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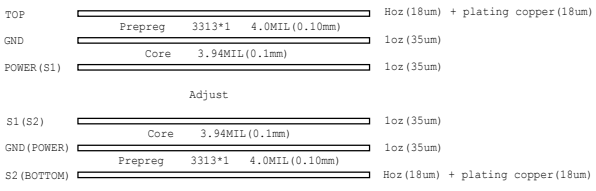
17.GPS

PCB POWER WIRE WIDTH INDICATE

	above 80 miles
	above 50 miles
	above 30 miles
	above 16 miles
No indicate	Under needs

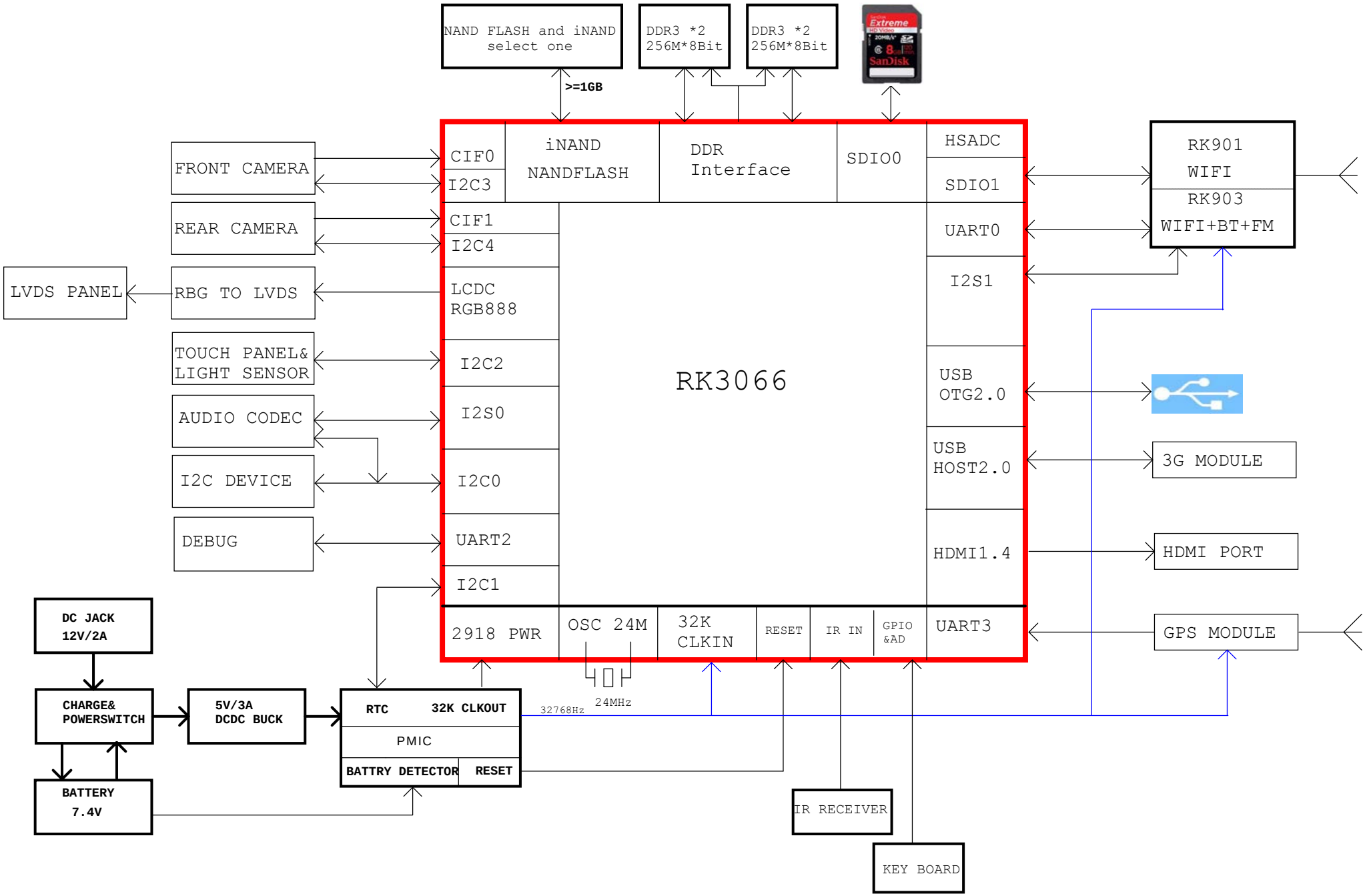
6 LAYERS PCB STACK



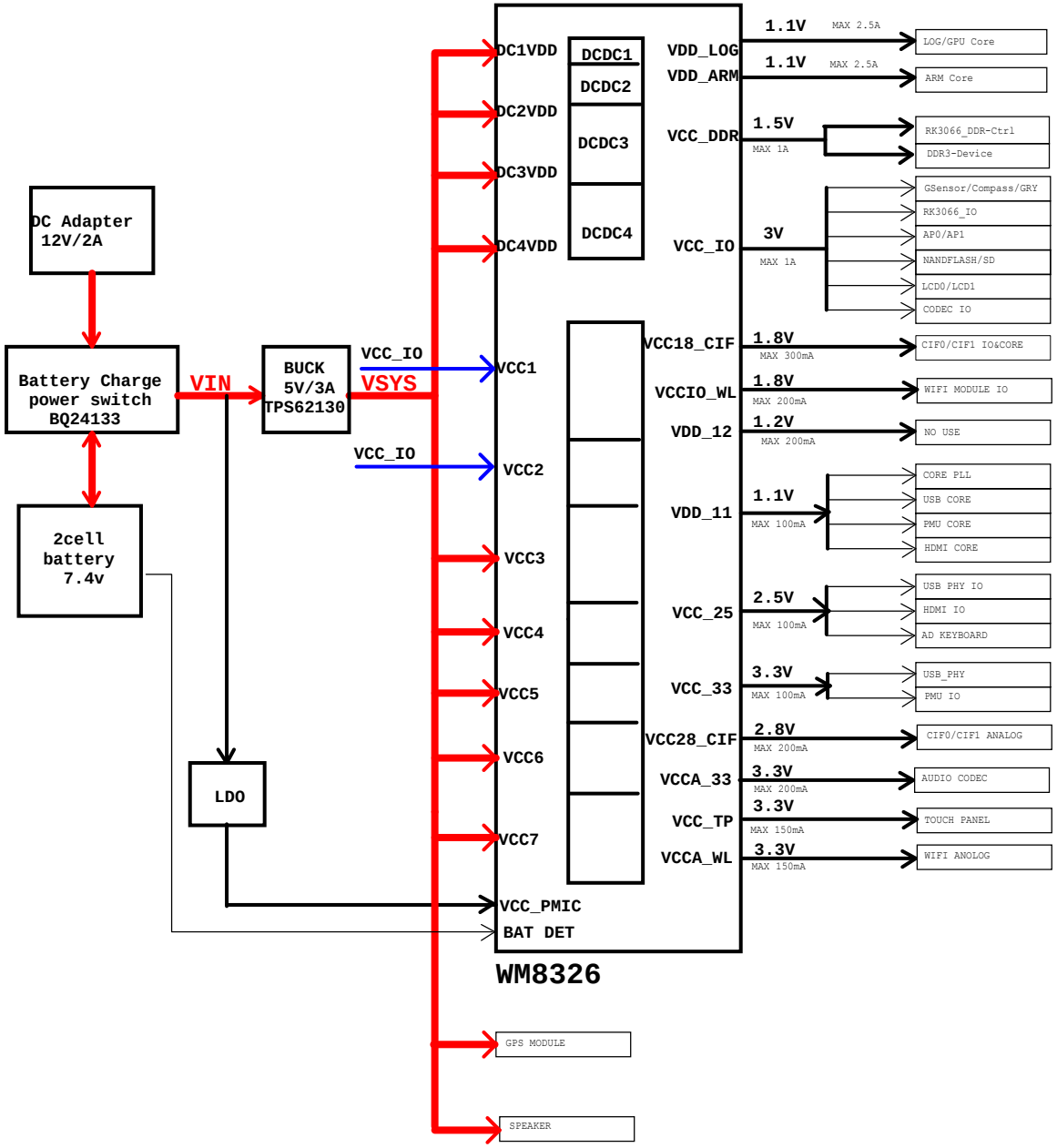
福州瑞芯微电子有限公司		
Title: Index		
File: RK3066_REF_2CELL		REV:1.0
Create Date: Wednesday, December 14, 2011		Page Num:1
Modify Date: Wednesday, February 22, 2012		Page Total:17

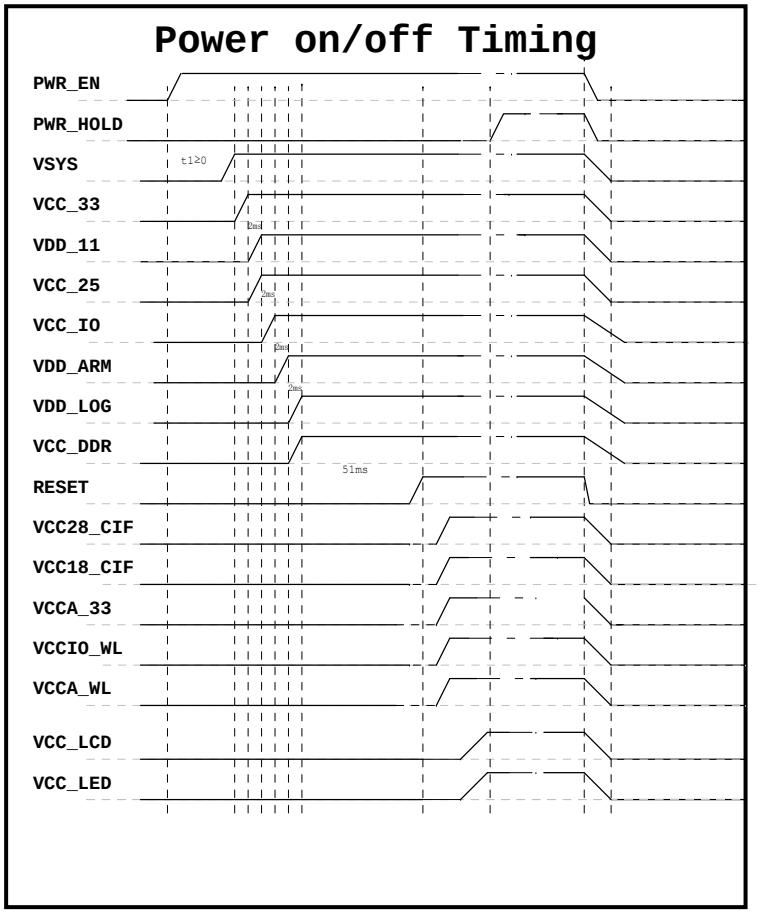
Version	Date	Author	Change Note	Approved
V1.0	20120220	HCH	First edictor	

Rockchip 瑞芯微电子 福州瑞芯微电子有限公司		
Title: Modify note		
File: RK3066_REF_2CELL		REV:1.0
Create Date: Saturday, October 23, 2010		Page Num:2
Modify Date: Wednesday, February 22, 2012		Page Total:17



