TEST REPORT

Report No.	:	WTF22F05103636A1C
Applicant	:	Quair Company Limited
Address	:	7B, Mai Hong Industrial Building, 160 Wai Yip Street, Kwun Tong, Kowloon, Hong Kong
Manufacturer	:	Foshan City Shunde Poly-Products Electrical Limited.
Address	:	No.1 Shi Long Road, Xintang Village, Shi Long Industrial Park, Xintang Village Committee, Lun Jiao Street Office, Shunde District, Foshan City, Guangdong Province, P.R. China
Sample Name	:	Portable Purifier
Sample Model	:	PG-0221
Date of Receipt sample	:	2022-05-25 & 2022-07-11
Testing period	:	2022-05-25 to 2022-06-20 & 2022-07-11 to 2022-07-19
Date of Issue	:	2022-07-22
Test Result	:	Refer to next page (s)

Prepared By:
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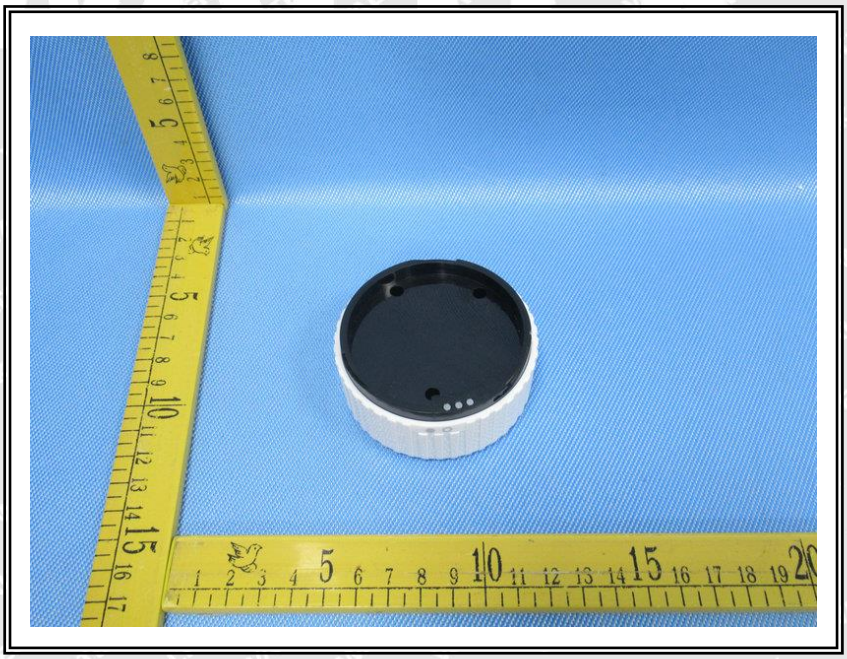
Signed for and on behalf of
Waltek Testing Group (Foshan) Co., Ltd.

Swing.Liang

Test Requested	:	In accordance with the RoHS Directive 2011/65/EU and its amendment (EU) No. 2015/863.
Test Method	:	1) With reference to IEC 62321-2:2021, disassembly, disjunction and mechanical sample preparation 2) With reference to IEC 62321-3-1:2013, screening - Lead, mercury, cadmium, total chromium and total bromine by X-ray fluorescence spectrometry 3) With reference to IEC 62321-4:2013+AMD1:2017 CSV, determination of Mercury by ICP-OES 4) With reference to IEC 62321-5:2013, determination of Lead and Cadmium by ICP-OES 5) With reference to IEC 62321-7-2: 2017 and IEC 62321-7-1: 2015, determination of Hexavalent Chromium by UV-Vis 6) With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS 7) With reference to IEC 62321-8:2017, determination of Phthalates content by GC-MS.
Test Conclusion	:	**Pass** (Based on the performed tests on the submitted samples, the results comply with the RoHS Directive 2011/65/EU and its amendment (EU) No. 2015/863)

Sample Photo(s):



Test Results:

1. Lead, Mercury, Cadmium, Hexavalent Chromium, PBBs and PBDEs

Part No.	Part Description	Result of XRF					Result of Wet Chemical Testing (mg/kg)
		Cd	Pb	Hg	Cr	Br	
1	Black plastic wire jacket	BL	BL	BL	BL	BL	NA
2	Black plastic jacket of USB plug	BL	BL	BL	BL	BL	NA
3	Silvery metal shell of USB plug	BL	BL	BL	BL	BL	NA
4	Silvery metal pin of USB plug	BL	BL	BL	BL	BL	NA
5	Solder of USB plug	BL	BL	BL	BL	BL	NA
6	White plastic sheet of USB plug	BL	BL	BL	BL	BL	NA
7	Chip capacitor	BL	BL	BL	BL	BL	NA
8	Chip resistor	BL	BL	BL	BL	BL	NA
9	Green PCB	BL	BL	BL	BL	IN	PBBs : ND PBDEs : ND
10	Silvery metal shell of plug	BL	BL	BL	IN	BL	Cr^{6+} : Negative
11	Silvery metal pin of plug	BL	BL	BL	BL	BL	NA
12	Black plastic sheet of plug	BL	BL	BL	BL	BL	NA
13	Solder of plug	BL	BL	BL	BL	BL	NA
14	Red plastic wire covering	BL	BL	BL	BL	BL	NA
15	Black plastic wire covering	BL	BL	BL	BL	BL	NA
16	Coppery metal wire	BL	BL	BL	BL	BL	NA
17	Black plastic shell	BL	BL	BL	BL	IN	PBBs : ND PBDEs : ND
18	Black plastic sleeve	BL	BL	BL	BL	BL	NA
19	White paper net with black carbon dust	BL	BL	BL	BL	BL	NA

Part No.	Part Description	Result of XRF					Result of Wet Chemical Testing (mg/kg)
		Cd	Pb	Hg	Cr	Br	
20	Black sponge adhesive sheet	BL	BL	BL	BL	BL	NA
21	Black plastic ring	BL	BL	BL	BL	BL	NA
22	Transparent glue	BL	BL	BL	BL	BL	NA
23	Brown FPC	BL	BL	BL	BL	BL	NA
24	Transparent glass with black plating	BL	BL	BL	BL	BL	NA
25	Black plastic adhesive sheet	BL	BL	BL	BL	BL	NA
26	Silvery glass sheet	BL	BL	BL	BL	BL	NA
27	Transparent glass sheet	BL	BL	BL	BL	BL	NA
28	Semi-transparent plastic sheet	BL	BL	BL	BL	BL	NA
29	Black plastic holder	BL	BL	BL	BL	IN	PBBs : ND PBDEs : ND
30	White plastic gasket	BL	BL	BL	BL	BL	NA
31	Silvery metal shaft	BL	BL	BL	IN	BL	Cr^{6+} : Negative
32	Yellow plastic wire covering	BL	BL	BL	BL	BL	NA
33	Red plastic wire covering	BL	BL	BL	BL	BL	NA
34	Silvery plastic adhesive label with black printing	BL	BL	BL	BL	BL	NA
35	Black plastic covering	BL	BL	BL	BL	BL	NA
36	Silvery metal wire	BL	BL	BL	BL	BL	NA
37	Black plastic bobbin	BL	BL	BL	BL	IN	PBBs : ND PBDEs : ND
38	Coppery metal winding	BL	BL	BL	BL	BL	NA
39	Silvery metal sheet	BL	BL	BL	IN	BL	Cr^{6+} : Negative

Part No.	Part Description	Result of XRF					Result of Wet Chemical Testing (mg/kg)
		Cd	Pb	Hg	Cr	Br	
40	Black plastic fan	BL	BL	BL	BL	IN	PBBs : ND PBDEs : 129
41	Silvery metal shell of bearing	BL	BL	BL	IN	BL	Cr^{6+} : Negative
42	Silvery metal cover of bearing	BL	BL	BL	IN	BL	Cr^{6+} : Negative
43	Silvery metal bead of bearing	BL	BL	BL	IN	BL	Cr^{6+} : Negative
44	Brown plastic gasket of bearing	BL	BL	BL	BL	BL	NA
45	Silvery metal shell	BL	BL	BL	IN	BL	Cr^{6+} : Negative
46	Dark grey magnetic ring	BL	BL	BL	BL	BL	NA
47	Solder	BL	BL	BL	BL	BL	NA
48	Chip IC	BL	BL	BL	BL	BL	NA
49	Green PCB	BL	BL	BL	BL	BL	NA
50	Chip resistor	BL	BL	BL	BL	BL	NA
51	Chip capacitor	BL	BL	BL	BL	BL	NA
52	White plastic wire covering with red printing	BL	BL	BL	BL	BL	NA
53	Golden metal base of socket	BL	BL	BL	BL	BL	NA
54	Golden metal pin of socket	BL	BL	BL	BL	BL	NA
55	Silvery metal spring of socket	BL	BL	BL	IN	BL	Cr^{6+} : Negative
56	Black plastic wire covering	BL	BL	BL	BL	BL	NA
57	Red plastic wire covering	BL	BL	BL	BL	BL	NA
58	Silvery metal wire	BL	BL	BL	BL	BL	NA
59	White plastic shell of connector	BL	BL	BL	BL	BL	NA

