EMC TEST REPORT

Project No.	LBE094005	**Issue No.**	1
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	December 23, 2009	
EUT	**Type of device**	Class B digital devices and peripherals	
	Equipment authorization	☐ Declaration of Conformity ☒ Certification ☐ Verification	
	FCC ID	**A3LCLX3185FN**	
	Kind of product	**Color LASER PRINTER**	
	Model No.	**CLX-3185FW**	
		Variant Model No.	CLX-3180N,CLX-3185FN,CLX-3180FN, CLX-3185W,CLX-3180W,CLX-3185N, CLX-3180FW
	Manufacturer	**Samsung Electronics Co., Ltd.** 259, Gongdan-Dong, Gumi-City, Gyeong-Buk, 730-030, Korea **Samsung Electronics (Shandong) Digital Printing Co., Ltd.** 264209, Samsung Road, Weihai Hi-Tech IDZ, Shandong Province, P.R. China **Shin Heung Digital Electronics Co., Ltd.** 98, Samsung Road, Weihai Hi-Tech IDZ, Shandong Province, P.R. China **Intops : Intops (Weihai) Electronics Co., Ltd.,** Keji Road-268-1 , Weihai Hi-Tech,Industries Development Zone , Shandong Province , CHINA	
Applied Standards		FCC Part 15, Subpart B / ANSI C63.4-2003	
Test Period		December 15, 2009 ~ December 21, 2009	
Issue date		December 23 , 2009	

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 : Ho Jin Choi	**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.
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SAMSUNG

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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
☒	Radiated Disturbance		Complied	Meets Class B Limit

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
	UKAS(United Kingdom Accreditation Service)	Accredited : 4290
	Radio Research Agency	Accredited : KR0004
	FCC(Federal Communications Commission)	Accredited : KR0004
	National Voluntary Laboratory Accreditation Program	Lab Code: 200623-0
	Norges Elektriske Materiellkontroll	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 testing.

Description	Model No.	Serial No.	Manufacturer	FCC ID and/or DoC
Color Laser MFP	CLX-3185FW	-	Samsung	EUT
Notebook PC	PP18L	2718225373	DELL	DOC
AC Adapter	LA65LS1-00	CN-OYD637-71615-83C-OE60	DELL	DOC
USB Mouse	MOARUO	0740007905	Primax electronics	DOC
Head set	Micro soft	-	-	-
Telephone	SP-F209	-	Samsung	-

3.2 EUT operating mode

To achieve compliance applied standard and/or specification, the following mode(s) were considered

Operating Mode 1	Standby
Operating Mode 2	USB Printing
Operating Mode 3	ADF Copy Printing
Operating Mode 4	Network Printing
Operating Mode 5	Wireless Network Printing
Operating Mode 6	Scan to PC
Operating Mode 7	Scan to USB
Operating Mode 8	Fax-Rx
Operating Mode 9	Fax-Tx

3.3 Details of Sampling

Customer selected, single units.

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
Power	1.8	No	For Note PC
USB	1.8	Yes	From Note PC to EUT
USB	1.8	Yes	From Note PC to Mouse
Head set	1.5	No	For Note PC to Head set
Ethernet	10.0	No	From EUT to HUB
TEL	10.0	No	From EUT to K/P system
TEL	2.0	No	From EUT to Telephone

3.5 EUT Description

The following features describe EUT represented by this report:

Item	Specification	Remarks
Processor	Chorus3 (360Mhz)	-
Standard System memory	256MB DDR2 SDRAM	-
Resolution	Up to 2400X600dpi Class (Default 1200x600 dpi) Optical: 600x600 Dpi	-
Copy Quality mode	Text : 600x600dpi(Optical: 300x300dpi) Mixed : 600x600dpi(Optical: 300x300dpi) Photo : 600x600dpi(Optical: 300x300dpi)(ADF) , 1200x1200dpi(Optical: 600x600dpi) (Platen)	-
Paper Handling	Paper Tray(standard) 150 Sheets	-
Power Rating	110~127 VAC, 5.5A, 50/60 Hz	-
Power Consumption	Average : 350W Sleep/Power off : Less than 6W/0.45W	-
Printer Language	SPL-C, PCL-6 (CLX-3185N/FN/FW only)	-
PC Interfaces	USB2.0, Ethernet 10/100 Tx Base, 802.11b/g/n(Wireless model only)	-
OS compatibility	Microsoft Windows: 2000/XP(Include 64bit) Vista Linux OS: Red Hat 8~9, Fedora Core 1~4 Mandrake 9.2~10.1 SuSE 8.2~9.2	-
Modes of Operation	USB Printing, Network Printing, Copy , FAX (FAX model only) Wireless network printing (Wireless model only)	-
Intended Class for Emissions	Class B	-

3.6 Clock Frequencies

Kind of Clocks	Frequency[MHz]	Kind of Clocks	Frequency[MHz]
Main Source	12	Video	12
CPU Internal	360	DDR2	166
USB Device	12	CIS	4
MAC	25		

3.7 Test configuration and 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.

Power source for the EUT operating was supplied by CVCF made by the Voltech Corp.

- **Testing Voltage : AC 115 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	Main terminal	3.50 dB
Radiated Disturbance	Horizontal	5.04 dB
	Vertical	5.03 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 the mains ports of class A ITE

Frequency range Limits MHz	Resolution Bandwidth	Limits dB(μV)	
		Quasi-peak	Average
0,15 to 0,50	9 kHz	79	66
0,50 to 30	9 kHz	73	60
NOTE The lower limit shall apply at the transition frequency			

Limits for conducted disturbance at the mains ports of class B ITE

Frequency range Limits MHz	Resolution Bandwidth	Limits dB(μV)	
		Quasi-peak	Average
0,15 to 0,50	9 kHz	66 to 56	56 to 46
0,50 to 5	9 kHz	56	46
5 to 30	9 kHz	60	50
NOTE 1 The lower limit shall apply at the transition frequency NOTE 2 The limit decreases linearly with the logarithm of the frequency in the range 0,15 MHz to 0,50 MHz.			

4.1.1 Test instrumentation

Test instrumentation	Manufacturer	Model name	Serial or Firmware (No./Ver.)	Calibration	
				Date	Interval (Month)
Test Receiver	R&S	ESCI	100370	2009-05-07	12
Two-Line V-Network	R&S	ENV216	100456	2009-09-18	12
Two-Line V-Network	R&S	ESH3-Z5	100261	2009-04-03	12
Test software	EMC32	ESCI	100370	2009-05-07	N/A

4.1.2 Temperature and humidity condition

Test date	December 11, 2009	**Test engineer**	Ho Jin Choi
Test place	Shielded Room #1		

4.1.3 Photograph of Test Setup

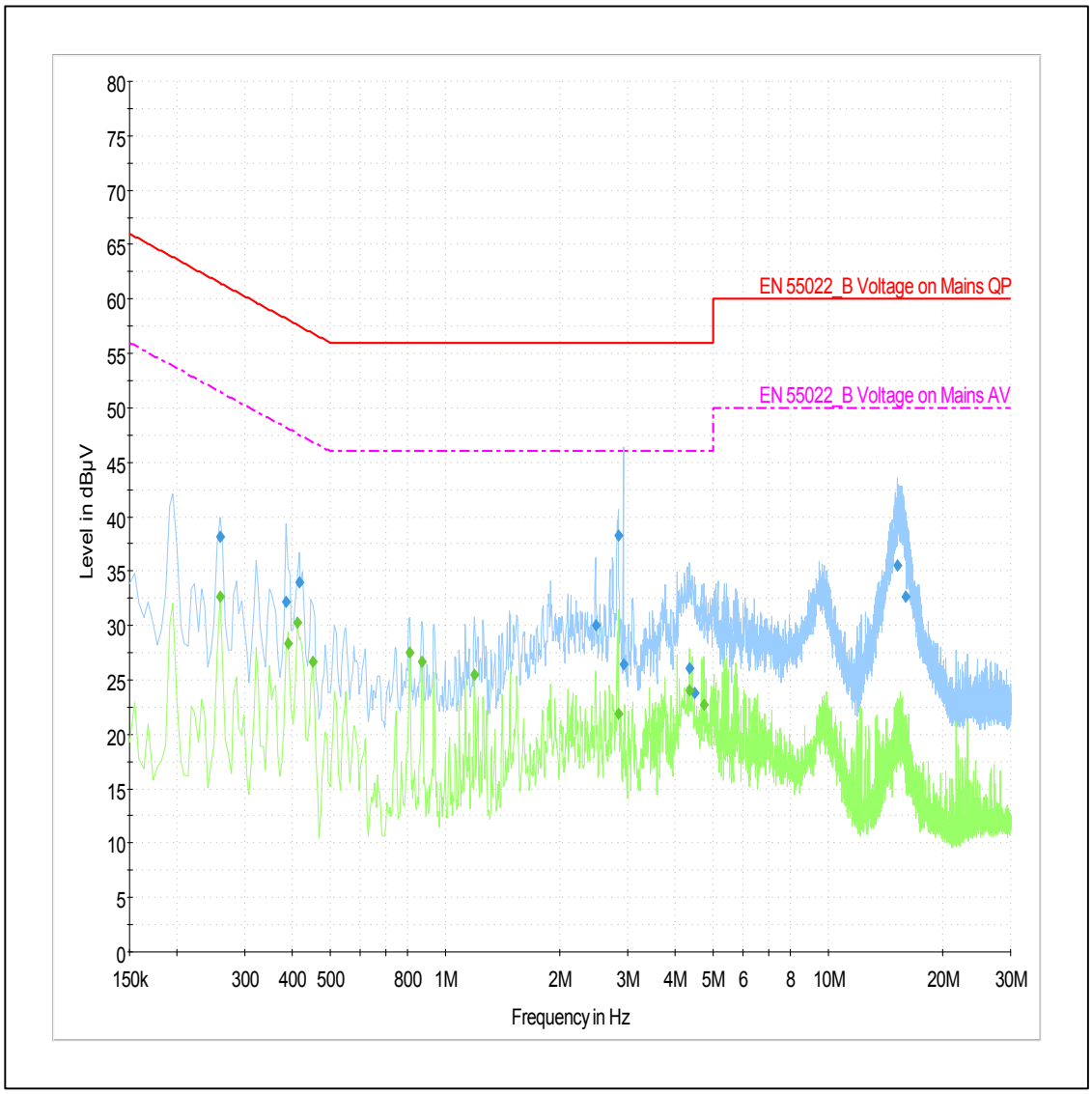
Front

Rear

4.1.4 Test results (mains port)

- **Operating Mode : Standby Mode**

Test Graph



Note) Two graphs measured for both Live(L1) and Neutral(N) of the LISN are combined into one graph.

Test Results (Quasi-Peak and Average)

Quasi-peak final measurement results table

Frequency [MHz]	Quasi-Peak [dBuV]	Bandwidth [kHz]	Line	Factor [dB]	Margin [dB]	Limit [dBuV]
0.258	38.092	9.0	N	9.4	23.4	61.5
0.384	32.129	9.0	N	9.4	26.1	58.2
0.416	33.993	9.0	N	9.4	23.5	57.5
2.472	30.012	9.0	L1	9.6	26	56
2.832	38.271	9.0	N	9.6	17.7	56
2.922	26.388	9.0	L1	9.6	29.6	56
4.353	26.089	9.0	L1	9.6	29.9	56
4.474	23.766	9.0	L1	9.6	32.2	56
15.166	35.476	9.0	N	9.8	24.5	60
15.918	32.614	9.0	N	9.8	27.4	60

