



RADIO TEST REPORT

Test Report No.: 10693430S-A

Applicant : Fuji Xerox Co., Ltd.
Type of Equipment : Color Multifunction Printer
Model No. : Dell H825cdw
FCC ID : 2AAPEH825CDW
Test regulation : FCC Part15 Subpart C: 2015
Test result : Complied

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It does not cover administrative issues such as Manual or non-Radio test related Requirements. (if applicable)

Date of test: June 24 to July 6, 2015

Representative test engineer:


Hikaru Shirasawa
Engineer
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Approved by :


Toyokazu Imamura
Leader
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13-EM-F0429

REVISION HISTORY

Original Test Report No.: 10693430S-A

[illegible]

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SECTION 1: Customer information

Company Name : Fuji Xerox Co., Ltd.
Address : 6-1 Minatomirai, Nishi-ku, Yokohama-shi, Kanagawa 220-8668, Japan
Telephone Number : +81-45-755-4431
Contact Person : Shiro Miyake

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

2.1 Identification of E.U.T.

Type of Equipment : Color Multifunction Printer
Model Number : Dell H825cdw
Serial Number : Refer to 4.2 in this report.
Rating : AC 110 V - 127 V, 50 Hz / 60Hz
Country of Mass-production : Vietnam
Condition of EUT : Production prototype
(Not for Sale: This sample is equivalent to mass-produced items.)
Receipt Date of Sample : June 23 and 30, 2015
Modification of EUT : No modification by the test lab.

2.2 Product description

Model: Dell H825cdw (referred to as the EUT in this report) is Color Multifunction Printer.

Clock frequency(ies) in the system : 525 MHz, 27.12 MHz
Operating temperature : +10 deg.C to +32 deg. C.

<Radio part>

Radio Type : Transceiver
Frequency of Operation : 13.56 MHz
Modulation : ASK
Antenna type : Loop
ITU code : A1D
Card type : MIFARE classic-1k, MIFARE classic-4k, MIFARE ultralight

Similar model and difference:

Model No.	Print speed
Dell H825cdw	30 ppm (letter)
Dell H625cdw	25 ppm (letter)

FCC 15.31 (e)

The RF transmitter is provided the stable supply (DC 3.3V) 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 June 12, 2015 and effective July 13, 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 June 12, 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	2.1 dB Freq.: 13.56000 MHz Phase: N	Complied
Electric field strength of Fundamental emission	ANSI C63.4:2009 13. Measurement of intentional radiators	FCC 15.225 (a)	Radiated	N/A	69.7 dB Polarization: Horizontal	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	45.9 dB Freq.: 13.110 MHz Polarization: Horizontal 45.9 dB Freq.: 14.010 MHz Polarization: Horizontal & 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	0.8 dB Freq.: 800.05 MHz 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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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 (±)
Conducted emission (AC Mains) AMN/LISN	9 kHz-150 kHz	4.0 dB	3.8 dB	3.8 dB
	150 kHz-30 MHz	3.6 dB	3.4 dB	3.4 dB
Radiated emission (Measurement distance: 3m)	9 kHz-30 MHz	3.7 dB	3.5 dB	3.5 dB
	30 MHz-300 MHz	4.9 dB	4.9 dB	4.7 dB
	300 MHz-1 GHz	5.0 dB	5.0 dB	4.8 dB
	1 GHz-18 GHz	4.9 dB	4.9 dB	4.9 dB
	18 GHz-26.5 GHz	4.5 dB	4.3 dB	4.3 dB

*1: SAC=Semi-Anechoic Chamber

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

Conducted emission

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

Radiated emission

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

Other tests

Frequency (Normal condition) Measurement uncertainty for this test was: $(\pm) 7.9 \times 10^{-8}$.

Frequency (Extreme condition) Measurement uncertainty for this test was: $(\pm) 7.9 \times 10^{-8}$.

