



Compal confidential

ISKAA LA-3481P Schematics Document

Mobile Merom uFCPGA with Intel
Crestline_PM+ICH8-M core logic

2007-06-23

REV:2.0A

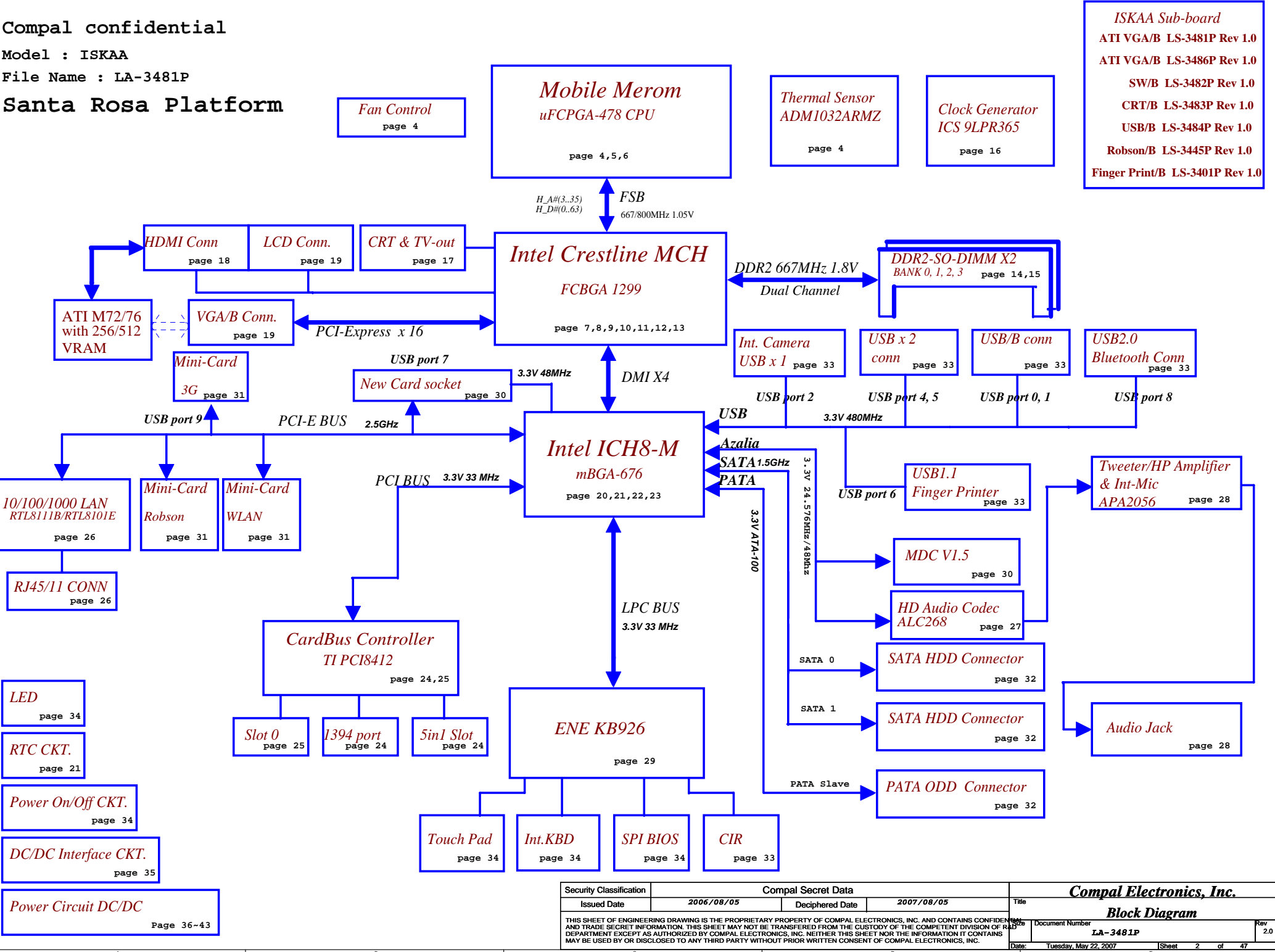
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|---|------------|--------------------|------------|--------------------------|-------------|
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| | | | | LA-3481P | 2.0 |
| Date: Saturday, June 23, 2007 | | | | Sheet 1 of 47 | |

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Model : ISKAA

File Name : LA-3481P

Santa Rosa Platform



ISKAA Sub-board

ATI VGA/B LS-3481P Rev 1.0

ATI VGA/B LS-3486P Rev 1.0

SW/B LS-3482P Rev 1.0

CRT/B LS-3483P Rev 1.0

USB/B LS-3484P Rev 1.0

Robson/B LS-3445P Rev 1.0

Finger Print/B LS-3401P Rev 1.0

Voltage Rails

| Power Plane | Description | S0-S1 | S3 | S5 |
|-------------|---|-------|-----|-----|
| VIN | Adapter power supply (18.5V) | N/A | N/A | N/A |
| B+ | AC or battery power rail for power circuit | N/A | N/A | N/A |
| +VCC_CORE | Core voltage for CPU | ON | OFF | OFF |
| +0.9VS | 0.9V switched power rail for DDRII Vtt | ON | OFF | OFF |
| +1.05VS | 1.05V power rail for Processor I/O and MCH/ICH core power | ON | OFF | OFF |
| +1.25VS | 1.25V power rail for MCH/ICH core power | ON | OFF | OFF |
| +1.5VS | 1.5V switched power rail for PCI-E interface | ON | OFF | OFF |
| +1.8V | 1.8V power rail for DDRII | ON | ON | OFF |
| +1.8VS | 1.8V switched power rail | ON | OFF | OFF |
| +2.5VS | 2.5V switched power rail for MCH video PLL | ON | OFF | OFF |
| +3VALW | 3.3V always on power rail | ON | ON | ON* |
| +3VS | 3.3V switched power rail | ON | OFF | OFF |
| +5VALW | 5V always on power rail | ON | ON | ON* |
| +5VS | 5V switched power rail | ON | OFF | OFF |
| +RTC_VCC | RTC power | ON | ON | ON |

Note : ON* means that this power plane is ON only with AC power available, otherwise it is OFF.

External PCI Devices

| DEVICE | PCI Device ID | IDSEL # | REQ/GNT # | PIRQ |
|----------|---------------|---------|-----------|---------|
| 1394 | D0 | AD20 | 2 | A,B,C,D |
| CARD BUS | D4 | AD20 | 2 | A,B,C,D |
| SIN1 | D4 | AD20 | 2 | A,B,C,D |

KB926 I2C / SMBUS ADDRESSING

| DEVICE | HEX | ADDRESS |
|---------------------|-----|-------------------|
| SM1 24C16 | A0H | 1 0 1 0 0 0 0 X b |
| SM1 SMART BATTERY | 16H | 0 0 0 1 0 1 1 X b |
| SM2 ADM0132 | 98H | 1 0 0 1 1 0 0 X b |
| CPU THERMAL MONITOR | | |

ICH8-M SM Bus address

| DEVICE | HEX | ADDRESS |
|------------------------|-----|-----------------|
| DDR SO-DIMM 0 | A0 | 1 0 1 0 0 0 0 0 |
| DDR SO-DIMM 1 | A4 | 1 0 1 0 0 1 0 0 |
| CLOCK GENERATOR (EXT.) | D2 | 1 1 0 1 0 0 1 0 |

Board ID / SKU ID Table for AD channel

| Vcc | 3.3V +/- 5% | | | |
|----------|--------------|-------------|-------------|-------------|
| Ra/Rc/Re | 100K +/- 1% | | | |
| Board ID | Rb / Rd / Rf | VAD_BID min | VAD_BID typ | VAD_BID max |
| 0 | 0 | 0 V | 0 V | 0.100 V |
| 1 | 8.2K +/- 1% | 0.216 V | 0.250 V | 0.289 V |
| 2 | 18K +/- 1% | 0.436 V | 0.503 V | 0.538 V |
| 3 | 33K +/- 1% | 0.712 V | 0.819 V | 0.875 V |
| 4 | 56K +/- 1% | 1.036 V | 1.185 V | 1.264 V |
| 5 | 100K +/- 1% | 1.453 V | 1.650 V | 1.759 V |
| 6 | 200K +/- 1% | 1.935 V | 2.200 V | 2.341 V |
| 7 | NC | 2.500 V | 3.300 V | 3.300 V |

BOARD ID Table

| Board ID | PCB Revision |
|----------|--------------|
| 0 | 0.1 |
| 1 | 0.2 |
| 2 | 0.3 |
| 3 | 0.4 |
| 4 | 1.0 |
| 5 | 2.0 |
| 6 | 2A |
| 7 | |

SKU ID Table

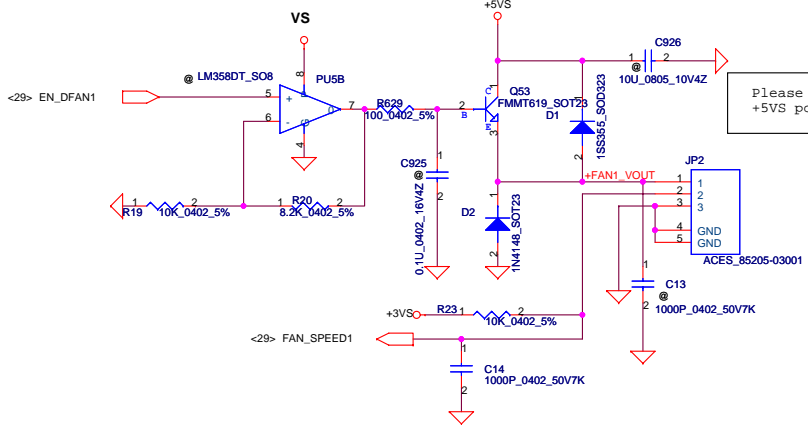
| SKU ID | SKU |
|--------|-----|
| 0 | 10 |
| 1 | 10G |
| 2 | |
| 3 | |
| 4 | |
| 5 | |
| 6 | |
| 7 | |

BTO Option Table

| BTO Item | BOM Structure |
|--------------|-----------------|
| 2nd HDD | 2HDD@ |
| LAN | 100M@ 1000M@ |
| WLAN | WLAN@ |
| NB | GM@ PM@ |
| BT | BT@ |
| MIC | MIC@ |
| CIR | CIR@ |
| FINGER PRINT | FP@ |
| HDMI | HDMI@ |
| Camera | Camera@ |
| Robson | Robson@ |
| Express Card | NEWCARD@ |
| HD-DVD | 3G@ |
| | |

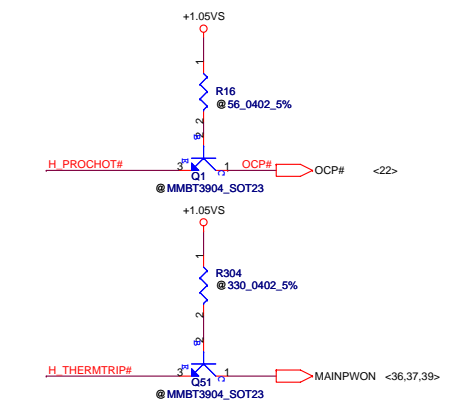
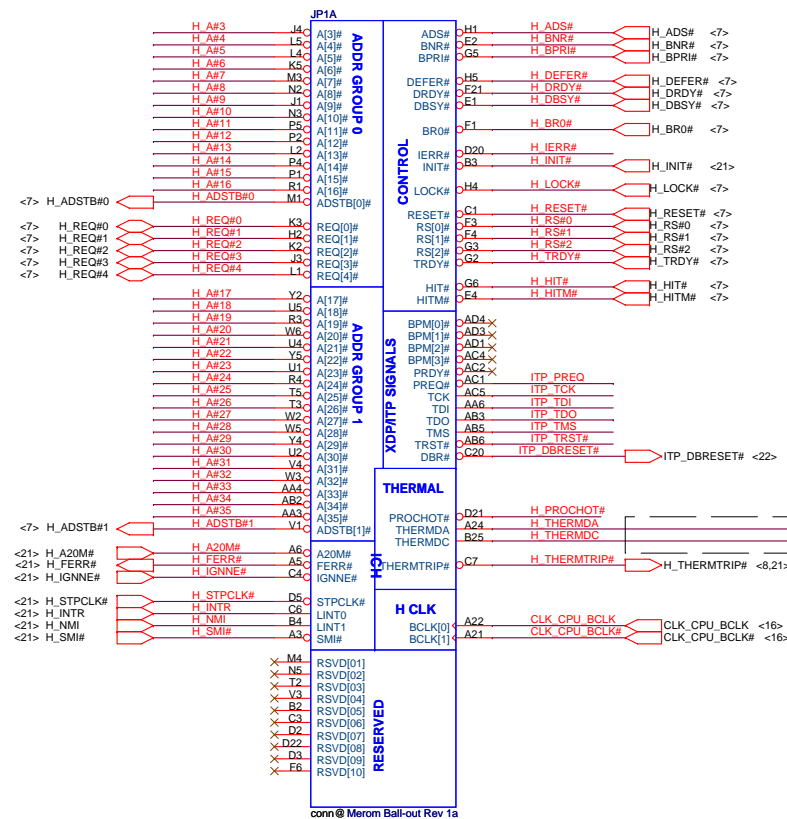
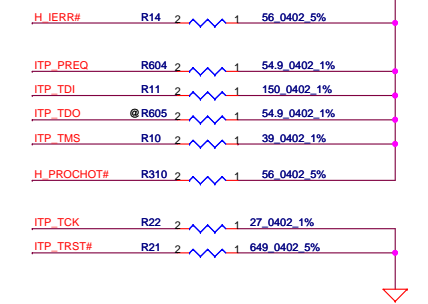
USB PORT LIST

| PORT | DEVICE |
|------|------------------------------|
| 0 | RIGHT USB Port (Samll Board) |
| 1 | RIGHT USB Port (Samll Board) |
| 2 | 3G Card |
| 3 | N.C. |
| 4 | LEFT USB Port |
| 5 | LEFT USB Port |
| 6 | Fingerprint or Felica |
| 7 | Blue Tooth |
| 8 | Internal Camera |
| 9 | New Card |



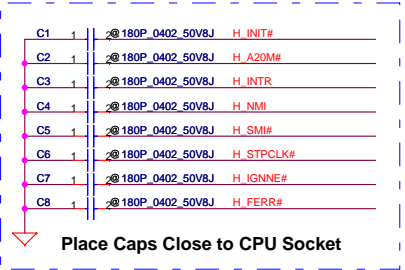
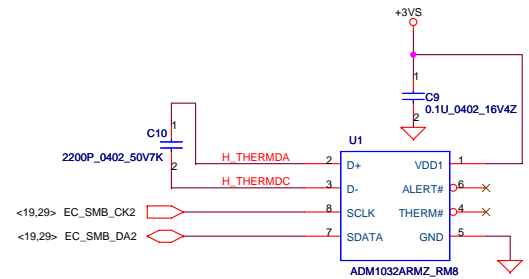
Please add the 10uF capacitor if the +5VS power source not stable.

Place close to CPU within 500mil



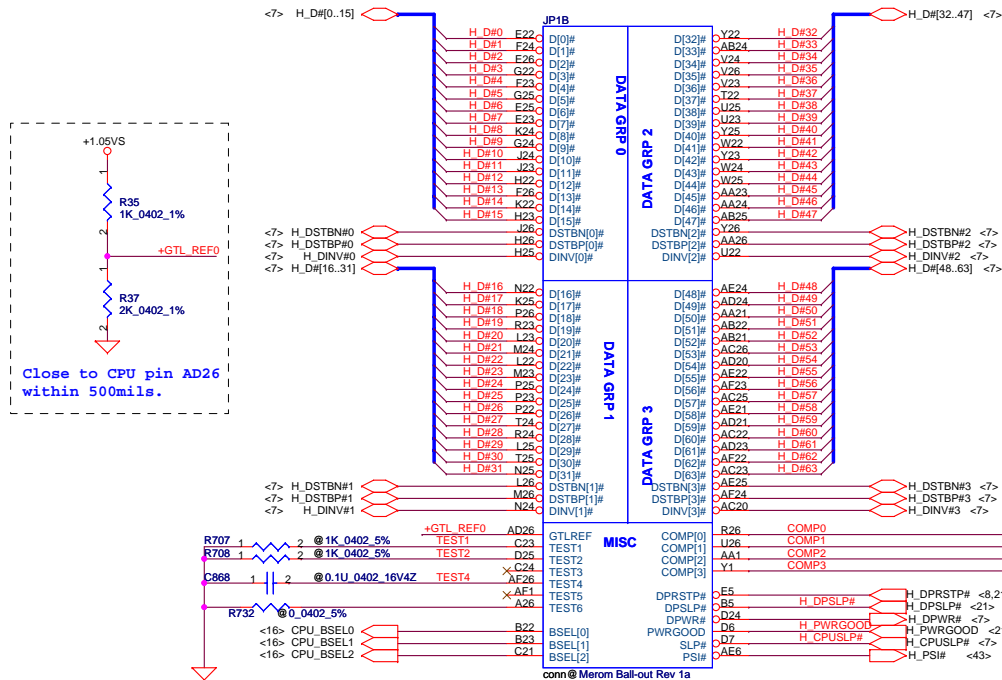
H_THERMDA, H_THERMDC routing together, Trace width / Spacing = 10 / 10 mil

Thermal Sensor ADM1032ARM



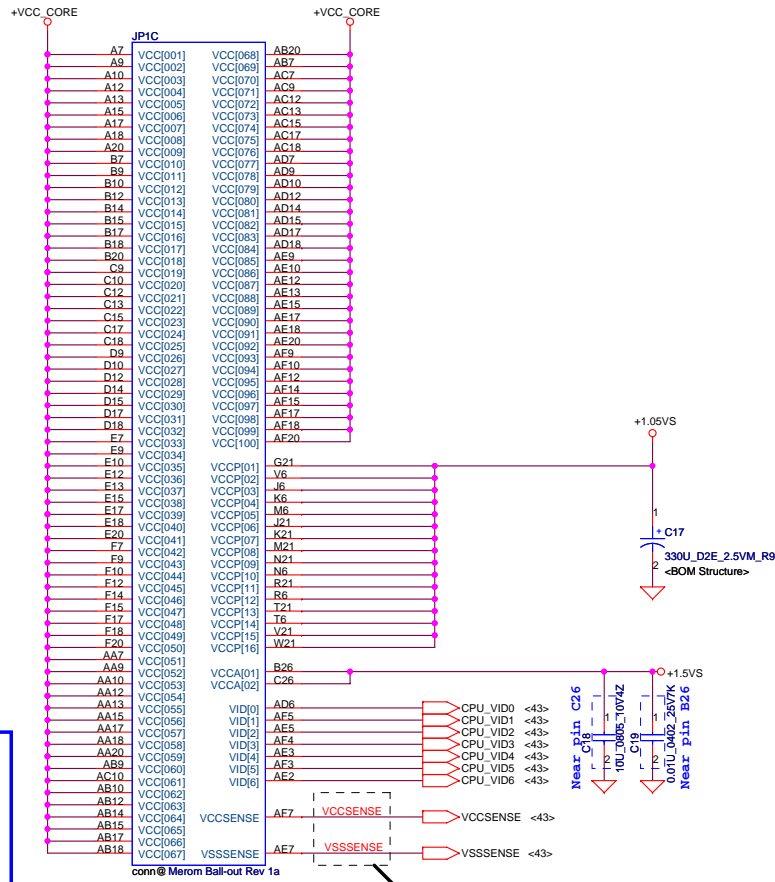
Place Caps Close to CPU Socket

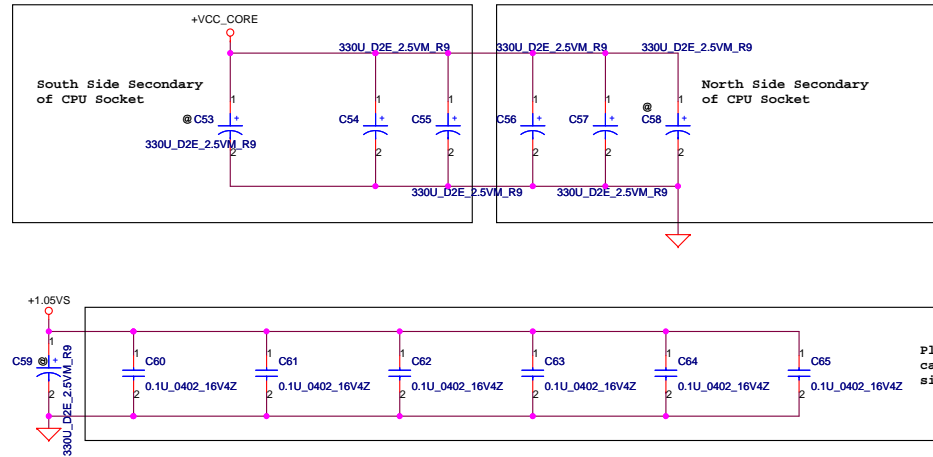
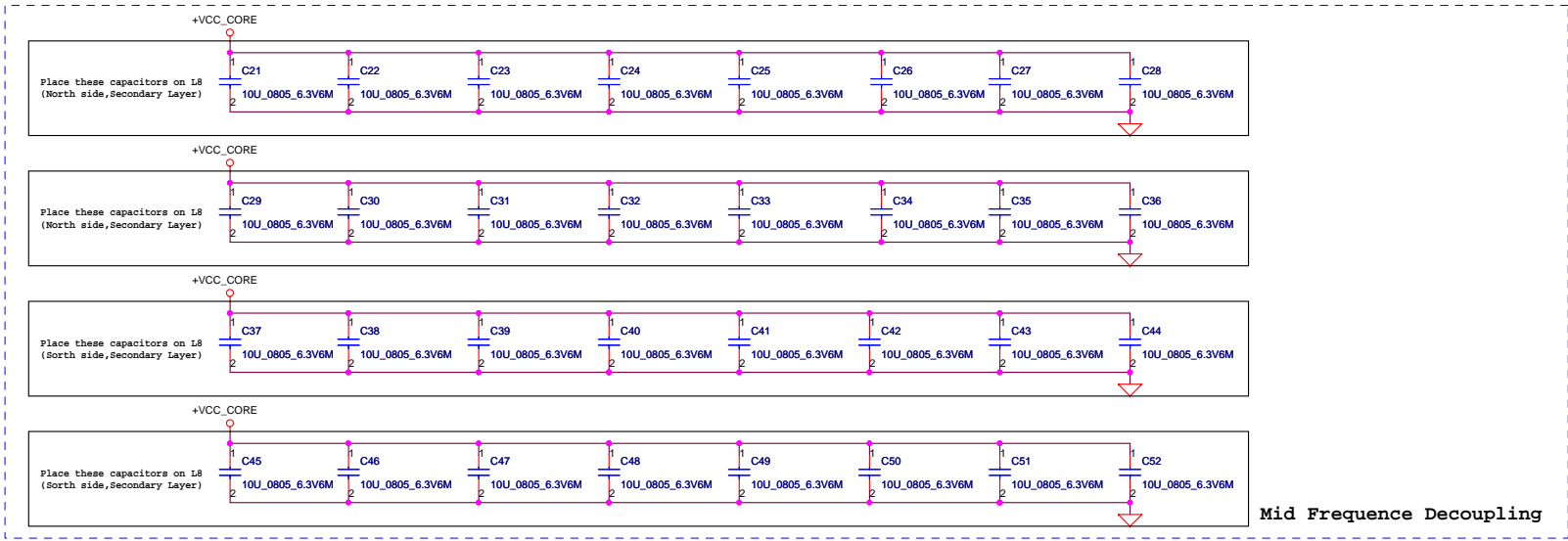
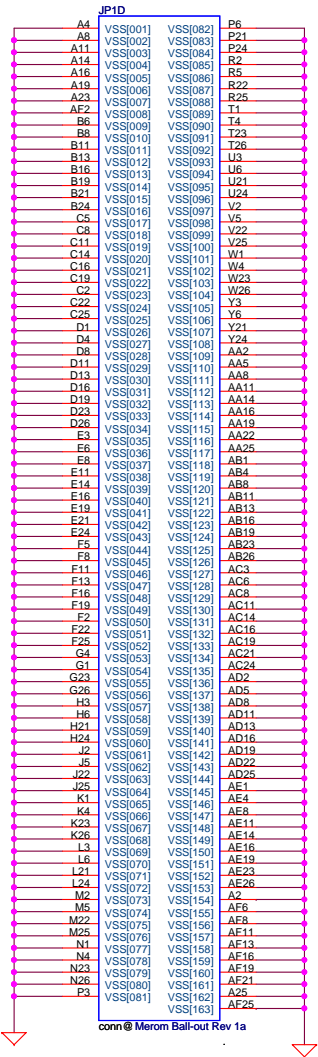
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| LA-3481P | | | | Document Number | Rev 2.0 |
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| CPU_BSEL | CPU_BSEL2 | CPU_BSEL1 | CPU_BSEL0 |
|----------|-----------|-----------|-----------|
| 166 | 0 | 1 | 1 |
| 200 | 0 | 1 | 0 |

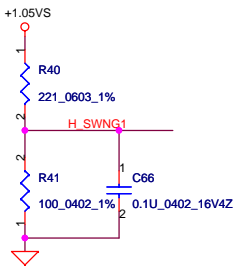
Resistor placed within 0.5" of CPU pin. Trace should be at least 25 mils away from any other toggling signal. COMP[0,2] trace width is 18 mils. COMP[1,3] trace width is 4 mils.



