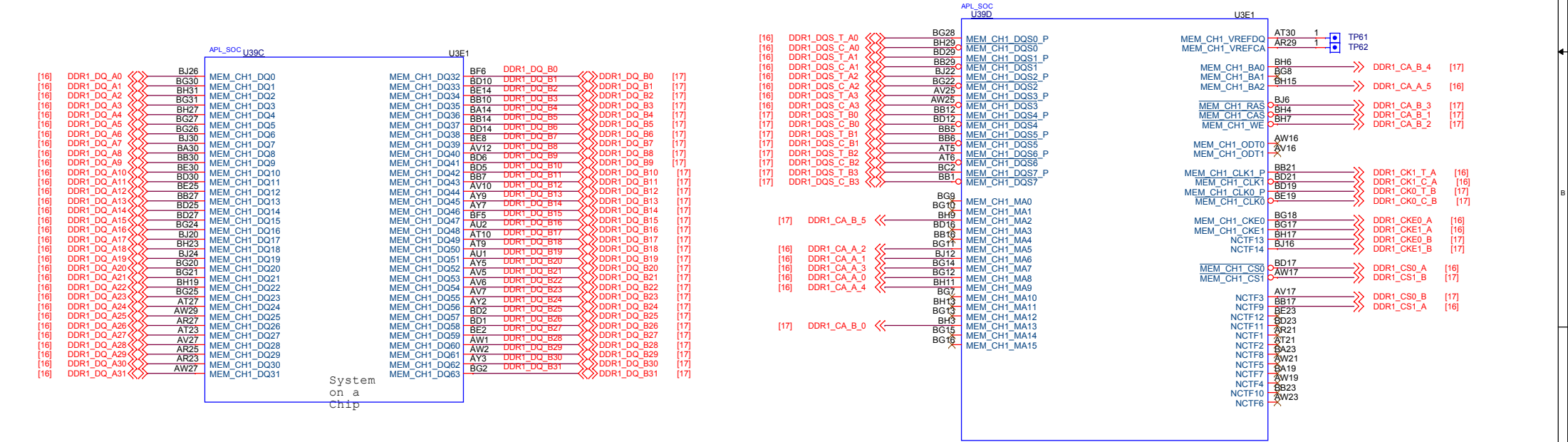
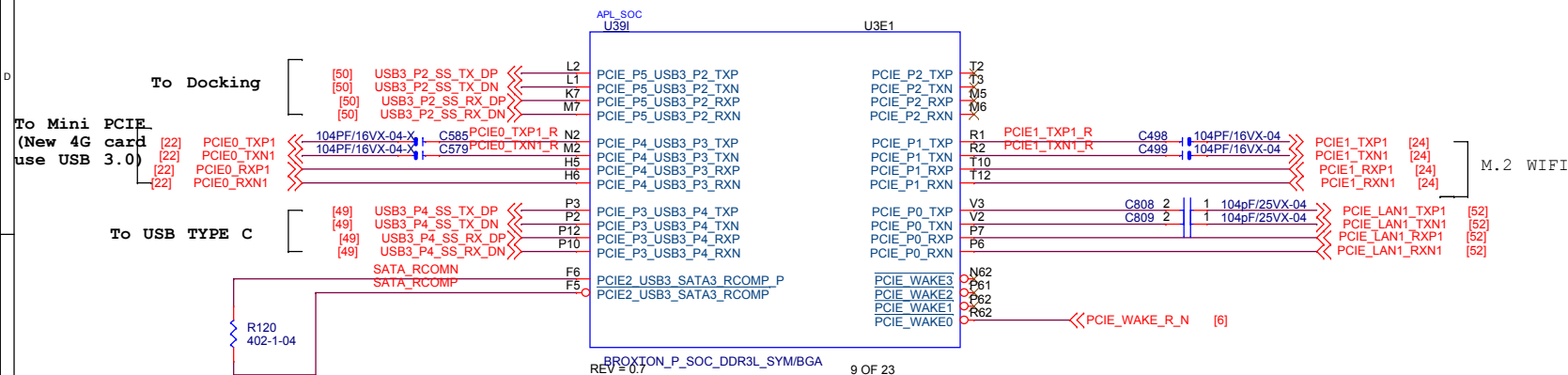




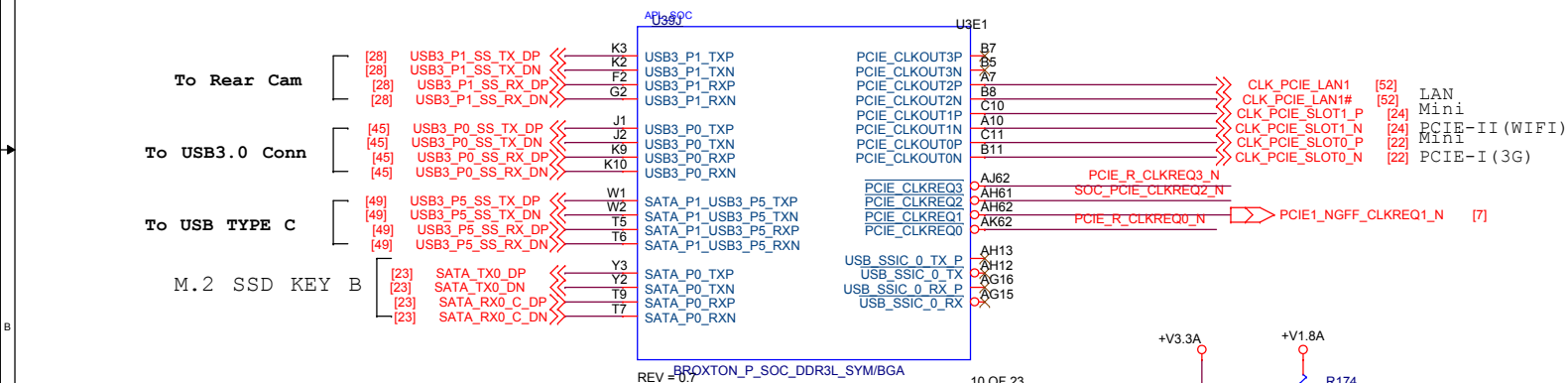
REV = 0.7



REV = 0.7



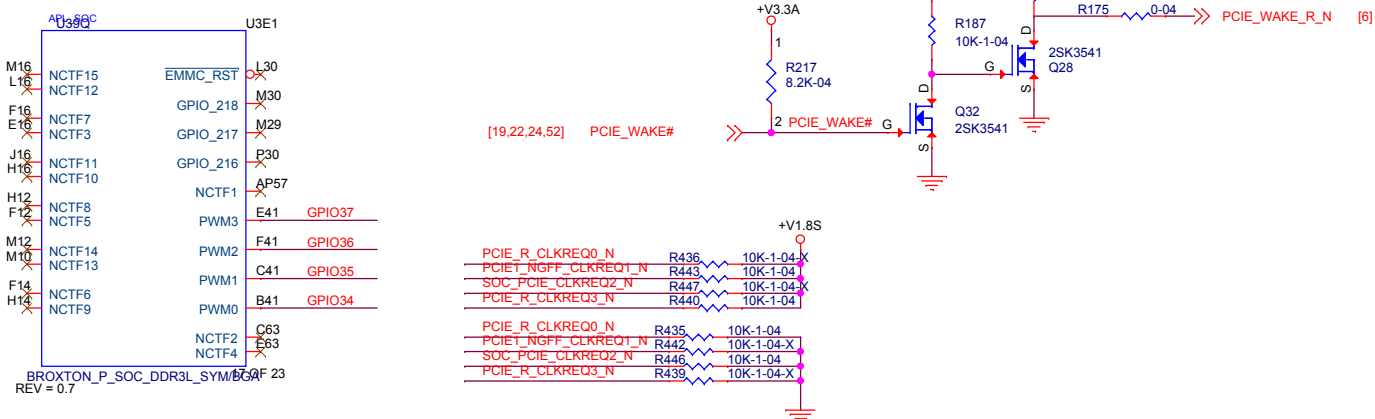
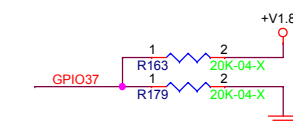
- Ensure that this strap is always pulled low for normal platform operation.

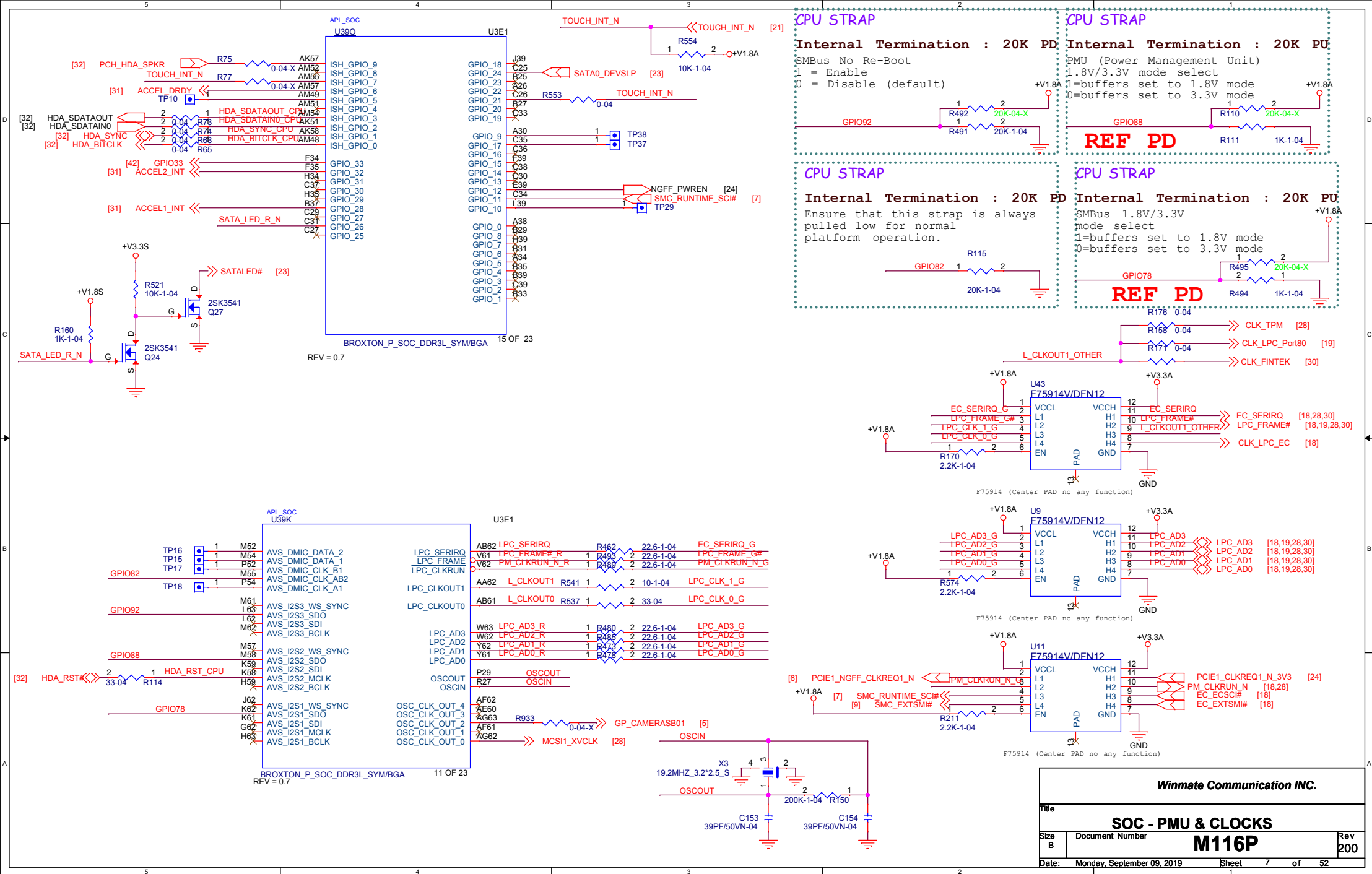


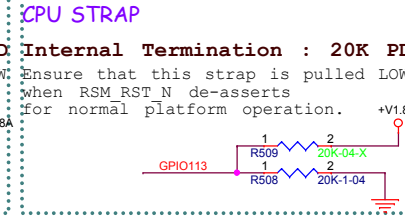
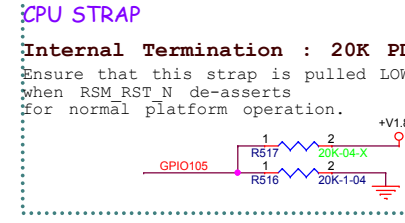
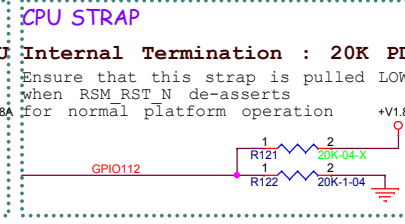
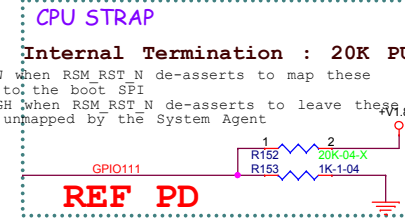
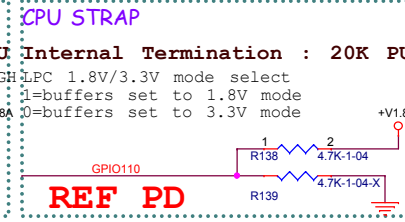
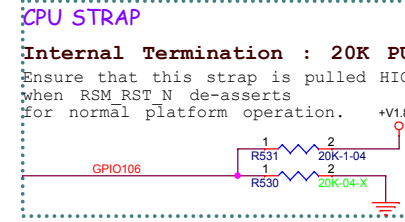
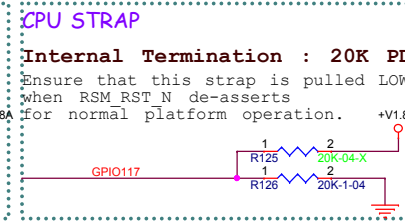
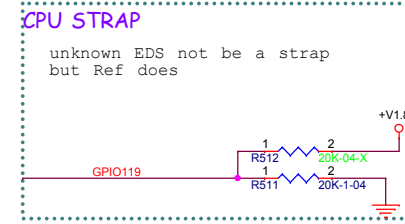
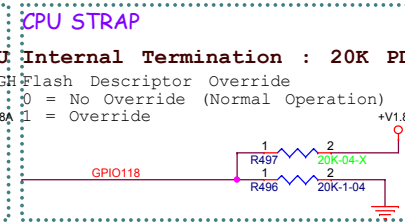
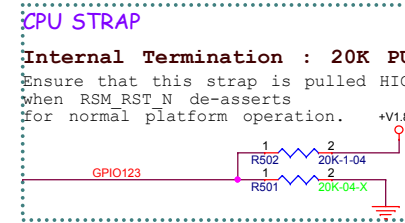
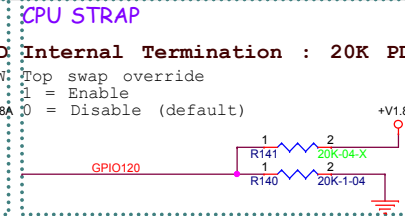
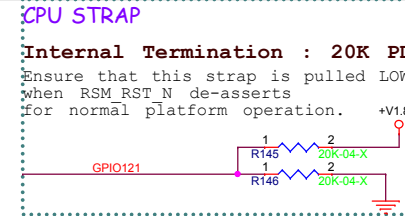
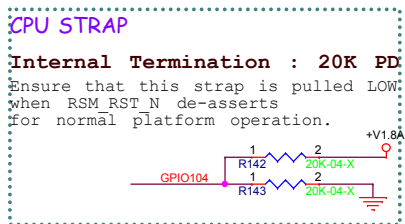
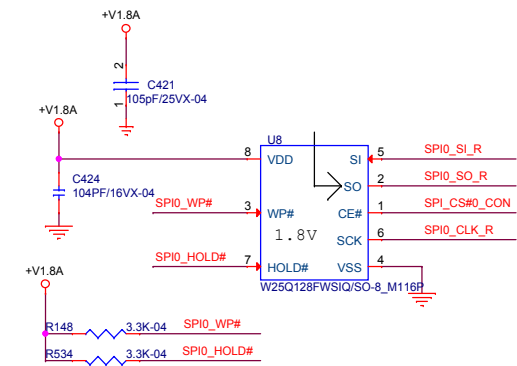
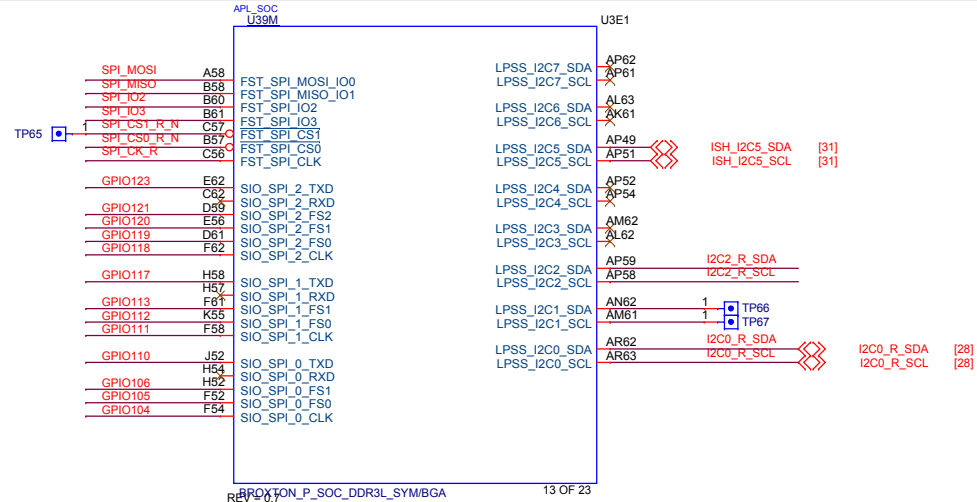
- Ensure that this strap is always pulled low for normal platform operation.

