

Compal confidential

Schematics Document Mobile Dothan uFCPGA with Intel Alviso_GM+ICH6-M core logic

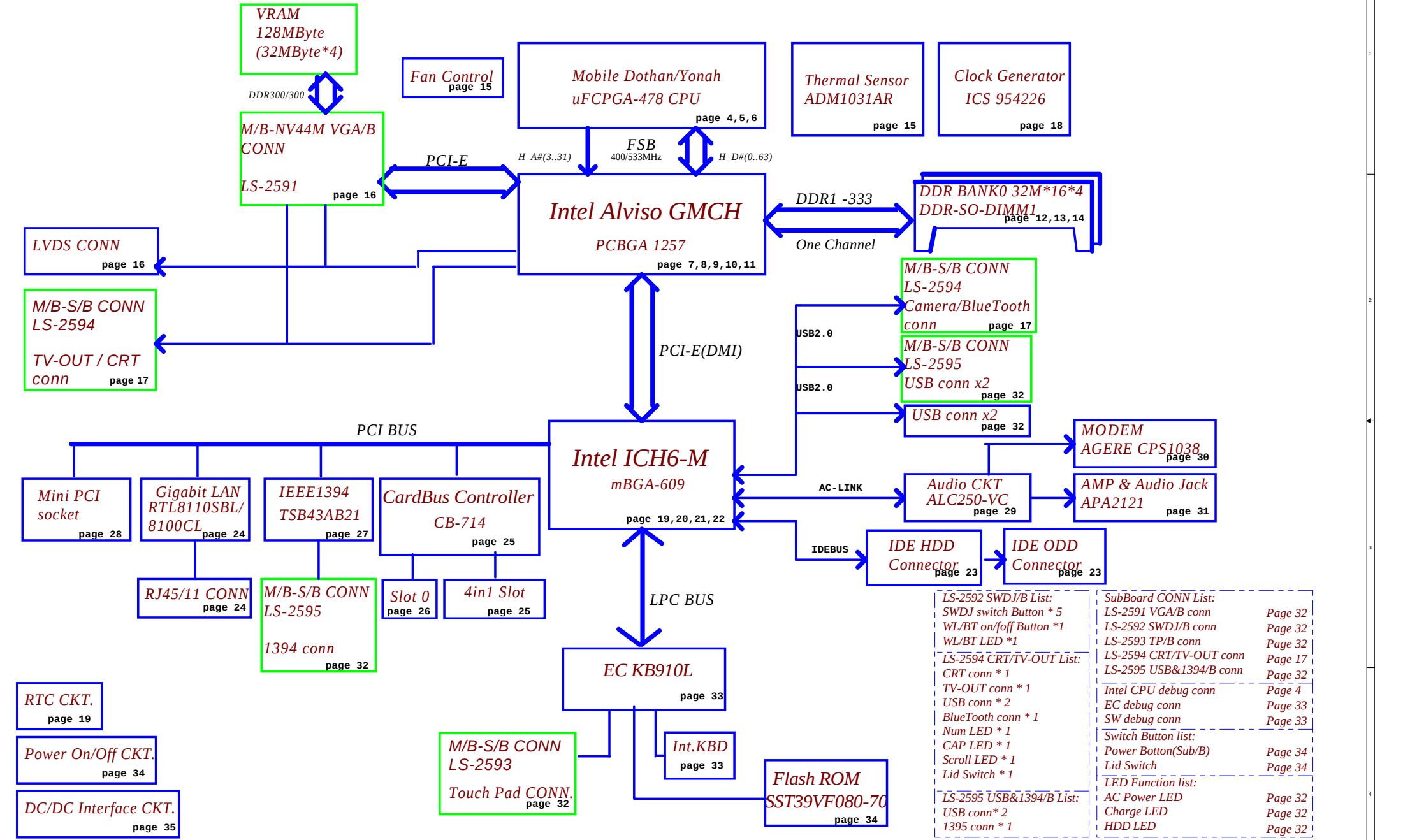
2004-10-08

LA-2591

REV:01

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Block Diagram			
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I2C / SMBUS ADDRESSING

External PCI Devices

DEVICE	IDSEL #	REQ / GNT #	PIRQ
LAN	AD17	0	F
CARD BUS	AD20	1	A
Cardreader			B
1394	AD16	2	E
Wireless LAN(MINI PCI)	AD18	3	G,H

Power Managment table

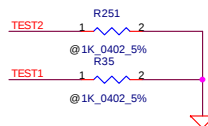
Signal State	+12VALW +3VALW +5VALW	+3V +2.5V	+CPU CORE +VCCP(1.05v) +5VS +3VS +2.5VS +1.5VS +1.25VS +1.1VS(VGA/B) +1.2VS(VGA/B) +1.8VS(VGA/B)
S0	ON	ON	ON
S1	ON	ON	ON
S3	ON	ON	OFF
S5 S4/AC	ON	OFF	OFF
S5 S4/AC don't exist	OFF	OFF	OFF

SMBUS Control Table

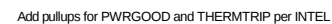
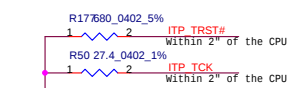
	SOURCE	INVERTER	BATT	SERIAL EEPROM	THERMAL SENSOR (CPU) ADM1032	SODIMM	CLK CHIP	MINI PCI	LCD
SMB_EC_CK1 SMB_EC_DA1	KB910L	×	✓	×	×	×	×	×	×
SMB_EC_CK2 SMB_EC_DA2	KB910L	×	×	×	✓	×	×	×	×
ICH_SMBCLK ICH_SMBDATA	ICH6-M	×	×	×	×	✓	✓	×	×
LCD_DDCCLK LCD_DDCDATA	Alviso GM-GP	×	×	×	×	×	×	×	✓
I2CC_SCL I2CC_SDA	NV44M	×	×	×	×	×	×	×	✓

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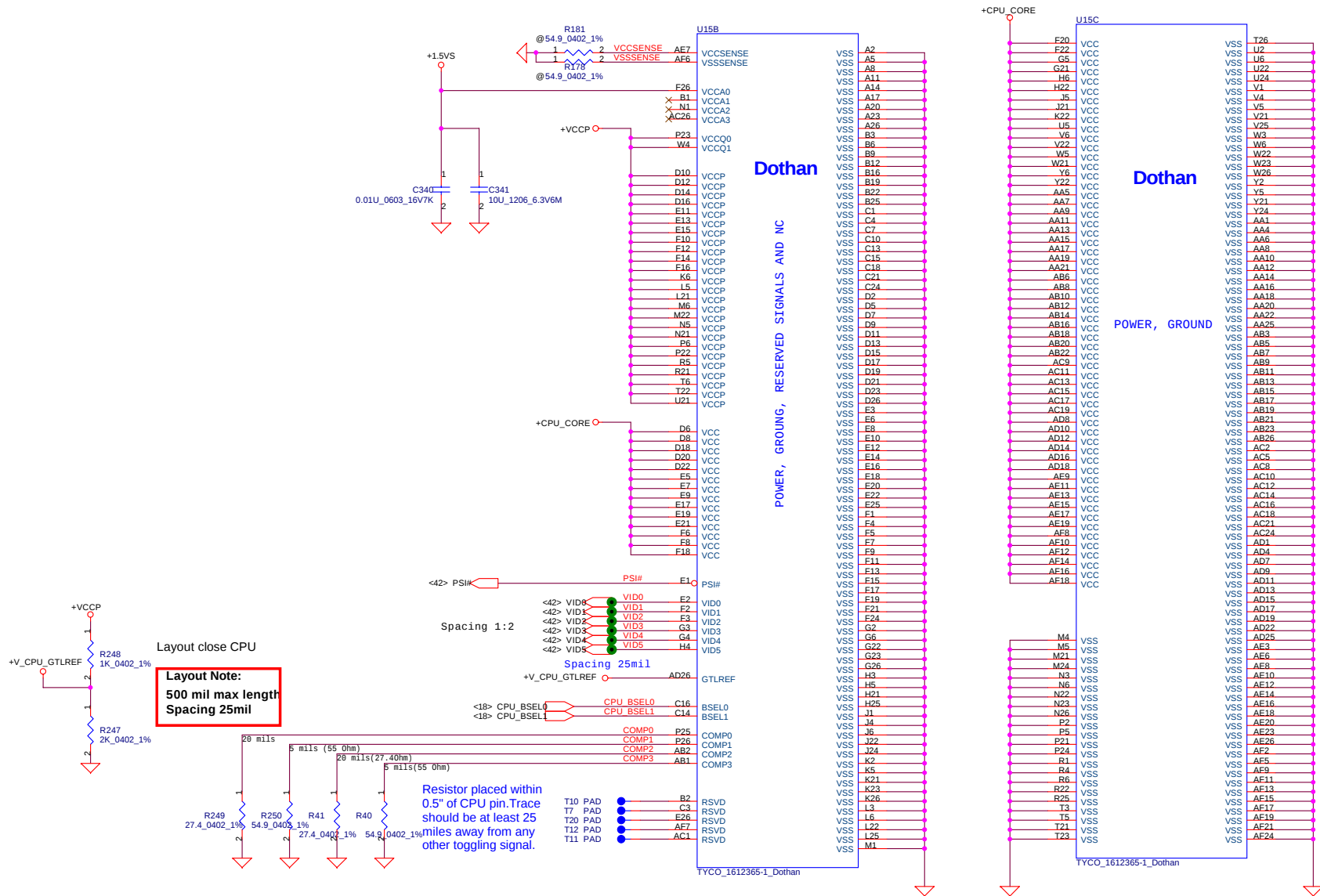


ITP TCK	PAD T17
ITP TRST#	PAD T14
ITP TMS	PAD T4
ITP TDI	PAD T13



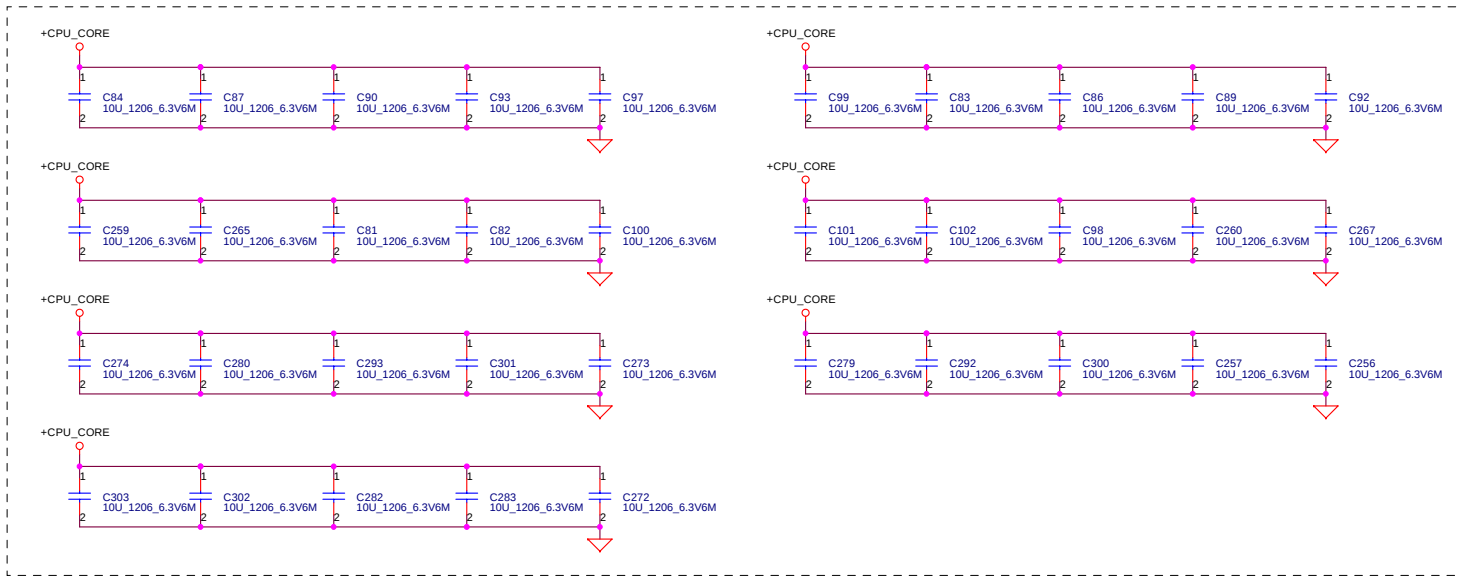
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Rev
0.1

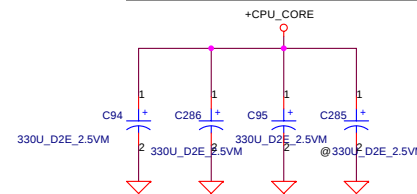


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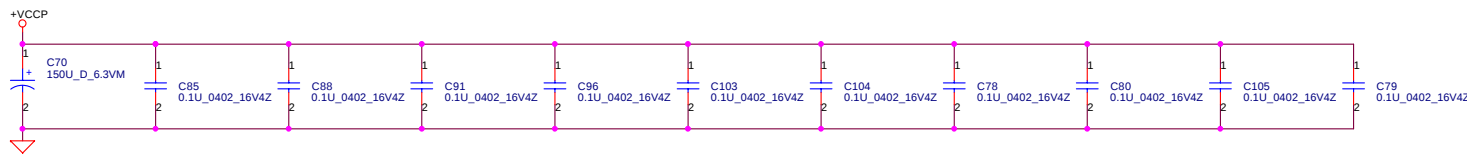
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Dothan Processor(2/2)			
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Near VCORE regulator.

