



RADIO TEST REPORT

Test Report No.: 10520971S-A-R1

Applicant : Fuji Xerox Co., Ltd.
Type of Equipment : Multifunction Laser Printer
Model No. : Dell H815dw
FCC ID : 2AAPEH815DW
Test regulation : FCC Part15 Subpart C: 2015
Test result : Complied

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6. The opinions and the interpretations to the result of the description in this report are outside scopes where UL Japan has been accredited.
7. This report is a revised version of 10520971S-A. 10520971S-A is replaced with this report.

Date of test: December 12 to 18, 2014

Tested by:

T. Arai

Tatsuya Arai
Engineer

Consumer Technology Division

Approved by :

T. Imamura

Toyokazu Imamura
Leader

Consumer Technology Division



JAB
Testing
RTL02610

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☒ There is no testing item of "Non-accreditation".

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1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

13-EM-F0429

Original Test Report No.: 10520971S-A

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SECTION 1: Customer information

Company Name : Fuji Xerox Co., Ltd.
Address : 9-7-3 Akasaka, Minato-ku, Tokyo, 107-0052, Japan
Telephone Number : +81-45-755-5111
Facsimile Number : +81-45-224-0611
Contact Person : Yasuhide Yamada

SECTION 2: Equipment under test (E.U.T.)

2.1 Identification of E.U.T.

Type of Equipment : Multifunction Laser Printer
Model Number : Dell H815dw
Serial Number : Refer to clause 4.2
Rating : AC110-127V, 50/ 60Hz
Country of Mass-production : China
Condition of EUT : Production prototype
(Not for Sale: This sample is equivalent to mass-produced items.)
Size : 439 x 438 x 492 (Width x Length x Height (mm)), 19.0kg
Receipt Date of Sample : November 10, 2014
Modification of EUT : No modification by the test lab.

2.2 Product description

Model: Dell H815dw (referred to as the EUT in this report) is a Multifunction Laser Printer.

The clock frequency used in EUT: 27.12MHz, 525MHz

<Radio part>

Radio Type : Transceiver
Frequency of Operation : 13.56MHz
Modulation : ASK 100%
Antenna type : Loop
ITU code : A1D
Operating Temperature : -20 to +70 deg C.
Card type : MIFARE classic-1k, MIFARE classic-4k, MIFARE ultralight

FCC 15.31 (e)

The RFID transmitter is provided the stable voltage (DC3.3V) from the host device.
Therefore, this EUT complies with the requirement.

FCC 15.203

The equipment and its antenna comply with this requirement since the antenna is built in the equipment and it cannot be replaced by end users.

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SECTION 3: Test specification, procedures & results

3.1 Test specification

Test specification : FCC Part 15 Subpart C: 2015, final revised on January 21, 2015
Title : FCC 47CFR Part15 Radio Frequency Device Subpart C Intentional Radiators
Section 15.207 Conducted limits
Section 15.209 Radiated emission limits, general requirements
Section 15.215 Additional provisions to the general radiated emission limitations
Section 15.225 Operation within the band 13.110-14.010MHz

* The revision on January 21, 2015 does not affect the test specification applied to the EUT.

The EUT has been tested for compliance with FCC Part 15 Subpart B by the customer.

3.2 Procedures & Results

Item	Test Procedure	Specification	Remarks	Deviation	Worst Margin	Results
Conducted emission	ANSI C63.4:2009 7. AC powerline conducted emission measurements	FCC 15.207	-	N/A	3.5dB Freq.: 13.56060MHz Detector: Quasi-Peak Phase: L1	Complied
Electric field strength of Fundamental emission	ANSI C63.4:2009 13. Measurement of intentional radiators	FCC 15.225 (a)	Radiated	N/A	70.0dB Polarization: Vertical	Complied
Electric field strength of Spurious emission (within the 13.110-14.010MHz band)	ANSI C63.4:2009 13. Measurement of intentional radiators	FCC 15.225 (b)(c)	Radiated	N/A	46.5dB Freq.: 13.110MHz and 14.010MHz Polarization: Vertical	Complied
Electric field strength of Spurious emission (outside of the 13.110-14.010MHz band)	ANSI C63.4:2009 13. Measurement of intentional radiators	FCC 15.209 FCC 15.225 (d)	Radiated	N/A	0.8dB Freq.: 800.040MHz Polarization: Horizontal	Complied
20dB bandwidth	ANSI C63.4:2009 13. Measurement of intentional radiators	FCC 15.215 (c)	Radiated	N/A	-	-
Frequency tolerance	ANSI C63.4:2009 13. Measurement of intentional radiators	FCC 15.225 (e)	Radiated	N/A	-	Complied

Note: UL Japan's Work Procedures No. 13-EM-W0420 and 13-EM-W0422

3.3 Addition to standard

Item	Test Procedure	Specification	Remarks	Worst Margin	Results
Occupied Bandwidth (99%)	ANSI C63.4:2009 13. Measurement of intentional radiators, RSS-Gen 6.6	-	Radiated	-	-

Note: UL Japan's Work Procedures No. 13-EM-W0420 and 13-EM-W0422

* Other than above, no addition, exclusion nor deviation has been made from the standard.

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Facsimile : +81 463 50 6401

3.4 Uncertainty

The following uncertainties have been calculated to provide a confidence level of 95% using a coverage factor k=2.

