

HE002 Flashing LED Police PCB Car DIY Kit

1.Introduction:

HE002 is a Red/Blue Automatic Flashing LED Police PCB Car Electronic Soldering DIY Kit. It is powered by 5V voltage from DC-002 interface and automatically flashing and change various lighting effects within Red and Blue LED. Simultaneously simulating the sound of police car horns.

It can not only be used as a DIY electronic welding kit that allows you to better understand the circuit and learn how to soldering, but also as a very suitable experimental workbench tool.

2.Feature:

- 1>.8 Red/Blue LED Automatic Flashing
- 2>.Switchable 3 LED Flashing Effect
- 3>.Switchable Fast and Snow Flashing Frequency
- 4>.Simulate Police Cars Sound
- 5>.Police Car Exterior Design
- 6>.Interesting DIY Manual Soldering

3.Parameter:

- 1>.Work voltage: DC 5V
- 2>.Display Color: Red/Blue
- 3>.Power Type: DC-002
- 4>.Work Temperature:-40℃~85℃
- 5>.Work Humidity:5%~95%RH
- 6>.Size(Installed):89*60*23mm

4.Use Method:

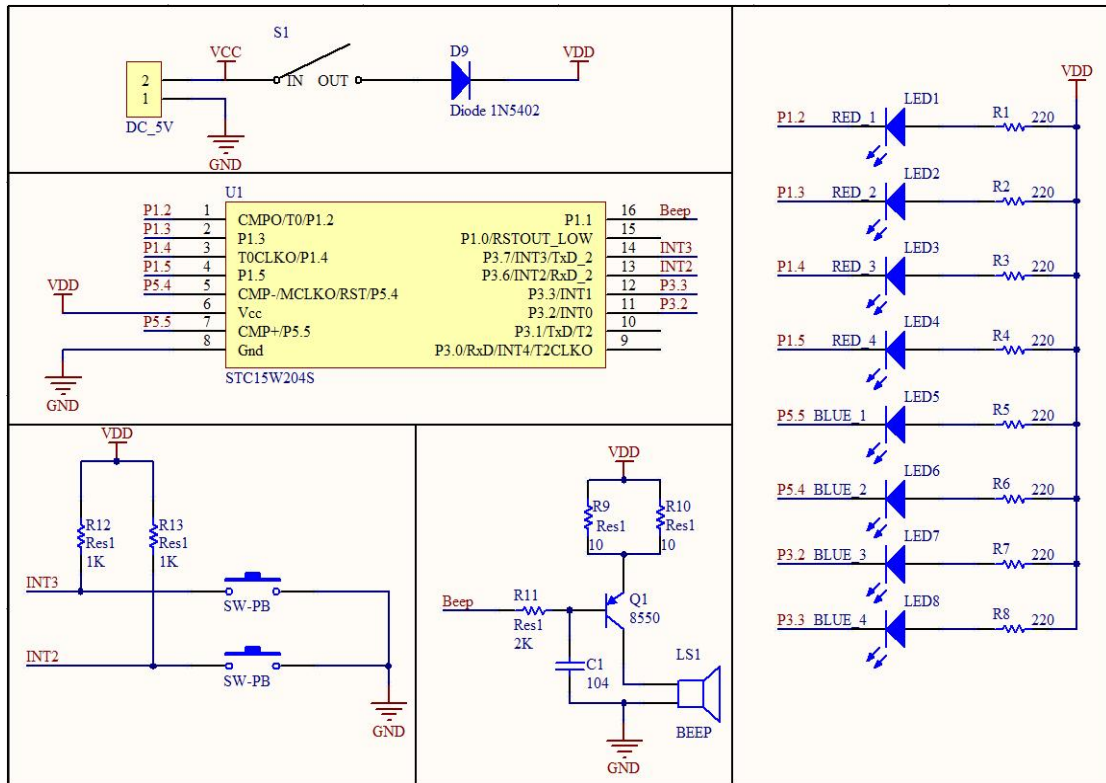
- 1>.Turn on the power switch S1 and the LED/Buzzer will automatically enter the working state.
- 2>.Switch LED Flashing Effect by press S2_MOD button.
- 3>.Switch LED Flashing Frequency by press S3_FRE button.

5.Component Listing:

NO.	Component Name	PCB Marker	Parameter	QTY
1	STC15W204S Controller	U1	DIP-16	1
2	IC Socket	U1	DIP-16	1
3	Red LED	D1-D4	5mm	4
4	Blue LED	D5-D8	5mm	4
5	Passive Buzzer	Beep	5V	1
6	1N5819 Schottky Diode	D9	DO-41	1
7	S8550 Transistor	Q1	TO-92	1
8	SS-12F44 1P2T Toggle Switch	S1	5Pin	1
9	Black Button	S2,S3	6*6*7mm	2
10	Button Cap	S2,S3	6*6mm	2
11	Ceramic Capacitor	C4	0.1UF 104	1
12	Metal Film Resistor	R12,R13	1K	2
13	Metal Film Resistor	R1-R8	220ohm	8
14	Metal Film Resistor	R9,R10	10ohm	2
15	Metal Film Resistor	R11	2K	1
16	DC-002 Power Socket	DC_5V	3.5*1.3mm	1
17	USB to DC002 Power Wire	DC_5V	60cm	1
18	Black PCB Circuit Board	/	89*60mm	1

Note:Users can complete the installation according to the PCB silk screen and component list.

6.Schematic Diagram:



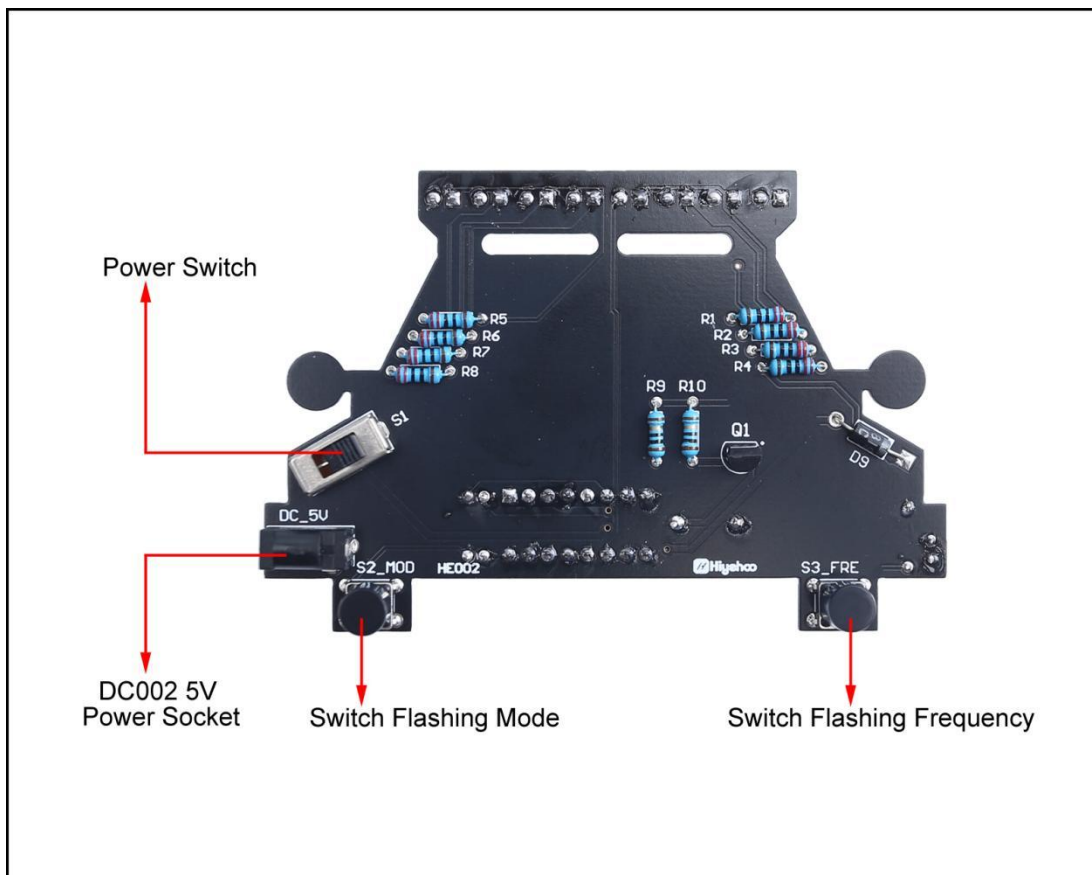
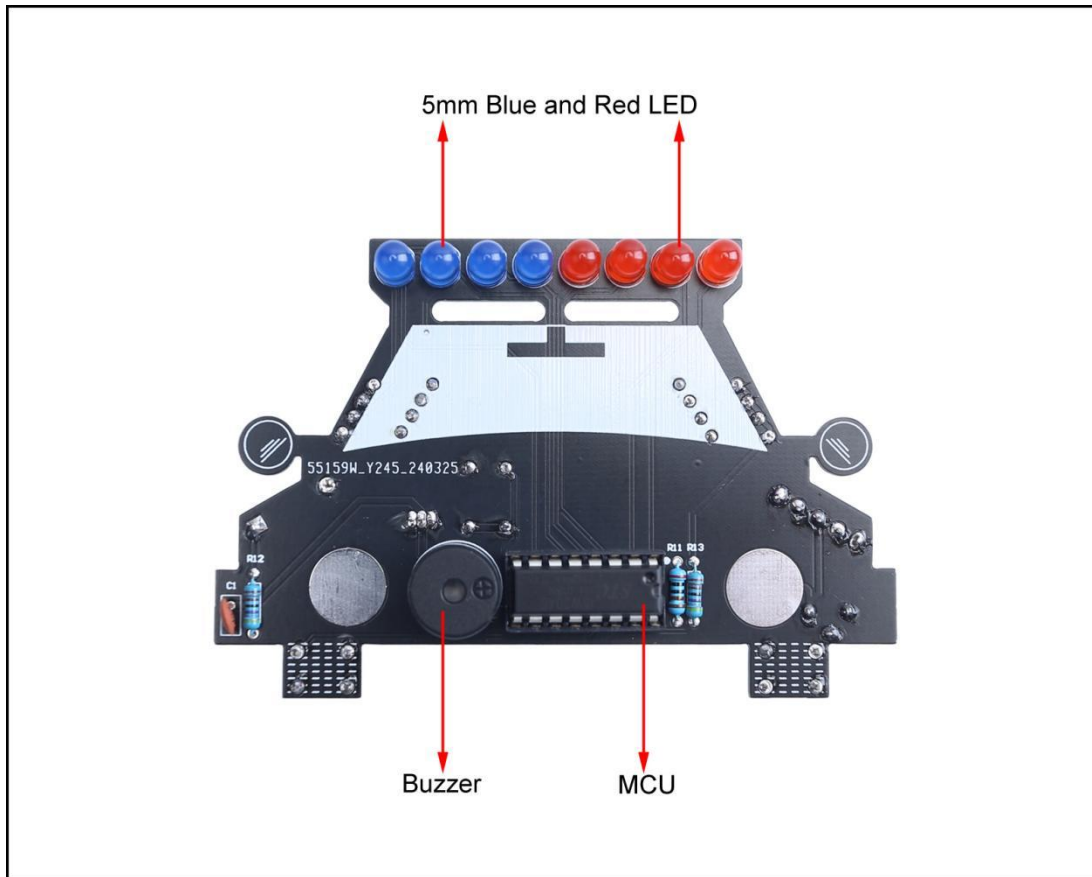
7.Application:

- 1>.Training welding skills
- 2>.Student school
- 3>.DIY production
- 4>.Project Design
- 5>.Electronic competition
- 6>.Gift giving
- 7>.Crafts collection
- 8>.Home decoration
- 9>.Souvenir collection
- 10>.Graduation design
- 11>.Holiday gifts

