# Test Report



**Applicant** : UNI-TREND TECHNOLOGY (CHINA) CO.,LTD.
**Address** : No 6, Gong Ye Bei 1 st Road, Songshan Lake National High-Tech Industrial Development Zone, Dongguan City, Guangdong Province, China

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

Product Name : Digital Multimeter
Model : UT15B MAX，UT17B MAX，UT18B MAX
Manufacturer : UNI-TREND TECHNOLOGY (CHINA) CO.,LTD.
Address : No 6, Gong Ye Bei 1 st Road, Songshan Lake National High-Tech Industrial Development Zone, Dongguan City, Guangdong Province, China

Date of Sample Received : May. 30, 2023
Test period : May. 30, 2023 - Jun. 08, 2023

| **Test requested** | **Conclusion** |
|---|---|
| In accordance with RoHS Directive 2011/65/EU and amendment 2015/863/EU, to determine Cadmium (Cd), Lead (Pb), Mercury (Hg), Chromium (Cr (VI)), PBBs, PBDEs, Di (2-ethyl hexyl)-phthalate (DEHP), Dibutyl phthalate (DBP), Butylbenzyl phthalate (BBP), Diisobuty phthalate (DIBP) content on submitted samples. | Pass |
| With reference to 2012 No. 3032 Environmental Protection in United Kingdom-The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (Amendment) Regulations 2012 and its amendment regulations 2021(UK ROHS). | Pass |

**Test method** : Please refer to next page.

**Test result** : Please refer to next page.

**Approved by:** Richard Ke **Date:** Jun. 13, 2023

Richard Ke
(Signed for and on behalf)

Dongguan NTEK Testing Technology Co., Ltd. NTEK Report Seal

**ROHS Test method:**

**1. For the Cadmium (Cd), Lead (Pb),Mercury (Hg), Chromium (Cr (VI)), PBBs, PBDEs:**

With reference to IEC 62321 Procedures for the Determination of Levels of Regulated Substances in Electrotechnical Products, XRF scanning first test, then using chemical test method to confirm.

| Testing Item | | Test Method | Measuring Instrument | MDL |
|---|---|---|---|---|
| Screening test | | IEC 62321-3-1: 2013 scanning | XRF | -- |
| Wet Chemical test | Lead (Pb) | IEC 62321-5: 2013 | ICP-OES | 2mg/kg |
| | Cadmium (Cd) | IEC 62321-5: 2013 | ICP-OES | 2mg/kg |
| | Mercury (Hg) | IEC 62321-4: 2013+AMD1:2017 | ICP-OES | 2mg/kg |
| | Chromium (Cr (VI))▼ | IEC 62321-7-2:2017 | UV-Vis | 10mg/kg |
| | | IEC 62321-7-1: 2015 | | 0.10μg/cm$^2$ |
| | PBBs, PBDEs | IEC 62321-6: 2015 | GC-MS | 5 mg/kg |

**2. For the DEHP, DBP, BBP and DIBP:**

| Testing Item | Pretreatment Method | Measuring Instrument | MDL |
|---|---|---|---|
| Di (2-ethyl hexyl)-phthalate (DEHP) | IEC 62321-8: 2017 | GC-MS | 30mg/kg |
| Butylbenzyl phthalate (BBP) | | | 30mg/kg |
| Dibutyl phthalate (DBP) | | | 30mg/kg |
| Diisobuty phthalate (DIBP) | | | 30mg/kg |

**UK ROHS Test method:**

**1. For the Cadmium (Cd), Lead (Pb),Mercury (Hg), Chromium (Cr (VI)), PBBs, PBDEs:**

With reference to BS EN 62321 Procedures for the Determination of Levels of Regulated Substances in Electrotechnical Products, XRF scanning first test, then using chemical test method to confirm.

| Testing Item | | Test Method | Measuring Instrument | MDL |
|---|---|---|---|---|
| Screening test | | BS EN 62321-3-1: 2014 scanning | XRF | -- |
| Wet Chemical test | Lead (Pb) | BS EN 62321-5: 2014 | ICP-OES | 2mg/kg |
| | Cadmium (Cd) | BS EN 62321-5: 2014 | ICP-OES | 2mg/kg |
| | Mercury (Hg) | BS EN 62321-4: 2014+A1: 2017 | ICP-OES | 2mg/kg |
| | Chromium (Cr (VI))▼ | BS EN 62321-7-2: 2017 | UV-Vis | 10mg/kg |
| | | BS EN 62321-7-1: 2015 | | 0.10μg/cm$^2$ |
| | PBBs, PBDEs | BS EN 62321-6: 2015 | GC-MS | 5 mg/kg |

**2. For the DEHP, DBP, BBP and DIBP:**

| Testing Item | Pretreatment Method | Measuring Instrument | MDL |
|---|---|---|---|
| Di (2-ethyl hexyl)-phthalate (DEHP) | BS EN 62321-8: 2017 | GC-MS | 30mg/kg |
| Butylbenzyl phthalate (BBP) | | | 30mg/kg |
| Dibutyl phthalate (DBP) | | | 30mg/kg |
| Diisobuty phthalate (DIBP) | | | 30mg/kg |

**1. Description of the test subject:**

| Sample No. | Location | Sample Description |
|---|---|---|
| 1 | Shell assembly | Red soft plastic sleeve |
| 2 | Shell assembly | Deep red soft plastic |
| 3 | Shell assembly | Dark gray with white/yellow plastic case |
| 4 | Shell assembly | Transparent plastic sheet |
| 5 | Shell assembly | Red plastic cylinder |
| 6 | Shell assembly | Black plastic drum |
| 7 | Shell assembly | Beige plastic pieces |
| 8 | Shell assembly | Silver metal buckle |
| 9 | Shell assembly | Silver drum |
| 10 | Shell assembly | Silver metal frame |
| 11 | Shell assembly | White lubricating oil |
| 12 | Shell assembly | Silver metal steel ball |
| 13 | Shell assembly | Silver metal spring |
| 14 | Shell assembly | Gold drum |
| 15 | Shell assembly | Silver metal spring |
| 16 | Shell assembly | soft plastic cushion beige |
| 17 | Shell assembly | Beige with blue/white printed soft adhesive keys |
| 18 | Shell assembly | Black with white printed soft adhesive keys |
| 19 | Shell assembly | Beige with yellow/white printed soft adhesive keys |
| 20 | Shell assembly | Black soft plastic pad |
| 21 | Shell assembly | Black coating |
| 22 | Shell assembly | Silver metal frame |
| 23 | Shell assembly | Black metal screw |
| 24 | Shell assembly | Silver metal screw |
| 25 | Shell assembly | Silver metal belt ring screws |
| 26 | Display screen | Silver film |
| 27 | Display screen | Translucent plastic sheet |
| 28 | Display screen | White film |

| Sample No. | Location | Sample Description |
|---|---|---|
| 29 | Display screen | Off-white film |
| 30 | Display screen | Transparent double-sided adhesive |
| 31 | Display screen | Gray/black soft plastic strip |
| 32 | Display screen | Silver film |
| 33 | Display screen | Grey transparent adhesive film |
| 34 | Display screen | Clear glass plate |
| 35 | PCB board module | Black plastic rack |
| 36 | PCB board module | Light gold sheet metal |
| 37 | PCB board module | Dark grey soft plastic sleeve |
| 38 | PCB board module | Silver sheet |
| 39 | PCB board module | Clear patch LED |
| 40 | PCB board module | Chip inductance |
| 41 | PCB board module | White patch LED |
| 42 | PCB board module | Patch color ring resistor |
| 43 | PCB board module | Brown patch capacitor |
| 44 | PCB board module | PCB board solder |
| 45 | PCB board module | Green PCB board |
| 46 | PCB board module | Silver sheet |
| 47 | PCB board module | Thermistor sleeve black |
| 48 | PCB board module | Thermistor Green body |
| 49 | PCB board module | Thermistor pin |
| 50 | PCB board module | Capacitor body blue |
| 51 | PCB board module | Capacitance pin |
| 52 | PCB board module | Color ring Resistor Green body |
| 53 | PCB board module | Color ring resistance pin |
| 54 | PCB board module | Silver sheet |
| 55 | PCB board module | Patch triode |
| 56 | PCB board module | Silver metal spring |
| 57 | PCB board module | Patch diode |

| Sample No. | Location | Sample Description |
|---|---|---|
| 58 | PCB board module | Silver metal base |
| 59 | PCB board module | Fuse silver metal cap |
| 60 | PCB board module | Fuse white/green/black sticker |
| 61 | PCB board module | Fuse white fiber sleeve |
| 62 | PCB board module | The fuse is filled with white grain |
| 63 | PCB board module | Fuse copper metal sheet |
| 64 | PCB board module | Varistor body blue |
| 65 | PCB board module | Varistor pin |
| 66 | PCB board module | Patch rectifier bridge |
| 67 | PCB board module | Safety tube white/blue/black sticker |
| 68 | PCB board module | Brown patch large capacitance |
| 69 | PCB board module | Clear adhesive |
| 70 | PCB board module | Inductive brown plastic case |
| 71 | PCB board module | Inductor black adhesive |
| 72 | PCB board module | Inductance yellow enamelled wire |
| 73 | PCB board module | Inductance magnetic ring with green coating |
| 74 | PCB board module | Inductor pin |
| 75 | PCB board module | Patch IC |
| 76 | PCB board module | White patch capacitor |
| 77 | PCB board module | Patch resistance |
| 78 | PCB board module | Crystal oscillator body |
| 79 | PCB board module | Crystal oscillator pin |
| 80 | PCB board module | Black plastic seat |
| 81 | PCB board module | Chip inductance |
| 82 | PCB board module | Yellow patch capacitor |
| 83 | PCB board module | Patch IC small |
| 84 | PCB board module | Patch IC |
| 85 | PCB board module | Patch IC |
| 86 | PCB board module | Patch IC length |

