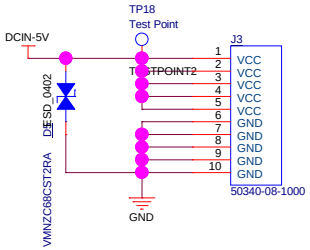
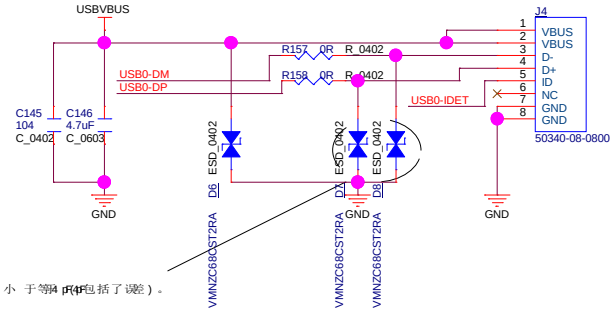
Button

PCB Power Assay



USB-DEVICE

Differential pairs
Z0= 90 ohm



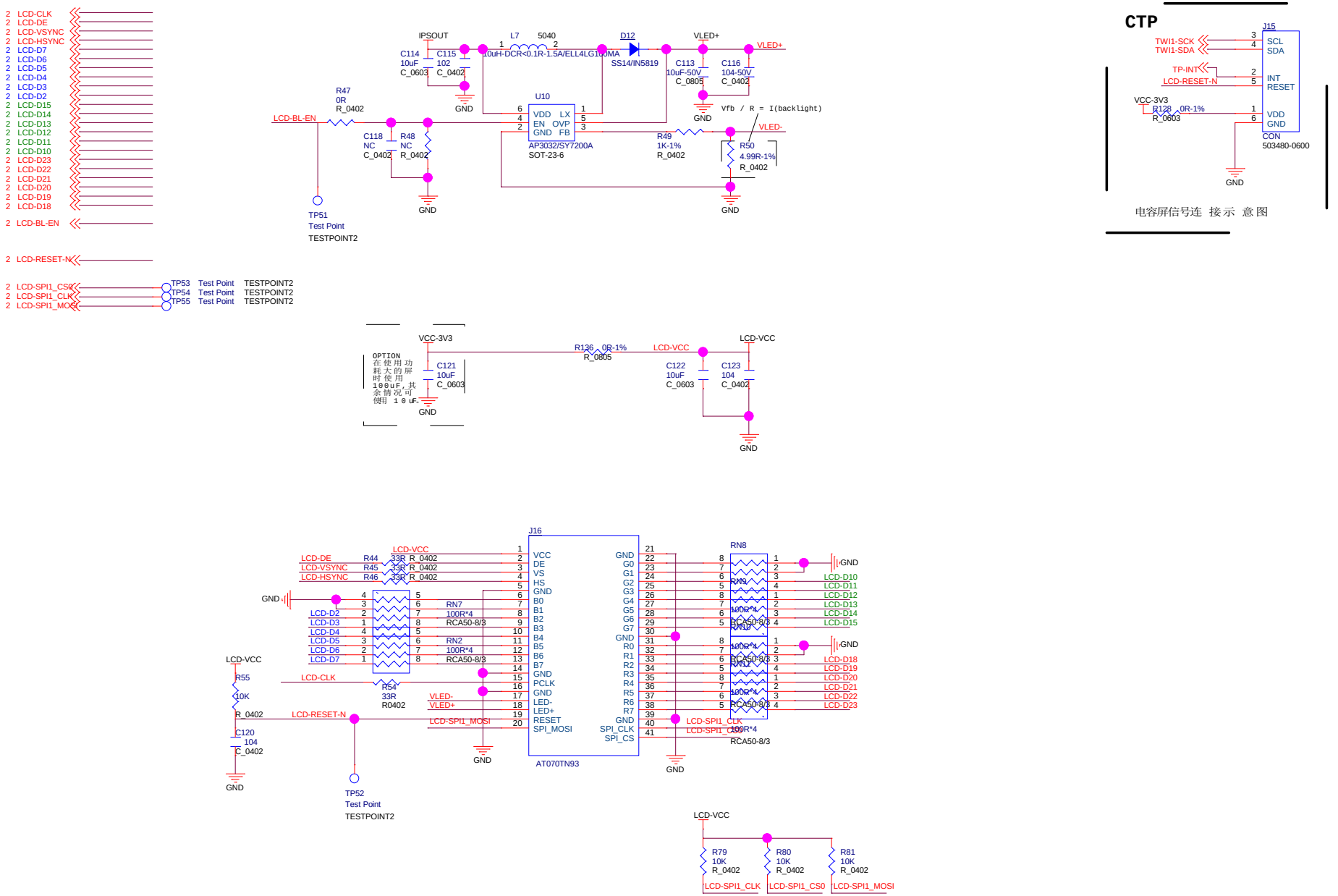
D+/D-上的ESD器件电容小于等于4pF(包括了误差)。

M1
Bad Mark

M2
Bad Mark

DISPLAY

LCD



CTP

电容屏信号连 接示 意图

FLASH/CARD

2 ND[7:0] ND[7:0]
2 NDQS NDQS

2 NRB1-N NRB1-N
2 NRB0-N NRB0-N
2 NRE-N NRE-N
2 NCE0-N NCE0-N
2 NCE1-N NCE1-N
2 NCLE NCLE
2 NALE NALE
2 NWE-N NWE-N

SYS-3.3V
C204 1uF C0402
C207 104 C0402
GND

SYS-3.3V
C208 1uF C0402
C209 104 C0402
GND

NAND FLASH

SYS-3.3V
R32 NC/0R-1% R_0402
VPS
R35 NC/0R-1% R_0402
GND

注：VPS的上下拉，具体请参见所用NAND FLASH的datasheet

SYS-3.3V
R39 10K R_0402
NWP-N
C111 104 C_0402
GND

SYS-3.3V SYS-3.3V
R34 10K R_0402
GND

U8

1	RES#	NC22	48
2	NC2	NC21	47
3	NC3	NC20	46
4	RB4#	NC19	45
5	RB3#	IO7	44
6	RB2#	IO6	43
7	RB1#	IO5	42
8	RE#	IO4	41
9	CE1#	NC18	40
10	CE2#	NC17	39
11	NC4	VSS3	38
12	VCC1	VCC2	37
13	VSS1	VSS2	36
14	CE3#	NC16	35
15	CE4#	NC15	34
16	CLE	NC14	33
17	ALE	IO3	32
18	WE#	IO2	30
19	WP#	IO1	31
20	NC5	IO0	29
21	NC6	NC13	28
22	NC7	NC12	27
23	NC8	NC11	26
24	NC9	NC10	25

