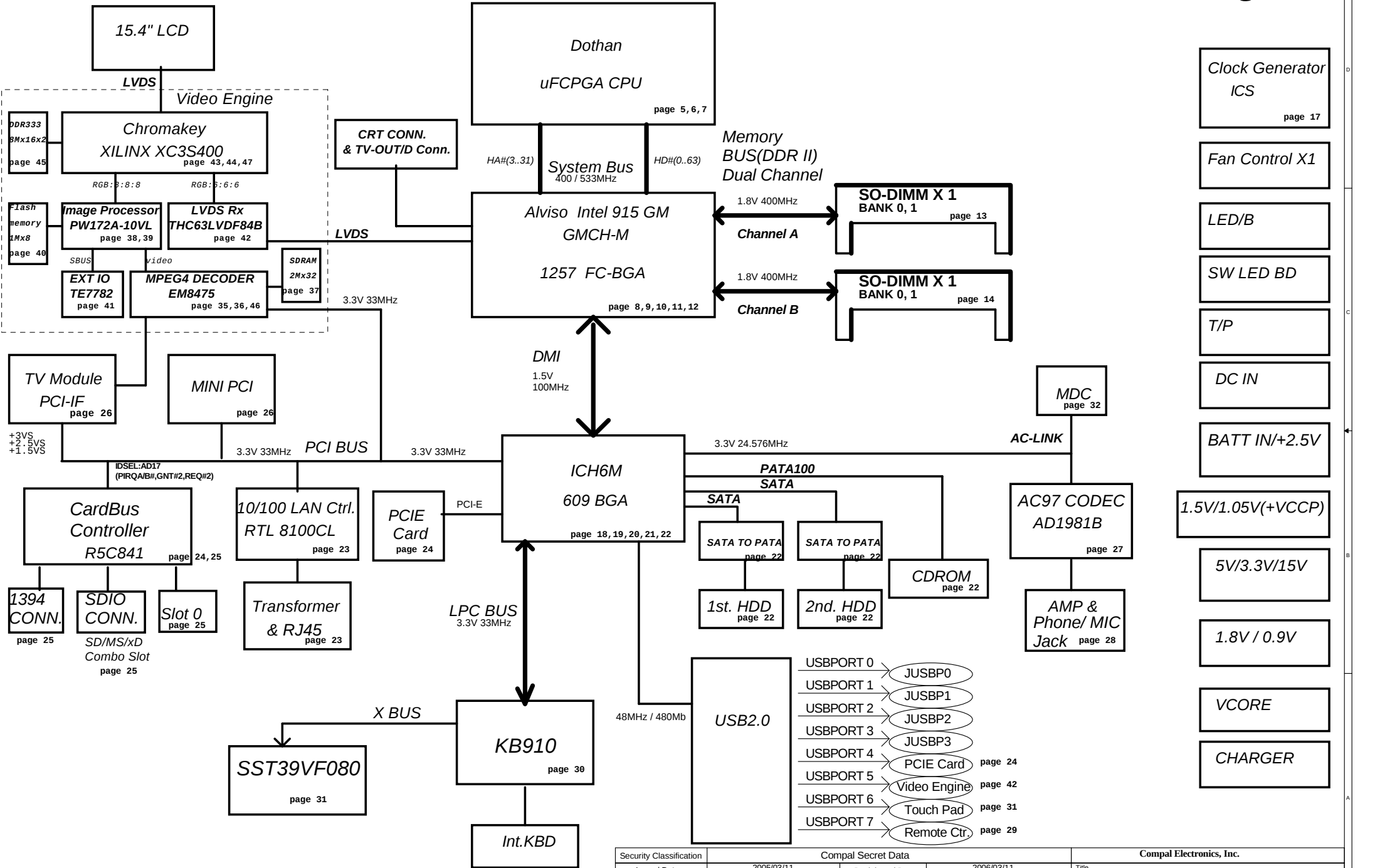


WT2  
HAR00 LA-2831 Schematic

|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                    |                 |            |                          |                 |     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-----------------|------------|--------------------------|-----------------|-----|
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       | Compal Secret Data |                 |            | Compal Electronics, Inc. |                 |     |
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2005/03/11         | Deciphered Date | 2006/03/11 | Title                    |                 |     |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                    |                 |            |                          | 401362          | D   |
| Date: 星期六 三月 06, 2006                                                                                                                                                                                                                                                                                                                                                                                                                                         |                    |                 |            | Sheet 1 of 59            |                 |     |



I2C / SMBUS ADDRESSING

External PCI Devices

| DEVICE                 | IDSEL | REQ / GNT # | PIRQ |
|------------------------|-------|-------------|------|
| LAN                    | #D17  | 0           | F    |
| CARD BUS               | AD20  | 1           | A    |
| Cardreader             |       |             | B    |
| 1394                   | AD16  | 2           | E    |
| Wireless LAN(MINI PCI) | AD18  | 3           | G,H  |

Power Managment table

| Signal               |                             |                             | +CPU_CORE<br>+VCCP<br>+5VS<br>+3VS<br>+2.5VS<br>+1.8VS<br>+1.25VS<br>+1.5VS |
|----------------------|-----------------------------|-----------------------------|-----------------------------------------------------------------------------|
| State                | +12VALW<br>+3VALW<br>+5VALW | +2.5V<br>+3V<br>+5V<br>+12V |                                                                             |
| S0                   | ON                          | ON                          | ON                                                                          |
| S1                   | ON                          | ON                          | ON                                                                          |
| S3                   | ON                          | ON                          | OFF                                                                         |
| S5 S4/AC             | ON                          | OFF                         | OFF                                                                         |
| S5 S4/AC don't exist | OFF                         | OFF                         | OFF                                                                         |

Ceramic Capacitor Spec Guide:

Temperature Characteristics:

| Symbol | 0   | 1   | 2   | 3   | 4   | 5   | 6   | 7   |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|
| CODE   | Z5U | Z5V | Z5P | Y5U | Y5V | Y5P | X5R | X7R |

| 8   | 9   | A | B  | C  | D  | E  | F  | G  |
|-----|-----|---|----|----|----|----|----|----|
| NP0 | C0G |   | BJ | CH | CJ | CK | SH | SJ |

| H  | I  | J  |  |
|----|----|----|--|
| UJ | UK | SL |  |

Tolerance:

| Symbol | A         | B        | C         | D        | F      | G     | H     | J     |
|--------|-----------|----------|-----------|----------|--------|-------|-------|-------|
| CODE   | + -0.05PF | + -0.1PF | + -0.25PF | + -0.5PF | + -1PF | + -2% | + -3% | + -5% |

| K      | M      | N      | P         | Q         | V         | X         | Z         |  |
|--------|--------|--------|-----------|-----------|-----------|-----------|-----------|--|
| + -10% | + -20% | + -30% | +100, -0% | +30, -10% | +20, -10% | +40, -20% | +80, -20% |  |

SMBUS Control Table

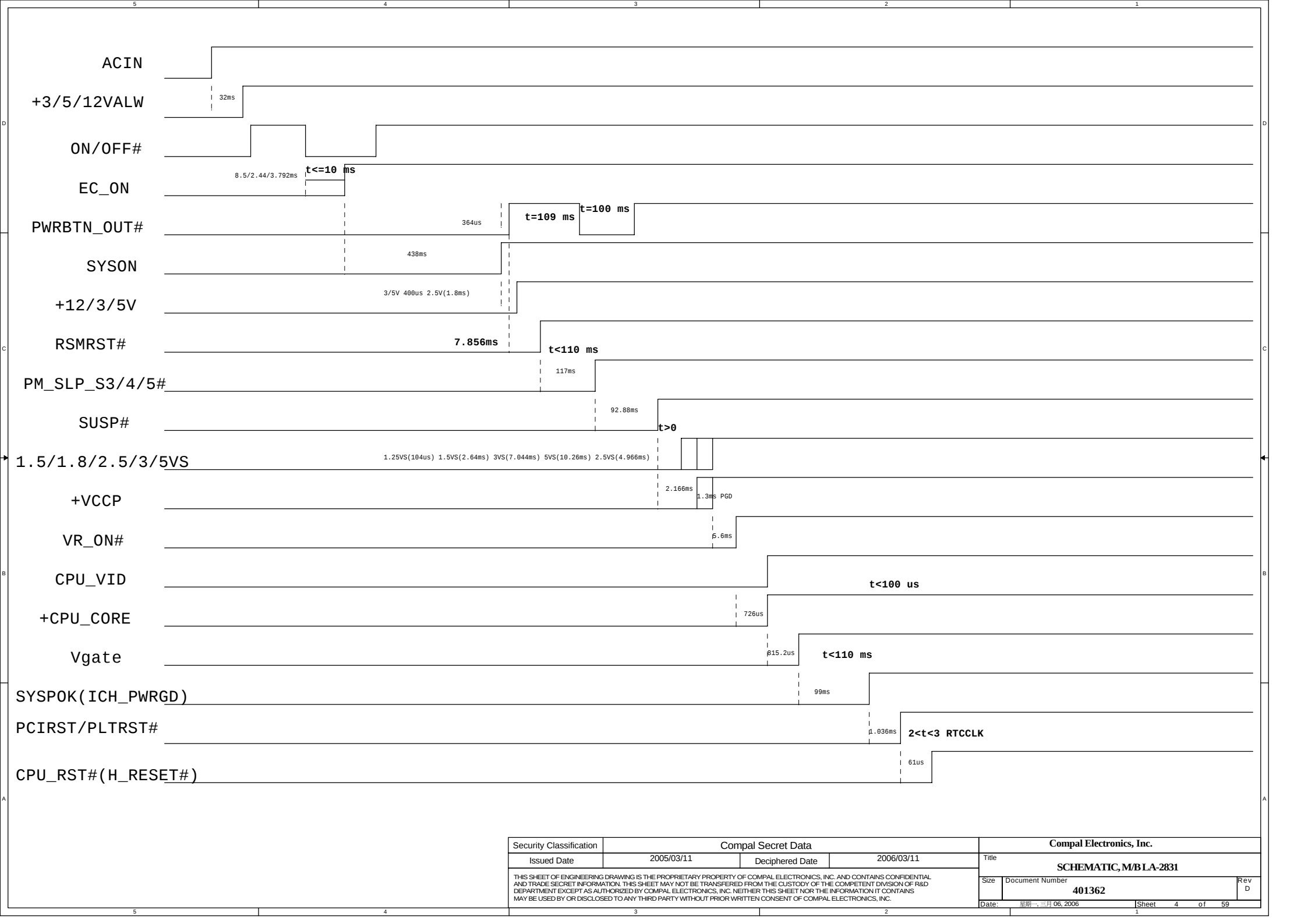
|                           | SOURCE          | INVERTER | BATT | SERIAL<br>EEPROM | THERMAL<br>SENSOR<br>(CPU) | THERMAL<br>SENSOR<br>(LM75) | SODIMM | CLK CHIP | MINI PCI | LCD | VGA Thermal<br>ADM1032 |
|---------------------------|-----------------|----------|------|------------------|----------------------------|-----------------------------|--------|----------|----------|-----|------------------------|
| SMB_EC_CK1<br>SMB_EC_DA1  | PC87591L        | ✓        | ✓    | ✓                | ✗                          | ✗                           | ✗      | ✗        | ✗        | ✗   | ✗                      |
| SMB_EC_CK2<br>SMB_EC_DA2  | PC87591L        | ✗        | ✗    | ✗                | ✓                          | ✓                           | ✗      | ✗        | ✗        | ✗   | ✓                      |
| ICH_SMBCLK<br>ICH_SMBDATA | ICH6-M          | ✗        | ✗    | ✗                | ✗                          | ✗                           | ✓      | ✓        | ✗        | ✗   | ✗                      |
| LCD_DDCCLK<br>LCD_DDCDATA | Alviso<br>GM-GP | ✗        | ✗    | ✗                | ✗                          | ✗                           | ✗      | ✗        | ✗        | ✓   | ✗                      |

|                           | PCB Rev | Data |
|---------------------------|---------|------|
| Bringup-Build<br>ES-Build | 0.1     |      |
| PP-Build                  |         |      |
| MP1-Build                 |         |      |
| MP-Build                  |         |      |
|                           |         |      |
|                           |         |      |

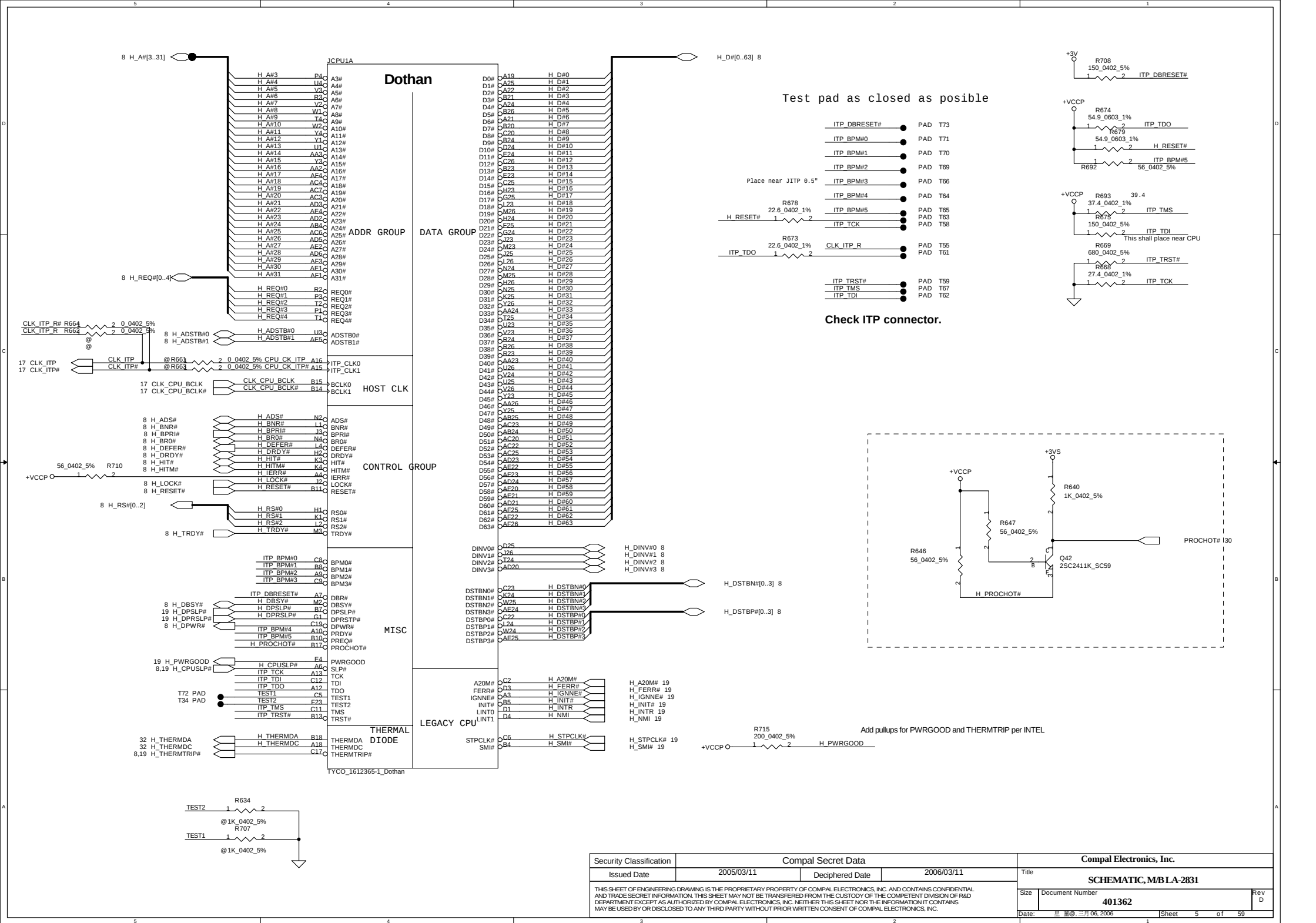
SCHEMATICS VERSION LIST

| VERSION | ISSUE DATE | REMARK        |
|---------|------------|---------------|
| 0.0A    |            | First Release |
|         |            |               |
|         |            |               |
|         |            |               |
|         |            |               |
|         |            |               |
|         |            |               |
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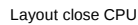
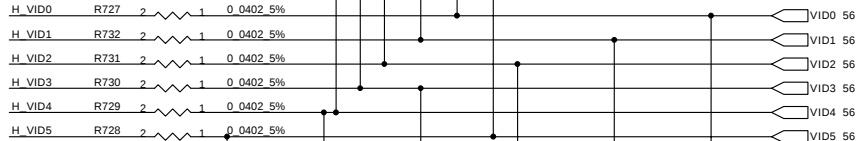
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| Date:                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                    |  |                 |  | 日期: 三月 06, 2006          |  | Sheet 3 of 59   |  |       |  |



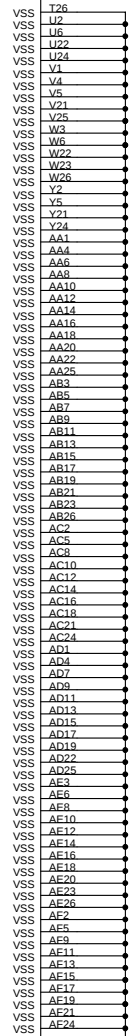
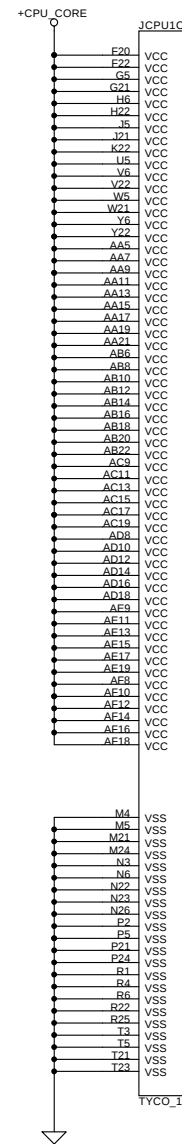
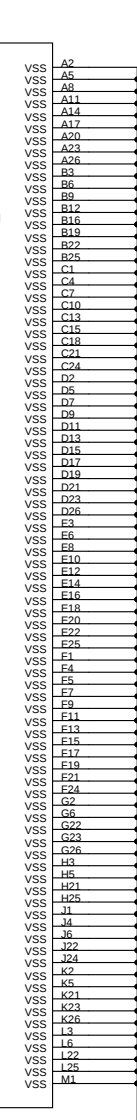
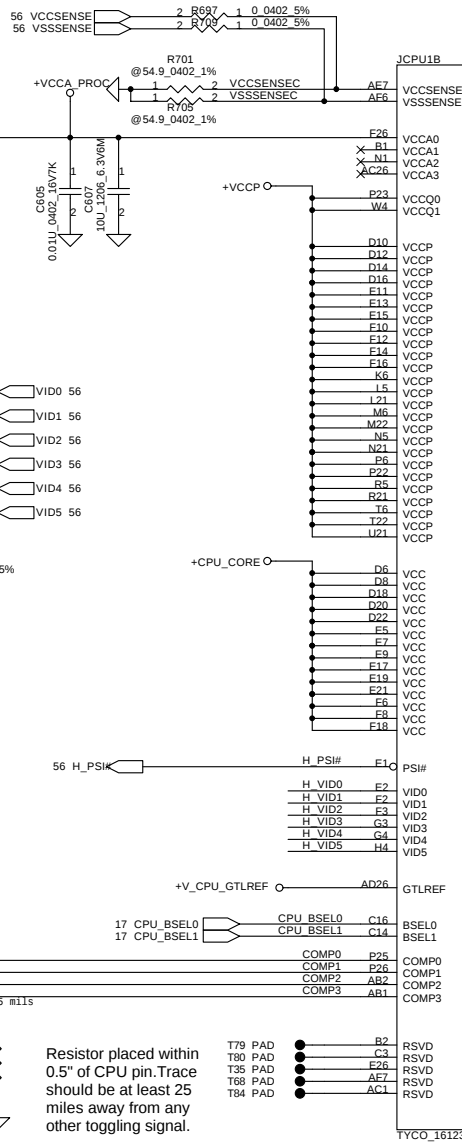
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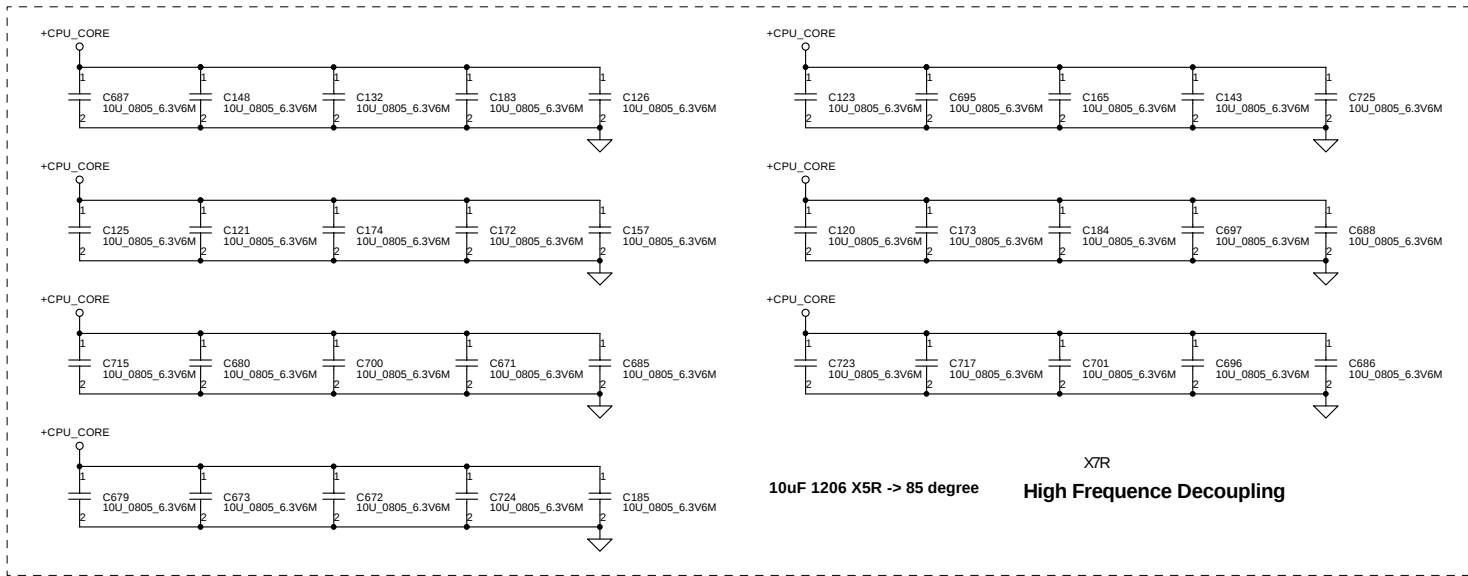
CPU Voltage ID



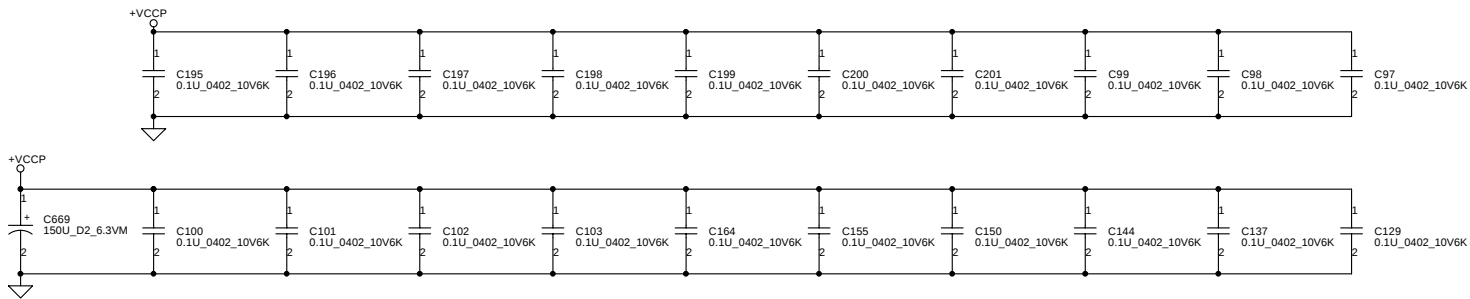
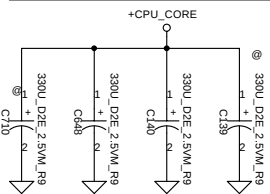
Resistor placed within 0.5" of CPU pin. Trace should be at least 25 miles away from any other toggling signal.



