# TEST REPORT

| | |
|---|---|
| **Applicant:** | Ningbo LingYi Technology Co. LTD |
| **Address:** | Hongju Building, No. 535 Tiantong South Road, Shounan Street, Yinzhou District, Ningbo City, Zhejiang Province, China |

**The following sample(s) was/were submitted and identified on behalf of the client as:**

| | |
|---|---|
| Product name: | Control Box |
| Model: | 01C05 |
| Trade mark: | |
| Manufacturer: | Ningbo LingYi Technology Co. LTD |
| Address: | Hongju Building, No. 535 Tiantong South Road, Shounan Street, Yinzhou District, Ningbo City, Zhejiang Province, China |
| Sample No.: | S240606011003 |
| Sample Received Date: | 2024-06-11 |
| Testing Period: | 2024-06-11~ 2024-07-02 |

| **Test Requirement:** | **Conclusion** |
|---|---|
| As specified by client, to determine the Lead(Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium (Cr(VI)), Polybrominated Biphenyls(PBBs), Polybrominated Diphenyl Ethers(PBDEs), Bis-(2-ethylhexyl) Phthalate (DEHP), Benzyl butyl Phthalate (BBP), Dibutyl Phthalate (DBP) and Diisobutyl Phthalate(DIBP)contents in the submitted sample(s) in accordance with RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU. | Pass |

**Test Result(s):** Please refer to the following page(s);

**Test Method:** Please refer to the following page(s);

Compiled by: Nina.Cai Reviewed by: Luetta Mo

Approved by: Mary Li Date: 2024-07-16

**Sample Description:**

| No. | Sample name | Description |
|---|---|---|
| 1 | Shell | Black plastic shell |
| 2 | | Black metal screw |
| 3 | PCBA (000-DB32 economy V1.0) | Green PCB |
| 4 | | Blue body of color ring resistor |
| 5 | | Metal pin of color ring resistor |
| 6 | | White colloid |
| 7 | | Silver metal sheet |
| 8 | | Yellow adhesive tape with lettering of transformer |
| 9 | | Magnet core of transformer |
| 10 | | Coil of transformer |
| 11 | | Varnished wire of transformer |
| 12 | | Transparent casing tube of transformer |
| 13 | | Black body of diode |
| 14 | | Metal pin of diode |
| 15 | | Silver metal screw of combination screw |
| 16 | | Silver metal washer of combination screw |
| 17 | | Silver metal plain washer of combination screw |
| 18 | | White translucent plastic of white interface |
| 19 | | Silver metal plug pin of white interface |
| 20 | | Green coating of ring inductor |
| 21 | | Cupreous metal coil of ring inductor |
| 22 | | Red metal coil of ring inductor |
| 23 | | Transparent casing tube of ring inductor |
| 24 | | Black plastic base of ring inductor |
| 25 | | Green body of Green electronic component |
| 26 | | Black body of audion |
| 27 | | Metal pin of audion |
| 28 | | Blue body of Blue electronic component |
| 29 | | Black body of bridge rectifier |
| 30 | | Black plastic of power interface |
| 31 | | Silver metal plug pin(large) of power interface |
| 32 | | Silver metal plug pin(small) of power interface |
| 33 | | White label of electrolytic capacitor(large) |
| 34 | | Black plastic jacket of electrolytic capacitor(large) |
| 35 | | Aluminum shell of electrolytic capacitor(large) |
| 36 | | Anode foil of electrolytic capacitor(large) |
| 37 | | Cathode foil of electrolytic capacitor(large) |
| 38 | | Electrolytic paper of electrolytic capacitor(large) |
| 39 | | Rubber pad of electrolytic capacitor(large) |
| 40 | | Electrode pin of electrolytic capacitor(large) |

| | | |
|---|---|---|
| 41 | PCBA (000-DB32 economy V1.0) | Green coating of vertical inductor |
| 42 | | Magnet core of vertical inductor |
| 43 | | Coil of vertical inductor |
| 44 | | Black plastic frame of vertical inductor |
| 45 | | Yellow plastic shell of X capacitor |
| 46 | | Inner body of X capacitor |
| 47 | | Yellow pouring sealant of X capacitor |
| 48 | | Yellow-green wire jacket |
| 49 | | Core of wire |
| 50 | | Transparent casing tube |
| 51 | | Black plastic of network interface |
| 52 | | Metal plug pin of network interface |
| 53 | | Black plastic shell of buzzer |
| 54 | | Silver metal disc of buzzer |
| 55 | | Silver metal shrapnel of buzzer |
| 56 | | Magnet core of buzzer |
| 57 | | Coil of buzzer |
| 58 | | Silver metal pedestal of buzzer |
| 59 | | Rubber pad of electrolytic capacitor(small) |
| 60 | | Rubber pad of electrolytic capacitor(medium) |
| 61 | | Black plastic base of electrolytic capacitor(medium) |
| 62 | | Black plastic jacket of black electrolytic capacitor |
| 63 | | Rubber pad of black electrolytic capacitor |
| 64 | | Silver metal contact pin |
| 65 | | Orange plastic jacket of orange electrolytic capacitor |
| 66 | | Rubber pad of orange electrolytic capacitor |
| 67 | | Brown plastic shell of fuse |
| 68 | | Black plastic frame of fuse |
| 69 | | Green body of resistor |
| 70 | | SMD diode 1 |
| 71 | | SMD chip 1 |
| 72 | | SMD audion |
| 73 | | SMD chip 2 |
| 74 | | SMD resistor |
| 75 | | SMD diode 2 |
| 76 | | SMD MOS transistor |
| 77 | | SMD diode 3 |
| 78 | | SMD capacitor |
| 79 | | SMD fuse |
| 80 | | Tin solder |