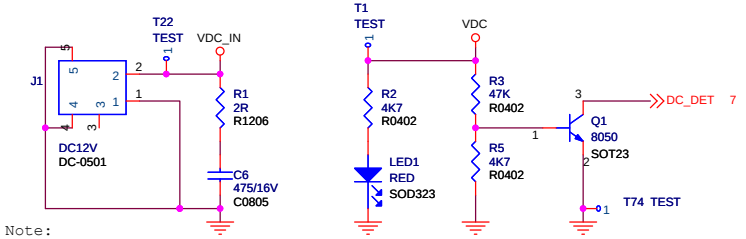
Rockchip 瑞芯微电子	福州瑞芯微电子有限公司
Title: Block Diagram	
File: RK3066_REF_2CELL	REV:1.0
Create Date: Saturday, October 23, 2010	Page Num:3
Modify Date: Wednesday, February 22, 2012	Page Total:17





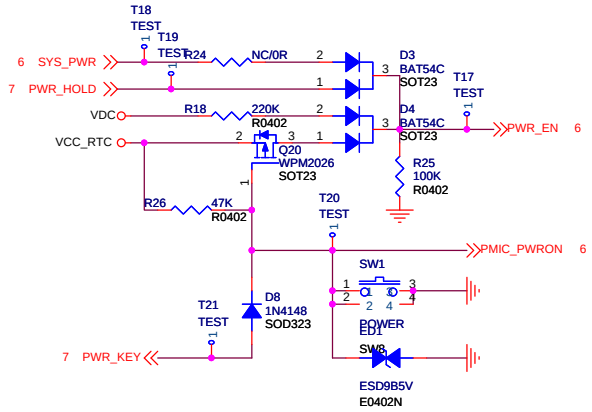
POWER DIAGRAM

Rockchip 瑞芯微电子	福州瑞芯微电子有限公司
Title: System power diagram	
File: RK3066_REF_2CELL	REV:1.0
Create Date: Wednesday, March 02, 2011	Page Num:4
Modify Date: Wednesday, February 22, 2012	Page Total:17



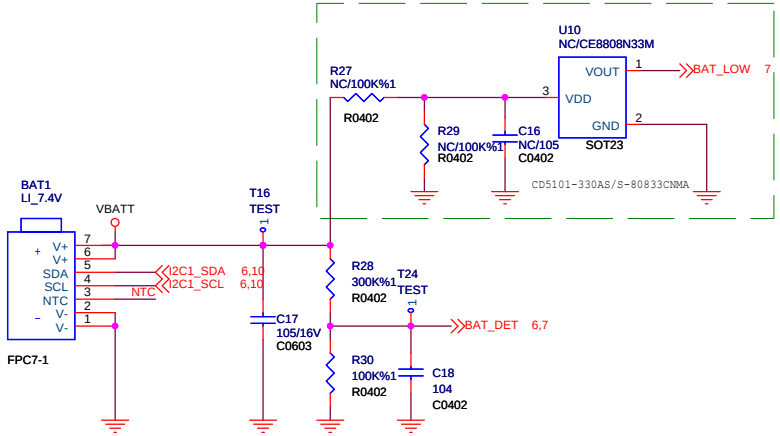
Note:
Please use a 12V DC.

DC IN

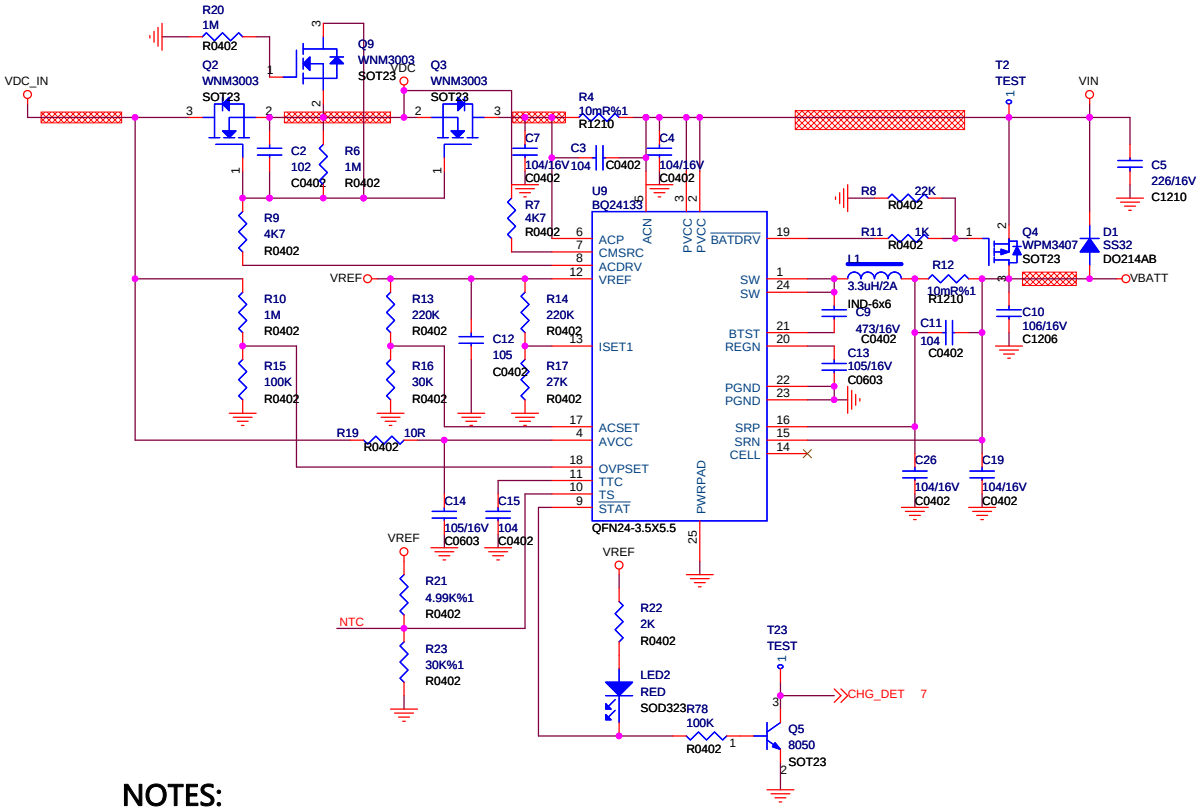


POWER CONTROL

Note:
The battery pack must have a fuel gauge and a 10K NTC.



BATTER



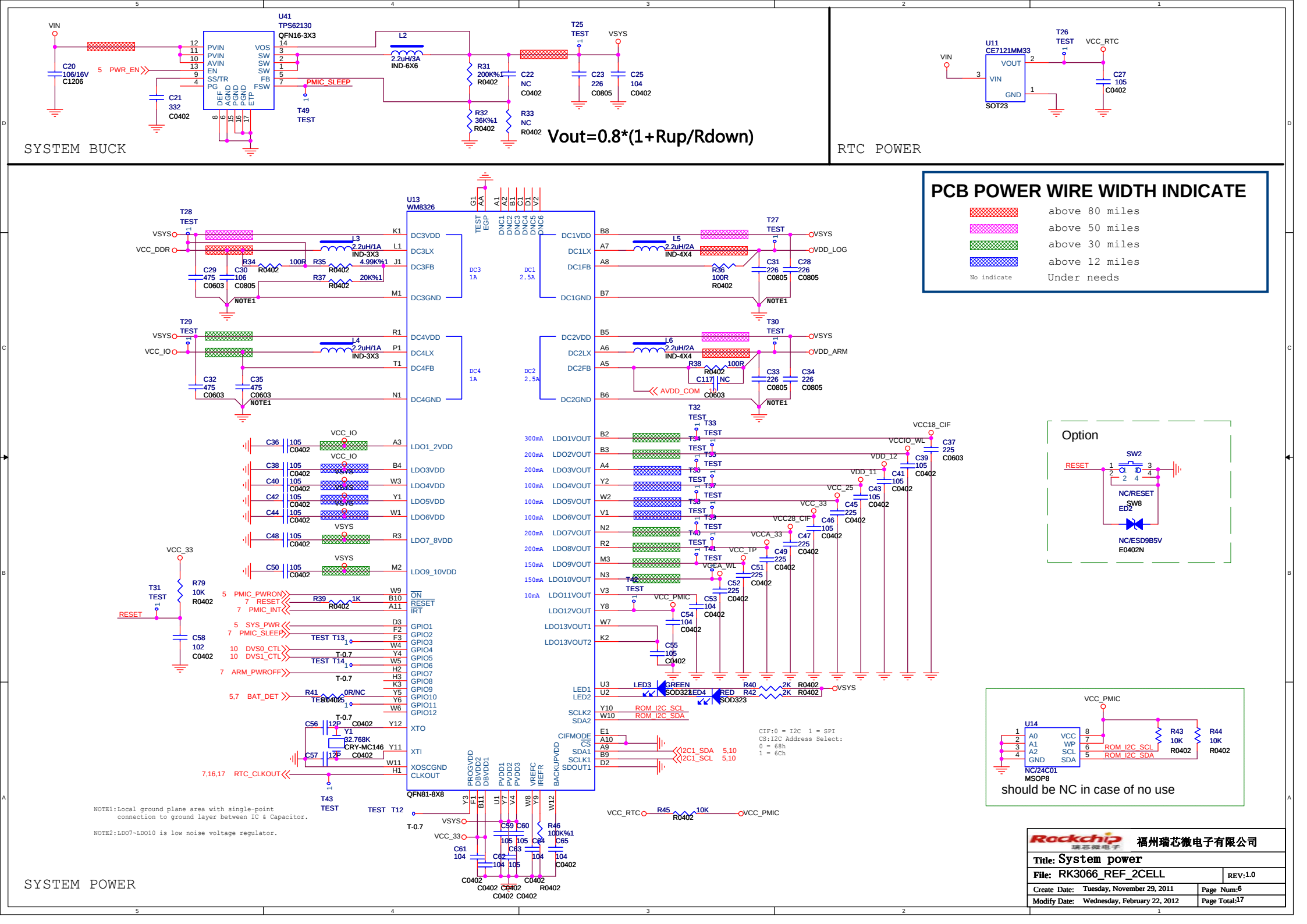
NOTES:

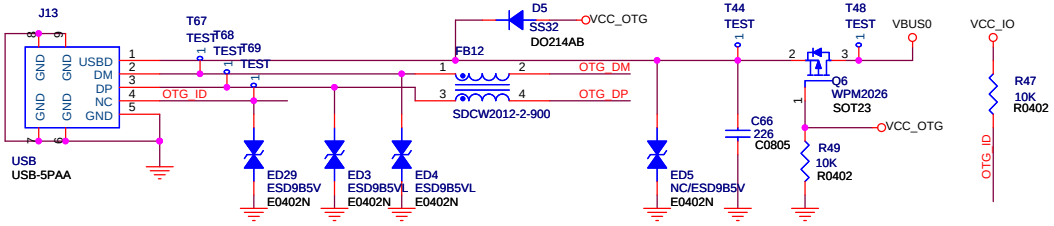
VREF=3.3V
Idpm=Vacset/(20*Rac) ;Adapter input current max 1.98A
Icharge=Viset/(20*Rsr) ;Charge current max 1.8A
Iprecharge=Viset/(200*Rsr) ;Iprecharge current max 198mA
Iterm=Viset/(200*Rsr) ;Terminate charge current 198mA
Tttc=Cttc*Kttc(Kttc=5.6min/nF) ;Terminate charge time 560min

If Vovpset above 1.6V or below 0.5V,charge is disabled;
Adapter input above 18V or below 5V,charge is disabled

