



APPLICATION OF CERTIFICATION

For

Ricoh Co., Ltd

Printer

Model Number
SP311SFNw, SP311SFN, SP310SFNw, SP310SFN

FCC ID: BBP-MFSP311SFNW1

Prepared for : Ricoh Co., Ltd  
Technology Center 810 Shimo-imaizumi Ebina-shi Kanagawa  
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Report Number : ACS- F13020  
Date of Test : Jan.06~12, 2013  
Date of Report : Feb.26, 2013

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### TEST REPORT CERTIFICATION

Applicant : Ricoh Co., Ltd  
 Manufacturer : Ricoh Co., Ltd  
 EUT Description : Printer  
 FCC ID : BBP-MFSP311SFNW1  
 (A) Model No. : SP311SFNW, SP311SFN, SP310SFNW, SP310SFN  
 (B) Power Supply : AC 120V/60Hz  
 (C) Test Voltage : AC 120V/60Hz

Measurement Standard Used:

FCC Rules and Regulations Part 15 Subpart B Class B 2011

The device described above is tested by AUDIX TECHNOLOGY (SHENZHEN) CO., LTD. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart B Class B limits both conducted and radiated emissions. The test results are contained in this test report and AUDIX TECHNOLOGY (SHENZHEN) CO., LTD. is assumed of full responsibility for the accuracy and completeness of these tests. This report contains data that are not covered by the NVLAP accreditation.

After the test, our opinion is that EUT compliance with the requirement of the above standards.

This Report is made under FCC Part 2.1075. No modifications were required during testing to bring this product into compliance.

This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of AUDIX TECHNOLOGY (SHENZHEN) CO., LTD.

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

Date of Test : Jan.06~12, 2013 Report of date: Feb.26, 2013

Prepared by : Sherry Zhuo / Assistant Reviewed by : Bensun Chen / Assistant Manager

信華科技(深圳)有限公司  
 Audix Technology (Shenzhen) Co., Ltd.  
 EMC 部門報告專用章  
 Stamp only for EMC Dept. Report  
 Signature: Ken Lu 2/26/13

Approved & Authorized Signer : Ken Lu / Manager

## 1. SUMMARY OF STANDARDS AND RESULTS

### 1.1. Description of Standards and Results

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

EMISSION			
Description of Test Item	Standard	Results	Remarks
Power Line Conducted Emission Test	FCC Part 15: 2011 ANSI C63.4: 2009	PASS	Meets Class B Limit Minimum passing margin is 16.01dB at 5.732MHz
Radiated Emission Test (30-1000MHz)	FCC Part 15: 2011 ANSI C63.4: 2009	PASS	Meets Class B Limit Minimum passing margin is 4.20dB at 240.000MHz
Radiated Emission Test (1-15GHz)	FCC Part 15: 2011 ANSI C63.4: 2009	PASS	Meets Class B Limit Minimum passing margin is 13.57dB at 1993.026MHz

## 2. GENERAL INFORMATION

### 2.1. Equipment under test (EUT)

#### 2.1.1. Emission test:

Kind of equipment	Manufacturer	Model name	Serial number	Remarks
EUT	RICOH	SP 311SFNw	SS157170073	

#### 2.1.2. 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 311SFNw	480MHz	USB

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

The EUT is a multifunction digital printer with copier, scanner and fax.

Model Difference: They are similar, except 2 sides as follow.

1. There is a WIFI module in SP 310SFNw and SP 311SFNw except SP 310SFN and SP 311SFN.
2. SP 310SFN / SP 310SFNw and SP 311SFN / SP 311SFNw are similar, but different from the mechanical structure which does not affect EMC.

Unless otherwise indicated, all tests were conducted on SP 311SFNw.

Tests performed on SP 311SFNw were considered to be representative of SP 311SFN / SP 310SFN / SP 310SFNw.

## 2.2. Tested Supporting System Details

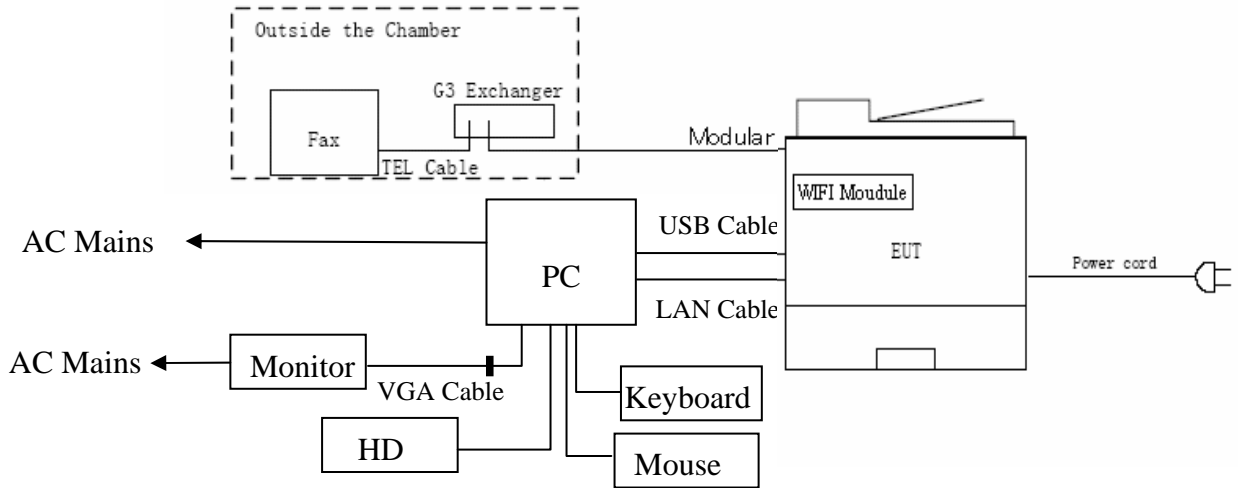
### 2.2.1. Emission test:

1.	Personal Computer	Test PC M	DELL	Studio 540	224XK2X	<input checked="" type="checkbox"/> FCC DoC
		Power Cord: Unshielded, Detachable, 1.8m Display Card: HD3450 (DVI+VGA+HDMI)				
2.	Monitor	ACS-EMC-LM04R	DELL	1907FPt	CN-009759-71618-6AP-ACPP	<input checked="" type="checkbox"/> FCC DoC
		Power Cord: Unshielded, Detachable, 1.8m VGA Cable: Shielded, Detachable, 2.0m (with two cores) DVI Cable: Shielded, Detachable, 2.0m (with two cores)				
3.	USB Keyboard	ACS-EMC- K04R	DELL	SK-8115	CN-ODJ313-71616-6BB-049J	<input checked="" type="checkbox"/> FCC DoC
		Power Cord: shielded, Undetachable, 2.0m				
4.	USB Mouse	ACS-EMC-M04R	DELL	M056UO	512024282	<input checked="" type="checkbox"/> FCC DoC
		Power Cord: shielded, Undetachable, 1.8m				
5.	HDD	ACS-EMC-HDD04	Terasys	F12-UF	A0100215-5390002	<input checked="" type="checkbox"/> FCC DoC
		USB Cable: Shielded, Detachable, 1.8m				
6.	G3 Exchanger	---	TENDA	PABX	---	
7.	FAX Machine	----	RICOH	Aficio SP 3510SF	JM119270005	

2.3. Block diagram of connection between the EUT and simulators

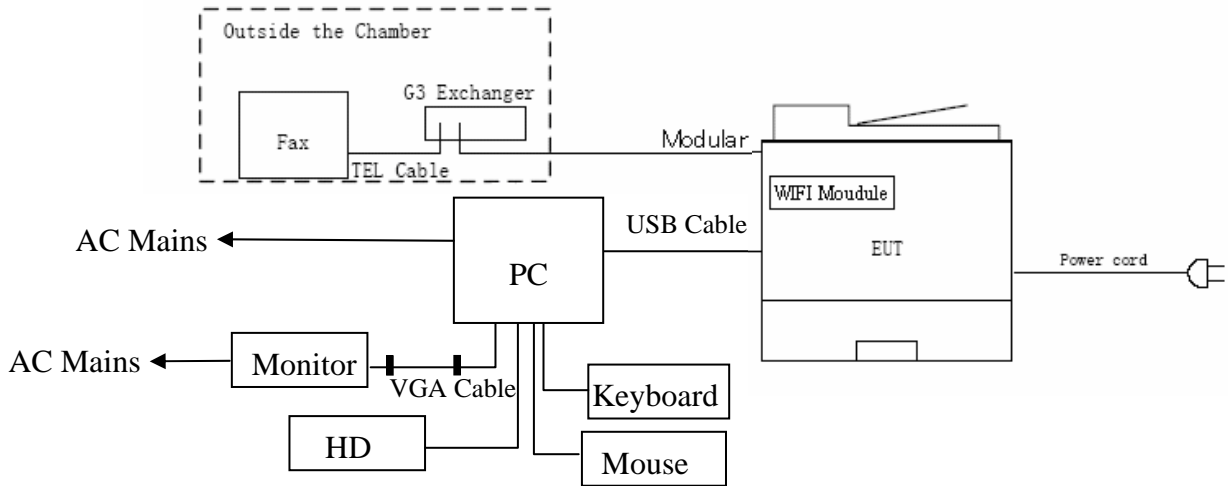
2.3.1. Configuration of E.U.T

**Mode 1,2,3,5,6,8,9,10**



2.3.2. Configuration of E.U.T

**Mode 4,7**



**(EUT: Printer)**

	Cable Name	Length	Shielded	Maker	Remarks
1	USB Cable	2m	YES	RICOH	
2	NIC Cable	3m	No	Black Box	
3	Power Cable	1.5m	No	LONGWELL	
4	Modular Cable	2m	No	—	
5.	VGA Cable	1.8m	No	—	

## 2.4. Test Facility

### Site Description

- Name of Firm : Audix Technology (Shenzhen) Co., Ltd.  
No. 6, Ke Feng Rd., 52 Block, Shenzhen Science & Industrial Park, Nantou, Shenzhen, Guangdong, China
- 3m Anechoic Chamber : Certificated by FCC, USA  
Registration Number: 90454  
Valid Date: Feb.22, 2015
- 3m & 10m Anechoic Chamber : Certificated by FCC, USA  
Registration Number: 794232  
Valid Date: Oct.31, 2015
- EMC Lab. : Certificated by DAkkS, Germany  
Registration No: D-PL-12151-01-01  
Valid Date: Feb.01, 2014
- Accredited by NVLAP, USA  
NVLAP Code: 200372-0  
Valid Date: Mar.31, 2013

## 2.5. Measurement Uncertainty (95% confidence levels, k=2)

Test Item	Uncertainty
Uncertainty for Conduction emission test in No. 2 Conduction	3.2 dB(150KHz to 30MHz)
Uncertainty for Radiation Emission test in 3m chamber	3.6 dB(30~200MHz, Polarize: H)
	3.8 dB(30~200MHz, Polarize: V)
	4.2 dB(200M~1GHz, Polarize: H)
	3.8 dB(200M~1GHz, Polarize: V)
Uncertainty for Radiation Emission test in 3m chamber (1GHz-18GHz)	3.1dB(Distance: 3m Polarize: V)
	3.7 dB(Distance: 3m Polarize: H)
Uncertainty for test site temperature and humidity	3%
	0.6°C

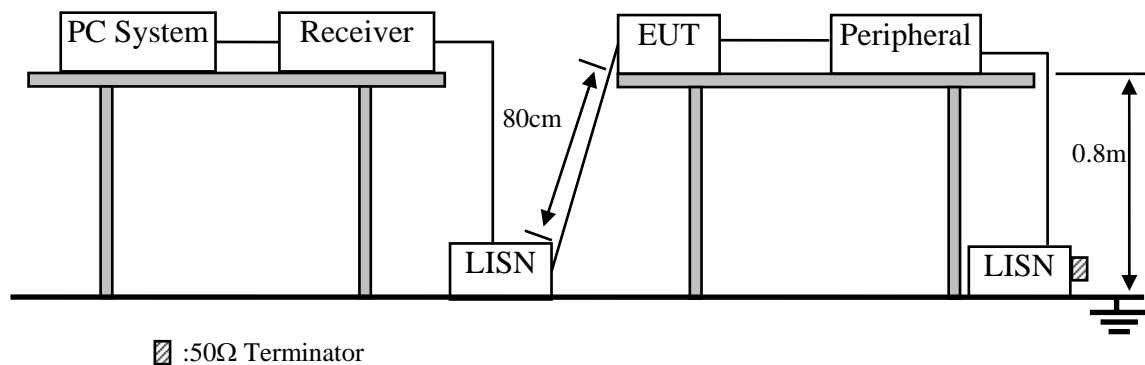


### 3. POWER LINE CONDUCTED EMISSION MEASUREMENT

#### 3.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Test Receiver	Rohde & Schwarz	ESHS20	836600/006	May.08, 12	1 Year
2	L.I.S.N.#1	Rohde & Schwarz	ENV4200	100041	May.08, 12	1 Year
3	L.I.S.N.#2	Kyoritsu	KNW-407	8-1628-5	May.08, 12	1 Year
4	Terminator	Hubersuhner	50Ω	No. 1	May.08, 12	1 Year
5	Terminator	Hubersuhner	50Ω	No. 2	May.08, 12	1 Year
6	RF Cable	Fujikura	3D-2W	No.2	May.08, 12	1 Year
7	Coaxial Switch	Anritsu	MP59B	6200298346	May.08, 12	1 Year
8	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100340	May.08, 12	1 Year

#### 3.2. Block Diagram of Test Setup



#### 3.3. Power Line Conducted Emission Test Limits

Frequency	Maximum RF Line Voltage	
	Quasi-Peak Level dB(μV)	Average Level dB(μV)
150kHz ~ 500kHz	66 ~ 56*	56 ~ 46*
500kHz ~ 5MHz	56	46
5MHz ~ 30MHz	60	50

- Notes: 1. \* Decreasing linearly with logarithm of frequency.  
 2. The lower limit shall apply at the transition frequencies.

#### 3.4. Configuration of EUT on Test

The following equipment are installed on Power Line Conducted Emission Test to meet the commission requirement and operating regulations in a manner which tends to maximize its emission characteristics in a normal application.

##### 3.4.1. Printer (EUT)

Model Number : SP311SFNW  
 Serial Number : N/A

##### 3.4.2. Support Equipment : As Tested Supporting System Detail, in Section 2.2.

### 3.5. Operating Condition of EUT

- 3.5.1. Setup the EUT and simulator as shown as Section 3.2.
- 3.5.2. Turn on the power of all equipment.

### 3.6. Test Procedure

The EUT was placed on a non-metallic table, 80cm above the ground plane. The EUT Power connected to the power mains through a line impedance stabilization network (L.I.S.N. 1#). This provided a 50-ohm coupling impedance for the EUT (Please refer to the block diagram of the test setup and photographs). The other peripheral devices power cord connected to the power mains through a line impedance stabilization network (L.I.S.N.#3). Both sides of power line were checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to ANSI C63.4: 2009 on conducted Emission test.

The bandwidth of test receiver (R&S TEST RECEIVER ESHS10) is set at 9kHz.

The frequency range from 150kHz to 30MHz is checked. The test result are reported on Section 3.7.

### 3.7. Conducted Emission at Mains Terminals Test Results

**PASS.** (All emissions not reported below are too low against the prescribed limits.)

The EUT with the following test modes were tested and selected to read Q.P values and average values, all the test results are listed in next pages.

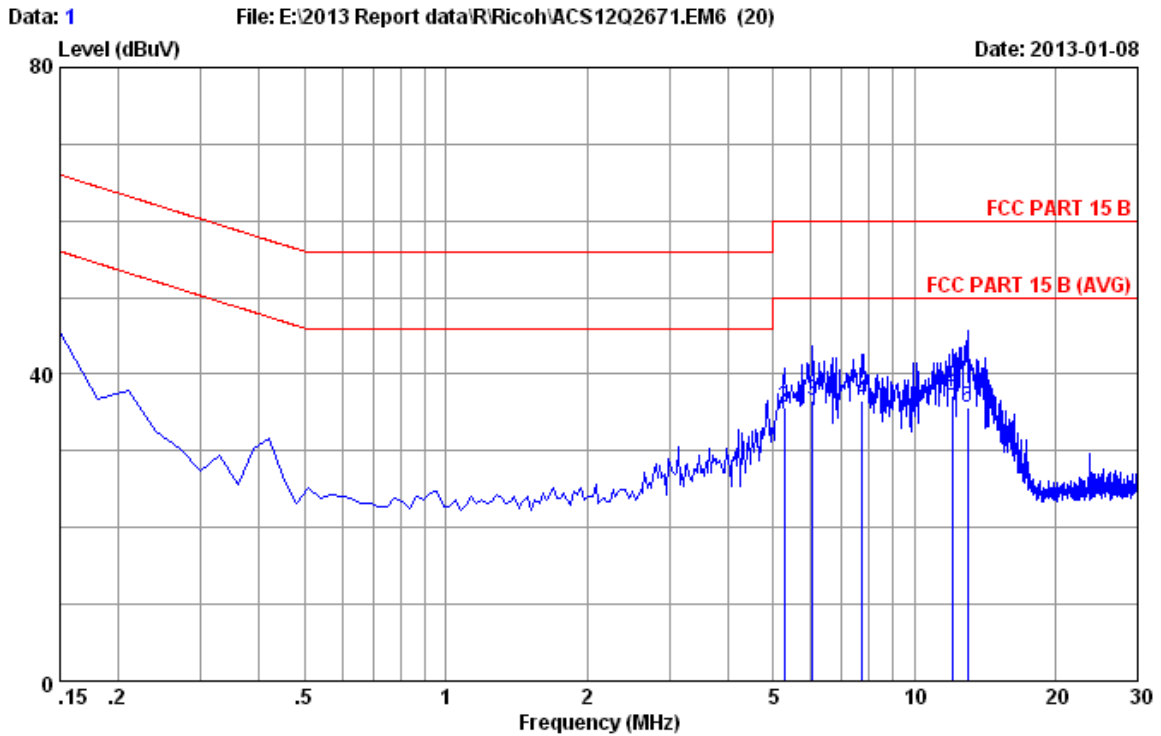
EUT: Printer

Model No. : SP311SFNW

Test Date: Jan.07, 2013      Temperature: 23.4°C      Humidity: 44%

#### 3.7.1. Operating modes :

1.	Standby	(CE)
2.	USB Print	(CE)
3.	NIC Print	(CE)
4.	WIFI Print	(CE)
5.	NIC Scan	(CE)
6.	USB Scan	(CE)
7.	WIFI Scan	(CE)
8.	FAX TX	(CE)
9.	FAX RX	(CE)
10.	Copy	(CE)

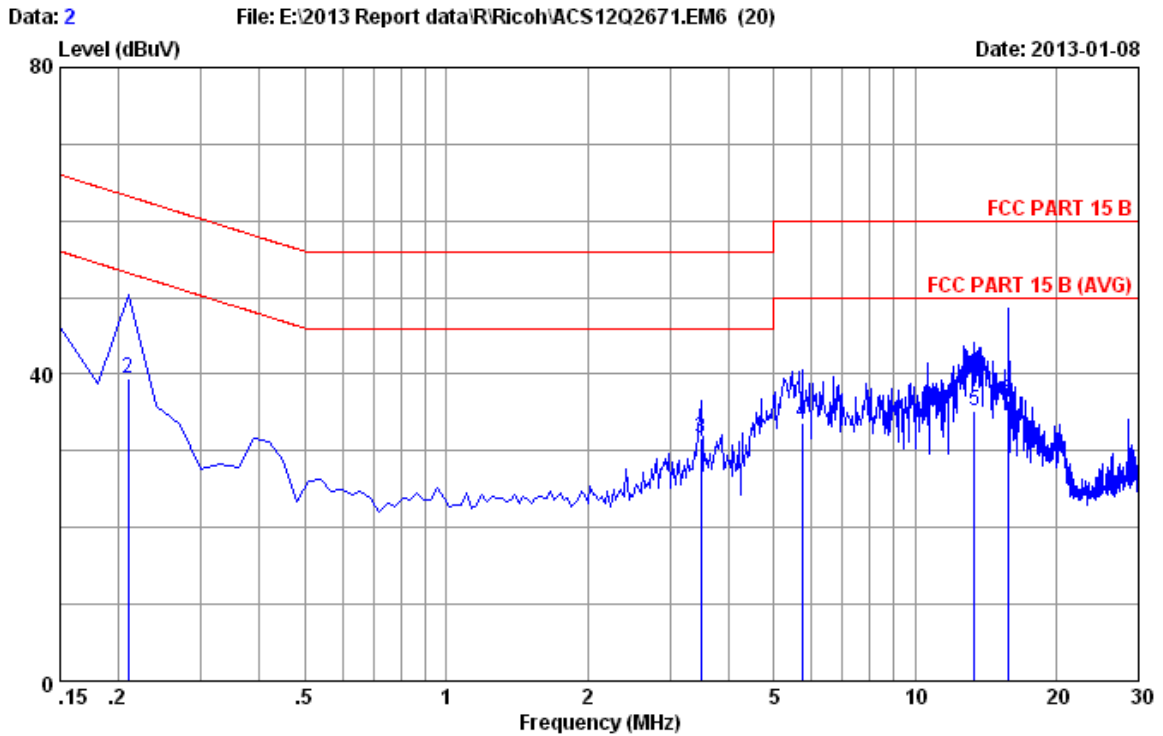


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Site no       :Audix No.2 Conduction           Data No      :1
Dis./Lisn    **: 12 ENV4200 L1                LISN phase:LINE
Limit        :FCC PART 15 B
Env./Ins.    :23.3*C/44%                     Engineer    :Jerry
EUT          :Printer
Power Rating :AC 120V/60Hz
Test Mode    :Standby
M/N:SP311SFNW
    
```

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.15000	9.95	9.93	21.51	41.39	66.00	24.61	QP
2	5.284	9.79	9.95	15.95	35.69	60.00	24.31	QP
3	6.060	9.79	9.95	16.87	36.61	60.00	23.39	QP
4	7.732	9.80	9.96	16.87	36.63	60.00	23.37	QP
5	12.030	9.90	9.99	17.29	37.18	60.00	22.82	QP
6	13.015	9.93	10.00	15.65	35.58	60.00	24.42	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.  
 2.If the average limit is met when using a quasi-peak detector. the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

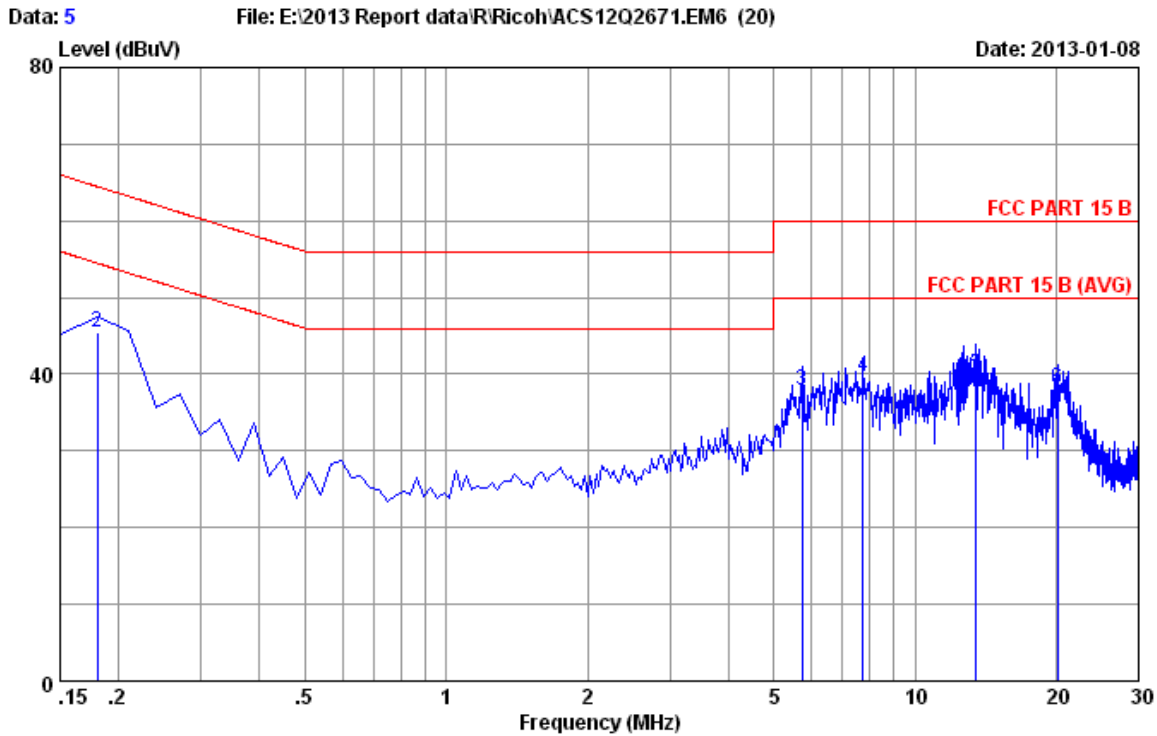


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Site no       :Audix No.2 Conduction           Data No      :2
Dis./Lisn    **: 12 ENV4200 N                 LISN phase:NEUTRAL
Limit        :FCC PART 15 B
Env./Ins.    :23.3*C/44%                     Engineer    :Jerry
EUT          :Printer
Power Rating :AC 120V/60Hz
Test Mode    :Standby
              M/N:SP311SFNW
    
```

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBUV)	Emission Level (dBUV)	Limits (dBUV)	Margin (dB)	Remark
1	0.15000	9.95	9.93	21.80	41.68	66.00	24.32	QP
2	0.20970	9.89	9.94	19.64	39.47	63.22	23.75	QP
3	3.493	9.77	9.94	11.93	31.64	56.00	24.36	QP
4	5.732	9.78	9.95	13.88	33.61	60.00	26.39	QP
5	13.403	9.95	10.00	15.16	35.11	60.00	24.89	QP
6	15.791	10.00	10.02	16.58	36.60	60.00	23.40	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.  
 2.If the average limit is met when using a quasi-peak detector.  
 the EUT shall be deemed to meet both limits and measurement  
 with average detector is unnecessary.

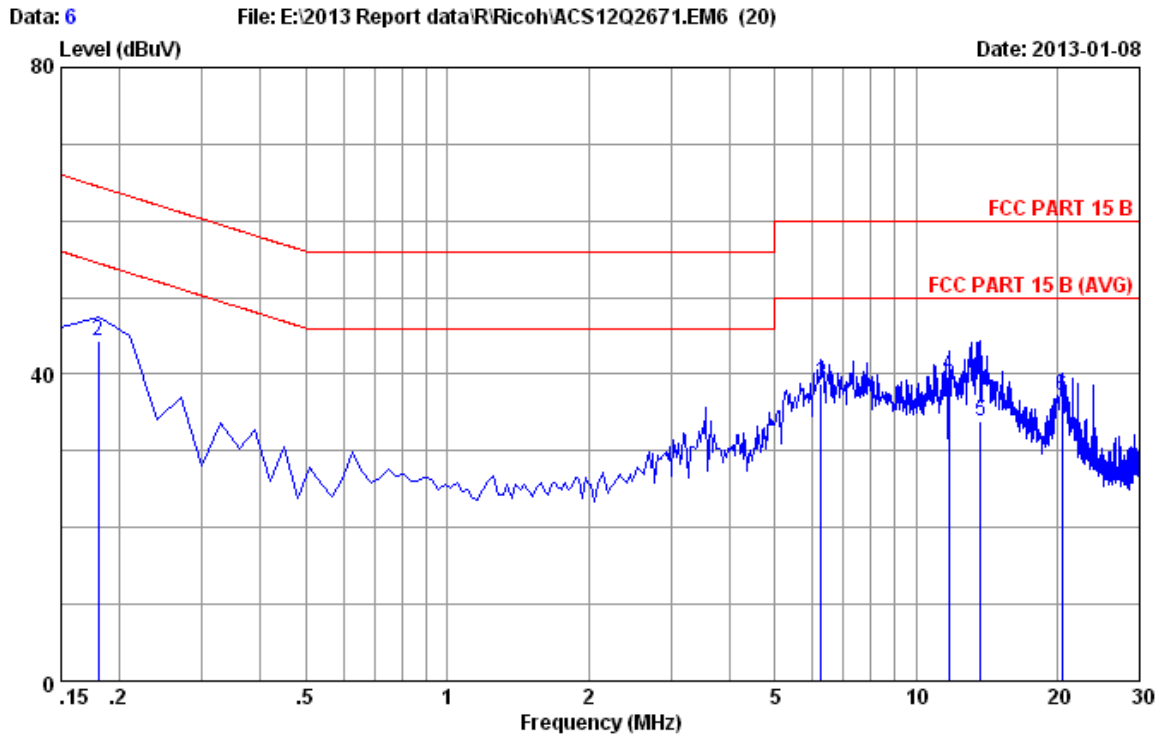


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Site no       :Audix No.2 Conduction      Data No      :5
Dis./Lisn    **: 12 ENV4200 L1           LISN phase:LINE
Limit        :FCC PART 15 B
Env./Ins.    :23.3*C/44%                Engineer    :Jerry
EUT          :Printer
Power Rating  :AC 120V/60Hz
Test Mode    :USB PRINT
              M/N:SP311SFNW
    
```

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.15000	9.95	9.93	18.70	38.58	66.00	27.42	QP
2	0.17985	9.91	9.93	25.61	45.45	64.49	19.04	QP
3	5.732	9.79	9.95	18.19	37.93	60.00	22.07	QP
4	7.732	9.80	9.96	19.91	39.67	60.00	20.33	QP
5	13.433	9.95	10.00	20.05	40.00	60.00	20.00	QP
6	20.150	9.99	10.06	18.13	38.18	60.00	21.82	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.  
 2.If the average limit is met when using a quasi-peak detector.  
 the EUT shall be deemed to meet both limits and measurement  
 with average detector is unnecessary.

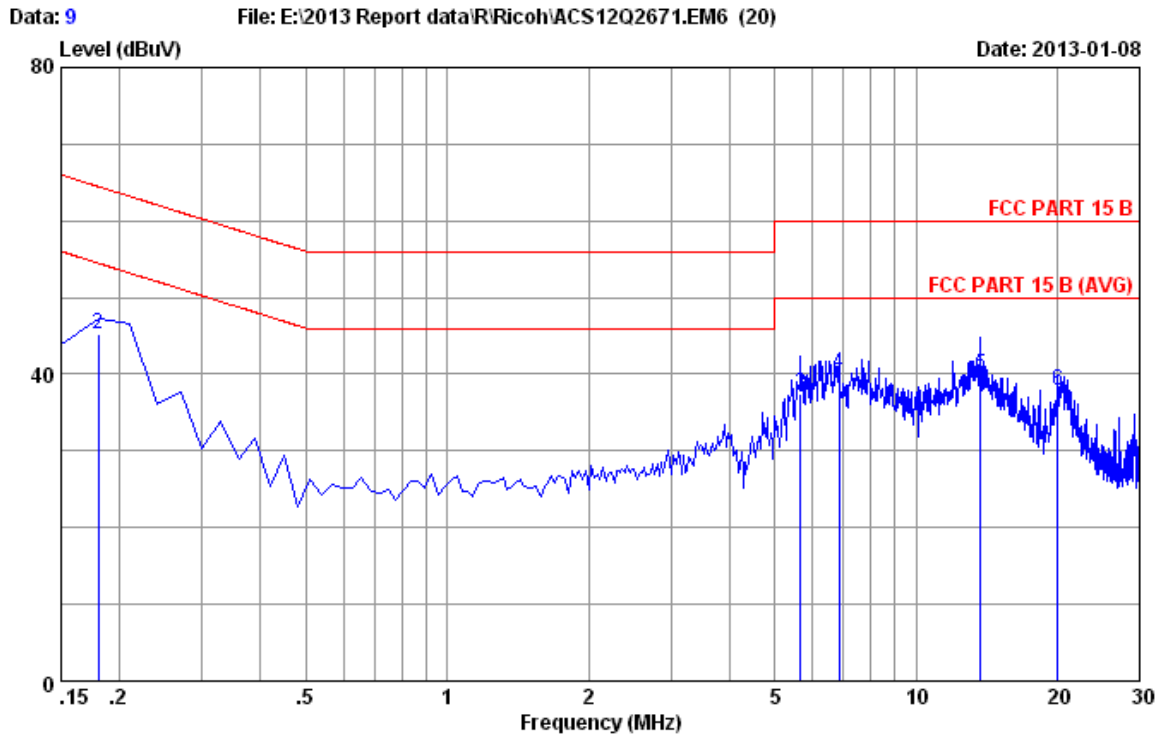