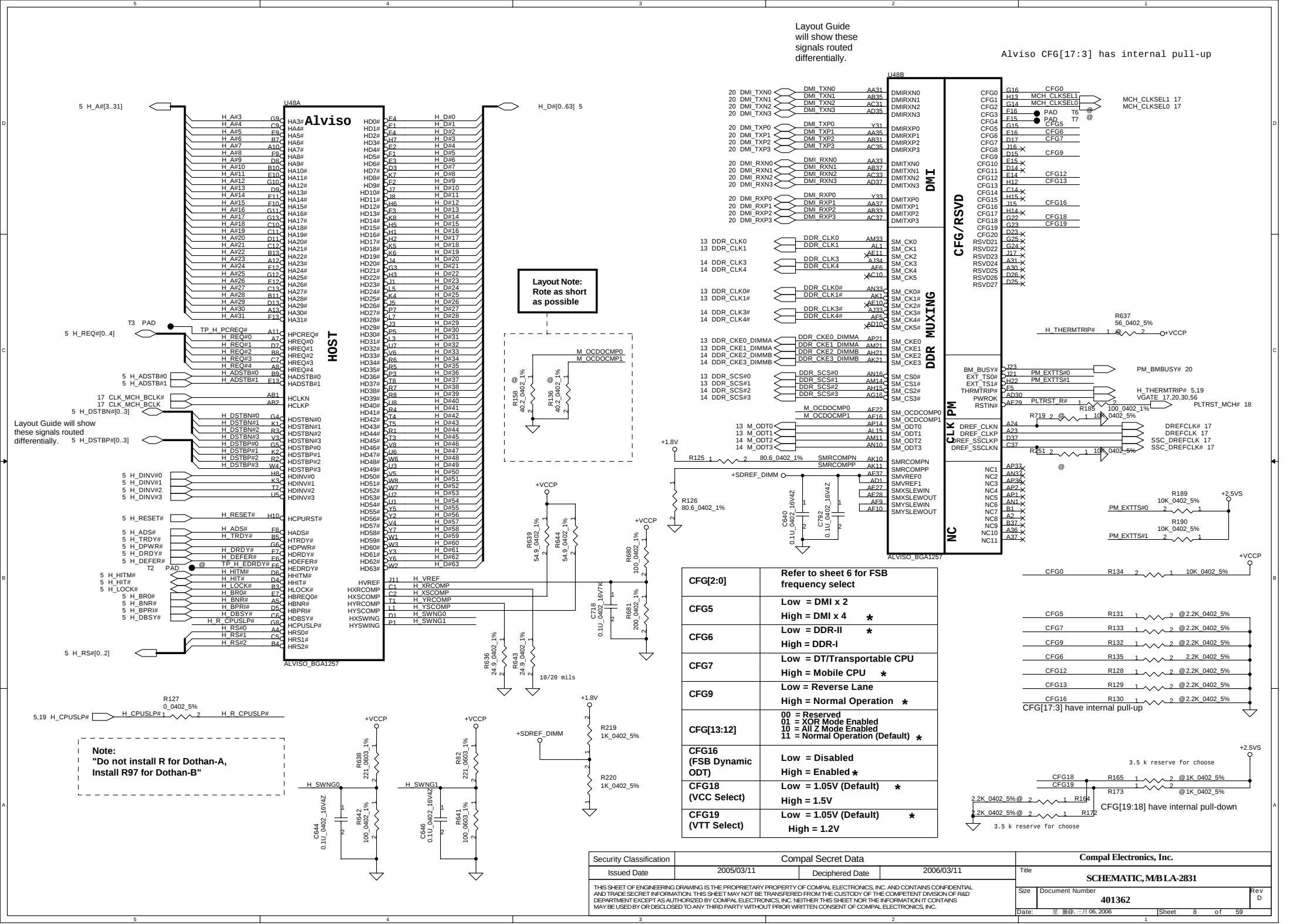
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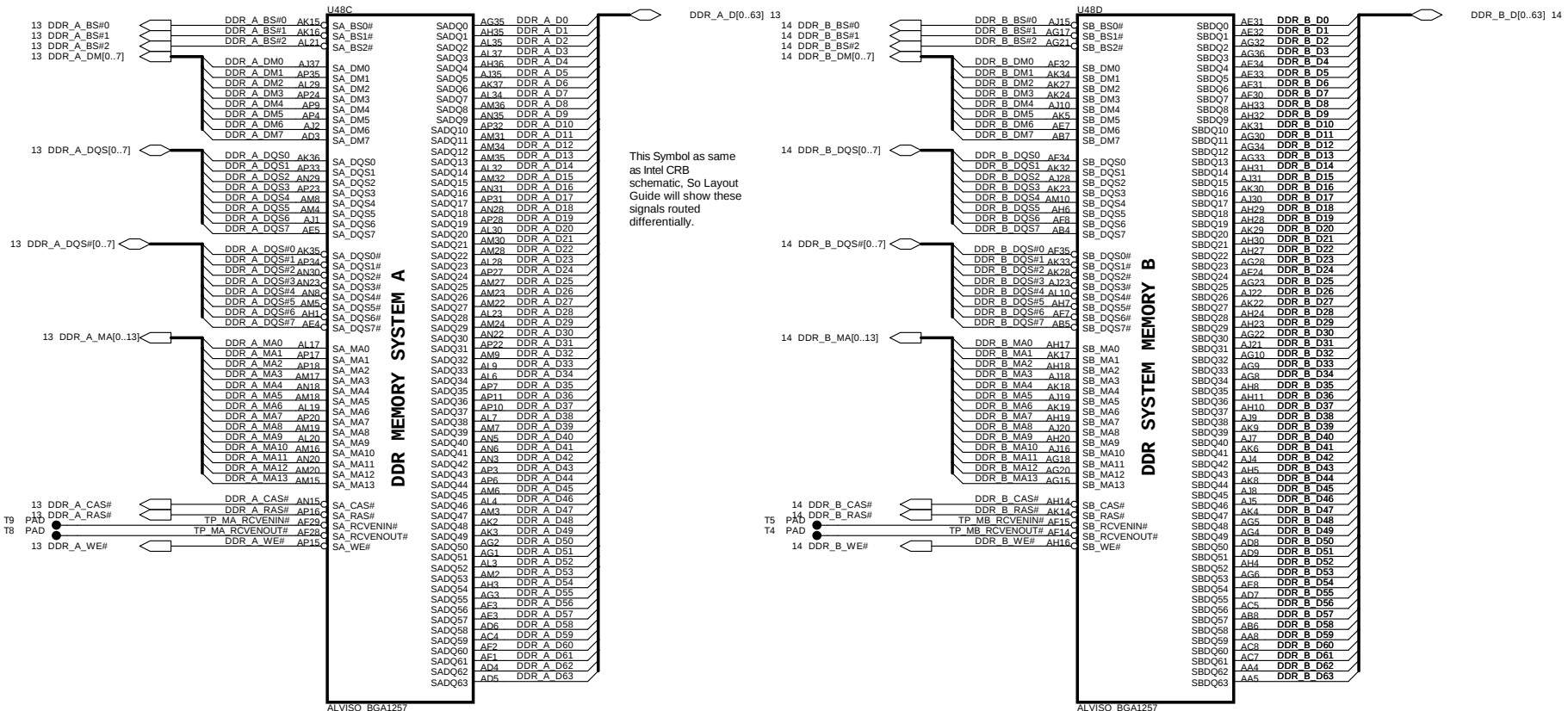


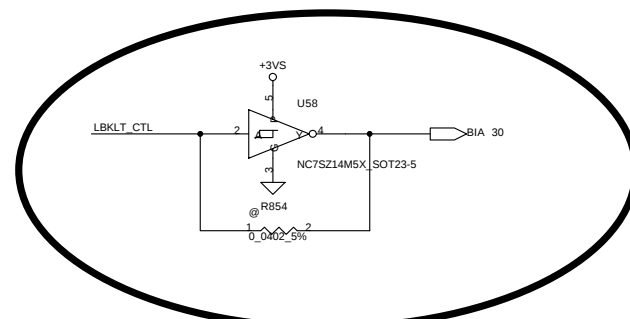
Near VCORE regulator.



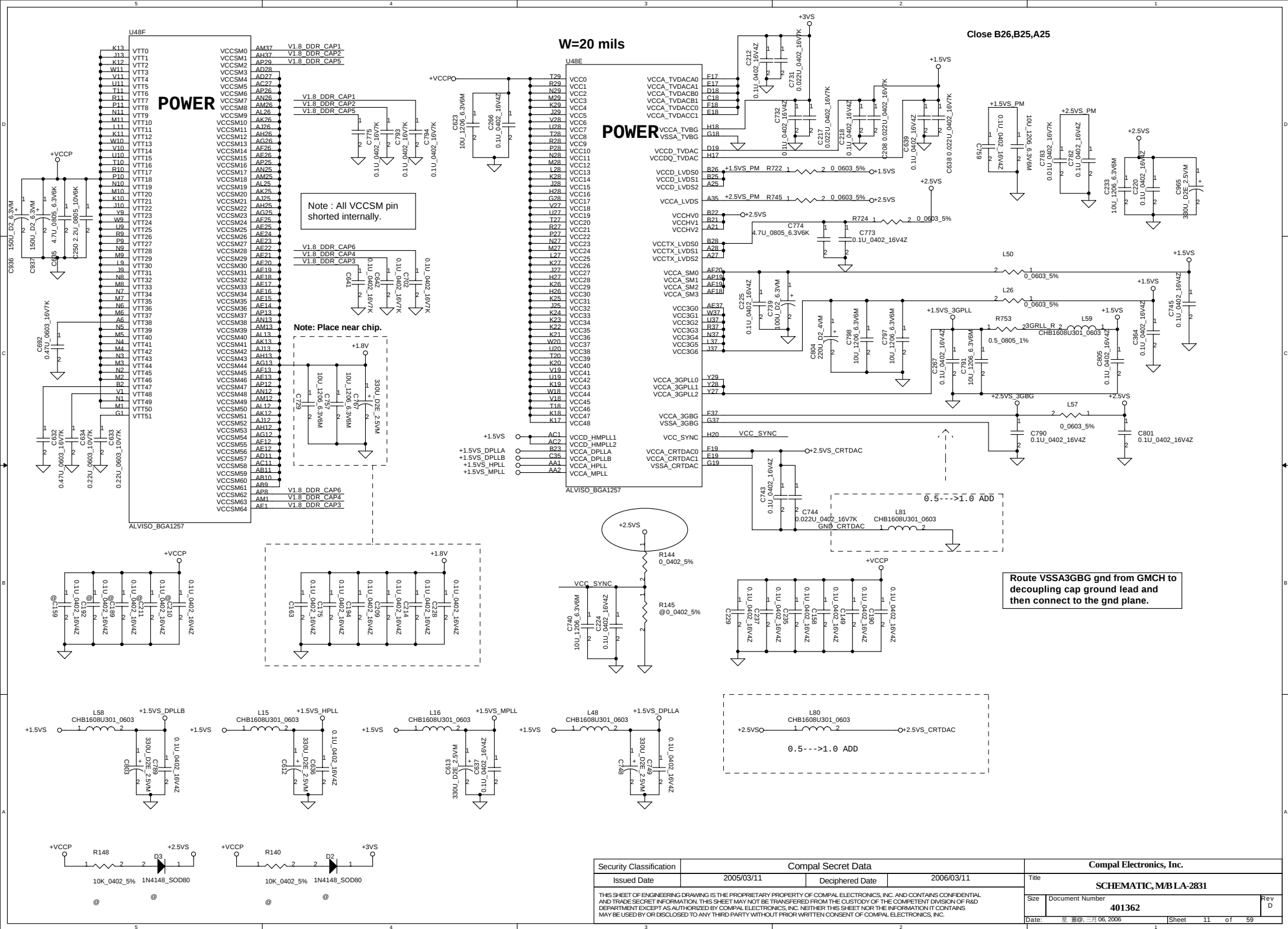
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| Date: 2006.03.06                                                                                                                                                                                                                                                                                                                                                                                                                                              |                    |                 |            | Sheet                    | 7 of 59         |

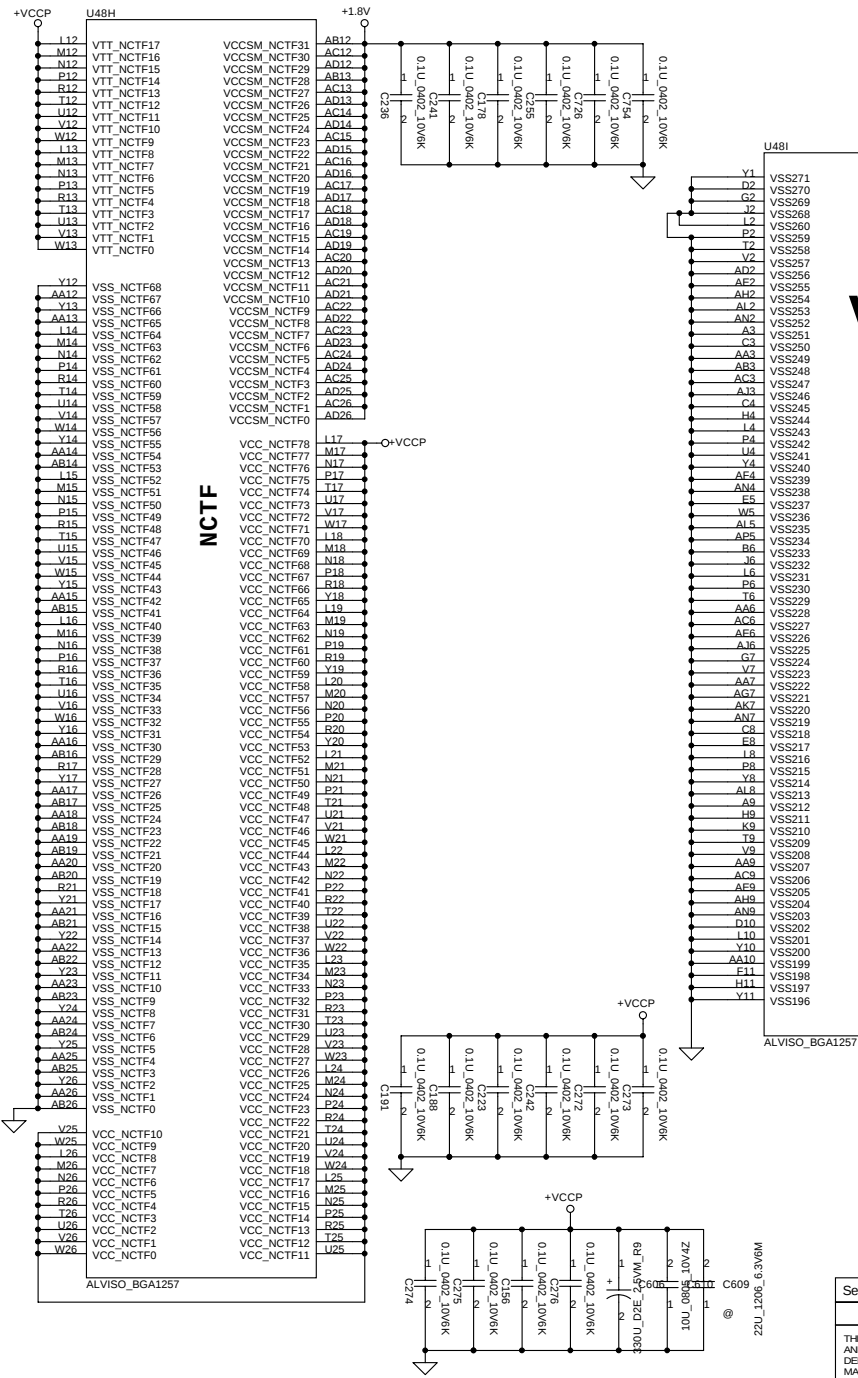






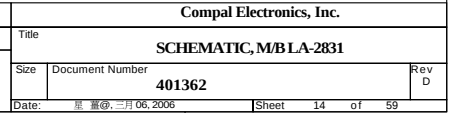
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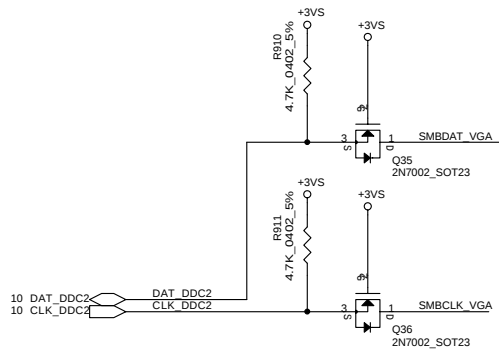
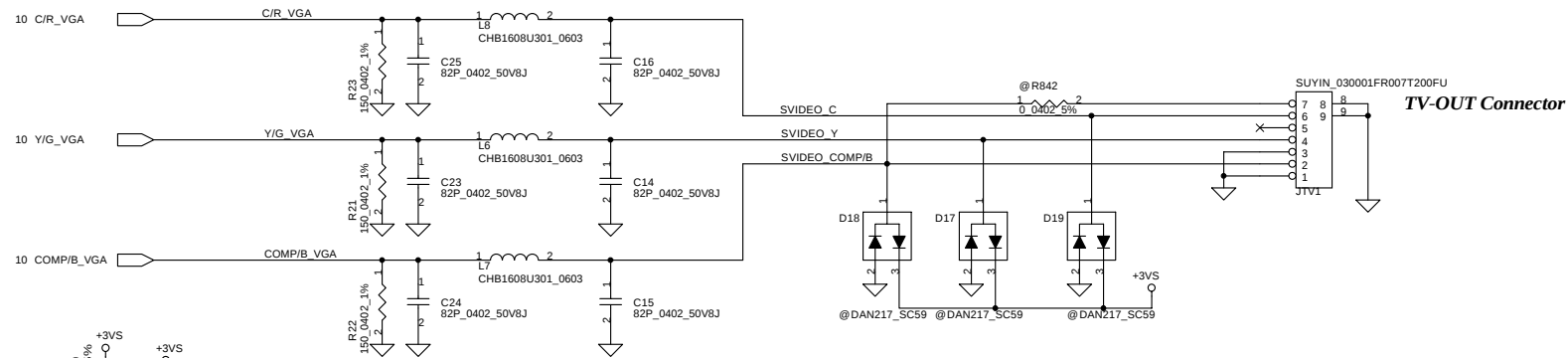


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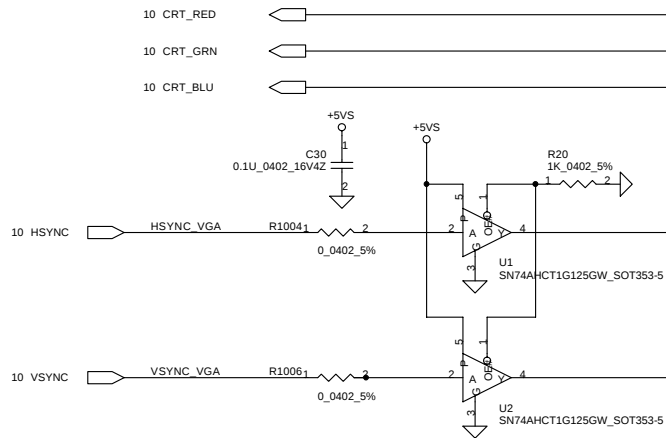
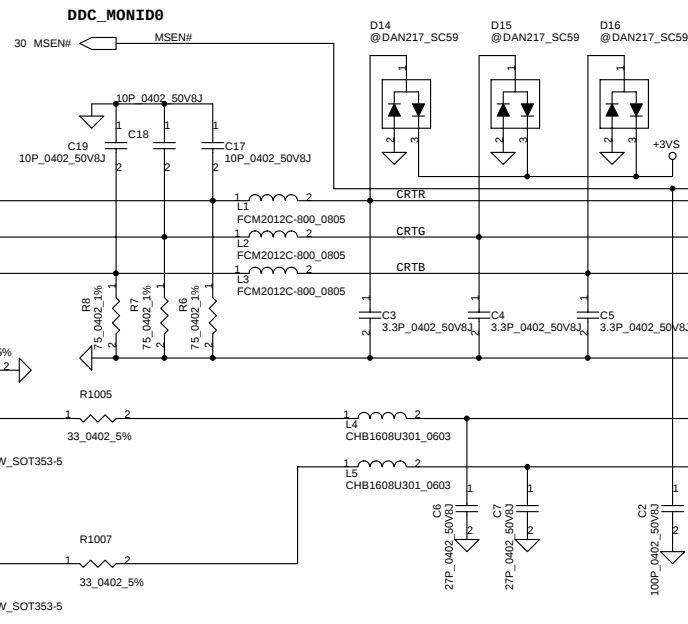
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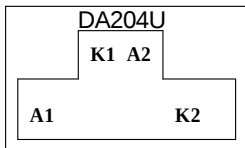
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| Date:                                                                                                                                                                                                                                                                                                                                                                                                                                                         |            |                    |            | 星期一, 三月 06, 2006         | Sheet           | 15    | of 59 |



