

FCC PART 15C TEST REPORT FOR CERTIFICATION

On Behalf of

Jiangmen Dascom Computer Peripherals Co., Ltd.

Thermal desktop label printer

Model Number: DL-820

Additional Model: DL-820a, DL-820b, DL-830

FCC ID: Z7ODL8300

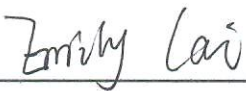
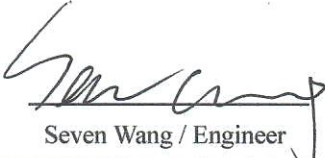
Applicant :	Jiangmen Dascom Computer Peripherals Co., Ltd.
Address:	No.399, Jin Xing Road, Jiang Hai District, Jiangmen City,
	Guang Dong Province, P.R.China
Prepared By:	EST Technology Co., Ltd.
	Chilingxiang, Qishantou, Santun, Houjie, Dongguan, Guangdong, China
	Tel: 86-769-83081888-808

Report Number:	ESTE-R2109272-1
Date of Test:	Mar. 23~Jul. 13, 2022
Date of Report:	Jul. 16, 2022

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EST Technology Co., Ltd.

Applicant:	Jiangmen Dascom Computer Peripherals Co., Ltd.		
Address:	No.399, Jin Xing Road, Jiang Hai District, Jiangmen City, Guang Dong Province, P.R.China		
Manufacturer:	Jiangmen Dascom Computer Peripherals Co., Ltd.		
Address:	No.399, Jin Xing Road, Jiang Hai District, Jiangmen City, Guang Dong Province, P.R.China		
Factory:	Jiangmen Dascom Computer Peripherals Co., Ltd.		
Address:	No.399, Jin Xing Road, Jiang Hai District, Jiangmen City, Guang Dong Province, P.R.China		
E.U.T:	Thermal desktop label printer		
Model Number:	DL-820		
Additional Model:	DL-820a, DL-820b, DL-830 (They are identical except model name)		
Power Supply:	AC 100-240V, 50/60Hz		
Trade Name:	Tally/DASCOM, DASCOM, PRINTEK		
Date of Receipt:	Mar. 23, 2022	Date of Test:	Mar. 23~Jul. 13, 2022
Test Specification:	FCC Part 15 Subpart C (15.247) ANSI C63.10:2013 FCC KDB 558074 D01 15.247 Meas Guidance v05r02		
Test Result:	The device described above is tested by EST Technology Co., Ltd. The measurement results were contained in this test report and EST Technology Co., Ltd. was assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT to be technically compliance with the FCC Rules and Regulations Part 15 Subpart C requirements. This report applies to above tested sample only and shall not be reproduced in part without written approval of EST Technology Co., Ltd.		
Prepared by:	Reviewed by:	Date: Jul. 16, 2022	
 Emily Cai / Assistant	 Seven Wang / Engineer	 Iceman Hu / Manager	
Other Aspects: This report base on the previous report with report number: ESTE-R2109272, On the basis of the original product changed the main board,affects only EMC testing,The RF module has not changed, so just re-tested spurious emissions (30MHz-1GHz) and conducted emissions.			
Abbreviations: OK/P=passed fail/F=failed n.a/N=not applicable E.U.T=equipment under tested			
This test report is based on a single evaluation of one sample of above mentioned products ,It is not permitted to be duplicated in extracts without written approval of EST Technology Co., Ltd.			

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

Product Name	:	Thermal desktop label printer
Model Number	:	DL-820
Software Version	:	N/A
Hardware Version	:	N/A
Operation frequency	:	2412MHz~2462MHz 2422MHz~2452MHz
Number of channel	:	IEEE 802.11b/g/n HT20: 11 Channels IEEE 802.11n HT40: 7 Channels
Modulation Type	:	DSSS OFDM
Sample Type	:	Prototype production

Note: For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.

1.2. Antenna Information

Ant No.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	N/A	N/A	External antenna	N/A	2

Note: This information is provided by the applicant

1.3. Information of RF Cable

Cable Loss(dB)	Provided by
1.0	Jiangmen Dascom Computer Peripherals Co., Ltd.
Note: 1. The customer declared the loss value of the RF Cable, and the test results of this report only apply to the sample as received. 2. This information is provided by the applicant.	

2. SUMMARY OF TEST

2.1. Summary of test result

No.	Description of Test Item	FCC Standard Section	Results
1	6dB Bandwidth	15.247(a)(2)	N/A
2	Maximum Peak Output Power	15.247(b)(3)	N/A
3	Power Spectral Density	15.247(e)	N/A
4	Conducted Band Edge	15.247(d)	N/A
5	Conducted Spurious Emissions	15.247(d)	N/A
6	Radiated Spurious Emissions and Band Edge	15.205 15.209 15.247(d)	PASS
7	AC Power Line Conducted Emissions	15.207	PASS
8	Antenna Requirement	15.203	PASS

Note:“N/A” denotes test is not applicable in this test report.

2.2. Test Facilities

EMC Lab : Certificated by CNAS, CHINA
Registration No.: L5288
This Certificate is valid until: November 12, 2023

Certificated by FCC, USA
Designation Number: CN1215
This Certificate is valid until: January 31, 2024

Certificated by A2LA, USA
Registration No.: 4366.01
This Certificate is valid until: January 31, 2024

Certificated by Industry Canada
CAB identifier No.: CN0035
This Certificate is valid until: January 31, 2024

Certificated by VCCI, Japan
Registration No.: C-14103; T-20073; R-13663;
R-20103; G-20097
Date of registration: Apr. 20, 2020
This Certificate is valid until: Apr. 19, 2023

Certificated by TUV Rheinland, Germany
Registration No.: UA 50413872 0001
Date of registration: July 31, 2018

Certificated by Intertek
Registration No.: 2011-RTL-L2-64
Date of registration: November 08, 2018

Name of Firm : EST Technology Co., Ltd.

Site Location : Chilingxiang, Qishantou, Santun, Houjie, Dongguan,
Guangdong, China

2.3. Measurement uncertainty

Test Item	Uncertainty
Uncertainty for Conduction emission test	$\pm 3.48\text{dB}$
Uncertainty for spurious emissions test (Below 30MHz)	$\pm 1.62\text{ dB}$
Uncertainty for spurious emissions test (30MHz-1GHz)	$\pm 4.60\text{ dB(Polarize: H)}$
	$\pm 4.68\text{ dB(Polarize: V)}$
Uncertainty for spurious emissions test (1GHz to 25GHz)	$\pm 4.96\text{dB}$
Uncertainty for radio frequency	7×10^{-8}
Uncertainty for conducted RF Power	1.08dB
Uncertainty for Power density test	0.26dB

Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.

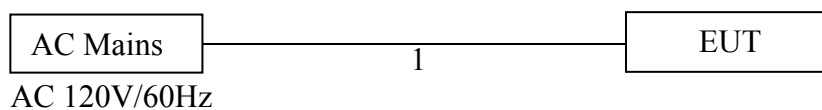
2.4. Assistant equipment used for test

Item	Equipment	Brand	Model Name/Type No.	FCC ID	Series No.
-	-	-	-	-	-

Item	Shielded Type	Ferrite Core	Length	Note
1	NO	NO	1.0m	AC Cable

2.5. Block Diagram

For radiated emissions test: EUT was placed on a turn table, which is 0.8 meter high above ground. EUT was beset into 2.4G WIFI test mode by software before test.



(EUT: Thermal desktop label printer)

2.6. Test Mode

The test mode was selected for the final test as listed below.

Test Item	Mode	Date Rate	Test Channel
Radiated Spurious Emissions(Below 1GHz)	IEEE 802.11b	1Mbps	Low/Middle/High
	IEEE 802.11g	6Mbps	Low/Middle/High
	IEEE 802.11n HT20	MCS0	Low/Middle/High
	IEEE 802.11n HT40	MCS0	Low/Middle/High
AC Power Line Conducted Emissions	IEEE 802.11b	1Mbps	Low/Middle/High
	IEEE 802.11g	6Mbps	Low/Middle/High
	IEEE 802.11n HT20	MCS0	Low/Middle/High
	IEEE 802.11n HT40	MCS0	Low/Middle/High

Note:

1. In radiated measurement,the EUT had been pre-scan on the positioned of each 3 axis(X,Y,Z), the worst case was found when positioned on **X-plane**.

2.7. Power Setting of Test Software

Software Name	EspRFTestTool_v2.8_Manual		
Frequency(MHz)	2412	2437	2462
IEEE 802.11b Setting	Default	Default	Default
IEEE 802.11g Setting	Default	Default	Default
IEEE 802.11n HT20 Setting	Default	Default	Default
Frequency(MHz)	2422	2437	2452
IEEE 802.11n HT40 Setting	Default	Default	Default

Note: This information is provided by the applicant.

3. RADIATED SPURIOUS EMISSIONS AND BAND EDGE

3.1. Limit

All the emissions appearing within 15.205 restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.

15.205 Restricted frequency band

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
¹ 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	(²)

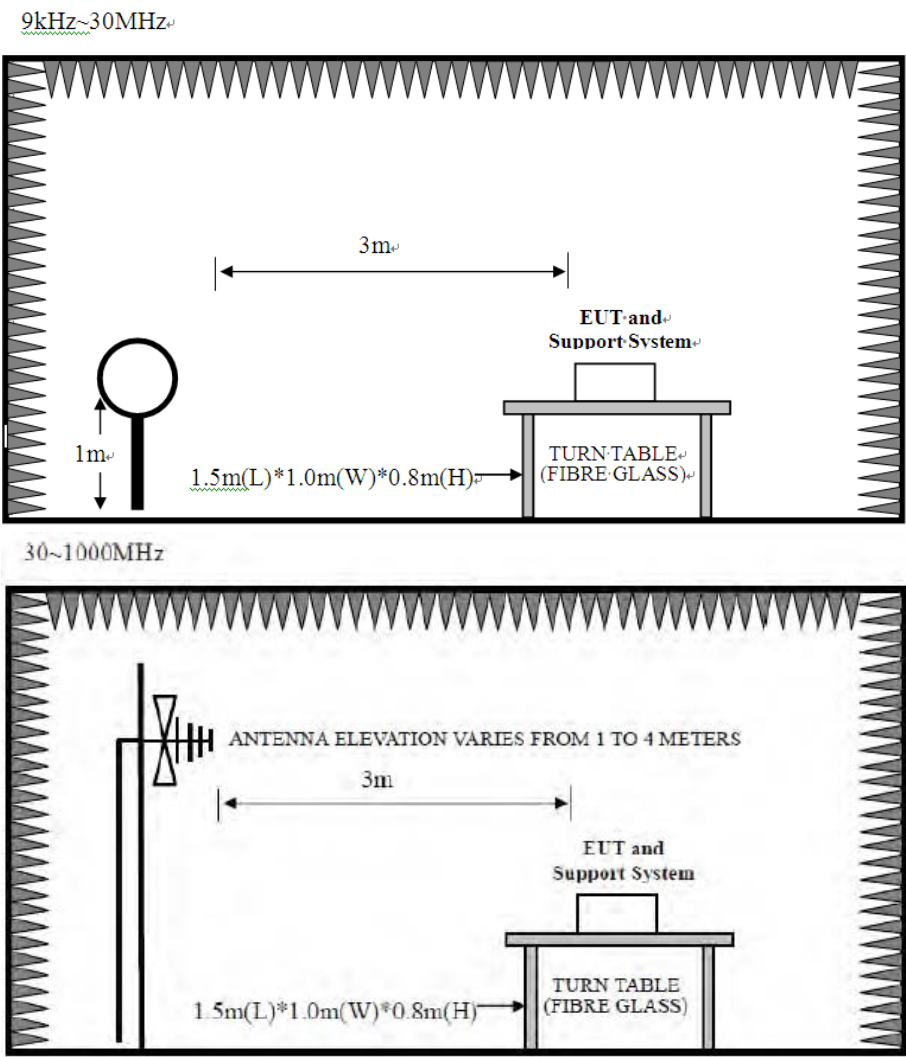
15.209 Limit

Frequency (MHz)	Field Strength(μ V/m)	Distance(m)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Note:

- (1) Emission level $\text{dB}\mu\text{V} = 20 \log \text{Emission level } \mu\text{V/m}$.
- (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.

