REV A	PD Keyboard evaluate version
V1.1	Official version
V2.0	1. 修改键盘主控方案为CH582M 2. STM32驱动屏幕
V2.1	1. Fix 5V buck bug 2. 12V buck改成一直使能 3. Fix LCD bias bug 4. 副屏背光微调 5. ip2368电路微调，增加供电脚电容 6. 修改电池接口定义 7. 去掉rk3399端的vbat sns

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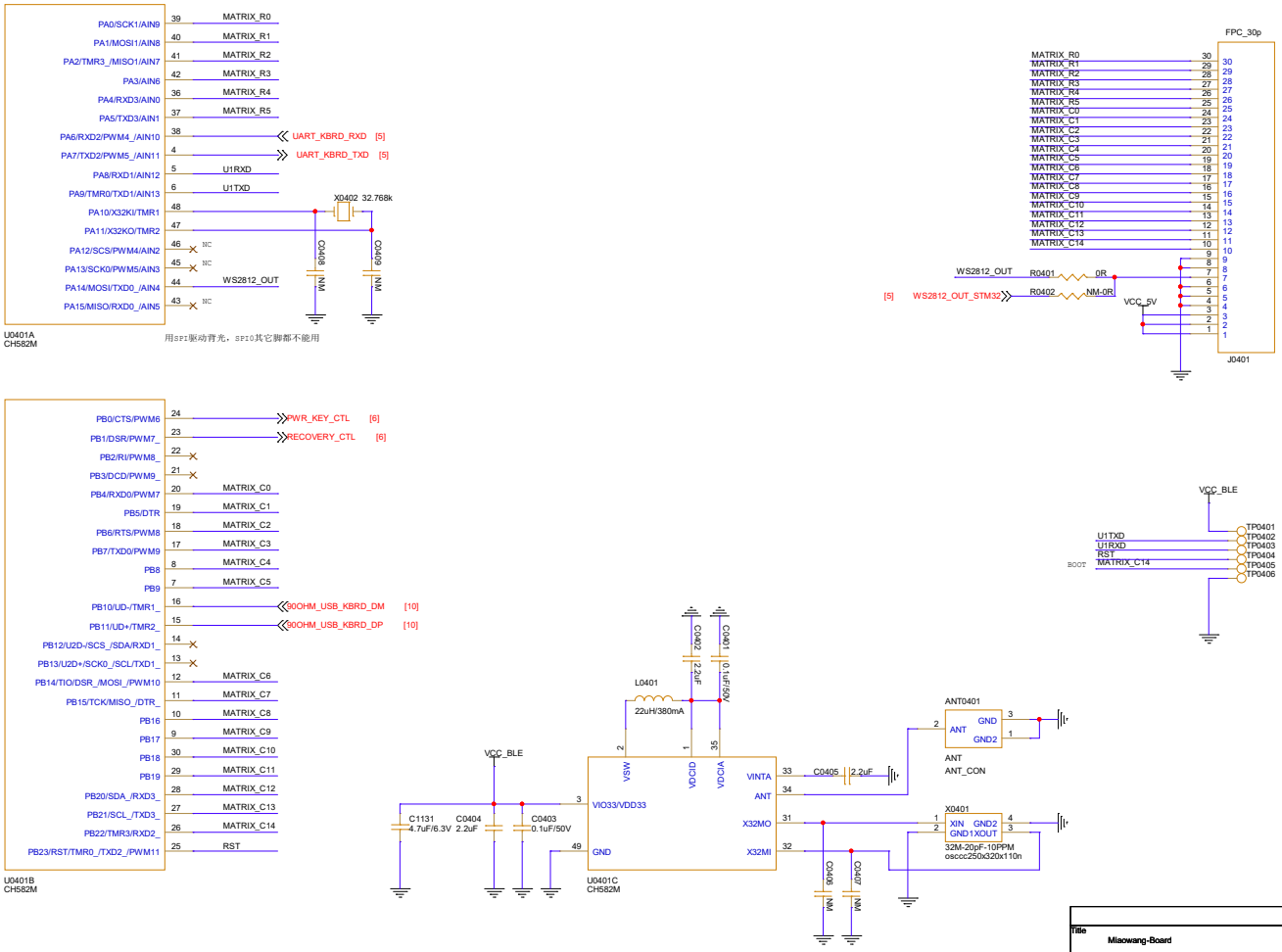