Bandwidth Measurement uncertainty for this test was: $(\pm) 0.66\%$

Temperature uncertainty for this test was: $(\pm) 0.95\text{deg.C}$

Voltage uncertainty for this test was: $(\pm) 0.24\%$

3.5 Test location

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JAB Accreditation No. : RTL02610

	IC Registration No.	Width x Depth x Height (m)	Size of reference ground plane (m) / horizontal conducting plane	Maximum measurement distance
☐ No.1 Semi-anechoic chamber	2973D-1	20.6 x 11.3 x 7.65	20.6 x 11.3	10 m
☒ No.2 Semi-anechoic chamber	2973D-2	20.6 x 11.3 x 7.65	20.6 x 11.3	10 m
☐ No.3 Semi-anechoic chamber	2973D-3	12.7 x 7.7 x 5.35	12.7 x 7.7	5 m
☐ 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	13.56 MHz

Firmware version: 201505290655

Power settings: 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 30 MHz)	Radiated emission (Above 30 MHz)
With Card (MIFARE classic-4k)	With Card (MIFARE classic-1k)	With Card (MIFARE classic-4k)

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

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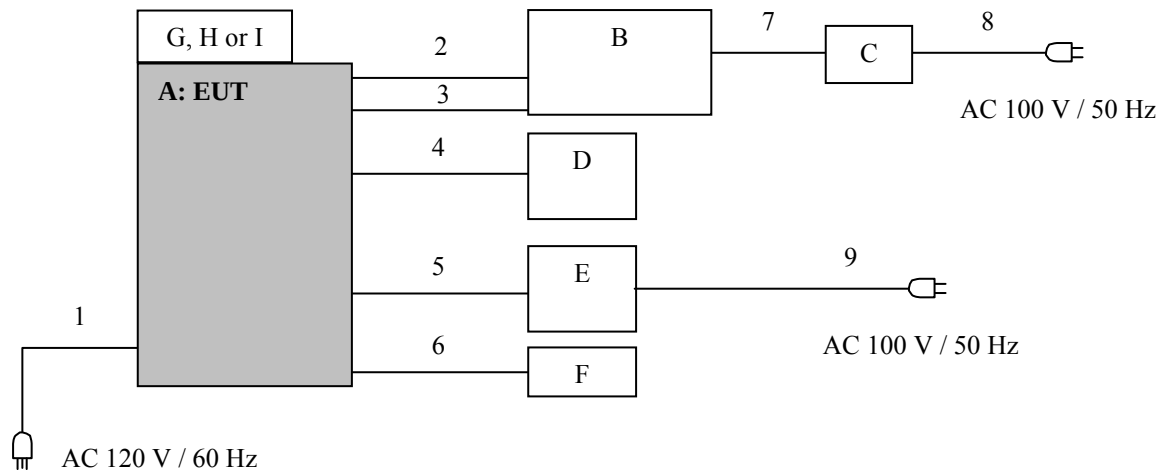
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4.2 Configuration and peripherals



*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	Remarks
A	Color Multifunction Printer	Dell H825cdw	*1)	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	-	-	-

*1) 19: Conducted emission, 30: Other test

List of cables used

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

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SECTION 5: Conducted emission

5.1 Operating environment

Test place : See test data (APPENDIX 1)
Temperature : See test data (APPENDIX 1)
Humidity : See test data (APPENDIX 1)

5.2 Test configuration

EUT was placed on a platform of nominal size, 1.0 m by 1.5 m, raised 0.8 m above the conducting ground plane. The table is made of Styrofoam and covered with polyvinyl chloride. That has very low permittivity. The rear of tabletop was located 40 cm to the vertical conducting plane. The rear of peripheral was aligned and was flushed with rear of tabletop. All other surfaces of tabletop were at least 80 cm from any other grounded conducting surface. EUT was located 80 cm from LISN. Each EUT current-carrying power lead, except the ground (safety) lead, was individually connected through a LISN to the input power source. All unused 50ohm connectors of the LISN were resistively terminated in 50 ohm when not connected to the measuring equipment. Photographs of the set up are shown in APPENDIX 3.

5.3 Test conditions

Frequency range : 0.15 MHz - 30 MHz
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 : 9 kHz

5.5 Results

Summary of the test results : Pass
Refer to APPENDIX 1

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SECTION 6: Radiated emission (Fundamental and Spurious emission)

6.1 Operating environment

Test place : See test data (APPENDIX 1)
Temperature : See test data (APPENDIX 1)
Humidity : See test data (APPENDIX 1)

6.2 Test configuration

EUT was placed on a platform of nominal size, 1.0 m by 1.5 m, raised 0.8 m above the conducting ground plane. The table is made of Styrofoam and covered with polyvinyl chloride. That has very low permittivity. Photographs of the set up are shown in Appendix 1.