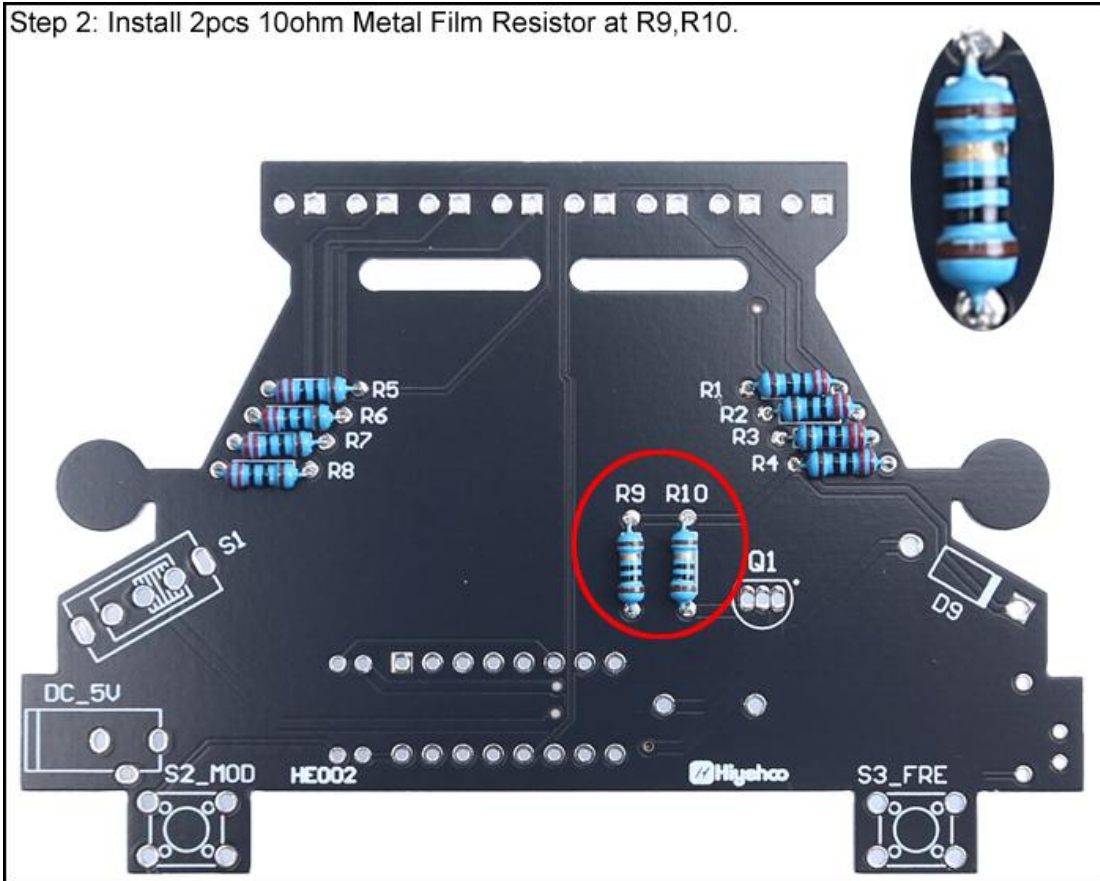
8.Installation Tips:

- 1>.User needs to prepare the welding tool at first.
 - 1.1>.Soldering iron (<50 Watt)
 - 1.2>.Rosin core ("radio") solder
 - 1.3>.Wire cutters
 - 1.4>.Wire strippers
- 2>.Please be patient until the installation is complete.
- 3>.The package is DIY kit.It need finish install by user.
- 4>.Soldering iron can't touch components for a long time(1.0s), otherwise damage the components.
- 5>.Pay attention to the positive and negative of the components.
- 6>.Strictly prohibit short circuit.
- 7>.User must install the LED according to the specified rules.Otherwise some LED will not light.
- 8>.Install complex components preferentially.
- 9>.Make sure all components are in right direction and right place.
- 10>.It is strongly recommended to read the installation manual before starting installation!!!
- 11>.Please wear anti-static gloves or anti-static wristbands when installing electronic components.

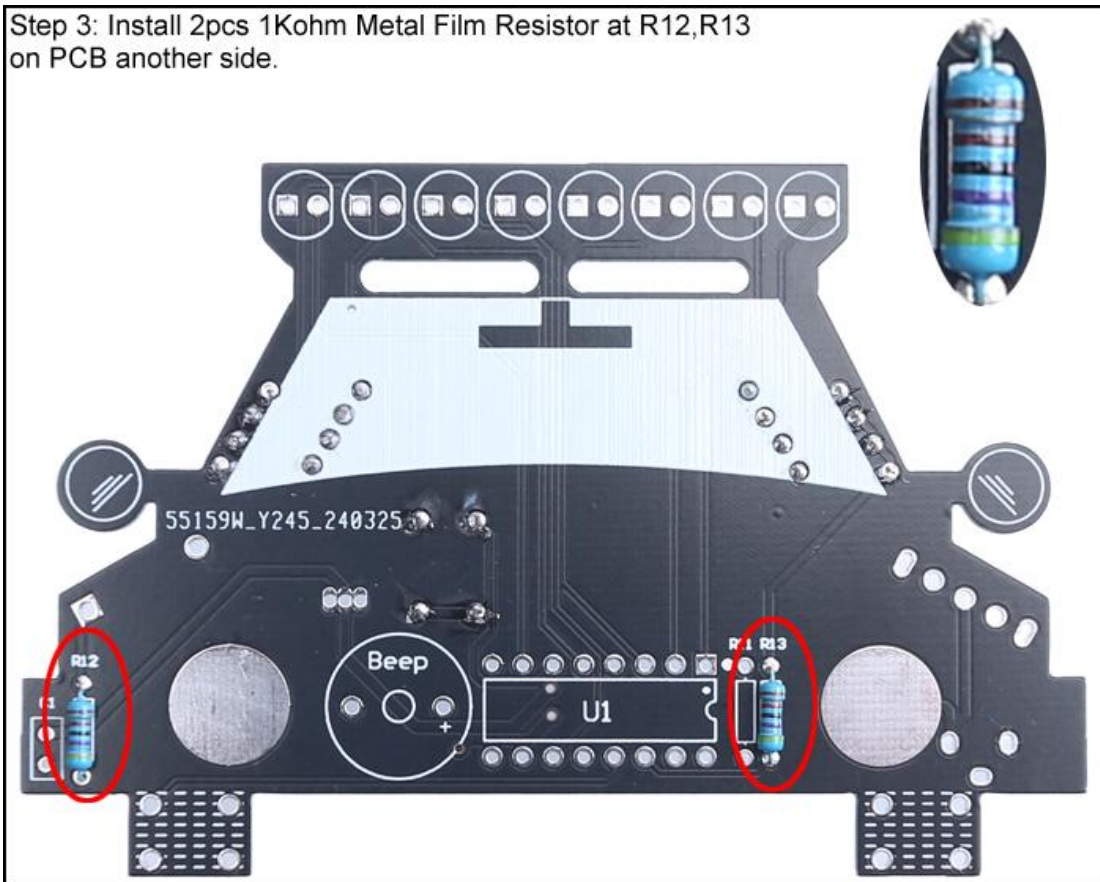
9. Installation Steps(Please be patient install!!!):



