



How to Fix iPhone X Keeps Restarting With Vertical Lines On The Screen

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INTRODUCTION

iPhone X features vertical lines on the screen and keeps restarting? How to narrow down the fault possibilities by ruling out one by one? How to confirm the fault and fix the problem? Let's see how REWA engineer deals with it.

TOOLS:

- [Test Fixture](#) (1)
 - [Integrated Mobile Phone Repair Platform](#) (1)
 - [Heating Platform](#) (1)
-

Step 1 — Test



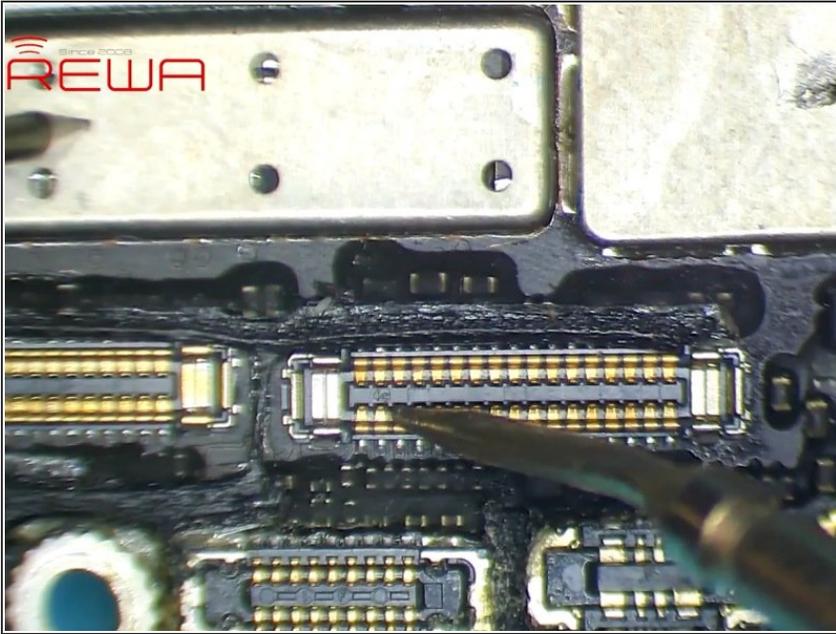
- Press the power button to turn on the phone. We can see vertical lines on the screen. What's more, the phone keeps restarting.

Step 2 — Diagnosis



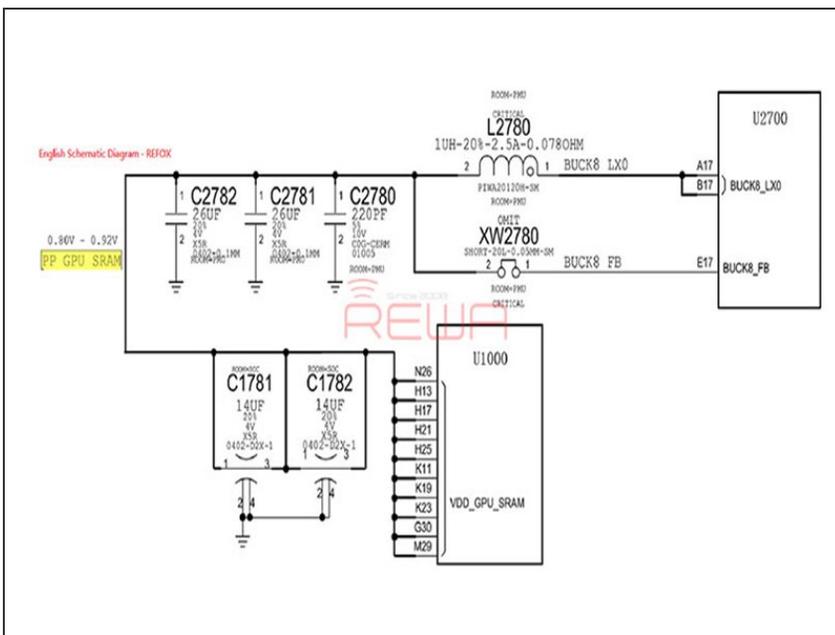
- Let's replace with a new screen first.
- Press the power button to turn on the phone. The problem remains the same.
- Judging by this, the fault is related to the motherboard.

Step 3 — Diagnosis



- The first thing we do is to measure the display connector and measure the working voltage of the screen.
- Run diode mode measurement of the display connector. The measured value is normal. The working voltage of the screen is also normal.
- Judging by this, the fault has nothing to do with the display circuit. It is probably related to PP_GPU_SRAM or CPU.