```

Site no       :Audix No.2 Conduction           Data No      :6
Dis./Lisn    **: 12 ENV4200 N                 LISN phase:NEUTRAL
Limit        :FCC PART 15 B
Env./Ins.    :23.3*C/44%                     Engineer    :Jerry
EUT          :Printer
Power Rating :AC 120V/60Hz
Test Mode    :USB PRINT
              M/N:SP311SFNW
    
```

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.15000	9.95	9.93	18.90	38.78	66.00	27.22	QP
2	0.17985	9.91	9.93	24.53	44.37	64.49	20.12	QP
3	6.269	9.79	9.96	19.10	38.85	60.00	21.15	QP
4	11.732	9.89	9.99	20.02	39.90	60.00	20.10	QP
5	13.739	9.96	10.00	13.90	33.86	60.00	26.14	QP
6	20.478	9.98	10.07	17.17	37.22	60.00	22.78	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.  
 2.If the average limit is met when using a quasi-peak detector.  
 the EUT shall be deemed to meet both limits and measurement  
 with average detector is unnecessary.

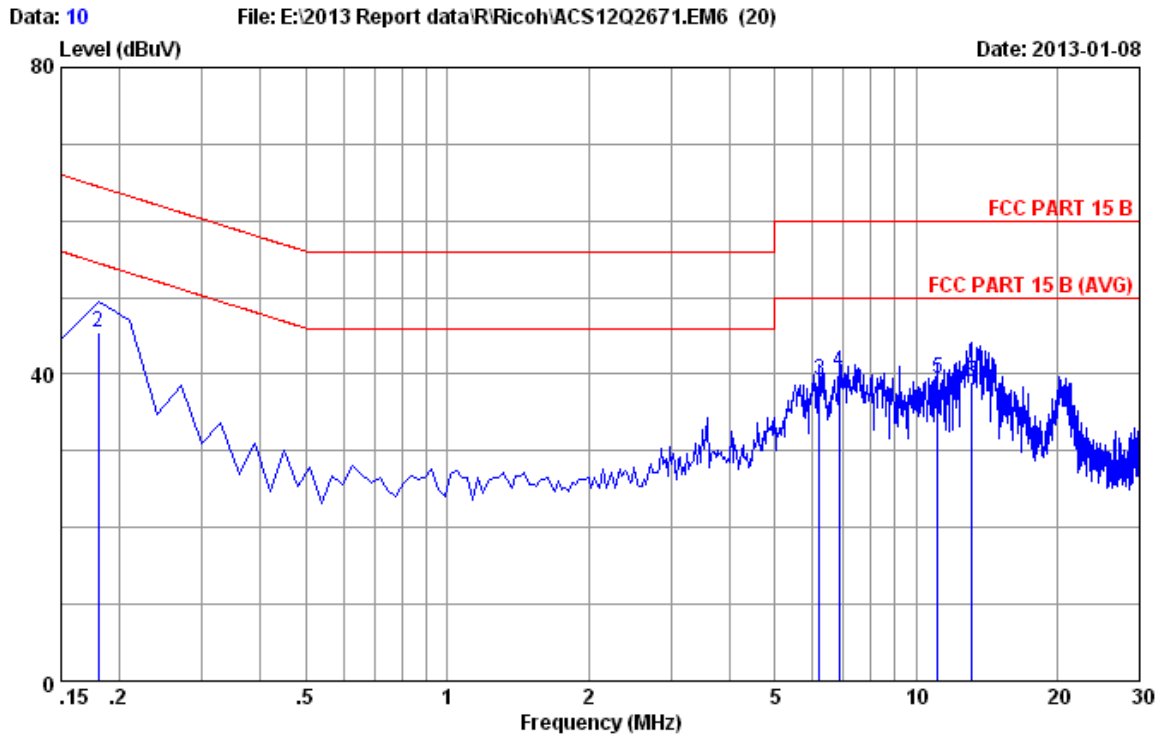


```

Site no       :Audix No.2 Conduction      Data No      :9
Dis./Lisn    **: 12 ENV4200 L1           LISN phase   :LINE
Limit        :FCC PART 15 B
Env./Ins.    :23.3*C/44%                Engineer    :Jerry
EUT          :Printer
Power Rating  :AC 120V/60Hz
Test Mode    :NIC PRINT
              M/N:SP311SFNW
    
```

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.15000	9.95	9.93	16.90	36.78	66.00	29.22	QP
2	0.17985	9.91	9.93	25.43	45.27	64.49	19.22	QP
3	5.672	9.79	9.95	17.67	37.41	60.00	22.59	QP
4	6.866	9.79	9.96	20.34	40.09	60.00	19.91	QP
5	13.732	9.96	10.00	19.92	39.88	60.00	20.12	QP
6	20.090	9.99	10.06	17.73	37.78	60.00	22.22	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.  
 2.If the average limit is met when using a quasi-peak detector. the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.



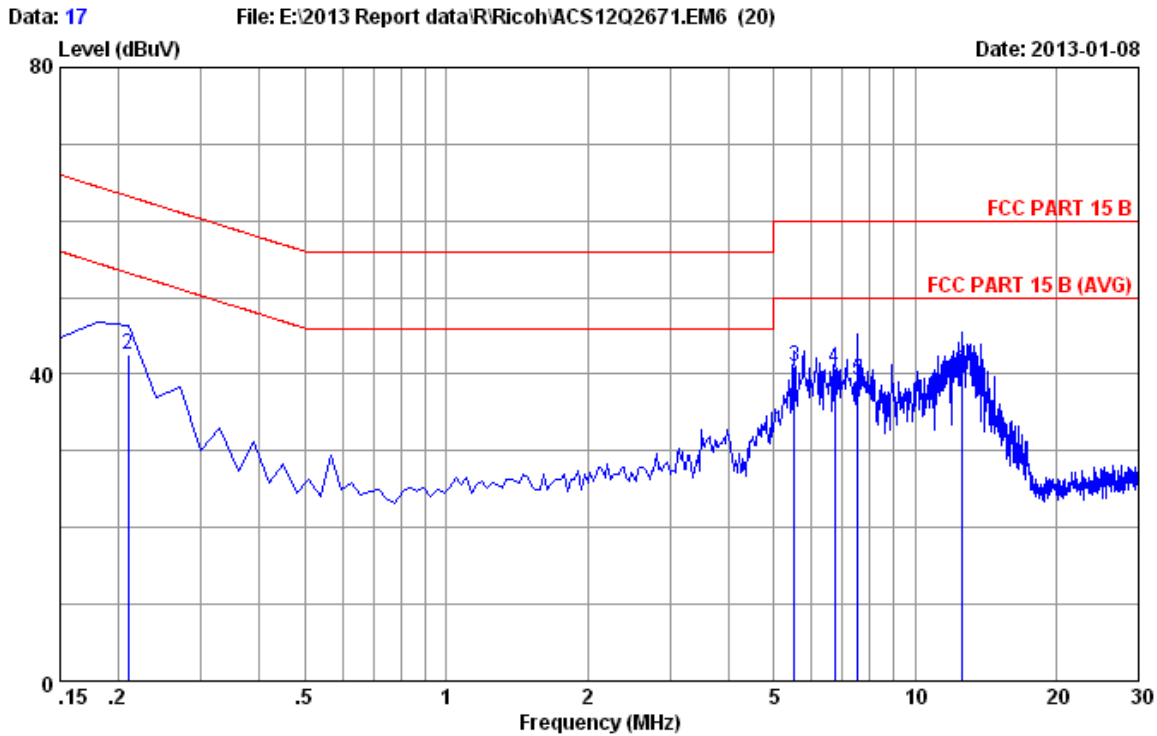
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Site no       :Audix No.2 Conduction           Data No      :10
Dis./Lisn    **: 12 ENV4200 N                 LISN phase:NEUTRAL
Limit        :FCC PART 15 B
Env./Ins.    :23.3*C/44%                     Engineer    :Jerry
EUT          :Printer
Power Rating :AC 120V/60Hz
Test Mode    :NIC PRINT
              M/N:SP311SFNW
    
```

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.15000	9.95	9.93	19.80	39.68	66.00	26.32	QP
2	0.17985	9.91	9.93	25.64	45.48	64.49	19.01	QP
3	6.210	9.79	9.95	19.39	39.13	60.00	20.87	QP
4	6.866	9.79	9.96	20.68	40.43	60.00	19.57	QP
5	11.105	9.87	9.99	19.64	39.50	60.00	20.50	QP
6	13.165	9.94	10.00	19.15	39.09	60.00	20.91	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.  
 2.If the average limit is met when using a quasi-peak detector. the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.



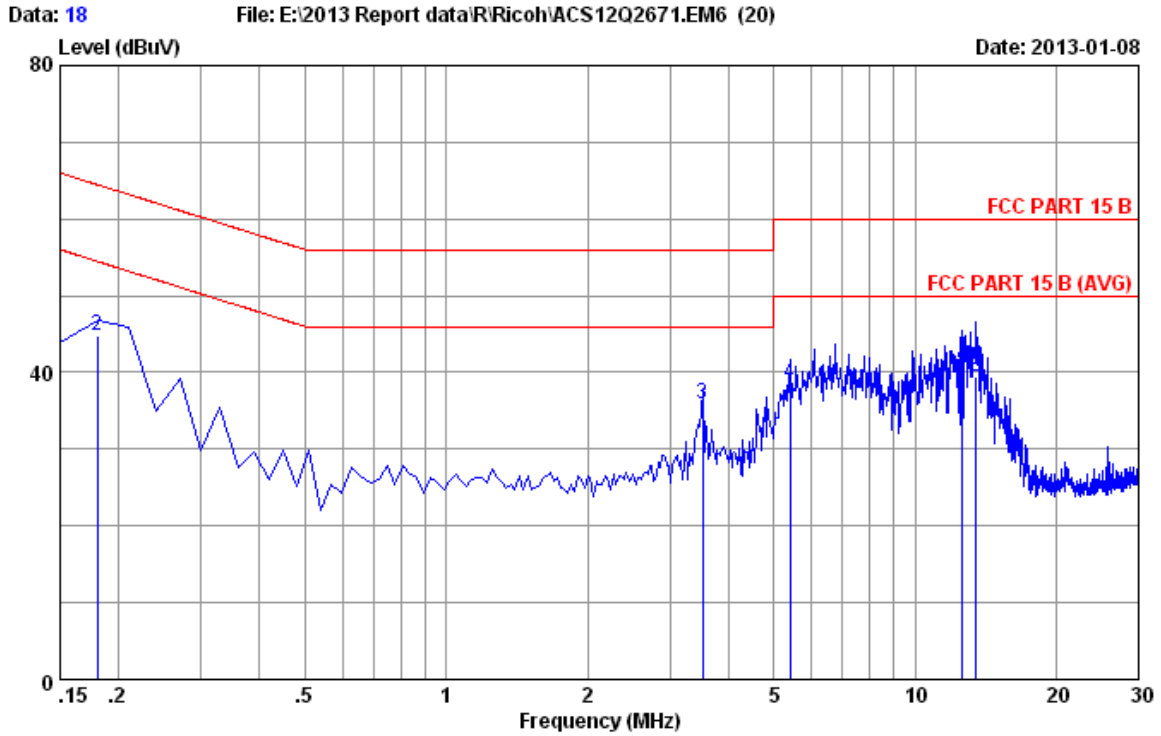


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Site no       :Audix No.2 Conduction           Data No      :17
Dis./Lisn    **: 12 ENV4200 L1                 LISN phase:LINE
Limit        :FCC PART 15 B
Env./Ins.    :23.3*C/44%                      Engineer    :Jerry
EUT          :Printer
Power Rating  :AC 120V/60Hz
Test Mode    :WIFI PRINT
              M/N:SP311SFNW
    
