

MEASUREMENT/TECHNICAL REPORT
FCC Part 15 Subpart CIssued: June 13rd, 2008

Name and Address of the Applicant: KYOCERAMITA Corporation
2-28,1-CHOME, TAMATSUKURI, CHUO-KU, Osaka,
540-8585 Japan

Test Item: Laser Printer

Identification: FS-3920DN

Serial No.: SPL8307635

FCC ID: E522J00117

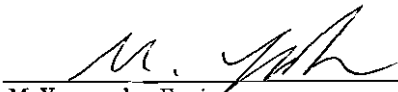
Sample Receipt Date: April 21st, 2008

Test Specification: FCC Part 15 Subpart C, 15.225

Date of Testing: April 21st 22nd, 2008

Test Result: PASS

Report Prepared by: Cosmos Corporation
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Tested by:  Date: June 13rd, 2008
M. Yamanaka, Engineer

Reviewed by:  Date: June 13rd, 2008
Y. Kawahara, Leader

Notes:

1. This report should not be reproduced except in full, without the written approval of Cosmos Corporation.
2. All measurement data contained in this report may have uncertainty. A judgment for the limitation should be taken into the count.
3. The report in this report apply only to the sample tested.

List of Contents	Page
1. Description of Equipment Under Test	4
1.1 Product Description	4
1.2 Antenna Description.....	4
1.3 Accompanied Peripherals Description	4
2. General Information	5
2.1 Test Methodology	5
2.2 Test Facility.....	5
2.3 Tractability	5
3. Summary of Test Results	5
4. Test Configuration	6
4.1 Conducted Emission Measurement.....	6
4.2 Radiated Measurement in 3m Anechoic Chamber.....	6
4.3 Test Mode	7
5. Measurement Result.....	8
5.1 15. 207 AC Power Conducted Emission.....	8
5.1.1 Setting Remarks.....	8
5.1.2 Minimum Standard.....	8
5.1.3 Result	8
5.1.4 Measured Data	9
5.2 15. 209 Transmitter Radiated Emissions	11
5.2.1 Setting Remarks.....	11
5.2.2 Minimum Standard.....	12
5.2.3 Result	12
5.2.4 Measured Data	13
5.3 Maximum Carrier Output Power.....	17
5.3.1 Setting Remarks.....	17
5.3.2 Minimum Standard.....	17
5.3.3 Result	17
5.3.4 Measured Data (3m distance)	18
5.4 Frequency Tolerance	22
5.4.1 Setting Remarks.....	22
5.4.2 Minimum Standard.....	22
5.4.3 Result	22
5.4.4 Measured Data	22
6. Photos.....	23
6.1 Setup Photo (Conducted Emission)	23
6.2 Setup Photo (Radiated Emission).....	24

7. List of Test Measurement Instruments..... 26

7.1 Conducted Emission Measurement 26

7.2 Radiated Emission Measurement 26

1. Description of Equipment Under Test

1.1 Product Description

Manufacturer : KYOCERAMITA Corporation
 Model (referred to as the EUT) : FS-3920DN
 : AC 120V
 Type of Modulation : ASK
 Mode of Operation : ☐ duplex ☐ 1/2 duplex ☒ simplex ☐ other
 The type of the equipment : ☐ Stand-alone ☒ Combined Equipment
 : ☐ Plug -In Card ☐ Other (Module Unit)
 The type of the antenna : ☒ Integral ☐ external ☐ Other
 The type of power source : ☒ AC mains ☐ Dedicated AC adapter (V)
 : ☐ DC Voltage ☐ Battery
 The type of battery (if applicable) : N/A
 Type of Operation : ☐ Continuous ☐ Burst ☒ Intermittent
 Stand by Mode : ☐ Available ☒ N/A
 Intended functions : RFID Module Reader/Writer
 The bandwidth of the IF filters : N/A
 Method of Communication Link : Software to make maximum speed transmitting
 The operating frequency band : 13.56 MHz
 The thermal limitation : Not specified

1.2 Antenna Description

No.	Type Name	Gain	Antenna Type	Remarks
1	39221	-53 dB	Printed Loop	Originally Integrated

1.3 Accompanied Peripherals Description

No.	Equipment Name	Manufacturer	Type Name	Serial Number	Remarks
1	PC	FUJITSU	FMV5NUBJ H3	R4200405	100-240Vac 1.0-0.4A 50-60Hz

2. General Information

2.1 Test Methodology

All measurement subject to the present test report is carried out according to the procedures in ANSI C63.4:2003.

2.2 Test Facility

All measurement was performed in the following facility;

Cosmos Corporation EMC Lab. Ohnogi

(2-3571 Ohaza-iwatachi, Ohnogi, Watarai-cho, Watarai-gun, Mie-ken 516-2102, Japan) The test site has been filed by FCC.

2.3 Tractability

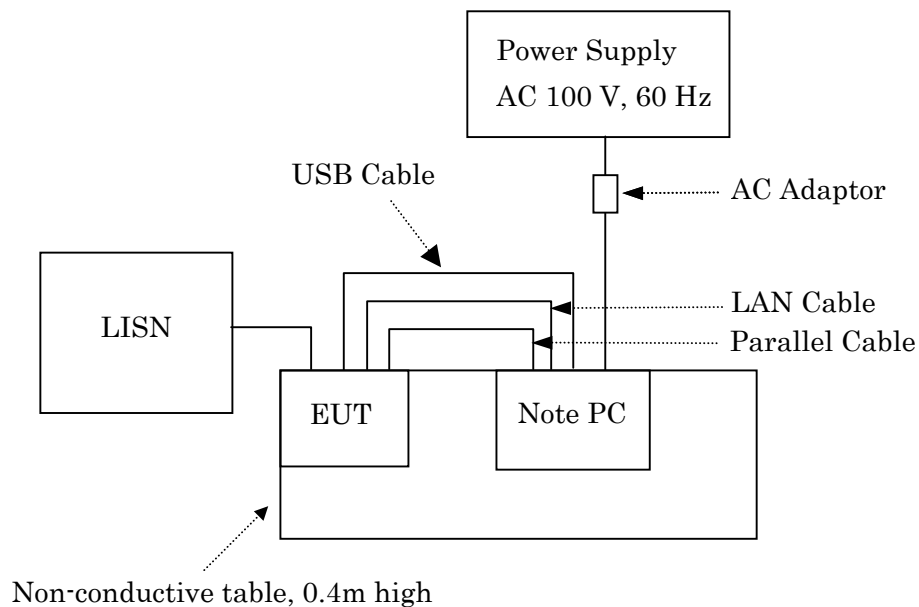
The calibration of measurement equipment used in the test subject to the present report is designed and operated to ensure that the measurement is traceable to national standards of measurement or equivalent abroad.