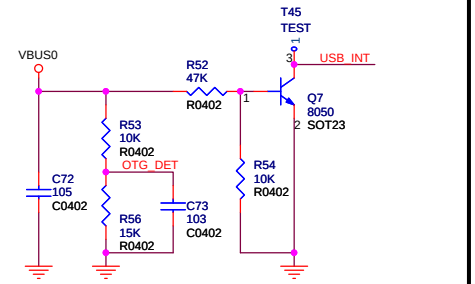
CHARGER&POWER PATH SELECTOR

Rockchip 瑞芯微电子	福州瑞芯微电子有限公司	
Title: DC/Charge		
File: RK3066_REF_2CELL		REV:1.0
Create Date: Thursday, November 24, 2011		Page Num:5
Modify Date: Wednesday, February 22, 2012		Page Total:17

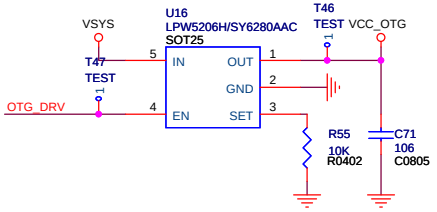

SYSTEM BUCK
U41
TPS62130
QFN16-3X3
VIN
C20
106/16V
C1206
PWR_EN
C21
332
C0402
L2
2.2uH/3A
IND-6X6
PMIC_SLEEP
T49
TEST
R31
200K%1
R0402
C22
NC
C0402
R32
36K%1
R0402
R33
NC
R0402
T25
TEST
C23
226
C0805
C25
104
C0402
Vout=0.8*(1+Rup/Rdown)
RTC POWER
U11
CE7121MM33
SOT23
T26
TEST
VCC_RTC
C27
105
C0402
PCB POWER WIRE WIDTH INDICATE
above 80 miles
above 50 miles
above 30 miles
above 12 miles
No indicate
Under needs
U13
WM8326
QFN81-8X8
T28
TEST
L3
2.2uH/1A
IND-3X3
R34
100R
R0402
R35
4.99K%1
R37
20K%1
C29
475
C0603
C30
106
C0805
NOTE1
T29
TEST
L4
2.2uH/1A
IND-3X3
C32
475
C0603
C35
475
C0603
T27
TEST
L5
2.2uH/2A
IND-4X4
R36
100R
R0402
C31
226
C0805
C28
226
C0805
T30
TEST
L6
2.2uH/2A
IND-4X4
R38
100R
R0402
C117
NC
C0603
AVDD_COM
C33
226
C0805
C34
226
C0805
T32
TEST
T33
T34
T35
T36
T37
T38
T39
T40
T41
T42
VCC18_CIF
VCCIO_WL
VDD_12
VDD_11
VCC_25
VCC_33
VCC28_CIF
VCCA_33
VCC_TP
VCCA_WL
VCC_PMIC
C36
C38
C40
C42
C44
C48
C50
C37
225
C0603
C39
105
C0402
C41
105
C0402
C43
105
C0402
C45
225
C0402
C46
105
C0402
C47
225
C0402
C49
225
C0402
C51
225
C0402
C52
225
C0402
C53
104
C0402
C54
104
C0402
C55
105
C0402
LDO1_2VDD
LDO3VDD
LDO4VDD
LDO5VDD
LDO6VDD
LDO7_8VDD
LDO9_10VDD
LDO1VOUT
LDO2VOUT
LDO3VOUT
LDO4VOUT
LDO5VOUT
LDO6VOUT
LDO7VOUT
LDO8VOUT
LDO9VOUT
LDO10VOUT
LDO11VOUT
LDO12VOUT
LDO13VOUT1
LDO13VOUT2
Option
SW2
RESET
NC/RESET
SW8
ED2
NC/ESD9B5V
E0402N
T31
TEST
R79
10K
R0402
C58
102
C0402
PMIC_PWRON
RESET
PMIC_INT
R39
1K
R0402
SYS_PWR
PMIC_SLEEP
DVS0_CTL
DVS1_CTL
ARM_PWROFF
BAT_DET
R41
0R/NC
R0402
ON
RESET
IRT
GPIO1
GPIO2
GPIO3
GPIO4
GPIO5
GPIO6
GPIO7
GPIO8
GPIO9
GPIO10
GPIO11
GPIO12
XTO
XTI
XOSCGND
CLKOUT
RTC_CLKOUT
T43
TEST
C56
12P
C0402
Y1
32.768K
CRY-MC146
C57
12P
C0402
LED3
GREEN
SOD323
LED4
RED
SOD323
R40
2K
R0402
R42
2K
R0402
LED1
LED2
SCLK2
SDA2
ROM_I2C_SCL
ROM_I2C_SDA
CIFMODE
CS
SDA1
SCLK1
SDOUT1
I2C1_SDA
I2C1_SCL
CIF:0 = I2C 1 = SPI
CS:I2C Address Select:
0 = 68h
1 = 6Ch
U14
NC/24C01
MSOP8
R43
10K
R0402
R44
10K
R0402
should be NC in case of no use
R45
10K
R0402
TEST T12
NOTE1:Local ground plane area with single-point connection to ground layer between IC & Capacitor.
NOTE2:LDO7~LDO10 is low noise voltage regulator.
SYSTEM POWER
Rockchip 瑞芯微电子
福州瑞芯微电子有限公司
Title: System power
File: RK3066_REF_2CELL
REV:1.0
Create Date: Tuesday, November 29, 2011
Page Num:6
Modify Date: Wednesday, February 22, 2012
Page Total:17



