

54321

VERSION HISTORY

D

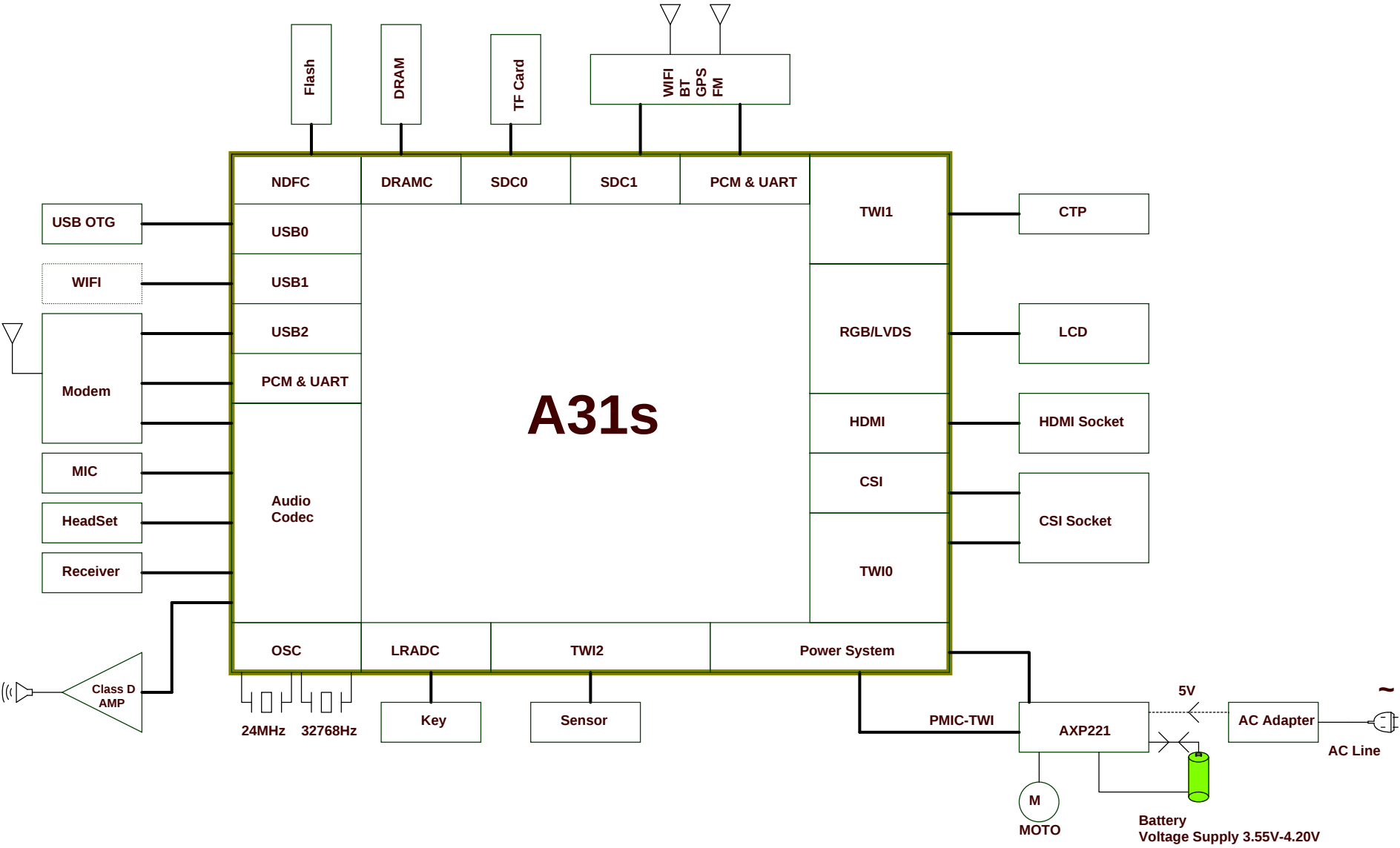
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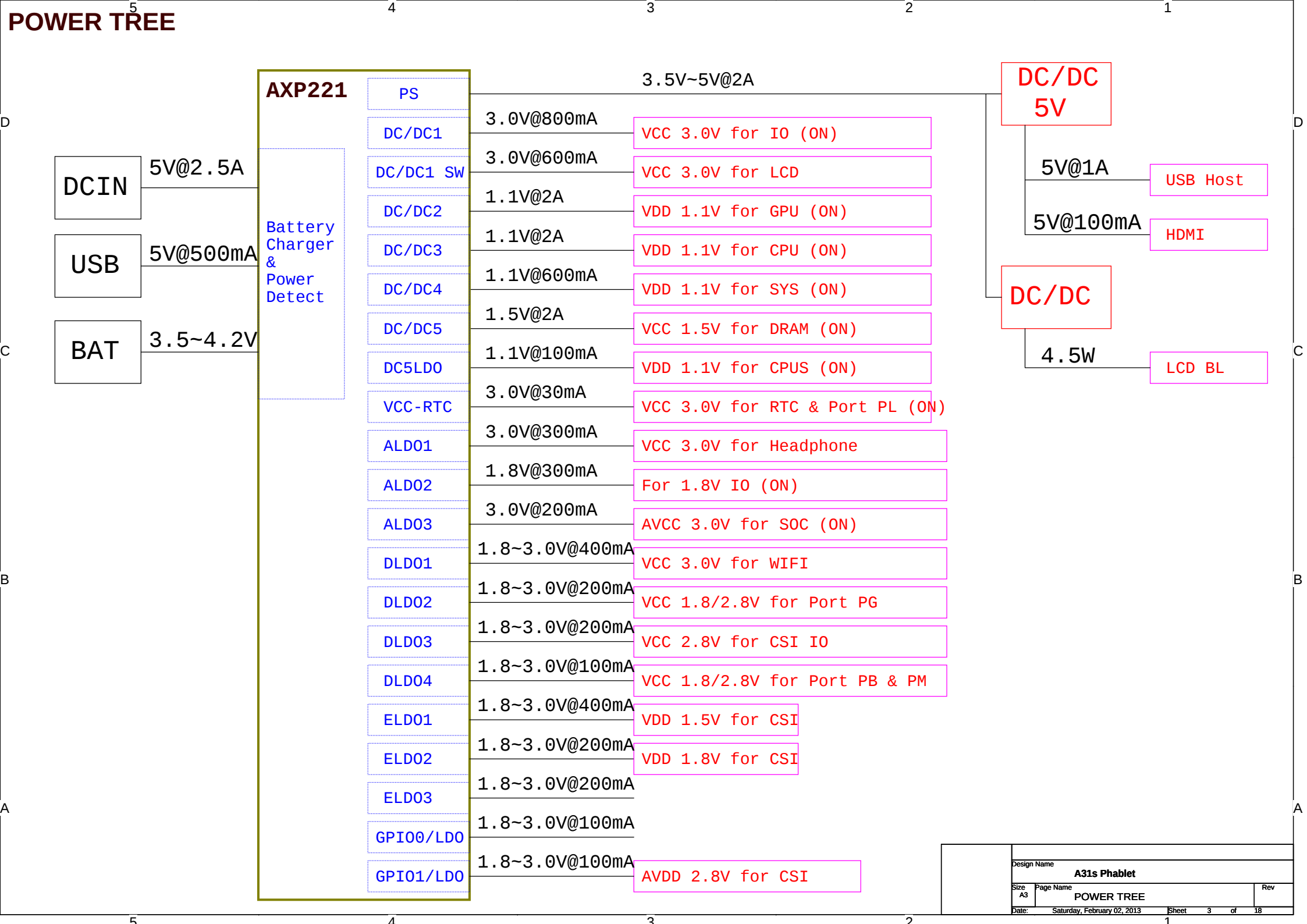
- P01: VERSION HISTORY
P02: BLOCK DIAGRAM
P03: POWER TREE
P04: GPIO ASSIGNMENT
P05: DRAM DDR3 2X16
P06: CPU
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OPTION:
MODEM G3
MODEM WM5608
WIFI 4IN1 BC