6.3 Test conditions

Frequency range : 9 kHz - 1 GHz
Test distance : 3 m
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 3 m.

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 3 m
Frequency: From 9 kHz to 30 MHz at distance 3 m

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: 0 deg.to 360 deg.) and horizontal polarization. Drawing of the antenna direction is shown in Figure 1.

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

The measuring antenna height was varied between 1 and 4 m 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.

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

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

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

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

The EUT was tested in the direction normally used.

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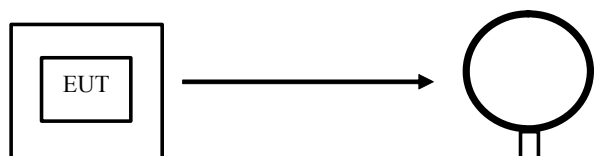
6.5 Results

Summary of the test results : Pass
No spurious emissions exceeded the fundamental emission level.

Refer to APPENDIX 1.

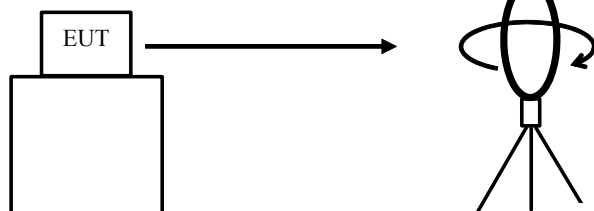
Figure 1. Direction of the Loop Antenna

Horizontal (Top View)

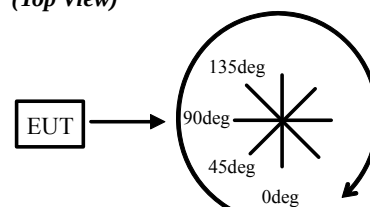


Antenna was not rotated.

Vertical (Side View)

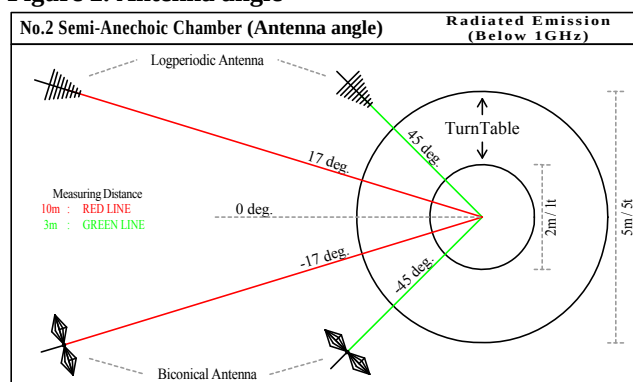


(Top View)



Front side: 0 deg.
Forward direction: clockwise

Figure 2. Antenna angle



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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.

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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Contents of APPENDIXES

APPENDIX 1: Data of Radio tests

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
Card used for the test as representative