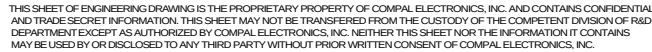


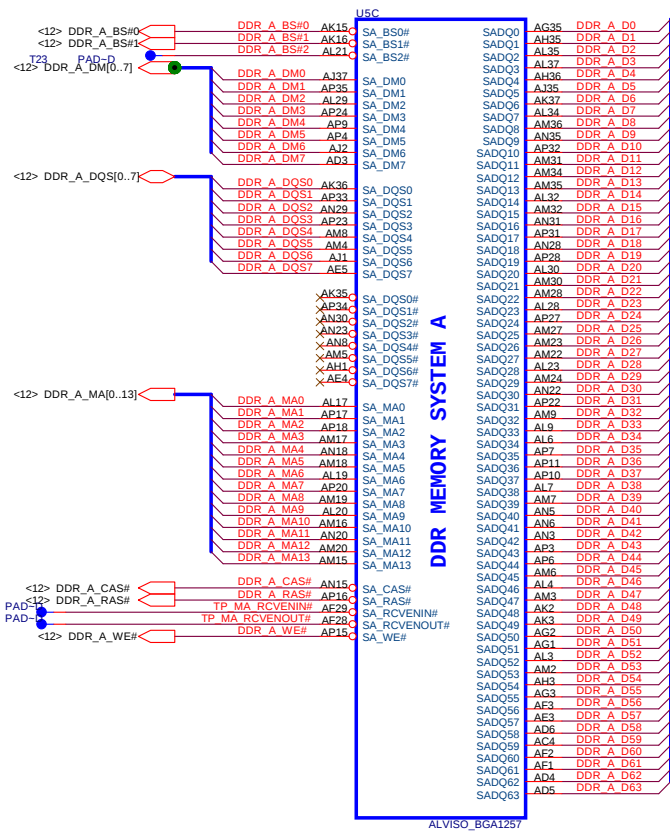
ESR <= 3m ohm
Capacitor > 880 uF



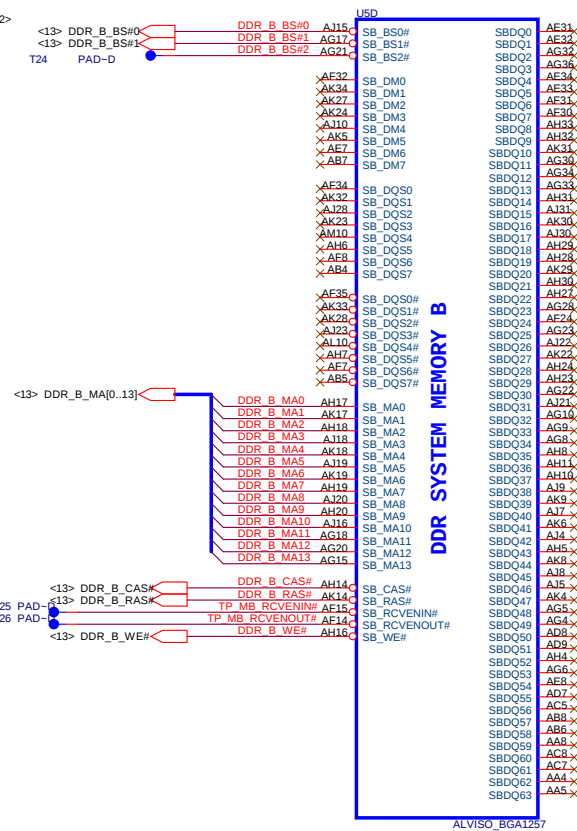
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Dothan Bypass			
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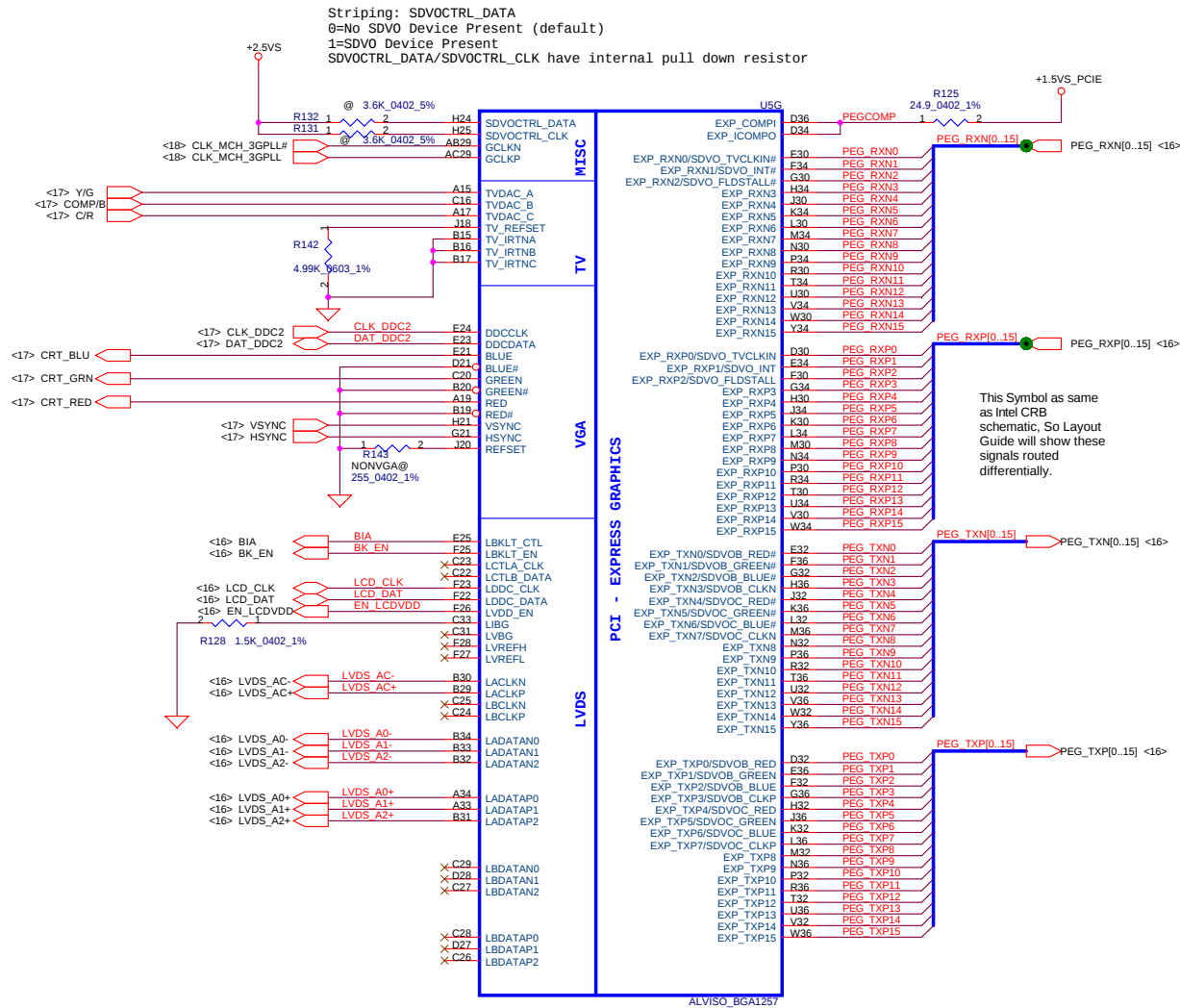


This Symbol as same as Intel CRB schematic, So Layout Guide will show these signals routed differentially.



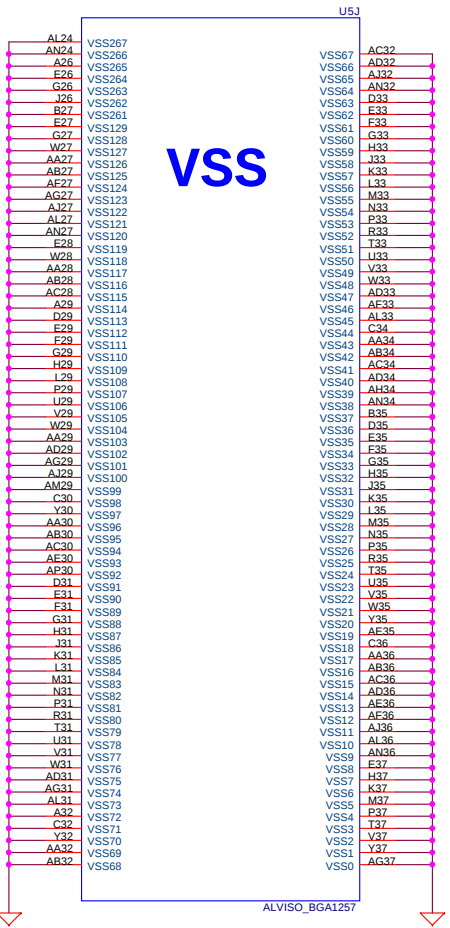
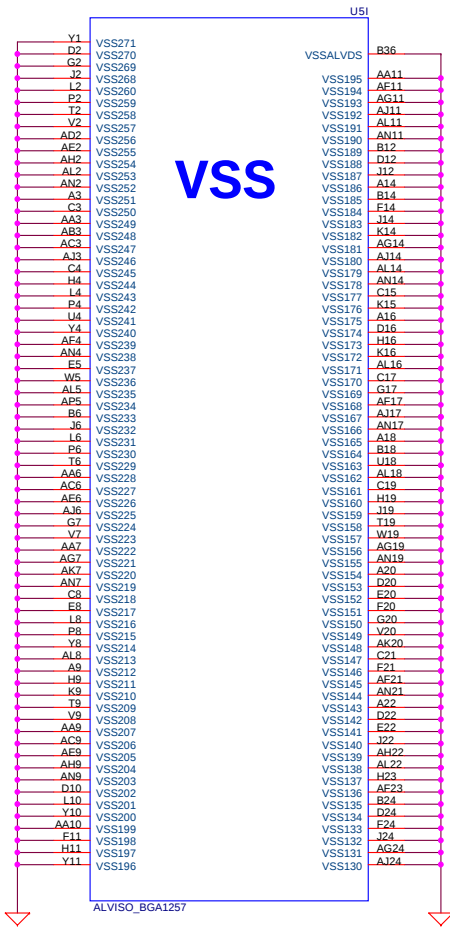
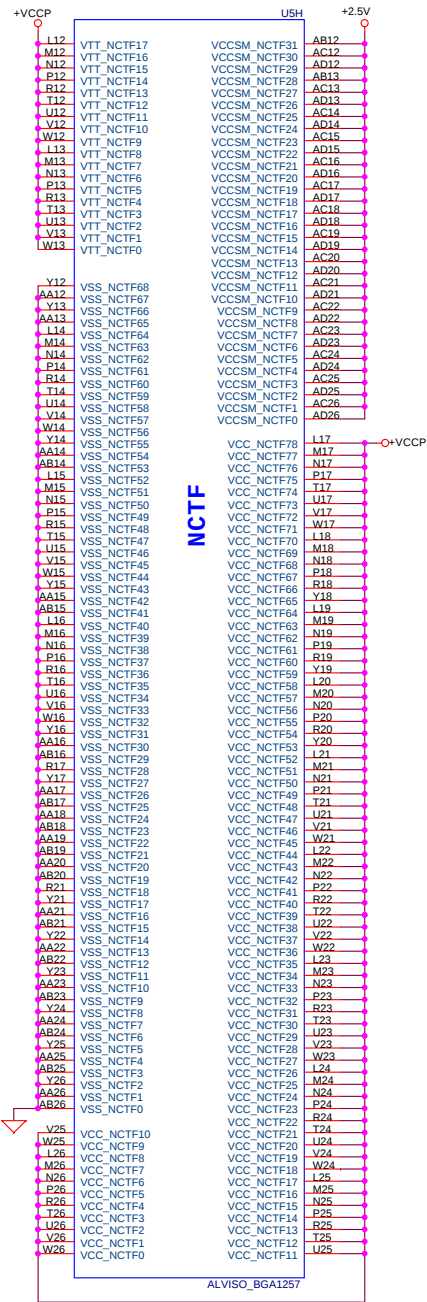
ALVISO_BGA1257

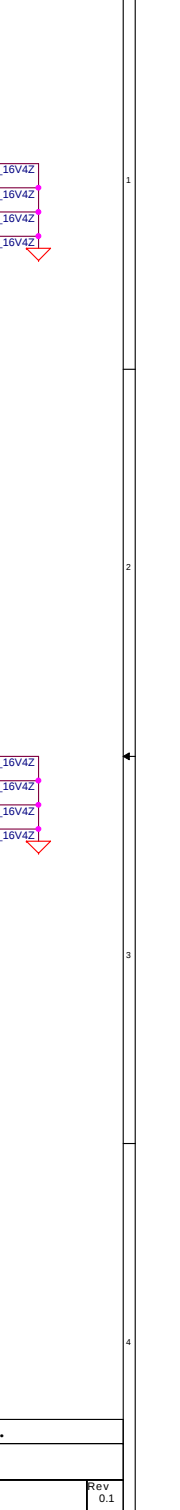
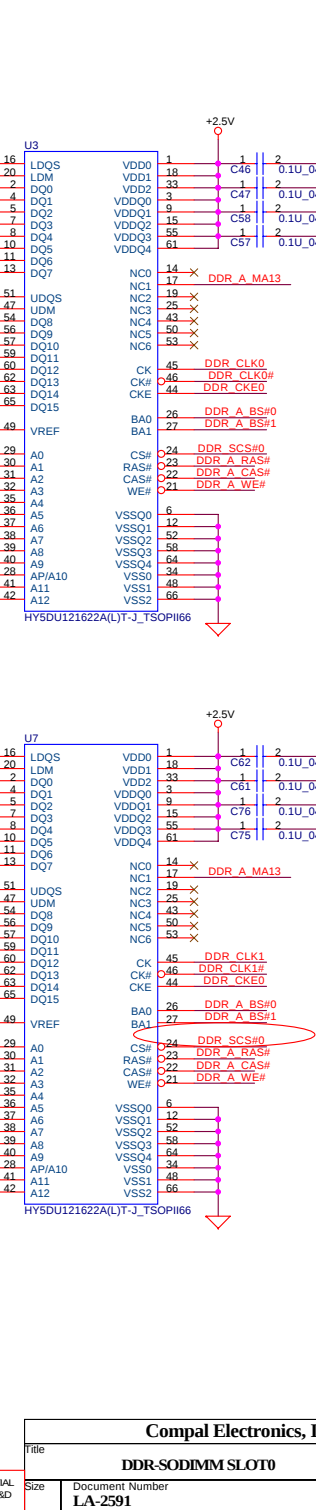
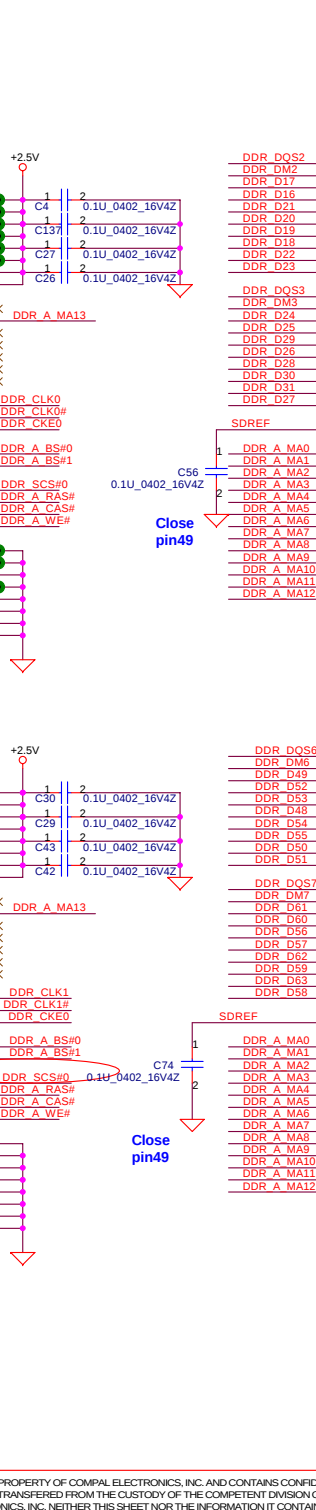
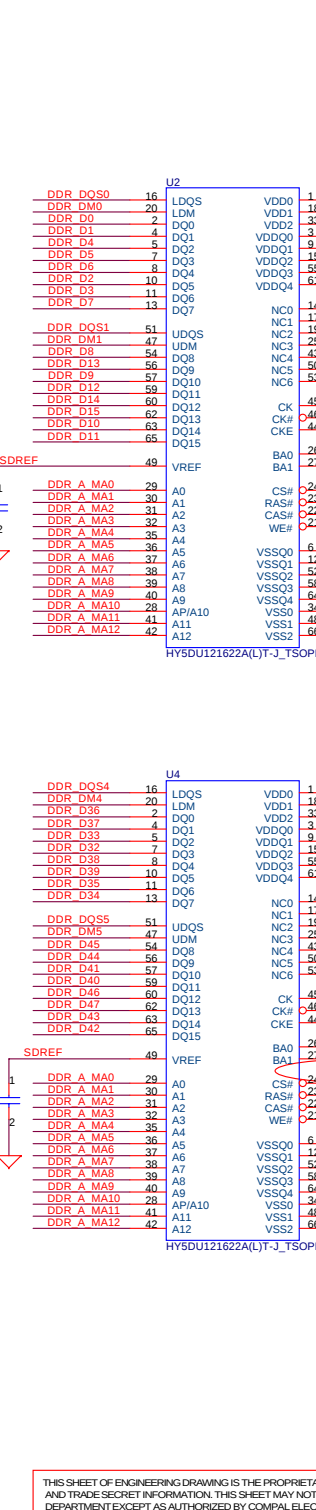
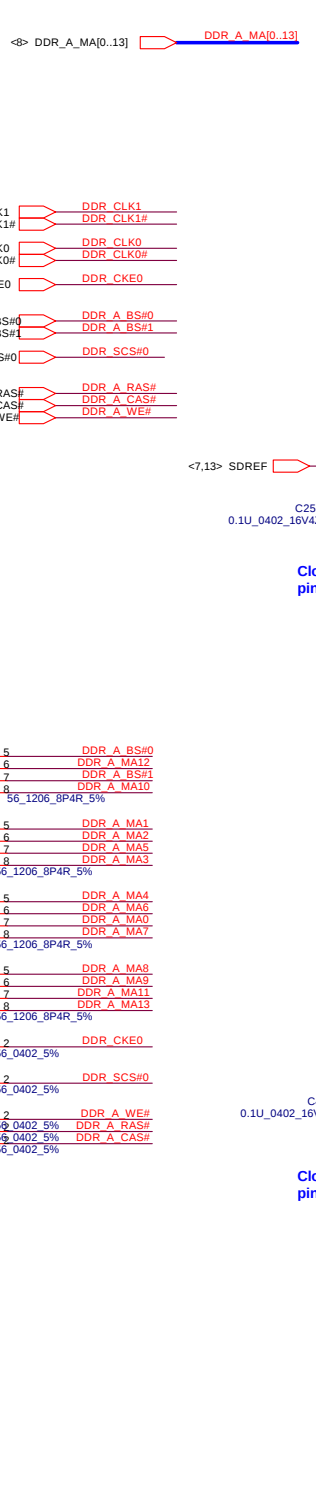
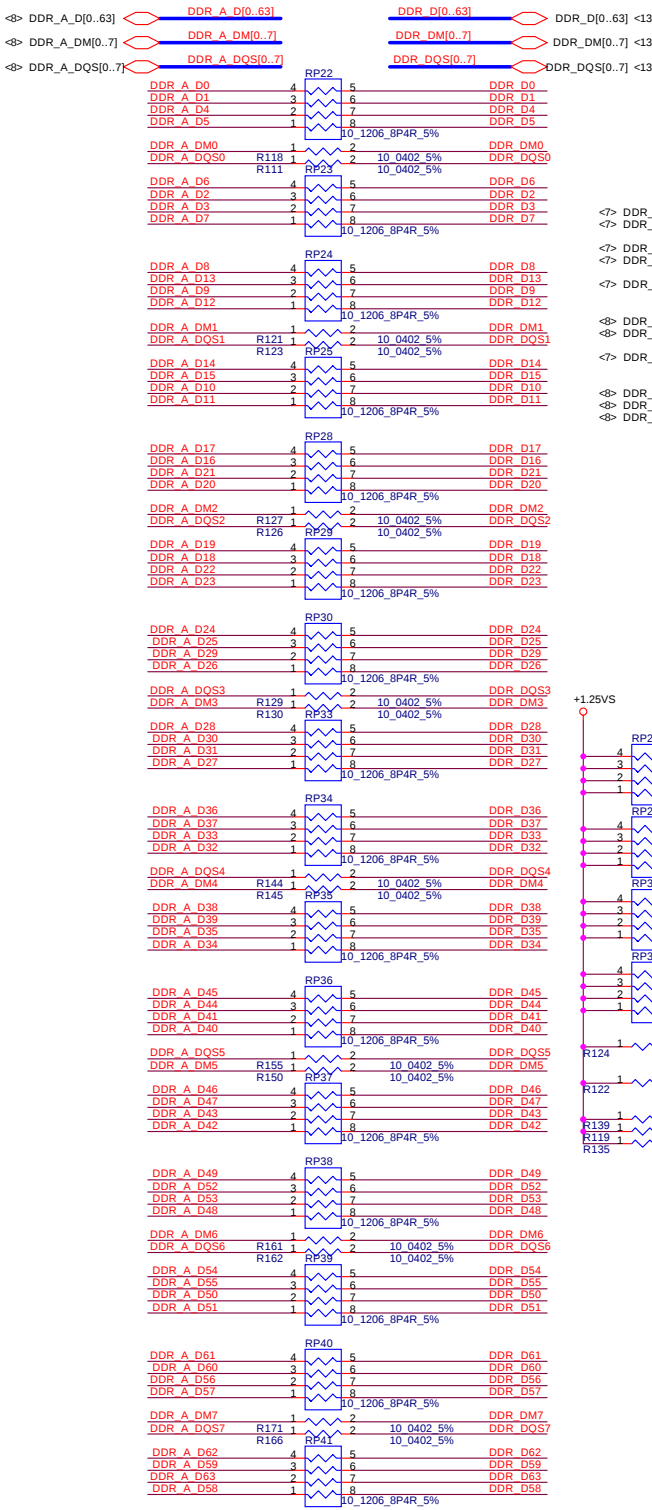
ALVISO_BGA1257