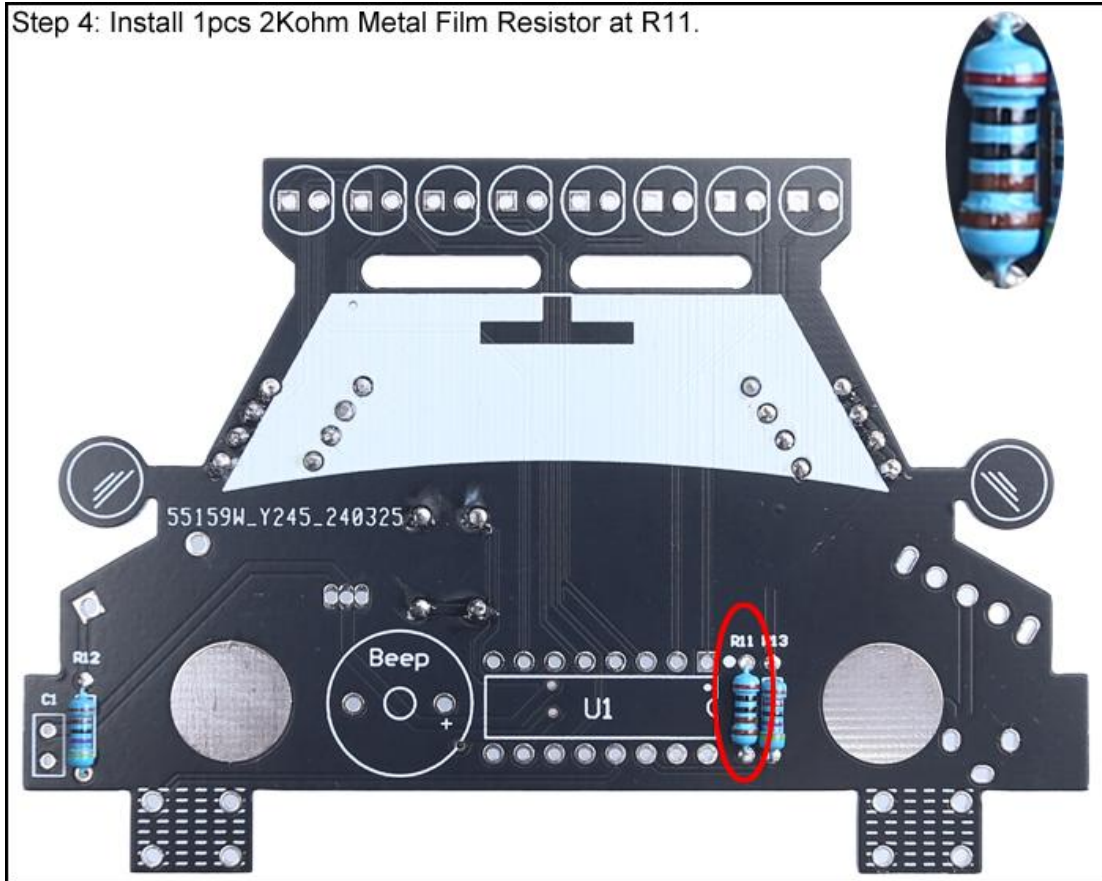
Step 2: Install 2pcs 10ohm Metal Film Resistor at R9,R10.



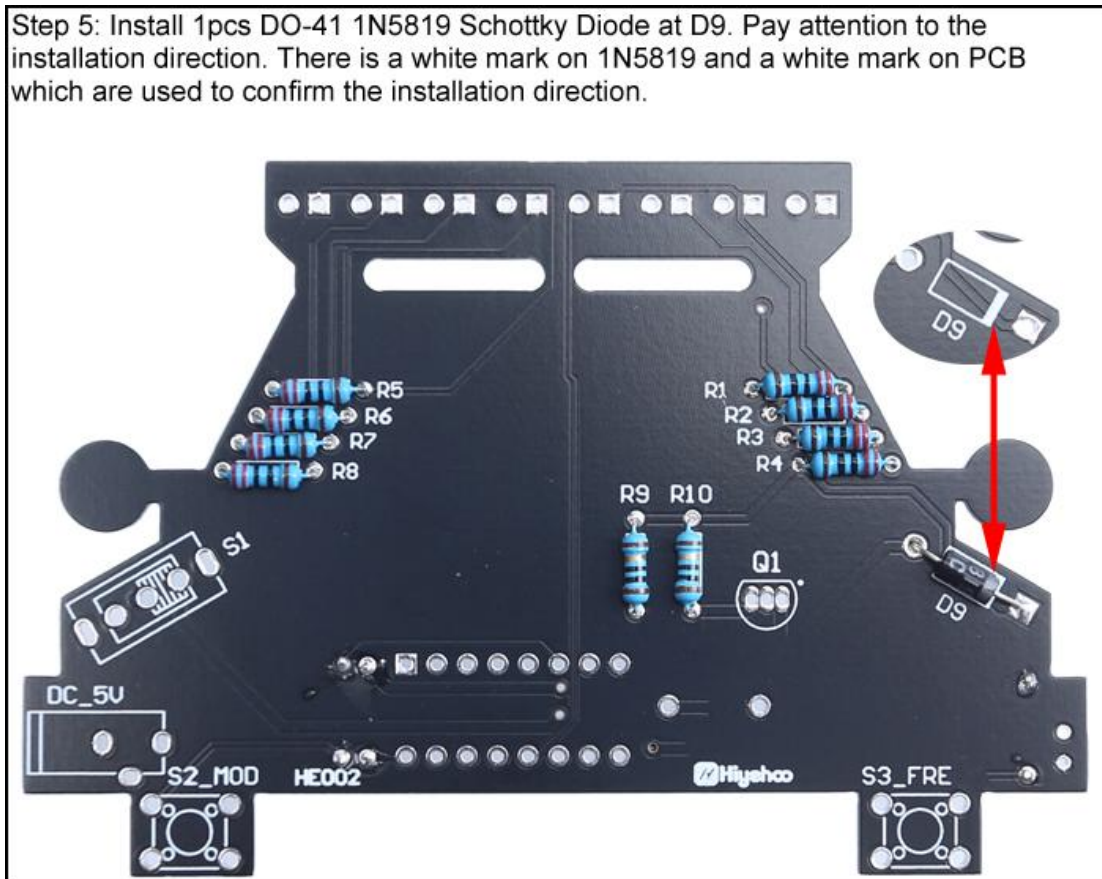
Step 3: Install 2pcs 1Kohm Metal Film Resistor at R12,R13 on PCB another side.