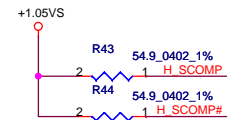


ESR <= 1.5m ohm
Capacitor > 1980uF
330uF ESR 7m ohm X 6 PCS

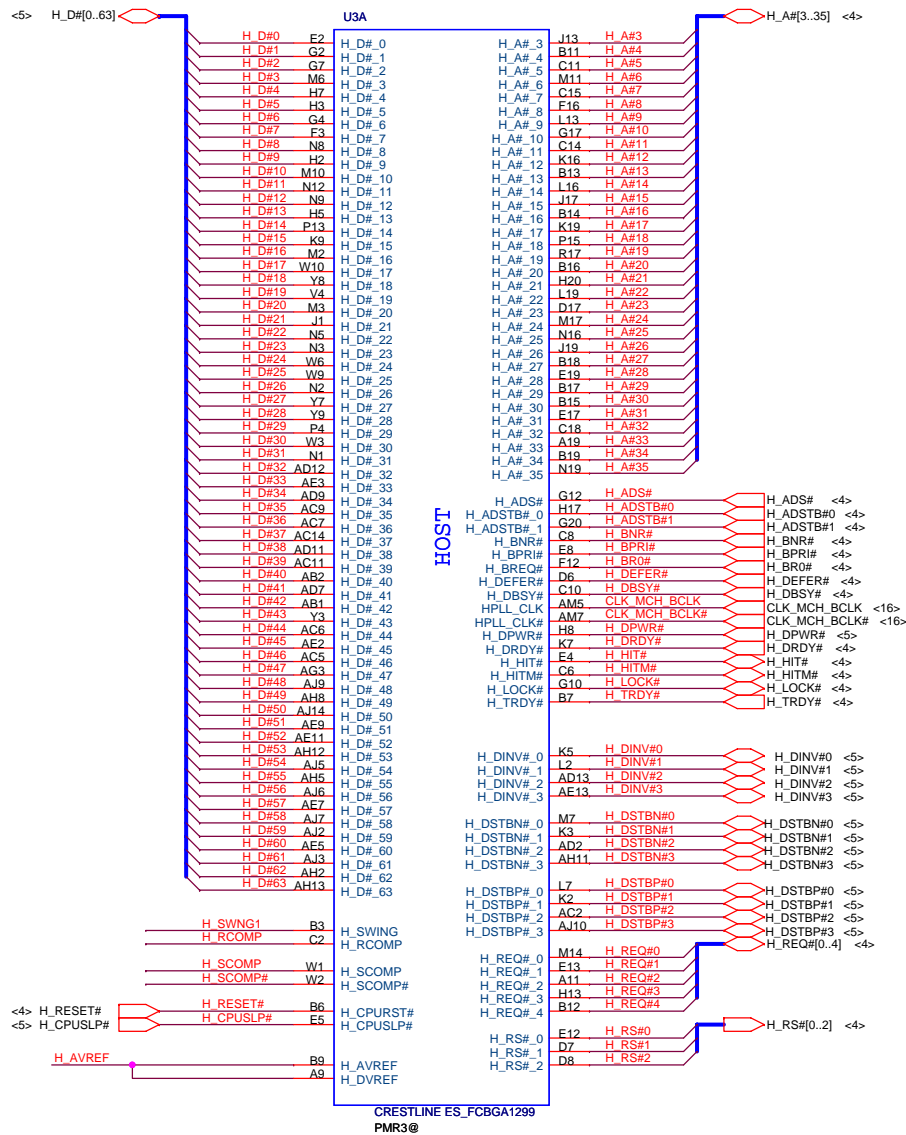
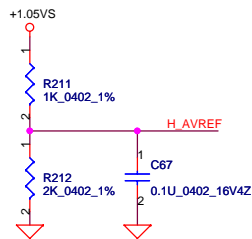
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10-mil wide with 20-mil spacing



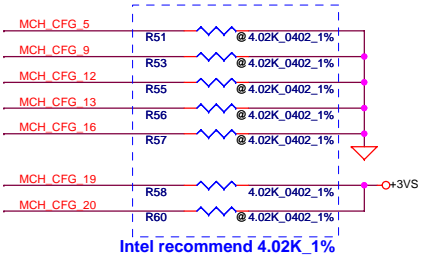
impedance is 55 ohm
Width is 10mil



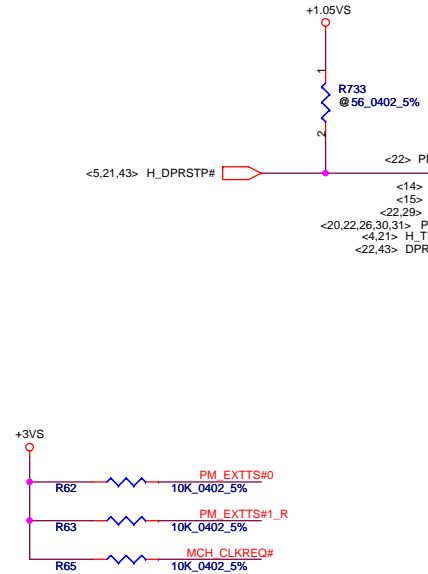
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| | | | | | | | | | | 47 | |

Strap Pin Table

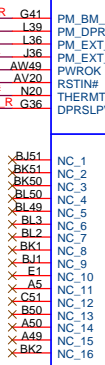
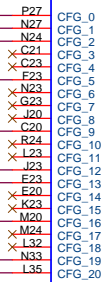
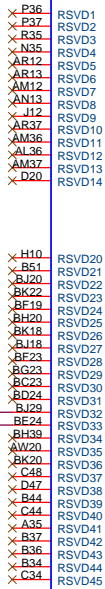
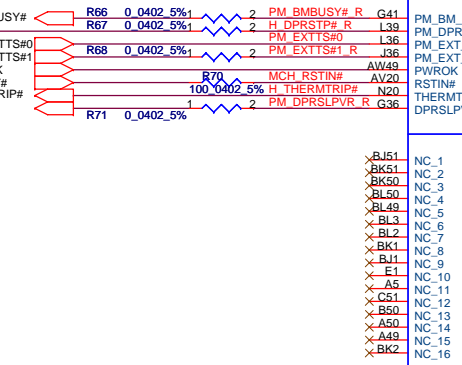
| | |
|-----------------------------|--|
| CFG[2:0] | 011 = 667MT/s FSB 010 = 800MT/s FSB |
| CFG5 | 0 = DMI x 2 1 = DMI x 4 * (Default) |
| CFG9 | 0 = Lane Reversal Enable 1 = Normal Operation * (Default) |
| CFG[13:12] | 00 = Reserved 01 = XOR Mode Enabled 10 = All Z Mode Enabled 11 = Normal Operation * (Default) |
| CFG16 | 0 = Dynamic ODT Disabled 1 = Dynamic ODT Enabled * (Default) |
| CFG19 | 0 = Normal Operation 1 = DMI Lane Reversal Enable *(Default) |
| CFG20 (PCIE/SDVO select) | 0 = Only PCIE or SDVO is operational. * (Default) 1 = PCIE/SDVO are operating simu. |
| SDVO_CTRLDATA | 0 = No SDVO Device Present * (Default) 1 = SDVO Device Present |



CFG[17:3] have internal pull up
CFG[19:18] have internal pull down



Refer Strap Pin Table



RSVD

DDR MUXING

CLK

DMI

CFG

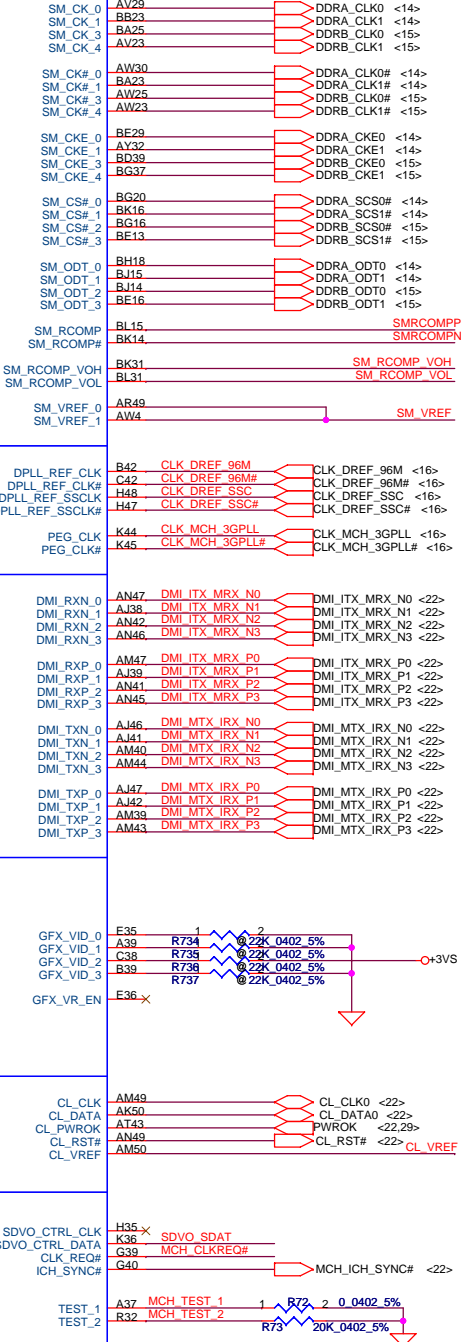
PM

ME

NC

MISC

CRESTLINE ES_FCBGA1299
PMR3@

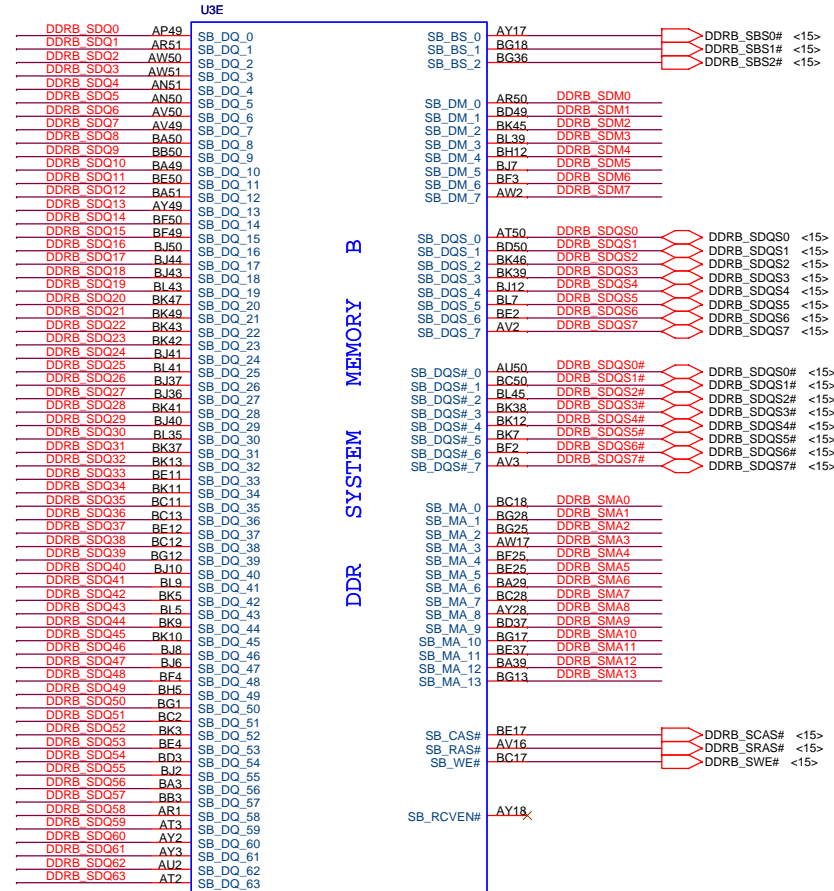


<14> DDRA_SDQ[0..63] <14> DDRA_SDM[0..7] <14> DDRA_SMA[0..13]

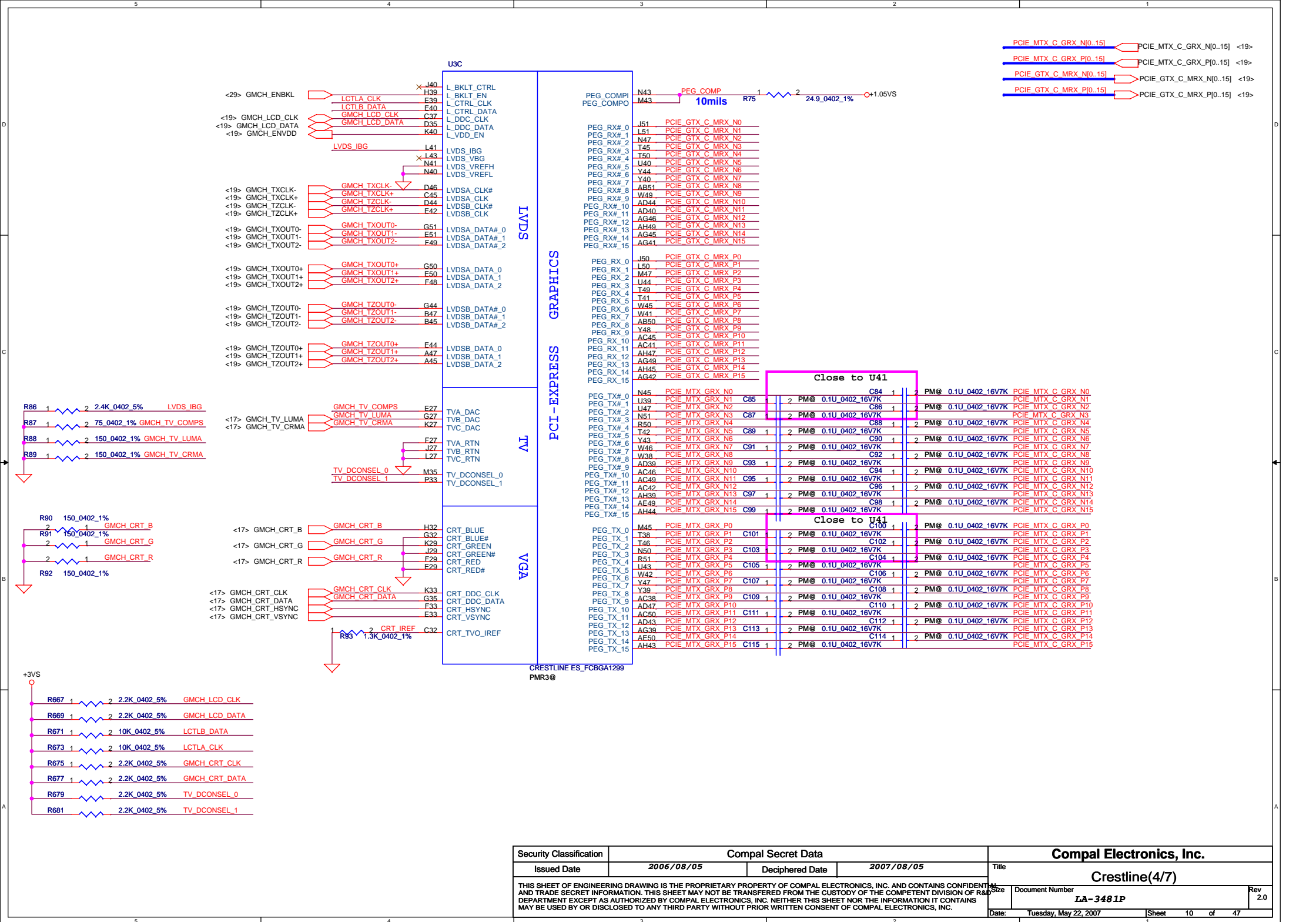
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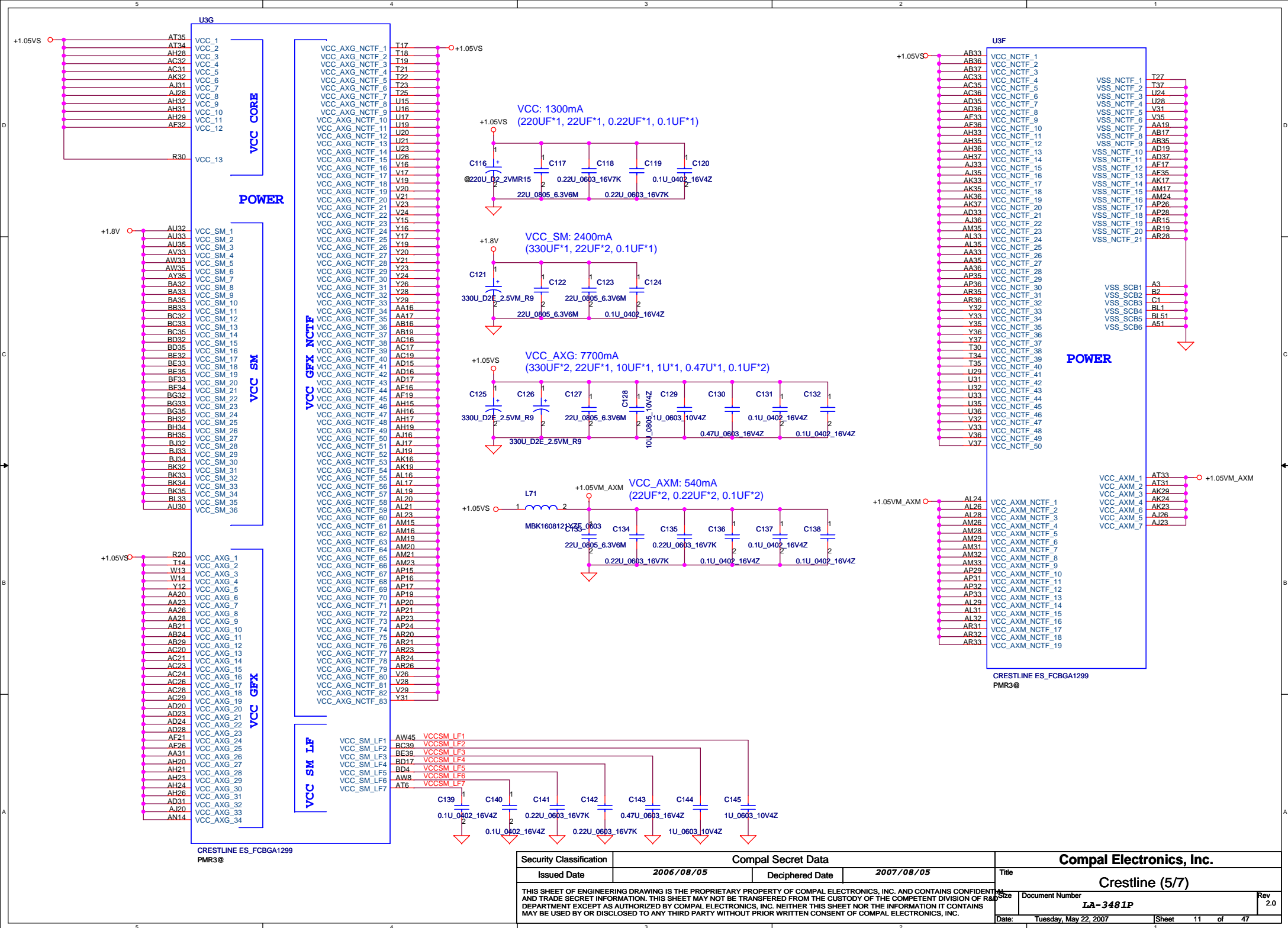


