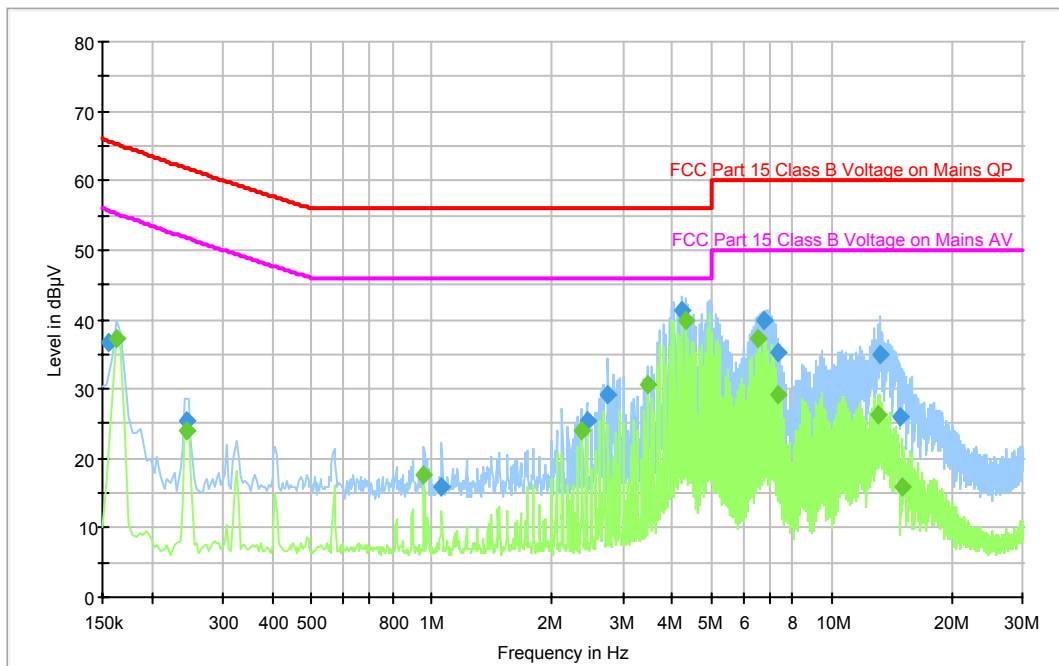
EUT Name: SCX-4500W  
 Serial Number:  
 Test Description:  
 Operating Conditions: Stand-by mode  
 Operator Name: SJ, SIM  
 Comment:

### Hardware Setup: Voltage with ENV 2-Line-LISN - [EMI conducted]

Subrange 1  
 Frequency Range: 150kHz - 30MHz  
 Receiver: ESCI 3  
 Transducer: ENV216 / Receiver-2-Line-LISN ENV216

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

### The result graph



\* The measured value in both LIVE and NEUTRAL mode of LISN is combined to the one graph.

### Quasi-peak measurement table

Frequency (MHz)	QuasiPeak (dB $\mu$ V)	Line	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V)
0.154500	36.7	N	9.6	29.1	65.7
0.242500	25.3	N	9.6	36.5	61.8
1.060500	15.7	L1	9.7	40.3	56.0
2.440500	25.4	N	9.7	30.6	56.0
2.764500	29.2	L1	9.7	26.8	56.0
4.236500	41.4	N	9.8	14.6	56.0
6.804500	39.9	L1	9.9	20.1	60.0
7.320500	35.3	N	9.9	24.7	60.0
13.164500	35.0	L1	10.0	25.0	60.0
14.887500	26.0	L1	10.1	34.0	60.0

### Average measurement table

Frequency (MHz)	Average (dB $\mu$ V)	Line	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V)
0.162500	37.3	N	9.6	18.0	55.3
0.242500	23.8	N	9.6	27.9	51.8
0.954500	17.6	L1	9.7	28.4	46.0
2.376500	24.1	L1	9.7	21.9	46.0
3.468500	30.7	N	9.8	15.3	46.0
4.300500	39.9	L1	9.8	6.1	46.0
6.548500	37.3	L1	9.9	12.7	50.0
7.320500	29.3	L1	9.9	20.7	50.0
13.032500	26.4	L1	10.0	23.6	50.0
14.964500	15.8	L1	10.1	34.2	50.0

<b>Operating condition</b>	Copy
<b>Note</b>	<ul style="list-style-type: none"> <li>* QP : Quasi-peak, AV: Average</li> <li>* Level (QP or AV) = Meter Reading(QP or AV) + Corr.(LISN Insertion loss + Cable loss)</li> <li>* Margin = Limit - Level</li> </ul>

## Test Information

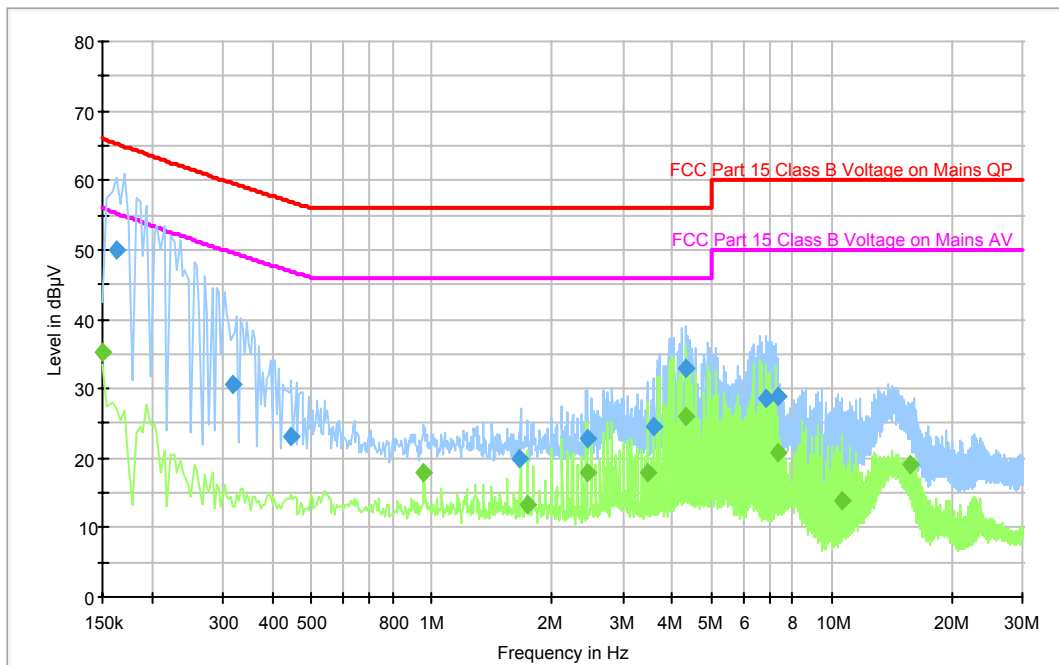
EUT Name: SCX-4500W  
 Serial Number:  
 Test Description:  
 Operating Conditions: 1:99 copy printing  
 Operator Name: SJ, SIM  
 Comment:

## Hardware Setup: Voltage with ENV 2-Line-LISN - [EMI conducted]

Subrange 1  
 Frequency Range: 150kHz - 30MHz  
 Receiver: ESCI 3  
 Transducer: ENV216 / Receiver-2-Line-LISN ENV216

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

## The result graph



\* The measured value in both LIVE and NEUTRAL mode of LISN is combined to the one graph.