```

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.15000	9.95	9.93	19.60	39.48	66.00	26.52	QP
2	0.20970	9.89	9.94	22.62	42.45	63.22	20.77	QP
3	5.523	9.79	9.95	21.29	41.03	60.00	18.97	QP
4	6.747	9.79	9.96	21.10	40.85	60.00	19.15	QP
5	7.553	9.80	9.96	19.48	39.24	60.00	20.76	QP
6	12.568	9.92	10.00	20.43	40.35	60.00	19.65	QP

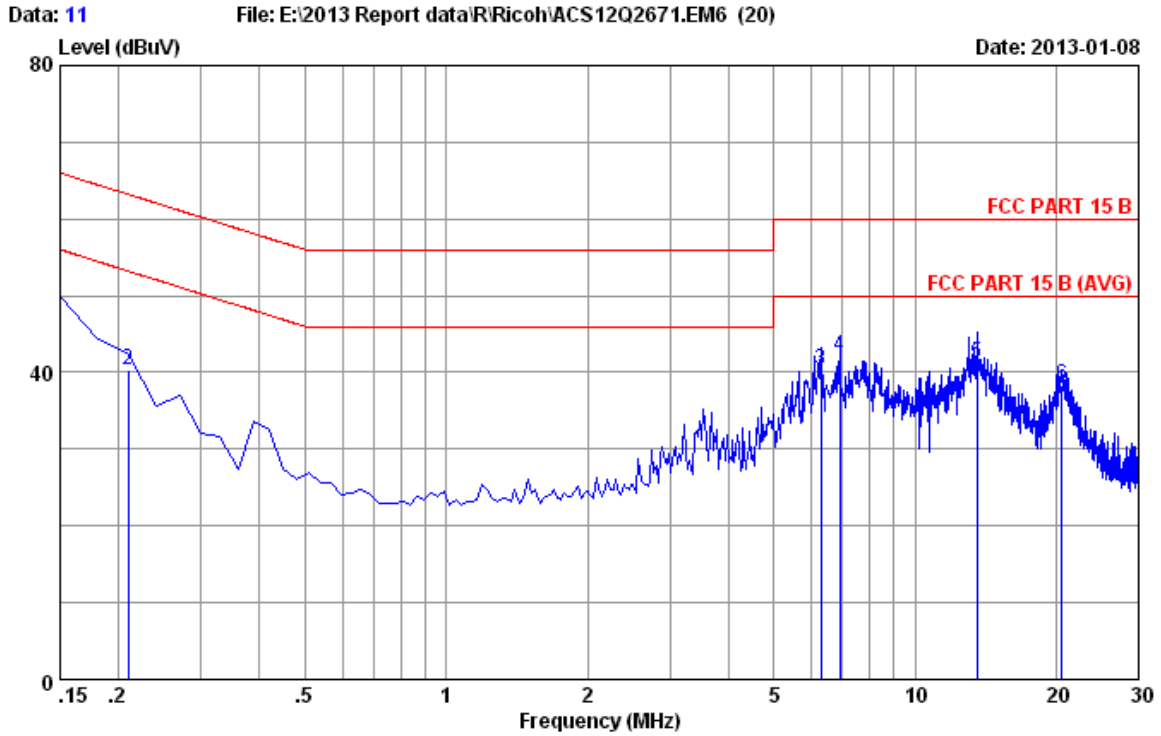
Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.  
 2.If the average limit is met when using a quasi-peak detector.  
 the EUT shall be deemed to meet both limits and measurement  
 with average detector is unnecessary.



Site no :Audix No.2 Conduction Data No :18  
 Dis./Lisn \*\*: 12 ENV4200 N LISN phase:NEUTRAL  
 Limit :FCC PART 15 B  
 Env./Ins. :23.3\*C/44% Engineer :Jerry  
 EUT :Printer  
 Power Rating :AC 120V/60Hz  
 Test Mode :WIFI PRINT  
 M/N:SP311SFNW

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.15000	9.95	9.93	17.80	37.68	66.00	28.32	QP
2	0.17985	9.91	9.93	24.88	44.72	64.49	19.77	QP
3	3.523	9.77	9.94	16.15	35.86	56.00	20.14	QP
4	5.404	9.78	9.95	18.89	38.62	60.00	21.38	QP
5	12.627	9.92	10.00	20.48	40.40	60.00	19.60	QP
6	13.523	9.95	10.00	19.58	39.53	60.00	20.47	QP

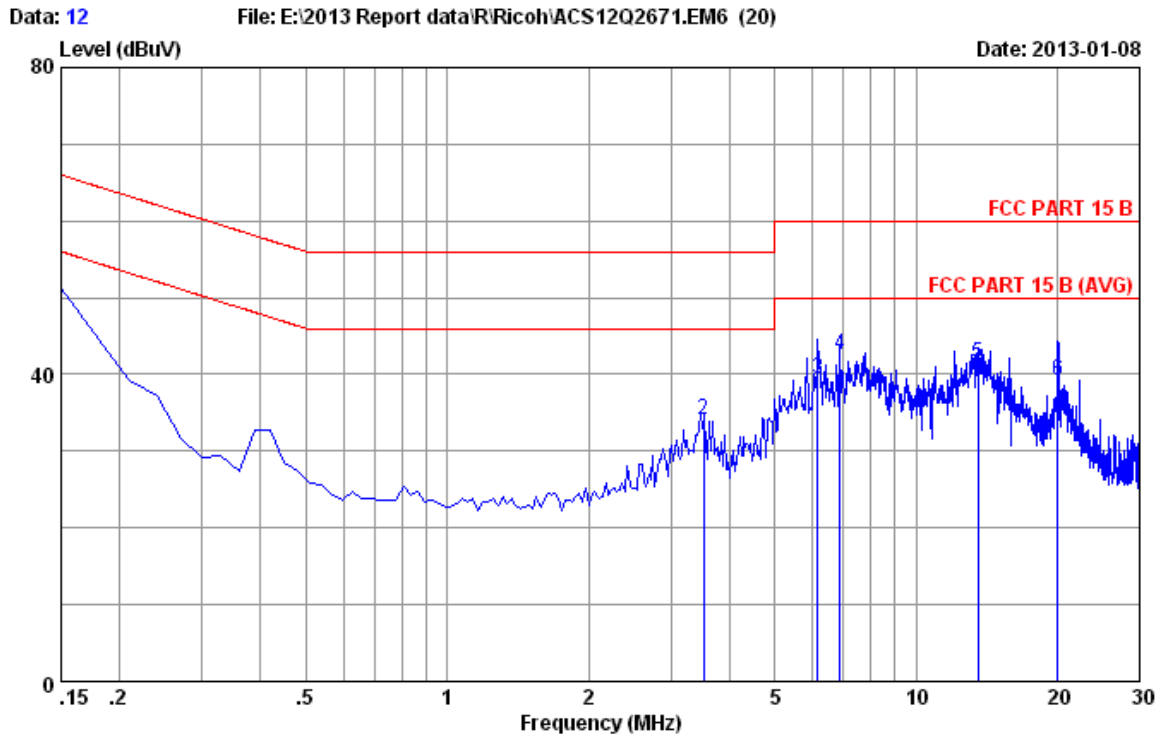
Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.  
 2.If the average limit is met when using a quasi-peak detector.  
 the EUT shall be deemed to meet both limits and measurement  
 with average detector is unnecessary.



Site no :Audix No.2 Conduction Data No :11  
 Dis./Lisn \*\*: 12 ENV4200 L1 LISN phase:LINE  
 Limit :FCC PART 15 B  
 Env./Ins. :23.3\*C/44% Engineer :Jerry  
 EUT :Printer  
 Power Rating :AC 120V/60Hz  
 Test Mode :NIC SCAN  
 M/N:SP311SFNW

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.15000	9.95	9.93	27.01	46.89	66.00	19.11	QP
2	0.20970	9.89	9.94	20.54	40.37	63.22	22.85	QP
3	6.299	9.79	9.96	20.54	40.29	60.00	19.71	QP
4	6.926	9.79	9.96	22.39	42.14	60.00	17.86	QP
5	13.553	9.95	10.00	21.21	41.16	60.00	18.84	QP
6	20.597	9.99	10.07	18.21	38.27	60.00	21.73	QP

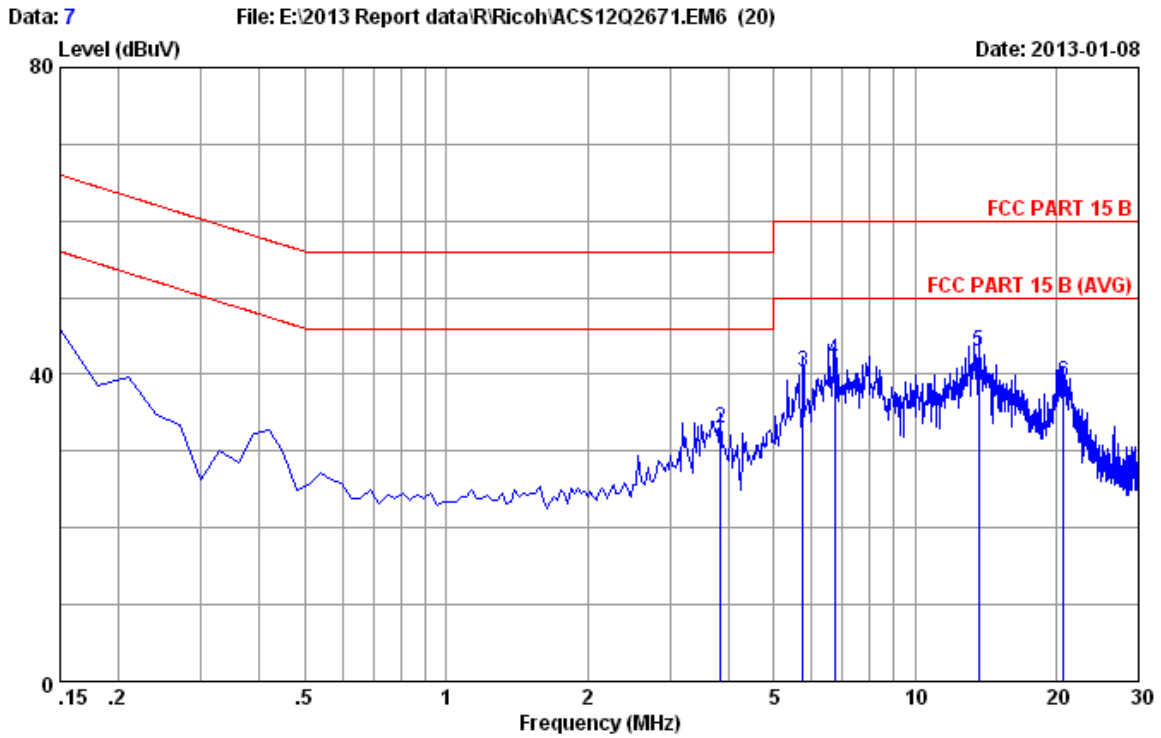
Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.  
 2.If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.



Site no : Audix No.2 Conduction Data No : 12  
 Dis./Lisn : \*\* 12 ENV4200 N LISN phase: NEUTRAL  
 Limit : FCC PART 15 B  
 Env./Ins. : 23.3\*C/44% Engineer : Jerry  
 EUT : Printer  
 Power Rating : AC 120V/60Hz  
 Test Mode : NIC SCAN  
 M/N: SP311SFNW

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.15000	9.95	9.93	25.50	45.38	66.00	20.62	QP
2	3.523	9.77	9.94	14.34	34.05	56.00	21.95	QP
3	6.180	9.79	9.95	19.77	39.51	60.00	20.49	QP
4	6.896	9.79	9.96	22.89	42.64	60.00	17.36	QP
5	13.583	9.95	10.00	21.51	41.46	60.00	18.54	QP
6	20.030	9.98	10.06	19.24	39.28	60.00	20.72	QP

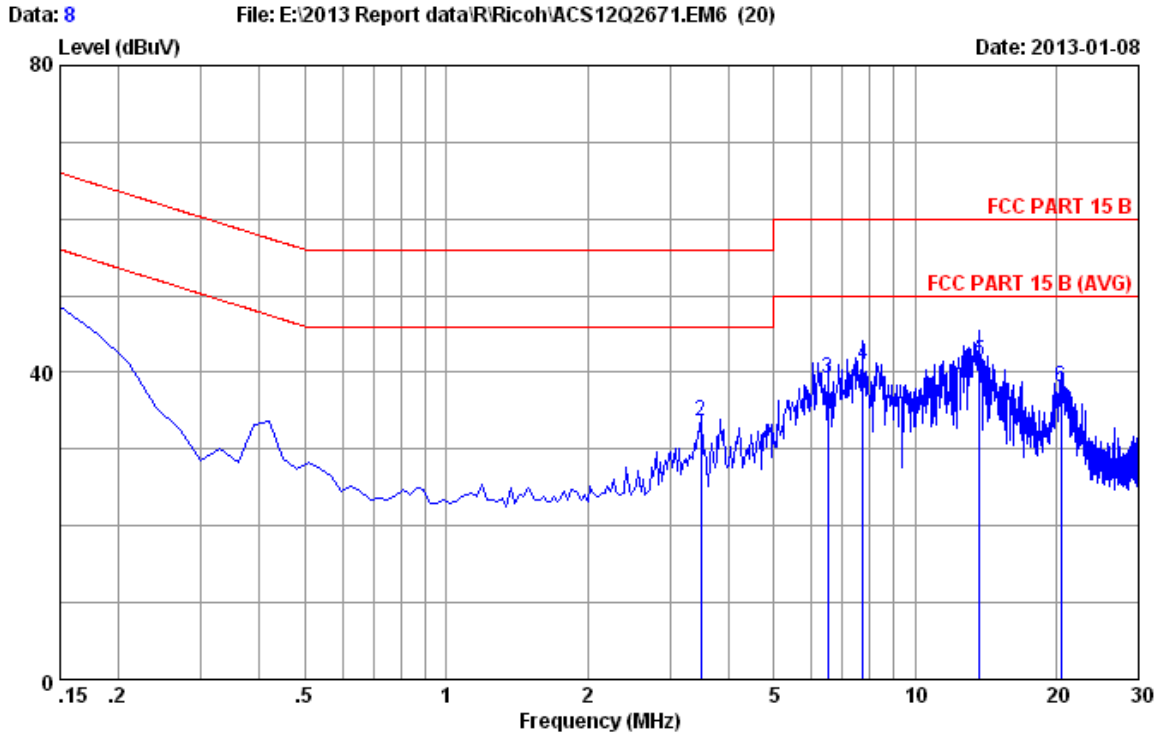
Remarks: 1. Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.  
 2. If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.



Site no :Audix No.2 Conduction Data No :7  
 Dis./Lisn \*\*: 12 ENV4200 L1 LISN phase:LINE  
 Limit :FCC PART 15 B  
 Env./Ins. :23.3\*C/44% Engineer :Jerry  
 EUT :Printer  
 Power Rating :AC 120V/60Hz  
 Test Mode :USB SCAN  
 M/N:SP311SFNW

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.15000	9.95	9.93	27.50	47.38	66.00	18.62	QP
2	3.851	9.78	9.94	13.19	32.91	56.00	23.09	QP
3	5.762	9.79	9.95	20.49	40.23	60.00	19.77	QP
4	6.747	9.79	9.96	22.15	41.90	60.00	18.10	QP
5	13.672	9.95	10.00	23.13	43.08	60.00	16.92	QP
6	20.776	9.99	10.07	18.89	38.95	60.00	21.05	QP

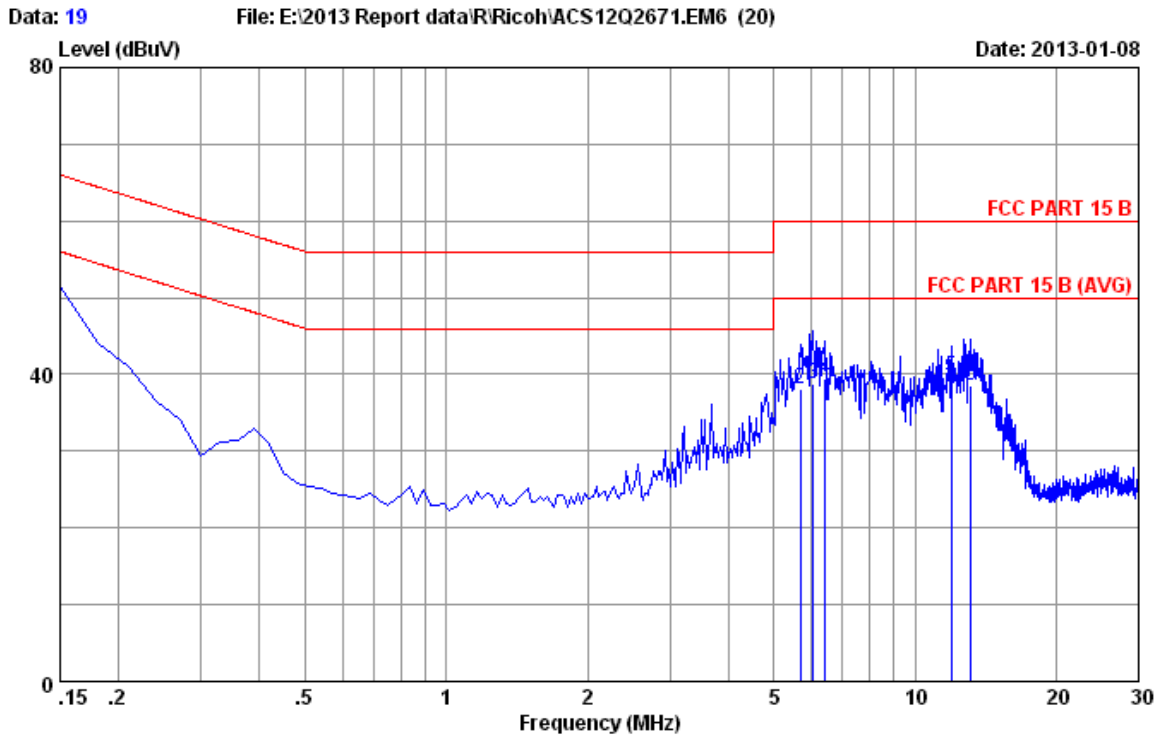
Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.  
 2.If the average limit is met when using a quasi-peak detector.  
 the EUT shall be deemed to meet both limits and measurement  
 with average detector is unnecessary.



Site no :Audix No.2 Conduction Data No :8  
 Dis./Lisn \*\*: 12 ENV4200 N LISN phase:NEUTRAL  
 Limit :FCC PART 15 B  
 Env./Ins. :23.3\*C/44% Engineer :Jerry  
 EUT :Printer  
 Power Rating :AC 120V/60Hz  
 Test Mode :USB SCAN  
 M/N:SP311SFNW

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.15000	9.95	9.93	26.60	46.48	66.00	19.52	QP
2	3.493	9.77	9.94	13.89	33.60	56.00	22.40	QP
3	6.508	9.79	9.96	19.55	39.30	60.00	20.70	QP
4	7.732	9.80	9.96	21.30	41.06	60.00	18.94	QP
5	13.732	9.96	10.00	21.50	41.46	60.00	18.54	QP
6	20.478	9.98	10.07	17.99	38.04	60.00	21.96	QP

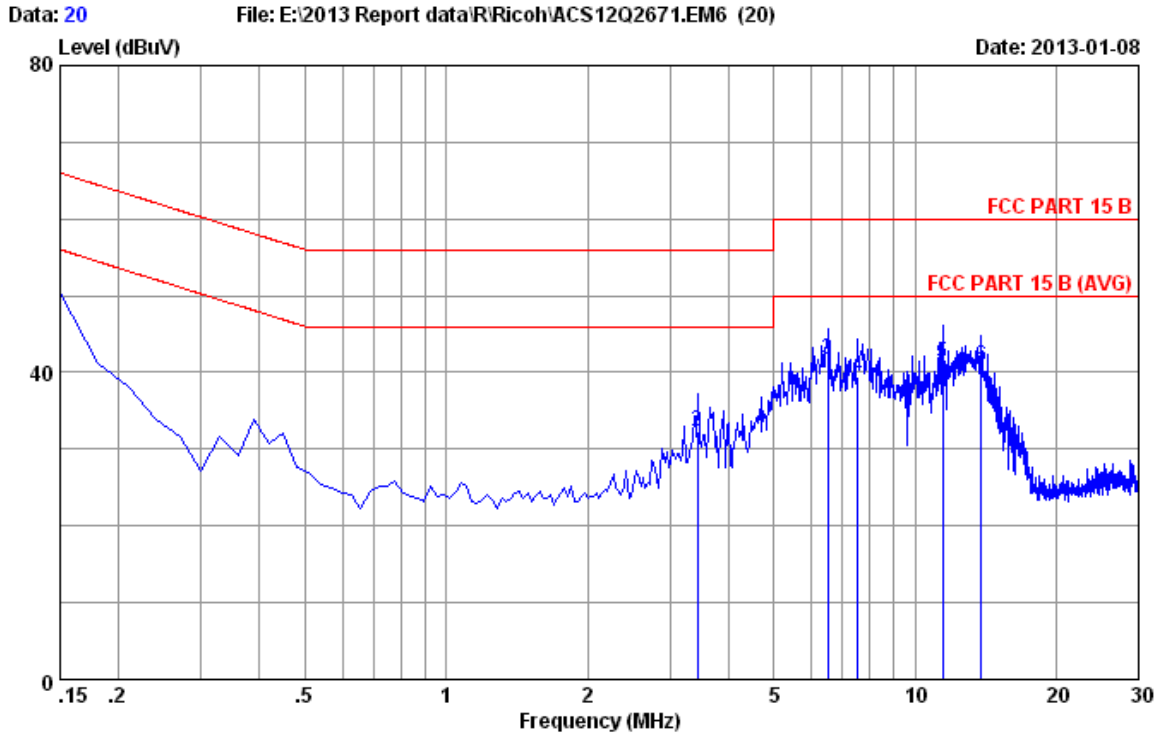
Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.  
 2.If the average limit is met when using a quasi-peak detector.  
 the EUT shall be deemed to meet both limits and measurement  
 with average detector is unnecessary.



Site no : Audix No.2 Conduction Data No : 19  
 Dis./Lisn : \*\* 12 ENV4200 L1 LISN phase: LINE  
 Limit : FCC PART 15 B  
 Env./Ins. : 23.3\*C/44% Engineer : Jerry  
 EUT : Printer  
 Power Rating : AC 120V/60Hz  
 Test Mode : WIFI SCAN  
 M/N: SP311SFNW

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.15000	9.95	9.93	23.50	43.38	66.00	22.62	QP
2	5.702	9.79	9.95	18.26	38.00	60.00	22.00	QP
3	6.060	9.79	9.95	18.94	38.68	60.00	21.32	QP
4	6.448	9.79	9.96	19.61	39.36	60.00	20.64	QP
5	11.941	9.90	9.99	19.72	39.61	60.00	20.39	QP
6	13.194	9.94	10.00	18.71	38.65	60.00	21.35	QP

Remarks: 1. Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.  
 2. If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

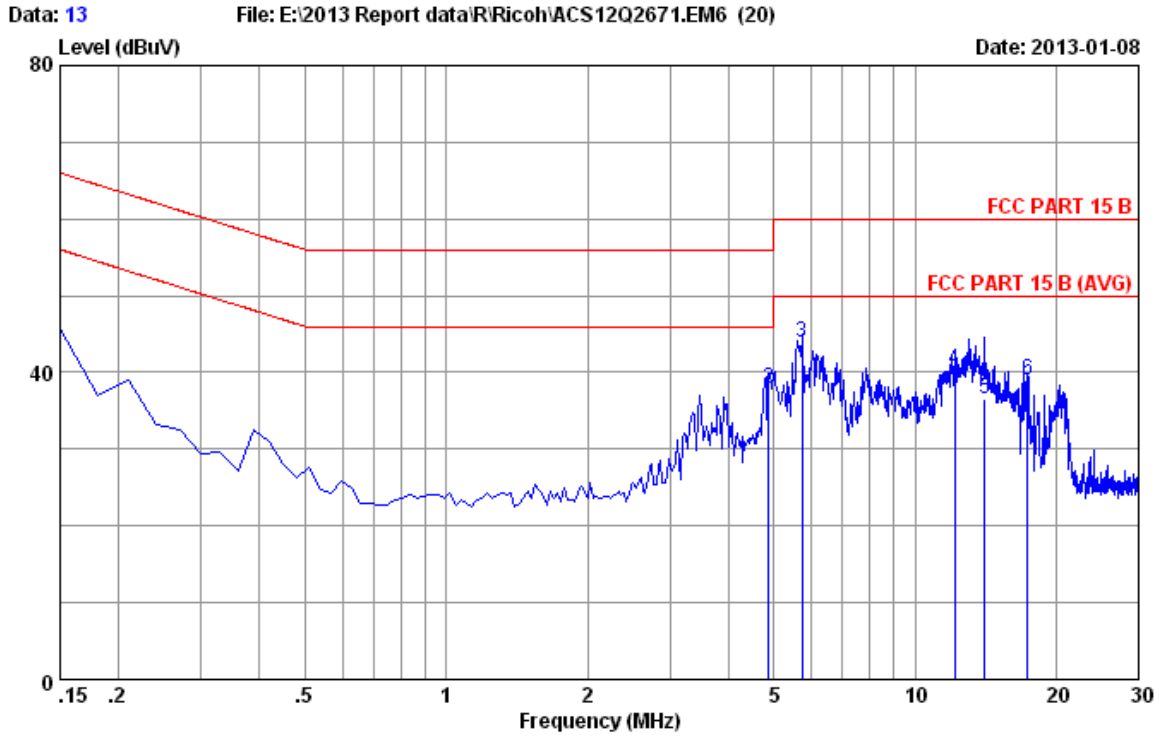


Site no :Audix No.2 Conduction Data No :20  
 Dis./Lisn \*\*: 12 ENV4200 N LISN phase:NEUTRAL  
 Limit :FCC PART 15 B  
 Env./Ins. :23.3\*C/44% Engineer :Jerry  
 EUT :Printer  
 Power Rating :AC 120V/60Hz  
 Test Mode :WIFI SCAN  
 M/N:SP311SFNW

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.15000	9.95	9.93	23.80	43.68	66.00	22.32	QP
2	3.434	9.77	9.94	12.51	32.22	56.00	23.78	QP
3	6.508	9.79	9.96	21.93	41.68	60.00	18.32	QP
4	7.553	9.80	9.96	19.63	39.39	60.00	20.61	QP
5	11.463	9.88	9.99	21.26	41.13	60.00	18.87	QP
6	13.851	9.96	10.00	20.73	40.69	60.00	19.31	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.  
 2.If the average limit is met when using a quasi-peak detector.  
 the EUT shall be deemed to meet both limits and measurement  
 with average detector is unnecessary.

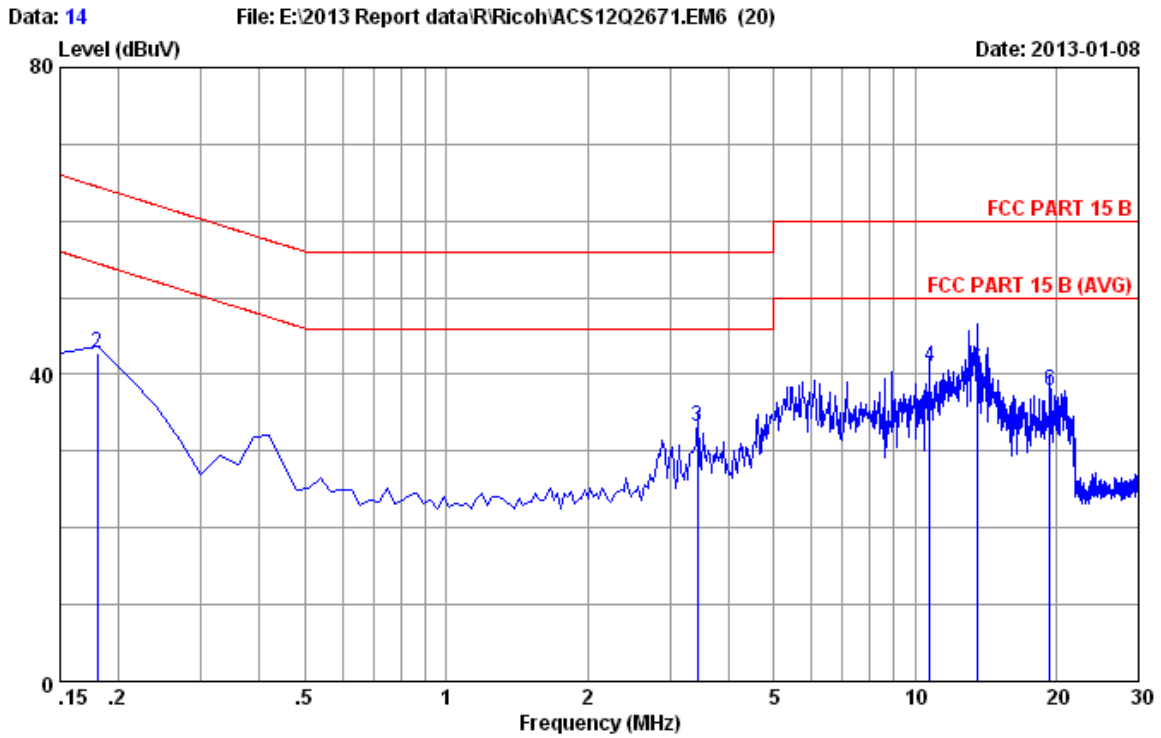




Site no : Audix No.2 Conduction Data No : 13  
 Dis./Lisn : \*\* 12 ENV4200 L1 LISN phase: LINE  
 Limit : FCC PART 15 B  
 Env./Ins. : 23.3\*C/44% Engineer : Jerry  
 EUT : Printer  
 Power Rating : AC 120V/60Hz  
 Test Mode : FAX-TX  
 M/N: SP311SFNW

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.15000	9.95	9.93	28.60	48.48	66.00	17.52	QP
2	4.866	9.79	9.95	18.20	37.94	56.00	18.06	QP
3	5.732	9.79	9.95	24.25	43.99	60.00	16.01	QP
4	12.150	9.90	9.99	20.45	40.34	60.00	19.66	QP
5	14.060	9.97	10.00	16.64	36.61	60.00	23.39	QP
6	17.403	10.00	10.03	18.96	38.99	60.00	21.01	QP

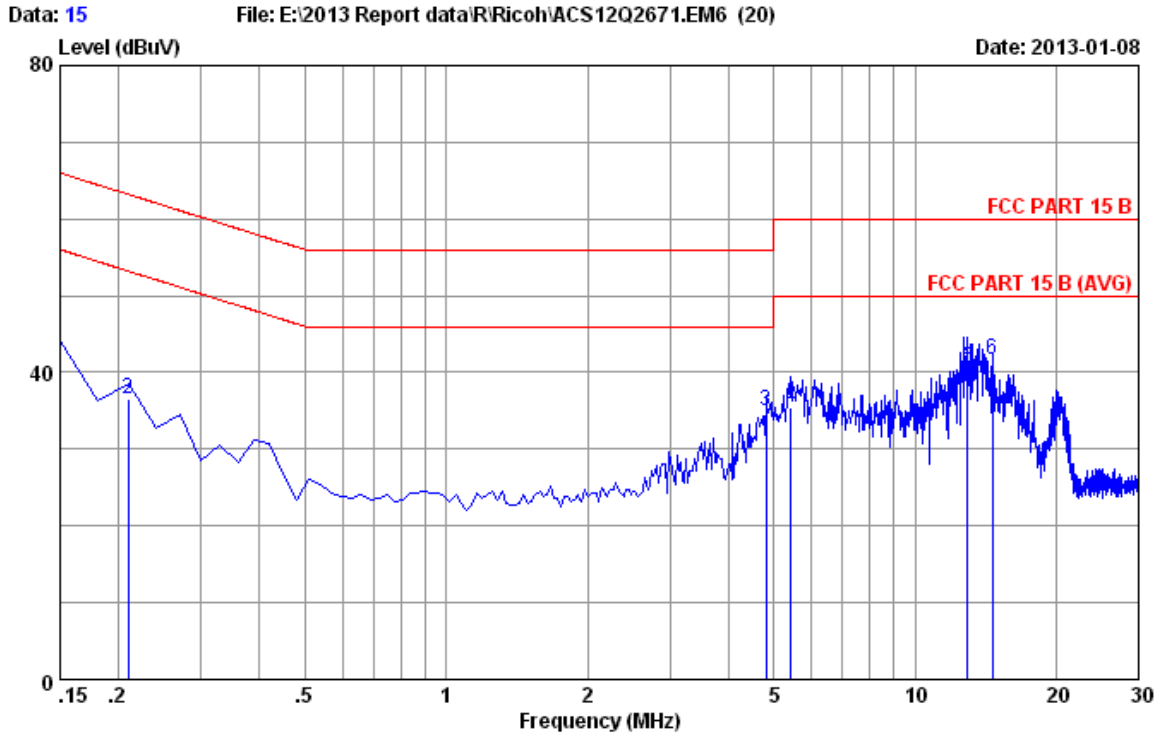
Remarks: 1. Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.  
 2. If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.



Site no :Audix No.2 Conduction Data No :14  
 Dis./Lisn \*\*: 12 ENV4200 N LISN phase:NEUTRAL  
 Limit :FCC PART 15 B  
 Env./Ins. :23.3\*C/44% Engineer :Jerry  
 EUT :Printer  
 Power Rating :AC 120V/60Hz  
 Test Mode :F&X-TX  
 M/N:SP311SFNW

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.15000	9.95	9.93	18.99	38.87	66.00	27.13	QP
2	0.17985	9.91	9.93	22.89	42.73	64.49	21.76	QP
3	3.434	9.77	9.94	13.55	33.26	56.00	22.74	QP
4	10.747	9.86	9.98	21.19	41.03	60.00	18.97	QP
5	13.553	9.95	10.00	20.62	40.57	60.00	19.43	QP
6	19.433	9.98	10.05	17.78	37.81	60.00	22.19	QP

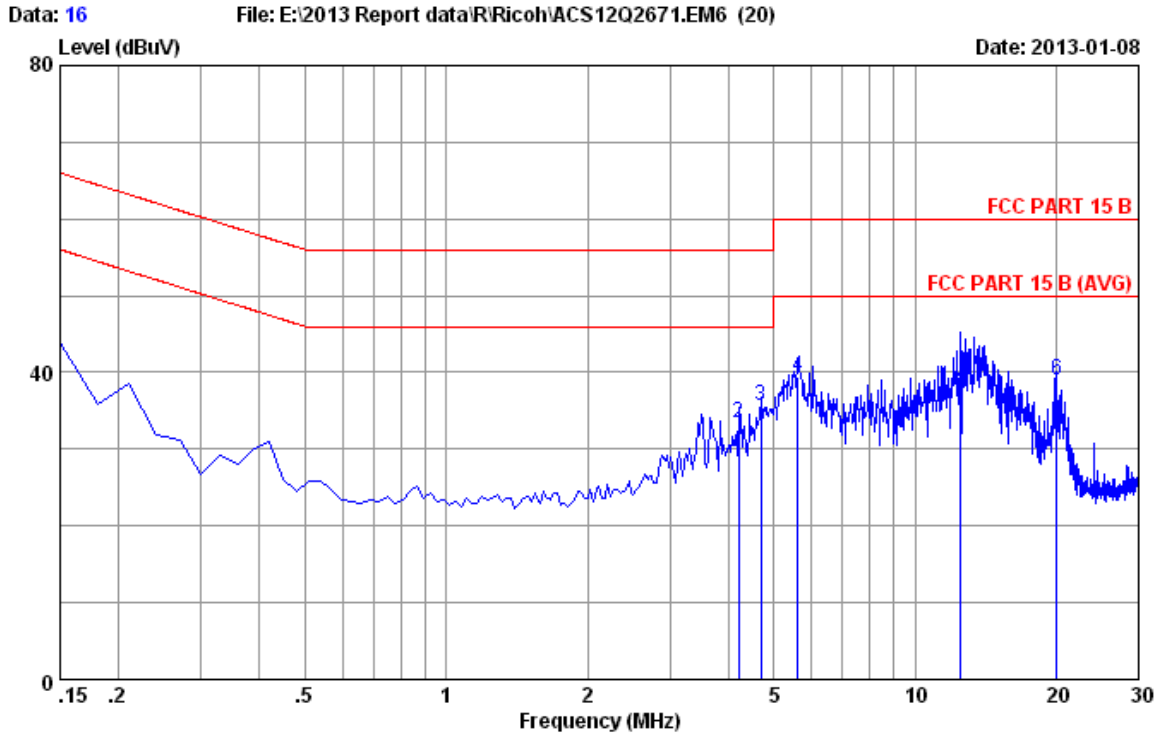
Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.  
 2.If the average limit is met when using a quasi-peak detector.  
 the EUT shall be deemed to meet both limits and measurement  
 with average detector is unnecessary.



Site no : Audix No.2 Conduction Data No : 15  
 Dis./Lisn : \*\* 12 ENV4200 L1 LISN phase: LINE  
 Limit : FCC PART 15 B  
 Env./Ins. : 23.3\*C/44% Engineer : Jerry  
 EUT : Printer  
 Power Rating : AC 120V/60Hz  
 Test Mode : FAX-RX  
 M/N: SP311SFNW

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.15000	9.95	9.93	23.80	43.68	66.00	22.32	QP
2	0.20970	9.89	9.94	16.82	36.65	63.22	26.57	QP
3	4.807	9.79	9.95	15.25	34.99	56.00	21.01	QP
4	5.433	9.79	9.95	15.74	35.48	60.00	24.52	QP
5	12.956	9.93	10.00	20.74	40.67	60.00	19.33	QP
6	14.627	9.99	10.01	21.57	41.57	60.00	18.43	QP

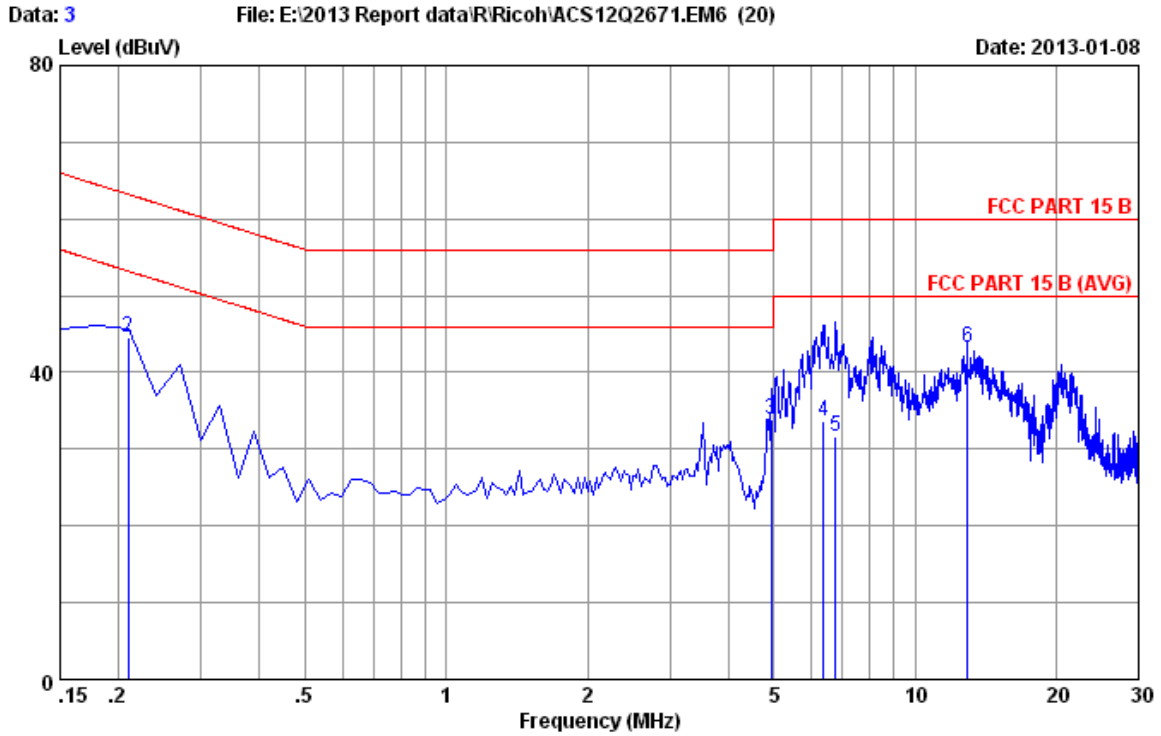
Remarks: 1. Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.  
 2. If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.



Site no : Audix No.2 Conduction Data No : 16  
 Dis./Lisn : \*\* 12 ENV4200 N LISN phase: NEUTRAL  
 Limit : FCC PART 15 B  
 Env./Ins. : 23.3\*C/44% Engineer : Jerry  
 EUT : Printer  
 Power Rating : AC 120V/60Hz  
 Test Mode : FAX-RX  
 M/N: SP311SFNW

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.15000	9.95	9.93	26.70	46.58	66.00	19.42	QP
2	4.210	9.77	9.95	13.76	33.48	56.00	22.52	QP
3	4.687	9.78	9.95	15.99	35.72	56.00	20.28	QP
4	5.613	9.78	9.95	19.71	39.44	60.00	20.56	QP
5	12.538	9.92	10.00	17.39	37.31	60.00	22.69	QP
6	20.090	9.98	10.06	19.01	39.05	60.00	20.95	QP

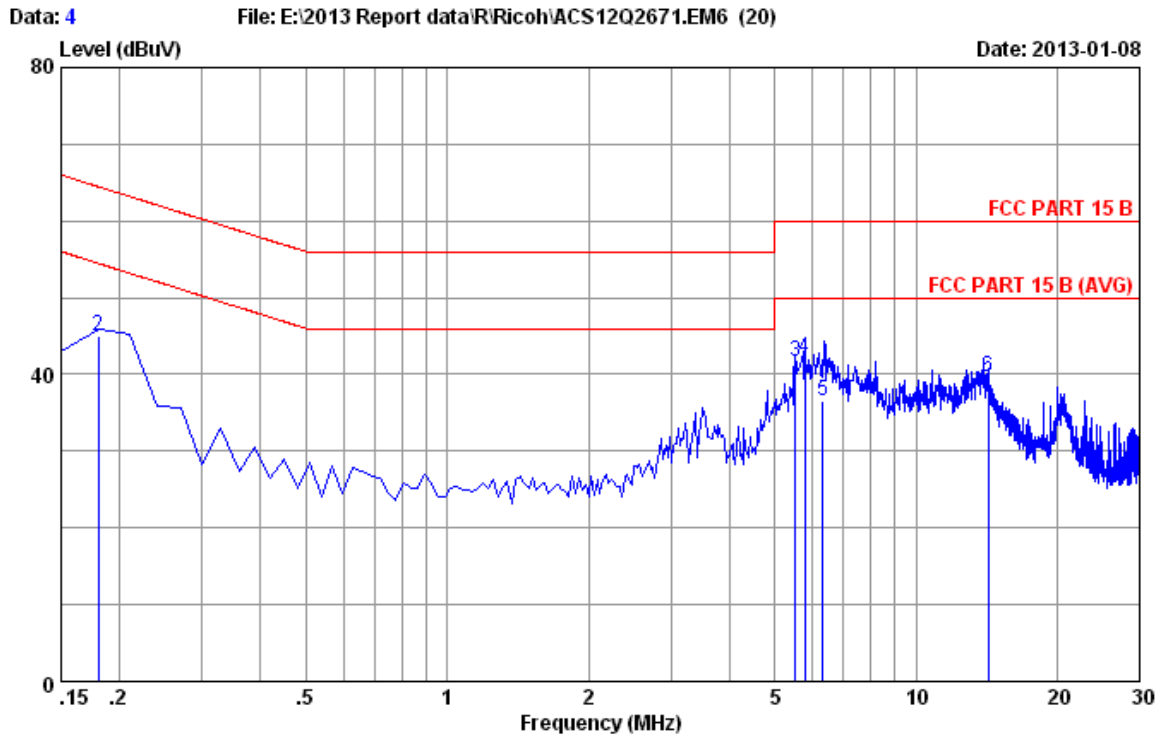
Remarks: 1. Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.  
 2. If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.



Site no :Audix No.2 Conduction Data No :3  
 Dis./Lisn \*\*: 12 ENV4200 L1 LISN phase:LINE  
 Limit :FCC PART 15 B  
 Env./Ins. :23.3\*C/44% Engineer :Jerry  
