



TEST REPORT

47 CFR FCC Part 15 Subpart B (Class B)

Radio Frequency Devices – Unintentional Radiators – Limits and methods of measurement

ANSI C63.4: 2009

American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz

Report Reference No.....	TRE14010024 R/C:34809		
FCC ID.....	BBP-MFSP213SFNW1		
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Approved by (position+printed name+signature)...	Manager Wenliang Li	<i>Wenliang Li</i>	
Date of issue.....	Jan 20,2014		
Testing Laboratory Name	Shenzhen Huatongwei International Inspection Co., Ltd		
Address.....	Keji Nan No.12 Road, Hi-tech Park, Shenzhen, China		
Testing location/ procedure	Full application of Harmonised standards	<input checked="" type="checkbox"/>	
	Partial application of Harmonised standards	<input type="checkbox"/>	
	Other standard testing methods	<input type="checkbox"/>	
Applicant's name	RICOH Co., LTD.		
Address.....	810 Shimoimaizumi,Ebina City, Kanagawa-Pref., 243-0460 Japan		
Test specification			
Standard	47 CFR FCC Part 15 Subpart B (Class B)	ANSI C63.4: 2009	
Non-standard test method.....	/		
Test Report Form No.	HTWEMCFCC_1A		
TRF Originator.....	Shenzhen Huatongwei International Inspection Co., Ltd		
Master TRF	Dated 2006-06		
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Test item description	Printer		
Trade Mark	RICOH		
Model/Type reference.....	SP 213SFNw		
Listed Model.....	SP 212SFNw, SP 213SNw,SP 212SNw		
Ratings.....	AC 120V/60Hz 8A 900W		
Result.....	PASS		

EMC - TEST REPORT

Test Report No. :	TRE14010024	Jan 20,2014
		Date of issue

Equipment under Test : Printer

Model / Type : SP 213SFNw

Listed Model : SP 212SFNw, SP 213SNw,SP 212SNw

Applicant : RICOH Co., LTD.

Address : 810 Shimoimaizumi,Ebina City, Kanagawa-Pref., 243-0460 Japan

Manufacturer : RICOH Co., LTD.

Address : 3-6, Naka-magome 1-Chome Ohta-ku,Tokyo 143-8555 Japan

Test Result	PASS
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The test report merely corresponds to the test sample.
 It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

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1. TEST STANDARDS

The tests were performed according to following standards:

[47 CFR FCC Part 15 Subpart B \(Class B\)](#) Radio Frequency Devices – Unintentional Radiators – Limits and methods of measurement.

[ANSI C63.4: 2009](#) American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz.

2. SUMMARY

2.1. General Remarks:

Date of receipt of test sample	:	Jan 14, 2014
Testing commenced on	:	Jan 14, 2014
Testing concluded on	:	Jan 20,2014

2.2. Equipment under Test

Power supply system utilised

Power supply voltage	:	<input type="radio"/> 230V / 50 Hz	<input type="radio"/> 115V / 60Hz
		<input type="radio"/> 12 V DC	<input type="radio"/> 24 V DC
		<input checked="" type="radio"/> Other (specified in blank below)	

AC 120V/60Hz

2.3. Short description of the Equipment under Test (EUT)

The EUT is a laser printer, and there is a WIFI module in SP 213SFNw and SP 212SFNw, SP 213SNw,SP 212SNw and the WIFI module has been confirmed

Model Difference:

1. There is a FAX board in SP 212SFNw/SP 213SFNw ,but not in SP 212SNw/SP 213SNw.
 2. SP 212SNw/SP 212SFNw and SP 213SNw/SP 213SFNw are similar, but different from the mechanical structure which does not affect EMC.
- Unless otherwise indicated, all tests were conducted on SP 213SFNw.

Tests performed on SP 213SFNw were considered to be representative of SP 212SFNw, SP 212SNw and SP 213SNw.

2.4. EUT operation mode

The equipment under test was operated during the measurement under the following conditions:

Test program (customer specific)

Emissions tests.....: 47 CFR FCC Part 15 Subpart B (Class B) and ANSI C63.4 2009, searching for the highest disturbance.

2.5. EUT configuration

1) Equipment under test

Kind of equipment	Manufacturer	Model name	Serial number	Remarks
EUT	RICOH	SP 213SFNw	LM217170016	/

2) Highest Frequency Generated or Used in The Device or on Which the Device Operates (MHz)

Kind of equipment	Mode name	Operates Frequency	Remark
EUT	SP 213SFNw	480MHz	USB

3) Supporting equipment

Kind of equipment	Manufacturer	Model name	Serial number	Remarks
Notebook	LENOVO	ThinkPad X201i	R8-7DYTX 10/11	
G3 Exchanger	TENDA	PABX	—	
FAX Machine	RICOH	SP 204SFNW	LM150270003	
USB Memory	Sandisk	Cruzer Blade 8GB	—	

4) Cables Used

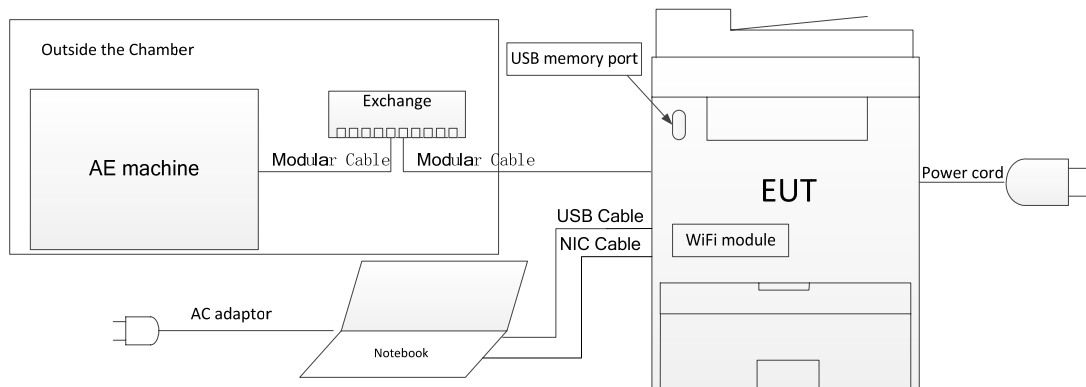
	Cable Name	Length	Shielded	Maker	Remarks
1	USB Cable	2m	YES	New Nam Lee	
2	Modular Cable	2m	No	/	
3	NIC Cable	3m	No	Black Box	
4	Power Cable	1.5m	No	LONGWELL	

5)Operating modes:

No.	Operating modes	Remarks
1	COPY+PING	
2	USB PRINT+WIFI SCAN	
3	USB SCAN +WIFI PRINT	
4	NIC PRINT+SCAN TO USB	
5	TX	
6	RX	

6)EUT Setup:

SP 213SFNw machine system configuration



3. TEST ENVIRONMENT

3.1. Address of the test laboratory

Shenzhen Huatongwei International Inspection Co., Ltd
Keji Nan No.12 Road, Hi-tech Park, Shenzhen, China
Phone: 86-755-26715686 Fax: 86-755-26748089

3.2. Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

CNAS-Lab Code: L1225

Shenzhen Huatongwei International Inspection Co., Ltd. has been assessed and proved to be in compliance with CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC 17025: 2005 General Requirements) for the Competence of Testing and Calibration Laboratories, Date of Registration: Mar. 01, 2012. Valid time is until Feb. 28, 2015.

A2LA-Lab Cert. No. 2243.01

Shenzhen Huatongwei International Inspection Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing. Valid time is until Sept. 30, 2015.

FCC-Registration No.: 662850

Shenzhen Huatongwei International Inspection Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. Registration 662850, Renewal date June. 01, 2012, valid time is until Jun. 01, 2015.

IC-Registration No.: 5377A

The 3m Alternate Test Site of Shenzhen Huatongwei International Inspection Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No. 5377A on Dec. 31, 2013, valid time is until Dec.31, 2016.

ACA

Shenzhen Huatongwei International Inspection Co., Ltd. EMC Laboratory can also perform testing for the Australian C-Tick mark as a result of our A2LA accreditation.

VCCI

The 3m Semi-anechoic chamber (12.2m×7.95m×6.7m) and Shielded Room (8m×4m×3m) of Shenzhen Huatongwei International Inspection Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-292. Date of Registration: Dec. 24, 2012. Valid time is until Dec. 29, 2015.

Main Ports Conducted Interference Measurement of Shenzhen Huatongwei International Inspection Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: C-2726. Date of Registration: Dec. 20, 2012. Valid time is until Dec. 19, 2015.

Telecommunication Ports Conducted Interference Measurement of Shenzhen Huatongwei International Inspection Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: T-1837. Date of Registration: May 07, 2013. Valid time is until May 06, 2016.

DNV

Shenzhen Huatongwei International Inspection Co., Ltd. has been found to comply with the requirements of DNV towards subcontractor of EMC and safety testing services in conjunction with the EMC and Low voltage Directives and in the voluntary field. The acceptance is based on a formal quality Audit and follow-ups according to relevant parts of ISO/IEC Guide 17025 (2005), in accordance with the requirements of the DNV Laboratory Quality Manual towards subcontractors. Valid time is until Aug. 24, 2016.

3.3. Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature: 15-35 ° C

Humidity: 30-60 %

Atmospheric pressure: 950-1050mbar

3.4. Test Description

Emission Measurement		
Radiated Emission	47 CFR FCC Part 15 Subpart B Class B ANSI C63.4 2009	PASS
Conducted Disturbance	47 CFR FCC Part 15 Subpart B Class B ANSI C63.4 2009	PASS

Remark: The measurement uncertainty is not included in the test result.

3.5. Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16 - 4 „Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements“ and is documented in the Shenzhen Huatongwei International Inspection Co., Ltd quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Hereafter the best measurement capability for Shenzhen Huatongwei laboratory is reported:

Test	Range	Measurement Uncertainty	Notes
Radiated Emission	30~1000MHz	4.65dB	(1)
Radiated Emission	1G~2G	5.16dB	(1)
Conducted Disturbance	0.15~30 MHz	3.35dB	(1)

(1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

3.6. Equipments Used during the Test

Radiated Emission					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	ULTRA-BROADBAND ANTENNA	Rohde & Schwarz	HL562	100015	2013/10/26
2	EMI TEST RECEIVER	Rohde & Schwarz	ESI 26	100009	2013/10/26
3	RF TEST PANEL	Rohde & Schwarz	TS / RSP	335015/ 0017	2013/10/26
4	TURNTABLE	ETS	2088	2149	N/A
5	ANTENNA MAST	ETS	2075	2346	N/A
6	EMI TEST Software	Rohde & Schwarz	ESK1	N/A	N/A
7	Double-Ridged-Waveguide Horn Antenna	Rohde & Schwarz	HF906	100039	2013/10/26
8	Semi-anechoic chamber	ETS-LINDGREN	AJ 593 HTW	N/A	N/A

Conducted Disturbance						
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	
1	EMI Test Receiver	Rohde & Schwarz	ESCS30	100038	2013/10/26	
2	Artificial Mains	Rohde & Schwarz	ESH2-Z5	100028	2013/10/26	
3	Artificial Mains	Rohde & Schwarz	ESH3-Z5	100040	2013/10/26	
4	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100044	2013/10/26	
5	EMI Test Software	Rohde & Schwarz	ESK1	N/A	N/A	
6	3# shielded room	ETS-LINDGREN	RFD-100	2406	N/A	

The Cal.Interval was one year.

4. TEST CONDITIONS AND RESULTS

4.1. Radiated Emission

For test instruments and accessories used see section 3.6.

4.1.1. Description of the test location

Test location: Shielded room No. 4

4.1.2. Limits of disturbance

Frequency (MHz)	Distance (Meters)	Field Strengths Limits (dB μ V/m)	
30 ~ 88	3	40	
88~216	3	43.5	
216 ~ 960	3	46	
960-1000	3	54	
1000-2000	3	74(PK)	54(AV)

Note: (1) The tighter limit shall apply at the edge between two frequency bands.

(2) Distance refers to the distance in meters between the test instrument antenna and the closest point of any part of the E.U.T.

(3)The highest frequency of the internal sources of the EUT is 480MHz, so the measurement was made up to 2 GHz.

4.1.3. Description of the test set-up

4.1.3.1. Operating Condition

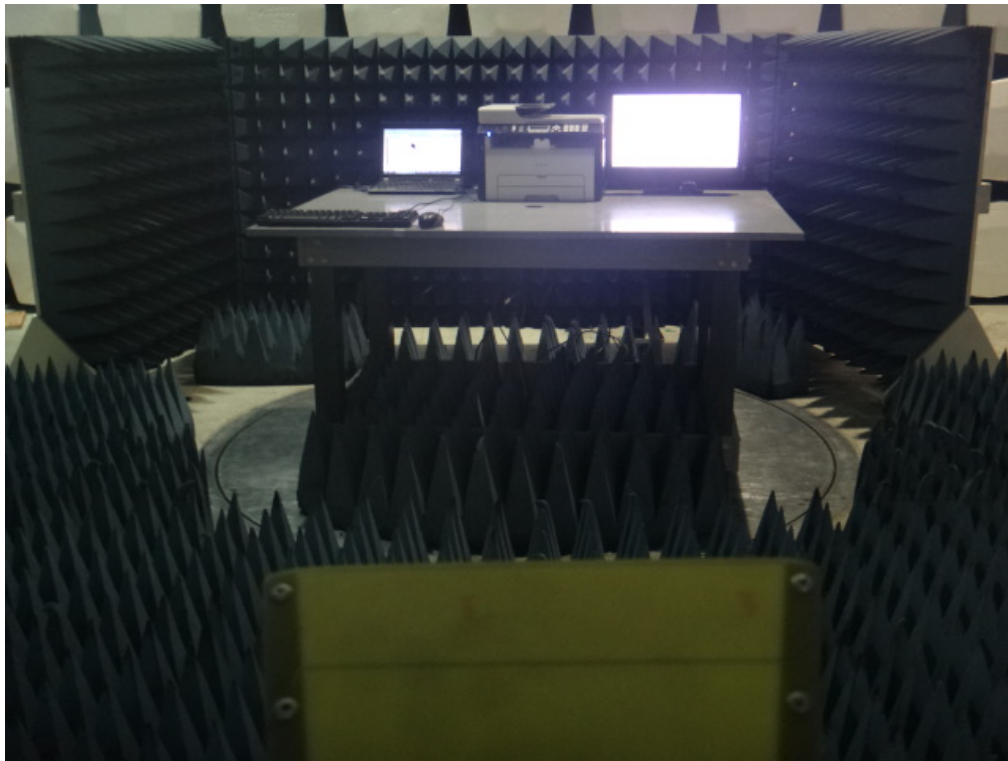
The EUT is set to work that shall be carried out respectively COPY+PING, USB PRINT+WIFI SCAN, USB SCAN +WIFI PRINT, NIC PRINT+SCAN TO USB, Tx, Rx modes on different motor, Stepping motor and DC motor during the test and the results of the maximum emanation are recorded.

4.1.3.2. Test Configuration and Procedure

Test is carried out in Semi-Anechoic Chamber. EUT is placed on a nonmetal table which is 0.8 meter above a grounded turntable. EUT is set 3 meters away from the center of receiving antenna. The turntable can rotate 360 degrees to determine the azimuth of the maximum emission level and then the antenna can move up and down from 1 to 4 meter to find out the maximum emission level. Both horizontal and vertical polarizations of the antenna are set on the test.

4.1.3.3. Photos of the test set-up





4.1.4. Test result

The requirements are **Fulfilled**

Band Width: 120 KHz

Frequency Range: 30MHz to 1000MHz

Band Width: 1MHz

Frequency Range: 1G-2G

The average measurement was not performed when the peak measured data under the limit of average detection.

Remarks: The limits are kept. For detailed results, please see the following page(s).

Margin=limit-level

Level=read value+transducer

Transducer=antenna factor+pre-amplifier factor+cable loss (with 6db attenuator)

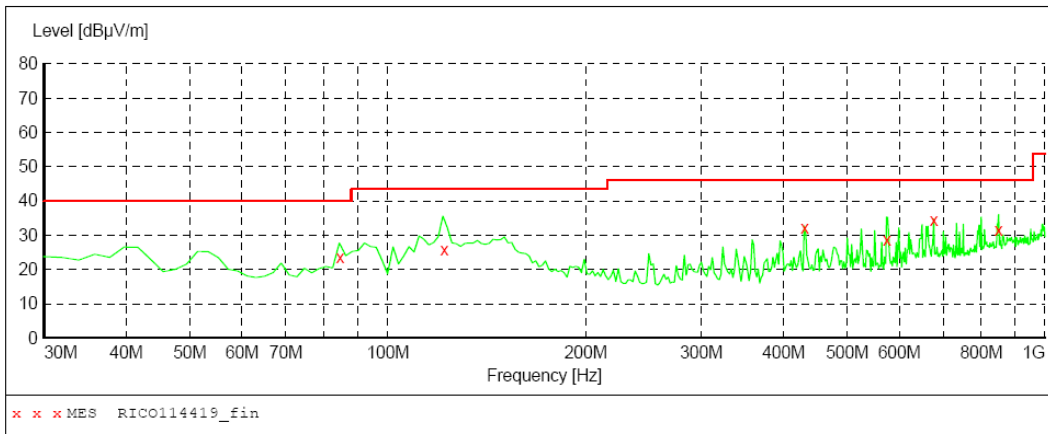
SHENZHEN HUATONGWEI INTERNATIONAL INSPECTION CO.,LTD

RADIATED EMISSION TEST FCC PART 15 CLASS B

EUT: SP 213SFNW
 Manufacturer: RICOH
 Operating Condition: COPY+PING
 Test Site: 3M CHAMBER
 Operator: KAIJIN.LI
 Test Specification: AC 120V/60Hz
 Comment:
 Start of Test: 1/14/2014 / 2:25:18PM

SCAN TABLE: "test Field(30M-1G)OP"

Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer
30.0 MHz	1.0 GHz	60.0 kHz	QuasiPeak	1.0 s	120 kHz	HL562



MEASUREMENT RESULT: "RICO114419_fin"

1/14/2014 2:36PM

Frequency MHz	Level dBuV/m	Transd dB	Limit dBuV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
84.660000	23.50	-19.6	40.0	16.5	QP	119.0	5.00	VERTICAL
122.040000	25.90	-17.9	43.5	17.6	QP	100.0	266.00	VERTICAL
430.980000	32.00	-13.9	46.0	14.0	QP	100.0	207.00	VERTICAL
574.980000	28.70	-11.2	46.0	17.3	QP	100.0	31.00	VERTICAL
677.340000	34.30	-7.5	46.0	11.7	QP	100.0	319.00	VERTICAL
850.020000	31.60	-5.1	46.0	14.4	QP	100.0	317.00	VERTICAL

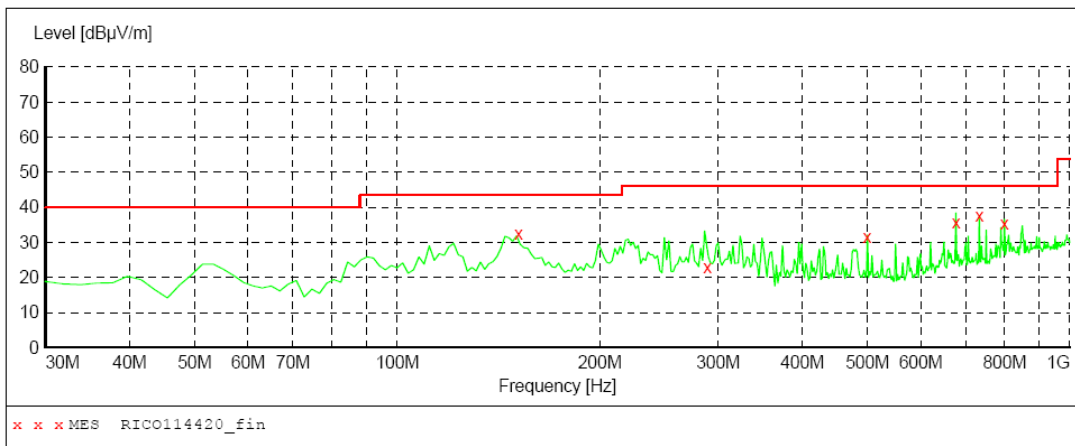
SHENZHEN HUATONGWEI INTERNATIONAL INSPECTION CO.,LTD

RADIATED EMISSION TEST FCC PART 15 CLASS B

EUT: SP 213SFNw
 Manufacturer: RICOH
 Operating Condition: COPY+PING
 Test Site: 3M CHAMBER
 Operator: KAIJIN.LI
 Test Specification: AC 120V/60Hz
 Comment:
 Start of Test: 1/14/2014 / 2:38:20PM

