

Prüfbericht-Nr.: <i>Test Report No.:</i>	17044733 001	Auftrags-Nr.: <i>Order No.:</i>	164024794	Seite 1 von 32 Page 1 of 32
Kunden-Referenz-Nr.: <i>Client Reference No.:</i>	N/A	Auftragsdatum: <i>Order date:</i>	13.11.2014	
Auftraggeber: <i>Client:</i>	Jiangmen Dascom Computer Peripherals Co., Ltd., No. 399, Jin Xing Road, Jiang Hai District, Jiangmen City, Guangdong Province 529040, P.R. China			
Prüfgegenstand: <i>Test item:</i>	Label & Barcode Printer			
Bezeichnung / Typ-Nr.: <i>Identification / Type No.:</i>	DL-210 (Tally/DASCOM)			
Auftrags-Inhalt: <i>Order content:</i>	FCC Certification			
Prüfgrundlage: <i>Test specification:</i>	FCC CFR47 Part 15: Subpart B Section 15.107 FCC CFR47 Part 15: Subpart B Section 15.109			
Wareneingangsdatum: <i>Date of receipt:</i>	06.11.2014			
Prüfmuster-Nr.: <i>Test sample No.:</i>	KAD141106007S01			
Prüfzeitraum: <i>Testing period:</i>	07.11.2014 - 12.11.2014			
Ort der Prüfung: <i>Place of testing:</i>	Dongguan EMTEK Co., Ltd. Shenzhen EMTEK Co., Ltd.			
Prüflaboratorium: <i>Testing laboratory:</i>	TÜV Rheinland (Shenzhen) Co., Ltd.			
Prüfergebnis*: <i>Test result*:</i>	Pass			
geprüft von / tested by:		kontrolliert von / reviewed by:		
05.12.2014	 Winnie Hou/Project Manager	05.12.2014	 Owen Tian/Technical Certifier	
Datum <i>Date</i>	Name / Stellung <i>Name / Position</i>	Unterschrift <i>Signature</i>	Datum <i>Date</i>	Name / Stellung <i>Name / Position</i>
				Unterschrift <i>Signature</i>
Sonstiges / Other:	FCC ID: Z7ODL2100			
Zustand des Prüfgegenstandes bei Anlieferung: <i>Condition of the test item at delivery:</i>	Prüfmuster vollständig und unbeschädigt <i>Test item complete and undamaged</i>			
* Legende:	1 = sehr gut P(ass) = entspricht o.g. Prüfgrundlage(n)	2 = gut F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	3 = befriedigend N/A = nicht anwendbar	4 = ausreichend N/T = nicht getestet
Legend:	1 = very good P(ass) = passed a.m. test specification(s)	2 = good F(ail) = failed a.m. test specification(s)	3 = satisfactory N/A = not applicable	4 = sufficient N/T = not tested
<p>Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. <i>This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i></p>				

Prüfbericht - Nr.: 17044733 001*Test Report No.***Seite 2 von 32***Page 2 of 32*

TEST SUMMARY

5.1.1 CONDUCTED EMISSION*RESULT: Pass***5.2.1 RADIATED EMISSIONS***RESULT: Pass*

Contents

1.	GENERAL REMARKS	4
1.1	COMPLEMENTARY MATERIALS	4
2.	TEST SITES	4
2.1	TEST FACILITIES	4
2.2	LIST OF TEST AND MEASUREMENT INSTRUMENTS.....	5
2.3	TRACEABILITY	5
2.4	CALIBRATION	5
2.5	MEASUREMENT UNCERTAINTY.....	6
2.6	LOCATION OF ORIGINAL DATA.....	6
2.7	STATUS OF FACILITY USED FOR TESTING.....	6
3.	GENERAL PRODUCT INFORMATION	7
3.1	PRODUCT FUNCTION AND INTENDED USE.....	7
3.2	RATINGS AND SYSTEM DETAILS	7
3.3	INDEPENDENT OPERATION MODES	7
3.4	NOISE GENERATING AND NOISE SUPPRESSING PARTS	7
3.5	SUBMITTED DOCUMENTS	7
4.	TEST SET-UP AND OPERATION MODES	8
4.1	PRINCIPLE OF CONFIGURATION SELECTION.....	8
4.2	TEST OPERATION AND TEST SOFTWARE	8
4.3	SPECIAL ACCESSORIES AND AUXILIARY EQUIPMENT	8
4.4	COUNTERMEASURES TO ACHIEVE EMC COMPLIANCE.....	8
4.5	TEST SETUP DIAGRAM	9
5.	TEST RESULTS EMISSION	10
5.1	EMISSION IN THE FREQUENCY RANGE UP TO 30 MHZ	10
5.1.1	<i>Conducted Emission</i>	<i>10</i>
5.2	EMISSION IN THE FREQUENCY RANGE ABOVE 30 MHZ.....	17
5.2.1	<i>Radiated emissions.....</i>	<i>17</i>
6.	PHOTOGRAPHS OF THE TEST SET-UP	30
7.	LIST OF TABLES	32
8.	LIST OF PHOTOGRAPHS	32

1. General Remarks

1.1 Complementary Materials

None.

2. Test Sites

2.1 Test Facilities

Dongguan EMTEK Co., Ltd.

(FCC Registration No.: 247565)

No. 281, Guantai Road, Nancheng District, Dongguan,
Guangdong, 523077, P.R. China

The tests at the test site have been conducted under the supervision of a TÜV engineer.

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

Kind of Equipment	Manufacturer	Type	S/N	Calibrated until
Conducted Emission				
Test Receiver	Rohde&Schwarz	ESCS30	100018	2015-05-16
L.I.S.N.	Rohde&Schwarz	ENV216	100017	2015-05-16
RF Switching Unit	CDS	RSU-M2	38401	2015-05-16
Radiated Emission				
Test Receiver	Rohde & Schwarz	ESCI	1166.5950.03	2015-05-16
Bilog Antenna	Schwarzbeck	VULB9163	000141	2015-05-16
Power Amplifier	CDS	RSU-M352	818	2015-05-16
Power Amplifier	HP	8447F	OPT H64	2015-05-16
Color Monitor	SUNSP0	SP-140A	N/A	2015-05-16
Single Line Filter	JIANLI	XL-3	N/A	2015-05-16
Single Phase Power Line Filter	JIANLI	DL-2X100B	N/A	2015-05-16
3 Phase Power Line Filter	JIANLI	DL-4X100B	N/A	2015-05-16
DC Power Filter	JIANLI	DL-2X50B	N/A	2015-05-16
Cable	Schwarzbeck	PLF-100	549489	2015-05-16
Cable	Rosenberger	CIL02	A0783566	2015-05-16
Cable	Rosenberger	RG 233/U	525178	2015-05-16

2.3 Traceability

All measurement equipment calibrations are traceable to NIST or where calibration is performed outside the United States, to equivalent nationally recognized standards organizations.

2.4 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basis using in house standards or comparisons.

2.5 Measurement Uncertainty

Table 2: Measurement Uncertainty

Parameter	Uncertainty
Conducted Emission	< ± 2.40 dB
Radiated Emission (30 – 1000MHz)	< ± 3.43 dB
Radiated Emission (1 – 2GHz)	< ± 4.46 dB

2.6 Location of Original Data

The original copies of all test data taken during actual testing were retained in the TÜV Rheinland (Shenzhen) file for certification follow-up purposes.

2.7 Status of Facility Used for Testing

Dongguan EMTEK Co., Ltd. test facility located at No. 281, Guantai Road, Nancheng District, Dongguan, Guangdong, 523077, P.R. China is listed on the US Federal Communications Commission list of facilities approved to perform measurements.

3. General Product Information

3.1 Product Function and Intended Use

The EUT is a label & barcode printer.
For more information refer to the manufacturer's Circuit diagram & Instruction Manual.

3.2 Ratings and System Details

Rated voltage:	DC 24V
Input current:	2A
Protection class:	III

3.3 Independent Operation Modes

The basic operation modes are:

- A. On
 - 1. USB port input
 - 2. Serial port input
 - 3. Parallel port input
- B. Stand by
- C. Off

3.4 Noise Generating and Noise Suppressing Parts

Refer to the Circuit Diagram.

