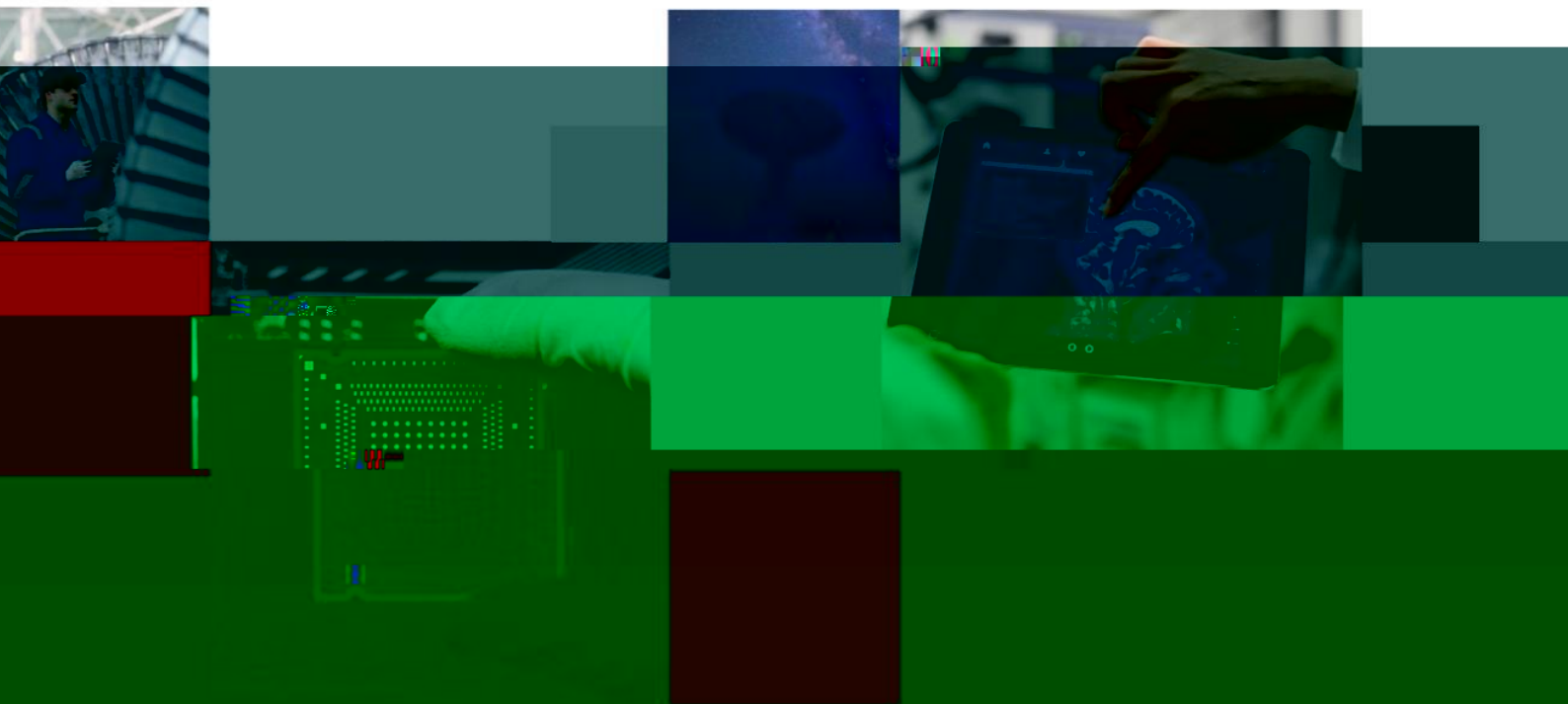


# EC800X QuecDuino EVB

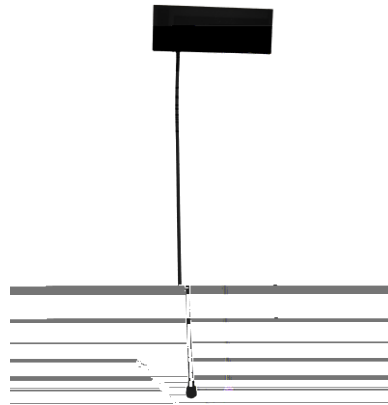
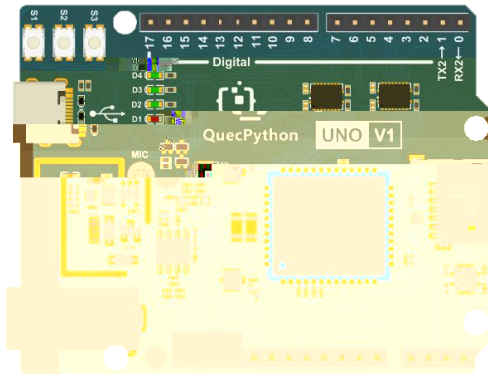


# 1

EC800X QuecDuino EVB                      EC800  
EC800M                      EC800K                      EG800K                      EC800E