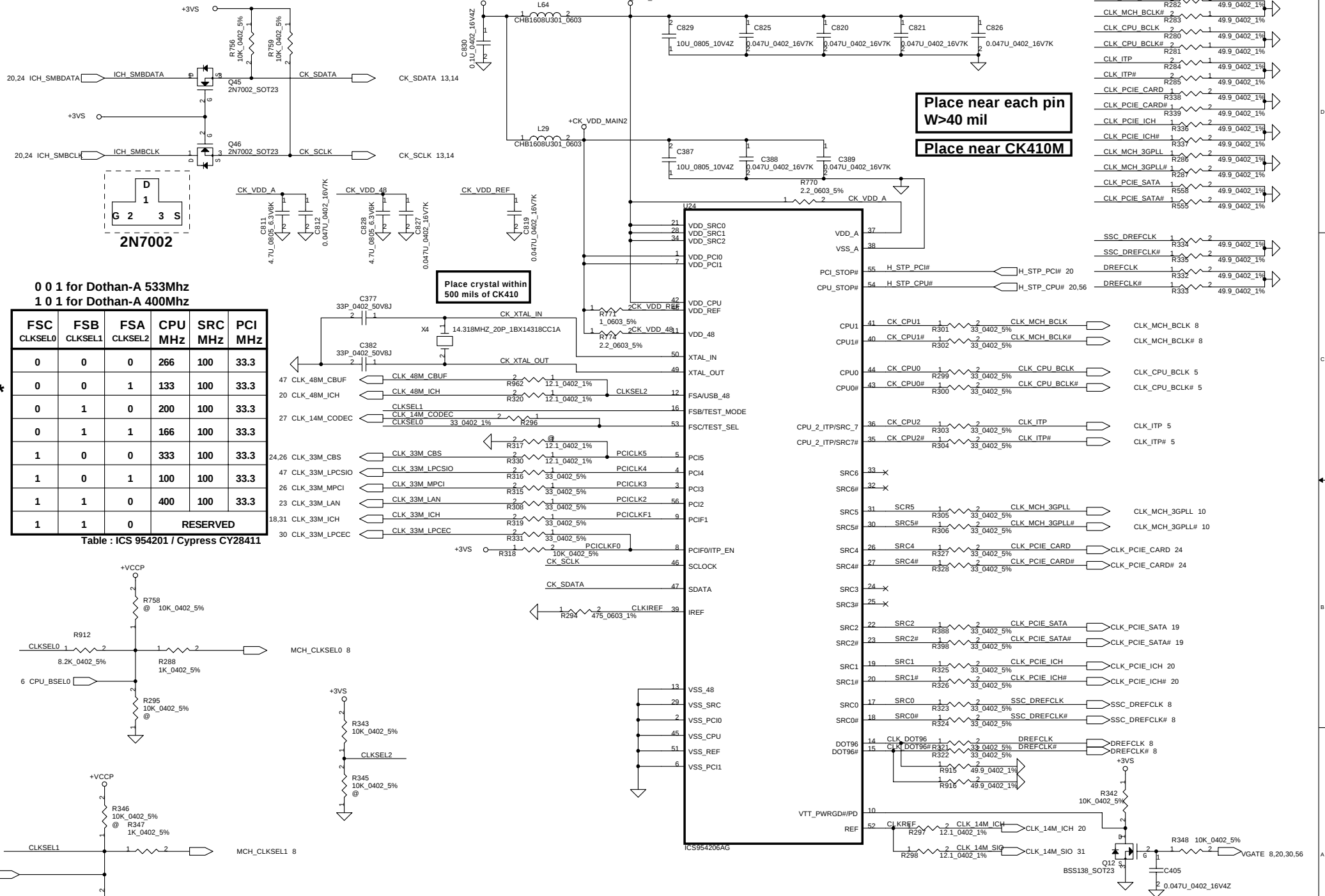
DVI Interface



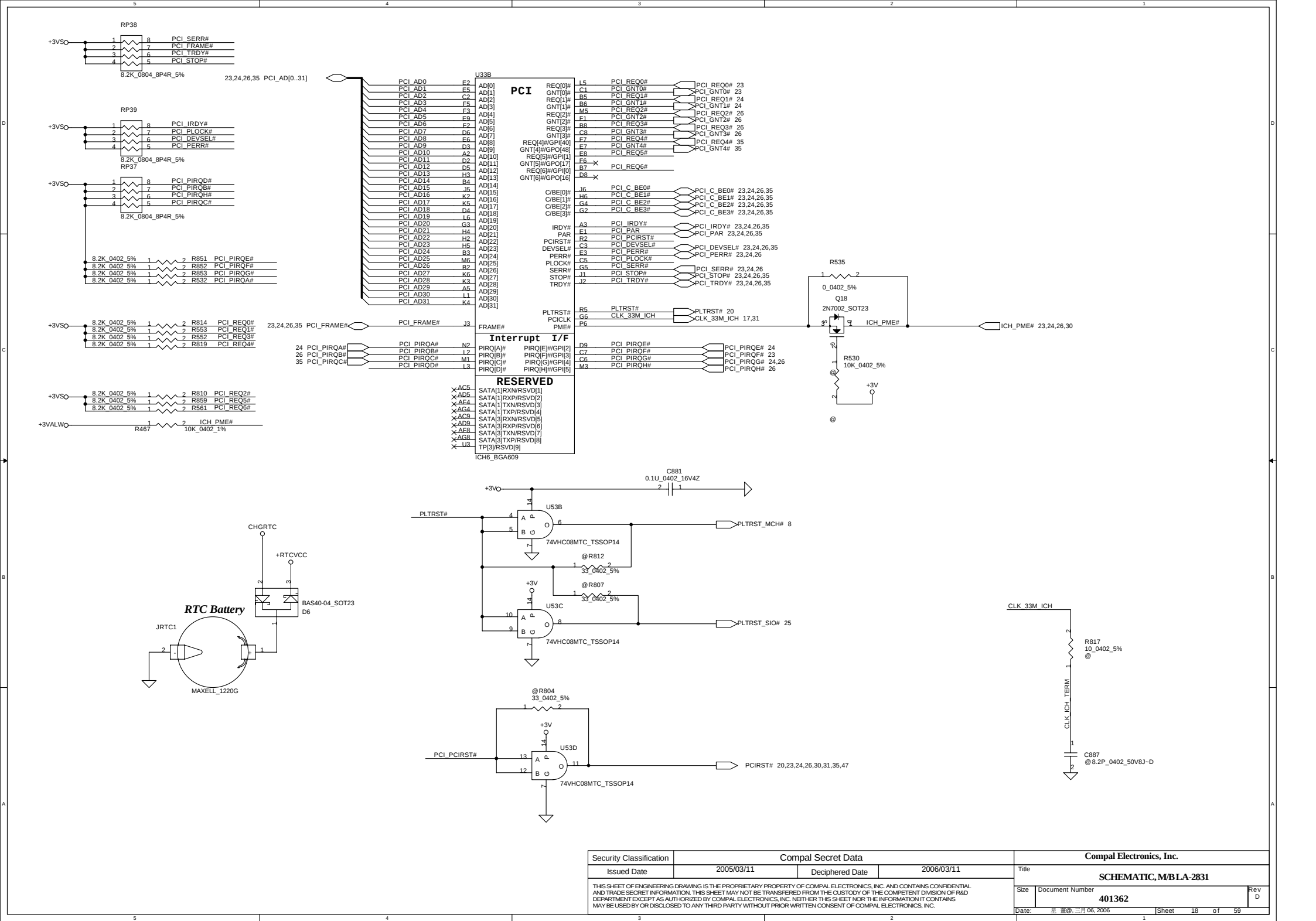
CRT Connector

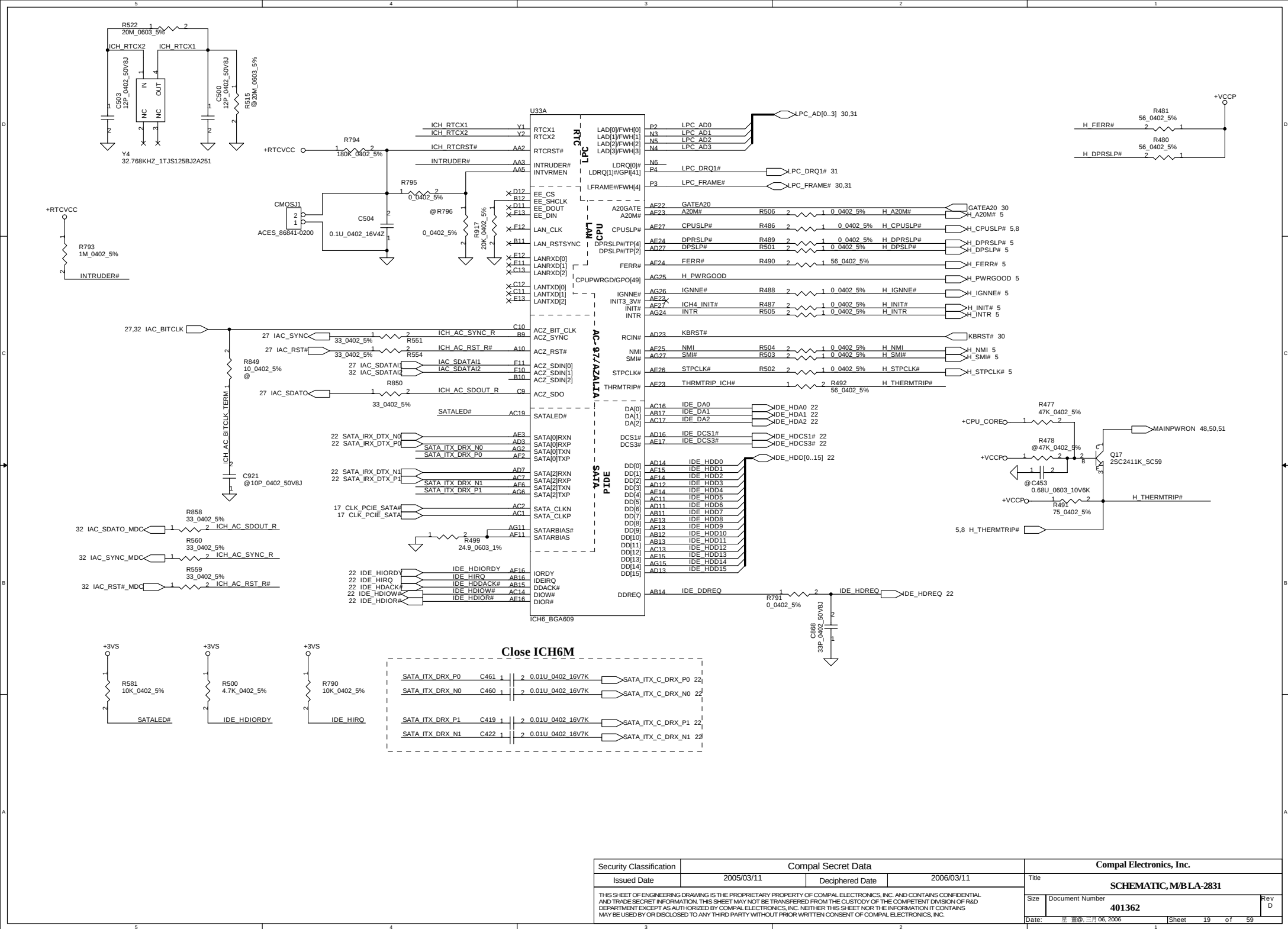


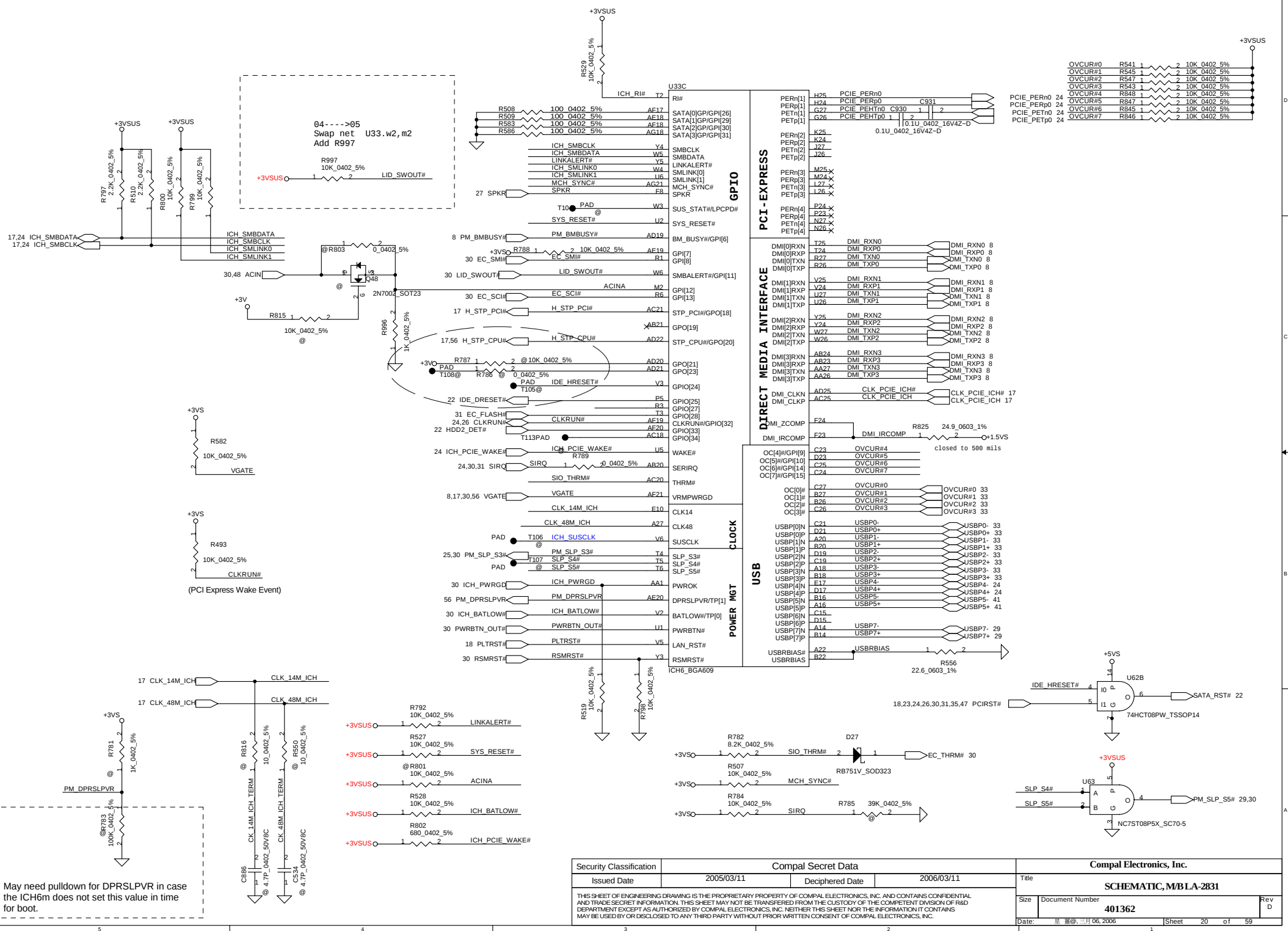
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| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |  | Compal Secret Data |  |                 |  | Compal Electronics, Inc. |                 |             |  |        |  |          |  |
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  | 2005/03/11         |  | Deciphered Date |  | 2006/03/11               |                 | Title       |  |        |  |          |  |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |  |                 |  | Size                     | Document Number |             |  | 401362 |  | Rev D    |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |  |                 |  | Date:                    |                 | 日 號, 月 日, 年 |  | Sheet  |  | 16 of 59 |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |  |                 |  |                          |                 |             |  |        |  |          |  |



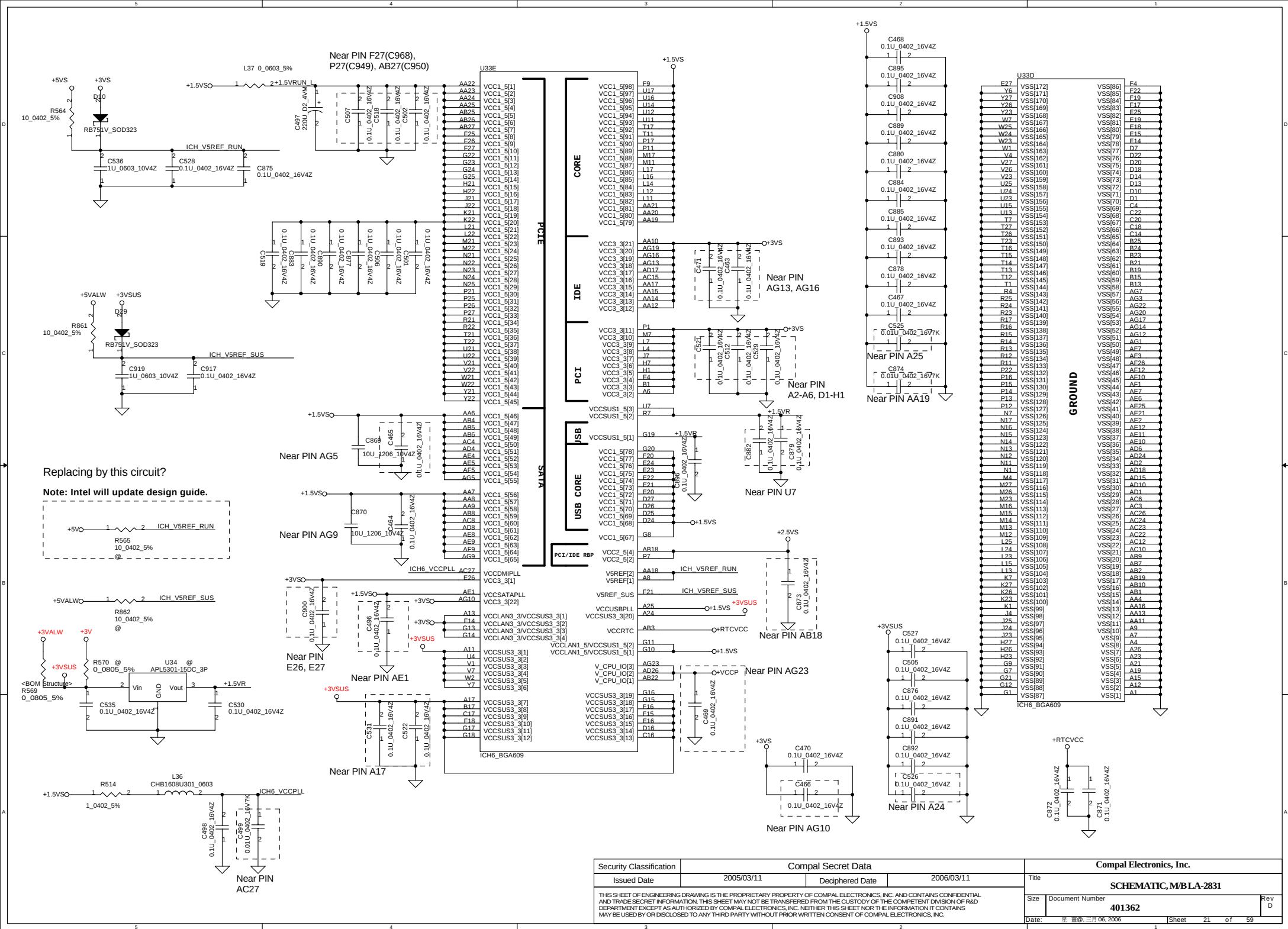
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |            | Compal Secret Data |            | Title  |                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------------|------------|--------|-----------------|
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2005/03/11 | Deciphered Date    | 2006/03/11 | Size   | Document Number |
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| Date: 2006.03.06                                                                                                                                                                                                                                                                                                                                                                                                                                              |            |                    |            | Sheet  | 17 of 59        |





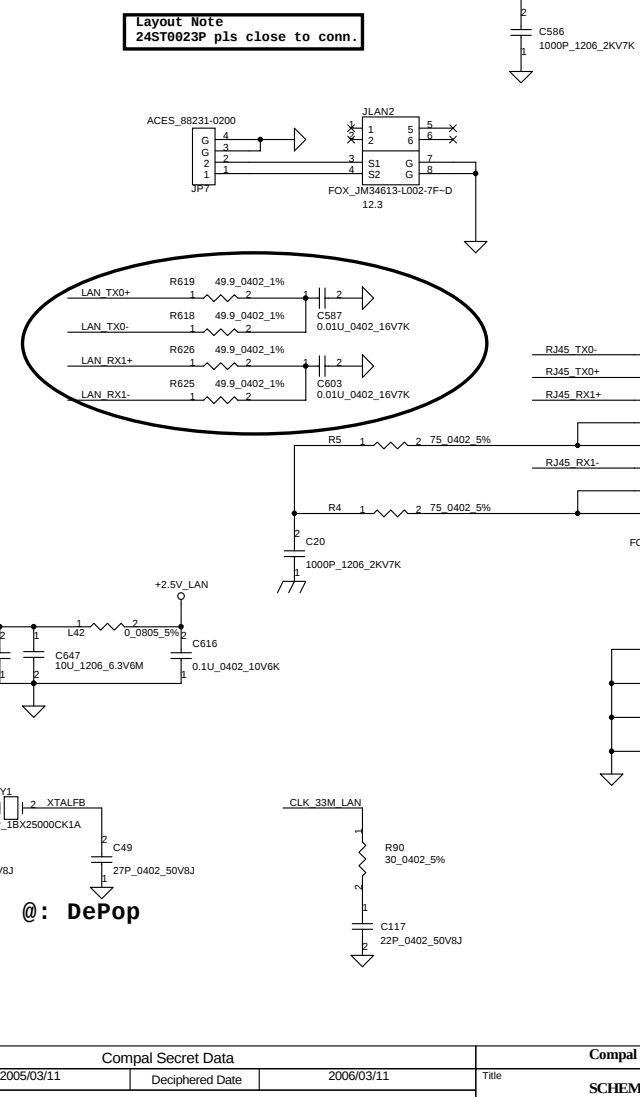
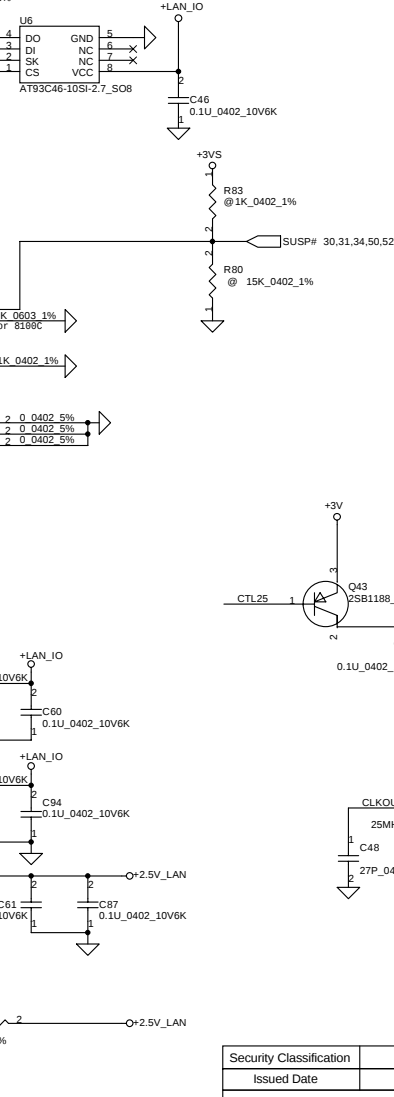
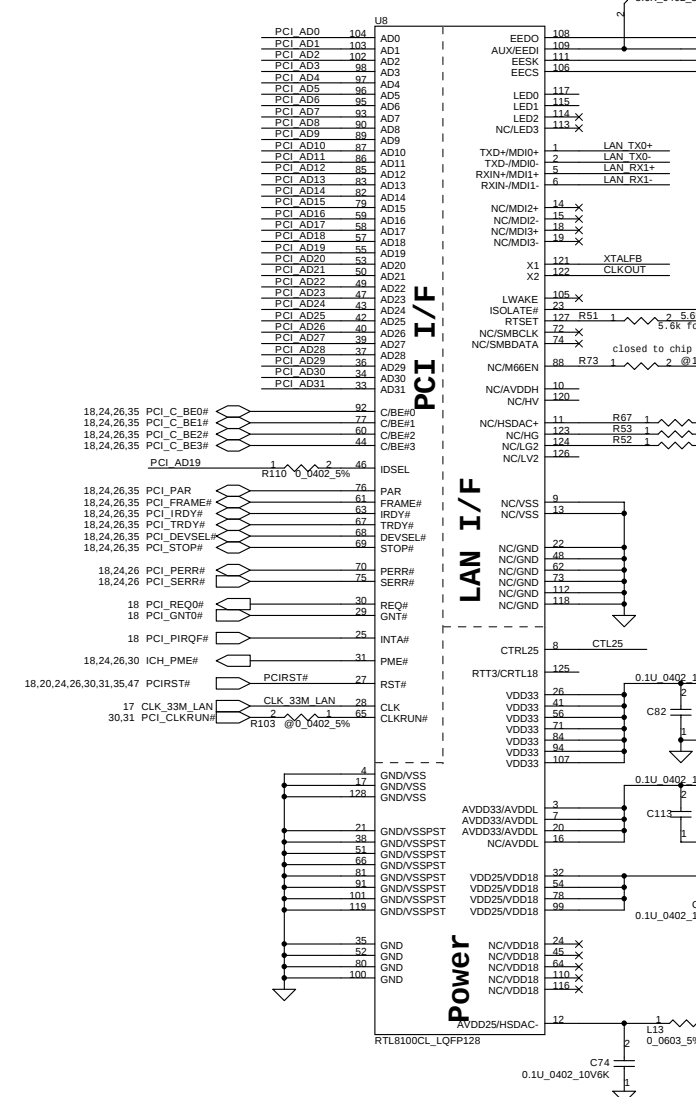
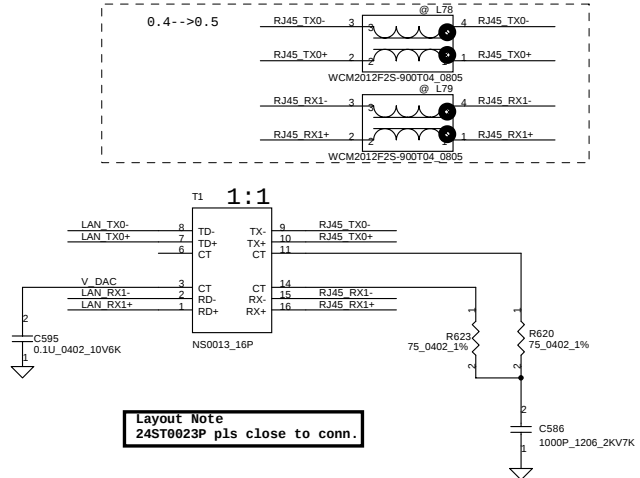
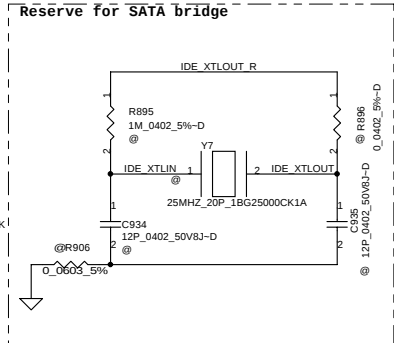
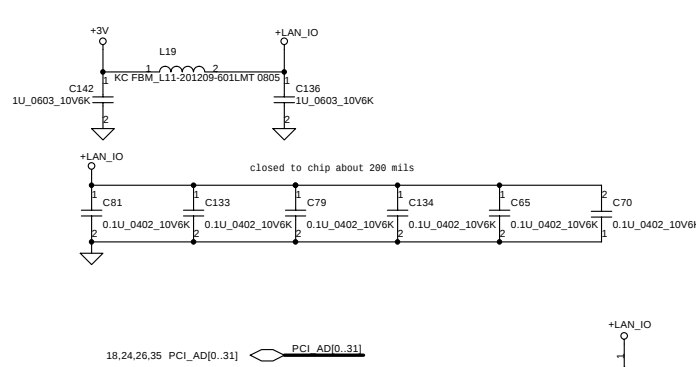