3. Summary of Test Results

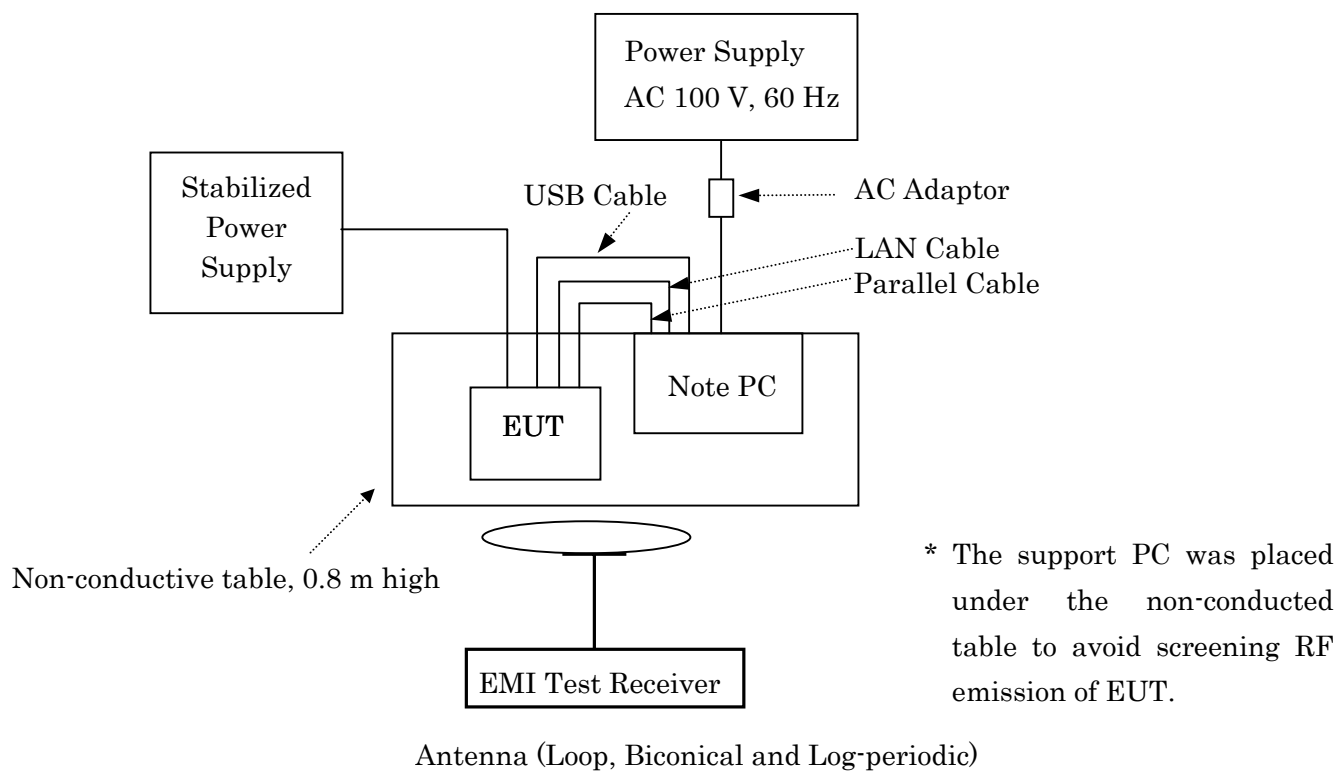
No.	Requirement	RSS 210 Issue 7, RSS-Gen Issue 2 (Industry Canada)	CFR 47 Part. 15 (FCC)	Result
1	Frequency Tolerance	A2.6 – RSS 210	15.225 (e)	Pass
2	Maximum Output Power	A2.6 – RSS 210	15.225 (a)(b)(c)	Pass
3	Field Strength of Spurious Emission (Transmitter)	A2.6 – RSS 210	15.209, 15.225 (d)	Pass
4	AC Power lines Conducted Emission	7.2.2 – RSS-Gen	15.207	Pass
5	Spurious Emission (Receiver)	7.2.3 – RSS-Gen	N/A	N/A
6	Occupied Band Width(99%)	4.6.1 – RSS-Gen	N/A	N/A

4. Test Configuration

4.1 Conducted Emission Measurement



4.2 Radiated Measurement in 3m Anechoic Chamber



4.3 Test Mode

In all test configurations above, EUT makes communication link between the integrated RFID module and a RFID tag in a dedicated ink ribbon with the maximum RF power by a special test program.

Maximum Output Power and Frequency Tolerance measurement were performed with an external stabilized DC power supply voltage varied between 85% and 115% of the nominal rated supply voltage 120 VAC.

Frequency Tolerance and Maximum Output Power measurements are performed under the following condition:

Temperature: - 20°C to +50°C
Voltage: 120 VAC $\pm$ 15%

5. Measurement Result

5.1 15. 207 AC Power Conducted Emission

5.1.1 Setting Remarks

- Configure the EUT System in accordance with ANSI C63.4-2003.
- A wooden test table (1.5m×1.0m, height 0.4m) was used.
- Other power cord of support equipment is connected to another LISN to isolate its emission from the measured emission of EUT.
- The measuring port of LISN for support equipment was terminated by the 50Ω
- Activate the EUT System and run the software prepared for the test, if necessary.
- Refer to test configuration figure 4.1.

5.1.2 Minimum Standard

15. 207 (a) Except as shown in paragraphs (b) and (c) of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 μH/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56 *	56 to 46 *
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency.

5.1.3 Result

EUT complies with the requirement.