Average final measurement results table

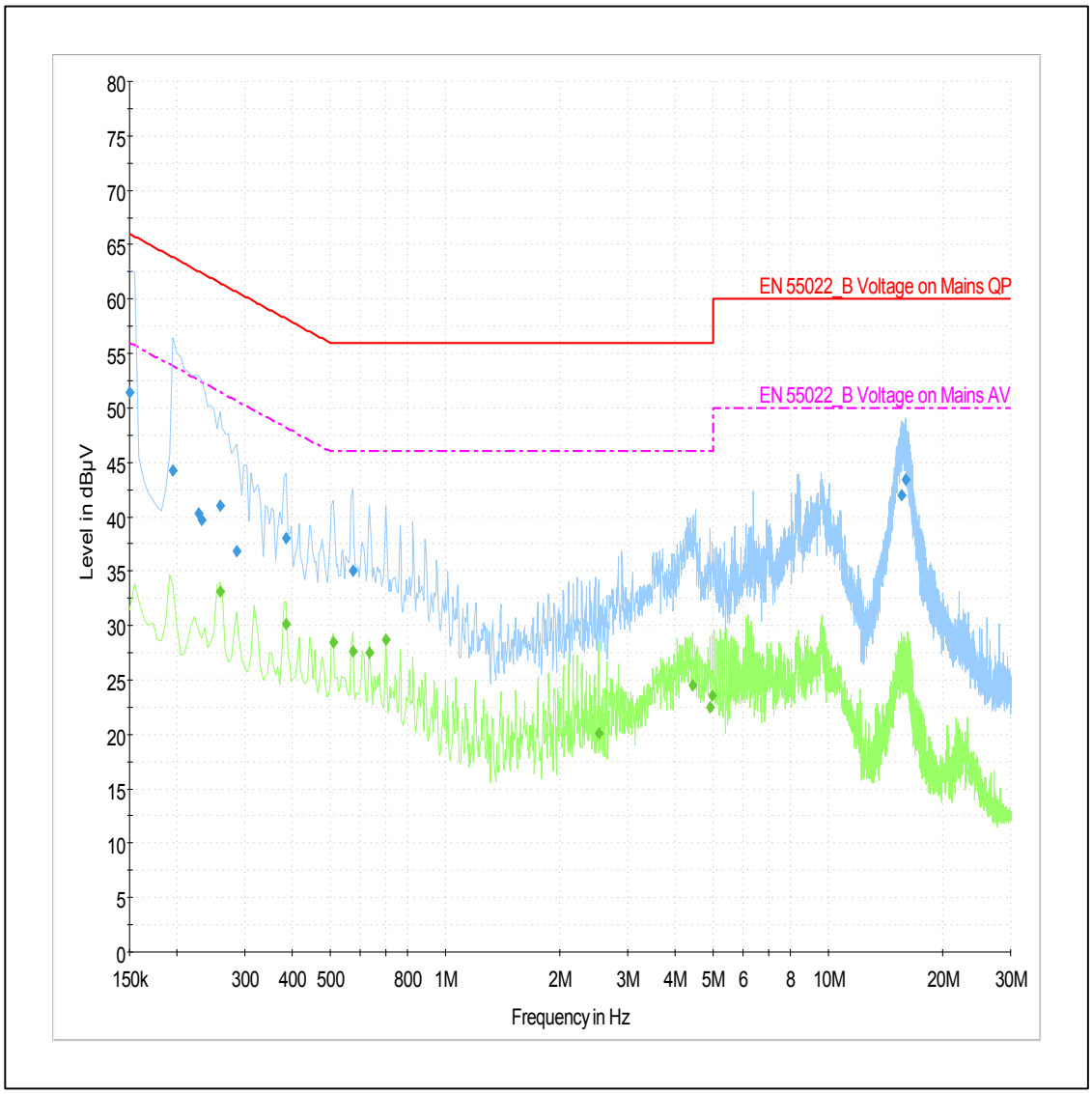
Frequency [MHz]	Average [dBuV]	Bandwidth [kHz]	Line	Factor [dB]	Margin [dB]	Limit [dBuV]
0.258	32.674	9.0	N	9.4	18.8	51.5
0.389	28.367	9.0	N	9.4	19.7	48.1
0.411	30.266	9.0	N	9.4	17.4	47.6
0.452	26.642	9.0	N	9.4	20.2	46.8
0.807	27.486	9.0	N	9.5	18.5	46
0.87	26.657	9.0	N	9.5	19.3	46
1.194	25.519	9.0	N	9.6	20.5	46
2.832	21.834	9.0	N	9.6	24.2	46
4.357	24.018	9.0	N	9.6	22	46
4.744	22.719	9.0	N	9.6	23.3	46

Note) Level (Quasi-Peak and/or Average) = Meter Reading(Quasi-Peak and/or Average) + Factor (LISN Insertion Loss + Cable Loss)

Margin = Limit – Level (Quasi-Peak and/or Average)

- **Operating Mode : USB Printing**

Test Graph



Note) Two graphs measured for both Live(L1) and Neutral(N) of the LISN are combined into one graph.

Test Results (Quasi-Peak and Average)

Quasi-peak final measurement results table

Frequency [MHz]	Quasi-Peak [dBuV]	Bandwidth [kHz]	Line	Factor [dB]	Margin [dB]	Limit [dBuV]
0.15	51.371	9.0	N	9.4	14.6	66
0.195	44.206	9.0	L1	9.3	19.6	63.8
0.227	40.349	9.0	L1	9.4	22.2	62.6
0.231	39.703	9.0	L1	9.4	22.7	62.4
0.258	41.002	9.0	L1	9.4	20.5	61.5
0.285	36.851	9.0	L1	9.4	23.8	60.7
0.384	38.079	9.0	L1	9.4	20.1	58.2
0.573	35.024	9.0	L1	9.5	21	56
15.544	41.923	9.0	N	9.8	18.1	60
15.99	43.41	9.0	N	9.8	16.6	60

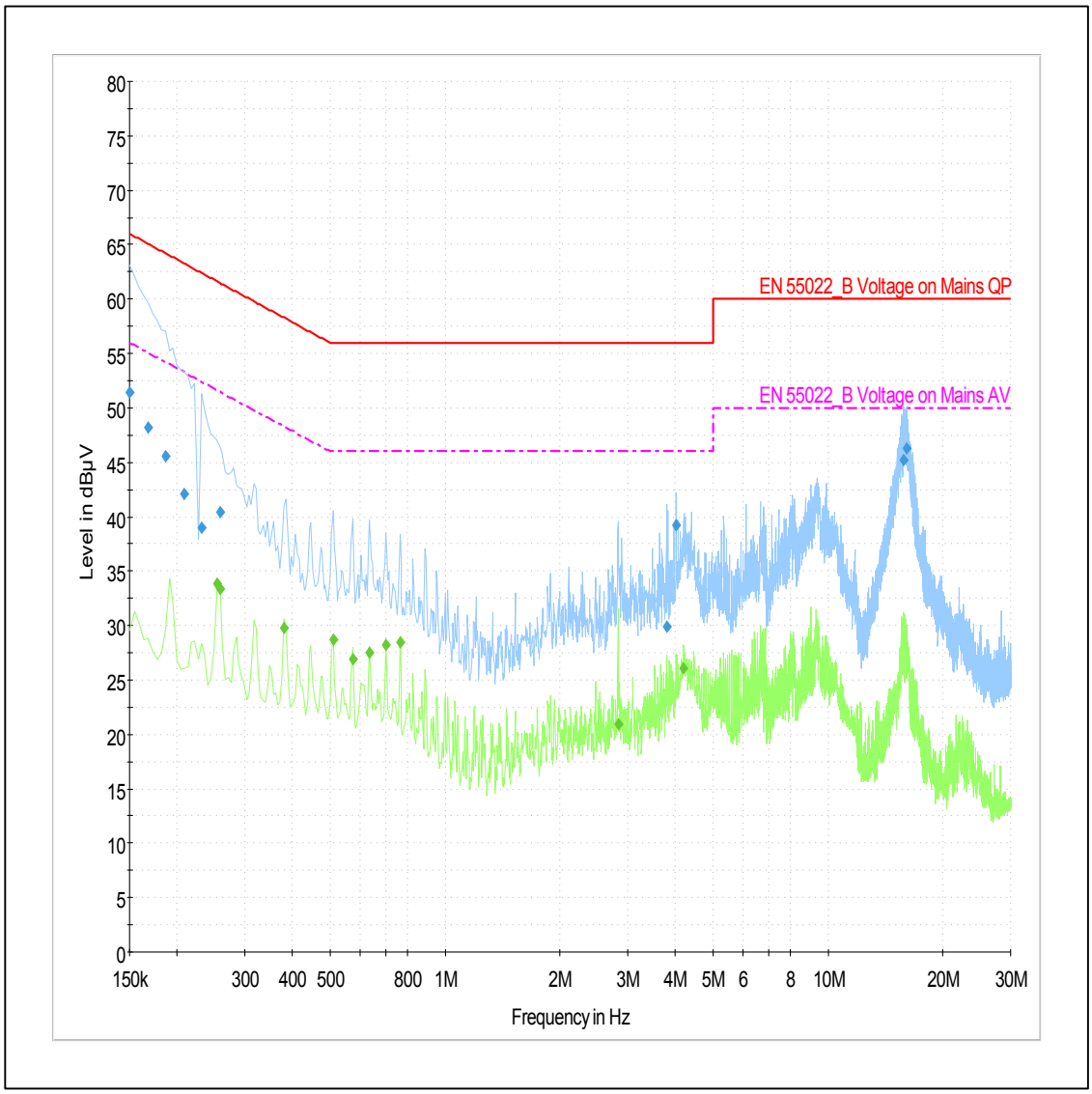
Average final measurement results table

Frequency [MHz]	Average [dBuV]	Bandwidth [kHz]	Line	Factor [dB]	Margin [dB]	Limit [dBuV]
0.258	33.178	9.0	N	9.4	18.3	51.5
0.384	30.184	9.0	L1	9.4	18	48.2
0.51	28.481	9.0	L1	9.5	17.5	46
0.573	27.64	9.0	L1	9.5	18.4	46
0.636	27.558	9.0	L1	9.5	18.4	46
0.699	28.74	9.0	N	9.5	17.3	46
2.517	20.091	9.0	L1	9.6	25.9	46
4.434	24.461	9.0	L1	9.6	21.5	46
4.915	22.529	9.0	L1	9.6	23.5	46
4.983	23.614	9.0	L1	9.6	22.4	46

Note) Level (Quasi-Peak and/or Average) = Meter Reading(Quasi-Peak and/or Average) +
Factor (LISN Insertion Loss + Cable Loss)
Margin = Limit – Level (Quasi-Peak and/or Average)

- **Operating Mode : Network Printing**

Test Graph



Note) Two graphs measured for both Live(L1) and Neutral(N) of the LISN are combined into one graph.

Test Results (Quasi-Peak and Average)

Quasi-peak final measurement results table

Frequency [MHz]	Quasi-Peak [dBuV]	Bandwidth [kHz]	Line	Factor [dB]	Margin [dB]	Limit [dBuV]
0.15	51.421	9.0	N	9.4	14.6	66
0.168	48.218	9.0	N	9.4	16.8	65.1
0.186	45.507	9.0	N	9.3	18.7	64.2
0.209	42.064	9.0	N	9.3	21.2	63.3
0.231	38.944	9.0	L1	9.4	23.5	62.4
0.258	40.463	9.0	L1	9.4	21	61.5
3.795	29.899	9.0	N	9.6	26.1	56
4.015	39.188	9.0	N	9.6	16.8	56
15.783	45.206	9.0	N	9.8	14.8	60
16.035	46.25	9.0	N	9.8	13.8	60

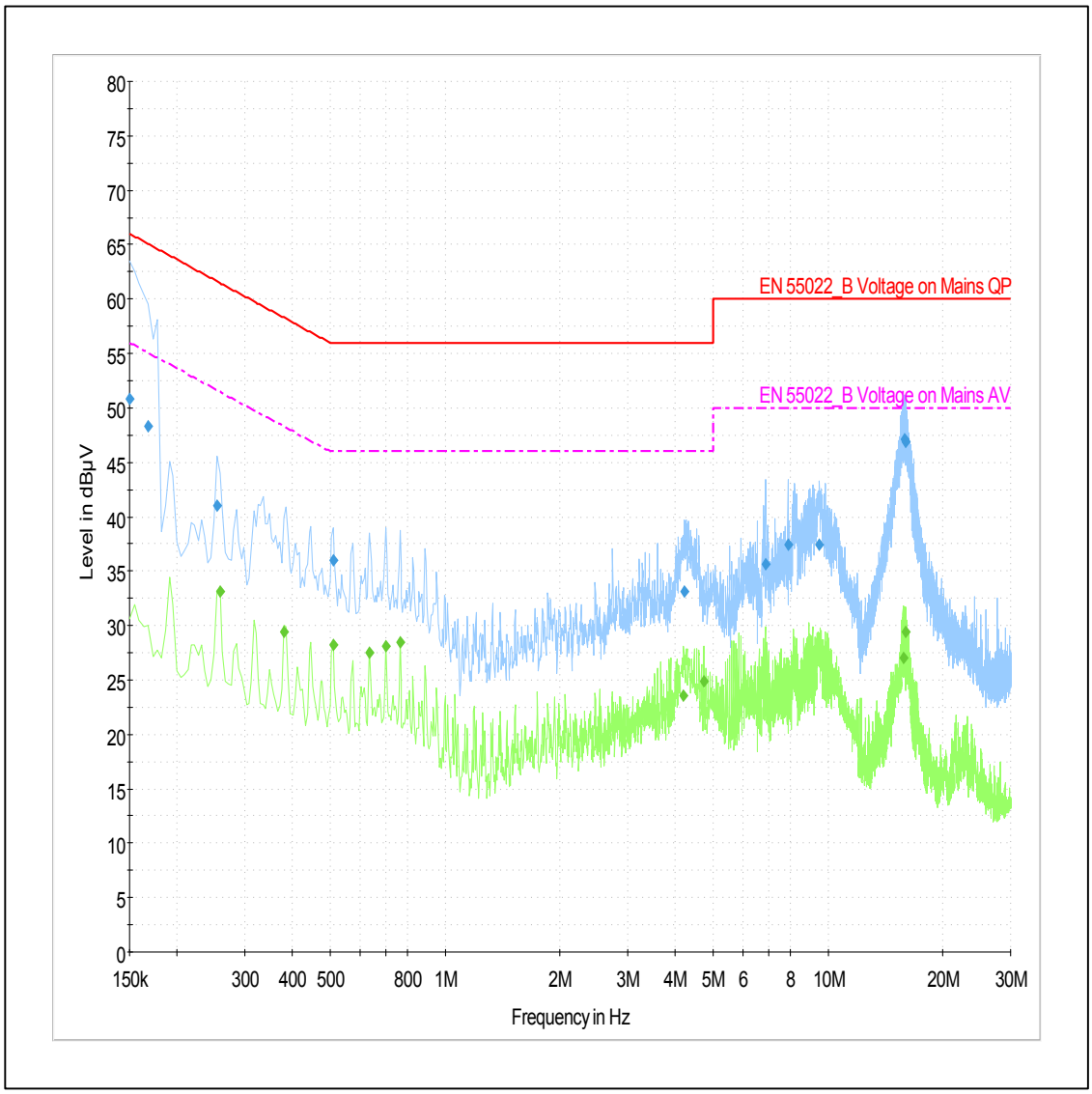
Average final measurement results table

Frequency [MHz]	Average [dBuV]	Bandwidth [kHz]	Line	Factor [dB]	Margin [dB]	Limit [dBuV]
0.254	33.87	9.0	L1	9.4	17.8	51.6
0.258	33.309	9.0	L1	9.4	18.2	51.5
0.38	29.818	9.0	L1	9.4	18.5	48.3
0.51	28.662	9.0	L1	9.5	17.3	46
0.573	26.965	9.0	L1	9.5	19	46
0.636	27.458	9.0	L1	9.5	18.5	46
0.699	28.203	9.0	N	9.5	17.8	46
0.762	28.503	9.0	N	9.5	17.5	46
2.832	20.931	9.0	L1	9.6	25.1	46
4.2	26.106	9.0	N	9.6	19.9	46

Note) Level (Quasi-Peak and/or Average) = Meter Reading(Quasi-Peak and/or Average) +
Factor (LISN Insertion Loss + Cable Loss)
Margin = Limit – Level (Quasi-Peak and/or Average)

- **Operating Mode : Wireless Network Printing**

Test Graph



Note) Two graphs measured for both Live(L1) and Neutral(N) of the LISN are combined into one graph.