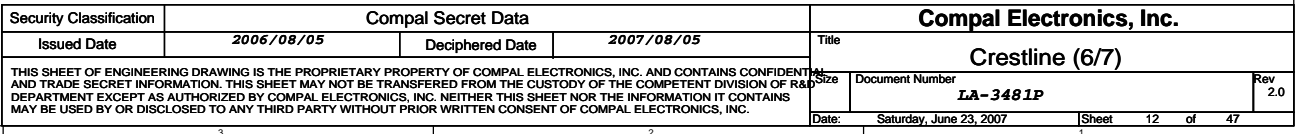
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PMR3@



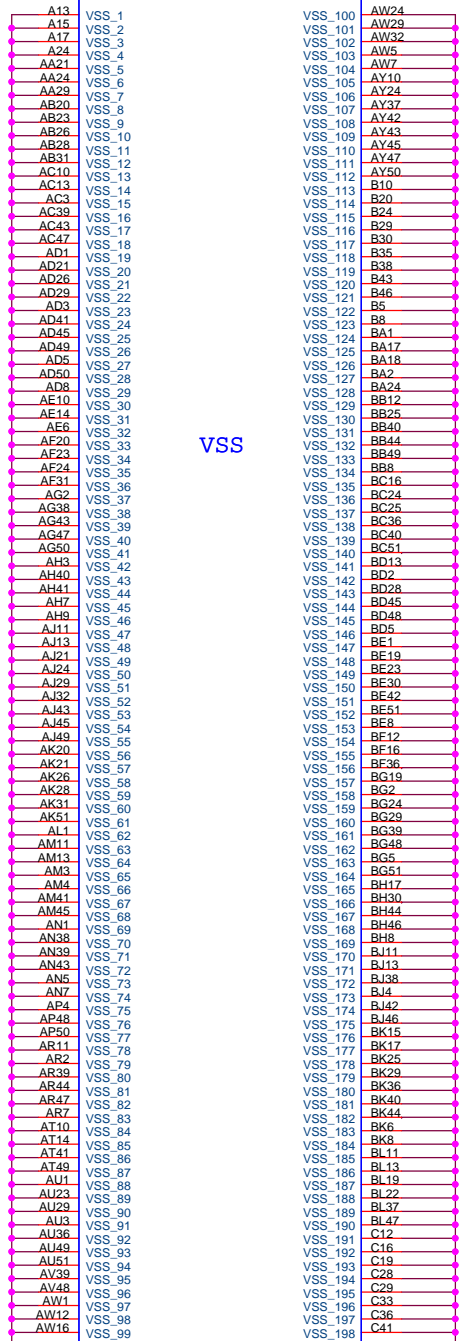
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PMR3@





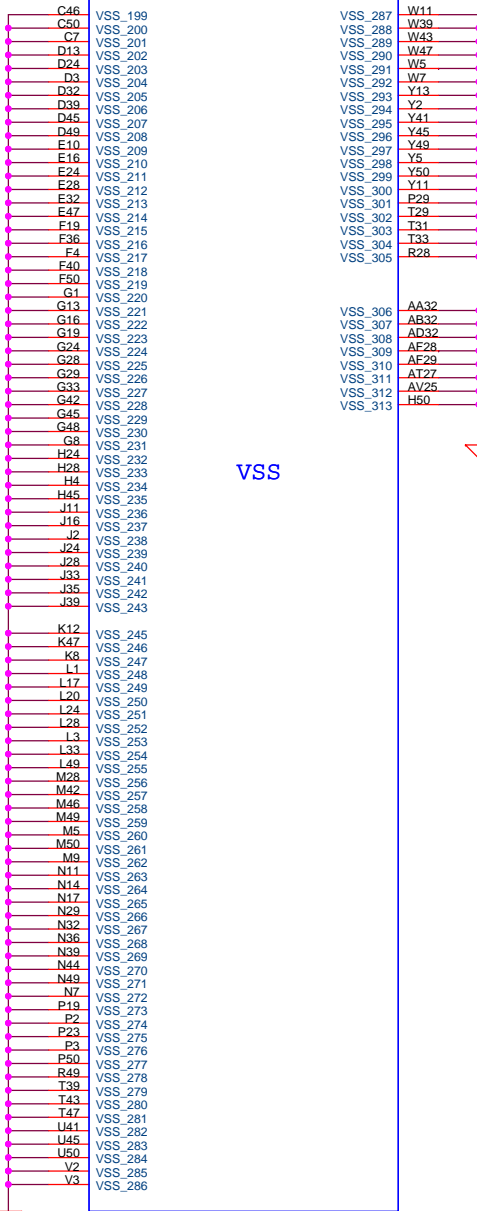


U3I

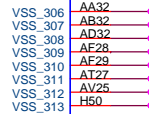
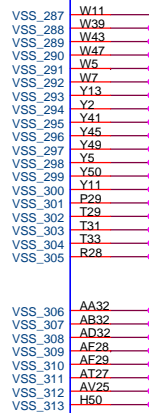


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PMR3@

U3J

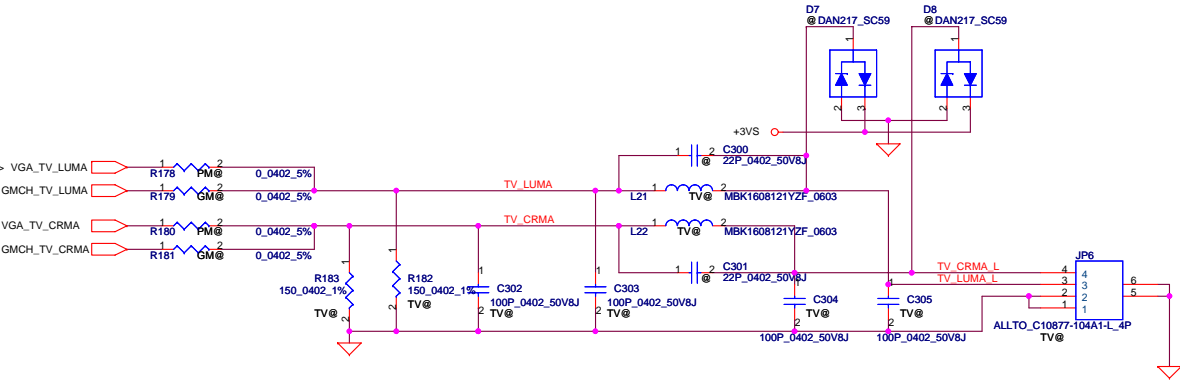
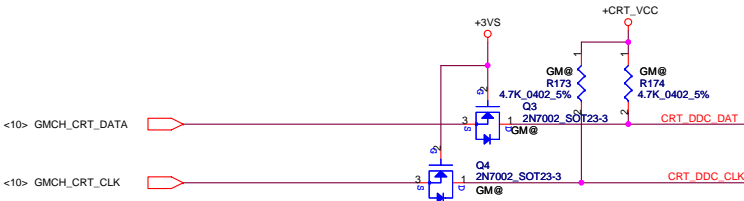
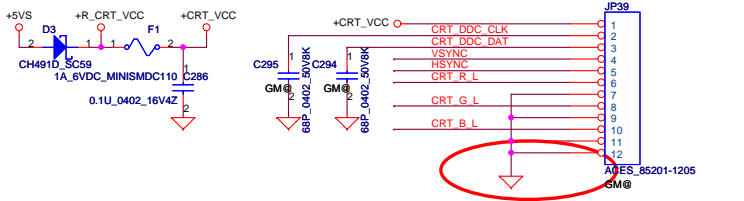
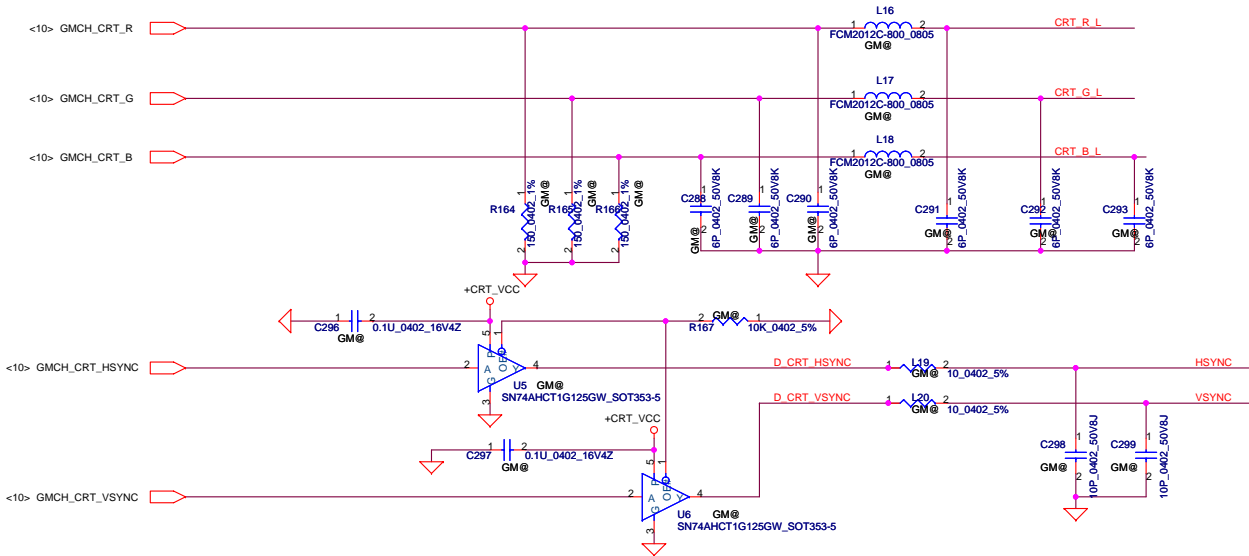


CRESTLINE ES_FCBGA1299
PMR3@



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| Date: | | Tuesday, May 22, 2007 | | Sheet | | 13 | | of 47 | | | |
| LA-3481P | | 2.0 | | | | | | | | | |

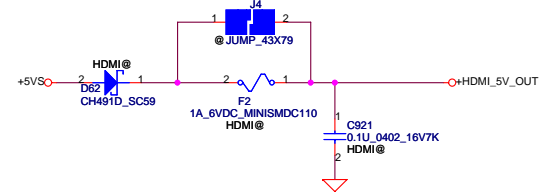
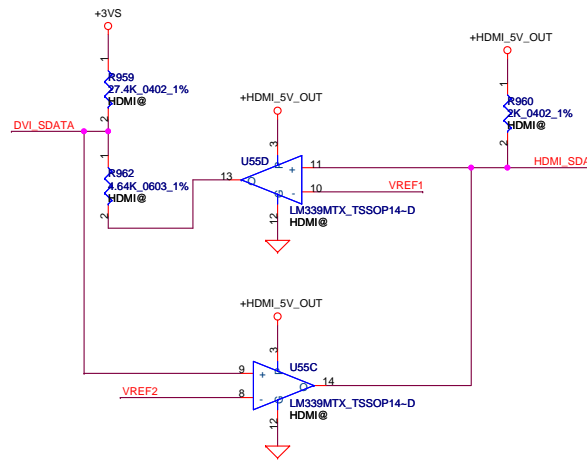
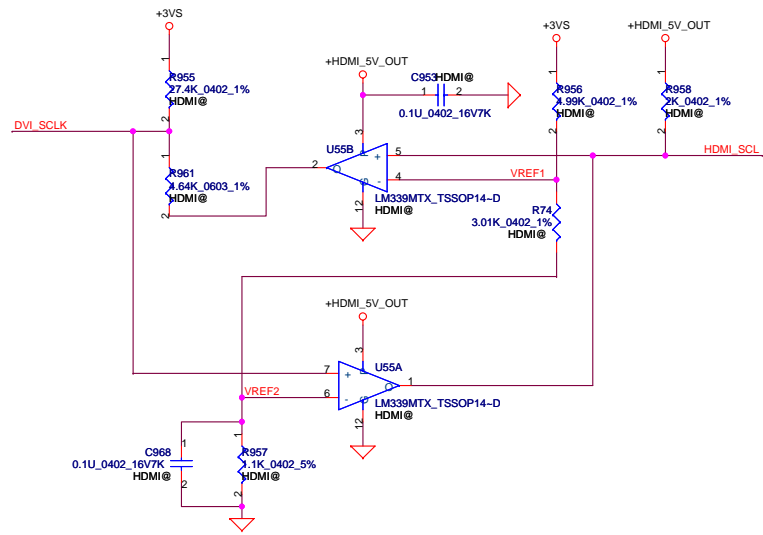
CRT CONNECTOR



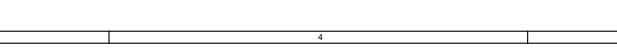
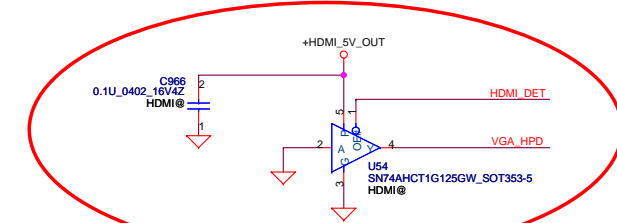
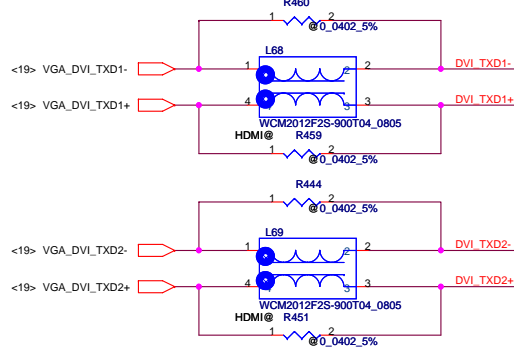
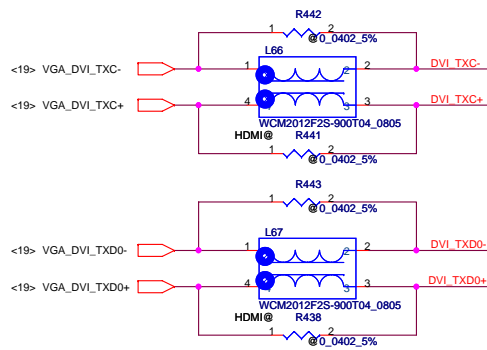
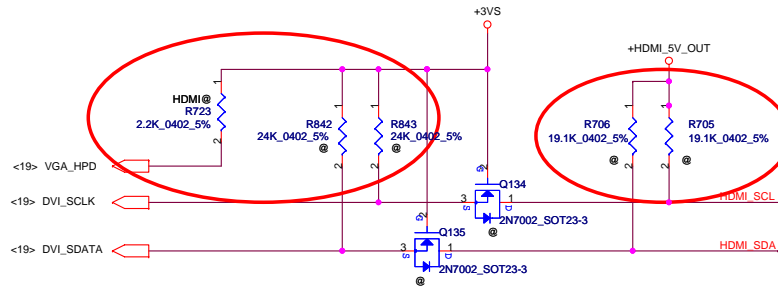
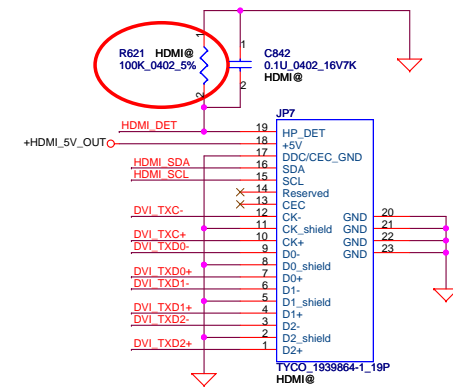
TV-OUT Conn.

- 1. Y ground
- 2. C ground
- 3. Y (luminance+sync)
- 4. C (chrominance)

| | | | | | | | | | | | | | |
|---|--|--------------------|--|-----------------|--|--------------------------|--|-----------------------|--|-------------------------|--|----------------|--|
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| | | | | | | | | Document Number | | LA-3481P | | Rev 2.0 | |
| | | | | | | | | Date: | | Wednesday, May 23, 2007 | | Sheet 17 of 47 | |
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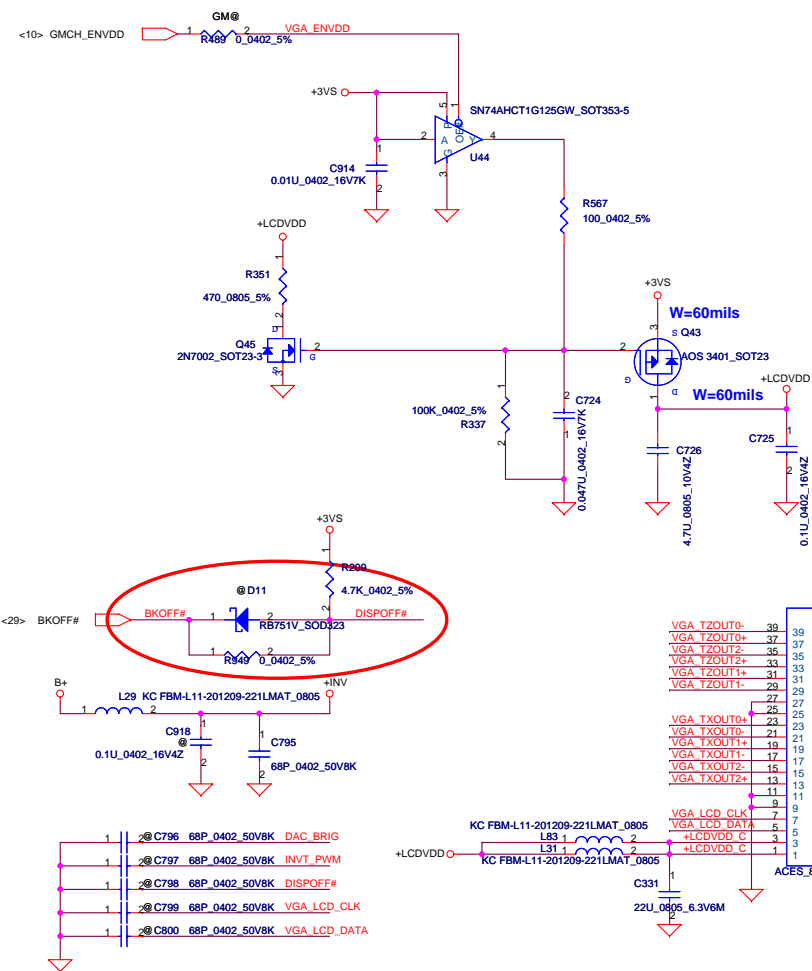
HDMI Connector



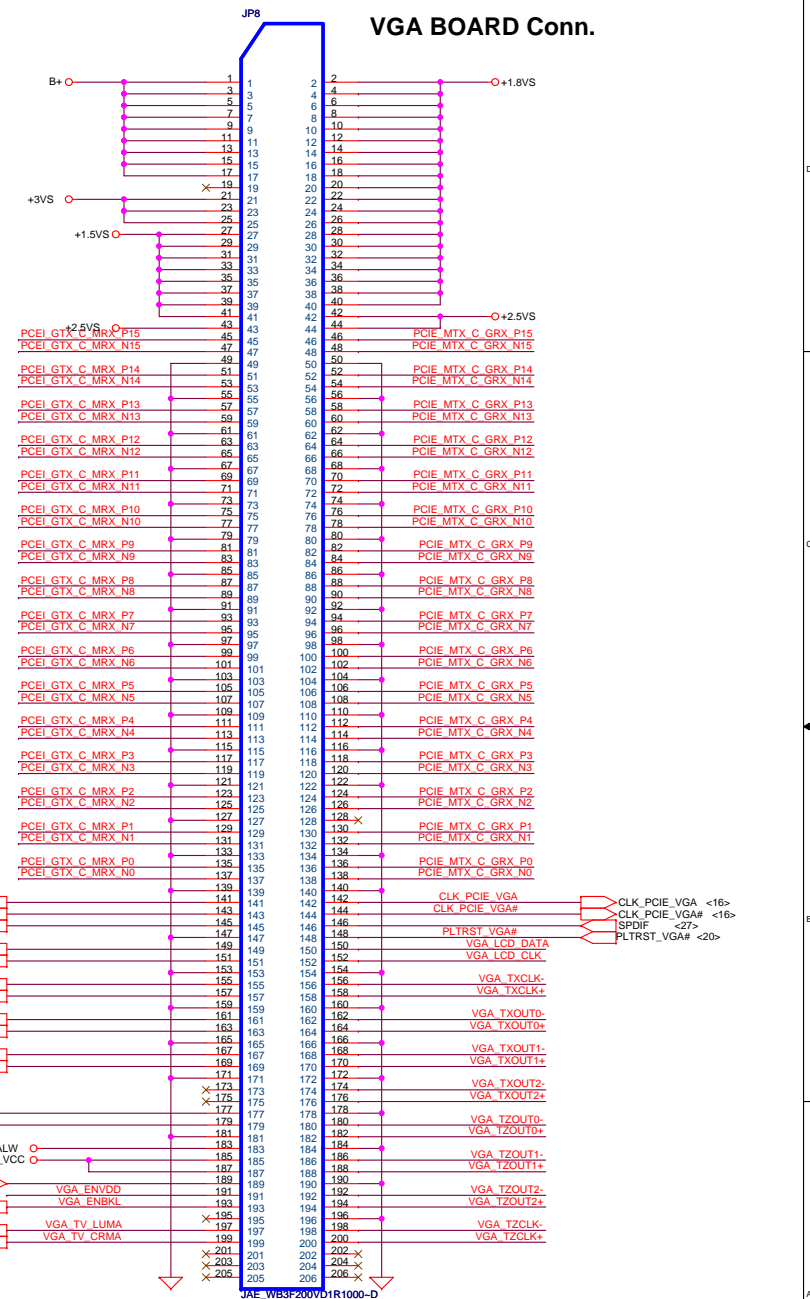
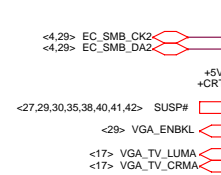
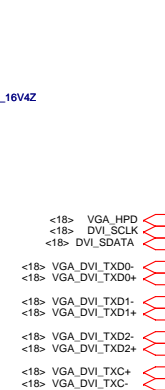
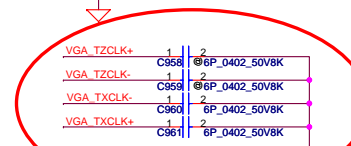
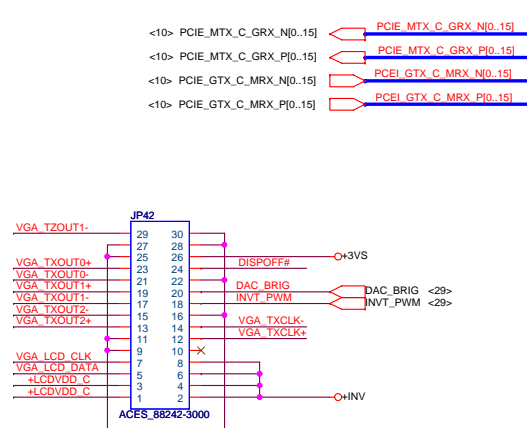
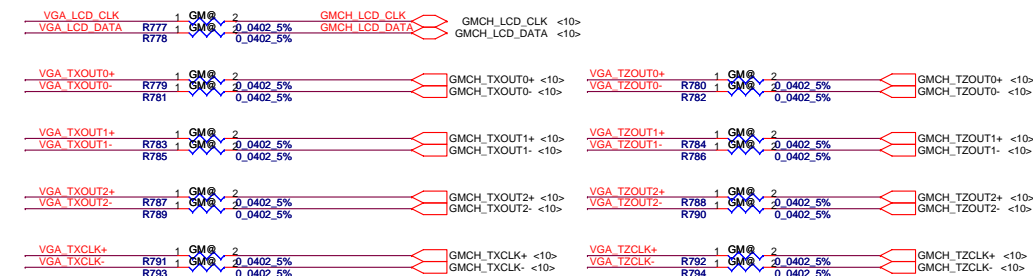
For HDMI Hot Plug Issue