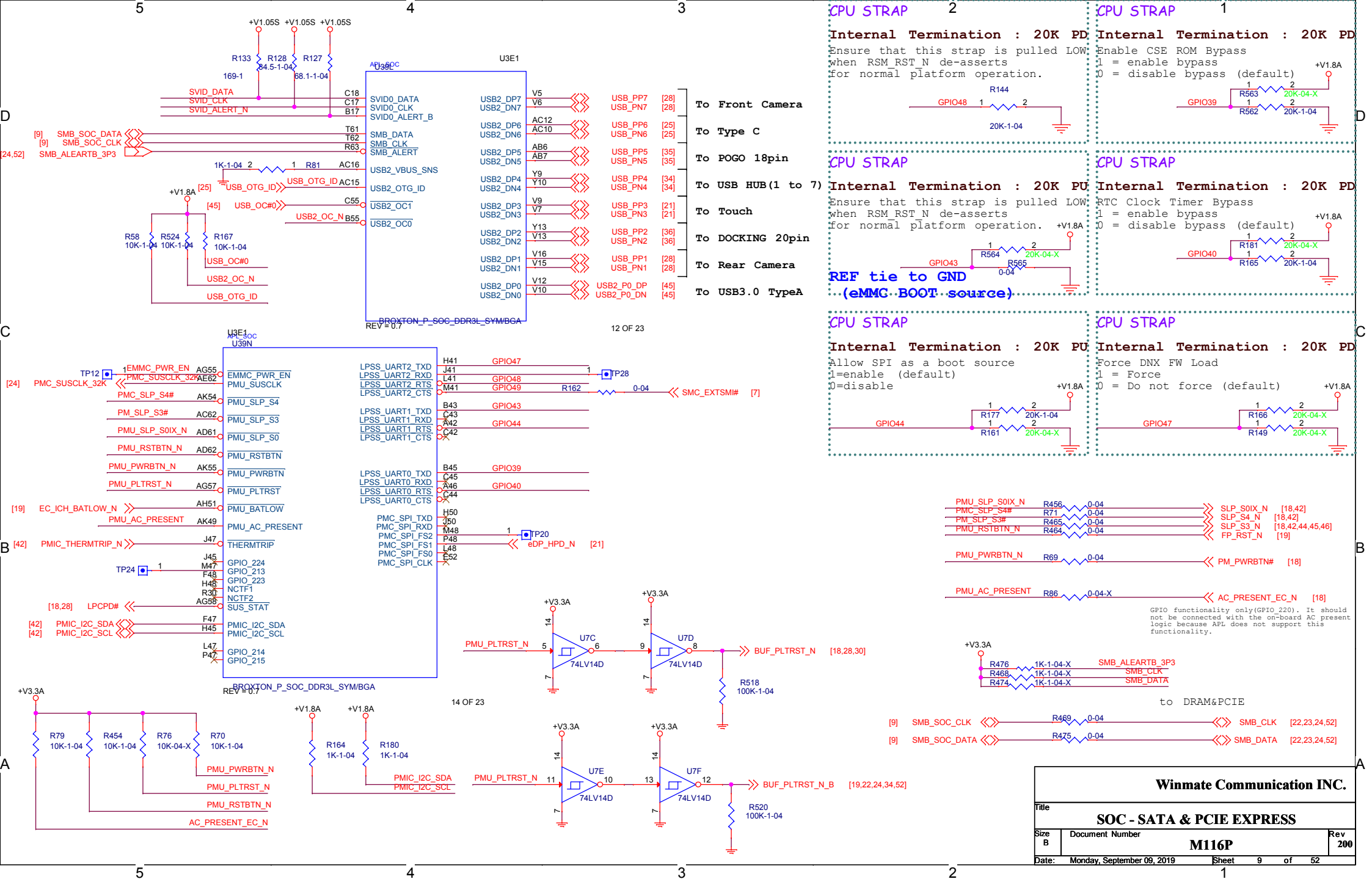


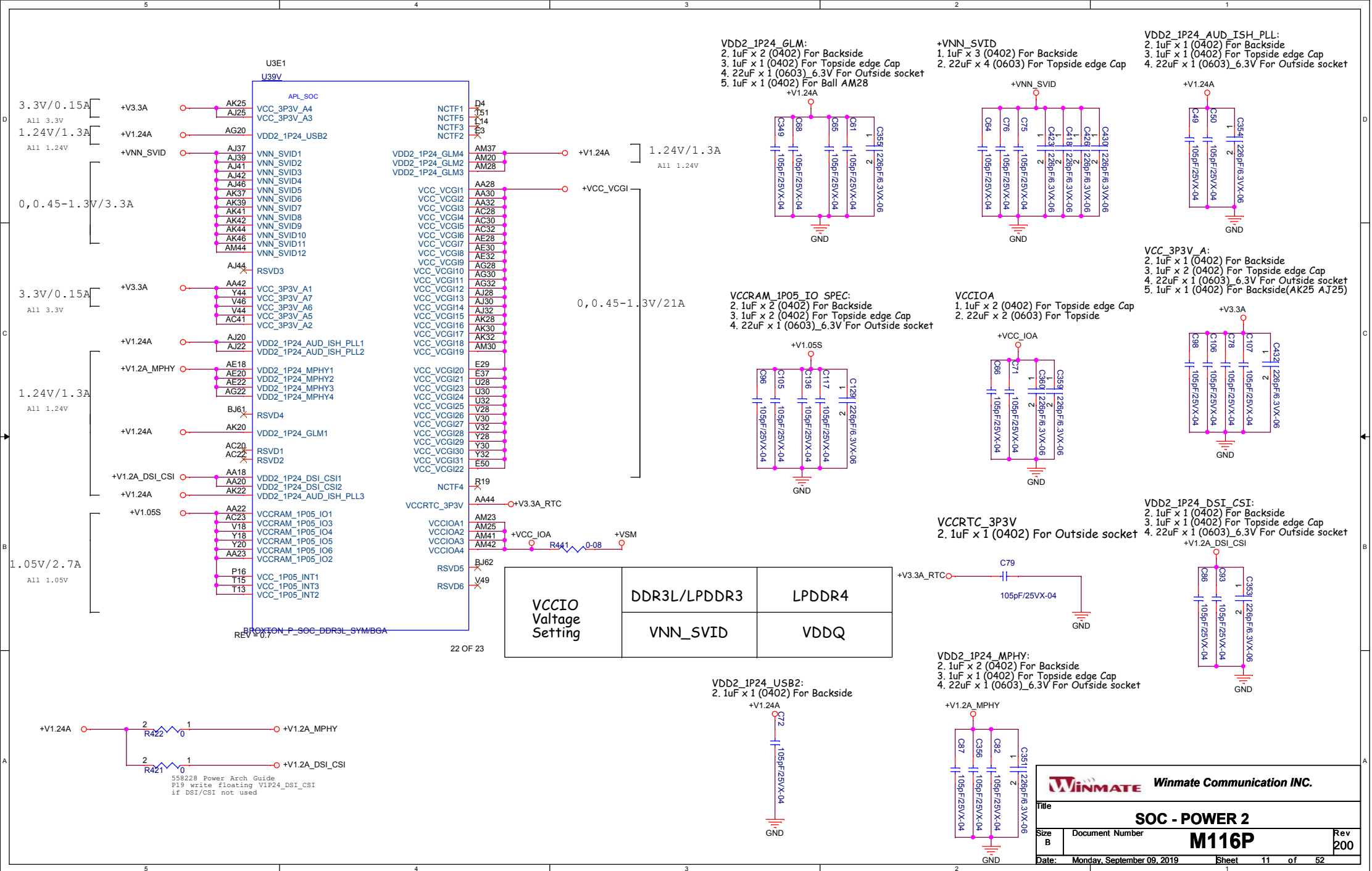
- Ensure that this strap is always pulled low for normal platform operation.

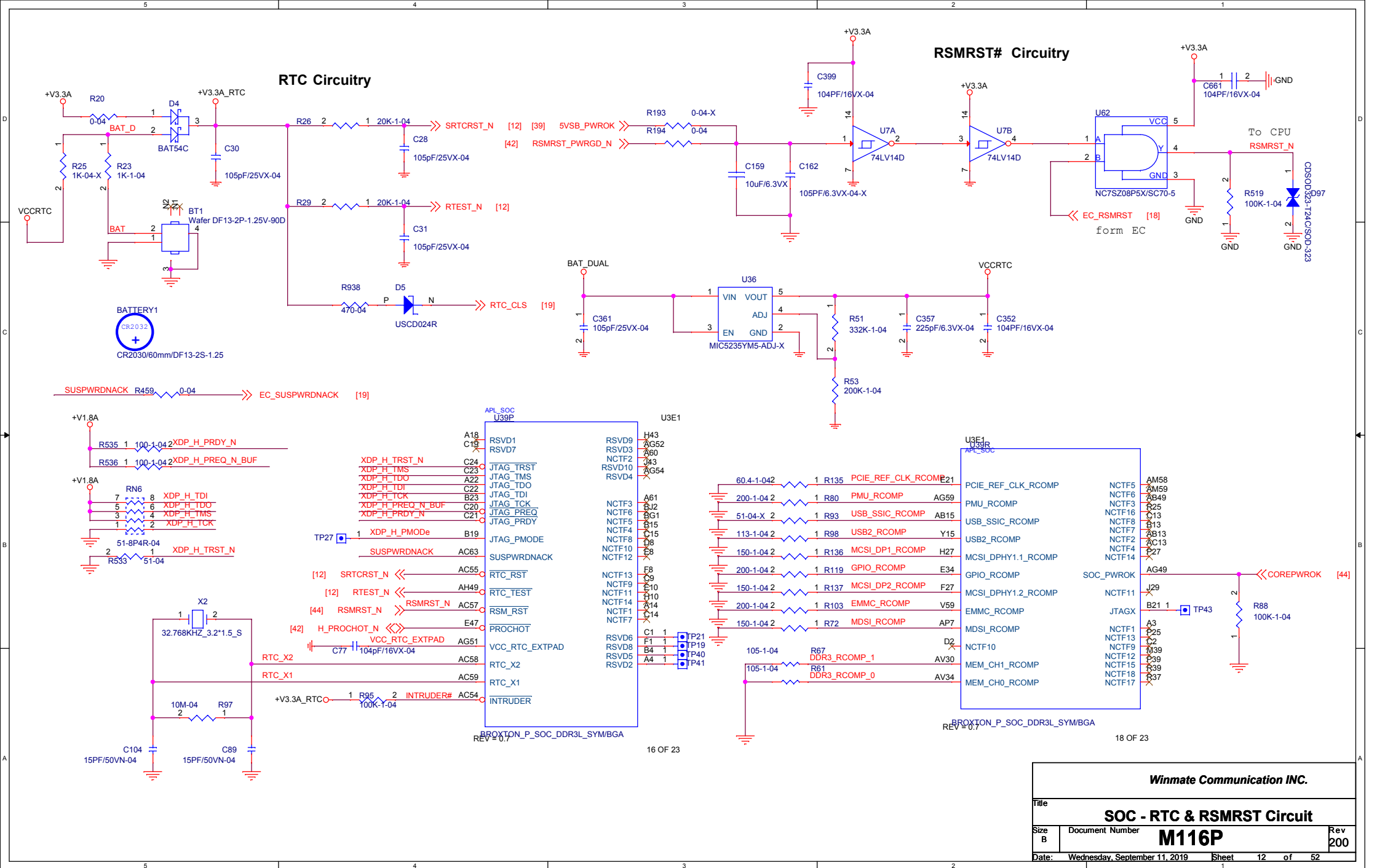


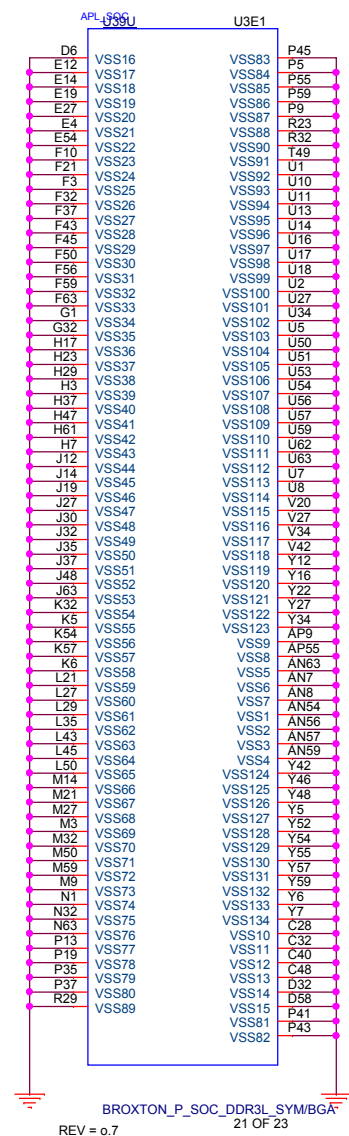
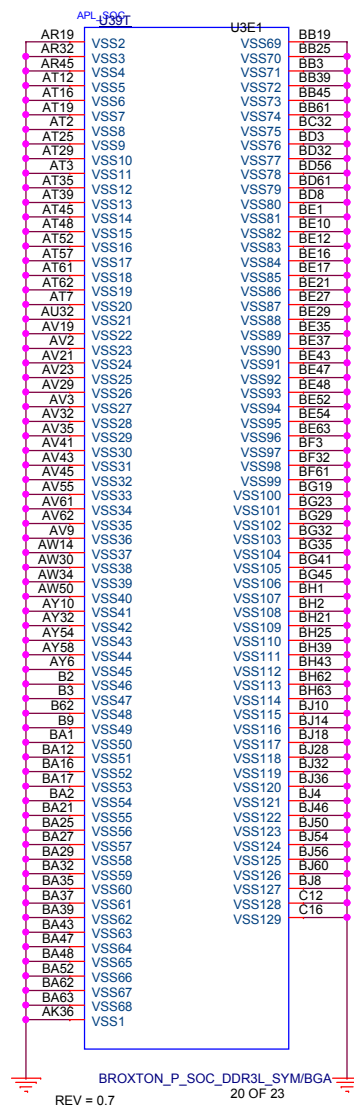
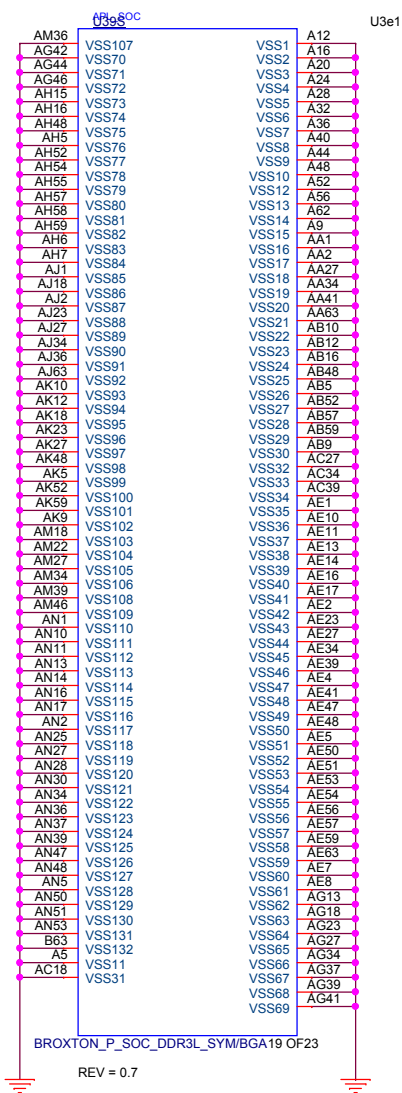