Revision	Description	Date	Drawn	Checked	Approved
Ver1.0	Release	2013-02-01			
Ver1.01	a31s_phablet_changelist1_01.txt	2013-02-17			

BLOCK DIAGRAM





GPIO ASSIGNMENT

PIN	Name	Function
PA0		
PA1		
PA2	CTP-WAKE	CTP
PA3	CTP-INT	
PA4		
PA5		
PA6		
PA7		
PA8	SDC0-DET	TF CARD
PA9	GS-INT	SENSOR
PA10	GY-INT	
PA11	CP-INT	
PA12		
PA13		
PA14	USB0-VBDET	USB
PA15	USB0-IDDET	
PA16		
PA17		
PA18		
PA19		
PA20		
PA21	RESET	CSI
PA22	PWDN	
PA23		
PA24		
PA25	LCD-BL-EN	LCD
PA26		
PA27		

PIN	Name	Function
PL0	PMU-SCK	PMIC
PL1	PMU-SDA	
PL2	SUART-TX	DEBUG
PL3	SUART-RX	
PL4	PA-SHDN	SPEAKER
PL5	WL-PMU-EN	WIFI
PL6	WL-WAKE-HOST	
PL7	BT-WAKE-HOST	
PL8	WL-SYSRST-N	

PIN	Name	Function
PM0	BB-HOST-WAKE	Modem
PM1	BB-PWRON	
PM2	BB-WAKE	
PM3	BB-RST-N	
PM4		
PM5		
PM6		
PM7	AP-CLK32K	WIFI

5 4 3 2 1

DRAM DDR3 2X16

Please copy DRAM PCB template and follow PCB layout guide. The circuit is only for single-side PCB layout.

D

C

B

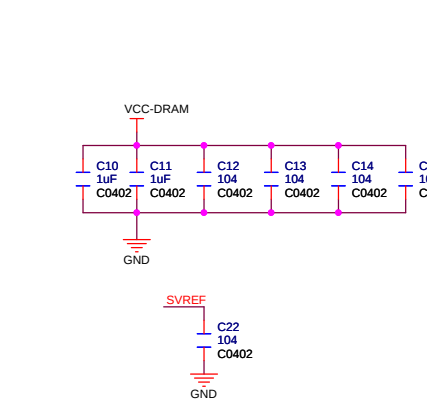
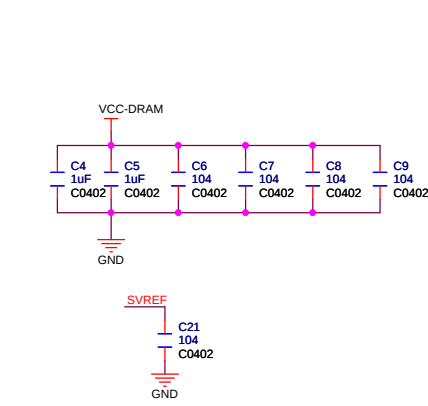
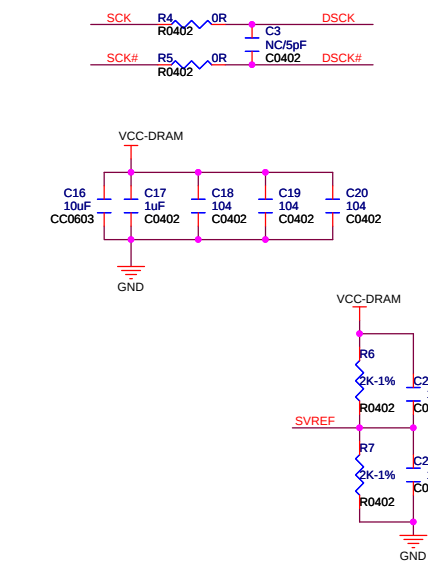
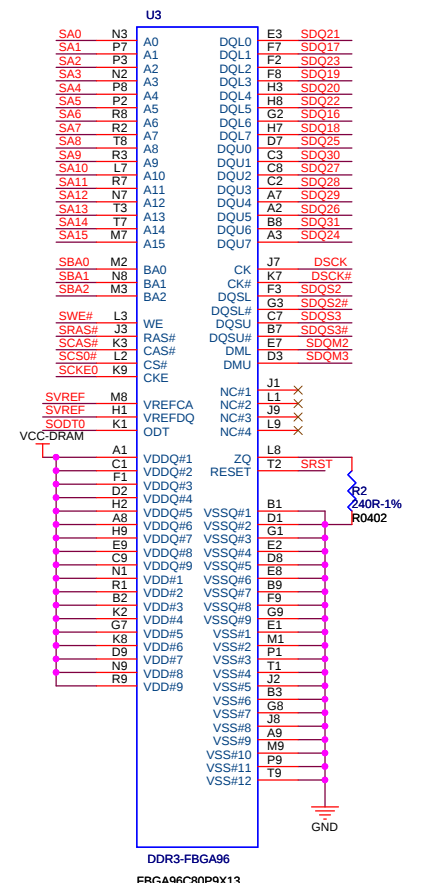
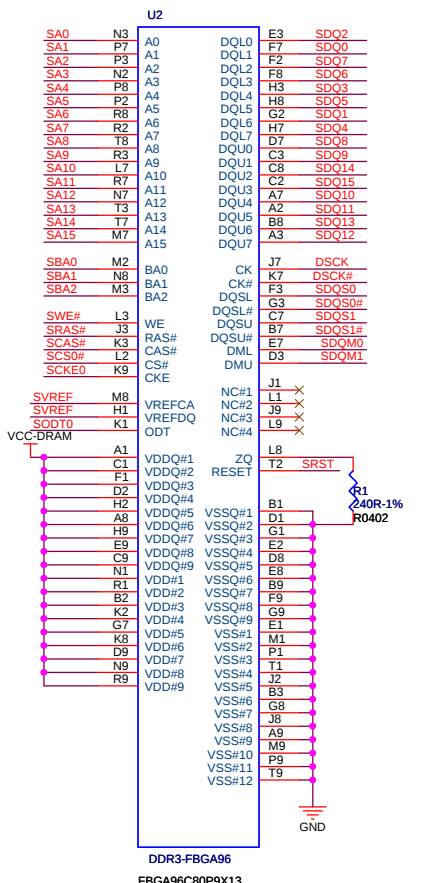
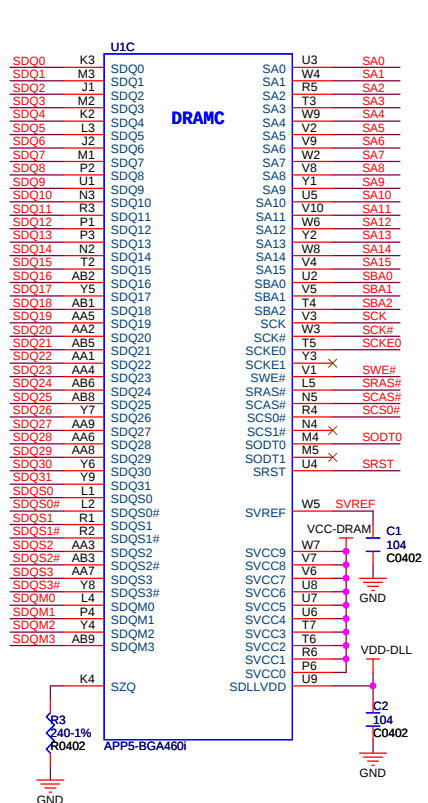
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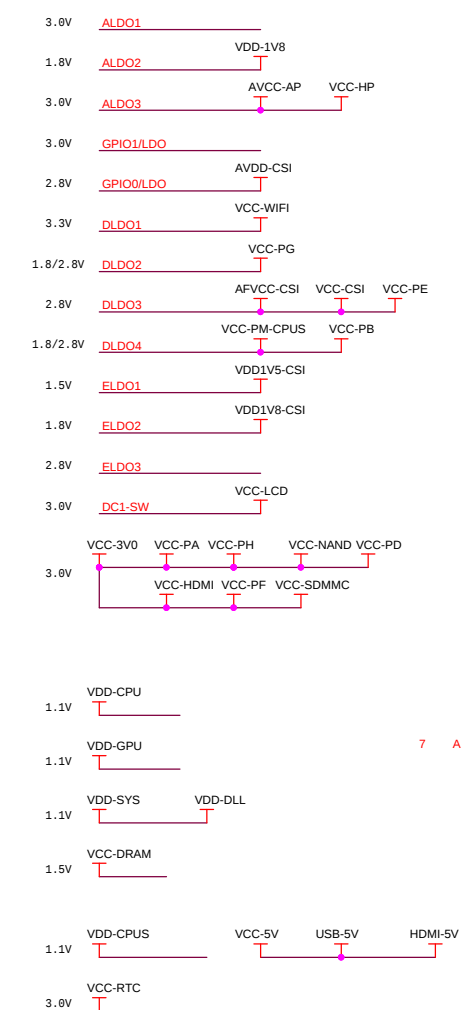
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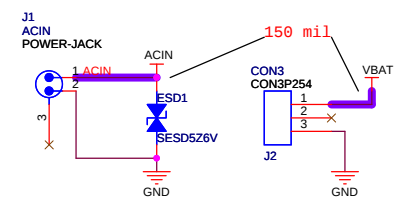