3.5 Submitted Documents

- | | |
|--------------------|----------------------|
| - Bill of Material | - Circuit Diagram |
| - PCB Layout | - Instruction Manual |
| - Photo Document | - Rating Label |

4. Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

The equipment under test (EUT) was configured to measure its maximum power level. The test modes were adapted accordingly in reference to the instructions for use.

4.2 Test Operation and Test Software

Test operation refers to test setup in chapter 5. All testing were performed according to the procedures in ANSI C63.4: 2003.

4.3 Special Accessories and Auxiliary Equipment

The EUTs were tested with following cables:

Interface(s)/Port(s):	Max. cable length, shielding	Cable classification
AC Input port of adapter	2 cores, non-shielded port	AC Input Power Port
DC Input port of EUT	2 cores, non-shielded port	DC Input Power Port
USB port	4 cores, 3m, non-shielded port	Signal Port
Parallel port	25 cores, 3m, non-shielded port	Signal Port
Serial port	9 cores, 3m, non-shielded port	Signal Port

The EUTs were tested with following accessories:

Accessory	Manufacturer	M/N	Serial No.
AC/DC adapter			
PC	Lenovo	ThinkCentre M8400t	EA08228210
LCD Monitor	SAMSUNG	B2230H	YDG7HVGZ900053H
Mouse	DELL	M-UAR DEL7	XN966
Keyboard	DELL	L30U	ON277F

4.4 Countermeasures to achieve EMC Compliance

The test sample which has been tested contained the noise suppression parts as described in the Constructional Data Form or the Technical Construction File. No additional measures were employed to achieve compliance.

4.5 Test Setup Diagram

Diagram of Measurement Configuration for Radiation Test

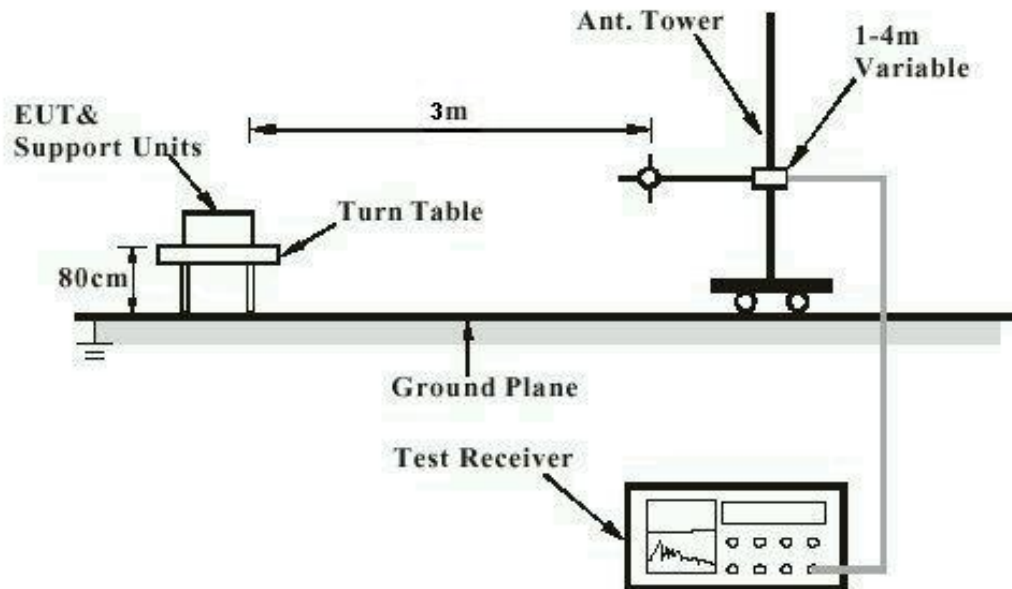
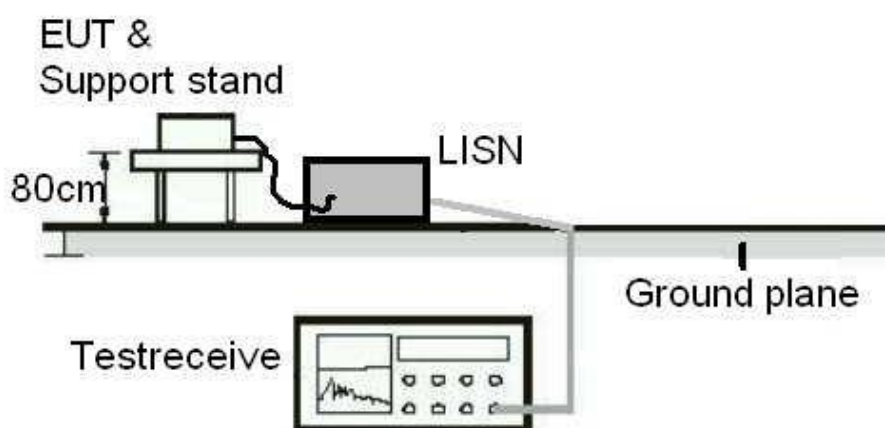


Diagram of Measurement Equipment Configuration for Conduction Measurement



5. Test Results EMISSION

5.1 Emission in the Frequency Range up to 30 MHz

5.1.1 Conducted Emission

RESULT:**Pass**

Date of testing	:	2014-11-08
Test standard	:	FCC Part15 Subpart B Section 15.107(a)
Basic standard	:	ANSI C63.4: 2003
Frequency range	:	0.15 – 30MHz
Limits	:	FCC Part15 Subpart B Section 15.107(a)
Kind of test site	:	Shield room

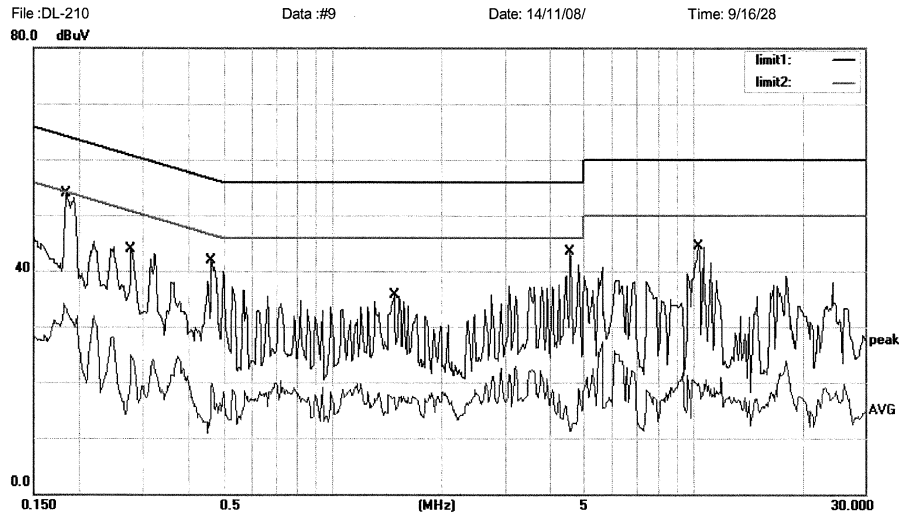
Test setup

Input voltage	:	AC 120V, 60Hz (via marketed AC/DC adapter)
Operation mode	:	A
Earthing	:	Not connected
Ambient temperature	:	24°C
Relative humidity	:	55%
Atmospheric pressure	:	101kPa

For details refer to following test plot.