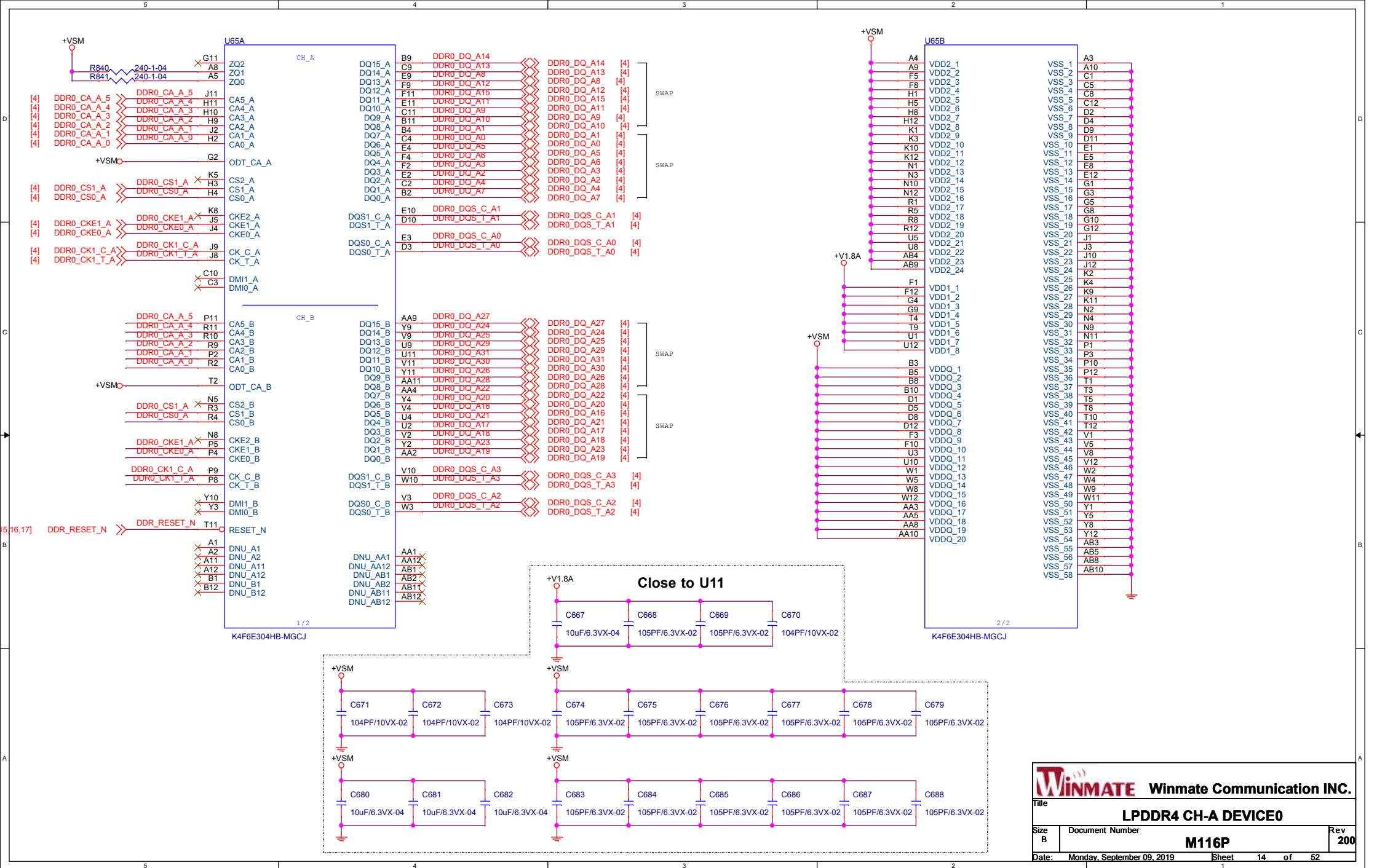


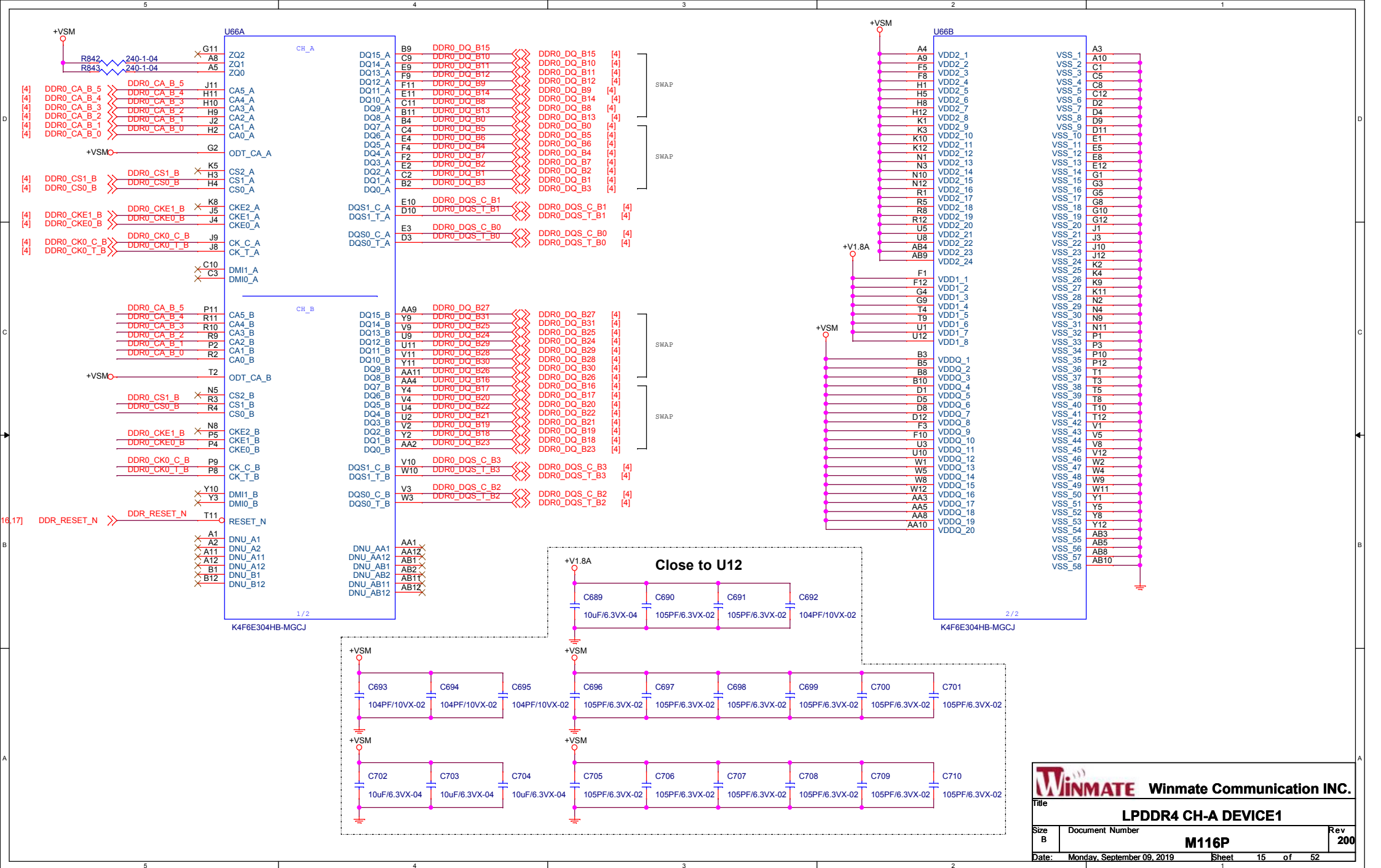


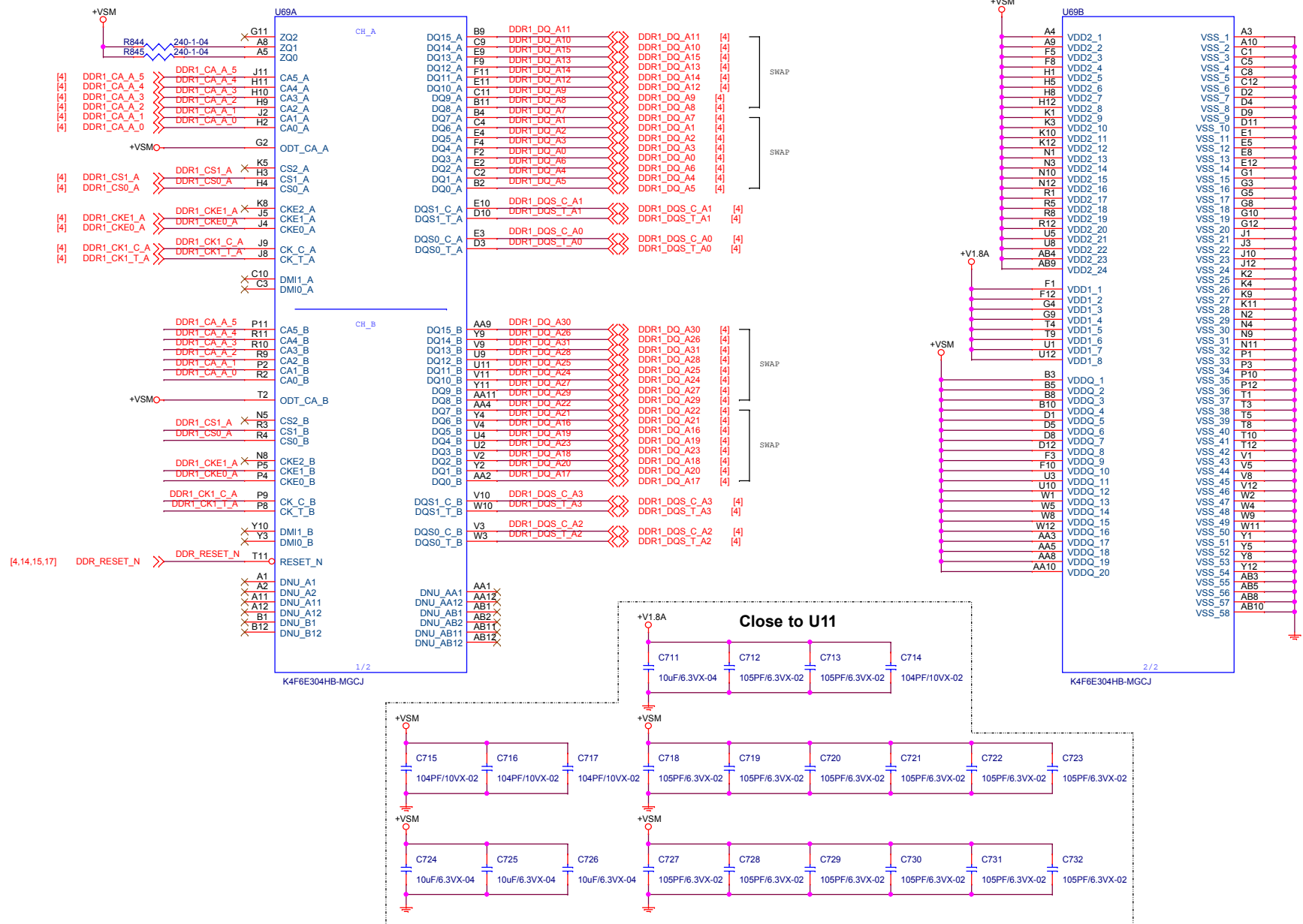


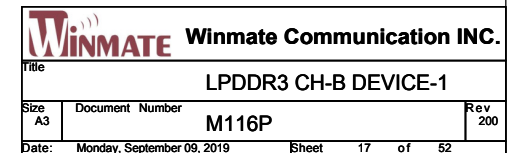


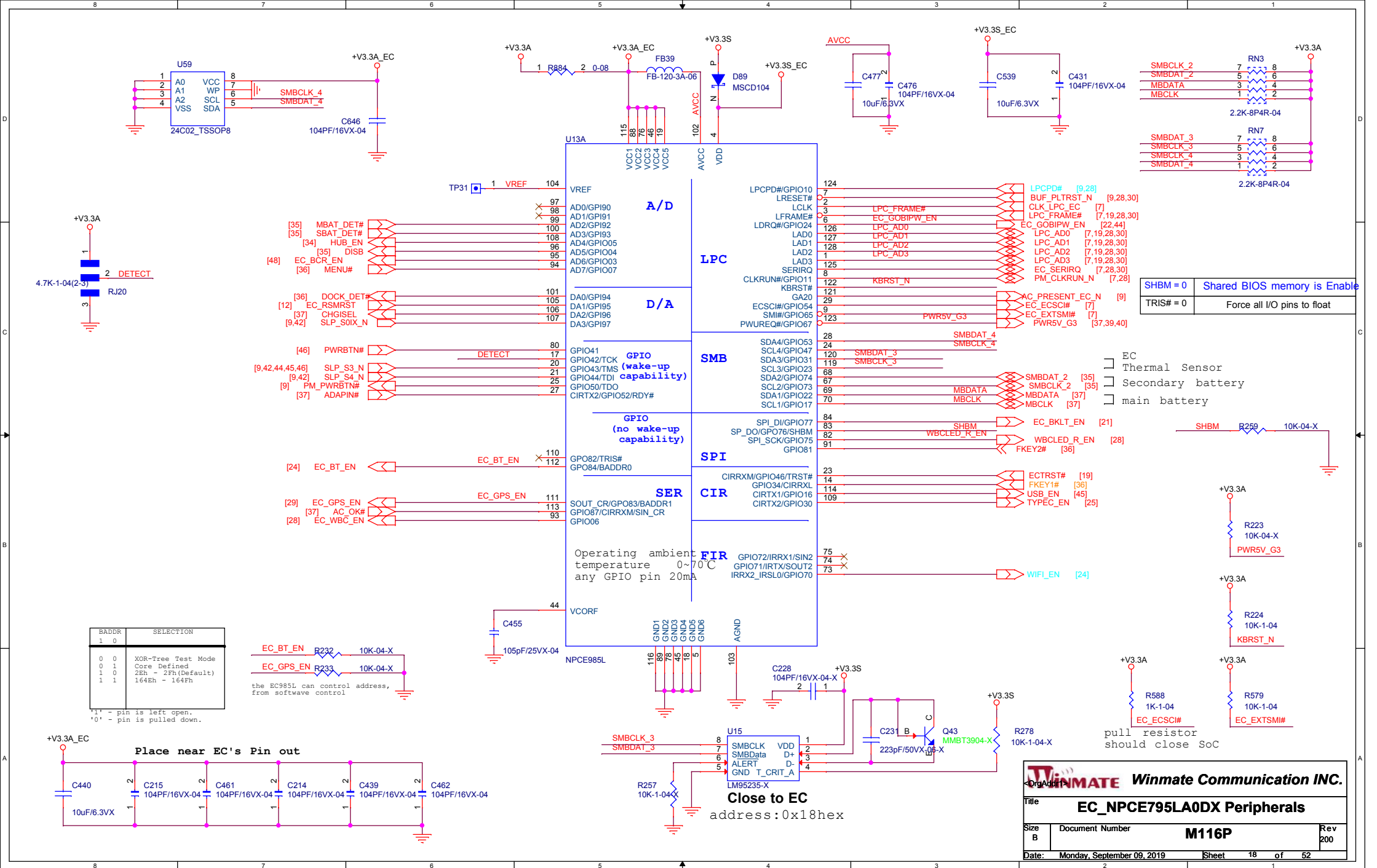


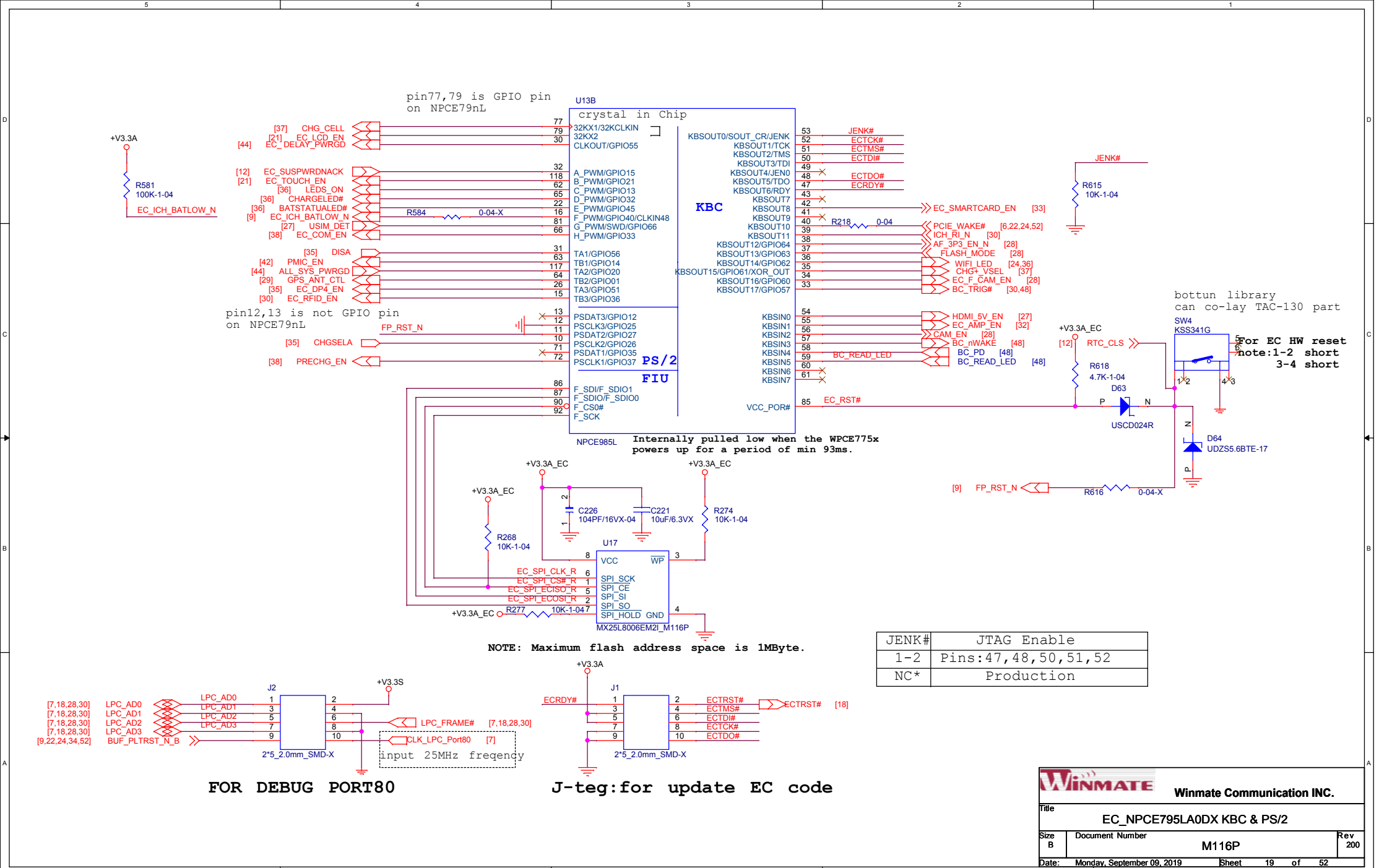


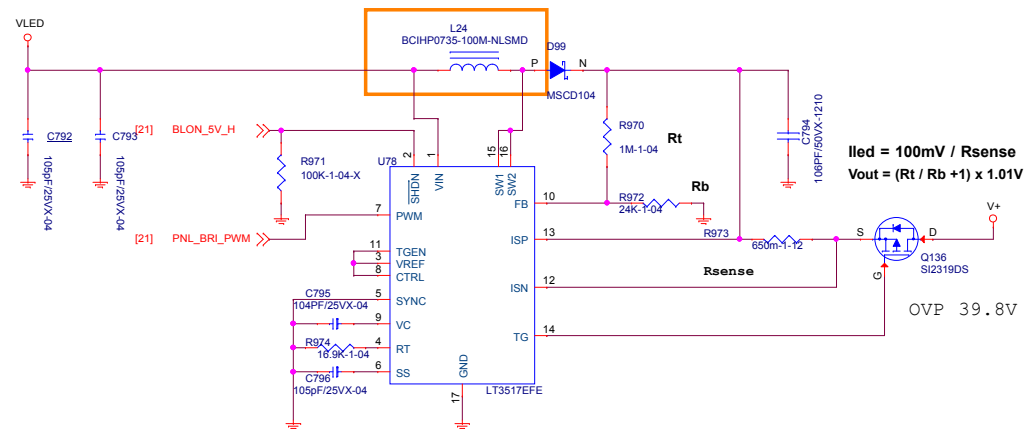






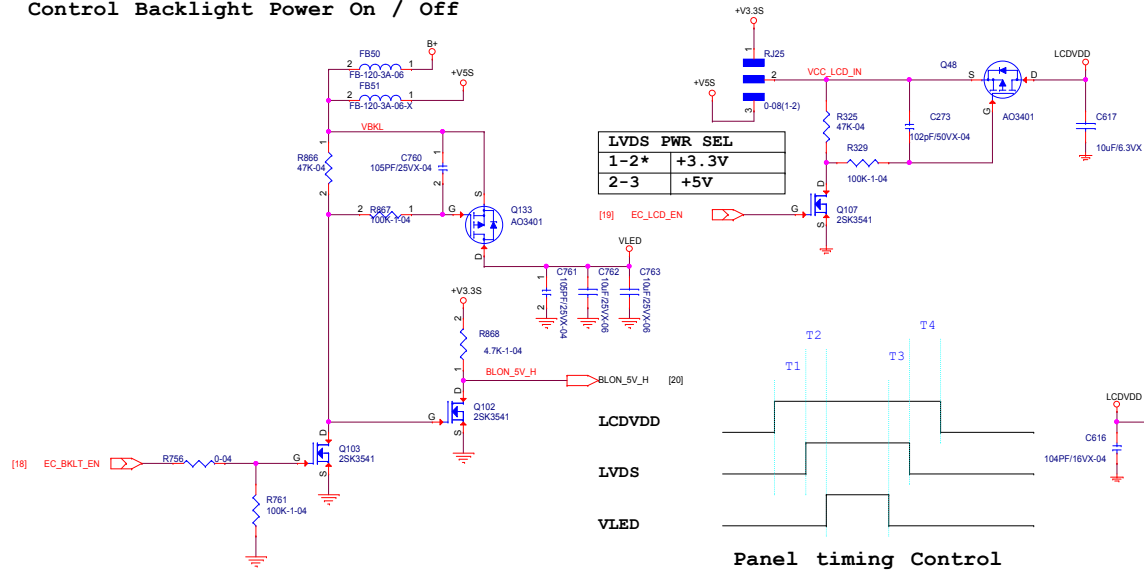




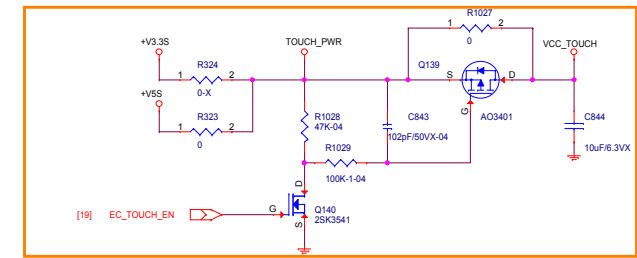
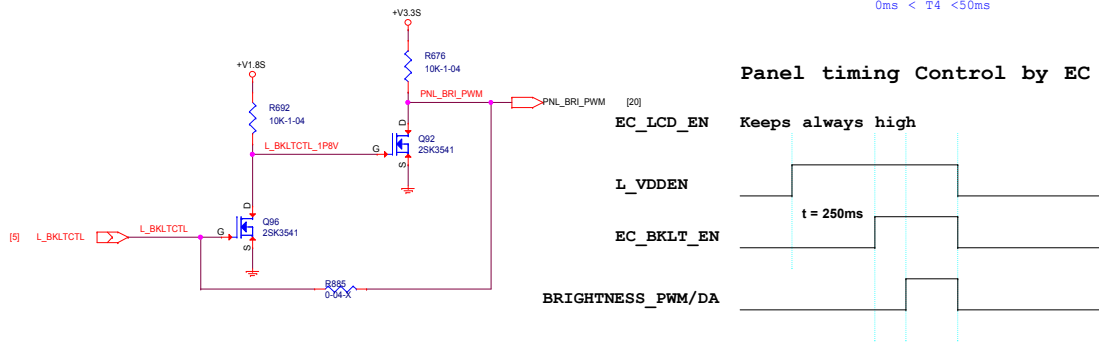


Winmate Communication INC.			
Title			
LED driver_LT3517			
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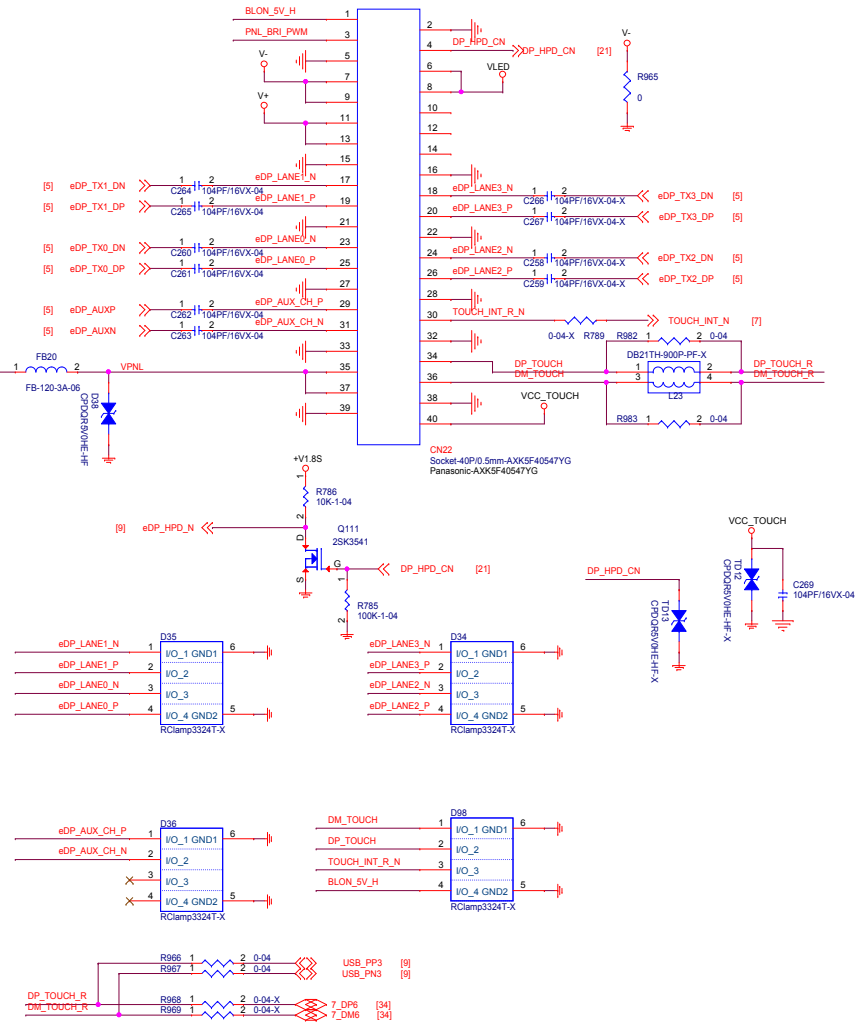
Control Backlight Power On / Off