 EUT :Printer  
 Power Rating :AC 120V/60Hz  
 Test Mode :COPY  
 M/N:SP311SFNW

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.15000	9.95	9.93	18.90	38.78	66.00	27.22	QP
2	0.20970	9.89	9.94	24.80	44.63	63.22	18.59	QP
3	4.926	9.79	9.95	14.04	33.78	56.00	22.22	QP
4	6.384	9.79	9.96	13.80	33.55	60.00	26.45	QP
5	6.770	9.79	9.96	11.80	31.55	60.00	28.45	QP
6	12.926	9.93	10.00	23.20	43.13	60.00	16.87	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.  
 2.If the average limit is met when using a quasi-peak detector.  
 the EUT shall be deemed to meet both limits and measurement  
 with average detector is unnecessary.



Site no : Audix No.2 Conduction Data No : 4  
 Dis./Lisn : \*\* 12 ENV4200 N LISN phase: NEUTRAL  
 Limit : FCC PART 15 B  
 Env./Ins. : 23.3\*C/44% Engineer : Jerry  
 EUT : Printer  
 Power Rating : AC 120V/60Hz  
 Test Mode : COPY  
 M/N: SP311SFNW

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.15000	9.95	9.93	18.80	38.68	66.00	27.32	QP
2	0.17985	9.91	9.93	25.10	44.94	64.49	19.55	QP
3	5.523	9.78	9.95	21.86	41.59	60.00	18.41	QP
4	5.792	9.78	9.95	22.43	42.16	60.00	17.84	QP
5	6.338	9.79	9.96	16.89	36.64	60.00	23.36	QP
6	14.269	9.98	10.01	19.69	39.68	60.00	20.32	QP

Remarks: 1. Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.  
 2. If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

## 4. RADIATED EMISSION TEST

### 4.1. Test Equipment

#### 4.1.1. For frequency range 30MHz~1000MHz

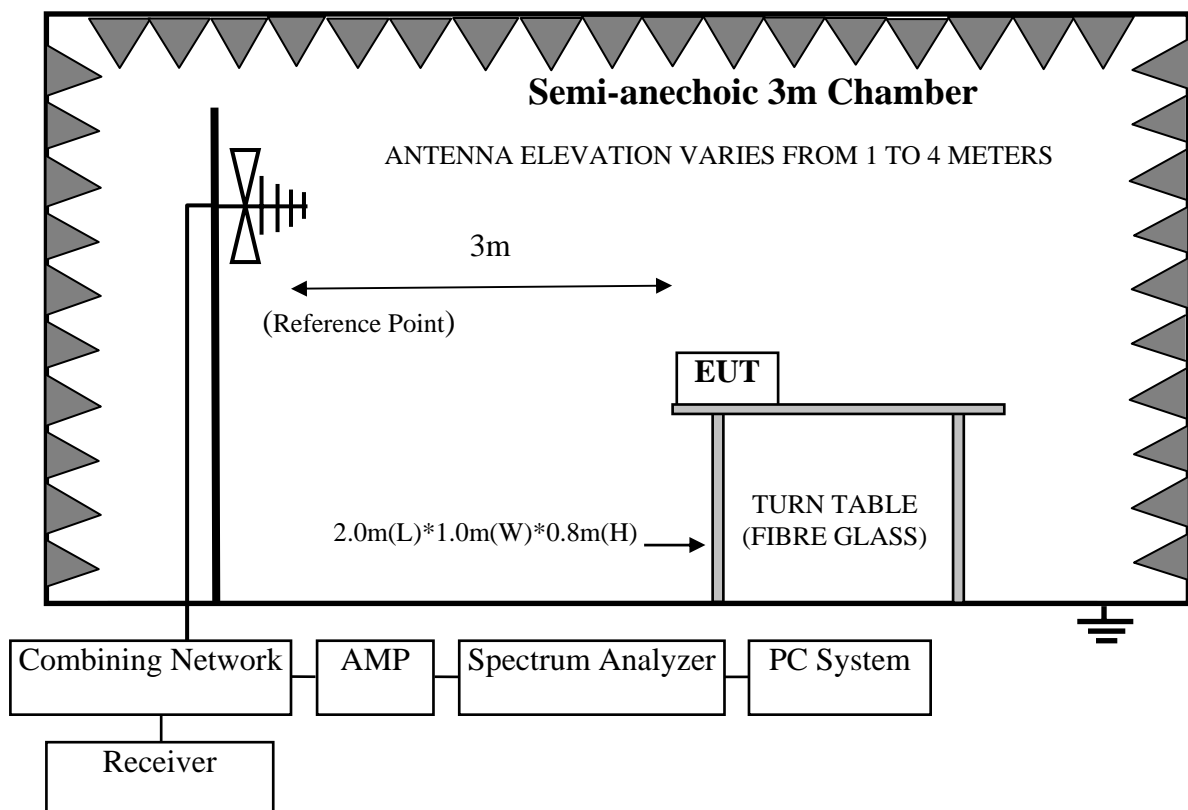
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	3#Chamber	AUDIX	N/A	N/A	Nov.24,12	1 Year
2	EMI Spectrum	Agilent	E4407B	MY41440292	May.08, 12	1 Year
3	Test Receiver	Rohde & Schwarz	ESVS10	834468/011	May.08, 12	1 Year
4	Amplifier	HP	8447D	2648A04738	May.08, 12	1 Year
5	Trilog-Broadband Antenna	SCHWARZBECK	VULB 9168	9168-429	Nov.27, 12	1.0 Year
6	RF Cable	MIYAZAKI	CFD400-NL	3# Chamber No.1	May.08, 12	1 Year
7	Coaxial Switch	Anritsu	MP59B	M74389	May.08, 12	1 Year

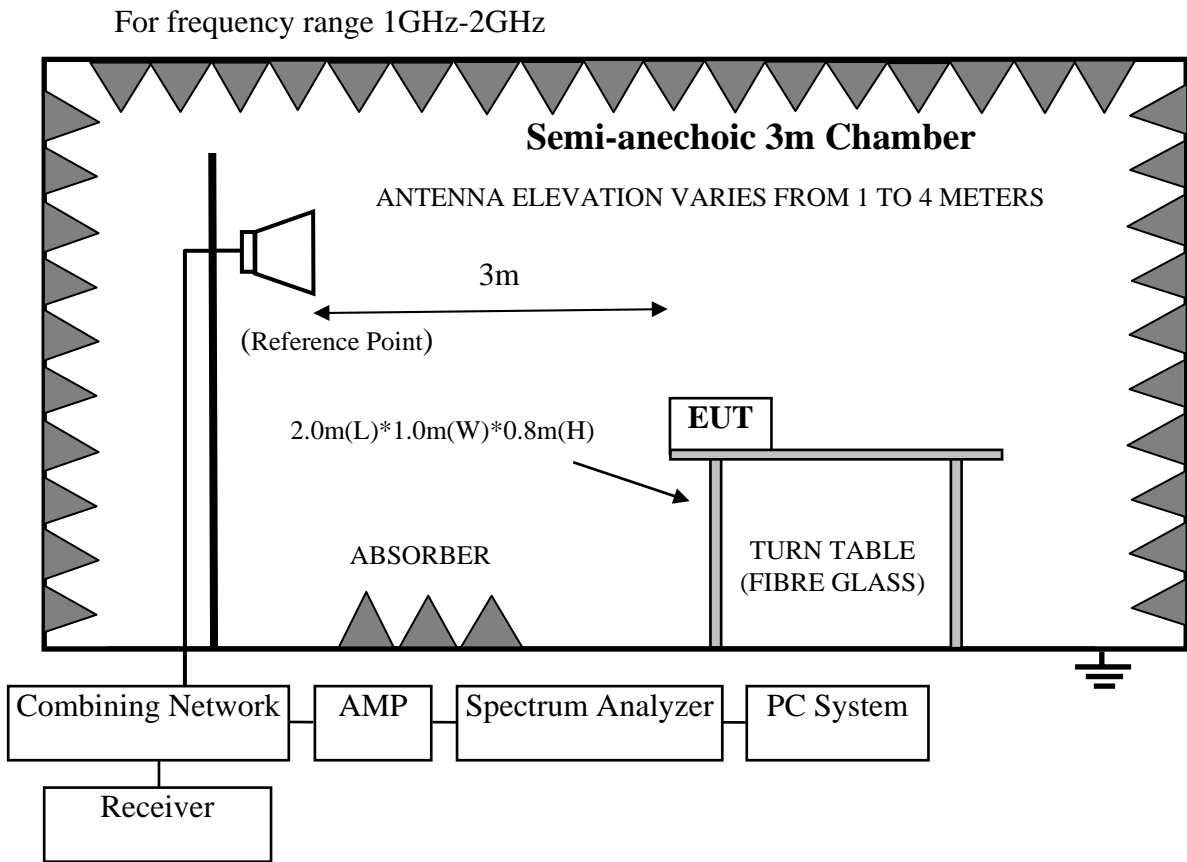
#### 4.1.2. For frequency range 1GHz~2GHz

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Spectrum Analyzer	Agilent	E4407B	MY41440292	May.08, 12	1 Year
2	Horn Antenna	EMCO	3115	9510-4580	June.05, 12	1 Year
3	Amplifier	Agilent	8449B	3008A00863	May.08, 12	1 Year
4	RF Cable	Hubersuhner	SUCOFLEX106	77980/6	May.08, 12	1 Year
5	RF Cable	Hubersuhner	SUCOFLEX106	77977/6	May.08, 12	1 Year

### 4.2. Block Diagram of Test Setup

For frequency range 30MHz-1000Mz





#### 4.3. Radiated Emission Limit

Frequency MHz	Distance (Meters)	Field Strengths Limits dB(μV)/m
30 ~ 88	3	40.0
88 ~ 216	3	43.5
216 ~ 960	3	46.0
960 ~ 1000	3	54.0
Above 1000	3	74(Peak)54(Average)

- Remark: (1) Emission level = Antenna Factor + Cable Loss + Reading  
 Emission level = Antenna Factor - Amp Factor + Cable Loss + Reading (above 1000MHz)
- (2) The smaller limit shall apply at the cross point between two frequency bands.
- (3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

#### 4.4. EUT Configuration on Test

The configurations of EUT are listed in Section 3.4

#### 4.5. Operating Condition of EUT

Same as Conducted Emission test that is listed in Section 3.5. except the test set up replaced by Section 4.2.



#### 4.6. Test Procedure

The EUT was placed on a non-metallic table, 80 cm above the ground plane inside a semi-anechoic chamber. An antenna was located 3m from the EUT on an adjustable mast. A pre-scan was first performed in order to find prominent radiated emissions. For final emissions measurements at each frequency of interest, the EUT were rotated and the antenna height was varied between 1m and 4m in order to maximize the emission. Measurements in both horizontal and vertical polarities were made and the data was recorded. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to ANSI C63.4: 2009 on Radiated Emission test.

The bandwidth of the EMI test receiver (R&S ESVS10) is set at 120kHz for frequency range from 30MHz to 1000 MHz.

The bandwidth of the Spectrum's RBW is set at 1MHz and VBW is set at 3MHz for peak emissions measurement above 1GHz and 1MHz RBW, 10Hz VBW for average emissions measure above 1GHz.

#### 4.7. Radiated Disturbance Test Results

**PASS.** (All emissions not reported below are too low against the prescribed limits.)

EUT: Printer      Model No. : SP311SFNw

##### **For frequency range 30MHz~1000MHz**

The EUT with the following test modes were tested and selected to read Q.P values, all the test results are listed in next pages.

Test Date: Jan.06, 2013      Temperature: 24°C      Humidity: 56%

##### 4.7.1. Operating modes :

1.	Standby	(RE)
2.	USB Print	(RE)
3.	NIC Print	(RE)
4.	WIFI Print	(RE)
5.	NIC Scan	(RE)
6.	USB Scan	(RE)
7.	WIFI Scan	(RE)
8.	FAX TX	(RE)
9.	FAX RX	(RE)
10.	Copy	(RE)

**For frequency range 1GHz~2GHz**

The EUT with below test mode were measured within Anechoic Chamber and the test results listed in next pages

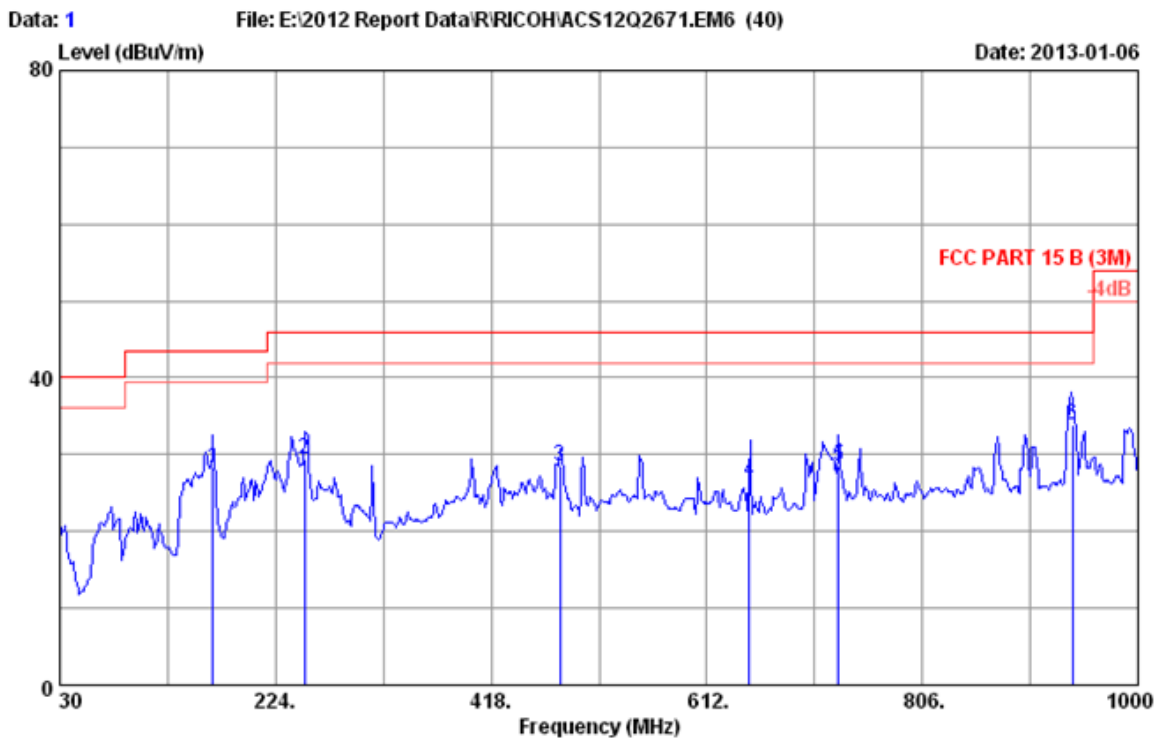
Note: For all the emissions above 1GHz, the peak measured level comply with peak limit, so the average level were deemed to comply with average limit.

Test Date: Jan.06, 2013      Temperature: 24°C      Humidity: 56%

## 4.7.2.Operating modes :

1.	Standby	(RE)
2.	USB Print	(RE)
3.	NIC Print	(RE)
4.	WIFI Print	(RE)
5.	NIC Scan	(RE)
6.	USB Scan	(RE)
7.	WIFI Scan	(RE)
8.	FAX TX	(RE)
9.	FAX RX	(RE)
10.	Copy	(RE)

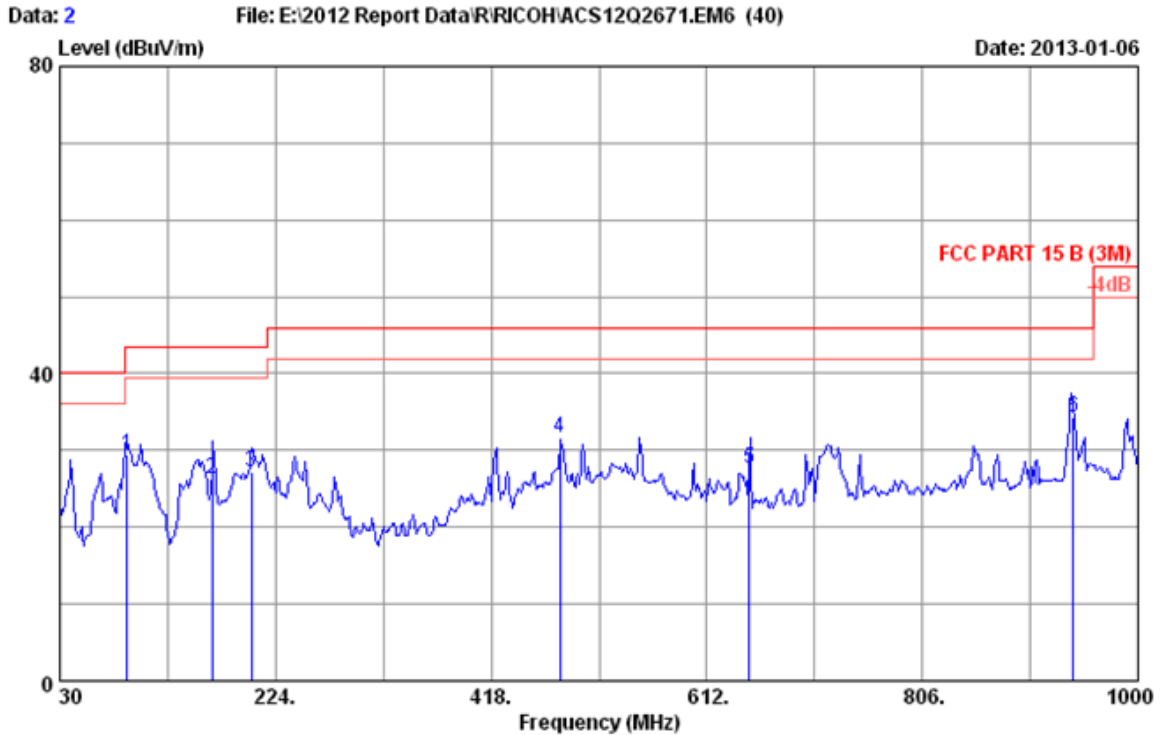
30MHz~1000MHz



Site no. : 3m Chamber Data no. : 1  
 Dis. / Ant. : 3m 2012 CBL6111C 2598 Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15 B (3M)  
 Env. / Ins. : 24°C/56% Engineer : Even\_Deng  
 EUT : Printer  
 Power rating : AC 120/60Hz  
 Test Mode : StandBy  
 M/N:SP311SFNW

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBUV)	Emission Level (dBUV/m)	Limits (dBUV/m)	Margin (dB)	Remark
1	168.000	9.87	1.00	17.50	28.37	43.50	15.13	QP
2	250.000	12.67	1.16	15.60	29.43	46.00	16.57	QP
3	480.000	18.22	1.77	8.50	28.49	46.00	17.51	QP
4	650.240	20.66	2.28	3.50	26.44	46.00	19.56	QP
5	730.250	21.80	2.50	4.29	28.59	46.00	17.41	QP
6	941.350	24.63	2.85	6.50	33.98	46.00	12.02	QP

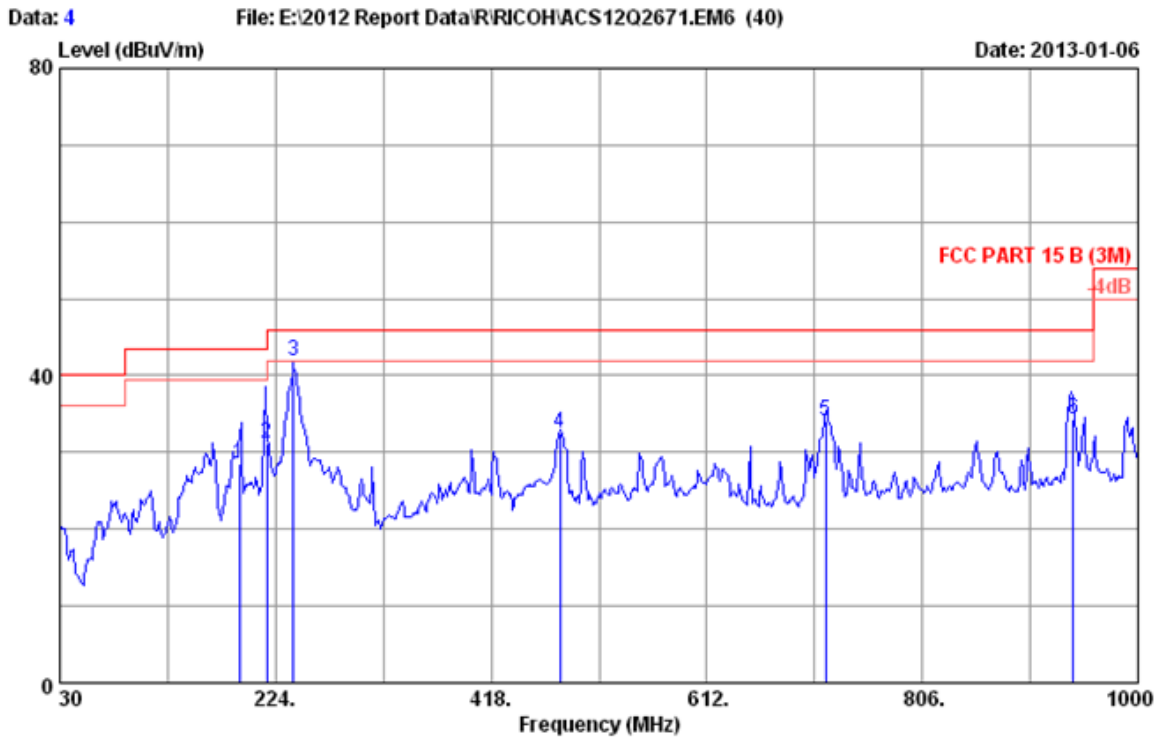
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 2  
 Dis. / Ant. : 3m 2012 CBL6111C 2598 Ant. pol. : VERTICAL  
 Limit : FCC PART 15 B (3M)  
 Env. / Ins. : 24°C/56% Engineer : Even\_Deng  
 EUT : Printer  
 Power rating : AC 120/60Hz  
 Test Mode : StandBy  
 M/N:SP311SFNW

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBUV)	Emission Level (dBUV/m)	Limits (dBUV/m)	Margin (dB)	Remark
1	90.350	8.24	0.79	20.30	29.33	43.50	14.17	QP
2	167.230	9.95	0.99	15.29	26.23	43.50	17.27	QP
3	202.010	9.54	1.06	16.60	27.20	43.50	16.30	QP
4	480.000	18.22	1.77	11.70	31.69	46.00	14.31	QP
5	650.340	20.66	2.28	4.60	27.54	46.00	18.46	QP
6	941.530	24.63	2.85	6.80	34.28	46.00	11.72	QP

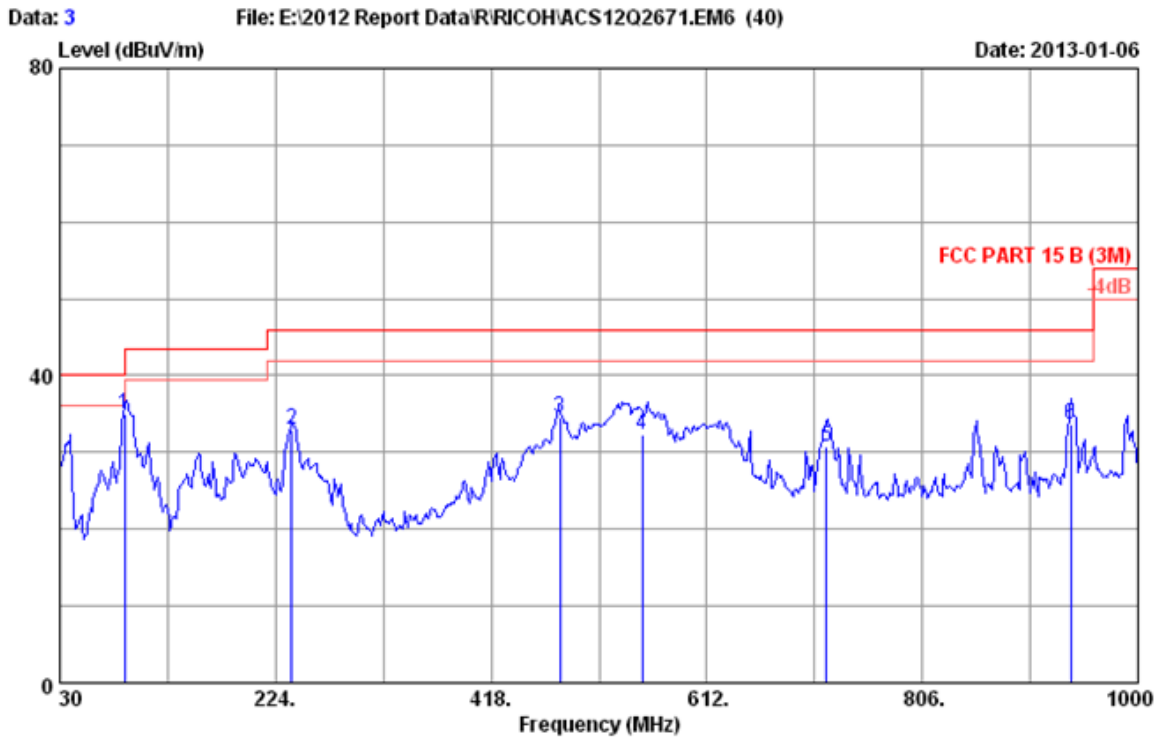
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber	Data no. : 4
Dis. / Ant. : 3m 2012 CBL6111C 2598	Ant. pol. : HORIZONTAL
Limit : FCC PART 15 B (3M)	
Env. / Ins. : 24°C/56%	Engineer : Even_Deng
EUT : Printer	
Power rating : AC 120/60Hz	
Test Mode : USB Print	
M/N:SP311SFNW	

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBUV)	Emission Level (dBUV/m)	Limits (dBUV/m)	Margin (dB)	Remark
1	191.250	8.80	1.04	18.61	28.45	43.50	15.05	QP
2	215.830	9.73	1.09	20.30	31.12	43.50	12.38	QP
3	240.000	11.65	1.15	29.00	41.80	46.00	4.20	QP
4	480.000	18.22	1.77	12.50	32.49	46.00	13.51	QP
5	718.600	21.44	2.46	10.29	34.19	46.00	11.81	QP
6	941.850	24.64	2.85	6.80	34.29	46.00	11.71	QP

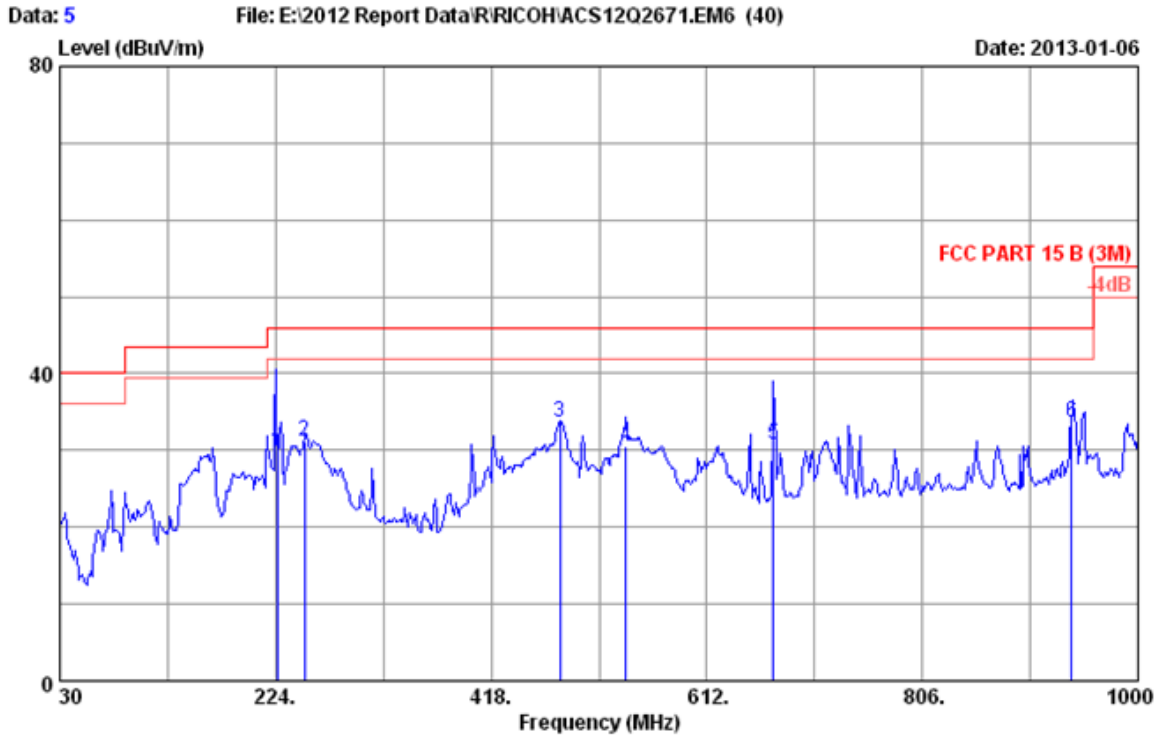
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 3  
 Dis. / Ant. : 3m 2012 CBL6111C 2598 Ant. pol. : VERTICAL  
 Limit : FCC PART 15 B (3M)  
 Env. / Ins. : 24°C/56% Engineer : Even\_Deng  
 EUT : Printer  
 Power rating : AC 120/60Hz  
 Test Mode : USB Print  
 M/N:SP311SFNW

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBUV)	Emission Level (dBUV/m)	Limits (dBUV/m)	Margin (dB)	Remark
1	88.280	7.98	0.79	26.29	35.06	43.50	8.44	QP
2	238.610	11.50	1.15	20.30	32.95	46.00	13.05	QP
3	479.580	18.22	1.77	14.50	34.49	46.00	11.51	QP
4	553.830	19.35	1.99	10.91	32.25	46.00	13.75	QP
5	720.010	21.44	2.48	6.80	30.72	46.00	15.28	QP
6	939.730	24.60	2.85	6.10	33.55	46.00	12.45	QP

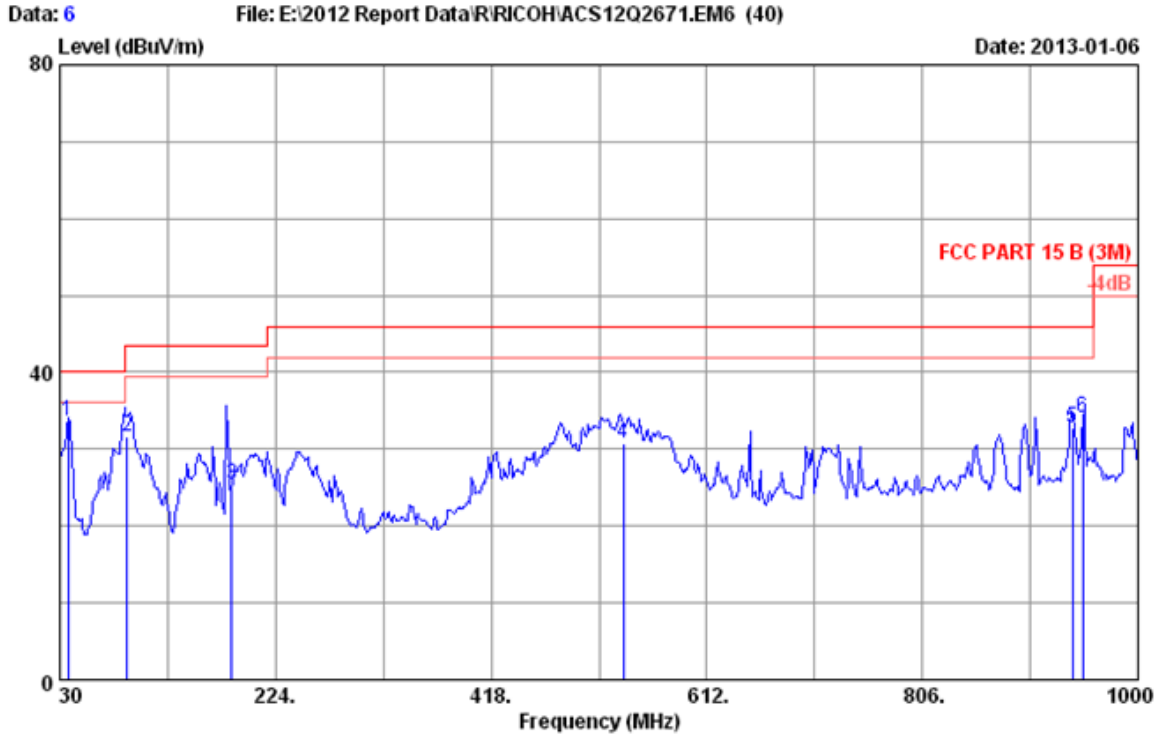
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 5  
 Dis. / Ant. : 3m 2012 CBL6111C 2598 Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15 B (3M)  
 Env. / Ins. : 24°C/56% Engineer : Even\_Deng  
 EUT : Printer  
 Power rating : AC 120/60Hz  
 Test Mode : NIC Print  
 M/N:SP311SFNW

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBUV)	Emission Level (dBUV/m)	Limits (dBUV/m)	Margin (dB)	Remark
1	225.630	10.42	1.12	18.30	29.84	46.00	16.16	QP
2	250.030	12.67	1.16	17.31	31.14	46.00	14.86	QP
3	480.000	18.22	1.77	13.60	33.59	46.00	12.41	QP
4	539.180	19.07	1.95	9.60	30.62	46.00	15.38	QP
5	671.850	21.28	2.34	7.20	30.82	46.00	15.18	QP
6	939.890	24.61	2.85	6.20	33.66	46.00	12.34	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.



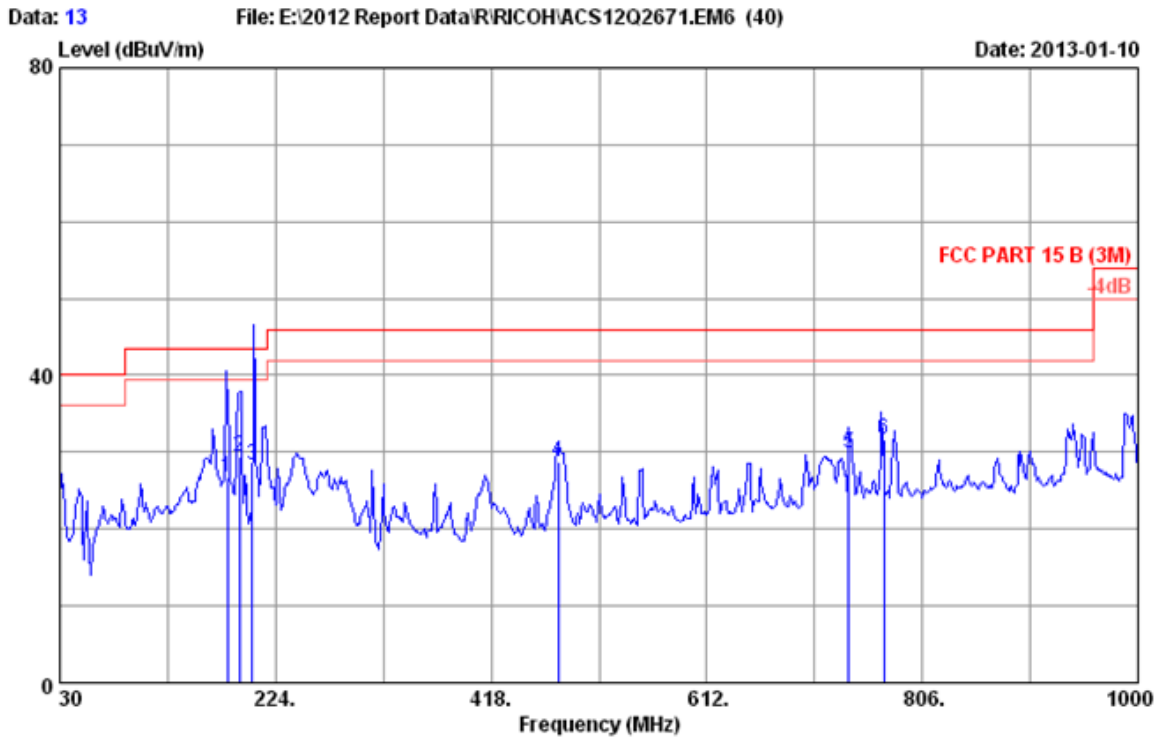
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Site no.       : 3m Chamber           Data no.   : 6
Dis. / Ant.   : 3m 2012 CBL6111C 2598 Ant. pol.  : VERTICAL
Limit        : FCC PART 15 B (3M)
Env. / Ins.   : 24°C/56%             Engineer   : Even_Deng
EUT          : Printer
Power rating  : AC 120/60Hz
Test Mode    : NIC Print
M/N:SP311SFNW
    
```