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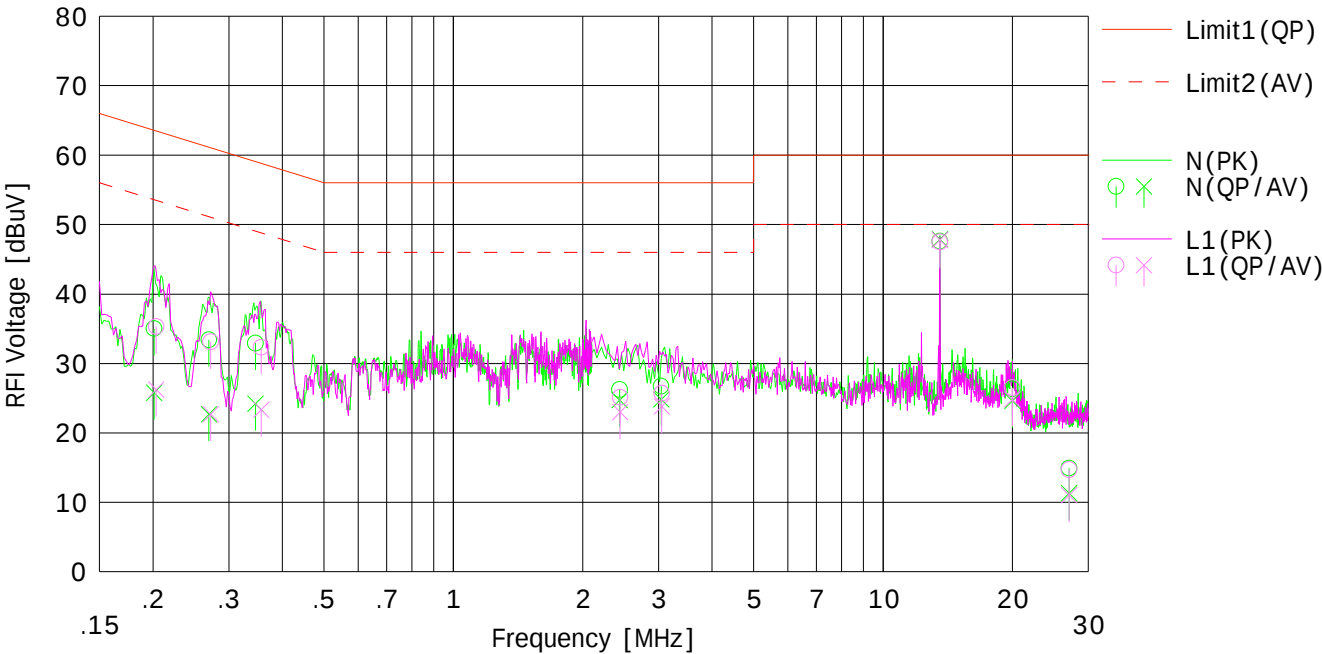
DATA OF CONDUCTED EMISSION TEST

UL Japan,Inc. Shonan EMC Lab. No.3 Shielded Room
Date : 2015/07/06

Serial No. : 19
Remarks : NFC Card: T4-C1(Mifare Classic 4K)

Mode : NFC Transmitting
Order No. : 10693430S
Power : AC 120 V / 60 Hz
Temp./Humi. : 25 deg.C. / 62 %RH

Limit1 : FCC 15C(15.207) QP
Limit2 : FCC 15C(15.207) AV
Engineer : Hiroyuki Morikawa



No.	Freq. [MHz]	Reading		C.Fac [dB]	Results		Limit		Margin		Phase	Comment
		<QP> [dBuV]	<AV> [dBuV]		<QP> [dBuV]	<AV> [dBuV]	<QP> [dBuV]	<AV> [dBuV]	<QP> [dB]	<AV> [dB]		
1	0.20101	21.9	12.7	13.1	35.0	25.8	63.5	53.5	28.5	27.7	N	
2	0.26988	20.2	9.5	13.2	33.4	22.7	61.1	51.1	27.7	28.4	N	
3	0.34633	19.8	11.1	13.1	32.9	24.2	59.0	49.0	26.1	24.8	N	
4	2.43827	12.9	11.4	13.3	26.2	24.7	56.0	46.0	29.8	21.3	N	
5	3.04648	13.4	11.5	13.3	26.7	24.8	56.0	46.0	29.3	21.2	N	
6	13.56000	33.7	34.0	13.9	47.6	47.9	60.0	50.0	12.4	2.1	N	
7	20.00214	12.1	10.4	14.2	26.3	24.6	60.0	50.0	33.7	25.4	N	
8	27.12000	0.4	-3.2	14.5	14.9	11.3	60.0	50.0	45.1	38.7	N	
9	0.20348	22.2	13.1	13.1	35.3	26.2	63.4	53.4	28.1	27.2	L1	
10	0.27264	19.9	9.5	13.2	33.1	22.7	61.0	51.0	27.9	28.3	L1	
11	0.35716	19.2	10.2	13.1	32.3	23.3	58.7	48.7	26.4	25.4	L1	
12	2.44453	11.8	9.7	13.3	25.1	23.0	56.0	46.0	30.9	23.0	L1	
13	3.05576	12.4	10.5	13.3	25.7	23.8	56.0	46.0	30.3	22.2	L1	
14	13.56000	33.6	33.9	13.9	47.5	47.8	60.0	50.0	12.5	2.2	L1	
15	20.00199	12.3	10.6	14.2	26.5	24.8	60.0	50.0	33.5	25.2	L1	
16	27.12000	0.2	-3.5	14.5	14.7	11.0	60.0	50.0	45.3	39.0	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.2 Semi Anechoic Chamber