Test Results (Quasi-Peak and Average)

Quasi-peak final measurement results table

Frequency [MHz]	Quasi-Peak [dBuV]	Bandwidth [kHz]	Line	Factor [dB]	Margin [dB]	Limit [dBuV]
0.15	50.834	9.0	N	9.4	15.2	66
0.168	48.291	9.0	N	9.4	16.8	65.1
0.254	41.026	9.0	N	9.4	20.6	61.6
0.51	36.037	9.0	N	9.5	20	56
4.227	33.069	9.0	N	9.6	22.9	56
6.864	35.627	9.0	N	9.6	24.4	60
7.858	37.39	9.0	N	9.6	22.6	60
9.514	37.384	9.0	N	9.6	22.6	60
15.841	47.167	9.0	N	9.8	12.8	60
15.967	46.874	9.0	N	9.8	13.1	60

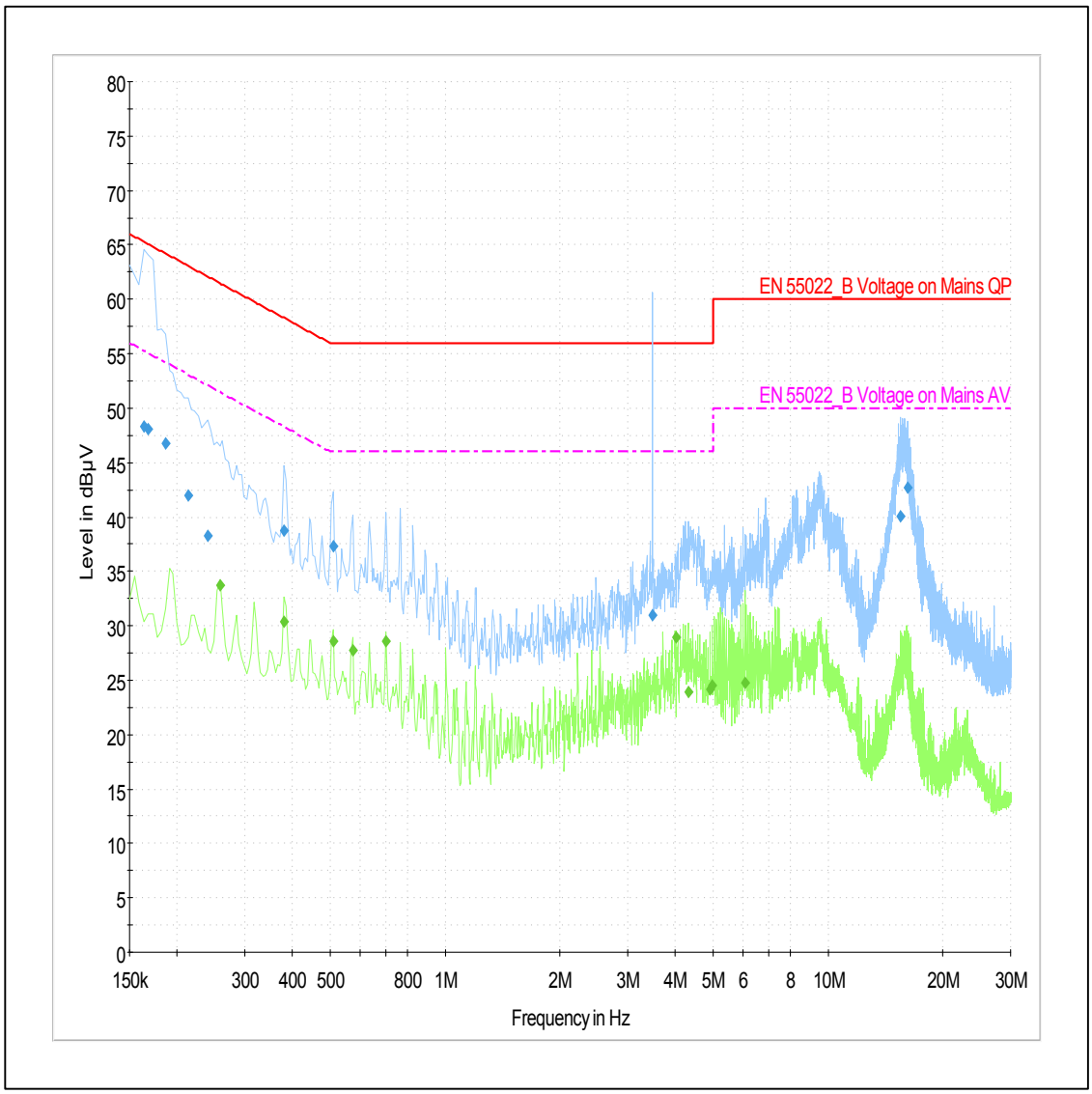
Average final measurement results table

Frequency [MHz]	Average [dBuV]	Bandwidth [kHz]	Line	Factor [dB]	Margin [dB]	Limit [dBuV]
0.258	33.125	9.0	L1	9.4	18.4	51.5
0.38	29.441	9.0	N	9.4	18.8	48.3
0.51	28.173	9.0	N	9.5	17.8	46
0.636	27.524	9.0	L1	9.5	18.5	46
0.699	28.066	9.0	N	9.5	17.9	46
0.762	28.403	9.0	N	9.5	17.6	46
4.2	23.568	9.0	N	9.6	22.4	46
4.735	24.825	9.0	L1	9.6	21.2	46
15.715	27.072	9.0	N	9.8	22.9	50
15.967	29.425	9.0	N	9.8	20.6	50

Note) Level (Quasi-Peak and/or Average) = Meter Reading(Quasi-Peak and/or Average) +
Factor (LISN Insertion Loss + Cable Loss)
Margin = Limit – Level (Quasi-Peak and/or Average)

- **Operating Mode : ADF Copy Printing**

Test Graph



Note) Two graphs measured for both Live(L1) and Neutral(N) of the LISN are combined into one graph.

Test Results (Quasi-Peak and Average)

Quasi-peak final measurement results table

Frequency [MHz]	Quasi-Peak [dBuV]	Bandwidth [kHz]	Line	Factor [dB]	Margin [dB]	Limit [dBuV]
0.164	48.366	9.0	N	9.4	16.9	65.3
0.168	48.101	9.0	N	9.4	17	65.1
0.186	46.74	9.0	N	9.3	17.5	64.2
0.213	41.988	9.0	L1	9.3	21.1	63.1
0.24	38.243	9.0	L1	9.4	23.9	62.1
0.38	38.779	9.0	L1	9.4	19.5	58.3
0.51	37.368	9.0	L1	9.5	18.6	56
3.475	30.944	9.0	N	9.6	25.1	56
15.495	40.073	9.0	N	9.8	19.9	60
16.17	42.744	9.0	N	9.8	17.3	60

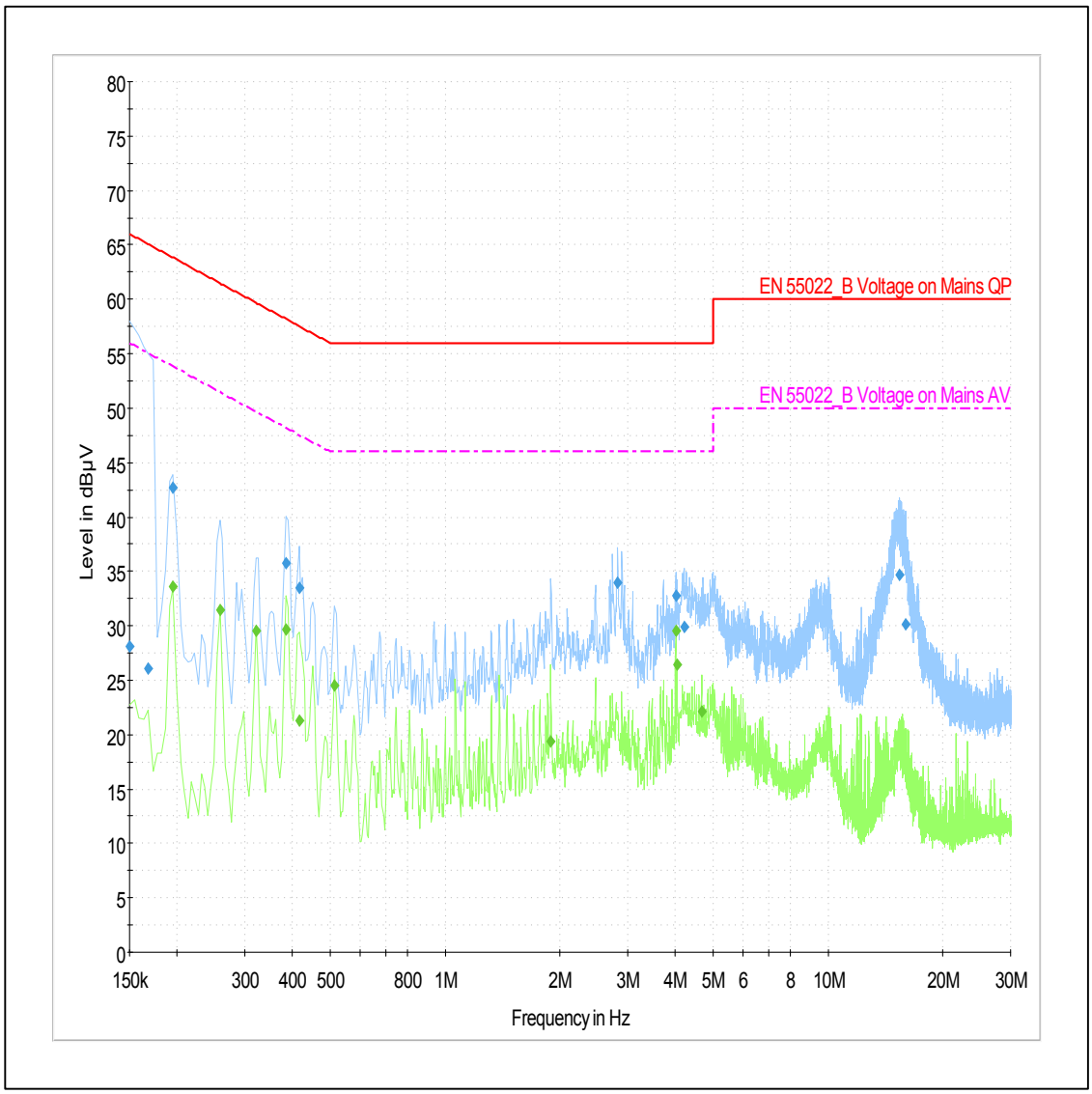
Average final measurement results table

Frequency [MHz]	Average [dBuV]	Bandwidth [kHz]	Line	Factor [dB]	Margin [dB]	Limit [dBuV]
0.258	33.74	9.0	L1	9.4	17.8	51.5
0.38	30.43	9.0	L1	9.4	17.9	48.3
0.51	28.525	9.0	L1	9.5	17.5	46
0.573	27.688	9.0	L1	9.5	18.3	46
0.699	28.619	9.0	N	9.5	17.4	46
4.002	28.941	9.0	L1	9.6	17.1	46
4.312	23.946	9.0	L1	9.6	22.1	46
4.929	24.12	9.0	L1	9.6	21.9	46
4.992	24.535	9.0	L1	9.6	21.5	46
6.063	24.764	9.0	L1	9.6	25.2	50

Note) Level (Quasi-Peak and/or Average) = Meter Reading(Quasi-Peak and/or Average) +
Factor (LISN Insertion Loss + Cable Loss)
Margin = Limit – Level (Quasi-Peak and/or Average)

- **Operating Mode : Scan to PC**

Test Graph



Note) Two graphs measured for both Live(L1) and Neutral(N) of the LISN are combined into one graph.