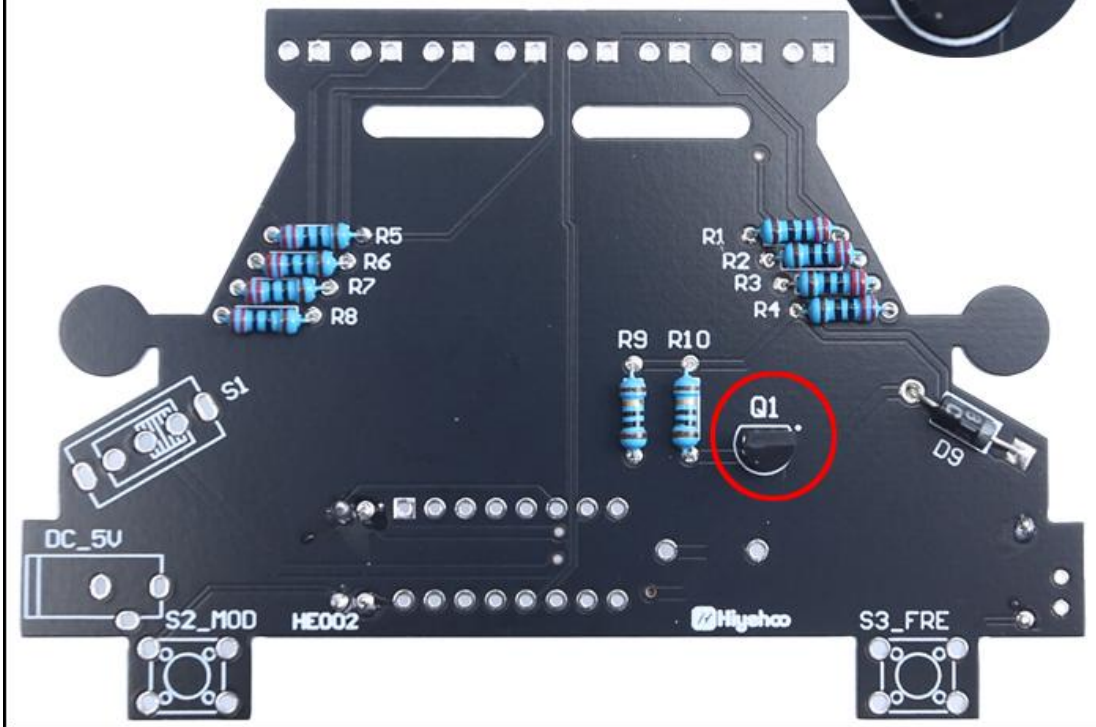
Step 4: Install 1pcs 2Kohm Metal Film Resistor at R11.



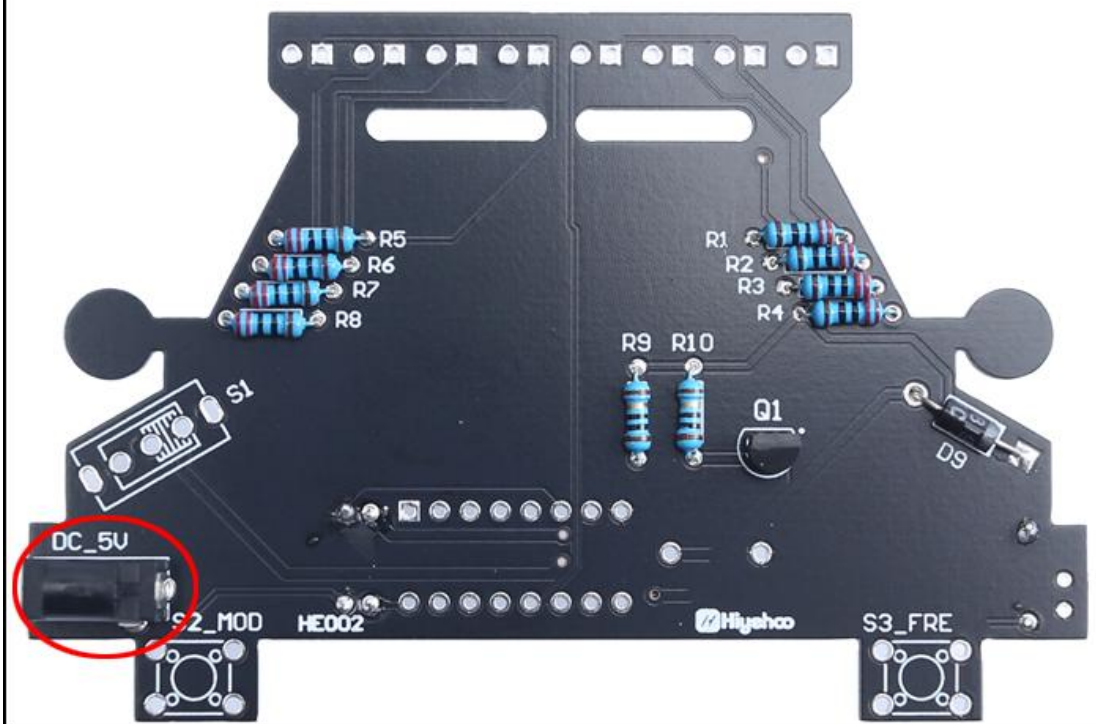
Step 5: Install 1pcs DO-41 1N5819 Schottky Diode at D9. Pay attention to the installation direction. There is a white mark on 1N5819 and a white mark on PCB which are used to confirm the installation direction.



