

Application for FCC Certificate
On Behalf of
Ricoh Company Ltd

Printer

Model No.: SP C262DNw, SP C261DNw

FCC ID : BBP-PRSPC262DNW1

Prepared For : Ricoh Company Ltd
810, Shimoimaizumi Ebina City, Kanagawa 243-0460,
Japan.

Prepared By : Audix Technology (Shanghai) Co., Ltd.
3F and 4F, 34Bldg 680 Guiping Rd,
Caohejing Hi-Tech Park,
Shanghai 200233, China

Tel: +86-21-64955500
Fax: +86-21-64955491

Report No. : ACI-F16276
Date of Test : Nov 03-08, 2016
Date of Report : Nov 22, 2016

TABLE OF CONTENTS

	Page
1 SUMMARY OF STANDARDS AND RESULTS	4
1.1 Description of Standards and Results	4
2 GENERAL INFORMATION	5
2.1 Description of Equipment Under Test	5
2.2 Peripherals	6
2.3 Cable list	7
2.4 Description of Test Facility	8
2.5 Measurement Uncertainty	8
3 CONDUCTED EMISSION TEST	9
3.1 Test Equipment	9
3.2 Block Diagram of Test Setup	9
3.3 Conducted Emission Limit [FCC Part 15 Subpart B 15.107(a) (ICES-003 Issue 6)]	10
3.4 Test Configuration	10
3.5 Operating Condition of EUT	10
3.6 Test Procedures	11
3.7 Test Results	11
4 RADIATED EMISSION TEST	16
4.1 Test Equipment	16
4.2 Block Diagram of Test Setup	16
4.3 Radiated Emission Limit [FCC Part 15 Subpart B 15.109(a) ICES-003 Issue 6]	18
4.4 Test Configuration	18
4.5 Operating Condition of EUT	18
4.6 Test Procedures	18
4.7 Test Results	19
5 DEBUG DESCRIPTION	28
6 DEVIATION TO TEST SPECIFICATIONS	29

TEST REPORT FOR FCC CERTIFICATE

Applicant : Ricoh Company Ltd
Manufacturer : Ricoh Co., Ltd.
Factory : Shanghai Ricoh Digital Equipment Co., Ltd.
EUT Description : Printer
(A) Model No. : SP C262DNw, SP C261DNw
(B) Power Supply : 120V/60Hz

Test Procedure Used:

*FCC RULES AND REGULATIONS PART 15 SUBPART B CLASS B OCTOBER 2015
AND ANSI C63.4-2014
(ICES-003 Issue 6 Jun. 2016 Class B)*

The device described above is tested by Audix Technology (Shanghai) Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart B (Class B) limits both radiated and conducted emissions.

The test results are contained in this test report and Audix Technology (Shanghai) Co., Ltd. is assumed full responsibility for the accuracy and completeness of these measurements. This report shows that the EUT (M/N: Refer to Sec2.1) which was tested in 3m anechoic chamber Nov 03-08, 2016 is technically compliance with the FCC official limits also.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Audix Technology (Shanghai) Co., Ltd.

This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

Date of Test : Nov 03-08, 2016 Date of Report : Nov 22, 2016

Producer : Alan He
ALAN HE / Assistant

Review : Byron Wu
BYRON WU / Deputy Assistant Manager

AUDIX[®] For and on behalf of
Audix Technology (Shanghai) Co., Ltd.

Signatory : Byron Kwo
Authorized Signature(s) BYRON KWO/Assistant General Manager

1 SUMMARY OF STANDARDS AND RESULTS

1.1 Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below:

Description of Test Item	Standard	Limits	Results
EMISSION			
Conducted Disturbance at the Mains Terminal	FCC RULES AND REGULATIONS PART 15 SUBPART B OCTOBER 2015 AND ANSI C63.4-2014 ICES-003 ISSUE 6 JUN. 2016	15.107(a) Class B	Pass
Radiated Disturbance	FCC RULES AND REGULATIONS PART 15 SUBPART B OCTOBER 2015 AND ANSI C63.4-2014 ICES-003 ISSUE 6 JUN. 2016	15.109(a) Class B	Pass

2 GENERAL INFORMATION

2.1 Description of Equipment Under Test

Description : Printer

Type of EUT : ☐ Production ☒ Pre-product ☐ Pro-type

Model No. : SP C262DNw, SP C261DNw

Note :

	SP C261DNw	SP C262DNw
Print function	○	○
Duplex function	○	○
USB2.0	○	○
100BaseTX	○	○
USB Host I/F(2.0)	○	○
IEEE802.11b/g/n	○	○
500 sheets Paper Feed Tray	OP	OP
High capacity toner cartridge	×	○
Low capacity toner cartridge	○	×
Print Speed(Latter ppm)	21	21
Print Discription Language	PCL, PS	PCL, PS
Operation Panel	2Line LCD	2Line LCD

× :Not apply

○ :Standard

OP :Option

Highest working Frequency : 532MHz

Applicant : Ricoh Company Ltd
810, Shimoimaizumi Ebina City, Kanagawa 243-0460,
Japan.

Manufacturer : Same as applicant.