| Sample No. | Location | Sample Description |
|---|---|---|
| 87 | PCB board module | Buzzer Black plastic case |
| 88 | PCB board module | Buzzer diaphragm silver metal |
| 89 | PCB board module | Buzzer Silver metal gasket |
| 90 | PCB board module | Buzzer magnetic ring |
| 91 | PCB board module | Buzzer copper enamelled wire |
| 92 | PCB board module | Buzzer wire wound metal holder |
| 93 | PCB board module | Buzzer White Glue |
| 94 | PCB board module | Buzzer PCB board |
| 95 | PCB board module | Buzzer PCB board solder |
| 96 | PCB board module | Buzzer bottom black filler |
| 97 | PCB board module | Buzzer pin |
| 98 | PCB board module | Patch IC |
| 99 | PCB board module | Chip inductor body |

**2. Test results (Unit: mg/kg):**

**ROHS**

**2.1 Test results of Cr (VI), Cd, Pb, Hg, PBBs, PBDEs:**

| No. | Test Method | Heavy Metals and Flame Retardants | | | | | Conclusion |
|---|---|---|---|---|---|---|---|
| | | Cd | Pb | Hg | Cr (Cr (V I)) | Br (PBBs, PBDEs) | |
| 1 | Screening | BL | BL | BL | BL | BL | Pass |
| 2 | Screening | BL | BL | BL | BL | BL | Pass |
| 3 | Screening | BL | BL | BL | BL | BL | Pass |
| 4 | Screening | BL | BL | BL | BL | IN | Pass |
| | Wet Chem. | --- | --- | --- | --- | N.D. | |
| 5 | Screening | BL | BL | BL | BL | BL | Pass |
| 6 | Screening | BL | BL | BL | BL | BL | Pass |
| 7 | Screening | BL | BL | BL | BL | IN | Pass |
| | Wet Chem. | --- | --- | --- | --- | N.D. | |
| 8 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 9 | Screening | BL | OL 17582 See Note (5) | BL | BL | N.A. | Pass |
| 10 | Screening | BL | OL 16886 See Note (5) | BL | BL | N.A. | Pass |
| 11 | Screening | BL | BL | BL | BL | BL | Pass |
| 12 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 13 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 14 | Screening | BL | IN | BL | BL | N.A. | Pass |
| | Wet Chem. | --- | OL 24500 See Note (5) | --- | --- | --- | |
| 15 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 16 | Screening | BL | BL | BL | BL | BL | Pass |
| 17 | Screening | BL | BL | BL | BL | BL | Pass |
| 18 | Screening | BL | BL | BL | BL | BL | Pass |
| 19 | Screening | BL | BL | BL | BL | BL | Pass |
| 20 | Screening | BL | BL | BL | BL | BL | Pass |
| 21 | Screening | BL | BL | BL | BL | BL | Pass |

| No. | Test Method | Heavy Metals and Flame Retardants | | | | | Conclusion |
|---|---|---|---|---|---|---|---|
| | | Cd | Pb | Hg | Cr (Cr (V I)) | Br (PBBs, PBDEs) | |
| 22 | Screening | BL | BL | BL | IN | N.A. | Pass |
| | Wet Chem. | --- | --- | --- | N.D. | --- | |
| 23 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 24 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 25 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 26 | Screening | BL | BL | BL | BL | BL | Pass |
| 27 | Screening | BL | BL | BL | BL | BL | Pass |
| 28 | Screening | BL | BL | BL | BL | BL | Pass |
| 29 | Screening | BL | BL | BL | BL | BL | Pass |
| 30 | Screening | BL | BL | BL | BL | BL | Pass |
| 31 | Screening | BL | BL | BL | BL | BL | Pass |
| 32 | Screening | BL | BL | BL | BL | BL | Pass |
| 33 | Screening | BL | BL | BL | BL | BL | Pass |
| 34 | Screening | BL | BL | BL | BL | BL | Pass |
| 35 | Screening | BL | BL | BL | BL | IN | Pass |
| | Wet Chem. | --- | --- | --- | --- | N.D. | |
| 36 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 37 | Screening | BL | BL | BL | BL | BL | Pass |
| 38 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 39 | Screening | BL | BL | BL | BL | BL | Pass |
| 40 | Screening | BL | BL | BL | BL | BL | Pass |
| 41 | Screening | BL | BL | BL | BL | BL | Pass |
| 42 | Screening | BL | BL | BL | BL | BL | Pass |
| 43 | Screening | BL | BL | BL | BL | BL | Pass |
| 44 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 45 | Screening | BL | BL | BL | BL | IN | Pass |
| | Wet Chem. | --- | --- | --- | --- | N.D. | |
| 46 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 47 | Screening | BL | BL | BL | BL | BL | Pass |

| No. | Test Method | Heavy Metals and Flame Retardants | | | | | Conclusion |
|---|---|---|---|---|---|---|---|
| | | Cd | Pb | Hg | Cr (Cr (VI)) | Br (PBBs, PBDEs) | |
| 48 | Screening | BL | OL 730 See Note (6) | BL | IN | BL | Pass |
| | Wet Chem. | --- | --- | --- | N.D. | --- | |
| 49 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 50 | Screening | BL | BL | BL | BL | BL | Pass |
| 51 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 52 | Screening | BL | BL | BL | IN | BL | Pass |
| | Wet Chem. | --- | --- | --- | N.D. | --- | |
| 53 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 54 | Screening | BL | BL | BL | IN | N.A. | Pass |
| | Wet Chem. | --- | --- | --- | N.D. | --- | |
| 55 | Screening | BL | BL | BL | BL | BL | Pass |
| 56 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 57 | Screening | BL | OL 2619 See Note (7) | BL | BL | BL | Pass |
| 58 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 59 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 60 | Screening | BL | BL | BL | BL | BL | Pass |
| 61 | Screening | BL | BL | BL | BL | BL | Pass |
| 62 | Screening | BL | BL | BL | BL | BL | Pass |
| 63 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 64 | Screening | BL | BL | BL | BL | BL | Pass |
| 65 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 66 | Screening | BL | OL 2445 See Note (7) | BL | BL | BL | Pass |
| 67 | Screening | BL | BL | BL | BL | BL | Pass |
| 68 | Screening | BL | BL | BL | BL | BL | Pass |
| 69 | Screening | BL | BL | BL | BL | BL | Pass |
| 70 | Screening | BL | BL | BL | BL | BL | Pass |
| 71 | Screening | BL | BL | BL | BL | BL | Pass |

| No. | Test Method | Heavy Metals and Flame Retardants | | | | | Conclusion |
|---|---|---|---|---|---|---|---|
| | | Cd | Pb | Hg | Cr (Cr (VI)) | Br (PBBs, PBDEs) | |
| 72 | Screening | BL | BL | BL | BL | BL | Pass |
| 73 | Screening | BL | BL | BL | BL | BL | Pass |
| 74 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 75 | Screening | BL | BL | BL | BL | BL | Pass |
| 76 | Screening | BL | BL | BL | BL | BL | Pass |
| 77 | Screening | BL | BL | BL | BL | BL | Pass |
| 78 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 79 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 80 | Screening | BL | BL | BL | BL | BL | Pass |
| 81 | Screening | BL | BL | BL | BL | BL | Pass |
| 82 | Screening | BL | BL | BL | BL | BL | Pass |
| 83 | Screening | BL | BL | BL | BL | BL | Pass |
| 84 | Screening | BL | BL | BL | BL | BL | Pass |
| 85 | Screening | BL | BL | BL | BL | BL | Pass |
| 86 | Screening | BL | BL | BL | BL | BL | Pass |
| 87 | Screening | BL | BL | BL | BL | IN | Pass |
| | Wet Chem. | --- | --- | --- | --- | N.D. | |
| 88 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 89 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 90 | Screening | BL | BL | BL | BL | BL | Pass |
| 91 | Screening | BL | BL | BL | BL | BL | Pass |
| 92 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 93 | Screening | BL | BL | BL | BL | BL | Pass |
| 94 | Screening | BL | BL | BL | BL | IN | Pass |
| | Wet Chem. | --- | --- | --- | --- | N.D. | |
| 95 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 96 | Screening | BL | BL | BL | BL | BL | Pass |
| 97 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 98 | Screening | BL | BL | BL | BL | BL | Pass |
| 99 | Screening | BL | BL | BL | BL | BL | Pass |