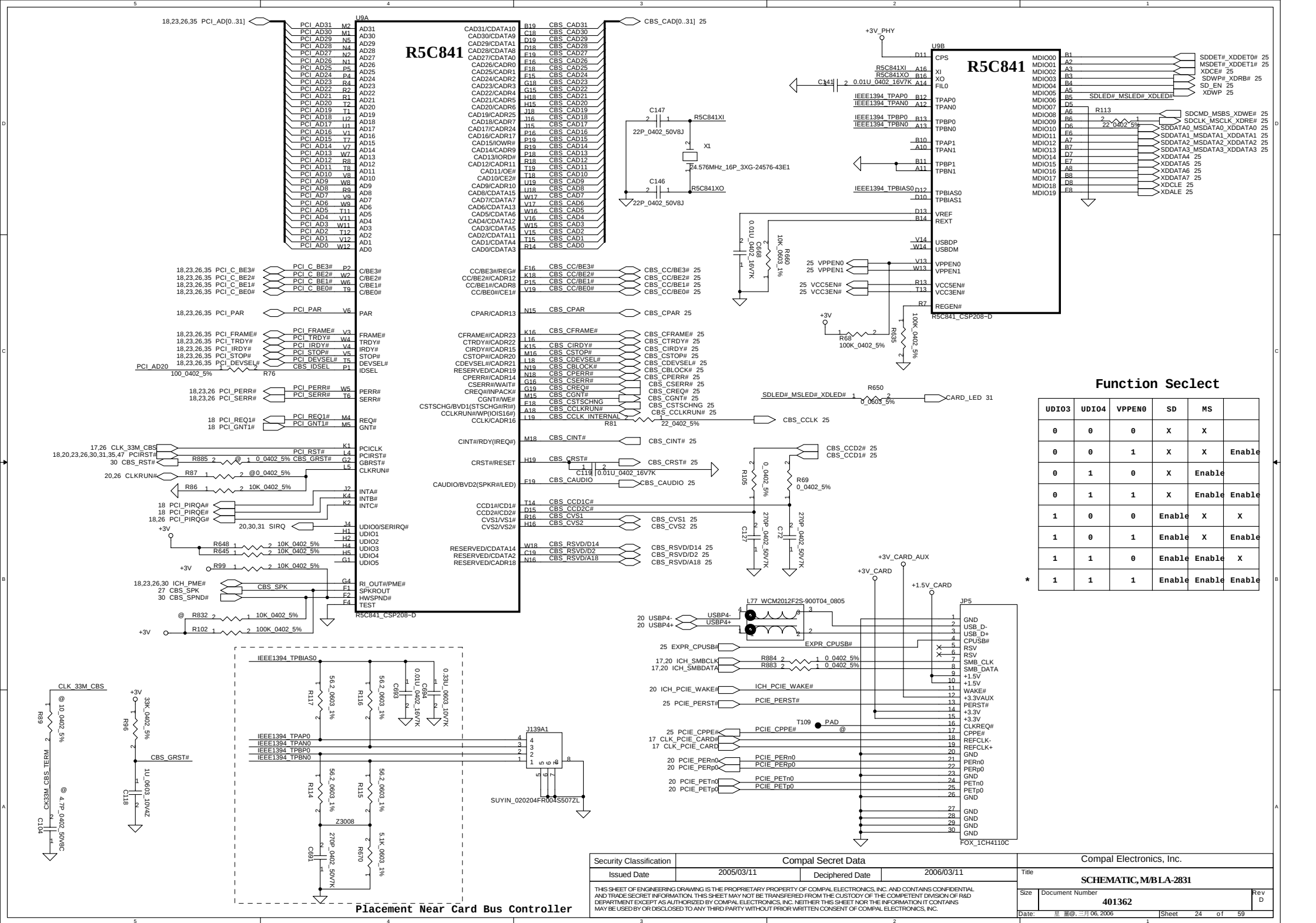
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|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-----------------|------------|--------------------------|-----------------|--------|----|-------|
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       | Compal Secret Data |                 |            | Compal Electronics, Inc. |                 |        |    |       |
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2005/03/11         | Deciphered Date | 2006/03/11 | Title                    |                 |        |    |       |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                    |                 |            | Size                     | Document Number | 401362 |    | Rev D |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                    |                 |            | Date: 日 月 年 06, 2006     |                 |        |    |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                    |                 |            | Sheet                    | 20              | of     | 59 |       |

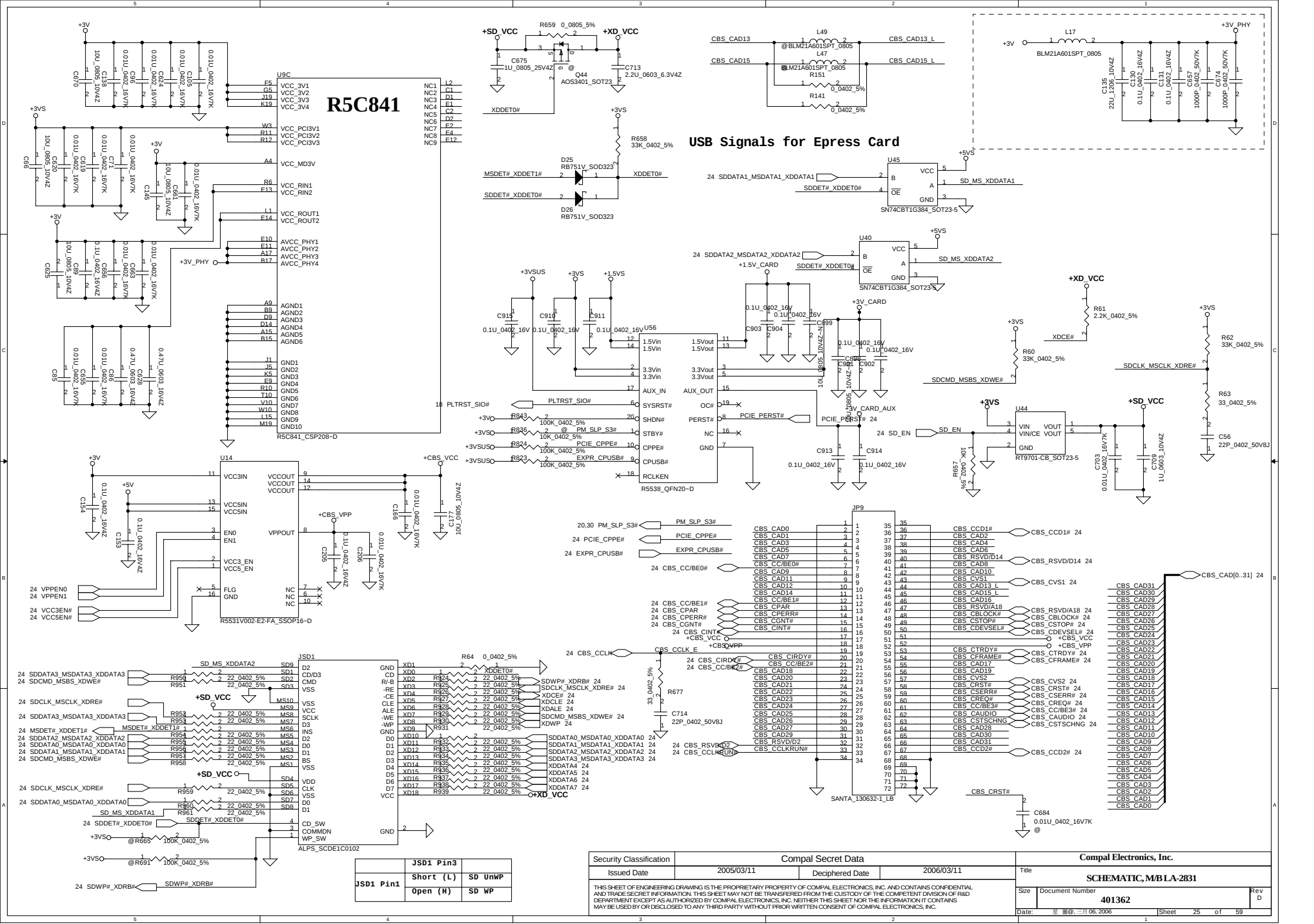


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| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       | Compal Secret Data |                 |            | Compal Electronics, Inc. |                 |       |          |
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| 3                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1                  | 2               |            | 1                        |                 |       |          |

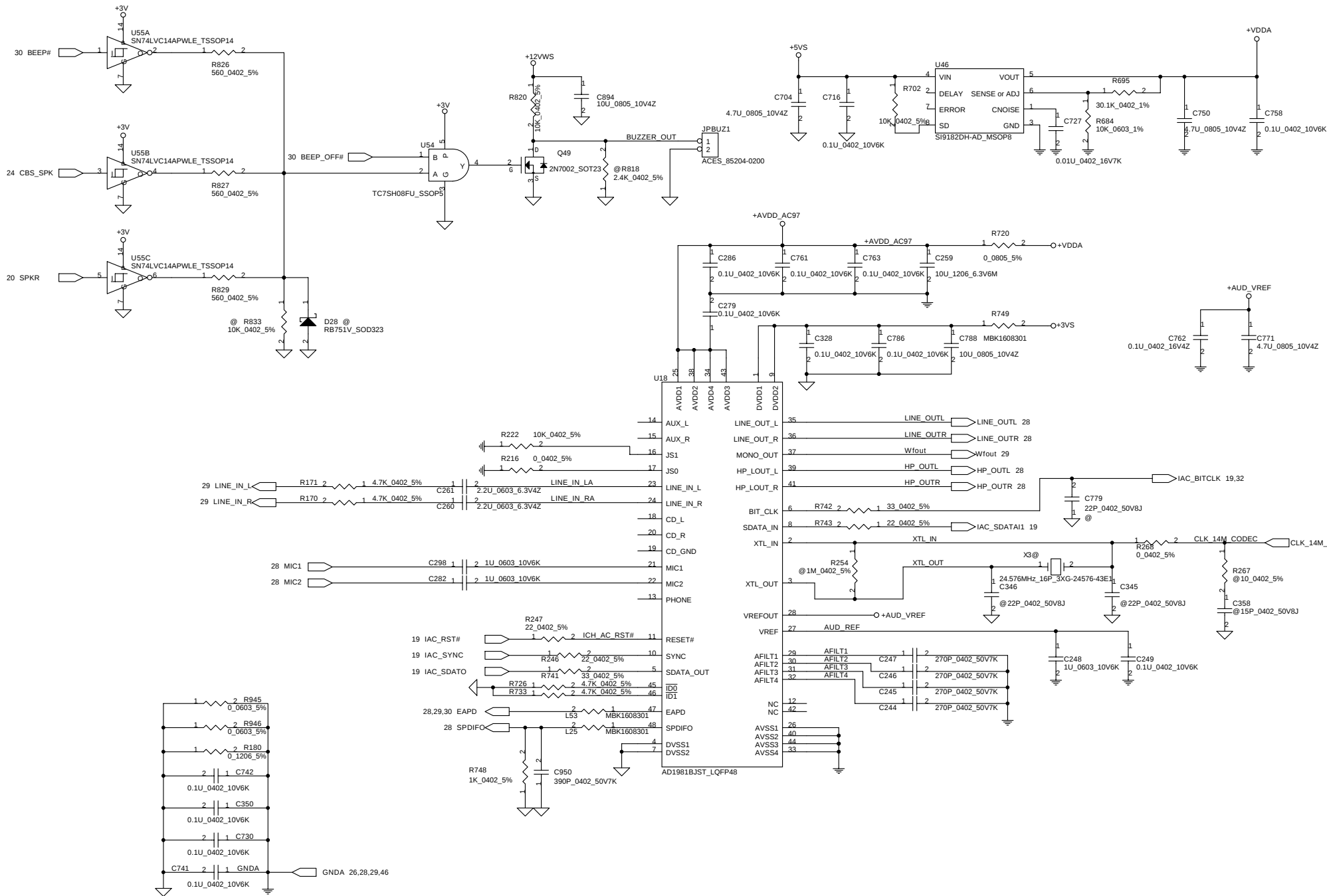




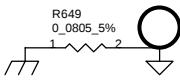
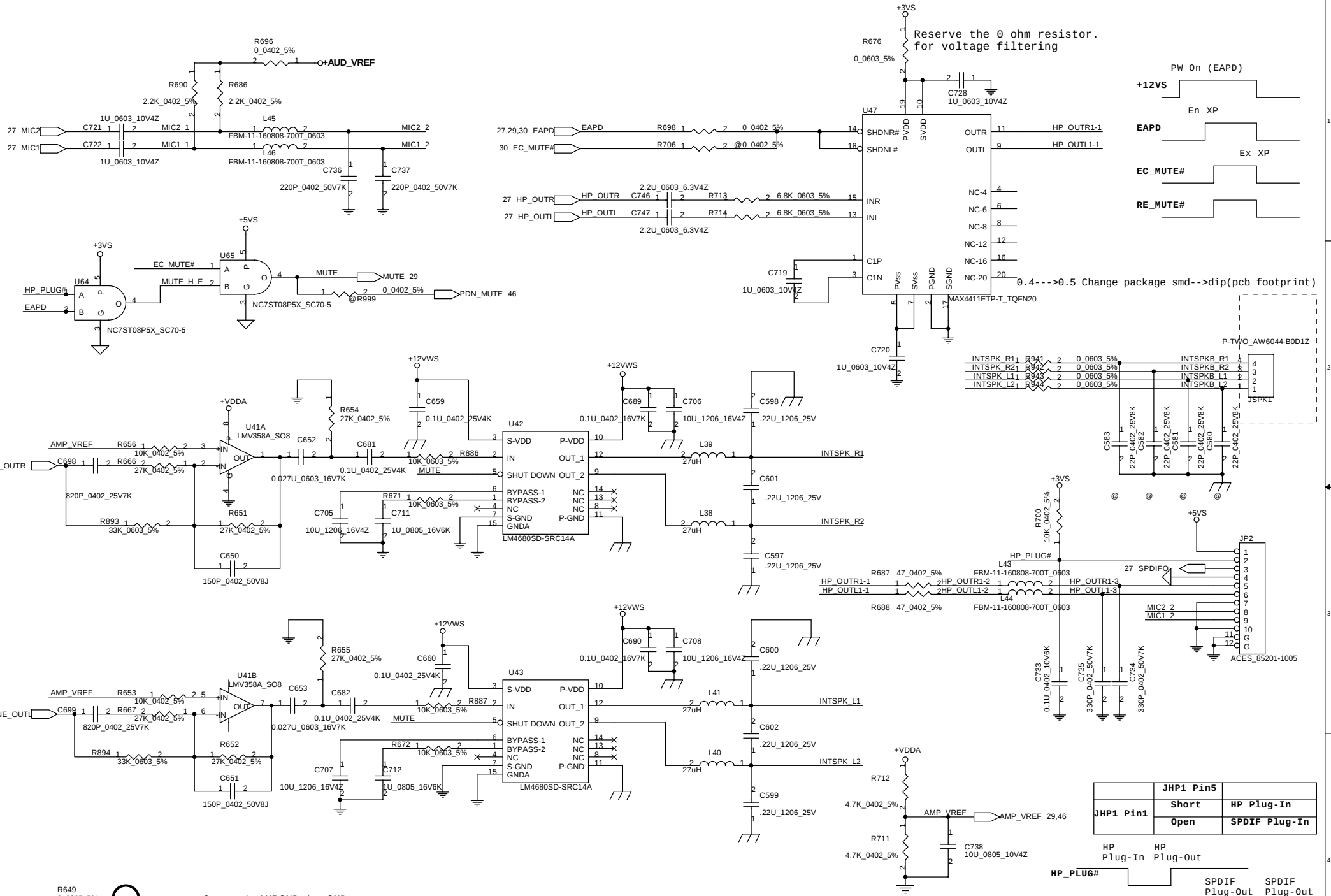






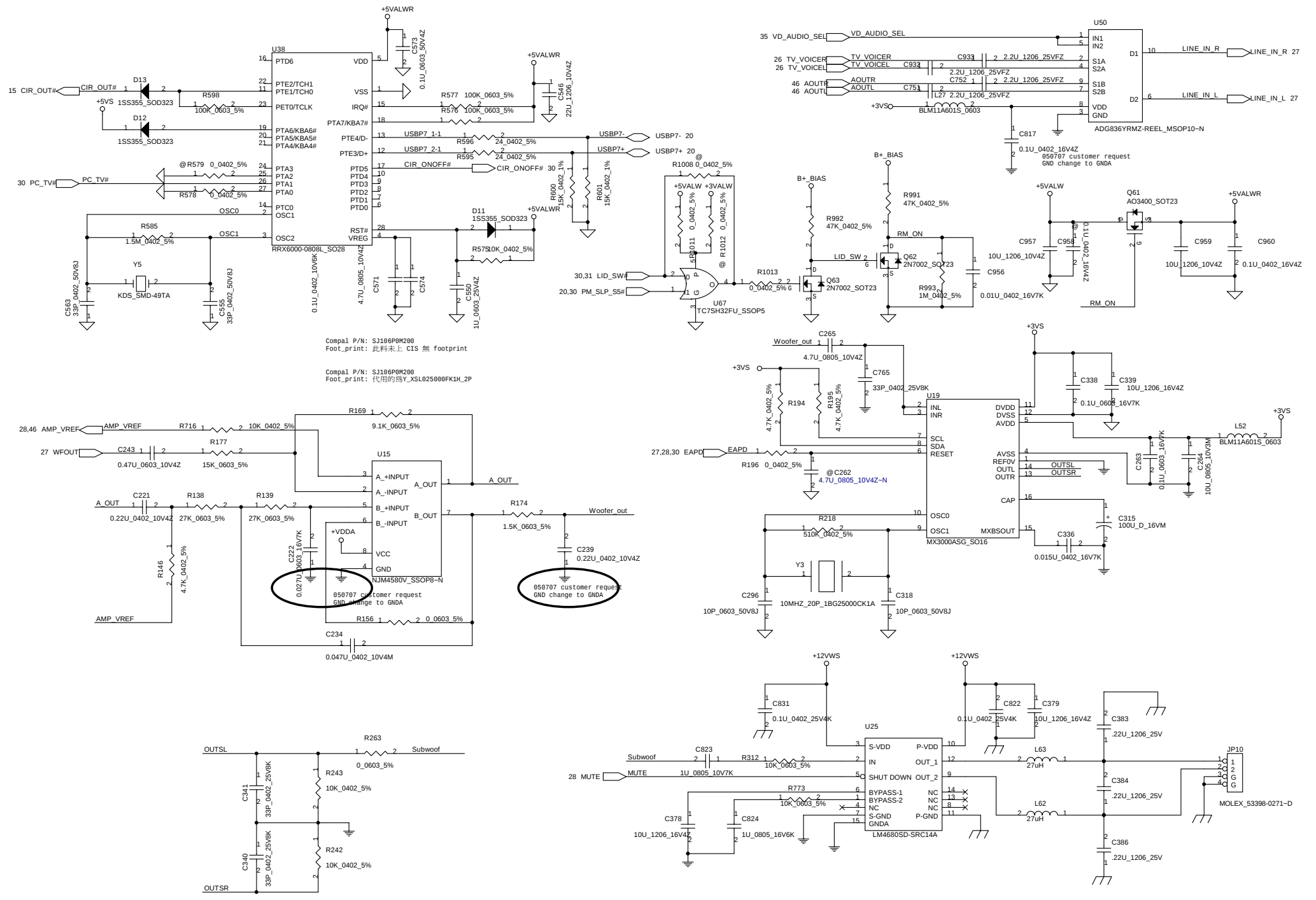


| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |            |  | Compal Secret Data |  |            |  | Compal Electronics, Inc. |                 |  |       |  |  |  |  |  |  |  |  |
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| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  | 2005/03/11 |  | Deciphered Date    |  | 2006/03/11 |  | Title                    |                 |  |       |  |  |  |  |  |  |  |  |
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| Date: 2006.03.06                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |            |  |                    |  |            |  | Sheet 27 of 59           |                 |  |       |  |  |  |  |  |  |  |  |