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|---|------------|--------------------|------------|-------------------------------|----------------|
| Issued Date | 2006/06/30 | Deciphered Date | 2007/06/30 | Title | |
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| | | | | LA-3481P | 2.0 |
| | | | | Date: Saturday, June 23, 2007 | Sheet 18 of 47 |

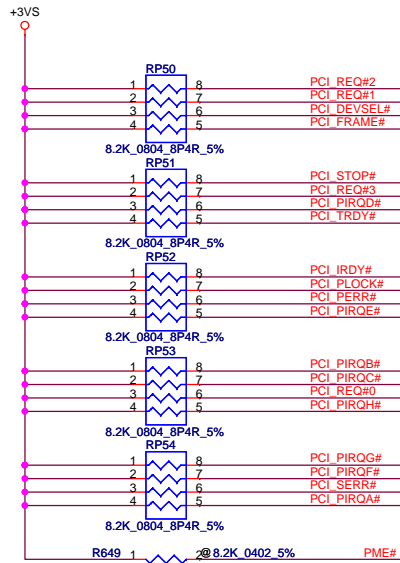
LCD POWER CIRCUIT



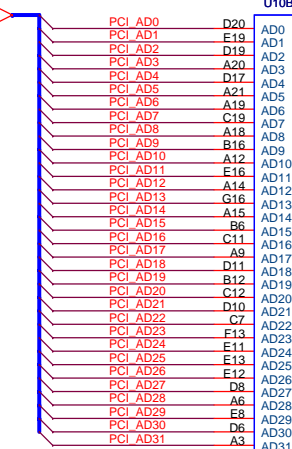
ALL R CLOSE TO VGA CONNECTOR



| | | | | | | |
|---|--------------------|-----------------|------------|---------------------------------|-----------------|-------|
| Security Classification | Compal Secret Data | | | Compal Electronics, Inc. | | |
| Issued Date | 2006/08/05 | Deciphered Date | 2007/08/05 | Title VGA CONN | | |
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| | | | | | LA-3481P | 2.0 |
| Date: Saturday, June 23, 2007 | | | | Sheet | 19 | of 47 |

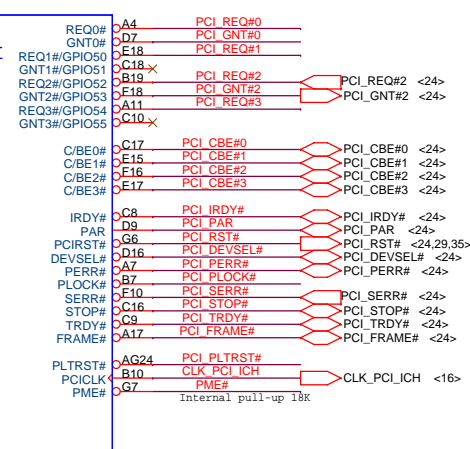


<24> PCI_AD[0..31]

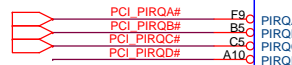


U10B

PCI

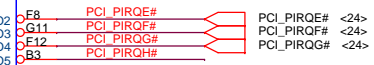


<24> PCI_PIRQA#
<24> PCI_PIRQB#
<24> PCI_PIRQC#

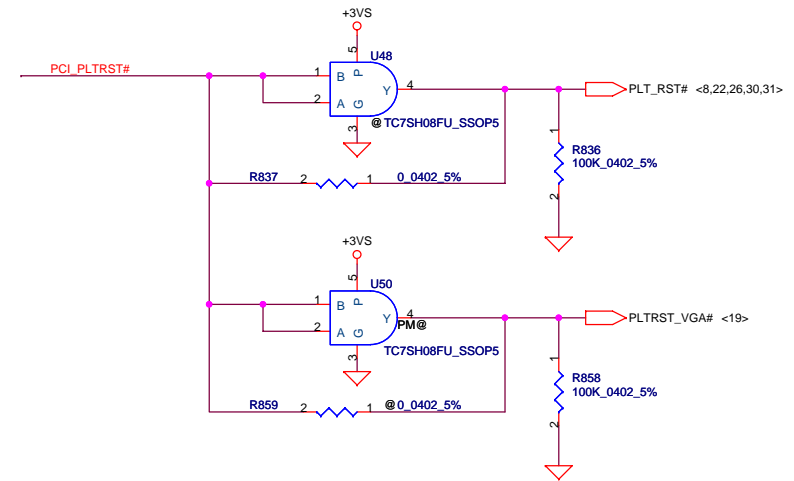
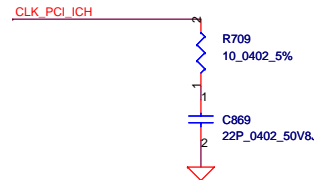
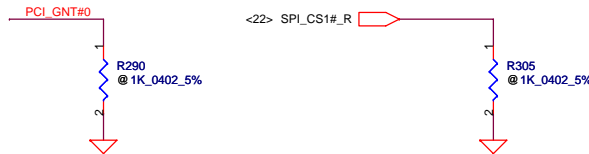


Interrupt I/F

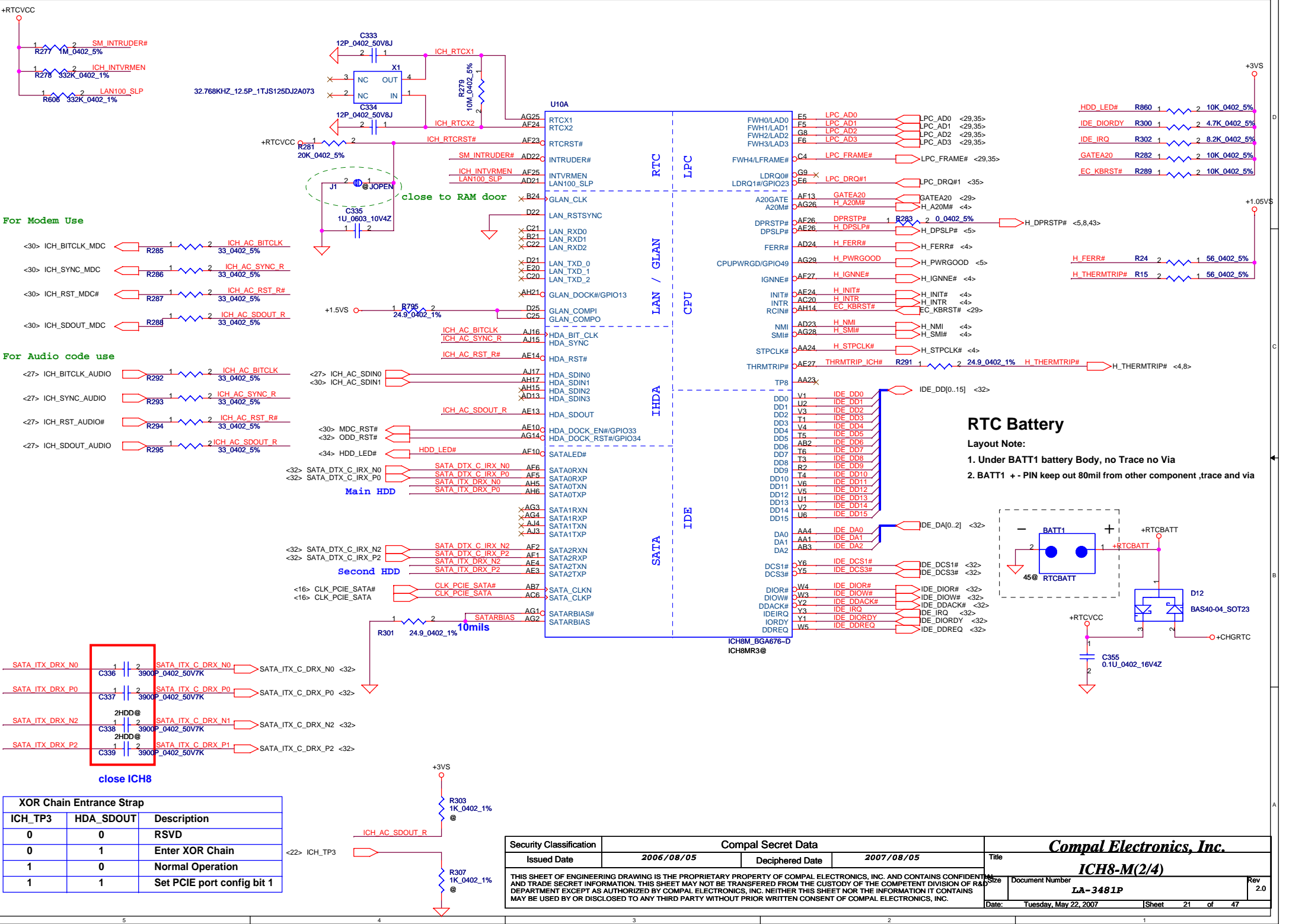
ICH8M_BGA676-D
ICH8MR3@



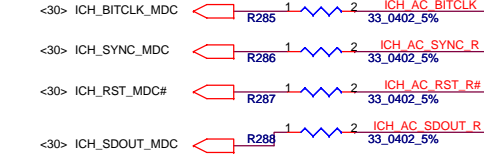
| Boot BIOS Strap | | |
|-----------------|----------|--------------------|
| PCI_GNT0# | SPI_CS#0 | Boot BIOS Location |
| 0 | 1 | SPI |
| 1 | 0 | PCI |
| 1 | 1 | LPC * |



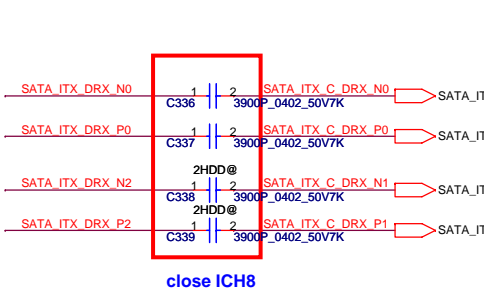
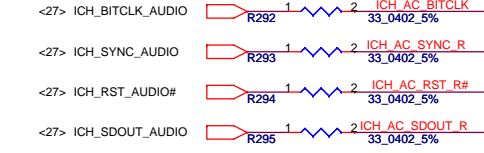
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|---|--|--------------------|--|-----------------|--|--------------------------|-----------------|----------------|-----|
| Security Classification | | Compal Secret Data | | | | Compal Electronics, Inc. | | | |
| Issued Date | | 2006/08/05 | | Deciphered Date | | 2007/08/05 | | Title | |
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| | | | | | | Size | Document Number | | Rev |
| | | | | | | LA-3481P | | 2.0 | |
| Date: | | | | | | Tuesday, May 22, 2007 | | Sheet 20 of 47 | |



For Modem Use



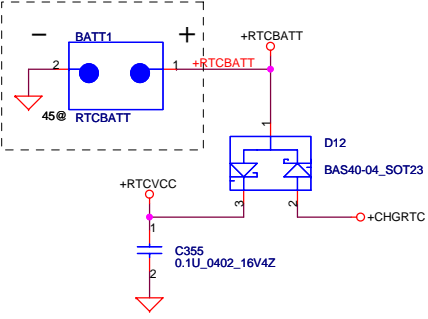
For Audio code use

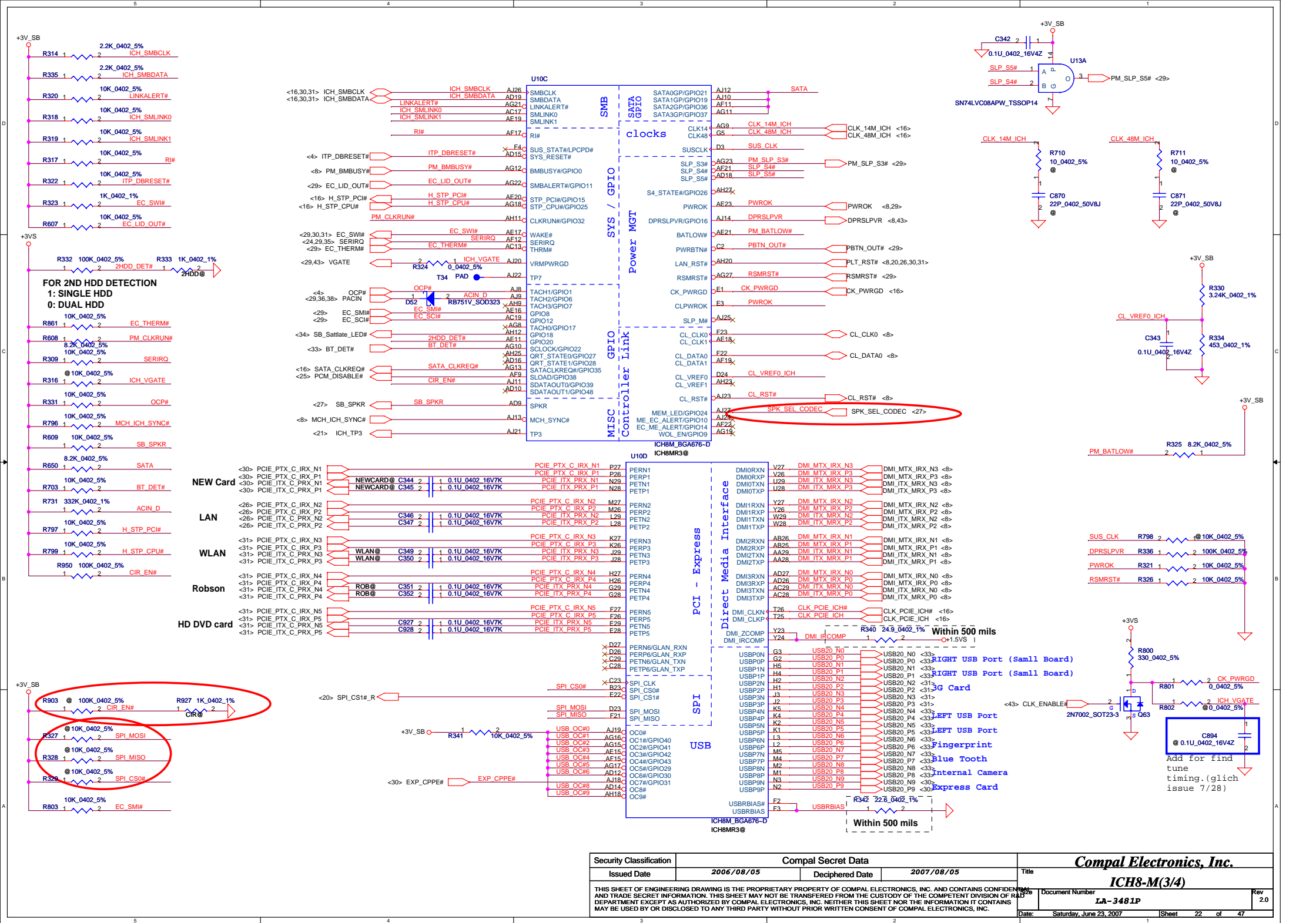


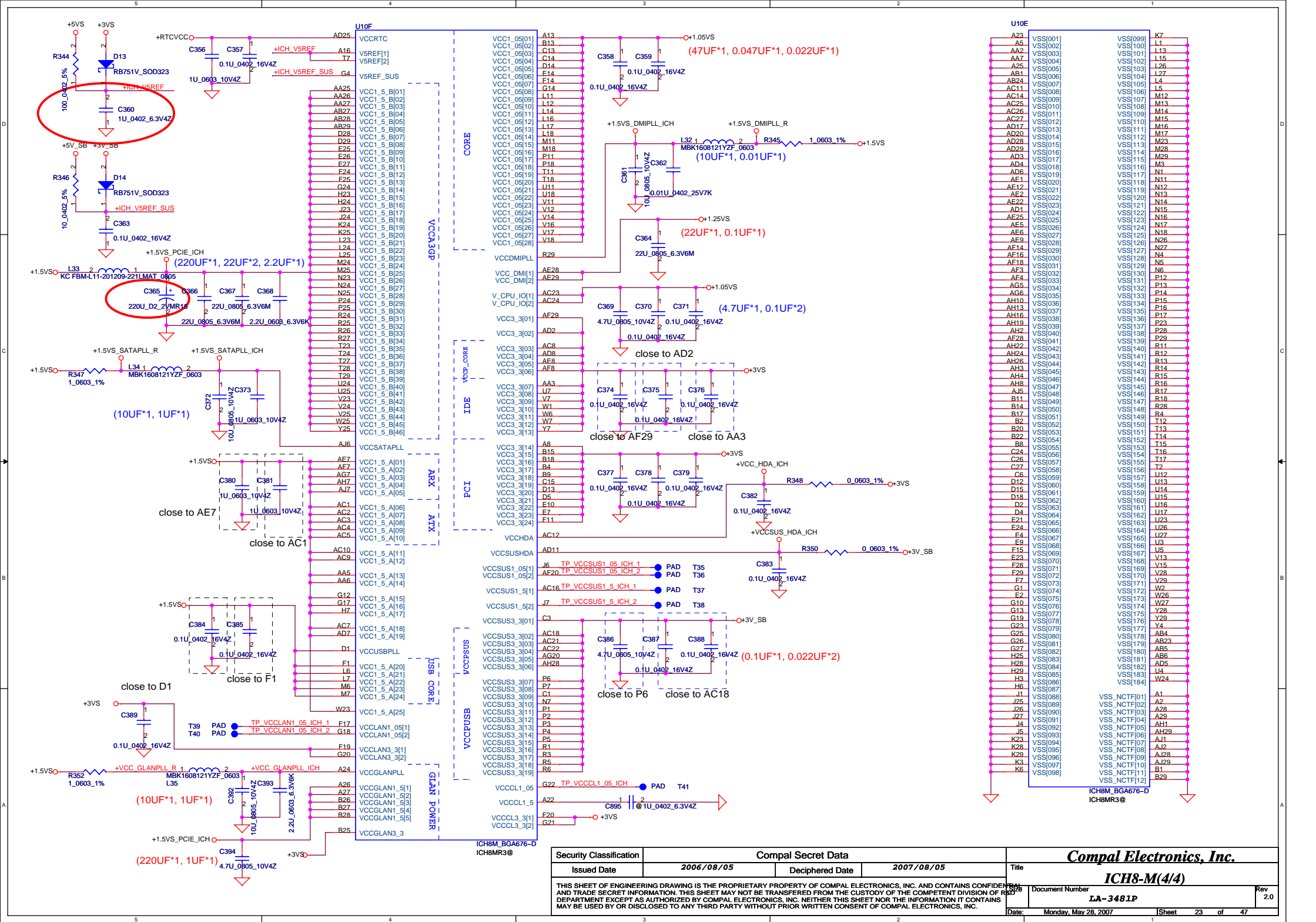
| XOR Chain Entrance Strap | | |
|--------------------------|-----------|----------------------------|
| ICH_TP3 | HDA_SDOUT | Description |
| 0 | 0 | RSVD |
| 0 | 1 | Enter XOR Chain |
| 1 | 0 | Normal Operation |
| 1 | 1 | Set PCIe port config bit 1 |