Company: Fuji Xerox Co., Ltd.
Equipment: Color Multifunction Printer
Model: Dell H825cdw
Sample No.: 30
Power: AC120 V / 60 Hz
Mode: Transmitting 13.56 MHz

Regulation: FCC Part15 Subpart C 15.225
Test Distance: 3m
Date: June 24, 2015
Temperature: 22 deg.C
Humidity: 64 %RH
ENGINEER: Hikaru Shirasawa

Remarks: : T4-C1(Mifare Classic 4K), with Card, Loop: Vertical 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	61.1	50.9	18.6	6.4	31.9	-40.0	14.2	4.0	83.9	69.7	79.9

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	30.5	30.4	18.6	6.4	31.9	-40.0	-16.4	-16.5	29.5	45.9	46.0
2	13.410	30.7	30.5	18.6	6.4	31.9	-40.0	-16.2	-16.4	40.5	56.7	56.9
3	13.553	45.7	35.8	18.6	6.4	31.9	-40.0	-1.2	-11.1	50.4	51.6	61.5
4	13.567	47.0	37.2	18.6	6.4	31.9	-40.0	0.1	-9.7	50.4	50.3	60.1
5	13.710	30.8	30.5	18.5	6.5	31.9	-40.0	-16.1	-16.4	40.5	56.6	56.9
6	14.010	30.5	30.5	18.5	6.5	31.9	-40.0	-16.4	-16.4	29.5	45.9	45.9

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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Radiated Emission (above 30MHz)

UL Japan, Inc.

Shonan EMC Lab. No.2 Semi Anechoic Chamber

Company: Fuji Xerox Co., Ltd.
 Equipment: Color Multifunction Printer
 Model: Dell H825cdw
 Sample No.: 30
 Power: AC120 V / 60 Hz
 Mode: Transmitting 13.56 MHz
 EUT axis: Below 30MHz, T1-C1(Mifare Classic 1K), with Card, Loop: Vertical 90deg.
 Above 30MHz, T4-C1(Mifare Classic 4K), with Card

Regulation: FCC Part15 Subpart C 15.225
 Test Distance: 3m
 Date: June 24, 2015
 Temperature: 22 deg.C
 Humidity: 64 %RH
 ENGINEER: Hikaru Shirasawa

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	30.0	19.4	6.7	31.9	-40.0	-15.8	29.5	45.3	-	359	* Limit: 30m
Hori.	40.68	QP	41.3	14.1	7.0	31.9	0.0	30.5	40.0	9.5	201	286	
Hori.	54.24	QP	31.9	9.5	7.2	31.9	0.0	16.7	40.0	23.3	344	108	
Hori.	67.800	QP	42.4	6.6	7.1	31.9	0.0	24.2	40.0	15.8	252	268	
Hori.	81.360	QP	42.7	6.5	8.1	31.9	0.0	25.4	40.0	14.6	231	139	
Hori.	94.920	QP	38.9	9.1	8.1	31.9	0.0	24.2	43.5	19.3	177	250	
Hori.	101.888	QP	43.7	10.4	7.9	31.8	0.0	30.2	43.5	13.3	306	291	
Hori.	108.48	QP	35.9	11.3	7.9	31.8	0.0	23.3	43.5	20.2	173	245	
Hori.	122.04	QP	39.2	13.0	8.0	31.8	0.0	28.4	43.5	15.1	144	191	
Hori.	135.60	QP	31.9	14.0	8.2	31.8	0.0	22.3	43.5	21.2	232	328	
Hori.	216.960	QP	45.2	16.6	9.1	31.7	0.0	39.2	46.0	6.8	348	332	
Hori.	515.285	QP	44.3	17.7	7.8	31.6	0.0	38.2	46.0	7.8	242	35	
Hori.	732.240	QP	40.9	20.4	8.9	31.4	0.0	38.8	46.0	7.2	153	5	
Hori.	786.492	QP	41.2	20.6	9.1	31.3	0.0	39.6	46.0	6.4	145	9	
Hori.	800.05	QP	46.5	20.7	9.2	31.2	0.0	45.2	46.0	0.8	138	8	
Vert.	27.12	QP	30.3	19.4	6.7	31.9	-40.0	-15.5	29.5	45.0	-	0	* Limit: 30m
Vert.	40.68	QP	43.5	14.1	7.0	31.9	0.0	32.7	40.0	7.3	100	34	
Vert.	54.24	QP	35.7	9.5	7.2	31.9	0.0	20.5	40.0	19.5	100	194	
Vert.	67.80	QP	46.5	6.6	7.1	31.9	0.0	28.3	40.0	11.7	100	62	
Vert.	81.36	QP	37.0	6.5	8.1	31.9	0.0	19.7	40.0	20.3	100	221	
Vert.	94.92	QP	40.3	9.1	8.1	31.9	0.0	25.6	43.5	17.9	100	155	
Vert.	101.88	QP	46.2	10.4	7.9	31.8	0.0	32.7	43.5	10.8	100	199	
Vert.	108.48	QP	36.5	11.3	7.9	31.8	0.0	23.9	43.5	19.6	100	172	
Vert.	122.04	QP	40.2	13.0	8.0	31.8	0.0	29.4	43.5	14.1	100	287	
Vert.	135.60	QP	31.6	14.0	8.2	31.8	0.0	22.0	43.5	21.5	100	95	
Vert.	216.96	QP	39.7	16.6	9.1	31.7	0.0	33.7	46.0	12.3	172	13	
Vert.	800.05	QP	42.0	20.7	9.2	31.2	0.0	40.7	46.0	5.3	165	314	