Factory : Shanghai Ricoh Digital Equipment Co., Ltd.
No.887 Jingang Road, Jinqiao Export Processing
Zone, Pudong New Area, Shanghai, China

Remark:

The EUT is a Printer which input/output ports as follows:

- (1) One LAN Port
: Connected with PC
- (2) One USB2 Port
: Connected with PC
- (3) One USB1 Port
: Connected with Camera

2.2 Peripherals

2.2.1 PC

Manufacturer : LENOVO
Model Number : E73s
Serial Number : PC0892JM
Certificate : C-Tick, FCC DoC, CE/EMC, VCCI

2.2.2 Keyboard

Manufacturer : Microsoft
Model Number : RT2300
Serial Number : 7668200662248
Data Cable : Shielded, Detachable, 1.5m
Certificate : CE/EMC, FCC DoC, VCCI, MIC, C-Tick, BSMI

2.2.3 Mouse

Manufacturer : Microsoft
Model Number : RT2300
Serial Number : 6965712071551
Data Cable : Shielded, Detachable, 1.5m.
Certificate : CE/EMC, FCC DoC, VCCI, MIC, C-Tick, BSMI

2.2.4 LCD Monitor

Manufacturer : ASUS
Model Number : VE228
Power Cord : Unshielded, Detachable, 1.8m
Certificate : CE/EMC ,BSMI, FCC DOC,VCCI

2.2.5 Digital Camera #1

Manufacturer : SAMSUNG
Model Number : ST-66
Serial Number : A4PCCNGC9000
Certificate : CE/EMC

The peripherals from Site #2

2.2.6 Notebook

Manufacturer : DELL
Model Number : Inspiron 3000
Serial Number : 36Q4X2X
Certificate : C-Tick, FCC DoC, CE/EMC, VCCI

2.2.7 Digital Camera#2

Manufacturer : Nikon
Model Number : A100
Serial Number : 77016616
Certificate : CE/EMC

2.3 Cable list

No.	Name	Length (m)	Cable Shield	Connector Shield	Remark
1	USB1 Cable	1.2	Shielded	Shielded	With one core
2	USB2 Cable	1.5	Shielded	Shielded	-
3	LAN Cable	1.6	Shielded	Shielded	
4	AC Input Cable	1.9	Unshielded	Unshielded	3C

2.4 Description of Test Facility

Site #1:

Site Description : Sept. 17, 1998 file on
(Semi-Anechoic Chamber) Jan.15, 2015 Renewed
Federal Communications Commission
FCC Engineering Laboratory
7435 Oakland Mills Road
Columbia, MD 21046, USA

Name of Firm : Audix Technology (Shanghai) Co., Ltd.

Site Location : 3F 34Bldg 680 Guiping Rd,
Caohejing Hi-Tech Park,
Shanghai 200233, China

NVLAP Lab Code : 200371-0

Site #2:

Name of Firm : Audix Technology (Wujiang) Co., Ltd.

Site Location : No.1289, Jiangxing East Rd., The Eastern
Part of Wujiang Economic Development
Zone, JiangSu 215200, China

Accredited by NVLAP, Lab Code 200786-0

Note: The radiated disturbance test was tested in Site #2, and the conducted emission test was tested in Site #1.

2.5 Measurement Uncertainty

Conducted Disturbance Test Uncertainty: U = 3.4 dB

Radiated Emission Expanded Uncertainty (30M-300MHz):

U = 3.28 dB (Horizontal)

U = 3.28 dB (Vertical)

Radiated Emission Expanded Uncertainty (300M-1GHz):

U = 3.15 dB (Horizontal)

U = 3.16 dB (Vertical)

Radiated Emission Expanded Uncertainty (Above 1GHz):

U = 4.47 dB

3 CONDUCTED EMISSION TEST

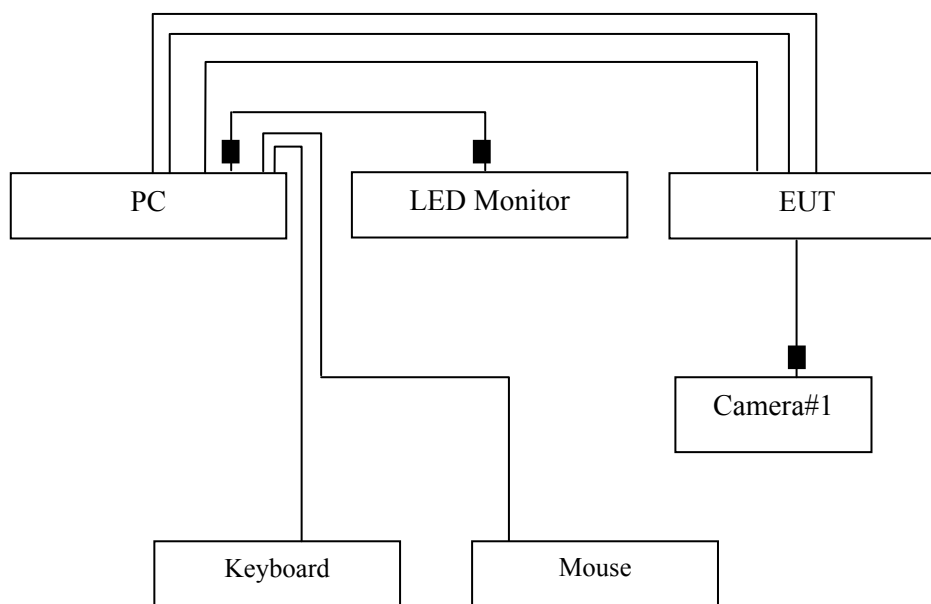
3.1 Test Equipment

The following test equipments are used during the conducted emission test in a shielded room:

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESCI	101302	Jul 03, 2016	Jul 02, 2017
2.	Artificial Mains Network (AMN)	R&S	ENV4200	100125	Jun 27, 2016	Jun 26, 2017
3.	Line Impedance Stabilization Network (LISN)	Kyoritsu	KNW-407	8-1280-5	Mar 20, 2016	Mar 19, 2017
4.	50Ω Terminator	Anritsu	BNC	001	Sep 18, 2016	Mar 17, 2017
5.	Software	Audix	e3	6.2009-1-15	--	--