**Test Result(s):**

**Lead(Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium (Cr(VI)), Polybrominated Biphenyls (PBBs), Polybrominated Diphenyl Ethers(PBDEs)**

| Part No. | Test Items | XRF Screening Result(mg/kg) | Chemical Test Result(mg/kg) | Conclusion |
|---|---|---|---|---|
| 1 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | IN | N.D. | |
| 2 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | IN | N.D. | |
| | Br(PBBs&PBDEs) | / | / | |
| 3 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | IN | N.D. | |
| 4 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | IN | N.D. | |
| | Br(PBBs&PBDEs) | BL | / | |
| 5 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | / | / | |
| 6 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | BL | / | |
| 7 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | / | / | |

| | | | | |
|---|---|---|---|---|
| 8 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | BL | / | |
| 9 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | / | / | |
| 10 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | / | / | |
| 11 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | BL | / | |
| 12 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | BL | / | |
| 13 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | BL | / | |
| 14 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | / | / | |
| 15 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | IN | N.D. | |
| | Br(PBBs&PBDEs) | / | / | |

| | | | | |
|---|---|---|---|---|
| 16 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | IN | N.D. | |
| | Br(PBBs&PBDEs) | / | / | |
| 17 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | IN | N.D. | |
| | Br(PBBs&PBDEs) | / | / | |
| 18 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | BL | / | |
| 19 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | / | / | |
| 20 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | BL | / | |
| 21 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | / | / | |
| 22 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | / | / | |
| 23 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | BL | / | |

| | | | | |
|---|---|---|---|---|
| 24 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | BL | / | |
| 25 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | IN | N.D. | |
| | Br(PBBs&PBDEs) | BL | / | |
| 26 | Pb | OL | N.D. | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | BL | / | |
| 27 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | / | / | |
| 28 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | BL | / | |
| 29 | Pb | OL | N.D. | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | BL | / | |
| 30 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | IN | N.D. | |
| 31 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | / | / | |

| | | | | |
|---|---|---|---|---|
| 32 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | / | / | |
| 33 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | BL | / | |
| 34 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | BL | / | |
| 35 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | / | / | |
| 36 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | / | / | |
| 37 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | / | / | |
| 38 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | BL | / | |
| 39 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | BL | / | |

| | | | | |
|---|---|---|---|---|
| 40 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | / | / | |
| 41 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | BL | / | |
| 42 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | / | / | |
| 43 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | / | / | |
| 44 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | BL | / | |
| 45 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | IN | N.D. | |
| 46 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | BL | / | |
| 47 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | IN | N.D. | |

| | | | | |
|---|---|---|---|---|
| 48 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | BL | / | |
| 49 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | / | / | |
| 50 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | BL | / | |
| 51 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | IN | N.D. | |
| 52 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | / | / | |
| 53 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | BL | / | |
| 54 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | / | / | |
| 55 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | IN | N.D. | |
| | Br(PBBs&PBDEs) | / | / | |

| | | | | |
|---|---|---|---|---|
| 56 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | / | / | |
| 57 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | / | / | |
| 58 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | / | / | |
| 59 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | BL | / | |
| 60 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | BL | / | |
| 61 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | BL | / | |
| 62 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | BL | / | |
| 63 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | BL | / | |

| | | | | |
|---|---|---|---|---|
| 64 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | / | / | |
| 65 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | BL | / | |
| 66 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | BL | / | |
| 67 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | BL | / | |
| 68 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | BL | / | |
| 69 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | IN | N.D. | |
| | Br(PBBs&PBDEs) | BL | / | |
| 70 | Pb | OL | N.D. | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | BL | / | |
| 71 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | BL | / | |

| | | | | |
|---|---|---|---|---|
| 72 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | BL | / | |
| 73 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | BL | / | |
| 74 | Pb | OL | N.D. | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | BL | / | |
| 75 | Pb | OL | 19233[#1] | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | BL | / | |
| 76 | Pb | OL | N.D. | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | BL | / | |
| 77 | Pb | OL | 29956[#1] | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | BL | / | |
| 78 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | BL | / | |
| 79 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | BL | / | |

| | | | | |
|---|---|---|---|---|
| 80 | Pb | BL | / | Pass |
| | Cd | BL | / | |
| | Hg | BL | / | |
| | Cr(Cr(VI)) | BL | / | |
| | Br(PBBs&PBDEs) | / | / | |