Test Results (Quasi-Peak and Average)

Quasi-peak final measurement results table

Frequency [MHz]	Quasi-Peak [dBuV]	Bandwidth [kHz]	Line	Factor [dB]	Margin [dB]	Limit [dBuV]
0.15	28.108	9.0	N	9.4	37.9	66
0.168	26.125	9.0	N	9.4	38.9	65.1
0.195	42.668	9.0	N	9.3	21.2	63.8
0.384	35.787	9.0	L1	9.4	22.4	58.2
0.416	33.467	9.0	N	9.4	24.1	57.5
2.827	34.008	9.0	N	9.6	22	56
4.002	32.778	9.0	N	9.6	23.2	56
4.204	29.902	9.0	N	9.6	26.1	56
15.414	34.682	9.0	N	9.8	25.3	60
15.922	30.118	9.0	L1	9.7	29.9	60

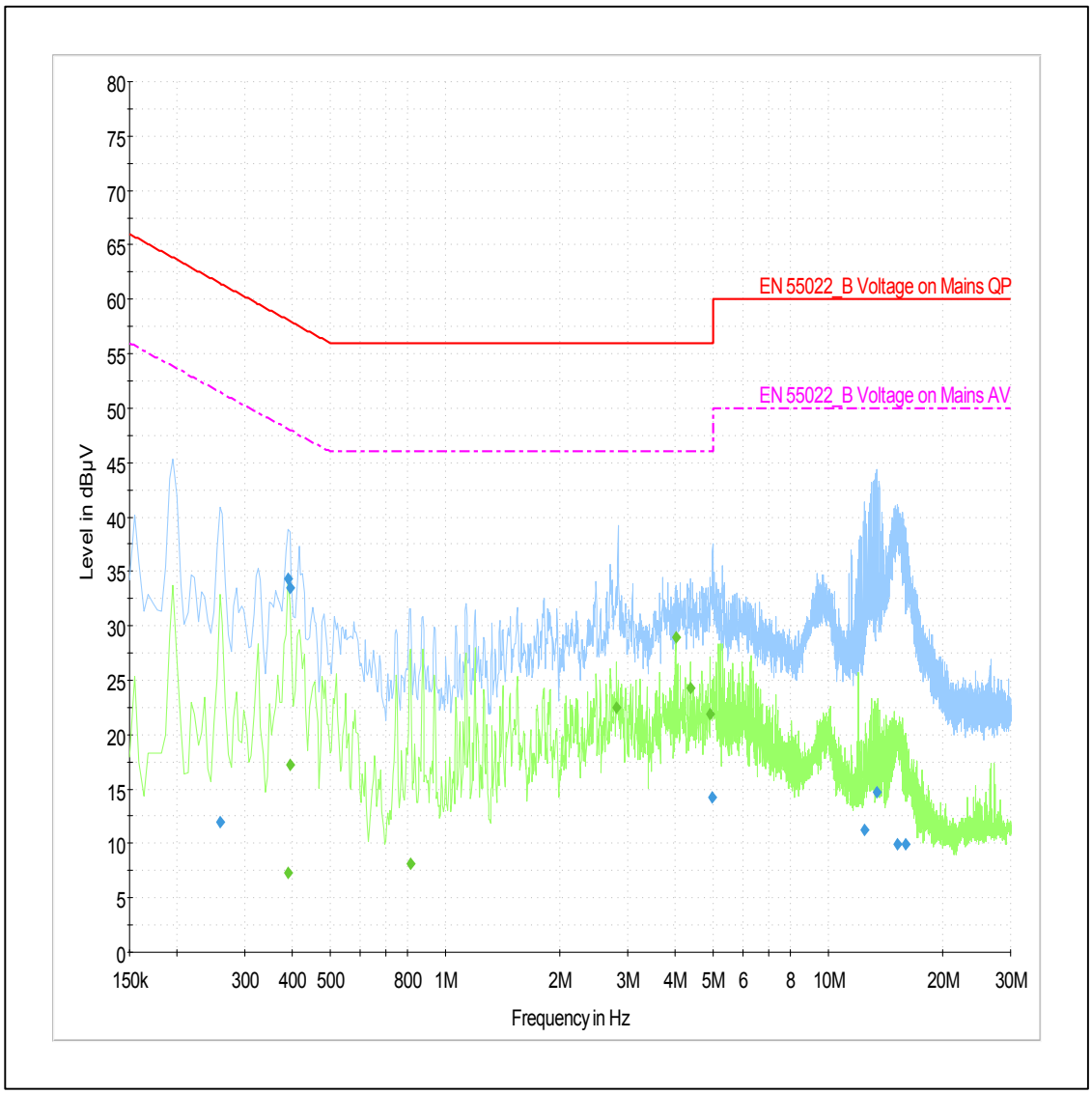
Average final measurement results table

Frequency [MHz]	Average [dBuV]	Bandwidth [kHz]	Line	Factor [dB]	Margin [dB]	Limit [dBuV]
0.195	33.613	9.0	N	9.3	20.2	53.8
0.258	31.435	9.0	N	9.4	20.1	51.5
0.321	29.477	9.0	L1	9.4	20.2	49.7
0.384	29.667	9.0	L1	9.4	18.5	48.2
0.416	21.344	9.0	N	9.4	26.2	47.5
0.515	24.544	9.0	N	9.5	21.5	46
1.887	19.416	9.0	N	9.6	26.6	46
4.002	29.528	9.0	L1	9.6	16.5	46
4.033	26.456	9.0	N	9.6	19.5	46
4.677	22.095	9.0	N	9.6	23.9	46

Note) Level (Quasi-Peak and/or Average) = Meter Reading(Quasi-Peak and/or Average) +
Factor (LISN Insertion Loss + Cable Loss)
Margin = Limit – Level (Quasi-Peak and/or Average)

- **Operating Mode : Scan to USB**

Test Graph



Note) Two graphs measured for both Live(L1) and Neutral(N) of the LISN are combined into one graph.

Test Results (Quasi-Peak and Average)

Quasi-peak final measurement results table

Frequency [MHz]	Quasi-Peak [dBuV]	Bandwidth [kHz]	Line	Factor [dB]	Margin [dB]	Limit [dBuV]
0.258	11.9	9.0	N	9.4	49.6	61.5
0.389	34.348	9.0	L1	9.4	23.7	58.1
0.393	33.431	9.0	L1	9.4	24.6	58
4.996	14.206	9.0	N	9.6	41.8	56
12.448	11.182	9.0	N	9.7	48.8	60
13.438	14.707	9.0	N	9.7	45.3	60
15.148	9.872	9.0	N	9.8	50.1	60
15.954	9.904	9.0	N	9.8	50.1	60

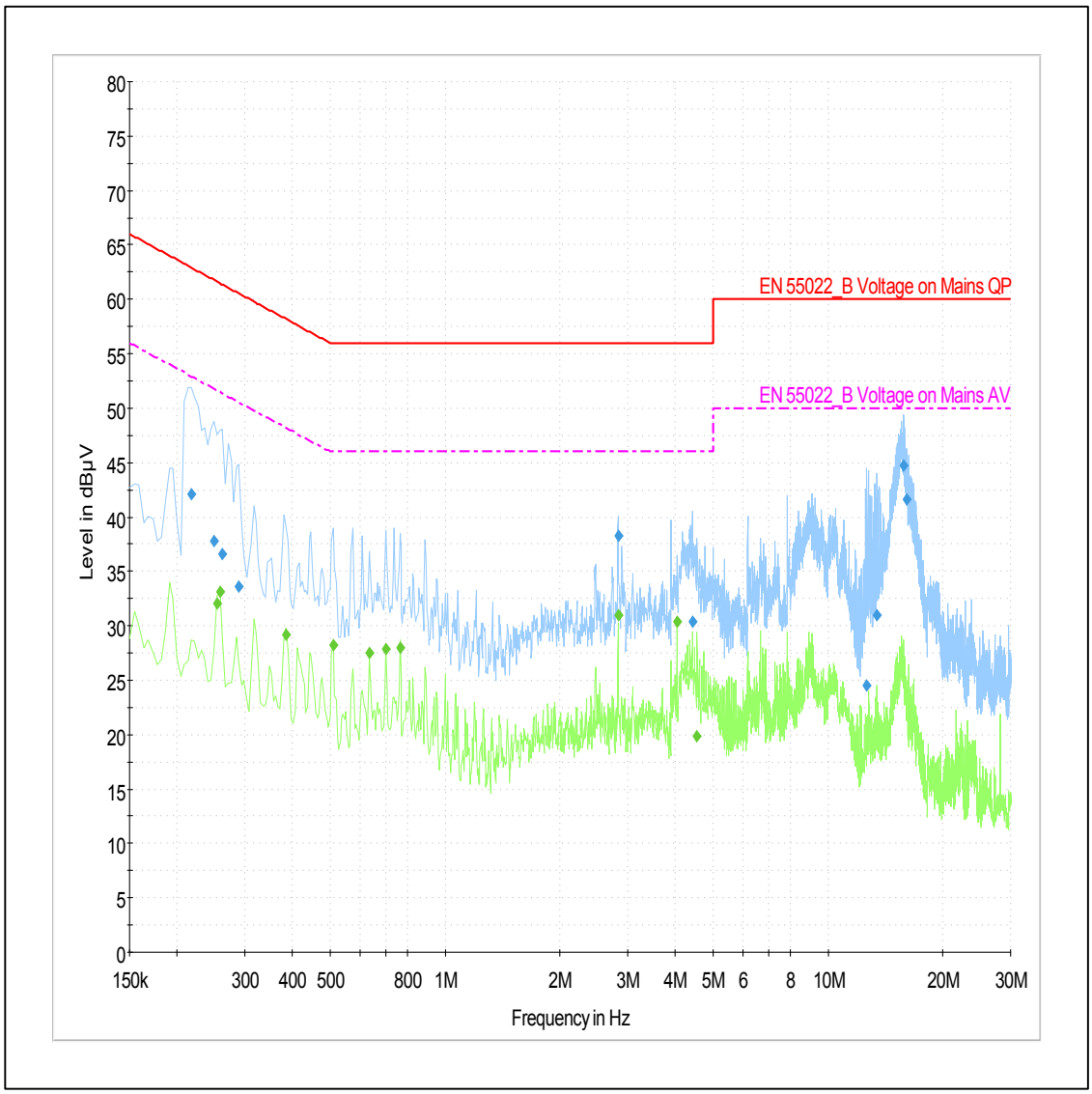
Average final measurement results table

Frequency [MHz]	Average [dBuV]	Bandwidth [kHz]	Line	Factor [dB]	Margin [dB]	Limit [dBuV]
0.389	7.268	9.0	L1	9.4	40.8	48.1
0.393	17.212	9.0	L1	9.4	30.8	48
0.812	8.104	9.0	L1	9.5	37.9	46
2.805	22.517	9.0	L1	9.6	23.5	46
4.002	28.902	9.0	L1	9.6	17.1	46
4.375	24.241	9.0	L1	9.6	21.8	46
4.933	21.858	9.0	L1	9.6	24.1	46

Note) Level (Quasi-Peak and/or Average) = Meter Reading(Quasi-Peak and/or Average) +
Factor (LISN Insertion Loss + Cable Loss)
Margin = Limit – Level (Quasi-Peak and/or Average)

- **Operating Mode : Fax-Rx**

Test Graph



Note) Two graphs measured for both Live(L1) and Neutral(N) of the LISN are combined into one graph.

Test Results (Quasi-Peak and Average)

Quasi-peak final measurement results table

Frequency [MHz]	Quasi-Peak [dBuV]	Bandwidth [kHz]	Line	Factor [dB]	Margin [dB]	Limit [dBuV]
0.218	42.081	9.0	N	9.4	20.8	62.9
0.249	37.816	9.0	N	9.4	24	61.8
0.263	36.551	9.0	N	9.4	24.8	61.4
0.29	33.564	9.0	N	9.4	27	60.5
2.832	38.291	9.0	N	9.6	17.7	56
4.42	30.385	9.0	L1	9.6	25.6	56
12.651	24.463	9.0	N	9.7	35.5	60
13.438	30.97	9.0	N	9.7	29	60
15.733	44.685	9.0	N	9.8	15.3	60
16.039	41.652	9.0	N	9.8	18.3	60

