

# Compal Confidential

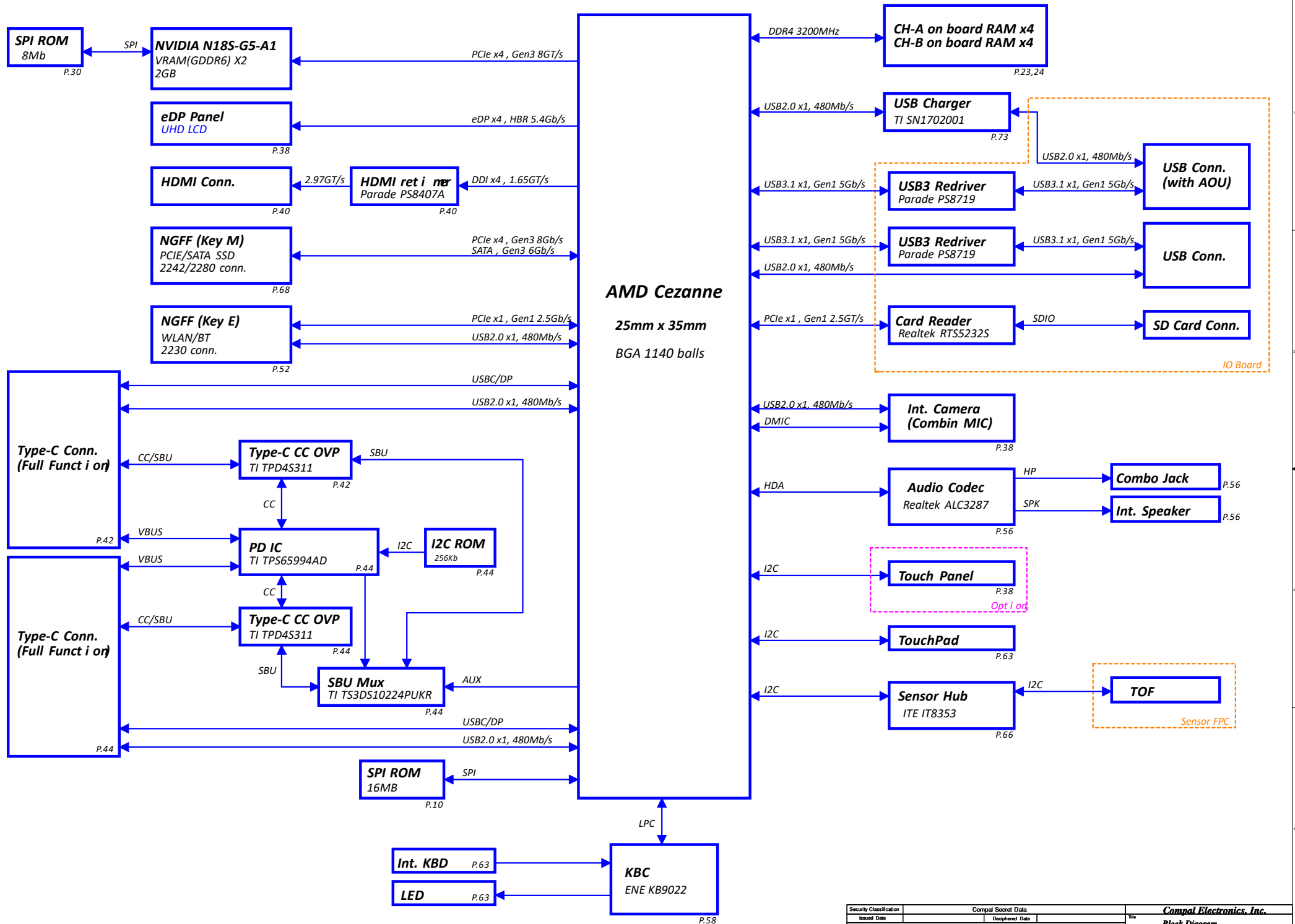
## S560 Pro-14"

### DIS M/B Schematic Document

### AMD Cezanne Processor with DDR4 Memory Down

2020-12-08A  
LA-K483P  
REV: 1A

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
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Voltage Rails

State	power plane				
		+12.6VB	+5VALW +3VALW +1.8VALW +0.75VALW	+1.2V +2.5V	+5VS +3VS +1.8VS +0.75VS +0.6VS +APU_CORE +APU_CORE_SOC
S0		O	O	O	O
S3		O	O	O	X
S5 S4/AC		O	O	X	X
S5 S4/ Battery only		O	X	X	X
S5 S4/AC & Battery don't exist		X	X	X	X

BOM Structure Table

Item	BOM Structure
Memory Down - SDP Package	SDP@ SDP_CHB@
Memory Down - DDP Package	DDP@ DDP_CHB@
Channel B Memory Down	CHB@
EMI pop	EMI@
ESD pop	ESD@
RF pop	RF@
AMD HDT Debug	HDT@
Keyboard BackLight	KBL@
DIS SKU	DIS@
UMA SKU	UMA@
GPU GC6 Mode	GC6@
Touch Screen SKU	NOGC6@ TS@
SOC WOV Solution	BHWOV@
Codec WOV Solution	SWWOV@

Item	BOM Structure
EMI un-pop	@EMI@
ESD un-pop	@ESD@
RF un-pop	@RF@
DIS unpop	@DIS@

Item	BOM Structure
APU Select	APU_R5@ APU_R7@ APU_H_R5@ APU_H_R7@
GPU Select	N18S_G5@
VRAM Select	VRAM_S2G@ VRAM_M2G@ VRAM_H2G@ VRAM_M8G@ VRAM_H8G@ VRAM_S8G_S@ VRAM_S16G@ VRAM_M16G@ VRAM_H16G@
DRAM Select	

Item	BOM Structure
	APU@ GPU@ DRAM@ VRAM@ JUMP@
for Simulation Rule	

USB Port Table

USB3	USB2	Function
0	0	Type-C Port1
1	1	USB3 Port1
2	2	Camera
3	3	
4	4	Type-C Port2
5	5	USB3 Port2
6	6	
7	7	NGFF BT

DDI Port Table

Port	Function
0	eDP
1	HDMI
2	Type-C Port1
3	Type-C Port2

GFX Port Table

Port	Function
0	
1	
2	DGPU
3	
4	
5	
6	
7	

GPP Port Table

Port	Function
0	
1	
2	SSD
3	
4	
5	CardReader
6	
7	NGFF WLAN
8	
9	
10	
11	

EC SM Bus1 Address

Device	Address
Smart Battery	0001 011x 16h
Charger (BQ25710)	0001 001x 12h
PD (USBC0)	0100 000x 40h
PD (USBC1)	0100 100x 48h
Sensor Hub	1100 011x C6h

EC SM Bus2 Address

Device	Address
Thermal Sensor (F75305M)	1001 101x 9Ah
GPU Internal thermal sensor	1001 111x 9Eh
APU Internal thermal sensor	1001 100x 98h

EC SM Bus3 Address

Device	Address
Thermal Sensor (F75397M)	1001 100x 98h

PCH SM Bus Address

Device	Address
Touch Pad	
Touch Screen	
Sensor Hub	101 1100 5Ch

PCH USBC I2C Address

Device	Address
PD (USBC0)	101 1100 5Ch
PD (USBC1)	101 0001 52h

SMBUS Control Table

	SOURCE	APU	BATT	CHARGER	KB9022	PD IC	Thermal Sensor (4Channel)	Thermal Sensor (2Channel)	Sensor Hub	dGPU
EC_SMB_CK1 EC_SMB_DA1	KB9022 +3VL	X	V	V	V	V	X	X	V	X
EC_SMB_CK2 EC_SMB_DA2	KB9022 +3VS	V	X	X	V	X	V	X	X	V
EC_SMB_CK3 EC_SMB_DA3	KB9023 +3VS	X	X	X	X	X	V	X	X	X

STATE	SIGNAL	SLP_S1#	SLP_S3#	SLP_S4#	SLP_S5#	+VALW	+V	+VS	Clock
Full ON	HIGH	HIGH	HIGH	HIGH	HIGH	ON	ON	ON	ON
S1 (Power On Suspend)	LOW	HIGH	HIGH	HIGH	HIGH	ON	ON	ON	LOW
S3 (Suspend to RAM)	LOW	LOW	HIGH	HIGH	HIGH	ON	ON	OFF	OFF
S4 (Suspend to Disk)	LOW	LOW	LOW	HIGH	HIGH	ON	OFF	OFF	OFF
S5 (Soft OFF)	LOW	LOW	LOW	LOW	LOW	ON	OFF	OFF	OFF

<b>VRAM (R3 PN)</b> Samsung UG11 K4Z803258C-HC14 SA0000C270 VRAM_S2G@ UG12 K4Z803258C-HC14 SA0000C270 VRAM_S2G@ Micron UG11 MT61K256M32JE-14-A SA0000C290 VRAM_M2G@ UG12 MT61K256M32JE-14-A SA0000C290 VRAM_M2G@ Hynix UG11 H56C8H24AR-S2C SA0000C210 VRAM_H2G@ UG12 H56C8H24AR-S2C SA0000C210 VRAM_H2G@			<b>APU (IP Sample R3 PN)</b> UC1 AMD Cezanne R5 SA0000C1020 APU_R5@ UC1 AMD Cezanne R7 SA0000C1020 APU_R7@		
<b>ON BOARD RAM (R3 PN)</b> 8GB Micron UD1 DRAM M8G@ MT40A512M16TB-082E-J SA0000C290 UD2 DRAM M8G@ MT40A512M16TB-082E-J SA0000C290 UD3 DRAM M8G@ MT40A512M16TB-082E-J SA0000C290 UD4 DRAM M8G@ MT40A512M16TB-082E-J SA0000C290 UD5 DRAM M8G@ MT40A512M16TB-082E-J SA0000C290 UD6 DRAM M8G@ MT40A512M16TB-082E-J SA0000C290 UD7 DRAM M8G@ MT40A512M16TB-082E-J SA0000C290 UD8 DRAM M8G@ MT40A512M16TB-082E-J SA0000C290 Hynix UD1 DRAM H8G@ H5AN8GENDJR-XNC SA0000C290 UD2 DRAM H8G@ H5AN8GENDJR-XNC SA0000C290 UD3 DRAM H8G@ H5AN8GENDJR-XNC SA0000C290 UD4 DRAM H8G@ H5AN8GENDJR-XNC SA0000C290 UD5 DRAM H8G@ H5AN8GENDJR-XNC SA0000C290 UD6 DRAM H8G@ H5AN8GENDJR-XNC SA0000C290 UD7 DRAM H8G@ H5AN8GENDJR-XNC SA0000C290 UD8 DRAM H8G@ H5AN8GENDJR-XNC SA0000C290 Samsung UD1 DRAM S8G@ K4A8G16SWA-B0WE SA0000C220 UD2 DRAM S8G@ K4A8G16SWA-B0WE SA0000C220 UD3 DRAM S8G@ K4A8G16SWA-B0WE SA0000C220 UD4 DRAM S8G@ K4A8G16SWA-B0WE SA0000C220 UD5 DRAM S8G@ K4A8G16SWA-B0WE SA0000C220 UD6 DRAM S8G@ K4A8G16SWA-B0WE SA0000C220 UD7 DRAM S8G@ K4A8G16SWA-B0WE SA0000C220 UD8 DRAM S8G@ K4A8G16SWA-B0WE SA0000C220			<b>VRAM X76</b> ZZZ Samsung 2G VRAM X76_VRAM_S2G@ ZZZ Micron 2G VRAM X76_VRAM_M2G@ ZZZ Hynix 2G VRAM X76_VRAM_H2G@		
<b>X4E</b> ZZZ SMT EMC FOR EE MB X4EAP38L01 X4E@			<b>PCB PN</b> ZZZ PCB GLA41 LA-K483P DA236X00100		
<b>GPU (R3 PN)</b> UV1 N18S-G5-A1 SA0000C290 N18S_G5@			<b>ON BOARD RAM X76</b> ZZZ Samsung 8G DRAM X7680328L51 X76_DRAM_S8G@ ZZZ Micron 8G DRAM X7680328L52 X76_DRAM_M8G@ ZZZ Hynix 8G DRAM X7680328L53 X76_DRAM_H8G@ ZZZ Samsung 8G Single Channel X7680328L54 X76_DRAM_S_S8G@ ZZZ Samsung 16G DRAM X7680328L55 X76_DRAM_S16G@ ZZZ Micron 16G DRAM X7680328L56 X76_DRAM_M16G@ ZZZ Hynix 16G DRAM X7680328L57 X76_DRAM_H16G@		

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Power Sequence

Boot

Shut  
Down

EC Pin 110 Input

EC Pin 112 Output

AC Plug

EC Pin 114 Input

EC Pin 100 Output

EC Pin 122 Output

EC Pin 123 Input

EC Pin 6 Input

EC Pin 95 Output

EC Pin 116 Output

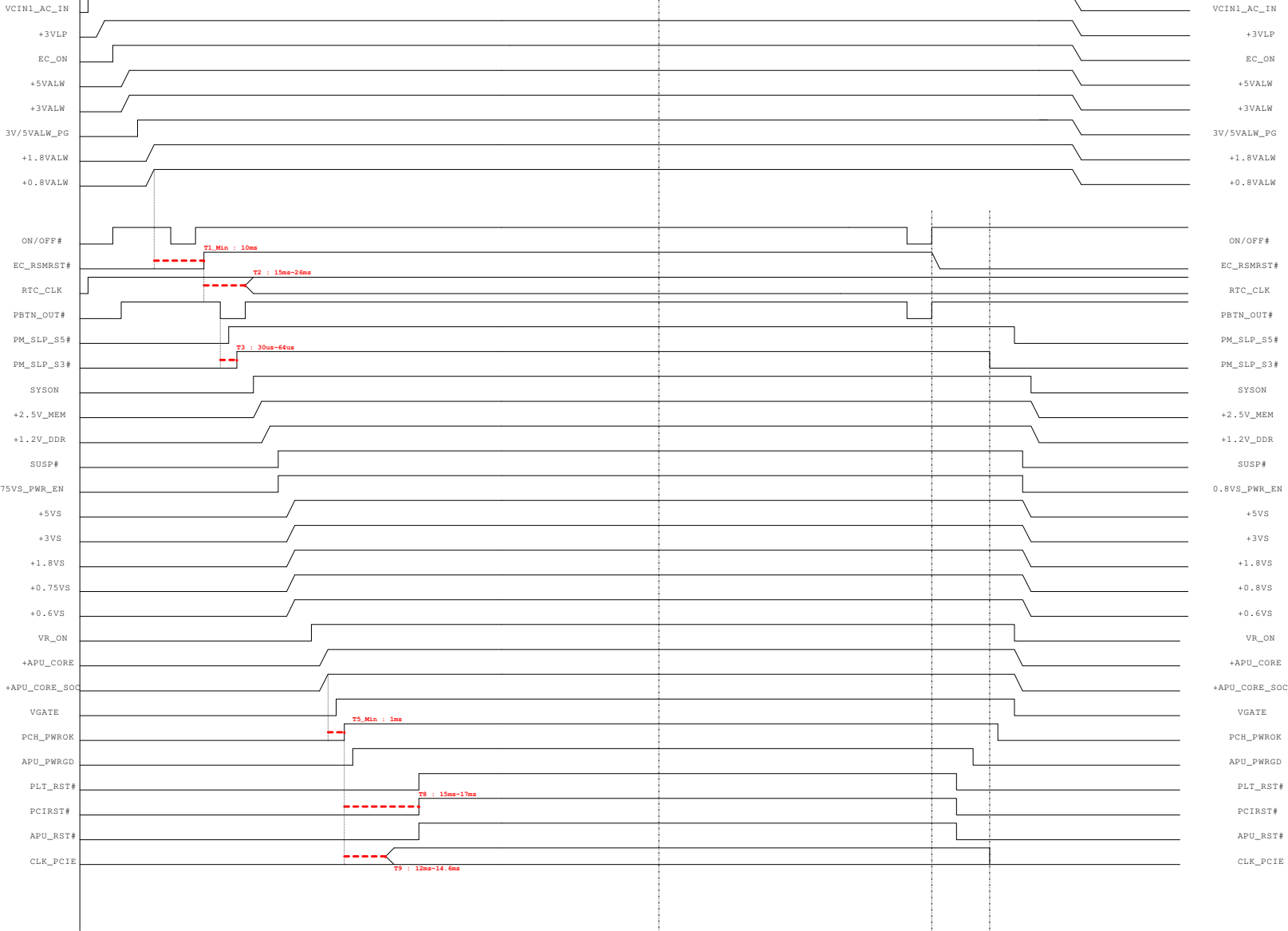
EC Pin 99 Output

EC Pin 121 Output

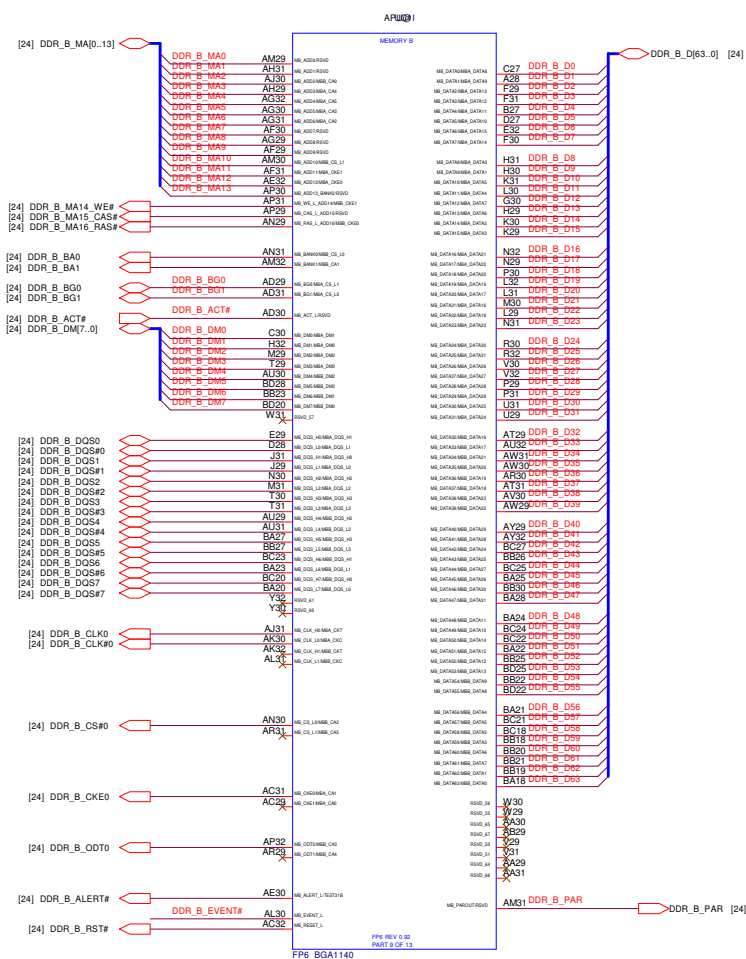
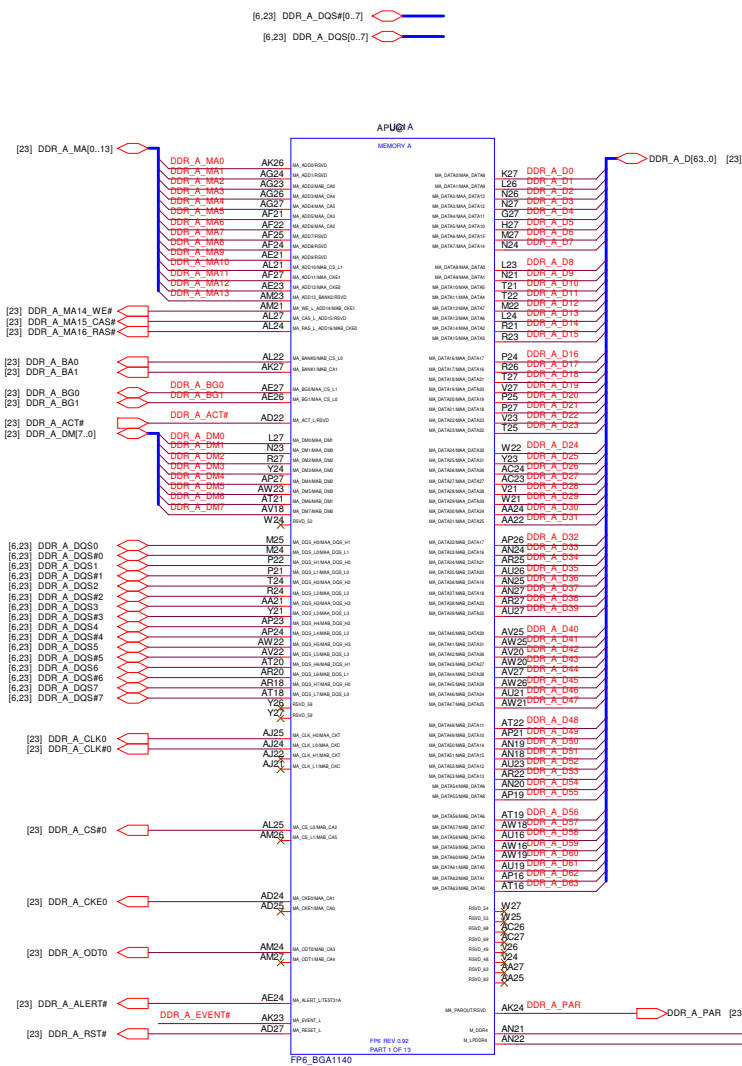
EC Pin 36 Input