**UK ROHS**

**2.2 Test results of Cr (VI), Cd, Pb, Hg, PBBs, PBDEs:**

| No. | Test Method | Heavy Metals and Flame Retardants | | | | | Conclusion |
|---|---|---|---|---|---|---|---|
| | | Cd | Pb | Hg | Cr (Cr (VI)) | Br (PBBs, PBDEs) | |
| 1 | Screening | BL | BL | BL | BL | BL | Pass |
| 2 | Screening | BL | BL | BL | BL | BL | Pass |
| 3 | Screening | BL | BL | BL | BL | BL | Pass |
| 4 | Screening | BL | BL | BL | BL | IN | Pass |
| | Wet Chem. | --- | --- | --- | --- | N.D. | |
| 5 | Screening | BL | BL | BL | BL | BL | Pass |
| 6 | Screening | BL | BL | BL | BL | BL | Pass |
| 7 | Screening | BL | BL | BL | BL | IN | Pass |
| | Wet Chem. | --- | --- | --- | --- | N.D. | |
| 8 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 9 | Screening | BL | OL 17582 See Note (5) | BL | BL | N.A. | Pass |
| 10 | Screening | BL | OL 16886 See Note (5) | BL | BL | N.A. | Pass |
| 11 | Screening | BL | BL | BL | BL | BL | Pass |
| 12 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 13 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 14 | Screening | BL | IN | BL | BL | N.A. | Pass |
| | Wet Chem. | --- | OL 24600 See Note (5) | --- | --- | --- | |
| 15 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 16 | Screening | BL | BL | BL | BL | BL | Pass |
| 17 | Screening | BL | BL | BL | BL | BL | Pass |
| 18 | Screening | BL | BL | BL | BL | BL | Pass |
| 19 | Screening | BL | BL | BL | BL | BL | Pass |
| 20 | Screening | BL | BL | BL | BL | BL | Pass |
| 21 | Screening | BL | BL | BL | BL | BL | Pass |

| No. | Test Method | Heavy Metals and Flame Retardants | | | | | Conclusion |
|---|---|---|---|---|---|---|---|
| | | Cd | Pb | Hg | Cr (Cr (V I)) | Br (PBBs, PBDEs) | |
| 22 | Screening | BL | BL | BL | IN | N.A. | Pass |
| | Wet Chem. | --- | --- | --- | N.D. | --- | |
| 23 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 24 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 25 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 26 | Screening | BL | BL | BL | BL | BL | Pass |
| 27 | Screening | BL | BL | BL | BL | BL | Pass |
| 28 | Screening | BL | BL | BL | BL | BL | Pass |
| 29 | Screening | BL | BL | BL | BL | BL | Pass |
| 30 | Screening | BL | BL | BL | BL | BL | Pass |
| 31 | Screening | BL | BL | BL | BL | BL | Pass |
| 32 | Screening | BL | BL | BL | BL | BL | Pass |
| 33 | Screening | BL | BL | BL | BL | BL | Pass |
| 34 | Screening | BL | BL | BL | BL | BL | Pass |
| 35 | Screening | BL | BL | BL | BL | BL | Pass |
| 36 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 37 | Screening | BL | BL | BL | BL | BL | Pass |
| 38 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 39 | Screening | BL | BL | BL | BL | BL | Pass |
| 40 | Screening | BL | BL | BL | BL | BL | Pass |
| 41 | Screening | BL | BL | BL | BL | BL | Pass |
| 42 | Screening | BL | BL | BL | BL | BL | Pass |
| 43 | Screening | BL | BL | BL | BL | BL | Pass |
| 44 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 45 | Screening | BL | BL | BL | BL | IN | Pass |
| | Wet Chem. | --- | --- | --- | --- | N.D. | |
| 46 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 47 | Screening | BL | BL | BL | BL | BL | Pass |

| No. | Test Method | Heavy Metals and Flame Retardants | | | | | Conclusion |
|---|---|---|---|---|---|---|---|
| | | Cd | Pb | Hg | Cr (Cr (VI)) | Br (PBBs, PBDEs) | |
| 48 | Screening | BL | OL 730 See Note (6) | BL | IN | BL | Pass |
| | Wet Chem. | --- | --- | --- | N.D. | --- | |
| 49 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 50 | Screening | BL | BL | BL | BL | BL | Pass |
| 51 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 52 | Screening | BL | BL | BL | IN | BL | Pass |
| | Wet Chem. | --- | --- | --- | N.D. | --- | |
| 53 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 54 | Screening | BL | BL | BL | IN | N.A. | Pass |
| | Wet Chem. | --- | --- | --- | N.D. | --- | |
| 55 | Screening | BL | BL | BL | BL | BL | Pass |
| 56 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 57 | Screening | BL | OL 2619 See Note (7) | BL | BL | BL | Pass |
| 58 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 59 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 60 | Screening | BL | BL | BL | BL | BL | Pass |
| 61 | Screening | BL | BL | BL | BL | BL | Pass |
| 62 | Screening | BL | BL | BL | BL | BL | Pass |
| 63 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 64 | Screening | BL | BL | BL | BL | BL | Pass |
| 65 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 66 | Screening | BL | OL 2445 See Note (7) | BL | BL | BL | Pass |
| 67 | Screening | BL | BL | BL | BL | BL | Pass |
| 68 | Screening | BL | BL | BL | BL | BL | Pass |
| 69 | Screening | BL | BL | BL | BL | BL | Pass |
| 70 | Screening | BL | BL | BL | BL | BL | Pass |
| 71 | Screening | BL | BL | BL | BL | BL | Pass |

| No. | Test Method | Heavy Metals and Flame Retardants | | | | | Conclusion |
|---|---|---|---|---|---|---|---|
| | | Cd | Pb | Hg | Cr (Cr (VI)) | Br (PBBs, PBDEs) | |
| 72 | Screening | BL | BL | BL | BL | BL | Pass |
| 73 | Screening | BL | BL | BL | BL | BL | Pass |
| 74 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 75 | Screening | BL | BL | BL | BL | BL | Pass |
| 76 | Screening | BL | BL | BL | BL | BL | Pass |
| 77 | Screening | BL | BL | BL | BL | BL | Pass |
| 78 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 79 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 80 | Screening | BL | BL | BL | BL | BL | Pass |
| 81 | Screening | BL | BL | BL | BL | BL | Pass |
| 82 | Screening | BL | BL | BL | BL | BL | Pass |
| 83 | Screening | BL | BL | BL | BL | BL | Pass |
| 84 | Screening | BL | BL | BL | BL | BL | Pass |
| 85 | Screening | BL | BL | BL | BL | BL | Pass |
| 86 | Screening | BL | BL | BL | BL | BL | Pass |
| 87 | Screening | BL | BL | BL | BL | IN | Pass |
| | Wet Chem. | --- | --- | --- | --- | N.D. | |
| 88 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 89 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 90 | Screening | BL | BL | BL | BL | BL | Pass |
| 91 | Screening | BL | BL | BL | BL | BL | Pass |
| 92 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 93 | Screening | BL | BL | BL | BL | BL | Pass |
| 94 | Screening | BL | BL | BL | BL | IN | Pass |
| | Wet Chem. | --- | --- | --- | --- | N.D. | |
| 95 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 96 | Screening | BL | BL | BL | BL | BL | Pass |
| 97 | Screening | BL | BL | BL | BL | N.A. | Pass |
| 98 | Screening | BL | BL | BL | BL | BL | Pass |
| 99 | Screening | BL | BL | BL | BL | BL | Pass |

**ROHS**

**2.3 The test results of DEHP, DBP, BBP, DIBP:**

| Group No. | Part No. | Test Method | Phthalates | | | | Conclusion |
|---|---|---|---|---|---|---|---|
| | | | DEHP | DBP | BBP | DIBP | |
| 1 | 1+2+16 | Wet Chem. | BL | BL | BL | BL | Pass |
| 2 | 17+18+19 | Wet Chem. | BL | BL | BL | BL | Pass |
| 3 | 20+31 | Wet Chem. | BL | BL | BL | BL | Pass |
| 4 | 37+47 | Wet Chem. | BL | BL | BL | BL | Pass |
| 5 | 11+21+26+32+33+61 | Wet Chem. | BL | BL | BL | BL | Pass |
| 6 | 69+71+72+73+91+93 | Wet Chem. | BL | BL | BL | BL | Pass |
| 7 | 28+29+30+60+67+62 | Wet Chem. | BL | BL | BL | BL | Pass |
| 8 | 39+41+45+94+96 | Wet Chem. | BL | BL | BL | BL | Pass |
| 9 | 27+35+70+80+87 | Wet Chem. | BL | BL | BL | BL | Pass |
| 10 | 3+4+5+6+7 | Wet Chem. | BL | BL | BL | BL | Pass |

Remark:

(1) While the test results were less than the one-half limits indicates the presence of Phthalates on the two tested areas and result were all be regarded as no conflict with the requirement;

(2) While the test results were less than the one-third limits indicates the presence of Phthalates on the three tested areas and result were all be regarded as no conflict with the requirement;

(3) While the test results were less than the one-fifth limits indicates the presence of Phthalates on the five tested areas and result were all be regarded as no conflict with the requirement;

(4) While the test results were less than the one-sixth limits indicates the presence of Phthalates on the six tested areas and result were all be regarded as no conflict with the requirement.