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A31s Phablet		
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A3	DRAM DDR3 2X16	
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POWER

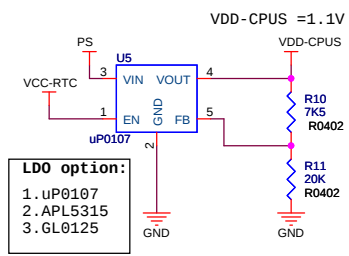


Name	Default Voltage	Maximum Current	Comment	Name	Default Voltage	Maximum Current	Comment
DCDC1	3.0V	1A	For GPIO Default ON	DLD01	0V	400mA	Default OFF
DCDC2	1.1V	2A	For GPU Default ON	DLD02	0V	200mA	Default OFF
DCDC3	1.1V	2A	For CPU Default ON	DLD03	0V	200mA	Default OFF
DCDC4	1.1V	600mA	For System Default ON	DLD04	0V	100mA	Default OFF
DCDC5	1.2V	2A	For DRAM Default ON	ELD01	0V	400mA	Default OFF
ALD01	0V	300mA	Default OFF	ELD02	0V	200mA	Default OFF
ALD02	1.8V	300mA	For 1.8V IO/LPDDR2 Default ON	ELD03	0V	200mA	Default OFF
ALD03	3V	200mA	For SOC Analog Default ON	DC5LD0	1.1V	200mA	For CPUS, From DC/DC5 Default ON
GPI00	0V	100mA	Default OFF	DC1SW	3.0V	0.1ohm	For LCD, From DC/DC1 Default OFF
GPI01	0V	100mA	Default OFF	RTC-VCC	3V	30mA	For RTC Always On



