



# Compal Confidential

## ISKAE LA-3661P Schematics Document

Intel Yonah/Merom with 945GM/943GML/940GML+ DDRII + ICH7M

2006-12-22

REV: 0.1

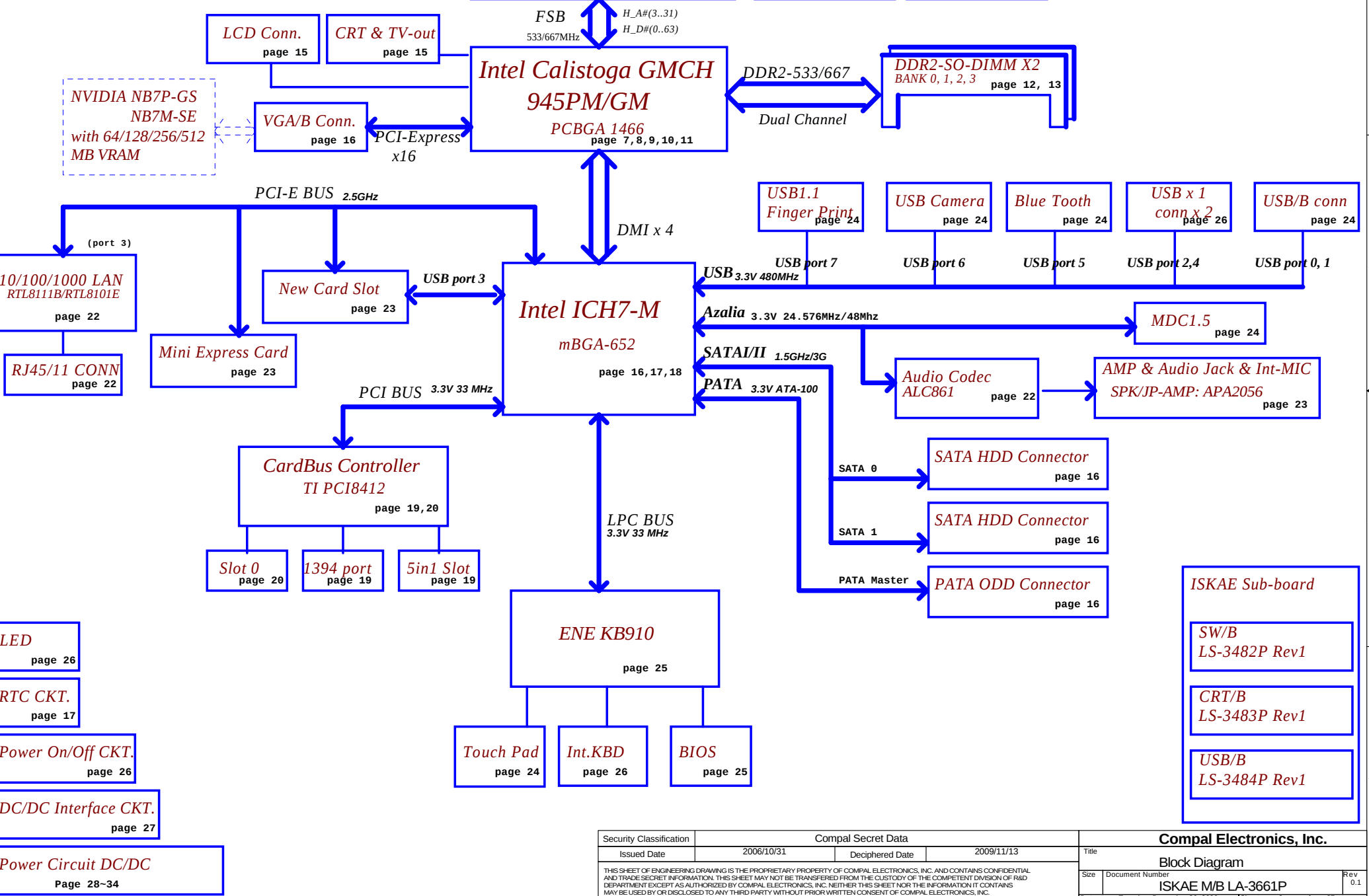
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                    |            |                                  |                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------------|------------|----------------------------------|-----------------|
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |            | Compal Secret Data |            | Compal Electronics, Inc.         |                 |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                    |            | ISKAE M/B LA-3661P               |                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                    |            | Date: Tuesday, December 26, 2006 | Rev 0.1         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                    |            | Sheet 1                          | of 37           |

# Compal confidential

Model : ISKAE

File Name : LA-3661P

## NAPA Platform



|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                    |                 |            |                          |                            |               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-----------------|------------|--------------------------|----------------------------|---------------|
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       | Compal Secret Data |                 |            | Compal Electronics, Inc. |                            |               |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                    |                 |            | Date:                    | Tuesday, December 26, 2006 | Sheet 2 of 37 |

Voltage Rails

| Power Plane | Description                                 | S1 | S3  | S5  |
|-------------|---------------------------------------------|----|-----|-----|
| VIN         | Adapter power supply (19V)                  | NA | NA  | NA  |
| B+          | AC or battery power rail for power circuit. | NA | NA  | NA  |
| +CPU_CORE   | Core voltage for CPU                        | ON | OFF | OFF |
| +0.9VS      | 0.9V switched power rail for DDR terminator | ON | OFF | OFF |
| +VCCP       | 1.05V switched power rail                   | ON | OFF | OFF |
| +1.5VS      | 1.5V switched power rail                    | ON | OFF | OFF |
| +1.8V       | 1.8V power rail for DDR                     | ON | ON  | OFF |
| +1.8VS      | 1.8V switched power rail                    | ON | OFF | OFF |
| +2.5VS      | 2.5V switched power rail                    | 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 |
| +VSB        | +VSB always on power rail                   | ON | ON  | ON* |
| +RTCVCC     | 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 |
| CARD BUS | D4            | AD20    | 2         | A,B,C |
| 5IN1     | D4            | AD20    | 2         | A,B,C |

KB910 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 |     |                   |

ICH7-M SM Bus address

| DEVICE                 | HEX | ADDRESS         |
|------------------------|-----|-----------------|
| DDR SO-DIMM 0          | A0  | 1 0 1 0 0 0 0   |
| DDR SO-DIMM 1          | A4  | 1 0 1 0 0 1 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       | 100K +/- 5% |             |             |             |
| Board ID | Rb          | VAD_BID min | VAD_BID typ | VAD_BID max |
| 0        | 0           | 0 V         | 0 V         | 0 V         |
| 1        | 8.2K +/- 5% | 0.216 V     | 0.250 V     | 0.289 V     |
| 2        | 18K +/- 5%  | 0.436 V     | 0.503 V     | 0.538 V     |
| 3        | 33K +/- 5%  | 0.712 V     | 0.819 V     | 0.875 V     |
| 4        | 56K +/- 5%  | 1.036 V     | 1.185 V     | 1.264 V     |
| 5        | 100K +/- 5% | 1.453 V     | 1.650 V     | 1.759 V     |
| 6        | 200K +/- 5% | 1.935 V     | 2.200 V     | 2.341 V     |
| 7        | NC          | 2.500 V     | 3.300 V     | 3.300 V     |

BOARD ID Table

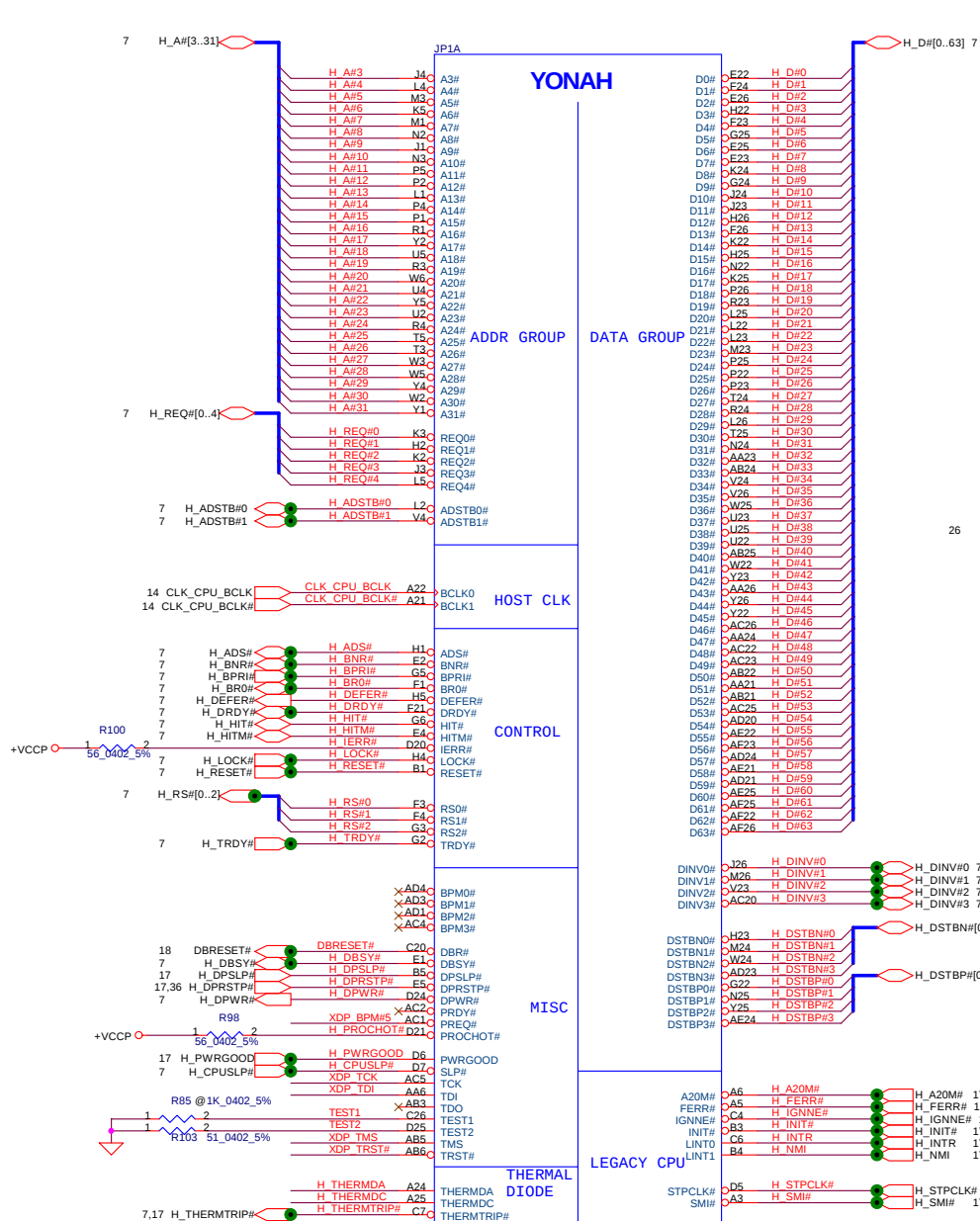
| Board ID | PCB Revision |
|----------|--------------|
| 0        | 0.1          |
| 1        |              |
| 2        |              |
| 3        |              |
| 4        |              |
| 5        |              |
| 6        |              |
| 7        |              |

SKU ID Table

| SKU ID | SKU        |
|--------|------------|
| 0      | 10 (10E)   |
| 1      | 10C        |
| 2      | 10G        |
| 3      | 10GC       |
| 4      | 10J (10EJ) |
| 5      | 10CJ       |
| 6      | 10GJ       |
| 7      | 10GCJ      |

BTO Option Table

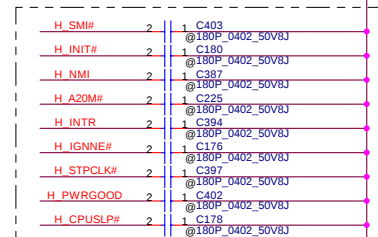
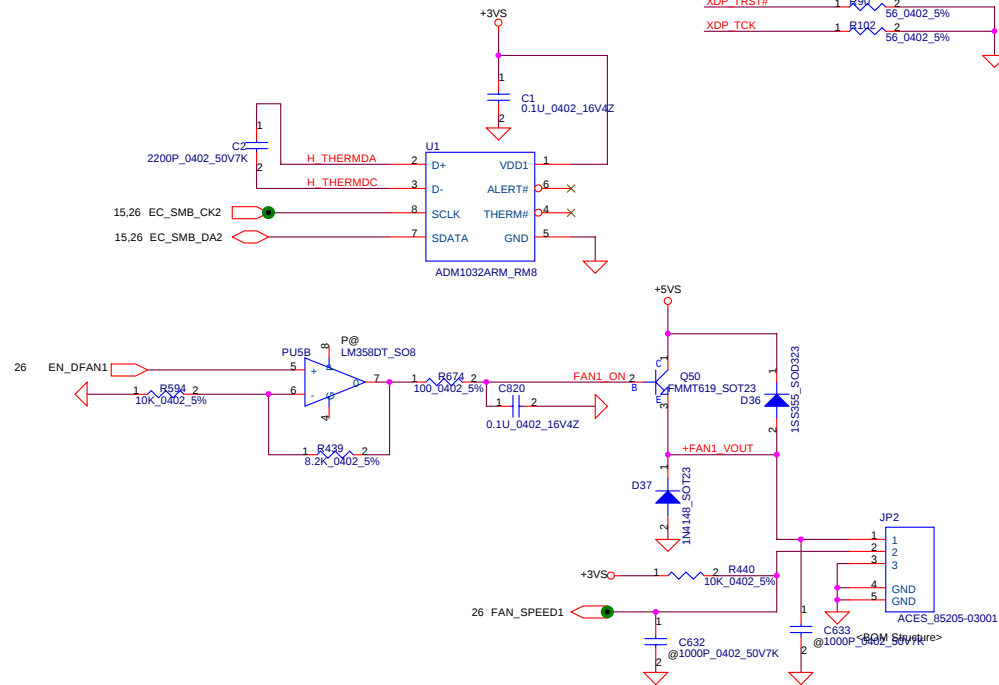
| BTO Item     | BOM Structure   |
|--------------|-----------------|
| NEW CARD     | NEWCARD@        |
| LAN          | 100M@<br>1000M@ |
| WLAN         | KS@             |
| NB           | GM@             |
| BT           | BT@             |
| MIC          | MIC@            |
| CIR          | CIR@            |
| FINGER PRINT | FP@             |
| 5IN1         | 5IN1@           |
| CAMERA       | CAMERA@         |
| PCMCIA       | PCMCIA@         |
| MDC          | MDC@            |



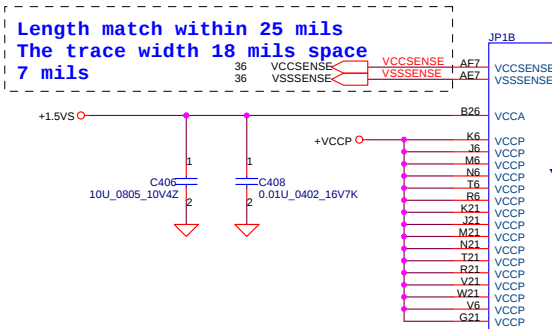
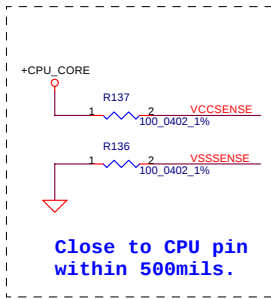
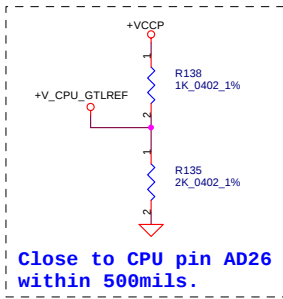
H\_THERMDA, H\_THERMDC routing together.  
Trace width / Spacing = 10 / 10 mil

FOX\_P247903-2741-42\_YONAH

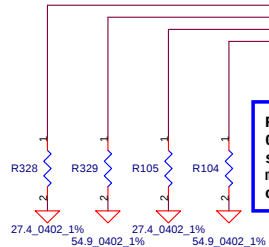
## Thermal Sensor ADM1032ARM



|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |                 |                                 |  |                               |                            |  |       |         |     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------|-----------------|---------------------------------|--|-------------------------------|----------------------------|--|-------|---------|-----|
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |                 |                                 |  | Size                          | Document Number            |  |       |         | Rev |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |                 |                                 |  |                               |                            |  |       |         |     |



| CPU_BSEL | CPU_BSEL2 | CPU_BSEL1 | CPU_BSEL0 |
|----------|-----------|-----------|-----------|
| 133      | 0         | 0         | 1         |
| 166      | 0         | 1         | 1         |

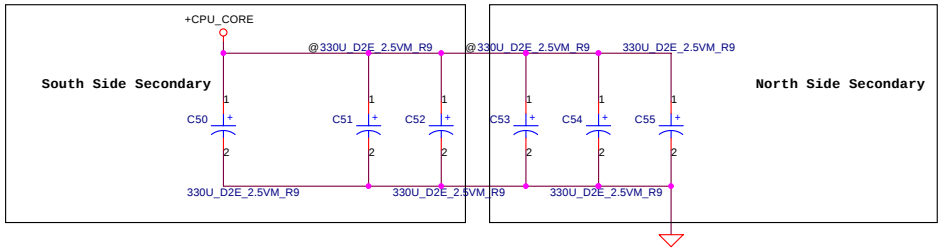
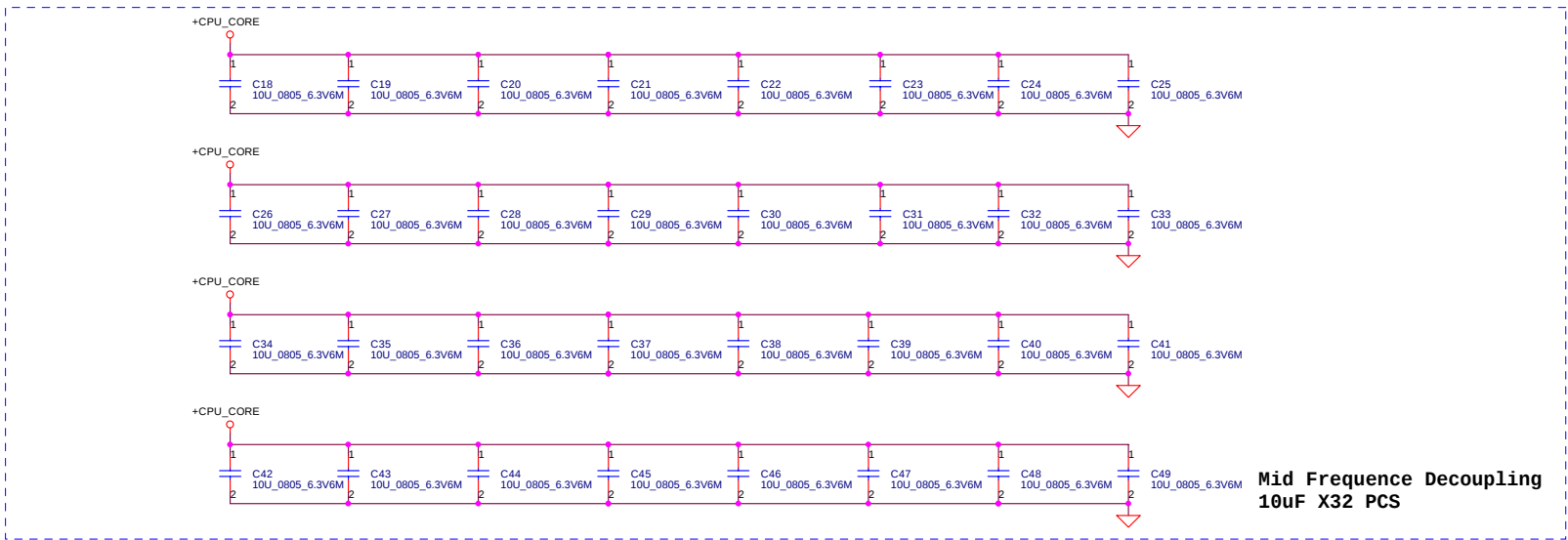


Resistor placed within 0.5" of CPU pin. Trace should be at least 25 mils away from any other toggling signal.