## EC800X QuecDuino EVB

QuecDuino EVB 4G FPC



1 EVB

## Features

### CPU

EC800 / EG800 Module Series

### Pins

22x digital pins (GPIO), D0-D3,0-17 up to  
2x analog input pins (ADC), A0-A1

### Peripherals

Antenna Interface,LTE & GNSS(option)

SIM Interface, NANO SIM

USB 2.0, TypeC

Arduino female header Interface

Audio(option)

1xMIC onboard

1x 3W Class-D Stereo Amplifier

#### Power

Recommended input voltage (VIN) is 4.5-5.25 V/2A

Power via USB-C® at 5 V

Power via DC05® at 5-16V

3.3V/200mA output

#### Communication

4x UART (pin 0, 7) up to

1x SPI (pin 10-13, ICSP header)

1x I2C (pin 16, 17, SDA, SCL)

3x KEY(S1-S3)

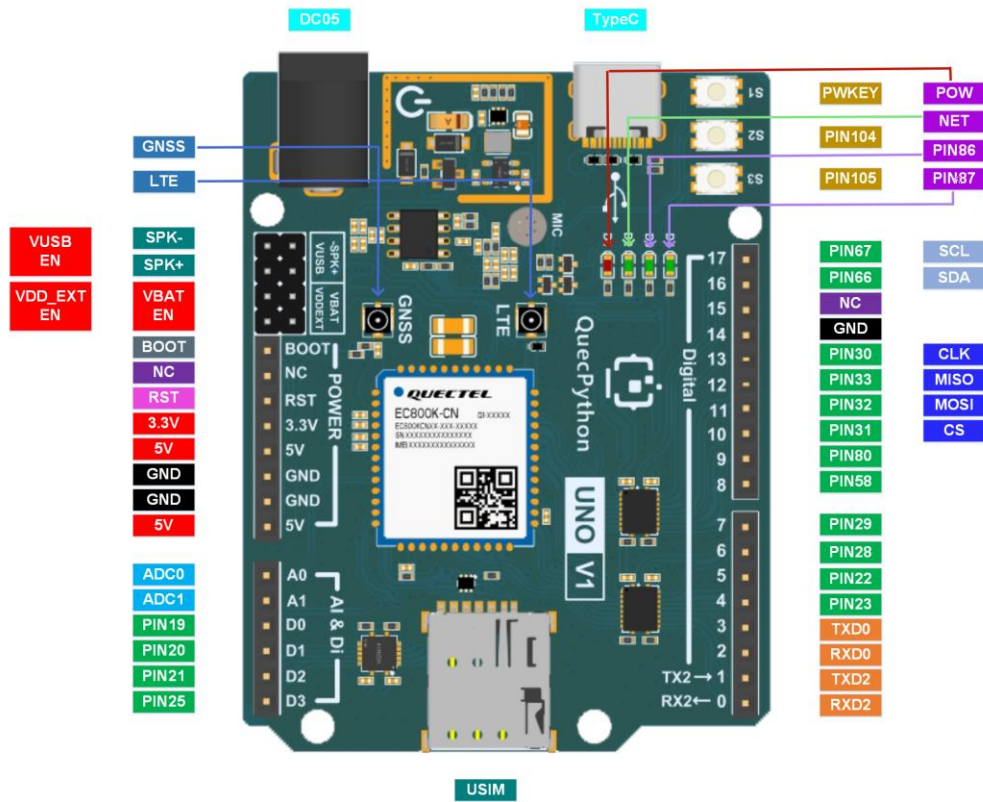
4x LED(D1-D4)

1x RESET(Pull-down reset Module)

1x BOOT(According to different model modules pull up or Pull-down the BOOT pin, Before power-on)

## 2

### 2.1



2 EVB

EVB

VUBS EN VDD\_EXT EN VBAT EN

### 2.2

1

		DC
BOOT	USB_BOOT	
NC		
RST	RESET	

3.3V		3.3V/200mA
5V	/	5V/2A V1.1
GND		
GND		
5V	/	5V/2A V1.1
A0	ADC0	0-1.2 V
A1	ADC1	0-1.2 V
D0	I/O 19	3.3V
D1	I/O 20	3.3V
D2	I/O 21	3.3V
D3	I/O 25	3.3V
0		3.3V
1		3.3V
2		3.3V
3		3.3V
4	I/O 23	3.3V
5	I/O 22	3.3V
6	I/O 28	3.3V
7	I/O 29	3.3V
8	I/O 58	3.3V
9	I/O 80	3.3V
10	I/O 31	3.3V
11	I/O 32	3.3V
12	I/O 33	3.3V
13	I/O 30	3.3V
14		
15	NC	
16	I/O 66	3.3V



