



## TEST REPORT

### FCC Rules and Regulations Part 15 Subpart B Class B 2008

**Report Reference No.** .....: **TRE09090026**

**FCC ID** .....: **BBP-PRSP34101**

Compiled by

( position+printed name+signature)...: File administrator May Hu

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Approved by

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Date of issue .....: Sept 22, 2009

**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   
 Partial application of Harmonised standards   
 Other standard testing methods

**Applicant's name** .....: **Ricoh Company Ltd**

Address.....: 810, Shimoimaizum, Ebina-Shi, Kanagawa-ken, 243-0460 Japan

**Test specification:**

Standard .....: **FCC Rules and Regulations Part 15 Subpart B Class B 2008**

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** .....: Laser Printer

Trade Mark .....: /

Manufacturer .....: RICOH COMPONENTS ASIA (SHEN ZHEN)CO.,LTD

Model/Type reference.....: Aficio SP 3400N, SP 3400N/Aficio SP 3400N, Aficio SP 3410DN, SP 3410DN/Aficio SP 3410DN

Listed Model.....: /

Ratings.....: 120V 60Hz 10A 850W

Result.....: **Positive**

# EMC -- TEST REPORT

<b>Test Report No. :</b> <b>TRE09090026</b>	Sept 22, 2009 <hr style="border: 0; border-top: 1px solid black;"/> Date of issue
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Equipment under Test           :     Laser Printer

Model / Type                    :     Aficio SP 3400N, SP 3400N/Aficio SP 3400N, Aficio SP  
3410DN, SP 3410DN/Aficio SP 3410DN

Listed Model                    :     /

**Applicant**                     :     Ricoh Company Ltd

Address                         :     810, Shimoimaizum, Ebina-Shi, Kanagawa-ken, 243-0460  
Japan

**Manufacturer**               :     RICOH COMPONENTS ASIA (SHEN ZHEN)CO.,LTD

Address                         :     Block 2 RICOH industry group, Hao Ye Road, Heping  
Community, Fuyong Town, Baoan Distrist, Shenzhen,  
Guangdong, China 518026

<b>Test Result</b> according to the standards on page 4:	<b>Positive</b>
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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:

[FCC Rules and Regulations Part 15 Subpart B Class B 2008](#) Radio Frequency Devices – Unintentional Radiators – Limits and methods of measurement

# 2. SUMMARY

## 2.1. General Remarks:

Date of receipt of test sample : Sept 15, 2009

Testing commenced on : Sept 15, 2009

Testing concluded on : Sept 22, 2009

## 2.2. Equipment Under Test

### Power supply system utilised

- Power supply voltage :
  - 230V / 50 Hz
  - 115V / 60Hz
  - 12 V DC
  - 24 V DC
  - Other (specified in blank below)

AC 120V/60Hz

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

The EUT is a Laser Printer, models Aficio SP 3400N, SP 3400N/Aficio SP 3400N were similar to Models Aficio SP 3410DN, SP 3410DN/Aficio SP 3410DN, except Models Aficio SP 3410DN, SP 3410DN/Aficio SP 3410DN employed additional Duplex motor for duplex side printing function.

Series number: Prototype

## 2.4. EUT operation mode:

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

Test program (customer specific)

Emissions tests.....: According to FCC Rules and Regulations Part 15 Subpart B Class B 2008 and ANSI 63.4 2003, searching for the highest disturbance.

## 2.5. EUT configuration

The following peripheral devices and interface cables were connected during the measurement:

- - supplied by the manufacturer

- - supplied by the lab

- Option for EUT

Manufacturer : RICOH

M/N : Paper Feed Unit TK1080

S/N : M3551700001

- Notebook

Manufacturer : Lenovo

M/N : ThinkPad T400

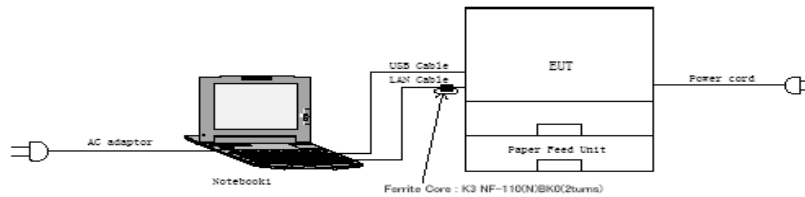
S/N : L3-ACC2K 08/10

- Adaptor

Manufacturer : ASTEC

Model No. : 92P1103

Photos of the EUT configuration:



## 2.6. Cables used

Cable Name	Length	Shielded	Ferrite	Maker
AC cable	2m	No	No	Volex
NIC Cable(LAN Cable)	3m	No	K3 NF-110(N)BK0	Black Box
USB cable	2m	Yes	No	RICOH

### **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: March 30, 2009. Valid time is until March 29, 2012.

##### **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 from Aug 24, 2005 to Oct 31, 2009.

##### **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 Jul 01, 2009.

##### **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 February 13, 2011.

##### **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.: R-2484. Date of Registration: December 20, 2006. Valid time is until December 19, 2009.

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: December 20, 2006. Valid time is until December 19, 2009.

##### **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 09 July, 2010.

### 3.3. Environmental conditions

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

Temperature:	<u>15-35 ° C</u>
Humidity:	<u>30-60 %</u>
Atmospheric pressure:	<u>950-1050mbar</u>

### 3.4. Test Description

Emission Measurement		
Radiated Emission	FCC Rules and Regulations Part 15 Subpart B Class B 2008	PASS
Conducted Disturbance	FCC Rules and Regulations Part 15 Subpart B Class B 2008	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	4.22dB	(1)
Radiated Emission	1G~2G	4.35dB	(1)
Conducted Disturbance	0.15~30 MHz	3.29dB	(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	2009/05
2	EMI TEST RECEIVER	ROHDE & SCHWARZ	ESI 26	100009	2008/10
3	RF TEST PANEL	ROHDE & SCHWARZ	TS / RSP	335015/ 0017	2008/10
4	TURNTABLE	ETS	2088	2149	2008/10
5	ANTENNA MAST	ETS	2075	2346	2008/10
6	EMI TEST SOFTWARE	ROHDE & SCHWARZ	ESK1	N/A	2008/10
7	Double-Ridged-Waveguide Antenna Horn	ROHDE & SCHWARZ	HF906	100039	2008/10
8	Semi-anechoic chamber	ETS-LINDGREN	AJ 593 HTW	N/A	2009/05

Conducted Disturbance					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	EMI Test Receiver	ROHDE & SCHWARZ	ESCS30	100038	2008/10
2	Artificial Mains	ROHDE & SCHWARZ	ESH2-Z5	100028	2008/10
3	Pulse Limiter	ROHDE & SCHWARZ	ESH3-Z2	100044	2008/10
4	EMI Test Software	ROHDE & SCHWARZ	ESK1	N/A	2008/10
5	3# shielded room	ETS-LINDGREN	RFD-100	2406	N/A



## **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**

<b>Frequency (MHz)</b>	<b>Distance (Meters)</b>	<b>Field Strengths Limits (dB<math>\mu</math>V/m)</b>
30 ~ 88	3	40
88~216	3	43.5
216 ~ 960	3	46
Above 960	3	74

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.

#### **4.1.3. Description of the test set-up**

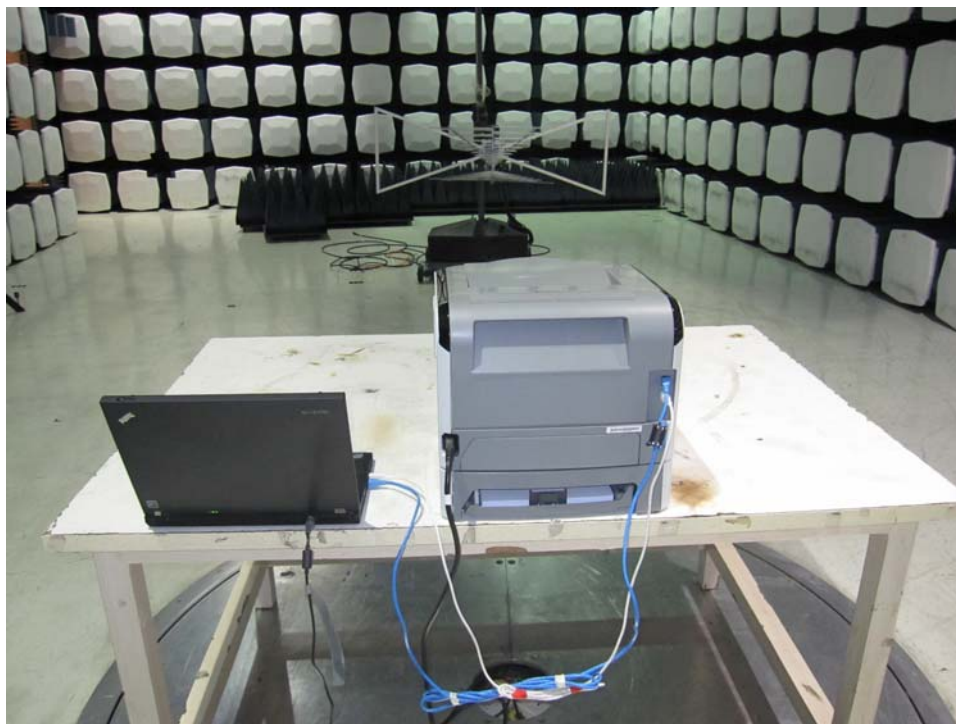
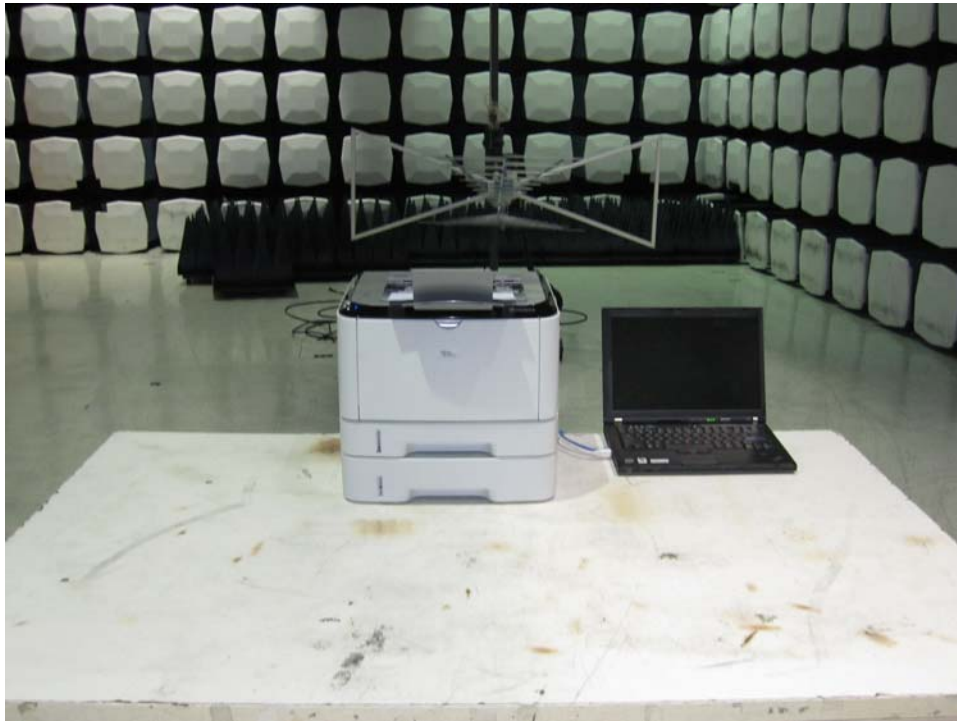
##### **4.1.3.1. Operating Condition**

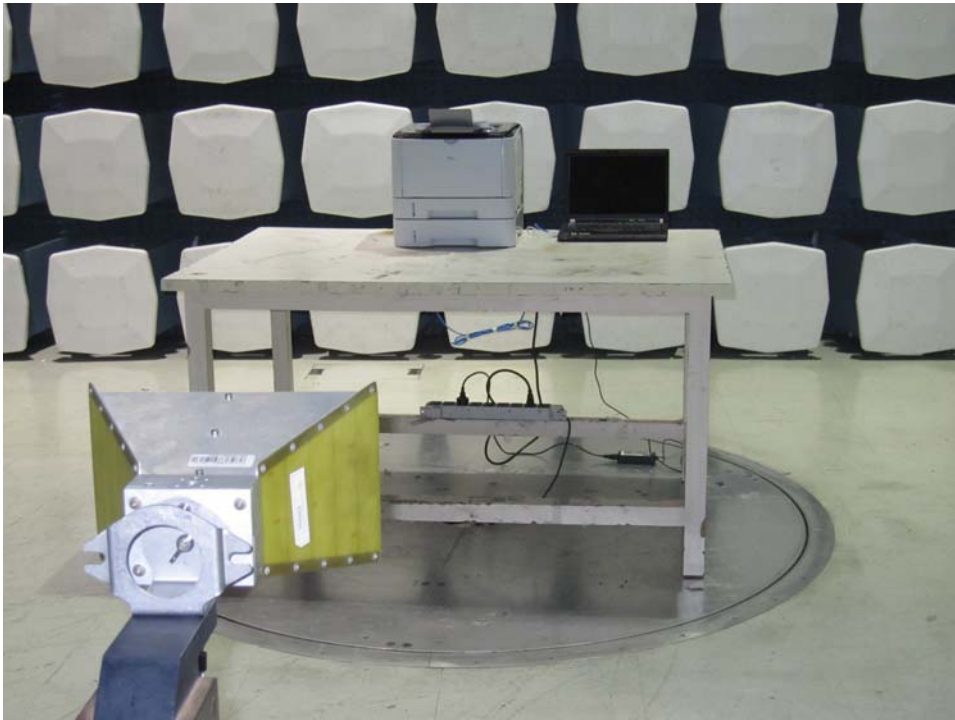
The EUT is set to work that shall be carried out respectively standby, USB print and NIC print modes during the test and the results of the maximum emanation are recorded.