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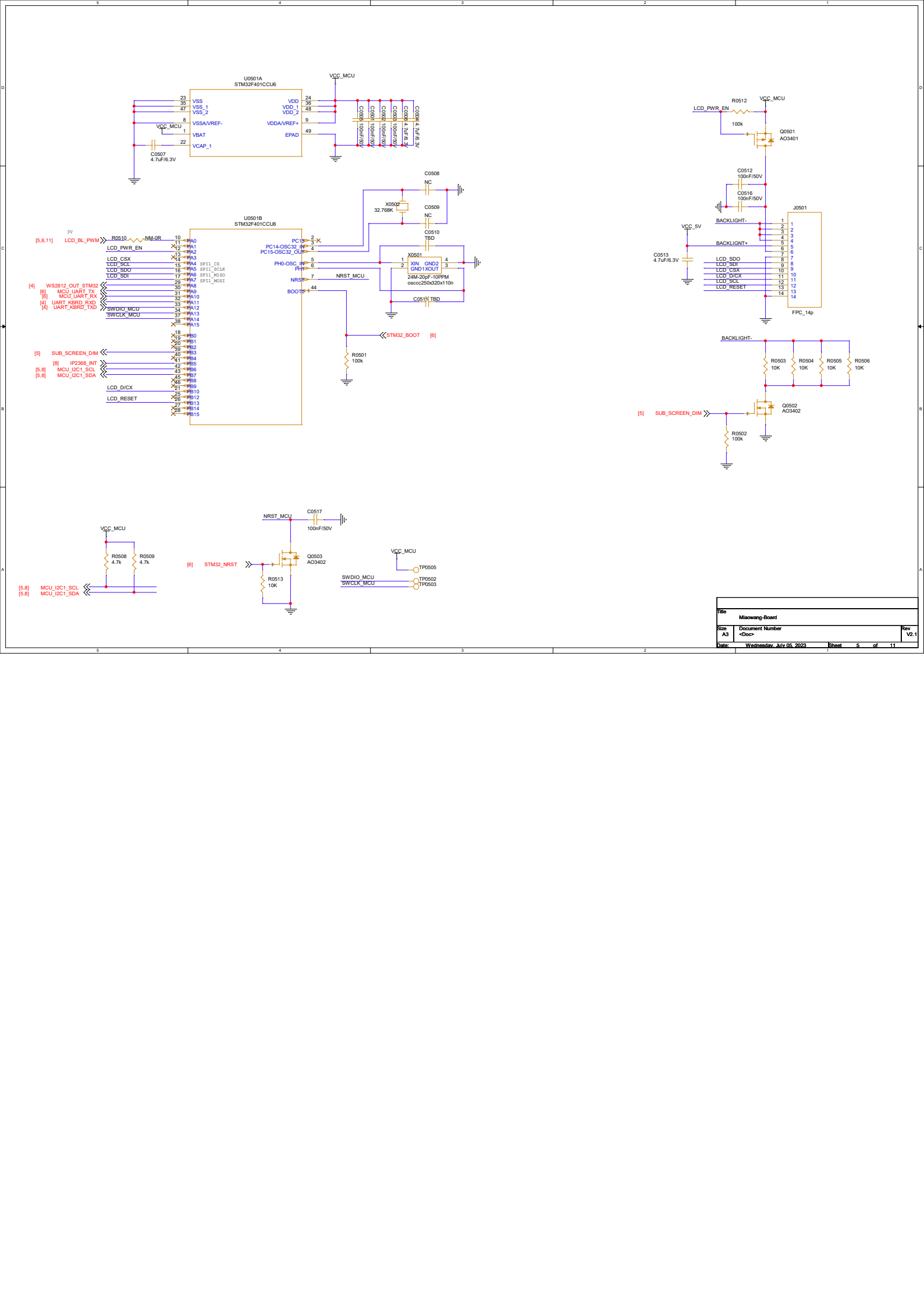