### Quasi-peak measurement table

Frequency (MHz)	QuasiPeak (dB $\mu$ V)	Line	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V)
0.162500	50.1	N	9.6	15.2	65.3
0.318500	30.8	L1	9.6	28.8	59.6
0.446500	23.0	N	9.6	33.9	56.9
1.664500	19.8	L1	9.7	36.2	56.0
2.440500	22.9	L1	9.7	33.1	56.0
3.588500	24.5	N	9.8	31.5	56.0
4.296500	33.0	L1	9.8	23.0	56.0
6.868500	28.6	L1	9.9	31.4	60.0
7.312500	28.9	N	9.9	31.1	60.0

### Average measurement table

Frequency (MHz)	Average (dB $\mu$ V)	Line	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V)
0.150000	35.1	L1	9.6	20.9	56.0
0.954500	17.9	L1	9.7	28.1	46.0
1.736500	13.3	N	9.7	32.7	46.0
2.436500	17.9	L1	9.7	28.1	46.0
3.468500	17.9	N	9.8	28.1	46.0
4.300500	25.9	L1	9.8	20.1	46.0
7.312500	20.8	N	9.9	29.2	50.0
10.648500	13.9	N	9.9	36.1	50.0
15.664500	18.9	N	10.1	31.1	50.0



<b>Operating condition</b>	USB printing
<b>Note</b>	<ul style="list-style-type: none"> <li>* QP : Quasi-peak, AV: Average</li> <li>* Level (QP or AV) = Meter Reading(QP or AV) + Corr.(LISN Insertion loss + Cable loss)</li> <li>* Margin = Limit - Level</li> </ul>

### Test Information

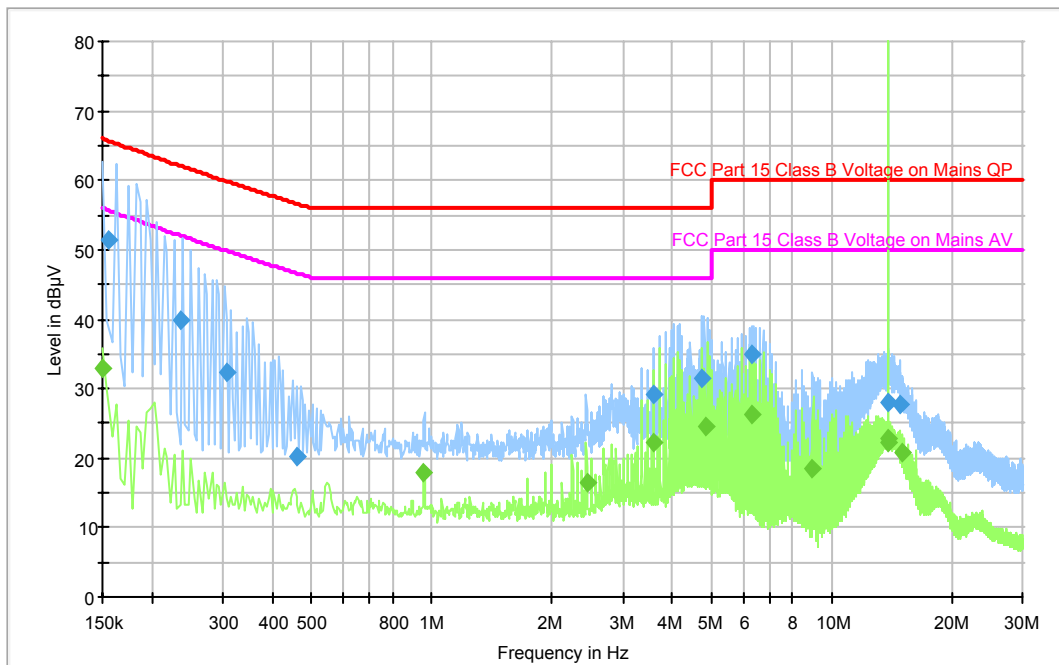
EUT Name: SCX-4500W  
 Serial Number:  
 Test Description:  
 Operating Conditions: USB simplex printing  
 Operator Name: SJ, SIM  
 Comment:

### Hardware Setup: Voltage with ENV 2-Line-LISN - [EMI conducted]

Subrange 1  
 Frequency Range: 150kHz - 30MHz  
 Receiver: ESCI 3  
 Transducer: ENV216 / Receiver-2-Line-LISN ENV216

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

### The result graph



\* The measured value in both LIVE and NEUTRAL mode of LISN is combined to the one graph.

### Quasi-peak measurement table

Frequency (MHz)	QuasiPeak (dB $\mu$ V)	Line	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V)
0.154500	51.4	N	9.6	14.3	65.7
0.234500	39.9	N	9.6	22.2	62.1
0.306500	32.5	L1	9.6	27.4	59.9
0.457500	20.3	N	9.6	36.4	56.7
3.588500	29.1	L1	9.8	26.9	56.0
4.748500	31.5	L1	9.8	24.5	56.0
6.348500	35.1	L1	9.9	24.9	60.0
13.868500	28.0	N	10.0	32.0	60.0
14.868500	27.8	L1	10.1	32.2	60.0

### Average measurement table

Frequency (MHz)	Average (dB $\mu$ V)	Line	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V)
0.150000	32.9	N	9.6	23.1	56.0
0.954500	17.9	N	9.7	28.1	46.0
2.436500	16.4	N	9.7	29.6	46.0
3.592500	22.4	L1	9.8	23.6	46.0
4.868500	24.4	L1	9.8	21.6	46.0
6.348500	26.2	L1	9.9	23.8	50.0
8.976500	18.4	L1	9.9	31.6	50.0
13.848500	22.9	N	10.0	27.1	50.0
13.872500	22.4	N	10.0	27.6	50.0
15.008500	20.9	L1	10.1	29.1	50.0

