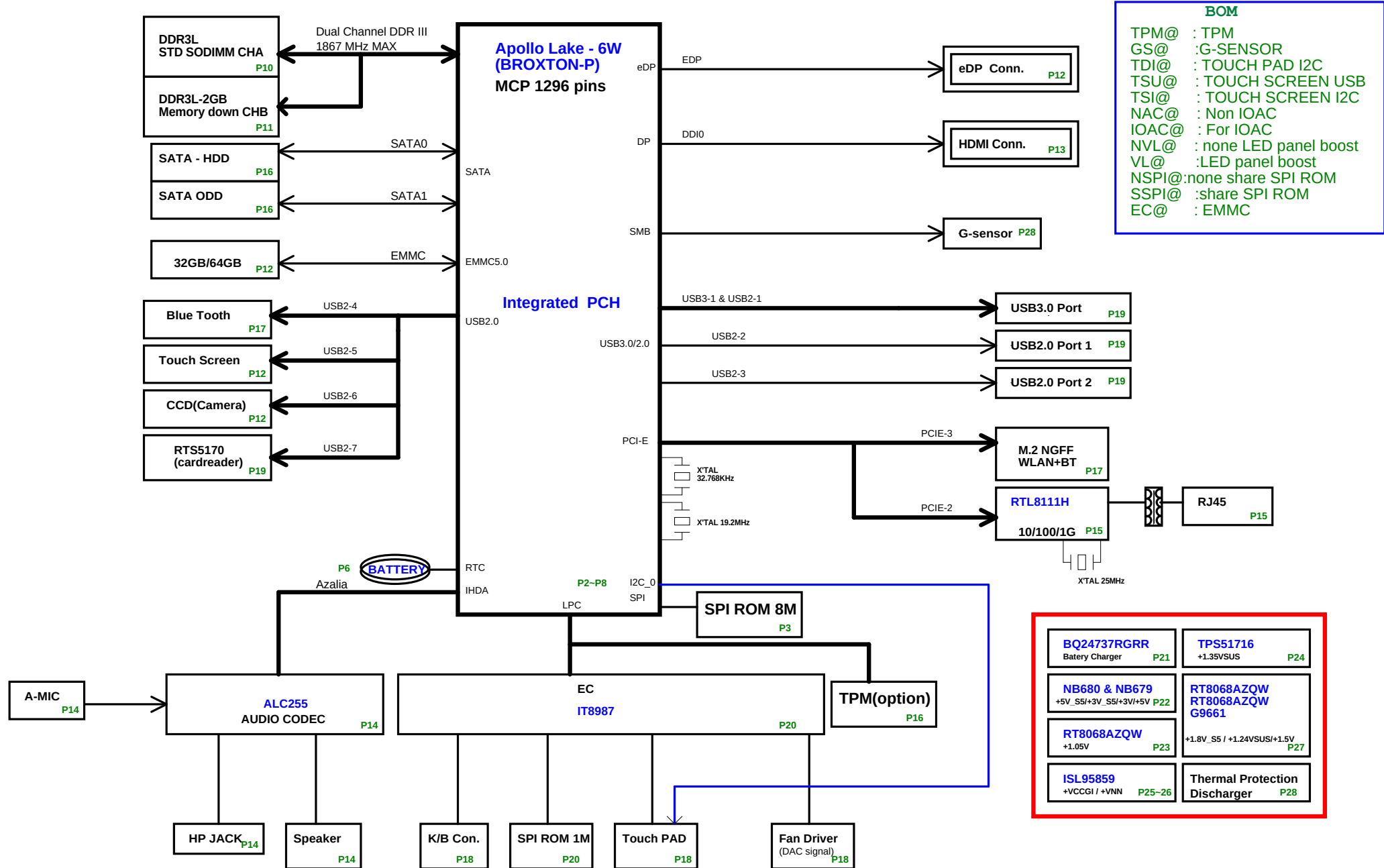


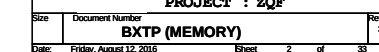
# ZQF SYSTEM BLOCK DIAGRAM

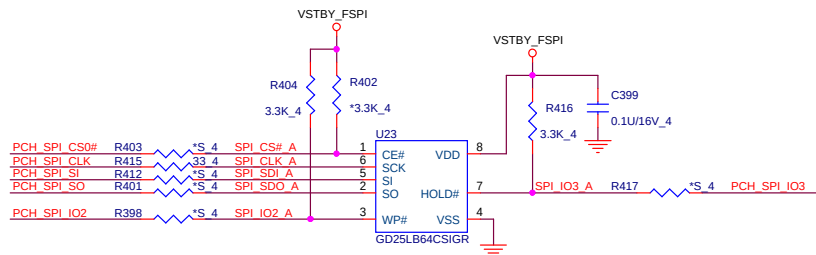


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PROJECT : ZQF

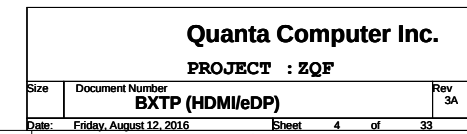
Size Document Number Rev 3A  
Block Diagram  
Date: Friday, August 12, 2016 Sheet 1 of 33

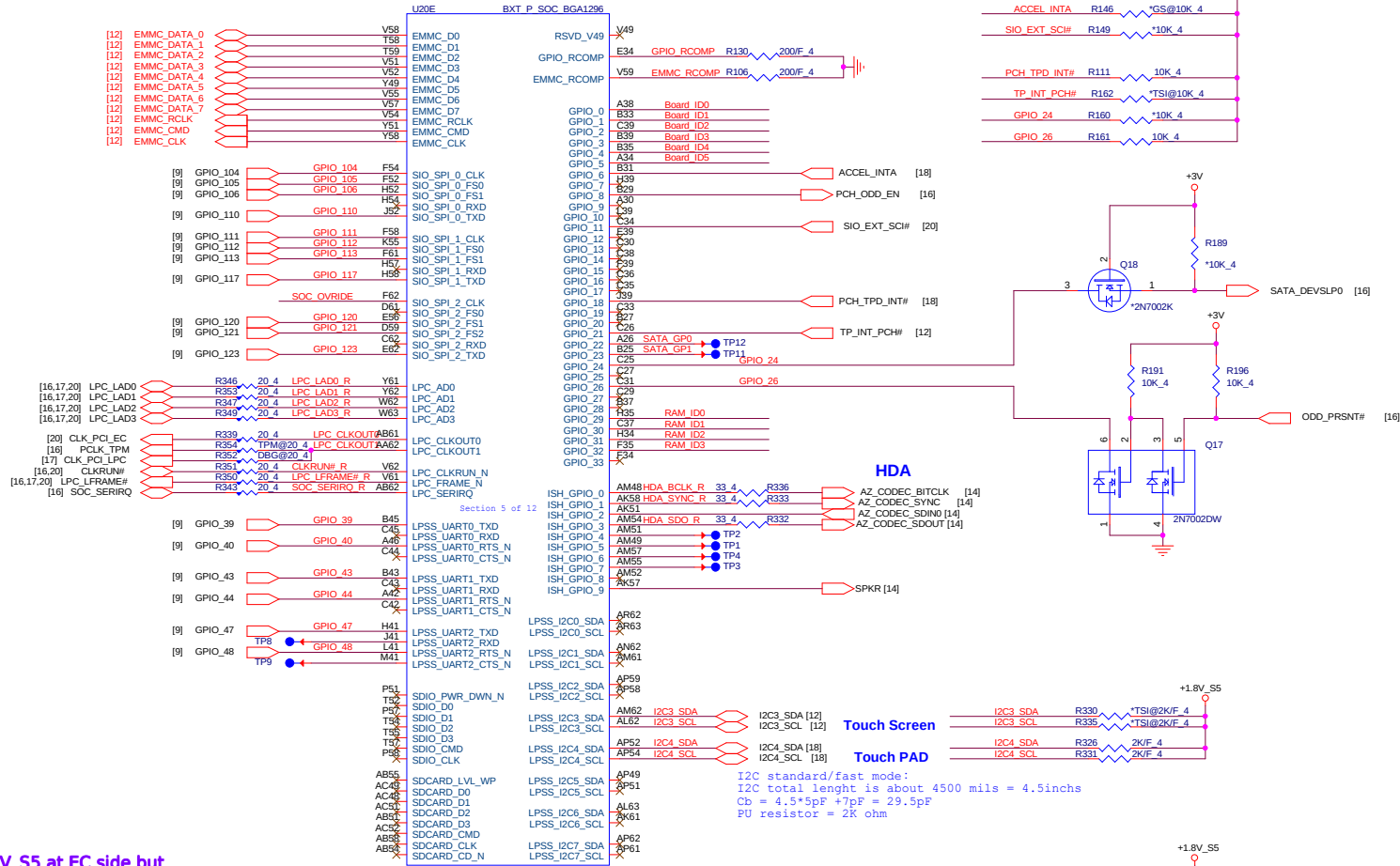




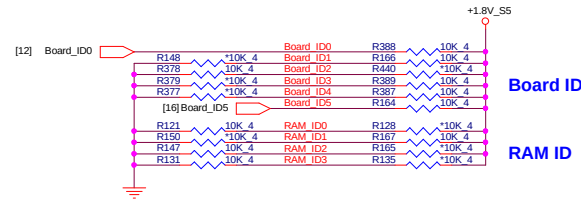
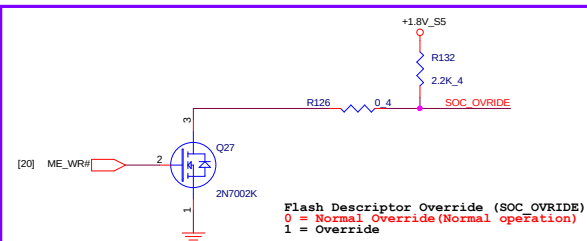
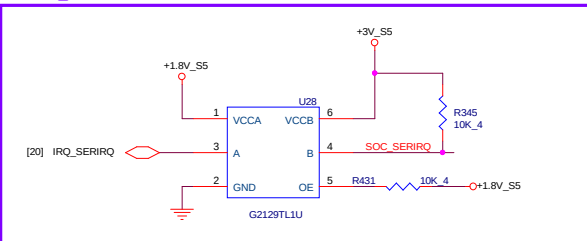
SPI ROM	Vender	Size	Quanta P/N	Vender P/N
1.8V	WND	8M	AKE5EZ0N0N01	W25Q64FWSSIQ
	GGD	8M	AKE5EG-0Q01	GD25LB64CSIGF

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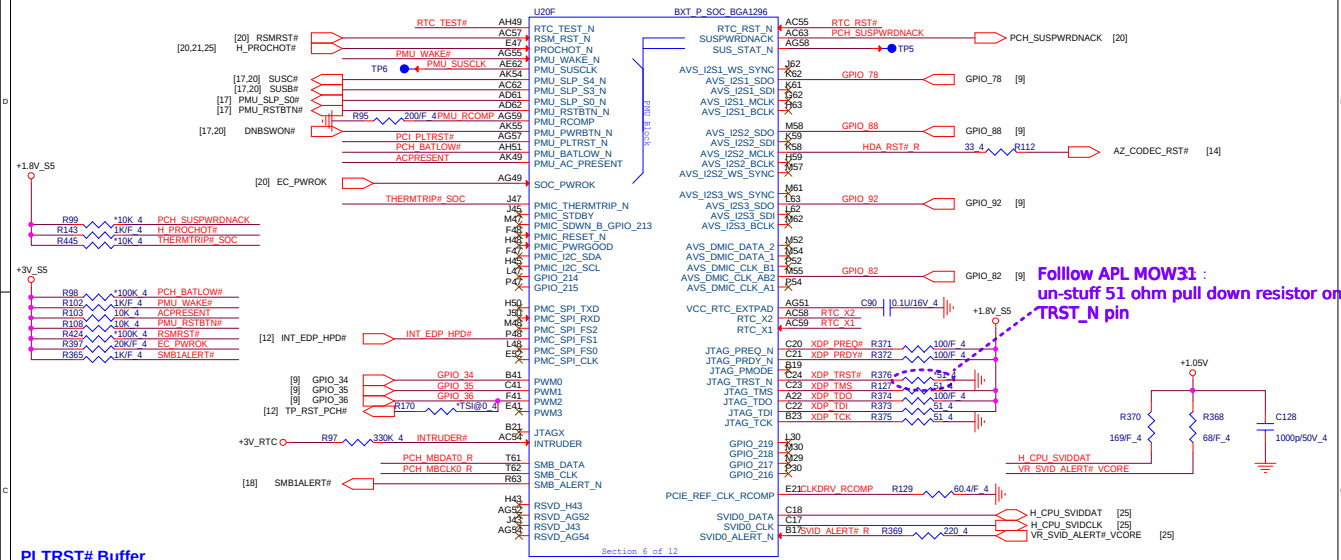