Backlight Brightness Control

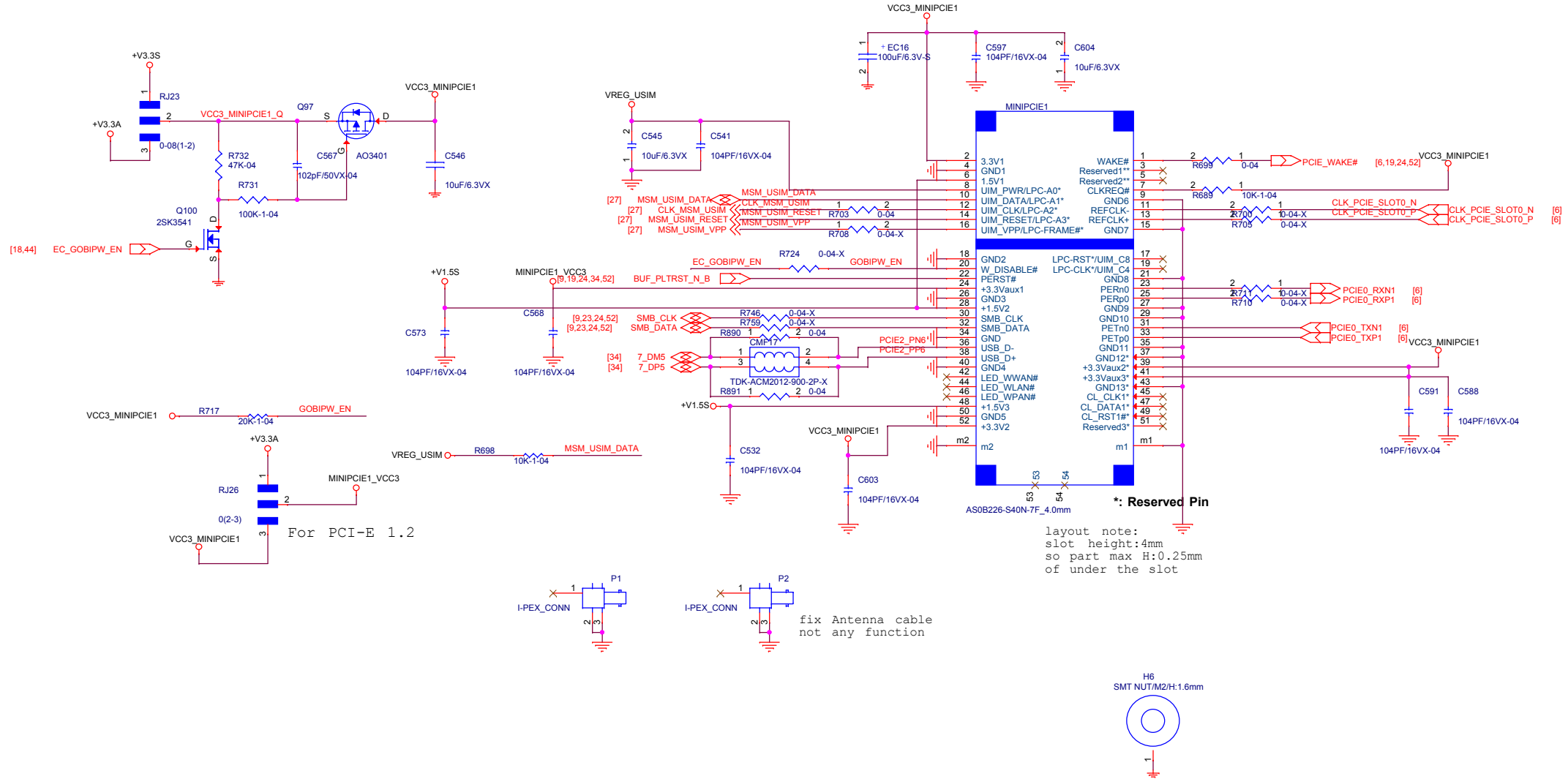


LVDS Connector

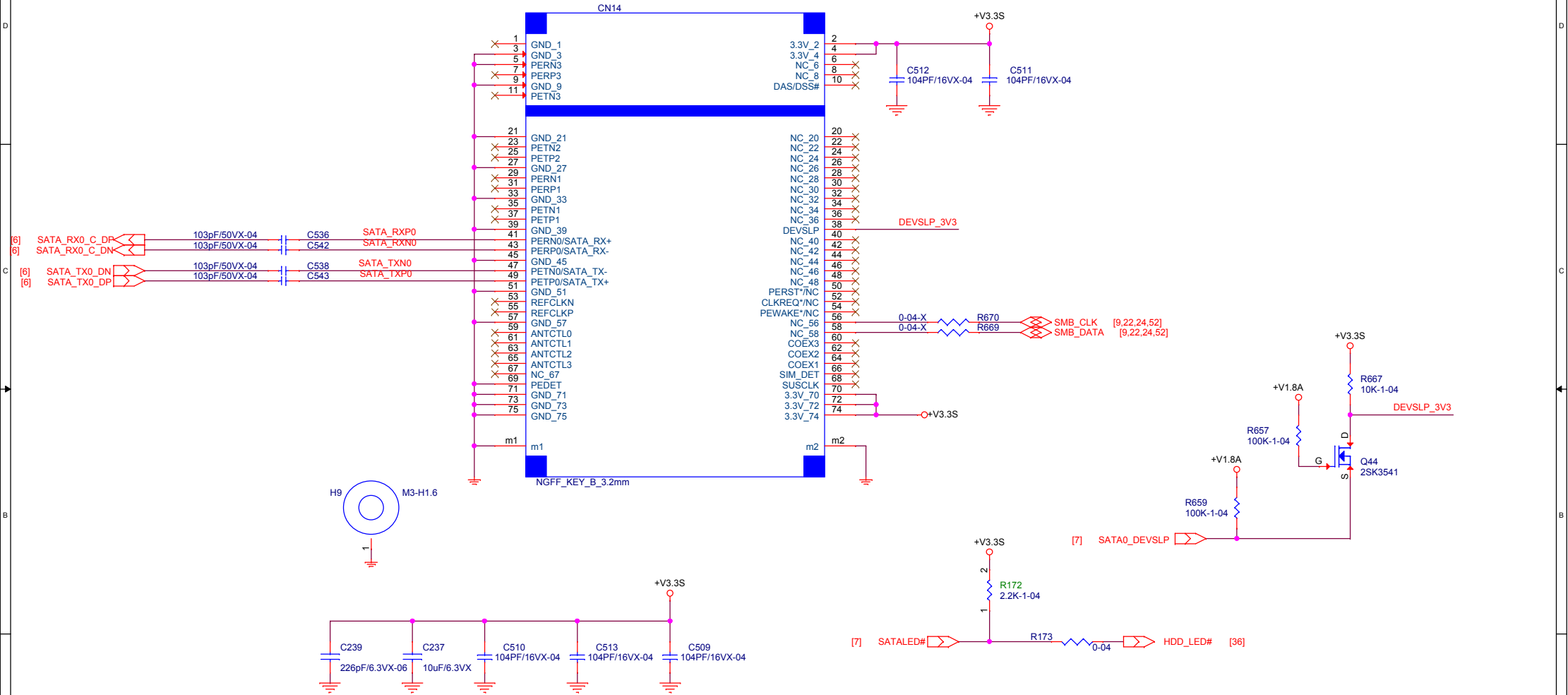


Mini PCI-E Slot , USB Interface

2.75A MAX (GOBI-2000 AND MC87XX)



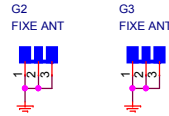
3.3V, 1.1A



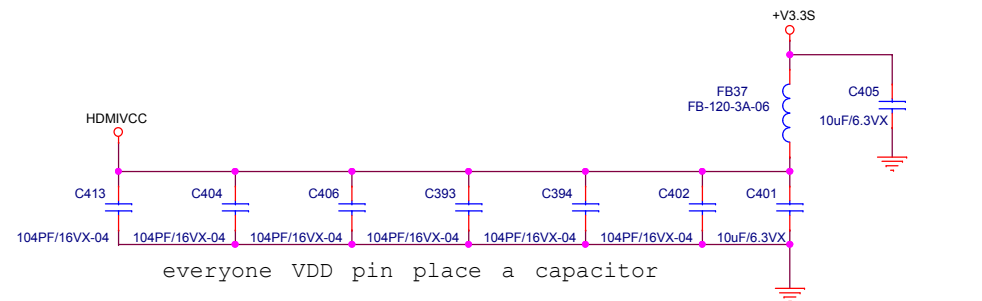
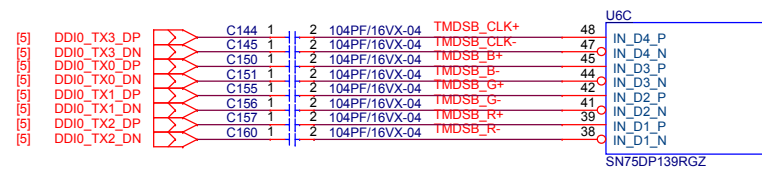
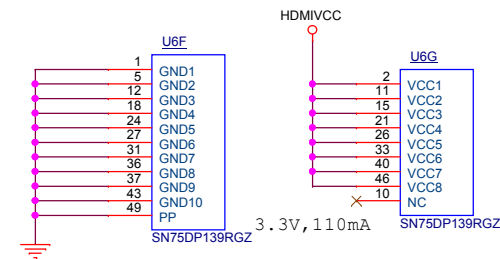
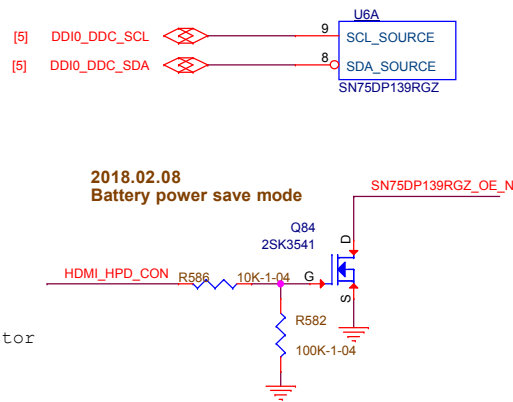
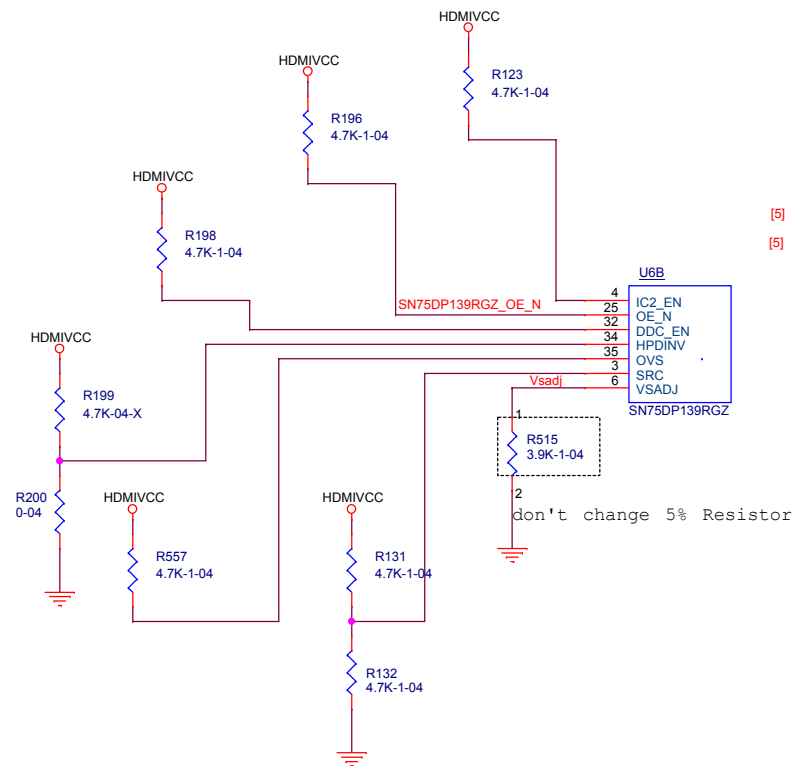
Winmate Communication INC.

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3.3V 2,750mA





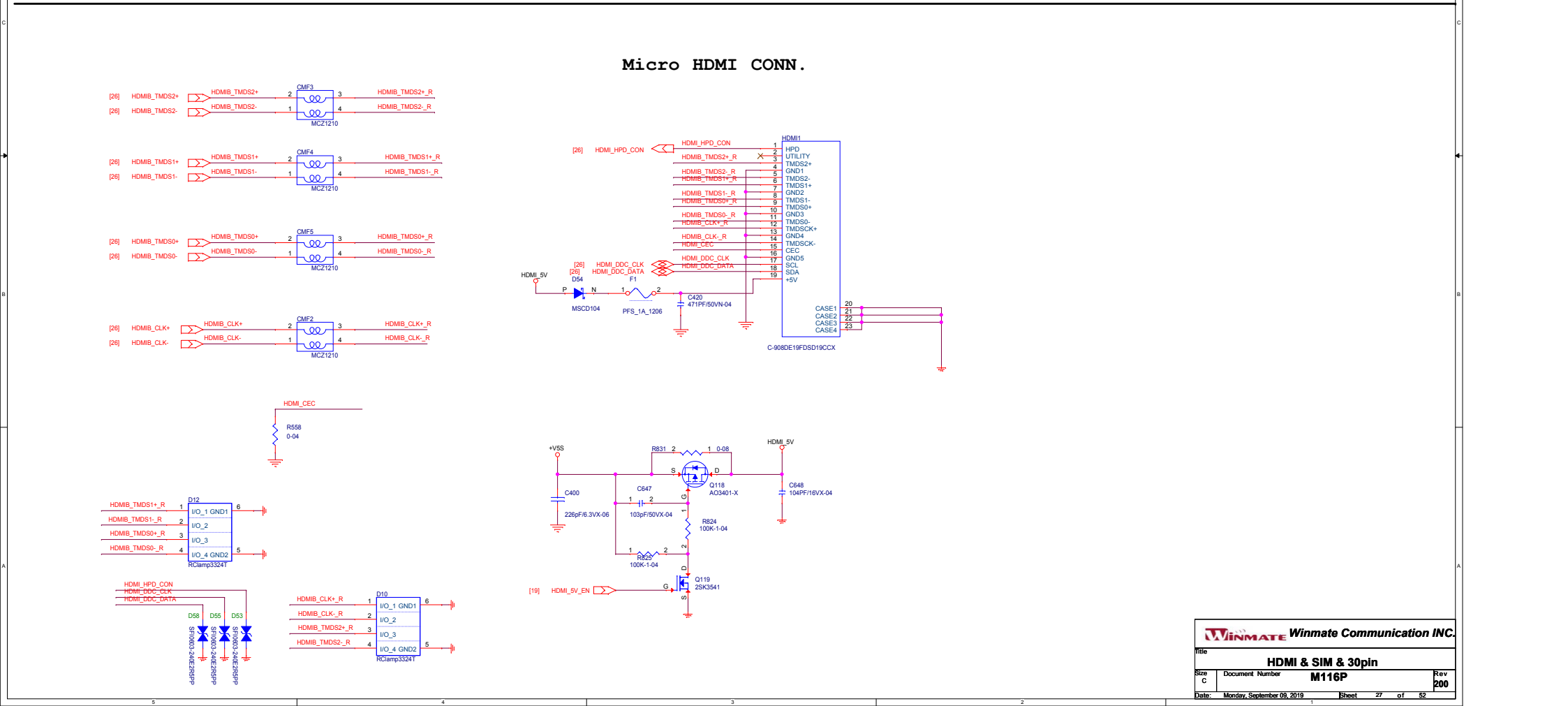


Micro SIM CARD

The diagram illustrates the electrical connections for a Micro SIM CARD. Key components and connections include:

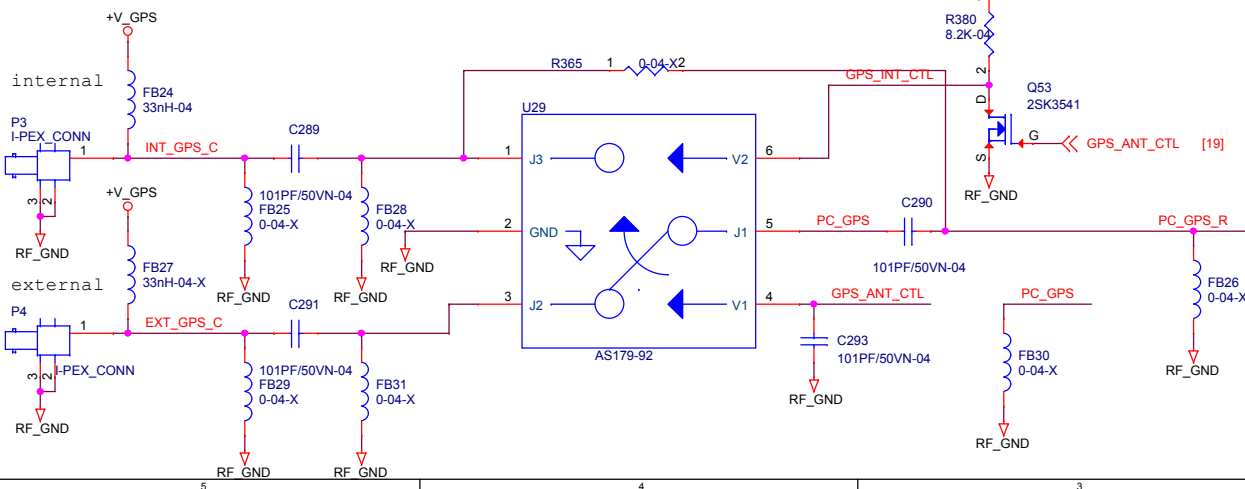
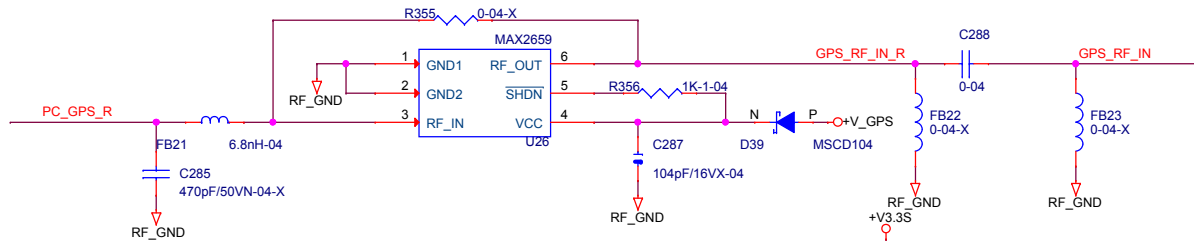
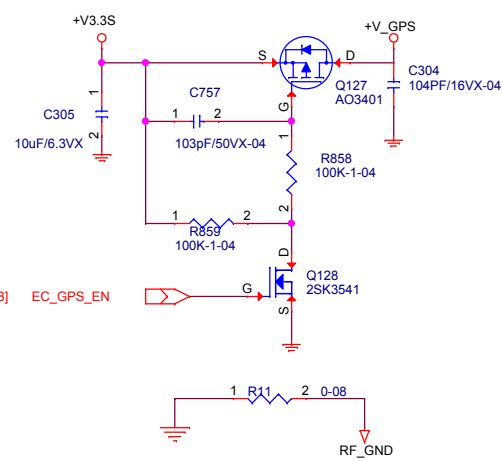
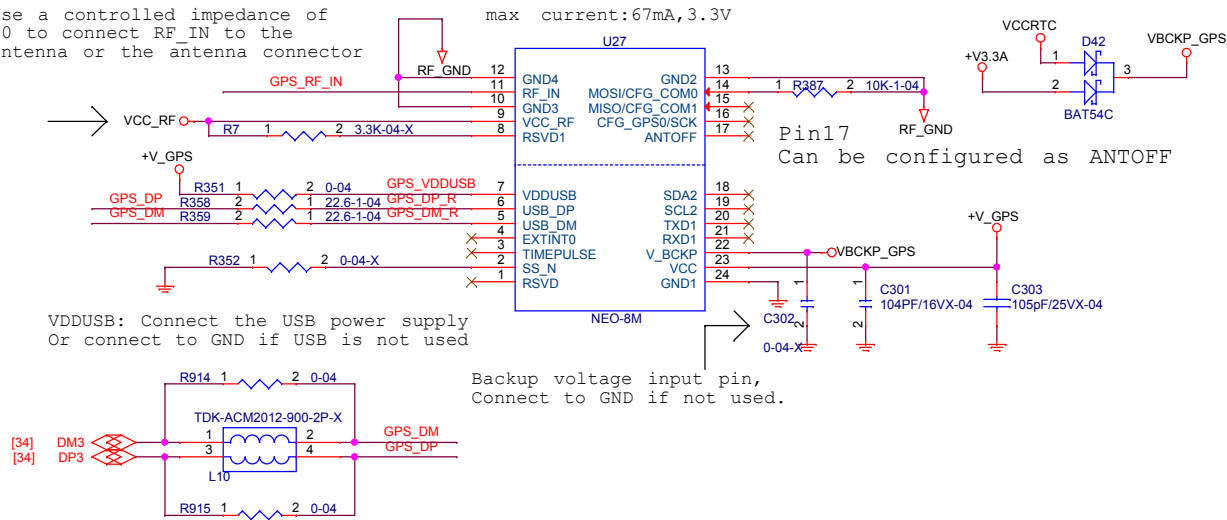
- Power and Grounding:**
 - VREG_USIM:** Connected to a 104PF/16V-04 capacitor (C537) and a 100K-1-04 resistor (R691) to the +V3.3A supply.
 - MSM_USIM_VPP:** Connected to a 3.3V supply through a 50V/4.4 capacitor (D69).
 - MSM_USIM_DATA:** Connected to a 3.3V supply through a 50V/4.4 capacitor (D68).
 - MSM_USIM_RESET:** Connected to a 3.3V supply through a 50V/4.4 capacitor (D67).
- Signal Connections:**
 - CLK_MSM_USIM:** Connected to the CLK pin of the SIM1 chip.
 - MSM_USIM_RESET:** Connected to the RST pin of the SIM1 chip.
 - MSM_USIM_DATA:** Connected to the I/O pins of the SIM1 chip.
- Physical Connections:**
 - TOP Layout:** A push-type connector for the Micro SIMCard.
 - Pin 19:** Labeled USIM_DET, connected to a pull-up resistor (R691) to +V3.3A.
- Legend:**
 - [22] MSM_USIM_RESET**
 - [22] CLK_MSM_USIM**
 - [22] MSM_USIM_VPP**
 - [22] MSM_USIM_DATA**

Additional notes: "should close SIM socket" and "Push Type".