NOTE: Q1 vth <1.5V & R <30mohm@vgs=4.5V

- P-MOSFET option:
1. TCS1905
 2. KD1221
 3. WPM1481
 4. WPM1485

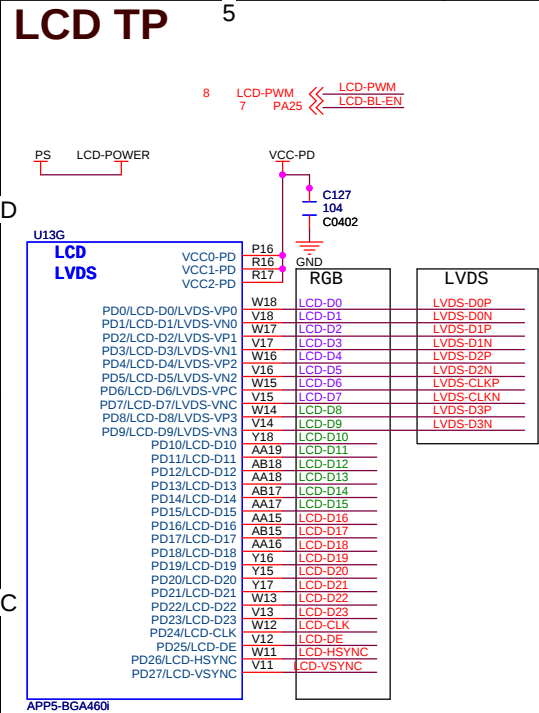


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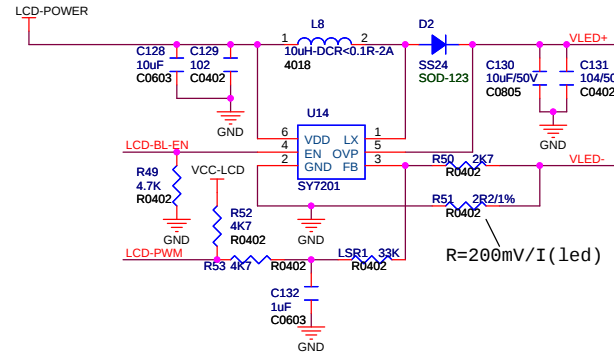
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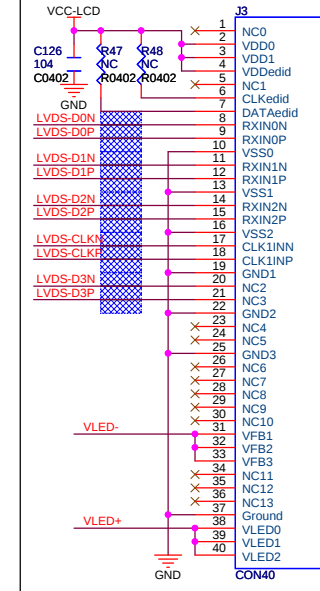
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Backlight

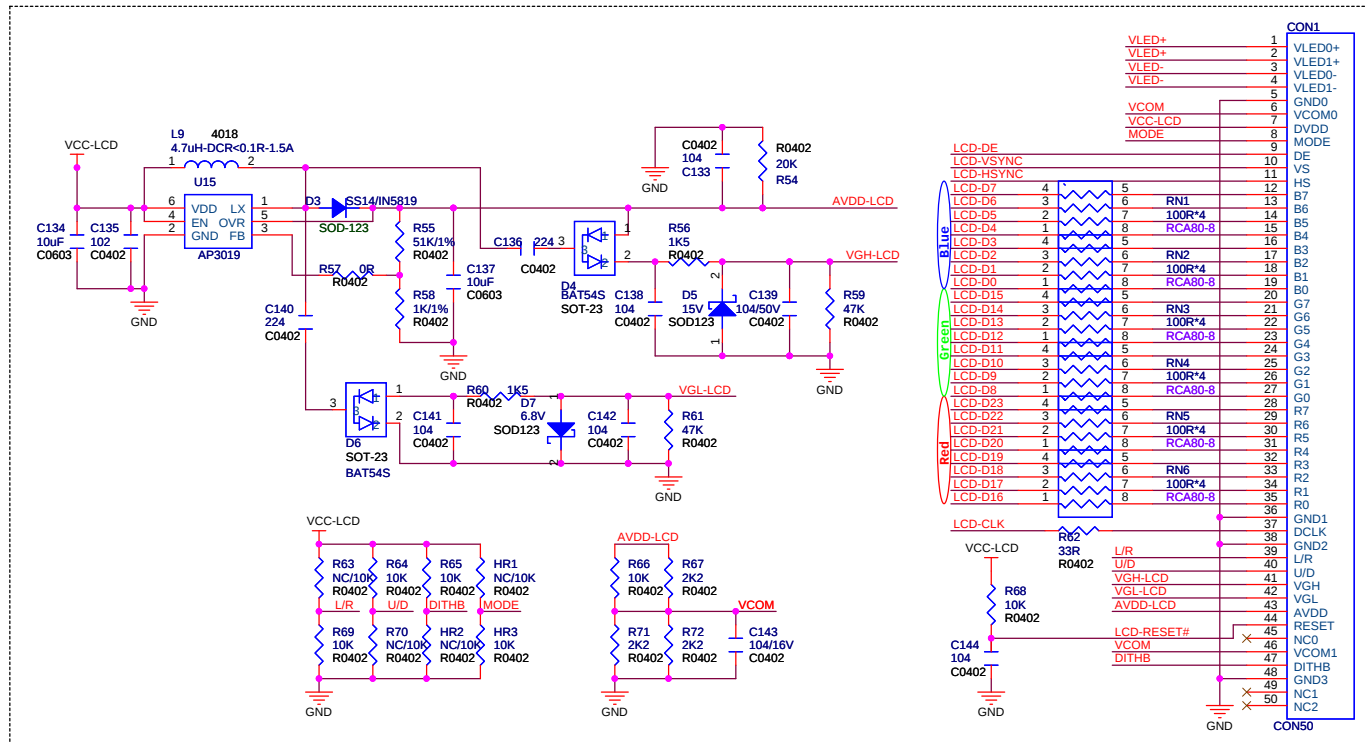


LVDS2

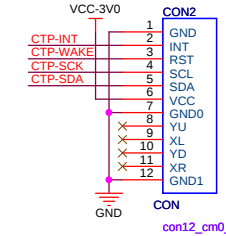


Differential pairs
 $Z0=100\text{ohm}$

7 PA2 CTP-WAKE
7 PA3 CTP-INT
8 TWI1-SCK CTP-SCK
8 TWI1-SDA CTP-SDA



CTP



Design Name

A31s Phablet

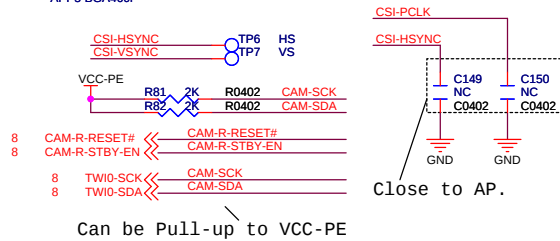
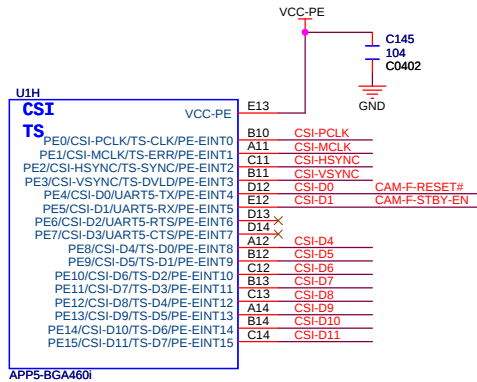
Size
A3Page Name
LCD TP

Rev

Date: Saturday, February 02, 2013

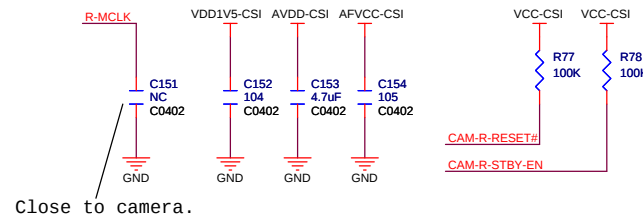
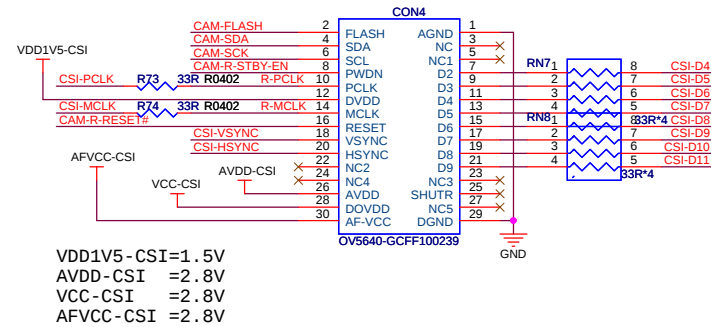
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CAMERA