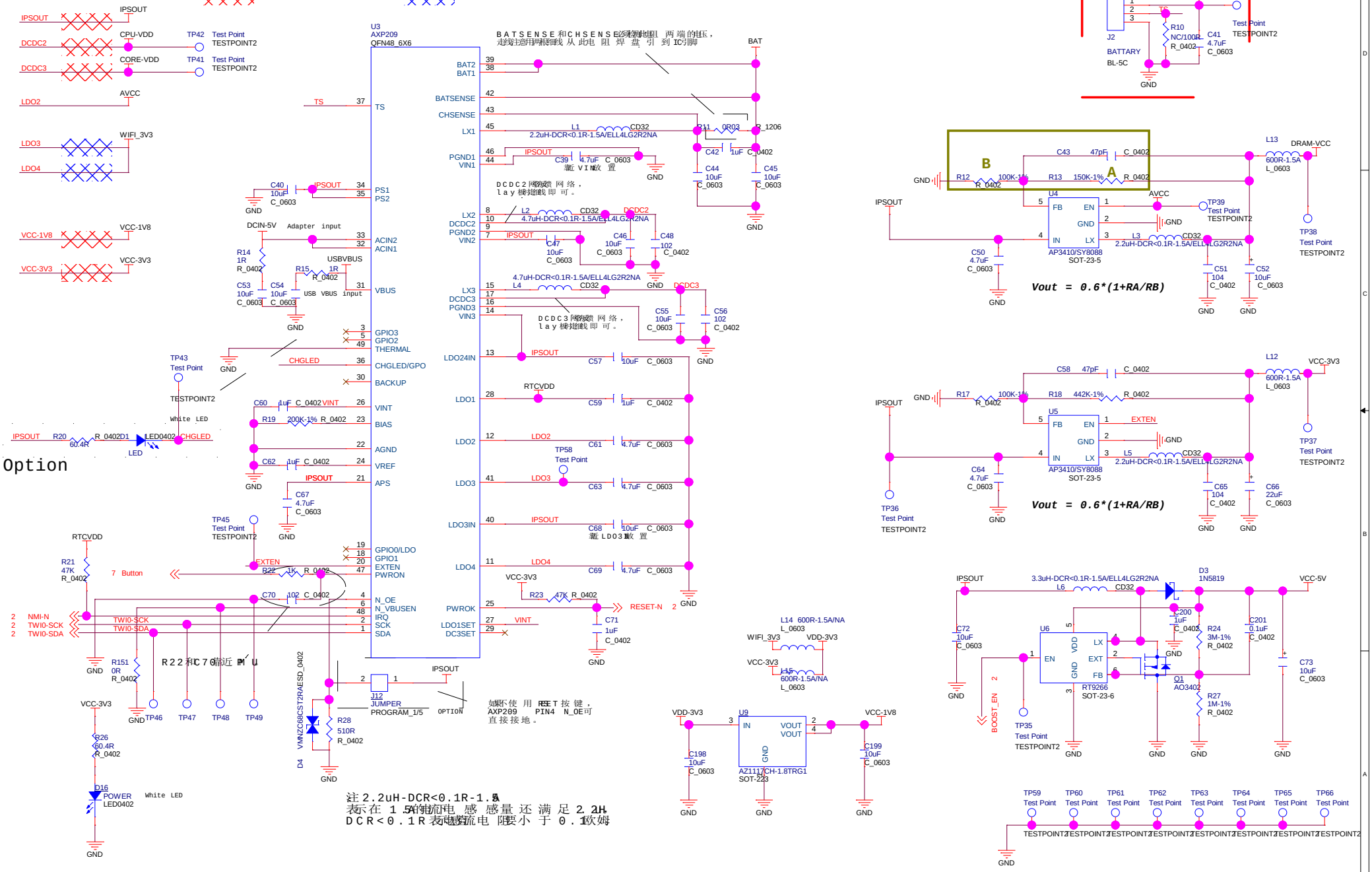
NAND FLASH X8
SSOP48

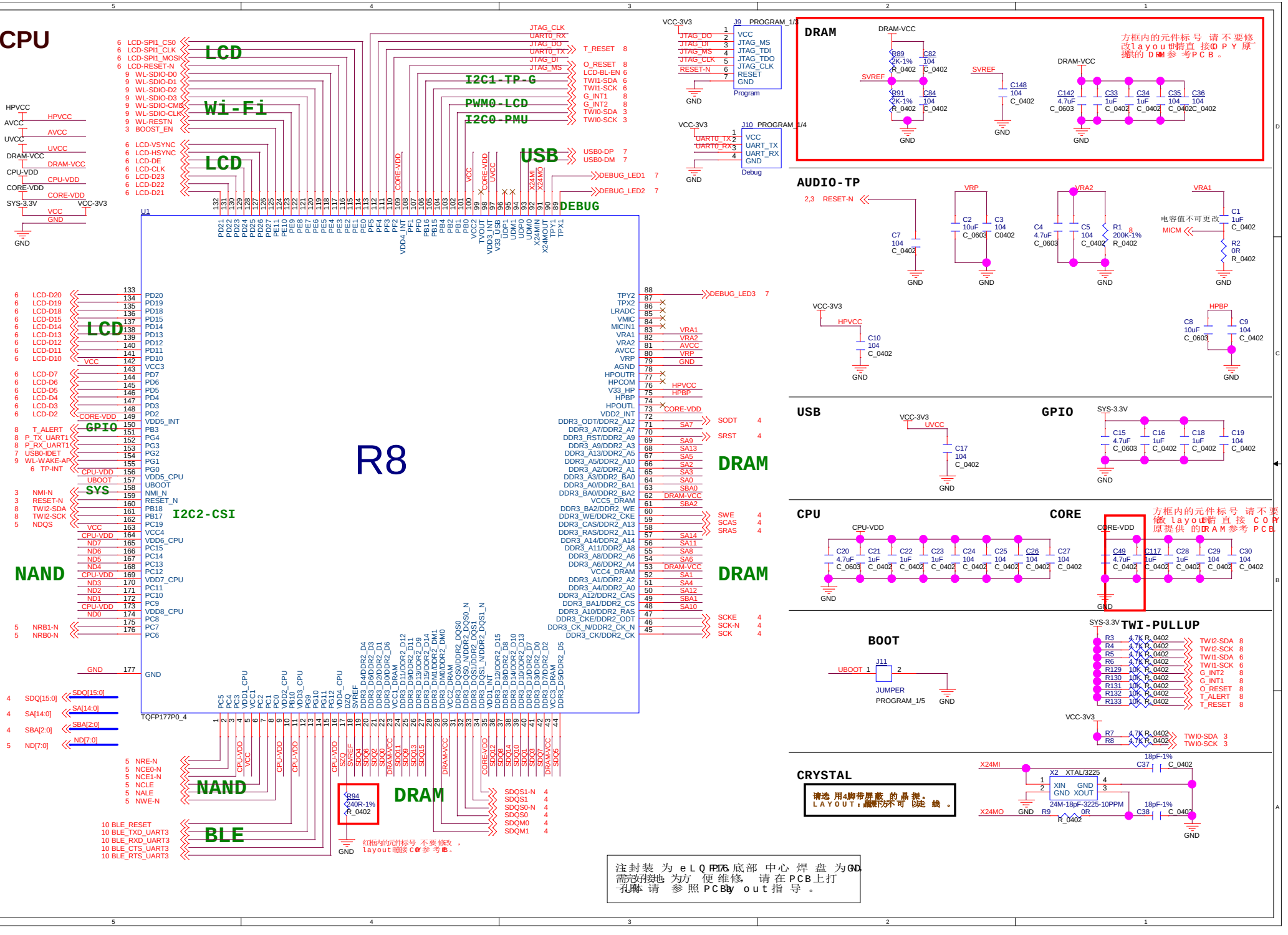
NRB1-N
NRB0-N
NRE-N
NCE0-N
NCE1-N
NCLE
NALE
NWE-N
NWP-N

SYS-3.3V
ND7
ND6
ND5
ND4
VPS
NDQS
ND3
ND2
ND1
ND0
GND

POWER

POWER LINE:Width>=80mil POWER LINE:Width>=50mil




CPU
LCD
Wi-Fi
LCD
USB
DEBUG
I2C1-TP-G
PWM0-LCD
I2C0-PMU
R8
LCD
GPIO
SYS
I2C2-CSI
NAND
NAND
BLE
DRAM
DRAM
DRAM
DRAM
JTAG_CLK
UART0_RX
JTAG_DO
UART0_TX
JTAG_DI
JTAG_MS
JTAG_CLK
JTAG_MS
T_RESET 8
O_RESET 8
LCD-BL-EN 6
TWI1-SDA 6
TWI1-SCK 6
G_INT1 8
G_INT2 8
TWI0-SDA 3
TWI0-SCK 3
USB0-DP 7
USB0-DM 7
DEBUG_LED1 7
DEBUG_LED2 7
DEBUG_LED3 7
J9 PROGRAM_1/3
Program
J10 PROGRAM_1/4
Debug
VCC-3V3
GND
HPVCC
AVCC
UVCC
DRAM-VCC
CPU-VDD
CORE-VDD
SYS-3.3V
U1
TQFP177P0_4
DRAM
方框内的元件标号 请不要修改layout时请直接COPY原理图的DRAM参考PCB。
AUDIO-TP
RESET-N
VRP
VRA2
VRA1
MICM
电容值不可更改
HPBP
USB
GPIO
CPU
CORE
BOOT
UBOOT
JUMPER
PROGRAM_1/5
TWI-PULLUP
CRYSTAL
请选 用4脚带屏蔽 的晶振。
LAYOUT：晶振下方不可以走 线 。
X24MI
X24MO
XTAL/3225
24M-18pF-3225-10PPM
18pF-1%
注封装为eLQFP176底部中心焊盘为GND需接到地，为方便维修，请在PCB上打孔，请参照PCB layout指导。
红框内的元件标号不要修改，layout时请直接COPY参考PCB。