SCAN TABLE: "test Field(30M-1G)OP"

Short Description: Field Strength(30M-1G)
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 30.0 MHz 1.0 GHz 60.0 kHz QuasiPeak 1.0 s 120 kHz HL562



MEASUREMENT RESULT: "RICO114420_fin"

1/14/2014 2:48PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
151.560000	32.40	-21.1	43.5	11.1	QP	250.0	175.00	HORIZONTAL
289.320000	22.90	-16.0	46.0	23.1	QP	98.0	196.00	HORIZONTAL
499.980000	31.50	-11.7	46.0	14.5	QP	101.0	186.00	HORIZONTAL
677.340000	35.60	-7.5	46.0	10.4	QP	315.0	0.00	HORIZONTAL
733.800000	37.70	-7.3	46.0	8.3	QP	298.0	1.00	HORIZONTAL
799.980000	35.50	-6.3	46.0	10.5	QP	99.0	128.00	HORIZONTAL

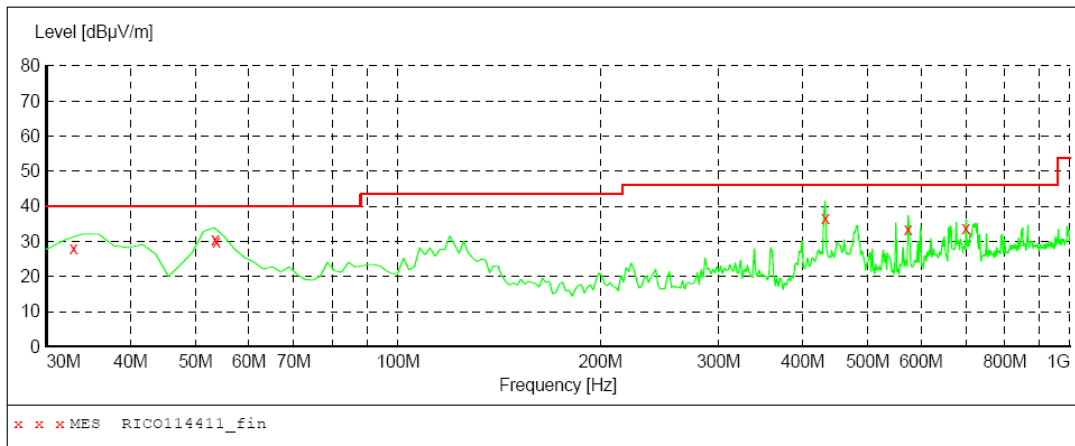
SHENZHEN HUATONGWEI INTERNATIONAL INSPECTION CO.,LTD

RADIATED EMISSION TEST FCC PART 15 CLASS B

EUT: SP 213SFNW
 Manufacturer: RICOH
 Operating Condition: USB PRINT+WiFi SCAN
 Test Site: 3M CHAMBER
 Operator: KAIJIN.LI
 Test Specification: AC 120V/60Hz
 Comment:
 Start of Test: 1/14/2014 / 1:14:05PM

SCAN TABLE: "test Field(30M-1G)OP"

Short Description:		Field Strength(30M-1G)					
Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer	
30.0 MHz	1.0 GHz	60.0 kHz	QuasiPeak	1.0 s	120 kHz	HL562	



MEASUREMENT RESULT: "RICO114411_fin"

1/14/2014 1:21PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
32.940000	29.60	-11.6	40.0	10.4	QP	131.0	79.00	VERTICAL
52.440000	30.00	-21.7	40.0	10.0	QP	100.0	315.00	VERTICAL
52.860000	30.20	-21.7	40.0	9.8	QP	100.0	291.00	VERTICAL
432.660000	36.50	-13.8	46.0	9.5	QP	100.0	183.00	VERTICAL
574.620000	33.60	-11.2	46.0	12.4	QP	100.0	0.00	VERTICAL
700.020000	33.90	-7.7	46.0	12.1	QP	100.0	360.00	VERTICAL

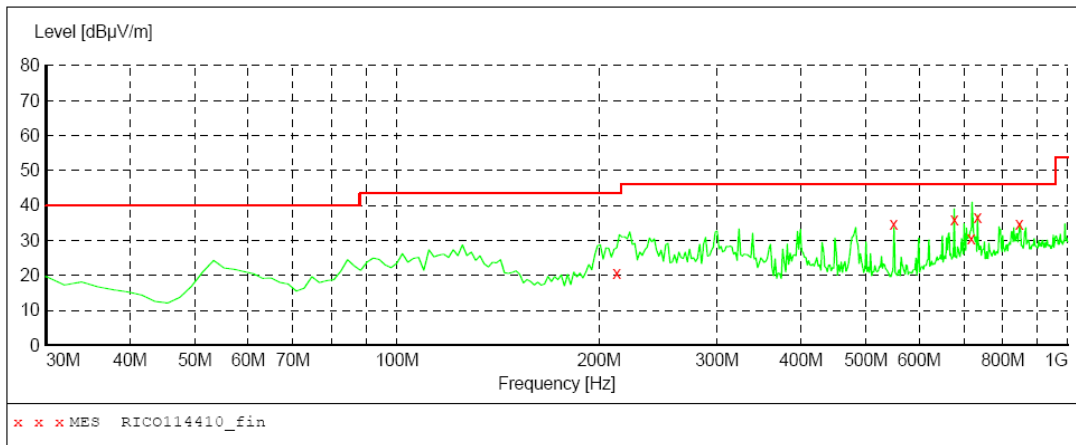
SHENZHEN HUATONGWEI INTERNATIONAL INSPECTION CO.,LTD

RADIATED EMISSION TEST FCC PART 15 CLASS B

EUT: SP 213SFNw
 Manufacturer: RICOH
 Operating Condition: USB PRINT+WiFi SCAN
 Test Site: 3M CHAMBER
 Operator: KAIJIN.LI
 Test Specification: AC 120V/60Hz
 Comment:
 Start of Test: 1/14/2014 / 1:02:40PM

SCAN TABLE: "test Field(30M-1G)OP"

Short Description: Field Strength(30M-1G)
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 30.0 MHz 1.0 GHz 60.0 kHz QuasiPeak 1.0 s 120 kHz HL562



MEASUREMENT RESULT: "RICO114410_fin"

1/14/2014 1:12PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
212.760000	20.80	-19.1	43.5	22.7	QP	100.0	104.00	HORIZONTAL
550.020000	34.70	-11.8	46.0	11.3	QP	131.0	62.00	HORIZONTAL
677.340000	36.00	-7.5	46.0	10.0	QP	340.0	0.00	HORIZONTAL
717.780000	30.40	-7.3	46.0	15.6	QP	100.0	5.00	HORIZONTAL
733.800000	36.70	-7.3	46.0	9.3	QP	298.0	0.00	HORIZONTAL
846.720000	34.70	-5.1	46.0	11.3	QP	148.0	169.00	HORIZONTAL

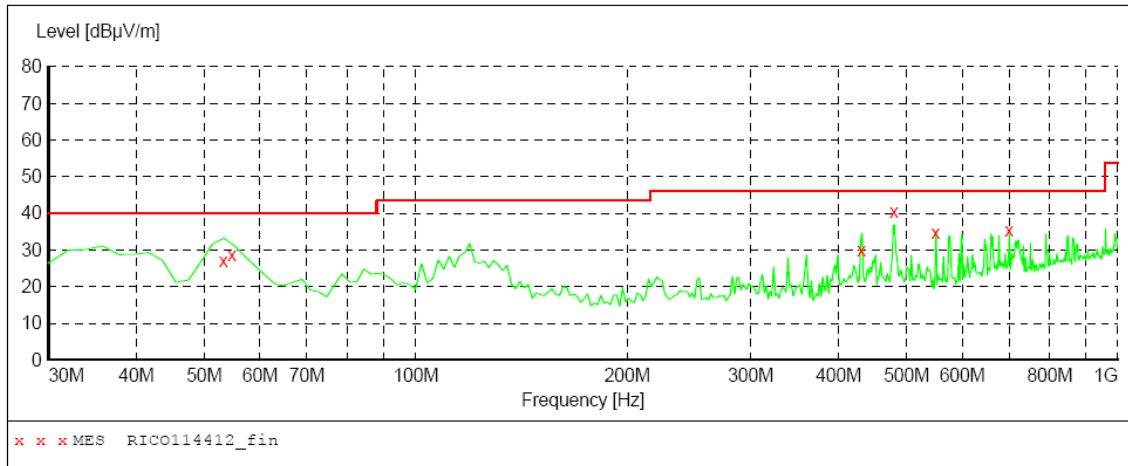
SHENZHEN HUATONGWEI INTERNATIONAL INSPECTION CO.,LTD

RADIATED EMISSION TEST FCC PART 15 CLASS B

EUT: SP 213SFNW
 Manufacturer: RICOH
 Operating Condition: WiFi PRINT+USB SCAN
 Test Site: 3M CHAMBER
 Operator: KAIJIN.LI
 Test Specification: AC 120V/60Hz
 Comment:
 Start of Test: 1/14/2014 / 1:26:25PM

SCAN TABLE: "test Field(30M-1G)OP"

Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer
30.0 MHz	1.0 GHz	60.0 kHz	QuasiPeak	1.0 s	120 kHz	HL562



MEASUREMENT RESULT: "RICO114412_fin"

1/14/2014 1:33PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
53.520000	27.80	-21.9	40.0	12.2	QP	100.0	243.00	VERTICAL
54.420000	29.20	-22.2	40.0	10.8	QP	100.0	251.00	VERTICAL
431.220000	29.80	-13.9	46.0	16.2	QP	139.0	358.00	VERTICAL
480.000000	40.50	-11.6	46.0	5.5	QP	114.0	148.00	VERTICAL
550.020000	34.70	-11.8	46.0	11.3	QP	100.0	300.00	VERTICAL
700.020000	35.50	-7.7	46.0	10.5	QP	100.0	309.00	VERTICAL

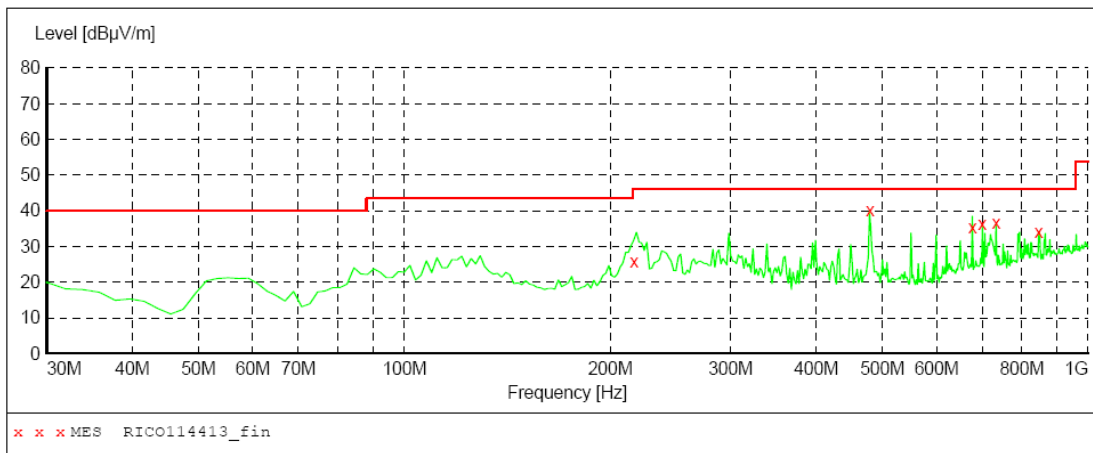
SHENZHEN HUATONGWEI INTERNATIONAL INSPECTION CO.,LTD

RADIATED EMISSION TEST FCC PART 15 CLASS B

EUT: SP 213SFNW
 Manufacturer: RICOH
 Operating Condition: WiFi PRINT+USB SCAN
 Test Site: 3M CHAMBER
 Operator: KAIJIN.LI
 Test Specification: AC 120V/60Hz
 Comment:
 Start of Test: 1/14/2014 / 1:35:40PM

SCAN TABLE: "test Field(30M-1G)OP"

Short Description: Field Strength(30M-1G)
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 30.0 MHz 1.0 GHz 60.0 kHz QuasiPeak 1.0 s 120 kHz HL562



MEASUREMENT RESULT: "RICO114413_fin"

1/14/2014 1:45PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
216.960000	26.30	-18.9	46.0	19.7	QP	136.0	20.00	HORIZONTAL
480.000000	40.20	-11.6	46.0	5.8	QP	100.0	230.00	HORIZONTAL
677.340000	35.40	-7.5	46.0	10.6	QP	315.0	0.00	HORIZONTAL
700.020000	36.30	-7.7	46.0	9.7	QP	100.0	59.00	HORIZONTAL
733.800000	36.50	-7.3	46.0	9.5	QP	295.0	5.00	HORIZONTAL
846.720000	34.00	-5.1	46.0	12.0	QP	147.0	168.00	HORIZONTAL

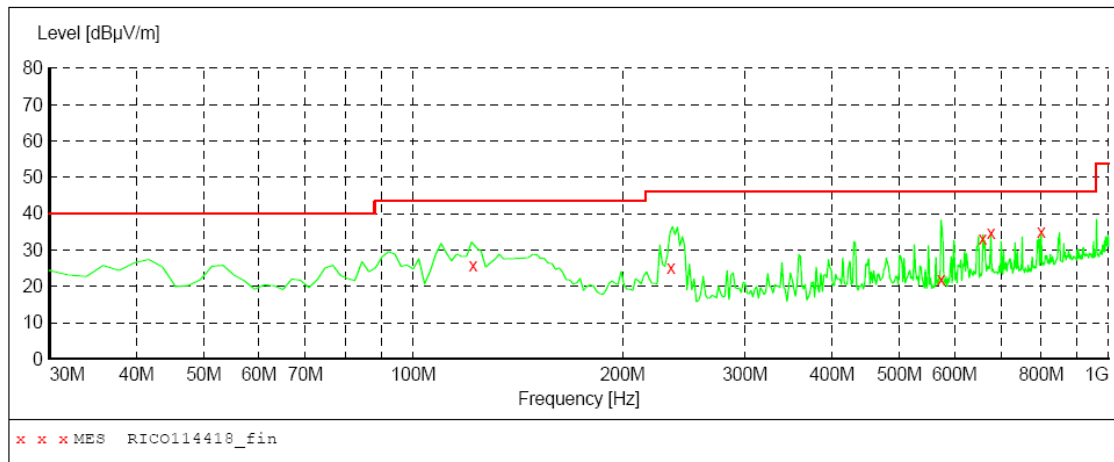
SHENZHEN HUATONGWEI INTERNATIONAL INSPECTION CO.,LTD

RADIATED EMISSION TEST FCC PART 15 CLASS B

EUT: SP 213SFNw
 Manufacturer: RICOH
 Operating Condition: NIC PRINT+SCAN TO USB
 Test Site: 3M CHAMBER
 Operator: KAIJIN.LI
 Test Specification: AC 120V/60Hz
 Comment:
 Start of Test: 1/14/2014 / 2:12:58PM

SCAN TABLE: "test Field(30M-1G)OP"

Short Description: Field Strength(30M-1G)
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 30.0 MHz 1.0 GHz 60.0 kHz QuasiPeak 1.0 s 120 kHz HL562



MEASUREMENT RESULT: "RICO114418_fin"

1/14/2014 2:22PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
122.040000	25.70	-17.9	43.5	17.8	QP	100.0	270.00	VERTICAL
233.400000	25.20	-17.7	46.0	20.8	QP	139.0	106.00	VERTICAL
574.680000	20.30	-11.2	46.0	25.7	QP	100.0	0.00	VERTICAL
658.980000	33.20	-8.0	46.0	12.8	QP	100.0	175.00	VERTICAL
677.340000	34.80	-7.5	46.0	11.2	QP	100.0	314.00	VERTICAL
799.980000	35.10	-6.3	46.0	10.9	QP	100.0	76.00	VERTICAL

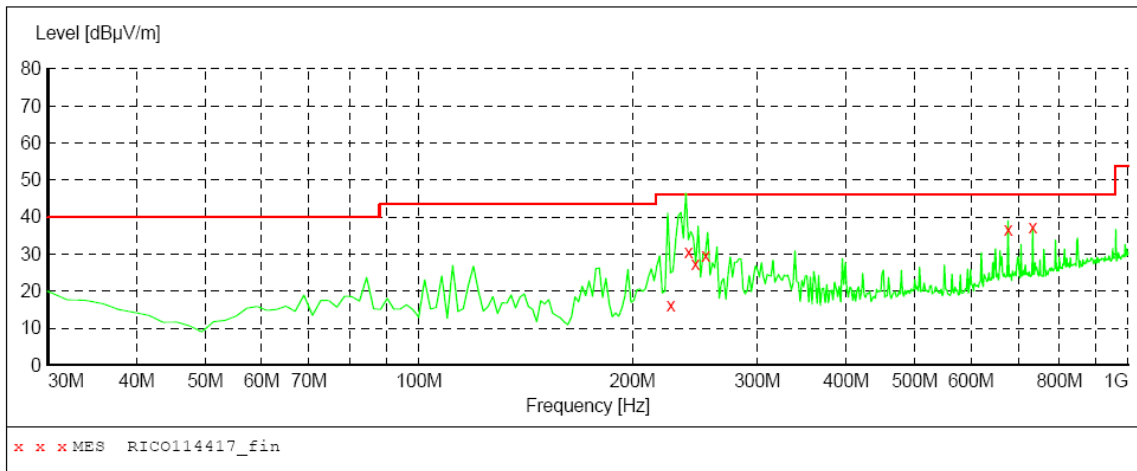
SHENZHEN HUATONGWEI INTERNATIONAL INSPECTION CO.,LTD

RADIATED EMISSION TEST FCC PART 15 CLASS B

EUT: SP 213SFNw
 Manufacturer: RICOH
 Operating Condition: NIC PRINT+SCAN TO USB
 Test Site: 3M CHAMBER
 Operator: KAIJIN.LI
 Test Specification: AC 120V/60Hz
 Comment:
 Start of Test: 1/14/2014 / 2:02:52PM

SCAN TABLE: "test Field(30M-1G)OP"

Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer
30.0 MHz	1.0 GHz	60.0 kHz	QuasiPeak	1.0 s	120 kHz	HL562



MEASUREMENT RESULT: "RICO114417_fin"

1/14/2014 2:12PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
226.560000	16.30	-18.4	46.0	29.7	QP	150.0	38.00	HORIZONTAL
239.940000	30.50	-17.3	46.0	15.5	QP	100.0	50.00	HORIZONTAL
245.400000	27.20	-17.1	46.0	18.8	QP	100.0	56.00	HORIZONTAL
253.980000	29.50	-16.7	46.0	16.5	QP	100.0	53.00	HORIZONTAL
677.340000	36.70	-7.5	46.0	9.3	QP	328.0	1.00	HORIZONTAL
733.800000	37.30	-7.3	46.0	8.7	QP	277.0	2.00	HORIZONTAL

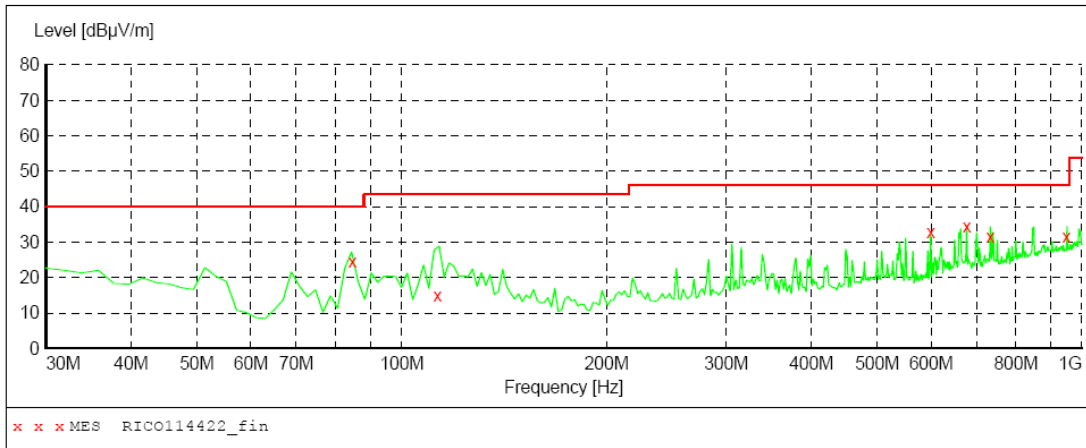
SHENZHEN HUATONGWEI INTERNATIONAL INSPECTION CO.,LTD