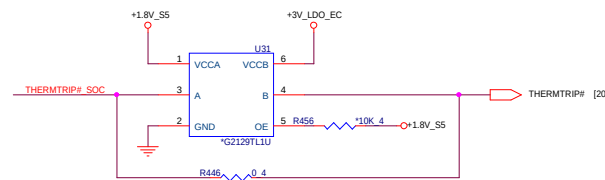
SERIRQ is 1.8V\_S5 at EC side but 3V\_S5 at CPU/TPM side



RAM_ID3	RAM_ID2	RAM_ID1	RAM_ID0	Vender	Quanta PN	Description
0	0	0	0	Samung-2GB	AKD5J00T504	IC SDRAM (96P) K4B4G1646E-BYK0 (FBGA) STNBSQ
0	0	0	1	Hynix-2GB	AKD5P00T113	IC SDRAM (96P) H5TC4G63CPR-PBA (FBGA) STNBSQ
0	0	1	0	Wiron-2GB	AKD5P00T112	IC SDRAM (96P) H5TC4G63CPR-PBA (FBGA) STNBSQ

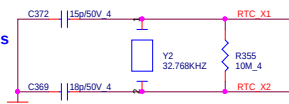


## THERMALTRIP#

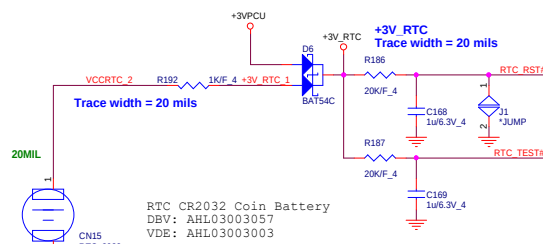


## RTC Clock 32.768KHz (CPU)

Trace length &lt; 1000 mils



## RTC Circuitry (RTC)



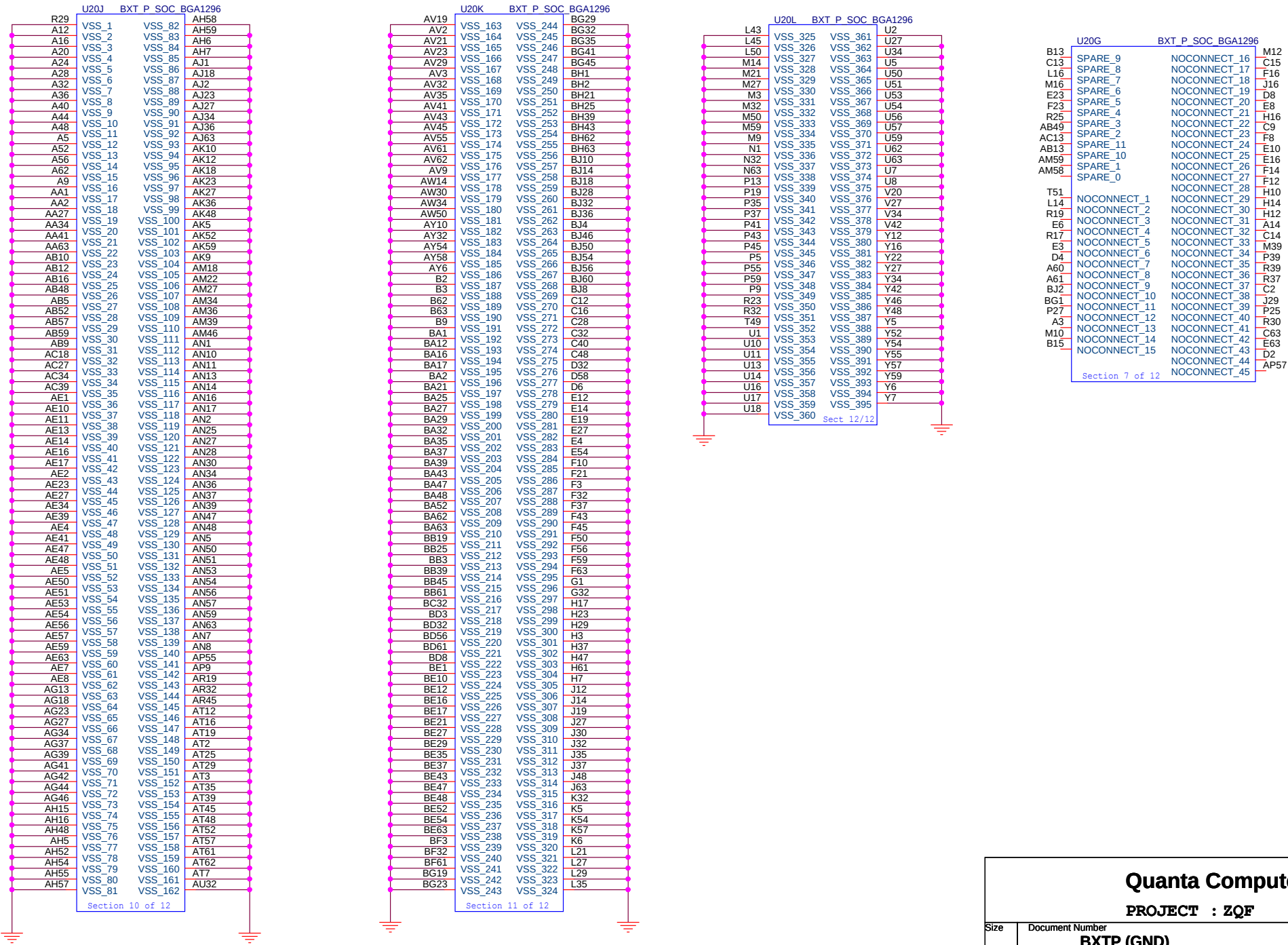
Quanta Computer Inc.

PROJECT : ZQF

Size	Document Number	Rev
	BXTP (PMU/PMIC/HDA/RTC)	3A
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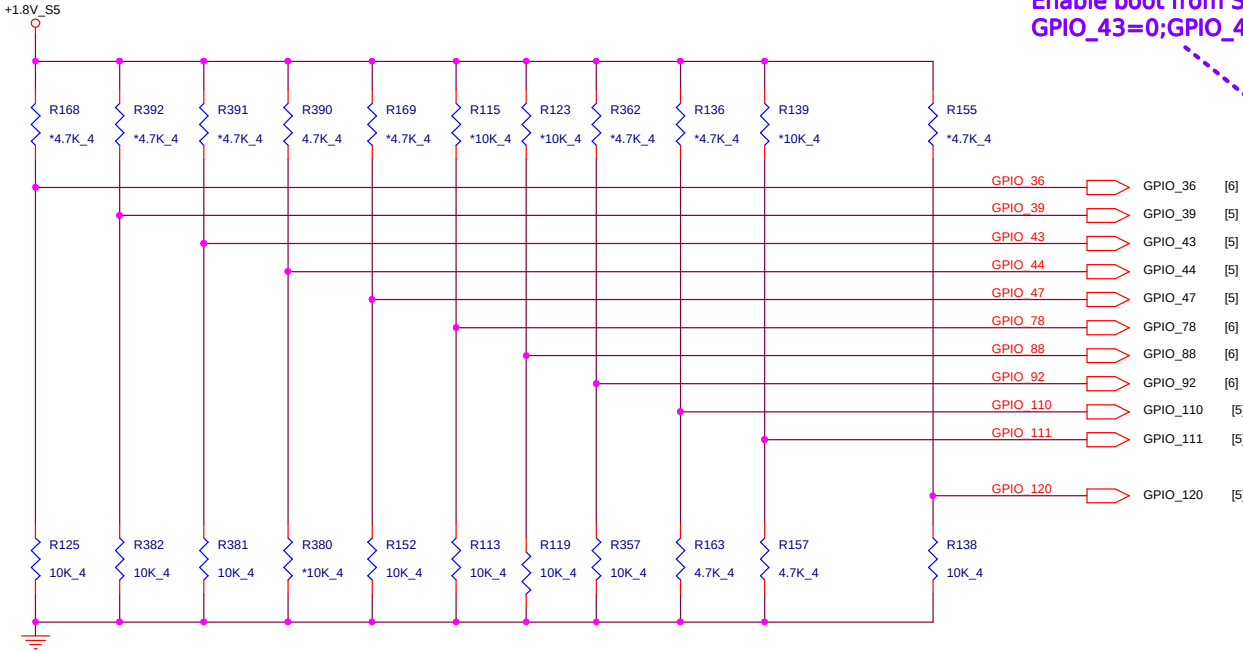