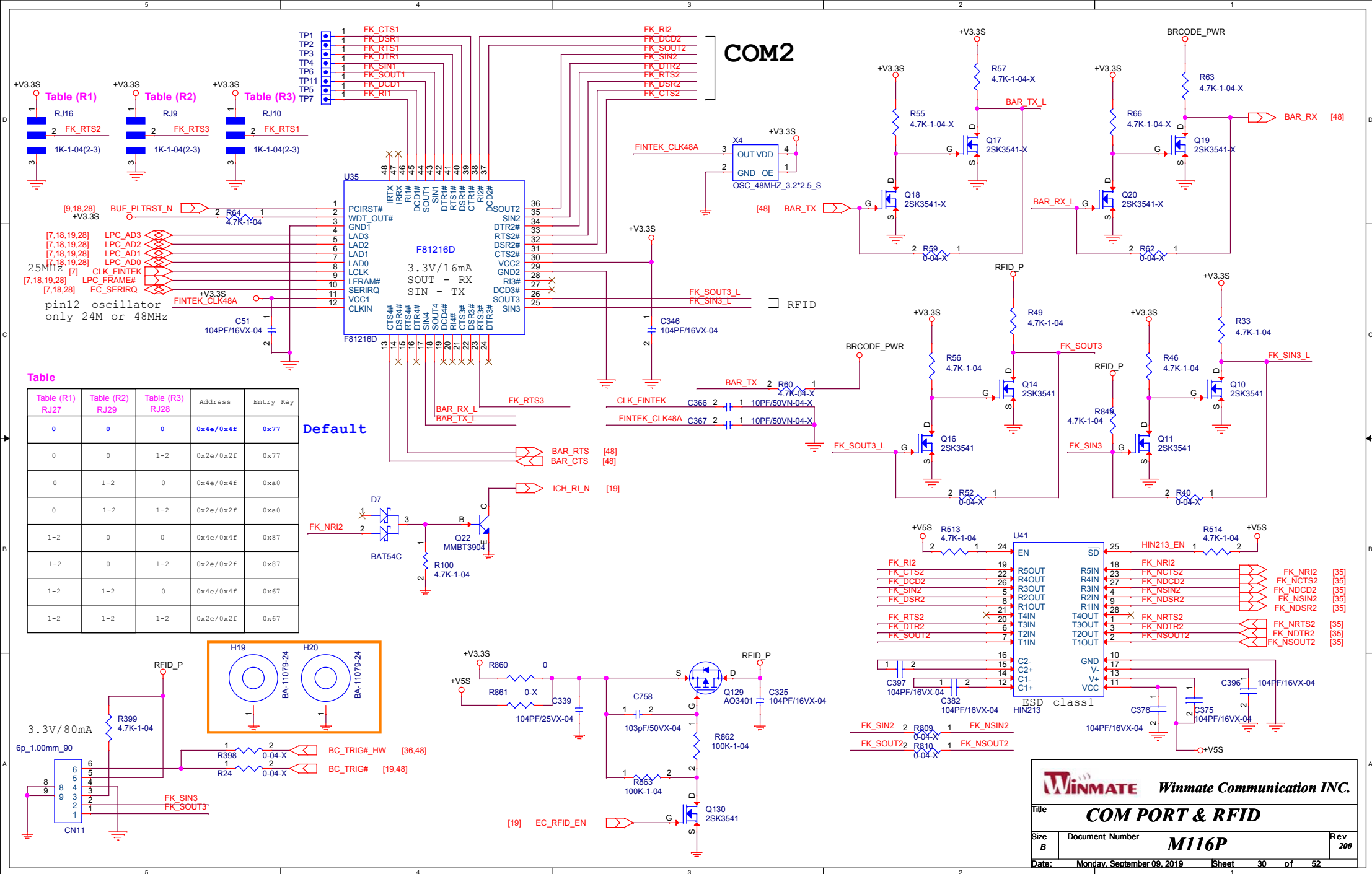
Use a controlled impedance of 50 to connect RF_IN to the antenna or the antenna connector

max current:67mA,3.3V



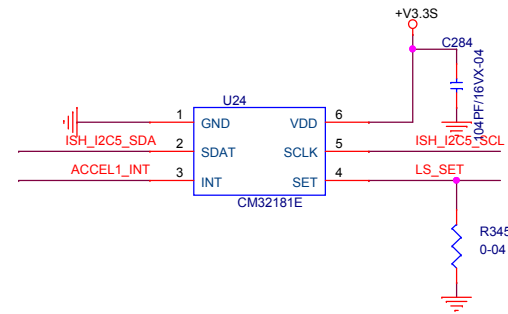
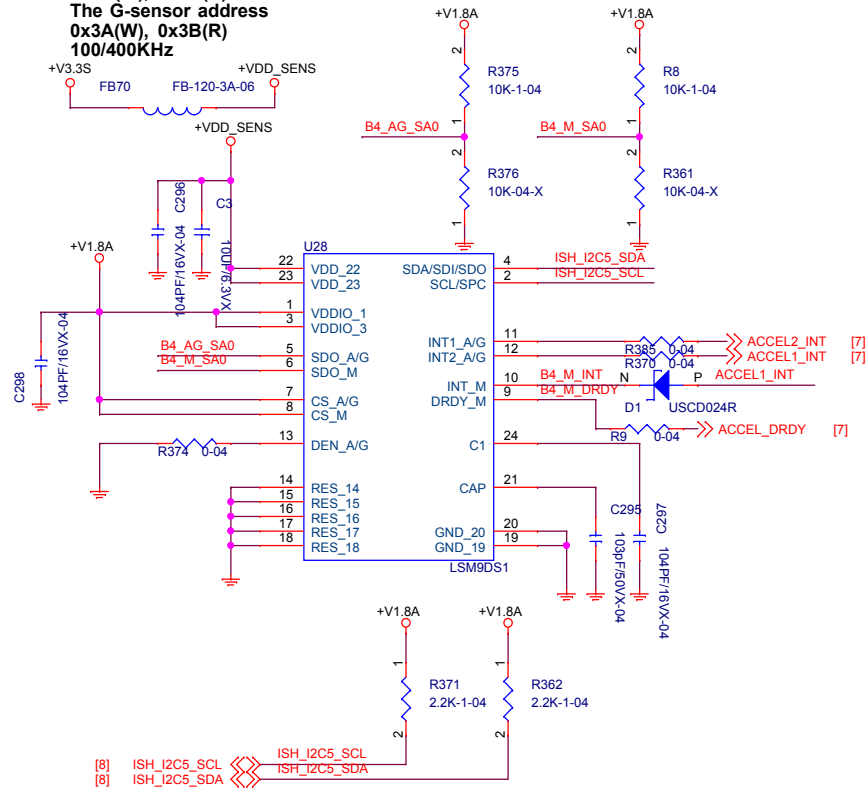
Hot-tab can control it
Default setting Built-in GPS ANT. (internal)
but User can setting Auto Switch,
when Tablet insert Vehicle Docking
GPS ANT auto select external GPS ANT.

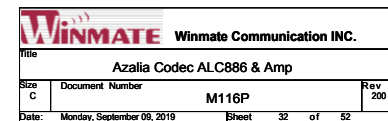
V1	V2	PATH
L	H	J1-J2 (Ext. Antenna)
H	L	J1-J3 (Int. Antenna)



E-Compass **3D Accelerometer** **3D Magnetometer (with G-sensor)**

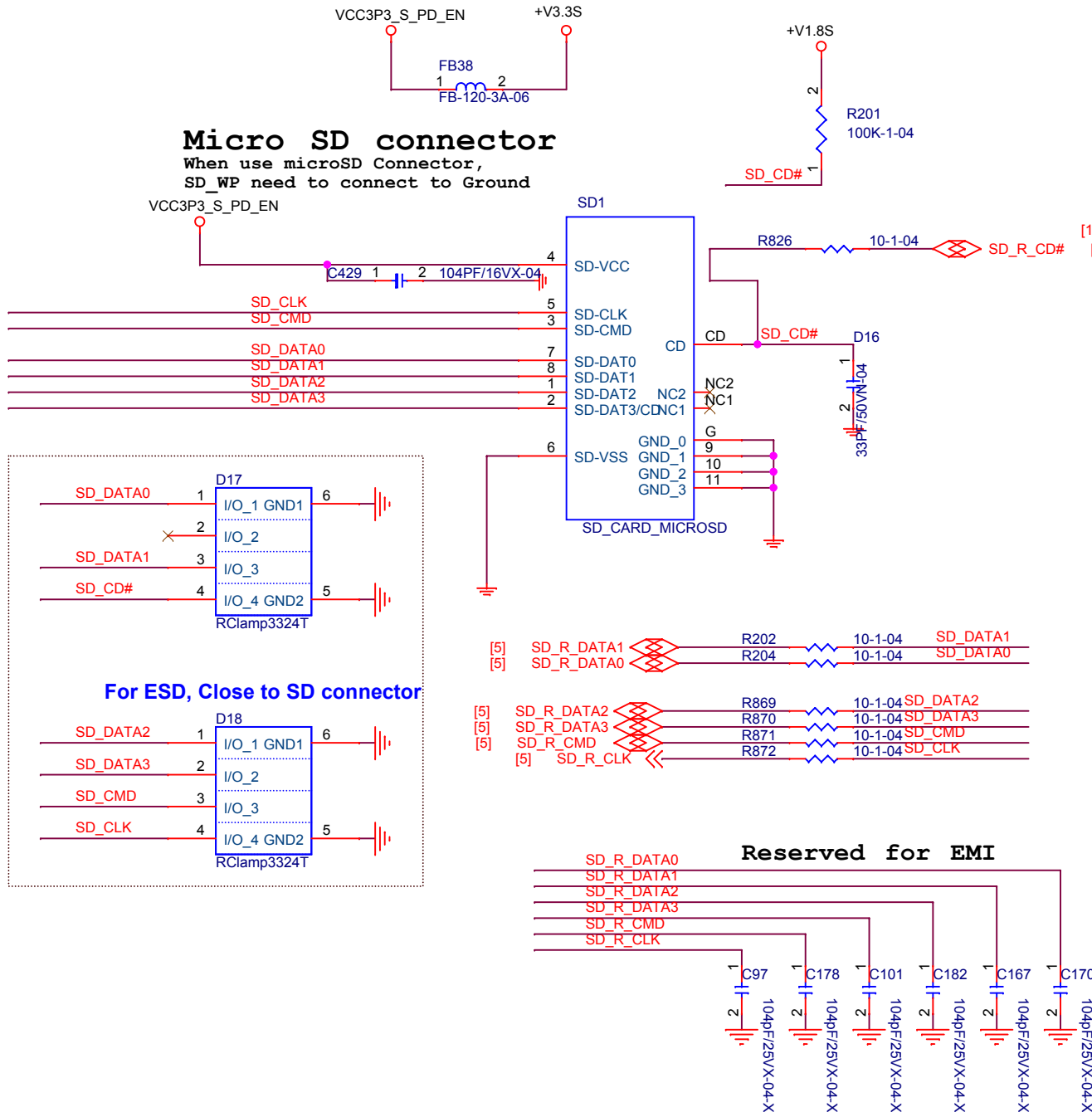
The Magnetic address
0x3C(W), 0x3D(R)
The G-sensor address
0x3A(W), 0x3B(R)
100/400KHz



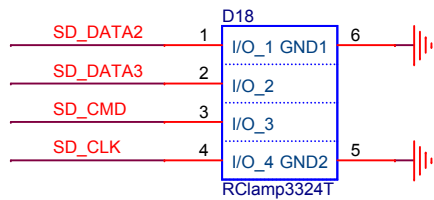


Micro SD connector

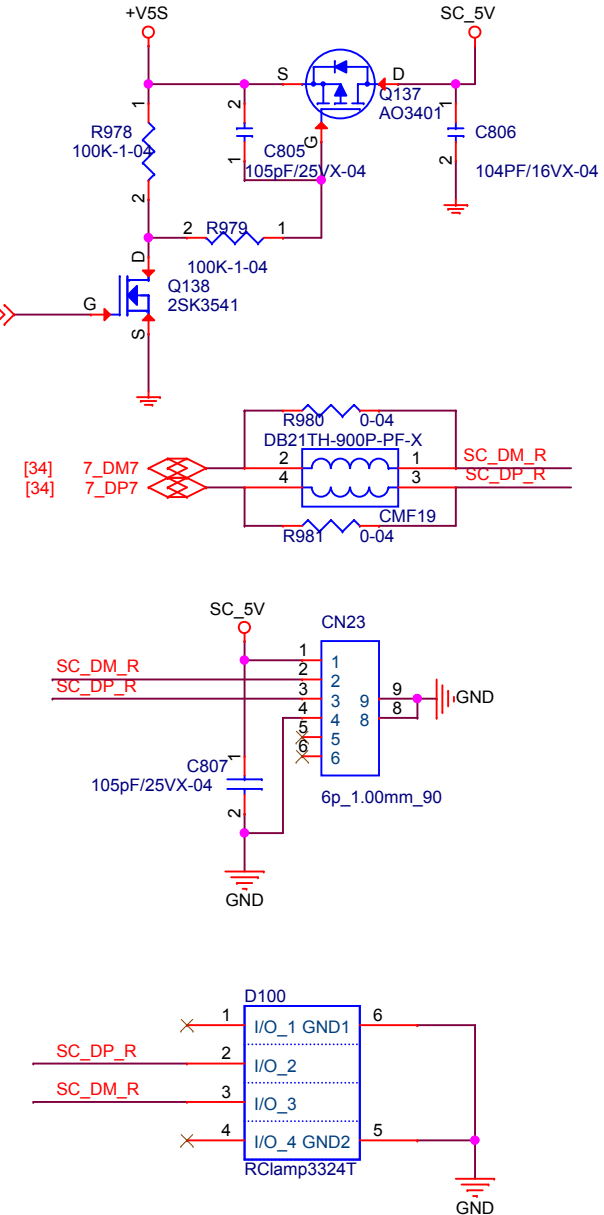
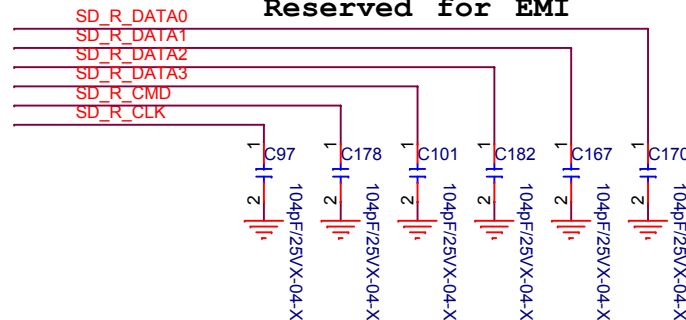
When use microSD Connector,
SD_WP need to connect to Ground



For ESD, Close to SD connector



Reserved for EMI



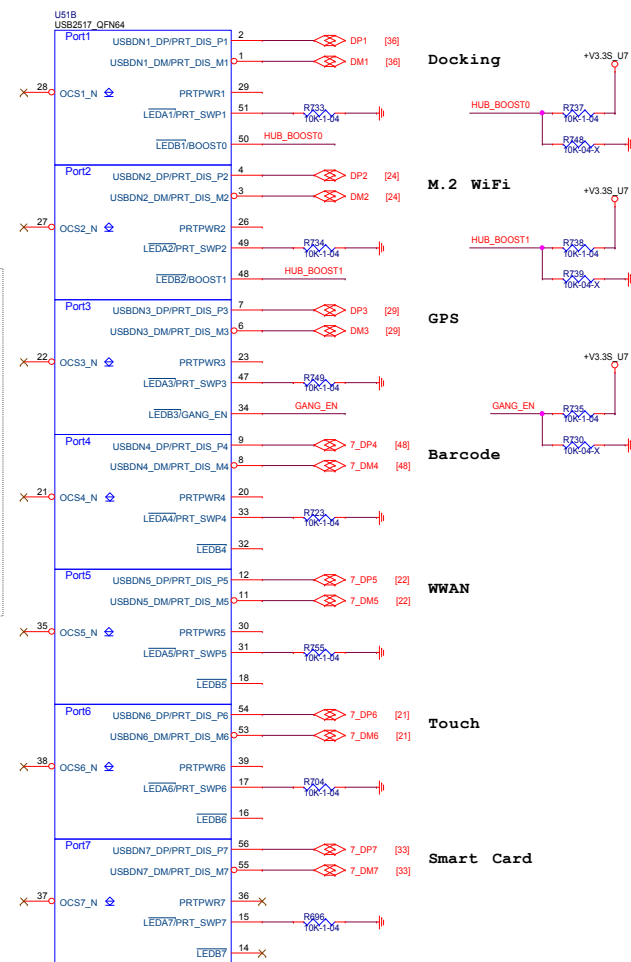
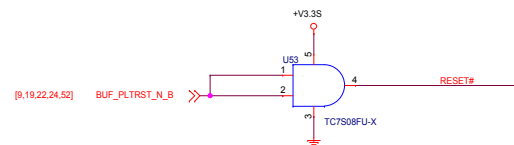
Winmate Communication INC.