Item	Frequency range	No.1 SAC ^{*1} /SR ^{*2} (±)	No.2 SAC/SR (±)	No.3 SAC/SR (±)	No.4/5/6/8 SR (±)
Conducted emission (AC Mains) AMN/LISN	150kHz-30MHz	3.6 dB	3.4 dB	3.4 dB	3.4 dB
Radiated emission (Measurement distance: 3m)	9kHz-30MHz	3.7 dB	3.5 dB	3.5 dB	-
	30MHz-300MHz	4.9 dB	4.9 dB	4.7 dB	-
	300MHz-1GHz	5.0 dB	5.0 dB	4.8 dB	-

*1: SAC=Semi-Anechoic Chamber

*2: SR= Shielded Room is applied besides radiated emission

Conducted emission test

The data listed in this test report has enough margin, more than site margin.

Radiated emission test

The data listed in this report meets the limits unless the uncertainty is taken into consideration.

Frequency tolerance

Frequency (Normal condition) Measurement uncertainty for this test was: (±) 7.9×10^{-8} .

Frequency (Extreme condition) Measurement uncertainty for this test was: (±) 7.9×10^{-8} .

Other tests

Bandwidth Measurement uncertainty for this test was: (±) 0.66%

3.5 Test location

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Facsimile number : +81 463 50 6401

JAB Accreditation No. : RTL02610

	IC Registration No.	Width x Depth x Height (m)	Size of reference ground plane (m) / horizontal conducting plane	Maximum measuremen t distance
☐ No.1 Semi-anechoic chamber	2973D-1	20.6 x 11.3 x 7.65	20.6 x 11.3	10m
☐ No.2 Semi-anechoic chamber	2973D-2	20.6 x 11.3 x 7.65	20.6 x 11.3	10m
☒ No.3 Semi-anechoic chamber	2973D-3	12.7 x 7.7 x 5.35	12.7 x 7.7	5m
☐ No.4 Semi-anechoic chamber	-	8.1 x 5.1 x 3.55	8.1 x 5.1	-
☐ No.1 shielded room	-	6.8 x 4.1 x 2.7	6.8 x 4.1	-
☐ No.2 shielded room	-	6.8 x 4.1 x 2.7	6.8 x 4.1	-
☐ No.3 shielded room	-	6.3 x 4.7 x 2.7	6.3 x 4.7	-
☐ No.4 shielded room	-	4.4 x 4.7 x 2.7	4.4 x 4.7	-
☒ No.5 shielded room	-	7.8 x 6.4 x 2.7	7.8 x 6.4	-
☒ No.6 shielded room	-	7.8 x 6.4 x 2.7	7.8 x 6.4	-
☐ No.1 Measurement room	-	2.55 x 4.1 x 2.5	-	-

3.6 Test setup, Data of test & Test instruments

Refer to APPENDIX 1 to 3.

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SECTION 4: Operation of E.U.T. during testing

4.1 Operating mode

The EUT exercise program used during testing was designed to exercise the various system components in a manner similar to typical use.

Test item	Operating mode	Tested frequency
All items	Transmitting	13.56MHz

Software for testing: ESS-FW Ver. SI36 (201408110658)

Power setting: Fixed

The carrier level and noise levels were confirmed with and without Card, and the test was made with the condition that has the maximum noise.

Combinations of the worst case:

Conducted emission	Radiated emission (Carrier)	Radiated emission (Below 30MHz)	Radiated emission (Above 30MHz)
With Card (MIFARE classic-4k)	With Card (MIFARE classic-1k)	With Card (MIFARE classic-1k)	With Card (MIFARE Ultralight)

Justification: The system was configured in typical fashion (as customer would normally use it) for testing.

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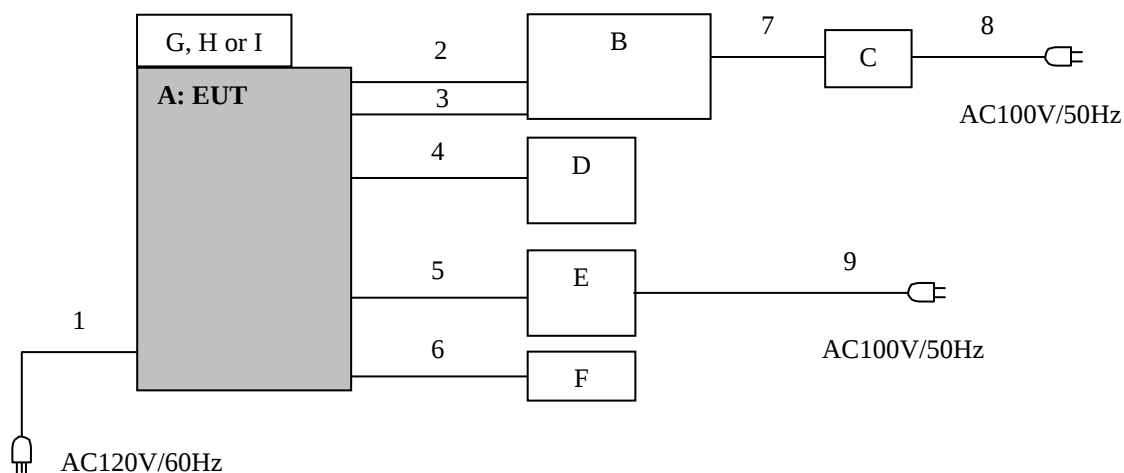
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4.2 Configuration and peripherals



* Cabling and setup were taken into consideration and test data was taken under worse case conditions.