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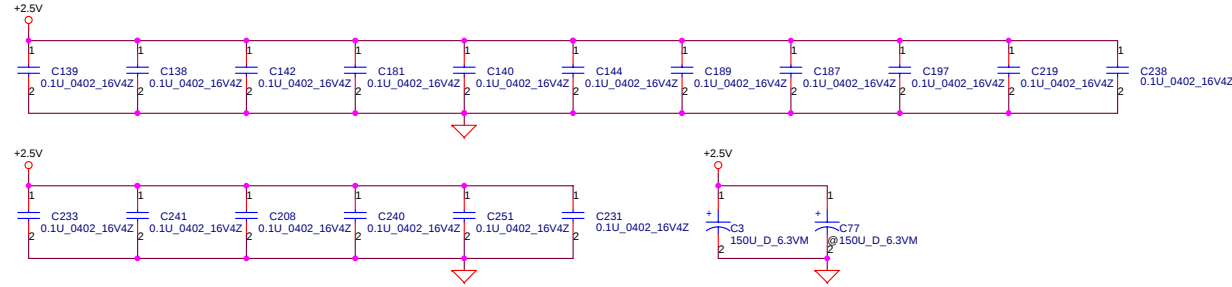




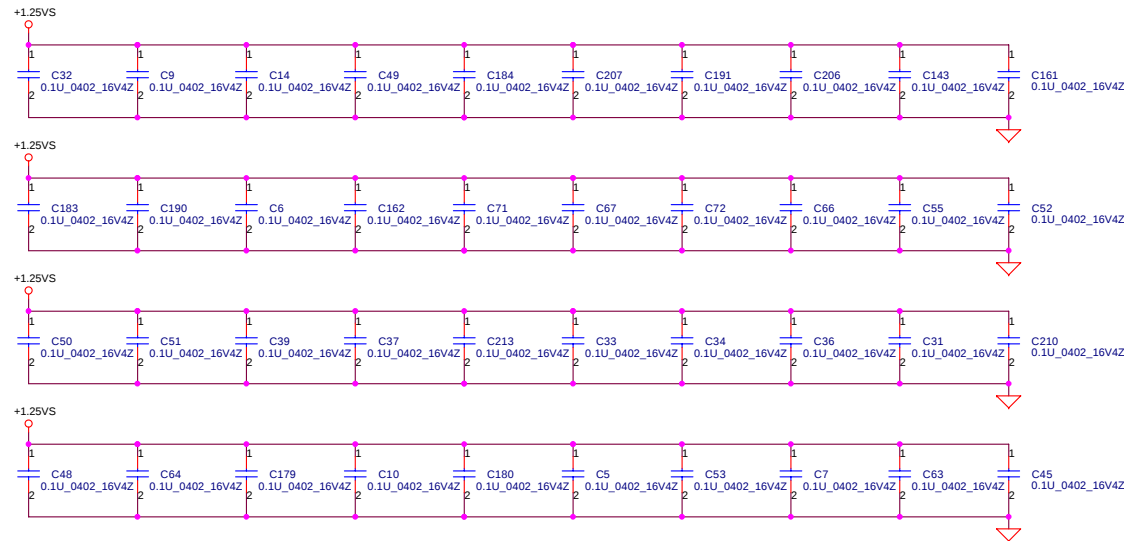
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Title			
DDR-SODIMM SLOT0			
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Layout note :
Distribute as close as possible
to DDR-SODIMM.

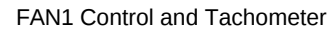
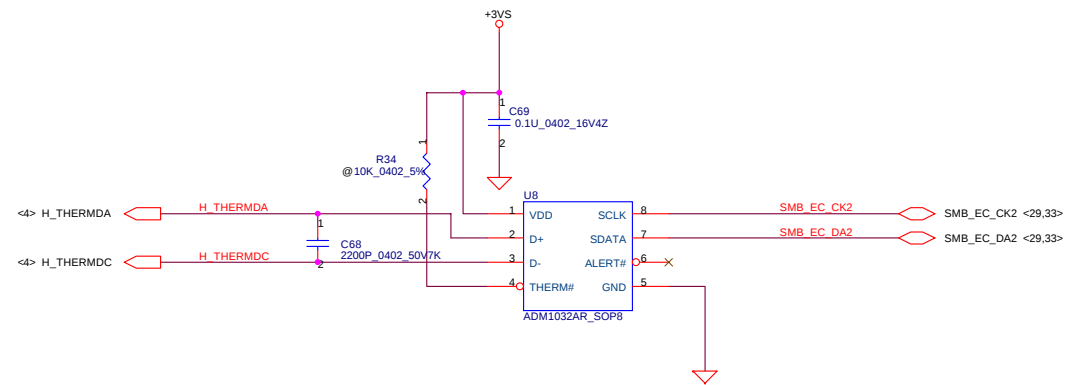


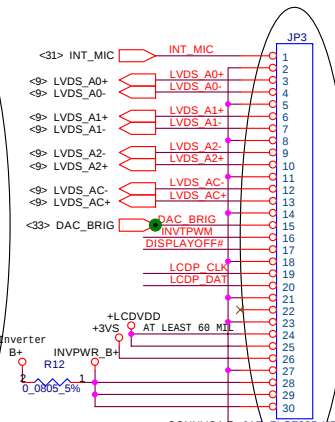
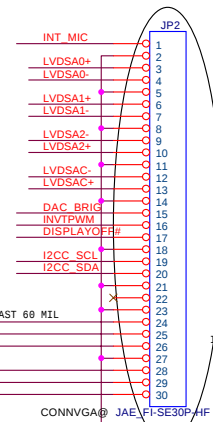
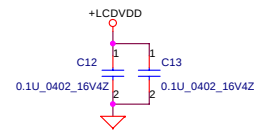
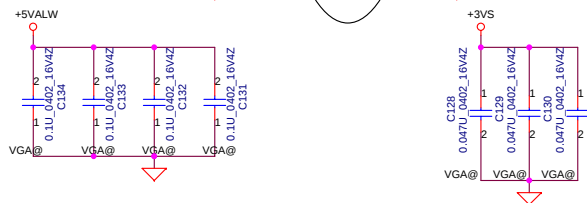
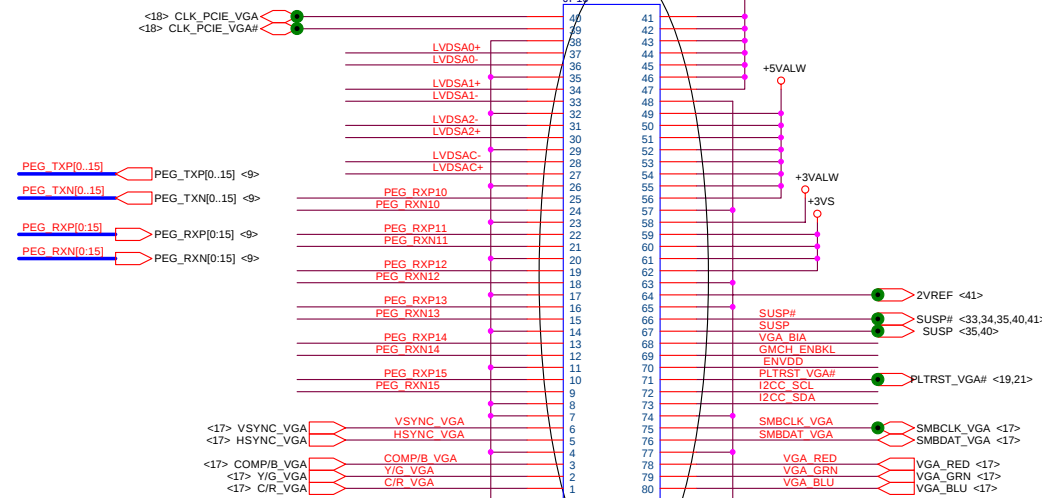
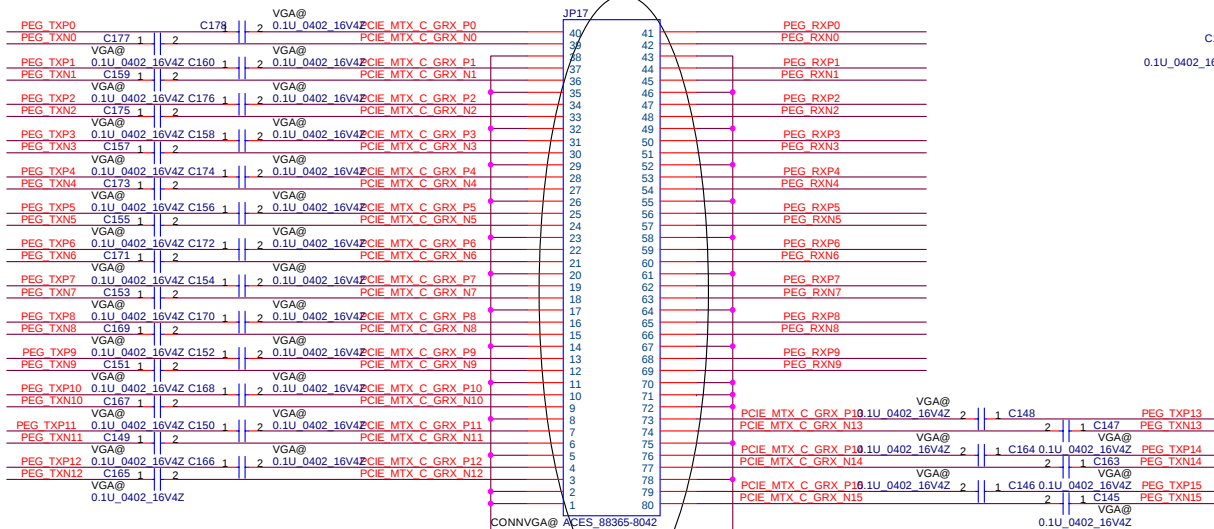
Layout note :
Place one cap close to every 2 pull up resistors termination to
+1.25V



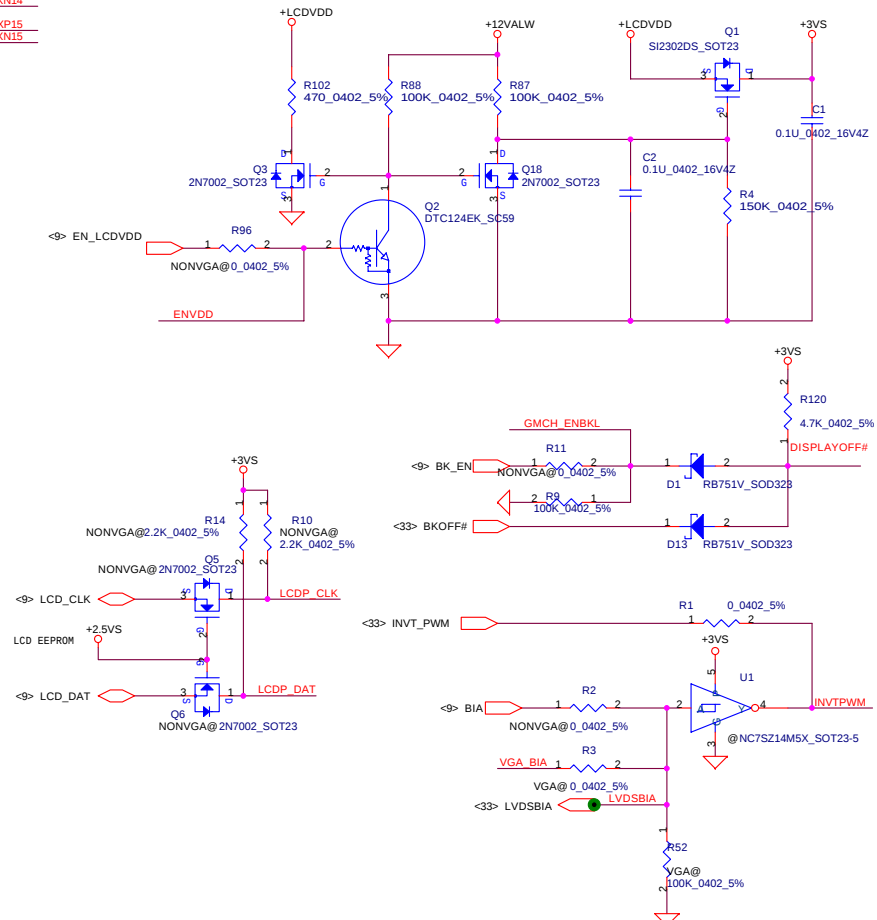
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DDR SODIMM Decoupling			
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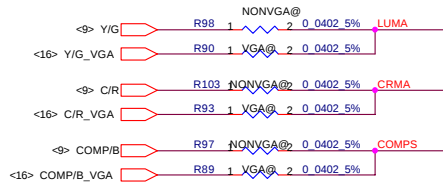
Aviso LCD/PANEL BD. CONN.