RADIATED EMISSION TEST FCC PART 15 CLASS B

EUT: SP 213SFNw
 Manufacturer: RICOH
 Operating Condition: TX
 Test Site: 3M CHAMBER
 Operator: KAIJIN.LI
 Test Specification: AC 120V/60Hz
 Comment:
 Start of Test: 1/14/2014 / 3:06:19PM

SCAN TABLE: "test Field(30M-1G)OP"

Short Description: Field Strength(30M-1G)
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 30.0 MHz 1.0 GHz 60.0 kHz QuasiPeak 1.0 s 120 kHz HL562



MEASUREMENT RESULT: "RICO114422_fin"

1/14/2014 3:14PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
84.660000	24.50	-19.6	40.0	15.5	QP	150.0	136.00	VERTICAL
112.920000	14.80	-18.1	43.5	28.7	QP	100.0	122.00	VERTICAL
600.000000	32.90	-10.6	46.0	13.1	QP	98.0	358.00	VERTICAL
677.340000	34.30	-7.5	46.0	11.7	QP	100.0	316.00	VERTICAL
733.800000	31.60	-7.3	46.0	14.4	QP	100.0	93.00	VERTICAL
950.040000	31.60	-4.7	46.0	14.4	QP	100.0	78.00	VERTICAL

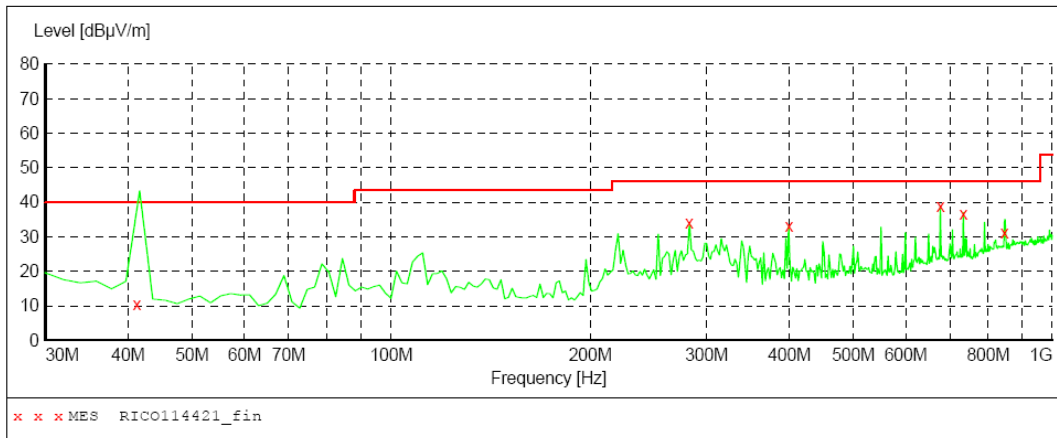
SHENZHEN HUATONGWEI INTERNATIONAL INSPECTION CO.,LTD

RADIATED EMISSION TEST FCC PART 15 CLASS B

EUT: SP 213SFNW
 Manufacturer: RICOH
 Operating Condition: TX
 Test Site: 3M CHAMBER
 Operator: KAIJIN.LI
 Test Specification: AC 120V/60Hz
 Comment:
 Start of Test: 1/14/2014 / 2:55:49PM

SCAN TABLE: "test Field(30M-1G)OP"

Start	Stop	Step	Field Strength(30M-1G)	Detector	Meas. Time	IF Bandw.	Transducer
30.0 MHz	1.0 GHz	60.0 kHz	QuasiPeak	1.0 s	120 kHz	HL562	



MEASUREMENT RESULT: "RICO114421_fin"

1/14/2014 3:04PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
41.280000	10.40	-16.1	40.0	29.6	QP	150.0	194.00	HORIZONTAL
282.240000	34.00	-16.3	46.0	12.0	QP	126.0	29.00	HORIZONTAL
400.020000	33.10	-13.4	46.0	12.9	QP	100.0	331.00	HORIZONTAL
677.340000	38.80	-7.5	46.0	7.2	QP	311.0	334.00	HORIZONTAL
733.800000	36.70	-7.3	46.0	9.3	QP	100.0	0.00	HORIZONTAL
846.720000	31.30	-5.1	46.0	14.7	QP	100.0	201.00	HORIZONTAL

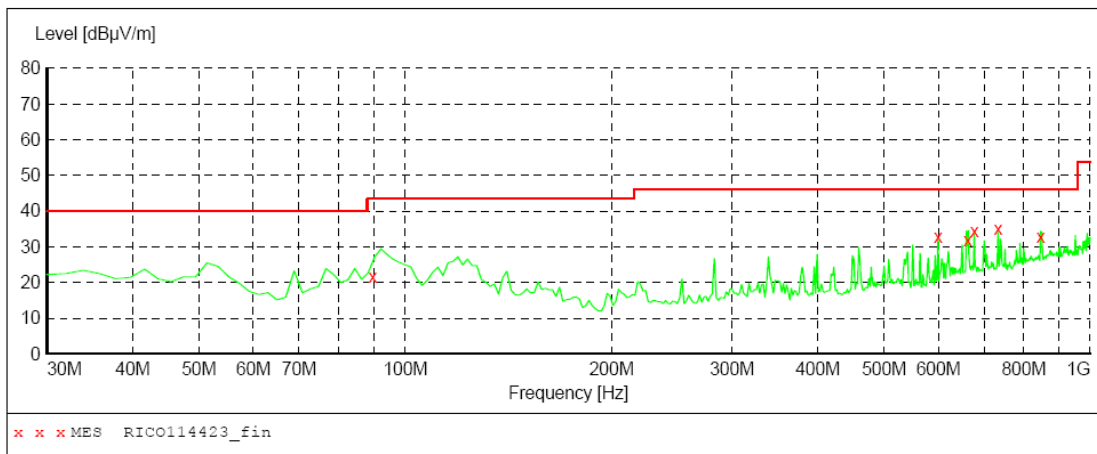
SHENZHEN HUATONGWEI INTERNATIONAL INSPECTION CO.,LTD

RADIATED EMISSION TEST FCC PART 15 CLASS B

EUT: SP 213SFNW
 Manufacturer: RICOH
 Operating Condition: RX
 Test Site: 3M CHAMBER
 Operator: KAIJIN.LI
 Test Specification: AC 120V/60Hz
 Comment:
 Start of Test: 1/14/2014 / 3:16:15PM

SCAN TABLE: "test Field(30M-1G)OP"

Short Description: Field Strength(30M-1G)
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 30.0 MHz 1.0 GHz 60.0 kHz QuasiPeak 1.0 s 120 kHz HL562



MEASUREMENT RESULT: "RICO114423_fin"

1/14/2014 3:23PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
89.700000	21.70	-18.8	43.5	21.8	QP	100.0	101.00	VERTICAL
600.000000	32.70	-10.6	46.0	13.3	QP	100.0	0.00	VERTICAL
663.000000	31.70	-7.8	46.0	14.3	QP	100.0	260.00	VERTICAL
677.340000	34.40	-7.5	46.0	11.6	QP	100.0	314.00	VERTICAL
733.800000	35.00	-7.3	46.0	11.0	QP	100.0	107.00	VERTICAL
846.720000	32.90	-5.1	46.0	13.1	QP	100.0	204.00	VERTICAL

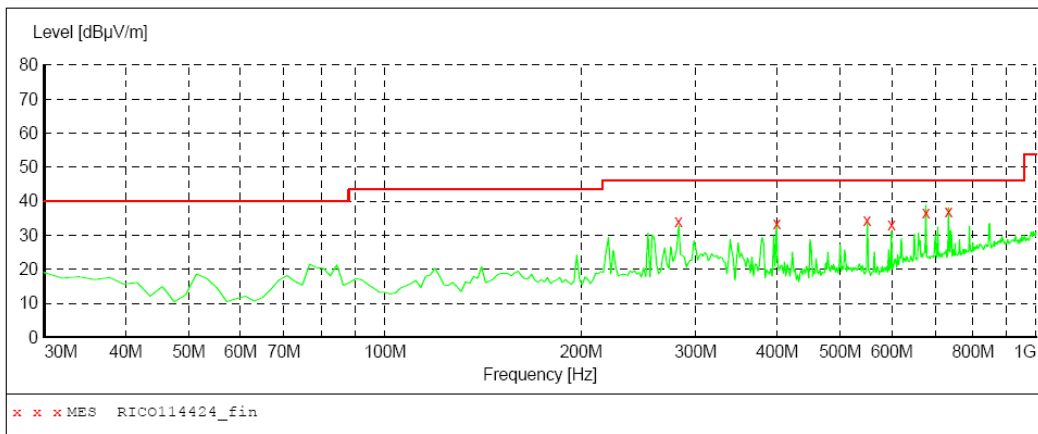
SHENZHEN HUATONGWEI INTERNATIONAL INSPECTION CO.,LTD

RADIATED EMISSION TEST FCC PART 15 CLASS B

EUT: SP 213SFNW
 Manufacturer: RICOH
 Operating Condition: RX
 Test Site: 3M CHAMBER
 Operator: KAIJIN.LI
 Test Specification: AC 120V/60Hz
 Comment:
 Start of Test: 1/14/2014 / 3:24:02PM

SCAN TABLE: "test Field(30M-1G)OP"

Short Description: Field Strength(30M-1G)
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 30.0 MHz 1.0 GHz 60.0 kHz QuasiPeak 1.0 s 120 kHz HL562



MEASUREMENT RESULT: "RICO114424_fin"

1/14/2014 3:33PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
282.240000	34.20	-16.3	46.0	11.8	QP	100.0	47.00	HORIZONTAL
400.020000	33.50	-13.4	46.0	12.5	QP	100.0	316.00	HORIZONTAL
550.020000	34.30	-11.8	46.0	11.7	QP	132.0	65.00	HORIZONTAL
600.000000	33.00	-10.6	46.0	13.0	QP	123.0	342.00	HORIZONTAL
677.340000	36.60	-7.5	46.0	9.4	QP	323.0	0.00	HORIZONTAL
733.800000	36.90	-7.3	46.0	9.1	QP	100.0	0.00	HORIZONTAL

Above 1G

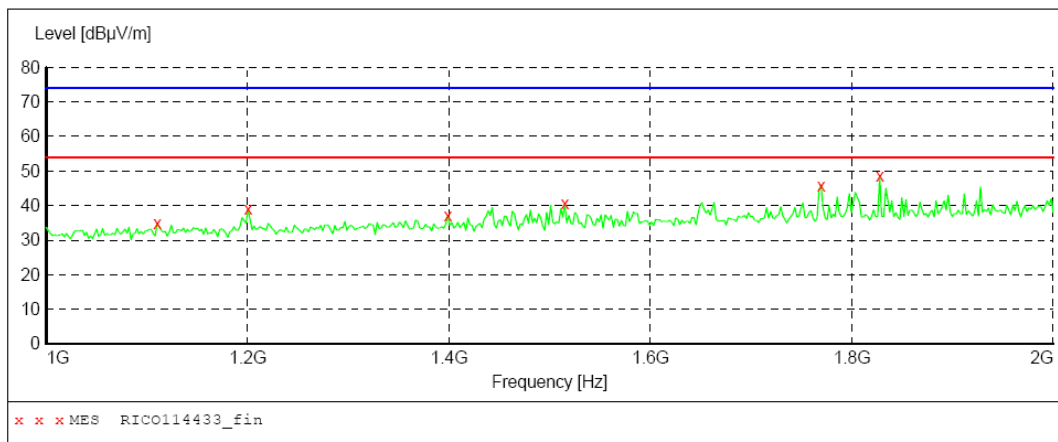
SHENZHEN HUATONGWEI INTERNATIONAL INSPECTION CO.,LTD

RADIATED EMISSION TEST FCC PART 15 CLASS B

EUT: SP 213SFNW
 Manufacturer: RICOH
 Operating Condition: COPY+PING
 Test site: 3M CHAMBER
 Operator: KAIJIN.LI
 Test Specification: AC 120V/60Hz
 Comment:
 Start of Test: 1/14/2014 / 4:55:58PM

SWEEP TABLE: "test (1G-18G) P"

Short Description: Field Strength
 Unit: dBµV/m
 Detector: Mode:



MEASUREMENT RESULT: "RICO114433_fin"

1/14/2014 4:57PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
1110.220441	34.80	-9.5	54.0	19.2	PK	100.0	29.00	VERTICAL
1200.400802	39.10	-8.8	54.0	14.9	PK	100.0	260.00	VERTICAL
1398.797595	37.00	-7.4	54.0	17.0	PK	100.0	0.00	VERTICAL
1515.030060	40.60	-7.0	54.0	13.4	PK	100.0	3.00	VERTICAL
1769.539078	45.90	-5.4	54.0	8.1	PK	100.0	3.00	VERTICAL
1827.655311	48.60	-4.9	54.0	5.4	PK	100.0	9.00	VERTICAL

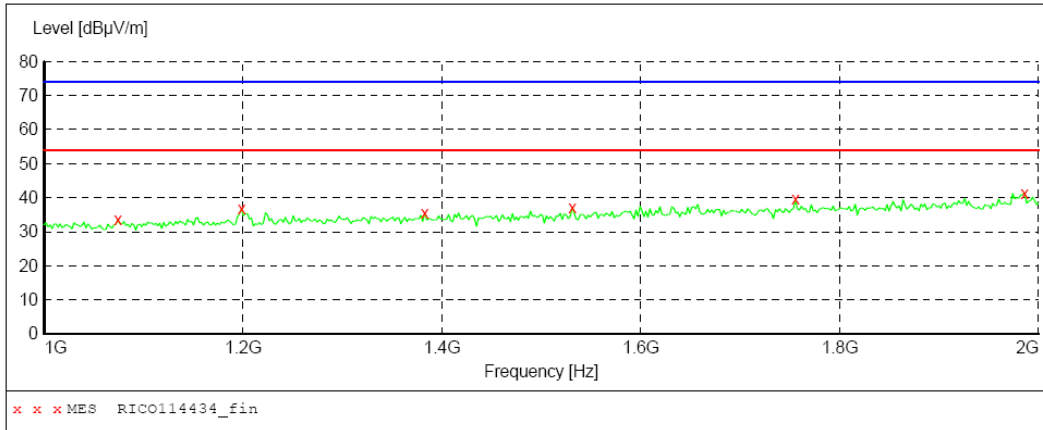
SHENZHEN HUATONGWEI INTERNATIONAL INSPECTION CO.,LTD

RADIATED EMISSION TEST FCC PART 15 CLASS B

EUT: SP 213SFNW
 Manufacturer: RICOH
 Operating Condition: COPY+PING
 Test Site: 3M CHAMBER
 Operator: KAIJIN.LI
 Test Specification: AC 120V/60Hz
 Comment:
 Start of Test: 1/14/2014 / 4:57:41PM

SWEEP TABLE: "test (1G-18G) P"

Short Description: Field Strength
 Unit: dBµV/m
 Detector: Mode:



MEASUREMENT RESULT: "RICO114434_fin"

1/14/2014 4:59PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
1074.148297	33.60	-9.7	54.0	20.4	PK	100.0	69.00	HORIZONTAL
1198.396794	36.80	-8.8	54.0	17.2	PK	100.0	75.00	HORIZONTAL
1382.765531	35.50	-7.5	54.0	18.5	PK	100.0	315.00	HORIZONTAL
1531.062124	37.00	-6.9	54.0	17.0	PK	100.0	232.00	HORIZONTAL
1755.511022	39.50	-5.5	54.0	14.5	PK	100.0	99.00	HORIZONTAL
1985.971944	41.40	-3.8	54.0	12.6	PK	100.0	167.00	HORIZONTAL

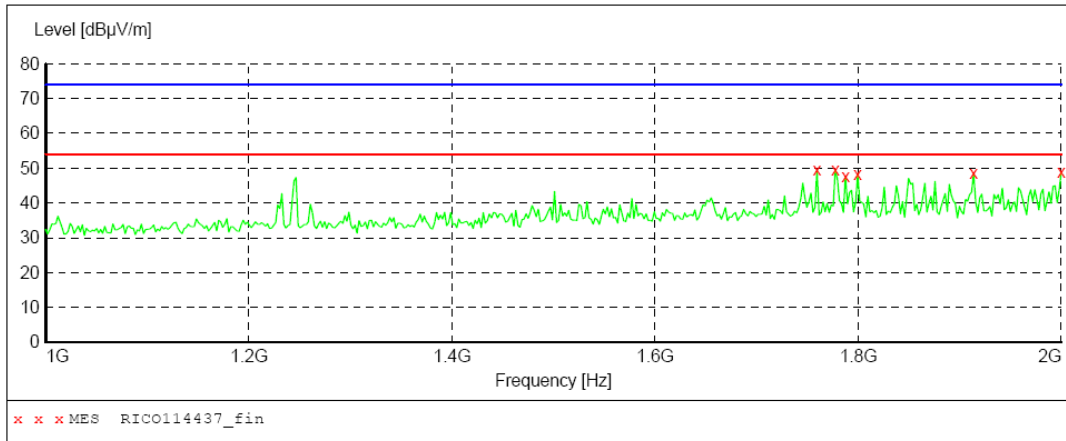
SHENZHEN HUATONGWEI INTERNATIONAL INSPECTION CO.,LTD

RADIATED EMISSION TEST FCC PART 15 CLASS B

EUT: SP 213SFNW
 Manufacturer: RICOH
 Operating Condition: WIFI SCAN + USB PRINT
 Test Site: 3M CHAMBER
 Operator: KAIJIN.LI
 Test Specification: AC 120V/60Hz
 Comment:
 Start of Test: 1/14/2014 / 5:07:11PM

SWEEP TABLE: "test (1G-18G) P"

Short Description: Field Strength
 Unit: dBµV/m
 Detector: Mode:



MEASUREMENT RESULT: "RICO114437_fin"

1/14/2014 5:08PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
1759.519038	49.50	-5.5	54.0	4.5	PK	100.0	359.00	VERTICAL
1777.555110	49.50	-5.3	54.0	4.5	PK	100.0	0.00	VERTICAL
1787.575150	47.60	-5.2	54.0	6.4	PK	100.0	356.00	VERTICAL
1799.599198	48.40	-5.1	54.0	5.6	PK	100.0	359.00	VERTICAL
1913.827655	48.50	-4.2	54.0	5.5	PK	100.0	359.00	VERTICAL
2000.000000	48.80	-3.7	54.0	5.2	PK	100.0	354.00	VERTICAL

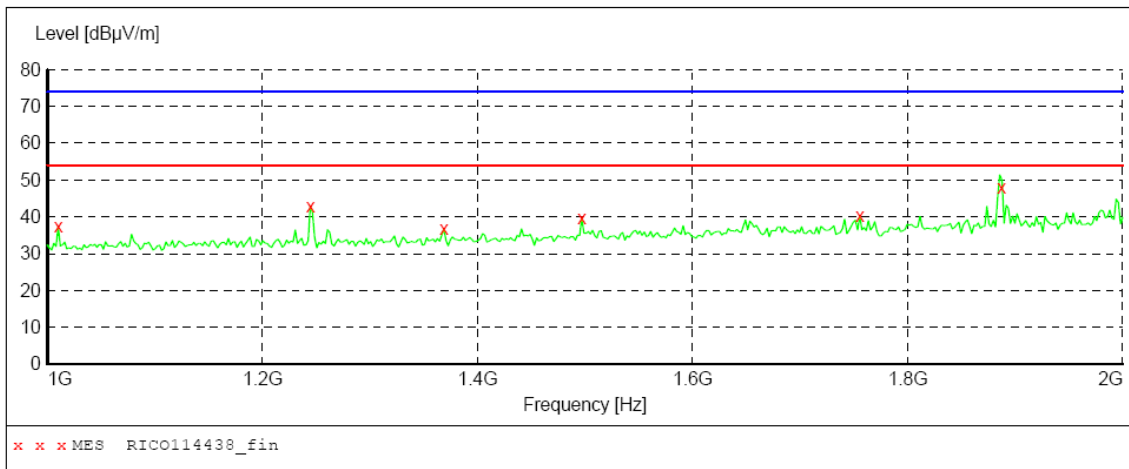
SHENZHEN HUATONGWEI INTERNATIONAL INSPECTION CO.,LTD

RADIATED EMISSION TEST FCC PART 15 CLASS B

EUT: SP 213SFNw
 Manufacturer: RICOH
 Operating Condition: WIFI SCAN + USB PRINT
 Test Site: 3M CHAMBER
 Operator: KAIJIN.LI
 Test Specification: AC 120V/60Hz
 Comment:
 Start of Test: 1/14/2014 / 5:12:54PM

SWEEP TABLE: "test (1G-18G) P"

Short Description: Field Strength
 Unit: dBµV/m
 Detector: Mode:



MEASUREMENT RESULT: "RICO114438_fin"

