

| | | |
|------|-------|----|
|  | ..... | 1 |
|  | ..... | 1 |
| | | |
| 1-1 | ..... |  |
| 1-1 | ..... |  |
| 1- | ..... |  |
| 1- | ..... |  |
| 1- | ..... |  |
| 1- | ..... | 11 |
| 1- | ..... | 1 |
| 1- | ..... | 1 |
| 1- | ..... | 1 |
| 1- | ..... | 1 |
| 1-10 | ..... | 1 |
| 1-11 | ..... |  |
| 1-1 | ..... |  |
| 1-1 | ..... |  |
| 1-1 | ..... |  |
| 1-1 | ..... |  |
| 1-1 | ..... | 0 |
| 1-1 | ..... |  |
| 1-1 | ..... |  |
| | | |
| | | |
| -1 | ..... |  |
| -1 | ..... |  |
| - | ..... | 0 |
| - | ..... | 1 |
| - | | |
| - | | |
| - | | |
| - | | |
| - | ..... | 1 |
| -10 | ..... |  |
| -11 | ..... |  |
| -1 | ..... |  |
| -1 | ..... |  |
| -1 | ..... | 1 |
| -1 | ..... |  |
| -1 | ..... |  |
| -1 | ..... |  |
| -1 | ..... |  |
|  | ..... | 0 |

[2014] 55

- 1.
- 2.
- 3.
- 4.

--

--

| | | 1-1 | 1 | 1-1 | 1-1 |
|--|--|-----|---|-----|-----|
| | | -1 | 1 | -1 | -1 |
| | | -1 | 1 | -1 | -1 |

1

I/O

C

/

Kei I C

2

1

/ /

Kei I C

MCU

/ /

2

6S (

)

/

3

120

4

| | | | | |
|----|--|----|---|---|
| | | | | |
| | | | | |
| 20 | | 10 | 0 | |
| | | | | 1 |
| | | | | 2 |
| | | 10 | | 3 |
| | | | | 4 |
| | | | 5 | |