3.2. Test setup



3.3. Spectrum Analyzer Setting

For 9KHz-150KHz

Spectrum Parameters	Setting
RBW	300Hz(for Peak&AVG)/CISPR 200Hz(for QP)
VBW	300Hz(for Peak&AVG)/CISPR 200Hz(for QP)
Start frequency	9KHz
Stop frequency	150KHz
Sweep Time	Auto
Detector	PEAK/QP/AVG
Trace Mode	Max Hold

For 150KHz-30MHz

Spectrum Parameters	Setting
RBW	9KHz
VBW	9KHz
Start frequency	150KHz
Stop frequency	30MHz
Sweep Time	Auto
Detector	QP
Trace Mode	Max Hold

For 30MHz-1GHz

Spectrum Parameters	Setting
RBW	120KHz
VBW	300KHz
Start frequency	30MHz
Stop frequency	1GHz
Sweep Time	Auto
Detector	QP
Trace Mode	Max Hold

3.4. Test Procedure

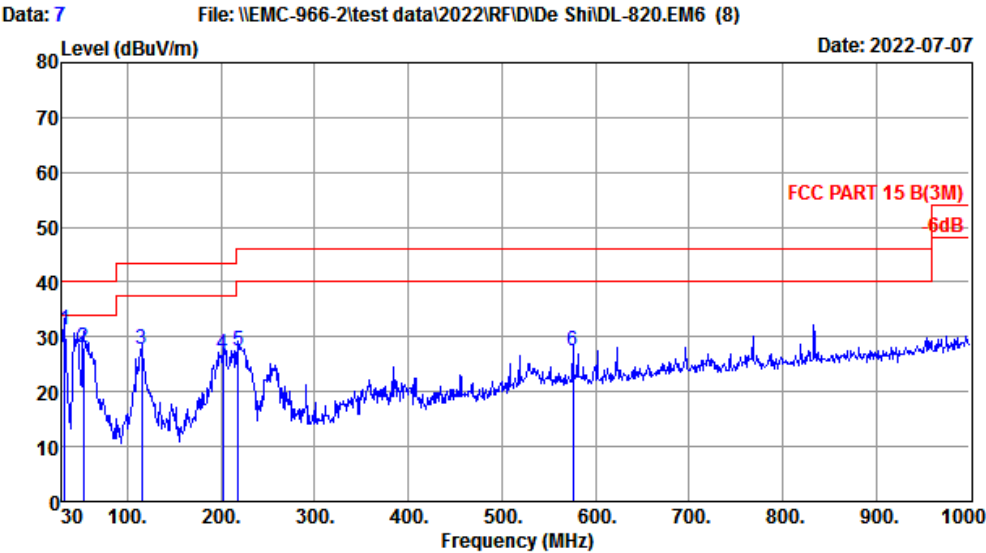
- EUT was placed on a turn table, which is 0.8 meter high above ground for below 1GHz test.
- EUT is set 3 meters away from the receiving antenna, which is mounted on a antenna tower.
- Set the EUT transmit continuously with maximum output power.
- The turn table can rotate 360 degrees to determine the position of the maximum emission level.
- The antenna can be moved up and down between 1 meter and 4 meters to find out the maximum emission level. Both horizontal and vertical polarization of the antenna are set on test.
- Spectrum analyzer setting parameters in accordance with section 3.3.
- Repeat above procedures until all channels were measured.
- Record the results in the test report.

3.5. Test Result

Radiated Emissions Below 1GHz

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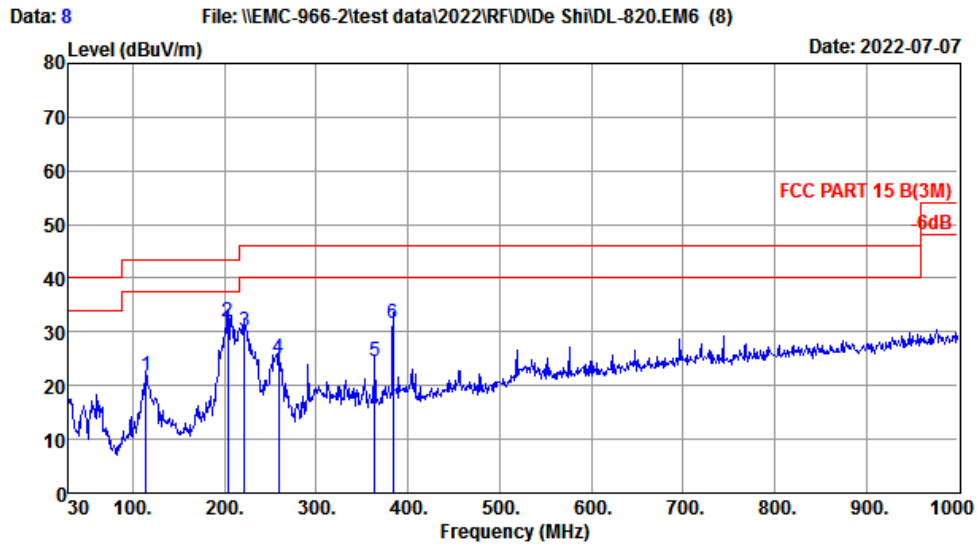
Site no. : 2# 966 chamber Data no. : 7
Dis. / Ant. : 3m 47018 Ant. pol. : VERTICAL
Limit : FCC PART 15 B(3M)
Env. / Ins. : Temp:22.5℃;Humi:53.1%;Press:101.52kPa
Engineer : Zero
EUT : Thermal desktop label printer
Power : AC 120V/60Hz
M/N : DL-820
Test Mode : TX Mode

	Freq. (MHz)	ANT Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	32.9100	16.35	0.22	14.84	31.41	40.00	8.59	QP
2	53.2800	7.30	0.31	20.42	28.03	40.00	11.97	QP
3	115.3600	11.60	0.82	15.30	27.72	43.50	15.78	QP
4	201.6900	8.68	1.15	17.08	26.91	43.50	16.59	QP
5	218.1800	9.62	1.23	16.51	27.36	46.00	18.64	QP
6	576.1100	19.96	2.49	4.94	27.39	46.00	18.61	QP

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

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Site no. : 2# 966 chamber Data no. : 8
Dis. / Ant. : 3m 47018 Ant. pol. : HORIZONTAL
Limit : FCC PART 15 B(3M)
Env. / Ins. : Temp:22.5℃;Humi:53.1%;Press:101.52kPa
Engineer : Zero
EUT : Thermal desktop label printer
Power : AC 120V/60Hz
M/N : DL-820
Test Mode : TX Mode

Freq. (MHz)	ANT Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1 114.3900	11.43	0.83	9.44	21.70	43.50	21.80	QP
2 203.6300	8.76	1.15	22.07	31.98	43.50	11.52	QP
3 222.0600	10.06	1.29	18.86	30.21	46.00	15.79	QP
4 258.9200	13.86	1.47	9.91	25.24	46.00	20.76	QP
5 363.6800	15.67	1.89	7.00	24.56	46.00	21.44	QP
6 384.0500	15.98	1.84	13.84	31.66	46.00	14.34	QP

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

Note:

1. The amplitude of 9KHz to 30MHz spurious emission that is attenuated by more than 20dB below the permissible limit has no need to be reported.
2. All channels had been pre-test, only the worst case was reported.

4. AC POWER LINE CONDUCTED EMISSIONS

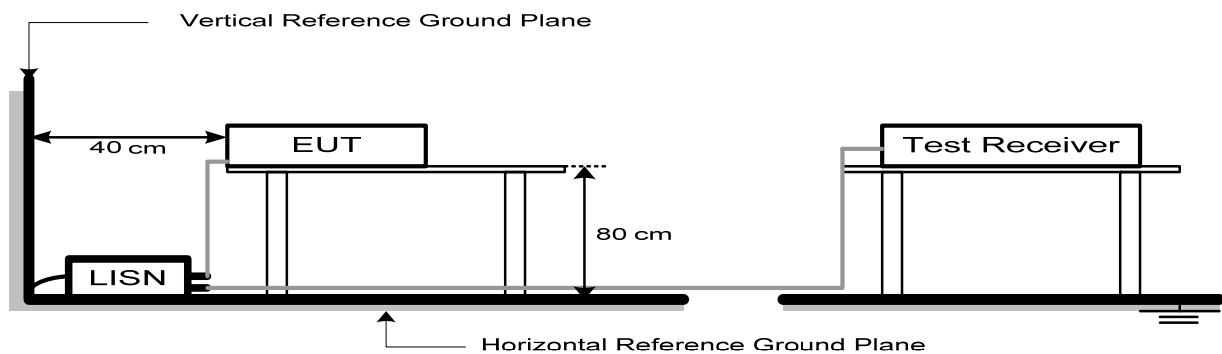
4.1. Limit

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

Note:

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

4.2. Test Setup



4.3. Spectrum Analyzer Setting

Spectrum Parameters	Setting
RBW	9KHz
VBW	9KHz
Start frequency	150KHz
Stop frequency	30MHz
Sweep Time	Auto
Detector	QP/AVG
Trace Mode	Max Hold

4.4. Test Procedure

- a. The EUT was placed on a non-metallic table, 80cm above the ground plane.
- b. The EUT Power connected to the power mains through a line impedance stabilization network.
- c. Provides a 50 ohm coupling impedance for the EUT (Please refer the block diagram of the test setup and photographs).
- d. Set the EUT transmit continuously with maximum output power.
- e. Spectrum analyzer setting parameters in accordance with section 4.3.
- f. The AC line are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.10: 2013 on Conducted Emission Test.
- g. Record the results in the test report.