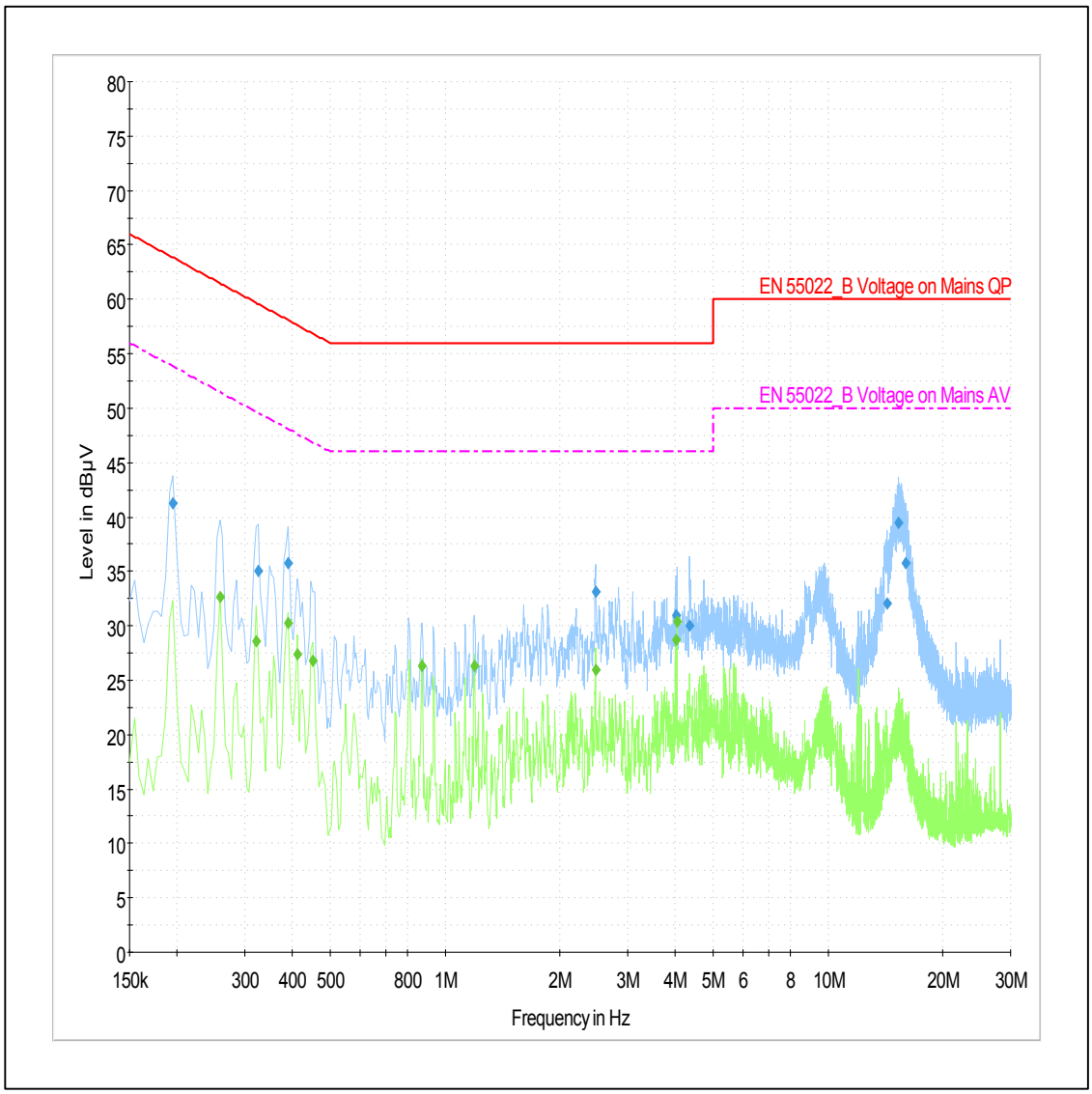
Average final measurement results table

Frequency [MHz]	Average [dBuV]	Bandwidth [kHz]	Line	Factor [dB]	Margin [dB]	Limit [dBuV]
0.254	32.048	9.0	N	9.4	19.6	51.6
0.258	33.086	9.0	N	9.4	18.4	51.5
0.384	29.161	9.0	N	9.4	19	48.2
0.51	28.273	9.0	N	9.5	17.7	46
0.636	27.476	9.0	N	9.5	18.5	46
0.699	27.809	9.0	L1	9.5	18.2	46
0.762	27.943	9.0	L1	9.5	18.1	46
2.832	30.951	9.0	N	9.6	15	46
4.033	30.399	9.0	N	9.6	15.6	46
4.555	19.847	9.0	L1	9.6	26.2	46

Note) Level (Quasi-Peak and/or Average) = Meter Reading(Quasi-Peak and/or Average) +
Factor (LISN Insertion Loss + Cable Loss)
Margin = Limit – Level (Quasi-Peak and/or Average)

- **Operating Mode : Fax-Tx**

Test Graph



Note) Two graphs measured for both Live(L1) and Neutral(N) of the LISN are combined into one graph.

Test Results (Quasi-Peak and Average)

Quasi-peak final measurement results table

Frequency [MHz]	Quasi-Peak [dBuV]	Bandwidth [kHz]	Line	Factor [dB]	Margin [dB]	Limit [dBuV]
0.195	41.254	9.0	N	9.3	22.6	63.8
0.326	35.004	9.0	L1	9.4	24.6	59.6
0.389	35.777	9.0	N	9.4	22.3	58.1
2.472	33.086	9.0	N	9.6	22.9	56
4.002	30.951	9.0	L1	9.6	25	56
4.353	29.98	9.0	N	9.6	26	56
14.23	32.043	9.0	N	9.7	28	60
15.292	39.494	9.0	N	9.8	20.5	60
15.918	35.78	9.0	N	9.8	24.2	60

Average final measurement results table

Frequency [MHz]	Average [dBuV]	Bandwidth [kHz]	Line	Factor [dB]	Margin [dB]	Limit [dBuV]
0.258	32.658	9.0	N	9.4	18.8	51.5
0.321	28.553	9.0	L1	9.4	21.1	49.7
0.389	30.283	9.0	N	9.4	17.8	48.1
0.411	27.435	9.0	N	9.4	20.2	47.6
0.452	26.782	9.0	N	9.4	20.1	46.8
0.87	26.324	9.0	N	9.5	19.7	46
1.194	26.26	9.0	N	9.6	19.7	46
2.472	25.95	9.0	N	9.6	20	46
4.002	28.748	9.0	L1	9.6	17.3	46
4.033	30.369	9.0	N	9.6	15.6	46

Note) Level (Quasi-Peak and/or Average) = Meter Reading(Quasi-Peak and/or Average) +
Factor (LISN Insertion Loss + Cable Loss)
Margin = Limit – Level (Quasi-Peak and/or Average)

4.2 Radiated disturbance

Of those disturbances above (*L* - 20dB), 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	Resolution Bandwidth	Quasi-peak Limits dB dB(μV/m)	
		Class A	Class B
30 to 230	120 kHz	40	30
230 to 1000	120 kHz	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.			

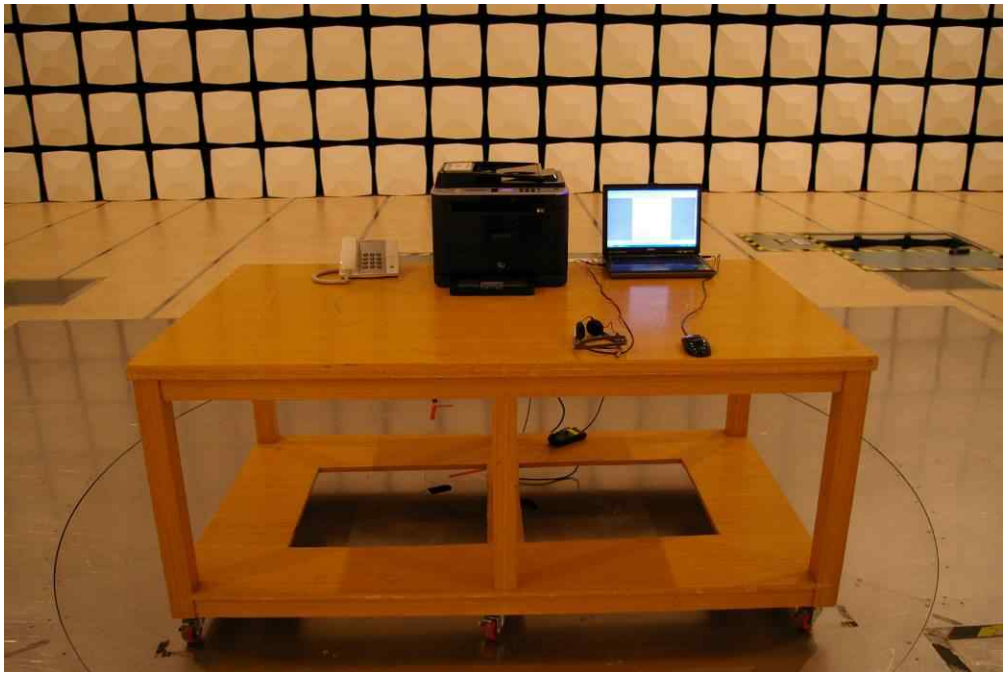
4.2.1 Test instrumentation

Test instrumentation	Manufacturer	Model name	Serial or Firmware (No./Ver.)	Calibration	
				Date	Interval (Month)
Bilog Antenna	Schaffner	CBL6112D	22602	2008-04-15	24
Bilog Antenna	Schaffner	CBL6112D	22604	2008-04-15	24
Horn Antenna	R&S	HF907	100016	2009-04-27	24
Test Receiver	R&S	ESIB-26	100287	2009-08-27	12
Test Receiver	R&S	ESIB-26	100147	2009-06-30	12
Amplifier	Sonoma	310N	185861	2009-01-28	12
Amplifier	Sonoma	310N	251676	2009-01-28	12
Amplifier	R&S	SCU_F018_G35_ASF42_CNN(F)	10001	2009-01-19	12
Antenna Mast	INN CO	MA4000	-	N/A	N/A
Antenna Mast	INN CO	MA4000	-	N/A	N/A
Mast Controller	INN CO	CO2000	-	N/A	N/A
Test software	TOYO	EP5/RE	VER 3.1.20	N/A	N/A
RF Selector	TOYO	NS4900	-	N/A	N/A
RF Selector	TOYO	NS4900	-	N/A	N/A

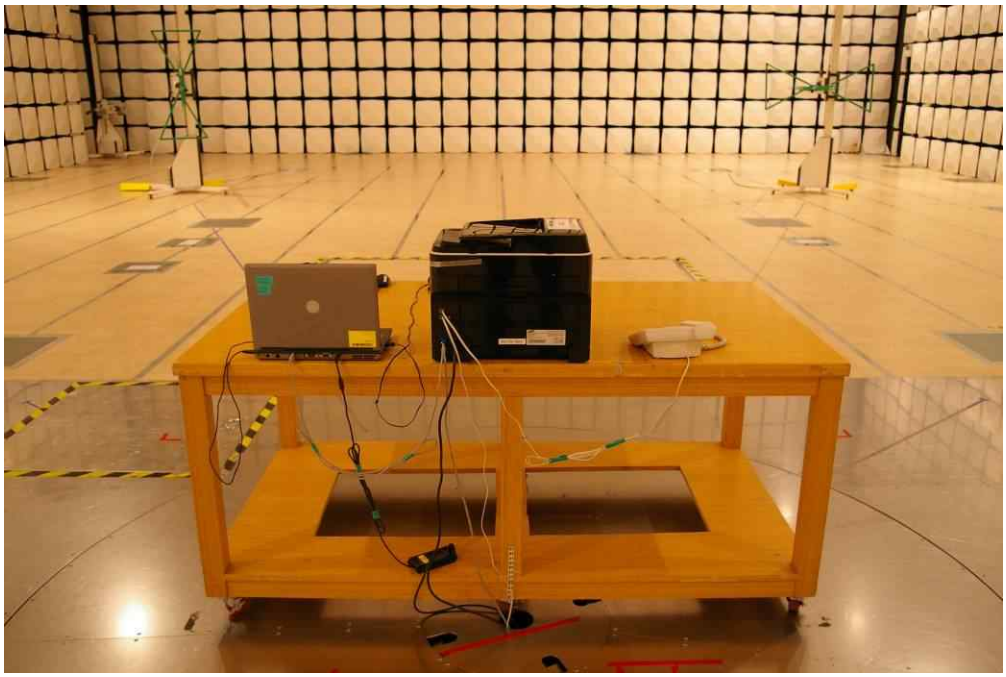
4.2.2 Temperature and humidity condition

Test date	December 15, 2009 ~ December 17, 2009	**Test engineer**	Ho Jin Choi
Test place	Semi-Anechoic Chamber		

4.2.3 Photograph of Test Setup



Front



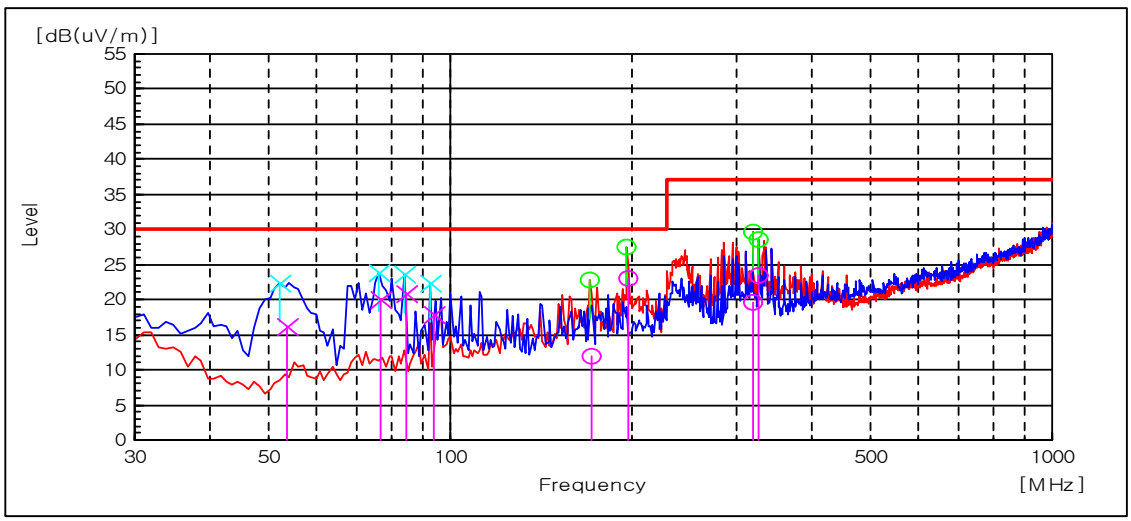
Rear

4.2.4 Test results

4.2.4.1 Below 1GHz results

- **Operating Mode : Standby**

Test Graph and Results



Frequency [MHz]	(P)	Reading QP [dB(uV)]	Factor [dB(1/m)]	Level QP [dB(uV/m)]	Limit [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]
53.66	V	40.4	-24.1	16.3	30	13.7	252	90
76.62	V	43.6	-23.6	20.0	30	10.0	112	160
84.68	V	42.9	-22.1	20.8	30	9.2	128	312
93.92	V	37.9	-20.0	17.9	30	12.1	148	47.2
171.69	H	31.7	-19.9	11.8	30	18.2	349	359.6
197.57	H	43.0	-19.9	23.1	30	6.9	289	127.5
318.56	H	33.5	-13.8	19.7	37	17.3	252	18.5
325.136	H	37	-13.6	23.4	37	13.6	148	257.5