**Bis-(2-ethylhexyl) Phthalate (DEHP), Benzyl butyl Phthalate (BBP), Dibutyl Phthalate (DBP) and Diisobutyl Phthalate(DIBP)**

| Test Items | Result(mg/kg) | | |
|---|---|---|---|
| | 1+18+24+30+44+45 | 3+11+38+46 | 4+13+25+26 |
| Bis-(2-ethylhexyl) Phthalate (DEHP) | N.D. | N.D. | N.D. |
| Benzyl butyl Phthalate (BBP) | N.D. | N.D. | N.D. |
| Dibutyl Phthalate (DBP) | N.D. | N.D. | N.D. |
| Diisobutyl Phthalate(DIBP) | N.D. | N.D. | N.D. |
| Conclusion | Pass | Pass | Pass |

| Test Items | Result(mg/kg) | | |
|---|---|---|---|
| | 6 | 8 | 12+23+50 |
| Bis-(2-ethylhexyl) Phthalate (DEHP) | N.D. | N.D. | N.D. |
| Benzyl butyl Phthalate (BBP) | N.D. | N.D. | N.D. |
| Dibutyl Phthalate (DBP) | N.D. | N.D. | N.D. |
| Diisobutyl Phthalate(DIBP) | N.D. | N.D. | N.D. |
| Conclusion | Pass | Pass | Pass |

| Test Items | Result(mg/kg) | | |
|---|---|---|---|
| | 20 | 28+29+69 | 33 |
| Bis-(2-ethylhexyl) Phthalate (DEHP) | N.D. | N.D. | N.D. |
| Benzyl butyl Phthalate (BBP) | N.D. | N.D. | N.D. |
| Dibutyl Phthalate (DBP) | N.D. | N.D. | N.D. |
| Diisobutyl Phthalate(DIBP) | N.D. | N.D. | N.D. |
| Conclusion | Pass | Pass | Pass |

| Test Items | Result(mg/kg) | | |
|---|---|---|---|
| | 34+62+65 | 39 | 41 |
| Bis-(2-ethylhexyl) Phthalate (DEHP) | N.D. | N.D. | N.D. |
| Benzyl butyl Phthalate (BBP) | N.D. | N.D. | N.D. |
| Dibutyl Phthalate (DBP) | N.D. | N.D. | N.D. |
| Diisobutyl Phthalate(DIBP) | N.D. | N.D. | N.D. |
| Conclusion | Pass | Pass | Pass |

| Test Items | Result(mg/kg) | | |
|---|---|---|---|
| | 47 | 48 | 51+53+61+67+68 |
| Bis-(2-ethylhexyl) Phthalate (DEHP) | N.D. | N.D. | N.D. |
| Benzyl butyl Phthalate (BBP) | N.D. | N.D. | N.D. |
| Dibutyl Phthalate (DBP) | N.D. | N.D. | N.D. |
| Diisobutyl Phthalate(DIBP) | N.D. | N.D. | N.D. |
| Conclusion | Pass | Pass | Pass |

| Test Items | Result(mg/kg) | | |
|---|---|---|---|
| | 59 | 60+63+66 | 70+71+72+73+74 |
| Bis-(2-ethylhexyl) Phthalate (DEHP) | N.D. | N.D. | N.D. |
| Benzyl butyl Phthalate (BBP) | N.D. | N.D. | N.D. |
| Dibutyl Phthalate (DBP) | N.D. | N.D. | N.D. |
| Diisobutyl Phthalate(DIBP) | N.D. | N.D. | N.D. |
| Conclusion | Pass | Pass | Pass |

| Test Items | Result(mg/kg) |
|---|---|
| | 75+76+77+78+79 |
| Bis-(2-ethylhexyl) Phthalate (DEHP) | N.D. |
| Benzyl butyl Phthalate (BBP) | N.D. |
| Dibutyl Phthalate (DBP) | N.D. |
| Diisobutyl Phthalate(DIBP) | N.D. |
| Conclusion | Pass |

Note: 1.N.D. = Not Detected (<MDL)
MDL = Method Detection Limit
1mg/kg = 1ppm =0.0001%
/=Not Regulated or Not Applicable
2. BL = Below the XRF screening limit
IN = Further chemical test will be conducted when the screening result inconclusive
OL = Further chemical test will be conducted while the result is above the screening limit.
3. For metal samples, the sample is negative for Cr(VI), if the Cr(VI) concentration is less than 0.10 μg/cm², the coating is considered a non- Cr(VI) based coating;
The sample is positive for Cr(VI), if the Cr(VI) concentration is greater than 0.13 μg/cm², The sample coating is considered to contain Cr(VI);
The result is considered to be inconclusive, the Cr(VI) concentration is between the 0.10 μg/cm² and 0.13 μg/cm², unavoidable coating variations may influence the determination.
Because the storage condition and production date of the sample are not known, the test results of the sample of hexavalent chromium can only represent the state of hexavalent chromium in the samples tested.

