

# RoHS TEST REPORT

<b>Applicant</b>	Cook Cooper Electric (shanghai) Co., Ltd.
<b>Address</b>	Room A56, 4th Floor, Block B 505 Xinbei Road Minhang District Shanghai
<b>Manufacture</b>	Cook Cooper Electric (shanghai) Co., Ltd.
<b>Address</b>	Room A56, 4th Floor, Block B 505 Xinbei Road Minhang District Shanghai
<b>Sample Name</b>	Active Power Filter
<b>Model</b>	APF-400-50A-4L
<b>Serial Model</b>	APF-400-10A-4L, APF-400-15A-4L, APF-400-20A-4L, APF-400-30A-4L, APF-400-75A-4L, APF-400-100A-4L, APF-400-150A-4L
<b>Trademark</b>	Cooke kolb
<b>Date of Receipt</b>	Nov. 22, 2025
<b>Date of Test</b>	Nov. 23, 2025 to Nov. 27, 2025
<b>Date of Report</b>	Nov. 27, 2025
<b>Test laboratory</b>	Guangdong KAIXU Testing Technology Co., Ltd.
<b>Test location</b>	Room 215, Building 2, No. 123, Dongcheng Section, Guanlong Road, Dongcheng Street, Dongguan City, Guangdong Province, China

**Test Conclusion:**

Test Requested	Conclusion
As specified by client, to determine the Lead(Pb), Cadmium(Cd), Mercury(Hg), Hexavalent chromium(Cr <sup>6+</sup> ), Polybrominated Biphenyls(PBBs), Polybrominated Diphenyl Ethers(PBDEs), Dibutyl phthalate (DBP), Butyl benzyl phthalate(BBP), Bis(2-2thylhexyl) phthalate (DEHP) and Diisobutyl phthalate (DIBP) content in the submitted sample(s) in accordance with EU directive <b>2011/65/EU</b> and revised directive <b>(EU)2015/863 (RoHS2.0)</b> .	<b>PASS</b>

\*\*\*\*\* FOR FURTHER DETAILS, PLEASE REFER TO THE FOLLOWING PAGE(S) \*\*\*\*\*

Signed for and on behalf of KAIXU Test International

Tested by: Cathy

Approved by: Martin

**Test Method:**

1. With reference to IEC 62321-2:2021, review was performed for the samples disjointed from the submitted articles.
2. With reference to IEC 62321-1:2013, tests were performed for the samples indicated by the photos in this report
  - (1) With reference to IEC 62321-3-1:2013, screening by XRF spectroscopy.
  - (2) Wet chemical test method
    - a. With reference to IEC 62321-5:2013, determination of Cadmium by ICP-OES.
    - b. With reference to IEC 62321-5:2013, determination of Lead by ICP-OES.
    - c. With reference to IEC 62321-4:2013+A1:2017, determination of Mercury by ICP-OES.
    - d. With reference to IEC 62321-7-1:2015 & IEC 62321-7-2:2017, determination of Hexavalent chromium by Colorimetric method using UV-Vis.
    - e. With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.
3. With reference to IEC 62321-8: 2017, determination of phthalates by GC-MS.

**Test Result:**

Item	Results of XRF <sup>(1)</sup> (mg/kg)					Results of Wet Chemical Test <sup>(2)</sup> (mg/kg)						
	Pb	Cd	Hg	Cr	Br	Cr <sup>6+</sup>	PBBs	PBDEs	DBP	BBP	DEHP	DIBP
<b>Limit</b>	1000	100	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
<b>No.</b>												
1	BL	BL	BL	X	--	NEG	--	--	--	--	--	--
2	BL	BL	BL	X	--	NEG	--	--	--	--	--	--
3	BL	BL	BL	X	--	NEG	--	--	--	--	--	--
4	BL	BL	BL	X	--	NEG	--	--	--	--	--	--
5	BL	BL	BL	X	--	NEG	--	--	--	--	--	--
6	BL	BL	BL	BL	--	--	--	--	--	--	--	--
7	BL	BL	BL	BL	--	--	--	--	--	--	--	--
8	BL	BL	BL	BL	BL	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
9	BL	BL	BL	X	--	NEG	--	--	--	--	--	--
10	BL	BL	BL	X	--	NEG	--	--	--	--	--	--
11	BL	BL	BL	BL	BL	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
12	BL	BL	BL	BL	BL	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
13	BL	BL	BL	BL	BL	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
14	BL	BL	BL	BL	BL	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
15	BL	BL	BL	BL	BL	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
16	BL	BL	BL	BL	BL	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
17	BL	BL	BL	BL	--	--	--	--	--	--	--	--
18	BL	BL	BL	BL	BL	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
19	BL	BL	BL	X	--	NEG	--	--	--	--	--	--