Description of EUT and support equipment

No.	Item	Model number	Serial number	Manufacturer	Remark
A	Multifunction Laser Printer	Dell H815dw	087	FUJIXEROX	EUT
B	Laptop Computer	6730b	CNU9072V60	HP	-
C	AC adapter	PPP014L-S	8620562306	HP	-
D	Phone	SS-01	A02-0905JP	Kashimura	-
E	Telephone Line Emulator	TLE-101III	012817	LSI	-
F	USB memory	USM4GU	-	SONY	-
G	Card	MIFARE classic-1k	-	-	-
H	Card	MIFARE classic-4k	-	-	-
I	Card	MIFARE Ultralight	-	-	-

List of cables used

No.	Item	Length (m)	Shield	Remark
1	AC	2.0	Unshielded	-
2	LAN	3.0	Unshielded	-
3	USB	3.0	Shielded	-
4	TEL (Phone)	3.0	Unshielded	-
5	TEL (Line)	3.0	Unshielded	-
6	USB	2.0	Shielded	-
7	DC	1.8	Unshielded	-
8	AC	1.8	Unshielded	-
9	AC	1.9	Unshielded	-

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SECTION 5: Conducted emission

5.1 Operating environment

The test was carried out in a semi-anechoic chamber.

Temperature : Refer to APPENDIX 1.
Humidity : Refer to APPENDIX 1.

5.2 Test configuration

EUT was placed on a wooden platform of nominal size, 0.8m by 1.6m, raised 0.8m above the conducting ground plane. The rear of tabletop was located 40cm to the vertical conducting plane. The rear of EUT was aligned and was flushed with rear of tabletop. All other surfaces of tabletop were at least 80cm from any other grounded conducting surface. EUT was located 80cm from LISN. I/O cables that were connected to the peripherals were bundled in center. They were folded back and for the forming a bundle 30cm to 40cm long and were hanged at a 40cm height to the ground plane. Each EUT current-carrying power lead was individually connected through a LISN to the input power source. Photographs of the set up are shown in Appendix 1.

5.3 Test conditions

Frequency range : 0.15 - 30MHz
EUT position : Table top

5.4 Test procedure

The AC Mains Terminal Continuous disturbance Voltage had been measured with the EUT within a Shielded room. The EUT was connected to a Line Impedance Stabilization Network (LISN). An overview sweep with peak detection has been performed. The measurements had been performed with a quasi-peak detector and if required, a CISPR average detector. The conducted emission measurements were made with the following detection of the test receiver.

Detection Type : Quasi-Peak/ CISPR-Average
IF Bandwidth : 9kHz

5.5 Results

Summary of the test results : Pass

Refer to APPENDIX 1.

SECTION 6: Radiated emission (Fundamental and Spurious emission)

6.1 Operating environment

The test was carried out in a semi-anechoic chamber.

Temperature : Refer to APPENDIX 1.
Humidity : Refer to APPENDIX 1.

6.2 Test configuration

EUT was placed on a platform of nominal size, 1m by 1.5m, raised 0.8m above the conducting ground plane. The table is made of Styrofoam and covered with polyvinyl chloride. That has very low permittivity. I/O cables that were connected to the peripherals were bundled in center. They were folded back and for the forming a bundle 30cm to 40cm long and were hanged at a 40cm height to the ground plane. Photographs of the set up are shown in Appendix 1.

6.3 Test conditions

Frequency range : 9kHz - 1GHz
Test distance : 3m
EUT position : Table top

6.4 Test procedure

The Radiated Electric Field Strength intensity has been measured on a semi-anechoic chamber with a ground plane at a distance of 3m.

Although these tests were performed other than open area test site, adequate comparison measurements were confirmed against 30 m open area test site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 937606. These tests were performed in semi anechoic chamber. Therefore the measured level of emissions may be higher than if measurements were made without a ground plane. However test results were confirmed to pass against standard limit.

The Radiated Electric Field Strength intensity has been measured with a ground plane and at a distance of 3m
Frequency: From 9kHz to 30MHz at distance 3m

The EUT was rotated a full revolution in order to obtain the maximum value of the electric field intensity.

The measurements were performed for vertical polarization (antenna angle: 0deg.to 360deg.) and horizontal polarization. Drawing of the antenna direction is shown in Figure 1.

Frequency: From 30MHz to 1GHz at distance 3m (Refer to Figure 2).

The measuring antenna height was varied between 1 and 4m and EUT was rotated a full revolution in order to obtain the maximum value of the electric field intensity.

The measurements were performed for both vertical and horizontal antenna polarization.

Measurements were performed with QP, PK, and AV detector.

The radiated emission measurements were made with the following detector function of the test receiver.

	9kHz to 90kHz & 110kHz to 150kHz	90kHz to 110kHz	150kHz to 490kHz	490kHz to 30MHz	30MHz to 1GHz
Detector Type	PK/AV	QP	PK/AV	QP	QP
IF Bandwidth	200Hz	200Hz	9kHz	9kHz	120kHz
Measuring antenna	Loop antenna				Biconical (30-299.99MHz) Logperiodic (300MHz-1GHz)

* FCC 15.31 (f)(2) (9kHz-30MHz)

9kHz – 490kHz [Limit at 3m]= [Limit at 300m]-40log (3[m]/300[m])

490kHz – 30MHz [Limit at 3m]= [Limit at 30m]-40log (3[m]/30[m])

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6.5 Results

Summary of the test results : Pass

Refer to APPENDIX 1.