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBUV)	Emission Level (dBUV/m)	Limits (dBUV/m)	Margin (dB)	Remark
1	37.280	14.70	0.51	18.50	33.71	40.00	6.29	QP
2	90.830	8.30	0.82	22.60	31.72	43.50	11.78	QP
3	184.630	8.78	1.03	15.60	25.41	43.50	18.09	QP
4	536.600	19.09	1.93	9.81	30.83	46.00	15.17	QP
5	941.360	24.63	2.85	5.30	32.78	46.00	13.22	QP
6	950.250	24.72	2.87	6.49	34.08	46.00	11.92	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.  
2. The emission levels that are 20dB below the official limit are not reported.

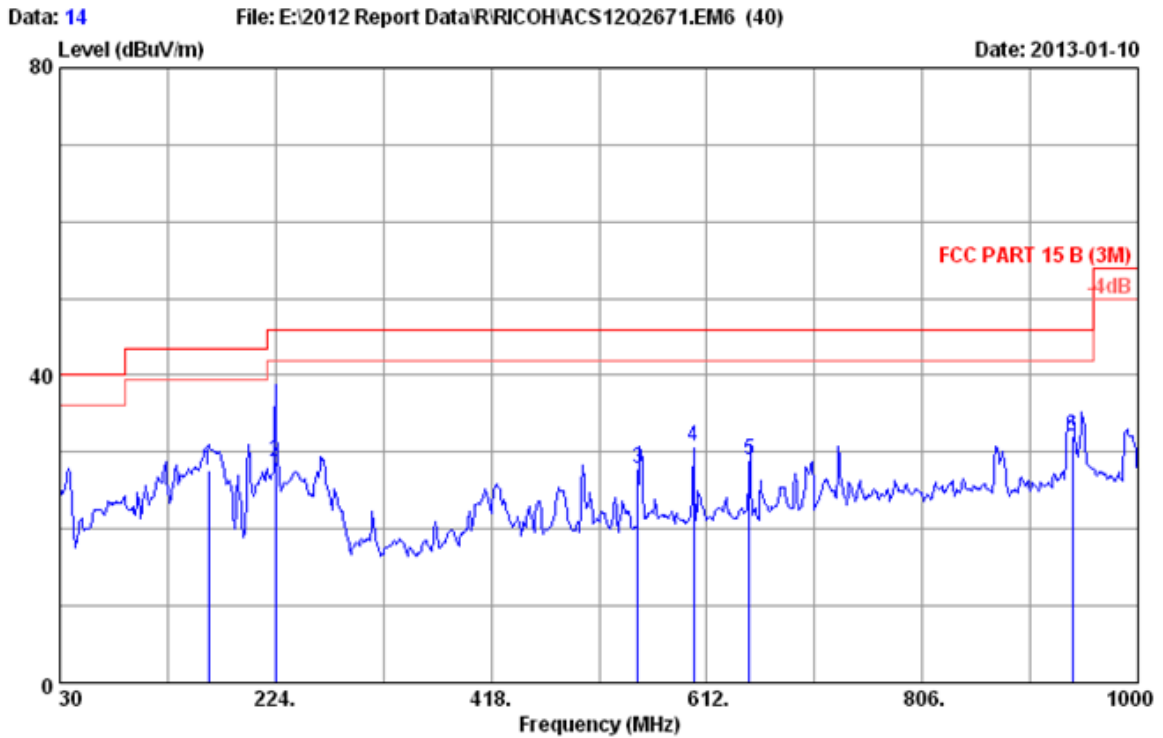




Site no. : 3m Chamber Data no. : 13  
 Dis. / Ant. : 3m 2012 CBL6111C 2598 Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15 B (3M)  
 Env. / Ins. : 24°C/56% Engineer : Even\_Deng  
 EUT : Printer  
 Power rating : AC 120/60Hz  
 Test Mode : WIFI print  
 M/N:SP311SFNW

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBUV)	Emission Level (dBUV/m)	Limits (dBUV/m)	Margin (dB)	Remark
1	181.050	8.92	1.01	16.81	26.74	43.50	16.76	QP
2	191.250	8.80	1.04	19.51	29.35	43.50	14.15	QP
3	203.350	9.62	1.08	17.60	28.30	43.50	15.20	QP
4	478.355	18.20	1.77	8.81	28.78	46.00	17.22	QP
5	740.025	22.04	2.52	5.40	29.96	46.00	16.04	QP
6	771.055	22.52	2.62	6.60	31.74	46.00	14.26	QP

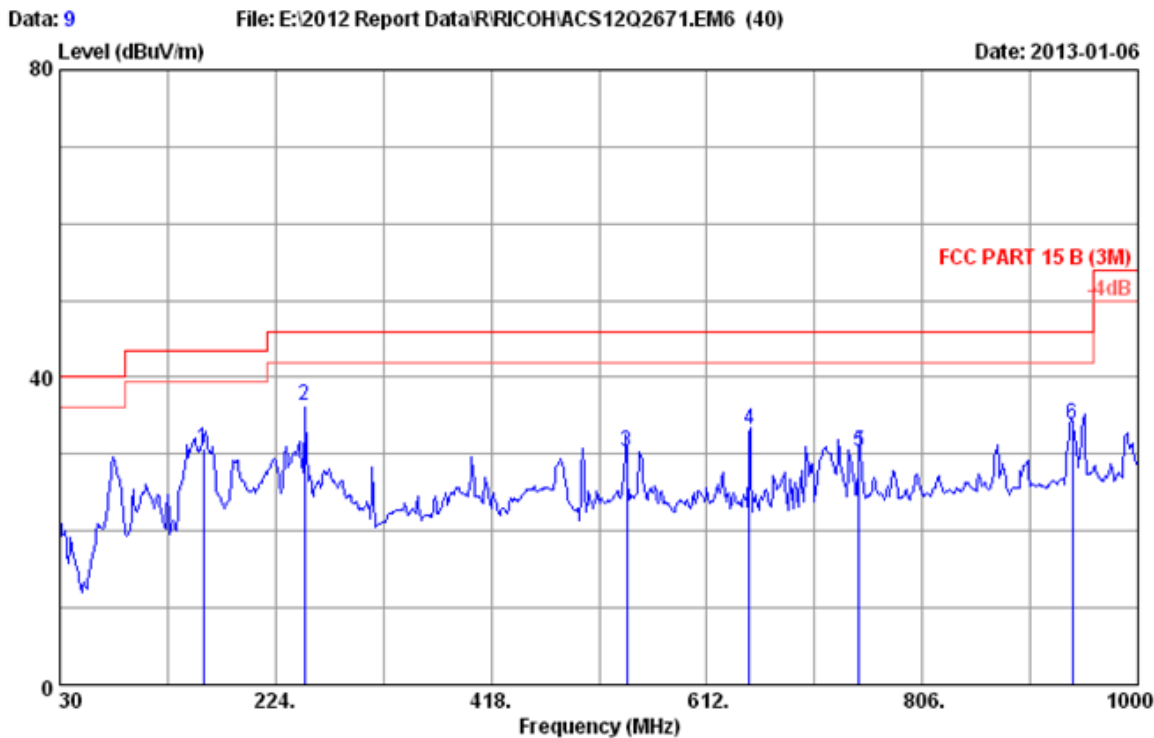
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 14  
 Dis. / Ant. : 3m 2012 CBL6111C 2598 Ant. pol. : VERTICAL  
 Limit : FCC PART 15 B (3M)  
 Env. / Ins. : 24°C/56% Engineer : Even\_Deng  
 EUT : Printer  
 Power rating : AC 120/60Hz  
 Test Mode : WIFI print  
 M/N:SP311SFNW

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBUV)	Emission Level (dBUV/m)	Limits (dBUV/m)	Margin (dB)	Remark
1	163.548	10.26	0.99	16.49	27.74	43.50	15.76	QP
2	223.649	10.28	1.12	17.40	28.80	46.00	17.20	QP
3	550.240	19.25	1.97	6.60	27.82	46.00	18.18	QP
4	600.000	20.20	2.11	8.50	30.81	46.00	15.19	QP
5	650.000	20.66	2.28	6.10	29.04	46.00	16.96	QP
6	941.350	24.63	2.85	4.50	31.98	46.00	14.02	QP

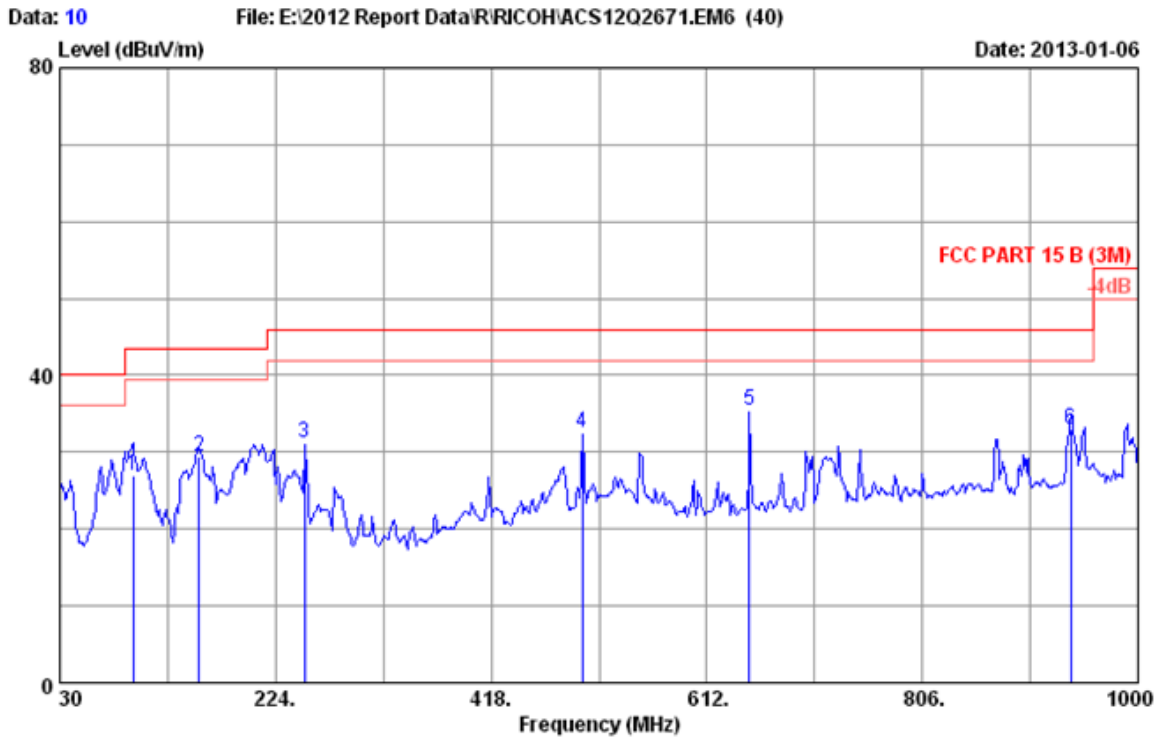
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber	Data no. : 9
Dis. / Ant. : 3m 2012 CBL6111C 2598	Ant. pol. : HORIZONTAL
Limit : FCC PART 15 B (3M)	
Env. / Ins. : 24°C/56%	Engineer : Even_Deng
EUT : Printer	
Power rating : AC 120/60Hz	
Test Mode : NIC Scan	
M/N:SP311SFNW	

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBUV)	Emission Level (dBUV/m)	Limits (dBUV/m)	Margin (dB)	Remark
1	159.480	10.52	0.97	19.30	30.79	43.50	12.71	QP
2	250.000	12.67	1.16	22.41	36.24	46.00	9.76	QP
3	539.890	19.06	1.95	9.40	30.41	46.00	15.59	QP
4	650.030	20.66	2.28	10.30	33.24	46.00	12.76	QP
5	749.350	22.27	2.56	5.50	30.33	46.00	15.67	QP
6	941.250	24.63	2.85	6.30	33.78	46.00	12.22	QP

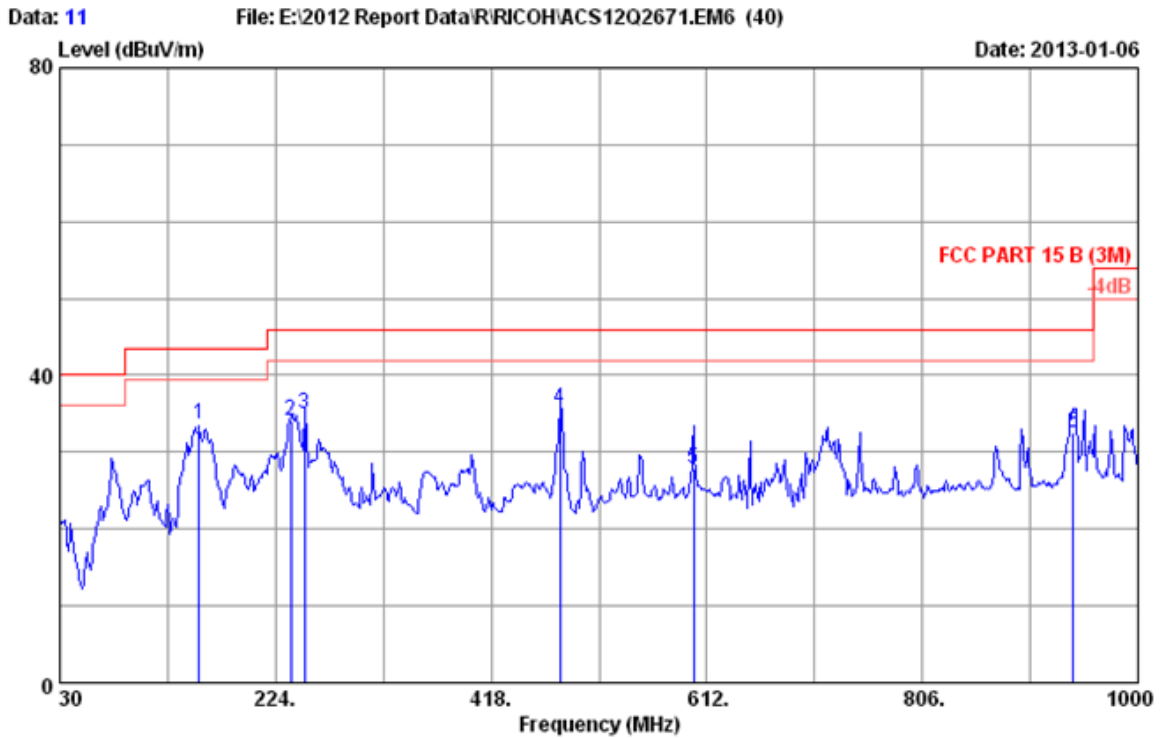
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.  
2. The emission levels that are 20dB below the official limit are not reported.



Site no.	: 3m Chamber	Data no.	: 10
Dis. / Ant.	: 3m 2012 CBL6111C 2598	Ant. pol.	: VERTICAL
Limit	: FCC PART 15 B (3M)		
Env. / Ins.	: 24°C/56%	Engineer	: Even_Deng
EUT	: Printer		
Power rating	: AC 120/60Hz		
Test Mode	: NIC Scan		
	M/N:SP311SFNW		

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBUV)	Emission Level (dBUV/m)	Limits (dBUV/m)	Margin (dB)	Remark
1	95.980	8.98	0.82	17.10	26.90	43.50	16.60	QP
2	155.630	10.74	0.97	17.60	29.31	43.50	14.19	QP
3	250.000	12.67	1.16	17.41	31.24	46.00	14.76	QP
4	500.000	19.08	1.83	11.60	32.51	46.00	13.49	QP
5	650.000	20.66	2.28	12.50	35.44	46.00	10.56	QP
6	939.830	24.61	2.85	5.50	32.96	46.00	13.04	QP

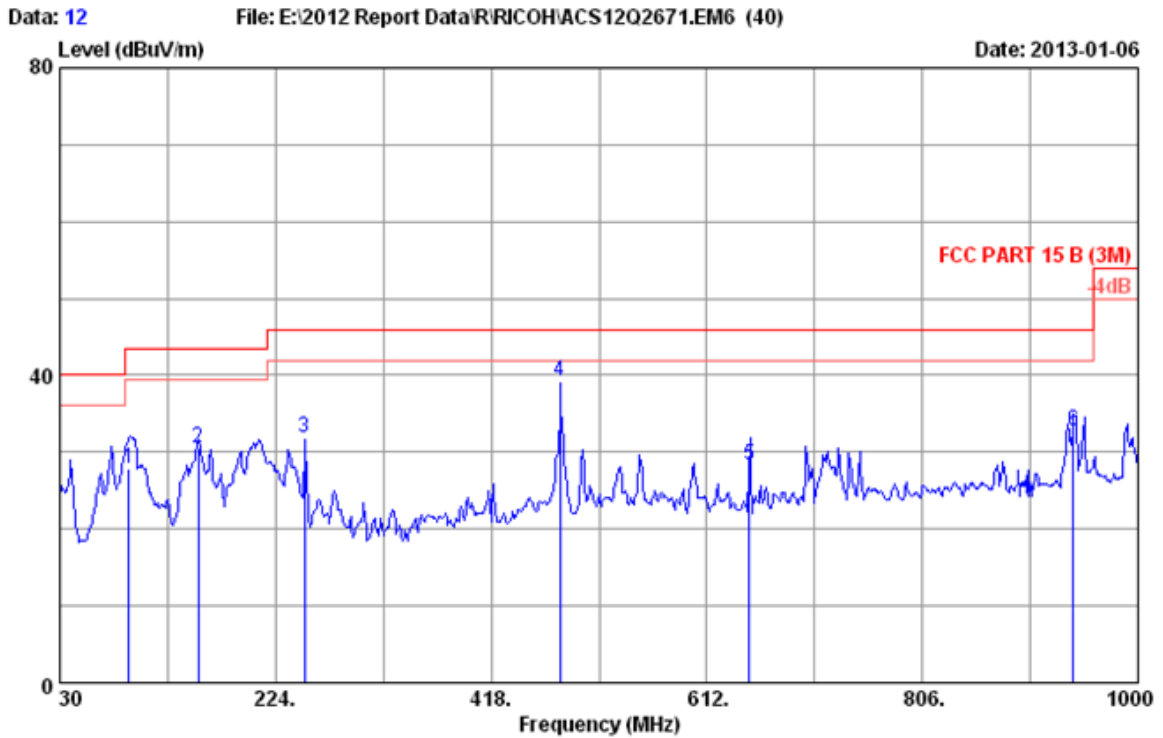
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.  
2. The emission levels that are 20dB below the official limit are not reported.



Site no.	: 3m Chamber	Data no.	: 11
Dis. / Ant.	: 3m 2012 CBL6111C 2598	Ant. pol.	: HORIZONTAL
Limit	: FCC PART 15 B (3M)		
Env. / Ins.	: 24°C/56%	Engineer	: Even_Deng
EUT	: Printer		
Power rating	: AC 120/60Hz		
Test Mode	: USB scan		
	M/N:SP311SFNW		

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	155.630	10.74	0.97	22.00	33.71	43.50	9.79	QP
2	237.800	11.42	1.15	21.50	34.07	46.00	11.93	QP
3	250.000	12.67	1.16	21.11	34.94	46.00	11.06	QP
4	480.000	18.22	1.77	15.70	35.69	46.00	10.31	QP
5	600.000	20.20	2.11	5.50	27.81	46.00	18.19	QP
6	941.780	24.63	2.85	5.11	32.59	46.00	13.41	QP

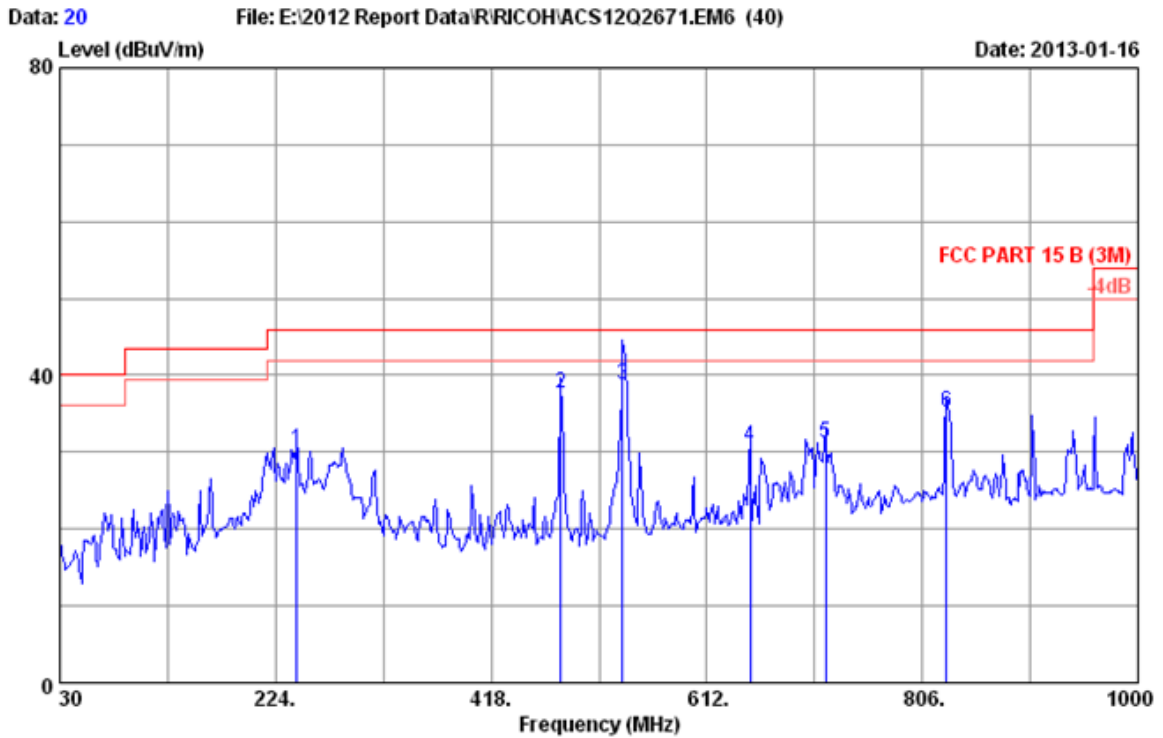
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.  
2. The emission levels that are 20dB below the official limit are not reported.



Site no.	: 3m Chamber	Data no.	: 12
Dis. / Ant.	: 3m 2012 CBL6111C 2598	Ant. pol.	: VERTICAL
Limit	: FCC PART 15 B (3M)	Engineer	: Even_Deng
Env. / Ins.	: 24°C/56%		
EUT	: Printer		
Power rating	: AC 120/60Hz		
Test Mode	: USB scan		
	M/N:SP311SFNW		

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBUV)	Emission Level (dBUV/m)	Limits (dBUV/m)	Margin (dB)	Remark
1	92.080	8.46	0.82	18.50	27.78	43.50	15.72	QP
2	154.150	10.80	0.97	18.70	30.47	43.50	13.03	QP
3	250.000	12.67	1.16	18.10	31.93	46.00	14.07	QP
4	480.000	18.22	1.77	19.20	39.19	46.00	6.81	QP
5	650.000	20.66	2.28	5.30	28.24	46.00	17.76	QP
6	941.730	24.63	2.85	5.21	32.69	46.00	13.31	QP

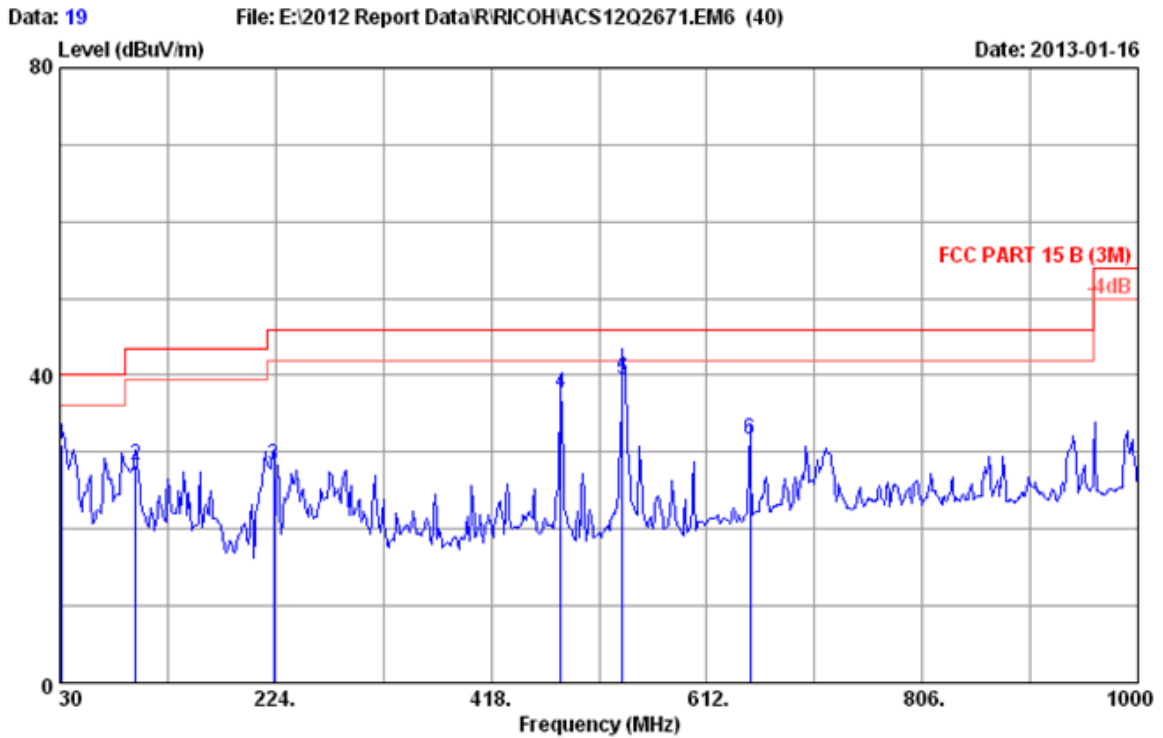
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.  
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber	Data no. : 20
Dis. / Ant. : 3m 9168-429	Ant. pol. : HORIZONTAL
Limit : FCC PART 15 B (3M)	Engineer : Even_Deng
Env. / Ins. : 24°C/56%	
EUT : Printer	
Power rating : AC 120/60Hz	
Test Mode : WIFI scan	
M/N:SP311SFNW	

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBUV)	Emission Level (dBUV/m)	Limits (dBUV/m)	Margin (dB)	Remark
1	243.400	11.49	1.15	17.56	30.20	46.00	15.80	QP
2	481.050	16.28	1.77	19.57	37.62	46.00	8.38	QP
3	536.050	17.15	1.93	19.80	38.88	46.00	7.12	QP
4	650.800	19.11	2.28	9.47	30.86	46.00	15.14	QP
5	718.700	19.89	2.46	8.95	31.30	46.00	14.70	QP
6	827.340	20.89	2.73	11.67	35.29	46.00	10.71	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.  
2. The emission levels that are 20dB below the official limit are not reported.

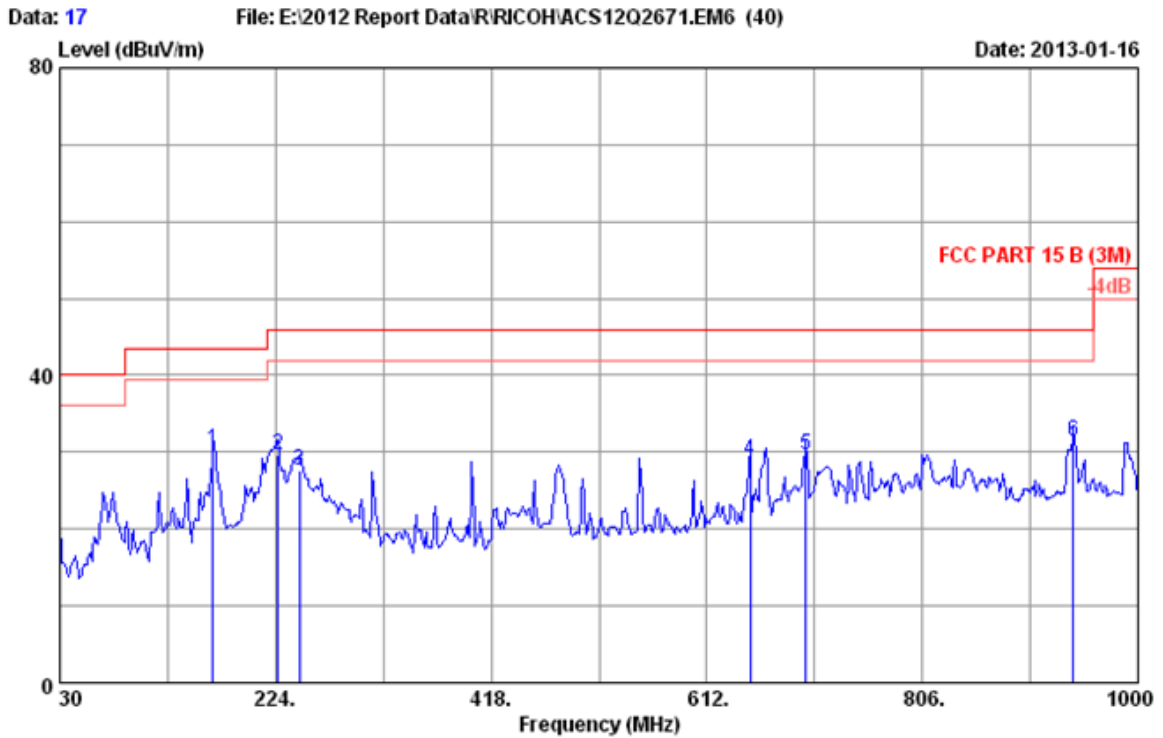


Site no. : 3m Chamber	Data no. : 19
Dis. / Ant. : 3m 9168-429	Ant. pol. : VERTICAL
Limit : FCC PART 15 B (3M)	Engineer : Even_Deng
Env. / Ins. : 24°C/56%	
EUT : Printer	
Power rating : AC 120/60Hz	
Test Mode : WIFI scan	
M/N:SP311SFNW	

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBUV)	Emission Level (dBUV/m)	Limits (dBUV/m)	Margin (dB)	Remark
1	31.940	13.29	0.45	17.32	31.06	40.00	8.94	QP
2	97.900	10.00	0.85	17.54	28.39	43.50	15.11	QP
3	222.060	10.76	1.11	16.38	28.25	46.00	17.75	QP
4	481.050	16.28	1.77	19.60	37.65	46.00	8.35	QP
5	536.150	17.15	1.93	20.30	39.38	46.00	6.62	QP
6	650.800	19.11	2.28	10.20	31.59	46.00	14.41	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.  
2. The emission levels that are 20dB below the official limit are not reported.

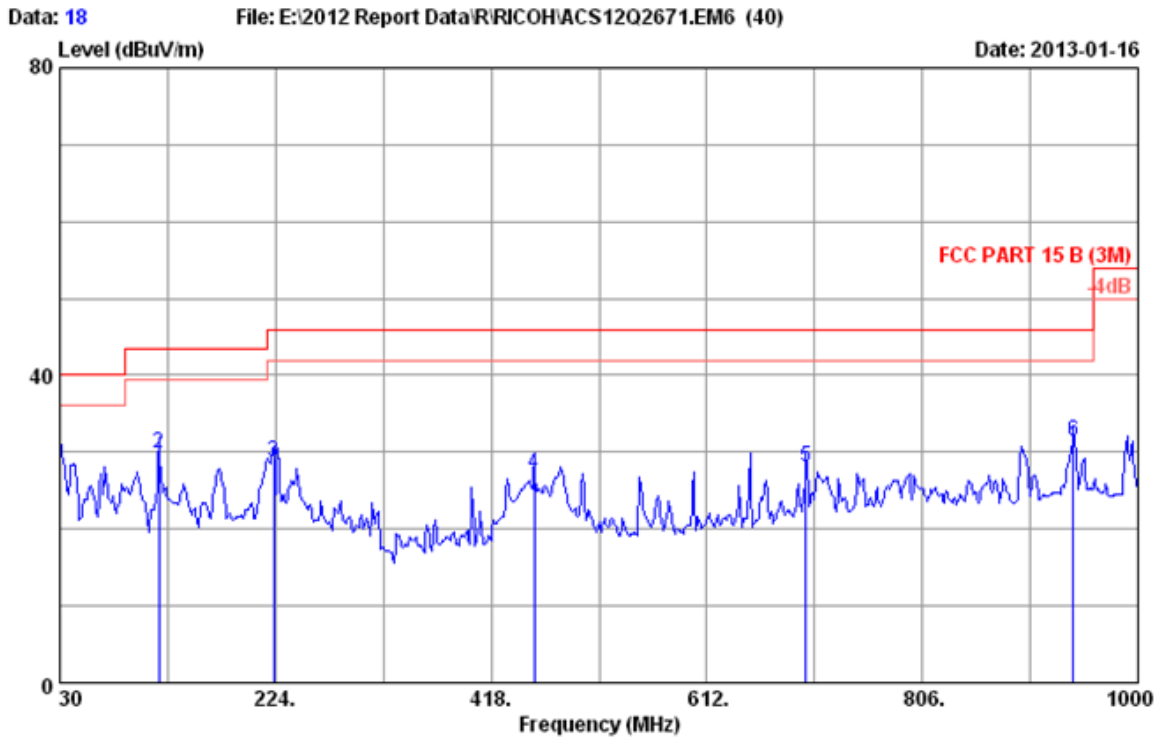




Site no. : 3m Chamber	Data no. : 17
Dis. / Ant. : 3m 9168-429	Ant. pol. : HORIZONTAL
Limit : FCC PART 15 B (3M)	Engineer : Even_Deng
Env. / Ins. : 24°C/56%	
EUT : Printer	
Power rating : AC 120/60Hz	
Test Mode : FAX TX	
M/N:SP311SFNW	

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBUV)	Emission Level (dBUV/m)	Limits (dBUV/m)	Margin (dB)	Remark
1	167.740	13.40	1.00	15.90	30.30	43.50	13.20	QP
2	225.940	10.98	1.12	17.49	29.59	46.00	16.41	QP
3	245.340	11.51	1.16	14.88	27.55	46.00	18.45	QP
4	650.800	19.11	2.28	7.65	29.04	46.00	16.96	QP
5	701.240	19.66	2.42	7.48	29.56	46.00	16.44	QP
6	941.800	22.08	2.85	6.46	31.39	46.00	14.61	QP

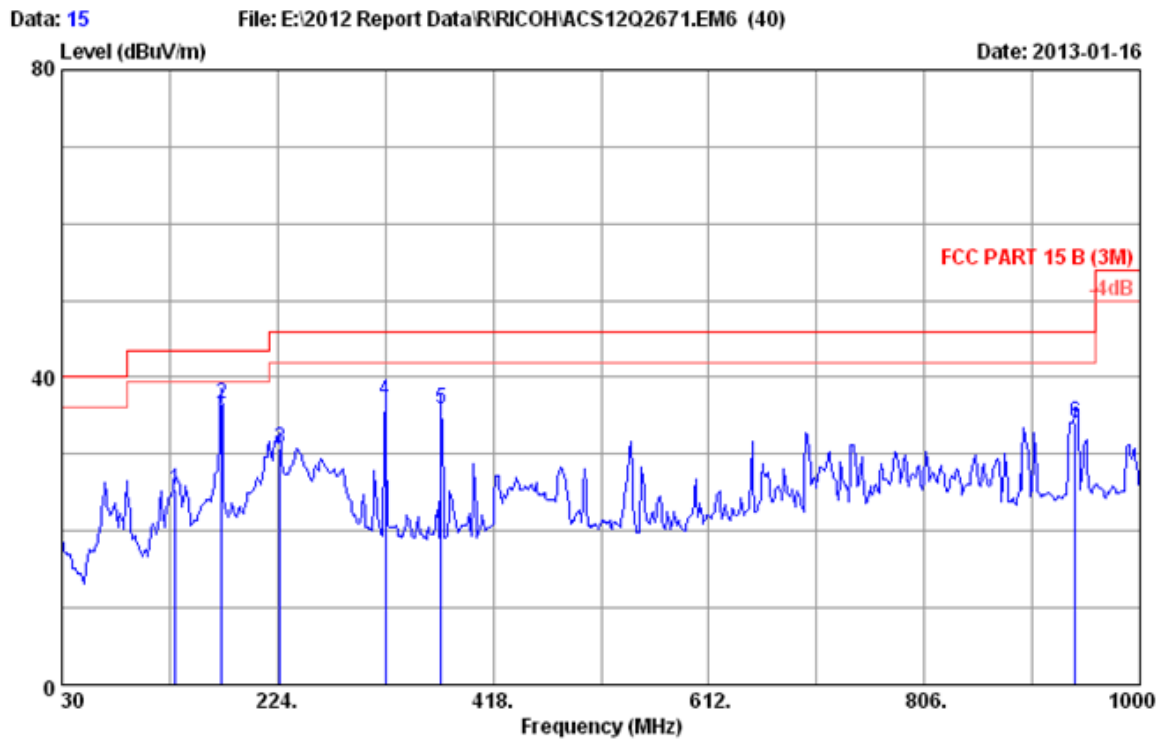
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.  
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber	Data no. : 18
Dis. / Ant. : 3m 9168-429	Ant. pol. : VERTICAL
Limit : FCC PART 15 B (3M)	Engineer : Even_Deng
Env. / Ins. : 24°C/56%	
EUT : Printer	
Power rating : AC 120/60Hz	
Test Mode : FAX TX	
M/N:SP311SFNW	