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= 54.2dBuV/m, Ver= 44 dBuV/m

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Data of Frequency Tolerance

UL Japan, Inc.

Shonan EMC Lab. No.5 Shielded room

Company Fuji Xerox Co., Ltd.
 Equipment Color Multifunction Printer
 Model Dell H825cdw
 Serial No. 30
 Power AC 120V / 60 Hz
 Mode Transmitting 13.56 MHz

Regulation FCC Part15 Subpart C 15.225 (e)
 Date June 26, 2015
 Temperature 27 deg.C
 Humidity 38 %RH
 ENGINEER Hikaru Shirasawa

Temperature Variation: -20deg.C

Test Conditions	Original Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (MHz)	Frequency tolerance (%)	Limit (%)
startup	13.56	13.560224	0.000224	0.00165	0.010
after 2minutes	13.56	13.560266	0.000266	0.00196	0.010
after 5minutes	13.56	13.560273	0.000273	0.00202	0.010
after 10minutes	13.56	13.560276	0.000276	0.00203	0.010

Temperature Variation: -10deg.C

Test Conditions	Original Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (MHz)	Frequency tolerance (%)	Limit (%)
startup	13.56	13.560290	0.000290	0.00214	0.010
after 2minutes	13.56	13.560289	0.000289	0.00213	0.010
after 5minutes	13.56	13.560292	0.000292	0.00215	0.010
after 10minutes	13.56	13.560293	0.000293	0.00216	0.010

Temperature Variation: 0deg.C

Test Conditions	Original Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (MHz)	Frequency tolerance (%)	Limit (%)
startup	13.56	13.560292	0.000292	0.00216	0.010
after 2minutes	13.56	13.560292	0.000292	0.00215	0.010
after 5minutes	13.56	13.560291	0.000291	0.00214	0.010
after 10minutes	13.56	13.560290	0.000290	0.00214	0.010

Temperature Variation: 10deg.C

Test Conditions	Original Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (MHz)	Frequency tolerance (%)	Limit (%)
startup	13.56	13.560291	0.000291	0.00214	0.010
after 2minutes	13.56	13.560281	0.000281	0.00207	0.010
after 5minutes	13.56	13.560277	0.000277	0.00204	0.010
after 10minutes	13.56	13.560275	0.000275	0.00203	0.010

Temperature Variation: 20deg.C

Test Conditions	Original Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (MHz)	Frequency tolerance (%)	Limit (%)
startup	13.56	13.560275	0.000275	0.00203	0.010
after 2minutes	13.56	13.560261	0.000261	0.00192	0.010
after 5minutes	13.56	13.560255	0.000255	0.00188	0.010
after 10minutes	13.56	13.560253	0.000253	0.00187	0.010