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Conducted Emission Measurement


Site site #1 Phase: **L1** Temperature: 24
 Limit: (CE)FCC PART 15 class B_QP Power: AC 120V/60Hz Humidity: 55 %
 EUT: Label and Barcode Printer
 M/N: DL-210
 Mode: Printing
 Note: USB interface connection

No.	Mk.	Freq. MHz	Reading	Correct	Measure-	Limit		Over	Detector	Comment
			Level dBuV	Factor dB	ment dBuV	dBuV	dB			
1	*	0.1850	50.81	0.00	50.81	64.26	-13.45	QP		
2		0.1850	32.84	0.00	32.84	54.26	-21.42	AVG		
3		0.2800	40.99	0.00	40.99	60.82	-19.83	QP		
4		0.2800	24.82	0.00	24.82	50.82	-26.00	AVG		
5		0.4650	38.98	0.00	38.98	56.60	-17.62	QP		
6		0.4650	19.63	0.00	19.63	46.60	-26.97	AVG		
7		1.4800	32.64	0.00	32.64	56.00	-23.36	QP		
8		1.4800	17.32	0.00	17.32	46.00	-28.68	AVG		
9		4.5900	40.50	0.00	40.50	56.00	-15.50	QP		
10		4.5900	12.84	0.00	12.84	46.00	-33.16	AVG		
11		10.3250	41.50	0.00	41.50	60.00	-18.50	QP		
12		10.3250	20.57	0.00	20.57	50.00	-29.43	AVG		

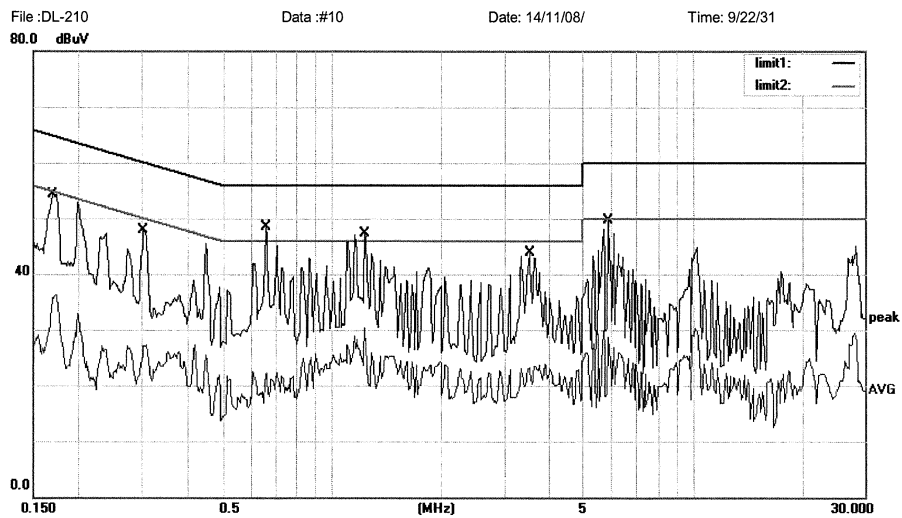
*:Maximum data x:Over limit !:over margin Comment: Factor build in receiver.

File :DL-210\Data :#9

Page: 1

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Conducted Emission Measurement


Site site #1 Phase: **N** Temperature: 24
 Limit: (CE)FCC PART 15 class B_QP Power: AC 120V/60Hz Humidity: 55 %
 EUT: Label and Barcode Printer
 M/N: DL-210
 Mode: Printing
 Note: USB interface connection

No.	Mk.	Freq. MHz	Reading	Correct	Measure-	Limit		Detector	Comment
			Level dBuV	Factor dB	ment dBuV	dBuV	dB		
1		0.1700	51.37	0.00	51.37	64.96	-13.59	QP	
2		0.1700	36.34	0.00	36.34	54.96	-18.62	AVG	
3		0.3050	44.88	0.00	44.88	60.11	-15.23	QP	
4		0.3050	27.21	0.00	27.21	50.11	-22.90	AVG	
5	*	0.6600	46.47	0.00	46.47	56.00	-9.53	QP	
6		0.6600	22.42	0.00	22.42	46.00	-23.58	AVG	
7		1.2400	44.25	0.00	44.25	56.00	-11.75	QP	
8		1.2400	30.28	0.00	30.28	46.00	-15.72	AVG	
9		3.5300	40.91	0.00	40.91	56.00	-15.09	QP	
10		3.5300	23.84	0.00	23.84	46.00	-22.16	AVG	
11		5.8900	46.70	0.00	46.70	60.00	-13.30	QP	
12		5.8900	29.84	0.00	29.84	50.00	-20.16	AVG	

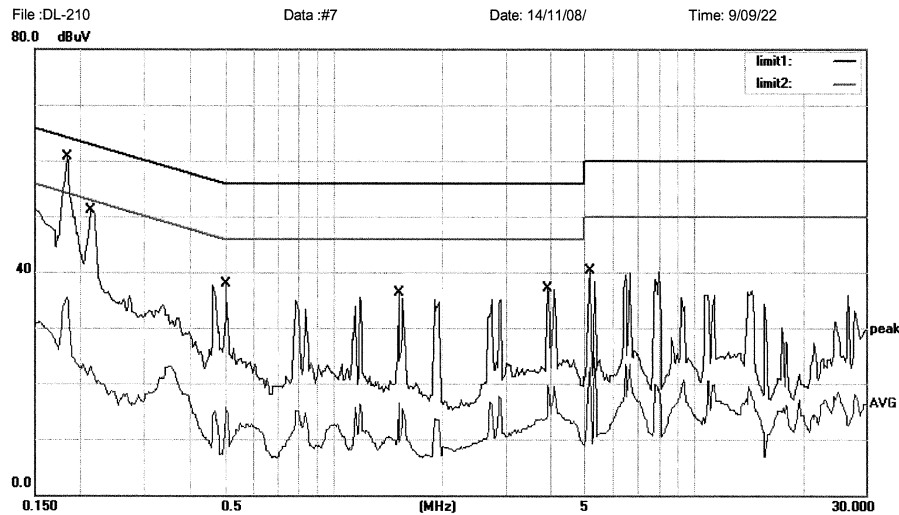
*:Maximum data x:Over limit !:over margin Comment: Factor build in receiver.

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Page: 1

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Conducted Emission Measurement


Site site #1 Phase: **L1** Temperature: 24
 Limit: (CE)FCC PART 15 class B_QP Power: AC 120V/60Hz Humidity: 55 %
 EUT: Label and Barcode Printer
 M/N: DL-210
 Mode: Printing
 Note: Parallel interface connection

No.	Mk.	Freq. MHz	Reading	Correct	Measure-	Limit		Detector	Comment
			Level dBuV	Factor dB	ment dBuV	dBuV	dB		
1	*	0.1850	55.75	0.00	55.75	64.26	-8.51	QP	
2		0.1850	35.59	0.00	35.59	54.26	-18.67	AVG	
3		0.2150	48.13	0.00	48.13	63.01	-14.88	QP	
4		0.2150	23.02	0.00	23.02	53.01	-29.99	AVG	
5		0.5050	35.99	0.00	35.99	56.00	-20.01	QP	
6		0.5050	15.71	0.00	15.71	46.00	-30.29	AVG	
7		1.5150	33.32	0.00	33.32	56.00	-22.68	QP	
8		1.5150	16.56	0.00	16.56	46.00	-29.44	AVG	
9		3.9600	34.15	0.00	34.15	56.00	-21.85	QP	
10		3.9600	19.62	0.00	19.62	46.00	-26.38	AVG	
11		5.1900	37.22	0.00	37.22	60.00	-22.78	QP	
12		5.1900	24.73	0.00	24.73	50.00	-25.27	AVG	

*:Maximum data x:Over limit !:over margin Comment: Factor build in receiver.

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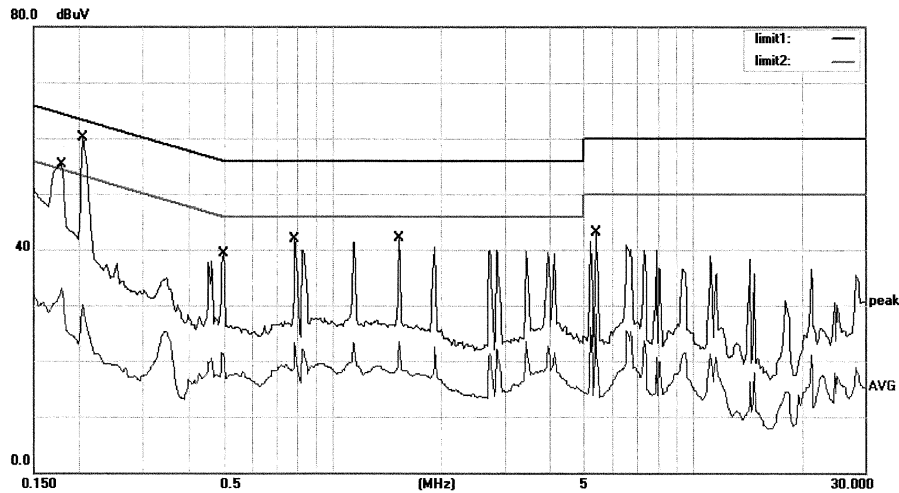
Page: 1

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Conducted Emission Measurement

File :DL-210 Data :#8 Date: 14/11/08/ Time: 9/11/55


 Site site #1 Phase: **N** Temperature: 24
 Limit: (CE)FCC PART 15 class B_QP Power: AC 120V/60Hz Humidity: 55 %
 EUT: Label and Barcode Printer
 M/N: DL-210
 Mode: Printing
 Note: Parallel interface connection

No. Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
	MHz	dBuV	dB	dBuV	dBuV	dB		
1	0.1800	51.36	0.00	51.36	64.49	-13.13	QP	
2	0.1800	33.08	0.00	33.08	54.49	-21.41	AVG	
3 *	0.2050	55.04	0.00	55.04	63.41	-8.37	QP	
4	0.2050	30.05	0.00	30.05	53.41	-23.36	AVG	
5	0.5000	36.38	0.00	36.38	56.00	-19.62	QP	
6	0.5000	21.45	0.00	21.45	46.00	-24.55	AVG	
7	0.7900	38.89	0.00	38.89	56.00	-17.11	QP	
8	0.7900	23.24	0.00	23.24	46.00	-22.76	AVG	
9	1.5300	39.01	0.00	39.01	56.00	-16.99	QP	
10	1.5300	23.59	0.00	23.59	46.00	-22.41	AVG	
11	5.4000	40.11	0.00	40.11	60.00	-19.89	QP	
12	5.4000	28.52	0.00	28.52	50.00	-21.48	AVG	

*:Maximum data x:Over limit !:over margin Comment: Factor build in receiver.

File :DL-210\Data :#8

Page: 1

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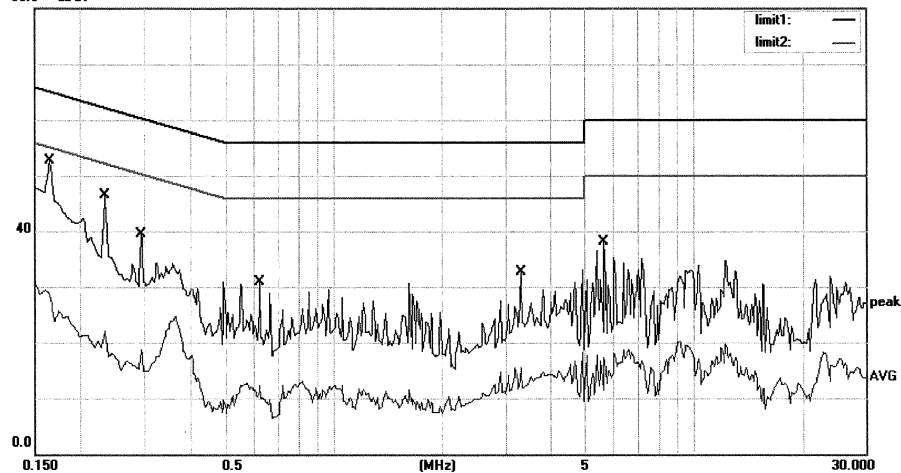
Conducted Emission Measurement

 File :DL-210
 80.0 dBuV

Data :#5

Date: 2014/11/07

Time: 19:05:38


 Site site #1
 Limit: (CE)FCC PART 15 class B_QP
 EUT: Label and Barcode Printer
 M/N: DL-210
 Mode: Printing
 Note: Serial interface connection

 Phase: **L1** Temperature: 24
 Power: AC 120V/60Hz Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV	dBuV	dB		
1	*	0.1650	49.74	0.00	49.74	65.21	-15.47	QP	
2		0.1650	29.55	0.00	29.55	55.21	-25.66	AVG	
3		0.2350	43.50	0.00	43.50	62.27	-18.77	QP	
4		0.2350	22.15	0.00	22.15	52.27	-30.12	AVG	
5		0.2950	39.46	0.00	39.46	60.38	-20.92	QP	
6		0.2950	18.67	0.00	18.67	50.38	-31.71	AVG	
7		0.6250	30.83	0.00	30.83	56.00	-25.17	QP	
8		0.6250	10.15	0.00	10.15	46.00	-35.85	AVG	
9		3.3200	32.69	0.00	32.69	56.00	-23.31	QP	
10		3.3200	15.45	0.00	15.45	46.00	-30.55	AVG	
11		5.6700	38.10	0.00	38.10	60.00	-21.90	QP	
12		5.6700	18.16	0.00	18.16	50.00	-31.84	AVG	

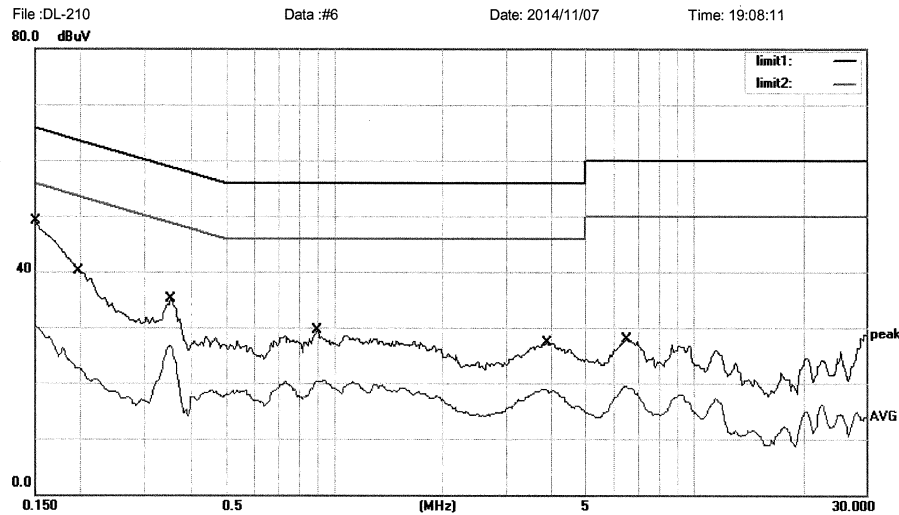
*:Maximum data x:Over limit !:over margin Comment: Factor build in receiver.

File :DL-210>Data :#5

Page: 1

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Conducted Emission Measurement


Site site #1 Phase: **N** Temperature: 24
 Limit: (CE)FCC PART 15 class B_QP Power: AC 120V/60Hz Humidity: 55 %
 EUT: Label and Barcode Printer
 M/N: DL-210
 Mode: Printing
 Note: Serial interface connection

No.	Mk.	Freq. MHz	Reading	Correct	Measure-	Limit		Detector	Comment
			Level dBuV	Factor dB	ment dBuV	dBuV	dB		
1	*	0.1500	49.13	0.00	49.13	66.00	-16.87	QP	
2		0.1500	30.40	0.00	30.40	56.00	-25.60	AVG	
3		0.2000	39.12	0.00	39.12	63.61	-24.49	QP	
4		0.2000	22.67	0.00	22.67	53.61	-30.94	AVG	
5		0.3550	35.13	0.00	35.13	58.84	-23.71	QP	
6		0.3550	26.77	0.00	26.77	48.84	-22.07	AVG	
7		0.9000	29.57	0.00	29.57	56.00	-26.43	QP	
8		0.9000	20.33	0.00	20.33	46.00	-25.67	AVG	
9		3.9200	27.36	0.00	27.36	56.00	-28.64	QP	
10		3.9200	18.91	0.00	18.91	46.00	-27.09	AVG	
11		6.5000	27.89	0.00	27.89	60.00	-32.11	QP	
12		6.5000	19.58	0.00	19.58	50.00	-30.42	AVG	

*:Maximum data x:Over limit !:over margin Comment: Factor build in receiver.