Uncertainty of measurement : ± 2.26 dB
Temperature, Humidity : 20°C / 44%

5.1.4 Measured Data

Measured Value Table

FCC CE.CED

<<Conducted Emission>>

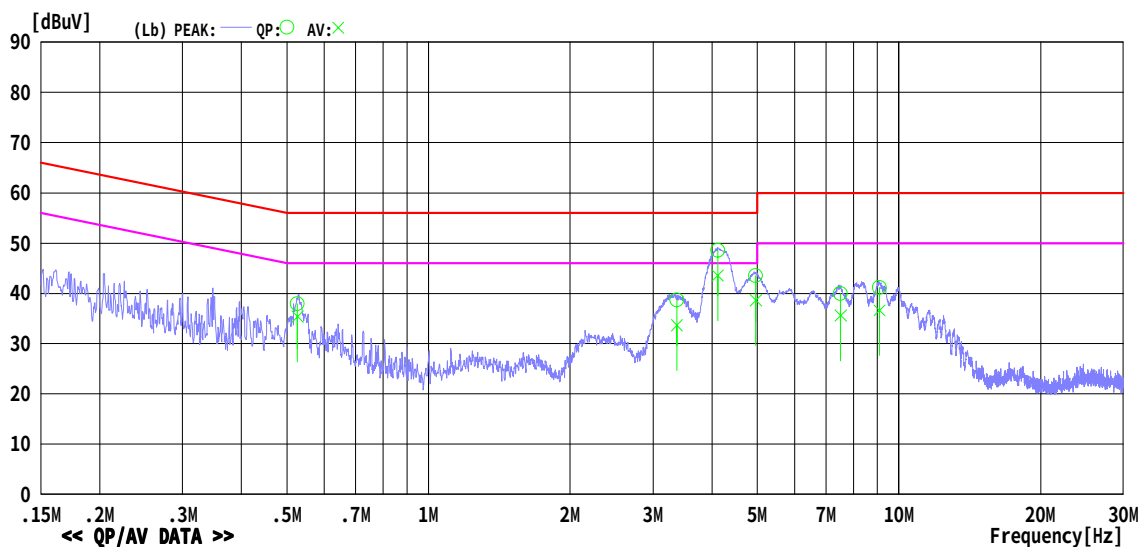
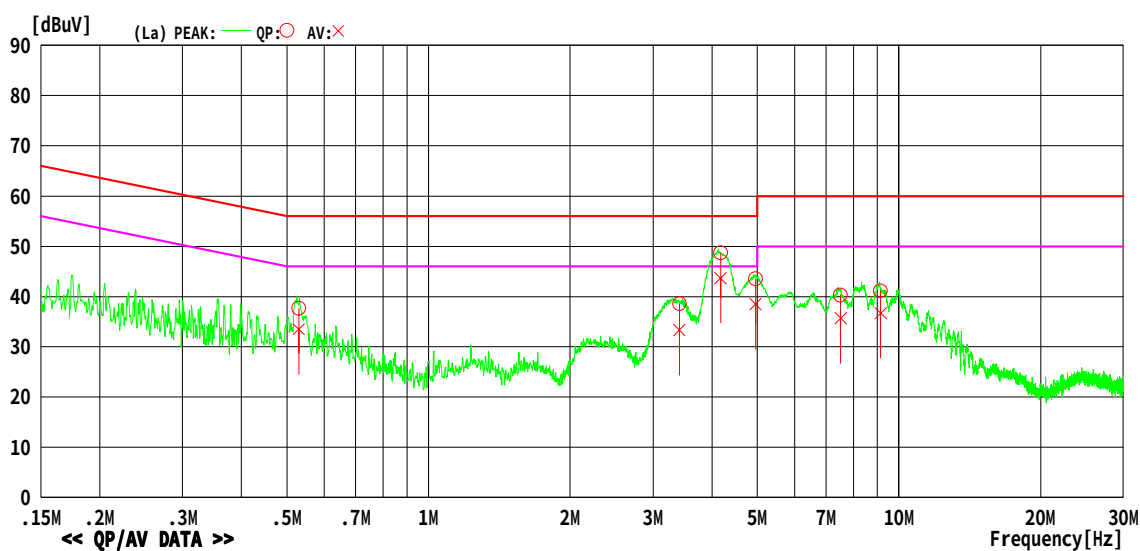
Cosmos Corporation Onoki Lab.
Date : 2008/04/22 10:10:13

Model Name : FWS-3920DN
Serial No. : SPL8307635
Operator : M.Yamanaka
Power Supply : AC 120V,60Hz

Job No : CJ07-066979E
Temp./Humi. : 20°C/44%
Condition : Operated
Remark :

Memo : RBW:9kHz

LIMIT : FCC Part15 Sub.C 15.207 QP Limit
FCC Part15 Sub.C 15.207 AV Limit



Measured Value Table

FCC CE.CED

<<Conducted Emission>>

Cosmos Corporation Onoki Lab.
Date : 2008/04/22 10:10:13Model Name : FWS-3920DN
Serial No. : SPL8307635
Operator : M.Yamanaka
Power Supply : AC 120V,60HzJob No : CJ07-066979E
Temp./Humi. : 20°C/44%
Condition : Operated
Remark :

Memo : RBW:9kHz

LIMIT : FCC Part15 Sub.C 15.207 QP Limit
FCC Part15 Sub.C 15.207 AV Limit

<< QP/AV DATA >>

No	Freq. [MHz]	Reading Level		C.Fac [dB]	Results		Limit		Margin		Phase	Comment
		QP	AV		QP	AV	QP	AV	QP	AV		
		[dBuV]	[dBuV]		[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dB]	[dB]		
1	0.53001	27.7	23.5	10.0	37.7	33.5	56.0	46.0	18.3	12.5	La	
2	3.41352	28.0	22.8	10.5	38.5	33.3	56.0	46.0	17.5	12.7	La	
3	4.17566	38.2	33.2	10.5	48.7	43.7	56.0	46.0	7.3	2.3	La	
4	4.95520	32.9	27.9	10.6	43.5	38.5	56.0	46.0	12.5	7.5	La	
5	7.51732	29.7	25.1	10.6	40.3	35.7	60.0	50.0	19.7	14.3	La	
6	9.13796	30.3	25.9	10.8	41.1	36.7	60.0	50.0	18.9	13.3	La	
7	0.52650	27.9	25.4	10.0	37.9	35.4	56.0	46.0	18.1	10.6	Lb	
8	3.37144	28.3	23.2	10.4	38.7	33.6	56.0	46.0	17.3	12.4	Lb	
9	4.12095	38.2	33.1	10.4	48.6	43.5	56.0	46.0	7.4	2.5	Lb	
10	4.96362	33.0	28.1	10.5	43.5	38.6	56.0	46.0	12.5	7.4	Lb	
11	7.52213	29.4	25.0	10.6	40.0	35.6	60.0	50.0	20.0	14.4	Lb	
12	9.08325	30.4	25.9	10.7	41.1	36.6	60.0	50.0	18.9	13.4	Lb	

5.2 15. 209 Transmitter Radiated Emissions

5.2.1 Setting Remarks

- The data lists in “5.2.4 Measured Data “ list the significant emission frequencies, measured levels, correction factor (includes cable and antenna corrections), the corrected reading, plus the limit.
- In the frequency range between 9kHz to 1 GHz, the Electric Field Strength was measured in accordance with ANSI C63.4: 2003 and CISPR22: 1997.
- The test setup was made in accordance with ANSI C63.4: 2003.
- The antenna was measured at 1-4m height for 30MHz to 1GHz.
- The EUT was placed on the non-conductive table in the center of turntable. The height of this table was 0.8m.
- The measurement was carried out with both horizontal and vertical antenna polarization.
- The highest radiation from the equipment was recorded.
- Below 30MHz, a loop antenna was used at 1m height.
- By varying the configuration of the test sample and the cable routing, it was attempted to maximize the emission.
- The test receiver with Quasi Peak and Average detector is in compliance with CISPR 16-1.
- The spectrum analyzer was set-up as following;

(Frequency range : 9kHz - 30 MHz)

- ✓ Resolution bandwidth : 10 kHz
- ✓ Video bandwidth : 100 kHz
- ✓ Detector function : Peak
- ✓ Trace Mode : Max Hold

(Frequency range : 30 - 1000 MHz)

- ✓ Resolution bandwidth : 100 kHz
- ✓ Video bandwidth : 300 kHz
- ✓ Detector function : Peak
- ✓ Trace Mode : Max Hold

- EMI Test Receiver analyzer was set-up as following (Quasi-Peak Detector);

- ✓ IF bandwidth : 200 Hz (9kHz - 150kHz)
- ✓ IF bandwidth : 9 kHz (150kHz - 30MHz)
- ✓ IF bandwidth : 120 kHz (30MHz - 1GHz)

- Refer to test configuration figure 4.2.

5.2.2 Minimum Standard

15. 225 (d) The field strength of any emissions appearing outside of the 13.110-14.010 MHz band shall not exceed the general radiated emission limits in § 15.209.

5.2.3 Result

EUT complies with the requirement.