EC Pin 32 Output

EC Pin 13 Input

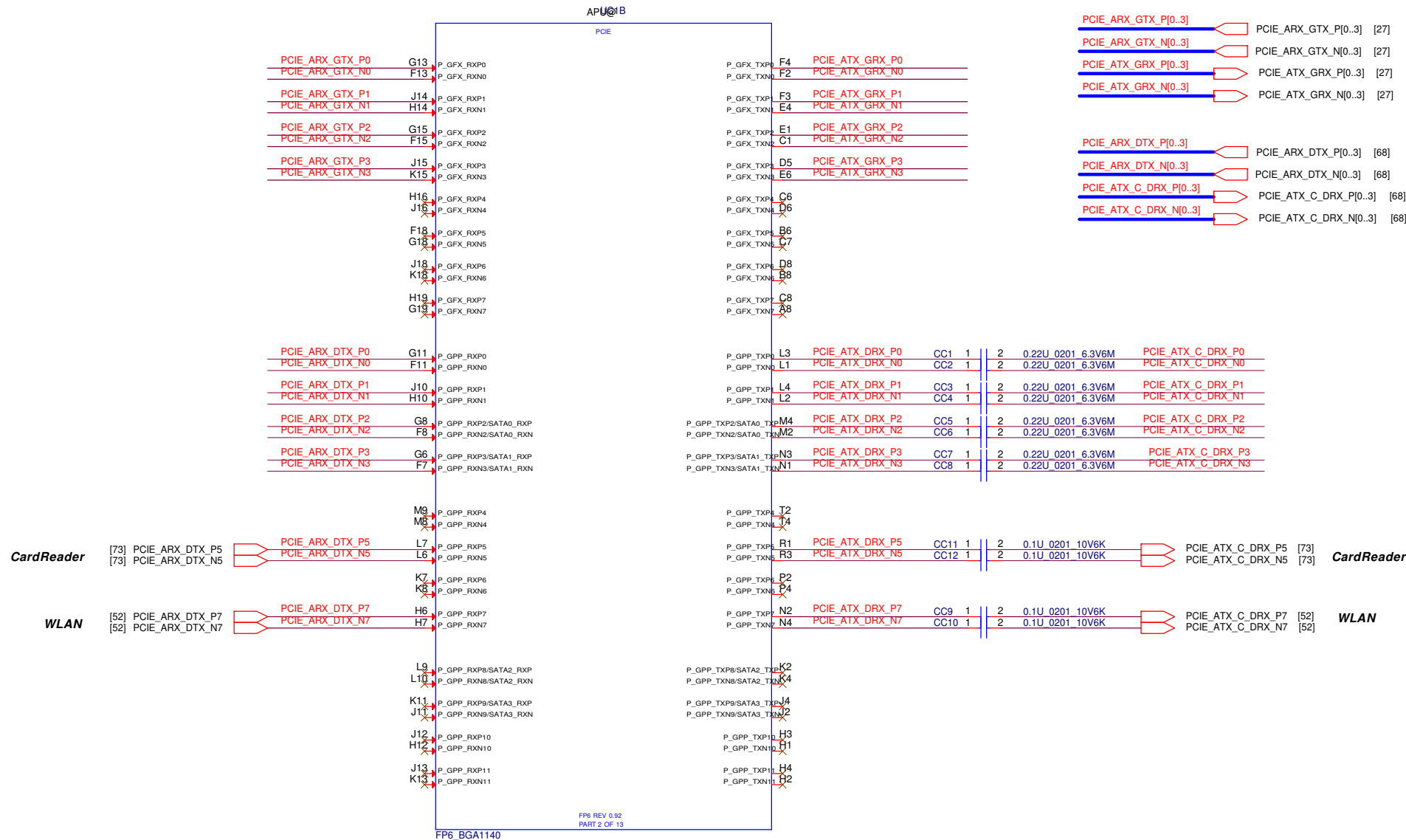


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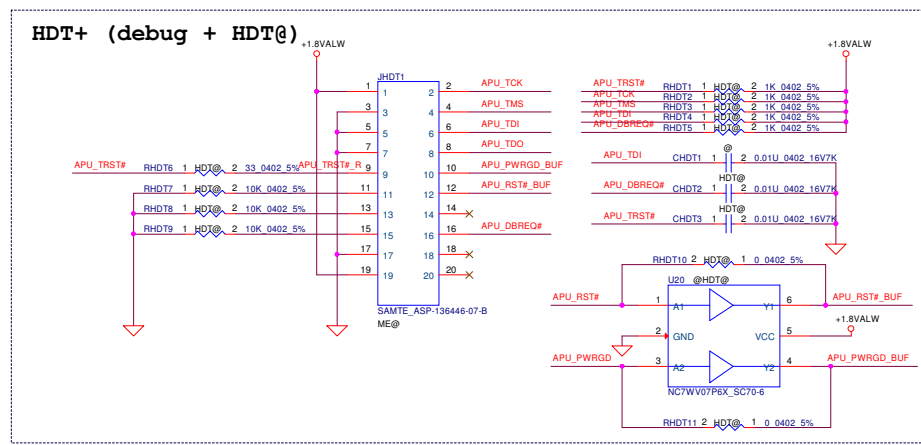
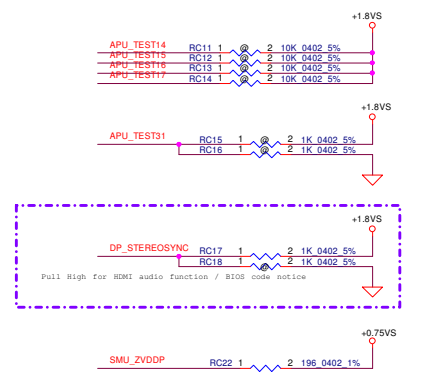
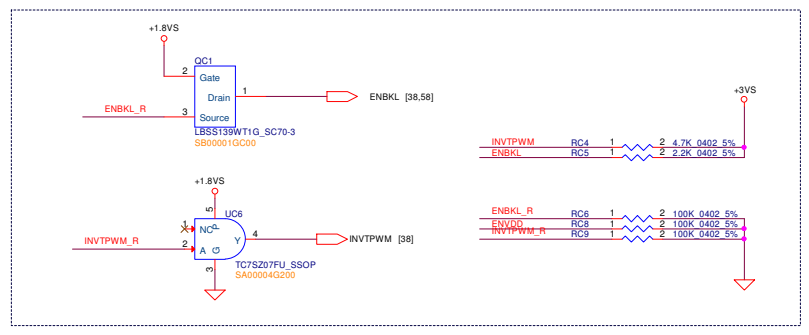
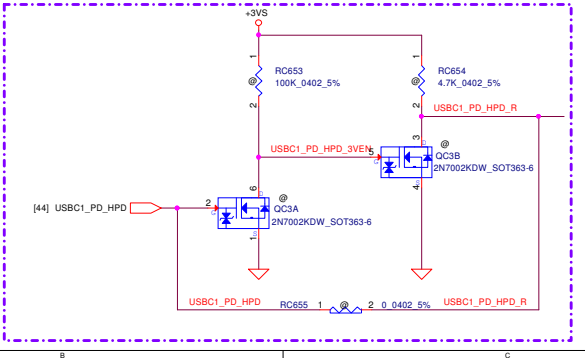
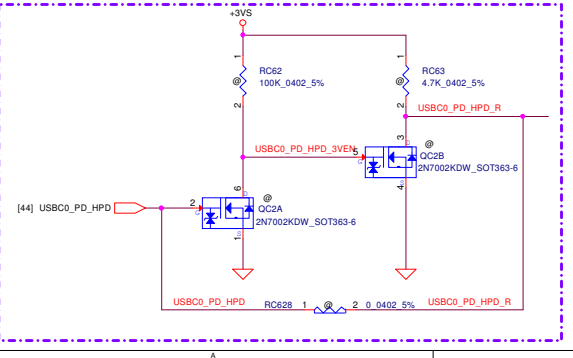
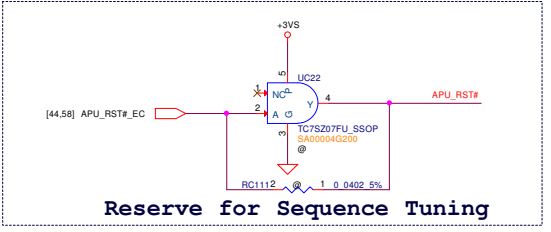
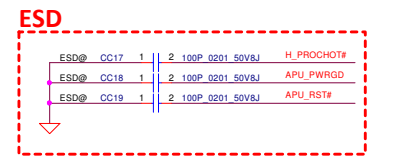
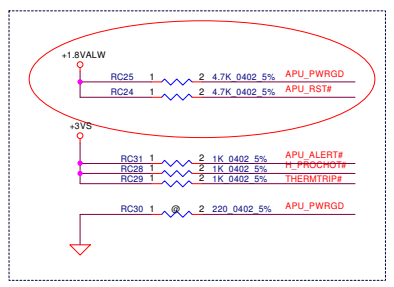
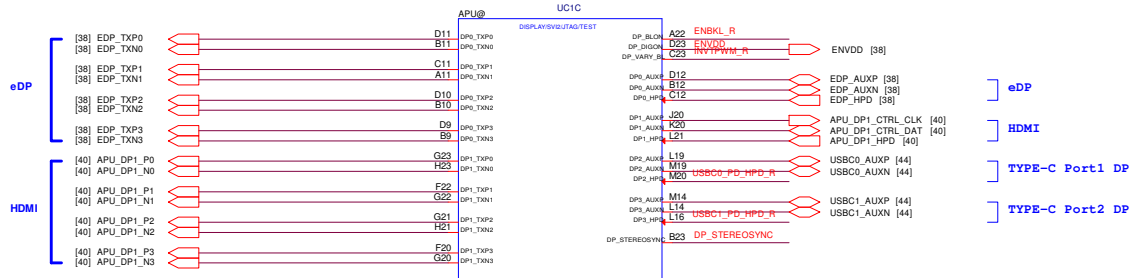
Main Func = CPU



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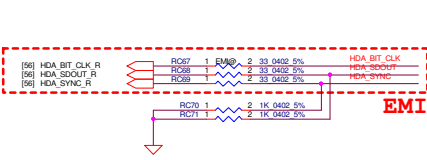
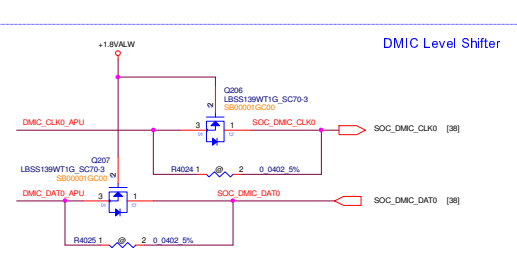
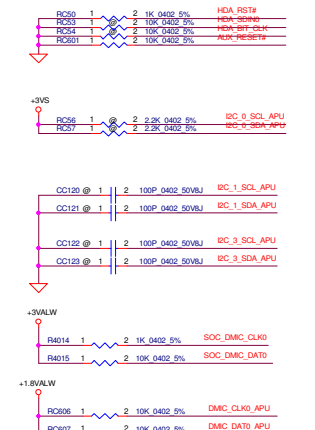
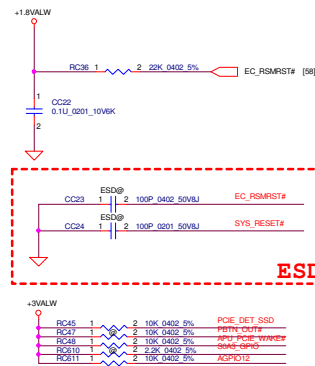
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DP0: eDP  
DP1: HDMI  
DP2: Type-C Port1  
DP3: Type-C Port2  
UC1C

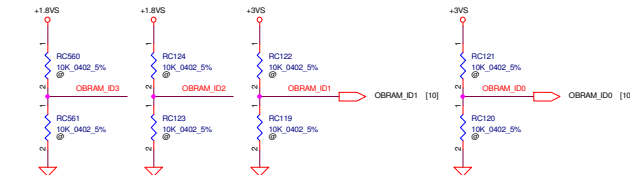


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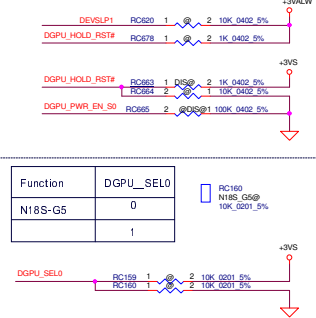
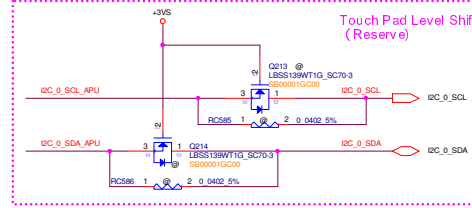


Capacity	Total	Description	Package	Channel B	OBRAM_ID3	OBRAM_ID2	OBRAM_ID1	OBRAM_ID0
8Gb x16 3200	4GB	SS D4 K4A8G16WC-BWVE	SDP		0	0	0	0
		HY D4 H5AN8G6NCJR-XNC	SDP		0	0	0	1
		MC D4 MT40A512M16TB-062EJ	SDP		0	0	1	0
	8GB	SS D4 K4A8G16WC-BWVE	SDP	V	0	0	1	1
		HY D4 H5AN8G6NCJR-XNC	SDP	V	0	1	0	0
		MC D4 MT40A512M16TB-062EJ	SDP	V	0	1	0	1
16Gb x16 3200	8GB	SS D4 K4A8G16WA-BWVE	SDP		1	1	0	0
		SS D4 K4A8G16WA-BWVE	SDP	V	0	1	1	0
		HY D4 H5ANAG6NCMR-XNC	SDP	V	0	1	1	1
	16GB	SS D4 K4A8G16WA-BWVE	SDP	V	1	0	0	0
		HY D4 H5ANAG6NCJR-XNC	SDP	V	1	0	0	1
		SS D4 TBD	TBD	V	1	0	1	0

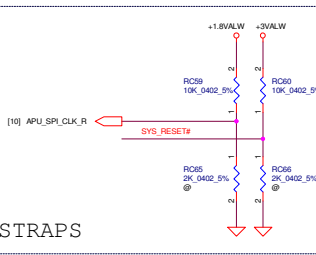


ON BOARD RAM ID

Total Size	Vendor	OBRAM_ID3	OBRAM_ID2	OBRAM_ID1	OBRAM_ID0
8 GB	Sams ung	RC126 10K 0402 5% DRAM_SBG	RC123 10K 0402 5% DRAM_SBG	RC122 10K 0402 5% DRAM_SBG	RC121 10K 0402 5% DRAM_SBG
	Micron	RC126 10K 0402 5% DRAM_MBG	RC123 10K 0402 5% DRAM_MBG	RC122 10K 0402 5% DRAM_MBG	RC121 10K 0402 5% DRAM_MBG
	Hynix	RC126 10K 0402 5% DRAM_SBG	RC123 10K 0402 5% DRAM_SBG	RC122 10K 0402 5% DRAM_SBG	RC121 10K 0402 5% DRAM_SBG
	Sams ung	RC126 10K 0402 5% DRAM_SBG	RC123 10K 0402 5% DRAM_SBG	RC122 10K 0402 5% DRAM_SBG	RC121 10K 0402 5% DRAM_SBG
	Sams ung	RC126 10K 0402 5% DRAM_SBG	RC123 10K 0402 5% DRAM_SBG	RC122 10K 0402 5% DRAM_SBG	RC121 10K 0402 5% DRAM_SBG
	Micron	RC126 10K 0402 5% DRAM_MBG	RC123 10K 0402 5% DRAM_MBG	RC122 10K 0402 5% DRAM_MBG	RC121 10K 0402 5% DRAM_MBG



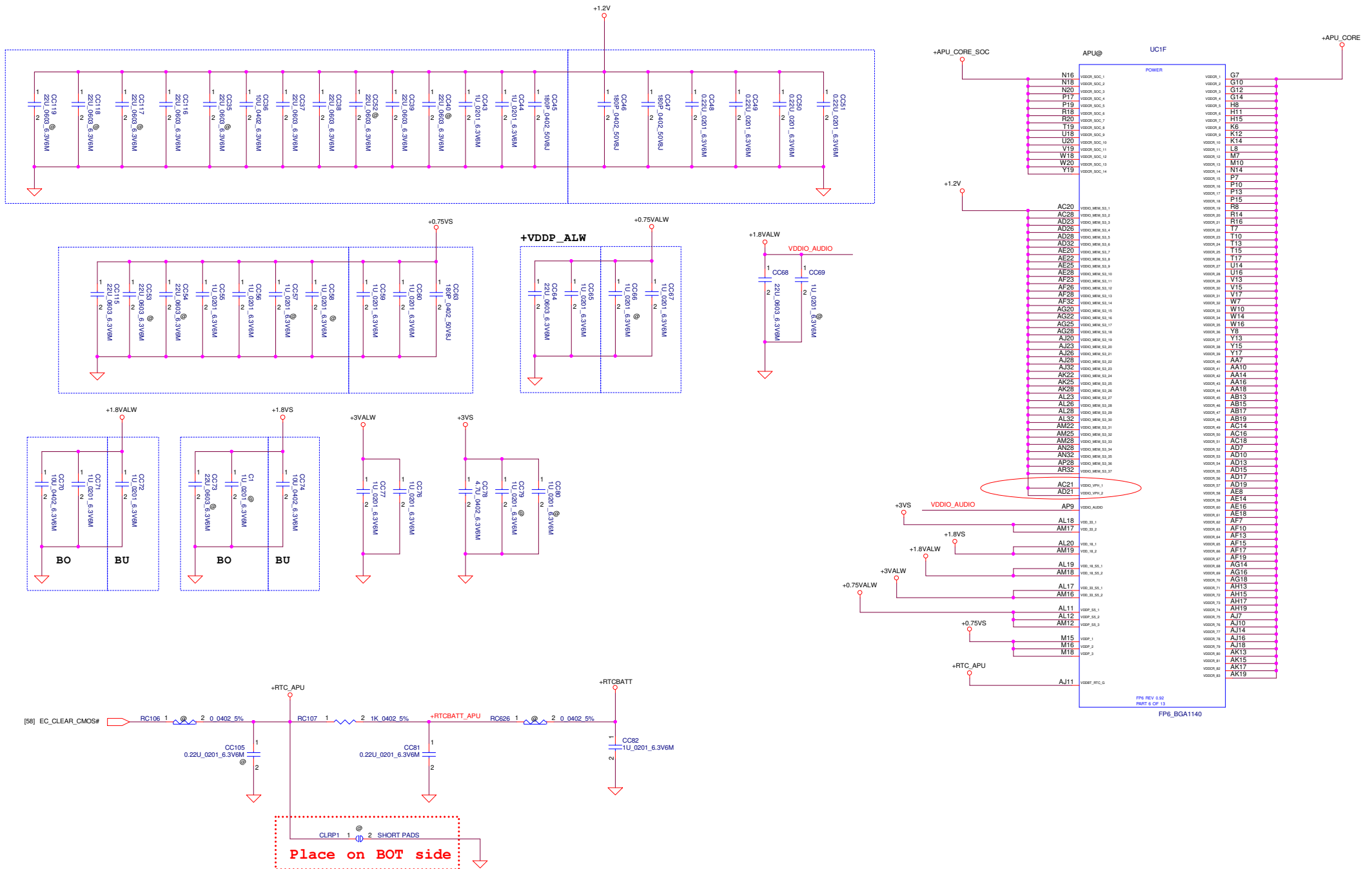
Function	DGPU_SELO
N18S-G5	0
	1



STRAPS	DEFINITION
SPL_CLK	1: Use 48MHZ Crystal Clock and Generate both internal and external clocks (Default) 0: Use 100MHZ PCIe clock as reference clock and generate internal clocks only
SYS_RST#	1: Normal reset mode (Default) 0: short reset mode