BOOT  
BOOT

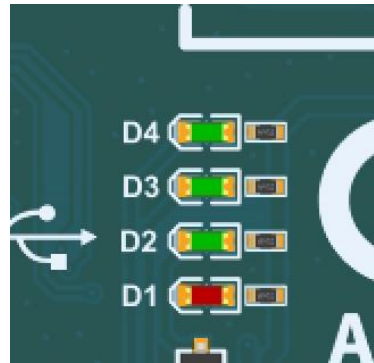
BOOT

BOOT GND

## 2.3

EVB 4

D1



5

D2

2

D2	200ms /1800ms	
	1800ms /200ms	
	125ms /125ms	

D3 D4

86 87

### 3 SIM



6 SIM

EVB NANO SIM USIM ETSI IMT-2000  
1.8 V 3.0 V USIM

### 4 USB



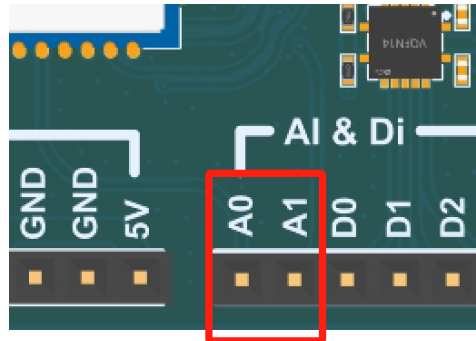
7 USB

EVB 1 TypeC USB USB USB 2.0  
USB 2.0 480 Mbps 12 Mbps  
AT GNSS NMEA

## 5 ADC

EVB 2

ADC



8 ADC

3 ADC

参数	最小值	典型值	最大值	单位
ADC0 电压	0	-	1.2	V
ADC1 电压	0	-	1.2	V
ADC 分辨率	-	-	12	位

## 6

### 6.1

#### 6.1.1

5

引脚名	引脚号	I/O	描述	备注
ANT_MAIN	35	AIO	主天线接口	50 Ω 特性阻抗。

#### 备注

模块支持 Wi-Fi Scan 功能。由于共用主天线接口，两种功能不可同时使用，时分复用，Wi-Fi Scan 只接收不发送。

6

频段	下行频率	上行频率
LTE-FDD B34	1920~1980	2110~2170
LTE-FDD B38	2570~2620	2605~2660
LTE-FDD B39	1880~1920	800~894
LTE-FDD B40	2300~2400	2300~2400
LTE-FDD B41	2535~2675	2535~2675

### 6.1.2

7

频段	最大值	最小值
LTE-FDD B1/B3/B5/B8	23 dBm ±2 dB	< -39 dBm
LTE-TDD B34/B38/B39/B40/B41	23 dBm ±2 dB	< -39 dBm

### 6.1.3

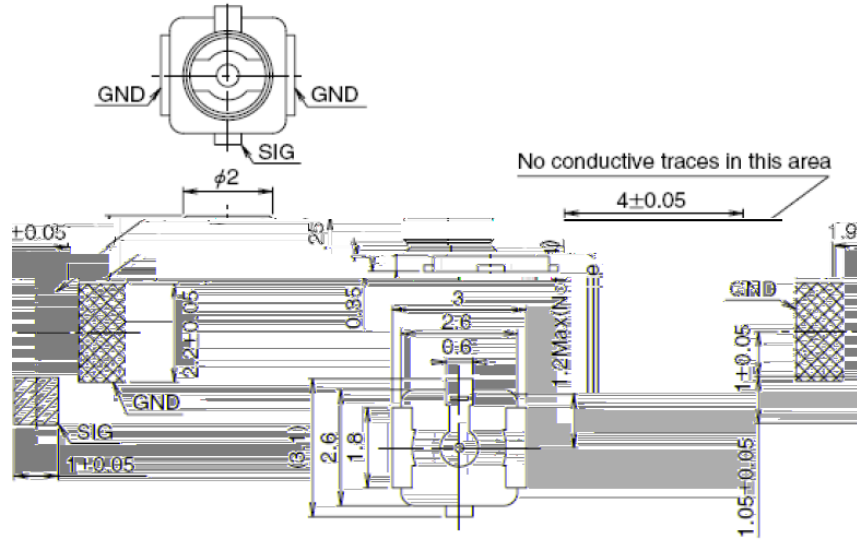
8

频段	接收灵敏度（典型值）（dBm）			3GPP 要求 （主集 + 分集）
	主集	分集	主集 + 分集	
LTE-FDD B1 (10 MHz)	-99.5 dBm	-	-	-96.3 dBm
LTE-FDD B3 (10 MHz)	-99.0 dBm	-	-	-93.3 dBm
LTE-FDD B5 (10 MHz)	-98.5 dBm	-	-	-94.3 dBm
LTE-FDD B8 (10 MHz)	-99.0 dBm	-	-	-93.3 dBm
LTE-TDD B34 (10 MHz)	-100.0 dBm	-	-	-96.3 dBm
LTE-TDD B38 (10 MHz)	-99.0 dBm	-	-	-96.3 dBm
LTE-TDD B39 (10 MHz)	-100.0 dBm	-	-	-96.3 dBm
LTE-TDD B40 (10 MHz)	-100.5 dBm	-	-	-96.3 dBm
LTE-TDD B41 (10 MHz)	-99.0 dBm	-	-	-94.3 dBm



### 6.3

### EVB



天线连接器尺寸 (单位: 毫米)