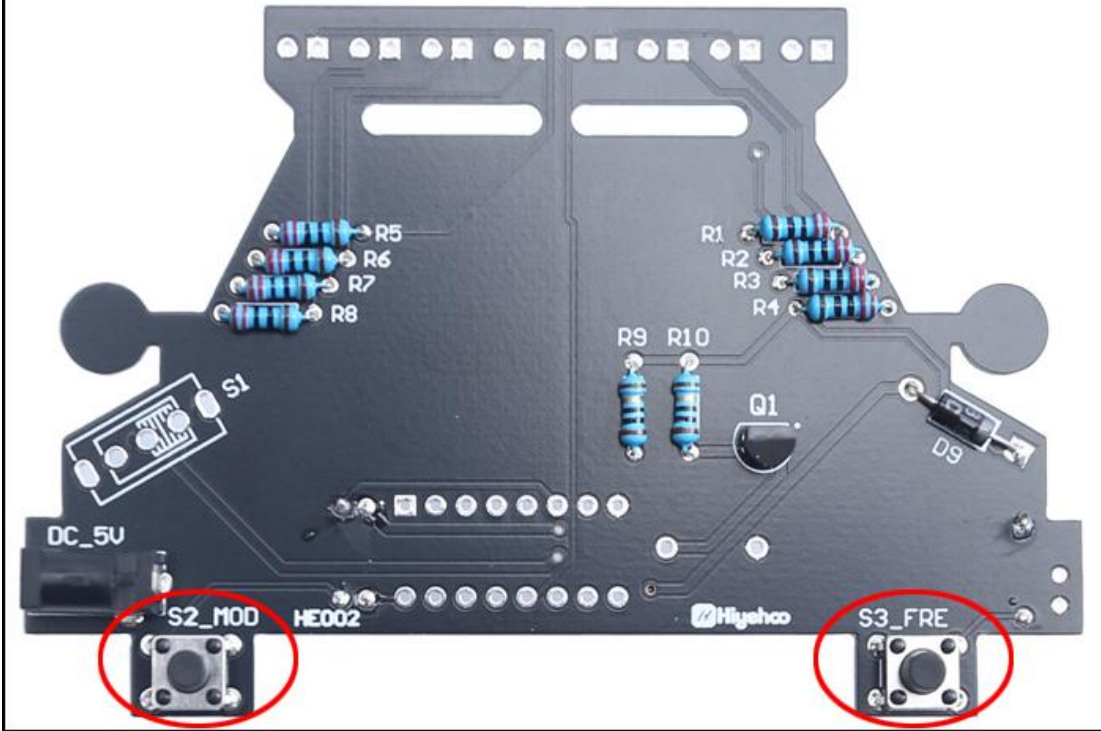
Step 6: Install 1pcs TO-92 S8550 Transistor at Q1. Pay attention to the installation direction. The arc on the PCB corresponds to the arc of the components.



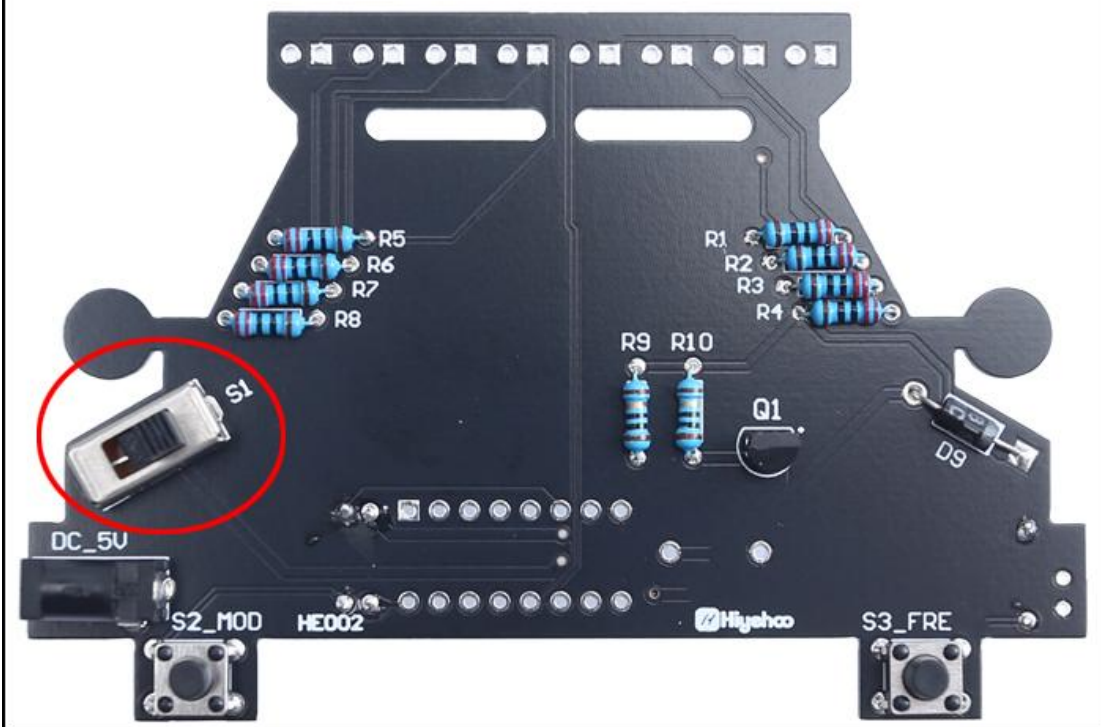
Step 7: Install 1pcs 3.5*1.3mm DC-002 Power Socket at DC_5V.



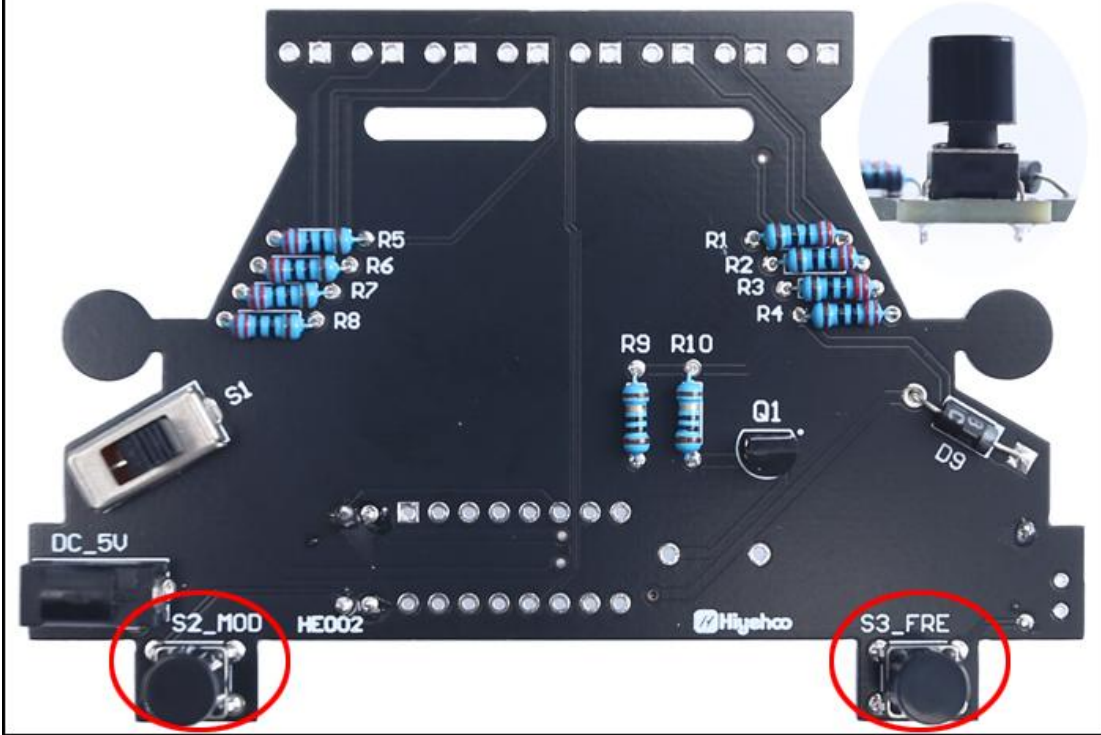
Step 8: Install 2pcs 6*6*7mm Black Button at S2,S3.