Uncertainty of measurement result: ± 3.64 dB

Temperature, Humidity : Refer to each data table

5.2.4 Measured Data

9kHz to 30MHz

ME 9k-30MHz TotalNoise.MED

<<Electromagnetic Radiation>>

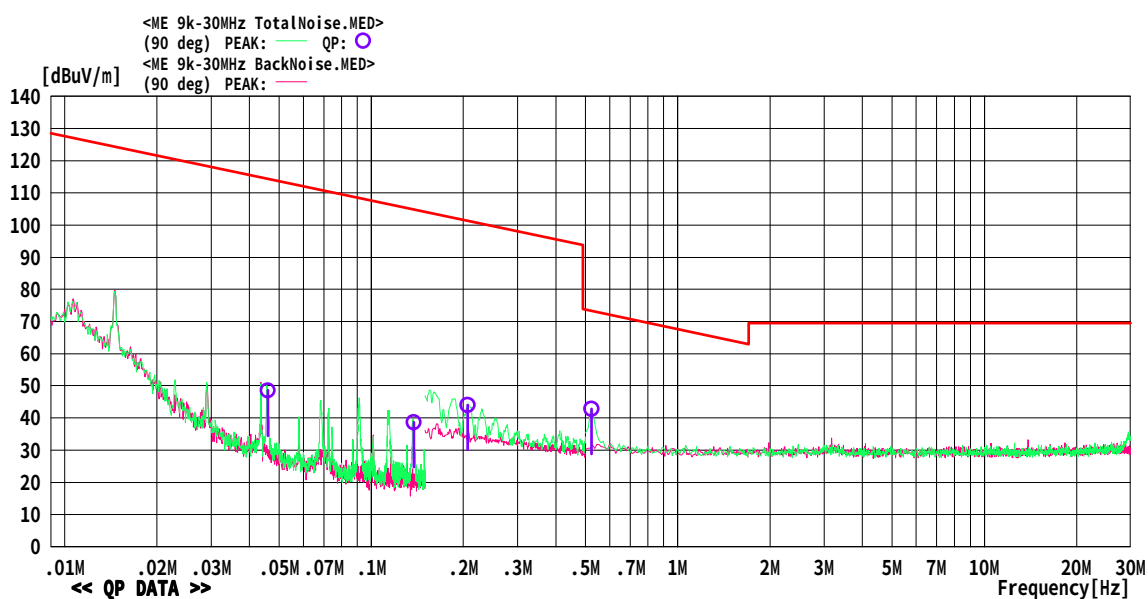
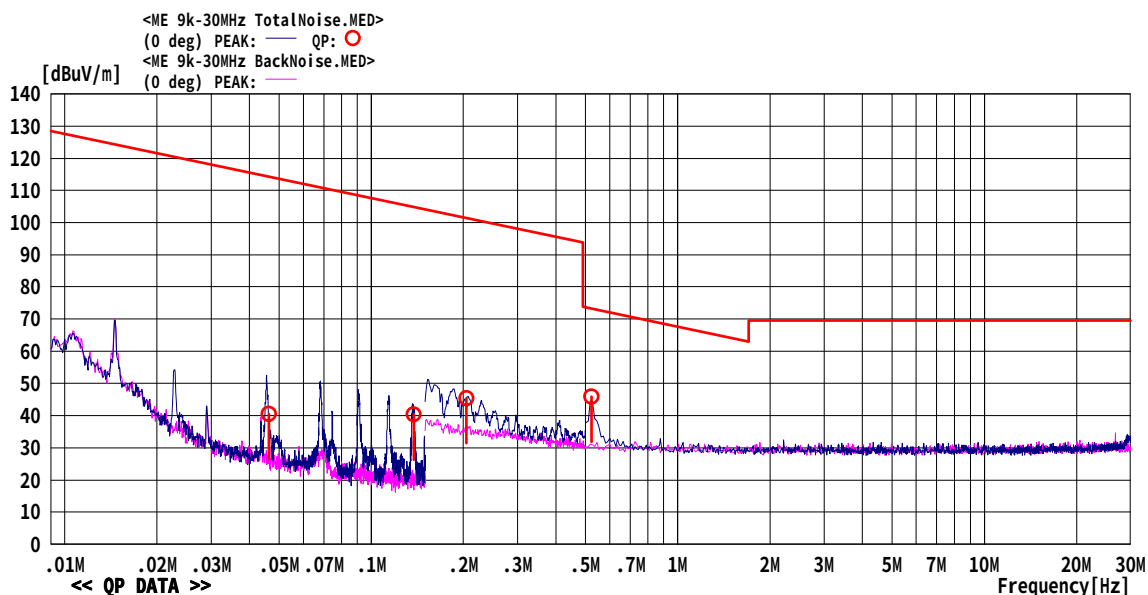
Cosmos Corporation Onoki Lab.
Date : 2008/04/21 13:42:28

Model Name : FS-3920DN
Serial No. : SPL3807635
Operator : M.Yamanaka
Power Supply : AC 120 V, 60 Hz

Job No. : CJ07-066979E
Temp./Humi. : 23°C/43%
Condition : Operated
Remark :

Memo : RBW:200Hz(9k-150kHz),9kHz(150k-30MHz)

LIMIT : FCC Part15 SubpartC 15.209 9KHz-30MHz



9kHz to 30MHz

ME 9k-30MHz TotalNoise.MED

<<Electromagnetic Radiation>>

Cosmos Corporation Onoki Lab.
Date : 2008/04/21 13:42:28Model Name : FS-3920DN
Serial No. : SPL3807635
Operator : M.Yamanaka
Power Supply : AC 120 V, 60 HzJob No. : CJ07-066979E
Temp./Humi. : 23°C/43%
Condition : Operated
Remark :

Memo : RBW:200Hz(9k-150kHz),9kHz(150k-30MHz)

LIMIT : FCC Part15 SubpartC 15.209 9KHz-30MHz

<< QP DATA >>

No	Freq.	Reading	Ant.Fac	Loss	Result	Limit	Margin	Antenna	Angle	Comment
	[MHz]	[dBuV]	[dB/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]		[deg]	
1	0.04625	21.3	19.1	0.1	40.5	114.3	73.8	0deg	358	
2	0.13743	21.2	19.0	0.1	40.3	104.8	64.5	0deg	4	
3	0.20446	26.3	19.0	0.1	45.4	101.4	56.0	0deg	203	
4	0.52340	26.6	19.0	0.2	45.8	73.2	27.4	0deg	221	
5	0.04591	29.4	19.1	0.1	48.6	114.4	65.9	90deg	266	
6	0.13773	19.6	19.0	0.1	38.7	104.8	66.1	90deg	283	
7	0.20627	25.0	19.0	0.1	44.1	101.3	57.2	90deg	288	
8	0.52370	23.6	19.0	0.2	42.8	73.2	30.4	90deg	305	