Note) Receiving antenna polarization : Horizontal and/or Vertical

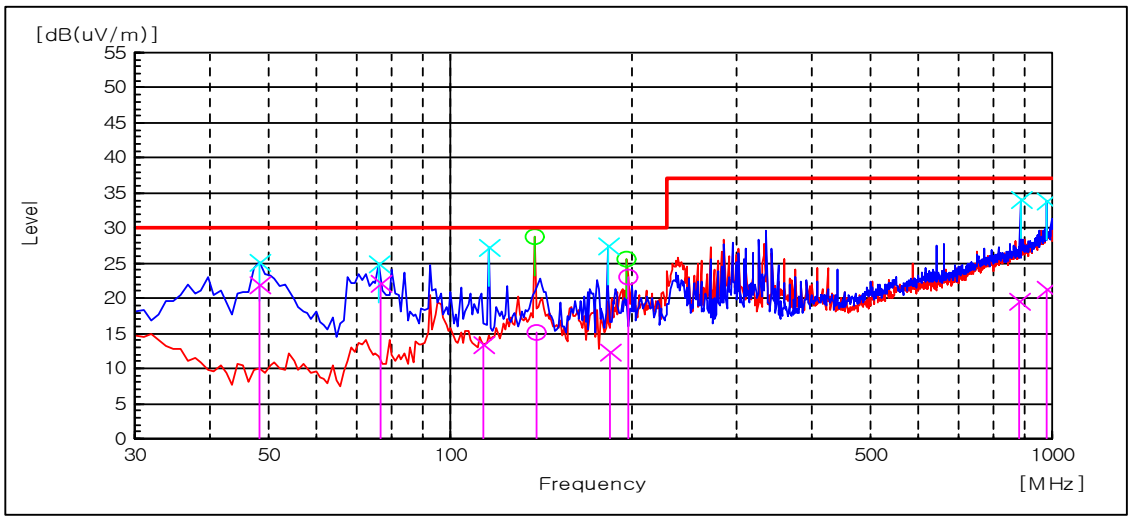
Test Distance : 10m, Antenna Height : 1 to 4 meters

Level QP(Quasi-Peak) = Reading QP + Factor(Antenna Factor + Cable Loss - Amp. Gain)

Margin QP(Quasi-Peak) = Limit – Level QP

- **Operating Mode : USB Printing**

Test Graph and Results



Frequency [MHz]	(P)	Reading QP [dB(uV)]	Factor [dB(1/m)]	Level QP [dB(uV/m)]	Limit [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]
48.42	V	44.4	-22.4	22.0	30	8.0	123	71
76.59	V	45.7	-23.6	22.1	30	7.9	189	159
113.56	V	30.8	-17.4	13.4	30	16.6	114	0
139.82	H	33.4	-18.2	15.2	30	14.8	359	241.6
184.34	V	31.8	-19.5	12.3	30	17.7	103	23.5
197.57	H	43.0	-19.9	23.1	30	6.9	347	112.3
884.44	V	22.0	-2.4	19.6	37	17.4	161	235.6
979.976	V	21.7	-0.3	21.4	37	15.6	198	359.1

Note) Receiving antenna polarization : Horizontal and/or Vertical

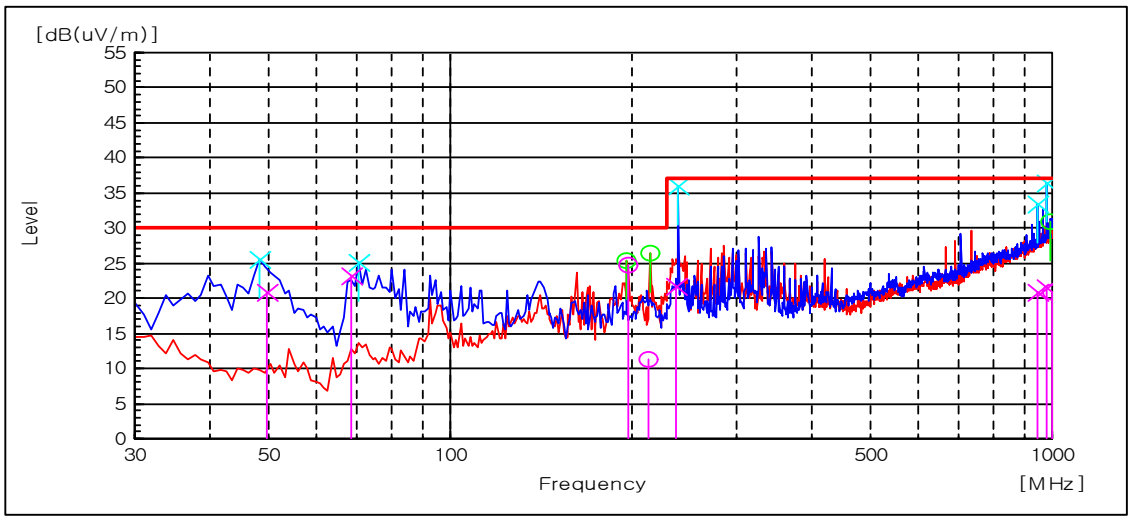
Test Distance : 10m, Antenna Height : 1 to 4 meters

Level QP(Quasi-Peak) = Reading QP + Factor(Antenna Factor + Cable Loss - Amp. Gain)

Margin QP(Quasi-Peak) = Limit – Level QP

- **Operating Mode : Network Printing**

Test Graph and Results



Frequency [MHz]	(P)	Reading QP [dB(uV)]	Factor [dB(1/m)]	Level QP [dB(uV/m)]	Limit [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]
49.64	V	43.6	-22.8	20.8	30	9.2	116	87
68.54	V	47.8	-24.5	23.3	30	6.7	103	105
197.58	H	44.6	-19.9	24.7	30	5.3	347	237
213.48	H	31.1	-19.8	11.3	30	18.7	346	195.3
237.54	V	39.7	-17.9	21.8	37	15.2	147	32.8
944.37	V	21.8	-1.0	20.8	37	16.2	103	321.3
981.44	V	21.9	-0.3	21.6	37	15.4	179	281.2
997.325	H	21.2	-0.3	20.9	37	16.1	351	331.5

Note) Receiving antenna polarization : Horizontal and/or Vertical

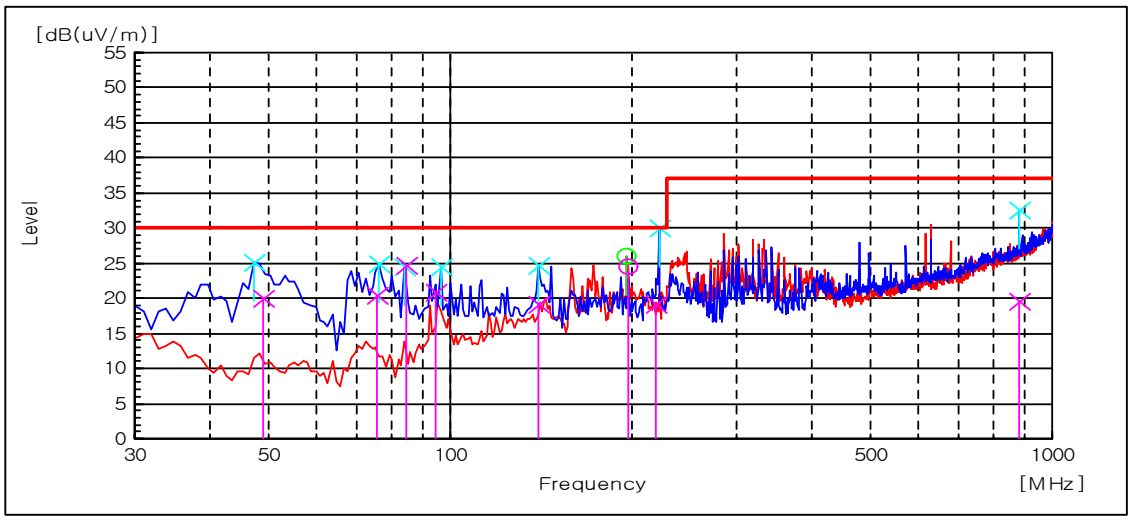
Test Distance : 10m, Antenna Height : 1 to 4 meters

Level QP(Quasi-Peak) = Reading QP + Factor(Antenna Factor + Cable Loss - Amp. Gain)

Margin QP(Quasi-Peak) = Limit – Level QP

- **Operating Mode : Wireless Network Printing**

Test Graph and Results



Frequency [MHz]	(P)	Reading QP [dB(uV)]	Factor [dB(1/m)]	Level QP [dB(uV/m)]	Limit [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]
48.90	V	42.5	-22.5	20.0	30	10.0	125	25
75.93	V	44.2	-23.7	20.5	30	9.5	136	112
84.68	V	46.9	-22.1	24.8	30	5.2	189	236
94.76	V	40.6	-19.8	20.8	30	9.2	278	42.6
139.99	V	37.1	-17.9	19.2	30	10.8	149	288.1
197.58	H	44.4	-19.9	24.5	30	5.5	386	132.3
219.84	V	38.3	-19.1	19.2	30	10.8	112	355.9
882.191	V	21.9	-2.4	19.5	37	17.5	351	354.4

Note) Receiving antenna polarization : Horizontal and/or Vertical

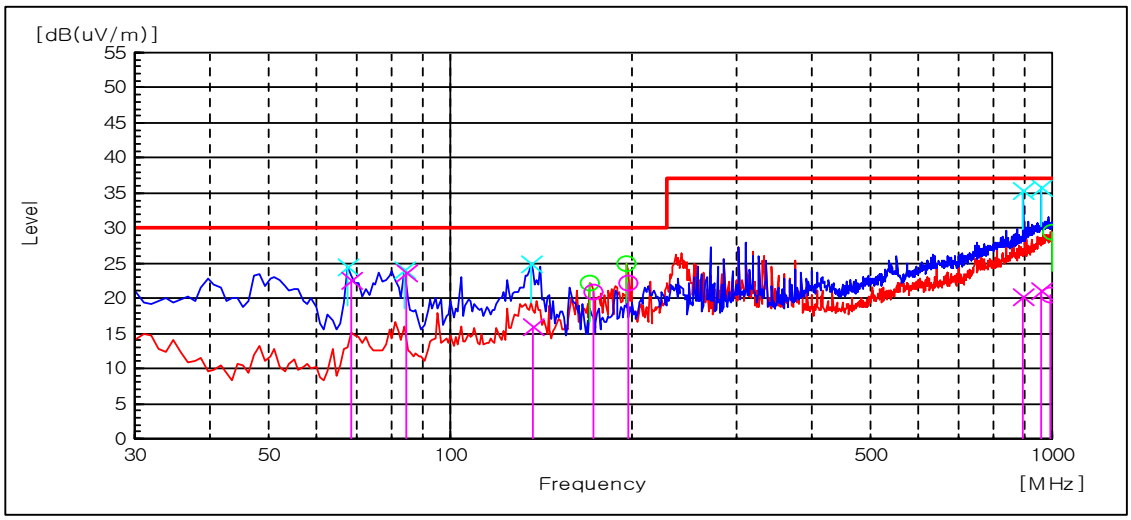
Test Distance : 10m, Antenna Height : 1 to 4 meters

Level QP(Quasi-Peak) = Reading QP + Factor(Antenna Factor + Cable Loss - Amp. Gain)

Margin QP(Quasi-Peak) = Limit – Level QP

- **Operating Mode : ADF Copy Printing**

Test Graph and Results



Frequency [MHz]	(P)	Reading QP [dB(uV)]	Factor [dB(1/m)]	Level QP [dB(uV/m)]	Limit [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]
68.56	V	47.1	-24.5	22.6	30	7.4	150	201
84.68	V	45.7	-22.1	23.6	30	6.4	150	235
137.09	V	33.6	-17.7	15.9	30	14.1	150	253
197.58	H	42.1	-19.9	22.2	30	7.8	324	114.6
894.22	V	22.3	-2.1	20.2	37	16.8	128	159.1
959.96	V	22.0	-0.8	21.2	37	15.8	165	298.6
996.16	H	20.8	-0.3	20.5	37	16.5	348	53.6
173.624	H	40.9	-20	20.9	30	9.1	353	327.6