**UK ROHS**

**2.4 The test results of DEHP, DBP, BBP, DIBP:**

| Group No. | Part No. | Test Method | Phthalates | | | | Conclusion |
|---|---|---|---|---|---|---|---|
| | | | DEHP | DBP | BBP | DIBP | |
| 1 | 1+2+16 | Wet Chem. | BL | BL | BL | BL | Pass |
| 2 | 17+18+19 | Wet Chem. | BL | BL | BL | BL | Pass |
| 3 | 20+31 | Wet Chem. | BL | BL | BL | BL | Pass |
| 4 | 37+47 | Wet Chem. | BL | BL | BL | BL | Pass |
| 5 | 11+21+26+32+33+61 | Wet Chem. | BL | BL | BL | BL | Pass |
| 6 | 69+71+72+73+91+93 | Wet Chem. | BL | BL | BL | BL | Pass |
| 7 | 28+29+30+60+67+62 | Wet Chem. | BL | BL | BL | BL | Pass |
| 8 | 39+41+45+94+96 | Wet Chem. | BL | BL | BL | BL | Pass |
| 9 | 27+35+70+80+87 | Wet Chem. | BL | BL | BL | BL | Pass |
| 10 | 3+4+5+6+7 | Wet Chem. | BL | BL | BL | BL | Pass |

Remark:

(1) While the test results were less than the one-half limits indicates the presence of Phthalates on the two tested areas and result were all be regarded as no conflict with the requirement;

(2) While the test results were less than the one-third limits indicates the presence of Phthalates on the three tested areas and result were all be regarded as no conflict with the requirement;

(3) While the test results were less than the one-fifth limits indicates the presence of Phthalates on the five tested areas and result were all be regarded as no conflict with the requirement;

(4) While the test results were less than the one-sixth limits indicates the presence of Phthalates on the six tested areas and result were all be regarded as no conflict with the requirement.

**Note:**

(1) (a) It is the result on total Br while test PBBs, PBDEs by XRF, It is the result on total Cr while test Cr (VI) by XRF.

(b) Results are obtained by XRF for primary screening and further chemical testing by ICP-OES (for Pb, Cd and 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 IEC 62321-3-1:2013. (unit: mg/kg).

| Element | Polymer | Metal | Composite Materials |
|---|---|---|---|
| Cd | BL≤(70 -3σ)<X<(130+3σ)≤OL | BL≤(70-3σ)<X<(70+3σ)≤OL | LOD<X<(150+3σ)≤OL |
| Pb | BL≤(700-3σ)<X<(1300+3σ) ≤OL | BL≤(700-3σ)<X<(1300+3σ) ≤OL | BL≤(500-3σ)<X<(1500+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 |

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

(d) OL=Over Limit, BL=Below Limit, IN=Inconclusive, LOD= Limit of Detection;

(2) mg/kg=ppm=0.0001%, N.D.=Not detected(<MDL), MDL=Method Detection Limit, "---"=Not conducted, "--"=Not regulated, "N.A."=Not applicable.

(3)"▼" =Metal sample

a. 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) ;

b. The sample is negative for Cr (VI) if Cr (VI) concentration is less than 0.10 μg/cm². The coating is considered a non-Cr (VI) based coating ;

c. The result between 0.10 μg/cm² and 0.13 μg/cm² is considered to be inconclusive - unavoidable coating variations may influence the determination ;

Information on storage conditions and production date of the tested sample is unavailable and thus Cr (VI) results represent status of the sample at the time of testing.

(4) RoHS Requirement

| Restricted substances | Limits |
|---|---|
| Lead (Pb) | 0.1% (1000 ppm) |
| Cadmium (Cd) | 0.01% (100 ppm) |
| Chromium(VI) (Cr (VI)) | 0.1% (1000 ppm) |
| Mercury (Hg) | 0.1% (1000 ppm) |
| Polybrominated biphenyls (PBBs) | 0.1% (1000 ppm) |
| Polybrominated diphenyl ethers (PBDEs) | 0.1% (1000 ppm) |
| Di (2-ethyl hexyl)-phthalate (DEHP) | 0.1% (1000 ppm) |
| Butylbenzyl phthalate (BBP) | 0.1% (1000 ppm) |
| Dibutyl phthalate (DBP) | 0.1% (1000 ppm) |
| Diisobuty phthalate (DIBP) | 0.1% (1000 ppm) |

The above limits are reference with RoHS Directive 2011/65/EU and amendment 2015/863/EU.

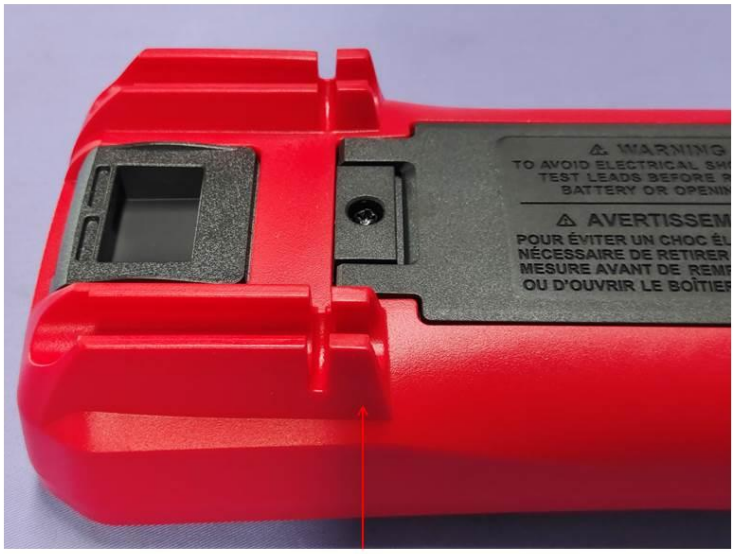
(5) In accordance with RoHS Directive (2011/65/EU) Annex III Exemption list 6(c), the lead content in copper alloy is exempted up to 4 % by weight.

(6) In accordance with RoHS Directive (2011/65/EU) Annex III Exemption list 7(c)-1, the lead content in glass and ceramic of electronic components is exempted.

(7) According to the declaration provided by the client, the sample material is based on In accordance with RoHS Directive (2011/65/EU) Annex III Exemption list 7(a), Lead in high melting temperature type solders (i.e. lead-based alloys containing 85 % by weight or more lead) is exempted.

**Photographs of Sample:**



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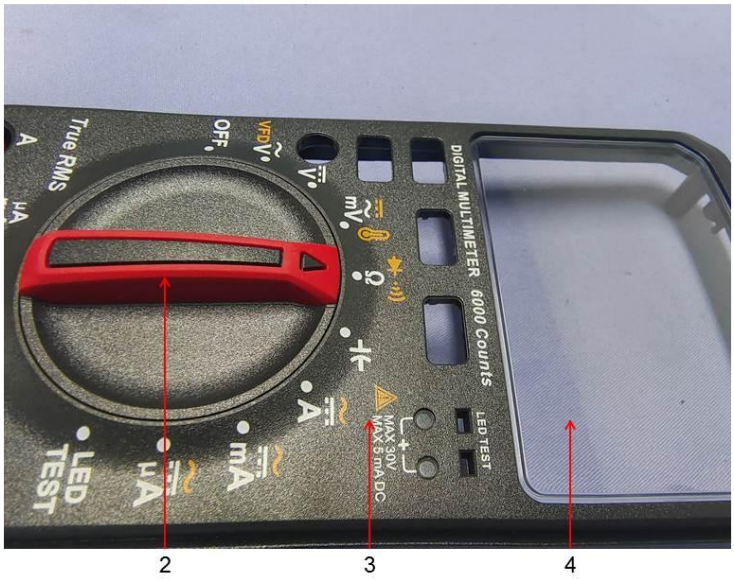