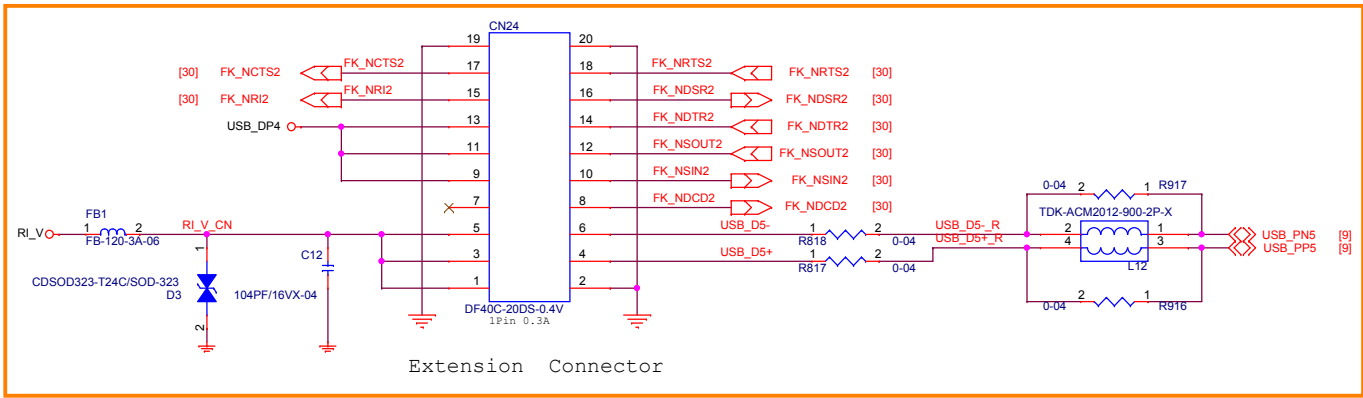
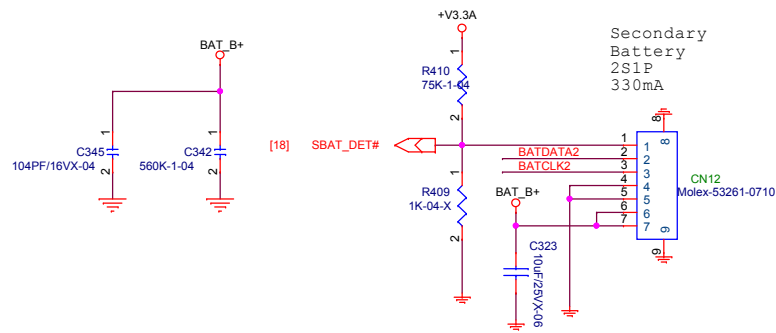
Title **USB HUB**

Size A4 Document Number **M116P**

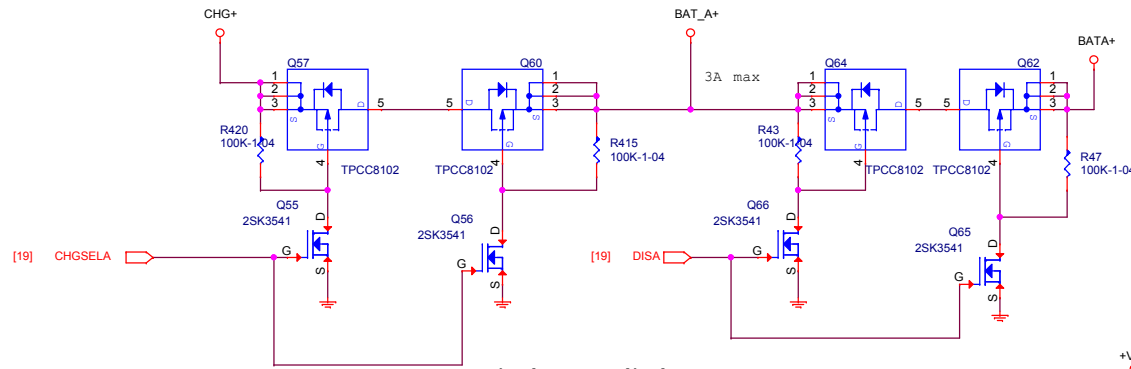
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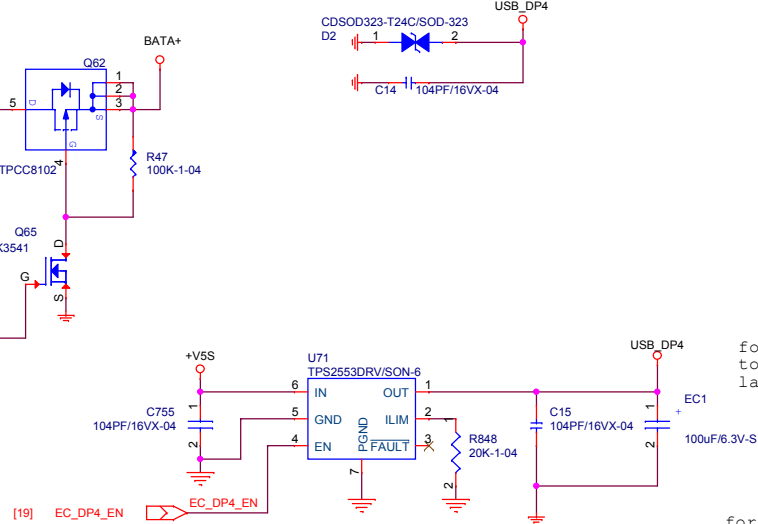
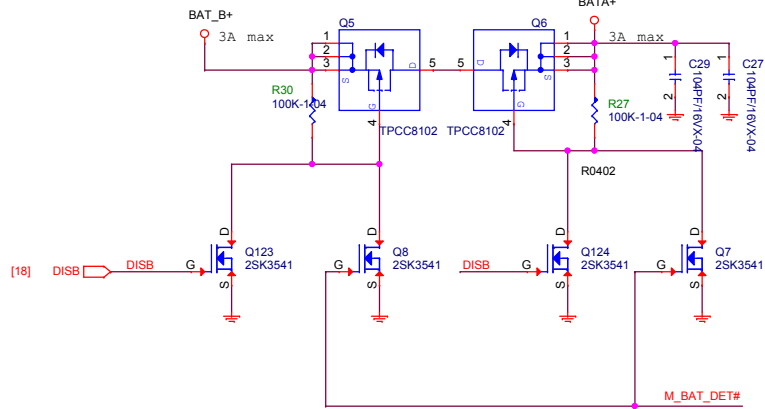




main battery charger



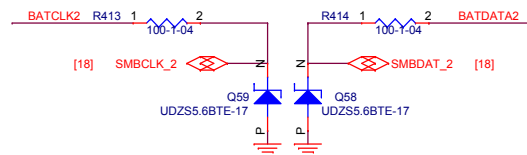
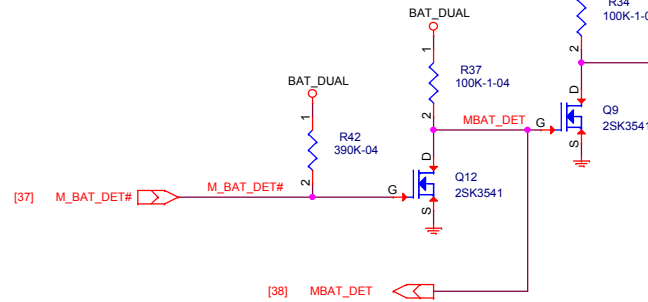
main battery discharger



for top layer

this're EMI part should place to Pogo pin

for bottom layer



LED indicator for Standard product

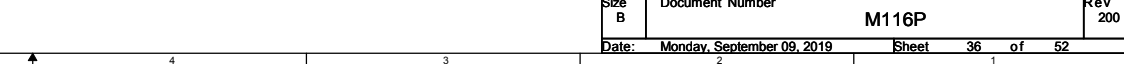
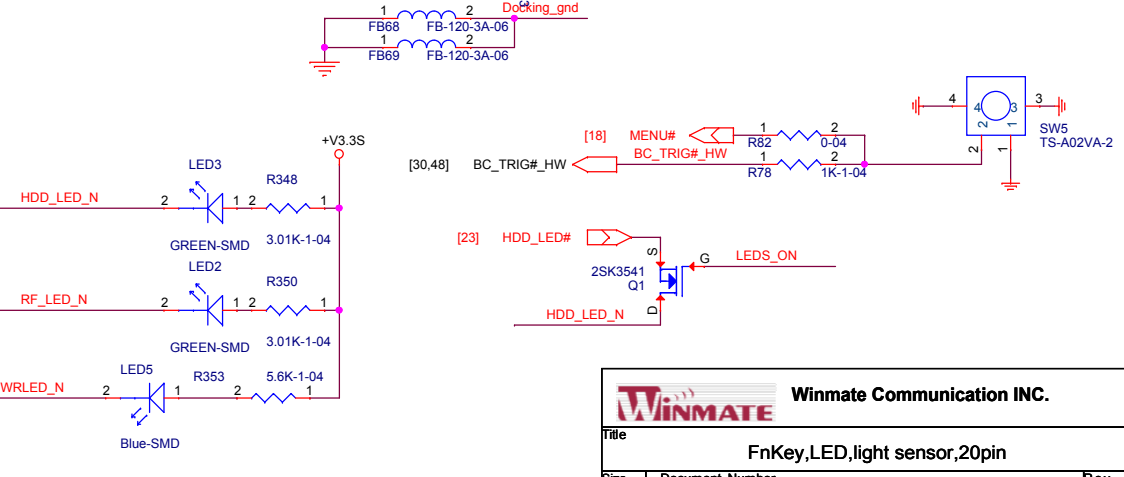
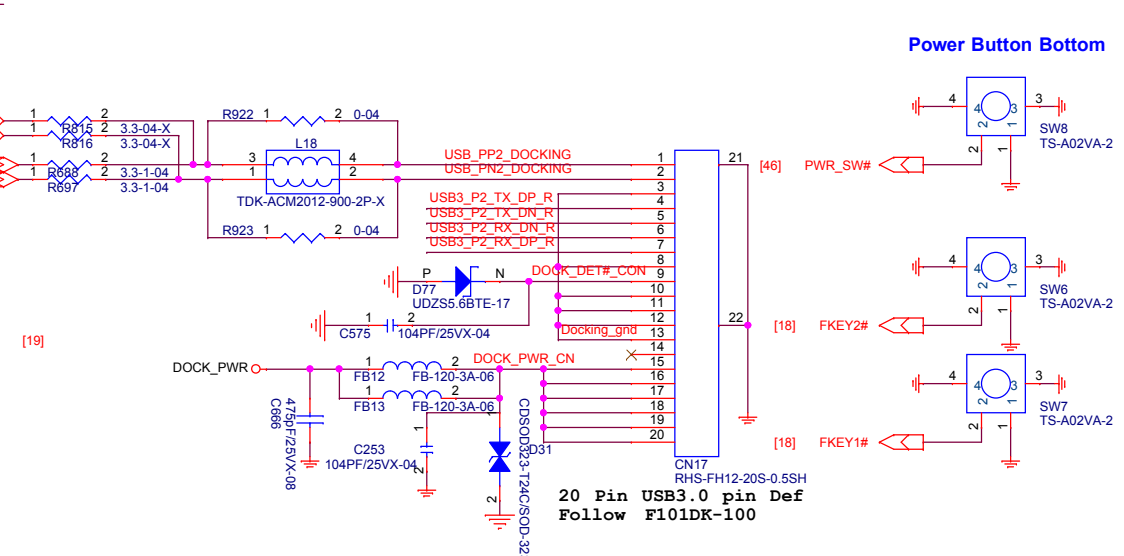
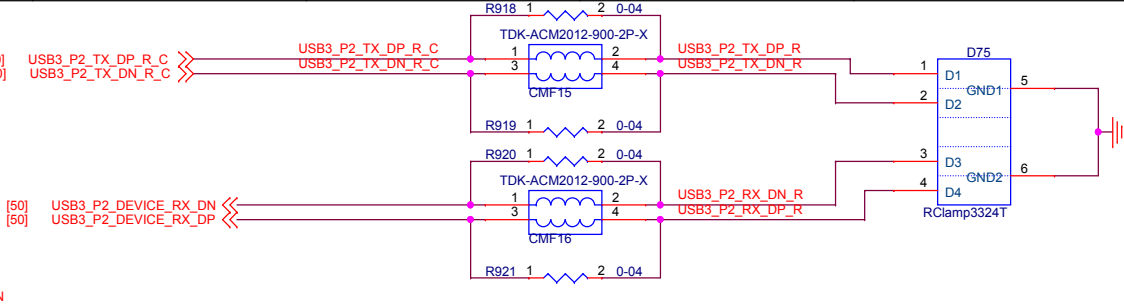
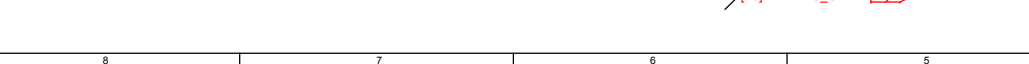
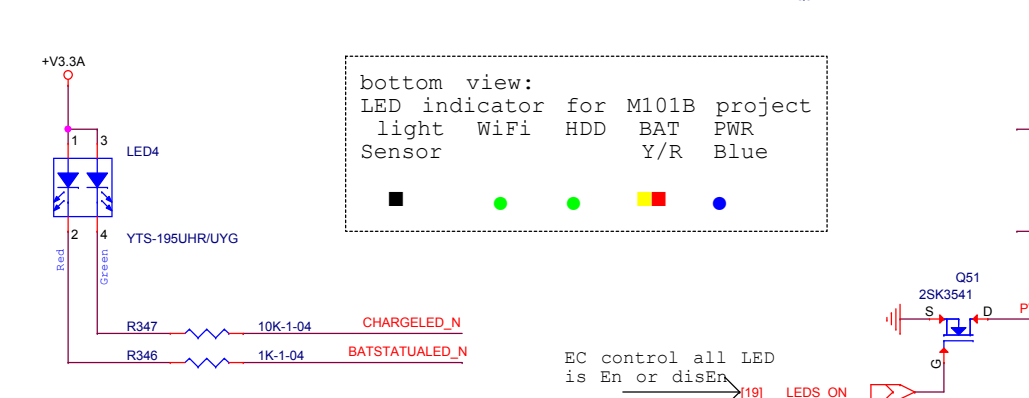
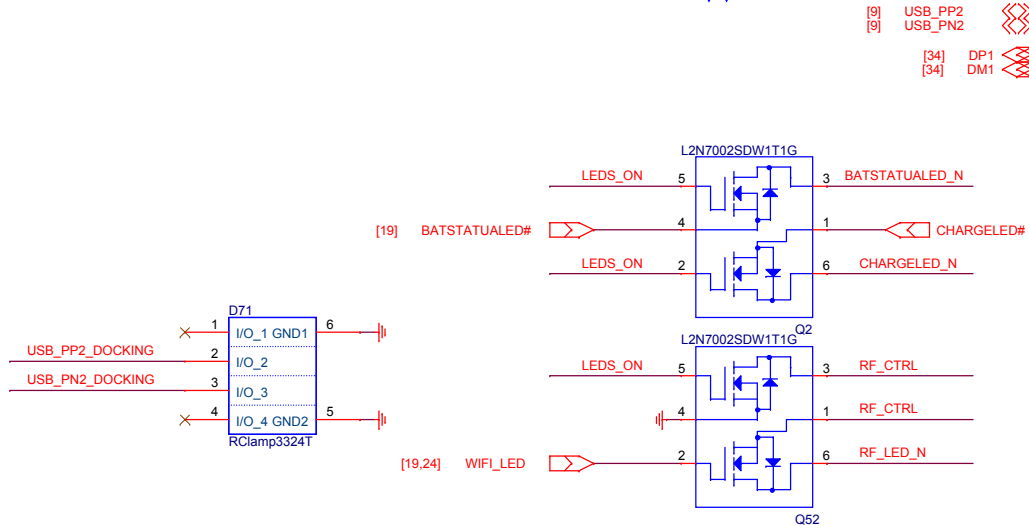
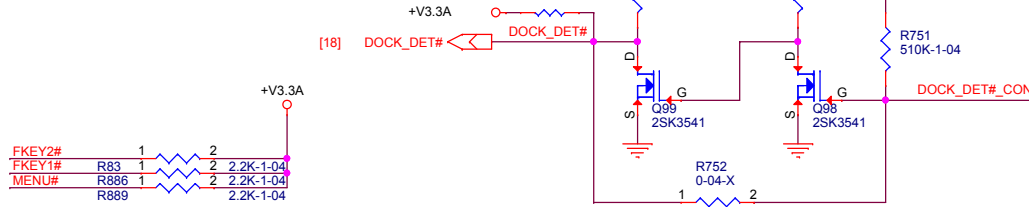
1.Power LED - power ON mode

2.Battery:

- Under AC mode / Charging: Orange
- Under AC mode / Full Charged: Off
- Under Battery Mode : Green
- Under Battery Mode / Low Power (<10%): Red
- Under Battery Mode / Hot Swap: Red flicker

3.HDD LED - HDD work

4.RF - WiFi/BT/3G/GPS anyone turn On

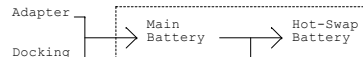


bottom view:
LED indicator for M101B project
light WiFi HDD BAT PWR
Sensor Y/R Blue

EC control all LED
is En or disEn

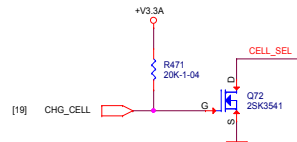
Winmate Communication INC.			
FnKey,LED,light sensor,20pin			
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Battery Charging: value under 3% will shutdown
Hot-Swap Battery charge only from Main Battery



Control Input current
battery under 5% status
main:
11.62V, 3.62A
backup:
11.62V, 2.56A

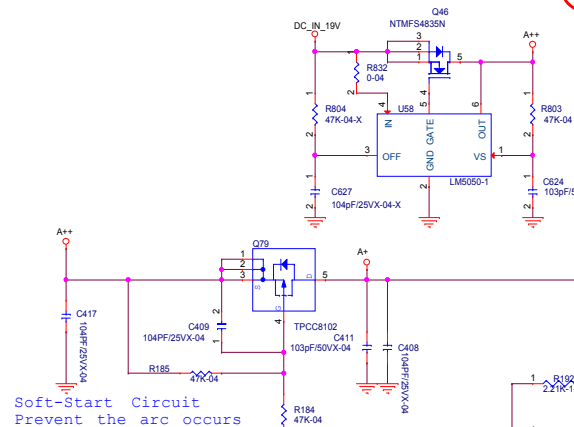
VBATT = cells x (4V+0.4(VVCTL/VREFIN))
Tri-level input for setting number of cells.
GND = 2 cells, float = 3 cells, REFIN = 4 cells.



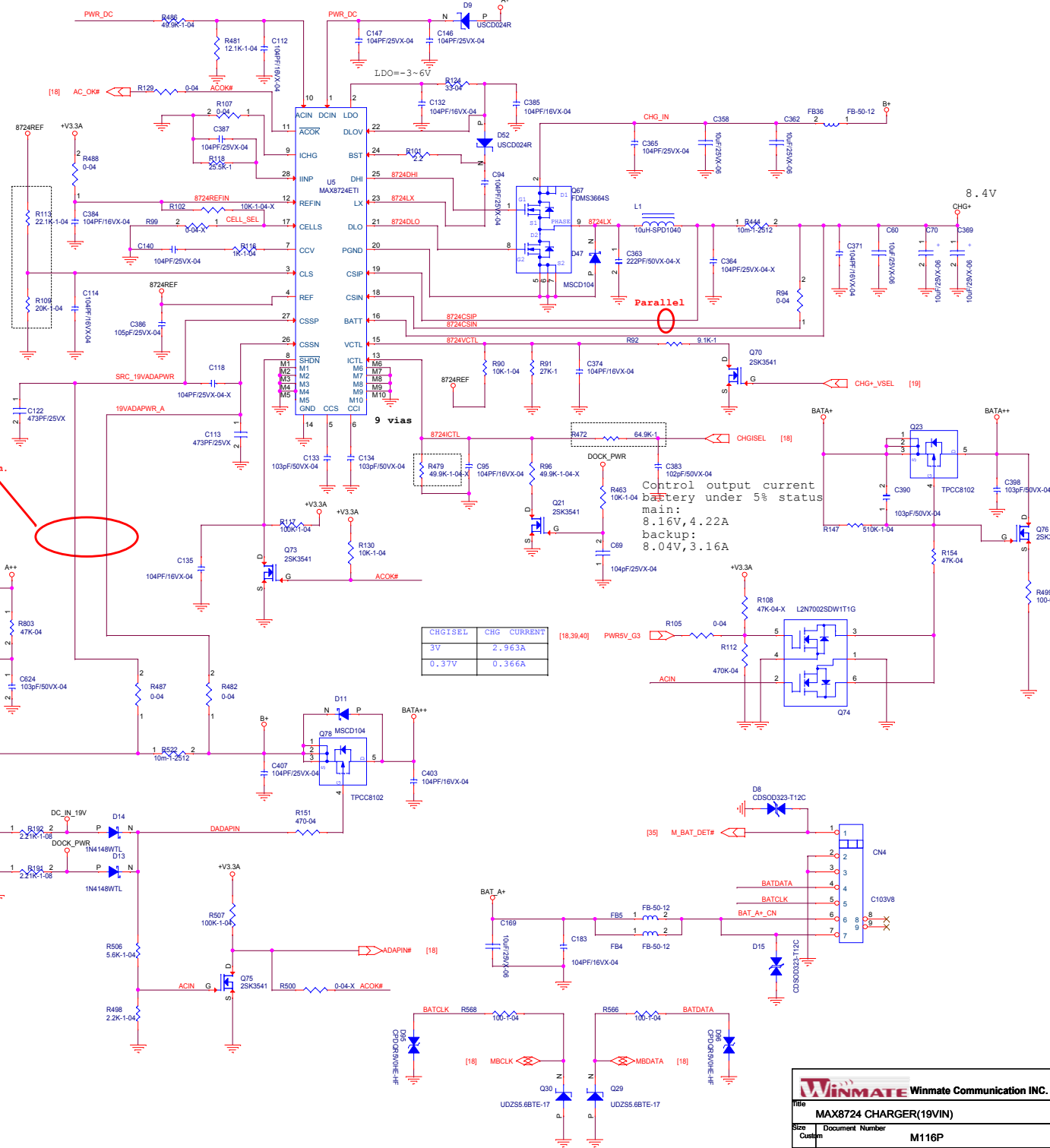
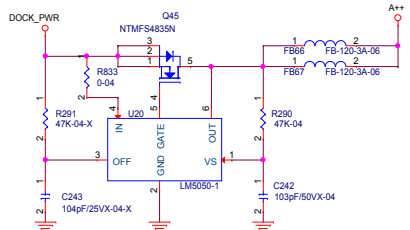
Cell select:

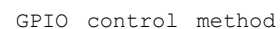
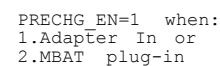
1. Main Bat detection , then default set CHG_CELL High(Or Open) for 2 Cell
2. Reading BAT inform by I2C , if Bat is 3 cell , then set CHR_CELL LOW

Routing length should less than 10mm.



