FCC TEST REPORT

Client Information:

Applicant:	Shenzhen Seaory Technology Co.,Ltd.
Applicant add.:	Room 901, Block A, Building 2, Dajihui Innovation Industry Center, Yabian Community, Shajing Street, Baoan District, Shenzhen,Guangdong, P.R.C
Brand Name:	Seaory

Product Information:

Product Name:	Card Printer
Model No.:	Seaory S22K
Derivative model No.:	Seaory S20R, Seaory S20X, Seaory S21X, Seaory S22X, Seaory S25X, Seaory S26X , Seaory S28X, Seaory E30 (X=blank or A-Z, X represents different sales areas or different firmware versions)
Test Date:	May 16 to May 22, 2025 Issue Date: May 22, 2025
Test Standard:	FCC Part 15, Subpart B: 2016 ANSI C63.4:2014
Test Result:	**PASS**
Issued by:	**Shenzhen iTC Product Testing Co., Ltd.** Add. :103, Building 1 South, Dayang Industrial Zone, Lougang Community, Songgang Street, Bao'an District, Shenzhen, Guangdong, China

Tested by	JunLong Li
Reviewed by	Keyin Liu
Approved by	Apple Huang

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Test result presented in this test report is applicable to the tested sample only

Report Revision History			
Report No.	**Report Version**	**Description**	**Issue Date**
24ITC0115082F	NONE	Original	Jan. 17, 2024
25ITC0516405*F*	NONE	Update	May 22, 2025
Compared to the original report, everything else is the same except for the applicant's address and product images.			

Customer information	
Applicant Name	Shenzhen Seaory Technology Co.,Ltd.
Applicant Address	Room 901, Block A, Building 2, Dajihui Innovation Industry Center, Yabian Community, Shajing Street, Baoan District, Shenzhen,Guangdong, P.R.C
Manufacturer Name	Zhongshan Seaory Smart Technology Co., LTD.
Manufacturer Address	Room 501, Building 5, and Room 501, Building 6, No.19, Dongfu Road, Fusha Town, Zhongshan City, Guangdong Province, China.

Test site information	
Lab performing tests	Shenzhen iTC Product Testing Co., Ltd.
Lab Address	103, Building 1 South, Dayang Industrial Zone, Lougang Community, Songgang Street, Bao'an District, Shenzhen, Guangdong, China
Telephone:	(86)-0755-33138690
Fax:	(86)-0755-23071003
Abbreviations: OK/P=passed fail/F=failed n.a/N=not applicable E.U.T=equipment under test	

TABLE OF CONTENTS

1. GENERAL PRODUCT INFORMATION

1.1.Product Function

Refer to Technical Construction Form and User Manual.

1.2.Description of Device (EUT)

Description	:	Card Printer
Model No.	:	Seaory S22K, Seaory S20R, Seaory S20X, Seaory S21X, Seaory S22X, Seaory S25X, Seaory S26X , Seaory S28X, Seaory E30 (X=blank or A-Z, X represents different sales areas or different firmware versions)
Power Supply	:	DC 24~25.5V 2.7A from adapter
Adapter 1	:	Model:FY2554000 Input: AC100-240V, 50/60Hz, 1.5A, 150VA Output:DC25.5V, 4A, 102W
Adapter 2	:	Model:WT2402700I Input: AC100-240V, 50/60Hz, 1.6A Output:DC24V, 2.7A
Testing voltage	:	AC 120V/60Hz

1.2.1The basic operation mode is:

Pretest Mode	Description
Mode 1	Working

1.3.ifference between Model Numbers

All are the same except the model name and appearance

2. TEST SITES

2.1.Test Summary

Test Item	Condition	Standard	Result
Conducted disturbance at mains terminals	150kHz to 30MHz	FCC Part 15, Subpart B: 2016 ANSI C63.4:2014	Pass
Radiated Emission (below 1 GHz)	30MHz to 1GHz	FCC Part 15, Subpart B: 2016 ANSI C63.4:2014	Pass
Radiated Emission (above 1 GHz)	Above 1GHz	FCC Part 15, Subpart B: 2016 ANSI C63.4:2014	N/A
Remark: 1. The symbol “N/A” in above table means Not Applicable. 2.When determining the test results, measurement uncertainty of tests has been considered.			

System Measurement Uncertainty	
Test Items	Extended Uncertainty
Uncertainty for Radiated Emission in 3m chamber	3.60dB
Uncertainty for Conducted Emission.	2.60dB

2.2.List of Test and Measurement Instruments

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
For conducted emission at the mains terminals and load port test					☒
EMI Test Receiver	Rohde&Schwarz	ESCI	101156	Apr. 9, 23	Apr. 9, 24
Artificial Mains Network	Rohde&Schwarz	ENV216	101315	Apr. 9, 23	Apr. 9, 24
Artificial Mains Network (AUX)	Rohde&Schwarz	ENV216	101314	Apr. 9, 23	Apr. 9, 24
RF Cable	FUJIKURA	3D-2W	944 Cable	Apr. 9, 23	Apr. 9, 24
Voltage Probe	CHWARZBECK	A130302	KWE-053	Apr. 12, 23	Apr. 12, 24
For radiated emission test (Below 1GHz)					☒
EMI Test Receiver	Rohde&Schwarz	ESCI	101156	Apr. 9, 23	Apr. 9, 24
Bilog Antenna	ETS-LINDGREN	3142D	00135452	Apr. 2, 23	Apr. 2, 24
Spectrum Analyzer	Agilent	8593E	3911A04271	Apr. 9, 23	Apr. 9, 24
3m Semi-anechoic Chamber	ETS-LINDGREN	966	170326	Apr. 2, 23	Apr. 2, 24
Signal Amplifier	SONOMA	310	186956	Apr. 9, 23	Apr. 9, 24
RF Cable	IMRO	IMRO-400	966 Cable 1#	Apr. 9, 23	Apr. 9, 24
MULTI-DEVICE Controller	ETS-LINDGREN	2090	126913	N/A	N/A
Antenna Holder	ETS-LINDGREN	2070B	00109601	N/A	N/A
For radiated emission test (Above 1GHz)					☐
EMI Test Receiver	Rohde&Schwarz	ESCI	101156	Apr. 9, 23	Apr. 9, 24
Horn Antenna	DAZE	ZN30701	11003	Apr. 13, 23	Apr. 13, 24
Spectrum Analyzer	Agilent	8593E	3911A04271	Apr. 9, 23	Apr. 9, 24
3m Semi-anechoic Chamber	ETS-LINDGREN	966	170326	Apr. 2, 23	Apr. 2, 24
Signal Amplifier	ZHINAN	ZN3380C	11001	Apr. 9, 23	Apr. 9, 24
RF Cable	IMRO	IMRO-400	966 Cable 1#	Apr. 9, 23	Apr. 9, 24
MULTI-DEVICE Controller	ETS-LINDGREN	2090	126913	N/A	N/A
Antenna Holder	ETS-LINDGREN	2070B	00109601	N/A	N/A
Note: ☒ Used ☐ Not Used					

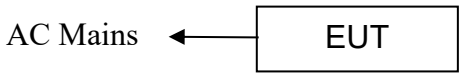
3. TEST SET-UP AND OPERATION MODES

3.1.Principle of Configuration Selection

Emission: The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the Operating Instructions.