File :DL-210\Data :#6

Page: 1

5.2 Emission in the Frequency Range above 30 MHz

5.2.1 Radiated emissions

RESULT:**Pass**

Date of testing : 2014-11-12
Test standard : FCC Part15 Subpart B Section 15.109(a)
Basic standard : ANSI C63.4: 2003
Frequency range : 30 – 2000MHz *
Limits : FCC Part15 Subpart B Section 15.109(a)
Kind of test site : 3m Semi-Anechoic Chamber

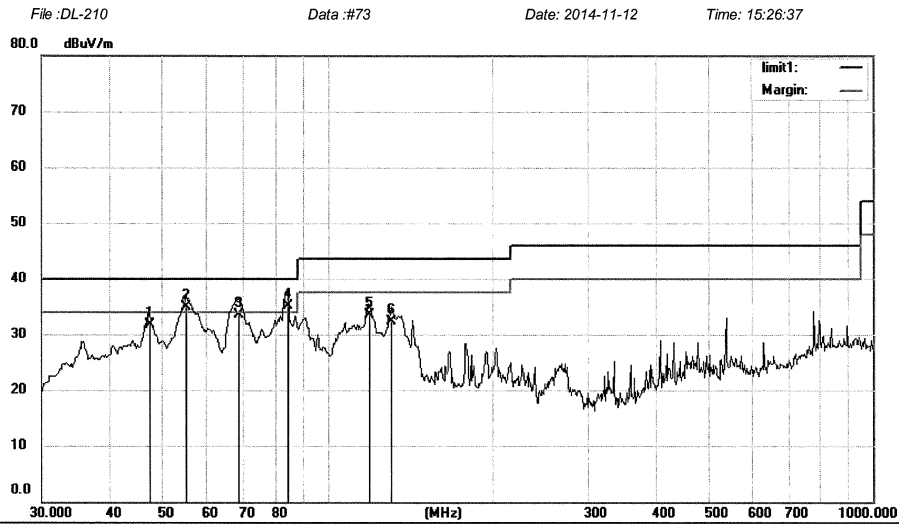
Test Setup

Input voltage : AC 120V, 60Hz (via marketed AC/DC adapter)
Operation mode : A
Earthing : Not Connected
Ambient temperature : 25°C
Relative humidity : 55%
Atmospheric pressure : 101kPa

*- The EUT's highest frequency generated and used is 480MHz, hence the highest scan frequency is up to 2GHz only.

For details refer to following test plot.

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Radiated Emission Measurement


Site Chamber #1 Polarization: **Horizontal** Temperature: 25
 Limit: (RE)FCC PART 15 class B 3m Power: AC 120V/60Hz Humidity: 55 %
 EUT: Label and Barcode Printer
 M/N: DL-210
 Mode: Printing
 Note: USB interface connection

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		47.4600	46.02	-14.38	31.64	40.00	-8.36	QP		
2	!	55.2200	52.39	-17.46	34.93	40.00	-5.07	QP		
3		68.8000	55.30	-21.80	33.50	40.00	-6.50	QP		
4	*	84.3200	57.00	-21.91	35.09	40.00	-4.91	QP		
5		119.2400	50.46	-17.01	33.45	43.50	-10.05	QP		
6		130.8800	48.66	-16.29	32.37	43.50	-11.13	QP		

*:Maximum data x:Over limit !:over margin

Operator: QIU

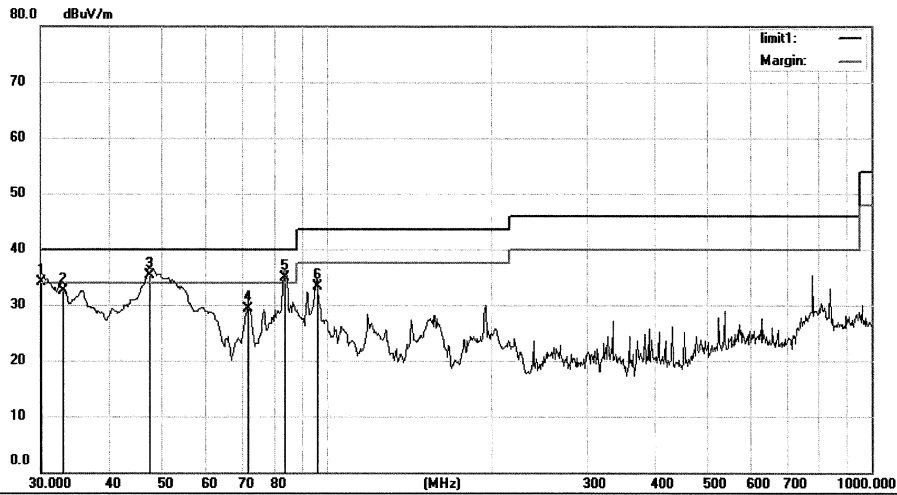
File :DL-210\Data :#73

Page: 1

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Radiated Emission Measurement

File :DL-210 Data :#74 Date: 2014-11-12 Time: 15:31:25


 Site Chamber #1 Polarization: **Vertical** Temperature: 25
 Limit: (RE)FCC PART 15 class B 3m Power: AC 120V/60Hz Humidity: 55 %
 EUT: Label and Barcode Printer
 M/N: DL-210
 Mode:Printing
 Note: USB interface connection

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1	!	30.0000	49.22	-15.15	34.07	40.00	-5.93	QP		
2		32.9100	46.88	-14.46	32.42	40.00	-7.58	QP		
3	*	47.4600	49.59	-14.38	35.21	40.00	-4.79	QP		
4		71.7100	51.66	-22.31	29.35	40.00	-10.65	QP		
5	!	83.8155	56.94	-21.97	34.97	40.00	-5.03	QP		
6		95.9600	53.13	-19.83	33.30	43.50	-10.20	QP		

*:Maximum data x:Over limit !:over margin

Operator: QIU

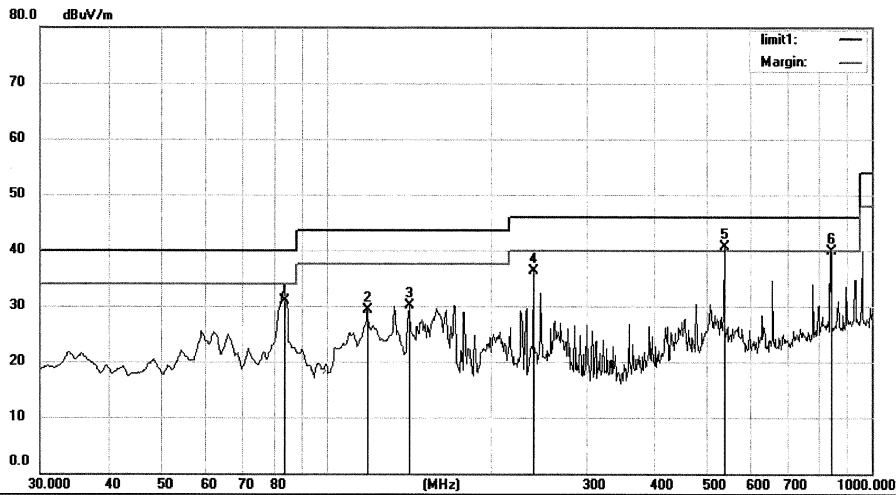
File :DL-210\Data :#74

Page: 1

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Radiated Emission Measurement

File :DL-210 Data :#65 Date: 2014-11-12 Time: 14:20:58



Site Chamber #1 Polarization: **Horizontal** Temperature: 25
 Limit: (RE)FCC PART 15 class B 3m Power: AC 120V/60Hz Humidity: 55 %
 EUT: Label and Barcode Printer
 M/N: DL-210
 Mode:Printing
 Note: Parallel interface connection

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		83.3500	53.02	-22.05	30.97	40.00	-9.03	QP		
2		119.2400	46.22	-17.01	29.21	43.50	-14.29	QP		
3		142.5200	47.28	-17.22	30.06	43.50	-13.44	QP		
4		239.5200	51.98	-15.68	36.30	46.00	-9.70	QP		
5	*	540.2200	50.03	-9.31	40.72	46.00	-5.28	QP		
6		839.9500	44.53	-4.56	39.97	46.00	-6.03	QP		

*:Maximum data x:Over limit !:over margin

Operator: QIU

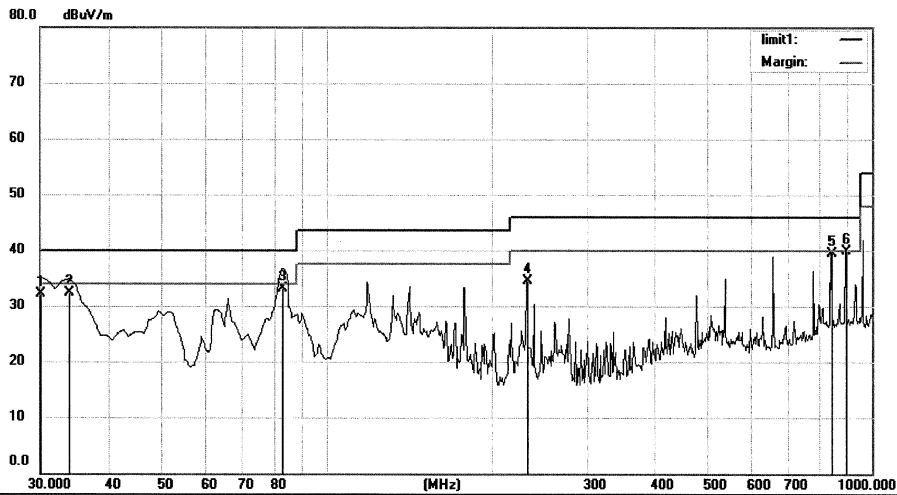
File :DL-210\Data :#65

Page: 1

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Radiated Emission Measurement