<b>Operating condition</b>	Network printing
<b>Note</b>	<ul style="list-style-type: none"> <li>* QP : Quasi-peak, AV: Average</li> <li>* Level (QP or AV) = Meter Reading(QP or AV) + Corr.(LISN Insertion loss + Cable loss)</li> <li>* Margin = Limit - Level</li> </ul>

### Test Information

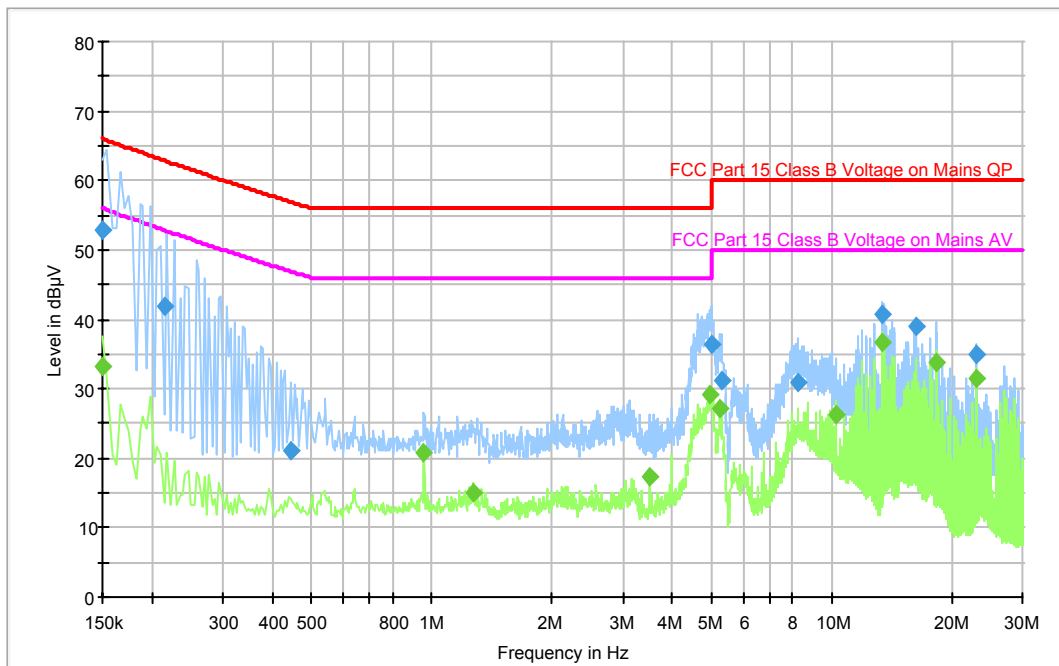
EUT Name: SCX-4500W  
 Serial Number:  
 Test Description:  
 Operating Conditions: Network simplex printing  
 Operator Name: SJ, SIM  
 Comment:

### Hardware Setup: Voltage with ENV 2-Line-LISN - [EMI conducted]

Subrange 1  
 Frequency Range: 150kHz - 30MHz  
 Receiver: ESCI 3  
 Transducer: ENV216 / Receiver-2-Line-LISN ENV216

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

### The result graph



\* The measured value in both LIVE and NEUTRAL mode of LISN is combined to the one graph.

### Quasi-peak measurement table

Frequency (MHz)	QuasiPeak (dB $\mu$ V)	Line	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V)
0.150000	52.9	N	9.6	13.1	66.0
0.214500	41.9	L1	9.6	21.0	62.9
0.442500	21.2	L1	9.6	35.8	56.9
4.999500	36.4	N	9.8	19.6	56.0
5.308500	31.3	N	9.8	28.7	60.0
8.196500	30.8	N	9.9	29.2	60.0
13.420500	40.6	L1	10.0	19.4	60.0
16.228500	39.0	N	10.1	21.0	60.0
23.128500	35.0	L1	10.3	25.0	60.0

### Average measurement table

Frequency (MHz)	Average (dB $\mu$ V)	Line	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V)
0.150000	33.3	L1	9.6	22.7	56.0
0.954500	20.7	L1	9.7	25.3	46.0
1.268500	15.1	L1	9.7	30.9	46.0
3.516500	17.3	L1	9.8	28.7	46.0
4.960500	29.3	L1	9.8	16.7	46.0
5.236500	27.2	N	9.8	22.8	50.0
10.244500	26.2	L1	9.9	23.8	50.0
13.420500	36.6	N	10.0	13.4	50.0
18.244500	33.7	L1	10.1	16.3	50.0
23.128500	31.5	L1	10.3	18.5	50.0

<b>Operating condition</b>	Wireless network printing
<b>Note</b>	<ul style="list-style-type: none"> <li>* QP : Quasi-peak, AV: Average</li> <li>* Level (QP or AV) = Meter Reading(QP or AV) + Corr.(LISN Insertion loss + Cable loss)</li> <li>* Margin = Limit - Level</li> </ul>

### Test Information

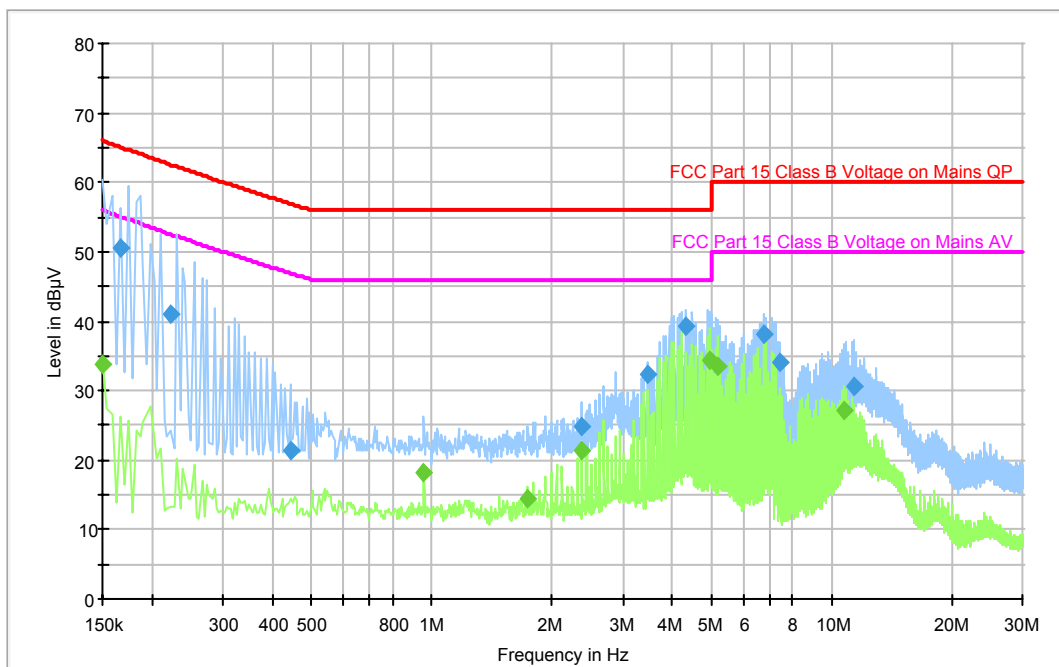
EUT Name: SCX-4500W  
 Serial Number:  
 Test Description:  
 Operating Conditions: Wireless network simplex printing  
 Operator Name: SJ, SIM  
 Comment:

### Hardware Setup: Voltage with ENV 2-Line-LISN - [EMI conducted]

Subrange 1  
 Frequency Range: 150kHz - 30MHz  
 Receiver: ESCI 3  
 Transducer: ENV216 / Receiver-2-Line-LISN ENV216

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

### The result graph



\* The measured value in both LIVE and NEUTRAL mode of LISN is combined to the one graph.

### Quasi-peak measurement table

Frequency (MHz)	QuasiPeak (dB $\mu$ V)	Line	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V)
0.166500	50.5	L1	9.6	14.6	65.1
0.222500	40.9	L1	9.6	21.7	62.5
0.446500	21.5	L1	9.6	35.4	56.9
2.372500	24.7	L1	9.7	31.3	56.0
3.464500	32.4	N	9.8	23.6	56.0
4.300500	39.4	L1	9.8	16.6	56.0
6.800500	38.2	L1	9.9	21.8	60.0
7.380500	34.1	L1	9.9	25.9	60.0
11.356500	30.7	L1	10.0	29.3	60.0

### Average measurement table

Frequency (MHz)	Average (dB $\mu$ V)	Line	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V)
0.150000	33.8	L1	9.6	22.2	56.0
0.954500	18.3	L1	9.7	27.7	46.0
1.732500	14.4	L1	9.7	31.6	46.0
2.372500	21.2	L1	9.7	24.8	46.0
4.940500	34.4	L1	9.8	11.6	46.0
5.196500	33.5	L1	9.8	16.5	50.0
10.712500	27.1	L1	10.0	22.9	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( $\mu\text{V}/\text{m}$ )	
	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  $\mu\text{V}/\text{m}$  is regarded as 0 dB.

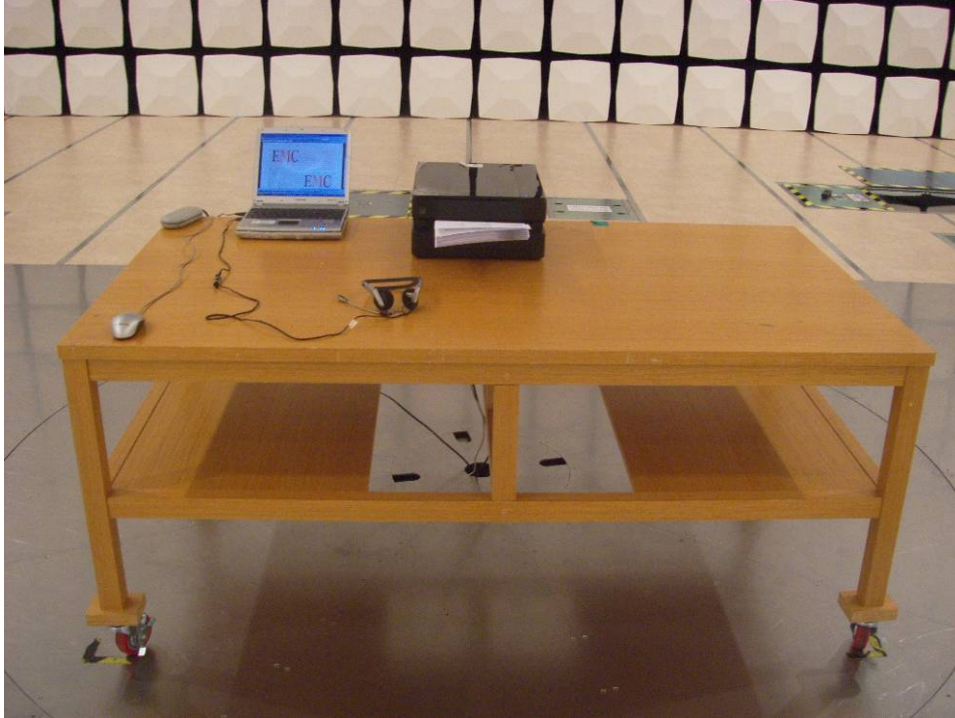
### 4.2.1 Test instrumentation

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
Horn Antenna	BBHA9120B	SCHWARZBECK	336	2007-03-15	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
Antenna Mast	MA4000	INN CO	-	N/A	N/A
Antenna Mast	MA4000	INN CO	-	N/A	N/A
Antenna Mast	MA2000	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 (30 MHz ~ 1 GHz)

(Front)



(Rear)



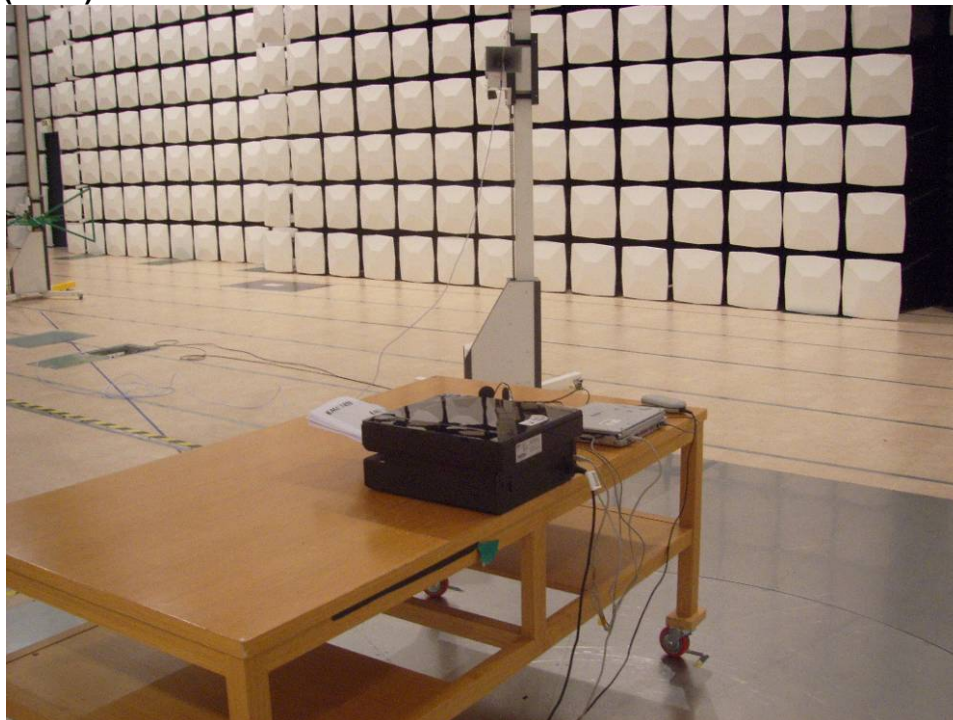


### 4.2.3 Photograph of the test Configuration (1 GHz ~ 2 GHz)

(Front)