Part No.	Part Description	Result of XRF					Result of Wet Chemical Testing (mg/kg)
		Cd	Pb	Hg	Cr	Br	
60	Silvery metal terminal of connector	BL	BL	BL	BL	BL	NA
61	White fibrous adhesive sheet	BL	BL	BL	BL	BL	NA
62	Red plastic wire covering	BL	BL	BL	BL	BL	NA
63	Blue plastic wire covering	BL	BL	BL	BL	BL	NA
64	Black plastic wire covering	BL	BL	BL	BL	BL	NA
65	Red heat-shrinkable tube	BL	BL	BL	BL	BL	NA
66	Black heat-shrinkable tube	BL	BL	BL	BL	BL	NA
67	Black fibrous brush	BL	BL	BL	BL	BL	NA
68	Golden metal terminal	BL	BL	BL	BL	BL	NA
69	Silvery metal screw	BL	BL	BL	IN	BL	Cr^{6+} : Negative
70	Silvery metal screw	BL	BL	BL	BL	BL	NA
71	Silvery metal screw with black plating	BL	BL	BL	BL	BL	NA
72	Silvery metal screw	BL	BL	BL	IN	BL	Cr^{6+} : Negative
73	Silvery metal screw with black plating	BL	BL	BL	IN	BL	Cr^{6+} : Negative
74	Chip LED	BL	BL	BL	BL	BL	NA
75	Black plastic shell of buzzer	BL	BL	BL	BL	IN	PBBs : ND PBDEs : ND
76	Silvery metal sheet of buzzer	BL	BL	BL	BL	BL	NA
77	Silvery metal contactor of buzzer	BL	BL	BL	BL	BL	NA
78	Dark grey magnetic ring of buzzer	BL	BL	BL	IN	BL	Cr^{6+} : ND
79	Silvery metal bobbin of buzzer	BL	BL	BL	BL	BL	NA

Part No.	Part Description	Result of XRF					Result of Wet Chemical Testing (mg/kg)
		Cd	Pb	Hg	Cr	Br	
80	Coppery metal winding of buzzer	BL	BL	BL	BL	BL	NA
81	Chip audion	BL	BL	BL	BL	BL	NA
82	Silvery metal spring	BL	BL	BL	BL	BL	NA
83	Beige plastic shell of connector	BL	BL	BL	BL	BL	NA
84	Dark grey plastic sheet of connector	BL	BL	BL	BL	BL	NA
85	Silvery metal pin of connector	BL	BL	BL	BL	BL	NA
86	Chip resistor	BL	**OL**	BL	IN	BL	***Pb : 2.13×10^3** Cr^{6+} : ND
87	Chip audion	BL	BL	BL	BL	BL	NA
88	Chip IC	BL	BL	BL	BL	BL	NA
89	Chip IC	BL	BL	BL	BL	BL	NA
90	Chip capacitor	BL	BL	BL	BL	BL	NA
91	Chip diode	BL	BL	BL	BL	BL	NA
92	Chip diode	BL	BL	BL	BL	IN	PBBs : ND PBDEs : ND
93	Green PCB	BL	BL	BL	BL	IN	PBBs : ND PBDEs : ND
94	Solder	BL	BL	BL	BL	BL	NA
95	Dark grey magnetic core of inductor	BL	BL	BL	IN	BL	Cr^{6+} : ND
96	Coppery metal winding of inductor	BL	BL	BL	BL	BL	NA
97	Silvery metal shell of socket	BL	BL	BL	IN	BL	Cr^{6+} : Negative
98	Silvery metal pin of socket	BL	BL	BL	BL	BL	NA
99	Black plastic sheet of socket	BL	BL	BL	BL	IN	PBBs : ND PBDEs : ND

Part No.	Part Description	Result of XRF					Result of Wet Chemical Testing (mg/kg)
		Cd	Pb	Hg	Cr	Br	
100	Chip resistor	BL	BL	BL	IN	BL	Cr^{6+} : ND
101	Silvery metal shell of sensor	BL	BL	BL	BL	BL	NA
102	Silvery metal pin of sensor	BL	BL	BL	BL	BL	NA
103	white ceramic body of EC	BL	BL	BL	BL	BL	NA
104	Silvery metal net of sensor	BL	BL	BL	IN	BL	Cr^{6+} : Negative
105	Silvery metal ring of sensor	BL	BL	BL	BL	BL	NA
106	Solder	BL	BL	BL	BL	BL	NA
107	Black PCB	BL	BL	BL	BL	IN	PBBs : ND PBDEs : ND
108	Silvery metal pin	BL	**OL**	BL	BL	BL	**$^{\#}$Pb : 2.31×10^{4}**
109	Solder	BL	BL	BL	BL	BL	NA
110	Yellow-green PCB	BL	BL	BL	BL	IN	PBBs : ND PBDEs : ND
111	Blue plastic film	BL	BL	BL	BL	BL	NA
112	Blue plastic adhesive tape	BL	BL	BL	BL	BL	NA
113	Red plastic wire covering	BL	BL	BL	BL	BL	NA
114	Black sponge adhesive sheet	BL	BL	BL	BL	IN	PBBs : ND PBDEs : ND
115	Black plastic wire covering	BL	BL	BL	BL	BL	NA
116	Brown transparent plastic adhesive sheet	BL	BL	BL	BL	BL	NA
117	Red paper adhesive sheet	BL	BL	BL	BL	BL	NA
118	Chip IC	BL	BL	BL	BL	IN	PBBs : ND PBDEs : ND
119	Chip IC	BL	BL	BL	BL	BL	NA

Part No.	Part Description	Result of XRF					Result of Wet Chemical Testing (mg/kg)
		Cd	Pb	Hg	Cr	Br	
120	Chip resistor	BL	BL	BL	BL	BL	NA
121	Solder	BL	BL	BL	BL	BL	NA
122	Silvery metal sheet	BL	BL	BL	IN	BL	Cr^{6+} : Negative
123	Green PCB	BL	BL	BL	BL	IN	PBBs : ND PBDEs : ND
124	White plastic shell	BL	BL	BL	BL	BL	NA
125	Black plastic shell	BL	BL	BL	BL	IN	PBBs : ND PBDEs : 128
126	Black glue	BL	BL	BL	BL	BL	NA
127	Solder	BL	BL	BL	BL	BL	NA
128	Green PCB	BL	BL	BL	BL	IN	PBBs : ND PBDEs : ND
129	Transparent glue of inductor	BL	BL	BL	BL	BL	NA
130	Yellow plastic adhesive tape of inductor	BL	BL	BL	BL	BL	NA
131	Black plastic bobbin of inductor	BL	BL	BL	BL	BL	NA
132	Dark grey magnetic core of inductor	BL	BL	BL	BL	BL	NA
133	Coppery enamelled wire of inductor	BL	BL	BL	BL	BL	NA
134	Beige resistor	BL	BL	BL	BL	BL	NA

Remark:

(1) Results are obtained by EDXRF for primary screening, and further chemical testing by ICP (for Cd, Pb, Hg), UV-VIS (for Cr^{6+}) and GC-MS (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	BL ≤ (70-3σ) < IN < (130+3σ) ≤ OL	BL ≤ (70-3σ) < IN < (130+3σ) ≤ OL	LOD < IN < (150+3σ) ≤ OL
Pb	BL ≤ (700-3σ) < IN < (1300+3σ) ≤ OL	BL ≤ (700-3σ) < IN < (1300+3σ) ≤ OL	BL ≤ (500-3σ) < IN < (1500+3σ) ≤ OL
Hg	BL ≤ (700-3σ) < IN < (1300+3σ) ≤ OL	BL ≤ (700-3σ) < IN < (1300+3σ) ≤ OL	BL ≤ (500-3σ) < IN < (1500+3σ) ≤ OL
Cr	BL ≤ (700-3σ) < IN	BL ≤ (700-3σ) <IN	BL ≤ (500-3σ) < IN
Br	BL ≤ (300-3σ) < IN	--	BL ≤ (250-3σ) < IN

BL= Below Limit OL= Over Limit LOD = Limit of Detection -- = Not Regulated

(2) "IN" expresses the inconclusive region, and further chemical testing to confirm whether it complies with the requirement of RoHS Directive.

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

(4) mg / kg =milligram per kilogram=ppm, $\mu g/cm^2$= Micrograms per square centimetre.

(5) ND = Not Detected or lower than limit of quantitation.

(6) NA = Not Applicable, as the XRF screening test result was below the limit or as the XRF screening directly determine that test result was over the limit, it was not need to conduct the wet chemical testing.

(7) LOQ = Limit of quantitation.

