TJ-56-753心叠加心形闪烁灯图文教程

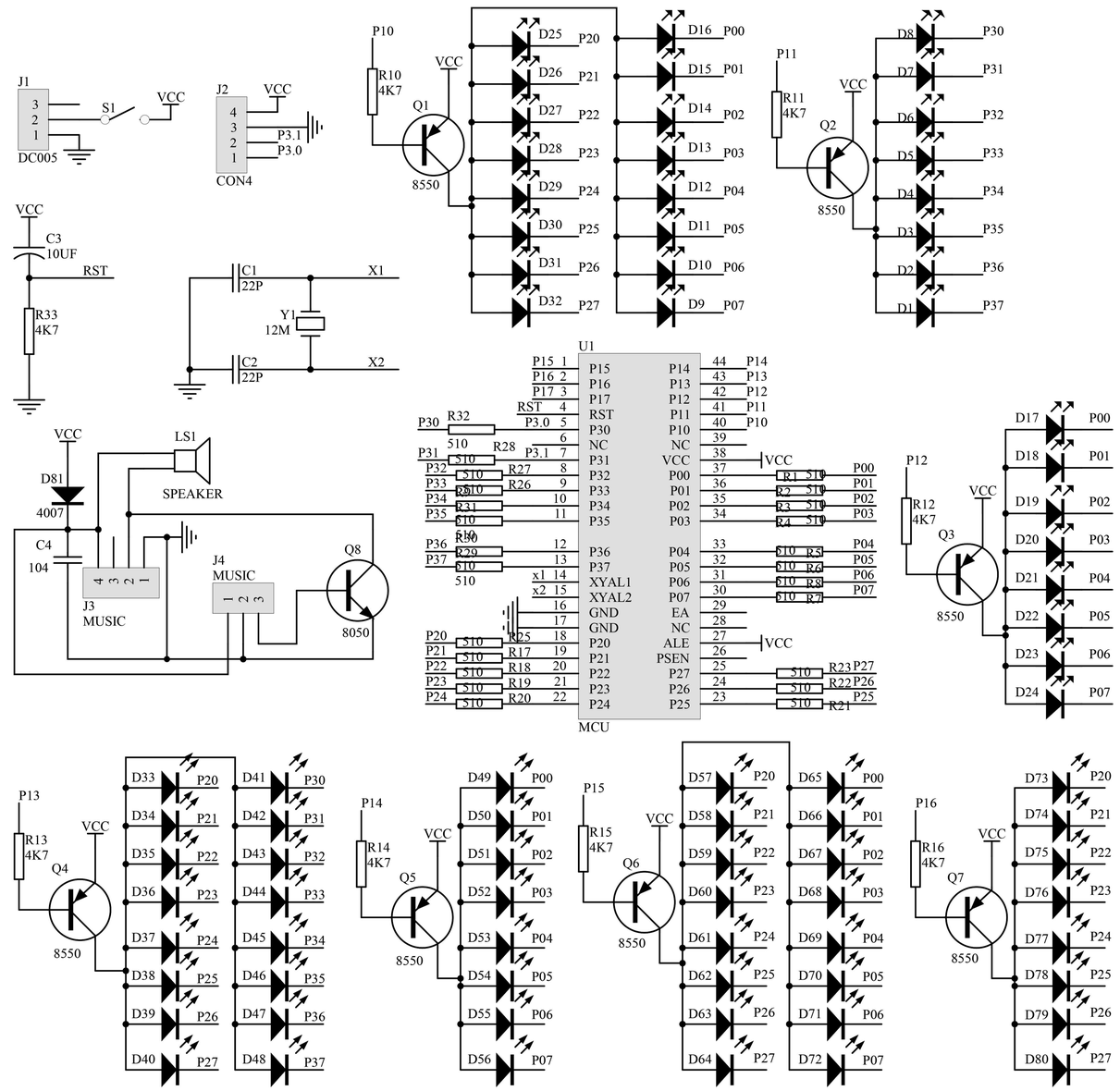
1. 元件清单

序号	名称	型号	标号	数量
1	五色环电阻	4.7K(色环:黄紫黑棕棕)	R10-R16 R33	8
2	五色环电阻	510R(色环:绿棕黑黑棕)	R1-R9 R17-R23 R25-R32	24
3	无源蜂鸣器	16欧 3V-12V通用	LS1	1
4	三极管	8550	Q1-Q7	7
5	三极管	8050	Q8	1
6	电解电容	10uF/25V	C3	1
7	贴片单片机	STC89C52RC LQFP44	U1	1
8	瓷片电容	22pF/50V(22)	C1 C2	2
9	瓷片电容	100nF/50V(104)	C4	1
10	整流二极管	1N4007	D81	1
11	石英晶振	无源 12M	Y1	1
12	单排针	直针 1*4P	J2	1
13	音乐三极管	世上只有妈妈好	MUSIC	1
14	自锁开关	8*8 6脚 蓝柄	S1	1
15	电源插座	DC-005	J1	1
16	发光二极管	红发红 5MM 圆头	D1-D32	32
17	发光二极管	绿发绿 5MM 圆头	D33-D56	24
18	发光二极管	黄发黄 5MM 圆头	D57-D72	16
19	发光二极管	蓝发蓝 5MM 圆头	D73-D80	8
20	电路板	TJ-56-753		1