Step 4 — PP_GPU_SRAM



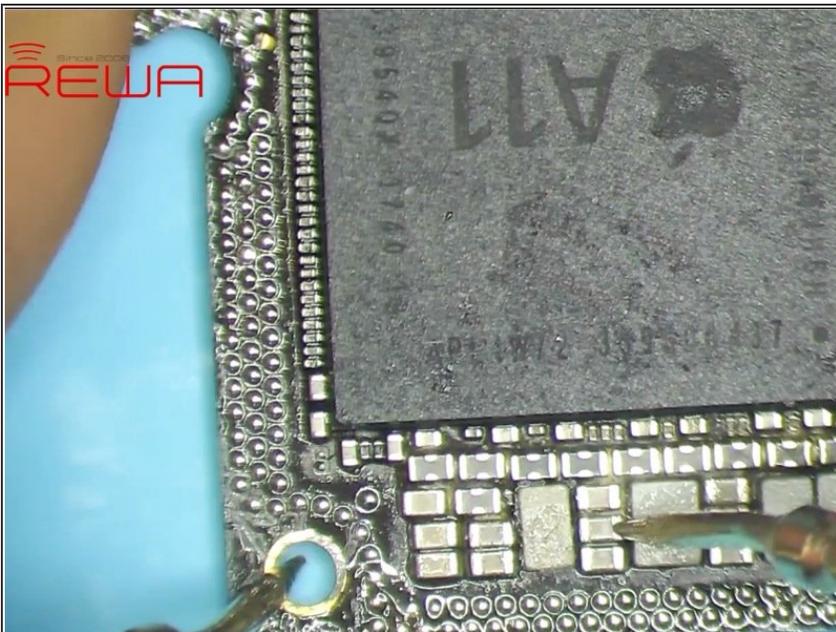
- Let's start with PP_GPU_SRAM.
- Open [REFOX](#), the bitmap software. Spread out iPhone X schematic diagram and search 'PP_GPU_SRAM'.
- We need to measure components on PP_GPU_SRAM one by one.

Step 5 — Motherboard Separating



- Still, we need to separate the motherboard before measurement.
- Place the motherboard on the specialized Heating Platform. Several minutes later, pick up the upper layer.

Step 6 — Diagnosis

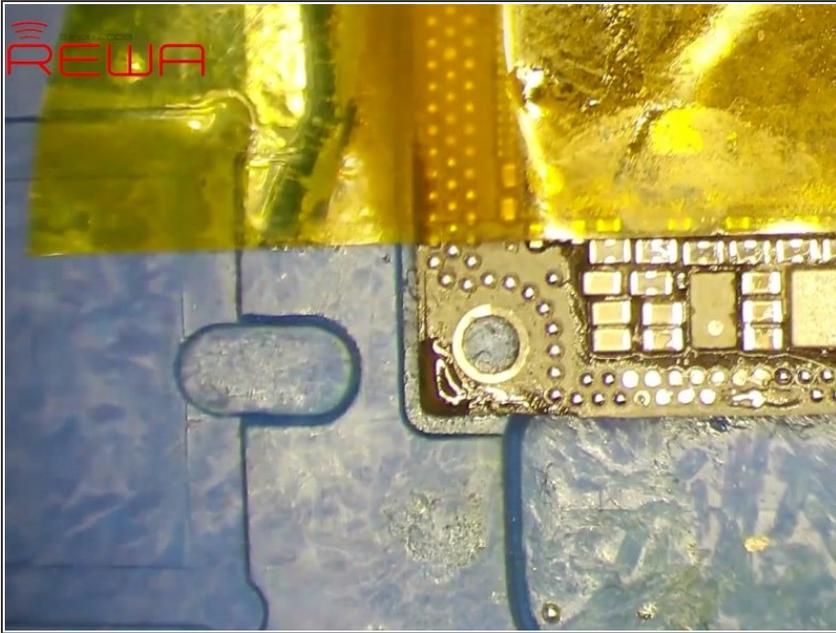


- Run diode mode measurement of components on the circuit. The measured value is normal. We can

rule out the possibility of shorted capacitors on the circuit.

- So the fault is probably related to L2780, U2700 or U1000.

Step 7 — Troubleshooting



- Let's start with L2780 on the circuit.
- Attach the upper layer to the PCB Holder. Stick High Temperature Tape on U1000 at first. Then remove L2780 with Hot Air Gun.
- Clean the bonding pad and then solder a new inductor.

Step 8 — Test Again



- Attach the upper layer and the lower layer to the test fixture. Get the display assembly connected and the board powered on.
- The boot current is normal. The phone turns on with normal screen display.

Step 9 — Motherboard Recombining



- Next thing we need to do is to solder the two layers together.
- Reball the lower layer first. Then apply BGA Paste Flux to the third space PCB. Get the upper layer in position. Power on the heating platform.

Step 10 — Reassemble And Test



- Now we can assemble the phone and test. Press the power button to turn on the phone. The phone turns on with normal screen display.

Step 11 — Video Guide



- Check out [REWA YouTube Channel](#) and learn more about iPhone X troubleshooting.
- Credit: [REWA Technology](#)