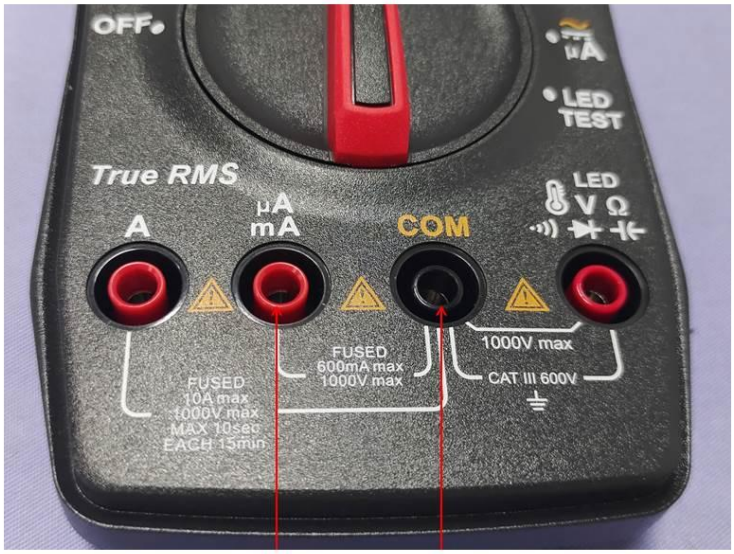


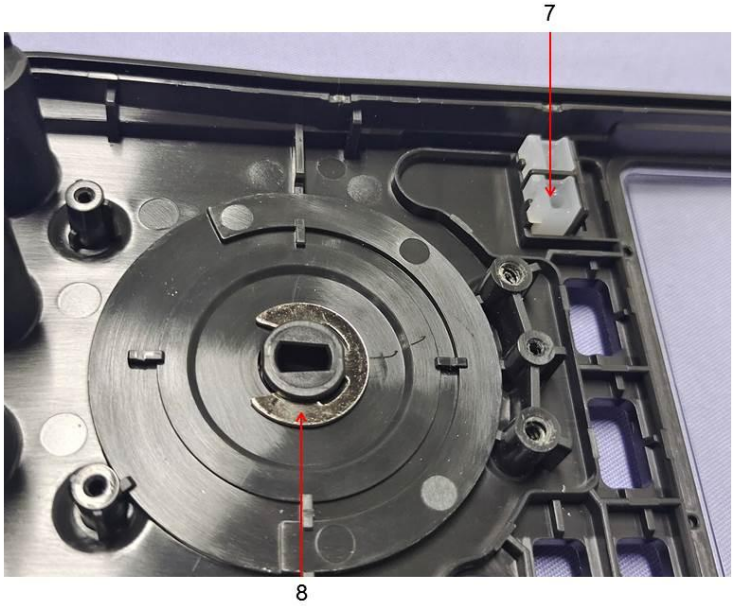

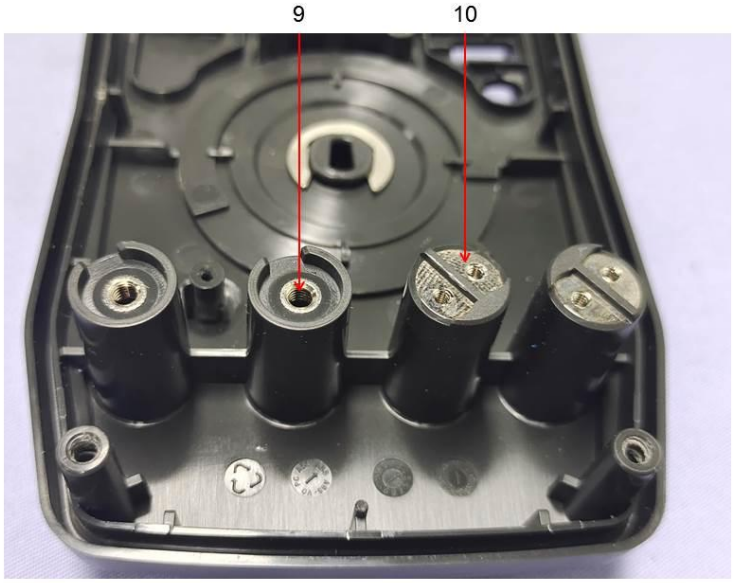


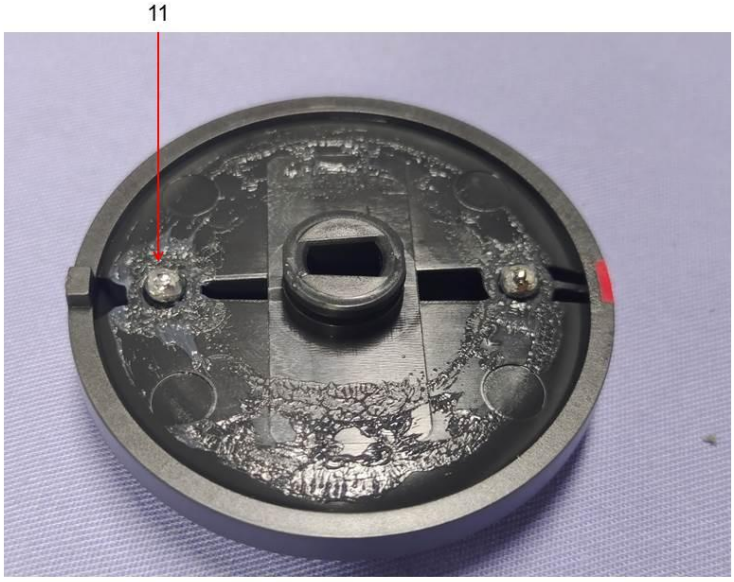

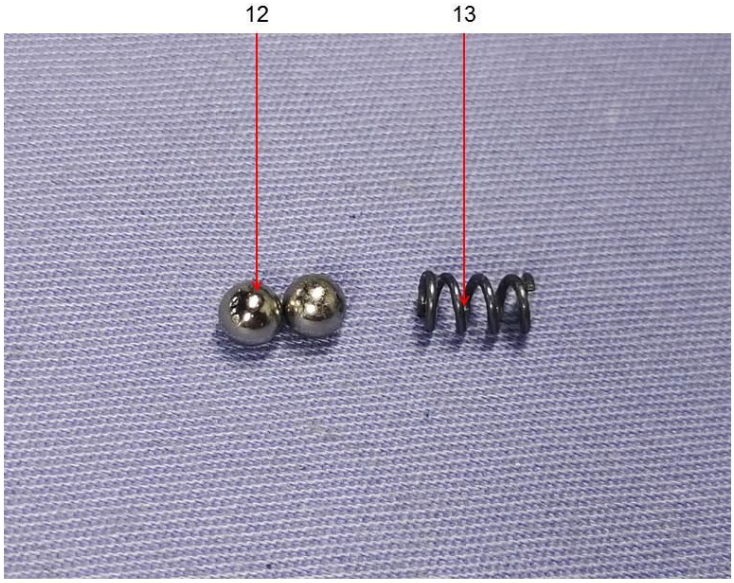


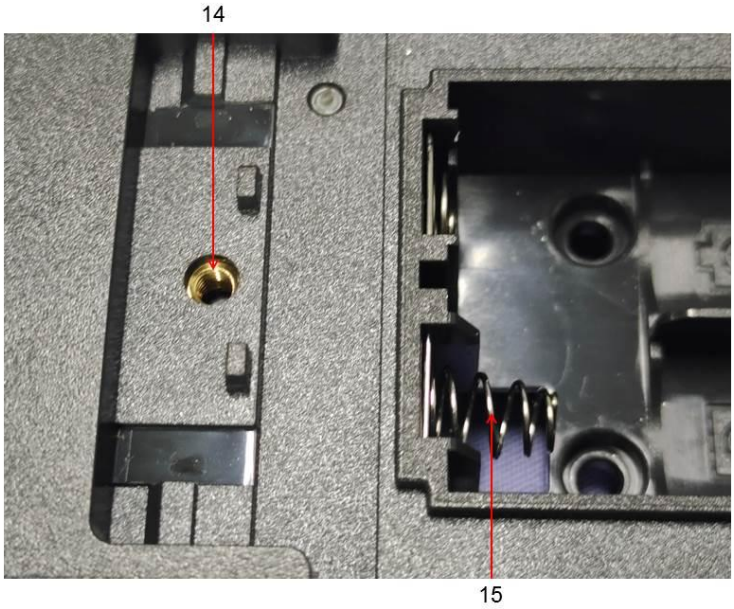


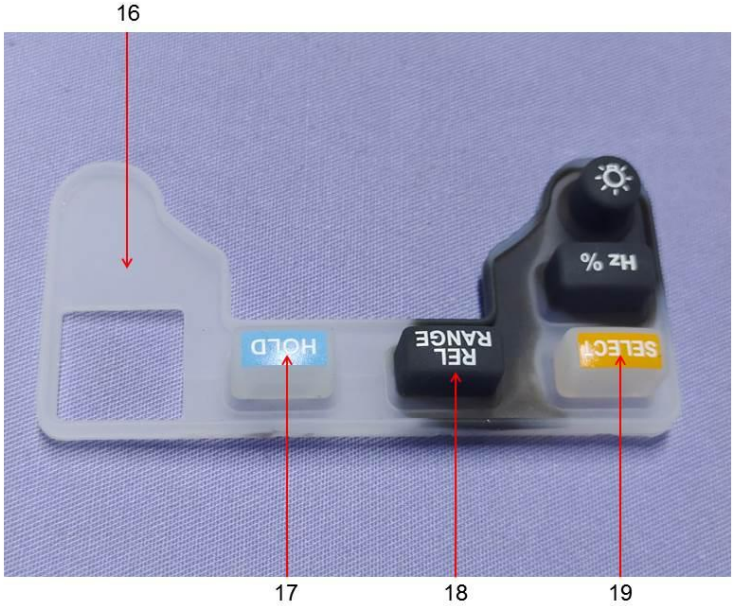

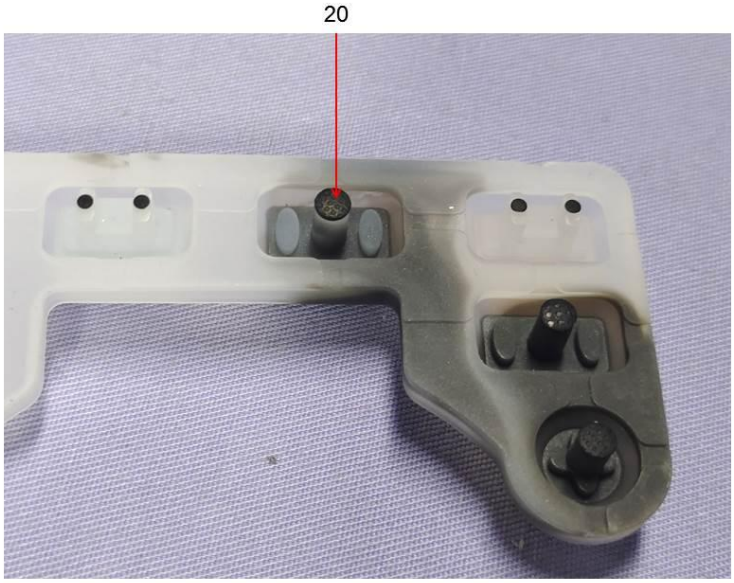