1/14/2014 5:14PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
1010.020040	37.30	-10.2	54.0	16.7	PK	100.0	52.00	HORIZONTAL
1244.488978	42.90	-8.5	54.0	11.1	PK	100.0	185.00	HORIZONTAL
1368.737475	36.70	-7.6	54.0	17.3	PK	100.0	272.00	HORIZONTAL
1496.993988	39.70	-7.1	54.0	14.3	PK	100.0	228.00	HORIZONTAL
1755.511022	40.30	-5.5	54.0	13.7	PK	100.0	254.00	HORIZONTAL
1885.771543	49.40	-4.4	54.0	4.6	PK	100.0	269.00	HORIZONTAL

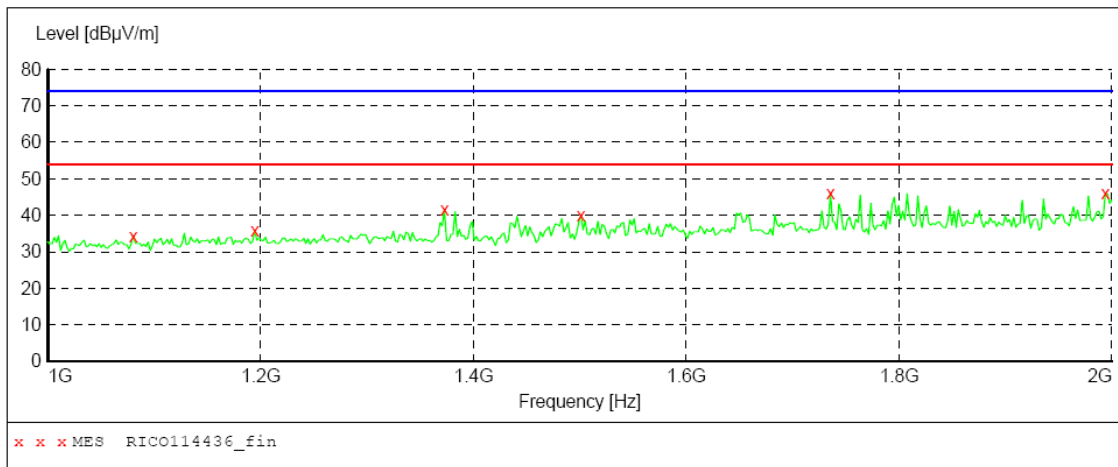
SHENZHEN HUATONGWEI INTERNATIONAL INSPECTION CO.,LTD

RADIATED EMISSION TEST FCC PART 15 CLASS B

EUT: SP 213SFNW
 Manufacturer: RICOH
 Operating Condition: USB SCAN + WIFI PRINT
 Test Site: 3M CHAMBER
 Operator: KAIJIN.LI
 Test Specification: AC 120V/60Hz
 Comment:
 Start of Test: 1/14/2014 / 5:03:31PM

SWEEP TABLE: "test (1G-18G) P"

Short Description: Field Strength
 Unit: dBµV/m
 Detector: Mode:



MEASUREMENT RESULT: "RICO114436_fin"

1/14/2014 5:05PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
1080.160321	34.40	-9.7	54.0	19.6	PK	100.0	248.00	VERTICAL
1194.388778	35.80	-8.9	54.0	18.2	PK	100.0	292.00	VERTICAL
1372.745491	41.50	-7.6	54.0	12.5	PK	100.0	283.00	VERTICAL
1501.002004	40.10	-7.1	54.0	13.9	PK	100.0	0.00	VERTICAL
1735.470942	46.20	-5.7	54.0	7.8	PK	100.0	356.00	VERTICAL
1993.987976	46.00	-3.7	54.0	8.0	PK	100.0	0.00	VERTICAL

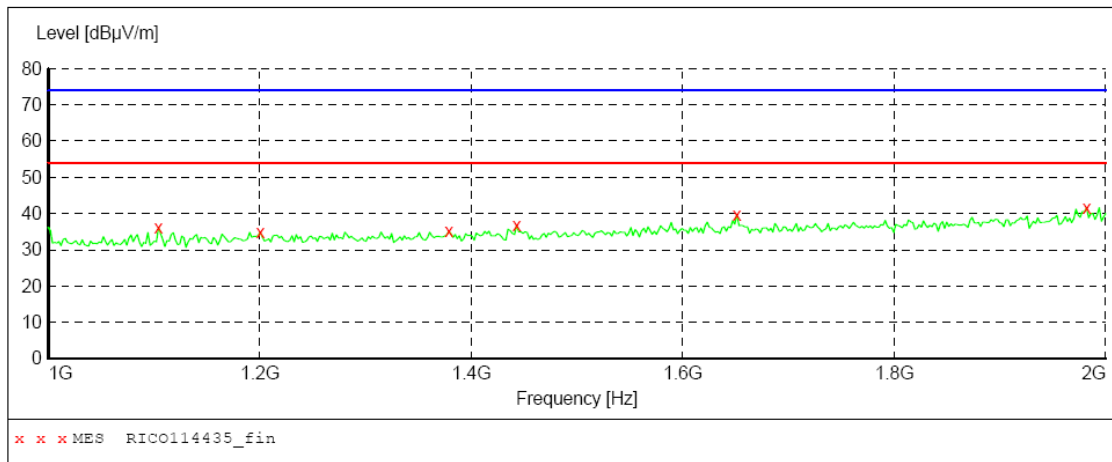
SHENZHEN HUATONGWEI INTERNATIONAL INSPECTION CO., LTD

RADIATED EMISSION TEST FCC PART 15 CLASS B

EUT: SP 213SFNW
 Manufacturer: RICOH
 Operating Condition: USB SCAN + WIFI PRINT
 Test Site: 3M CHAMBER
 Operator: KAIJIN.LI
 Test Specification: AC 120V/60Hz
 Comment:
 Start of Test: 1/14/2014 / 5:01:47PM

SWEEP TABLE: "test (1G-18G) P"

Short Description: Field Strength
 Unit: dBµV/m
 Detector: Mode:



MEASUREMENT RESULT: "RICO114435_fin"

1/14/2014 5:03PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
1104.208417	36.20	-9.5	54.0	17.8	PK	100.0	324.00	HORIZONTAL
1200.400802	34.80	-8.8	54.0	19.2	PK	100.0	117.00	HORIZONTAL
1378.757515	35.10	-7.6	54.0	18.9	PK	100.0	245.00	HORIZONTAL
1442.885772	36.80	-7.3	54.0	17.2	PK	100.0	268.00	HORIZONTAL
1651.302605	39.80	-6.2	54.0	14.2	PK	100.0	143.00	HORIZONTAL
1981.963928	41.60	-3.8	54.0	12.4	PK	100.0	150.00	HORIZONTAL

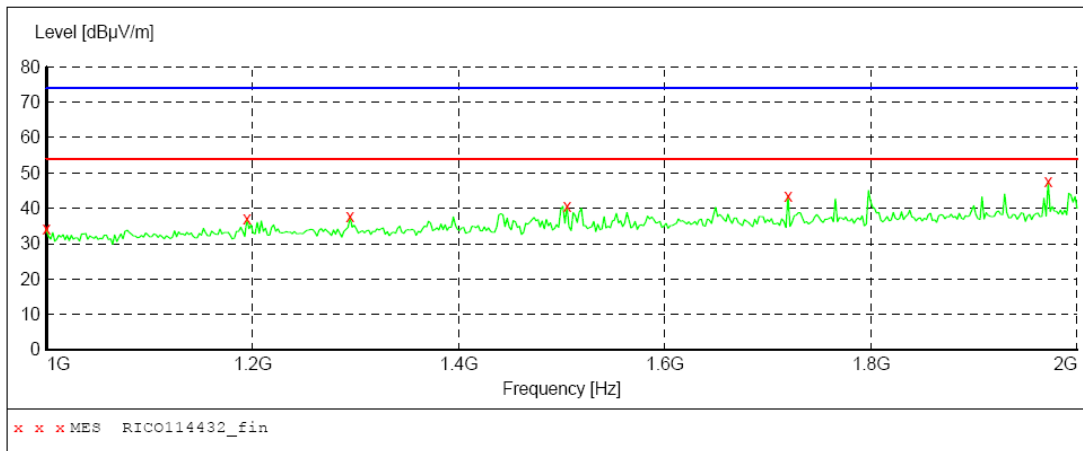
SHENZHEN HUATONGWEI INTERNATIONAL INSPECTION CO.,LTD

RADIATED EMISSION TEST FCC PART 15 CLASS B

EUT: SP 213SFNW
 Manufacturer: RICOH
 Operating Condition: NIC PRINT + SCAN TO USB
 Test Site: 3M CHAMBER
 Operator: KAIJIN.LI
 Test Specification: AC 120V/60Hz
 Comment:
 Start of Test: 1/14/2014 / 4:52:28PM

SWEEP TABLE: "test (1G-18G) P"

Short Description: Field Strength
 Unit: dBµV/m
 Detector: Mode:



MEASUREMENT RESULT: "RICO114432_fin"

1/14/2014 4:53PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
1000.000000	34.10	-10.3	54.0	19.9	PK	100.0	295.00	VERTICAL
1194.388778	37.10	-8.9	54.0	16.9	PK	100.0	74.00	VERTICAL
1294.589178	37.60	-8.1	54.0	16.4	PK	100.0	122.00	VERTICAL
1505.010020	40.70	-7.1	54.0	13.3	PK	100.0	5.00	VERTICAL
1719.438878	43.50	-5.8	54.0	10.5	PK	100.0	355.00	VERTICAL
1971.943888	47.60	-3.8	54.0	6.4	PK	100.0	358.00	VERTICAL

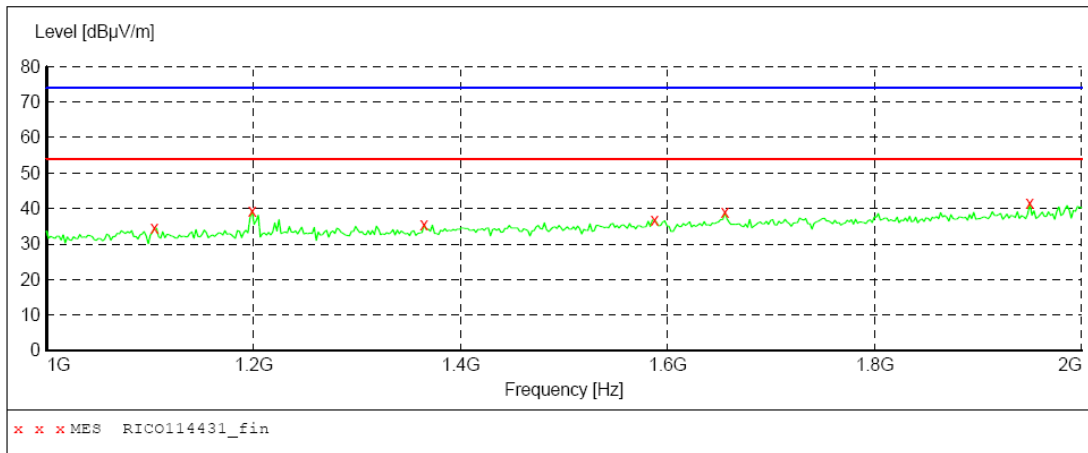
SHENZHEN HUATONGWEI INTERNATIONAL INSPECTION CO.,LTD

RADIATED EMISSION TEST FCC PART 15 CLASS B

EUT: SP 213SFNW
 Manufacturer: RICOH
 Operating Condition: NIC PRINT + SCAN TO USB
 Test Site: 3M CHAMBER
 Operator: KAIJIN.LI
 Test Specification: AC 120V/60Hz
 Comment:
 Start of Test: 1/14/2014 / 4:50:42PM

SWEEP TABLE: "test (1G-18G) P"

Short Description: Field Strength
 Unit: dBµV/m
 Detector: Mode:



MEASUREMENT RESULT: "RICO114431_fin"

1/14/2014 4:52PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
1104.208417	34.50	-9.5	54.0	19.5	PK	100.0	312.00	HORIZONTAL
1198.396794	39.40	-8.8	54.0	14.6	PK	100.0	52.00	HORIZONTAL
1364.729459	35.40	-7.7	54.0	18.6	PK	100.0	193.00	HORIZONTAL
1587.174349	36.80	-6.6	54.0	17.2	PK	100.0	262.00	HORIZONTAL
1655.310621	38.90	-6.2	54.0	15.1	PK	100.0	134.00	HORIZONTAL
1949.899800	41.50	-4.0	54.0	12.5	PK	100.0	228.00	HORIZONTAL

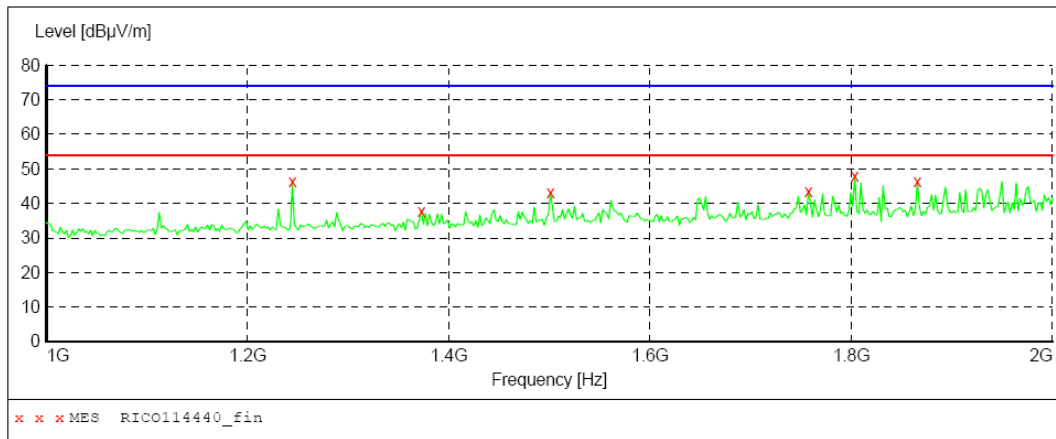
SHENZHEN HUATONGWEI INTERNATIONAL INSPECTION CO.,LTD

RADIATED EMISSION TEST FCC PART 15 CLASS B

EUT: SP 213SFNw
 Manufacturer: RICOH
 Operating Condition: TX
 Test Site: 3M CHAMBER
 Operator: KAIJIN.LI
 Test Specification: AC 120V/60Hz
 Comment:
 Start of Test: 1/14/2014 / 5:21:47PM

SWEEP TABLE: "test (1G-18G) P"

Short Description: Field Strength
 Unit: dBµV/m
 Detector: Mode:



MEASUREMENT RESULT: "RICO114440_fin"

1/14/2014 5:23PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
1244.488978	46.30	-8.5	54.0	7.7	PK	100.0	5.00	VERTICAL
1372.745491	37.70	-7.6	54.0	16.3	PK	100.0	5.00	VERTICAL
1501.002004	43.20	-7.1	54.0	10.8	PK	100.0	5.00	VERTICAL
1757.515030	43.60	-5.5	54.0	10.4	PK	100.0	0.00	VERTICAL
1803.607214	48.00	-5.1	54.0	6.0	PK	100.0	10.00	VERTICAL
1865.731463	46.30	-4.6	54.0	7.7	PK	100.0	5.00	VERTICAL

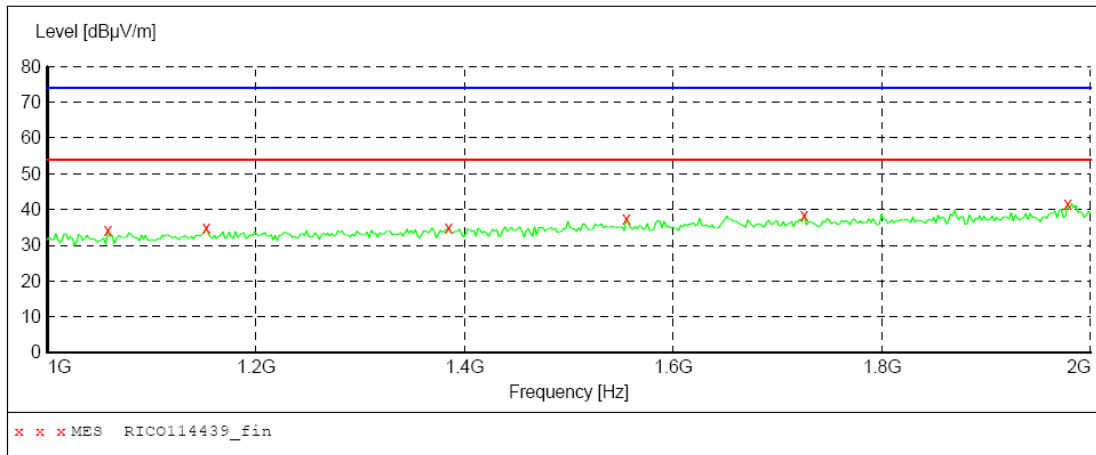
SHENZHEN HUATONGWEI INTERNATIONAL INSPECTION CO.,LTD

RADIATED EMISSION TEST FCC PART 15 CLASS B

EUT: SP 213SFNW
 Manufacturer: RICOH
 Operating Condition: TX
 Test Site: 3M CHAMBER
 Operator: KAIJIN.LI
 Test Specification: AC 120V/60Hz
 Comment:
 Start of Test: 1/14/2014 / 5:19:39PM

SWEEP TABLE: "test (1G-18G) P"

Short Description: Field Strength
 Unit: dBµV/m
 Detector: Mode:



MEASUREMENT RESULT: "RICO114439_fin"

1/14/2014 5:21PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
1058.116232	34.10	-9.9	54.0	19.9	PK	100.0	248.00	HORIZONTAL
1152.304609	34.90	-9.2	54.0	19.1	PK	100.0	315.00	HORIZONTAL
1384.769539	34.90	-7.5	54.0	19.1	PK	100.0	158.00	HORIZONTAL
1555.110220	37.50	-6.8	54.0	16.5	PK	100.0	229.00	HORIZONTAL
1725.450902	38.50	-5.8	54.0	15.5	PK	100.0	31.00	HORIZONTAL
1977.955912	41.60	-3.8	54.0	12.4	PK	100.0	227.00	HORIZONTAL

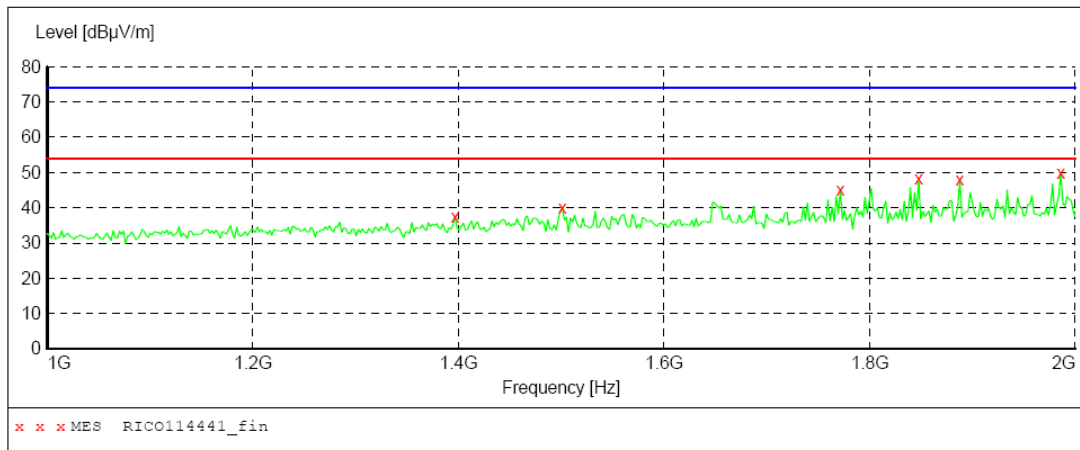
SHENZHEN HUATONGWEI INTERNATIONAL INSPECTION CO.,LTD

RADIATED EMISSION TEST FCC PART 15 CLASS B

EUT: SP 213SFNw
 Manufacturer: RICOH
 Operating Condition: RX
 Test Site: 3M CHAMBER
 Operator: KAIJIN.LI
 Test Specification: AC 120V/60Hz
 Comment:
 Start of Test: 1/14/2014 / 5:25:47PM

SWEEP TABLE: "test (1G-18G) P"

Short Description: Field Strength
 Unit: dBµV/m
 Detector: Mode:



MEASUREMENT RESULT: "RICO114441_fin"