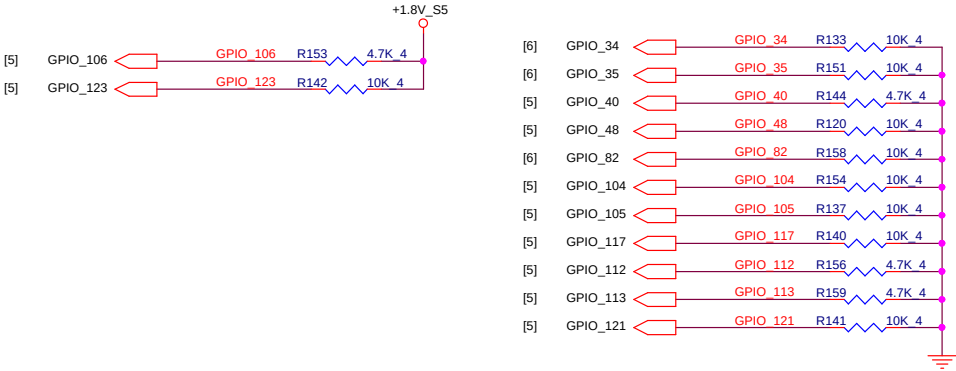


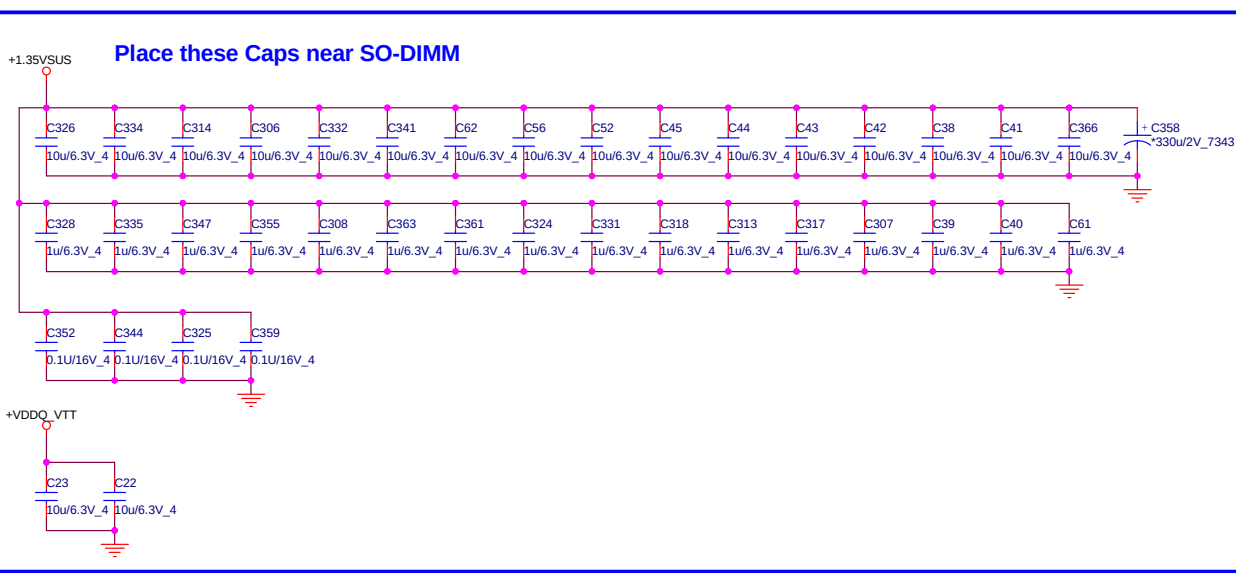
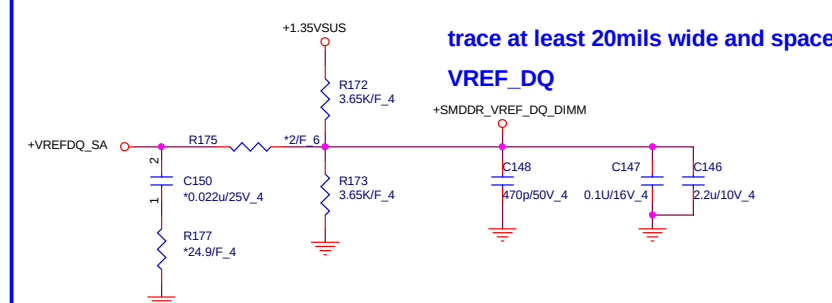
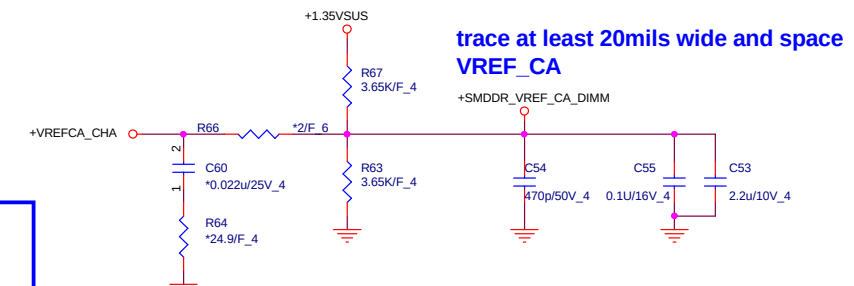
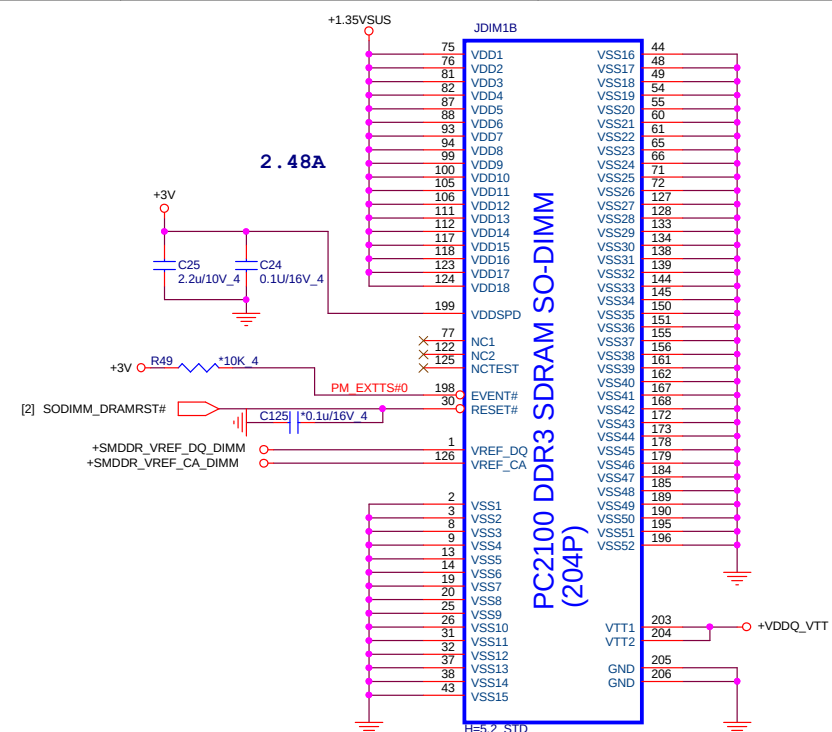
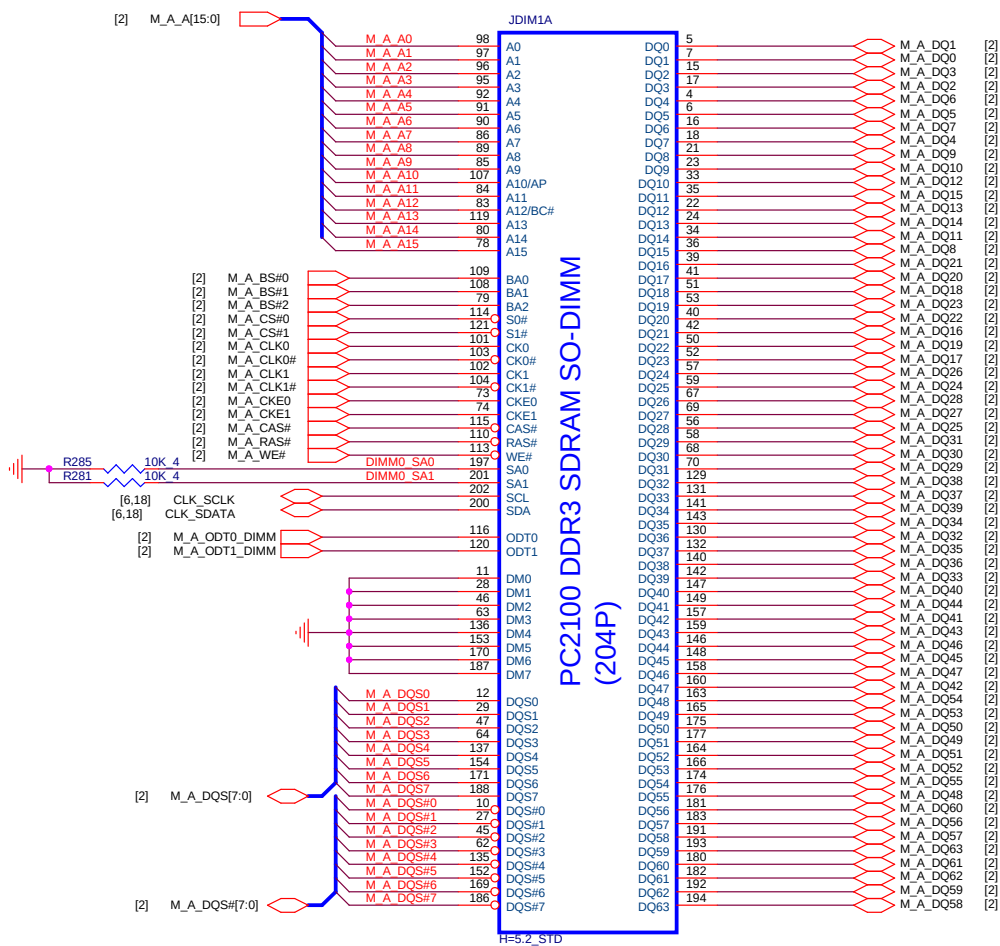
HARDWARE STRAPS

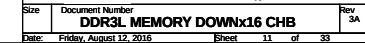


Follow APL WoW36 :  
Enable boot from SPI  
GPIO\_43=0;GPIO\_44=1

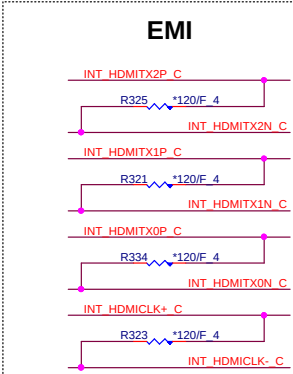
Hardware Strap	Strap Description
GPIO_36	VCC 1P24V 1P35V_A voltage select 0 = 1.24V 1 = 1.35V
GPIO_39	Enable CSE(TXE3.0) ROM Bypass 0 = Disable bypass 1 = Enable Bypass
GPIO_43	Allow eMMC as a boot source 0 = Disable 1 = Enable
GPIO_44	Allow SPI as a boot source 0 = Disable 1 = Enable
GPIO_47	Force DNX FW Load 0 = Do not force 1 = Force
GPIO_78	SMBus 1.8V/3.3V mode select 0=buffers set to 3.3V 1=buffers set to 1.8V
GPIO_88	PMU 1.8V/3.3V mode select 0=buffers set to 3.3V mode 1=buffers set to 1.8V mode
GPIO_92	SMBus No Re-Boot 0 = Disable (default) 1 = Enable
GPIO_110	LPC 1.8V/3.3V mode select 0=buffers set to 3.3V mode 1=buffers set to 1.8V mode
GPIO_111	Boot BIOS Strap 0 = Boot from SPI 1 = Do not boot from SPI
GPIO_120	Top swap override 0 = Disable 1 = Enable



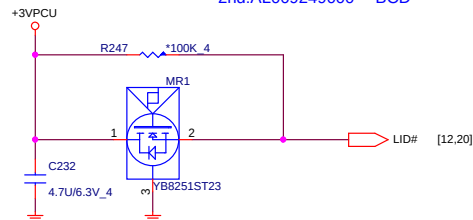








1st:AL008251000 -- YBT  
2nd:AL009249000 -- BCD

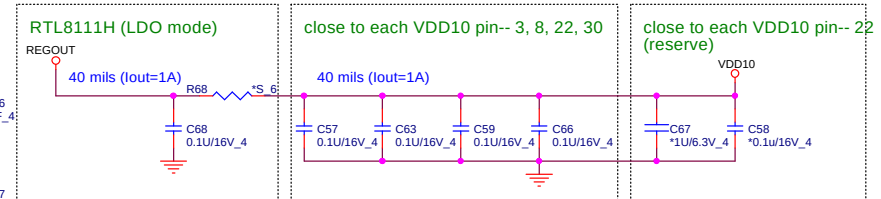
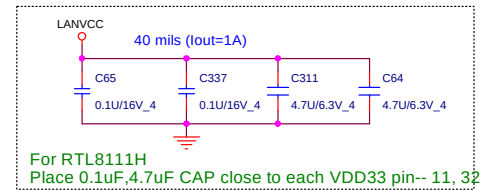
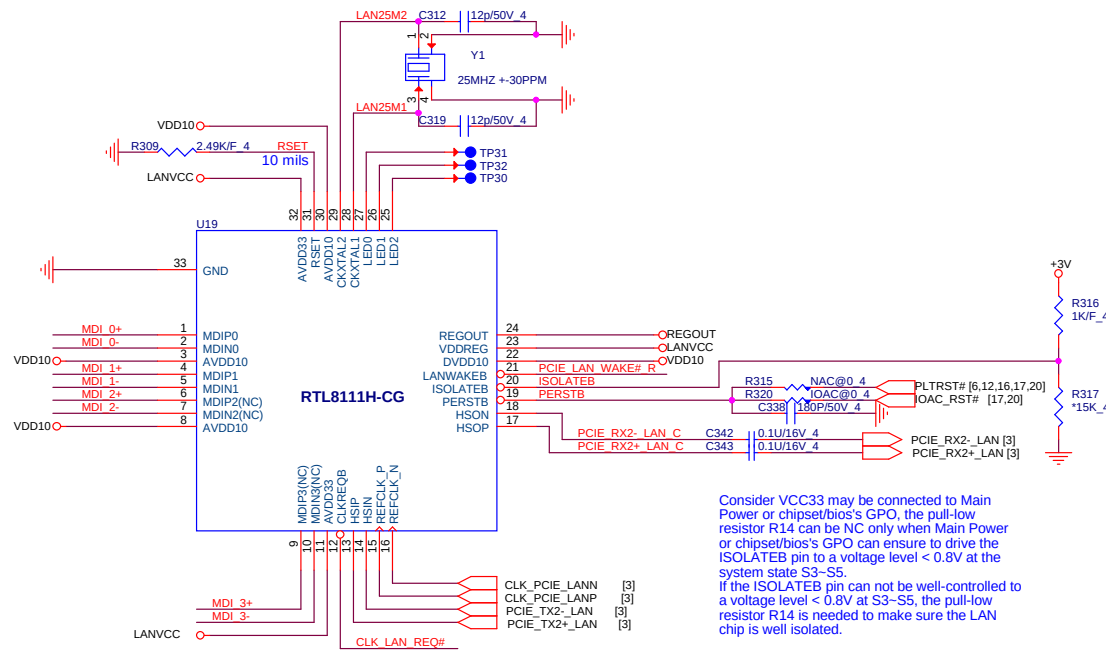