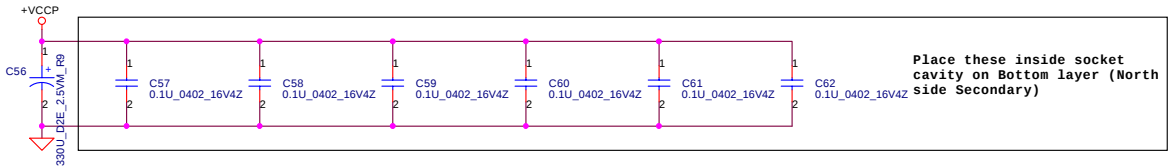
YONAH

YONAH

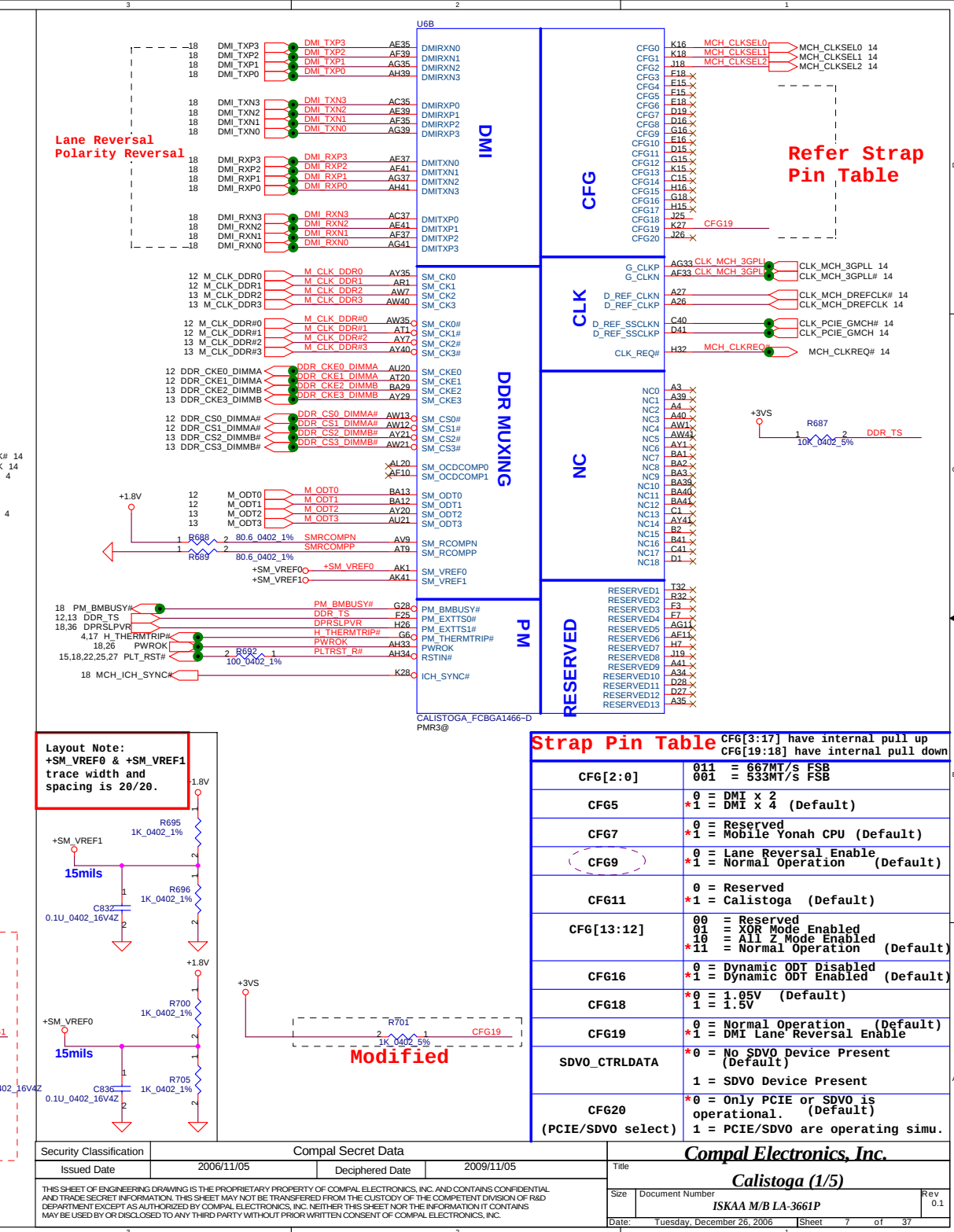
POWER, GROUND

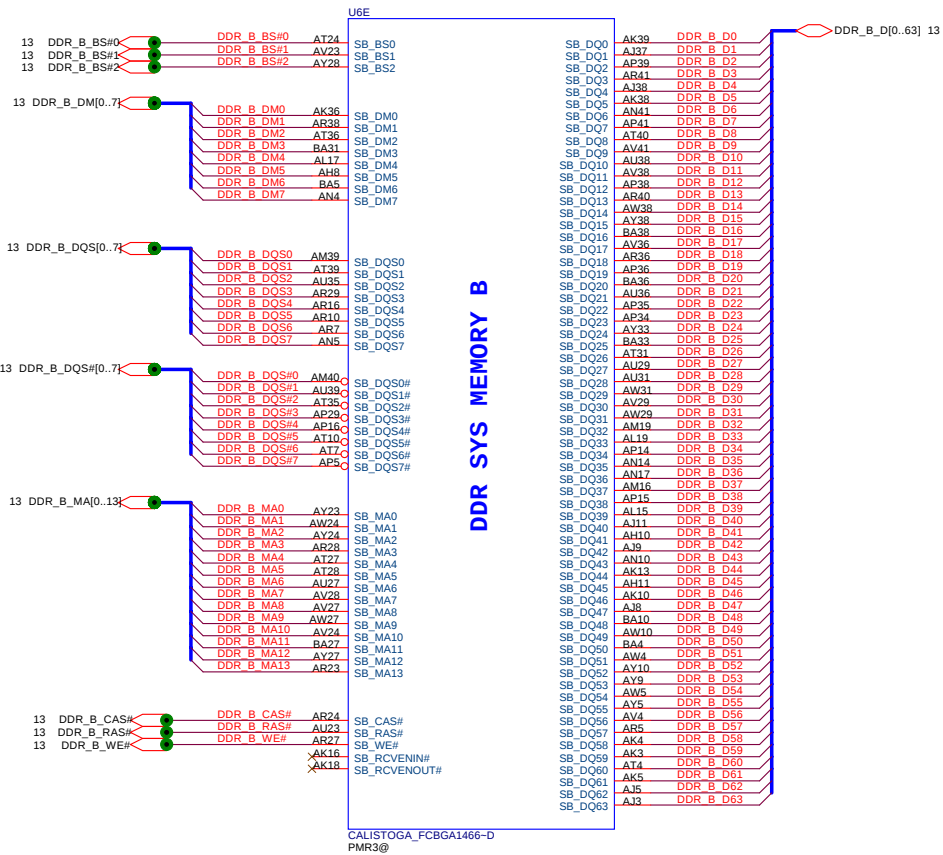
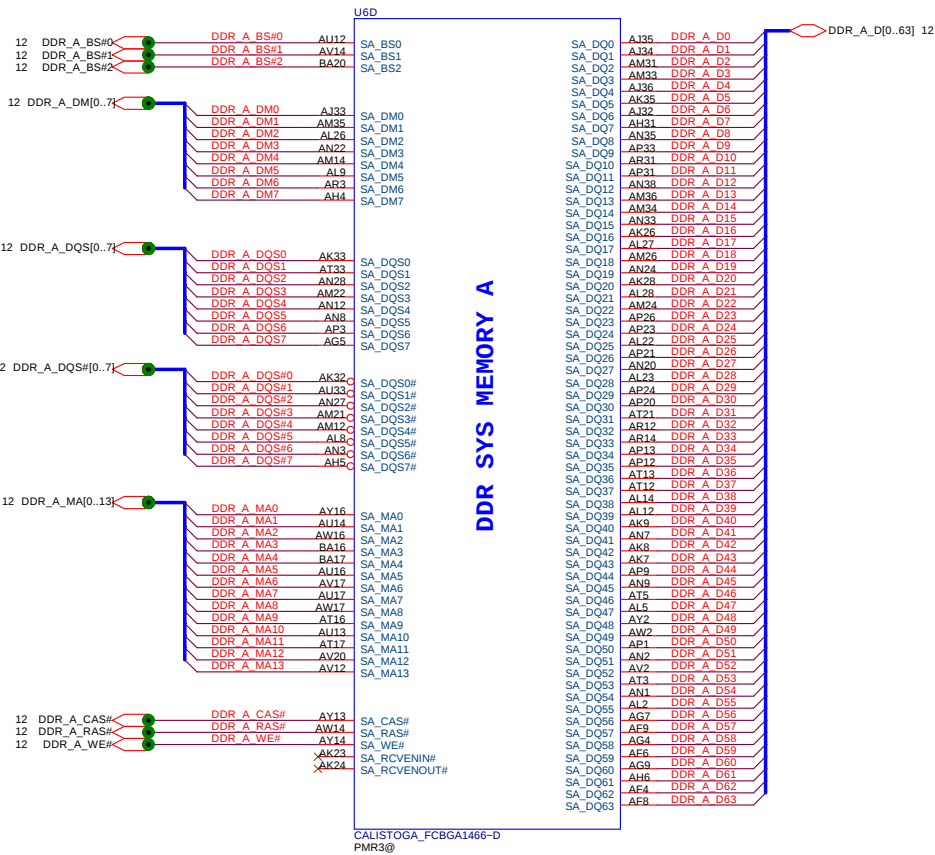


ESR <= 1.5m ohm  
Capacitor > 1980uF  
330uF ESR 9m ohm X 6 PCS

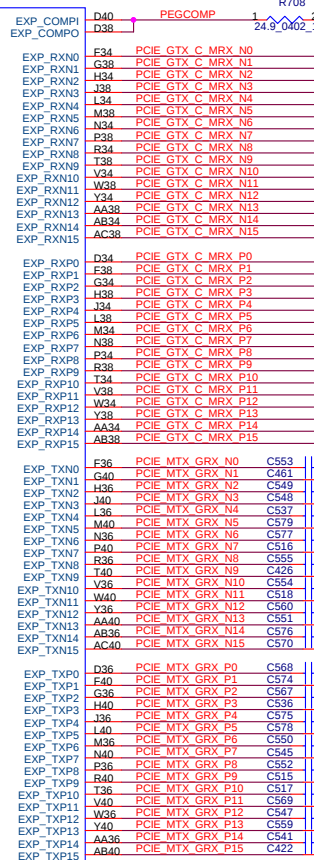
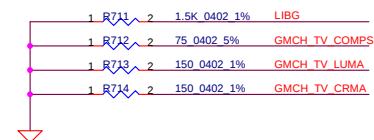


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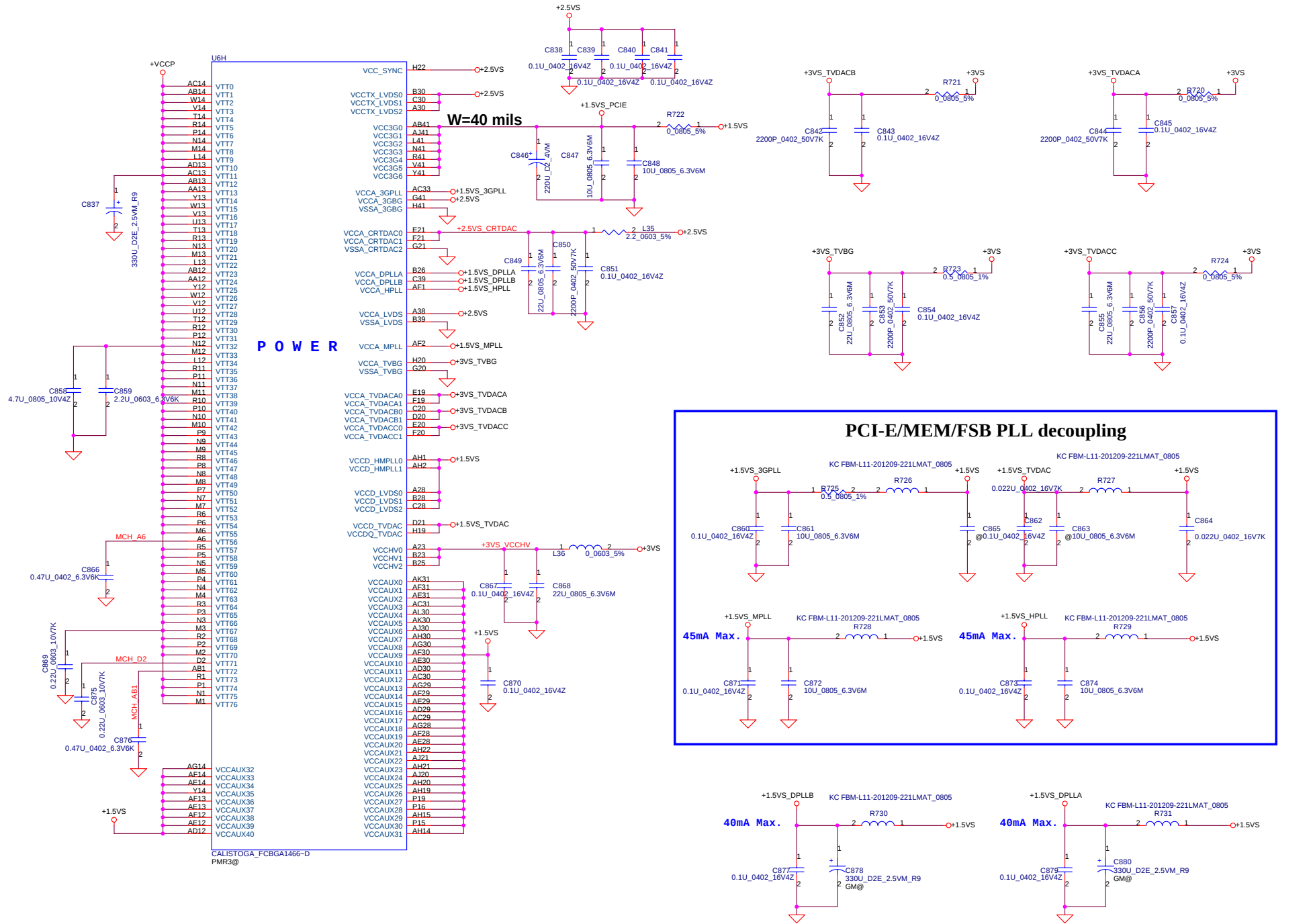




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|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                    |                 |            |                                                                      |                 |         |
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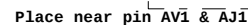
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                 |            |                    |  | Sheet              | 10 of 37                   |

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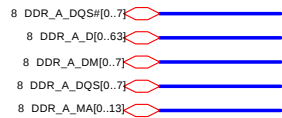
**Calistoga (4/5)**