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Data of Frequency Tolerance

Temperature Variation: 30deg.C

Test Conditions	Original Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (MHz)	Frequency tolerance (%)	Limit (%)
startup	13.56	13.560250	0.000250	0.00184	0.010
after 2minutes	13.56	13.560238	0.000238	0.00176	0.010
after 5minutes	13.56	13.560235	0.000235	0.00173	0.010
after 10minutes	13.56	13.560233	0.000233	0.00172	0.010

Temperature Variation: 40deg.C

Test Conditions	Original Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (MHz)	Frequency tolerance (%)	Limit (%)
startup	13.56	13.560233	0.000233	0.00172	0.010
after 2minutes	13.56	13.560224	0.000224	0.00165	0.010
after 5minutes	13.56	13.560223	0.000223	0.00164	0.010
after 10minutes	13.56	13.560223	0.000223	0.00164	0.010

Temperature Variation: 50deg.C

Test Conditions	Original Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (MHz)	Frequency tolerance (%)	Limit (%)
startup	13.56	13.560222	0.000222	0.00163	0.010
after 2minutes	13.56	13.560224	0.000224	0.00165	0.010
after 5minutes	13.56	13.560227	0.000227	0.00167	0.010
after 10minutes	13.56	13.560229	0.000229	0.00169	0.010

Data of Frequency Tolerance

UL Japan, Inc.

Shonan EMC Lab. No.5 Shielded room

Company Fuji Xerox Co., Ltd.
 Equipment Color Multifunction Printer
 Model Dell H825cdw
 Serial No. 30
 Power AC 120V / 60 Hz
 Mode Transmitting 13.56 MHz

Regulation FCC Part15 Subpart C 15.225 (e)
 Date June 26, 2015
 Temperature 27 deg.C
 Humidity 38 %RH
 ENGINEER Hikaru Shirasawa

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	13.560267	0.000267	0.00197	0.010
after 2minutes	13.56	13.560257	0.000257	0.00190	0.010
after 5minutes	13.56	13.560254	0.000254	0.00188	0.010
after 10minutes	13.56	13.560253	0.000253	0.00187	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	13.560266	0.000266	0.00196	0.010
after 2minutes	13.56	13.560257	0.000257	0.00189	0.010
after 5minutes	13.56	13.560254	0.000254	0.00187	0.010
after 10minutes	13.56	13.560253	0.000253	0.00187	0.010

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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: Color Multifunction Printer
Model: Dell H825cdw
Sample No.: 30
Power: AC120 V / 60 Hz
Mode: Transmitting 13.56 MHz
: T4-C1(Mifare Classic 4K), with Card, Loop: Vertical 45deg.