##### **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: 120KHz

Frequency Range: 30MHz to 1000MHz

Band Width: 1MHz

Frequency Range: 1G-18G

**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)

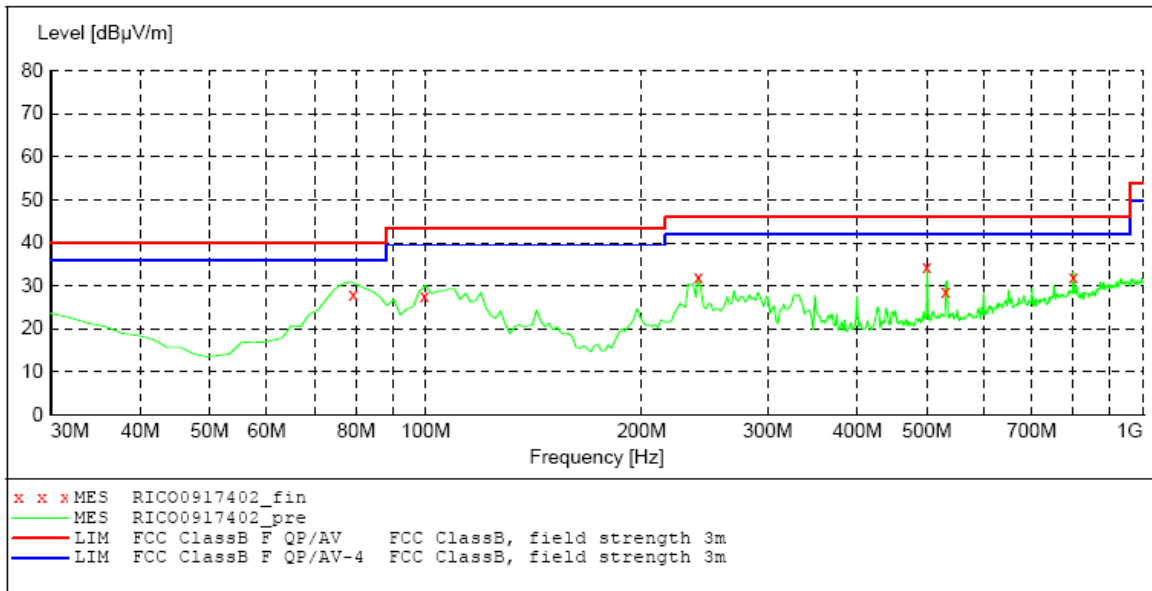
**SHENZHEN HUATONGWEI INTERNATIONAL INSPECTION CO., LTD**

**RADIATED EMISSION FCC PART 15 B**

EUT: Laser Printer M/N:Aficio SP3410DN  
 Manufacturer: RICOH COMPONENTS ASIA (SHEN ZHEN) CO., LTD  
 Operating Condition: STANDBY  
 Test Site: 3M CHAMBER  
 Operator: IVAN  
 Test Specification: AC 120V/60Hz  
 Comment:  
 Start of Test: 9/17/2009 / 7:11:19PM

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

Short Description:	Field Strength(30M-1G)		Detector	Meas. Time	IF Bandw.	Transducer
Start	Stop	Step				
30.0 MHz	1.0 GHz	60.0 kHz	QuasiPeak	1.0 s	120 kHz	HL562 09



**MEASUREMENT RESULT: "RICO0917402\_fin"**

9/17/2009 7:22PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
79.320000	27.80	-15.6	40.0	12.2	QP	350.0	202.00	HORIZONTAL
99.600000	27.50	-13.8	43.5	16.0	QP	346.0	178.00	HORIZONTAL
240.000000	32.10	-12.9	46.0	13.9	QP	130.0	211.00	HORIZONTAL
499.980000	34.30	-6.7	46.0	11.7	QP	100.0	172.00	HORIZONTAL
531.120000	28.60	-5.8	46.0	17.4	QP	100.0	33.00	HORIZONTAL
799.980000	32.00	-0.8	46.0	14.0	QP	100.0	207.00	HORIZONTAL

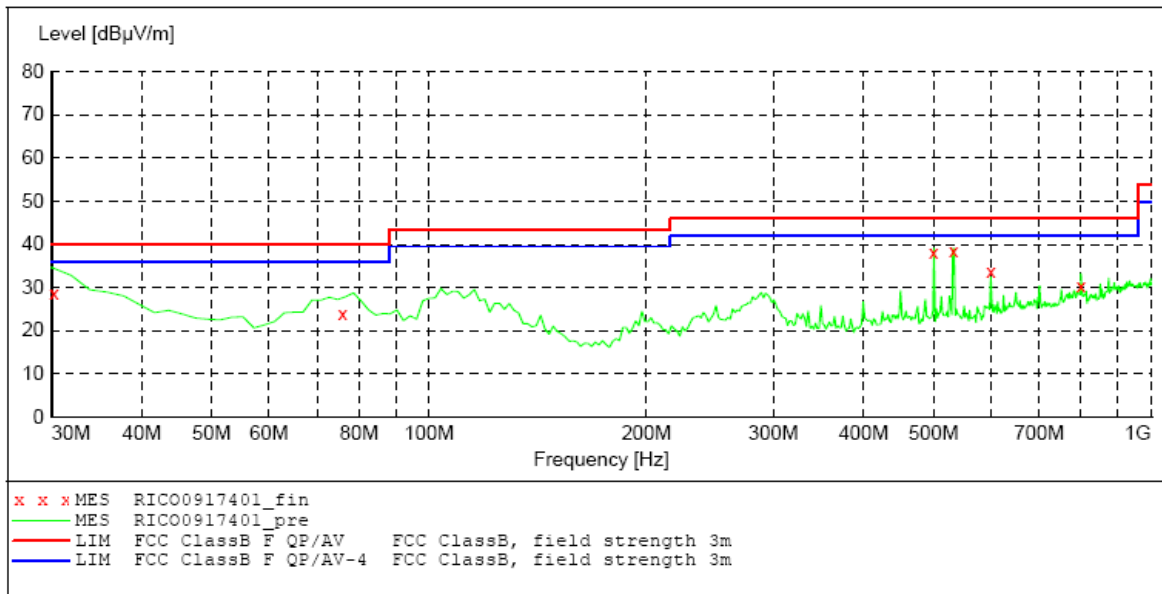
**SHENZHEN HUATONGWEI INTERNATIONAL INSPECTION CO.,LTD**

**RADIATED EMISSION FCC PART 15 B**

EUT: Laser Printer M/N:Aficio SP3410DN  
 Manufacturer: RICOH COMPONENTS ASIA(SHEN ZHEN)CO.,LTD  
 Operating Condition: STANDBY  
 Test Site: 3M CHAMBER  
 Operator: IVAN  
 Test Specification: AC 120V/60Hz  
 Comment:  
 Start of Test: 9/17/2009 / 7:01:01PM

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

Short Description:		Field Strength(30M-1G)				
Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer
Frequency	Frequency	Width				
30.0 MHz	1.0 GHz	60.0 kHz	QuasiPeak	1.0 s	120 kHz	HL562 09



**MEASUREMENT RESULT: "RICO0917401\_fin"**

9/17/2009 7:10PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
30.240000	28.70	-4.9	40.0	11.3	QP	100.0	92.00	VERTICAL
75.900000	23.80	-16.2	40.0	16.2	QP	150.0	179.00	VERTICAL
499.980000	38.00	-6.7	46.0	8.0	QP	100.0	150.00	VERTICAL
532.860000	38.30	-5.8	46.0	7.7	QP	100.0	46.00	VERTICAL
600.000000	33.80	-5.3	46.0	12.2	QP	150.0	151.00	VERTICAL
800.040000	30.20	-0.8	46.0	15.8	QP	100.0	192.00	VERTICAL

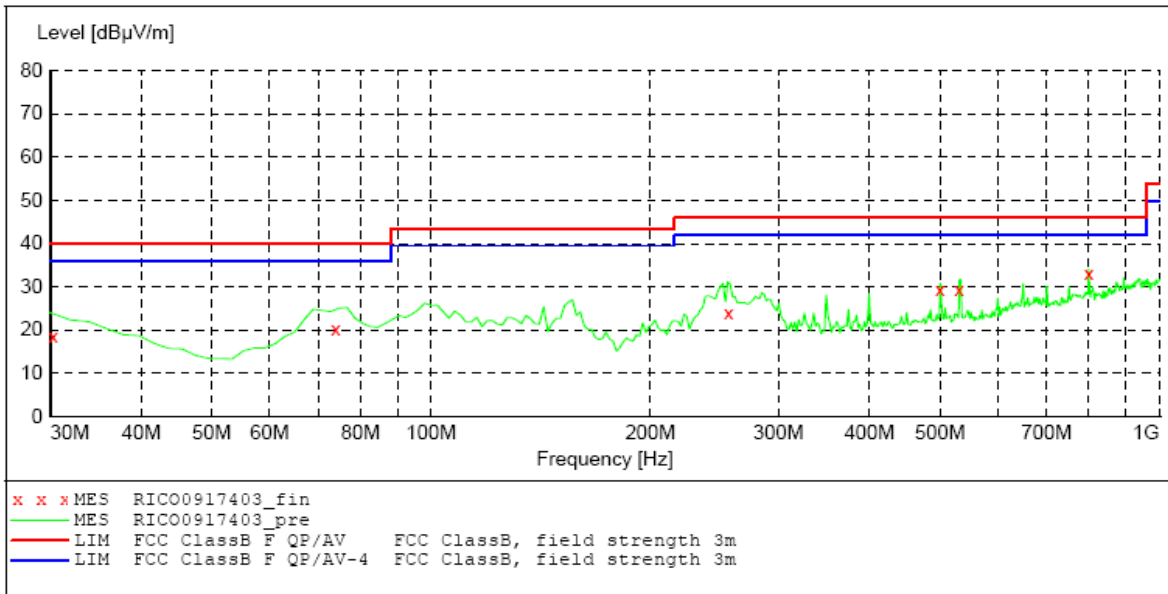
**SHENZHEN HUATONGWEI INTERNATIONAL INSPECTION CO.,LTD**

**RADIATED EMISSION FCC PART 15 B**

EUT: Laser Printer M/N:Aficio SP3410DN  
 Manufacturer: RICOH COMPONENTS ASIA(SHEN ZHEN)CO.,LTD  
 Operating Condition: USB PRINT  
 Test Site: 3M CHAMBER  
 Operator: IVAN  
 Test Specification: AC 120V/60Hz  
 Comment:  
 Start of Test: 9/17/2009 / 7:25:48PM

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

Start Frequency	Stop Frequency	Step Width	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 09



**MEASUREMENT RESULT: "RICO0917403\_fin"**

9/17/2009 7:34PM

Frequency MHz	Level dBuV/m	Transd dB	Limit dBuV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
30.300000	18.40	-4.9	40.0	21.6	QP	347.0	18.00	HORIZONTAL
73.980000	20.00	-16.5	40.0	20.0	QP	334.0	226.00	HORIZONTAL
256.020000	23.80	-12.4	46.0	22.2	QP	135.0	52.00	HORIZONTAL
499.980000	29.40	-6.7	46.0	16.6	QP	150.0	187.00	HORIZONTAL
531.060000	29.20	-5.8	46.0	16.8	QP	150.0	42.00	HORIZONTAL
799.980000	32.90	-0.8	46.0	13.1	QP	100.0	223.00	HORIZONTAL