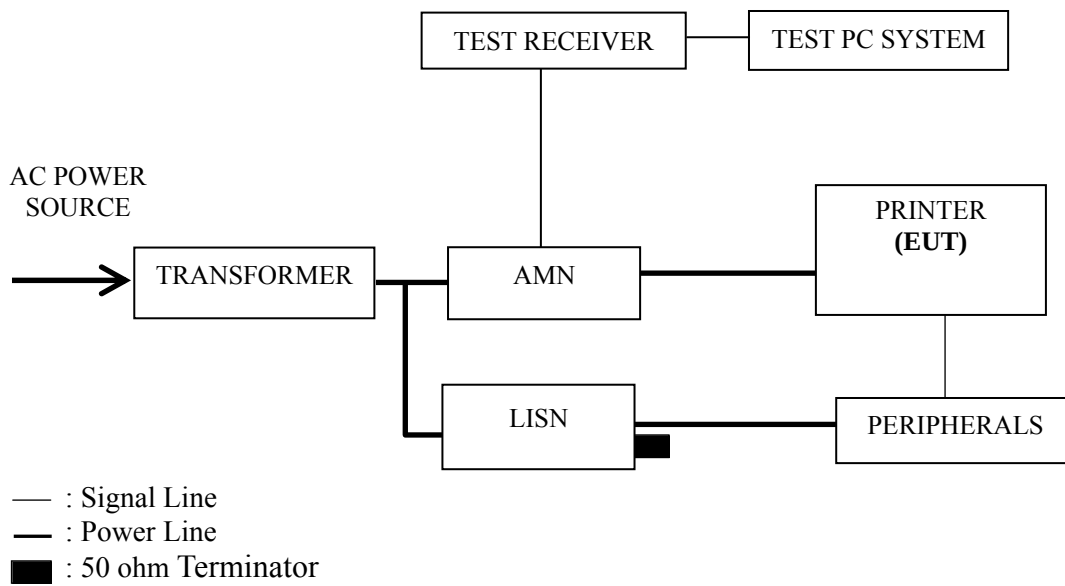
3.2 Block Diagram of Test Setup

3.2.1 EUT & Peripherals



■ : Ferrite core

3.2.2 Conducted Disturbance Test Setup



3.3 Conducted Emission Limit [FCC Part 15 Subpart B 15.107(a) (ICES-003 Issue 6)]

Frequency Range (MHz)	Limits dB (μV)	
	Quasi-peak	Average
0.15 ~ 0.5	66~56	56~46
0.5 ~ 5	56	46
5 ~ 30	60	50
NOTE 1 – The lower limit shall apply at the transition frequencies. NOTE 2 – The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz~0.50 MHz		

3.4 Test Configuration

The EUT (listed in Sec.2.1) and the peripherals (listed in Sec 2.2) were installed as shown on Sec.3.2 to meet FCC requirement and operating in a manner that tends to maximize its emission level in a normal application.

3.5 Operating Condition of EUT

3.5.1 Setup the EUT and peripherals as shown in Sec. 3.2.

3.5.2 Turn on the power of all equipments and the EUT.

3.5.3 Set the EUT on the test mode and then test.

3.6 Test Procedures

The EUT and peripherals were connected to the power mains through an Artificial Mains Network (AMN). This provided a 50 ohm coupling impedance for the measuring equipment.

Both sides of AC line (Line & Neutral) were checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables were changed or manipulated according to ANSI C63.4:2014 during conducted emission test.

The bandwidth of R&S Test Receiver ESCI was set at 9 kHz.

The frequency range from 150 kHz to 30 MHz was checked.

The test modes were done on conducted disturbance test and all the test results are listed in Sec. 3.7.

3.7 Test Results

< **PASS** >

The frequency and amplitude of the highest conducted emission relative to the limit is reported. All emissions not reported below are too low against the prescribed limits.

M/N	Test Mode	Data Page
SP C262DNw	Stand-by	P12
	Wifi Print	P13
	Picbridge Print	P14
	USB Print + LAN Print	P15

NOTE 1 – Factor = Cable Loss + AMN Factor.

NOTE 2 – Emission Level = Meter Reading + Factor.

NOTE 3 – “QP” means “Quasi-Peak” values, “AV” means “Average” values.

NOTE 4 – The worst case is for USB Print + LAN Print test mode. The worst emission is detected at 8.818 MHz (Average Value) with corrected signal level of 45.18 dB (μV) (limit is 50.00 dB (μV)), when the Line of the EUT is connected to AMN.

EUT : Printer Temperature : 22°C

Model No. : SP C262DNw Humidity : 48%RH

Test Mode : Stand-by Date of Test : Nov 03, 2016

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.169	30.61	10.56	41.17	65.01	23.84	QP
	0.529	10.80	10.40	21.20	56.00	34.80	
	1.067	8.80	10.40	19.20	56.00	36.80	
	1.709	7.60	10.41	18.01	56.00	37.99	
	3.996	9.20	10.44	19.64	56.00	36.36	
	9.980	16.70	10.49	27.19	60.00	32.81	
	0.169	20.11	10.56	30.67	55.01	24.34	AV
	0.529	1.20	10.40	11.60	46.00	34.40	
	1.067	0.90	10.40	11.30	46.00	34.70	
	1.709	-1.50	10.41	8.91	46.00	37.09	
	3.996	4.00	10.44	14.44	46.00	31.56	
	9.980	12.40	10.49	22.89	50.00	27.11	
Neutral	0.154	34.50	10.57	45.07	65.77	20.70	QP
	0.212	25.80	10.51	36.31	63.14	26.83	
	0.452	3.39	10.41	13.80	56.83	43.03	
	0.910	13.40	10.40	23.80	56.00	32.20	
	1.852	13.70	10.43	24.13	56.00	31.87	
	8.603	21.49	10.56	32.05	60.00	27.95	
	0.154	27.40	10.57	37.97	55.77	17.80	AV
	0.212	17.40	10.51	27.91	53.14	25.23	
	0.452	0.79	10.41	11.20	46.83	35.63	
	0.910	-5.40	10.40	5.00	46.00	41.00	
	1.852	-5.20	10.43	5.23	46.00	40.77	
	8.603	18.19	10.56	28.75	50.00	21.25	