Remark: 1. When conducting the test for PBBs&PBDEs, XRF was introduced to screen Br Exclusively; When conducting the test for Hexavalent Chromium, XRF was introduced to screen Chromium exclusively.
2. According to the client's statement , the material of the sample(s) comply with RoHS directive 2011/65/EU Annex III Exemption, Corresponding exemption clause:
#1 7(a) Lead is exempted as Lead in high melting temperature type solders (i.e. lead- based alloys containing 85 % by weight or more lead).

**Test Method:**

1. With reference to IEC 62321-1: 2013 Ed.1.0, IEC 62321-2:2021 Ed.2.0, IEC 62321-3-1:2013 Ed.1.0. XRF screening limits in mg/kg for regulated elements in various matrices.

| Element | Limit of IEC 62321-3-1:2013 Ed.1.0 (mg/kg) | | |
|---|---|---|---|
| | Polymers | Metals | Composite material |
| Pb | BL≤(700-3σ) <X <(1300+3σ)≤OL | BL≤(700-3σ) <X <(1300+3σ)≤OL | BL≤(500-3σ)<X <(1500+3σ)≤OL |
| Cd | BL≤(70-3σ)<X < (130+3σ) ≤OL | BL≤(70-3σ)<X < (130+3σ) ≤OL | LOD <X<(150+3σ) ≤OL |
| Hg | BL≤(700-3σ)<X <(1300+3σ)≤OL | BL≤(700-3σ)<X <(1300+3σ)≤OL | BL≤(500-3σ)<X <(1500+3σ)≤OL |
| Cr | BL≤(700-3σ)< X | BL≤(700-3σ)< X | BL≤(500-3σ)< X |
| Br | BL≤(300-3σ)< X | / | BL≤(250-3σ)< X |

Note: BL= Below the XRF screening limit
OL=Over the XRF screening limit
X=The symbol"X"marks the region where further investigation is necessary.
3σ =The reproducibility of analytical instruments
LOD= Detection limit

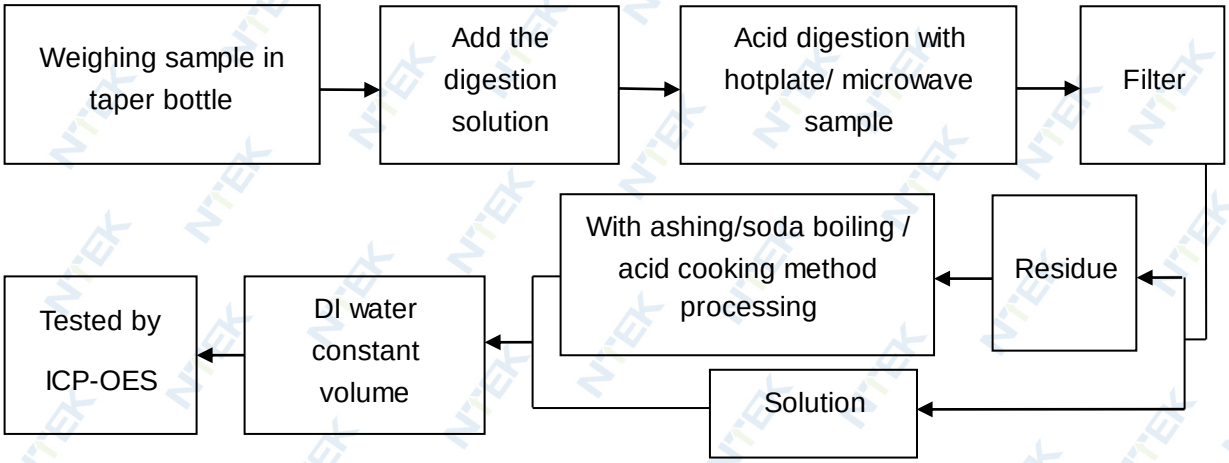
2. Chemical Test

| Test item | Test method | Test instrument | MDL | Limit△ |
|---|---|---|---|---|
| Lead (Pb) | IEC 62321-5:2013 Ed.1.0 | ICP-OES | 2 mg/kg | 1000 mg/kg |
| Cadmium (Cd) | IEC 62321-5:2013 Ed.1.0 | ICP-OES | 2 mg/kg | 100 mg/kg |
| Mercury (Hg) | IEC 62321-4:2013+AMD1:2017 | ICP-OES | 2 mg/kg | 1000 mg/kg |
| Hexavalent Chromium(Cr(VI)) | IEC 62321-7-1:2015 Ed.1.0 | UV-Vis | 0.10 μg/cm$^2$ | 1000 mg/kg |
| | IEC 62321-7-2:2017 Ed.1.0 | | 8 mg/kg | |
| Polybrominated Biphenyls(PBBs) | IEC 62321-6:2015 Ed.1.0 | GC-MS | 5 mg/kg | 1000 mg/kg |
| Polybrominated, Diphenyl Ethers(PBDEs) | IEC 62321-6:2015 Ed.1.0 | GC-MS | 5 mg/kg | 1000 mg/kg |
| Bis-(2-ethylhexyl) Phthalate (DEHP) | IEC 62321-8:2017 Ed.1.0 | GC-MS | 30 mg/kg | 1000 mg/kg |
| Benzyl butyl Phthalate (BBP) | IEC 62321-8:2017 Ed.1.0 | GC-MS | 30 mg/kg | 1000 mg/kg |
| Dibutyl Phthalate (DBP) | IEC 62321-8:2017 Ed.1.0 | GC-MS | 30 mg/kg | 1000 mg/kg |
| Diisobutyl Phthalate (DIBP) | IEC 62321-8:2017 Ed.1.0 | GC-MS | 30 mg/kg | 1000 mg/kg |

△The limit is quoted from RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.