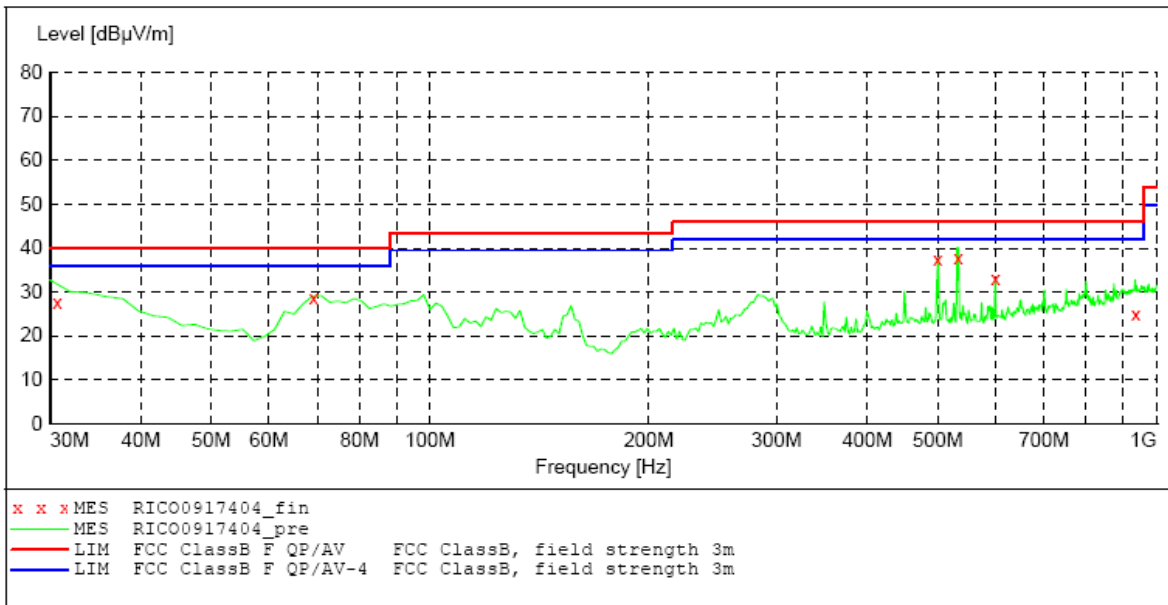
**SHENZHEN HUATONGWEI INTERNATIONAL INSPECTION CO.,LTD**

**RADIATED EMISSION FCC PART 15 B**

EUT: Laser Printer M/N:Aficio SP3410DN  
 Manufacturer: RICOH COMPONENTS ASIA(SHEN ZHEN)CO.,LTD  
 Operating Condition: USB PRINT  
 Test Site: 3M CHAMBER  
 Operator: IVAN  
 Test Specification: AC 120V/60Hz  
 Comment:  
 Start of Test: 9/17/2009 / 7:34:41PM

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

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 09	



**MEASUREMENT RESULT: "RICO0917404\_fin"**

9/17/2009 7:42PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
30.720000	27.70	-5.1	40.0	12.3	QP	100.0	103.00	VERTICAL
69.120000	28.60	-17.4	40.0	11.4	QP	150.0	265.00	VERTICAL
499.980000	37.40	-6.7	46.0	8.6	QP	100.0	150.00	VERTICAL
532.920000	37.90	-5.8	46.0	8.1	QP	100.0	38.00	VERTICAL
600.000000	33.00	-5.3	46.0	13.0	QP	150.0	149.00	VERTICAL
936.180000	25.00	2.7	46.0	21.0	QP	150.0	117.00	VERTICAL

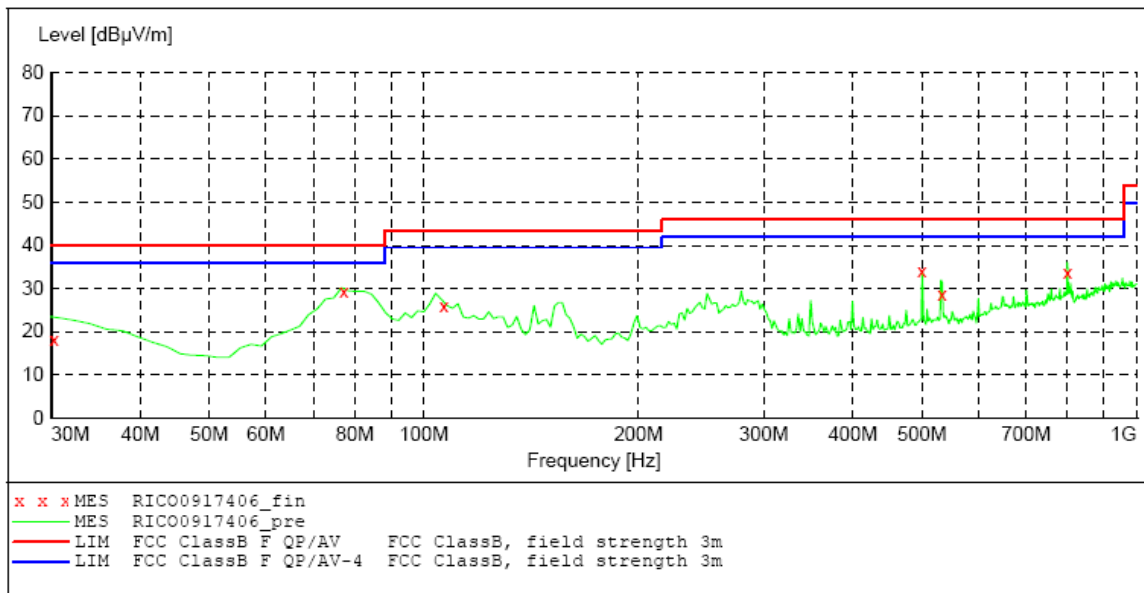
**SHENZHEN HUATONGWEI INTERNATIONAL INSPECTION CO.,LTD**

**RADIATED EMISSION FCC PART 15 B**

EUT: Laser Printer M/N:Aficio SP3410DN  
 Manufacturer: RICOH COMPONENTS ASIA(SHEN ZHEN)CO.,LTD  
 Operating Condition: NIC PRINT  
 Test Site: 3M CHAMBER  
 Operator: IVAN  
 Test Specification: AC 120V/60Hz  
 Comment:  
 Start of Test: 9/17/2009 / 7:52:32PM

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

Short Description:	Field Strength(30M-1G)		Detector	Meas. Time	IF Bandw.	Transducer
Start Frequency	Stop Frequency	Step Width				
30.0 MHz	1.0 GHz	60.0 kHz	QuasiPeak	1.0 s	120 kHz	HL562 09



**MEASUREMENT RESULT: "RICO0917406\_fin"**

9/17/2009 8:04PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
30.300000	18.20	-4.9	40.0	21.8	QP	250.0	1.00	HORIZONTAL
77.220000	29.20	-15.9	40.0	10.8	QP	305.0	185.00	HORIZONTAL
106.740000	25.90	-13.5	43.5	17.6	QP	250.0	187.00	HORIZONTAL
499.980000	34.00	-6.7	46.0	12.0	QP	118.0	165.00	HORIZONTAL
532.920000	28.50	-5.8	46.0	17.5	QP	100.0	28.00	HORIZONTAL
799.980000	33.70	-0.8	46.0	12.3	QP	100.0	224.00	HORIZONTAL



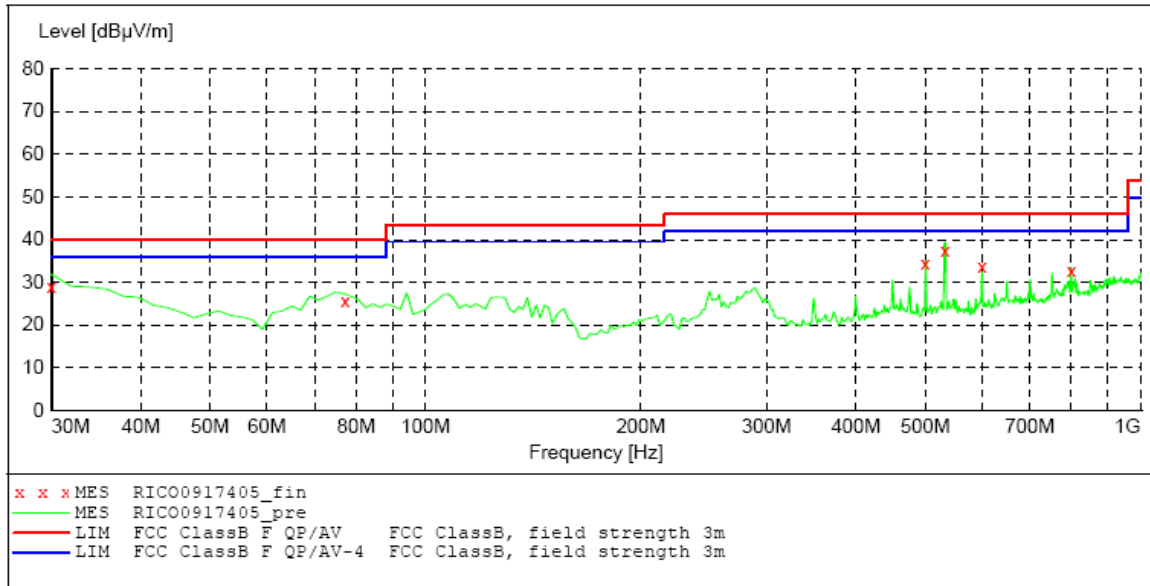
**SHENZHEN HUATONGWEI INTERNATIONAL INSPECTION CO.,LTD**

**RADIATED EMISSION FCC PART 15 B**

EUT: Laser Printer M/N:Aficio SP3410DN  
 Manufacturer: RICOH COMPONENTS ASIA (SHEN ZHEN) CO.,LTD  
 Operating Condition: NIC PRINT  
 Test Site: 3M CHAMBER  
 Operator: IVAN  
 Test Specification: AC 120V/60Hz  
 Comment:  
 Start of Test: 9/17/2009 / 7:44:38PM

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

Short Description:	Field Strength(30M-1G)						
Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer	
Frequency	Frequency	Width					
30.0 MHz	1.0 GHz	60.0 kHz	QuasiPeak	1.0 s	120 kHz	HL562 09	



**MEASUREMENT RESULT: "RICO0917405\_fin"**

9/17/2009 7:52PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
30.000000	28.90	-4.7	40.0	11.1	QP	100.0	99.00	VERTICAL
77.220000	25.60	-15.9	40.0	14.4	QP	147.0	220.00	VERTICAL
499.980000	34.50	-6.7	46.0	11.5	QP	100.0	147.00	VERTICAL
532.860000	37.30	-5.8	46.0	8.7	QP	100.0	47.00	VERTICAL
600.000000	33.80	-5.3	46.0	12.2	QP	150.0	148.00	VERTICAL
799.980000	32.80	-0.8	46.0	13.2	QP	114.0	169.00	VERTICAL

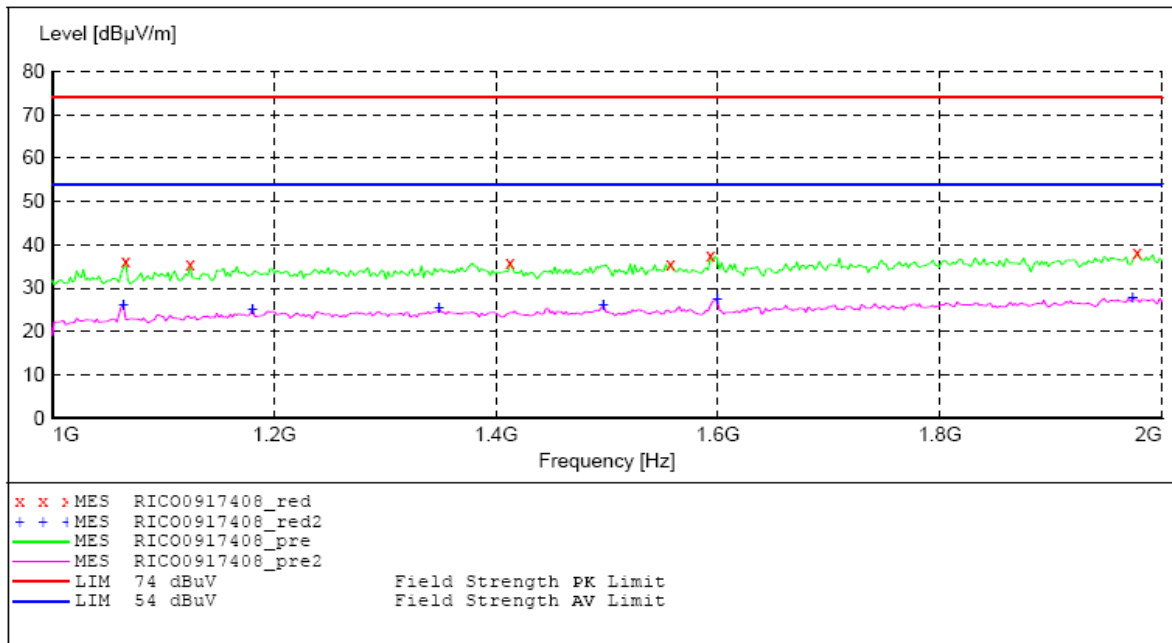
**SHENZHEN HUATONGWEI INTERNATIONAL INSPECTION CO.,LTD**

**RADIATED EMISSION FCC PART 15 B**

EUT: Laser Printer M/N:Aficio SP3410DN  
 Manufacturer: RICOH COMPONENTS ASIA(SHEN ZHEN)CO.,LTD  
 Operating Condition: STANDBY  
 Test Site: 3M CHAMBER  
 Operator: IVAN  
 Test Specification: AC 120V/60Hz  
 Comment:  
 Start of Test: 9/17/2009 / 8:35:32PM