Rev 0.1

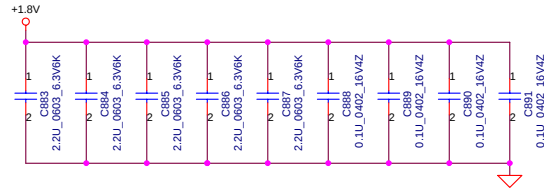
**GND**



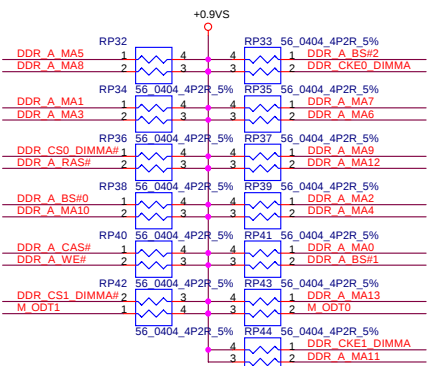
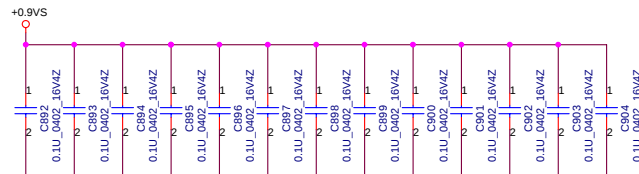
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                    |                 |            | Date:                           | Tuesday, December 26, 2006 | Sheet | 11 of 37 |



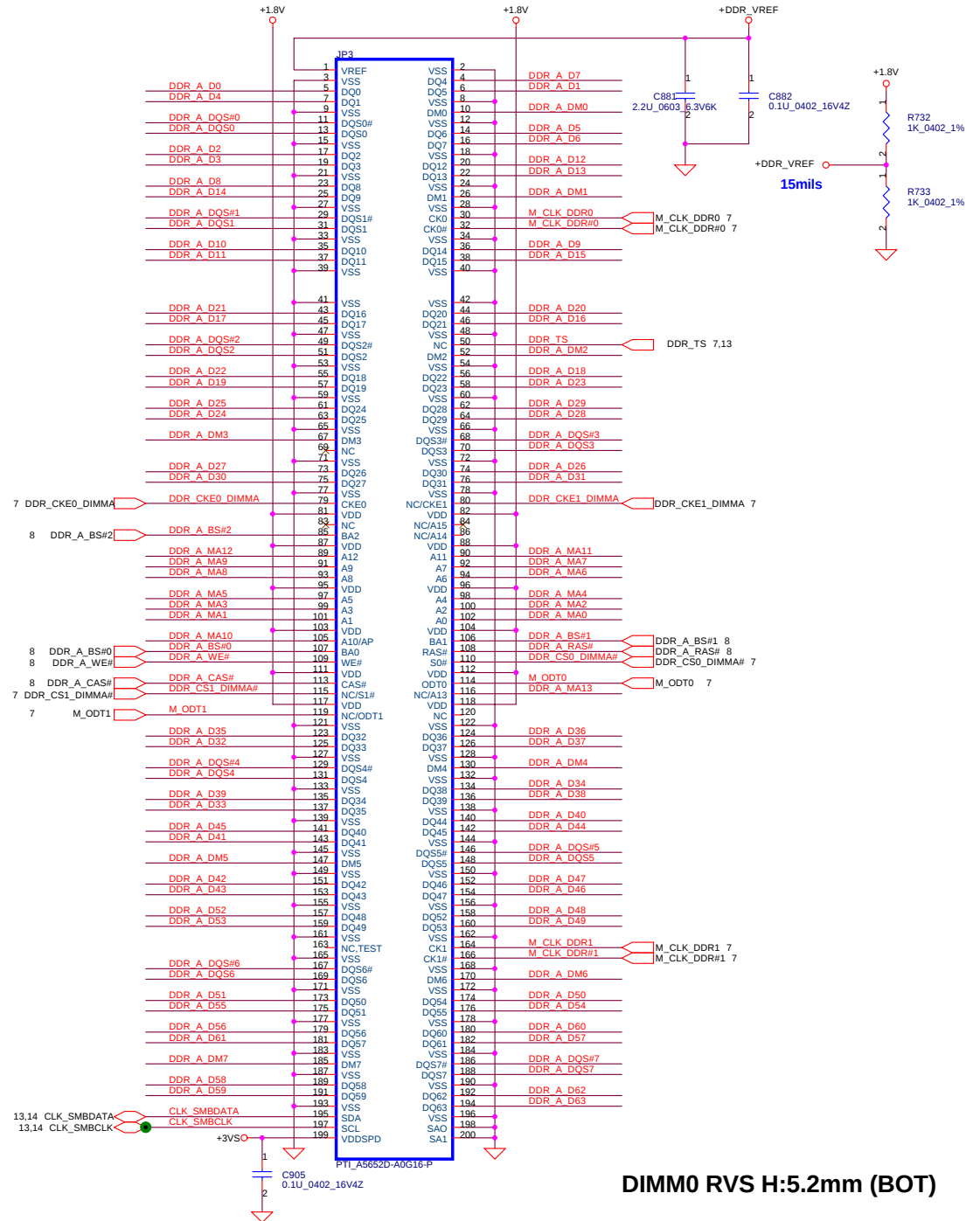
Layout Note:  
Place near JP27



Layout Note:  
Place one cap close to every 2 pullup  
resistors terminated to +0.9VS



Layout Note:  
Place these resistor  
closely JP27,all  
trace length Max=1.5"

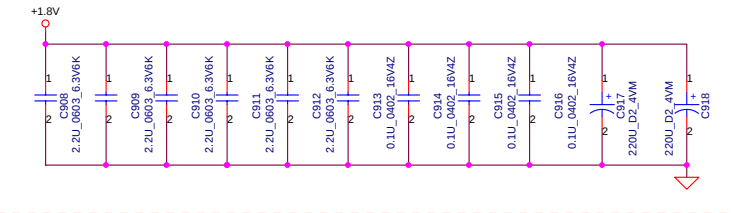


DIMM0 RVS H:5.2mm (BOT)

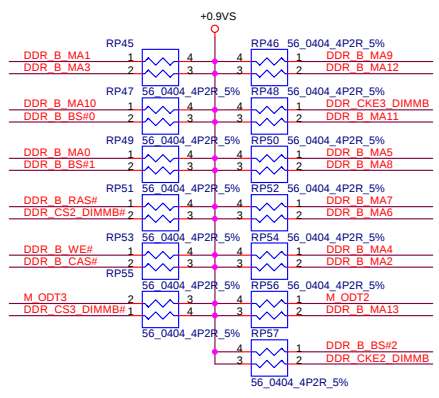
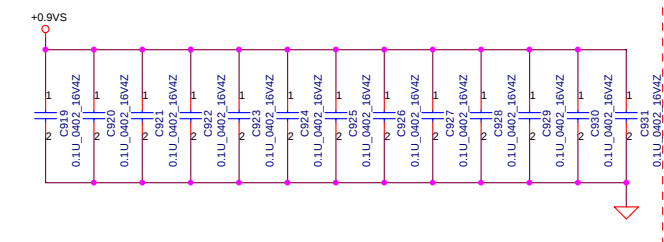
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8 DDR\_B\_DQS#0[0..7]   
 8 DDR\_B\_D[0..63]   
 8 DDR\_B\_DM[0..7]   
 8 DDR\_B\_DQS[0..7]   
 8 DDR\_B\_MA[0..13] 

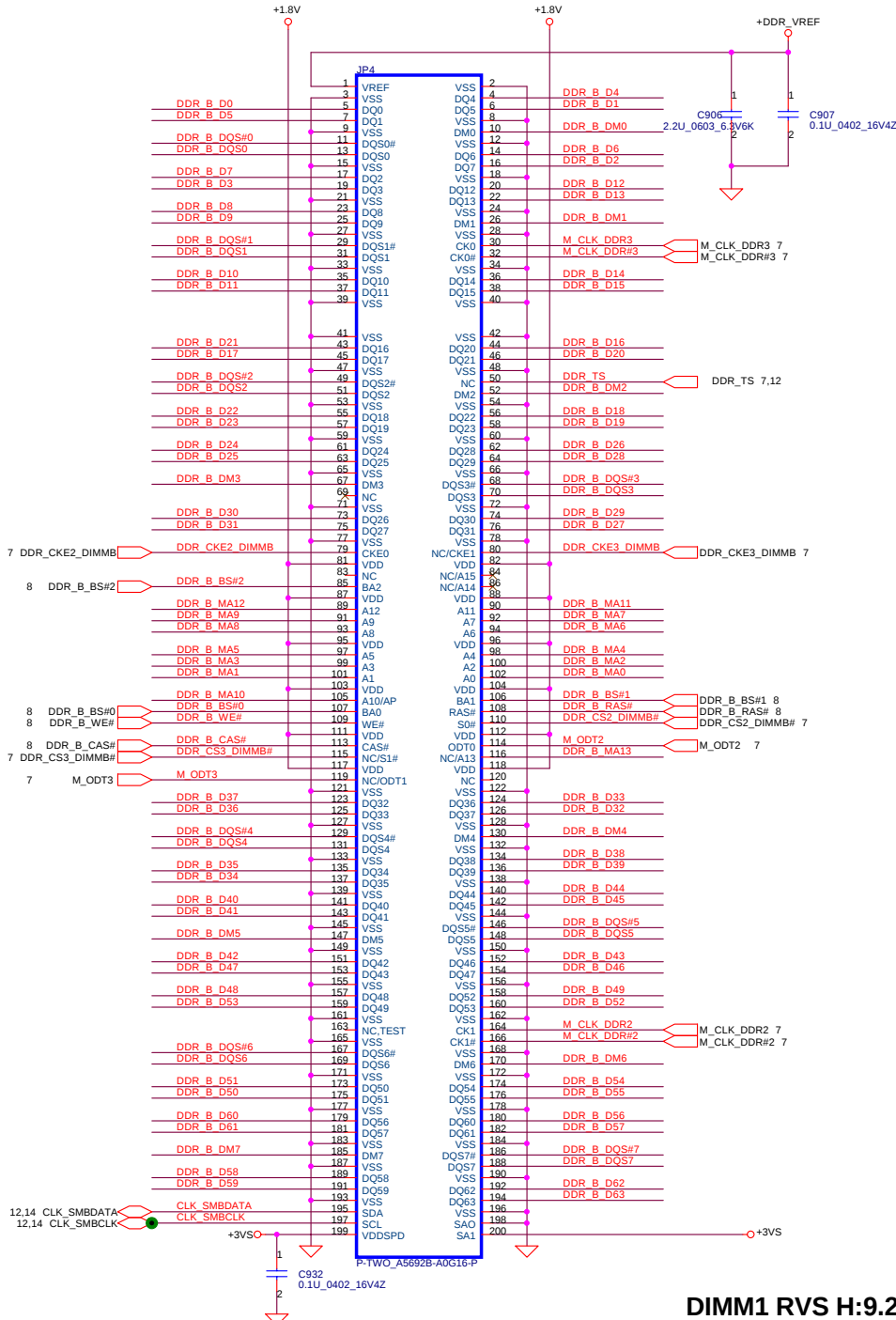
**Layout Note:**  
Place near JP26



**Layout Note:**  
Place one cap close to every 2 pullup resistors terminated to +0.9VS



**Layout Note:**  
Place these resistor closely JP26, all trace length Max=1.5"



**DIMM1 RVS H:9.2mm (BOT)**

|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |                 |                                 |                           |                            |                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------|-----------------|---------------------------------|---------------------------|----------------------------|----------------|
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |  | Compal Secret Data |                 | <b>Compal Electronics, Inc.</b> |                           |                            |                |
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  | 2006/11/05         | Deciphered Date | 2009/11/05                      | Title                     |                            |                |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |                 |                                 | Size                      | Document Number            | Rev            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |                 |                                 |                           | ISKAA M/B LA-3661P         | 0.1            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |                 |                                 | Date:                     | Tuesday, December 26, 2006 | Sheet 13 of 37 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |                 |                                 |                           |                            |                |

| FSLC    | FSLB    | FSLA    | CPU | SRC | PCI  |
|---------|---------|---------|-----|-----|------|
| CLKSEL2 | CLKSEL1 | CLKSEL0 | MHZ | MHZ | MHZ  |
| 0       | 0       | 1       | 133 | 100 | 33.3 |
| 0       | 1       | 1       | 166 | 100 | 33.3 |

## FSA

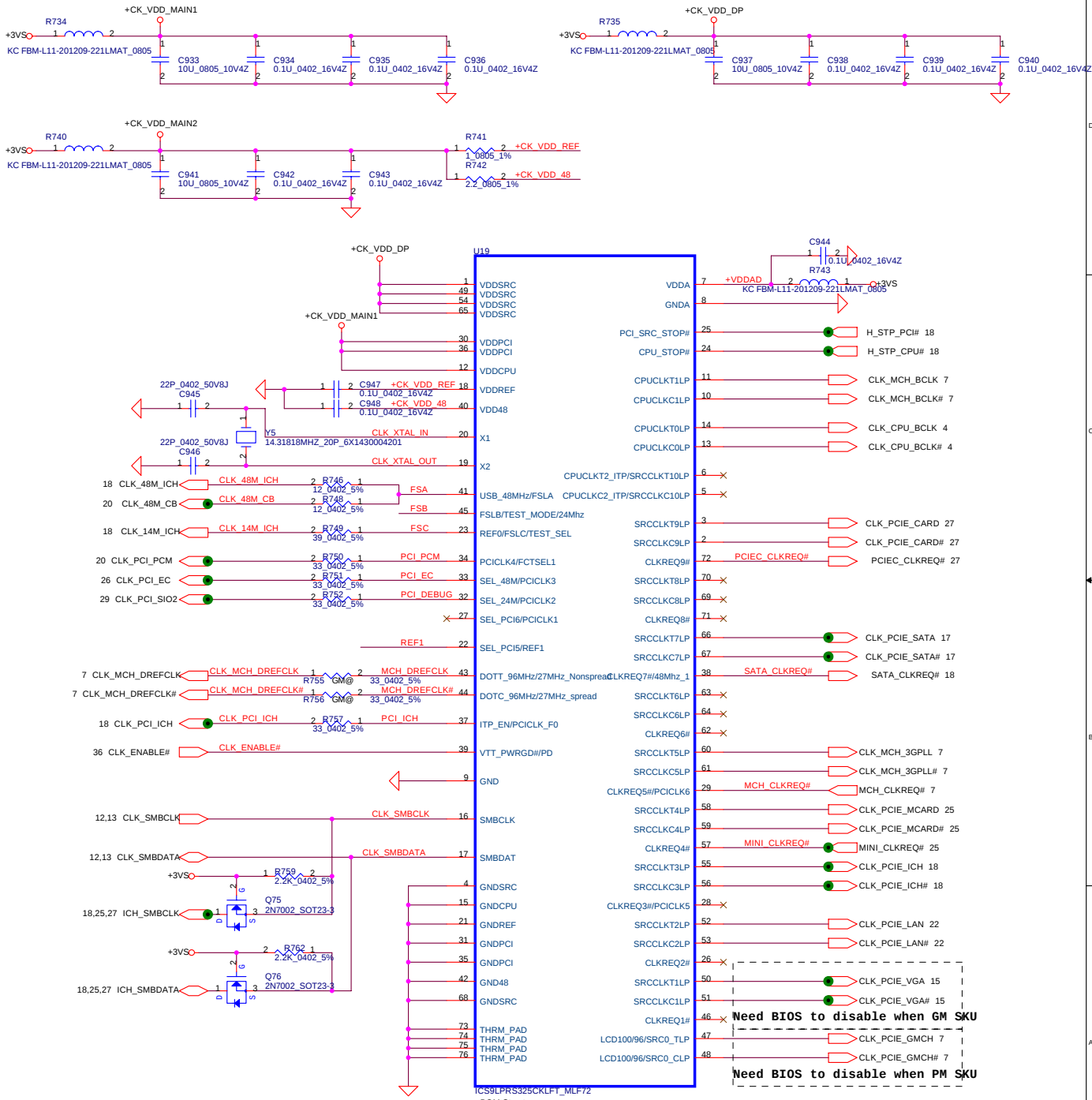
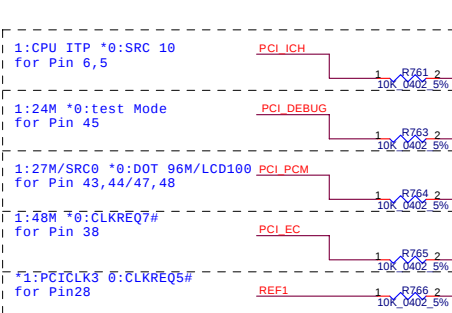
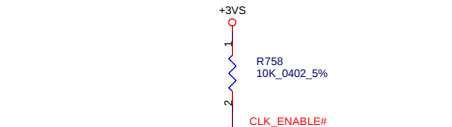
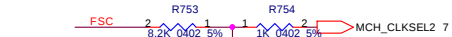