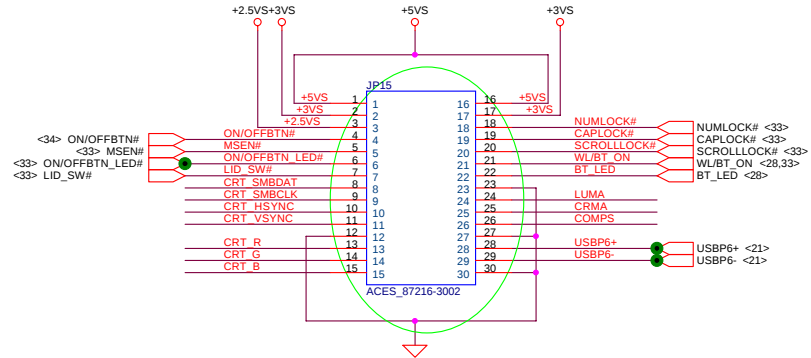
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VGA/B connector			
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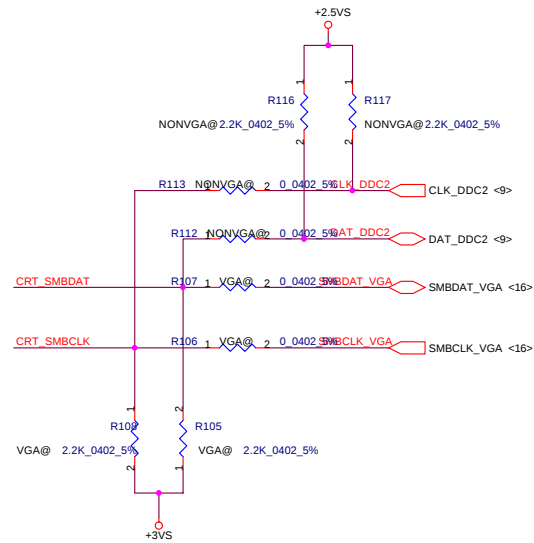
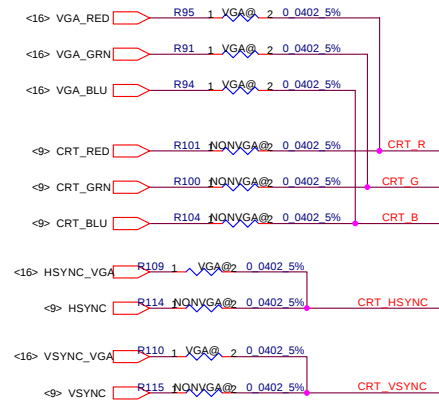
TV-Out Connector



VGA I/O PORT Connector

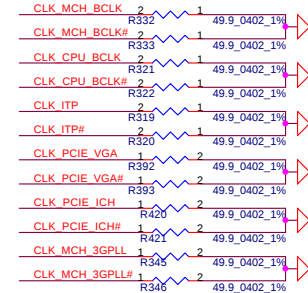


CRT CONNECTOR



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Title	TV_OUT and DVI connector		
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Place near ICS954226

0 0 1 for Dothan-A 533Mhz
1 0 1 for Dothan-A 400Mhz
0 0 1 for Dothan-B 533Mhz
0 1 1 for Dothan-B 400Mhz

[illegible]

Table : ICS 954226

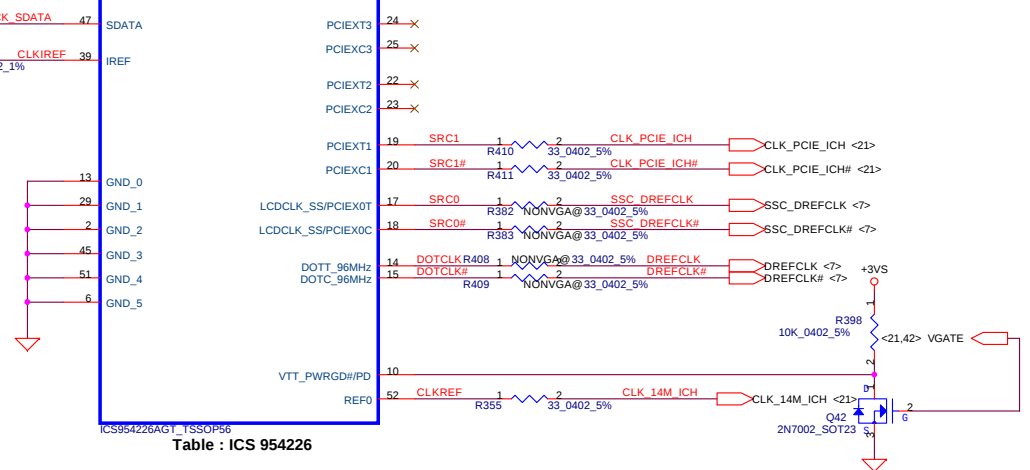
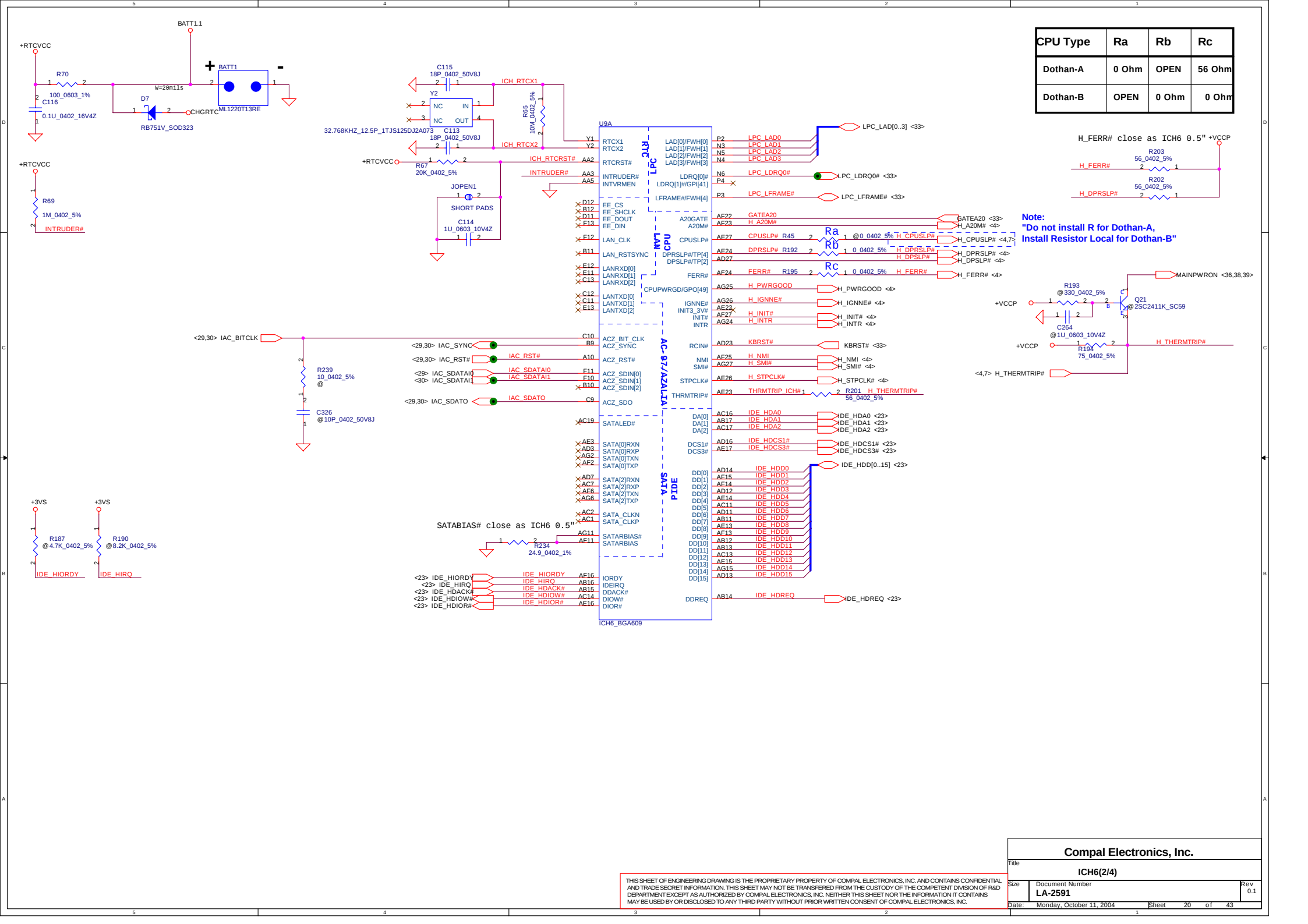
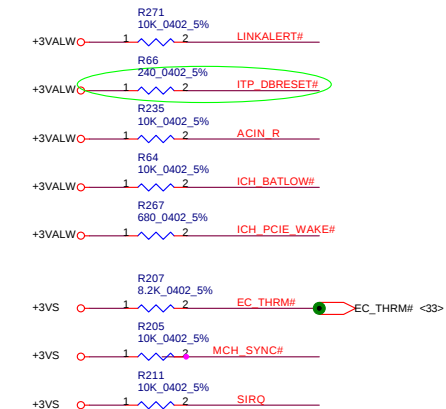
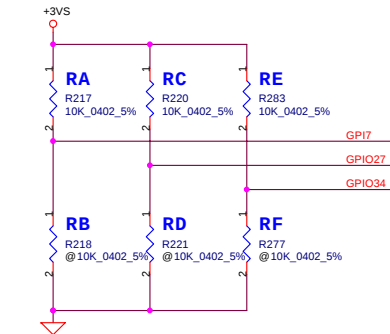
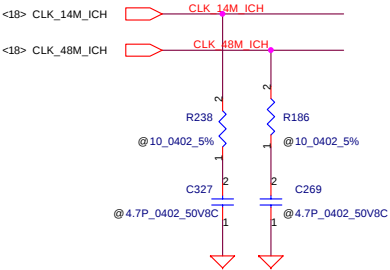
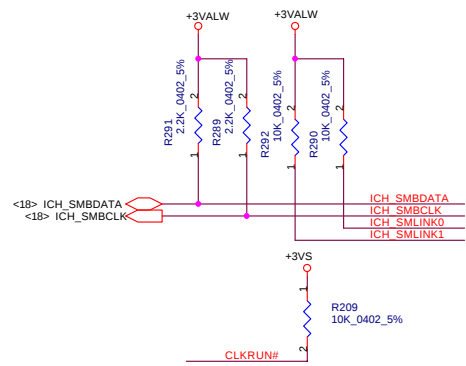


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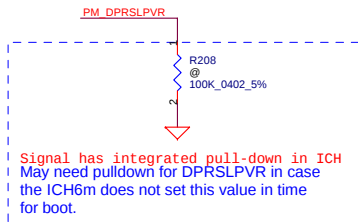




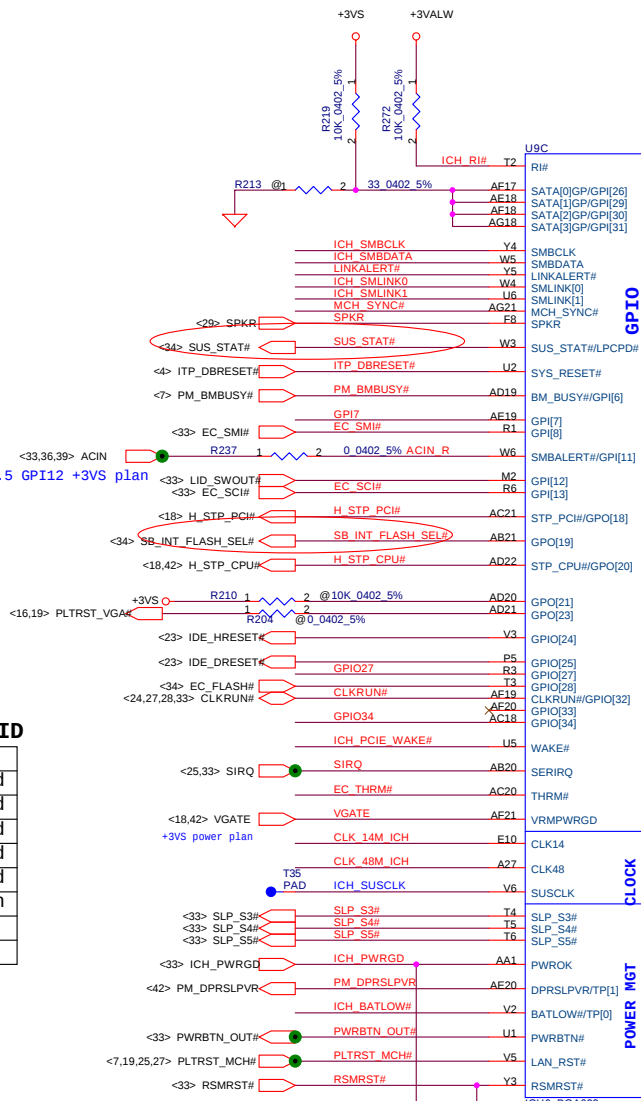
8.2 k pull-up to Vcc3_3 (CRB uses 10 k)

DDR RAM 32Mb*16*4 Vendor ID

GPIO7/GPIO27/GPIO34	Vendor
0 0 0	Reserved
0 0 1	Reserved
0 1 0	Reserved
0 1 1	Reserved
1 0 0	Reserved
1 0 1	Infineon
1 1 0	Samsung
1 1 1	Hynix