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

Short Description: EN 55022 Field Strength  
 Start Stop Detector Meas. IF Transducer  
 Frequency Frequency Time Bandw.  
 1.0 GHz 18.0 GHz MaxPeak Coupled 1 MHz HF906(2008)  
 Average



**MEASUREMENT RESULT: "RICO0917408\_red"**

9/17/2009 8:37PM

Frequency MHz	Level dBuV/m	Transd dB	Limit dBuV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
1066.132265	36.10	-9.6	74.0	37.9	PK	100.0	137.00	HORIZONTAL
1124.248497	35.40	-9.0	74.0	38.6	PK	100.0	194.00	HORIZONTAL
1412.825651	35.90	-7.8	74.0	38.1	PK	100.0	86.00	HORIZONTAL
1557.114228	35.70	-7.4	74.0	38.3	PK	100.0	39.00	HORIZONTAL
1593.186373	37.50	-7.3	74.0	36.5	PK	100.0	86.00	HORIZONTAL
1977.955912	38.20	-4.8	74.0	35.8	PK	100.0	56.00	HORIZONTAL

**MEASUREMENT RESULT: "RICO0917408\_red2"**

9/17/2009 8:37PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
1064.128257	26.10	-9.6	54.0	27.9	AV	100.0	122.00	HORIZONTAL
1180.360721	25.20	-8.5	54.0	28.8	AV	100.0	328.00	HORIZONTAL
1348.697395	25.30	-7.9	54.0	28.7	AV	100.0	271.00	HORIZONTAL
1496.993988	26.00	-7.6	54.0	28.0	AV	100.0	137.00	HORIZONTAL
1599.198397	27.60	-7.3	54.0	26.4	AV	100.0	76.00	HORIZONTAL
1973.947896	27.90	-4.8	54.0	26.1	AV	100.0	153.00	HORIZONTAL

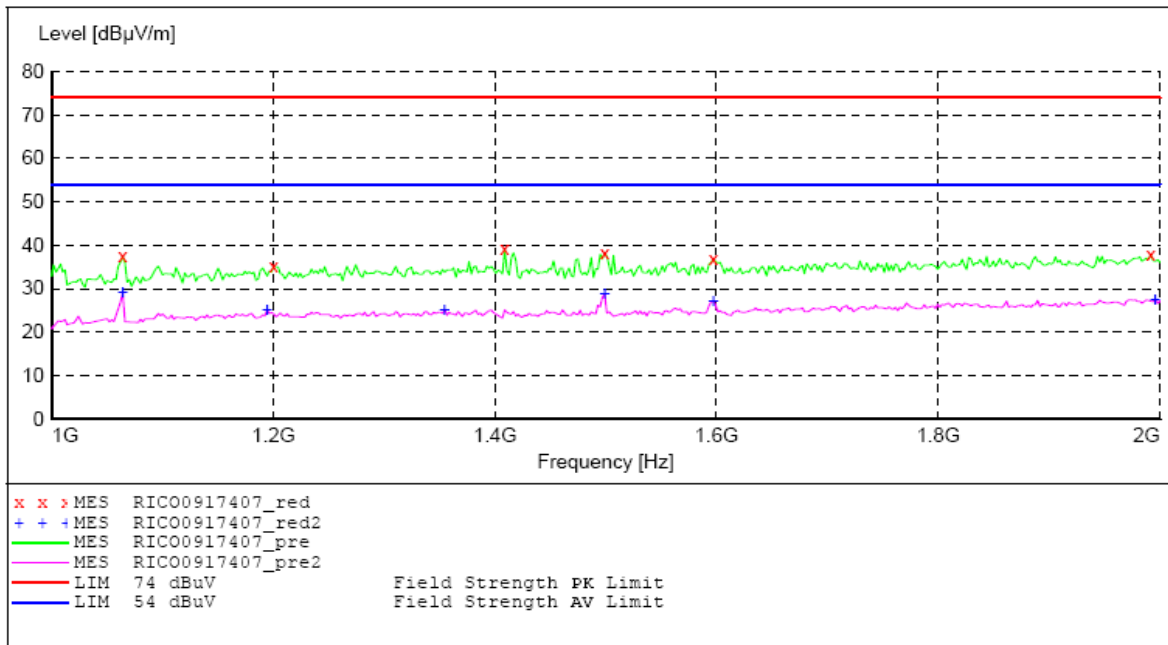
**SHENZHEN HUATONGWEI INTERNATIONAL INSPECTION CO., LTD**

**RADIATED EMISSION FCC PART 15 B**

EUT: Laser Printer M/N:Aficio SP3410DN  
 Manufacturer: RICOH COMPONENTS ASIA(SHEN ZHEN)CO.,LTD  
 Operating Condition: STANDBY  
 Test Site: 3M CHAMBER  
 Operator: IVAN  
 Test Specification: AC 120V/60Hz  
 Comment:  
 Start of Test: 9/17/2009 / 8:32:56PM

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

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Field Strength Transducer
1.0 GHz	18.0 GHz	MaxPeak	Coupled	1 MHz	EN 55022 HF906(2008)
Average					



**MEASUREMENT RESULT: "RICO0917407\_red"**

9/17/2009 8:34PM

Frequency MHz	Level dBuV/m	Transd dB	Limit dBuV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
1064.128257	37.50	-9.6	74.0	36.5	PK	100.0	164.00	VERTICAL
1200.400802	35.10	-8.3	74.0	38.9	PK	100.0	189.00	VERTICAL
1408.817635	39.20	-7.8	74.0	34.8	PK	100.0	148.00	VERTICAL
1498.997996	38.30	-7.6	74.0	35.7	PK	100.0	334.00	VERTICAL
1597.194389	36.90	-7.3	74.0	37.1	PK	100.0	336.00	VERTICAL
1991.983968	37.90	-4.7	74.0	36.1	PK	100.0	218.00	VERTICAL

**MEASUREMENT RESULT: "RICO0917407\_red2"**

9/17/2009 8:34PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
1064.128257	29.10	-9.6	54.0	24.9	AV	100.0	171.00	VERTICAL
1194.388778	25.20	-8.3	54.0	28.8	AV	100.0	71.00	VERTICAL
1354.709419	25.30	-7.9	54.0	28.7	AV	100.0	125.00	VERTICAL
1498.997996	28.90	-7.6	54.0	25.1	AV	100.0	336.00	VERTICAL
1597.194389	27.10	-7.3	54.0	26.9	AV	100.0	182.00	VERTICAL
1995.991984	27.60	-4.6	54.0	26.4	AV	100.0	110.00	VERTICAL

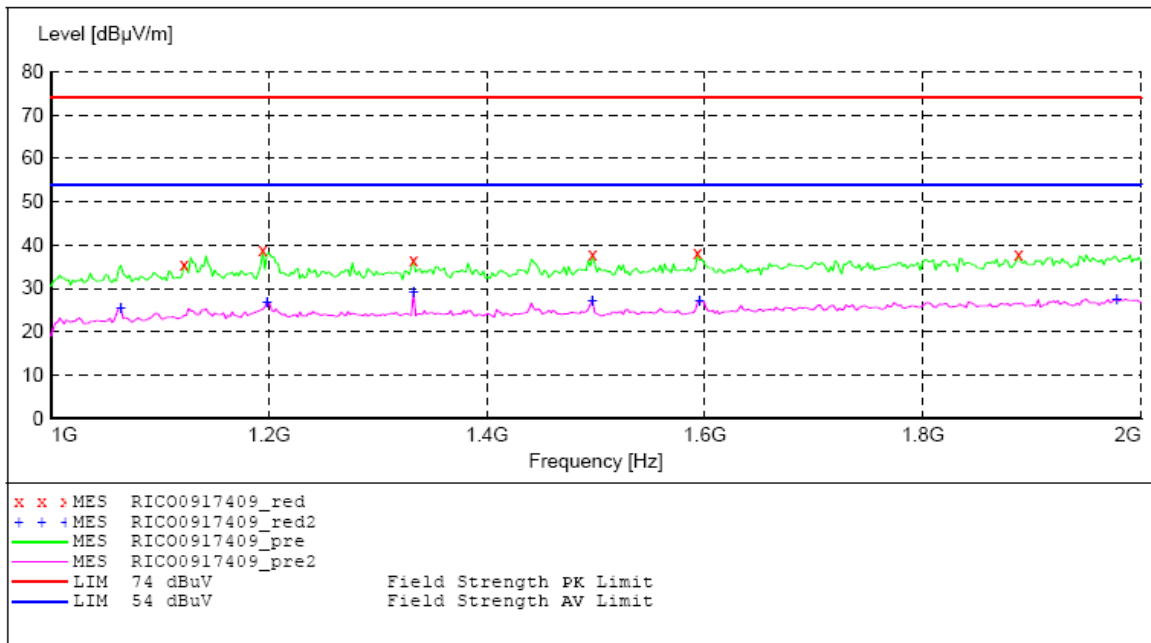
**SHENZHEN HUATONGWEI INTERNATIONAL INSPECTION CO.,LTD**

**RADIATED EMISSION FCC PART 15 B**

EUT: Laser Printer M/N:Aficio SP3410DN  
 Manufacturer: RICOH COMPONENTS ASIA (SHEN ZHEN) CO.,LTD  
 Operating Condition: USB PRINT  
 Test Site: 3M CHAMBER  
 Operator: IVAN  
 Test Specification: AC 120V/60Hz  
 Comment:  
 Start of Test: 9/17/2009 / 8:38:16PM

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

Short Description: EN 55022 Field Strength  
 Start Stop Detector Meas. IF Transducer  
 Frequency Frequency Time Bandw.  
 1.0 GHz 18.0 GHz MaxPeak Coupled 1 MHz HF906 (2008)  
 Average



**MEASUREMENT RESULT: "RICO0917409\_red"**

9/17/2009 8:39PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
1122.244489	35.50	-9.0	74.0	38.5	PK	100.0	194.00	HORIZONTAL
1194.388778	38.90	-8.3	74.0	35.1	PK	100.0	153.00	HORIZONTAL
1332.665331	36.60	-8.0	74.0	37.4	PK	100.0	93.00	HORIZONTAL
1496.993988	37.80	-7.6	74.0	36.2	PK	100.0	130.00	HORIZONTAL
1593.186373	38.20	-7.3	74.0	35.8	PK	100.0	114.00	HORIZONTAL
1887.775551	37.80	-5.5	74.0	36.2	PK	100.0	261.00	HORIZONTAL

**MEASUREMENT RESULT: "RICO0917409\_red2"**

9/17/2009 8:39PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
1064.128257	25.60	-9.6	54.0	28.4	AV	100.0	122.00	HORIZONTAL
1198.396794	26.90	-8.3	54.0	27.1	AV	100.0	167.00	HORIZONTAL
1332.665331	29.30	-8.0	54.0	24.7	AV	100.0	93.00	HORIZONTAL
1496.993988	27.20	-7.6	54.0	26.8	AV	100.0	137.00	HORIZONTAL
1595.190381	27.20	-7.3	54.0	26.8	AV	100.0	147.00	HORIZONTAL
1977.955912	27.60	-4.8	54.0	26.4	AV	100.0	194.00	HORIZONTAL