File :DL-210 Data :#66 Date: 2014-11-12 Time: 14:27:44



Site Chamber #1 Polarization: **Vertical** Temperature: 25
 Limit: (RE)FCC PART 15 class B 3m Power: AC 120V/60Hz Humidity: 55 %
 EUT: Label and Barcode Printer
 M/N: DL-210
 Mode: Printing
 Note: Parallel interface connection

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		30.0000	47.25	-15.15	32.10	40.00	-7.90	QP		
2		33.8800	46.70	-14.31	32.39	40.00	-7.61	QP		
3		82.6482	55.20	-22.13	33.07	40.00	-6.93	QP		
4		231.7600	50.49	-15.93	34.56	46.00	-11.44	QP		
5		839.9500	44.29	-4.69	39.60	46.00	-6.40	QP		
6	*	892.3300	43.81	-3.81	40.00	46.00	-6.00	QP		

*:Maximum data x:Over limit !:over margin

Operator: QIU

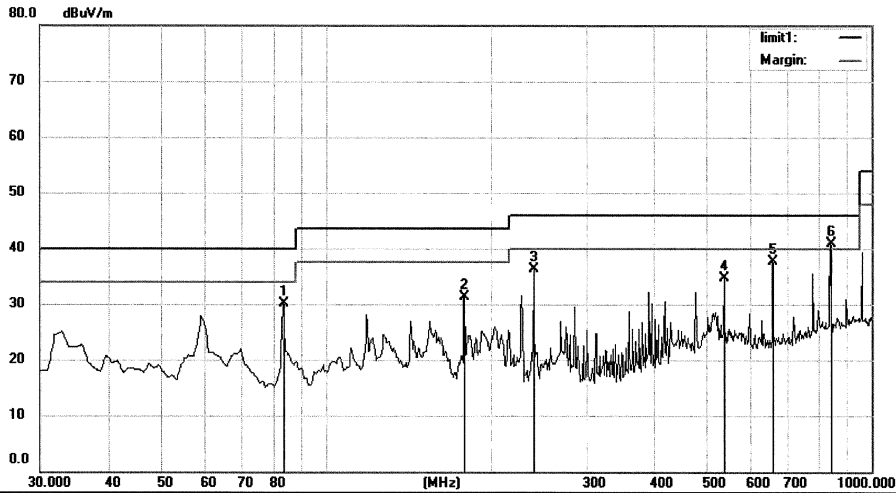
File :DL-210\Data :#66

Page: 1

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Radiated Emission Measurement

File :DL-210 Data :#68 Date: 2014-11-12 Time: 14:42:38



Site Chamber #1 Polarization: **Horizontal** Temperature: 25
 Limit: (RE)FCC PART 15 class B 3m Power: AC 120V/60Hz Humidity: 55 %
 EUT: Label and Barcode Printer
 M/N: DL-210
 Mode: Printing
 Note: Serial interface connection

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		83.3500	52.24	-22.05	30.19	40.00	-9.81	QP		
2		179.3800	50.13	-18.81	31.32	43.50	-12.18	QP		
3		239.5200	51.97	-15.68	36.29	46.00	-9.71	QP		
4		540.2200	44.00	-9.31	34.69	46.00	-11.31	QP		
5		660.5000	45.51	-7.80	37.71	46.00	-8.29	QP		
6	*	840.9200	45.41	-4.57	40.84	46.00	-5.16	QP		

*:Maximum data x:Over limit !:over margin

Operator: QIU

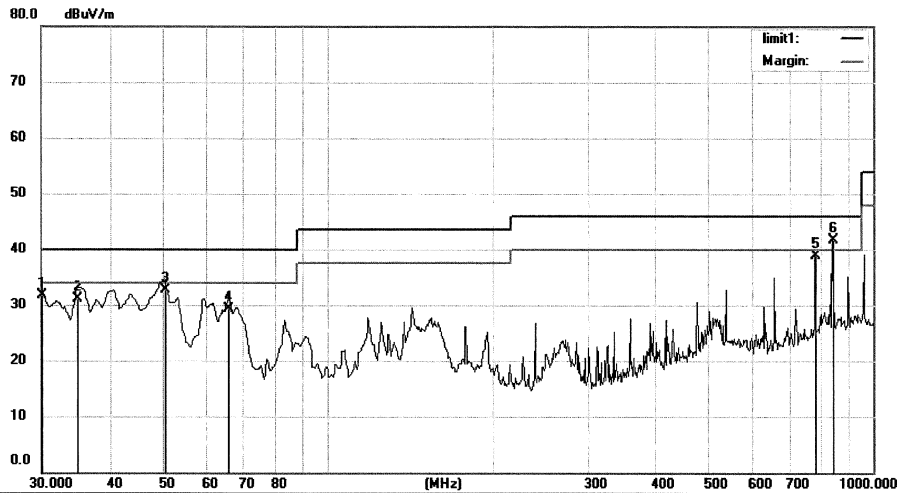
File :DL-210\Data :#68

Page: 1

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Radiated Emission Measurement

File :DL-210 Data :#67 Date :2014-11-12 Time :14:36:55



Site Chamber #1 Polarization: **Vertical** Temperature: 25
 Limit: (RE)FCC PART 15 class B 3m Power: AC 120V/60Hz Humidity: 55 %
 EUT: Label and Barcode Printer
 M/N: DL-210
 Mode:Printing
 Note: Serial interface connection

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree		
1		30.0000	46.85	-15.15	31.70	40.00	-8.30			QP	
2		34.8821	45.23	-14.18	31.05	40.00	-8.95			QP	
3		50.3700	48.28	-15.58	32.70	40.00	-7.30			QP	
4		65.8900	50.41	-21.07	29.34	40.00	-10.66			QP	
5		780.7800	44.64	-5.64	39.00	46.00	-7.00			QP	
6	*	839.9500	46.49	-4.69	41.80	46.00	-4.20			QP	

*:Maximum data x:Over limit !:over margin

Operator: QIU

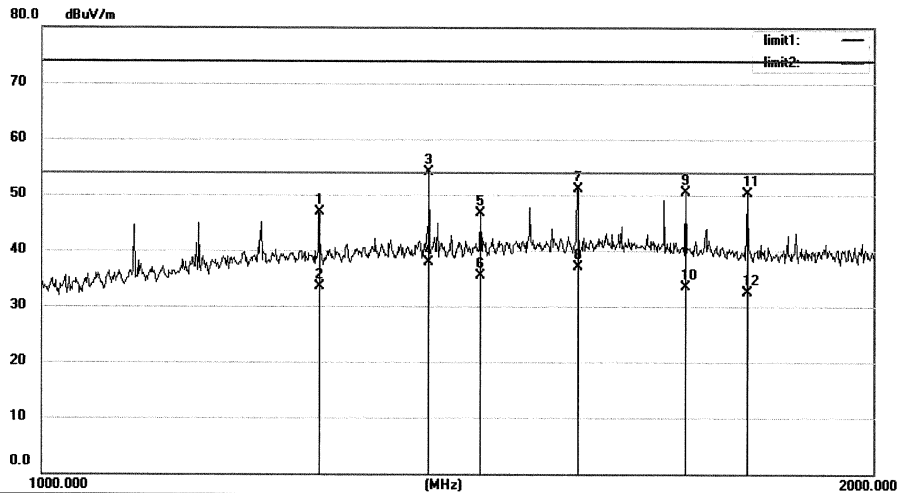
File :DL-210\Data :#67

Page: 1

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Radiated Emission Measurement

File :DL-210 Data :#79 Date: 14/11/08/ Time: 10/34/42



Site Chamber #1 Polarization: **Horizontal** Temperature: 25
 Limit: (RE)FCC PART 15 class B 3m Power: AC 120V/60Hz Humidity: 55 %
 EUT: Label and Barcode Printer
 M/N: DL-210
 Mode: Printing
 Note: USB interface connection