ICH6 VER1.5 GPIO12 +3VS plan



GPIO

PCI-EXPRESS

DIRECT MEDIA INTERFACE

USB

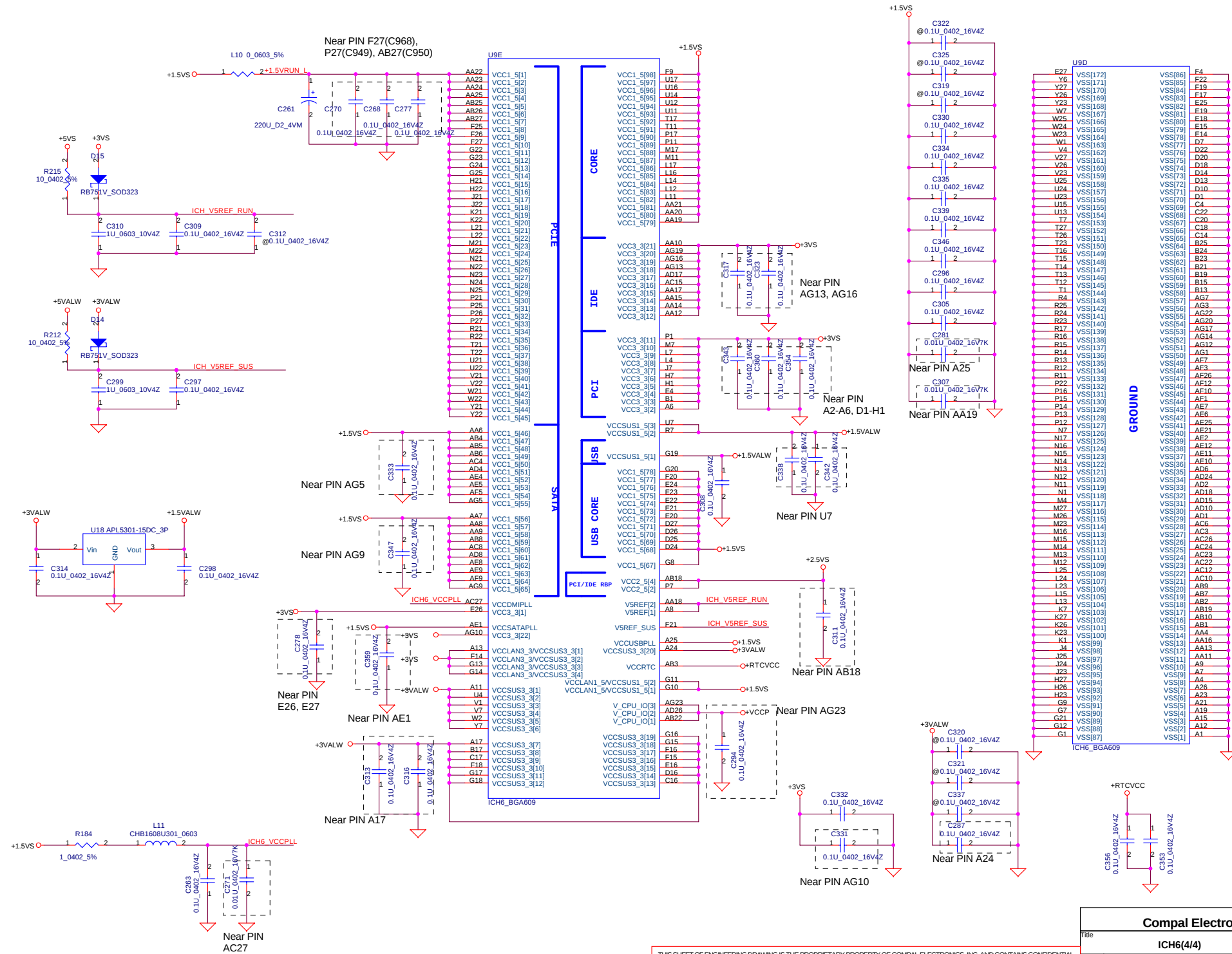
CLOCK

POWER MGT

USBPn/USBPp impedance 45 Ohm

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Title ICH6(3/4)		
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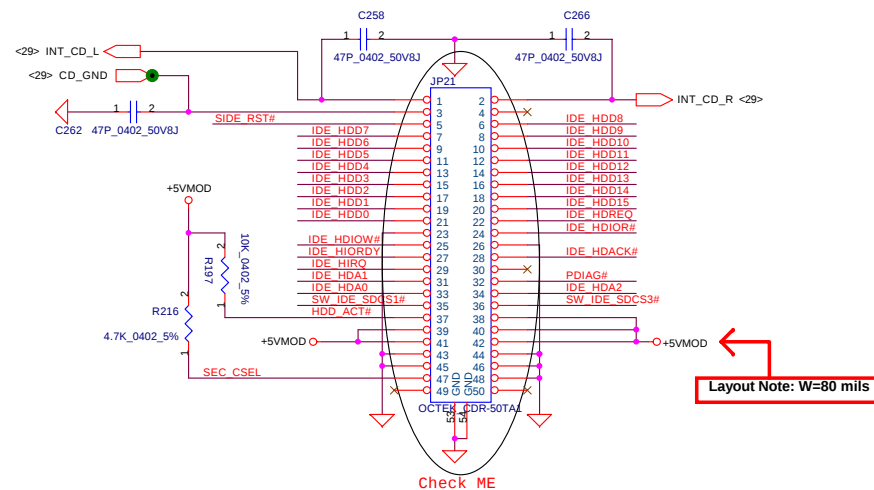
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ICH6(4/4)			
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CD-ROM Connector

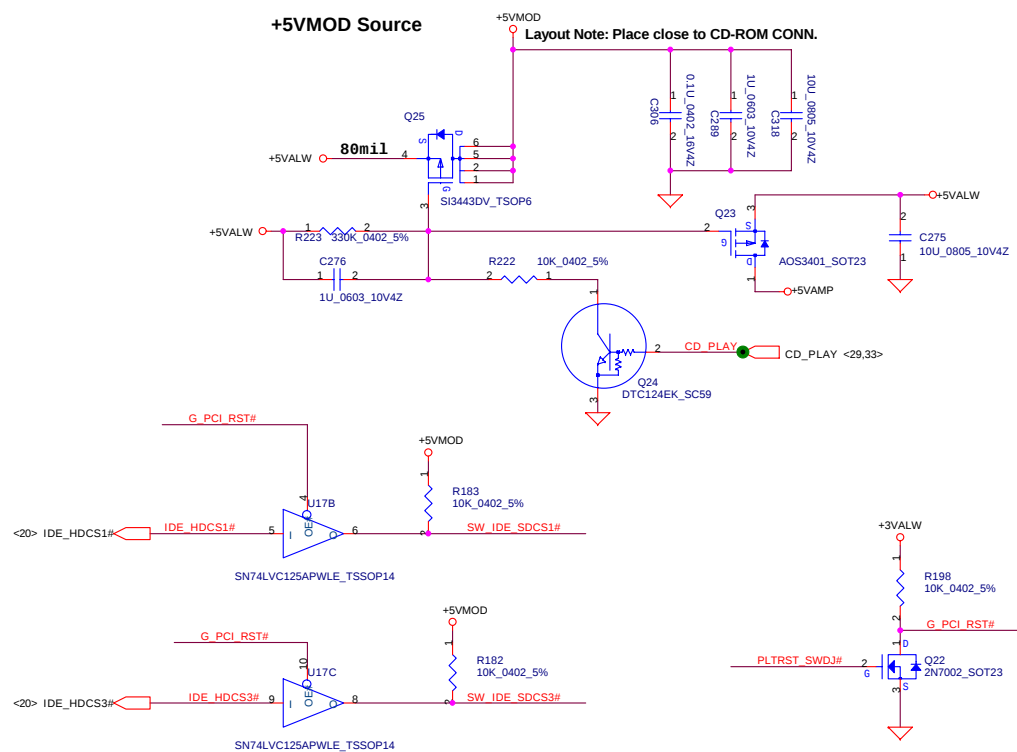


Check ME

Check ME

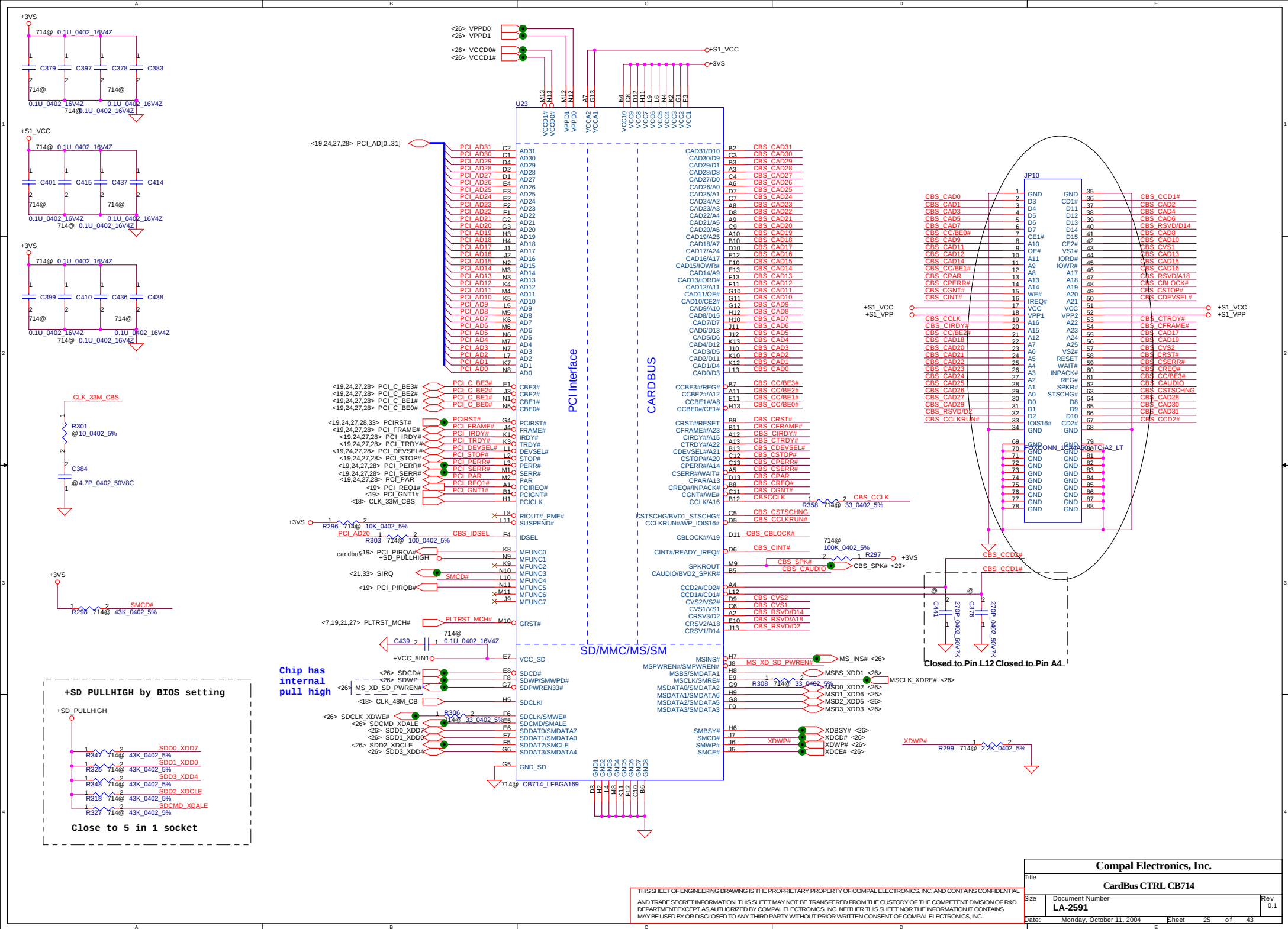
+5VMOD Source

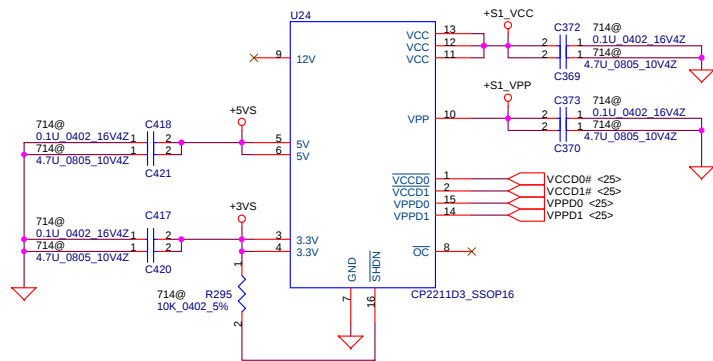
Layout Note: Place close to CD-ROM CONN.

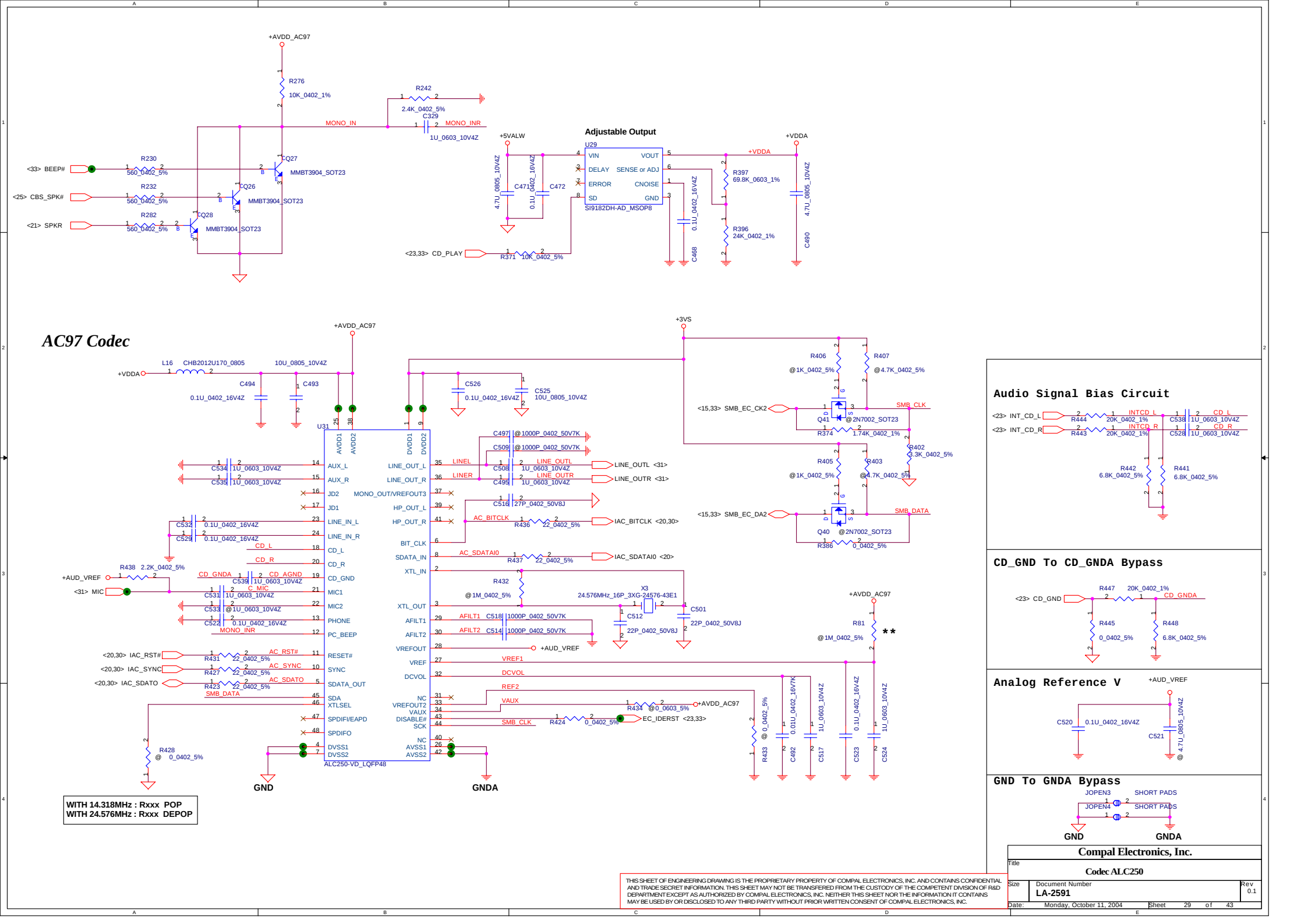


HDD & CD-ROM CONN.