Note) Receiving antenna polarization : Horizontal and/or Vertical

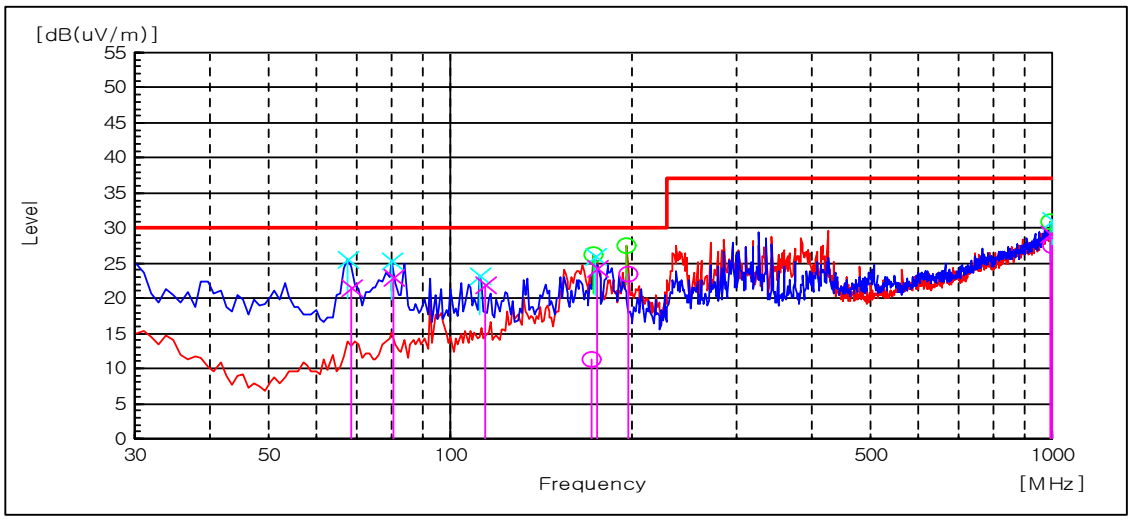
Test Distance : 10m, Antenna Height : 1 to 4 meters

Level QP(Quasi-Peak) = Reading QP + Factor(Antenna Factor + Cable Loss - Amp. Gain)

Margin QP(Quasi-Peak) = Limit – Level QP

- **Operating Mode : Scan to PC**

Test Graph and Results



Frequency [MHz]	(P)	Reading QP [dB(uV)]	Factor [dB(1/m)]	Level QP [dB(uV/m)]	Limit [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]
68.56	V	46.0	-24.5	21.5	30	8.5	112.8	130
80.67	V	46.0	-23.0	23.0	30	7.0	221	262
172.48	H	31.1	-19.9	11.2	30	18.8	277	191
175.55	V	43.6	-19.3	24.3	30	5.7	181	322.2
197.58	H	43.4	-19.9	23.5	30	6.5	356.1	158.9
994.68	V	29.3	0.0	29.3	37	7.7	352.6	93.4
997.30	H	27.9	-0.3	27.6	37	9.4	156	351.4
114.237	V	39.2	-17.3	21.9	30	8.1	148	341.4

Note) Receiving antenna polarization : Horizontal and/or Vertical

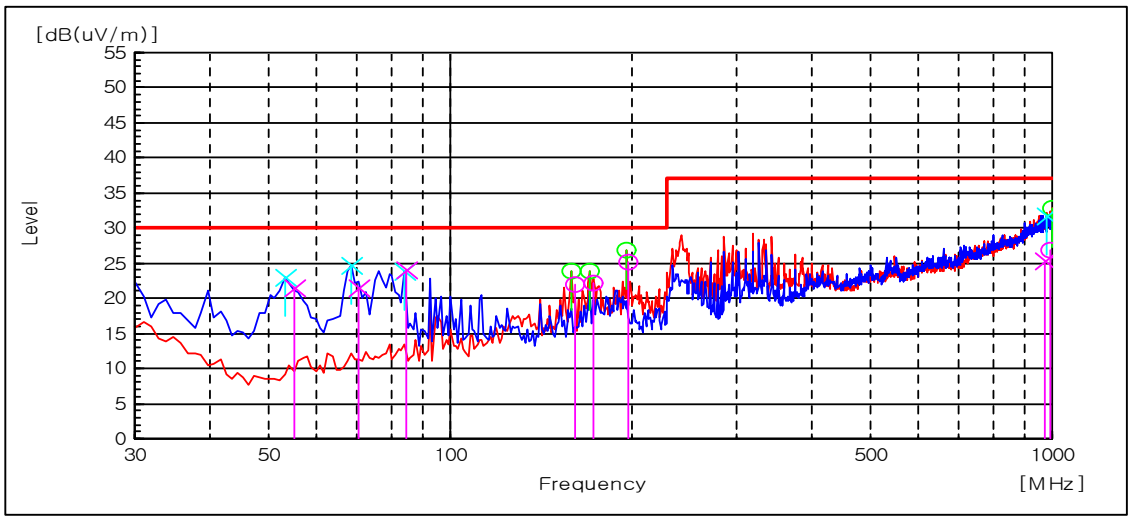
Test Distance : 10m, Antenna Height : 1 to 4 meters

Level QP(Quasi-Peak) = Reading QP + Factor(Antenna Factor + Cable Loss - Amp. Gain)

Margin QP(Quasi-Peak) = Limit – Level QP

- **Operating Mode : Scan to USB**

Test Graph and Results



Frequency [MHz]	(P)	Reading QP [dB(uV)]	Factor [dB(1/m)]	Level QP [dB(uV/m)]	Limit [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]
55.14	V	46.0	-24.4	21.6	30	8.4	254	89
70.56	V	45.9	-24.3	21.6	30	8.4	165	218
84.69	V	46.1	-22.1	24.0	30	6.0	128	236
161.50	H	41.5	-19.6	21.9	30	8.1	346	146.4
172.95	H	42.1	-20.0	22.1	30	7.9	341	205.4
197.59	H	45.1	-19.9	25.2	30	4.8	354	150.4
974.38	V	25.9	-0.5	25.4	37	11.6	353.7	16.7
996.176	H	27.2	-0.3	26.9	37	10.1	153	204.5

Note) Receiving antenna polarization : Horizontal and/or Vertical

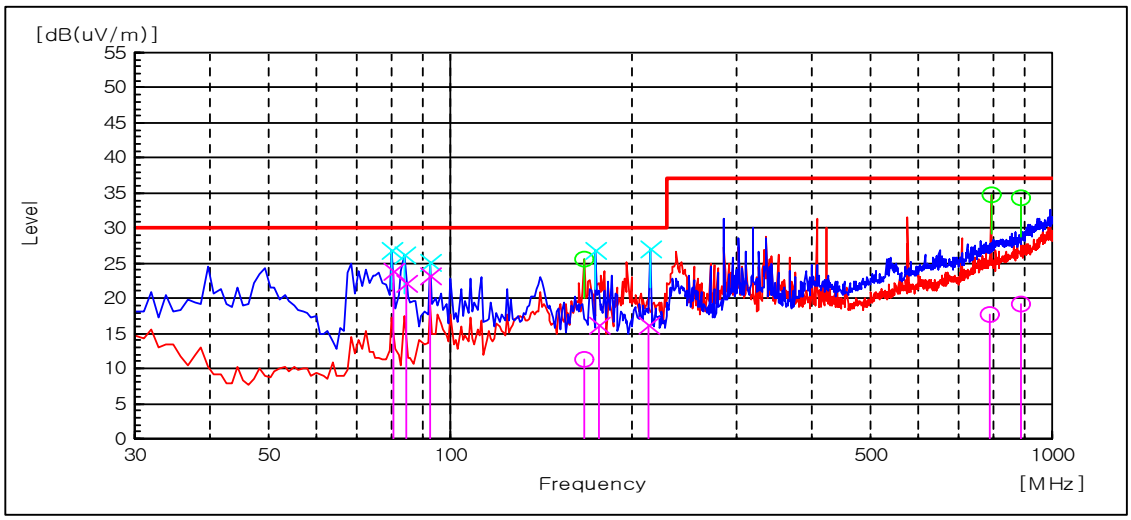
Test Distance : 10m, Antenna Height : 1 to 4 meters

Level QP(Quasi-Peak) = Reading QP + Factor(Antenna Factor + Cable Loss - Amp. Gain)

Margin QP(Quasi-Peak) = Limit – Level QP

- **Operating Mode : Fax-Rx**

Test Graph and Results



Frequency [MHz]	(P)	Reading QP [dB(uV)]	Factor [dB(1/m)]	Level QP [dB(uV/m)]	Limit [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]
80.64	V	46.9	-23.0	23.9	30	6.1	159	315
84.69	V	44.3	-22.1	22.2	30	7.8	105	360
92.76	V	43.5	-20.3	23.2	30	6.8	125	77
166.93	H	30.9	-19.6	11.3	30	18.7	359	347.5
176.56	V	35.5	-19.3	16.2	30	13.8	169	198.5
213.31	V	35.7	-19.5	16.2	30	13.8	112	148.2
788.30	H	21.8	-4.2	17.6	37	19.4	368	127.3
889.955	H	21.6	-2.5	19.1	37	17.9	314	325.4

Note) Receiving antenna polarization : Horizontal and/or Vertical

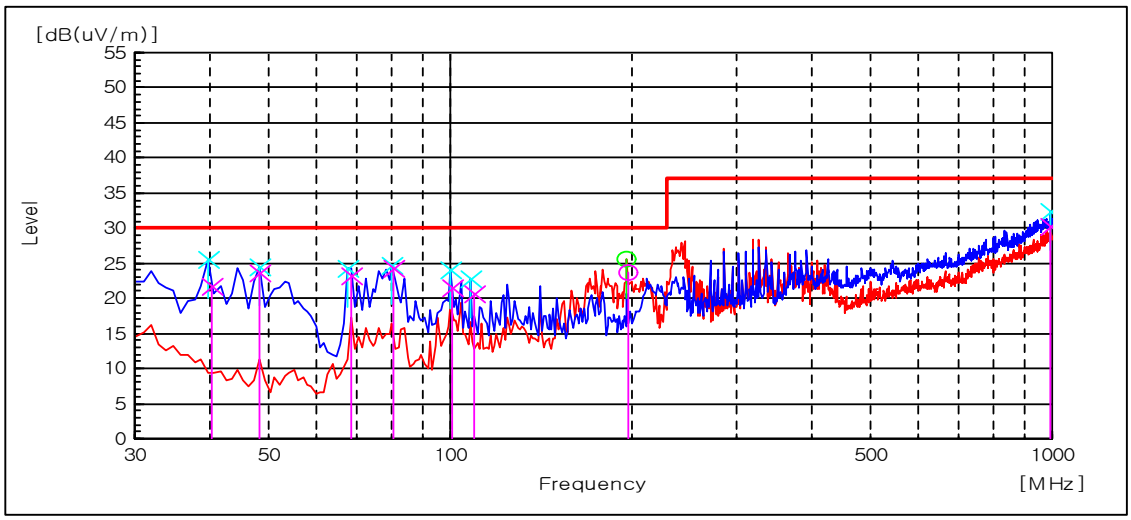
Test Distance : 10m, Antenna Height : 1 to 4 meters

Level QP(Quasi-Peak) = Reading QP + Factor(Antenna Factor + Cable Loss - Amp. Gain)

Margin QP(Quasi-Peak) = Limit – Level QP

- **Operating Mode : Fax-Tx**

Test Graph and Results



Frequency [MHz]	(P)	Reading QP [dB(uV)]	Factor [dB(1/m)]	Level QP [dB(uV/m)]	Limit [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]
40.34	V	40.4	-18.6	21.8	30	8.2	351	1
48.41	V	46.0	-22.4	23.6	30	6.4	151	196
68.54	V	47.8	-24.5	23.3	30	6.7	233	171
80.66	V	47.2	-23.0	24.2	30	5.8	153	99.8
100.82	V	40.1	-18.6	21.5	30	8.5	151	36.1
197.57	H	43.5	-19.9	23.6	30	6.4	251	114.3
109.62	V	38.3	-17.6	20.7	30	9.3	158	73.4
993.681	V	30.2	0	30.2	37	6.8	354	161.6

Note) Receiving antenna polarization : Horizontal and/or Vertical

Test Distance : 10m, Antenna Height : 1 to 4 meters

Level QP(Quasi-Peak) = Reading QP + Factor(Antenna Factor + Cable Loss - Amp. Gain)

Margin QP(Quasi-Peak) = Limit – Level QP

4.2. Above 1GHz results

- **Operating Mode : Stand by**

Peak Measurement

Frequency [MHz]	POL	Reading PK [dB(uV)]	Factor [dB(1/m)]	Level PK [dB(uV/m)]	Limit [dB(uV/m)]	Margin PK [dB]	Height [cm]	Angle [deg]
1967.94	H	47.8	-1.8	46.0	74	28.0	100	48
1981.96	V	47.6	-1.7	45.9	74	28.1	100	17

Average Measurement

Frequency [MHz]	POL	Reading AV [dB(uV)]	Factor [dB(1/m)]	Level AV [dB(uV/m)]	Limit [dB(uV/m)]	Margin AV [dB]	Height [cm]	Angle [deg]
1969.23	H	13.0	-1.8	11.2	54	42.8	100	50
1984.78	V	14.0	-1.7	12.3	54	41.7	100	18

Note1) Any emissions that do NOT exceed average limit were not tested with average detector mode.