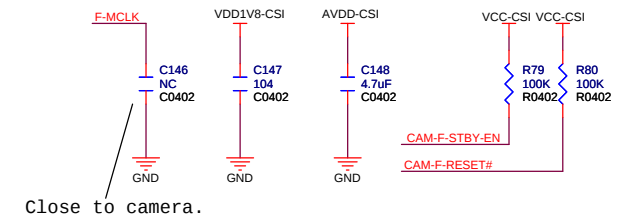
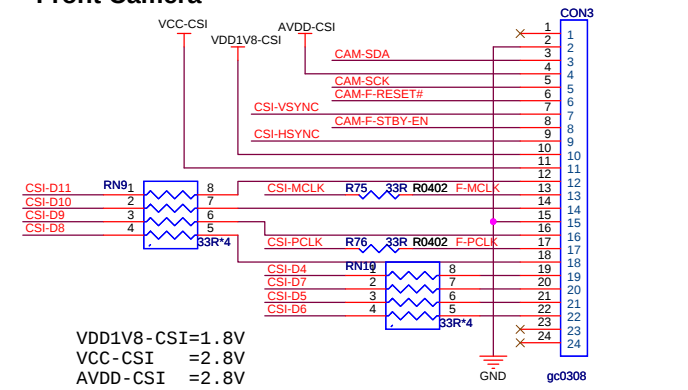
Rear Camera

5M



Front Camera

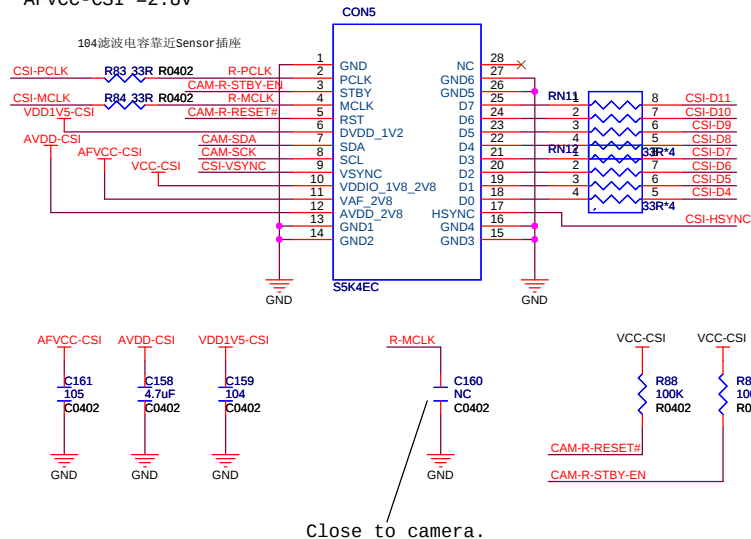
0.3M



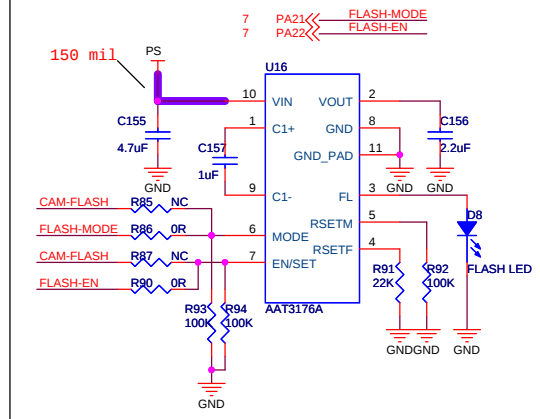
OPTION 1: CAMERA-CSI

Rear Camera

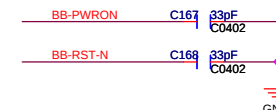
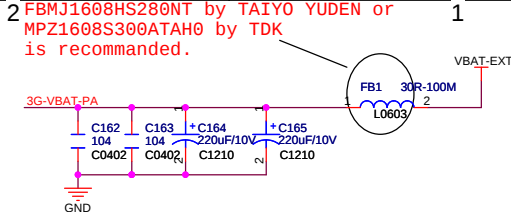
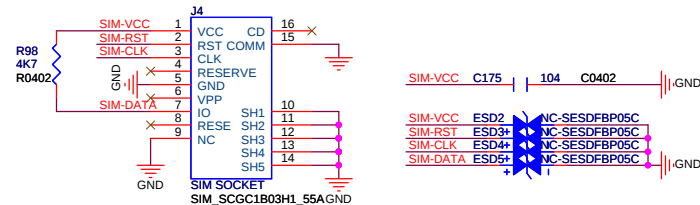
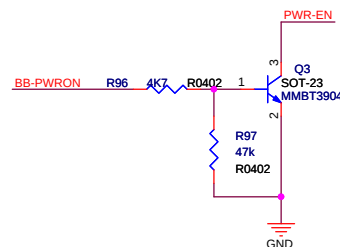
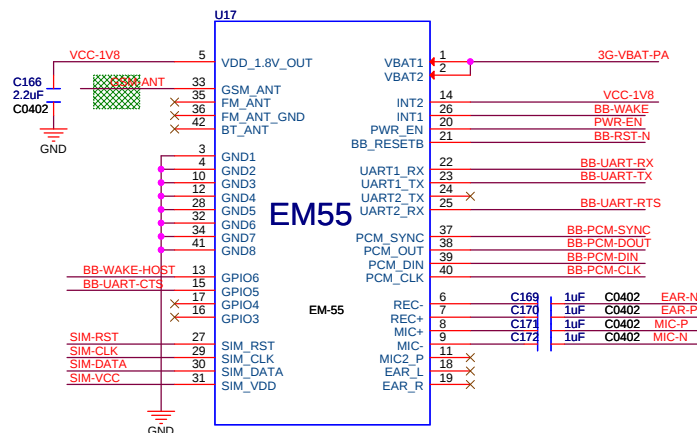
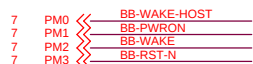
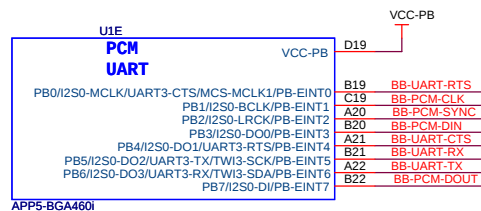
VDD1V5-CSI=1.2V
AVDD-CSI =3.3V
VCC-CSI =2.8V
AFVCC-CSI =2.8V