Figure 1. Direction of the Loop Antenna

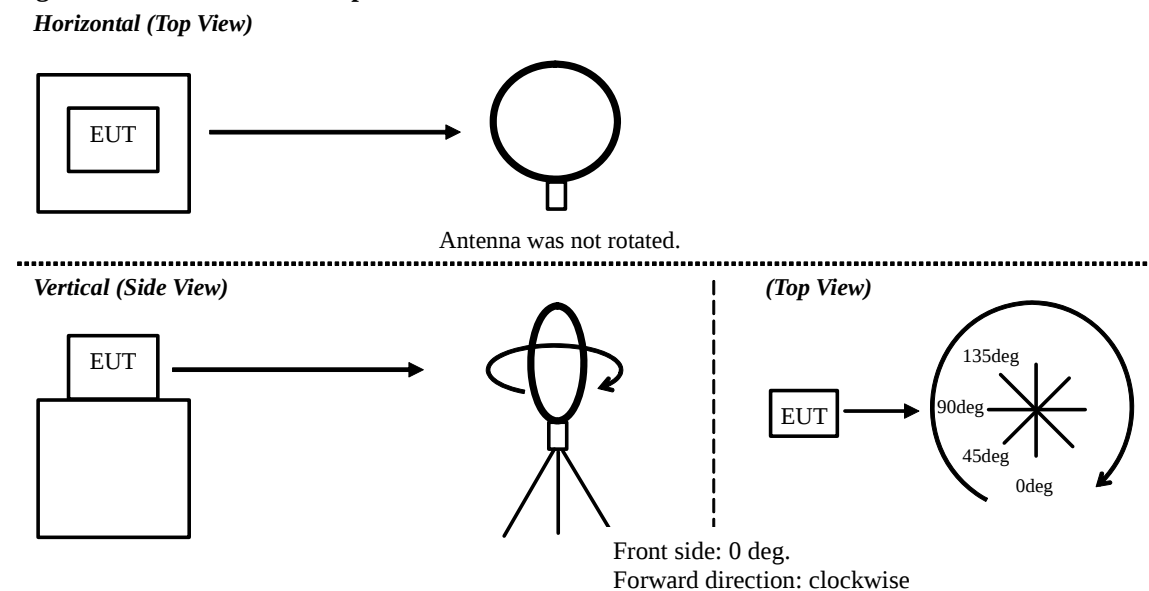
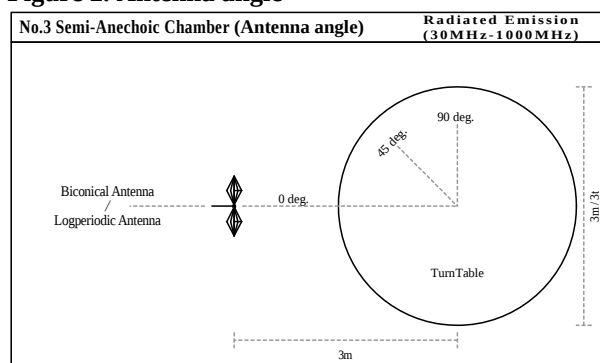


Figure 2. Antenna angle



SECTION 7: 20dB bandwidth & Occupied bandwidth (99%)

Test procedure

The test was measured with a spectrum analyzer using a test fixture.

Results

Summary of the test results: Pass

Refer to APPENDIX 1.

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SECTION 8: Frequency tolerances

Test procedure

The test was measured with a spectrum analyzer using a test fixture.
The temperature test was started after the temperature stabilization time of 30 minutes.
The test was begun from 50 deg.C and the temperature was lowered each 10 deg.C.

Results

Summary of the test results: Pass
Refer to APPENDIX 1.

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Conducted emission
Radiated emission
Frequency tolerance
Bandwidth

APPENDIX 2: Test instruments

Test instruments

APPENDIX 3: Photographs of test setup

Conducted emission
Radiated emission
Pre-check of the worst case
Cards used for the test as representatives

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DATA OF CONDUCTED EMISSION TEST

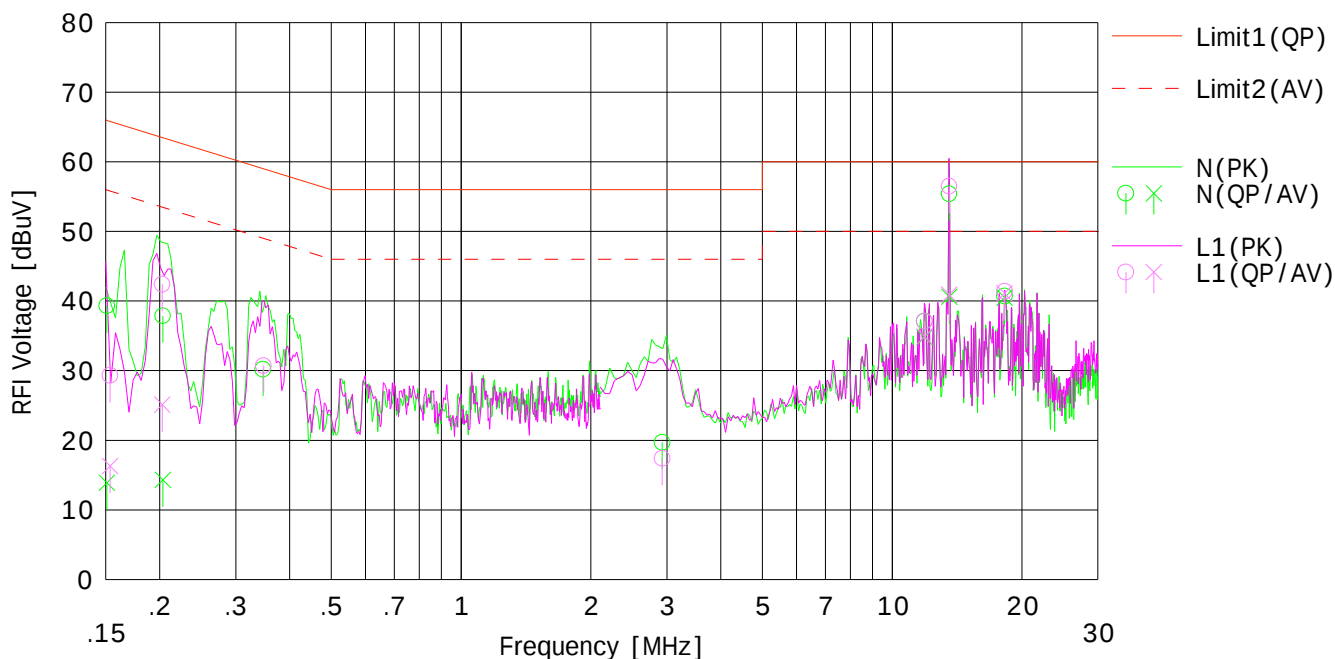
UL Japan, Inc. Shonan EMC Lab. No.6 Shielded Room
Date : 2014/12/12