30MHz to 1GHz

FCC RE 30M-1G TotalNoise.RED

<<Radiated Emission>>

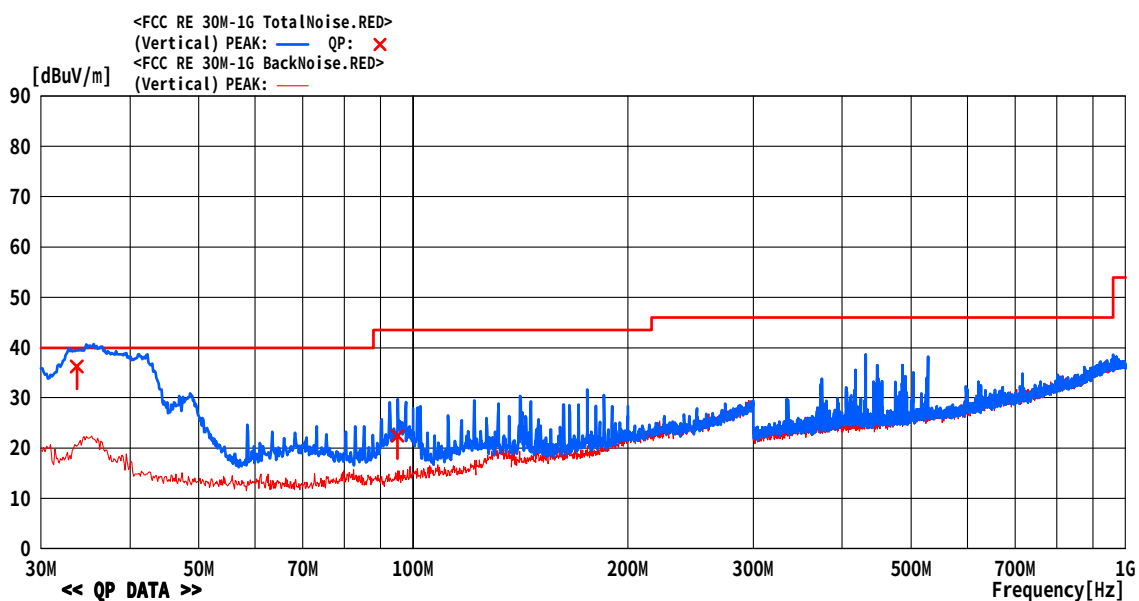
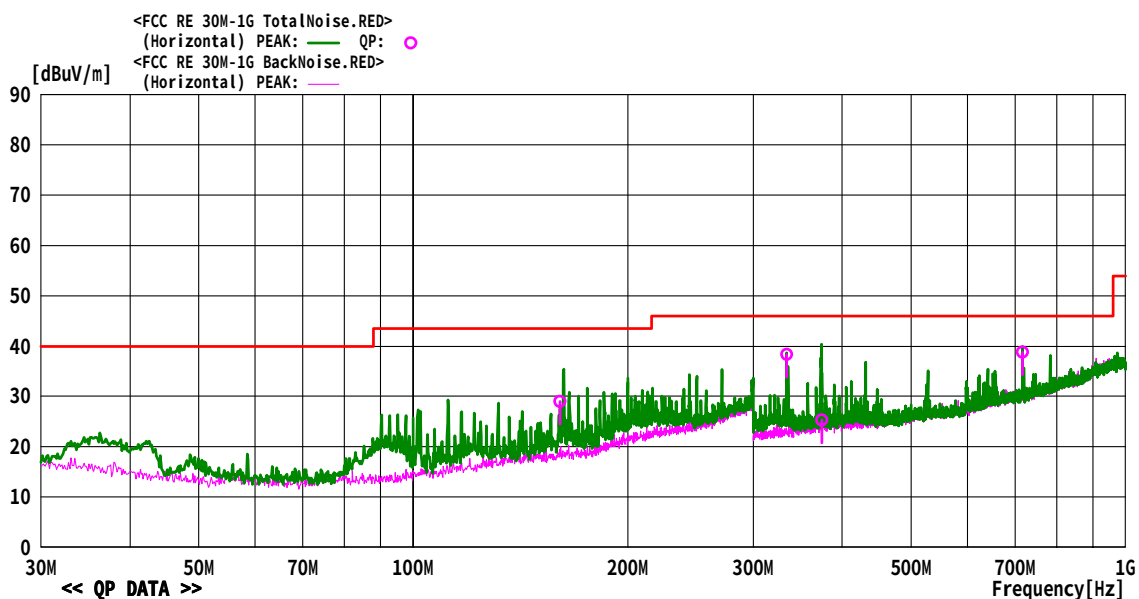
Cosmos Corporation Onoki Lab.

Model Name : FS-3920DN
Serial No. : SPL8307635
Operator : M.Yamanaka
Power Supply : AC 120V, 60Hz

Job No : CJ07-066979E
Temp./Humi. : 20°C/49%
Condition : Operated
Remark :

Memo : RBW:30M~1GHz(120kHz)

LIMIT : FCC 15.209 3m



-TEPT0-DV/RE Ver 1.80.0020

30MHz to 1GHz

FCC RE 30M-1G TotalNoise.RED

<<Radiated Emission>>

Cosmos Corporation Onoki Lab.

Model Name : FS-3920DN
 Serial No. : SPL8307635
 Operator : M.Yamanaka
 Power Supply : AC 120V, 60Hz

Job No : CJ07-066979E
 Temp./Humi. : 20°C/49%
 Condition : Operated
 Remark :

Memo : RBW:30M~1GHz(120kHz)

LIMIT : FCC 15.209 3m

<< QP DATA >>

No	Freq.	Reading	C.Fac	Result	Limit	Margin	Pola.	Height	Angle	Ant	Comment
	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dB]	[H/V]	[cm]	[deg]	Type	
1	160.826	38.9	-9.9	29.0	43.5	14.5	Hori.	193	214	BC	
2	334.534	43.7	-5.4	38.3	46.0	7.7	Hori.	100	194	LP	
3	374.995	30.0	-4.7	25.3	46.0	20.7	Hori.	100	265	LP	
4	716.879	38.2	0.6	38.8	46.0	7.2	Hori.	100	40	LP	
5	33.707	47.3	-11.1	36.2	40.0	3.8	Vert.	100	350	BC	
6	95.065	36.2	-13.8	22.4	43.5	21.1	Vert.	100	228	BC	

-TEPT0-DV/RE Ver 1.80.0020

5.3 Maximum Carrier Output Power

5.3.1 Setting Remarks

- Refer to 5.2.1
- The EUT was placed on the non-conductive table in the center of turntable.
- The measurement was carried out with both horizontal and vertical antenna polarization.
- The highest radiation from the equipment was recorded.
- The test receiver with Quasi Peak is in compliance with CISPR 16-1.
- The spectrum analyzer was set-up as following;
 - ✓ Frequency Span : Appropriate to determine carrier frequency.
 - ✓ Resolution bandwidth : Appropriate to determine carrier frequency.
 - ✓ Video bandwidth : Appropriate to determine carrier frequency.
 - ✓ Sweep : Auto
 - ✓ Detector function : Peak
 - ✓ Trace Mode : Max Hold
- EMI Test Receiver analyzer was set-up as following (Quasi-Peak Detector);
 - ✓ IF bandwidth : 9 kHz
- Refer to test configuration figure 4.2.