Regulation: FCC Part15 Subpart C 15.215

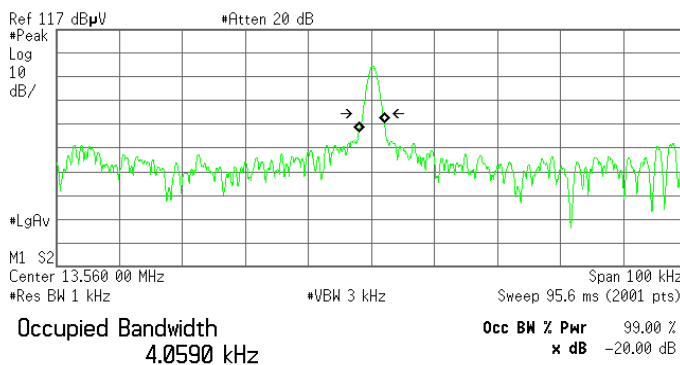
Date: June 26, 2015

Temperature: 27 deg.C

Humidity: 38 %RH

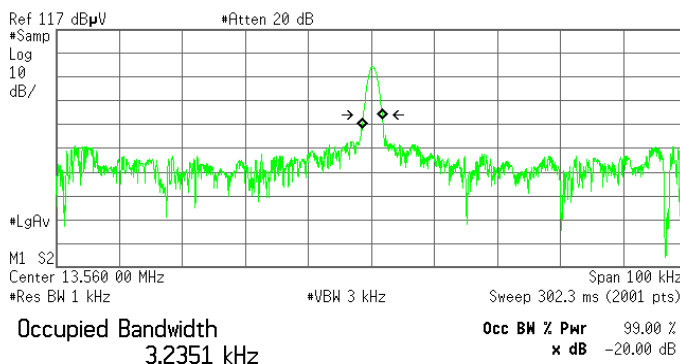
ENGINEER: Hikaru Shirasawa

20dB Bandwidth: 3.148 kHz
* Agilent R L



Transmit Freq Error 19.539 Hz
x dB Bandwidth 3.148 kHz

99% Occupied Bandwidth: 3.235 kHz
* Agilent R L



Transmit Freq Error 193.878 Hz
x dB Bandwidth 2.976 kHz*

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APPENDIX

Test Instruments

EMI test equipment

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
SAF-02	Pre Amplifier	SONOMA	310N	290212	RE	2015/02/18 * 12
SAT6-02	Attenuator	JFW	50HF-006N	-	RE	2015/02/18 * 12
KAT3-11	Attenuator	JFW IND. INC.	50HF-003N	-	RE	2014/08/27 * 12
SBA-02	Biconical Antenna	Schwarzbeck	BBA9106	91032665	RE	2014/11/22 * 12
SCC-B1/B3/B5/B7/B8/B13/SRSE-02	Coaxial Cable&RF Selector	Fujikura/Fujikura/Suhner/Suhner/Suhner/TOYO	8D2W/12DSFA/141PE/141PE/141PE/141PE/NS4906	-/0901-270(RF Selector)	RE	2015/04/17 * 12
SCC-B2/B4/B6/B7/B8/B13/SRSE-02	Coaxial Cable&RF Selector	Fujikura/Fujikura/Suhner/Suhner/Suhner/TOYO	8D2W/12DSFA/141PE/141PE/141PE/141PE/NS4906	-/0901-270(RF Selector)	RE	2015/04/17 * 12
SLA-02	Logperiodic Antenna	Schwarzbeck	UHALP9108A	UHALP 9108-A 0893	RE	2014/11/22 * 12
SOS-03	Humidity Indicator	A&D	AD-5681	4063325	RE	2014/10/30 * 12
STR-07	Test Receiver	Rohde & Schwarz	ESU26	100484	RE	2014/09/03 * 12
SJM-14	Measure	ASKUL	-	-	RE	-
SAEC-02(NSA)	Semi-Anechoic Chamber	TDK	SAEC-02(NSA)	2	RE	2014/07/08 * 12
SLP-02	Loop Antenna	Rohde & Schwarz	HFH2-Z2	100218	RE	2014/11/30 * 12
SAT6-07	Attenuator	JFW	50HF-006N	-	RE	2015/02/18 * 12
COTS-SEMI-1	EMI Software	TSJ	TEPTO-DV(RE,CE,RF,IMF)	-	RE,CE	-
SSA-03	Spectrum Analyzer	Agilent	E4448A	MY48250152	TX	2015/02/24 * 12
SSCA-01	Search coil	LANGER	RF-R 400-1	02-0634	TX	Pre Check
SCH-01	Temperature and Humidity Chamber	Espec	PL-1KT	14020837	TX	2015/04/22 * 12
SOS-09	Humidity Indicator	A&D	AD-5681	4061484	TX	2014/12/24 * 12
SCC-C9/C10/SRSE-03	Coaxial Cable&RF Selector	Suhner/Suhner/TOYO	RG223U/141PE/NS4906	-/0901-271(RF Selector)	CE	2015/04/17 * 12
SLS-05	LISN	Rohde & Schwarz	ENV216	100516	CE	2015/02/24 * 12
SOS-06	Humidity Indicator	A&D	AD-5681	4062118	CE	2014/12/24 * 12
STR-06	Test Receiver	Rohde & Schwarz	ESCI	101259	CE	2015/03/24 * 12
SJM-15	Measure	ASKUL	-	-	CE	-
SAT3-07	Attenuator	JFW	50HF-003N	-	CE	2014/09/02 * 12
STM-07	Terminator	TME	CT-01 BP	-	CE	2014/12/19 * 12
SCC-C9	Coaxial Cable	Suhner	RG223U	-	CE	2015/04/17 * 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 ,

TX: Test fixture