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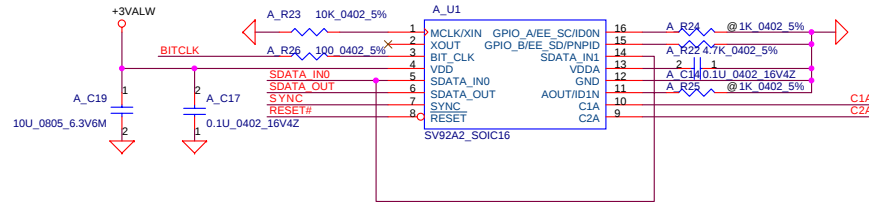
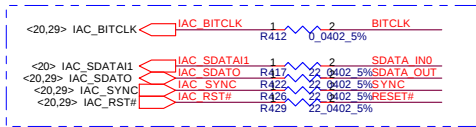




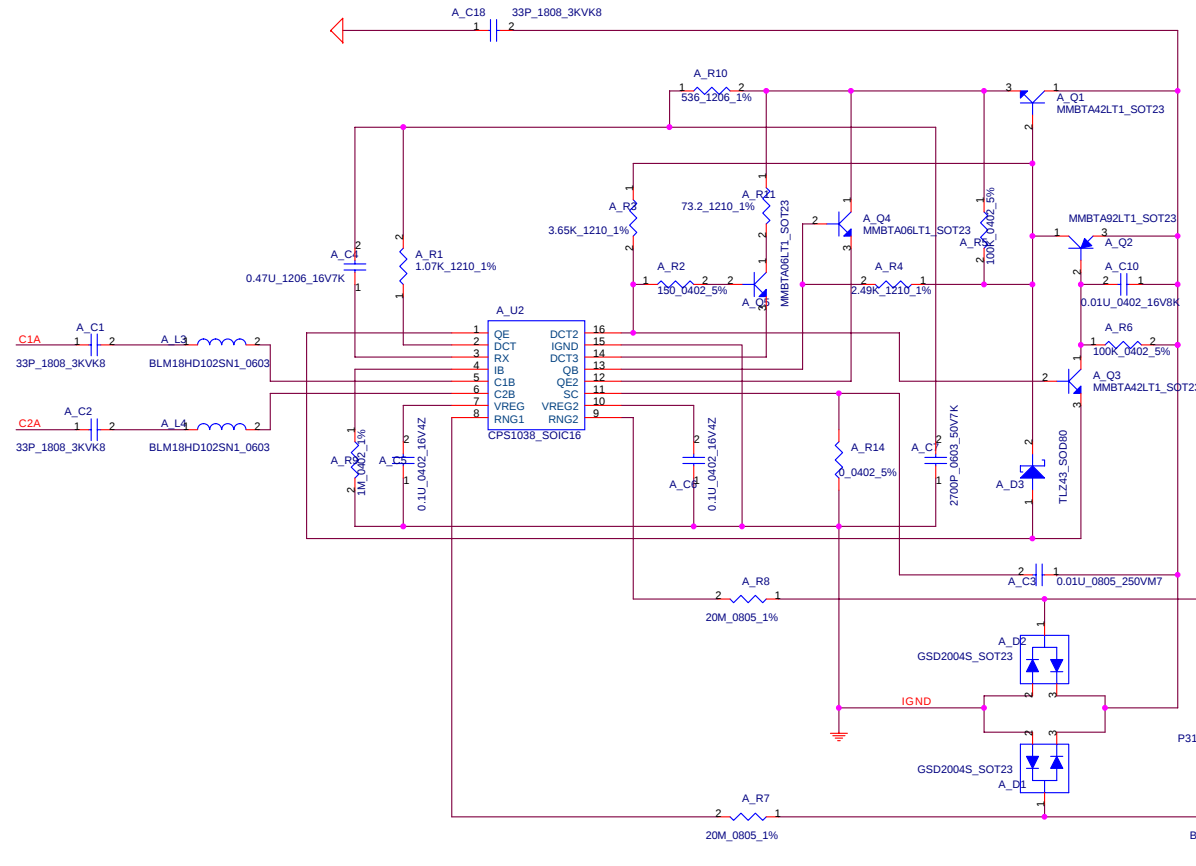


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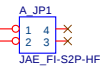
Compal Electronics, Inc.		
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Title	Document Number	Rev
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No Ground Plane In DAA Section

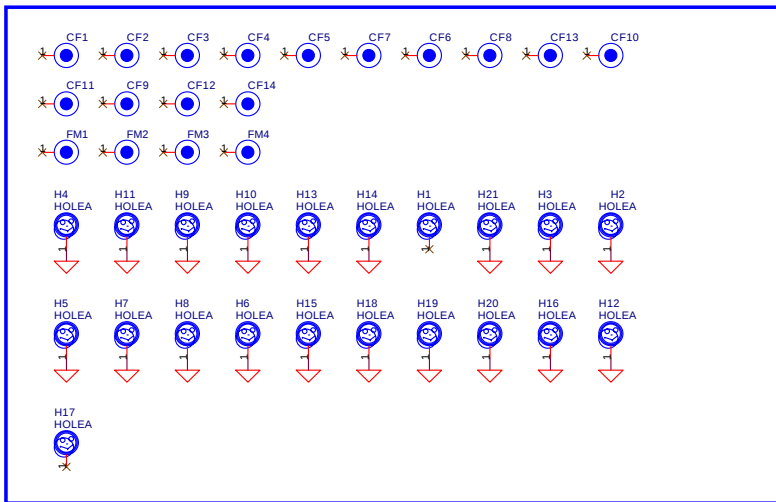
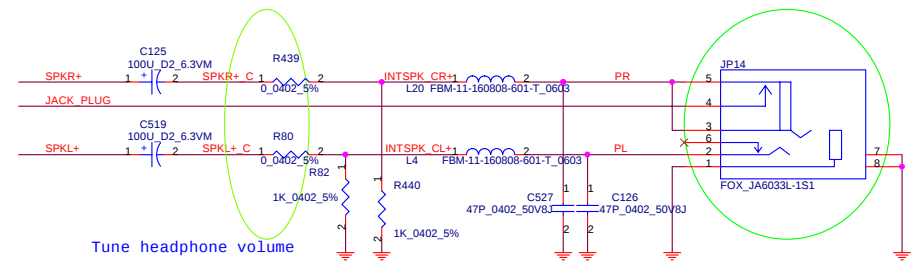
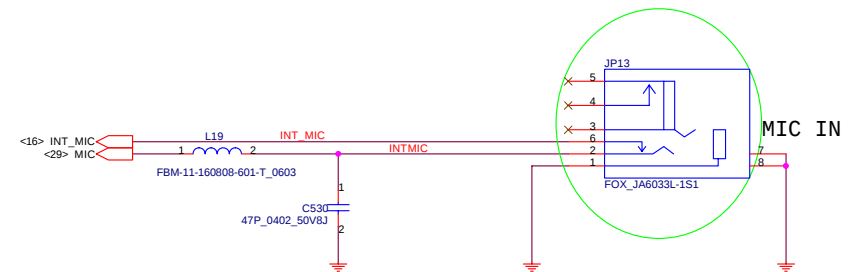
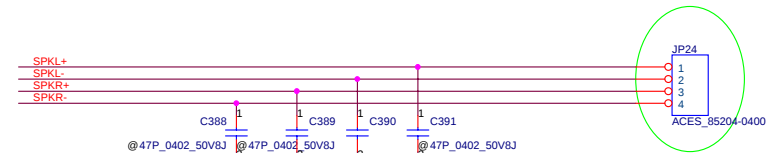
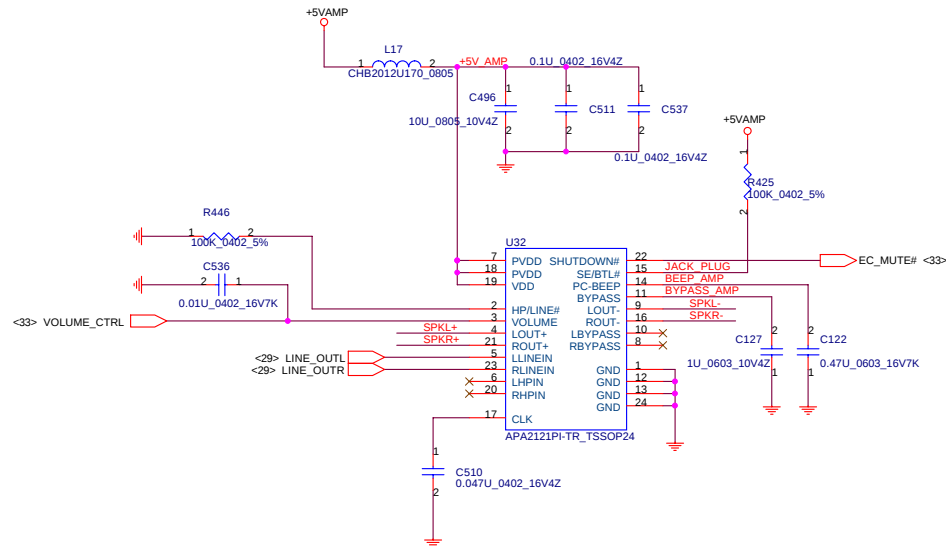


NOTE: Ample copper pad should be dedicated to Q1, Q3, Q4, Q5, R1, R4, and R11. Please refer to the design advisory and layout guidelines for further details.



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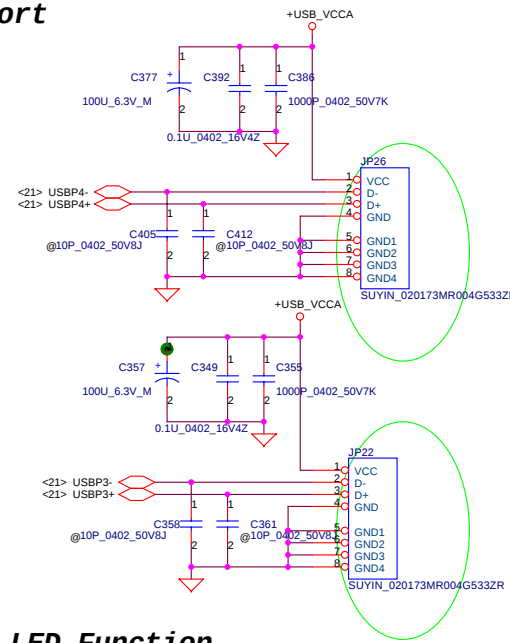
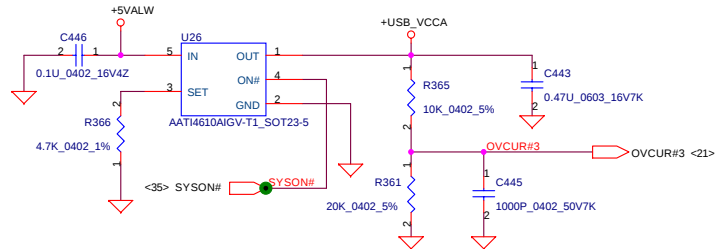
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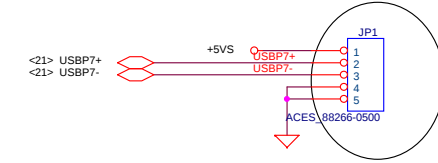
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Compal Electronics, Inc.			
Title			
AMP & Audio Jack			
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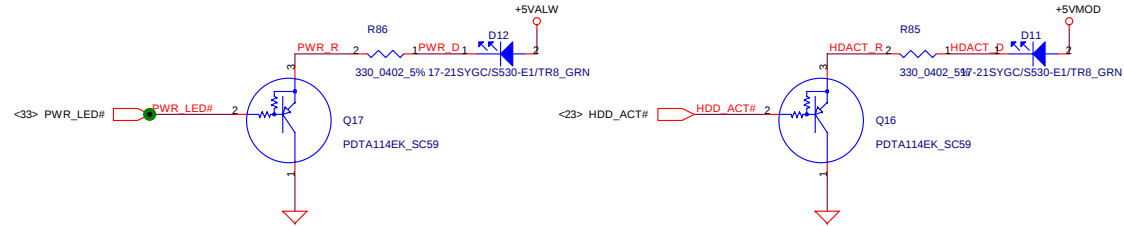
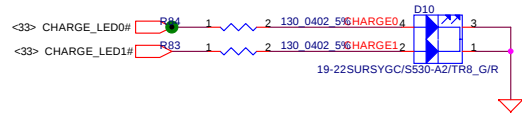
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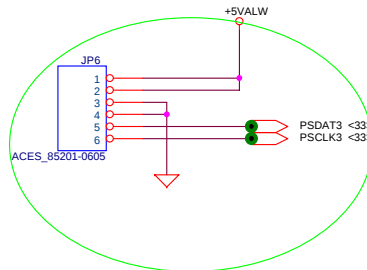
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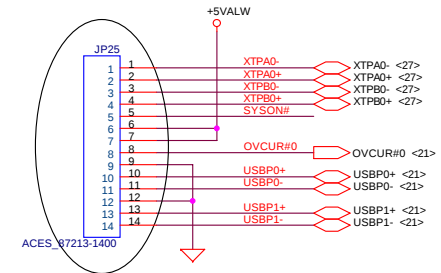
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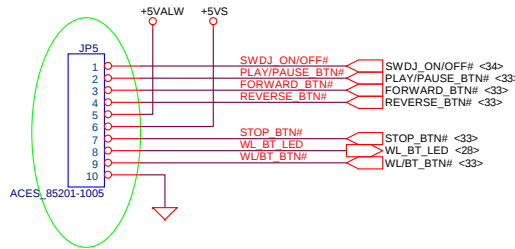
T/P Board



1394/USB Board



SWDJ Board

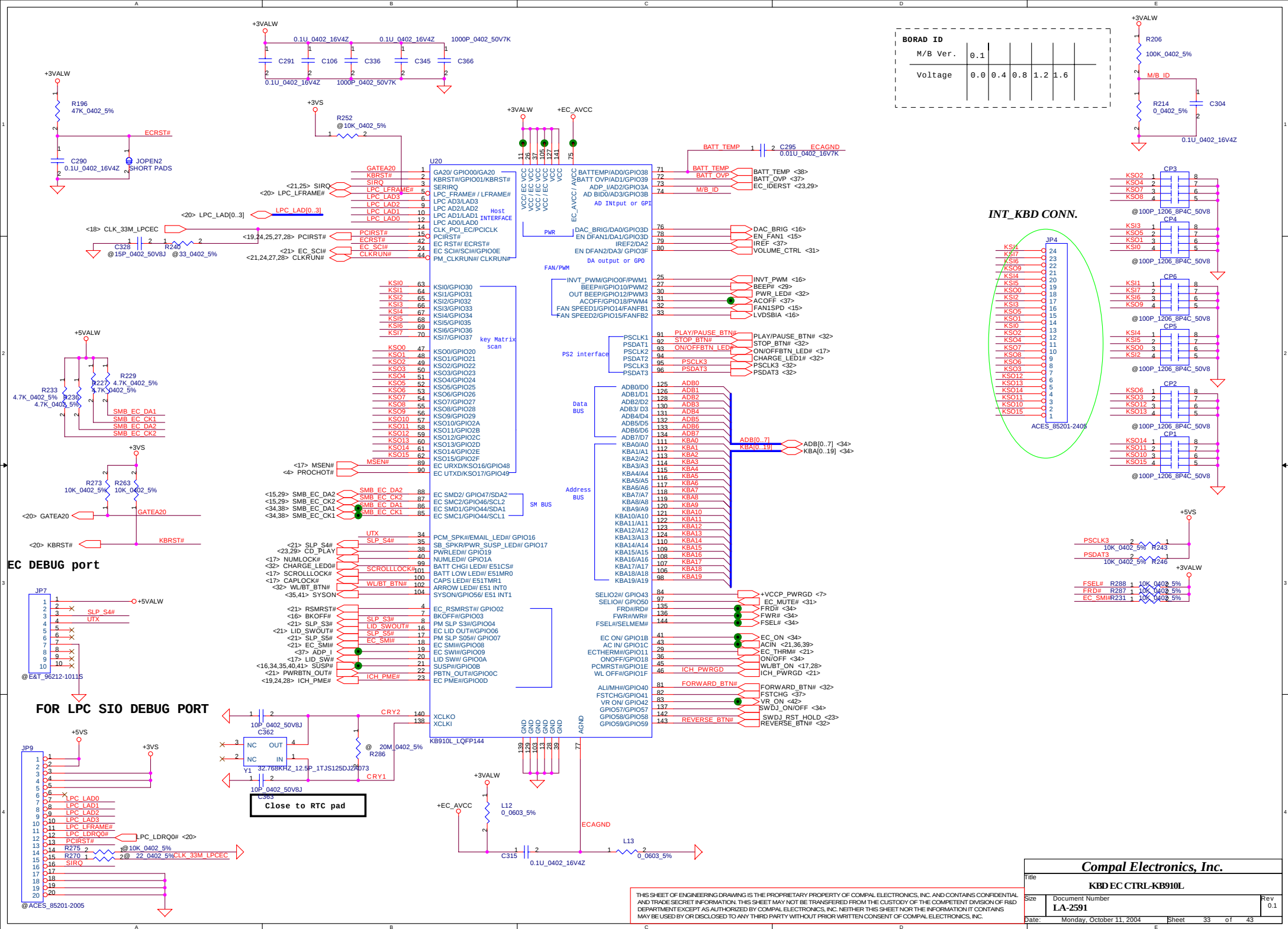


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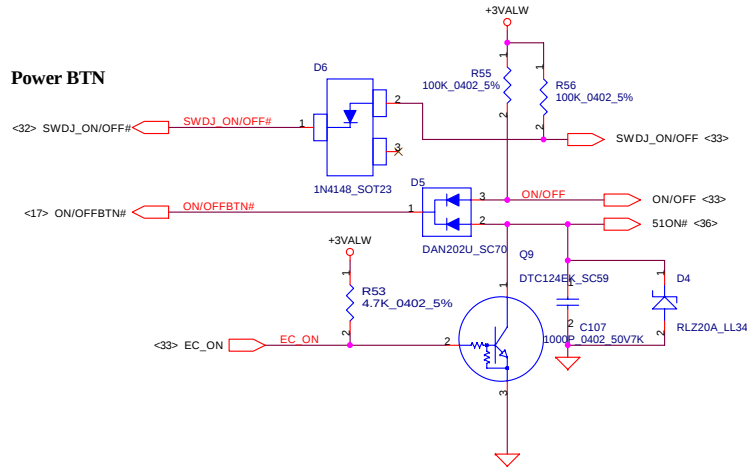
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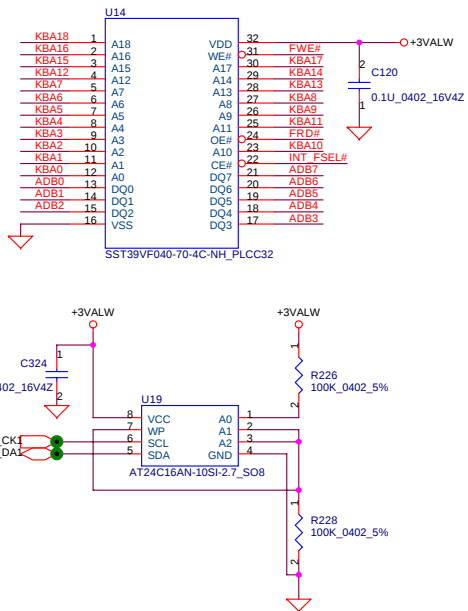
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Power BTN