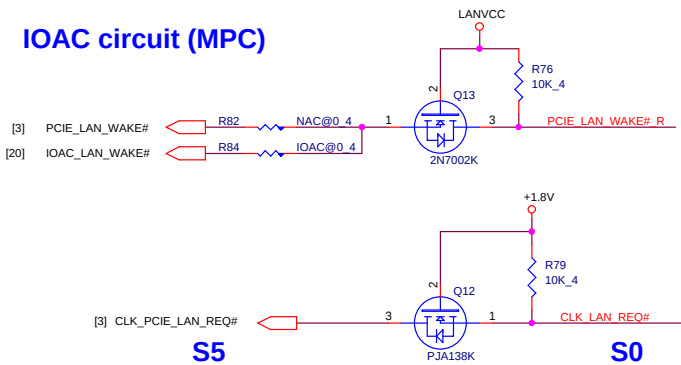
PROJECT : ZQF

Size	Document Number	Rev
	<b>Audio Codec/HP/SPK/AMIC</b>	3A
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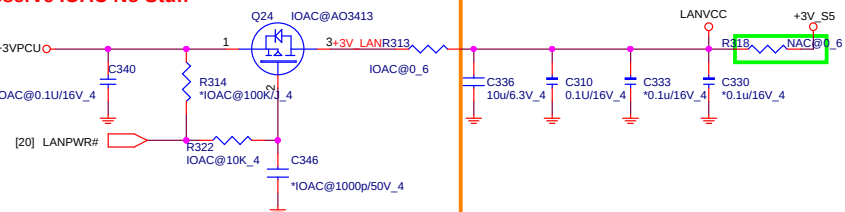




## IOAC circuit (MPC)

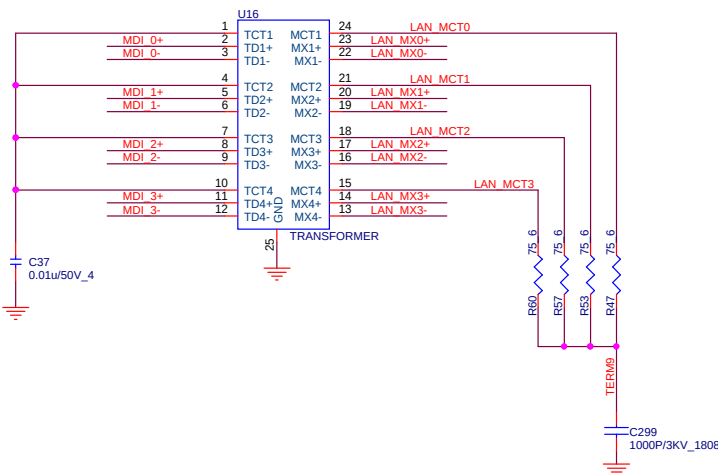


## Reserve IOAC No Stuff

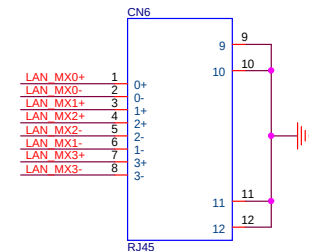


## Transformer

Layout: All termination signal should have 30 mil trace



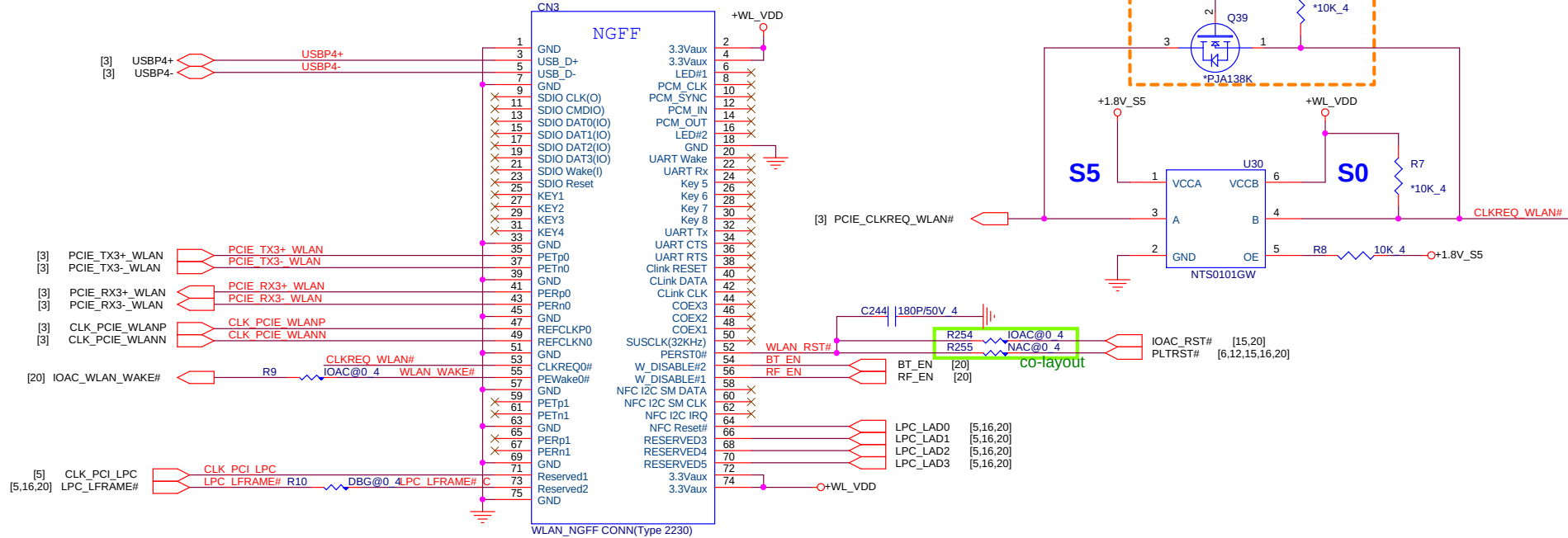
## RJ45 Connector



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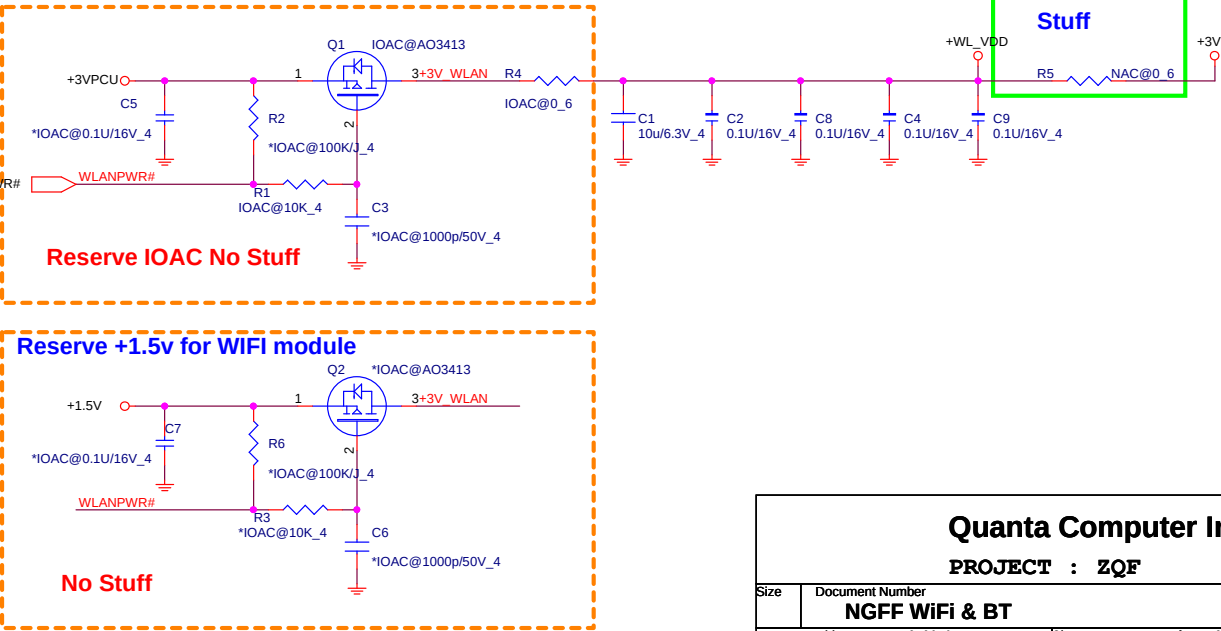
PROJECT : ZQF



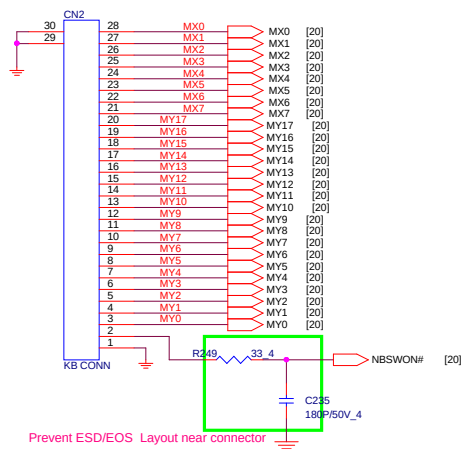


Low	Mini card +3V power enable
High	Mini card +3V power disable

Intel APS Fixture use

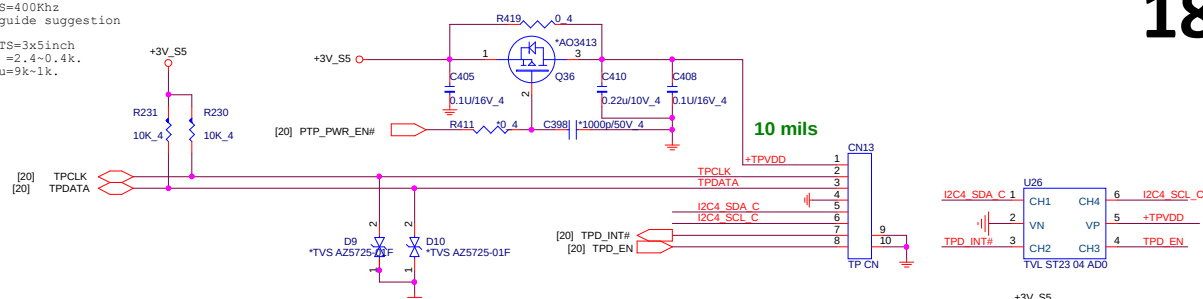


## KEYBOARD (KBC)

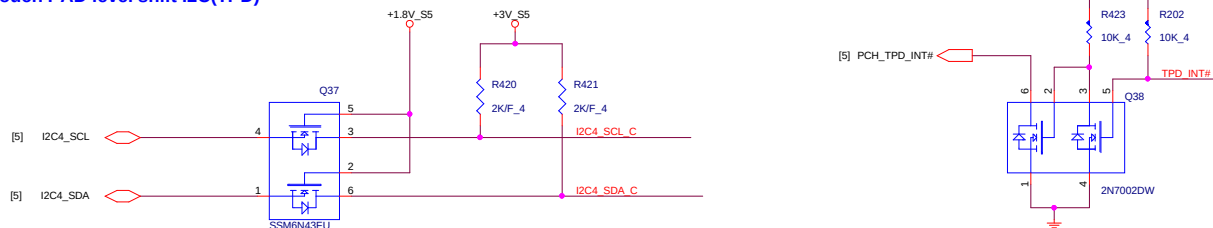


## TOUCHPAD BOARD CONN (TPD I2C/PS2 co-lay)

TPD->100KHz, TS=400KHz  
Intel design guide suggestion  
MCP PIN 10u.  
Per inch 3u TS=3x5inch  
400KHz10~100u =2.4~0.4k.  
100KHz 10~100u=9k~1k.