3.2.Block Diagram of Test Set-up

System Diagram of Connections between EUT and Simulators



*(EUT:*Card Printer*)*

3.3.Test Operation Mode and Test Software

Refer to Test Setup in clause 4 & 5.

3.4.Special Accessories and Auxiliary Equipment

None.

3.5.Countermeasures to Achieve EMC Compliance

None.

4. TEST RESULTS

4.1.Conducted Emission at the Mains Terminals Test

Result : PASS

Test Site : 944 Shielded Room

Limits : FCC Part 15B

Frequency range MHz	Limits dB(μV)	
	Quasi-peak	Average
0,15 to 0,50	66 to 56	56 to 46
0,50 to 5	56	46
5 to 30	60	50
NOTE: 1.The lower limit shall apply at the transition frequencies. 2.The limit decreases linearly with the logarithm of the frequency in the range 0,15 MHz to 0,50 MHz.		

Test Specification

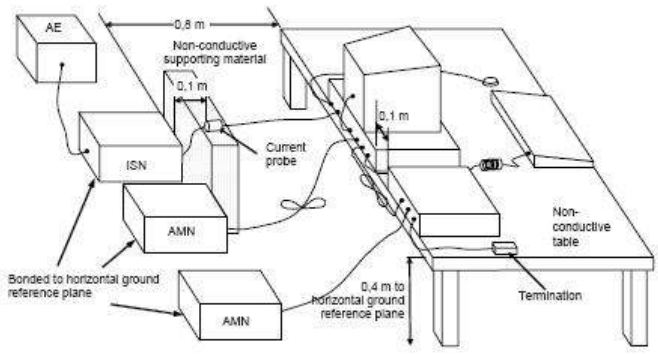
1.The EUT was put on a wooden table which was 0.8 m high above the ground and connected to the AC mains through the Artificial Mains Network (AMN). Where the mains cable supplied by the manufacture was longer than 1 m, the excess was folded back and forth parallel to the cable at the centre so as to form a bundle no longer than 0.4 m.

2.The EUT was kept 0.4 m from any other earthed conducting surface. Both sides of AC line were checked to find out the maximum conducted emission levels according to the test procedure during the conducted emission test.

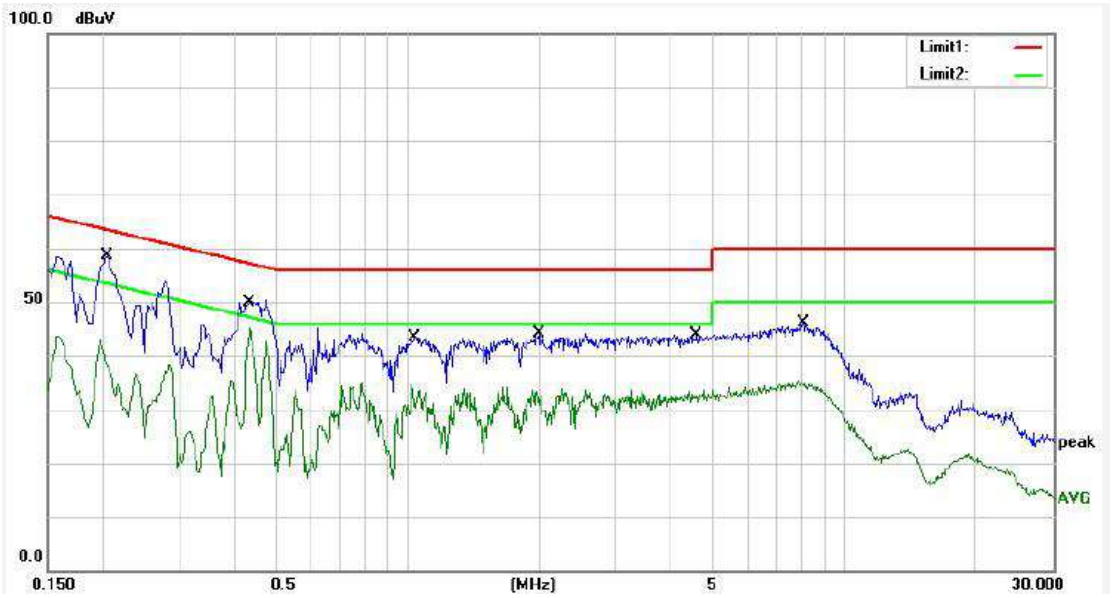
3.The bandwidth of the test receiver was set at 9 kHz.

4.The worst test data was reported on the following page.

Test Set-up



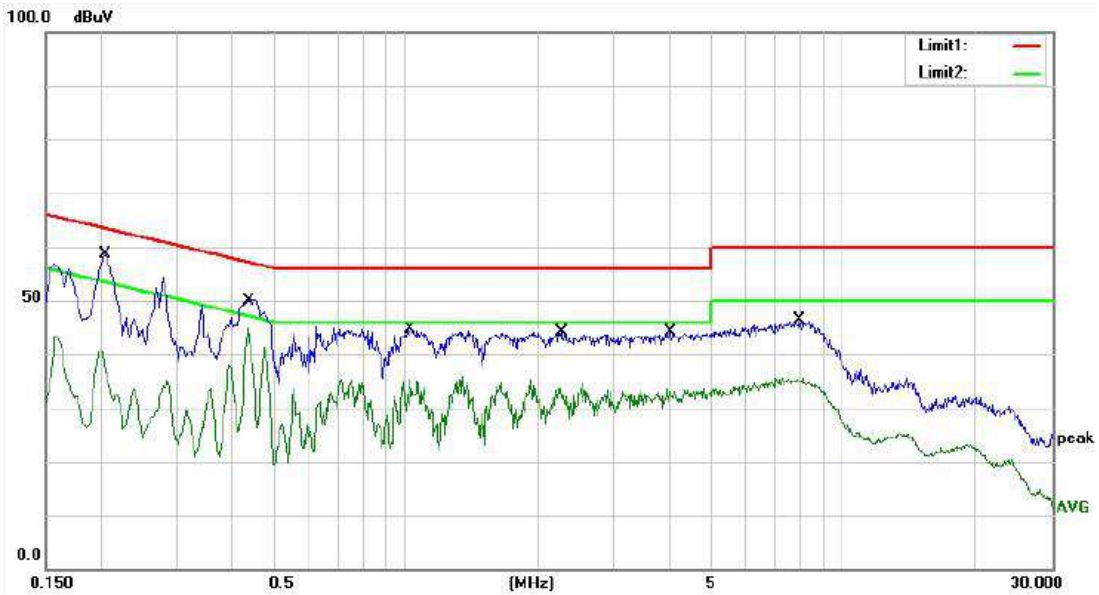
EUT：	Card Printer	Model Name. ：	Seaory S22K
Temperature：	26 ℃	Relative Humidity：	54%
Pressure：	1010hPa	Phase：	L
Test Voltage ：	AC 120V/60Hz	Test Mode：	Working



