

## **Welding method of SMT chip resistors and capacitors**

Tools: soldering iron, soldering iron stand, wet sponge, tweezers, rosin, solder, absorbent cotton, 95% alcohol, chip resistors, capacitors, circuit boards, 220V power supply

### **1. Preheating**

Insert the soldering iron on the iron stand, connect the power supply, and preheat the soldering iron.

### **2. Identification**

The welding methods of chip resistors and capacitors are roughly the same, and the welding points are also very similar. They are two contact points that are tiled, but there is a white line in the middle of the contact points of the capacitor to distinguish the welding points of the resistor. Chip resistors and capacitors are very small in size, and some are only as large as two or three hairs.

Resistors are generally black, and there are corresponding numbers on the back of the brand to represent their specifications. There will also be a corresponding mark on the circuit board to mark its location. If "R+number" is marked next to the corresponding resistance welding point, it can be welded accordingly.

This resistor is not divided into positive and negative poles and not necessarily chip capacitors. SMD capacitors without positive and negative electrodes are generally small squares, and all four sides of them can be used as welding surfaces. Capacitors with positive and negative poles are relatively large. The capacitor has only one welding surface. The one marked with a dark straight line on the back is the positive pole. The welding point marked "C+ number" on the circuit board is the welding point of the capacitor. One end of the "+" sign is positive.

### **3. Positioning**

First, use an electric soldering iron to melt a little solder to one of the soldering points, then use tweezers to pick up the chip resistor and capacitor and place them on the soldering point, and then use an electric soldering iron to melt the solder that has just been added, so that one end of the resistor and capacitor is soldered first and fixed. Resistor-capacitor. Note: The resistor and capacitor should be placed in the middle of the two soldering points. If the deviation is large, use a soldering iron to melt the solder again, and fine-tune the position of the resistor and capacitor so that they are exactly in the middle.

### **4. Welding**

First melt some solder onto the tip of the soldering iron tip, and then tap the other end of the solder joint.

### **5. Modification**

After welding the resistors and capacitors, observe whether the welding points are qualified and beautiful. If it is not aesthetically pleasing, it should be re-soldered, and appropriate rosin should be added to make the solder surface round.

### **6. Cleaning**

Take a cotton ball the size of a mung bean, hold it with tweezers, dip it in the rosin on the surface of the circuit board with 95% alcohol and wash it.