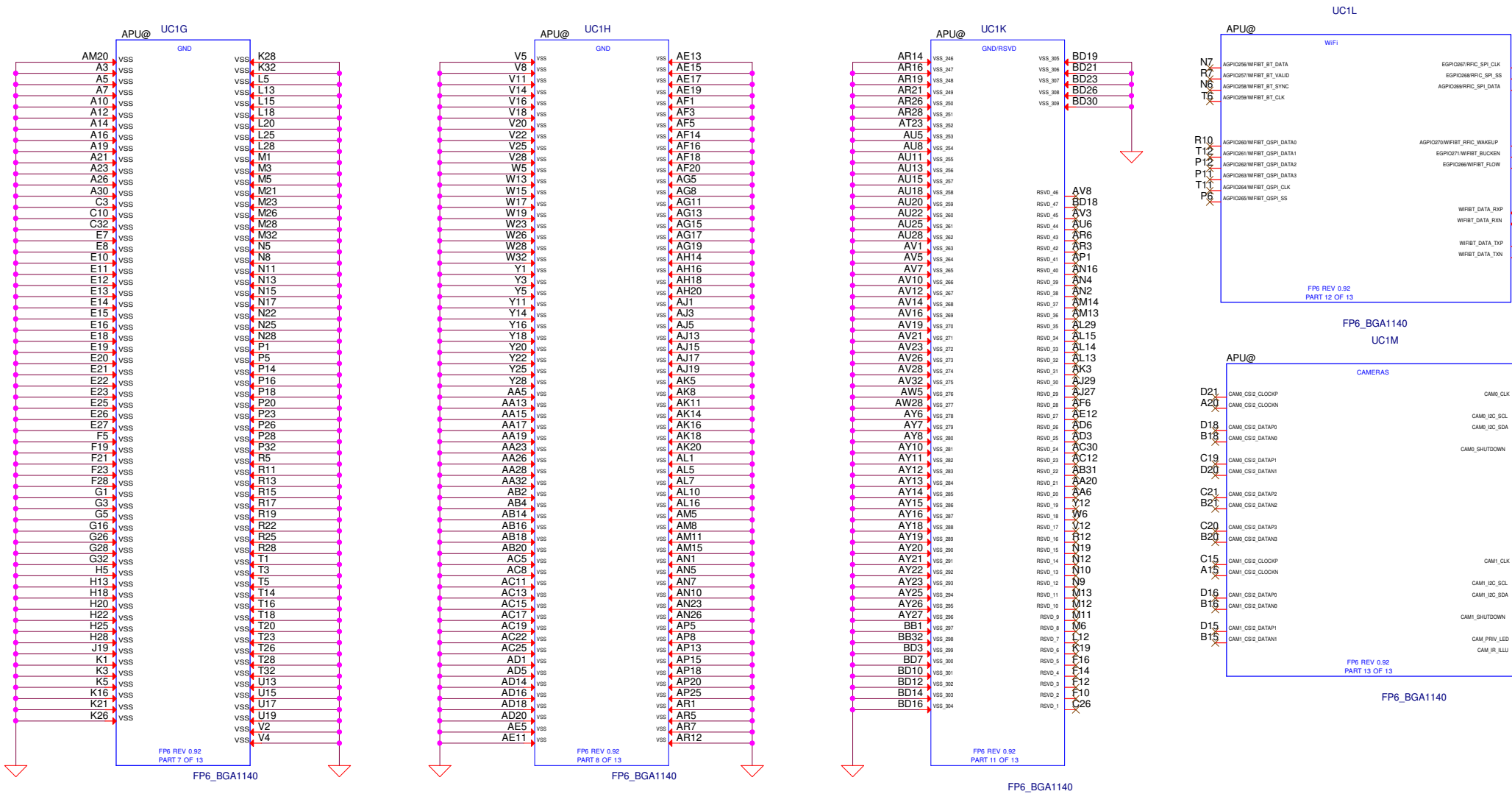


## Main Func = CPU



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Main Func = CPU



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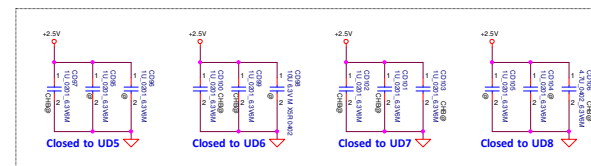
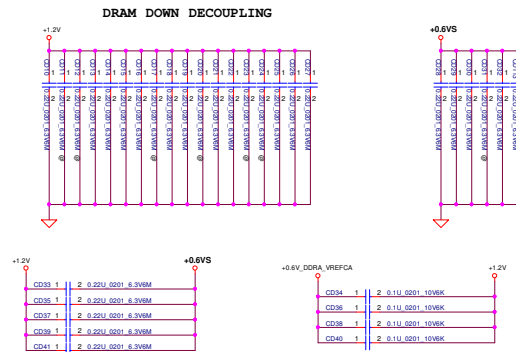
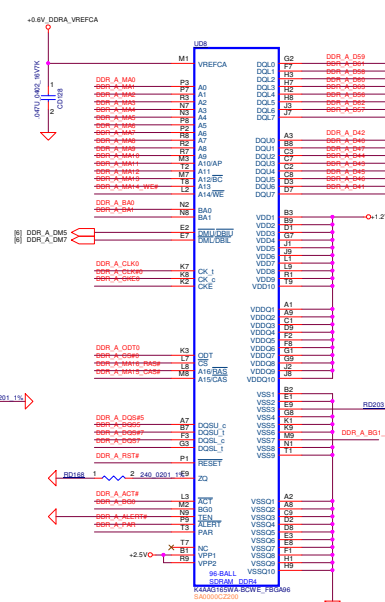
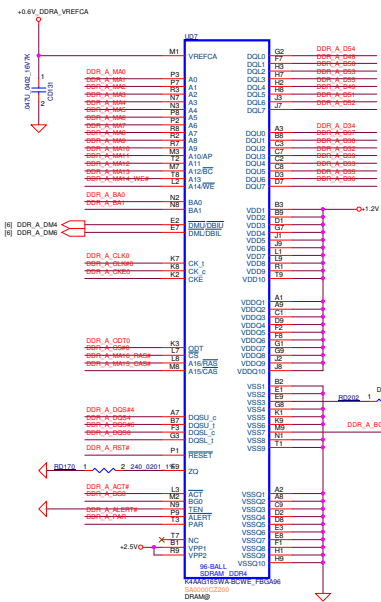
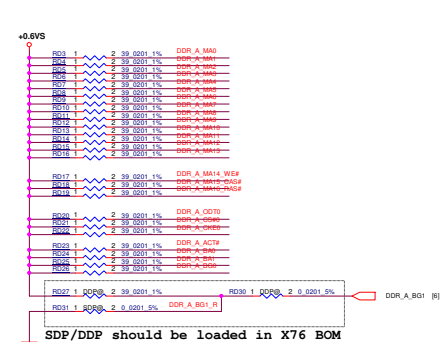
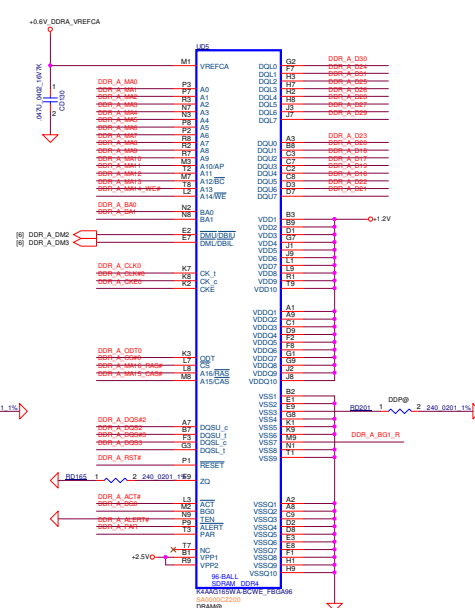
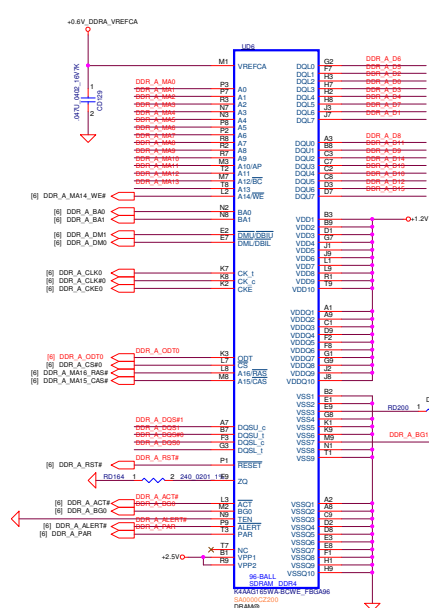
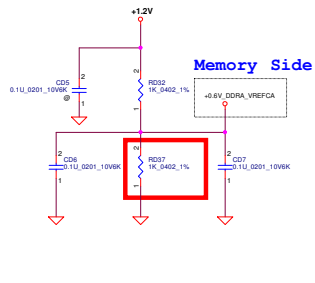
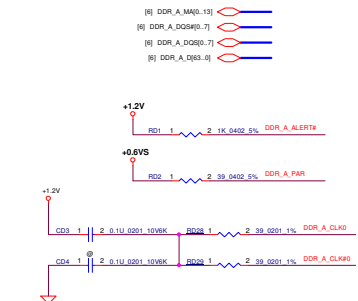
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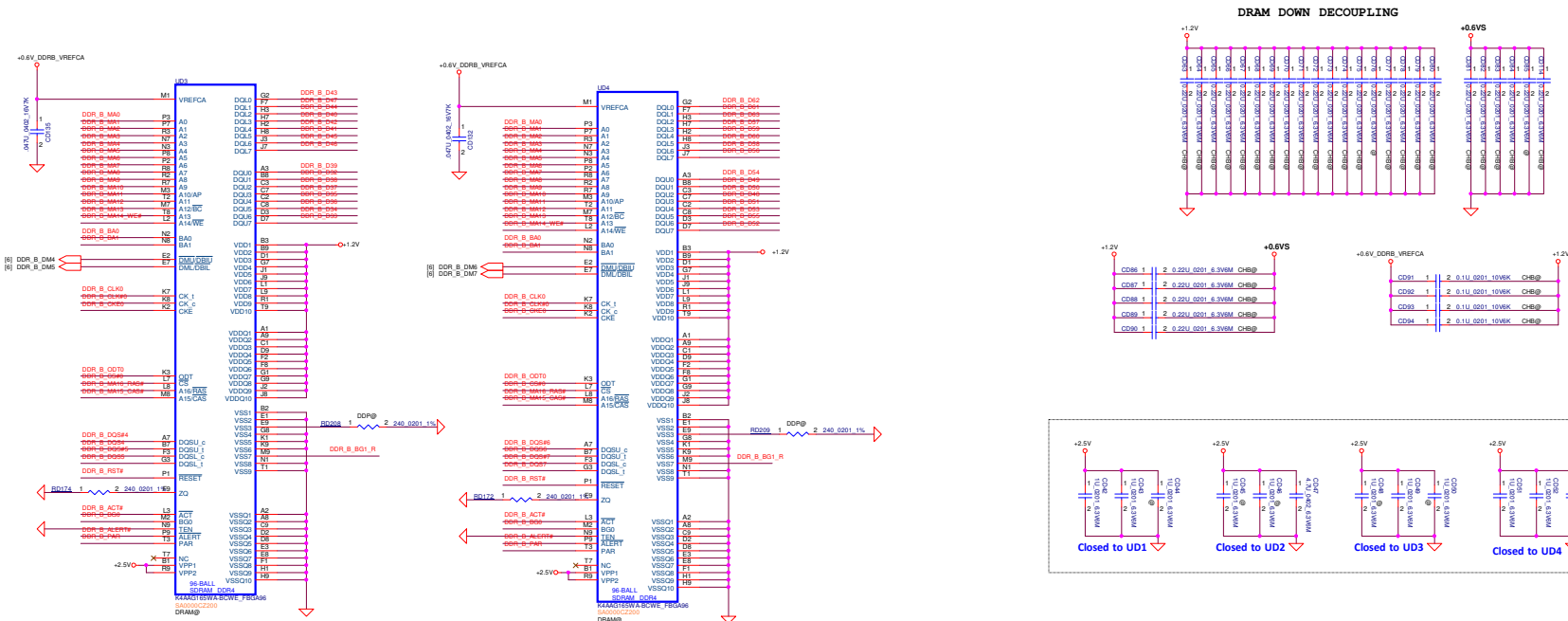
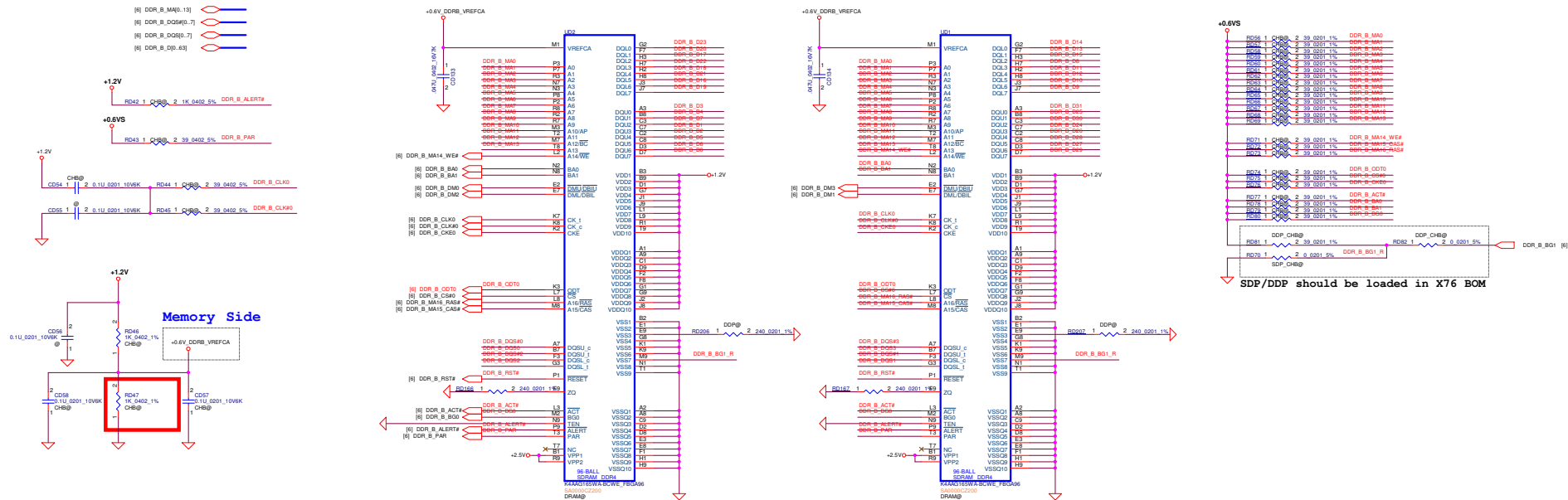
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## DDR4 - MEMORY DOWN (MEMORY CHANNEL A, x16 x4 PCS)



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## DDR4 - MEMORY DOWN (MEMORY CHANNEL B, x16 x4 PCS)



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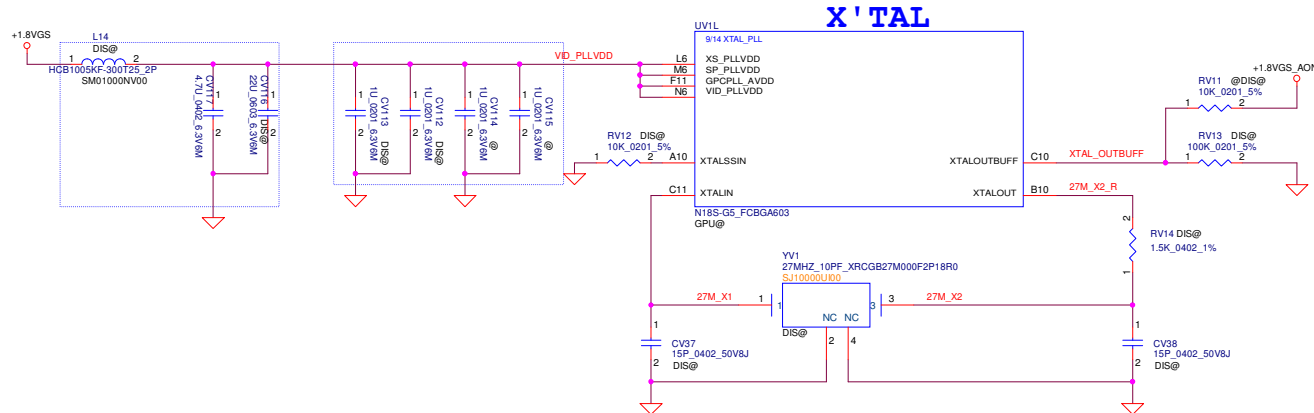
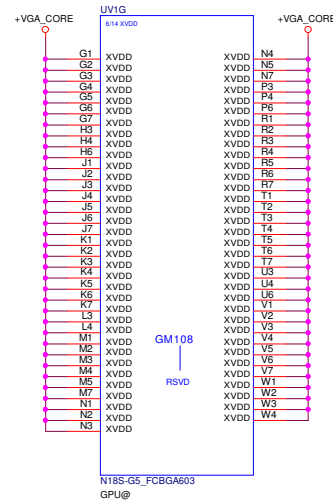
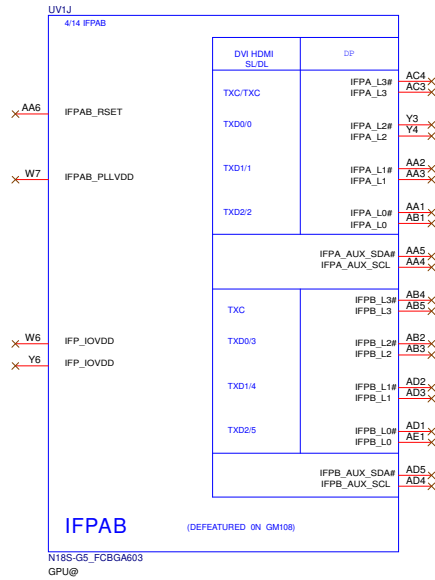
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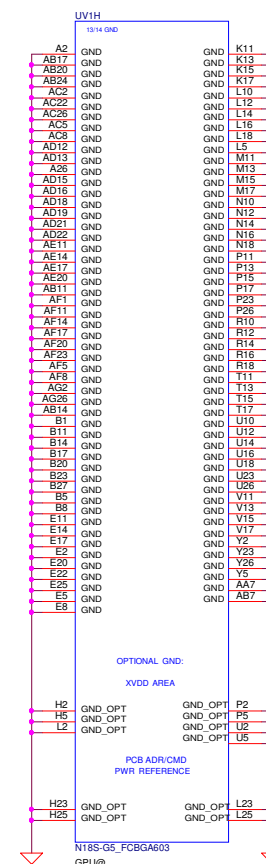
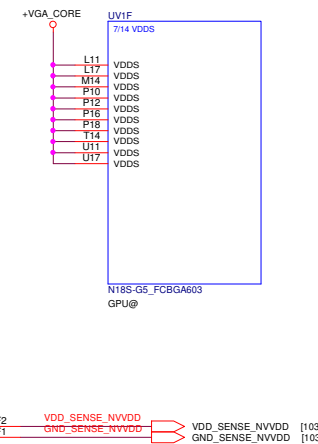
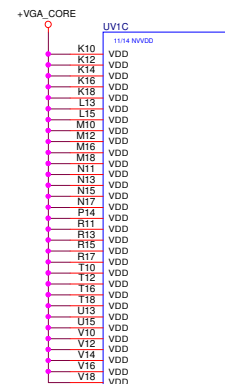
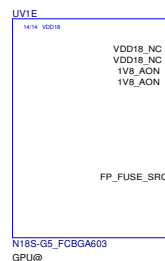
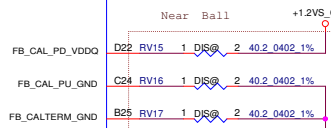
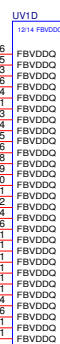
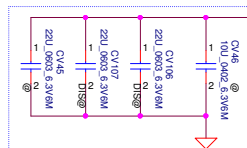
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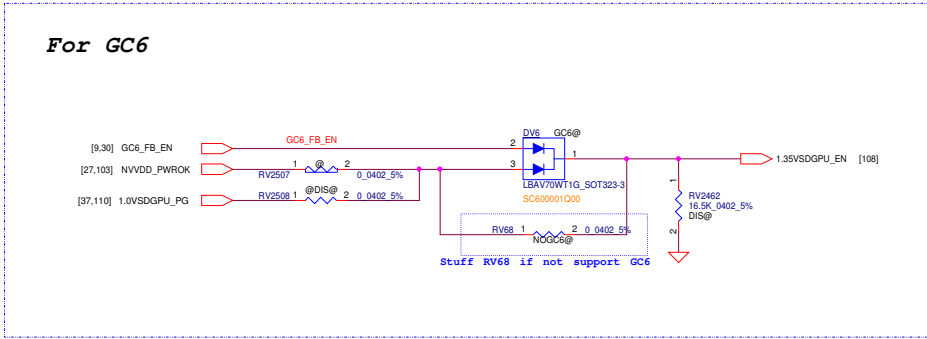
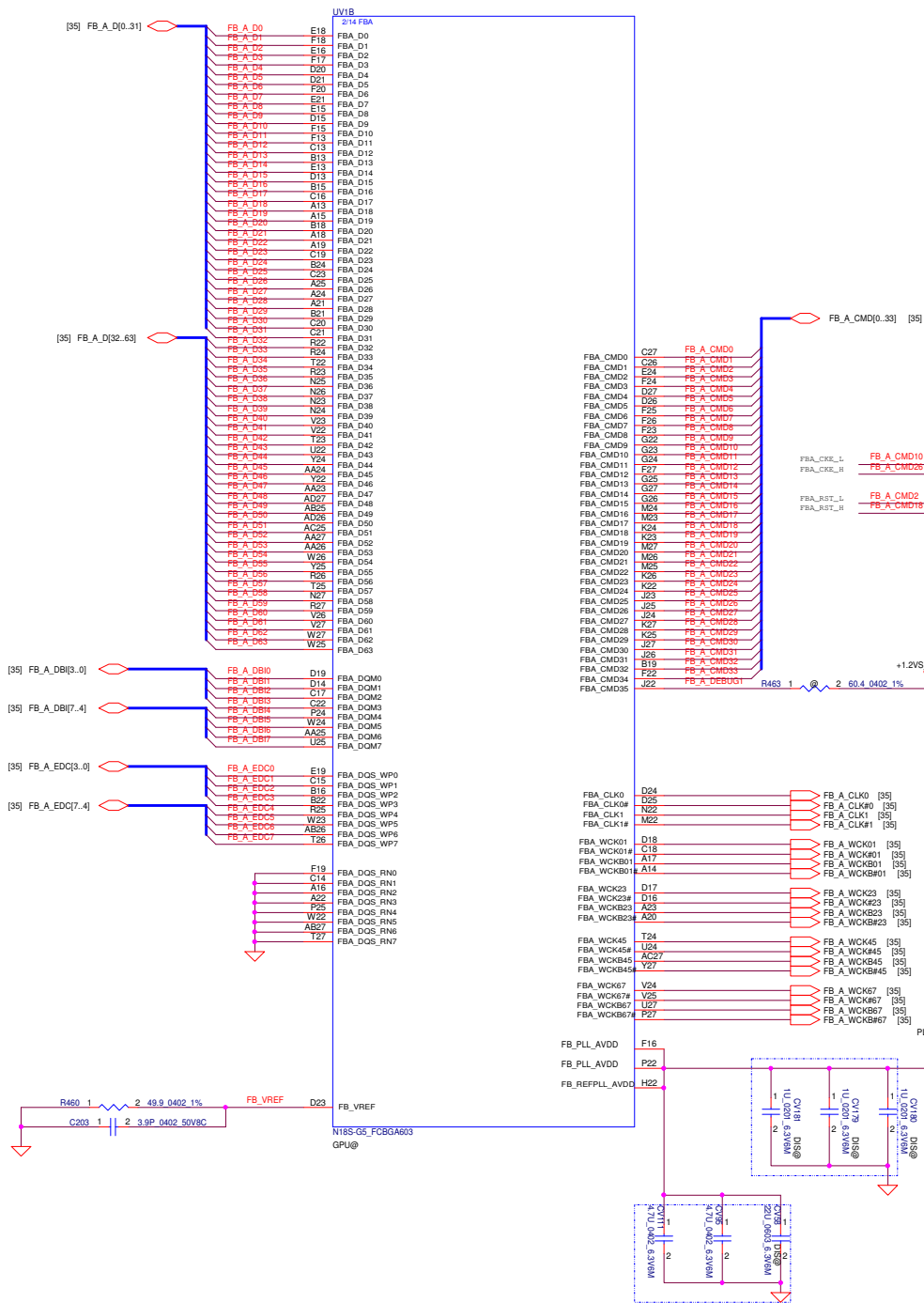
**\*\* XPWR pins are configurable.**

These pins are not connected on the substrate.

Therefore, XPWR pins can be assigned as needed, to improve Top layer routing, power delivery.

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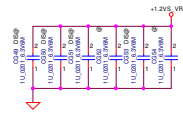
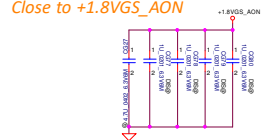
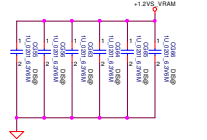
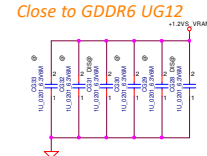
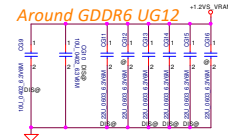
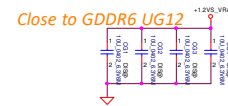
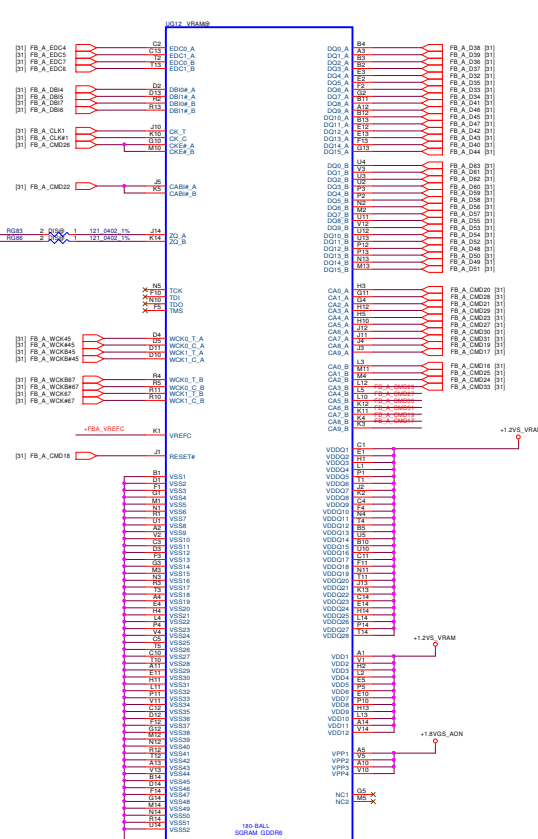
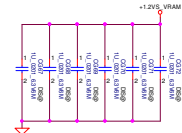
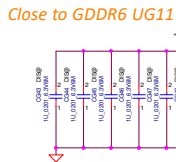
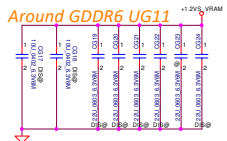
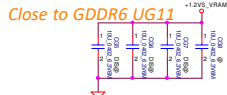
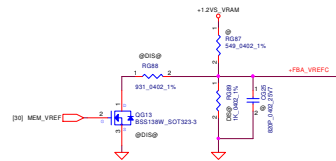
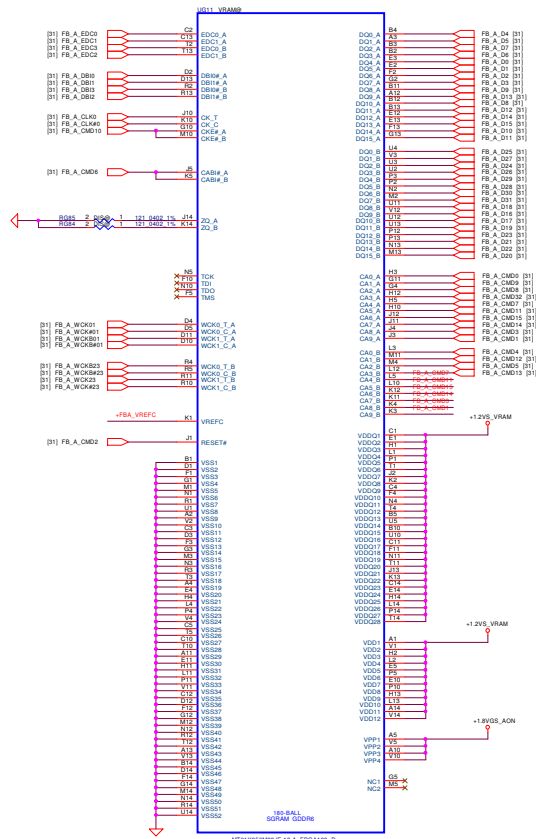
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## VRAM A