2. 产品特点

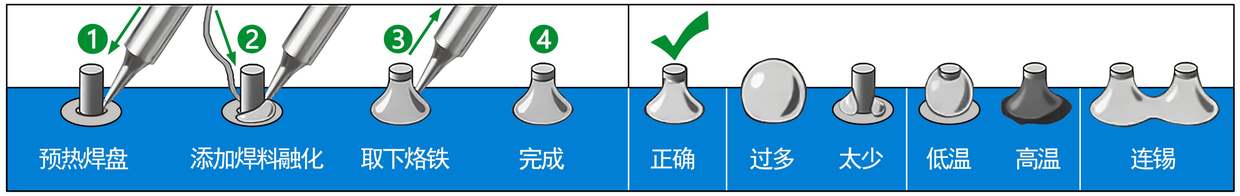
此套件利用STC单片机控制发光二极管播放流水灯动画，单片机已提前烧录好程序。熟悉51单片机开发的用户也可自行编写程序，并用J2串口重新烧录。套件的音乐由BJMMH三极管与其外围电路单独播放。套件的工作电压为直流5V，故使用配套DC电源线接电脑USB口或手机充电头即可使其正常工作。

3. 电路原理图



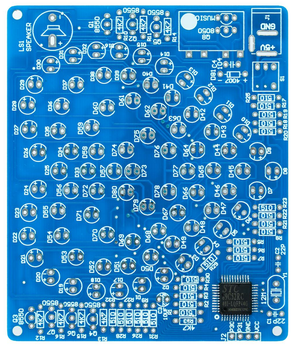
3. 焊接及安装

3.1直插元件焊接方法

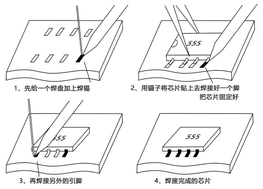


3.2焊接安装步骤(放大查看)

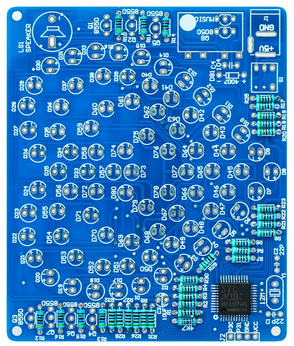
1 贴片单片机焊接



单片机上的圆点对应其丝印上的圆点方向安装。



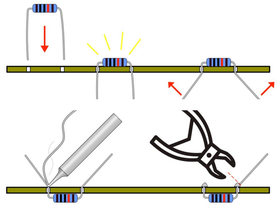
2 色环电阻焊接



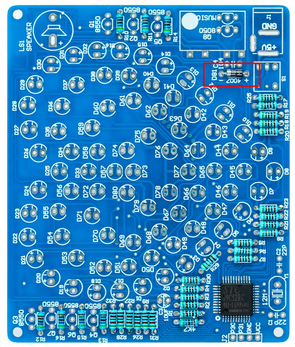
电阻	阻值	焊接位置
	4.7K	R10-R16 R33
	510R	R1-R9 R17-R23 R25-R32

丝印

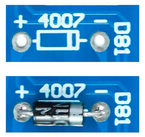
色环电阻不区分极性。



3 整流二极管焊接

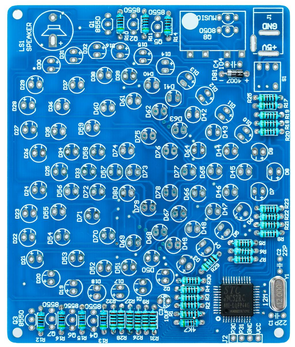


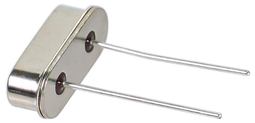
丝印

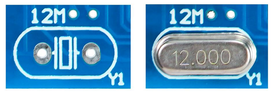


整流二极管带色环一端为负极，其丝印边框更宽的一侧为负极。
安装位置:D81;