9

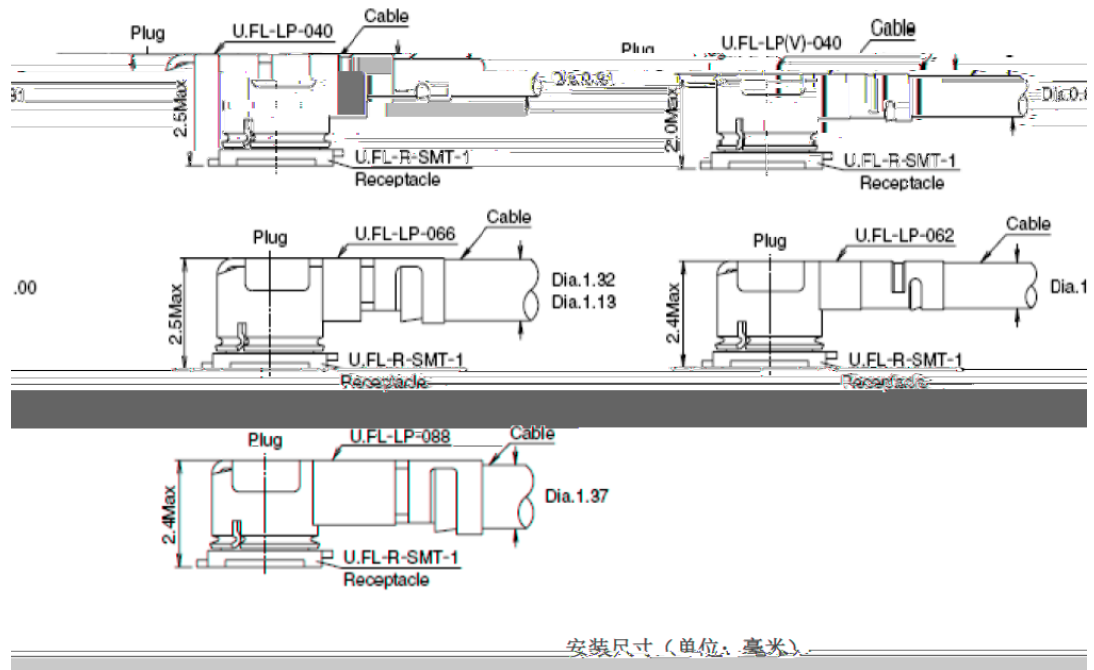
mm

### U.FL-LP

U.FL-LP		U.FL-LP04		U.FL-LP06		U.FL-LP08	
4	5	4	4	4	4	3.4	3.4
1.85	1.85	1.93	1.93	1.93	1.93	1.93	1.93
2.4mm Max. (2.3mm Nom.)	2.4mm Max. (2.3mm Nom.)	2.5mm Max. (2.4mm Nom.)	2.5mm Max. (2.4mm Nom.)	2.5mm Max. (2.4mm Nom.)	2.5mm Max. (2.4mm Nom.)	2.0mm Max. (1.9mm Nom.)	2.4mm Max. (2.3mm Nom.)
1mm	1mm	1mm	1mm	1mm	1mm	1mm	1mm
Coaxial cable	Coaxial cable	Coaxial cable	Coaxial cable	Coaxial cable	Coaxial cable	Coaxial cable	Coaxial cable
45.5	71.7	53.7	53.7	59.1	59.1	34.6	34.6
Applicable	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
U.FL-LP 连接线系列							