Remark:
1. All readings are Quasi-Peak and Average values.
2. Margin = Result (Result =Reading + Factor)–Limit

No.	Frequency (MHz)	Reading (dBuV)	Correction (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.2060	48.31	10.34	58.65	63.37	-4.72	QP
2	0.2060	32.53	10.34	42.87	53.37	-10.50	AVG
3	0.4340	38.67	10.54	49.21	57.18	-7.97	QP
4	0.4340	33.82	10.54	44.36	47.18	-2.82	AVG
5	1.0420	33.16	10.30	43.46	56.00	-12.54	QP
6	1.0420	20.65	10.30	30.95	46.00	-15.05	AVG
7	1.9980	33.92	10.30	44.22	56.00	-11.78	QP
8	1.9980	21.64	10.30	31.94	46.00	-14.06	AVG
9	4.5780	33.41	10.44	43.85	56.00	-12.15	QP
10	4.5780	22.02	10.44	32.46	46.00	-13.54	AVG
11	8.0300	35.42	10.80	46.22	60.00	-13.78	QP
12	8.0300	24.11	10.80	34.91	50.00	-15.09	AVG

EUT：	Card Printer	Model Name. ：	Seaory S22K
Temperature：	26 ℃	Relative Humidity：	54%
Pressure：	1010hPa	Phase：	N
Test Voltage ：	AC 120V/60Hz	Test Mode：	Working



Remark:
1. All readings are Quasi-Peak and Average values.
2. Margin = Result (Result =Reading + Factor)–Limit

No.	Frequency (MHz)	Reading (dBuV)	Correction (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.2060	48.17	10.42	58.59	63.37	-4.78	QP
2	0.2060	30.29	10.42	40.71	53.37	-12.66	AVG
3	0.4340	38.82	10.54	49.36	57.18	-7.82	QP
4	0.4340	34.08	10.54	44.62	47.18	-2.56	AVG
5	1.0300	34.33	10.30	44.63	56.00	-11.37	QP
6	1.0300	24.34	10.30	34.64	46.00	-11.36	AVG
7	2.2620	33.68	10.41	44.09	56.00	-11.91	QP
8	2.2620	24.90	10.41	35.31	46.00	-10.69	AVG
9	4.0260	33.49	10.51	44.00	56.00	-12.00	QP
10	4.0260	22.68	10.51	33.19	46.00	-12.81	AVG
11	7.9420	35.73	10.69	46.42	60.00	-13.58	QP
12	7.9420	24.86	10.69	35.55	50.00	-14.45	AVG

4.2.Radiated Emission Test (below 1 GHz)

Result : PASS

Test Site : 966 Chamber

Limits : FCC Part 15B

Frequency range MHz	Quasi-peak limits 3m dB(μV/m)
30-88	40
88-216	43.5
216-960	46
960-1000	54
Note: 1.The lower limit shall apply at the transition frequency. 2.Additional provisions may be required for cases where interference occurs.	

Conditional testing procedure

1.The EUT was placed on a turn table which was 0.8 m above the ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was set 3 m away from the receiving antenna which was mounted on an antenna tower. The measuring antenna moved up and down to find out the maximum emission level. It moved from 1 m to 4 m for both horizontal and vertical polarizations.

2.The highest frequency of the internal sources of the EUT is less than 108 MHz, the measurement shall only be made up to 1 GHz.

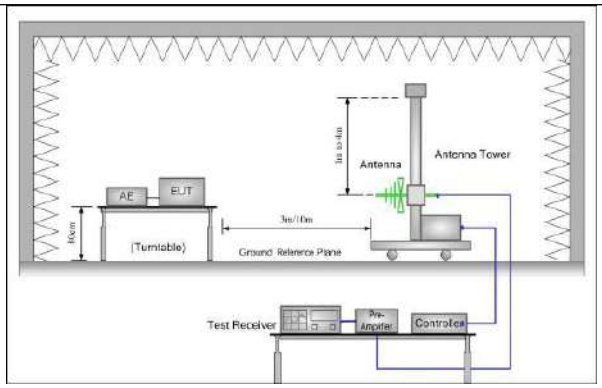
2.The EUT was tested in the Chamber Site. It was pre-scanned with a Peak detector from the spectrum, and all the final readings from the test receiver were measured with the Quasi-Peak detector.

3.The bandwidth setting on the test receiver was 120 kHz.

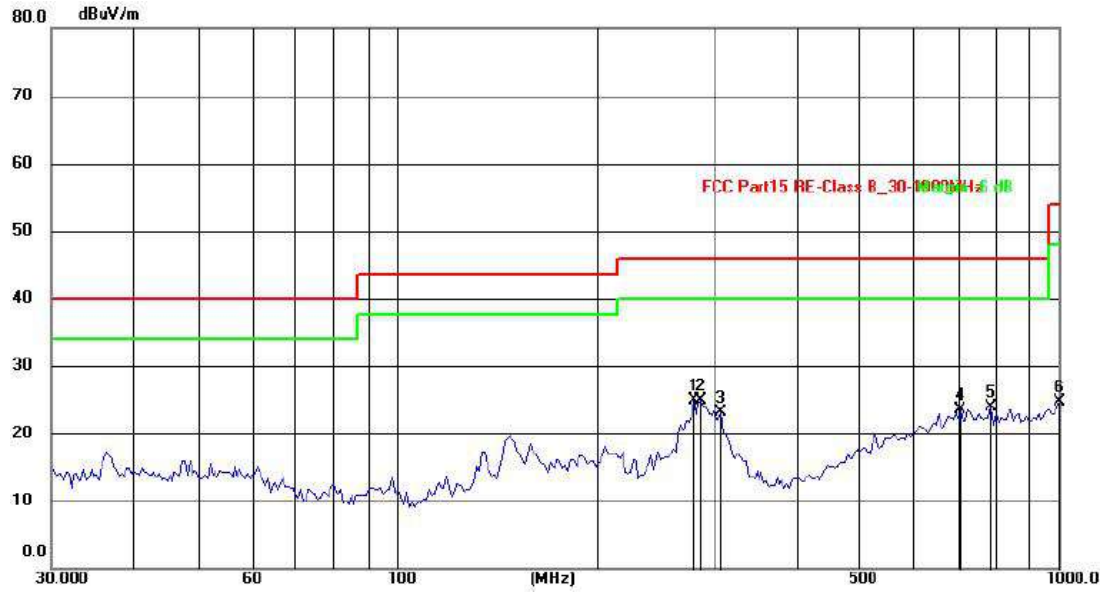
4.The worst test data was reported on the following page.

5.Emission Level = Antenna Factor + Cable Loss + Meter Reading - Preamp Factor.