4 石英晶振焊接

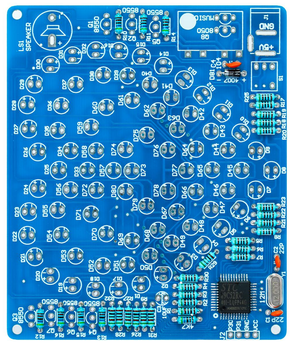






无源石英晶振不区分极性。
安装位置:Y1;

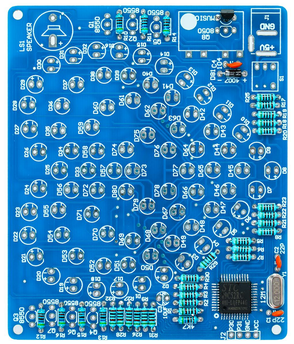
5 瓷片电容焊接

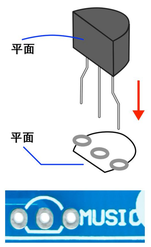


22pF　100nF　丝印

瓷片电容不区分极性。
安装位置:104->C4;
22->C1、C2;

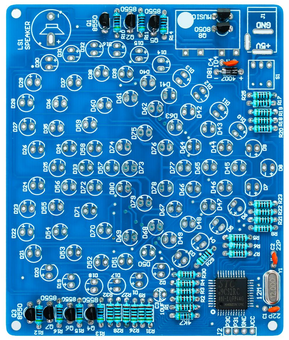
6 音乐三极管焊接

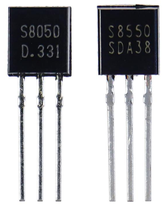




音乐三级管平面侧标注有型号"BJMMH"，不要认错。
安装位置:BJMMH->MUSIC;

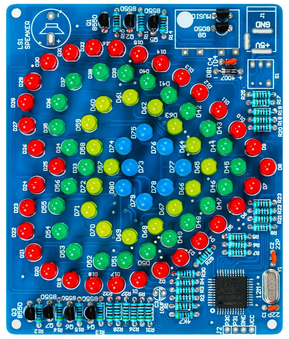
7 三极管焊接

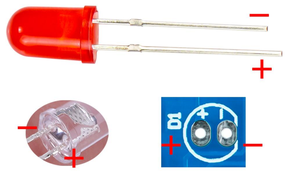




三级管平面侧标注有型号，两种三极管不要装错位置。
安装位置:8050->Q8;
8550->Q1至7;

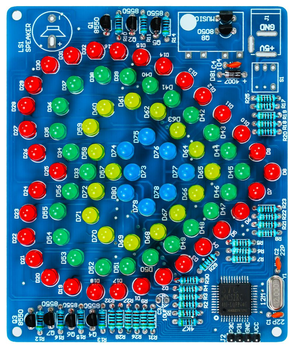
8 发光二极管焊接

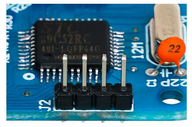




发光二极管的长引脚为负极，其丝印用"+"标注正极。
安装位置:
蓝->D73至80;黄->D57至72;
绿->D33至56;红->D1至32;

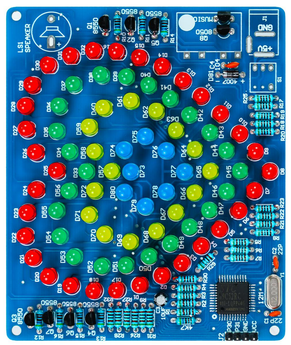
9 单排针焊接





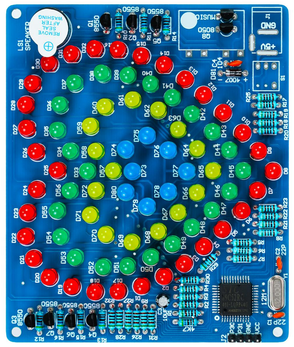
单排针短的一端插入焊盘。
安装位置:J2;

10 电解电容焊接



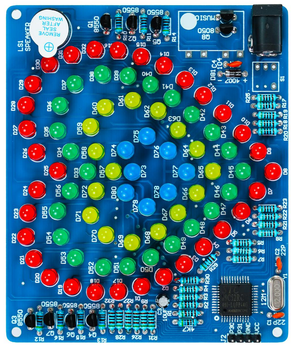
电解电容的短引脚为负极，其丝印涂满白色斜线的一侧侧为负极，对应极性安装。
安装位置:C3;