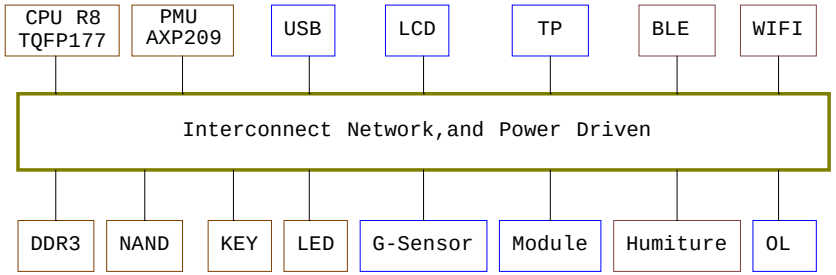
COVER

Schematics Index

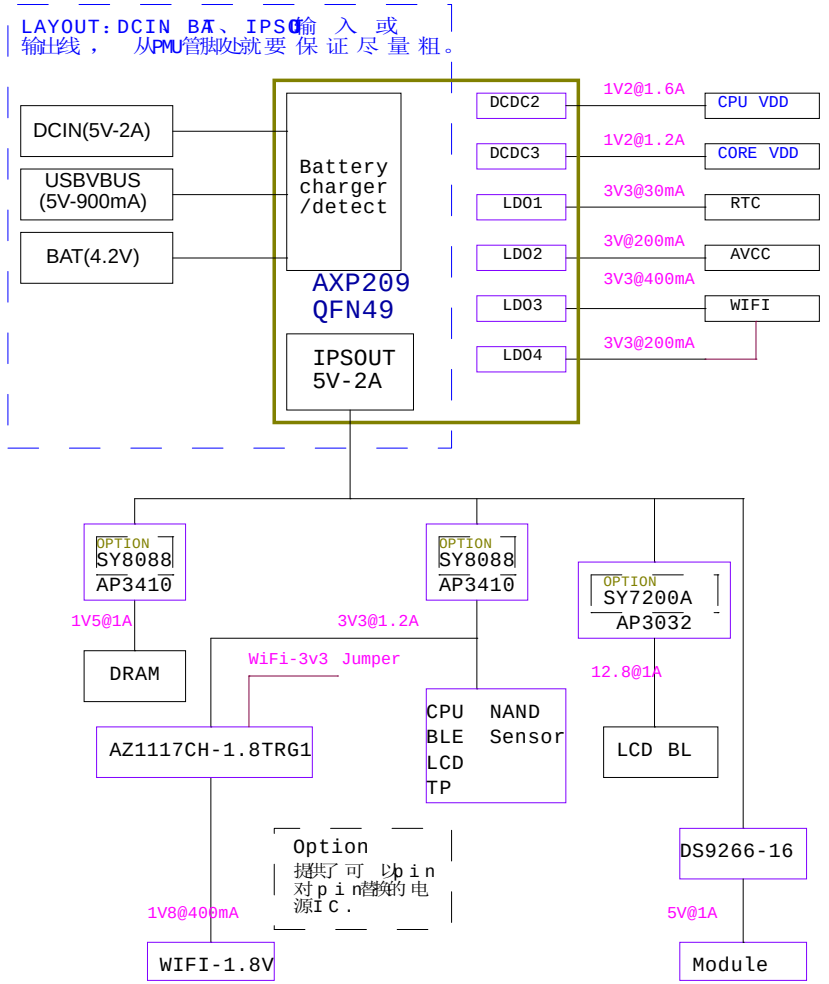
Bran-Design

特别提醒：
1:PG0 / PG1 / PG2这个PIN脚
具有INPUT中断有功能。
2:PMU的GPIO0/1/2这四个PIN脚
做GPIO-OUTPUT功能
3:PG10 / PG11 / PG12这个PIN脚
的功能可改变。
4:CSI-PCLK / CSI-MCLK这个PIN脚
具有INPUT中断有功能。
5:CSI-HSYNC具有INPUT中断有功能，
不能用途。