Test Set-up



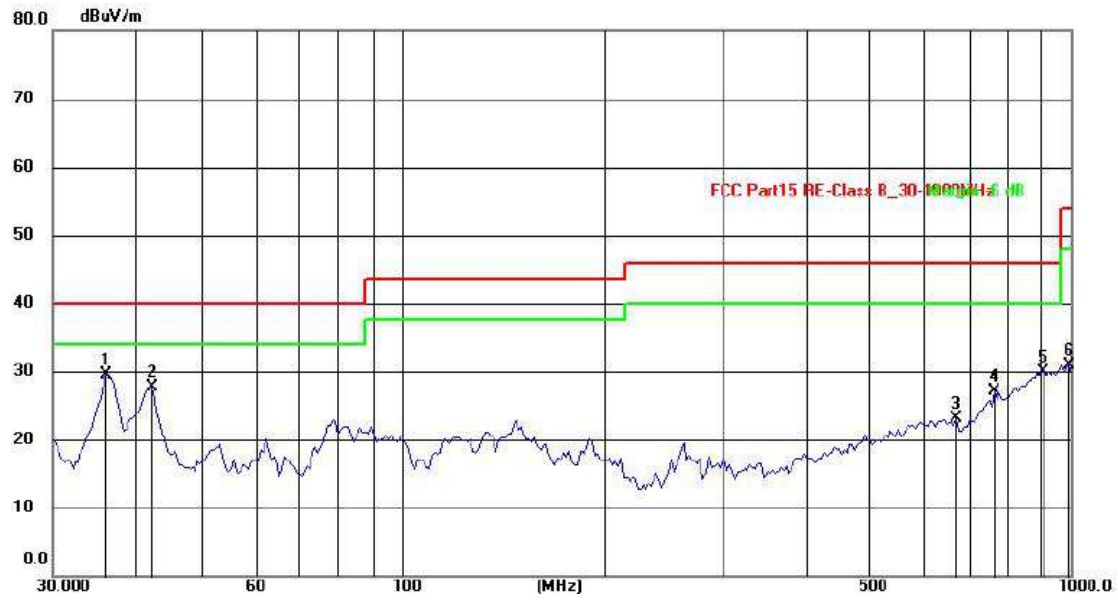
EUT：	Card Printer	Model Name ：	Seaory S22K
Temperature：	24 ℃	Relative Humidity：	54%
Pressure：	1010 hPa	Polarization：	Horizontal
Test Voltage ：	AC 120V/60Hz	Test Mode：	Working



Remark:
1. All readings are Quasi-Peak and Average values.
2. Margin = Result (Result =Reading + Factor)–Limit

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	280.5151	39.32	-14.41	24.91	46.00	-21.09	QP
2	287.9904	40.30	-15.40	24.90	46.00	-21.10	QP
3	308.9125	40.04	-16.95	23.09	46.00	-22.91	QP
4	710.4266	30.30	-6.73	23.57	46.00	-22.43	QP
5	789.2337	30.83	-6.92	23.91	46.00	-22.09	QP
6	1000.0000	29.60	-4.87	24.73	54.00	-29.27	QP

EUT：	Card Printer	Model Name ：	Seaory S22K
Temperature：	24 ℃	Relative Humidity：	54%
Pressure：	1010 hPa	Polarization：	Vertical
Test Voltage ：	AC 120V/60Hz	Test Mode：	Working



Remark:
1. All readings are Quasi-Peak and Average values.
2. Margin = Result (Result =Reading + Factor)–Limit

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	36.0638	47.04	-17.44	29.60	40.00	-10.40	QP
2	42.2280	44.66	-16.96	27.70	40.00	-12.30	QP
3	674.0252	30.86	-7.68	23.18	46.00	-22.82	QP
4	768.7481	31.94	-4.86	27.08	46.00	-18.92	QP
5	908.0730	30.61	-0.70	29.91	46.00	-16.09	QP
6	991.2718	31.18	-0.26	30.92	54.00	-23.08	QP

4.3.Radiated Emission Test (above 1 GHz)

Result : N/A

Test Site : 966 Chamber

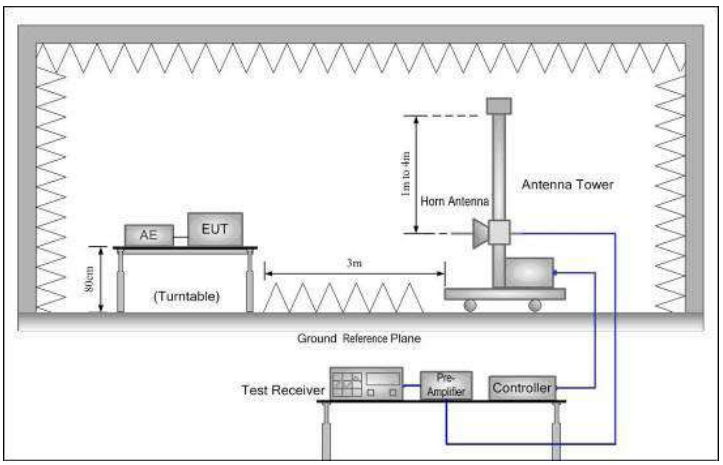
Limits : FCC Part 15B

Frequency range GHz	Average limit dB(μV/m)	Peak limit dB(μV/m)
1-3	50	70
3-6	54	74
Note: The lower limit applies at the transition frequency		