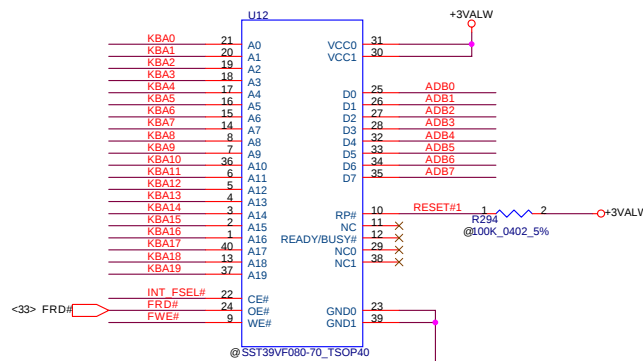


512K FLASH ROM

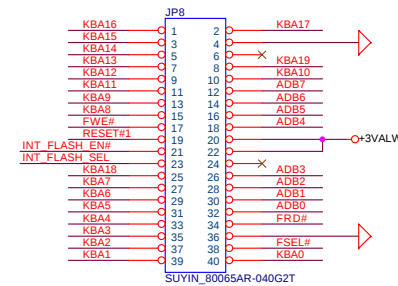


1MB FLASH ROM

Alternative SA290080100



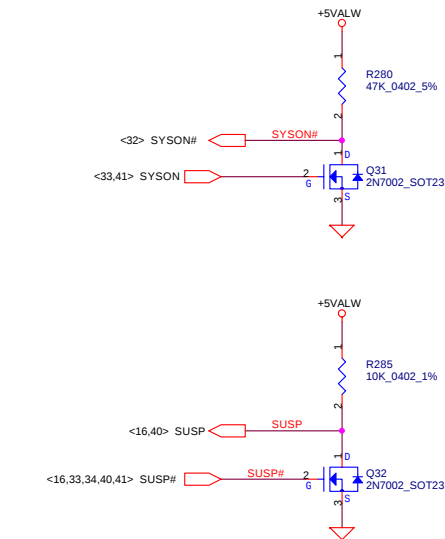
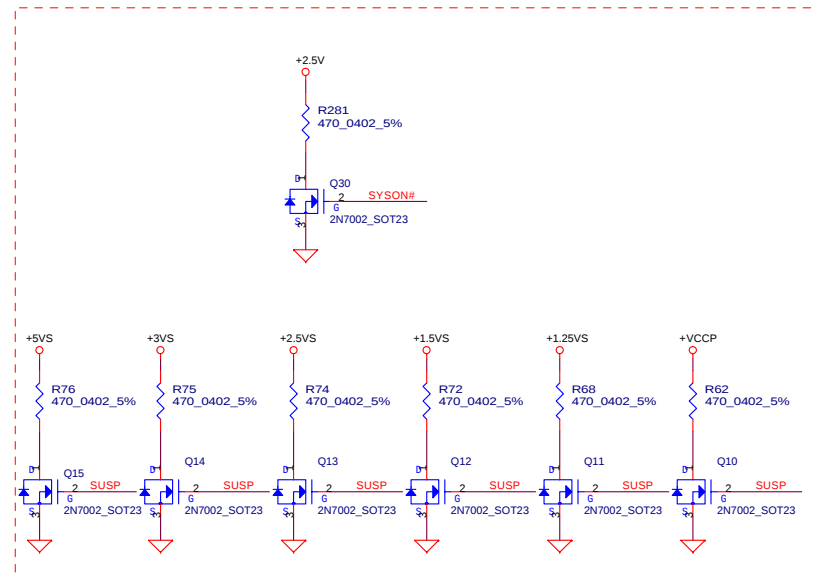
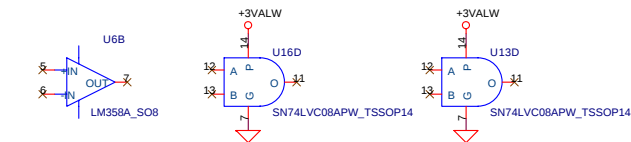
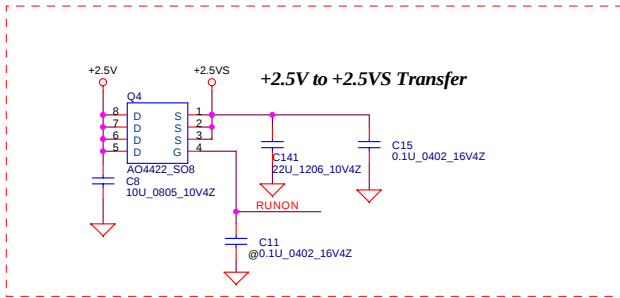
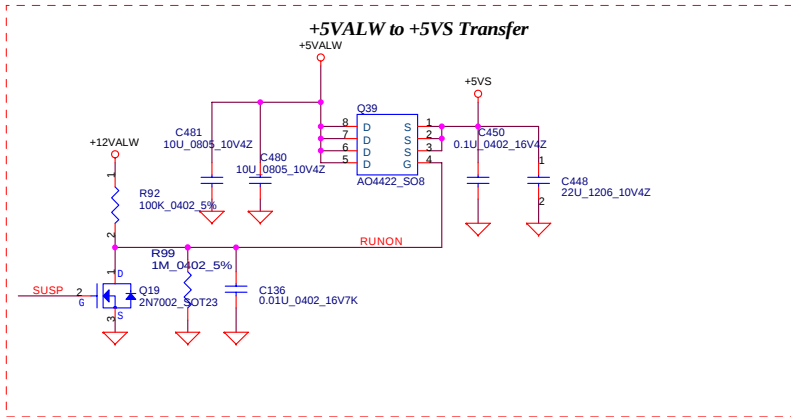
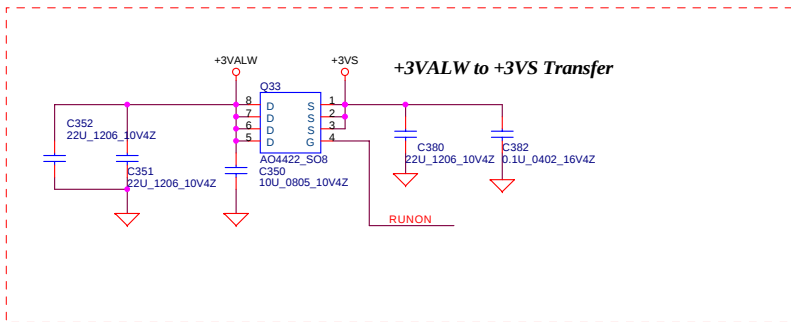
1MB ROM SOCKET



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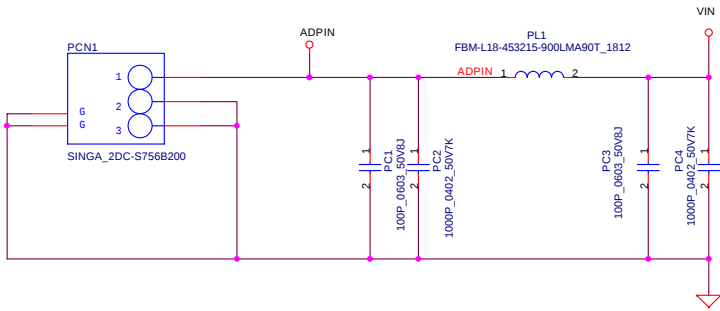
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BIOS & EXT. I/O PORT & PW BT		
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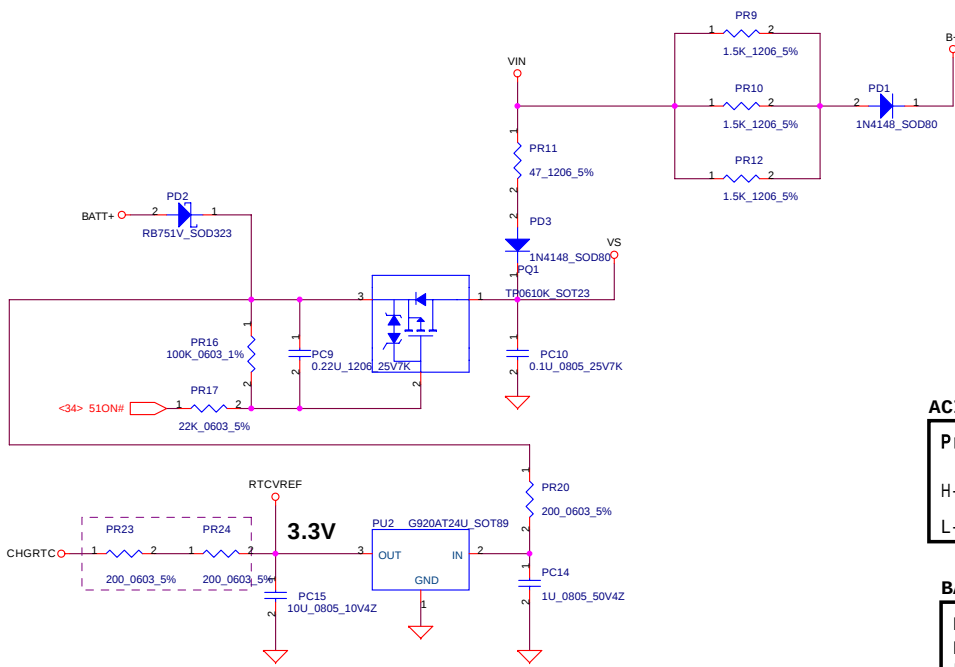
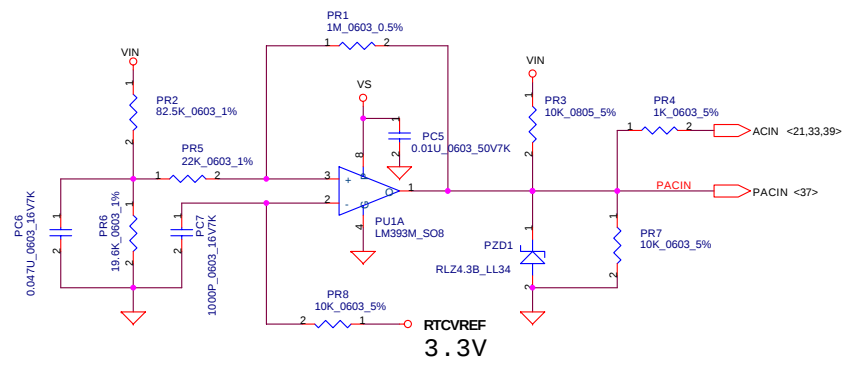


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Title			
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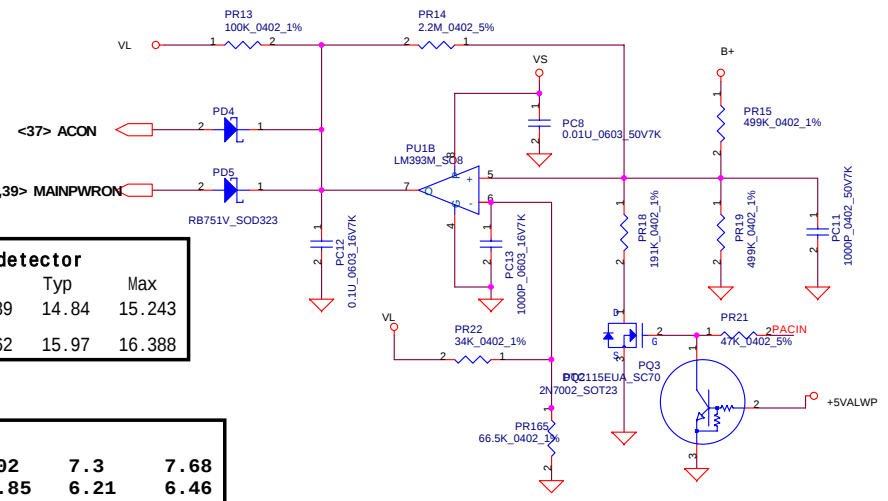


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17.597	17.210	16.813



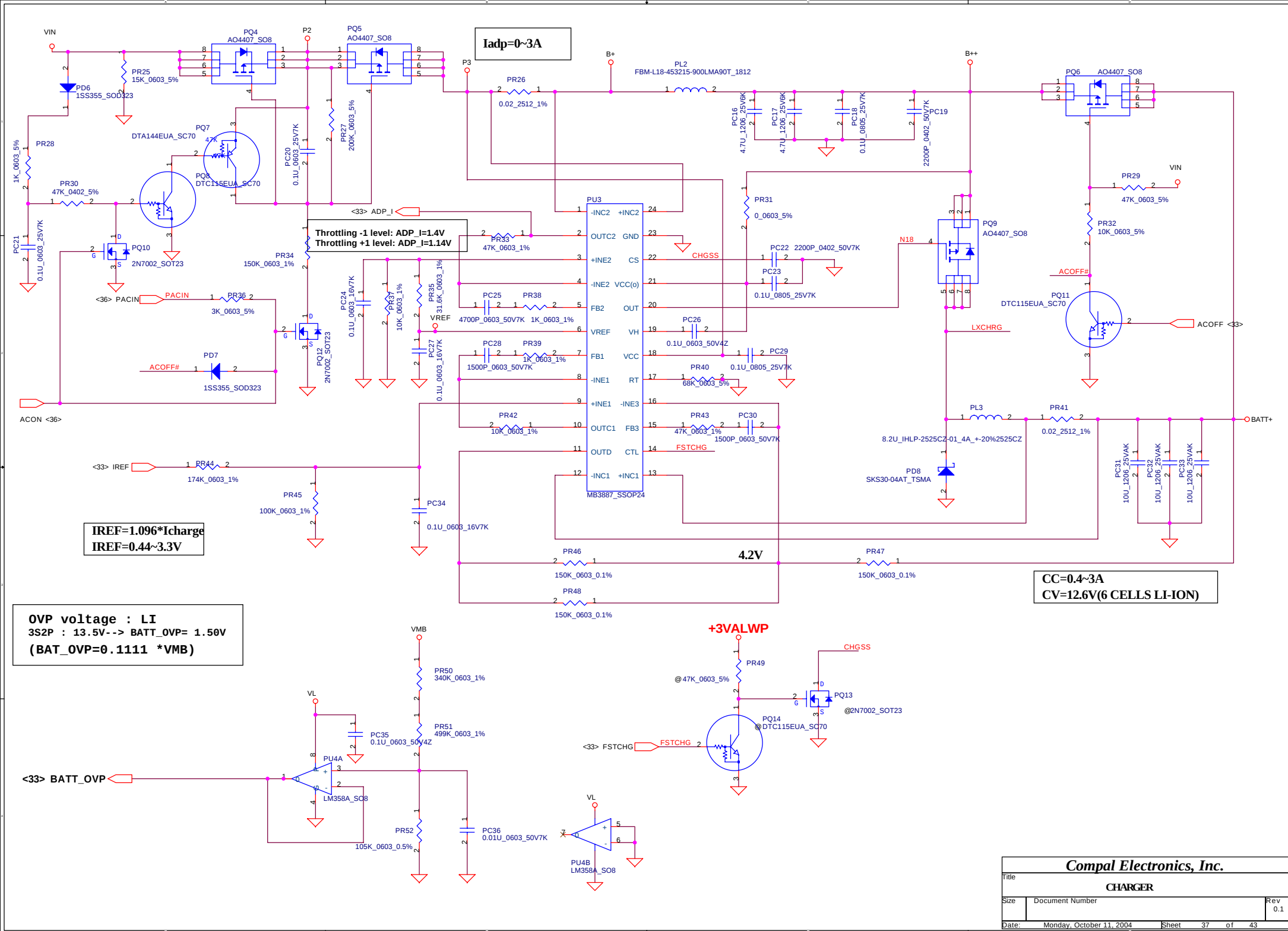
ACIN		
Precharge detector		
	Min	Typ
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L->H	15.562	15.97