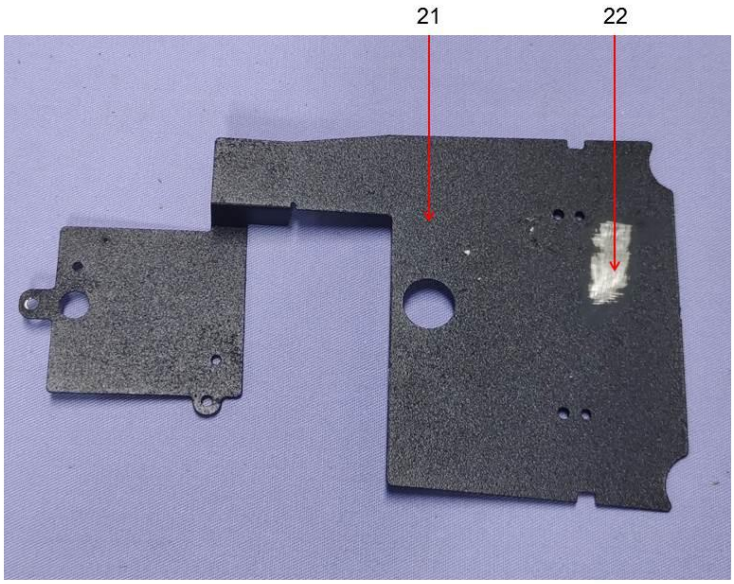

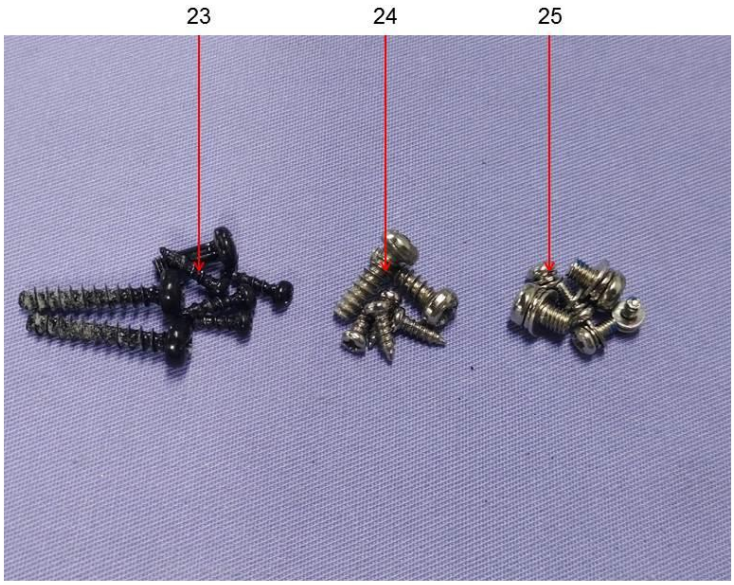


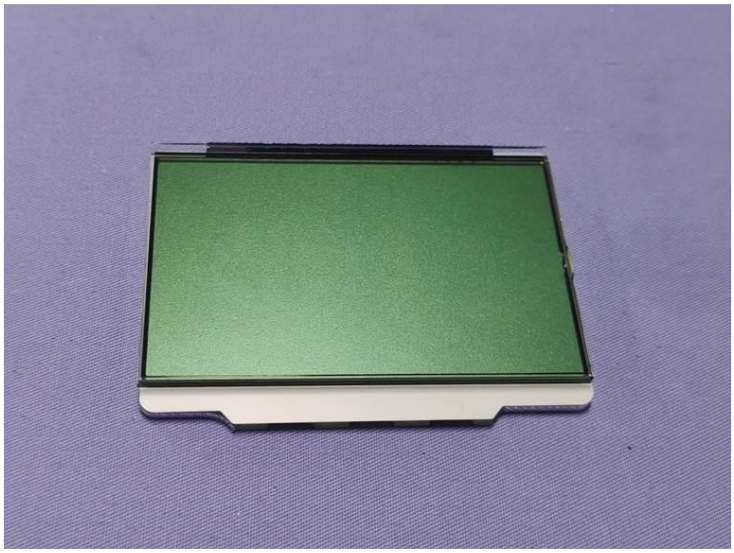

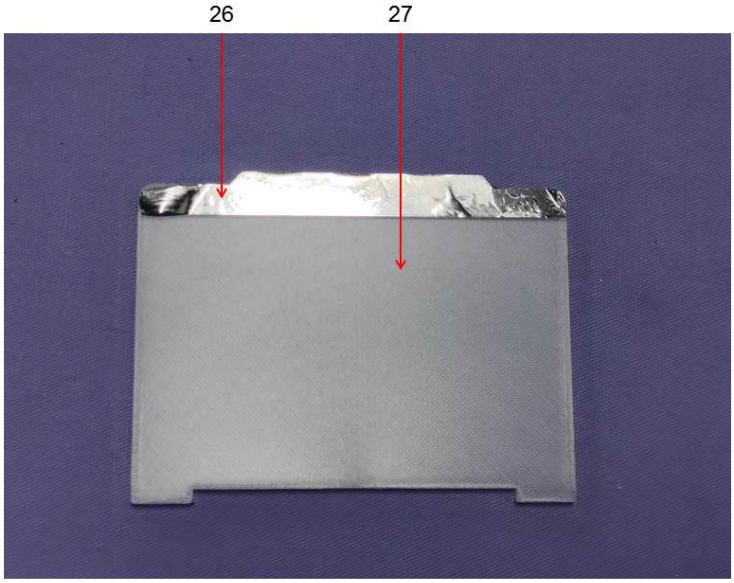


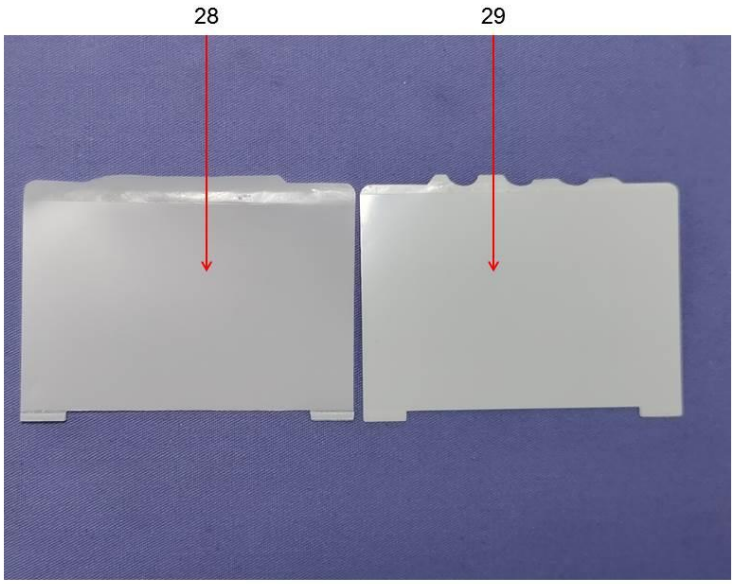

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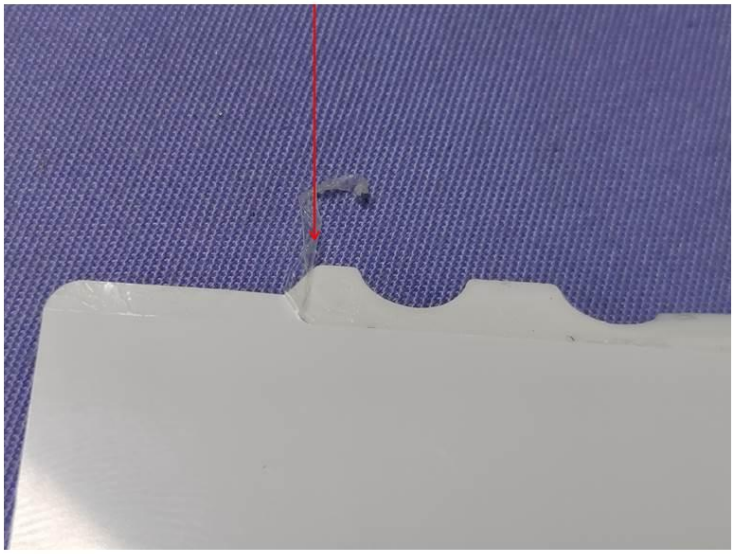