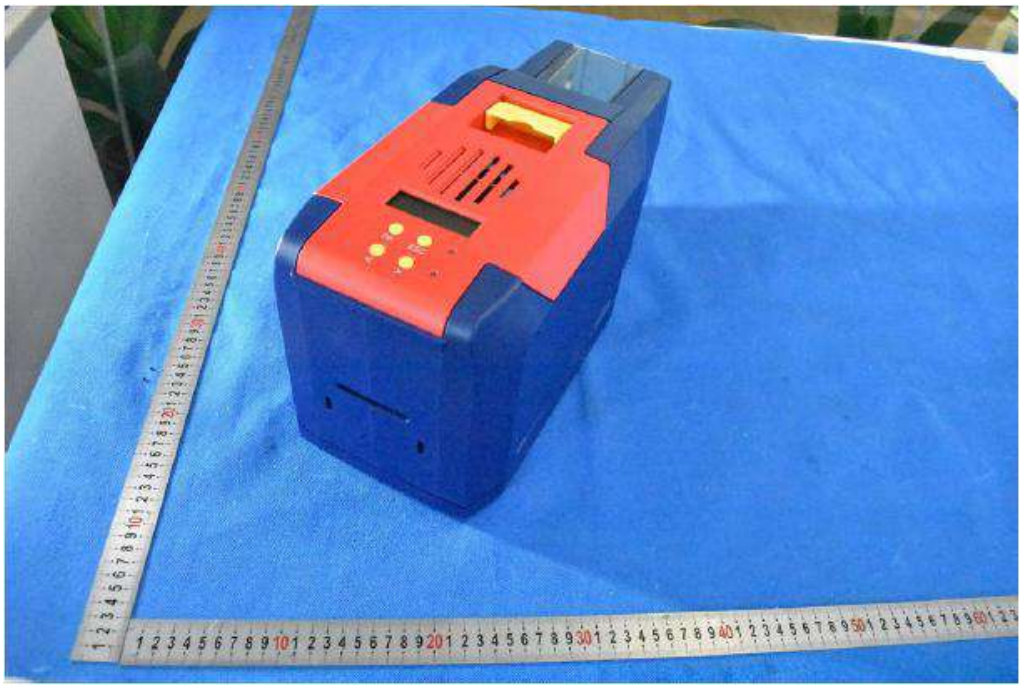
Conditional testing procedure

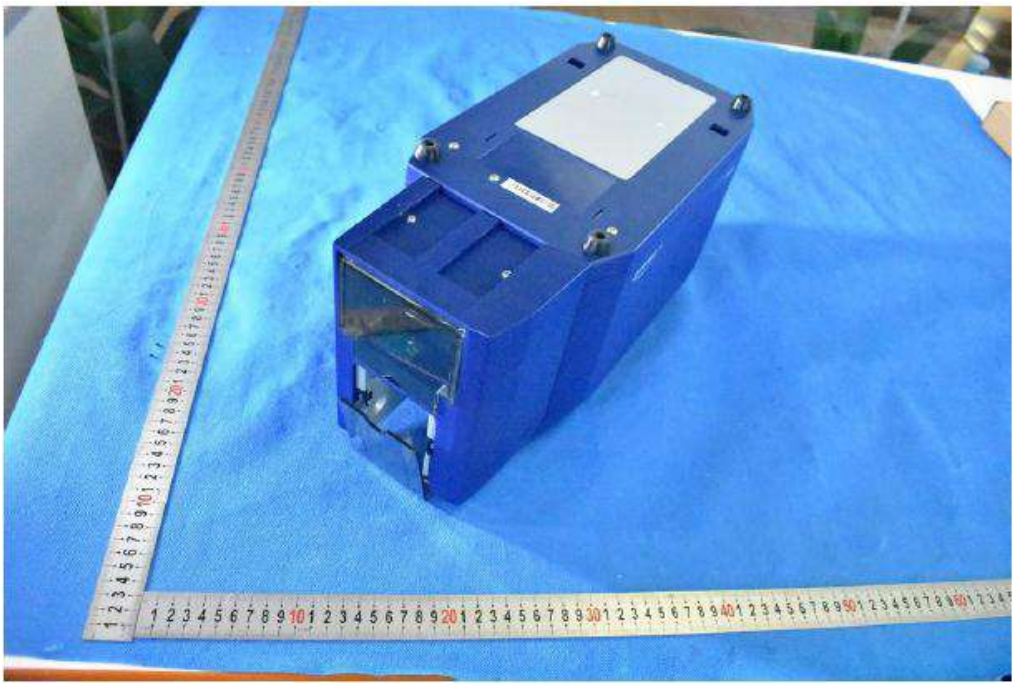
1.The EUT was placed on a turn table which was 0.8 m above the ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was set 3 m away from the receiving antenna which was mounted on an antenna tower. The measuring antenna moved up and down to find out the maximum emission level. It moved from 1 m to 4 m for both horizontal and vertical polarizations.
2.The EUT was tested in the 3m Chamber Site. It was pre-scanned with a Peak detector from the spectrum.
3.The bandwidth setting on the test receiver was 1 MHz.
4.The worst test data was reported on the following page.
5. Emission Level = Antenna Factor + Cable Loss + Meter Reading - Preamp Factor.
☐ the highest frequency of the internal sources of the EUT is between 108 MHz and 500 MHz, the measurement shall only be made up to 2 GHz.
☐ the highest frequency of the internal sources of the EUT is between 500 MHz and 1 GHz, the measurement shall only be made up to 5 GHz.
☐ the highest frequency of the internal sources of the EUT is above 1 GHz, the measurement shall be made up to 5 times the highest frequency or 40 GHz, whichever is lower.