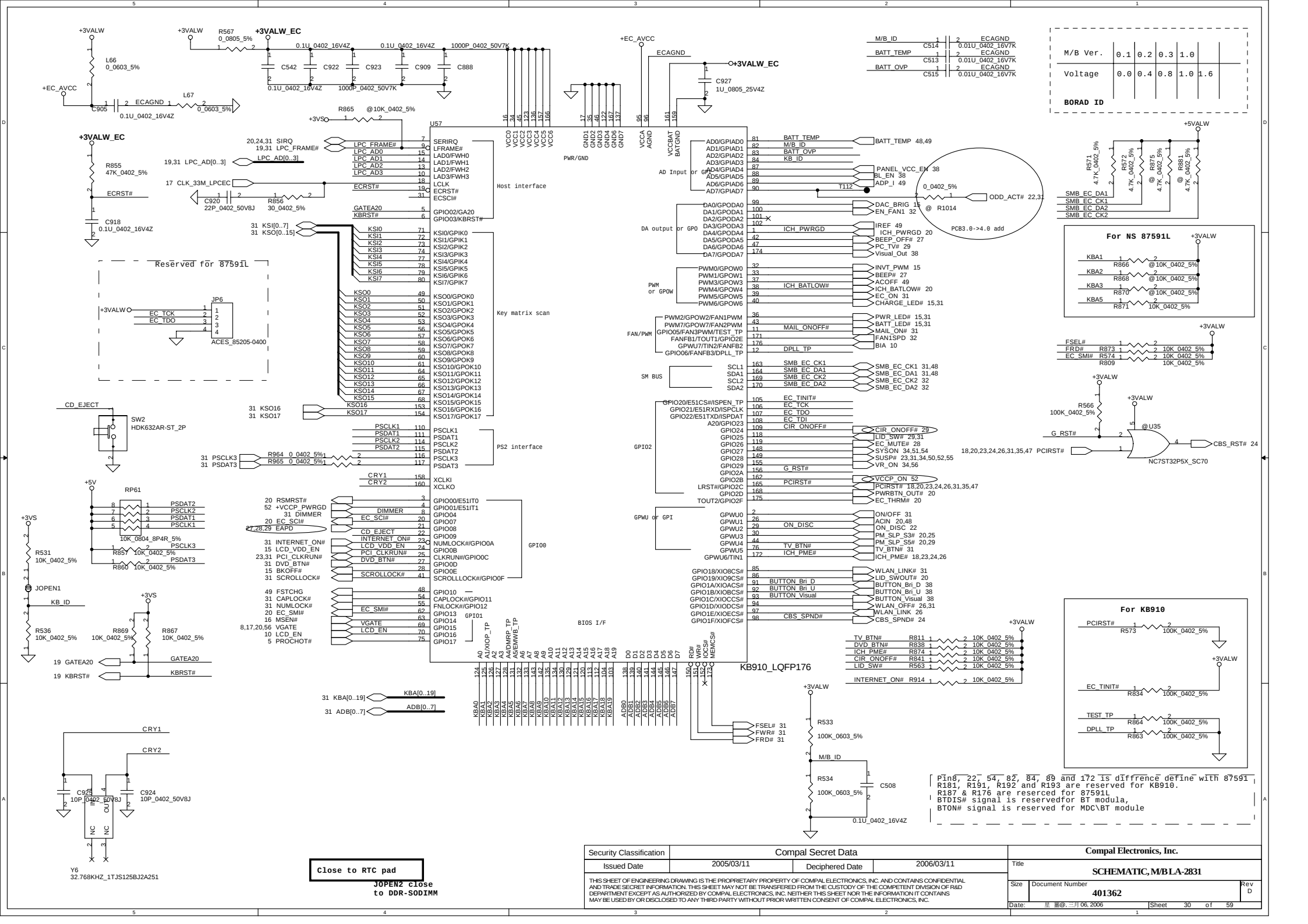


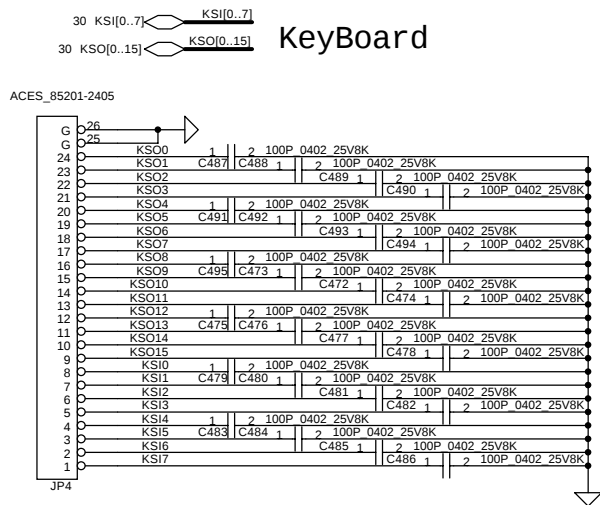
Connect AMPGND to GND  
via one single point to  
HOLE close to Amplifier

|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                    |            |                          |                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------------|------------|--------------------------|-----------------|
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |            | Compal Secret Data |            | Compal Electronics, Inc. |                 |
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2005/03/11 | Deciphered Date    | 2006/03/11 | Title                    |                 |
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| Date: 2006-03-06                                                                                                                                                                                                                                                                                                                                                                                                                                              |            | Sheet 28 of 59     |            |                          |                 |

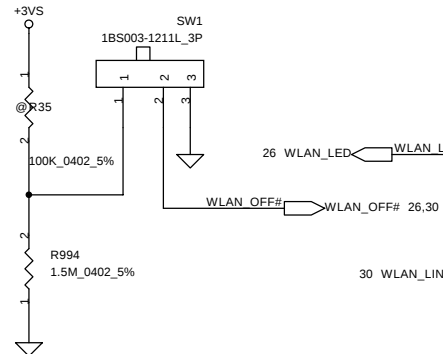


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| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |  | Compal Secret Data |  |                 |  | Compal Electronics, Inc. |  |                   |  |                |  |
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  | 2005/03/11         |  | Deciphered Date |  | 2006/03/11               |  | Title             |  |                |  |
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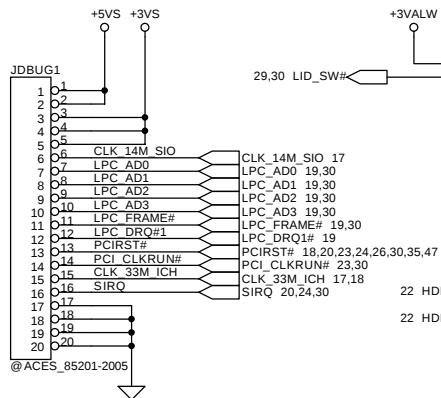




### Killer switch

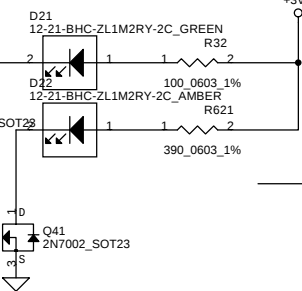


### LPC DEBUG CONN

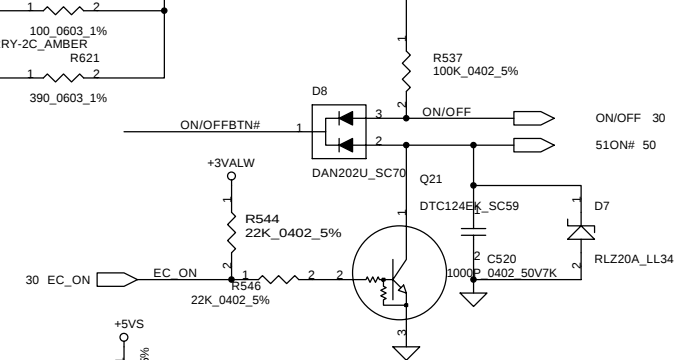


### D1 Pin3 Open PAST & MASK layer

#### WLAN LED

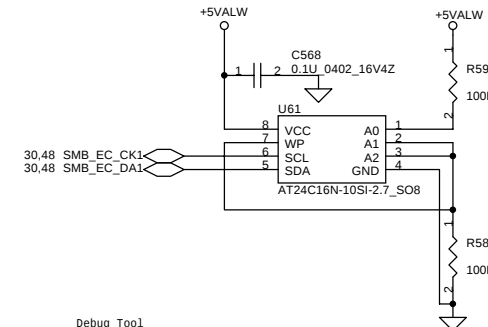
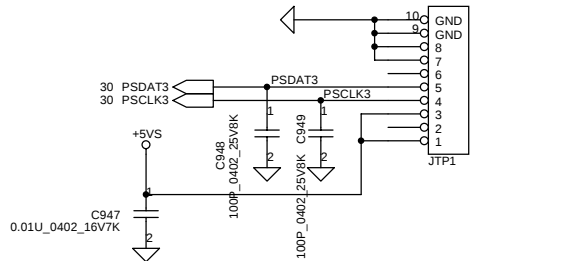


### Power BTN

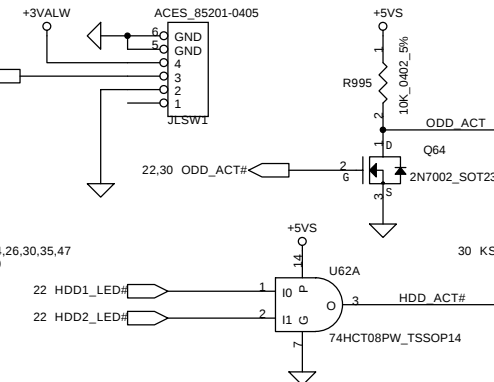
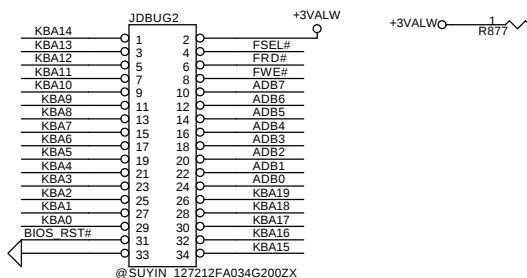


### Touch Pad Board

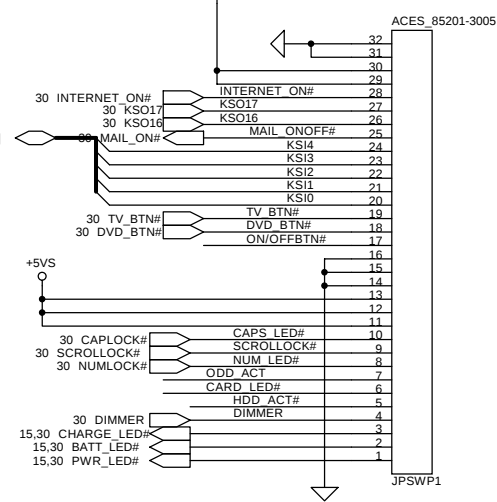
ACES\_85201-0805



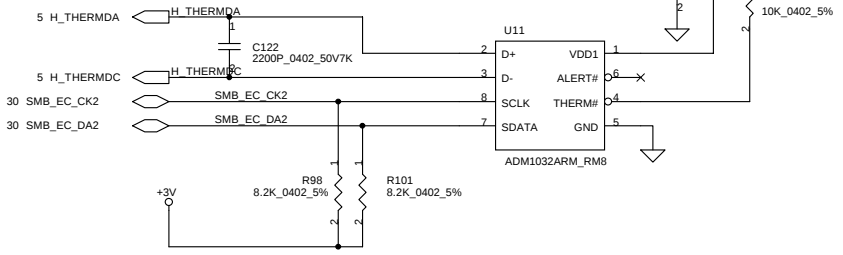
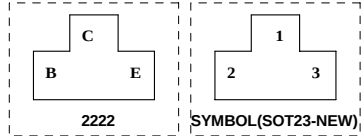
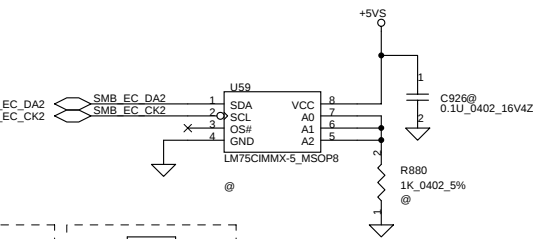
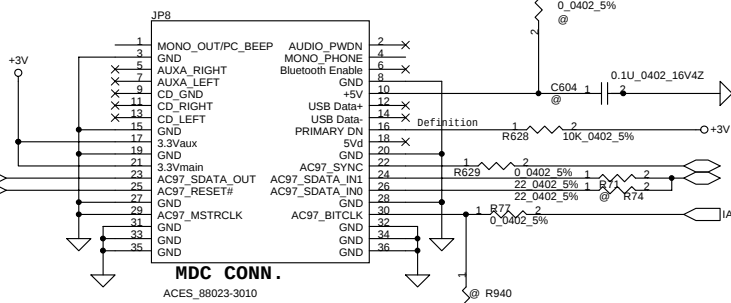
Debug Tool



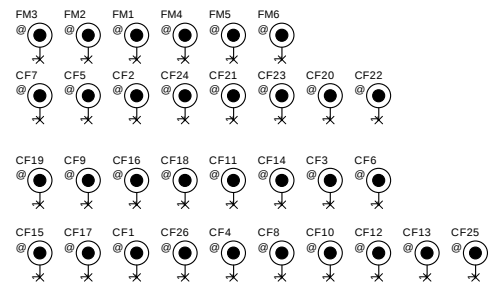
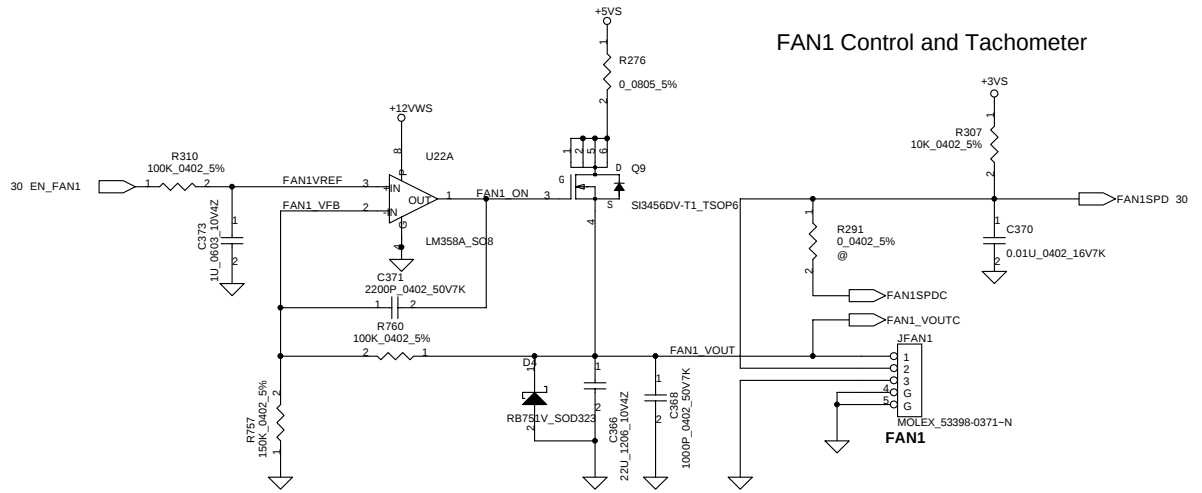
### LED Board



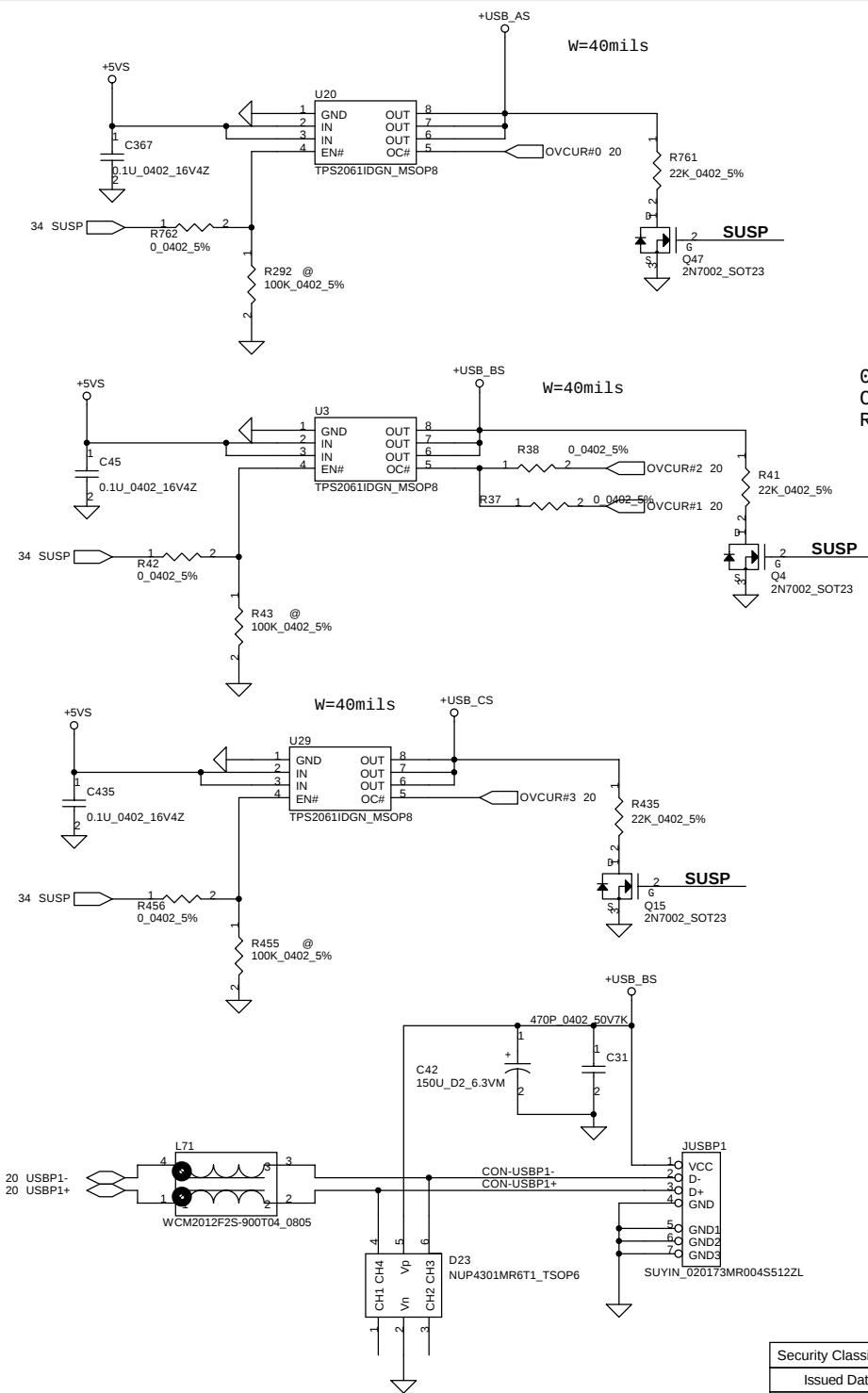
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |  |  | Compal Secret Data    |  |  |  | Compal Electronics, Inc. |  |  |  |
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| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |  |  | 2005/03/11            |  |  |  | Deciphered Date          |  |  |  |
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| Title                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |  | SCHEMATIC, M/BLA-2831 |  |  |  |                          |  |  |  |
| Size                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |  | Document Number       |  |  |  |                          |  |  |  |
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| Date                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |  | 2006/03/11            |  |  |  |                          |  |  |  |
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| Sheet                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |  | 31                    |  |  |  |                          |  |  |  |
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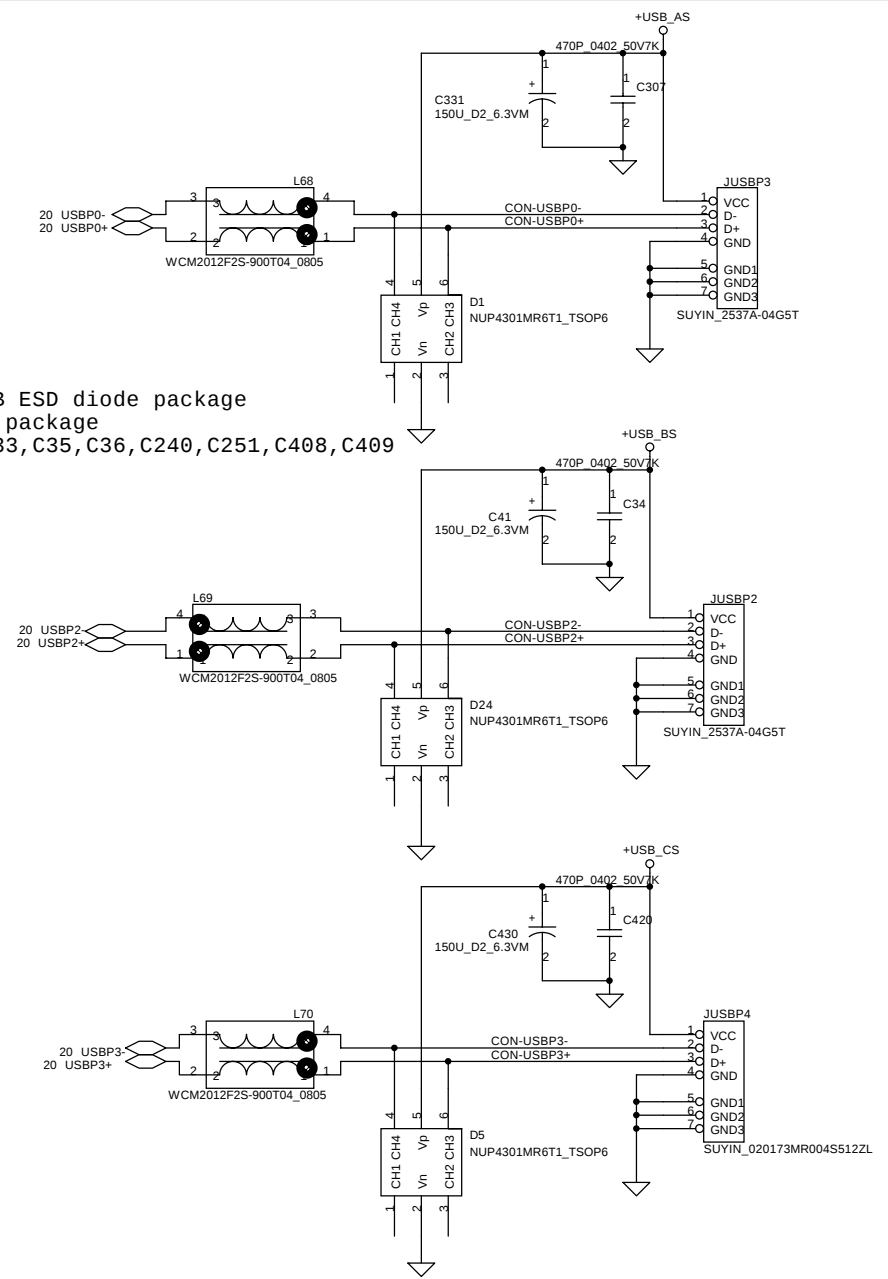
### FAN1 Control and Tachometer



|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                    |            |                          |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------------|------------|--------------------------|--|
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |            | Compal Secret Data |            | Compal Electronics, Inc. |  |
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2005/03/11 | Deciphered Date    | 2006/03/11 | Title                    |  |
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| Size                                                                                                                                                                                                                                                                                                                                                                                                                                                          |            | Document Number    |            | Rev D                    |  |
| 401362                                                                                                                                                                                                                                                                                                                                                                                                                                                        |            | Date: 06.06.2006   |            | Sheet 32 of 59           |  |