USB OTG CONNECTOR

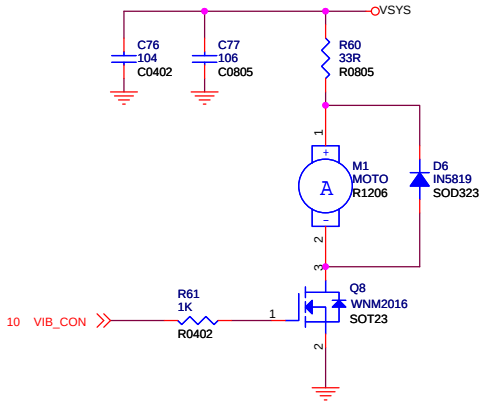


USB_DET

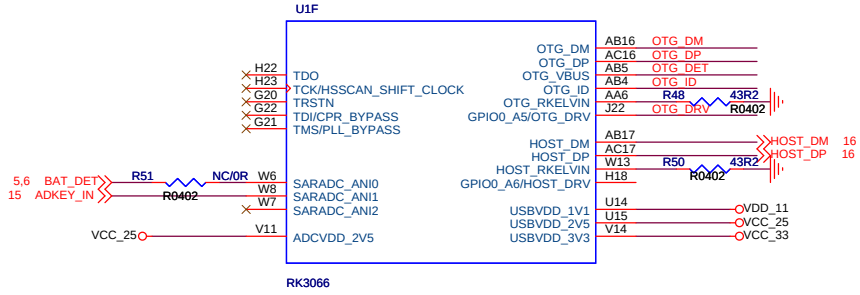


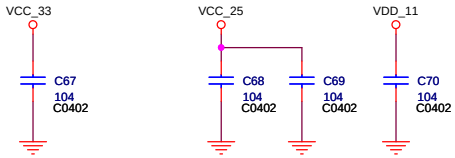
Curent limit 640mA

USB HOST POWER

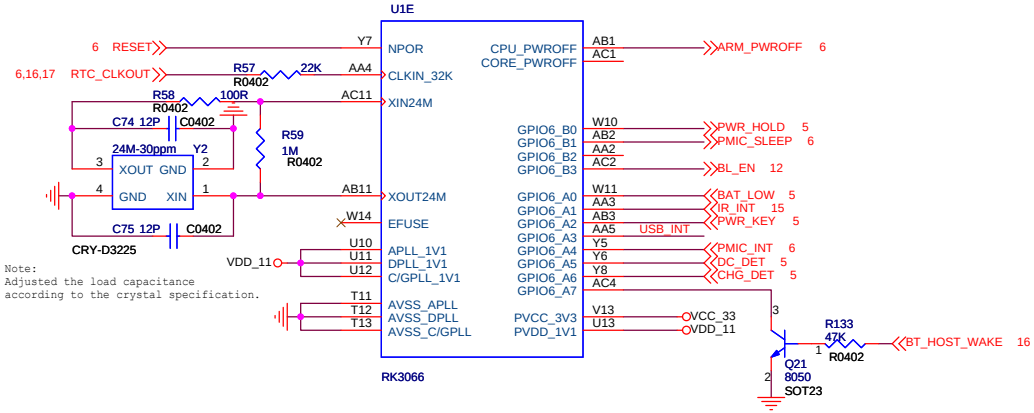


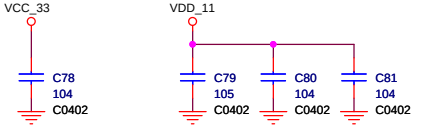
VIBRATION





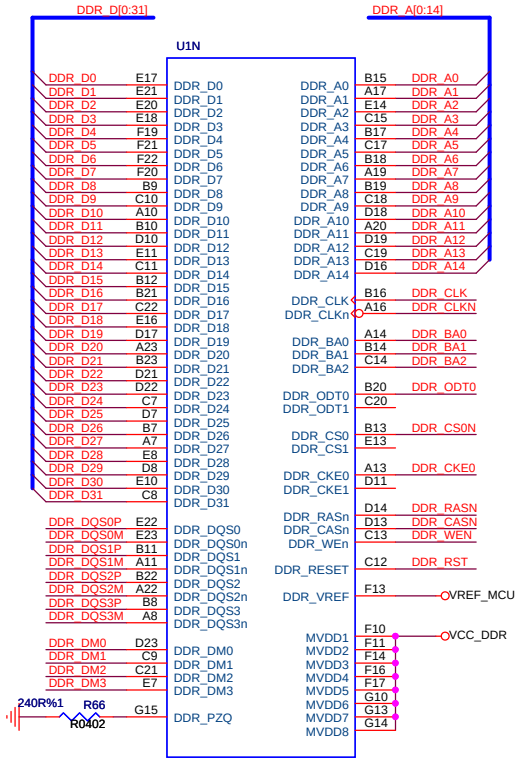
RK3066-F



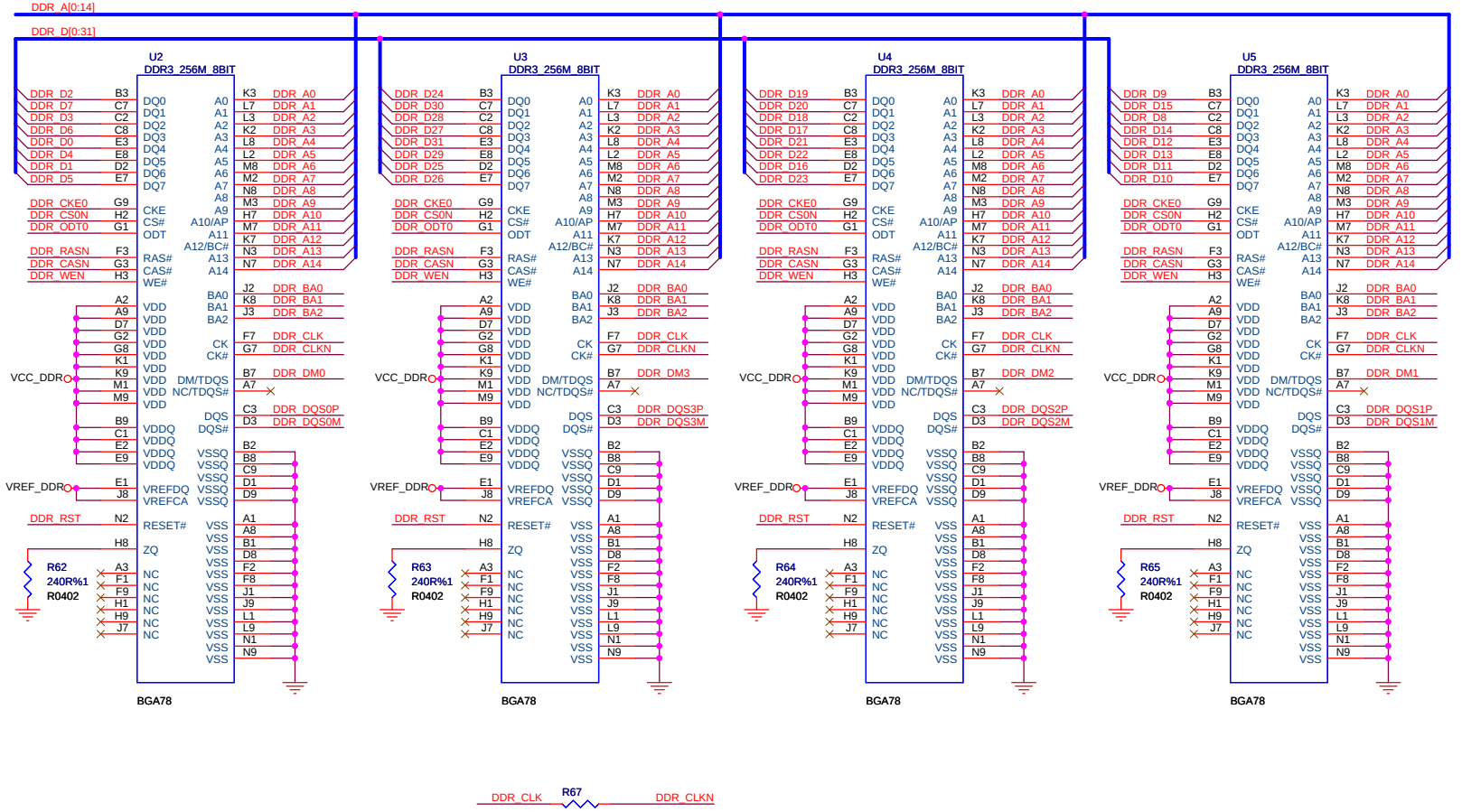


RK3066-E

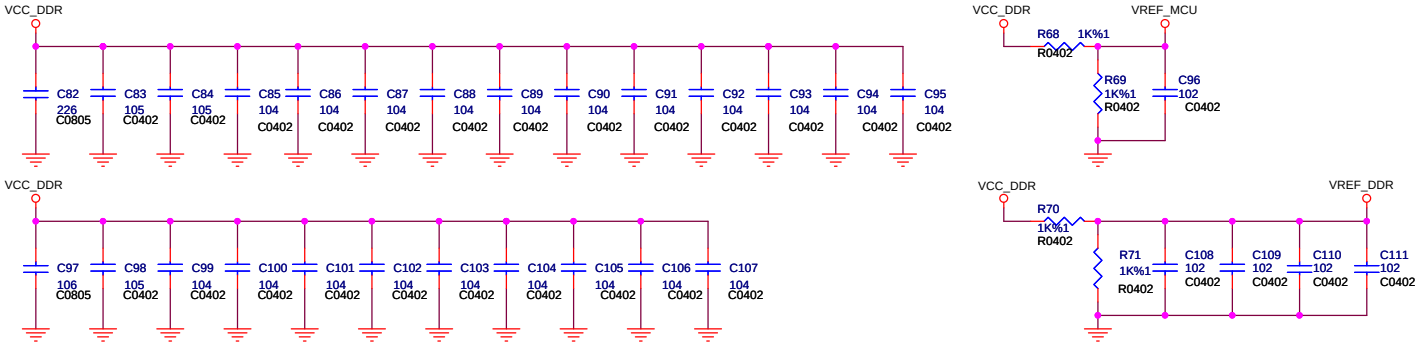
福州瑞芯微电子有限公司		
Title: USB OTG/VIB		
File: RK3066_REF_2CELL		REV:1.0
Create Date: Tuesday, November 29, 2011	Page Num:7	
Modify Date: Wednesday, February 22, 2012	Page Total:17	



RK3066-N



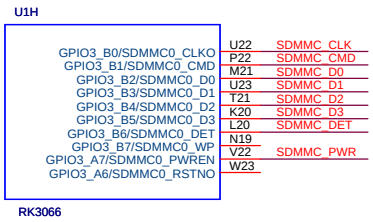
DDR3



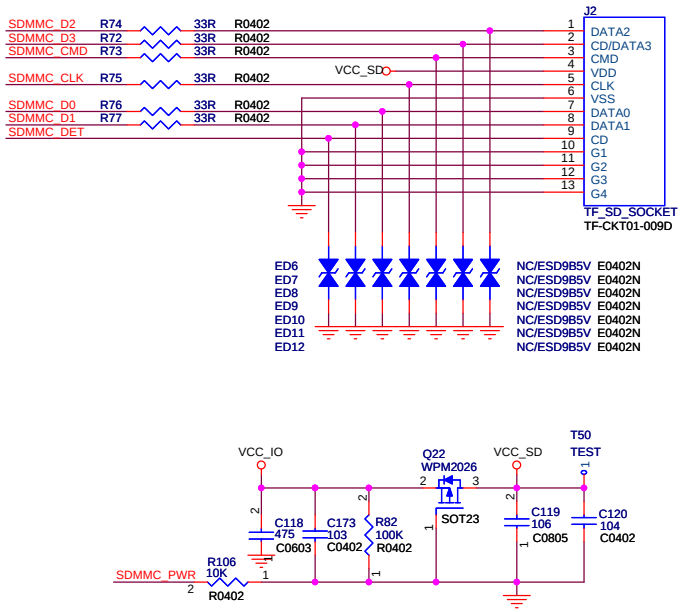
DDR FILTER

福州瑞芯微电子有限公司

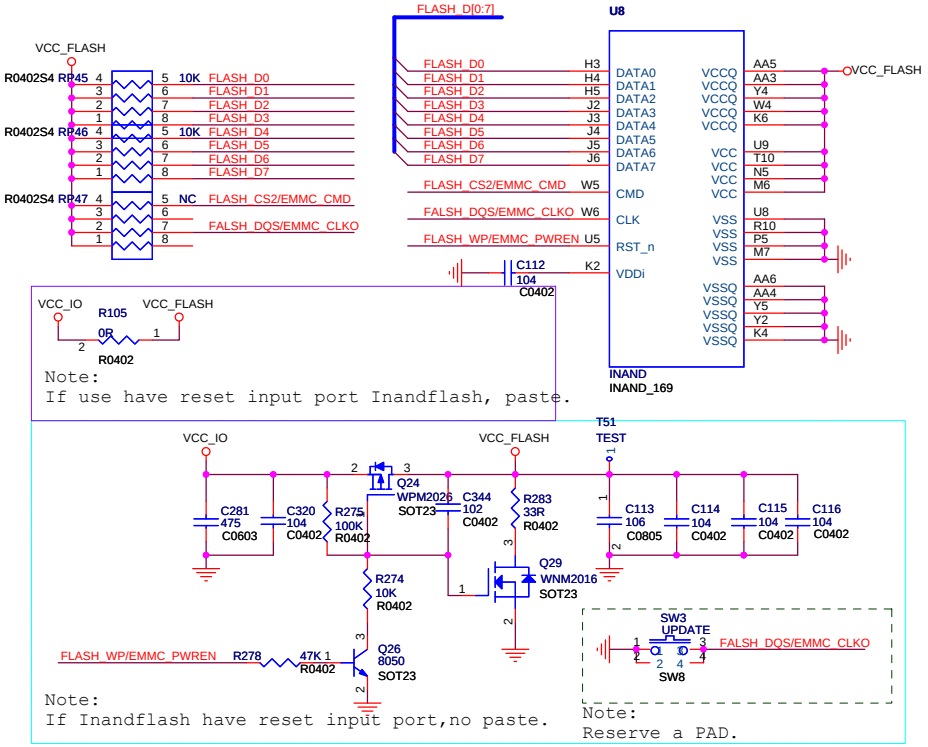
Title: DDR3	
File: RK3066_REF_2CELL	REV:1.0
Create Date: Tuesday, November 09, 2010	Page Num:8
Modify Date: Wednesday, February 22, 2012	Page Total:17



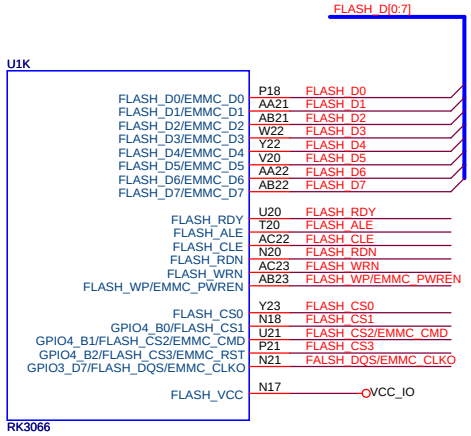
RK3066-H



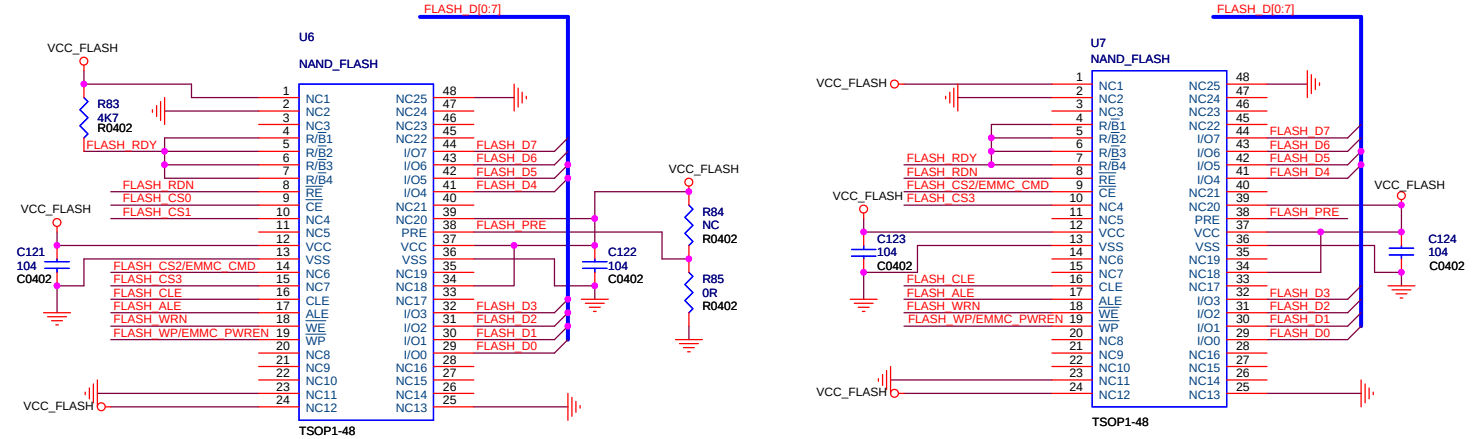
TF CARD



INAND(OPTION)