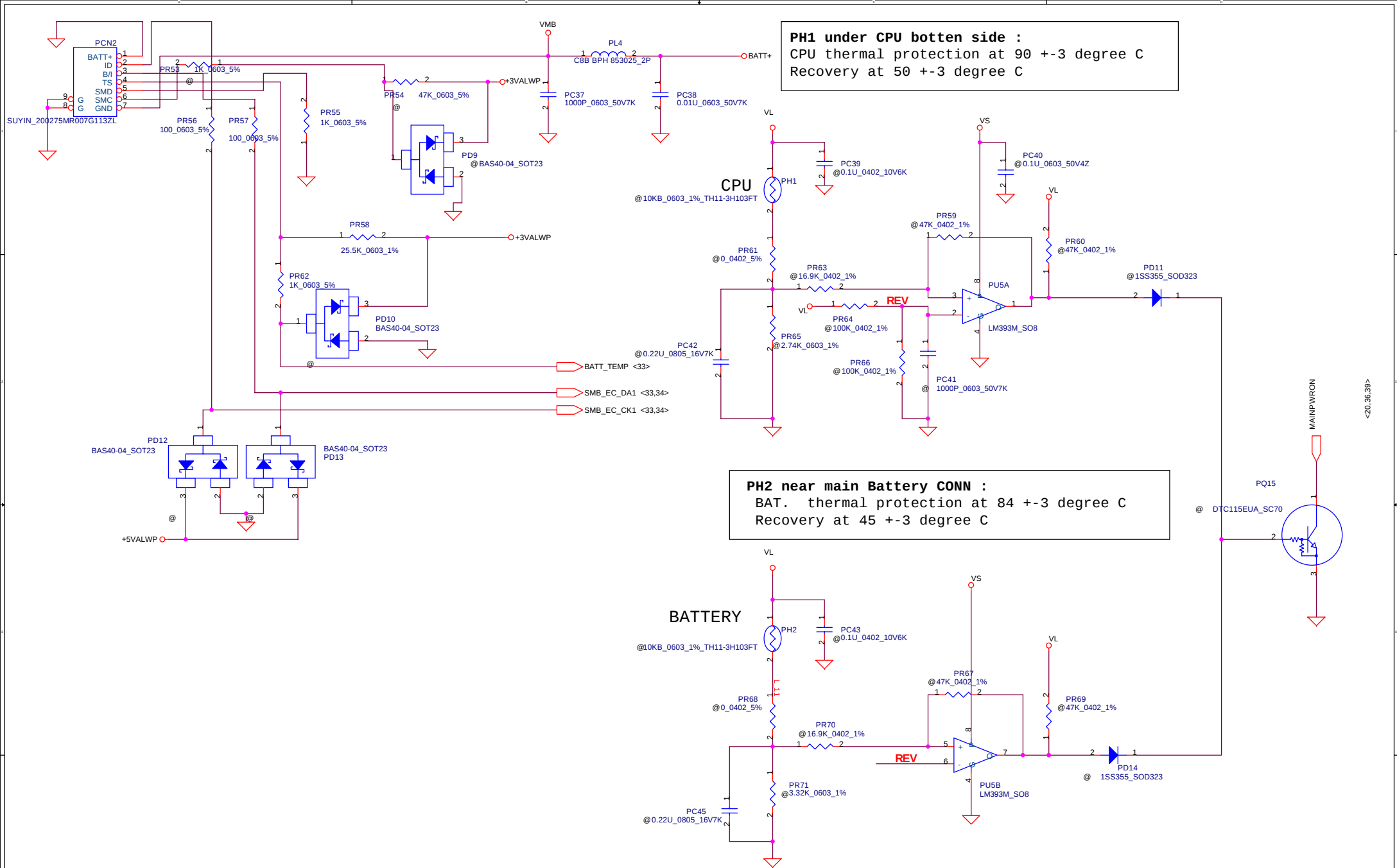
BATT		
Detector		
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L->H	5.85	6.21



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Detector		
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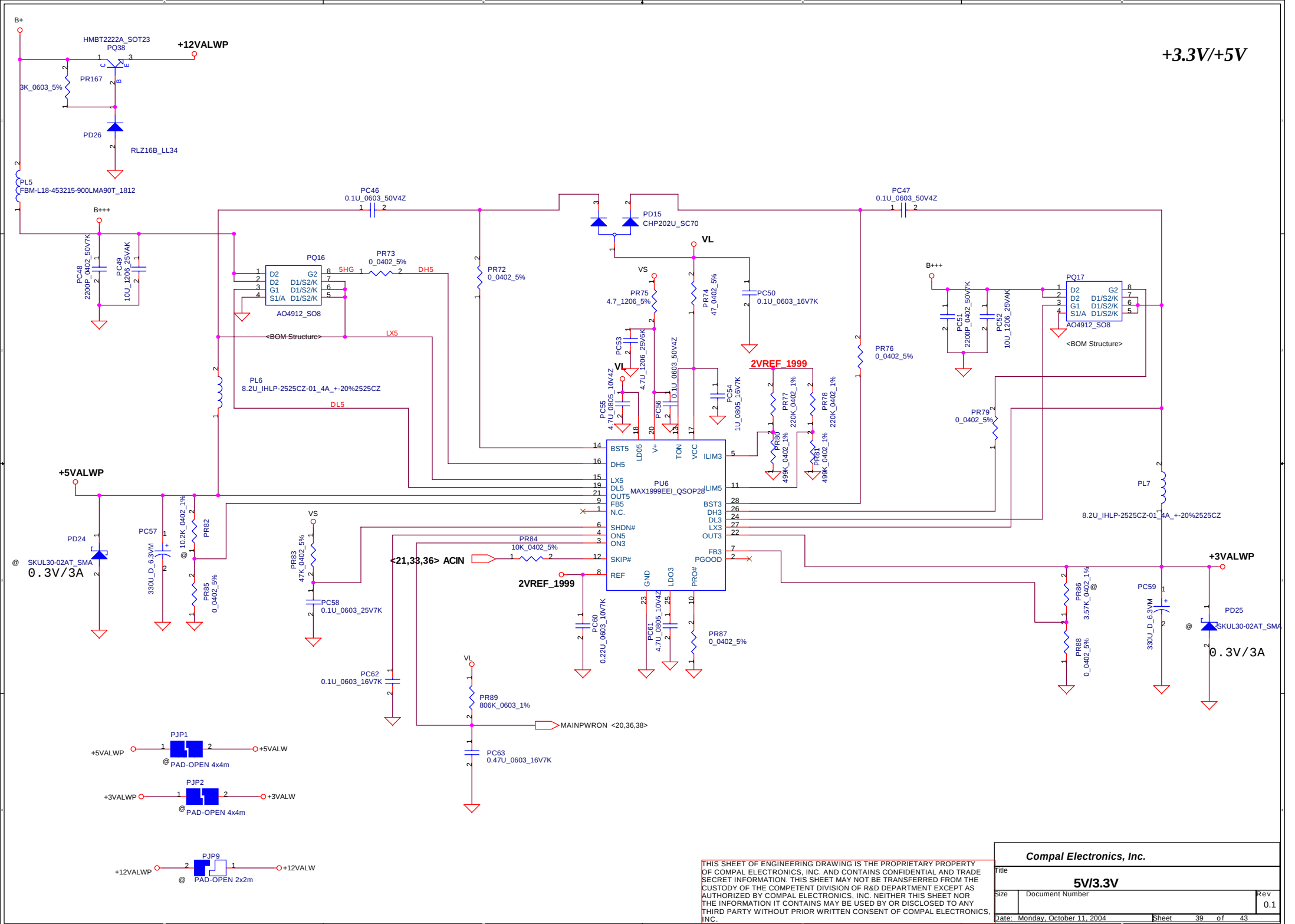




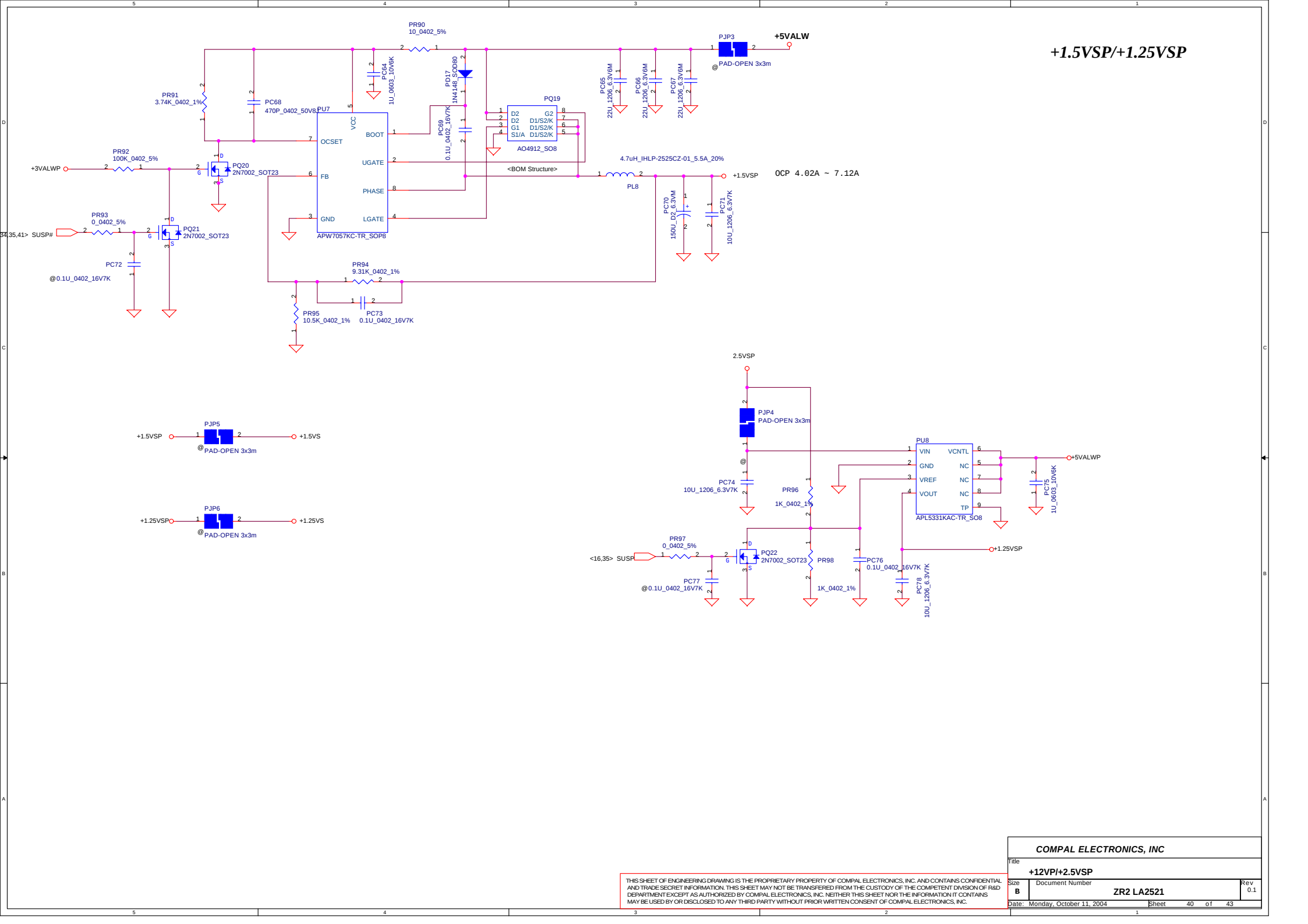
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Title		
BATTERY CONN		
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+3.3V/+5V



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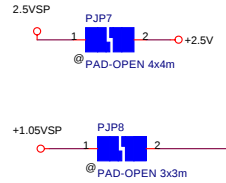
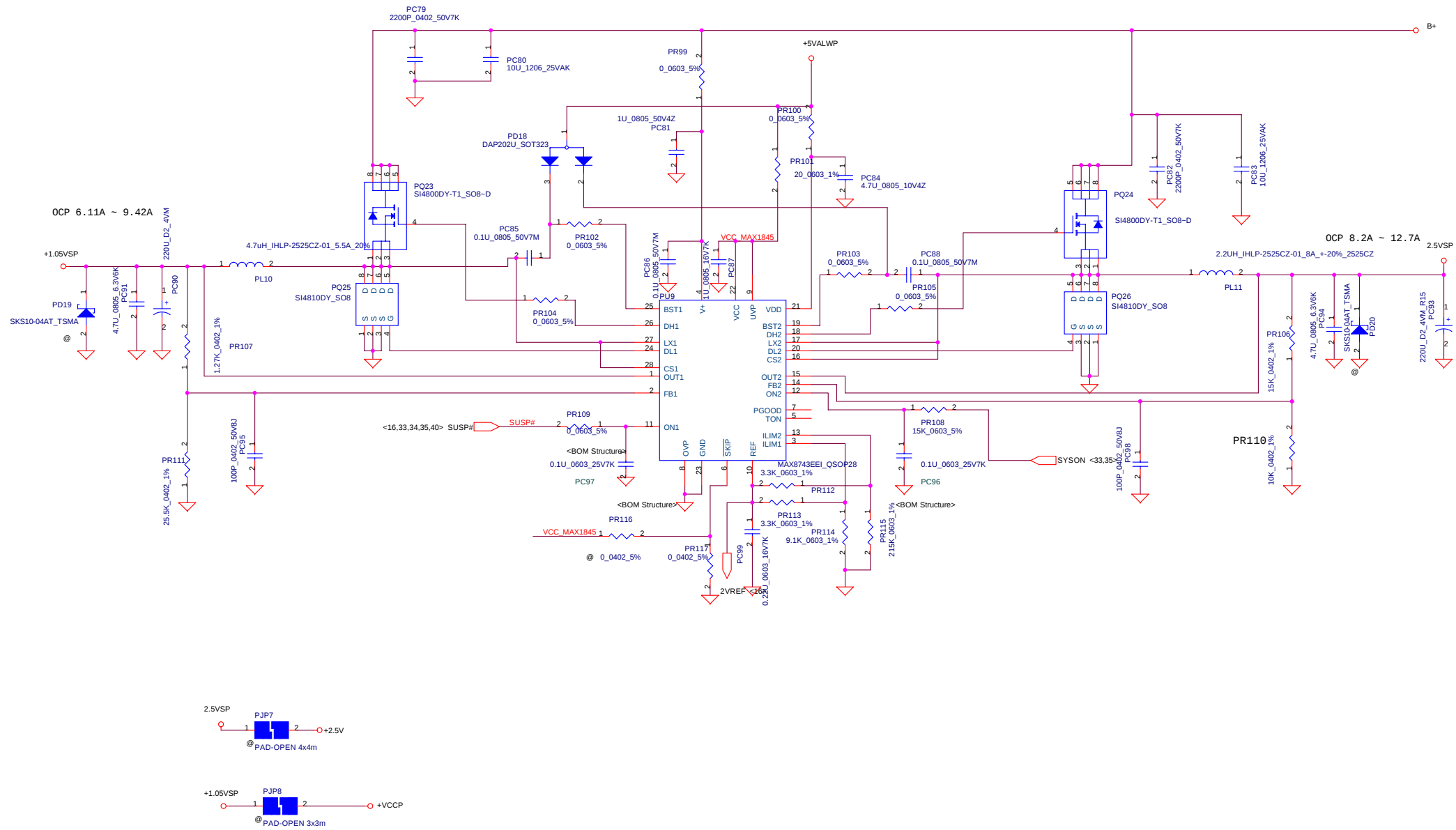
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OCP 4.02A ~ 7.12A

COMPAL ELECTRONICS, INC

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Size	Document Number	ZR2 LA2521		Rev
B				0.1
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Title			
+2.5VP / +1.05VP			
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Item	Fixed Issue	Reason for change	Rev.	PG#	Modify List	B.Ver #	Phase
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