## FSB



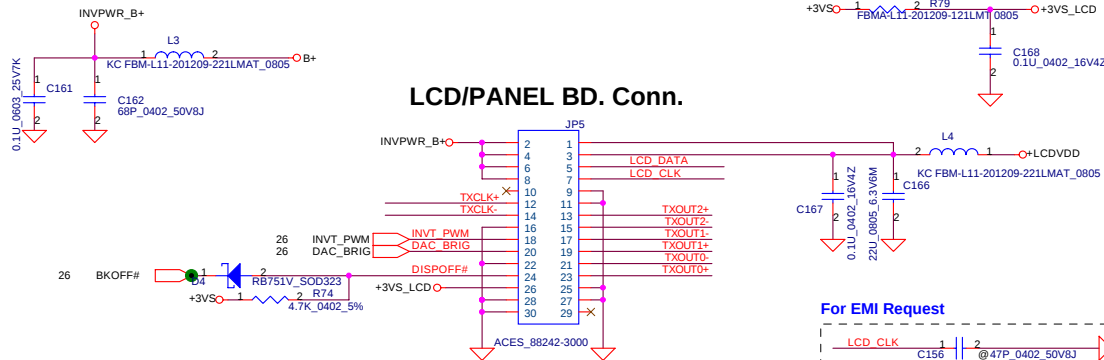
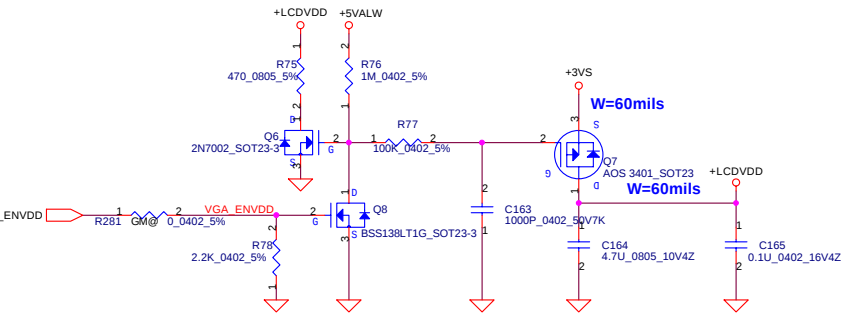
## FSC

(Fixed at low)

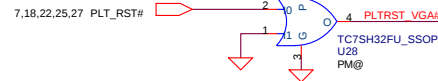
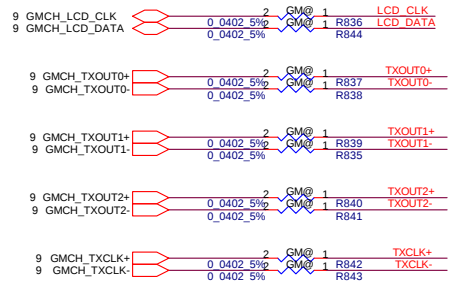


| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |  | Compal Secret Data |  |  | Title                       |  |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--------------------|--|--|-----------------------------|--|--|
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |  | 2006/11/05         |  |  | Clock generator             |  |  |
| Deciphered Date                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  | 2009/11/05         |  |  | ISKAA M/B LA-3661P          |  |  |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  | Sheet              |  |  | 14 of 37                    |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  | Rev                |  |  | 0.1                         |  |  |

## LCD POWER CIRCUIT

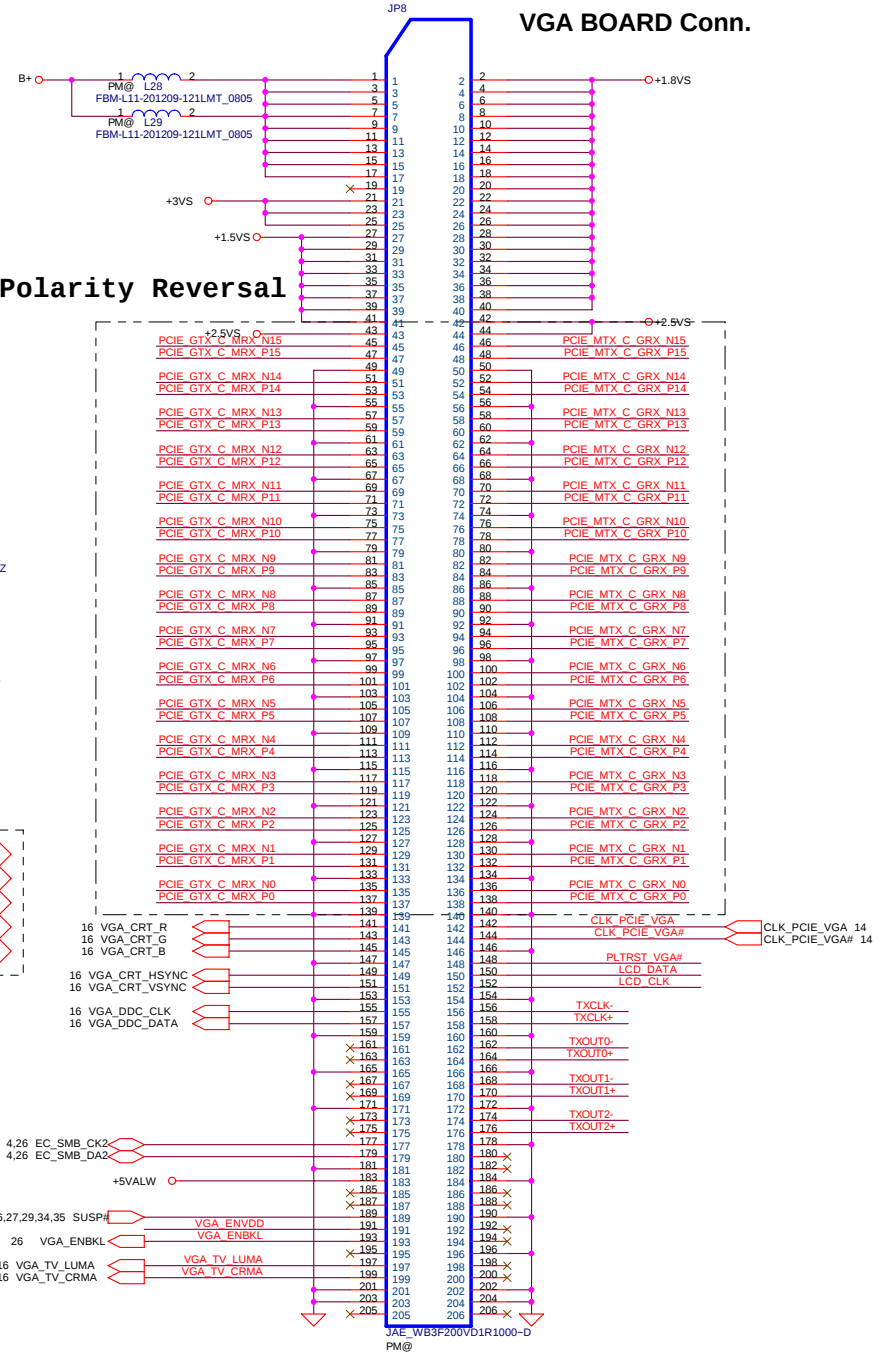


## ALL R CLOSE LVDS CONNECTOR



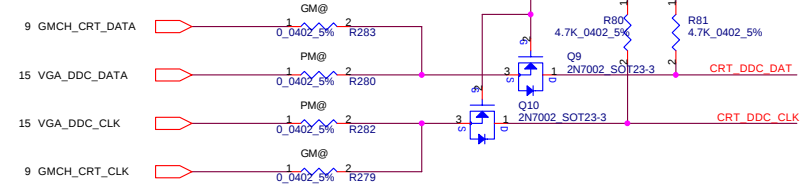
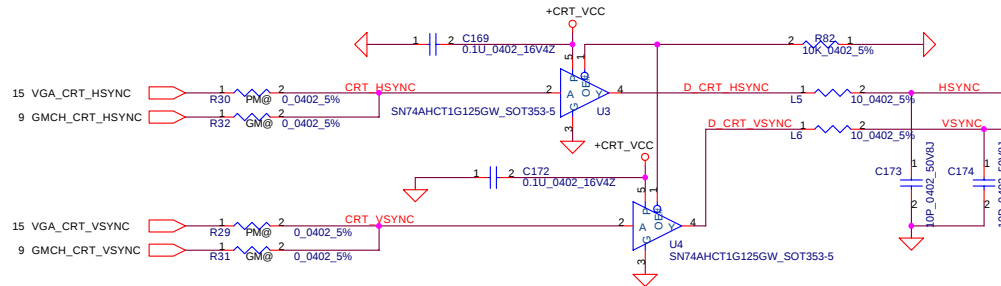
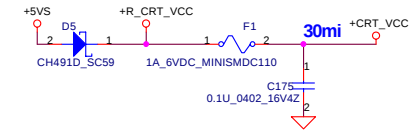
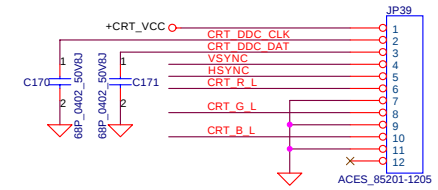
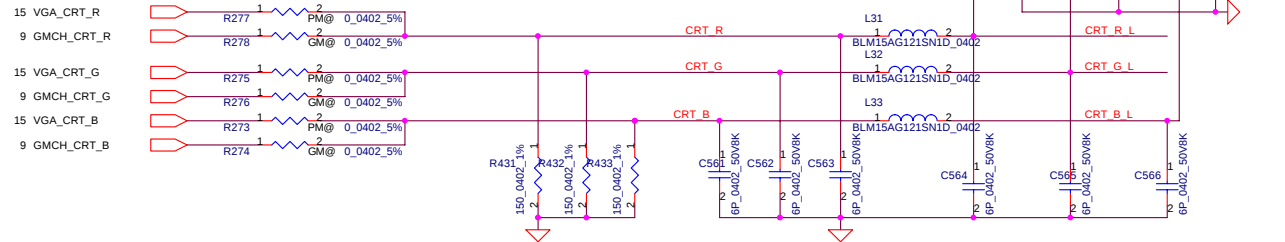
- 9 PCIE\_MTX\_C\_GRX\_N[0..15] PCIE\_MTX\_C\_GRX\_N[0..15]
- 9 PCIE\_MTX\_C\_GRX\_P[0..15] PCIE\_MTX\_C\_GRX\_P[0..15]
- 9 PCIE\_GTX\_C\_MRX\_N[0..15] PCIE\_GTX\_C\_MRX\_N[0..15]
- 9 PCIE\_GTX\_C\_MRX\_P[0..15] PCIE\_GTX\_C\_MRX\_P[0..15]

## Polarity Reversal

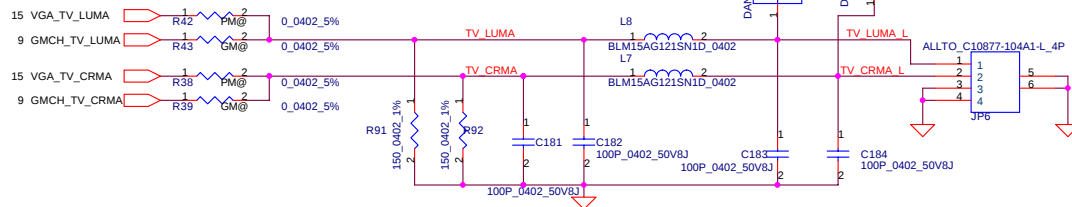


| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |  |  | Compal Secret Data          |  |  |  | Title      |  |  |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|-----------------------------|--|--|--|------------|--|--|--|
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |  |  | Deciphered Date             |  |  |  | 2006/08/05 |  |  |  |
| 2006/08/05                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  | 2007/08/05                  |  |  |  | VGA CONN   |  |  |  |
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| 2006/08/05                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  | 2007/08/05                  |  |  |  | LA - 3481P |  |  |  |
| Date                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |  | Thursday, December 28, 2006 |  |  |  | Sheet      |  |  |  |
| 15                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |  | 37                          |  |  |  | 1          |  |  |  |

# CRT CONNECTOR

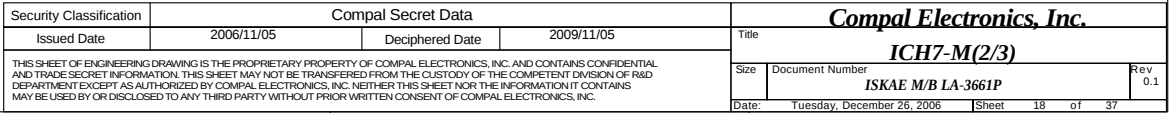


## TV-OUT Conn.

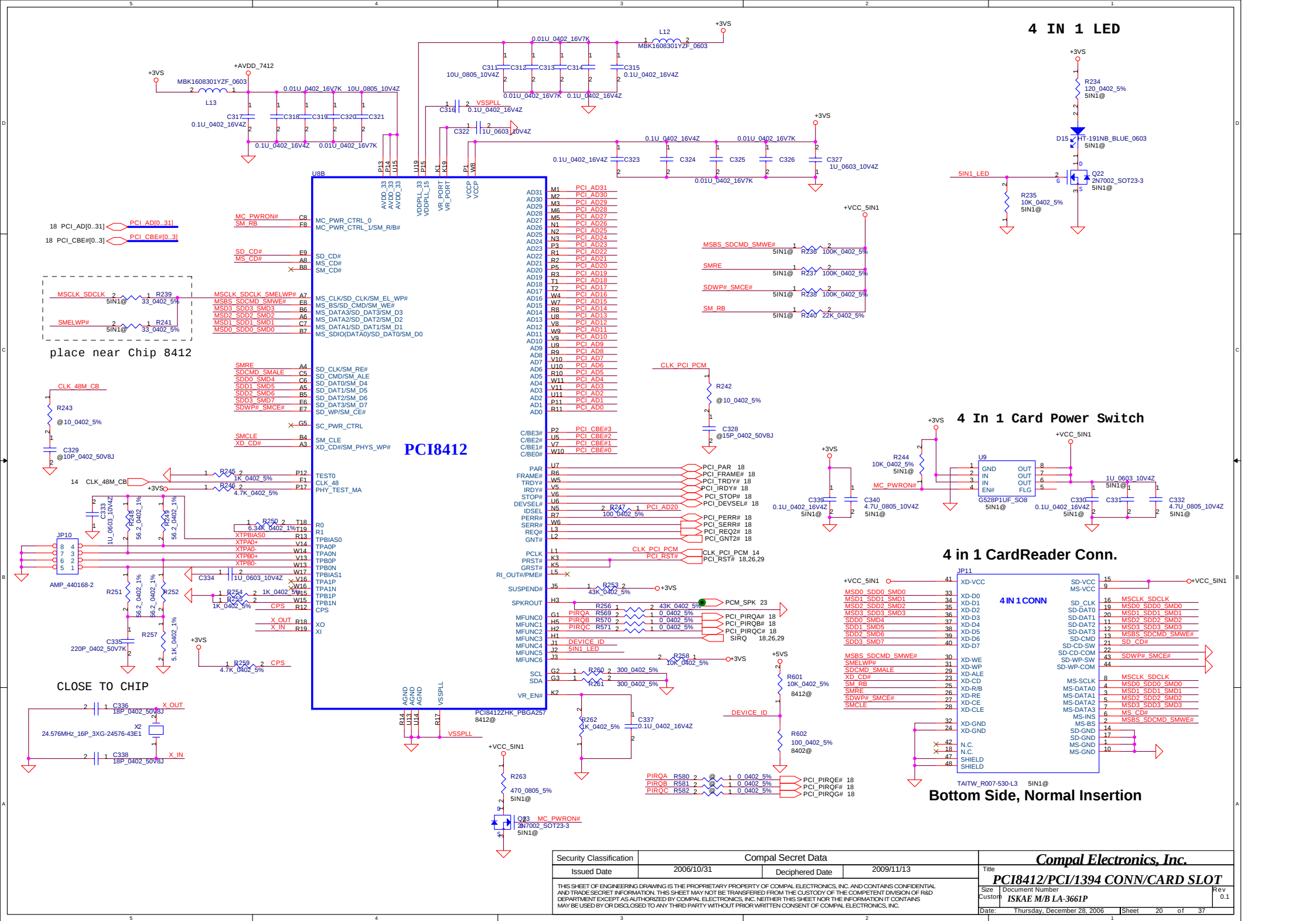


| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       | Compal Secret Data |                 |            | Compal Electronics, Inc. |                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-----------------|------------|--------------------------|-----------------|
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2006/10/31         | Deciphered Date | 2009/11/13 | Title                    |                 |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                    |                 |            | Rev                      |                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                    |                 |            | 0.1                      |                 |
| Date: Thursday, December 28, 2006                                                                                                                                                                                                                                                                                                                                                                                                                             |                    |                 |            | Sheet                    | 16 of 37        |