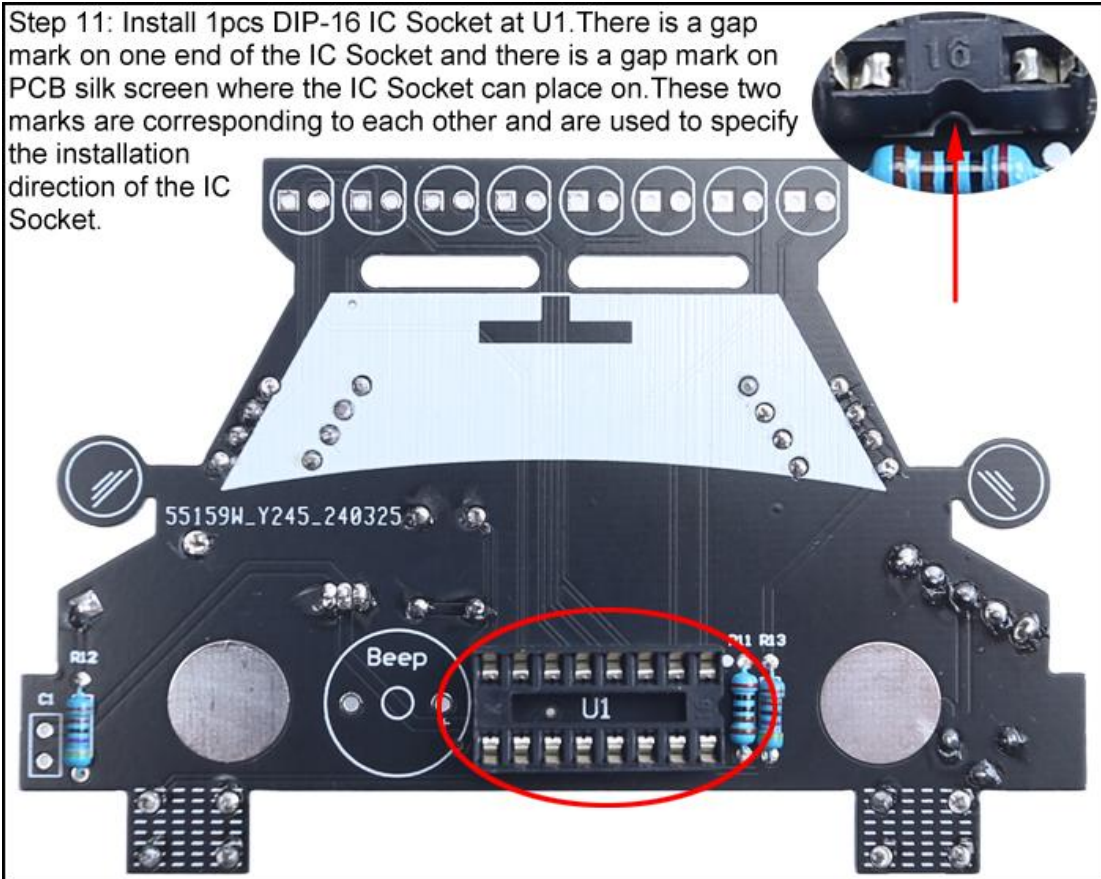
Step 9: Install 1pcs SS-12F44 1P2T Toggle Switch at S1.



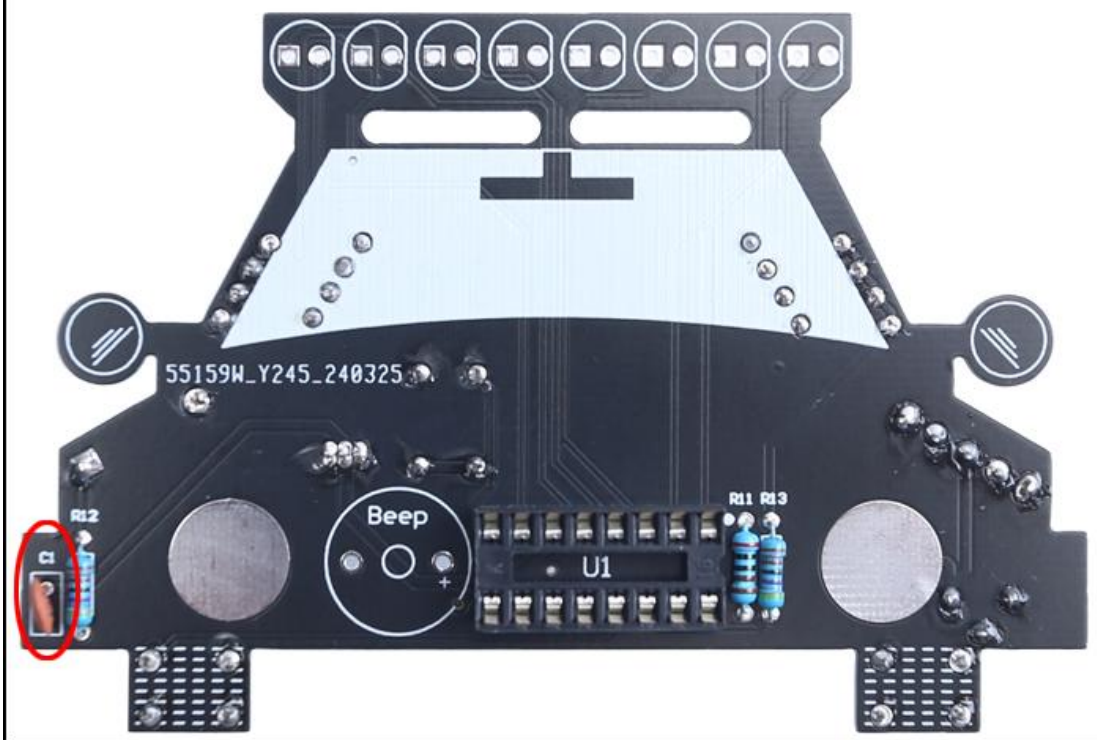
Step 10: Install 2pcs 6*6mm Button Cap on Black Button at S2,S3.



