

Compal confidential

Marseille 10ADG & 10AD

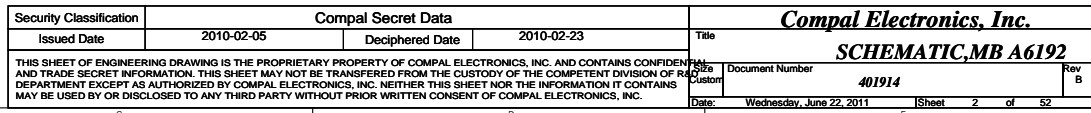
NWQAE LA-6192P Schematics Document

Mobile AMD S1G4/ RS880M / SB820M

2010-04-22 Rev. 1.0

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| Security Classification | | Compal Secret Data | | Compal Electronics, Inc. | |
| Issued Date | 2010-02-05 | Deciphered Date | 2010-02-23 | Title | SCHEMATIC, MB A6192 |
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| | | | | Date | Wednesday, June 22, 2011 |
| | | | | Rev | B |
| | | | | Sheet | 1 of 52 |

File Name : LA-6192P



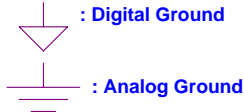
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Voltage Rails

O : ON
X : OFF

| power plane State | +B +3VL +5VL +RTCVCC | +5VALW +3VALW +1.1VALW | +1.5V | +5VS +3VS +2.5VS +1.8VS +1.5VS +1.1VS +1.05VS +0.75VS +VGA_CORE +VDDNB +CPU_CORE |
|--------------------------------|-------------------------------|------------------------------|-------|--|
| | | | | |
| S0 | O | O | O | O |
| S1 | 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 |

Symbol Note :



@ : just reserve , no build
UMA@ :Just reserved for UMA
DIS@ :Just reserved for discreate and PXP
PDIS@ :Just reserved for discreate (unsupport PXP)
PXP@ :Just reserved for Power Xpress
THM@ :Just reserved for GPU Thermal
MDC@ : Just reserved for MDC
FP@ :Just reserved for Finger print
BT@ : Just reserved for Blue Tooth
WLAN@ :Just reserved for WLAN
3G@ :Just reserved for 3G
8105E@ :Just reserved for 10/100 LAN
8111E@ :Just reserved for 1000 LAN
CEC@ :Just reserved for CEC
NEW@ :Just reserved for NEWCARD
CAM@ :Just reserved for Camera
GSENSOR@ :Just reserved for Gsemson
CIR@ :Just reserved for CIR

M9X@ :Just reserved for M92
Park@ :Just reserved for Park and Madison component
Madison@ :Just reserved for Madison
ParkC@ :Just reserved for Park only
4PCS@ :Just reserved for 512M & 1G VRAM
8PCS@ :Just reserved for 1G VRAM
CONN@ :Just reserved for Connector

| Platform | CPU | NB | SB | VGA | Comment |
|----------|------|---------|-------|---------|---------|
| Danube | S1G4 | RS880MC | SB820 | M92XTX | |
| | S1G4 | RS880M | SB820 | Park XT | |

BTO (Build-To-Order) Control Table

UMA SKU : UMA@/PXP_UMA@
PXP SKU : DIS@/PXP_UMA@/PXP@
DIS Only SKU : DIS@/PDIS@

=== PVT ===
SKU1-L01:UMA@/PXP_UMA@/CAM@/NEW@/JMB385@/8111E@/WLAN@/3G@/FP@/CEC@/BT@/CIR@/GSENSOR@
SKU2-L02:DIS@/PXP_UMA@/PXP@/CAM@/NEW@/JMB385@/8105E@/WLAN@/BT@/MDC@/CIR@/GSENSOR@/M9X@/4PCS@/THM@
SKU3-L03:DIS@/PXP_UMA@/PXP@/CAM@/NEW@/JMB385@/8105E@/WLAN@/BT@/CIR@/GSENSOR@/PARK@/PARKC@/4PCS@/8PCS@/THM@
SKU4-L04:DIS@/PXP_UMA@/PXP@/CAM@/NEW@/JMB385@/8105E@/WLAN@/3G@/FP@/CEC@/BT@/MDC@/CIR@/GSENSOR@/PARK@/MADISON@/4PCS@/8PCS@/THM@
SKU6-L05:DIS@/PXP_UMA@/PXP@/CAM@/NEW@/JMB385@/8105E@/WLAN@/FP@/CIR@/GSENSOR@/PARK@/MADISON@/4PCS@/8PCS@/THM@
SKU5-L06:DIS@/PXP_UMA@/PXP@/CAM@/NEW@/JMB385@/8111E@/WLAN@/3G@/FP@/CEC@/MDC@/GSENSOR@/PARK@/MADISON@/4PCS@/8PCS@/THM@
SKU7-L07:DIS@/PXP_UMA@/PXP@/CAM@/NEW@/JMB385@/8111E@/WLAN@/3G@/FP@/BT@/MDC@/CIR@/GSENSOR@/PARK@/MADISON@/4PCS@/8PCS@/THM@
COST-L08:UMA@/PXP_UMA@/CAM@/NEW@/JMB385@/8105E@/WLAN@/BT@/GSENSOR@
=====

EC SM Bus1 address

| Device | HEX | Address |
|---------------|-----|-------------|
| Smart Battery | 16H | 0001 011X b |
| HDMI-CEC | 34H | 0011 010X b |
| EC KB926D4 | | |

EC SM Bus2 address

| Device | HEX | Address |
|---------------|-----|-------------|
| ADH1032-1 CPU | 98H | 1001 100X b |
| ADH1032-2 VGA | 9AH | 1001 101X b |
| EC KB926D3 | | |

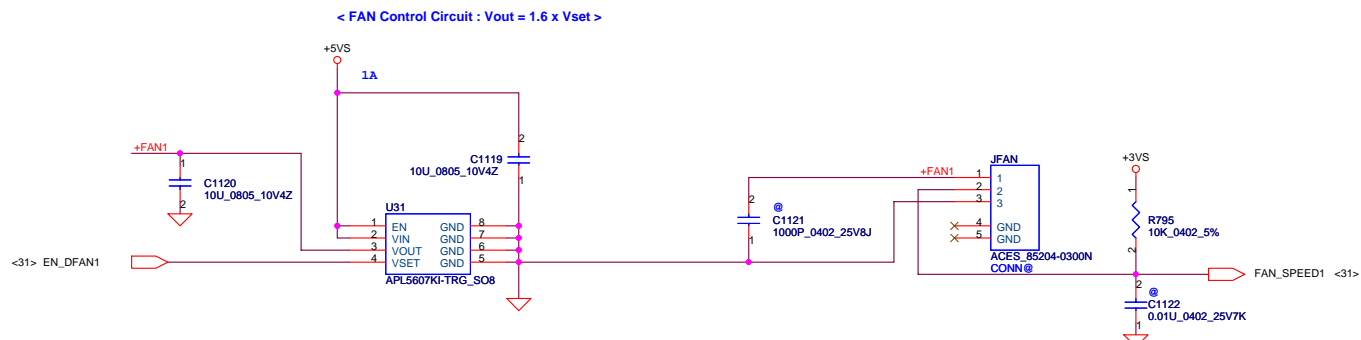
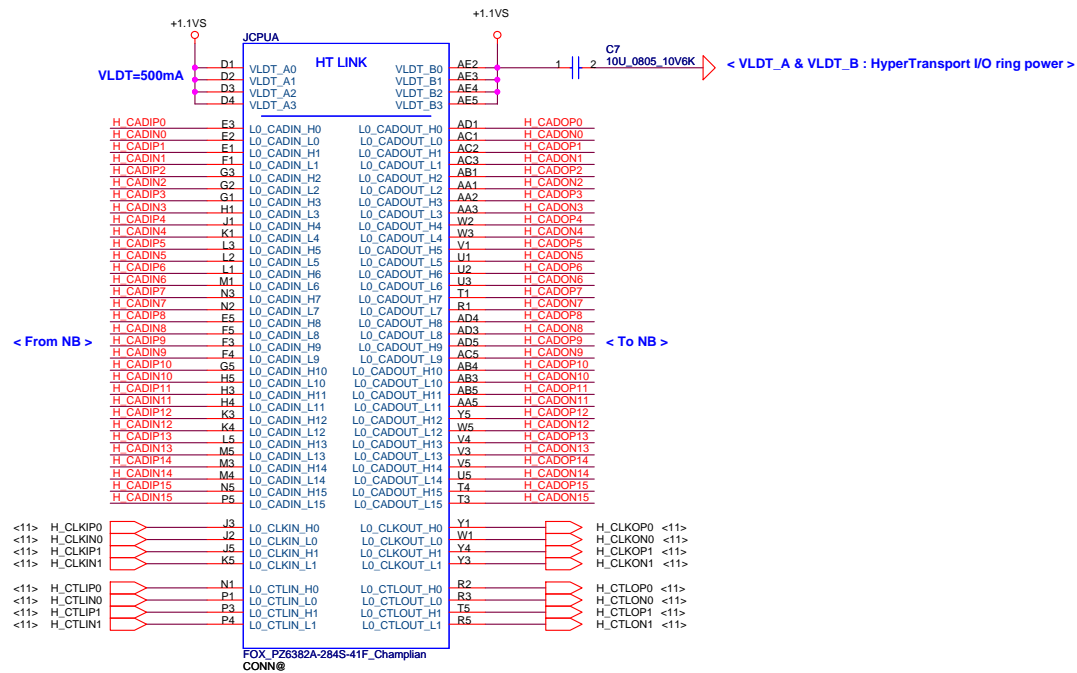
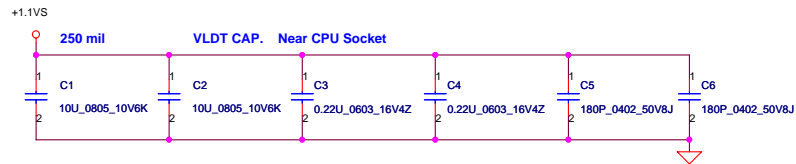
| SB SM Bus1 Address | | | | SB SM Bus2 Address | | | |
|--------------------|-----------------|------|-------------|--------------------|------------|-----|---------|
| Power | Device | HEX | Address | Power | Device | HEX | Address |
| +3VS | DDR SO-DIMM 0 | A0 H | 1010 0000 b | +3VALW | WLAN/WIMAX | | |
| +3VS | DDR SO-DIMM 1 | A4 H | 1010 0100 b | | | | |
| +3VS | Clock Generator | D2 H | 1101 0010 b | | | | |
| +3VS | New Card | | | | | | |

SMBUS Control Table

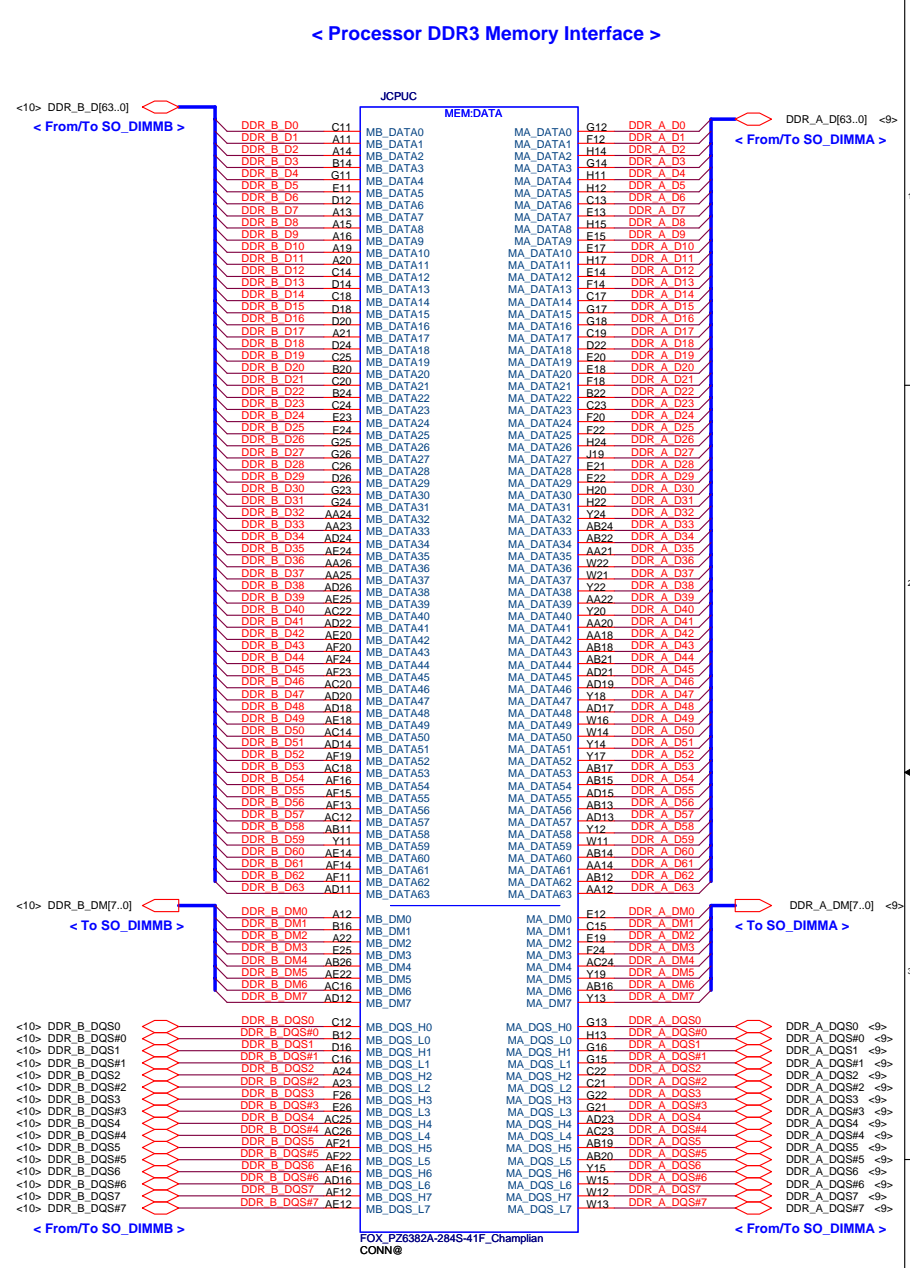
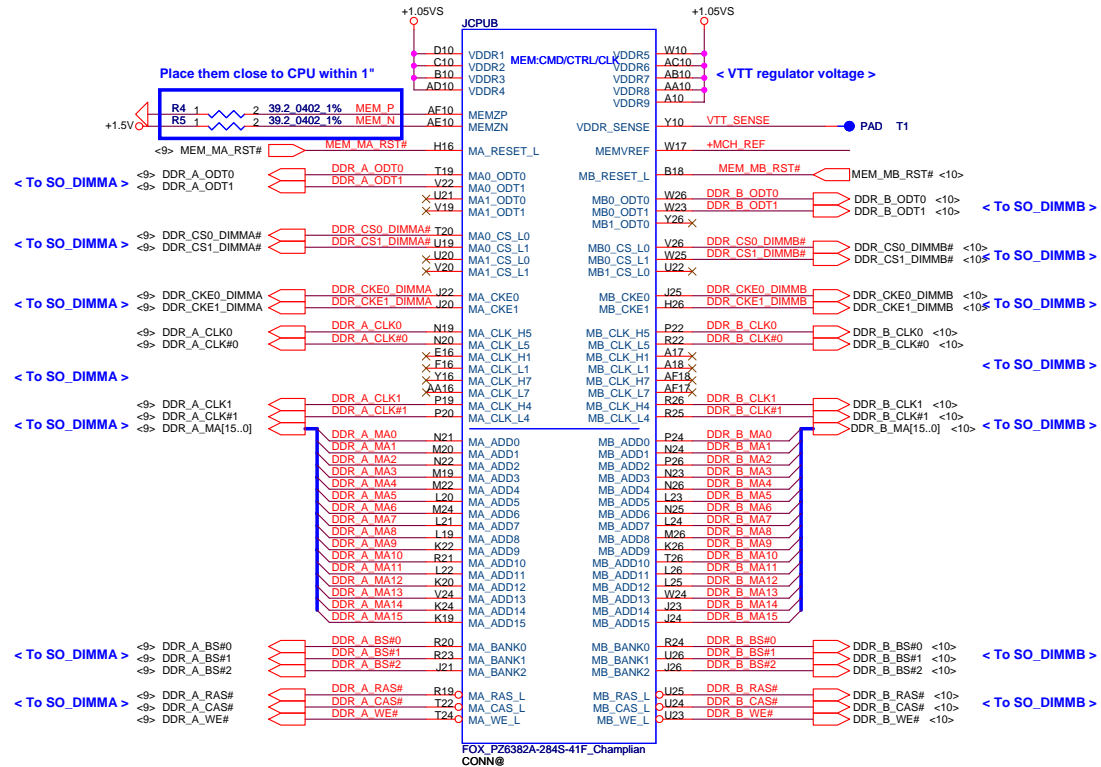
| | SOURCE | BATT | CPU THERMAL SENSOR | SODIMM I / II | CLK GEN | WLAN | LCD DDC ROM | HDMI DDC ROM | New Card |
|--------------------------|--------|------|--------------------|---------------|---------|------|-------------|--------------|----------|
| EC_SMB_CK1 EC_SMB_DA1 | KB926 | V | | | | | | | |
| EC_SMB_CK2 EC_SMB_DA2 | KB926 | | V | | | | | | |
| I2C_CLK I2C_DATA | RS880M | | | | | | V | | |
| DDC_CLK0 DDC_DATA0 | RS880M | | | | | | | V | |
| SCL0 SDA0 | SB820 | | | V | V | | | | V |
| SCL1 SDA1 | SB820 | | | | | V | | | |

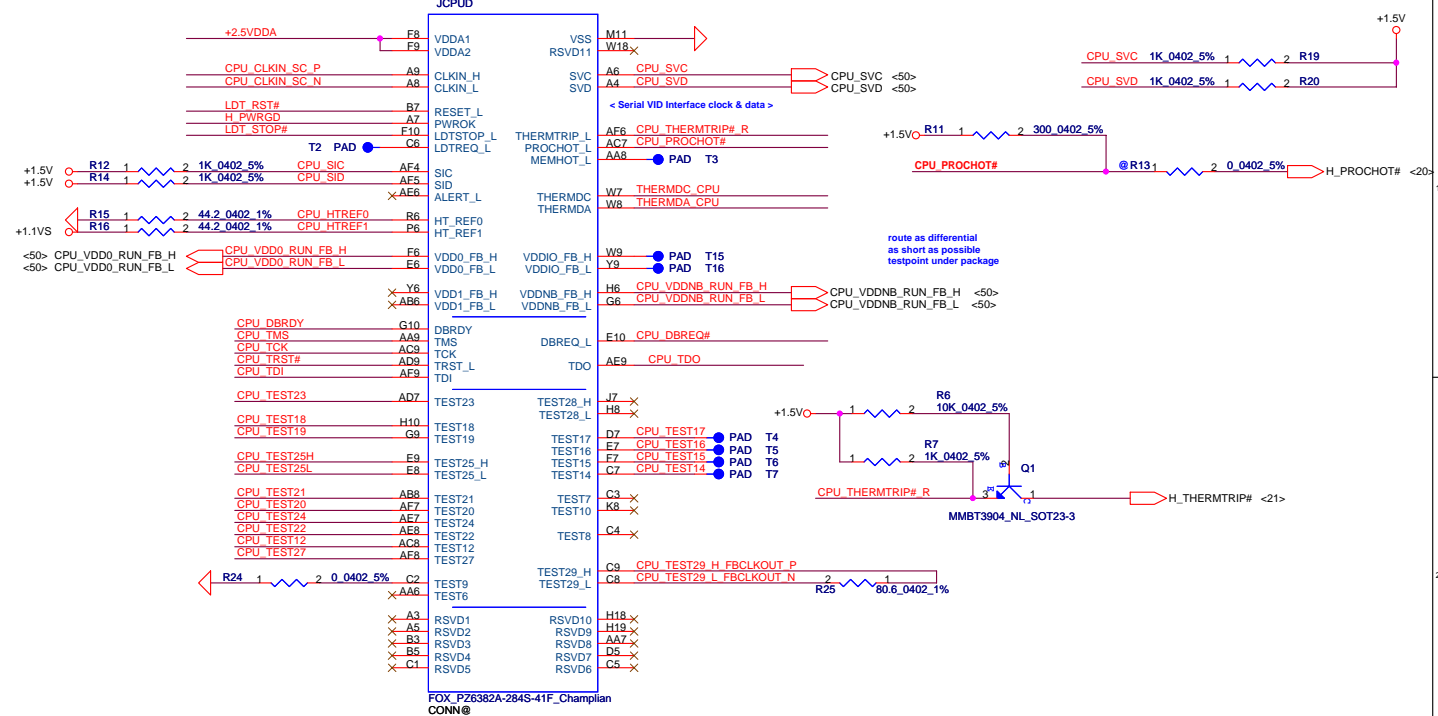
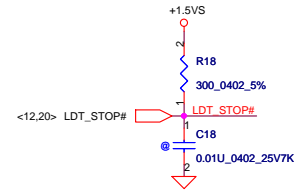
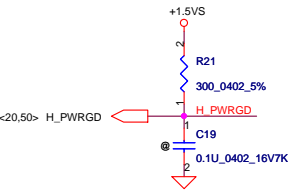
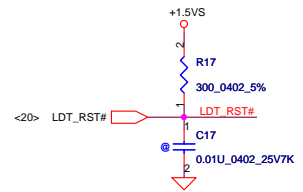
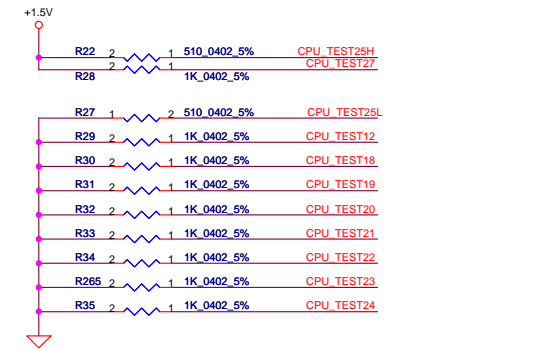
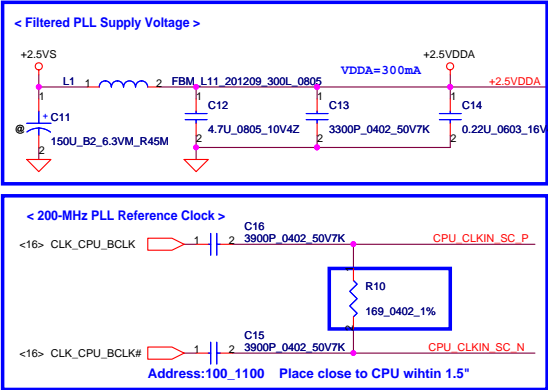
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SCHEMATIC,MB A6192

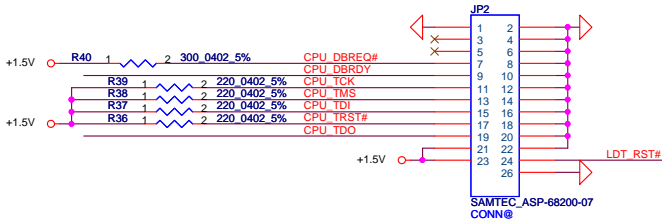


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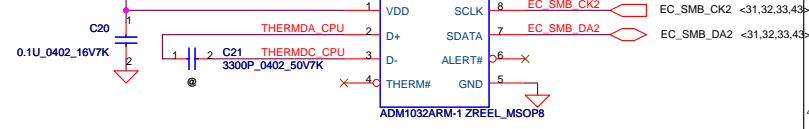




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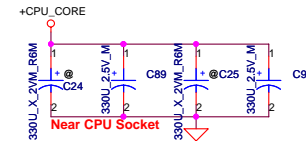
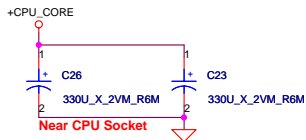


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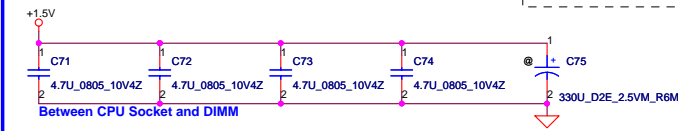
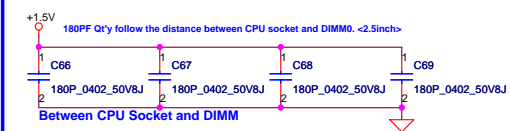
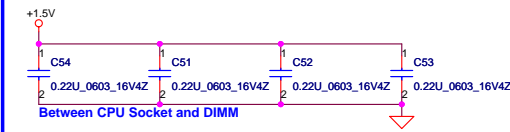
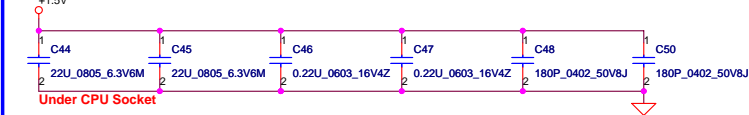


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VDD decoupling : +CPU_CORE



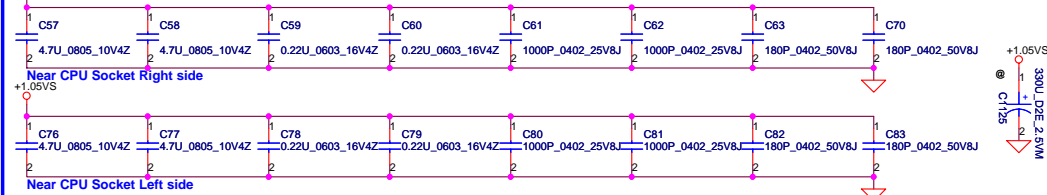
VDDIO decoupling : DDR SDRAM I/O ring power



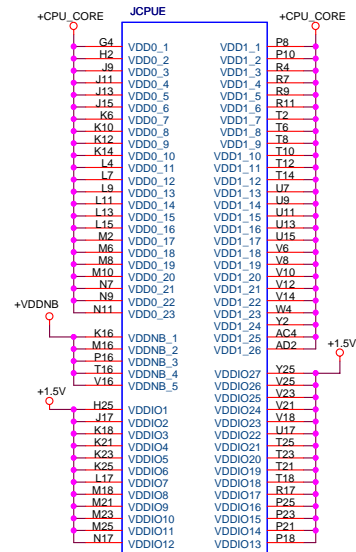
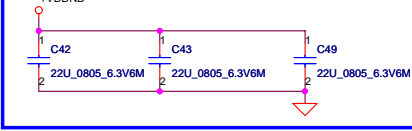
C56 Co-layout with C75

C1124 Co-layout with C1125

VDDR decoupling.