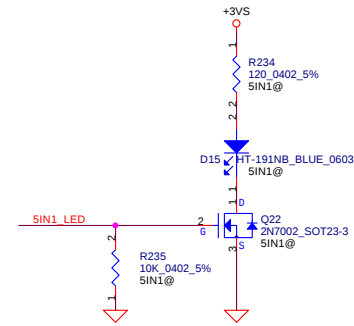




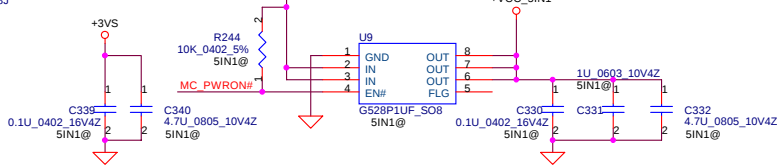




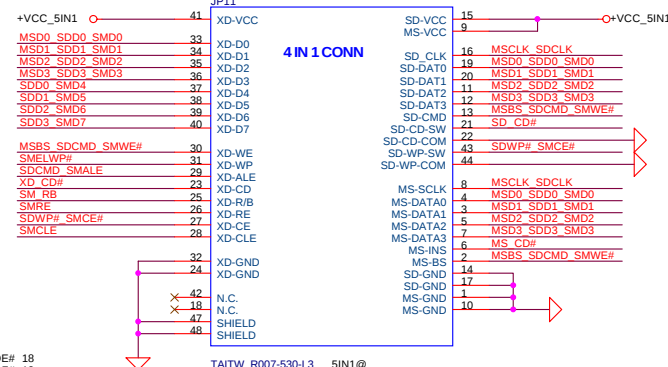
#### 4 IN 1 LED



#### 4 In 1 Card Power Switch



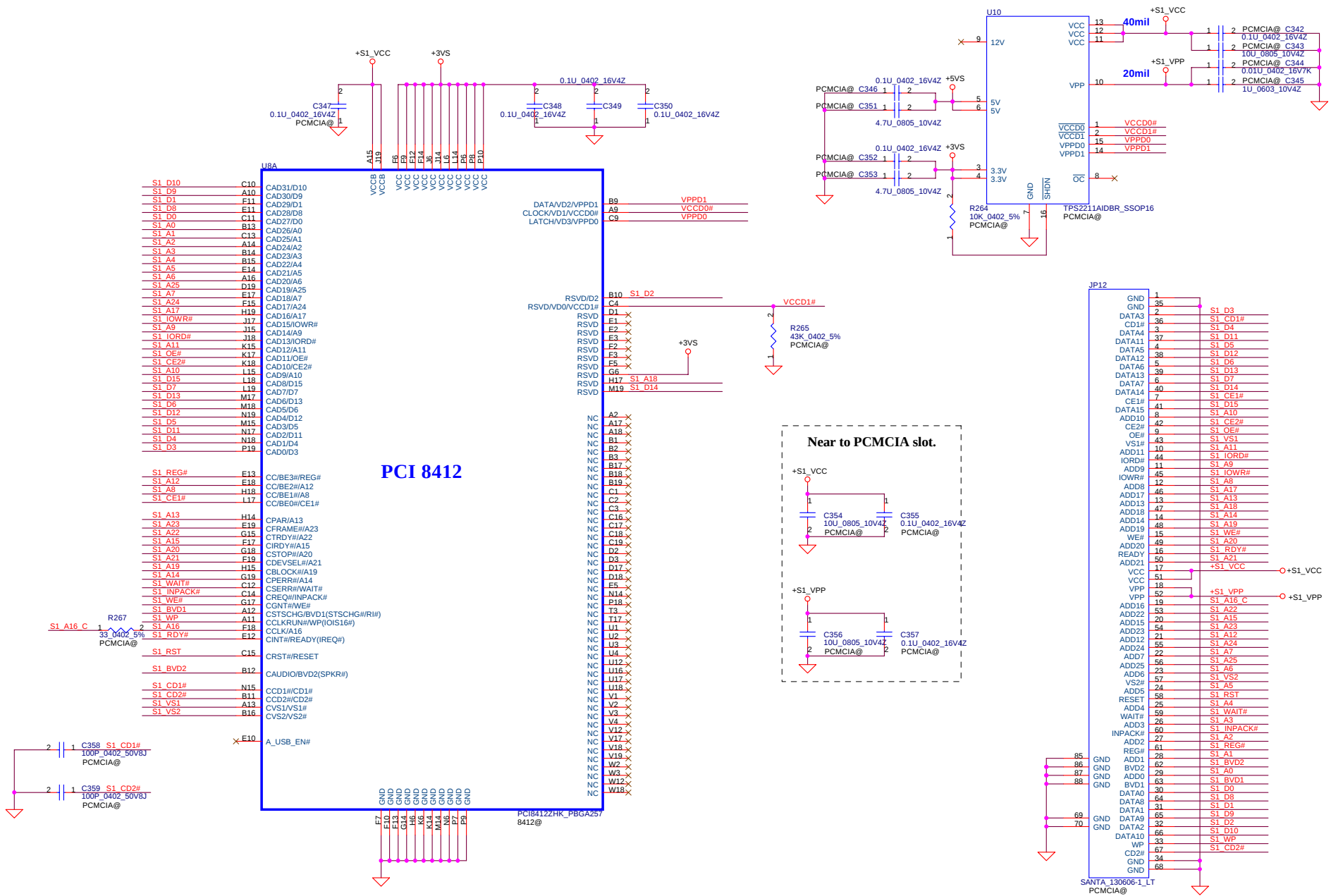
#### 4 in 1 CardReader Conn.



#### Bottom Side, Normal Insertion

| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |            | Compal Secret Data |            | Title                          |                                    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------------|------------|--------------------------------|------------------------------------|
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2006/10/31 | Deciphered Date    | 2009/11/13 | PCI8412/PCI1394 CONN/CARD SLOT |                                    |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                    |            | Date                           | Thursday, December 28, 2006        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                    |            | Sheet                          | 20 of 37                           |

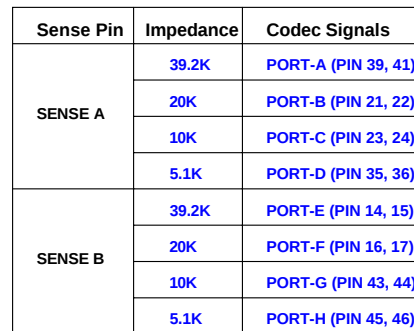
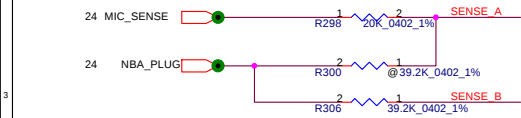
# CardBus Power Switch



| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |  |  | Compal Secret Data         |  |  |  | Title                                                        |  |  |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|----------------------------|--|--|--|--------------------------------------------------------------|--|--|--|
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |  |  | 2006/10/31                 |  |  |  | Deciphered Date                                              |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |  |                            |  |  |  | 2009/11/13                                                   |  |  |  |
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| Size                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |  | Document Number            |  |  |  | Rev                                                          |  |  |  |
| Custom                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |  |  | ISKA E M/B LA-3661P        |  |  |  | 0.1                                                          |  |  |  |
| Date:                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |  | Tuesday, December 26, 2006 |  |  |  | Sheet 21 of 37                                               |  |  |  |

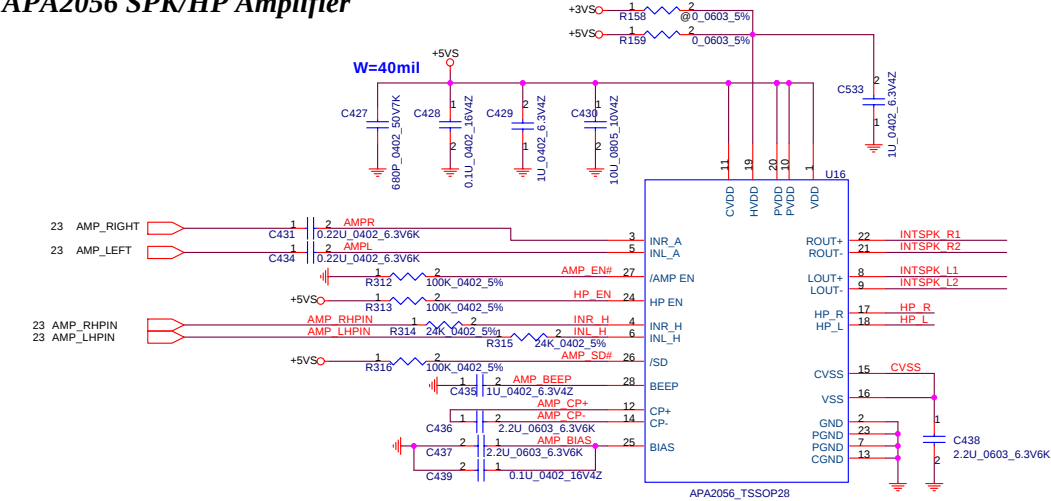


## +AVDD\_AC97      +3VS\_DVDD

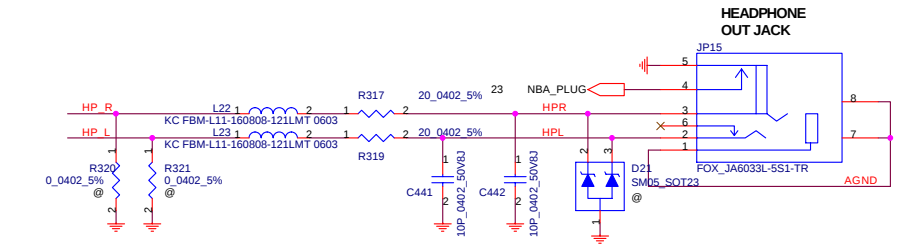
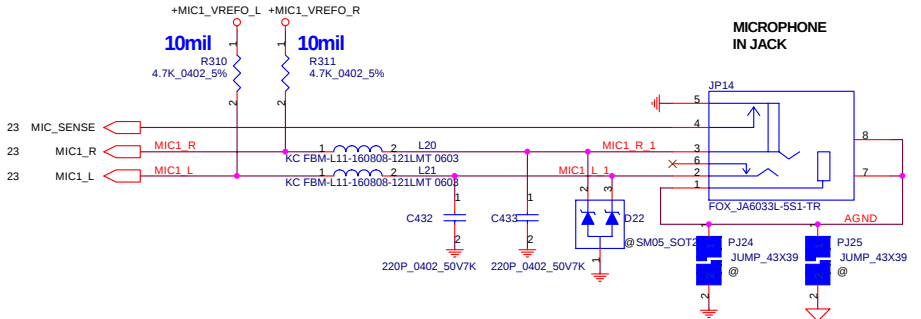
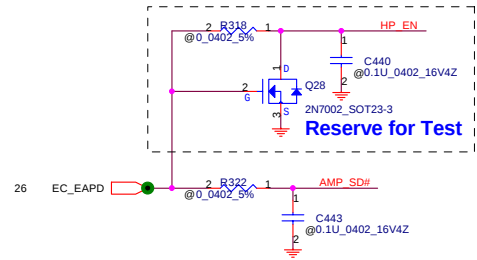


|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |                 |                          |            |  |       |                       |                    |                             |  |       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------|-----------------|--------------------------|------------|--|-------|-----------------------|--------------------|-----------------------------|--|-------|
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |  | Compal Secret Data |                 | Compal Electronics, Inc. |            |  |       |                       |                    |                             |  |       |
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  | 2006/10/31         | Deciphered Date |                          | 2009/11/13 |  | Title | HD Audio Codec ALC268 |                    |                             |  |       |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |                 |                          |            |  |       | Custodian             | ISKAE M/B LA-3661P |                             |  | 0.1   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |                 |                          |            |  |       | Date:                 |                    | Thursday, December 28, 2006 |  | Sheet |

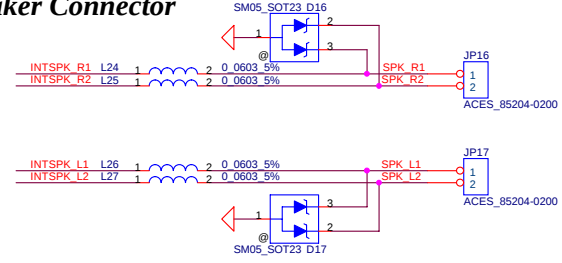
APA2056 SPK/HP Amplifier



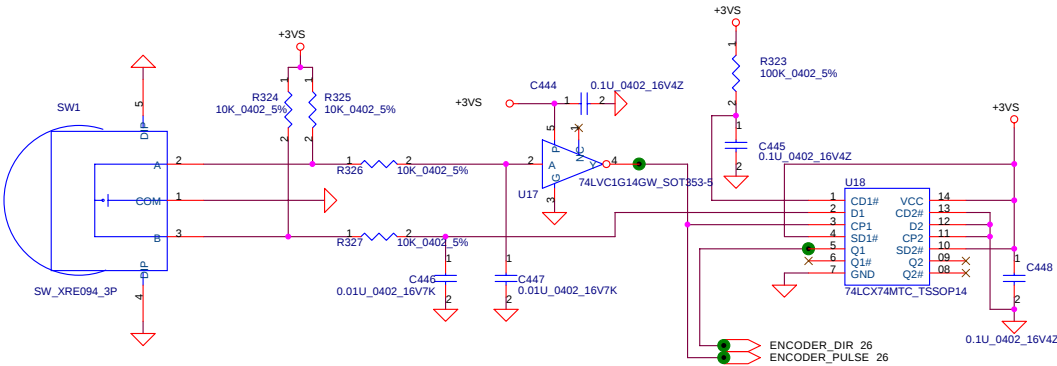
IN\_A Gain = 10dB (Internal Speaker)  
IN\_H Gain = 0dB (Headphone)