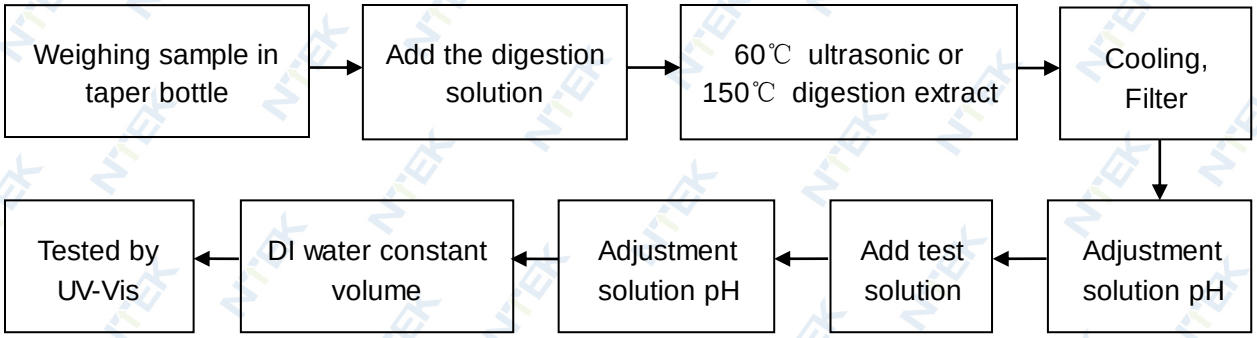
**Test Flow:**

1. Lead(Pb), Cadmium(Cd) , Mercury (Hg)

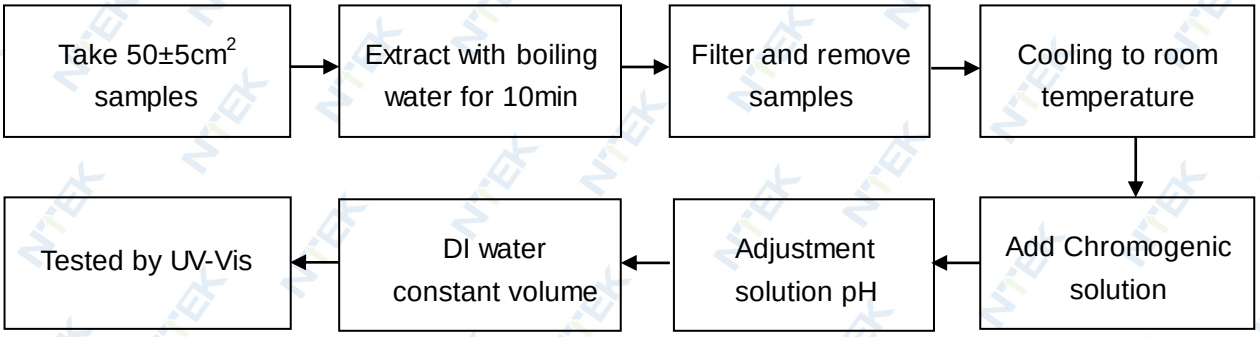



2. Hexavalent Chromium(Cr(VI))

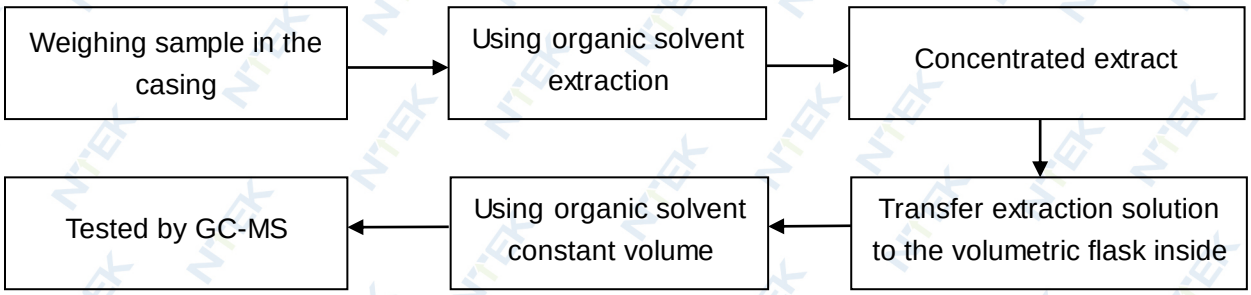
2.1 Non- metal sample(s)