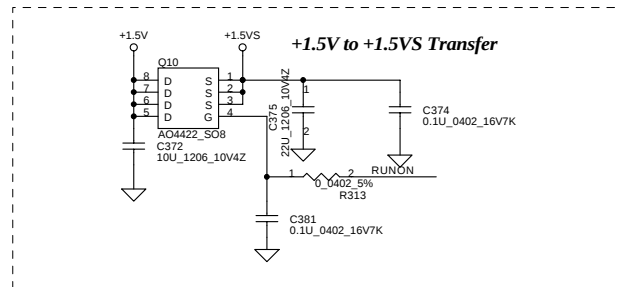
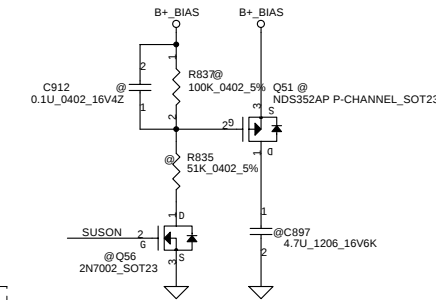
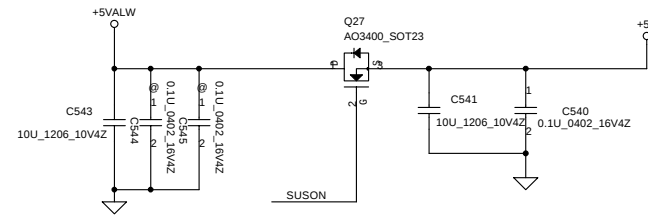
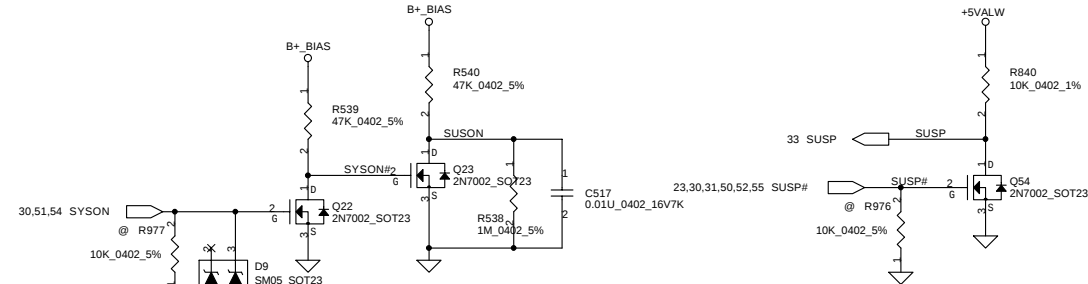
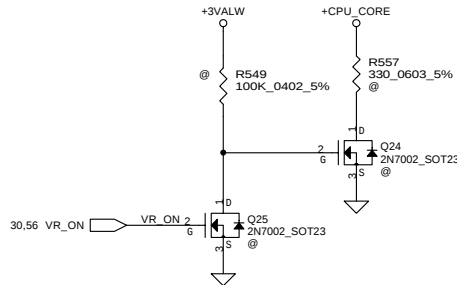
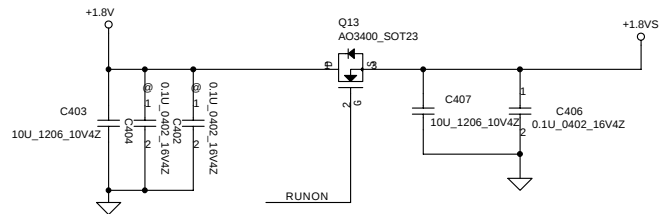
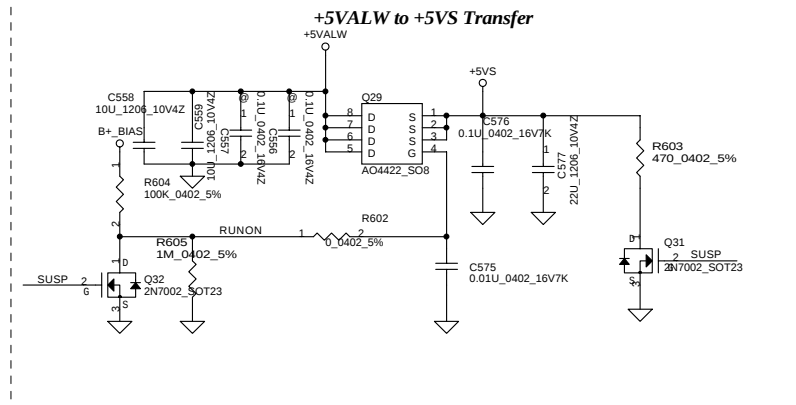
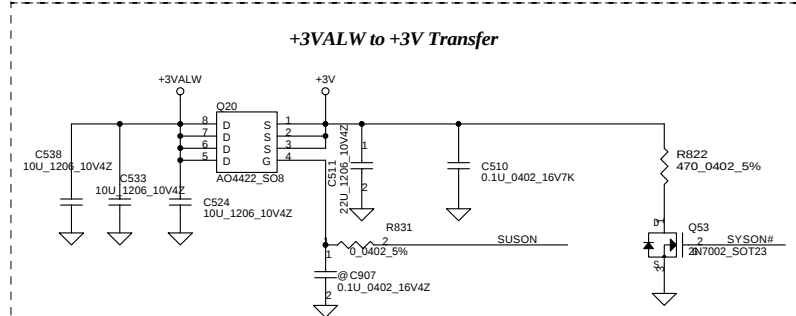
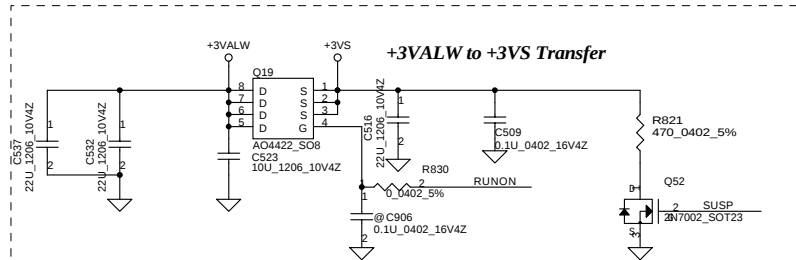


0.4--->0.5 Change USB ESD diode package  
 Change D1,D5,D23,D24 package  
 Remove 10P-NI C32,C33,C35,C36,C240,C251,C408,C409

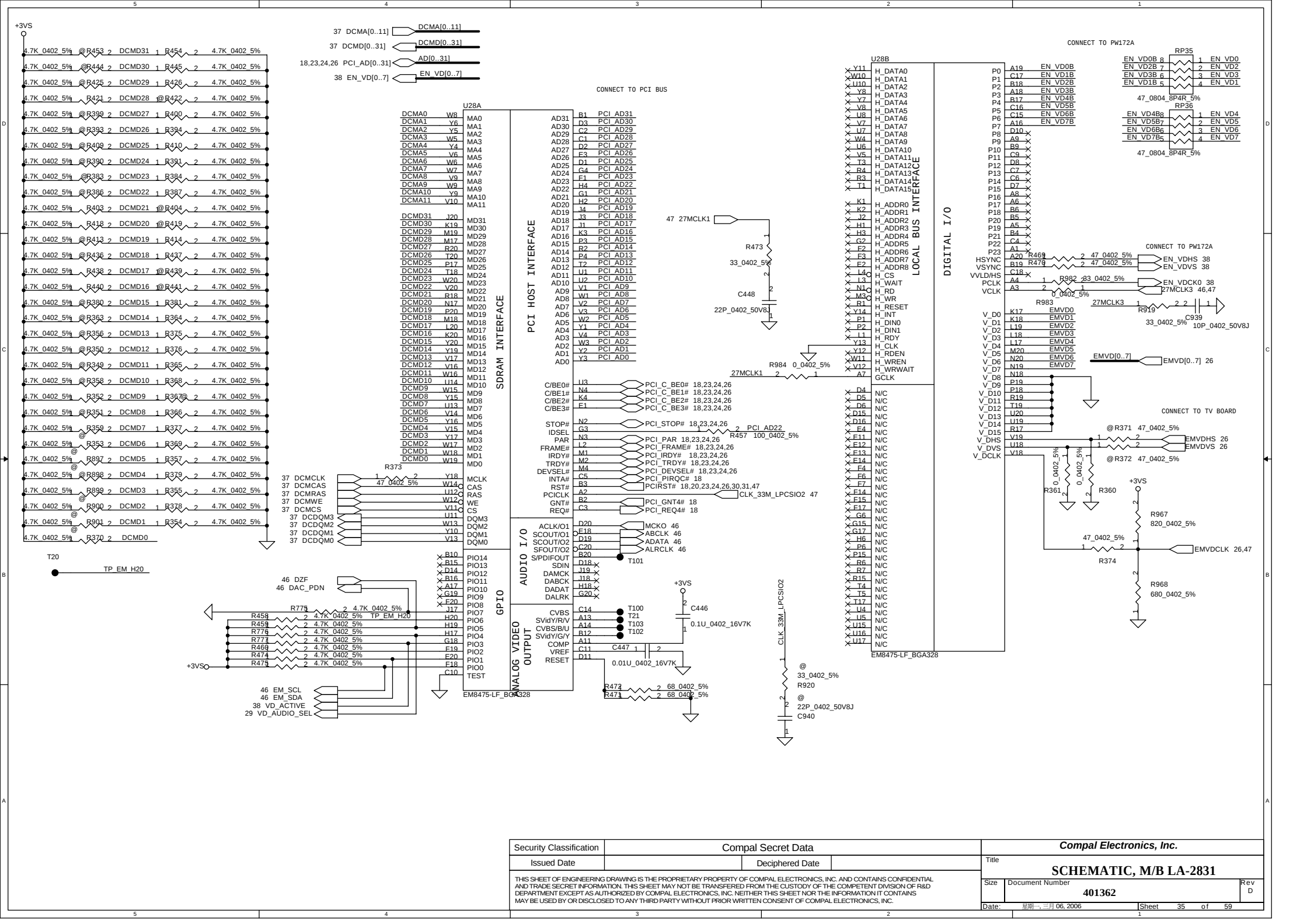


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| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |  | Compal Secret Data    |                  |                 |  | Compal Electronics, Inc. |    |       |       |
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  | 2005/03/11            |                  | Deciphered Date |  | 2006/03/11               |    | Title |       |
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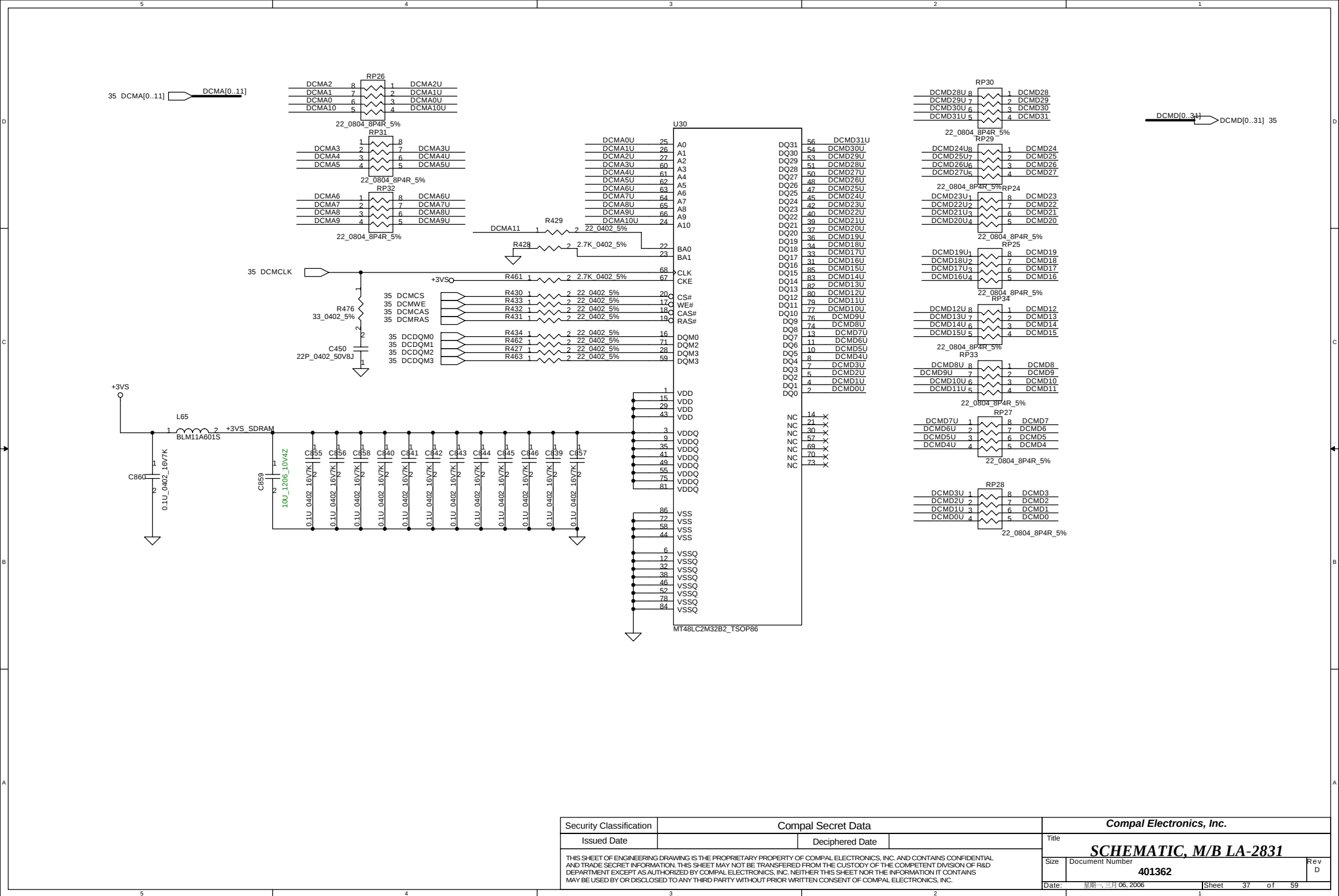
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| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |  |  | Compal Secret Data     |  |  |  | Compal Electronics, Inc. |  |  |  |
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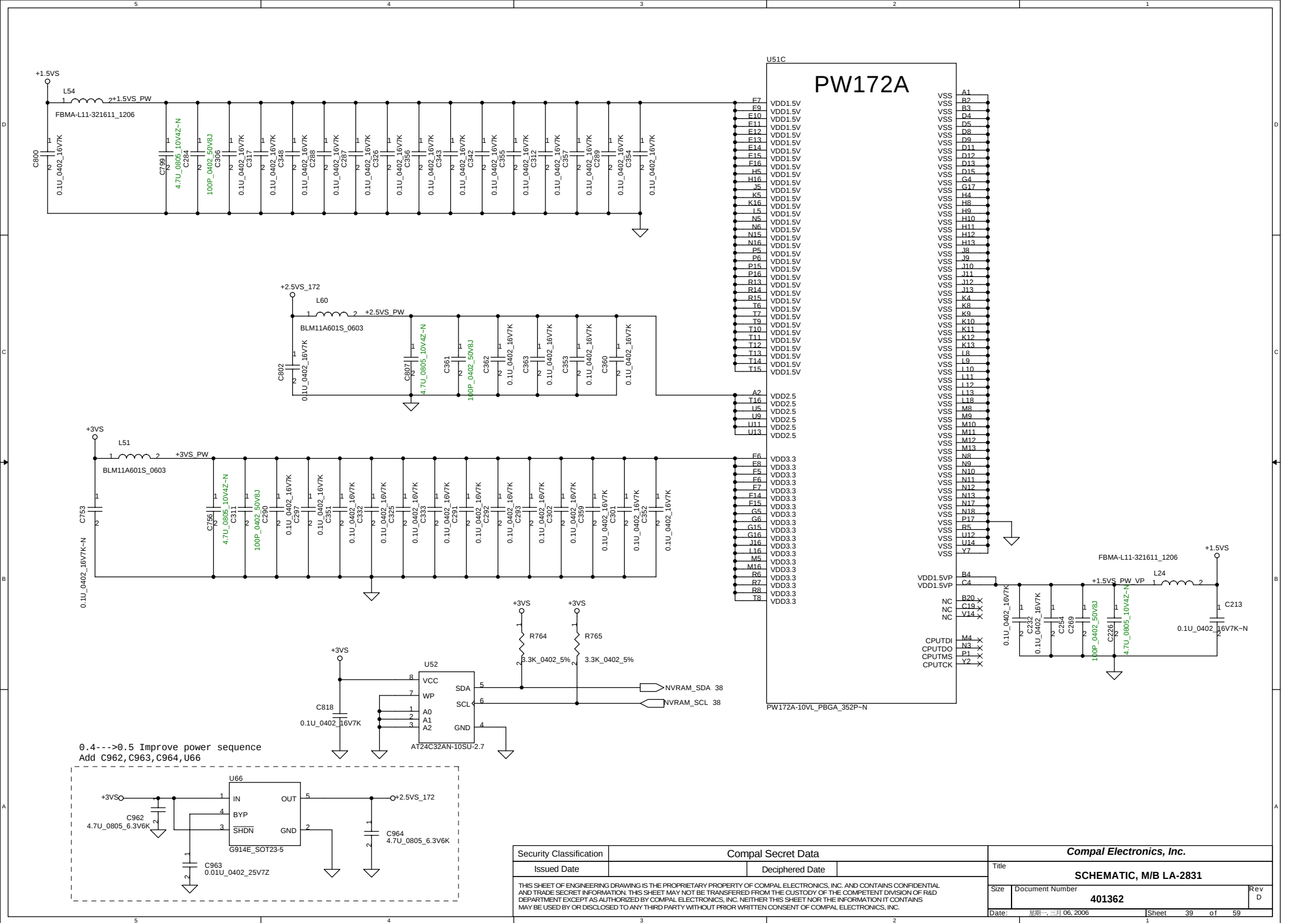