Company : Fuji Xerox Co., Ltd.
Kind of EUT : Multifunction Laser Printer
Model No. : Dell H815dw
Serial No. : 087
Remarks : NFC Card:MIFARE classic-4k

Mode : NFC Communication
Order No. : 10520971S
Power : AC 120V / 60Hz
Temp./Humi. : 23deg.C. / 35%RH

Limit1 : EN55022 ClassB QP
Limit2 : EN55022 ClassB AV

Engineer : Tomochika Sato



No.	Freq. [MHz]	Reading		C.Fac	Results		Limit		Margin		Phase	Comment
		<QP> [dBuV]	<AV> [dBuV]		<QP> [dBuV]	<AV> [dBuV]	<QP> [dBuV]	<AV> [dBuV]	<QP> [dB]	<AV> [dB]		
1	0.15080	26.2	0.8	13.1	39.3	13.9	65.9	55.9	26.6	42.0	N	
2	0.20320	24.8	1.2	13.1	37.9	14.3	63.4	53.4	25.5	39.1	N	
3	0.34700	17.2	---	13.0	30.2	---	59.0	49.0	28.8	---	N	
4	2.92900	6.5	---	13.2	19.7	---	56.0	46.0	36.3	---	N	
5	11.89280	23.4	21.1	13.7	37.1	34.8	60.0	50.0	22.9	15.2	N	
6	13.56020	41.7	26.9	13.7	55.4	40.6	60.0	50.0	4.6	9.4	N	
7	18.24300	26.7	26.5	14.0	40.7	40.5	60.0	50.0	19.3	9.5	N	
8	0.15340	16.2	3.2	13.1	29.3	16.3	65.8	55.8	36.5	39.5	L1	
9	0.20260	29.3	12.0	13.1	42.4	25.1	63.5	53.5	21.1	28.4	L1	
10	0.34820	17.7	---	13.0	30.7	---	59.0	49.0	28.3	---	L1	
11	2.92900	4.2	---	13.2	17.4	---	56.0	46.0	38.6	---	L1	
12	11.89280	23.4	21.2	13.7	37.1	34.9	60.0	50.0	22.9	15.1	L1	
13	13.56060	42.8	27.2	13.7	56.5	40.9	60.0	50.0	3.5	9.1	L1	
14	18.24340	27.4	27.1	14.0	41.4	41.1	60.0	50.0	18.6	8.9	L1	

Data of Electric field strength of Fundamental emission and Spurious emission within the band: FCC15.225(a)(b)(c)

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Shonan EMC Lab., No.3 Semi Anechoic Chamber

Company: Fuji Xerox Co., Ltd.
Equipment: Multifunction Laser Printer
Model: Dell H815dw
Sample No.: 087
Power: AC 120V / 60Hz
Mode: Transmitting 13.56MHz

Regulation: FCC Part15 Subpart C 15.225
Test Distance: 3m
Date: December 13, 2014
Temperature: 24 deg.C
Humidity: 25 %RH
ENGINEER: Shinichi Takano

Remarks: : NFC Card: MIFARE classic-1k , Vertical polarization (antenna angle) of the worst case: 45deg

Fundamental emission

No.	FREQ [MHz]	Test Receiver Reading		Antenna Factor [dB/m]	Loss [dB]	AMP GAIN [dB]	Distance factor [dB]	RESULT		LIMIT (30m) [dBuV/m]	MARGIN	
		Hor [dBuV]	Ver [dBuV]					Hor [dBuV/m]	Ver [dBuV/m]		Hor [dB]	Ver [dB]
1	13.560	59.9	61.2	18.6	6.3	32.2	-40.0	12.6	13.9	83.9	71.3	70.0

Calculation: Result[dBuV/m]=Reading[dBuV]+Ant.Fac[dB/m]+Loss(Cable+ATT)[dB]-Gain(AMP)[dB]+Distance factor[dB]

Distance factor: $40 \times \log(3\text{m}/30\text{m}) = -40 \text{ dB}$

Limits (30m)

• 13.553MHz to 13.567MHz : 83.9dBuV/m (FCC 15.225(a))

Spurious emission within the band

No.	FREQ [MHz]	Test Receiver Reading		Antenna Factor [dB/m]	Loss [dB]	AMP GAIN [dB]	Distance factor [dB]	RESULT		LIMIT (30m) [dBuV/m]	MARGIN	
		Hor [dBuV]	Ver [dBuV]					Hor [dBuV/m]	Ver [dBuV/m]		Hor [dB]	Ver [dB]
1	13.110	30.2	30.3	18.6	6.3	32.2	-40.0	-17.1	-17.0	29.5	46.6	46.5
2	13.410	30.3	30.4	18.6	6.3	32.2	-40.0	-17.0	-16.9	40.5	57.5	57.4
3	13.553	44.9	46.1	18.6	6.3	32.2	-40.0	-2.4	-1.2	50.4	52.8	51.6
4	13.567	46.3	47.4	18.6	6.3	32.2	-40.0	-1.0	0.1	50.4	51.4	50.3
5	13.710	30.4	30.5	18.6	6.3	32.2	-40.0	-17.0	-16.9	40.5	57.5	57.4
6	14.010	30.2	30.4	18.6	6.3	32.2	-40.0	-17.2	-17.0	29.5	46.7	46.5