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBUV)	Emission Level (dBUV/m)	Limits (dBUV/m)	Margin (dB)	Remark
1	30.000	13.22	0.45	15.99	29.66	40.00	10.34	QP
2	119.240	12.16	0.90	16.87	29.93	43.50	13.57	QP
3	222.060	10.76	1.11	16.84	28.71	46.00	17.29	QP
4	456.800	16.03	1.71	9.50	27.24	46.00	18.76	QP
5	701.240	19.66	2.42	5.89	27.97	46.00	18.03	QP
6	941.800	22.08	2.85	6.40	31.33	46.00	14.67	QP

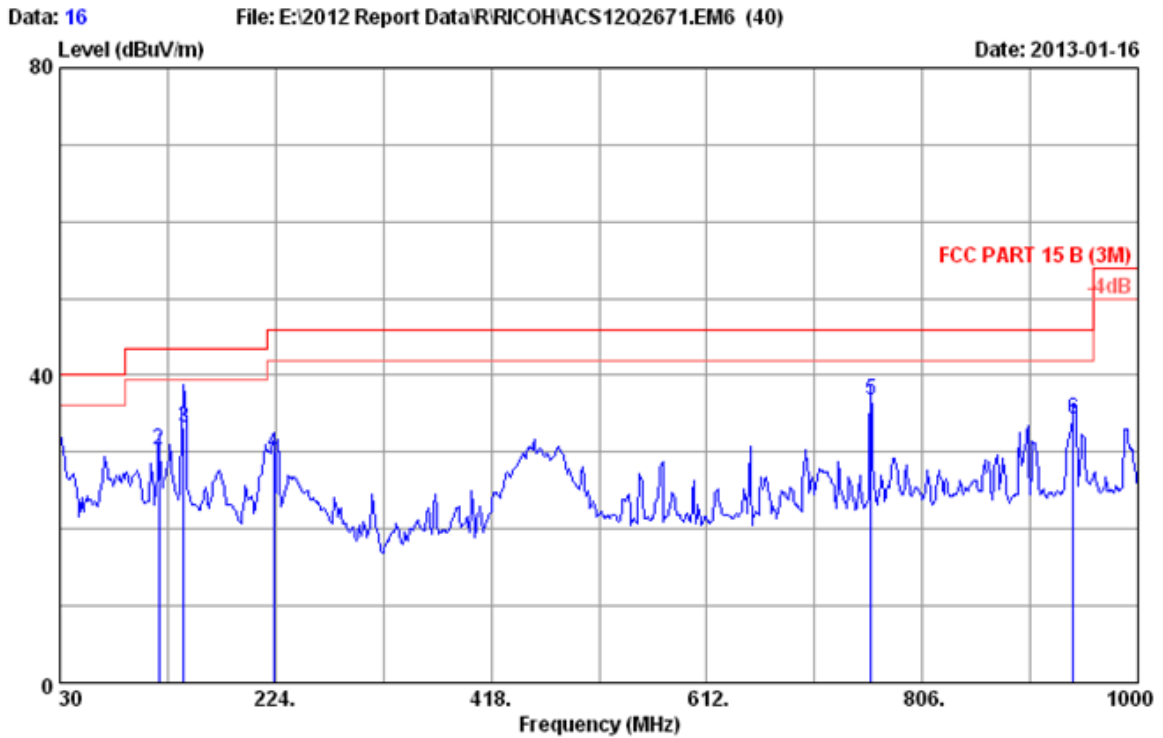
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.  
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber	Data no. : 15
Dis. / Ant. : 3m 9168-429	Ant. pol. : HORIZONTAL
Limit : FCC PART 15 B (3M)	Engineer : Even_Deng
Env. / Ins. : 24°C/56%	
EUT : Printer	
Power rating : AC 120/60Hz	
Test Mode : FAX RX	
M/N:SP311SFNW	

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBUV)	Emission Level (dBUV/m)	Limits (dBUV/m)	Margin (dB)	Remark
1	131.850	12.92	0.91	11.47	25.30	43.50	18.20	QP
2	173.560	12.65	1.00	22.80	36.45	43.50	7.05	QP
3	225.940	10.98	1.12	18.65	30.75	46.00	15.25	QP
4	321.000	13.33	1.33	22.35	37.01	46.00	8.99	QP
5	371.440	14.25	1.48	20.24	35.97	46.00	10.03	QP
6	941.800	22.08	2.85	9.13	34.06	46.00	11.94	QP

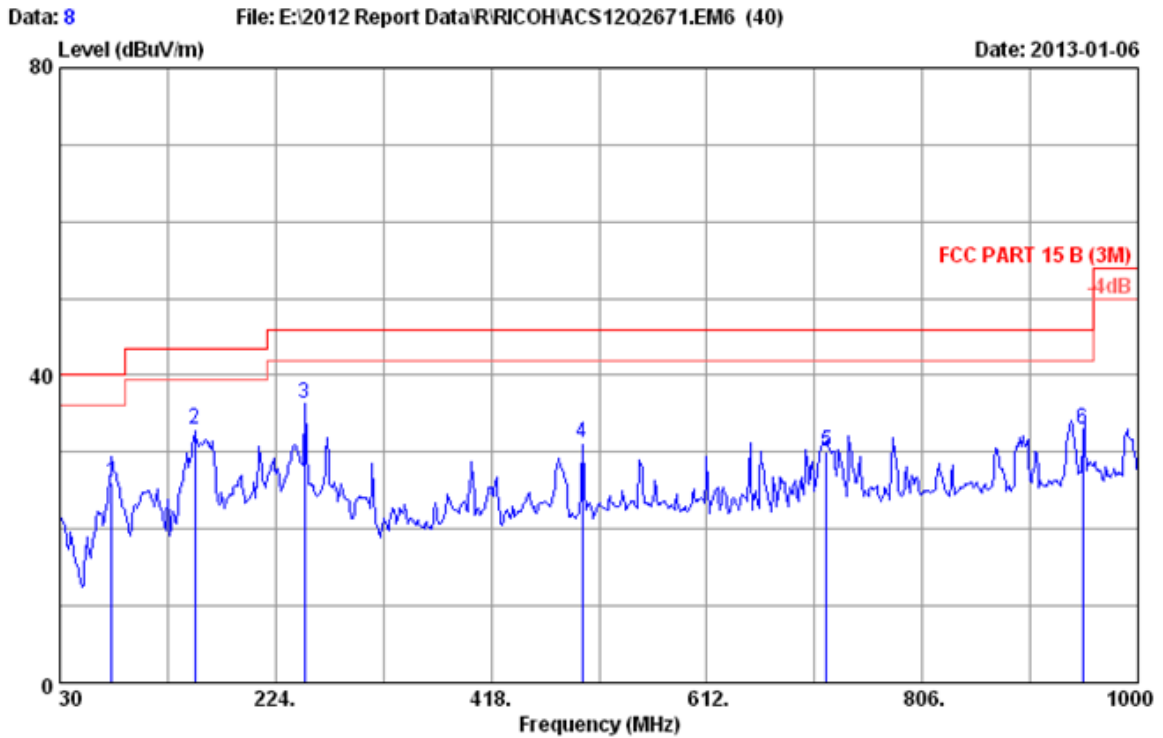
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.  
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber	Data no. : 16
Dis. / Ant. : 3m 9168-429	Ant. pol. : VERTICAL
Limit : FCC PART 15 B (3M)	Engineer : Even_Deng
Env. / Ins. : 24°C/56%	
EUT : Printer	
Power rating : AC 120/60Hz	
Test Mode : FAX RX	
M/N:SP311SFNW	

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBUV)	Emission Level (dBUV/m)	Limits (dBUV/m)	Margin (dB)	Remark
1	30.000	13.22	0.45	16.24	29.91	40.00	10.09	QP
2	119.240	12.16	0.90	17.17	30.23	43.50	13.27	QP
3	141.120	13.58	0.94	18.60	33.12	43.50	10.38	QP
4	222.060	10.76	1.11	18.02	29.89	46.00	16.11	QP
5	759.440	20.37	2.58	13.81	36.76	46.00	9.24	QP
6	941.800	22.08	2.85	9.50	34.43	46.00	11.57	QP

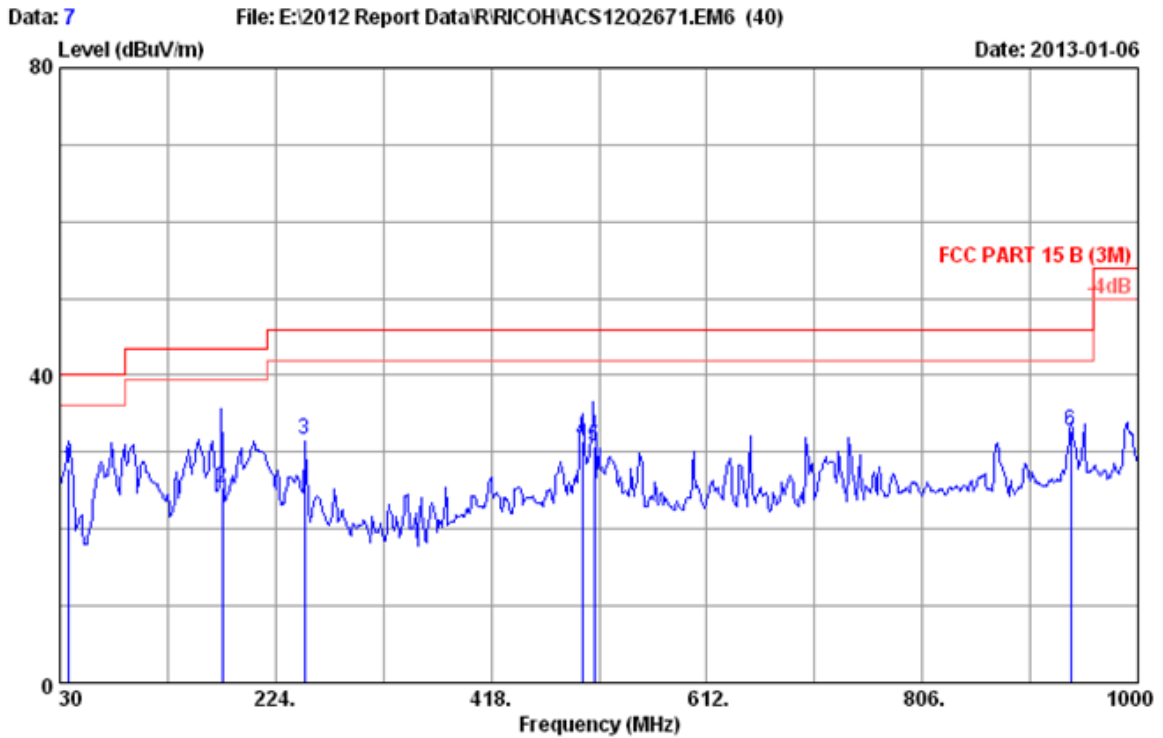
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.  
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 8  
 Dis. / Ant. : 3m 2012 CBL6111C 2598 Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15 B (3M)  
 Env. / Ins. : 24°C/56% Engineer : Even\_Deng  
 EUT : Printer  
 Power rating : AC 120/60Hz  
 Test Mode : Copy  
 M/N:SP311SFNW

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	76.550	6.74	0.76	18.49	25.99	40.00	14.01	QP
2	151.550	10.89	0.96	21.10	32.95	43.50	10.55	QP
3	250.000	12.67	1.16	22.41	36.24	46.00	9.76	QP
4	500.000	19.08	1.83	10.20	31.11	46.00	14.89	QP
5	720.010	21.44	2.48	6.20	30.12	46.00	15.88	QP
6	950.130	24.71	2.86	5.50	33.07	46.00	12.93	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.

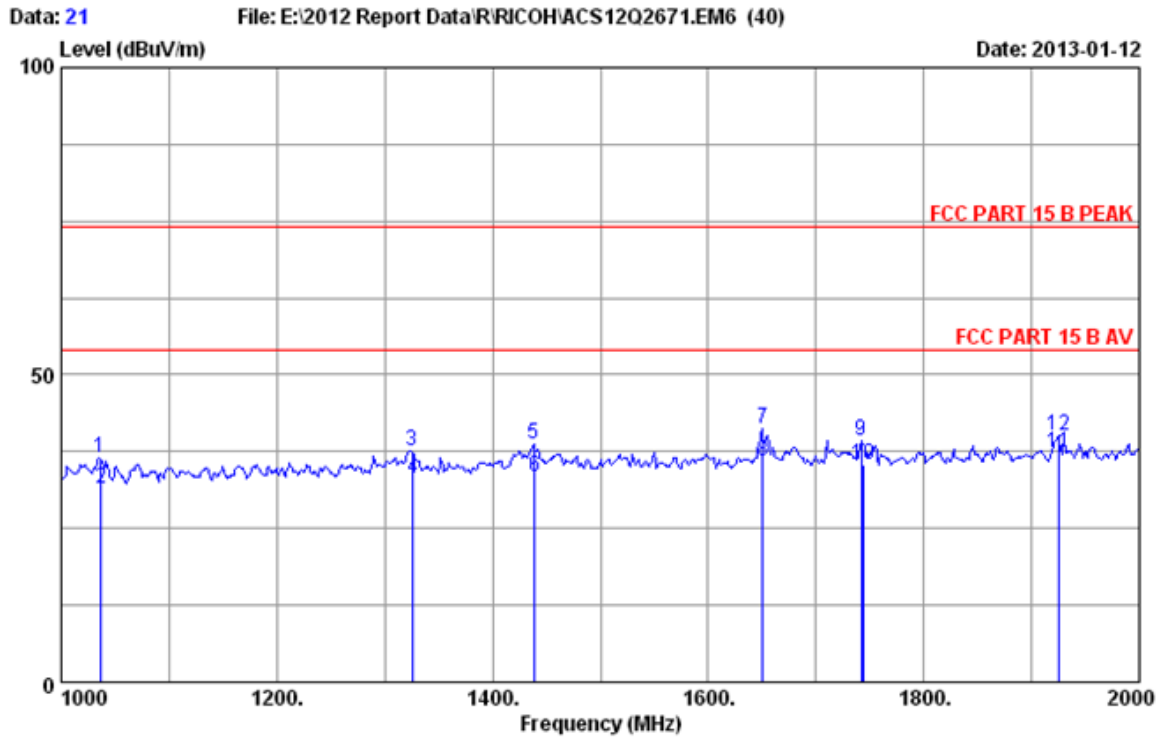


Site no. : 3m Chamber Data no. : 7  
 Dis. / Ant. : 3m 2012 CBL6111C 2598 Ant. pol. : VERTICAL  
 Limit : FCC PART 15 B (3M)  
 Env. / Ins. : 24°C/56% Engineer : Even\_Deng  
 EUT : Printer  
 Power rating : AC 120/60Hz  
 Test Mode : Copy  
 M/N:SP311SFNW

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	38.380	14.11	0.51	13.30	27.92	40.00	12.08	QP
2	176.050	9.22	1.01	15.20	25.43	43.50	18.07	QP
3	250.000	12.67	1.16	17.81	31.64	46.00	14.36	QP
4	500.000	19.08	1.83	10.60	31.51	46.00	14.49	QP
5	511.050	19.06	1.87	9.80	30.73	46.00	15.27	QP
6	939.830	24.61	2.85	5.40	32.86	46.00	13.14	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.

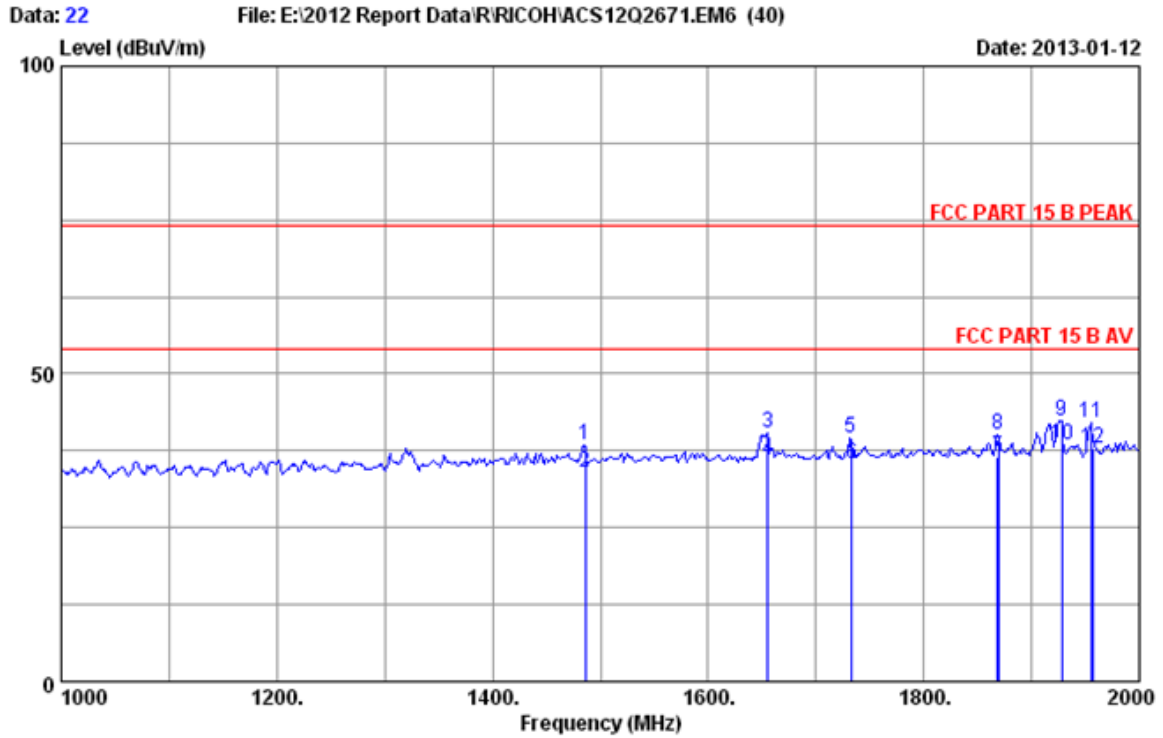
1GHz~2GHz



Site no. : 3m Chamber Data no. : 21  
 Dis. / Ant. : 3m 2011 3115 9607-4877 Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15 B PEAK  
 Env. / Ins. : 24°C/56% Engineer : Even\_Deng  
 EUT : Printer  
 Power Rating : AC 120/60Hz  
 Test Mode : Standby  
 M/N:SP311SFNW

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1035.944	23.37	0.95	34.09	46.18	36.41	74.00	37.59	Peak
2	1036.881	23.37	0.95	34.09	41.36	31.59	54.00	22.41	Average
3	1325.469	24.77	1.00	34.03	45.85	37.59	74.00	36.41	Peak
4	1326.339	24.77	1.00	34.03	41.45	33.19	54.00	20.81	Average
5	1438.145	25.35	1.01	34.01	46.34	38.69	74.00	35.31	Peak
6	1439.228	25.35	1.01	34.01	41.19	33.54	54.00	20.46	Average
7	1650.846	26.17	1.05	33.91	47.92	41.23	74.00	32.77	Peak
8	1650.849	26.17	1.05	33.91	42.55	35.86	54.00	18.14	Average
9	1742.044	26.55	1.08	33.85	45.63	39.41	74.00	34.59	Peak
10	1743.856	26.55	1.08	33.85	41.57	35.35	54.00	18.65	Average
11	1925.005	27.18	1.11	33.74	42.64	37.19	54.00	16.81	Average
12	1925.854	27.18	1.11	33.74	45.52	40.07	74.00	33.93	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor  
 2. The emission levels that are 20dB below the official limit are not reported.

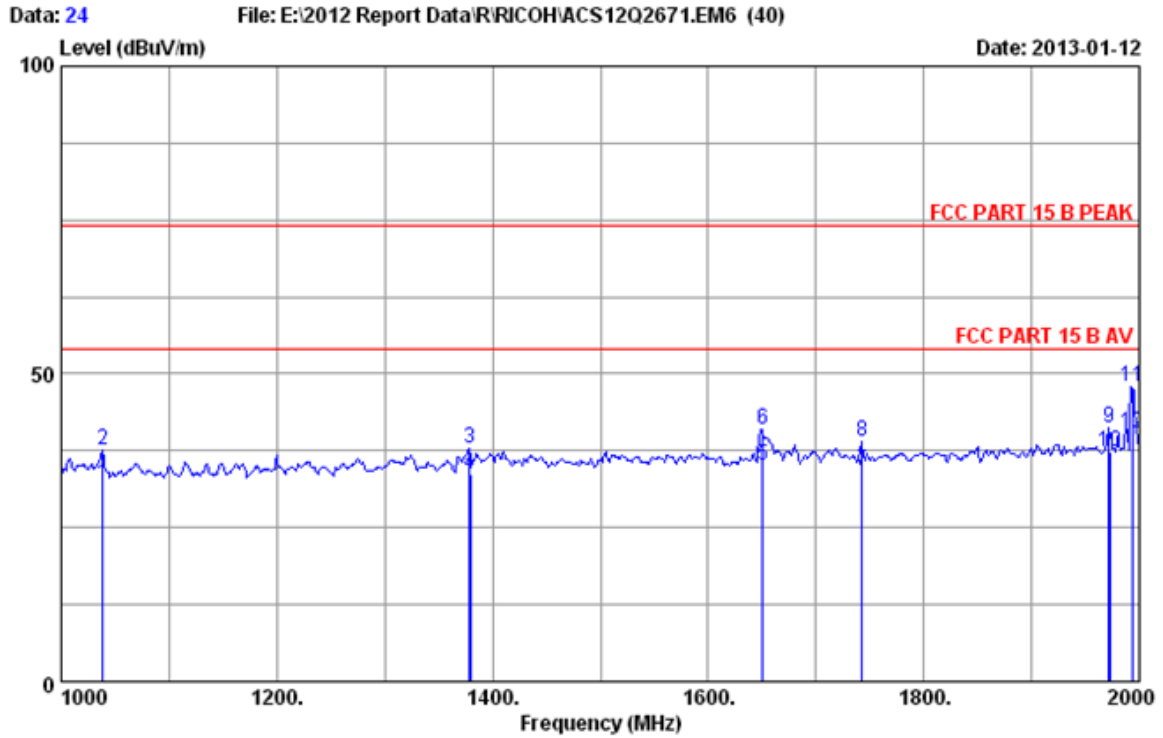


Site no. : 3m Chamber Data no. : 22  
 Dis. / Ant. : 3m 2011 3115 9607-4877 Ant. pol. : VERTICAL  
 Limit : FCC PART 15 B PEAK  
 Env. / Ins. : 24°C/56% Engineer : Even\_Deng  
 EUT : Printer  
 Power Rating : AC 120/60Hz  
 Test Mode : Standby  
 M/N:SP311SFNW

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1485.845	25.60	1.02	34.00	45.91	38.53	74.00	35.47	Peak
2	1485.955	25.60	1.02	34.00	41.35	33.97	54.00	20.03	Average
3	1655.025	26.23	1.06	33.91	46.88	40.26	74.00	33.74	Peak
4	1655.322	26.23	1.06	33.91	42.61	35.99	54.00	18.01	Average
5	1732.844	26.49	1.07	33.86	45.92	39.62	74.00	34.38	Peak
6	1732.021	26.49	1.07	33.86	41.67	35.37	54.00	18.63	Average
7	1868.052	26.99	1.10	33.78	42.05	36.36	54.00	17.64	Average
8	1868.955	26.99	1.10	33.78	45.87	40.18	74.00	33.82	Peak
9	1928.054	27.25	1.12	33.74	47.84	42.47	74.00	31.53	Peak
10	1928.366	27.25	1.12	33.74	43.84	38.47	54.00	15.53	Average
11	1955.846	27.31	1.12	33.73	47.47	42.17	74.00	31.83	Peak
12	1956.350	27.31	1.12	33.73	43.18	37.88	54.00	16.12	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor  
 2. The emission levels that are 20dB below the official limit are not reported.

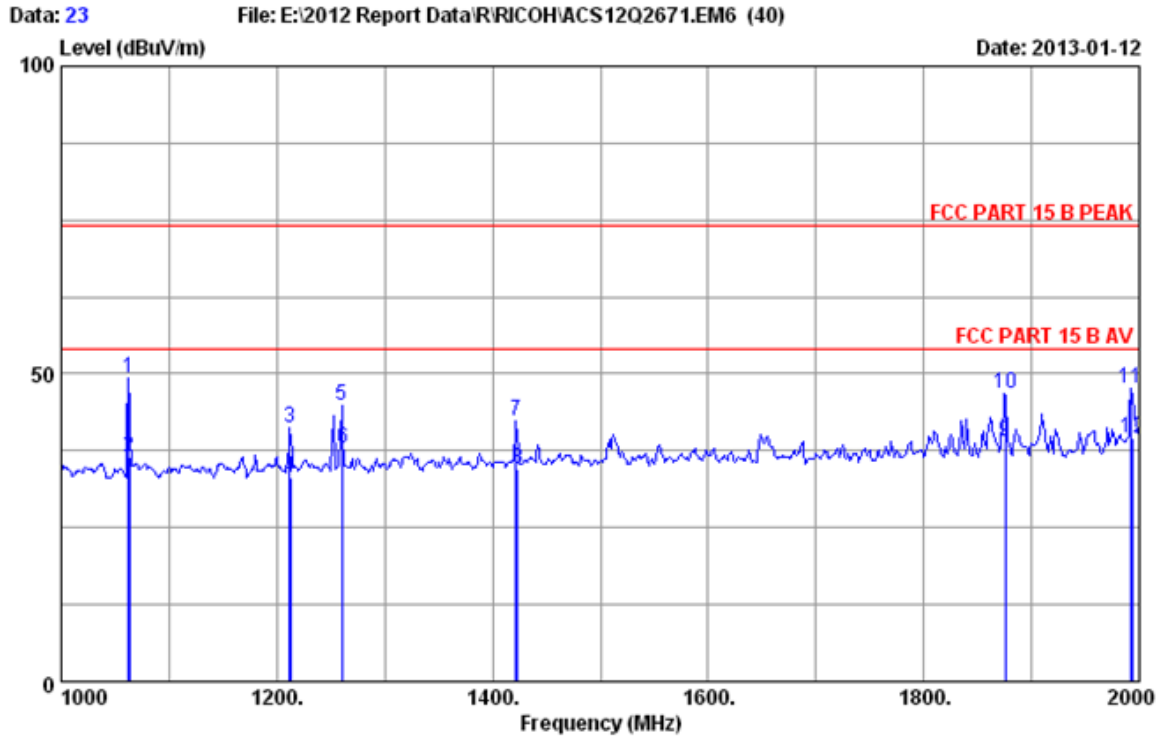




Site no. : 3m Chamber Data no. : 24  
 Dis. / Ant. : 3m 2011 3115 9607-4877 Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15 B PEAK  
 Env. / Ins. : 24°C/56% Engineer : Even\_Deng  
 EUT : Printer  
 Power Rating : AC 120/60Hz  
 Test Mode : USB print  
 M/N:SP311SFNW

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1038.544	23.37	0.95	34.09	41.68	31.91	54.00	22.09	Average
2	1038.844	23.37	0.95	34.09	47.25	37.48	74.00	36.52	Peak
3	1378.944	25.02	1.00	34.02	45.75	37.75	74.00	36.25	Peak
4	1379.355	25.02	1.00	34.02	41.67	33.67	54.00	20.33	Average
5	1650.846	26.17	1.05	33.91	41.91	35.22	54.00	18.78	Average
6	1650.876	26.17	1.05	33.91	47.65	40.96	74.00	33.04	Peak
7	1742.668	26.55	1.08	33.85	40.54	34.32	54.00	19.68	Average
8	1742.745	26.55	1.08	33.85	45.31	39.09	74.00	34.91	Peak
9	1972.025	27.37	1.12	33.72	46.57	41.34	74.00	32.66	Peak
10	1972.355	27.37	1.12	33.72	42.62	37.39	54.00	16.61	Average
11	1992.854	27.44	1.13	33.70	52.94	47.81	74.00	26.19	Peak
12	1993.026	27.44	1.13	33.70	45.56	40.43	54.00	13.57	Average

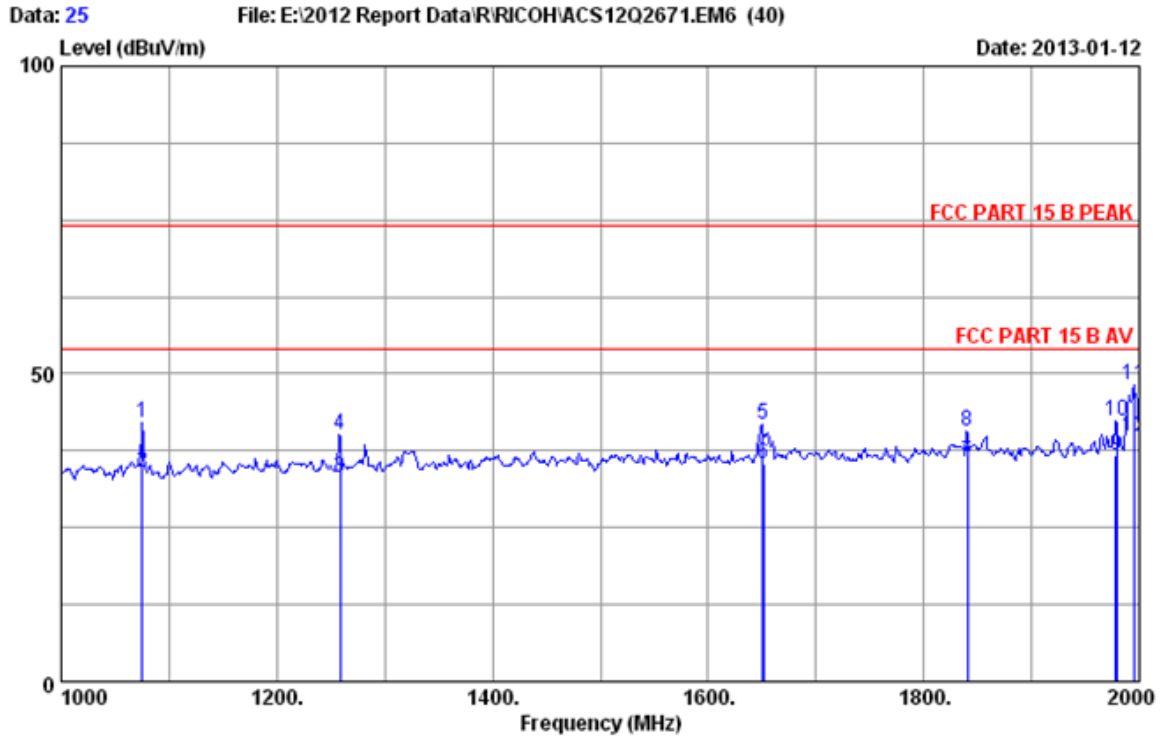
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 23  
 Dis. / Ant. : 3m 2011 3115 9607-4877 Ant. pol. : VERTICAL  
 Limit : FCC PART 15 B PEAK  
 Env. / Ins. : 24°C/56% Engineer : Even\_Deng  
 EUT : Printer  
 Power Rating : AC 120/60Hz  
 Test Mode : USB print  
 M/N:SP311SFNW

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1062.544	23.53	0.96	34.09	58.90	49.30	74.00	24.70	Peak
2	1062.844	23.53	0.96	34.09	46.08	36.48	54.00	17.52	Average
3	1212.054	24.19	0.98	34.06	50.25	41.36	74.00	32.64	Peak
4	1212.855	24.28	0.98	34.06	41.85	33.05	54.00	20.95	Average
5	1260.177	24.44	0.99	34.05	53.52	44.90	74.00	29.10	Peak
6	1261.126	24.44	0.99	34.05	46.61	37.99	54.00	16.01	Average
7	1422.055	25.27	1.01	34.02	50.08	42.34	74.00	31.66	Peak
8	1422.912	25.27	1.01	34.02	42.38	34.64	54.00	19.36	Average
9	1875.389	26.99	1.10	33.77	44.69	39.01	54.00	14.99	Average
10	1875.745	27.06	1.10	33.77	52.31	46.70	74.00	27.30	Peak
11	1992.545	27.44	1.13	33.70	52.74	47.61	74.00	26.39	Peak
12	1993.025	27.44	1.13	33.70	44.80	39.67	54.00	14.33	Average