Test Items	Pb	Cd	Hg	Cr^{6+}		PBB	PBDE
Units	mg/kg	mg/kg	mg/kg	mg/kg	$\mu g/cm^2$	mg/kg	mg/kg
LOQ	2	2	2	8	0.1	5	5

The LOQ for single compound of PBBs and PBDEs is 5mg/kg, LOQ of Cr^{6+} for polymer and composite sample is 8mg/kg and LOQ of Cr^{6+} for metal sample is 0.1$\mu g/cm^2$.

(8) RoHS Requirement

Restricted Substances	Limits
Cadmium (Cd)	0.01% (100 mg/kg)
Lead (Pb)	0.1% (1000 mg/kg)
Mercury (Hg)	0.1% (1000 mg/kg)
Chromium (VI) (Cr^{6+})	0.1% (1000 mg/kg)
Polybrominated Biphenyls (PBBs)	0.1% (1000 mg/kg)
Polybrominated Diphenyl Ethers (PBDEs)	0.1% (1000 mg/kg)

(9) According to IEC 62321-7-1:2015, determined of Cr^{6+} on metal sample by boiling water extraction test method, and result is shown as Positive/Negative.
Boiling water extraction:
Negative = Absence of Cr^{6+} coating, the detected concentration in boiling water extraction solution is less than 0.10ug/cm^2.
Positive = Presence of Cr^{6+} coating, the detected concentration in boiling water extraction solution is greater than 0.13ug/cm^2.
Information on storage conditions and production date of the tested sample is unavailable and thus Cr^{6+} results represent status of the sample at the time of testing.

(10) Abbreviation:
"Pb" denotes Lead, "Cd" denotes Cadmium, "Hg" denotes Mercury, "Cr" denotes Chromium, "Cr (VI)" denotes Hexavalent Chromium, "Br" denotes Bromine, "PBBs" denotes Total Polybrominated Biphenyls, "PBDEs" denotes Total Polybrominated Diphenyl Ethers.

(11) * = According to the declaration from client, the source of lead in test sample is from the glass or ceramic material of that electronic component which is exempted by Directive 2011/65/EU ANNEX III.

(12) # = According to the declaration from client, the source of lead in test sample is from copper alloy while lead as copper alloy containing up to 4% lead by weight is exempted by Directive 2011/65/EU ANNEX III.

2. Phthalates:

Serial No.	Part No.	Result (mg/kg)			
		DBP	BBP	DEHP	DIBP
T01	1	<50	<50	<50	<50
T02	2	<50	<50	85	<50
T03	6+12+17+21△	<50	<50	<50	<50
T04	7+8+23+24+26△	<50	<50	<50	<50
T05	9+49+92+107+110△	<50	<50	<50	<50
T06	14	<50	<50	<50	<50
T07	15	<50	<50	<50	<50
T08	18+37+30△	<50	<50	<50	<50
T09	19	<50	<50	<50	<50
T10	20	<50	<50	<50	<50
T11	22	<50	<50	<50	<50
T12	25	<50	<50	<50	<50
T13	27+46+48+50+51△	<50	<50	<50	<50
T14	28+29△	<50	<50	<50	<50
T15	32	96	<50	<50	<50
T16	33	119	<50	<50	<50
T17	34	<50	<50	<50	<50
T18	35	122	<50	<50	<50
T19	40+59△	<50	<50	<50	<50
T20	44	<50	<50	<50	<50
T21	52	<50	<50	<50	<50
T22	56	415	<50	<50	<50
T23	57	371	<50	<50	<50
T24	61	<50	<50	<50	<50

Serial No.	Part No.	Result (mg/kg)			
		DBP	BBP	DEHP	DIBP
T25	62	121	<50	88	<50
T26	63	225	<50	<50	<50
T27	64	119	<50	113	<50
T28	65	169	<50	103	<50
T29	66	105	<50	<50	<50
T30	67	<50	<50	<50	<50
T31	74+78+81+86+87△	<50	<50	<50	<50
T32	75+83+99△	<50	<50	<50	<50
T33	84	<50	<50	<50	<50
T34	88+89+90+91+92△	<50	<50	<50	<50
T35	95+100+103+118+119△	<50	<50	<50	<50
T36	111	<50	<50	<50	<50
T37	112	<50	<50	<50	<50
T38	113	370	<50	<50	107
T39	114	<50	<50	<50	<50
T40	115	<50	<50	<50	<50
T41	116	<50	<50	<50	<50
T42	117	<50	<50	<50	<50
T43	120+132+133+134△	<50	<50	<50	<50
T44	123+128△	<50	<50	<50	<50
T45	124+125△	<50	<50	<50	<50
T46	126	<50	<50	<50	<50
T47	129	<50	<50	<50	<50
T48	130	<50	<50	<50	<50
T49	131	<50	<50	<50	<50

Note:

(1) "<" = less than

(2) mg/kg = milligram per kilogram= ppm

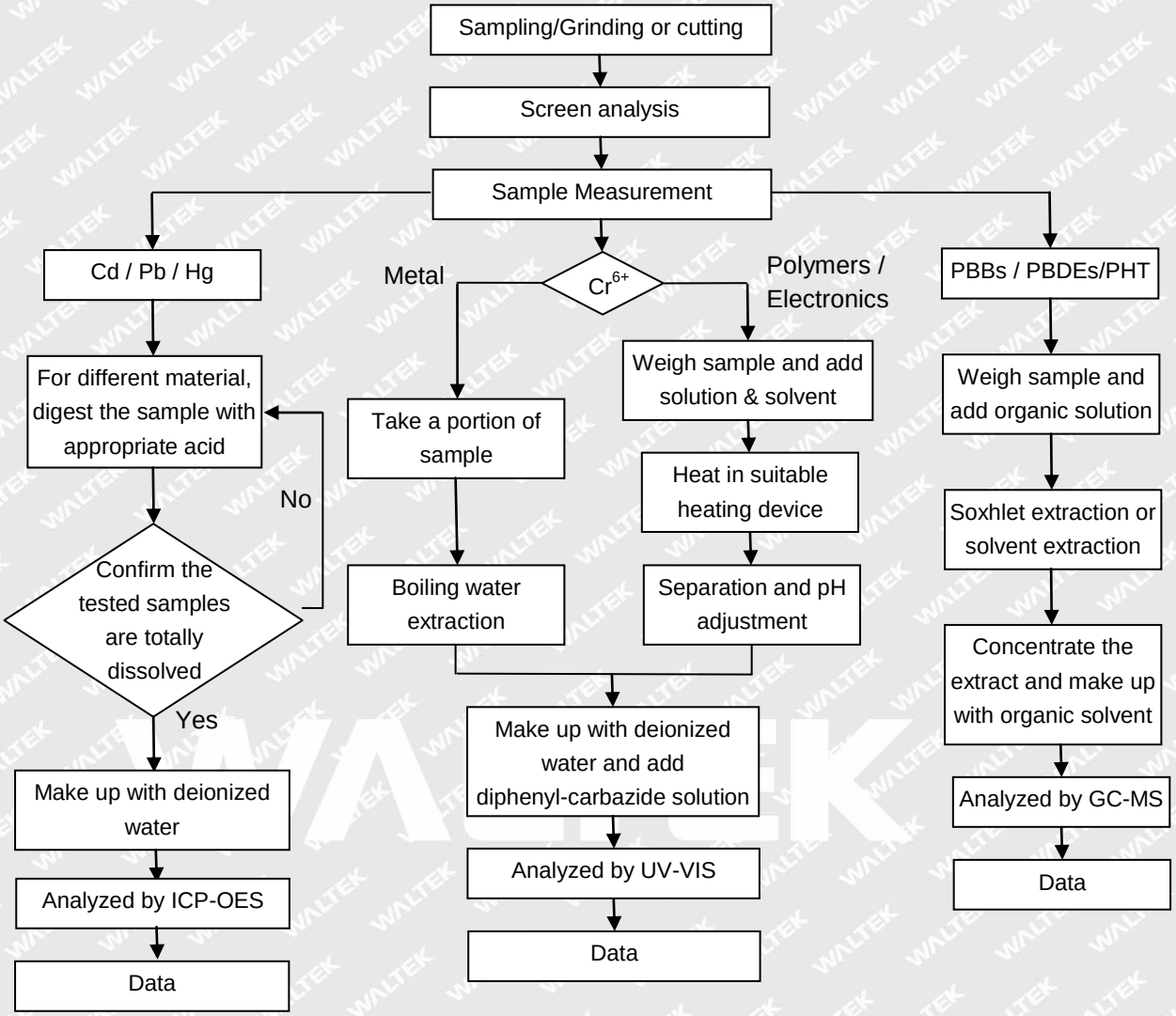
(3) Abbreviation:
"DBP" denotes Dibutyl phthalate, "BBP" denotes Benzyl butyl phthalate (BBP), "DEHP" denotes Bis(2-ethylhexyl)-phthalate, "DIBP" denotes Diisobutyl phthalate, "PHT" denotes Phthalates.