Calculation: Result[dBuV/m]=Reading[dBuV]+Ant.Fac[dB/m]+Loss(Cable+ATT)[dB]-Gain(AMP)[dB]+Distance factor[dB]

Outside filed strength frequencies

• Fc±7kHz: 13.553MHz to 13.567MHz

• Fc±150kHz: 13.410MHz to 13.710MHz

• Fc±450kHz: 13.110MHz to 14.010MHz

Fc = 13.56MHz

Limits (30m)

• 13.410MHz to 13.553MHz and 13.567MHz to 13.710MHz : 50.4dBuV/m (FCC 15.225(b))

• 13.110MHz to 13.410MHz and 13.710MHz to 14.010MHz : 40.5dBuV/m (FCC 15.225(c))

• Below 13.110MHz and Above 14.010MHz : 29.5dBuV/m (FCC 15.225(d) and FCC 15.209)

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Shonan EMC Lab.

1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa, Japan 259-1220

Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

Radiated Emission

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Shonan EMC Lab. No.3 Semi Anechoic Chamber

Company: Fuji Xerox Co., Ltd.
 Equipment: Multifunction Laser Printer
 Model: Dell H815dw
 Sample No.: 087
 Power: AC 120V / 60Hz
 Mode: Transmitting 13.56MHz
 EUT axis: Below 30MHz, NFC Card: MIFARE classic-1k, Vertical polarization (antenna angle) of the worst case: 90deg
 Above 30MHz, NFC Card: MIFARE Ultralight

Regulation: FCC Part15 Subpart C 15.225
 Test Distance: 3m
 Date: December 12, 2014 December 13, 2014
 Temperature: 24 deg.C 24 deg.C
 Humidity: 31 %RH 25 %RH
 ENGINEER: Yasumasa Owaki Shinichi Takano

Remarks:

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	27.12	QP	29.9	19.4	6.5	32.2	-40.0	-16.4	29.5	45.9	-	127	* Limit: 30m
Hori.	40.680	QP	41.4	14.1	6.6	32.2	0.0	29.9	40.0	10.1	270	184	
Hori.	54.240	QP	39.5	9.4	6.7	32.2	0.0	23.4	40.0	16.6	386	160	
Hori.	67.800	QP	46.8	6.6	6.5	32.2	0.0	27.7	40.0	12.3	262	22	
Hori.	81.360	QP	44.9	6.5	7.4	32.2	0.0	26.6	40.0	13.4	400	154	
Hori.	94.920	QP	45.6	9.1	7.4	32.1	0.0	30.0	43.5	13.5	206	24	
Hori.	108.480	QP	37.4	11.2	7.2	32.1	0.0	23.7	43.5	19.9	297	116	
Hori.	122.040	QP	39.7	13.0	7.2	32.1	0.0	27.8	43.5	15.7	154	110	
Hori.	135.600	QP	34.3	14.0	7.4	32.1	0.0	23.6	43.5	19.9	225	20	
Hori.	772.920	QP	43.8	20.9	10.3	31.7	0.0	43.3	46.0	2.7	100	330	
Hori.	800.040	QP	45.4	21.0	10.4	31.6	0.0	45.2	46.0	0.8	159	324	
Hori.	813.600	QP	41.5	21.2	10.4	31.5	0.0	41.6	46.0	4.4	163	321	
Hori.	827.160	QP	42.1	21.4	10.4	31.5	0.0	42.4	46.0	3.6	156	320	
Hori.	840.720	QP	39.2	21.6	10.5	31.4	0.0	39.9	46.0	6.1	153	321	
Vert.	27.12	QP	31.7	19.4	6.5	32.2	-40.0	-14.6	29.5	44.1	-	48	* Limit: 30m
Vert.	40.680	QP	41.1	14.1	6.6	32.2	0.0	29.6	40.0	10.4	100	290	
Vert.	54.240	QP	42.0	9.4	6.7	32.2	0.0	25.9	40.0	14.1	100	245	
Vert.	67.800	QP	43.4	6.6	6.5	32.2	0.0	24.3	40.0	15.7	100	82	
Vert.	81.360	QP	51.6	6.5	7.4	32.2	0.0	33.3	40.0	6.7	150	267	
Vert.	94.92	QP	45.0	9.1	7.4	32.1	0.0	29.4	43.5	14.1	100	2	
Vert.	108.48	QP	44.9	11.2	7.2	32.1	0.0	31.2	43.5	12.3	100	359	
Vert.	122.04	QP	44.1	13.0	7.2	32.1	0.0	32.2	43.5	11.3	100	354	
Vert.	135.60	QP	36.2	14.0	7.4	32.1	0.0	25.5	43.5	18.0	100	353	

Result = Reading + Ant Factor + Loss (Cable+ATT+ΔAF(above 30MHz)) - Gain(Amplifier) + Distance factor(below 30MHz)

* Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).

* Carrier level (Result at 3m): Hor= 52.6dBuV/m, Ver= 53.9 dBuV/m

UL Japan, Inc.

Shonan EMC Lab.

1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa, Japan 259-1220

Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

Data of Frequency Tolerance

UL Japan, Inc.