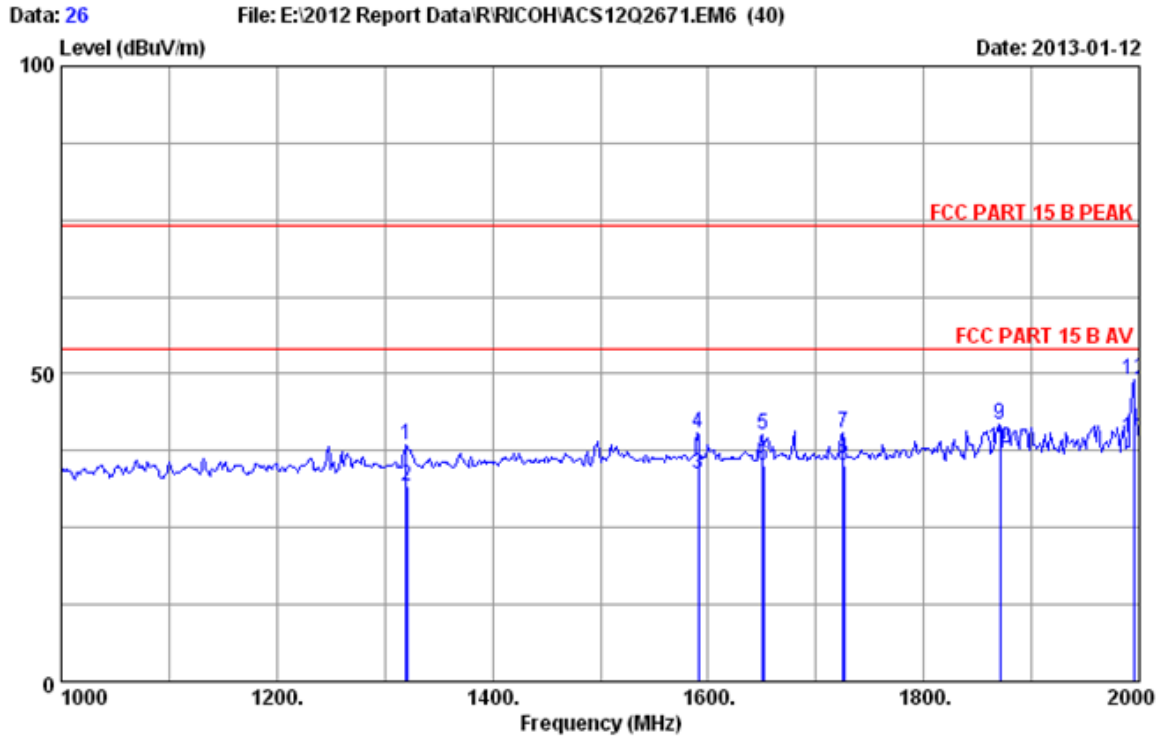
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 25  
 Dis. / Ant. : 3m 2011 3115 9607-4877 Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15 B PEAK  
 Env. / Ins. : 24°C/56% Engineer : Even\_Deng  
 EUT : Printer  
 Power Rating : AC 120/60Hz  
 Test Mode : NIC print  
 M/N:SP311SFNW

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1075.225	23.53	0.96	34.08	51.63	42.04	74.00	31.96	Peak
2	1075.365	23.53	0.96	34.08	43.55	33.96	54.00	20.04	Average
3	1258.355	24.44	0.99	34.05	41.64	33.02	54.00	20.98	Average
4	1258.755	24.44	0.99	34.05	48.64	40.02	74.00	33.98	Peak
5	1650.541	26.17	1.05	33.91	48.38	41.69	74.00	32.31	Peak
6	1651.225	26.17	1.05	33.91	42.08	35.39	54.00	18.61	Average
7	1840.558	26.87	1.09	33.80	41.57	35.73	54.00	18.27	Average
8	1840.746	26.87	1.09	33.80	46.65	40.81	74.00	33.19	Peak
9	1978.357	27.44	1.13	33.71	41.84	36.70	54.00	17.30	Average
10	1978.974	27.44	1.13	33.71	47.59	42.45	74.00	31.55	Peak
11	1995.025	27.50	1.13	33.70	53.15	48.08	74.00	25.92	Peak
12	1995.647	27.50	1.13	33.70	44.78	39.71	54.00	14.29	Average

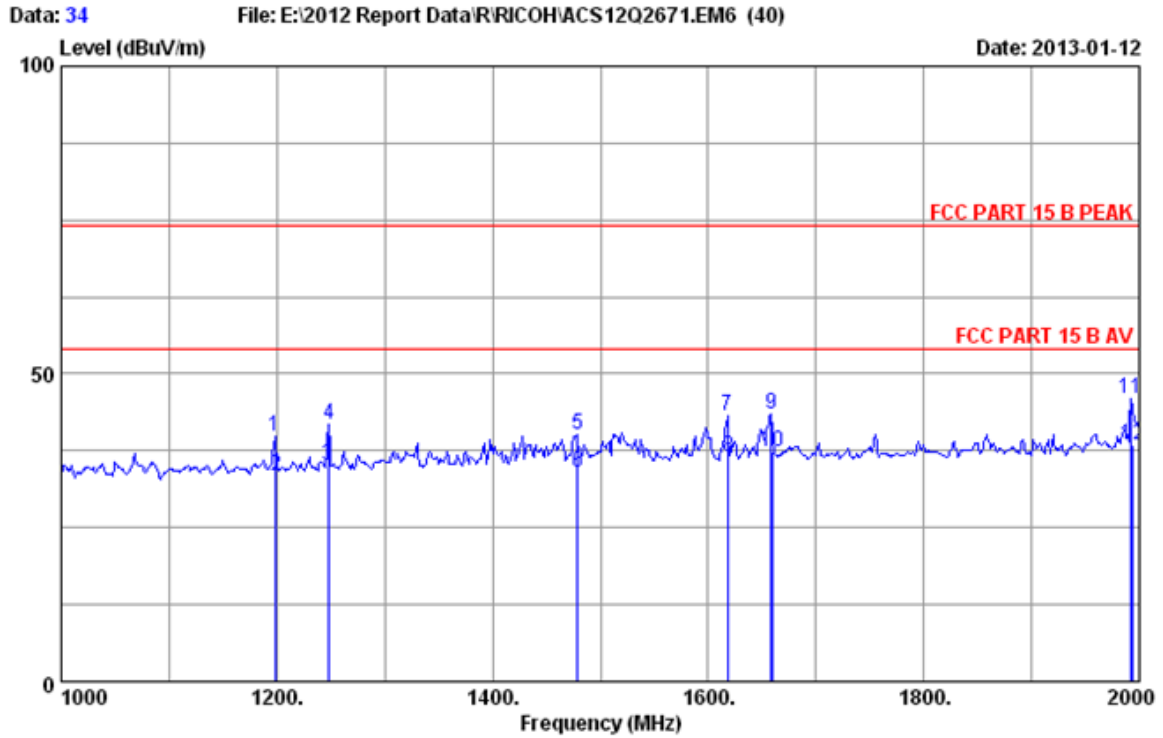
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 26  
 Dis. / Ant. : 3m 2011 3115 9607-4877 Ant. pol. : VERTICAL  
 Limit : FCC PART 15 B PEAK  
 Env. / Ins. : 24°C/56% Engineer : Even\_Deng  
 EUT : Printer  
 Power Rating : AC 120/60Hz  
 Test Mode : NIC print  
 M/N:SP311SFNW

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1320.005	24.77	1.00	34.04	46.75	38.48	74.00	35.52	Peak
2	1320.844	24.77	1.00	34.04	40.05	31.78	54.00	22.22	Average
3	1590.841	25.98	1.04	33.95	40.62	33.69	54.00	20.31	Average
4	1590.841	25.98	1.04	33.95	47.39	40.46	74.00	33.54	Peak
5	1650.457	26.17	1.05	33.91	46.90	40.21	74.00	33.79	Peak
6	1651.355	26.17	1.05	33.91	41.68	34.99	54.00	19.01	Average
7	1725.125	26.49	1.07	33.86	46.69	40.39	74.00	33.61	Peak
8	1726.355	26.49	1.07	33.86	41.37	35.07	54.00	18.93	Average
9	1870.844	26.99	1.10	33.78	47.41	41.72	74.00	32.28	Peak
10	1870.984	26.99	1.10	33.78	43.44	37.75	54.00	16.25	Average
11	1995.095	27.50	1.13	33.70	44.75	39.68	54.00	14.32	Average
12	1995.745	27.50	1.13	33.70	54.16	49.09	74.00	24.91	Peak

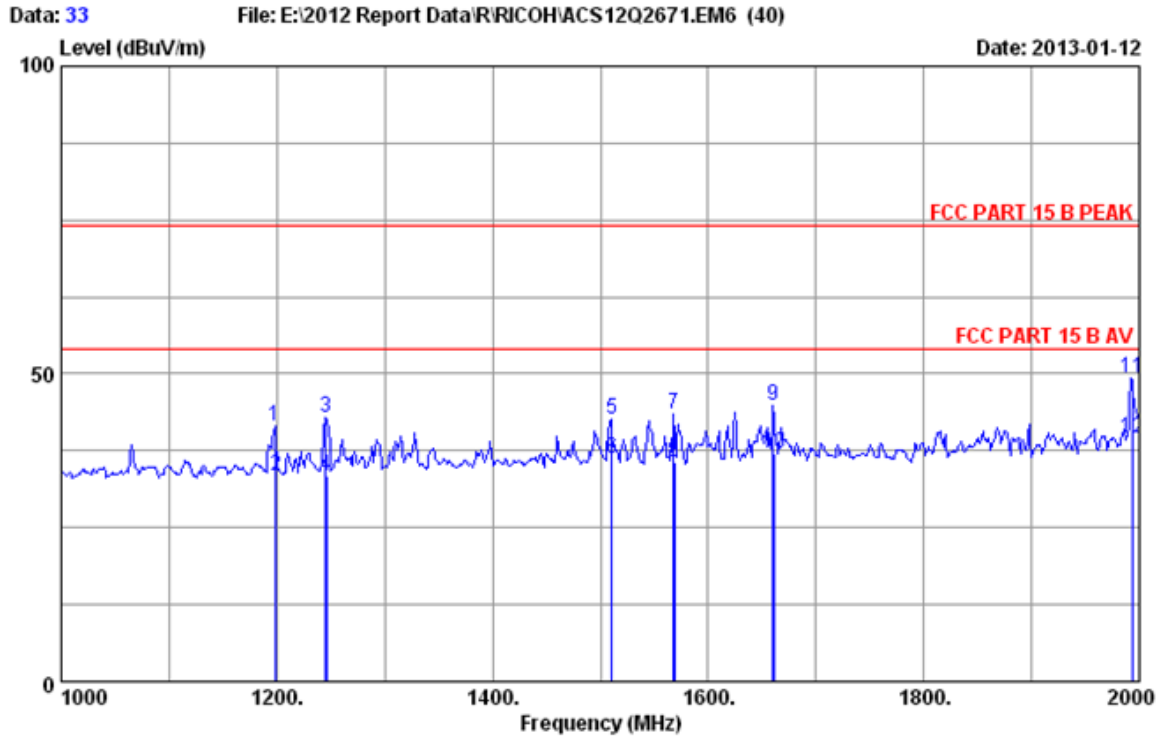
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 34  
 Dis. / Ant. : 3m 2011 3115 9607-4877 Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15 B PEAK  
 Env. / Ins. : 24°C/56% Engineer : Even\_Deng  
 EUT : Printer  
 Power Rating : AC 120/60Hz  
 Test Mode : WIFI print  
 M/N:SP311SFNW

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1198.588	24.19	0.98	34.06	48.84	39.95	74.00	34.05	Peak
2	1199.361	24.19	0.98	34.06	42.35	33.46	54.00	20.54	Average
3	1248.010	24.44	0.99	34.05	43.69	35.07	54.00	18.93	Average
4	1248.278	24.44	0.99	34.05	50.26	41.64	74.00	32.36	Peak
5	1478.944	25.52	1.02	34.00	47.61	40.15	74.00	33.85	Peak
6	1479.305	25.52	1.02	34.00	41.56	34.10	54.00	19.90	Average
7	1618.347	26.04	1.05	33.93	49.99	43.15	74.00	30.85	Peak
8	1618.614	26.04	1.05	33.93	43.34	36.50	54.00	17.50	Average
9	1658.447	26.23	1.06	33.90	50.09	43.48	74.00	30.52	Peak
10	1659.325	26.23	1.06	33.90	43.84	37.23	54.00	16.77	Average
11	1992.817	27.44	1.13	33.70	51.00	45.87	74.00	28.13	Peak
12	1993.554	27.44	1.13	33.70	43.59	38.46	54.00	15.54	Average

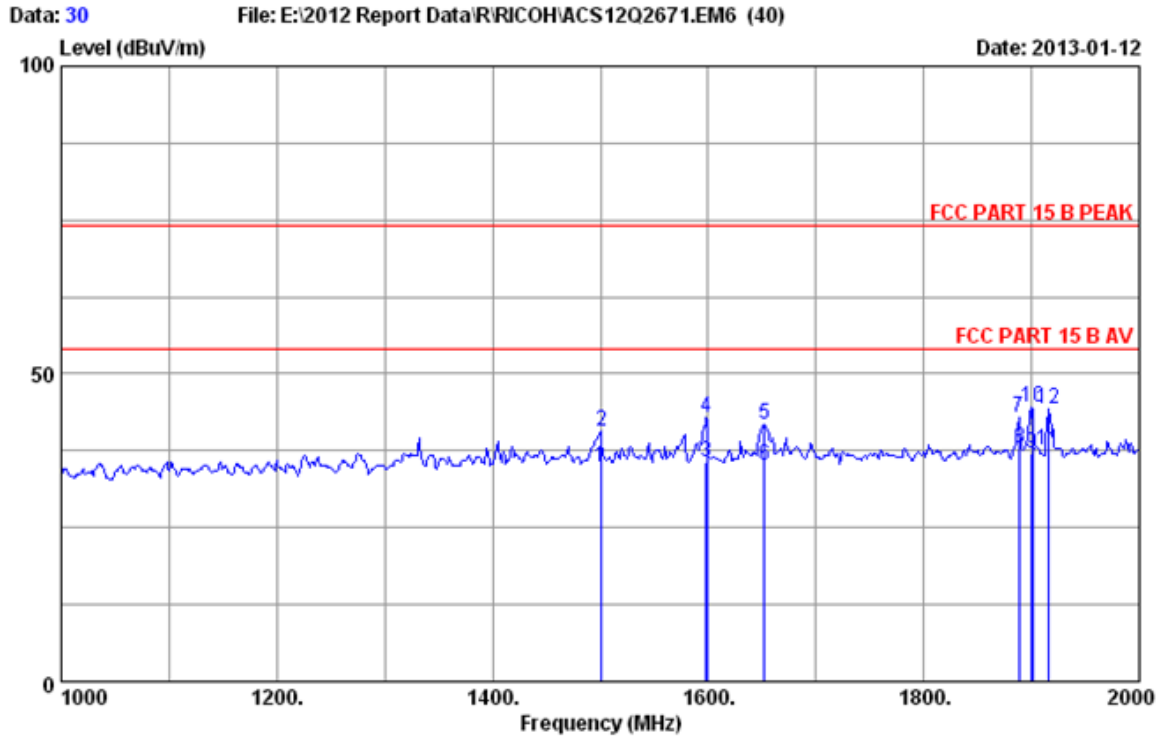
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 33  
 Dis. / Ant. : 3m 2011 3115 9607-4877 Ant. pol. : VERTICAL  
 Limit : FCC PART 15 B PEAK  
 Env. / Ins. : 24°C/56% Engineer : Even\_Deng  
 EUT : Printer  
 Power Rating : AC 120/60Hz  
 Test Mode : WIFI print  
 M/N:SP311SFNW

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1198.175	24.19	0.98	34.06	50.34	41.45	74.00	32.55	Peak
2	1199.355	24.19	0.98	34.06	42.35	33.46	54.00	20.54	Average
3	1245.544	24.36	0.98	34.05	51.65	42.94	74.00	31.06	Peak
4	1245.874	24.36	0.98	34.05	42.16	33.45	54.00	20.55	Average
5	1510.843	25.66	1.02	33.99	49.99	42.68	74.00	31.32	Peak
6	1511.040	25.66	1.02	33.99	43.57	36.26	54.00	17.74	Average
7	1568.056	25.85	1.03	33.96	50.45	43.37	74.00	30.63	Peak
8	1568.478	25.85	1.03	33.96	42.81	35.73	54.00	18.27	Average
9	1660.055	26.23	1.06	33.90	51.50	44.89	74.00	29.11	Peak
10	1660.845	26.23	1.06	33.90	43.68	37.07	54.00	16.93	Average
11	1992.949	27.44	1.13	33.70	54.49	49.36	74.00	24.64	Peak
12	1993.521	27.44	1.13	33.70	44.65	39.52	54.00	14.48	Average

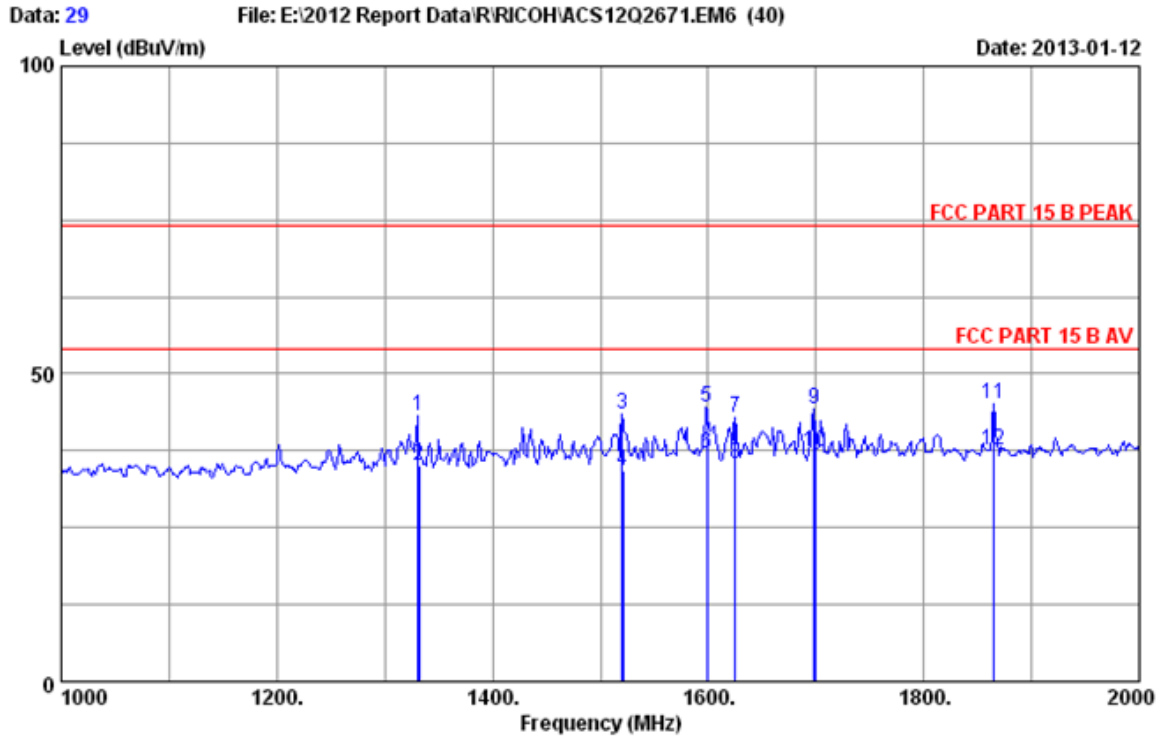
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 30  
 Dis. / Ant. : 3m 2011 3115 9607-4877 Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15 B PEAK  
 Env. / Ins. : 24°C/56% Engineer : Even\_Deng  
 EUT : Printer  
 Power Rating : AC 120/60Hz  
 Test Mode : NIC scan  
 M/N:SP311SFNW

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1500.776	25.60	1.02	34.00	42.16	34.78	54.00	19.22	Average
2	1500.941	25.60	1.02	34.00	48.08	40.70	74.00	33.30	Peak
3	1598.368	25.98	1.04	33.94	42.61	35.69	54.00	18.31	Average
4	1598.741	25.98	1.04	33.94	49.78	42.86	74.00	31.14	Peak
5	1652.148	26.17	1.05	33.91	48.50	41.81	74.00	32.19	Peak
6	1652.354	26.17	1.05	33.91	41.86	35.17	54.00	18.83	Average
7	1888.052	27.06	1.10	33.77	48.64	43.03	74.00	30.97	Peak
8	1889.320	27.06	1.10	33.77	43.60	37.99	54.00	16.01	Average
9	1900.602	27.12	1.11	33.76	42.58	37.05	54.00	16.95	Average
10	1900.844	27.12	1.11	33.76	50.12	44.59	74.00	29.41	Peak
11	1915.008	27.18	1.11	33.75	43.06	37.60	54.00	16.40	Average
12	1915.541	27.18	1.11	33.75	49.69	44.23	74.00	29.77	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor  
 2. The emission levels that are 20dB below the official limit are not reported.

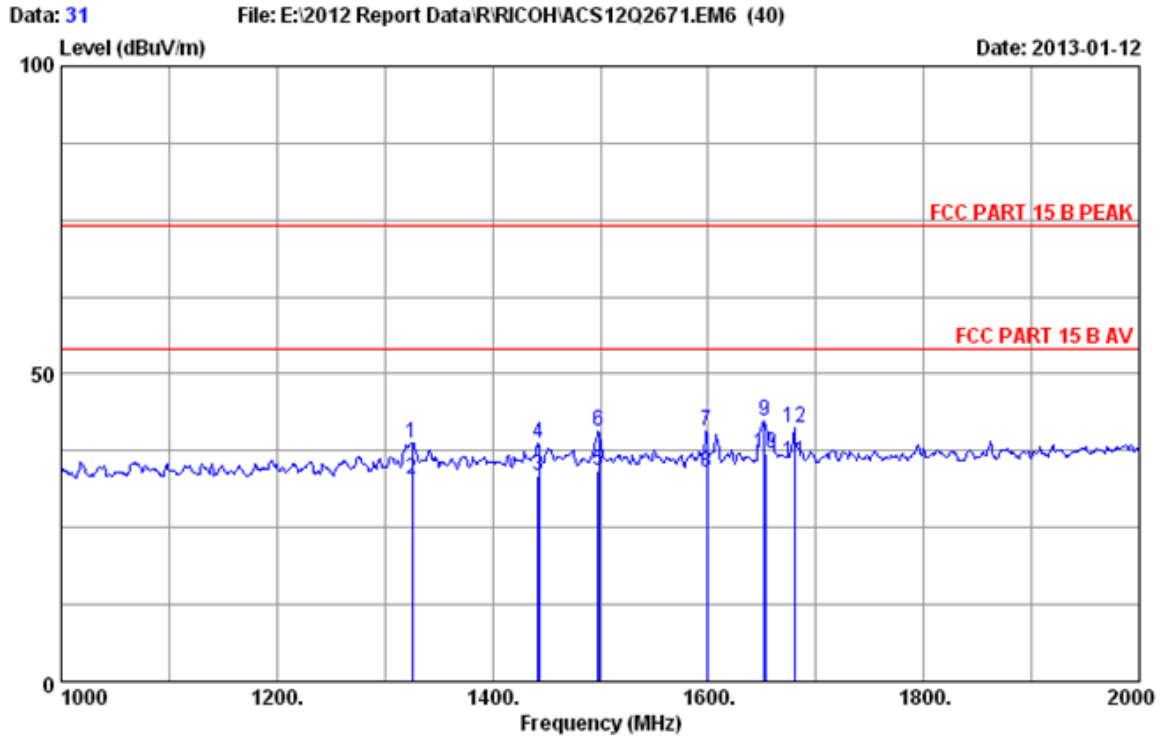


Site no. : 3m Chamber Data no. : 29  
 Dis. / Ant. : 3m 2011 3115 9607-4877 Ant. pol. : VERTICAL  
 Limit : FCC PART 15 B PEAK  
 Env. / Ins. : 24°C/56% Engineer : Even\_Deng  
 EUT : Printer  
 Power Rating : AC 120/60Hz  
 Test Mode : NIC scan  
 M/N:SP311SFNW

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1330.911	24.77	1.00	34.03	51.38	43.12	74.00	30.88	Peak
2	1331.844	24.86	1.00	34.03	43.17	35.00	54.00	19.00	Average
3	1520.479	25.73	1.03	33.99	50.75	43.52	74.00	30.48	Peak
4	1520.805	25.73	1.03	33.99	41.61	34.38	54.00	19.62	Average
5	1598.844	25.98	1.04	33.94	51.41	44.49	74.00	29.51	Peak
6	1599.305	25.98	1.04	33.94	43.85	36.93	54.00	17.07	Average
7	1625.058	26.11	1.05	33.92	49.66	42.90	74.00	31.10	Peak
8	1625.418	26.11	1.05	33.92	42.07	35.31	54.00	18.69	Average
9	1698.155	26.36	1.06	33.88	50.68	44.22	74.00	29.78	Peak
10	1699.024	26.36	1.06	33.88	43.77	37.31	54.00	16.69	Average
11	1865.052	26.99	1.10	33.78	50.81	45.12	74.00	28.88	Peak
12	1865.327	26.99	1.10	33.78	43.27	37.58	54.00	16.42	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor  
 2. The emission levels that are 20dB below the official limit are not reported.

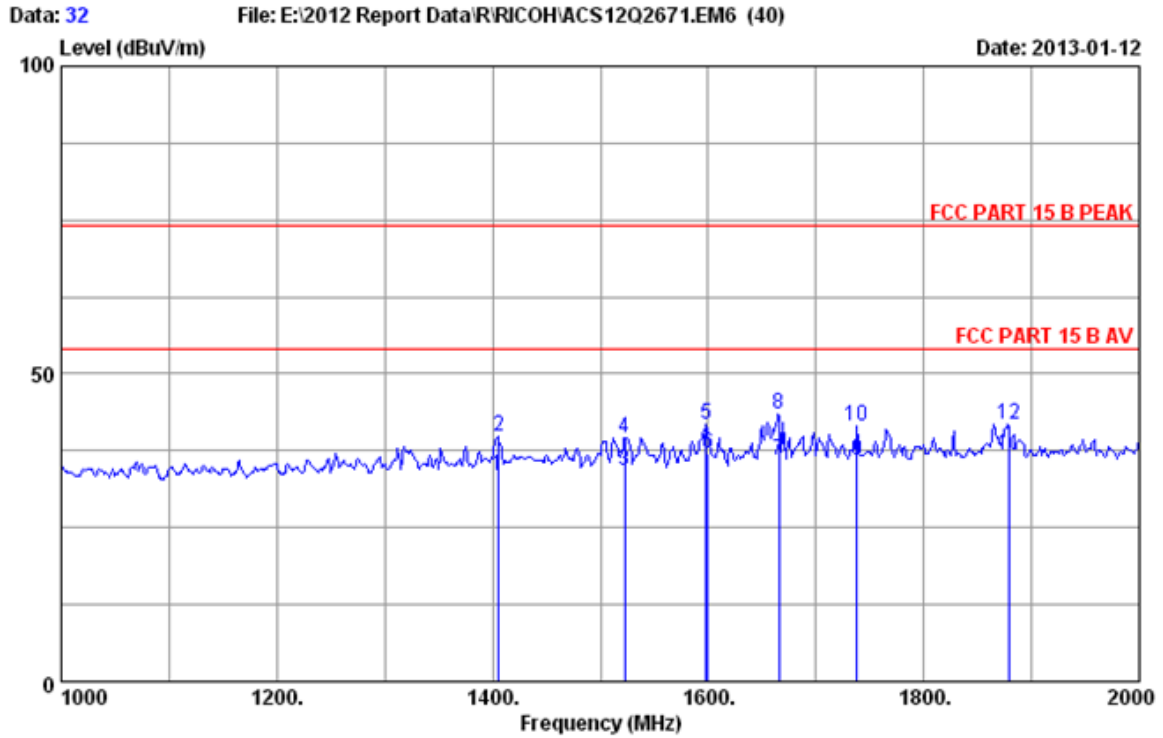




Site no. : 3m Chamber Data no. : 31  
 Dis. / Ant. : 3m 2011 3115 9607-4877 Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15 B PEAK  
 Env. / Ins. : 24°C/56% Engineer : Even\_Deng  
 EUT : Printer  
 Power Rating : AC 120/60Hz  
 Test Mode : USB scan  
 M/N:SP311SFNW

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1325.441	24.77	1.00	34.03	47.10	38.84	74.00	35.16	Peak
2	1325.645	24.77	1.00	34.03	41.14	32.88	54.00	21.12	Average
3	1442.650	25.35	1.01	34.01	41.13	33.48	54.00	20.52	Average
4	1442.844	25.35	1.01	34.01	46.27	38.62	74.00	35.38	Peak
5	1498.020	25.60	1.02	34.00	41.68	34.30	54.00	19.70	Average
6	1498.542	25.60	1.02	34.00	47.97	40.59	74.00	33.41	Peak
7	1598.644	25.98	1.04	33.94	47.58	40.66	74.00	33.34	Peak
8	1599.350	25.98	1.04	33.94	41.02	34.10	54.00	19.90	Average
9	1652.441	26.17	1.05	33.91	49.12	42.43	74.00	31.57	Peak
10	1653.980	26.17	1.05	33.91	43.62	36.93	54.00	17.07	Average
11	1680.220	26.30	1.06	33.89	42.11	35.58	54.00	18.42	Average
12	1680.844	26.30	1.06	33.89	47.83	41.30	74.00	32.70	Peak

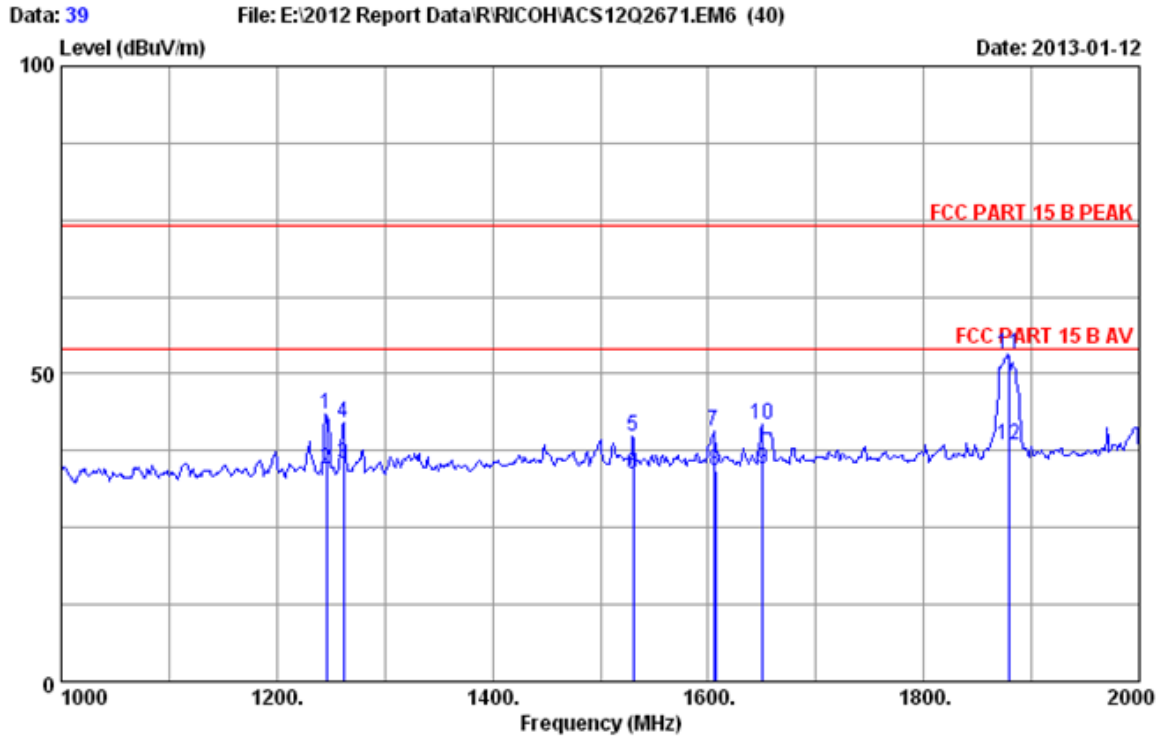
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 32  
 Dis. / Ant. : 3m 2011 3115 9607-4877 Ant. pol. : VERTICAL  
 Limit : FCC PART 15 B PEAK  
 Env. / Ins. : 24°C/56% Engineer : Even\_Deng  
 EUT : Printer  
 Power Rating : AC 120/60Hz  
 Test Mode : USB scan  
 M/N:SP311SFNW