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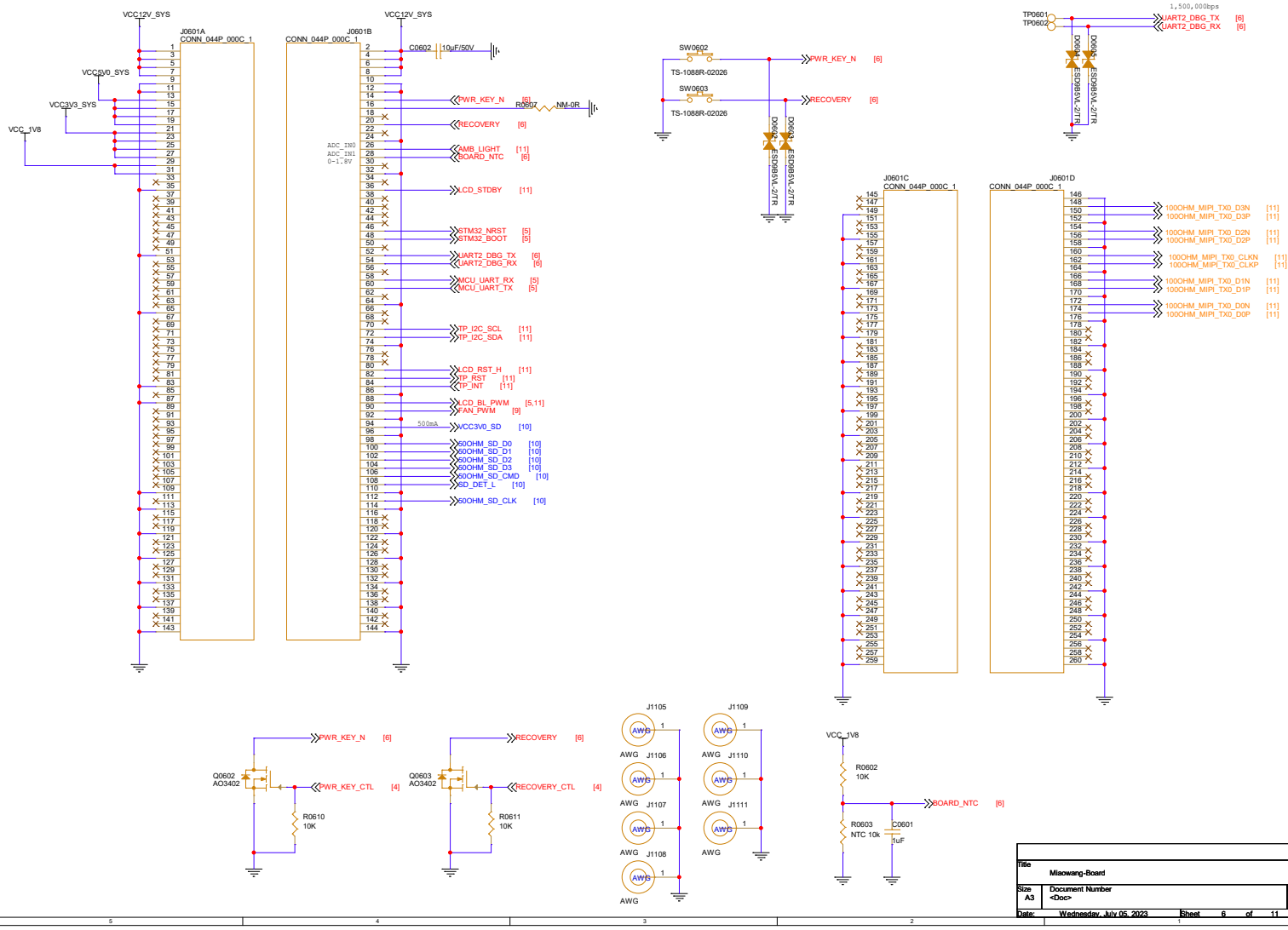