4.5. Test Result

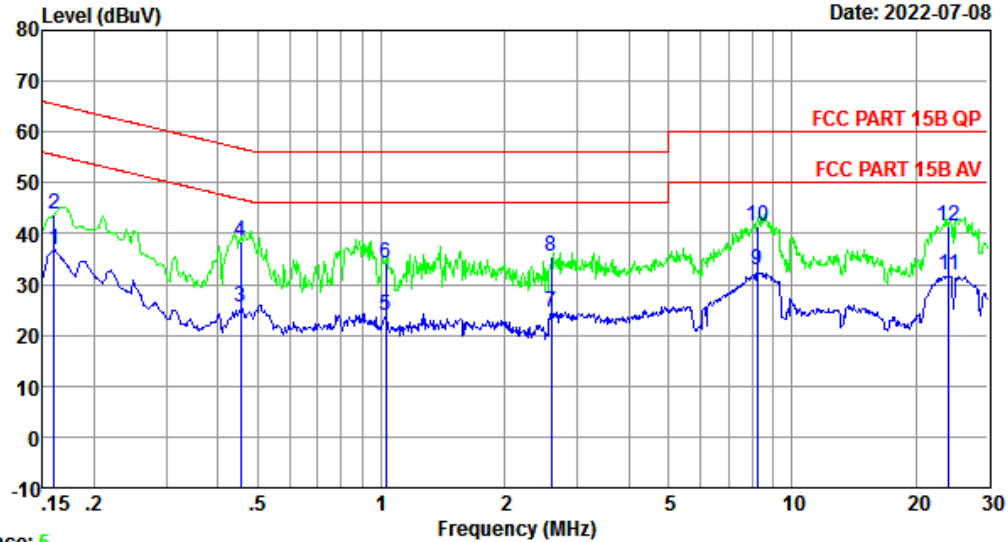
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Data: 6

File: \\EMC-CE-2\Test Data\2022\RFID\De Shi\De Shi\EM6 (12)

Date: 2022-07-08



Trace: 5

Site no : 2#CE Shield Room Data no. : 6
Env. / Ins. : Temp:25.6℃ Humi:65% Press:101.80kPa LINE Phase : NEUTRAL
Limit : FCC PART 15B QP
Engineer : XJF
EUT : Thermal desktop label printer
Power : AC 120V/60Hz
M/N : DL-820
Test Mode : TX Mode

	Freq. (MHz)	LISN Factor (db)	Cable Loss (db)	Reading dBuV	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.160	9.64	9.69	17.62	36.95	55.47	18.52	Average
2	0.160	9.64	9.69	24.41	43.74	65.47	21.73	QP
3	0.454	9.75	9.92	5.77	25.44	46.80	21.36	Average
4	0.454	9.75	9.92	18.66	38.33	56.80	18.47	QP
5	1.027	9.82	9.94	4.26	24.02	46.00	21.98	Average
6	1.027	9.82	9.94	14.55	34.31	56.00	21.69	QP
7	2.594	9.96	9.97	4.72	24.65	46.00	21.35	Average
8	2.594	9.96	9.97	15.66	35.59	56.00	20.41	QP
9	8.235	9.67	10.05	13.21	32.93	50.00	17.07	Average
10	8.235	9.67	10.05	21.87	41.59	60.00	18.41	QP
11	24.142	10.01	10.17	11.50	31.68	50.00	18.32	Average
12	24.142	10.01	10.17	21.42	41.60	60.00	18.40	QP

Remarks: 1. Emission Level= LISN Factor + Cable Loss + Reading.
2. Margin= Limit - Emission Level.
3. 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.

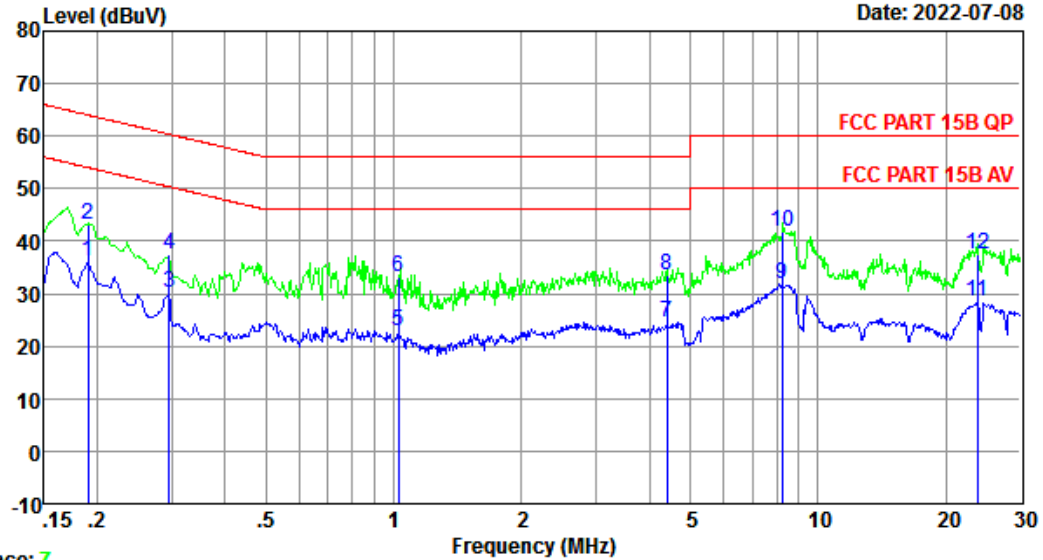
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Date: 2022-07-08



Trace: 7

Site no : 2#CE Shield Room Data no. : 8
Env. / Ins. : Temp:25.6℃ Humi:65% Press:101.80kPa LINE Phase : LINE
Limit : FCC PART 15B QP
Engineer : XJF
EUT : Thermal desktop label printer
Power : AC 120V/60Hz
M/N : DL-820
Test Mode : TX Mode

	Freq. (MHz)	LISN Factor (db)	Cable Loss (db)	Reading dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.190	9.69	9.77	16.80	36.26	54.02	17.76	Average
2	0.190	9.69	9.77	23.71	43.17	64.02	20.85	QP
3	0.296	9.81	9.92	10.32	30.05	50.37	20.32	Average
4	0.296	9.81	9.92	17.66	37.39	60.37	22.98	QP
5	1.027	9.94	9.94	3.12	23.00	46.00	23.00	Average
6	1.027	9.94	9.94	13.41	33.29	56.00	22.71	QP
7	4.407	9.91	10.00	4.61	24.52	46.00	21.48	Average
8	4.407	9.91	10.00	13.55	33.46	56.00	22.54	QP
9	8.235	10.11	10.05	11.54	31.70	50.00	18.30	Average
10	8.235	10.11	10.05	21.51	41.67	60.00	18.33	QP
11	23.762	10.01	10.17	8.37	28.55	50.00	21.45	Average
12	23.762	10.01	10.17	17.31	37.49	60.00	22.51	QP

Remarks: 1. Emission Level= LISN Factor + Cable Loss + Reading.
2. Margin= Limit - Emission Level.
3. 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.

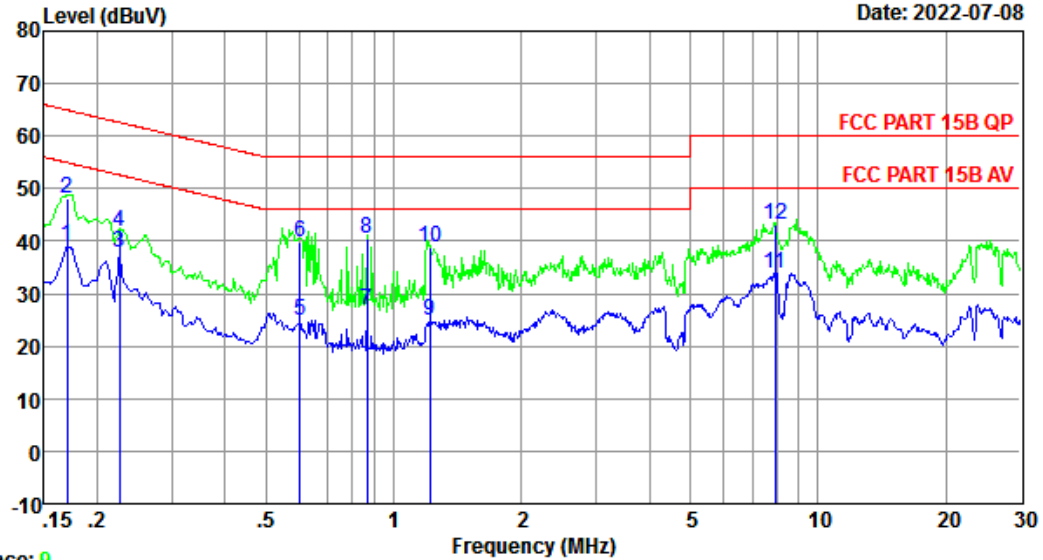
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Data: 10

File: \\EMC-CE-2\\Test Data\\2022\\RFID\\De Shi\\De Shi.EM6 (12)

Date: 2022-07-08



Trace: 9

Site no : 2#CE Shield Room Data no. : 10
Env. / Ins. : Temp:25.6℃ Humi:65% Press:101.80kPa LINE Phase : LINE
Limit : FCC PART 15B QP
Engineer : XJF
EUT : Thermal desktop label printer
Power : AC 240V/60Hz
M/N : DL-820
Test Mode : TX Mode

	Freq. (MHz)	LISN Factor (db)	Cable Loss (db)	Reading dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.170	9.68	9.69	19.69	39.06	54.94	15.88	Average
2	0.170	9.68	9.69	28.61	47.98	64.94	16.96	QP
3	0.226	9.70	9.84	18.36	37.90	52.61	14.71	Average
4	0.226	9.70	9.84	22.31	41.85	62.61	20.76	QP
5	0.601	9.83	9.92	5.25	25.00	46.00	21.00	Average
6	0.601	9.83	9.92	20.12	39.87	56.00	16.13	QP
7	0.866	9.86	9.93	6.91	26.70	46.00	19.30	Average
8	0.866	9.86	9.93	20.56	40.35	56.00	15.65	QP
9	1.216	9.92	9.94	4.90	24.76	46.00	21.24	Average
10	1.216	9.92	9.94	18.89	38.75	56.00	17.25	QP
11	7.935	10.20	10.04	13.73	33.97	50.00	16.03	Average
12	7.935	10.20	10.04	22.77	43.01	60.00	16.99	QP

Remarks: 1. Emission Level= LISN Factor + Cable Loss + Reading.
2. Margin= Limit - Emission Level.
3. 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.

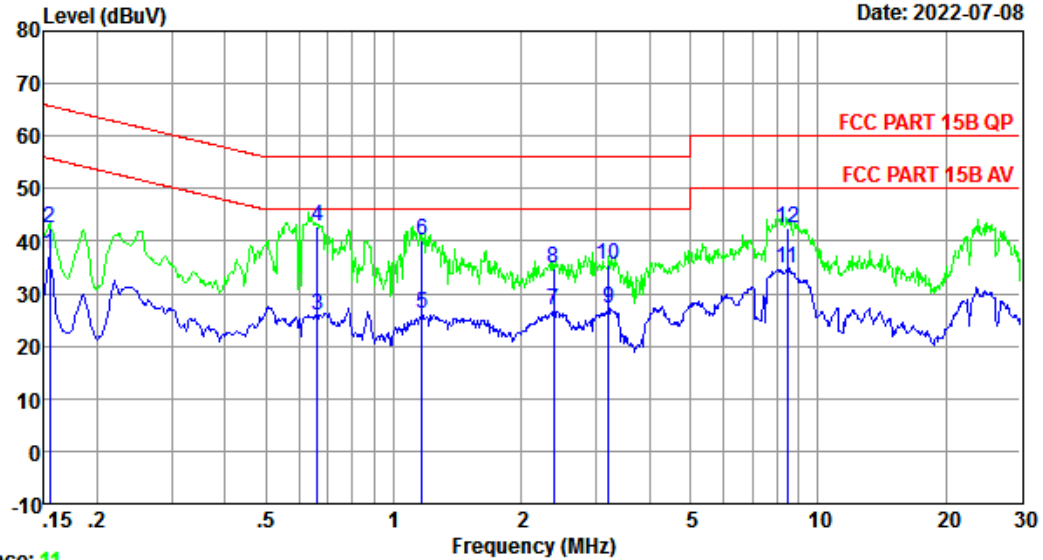
EST Technology

Chilingxiang, Qishantou, Santun,
Houjie, Dongguan, Guangdong, China
Tel: +86-769-83081888
Fax: +86-769-83081878

Data: 12

File: \\EMC-CE-2\Test Data\2022\RFID\De Shi\De Shi.EM6 (12)

Date: 2022-07-08



Trace: 11

Site no : 2#CE Shield Room Data no. : 12
 Env. / Ins. : Temp:25.6℃ Humi:65% Press:101.80kPa LINE Phase : NEUTRAL
 Limit : FCC PART 15B QP
 Engineer : XJF
 EUT : Thermal desktop label printer
 Power : AC 240V/60Hz
 M/N : DL-820
 Test Mode : TX Mode

	Freq. (MHz)	LISN Factor (db)	Cable Loss (db)	Reading dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.155	9.64	9.69	18.29	37.62	55.74	18.12	Average
2	0.155	9.64	9.69	23.21	42.54	65.74	23.20	QP
3	0.661	9.71	9.92	6.30	25.93	46.00	20.07	Average
4	0.661	9.71	9.92	23.21	42.84	56.00	13.16	QP
5	1.166	9.82	9.94	6.42	26.18	46.00	19.82	Average
6	1.166	9.82	9.94	20.52	40.28	56.00	15.72	QP
7	2.384	9.95	9.96	6.99	26.90	46.00	19.10	Average
8	2.384	9.95	9.96	14.76	34.67	56.00	21.33	QP
9	3.207	9.99	9.98	7.21	27.18	46.00	18.82	Average
10	3.207	9.99	9.98	15.66	35.63	56.00	20.37	QP
11	8.456	9.70	10.06	15.18	34.94	50.00	15.06	Average
12	8.456	9.70	10.06	22.86	42.62	60.00	17.38	QP

Remarks: 1. Emission Level= LISN Factor + Cable Loss + Reading.
 2. Margin= Limit - Emission Level.
 3. 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.