5.3.2 Minimum Standard

15.225(a) The field strength of any emissions within the band 13.553-13.567 MHz shall not exceed 15,848 microvolts/meter at 30 meters.

(b) Within the bands 13.410-13.553 MHz and 13.567-13.710 MHz, the field strength of any emissions shall not exceed 334 microvolts/meter at 30 meters.

(c) Within the bands 13.110-13.410 MHz and 13.710-14.010 MHz the field strength of any emissions shall not exceed 106 microvolts/meter at 30 meters.

5.3.3 Result

EUT complies with the requirement.

Uncertainty of measurement result: ± 3.64 dB

Temperature, Humidity : Refer to each data table

5.3.4 Measured Data (3m distance)

-20°C

Date of testing : April 22, 2008

Room temperature : 21°C

Relative humidity : 44%

【102V AC】

Frequency [MHz]	Correction Factor [dB]	Reading [dB μ V]	Peak Power [dB μ V/m]	Limit [dB μ V/m]	Margin[dB]
13.110	19.3	4.26	23.560	80.50	56.940
13.410	19.2	4.54	23.740	80.50	56.760
13.553	19.2	4.80	24.000	90.47	66.470
13.560	19.2	10.96	30.160	124.00	93.840
13.567	19.2	4.80	24.000	90.47	66.470
13.710	19.2	4.54	23.740	80.50	56.760
14.010	19.3	4.80	24.100	80.50	56.400

【120V AC】

Frequency [MHz]	Correction Factor [dB]	Reading [dB μ V]	Peak Power [dB μ V/m]	Limit [dB μ V/m]	Margin[dB]
13.110	19.3	4.26	23.560	80.50	56.940
13.410	19.2	4.26	23.460	80.50	57.040
13.553	19.2	4.54	23.740	90.47	66.730
13.560	19.2	10.96	30.160	124.00	93.840
13.567	19.2	4.80	24.000	90.47	66.470
13.710	19.2	4.54	23.740	80.50	56.760
14.010	19.3	4.54	23.840	80.50	56.660

【138V AC】

Frequency [MHz]	Correction Factor [dB]	Reading [dB μ V]	Peak Power [dB μ V/m]	Limit [dB μ V/m]	Margin[dB]
13.110	19.3	4.26	23.560	80.50	56.940
13.410	19.2	4.54	23.740	80.50	56.760
13.553	19.2	4.54	23.740	90.47	66.730
13.560	19.2	10.96	30.160	124.00	93.840
13.567	19.2	4.80	24.000	90.47	66.470
13.710	19.2	4.54	23.740	80.50	56.760
14.010	19.3	4.80	24.100	80.50	56.400

22°C

Date of testing : April 21, 2008

Room temperature : 22°C

Relative humidity : 44%

【102V AC】

Frequency [MHz]	Correction Factor [dB]	Reading [dB μ V]	Peak Power [dB μ V/m]	Limit [dB μ V/m]	Margin[dB]
13.110	19.3	3.98	23.280	80.50	57.220
13.410	19.2	3.98	23.180	80.50	57.320
13.553	19.2	4.26	23.460	90.47	67.010
13.560	19.2	11.21	30.410	124.00	93.590
13.567	19.2	4.80	24.000	90.47	66.470
13.710	19.2	4.26	23.460	80.50	57.040
14.010	19.3	3.98	23.280	80.50	57.220

【120V AC】

Frequency [MHz]	Correction Factor [dB]	Reading [dB μ V]	Peak Power [dB μ V/m]	Limit [dB μ V/m]	Margin[dB]
13.110	19.3	3.98	23.280	80.50	57.220
13.410	19.2	3.98	23.180	80.50	57.320
13.553	19.2	4.26	23.460	90.47	67.010
13.560	19.2	11.34	30.540	124.00	93.460
13.567	19.2	4.26	23.460	90.47	67.010
13.710	19.2	3.98	23.180	80.50	57.320
14.010	19.3	4.26	23.560	80.50	56.940

【138V AC】

Frequency [MHz]	Correction Factor [dB]	Reading [dB μ V]	Peak Power [dB μ V/m]	Limit [dB μ V/m]	Margin[dB]
13.110	19.3	3.98	23.280	80.50	57.220
13.410	19.2	3.98	23.180	80.50	57.320
13.553	19.2	4.54	23.740	90.47	66.730
13.560	19.2	11.21	30.410	124.00	93.590
13.567	19.2	4.54	23.740	90.47	66.730
13.710	19.2	3.98	23.180	80.50	57.320
14.010	19.3	3.98	23.280	80.50	57.220

+50°C

Date of testing : April 21, 2008

Room temperature : 22°C

Relative humidity : 44%

【102V AC】

Frequency [MHz]	Correction Factor [dB]	Reading [dB μ V]	Peak Power [dB μ V/m]	Limit [dB μ V/m]	Margin[dB]
13.110	19.3	3.98	23.280	80.50	57.220
13.410	19.2	3.98	23.180	80.50	57.320
13.553	19.2	4.26	23.460	90.47	67.010
13.560	19.2	11.08	30.280	124.00	93.720
13.567	19.2	4.54	23.740	90.47	66.730
13.710	19.2	3.98	23.180	80.50	57.320
14.010	19.3	4.26	23.560	80.50	56.940