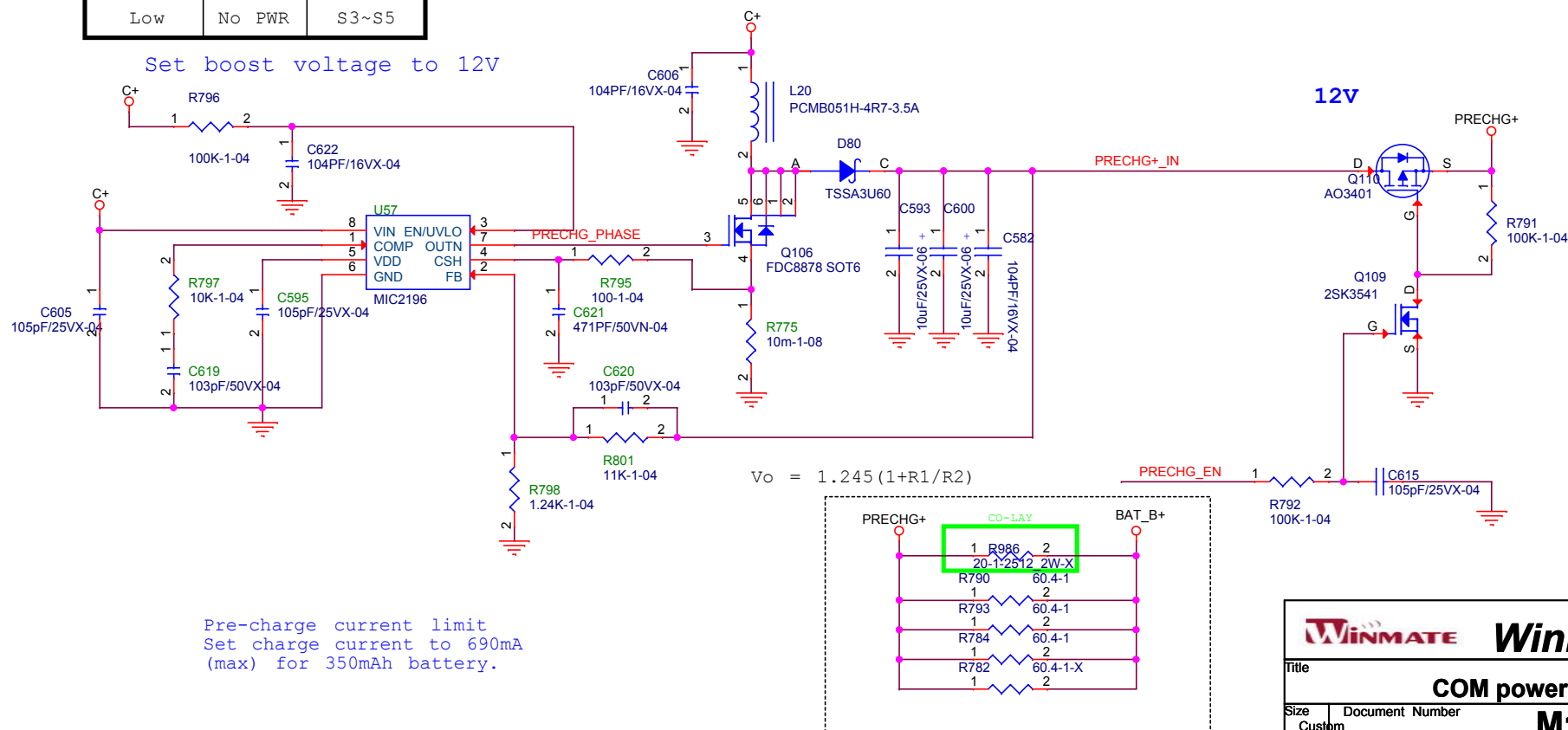
Soft-Start Circuit
Prevent the arc occurs



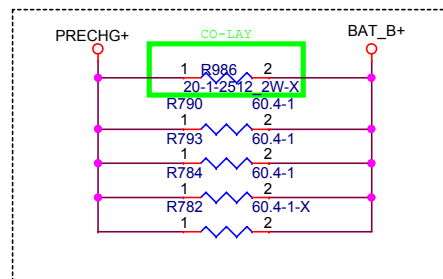


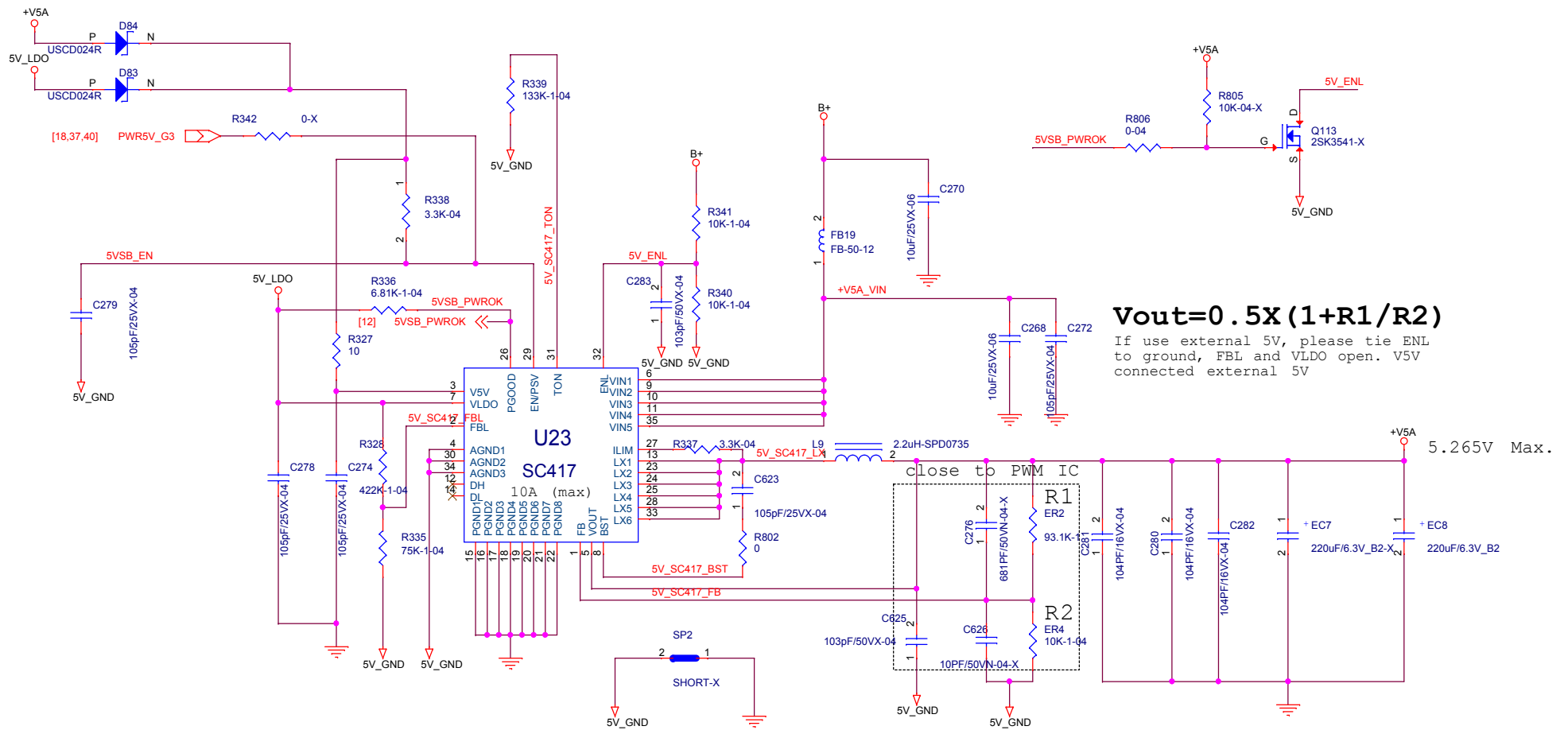
source1	RI_V	PC status
Hi	5V	S0~S1
Low	No PWR	S3~S5

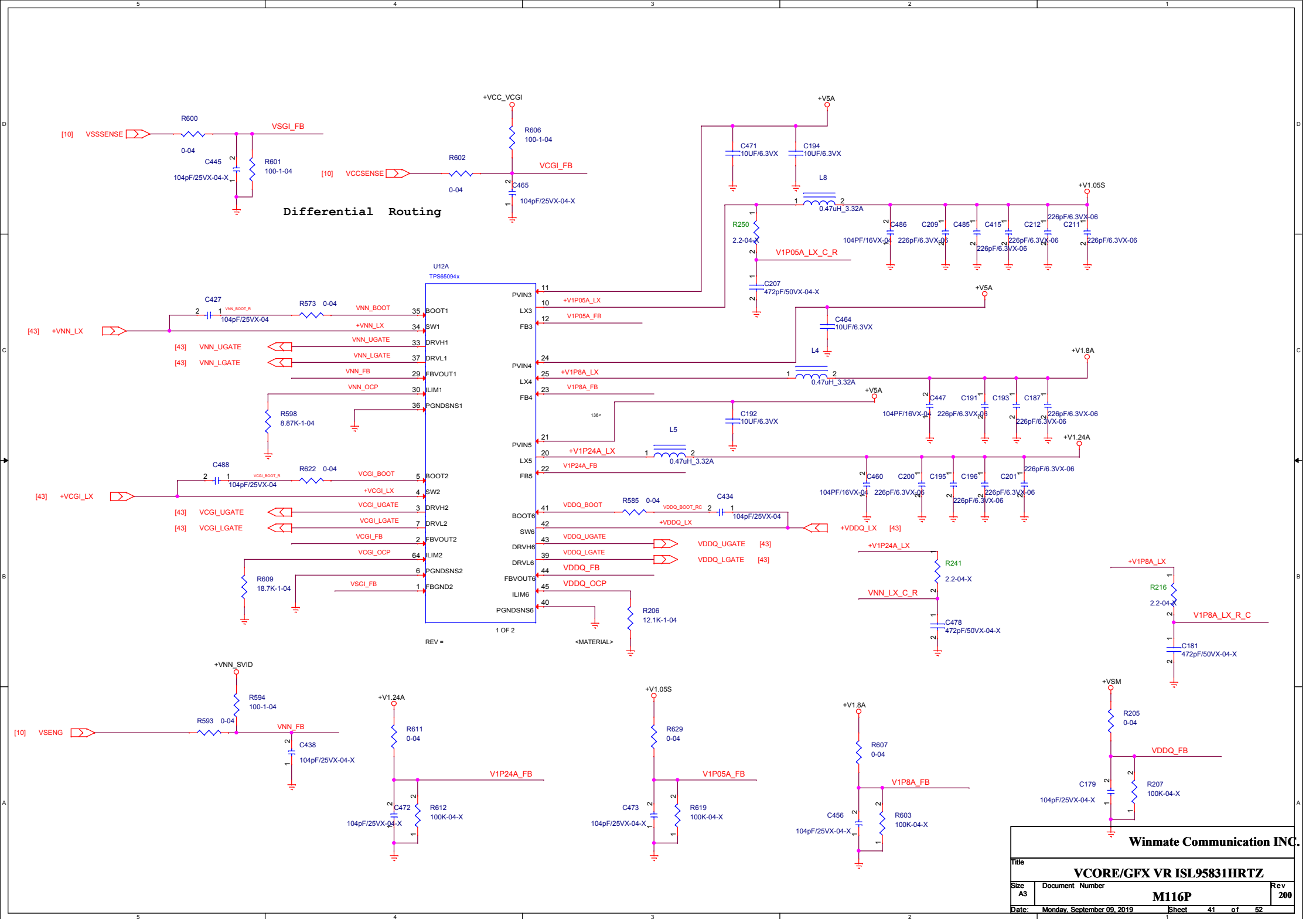
Set boost voltage to 12V

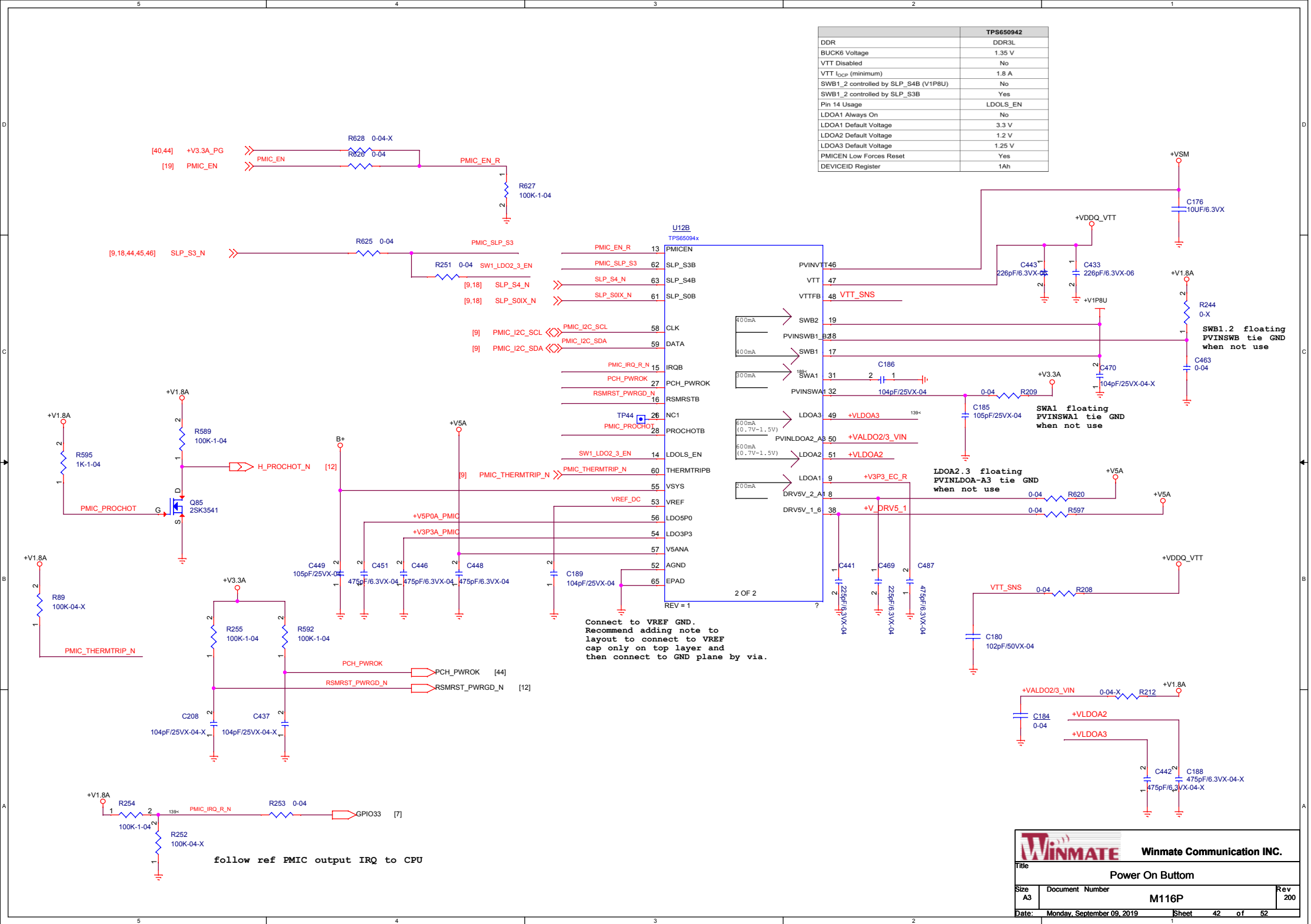


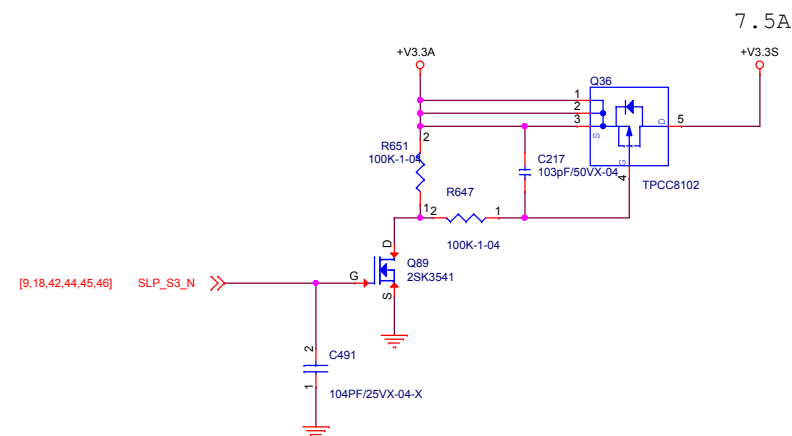
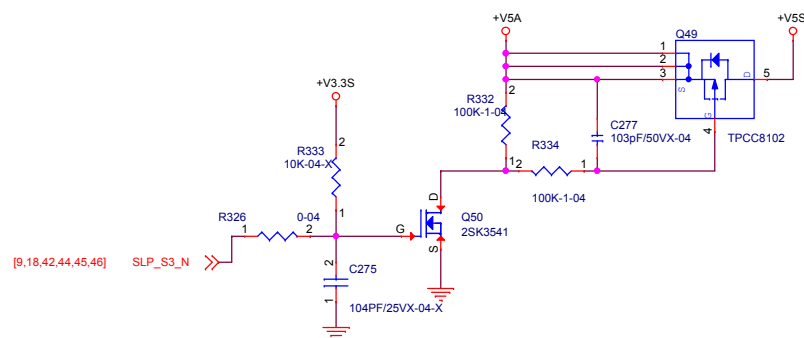
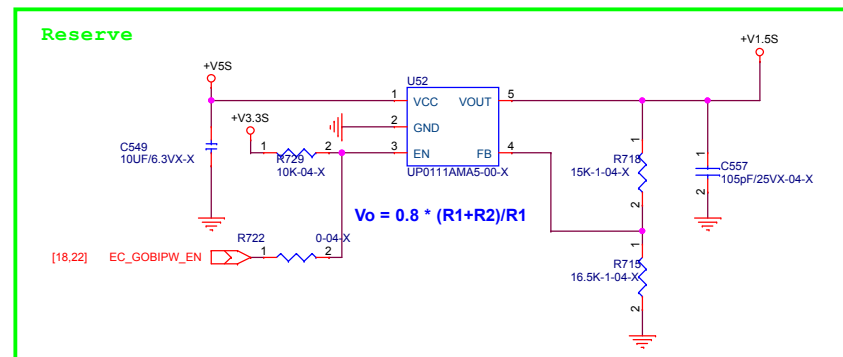
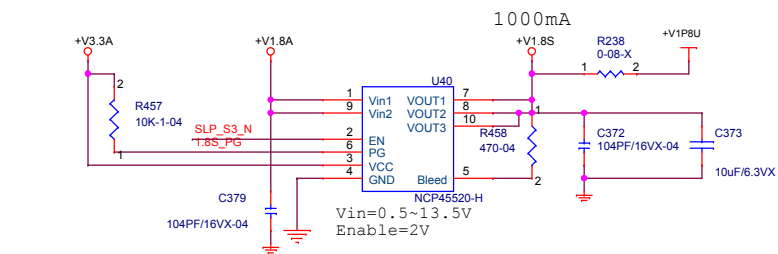
Pre-charge current limit
Set charge current to 690mA
(max) for 350mAh battery.