TEST ENGINEER: BYRON WU

EUT : Printer Temperature : 22°C

Model No. : SP C262DNw Humidity : 48%RH

Test Mode : Wifi Print Date of Test : Nov 03, 2016

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.150	47.20	10.59	57.79	65.99	8.20	QP
	0.413	14.20	10.43	24.63	57.59	32.96	
	0.564	12.10	10.40	22.50	56.00	33.50	
	2.394	8.90	10.42	19.32	56.00	36.68	
	8.729	38.50	10.48	48.98	60.00	11.02	
	27.440	17.00	10.88	27.88	60.00	32.12	
	0.150	30.50	10.59	41.09	55.99	14.90	AV
	0.413	3.90	10.43	14.33	47.59	33.26	
	0.564	-1.60	10.40	8.80	46.00	37.20	
	2.394	2.30	10.42	12.72	46.00	33.28	
	8.729	34.50	10.48	44.98	50.00	5.02	
	27.440	12.70	10.88	23.58	50.00	26.42	
Neutral	0.150	44.80	10.58	55.38	66.00	10.62	QP
	0.230	20.80	10.50	31.30	62.44	31.14	
	0.598	12.51	10.38	22.89	56.00	33.11	
	4.069	13.49	10.49	23.98	56.00	32.02	
	8.729	37.89	10.56	48.45	60.00	11.55	
	27.980	14.50	11.01	25.51	60.00	34.49	
	0.150	31.10	10.58	41.68	56.00	14.32	AV
	0.230	7.80	10.50	18.30	52.44	34.14	
	0.598	2.31	10.38	12.69	46.00	33.31	
	4.069	9.39	10.49	19.88	46.00	26.12	
	8.729	33.89	10.56	44.45	50.00	5.55	
	27.980	10.30	11.01	21.31	50.00	28.69	

TEST ENGINEER: BYRON WU

EUT : Printer Temperature : 22°C

Model No. : SP C262DNw Humidity : 48%RH

Test Mode : Picbridge Print Date of Test : Nov 03, 2016

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.156	44.70	10.58	55.28	65.65	10.37	QP
	0.223	26.00	10.51	36.51	62.70	26.19	
	0.521	12.10	10.40	22.50	56.00	33.50	
	2.387	7.80	10.42	18.22	56.00	37.78	
	8.726	30.00	10.48	40.48	60.00	19.52	
	17.380	20.70	10.58	31.28	60.00	28.72	
	0.156	27.40	10.58	37.98	55.65	17.67	AV
	0.223	9.30	10.51	19.81	52.70	32.89	
	0.521	1.80	10.40	12.20	46.00	33.80	
	2.387	2.20	10.42	12.62	46.00	33.38	
	8.726	25.70	10.48	36.18	50.00	13.82	
	17.380	16.90	10.58	27.48	50.00	22.52	
Neutral	0.158	40.70	10.57	51.27	65.59	14.32	QP
	0.226	21.20	10.50	31.70	62.59	30.89	
	0.598	11.21	10.38	21.59	56.00	34.41	
	1.540	6.50	10.42	16.92	56.00	39.08	
	8.823	30.10	10.56	40.66	60.00	19.34	
	17.370	21.89	10.69	32.58	60.00	27.42	
	0.158	24.70	10.57	35.27	55.59	20.32	AV
	0.226	5.70	10.50	16.20	52.59	36.39	
	0.598	4.31	10.38	14.69	46.00	31.31	
	1.540	-4.00	10.42	6.42	46.00	39.58	
	8.823	25.60	10.56	36.16	50.00	13.84	
	17.370	18.09	10.69	28.78	50.00	21.22	

TEST ENGINEER: BYRON WU

EUT : Printer Temperature : 22°C

Model No. : SP C262DNw Humidity : 48%RH

Test Mode : USB Print + LAN Print Date of Test : Nov 03, 2016

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.152	46.40	10.59	56.99	65.89	8.90	QP
	0.185	37.60	10.55	48.15	64.27	16.12	
	0.336	19.80	10.46	30.26	59.30	29.04	
	0.900	13.60	10.40	24.00	56.00	32.00	
	3.840	10.20	10.44	20.64	56.00	35.36	
	8.818	38.50	10.48	48.98	60.00	11.02	
	0.152	28.50	10.59	39.09	55.89	16.80	AV
	0.185	28.30	10.55	38.85	54.27	15.42	
	0.336	9.10	10.46	19.56	49.30	29.74	
	0.900	11.50	10.40	21.90	46.00	24.10	
	3.840	5.30	10.44	15.74	46.00	30.26	
	8.818	34.70	10.48	45.18	50.00	4.82	
Neutral	0.155	45.20	10.57	55.77	65.73	9.96	QP
	0.403	11.90	10.42	22.32	57.80	35.48	
	0.553	10.00	10.39	20.39	56.00	35.61	
	1.034	8.50	10.40	18.90	56.00	37.10	
	4.026	12.89	10.49	23.38	56.00	32.62	
	8.728	38.19	10.56	48.75	60.00	11.25	
	0.155	28.70	10.57	39.27	55.73	16.46	AV
	0.403	0.80	10.42	11.22	47.80	36.58	
	0.553	-2.30	10.39	8.09	46.00	37.91	
	1.034	-3.50	10.40	6.90	46.00	39.10	
	4.026	7.89	10.49	18.38	46.00	27.62	
	8.728	34.19	10.56	44.75	50.00	5.25	

TEST ENGINEER: BYRON WU

4 RADIATED EMISSION TEST

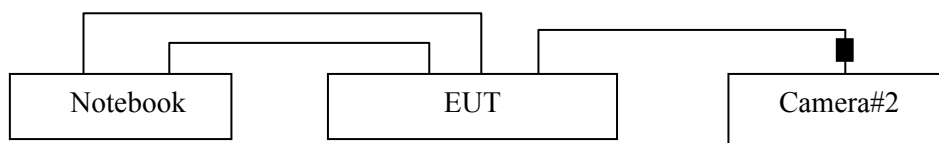
4.1 Test Equipment

The following test equipments are used during the radiated emission test in a semi-anechoic chamber:

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Spectrum Analyzer	Agilent	E7405A	MY45107028	Jan 05, 2016	Jan 04, 2017
2.	PSA signal analyzer	Agilent	N9030A	MY53120367	Jun 23, 2016	Jun 22, 2017
3.	Pre-Amplifier	Agilent	8447D	2944A10923	Jul 30, 2016	Jul 29, 2017
4.	Pre-Amplifier	Agilent	8447D	2944A10922	Jul 30, 2016	Jul 29, 2017
5.	Bi-log Antenna (Horizontal)	Schaffner	CBL6112D	22251	Aug 03, 2016	Aug 03, 2017
6.	Bi-log Antenna (Vertical)	Schaffner	CBL6112D	22253	Aug 03, 2016	Aug 03, 2017
7.	Test Receiver	R&S	ESCI	100351	Jul 03, 2016	Jul 02, 2017
8.	Software	Audix	e3	6.2007-9-10	--	--

4.2 Block Diagram of Test Setup

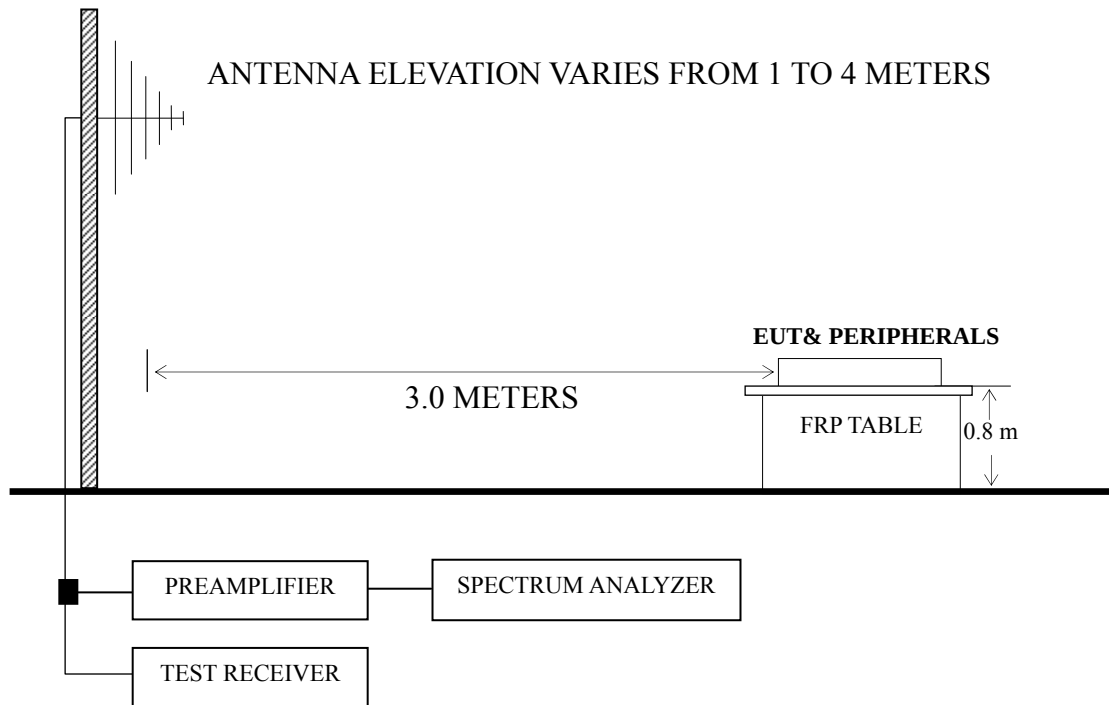
4.2.1 EUT & Peripherals



■ : Ferrite core

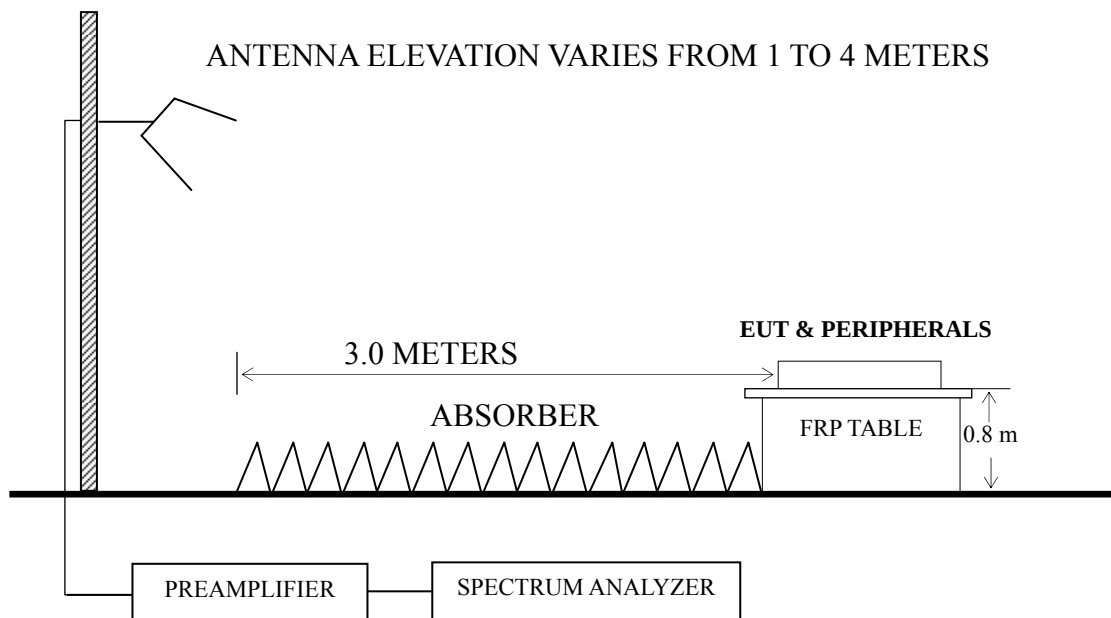
4.2.2 Radiated emission test setup

4.2.2.1 Below 1GHz



■ : 50 ohm Coaxial Switch

4.2.2.2 Above 1GHz



4.3 Radiated Emission Limit [FCC Part 15 Subpart B 15.109(a) ICES-003 Issue 6]

Frequency (MHz)	Distance (m)	Field strength limits	
		($\mu\text{V/m}$)	dB ($\mu\text{V/m}$)
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
Above 960	3	500	54.0
NOTE 1 - Emission Level dB ($\mu\text{V/m}$) = 20 log Emission Level ($\mu\text{V/m}$) NOTE 2 - The tighter limit applies at the band edges. NOTE 3 - Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system. NOTE 4 - The limits shown are based on Quasi-peak value detector. NOTE 5 - Above 1 GHz, the limit on peak emission is 20 dB above the maximum permitted average emission limit applicable to the EUT.			