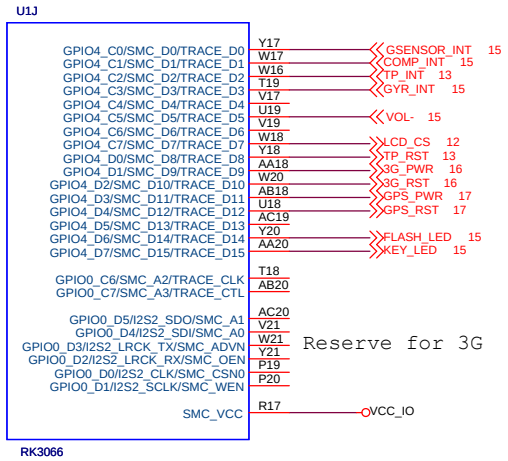


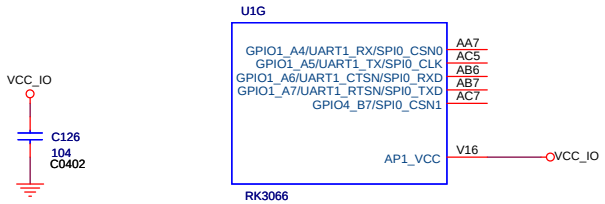
RK3066-K

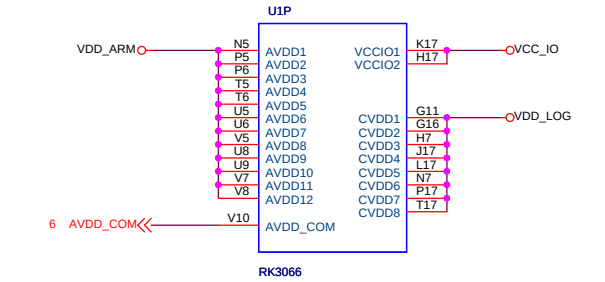


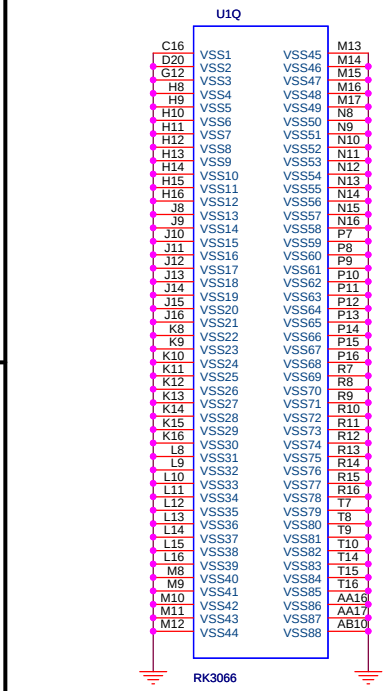
NAND FLASH

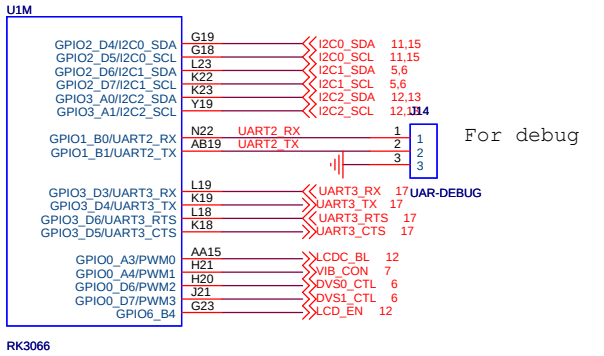
Rockchip 瑞芯微电子	福州瑞芯微电子有限公司
Title: Flash/SD	
File: RK3066_REF_2CELL	REV:1.0
Create Date: Thursday, October 14, 2010	Page Num:9
Modify Date: Wednesday, February 22, 2012	Page Total:17

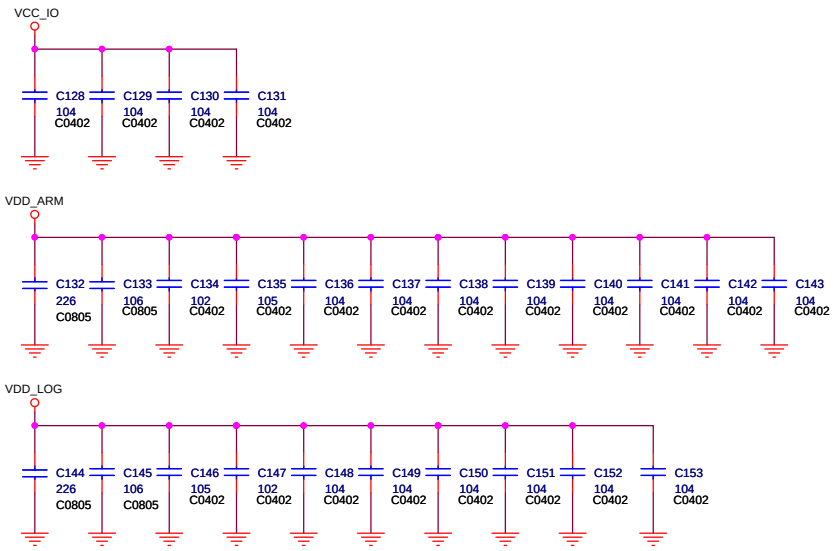






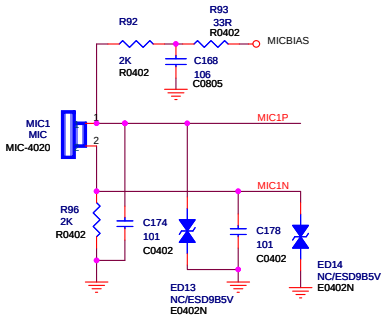




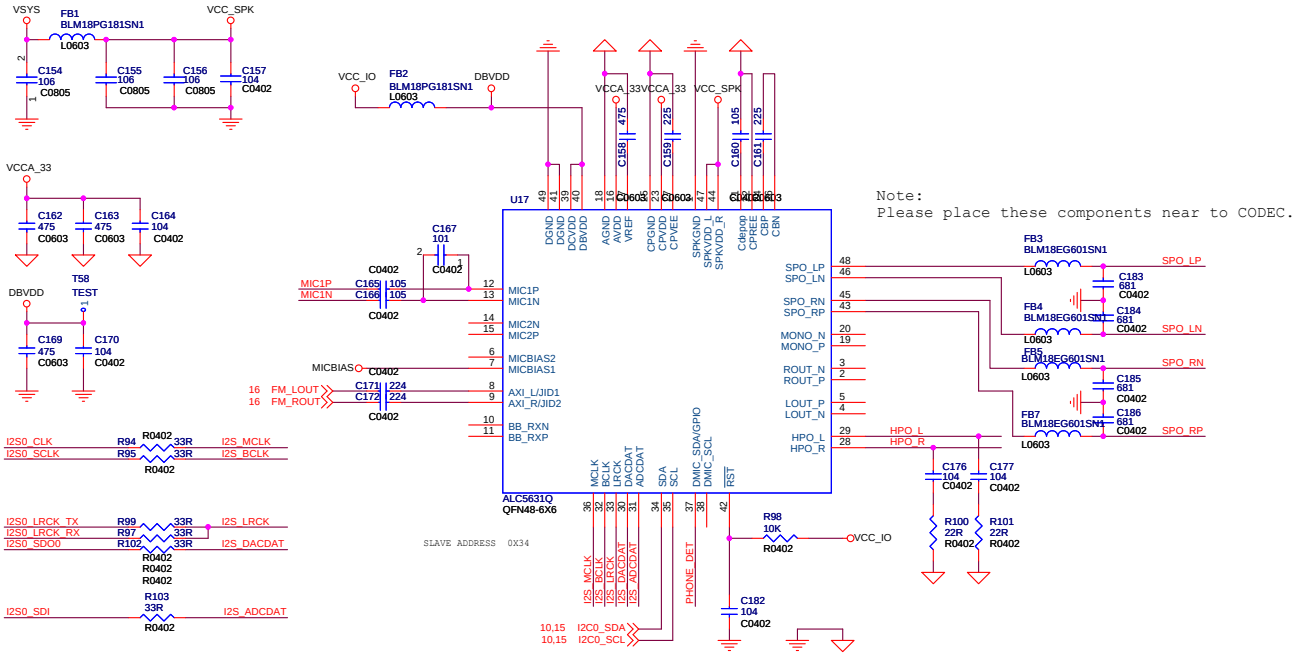


福州瑞芯微电子有限公司

Title: GPIO		
File: RK3066_REF_2CELL		REV:1.0
Create Date: Monday, October 18, 2010	Page Num:10	
Modify Date: Wednesday, February 22, 2012	Page Total:17	

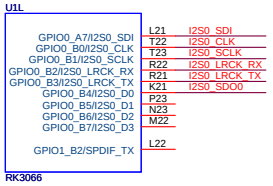


MIC

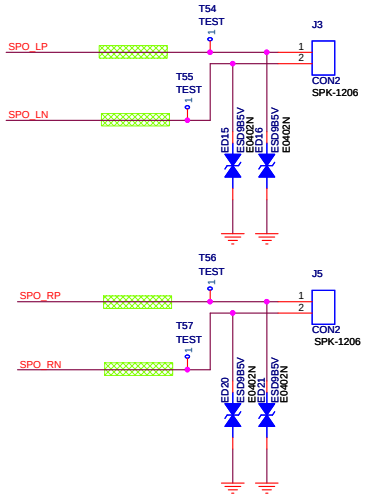


Note:
Please place these components near to CODEC.