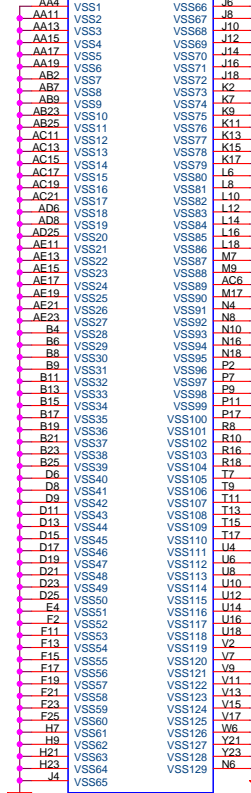


+VDDNB decoupling : Northbridge power



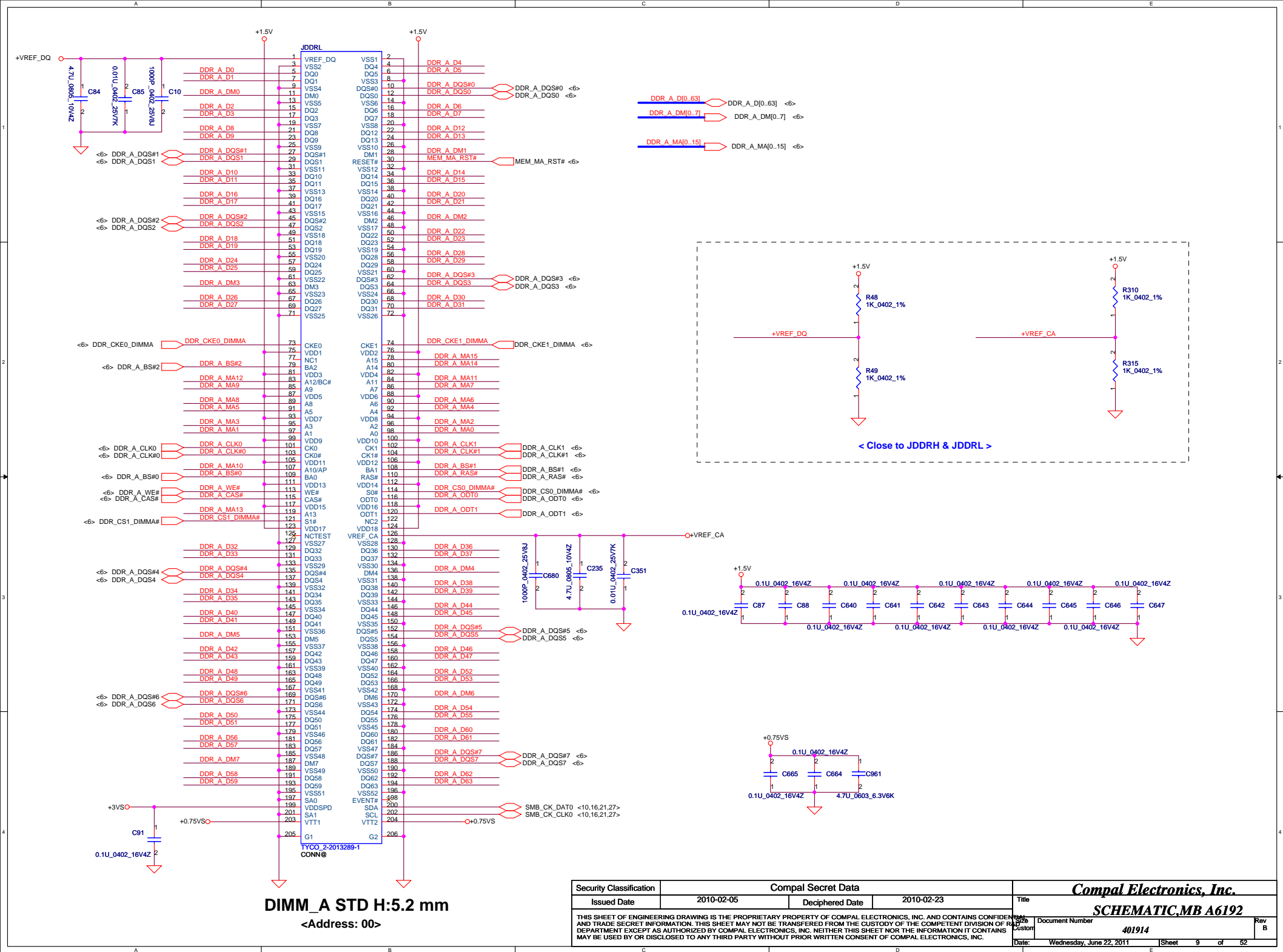
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CONN@

JCPUF

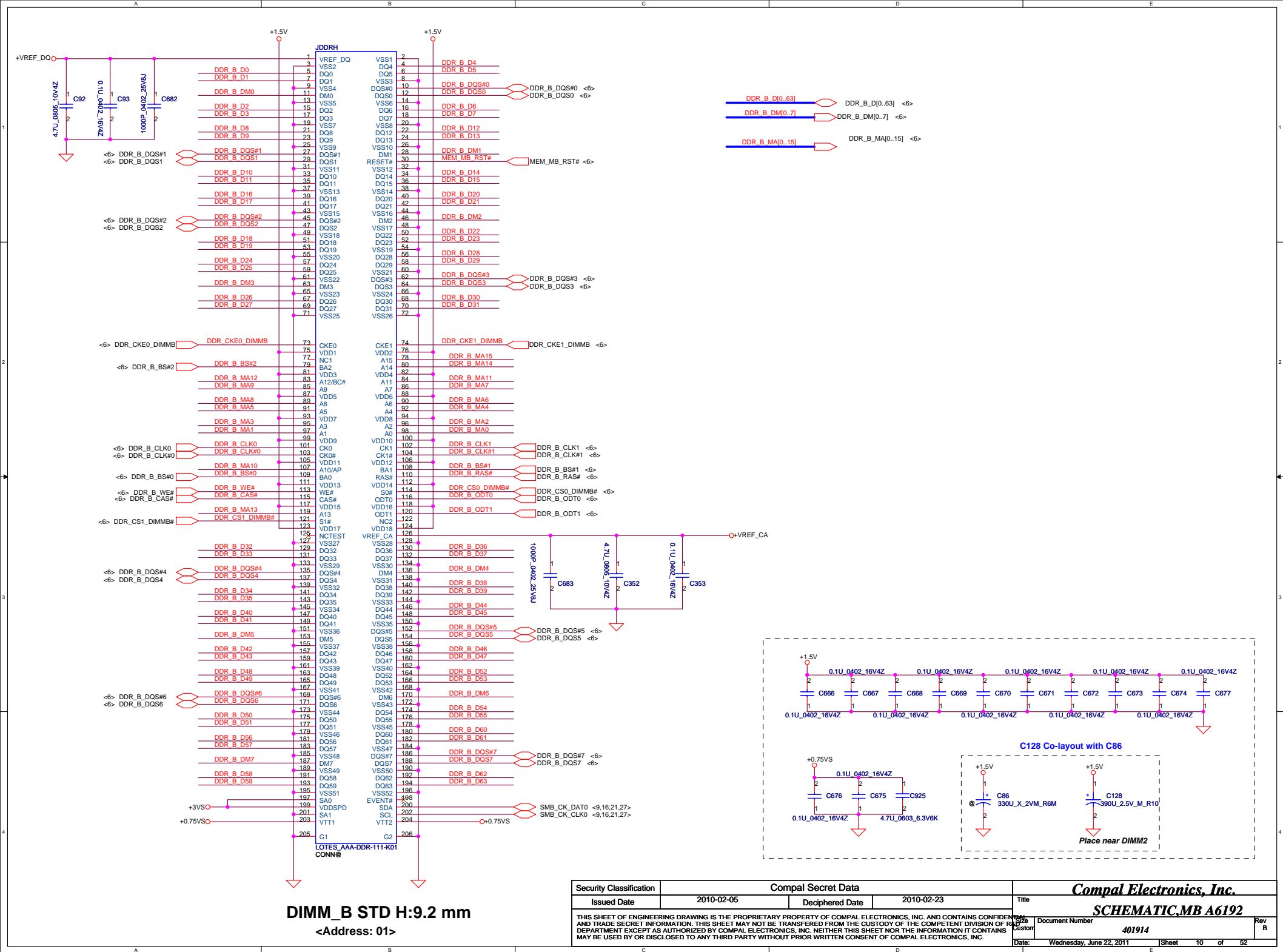


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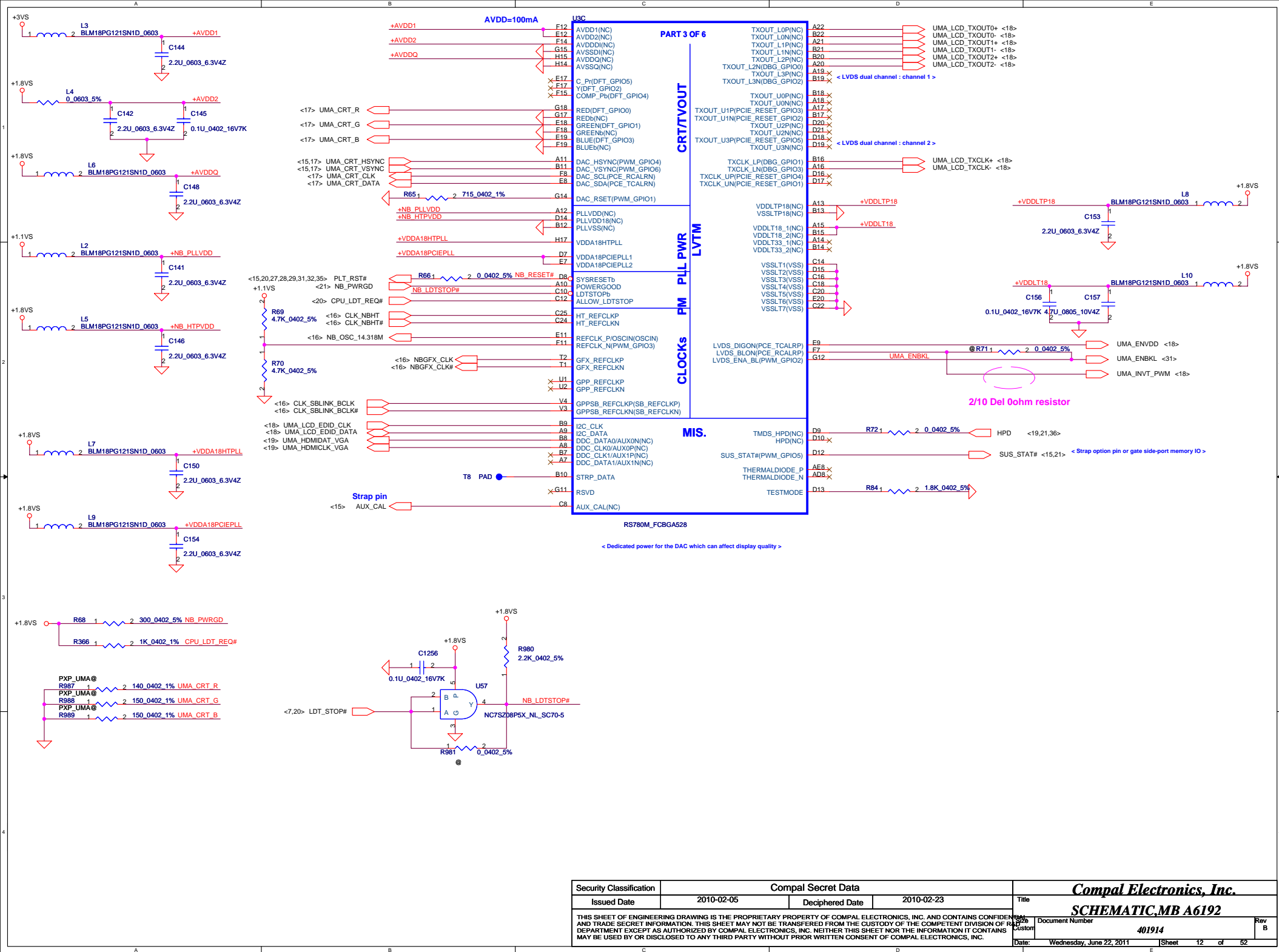
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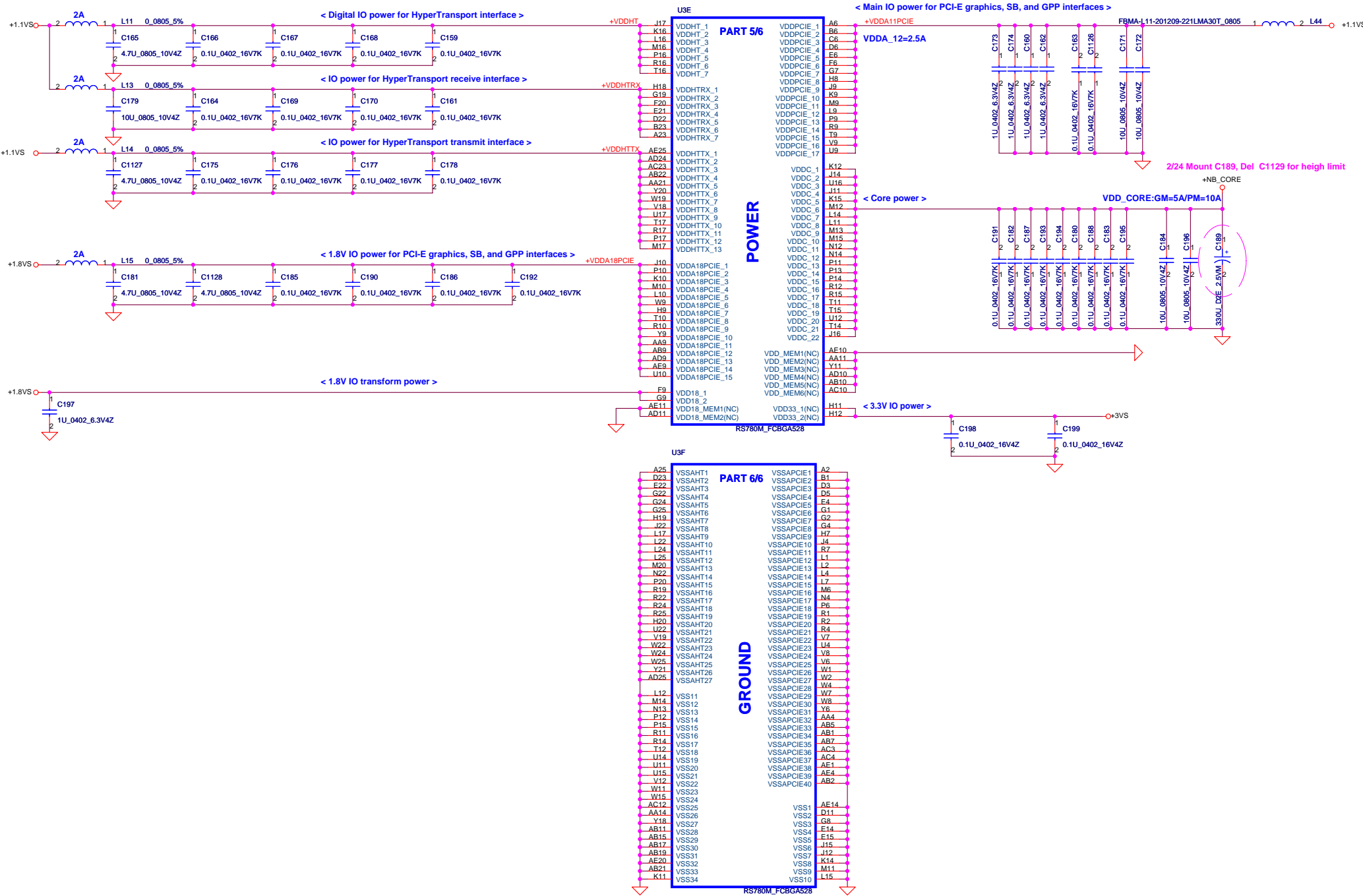
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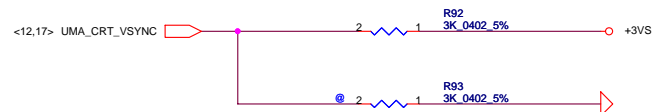
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< RS880 VSYNC mux at CRT_VSYNC pull High to 3K >



< VSYNC : STRAP_DEBUG_BUS_GPIO_ENABLEb >

Enables the Test Debug Bus using GPIO.

1 : Disable (RX881, RS880)
0 : Enable (RX881, RS880)

PIN: RS880--> VSYNC#

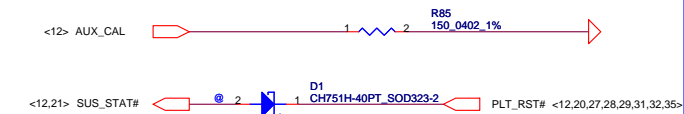
< RS880 use register to control PCI-E configure >

< DFT_GPIO[4:2] : STRAP_PCIE_GPP_CFG[2:0] >

These pin straps are used to configure PCI-E GPP mode.

000 : 00001
001 : 00010
010 : 01011
011 : 00100
100 : 01010
101 : 01100
111 : 01011

< RS880 SUS_STAT# >



< SUS_SATA# : LOAD_EEPROM_STRAPS >

Selects Loading of STRAPS from EPROM

1 : Bypass the loading of EEPROM straps and use Hardware Default Values
0 : I2C Master can load strap values from EEPROM if connected, or use default values if not connected

RS880:SUS_STAT#

< RS880 use HSYNC to enable SIDE PORT (internal pull high) >



< HSYNC : STRAP_DEBUG_BUS_PCIE_ENABLEb >

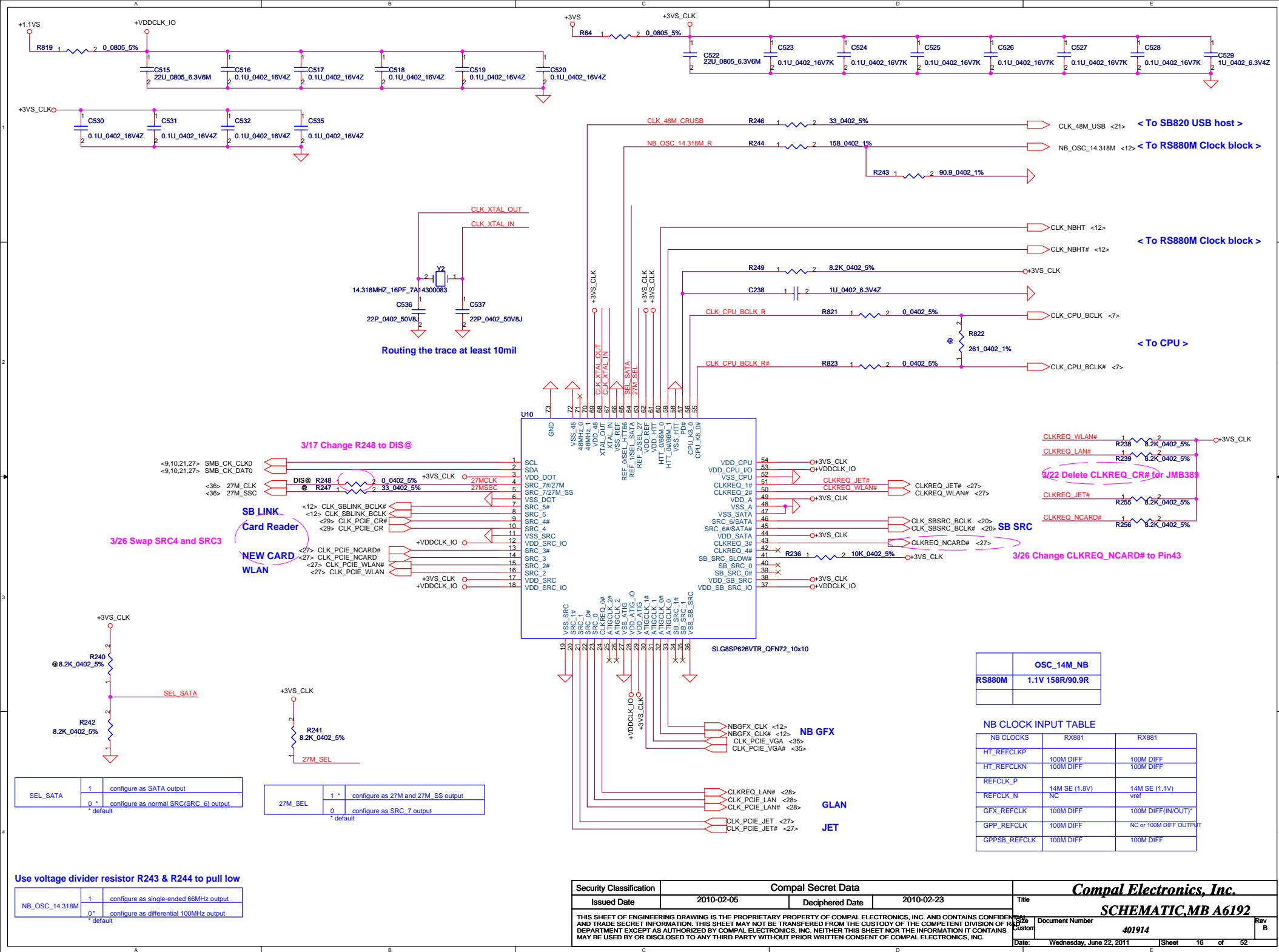
RX881: Enables the Test Debug Bus using PCIE bus

1 : Disable (Can still be enabled using nbcfg register access)
0 : Enable

RS880: Enables Side port memory (RS780 use HSYNC#)

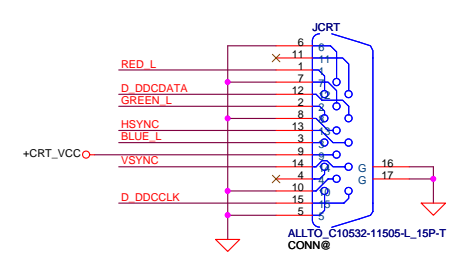
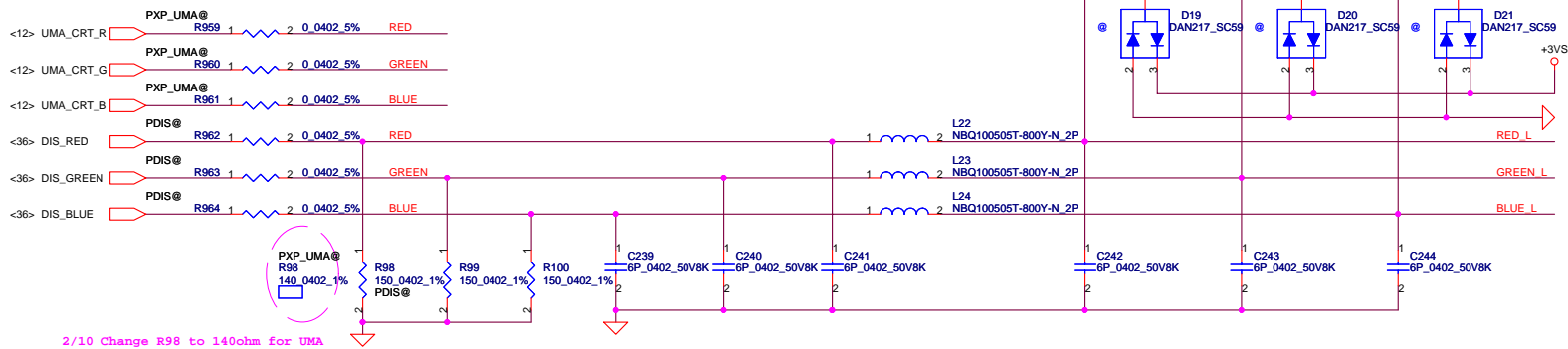
1. Disable (RS880)
0 : Enable (RS880)

| | | | | | |
|---|--------------------|-----------------|------------|--------------------------------|----------------|
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| | | | | 401914 | |
| | | | | Date: Wednesday, June 22, 2011 | Sheet 15 of 52 |

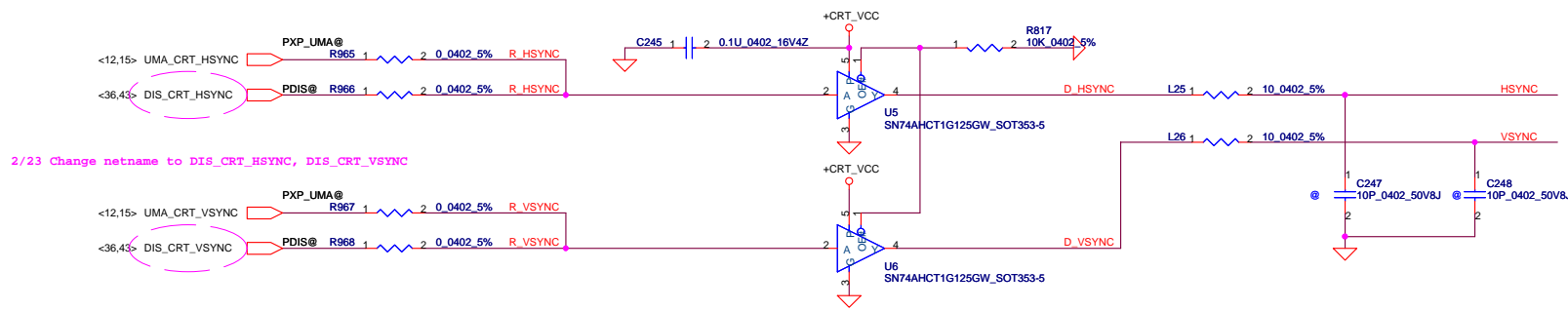


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| | | | | Date: | Wednesday, June 22, 2011 | Sheet 16 of 52 |

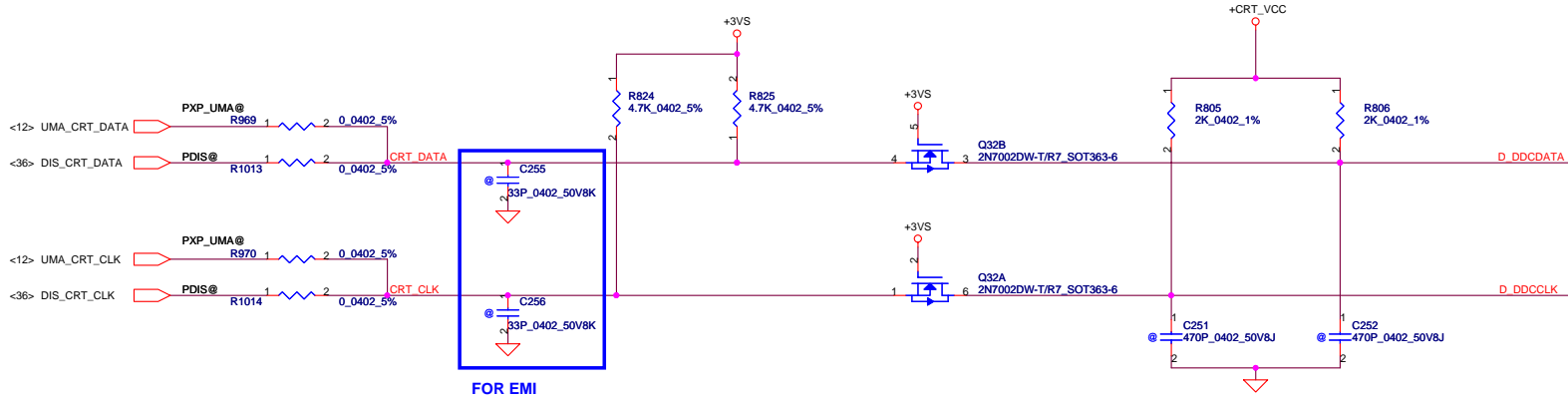
< CRT CONNECTOR >



< SYNC SIGNAL >



< Display Data Channel >



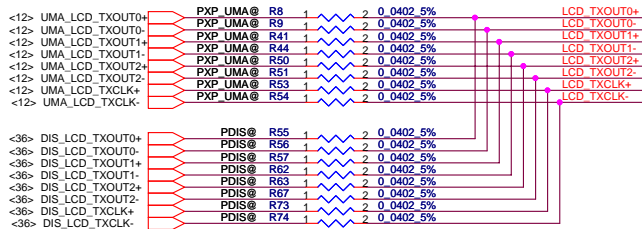
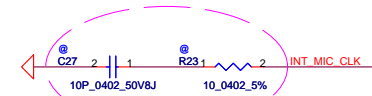
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| | | | | Sheet | 17 of 52 |

