

Test Report

Client	:	SHENZHEN HIMAX ELECTRONICS CO., LTD
Address	:	Floor 501, Building B, Nantong Avenue No.5, Tongle Community, Baolong Street, Longgang, Shenzhen, China

The following sample(s) and sample information was/were submitted and identified by/on the behalf of the client

Sample Name	:	Battery+USB/ RS485 Cable
Model/P.O. No.	:	S0304/ S0345
Manufacturer	:	SHENZHEN HIMAX ELECTRONICS CO., LTD
Received Date	:	May 28, 2026
Test Period	:	May 28, 2026~Jun 09, 2026
Test Requested	:	EU RoHS 2011/65/EU and 2015/863/EU

Conclusion

-	Lead(Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium(Cr ⁶⁺)	PASS
-	Polybromobiphenyls (PBBs) & Polybromodiphenyl ethers (PBDEs)	PASS
-	DBP, BBP, DEHP, DIBP	PASS

For Further Details, Please Refer To the Following Page(s)

Approved by: Jane Liu

Date: Jun 16, 2026



ShenZhen Tiansu Calibration and Testing Co., Ltd.

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Test items	19	20	21	22	23	24	25	26	27
Pb	P	P	P	D	P	P	P	P	P
Cd	P	P	P	P	P	P	P	P	P
Hg	P	P	P	P	P	P	P	P	P
Cr	P	P	P	P	P	P	P	P	P
Br	P	P	P	/	/	P	P	P	P
Conclusion	P	P	P	D	P	P	P	P	P

Test items	28	29	30	31	32	33	34	35	36	37
Pb	P	P	P	P	P	D	P	P	P	P
Cd	P	P	P	P	P	P	P	P	P	P
Hg	P	P	P	P	P	P	P	P	P	P
Cr	P	P	P	P	P	P	P	P	D	P
Br	P	/	P	P	P	/	P	P	/	P
Conclusion	P	P	P	P	P	D	P	P	D	P

Test items	38	39	40	41	42	43	44	45	46	47
Pb	P	P	D	P	P	P	D	P	P	P
Cd	P	P	D	P	P	P	P	P	P	P
Hg	P	P	P	P	P	P	P	P	P	P
Cr	P	P	P	P	P	P	P	P	P	P
Br	/	P	/	P	P	D	/	D	D	D
Conclusion	P	P	D	P	P	D	D	D	D	D

Test items	48	49	50	51	52	53	54	55	56	57
Pb	P	P	P	P	P	P	P	P	P	P
Cd	P	P	P	D	P	P	P	P	P	P
Hg	P	P	P	P	P	P	P	P	P	P
Cr	P	P	P	P	P	P	P	P	P	P
Br	/	D	D	/	D	P	P	P	P	P
Conclusion	P	D	D	D	D	P	P	P	P	P

Test items	58	59	60	61	62	63	64	65	66	67
Pb	P	P	P	P	P	P	P	P	D	P
Cd	P	P	P	P	P	P	P	P	P	P
Hg	P	P	P	P	P	P	P	P	P	P
Cr	P	P	P	P	P	P	P	P	P	P
Br	/	P	P	P	P	/	P	/	/	P
Conclusion	P	P	P	P	P	P	P	P	D	P

Test items	68	69	70	71	72	73	74	75	76	77
Pb	P	P	P	P	D	P	P	P	P	P
Cd	P	P	P	P	P	P	P	P	P	P
Hg	P	P	P	P	P	P	P	P	P	P
Cr	P	P	P	P	P	P	P	P	P	P
Br	P	P	P	P	/	/	P	/	/	P
Conclusion	P	P	P	P	D	P	P	P	P	P

Note:

- It is the result on total Br while testing PBBs and PBDEs by XRF. It is the result on total Cr while testing Hexavalent Chromium by XRF.
- Results are obtained by XRF for primary screening, and chemical testing by ICP (for Cd, Pb, Hg), UV-Vis (for Cr(VI)) and GCMS (for PBBs, PBDEs) is recommended to be performed, if the concentration exceeds the below warning value according to IEC 62321-3-1:2013 (unit: mg/kg)

Element	Polymer	Metal	Composite Materials
Cd	$P \leq 70-3\sigma < D < 130+3\sigma \leq F$	$P \leq 70-3\sigma < D < 130+3\sigma \leq F$	$P \leq 50-3\sigma < D < 150+3\sigma \leq F$
Pb	$P \leq 700-3\sigma < D < 1300+3\sigma \leq F$	$P \leq 700-3\sigma < D < 1300+3\sigma \leq F$	$P \leq 500-3\sigma < D < 1500+3\sigma \leq F$
Hg	$P \leq 700-3\sigma < D < 1300+3\sigma \leq F$	$P \leq 700-3\sigma < D < 1300+3\sigma \leq F$	$P \leq 500-3\sigma < D < 1500+3\sigma \leq F$
Br	$P \leq 300-3\sigma < D$	/	$P \leq 250-3\sigma < F$
Cr	$P \leq 700-3\sigma < D$	$P \leq 700-3\sigma < D$	$P \leq 500-3\sigma < F$

- P=PASS, F=FAIL, D=DETECTED

- mg/kg = ppm = 0.0001%, /= Not Applicable

- Chemical test results:

Test results of Pb, Cd, Hg and Cr⁶⁺

Test Item(s)	MDL	Result(s) (mg/kg)				Limit (mg/kg)
		22	33	36	40	
Lead(Pb)	5mg/kg	15150	N.D.	N.D.	N.D.	1000
Cadmium(Cd)	5mg/kg	N.D.	N.D.	N.D.	N.D.	100
Mercury(Hg)	5mg/kg	N.D.	N.D.	N.D.	N.D.	1000
Hexavalent Chromium(Cr ⁶⁺)#1	5mg/kg	/	/	/	/	1000
Hexavalent Chromium(Cr ⁶⁺)#2	0.10µg/cm ²	N.D.	N.D.	N.D.	N.D.	/

Test Item(s)	MDL	Result(s) (mg/kg)				Limit (mg/kg)
		44	51	66	72	
Lead(Pb)	5mg/kg	3726	61	N.D.	N.D.	1000
Cadmium(Cd)	5mg/kg	N.D.	N.D.	N.D.	N.D.	100
Mercury(Hg)	5mg/kg	N.D.	N.D.	N.D.	N.D.	1000
Hexavalent Chromium(Cr ⁶⁺)#1	5mg/kg	/	/	/	/	1000
Hexavalent Chromium(Cr ⁶⁺)#2	0.10µg/cm ²	N.D.	N.D.	N.D.	N.D.	/

Note:

- mg/kg=ppm=parts per million;
- N.D.=Not Detected (<MDL); MDL=method detection limit;
- #1: For non-metal materials test.
- #2: For metal materials test:
 “Positive” indicates Cr⁶⁺ in a sample is detected above 0.13µg/cm²;
 “Negative” indicates Cr⁶⁺ in a sample is detected below 0.10µg/cm²;
- According to EU RoHS 2011/65/EU Annex III, the following components were exempt

No.	Exempted substances	Exempted items	Exempted value
22	Copper alloy	Lead(Pb)	4.0%
44	Copper alloy	Lead(Pb)	4.0%

Test results of PBBs and PBDEs

Test Item(s)	MDL	Result(s) (mg/kg)			Limit (mg/kg)
		43	45	46	
Monobromobiphenyl	5mg/kg	N.D.	N.D.	N.D.	/
Dibromobiphenyl	5mg/kg	N.D.	N.D.	N.D.	/
Tribromobiphenyl	5mg/kg	N.D.	N.D.	N.D.	/
Tetrabromobiphenyl	5mg/kg	N.D.	N.D.	N.D.	/
Pentabromobiphenyl	5mg/kg	N.D.	N.D.	N.D.	/
Hexabromobiphenyl	5mg/kg	N.D.	N.D.	N.D.	/
Heptabromobiphenyl	5mg/kg	N.D.	N.D.	N.D.	/
Octabromobiphenyl	5mg/kg	N.D.	N.D.	N.D.	/
Nonabromobiphenyl	5mg/kg	N.D.	N.D.	N.D.	/
Decabromodiphenyl	5mg/kg	N.D.	N.D.	N.D.	/
Polybromobiphenyl(PBBs)	/	N.D.	N.D.	N.D.	1000
Monobromobiphenyl ether	5mg/kg	N.D.	N.D.	N.D.	/
Bibromobiphenyl ether	5mg/kg	N.D.	N.D.	N.D.	/
Tribromobiphenyl ether	5mg/kg	N.D.	N.D.	N.D.	/
Tetrabromobiphenyl ether	5mg/kg	N.D.	N.D.	N.D.	/
Pentabromobiphenyl ether	5mg/kg	N.D.	N.D.	N.D.	/
Hexabromobiphenyl ether	5mg/kg	N.D.	N.D.	N.D.	/
Heptabromobiphenyl ether	5mg/kg	N.D.	N.D.	N.D.	/
Octabromobiphenyl ether	5mg/kg	N.D.	N.D.	N.D.	/
Nonabromobiphenyl ether	5mg/kg	N.D.	N.D.	N.D.	/
Decabromodiphenyl ether	5mg/kg	N.D.	N.D.	N.D.	/
Polybromodiphenyl ether(PBDEs)	/	N.D.	N.D.	N.D.	1000

Test Item(s)	MDL	Result(s) (mg/kg)				Limit (mg/kg)
		47	49	50	52	
Monobromobiphenyl	5mg/kg	N.D.	N.D.	N.D.	N.D.	/
Dibromobiphenyl	5mg/kg	N.D.	N.D.	N.D.	N.D.	/
Tribromobiphenyl	5mg/kg	N.D.	N.D.	N.D.	N.D.	/
Tetrabromobiphenyl	5mg/kg	N.D.	N.D.	N.D.	N.D.	/
Pentabromobiphenyl	5mg/kg	N.D.	N.D.	N.D.	N.D.	/
Hexabromobiphenyl	5mg/kg	N.D.	N.D.	N.D.	N.D.	/
Heptabromobiphenyl	5mg/kg	N.D.	N.D.	N.D.	N.D.	/
Octabromobiphenyl	5mg/kg	N.D.	N.D.	N.D.	N.D.	/
Nonabromobiphenyl	5mg/kg	N.D.	N.D.	N.D.	N.D.	/
Decabromodiphenyl	5mg/kg	N.D.	N.D.	N.D.	N.D.	/
Polybromobiphenyl(PBBs)	/	N.D.	N.D.	N.D.	N.D.	1000
Monobromobiphenyl ether	5mg/kg	N.D.	N.D.	N.D.	N.D.	/
Bibromobiphenyl ether	5mg/kg	N.D.	N.D.	N.D.	N.D.	/
Tribromobiphenyl ether	5mg/kg	N.D.	N.D.	N.D.	N.D.	/
Tetrabromobiphenyl ether	5mg/kg	N.D.	N.D.	N.D.	N.D.	/
Pentabromobiphenyl ether	5mg/kg	N.D.	N.D.	N.D.	N.D.	/
Hexabromobiphenyl ether	5mg/kg	N.D.	N.D.	N.D.	N.D.	/
Heptabromobiphenyl ether	5mg/kg	N.D.	N.D.	N.D.	N.D.	/
Octabromobiphenyl ether	5mg/kg	N.D.	N.D.	N.D.	N.D.	/
Nonabromobiphenyl ether	5mg/kg	N.D.	N.D.	N.D.	N.D.	/
Decabromodiphenyl ether	5mg/kg	N.D.	N.D.	N.D.	N.D.	/
Polybromodiphenyl ether(PBDEs)	/	N.D.	N.D.	N.D.	N.D.	1000