1/14/2014 5:27PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
1396.793587	37.40	-7.5	54.0	16.6	PK	100.0	359.00	VERTICAL
1501.002004	39.90	-7.1	54.0	14.1	PK	100.0	0.00	VERTICAL
1771.543086	45.00	-5.4	54.0	9.0	PK	100.0	356.00	VERTICAL
1847.695391	48.20	-4.7	54.0	5.8	PK	100.0	5.00	VERTICAL
1887.775551	48.00	-4.4	54.0	6.0	PK	100.0	339.00	VERTICAL
1985.971944	49.90	-3.8	54.0	4.1	PK	100.0	354.00	VERTICAL

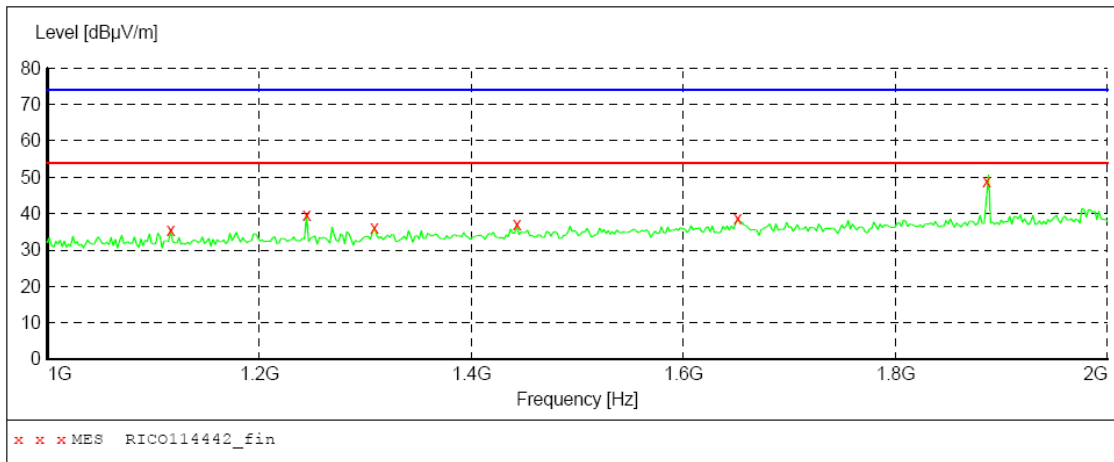
SHENZHEN HUATONGWEI INTERNATIONAL INSPECTION CO.,LTD

RADIATED EMISSION TEST FCC PART 15 CLASS B

EUT: SP 213SFNw
 Manufacturer: RICOH
 Operating Condition: RX
 Test Site: 3M CHAMBER
 Operator: KAIJIN.LI
 Test Specification: AC 120V/60Hz
 Comment:
 Start of Test: 1/14/2014 / 5:27:50PM

SWEEP TABLE: "test (1G-18G) P"

Short Description: Field Strength
 Unit: dBµV/m
 Detector: Mode:



MEASUREMENT RESULT: "RICO114442_fin"

1/14/2014 5:29PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
1116.232465	35.60	-9.4	54.0	18.4	PK	100.0	318.00	HORIZONTAL
1244.488978	39.70	-8.5	54.0	14.3	PK	100.0	324.00	HORIZONTAL
1308.617234	36.30	-8.0	54.0	17.7	PK	100.0	98.00	HORIZONTAL
1442.885772	37.00	-7.3	54.0	17.0	PK	100.0	119.00	HORIZONTAL
1651.302605	38.60	-6.2	54.0	15.4	PK	100.0	253.00	HORIZONTAL
1887.775551	59.70	-4.4	54.0	4.3	PK	100.0	262.00	HORIZONTAL

4.2. Conducted Disturbance

For test instruments and accessories used see section 3.6.

4.2.1. Description of the test location

Test location: Shielded room No. 3

4.2.2. Limits of disturbance

Limit of Conducted Disturbance at Mains Ports (Class B)

Frequency Range (MHz)	Limits (dBuV)	
	Quasi-Peak	Average
0.150~0.500	66~56	56~46
0.500~5.000	56	46
5.000~30.000	60	50

Note: (1) The tighter limit shall apply at the edge between two frequency bands.

4.2.3. Description of the test set-up

4.2.3.1. Operating Condition

The EUT is set to work that shall be carried out respectively COPY+PING, USB PRINT+WIFI SCAN, USB SCAN +WIFI PRINT, NIC PRINT+SCAN TO USB, Tx, Rx modes during the test and the results of the maximum emanation are recorded.

4.2.3.2. Test Procedure

EUT is placed on a nonmetal table 0.8 meter above the grounded reference plane. The power line of the EUT is connected to the LISN which is connected to receiver by coaxial line, and then disturbance signals of the neutral line and live line can be detected by the receiver.

4.2.3.3. Photos of the test set-up



4.2.4. Test result

The requirements are **Fulfilled**

Band Width: 9 KHz

Frequency Range: 150 KHz to 30MHz

Remarks: The limits are kept. For detailed results, please see the following page(s).

Margin=limit-level

Level=read value+transducer

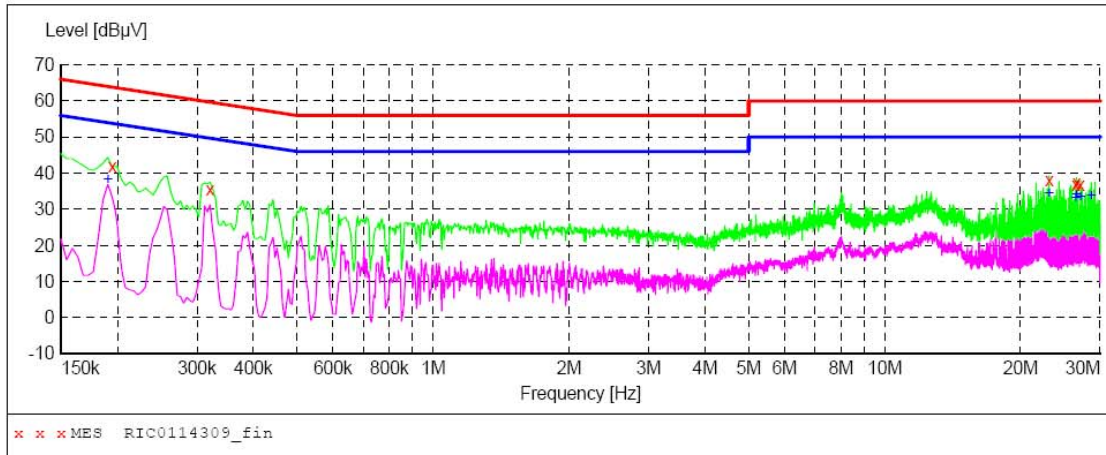
Transducer=insertion loss of LISN+cable loss+insertion loss of pulse limiter

Shenzhen Huatongwei International Inspection CO.,Ltd

Voltage Mains Test FCC PART 15 CLASS B

EUT: SP213SFNW
 Manufacturer: RICOH
 Operating Condition: COPY+PING
 Test Site: 3# SHIELDED ROOM
 Operator: ZHANGBAO.SUN
 Test Specification: AC 120V/60Hz
 Comment:
 Start of Test: 1/14/2014 / 5:26:00PM

SCAN TABLE: "Voltage (9K-30M)FIN"
 Short Description: 150K-30M Voltage



MEASUREMENT RESULT: "RIC0114309_fin"

1/14/2014 5:28PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.195000	42.00	10.4	64	21.8	QP	L1	GND
0.321000	35.50	10.6	60	24.2	QP	L1	GND
23.127000	38.20	10.9	60	21.8	QP	L1	GND
26.488500	36.80	11.0	60	23.2	QP	L1	GND
26.610000	37.40	11.0	60	22.6	QP	L1	GND
27.159000	36.80	11.0	60	23.2	QP	L1	GND

MEASUREMENT RESULT: "RIC0114309_fin2"

1/14/2014 5:28PM

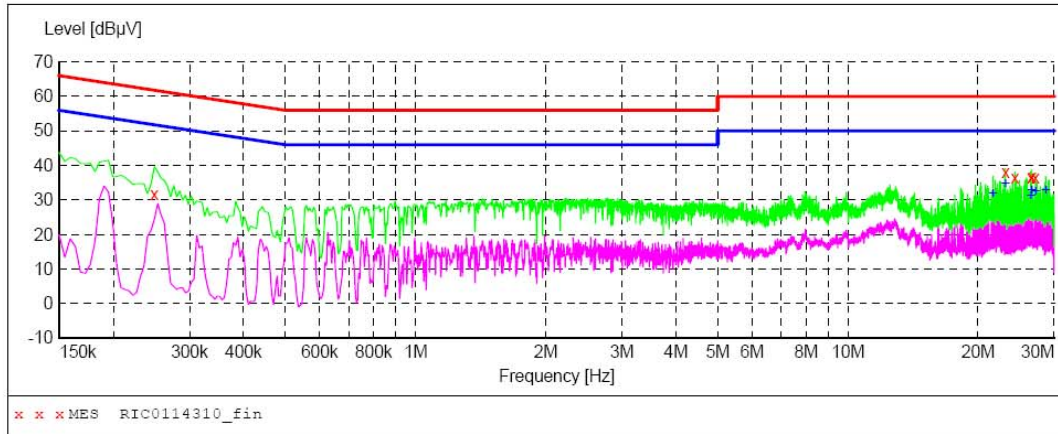
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.190500	38.30	10.4	54	15.7	AV	L1	GND
23.127000	34.60	10.9	50	15.4	AV	L1	GND
26.488500	33.40	11.0	50	16.6	AV	L1	GND
26.610000	34.20	11.0	50	15.8	AV	L1	GND
27.159000	33.60	11.0	50	16.4	AV	L1	GND
28.684500	33.80	11.1	50	16.2	AV	L1	GND

Shenzhen Huatongwei International Inspection CO.,Ltd

Voltage Mains Test FCC PART 15 CLASS B

EUT: SP213SFNW
 Manufacturer: RICOH
 Operating Condition: COPY+PING
 Test Site: 3# SHIELDED ROOM
 Operator: ZHANGBAO.SUN
 Test Specification: AC 120V/60Hz
 Comment:
 Start of Test: 1/14/2014 / 5:29:14PM

SCAN TABLE: "Voltage (9K-30M) FIN"
 Short Description: 150K-30M Voltage



MEASUREMENT RESULT: "RIC0114310_fin"

1/14/2014 5:31PM

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.249000	31.60	10.5	62	30.2	QP	N	GND
23.127000	38.20	10.9	60	21.8	QP	N	GND
24.351000	36.30	10.9	60	23.7	QP	N	GND
26.488500	36.30	11.0	60	23.7	QP	N	GND
26.610000	36.90	11.0	60	23.1	QP	N	GND
27.159000	36.30	11.0	60	23.7	QP	N	GND

MEASUREMENT RESULT: "RIC0114310_fin2"

1/14/2014 5:31PM

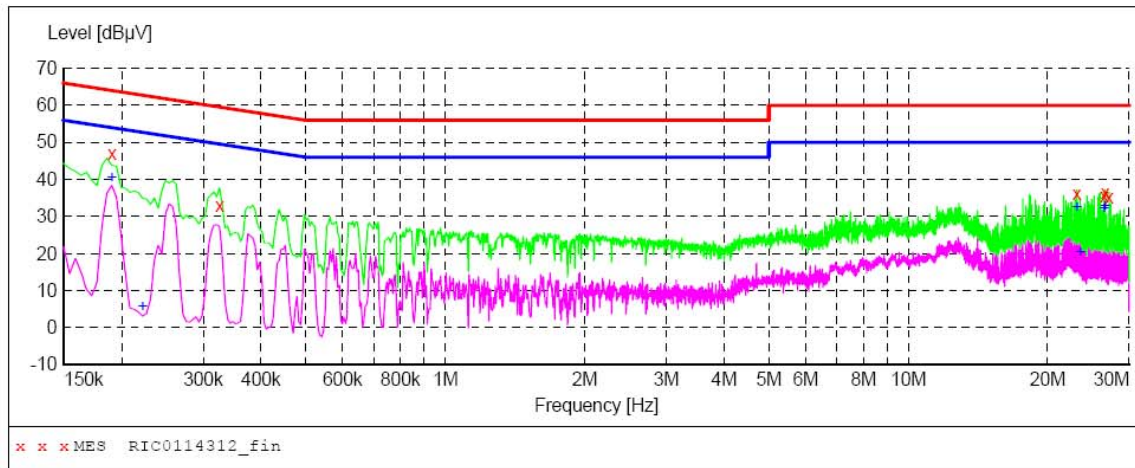
Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
21.664500	31.80	10.8	50	18.2	AV	N	GND
23.127000	34.70	10.9	50	15.3	AV	N	GND
26.488500	31.40	11.0	50	18.6	AV	N	GND
26.610000	32.90	11.0	50	17.1	AV	N	GND
27.159000	32.60	11.0	50	17.4	AV	N	GND
28.684500	32.90	11.1	50	17.1	AV	N	GND

Shenzhen Huatongwei International Inspection CO.,Ltd

Voltage Mains Test FCC PART 15 CLASS B

EUT: SP213SFNW
 Manufacturer: RICOH
 Operating Condition: USB PRINT+WIFI SCAN
 Test Site: 3# SHIELDED ROOM
 Operator: ZHANGBAO.SUN
 Test Specification: AC 120V/60Hz
 Comment:
 Start of Test: 1/14/2014 / 5:42:06PM

SCAN TABLE: "Voltage (9K-30M)FIN"
 Short Description: 150K-30M Voltage



MEASUREMENT RESULT: "RIC0114312_fin"

1/14/2014 5:44PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.190500	47.00	10.4	64	17.0	QP	L1	GND
0.325500	32.80	10.6	60	26.8	QP	L1	GND
23.127000	36.20	10.9	60	23.8	QP	L1	GND
26.488500	35.50	11.0	60	24.5	QP	L1	GND
26.610000	36.30	11.0	60	23.7	QP	L1	GND
27.159000	35.00	11.0	60	25.0	QP	L1	GND

MEASUREMENT RESULT: "RIC0114312_fin2"

1/14/2014 5:44PM

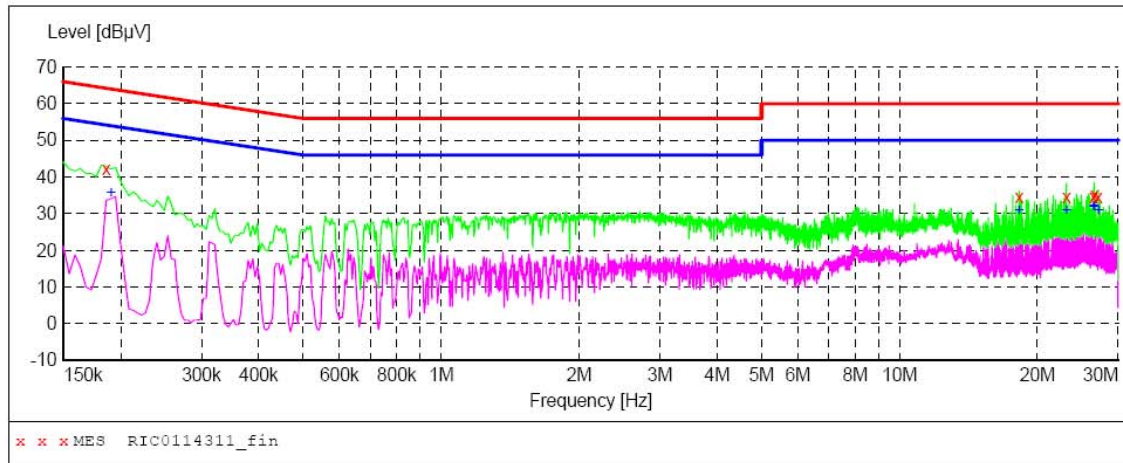
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.190500	40.70	10.4	54	13.3	AV	L1	GND
0.222000	5.90	10.4	53	46.8	AV	L1	GND
23.127000	32.70	10.9	50	17.3	AV	L1	GND
23.554500	20.40	10.9	50	29.6	AV	L1	GND
26.488500	32.40	11.0	50	17.6	AV	L1	GND
26.610000	32.90	11.0	50	17.1	AV	L1	GND

Shenzhen Huatongwei International Inspection CO.,Ltd

Voltage Mains Test FCC PART 15 CLASS B

EUT: SP213SFNW
 Manufacturer: RICOH
 Operating Condition: USB PRINT+WIFI SCAN
 Test Site: 3# SHIELDED ROOM
 Operator: ZHANGBAO.SUN
 Test Specification: AC 120V/60Hz
 Comment:
 Start of Test: 1/14/2014 / 5:39:02PM

SCAN TABLE: "Voltage (9K-30M) FIN"
 Short Description: 150K-30M Voltage



MEASUREMENT RESULT: "RIC0114311_fin"

1/14/2014 5:41PM

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.186000	42.30	10.4	64	21.9	QP	N	GND
18.244500	34.50	10.7	60	25.5	QP	N	GND
23.131500	34.50	10.9	60	25.5	QP	N	GND
26.488500	34.50	11.0	60	25.5	QP	N	GND
26.610000	35.20	11.0	60	24.8	QP	N	GND
27.159000	34.60	11.0	60	25.4	QP	N	GND

MEASUREMENT RESULT: "RIC0114311_fin2"

1/14/2014 5:41PM

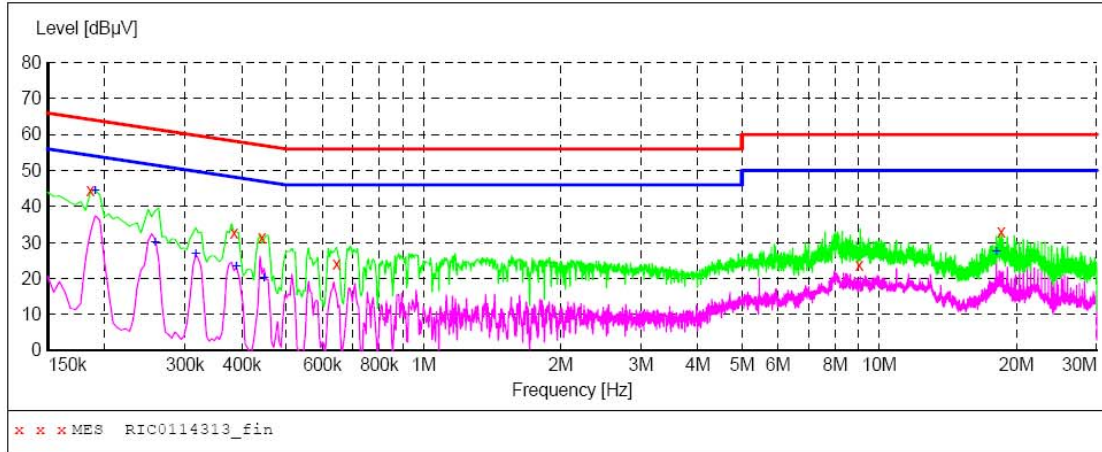
Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.190500	35.90	10.4	54	18.1	AV	N	GND
18.244500	30.90	10.7	50	19.1	AV	N	GND
23.131500	31.00	10.9	50	19.0	AV	N	GND
26.488500	31.90	11.0	50	18.1	AV	N	GND
26.610000	32.40	11.0	50	17.6	AV	N	GND
27.159000	31.00	11.0	50	19.0	AV	N	GND

Shenzhen Huatongwei International Inspection CO.,Ltd

Voltage Mains Test FCC PART 15 CLASS B

EUT: SP213SFNW
 Manufacturer: RICOH
 Operating Condition: USB SCAN+WIFI PRINT
 Test Site: 3# SHIELDED ROOM
 Operator: ZHANGBAO.SUN
 Test Specification: AC 120V/60Hz
 Comment:
 Start of Test: 1/14/2014 / 5:51:16PM

SCAN TABLE: "Voltage (9K-30M) FIN"
 Short Description: 150K-30M Voltage



MEASUREMENT RESULT: "RIC0114313_fin"

1/14/2014 5:53PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.186000	44.50	10.4	64	19.7	QP	L1	GND
0.384000	32.80	10.5	58	25.4	QP	L1	GND
0.442500	31.40	10.4	57	25.6	QP	L1	GND
0.645000	23.90	10.3	56	32.1	QP	L1	GND
9.042000	23.60	10.6	60	36.4	QP	L1	GND
18.537000	33.00	10.7	60	27.0	QP	L1	GND

MEASUREMENT RESULT: "RIC0114313_fin2"