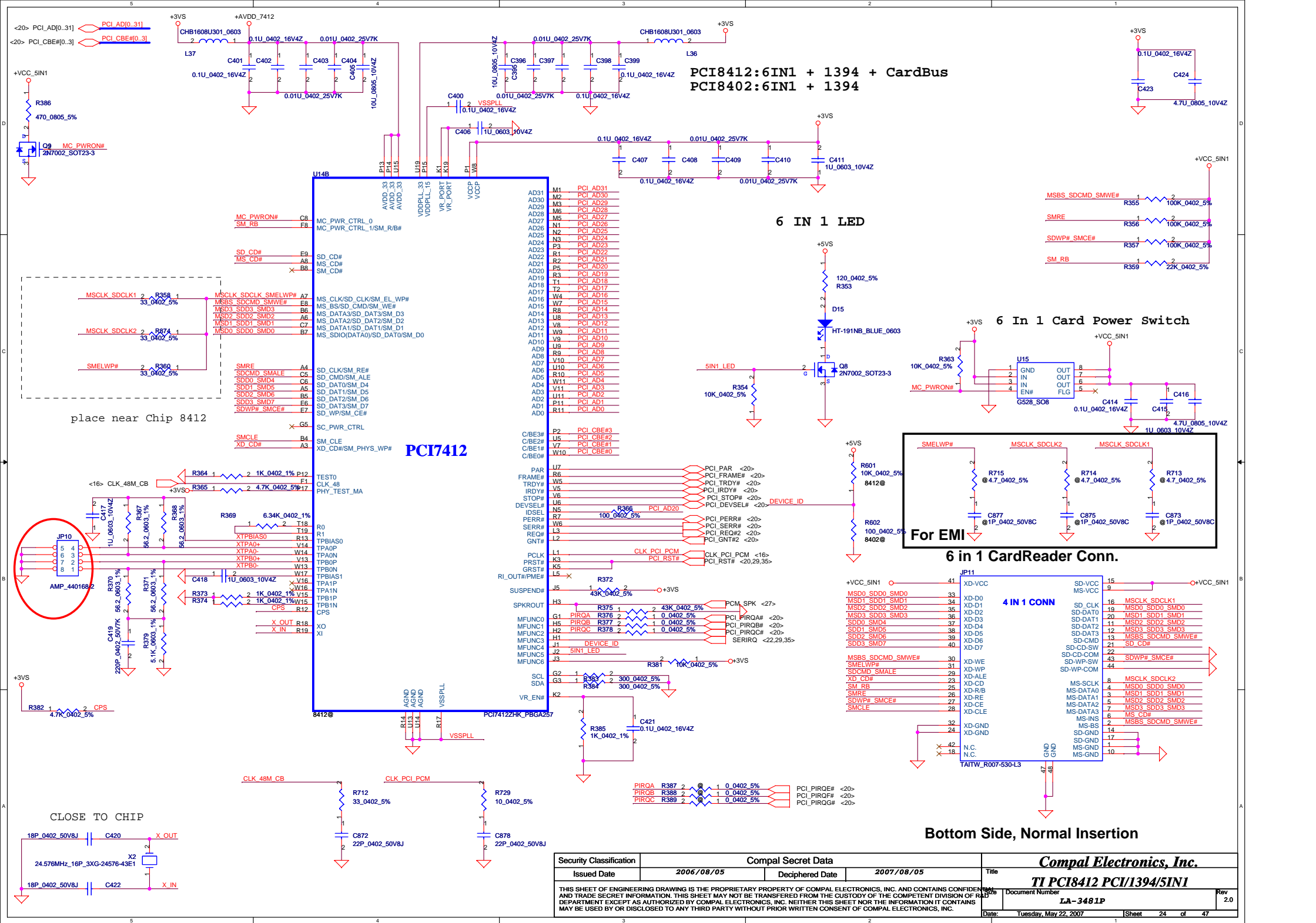
RTC Battery

- Layout Note:
- Under BATT1 battery Body, no Trace no Via
 - BATT1 + - PIN keep out 80mil from other component ,trace and via

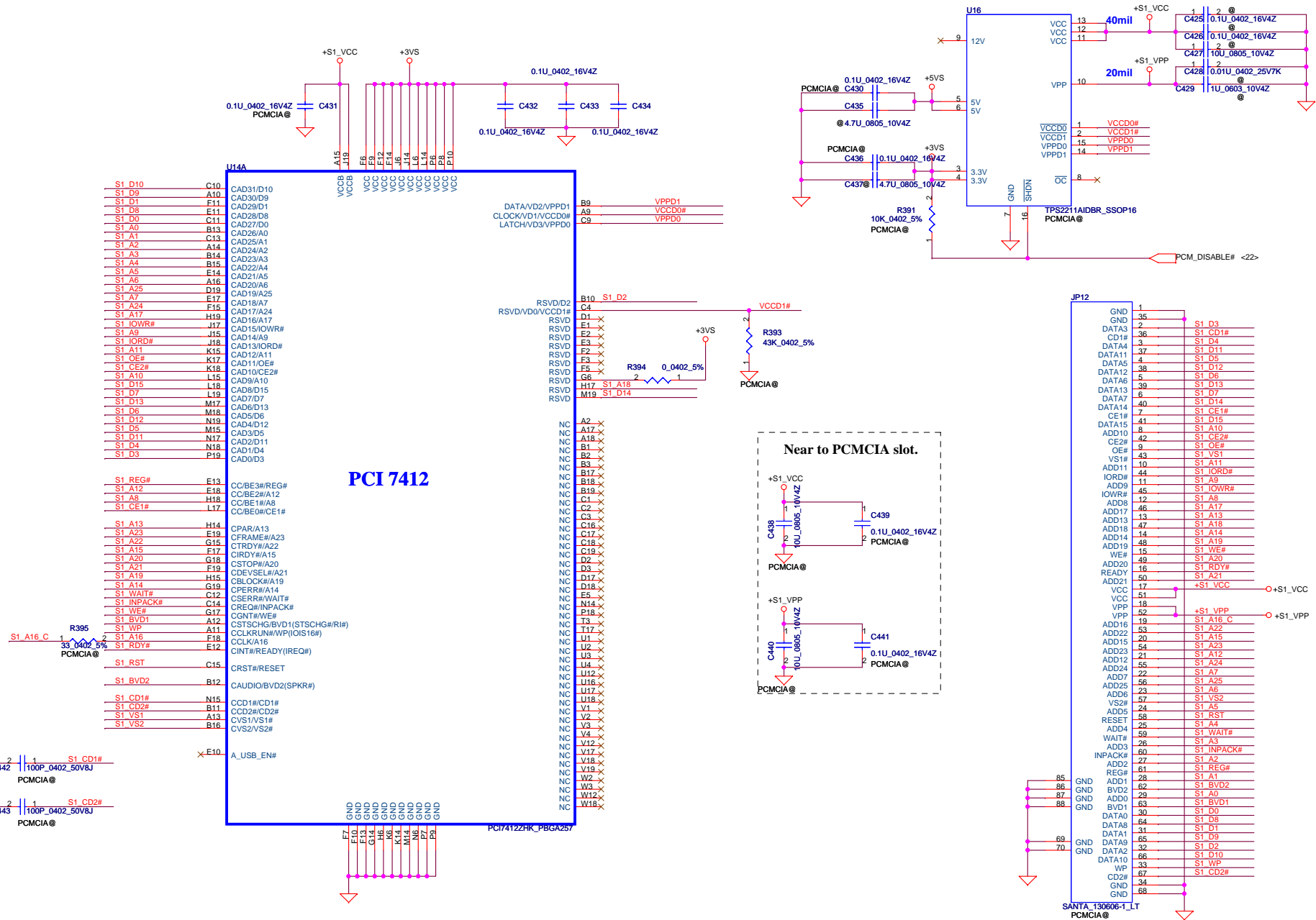


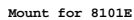
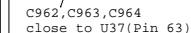




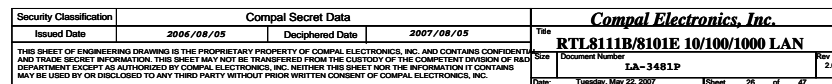


CardBus Power Switch

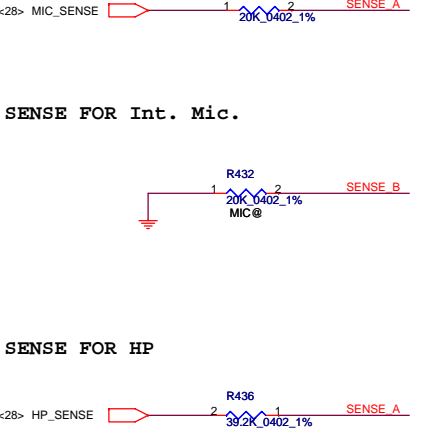
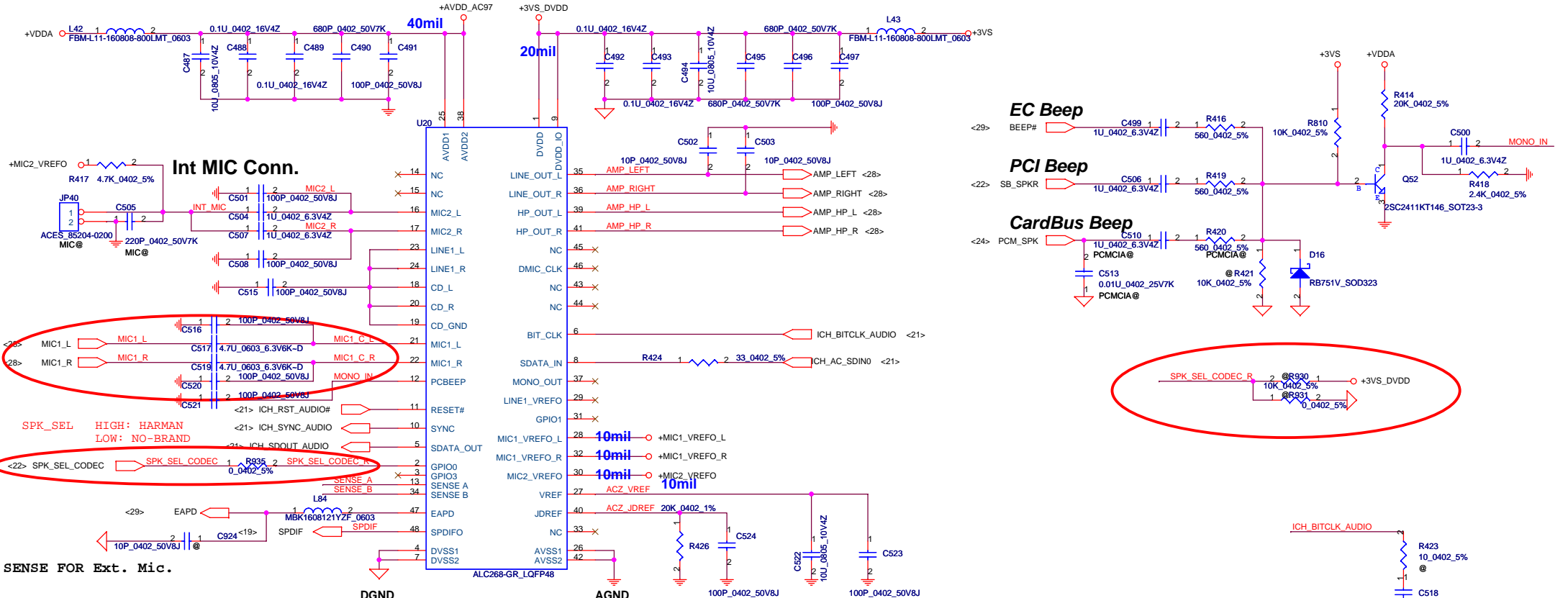




LAN Conn.

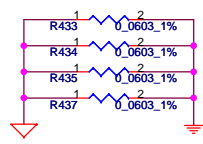


HD Audio Codec

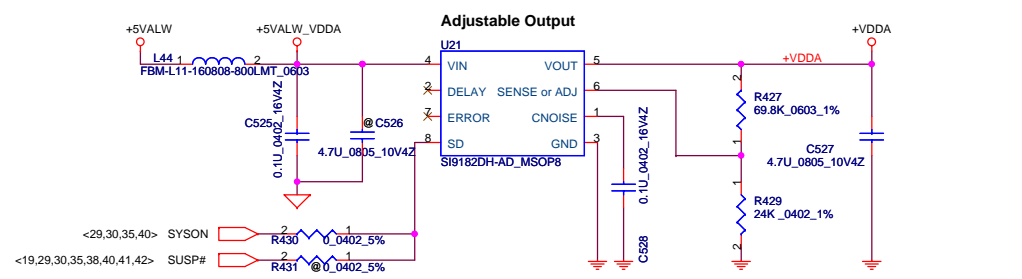


| Sense Pin | Impedance | Codec Signals |
|-----------|-----------|---------------------|
| SENSE A | 39.2K | PORT-A (PIN 39, 41) |
| | 20K | PORT-B (PIN 21, 22) |
| | 10K | PORT-C (PIN 23, 24) |
| SENSE B | 5.1K | PORT-D (PIN 35, 36) |
| | 39.2K | PORT-E (PIN 14, 15) |
| | 20K | PORT-F (PIN 16, 17) |
| | 10K | PORT-G (PIN 43, 44) |
| | 5.1K | PORT-H (PIN 45, 46) |

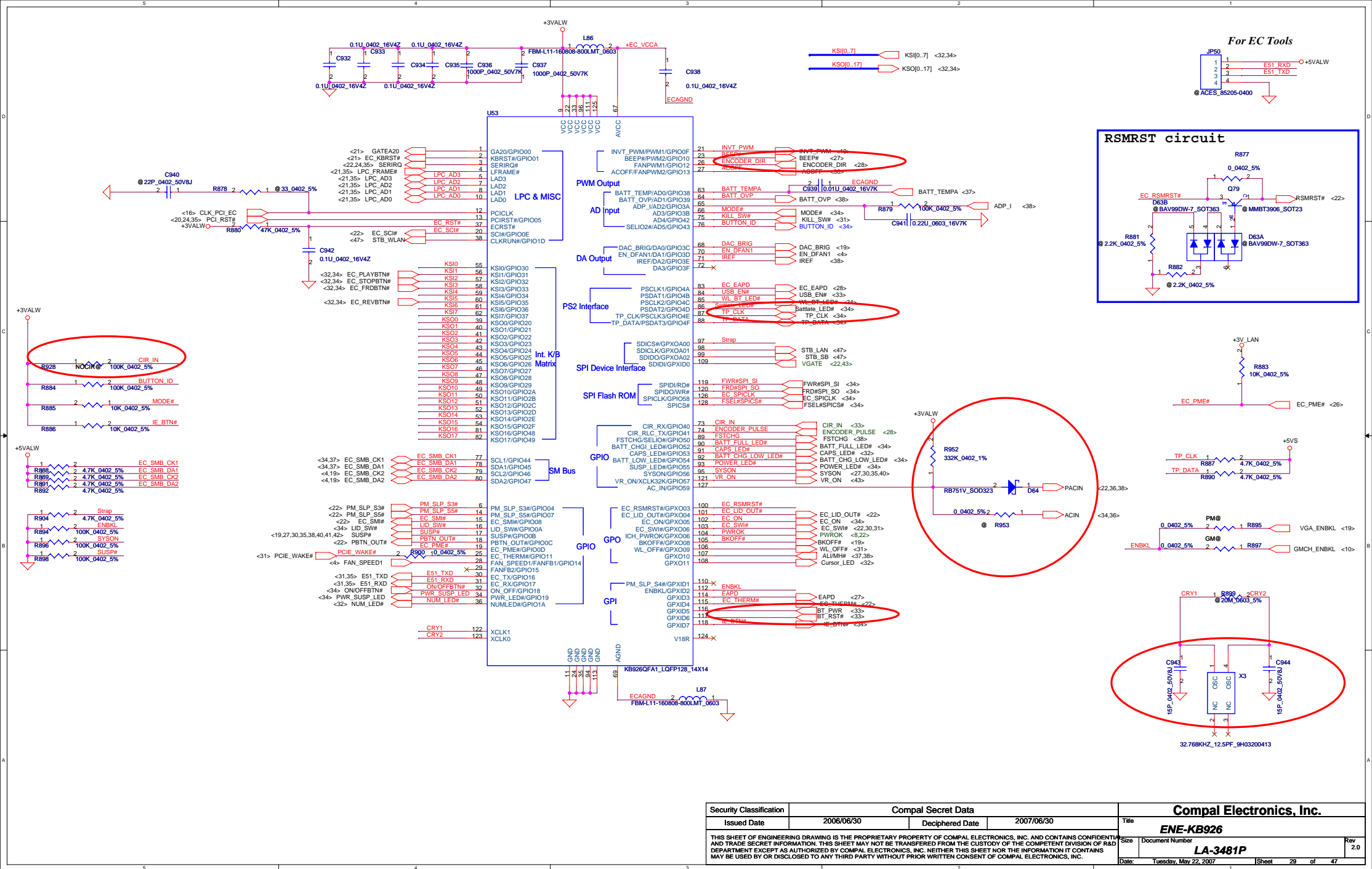
Moat Bridge



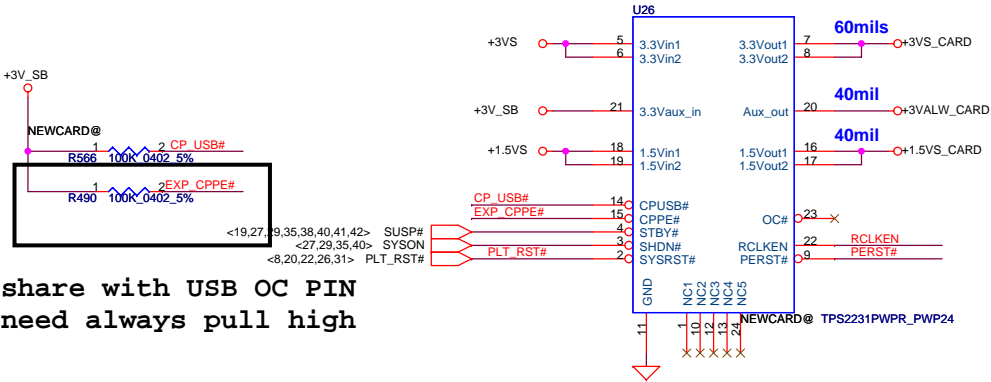
Regulator for CODEC



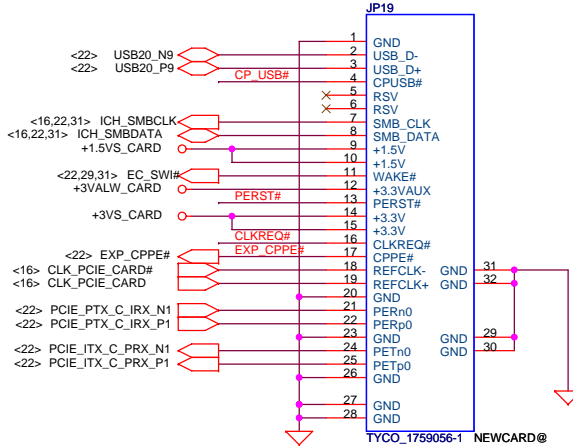
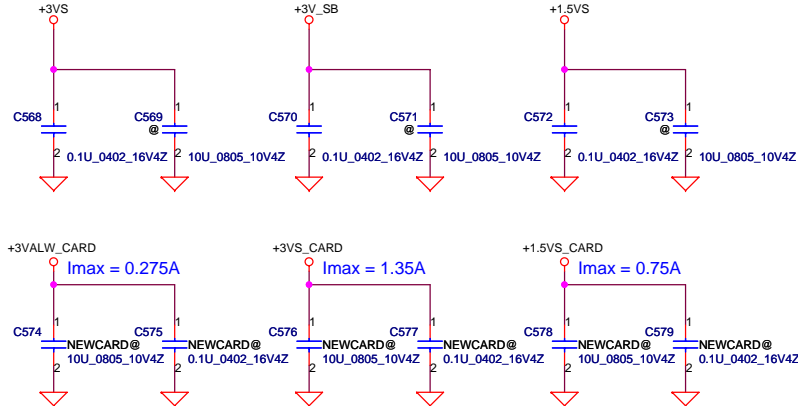
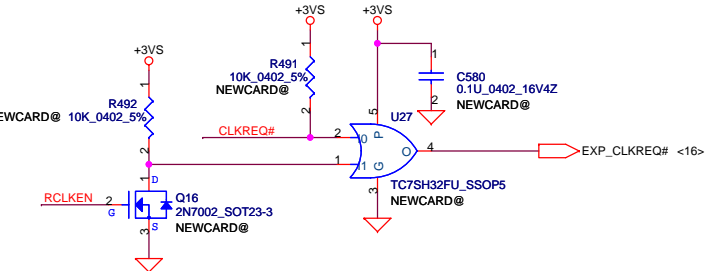
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| Issued Date | 2006/08/05 | Deciphered Date | 2007/08/05 | Title | HD Audio Codec_ALC268 | |
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| | | | | | LA-3481P | 2.0 |
| | | | | Date | Tuesday, May 22, 2007 | Sheet 27 of 47 |



New Card

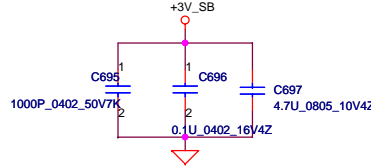
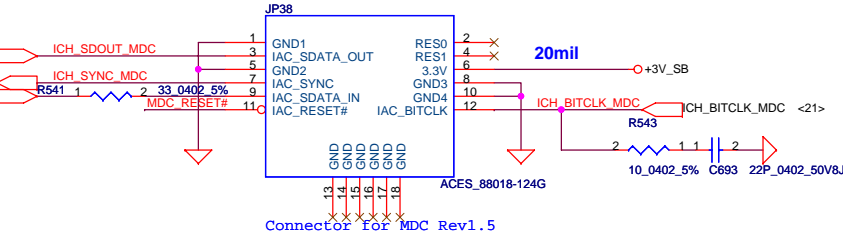
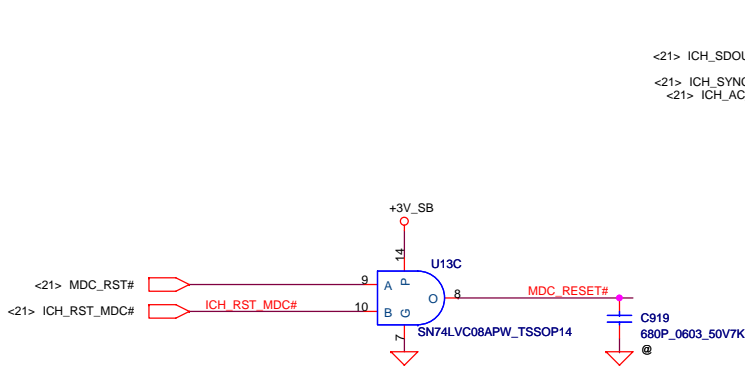


share with USB OC PIN
need always pull high



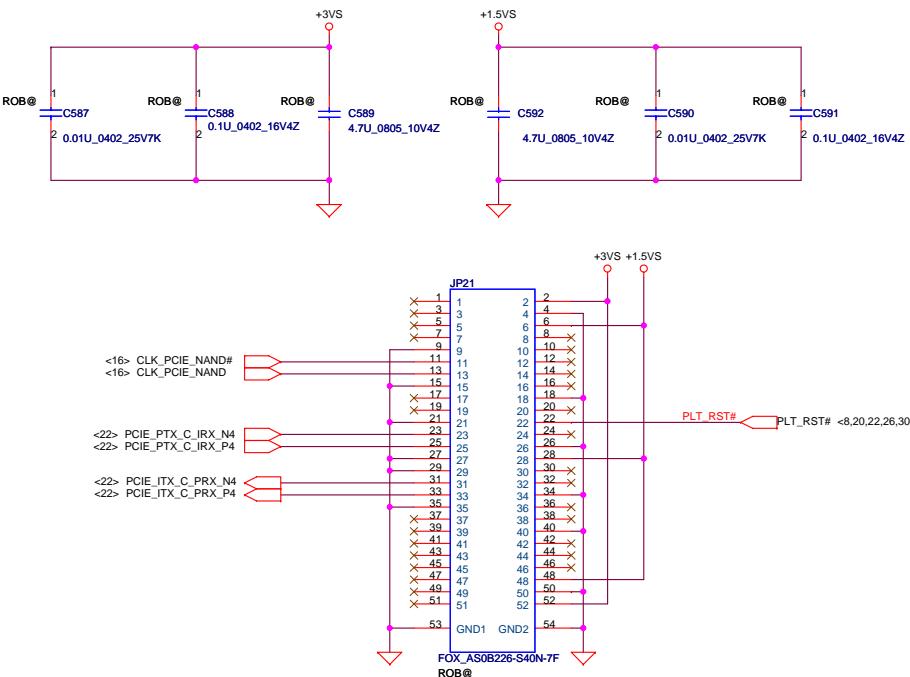
MDC

MDC Conn.