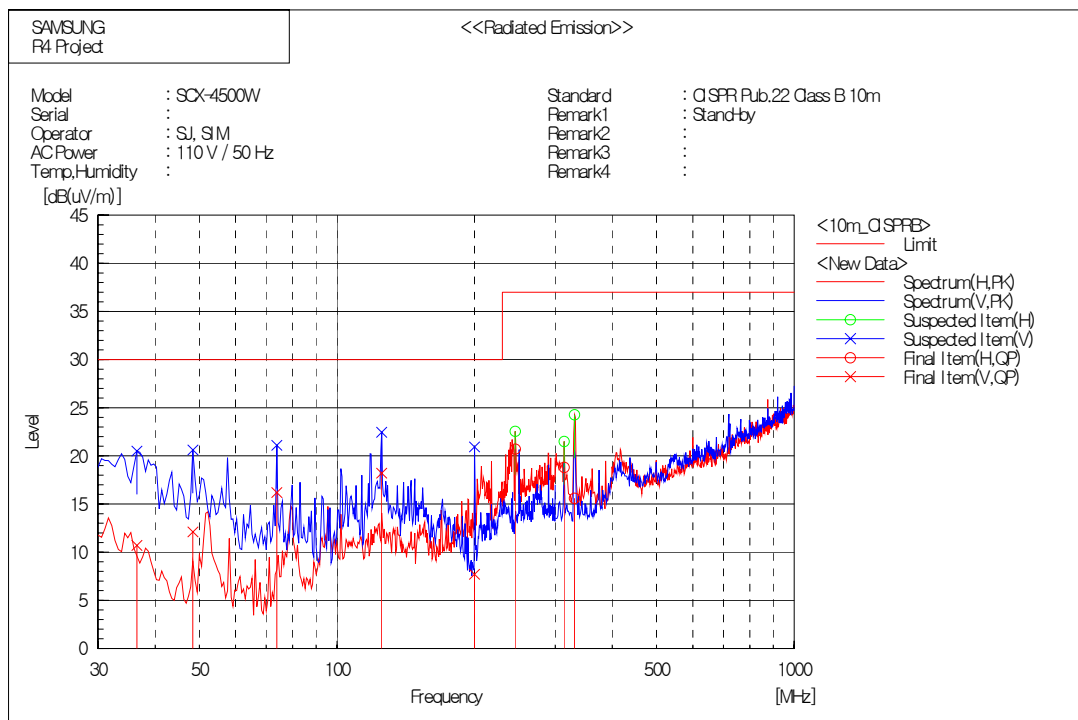


(Rear)



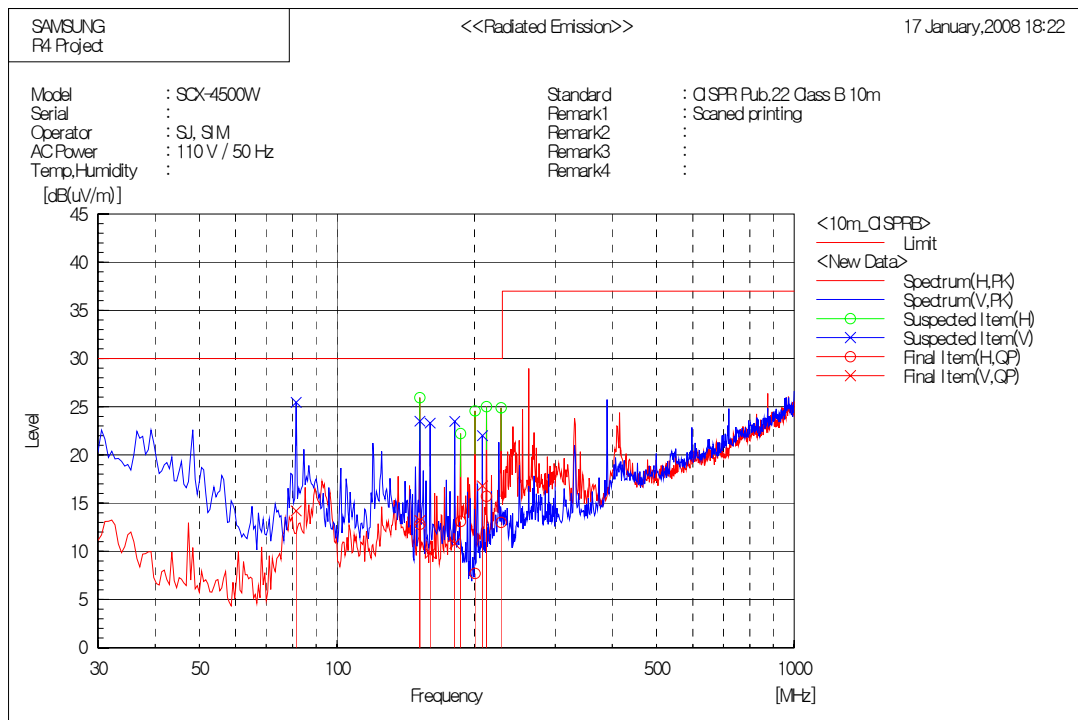
### 4.2.4 Test results ( 30 MHz ~ 1 GHz)

<b>Operating condition</b>	Stand-by mode			
<b>Test date</b>	2008-01-17	<b>Test engineer</b>		Sung Jin Sim
<b>Climate condition</b>	<b>Ambient temperature</b>	23.5 °C	<b>Relative humidity</b>	36 %
	<b>Atmospheric pressure</b>	102.0 kPa		
<b>Test place</b>	Semi-Anechoic Chamber			
<b>Note</b>	* 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			