10

5

30

1



2

PCB

E

3

1

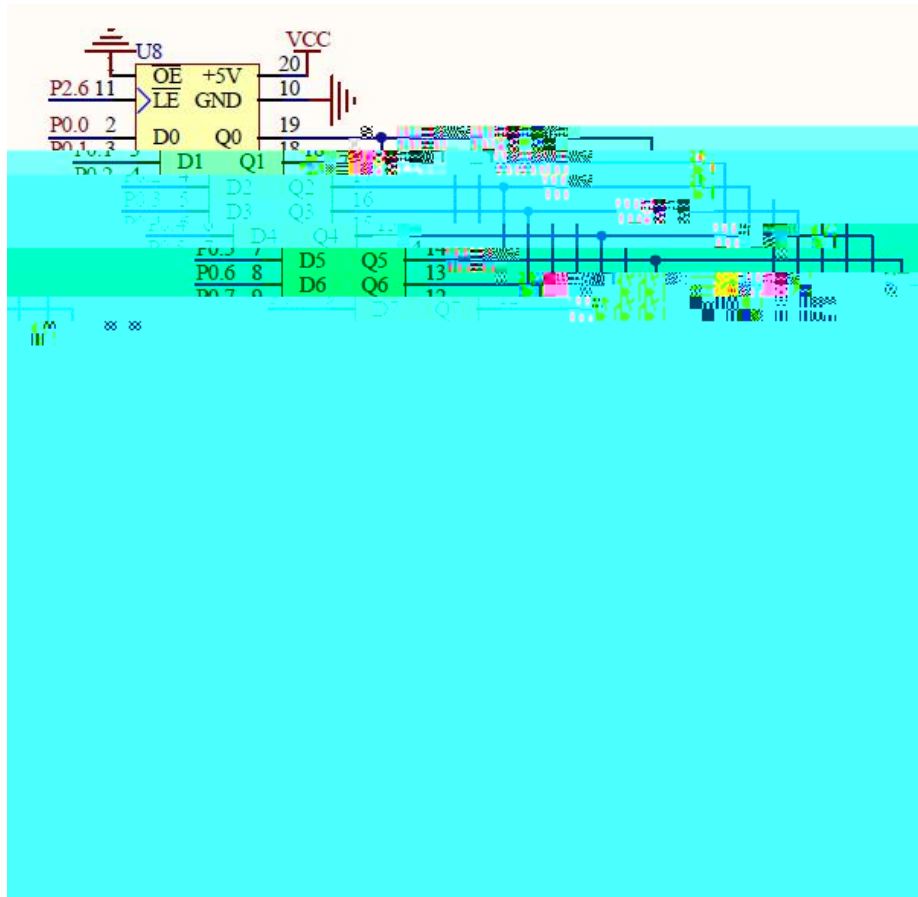


2

PCB
E

3

1



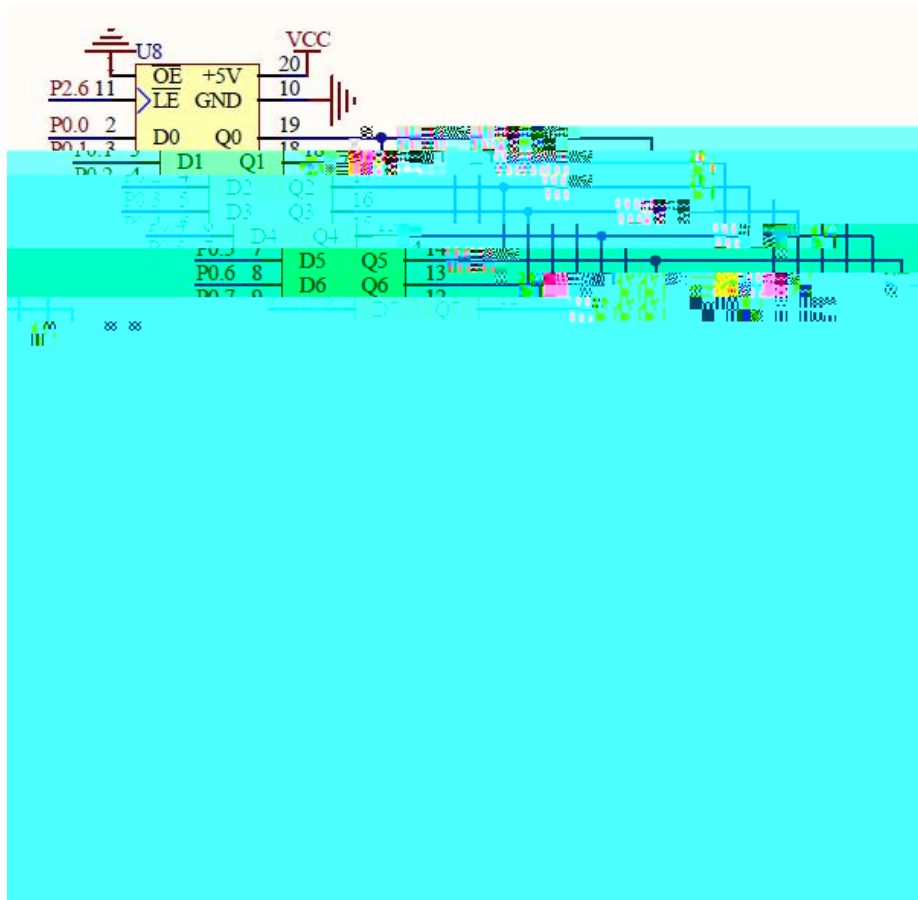
2

PCB

E

3

1



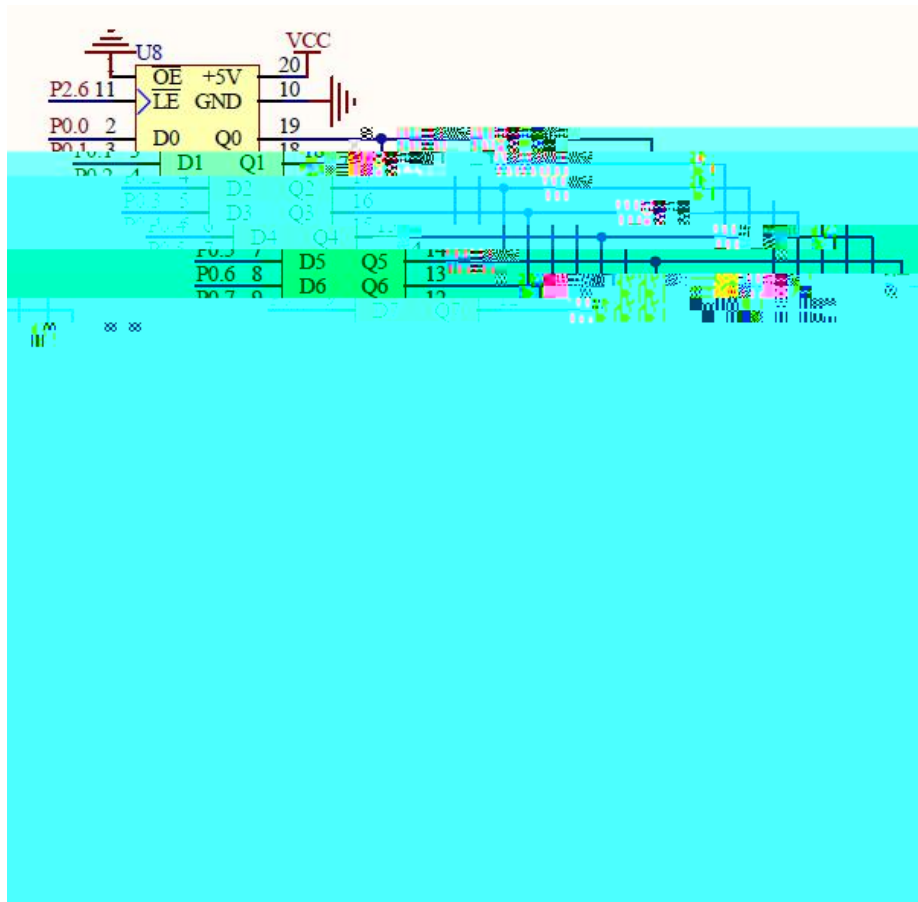
2

PCB

E

3

1



2

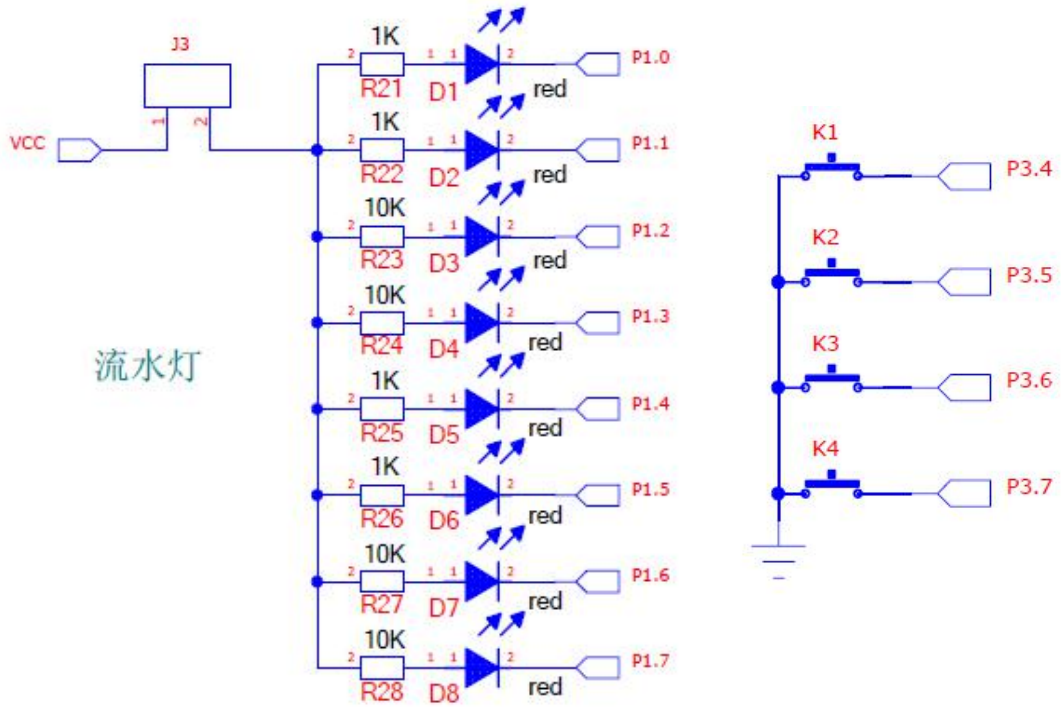
PCB

E

3

1

| | | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|----|---|
| K1 | D1 | D2 | D3 | D4 | K2 | D5 | D6 | D7 | D8 | K3 | 8 |
| | | | K4 | 8 | | | | | | | |