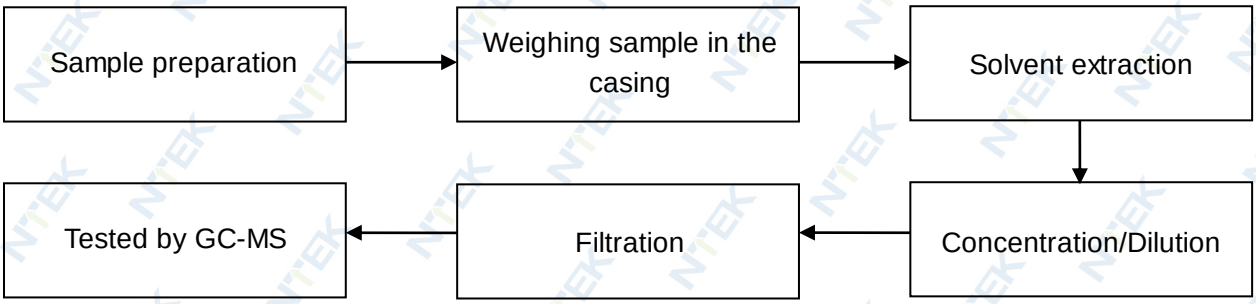

2.2 Metal sample(s)



3. PBBs/ PBDEs




4. Phthalates



**Sample photo(s)：**


Fig.1( Finished photo)

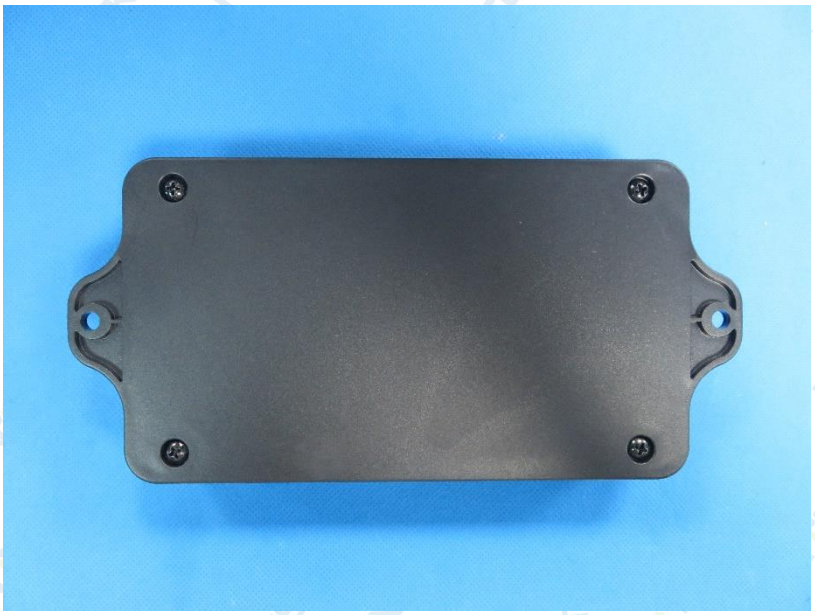


Fig.2( Finished photo)