4.4 Test Configuration

The configuration of the EUT and peripherals are same as those used in conducted emission test.

Please refer to Sec.3.4.

4.5 Operating Condition of EUT

Same as conducted emission test which is listed in Sec.3.5, except for the test setup replaced by Sec.4.2.

4.6 Test Procedures

The EUT and peripherals were placed on a FRP turntable that is 0.8 meter above ground. The FRP turntable rotated 360 degrees to determine the position of the maximum emission level. The EUT was set 3 meters away from the receiving antenna, which was mounted on an antenna tower. Broadband antenna (Calibrated Bilog Antenna) was used as receiving antenna. The antenna moved up and down between 1 meter and 4 meters to find out the maximum emission level. Both horizontal and vertical polarizations of the antenna were set on measurement. In order to find the maximum emission, all of the interference cables were manipulated according to ANSI C63.4:2014 requirements during radiated emission test.

The I.F. bandwidth of Test Receiver R&S ESCI was set at 120 kHz and The Spectrum Agilent N9030A was set at 1MHz above 1GHz.

The frequency range from 30 MHz to 15 GHz was checked.

The test modes were done on radiated disturbance test and all the test results are listed in Sec.4.7.

4.7 Test Results

<PASS>

The frequency and amplitude of the highest radiated emission relative the limit is reported. All the emissions not reported below are too low against the FCC limit.

Frequency	M/N	Test Mode	Data Page
30MHz~6GHz	SP C262DNw	Stand-by	P20-P21
		Wifi Print	P22-P23
		Picbridge Print	P24-P25
		USB Print + LAN Print	P26-P27

NOTE 1 – Emission Level = Antenna Factor + Cable Loss + Meter Reading. (< 1GHz);

Emission Level = Antenna Factor + Cable Loss – Preamp Factor + Meter Reading. (> 1GHz)

NOTE 2 – All readings are Quasi-Peak values below or equal to 1GHz, Peak and Average values above 1GHz.

NOTE 3 – 0° was the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.

NOTE 4 – The worst case is for Wifi Print test mode. The worst emission at horizontal polarization was detected at 931.450 MHz with corrected signal level of 32.69 dB (μV/m) (limit is 37.00 dB (μV/m)), when the antenna was 1.50 m height and the turntable was at 50°. The worst emission at vertical polarization was detected at 30.000 MHz with corrected signal level of 25.30 dB (μV/m) (limit is 30.00 dB (μV/m)), when the antenna was 1.00 m height and the turntable was at 270°.

EUT : Printer Temperature : 22°C

Model No. : SP C262DNw Humidity : 60%RH

Test Mode : Stand-by Date of Test : Nov 08, 2016

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	142.320	7.36	10.91	2.53	--	20.80	30.00	9.20	QP
	154.020	7.97	10.37	2.65	--	20.99	30.00	9.01	
	299.100	11.17	13.20	3.83	--	28.20	37.00	8.80	
	853.680	3.66	20.40	6.88	--	30.94	37.00	6.06	
	896.970	1.83	20.40	7.14	--	29.37	37.00	7.63	
	950.790	0.74	21.00	7.29	--	29.03	37.00	7.97	
	1602.000	54.57	25.58	4.63	35.25	49.53	70.00	20.47	PK
	2463.000	43.97	28.80	5.86	34.83	43.80	70.00	26.20	
	2596.000	44.75	29.12	6.07	34.82	45.12	70.00	24.88	
	2946.000	41.97	29.85	6.50	34.80	43.52	70.00	26.48	
	3968.000	40.23	32.46	7.92	34.55	46.06	74.00	27.94	
	5221.000	39.68	33.80	9.04	34.43	48.09	74.00	25.91	
	1602.150	34.27	25.58	4.63	35.25	29.23	50.00	20.77	AV
	2462.560	29.49	28.80	5.86	34.83	29.32	50.00	20.68	
	2595.890	28.47	29.12	6.07	34.82	28.84	50.00	21.16	
	2945.140	29.11	29.85	6.50	34.80	30.66	50.00	19.34	
	3968.520	24.89	32.46	7.92	34.55	30.72	54.00	23.28	
	5221.120	23.63	33.80	9.04	34.43	32.04	54.00	21.96	

TEST ENGINEER: LEO TIAN

EUT : Printer Temperature : 22°C

Model No. : SP C262DNw Humidity : 60%RH

Test Mode : Stand-by Date of Test : Nov 08, 2016

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Vertical	30.010	1.70	18.70	1.00	--	21.40	30.00	8.60	QP
	122.590	6.96	12.39	2.07	--	21.42	30.00	8.58	
	141.220	8.69	11.29	2.24	--	22.22	30.00	7.78	
	852.510	3.87	20.32	6.13	--	30.32	37.00	6.68	
	951.960	4.55	21.11	6.48	--	32.14	37.00	4.86	
	998.760	4.41	21.39	6.60	--	32.40	37.00	4.60	
	1602.000	57.03	25.58	4.63	35.25	51.99	70.00	18.01	PK
	2526.000	46.12	28.97	5.97	34.83	46.23	70.00	23.77	
	2561.000	51.24	29.05	6.00	34.83	51.46	70.00	18.54	
	2974.000	41.96	29.93	6.54	34.80	43.63	70.00	26.37	
	3961.000	39.84	32.42	7.92	34.55	45.63	74.00	28.37	
	4983.000	39.11	33.46	8.72	34.44	46.85	74.00	27.15	
	1601.980	35.53	25.58	4.63	35.25	30.49	50.00	19.51	AV
	2526.150	30.53	28.97	5.97	34.83	30.64	50.00	19.36	
	2561.250	31.45	29.05	6.00	34.83	31.67	50.00	18.33	
	2975.850	27.81	29.93	6.54	34.80	29.48	50.00	20.52	
	3960.580	26.63	32.42	7.92	34.55	32.42	54.00	21.58	
	4982.850	24.85	33.46	8.72	34.44	32.59	54.00	21.41	