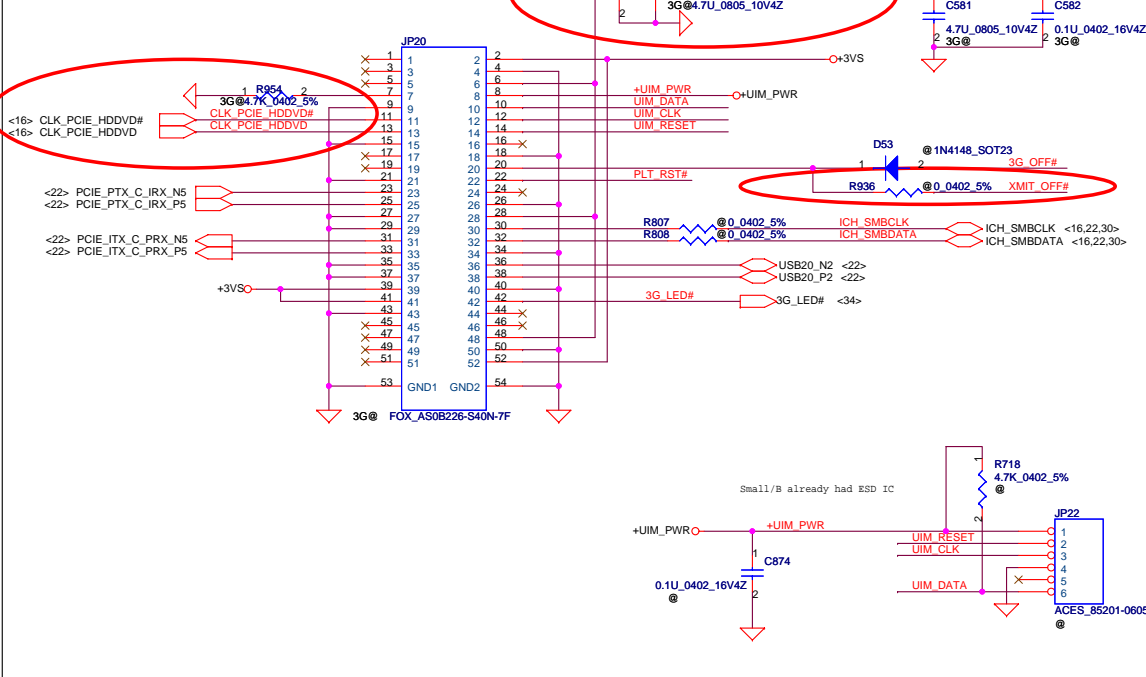


| | | | | | | | | | | | |
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| Security Classification | | | | Compal Secret Data | | | | Compal Electronics, Inc. | | | |
| Issued Date | | | | 2006/08/05 | | | | Deciphered Date | | | |
| 2007/08/05 | | | | Title | | | | New Card & MDC | | | |
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| Date | | | | Tuesday, May 22, 2007 | | | | Sheet 30 of 47 | | | |

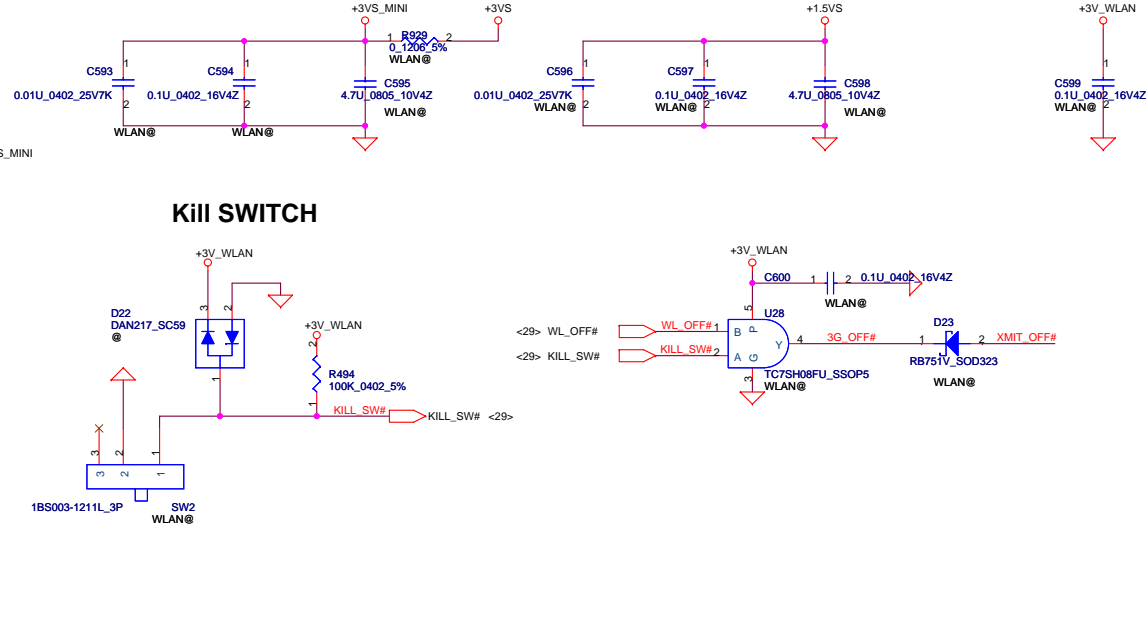
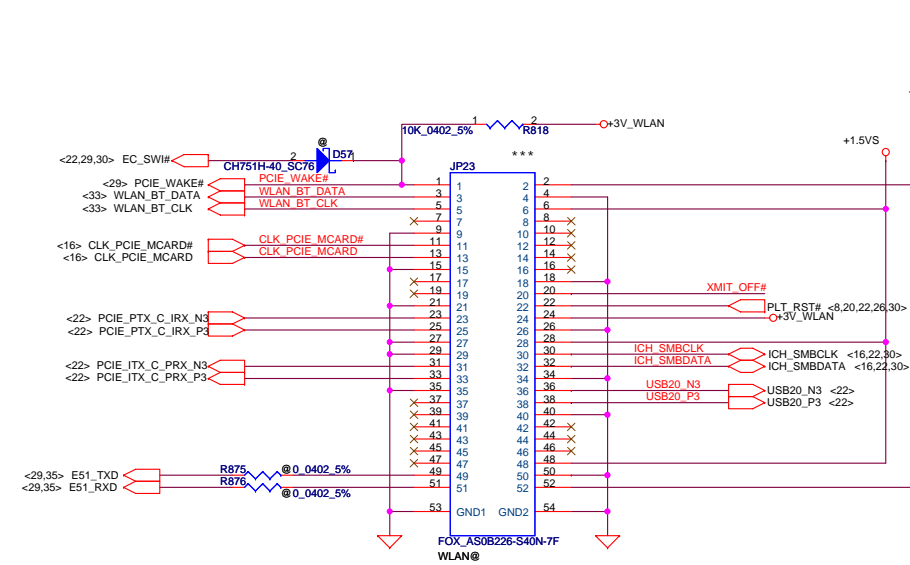
NAND mini Card(Robson support)



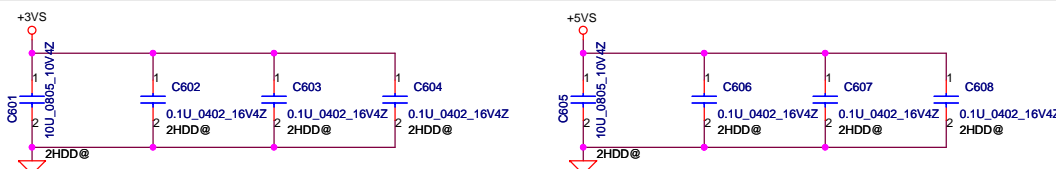
Mini-Express Card for 3G



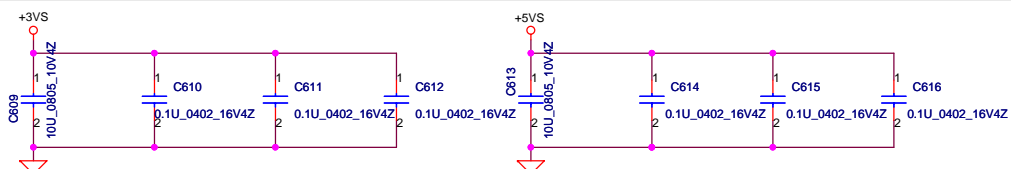
Mini-Express Card for WLAN



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|---|------------|--------------------|------------|--------------------------|----------|
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| | | | | LA-3481P | 2.0 |
| Date: Tuesday, May 22, 2007 | | | | Sheet | 31 of 47 |

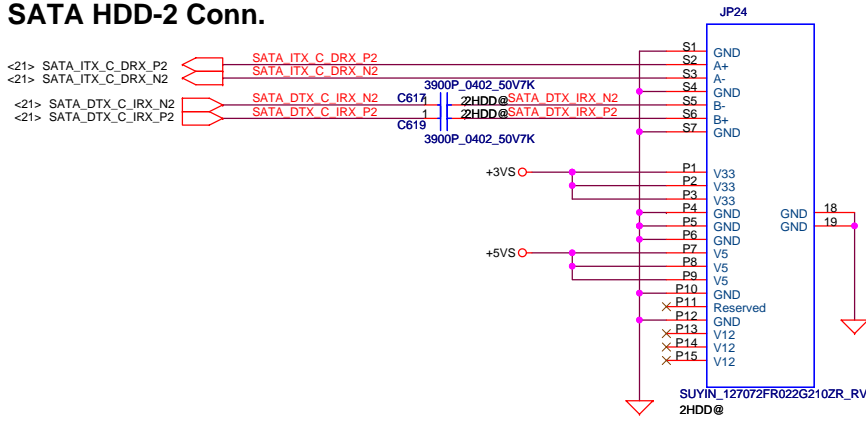


Place Components closely to SATA Conn.

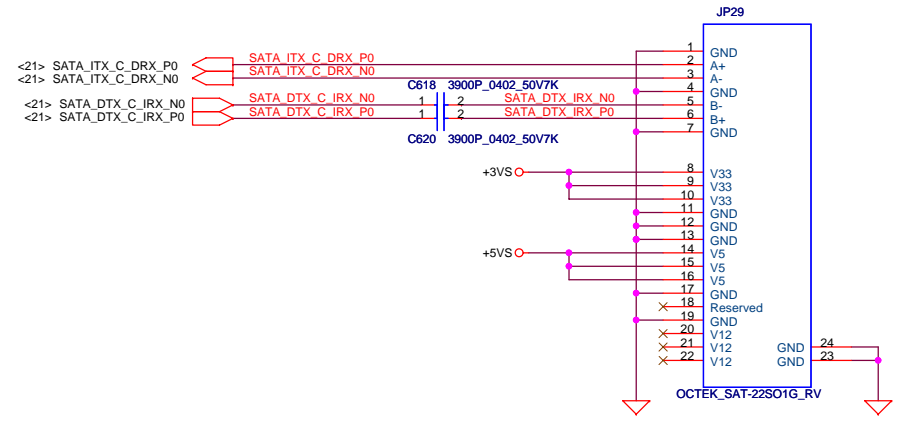


Place Components closely to SATA Conn.

SATA HDD-2 Conn.

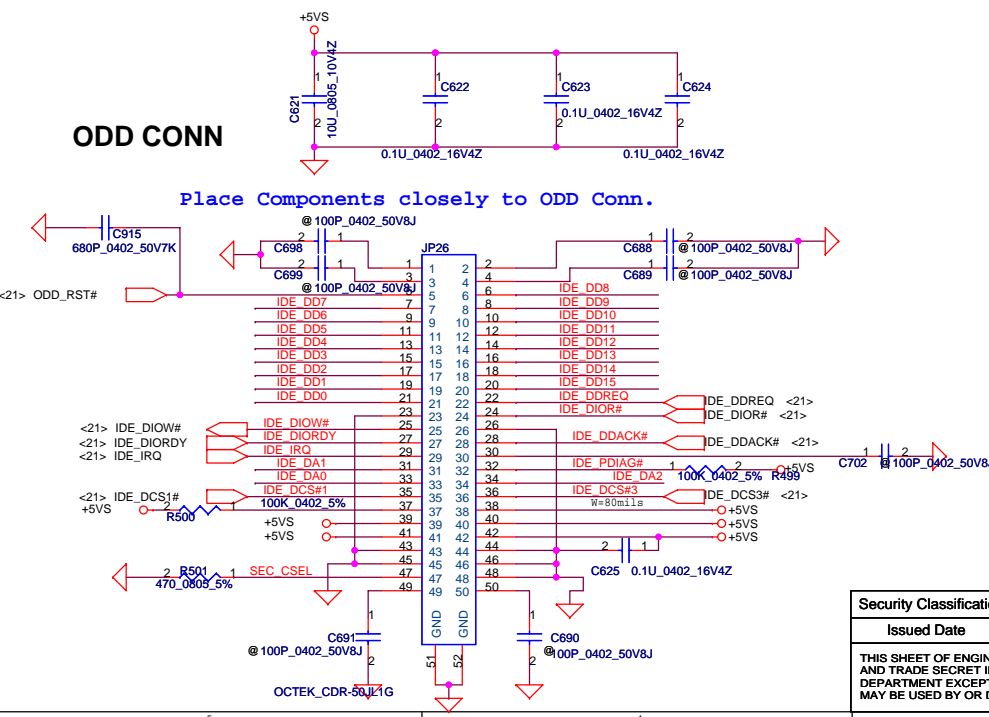


SATA HDD Conn.

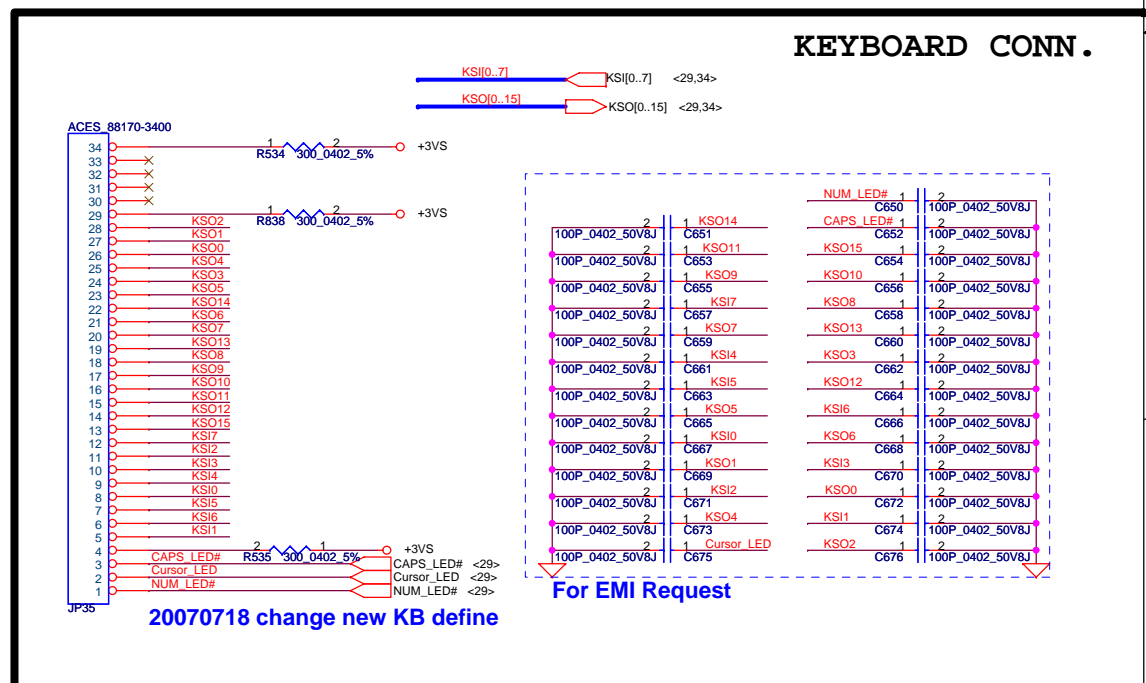


- <21> IDE_DD[0..15] IDE_DD[0..15]
- <21> IDE_DA[0..2] IDE_DA[0..2]

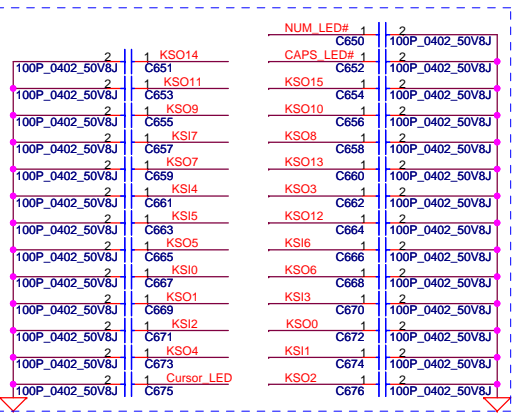
ODD CONN



Place Components closely to ODD Conn.



KEYBOARD CONN.



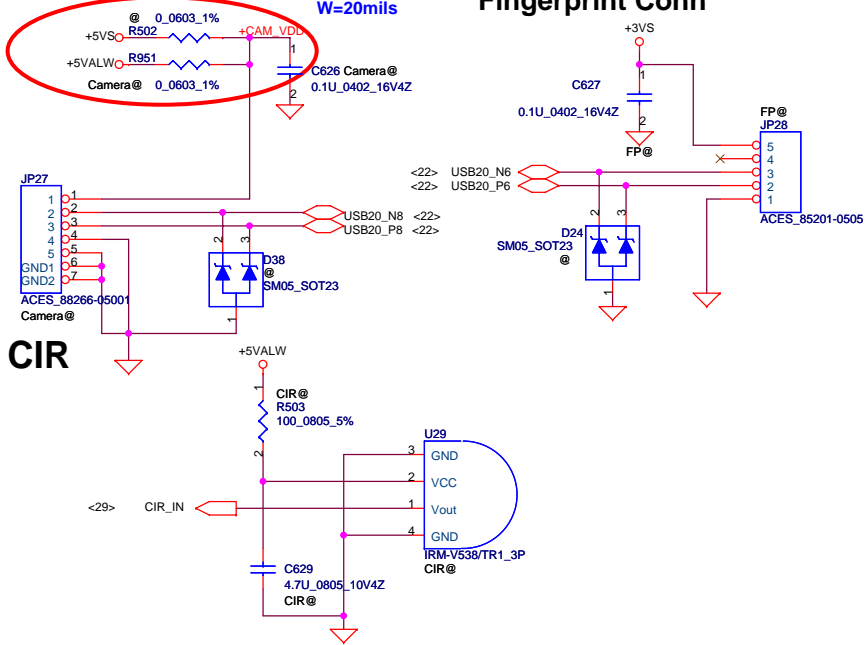
For EMI Request

20070718 change new KB define

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|---|--|--|--|--------------------|--|--|--|-----------------------------|--|--|--|
| Issued Date | | | | 2006/08/05 | | | | Title | | | |
| Deciphered Date | | | | 2007/08/05 | | | | SATA & ODD | | | |
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| | | | | | | | | Rev 2.0 | | | |
| | | | | | | | | Date: Tuesday, May 22, 2007 | | | |
| | | | | | | | | Sheet 32 of 47 | | | |