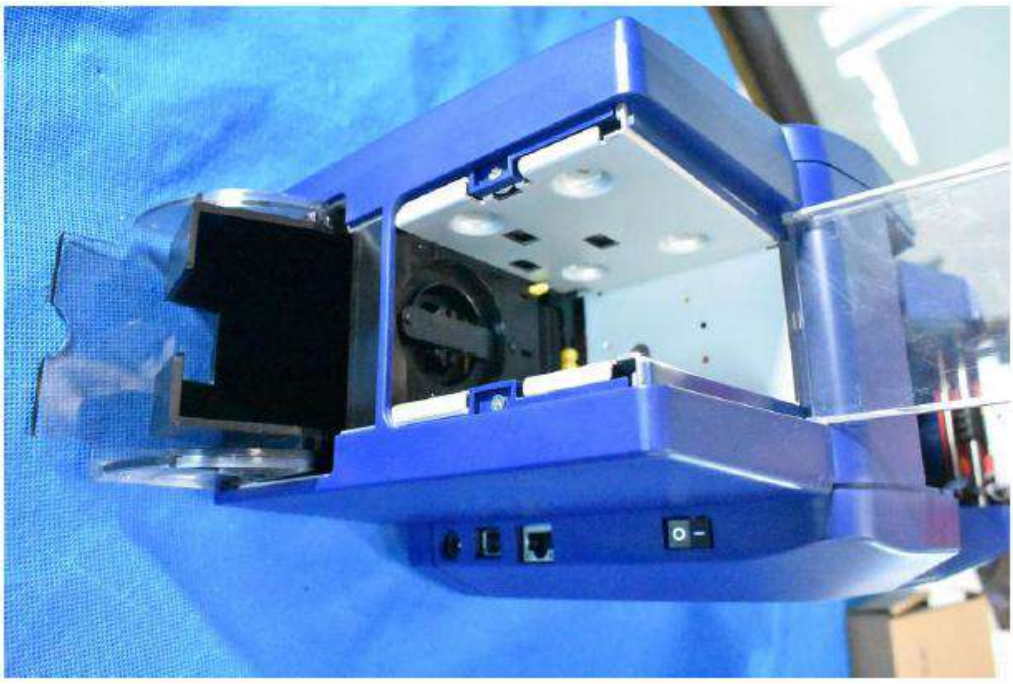
Test Set-up

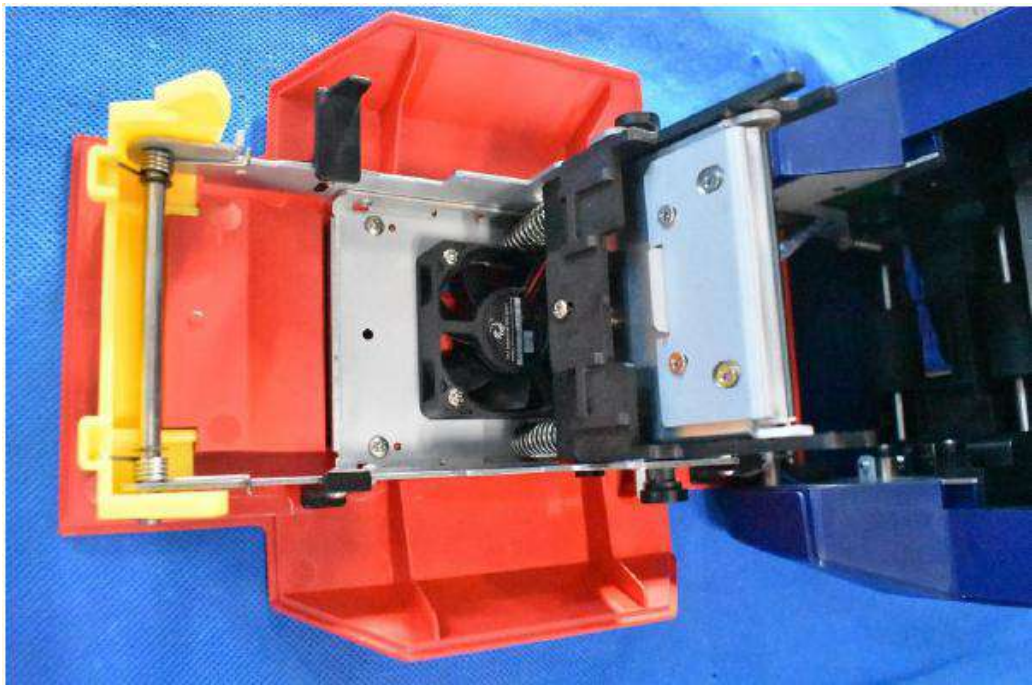


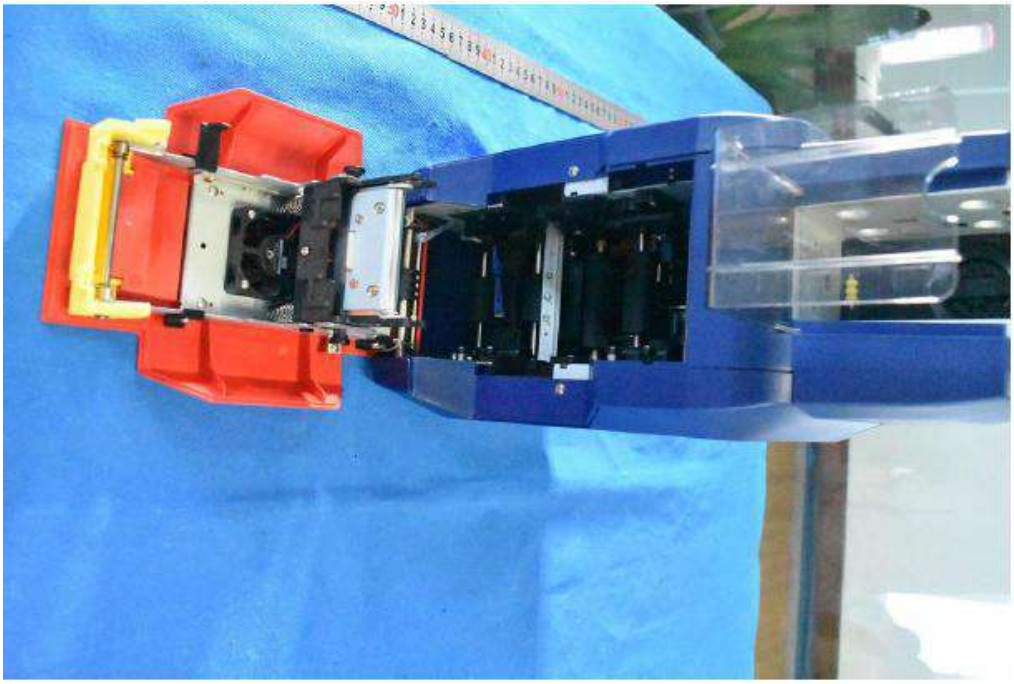
5. PHOTOGRAPHS OF THE EUT

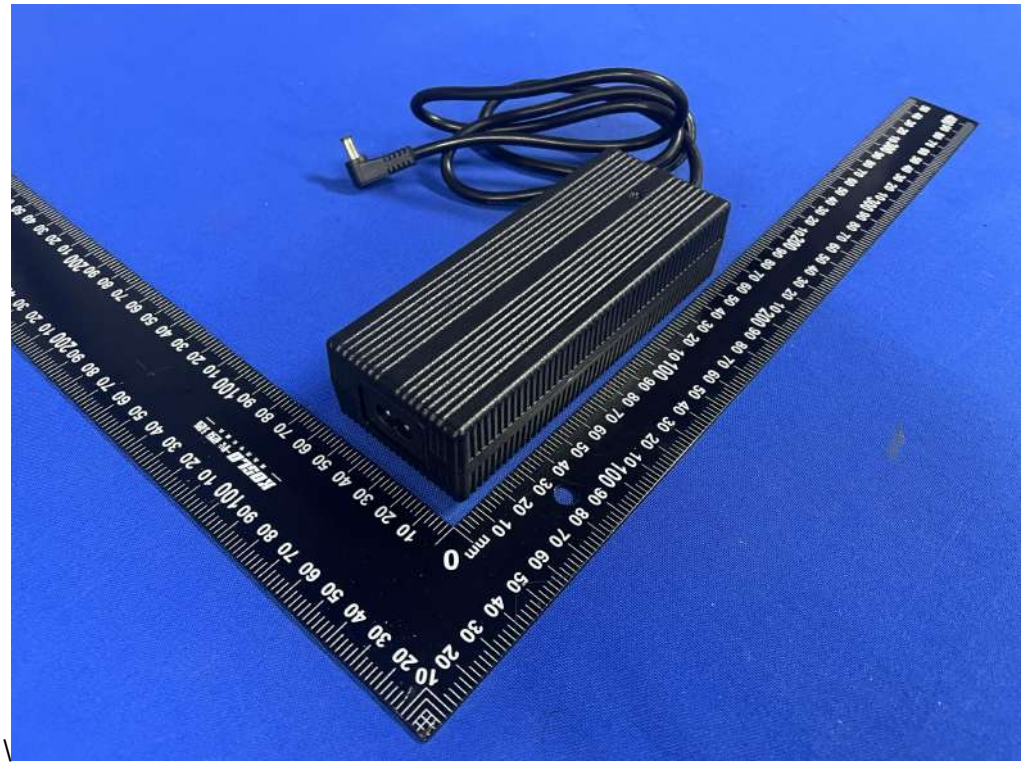


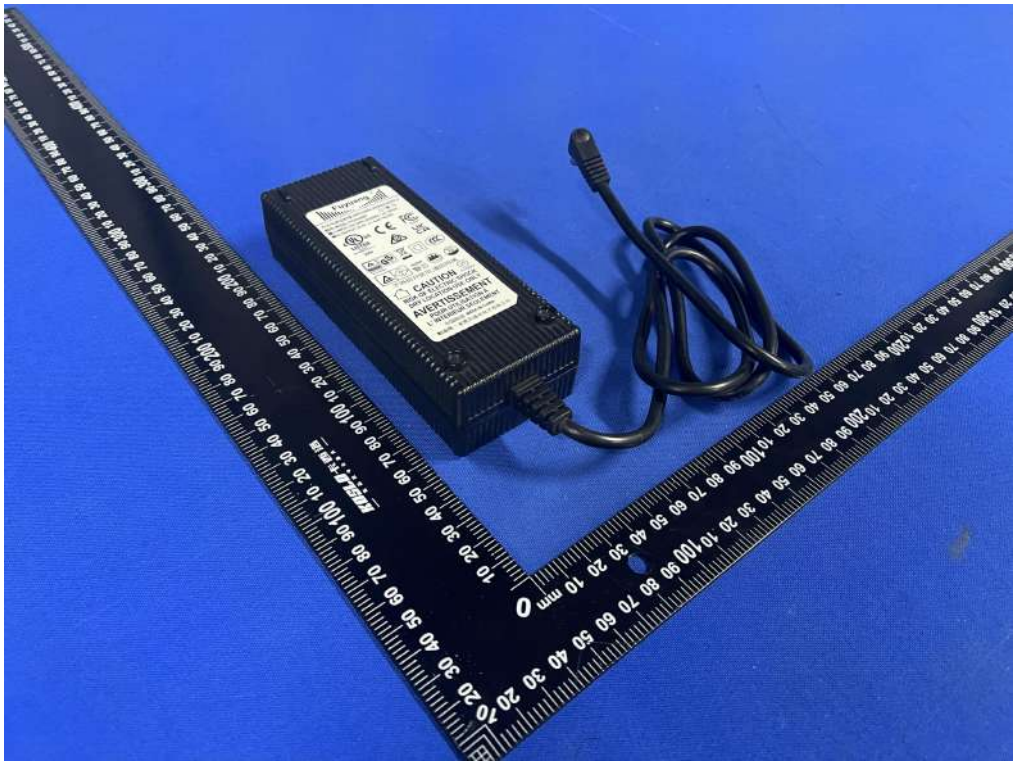






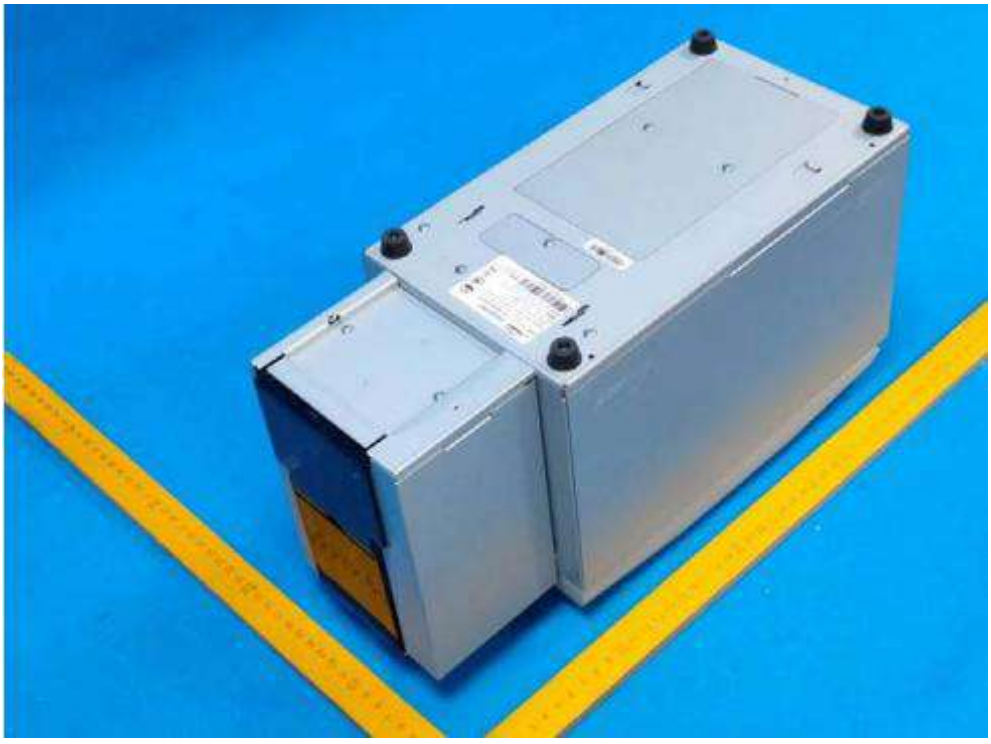







Fuyuang
开关电源适配器 SWITCHING POWER SUPPLY
型号 MODEL:FY2554000
输入INPUT:100-240V~50/60Hz 1.5A 150VA