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1405.332	25.19	1.01	34.02	41.15	33.33	54.00	20.67	Average
2	1405.942	25.19	1.01	34.02	47.65	39.83	74.00	34.17	Peak
3	1522.390	25.73	1.03	33.99	41.61	34.38	54.00	19.62	Average
4	1522.477	25.73	1.03	33.99	46.89	39.66	74.00	34.34	Peak
5	1598.541	25.98	1.04	33.94	48.80	41.88	74.00	32.12	Peak
6	1599.660	25.98	1.04	33.94	43.94	37.02	54.00	16.98	Average
7	1665.374	26.23	1.06	33.90	42.68	36.07	54.00	17.93	Average
8	1665.844	26.23	1.06	33.90	50.14	43.53	74.00	30.47	Peak
9	1738.025	26.49	1.07	33.86	42.25	35.95	54.00	18.05	Average
10	1738.055	26.49	1.07	33.86	47.93	41.63	74.00	32.37	Peak
11	1878.775	27.06	1.10	33.77	42.45	36.84	54.00	17.16	Average
12	1878.854	27.06	1.10	33.77	47.42	41.81	74.00	32.19	Peak

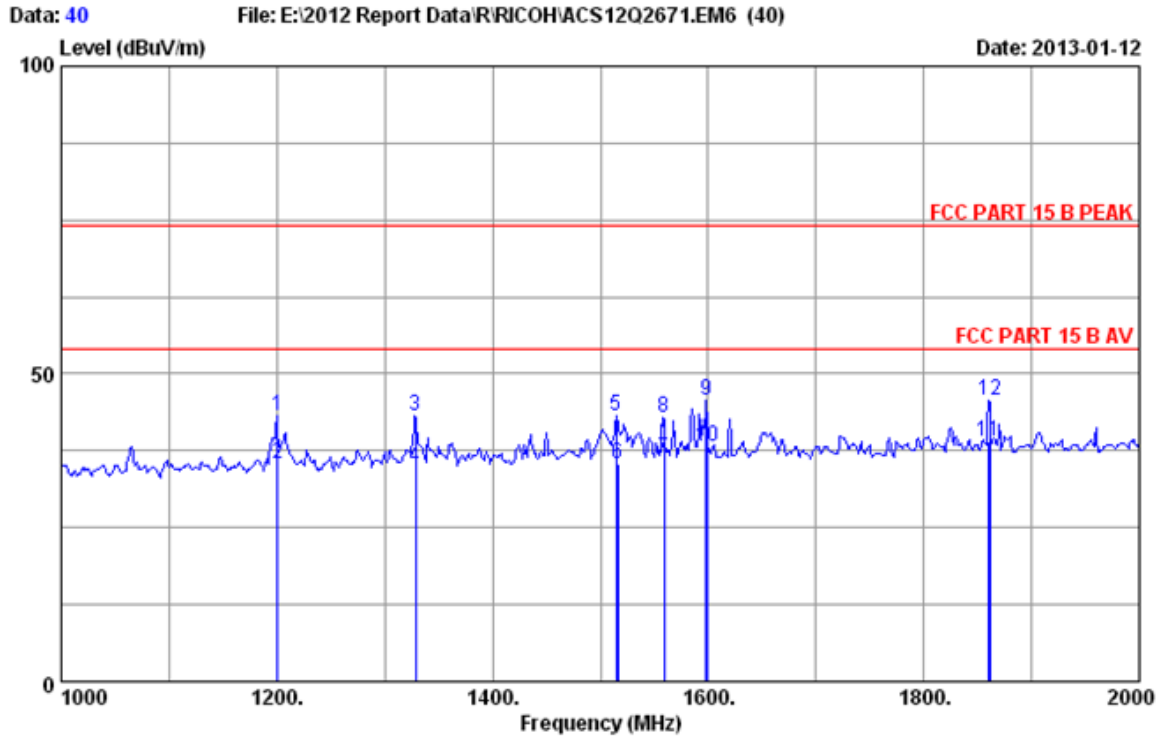
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 39  
 Dis. / Ant. : 3m 2011 3115 9607-4877 Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15 B PEAK  
 Env. / Ins. : 24°C/56% Engineer : Even\_Deng  
 EUT : Printer  
 Power Rating : AC 120/60Hz  
 Test Mode : WIFI scan  
 M/N:SP311SFNW

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1245.804	24.36	0.98	34.05	52.20	43.49	74.00	30.51	Peak
2	1246.354	24.36	0.98	34.05	43.18	34.47	54.00	19.53	Average
3	1262.054	24.44	0.99	34.05	44.08	35.46	54.00	18.54	Average
4	1262.145	24.44	0.99	34.05	50.77	42.15	74.00	31.85	Peak
5	1530.745	25.73	1.03	33.98	47.10	39.88	74.00	34.12	Peak
6	1530.845	25.73	1.03	33.98	41.02	33.80	54.00	20.20	Average
7	1605.248	26.04	1.05	33.94	47.42	40.57	74.00	33.43	Peak
8	1606.805	26.04	1.05	33.94	41.19	34.34	54.00	19.66	Average
9	1650.356	26.17	1.05	33.91	41.18	34.49	54.00	19.51	Average
10	1650.369	26.17	1.05	33.91	48.39	41.70	74.00	32.30	Peak
11	1878.844	27.06	1.10	33.77	58.70	53.09	74.00	20.91	Peak
12	1879.315	27.06	1.10	33.77	44.08	38.47	54.00	15.53	Average

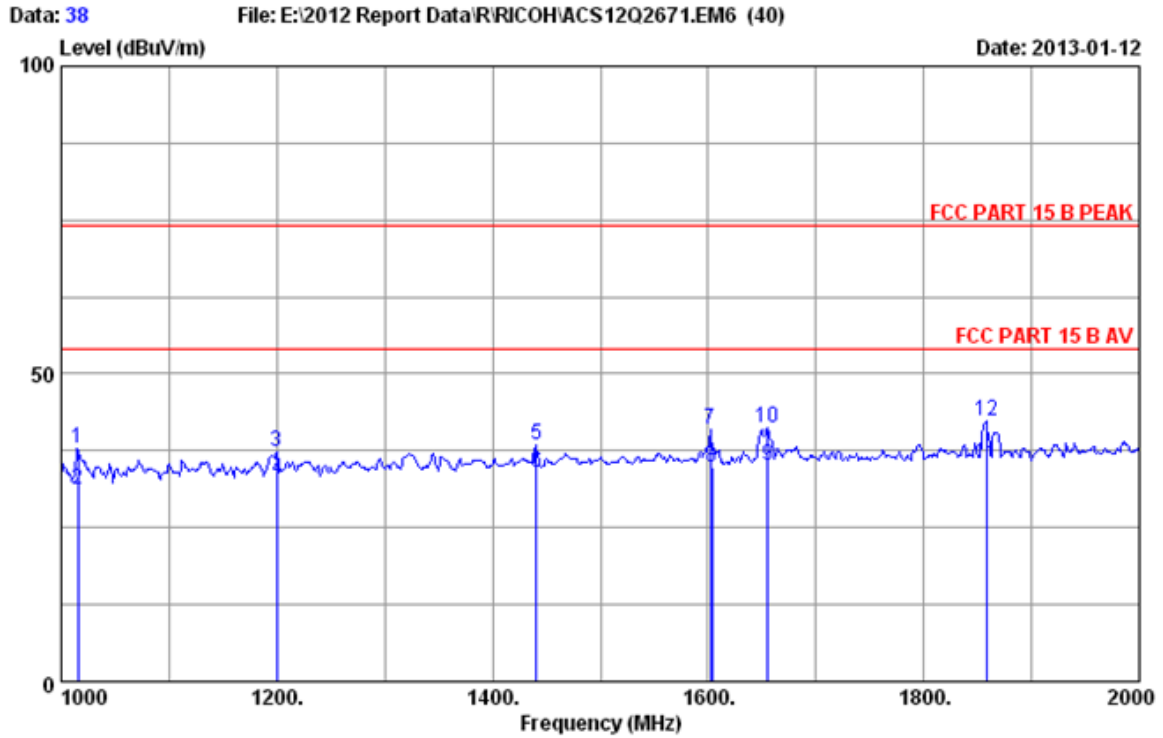
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : site Data no. : 40  
 Dis. / Ant. : 3m 2011 3115 9607-4877 Ant. pol. : VERTICAL  
 Limit : FCC PART 15 B PEAK  
 Env. / Ins. : 24°C/56% Engineer : Even\_Deng  
 EUT : Printer  
 Power Rating : AC 120/60Hz  
 Test Mode : WIFI scan  
 M/N:SP311SFNW

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1200.745	24.19	0.98	34.06	52.11	43.22	74.00	30.78	Peak
2	1200.944	24.19	0.98	34.06	44.39	35.50	54.00	18.50	Average
3	1328.645	24.77	1.00	34.03	51.50	43.24	74.00	30.76	Peak
4	1329.006	24.77	1.00	34.03	43.08	34.82	54.00	19.18	Average
5	1515.054	25.66	1.02	33.99	50.46	43.15	74.00	30.85	Peak
6	1516.358	25.66	1.02	33.99	42.58	35.27	54.00	18.73	Average
7	1558.905	25.85	1.03	33.96	43.18	36.10	54.00	17.90	Average
8	1558.944	25.85	1.03	33.96	49.93	42.85	74.00	31.15	Peak
9	1598.158	25.98	1.04	33.94	52.68	45.76	74.00	28.24	Peak
10	1599.321	25.98	1.04	33.94	45.07	38.15	54.00	15.85	Average
11	1860.770	26.99	1.10	33.78	44.79	39.10	54.00	14.90	Average
12	1860.954	26.99	1.10	33.78	51.30	45.61	74.00	28.39	Peak

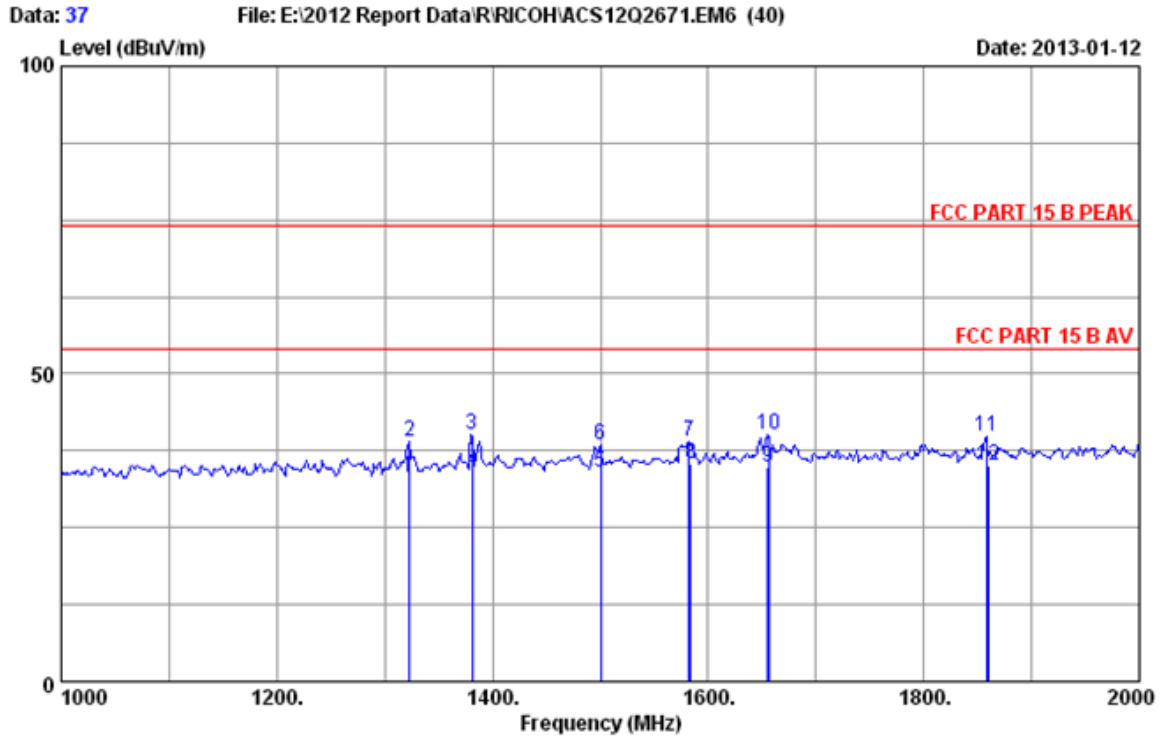
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 38  
 Dis. / Ant. : 3m 2011 3115 9607-4877 Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15 B PEAK  
 Env. / Ins. : 24°C/56% Engineer : Even\_Deng  
 EUT : Printer  
 Power Rating : AC 120/60Hz  
 Test Mode : FAX TX  
 M/N:SP311SFNW

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1015.446	23.28	0.95	34.10	47.73	37.86	74.00	36.14	Peak
2	1015.844	23.28	0.95	34.10	41.12	31.25	54.00	22.75	Average
3	1200.148	24.19	0.98	34.06	46.20	37.31	74.00	36.69	Peak
4	1200.630	24.19	0.98	34.06	41.67	32.78	54.00	21.22	Average
5	1440.466	25.35	1.01	34.01	46.13	38.48	74.00	35.52	Peak
6	1441.008	25.35	1.01	34.01	41.61	33.96	54.00	20.04	Average
7	1602.541	25.98	1.04	33.94	47.83	40.91	74.00	33.09	Peak
8	1603.840	26.04	1.05	33.94	41.67	34.82	54.00	19.18	Average
9	1655.248	26.23	1.06	33.91	41.85	35.23	54.00	18.77	Average
10	1655.375	26.23	1.06	33.91	47.88	41.26	74.00	32.74	Peak
11	1858.245	26.93	1.10	33.79	41.18	35.42	54.00	18.58	Average
12	1858.874	26.99	1.10	33.78	48.03	42.34	74.00	31.66	Peak

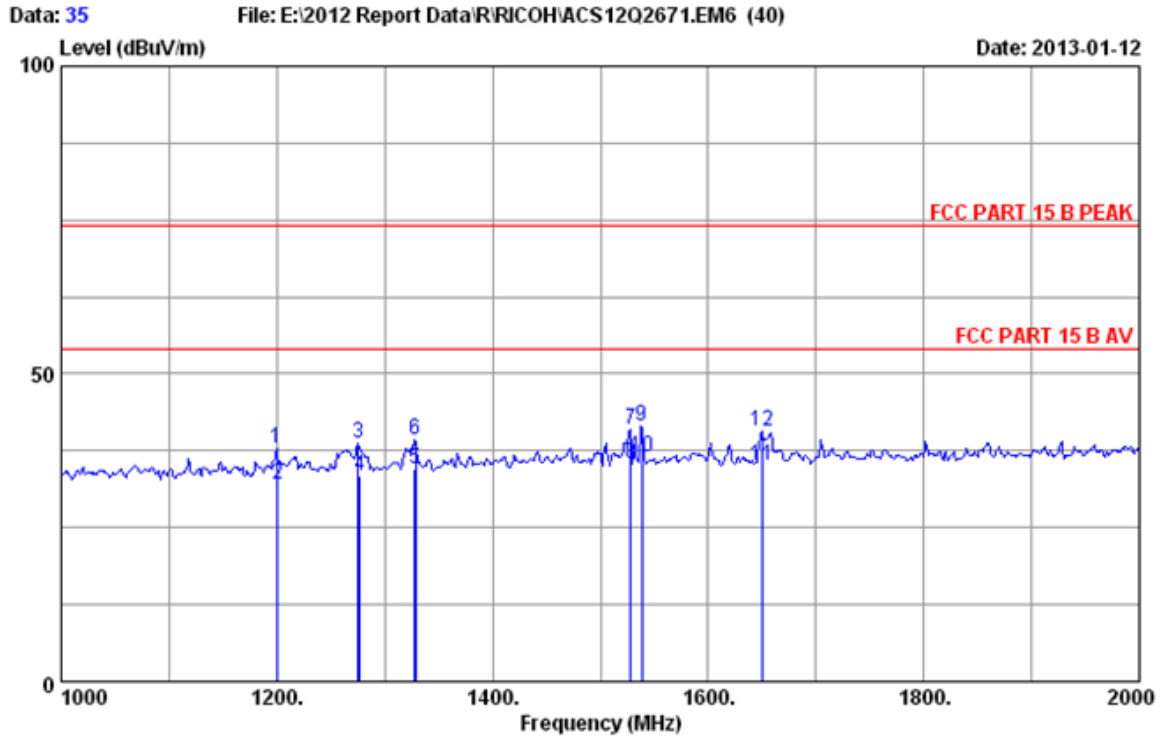
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 37  
 Dis. / Ant. : 3m 2011 3115 9607-4877 Ant. pol. : VERTICAL  
 Limit : FCC PART 15 B PEAK  
 Env. / Ins. : 24°C/56% Engineer : Even\_Deng  
 EUT : Printer  
 Power Rating : AC 120/60Hz  
 Test Mode : FAX TX  
 M/N:SP311SFNW

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1322.493	24.77	1.00	34.04	41.52	33.25	54.00	20.75	Average
2	1322.814	24.77	1.00	34.04	47.21	38.94	74.00	35.06	Peak
3	1380.911	25.02	1.00	34.02	48.02	40.02	74.00	33.98	Peak
4	1381.640	25.02	1.00	34.02	42.24	34.24	54.00	19.76	Average
5	1500.027	25.60	1.02	34.00	41.38	34.00	54.00	20.00	Average
6	1500.755	25.60	1.02	34.00	45.90	38.52	74.00	35.48	Peak
7	1582.457	25.92	1.04	33.95	45.85	38.86	74.00	35.14	Peak
8	1583.542	25.92	1.04	33.95	42.34	35.35	54.00	18.65	Average
9	1655.029	26.23	1.06	33.91	41.36	34.74	54.00	19.26	Average
10	1655.842	26.23	1.06	33.91	46.70	40.08	74.00	33.92	Peak
11	1858.015	26.93	1.10	33.79	45.62	39.86	74.00	34.14	Peak
12	1859.608	26.99	1.10	33.78	40.90	35.21	54.00	18.79	Average

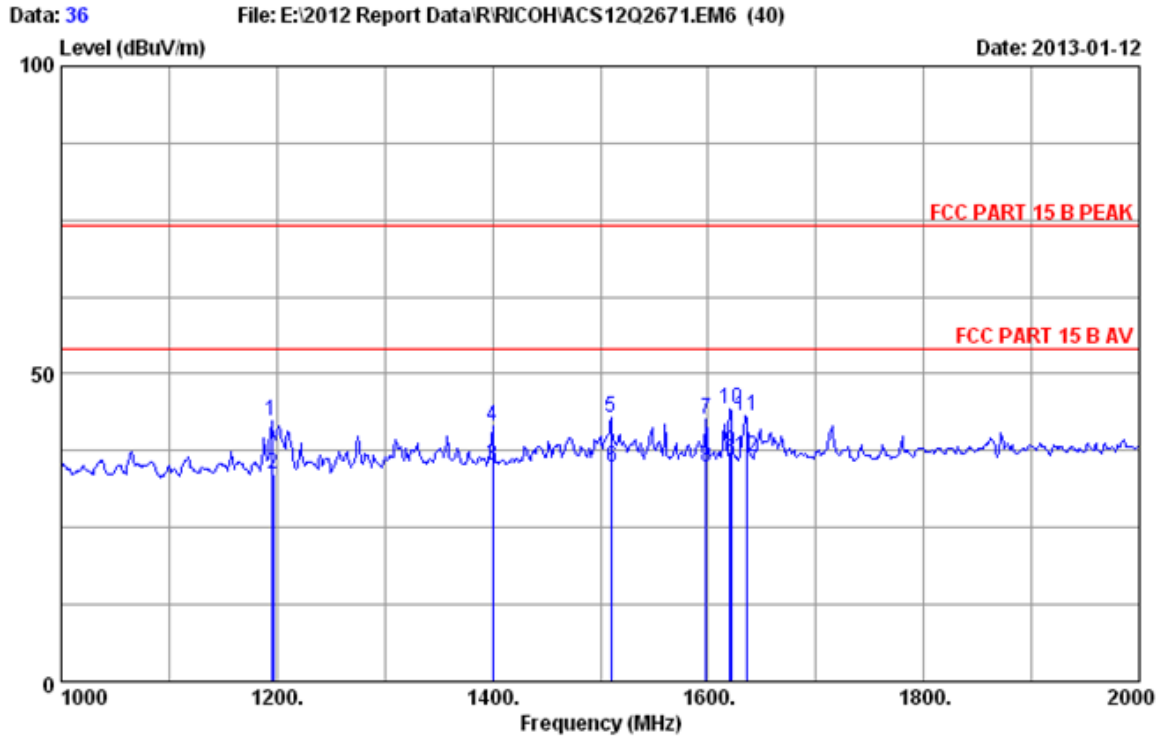
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 35  
 Dis. / Ant. : 3m 2011 3115 9607-4877 Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15 B PEAK  
 Env. / Ins. : 24°C/56% Engineer : Even\_Deng  
 EUT : Printer  
 Power Rating : AC 120/60Hz  
 Test Mode : FAX RX  
 M/N:SP311SFNW

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1200.259	24.19	0.98	34.06	46.78	37.89	74.00	36.11	Peak
2	1200.914	24.19	0.98	34.06	41.03	32.14	54.00	21.86	Average
3	1275.148	24.52	0.99	34.04	47.15	38.62	74.00	35.38	Peak
4	1276.664	24.52	0.99	34.04	42.05	33.52	54.00	20.48	Average
5	1328.005	24.77	1.00	34.03	42.66	34.40	54.00	19.60	Average
6	1328.344	24.77	1.00	34.03	47.41	39.15	74.00	34.85	Peak
7	1528.052	25.73	1.03	33.98	48.21	40.99	74.00	33.01	Peak
8	1528.347	25.73	1.03	33.98	42.53	35.31	54.00	18.69	Average
9	1538.911	25.79	1.03	33.98	48.80	41.64	74.00	32.36	Peak
10	1539.247	25.79	1.03	33.98	43.62	36.46	54.00	17.54	Average
11	1650.305	26.17	1.05	33.91	41.80	35.11	54.00	18.89	Average
12	1650.846	26.17	1.05	33.91	47.38	40.69	74.00	33.31	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor  
 2. The emission levels that are 20dB below the official limit are not reported.

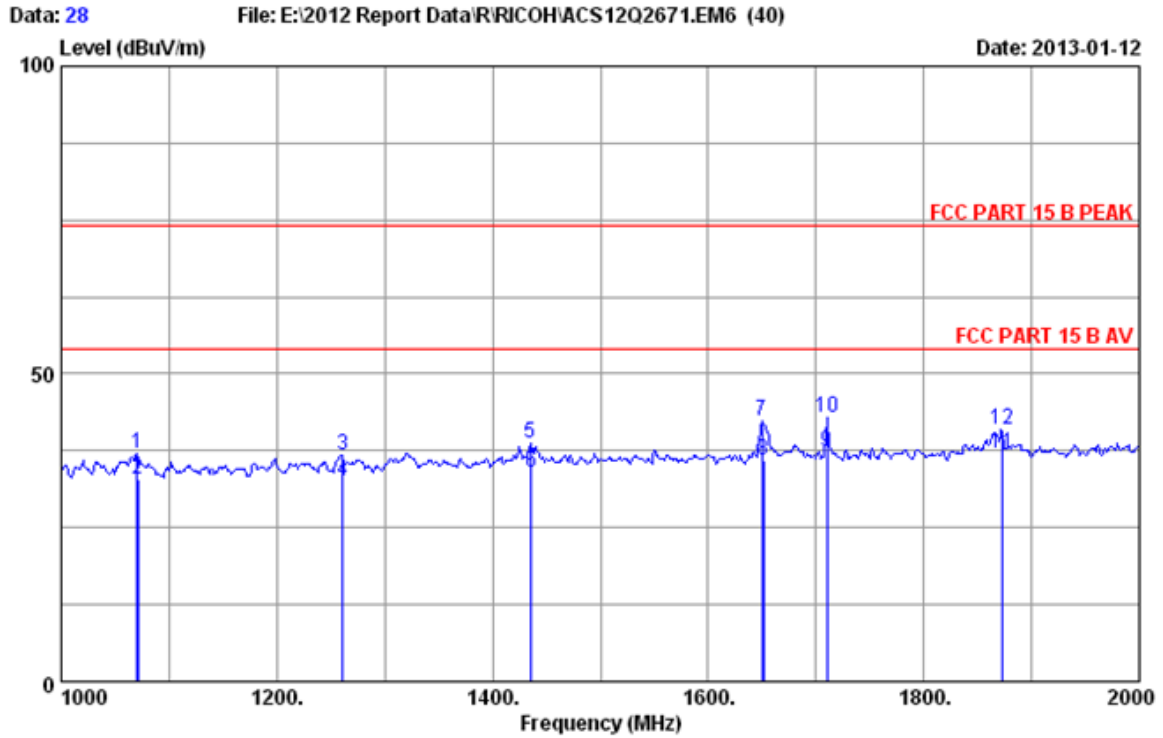


Site no. : 3m Chamber Data no. : 36  
 Dis. / Ant. : 3m 2011 3115 9607-4877 Ant. pol. : VERTICAL  
 Limit : FCC PART 15 B PEAK  
 Env. / Ins. : 24°C/56% Engineer : Even\_Deng  
 EUT : Printer  
 Power Rating : AC 120/60Hz  
 Test Mode : FAX RX  
 M/N:SP311SFNW

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dB)	Reading (dBUV)	Emission Level (dBUV/m)	Limits (dBUV/m)	Margin (dB)	Remark
1	1195.517	24.19	0.98	34.06	51.18	42.29	74.00	31.71	Peak
2	1196.355	24.19	0.98	34.06	42.61	33.72	54.00	20.28	Average
3	1400.258	25.19	1.01	34.02	43.04	35.22	54.00	18.78	Average
4	1400.347	25.19	1.01	34.02	49.44	41.62	74.00	32.38	Peak
5	1510.244	25.66	1.02	33.99	50.31	43.00	74.00	31.00	Peak
6	1511.027	25.66	1.02	33.99	42.25	34.94	54.00	19.06	Average
7	1598.045	25.98	1.04	33.94	49.58	42.66	74.00	31.34	Peak
8	1598.307	25.98	1.04	33.94	41.85	34.93	54.00	19.07	Average
9	1620.478	26.04	1.05	33.93	44.09	37.25	54.00	16.75	Average
10	1620.946	26.11	1.05	33.93	51.00	44.23	74.00	29.77	Peak
11	1635.816	26.11	1.05	33.92	50.05	43.29	74.00	30.71	Peak
12	1636.019	26.11	1.05	33.92	43.27	36.51	54.00	17.49	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor  
 2. The emission levels that are 20dB below the official limit are not reported.

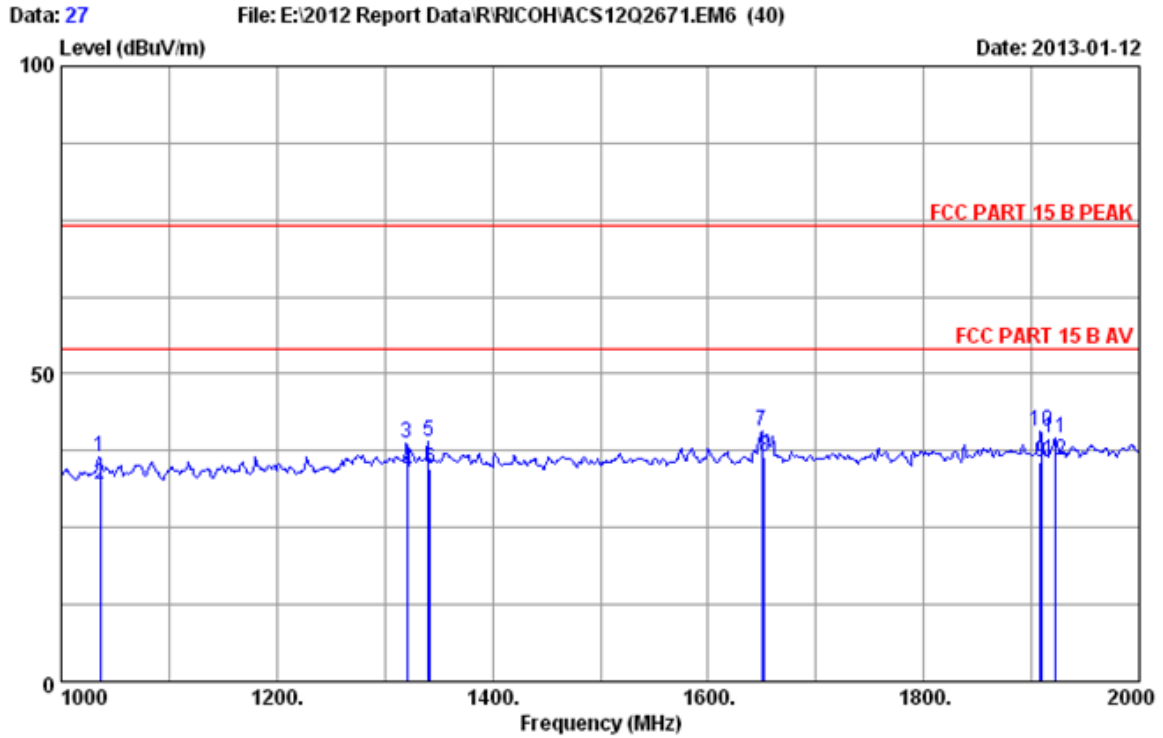




Site no. : 3m Chamber Data no. : 28  
 Dis. / Ant. : 3m 2011 3115 9607-4877 Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15 B PEAK  
 Env. / Ins. : 24°C/56% Engineer : Even\_Deng  
 EUT : Printer  
 Power Rating : AC 120/60Hz  
 Test Mode : Copy  
 M/N:SP311SFNW

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1070.121	23.53	0.96	34.09	46.56	36.96	74.00	37.04	Peak
2	1070.844	23.53	0.96	34.09	42.35	32.75	54.00	21.25	Average
3	1260.951	24.44	0.99	34.05	45.46	36.84	74.00	37.16	Peak
4	1261.354	24.44	0.99	34.05	41.15	32.53	54.00	21.47	Average
5	1435.495	25.35	1.01	34.01	46.28	38.63	74.00	35.37	Peak
6	1435.812	25.35	1.01	34.01	41.67	34.02	54.00	19.98	Average
7	1650.012	26.17	1.05	33.91	49.13	42.44	74.00	31.56	Peak
8	1651.559	26.17	1.05	33.91	42.69	36.00	54.00	18.00	Average
9	1710.456	26.42	1.07	33.87	43.64	37.26	54.00	16.74	Average
10	1710.741	26.42	1.07	33.87	49.22	42.84	74.00	31.16	Peak
11	1872.357	26.99	1.10	33.78	42.70	37.01	54.00	16.99	Average
12	1872.854	26.99	1.10	33.78	46.70	41.01	74.00	32.99	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 27  
 Dis. / Ant. : 3m 2011 3115 9607-4877 Ant. pol. : VERTICAL  
 Limit : FCC PART 15 B PEAK  
 Env. / Ins. : 24°C/56% Engineer : Even\_Deng  
 EUT : Printer  
 Power Rating : AC 120/60Hz  
 Test Mode : Copy  
 M/N:SP311SFNW

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1035.811	23.37	0.95	34.09	46.38	36.61	74.00	37.39	Peak
2	1035.844	23.37	0.95	34.09	41.85	32.08	54.00	21.92	Average
3	1320.944	24.77	1.00	34.04	46.90	38.63	74.00	35.37	Peak
4	1321.445	24.77	1.00	34.04	42.16	33.89	54.00	20.11	Average
5	1340.875	24.86	1.00	34.03	47.19	39.02	74.00	34.98	Peak
6	1341.946	24.86	1.00	34.03	42.68	34.51	54.00	19.49	Average
7	1650.152	26.17	1.05	33.91	47.25	40.56	74.00	33.44	Peak
8	1651.912	26.17	1.05	33.91	43.06	36.37	54.00	17.63	Average
9	1908.554	27.12	1.11	33.75	41.16	35.64	54.00	18.36	Average
10	1908.844	27.12	1.11	33.75	46.15	40.63	74.00	33.37	Peak
11	1922.545	27.18	1.11	33.75	44.98	39.52	74.00	34.48	Peak
12	1922.846	27.18	1.11	33.75	41.37	35.91	54.00	18.09	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor  
 2. The emission levels that are 20dB below the official limit are not reported.

## 5. DEVIATION TO TEST SPECIFICATIONS

[NONE]