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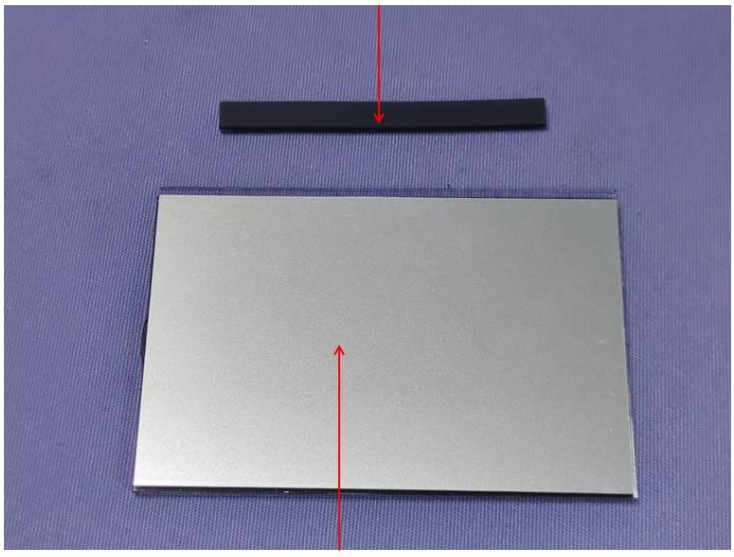

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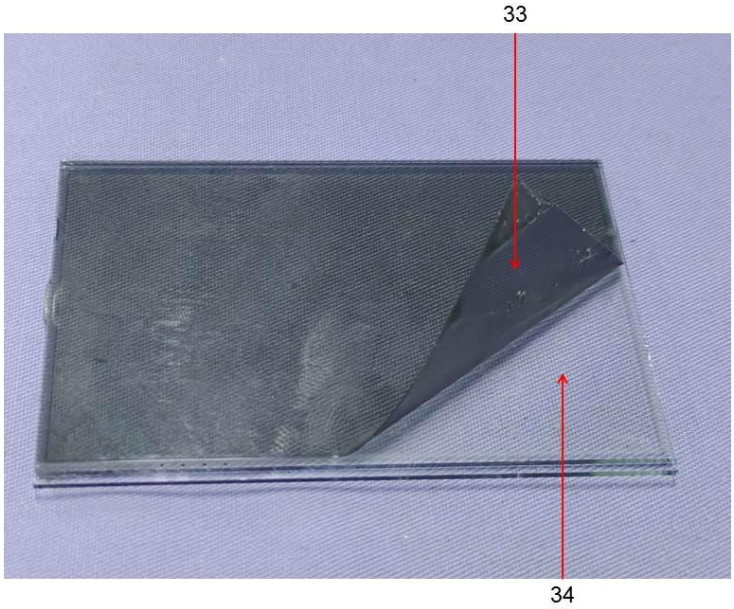