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		1259.630	58.61	-11.69	46.92	74.00	-27.08	peak		
2		1259.630	45.21	-11.69	33.52	54.00	-20.48	AVG		
3		1380.317	65.81	-11.67	54.14	74.00	-19.86	peak		
4	*	1380.317	49.65	-11.67	37.98	54.00	-16.02	AVG		
5		1439.931	58.34	-11.63	46.71	74.00	-27.29	peak		
6		1439.931	47.20	-11.63	35.57	54.00	-18.43	AVG		
7		1560.491	62.59	-11.55	51.04	74.00	-22.96	peak		
8		1560.491	48.56	-11.55	37.01	54.00	-16.99	AVG		
9		1711.190	62.92	-12.41	50.51	74.00	-23.49	peak		
10		1711.190	46.01	-12.41	33.60	54.00	-20.40	AVG		
11		1800.004	63.43	-13.11	50.32	74.00	-23.68	peak		
12		1800.004	45.66	-13.11	32.55	54.00	-21.45	AVG		

*:Maximum data x:Over limit !:over margin

Operator: QIU

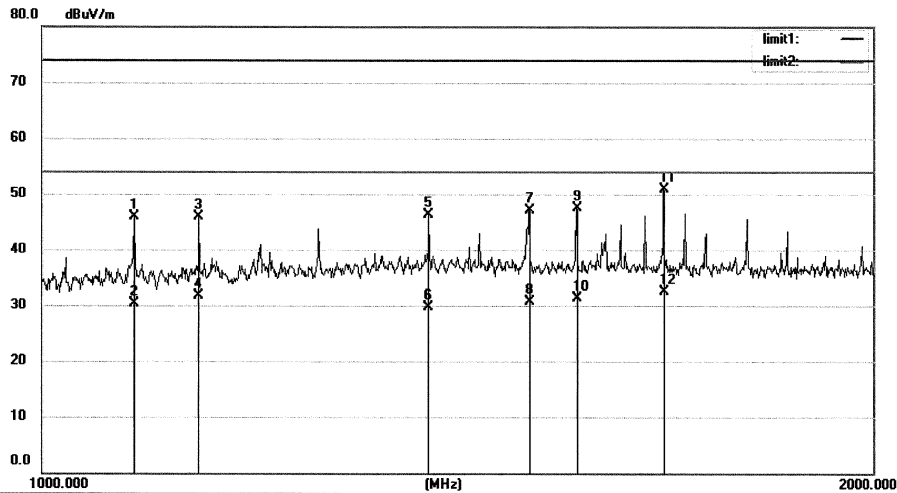
File :DL-210\Data :#79

Page: 1

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Radiated Emission Measurement

File :DL-210 Data :#78 Date: 14/11/08/ Time: 10/36/14



Site Chamber #1 Polarization: **Vertical** Temperature: 25
 Limit: (RE)FCC PART 15 class B 3m Power: AC 120V/60Hz Humidity: 55 %
 EUT: Label and Barcode Printer
 M/N: DL-210
 Mode: Printing
 Note: USB interface connection

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	
1		1079.976	61.30	-15.38	45.92	74.00	-28.08	peak		
2		1079.976	45.66	-15.38	30.28	54.00	-23.72	AVG		
3		1139.973	61.51	-15.54	45.97	74.00	-28.03	peak		
4		1139.973	47.20	-15.54	31.66	54.00	-22.34	AVG		
5		1380.317	61.97	-15.67	46.30	74.00	-27.70	peak		
6		1380.317	45.33	-15.67	29.66	54.00	-24.34	AVG		
7		1500.039	63.28	-16.09	47.19	74.00	-26.81	peak		
8		1500.039	46.87	-16.09	30.78	54.00	-23.22	AVG		
9		1560.491	63.90	-16.35	47.55	74.00	-26.45	peak		
10		1560.491	47.58	-16.35	31.23	54.00	-22.77	AVG		
11		1680.628	67.61	-16.76	50.85	74.00	-23.15	peak		
12	*	1680.628	49.33	-16.76	32.57	54.00	-21.43	AVG		

*:Maximum data x:Over limit !:over margin

Operator: QIU

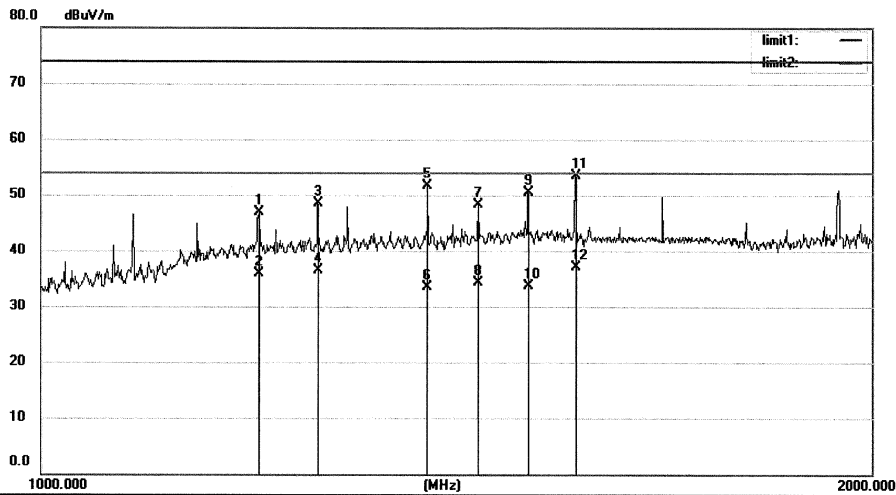
File :DL-210\Data :#78

Page: 1

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Radiated Emission Measurement

File :DL-210 Data :#82 Date: 14/11/08/ Time: 10/28/52



Site Chamber #1 Polarization: **Horizontal** Temperature: 25
 Limit: (RE)FCC PART 15 class B 3m Power: AC 120V/60Hz Humidity: 55 %
 EUT: Label and Barcode Printer
 M/N: DL-210
 Mode: Printing
 Note: Parallel interface connection

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		1199.971	58.60	-11.71	46.89	74.00	-27.11	peak		
2		1199.971	47.65	-11.71	35.94	54.00	-18.06	AVG		
3		1259.630	60.24	-11.69	48.55	74.00	-25.45	peak		
4		1259.630	48.16	-11.69	36.47	54.00	-17.53	AVG		
5		1380.317	63.38	-11.67	51.71	74.00	-22.29	peak		
6		1380.317	45.10	-11.67	33.43	54.00	-20.57	AVG		
7		1439.931	60.03	-11.63	48.40	74.00	-25.60	peak		
8		1439.931	46.03	-11.63	34.40	54.00	-19.60	AVG		
9		1500.039	62.16	-11.59	50.57	74.00	-23.43	peak		
10		1500.039	45.37	-11.59	33.78	54.00	-20.22	AVG		
11		1560.491	65.06	-11.55	53.51	74.00	-20.49	peak		
12	*	1560.491	48.59	-11.55	37.04	54.00	-16.96	AVG		

*:Maximum data x:Over limit !:over margin

Operator: QIU

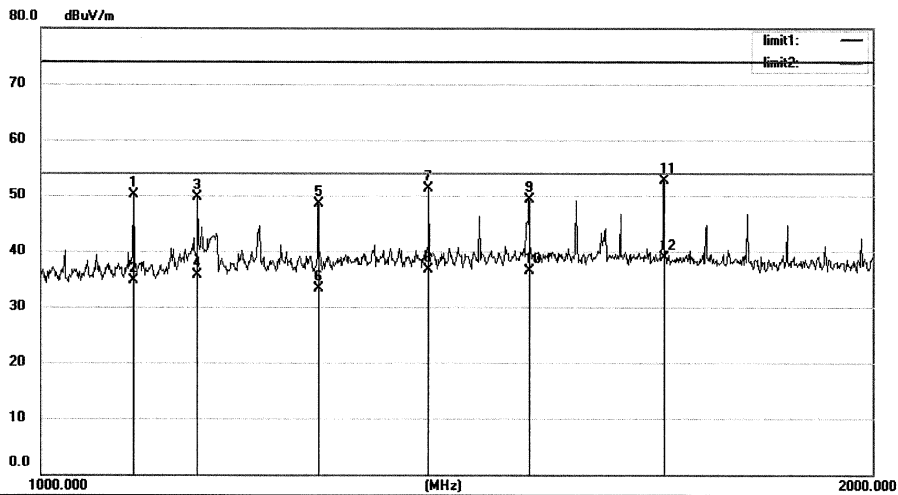
File :DL-210\Data :#82

Page: 1

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Radiated Emission Measurement