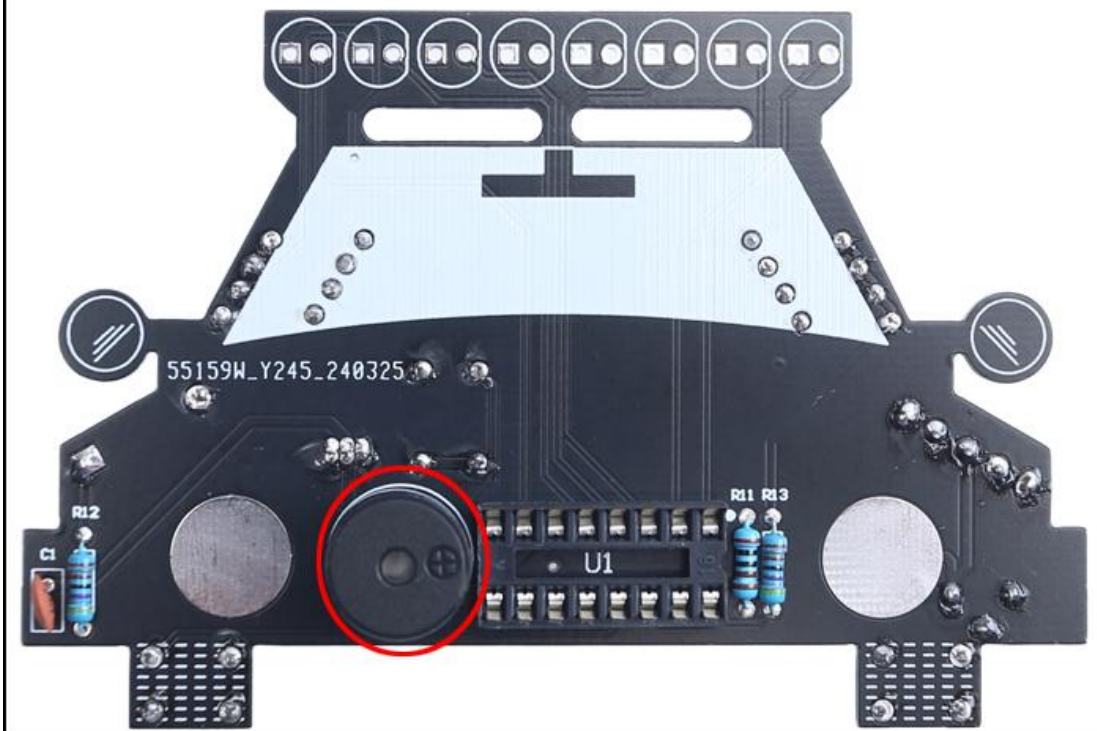
Step 11: Install 1pcs DIP-16 IC Socket at U1. There is a gap mark on one end of the IC Socket and there is a gap mark on PCB silk screen where the IC Socket can place on. These two marks are corresponding to each other and are used to specify the installation direction of the IC Socket.



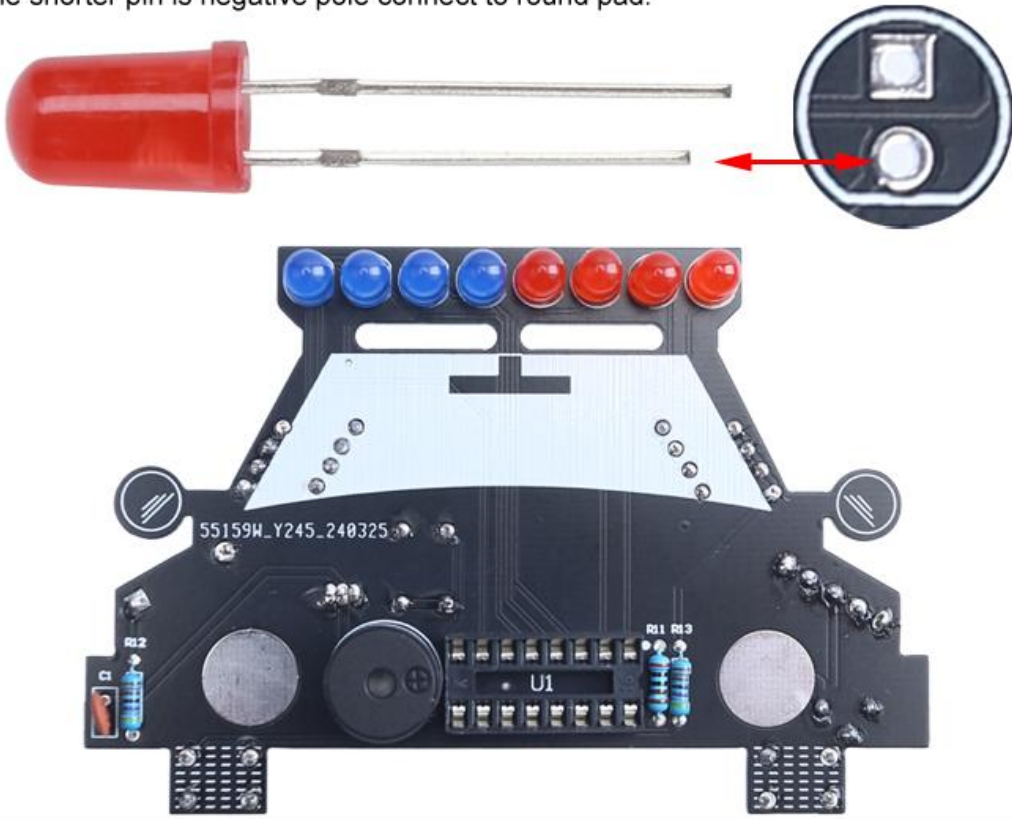
Step 12: Install 1pcs 0.1uF 104 Ceramic Capacitor at C4.



Step 13: Install 1pcs 5V Passive Buzzer at Beep. Pay attention to the positive and negative poles.



Step 14: Install 4pcs 5mm Blue LED on the left and Red LED on the right .
The shorter pin is negative pole connect to round pad.



Step 15: Install 1pcs DIP-16 IC STC15W204S Controller at U1. There is a gap mark on one end of the IC and there is a gap mark on DIP-16 IC Socket where the IC can place on. These two marks are corresponding to each other and are used to specify the installation direction of the IC.