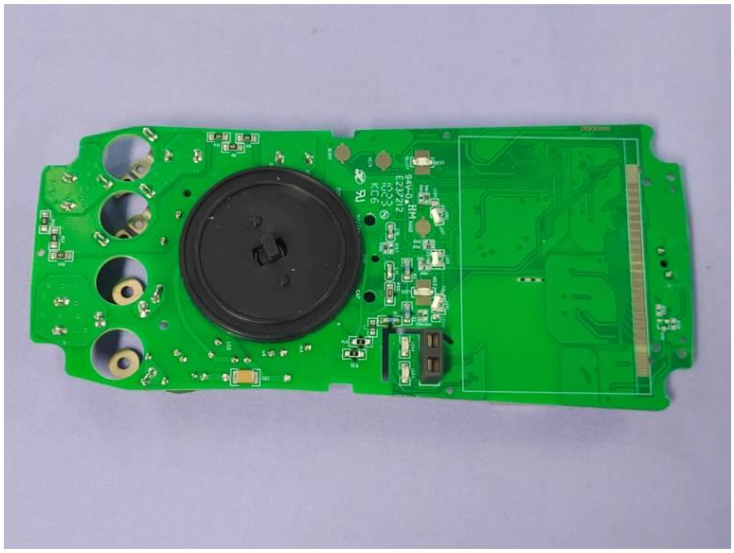

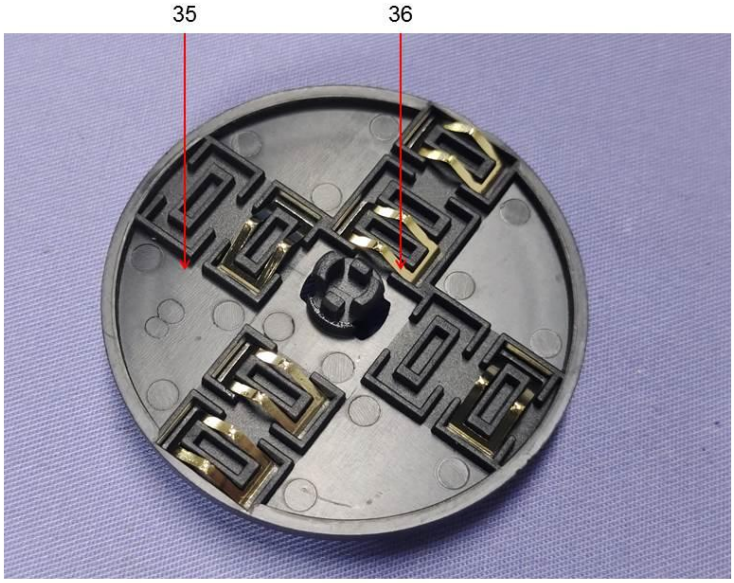


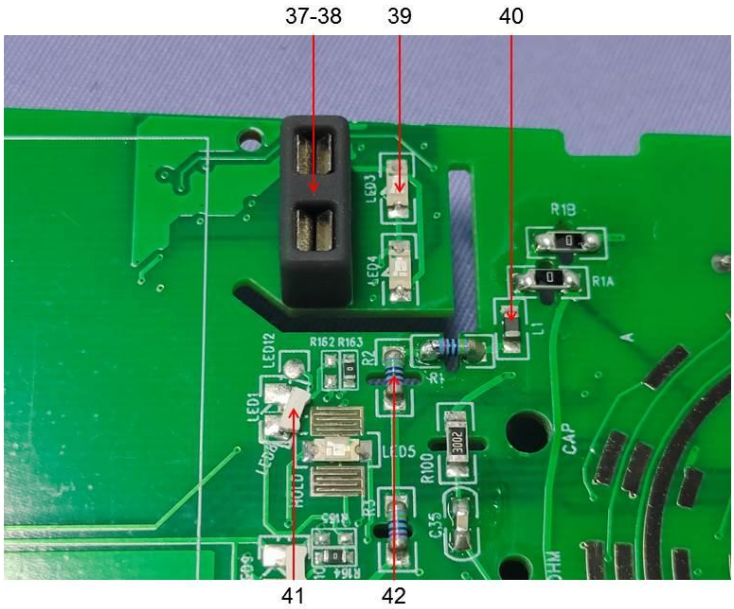

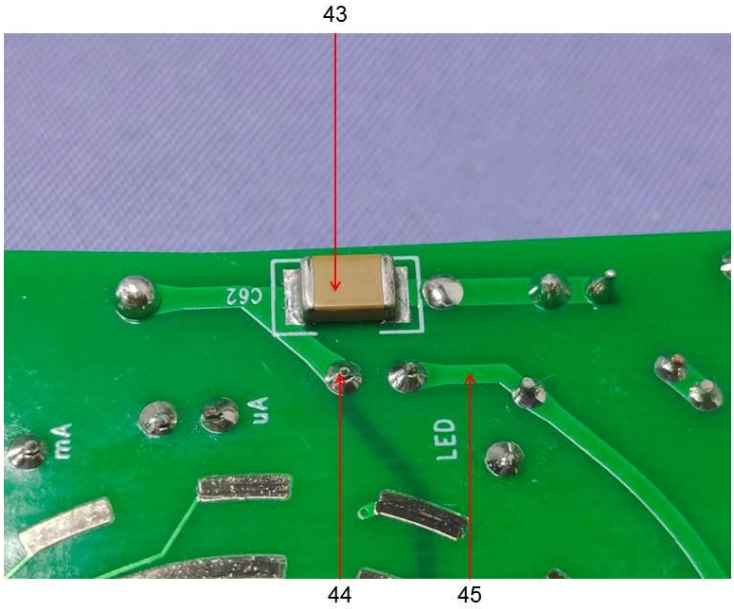


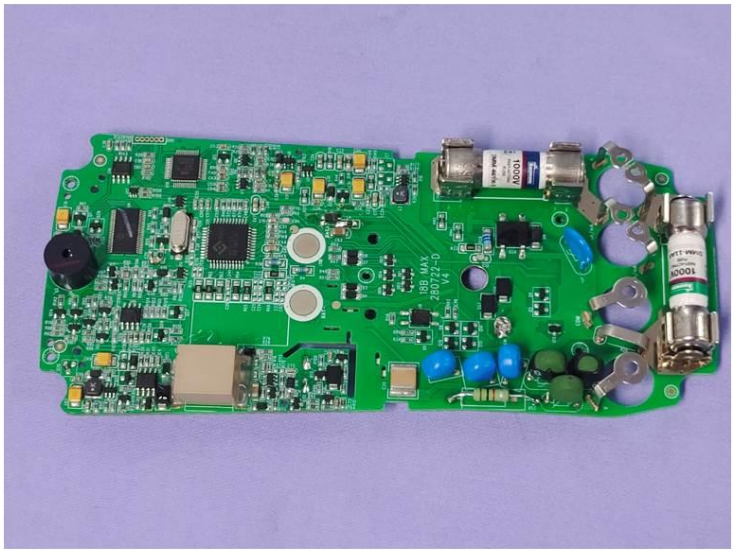

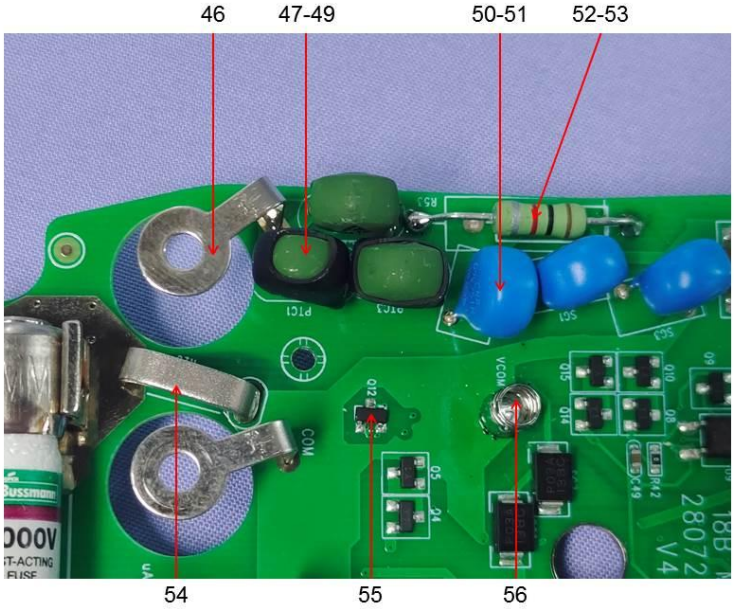


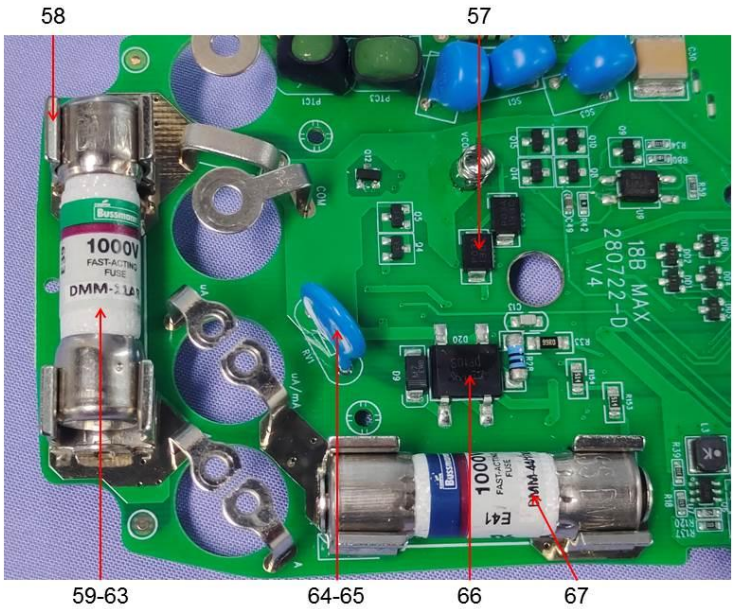

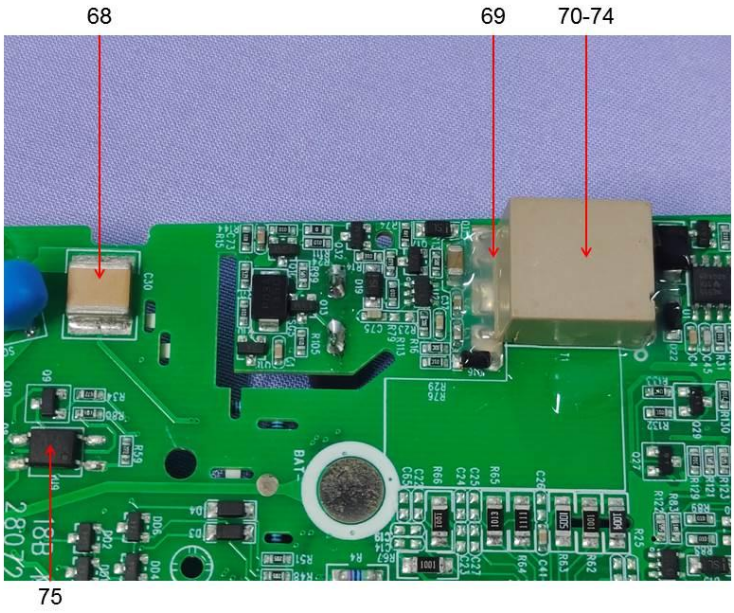


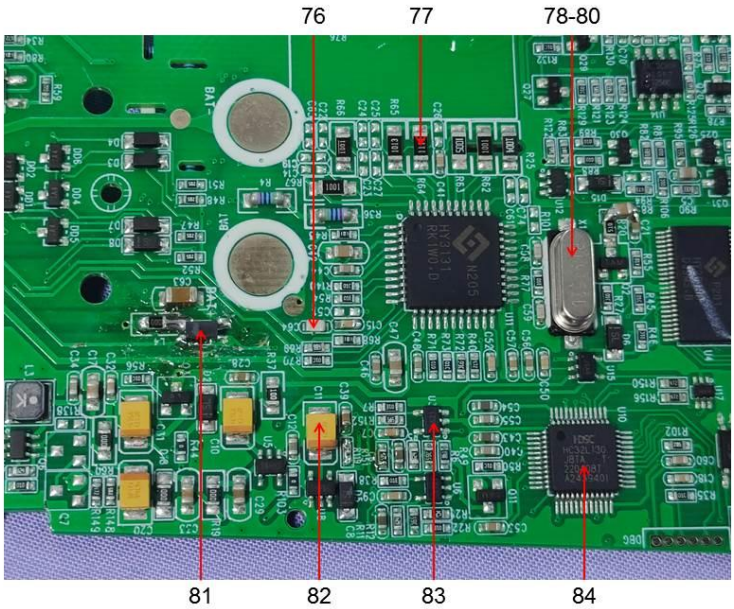

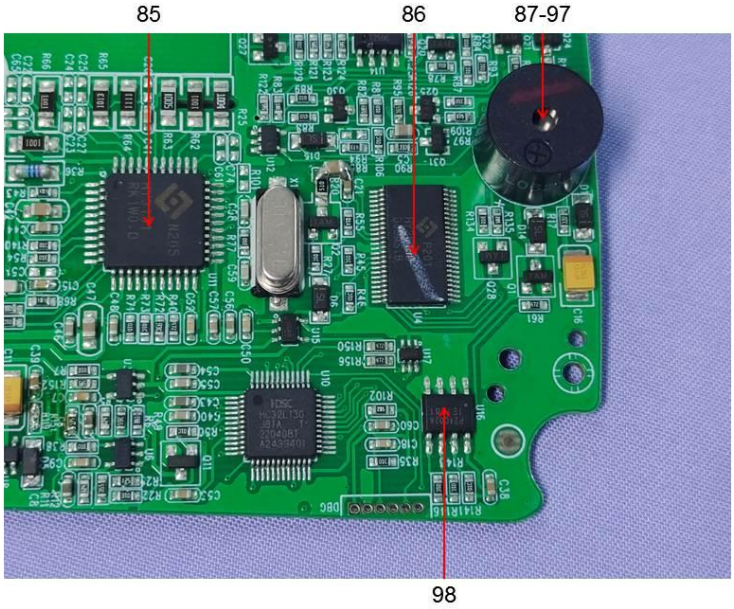


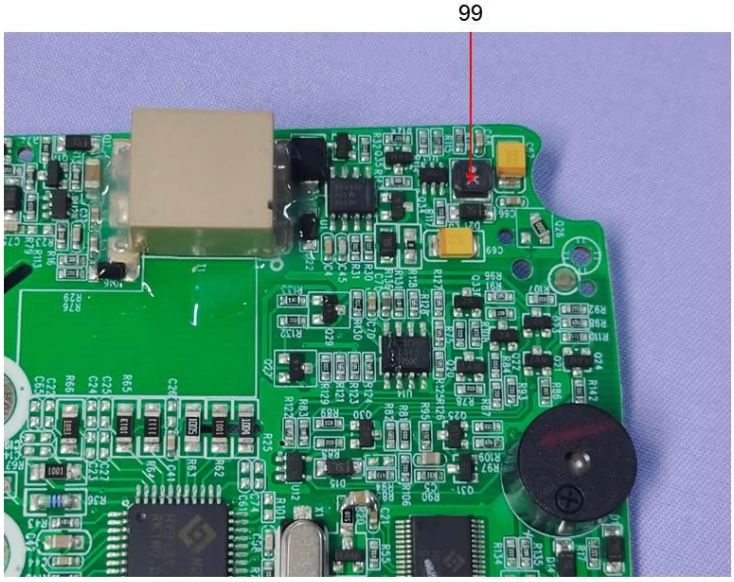


***End of Report***