10

mm



11

mm

IPEX

<https://www.i-pek.com>

## 7

### 7.1

11

TypeC	-0.3	6	V
DC	-0.3	16	V
3.3V	-0.3	3.4	V
	-0.3	3.4	V
ADC0	-	1.2	V
ADC1	-	1.2	V
5V	-	2	A

## 7.2

12

TypeC		4.5	5.0	5.25	V
DC		4.5	12	16	V
I	LTE	-	1.5	2	A

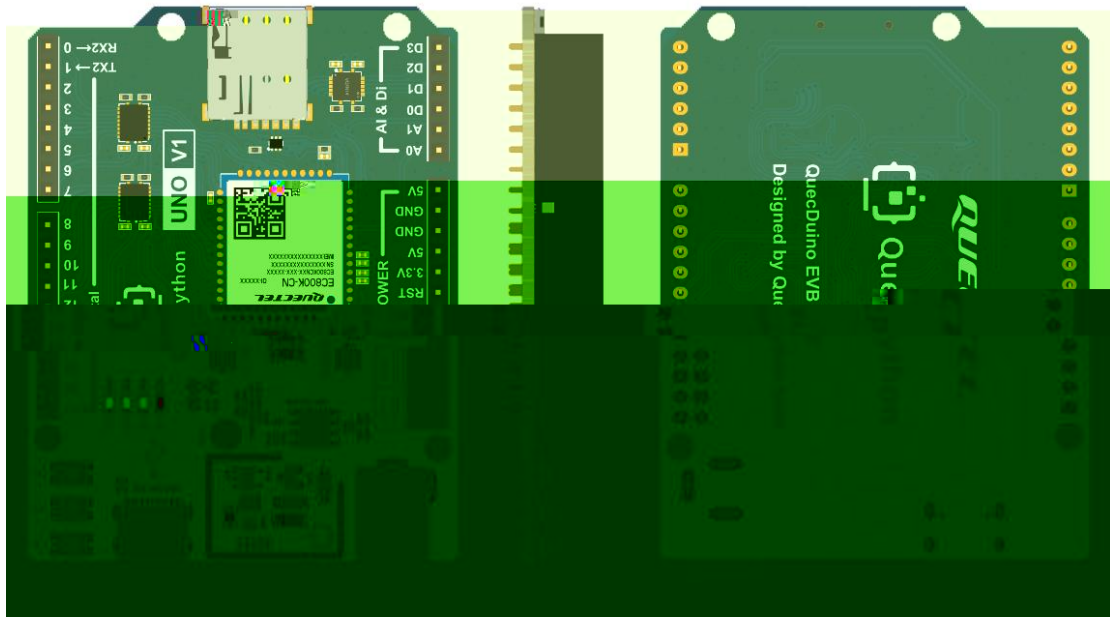
## 7.3

13 ESD V

5V GND	$\pm 8$	$\pm 10$		KV
USB	$\pm 8$	$\pm 10$		KV



## 8.2

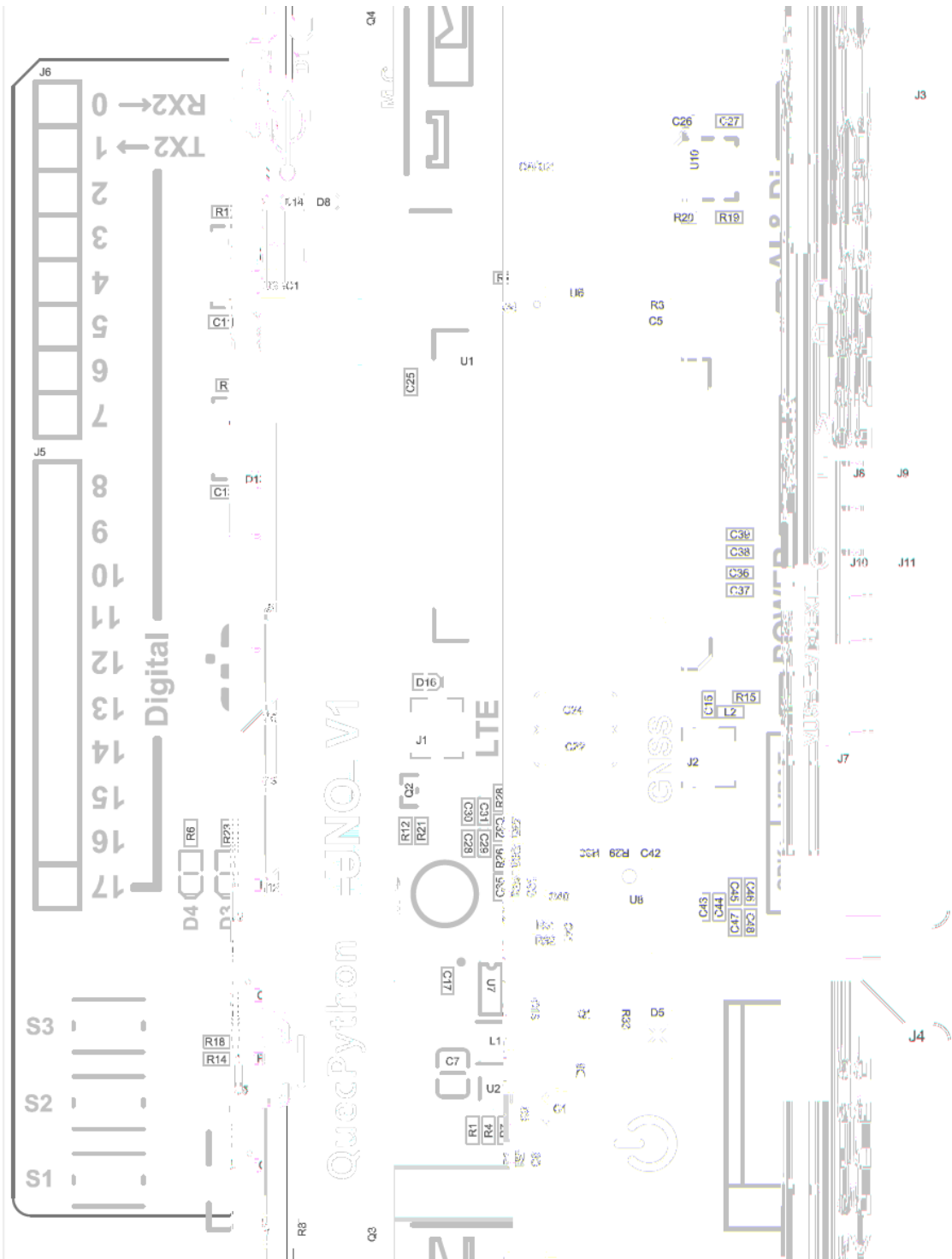


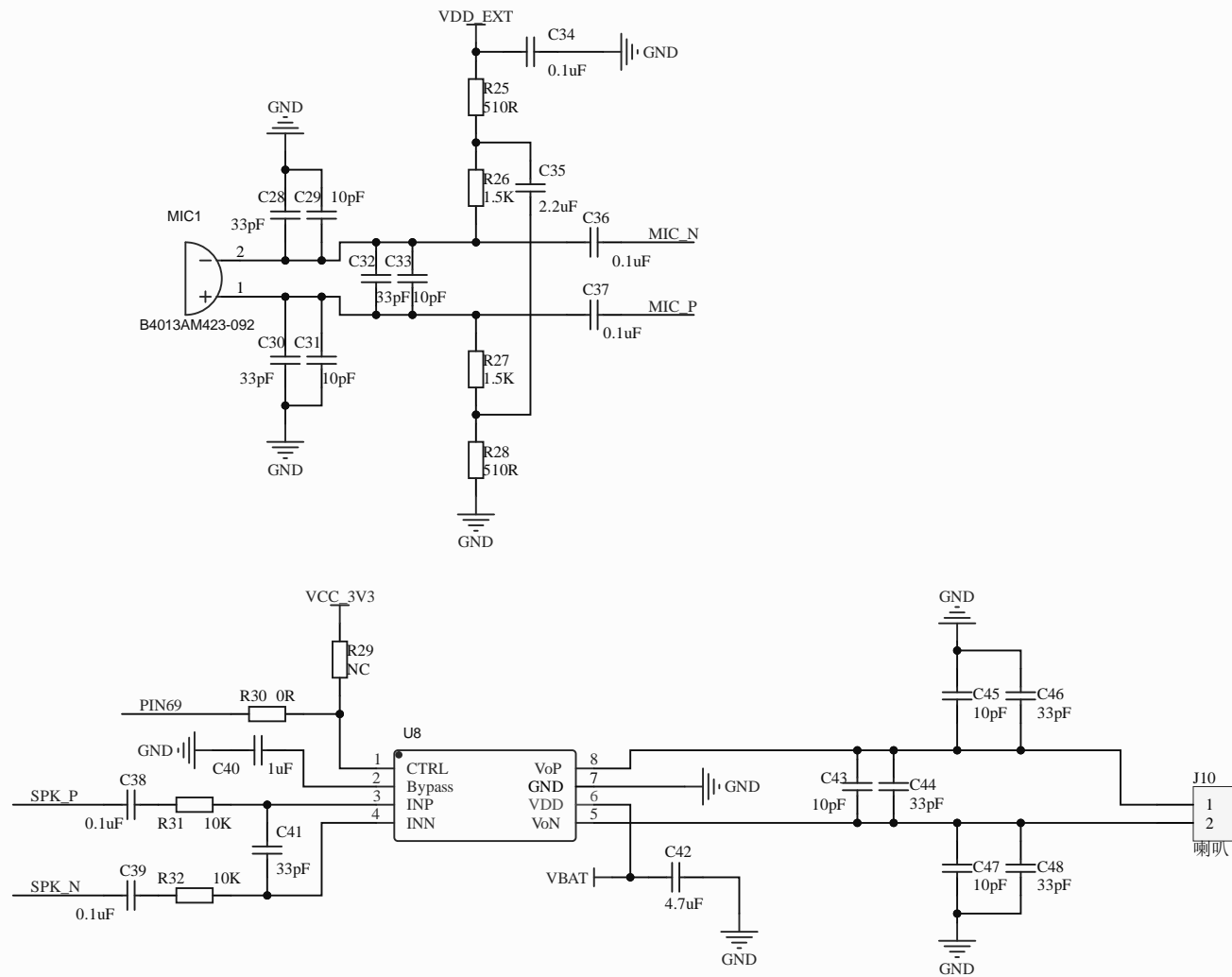