(4) RoHS requirement

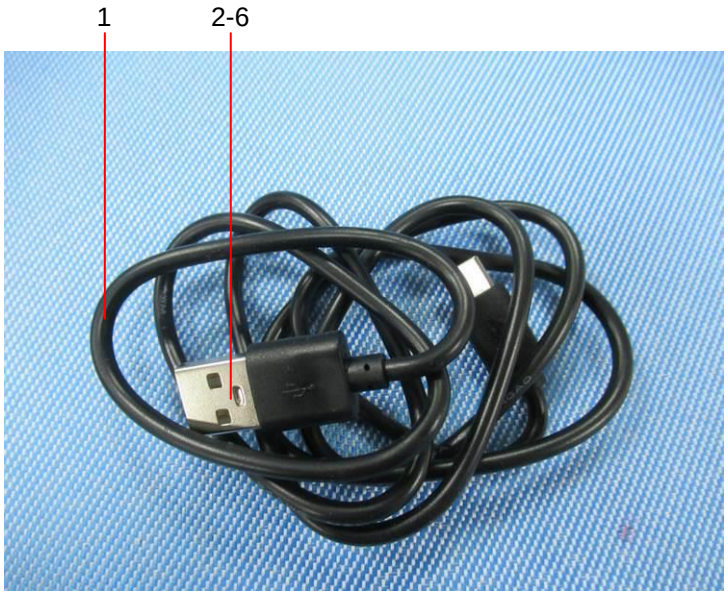
Restricted Substances	Limits
Dibutyl phthalate (DBP)	0.1% (1000 mg/kg)
Benzyl butyl phthalate (BBP)	0.1% (1000 mg/kg)
Di(2-ethylhexyl) phthalate (DEHP)	0.1% (1000 mg/kg)
Di-iso-butyl phthalate (DIBP)	0.1% (1000 mg/kg)

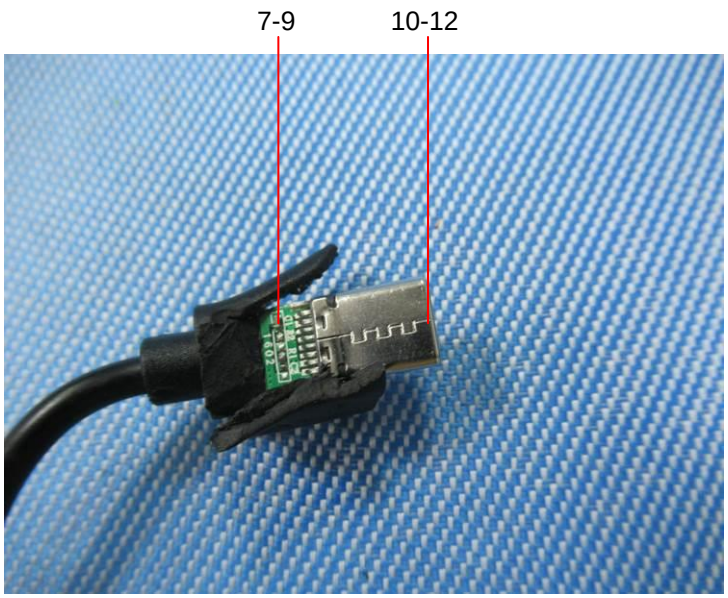
(5) "△"= As client's requirement, the testing was conducted based on mixed components. Results are calculated by the minimum weight of mixed components.

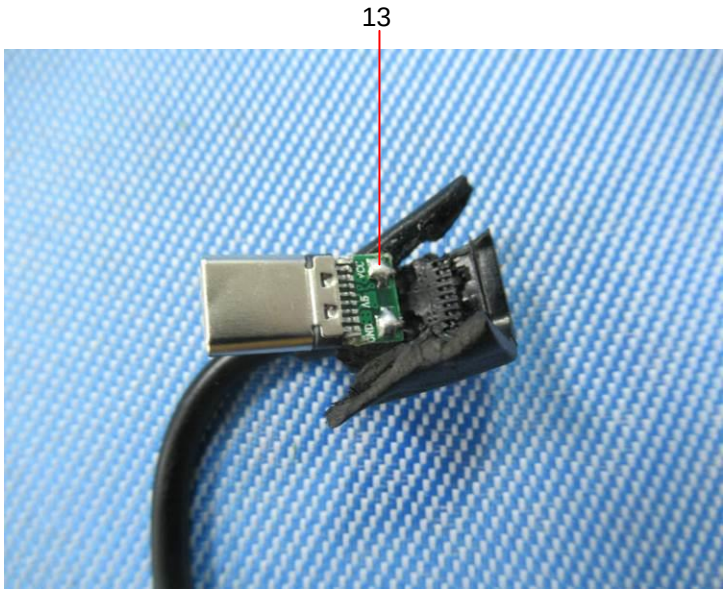
Measurement Flowchart:



Photograph(s) of parts tested:



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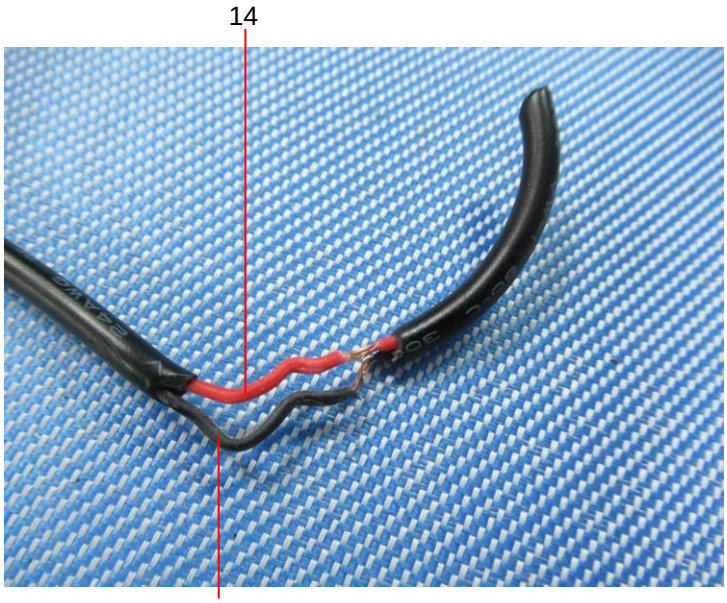
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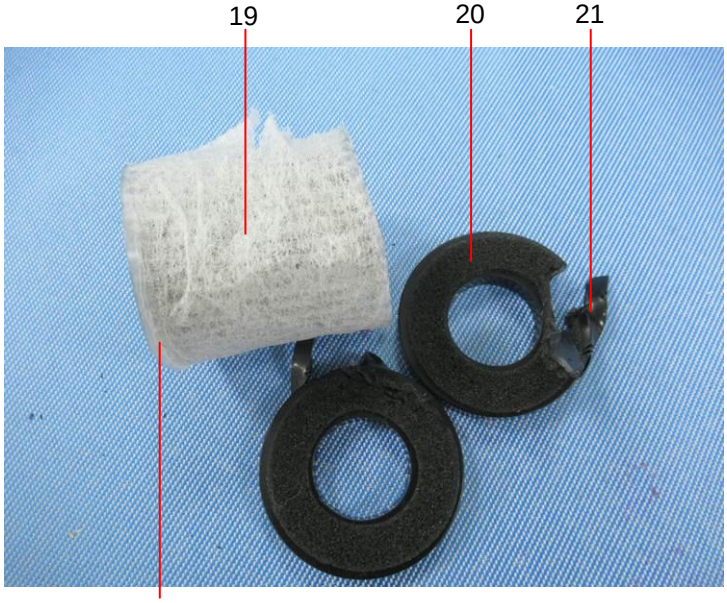
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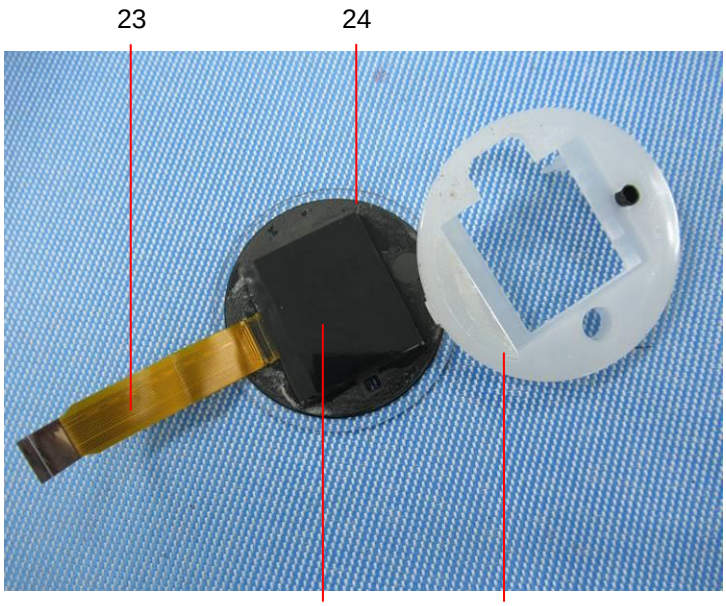
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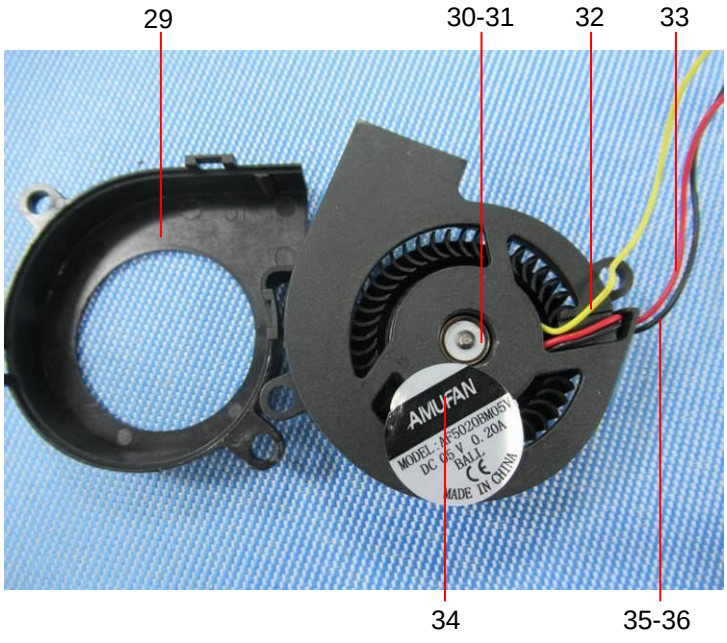
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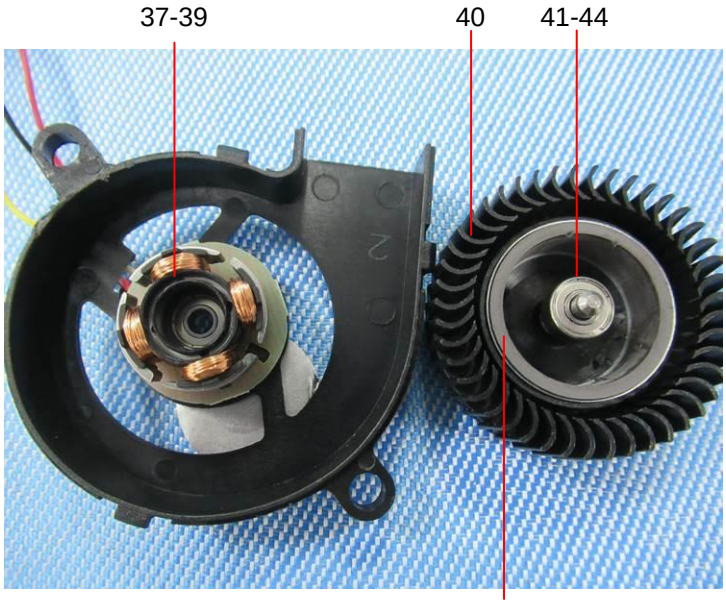
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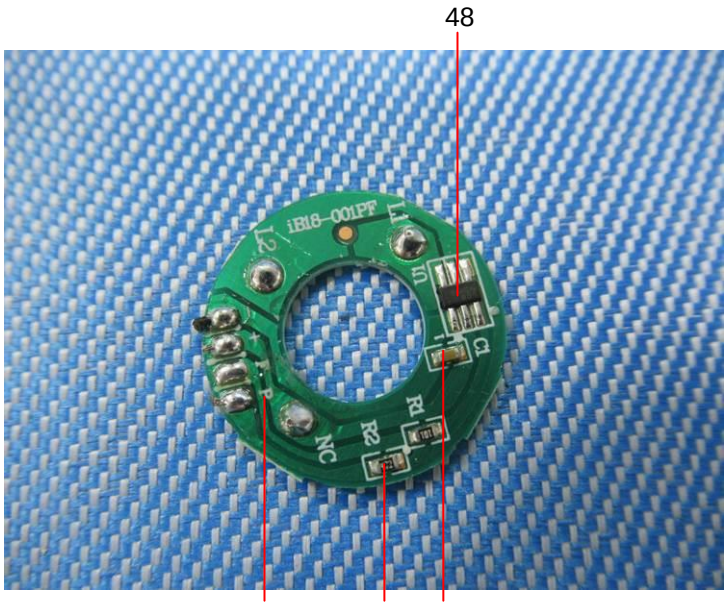
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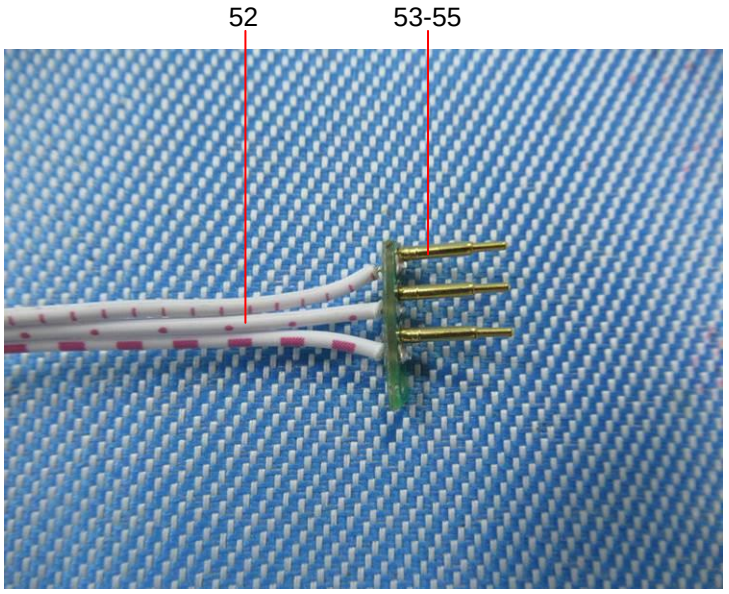