2

PCB
E

3

1

K1 8



2

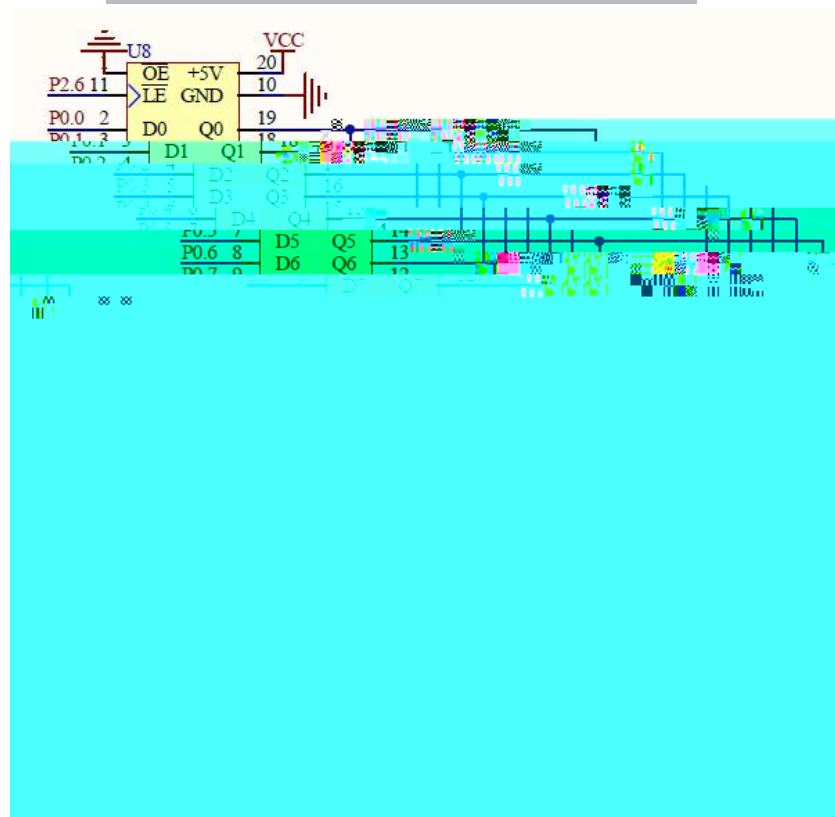
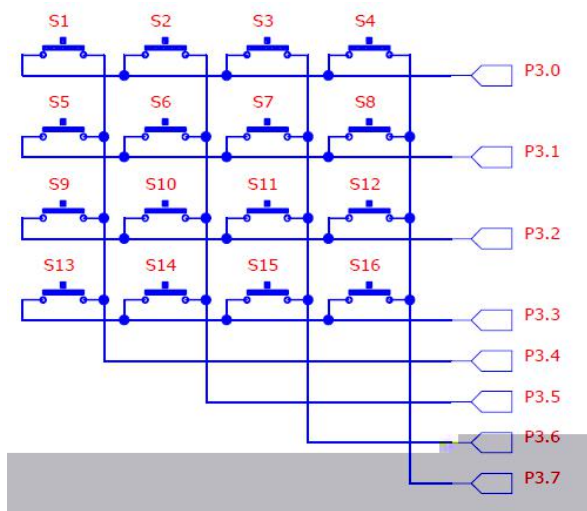
PCB
E

3

1

S1-S16

O-F



2

PCB

E

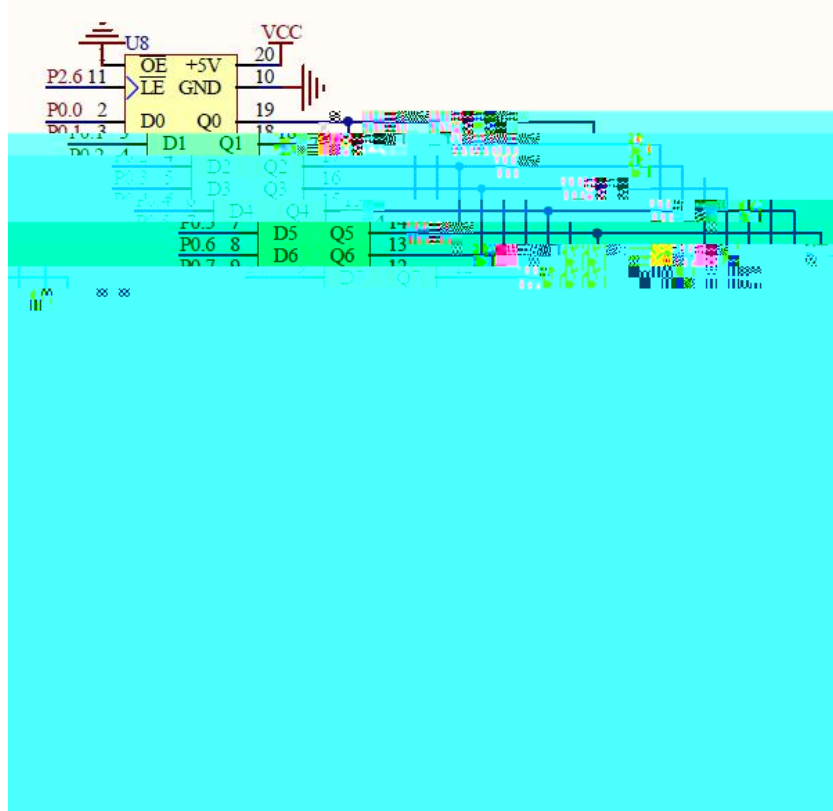
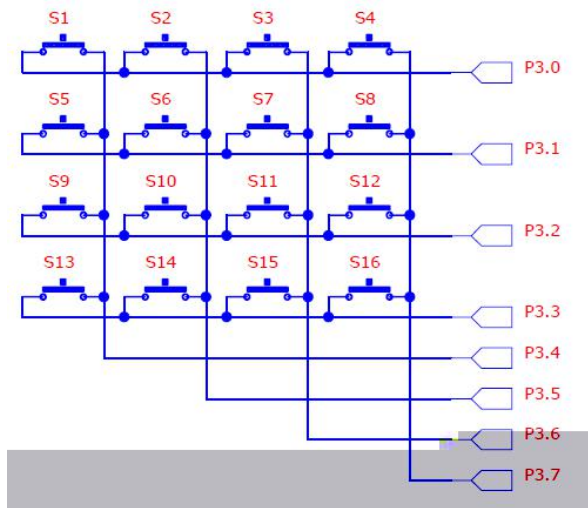
3