5. ANTENNA REQUIREMENTS

5.1. Limit

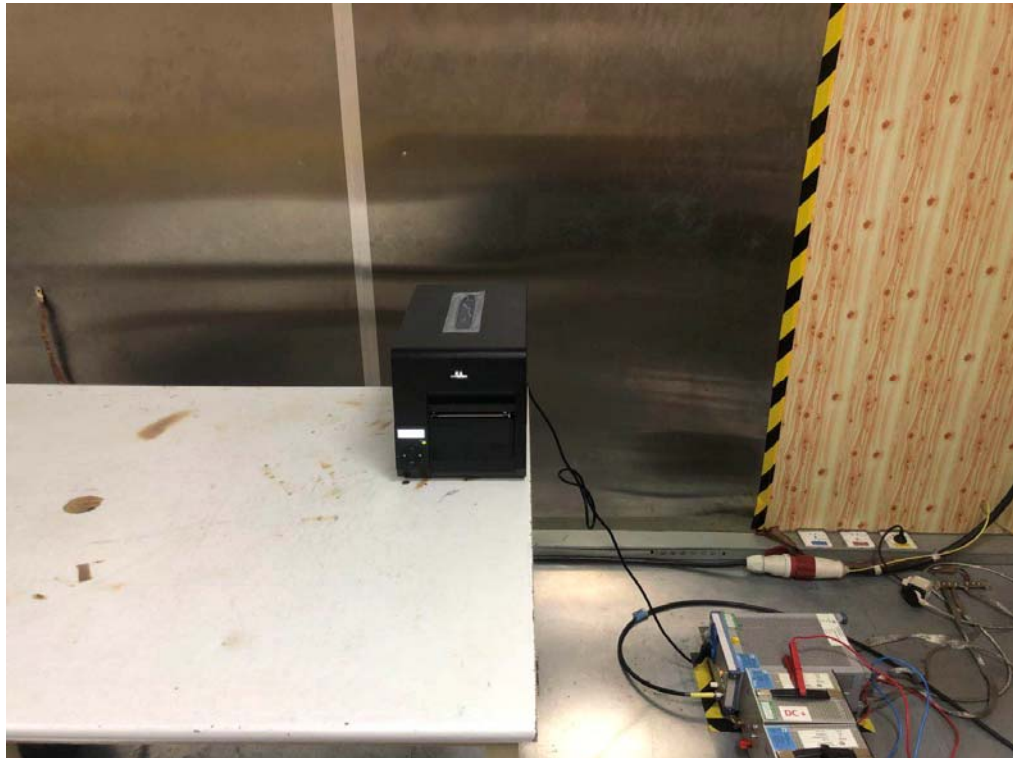
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §§15.211, 15.213, 15.217, 15.219, 15.221, or §15.236. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

5.2. Test Result

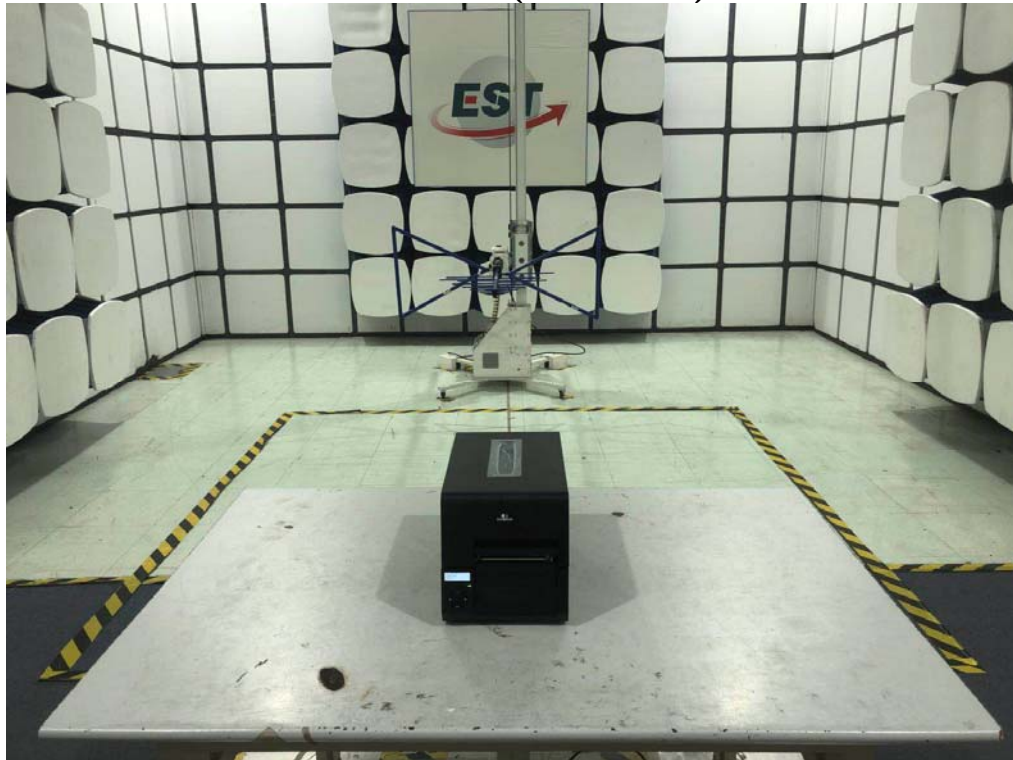
The antennas used for this product is external antenna ,so compliance with antenna requirements.
(Please refer to the EUT photo for details)

6. TEST SETUP PHOTO

Conducted Test



Radiated Test (Below 1GHz)

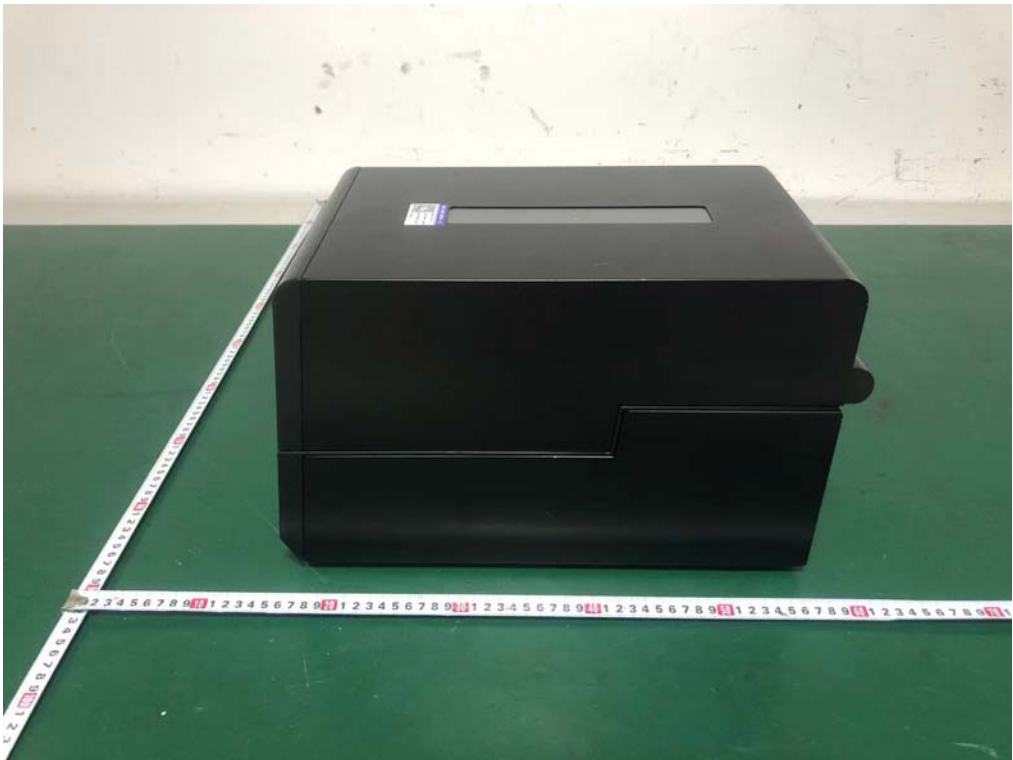
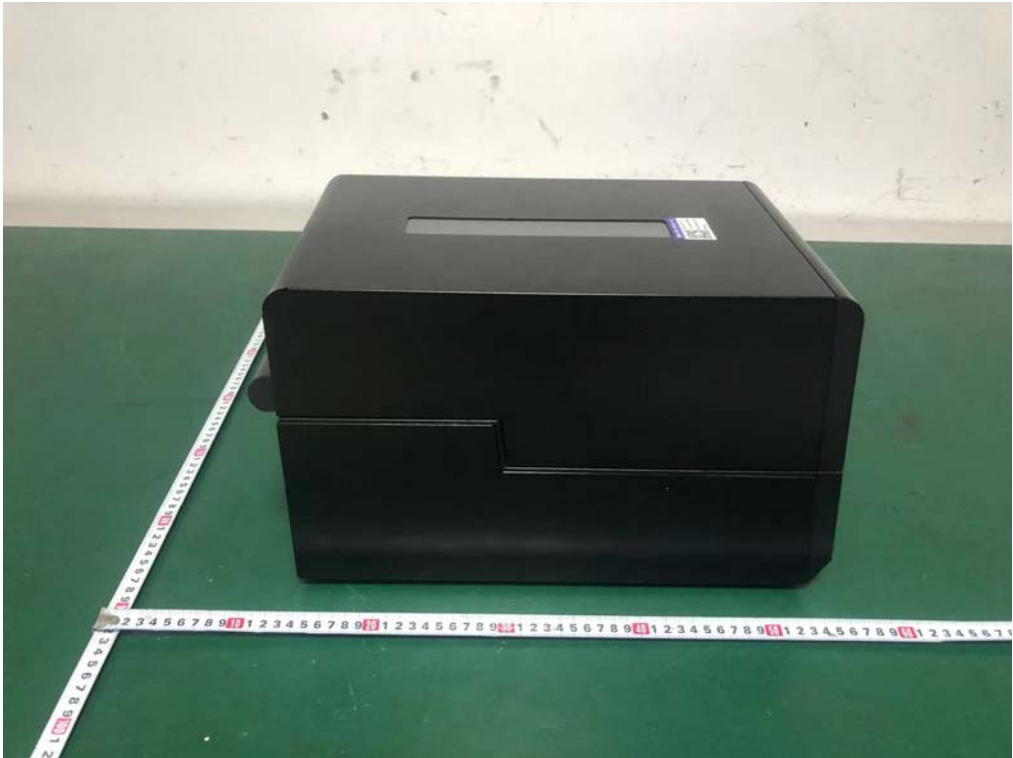