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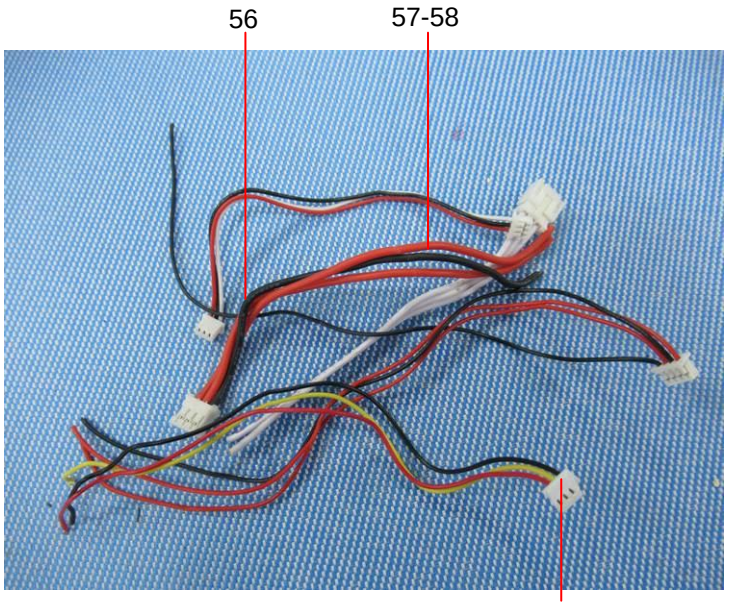
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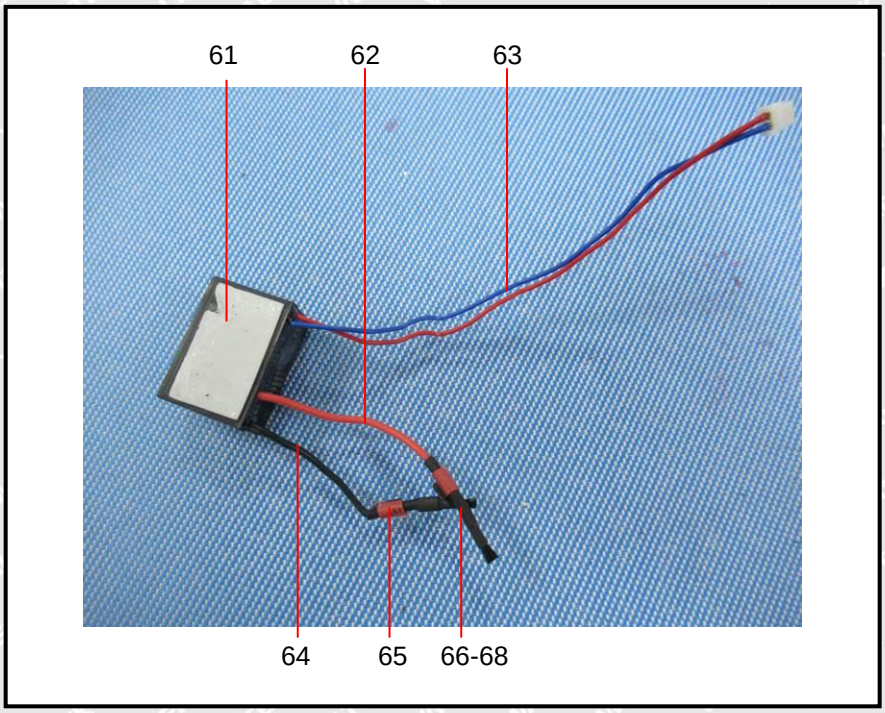
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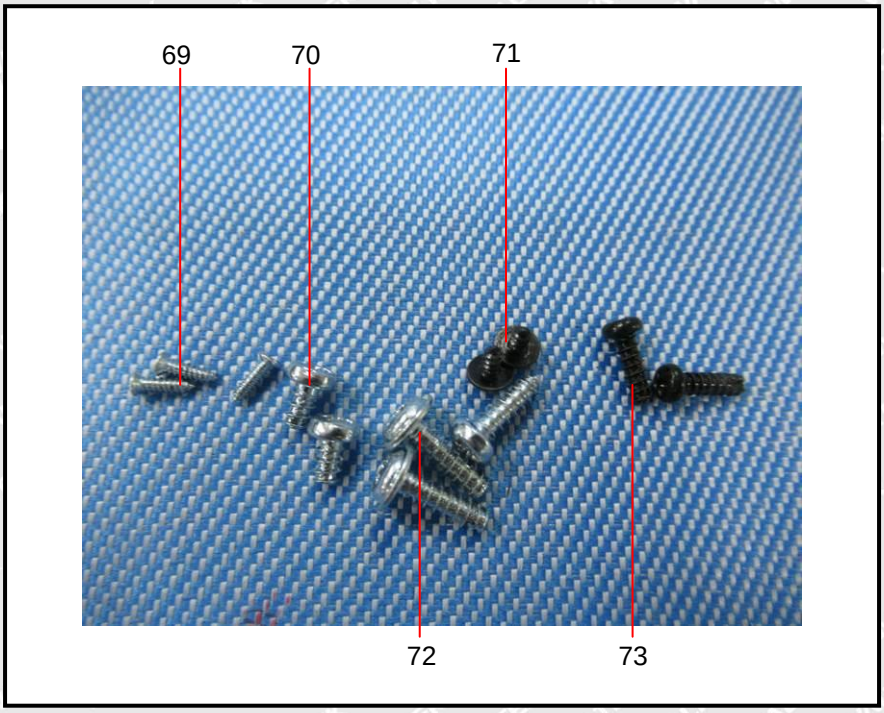
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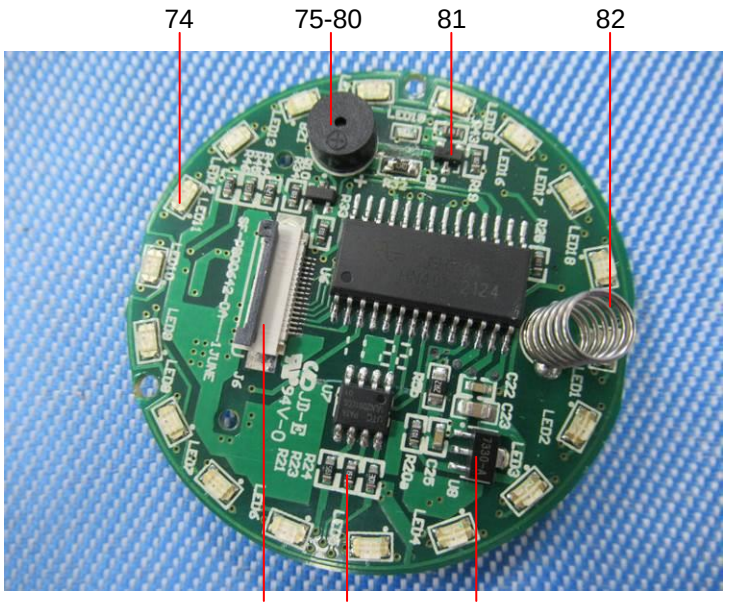
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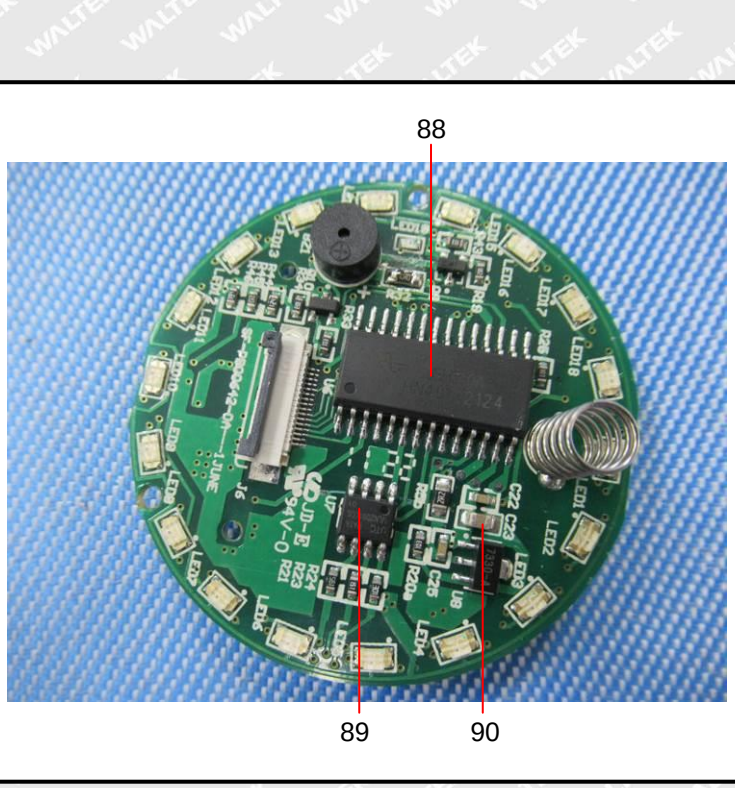
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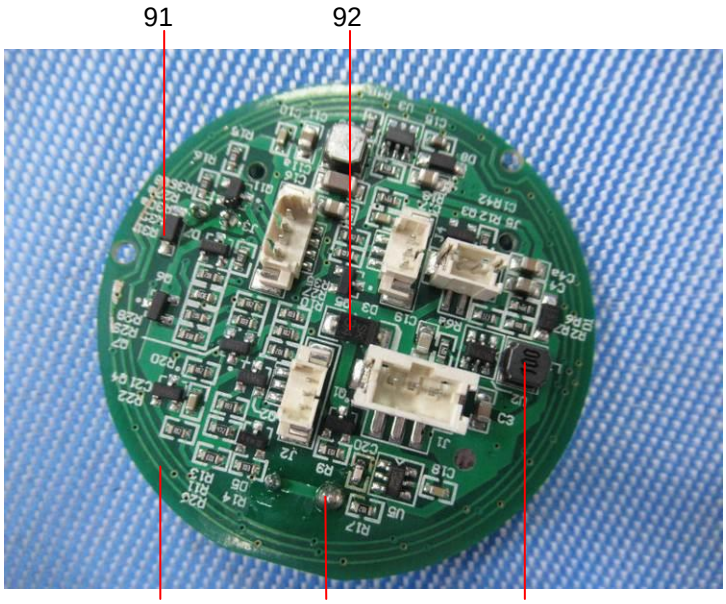