1

P3.2

1

9 0



2

PCB

E

3

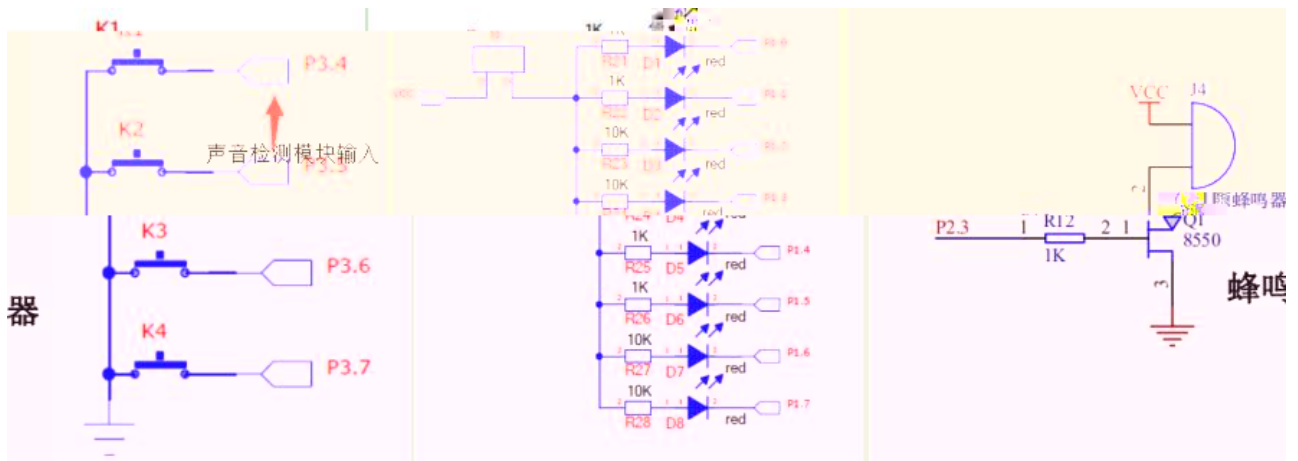
1

P3.4

1

P3.4

D1



1

2

PCB
E

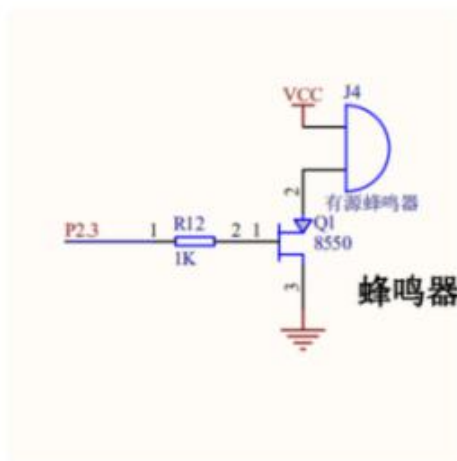
3

1

P3.7

1

P3.7



1

2

PCB
E

3

1

1

K1

D1

K2

D2



1

2

PCB

E

3

1

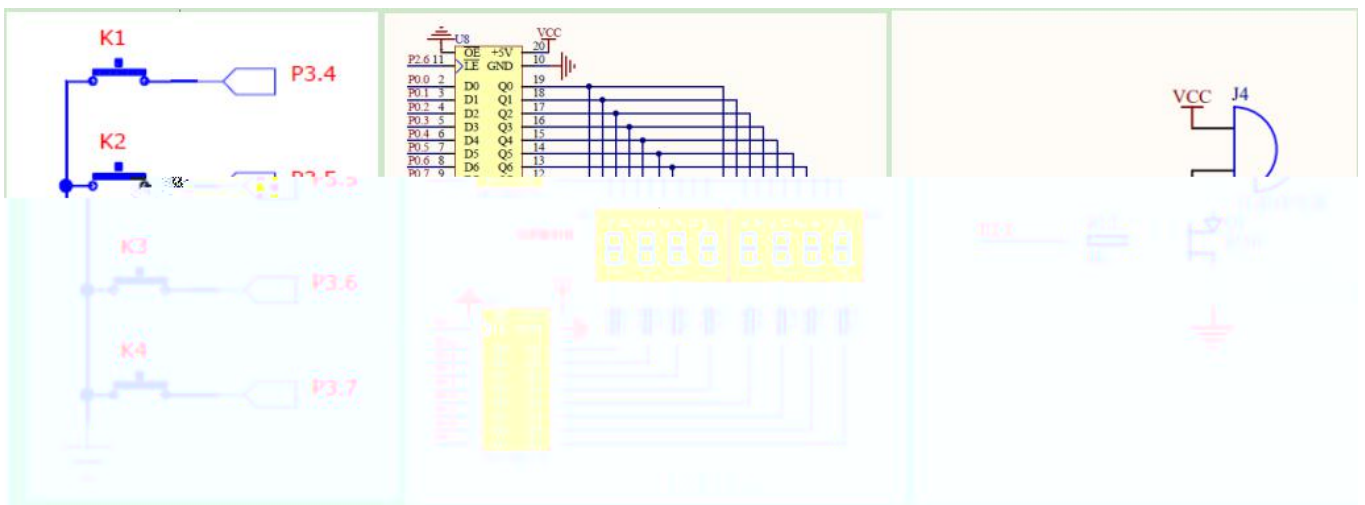
1

K1

K2 K3 K4

K1

" 1"



2

PCB

E

3

1

2



2

PCB

E

3

1

1

P3.6

P3.6



1

2

PCB

E

3

0

1

0.5S 0.5S



2

PCB

E

3

1

K1

D1-D4

K2

D5-D8



2

PCB

E

3

1

/ /

1

/ /

/ /

()

/

1 0

| | | | | | |
|----|--|----|---|--|---|
| | | | | | |
| | | | | | |
| 20 | | 10 | | | 0 |
| | | | 1 | | |
| | | 10 | 2 | | |
| | | | 3 | | |

| | | | | |
|----|--|----|-------------|-----|
| | | | 4 | |
| | | | 5 | |
| 30 | | 10 | | |
| | | 5 | | |
| | | 5 | | |
| | | 10 | | |
| 50 | | 5 | | |
| | | 5 | 1 2 | PCB |
| | | 10 | | |
| | | 15 | 1 2 3 | |
| | | 15 | | |