13 EVB

## 9

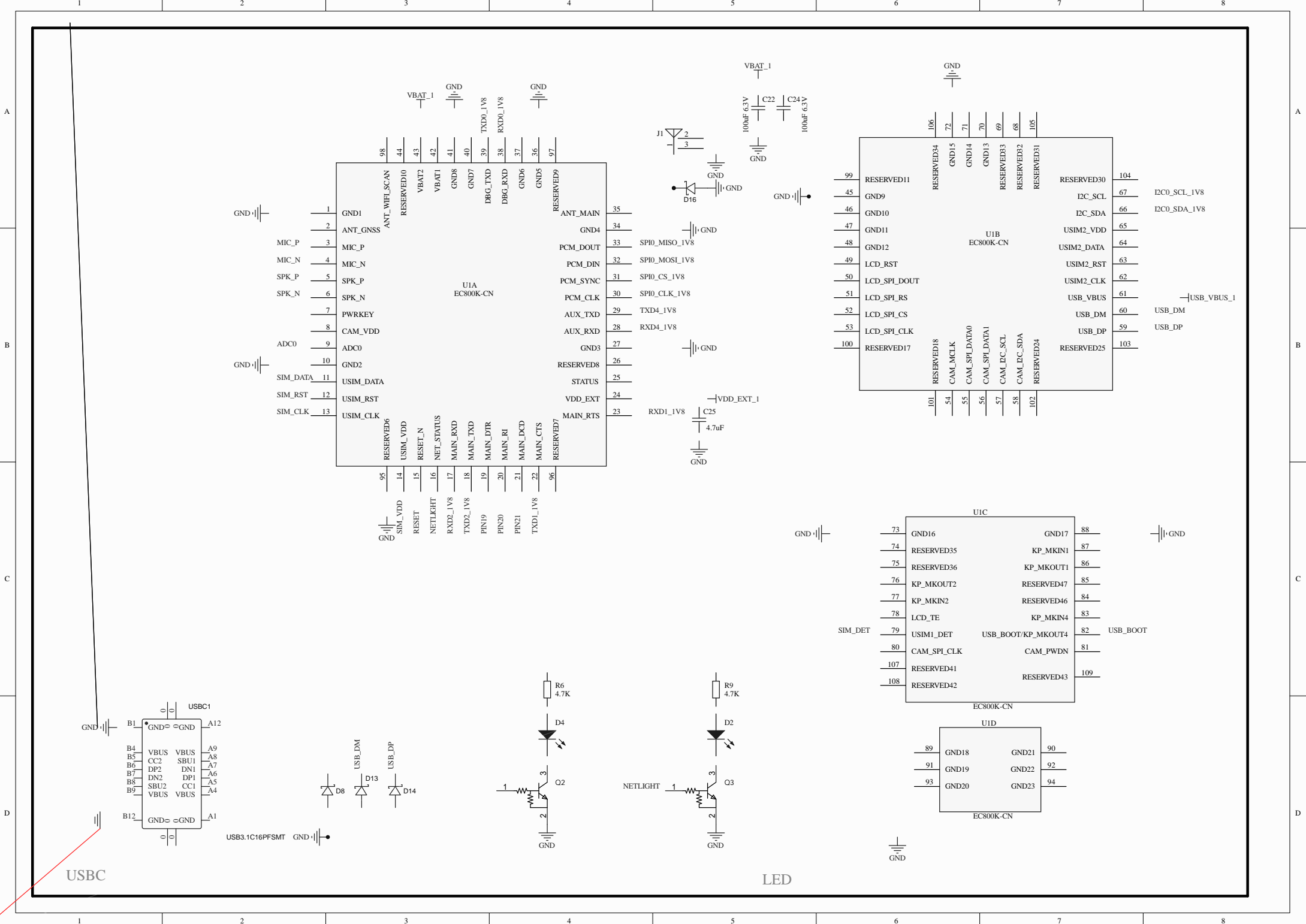
- 1
- 2

## 10 EVB



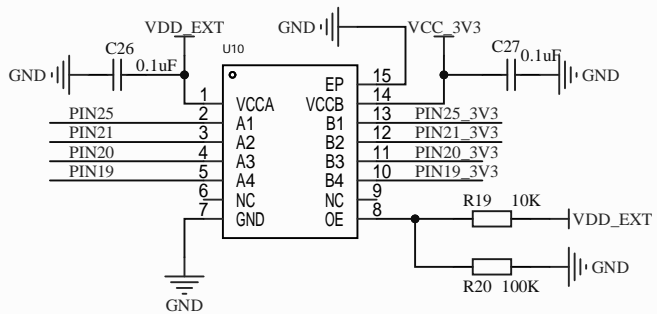
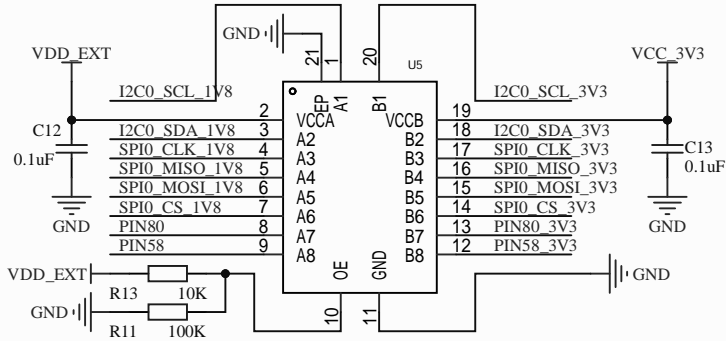
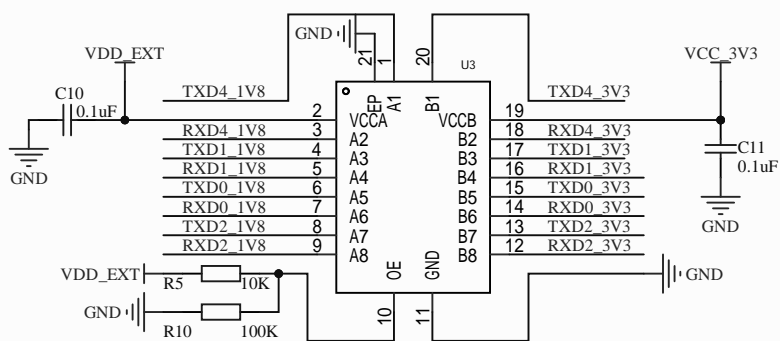