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SCHEMATIC, MB A6192

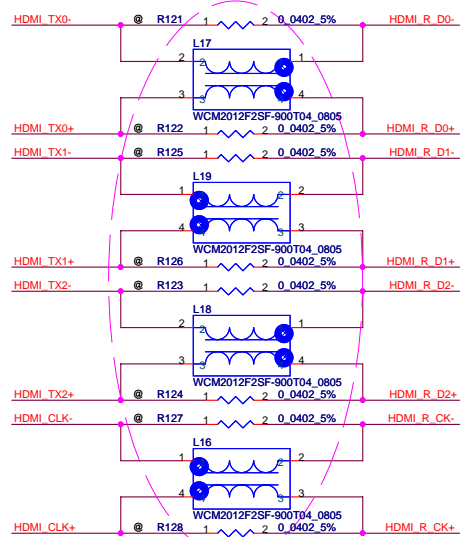
Rev B

W=20mils



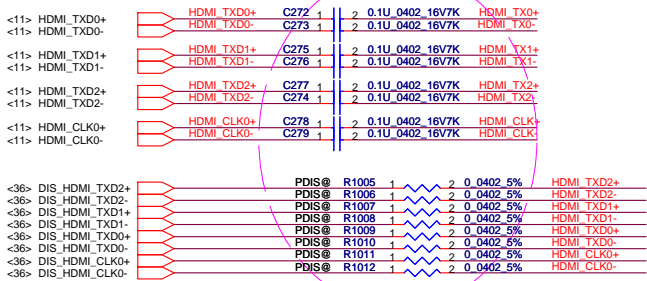
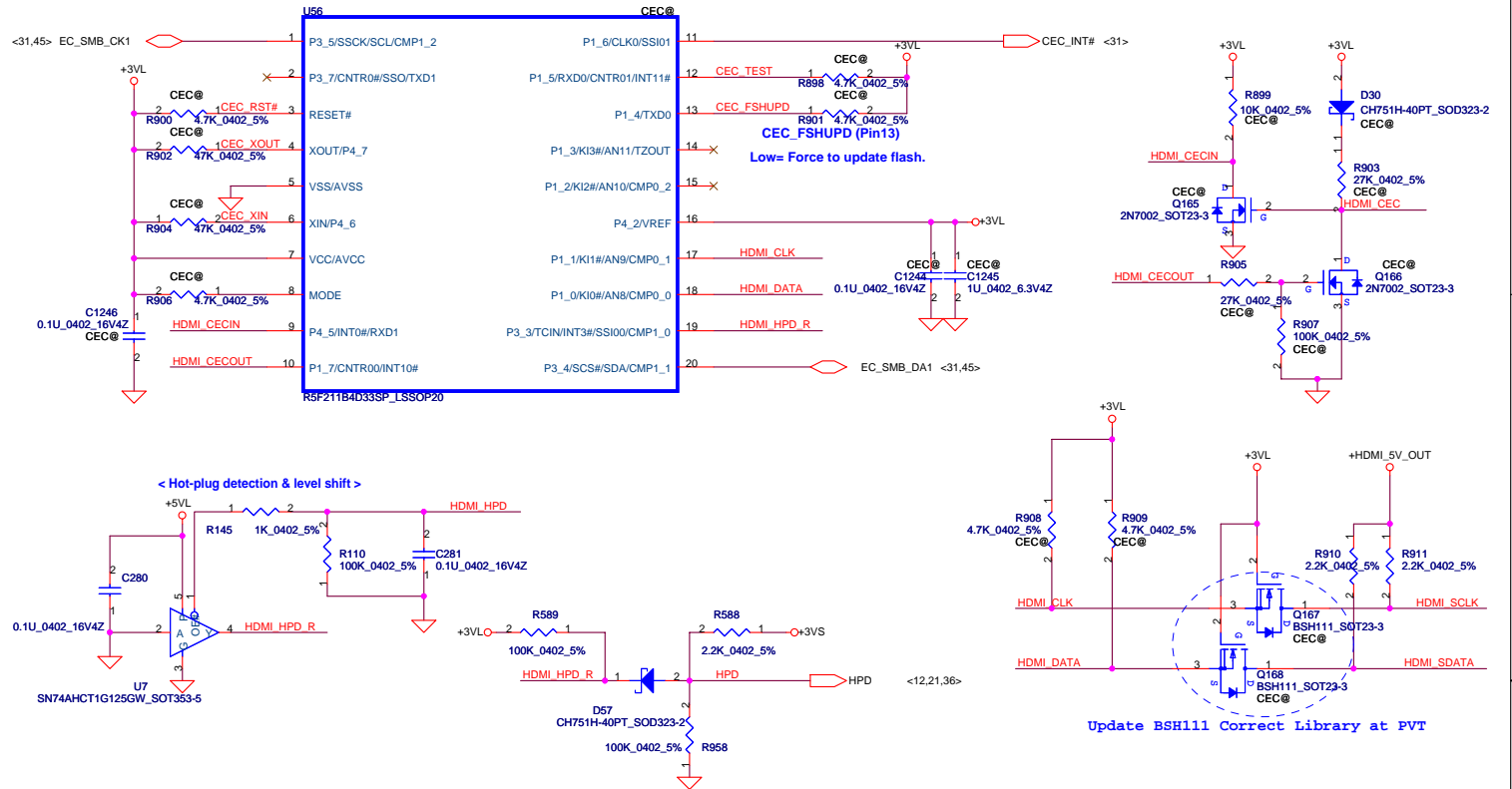
Date: Wednesday, June 22, 2011 Sheet 18 of 52

HDMI CEC Controller

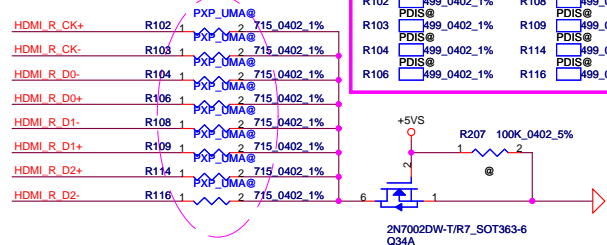


2/24 Reserve L16, L17, L18, L19. Mount resistors.
3/1 Reverse L17, L18 symbol fo layout
4/9 Mount L16, L17, L18, L19 for EMI request.

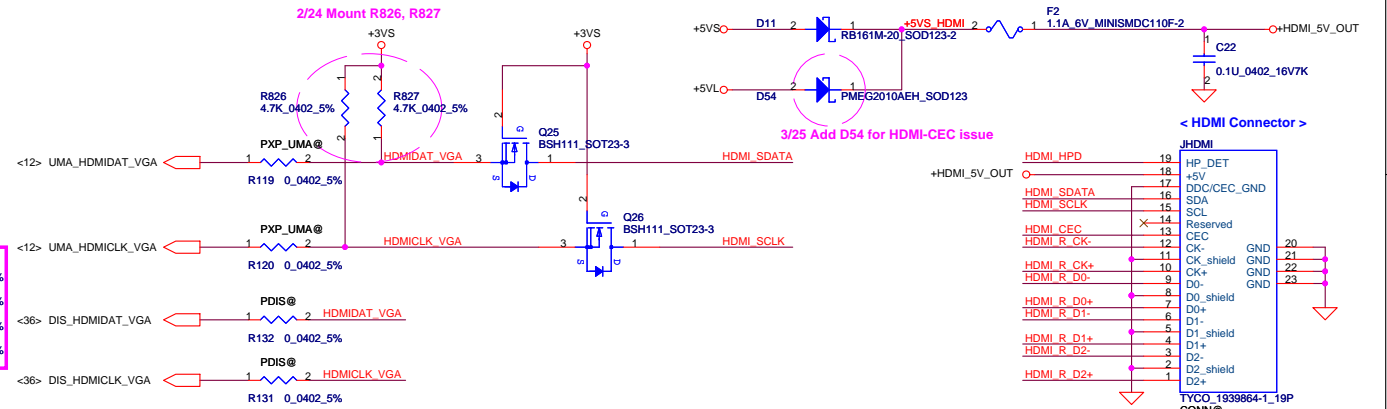
2/10 Place C95~C102 and R1005~1012 close to R972~R979



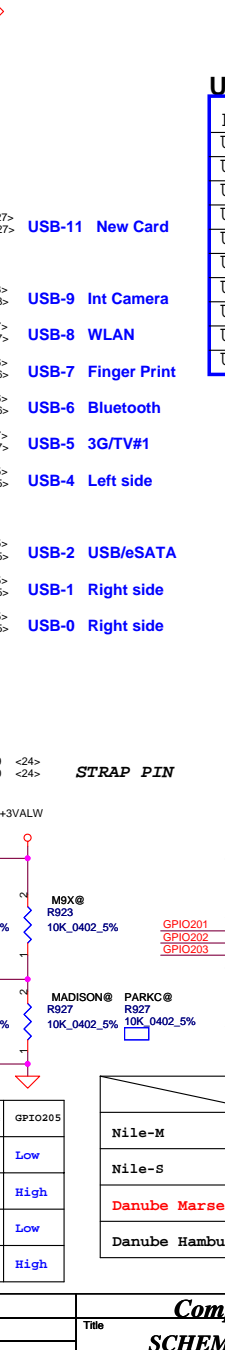
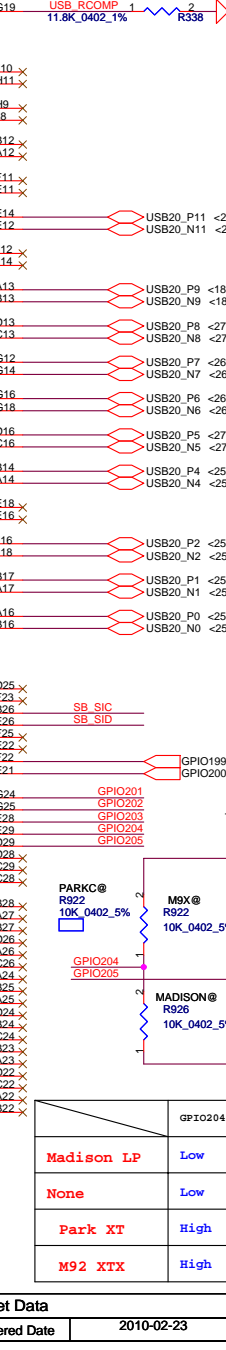
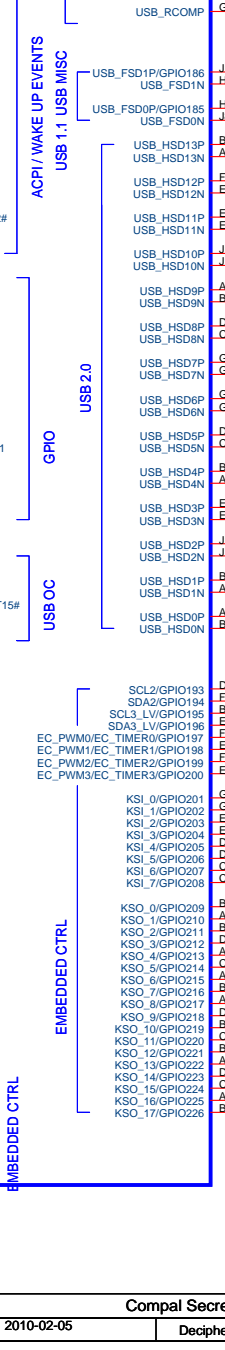
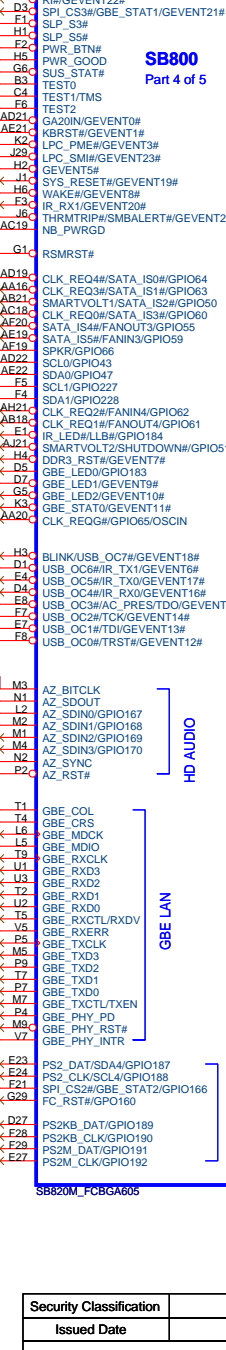
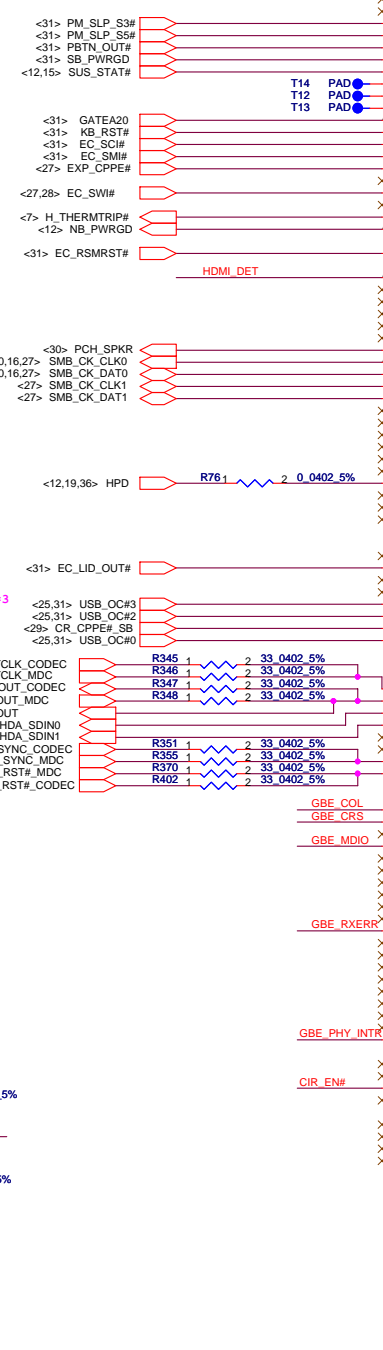
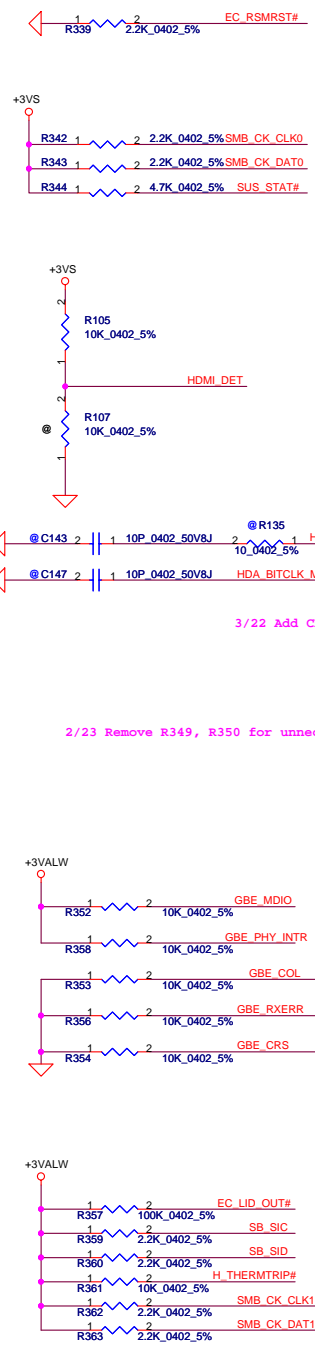
< Termination resistor >
< Close to Connector >



3/29 Change to 715ohm and PXP_UMA@ for HDMI



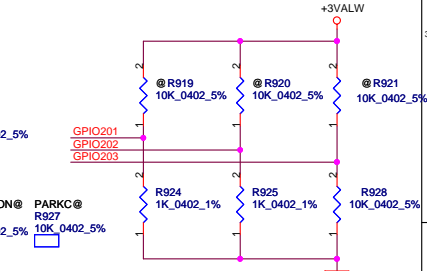
| | | | | | |
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USB PORT LIST

| PORT | DEVICE |
|-------|--------------|
| USB0 | USB0(Right) |
| USB1 | USB1(Right) |
| USB2 | USB/eSATA |
| USB4 | USB4(Left) |
| USB5 | 3G/TV#1 |
| USB6 | Bluetooth |
| USB7 | Finger Print |
| USB8 | WLAN |
| USB9 | Int Camera |
| USB11 | New Card |

STRAP PIN



| | GPIO201 | GPIO202 | GPIO203 |
|------------------|---------|---------|---------|
| Nile-M | High | High | High |
| Nile-S | High | High | Low |
| Danube Marseille | Low | Low | Low |
| Danube Hamburg | Low | Low | High |

| | GPIO204 | GPIO205 |
|------------|---------|---------|
| Madison LP | Low | Low |
| None | Low | High |
| Park XT | High | Low |
| M92 XTX | High | High |

HDD

ODD

eSATA

U8B

SB800
Part 2 of 5

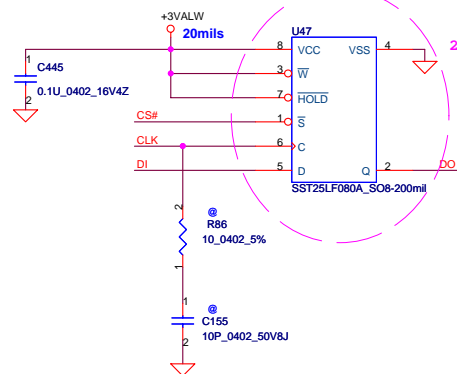
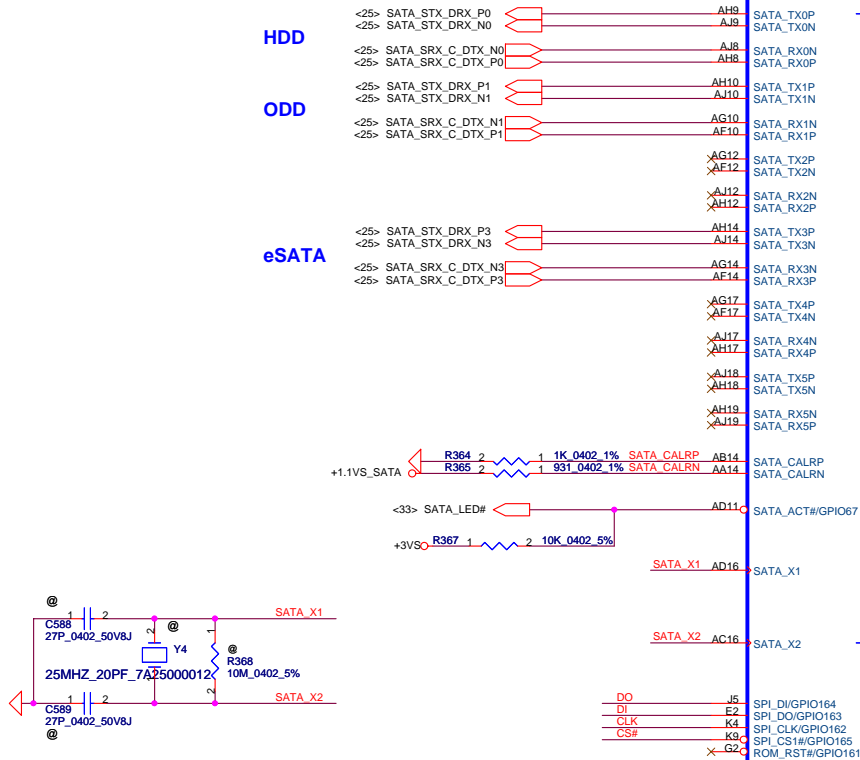
FLASH

SERIAL ATA

HW MONITOR

SPI ROM

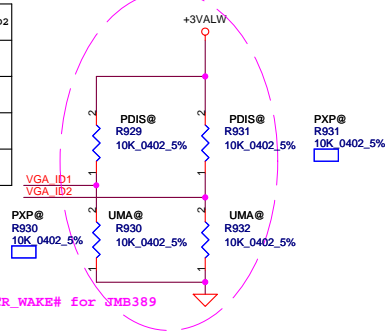
SB820M_FCBGA605



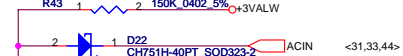
2/24 Remove ROM socket for heigh limit

2/24 Add VGA_ID1, VGA_ID2 to indentify GPU

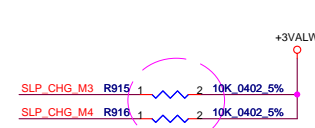
| | VGA_ID1 | VGA_ID2 |
|----------------|---------|---------|
| UMA | Low | Low |
| PowerExpress | Low | High |
| None | High | Low |
| Discreate only | High | High |



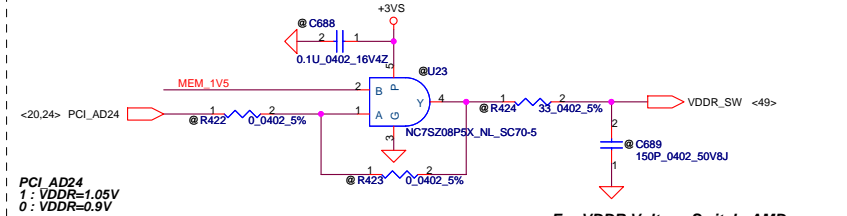
3/22 Add CR_WAKE# for SMB389



2/23 Change R915, R916 to 10K



MEM_1V5 is for gating the glitch on PCI_AD24 2/23 Reserve MEM_1V5 circuit for unsupport DDR-1333

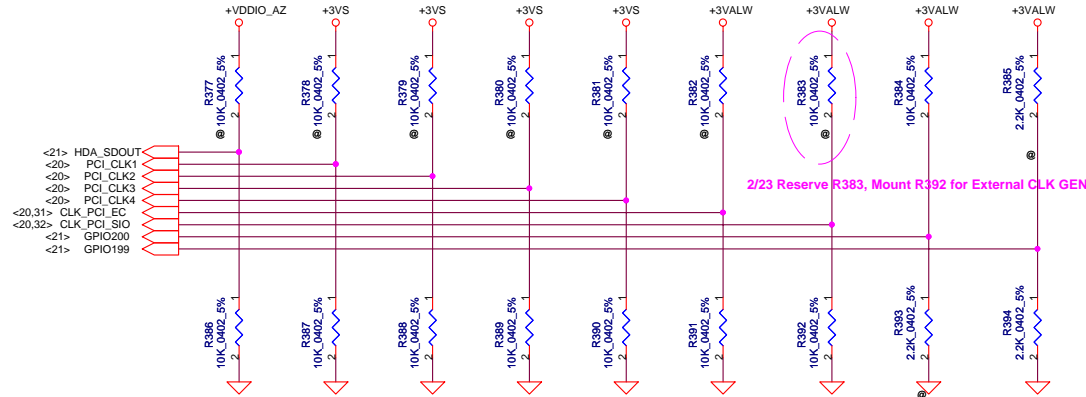


For VDDR Voltage Switch, AMD suggest

REQUIRED STRAPS

Check Internal PU/PD

| | AZ_SDOUT | PCI_CLK1 | PCI_CLK2 | PCI_CLK3 | PCI_CLK4 | LPC_CLK0 | LPC_CLK1 | GPIO200 | GPIO199 |
|------------------|------------------|-----------------|------------------------|--------------------|----------------------------|------------|------------------|---|---------|
| PULL HIGH | LOW POWER MODE | ALLOW PCIE GEN2 | WATCHDOG TIMER ENABLE | USE DEBUG STRAP | Inter CLK Gen Mode Enable | EC ENABLE | CLOCKGEN ENABLE | H,H = Reserved H,L = SPI ROM (Default) | |
| PULL LOW | Performance MODE | FORCE PCIE GEN1 | WATCHDOG TIMER DISABLE | IGNORE DEBUG STRAP | Inter CLK Gen Mode Disable | EC DISABLE | CLOCKGEN DISABLE | L,H = LPC ROM (Default L,NC) L,L = FWH ROM | |
| | DEFAULT | DEFAULT | DEFAULT | DEFAULT | DEFAULT | DEFAULT | DEFAULT | | |



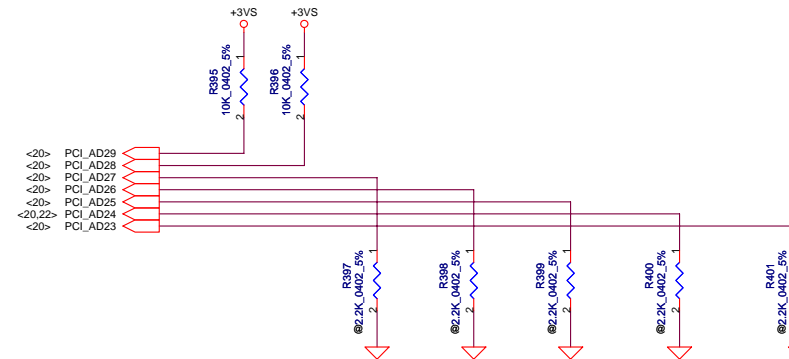
DEBUG STRAPS

SB800 HAS 15K INTERNAL PU FOR PCI_AD[27:23]

| | PCI_AD27 | PCI_AD26 | PCI_AD25 | PCI_AD24 | PCI_AD23 |
|------------------|----------------|---------------------|---------------|-------------------------|----------------------|
| PULL HIGH | USE PCI PLL | DISABLE ILA AUTORUN | USE FC PLL | USE DEFAULT PCIE STRAPS | DISABLE PCI MEM BOOT |
| | DEFAULT | DEFAULT | DEFAULT | DEFAULT | DEFAULT |
| PULL LOW | BYPASS PCI PLL | ENABLE ILA AUTORUN | BYPASS FC PLL | USE EEPROM PCIE STRAPS | ENABLE PCI MEM BOOT |

Check AD29,AD28 strap function

check default

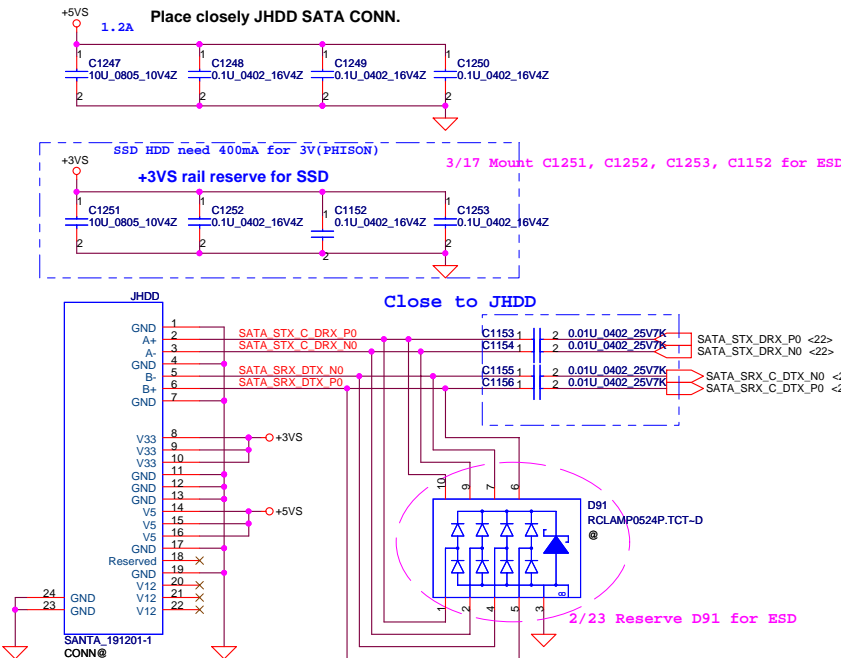


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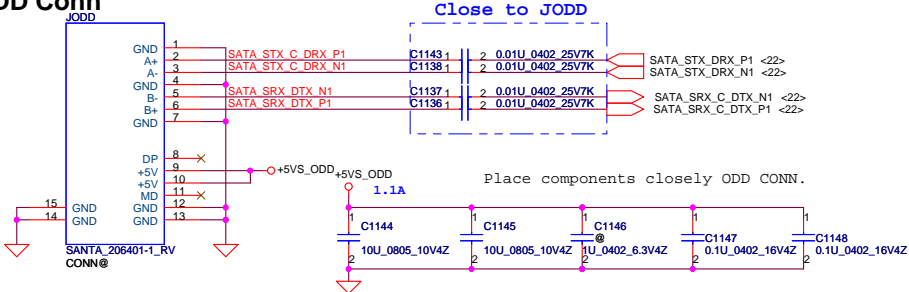
SCHEMATIC,MB A6192

401914

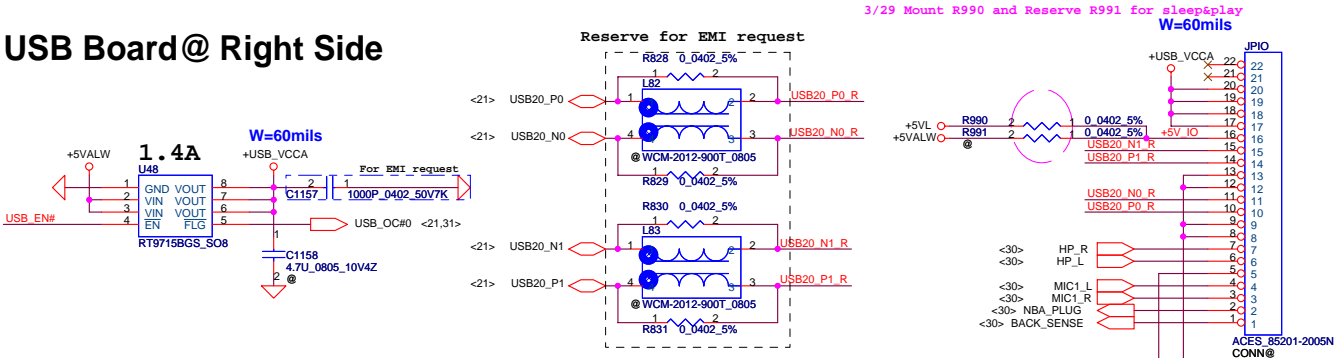
SATA HDD Conn.