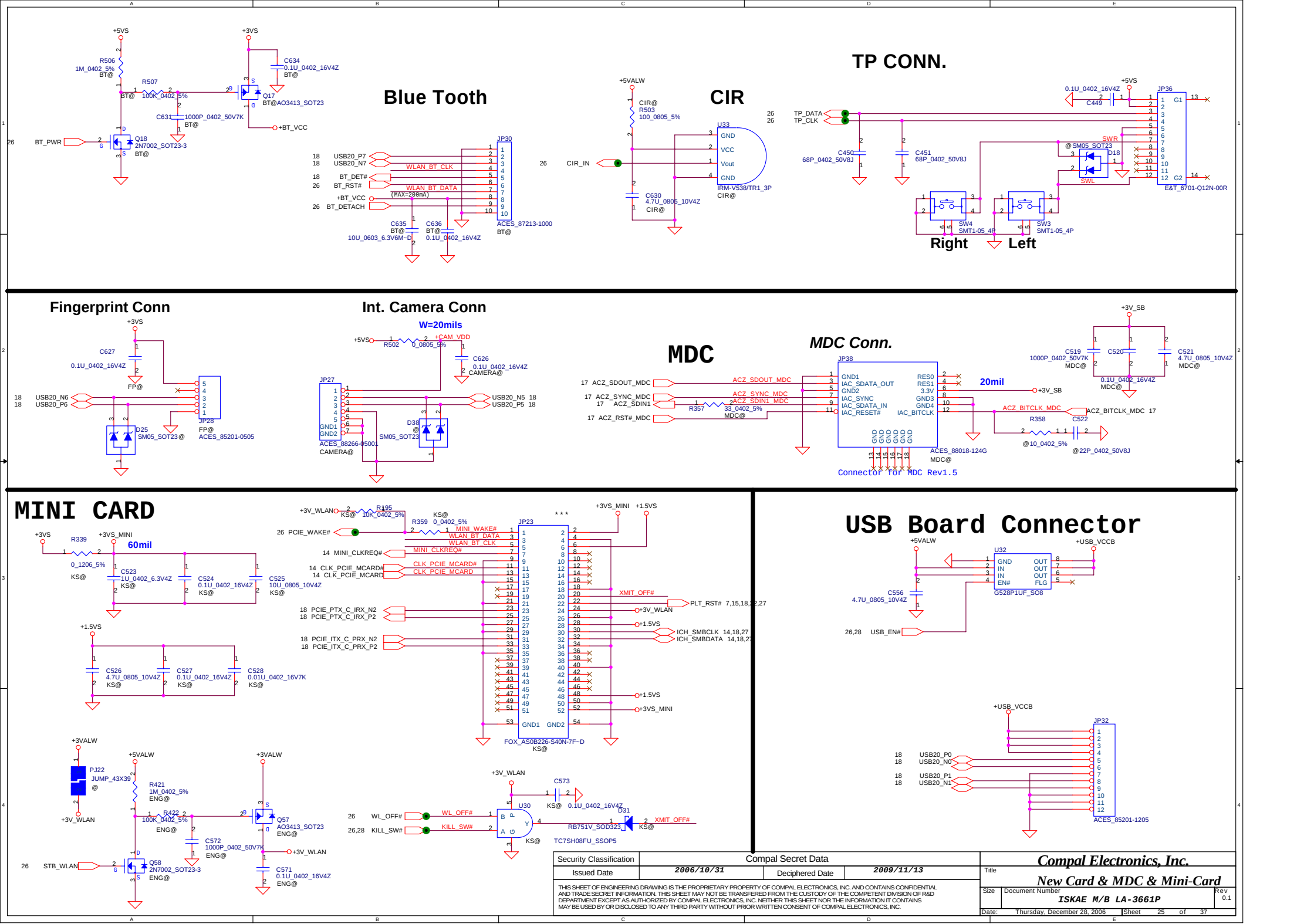
Right Speaker Connector

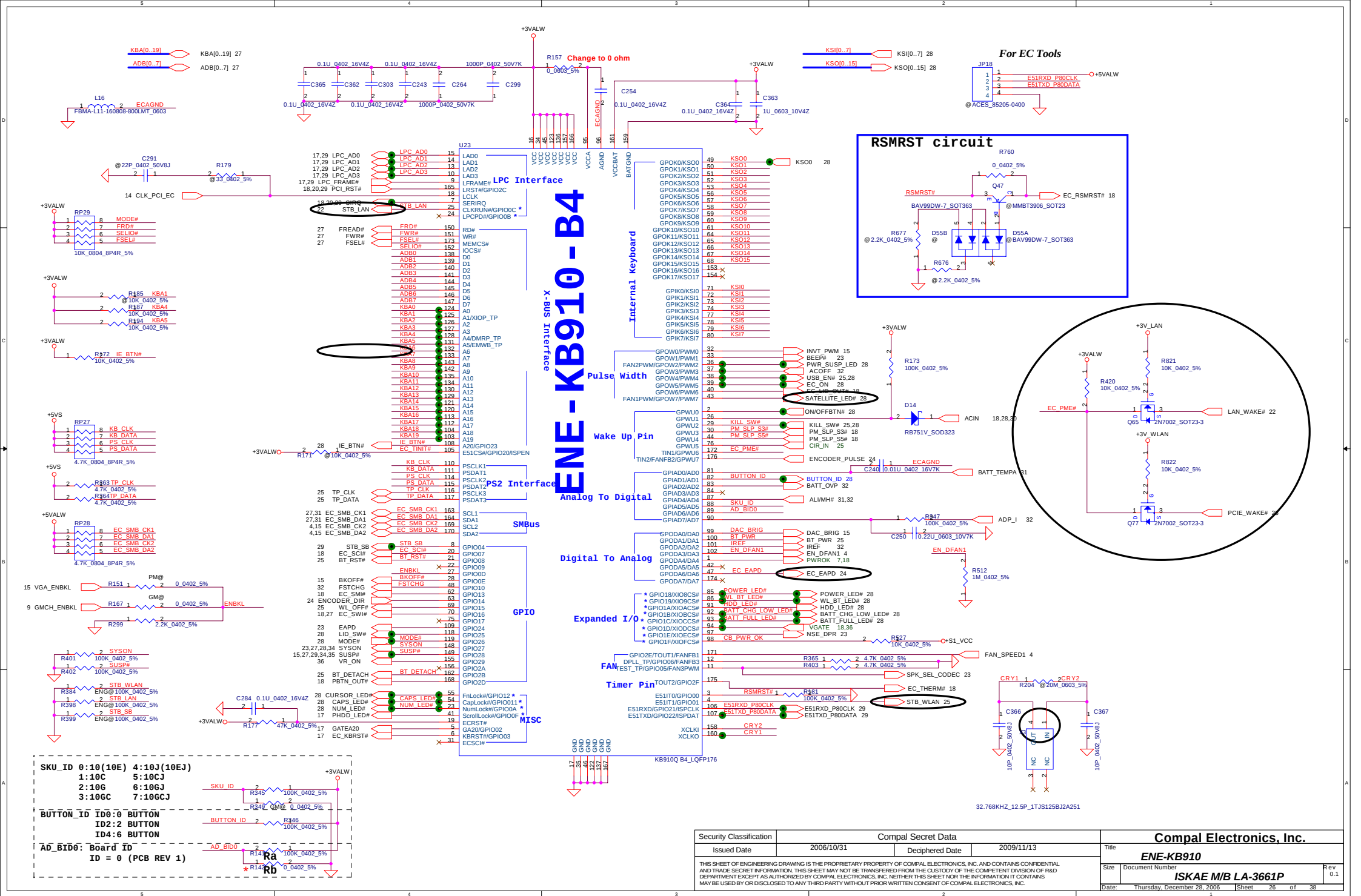


Volume Control

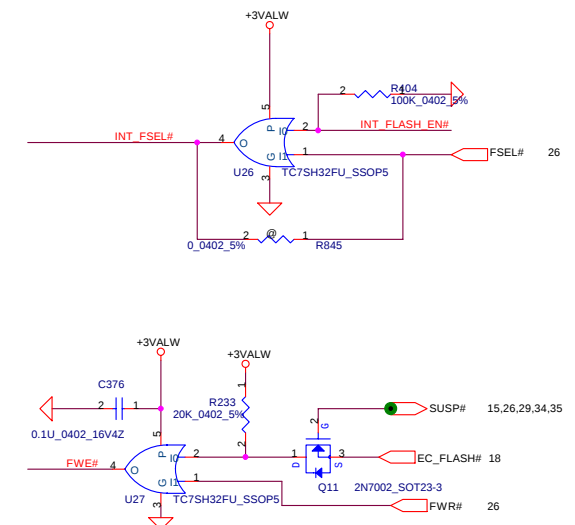
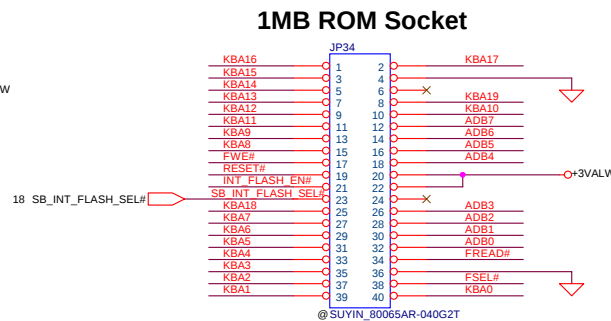
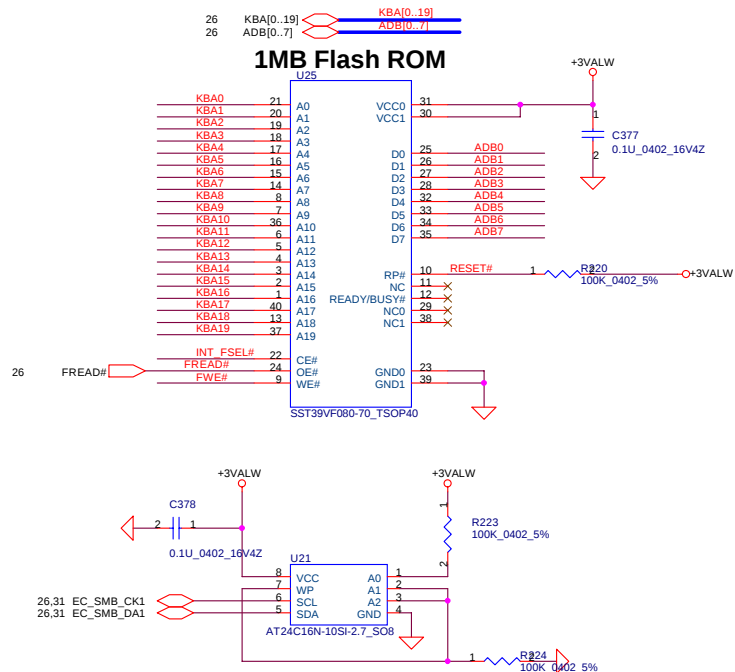
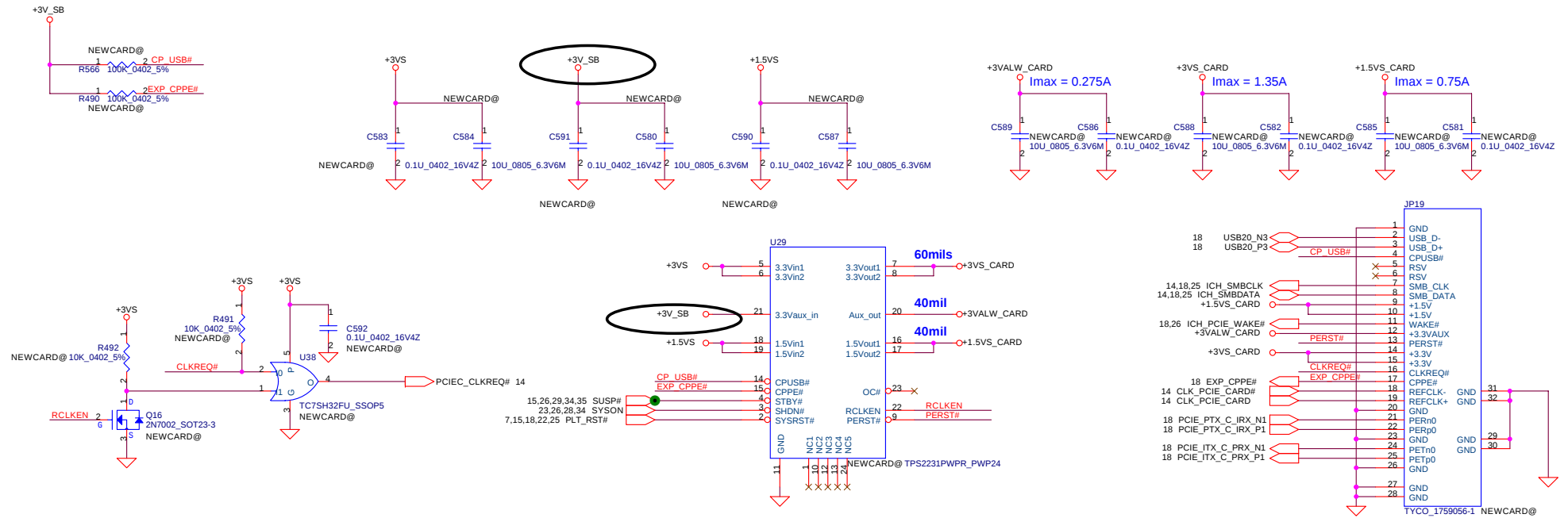


| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |            | Compal Secret Data |            | Compal Electronics, Inc.          |         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------------|------------|-----------------------------------|---------|
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2006/10/31 | Deciphered Date    | 2009/11/13 | AMP/Volume Encoder/Audio Jack/MIC |         |
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| Date: Thursday, December 28, 2006                                                                                                                                                                                                                                                                                                                                                                                                                             |            |                    |            | Sheet 24                          | of 37   |

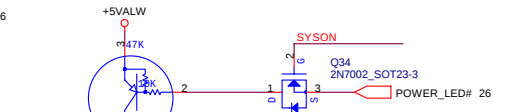
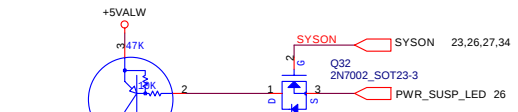
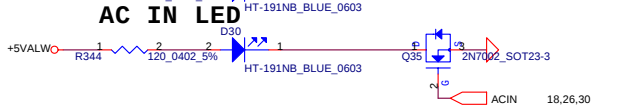
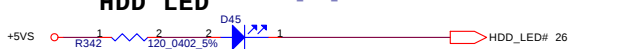
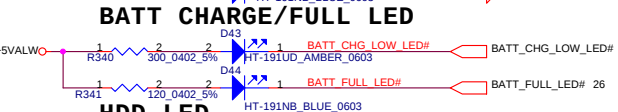
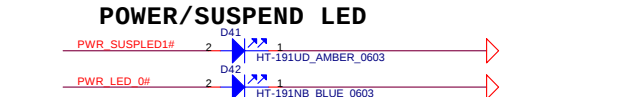
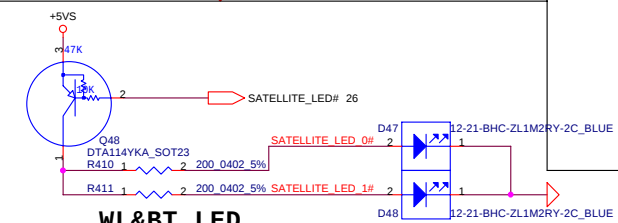
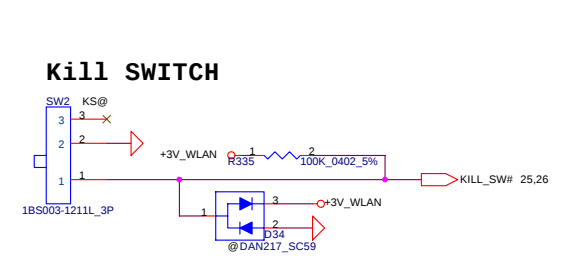
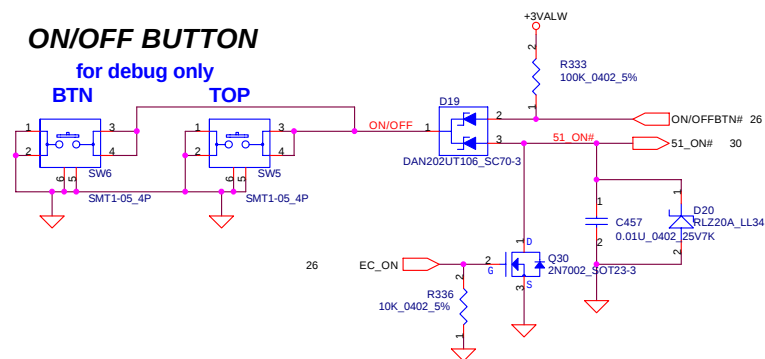
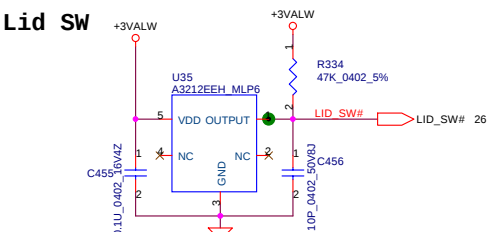




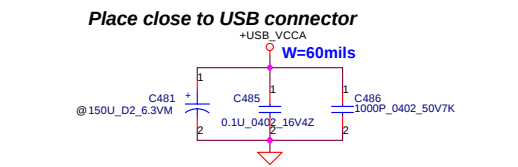
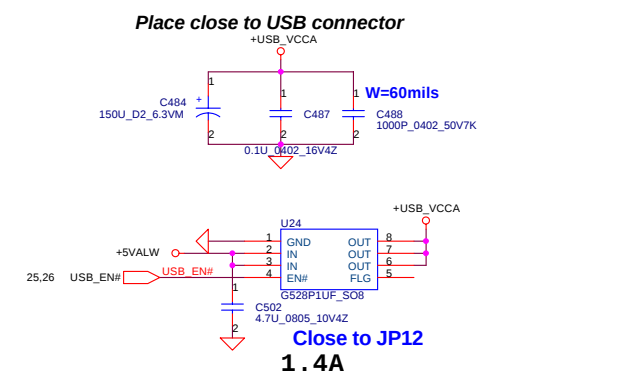
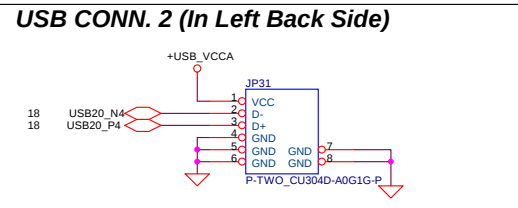
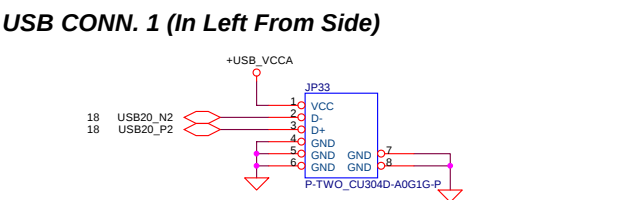
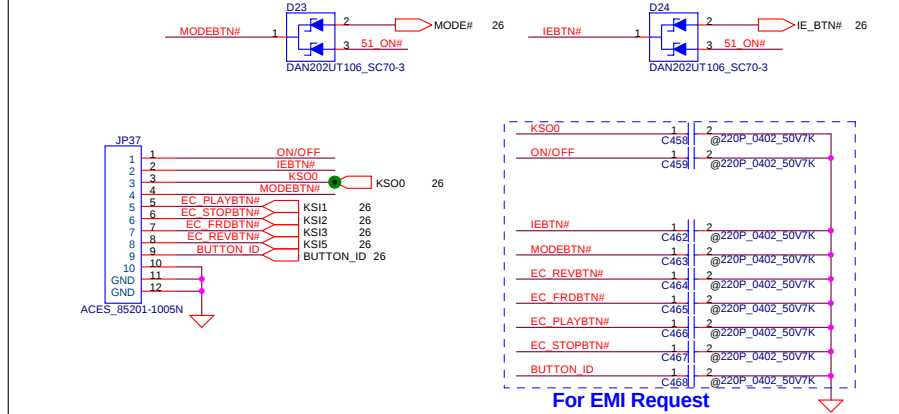
## New Card



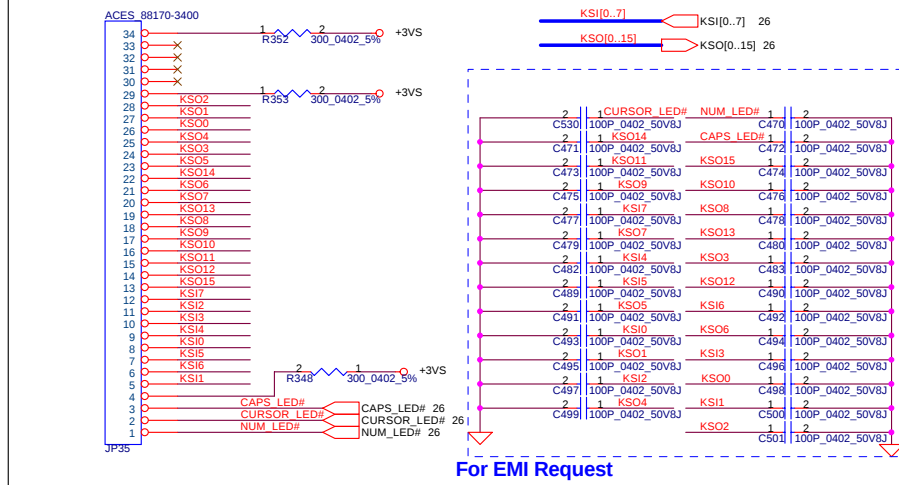
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                    |            |                             |                 |         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------------|------------|-----------------------------|-----------------|---------|
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |            | Compal Secret Data |            | Compal Electronics, Inc.    |                 |         |
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2006/11/05 | Deciphered Date    | 2009/11/05 | Title<br>BIOS/TP-PAD/BT     |                 |         |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                    |            | ISKA MB LA-3661P            |                 |         |
| Date:                                                                                                                                                                                                                                                                                                                                                                                                                                                         |            |                    |            | Thursday, December 28, 2006 | Sheet 27 of 38  |         |