<b>Operating condition</b>	Copy			
<b>Test date</b>	2008-01-17	<b>Test engineer</b>	Sung Jin Sim	
<b>Climate condition</b>	<b>Ambient temperature</b>	23.5 °C	<b>Relative humidity</b>	36 %
	<b>Atmospheric pressure</b>	102.0 kPa		
<b>Test place</b>	Semi-Anechoic Chamber			
<b>Note</b>	* 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

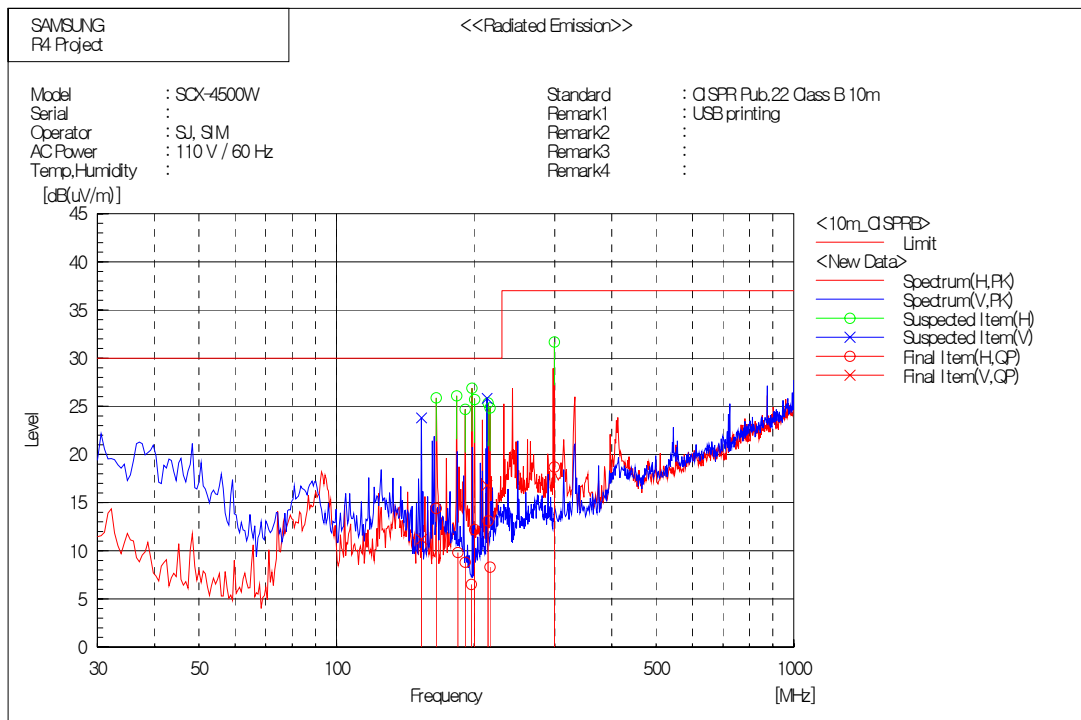
--- Horizontal Polarization (QP)---

No.	Frequency [MHz]	Reading [dB(uV)]	c.f [dB(1/m)]	Result [dB(uV/m)]	Limit [dB(uV/m)]	Margin [dB]
1	151.743	31.7	-18.9	12.8	30.0	17.2
2	186.373	33.3	-20.2	13.1	30.0	16.9
3	200.441	27.5	-19.8	7.7	30.0	22.3
4	212.345	35.7	-20.0	15.7	30.0	14.3
5	228.577	31.7	-18.7	13.0	30.0	17.0

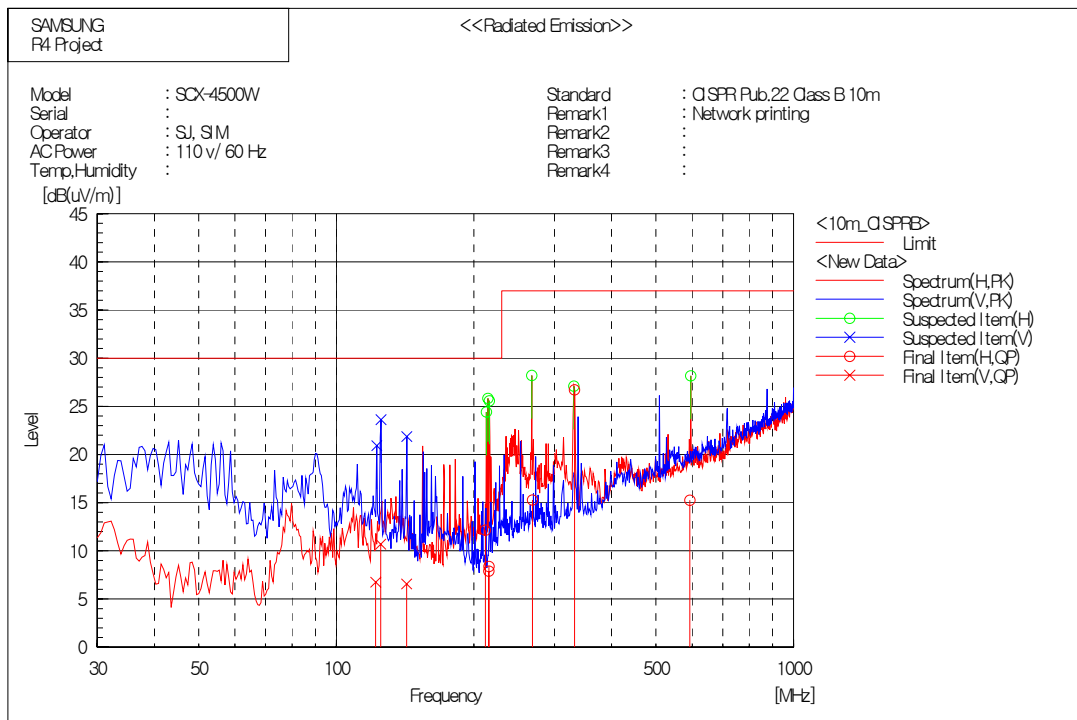
--- Vertical Polarization (QP)---

No.	Frequency [MHz]	Reading [dB(uV)]	c.f [dB(1/m)]	Result [dB(uV/m)]	Limit [dB(uV/m)]	Margin [dB]
1	81.403	37.0	-22.8	14.2	30.0	15.8
2	151.743	32.4	-19.2	13.2	30.0	16.8
3	159.860	29.0	-19.2	9.8	30.0	20.2
4	180.962	30.5	-19.7	10.8	30.0	19.2
5	208.016	36.6	-19.8	16.8	30.0	13.2