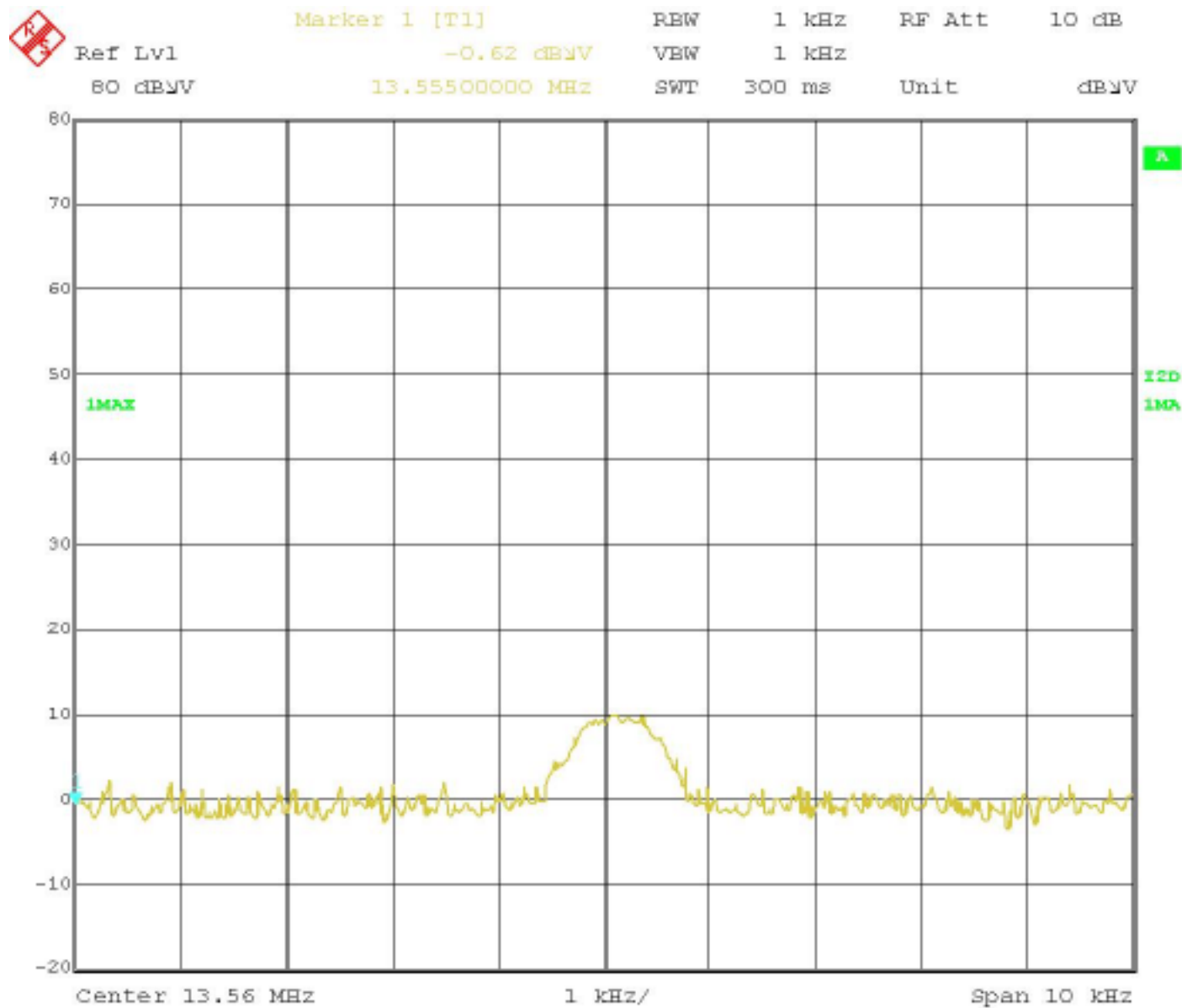
【120V AC】

Frequency [MHz]	Correction Factor [dB]	Reading [dB μ V]	Peak Power [dB μ V/m]	Limit [dB μ V/m]	Margin[dB]
13.110	19.3	3.68	22.980	80.50	57.520
13.410	19.2	3.68	22.880	80.50	57.620
13.553	19.2	4.26	23.460	90.47	67.010
13.560	19.2	11.08	30.280	124.00	93.720
13.567	19.2	3.98	23.180	90.47	67.290
13.710	19.2	3.68	22.880	80.50	57.620
14.010	19.3	3.98	23.280	80.50	57.220

【138V AC】

Frequency [MHz]	Correction Factor [dB]	Reading [dB μ V]	Peak Power [dB μ V/m]	Limit [dB μ V/m]	Margin[dB]
13.110	19.3	3.98	23.280	80.50	57.220
13.410	19.2	3.98	23.180	80.50	57.320
13.553	19.2	4.26	23.460	90.47	67.010
13.560	19.2	10.96	30.160	124.00	93.840
13.567	19.2	4.54	23.740	90.47	66.730
13.710	19.2	3.98	23.180	80.50	57.320
14.010	19.3	3.68	22.980	80.50	57.520

Carrier Spectrum



Date: 21.APR.2008 14:32:57

5.4 Frequency Tolerance

5.4.1 Setting Remarks

- Refer to setting remarks 5.3.1.
- Refer to test configuration figure 4.2.
- With an environmental test chamber, EUT is exposed in extreme temperatures until its temperature is stabilized. (Approximately 30 minutes) Then EUT is on with nominal AC voltage, or installed a fully charged battery.

5.4.2 Minimum Standard

15.225(e) The frequency tolerance of the carrier signal shall be maintained within +/- 0.01% of the operating frequency over a temperature variation of -20 degrees to +50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. For battery operated equipment, the equipment tests shall be performed using a new battery.

5.4.3 Result

EUT complies with the requirement.

Uncertainty of measurement result: ± 1 Hz

5.4.4 Measured Data

Date of testing : April 21, 2008

Room temperature : 22°C

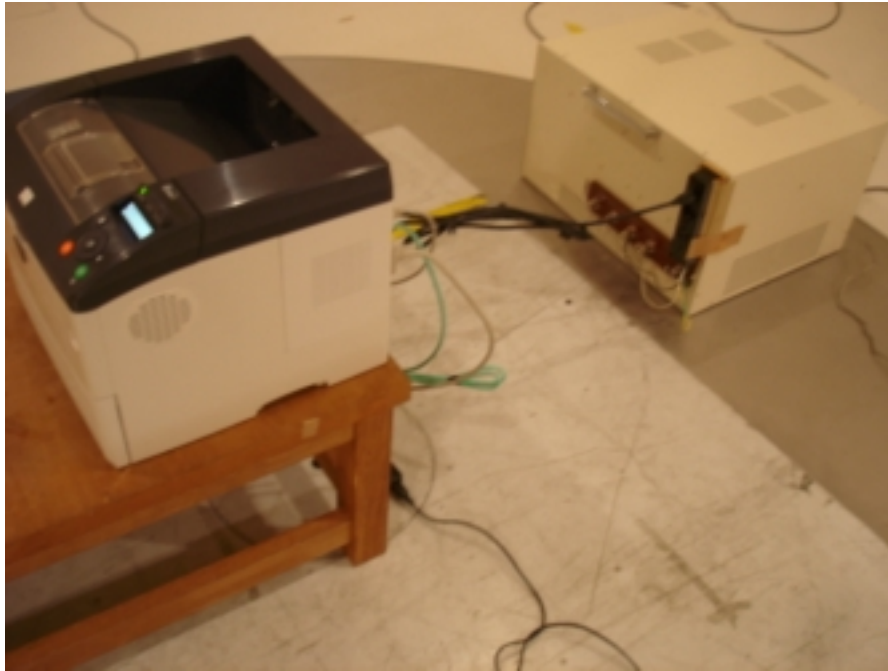
Relative humidity : 44%

Temp [°C]	P/S [VAC]	Frequency [Hz]	Limit [$\pm$ Hz]	Offset from the CF [Hz]	Limit [%]	Error[%]
Center Frequency		13,560,000				
23	102	13560100	1356.00	100	± 0.01	0.001
23	120	13560100	1356.00	100	± 0.01	0.001
23	138	13560090	1356.00	90	± 0.01	0.001
-20	102	13560140	1356.00	140	± 0.01	0.001
-20	120	13560140	1356.00	140	± 0.01	0.001
-20	138	13560140	1356.00	140	± 0.01	0.001
50	102	13560038	1356.00	38	± 0.01	0.000
50	120	13560039	1356.00	39	± 0.01	0.000
50	138	13560040	1356.00	40	± 0.01	0.000