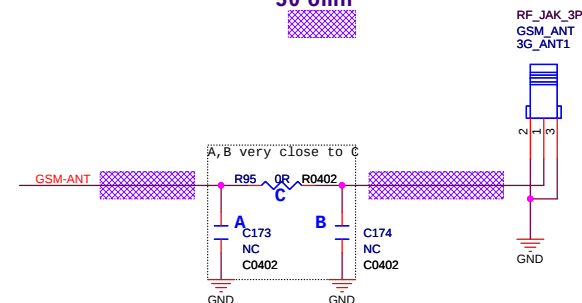
FLASH LED DRIVER



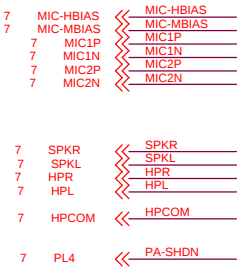
MODEM



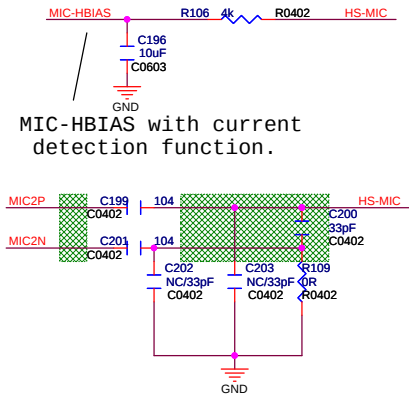
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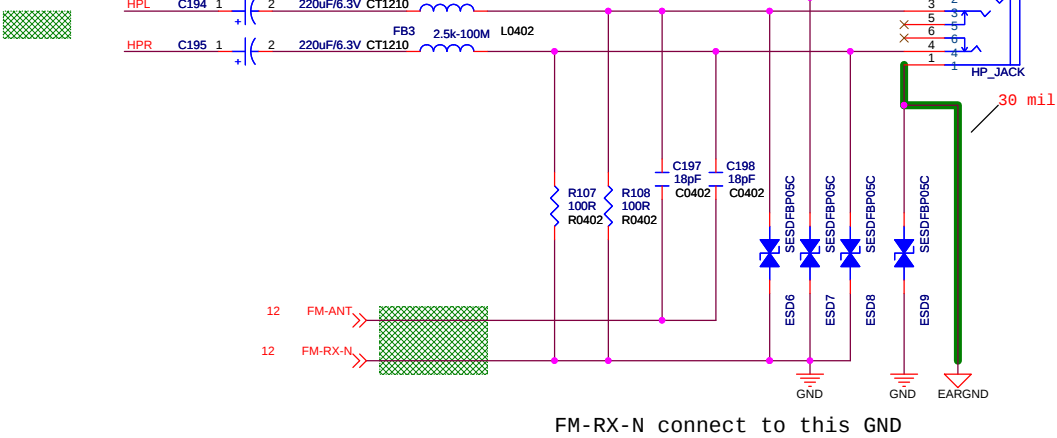
AUDIO



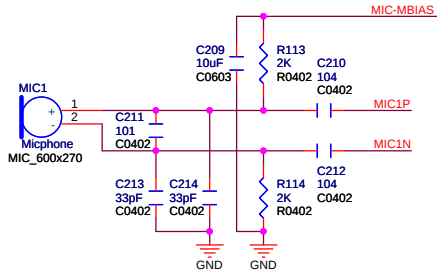
Head Phone



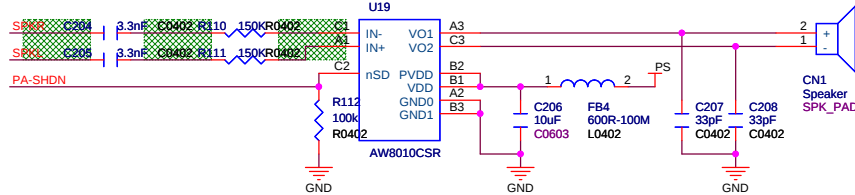
Differential pairs



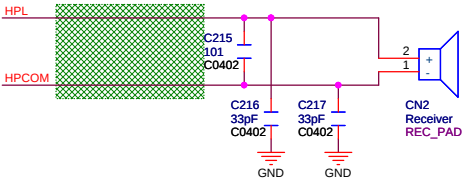
Analog Microphone



Speaker



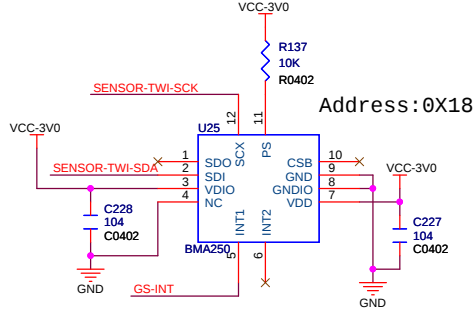
Receiver



SENSOR

- 8 TWI2-SCK << SENSOR-TWI-SCK
- 8 TWI2-SDA << SENSOR-TWI-SDA
- 7 PA9 << GS-INT
- 7 PA10 << GY-INT
- 7 PA11 << CP-INT
- 12 PG12 << LS-INT

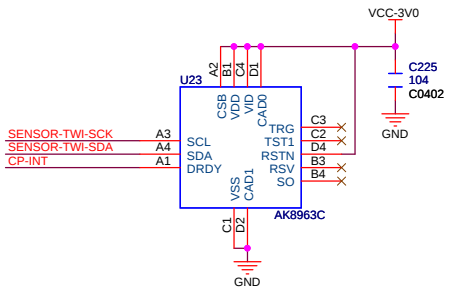
3D G-Sensor



1、The first pin paced on the left lower corner of product on top view.

Magnetic Sensor

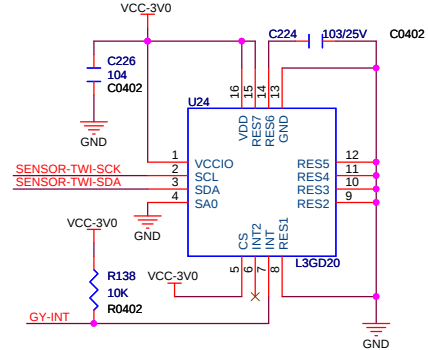
Address:0X0D



- 1. The first pin paced on the left lower corner of product on top view.
- 2. Not close to the metal.