1/14/2014 5:53PM

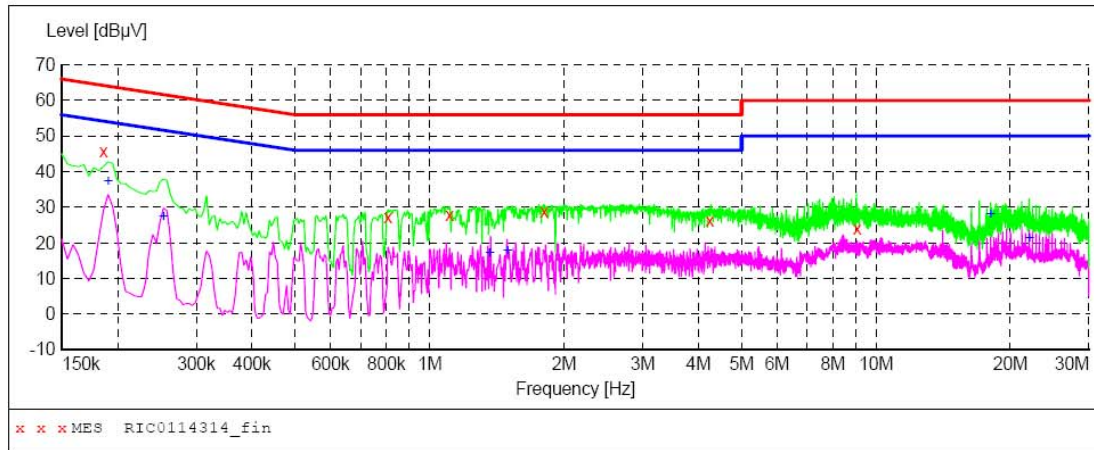
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.190500	44.60	10.4	54	9.4	AV	L1	GND
0.258000	30.10	10.5	52	21.4	AV	L1	GND
0.316500	27.10	10.6	50	22.7	AV	L1	GND
0.388500	23.40	10.5	48	24.7	AV	L1	GND
0.447000	20.10	10.4	47	26.8	AV	L1	GND
18.082500	27.60	10.7	50	22.4	AV	L1	GND

Shenzhen Huatongwei International Inspection CO.,Ltd

Voltage Mains Test FCC PART 15 CLASS B

EUT: SP213SFNW
 Manufacturer: RICOH
 Operating Condition: USB SCAN+WIFI PRINT
 Test Site: 3# SHIELDED ROOM
 Operator: ZHANGBAO.SUN
 Test Specification: AC 120V/60Hz
 Comment:
 Start of Test: 1/14/2014 / 5:54:14PM

SCAN TABLE: "Voltage (9K-30M) FIN"
 Short Description: 150K-30M Voltage



MEASUREMENT RESULT: "RIC0114314_fin"

1/14/2014 5:56PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.186000	45.60	10.4	64	18.6	QP	N	GND
0.807000	27.10	10.2	56	28.9	QP	N	GND
1.108500	27.90	10.3	56	28.1	QP	N	GND
1.806000	28.80	10.3	56	27.2	QP	N	GND
4.240500	26.10	10.3	56	29.9	QP	N	GND
9.078000	23.90	10.6	60	36.1	QP	N	GND

MEASUREMENT RESULT: "RIC0114314_fin2"

1/14/2014 5:56PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.190500	37.30	10.4	54	16.7	AV	N	GND
0.253500	27.40	10.5	52	24.2	AV	N	GND
1.365000	17.20	10.3	46	28.8	AV	N	GND
1.495500	17.80	10.3	46	28.2	AV	N	GND
18.082500	28.10	10.7	50	21.9	AV	N	GND
22.069500	21.50	10.8	50	28.5	AV	N	GND

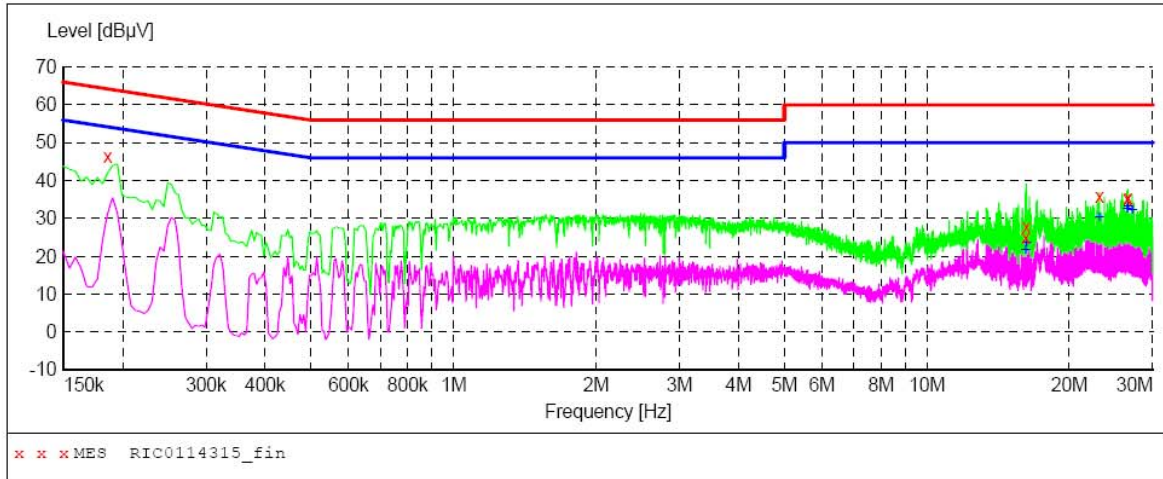
Shenzhen Huatongwei International Inspection CO.,Ltd

Voltage Mains Test FCC PART 15 CLASS B

EUT: SP213SFNW
 Manufacturer: RICOH
 Operating Condition: NIC PRINT+SCAN TO USB
 Test Site: 3# SHIELDED ROOM
 Operator: ZHANGBAO.SUN
 Test Specification: AC 120V/60Hz
 Comment:
 Start of Test: 1/14/2014 / 5:58:30PM

SCAN TABLE: "Voltage (9K-30M)FIN"

Short Description: 150K-30M Voltage



MEASUREMENT RESULT: "RIC0114315_fin"

1/14/2014 6:01PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.186000	46.20	10.4	64	18.0	QP	N	GND
16.170000	25.00	10.7	60	35.0	QP	N	GND
16.228500	27.80	10.7	60	32.2	QP	N	GND
23.127000	35.70	10.9	60	24.3	QP	N	GND
26.488500	35.30	11.0	60	24.7	QP	N	GND
26.610000	35.50	11.0	60	24.5	QP	N	GND

MEASUREMENT RESULT: "RIC0114315_fin2"

1/14/2014 6:01PM

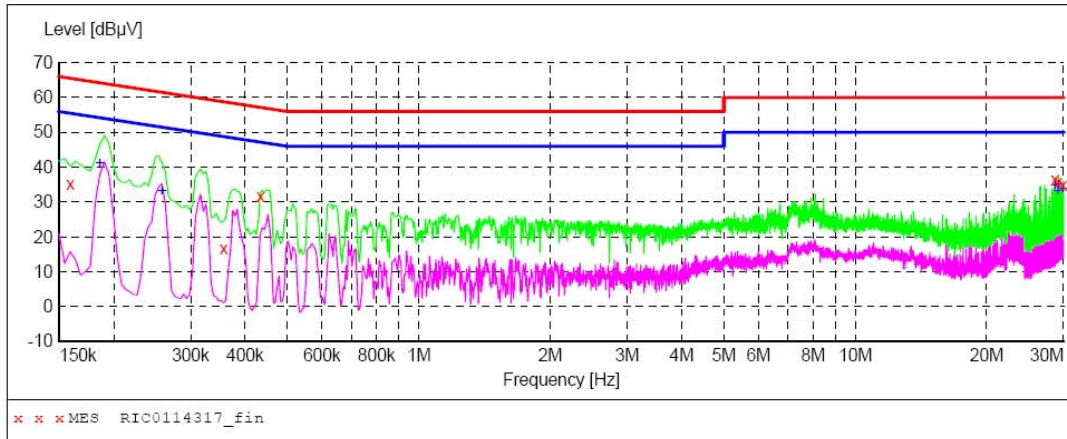
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
16.165500	21.90	10.7	50	28.1	AV	N	GND
16.228500	23.80	10.7	50	26.2	AV	N	GND
23.131500	30.50	10.9	50	19.5	AV	N	GND
26.488500	32.70	11.0	50	17.3	AV	N	GND
26.610000	33.30	11.0	50	16.7	AV	N	GND
27.159000	32.40	11.0	50	17.6	AV	N	GND

Shenzhen Huatongwei International Inspection CO.,Ltd

Voltage Mains Test FCC PART 15 CLASS B

EUT: SP213SFNW
 Manufacturer: RICOH
 Operating Condition: NIC PRINT+SCAN TO USB
 Test Site: 3# SHIELDED ROOM
 Operator: ZHANGBAO.SUN
 Test Specification: AC 120V/60Hz
 Comment:
 Start of Test: 1/14/2014 / 6:04:27PM

SCAN TABLE: "Voltage (9K-30M)FIN"
 Short Description: 150K-30M Voltage



MEASUREMENT RESULT: "RIC0114317_fin"

1/14/2014 6:06PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.159000	35.10	10.3	66	30.4	QP	L1	GND
0.357000	16.70	10.5	59	42.1	QP	L1	GND
0.433500	31.60	10.4	57	25.6	QP	L1	GND
28.684500	36.30	11.1	60	23.7	QP	L1	GND
29.238000	35.90	11.1	60	24.1	QP	L1	GND
29.908500	34.80	11.1	60	25.2	QP	L1	GND

MEASUREMENT RESULT: "RIC0114317_fin2"

1/14/2014 6:06PM

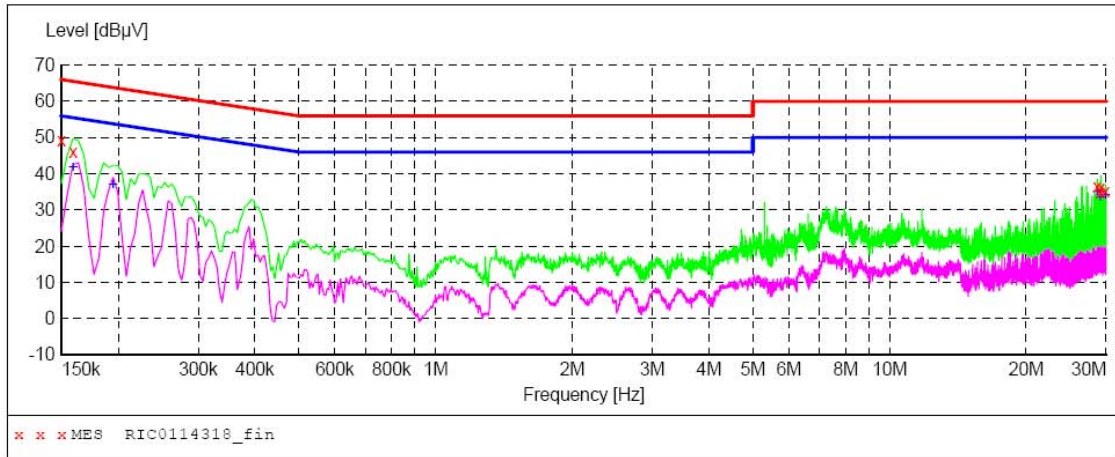
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.186000	41.10	10.4	54	13.1	AV	L1	GND
0.258000	33.10	10.5	52	18.4	AV	L1	GND
28.684500	34.90	11.1	50	15.1	AV	L1	GND
29.112000	33.40	11.1	50	16.6	AV	L1	GND
29.238000	35.00	11.1	50	15.0	AV	L1	GND
29.908500	33.80	11.1	50	16.2	AV	L1	GND

Shenzhen Huatongwei International Inspection CO.,Ltd

Voltage Mains Test FCC PART 15 CLASS B

EUT: SP213SFNW
 Manufacturer: RICOH
 Operating Condition: TX
 Test Site: 3# SHIELDED ROOM
 Operator: ZHANGBAO.SUN
 Test Specification: AC 120V/60Hz
 Comment:
 Start of Test: 1/14/2014 / 6:08:56PM

SCAN TABLE: "Voltage (9K-30M)FIN"
 Short Description: 150K-30M Voltage



MEASUREMENT RESULT: "RIC0114318_fin"

1/14/2014 6:11PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.150000	49.30	10.3	66	16.7	QP	L1	GND
0.159000	46.10	10.3	66	19.4	QP	L1	GND
28.684500	36.40	11.1	60	23.6	QP	L1	GND
29.112000	34.80	11.1	60	25.2	QP	L1	GND
29.238000	36.20	11.1	60	23.8	QP	L1	GND
29.908500	35.10	11.1	60	24.9	QP	L1	GND

MEASUREMENT RESULT: "RIC0114318_fin2"

1/14/2014 6:11PM

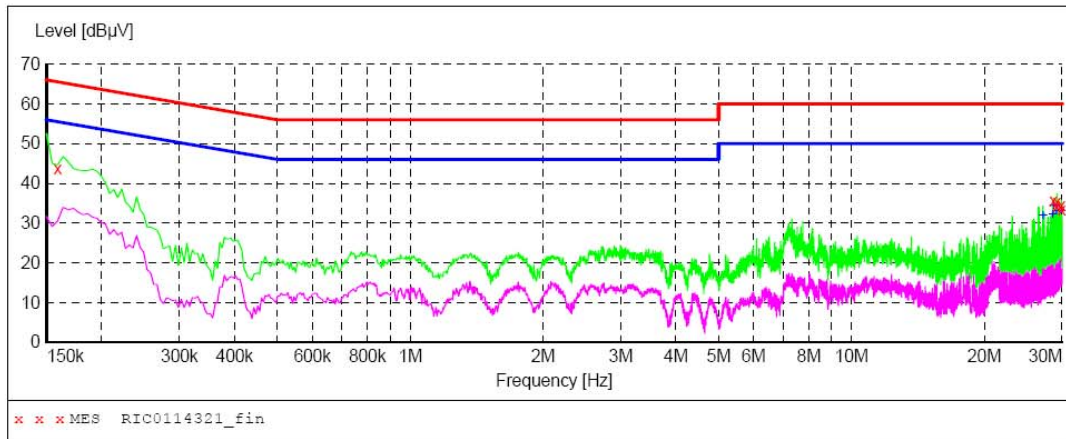
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.159000	41.80	10.3	56	13.7	AV	L1	GND
0.195000	37.10	10.4	54	16.7	AV	L1	GND
28.684500	35.30	11.1	50	14.7	AV	L1	GND
29.112000	33.70	11.1	50	16.3	AV	L1	GND
29.238000	35.30	11.1	50	14.7	AV	L1	GND
29.908500	34.20	11.1	50	15.8	AV	L1	GND

Shenzhen Huatongwei International Inspection CO.,Ltd

Voltage Mains Test FCC PART 15 CLASS B

EUT: SP213SFNW
 Manufacturer: RICOH
 Operating Condition: TX
 Test Site: 3# SHIELDED ROOM
 Operator: ZHANGBAO.SUN
 Test Specification: AC 120V/60Hz
 Comment:
 Start of Test: 1/14/2014 / 6:17:42PM

SCAN TABLE: "Voltage (9K-30M)FIN"
 Short Description: 150K-30M Voltage



MEASUREMENT RESULT: "RIC0114321_fin"

1/14/2014 6:20PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.159000	43.80	10.3	66	21.7	QP	N	GND
28.684500	35.50	11.1	60	24.5	QP	N	GND
29.112000	34.10	11.1	60	25.9	QP	N	GND
29.238000	35.40	11.1	60	24.6	QP	N	GND
29.908500	34.40	11.1	60	25.6	QP	N	GND
29.967000	33.40	11.1	60	26.6	QP	N	GND

MEASUREMENT RESULT: "RIC0114321_fin2"

1/14/2014 6:20PM

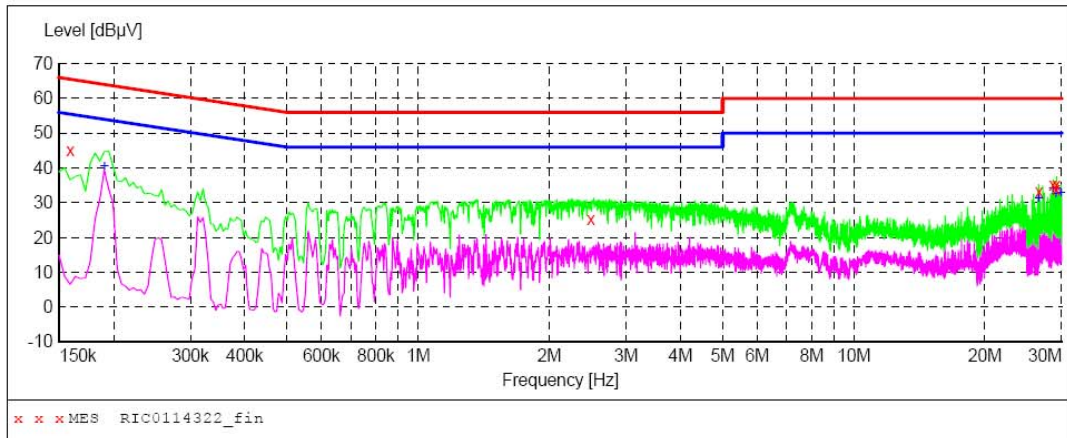
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
27.159000	32.10	11.0	50	17.9	AV	N	GND
28.563000	32.20	11.1	50	17.8	AV	N	GND
28.684500	34.50	11.1	50	15.5	AV	N	GND
29.112000	33.10	11.1	50	16.9	AV	N	GND
29.238000	34.50	11.1	50	15.5	AV	N	GND
29.908500	33.20	11.1	50	16.8	AV	N	GND

Shenzhen Huatongwei International Inspection CO.,Ltd

Voltage Mains Test FCC PART 15 CLASS B

EUT: SP213SFNW
 Manufacturer: RICOH
 Operating Condition: RX
 Test Site: 3# SHIELDED ROOM
 Operator: ZHANGBAO.SUN
 Test Specification: AC 120V/60Hz
 Comment:
 Start of Test: 1/14/2014 / 6:21:18PM

SCAN TABLE: "Voltage (9K-30M)FIN"
 Short Description: 150K-30M Voltage



MEASUREMENT RESULT: "RICO114322_fin"

1/14/2014 6:23PM

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.159000	45.20	10.3	66	20.3	QP	N	GND
2.490000	25.40	10.3	56	30.6	QP	N	GND
26.610000	33.30	11.0	60	26.7	QP	N	GND
28.684500	35.30	11.1	60	24.7	QP	N	GND
29.112000	33.80	11.1	60	26.2	QP	N	GND
29.238000	35.10	11.1	60	24.9	QP	N	GND

MEASUREMENT RESULT: "RICO114322_fin2"

1/14/2014 6:23PM

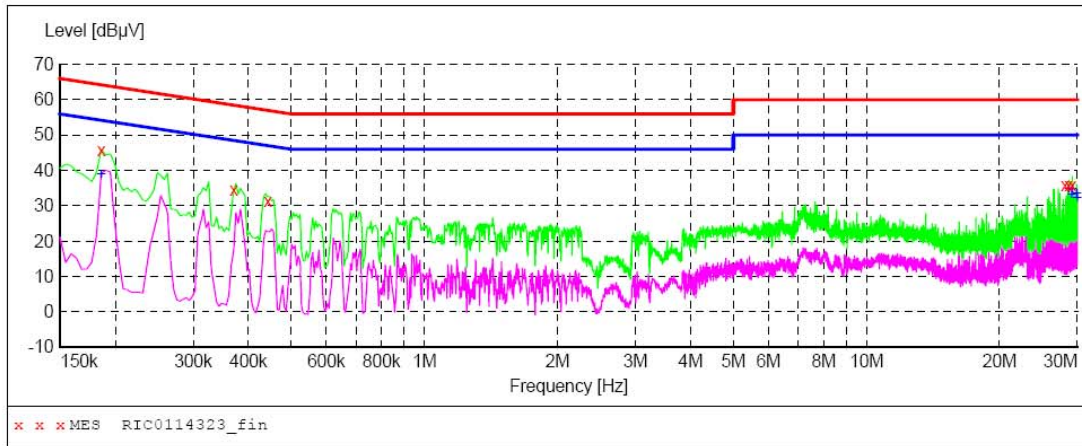
Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.190500	40.70	10.4	54	13.3	AV	N	GND
26.610000	31.40	11.0	50	18.6	AV	N	GND
28.684500	34.10	11.1	50	15.9	AV	N	GND
29.112000	32.60	11.1	50	17.4	AV	N	GND
29.238000	34.10	11.1	50	15.9	AV	N	GND
29.908500	32.90	11.1	50	17.1	AV	N	GND