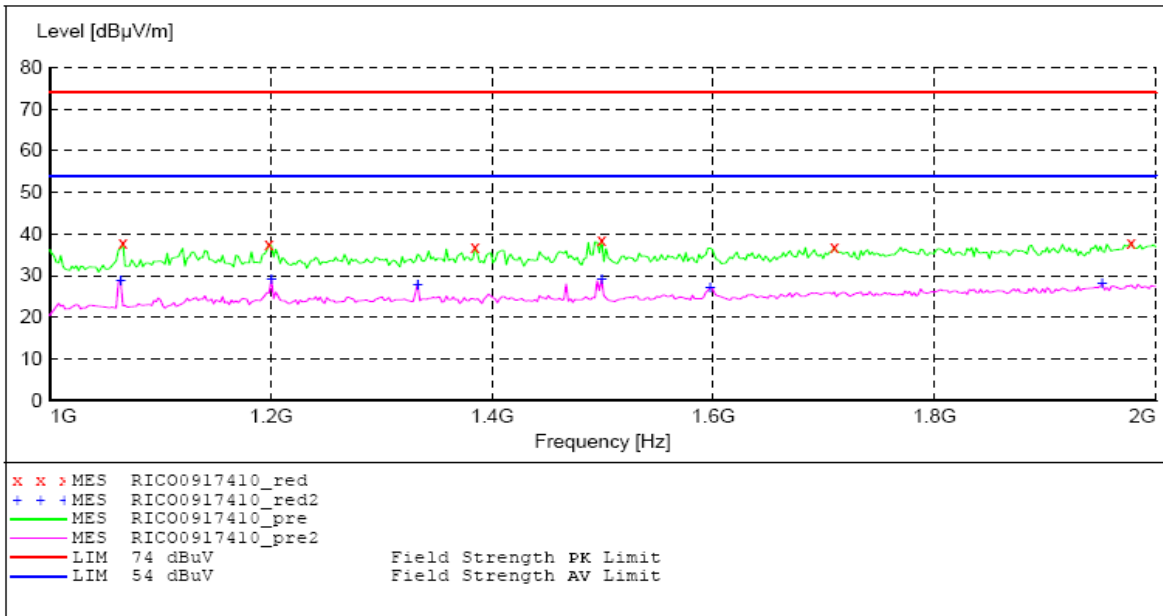
**SHENZHEN HUATONGWEI INTERNATIONAL INSPECTION CO.,LTD**

**RADIATED EMISSION FCC PART 15 B**

EUT: Laser Printer M/N:Aficio SP3410DN  
 Manufacturer: RICOH COMPONENTS ASIA (SHEN ZHEN) CO.,LTD  
 Operating Condition: USB PRINT  
 Test Site: 3M CHAMBER  
 Operator: IVAN  
 Test Specification: AC 120V/60Hz  
 Comment:  
 Start of Test: 9/17/2009 / 8:40:05PM

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

Short Description: EN 55022 Field Strength  
 Start Stop Detector Meas. IF Transducer  
 Frequency Frequency Time Bandw.  
 1.0 GHz 18.0 GHz MaxPeak Coupled 1 MHz HF906(2008)  
 Average



**MEASUREMENT RESULT: "RICO0917410\_red"**

9/17/2009 8:41PM

Frequency MHz	Level dBuV/m	Transd dB	Limit dBuV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
1066.132265	37.90	-9.6	74.0	36.1	PK	100.0	167.00	VERTICAL
1198.396794	37.70	-8.3	74.0	36.3	PK	100.0	144.00	VERTICAL
1384.769539	36.80	-7.9	74.0	37.2	PK	100.0	167.00	VERTICAL
1498.997996	38.60	-7.6	74.0	35.4	PK	100.0	332.00	VERTICAL
1709.418838	36.90	-6.6	74.0	37.1	PK	100.0	113.00	VERTICAL
1977.955912	37.80	-4.8	74.0	36.2	PK	100.0	106.00	VERTICAL



**MEASUREMENT RESULT: "RICO0917410\_red2"**

9/17/2009 8:41PM

Frequency MHz	Level dB $\mu$ V/m	Transd dB	Limit dB $\mu$ V/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
1064.128257	28.70	-9.6	54.0	25.3	AV	100.0	164.00	VERTICAL
1200.400802	29.20	-8.3	54.0	24.8	AV	100.0	211.00	VERTICAL
1332.665331	28.00	-8.0	54.0	26.0	AV	100.0	356.00	VERTICAL
1498.997996	29.20	-7.6	54.0	24.8	AV	100.0	323.00	VERTICAL
1597.194389	27.20	-7.3	54.0	26.8	AV	100.0	181.00	VERTICAL
1951.903808	28.00	-5.0	54.0	26.0	AV	100.0	292.00	VERTICAL

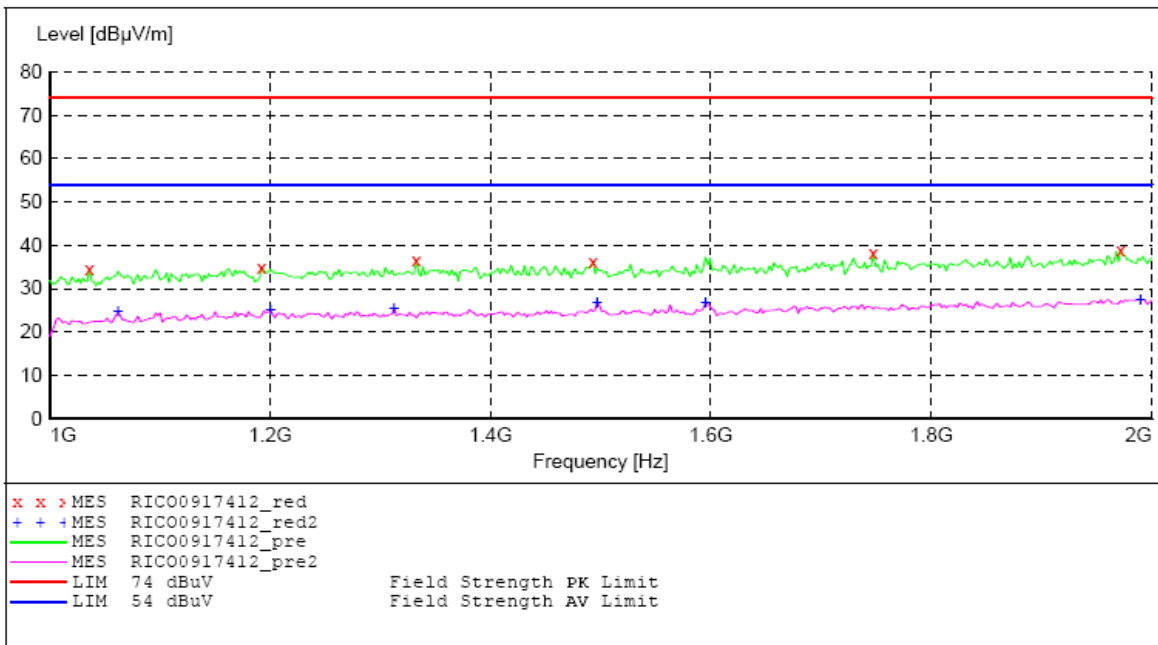
**SHENZHEN HUATONGWEI INTERNATIONAL INSPECTION CO., LTD**

**RADIATED EMISSION FCC PART 15 B**

EUT: Laser Printer M/N:Aficio SP3410DN  
 Manufacturer: RICOH COMPONENTS ASIA (SHEN ZHEN) CO., LTD  
 Operating Condition: NIC PRINT  
 Test Site: 3M CHAMBER  
 Operator: IVAN  
 Test Specification: AC 120V/60Hz  
 Comment:  
 Start of Test: 9/17/2009 / 8:45:02PM

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

Short Description: EN 55022 Field Strength  
 Start Stop Detector Meas. IF Transducer  
 Frequency Frequency Time Bandw.  
 1.0 GHz 18.0 GHz MaxPeak Coupled 1 MHz HF906(2008)  
 Average



**MEASUREMENT RESULT: "RICO0917412\_red"**

9/17/2009 8:46PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
1036.072144	34.70	-9.9	74.0	39.3	PK	100.0	345.00	HORIZONTAL
1192.384770	34.80	-8.4	74.0	39.2	PK	100.0	0.00	HORIZONTAL
1332.665331	36.60	-8.0	74.0	37.4	PK	100.0	121.00	HORIZONTAL
1492.985972	36.10	-7.6	74.0	37.9	PK	100.0	137.00	HORIZONTAL
1747.494990	38.20	-6.3	74.0	35.8	PK	100.0	307.00	HORIZONTAL
1971.943888	39.00	-4.8	74.0	35.0	PK	100.0	3.00	HORIZONTAL

**MEASUREMENT RESULT: "RICO0917412\_red2"**

9/17/2009 8:46PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
1062.124248	24.70	-9.6	54.0	29.3	AV	100.0	130.00	HORIZONTAL
1200.400802	25.00	-8.3	54.0	29.0	AV	100.0	130.00	HORIZONTAL
1312.625251	25.60	-8.0	54.0	28.4	AV	100.0	121.00	HORIZONTAL
1496.993988	26.90	-7.6	54.0	27.1	AV	100.0	137.00	HORIZONTAL
1595.190381	26.80	-7.3	54.0	27.2	AV	100.0	145.00	HORIZONTAL
1989.979960	27.60	-4.7	54.0	26.4	AV	100.0	208.00	HORIZONTAL

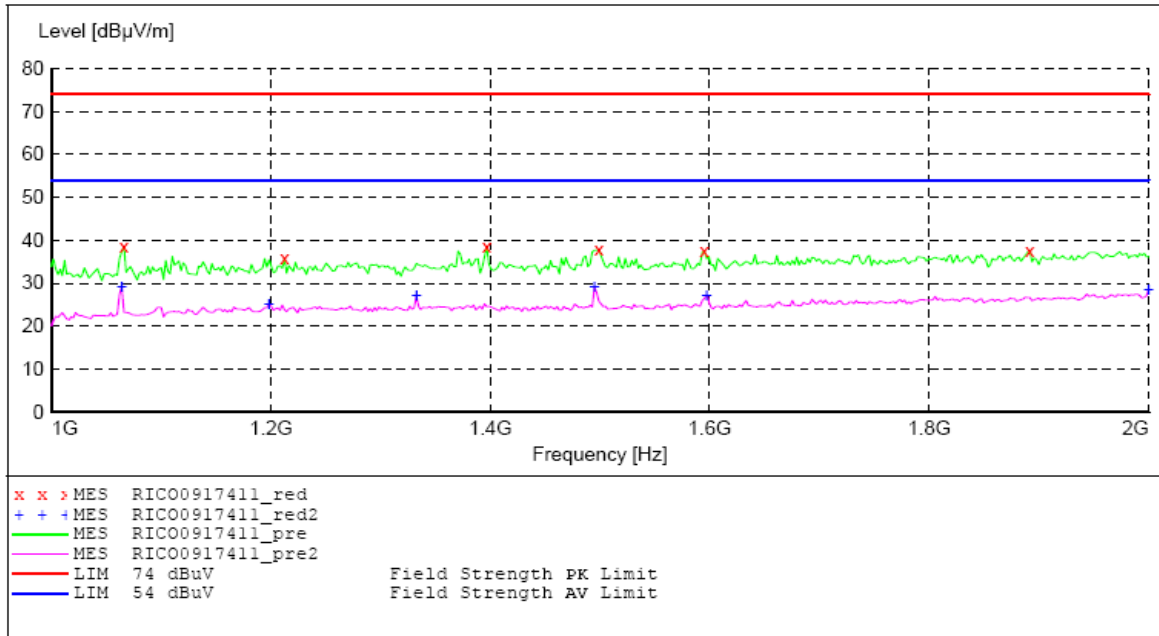
**SHENZHEN HUATONGWEI INTERNATIONAL INSPECTION CO.,LTD**

**RADIATED EMISSION FCC PART 15 B**

EUT: Laser Printer M/N:Aficio SP3410DN  
 Manufacturer: RICOH COMPONENTS ASIA(SHEN ZHEN)CO.,LTD  
 Operating Condition: NIC PRINT  
 Test Site: 3M CHAMBER  
 Operator: IVAN  
 Test Specification: AC 120V/60Hz  
 Comment:  
 Start of Test: 9/17/2009 / 8:43:05PM

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

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Field Strength Transducer
1.0 GHz	18.0 GHz	MaxPeak Average	Coupled	1 MHz	EN 55022 HF906 (2008)



**MEASUREMENT RESULT: "RICO0917411\_red"**

Frequency MHz	Level dBuV/m	Transd dB	Limit dBuV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
1066.132265	38.60	-9.6	74.0	35.4	PK	100.0	3.00	VERTICAL
1212.424850	35.80	-8.3	74.0	38.2	PK	100.0	225.00	VERTICAL
1396.793587	38.70	-7.9	74.0	35.3	PK	100.0	180.00	VERTICAL
1498.997996	37.90	-7.6	74.0	36.1	PK	100.0	195.00	VERTICAL
1595.190381	37.60	-7.3	74.0	36.4	PK	100.0	124.00	VERTICAL
1891.783567	37.70	-5.5	74.0	36.3	PK	100.0	359.00	VERTICAL