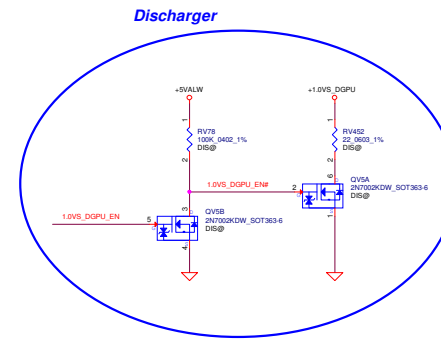
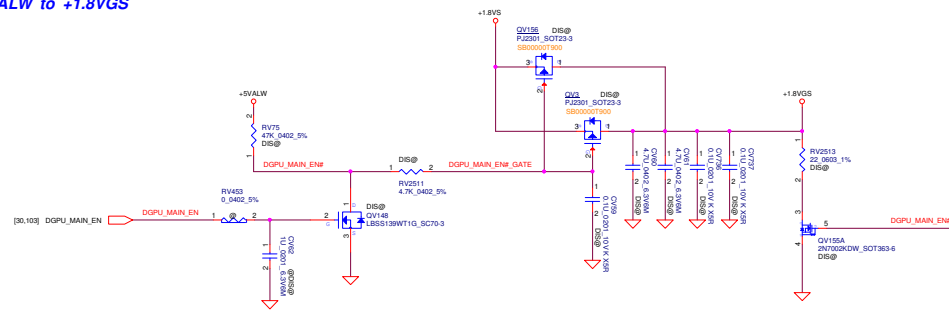
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**+1.8VALW to +1.8VGS\_AON**



Modern Standby	Component
Enter MS with GC of f	RV2514, RV86
Enter MS with GC6	RV2515, RV2516, DV8
Enter MS with GC6 (if BIOS can't control well)	RV2516

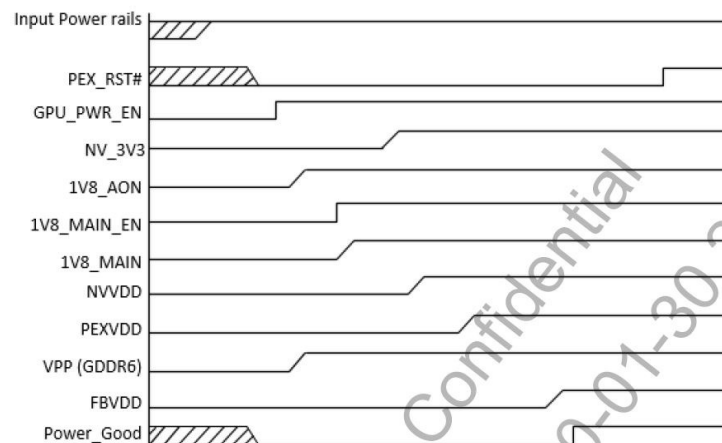
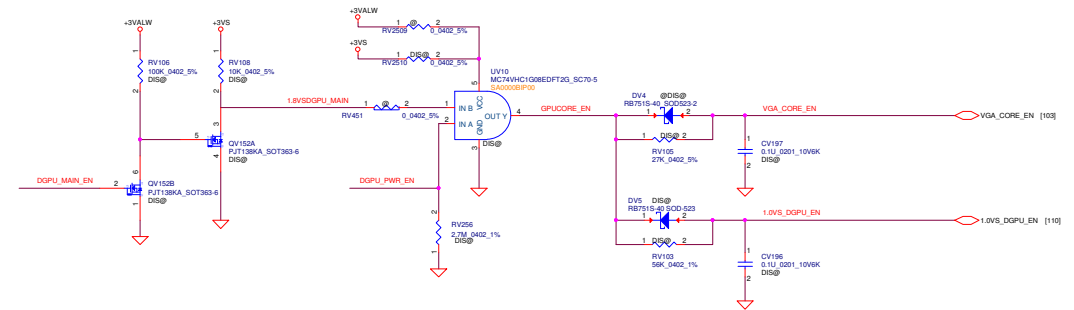
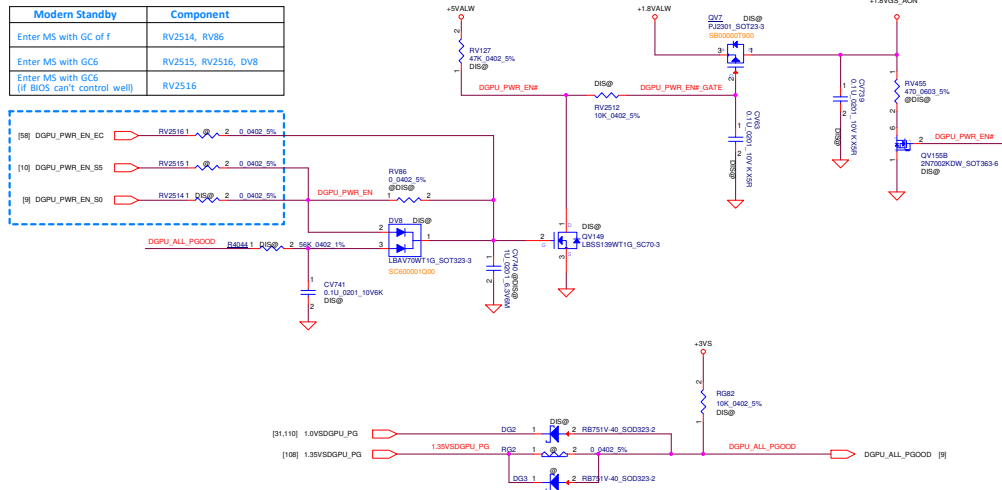


Figure 5.6 Power-Up Sequence

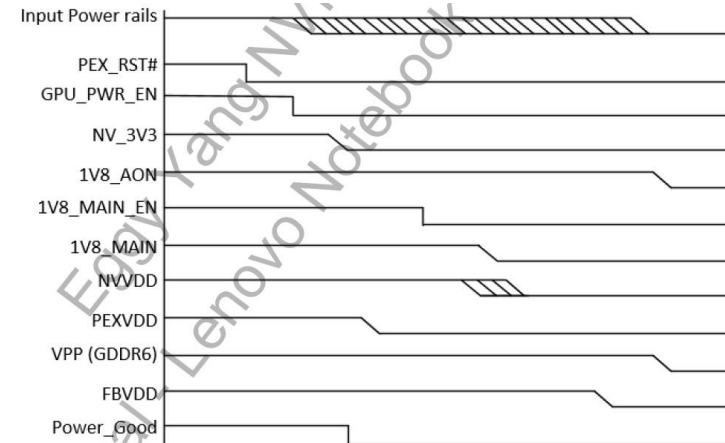
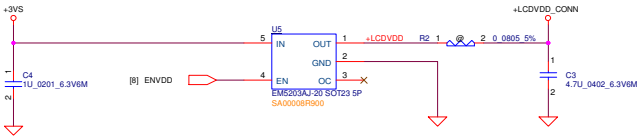


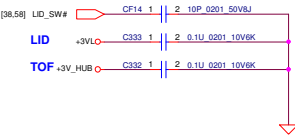
Figure 5.7 Power-Down Sequence

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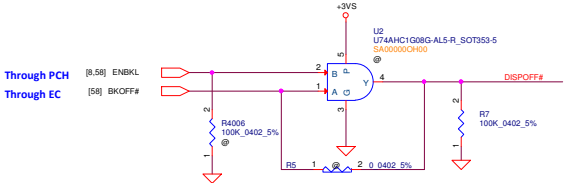
LCD POWER SWITCH



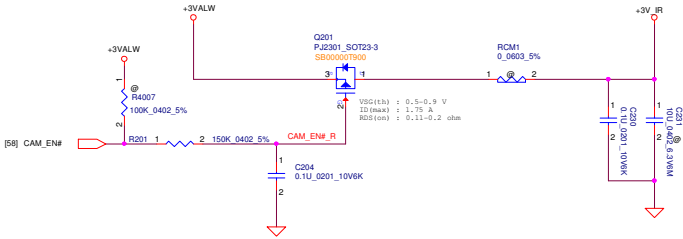
FPC need



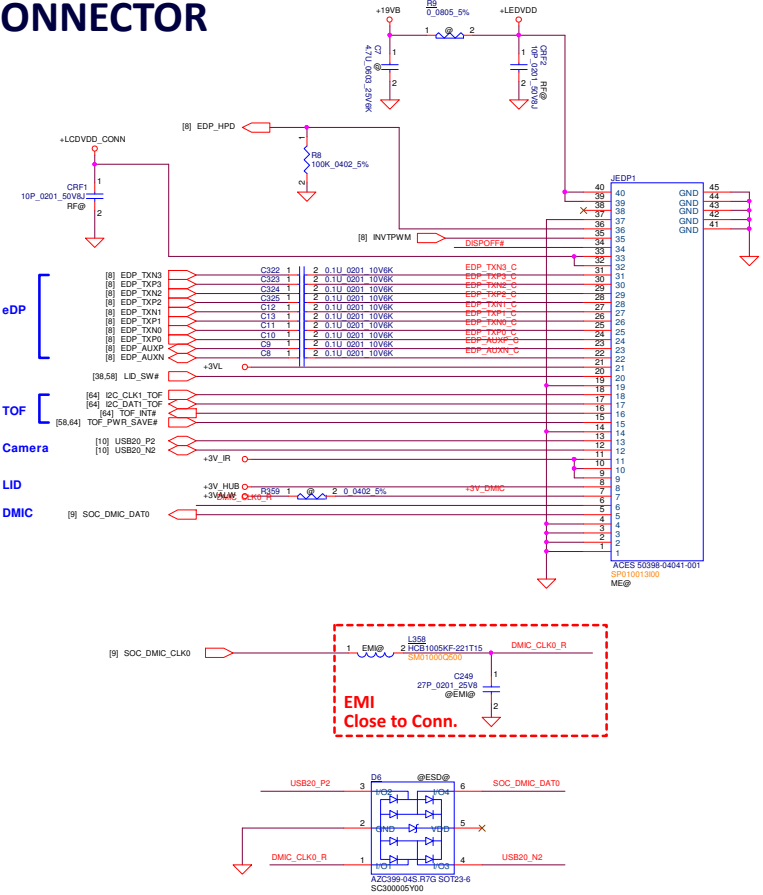
DISPLAY OFF



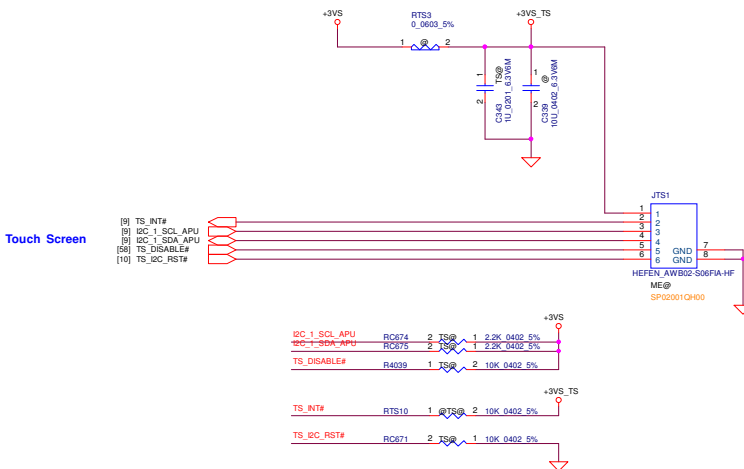
CAMERA POWER CIRCUIT



eDP CONNECTOR

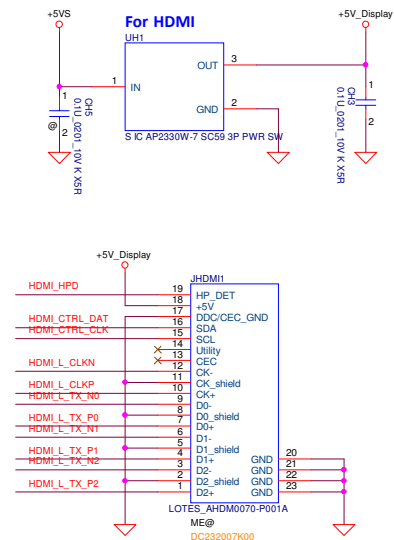
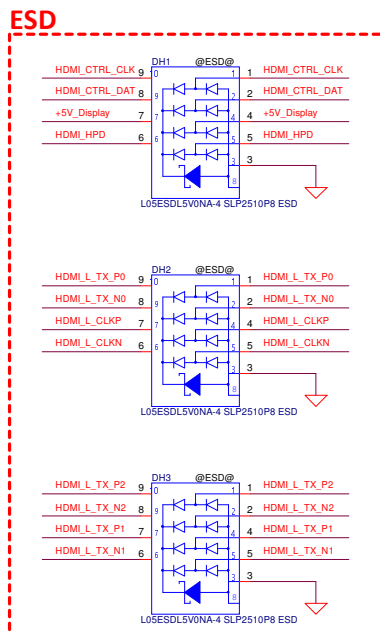
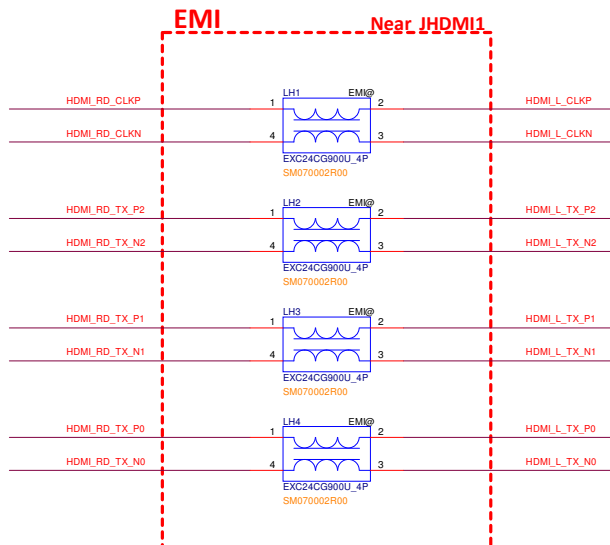
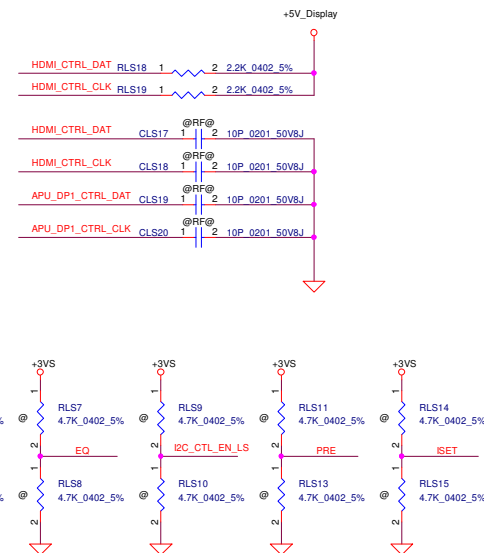
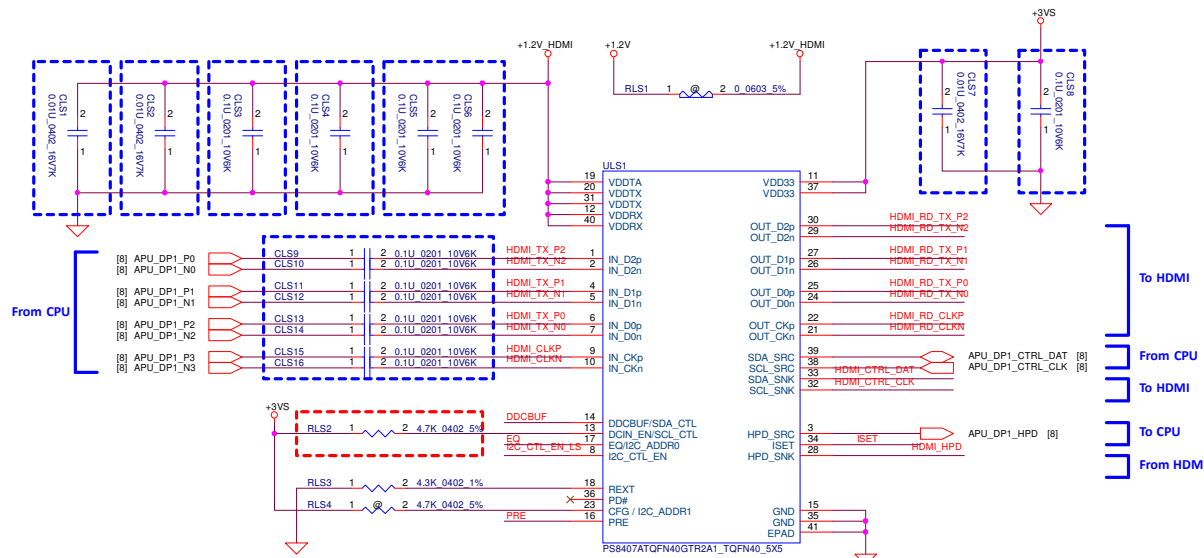


Touch Screen Connector



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HDMI Level shifter PS8407A				Rev 1A
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## USB2.0

[10] USB20\_N4

[10] USB20\_P4

LT1

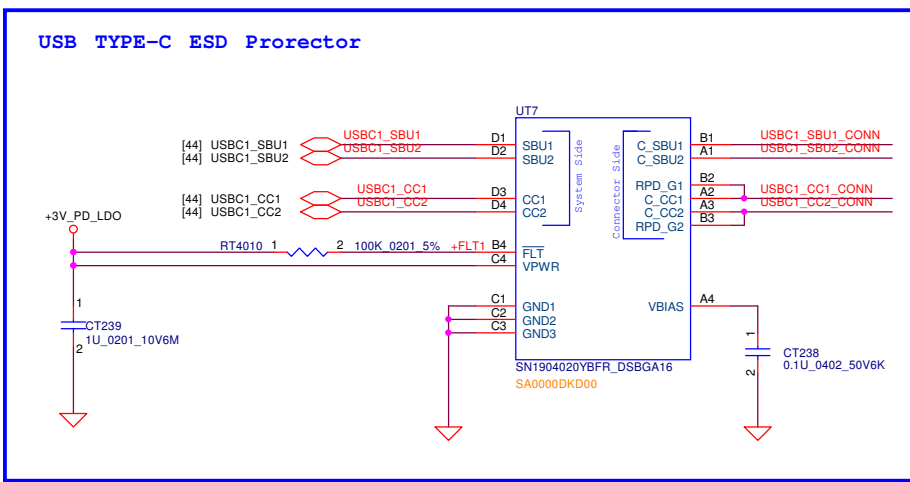
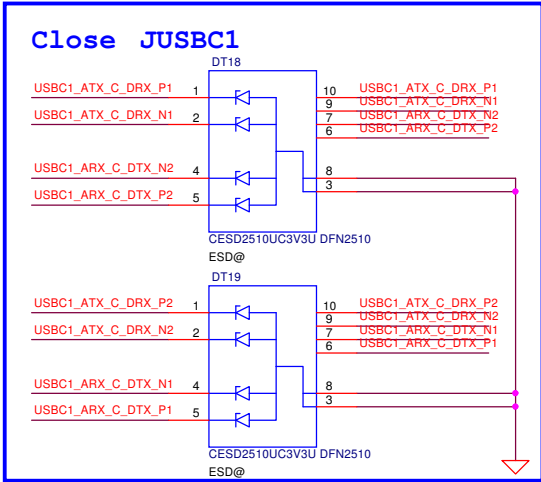
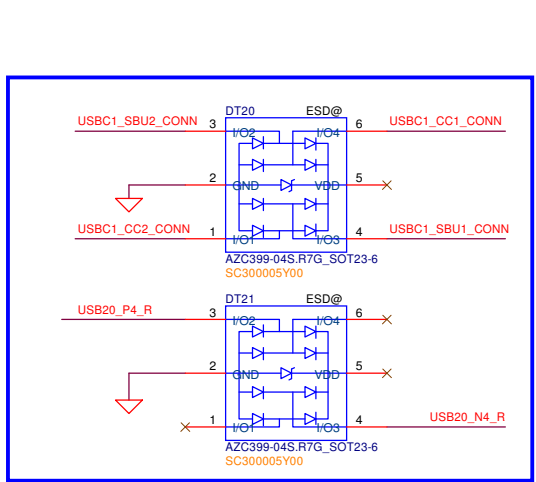
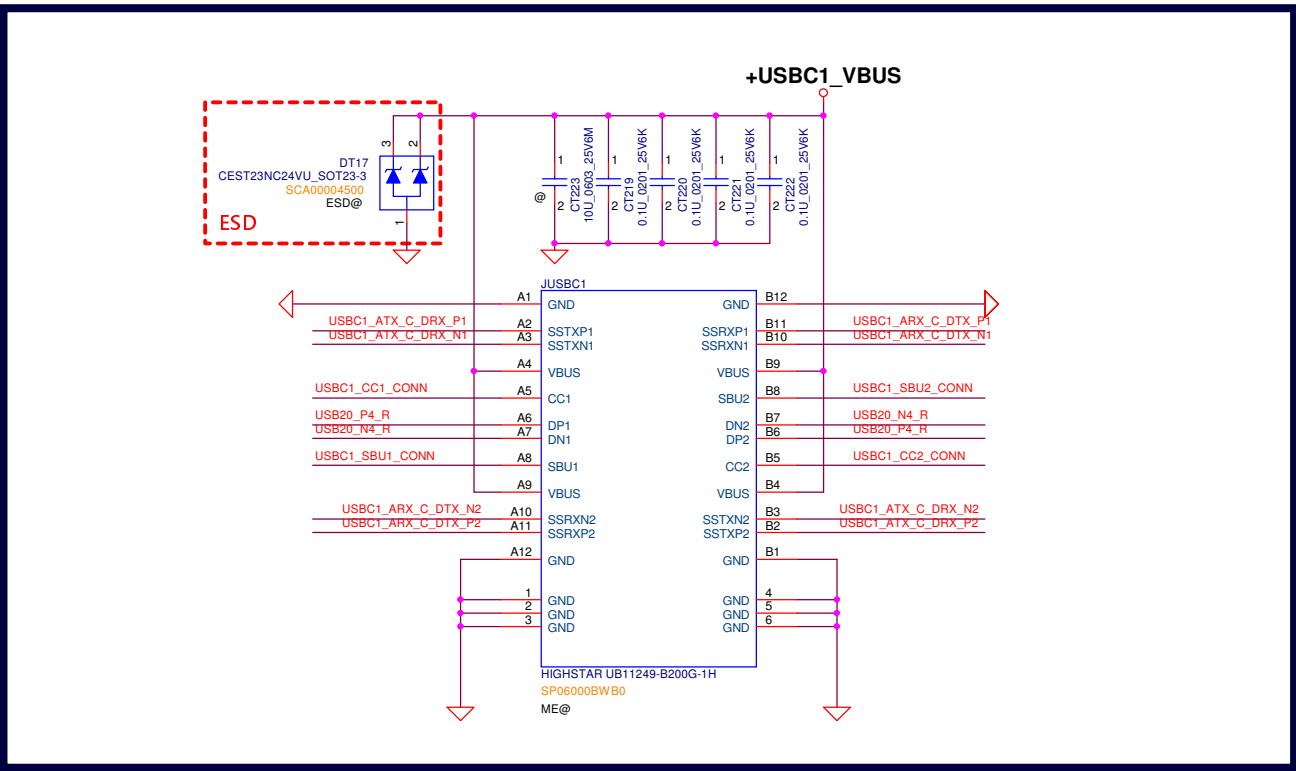
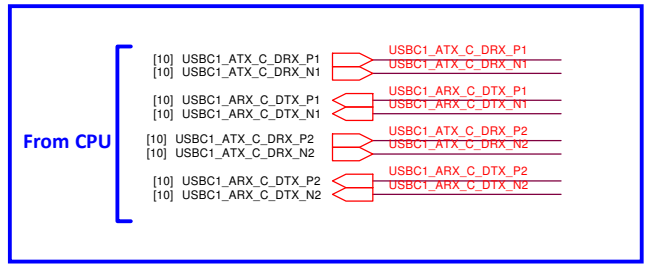
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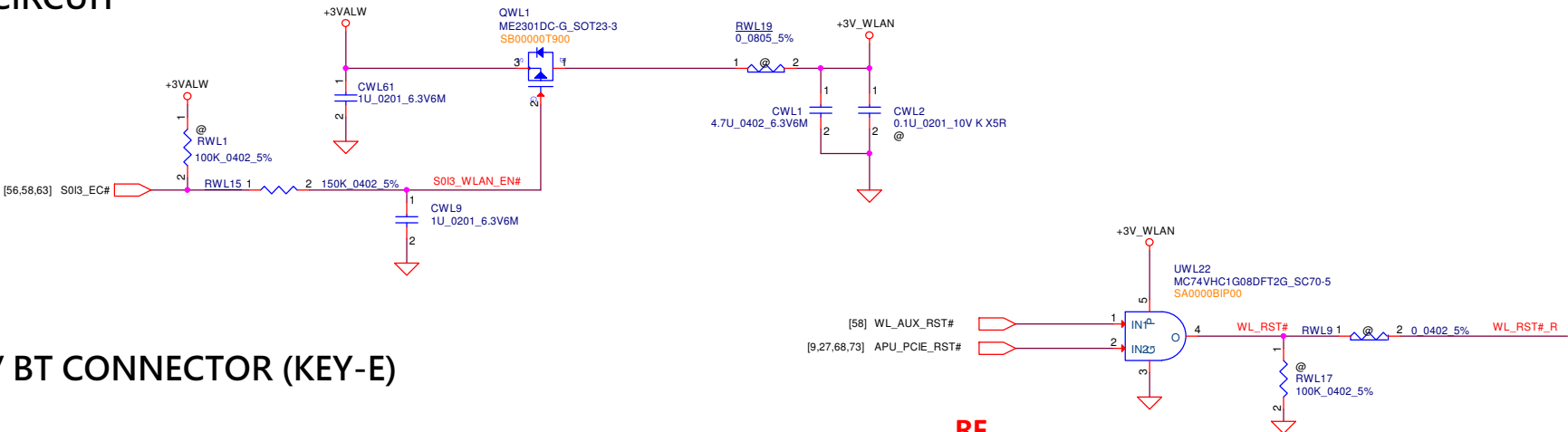
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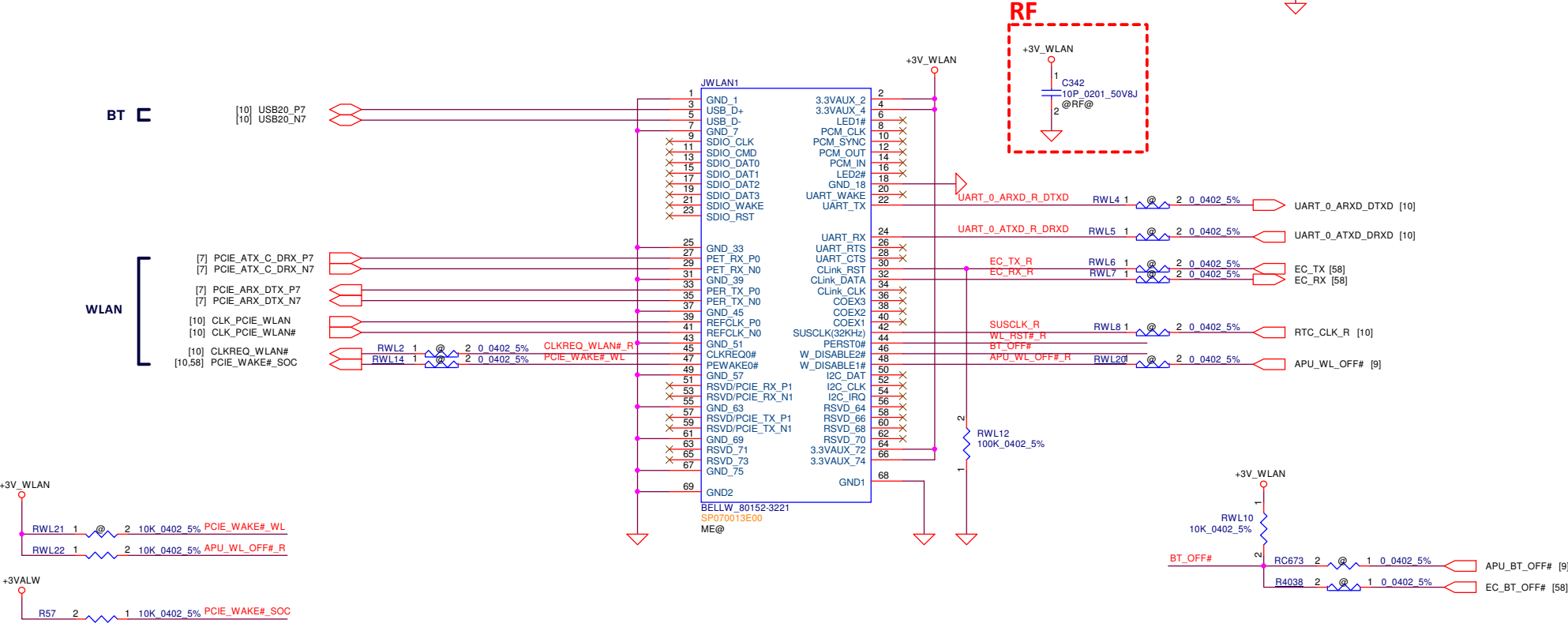
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WLAN POWER CIRCUIT