5

18

1



2

3

1



2

3

1



2

3

1



2

3

1



2



3

1

| | | | |
|----|--|--|----|
| 1 | VBAT | VDD | 64 |
| 2 | PC13/ANT1 | VSS | 63 |
| 3 | PC14/OSC32 | PB9/TIM4_CH4/SDIO_D5 | 62 |
| 4 | PC15/OSC32 | PB8/TIM4_CH3/SDIO_D4 | 61 |
| 5 | PD0/OSCIN | BOOT0 | 60 |
| 6 | PD1/OSCOU | PB7/I2C1_SDA/TIM4_CH2 | 59 |
| 7 | NRST | PB6/I2C1_SCL/TIM4_CH1 | 58 |
| 8 | PC0/ADC10 | PB5/I2C1_SMBA/SPI3_MOSI/I2S3_SD | 57 |
| 9 | PC1/ADC11 | PB4/JNTRST/SPI3_MISO | 56 |
| 10 | PC2/ADC12 | PB3/JTDO/SPI3_SCK/I2S3_CK | 55 |
| 11 | PC3/ADC13 | PD2/U5_RX/TIM3_ETR/SDIO_CMD | 54 |
| 12 | VSSA | PC12/U5_TX/SDIO_CK | 53 |
| 13 | VDDA | PC11/U4_RX/SDIO_D3 | 52 |
| 14 | PA0/WKUP/ADC0/TIM2_CH1_ETR/TIM5_CH1/TIM8_ETR | PC10/U4_TX/SDIO_D2 | 51 |
| 15 | PA1/ADC1/TIM2_CH2/TIM5_CH2 | PA15/JTDI/SPI3_NSS/I2S3_WS | 50 |
| 16 | PA2/U2_TX/ADC2/TIM2_CH3/TIM5_CH3 | PA14/JTCK/SWCLK | 49 |
| 17 | PA3/U2_RX/ADC3/TIM3_CH4/TIM5_CH4 | vpp | 48 |
| 18 | VSS | VSS | 47 |
| 19 | VDD | PA13/JTMS/SWDIO | 46 |
| 20 | PA4/SPI1_NSS/ADC4/DAC1 | PA12/CAN_TX/USBDP/TIM1_ETR | 45 |
| 21 | PA5/SPI1_SCK/ADC5/DAC2 | PA11/CAN_RX/USBDM/TIM1_CH4 | 44 |
| 22 | PA6/SPI1_MISO/ADC6/TIM3_CH1/TIM8_BKIN | PA10/U1_RX/TIM1_CH3 | 43 |
| 23 | PA7/SPI1_MOSI/ADC7/TIM3_CH2/TIM8_CHIN | PA9/U1_TX/TIM1_CH2 | 42 |
| 24 | PC4/ADC14 | PA8/TIM1_CH1/MCO | 41 |
| 25 | PC5/ADC15 | PC9/TIM8_CH4/SDIO_D1 | 40 |
| 26 | PB0/ADC8/TIM3_CH3/TIM8_CH2N | PC8/TIM8_CH3/SDIO_D0 | 39 |
| 27 | PB1/ADC9/TIM3_CH4/TIM8_CH3N | PC7/I2S3_MCK/TIM8_CH2/SDIO_D7 | 38 |
| 28 | PB2/BOOT1 | PC6/I2S2_MCK/TIM8_CH1/SDIO_D6 | 37 |
| 29 | PB10/U3_TX/I2C2_SCL | PB15/SPI2_MOSI/I2S2_SD/TIM1_CH3N | 36 |
| 30 | PB11/U3_RX/I2C2_SDA | PB14/SPI2_MISO/TIM1_CH2N | 35 |
| 31 | VSS | PB13/SPI2_SCK/I2S2_CK/TIM1_CH1N | 34 |
| 32 | VDD | PB12/SPI2_NSS/I2S2_WS/I2C2_SMBAL/TIM1_BKIN | 33 |