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Item	Results of XRF <sup>(1)</sup> (mg/kg)					Results of Wet Chemical Test <sup>(2)</sup> (mg/kg)						
	Pb	Cd	Hg	Cr	Br	Cr <sup>6+</sup>	PBBs	PBDEs	DBP	BBP	DEHP	DIBP
<b>Limit</b>	1000	100	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
<b>No.</b>												
20	BL	BL	BL	BL	X	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
21	BL	BL	BL	BL	BL	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
22	BL	BL	BL	BL	--	--	--	--	--	--	--	--
23	BL	BL	BL	BL	--	--	--	--	--	--	--	--
24	BL	BL	BL	BL	BL	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
25	BL	BL	BL	BL	BL	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
26	BL	BL	BL	BL	BL	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
27	BL	BL	BL	BL	BL	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
28	BL	BL	BL	BL	BL	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
29	BL	BL	BL	BL	BL	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
30	BL	BL	BL	X	--	NEG	--	--	--	--	--	--
31	BL	BL	BL	BL	--	--	--	--	--	--	--	--
32	BL	BL	BL	BL	BL	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
33	BL	BL	BL	BL	--	--	--	--	--	--	--	--
34	BL	BL	BL	BL	--	--	--	--	--	--	--	--
35	BL	BL	BL	BL	--	--	--	--	--	--	--	--
36	BL	BL	BL	BL	--	--	--	--	--	--	--	--
37	BL	BL	BL	BL	--	--	--	--	--	--	--	--
38	BL	BL	BL	BL	BL	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
39	BL	BL	BL	X	--	NEG	--	--	--	--	--	--
40	BL	BL	BL	BL	--	--	--	--	--	--	--	--

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**Remark:**

(1)

Pb=Lead, Cd=Cadmium, Hg=Mercury, Cr=Chromium, Br=Bromine, PBBs=Polybrominated biphenyls, PBDEs=Polybrominated diphenyl ethers.

(2)

(a) It is the result on total Br while test item on restricted substances is PBBs/PBDEs. It is the result on total Cr while test item on restricted substances is Cr6+.

(b) Results are obtained by XRF for primary screening, and further chemical testing by ICP-OES (for Cd, Pb,Hg), UV-Vis (for Cr(VI)) and GC-MS (for PBBs, PBDEs) is recommended to be performed, if the concentration exceeds the below warning value according to IEC62321-3-1:2013(unit: mg/kg).

Element	Unit	Non-metal	Metal	Composite Material
Cd	mg/kg	BL≤70-3σ< X <130+3σ≤OL	BL≤70-3σ< X <130+3σ≤OL	BL≤50-3σ< X <150+3σ≤OL
Pb	mg/kg	BL≤700-3σ< X <1300+3σ≤OL	BL≤700-3σ< X <1300+3σ≤ OL	BL≤500-3σ< X <1500+3σ≤OL
Hg	mg/kg	BL≤700-3σ< X <1300+3σ≤OL	BL≤700-3σ< X <1300+3σ≤OL	BL≤500-3σ< X <1500+3σ≤OL
Cr	mg/kg	BL≤700-3σ< X	BL≤700-3σ< X	BL≤500-3σ< X
Br	mg/kg	BL≤300-3σ< X	--	BL≤250-3σ< X

(c) OL=Over Limit, BL=Below Limit, X=inconclusive, LOD=Limit of Detection, NA=not applicable

(d) The XRF screening test for RoHS elements-The reading may be different to the actual content in the sample be of non-uniformity composition

(3)

(a) mg/kg=ppm=0.0001%, N.D.=not detected(<MDL), NEG= Negative

(b) Unit and Method Detection Limit (MDL) in wet chemical test

Test Items	Pb	Hg	Cd	PBBs	PBDEs	DBP	BBP	DEHP	DIBP
Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
MDL	10	10	10	50	50	50	50	50	50