**SW/LED Connector**

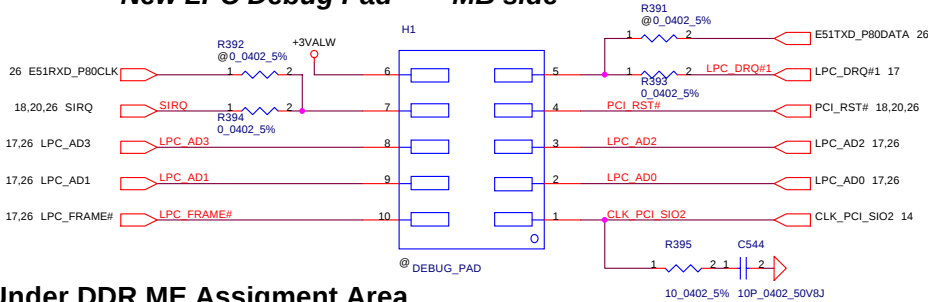


**KEYBOARD CONN.**



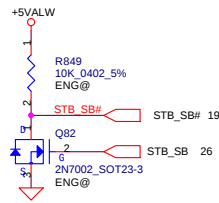
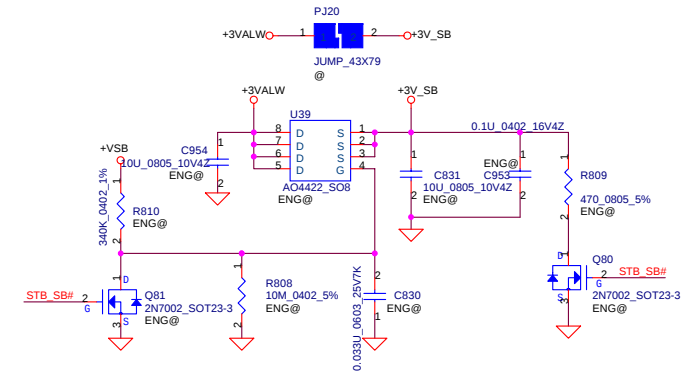
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |            | Compal Secret Data |            | Title                       |                             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------------|------------|-----------------------------|-----------------------------|
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2006/10/31 | Deciphered Date    | 2009/11/13 | USB/LID/KS/KB/LED/SW-B Conn |                             |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                    |            | Date:                       | Thursday, December 28, 2006 |

## New LPC Debug Pad ---- MB side

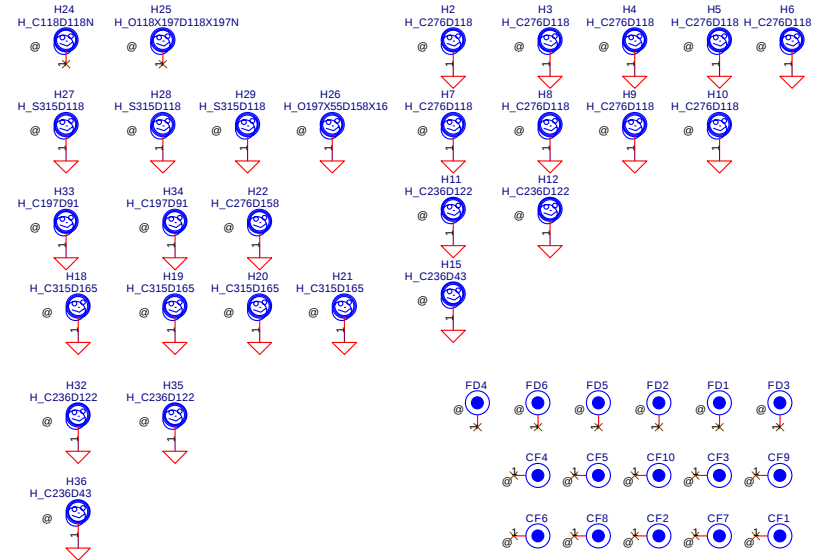


## Under DDR ME Assignment Area

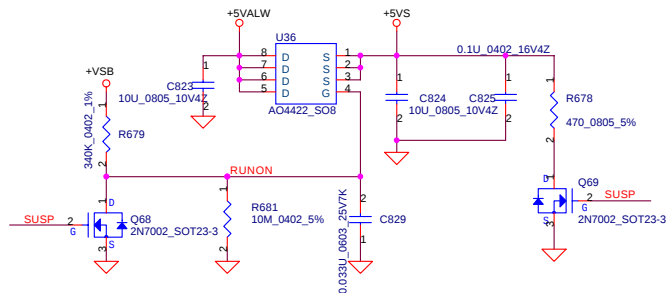
Keep Resistor near Debug Pad and in the same side  
Reverse side DIMM ---- Pin 1 keep away DIMM



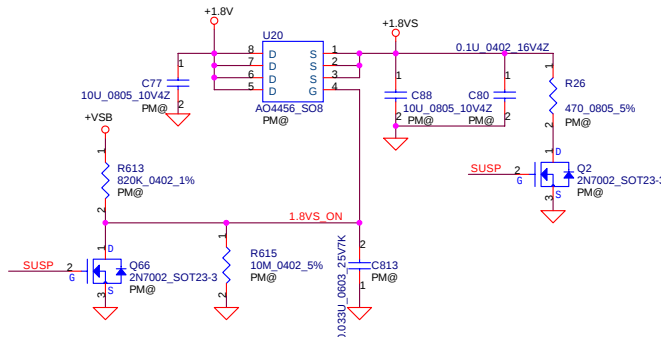
## Screw Hole



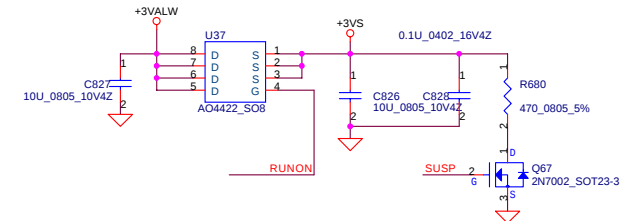
## +5VALW to +5VS Transfer



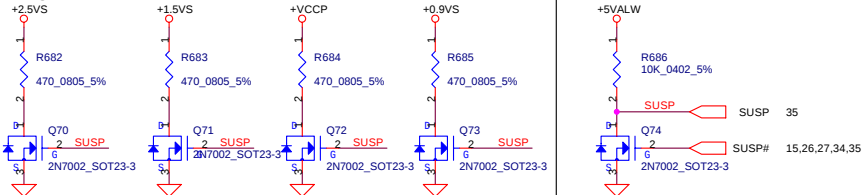
## +1.8V to +1.8VS Transfer (Place close to VGA-Connector)



## +3VALW to +3VS Transfer

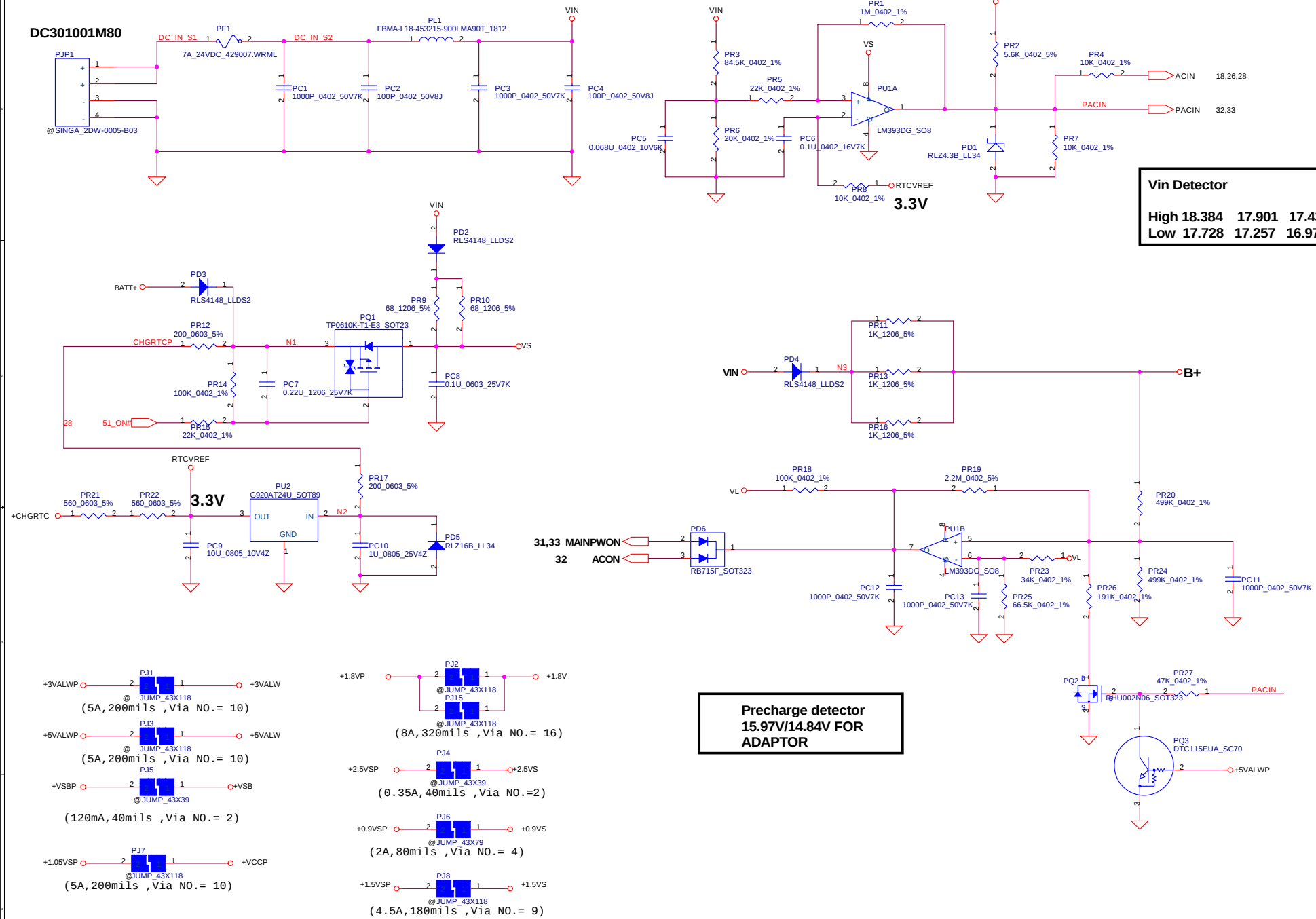


## Discharge Circuit



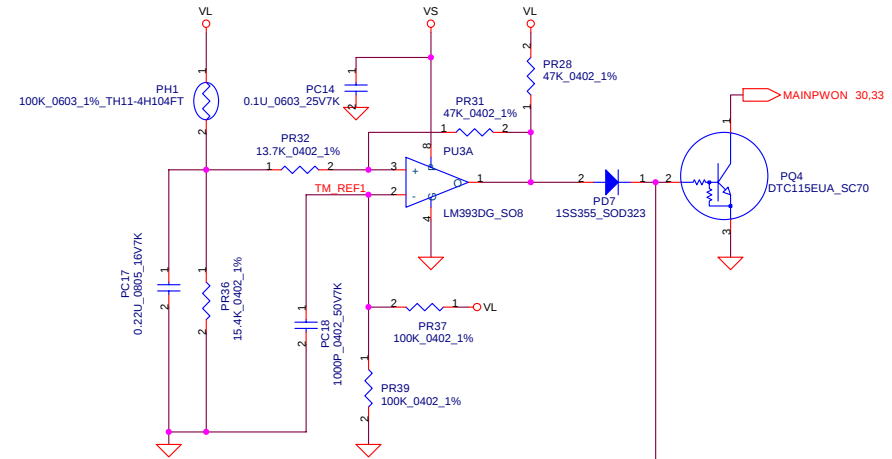
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |            | Compal Secret Data |            | Title                     |                             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------------|------------|---------------------------|-----------------------------|
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2006/10/31 | Deciphered Date    | 2009/11/13 | DC/DC I/F Debug I/F Screw |                             |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                    |            | Date:                     | Thursday, December 28, 2006 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                    |            | Sheet                     | 29 of 38                    |

# DC301001M80

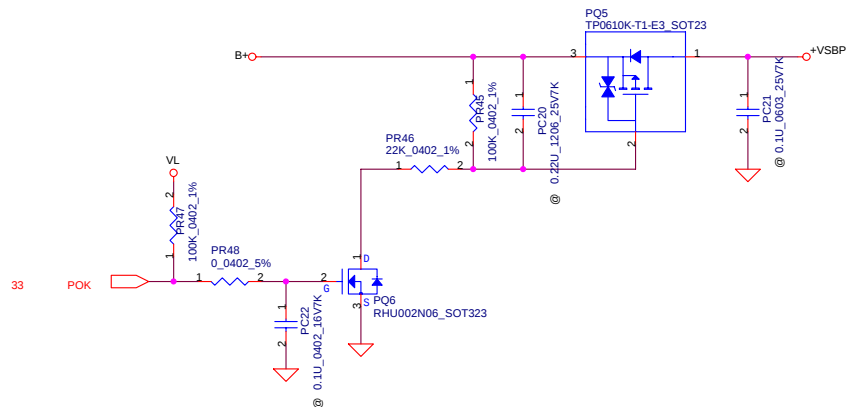
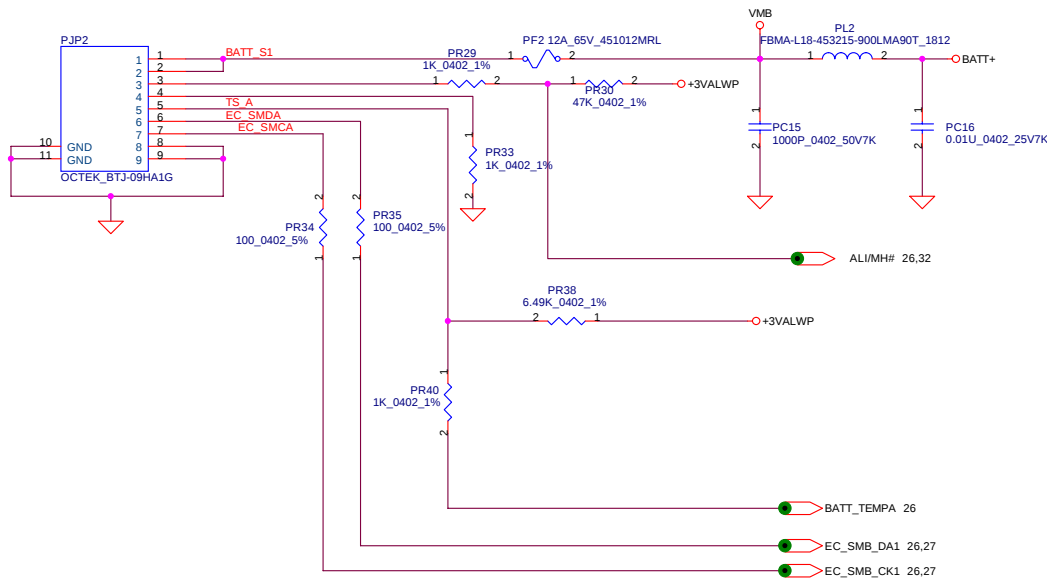
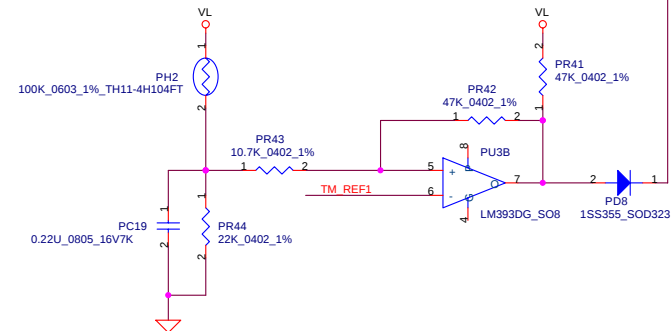


|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                            |                    |            |                          |    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|--------------------|------------|--------------------------|----|
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |                            | Compal Secret Data |            | Compal Electronics, Inc. |    |
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2006/06/06                 | Deciphered Date    | 2009/06/05 | Title                    |    |
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| Size                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Document Number            |                    |            | Rev                      |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                            |                    |            | 0.0                      |    |
| Date:                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Tuesday, December 26, 2006 | Sheet              | 30         | of                       | 38 |

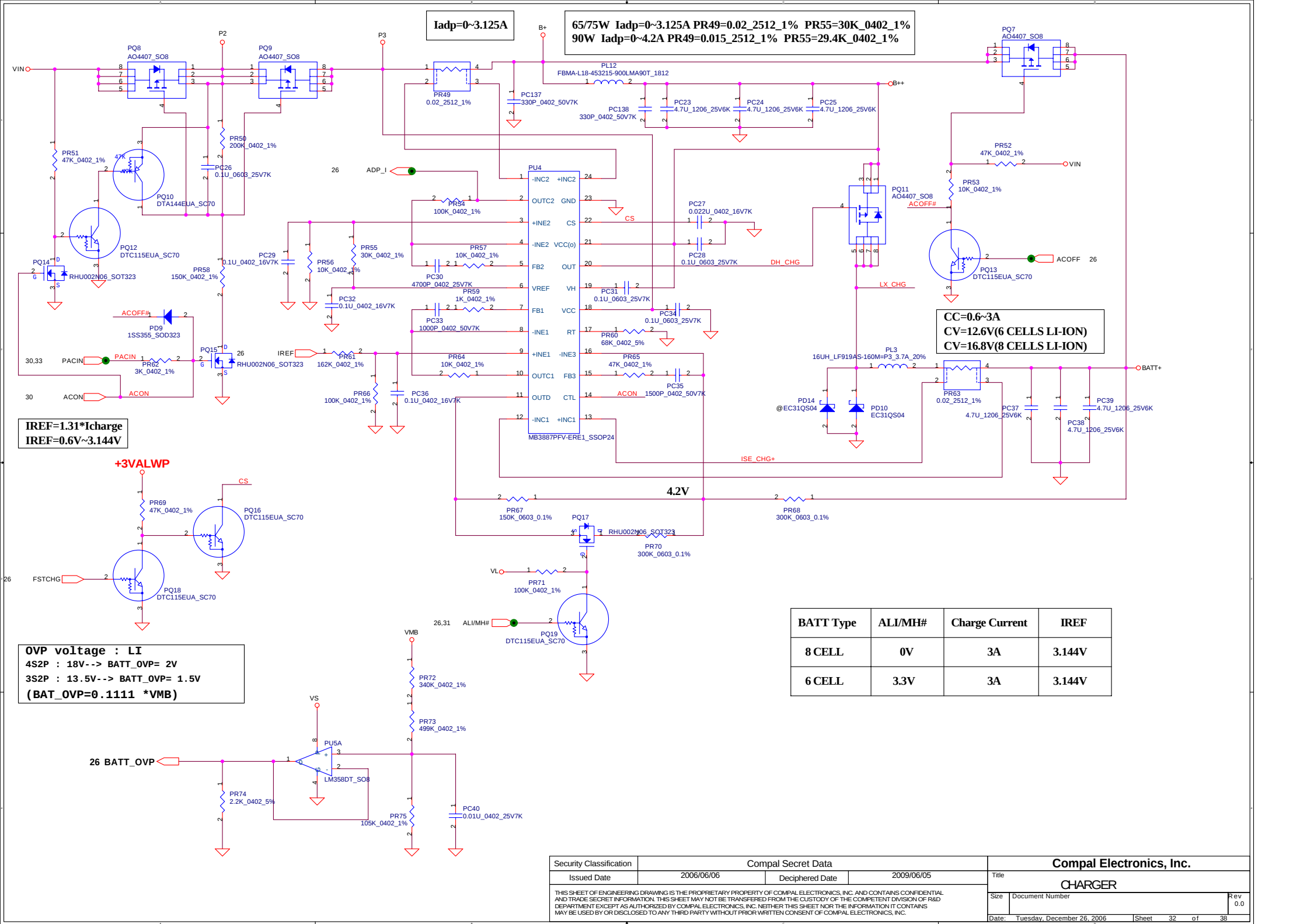
PH1 under CPU botten side :  
CPU thermal protection at 87 degree C  
Recovery at 48 degree C