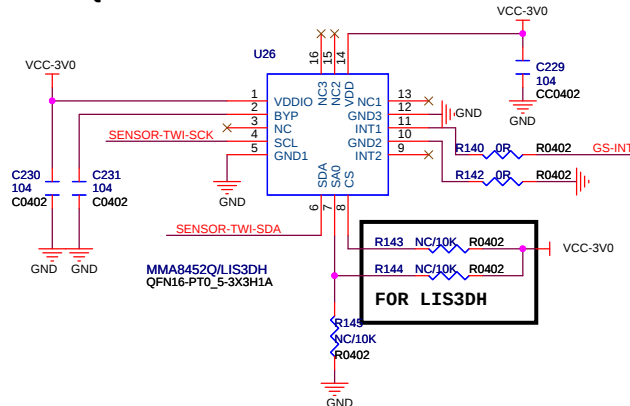
3-Axis Gyroscope

Address:0X6A



- 1. The first pin paced on the left lower corner of product on top view.

MMA8452Q/LIS3DH



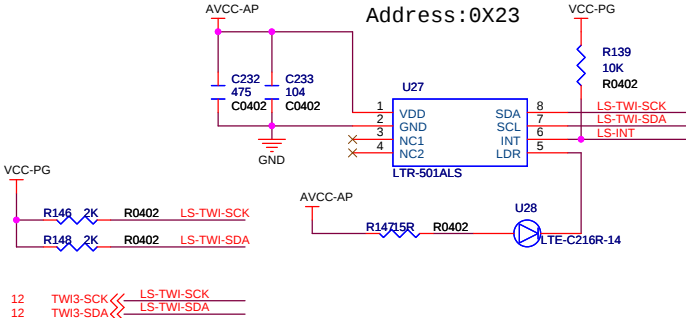
OPTION :

- 1. MMA8452Q:3x3x1mm
pin 7:NC pull down resistor and pull up resistor;
pin 8:NC pull up resistor.
- 2. LIS3DH:
pin 2:NC pull down capacitance ;
pin 7:NC pull down resistor , pull up resistor=10K;
pin 8: pull up resistor=10K.

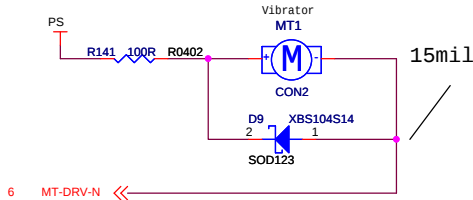
ALS Sensor

2-in-1 Light Sensor and Proximity Sensor

Address:0X23



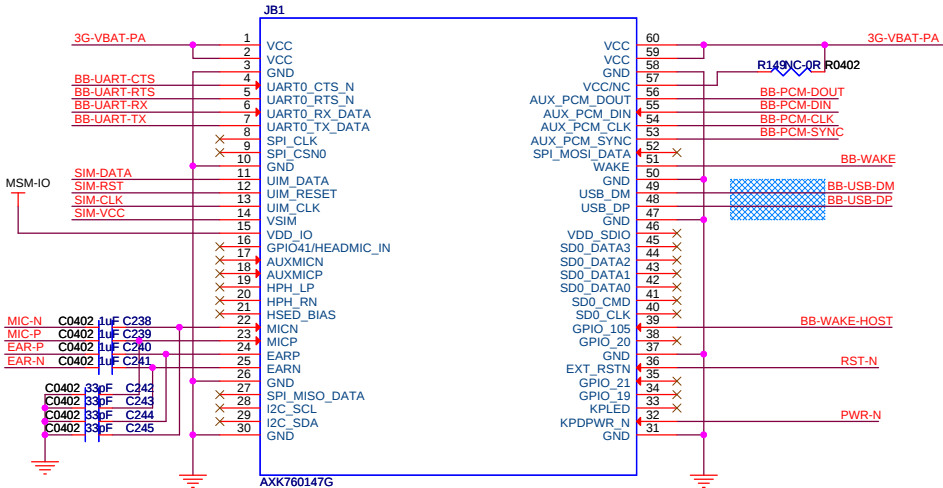
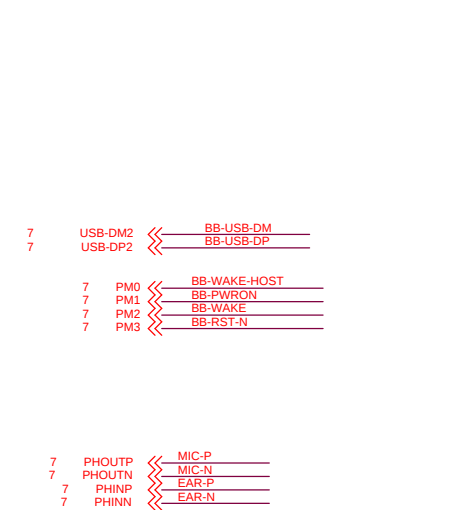
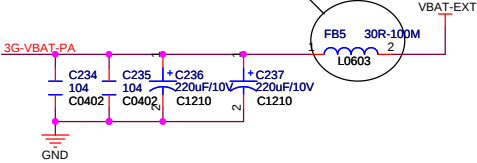
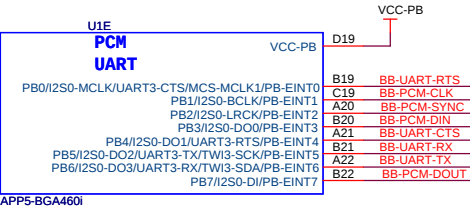
Motor



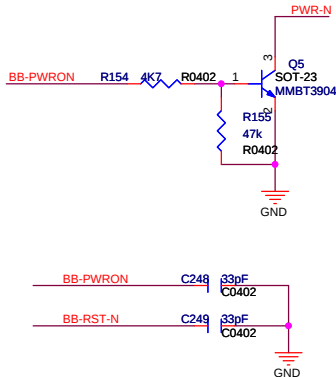
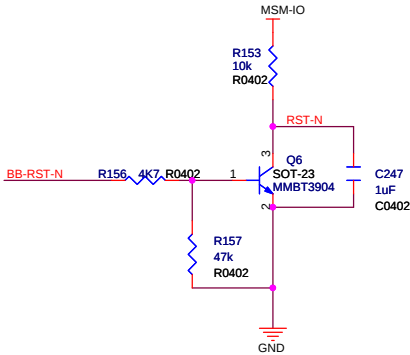
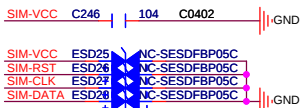
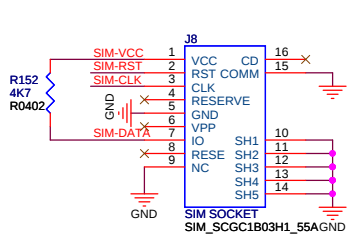
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A3	SENSOR		
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MODEM G3

FBMJ1608HS280NT by TAIYO YUDEN or
MPZ1608S300ATAH0 by TDK
is recommended.