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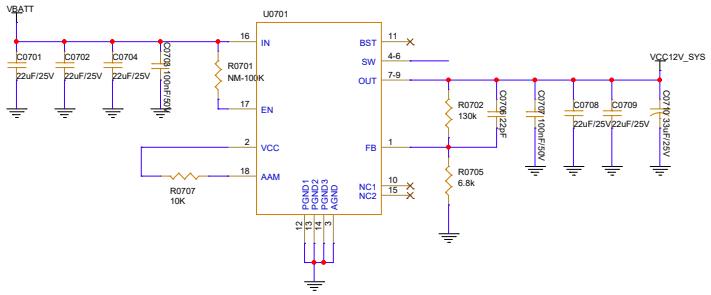

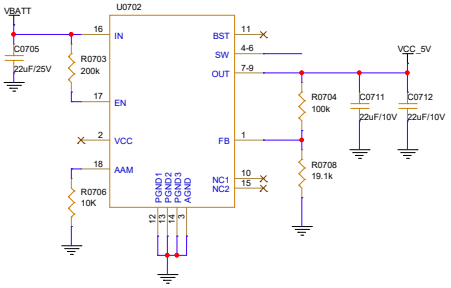

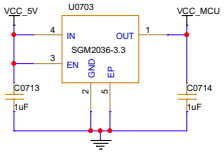

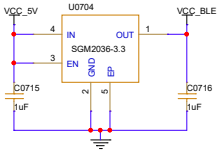

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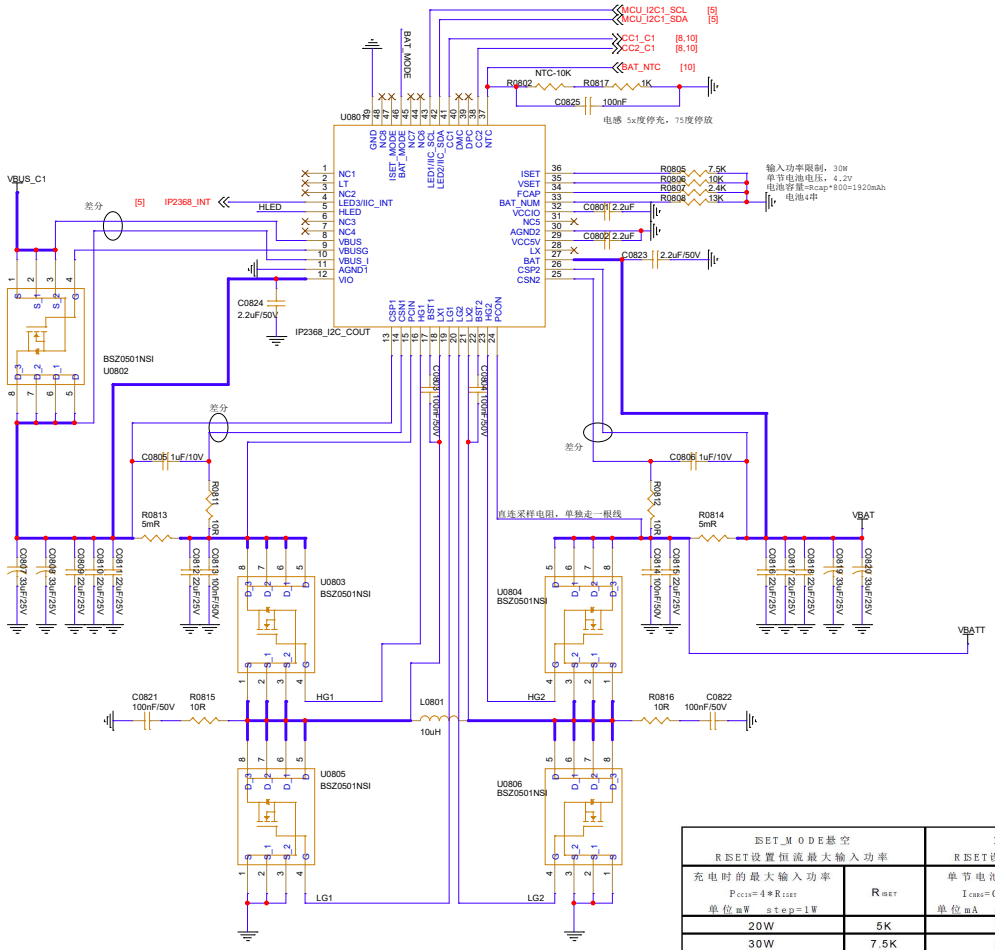