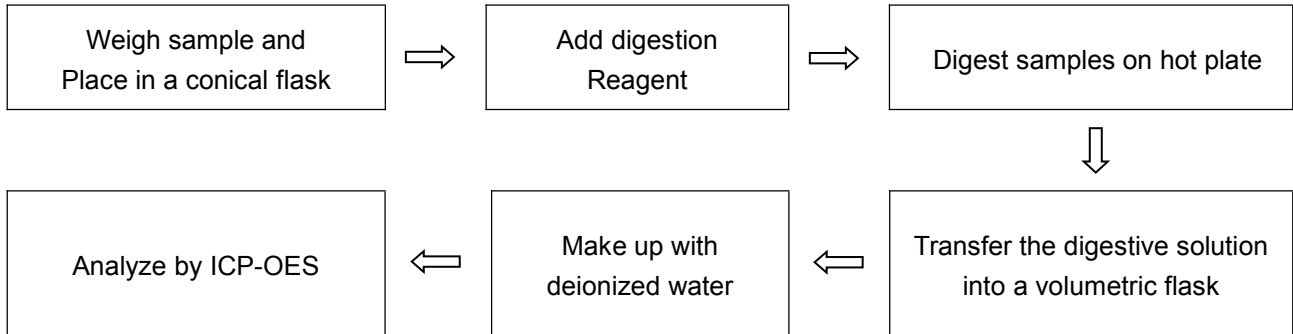
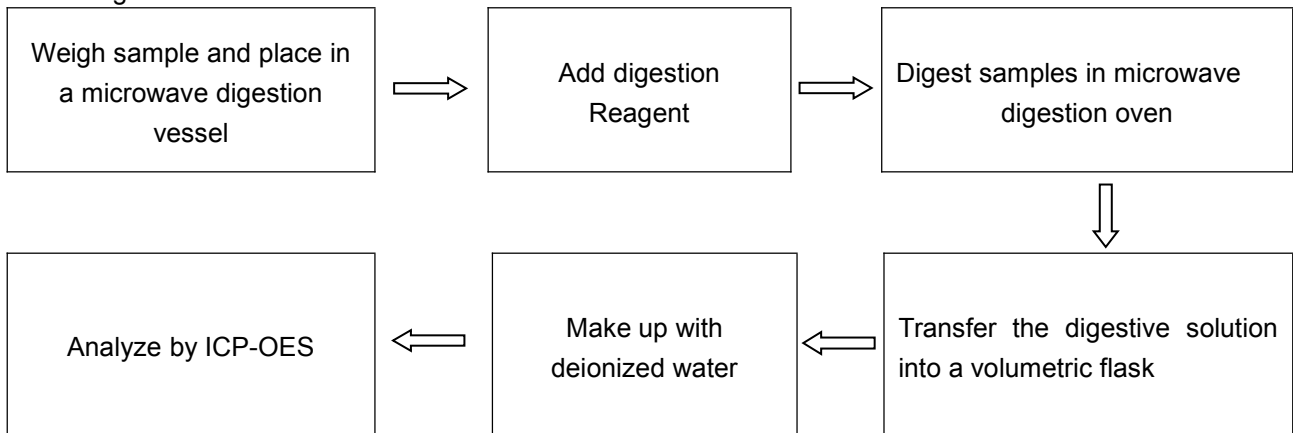
The MDL for single compound of PBBs &PBDEs is 50mg/kg, MDL of Cr<sup>6+</sup> for metal sample is 0.10µg/cm<sup>2</sup> and MDL of Cr<sup>6+</sup> for polymer & composite sample is 8mg/kg.

(c) Metal sample:

	CrVI concentration	Conclusion
1	> 0.13 µg/cm <sup>2</sup>	Positive
2	< 0.10 µg/cm <sup>2</sup>	Negative
3	0.10 µg/cm <sup>2</sup> ~ 0.13 µg/cm <sup>2</sup>	Inconclusive