Note:

- mg/kg=ppm=parts per million;
- N.D.=Not Detected (<MDL);
- MDL=method detection limit.

Test Item(s)	MDL	Result(s) (mg/kg)					Limit (mg/kg)
		49	50	52	53	54	
Dibutyl phthalate(DBP)	30mg/kg	N.D.	N.D.	N.D.	N.D.	N.D.	1000
Butyl benzyl phthalate(BBP)	30mg/kg	N.D.	N.D.	N.D.	N.D.	N.D.	1000
Di (2-ethylhexyl) phthalate(DEHP)	30mg/kg	N.D.	N.D.	N.D.	N.D.	N.D.	1000
Diisobutyl phthalate (DIBP)	30mg/kg	N.D.	N.D.	N.D.	N.D.	N.D.	1000

Test Item(s)	MDL	Result(s) (mg/kg)					Limit (mg/kg)
		55	56	57	59	60	
Dibutyl phthalate(DBP)	30mg/kg	N.D.	N.D.	N.D.	N.D.	N.D.	1000
Butyl benzyl phthalate(BBP)	30mg/kg	N.D.	N.D.	N.D.	N.D.	N.D.	1000
Di (2-ethylhexyl) phthalate(DEHP)	30mg/kg	N.D.	N.D.	N.D.	N.D.	N.D.	1000
Diisobutyl phthalate (DIBP)	30mg/kg	N.D.	N.D.	N.D.	N.D.	N.D.	1000

Test Item(s)	MDL	Result(s) (mg/kg)					Limit (mg/kg)
		61	62	64	67	68	
Dibutyl phthalate(DBP)	30mg/kg	N.D.	N.D.	N.D.	N.D.	N.D.	1000
Butyl benzyl phthalate(BBP)	30mg/kg	N.D.	N.D.	N.D.	N.D.	N.D.	1000
Di (2-ethylhexyl) phthalate(DEHP)	30mg/kg	N.D.	N.D.	N.D.	N.D.	N.D.	1000
Diisobutyl phthalate (DIBP)	30mg/kg	N.D.	N.D.	N.D.	N.D.	N.D.	1000

Test Item(s)	MDL	Result(s) (mg/kg)					Limit (mg/kg)
		69	70	71	74	77	
Dibutyl phthalate(DBP)	30mg/kg	N.D.	N.D.	N.D.	N.D.	N.D.	1000
Butyl benzyl phthalate(BBP)	30mg/kg	N.D.	N.D.	N.D.	N.D.	N.D.	1000
Di (2-ethylhexyl) phthalate(DEHP)	30mg/kg	N.D.	N.D.	N.D.	N.D.	N.D.	1000
Diisobutyl phthalate (DIBP)	30mg/kg	N.D.	N.D.	N.D.	N.D.	N.D.	1000

Note:

- mg/kg=ppm=parts per million;
- N.D.=Not Detected (<MDL);
- MDL=method detection limit.

Test components:

1	Black plastic	2	Black plastic shell
3	Black plastic label	4	Silver plastic label
5	Black plastic	6	Black plastic
7	Gold metal	8	Black plastic
9	Grey plastic	10	Black plastic
11	Transparent plastic	12	Black plastic wire
13	Black plastic	14	Silver metal
15	White plastic	16	Yellow plastic
17	Grey plastic	18	Black plastic
19	Blue plastic	20	Rose-red plastic wire
21	Black plastic wire	22	Gold metal
23	Silver metal	24	Black latex
25	Black plastic cover	26	Blue plastic wire
27	Black plastic wire	28	Red plastic wire
29	Silver metal core	30	Beige plastic
31	Blue plastic wire	32	Black plastic wire
33	Silver metal	34	Red plastic wire
35	White plastic wire	36	Silver metal screw
37	Black plastic	38	Silver metal
39	Grey rubber mud	40	Grey metal inductor
41	Black plastic	42	White latex
43	MOS transistor	44	MOS tube base
45	Triode tube	46	IC
47	Patch resistance	48	Copper colored metal
49	Patch capacitance	50	Diode
51	Solder	52	PCB
53	Black sponge	54	Blue plastic
55	Green paper	56	Transparent plastic
57	Yellow plastic	58	Silver metal
59	White plastic	60	Red paper

61	Grey plastic	62	Blue plastic
63	Silver metal shell	64	Beige plastic circle
65	Silver metal cap	66	Silver white metal
67	Beige plastic circle	68	Green tape
69	White plastic diaphragm	70	Yellow tape
71	Green tape	72	Positive electrode lug
73	Aluminum foil	74	Positive electrode powder
75	Negative pole lug	76	Copper foil
77	Negative electrode powder		