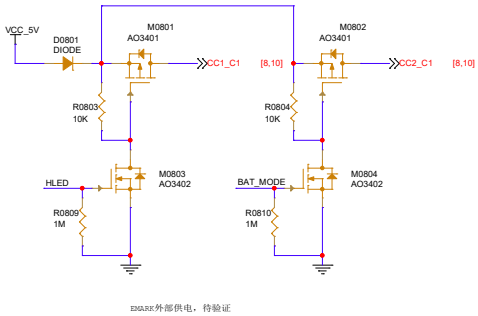

EMARK外部供电，待验证

R_{BAT_NUM}（欧姆）	设定电池串联节数（串）
6.2k	2串
9.1k	3串
13k	4串
18k	5串
27k	6串

RBAT_MODE悬空,普通锂电池		RBAT_MODE接地,磷酸铁锂电池	
单节电池充满电压 $V_{TSET}=4000+0.02*R_{VSET}$ 单位mV step=10mV	R_{VSET}	单节电池充满电压 $V_{TSET}=3500+0.01*R_{VSET}$ 单位mV step=10mV	R_{VSET}
4.15V	7.5K	3.55V	5K
4.20V	10K	3.60V	10K
4.30V	15K	3.65V	15K
4.35V	17.5K	3.70V	≥20K
4.40V	≥20K		

ISET_MODE悬空 RISET设置恒流最大输入功率		ISET_MODE接地 RISET设置恒流最大电池电流	
充电时的最大输入功率 $P_{CCLK}=4*R_{ISET}$ 单位mW step=1W	R_{ISET}	单节电池充满电压 $I_{CHRG}=0.2*R_{ISET}$ 单位mA step=100mA	R_{ISET}
20W	5K	1A	5K
30W	7.5K	2A	10K
45W	11.2K	2.5A	12.5K
60W	15K	3A	15K
100W	≥25K	5A	≥25K

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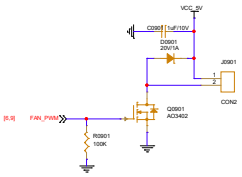

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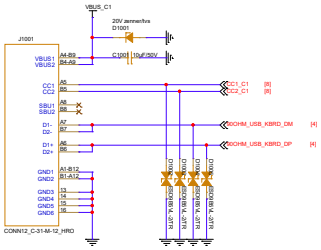