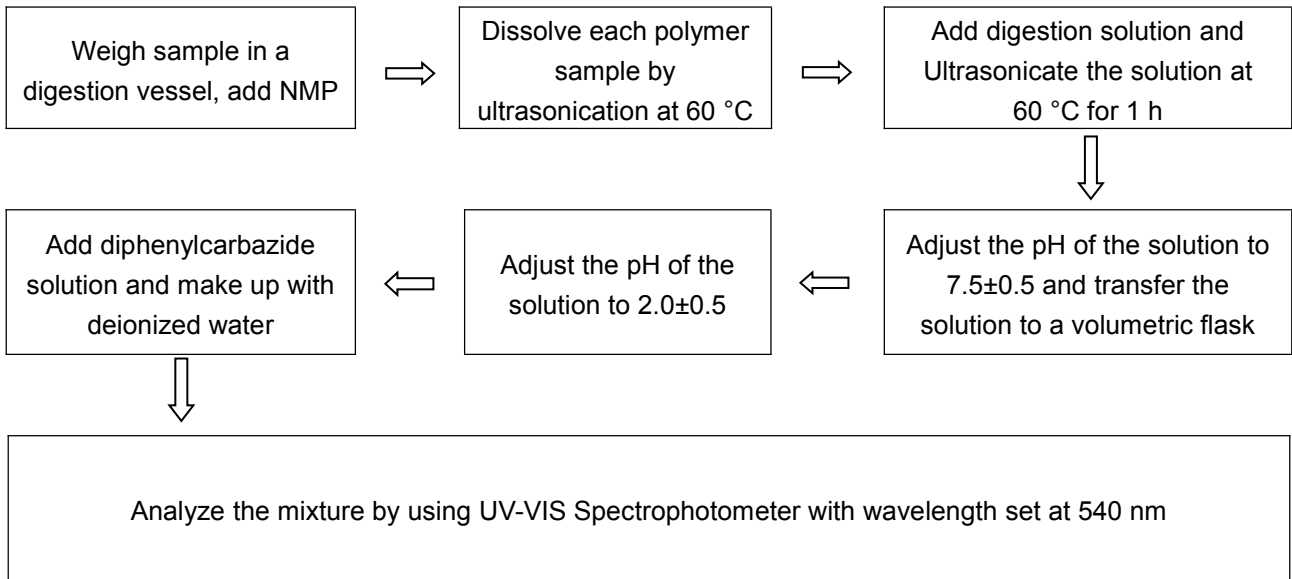
unavoidable coating variations may influence the determination

Information on storage conditions and production date of the tested sample is unavailable and thus Cr<sup>6+</sup> results represent status of the sample at the time of testing.

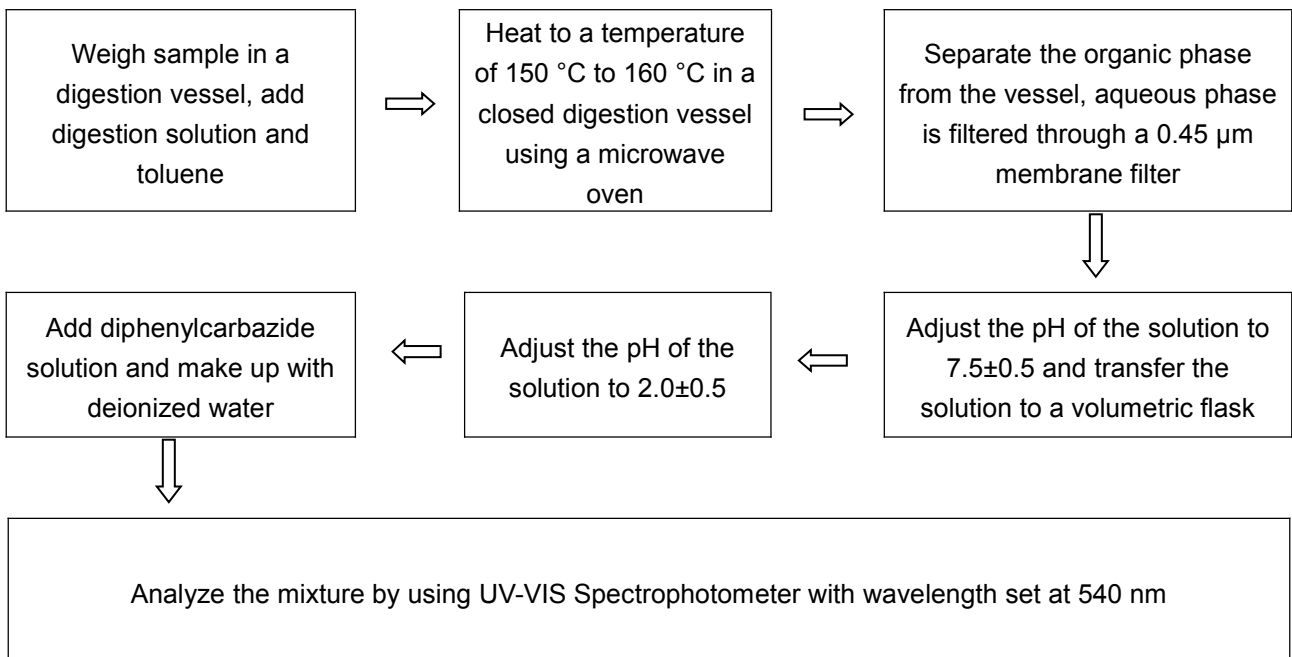
**Appendix I****Test Process:****1. Test for Cd/Pb Content****2. Test for Hg Content**