Shonan EMC Lab. No.5 Shielded room

Company Fuji Xerox Co., Ltd.
 Equipment Multifunction Laser Printer
 Model Dell H815dw
 Serial No. 087
 Power AC 120V /60Hz
 Mode Transmitting 13.56 MHz

Regulation FCC Part15 Subpart C 15.225 (e)
 Date December 18, 2014
 Temperature 24 deg.C
 Humidity 31 %RH
 ENGINEER Tatsuya Arai

Temperature Variation: 50deg.C

Test Conditions	Original Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (MHz)	Frequency tolerance (%)	Limit (%)
startup	13.56	13.560174	0.000174	0.00128	0.010
after 2minutes	13.56	13.560158	0.000158	0.00117	0.010
after 5minutes	13.56	13.560158	0.000158	0.00117	0.010
after 10minutes	13.56	13.560159	0.000159	0.00117	0.010

Temperature Variation: 40deg.C

Test Conditions	Original Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (MHz)	Frequency tolerance (%)	Limit (%)
startup	13.56	13.560159	0.000159	0.00117	0.010
after 2minutes	13.56	13.560164	0.000164	0.00121	0.010
after 5minutes	13.56	13.560166	0.000166	0.00122	0.010
after 10minutes	13.56	13.560160	0.000160	0.00118	0.010

Temperature Variation: 30deg.C

Test Conditions	Original Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (MHz)	Frequency tolerance (%)	Limit (%)
startup	13.56	13.560197	0.000197	0.00145	0.010
after 2minutes	13.56	13.560181	0.000181	0.00133	0.010
after 5minutes	13.56	13.560180	0.000180	0.00133	0.010
after 10minutes	13.56	13.560181	0.000181	0.00133	0.010

Temperature Variation: 20deg.C

Test Conditions	Original Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (MHz)	Frequency tolerance (%)	Limit (%)
startup	13.56	13.560225	0.000225	0.00166	0.010
after 2minutes	13.56	13.560209	0.000209	0.00154	0.010
after 5minutes	13.56	13.560201	0.000201	0.00148	0.010
after 10minutes	13.56	13.560199	0.000199	0.00147	0.010

Temperature Variation: 10deg.C

Test Conditions	Original Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (MHz)	Frequency tolerance (%)	Limit (%)
startup	13.56	13.560243	0.000243	0.00179	0.010
after 2minutes	13.56	13.560233	0.000233	0.00172	0.010
after 5minutes	13.56	13.560229	0.000229	0.00169	0.010
after 10minutes	13.56	13.560223	0.000223	0.00164	0.010

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Shonan EMC Lab.

1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa 259-1220 JAPAN

Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

Data of Frequency Tolerance

Temperature Variation: 0deg.C

Test Conditions	Original Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (MHz)	Frequency tolerance (%)	Limit (%)
startup	13.56	13.560253	0.000253	0.00187	0.010
after 2minutes	13.56	13.560254	0.000254	0.00187	0.010
after 5minutes	13.56	13.560253	0.000253	0.00187	0.010
after 10minutes	13.56	13.560248	0.000248	0.00183	0.010

Temperature Variation: -10deg.C

Test Conditions	Original Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (MHz)	Frequency tolerance (%)	Limit (%)
startup	13.56	13.560245	0.000245	0.00181	0.010
after 2minutes	13.56	13.560258	0.000258	0.00190	0.010
after 5minutes	13.56	13.560259	0.000259	0.00191	0.010
after 10minutes	13.56	13.560258	0.000258	0.00190	0.010

Temperature Variation: -20deg.C

Test Conditions	Original Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (MHz)	Frequency tolerance (%)	Limit (%)
startup	13.56	13.560210	0.000210	0.00155	0.010
after 2minutes	13.56	13.560241	0.000241	0.00178	0.010
after 5minutes	13.56	13.560249	0.000249	0.00184	0.010
after 10minutes	13.56	13.560250	0.000250	0.00184	0.010

Data of Frequency Tolerance

UL Japan, Inc.

Shonan EMC Lab. No.5 Shielded room

Company Fuji Xerox Co., Ltd.
 Equipment Multifunction Laser Printer
 Model Dell H815dw
 Serial No. 087
 Power AC 120V /60Hz
 Mode Transmitting 13.56 MHz

Regulation FCC Part15 Subpart C 15.225 (e)
 Date December 18, 2014
 Temperature 24 deg.C
 Humidity 31 %RH
 ENGINEER Tatsuya Arai

Voltage Variation: AC 102 V**Temperature Variation: 20deg.C**

Test Conditions	Original Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (MHz)	Frequency tolerance (%)	Limit (%)
startup	13.56	13.560235	0.000235	0.00173	0.010
after 2minutes	13.56	13.560213	0.000213	0.00157	0.010
after 5minutes	13.56	13.560213	0.000213	0.00157	0.010
after 10minutes	13.56	13.560207	0.000207	0.00153	0.010

Voltage Variation: AC 138 V**Temperature Variation: 20deg.C**

Test Conditions	Original Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (MHz)	Frequency tolerance (%)	Limit (%)
startup	13.56	13.560207	0.000207	0.00153	0.010
after 2minutes	13.56	13.560199	0.000199	0.00147	0.010
after 5minutes	13.56	13.560201	0.000201	0.00148	0.010
after 10minutes	13.56	13.560196	0.000196	0.00145	0.010

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Shonan EMC Lab.

1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa 259-1220 JAPAN

Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

20dB bandwidth & 99% Occupied bandwidth: FCC 15.215 / RSS-Gen

UL Japan, Inc.