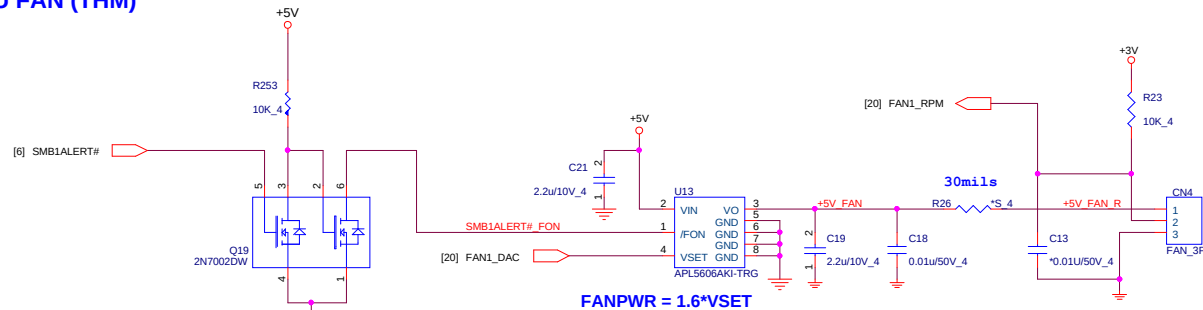


## Touch PAD level shift I2C(TPD)

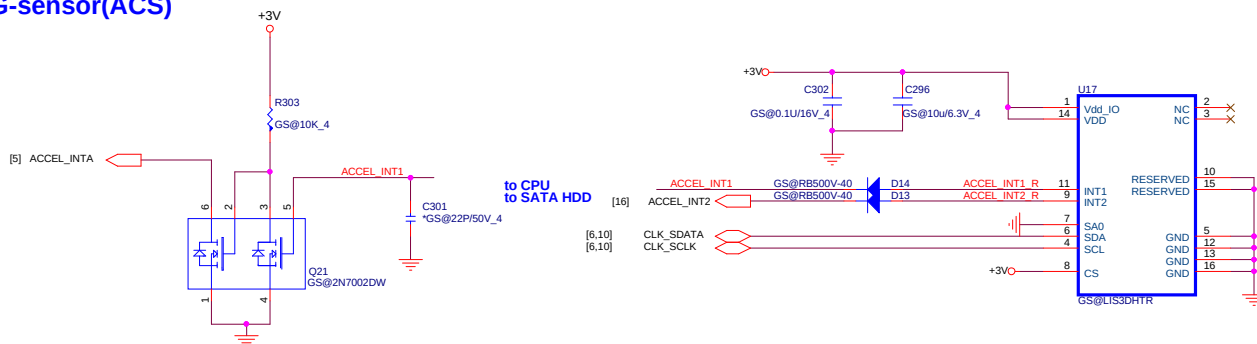


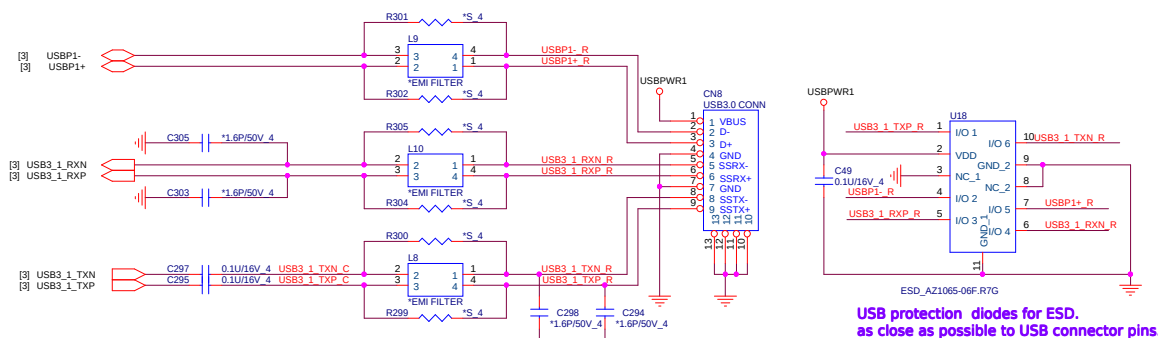
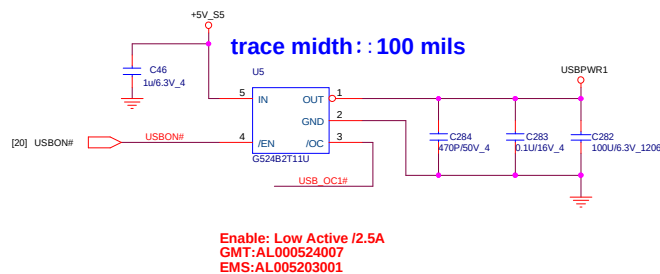
## KB\_BL LED (KBC)

## CPU FAN (THM)

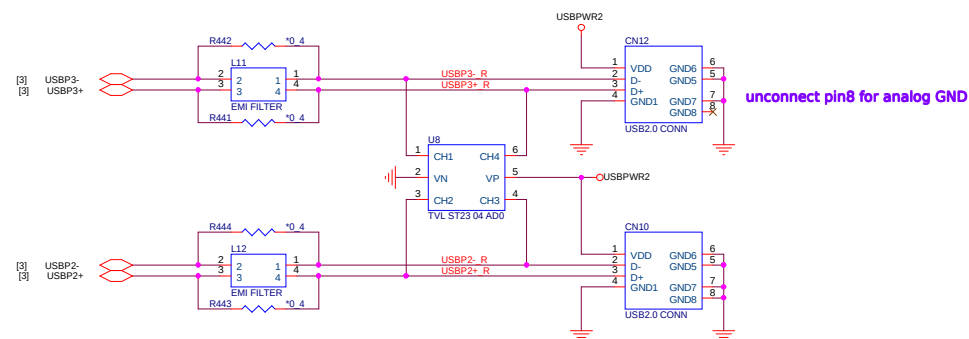
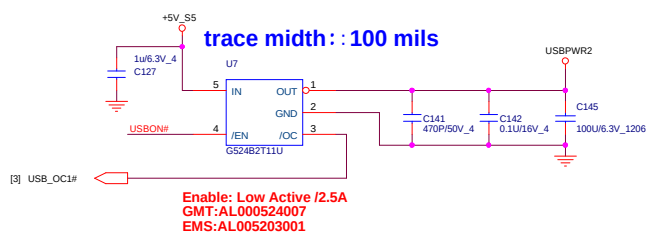


## G-sensor(ACS)

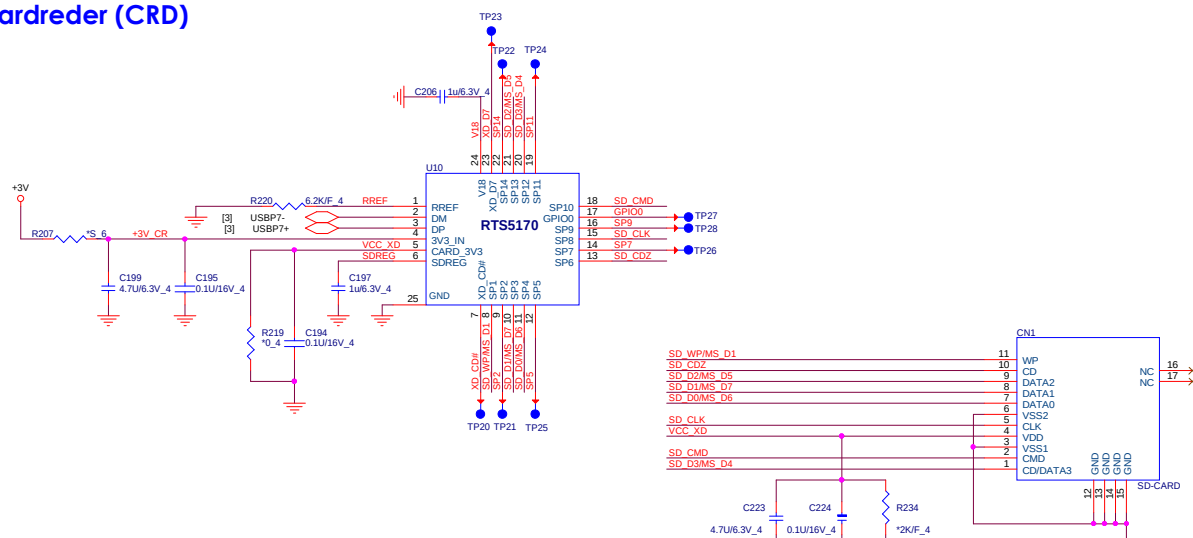




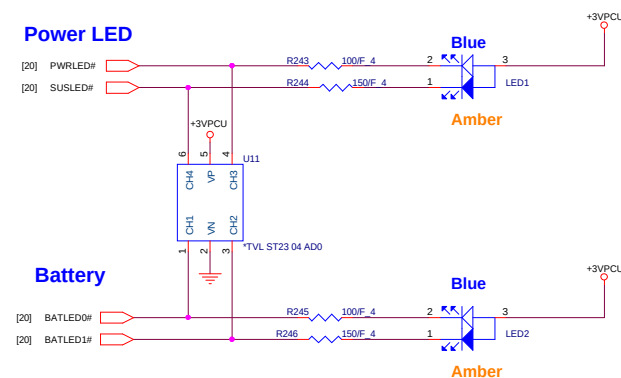
USB 2.0 Connector (UB2)