NGFF - WLAN / BT CONNECTOR (KEY-E)



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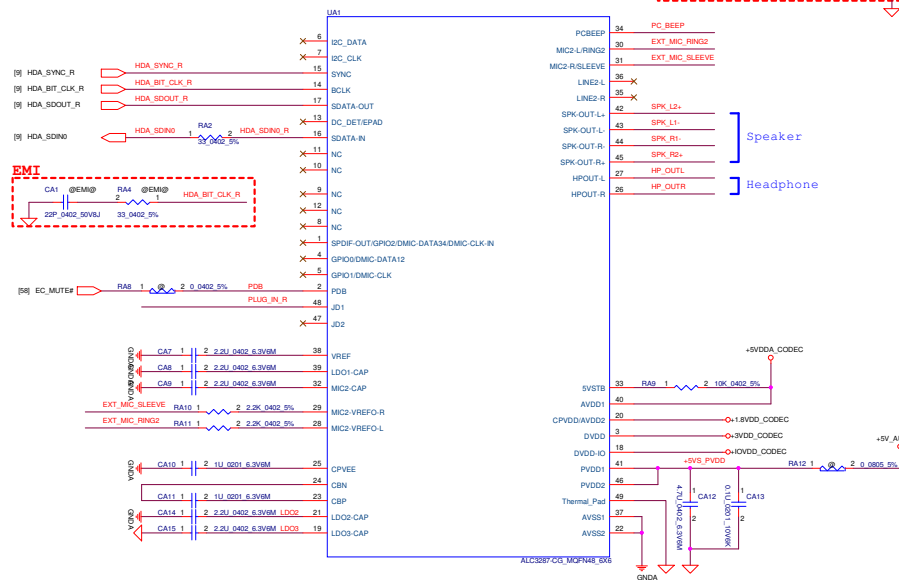
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**ALC3287**

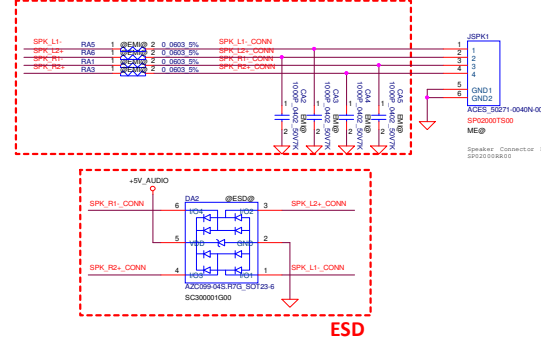


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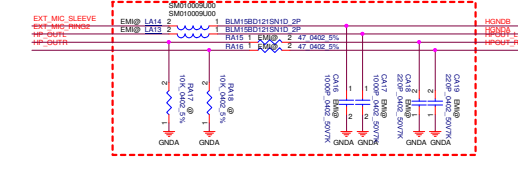
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**Speaker**

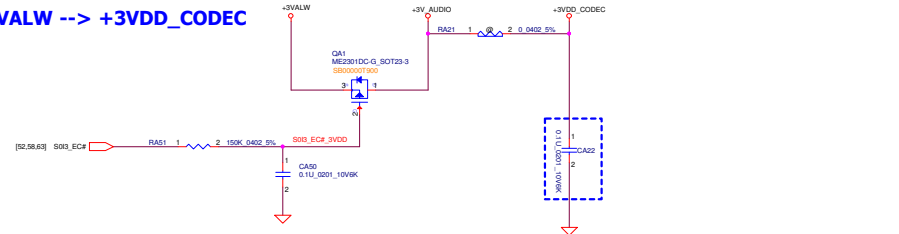
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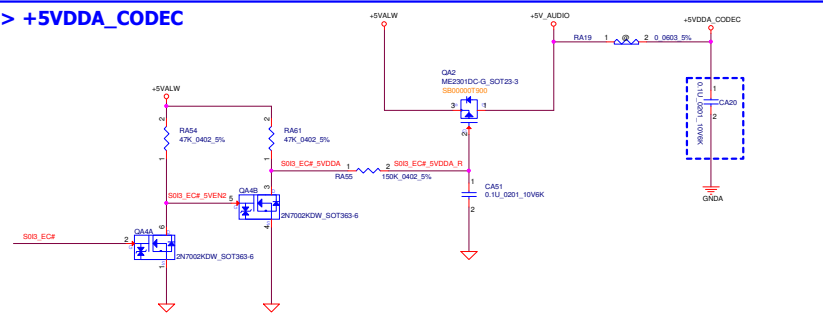
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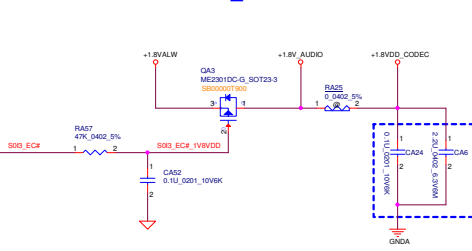
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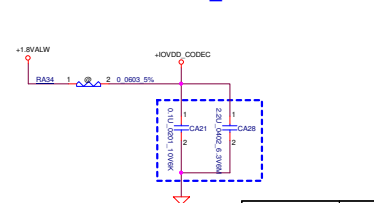
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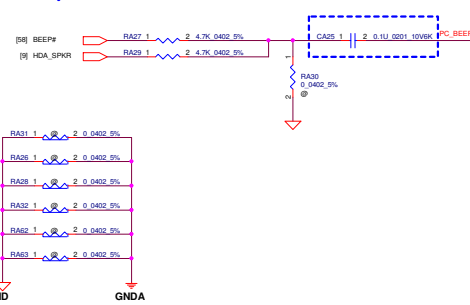
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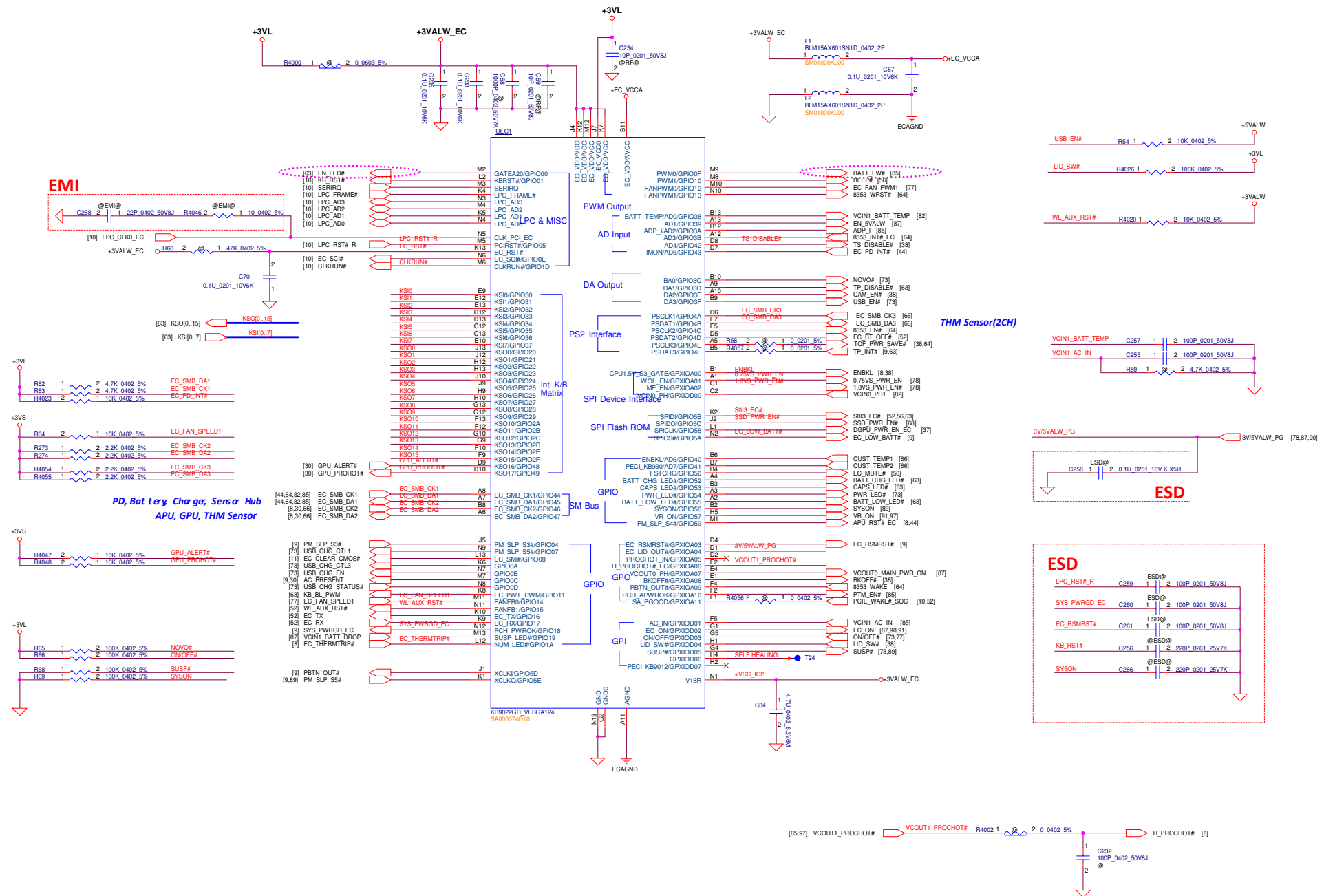
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## Embedded Controller



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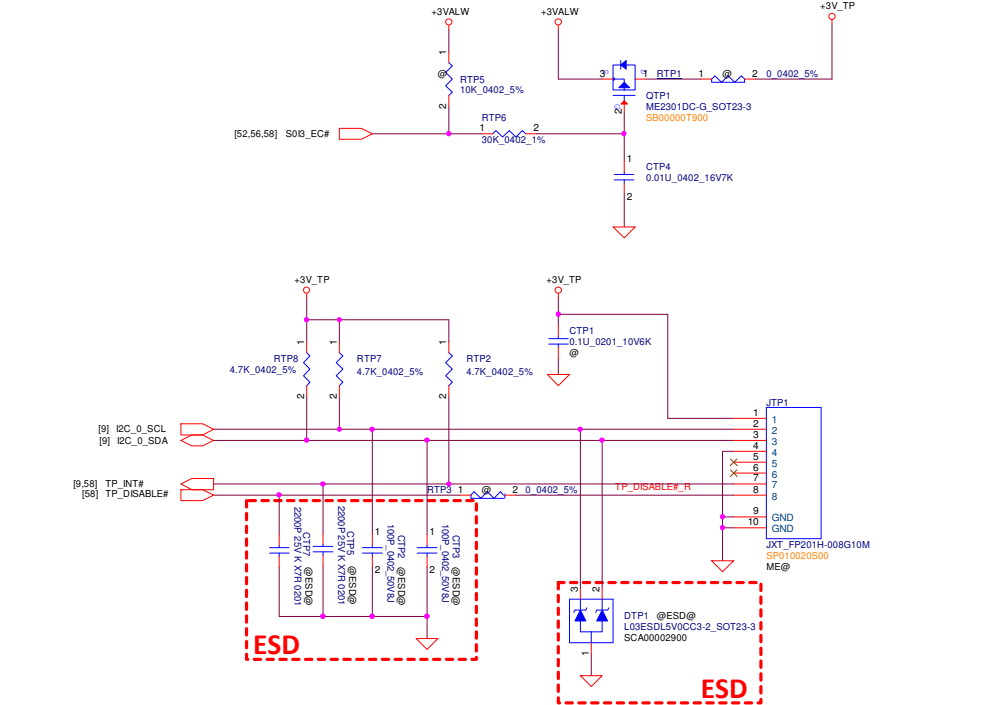
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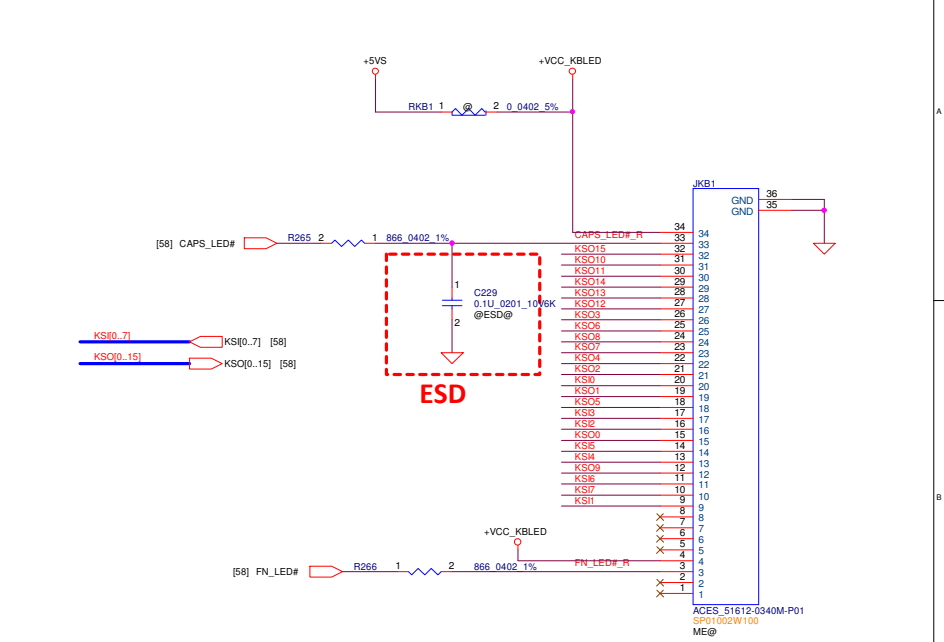
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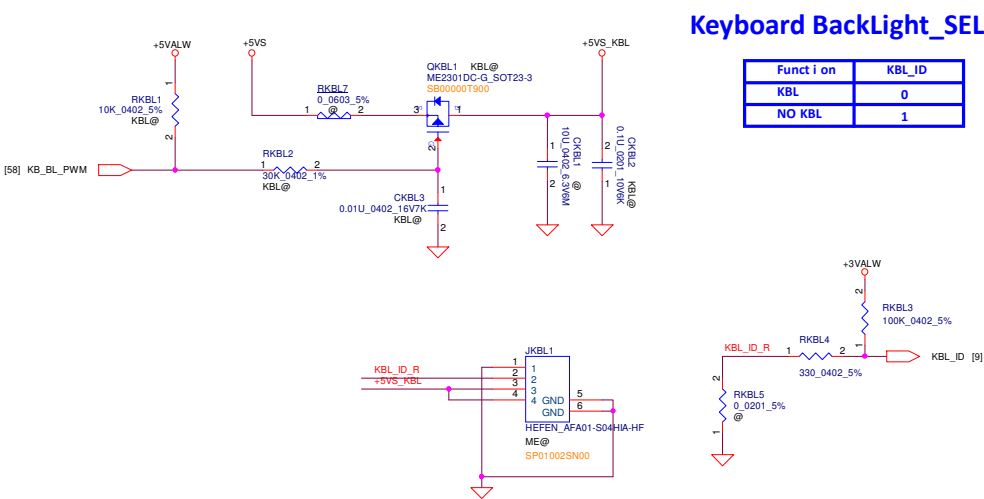
Touch Pad