输出 OUTPUT:25.5V ⎓ 4.0A 102.0W
LISTED
2304
UK CA
ROHS
警告
不得拆开使用,谨防雨淋.
CAUTION
RISK OF ELECTRIC SHOCK
DRY LOCATION USE ONLY
AVERTISSEMENT
POUR UTILISATION A
L' INTERIEUR SEULEMENT
中国制造 MADE IN CHINA
制造商：东莞市福洋电子有限公司


ADAPTER
RoHS
CAUTION:
FOR INDOOR USE ONLY
DRY LOCATION USE ONLY
RISK OF ELECTRIC SHOCK
DO NOT OPEN
MADE IN CHINA

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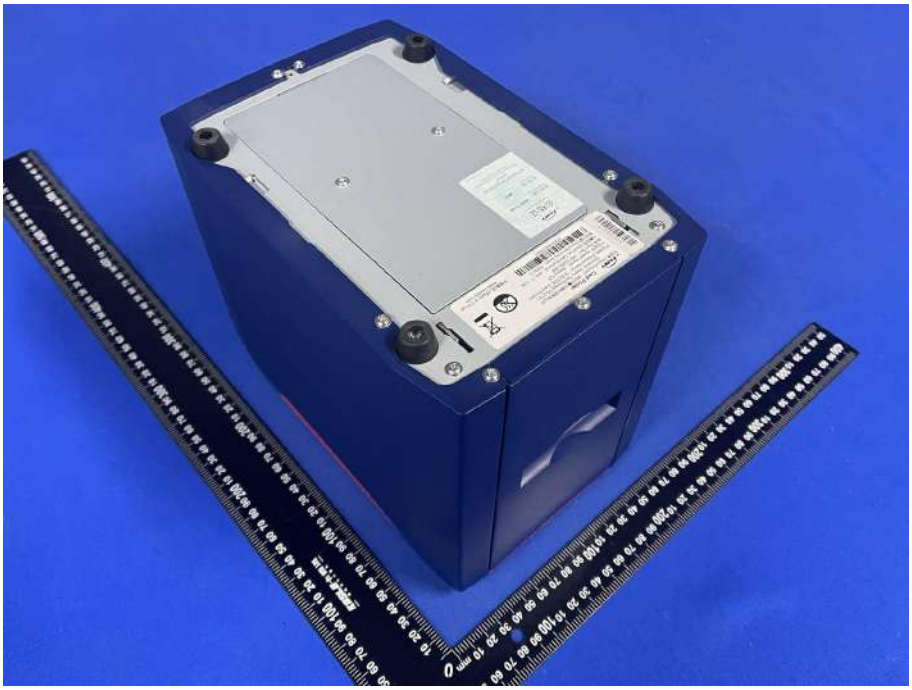