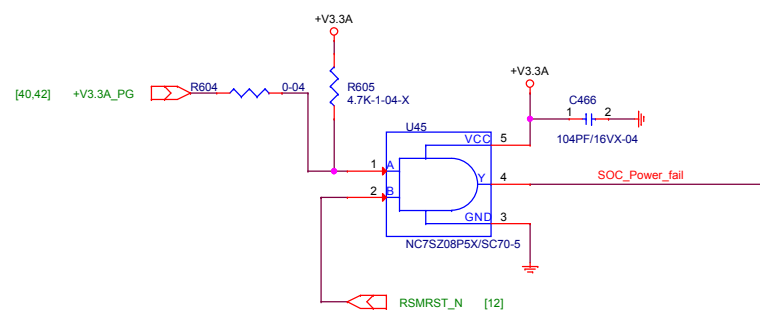




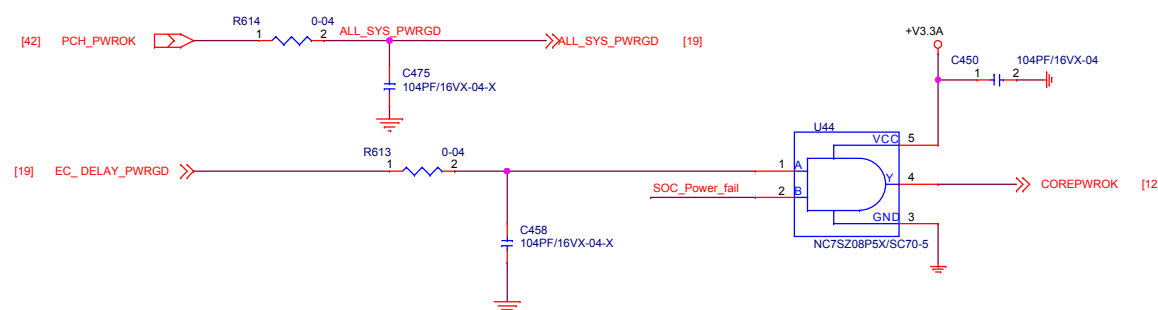


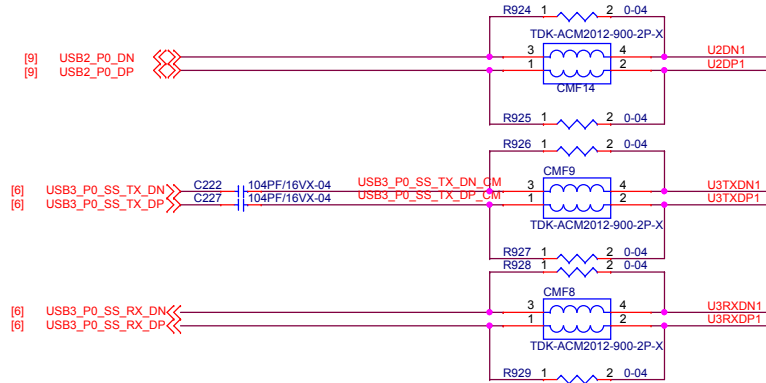


PMIC have Emergency shutdown
(B+<5.4V, drive RSMRST & PCH_PWROK to low)
Power Fail Detect



PCH_PWROK to EC ALL_SYS_PWRGD
All rails stable to SOC_PWROK assertion : 5 ms
EC_DELAY_PWRGD to SOC_PWROK





Current-Limit Threshold Equations (I_{OS}):

$$I_{OSmax}(mA) = \frac{22980V}{R_{ILIM}^{0.94} K\Omega}$$

$$I_{OSnom}(mA) = \frac{23950V}{R_{ILIM}^{0.977} K\Omega}$$

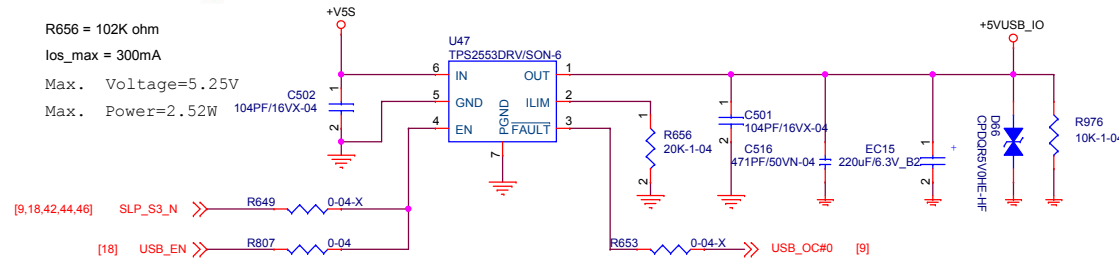
$$I_{OSmin}(mA) = \frac{25230V}{R_{ILIM}^{1.016} K\Omega}$$

R656 = 102K ohm

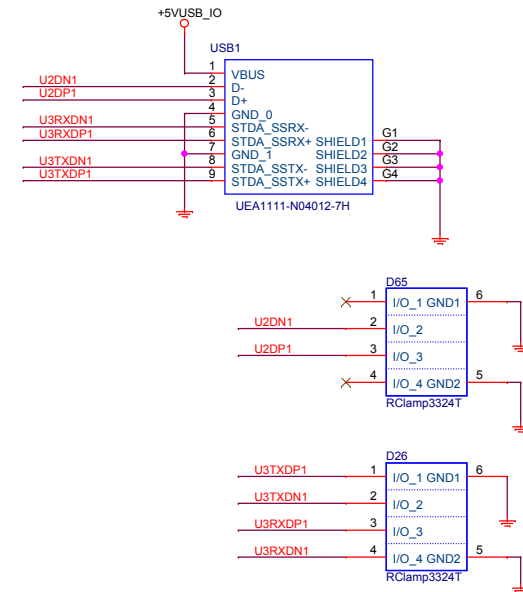
los_max = 300mA

Max. Voltage=5.25V

Max. Power=2.52W

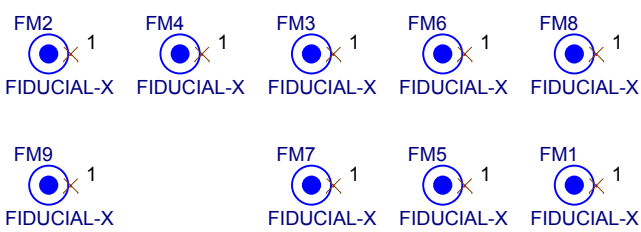
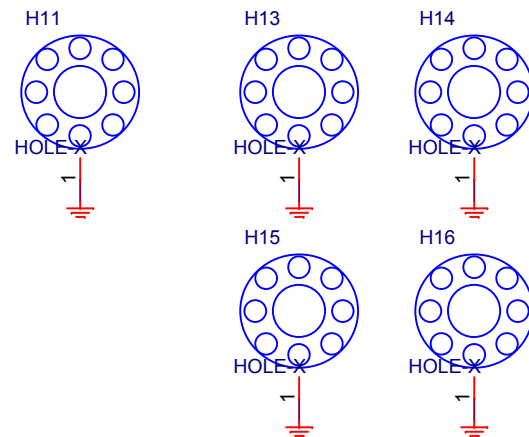
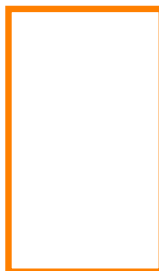
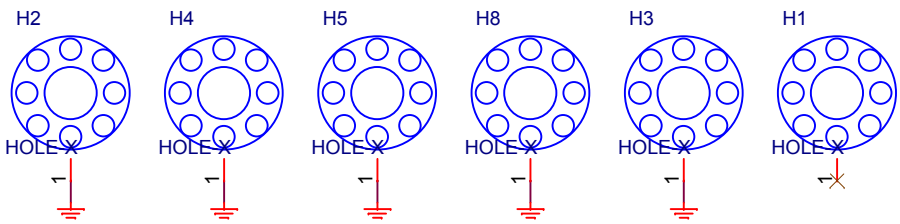


USB Connector

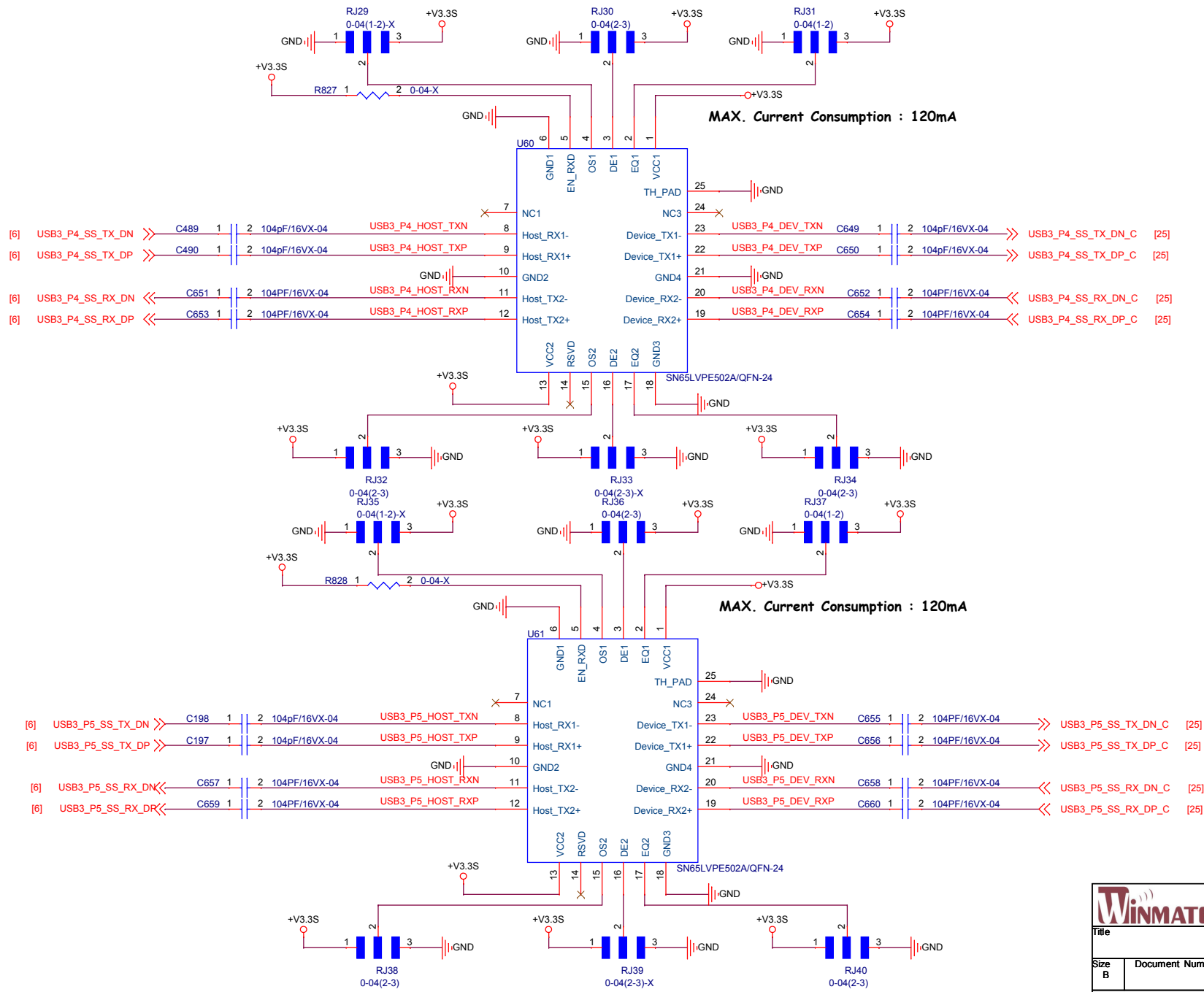


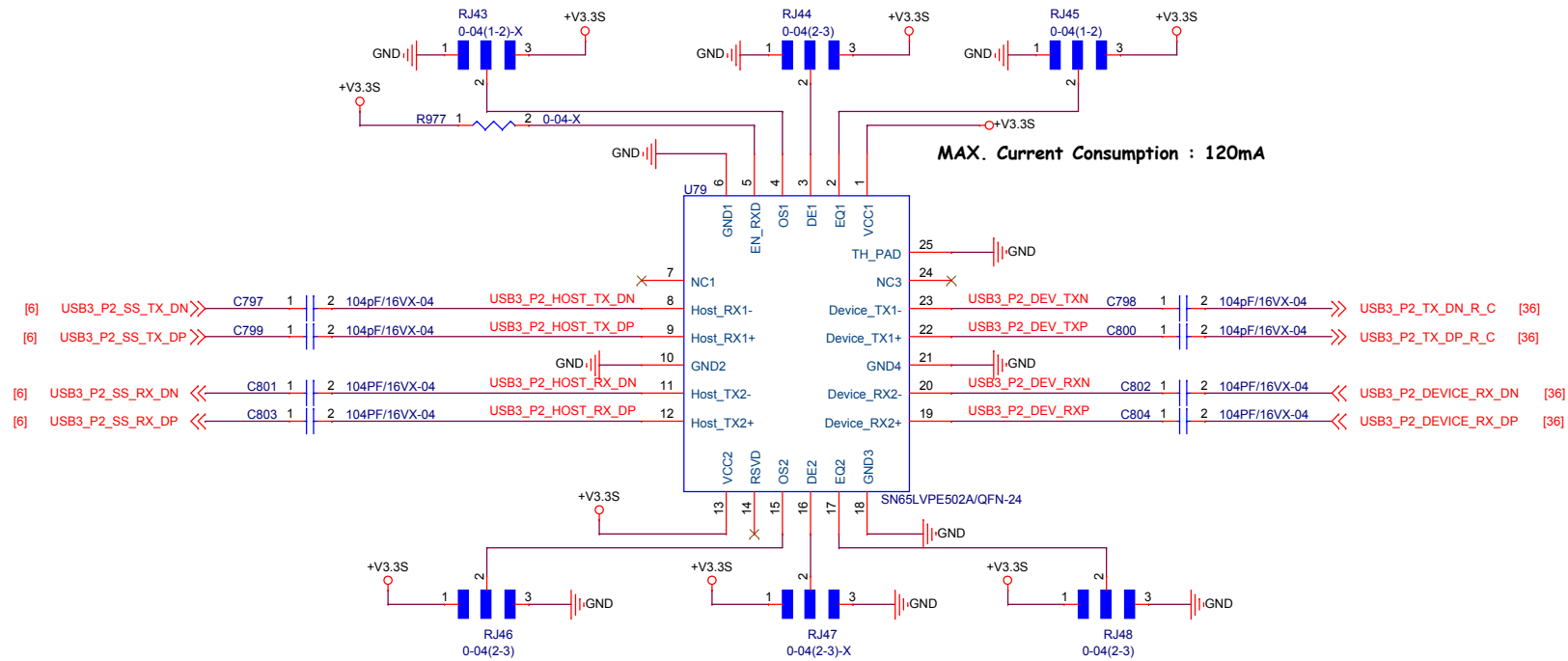
Winmate Communication INC.

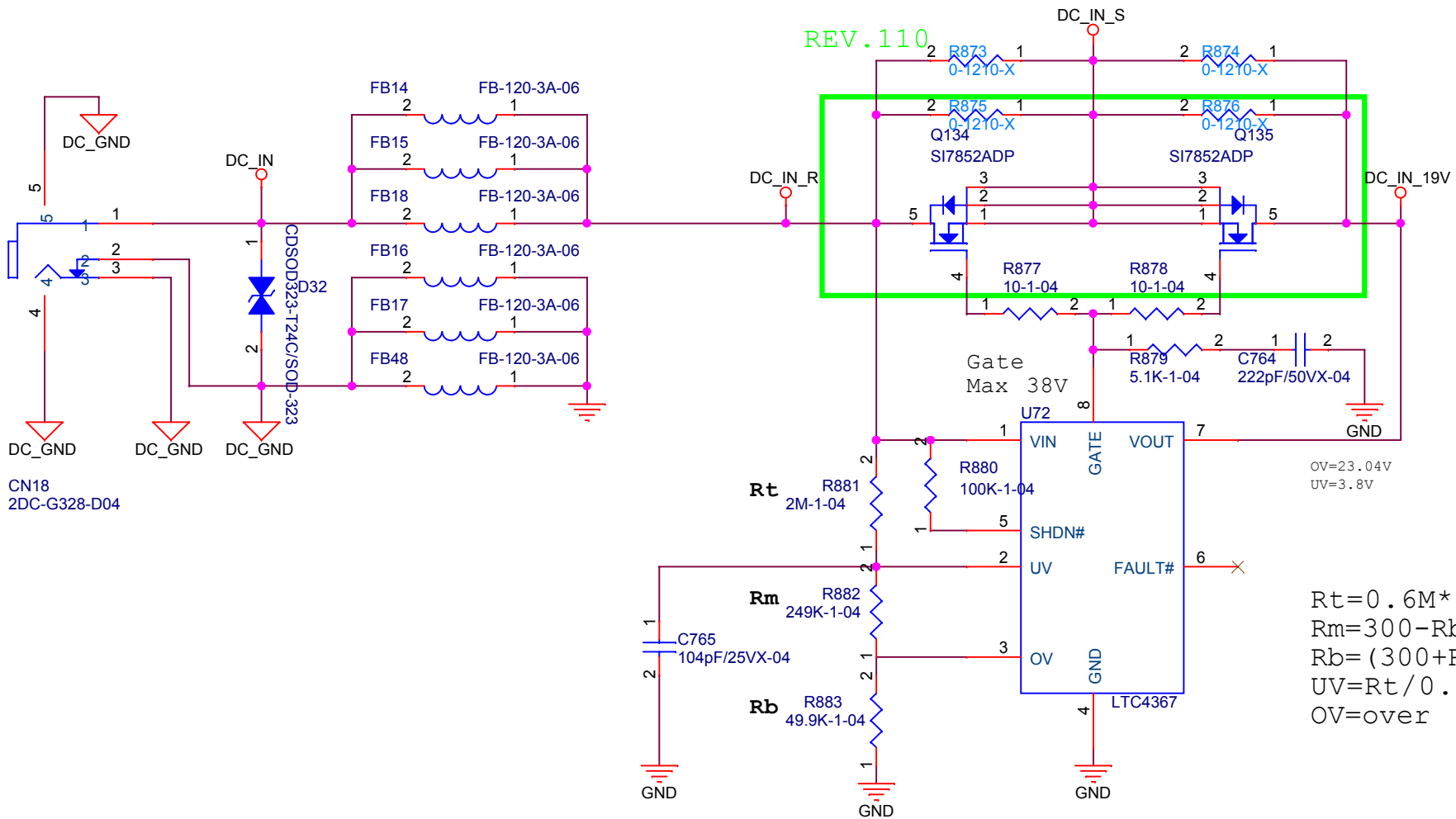
Title			
Level Voltage & SPI			
Size A3	Document Number	M116P	Rev 200
Date:	Monday, September 09, 2019	Sheet 45 of 52	



		Winmate Communication INC.	
Title			
Screw Hole & Fiducial			
Size A	Document Number M116P		Rev 200
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REV.110

$R_t = 0.6M * (UV - 0.5)$
 $R_m = 300 - R_b \quad (\text{Unit: } K\Omega)$
 $R_b = (300 + R_t) / 2 * OV \quad (R)$
 $UV = R_t / 0.6M + 0.5$
 $OV = \text{over voltage}$

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Title			HISTORY
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LAN1-I210