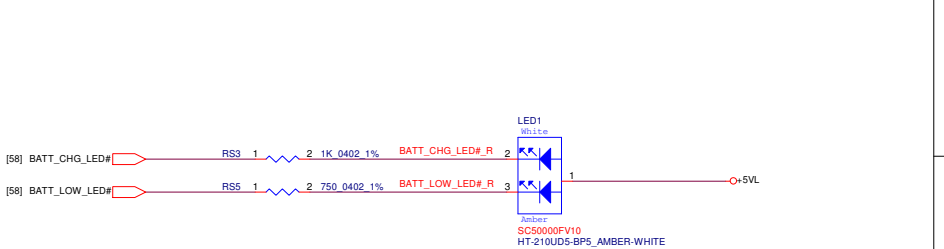
Keyboard



Keyboard Backlight



BATT LED

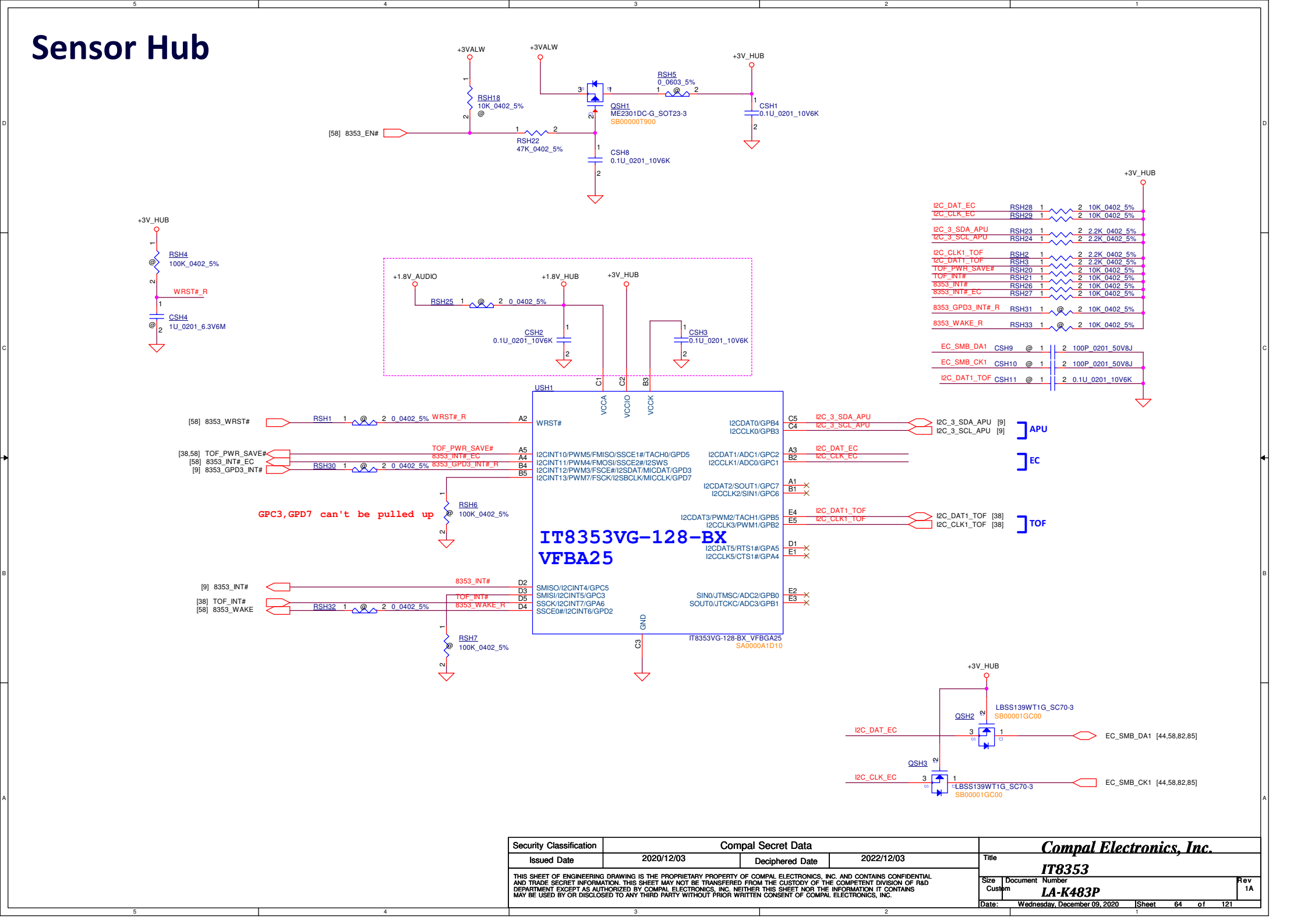
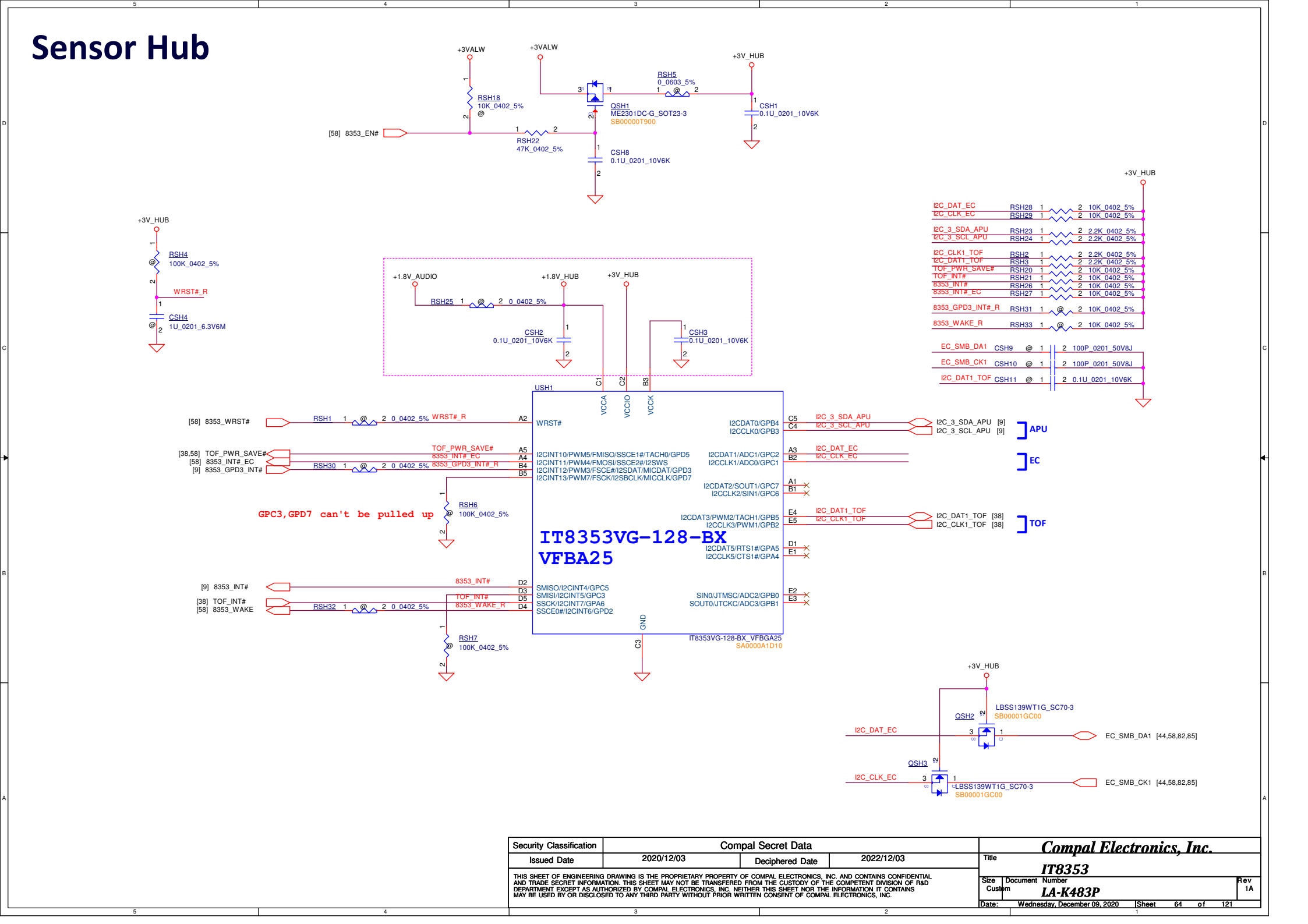


# Sensor Hub

The diagram illustrates the internal circuitry of the Sensor Hub, centered around the IT8353VG-128-BX VFBA25. Key components and connections include:

- Power Supply:** +3V\_HUB, +3V\_VALW, +1.8V\_AUDIO, +1.8V\_HUB.
- Resistors:** RSH1, RSH2, RSH3, RSH4, RSH5, RSH6, RSH7, RSH8, RSH9, RSH10, RSH11, RSH12, RSH13, RSH14, RSH15, RSH16, RSH17, RSH18, RSH19, RSH20, RSH21, RSH22, RSH23, RSH24, RSH25, RSH26, RSH27, RSH28, RSH29, RSH30, RSH31, RSH32, RSH33, RSH34, RSH35, RSH36, RSH37, RSH38, RSH39, RSH40, RSH41, RSH42, RSH43, RSH44, RSH45, RSH46, RSH47, RSH48, RSH49, RSH50, RSH51, RSH52, RSH53, RSH54, RSH55, RSH56, RSH57, RSH58, RSH59, RSH60, RSH61, RSH62, RSH63, RSH64, RSH65, RSH66, RSH67, RSH68, RSH69, RSH70, RSH71, RSH72, RSH73, RSH74, RSH75, RSH76, RSH77, RSH78, RSH79, RSH80, RSH81, RSH82, RSH83, RSH84, RSH85, RSH86, RSH87, RSH88, RSH89, RSH90, RSH91, RSH92, RSH93, RSH94, RSH95, RSH96, RSH97, RSH98, RSH99, RSH100.
- Capacitors:** CSH1, CSH2, CSH3, CSH4, CSH5, CSH6, CSH7, CSH8, CSH9, CSH10, CSH11, CSH12, CSH13, CSH14, CSH15, CSH16, CSH17, CSH18, CSH19, CSH20, CSH21, CSH22, CSH23, CSH24, CSH25, CSH26, CSH27, CSH28, CSH29, CSH30, CSH31, CSH32, CSH33, CSH34, CSH35, CSH36, CSH37, CSH38, CSH39, CSH40, CSH41, CSH42, CSH43, CSH44, CSH45, CSH46, CSH47, CSH48, CSH49, CSH50, CSH51, CSH52, CSH53, CSH54, CSH55, CSH56, CSH57, CSH58, CSH59, CSH60, CSH61, CSH62, CSH63, CSH64, CSH65, CSH66, CSH67, CSH68, CSH69, CSH70, CSH71, CSH72, CSH73, CSH74, CSH75, CSH76, CSH77, CSH78, CSH79, CSH80, CSH81, CSH82, CSH83, CSH84, CSH85, CSH86, CSH87, CSH88, CSH89, CSH90, CSH91, CSH92, CSH93, CSH94, CSH95, CSH96, CSH97, CSH98, CSH99, CSH100.
- Interfaces:** I2C\_DAT\_EC, I2C\_CLK\_EC, I2C\_3\_SDA\_APU, I2C\_3\_SCL\_APU, I2C\_CLK1\_TOF, I2C\_DAT1\_TOF, TOF\_PWR\_SAVE#, TOF\_INT#, 8353\_INT#, 8353\_INT#\_EC, 8353\_GPD3\_INT#, 8353\_WAKE\_R, EC\_SMB\_DA1, EC\_SMB\_CK1, I2C\_DAT1\_TOF, I2C\_CLK1\_TOF.
- Other Components:** QSH1, QSH2, QSH3, QSH4, QSH5, QSH6, QSH7, QSH8, QSH9, QSH10, QSH11, QSH12, QSH13, QSH14, QSH15, QSH16, QSH17, QSH18, QSH19, QSH20, QSH21, QSH22, QSH23, QSH24, QSH25, QSH26, QSH27, QSH28, QSH29, QSH30, QSH31, QSH32, QSH33, QSH34, QSH35, QSH36, QSH37, QSH38, QSH39, QSH40, QSH41, QSH42, QSH43, QSH44, QSH45, QSH46, QSH47, QSH48, QSH49, QSH50, QSH51, QSH52, QSH53, QSH54, QSH55, QSH56, QSH57, QSH58, QSH59, QSH60, QSH61, QSH62, QSH63, QSH64, QSH65, QSH66, QSH67, QSH68, QSH69, QSH70, QSH71, QSH72, QSH73, QSH74, QSH75, QSH76, QSH77, QSH78, QSH79, QSH80, QSH81, QSH82, QSH83, QSH84, QSH85, QSH86, QSH87, QSH88, QSH89, QSH90, QSH91, QSH92, QSH93, QSH94, QSH95, QSH96, QSH97, QSH98, QSH99, QSH100.

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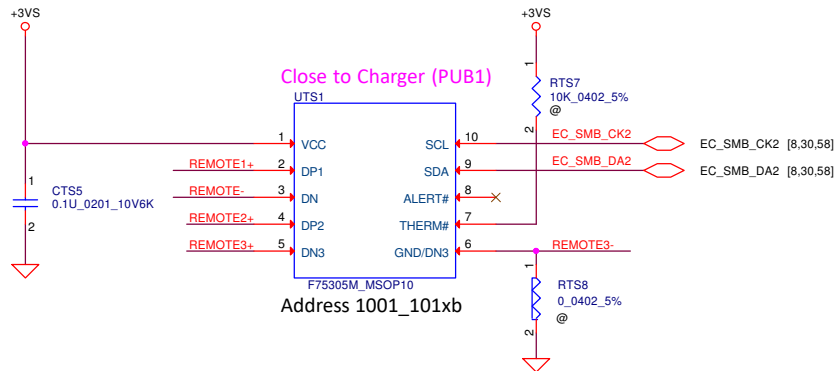
# Sensor Hub



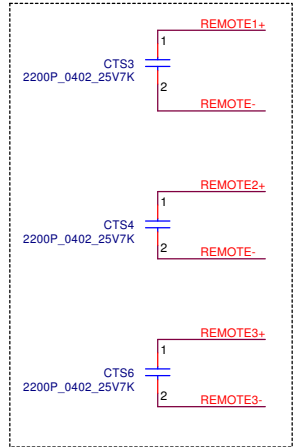
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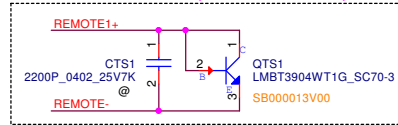
Thermal Sensor (4 Channel)



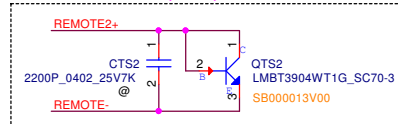
Close to UTS1



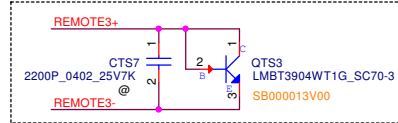
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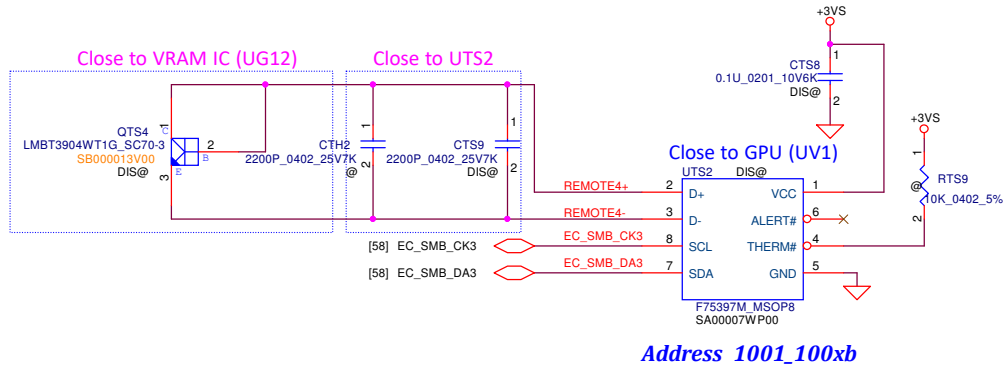
Close to KB Conn (JKB1)



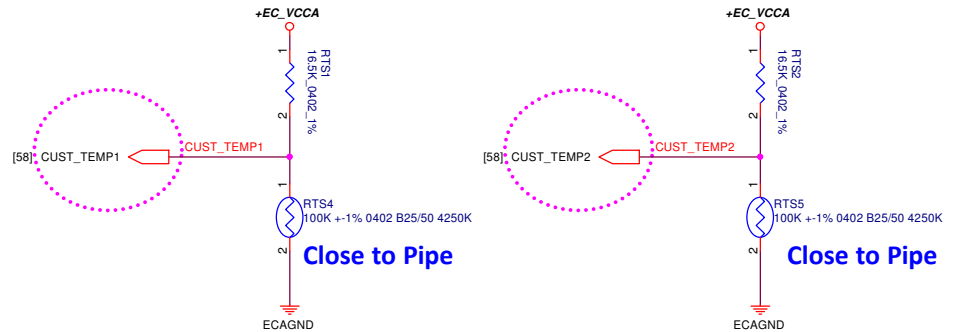
Close to 3V/5V IC (PU301/PU501)



Thermal Sensor (2 Channel)



Thermistor reserve ( 2 Channel)

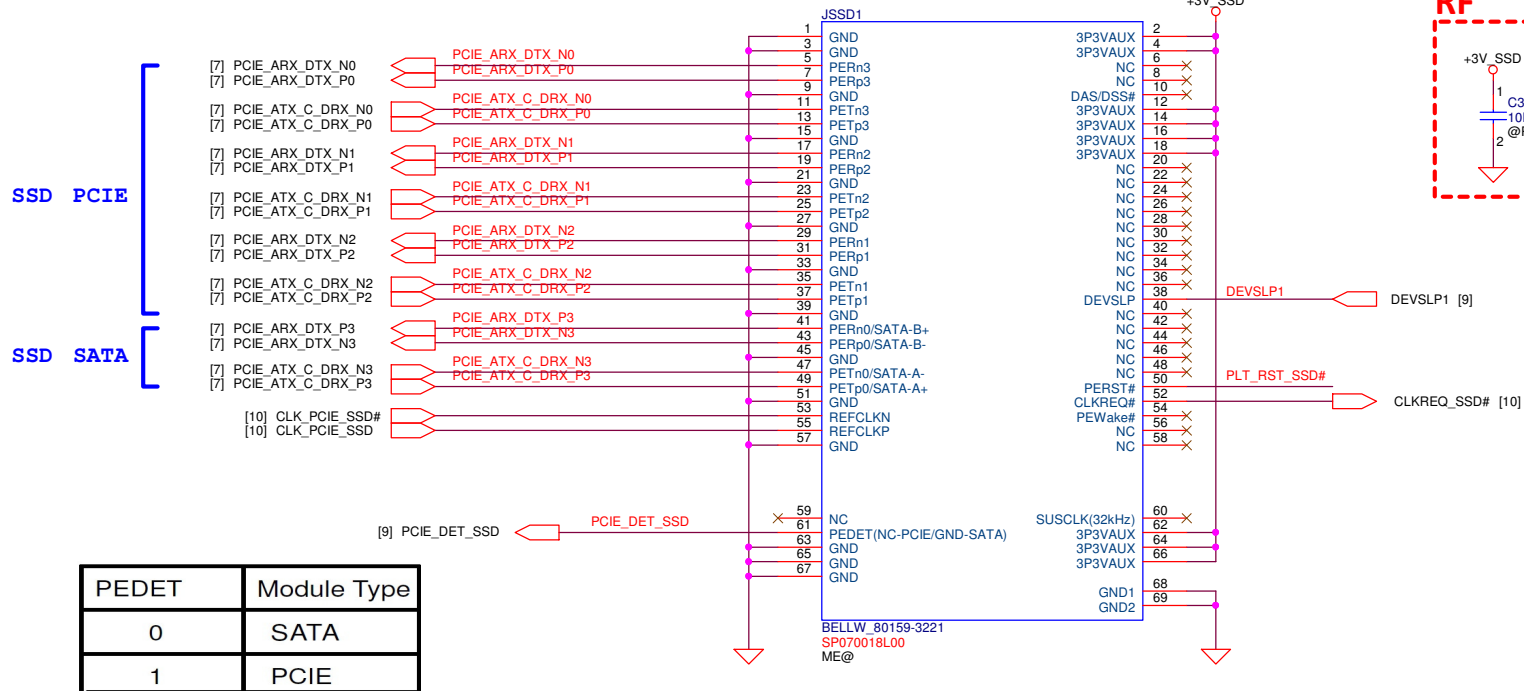
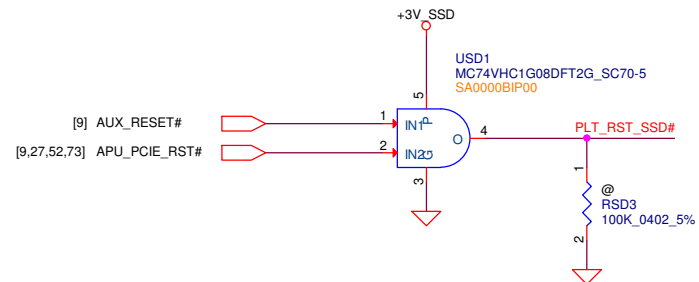
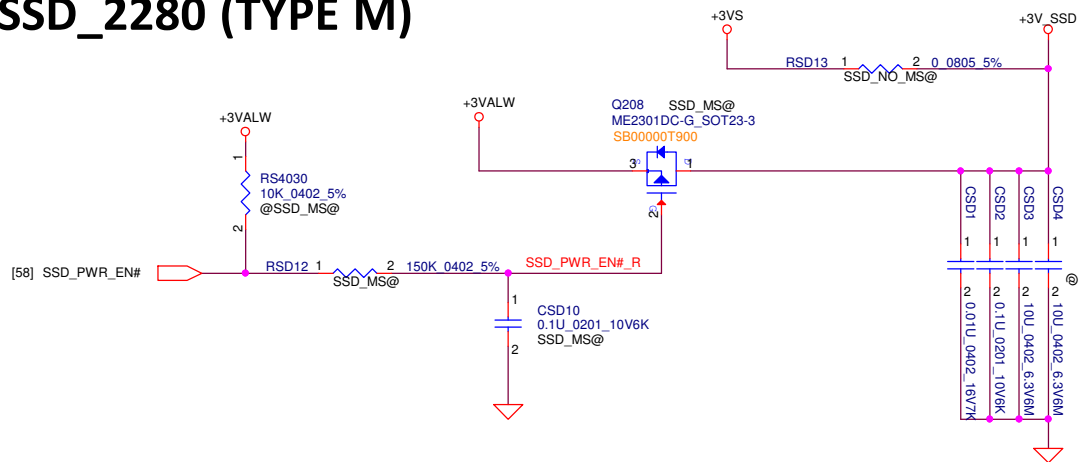


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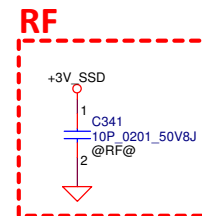
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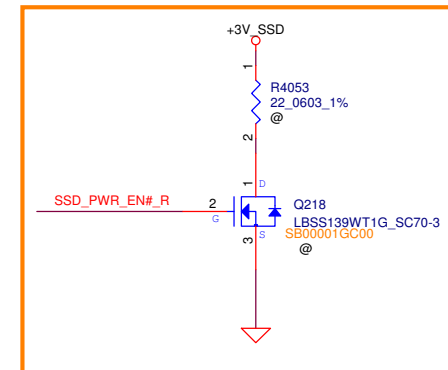
## SSD\_2280 (TYPE M)



PEDET	Module Type
0	SATA
1	PCIE



## DISCHARGE CIRCUIT



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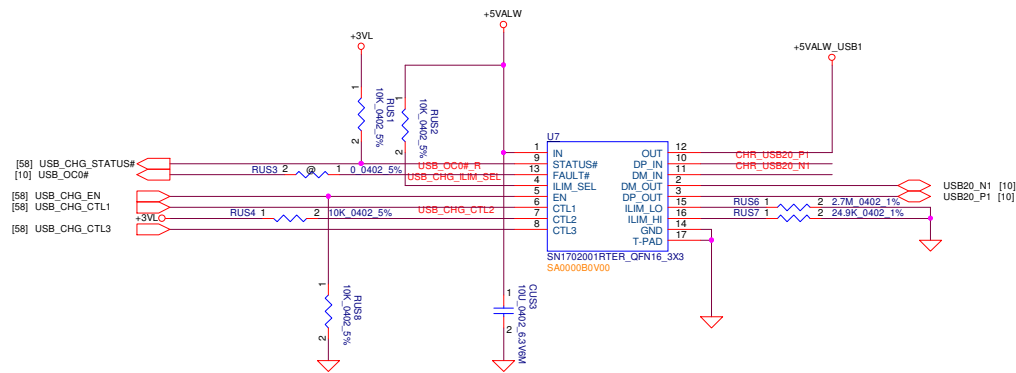
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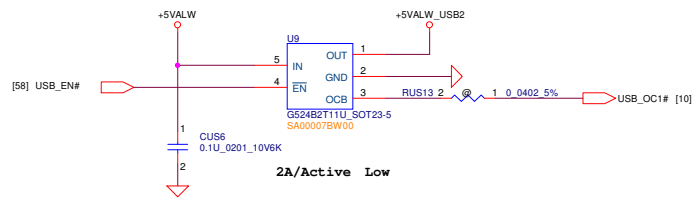
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USB3.0\_Port (AOU\_Port)

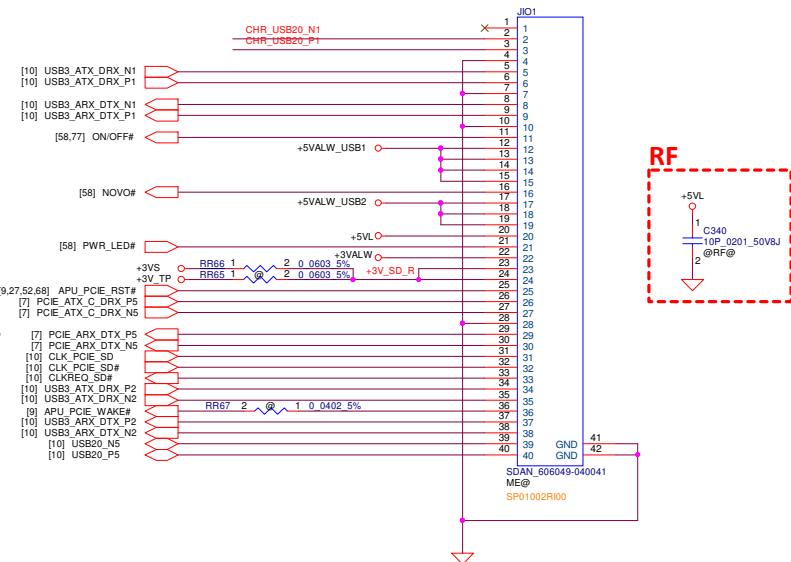


USB3.0\_Port (Non-AOU\_Port)