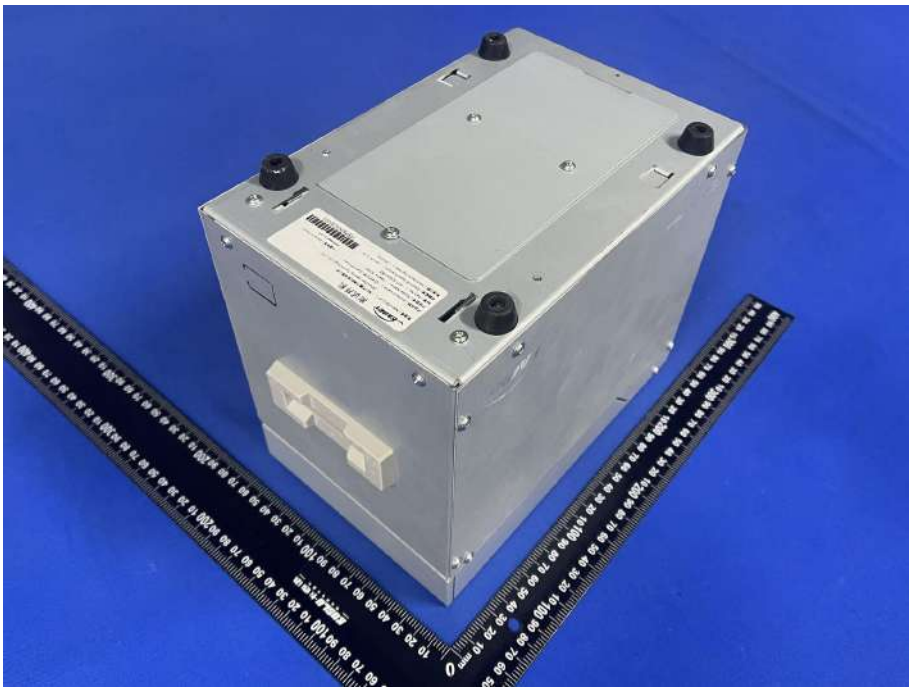

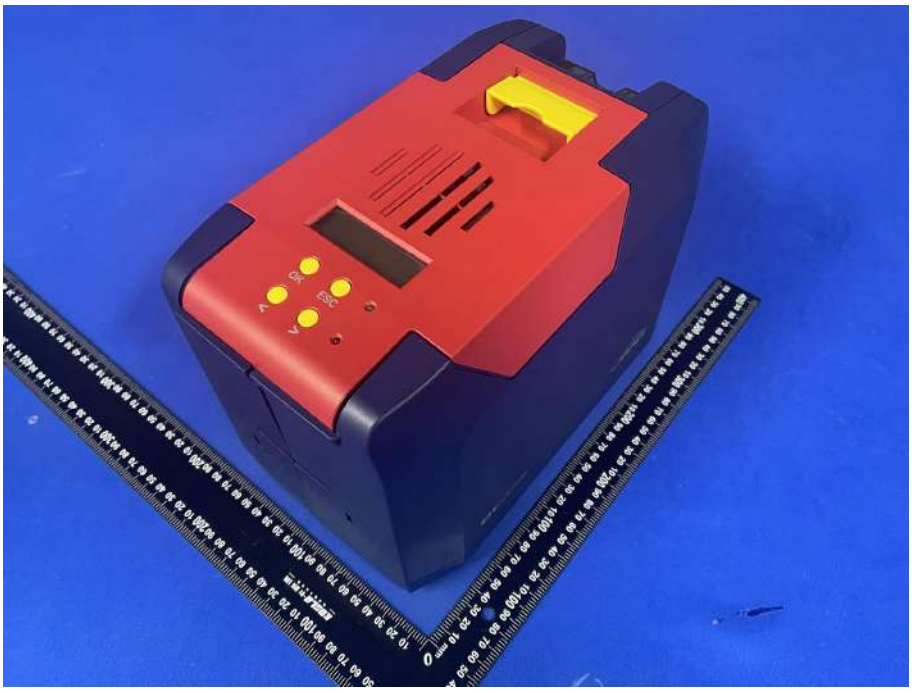

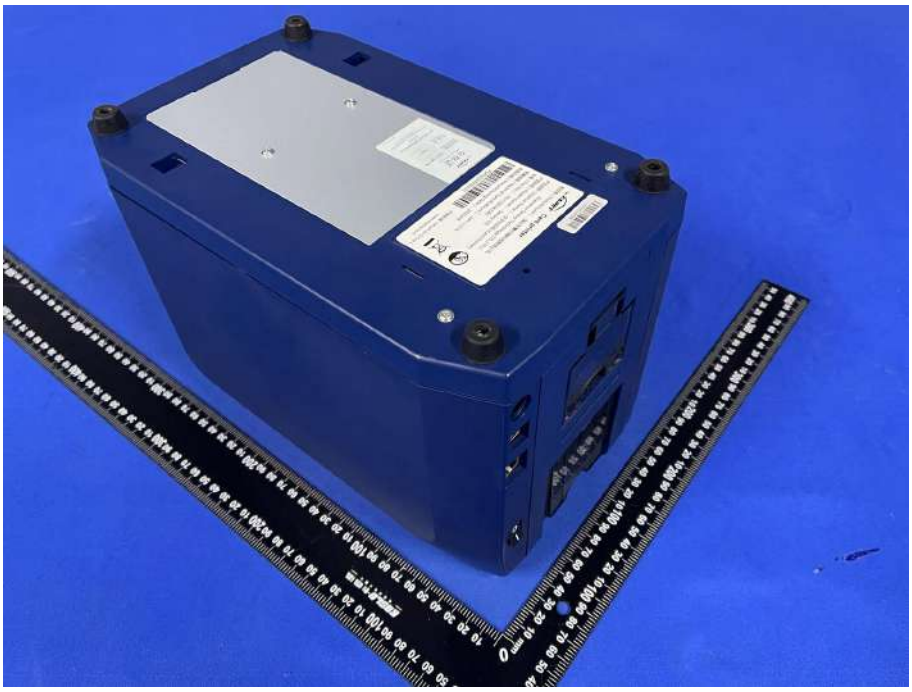

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