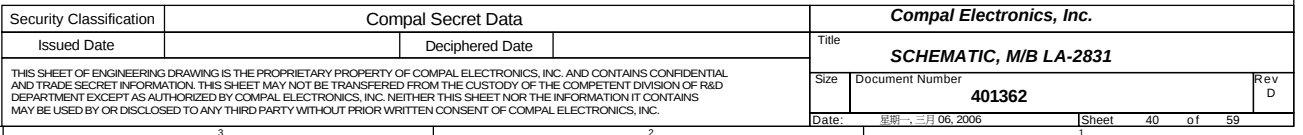


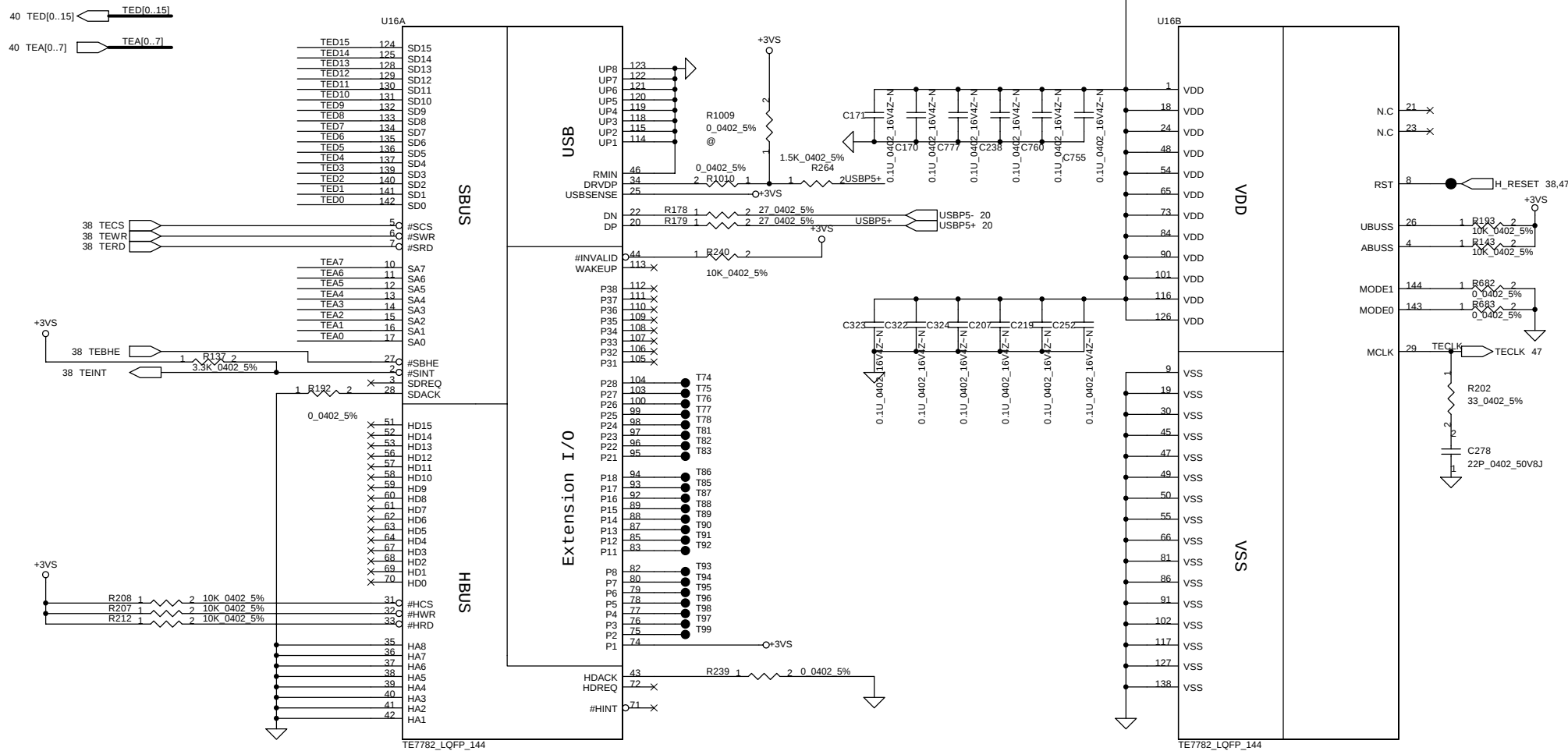
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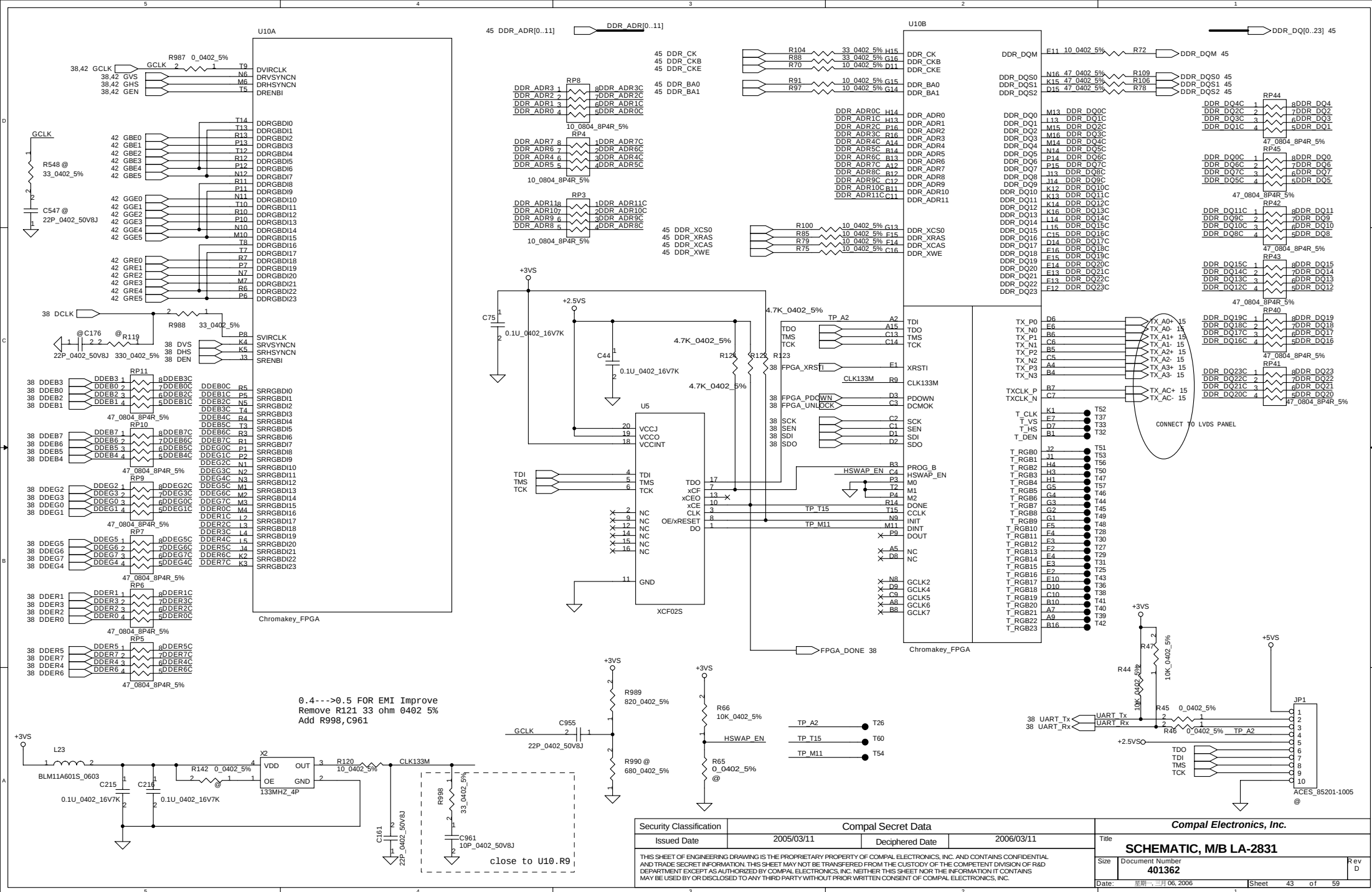
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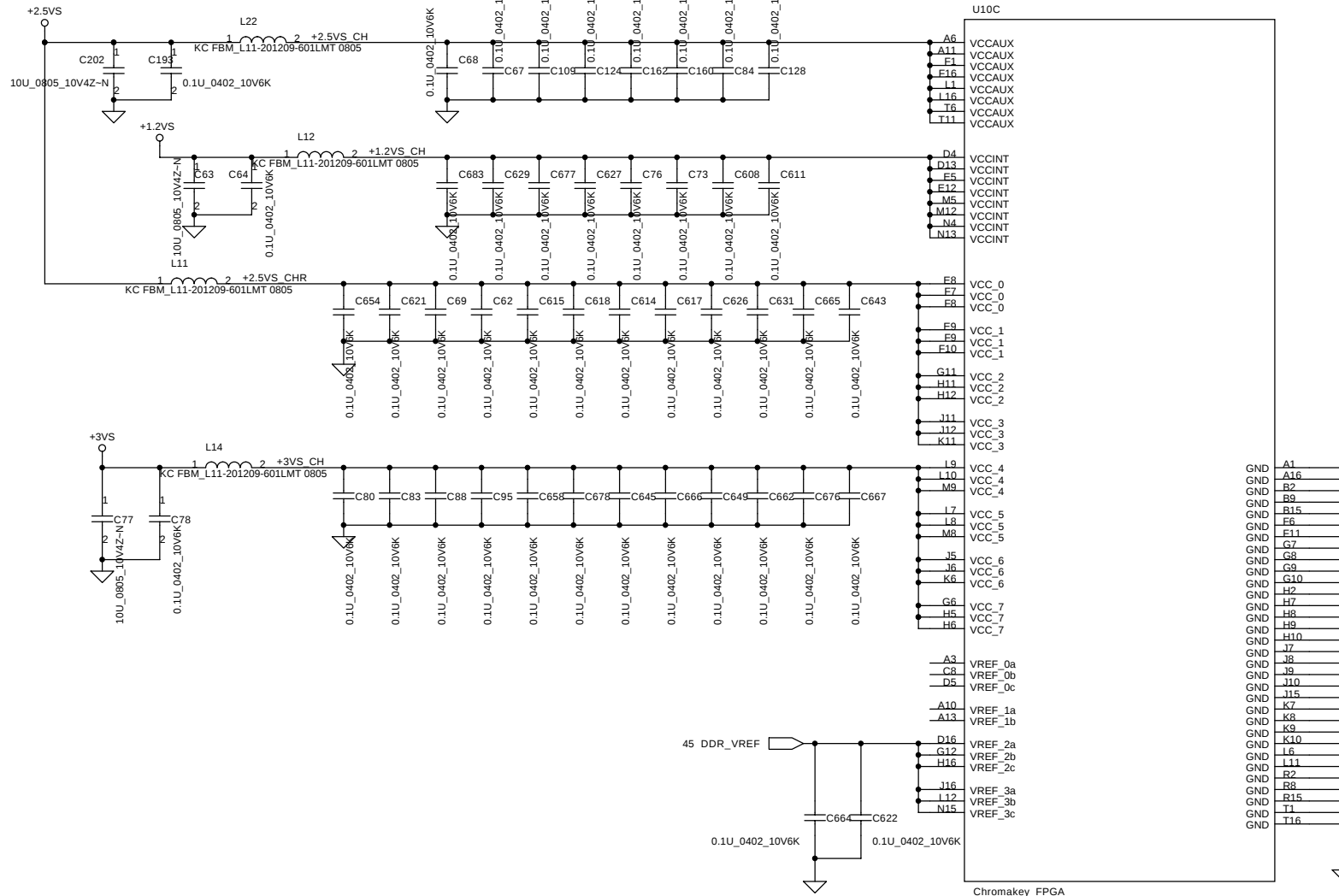
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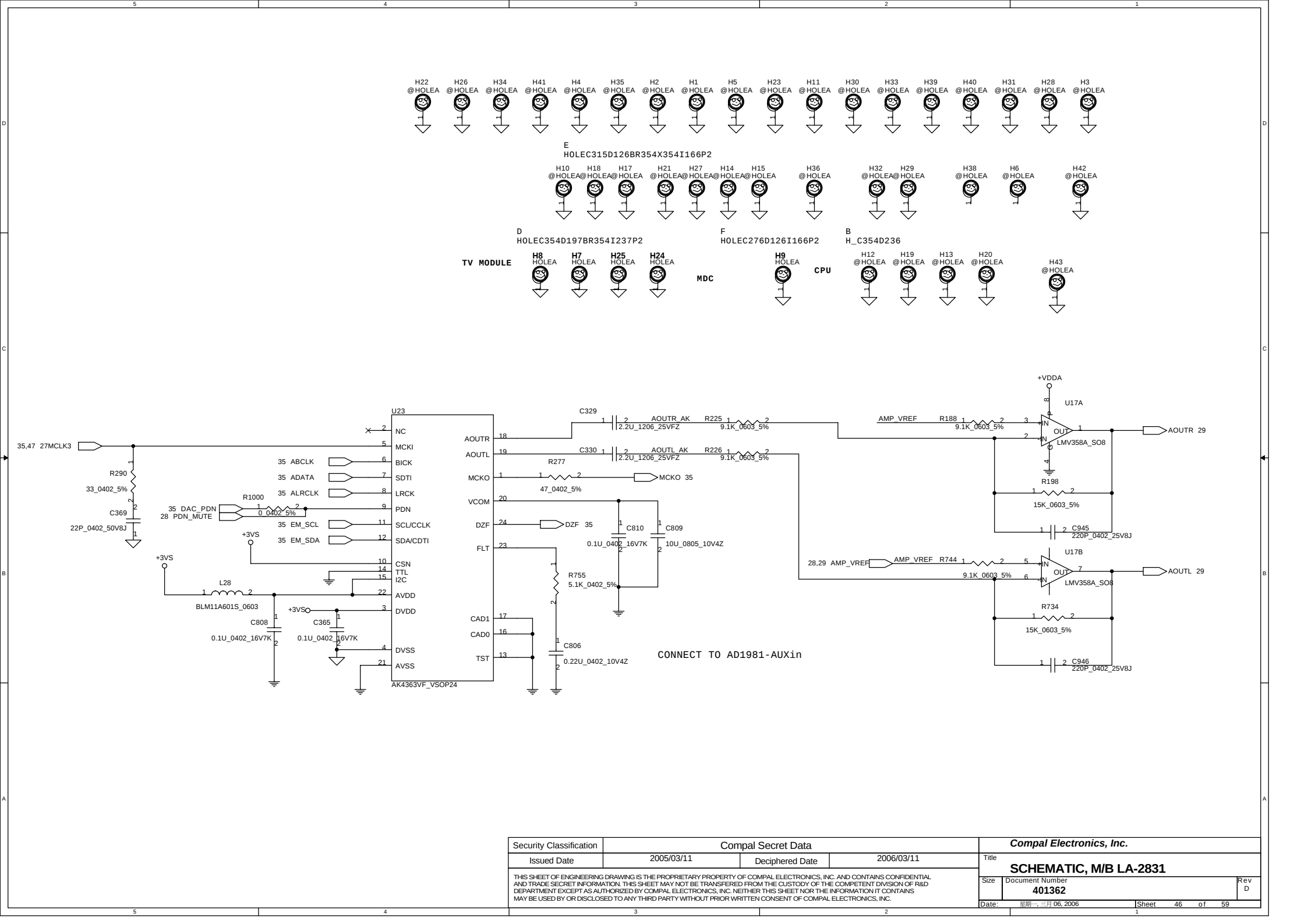
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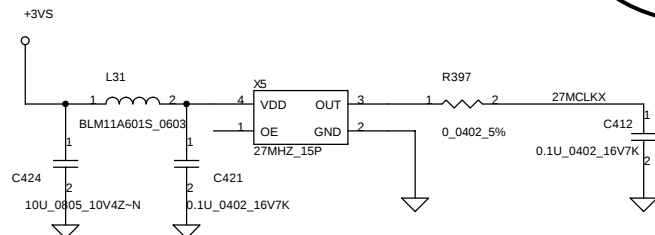
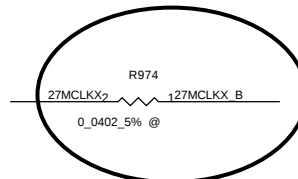
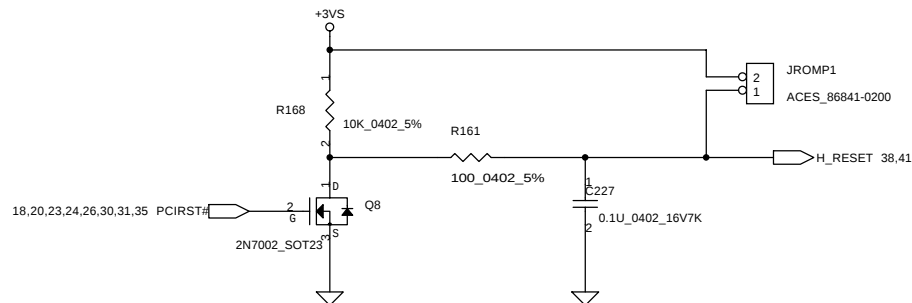
0.4-->0.5  
change L22,L12,L11 package from 0603 to 0805



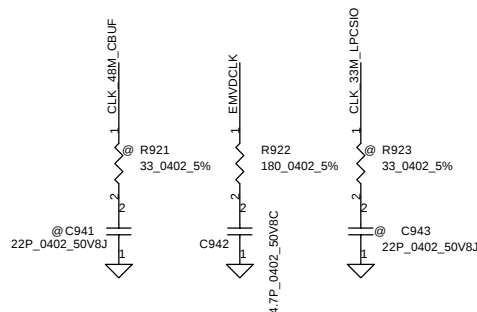
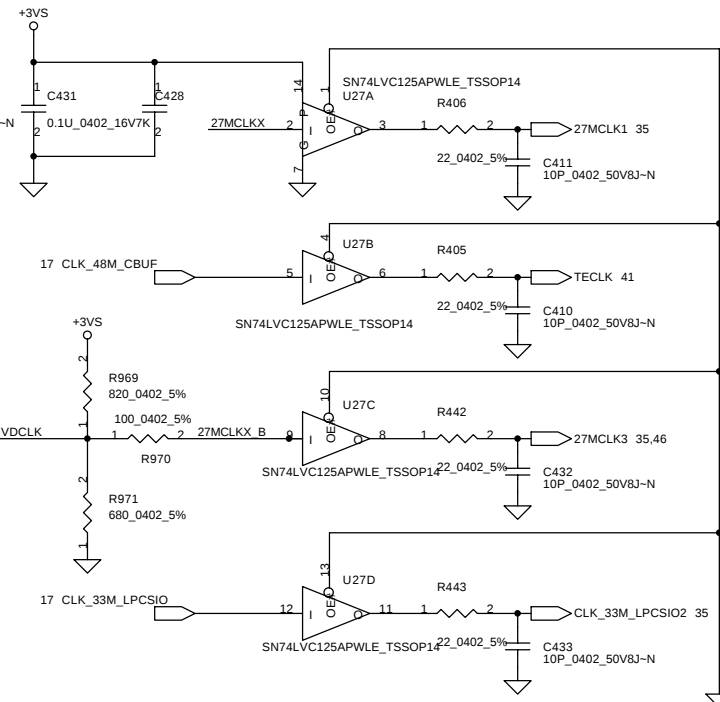
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26,35 EMVDCLK

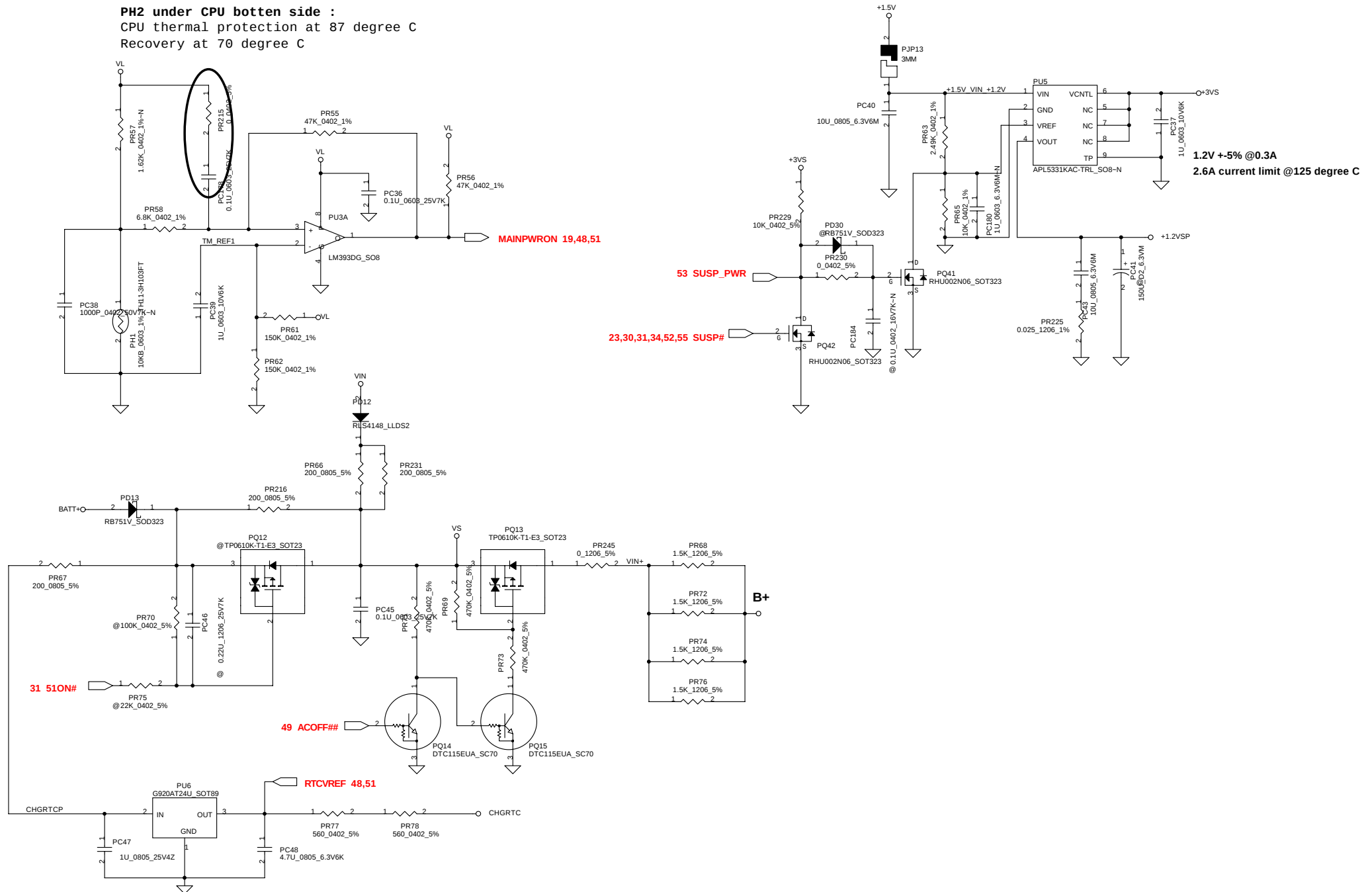


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| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |            | Compal Secret Data |            | Compal Electronics, Inc. |                                  |
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| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       | Compal Secret Data |                 |            | Compal Electronics, Inc.       |                     |       |          |
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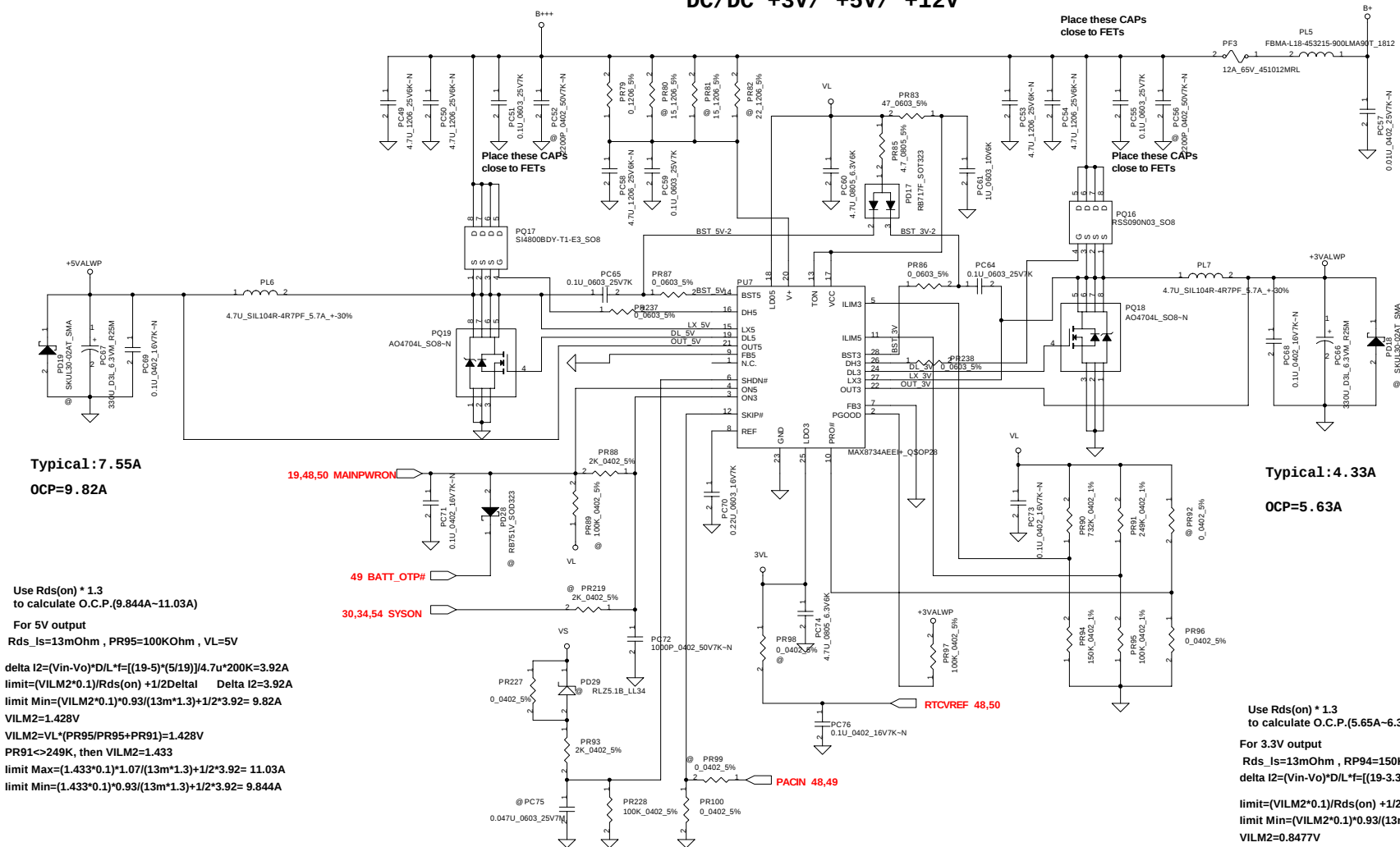


PH2 under CPU botten side :  
CPU thermal protection at 87 degree C  
Recovery at 70 degree C



| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |  |  | Compal Secret Data |  |  |  | Compal Electronics, Inc. |  |  |  |
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| Date: 2006.03.06                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |  | Sheet 50 of 59     |  |  |  |                          |  |  |  |

**DC/DC +3V/ +5V/ +12V**



Typical:7.55A  
OCP=9.82A

Use Rds(on) \* 1.3  
to calculate O.C.P.(9.844A~11.03A)

For 5V output  
Rds\_ls=13mOhm , PR95=100KOhm , VL=5V

delta I2=(Vin-Vo)\*D/L\*F=[(15-5)\*(5/19)]/4.7u\*200K=3.92A  
 Ilimit=(VILM2\*0.1)/Rds(on) =1/2DeltaI Delta I2=3.92A  
 Ilimt Min=(VILM2\*0.1)\*0.93/(13m\*1.3)+1/2\*3.92= 9.82A  
 VILM2=1.428V  
 VILM2=VL\*(PR95/PR95+PR91)=1.428V  
 PR91<=249K, then VILM2=1.433  
 Ilimt Max=(1.433\*0.1)\*1.07/(13m\*1.3)+1/2\*3.92= 11.03A  
 Ilimt Min=(1.433\*0.1)\*0.93/(13m\*1.3)+1/2\*3.92= 9.844A

Typical:4.33A  
OCP=5.63A

Use Rds(on) \* 1.3  
to calculate O.C.P.(5.65A~6.35A)