2

3

1



2

3

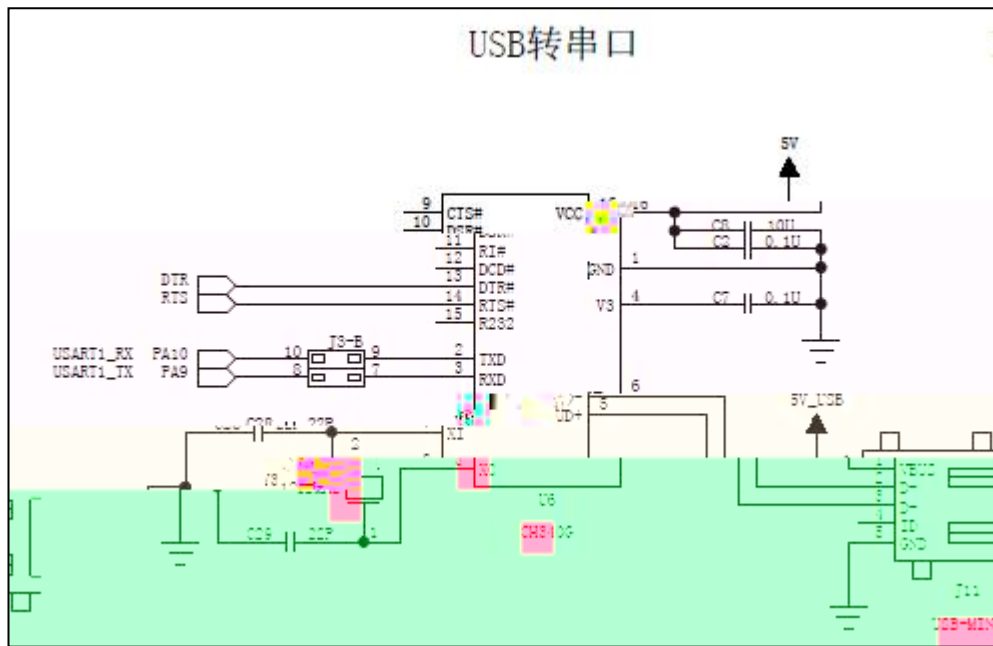
1

| | | | |
|----|--|--|----|
| 1 | VBAT | VDD | 64 |
| 2 | PC13/ANT1 | VSS | 63 |
| 3 | PC14/OSC32 | PB9/TIM4_CH4/SDIO_D5 | 62 |
| 4 | PC15/OSC32 | PB8/TIM4_CH3/SDIO_D4 | 61 |
| 5 | PD0/OSCIN | BOOT0 | 60 |
| 6 | PD1/OSCOU | PB7/I2C1_SDA/TIM4_CH2 | 59 |
| 7 | NRST | PB6/I2C1_SCL/TIM4_CH1 | 58 |
| 8 | PC0/ADC10 | PB5/I2C1_SMBA/SPI3_MOSI/I2S3_SD | 57 |
| 9 | PC1/ADC11 | PB4/JNTRST/SPI3_MISO | 56 |
| 10 | PC2/ADC12 | PB3/JTDO/SPI3_SCK/I2S3_CK | 55 |
| 11 | PC3/ADC13 | PD2/U5_RX/TIM3_ETR/SDIO_CMD | 54 |
| 12 | VSSA | PC12/U5_TX/SDIO_CK | 53 |
| 13 | VDDA | PC11/U4_RX/SDIO_D3 | 52 |
| 14 | PA0/WKUP/ADC0/TIM2_CH1_ETR/TIM5_CH1/TIM8_ETR | PC10/U4_TX/SDIO_D2 | 51 |
| 15 | PA1/ADC1/TIM2_CH2/TIM5_CH2 | PA15/JTDO/SPI3_NSS/I2S3_WS | 50 |
| 16 | PA2/U2_TX/ADC2/TIM2_CH3/TIM5_CH3 | PA14/JTCK/SWCLK | 49 |
| 17 | PA3/U2_RX/ADC3/TIM2_CH4/TIM5_CH4 | vnn | 48 |
| 18 | VSS | VSS | 47 |
| 19 | VDD | PA13/JTMS/SWDIO | 46 |
| 20 | PA4/SPI1_NSS/ADC4/DAC1 | PA12/CAN_TX/USBDP/TIM1_ETR | 45 |
| 21 | PA5/SPI1_SCK/ADC5/DAC2 | PA11/CAN_RX/USBDM/TIM1_CH4 | 44 |
| 22 | PA6/SPI1_MISO/ADC6/TIM3_CH1/TIM8_BKIN | PA10/U1_RX/TIM1_CH3 | 43 |
| 23 | PA7/SPI1_MOSI/ADC7/TIM3_CH2/TIM8_CHIN | PA9/U1_TX/TIM1_CH2 | 42 |
| 24 | PC4/ADC14 | PA8/TIM1_CH1/MCO | 41 |
| 25 | PC5/ADC15 | PC9/TIM8_CH4/SDIO_D1 | 40 |
| 26 | PB0/ADC8/TIM3_CH3/TIM8_CH2N | PC8/TIM8_CH3/SDIO_D0 | 39 |
| 27 | PB1/ADC9/TIM3_CH4/TIM8_CH3N | PC7/I2S3_MCK/TIM8_CH2/SDIO_D7 | 38 |
| 28 | PB2/BOOT1 | PC6/I2S2_MCK/TIM8_CH1/SDIO_D6 | 37 |
| 29 | PB10/U3_TX/I2C2_SCL | PB15/SPI2_MOSI/I2S2_SD/TIM1_CH3N | 36 |
| 30 | PB11/U3_RX/I2C2_SDA | PB14/SPI2_MISO/TIM1_CH2N | 35 |
| 31 | VSS | PB13/SPI2_SCK/I2S2_CK/TIM1_CH1N | 34 |
| 32 | VDD | PB12/SPI2_NSS/I2S2_WS/I2C2_SMBAL/TIM1_BKIN | 33 |

2

3

1

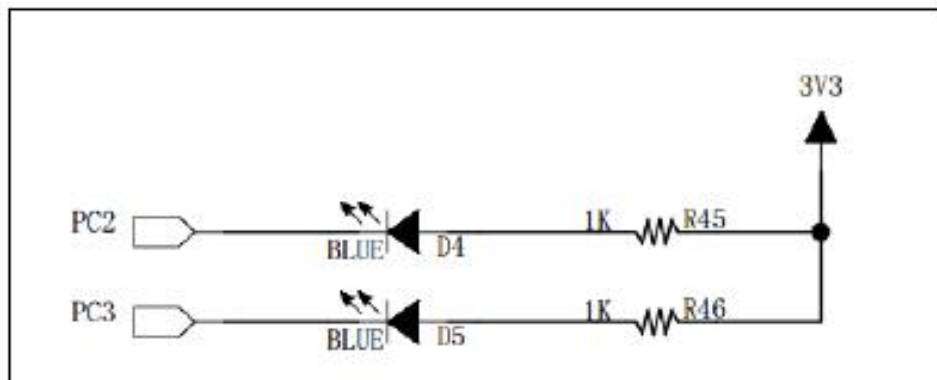
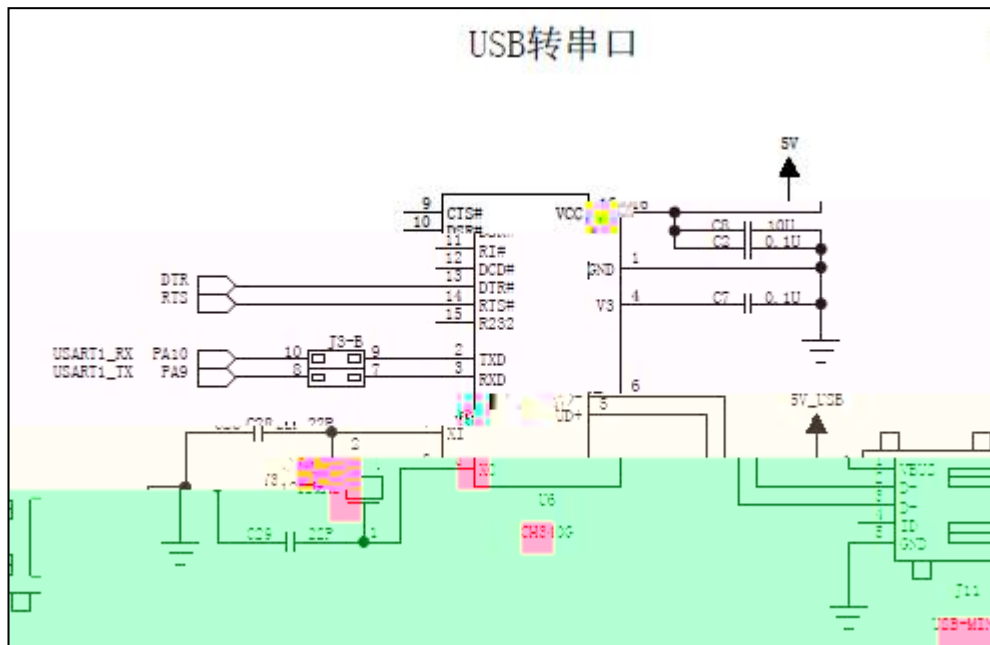