**MEASUREMENT RESULT: "RICO0917411\_red2"**

9/17/2009 8:44PM

Frequency MHz	Level dBuV/m	Transd dB	Limit dBuV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
1064.128257	29.30	-9.6	54.0	24.7	AV	100.0	7.00	VERTICAL
1198.396794	25.20	-8.3	54.0	28.8	AV	100.0	72.00	VERTICAL
1332.665331	27.10	-8.0	54.0	26.9	AV	100.0	133.00	VERTICAL
1494.989980	29.00	-7.6	54.0	25.0	AV	100.0	334.00	VERTICAL
1597.194389	27.30	-7.3	54.0	26.7	AV	100.0	334.00	VERTICAL
2000.000000	28.60	-4.6	54.0	25.4	AV	100.0	133.00	VERTICAL

**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 standby, USB print and NIC print modes during the test and the maximum emanating results 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: 9KHz

Frequency Range: 150KHz to 30MHz

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

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Margin=limit-level

Level=read value+transducer

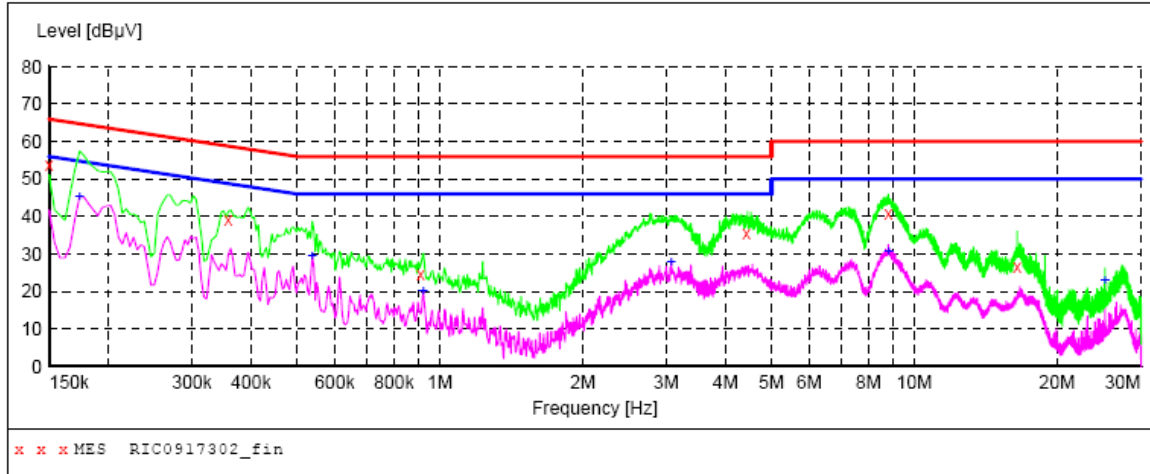
Transducer=insertion loss of LISN+cable loss+insertion loss of pulse limiter

Shenzhen Huatongwei International Inspection CO.,Ltd

Voltage Mains Test FCC PART 15 B

EUT: Laser Printer M/N:Aficio SP3410DN
Manufacturer: RICOH COMPONENTS ASIA(SHEN ZHEN)CO.,LTD
Operating Condition: STANDBY
Test Site: 3# SHIELDED ROOM
Operator: Peter
Test Specification: AC 120V/60Hz
Comment:
Start of Test: 9/17/2009 / 5:48:57PM

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



MEASUREMENT RESULT: "RIC0917302\_fin"

9/17/2009 5:51PM

Table with 8 columns: Frequency MHz, Level dBµV, Transd dB, Limit dBµV, Margin dB, Detector, Line, PE. It lists measurement data points at various frequencies.

MEASUREMENT RESULT: "RIC0917302\_fin2"

9/17/2009 5:51PM

Table with 8 columns: Frequency MHz, Level dBµV, Transd dB, Limit dBµV, Margin dB, Detector, Line, PE. It lists measurement data points at various frequencies.

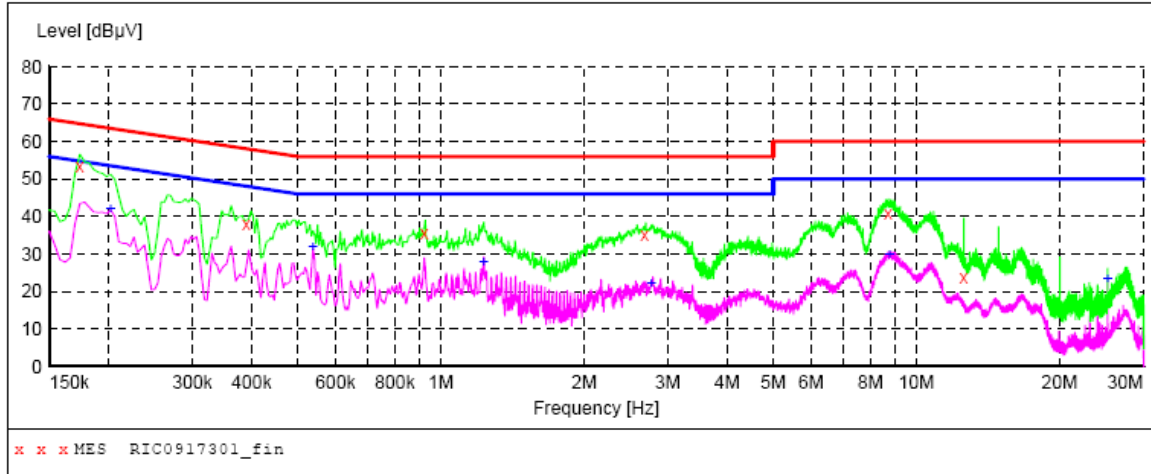


**Shenzhen Huatongwei International Inspection CO.,Ltd**

**Voltage Mains Test FCC PART 15 B**

EUT: Laser Printer M/N:Aficio SP3410DN  
 Manufacturer: RICOH COMPONENTS ASIA (SHEN ZHEN) CO.,LTD  
 Operating Condition: STANDBY  
 Test Site: 3# SHIELDED ROOM  
 Operator: Peter  
 Test Specification: AC 120V/60Hz  
 Comment:  
 Start of Test: 9/17/2009 / 5:45:47PM

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



**MEASUREMENT RESULT: "RIC0917301\_fin"**

9/17/2009 5:48PM

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.174000	53.50	10.5	65	11.3	QP	N	GND
0.390000	38.10	10.5	58	20.0	QP	N	GND
0.922000	35.50	10.5	56	20.5	QP	N	GND
2.682000	35.20	10.6	56	20.8	QP	N	GND
8.714000	40.70	10.7	60	19.3	QP	N	GND
12.566000	23.80	10.8	60	36.2	QP	N	GND

**MEASUREMENT RESULT: "RIC0917301\_fin2"**

9/17/2009 5:48PM

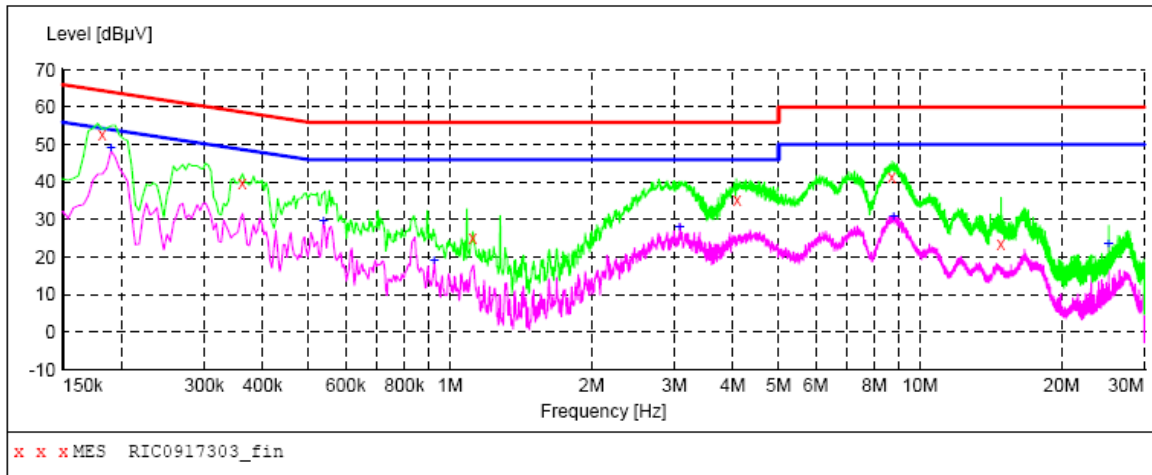
Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.202000	41.90	10.5	54	11.6	AV	N	GND
0.538000	31.80	10.4	46	14.2	AV	N	GND
1.230000	27.90	10.5	46	18.1	AV	N	GND
2.770000	22.20	10.6	46	23.8	AV	N	GND
8.782000	29.80	10.7	50	20.2	AV	N	GND
25.202000	23.30	11.1	50	26.7	AV	N	GND

**Shenzhen Huatongwei International Inspection Co., Ltd**

**Voltage Mains Test FCC PART 15 B**

EUT: Laser Printer M/N:Aficio SP3410DN  
 Manufacturer: RICOH COMPONENTS ASIA (SHEN ZHEN) CO., LTD  
 Operating Condition: USB PRINT  
 Test Site: 3# SHIELDED ROOM  
 Operator: Peter  
 Test Specification: AC 120V/60Hz  
 Comment:  
 Start of Test: 9/17/2009 / 5:53:57PM

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



**MEASUREMENT RESULT: "RIC0917303\_fin"**

9/17/2009 5:56PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.182000	52.90	10.5	64	11.5	QP	L1	GND
0.362000	39.60	10.5	59	19.1	QP	L1	GND
1.118000	25.30	10.5	56	30.7	QP	L1	GND
4.086000	35.20	10.6	56	20.8	QP	L1	GND
8.706000	41.20	10.7	60	18.8	QP	L1	GND
14.854000	23.70	10.8	60	36.3	QP	L1	GND

**MEASUREMENT RESULT: "RIC0917303\_fin2"**

9/17/2009 5:56PM

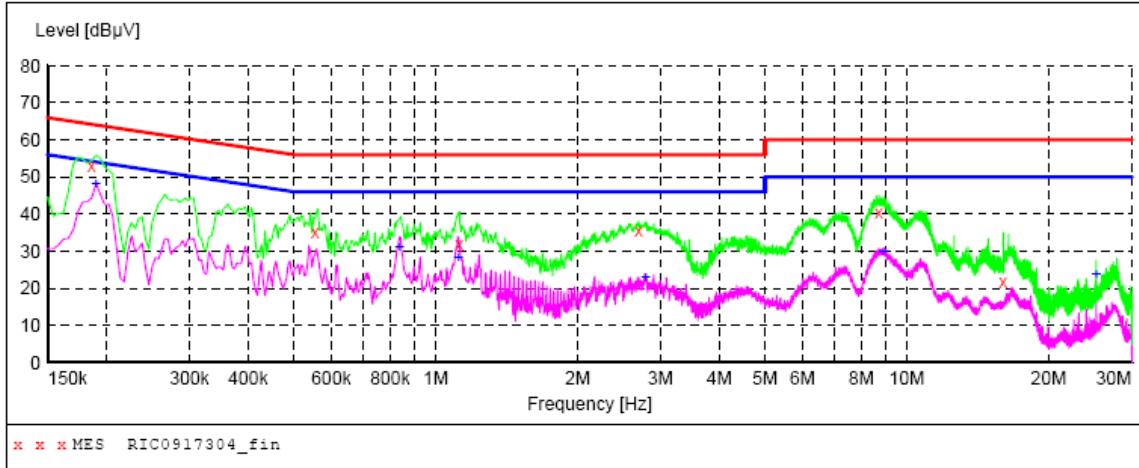
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.190000	49.30	10.5	54	4.7	AV	L1	GND
0.538000	29.60	10.4	46	16.4	AV	L1	GND
0.926000	19.20	10.5	46	26.8	AV	L1	GND
3.082000	28.00	10.6	46	18.0	AV	L1	GND
8.794000	30.70	10.7	50	19.3	AV	L1	GND
25.202000	23.50	11.1	50	26.5	AV	L1	GND

Shenzhen Huatongwei International Inspection CO.,Ltd

Voltage Mains Test FCC PART 15 B

EUT: Laser Printer M/N:Aficio SP3410DN
Manufacturer: RICOH COMPONENTS ASIA (SHEN ZHEN) CO., LTD
Operating Condition: USB PRINT
Test Site: 3# SHIELDED ROOM
Operator: Peter
Test Specification: AC 120V/60Hz
Comment:
Start of Test: 9/17/2009 / 5:56:55PM

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



MEASUREMENT RESULT: "RIC0917304\_fin"

9/17/2009 5:59PM

Table with 8 columns: Frequency MHz, Level dBuV, Transd dB, Limit dBuV, Margin dB, Detector, Line, PE. Contains 6 rows of measurement data.