File :DL-210 Data :#83 Date: 14/11/08/ Time: 10/26/26



Site Chamber #1 Polarization: **Vertical** Temperature: 25
 Limit: (RE)FCC PART 15 class B 3m Power: AC 120V/60Hz Humidity: 55 %
 EUT: Label and Barcode Printer
 M/N: DL-210
 Mode:Printing
 Note: Parallel interface connection

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		1079.976	65.52	-15.38	50.14	74.00	-23.86	peak			
2		1079.976	50.00	-15.38	34.62	54.00	-19.38	AVG			
3		1139.973	65.27	-15.54	49.73	74.00	-24.27	peak			
4		1139.973	51.20	-15.54	35.66	54.00	-18.34	AVG			
5		1259.630	64.11	-15.69	48.42	74.00	-25.58	peak			
6		1259.630	49.00	-15.69	33.31	54.00	-20.69	AVG			
7		1380.317	66.89	-15.67	51.22	74.00	-22.78	peak			
8		1380.317	52.33	-15.67	36.66	54.00	-17.34	AVG			
9		1500.039	65.35	-16.09	49.26	74.00	-24.74	peak			
10		1500.039	52.60	-16.09	36.51	54.00	-17.49	AVG			
11		1680.628	69.41	-16.76	52.65	74.00	-21.35	peak			
12	*	1680.628	55.57	-16.76	38.81	54.00	-15.19	AVG			

*:Maximum data x:Over limit !:over margin

Operator: QIU

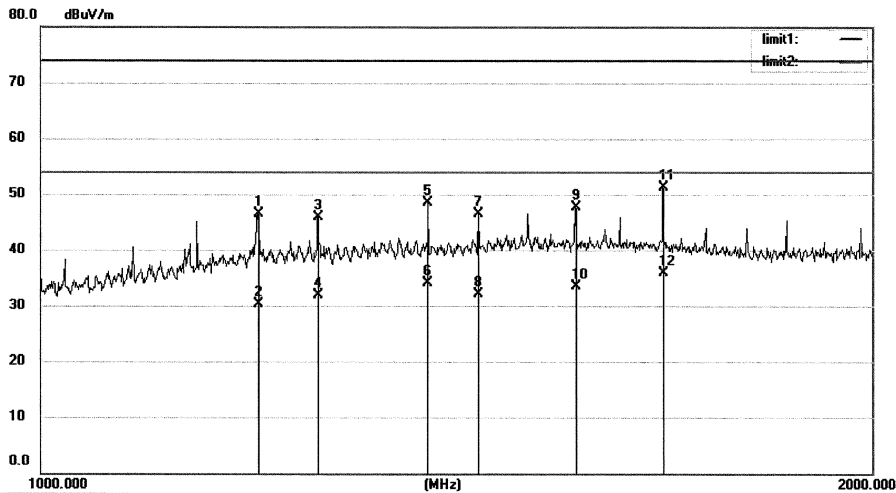
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Page: 1

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Radiated Emission Measurement

File :DL-210 Data :#80 Date: 14/11/08/ Time: 10/15/57



Site Chamber #1 Polarization: **Horizontal** Temperature: 25
 Limit: (RE)FCC PART 15 class B 3m Power: AC 120V/60Hz Humidity: 55 %
 EUT: Label and Barcode Printer
 M/N: DL-210
 Mode:Printing
 Note: Serial interface connection

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		1199.140	58.22	-11.73	46.49	74.00	-27.51	peak		
2		1199.140	42.08	-11.73	30.35	54.00	-23.65	AVG		
3		1259.630	57.53	-11.69	45.84	74.00	-28.16	peak		
4		1259.630	43.54	-11.69	31.85	54.00	-22.15	AVG		
5		1380.317	60.09	-11.67	48.42	74.00	-25.58	peak		
6		1380.317	45.68	-11.67	34.01	54.00	-19.99	AVG		
7		1439.931	58.09	-11.63	46.46	74.00	-27.54	peak		
8		1439.931	43.71	-11.63	32.08	54.00	-21.92	AVG		
9		1560.491	59.17	-11.55	47.62	74.00	-26.38	peak		
10		1560.491	45.00	-11.55	33.45	54.00	-20.55	AVG		
11		1680.628	63.55	-12.16	51.39	74.00	-22.61	peak		
12	*	1680.628	48.10	-12.16	35.94	54.00	-18.06	AVG		

*:Maximum data x:Over limit !:over margin

Operator: QIU

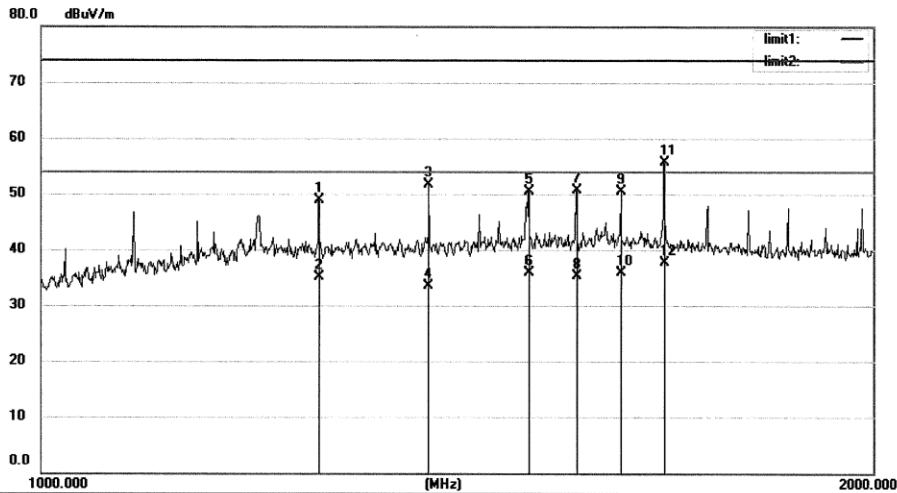
File :DL-210\Data :#80

Page: 1

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Radiated Emission Measurement

File :DL-210 Data :#81 Date: 14/11/08/ Time: 10/14/08



Site Chamber #1 Polarization: **Vertical** Temperature: 25
 Limit: (RE)FCC PART 15 class B 3m Power: AC 120V/60Hz Humidity: 55 %
 EUT: Label and Barcode Printer
 M/N: DL-210
 Mode: Printing
 Note: Serial interface connection

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		1259.630	60.55	-11.69	48.86	74.00	-25.14	peak		
2		1259.630	46.87	-11.69	35.18	54.00	-18.82	AVG		
3		1380.317	63.29	-11.67	51.62	74.00	-22.38	peak		
4		1380.317	45.16	-11.67	33.49	54.00	-20.51	AVG		
5		1500.039	62.09	-11.59	50.50	74.00	-23.50	peak		
6		1500.039	47.55	-11.59	35.96	54.00	-18.04	AVG		
7		1560.491	62.17	-11.55	50.62	74.00	-23.38	peak		
8		1560.491	46.87	-11.55	35.32	54.00	-18.68	AVG		
9		1620.007	62.14	-11.69	50.45	74.00	-23.55	peak		
10		1620.007	47.51	-11.69	35.82	54.00	-18.18	AVG		
11		1680.628	67.90	-12.16	55.74	74.00	-18.26	peak		
12	*	1680.628	49.95	-12.16	37.79	54.00	-16.21	AVG		

*:Maximum data x:Over limit !:over margin

Operator: QIU

File :DL-210\Data :#81

Page: 1

6. Photographs of the Test Set-Up

Photograph 1: Set-up for Conducted Emissions



Photograph 2: Set-up for Radiated Emissions of below 1GHz



Photograph 3: Set-up for Radiated Emissions of 1 - 2GHz



7. List of Tables

Table 1: List of Test and Measurement Equipment	5
Table 2: Measurement Uncertainty	6

8. List of Photographs

Photograph 1: Set-up for Conducted Emissions	30
Photograph 2: Set-up for Radiated Emissions of below 1GHz	30
Photograph 3: Set-up for Radiated Emissions of 1 - 2GHz.....	31