Chemical Test Process

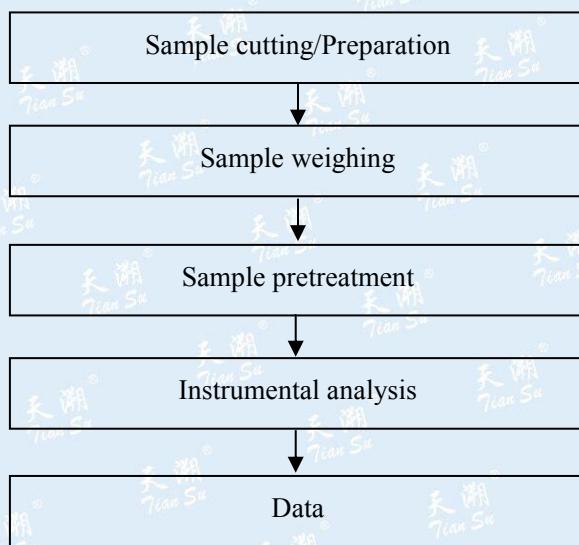
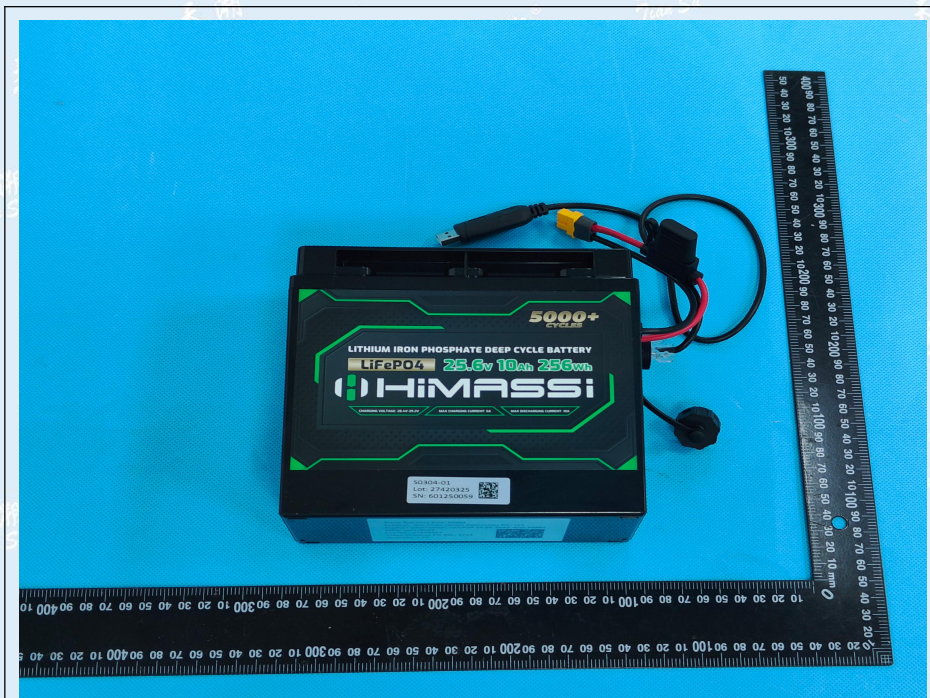
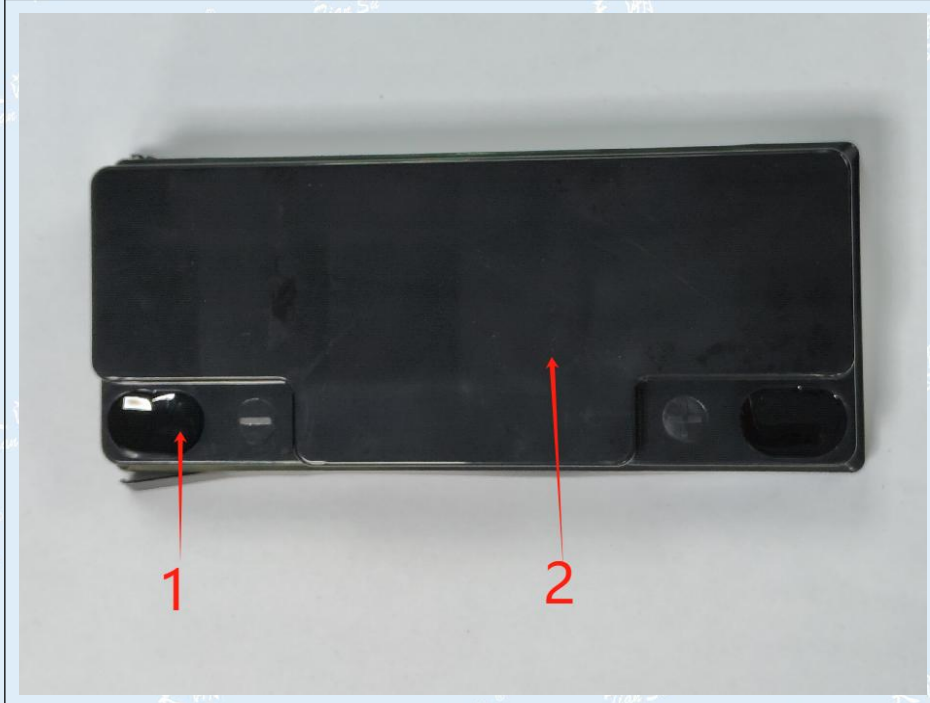
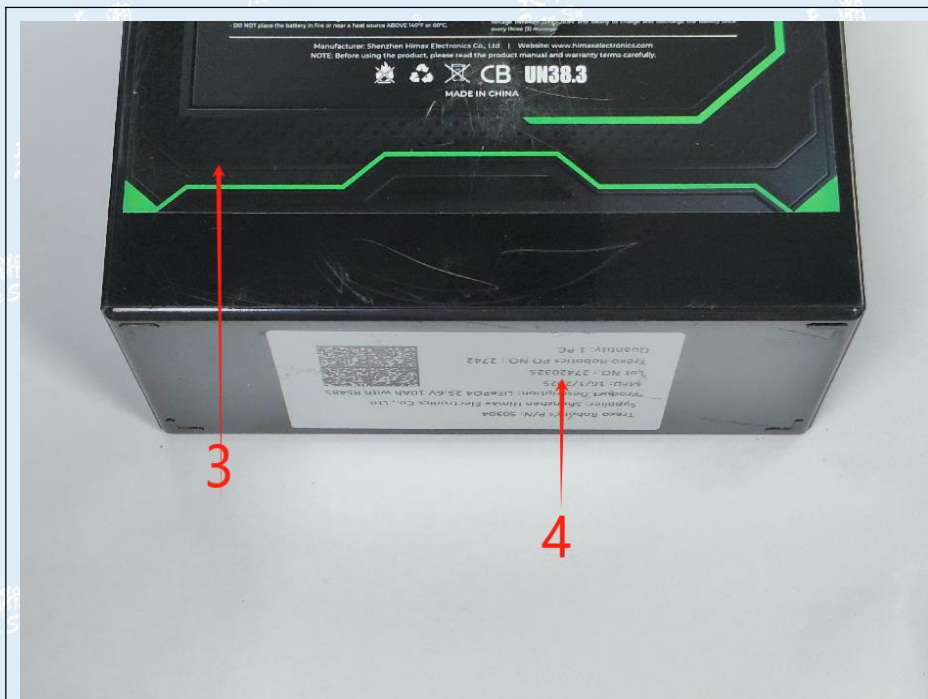