2

3

-

1



2

3

-

1

2

1

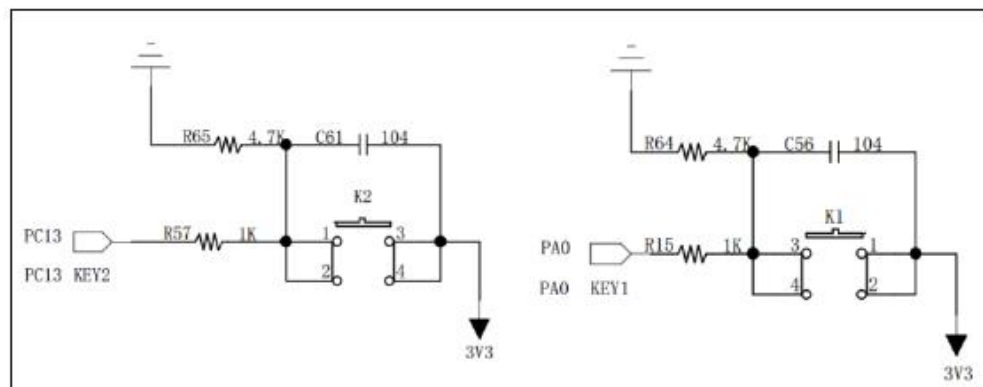
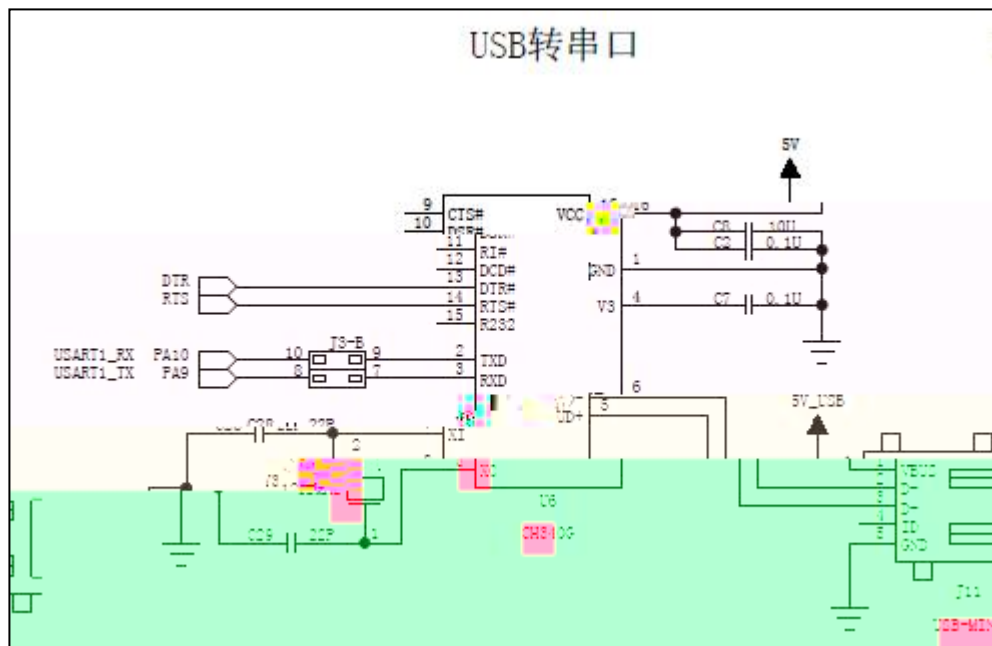


2

3

-

1

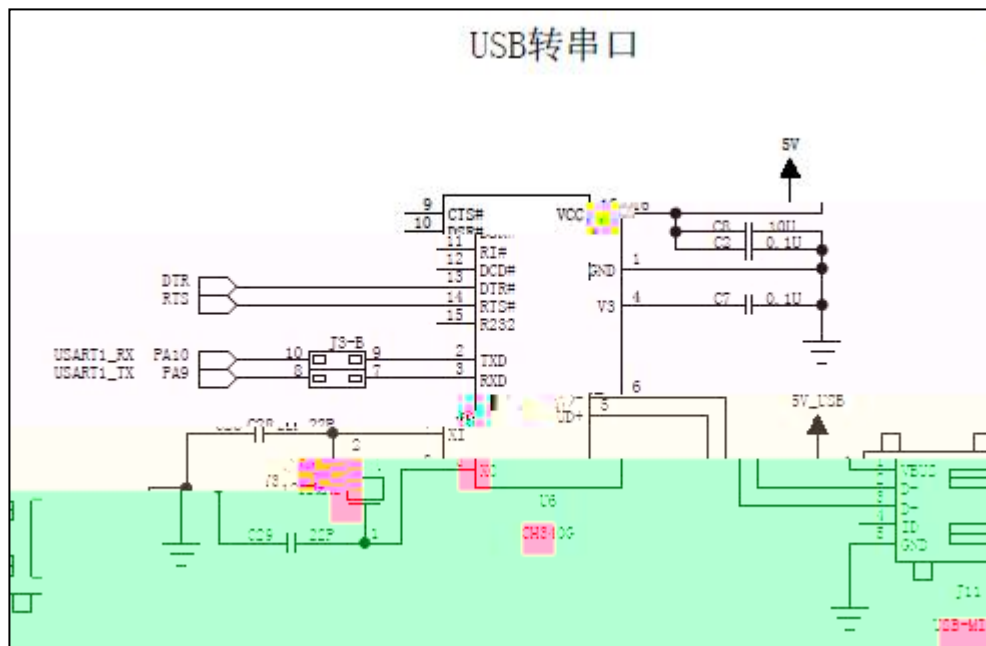


2

3

-

1



2

3

-



2

3

-

1



2

3

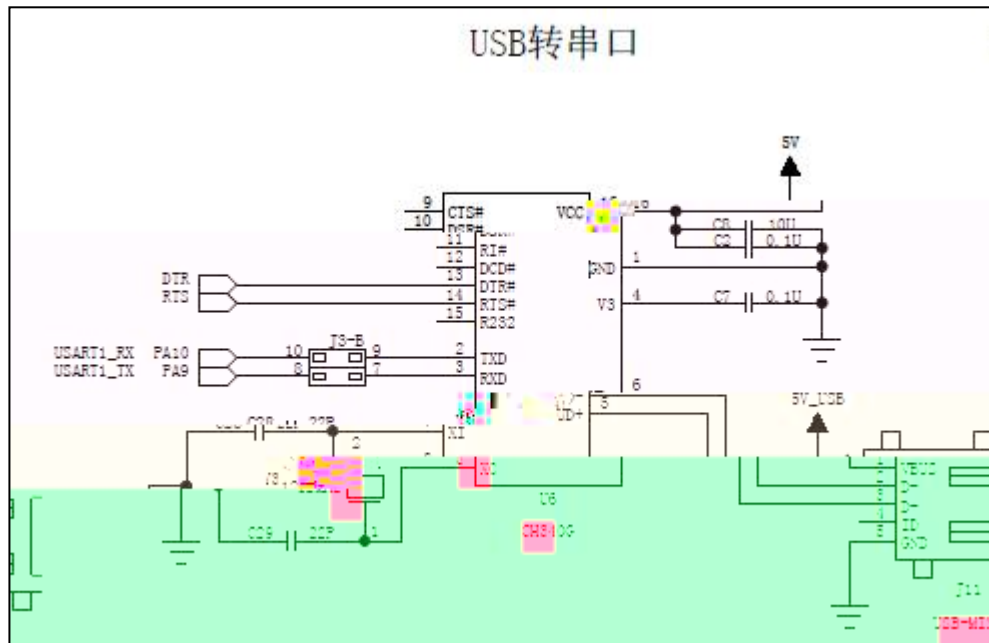
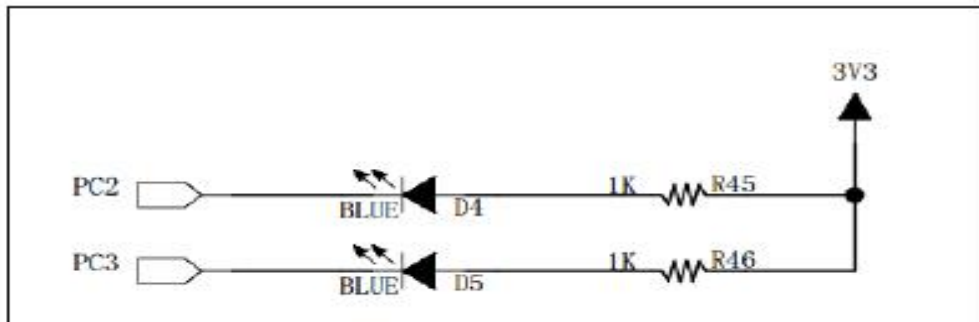