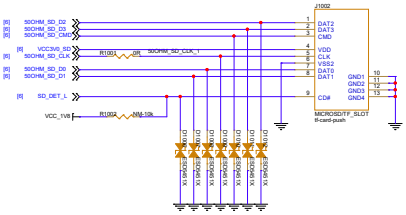

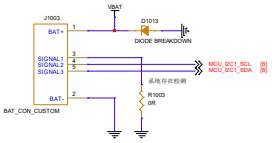

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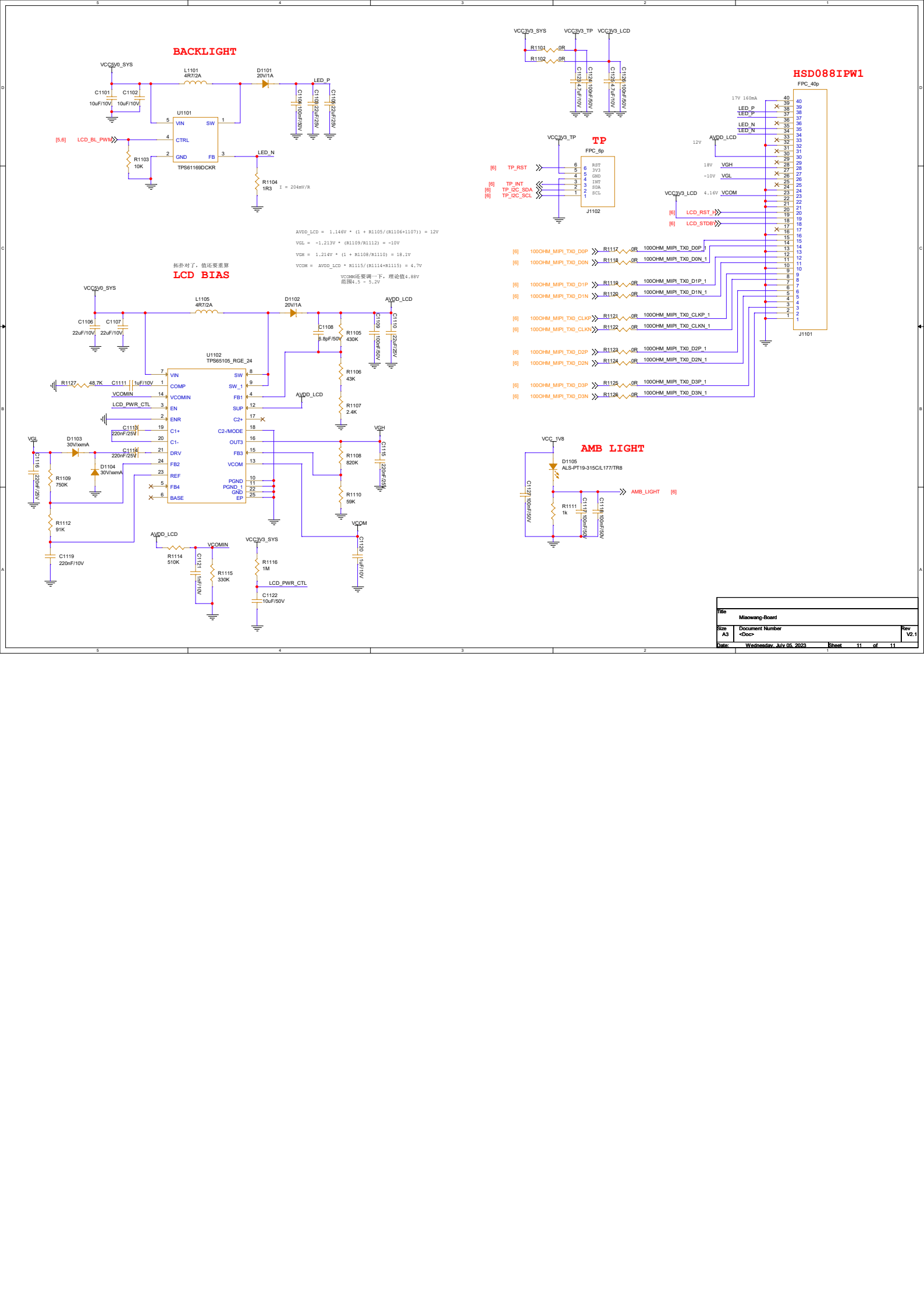
BACKLIGHT
VCC5V0_SYS
L1101
4R7/2A
D1101
20V/1A
LED_P
C1101
10uF/10V
C1102
10uF/10V
C1103
100nF/50V
C1104
22uF/25V
C1105
22uF/25V
U1101
VIN
SW
CTRL
GND
FB
TPS61169DCKR
[5,6]
LCD_BL_PWM
R1103
10K
LED_N
R1104
1R3
I = 204mV/R
AVDD_LCD = 1.146V * (1 + R1105/(R1106+1107)) = 12V
VGL = -1.213V * (R1109/R1112) = -10V
VGH = 1.214V * (1 + R1108/R1110) = 18.1V
VCOM = AVDD_LCD * R1115/(R1114+R1115) = 4.7V
拓扑对了，值还要重算
LCD BIAS
VCOM还要调一下，理论值4.88V
范围4.5 ~ 5.2V
VCC5V0_SYS
L1105
4R7/2A
D1102
20V/1A
AVDD_LCD
C1106
22uF/10V
C1107
22uF/10V
C1108
6.8pF/50V
R1105
430K
C1109
100nF/50V
C1110
22uF/25V
U1102
TPS65105_RGE_24
VIN
COMP
VCOMIN
EN
ENR
C1+
C1-
DRV
FB2
REF
FB4
BASE
SW
SW_1
FB1
SUP
C2+
C2-/MODE
OUT3
FB3
VCOM
PGND
PGND_1
GND
EP
R1127
48.7K
C1111
1uF/10V
VCOMIN
LCD_PWR_CTL
R1106
43K
R1107
2.4K
C1113
220nF/25V
C1114
220nF/25V
VGL
D1103
30V/xxmA
D1104
30V/xxmA
C1116
220nF/25V
R1109
750K
R1112
91K
C1119
220nF/10V
VGH
C1115
220nF/25V
R1108
820K
R1110
59K
VCOM
C1120
1uF/10V
AVDD_LCD