3. Test for Chromium (VI) Content

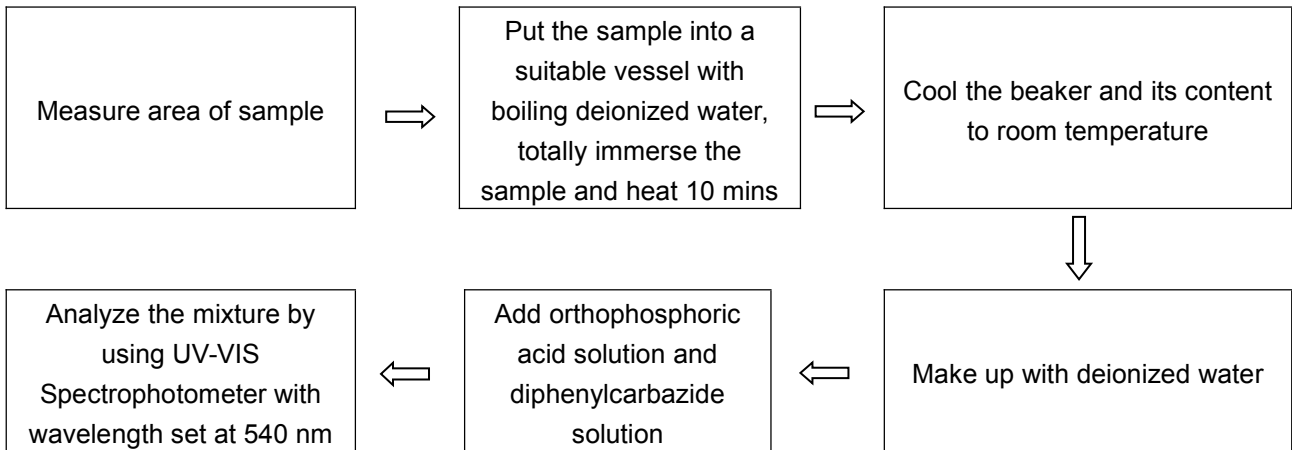
Soluble polymers:



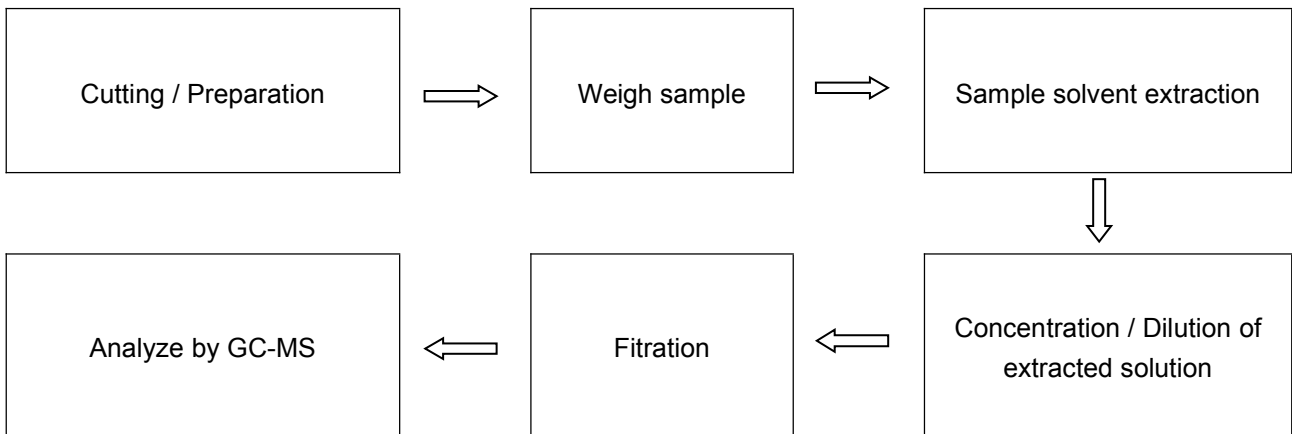
Insoluble/unknown polymers and electronics without Sb