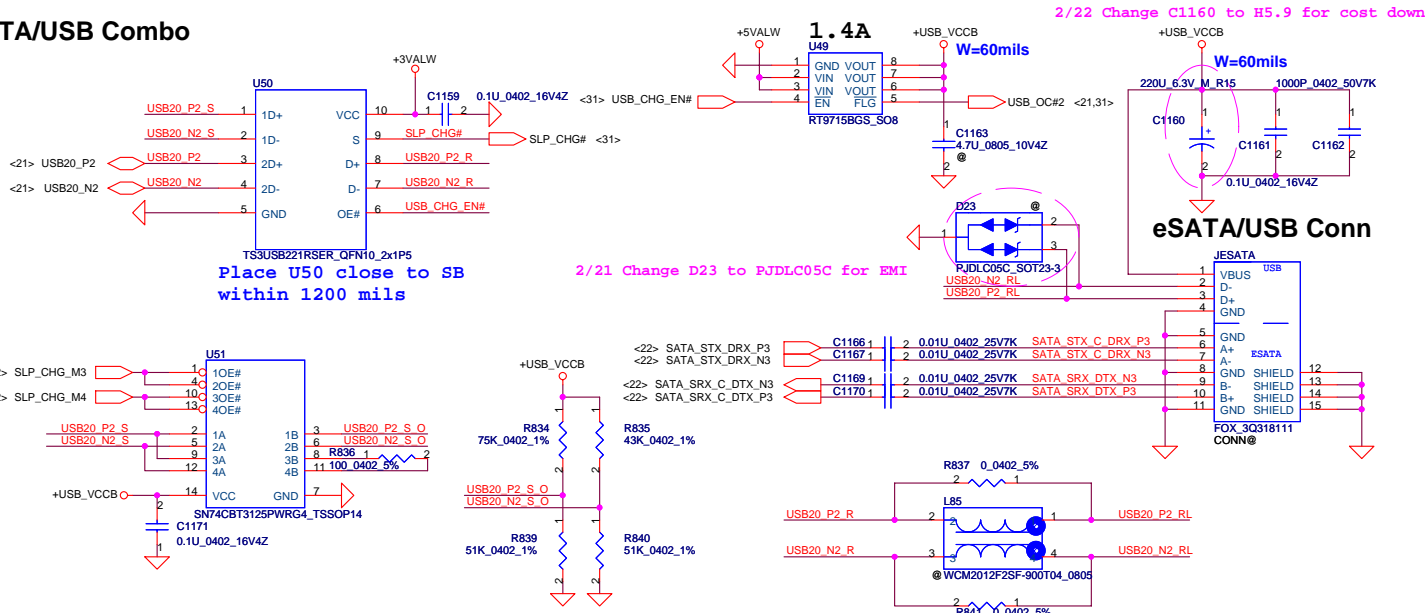
SATA ODD Con



USB Board@ Right Side



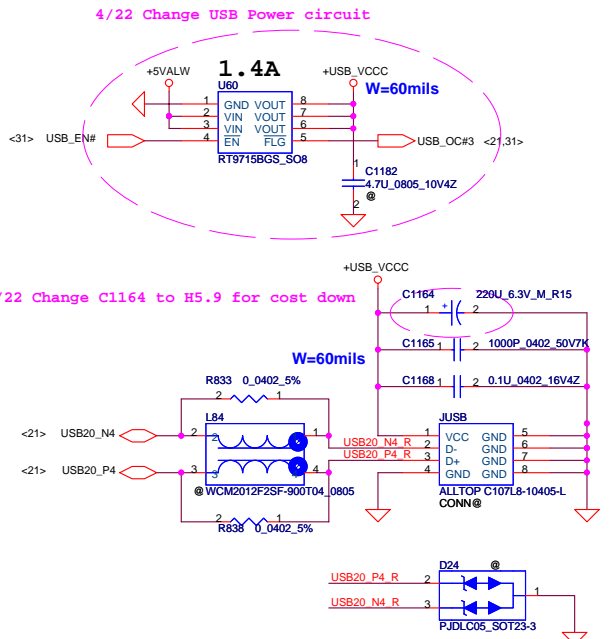
eSATA/USB Combo



| | |
|---------|----------|
| SLP_CHG | FUNCTION |
| LOW | D=1D |
| HIGH | D=2D |

| | | |
|--------|------------|------------|
| | SLP_CHG_M3 | SLP_CHG_M4 |
| Mode 3 | HIGH | LOW |
| Mode 4 | LOW | HIGH |

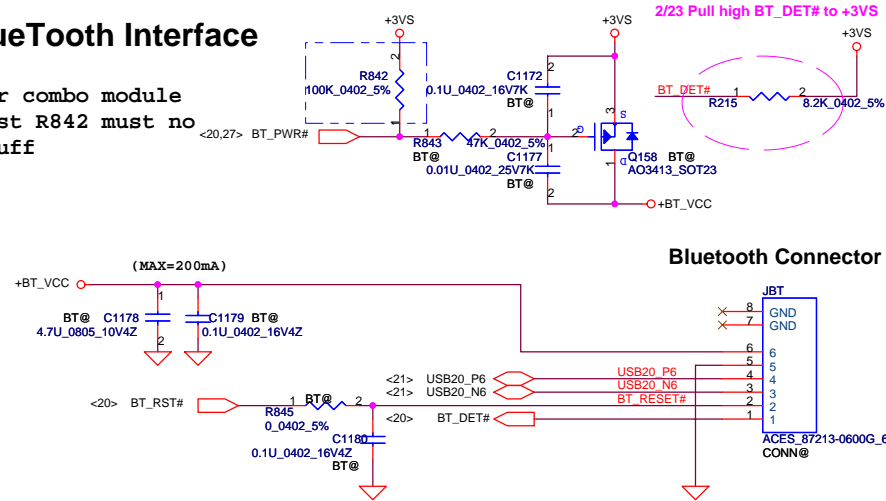
USB Board@ Left Side



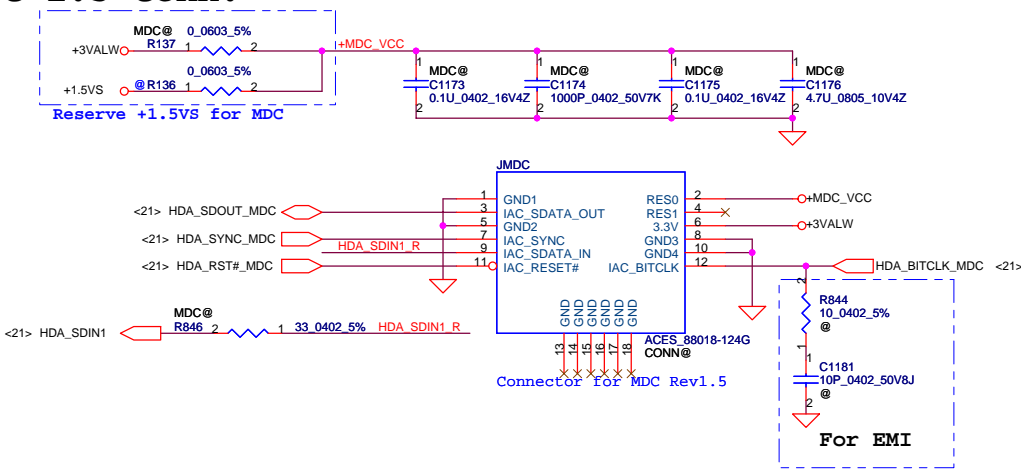
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| | | | | Date: | Wednesday, June 22, 2011 | Sheet | 25 of 52 |

BlueTooth Interface

For combo module
must R842 must no
stuff



MDC 1.5 Conn.



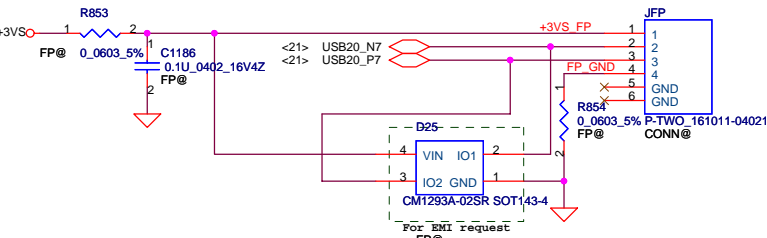
B-CAS Circuit

2/10 Remove B-CAS function

Felica

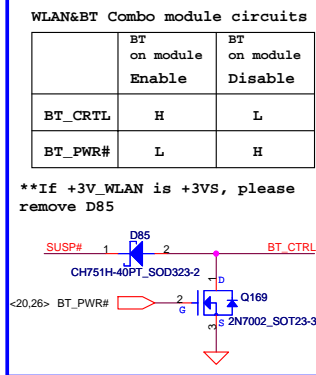
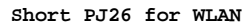
2/10 Remove Felica function

Finger printer



| | | | | | |
|---|------------|--------------------|------------|--------------------------|--------------------------|
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2/25 Del PJ27 for non-Wimax



Add BT_CTRL for WLAN & BT
Combo module at DVT

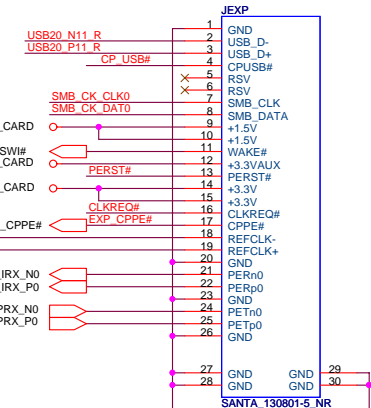
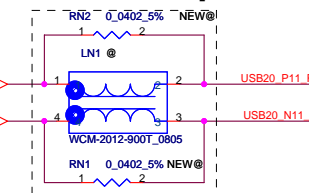
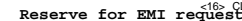
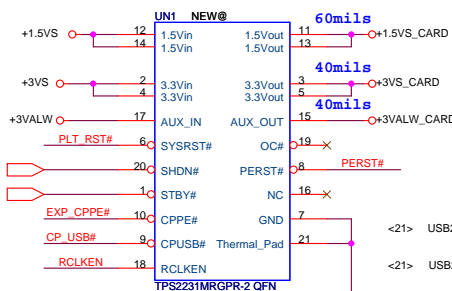
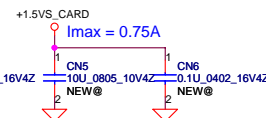
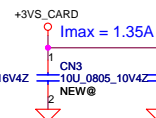
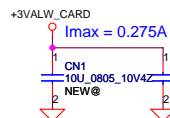
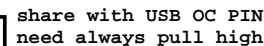
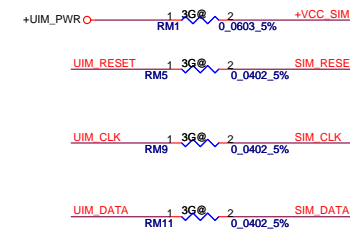
2/10 Remove B-CAS function

3/22 Add +1.5VS for TV Tuner



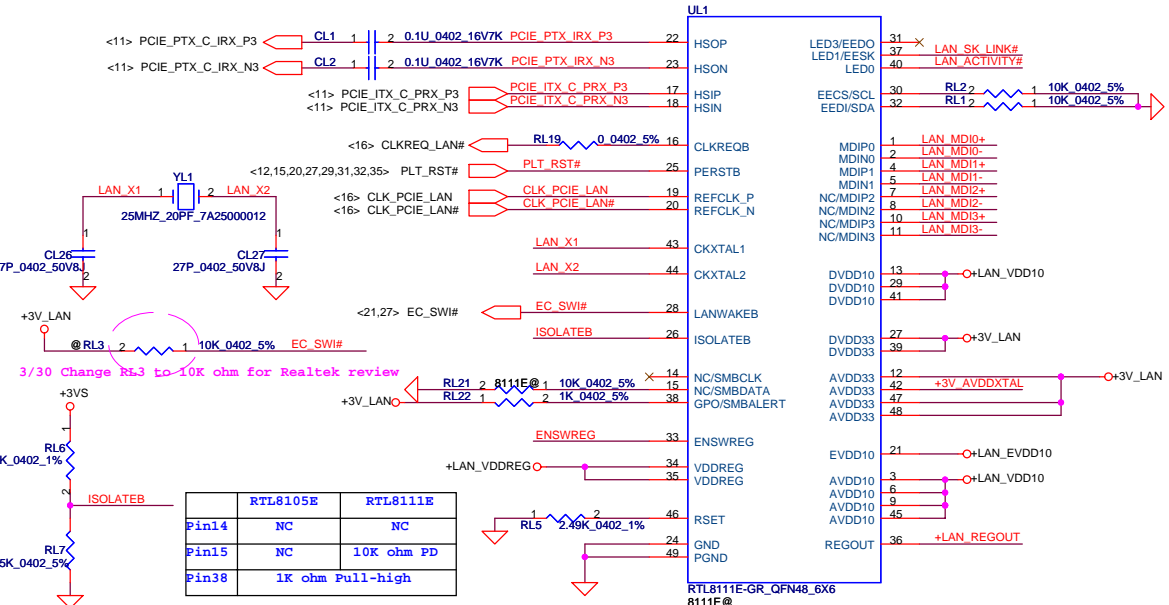
33> 3/17 Add RM6 pull high to +3VS for 3G LED issue

Close to J3G

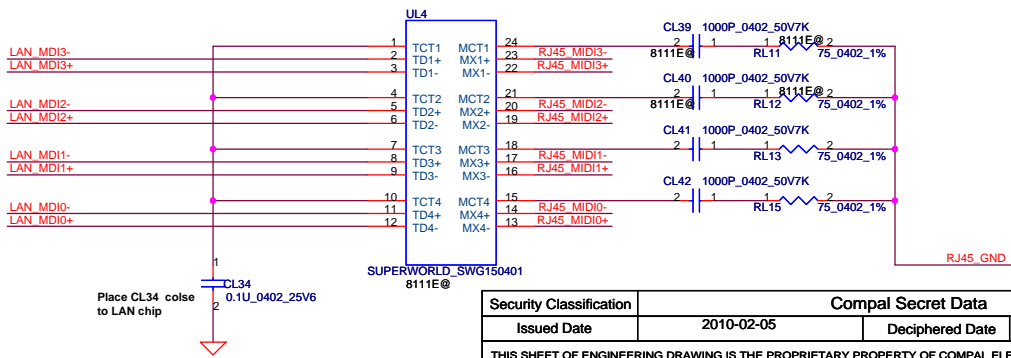
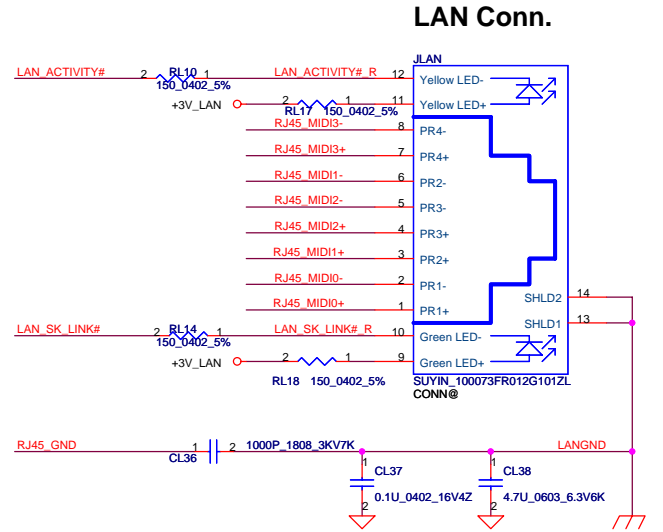
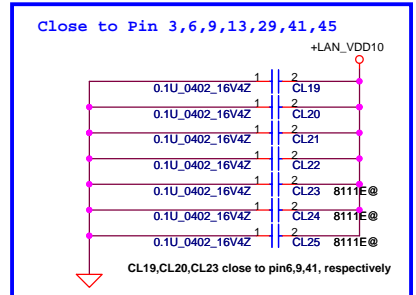
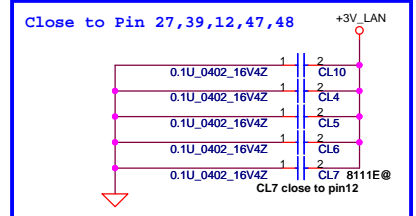
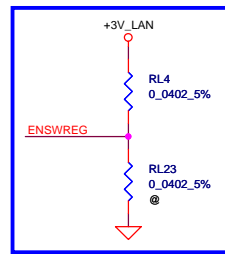
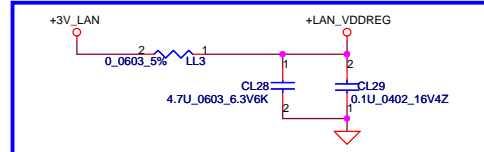
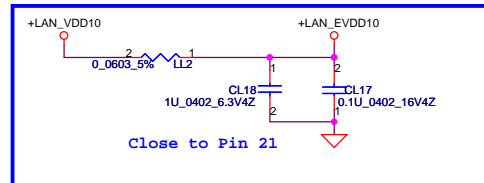
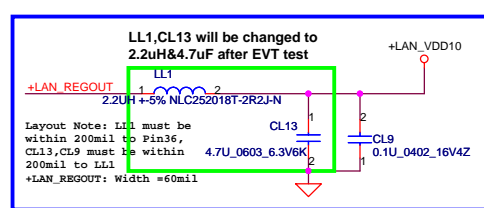
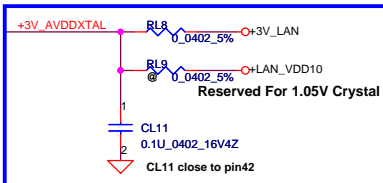
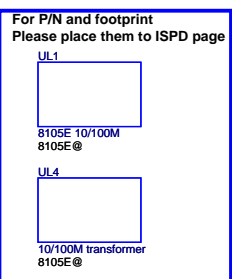
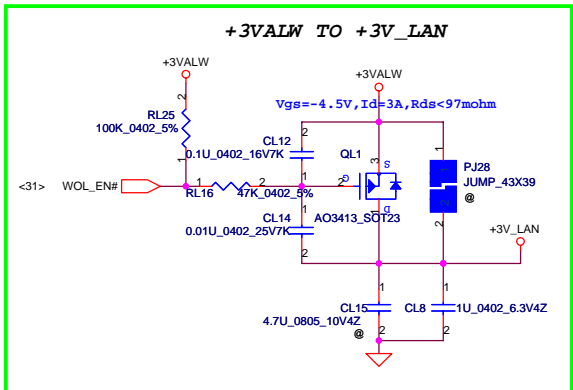


3/31 Use new symbol for ME

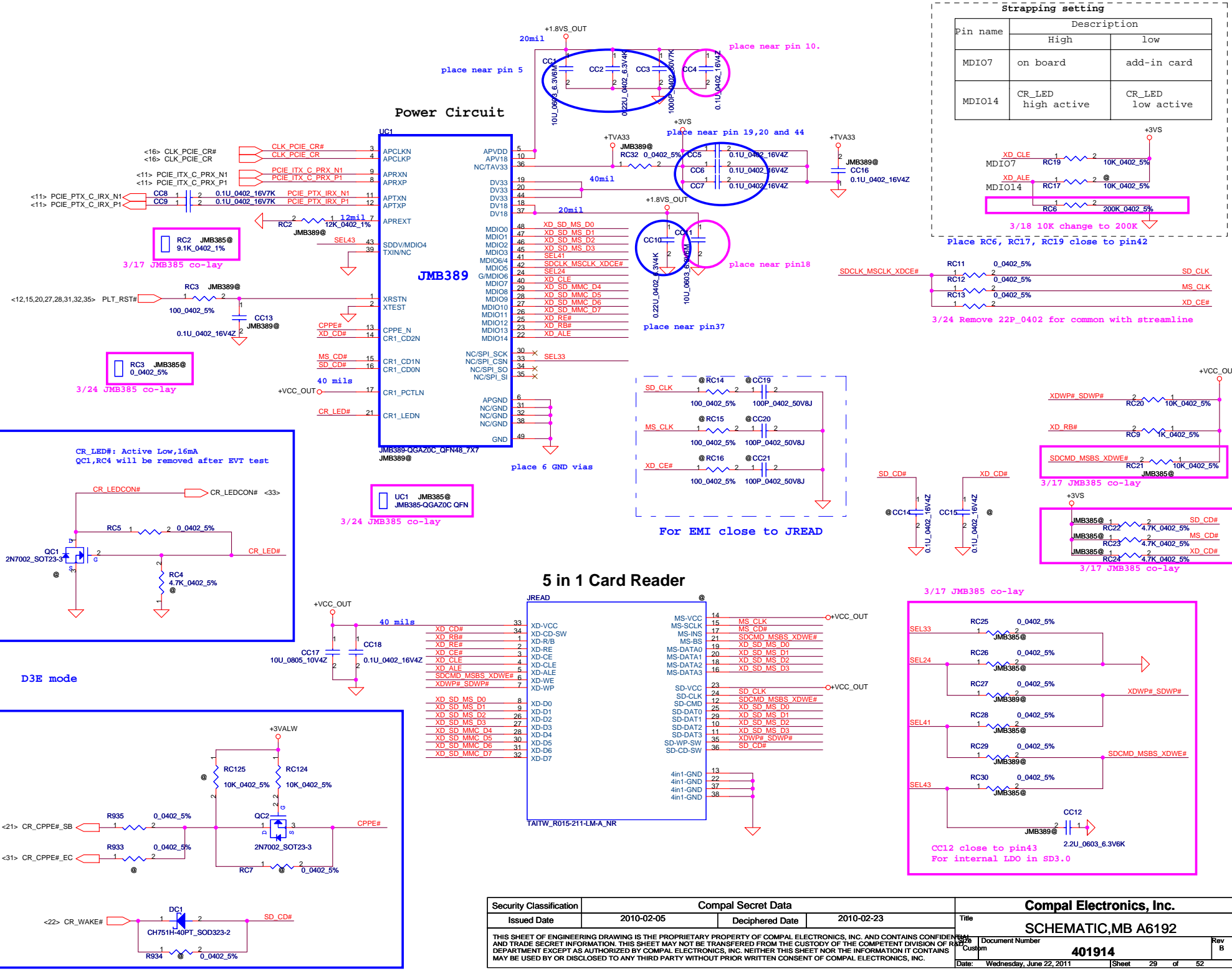
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|---|--------------------|-----------------|------------|--------------------------|---------------------|----------|
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| Issued Date | 2010-02-05 | Deciphered Date | 2010-02-23 | Title | SCHEMATIC, MB A6192 | |
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| | | | | | 401914 | |
| Date: | | | | Wednesday, June 22, 2011 | Sheet | 27 of 52 |



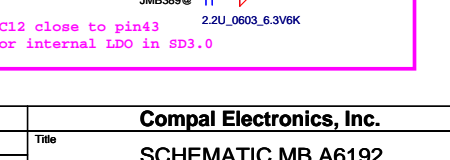
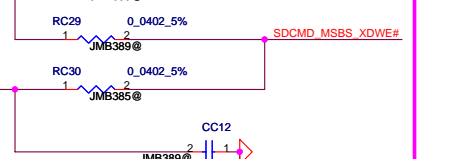
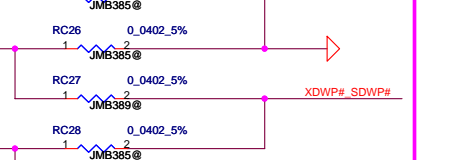
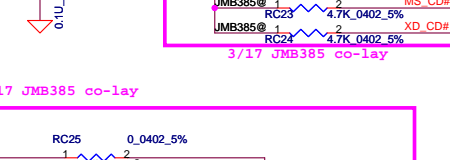
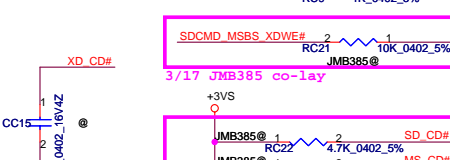
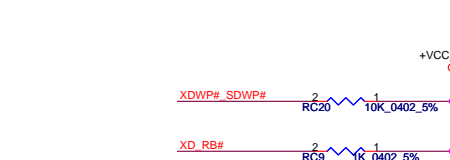
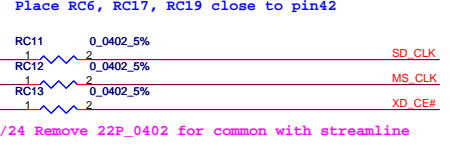
| | RTL8105E | RTL8111E |
|-------|------------------|------------|
| Pin14 | NC | NC |
| Pin15 | NC | 10K ohm PD |
| Pin38 | 1K ohm Pull-high | |