Int. Camera Conn

W=20mils

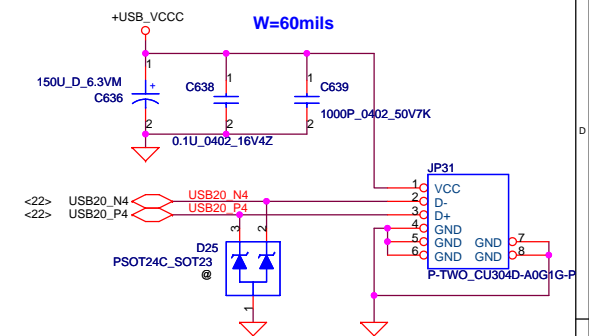


CIR

Fingerprint Conn

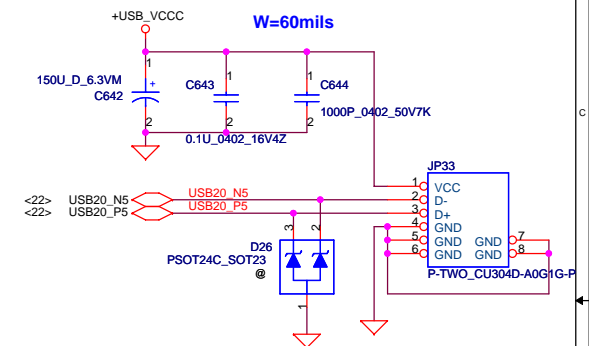
USB CONN. 1

W=60mils

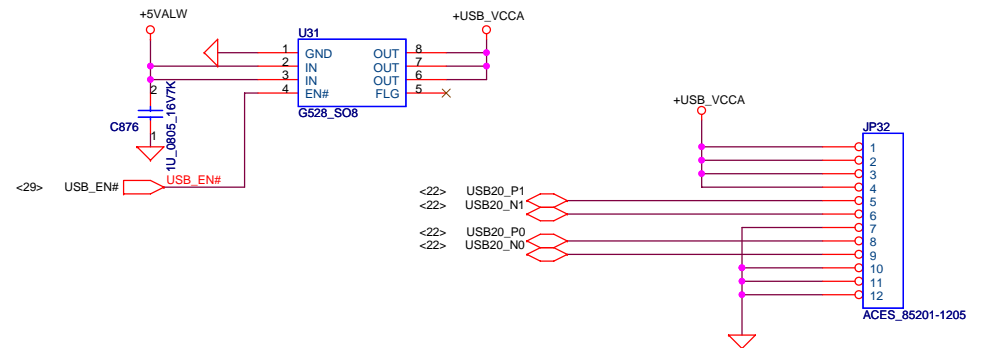


USB CONN.2

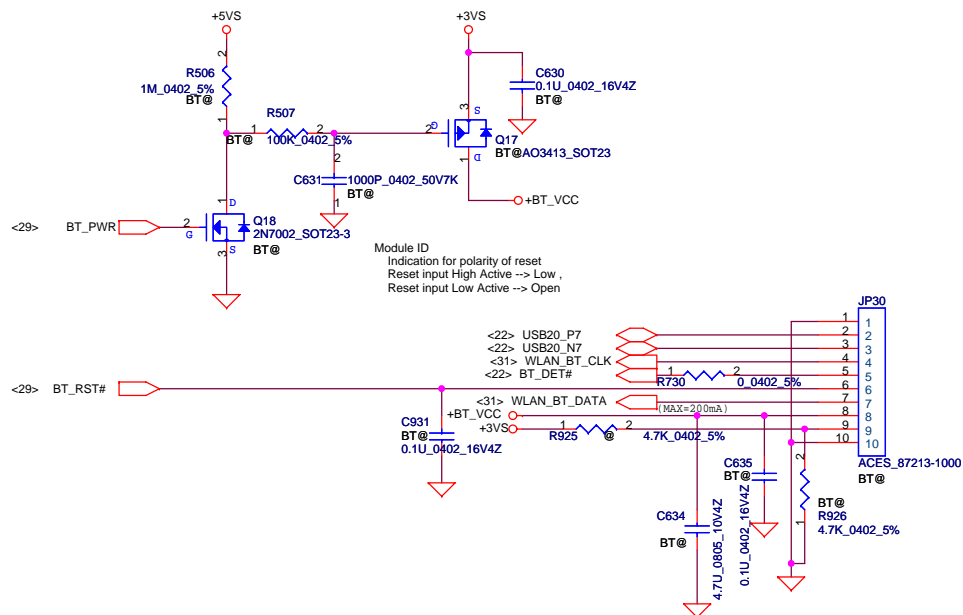
W=60mils



USB Small Board



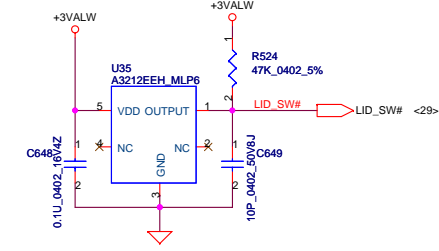
BlueTooth Interface



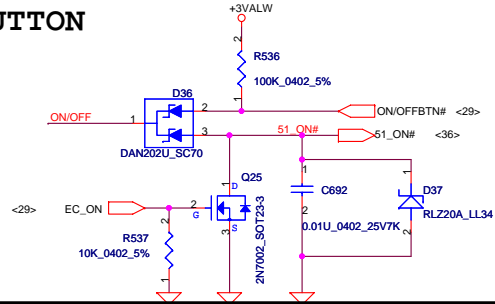
| Security Classification | | | | Compal Secret Data | | | | Compal Electronics, Inc. | | | |
|-------------------------|--|--|--|--------------------|--|-----------------|--|--------------------------|--|-----------------------------|--|
| Issued Date | | | | 2006/08/05 | | Deciphered Date | | 2007/08/05 | | Title | |
| | | | | | | | | | | USB Conn./BT/Camera/CIR | |
| | | | | | | | | | | LA-3481P | |
| | | | | | | | | | | Rev 2.0 | |
| | | | | | | | | | | Date: Tuesday, May 22, 2007 | |
| | | | | | | | | | | Sheet 33 of 47 | |

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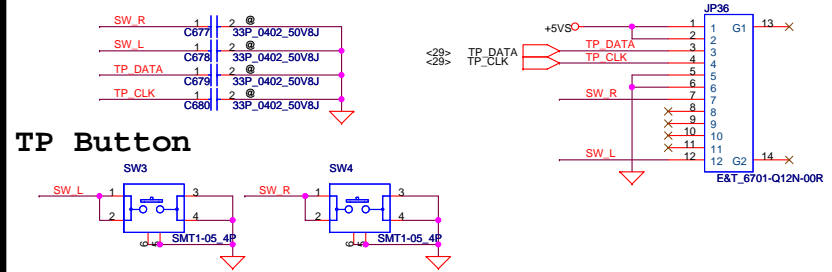
Lid SW



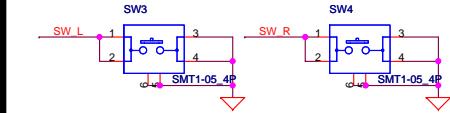
ON/OFF BUTTON



TP CONN.



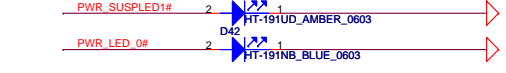
TP Button



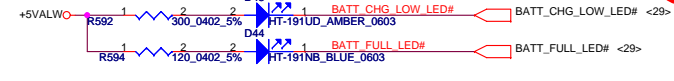
AC IN LED



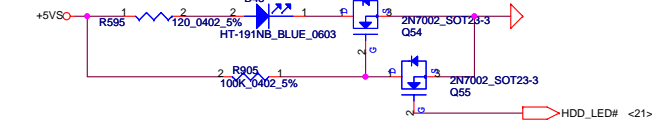
POWER/SUSPEND LED



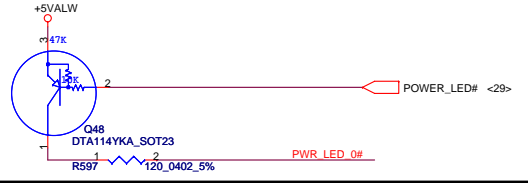
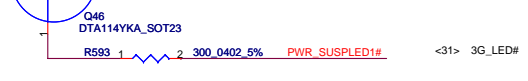
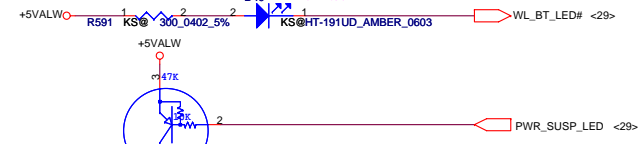
BATT CHARGE/FULL LED



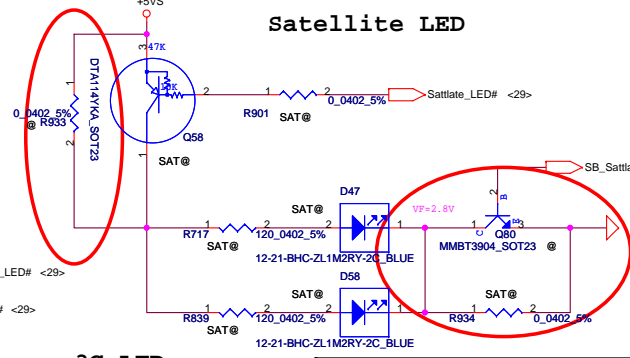
HDD LED



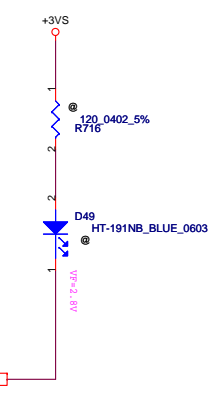
WL&BT LED



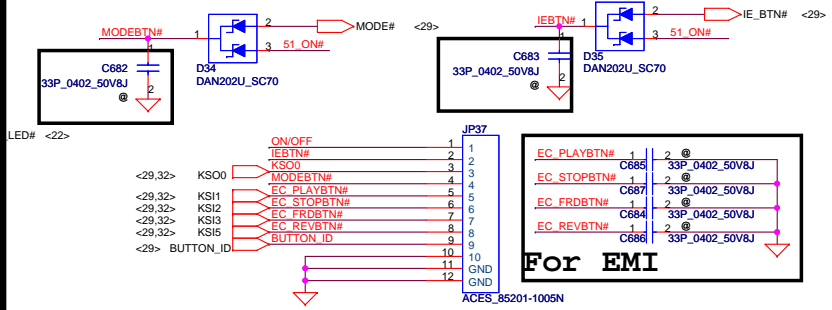
Satellite LED



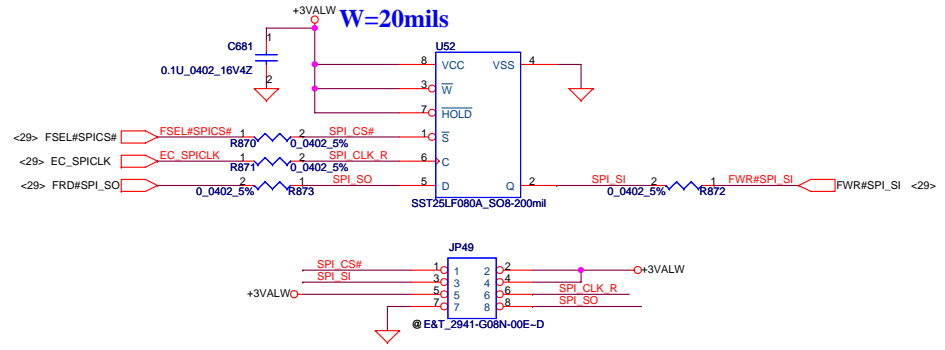
3G LED



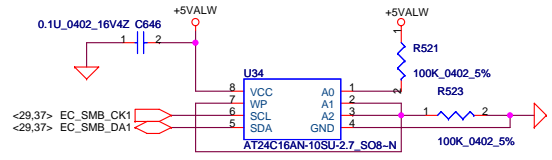
SW/LED Connector



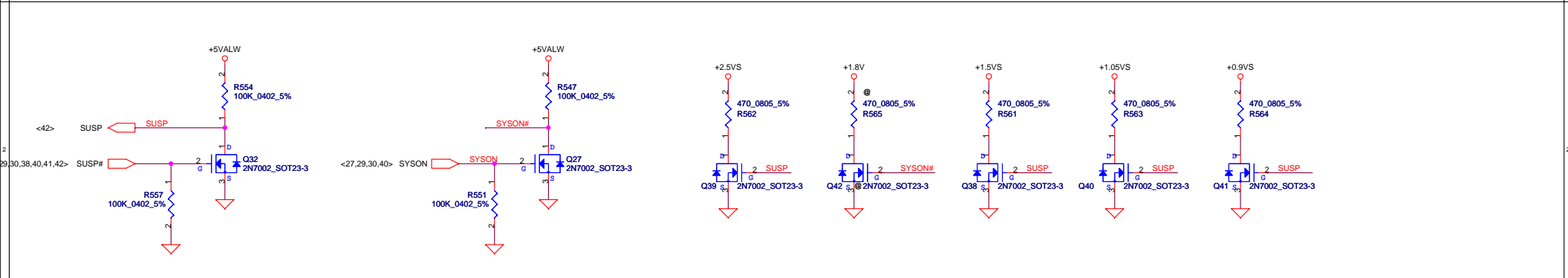
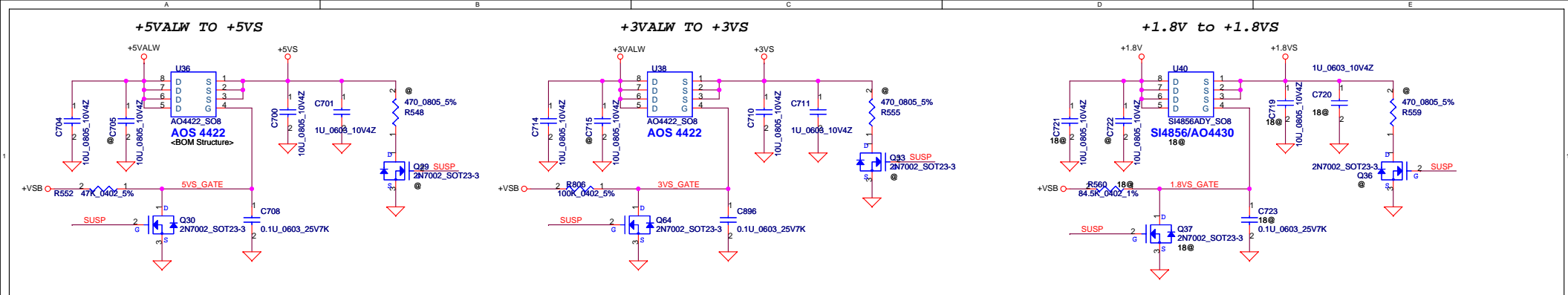
SPI Flash (8Mb*1)



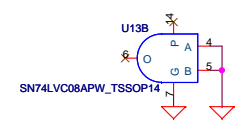
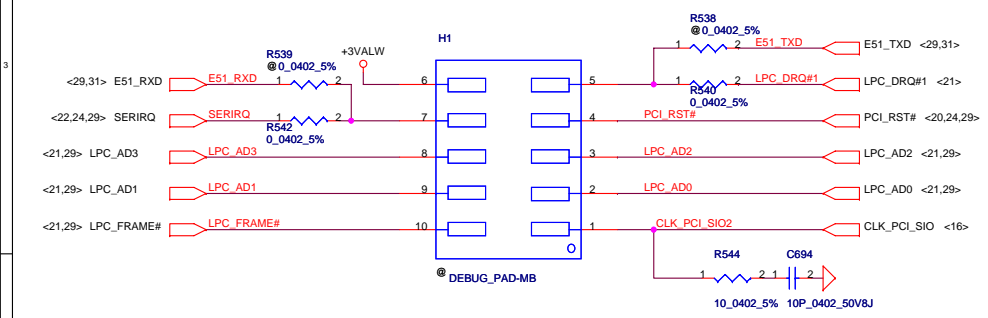
EEPROM



| Security Classification | | Compal Secret Data | | Title | |
|---|------------|--------------------|------------|-------------------------------|----------------|
| Issued Date | 2006/08/05 | Deciphered Date | 2007/08/05 | EEPROM/TP/LID/KB/LED/SW-B | |
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| | | | | LA-3481P | |
| | | | | Date: Saturday, June 23, 2007 | Sheet 34 of 47 |



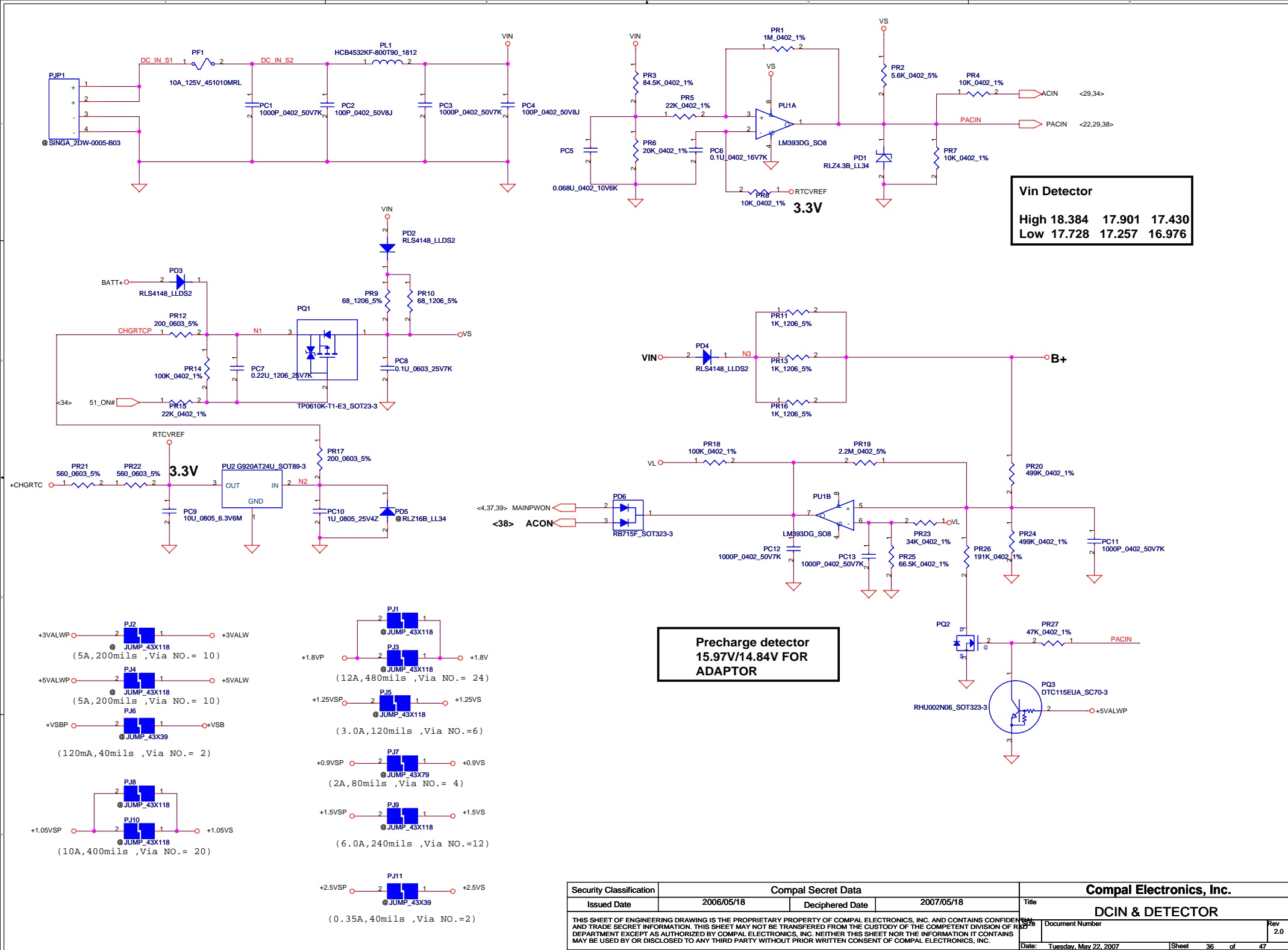
Debug Port New LPC Debug Pad ---- MB side For EE



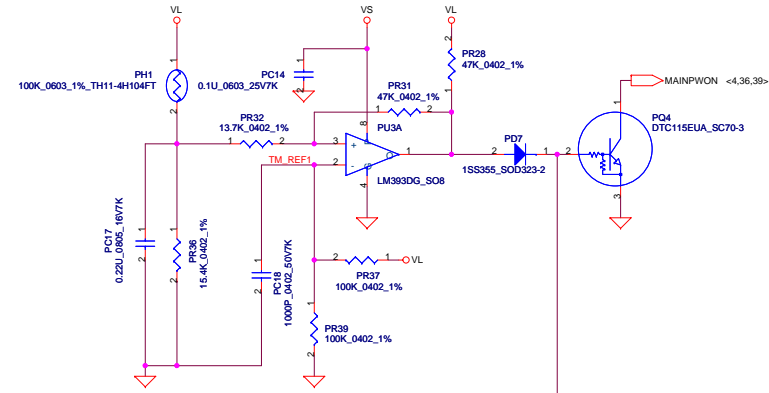
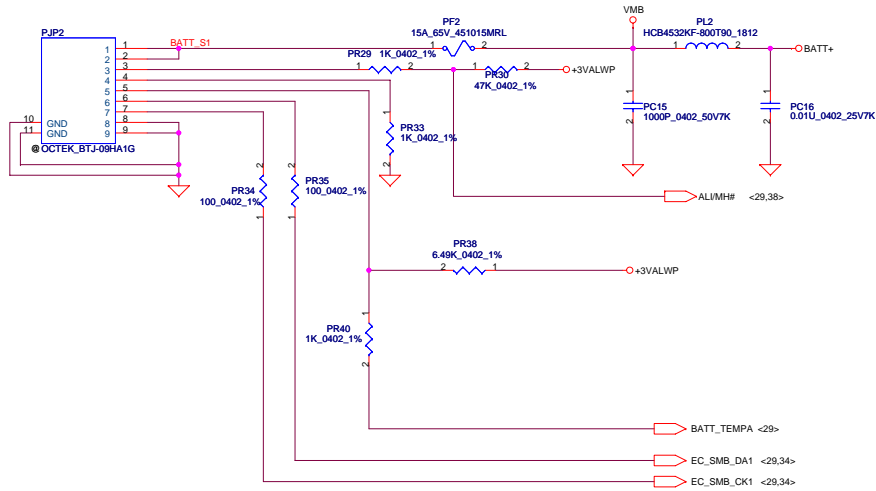
Under DDR ME Assignment Area

Keep Resistor near Debug Pad and in the same side

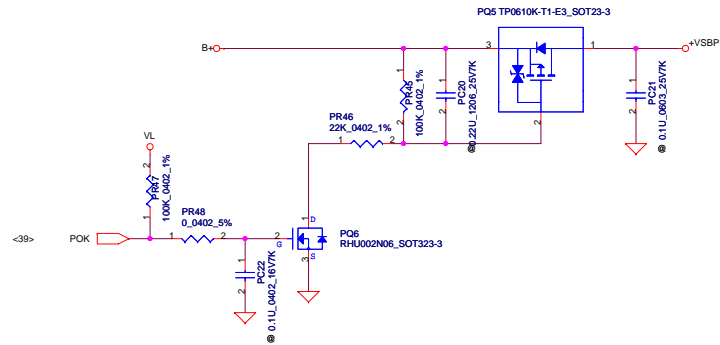
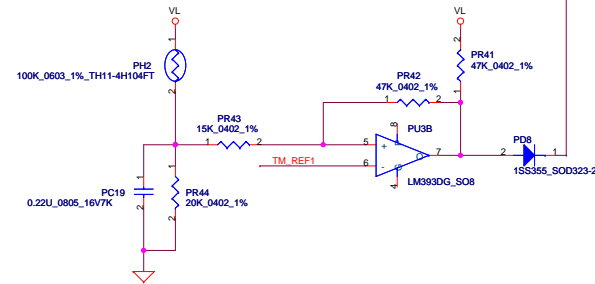
Reverse Side DIMM ---- Pin 1 keep away DIMM