Metal material



4. Test for DBP, BBP, DEHP, DIBP, PBBs, PBDEs Content



**Sample Description:**

Material No.	Description
1	Black metal casing
2	Black metal mesh cover
3	Black metal screw
4	Silver metal screw
5	Silver metal washer
6	terminal block
7	monitor
8	Ethernet port
9	USB-A interface
10	Silver metal switch
11	Black wire skin
12	Blue wire skin
13	Red wire skin
14	White wire skin
15	Yellow wire skin
16	Green wire skin
17	wire core
18	White plastic connector
19	Silver metal shell
20	Blue PCB
21	Black cooling fan
22	enameled wire
23	Blue magnetic ring
24	White glue
25	relay
26	transformer
27	electrolytic capacitor
28	Blue solid capacitor
29	Yellow solid capacitor
30	Yellow metal connector
31	fuse
32	IC

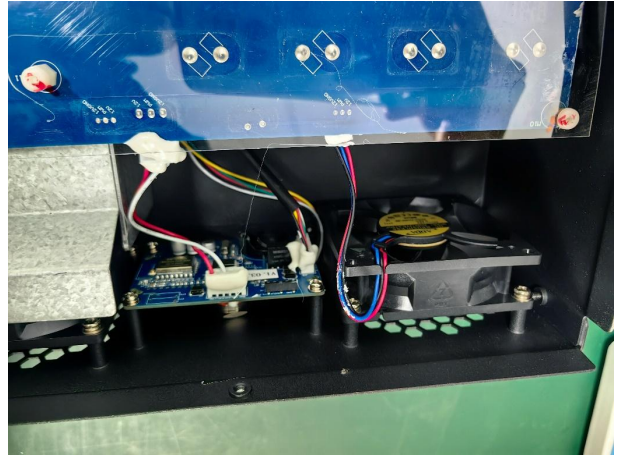
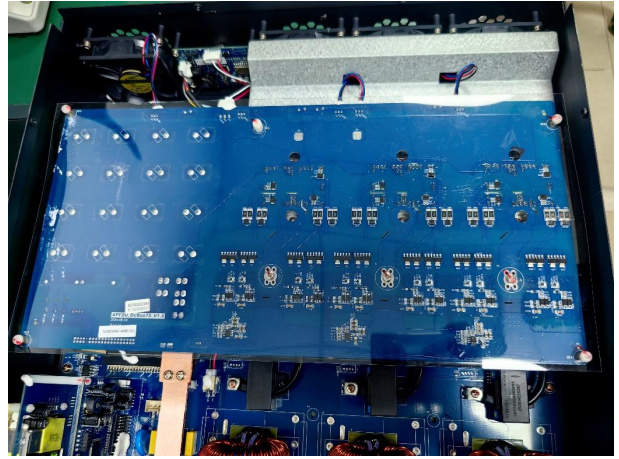
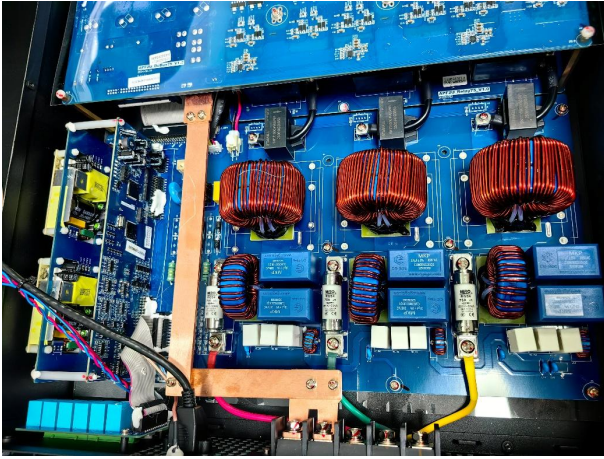
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Material No.	Description
33	capacitance
34	resistance
35	inductance
36	diode
37	transistor
38	White plastic connector
39	Metal pins
40	soldering

**Tested sample photos**







-----THE END OF REPORT-----