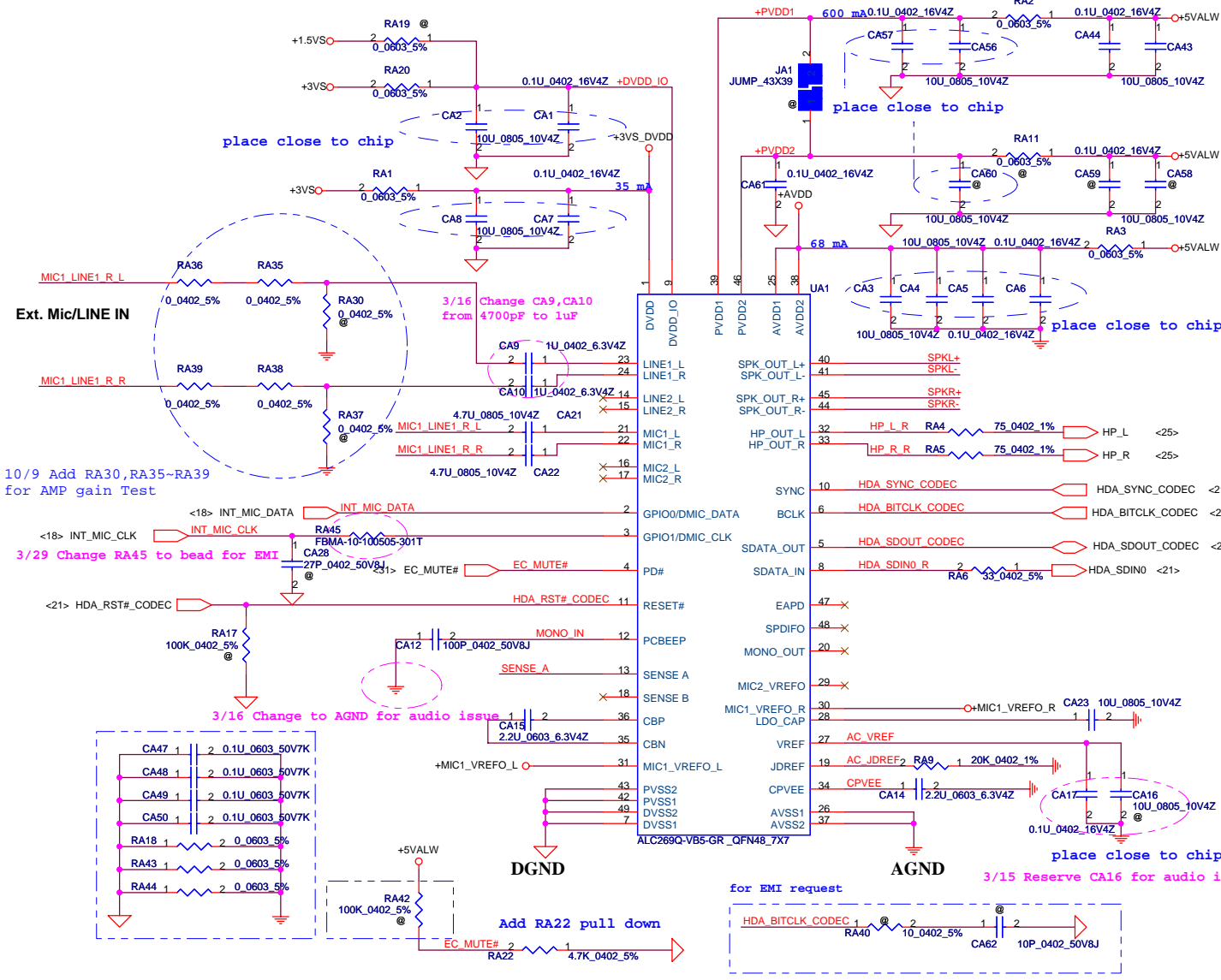


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| Title | | | | Document Number | | | | Rev B | | | |
| Date | | | | Wednesday, June 22, 2011 | | | | Sheet 28 of 52 | | | |

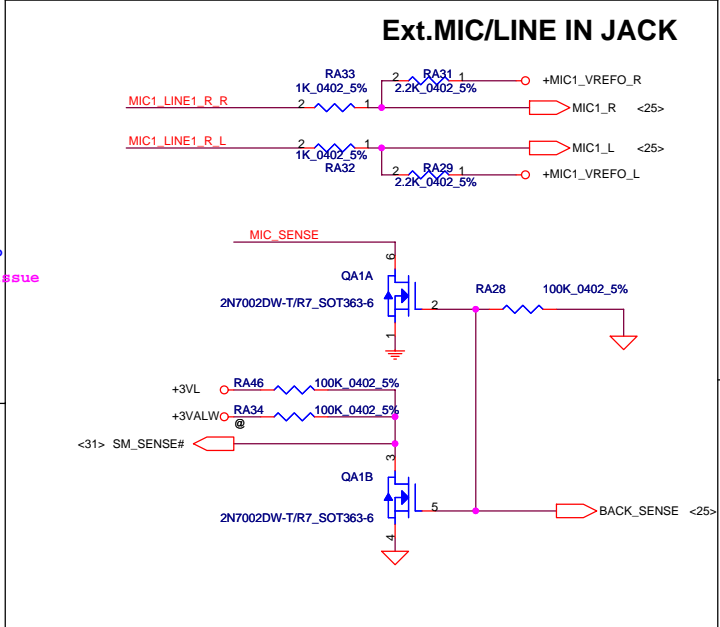
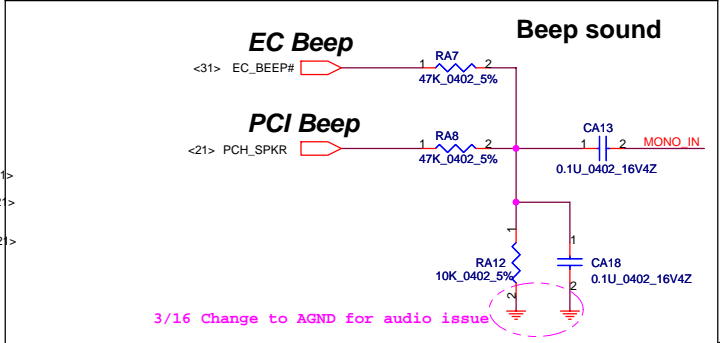
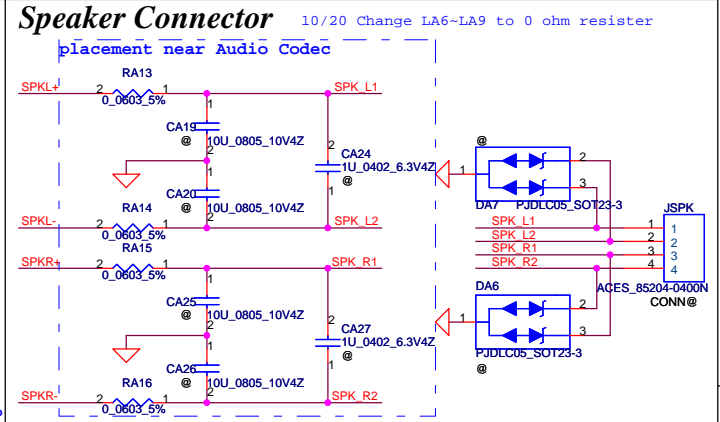
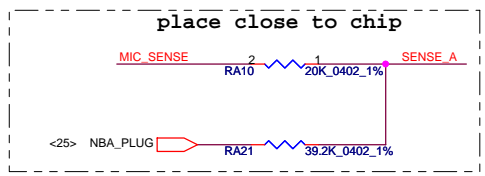


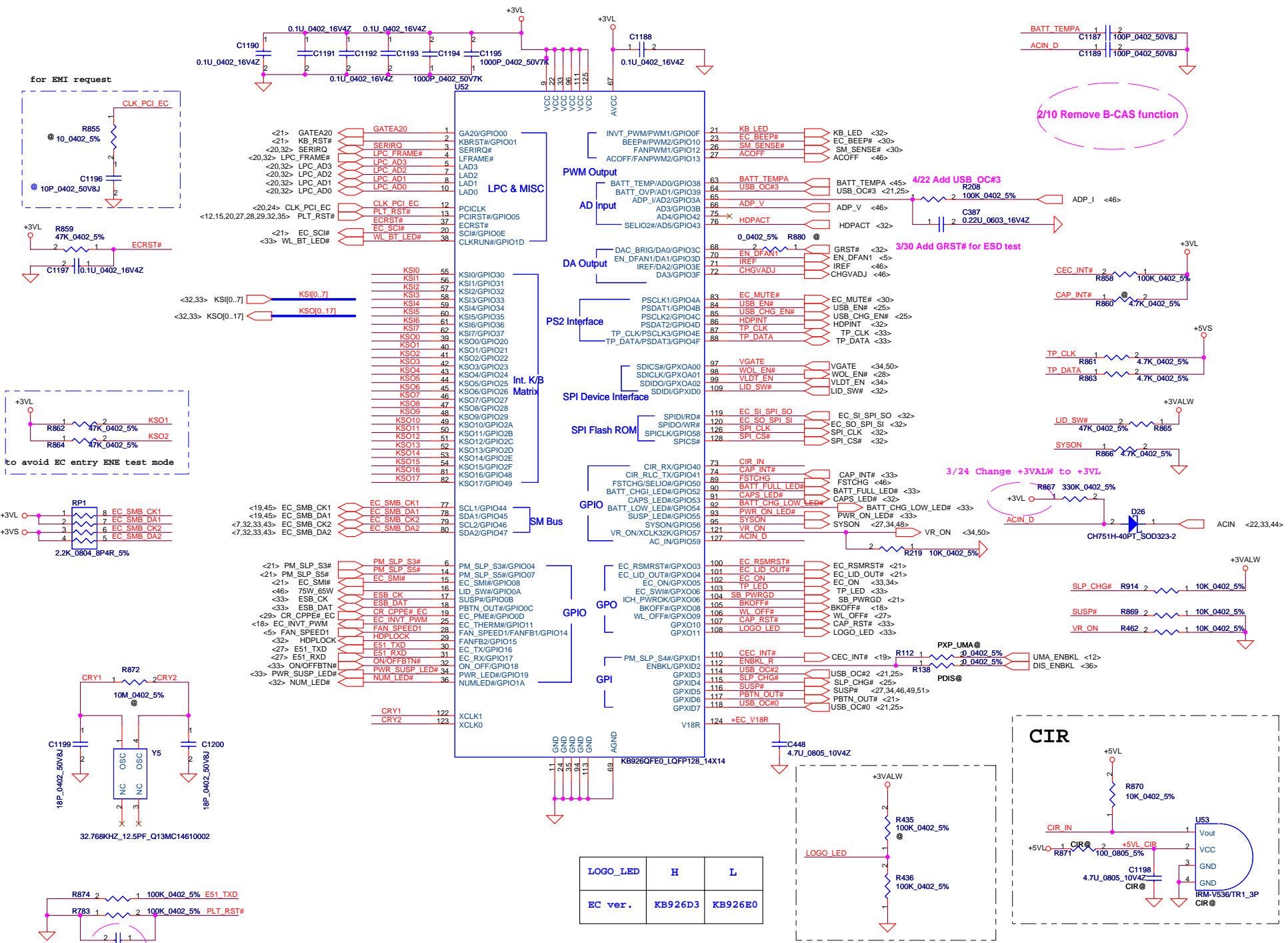
| Strapping setting | | |
|-------------------|--------------------|-------------------|
| Pin name | Description | |
| | High | low |
| MDIO7 | on board | add-in card |
| MDIO14 | CR_LED high active | CR_LED low active |



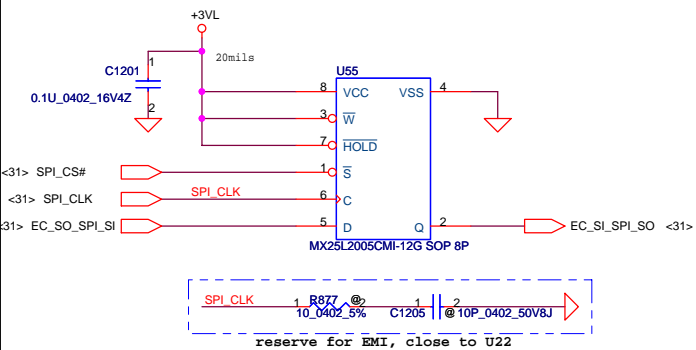


| Sense Pin | Impedance | Codec Signals | Function |
|-----------|-----------|---------------------|---------------|
| SENSE A | 39.2K | PORT-I (PIN 32, 33) | Headphone out |
| | 20K | PORT-B (PIN 21, 22) | Ext. MIC |
| | 10K | PORT-C (PIN 23, 24) | |
| | 5.1K | (PIN 48) | |
| SENSE B | 39.2K | PORT-E (PIN 14, 15) | |
| | 20K | PORT-F (PIN 16, 17) | |
| | 10K | PORT-H (PIN 20) | |

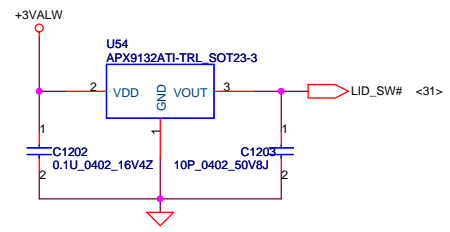




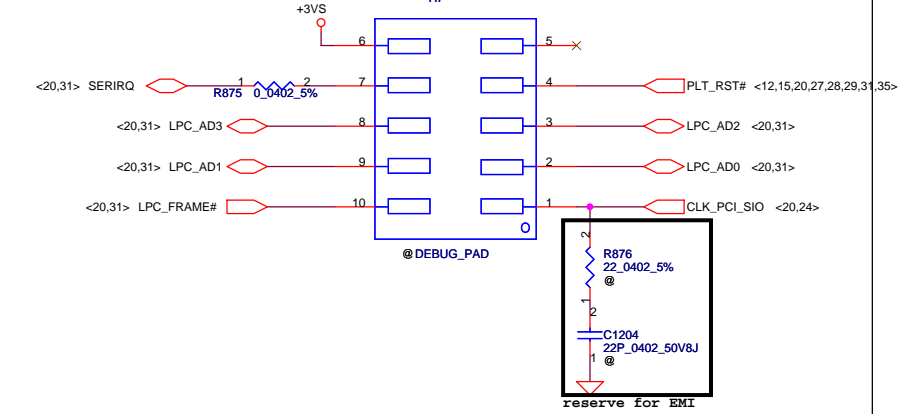
SPI Flash (256KB)
Socket: SP07000F500 & SP07000H900



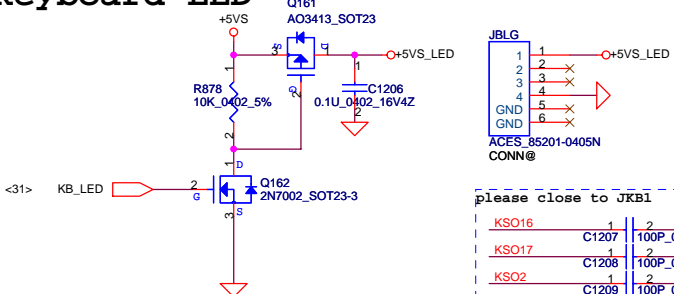
Lid SW



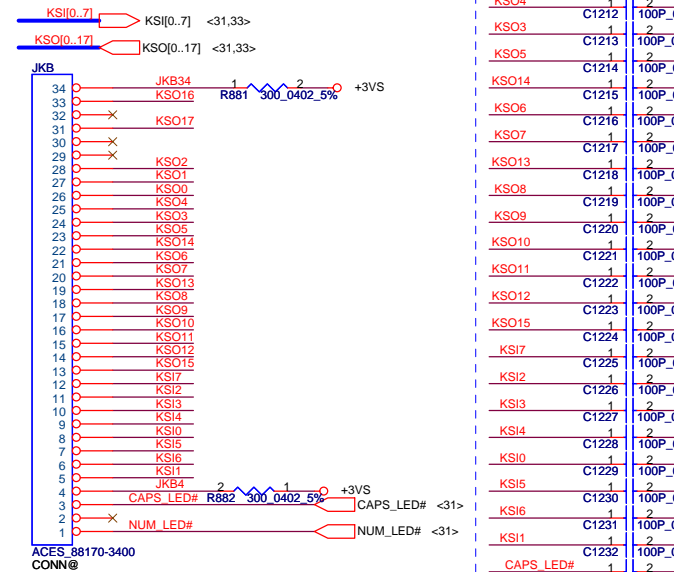
LPC Debug Port



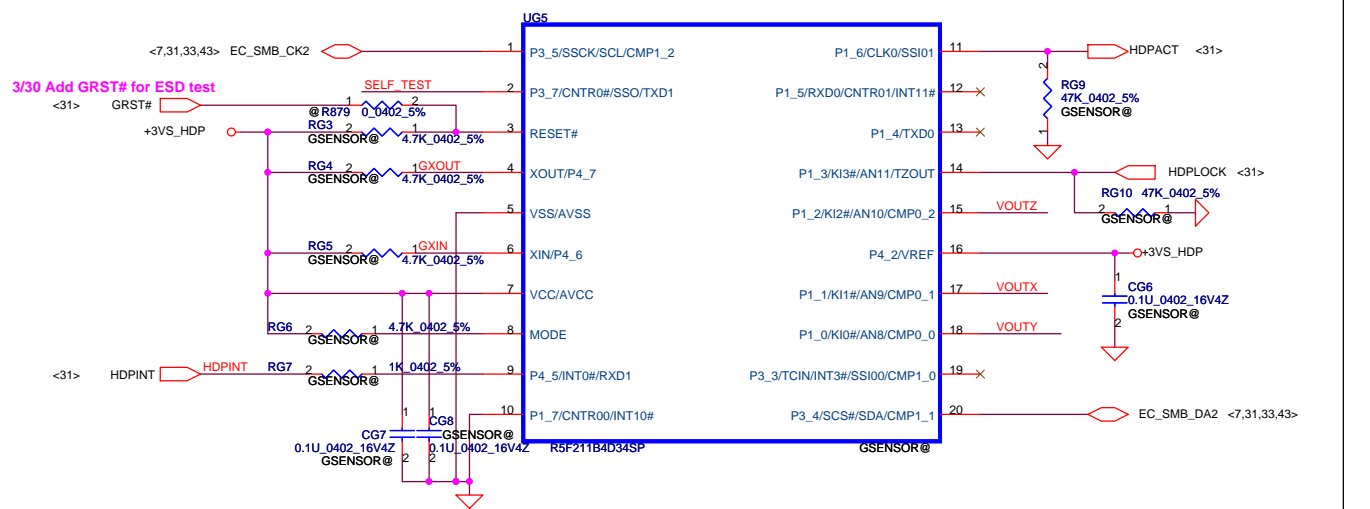
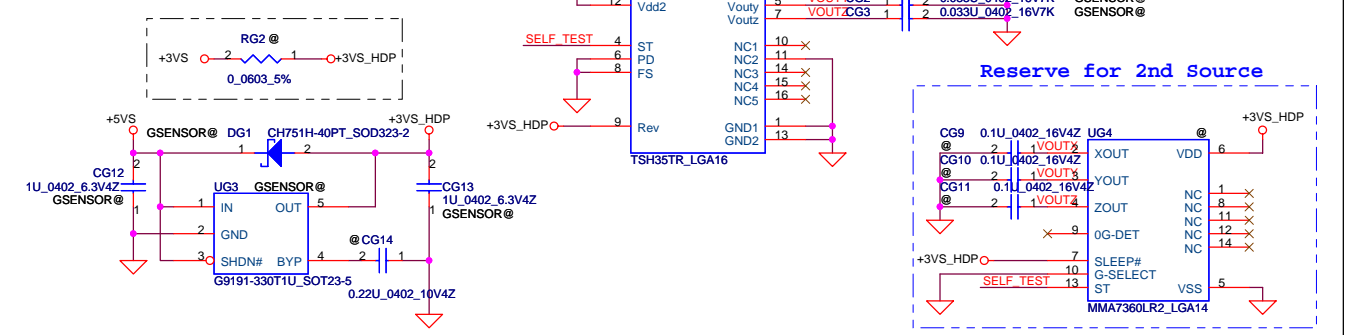
Keyboard LED



KEYBOARD CONN.

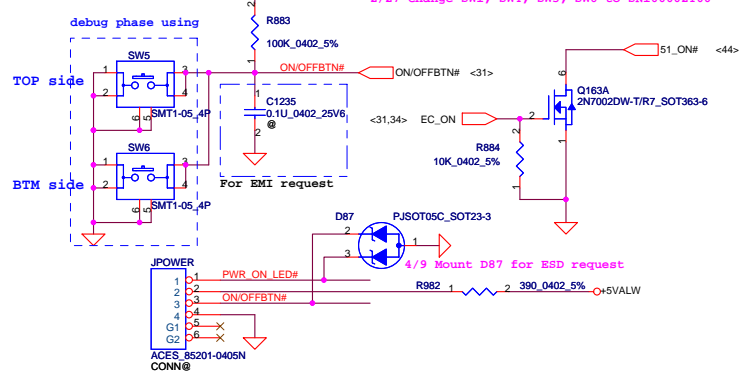


G-Sensor

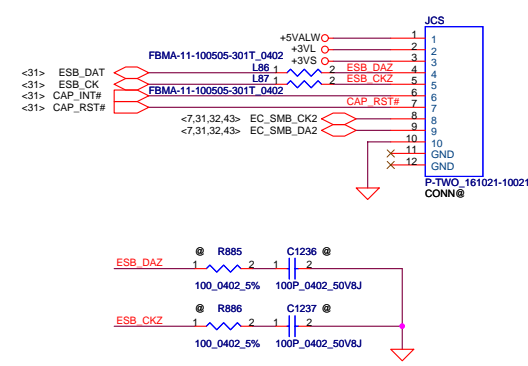


| | | | | |
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| | | 401914 | 401914 | B |
| | | Date: | Wednesday, June 22, 2011 | Sheet 32 of 52 |