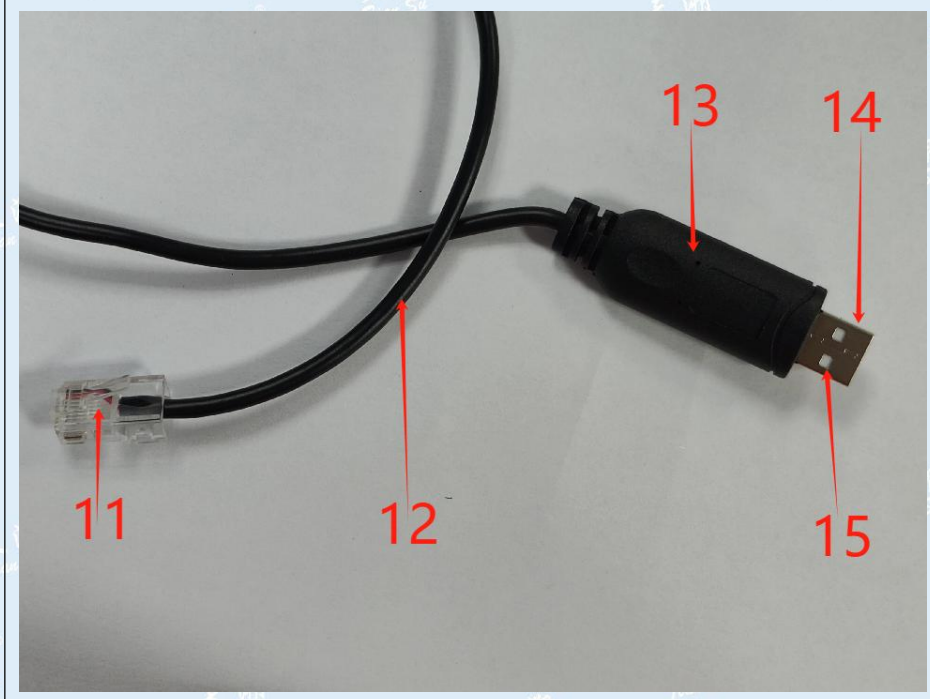
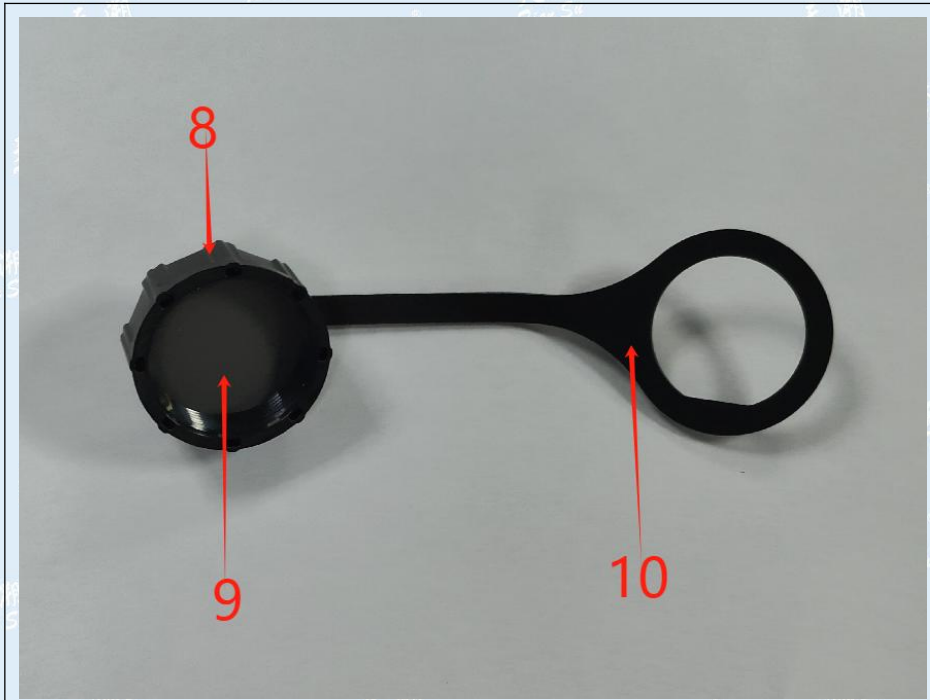
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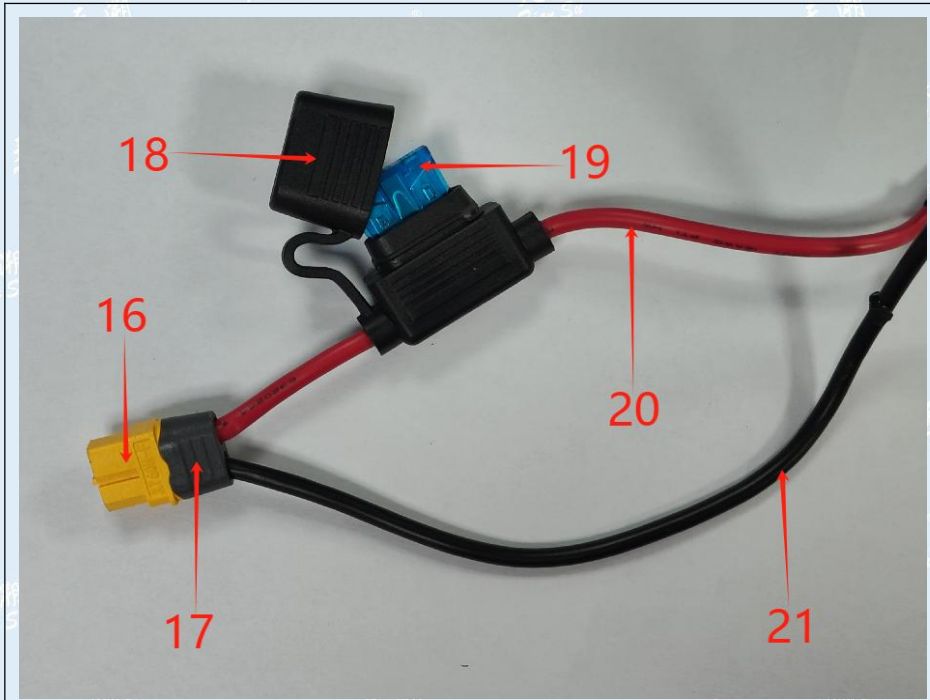