TEST ENGINEER: LEO TIAN

EUT : Printer Temperature : 22°C

Model No. : SP C262DNw Humidity : 60%RH

Test Mode : Wifi Print Date of Test : Nov 08, 2016

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	97.850	9.63	10.40	2.08	--	22.11	30.00	7.89	QP
	147.400	8.30	10.78	2.58	--	21.66	30.00	8.34	
	219.480	9.47	9.39	3.24	--	22.10	30.00	7.90	
	319.500	12.60	13.50	3.97	--	30.07	37.00	6.93	
	881.050	0.71	20.14	7.04	--	27.89	37.00	9.11	
	931.450	4.90	20.55	7.24	--	32.69	37.00	4.31	
	1385.000	67.51	24.75	4.25	35.49	61.02	70.00	8.98	PK
	1790.000	57.29	26.46	4.92	35.07	53.60	70.00	16.40	
	2255.000	58.56	28.22	5.60	34.84	57.54	70.00	12.46	
	2820.000	58.64	29.60	6.33	34.81	59.76	70.00	10.24	
	3280.000	61.06	30.77	6.96	34.73	64.06	74.00	9.94	
	4350.000	51.52	32.36	8.24	34.51	57.61	74.00	16.39	
	1385.150	29.33	24.75	4.25	35.49	22.84	50.00	27.16	AV
	1789.880	30.38	26.46	4.92	35.07	26.69	50.00	23.31	
	2255.860	29.26	28.22	5.60	34.84	28.24	50.00	21.76	
	2820.590	28.28	29.60	6.33	34.81	29.40	50.00	20.60	
	3280.590	28.08	30.77	6.96	34.73	31.08	54.00	22.92	
	4350.160	27.59	32.36	8.24	34.51	33.68	54.00	20.32	

TEST ENGINEER: LEO TIAN

EUT : Printer Temperature : 22°C

Model No. : SP C262DNw Humidity : 60%RH

Test Mode : Wifi Print Date of Test : Nov 08, 2016

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Vertical	30.000	1.30	23.00	1.00	--	25.30	30.00	4.70	QP
	54.550	9.64	10.56	1.34	--	21.54	30.00	8.46	
	77.980	11.48	9.07	1.63	--	22.18	30.00	7.82	
	99.760	6.70	10.20	1.88	--	18.78	30.00	11.22	
	146.050	9.30	11.10	2.28	--	22.68	30.00	7.32	
	216.110	9.36	9.34	2.85	--	21.55	30.00	8.45	
	1030.000	64.27	23.52	3.66	35.85	55.60	70.00	14.40	PK
	1245.000	60.25	24.22	4.04	35.62	52.89	70.00	17.11	
	1490.000	57.90	25.10	4.42	35.38	52.04	70.00	17.96	
	2590.000	58.16	29.12	6.03	34.82	58.49	70.00	11.51	
	3255.000	57.17	30.72	6.93	34.74	60.08	74.00	13.92	
	3765.000	53.16	32.01	7.63	34.60	58.20	74.00	15.80	
	1030.520	30.36	23.52	3.66	35.85	21.69	50.00	28.31	AV
	1245.520	30.36	24.22	4.04	35.62	23.00	50.00	27.00	
	1491.850	30.33	25.10	4.42	35.38	24.47	50.00	25.53	
	2590.650	28.98	29.12	6.03	34.82	29.31	50.00	20.69	
	3254.650	30.12	30.72	6.93	34.74	33.03	54.00	20.97	
	3765.820	27.35	32.01	7.63	34.60	32.39	54.00	21.61	

TEST ENGINEER: LEO TIAN

EUT : Printer Temperature : 22°C

Model No. : SP C262DNw Humidity : 60%RH

Test Mode : Picbridge Print Date of Test : Nov 08, 2016

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	98.310	12.91	10.40	2.08	--	25.39	30.00	4.61	QP
	135.000	9.80	11.55	2.46	--	23.81	30.00	6.19	
	156.220	10.10	10.31	2.67	--	23.08	30.00	6.92	
	162.460	11.50	9.96	2.73	--	24.19	30.00	5.81	
	209.030	9.63	9.30	3.17	--	22.10	30.00	7.90	
	317.950	10.30	13.48	3.96	--	27.74	37.00	9.26	
	1630.000	65.19	25.74	4.67	35.23	60.37	70.00	9.63	PK
	2025.000	48.33	27.55	5.29	34.86	46.31	70.00	23.69	
	2585.000	46.91	29.08	6.03	34.82	47.20	70.00	22.80	
	3645.000	44.62	31.74	7.49	34.63	49.22	74.00	24.78	
	4940.000	42.69	33.38	8.70	34.45	50.32	74.00	23.68	
	5685.000	47.28	34.28	9.65	34.42	56.79	74.00	17.21	
	1629.540	30.30	25.74	4.67	35.23	25.48	50.00	24.52	AV
	2024.870	27.56	27.55	5.29	34.86	25.54	50.00	24.46	
	2585.980	28.12	29.08	6.03	34.82	28.41	50.00	21.59	
	3644.890	27.36	31.74	7.49	34.63	31.96	54.00	22.04	
	4941.350	27.29	33.38	8.70	34.45	34.92	54.00	19.08	
	5685.890	25.11	34.28	9.65	34.42	34.62	54.00	19.38	