7. EUT PHOTO

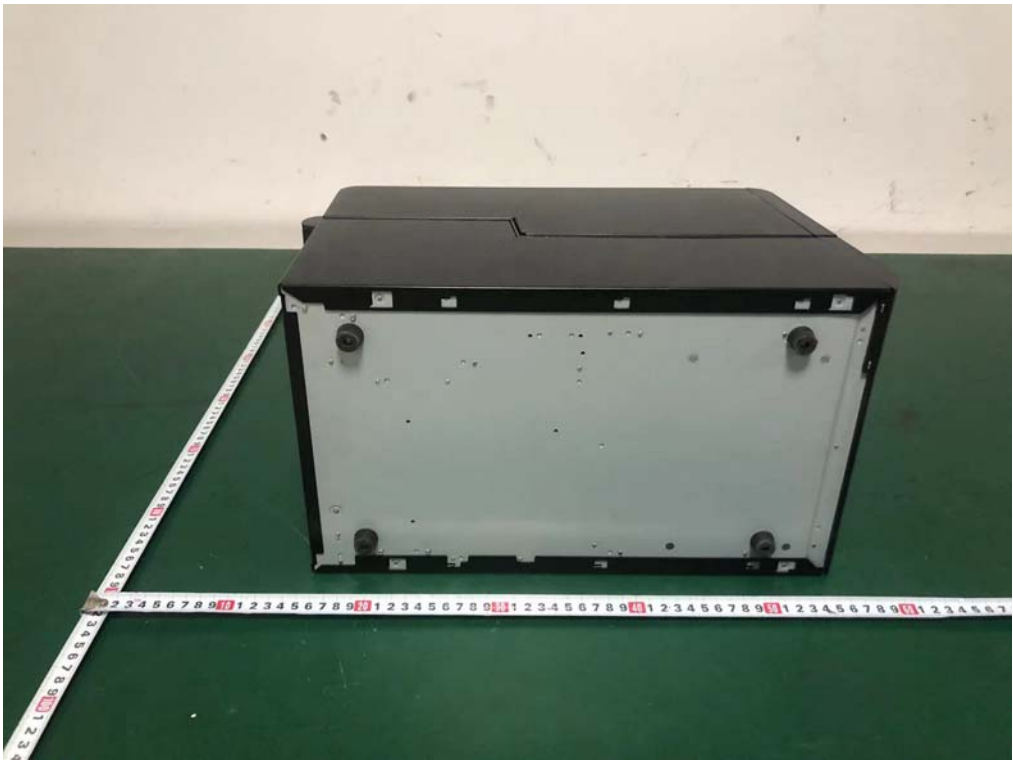
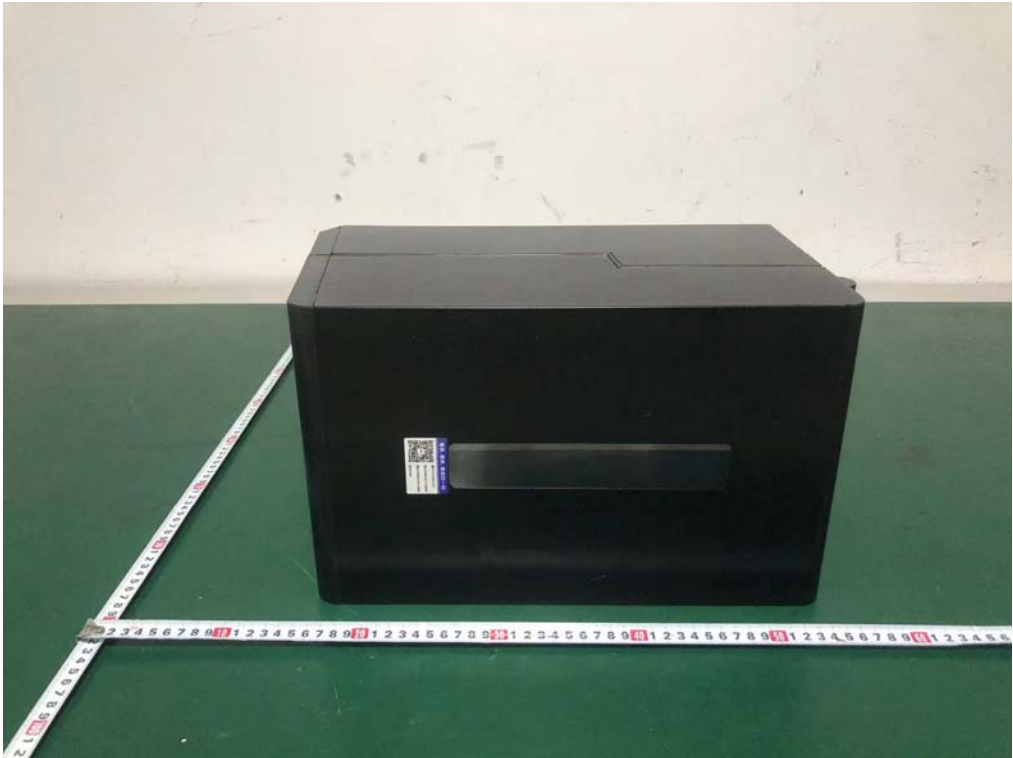
External Photos
M/N: DL-820



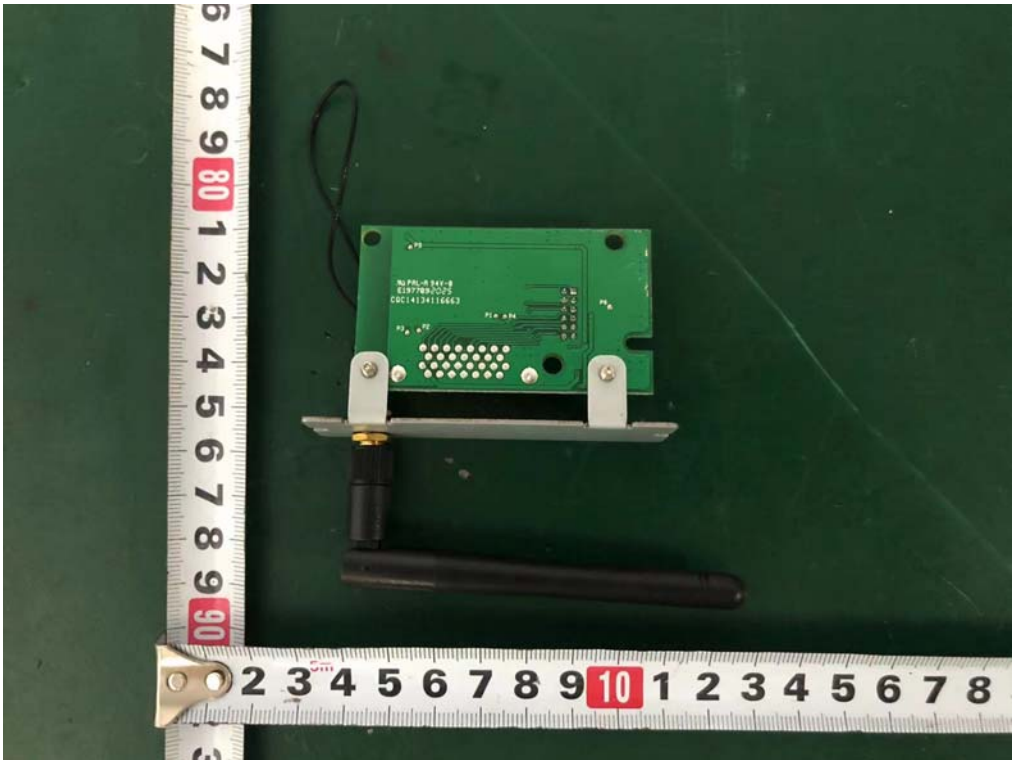
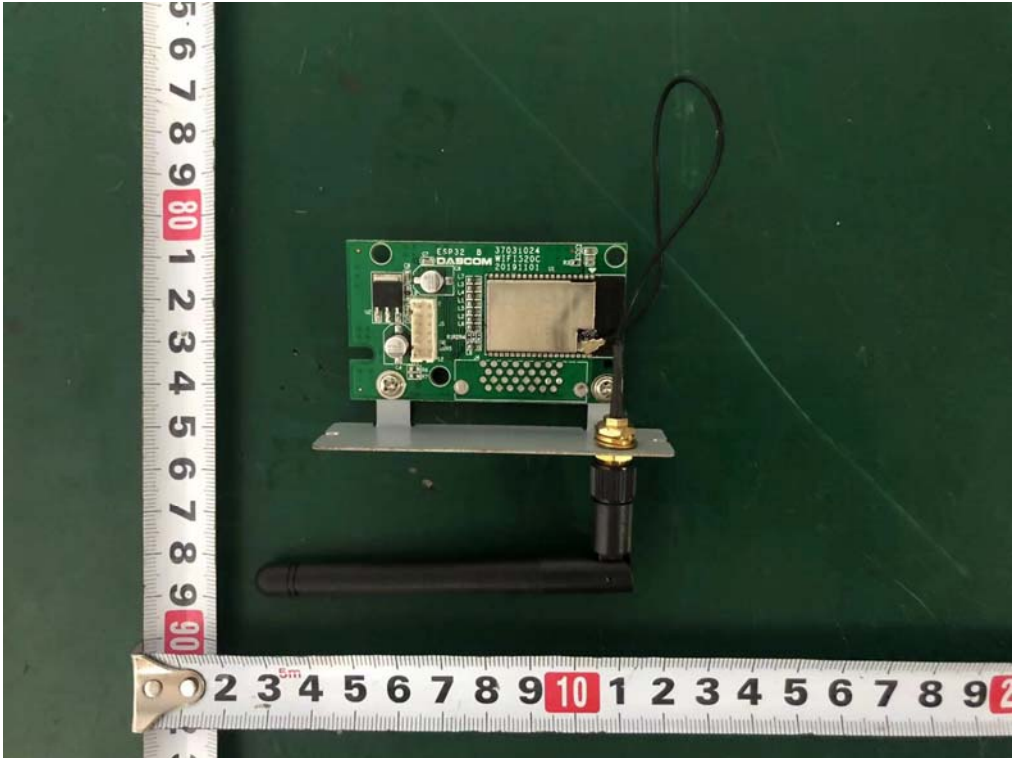
External Photos
M/N: DL-820