## Cardreder (CRD)

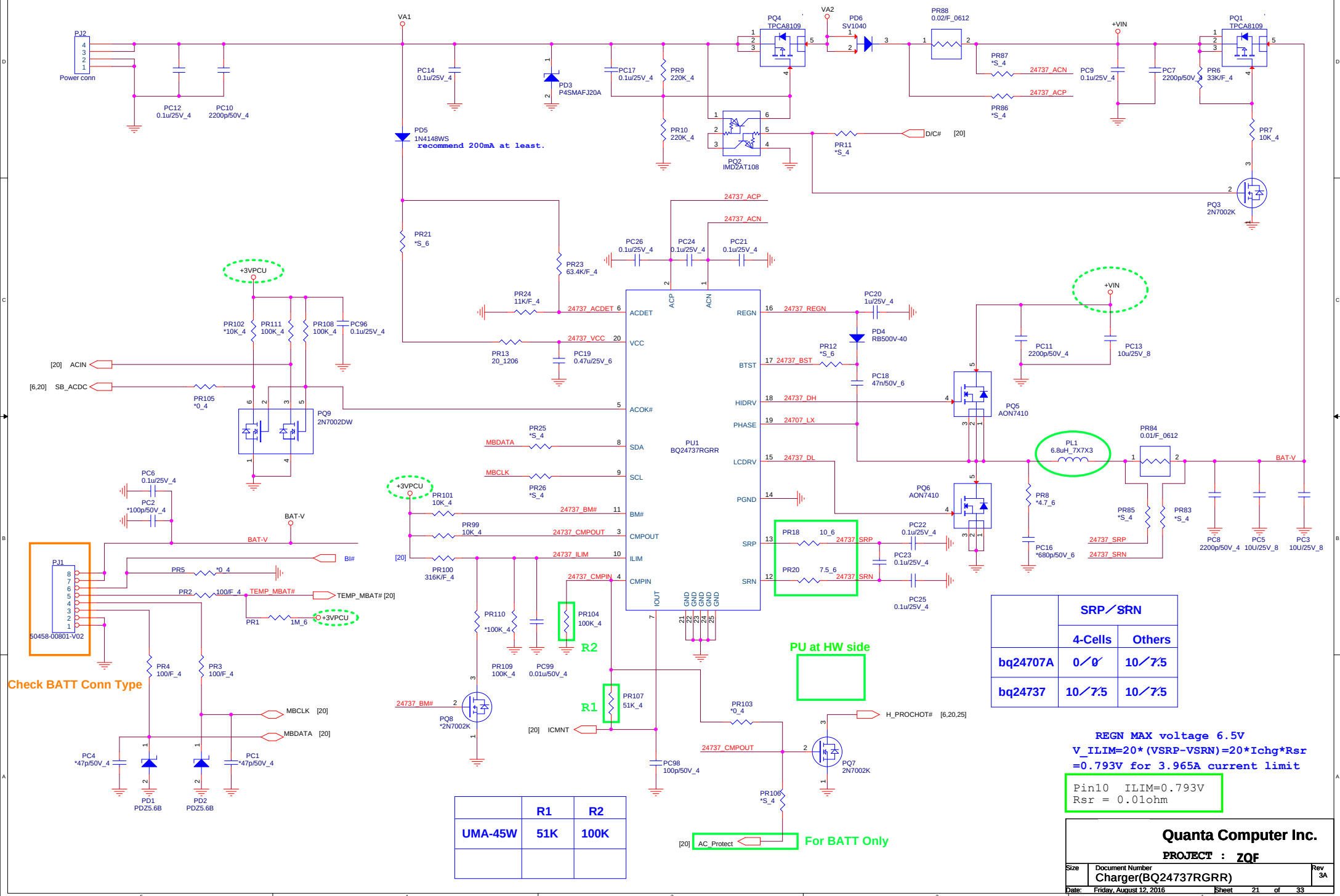


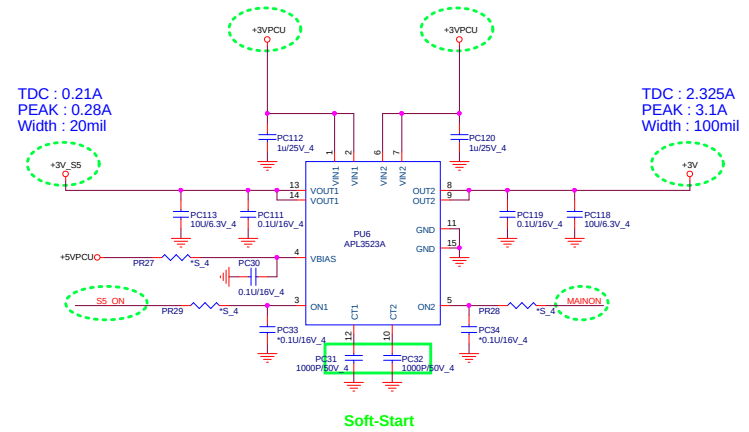
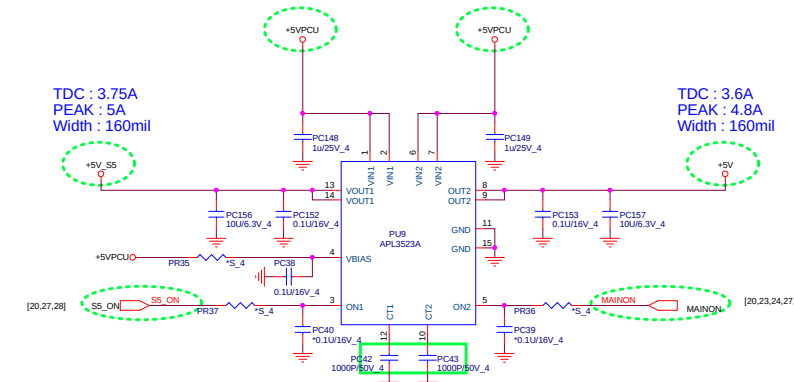
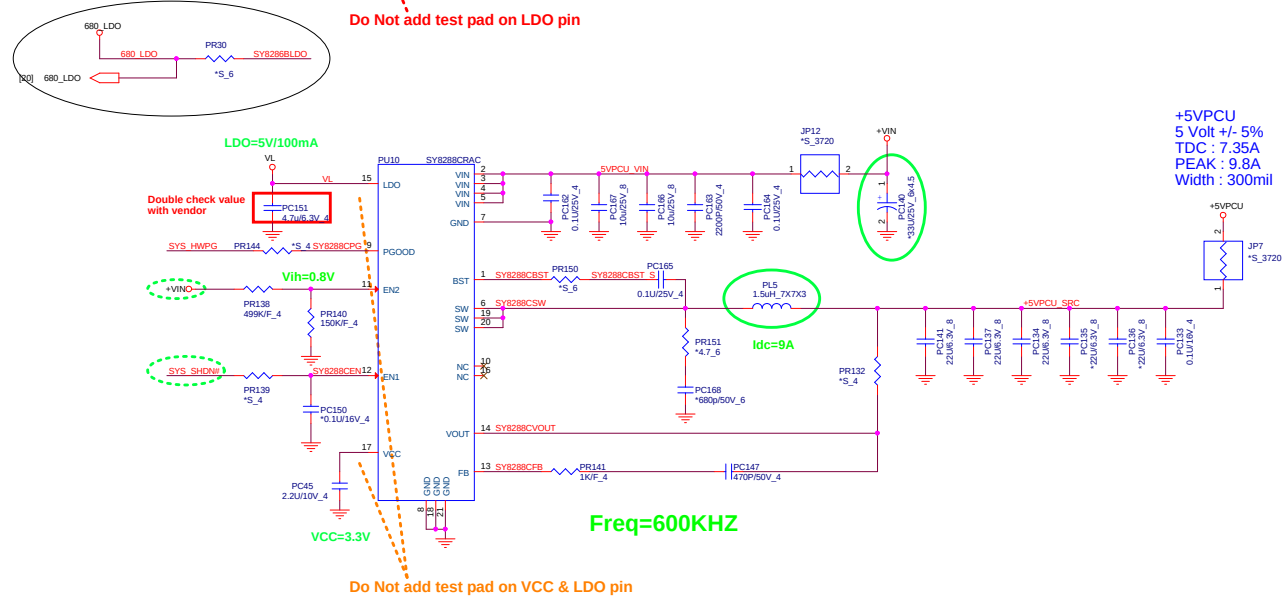
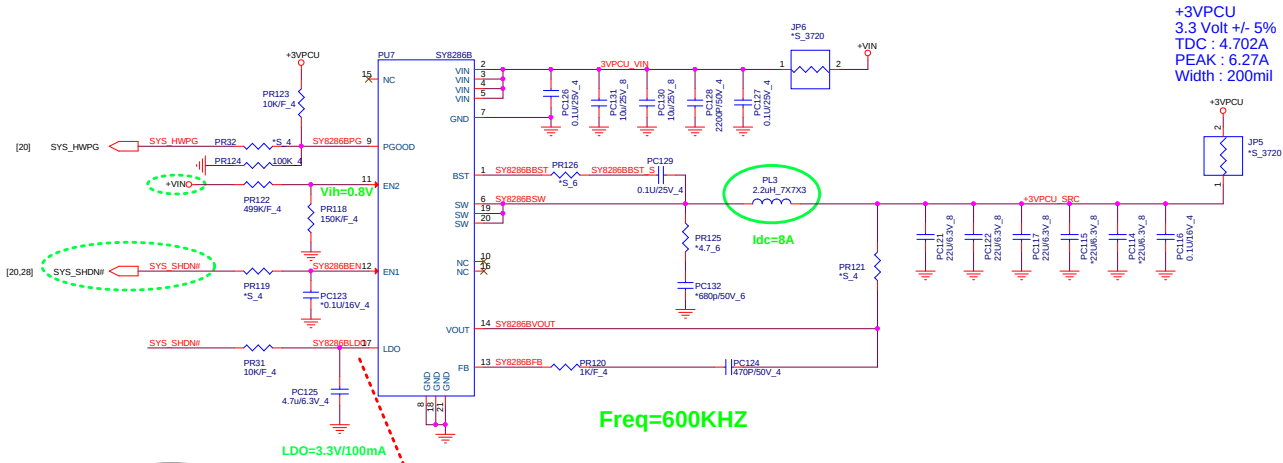
## LED(UIF)







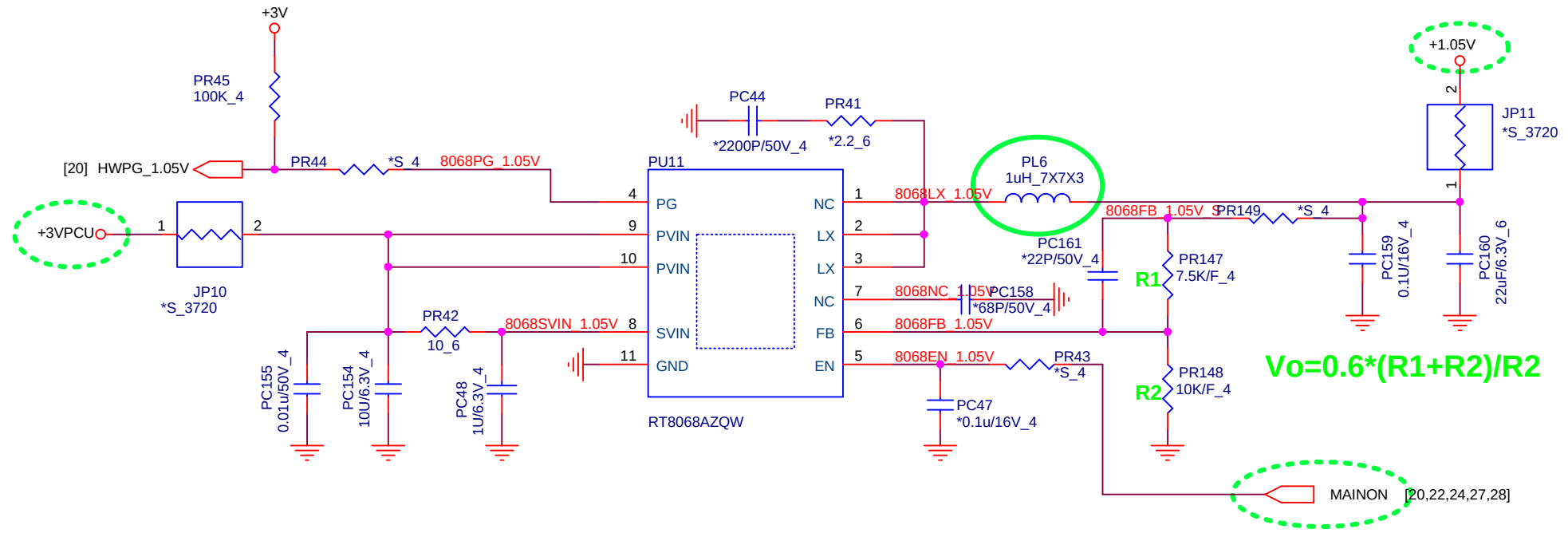




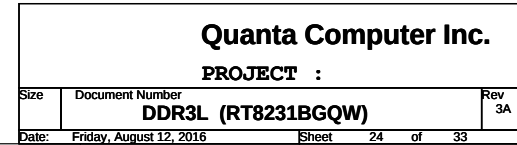
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Size	Document Number	Rev
	<b>SYSTEM 5V/3V (SY8286B &amp; SY8288C)</b>	3A
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+1.05V  
 1.05Volt +/- 5%  
 TDC : 2.025A  
 PEAK : 2.7A  
 Width : 100mil