R1114
510K
VCOMIN
C1121
1nF/10V
R1115
330K
VCC3V3_SYS
R1116
1M
LCD_PWR_CTL
C1122
10uF/50V
VCC3V3_SYS
VCC3V3_TP
VCC3V3_LCD
R1101
0R
R1102
0R
C1123
4.7uF/10V
C1124
100nF/50V
C1125
4.7uF/10V
C1126
100nF/50V
TP
VCC3V3_TP
FPC_6p
[6]
TP_RST
[6]
TP_INT
[6]
TP_I2C_SDA
[6]
TP_I2C_SCL
RST
3V3
GND
INT
SDA
SCL
J1102
HSD088IPW1
FPC_40p
17V 160mA
LED_P
LED_P
LED_N
LED_N
12V
AVDD_LCD
18V
VGH
-10V
VGL
VCC3V3_LCD
4.16V
VCOM
[6]
LCD_RST_1
[6]
LCD_STDBY
J1101
[6]
100OHM_MIPI_TX0_D0P
R1117
0R
100OHM_MIPI_TX0_D0P_1
[6]
100OHM_MIPI_TX0_D0N
R1118
0R
100OHM_MIPI_TX0_D0N_1
[6]
100OHM_MIPI_TX0_D1P
R1119
0R
100OHM_MIPI_TX0_D1P_1
[6]
100OHM_MIPI_TX0_D1N
R1120
0R
100OHM_MIPI_TX0_D1N_1
[6]
100OHM_MIPI_TX0_CLKP
R1121
0R
100OHM_MIPI_TX0_CLKP_1
[6]
100OHM_MIPI_TX0_CLKN
R1122
0R
100OHM_MIPI_TX0_CLKN_1
[6]
100OHM_MIPI_TX0_D2P
R1123
0R
100OHM_MIPI_TX0_D2P_1
[6]
100OHM_MIPI_TX0_D2N
R1124
0R
100OHM_MIPI_TX0_D2N_1
[6]
100OHM_MIPI_TX0_D3P
R1125
0R
100OHM_MIPI_TX0_D3P_1
[6]
100OHM_MIPI_TX0_D3N
R1126
0R
100OHM_MIPI_TX0_D3N_1
AMB LIGHT
VCC_1V8
D1105
ALS-PT19-315C/L177/TR8
AMB_LIGHT
[6]
C1127
100nF/50V
R1111
1k
C1118
100nF/50V
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