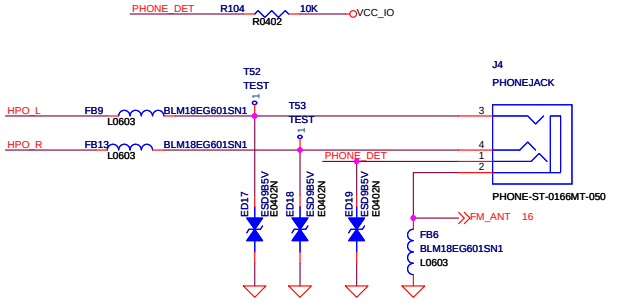
CODEC



RK3066-L

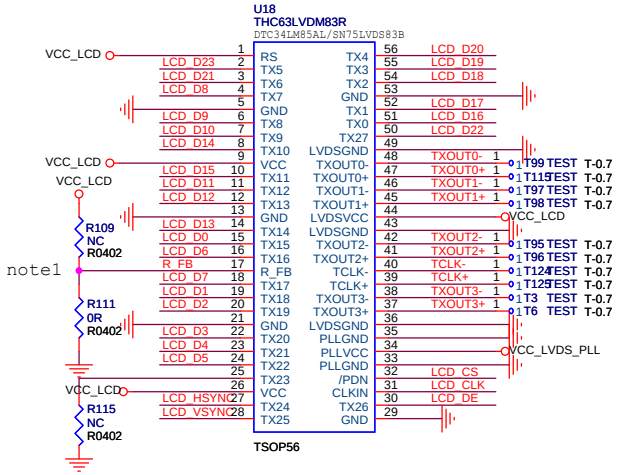


SPEAKER

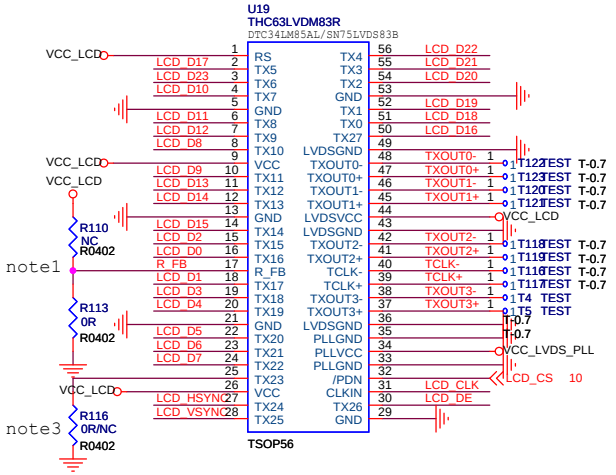


EARPHONE PORT

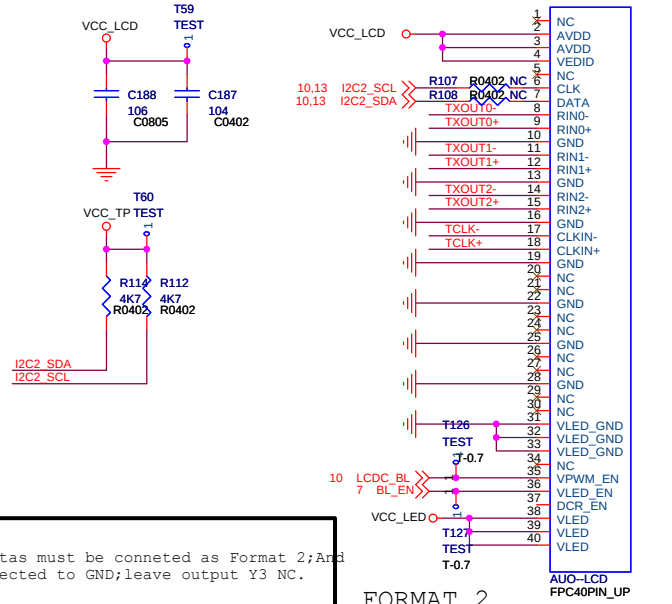
Rockchip 瑞芯微电子	福州瑞芯微电子有限公司	
Title: Audio		
File: RK3066_REF_2CELL		REV:1.0
Create Date: Friday, October 15, 2010		Page Num:11
Modify Date: Wednesday, February 22, 2012		Page Total:17



FORMAT 1 (note2)



FORMAT 2(note 2)



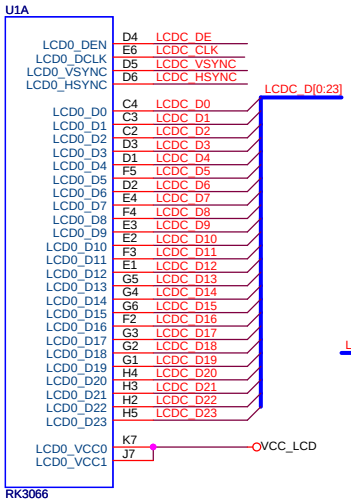
FORMAT 2

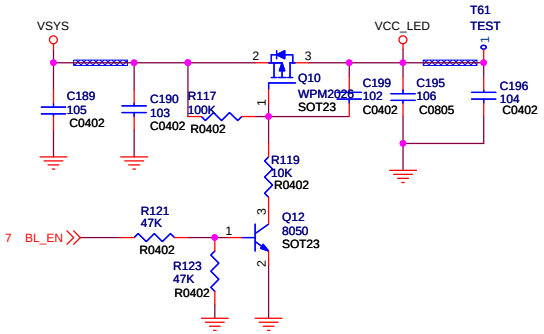
LCD PANEL CONNECTOR

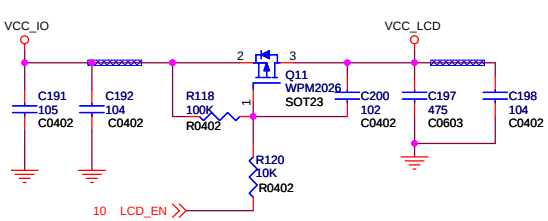
Note1:
Rpullup: install only to use rising edge triggered clocking.
Rpulldown: install only to use falling edge triggered clocking.

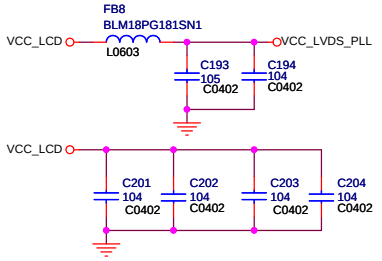
Note2:
Format 1: use with displays expecting the 2 MSB to be transmitted over the 4th data channel Y3. This is the dominate data format for LCD panels.
Format 2: use with displays expecting the 2 LSB to be transmitted over the 4th data channel.

Note3:
If use 18-bits LCD display,The resistor must be pased 0R.LCD datas must be conneted as Format 2;And the two LSBs of each color must be disconnected to MPU and connected to GND;leave output Y3 NC.

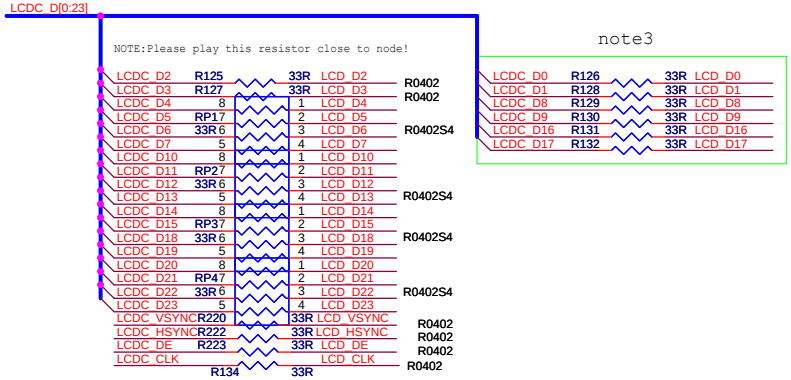




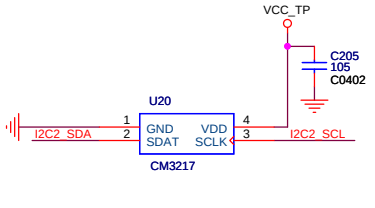




LCD PANEL POWER



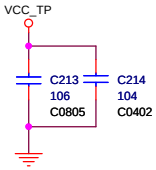
Correspondence between LCDC DATA and RGB			
LCDC_D0	B0	LCDC_D12	G4
LCDC_D1	B1	LCDC_D13	G5
LCDC_D2	B2	LCDC_D14	G6
LCDC_D3	B3	LCDC_D15	G7
LCDC_D4	B4	LCDC_D16	R0
LCDC_D5	B5	LCDC_D17	R1
LCDC_D6	B6	LCDC_D18	R2
LCDC_D7	B7	LCDC_D19	R3
LCDC_D8	G0	LCDC_D20	R4
LCDC_D9	G1	LCDC_D21	R5
LCDC_D10	G2	LCDC_D22	R6
LCDC_D11	G3	LCDC_D23	R7

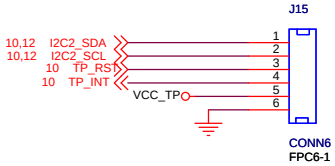


LIGHT SENSOR(OPTION)

RK2918-A

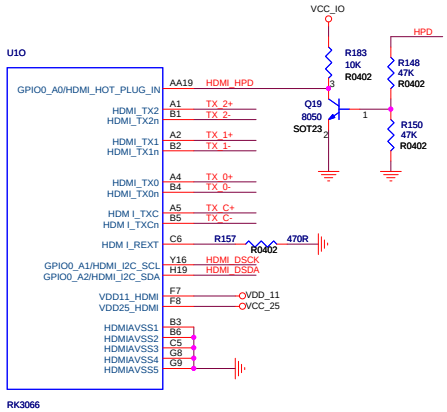
Rockchip 瑞芯微电子	福州瑞芯微电子有限公司
Title: LCD panel	
File: RK3066_REF_2CELL	REV:1.0
Create Date: Friday, October 15, 2010	Page Num:12
Modify Date: Wednesday, February 22, 2012	Page Total:17



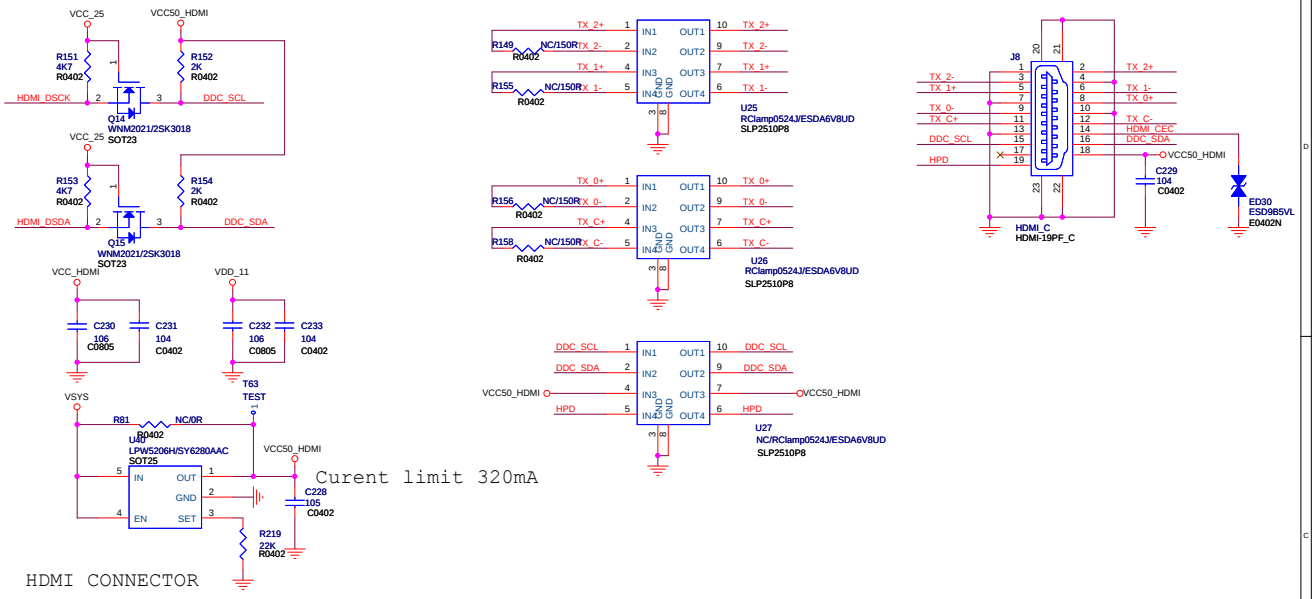


TOUCH PANEL CONNECTOR

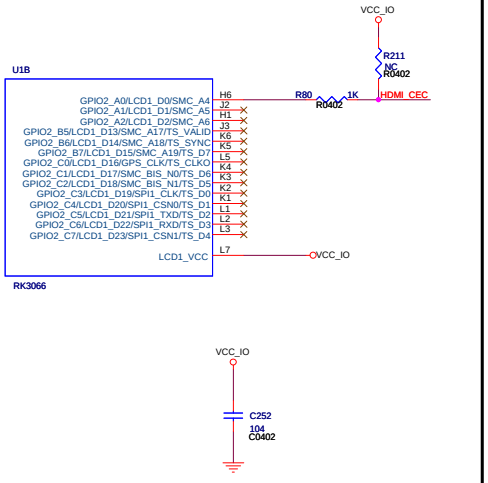
Rockchip 瑞芯微电子	福州瑞芯微电子有限公司	
Title: Touch panel		
File: RK3066_REF_2CELL		REV:1.0
Create Date: Thursday, December 08, 2011		Page Num:13
Modify Date: Wednesday, February 22, 2012		Page Total:17