External Photos
M/N: DL-820



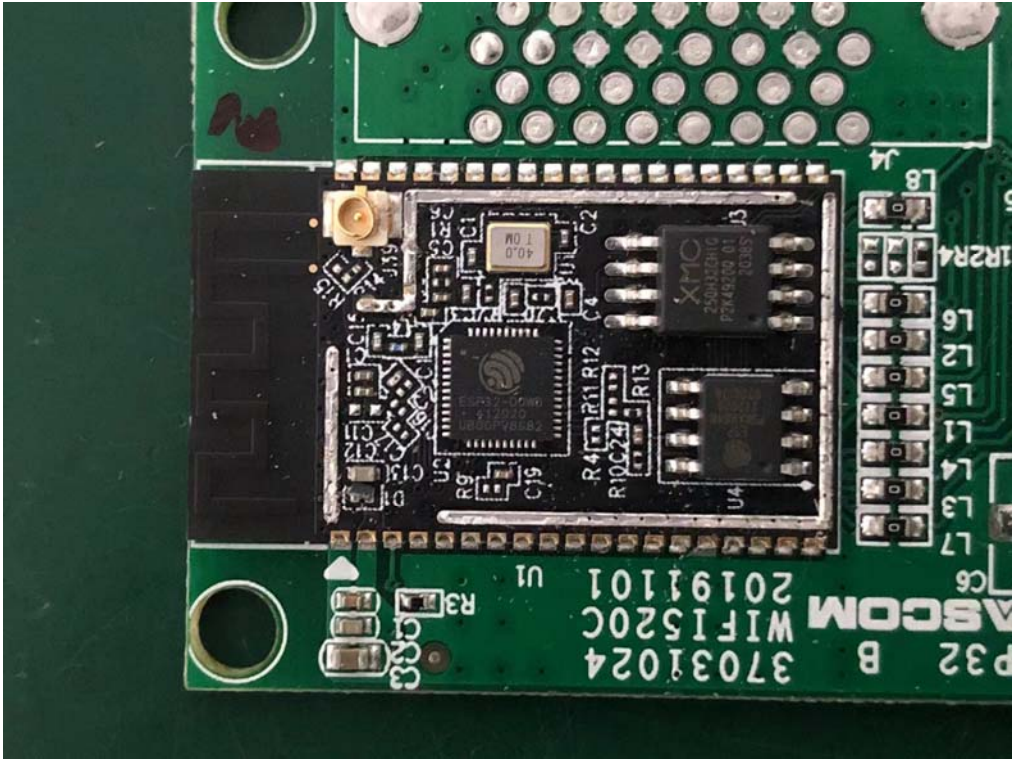
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M/N: DL-820



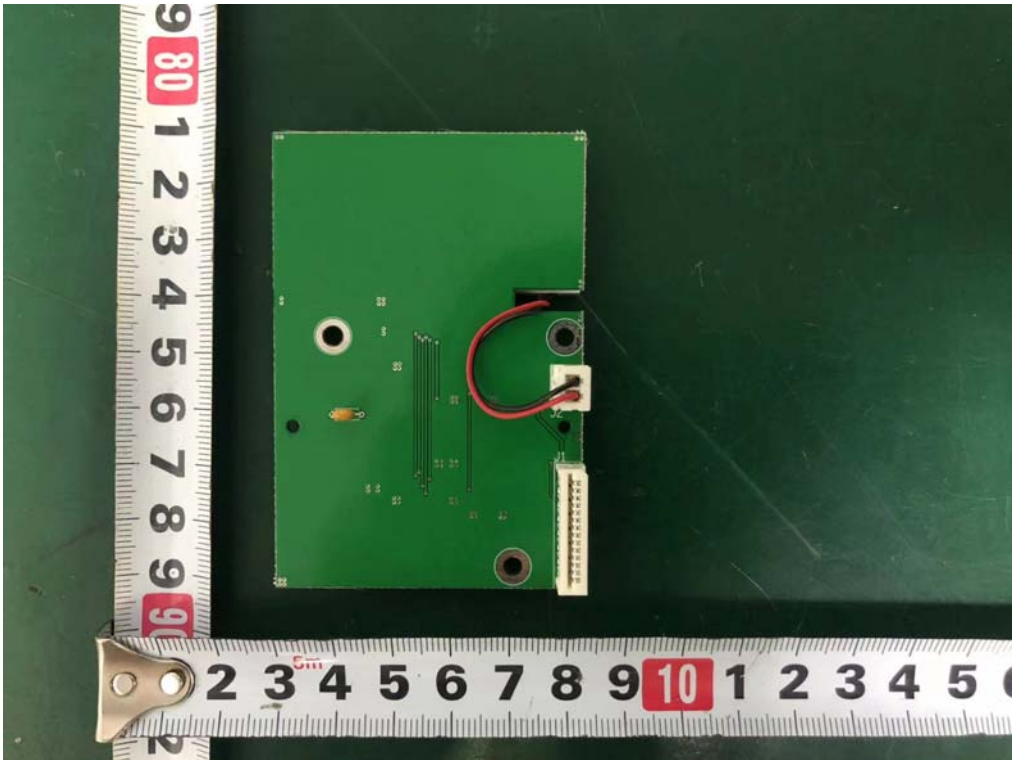
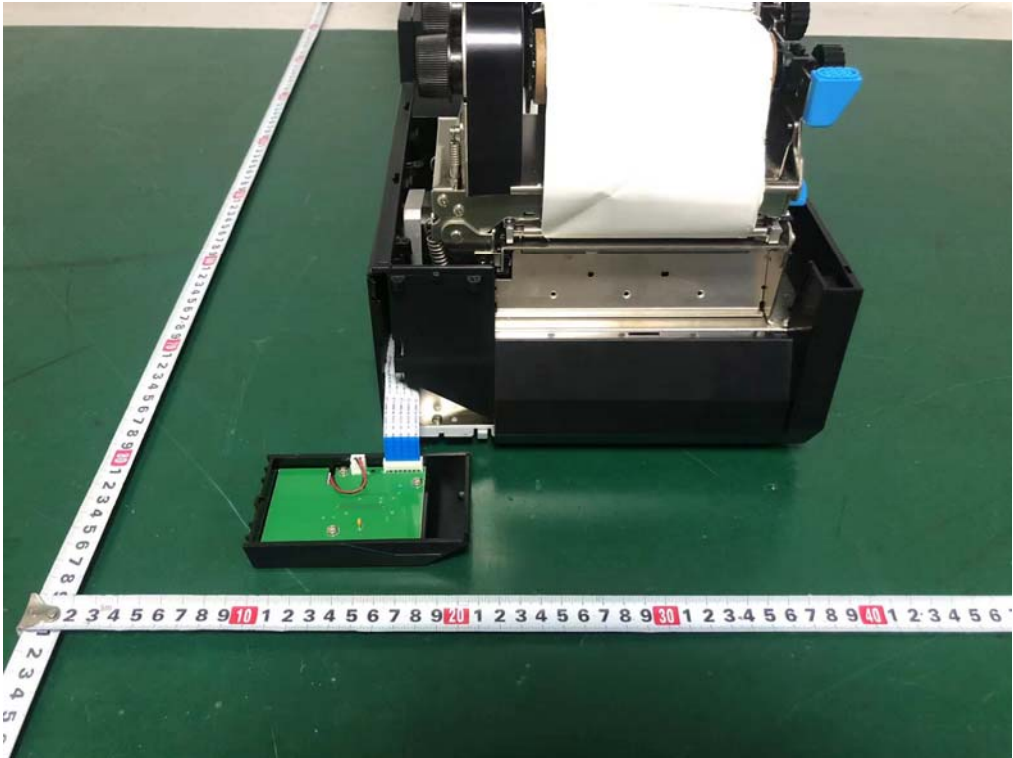
Internal Photos
M/N: DL-820



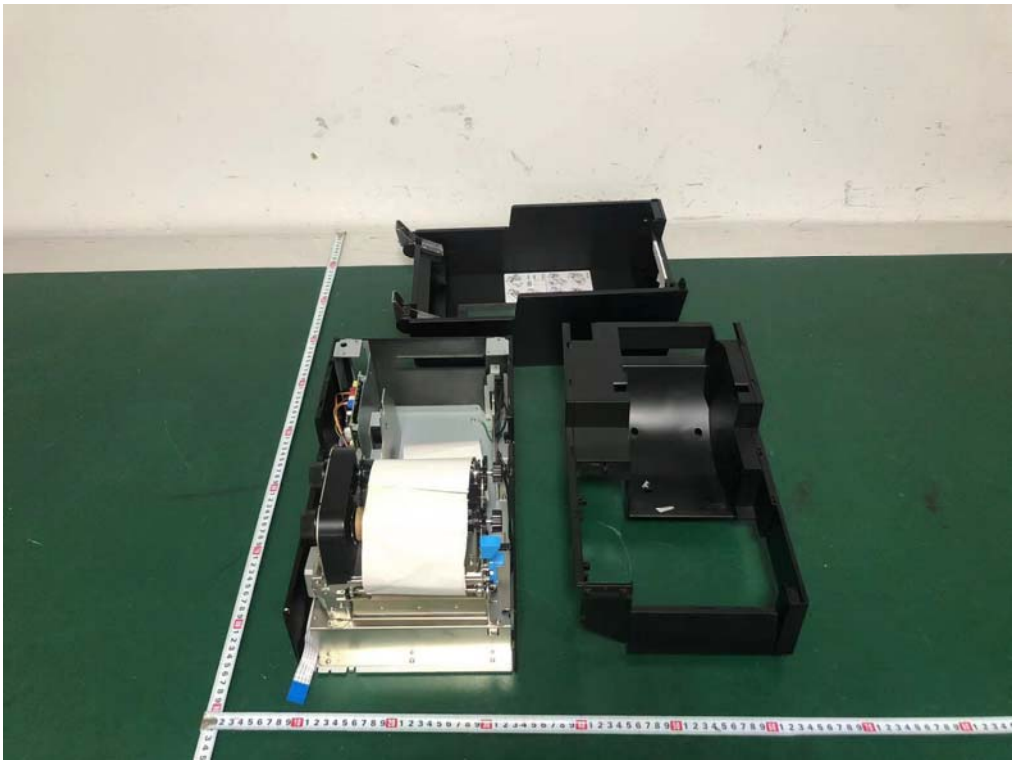
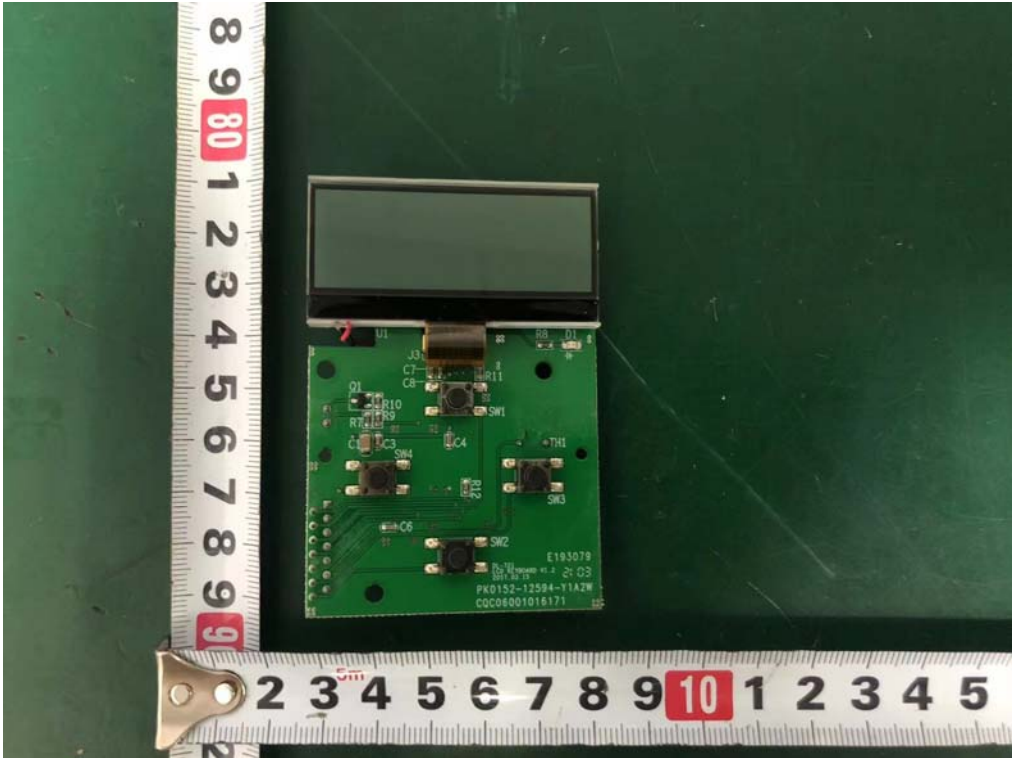
Internal Photos
M/N: DL-820