AUDIO

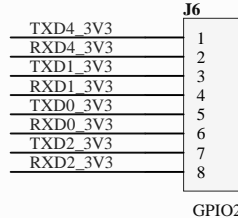
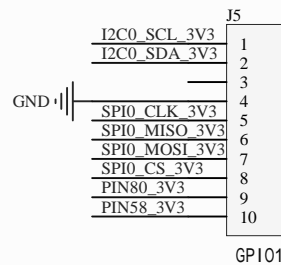
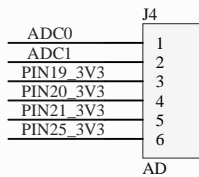
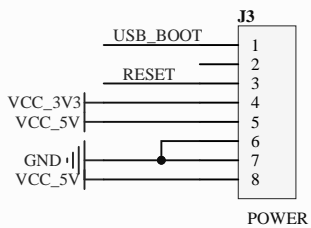


USB3.1C16PFSMT

LED



### 电平转换



### 按键和排母

1

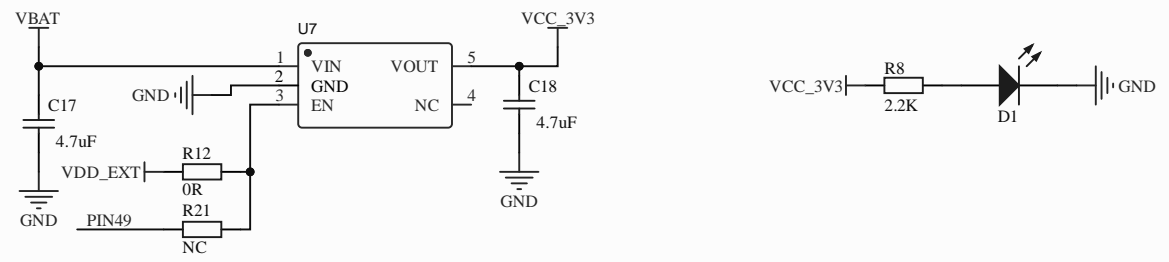
2

3

4

A

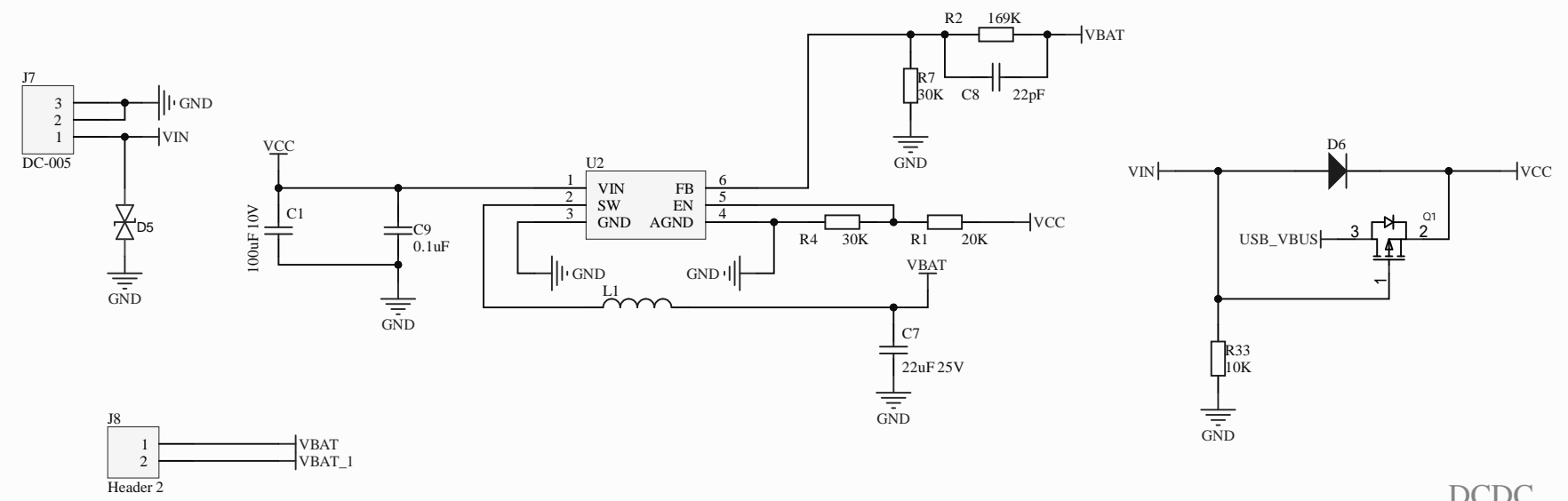
A



LDO

B

B



DCDC

D

D

1

2

3

4

1

2

3

4

5

6

A

A

B

B

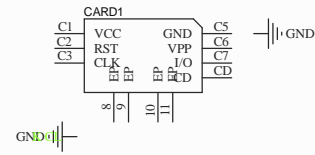
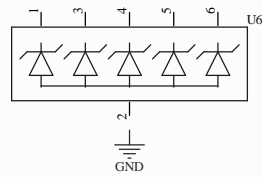
C

C

D

D

SIM\_VDD  
 SIM\_RST  
 SIM\_CLK  
 SIM\_DATA



USIM

1

2

3

4

5

6