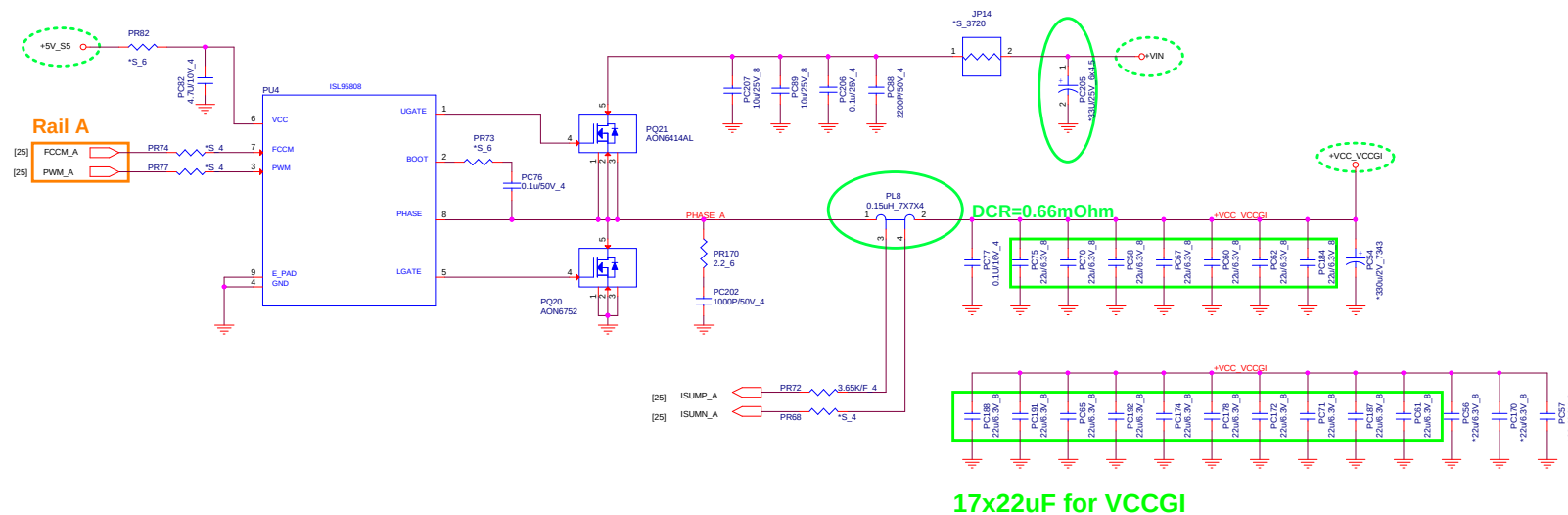
$$Vo = 0.6 * (R1 + R2) / R2$$





[12,16,21,22,24,25,28] +VIN  
 [7,16,25] +VCC\_VCCGI  
 [7,16,25] +VNN  
 [16,19,22,24,25] +5V\_S5

## VCCGI



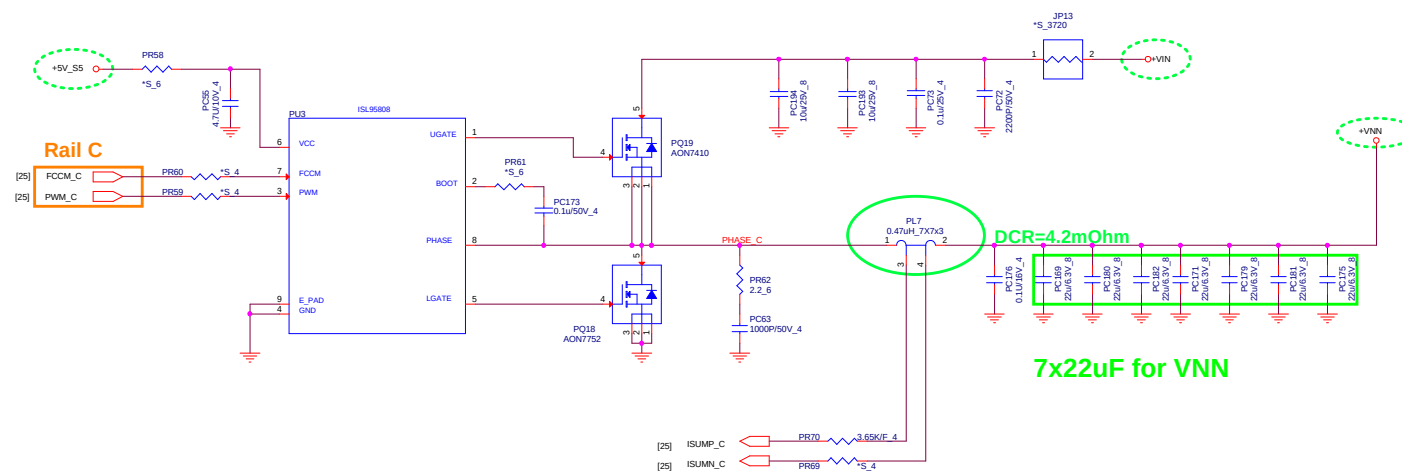
### +VCCGI

Icc Max: 21A  
 Icc TDC: 18A  
 Vboot: 0V  
 OCP: 25A  
 Fsw: 750KHZ

### VCCGI L/L:

R\_DC\_LL: 6mV/A  
 R\_AC\_LL: 6mV/A

## VNN



### +VNN

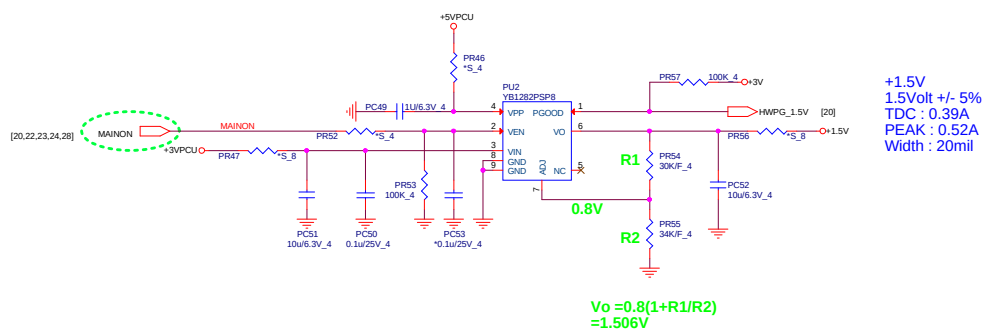
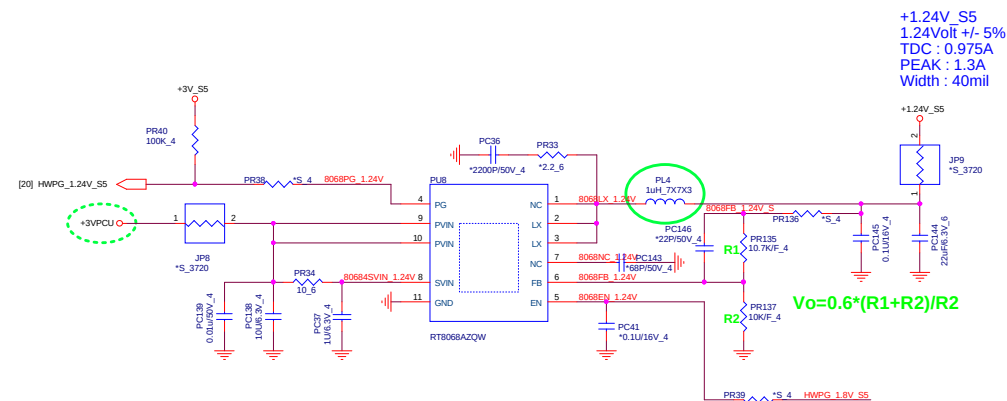
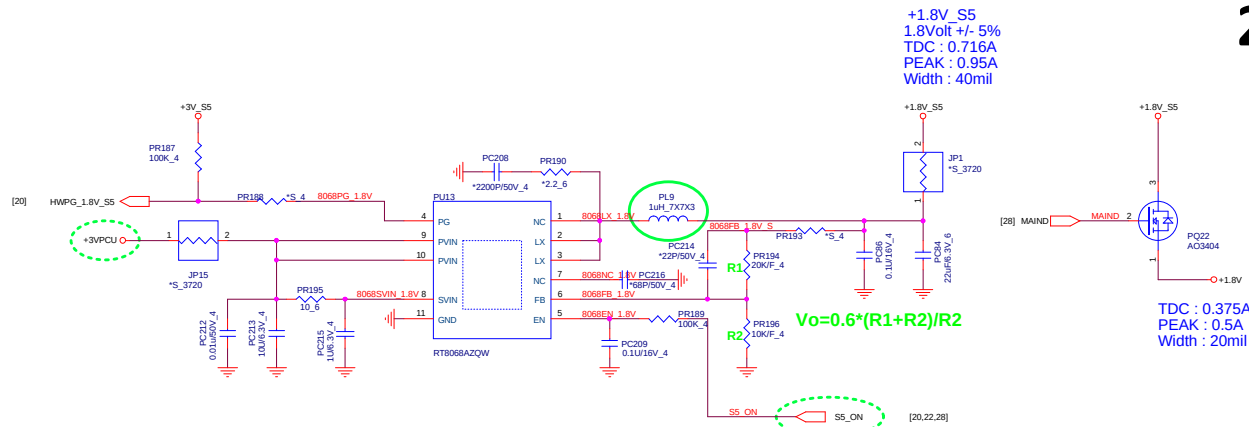
Icc Max: 4.8A  
 Icc TDC: N/A  
 Vboot: 1.05V  
 OCP: 8A  
 Fsw: 750KHZ

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	+VCCGI / +VNN (ISL95859)	3A
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+1.8V\_S5 / +1.24VSUS/+1.5V

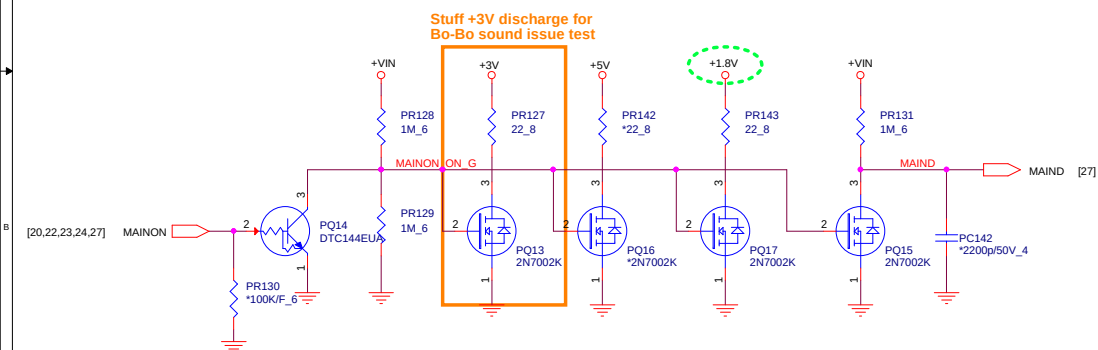
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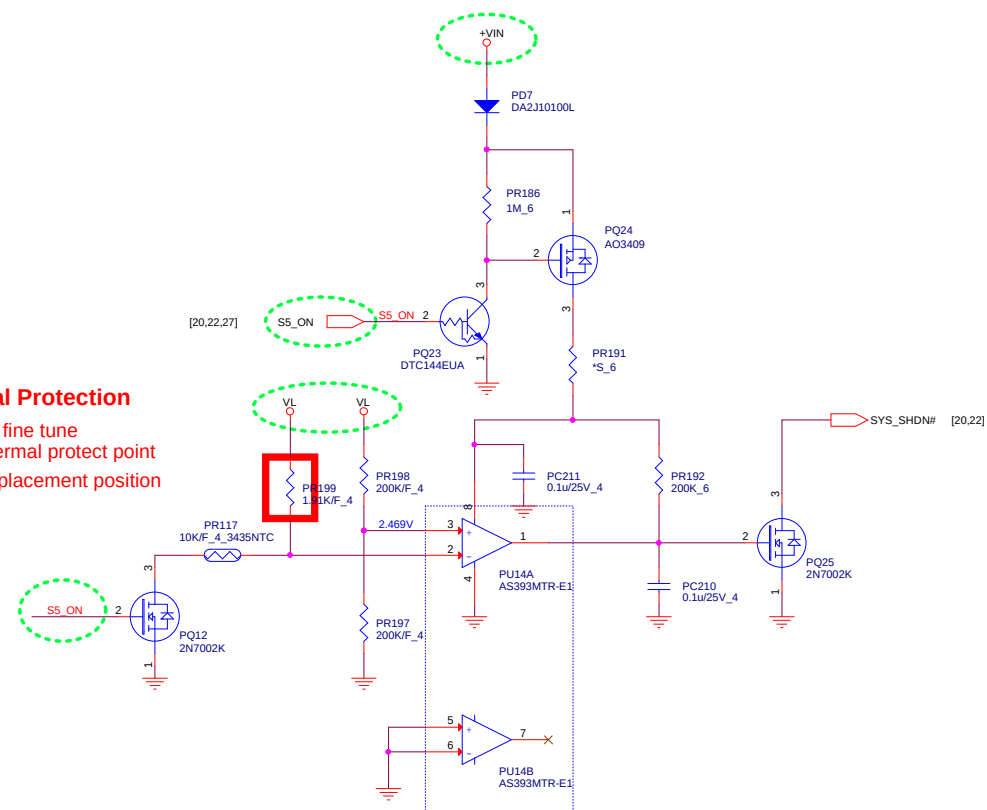
Rev