BLOCK



POWER TREE



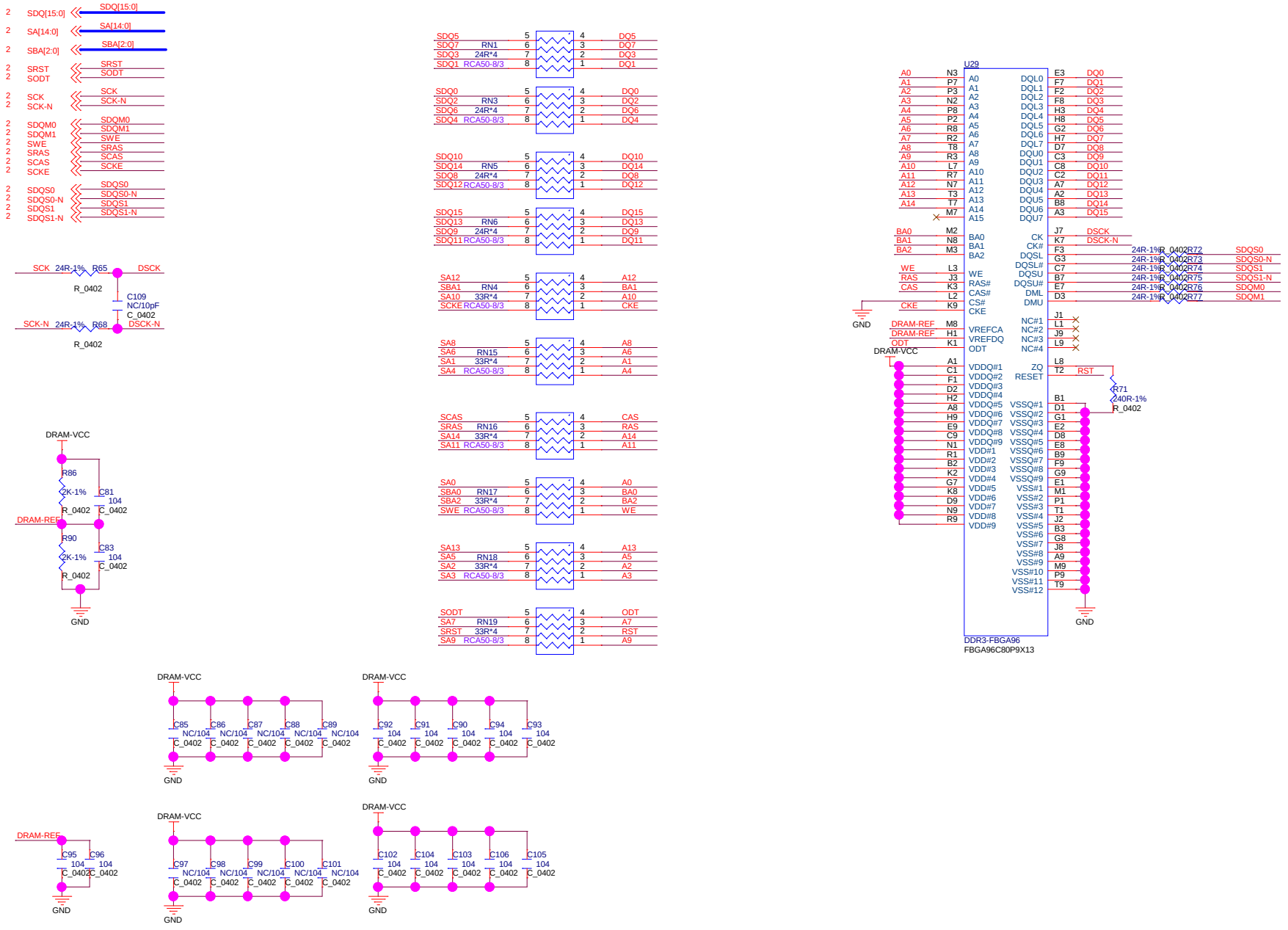
REVISION HISTORY

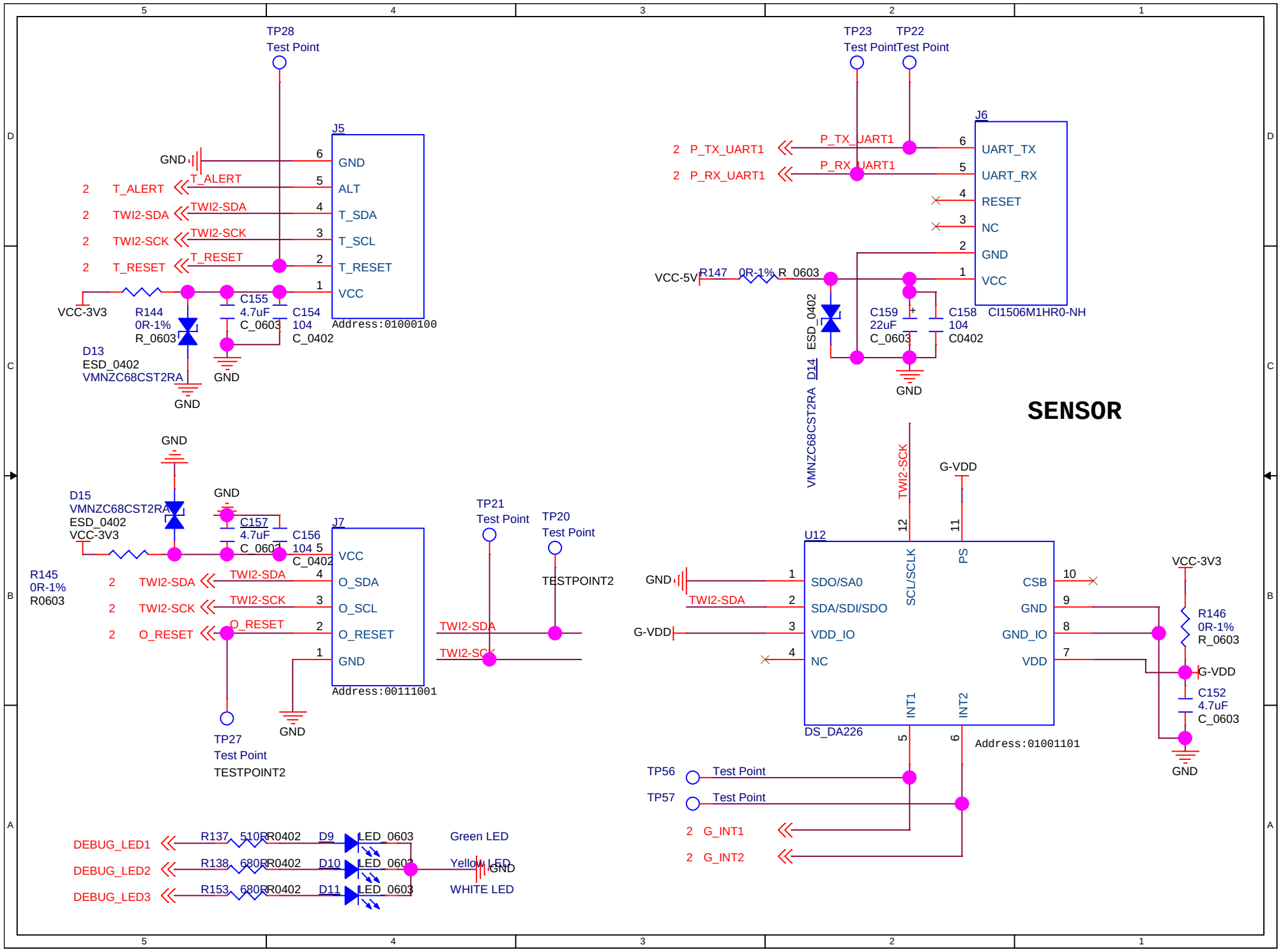
Revision	Description	Date	Drawn	Checked	Approved
Ver 1.0	Bran Main PCB ASSY	2016/6/19	Violet/Jemmey	Jemmey	