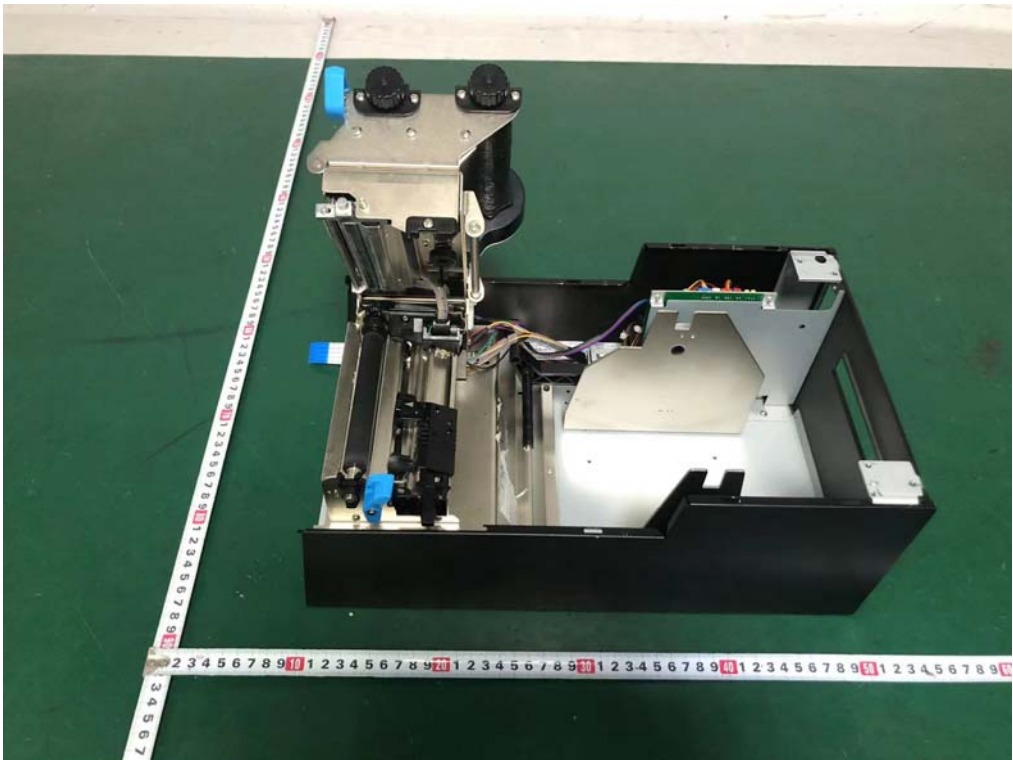
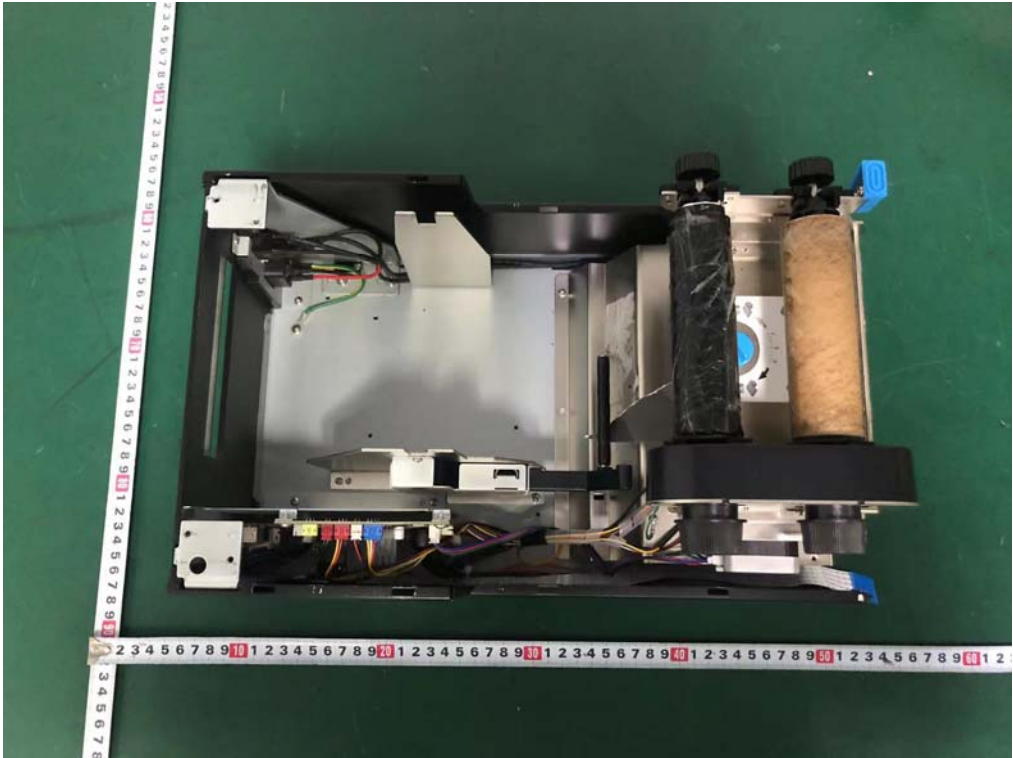
Internal Photos
M/N: DL-820



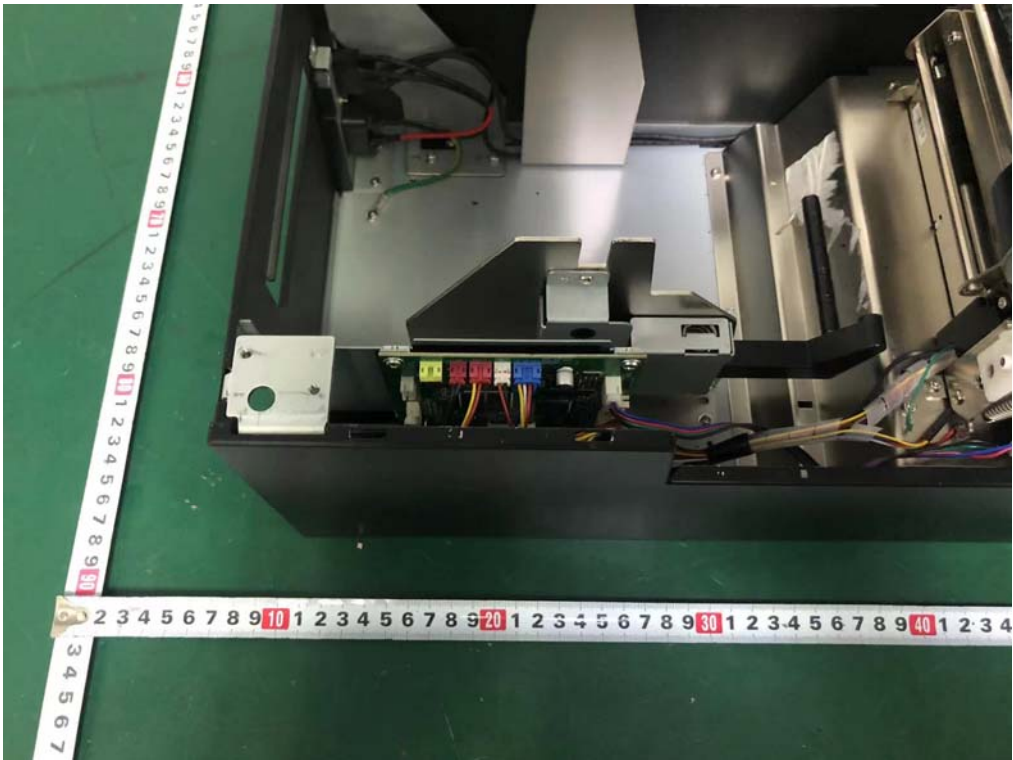
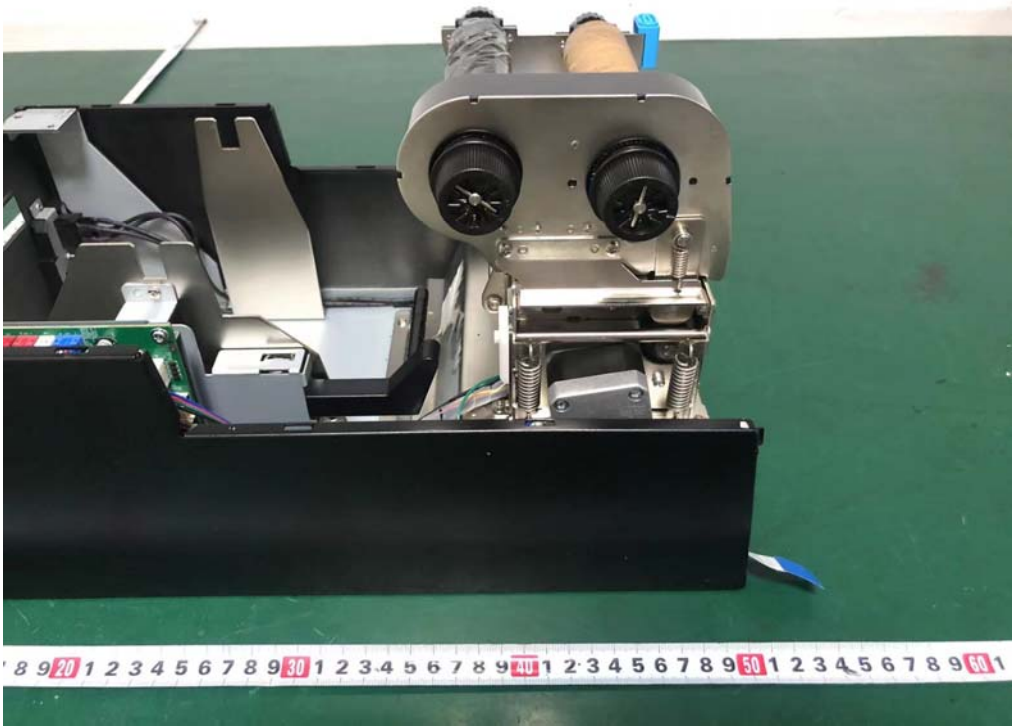
Internal Photos
M/N: DL-820



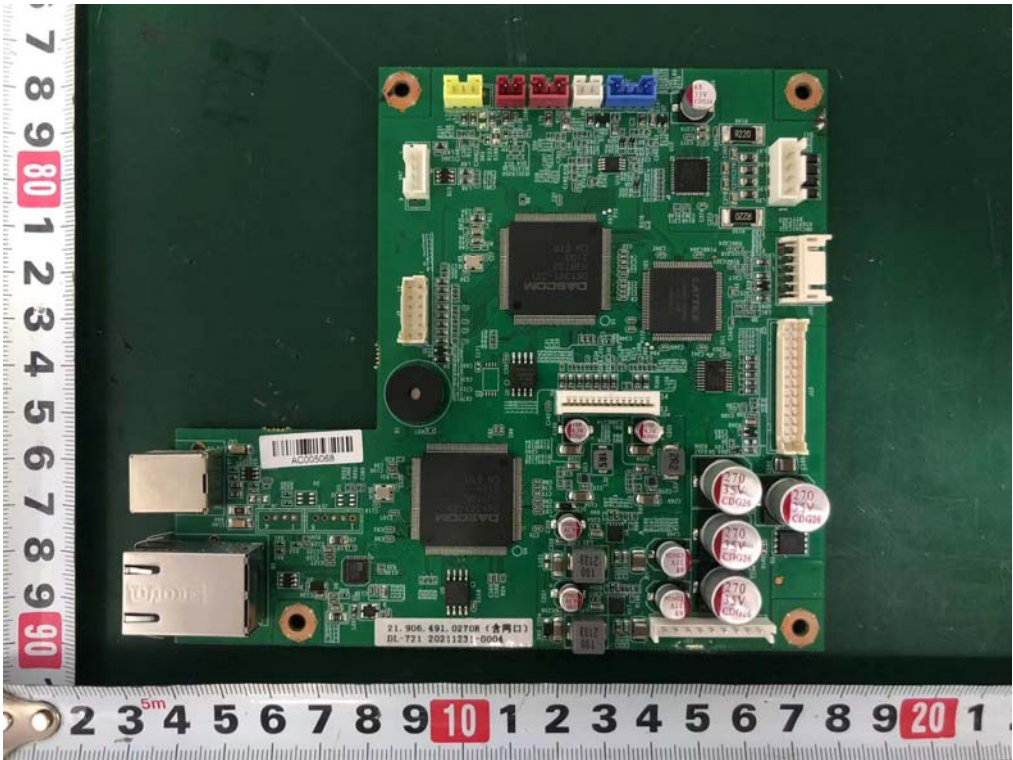
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M/N: DL-820