Fig.3

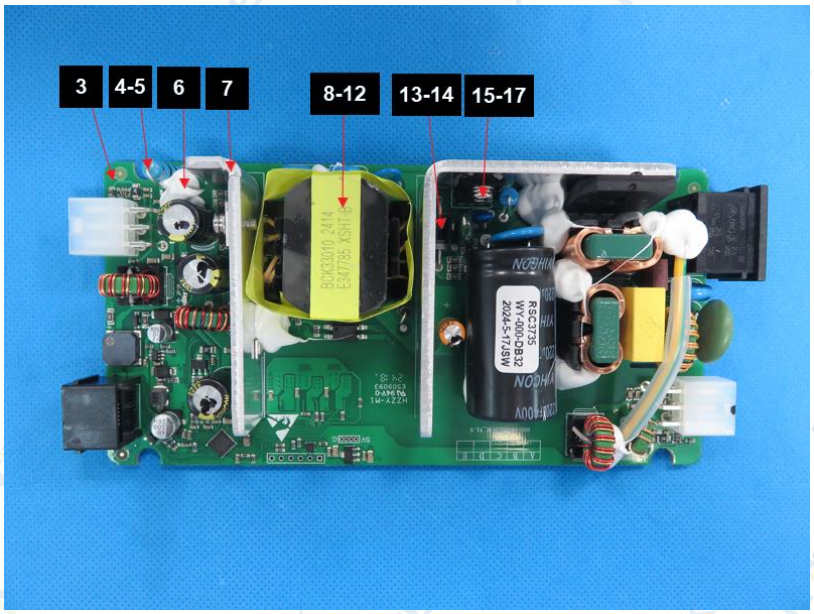



Fig.4

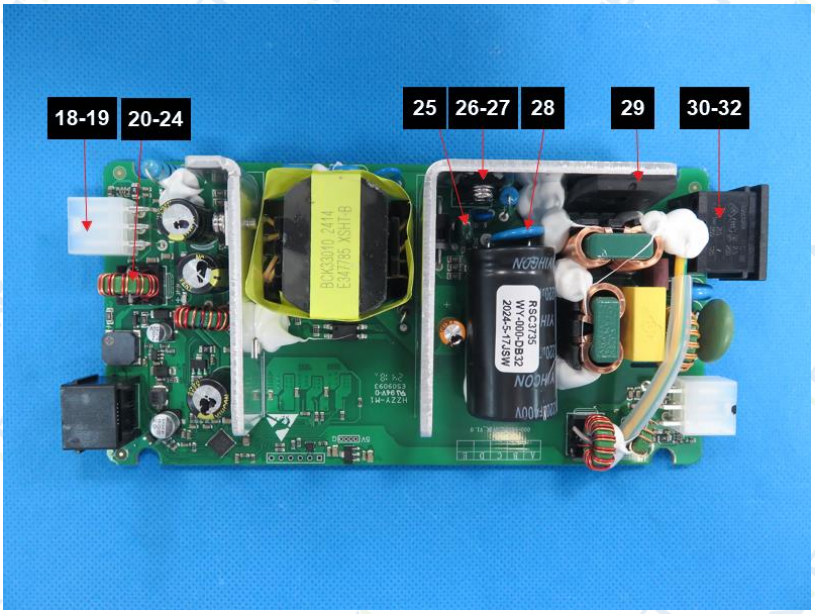



Fig.5

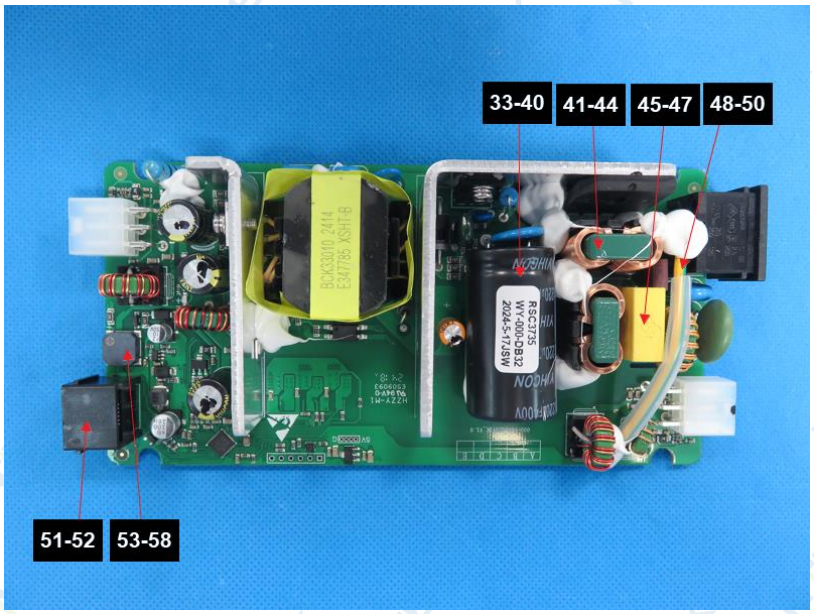



Fig.6

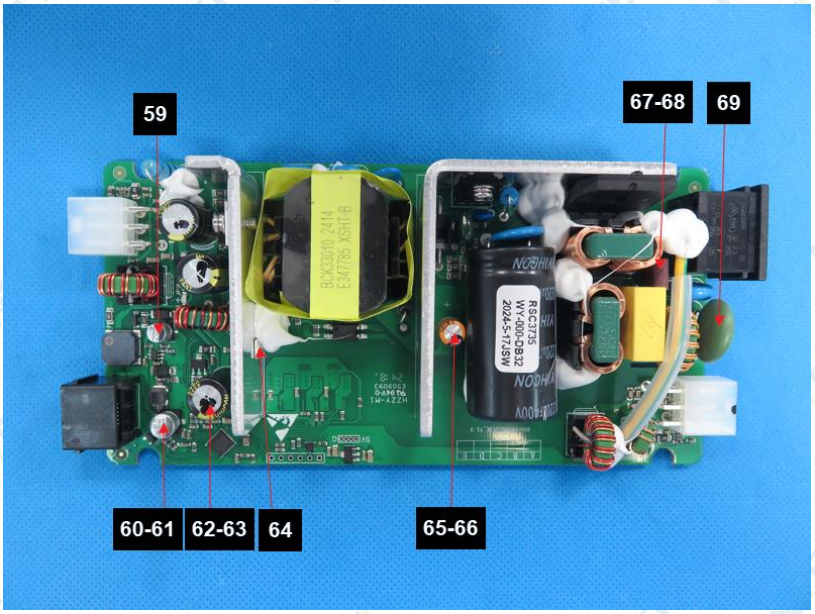



Fig.7

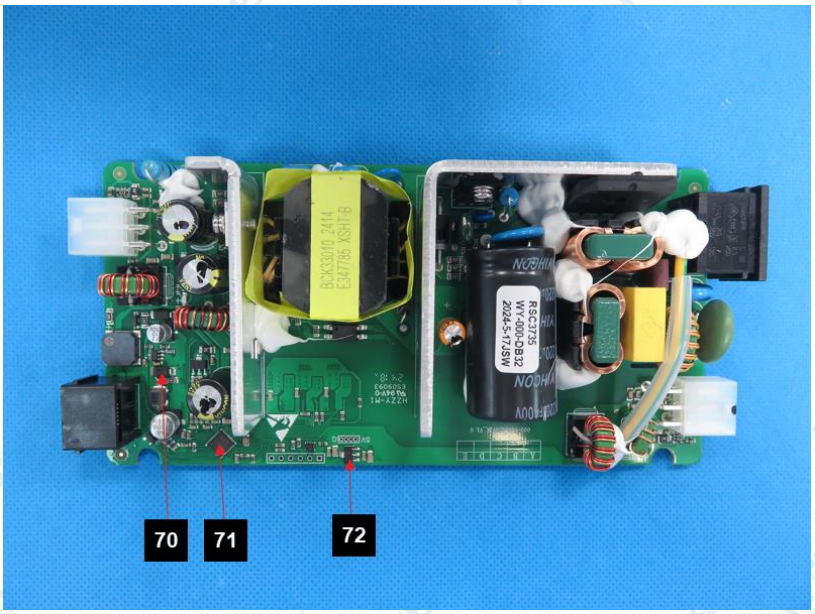



Fig.8

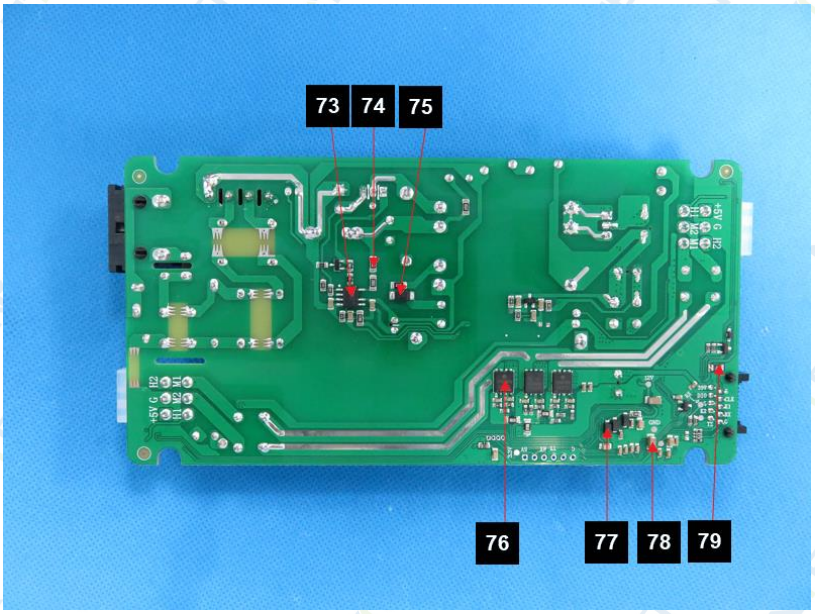