RK3066-O

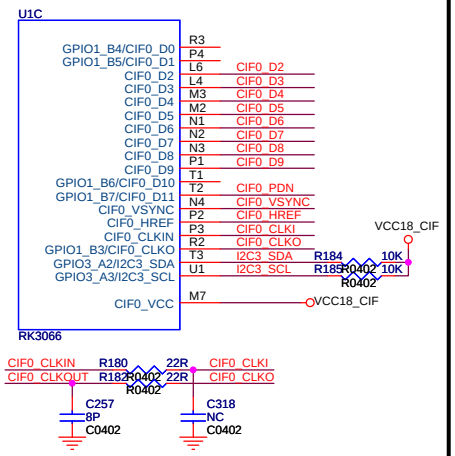


HDMI CONNECTOR

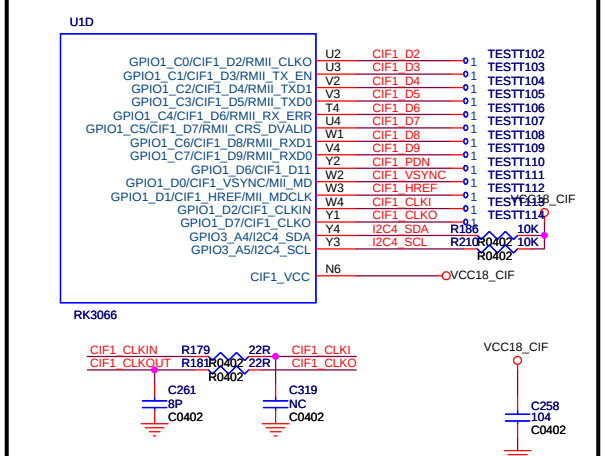


RK3066-B

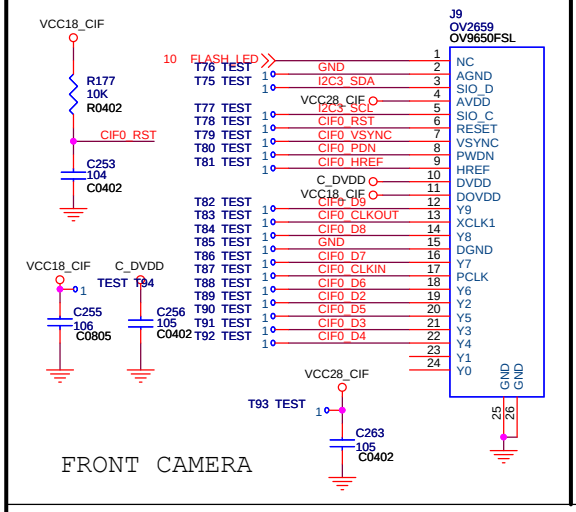
Rockchip 瑞芯微电子	福州瑞芯微电子有限公司	
Title: HDMI		
File: RK3066_REF_2CELL		REV: 1.0
Create Date: Monday, August 08, 2011	Page Num: 14	
Modify Date: Wednesday, February 22, 2012	Page Total: 17	



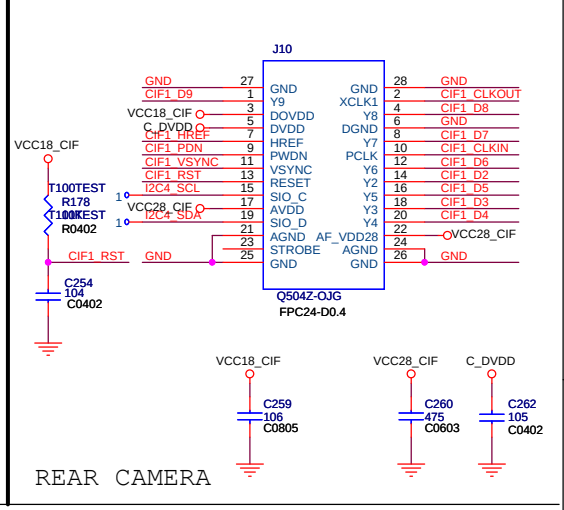
RK3066-C



RK3066-D

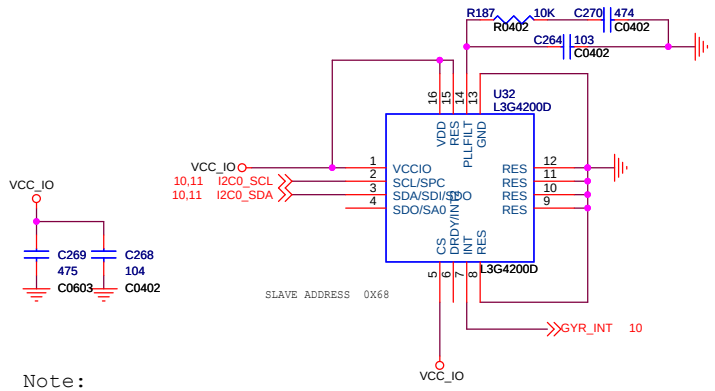


FRONT CAMERA



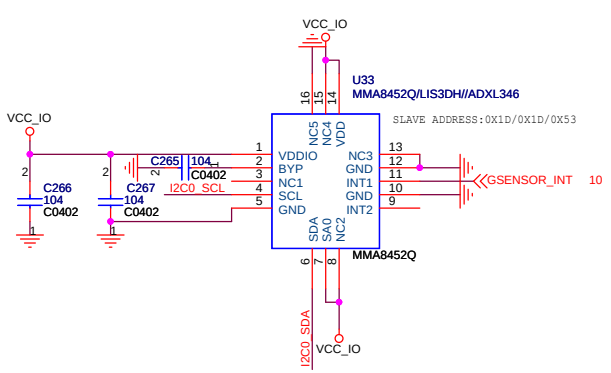
REAR CAMERA

Note: If using other sensor modules,
follow to the requirements of SPEC on the power supply.



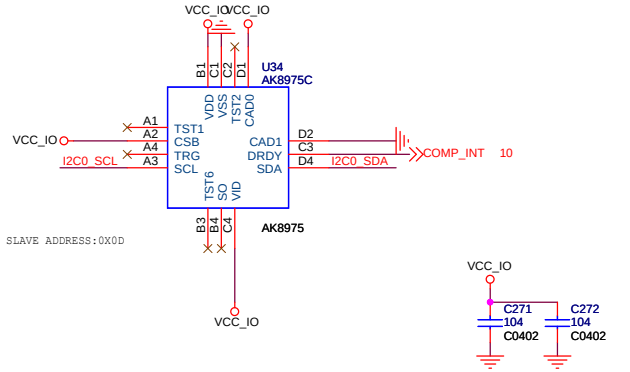
Note:
The first pin of MPU3050 must be
place on the lower left corner of PCB.

Gyroscope



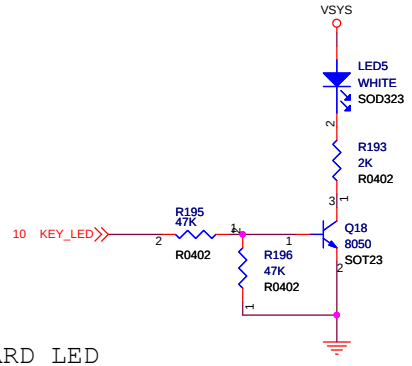
Note:
The first pin of MMA8452Q must be
place on the lower left corner of PCB.

3D G-Sensor

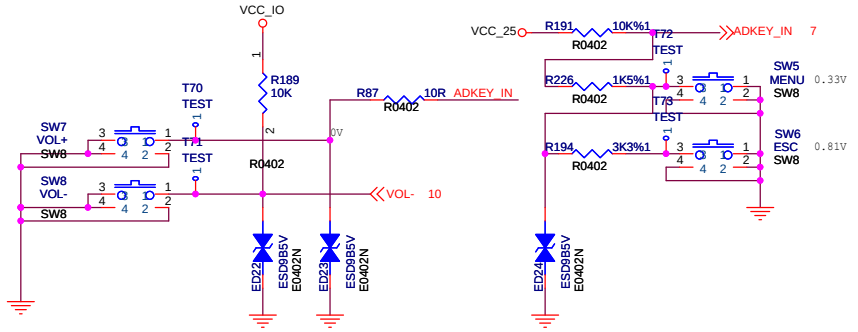


Note:
The first pin of AK8975C must be
place on the lower left corner of PCB.