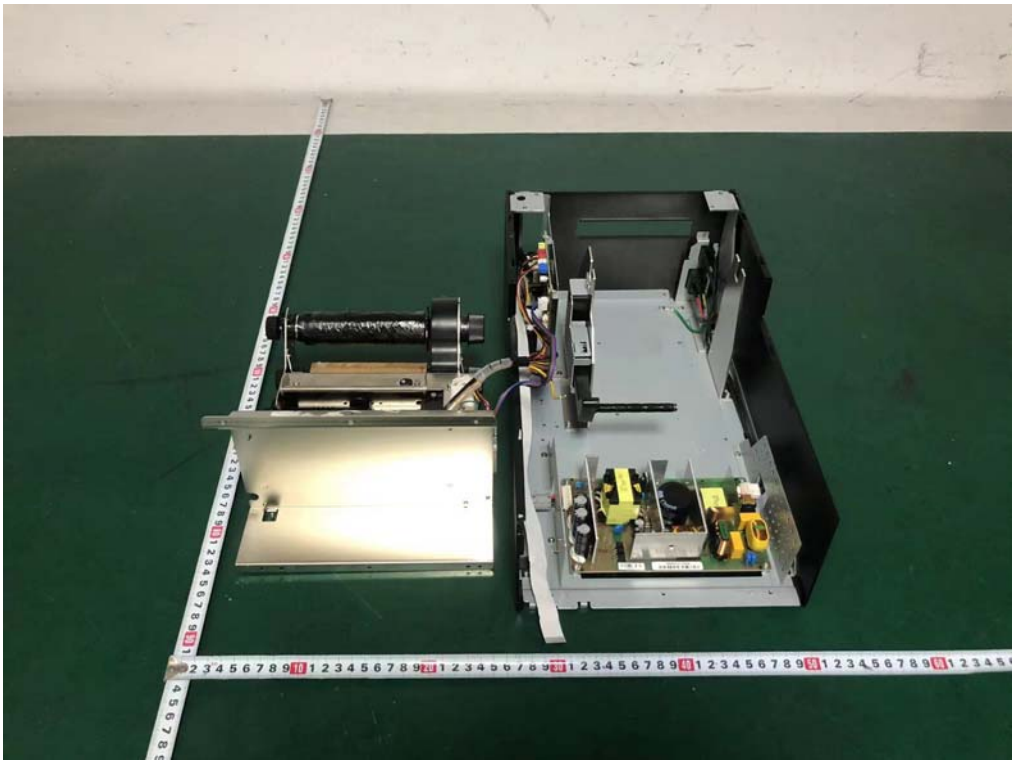
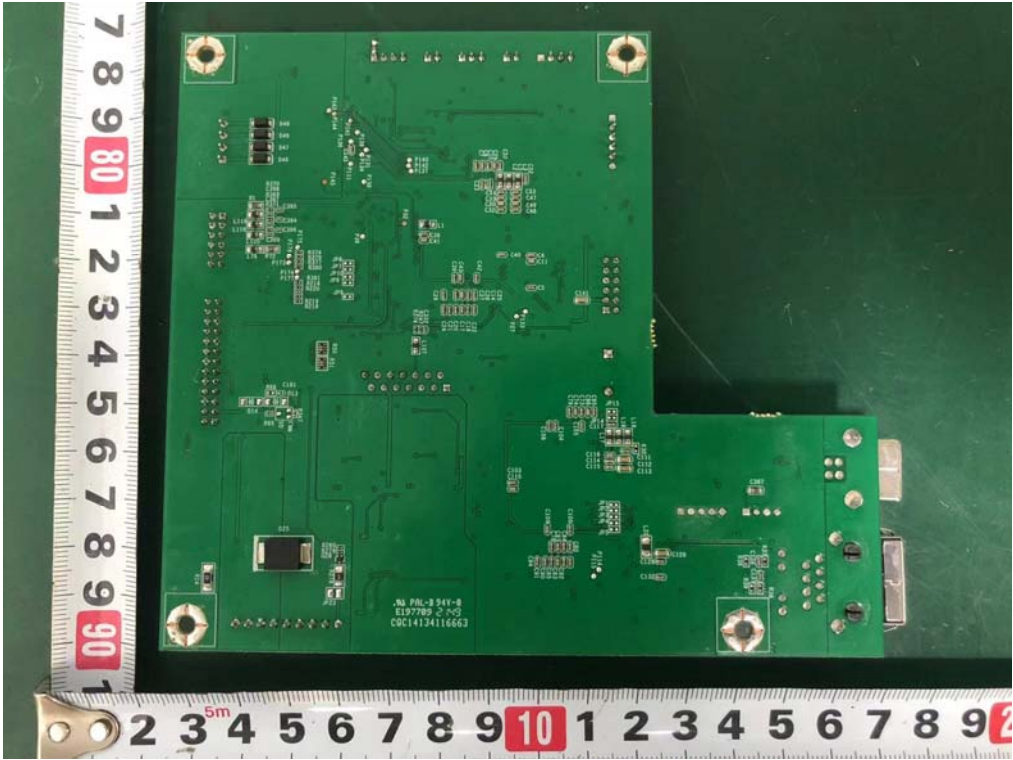
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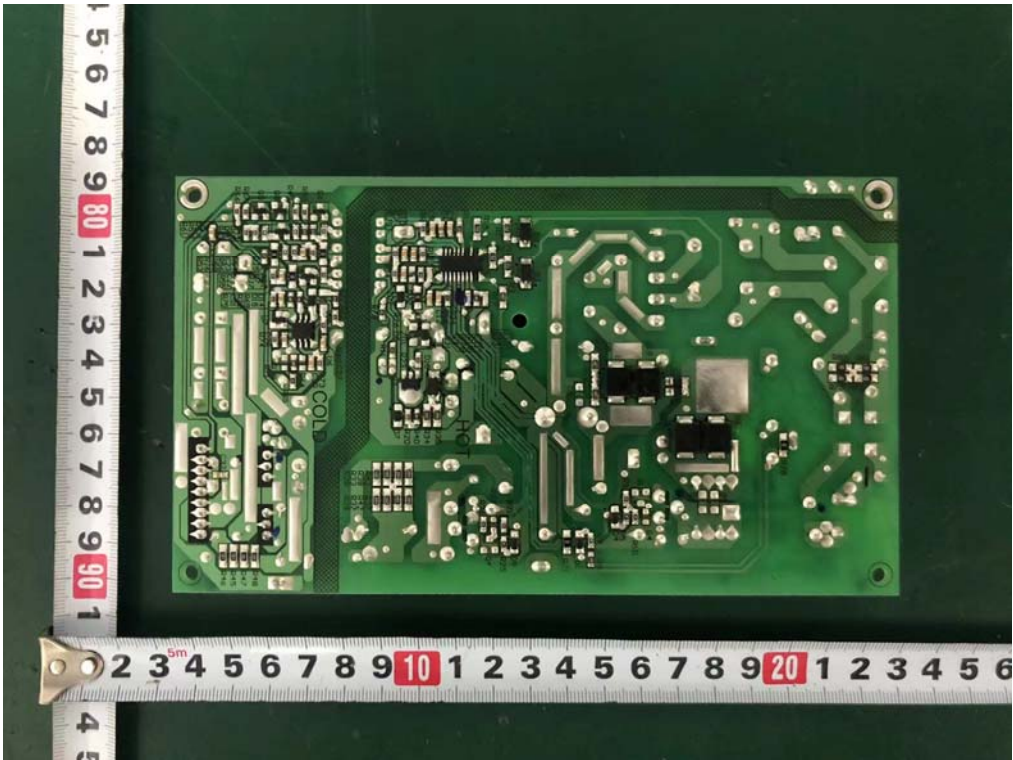
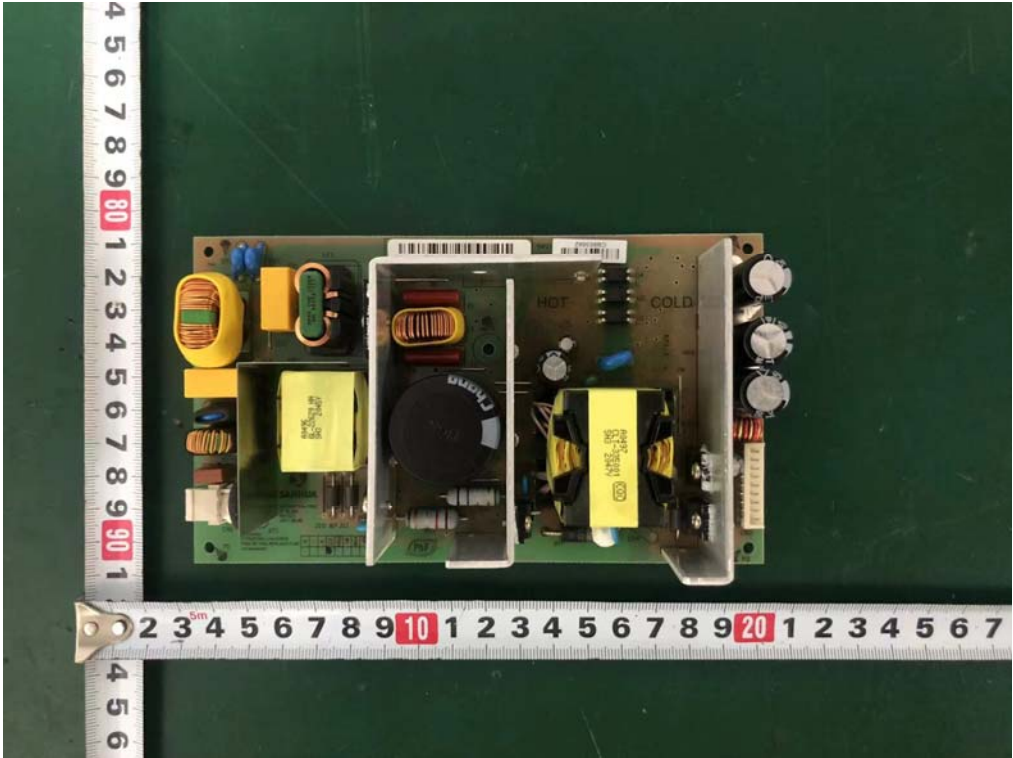
Internal Photos
M/N: DL-820



Internal Photos
M/N: DL-820



Internal Photos
M/N: DL-820



End of Test Report