MEASUREMENT RESULT: "RIC0917304\_fin2"

9/17/2009 5:59PM

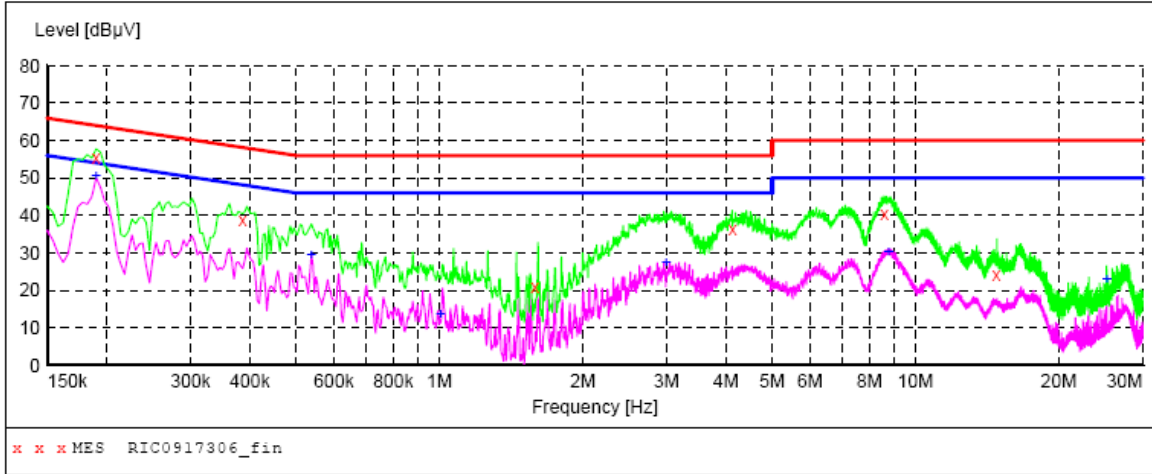
Table with 8 columns: Frequency MHz, Level dBuV, Transd dB, Limit dBuV, Margin dB, Detector, Line, PE. Contains 6 rows of measurement data.

Shenzhen Huatongwei International Inspection CO.,Ltd

Voltage Mains Test FCC PART 15 B

EUT: Laser Printer M/N:Aficio SP3410DN
Manufacturer: RICOH COMPONENTS ASIA(SHEN ZHEN)CO.,LTD
Operating Condition: NIC PRINT
Test Site: 3# SHIELDED ROOM
Operator: Peter
Test Specification: AC 120V/60Hz
Comment:
Start of Test: 9/17/2009 / 6:05:23PM

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



MEASUREMENT RESULT: "RIC0917306\_fin"

Table with 8 columns: Frequency MHz, Level dBuV, Transd dB, Limit dBuV, Margin dB, Detector, Line, PE. It lists measurement data points for various frequencies.

MEASUREMENT RESULT: "RIC0917306\_fin2"

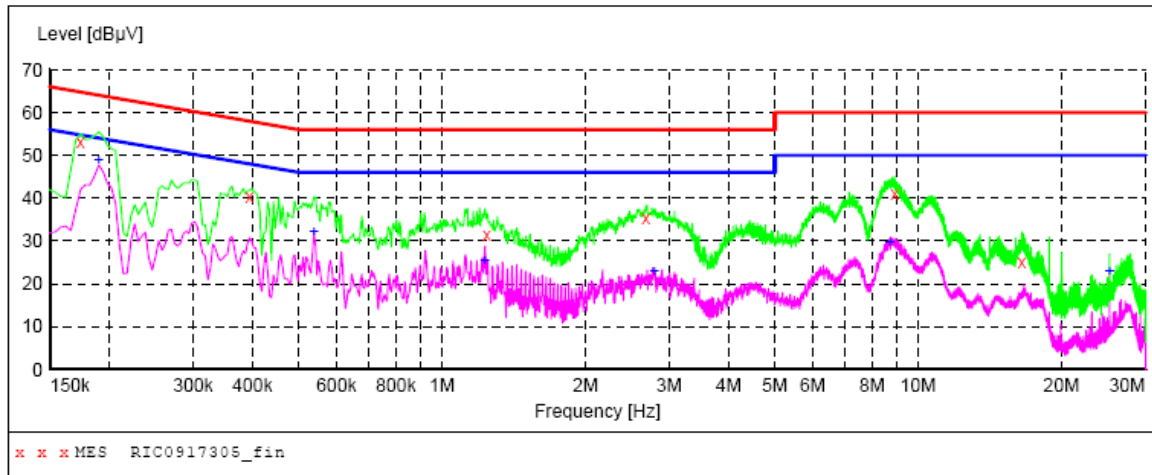
Table with 8 columns: Frequency MHz, Level dBuV, Transd dB, Limit dBuV, Margin dB, Detector, Line, PE. It lists measurement data points for various frequencies.

**Shenzhen Huatongwei International Inspection CO.,Ltd**

**Voltage Mains Test FCC PART 15 B**

EUT: Laser Printer M/N:Aficio SP3410DN  
 Manufacturer: RICOH COMPONENTS ASIA(SHEN ZHEN)CO.,LTD  
 Operating Condition: NIC PRINT  
 Test Site: 3# SHIELDED ROOM  
 Operator: Peter  
 Test Specification: AC 120V/60Hz  
 Comment:  
 Start of Test: 9/17/2009 / 6:02:34PM

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



**MEASUREMENT RESULT: "RIC0917305\_fin"**

9/17/2009 6:05PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.174000	53.10	10.5	65	11.7	QP	N	GND
0.394000	40.20	10.5	58	17.8	QP	N	GND
1.242000	31.40	10.5	56	24.6	QP	N	GND
2.678000	35.30	10.6	56	20.7	QP	N	GND
8.918000	41.00	10.7	60	19.0	QP	N	GND
16.502000	25.10	10.8	60	34.9	QP	N	GND

**MEASUREMENT RESULT: "RIC0917305\_fin2"**

9/17/2009 6:05PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.190000	48.70	10.5	54	5.3	AV	N	GND
0.538000	32.00	10.4	46	14.0	AV	N	GND
1.230000	25.30	10.5	46	20.7	AV	N	GND
2.790000	22.90	10.6	46	23.1	AV	N	GND
8.706000	29.70	10.7	50	20.3	AV	N	GND
25.202000	23.10	11.1	50	26.9	AV	N	GND

## 5. External and Internal Photos of the EUT

### 5.1. External photos of the EUT

Front view (with AC cable)



Front view









## 5.2. Internal photos of the EUT





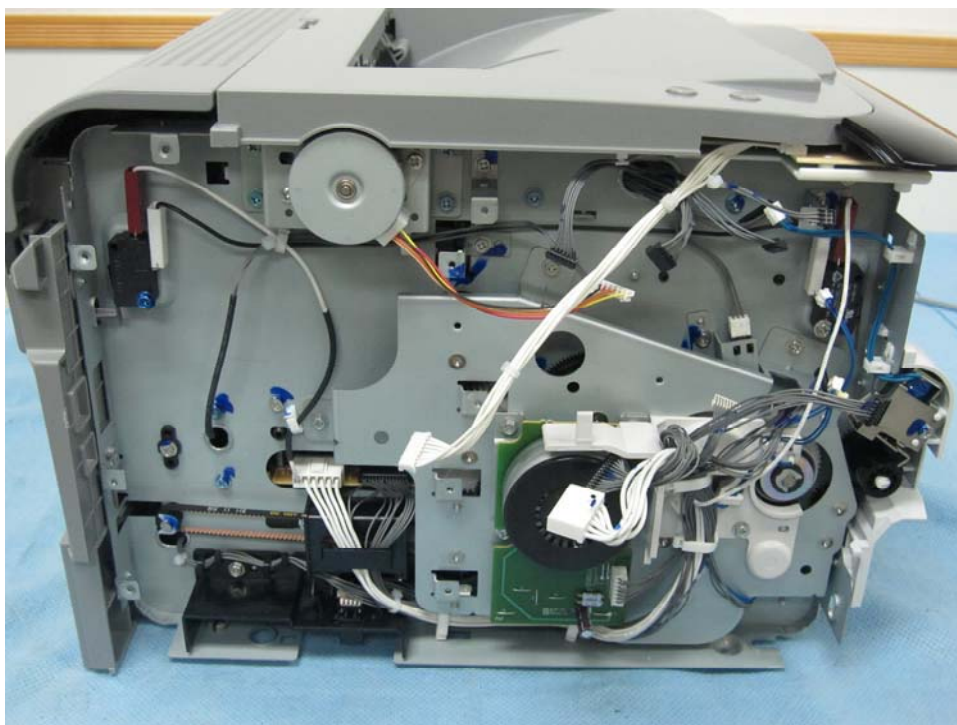


Photo of Duplex stepping motor

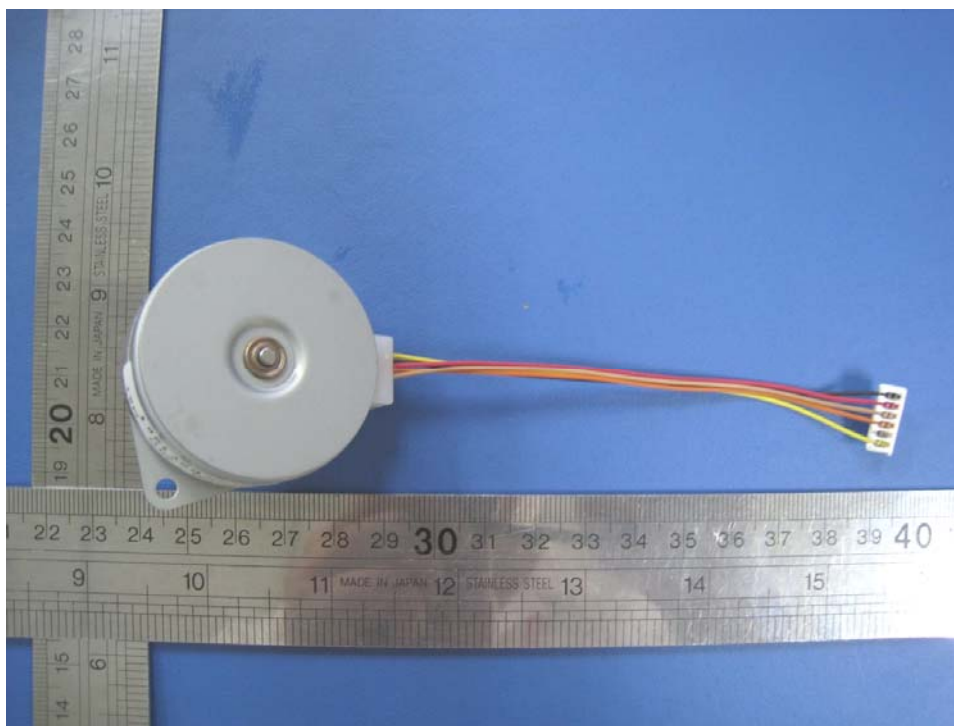


Photo of Duplex stepping motor (with S/N)



Photo of PCB: op-panel



Photo of PCB: op-panel (back)