I/O CONN

Card Reader



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								USB3 / IO board Conn.					
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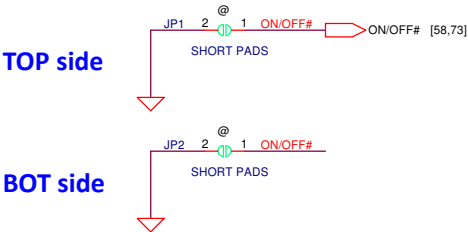
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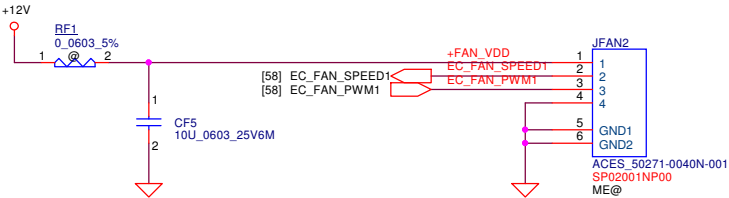
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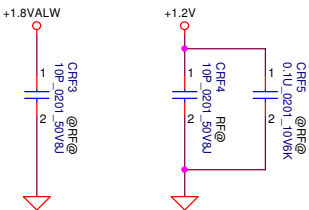
ON/OFF# SHORT PAD



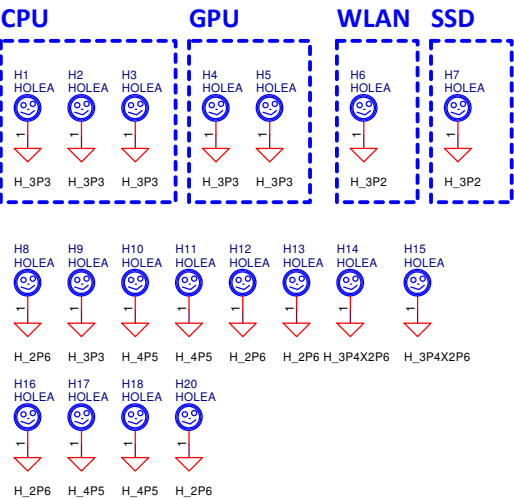
+12V FAN



RF - BY PASS / CROSS MOAT CAPS



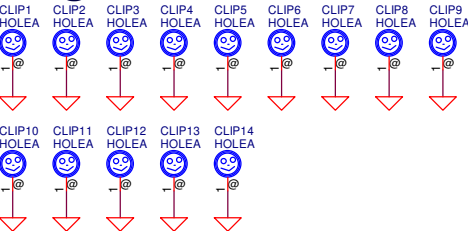
SCREW



LASER BARCODE



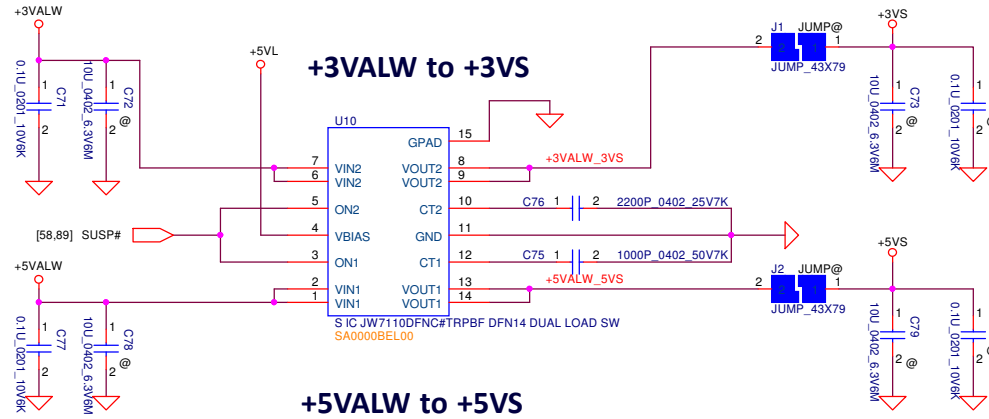
DDR Shielding Clip Large



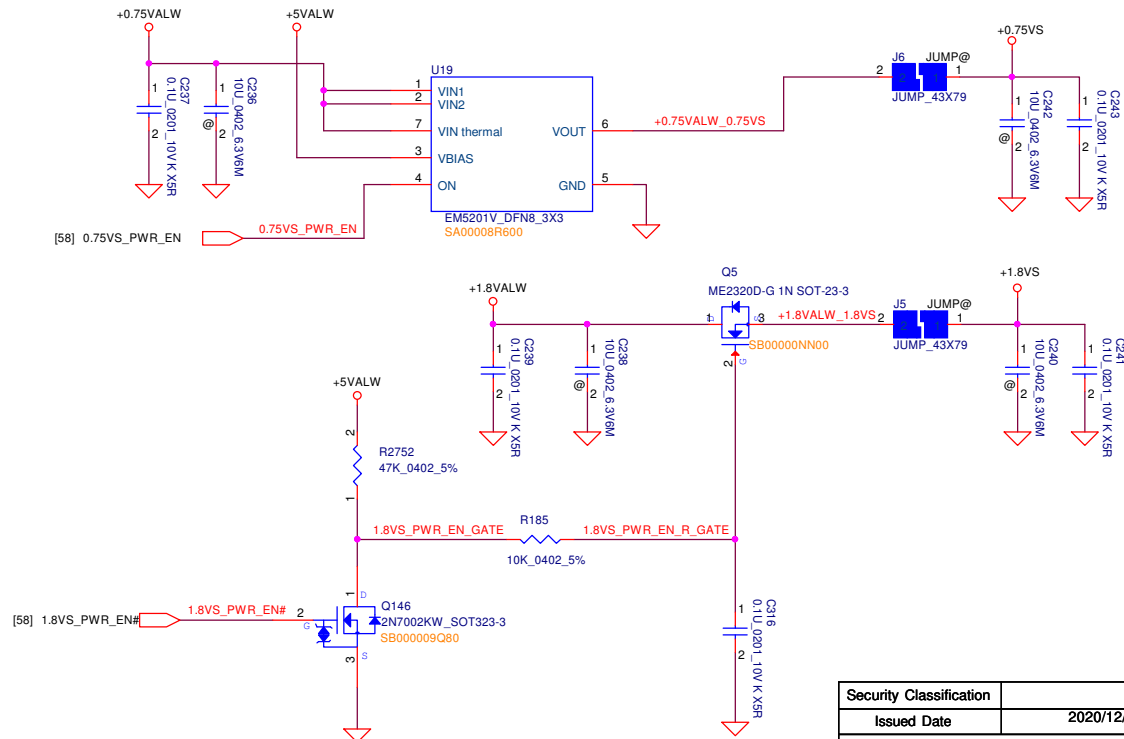
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# DC to DC

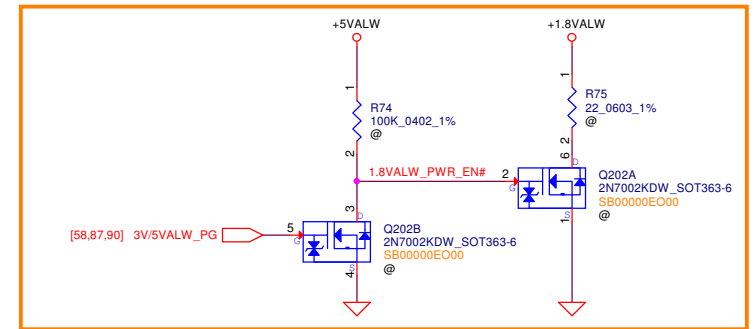
+3VALW to +3VS / +5VALW to +5VS



+1.8VALW to +1.8VS / +0.75VALW to +0.75VS



## DISCHARGE CIRCUIT



+1.8VALW Discharge Circuit (Reserved)

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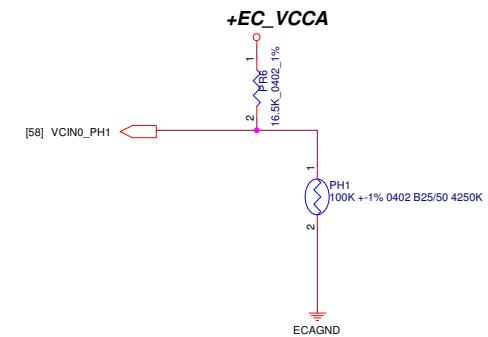
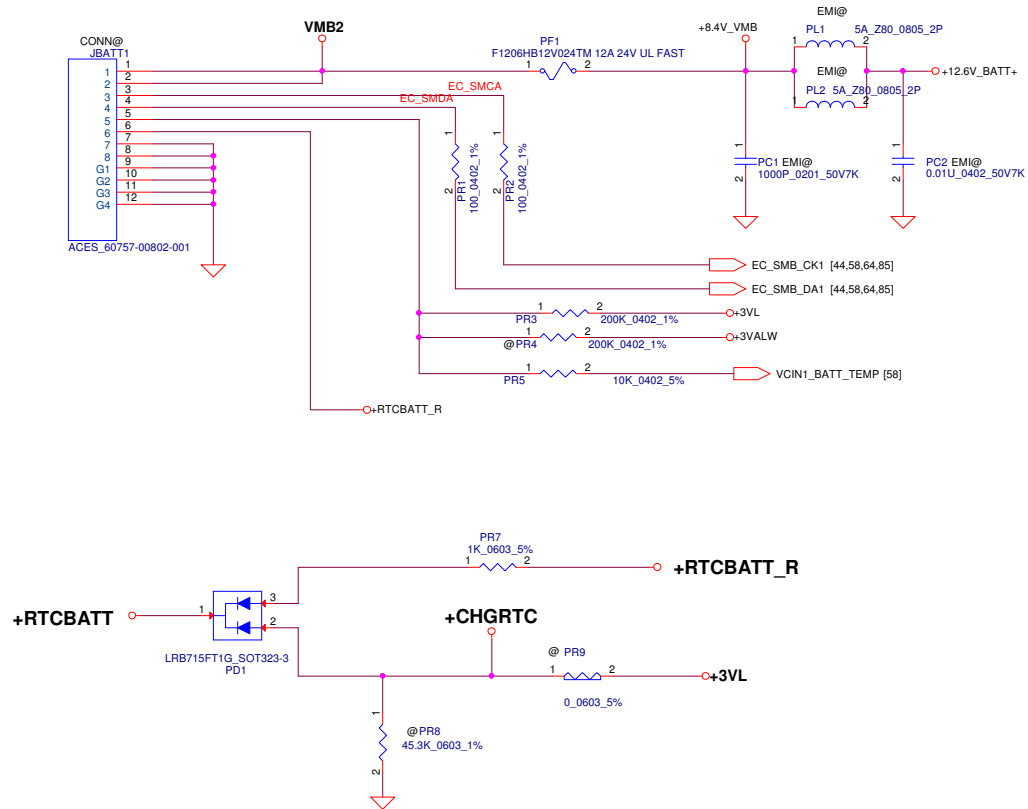
Reserve Page

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						Size	Document Number			Rev	
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						Date:	Wednesday, December 09, 2020		Sheet	81	of



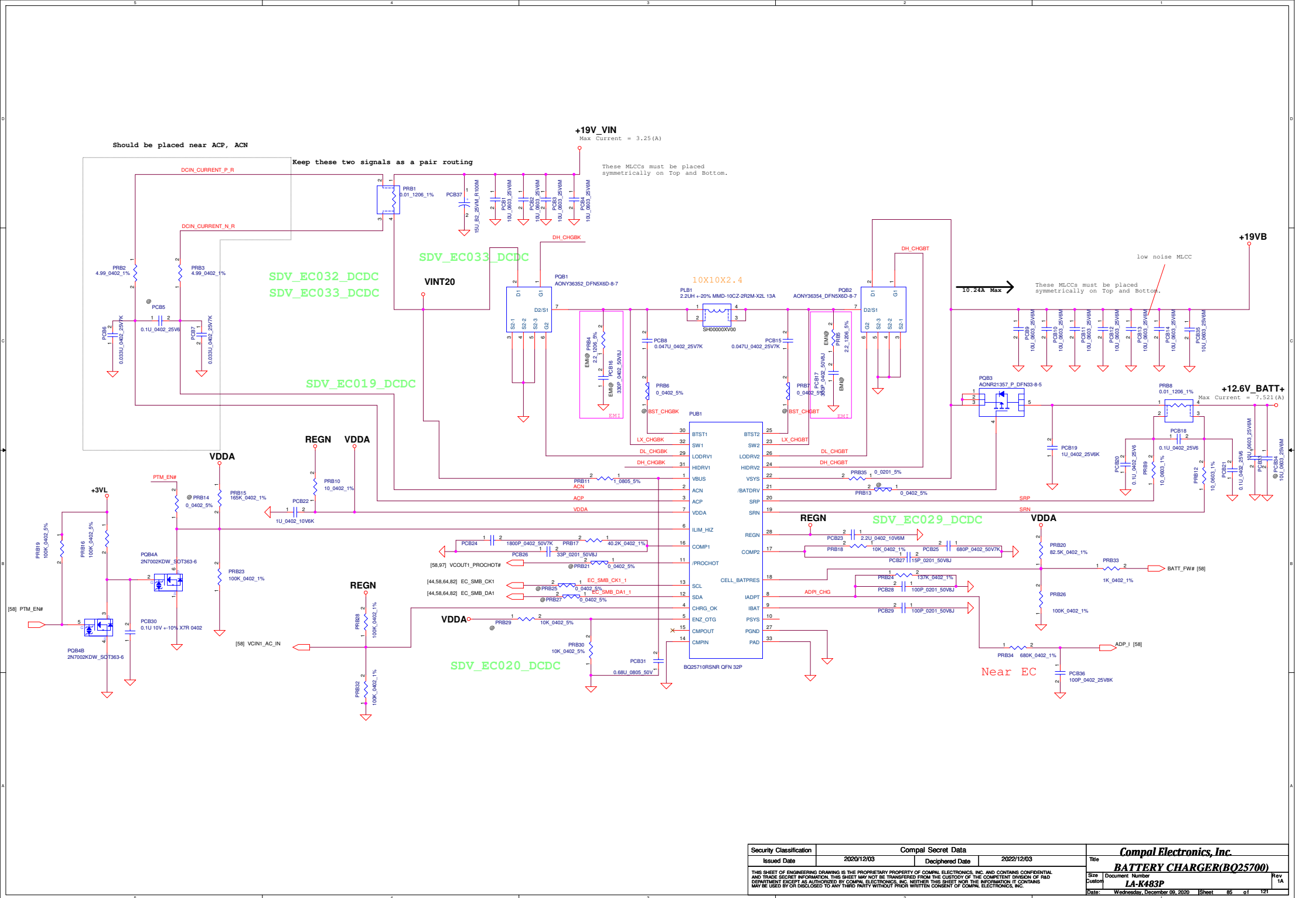
*PH1 under CPU botten side :  
CPU thermal protection at 93 +-3 degree C  
Recovery at 56 +-3 degree C*

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				Custom		Rev 1A
				Date:	Wednesday, December 09, 2020	Sheet 82 of 121



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Date		Wednesday, December 08, 2020		Sheet	
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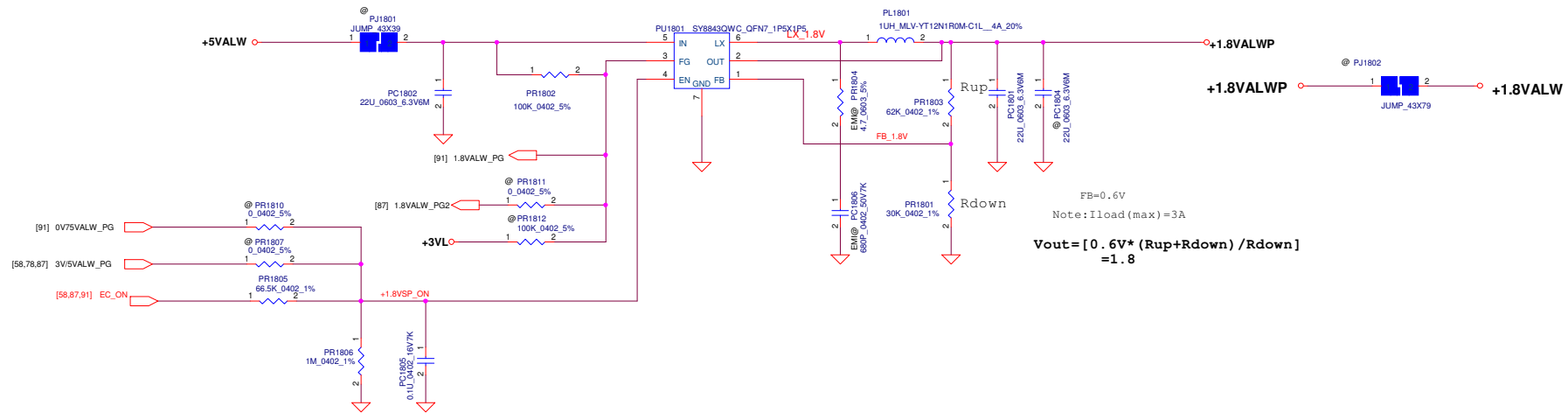


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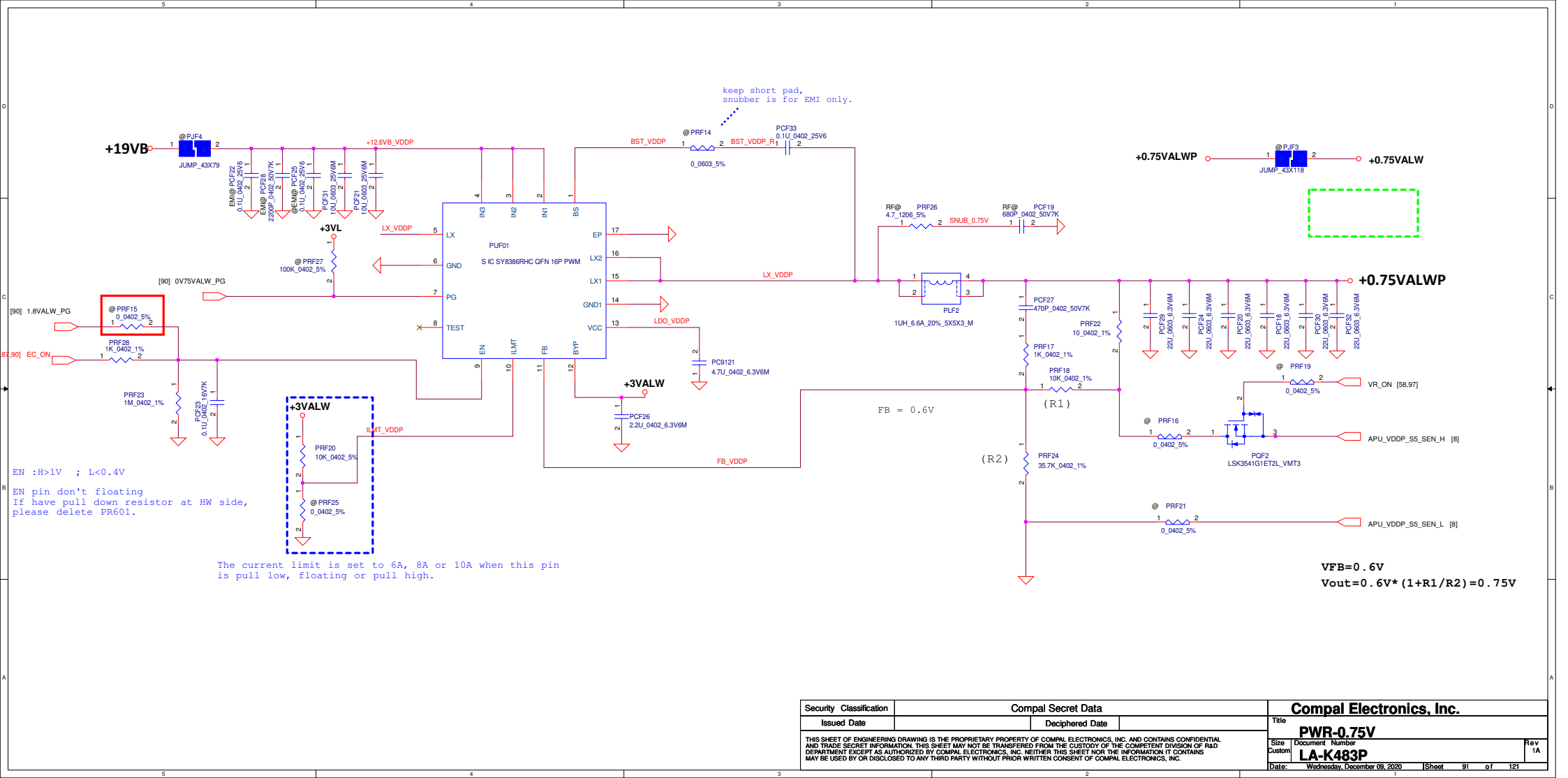
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						Size	Document Number			Rev	
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3				2							







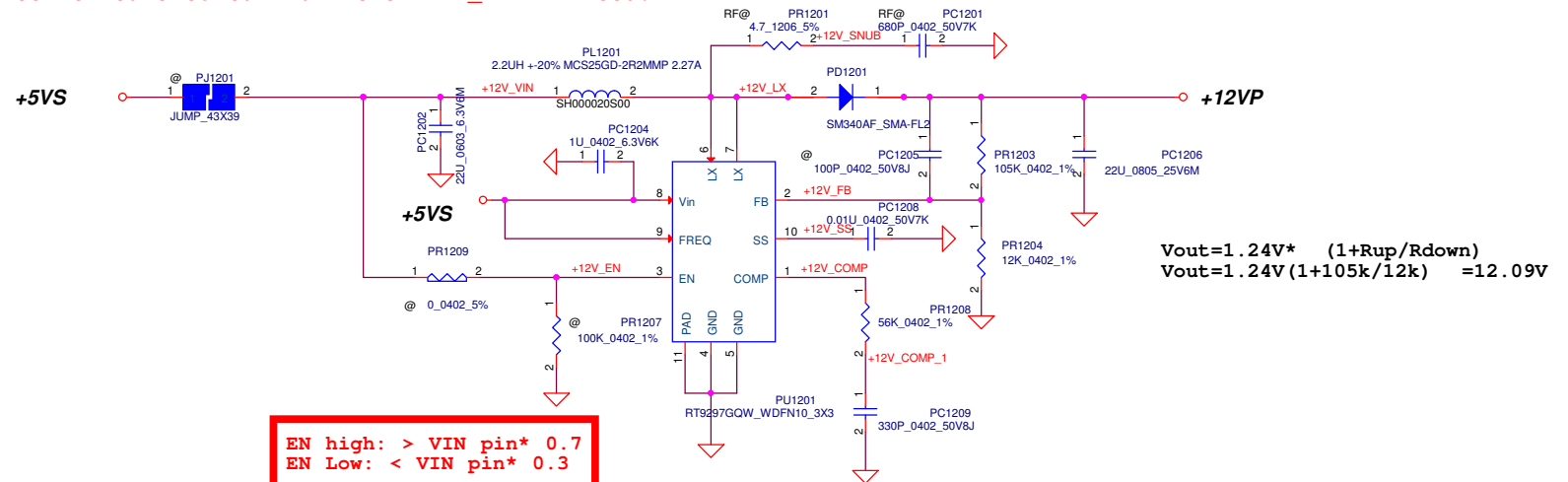
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Custom					
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Module model information  
RT9297\_V1.mdd

Must check PL501 and PD501 rating  
for your application.