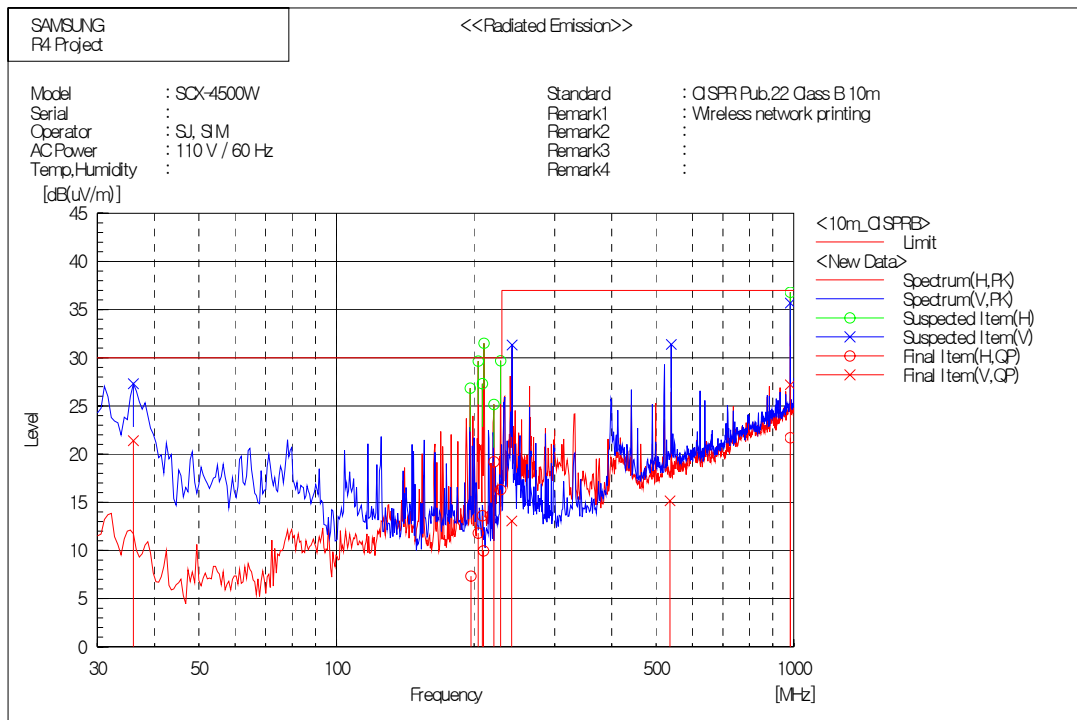
<b>Operating condition</b>	USB printing			
<b>Test date</b>	2008-01-17	<b>Test engineer</b>		Sung Jin Sim
<b>Climate condition</b>	<b>Ambient temperature</b>	23.5 °C	<b>Relative humidity</b>	36 %
	<b>Atmospheric pressure</b>	102.0 kPa		
<b>Test place</b>	Semi-Anechoic Chamber			
<b>Note</b>	* Receiving 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			



<b>Operating condition</b>	Network printing			
<b>Test date</b>	2008-01-17	<b>Test engineer</b>	Sung Jin Sim	
<b>Climate condition</b>	<b>Ambient temperature</b>	23.5 °C	<b>Relative humidity</b>	36 %
	<b>Atmospheric pressure</b>	102.0 kPa		
<b>Test place</b>	Semi-Anechoic Chamber			
<b>Note</b>	* 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			

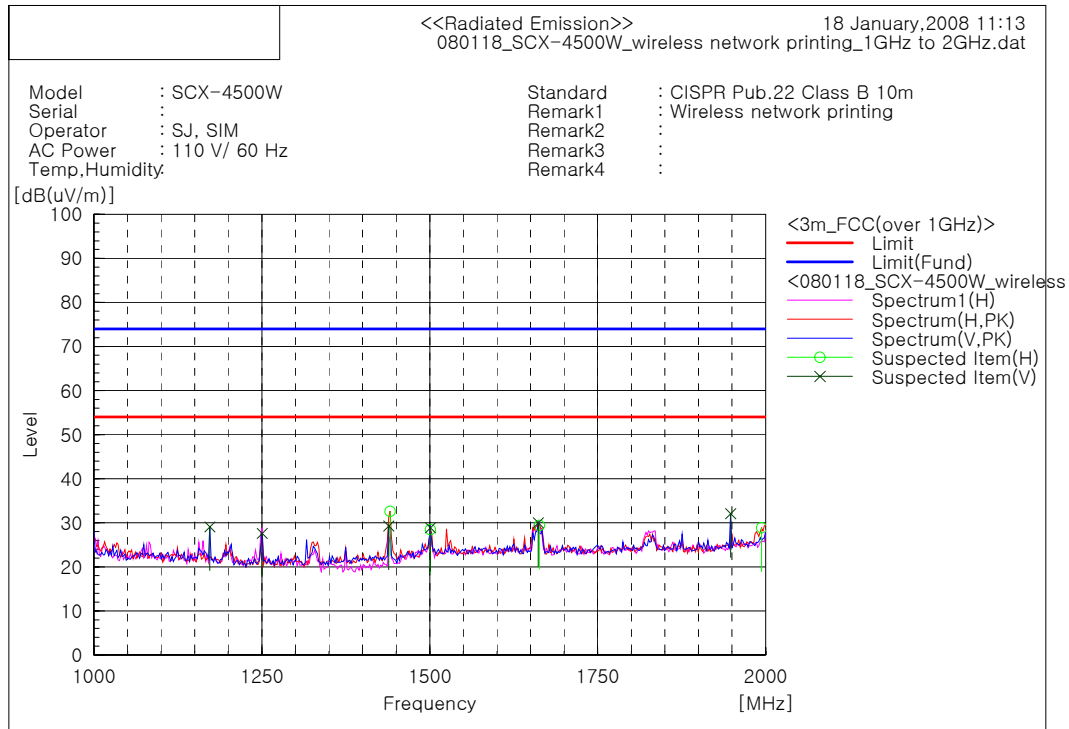


<b>Operating condition</b>	Wireless network printing			
<b>Test date</b>	2008-01-17	<b>Test engineer</b>	Sung Jin Sim	
<b>Climate condition</b>	<b>Ambient temperature</b>	23.5 °C	<b>Relative humidity</b>	36 %
	<b>Atmospheric pressure</b>	102.0 kPa		
<b>Test place</b>	Semi-Anechoic Chamber			
<b>Note</b>	* 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			



### 4.2.5 Test results ( 1 GHz ~ 2 GHz )

<b>Operating condition</b>	Wireless network printing			
<b>Test date</b>	2008-01-18	<b>Test engineer</b>	Sung Jin Sim	
<b>Climate condition</b>	<b>Ambient temperature</b>	23.6 °C	<b>Relative humidity</b>	32 %
	<b>Atmospheric pressure</b>	102.3 kPa		
<b>Test place</b>	Semi-Anechoic Chamber			
<b>Note</b>	* 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