Fig.9

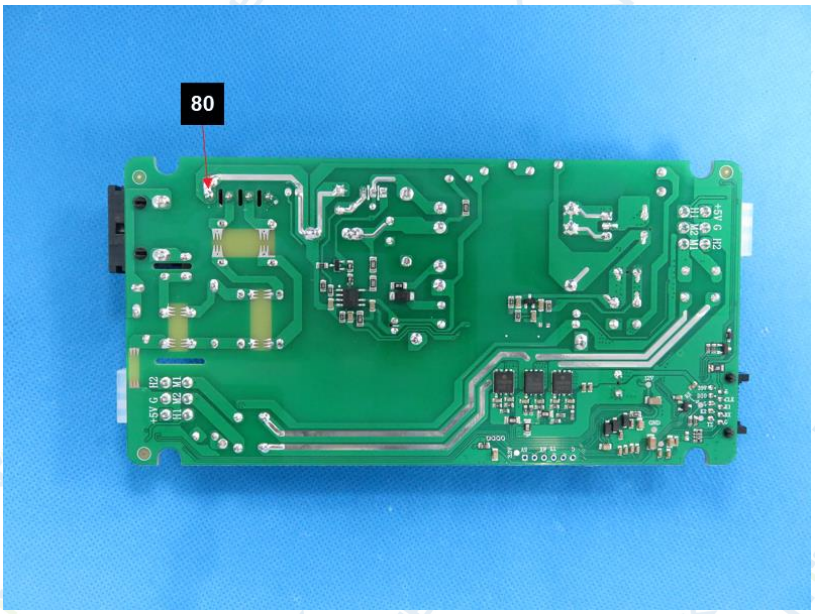



Fig.10

This test report displaces the original report No. S24060601103001, and the original report was invalid since the date of this test report released.

****End of Report****

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