Shenzhen Huatongwei International Inspection CO.,Ltd

Voltage Mains Test FCC PART 15 CLASS B

EUT: SP213SFNW
 Manufacturer: RICOH
 Operating Condition: RX
 Test Site: 3# SHIELDED ROOM
 Operator: ZHANGBAO.SUN
 Test Specification: AC 120V/60Hz
 Comment:
 Start of Test: 1/14/2014 / 6:24:14PM

SCAN TABLE: "Voltage (9K-30M) FIN"
 Short Description: 150K-30M Voltage



MEASUREMENT RESULT: "RIC0114323_fin"

1/14/2014 6:26PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.186000	45.70	10.4	64	18.5	QP	L1	GND
0.370500	34.50	10.5	59	24.0	QP	L1	GND
0.442500	31.50	10.4	57	25.5	QP	L1	GND
28.544500	35.90	11.1	60	24.1	QP	L1	GND
28.684500	35.90	11.1	60	24.1	QP	L1	GND
29.238000	35.70	11.1	60	24.3	QP	L1	GND

MEASUREMENT RESULT: "RIC0114323_fin2"

1/14/2014 6:26PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.186000	39.10	10.4	54	15.1	AV	L1	GND
28.684500	34.70	11.1	50	15.3	AV	L1	GND
29.112000	33.20	11.1	50	16.8	AV	L1	GND
29.238000	34.80	11.1	50	15.2	AV	L1	GND
29.908500	33.50	11.1	50	16.5	AV	L1	GND
29.967000	32.30	11.1	50	17.7	AV	L1	GND

5. External and Internal Photos of the EUT

5.1. External photos of the EUT

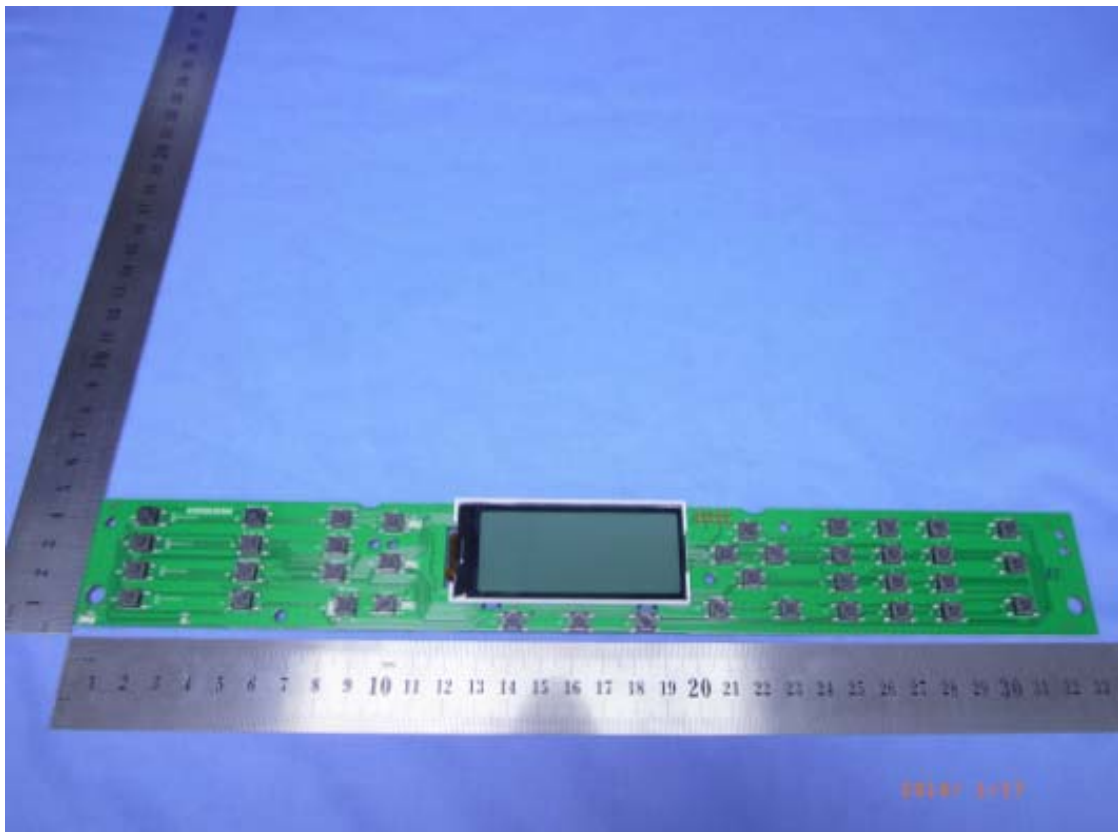


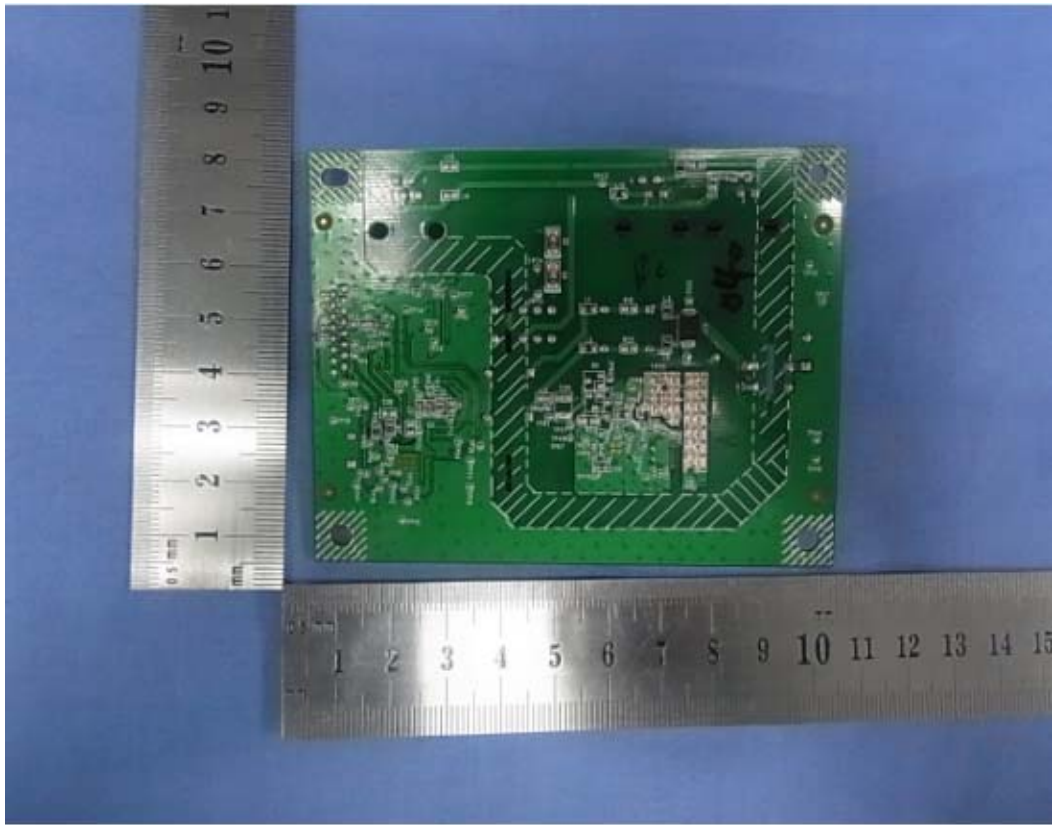


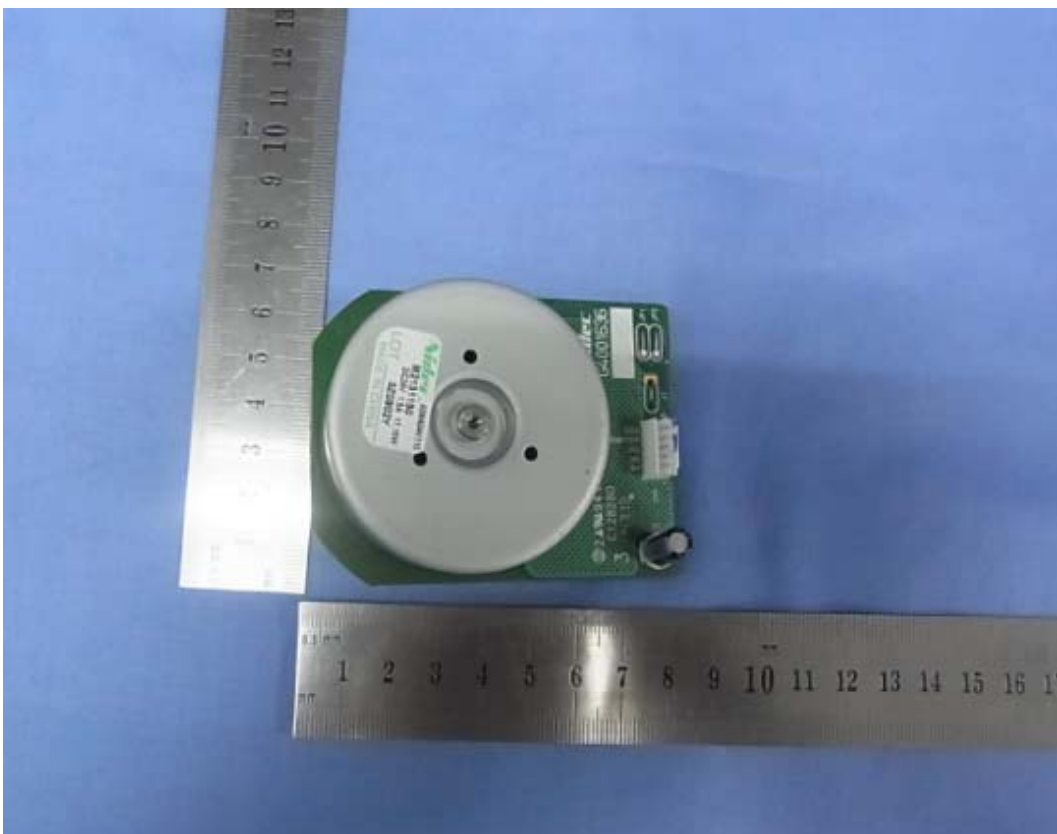
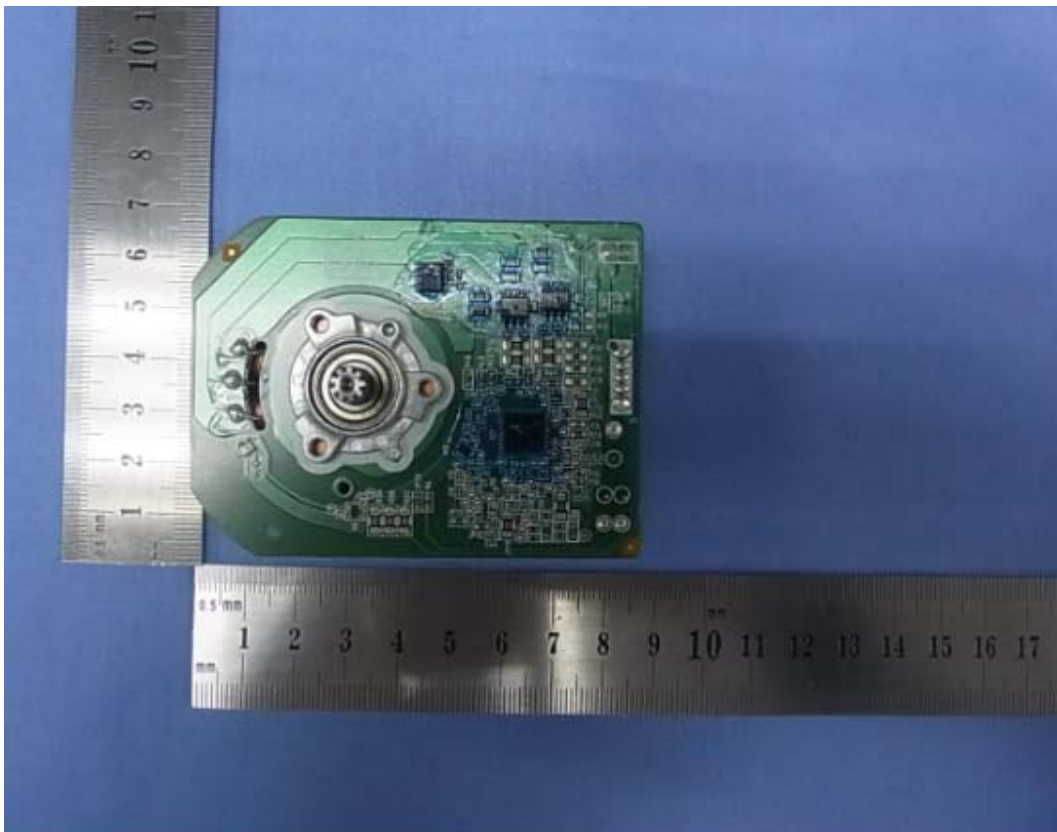


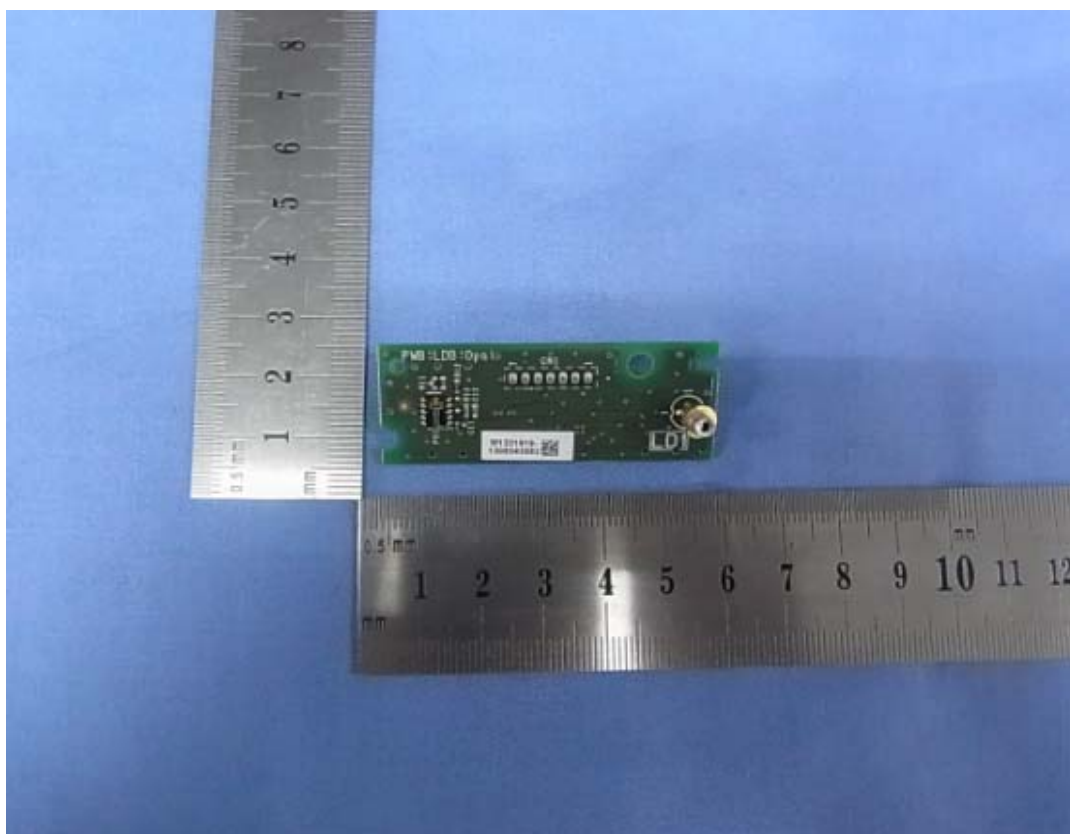
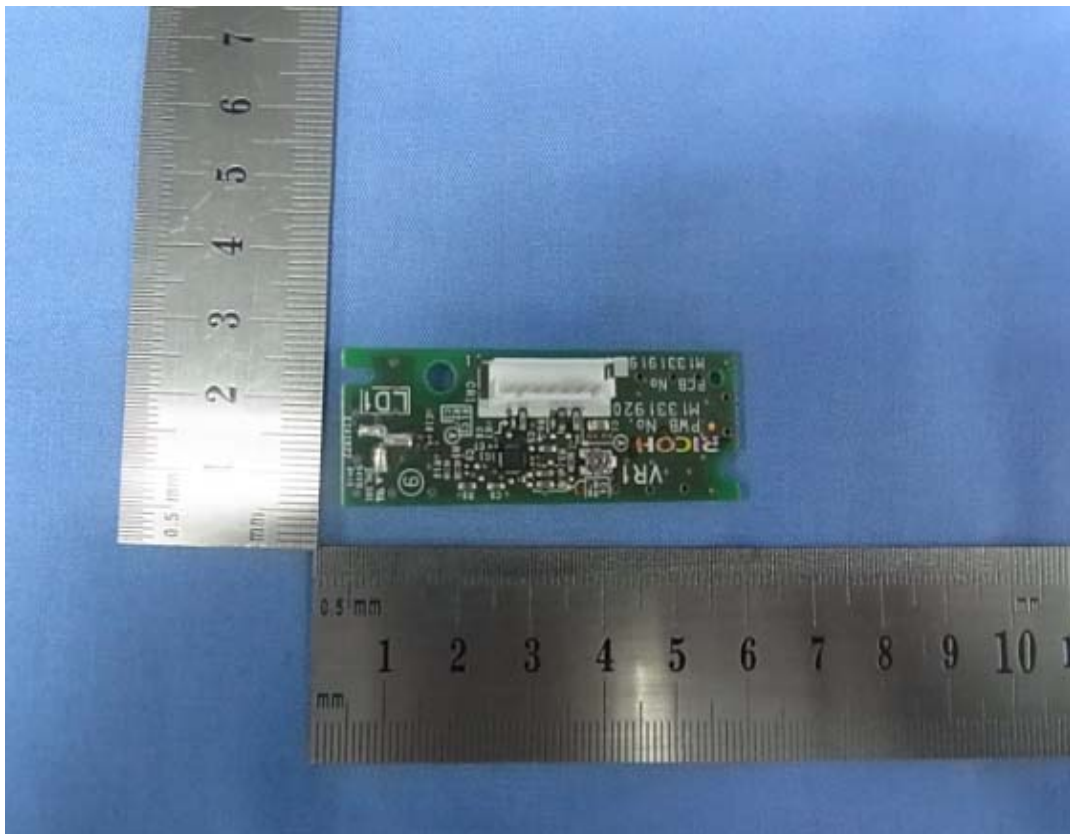
5.2. Internal photos of the EUT