2

3

-

1



2

3

-

1

1

/ /

.0

/ /

()

/

1 0

| | | | | | | |
|----|--|----|---|--|---|--|
| | | | | | | |
| | | | | | | |
| 20 | | 10 | | | 0 | |
| | | | 6 | | | |
| | | | 7 | | | |
| | | 10 | 8 | | | |
| | | | 9 | | | |

| | | | | |
|----|--|----|----|--|
| | | | 10 | |
| 30 | | | | |
| | | | | |
| | | 10 | | |
| | | 10 | | |
| 50 | | | | |
| | | 10 | | |
| | | | | |
| | | | | |

5

18

1
2

20sp

RGB #FF0000



3 :

2
1



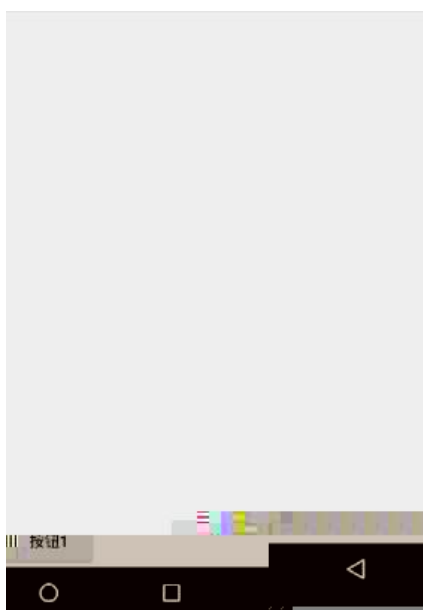
3 :

1

2

1

2



3

:

TextView

2

1



3

1

2



3

2

1

2



3

1

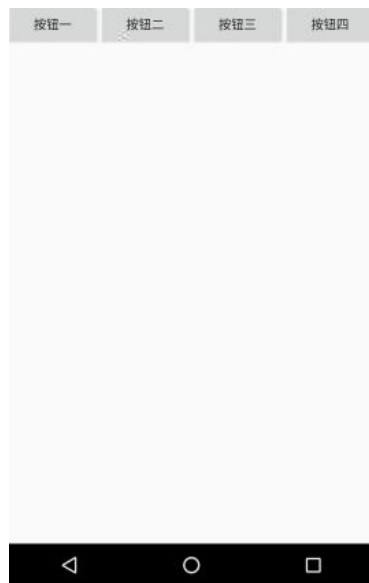
1 1 1 1

2

1

2

1 1 1 1



3

1

2

1



3

1

2

1

2



3

1

2

1

2

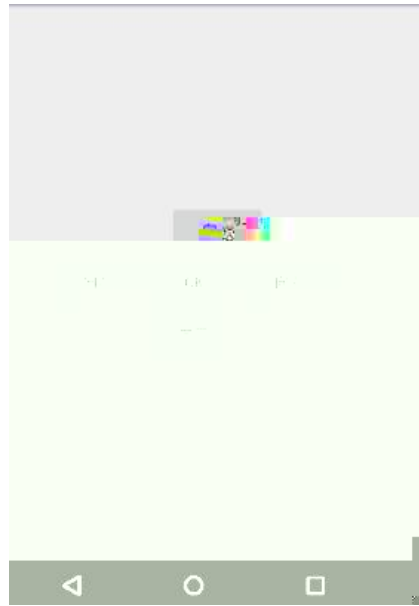


3

1

2

1



3

1

LED

2

1

2

3

TextView LED



3

1

LED

2

1

2

3

TextView LED



3

1

LED

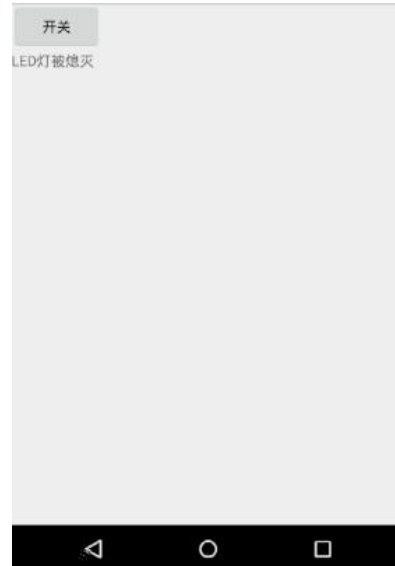
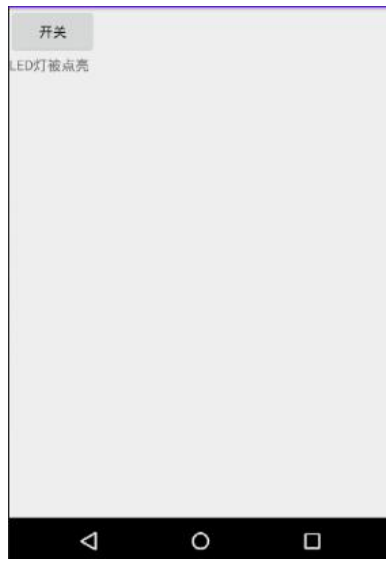
2

1

2

3

TextView LED



3

1

LED

2

1

2

3

4

TextVi ew



3

1

LED

2

1

2

3

4

ImageView

30dp*30dp



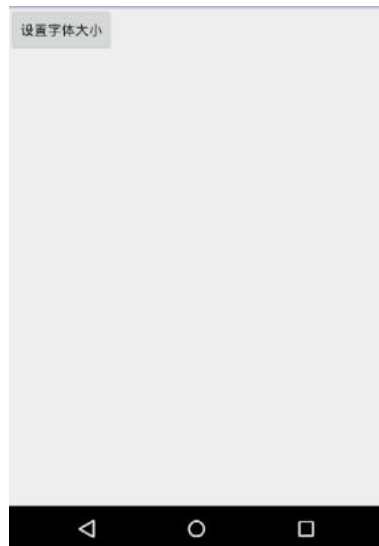
3

1

2

1

2



3

1

2

1

2



3