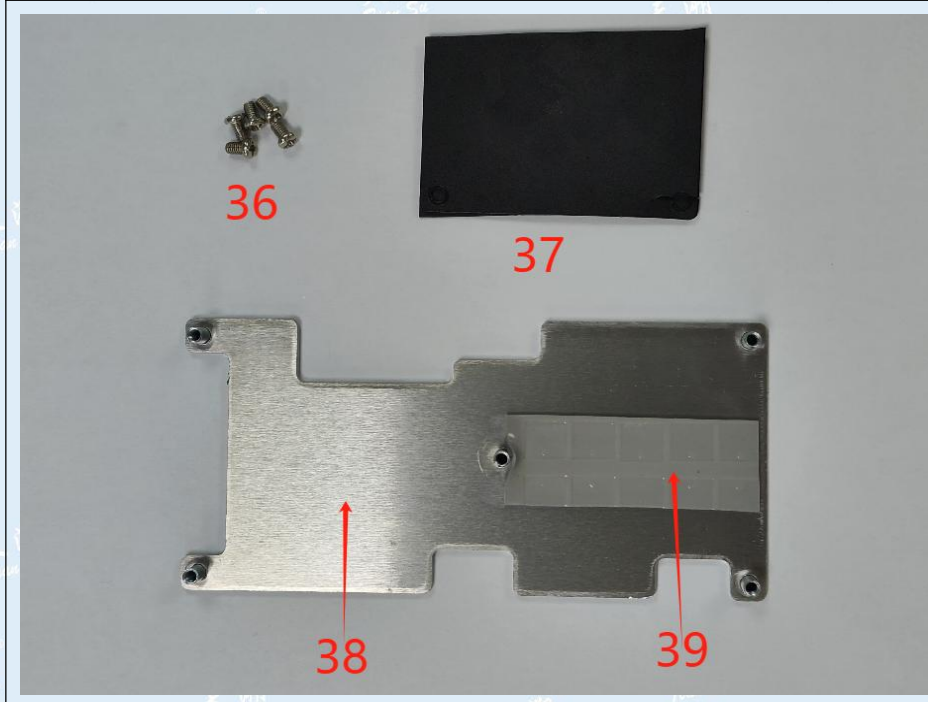
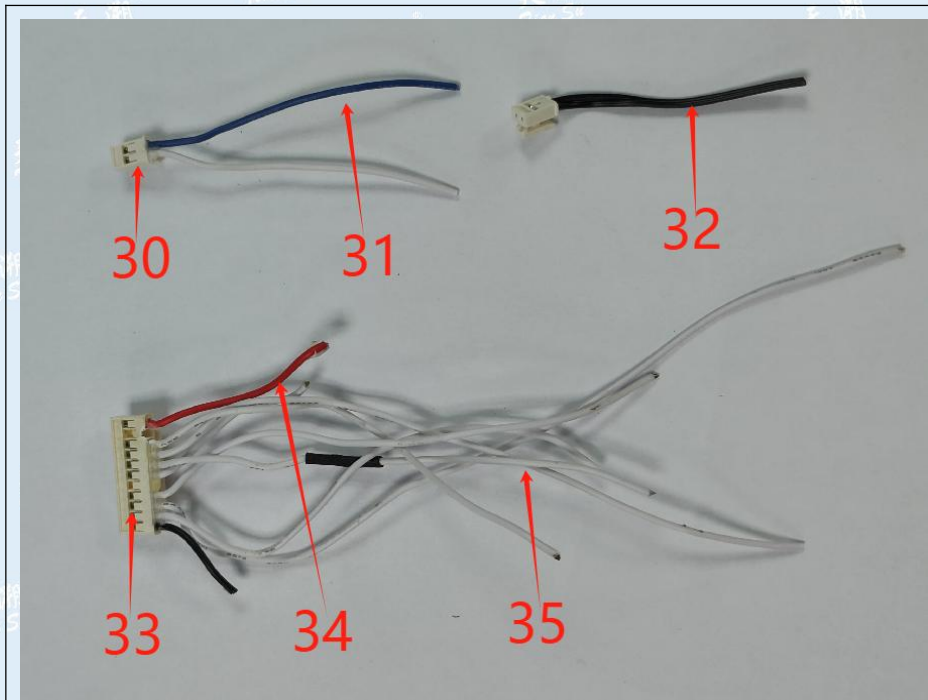
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