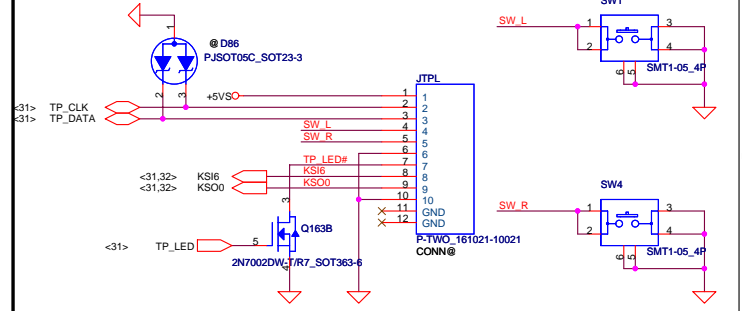
Power Button



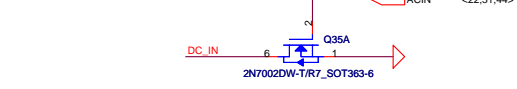
Caps Sensor Connector



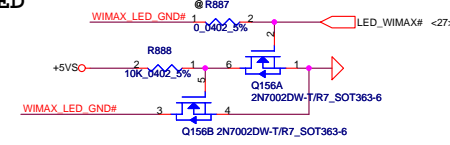
Touch/B Connector



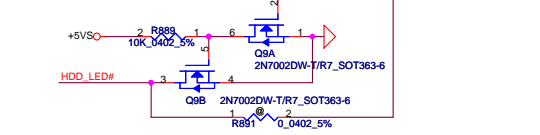
DC-IN LED



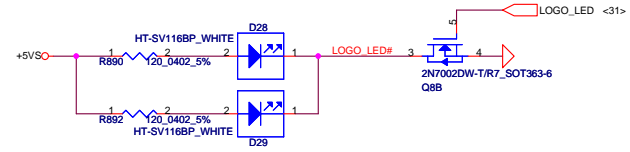
WiMAX LED



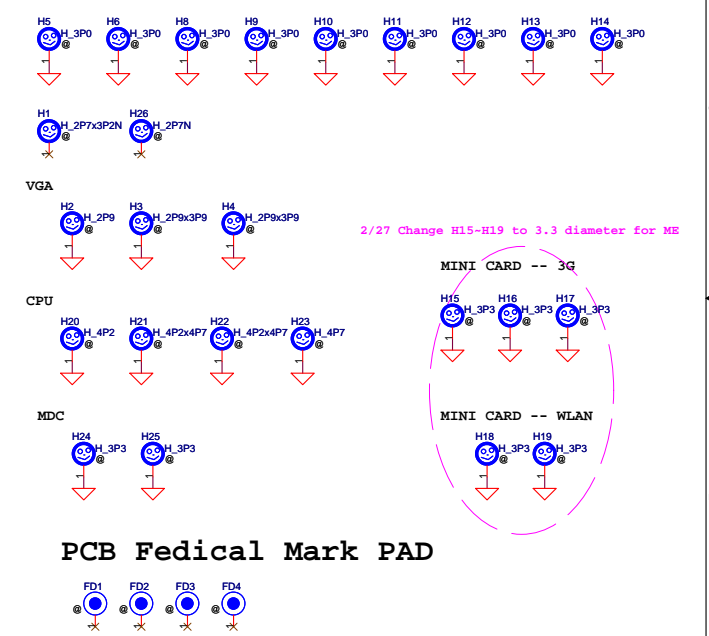
HDD LED



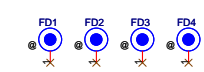
Logo LED



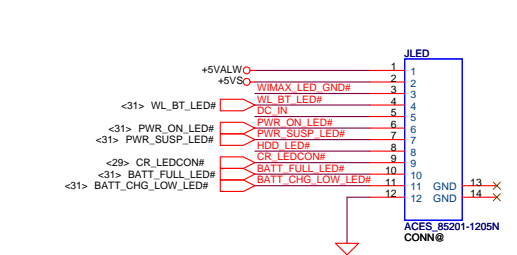
Screw Hole



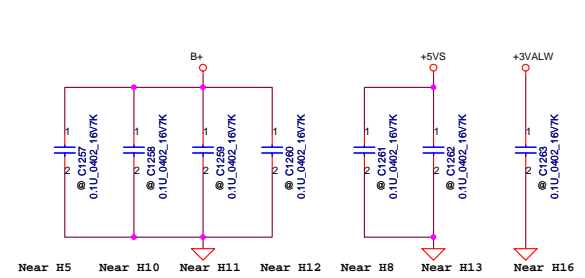
PCB Federal Mark PAD



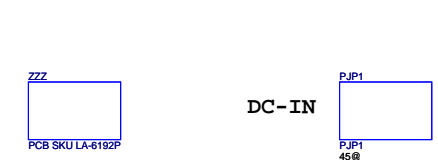
LED/B Connector



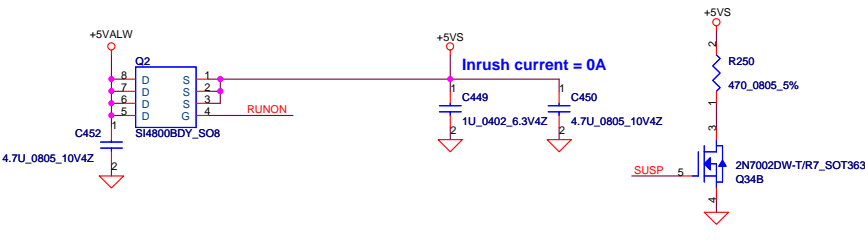
ESD reserved



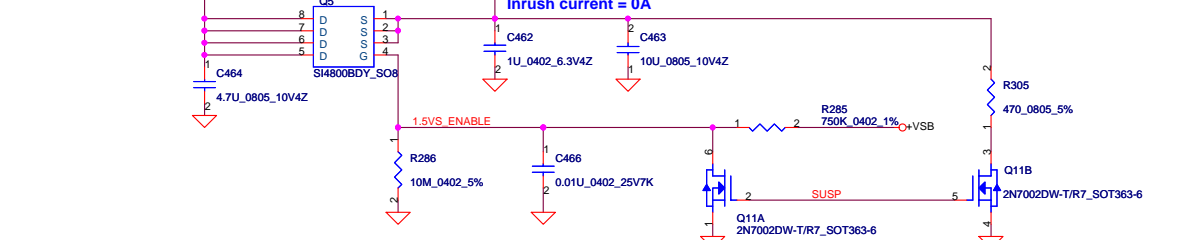
PCB



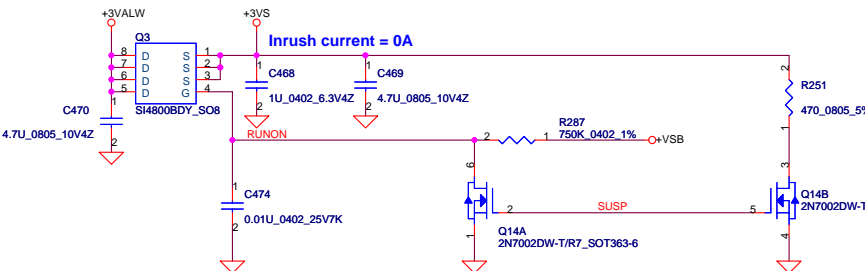
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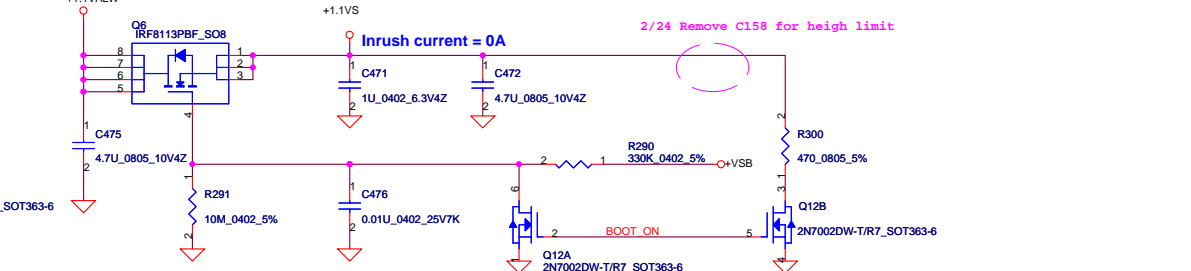
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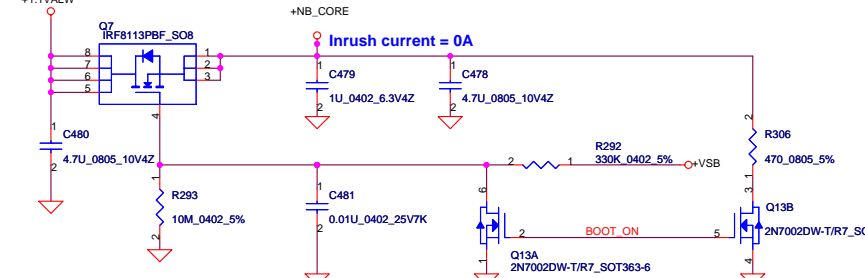
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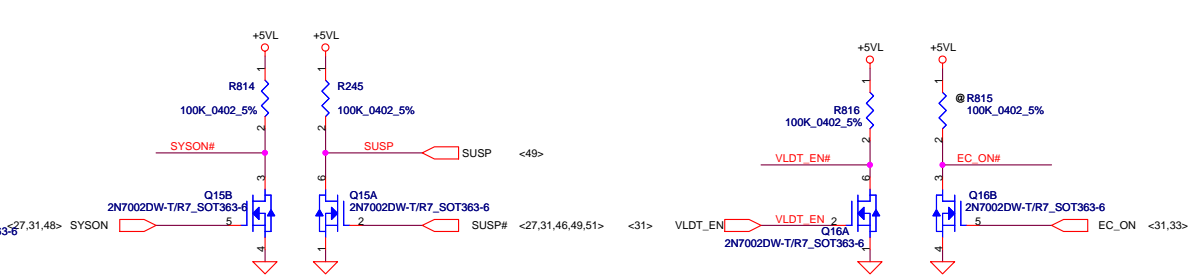
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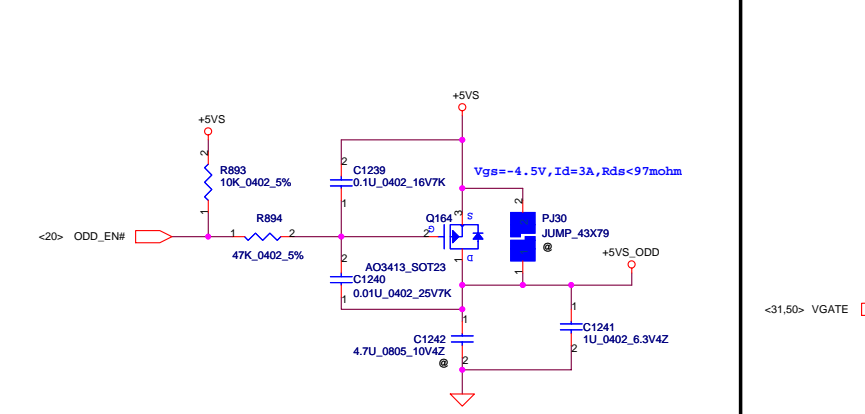
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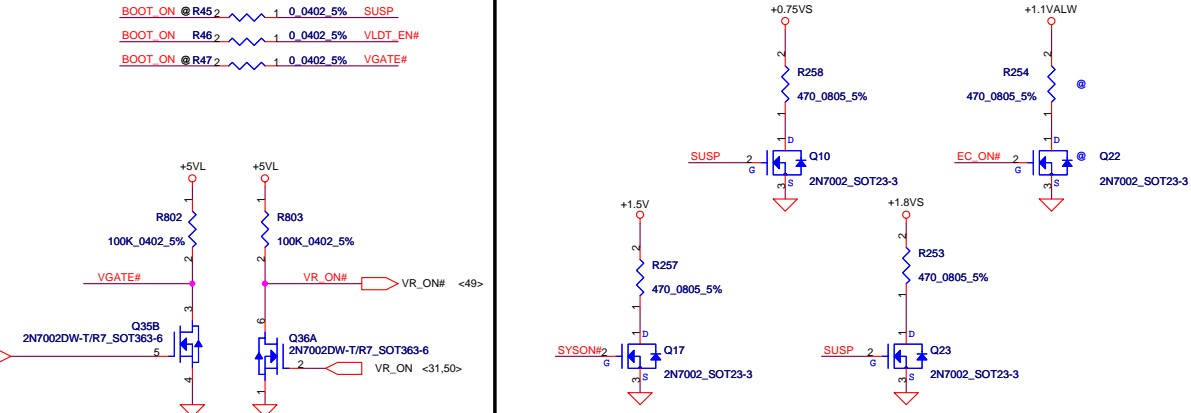
< Inversion of SYSON, SUSP#, VLDT_EN, EC_ON >



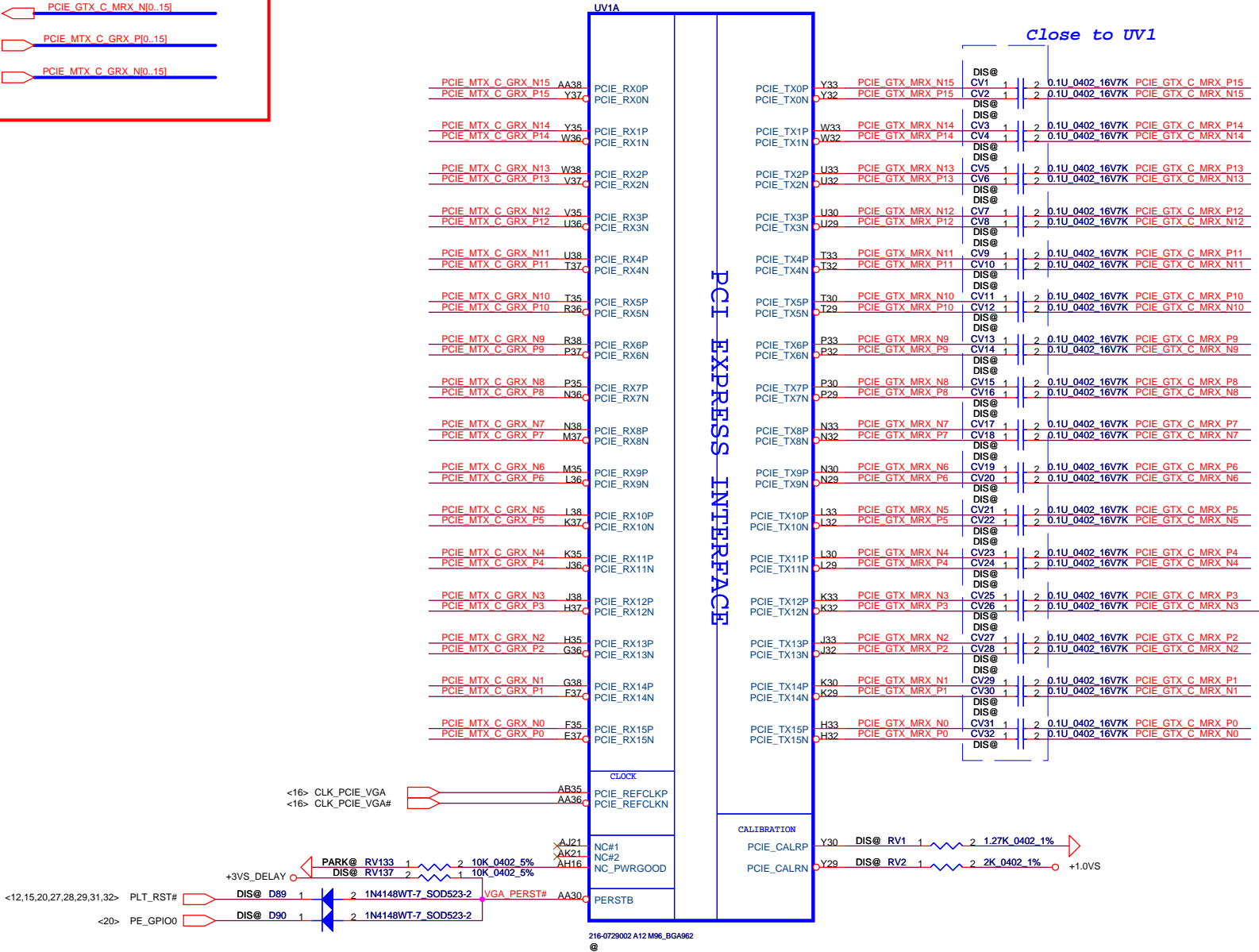
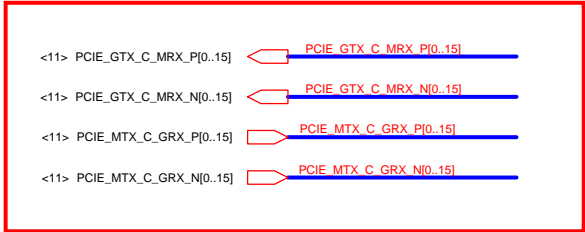
+5VS TO +5VS_ODD



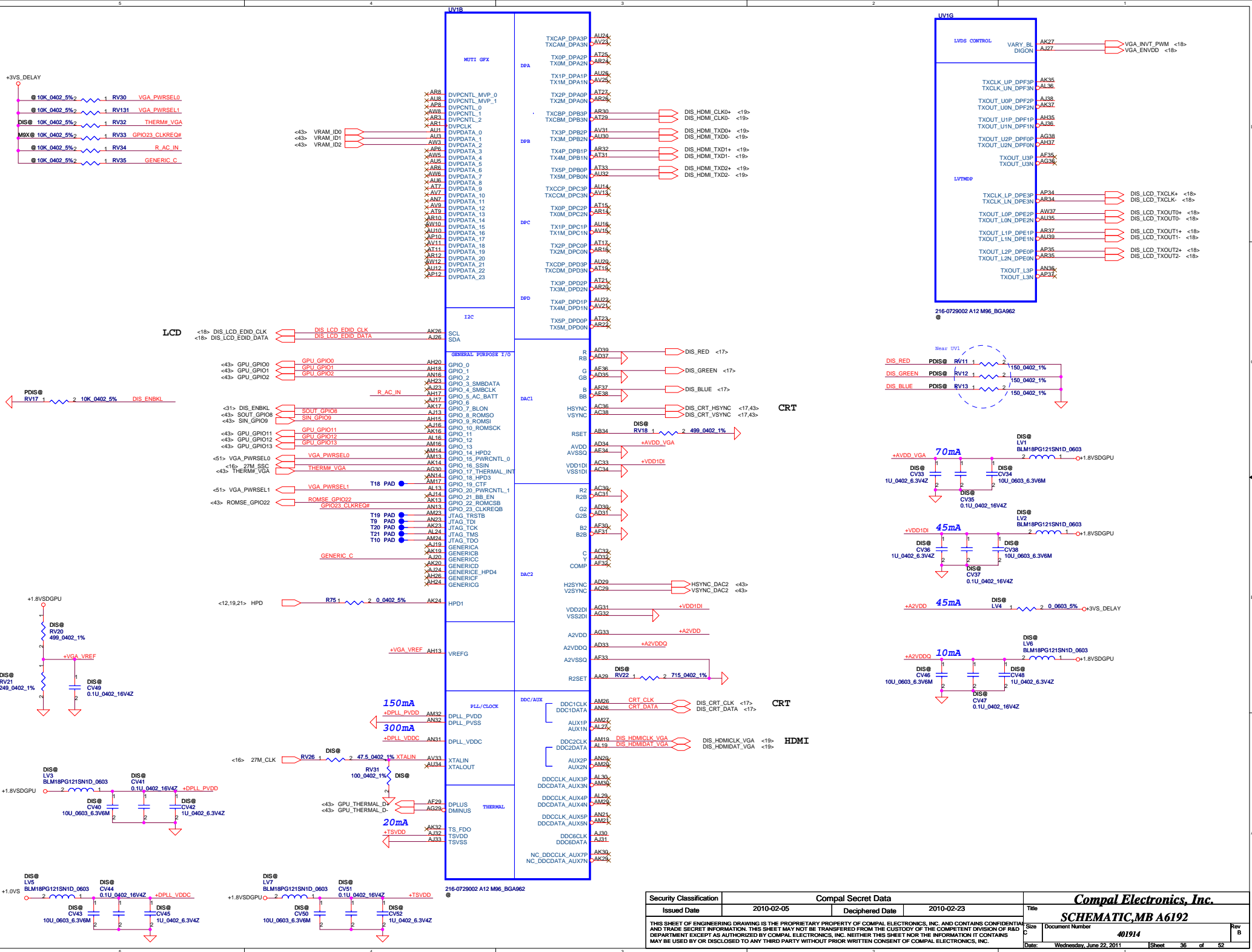
< Discharge circuit >



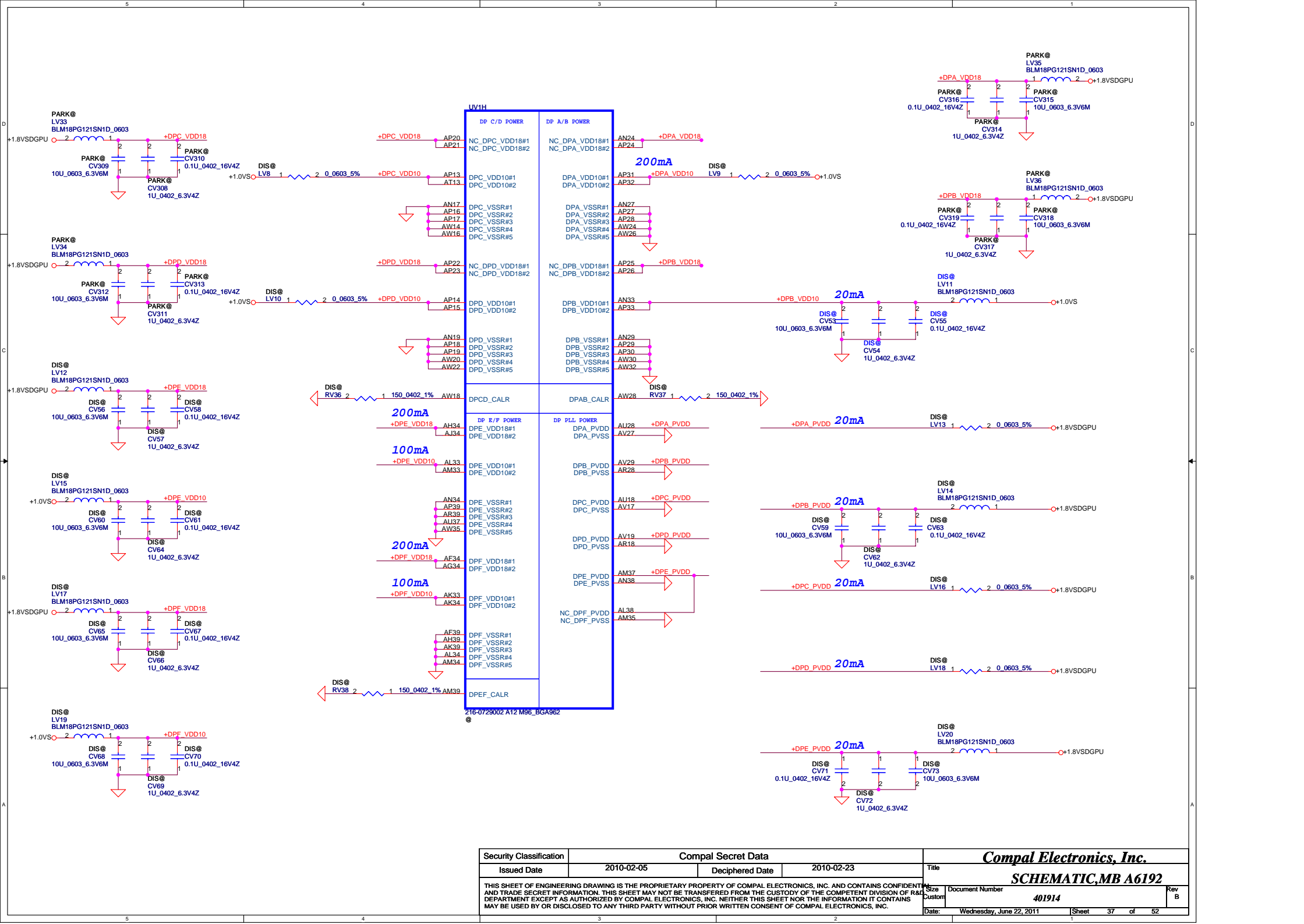
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| | | | | Sheet | 34 of 52 |

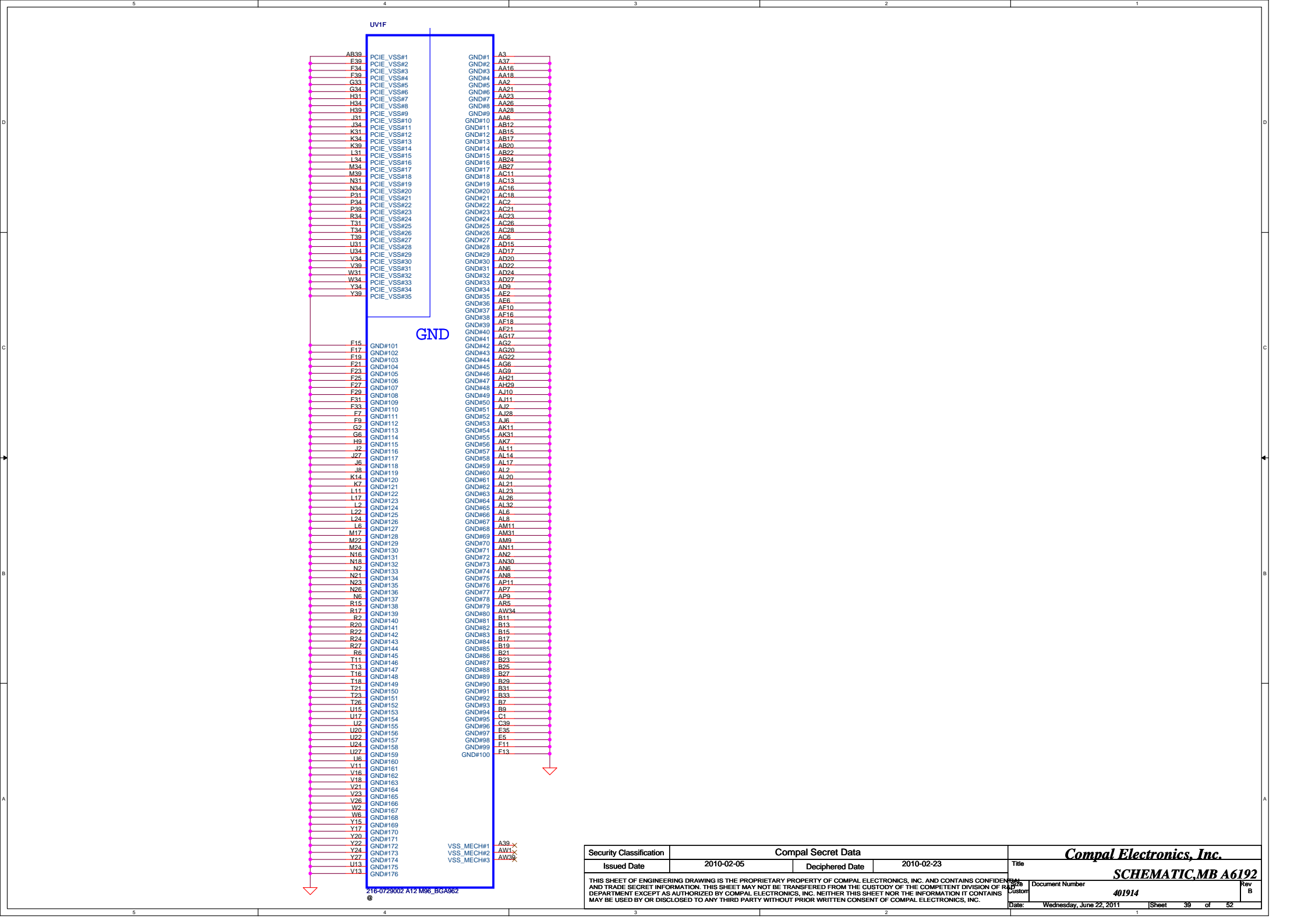


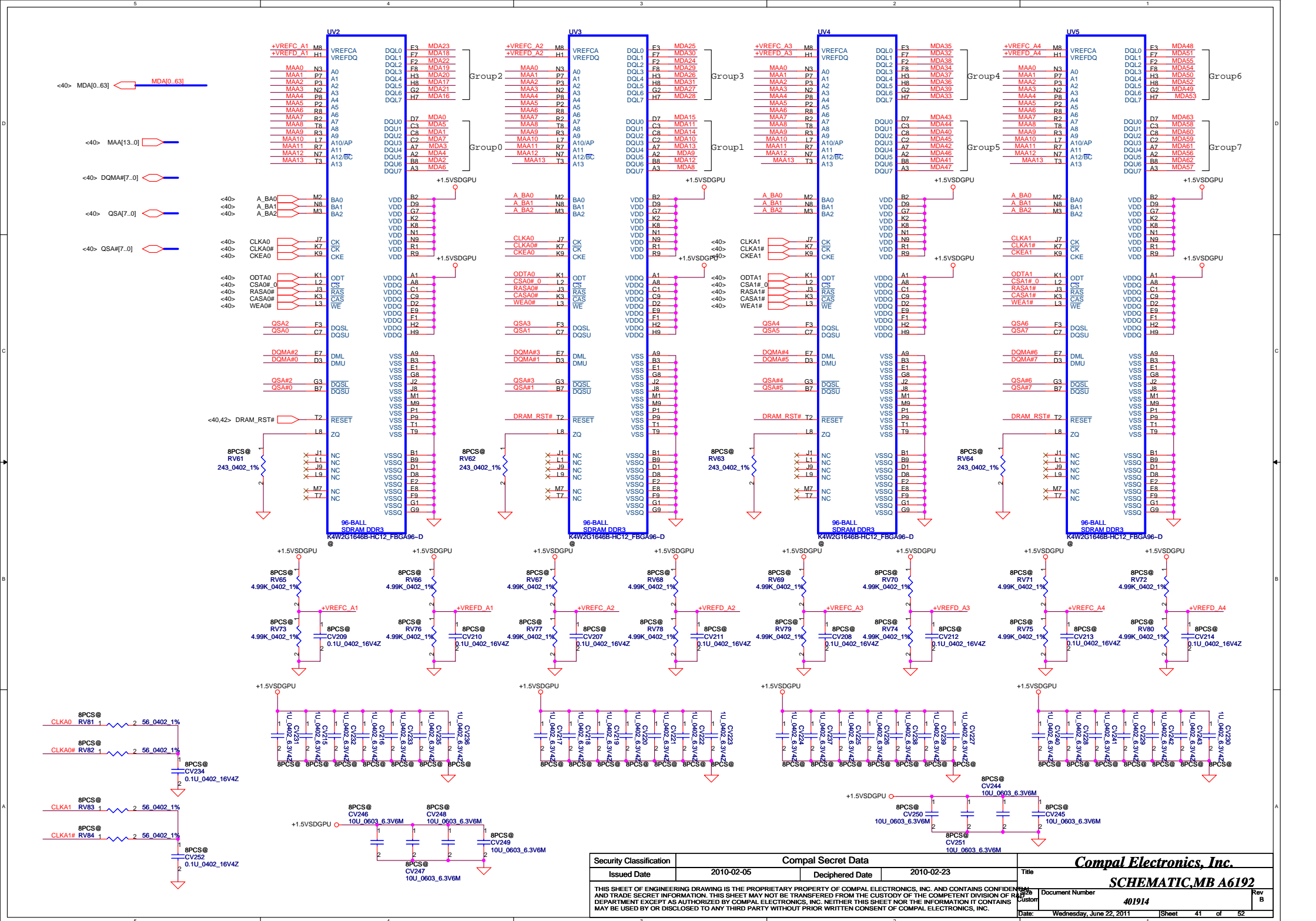
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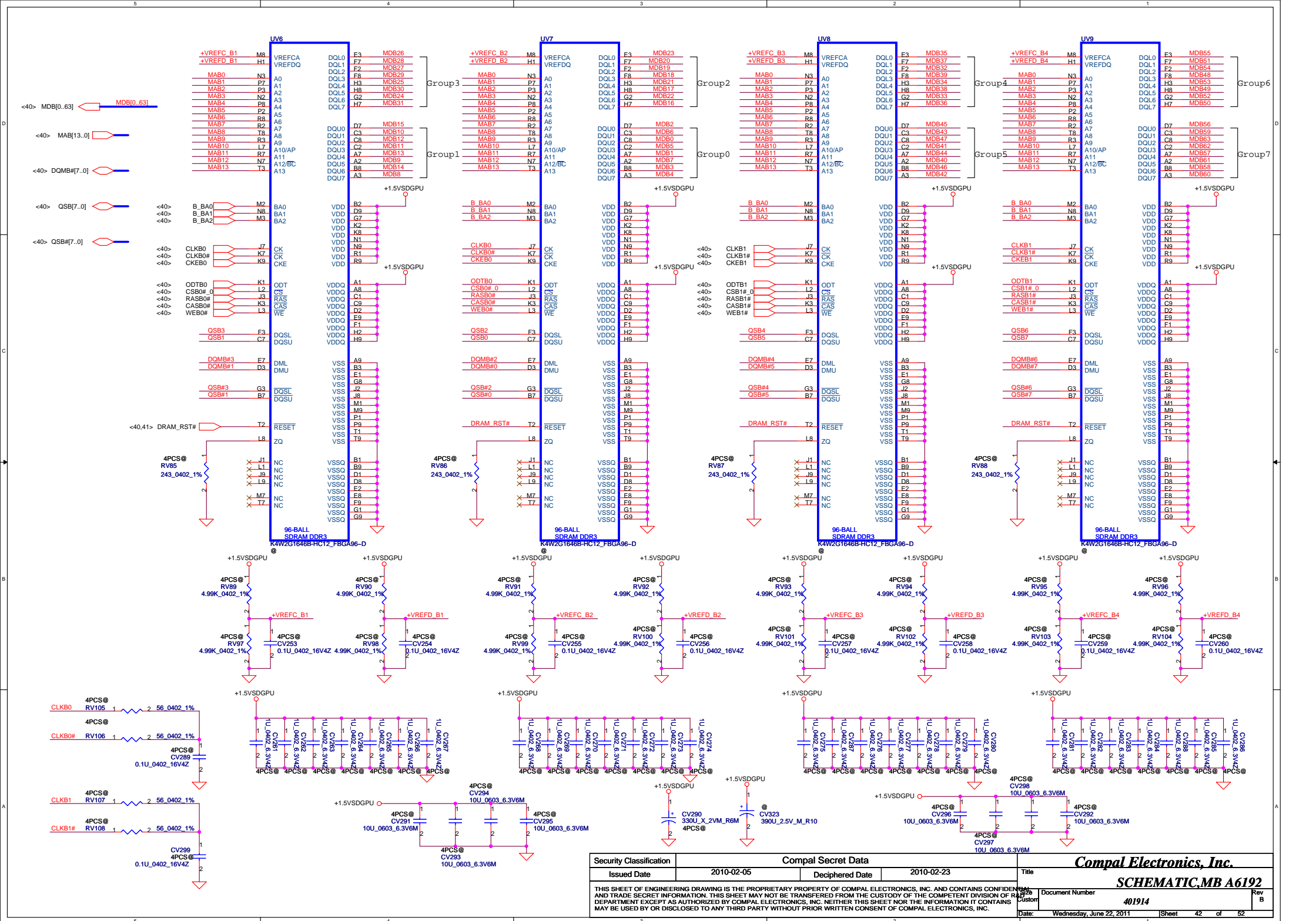