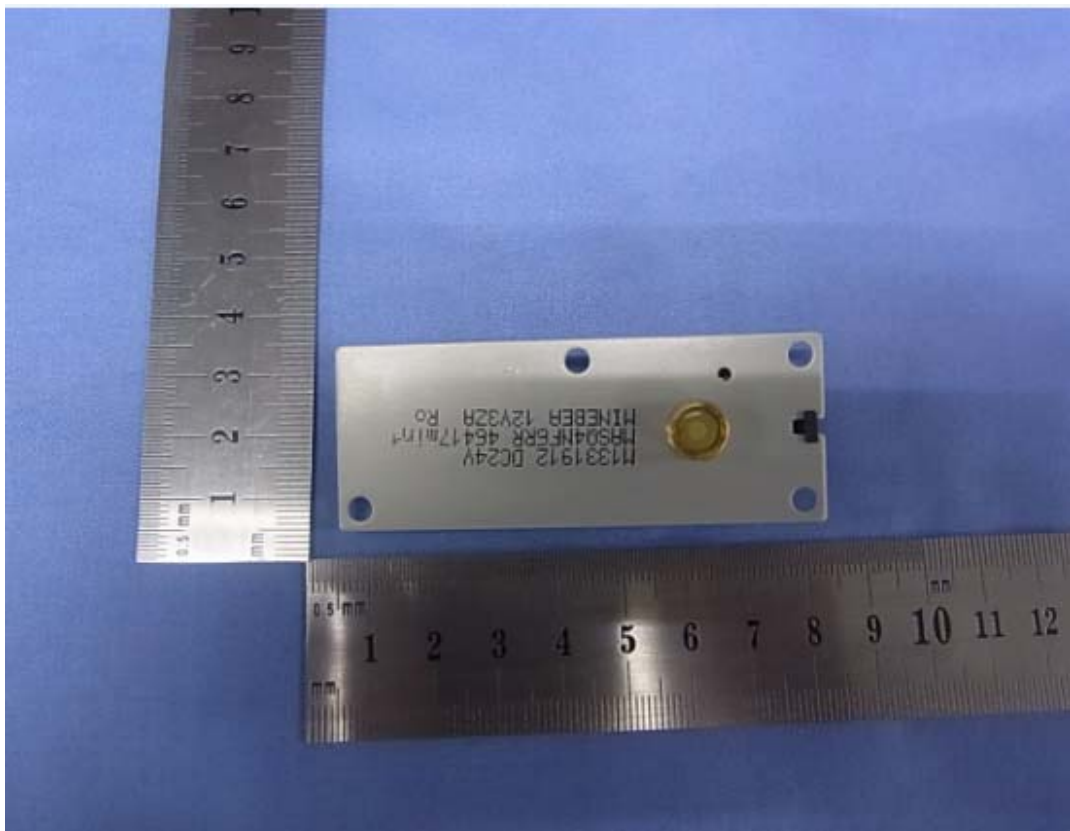
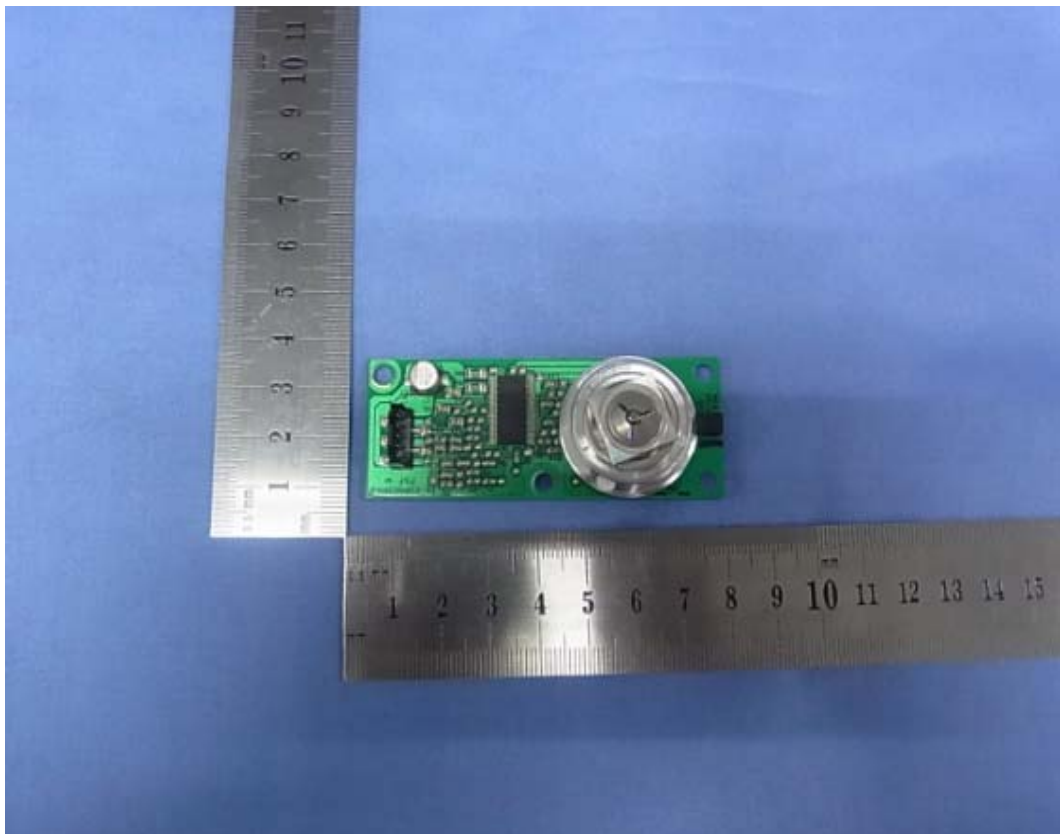




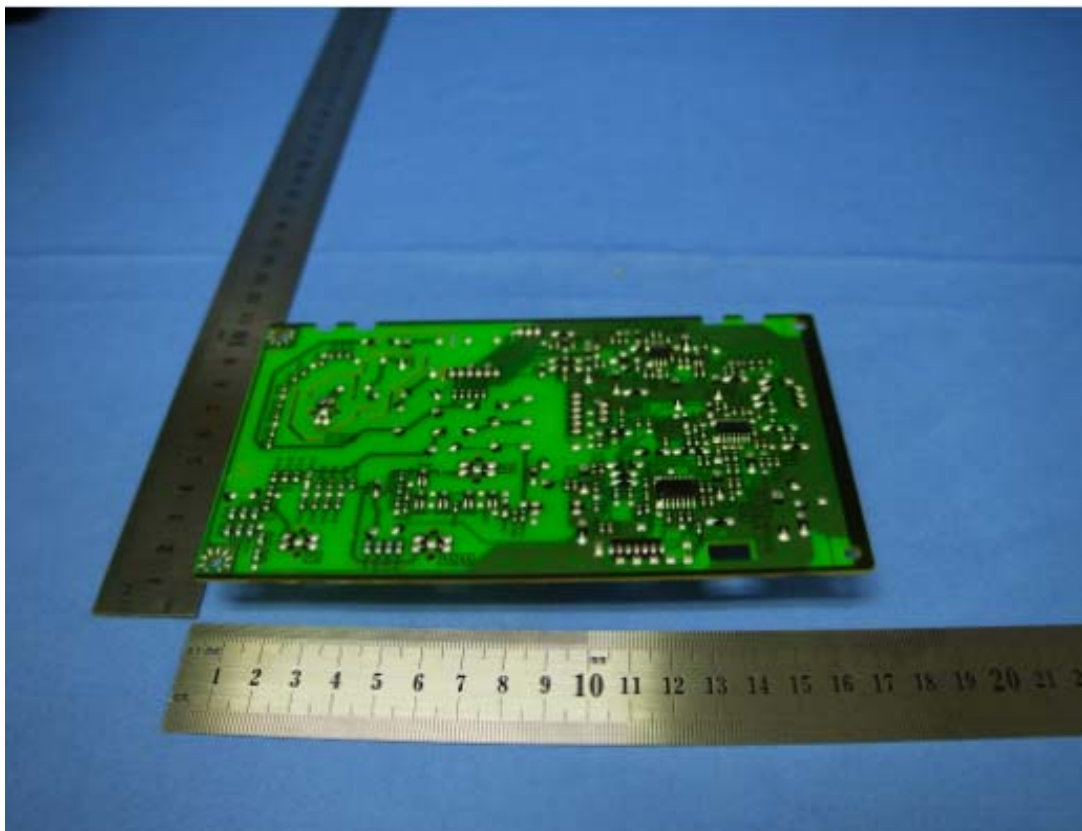
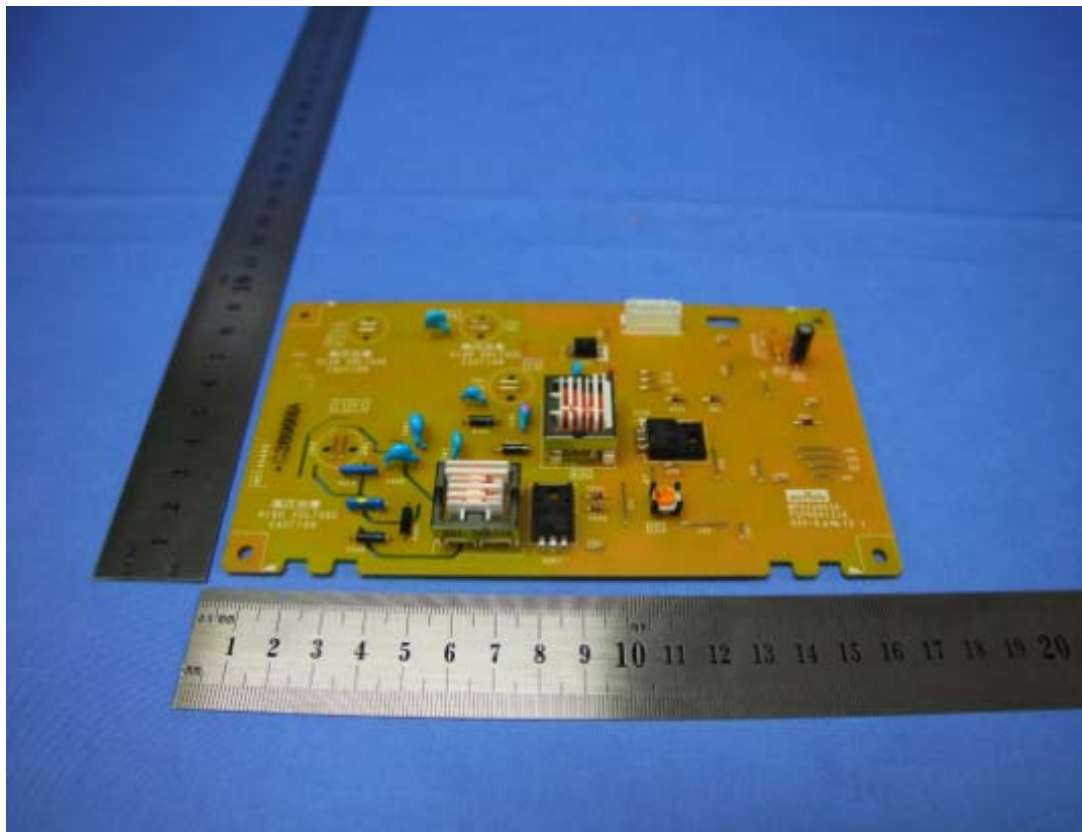


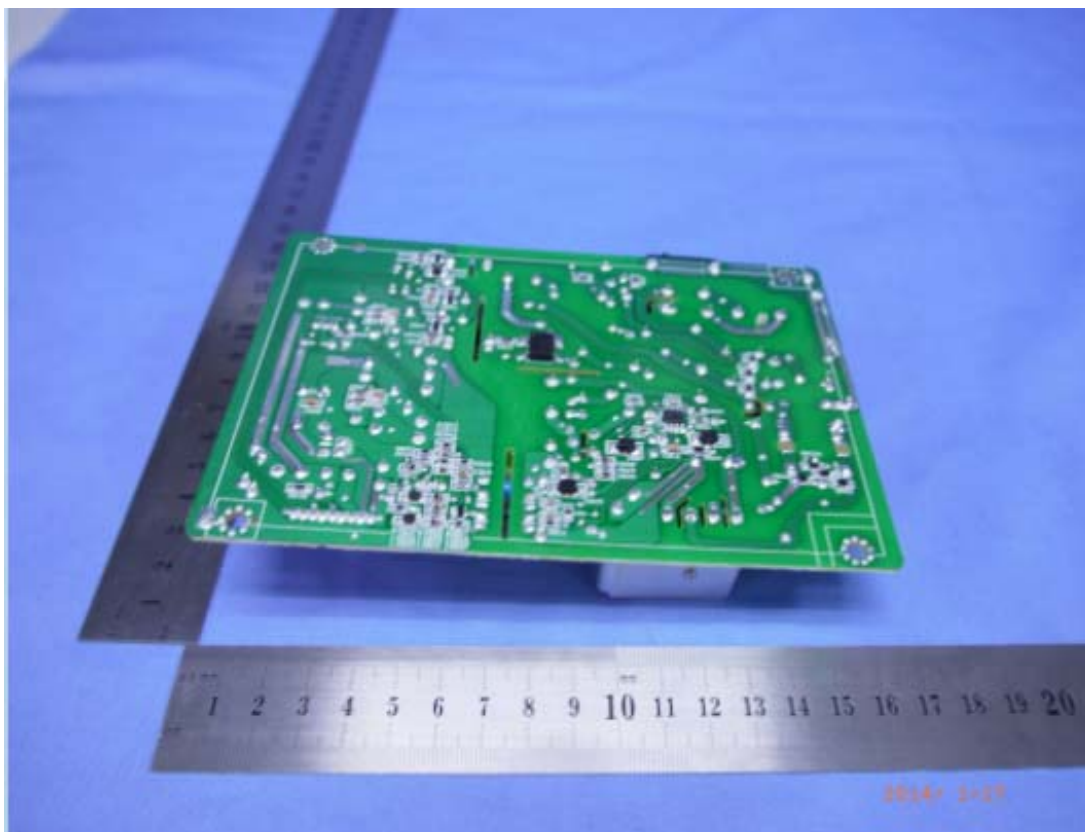
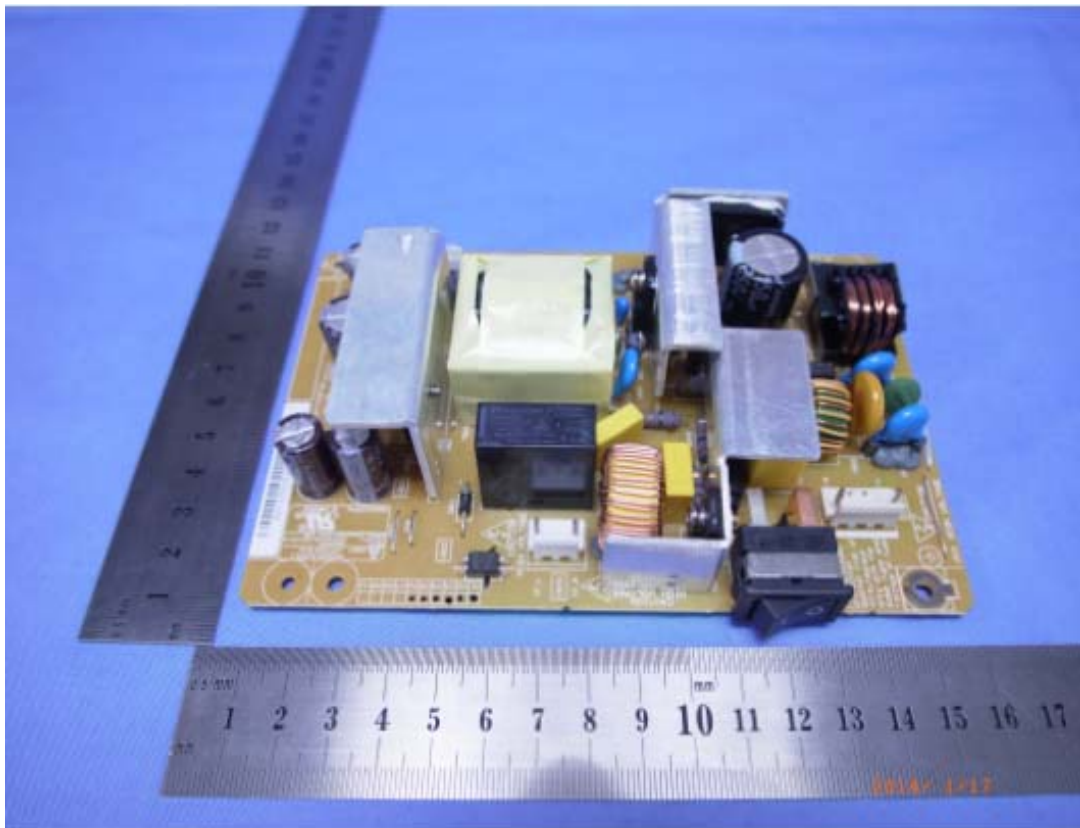


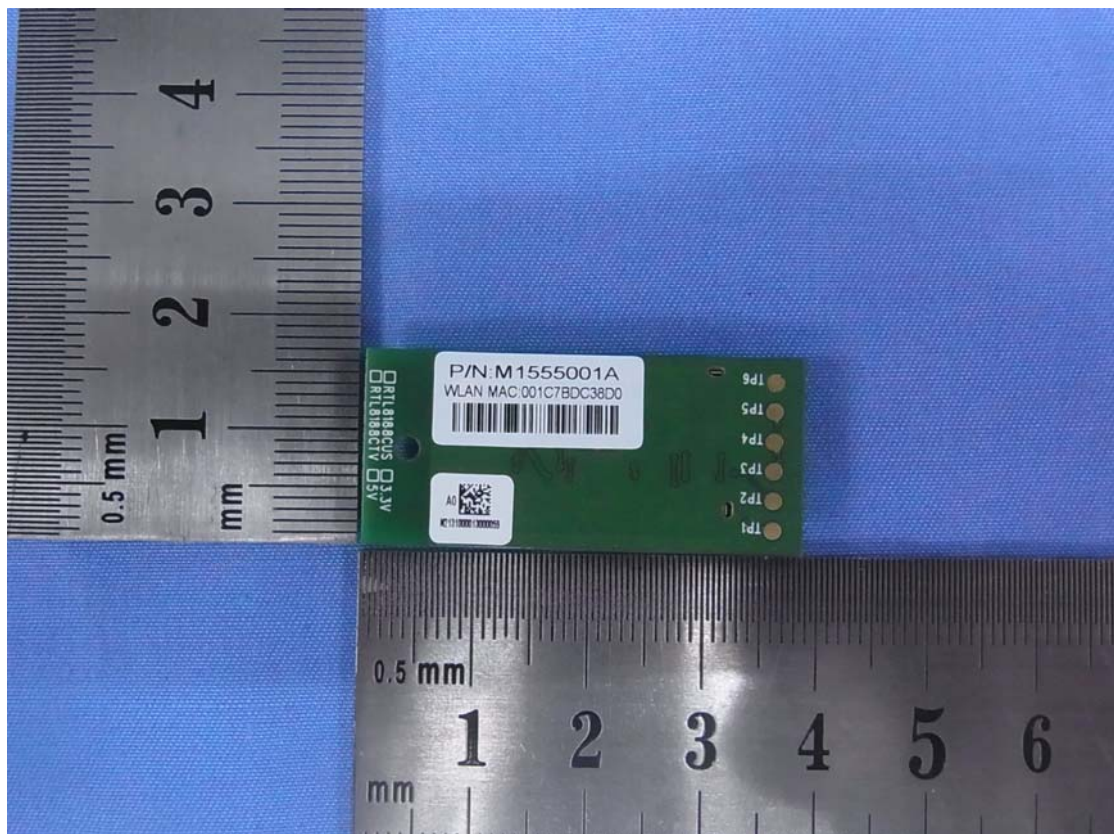
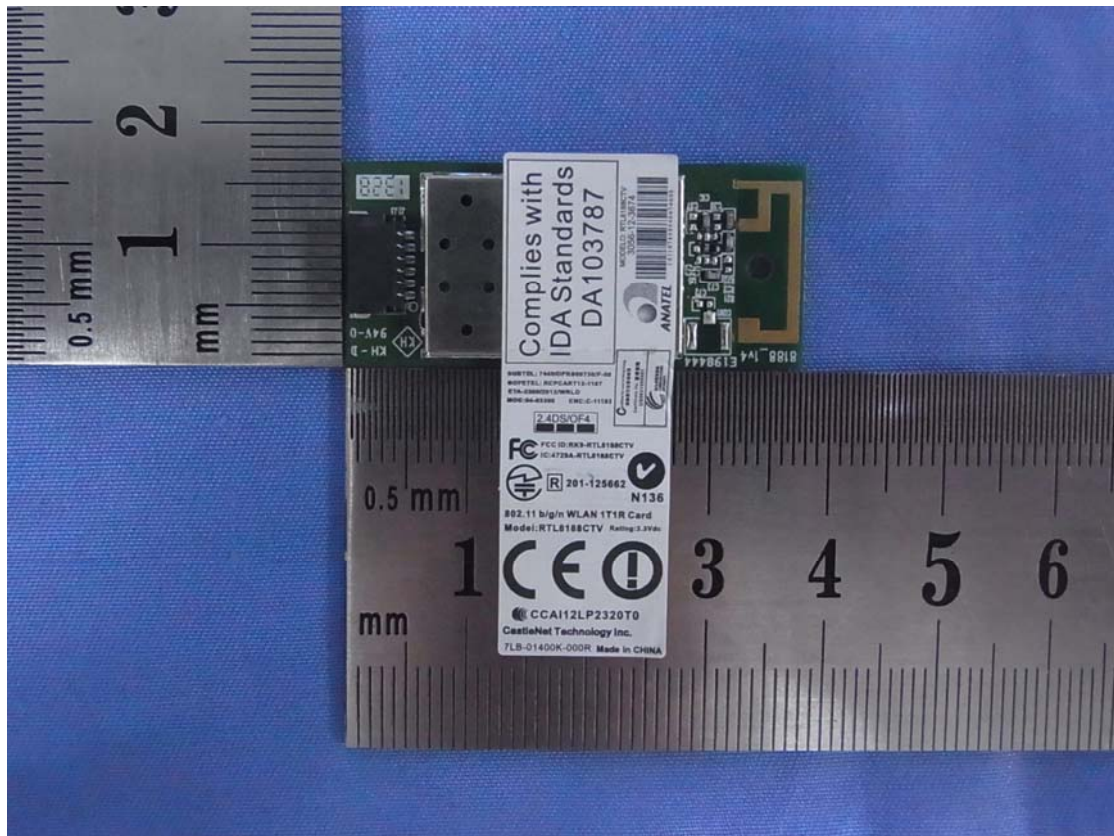












.....End of Report.....