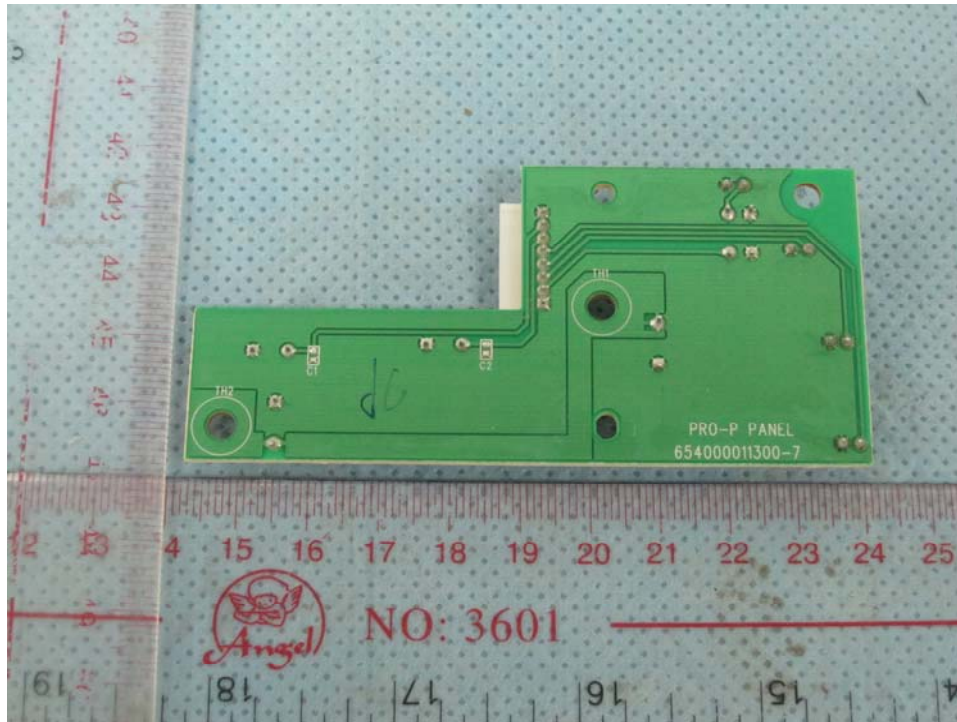


Photo of PCB: power supply unit

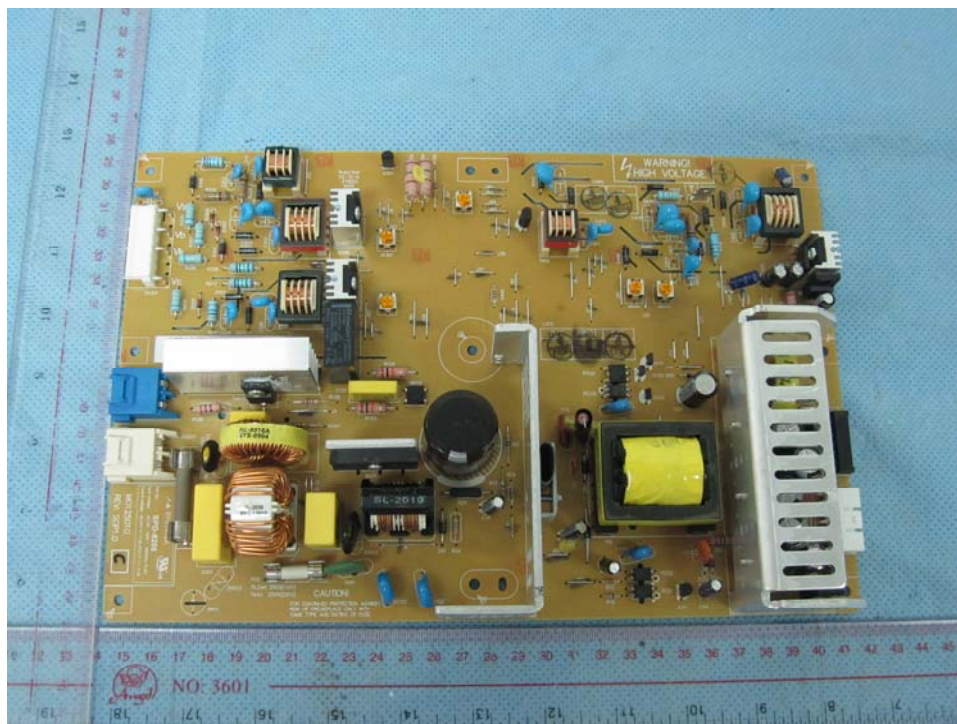




Photo of PCB: power supply unit(back)

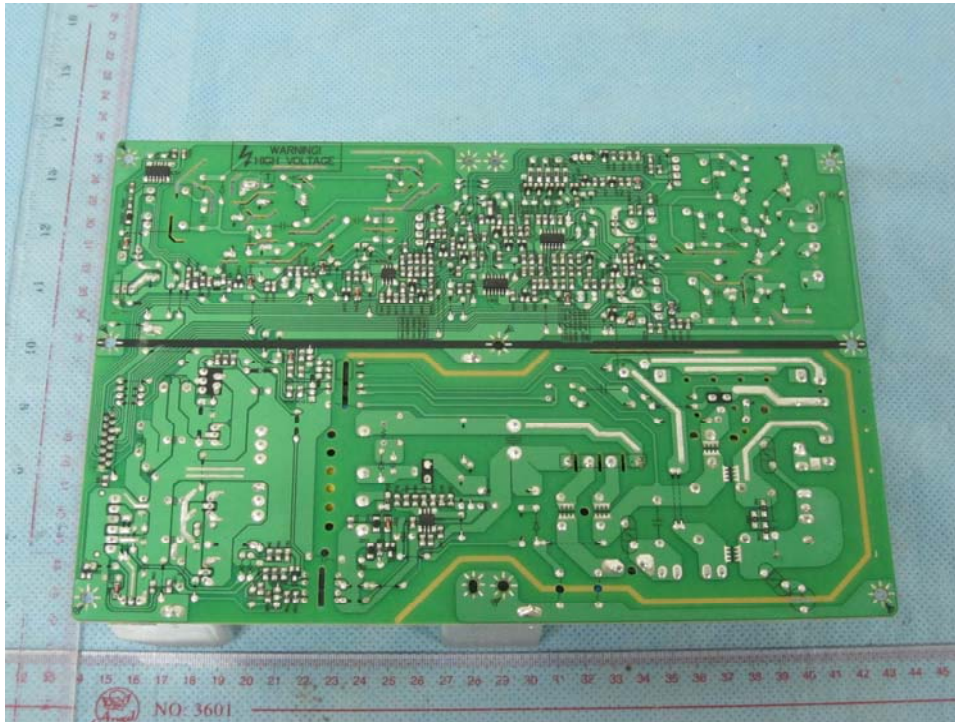


Photo of DC main motor

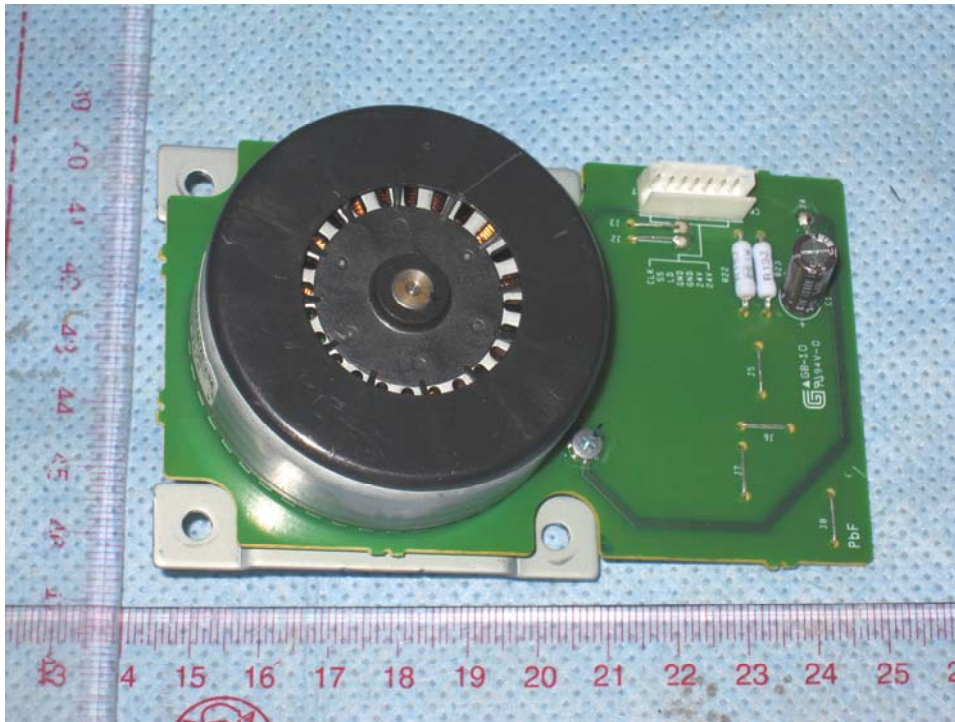


Photo of DC main motor (back)





Photo of PCB: Engine board

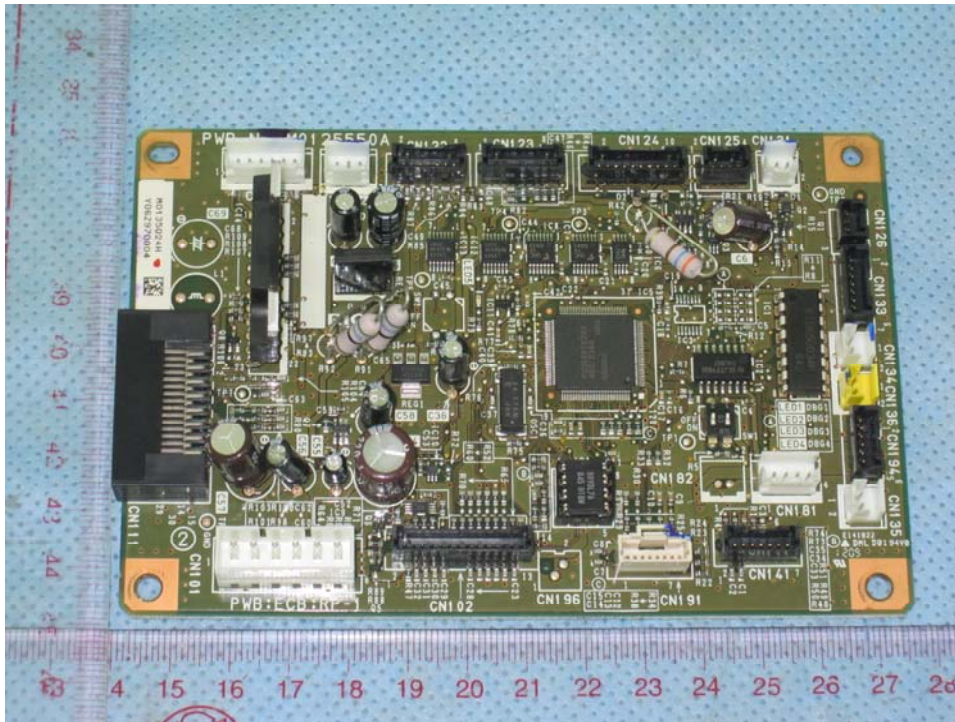


Photo of PCB: Engine board(back)





Photo of PCB: main board



Photo of PCB: main board(back)

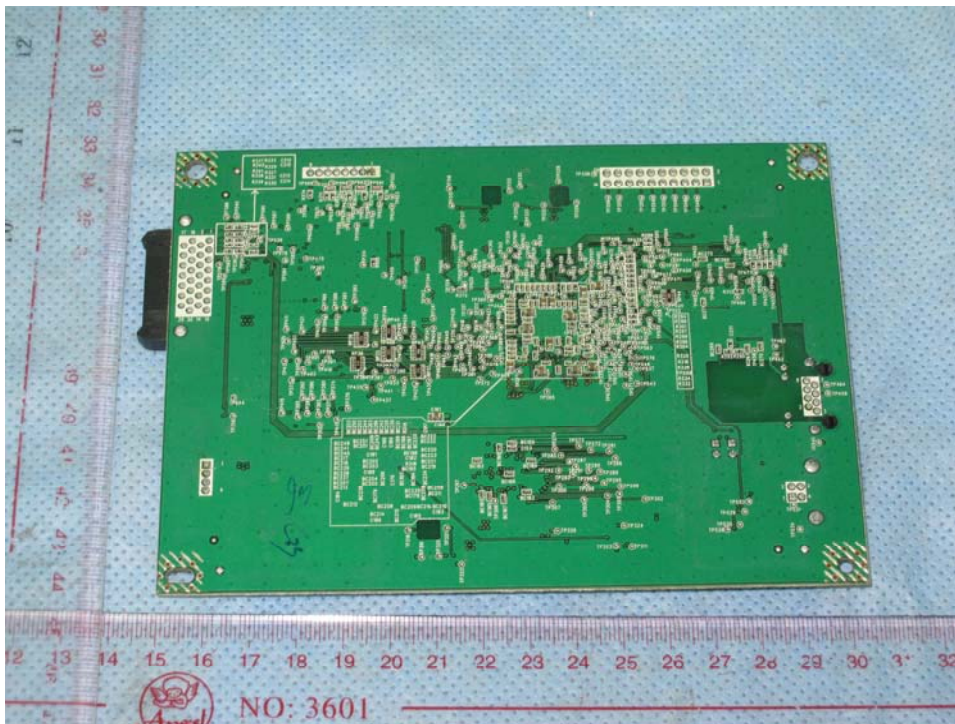


Photo of +24V Micro Switch



Photo of AC power cable



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