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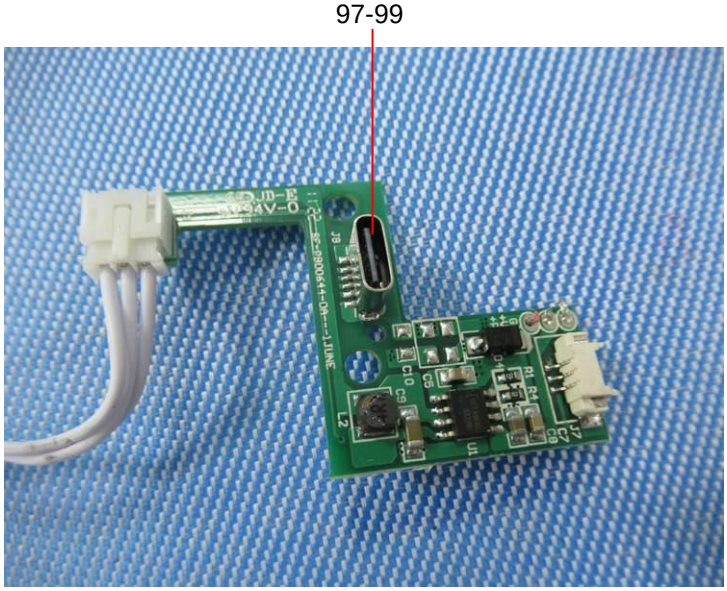
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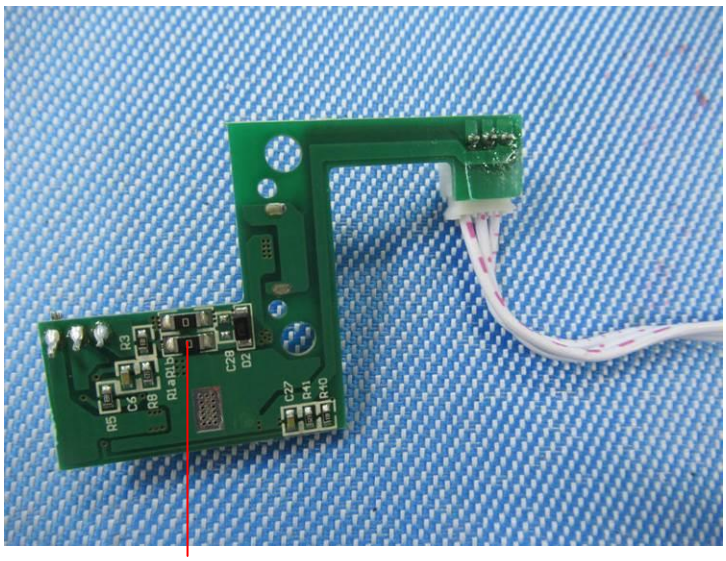
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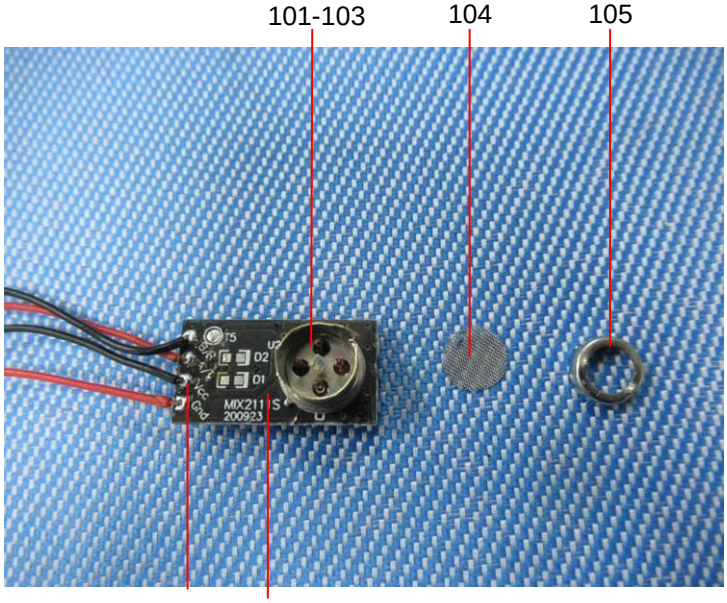
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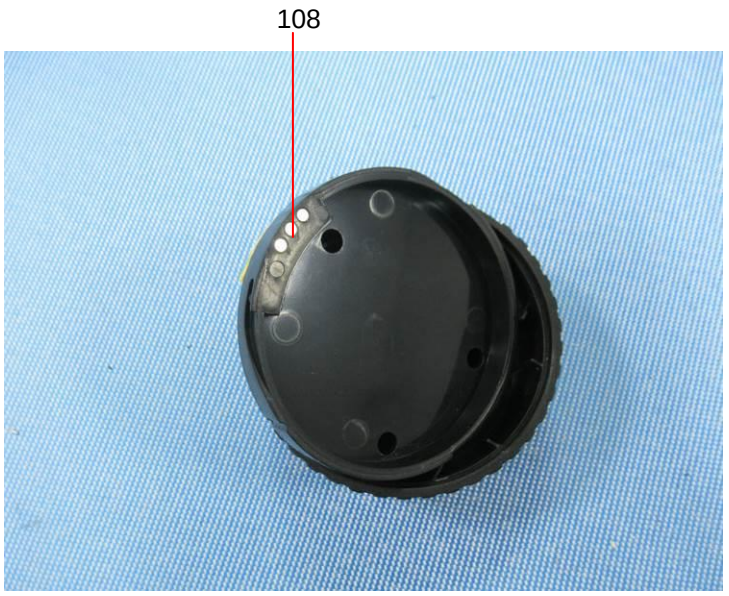
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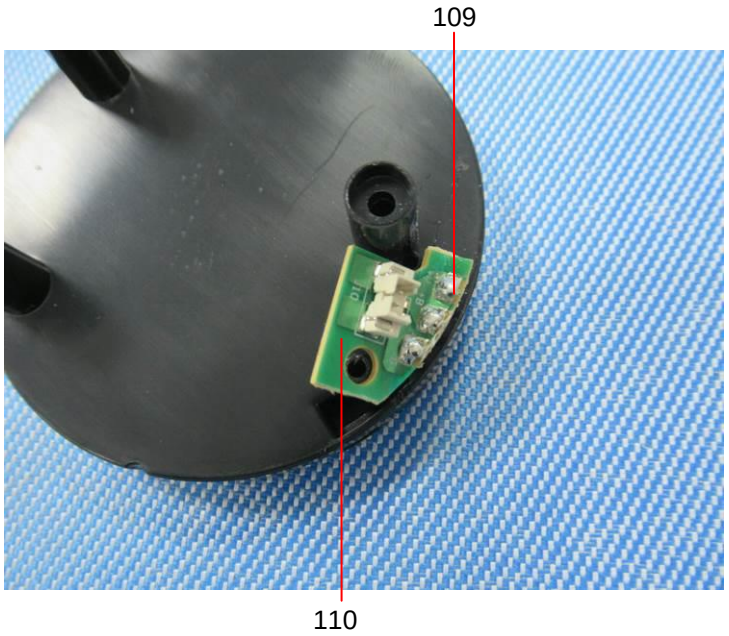
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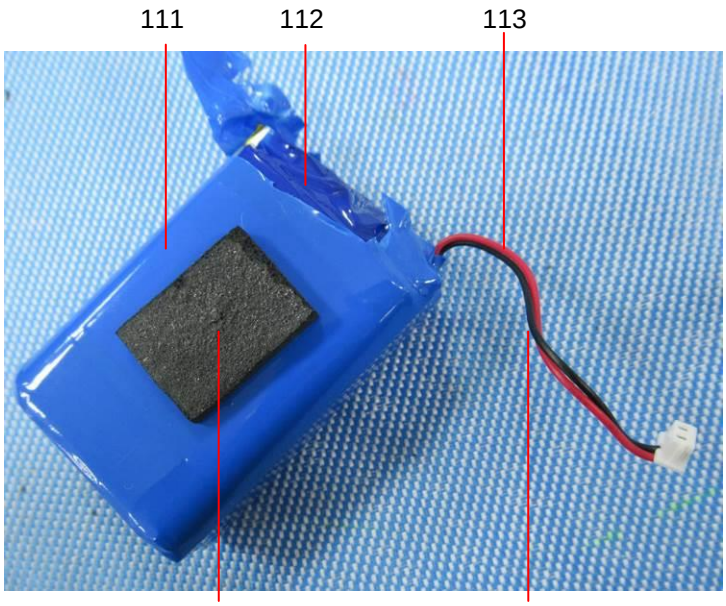
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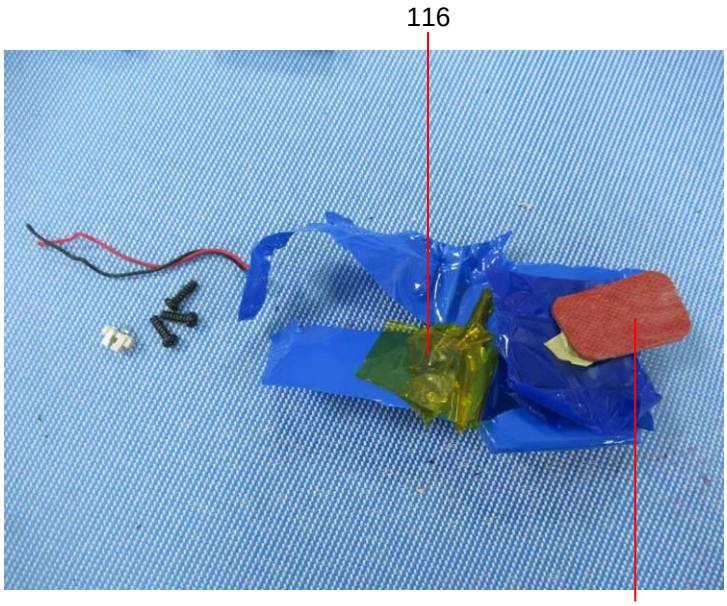