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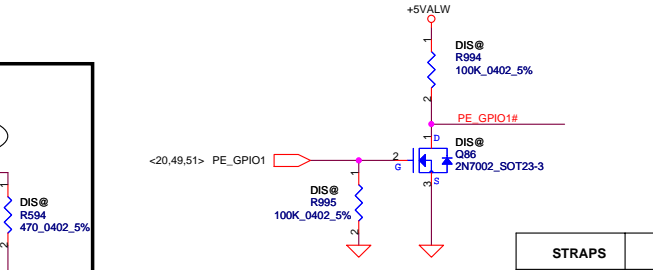
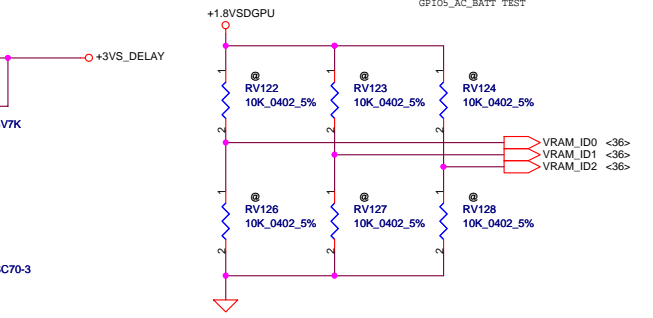
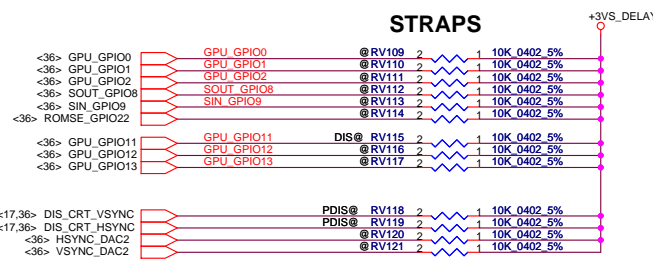
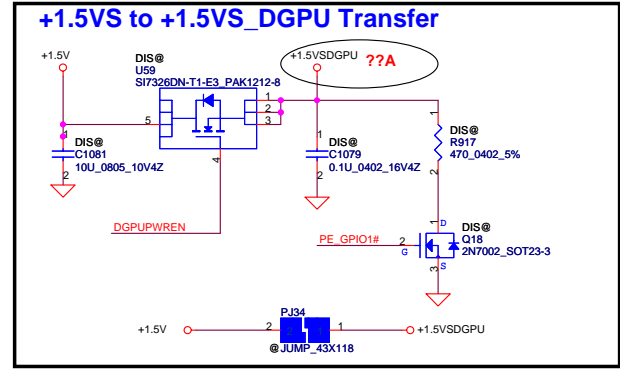
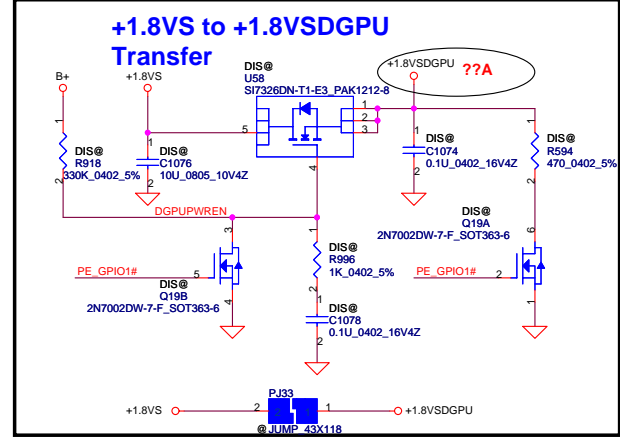
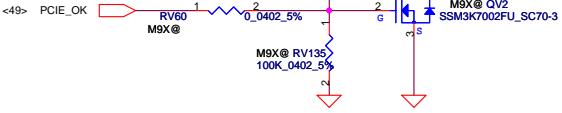






| GPU by the system BIOS | | GPU by VBIOS | |
|------------------------------|-------------|------------------------------|--|
| GPIO22 = 0 (BIOS_ROM_EN = 0) | | GPIO22 = 1 (BIOS_ROM_EN = 1) | |
| GPIO[13:11] | MEMORY SIZE | GPIO[13:11] | |
| 0 0 0 | 128MB | 1 0 0 | |
| 0 0 1 | 256MB | (M25P05A) | |
| 0 1 0 | 64MB | | |

2/23 Add RV3, RV136 for common with Hamburg



STRAPS

ALLOW FOR PULLUP PADS FOR THESE STRAPS AND IF THESE GPIOS ARE USED, THEY MUST NOT CONFLICT DURING RESET

| STRAPS | PIN | DESCRIPTION OF DEFAULT SETTINGS | RECOMMENDED SETTINGS |
|----------------------|----------------|---|----------------------|
| TX_PWRS_ENB | GPIO0 | PCIE FULL TX OUTPUT SWING | 0 |
| TX_DEEMPH_EN | GPIO1 | PCIE TRANSMITTER DE-EMPHASIS ENABLED | 0 |
| BIF_GEN2_EN_A | GPIO2 | PCIE GNE2 ENABLED | 0 |
| BIF_CLK_PM_EN | GPIO8 | BIF_CLK_PM_EN | 0 |
| BIF_VGA_DIS | GPIO9 | VGA Controller ENABLED | 0 (Enable) |
| BIOS_ROM_EN | GPIO_22_ROMCSB | Enable External BIOS device | 0 |
| ROMIDCFG(2:0) | GPIO[13:11] | ROM Configurations | 0 0 1 |
| VIP_DEVICE_STRAP_ENA | VSYNC_DAC2 | IGNORE VIP DEVICE STRAPS | 0 |
| AUD[1] | HSYNC | AUD[1] AUD[0] 0 0 No audio function 0 1 Audio for DisplayPort and HDMI if dongle is detected 1 0 Audio for DisplayPort only 1 1 Audio for both DisplayPort and HDMI | 1 1 |
| AUD[0] | VSYNC | | |
| RSVD | HSYNC_DAC2 | | 0 |
| RSVD | GENERICC | | 0 |

AMD RESERVED CONFIGURATION STRAPS

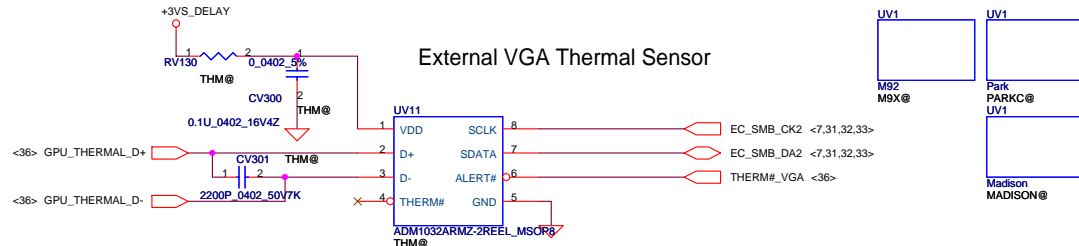
ALLOW FOR PULLUP PADS FOR THESE STRAPS AND IF THESE GPIOS ARE USED, THEY MUST NOT CONFLICT DURING RESET

HSYNC_DAC2 GENERICC

PULLUP PADS ARE NOT REQUIRED FOR THESE STRAPS BUT IF THESE GPIOS ARE USED, THEY MUST NOT CONFLICT DURING RESET

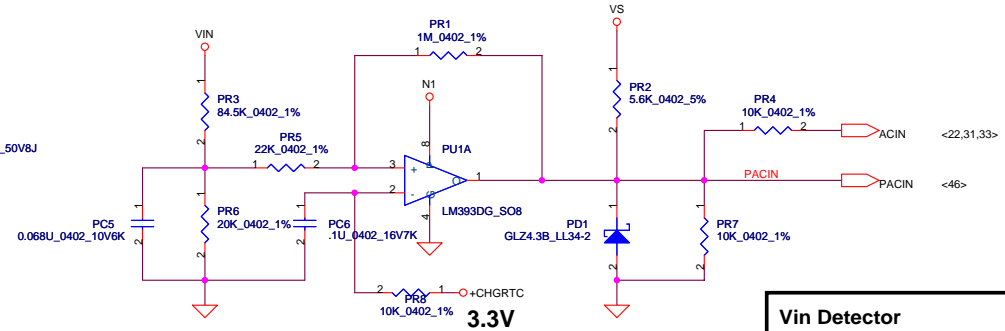
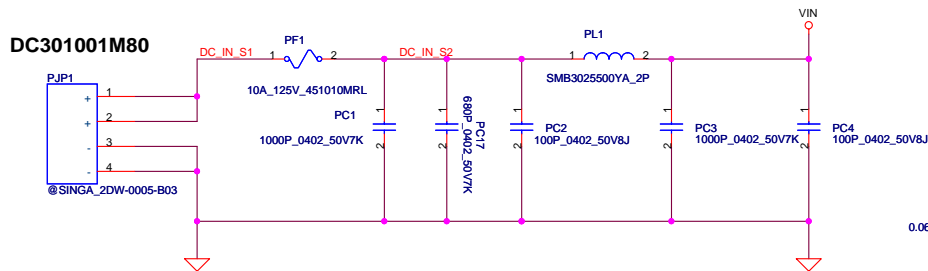
GPIO_28_TDO GPIO21_BB_EN

| STRAPS | PIN | GPU | VRAM size | Vendor Part Number# | Compal Part Number# | VRAM_ID 2,1,0 |
|--------------|-----------------|------------|------------------|-----------------------|---------------------|-----------------|
| VRAM_ID[2:0] | DVPDATA (2,1,0) | Park M2 | 512M 64Mx16 (x4) | HYN H5TQ1G63BFR-12C | SA000032400 | 0 0 0 |
| | | | 512M 64Mx16 (x4) | SAM K4W1G1646E-HC12 | SA000035700 | 0 0 1 |
| | | | 512M 64Mx16 (x4) | HYN H5TQ1G63BFR-12C-C | SA000032460 | 0 1 0 |
| | | | 1G 128Mx16 (x4) | SAM K4W2G1646B-HC12 | SA00003MQ00 | 0 1 1 (Reserve) |
| | | Madison M2 | 1G 64Mx16 (x8) | HYN H5TQ1G63BFR-12C | SA000032400 | 1 0 0 |
| | | | 1G 64Mx16 (x8) | SAM K4W1G1646E-HC12 | SA000035700 | 1 0 1 |
| | | | 1G 64Mx16 (x8) | HYN H5TQ1G63BFR-12C-C | SA000032460 | 1 1 0 |
| | | | 2G 128Mx16 (x8) | SAM K4W2G1646B-HC12 | SA00003MQ00 | 1 1 1 (Reserve) |



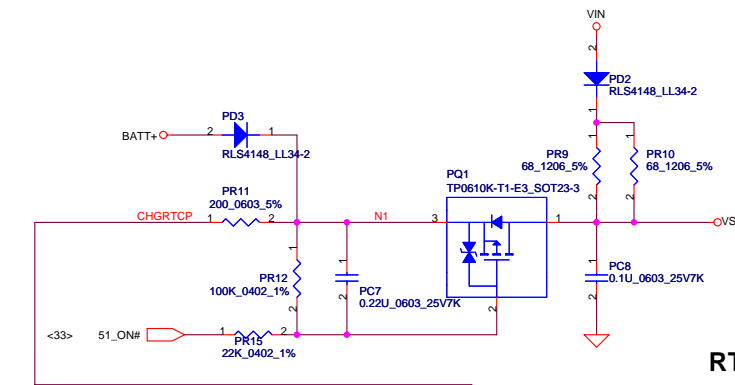
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DC301001M80

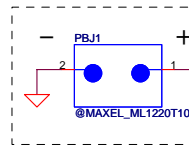


Vin Detector

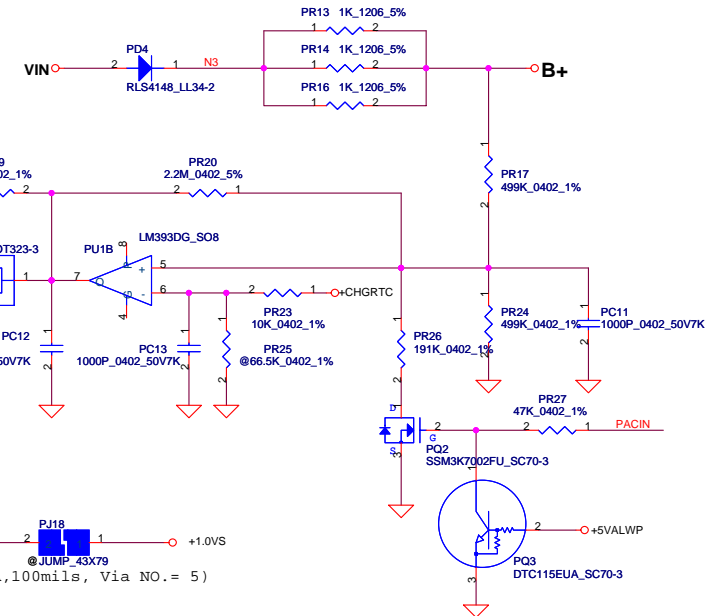
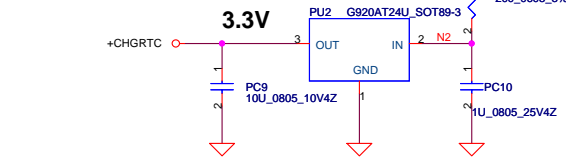
High 18.384 17.901 17.430
Low 17.728 17.257 16.976



RTC Battery



SP093MX0000



Precharge detector 15.97V/14.84V FOR ADAPTOR

+3VALWP (5A, 200mils, Via NO. = 10)
OCP(min) = 7.7A

+5VALWP (5A, 200mils, Via NO. = 10)
OCP(min) = 7.9A

+VSBP (120mA, 40mils, Via NO. = 1)

+0.75VSP (1A, 40mils, Via NO. = 2)

+1.1VALWP (12A, 480mils, Via NO. = 24)
OCP(min) = 18.7A

+1.5VP (7.5A, 300mils, Via NO. = 15)
OCP(min) = 8.7A

+1.8VSP (2.5A, 100mils, Via NO. = 5)

+1.05VSP (1.5A, 60mils, Via NO. = 3)

+3VLP (100mA, 40mils, Via NO. = 2)

VL (100mA, 40mils, Via NO. = 2)

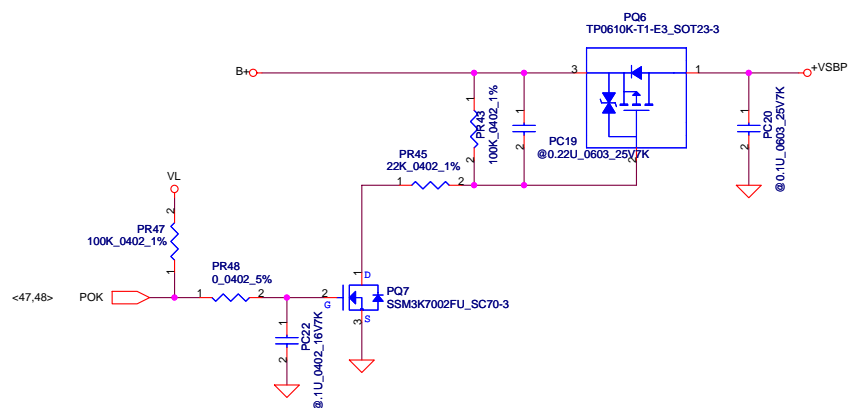
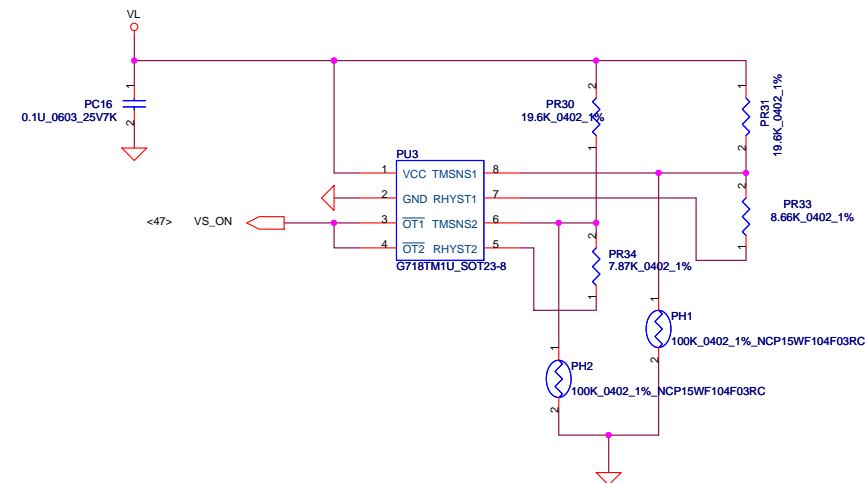
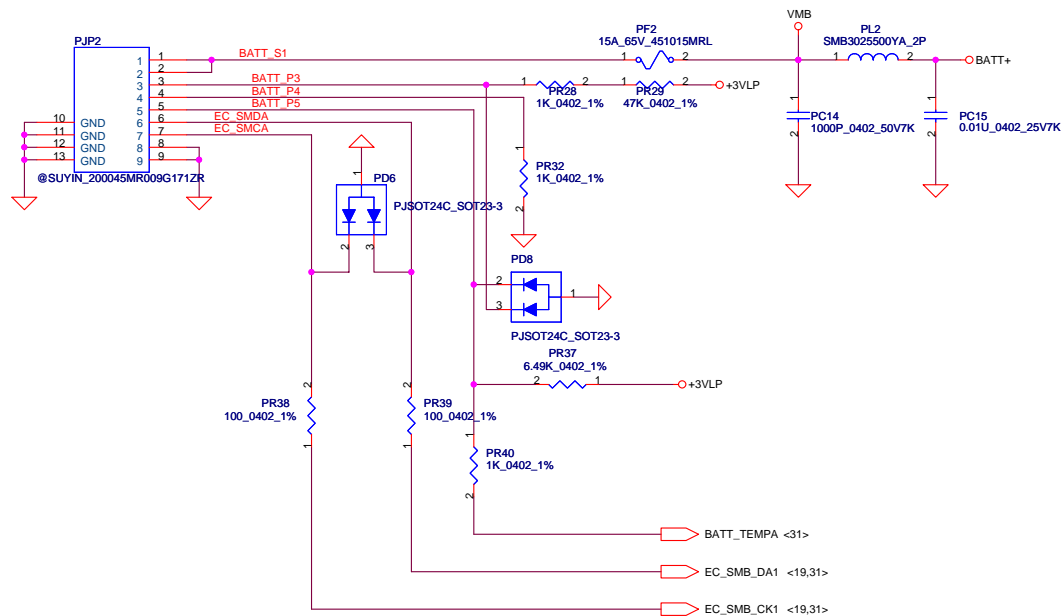
+2.5VSP (1A, 40mils, Via NO. = 2)

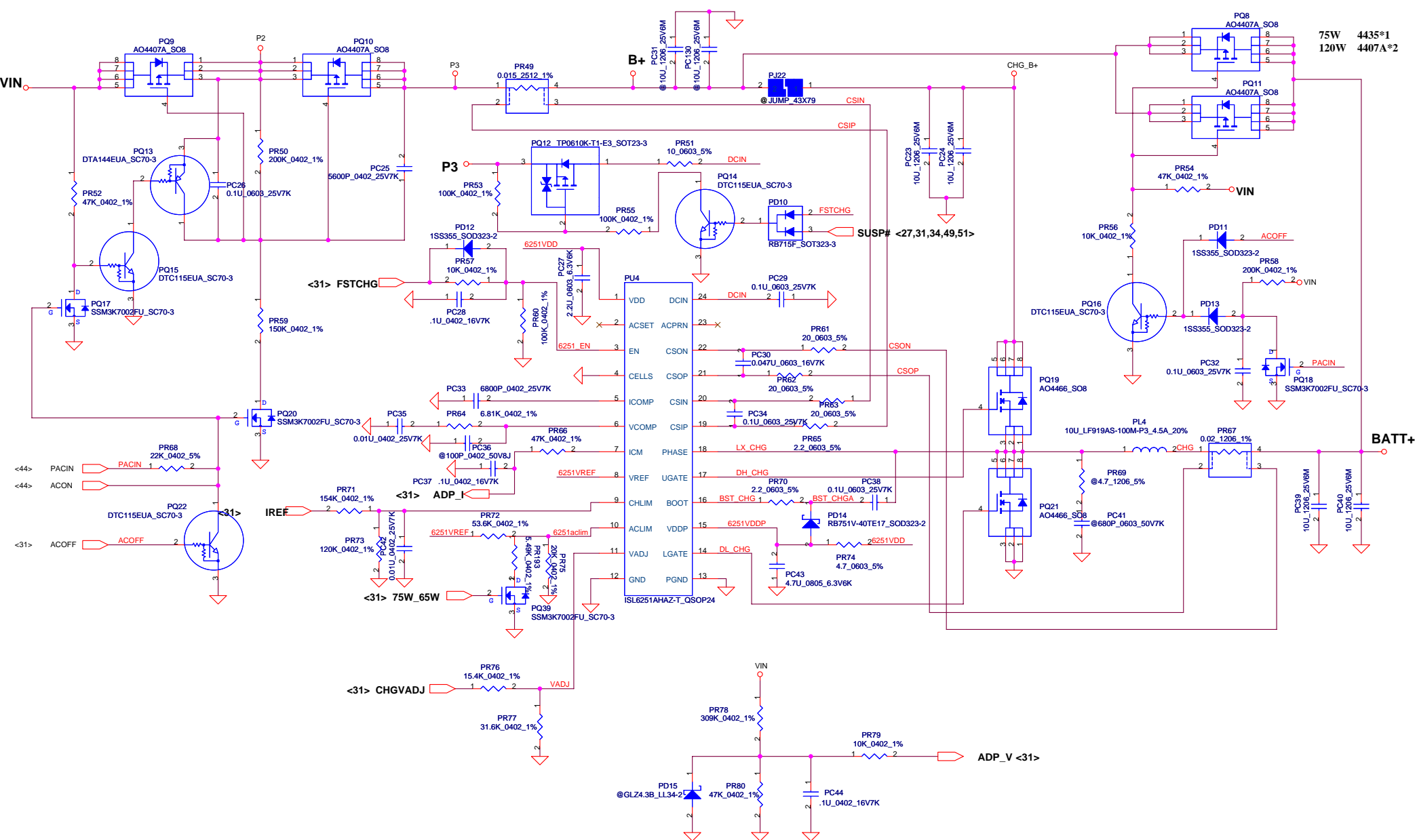
+VDDNBP (4A, 160mils, Via NO. = 8)

+1.0VSP (2.5A, 100mils, Via NO. = 5)

+VGA_COREP (20A, 800mils, Via NO. = 40)
OCP(min) = 20.14A

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| | |
|-----------------------|--|
| CC=0.25A~3.6A | |
| IREF=0.9133*Icharge | |
| IREF=0.228V~3.287V | |
| VCHLIM need over 95mV | |