TEST ENGINEER: LEO TIAN

EUT : Printer Temperature : 22°C

Model No. : SP C262DNw Humidity : 60%RH

Test Mode : Picbridge Print Date of Test : Nov 08, 2016

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Vertical	30.000	1.00	23.00	1.00	--	25.00	30.00	5.00	QP
	80.600	11.60	8.20	1.67	--	21.47	30.00	8.53	
	110.520	10.63	11.35	1.97	--	23.95	30.00	6.05	
	130.610	6.89	11.90	2.15	--	20.94	30.00	9.06	
	157.550	9.63	10.47	2.37	--	22.47	30.00	7.53	
	320.560	8.96	13.76	3.55	--	26.27	37.00	10.73	
	1045.000	56.98	23.58	3.70	35.83	48.43	70.00	21.57	PK
	1400.000	58.97	24.81	4.29	35.46	52.61	70.00	17.39	
	1620.000	60.77	25.66	4.63	35.25	55.81	70.00	14.19	
	2330.000	59.42	28.42	5.70	34.84	58.70	70.00	11.30	
	2375.000	56.10	28.56	5.76	34.84	55.58	70.00	14.42	
	4305.000	46.53	32.38	8.22	34.51	52.62	74.00	21.38	
	1044.560	31.33	23.58	3.70	35.83	22.78	50.00	27.22	AV
	1400.580	30.88	24.81	4.29	35.46	24.52	50.00	25.48	
	1620.560	30.33	25.74	4.63	35.25	25.45	50.00	24.55	
	2330.440	29.81	28.42	5.70	34.84	29.09	50.00	20.91	
	4304.990	26.99	32.38	8.22	34.51	33.08	54.00	20.92	
	1045.000	56.98	23.58	3.70	35.83	48.43	70.00	21.57	

TEST ENGINEER: LEO TIAN

EUT : Printer Temperature : 22°C

Model No. : SP C262DNw Humidity : 60%RH

Test Mode : USB Print + LAN Print Date of Test : Nov 08, 2016

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	88.540	11.63	8.44	1.96	--	22.03	30.00	7.97	QP
	97.850	10.66	10.40	2.08	--	23.14	30.00	6.86	
	137.660	7.36	11.34	2.48	--	21.18	30.00	8.82	
	154.500	6.80	10.41	2.65	--	19.86	30.00	10.14	
	320.480	8.40	13.53	3.97	--	25.90	37.00	11.10	
	982.560	2.42	20.96	7.37	--	30.75	37.00	6.25	
	1600.000	48.46	25.58	4.63	35.25	43.42	70.00	26.58	PK
	1930.000	50.54	27.18	5.13	34.94	47.91	70.00	22.09	
	2310.000	52.31	28.37	5.66	34.84	51.50	70.00	18.50	
	2600.000	49.06	29.12	6.07	34.82	49.43	70.00	20.57	
	2875.000	52.10	29.71	6.44	34.81	53.44	70.00	16.56	
	3685.000	44.22	31.82	7.53	34.62	48.95	74.00	25.05	
	1601.580	30.36	25.58	4.63	35.25	25.32	50.00	24.68	AV
	1930.520	30.15	27.18	5.13	34.94	27.52	50.00	22.48	
	2311.650	29.90	28.37	5.66	34.84	29.09	50.00	20.91	
	2602.650	28.33	29.12	6.07	34.82	28.70	50.00	21.30	
	2875.640	29.67	29.71	6.44	34.81	31.01	50.00	18.99	
	3685.890	27.32	31.82	7.53	34.62	32.05	54.00	21.95	

TEST ENGINEER: LEO TIAN

EUT : Printer Temperature : 22°C

Model No. : SP C262DNw Humidity : 60%RH

Test Mode : USB Print + LAN Print Date of Test : Nov 08, 2016

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Vertical	30.000	0.60	23.00	1.00	--	24.60	30.00	5.40	QP
	54.550	10.65	10.56	1.34	--	22.55	30.00	7.45	
	83.590	10.42	8.11	1.70	--	20.23	30.00	9.77	
	98.200	12.50	9.74	1.86	--	24.10	30.00	5.90	
	122.730	8.51	12.26	2.08	--	22.85	30.00	7.15	
	166.850	7.86	10.00	2.46	--	20.32	30.00	9.68	
	1320.000	56.08	24.51	4.17	35.54	49.22	70.00	20.78	PK
	1825.000	58.25	26.70	4.97	35.04	54.88	70.00	15.12	
	2315.000	50.07	28.37	5.70	34.84	49.30	70.00	20.70	
	2445.000	55.59	28.76	5.86	34.83	55.38	70.00	14.62	
	3085.000	52.48	30.24	6.71	34.77	54.66	74.00	19.34	
	4140.000	48.44	32.44	8.09	34.53	54.44	74.00	19.56	
	1320.650	31.33	24.51	4.17	35.54	24.47	50.00	25.53	AV
	1824.230	30.60	26.62	4.97	35.04	27.15	50.00	22.85	
	2314.860	33.05	28.37	5.70	34.84	32.28	50.00	17.72	
	2444.990	32.29	28.76	5.86	34.83	32.08	50.00	17.92	
	3085.880	30.59	30.24	6.71	34.77	32.77	54.00	21.23	
	4144.650	28.44	32.44	8.09	34.53	34.44	54.00	19.56	

TEST ENGINEER: LEO TIAN

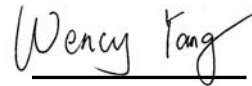
5 DEBUG DESCRIPTION

The following components are used during the countermeasure procedures:

Name	M/N	Manufacturer	Location
Ferrite core	K3 T16.00*13.00*8.00	Ferrico Corporation	See Internal Photos Figure 27

Note: We had required the applicant and manufacturer that all electrical and mechanical devices employed for spurious radiation suppression, including any modifications made during certification testing, must be incorporated in each unit marked

TEST ENGINEER:



(WENCY YANG)