DDR3 16x1

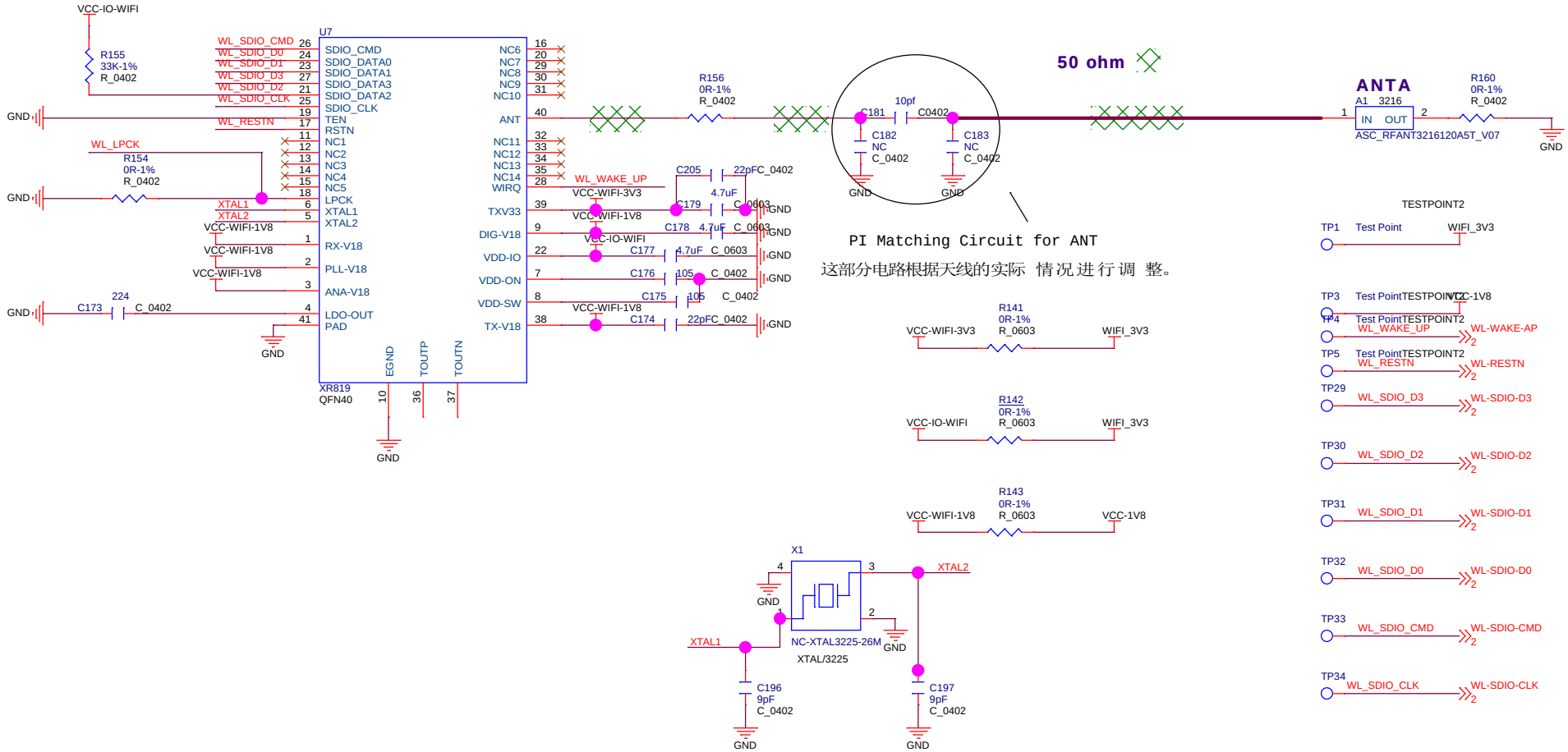
DDR3

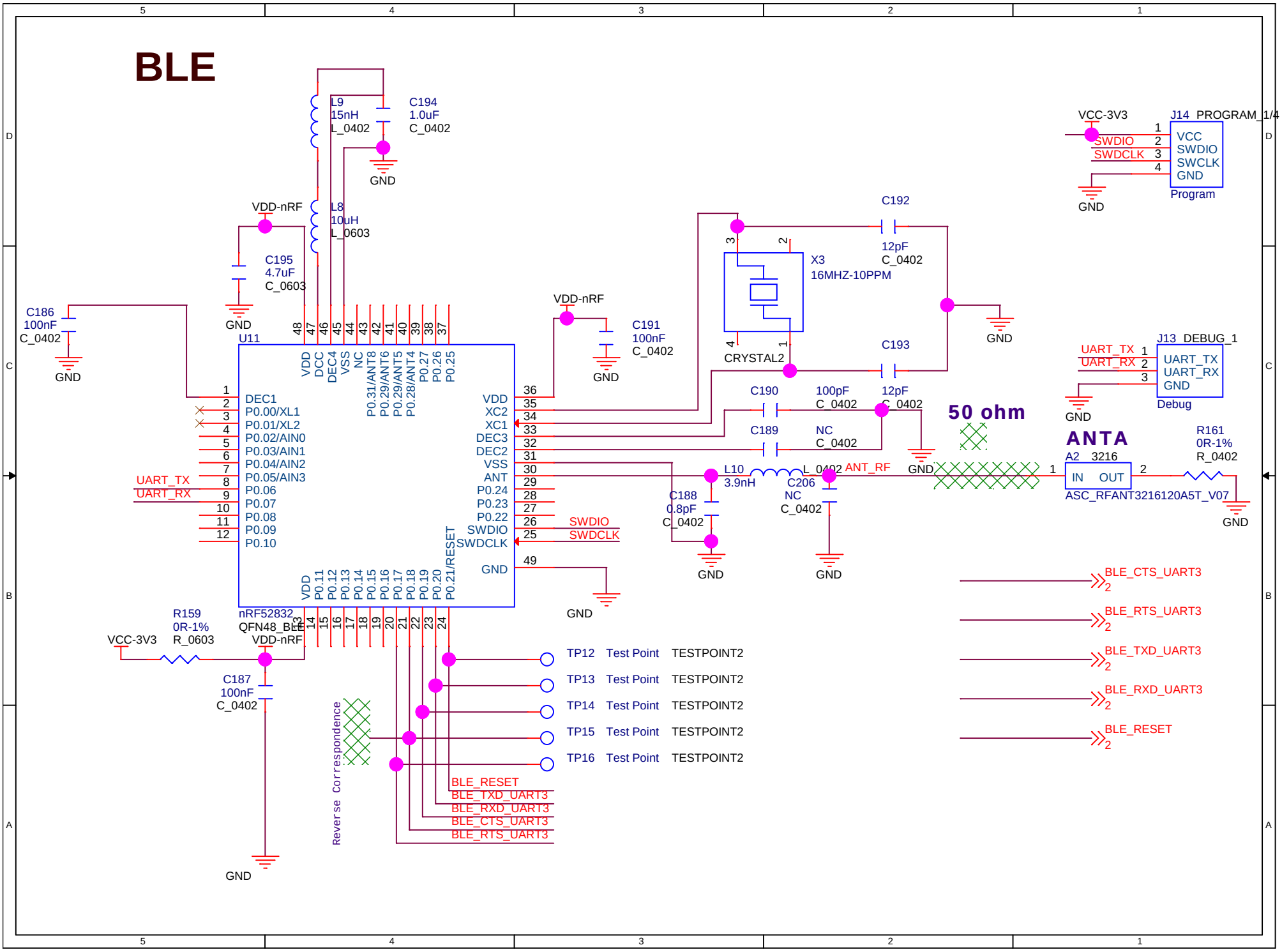
本页的元件标号请不要修改
layout时直接COPY原厂提供
的DRAM参考PCB




TP28
Test Point
J5
GND
T_ALERT
TWI2-SDA
TWI2-SCK
T_RESET
VCC-3V3
R144
0R-1%
R_0603
C155
4.7uF
C_0603
C154
104
C_0402
D13
ESD_0402
VMNZC68CST2RA
GND
GND
GND
T_ALERT
TWI2-SDA
TWI2-SCK
T_RESET
VCC
Address:01000100
TP23
Test Point
TP22
Test Point
J6
P_TX_UART1
P_RX_UART1
UART_TX
UART_RX
RESET
NC
GND
VCC
VCC-5V
R147
0R-1%
R_0603
C159
22uF
C_0603
C158
104
C0402
CI1506M1HR0-NH
ESD_0402
D14
VMNZC68CST2RA
GND
SENSOR
D15
VMNZC68CST2RA
ESD_0402
VCC-3V3
GND
GND
C157
4.7uF
C_0603
C156
104
C_0402
J7
VCC
O_SDA
O_SCL
O_RESET
GND
TWI2-SDA
TWI2-SCK
O_RESET
R145
0R-1%
R0603
Address:00111001
TP21
Test Point
TP20
Test Point
TESTPOINT2
TWI2-SDA
TWI2-SCK
TP27
Test Point
TESTPOINT2
GND
TWI2-SCK
G-VDD
U12
SDO/SA0
SDA/SDI/SDO
VDD_IO
NC
SCL/SCLK
PS
CSB
GND
GND_IO
VDD
INT1
INT2
DS_DA226
Address:01001101
VCC-3V3
R146
0R-1%
R_0603
G-VDD
C152
4.7uF
C_0603
GND
TP56
Test Point
TP57
Test Point
G_INT1
G_INT2
DEBUG_LED1
DEBUG_LED2
DEBUG_LED3
R137 510R R0402
R138 680R R0402
R153 680R R0402
D9 LED_0603
D10 LED_0603
D11 LED_0603
Green LED
Yellow LED
WHITE LED
GND