11 无源蜂鸣器焊接



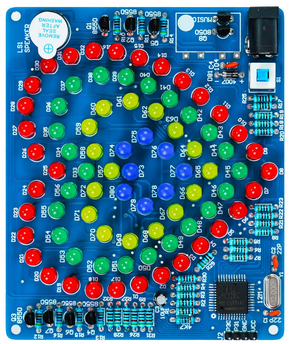
无源蜂鸣器使用交流电信号来产生振动，不区分极性。
安装位置:LS1;

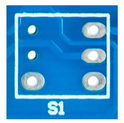
12 电源插座焊接



电源插座插口朝外安装。
安装位置:J1;

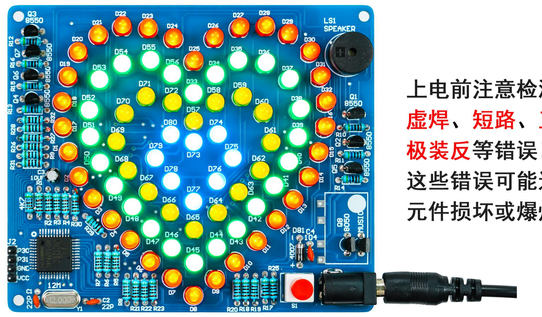
13 自锁开关焊接





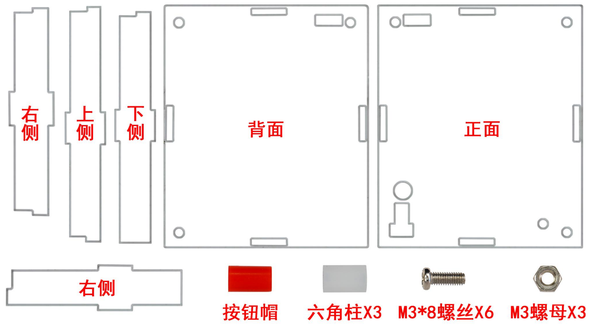
蓝柄自锁开关内部为中心对称结构，不区分安装方向。
安装位置:S1;

14 通电测试

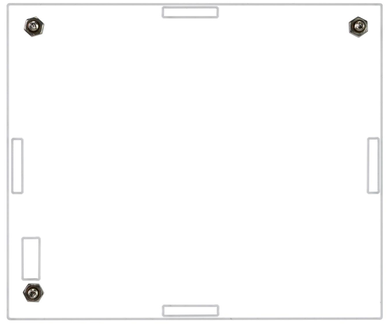


上电前注意检测:
虚焊、短路、正负极装反等错误!
这些错误可能造成元件损坏或爆炸!

15 清理外壳保护膜

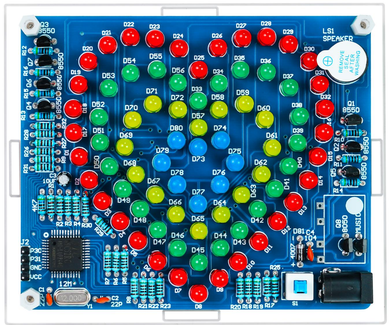


16 背面外壳螺丝安装



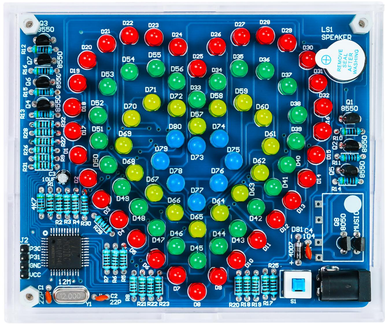
使用M3螺母将M3*8螺丝固定到背面外壳上。

17 电路板安装

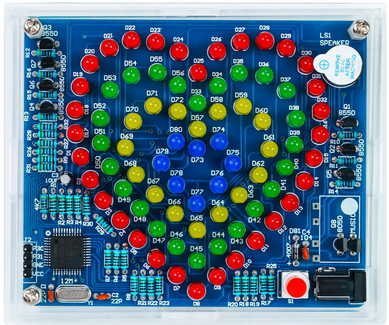


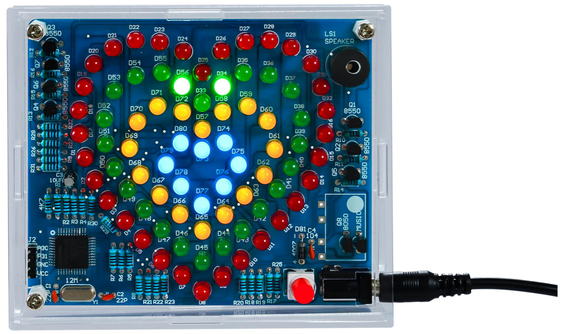
使用六角柱将电路板固定到背面外壳上。

18 侧面外壳安装



19 正面外壳安装



使用M3*8螺丝将正面外壳固定到六角柱上。

20 成品效果