PH1 under CPU botten side :
CPU thermal protection at 92 degree C
Recovery at 56 degree C



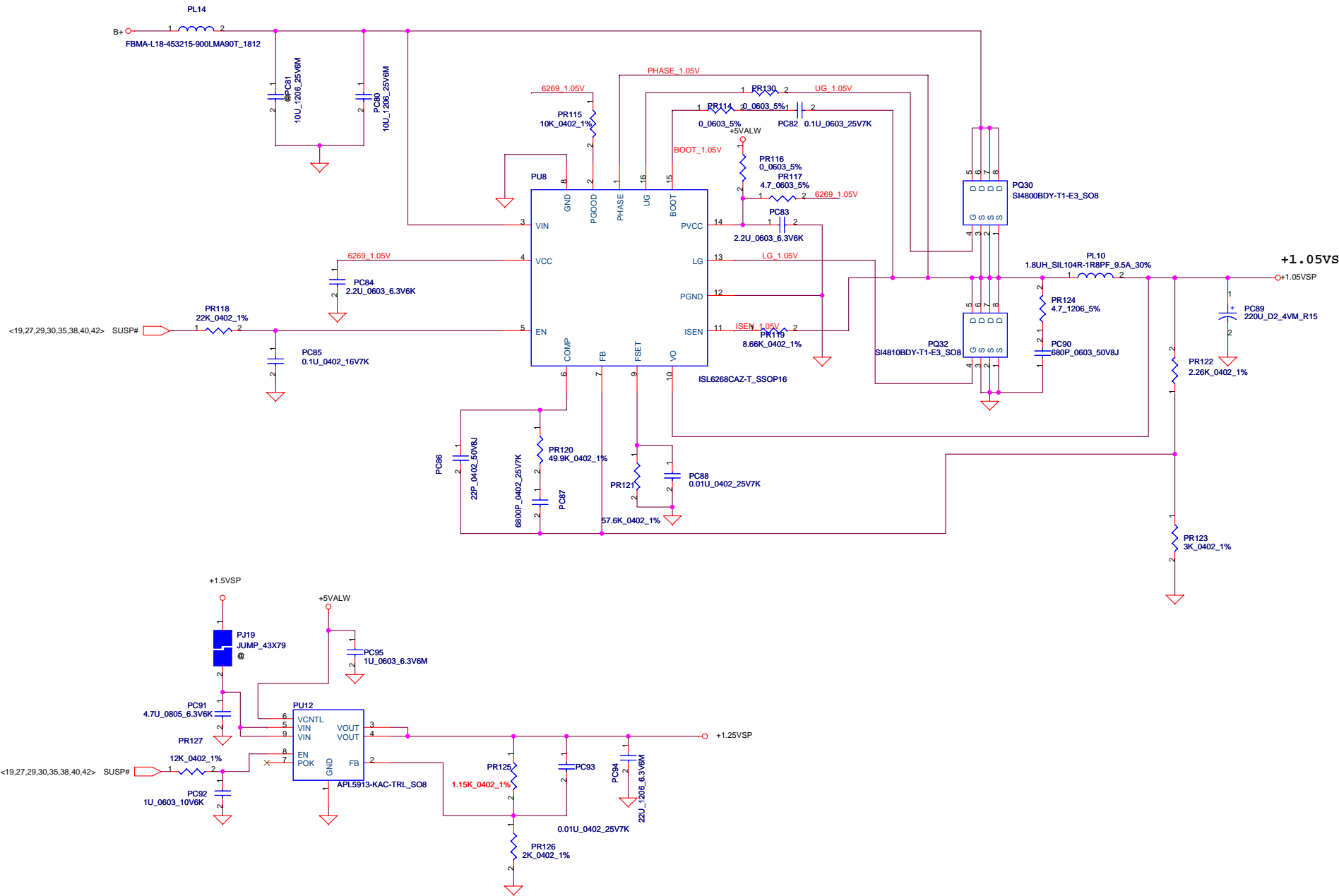
PH2 near main Battery CONN :
BAT. thermal protection at 92 degree C
Recovery at 47 degree C



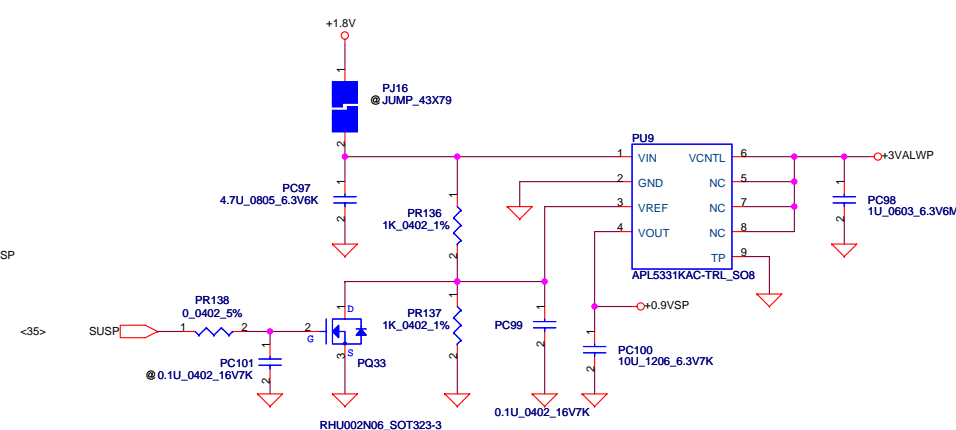
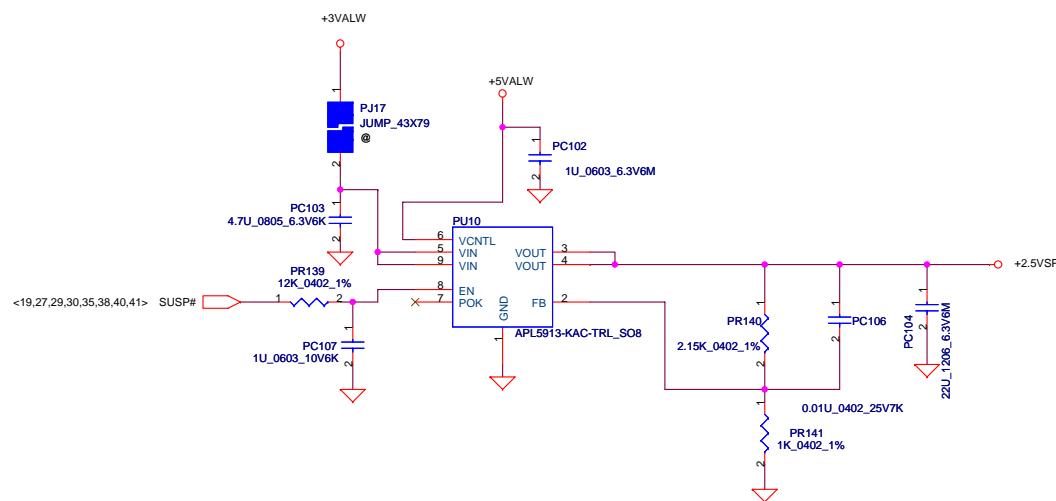
CC=0.5~3A
CV=12.6V(6 CELLS LI-ION)

[illegible]

| | | | | | | |
|---|------------|--------------------|------------|--------------------------|-----------------|---------|
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| Issued Date | 2006/05/18 | Deciphered Date | 2007/05/18 | CHARGER | | |
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| | | | | Doc No | Document Number | Rev 2.0 |
| Date: Tuesday, May 22, 2007 | | | | Sheet | 38 | of 47 |



| | | | | | | | | | | |
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| Security Classification | | Compal Secret Data | | | | Compal Electronics, Inc. | | | | |
| Issued Date | | 2006/05/18 | | Deciphered Date | | 2007/05/18 | | Title | | |
| | | | | | | | | 1.05V / 1.25V | | |
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| | | | | | | | | | | 2.0 |
| Date: Tuesday, May 22, 2007 | | | | Sheet | | 41 | | of 47 | | |



| | | | | | |
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| Issued Date | 2006/05/18 | Deciphered Date | 2007/05/18 | Title | |
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| | | | | Date: Tuesday, May 22, 2007 | Sheet 42 of 47 |

HW4 Product Improvement Record (P.I.R.)

ISKAA LA-3481P SCHEMATIC CHANGE LIST
REVISION CHANGE: 0.1 TO 2A

Rev 0.1 to 0.2

| NO | PAGE | MODIFICATION LIST | PURPOSE |
|----|------|-------------------------------------|----------------------------------|
| 1 | 17 | Add JP39 | Add CRT Board |
| 2 | 22 | Change R322 from 150 ohm to 10K ohm | From Intel recommend |
| 3 | 12 | Delete L13, L14, C199, C140 | 1.25VS_DMI share with 1.25VS_PEG |
| 4 | 31 | Modify PCI-E for WLAN and Robson | Design issue |
| 5 | 15 | Delete C234 | Share with C729 |

Rev 0.2 to 0.3

| NO | PAGE | MODIFICATION LIST | PURPOSE |
|----|------|--|---------------------------------|
| 1 | 11 | Remove C116 | From Intel recommend |
| 2 | 16 | Change EXP_CLKREQ# from U4.44 to U4.3 | Common design with ISRAA |
| 3 | 16 | Change CLK_MCH_3GPLL from U4.27 to U4.47 | Common design with ISRAA |
| 4 | 16 | Change CLK_PCIE_CARD from U4.47 to U4.27 | Common design with ISRAA |
| 5 | 19 | Add R949 and Remove D11 | Design change |
| 6 | 19 | Add JP42 | Co-layout 30 pin LVDS connector |
| 7 | 24 | Add R874 | Reserve the resistor for EMI |
| 8 | 29 | Change EC from KB910 to KB926 | Design change |
| 9 | 34 | Change SPI BIOS U52 | Design change |
| 10 | 34 | Add Q54, Q55 | HDD LED controlled by SB |
| 11 | 47 | Add Energy Star circuit | Design change |
| 12 | 10 | Change C84-C115 from Y5V to X7R | For VGA thermal issue |

Rev 0.3 to 0.4

| NO | PAGE | MODIFICATION LIST | PURPOSE |
|----|------|---|---|
| 1 | 12 | Modify L58 to 4.7 ohm | For TV-out wave line issue |
| 2 | 12 | Change R686 to 2.2uf | For TV-out wave line issue |
| 3 | 12 | Modify L15 to 100 ohm | from Intel recommend for new chip set |
| 4 | 12 | Change R694 to 1uf | from Intel recommend for new chip set |
| 5 | 26 | Reserve L92,R941,R944,R946,R947, C965,C963,R937,C962,C964 | Reserve for LAN controller 8111C |
| 6 | 33 | Modify Camera power from +5Vs to +5VALW | Change for Camera can't detect from S3 resume |
| 7 | 29 | Add R928 | For CIR issue |
| 7 | 22 | Add R903 and R927 | For CIR issue |

Rev 0.4 to 1.0

| NO | PAGE | MODIFICATION LIST | PURPOSE |
|----|------|--|--|
| 1 | 27 | Change PCB 0.4 to 1.0 | Modify Revision for MP |
| 2 | 28 | Add R935 | Design for speaker select |
| 2 | 28 | Change L49, L50, L51, L52 to 0 ohm | For speaker issue |
| 3 | 27 | Change C517 and C519 from 1uf to 4.7uf | From Realtek recommend for THD+N issue |
| 4 | 31 | Add R954 | For HD-DVD function |

Rev 1.0 to 2.0

| NO | PAGE | MODIFICATION LIST | PURPOSE |
|----|------|--|-------------------------------|
| 1 | 18 | Add U54 and C966 | For HDMI hot plug issue |
| 2 | 18 | Remove 1932 circuit | M72 and M76 has internal HDMI |
| 3 | 18 | Remove CMD circuit | For EMI issue |
| 4 | 18 | Add L66, L67, L68, L69 | For EMI issue |
| 5 | 18 | Add Q134,Q135 level-shifting circuit | For HDMI level-shifting |
| 6 | 18 | Change R705 and R706 to 19.1K ohm | From ATI recommend |
| 7 | 24 | Reserve R713, R714, R715, C873, C875, C877 | For EMI issue |
| 8 | 32 | Reserve C650-C676 | For EMI issue |
| 9 | 34 | Reserve C682-C687 | For EMI issue |
| 10 | 18 | Change R621 to 100K ohm and R723 to 2.2K ohm | For HDMI level-shifting |

Rev 2.0 to 2A

| NO | PAGE | MODIFICATION LIST | PURPOSE |
|----|------|--|--|
| 1 | 18 | Add U55 level-shifting circuit | For HDMI level-shifting |
| 2 | 29 | Change C943 and C944 from 10pf to 15pf | From ENE recommend for crystal issue |
| 3 | 23 | Change C360 from 0.1uf to 1uf | From Intel recommend for boot-up issue |
| 4 | 22 | Remove R327, R328, R329 | For leakage issue |

| | | | | | | |
|--|--------------------|-----------------|------------|-----------------|-------------------------|----------------|
| Security Classification | Compal Secret Data | | | Title | | |
| Issued Date | 2006/06/30 | Deciphered Date | 2008/05/21 | P.I.R. | | |
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| | | | | Date: | Saturday, June 23, 2007 | Sheet 44 of 47 |

Figure 1 illustrates the four experimental conditions. Each condition shows a subject (U3) interacting with a device (965GM_R3, 965GM_R1, 965PM_R1, or GL960_R3) via a GMR1 sensor or GLR3 sensor.

U10

ICH8M_R1
ICH8MR1@

U37

100M
100M@

R694

1U_0402_6.3V4Z
GM@

U19

100M

100M@

22U_0402_6.3VM

GM@


PCBA

LA-3481P_DAZ

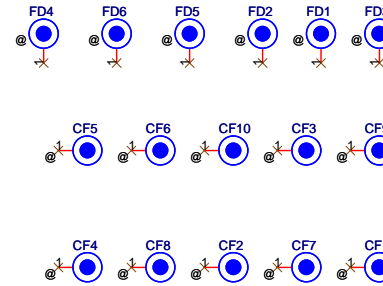
U14

Ti8402
8402@

PJP1



SINGA_2DW-0005-B03
45@



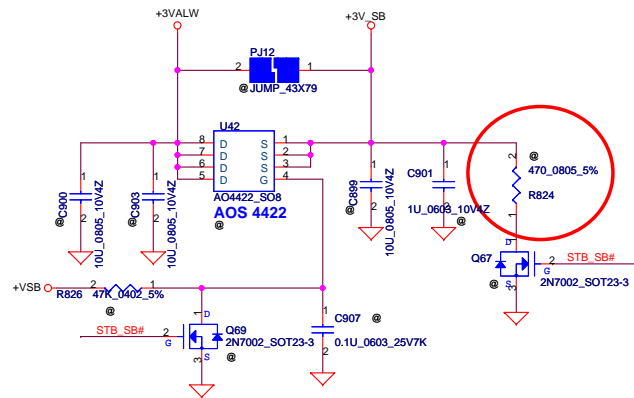
| | | | | |
|--------------------|----------------------------|-------------------|-------------------------|-------------------|
| H2 H_C276D118 | H3 H_C276D118 | H4 H_C276D118 | H5 H_C276D118 | H6 H_C276D118 |
| H7 H_C217D118 | H8 H_C217D118 | H9 H_C276D118 | H10 H_C276D118 | |
| H11 H_C236D122 | H12 H_C236D122 | H13 H_C236D122 | H14 H_C236D146 | H30 H_C236D122 |
| H15 H_C236D43 | H16 H_C236D43 | H17 H_C236D43 | H31 H_C236D122 | |
| H18 H_C315D165 | H19 H_C315D165 | H20 H_C315D165 | H21 H_C315D165 | |
| H22 H_C276D158 | H23 H_C276D158 | H32 H_C276D158 | | |
| H24 H_C118D118N | H25 H_O118X197D118X197N | | H26 H_O197X55D158X16 | |
| H27 H_S315D118 | H28 H_S315D118 | H29 H_S315D118 | | |

| | | | | | | |
|---|--------------------|-----------------|------------|---|-----------------|-----|
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| Issued Date | 2006/08/05 | Deciphered Date | 2007/08/05 | Title | | |
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| | | | | | LA-3481P | 2.0 |
| | | | | Date: Tuesday, May 22, 2007 | Sheet 45 of 47 | |

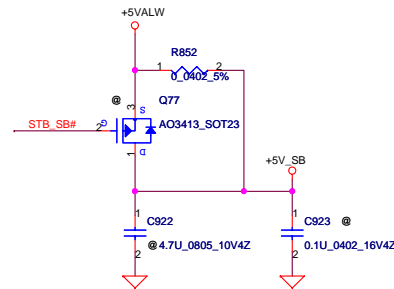
| NO | DATE | PAGE | MODIFICATION LIST | PURPOSE |
|-------|------|------------|--|------------------------------|
| 9/14 | | P.39 | Change PACIN to GND | Change to AUTO-SKIP mode |
| 9/14 | | P.39 | Add PR105 0_0402_5% | Reserve control sequence pin |
| 9/14 | | P.37 | Change PF2 to 15A | Increase design margine |
| 10/24 | | P.36,37,43 | Change PL1,PL2,PL11 to Tai-Tech | Buyer request |
| 10/24 | | P.39,43 | Add PC143,PC144,PC145 | EMI request |
| 10/24 | | P.41,43 | Add snubber PR124,PC90,PR151,PC119,PR160,PC128 | EMI request |
| 10/24 | | P.41 | Change PR119 to 5.49K | Modify 1.05V OCP point |
| 10/24 | | P.40 | Change PC70 to 330U_D2_9m ohm | Reduce the 1.8V ripple |

| | | | | | |
|---|--|--------------------|-----------------|------------|-----------------------|
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| Issued Date | | 2005/06/01 | Deciphered Date | 2006/06/01 | |
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| | | | | | LA-348IP |
| | | | | Date: | Tuesday, May 22, 2007 |
| | | | | Sheet | 46 of 47 |
| | | | | Rev | 2.0 |

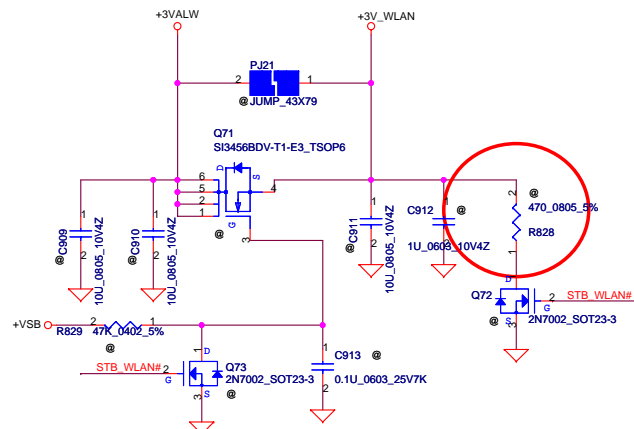
+3VALW TO +3V_SB



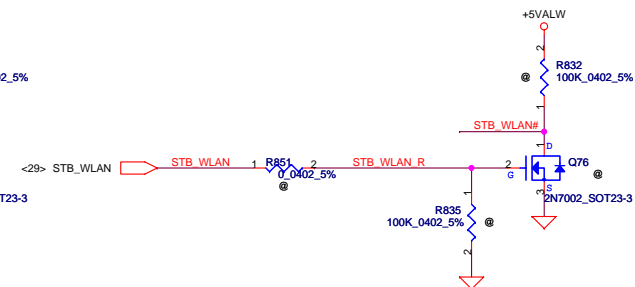
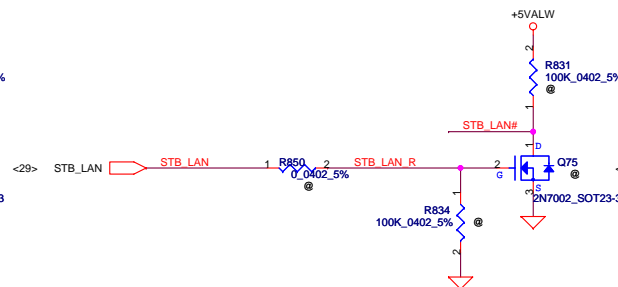
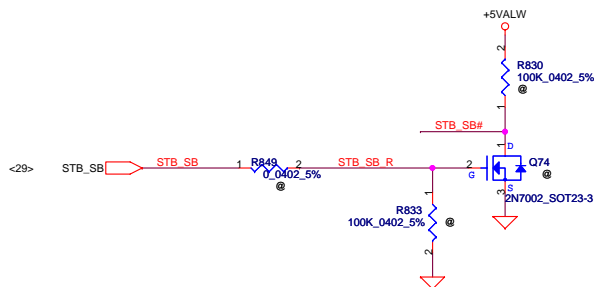
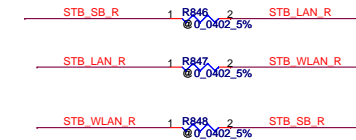
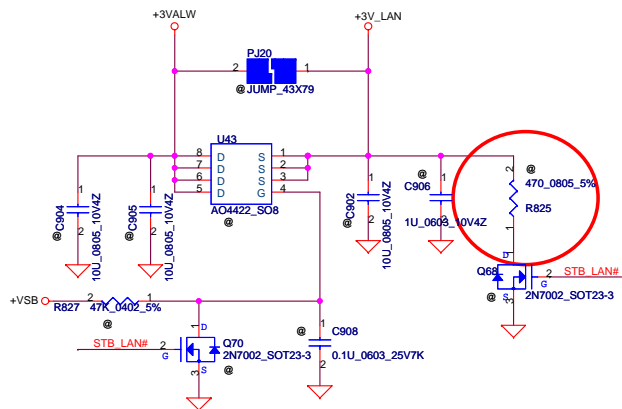
+5VALW TO +5V_SB



+3VALW TO +3V_WLAN



+3VALW TO +3V_LAN



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