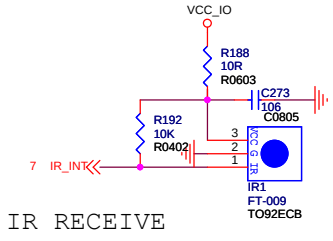
Compass



KEYBOARD LED



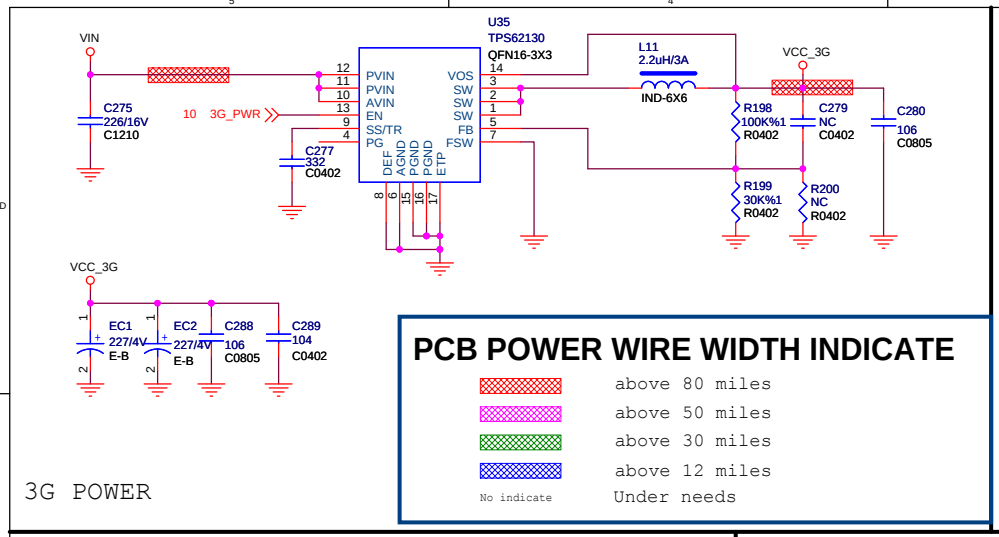
KEY BAORD

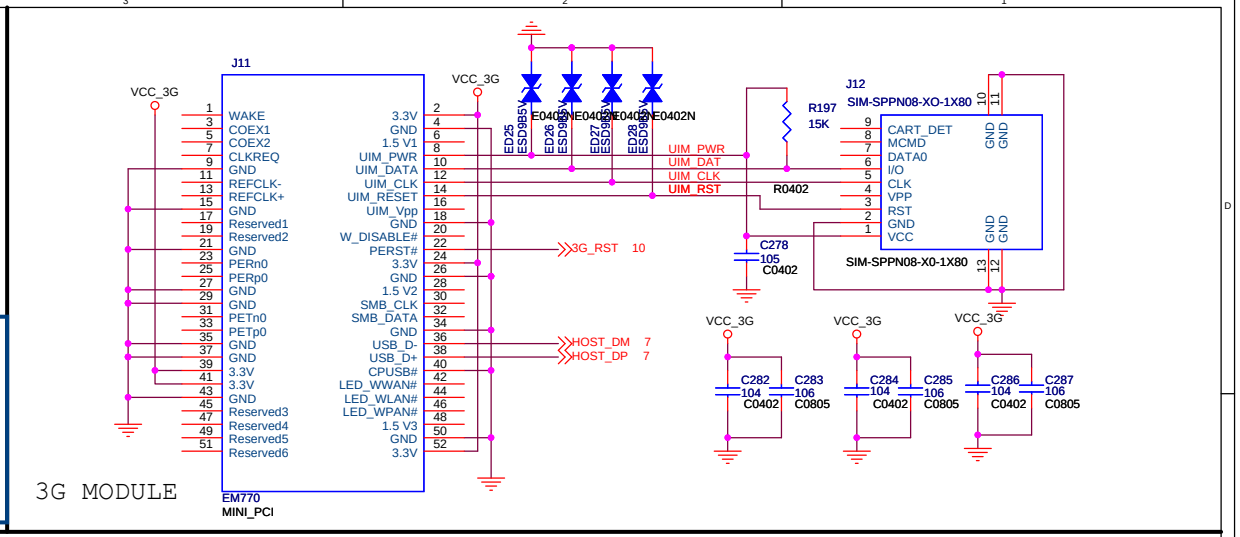


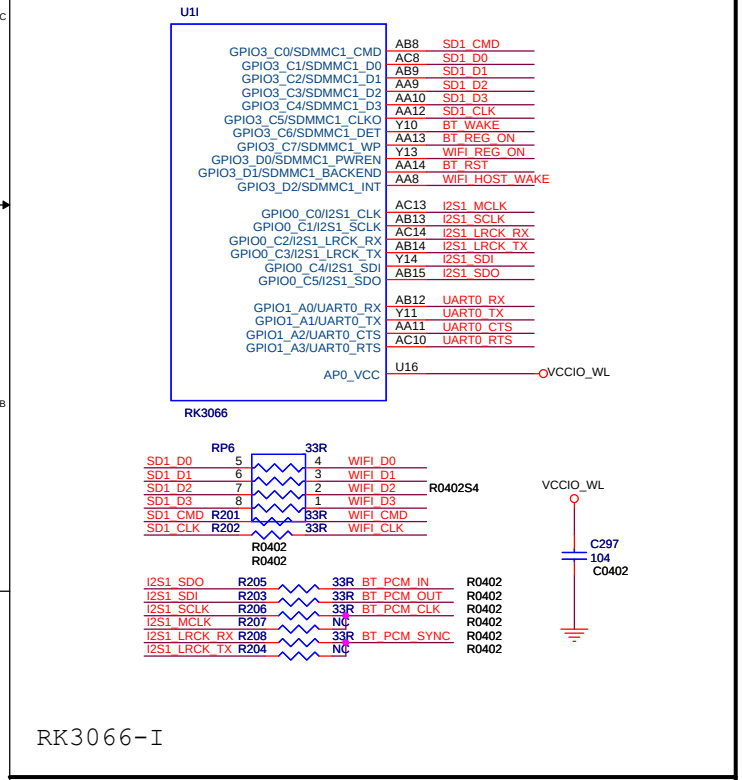
IR RECEIVE

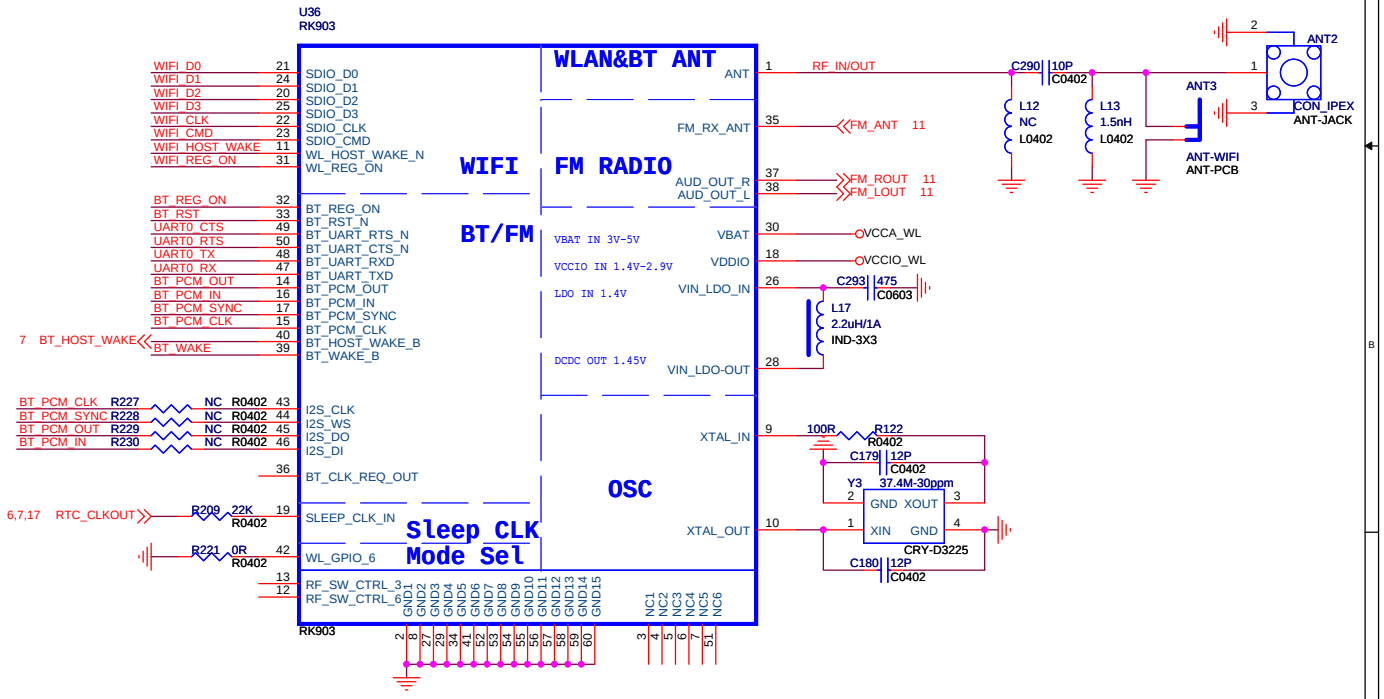
福州瑞芯微电子有限公司

Title:	Camera/G_Sensor/Key/COMP/IR
File:	RK3066_REF_2CELL
REV:	1.0
Create Date:	Friday, October 15, 2010
Page Num:	15
Modify Date:	Wednesday, February 22, 2012
Page Total:	17



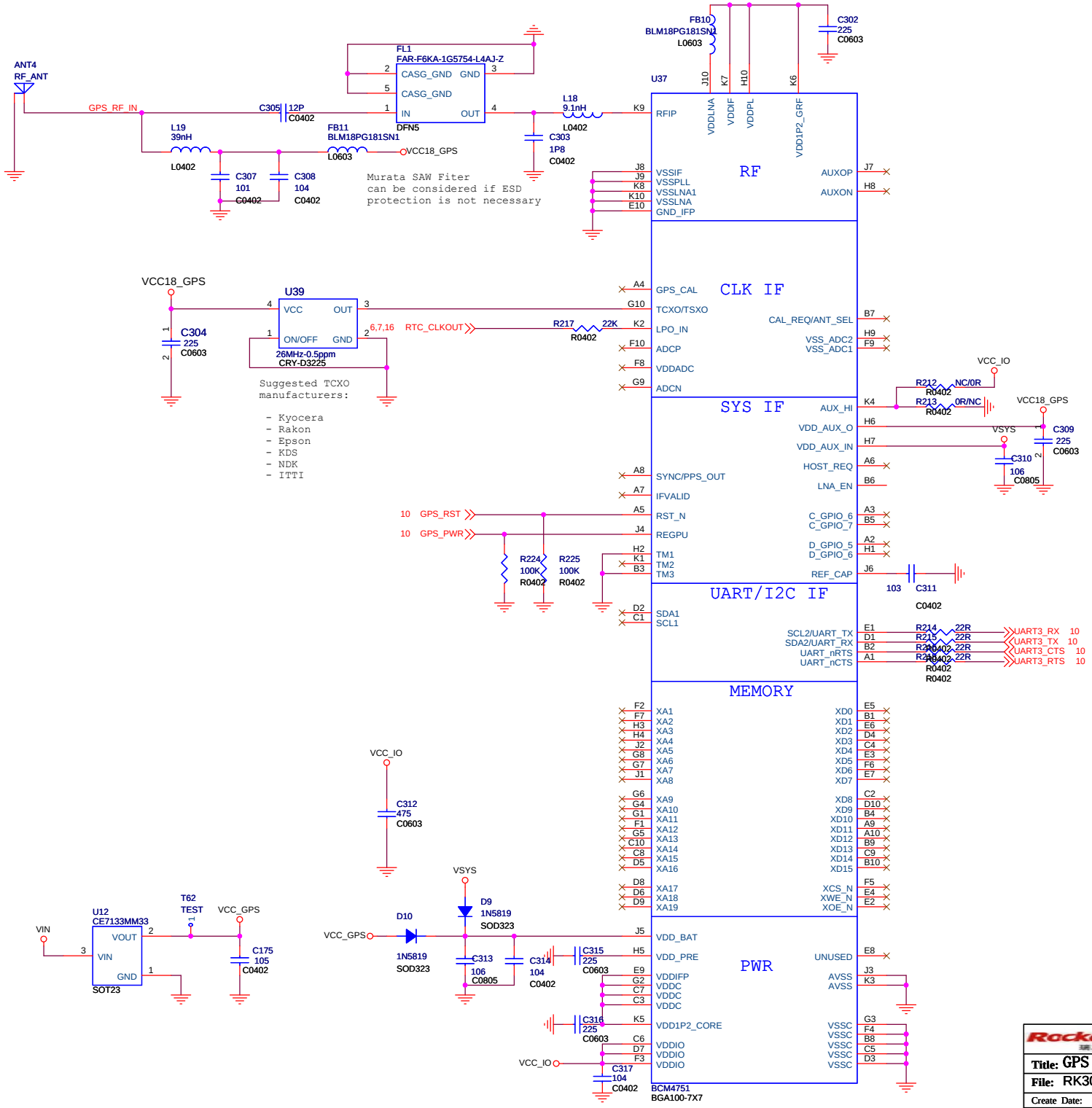






Note :PLS design the RF under RK RF LAYOUT guide;
For more suggestions, please refer to the SPEC
of the wireless IC

Rockchip 瑞芯微电子	福州瑞芯微电子有限公司
Title:	WIFI/3G
File:	RK3066_REF_2CELL REV:1.0
Create Date: Friday, October 15, 2010	Page Num:16
Modify Date: Wednesday, February 22, 2012	Page Total:17



福州瑞芯微电子有限公司

Title: GPS		
File: RK3066_REF_2CELL		REV:1.0
Create Date: Thursday, November 24, 2011	Page Num:17	
Modify Date: Wednesday, February 22, 2012	Page Total:17	