Add a switch circuit to turn off the +12V\_VIN if need.



FREQ high : Frequency = 1.2MHz  
FREQ low : Frequency = 640KHz

If the out put is for I/O port, should be add  
protection circuit for I/O short protection.



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Size	Document	Number		Rev	
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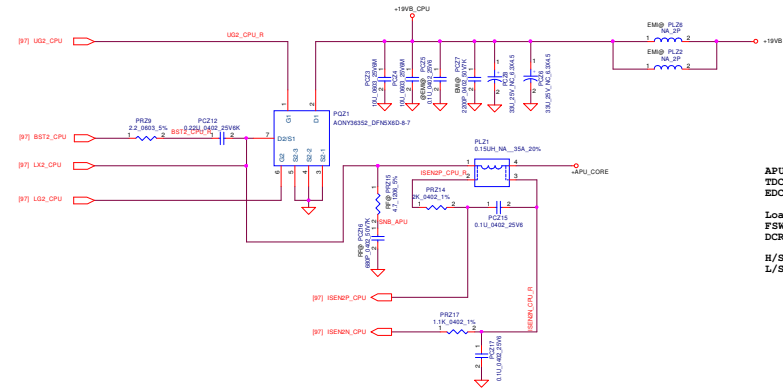
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3				2							





## SDV\_EC004\_DCDC

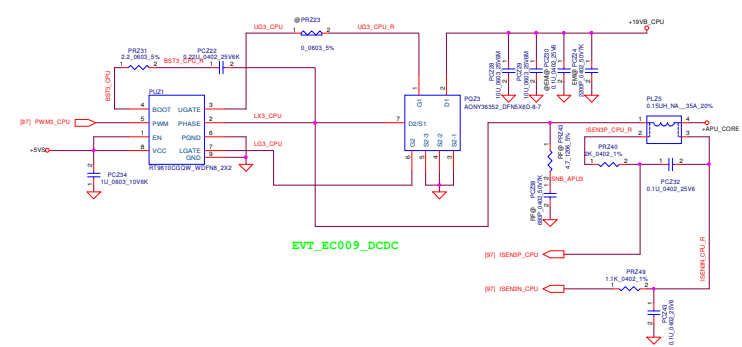
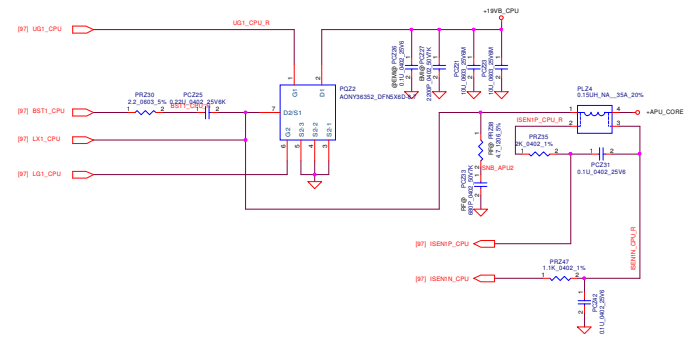


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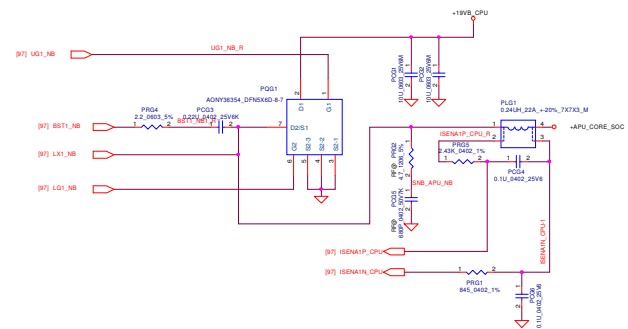
APU_core
TDC 51A
EDC 105A

Load_line -0.7mV/A
FSW=430kHz
DCR 0.9mohm +/-5%
                TYP      MAX
H/S Rds(on) : 6.8mohm,  8.6mohm
L/S Rds(on) : 2mohm ,   2.5mohm

```



## EVT\_EC009\_DCDC



```

+APU_CORE_SOC
TDC 15A
EDC 20A

Load line -2.1mV/A
FSW=400kHz
DCR 1.19mohm +/-5%
                                TYP      MAX
H/S Rds (on) : 6.8mohm,      8.6mohm
L/S Rds (on) : 2mohm ,      2.5mohm

```

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Date <input type="text"/> Wednesday, December 19, 2001 <input type="text"/> Sheet <input type="text"/> 26 of 121					

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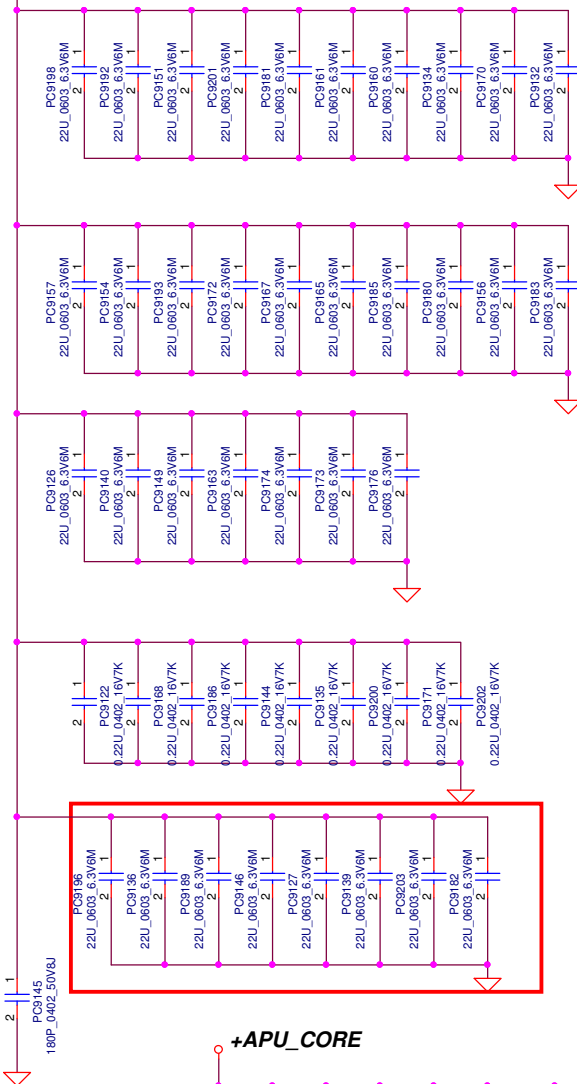
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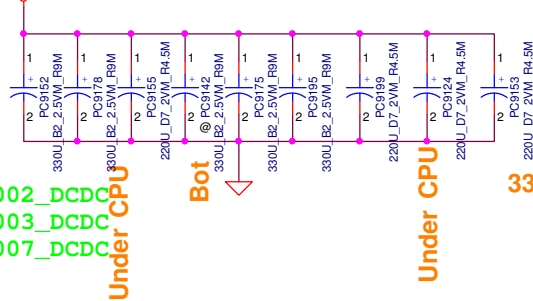
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+*APU\_CORE*

**+APU\_CORE**



**+APU\_CORE**



SIV\_EC002\_DCDC  
SIV\_EC003\_DCDC  
SIV\_EC007\_DCDC



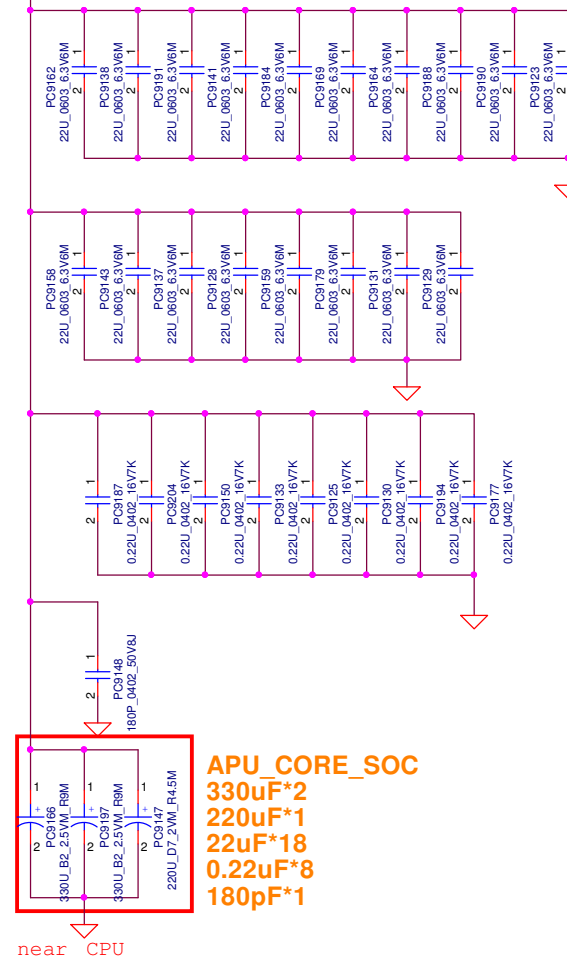
## Under CPU

330u is common part SGA00009S00

APU\_CORE  
330uF\*5 220uF \*4  
22uF\*27  
0.22uF\*8  
180pF\*1

## +APU\_CORE\_SOC

**+APU\_CORE\_SOC**



near CPU

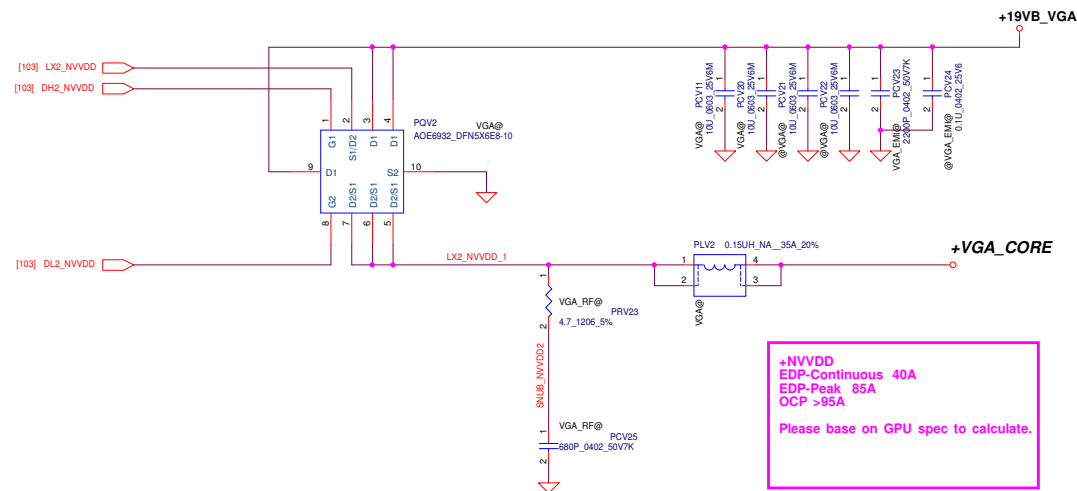
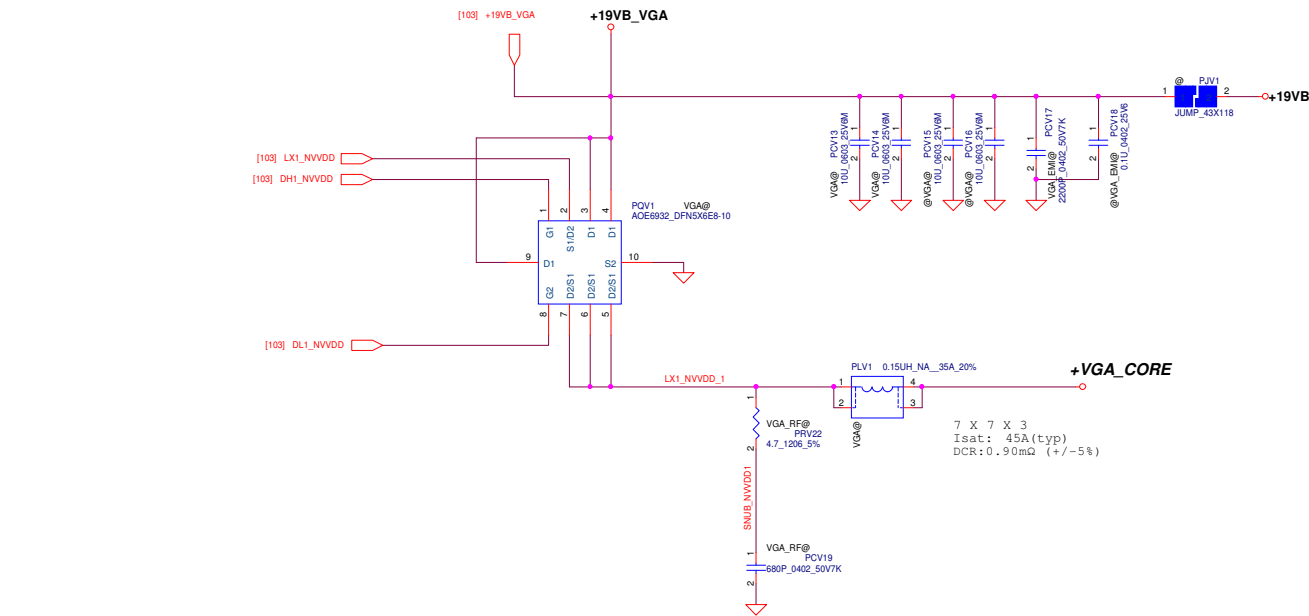
330u is common part SGA00009S00

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				Sheet	102 of 121







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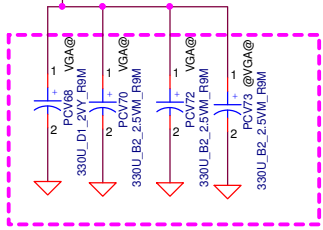
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				Sheet	105 of 121
				Rev	1A

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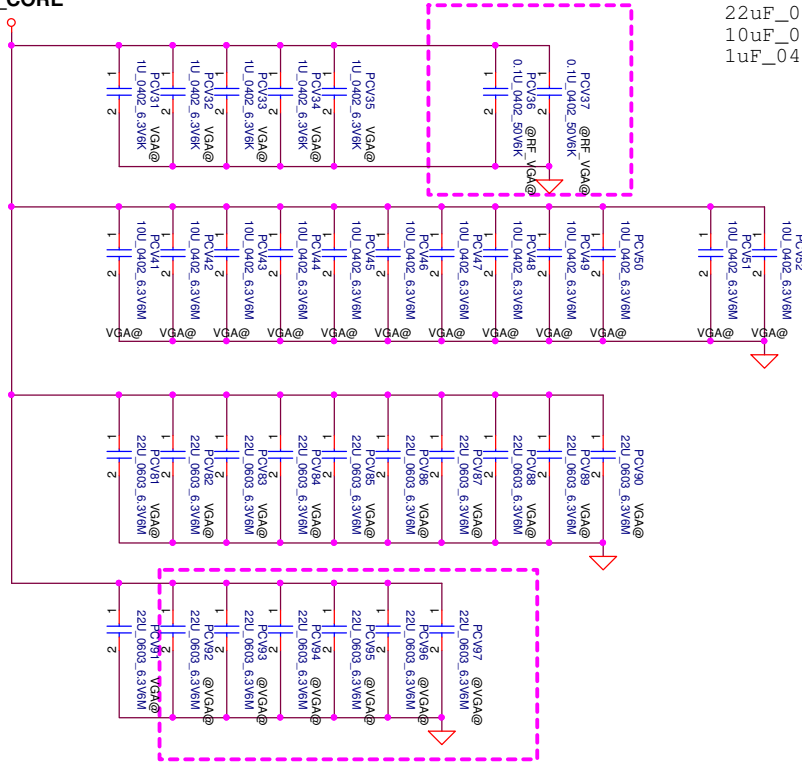
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**+VGA\_CORE**



Close GPU

**+VGA\_CORE**



Close Choke

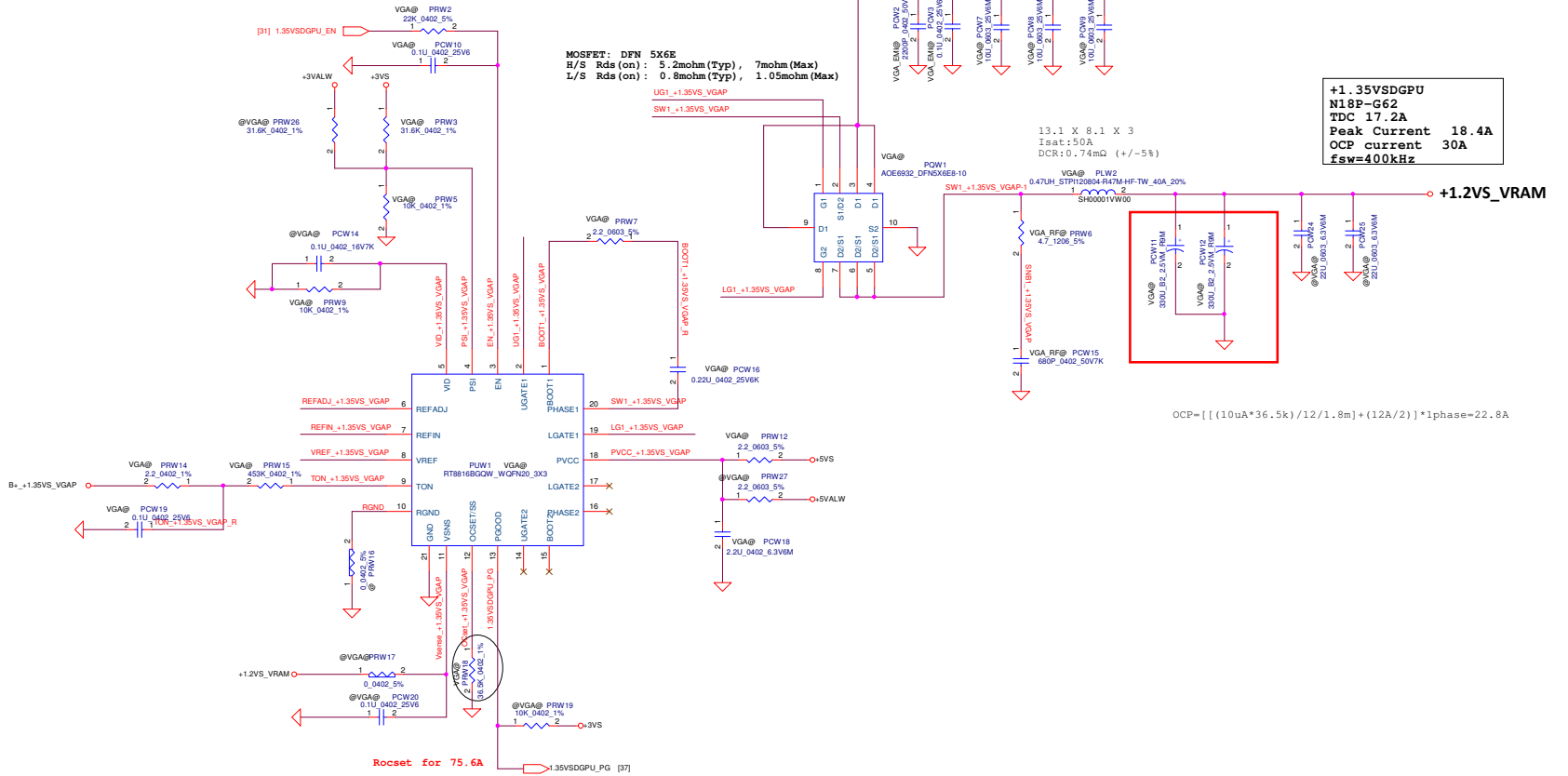
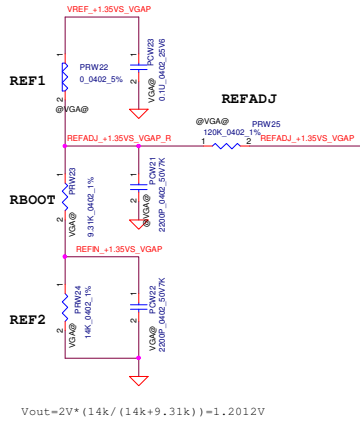
+VGA\_CORE  
330uF X 3  
220uF X 1  
22uF\_0603 X 11 (6)  
10uF\_0603 X 12  
1uF\_0402 X 5

+VGA\_CORE  
330uF X 2  
47uF\_0805 X 2  
22uF\_0603 X 4  
10uF\_0603 X 11  
1uF\_0402 X 49

Please base on GPU spec to modify output cap.

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				PWR- GPU CORE Cap	
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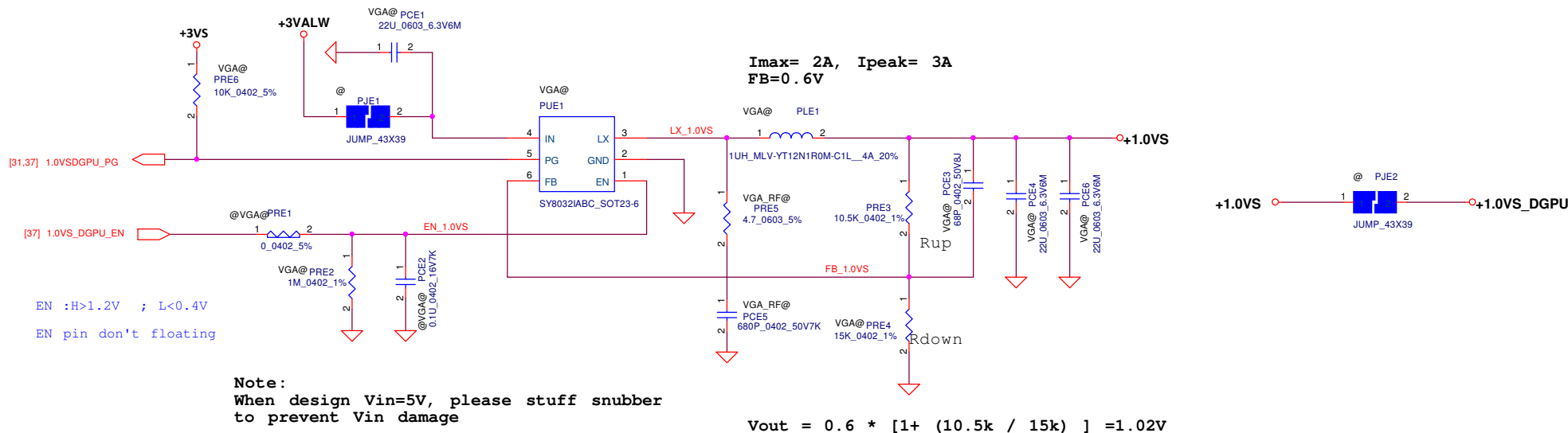
Samsung & Micron VRAM  
When, VRAM\_VDD\_CTL=High  
Vboot=1.25V  
When, VRAM\_VDD\_CTL=Low  
Vboot=1.2V



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				PWR- GPU 1.0V	
				Size	Rev
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