--- Horizontal Polarization ---							
No.	Frequency [MHz]	Reading [dB(uV)]	c.f [dB(1/m)]	Result PK [dB(uV/m)]	Limit [dB(uV/m)]	Margin [dB]	Remark
1	1440.882	43.1	-10.5	32.6	74.0	41.4	
2	1501.002	38.7	-10.2	28.5	74.0	45.5	
3	1663.327	38.8	-9.4	29.4	74.0	44.6	
4	1993.988	36.5	-7.6	28.9	74.0	45.1	

--- Vertical Polarization ---							
No.	Frequency [MHz]	Reading [dB(uV)]	c.f [dB(1/m)]	Result PK [dB(uV/m)]	Limit [dB(uV/m)]	Margin [dB]	Remark
1	1172.345	40.8	-11.7	29.1	74.0	44.9	
2	1250.501	39.0	-11.4	27.6	74.0	46.4	
3	1438.878	39.8	-10.5	29.3	74.0	44.7	
4	1501.002	39.1	-10.2	28.9	74.0	45.1	
5	1661.323	39.4	-9.4	30.0	74.0	44.0	
6	1947.896	39.9	-7.8	32.1	74.0	41.9	

## Appendix – EUT photography

### Front View



### Rear View







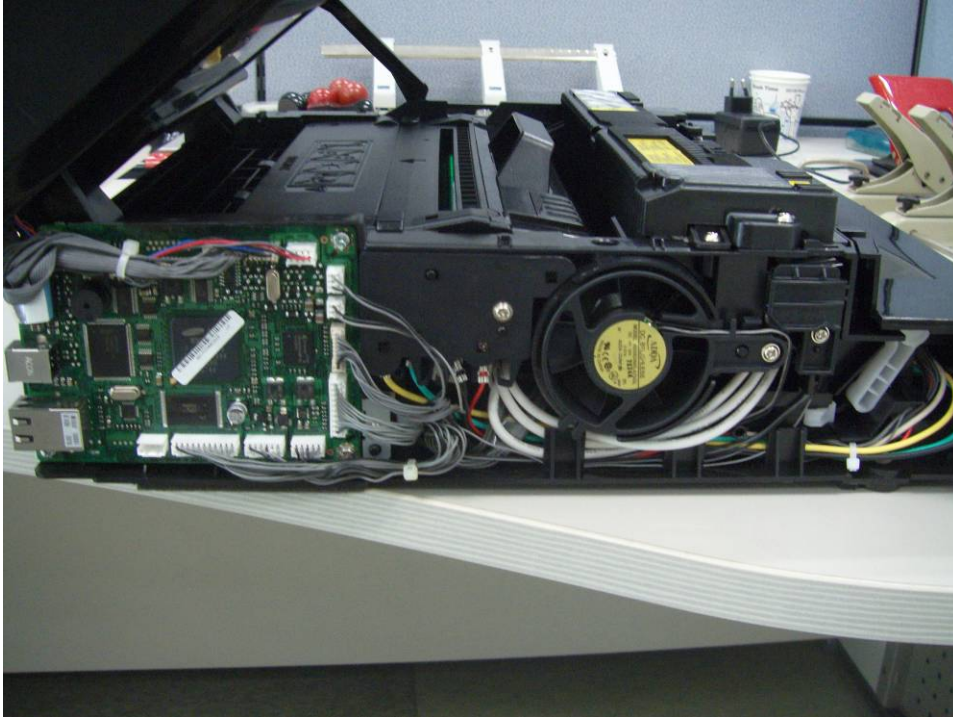
## Label Location



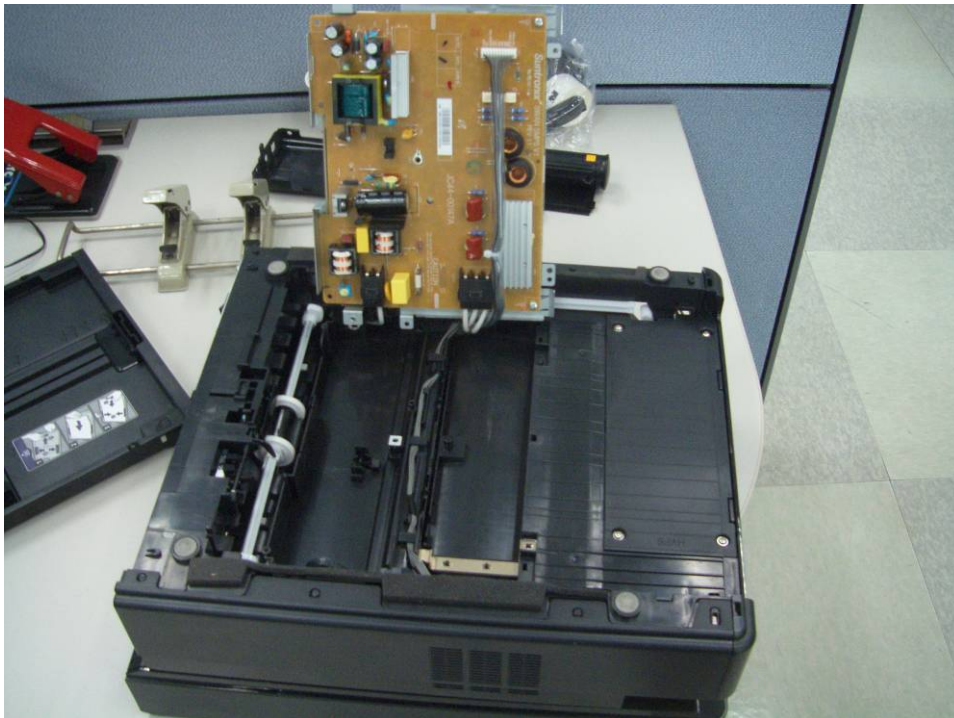
## Label

	<p><b>Model:</b> SCX-4500W  <b>Volts:</b> AC 110-127V  <b>Hertz:</b> 50/60 Hz  <b>Amps:</b> 4A  <b>Manufactured:</b></p>	<p>FCC ID : A3LSCX4500W (Printer)          FCC ID : A3LSWL-2900U (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-SWL2900U (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.</p>
<p>Samsung Electronics Co., Ltd.          Suwon, Korea, 443-742          Place: M264</p>		
<p>S/N</p>	<p>MADE IN CHINA / Fabrique au China REV.00</p>	

## EUT right inside



## EUT bottom inside



## EUT bottom inside PCB