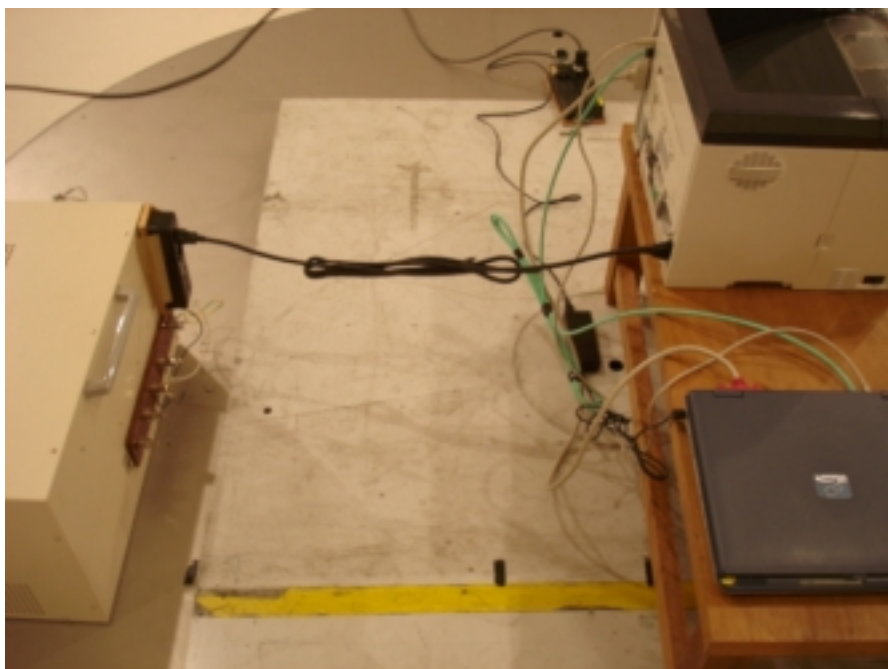
6. Photos

6.1 Setup Photo (Conducted Emission)

Front View



Side View

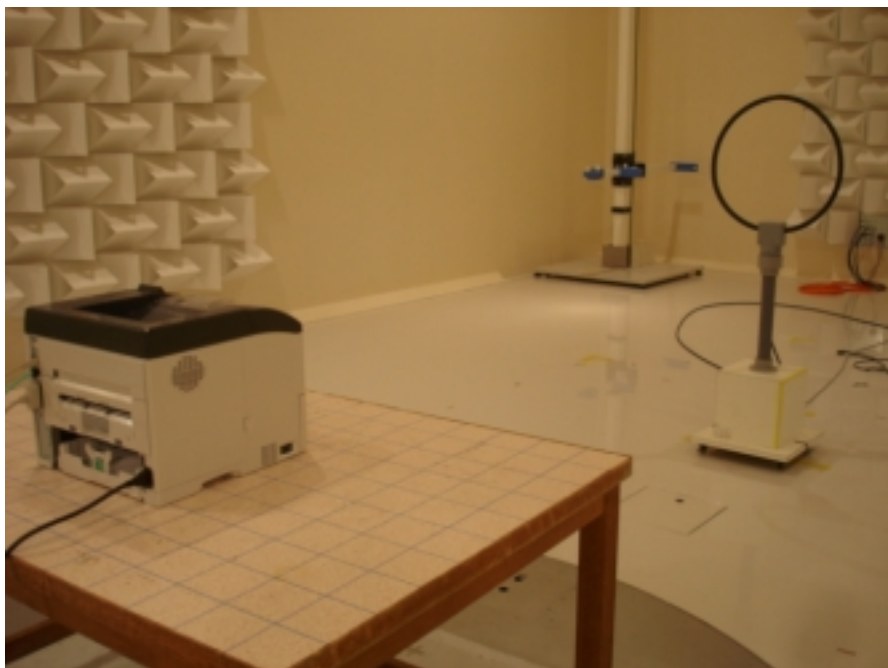


6.2 Setup Photo (Radiated Emission)

Front View (9kHz - 30MHz)



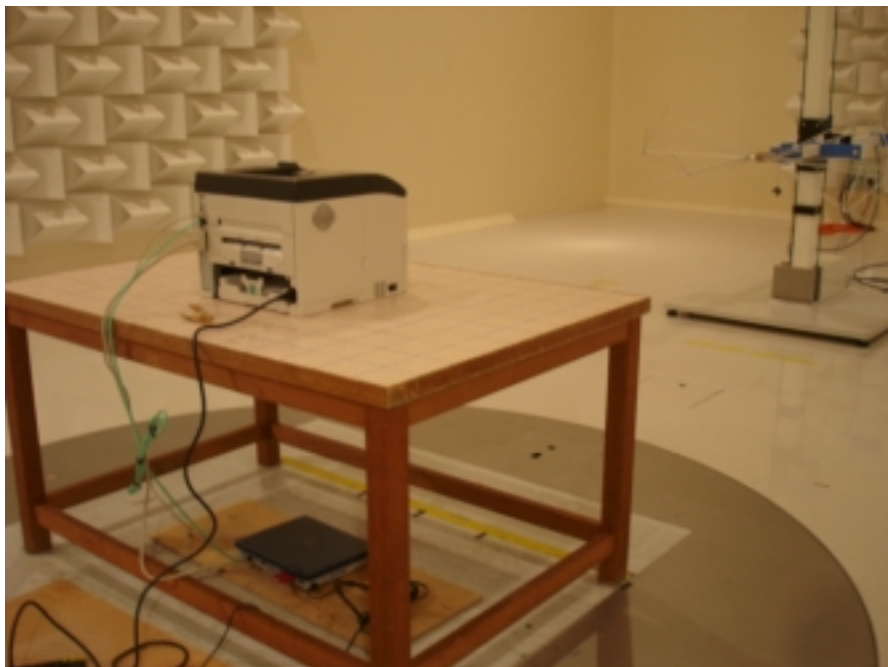
Rear View (9kHz - 30MHz)



Front View (Above 30MHz)



Rear View (Above 30MHz)



7. List of Test Measurement Instruments

7.1 Conducted Emission Measurement

Instruments	Manufacturer	Model / Type	Serial No.	Calibrated Date/Until
Spectrum Analyzer EMI Test Receiver	ROHDE & SCHWARZ	ESIB40	100211	April, 2008 April, 2009
Artificial-Mains Network (for EUT)	KYORITSU CORPORATION	KNW244C	8-1657-1	September, 2007 September, 2008
Artificial-Mains Network (for Peripheral)	ROHDE & SCHWARZ	ESH2-Z5	828739/005	June, 2007 June, 2008
Programmable AC/DC Power Source	NF Corporation	ES18000W	425779	---

7.2 Radiated Emission Measurement

Instruments	Manufacturer	Model / Type	Serial No.	Calibrated Date/Until
Programmable AC/DC Power Source	NF Corporation	ES18000W	425779	---
Spectrum Analyzer EMI Test Receiver	ROHDE & SCHWARZ	ESIB40	100211	April, 2008 April, 2009
Biconical Antenna (30 to 300MHz)	SCHWARZBECK	VHBB9124(Balun) BBA9106(Elements)	311	September, 2007 September, 2008
Log.-Periodic Antenna (300 MHz to 1 GHz)	SCHWARZBECK	UHALP 9108 A	645	September, 2007 September, 2008
Loop Antenna (0.15 to 30 MHz)	ROHDE & SCHWARZ	HFH2-Z2	131	August, 2007 August, 2008
Environment Chamber	ISUZU	HPAV-48-40	0092986-01	---