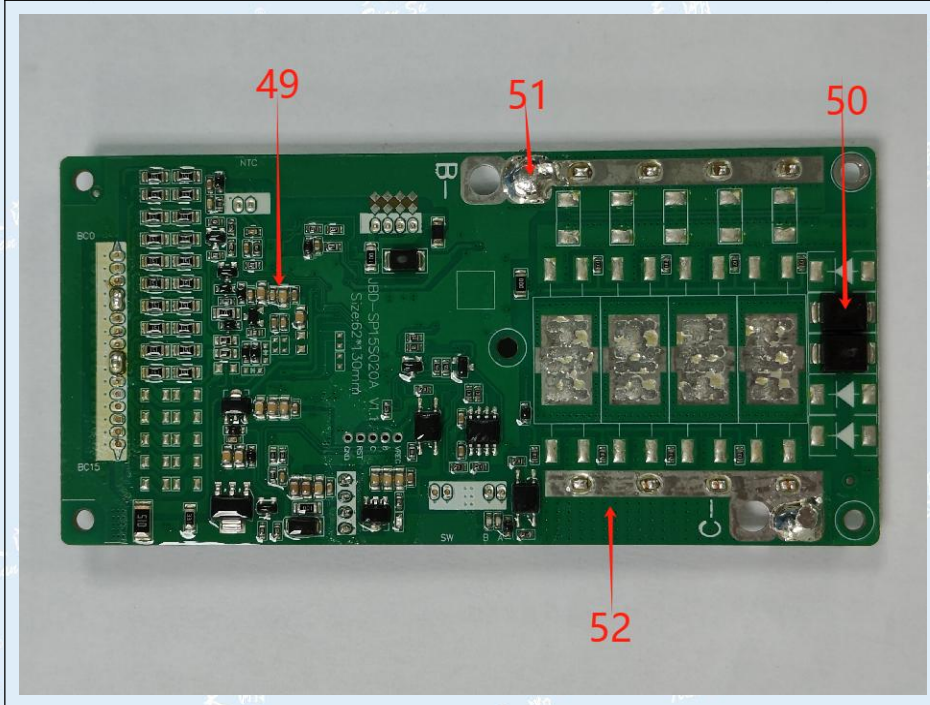
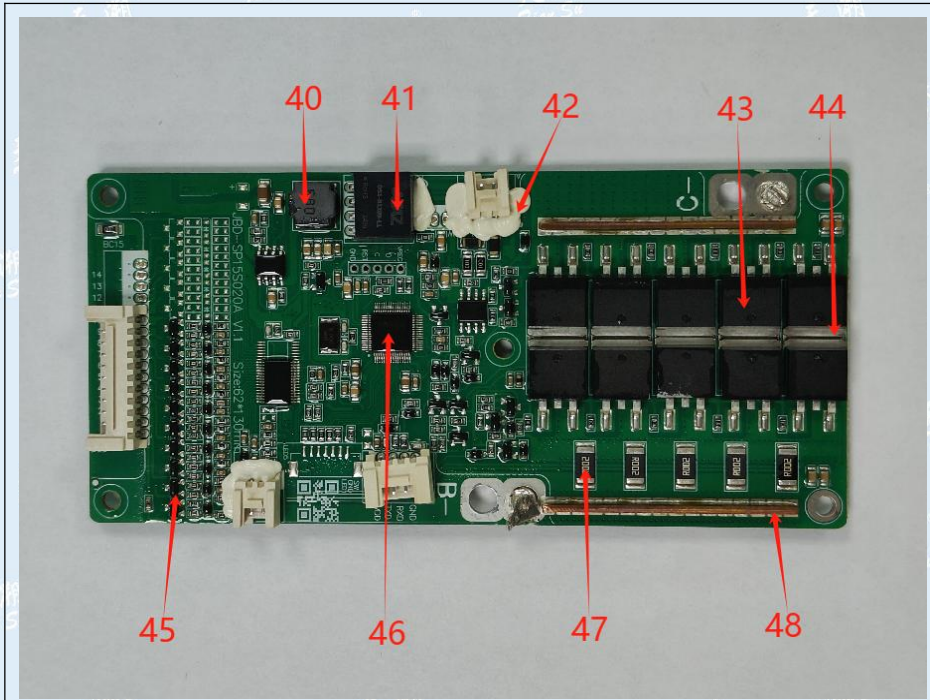