For 3.3V output

Rds<sub>Is</sub>=13mOhm, RP94=150KOhm, VL=5V

Delta I2=(Vin-Vo)\*D\*I<sub>L</sub>/[(19-3.3)\*(3.3/19)]/4.7u\*300K=1.93A

limit=(VILM2\*0.1)/Rds(on) + 1/2\*DeltaI2 Delta I2=1.93A

limit Min=(VILM2\*0.1)\*0.93/(13m\*1.3) + 1/2\*1.93= 5.63A

VILM2=0.8477V

VILM2=VL\*(PR94/PR94+PR90)=0.8477V

PR90<=732K, then VILM2=0.85

limit Max=(0.85\*0.1)\*1.07/(13m\*1.3) + 1/2\*1.93= 6.35A

limit Min=(0.85\*0.1)\*0.93/(13m\*1.3) + 1/2\*1.93= 5.65A

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |                    |  |                 |  |                          |                 |           |        |                |       |  |
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Low\_side MOS Rds(on) typ=17mOhm, Max=24mOhm

To use L-side Rds(on)\*1.5 to calculate OCP

Set OCP=4.55A, Risen=PR106=2.05K

(Iocp\*Rds(on)\*1.5)/PR106+104=76.045uA

Rocset=PR117=10.3V/(76.045uA+8uA)=122K, Set PR117=121K

Typical:3.5A

OCP:4.55A

Low\_side MOS Rds(on) typ=17mOhm, Max=24mOhm

To use L-side Rds(on)\*1.5 to calculate OCP

Set OCP=8.45A, Risen=PR107=2.05K

(Iocp\*Rds(on)\*1.5)/PR107+104=141.226uA

Rocset=PR117=10.3V/(141.226uA+8uA)=69K, Set PR118=69.8K

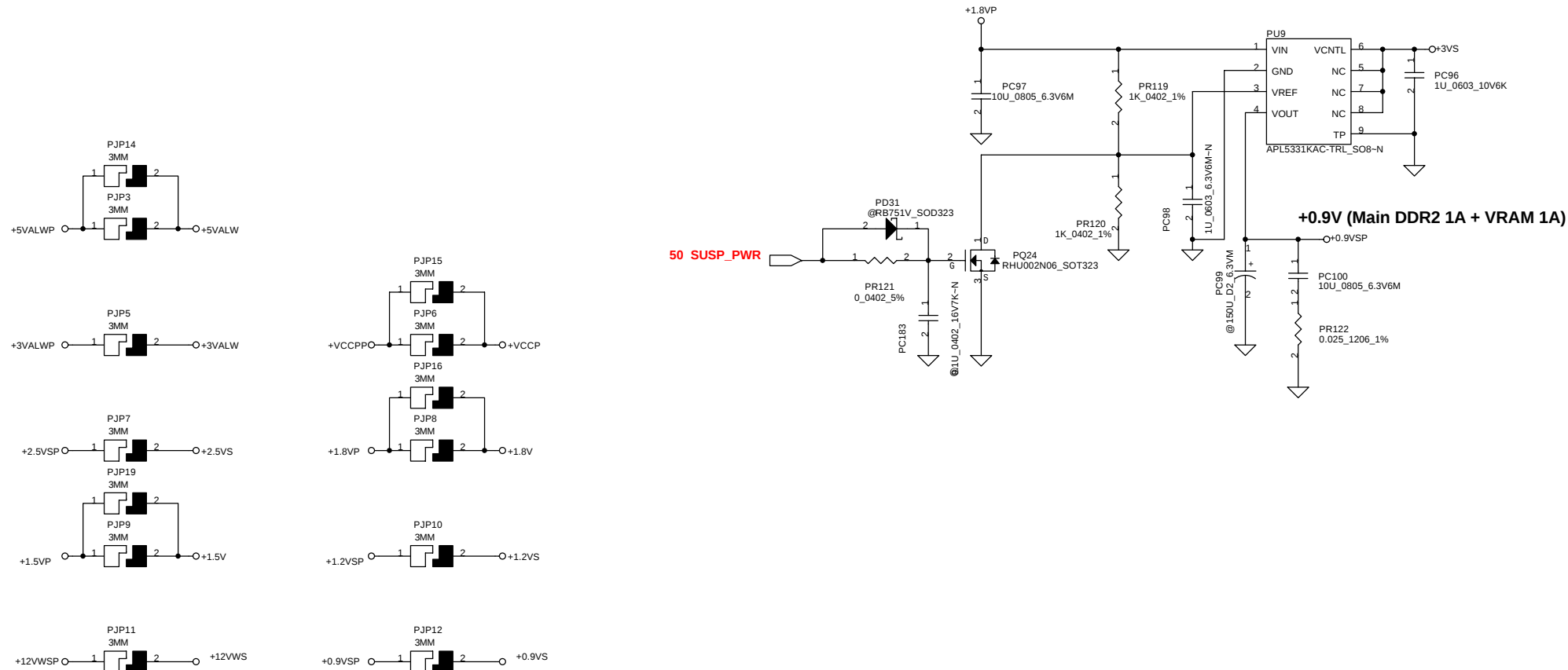
Typical:6.5A

OCP:8.45A

$$V_{out}=0.9V*(1+PR109/PR114)=0.9V*(1+18.2K/10K)=2.538V$$

$$V_{out}=0.9V*(1+PR110/PR113)=0.9V*(1+1.74K/10K)=1.0566V$$

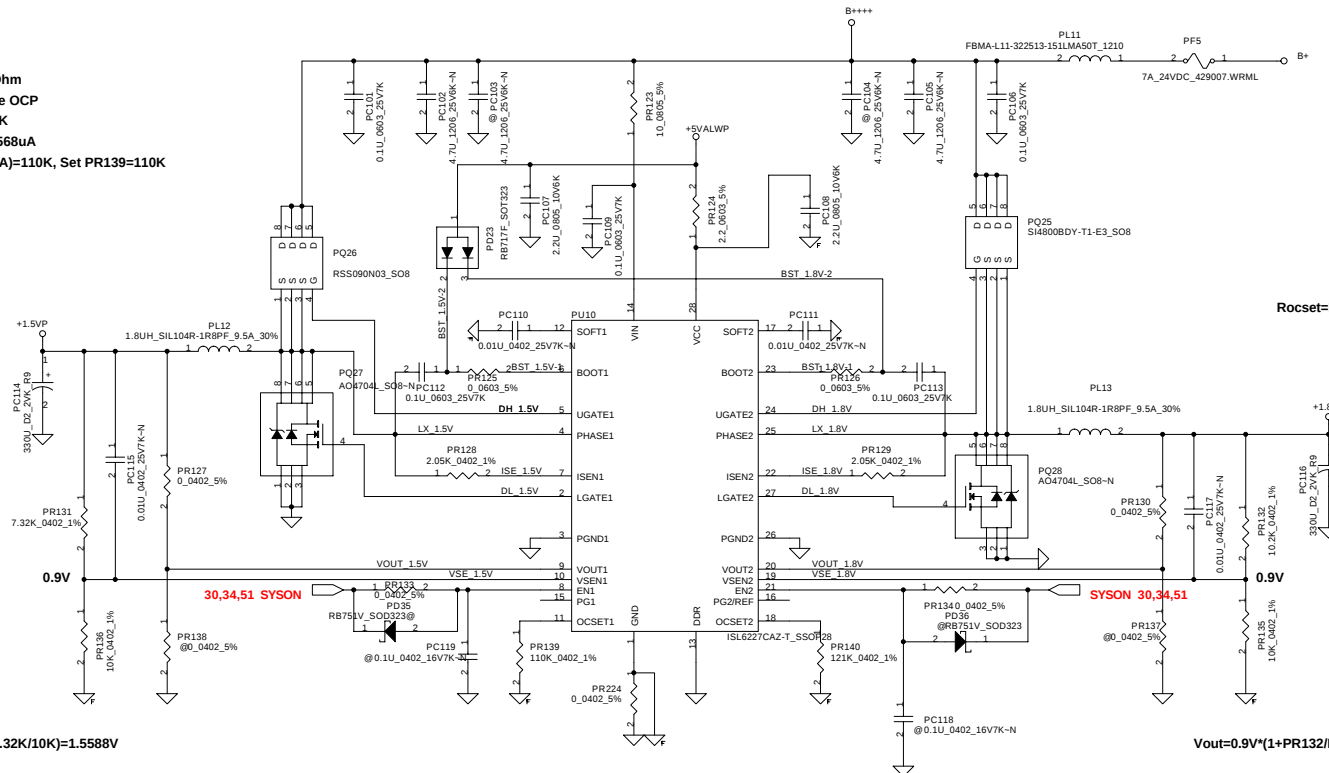
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |            | Compal Secret Data |            | Compal Electronics, Inc. |                       |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                    |            |                          | 401362                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                    |            | Date                     | Rev D                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                    |            | 2006-03-06               | Sheet 52 of 59        |



|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |  |                 |  |                          |                  |       |  |                |  |       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------|--|-----------------|--|--------------------------|------------------|-------|--|----------------|--|-------|
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |  | Compal Secret Data |  |                 |  | Compal Electronics, Inc. |                  |       |  |                |  |       |
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  | 2005/03/11         |  | Deciphered Date |  | 2006/03/11               |                  | Title |  |                |  |       |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |  |                 |  | Size                     | Document Number  |       |  | 401362         |  | Rev D |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |  |                 |  |                          |                  |       |  |                |  |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |  |                 |  | Date:                    | 星期一, 三月 06, 2006 |       |  | Sheet 53 of 59 |  |       |

**OCP:9.61A**

**OCP:8.67A**



$$V_{out}=0.9V*(1+PR131/PR136)=0.9V*(1+7.32K/10K)=1.5588V$$

$$V_{out}=0.9V \cdot (1+PR_{132}/PR_{135})=0.9V \cdot (1+10.2K/10K)=1.818V$$

|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                    |            |                          |                 |       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------------|------------|--------------------------|-----------------|-------|
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |            | Compal Secret Data |            | Compal Electronics, Inc. |                 |       |
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2005/03/11 | Deciphered Date    | 2006/03/11 | Title                    |                 |       |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                    |            | Size                     | Document Number | Rev D |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                    |            | 401362                   |                 |       |
| Date:                                                                                                                                                                                                                                                                                                                                                                                                                                                         |            | 星期 三 月 06, 2006    | Sheet      | 54                       | of              | 59    |



# CPU CORE

B+

PL17

2CPU\_Fuse2

PF7

8A\_1255VDC\_451008

PC143

0.01U\_0402\_25V7K-N

220U\_25V\_1M

2200P\_0402\_50V7K-N

PC141

0.1U\_0603\_25V7K

PC140

4.7U\_1206\_25V6K-N

PC139

4.7U\_1206\_25V6K-N

PC138

4.7U\_1206\_25V6K-N

PC137

4.7U\_1206\_25V6K-N

PC136

4.7U\_1206\_25V6K-N

PC135

4.7U\_1206\_25V6K-N

PC134

4.7U\_1206\_25V6K-N

PC133

4.7U\_1206\_25V6K-N

PC132

4.7U\_1206\_25V6K-N

PC131

4.7U\_1206\_25V6K-N

PC130

4.7U\_1206\_25V6K-N

PC129

4.7U\_1206\_25V6K-N

PC128

4.7U\_1206\_25V6K-N

PC127

4.7U\_1206\_25V6K-N

PC126

4.7U\_1206\_25V6K-N

PC125

4.7U\_1206\_25V6K-N

PC124

4.7U\_1206\_25V6K-N

PC123

4.7U\_1206\_25V6K-N

PC122

4.7U\_1206\_25V6K-N

PC121

4.7U\_1206\_25V6K-N

PC120

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PC119

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PC118

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PC117

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PC116

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PC115

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PC114

4.7U\_1206\_25V6K-N

PC113

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PC112

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PC111

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PC110

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PC109

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PC108

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PC107

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PC106

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PC105

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PC104

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PC103

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PC102

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PC101

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PC100

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PC99

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PC98

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PC97

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PC96

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PC93

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PC92

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PC91

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PC90

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PC89

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PC87

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PC86

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PC84

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PC83

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PC81

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PC80

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PC79

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PC73

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PC72

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PC71

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PC70

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PC68

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PC67

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PC66

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PC65

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PC64

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PC63

4.7U\_1206\_25V6K-N

PC62

4.7U\_1206\_25V6K-N

PC61

4.7U\_1206\_25V6K-N

PC60

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PC59

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PC58

4.7U\_1206\_25V6K-N

PC57

4.7U\_1206\_25V6K-N

PC56

4.7U\_1206\_25V6K-N

PC55

4.7U\_1206\_25V6K-N

PC54

4.7U\_1206\_25V6K-N

PC53

4.7U\_1206\_25V6K-N

PC52

4.7U\_1206\_25V6K-N

PC51

4.7U\_1206\_25V6K-N

PC50

4.7U\_1206\_25V6K-N

PC49

4.7U\_1206\_25V6K-N

PC48

4.7U\_1206\_25V6K-N

PC47

4.7U\_1206\_25V6K-N

PC46

4.7U\_1206\_25V6K-N

PC45

4.7U\_1206\_25V6K-N

PC44

4.7U\_1206\_25V6K-N

PC43

4.7U\_1206\_25V6K-N

PC42

4.7U\_1206\_25V6K-N

PC41

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PC40

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PC39

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PC31

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PC30

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PC26

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PC24

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PC23

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PC22

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PC21

4.7U\_1206\_25V6K-N

PC20

4.7U\_1206\_25V6K-N

PC19

4.7U\_1206\_25V6K-N

PC18

4.7U\_1206\_25V6K-N

PC17

| Item | Page# | Title                | Date  | Request Owner | Issue Description                                                       | Solution Description                                                                                      | Rev. |
|------|-------|----------------------|-------|---------------|-------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|------|
| 1    | 51    | +3V/5V               | 07/05 | Compal        | To improve EMI                                                          | To add PR237 and PR238 connect to High-side Gate                                                          | 0.1  |
| 2    | 56    | CPU_CORE             | 07/05 | Compal        | To improve EMI                                                          | To add PR239,PC196 and PR240,PC195 connect to Phase node                                                  |      |
| 3    | 50    | CPU OTP function     | 07/05 | Compal        | To meet 87 degree C CPU OTP                                             | To change PR57 to 1.96K and PR58 to 6.8K                                                                  |      |
| 4    | 54    | 1.5V/1.8V            | 07/05 | Compal        | H/W ask to change 1.5V to 1.55V                                         | To change PR131 to 7.32K                                                                                  |      |
| 5    | 49    | Battery OTP function | 08/01 | Compal        | To prevent mainpwon is pull low                                         | To change PR52 pin2 connect to +3VALWP                                                                    |      |
| 6    | 51    | +3V/5V               | 08/05 | Compal        | To prevent choke is too hot                                             | remove the +12VALWP function (remove PD16,PC63,PR84,PC62,PD15)                                            |      |
| 7    | 49    | charger              | 08/05 | Compal        | To prevent 5Vchoke is too hot                                           | New add B+_BIAS function to replace +12VALWP(Add PR241,PR242 PQ43,PC197,PD38,PR243,PC198,PR244,PD39,PQ44) |      |
| 8    | 55    | +12VWSP              | 08/15 | NEC           | Follow NEC requied                                                      | To change PR153 to 61.9K                                                                                  |      |
| 10   | 49    | charger              | 08/29 | Compal        | Change OTP@ charge to 68 degree C to avoid shut down on production line | To change PR50 to 332K                                                                                    |      |
| 11   | 51    | +3V/5V               | 08/29 | Compal        | To prevent 3V/5Vchoke is too hot at S5 mode                             | Depop PR99 and Pop PR100                                                                                  |      |
| 12   | 51    | +3V/5V               | 09/26 | Compal        | Batt OTP circuit has problem                                            | Depop PD28                                                                                                |      |
| 13   |       |                      |       |               |                                                                         |                                                                                                           |      |
| 14   |       |                      |       |               |                                                                         |                                                                                                           |      |
| 15   |       |                      |       |               |                                                                         |                                                                                                           |      |
| 16   |       |                      |       |               |                                                                         |                                                                                                           |      |
| 17   |       |                      |       |               |                                                                         |                                                                                                           |      |

Next: PR238, PC202, PQ56, PD42, PJP21

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| Compal Electronics, Inc. |                 |  |                |
| Title                    |                 |  |                |
| SCHEMATIC, M/B LA-2831   |                 |  |                |
| Size                     | Document Number |  | Rev            |
|                          | 401362          |  | D              |
| Date:                    | 日期: 三月 05, 2006 |  | Sheet 57 of 59 |

Version change list (P.I.R. List)

| Item | Fixed Issue                                                        | Reason for change                          | Rev. | PG#   | Modify List                                                                                                                                                                                                                 | B.Ver# | Phase |
|------|--------------------------------------------------------------------|--------------------------------------------|------|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-------|
| 1    |                                                                    | LVDS output EMI solution                   |      | 15    | Change R10,R11,R12,R13,R14,R15,R16,R17,R18,R19<br>to (L72,L73,L74,L75,L76)                                                                                                                                                  |        |       |
| 2    |                                                                    | modify JLVDS1 to fit in new inverter       |      | 15    | add JLVDS1 Pin35 connection to LCD_INVB+                                                                                                                                                                                    |        |       |
| 3    |                                                                    | EC control PWR_LED#,BATT_LED#,CHARGE_LED#  |      | 15    | Change Q37,Q38,Q39 to MMBT3904,<br>add R947,R948,R949 330ohm,R611,R612,R613 change to 1M ohm then connect to GND                                                                                                            |        |       |
| 4    |                                                                    | PANEL Backlight only control by EC&NB      |      | 15    | del U48                                                                                                                                                                                                                     |        |       |
| 5    |                                                                    | CLK_33M_MPCI connect to MPCI & TV too long |      | 17    | CLK_33M_CBS connect to JTVMD1 pin74                                                                                                                                                                                         |        |       |
| 6    |                                                                    | Buzzer is too quiet                        |      | 27    | change R820 to 100ohm                                                                                                                                                                                                       |        |       |
| 7    |                                                                    | U50 output left/right channel are wrong    |      | 29    | swap U50 pin6&pin10(pin6 connect to LINE_IN_L)<br>(pin10 connect to LINE_IN_R)                                                                                                                                              |        |       |
| 8    |                                                                    | control PANEL by EC                        |      | 30    | EC(U57)pin24 connect to LCD_VDD_EN<br>pin70 connect to LCD_EN                                                                                                                                                               |        |       |
| 9    | EC judge LID switch is not open,<br>then can't boot by pwr botton. | LID switch on/off                          |      | 31    | change JLSW1 pin4 connect from +3V to +3VALW                                                                                                                                                                                |        |       |
| 10   |                                                                    | EMI solution for MDC IAC_BITCLK            |      | 32    | Add R940 (330hm) and C944 (22pF)                                                                                                                                                                                            |        |       |
| 11   | USB2.0 fail                                                        | DIODE using wrong                          |      | 33    | change D1,D5,D23,D24 from PSOT24C to BAT54A(SCSBAT540A0)                                                                                                                                                                    |        |       |
| 12   | LM358 issue                                                        | AK4363 sound output signal unstable.       |      | 46    | change R225,R226 to 9.1K ohm, R198,R734 to 15K ohm<br>add C945 220PF between U17A pin1&pin2, add C946 220PF between U17A pin6&pin7<br>U17A pin2 connect to R225, U17B pin6 connect to R226<br>R744,R108 connect to AMP_VREF |        |       |
| 13   |                                                                    | U27 clock buffer EMI solution              |      | 47    | Add R921,R922,R923 330hm and C941,C942,C943 22PF                                                                                                                                                                            |        |       |
| 14   |                                                                    | Change touch pad from USB to PS2 interface |      | 30,31 | Del USBP5-;USBP5+ Add PSDAT3; PSCLK3                                                                                                                                                                                        |        |       |
| 15   | It had POP noise when enter S4.                                    | The subwoofer shut down timing to late     |      | 29    | EAPD connect to U19 RESET pin                                                                                                                                                                                               |        |       |
| 16   | The AUDIO can not turn off when the LCD close.                     | The EC can not control amplifier shutdown  |      | 28    | EC_MUTE# connect to amplifier shutdown pin                                                                                                                                                                                  |        |       |
| 17   | Video-Engine function abnormal                                     | The EMVDCLK waveform break                 |      | 35,47 | Add R967,R968,R969,R970,R971 to smooth EMVDCLK waveform                                                                                                                                                                     |        |       |
| 18   | USB2.0 fail (0.4-->0.5)                                            | ESD DIODE                                  |      | 16    | Change D1,D5,D23,D24 package                                                                                                                                                                                                |        |       |
| 19   | AW172A power sequence fail (0.4-->0.5)                             | +2.5VS too fast (0.4-->0.5)                |      | 39    | Add one power regulator                                                                                                                                                                                                     |        |       |
| 20   |                                                                    | PJP1,JSPK1 packake change(0.4-->0.5)       |      | 20,48 | PJP1,JSPK1 SMD-->DIP(0.4-->0.5)                                                                                                                                                                                             |        |       |
| 21   | Iprove voltage drop(0.4-->0.5)                                     | Iprove component DCR(0.4-->0.5)            |      | 44    | change L22,L12,L11 package from 0603 to 0805(0.4-->0.5)                                                                                                                                                                     |        |       |
| 22   |                                                                    | Improve Lan test(0.4-->0.5)                |      | 23    | Add L78,L79 0805(0.4-->0.5)                                                                                                                                                                                                 |        |       |

| Item | Fixed Issue | Reason for change                                             | Rev. | PG# | Modify List                 | B.Ver# | Phase |
|------|-------------|---------------------------------------------------------------|------|-----|-----------------------------|--------|-------|
| 1    |             | Add two resistors to HSYNC,VSYNC                              |      | 16  | Add R1004,R1005,R1006,R1007 |        |       |
| 2    |             | Add resistors from EM8475_DAC_PDN to MUTE for noise resume S4 |      | 46  | Add R999,R1000              |        |       |
| 3    |             | Add FB to VCC-CRT-DAC & VSS-CRT-DAC                           |      | 11  | Add L80,L81                 |        |       |
| 4    |             | Power plan reservation for RRX6000                            |      | 29  | Add R1012,R1013             |        |       |
| 5    |             | Circuit reservation for TE7782                                |      | 41  | Add R1009,R1010             |        |       |
| 6    |             | Improve 2.5VS                                                 |      | 26  | Add C966,C967               |        |       |
| 7    |             | Improve EMVDCLK Layout                                        |      | 26  | Delete C954                 |        |       |
| 8    |             | EC pin 90 connect to ODD_ACT# (optional)                      |      | 30  | Add R1014                   |        |       |
| 9    |             |                                                               |      |     |                             |        |       |
| 10   |             |                                                               |      |     |                             |        |       |
| 11   |             |                                                               |      |     |                             |        |       |
| 12   |             |                                                               |      |     |                             |        |       |
| 13   |             |                                                               |      |     |                             |        |       |
| 14   |             |                                                               |      |     |                             |        |       |
| 15   |             |                                                               |      |     |                             |        |       |
| 16   |             |                                                               |      |     |                             |        |       |
| 17   |             |                                                               |      |     |                             |        |       |
| 18   |             |                                                               |      |     |                             |        |       |
| 19   |             |                                                               |      |     |                             |        |       |
| 20   |             |                                                               |      |     |                             |        |       |
| 21   |             |                                                               |      |     |                             |        |       |
| 22   |             |                                                               |      |     |                             |        |       |