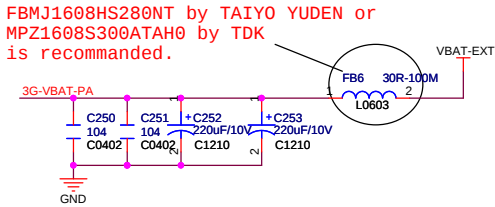
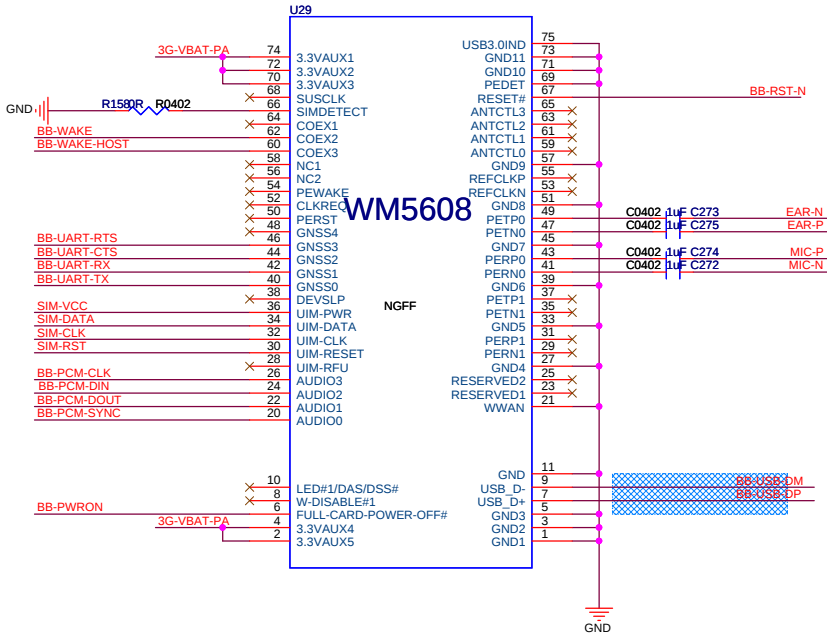
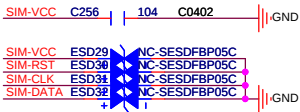
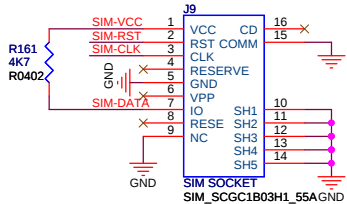
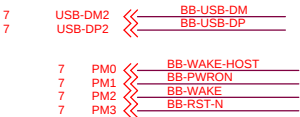
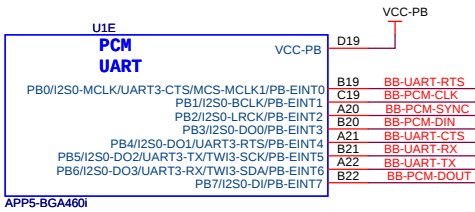


USB difference
Z0= 90ohm

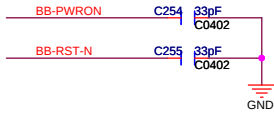


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A31s Phablet		
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A3	MODEM G3	
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MODEM WM5608

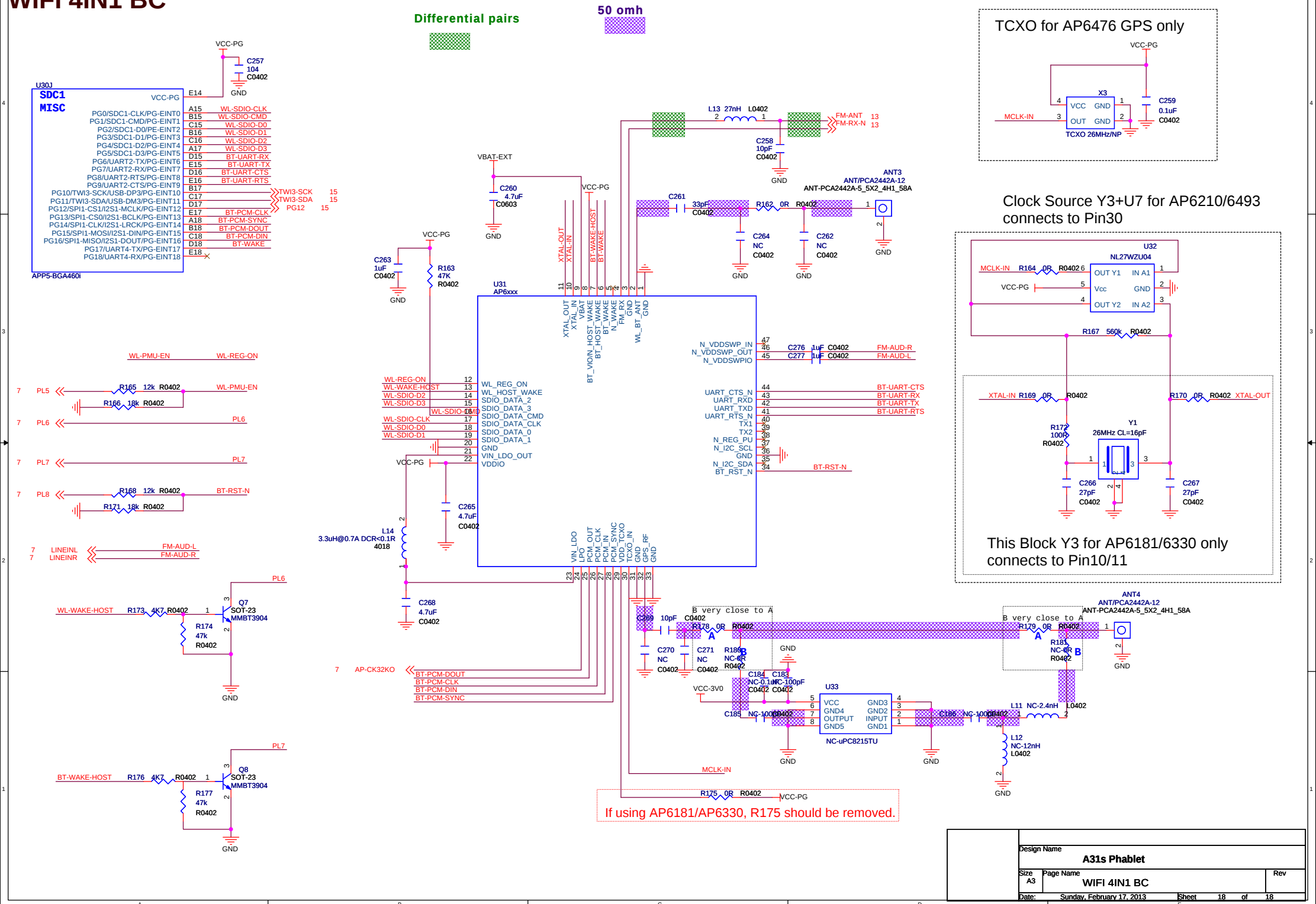


USB difference
Z0= 90ohm



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WIFI 4IN1 BC



Design Name			
A31s Phablet			
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A3	WIFI 4IN1 BC		
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