Shonan EMC Lab. No.5 Shielded Room

Company: Fuji Xerox Co., Ltd.
Equipment: Multifunction Laser Printer
Model: Dell H815dw
Sample No.: 087
Power: AC 120V / 60Hz
Mode: Transmitting 13.56MHz

Regulation: FCC Part15 Subpart C 15.215

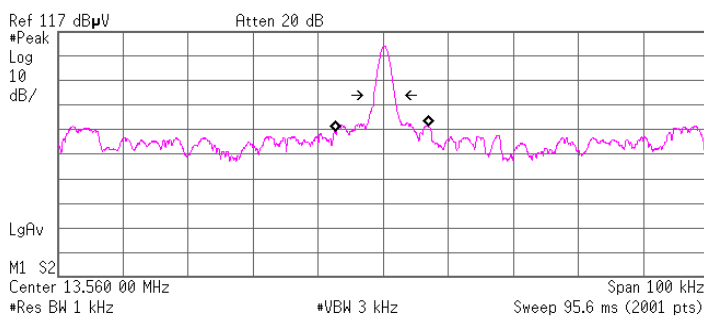
Date: December 18, 2014

Temperature: 24 deg.C

Humidity: 31 %RH

ENGINEER: Tatsuya Arai

20dB Bandwidth: 3.203 kHz
* Agilent R L

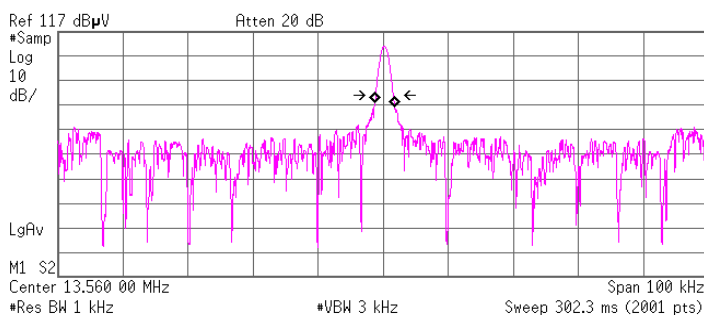


Occupied Bandwidth
14.4027 kHz

Occ BW % Pwr 99.00 %
x dB -20.00 dB

Transmit Freq Error -173.637 Hz
x dB Bandwidth 3.203 kHz

99% Occupied Bandwidth: 3.022 kHz
* Agilent R L



Occupied Bandwidth
3.0219 kHz

Occ BW % Pwr 99.00 %
x dB -20.00 dB

Transmit Freq Error 244.000 Hz
x dB Bandwidth 2.723 kHz*

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1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa, Japan 259-1220

Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

APPENDIX 2

Test Instruments

EMI test equipment

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
STR-02	Test Receiver	Rohde & Schwarz	ESCI	100575	CE	2014/09/16 * 12
SCC-C9	Coaxial Cable	Suhner	RG223U	-	CE	2014/04/25 * 12
SLS-08	LISN	Schwarzbeck	NSLK8126	8126442	CE	2014/10/03 * 12
SLS-02	LISN	Rohde & Schwarz	ENV216	100512	CE	2014/03/05 * 12
SAT13-02	Attenuator	JFW	50FP-013-H2 N	-	CE	2014/02/17 * 12
STM-15	Terminator	TME	CT-01 BP	-	CE	2013/12/26 * 12
SOS-09	Humidity Indicator	A&D	AD-5681	4061484	CE	2014/03/07 * 12
SAF-03	Pre Amplifier	SONOMA	310N	290213	RE	2014/02/14 * 12
SAT6-06	Attenuator	JFW	50HF-006N	-	RE	2014/02/17 * 12
SBA-03	Biconical Antenna	Schwarzbeck	BBA9106	91032666	RE	2014/10/18 * 12
SCC-C1/C2/C3/C4/C5/C10/SRSE-03	Coaxial Cable&RF Selector	Fujikura/Fujikura/Suhner/Suhner/Suhner/TOYO	8D2W/12DSFA/141PE/141PE/141PE/NS4906	-/0901-271(RF Selector)	RE	2014/04/25 * 12
SLA-03	Logperiodic Antenna	Schwarzbeck	UHALP9108A	UHALP 9108-A 0901	RE	2014/10/18 * 12
SOS-05	Humidity Indicator	A&D	AD-5681	4062518	RE	2014/10/30 * 12
STR-06	Test Receiver	Rohde & Schwarz	ESCI	101259	RE	2014/03/04 * 12
SJM-15	Measure	ASKUL	-	-	RE	-
SAEC-03(NSA)	Semi-Anechoic Chamber	TDK	SAEC-03(NSA)	3	RE	2014/07/14 * 12
COTS-SEMI-1	EMI Software	TSJ	TEPTO-DV(RE,CE, RFLMF)	-	RE	-
SLP-02	Loop Antenna	Rohde & Schwarz	HFH2-Z2	100218	RE	2014/11/30 * 12
SSA-03	Spectrum Analyzer	Agilent	E4448A	MY48250152	TF	2014/02/03 * 12
SCH-01	Temperature and Humidity Chamber	Espec	PL-1KT	14020837	TF	2014/04/15 * 12
SSCA-01	Search coil	LANGER	RF-R 400-1	02-0634	TF	Pre Check
SOS-09	Humidity Indicator	A&D	AD-5681	4061484	TF	2014/03/07 * 12

The expiration date of the calibration is the end of the expired month .

As for some calibrations performed after the tested dates , those test equipment have been controlled by means of an unbroken chains of calibrations .

All equipment is calibrated with valid calibrations . Each measurement data is traceable to the national or international standards .

Test Item :

CE: Conducted emission,

RE: Radiated emission,

TF: Test Fixture