Wi-Fi


U7
XR819
QFN40
SDIO_CMD
SDIO_DATA0
SDIO_DATA1
SDIO_DATA3
SDIO_DATA2
SDIO_CLK
TEN
RSTN
LPCK
XTAL1
XTAL2
RX-V18
PLL-V18
ANA-V18
LDO-OUT
PAD
EGND
TOUTP
TOUTN
NC1
NC2
NC3
NC4
NC5
NC6
NC7
NC8
NC9
NC10
NC11
NC12
NC13
NC14
WIRQ
ANT
TXV33
DIG-V18
VDD-IO
VDD-ON
VDD-SW
TX-V18
WL_SDIO_CMD
WL_SDIO_D0
WL_SDIO_D1
WL_SDIO_D3
WL_SDIO_D2
WL_SDIO_CLK
WL_RESTN
WL_LPCK
WL_WAKE_UP
VCC-IO-WIFI
VCC-WIFI-3V3
VCC-WIFI-1V8
GND
R155 33K-1% R_0402
R154 0R-1% R_0402
R156 0R-1% R_0402
R160 0R-1% R_0402
C173 224 C_0402
C205 22pF C_0402
C179 4.7uF C_0603
C178 4.7uF C_0603
C177 4.7uF C_0603
C176 105 C_0402
C175 105 C_0402
C174 22pF C_0402
C181 10pf C0402
C182 NC C_0402
C183 NC C_0402
50 ohm
ANTA
A1 3216
IN OUT
ASC_RFANT3216120A5T_V07
PI Matching Circuit for ANT
这部分电路根据天线的实际 情况进行调 整。
R141 0R-1% R_0603
R142 0R-1% R_0603
R143 0R-1% R_0603
X1
NC-XTAL3225-26M
XTAL/3225
C196 9pF C_0402
C197 9pF C_0402
TESTPOINT2
TP1 Test Point WIFI_3V3
TP3 Test Point VCC-1V8
TP4 Test Point WL_WAKE_UP WL-WAKE-AP
TP5 Test Point WL_RESTN WL-RESTN
TP29 WL_SDIO_D3 WL-SDIO-D3
TP30 WL_SDIO_D2 WL-SDIO-D2
TP31 WL_SDIO_D1 WL-SDIO-D1
TP32 WL_SDIO_D0 WL-SDIO-D0
TP33 WL_SDIO_CMD WL-SDIO-CMD
TP34 WL_SDIO_CLK WL-SDIO-CLK


BLE
L9
15nH
L_0402
C194
1.0uF
C_0402
GND
VDD-nRF
L8
10uH
L_0603
C195
4.7uF
C_0603
GND
C186
100nF
C_0402
GND
U11
nRF52832
QFN48_BLE
VDD
DCC
DEC4
VSS
NC
P0.31/ANT8
P0.29/ANT6
P0.29/ANT5
P0.28/ANT4
P0.27
P0.26
P0.25
DEC1
P0.00/XL1
P0.01/XL2
P0.02/AIN0
P0.03/AIN1
P0.04/AIN2
P0.05/AIN3
P0.06
P0.07
P0.08
P0.09
P0.10
VDD
XC2
XC1
DEC3
DEC2
VSS
ANT
P0.24
P0.23
P0.22
SWDIO
SWDCLK
GND
P0.21/RESET
VDD
P0.11
P0.12
P0.13
P0.14
P0.15
P0.16
P0.17
P0.18
P0.19
P0.20
UART_TX
UART_RX
SWDIO
SWDCLK
VDD-nRF
C191
100nF
C_0402
GND
C192
12pF
C_0402
X3
16MHZ-10PPM
CRYSTAL2
C193
12pF
C_0402
GND
C190
100pF
C_0402
C189
NC
C_0402
L10
3.9nH
L_0402
C188
0.8pF
C_0402
C206
NC
C_0402
ANT_RF
50 ohm
GND
ANTA
A2 3216
IN OUT
ASC_RFANT3216120A5T_V07
R161
0R-1%
R_0402
GND
VCC-3V3
J14 PROGRAM_1/4
SWDIO
SWDCLK
VCC
SWDIO
SWCLK
GND
Program
GND
UART_TX
UART_RX
J13 DEBUG_1
UART_TX
UART_RX
GND
Debug
GND
R159
0R-1%
R_0603
VCC-3V3
VDD-nRF
C187
100nF
C_0402
GND
TP12 Test Point TESTPOINT2
TP13 Test Point TESTPOINT2
TP14 Test Point TESTPOINT2
TP15 Test Point TESTPOINT2
TP16 Test Point TESTPOINT2
Reverse Correspondence
BLE_RESET
BLE_TXD_UART3
BLE_RXD_UART3
BLE_CTS_UART3
BLE_RTS_UART3
BLE_CTS_UART3
BLE_RTS_UART3
BLE_TXD_UART3
BLE_RXD_UART3
BLE_RESET