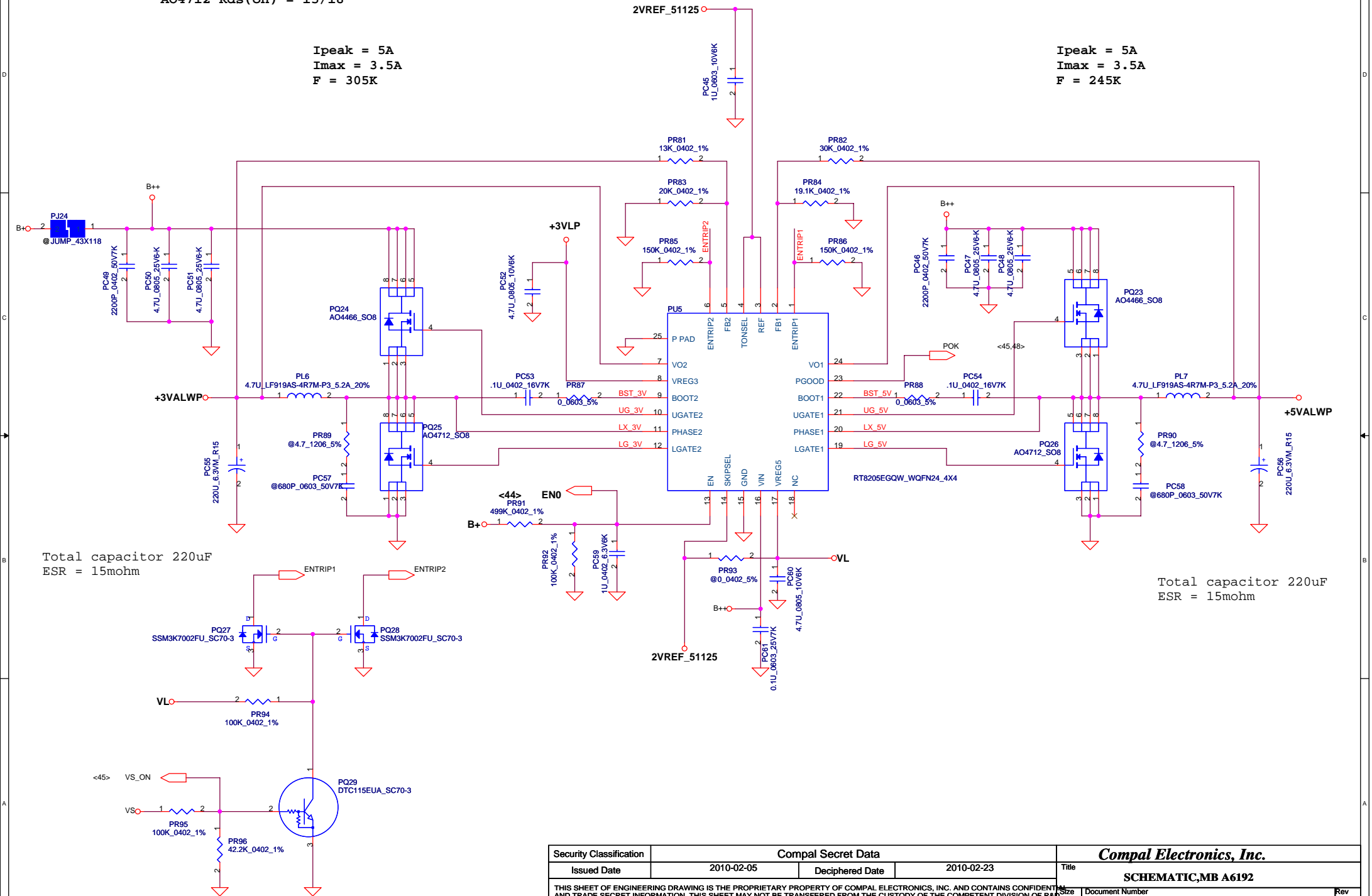
| | |
|-------------------------|---------|
| CHGVADJ=(Vcell-4)*9.445 | |
| Vcell | CHGVADJ |
| 4V | 0V |
| 4.2V | 1.898V |
| 4.35V | 3.315V |

| | | |
|--------------------|----------|----------------------------------|
| Iada=0~3.947A(75W) | CP=3.63A | PR49=0.02, PR72=24k, PR75=20k |
| Iada=0~6.316A(90W) | CP=5.81A | PR49=0.015, PR72=53.6k, PR75=20k |
| CP= 92%*Iada | | |

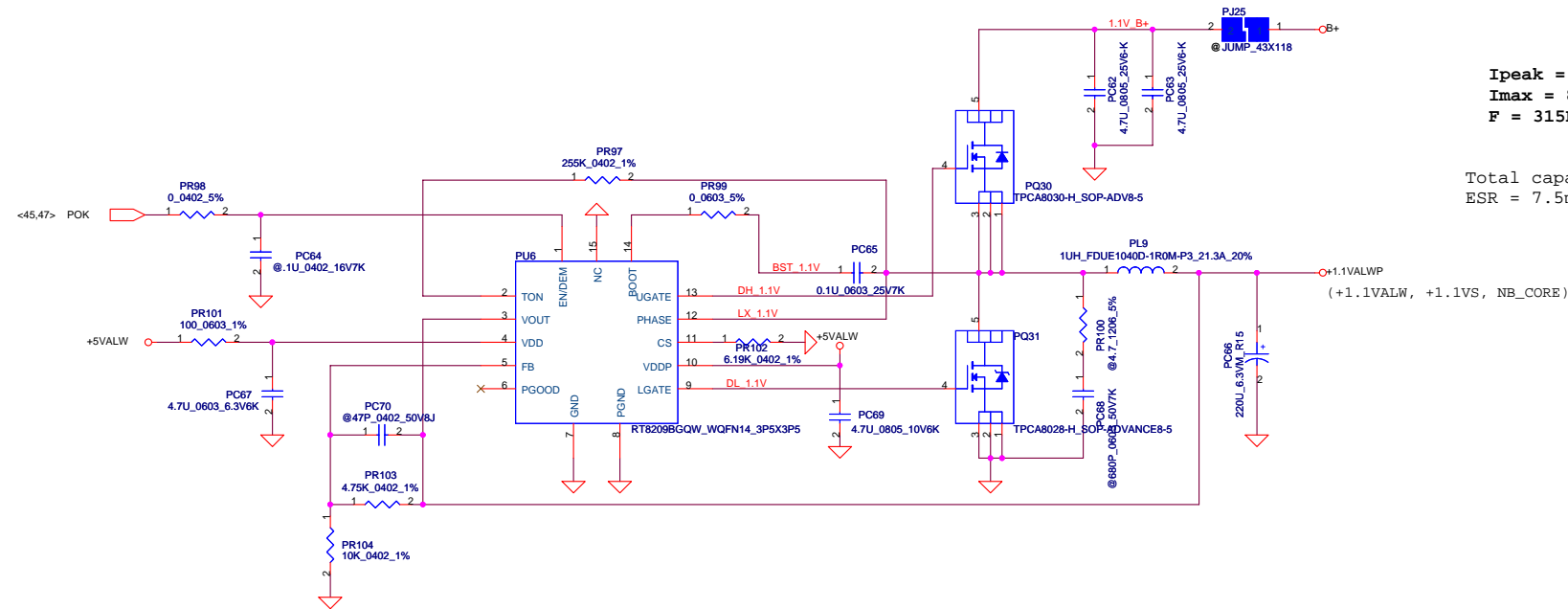
I_{peak} = 5A
I_{max} = 3.5A
F = 305K

Total capacitor 220uF
ESR = 15mohm

Total capacitor 220uF
ESR = 15mohm

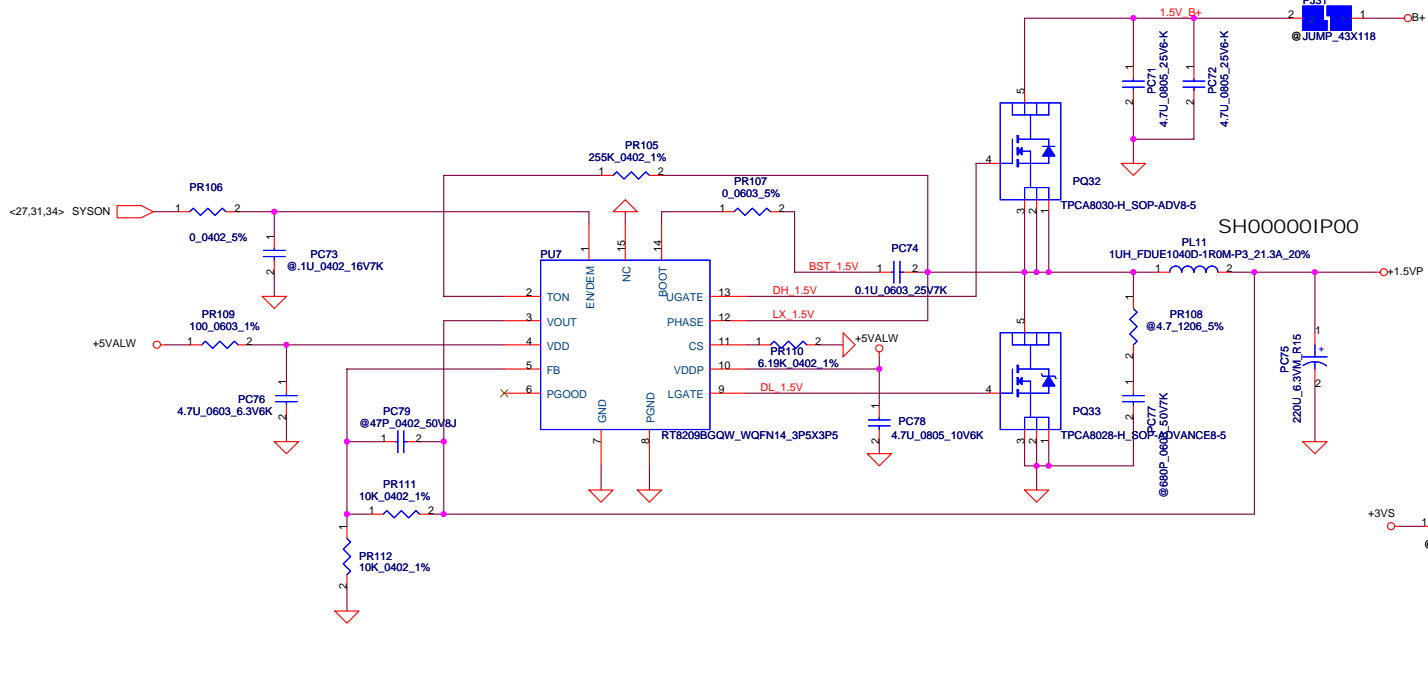


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| | | | | Custpm | LA-4971P | B | |
| | | | | Date: | Wednesday, June 22, 2011 | Sheet | 47 of 52 |



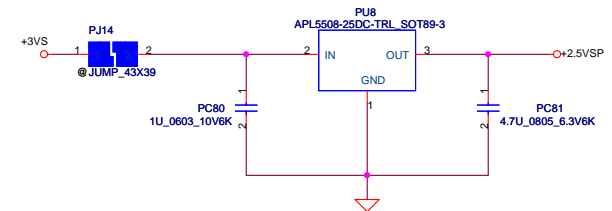
Ipeak = 12A
Imax = 8.4A
F = 315K

Total capacitor 550uF
ESR = 7.5mohm



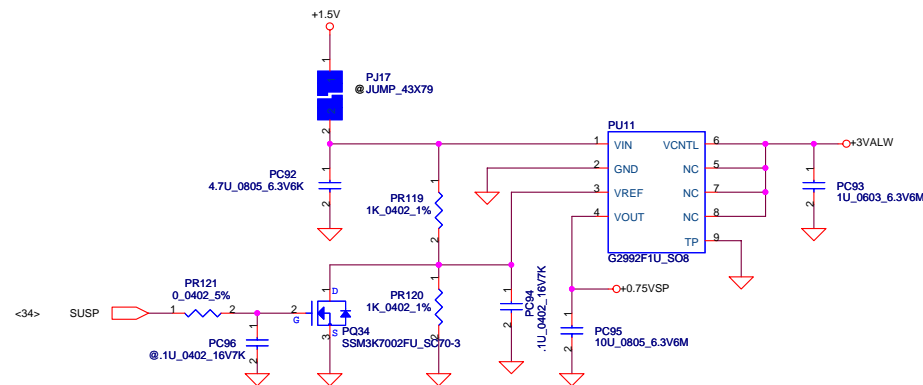
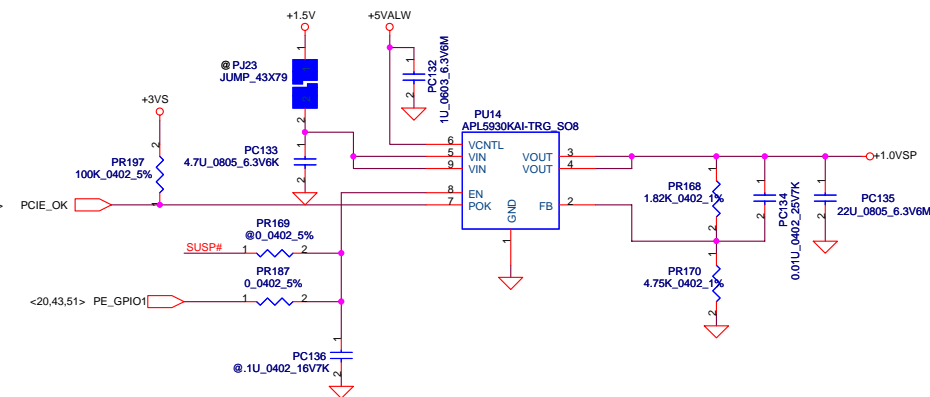
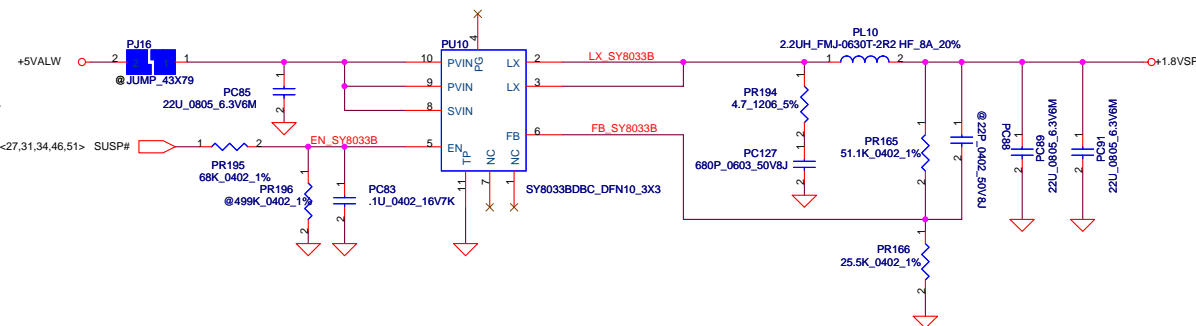
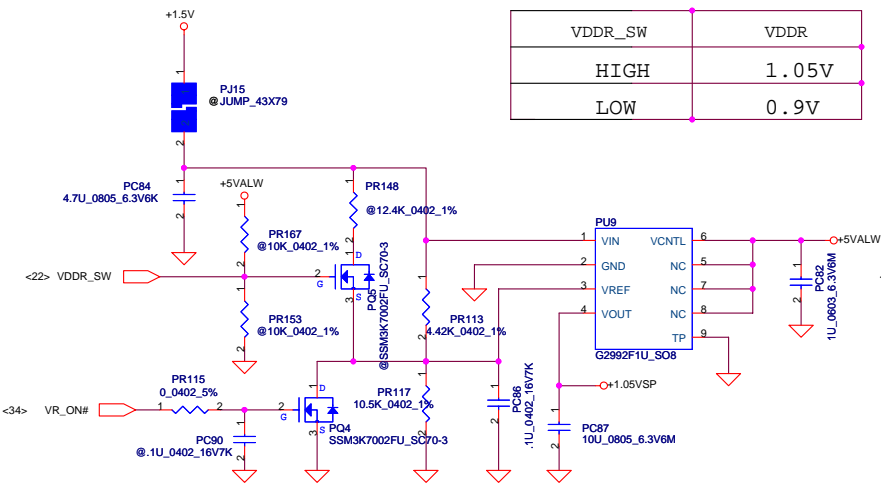
Ipeak = 11A
Imax = 7.7A
F = 315K

Total capacitor 220uF
ESR = 15mohm



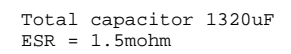
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| | |
|---------|-------|
| VDDR_SW | VDDR |
| HIGH | 1.05V |
| LOW | 0.9V |

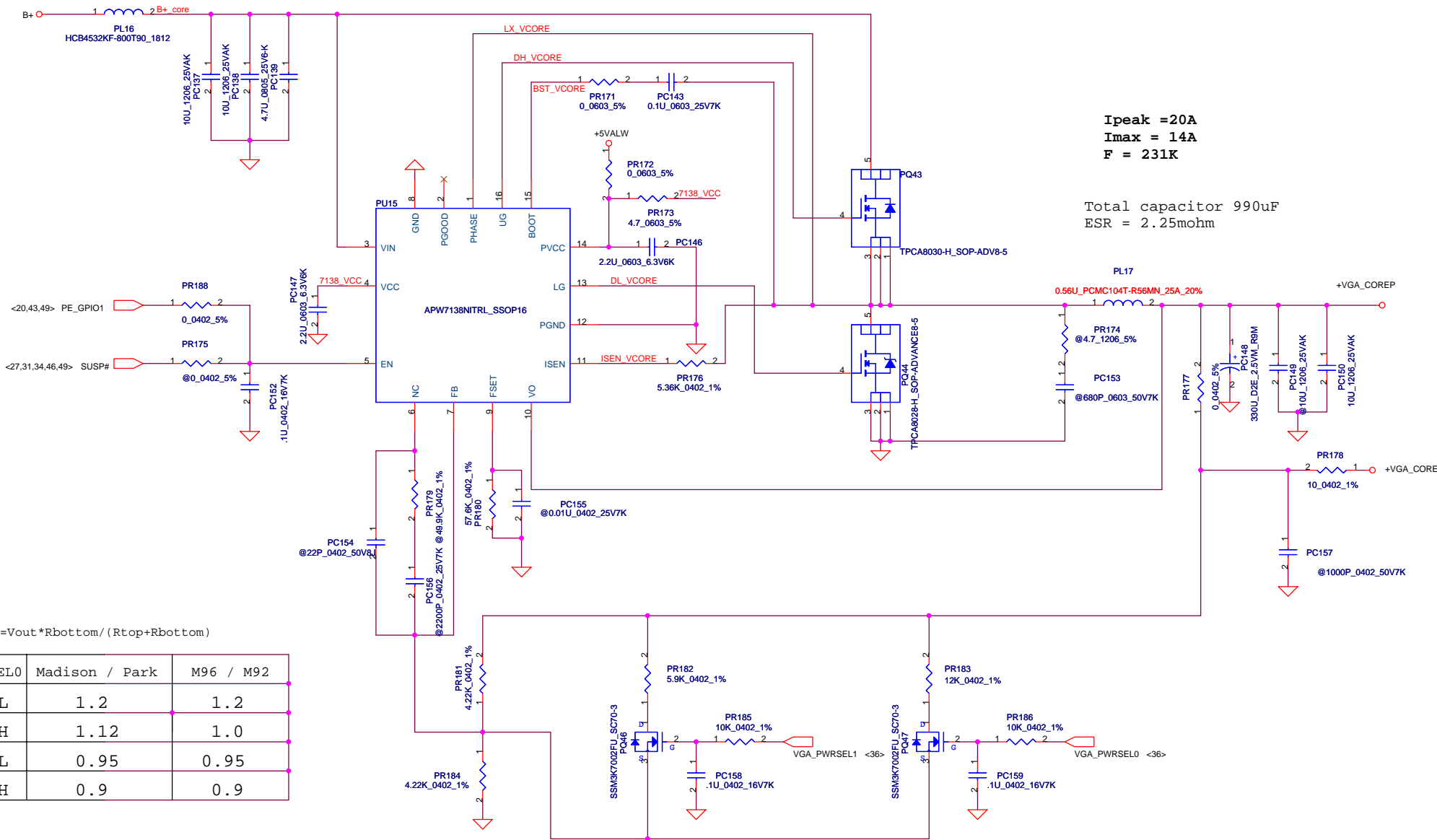


| | |
|----------------|---------------|
| Madison / Park | M96 / M92 |
| PCIE : 1.0V | PCIE : 1.1V |
| PR170 = 7.32K | PR170 = 4.75K |

| | | | | | |
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PIR (Product Improve Record)

NWQAE LA-6192P SCHEMATIC CHANGE LIST
REVISION CHANGE: 0.1

| NO | | DATE | PAGE | MODIFICATION LIST | | PURPOSE |
|------|------|-------|-----------|--|--|--------------------------|
| Item | Date | Page | Component | Solution | | Request |
| 1) | 2/8 | 20 | Change | Change 3G_OFF# to GPIO40 | | For BIOS common design |
| 2) | 2/8 | 20 | Change | Change PE_GPIO0 to GPIO35 | | For BIOS common design |
| 3) | 2/10 | 20 | Remove | Remove FELICA_PWR | | For cancel this function |
| 4) | 2/10 | 20 | Change | Change RTC circuit | | For A51 common design |
| 5) | 2/10 | 17 | Change | Change R98 to 140ohm | | For UMA platform |
| 6) | 2/10 | 18 | Reserve | Reserve R231, C27 | | For EMI request |
| 7) | 2/21 | 25 | Change | Change D23 to PJDLC05C | | For EMI request |
| 9) | 2/22 | 18 | Add | Add D84 | | For EMI request |
| 10) | 2/22 | 25 | Change | Change C1160, C1164 to H5.9 | | For cost down |
| 11) | 2/22 | 22 | Change | Change U47 socket footprint to WIESO_G6179-100000_8P | | For correct footprint |
| 12) | 2/23 | 22 | Change | Change R915, R916 to 10K | | For common with Intel |
| 13) | 2/23 | 17 | Change | Change netname to DIS_CRT_HSYNC, DIS_CRT_VSYNC | | |
| 14) | 2/23 | 21 | Remove | Remove R349, R350 | | For unnecessary part |
| 15) | 2/23 | 22 | Reserve | Reserve MEM_1V5 circuit | | For unsupport DDR-1333 |
| 16) | 2/23 | 23 | Change | Change L77 to 0ohm | | For common with Hamburg |
| 17) | 2/23 | 24 | Reserve | Reserve R383, Mount R392 | | For External CLK GEN |
| 18) | 2/23 | 34 | Reserve | Reserve C158 | | For common with Hamburg |
| 19) | 2/23 | 25 | Reserve | Reserve D91 | | For ESD |
| 20) | 2/23 | 20 | Reserve | Reserve R796 10K pull-down to CLKRUN# | | For EC request |
| 21) | 2/23 | 20 | Add | Add R215 to pull high BT_DET# to +3VS | | For BT issue |
| 22) | 2/23 | 43 | Add | Add RV3, RV136 | | For common with Hamburg |
| 23) | 2/24 | 18 | Reserve | Reserve D84 | | For EMI request |
| 24) | 2/24 | 19 | Reserve | Reserve L16, L17, L18, L19 | | For HDMI cost down |
| 25) | 2/24 | 19 | Mount | Mount R121-R128 | | For HDMI cost down |
| 26) | 2/24 | 19 | Mount | Mount R826, R827 | | For common design |
| 27) | 2/24 | 28 | Add | Add UL3 (10/100-16pin) | | For cost down |
| 28) | 2/24 | 14 | Remove | Remove C1129 | | For heigh limit |
| 29) | 2/24 | 14 | Mount | Mount C189 | | For heigh limit |
| 30) | 2/24 | 34 | Remove | Remove C158 | | For heigh limit |
| 31) | 2/24 | 22 | Remove | Remove U47 ROM socket | | For heigh limit |
| 32) | 2/24 | 38 | Mount | Mount CV116 | | For heigh limit |
| 33) | 2/24 | 38 | Remove | Remove CV326 | | For heigh limit |
| 34) | 2/24 | 22 | Add | Add VGA_ID1, VGA_ID2, R929-R932 | | For identify GPU type |
| 35) | 2/25 | 27 | Remove | Remove PJ27, RM6 | | For non-Wimax function |
| 36) | 2/25 | 31 | Reserve | Reserve C1238 | | For ESD request |
| 37) | 2/27 | 33 | Change | Change SW1, SW4, SW5, SW6 P/N to SN100002Y00 | | For cost comcern |
| 38) | 2/27 | 33 | Change | Change H15-H19 diameter to 3.3 | | For ME request |
| 39) | 3/01 | 30 | Change | Change RA45 to 0402 size | | For EMI request |
| 40) | 3/01 | 30 | Reserve | Reserve CA28 on INT_MIC_CLK | | For EMI request |
| 41) | 3/01 | 19 | Reserve | Reverse L17, L18 assignment | | For Layout request |
| 42) | 3/02 | 29 | Change | Change CC8 to 10K ohm | | For O2 ES2 issue |
| 43) | 3/15 | 30 | Reserve | Reserve CA16 | | For audio issue |
| 44) | 3/16 | 30 | Change | Change GND to AGND | | For audio issue |
| 45) | 3/16 | 30 | Change | Change CA9,CA10 from 4700pF to 1uF | | For audio issue |
| 46) | 3/17 | 25 | Mount | Mount C1251, C1252, C1253, C1152 | | For ESD |
| 47) | 3/17 | 16 | Change | Change R248 to DIS@ | | |
| 48) | 3/17 | 27 | Add | Add RM6 pull high to +3VS | | For 3G LED issue |
| 49) | 3/17 | | Change | Change all +1.5V_CPU and +1.5V_RAM to +1.5V | | For Samsung RAM issue |
| 50) | 3/17 | 44 | Remove | Remove J2 and J3 | | For Samsung RAM issue |
| 51) | 3/22 | 21 | Add | Add CR_CPPE#_SB | | For JMB389 |
| 52) | 3/22 | 22 | Add | Add CR_WAKE# | | For JMB389 |
| 53) | 3/22 | 16 | Delete | Delete CLKREQ_CR# | | For JMB389 |
| 54) | 3/22 | 27 | Add | Add +1.5VS | | For TV Tuner |
| 55) | 3/24 | 38 | Change | Change MPV18 to +MPV18 | | For layout |
| 56) | 3/24 | 38 | Change | Change SPV18 to +SPV18 | | For layout |
| 57) | 3/24 | 31 | Change | Change +3VALW to +3VL | | |
| 58) | 3/25 | 19 | Add | Add D54 to +5VL | | For HDMI-CEC issue |
| 59) | 3/26 | 16 | Swap | Swap SRC4 and SRC3 | | |
| 60) | 3/26 | 16 | Change | Change CLKREQ_NCARD# to Pin43 | | |
| 61) | 3/29 | 30 | Change | Change RA45 to bead | | For EMI |
| 62) | 3/29 | 19 | Change | Change to 715ohm and PXP_UMA@ | | For HDMI |
| 63) | 3/29 | 25 | Mount | Mount R990 and Reserve R991 | | For sleep&play |
| 64) | 3/30 | 31,32 | Add | Add GRST#, R879, R880 | | For ESD test |
| 65) | 3/30 | 28 | Change | Change RL3 to 10K ohm | | For Realtek review |
| 66) | 3/31 | 27 | Change | Change JEXP symbol | | For ME |
| 67) | 4/9 | 18 | Mount | Mount D84 | | For ESD request |
| 68) | 4/9 | 33 | Mount | Mount D87 | | For ESD request |
| 69) | 4/9 | 19 | Mount | Mount L16, L17, L18, L19 | | For EMI request |

Rev.

| | | | | | |
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