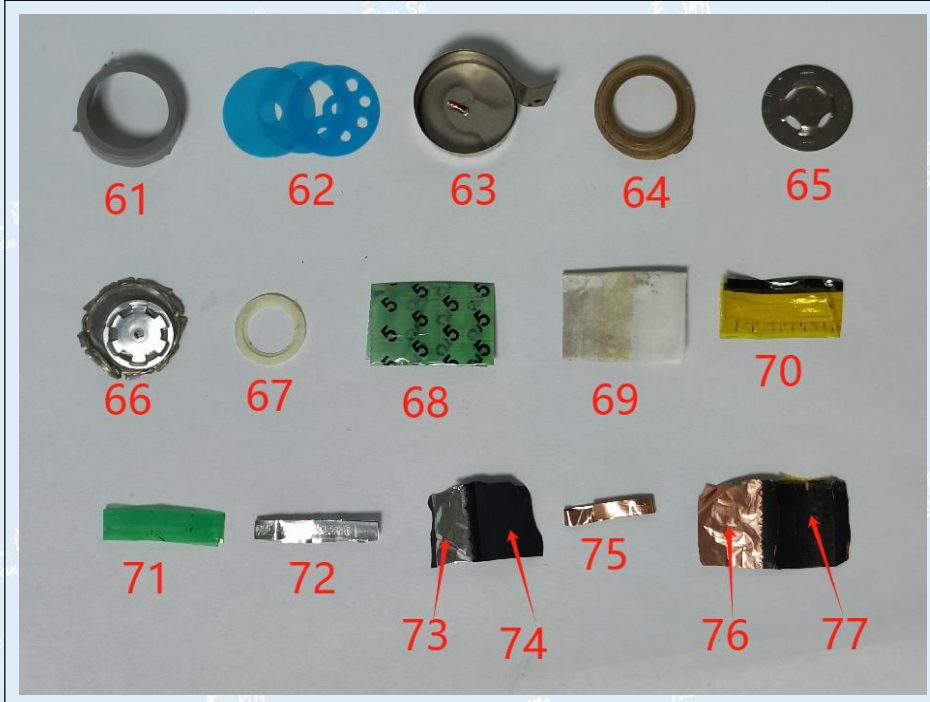
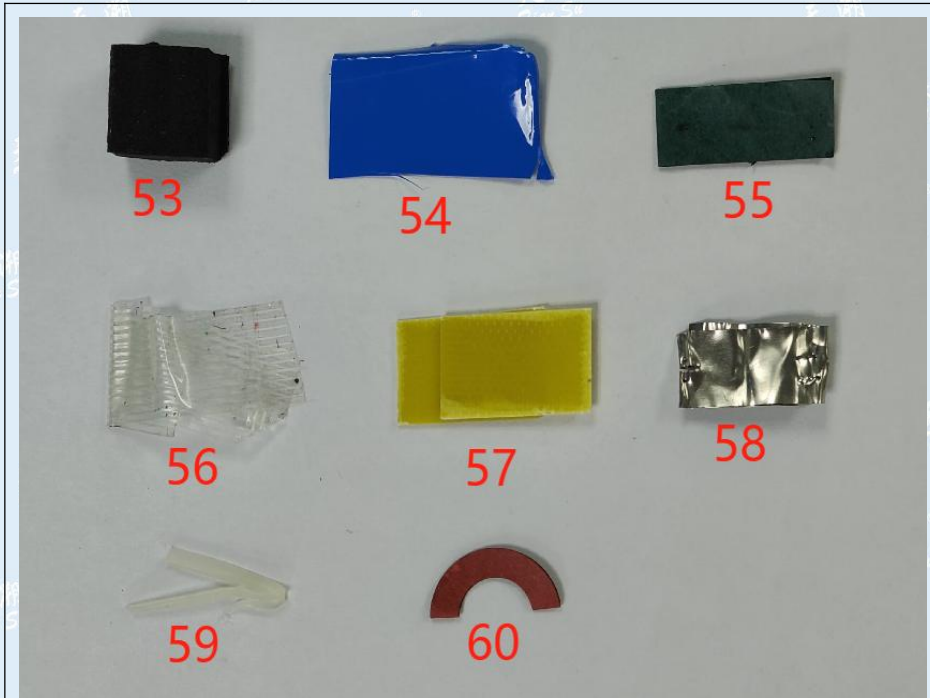












***** End of report *****

This report is invalid without the Special Seal of Tiansu. This report shall not be altered, increased or deleted. The results shown in this report refer only to the sample(s) tested.