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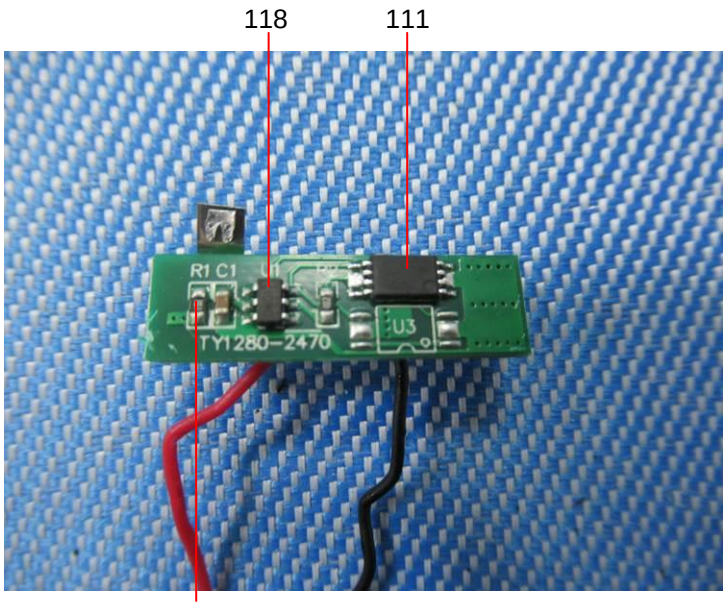
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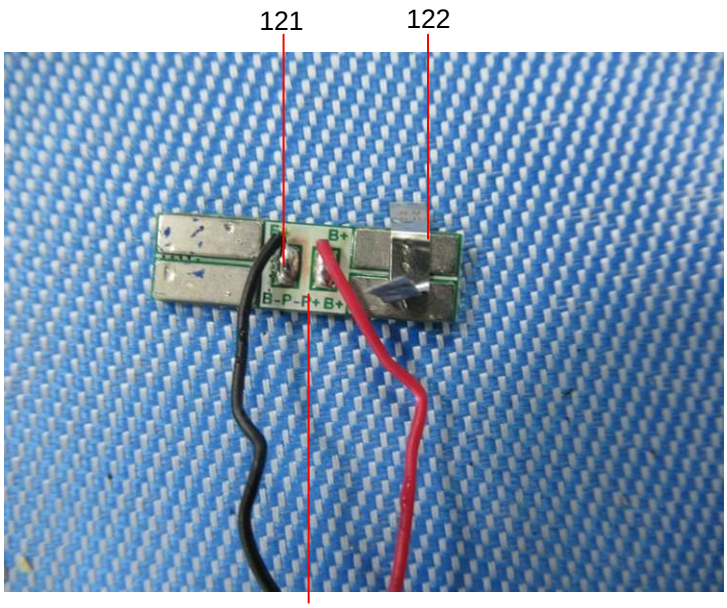
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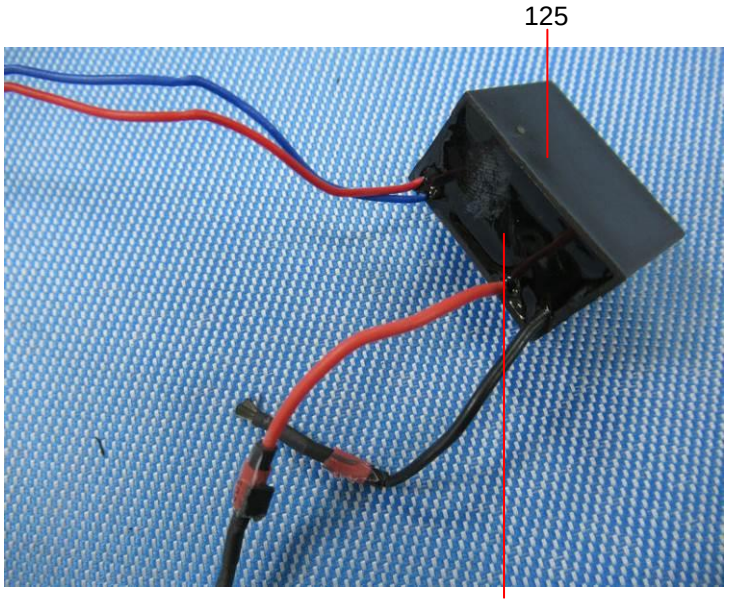
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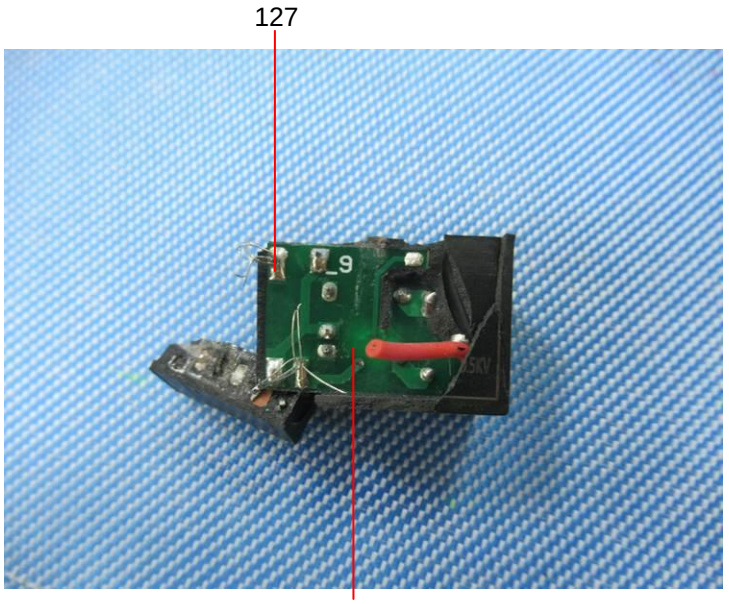
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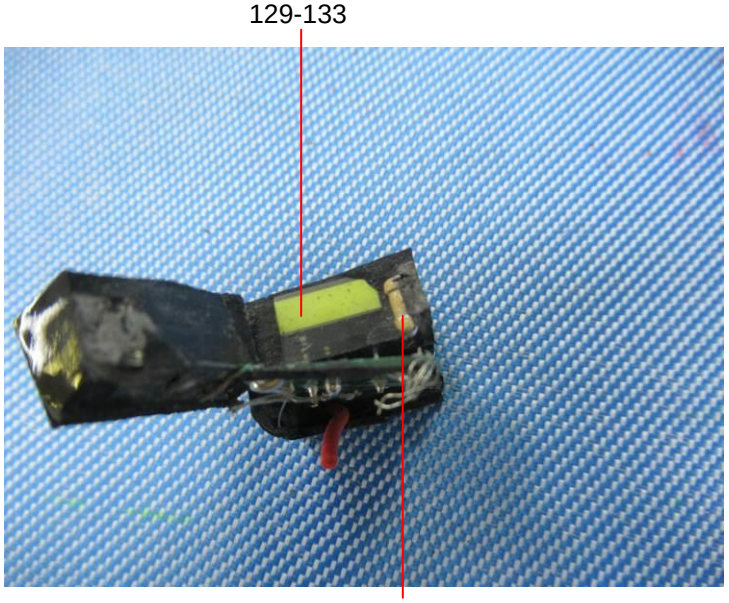
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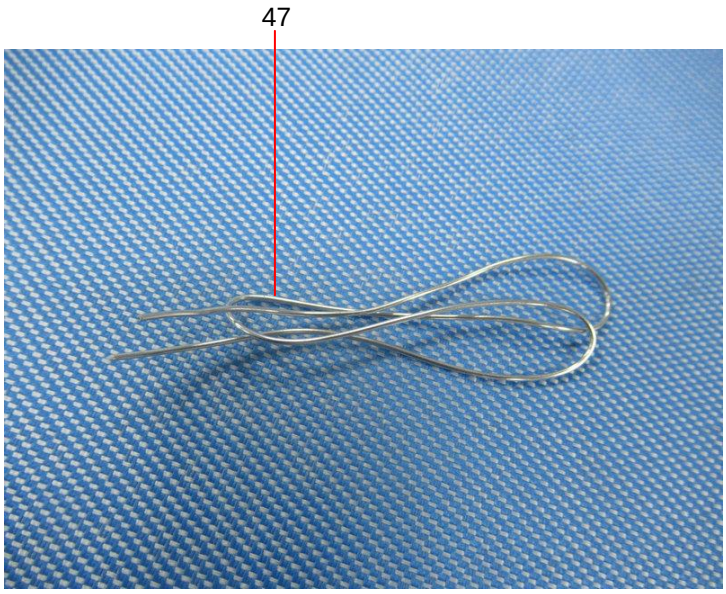

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====== End of Report ======