3A



### Thermal Protection

- (1) Need fine tune for thermal protect point
- (2) Note placement position



For EC control thermal protection (output 3.3V)

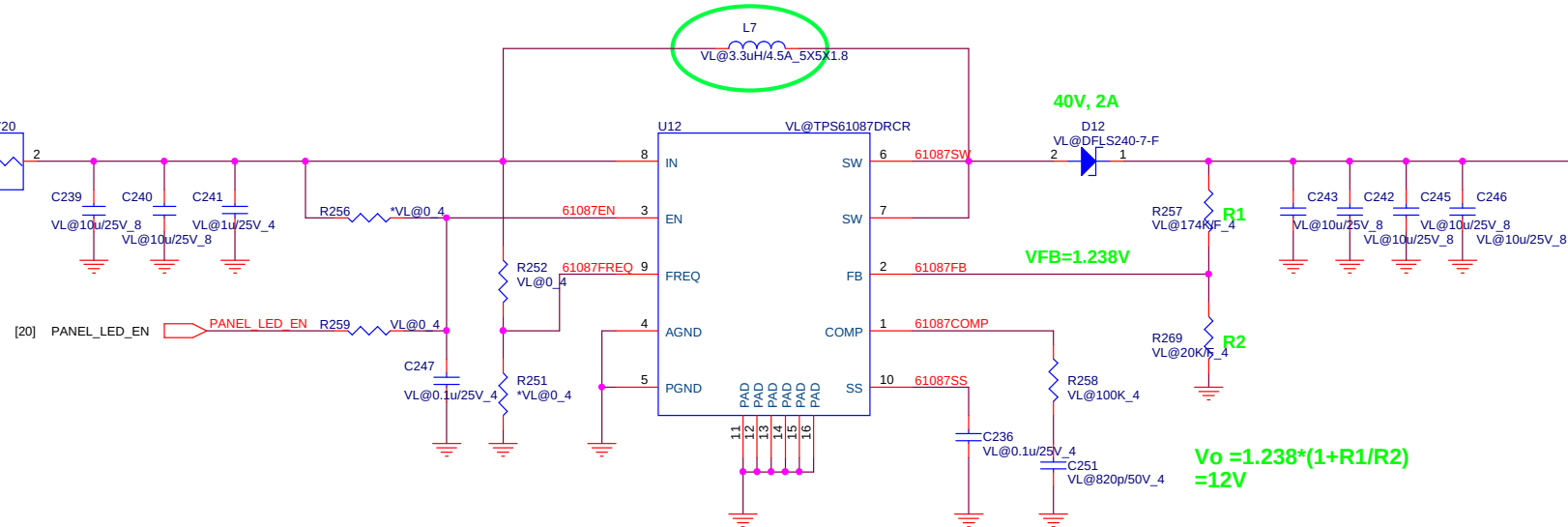
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PROJECT :

Size	Document Number	Rev
	Thermal / Discharge	3A
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Panel Spec (TFT-LCD 14")  
 VLED : 6V~21V (Typ:12V)  
 Power Consumption : 3W (MAX)

+12V\_Panel  
 12 Volt +/- 5%  
 PEAK : 0.35A  
 Width : 20mil

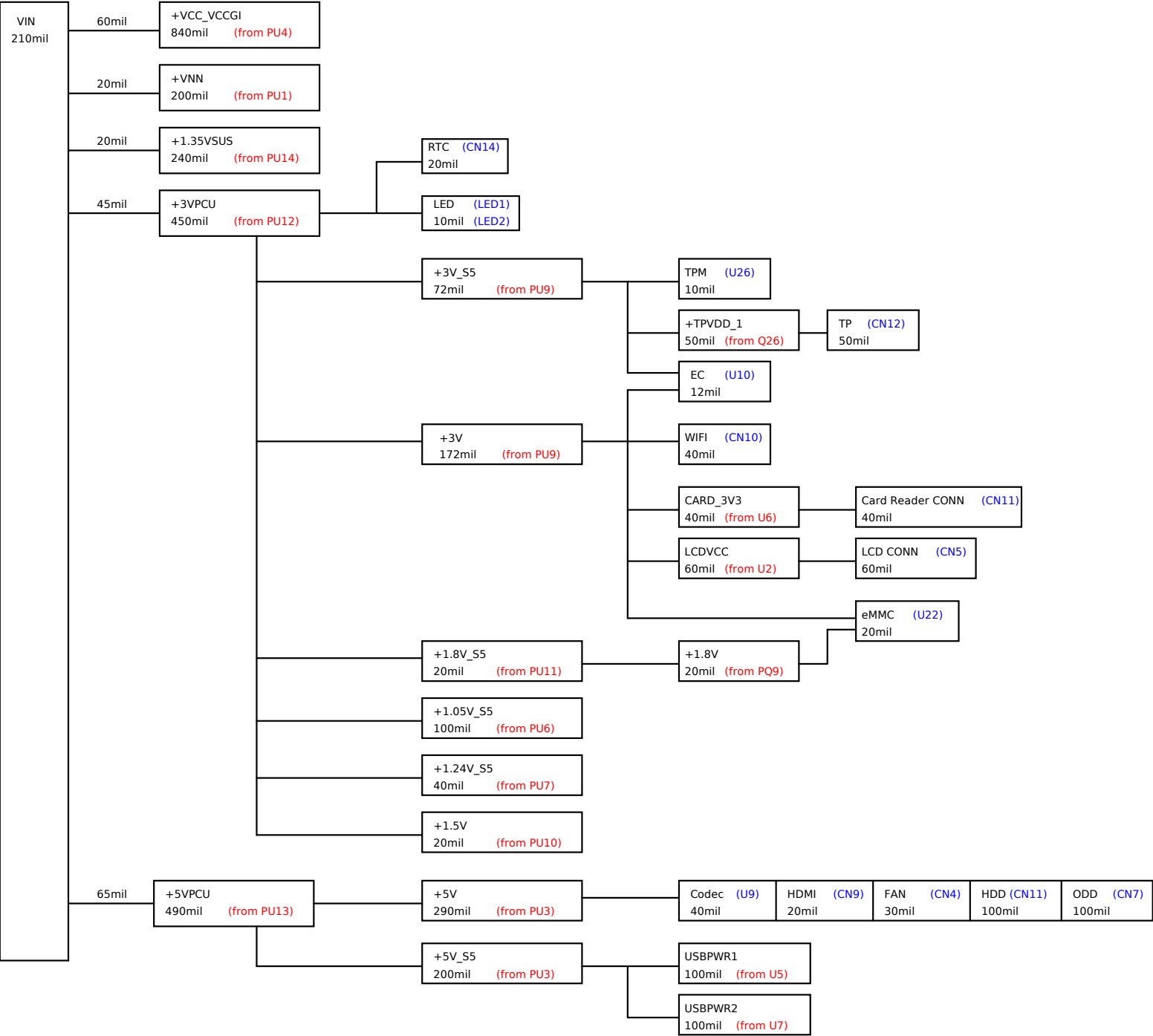


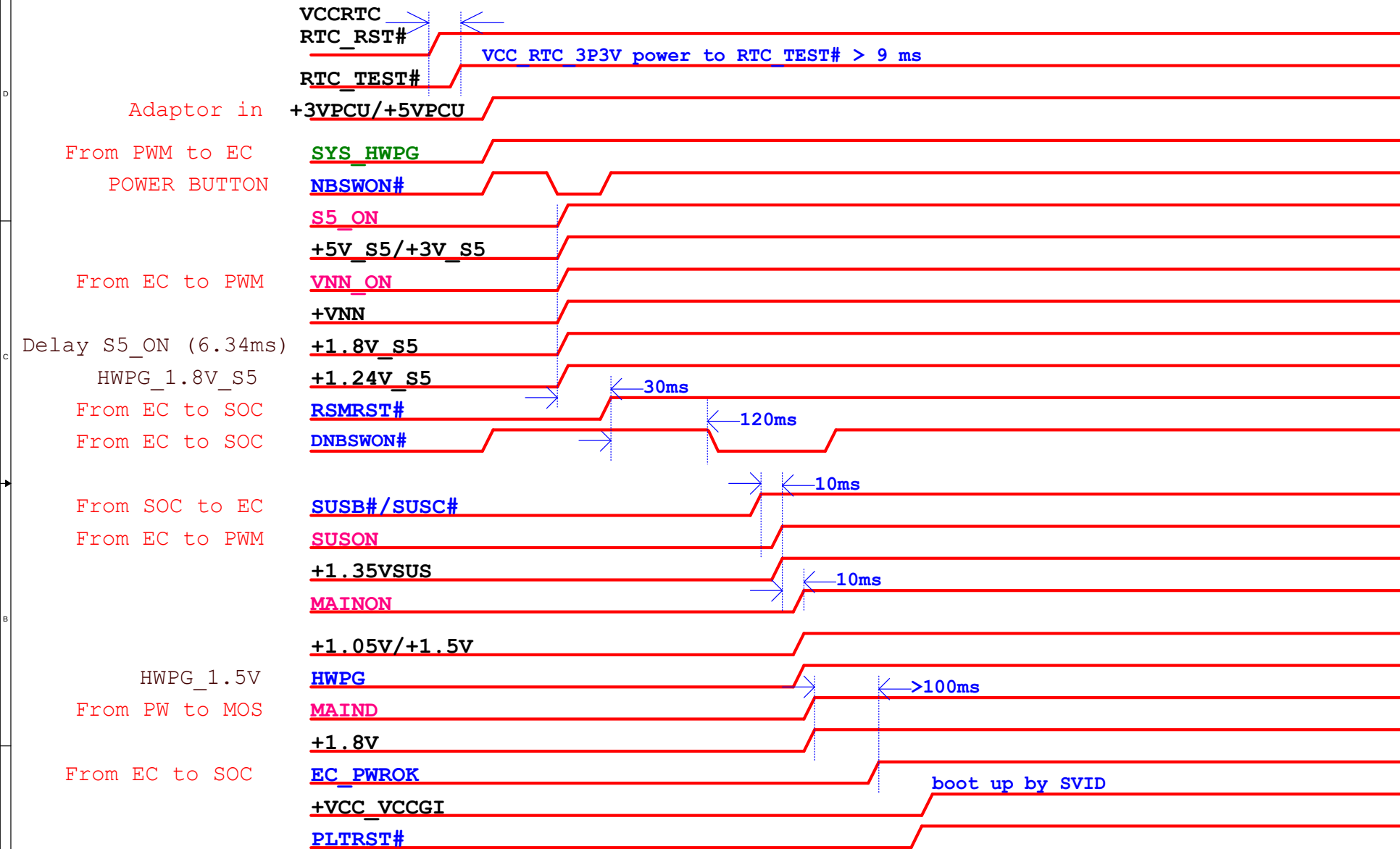
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PROJECT :

LED Panel (TPS61087)

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	<b>Power on Sequence</b>	3A

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Power status table		
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