Note2) Receiving antenna polarization : Horizontal and Vertical

Level P K(Peak) = Reading PK(Peak) + Factor(Antenna Factor + Cable Loss - Amp. Gain)

Level AV (Average) = Reading AV (Average) + Factor(Antenna Factor + Cable Loss - Amp. Gain)

Margin PK (Peak) = Limit – Level PK (Peak)

Margin AV (Average) = Limit – Level AV (Average)

- **Operating Mode : USB Printing**

Peak Measurement

Frequency [MHz]	POL	Reading PK [dB(uV)]	Factor [dB(1/m)]	Level PK [dB(uV/m)]	Limit [dB(uV/m)]	Margin PK [dB]	Height [cm]	Angle [deg]
1370.74	V	53.5	-6.4	47.1	74	26.9	100	12
1430.86	H	52.2	-5.7	46.5	74	27.5	100	347
1845.69	V	51.2	-3.0	48.2	74	25.8	100	43
1991.98	V	52.9	-1.7	51.2	74	22.8	100	153.8

Average Measurement

Frequency [MHz]	POL	Reading AV [dB(uV)]	Factor [dB(1/m)]	Level AV [dB(uV/m)]	Limit [dB(uV/m)]	Margin AV [dB]	Height [cm]	Angle [deg]
1372.45	V	18.7	-6.4	12.3	54	41.7	100	12
1432.85	H	19.1	-5.7	13.4	54	40.6	100	344
1841.41	V	13.8	-3.1	10.7	54	43.3	100	44
1987.12	V	13.5	-1.7	11.8	54	42.2	100	153.1

Note1) Any emissions that do NOT exceed average limit were not tested with average detector mode.

Note2) Receiving antenna polarization : Horizontal and Vertical

Level P K(Peak) = Reading PK(Peak) + Factor(Antenna Factor + Cable Loss - Amp. Gain)

Level AV (Average) = Reading AV (Average) + Factor(Antenna Factor + Cable Loss - Amp. Gain)

Margin PK (Peak) = Limit – Level PK (Peak)

Margin AV (Average) = Limit – Level AV (Average)

- **Operating Mode : Network Printing**

Peak Measurement

Frequency [MHz]	POL	Reading PK [dB(uV)]	Factor [dB(1/m)]	Level PK [dB(uV/m)]	Limit [dB(uV/m)]	Margin PK [dB]	Height [cm]	Angle [deg]
1132.27	H	52.9	-8.2	44.7	74	29.3	100	348
1314.63	V	54.3	-7.1	47.2	74	26.8	100	27
1569.14	V	53.1	-4.5	48.6	74	25.4	100	281
1581.16	V	53.0	-4.5	48.5	74	25.5	100	122
1967.94	H	47.4	-1.8	45.6	74	28.4	100	78.9

Average Measurement

Frequency [MHz]	POL	Reading AV [dB(uV)]	Factor [dB(1/m)]	Level AV [dB(uV/m)]	Limit [dB(uV/m)]	Margin AV [dB]	Height [cm]	Angle [deg]
1129.37	H	15.2	-8.3	6.9	54	47.1	100	347
1315.60	V	15.8	-7.1	8.7	54	45.3	100	28
1571.93	V	13.9	-4.5	9.4	54	44.6	100	280
1580.09	V	13.9	-4.5	9.4	54	44.6	100	122.6
1972.44	H	13.3	-1.8	11.5	54	42.5	100	79.5

Note1) Any emissions that do NOT exceed average limit were not tested with average detector mode.

Note2) Receiving antenna polarization : Horizontal and Vertical

Level P K(Peak) = Reading PK(Peak) + Factor(Antenna Factor + Cable Loss - Amp. Gain)

Level AV (Average) = Reading AV (Average) + Factor(Antenna Factor + Cable Loss - Amp. Gain)

Margin PK (Peak) = Limit – Level PK (Peak)

Margin AV (Average) = Limit – Level AV (Average)

- **Operating Mode : Wireless Network Printing**

Peak Measurement

Frequency [MHz]	POL	Reading PK [dB(uV)]	Factor [dB(1/m)]	Level PK [dB(uV/m)]	Limit [dB(uV/m)]	Margin PK [dB]	Height [cm]	Angle [deg]
1018.04	V	62.6	-8.4	54.2	74	19.8	100	47
1661.32	V	54.7	-4.1	50.6	74	23.4	100	94
1777.56	V	52.6	-3.6	49.0	74	25.0	100	0
1815.63	V	52.8	-3.3	49.5	74	24.5	100	14.9
1883.77	V	52.4	-2.6	49.8	74	24.2	100	78.6

Average Measurement

Frequency [MHz]	POL	Reading AV [dB(uV)]	Factor [dB(1/m)]	Level AV [dB(uV/m)]	Limit [dB(uV/m)]	Margin AV [dB]	Height [cm]	Angle [deg]
1013.42	V	26.5	-8.4	18.1	54	35.9	102	43
1663.44	V	21.8	-4.1	17.7	54	36.3	129	82
1773.46	V	20.5	-3.7	16.8	54	37.2	103	1
1815.16	V	16.9	-3.3	13.6	54	40.4	100	56.6
1879.75	V	14.4	-2.7	11.7	54	42.3	168	59.3

Note1) Any emissions that do NOT exceed average limit were not tested with average detector mode.

Note2) Receiving antenna polarization : Horizontal and Vertical

Level P K(Peak) = Reading PK(Peak) + Factor(Antenna Factor + Cable Loss - Amp. Gain)

Level AV (Average) = Reading AV (Average) + Factor(Antenna Factor + Cable Loss - Amp. Gain)

Margin PK (Peak) = Limit – Level PK (Peak)

Margin AV (Average) = Limit – Level AV (Average)

- **Operating Mode : ADF Copy Printing**

Peak Measurement

Frequency [MHz]	POL	Reading PK [dB(uV)]	Factor [dB(1/m)]	Level PK [dB(uV/m)]	Limit [dB(uV/m)]	Margin PK [dB]	Height [cm]	Angle [deg]
1018.04	V	54.2	-8.4	45.8	74	28.2	100	75
1438.88	H	54.8	-5.6	49.2	74	24.8	100	332
1446.89	H	53.0	-5.5	47.5	74	26.5	100	332
1893.79	H	49.4	-2.5	46.9	74	27.1	100	47.3

Average Measurement

Frequency [MHz]	POL	Reading AV [dB(uV)]	Factor [dB(1/m)]	Level AV [dB(uV/m)]	Limit [dB(uV/m)]	Margin AV [dB]	Height [cm]	Angle [deg]
1016.64	V	24.0	-8.4	15.6	54	38.4	100	77
1436.53	H	17.3	-5.7	11.6	54	42.3	100	335
1443.57	H	17.8	-5.6	12.2	54	41.7	100	333
1895.34	H	17.0	-2.5	14.5	54	39.5	100	48.6

Note1) Any emissions that do NOT exceed average limit were not tested with average detector mode.

Note2) Receiving antenna polarization : Horizontal and Vertical

Level P K(Peak) = Reading PK(Peak) + Factor(Antenna Factor + Cable Loss - Amp. Gain)

Level AV (Average) = Reading AV (Average) + Factor(Antenna Factor + Cable Loss - Amp. Gain)

Margin PK (Peak) = Limit – Level PK (Peak)

Margin AV (Average) = Limit – Level AV (Average)

- **Operating Mode : Scan to PC**

Peak Measurement

Frequency [MHz]	POL	Reading PK [dB(uV)]	Factor [dB(1/m)]	Level PK [dB(uV/m)]	Limit [dB(uV/m)]	Margin PK [dB]	Height [cm]	Angle [deg]
1330.66	V	53.8	-6.9	46.9	74	27.1	100	353
1593.19	V	53.6	-4.4	49.2	74	24.8	100	42
1661.32	V	55.2	-4.1	51.1	74	22.9	100	42
1775.55	V	52.6	-3.7	48.9	74	25.1	100	352.5
1883.77	V	53.2	-2.6	50.6	74	23.4	100	11.9

Average Measurement

Frequency [MHz]	POL	Reading AV [dB(uV)]	Factor [dB(1/m)]	Level AV [dB(uV/m)]	Limit [dB(uV/m)]	Margin AV [dB]	Height [cm]	Angle [deg]
1330.01	V	29.2	-6.9	22.3	54	31.7	100	4
1594.22	V	16.2	-4.4	11.8	54	42.2	190	167
1663.32	V	24.3	-4.1	20.2	54	33.8	103	73
1776.20	V	21.0	-3.7	17.3	54	36.7	110	352.2
1886.66	V	15.3	-2.6	12.7	54	41.3	100	33.8

Note1) Any emissions that do NOT exceed average limit were not tested with average detector mode.

Note2) Receiving antenna polarization : Horizontal and Vertical

Level P K(Peak) = Reading PK(Peak) + Factor(Antenna Factor + Cable Loss - Amp. Gain)

Level AV (Average) = Reading AV (Average) + Factor(Antenna Factor + Cable Loss - Amp. Gain)

Margin PK (Peak) = Limit – Level PK (Peak)

Margin AV (Average) = Limit – Level AV (Average)

- **Operating Mode : Scan to USB**

Peak Measurement

Frequency [MHz]	POL	Reading PK [dB(uV)]	Factor [dB(1/m)]	Level PK [dB(uV/m)]	Limit [dB(uV/m)]	Margin PK [dB]	Height [cm]	Angle [deg]
1440.88	V	51.7	-5.6	46.1	74	27.9	100	356
1967.94	H	47.7	-1.8	45.9	74	28.1	100	360
1977.96	V	47.6	-1.8	45.8	74	28.2	100	167

Average Measurement

Frequency [MHz]	POL	Reading AV [dB(uV)]	Factor [dB(1/m)]	Level AV [dB(uV/m)]	Limit [dB(uV/m)]	Margin AV [dB]	Height [cm]	Angle [deg]
1439.97	V	17.6	-5.6	12.0	54	42.0	145	73
1965.70	H	13.4	-1.8	11.6	54	42.4	106	65
1973.32	V	13.2	-1.8	11.4	54	42.6	106	360

Note1) Any emissions that do NOT exceed average limit were not tested with average detector mode.

Note2) Receiving antenna polarization : Horizontal and Vertical

Level P K(Peak) = Reading PK(Peak) + Factor(Antenna Factor + Cable Loss - Amp. Gain)

Level AV (Average) = Reading AV (Average) + Factor(Antenna Factor + Cable Loss - Amp. Gain)

Margin PK (Peak) = Limit – Level PK (Peak)

Margin AV (Average) = Limit – Level AV (Average)

- **Operating Mode : Fax-Rx**

Peak Measurement

Frequency [MHz]	POL	Reading PK [dB(uV)]	Factor [dB(1/m)]	Level PK [dB(uV/m)]	Limit [dB(uV/m)]	Margin PK [dB]	Height [cm]	Angle [deg]
1991.98	V	47.4	-1.7	45.7	74	28.3	100	1
1998.00	H	47.6	-1.7	45.9	74	28.1	100	326

Average Measurement

Frequency [MHz]	POL	Reading AV [dB(uV)]	Factor [dB(1/m)]	Level AV [dB(uV/m)]	Limit [dB(uV/m)]	Margin AV [dB]	Height [cm]	Angle [deg]
1993.45	V	12.0	-1.7	10.3	54	43.7	100	2
1994.17	H	14.2	-1.7	12.5	54	41.5	100	322

Note1) Any emissions that do NOT exceed average limit were not tested with average detector mode.

Note2) Receiving antenna polarization : Horizontal and Vertical

Level P K(Peak) = Reading PK(Peak) + Factor(Antenna Factor + Cable Loss - Amp. Gain)

Level AV (Average) = Reading AV (Average) + Factor(Antenna Factor + Cable Loss - Amp. Gain)

Margin PK (Peak) = Limit – Level PK (Peak)

Margin AV (Average) = Limit – Level AV (Average)

- **Operating Mode : Fax-Tx**

Peak Measurement

Frequency [MHz]	POL	Reading PK [dB(uV)]	Factor [dB(1/m)]	Level PK [dB(uV/m)]	Limit [dB(uV/m)]	Margin PK [dB]	Height [cm]	Angle [deg]
1953.91	H	47.9	-1.9	46.0	74	28.0	100	284
1989.98	V	47.9	-1.7	46.2	74	27.8	100	328

Average Measurement

Frequency [MHz]	POL	Reading AV [dB(uV)]	Factor [dB(1/m)]	Level AV [dB(uV/m)]	Limit [dB(uV/m)]	Margin AV [dB]	Height [cm]	Angle [deg]
1958.32	H	14.3	-1.9	12.4	54	41.6	100	287
1991.60	V	13.0	-1.7	11.3	54	42.7	100	326

Note1) Any emissions that do NOT exceed average limit were not tested with average detector mode.

Note2) Receiving antenna polarization : Horizontal and Vertical

Level P K(Peak) = Reading PK(Peak) + Factor(Antenna Factor + Cable Loss - Amp. Gain)

Level AV (Average) = Reading AV (Average) + Factor(Antenna Factor + Cable Loss - Amp. Gain)

Margin PK (Peak) = Limit – Level PK (Peak)

Margin AV (Average) = Limit – Level AV (Average)

Appendix 1 – EUT photography

Front View

Rear View

Inside View (1)

Label Location

Label