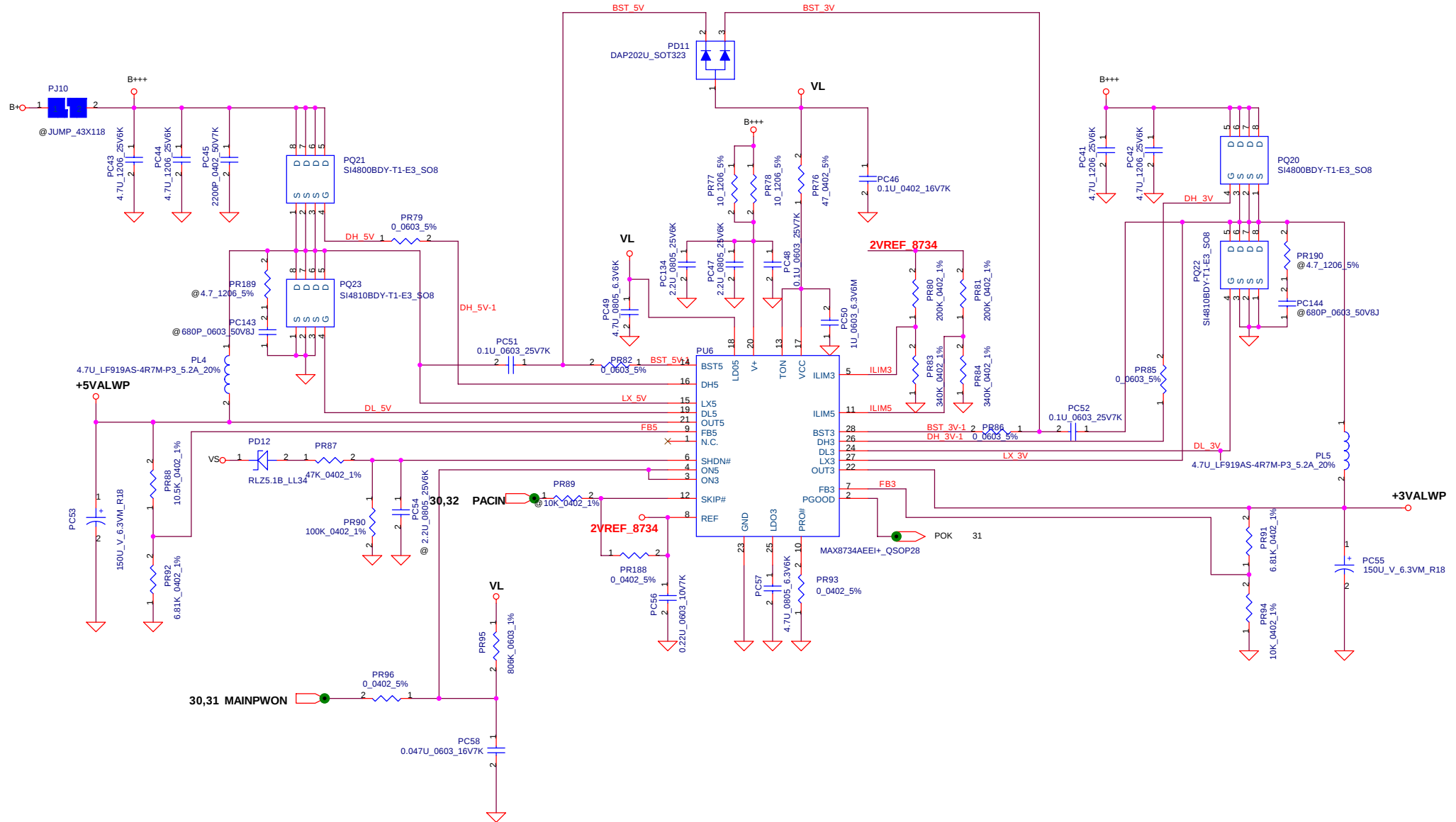
PH2 near main Battery CONN :  
BAT. thermal protection at 79 degree C  
Recovery at 45 degree C



|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                            |                    |            |                          |    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|--------------------|------------|--------------------------|----|
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |                            | Compal Secret Data |            | Compal Electronics, Inc. |    |
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2006/06/06                 | Deciphered Date    | 2009/06/05 | Title                    |    |
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| Size                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Document Number            |                    |            | Rev                      |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                            |                    |            | 0.0                      |    |
| Date:                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Tuesday, December 26, 2006 | Sheet              | 31         | of                       | 38 |

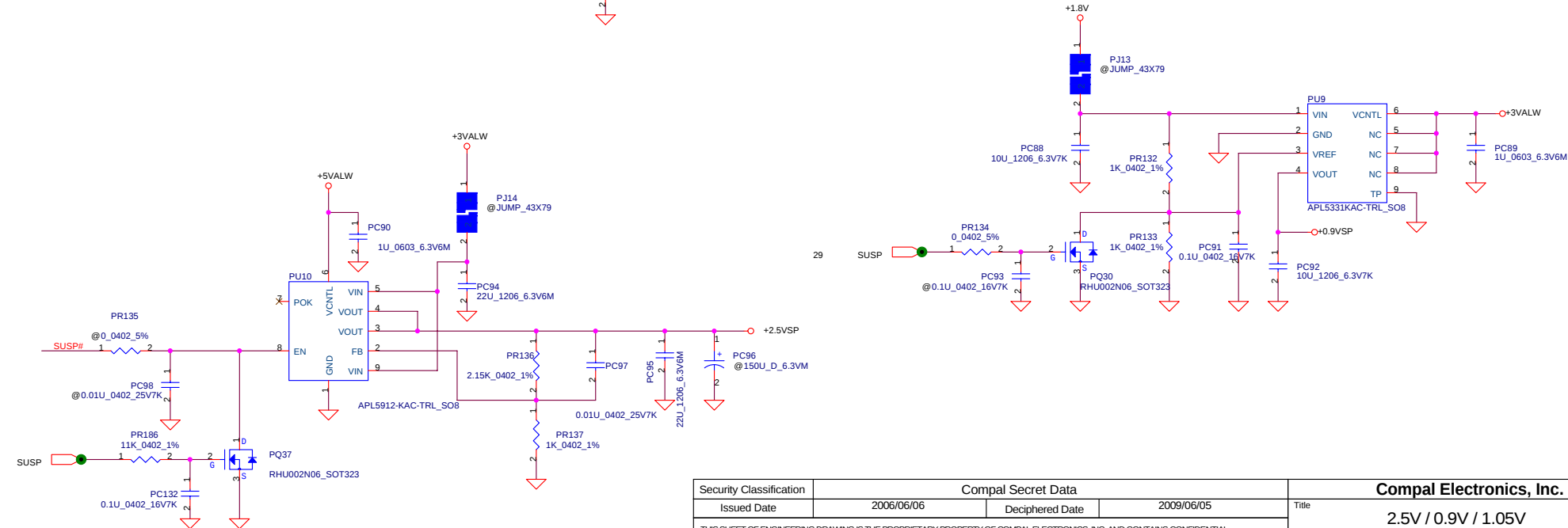
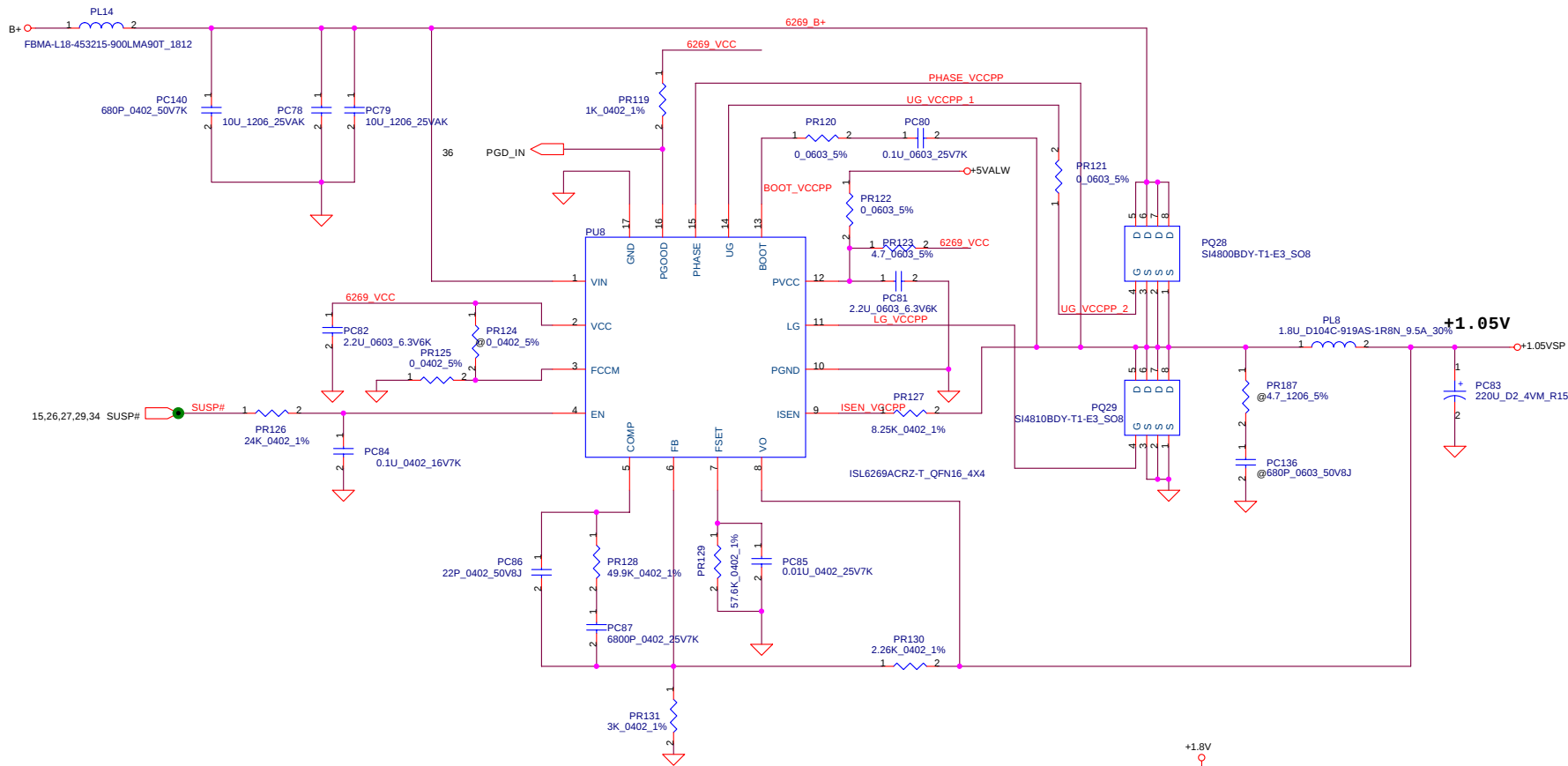


# +3.3VALWP/+5VALWP

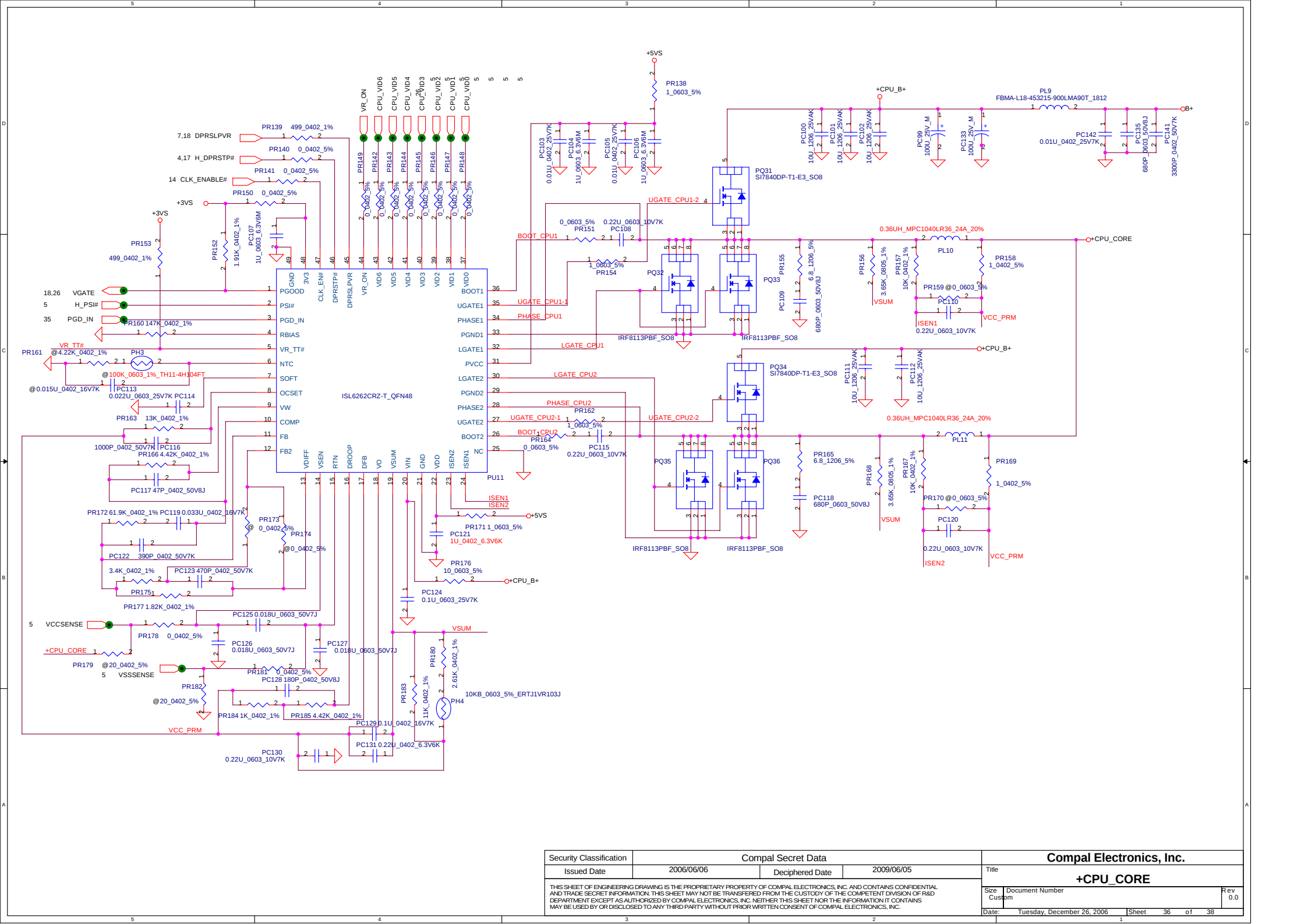


|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                            |                    |                   |                          |     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|--------------------|-------------------|--------------------------|-----|
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |                            | Compal Secret Data |                   | Compal Electronics, Inc. |     |
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2006/06/06                 | Deciphered Date    | 2009/06/05        | Title                    |     |
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| Size                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Custom                     | Document Number    | IAKAA M/BLA-3401P | Rev                      | 0.0 |
| Date:                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Tuesday, December 26, 2006 | Sheet              | 33                | of                       | 38  |





|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                            |                    |            |                          |          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|--------------------|------------|--------------------------|----------|
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |                            | Compal Secret Data |            | Compal Electronics, Inc. |          |
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2006/06/06                 | Deciphered Date    | 2009/06/05 | Title                    |          |
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| Size                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Document Number            |                    |            | Rev                      |          |
| Date                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Tuesday, December 26, 2006 |                    |            | Sheet                    | 35 of 38 |



|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                            |                    |            |                          |           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|--------------------|------------|--------------------------|-----------|
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |                            | Compal Secret Data |            | Compal Electronics, Inc. |           |
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2006/06/06                 | Deciphered Date    | 2009/06/05 | Title                    | +CPU_CORE |
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| Custom                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                            |                    |            |                          |           |
| Date:                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Tuesday, December 26, 2006 | Sheet              | 36         | of                       | 38        |

POWER PIR LIST

page Reason for change Modify list

DVT

|    |                                                                                                         |                                                                                                                                                                                                                                                                                                                 |
|----|---------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 35 | Change +1.05V PWM IC                                                                                    | Change PU8 to ISL6269A(SA00000GU80), add PR122 (0ohm, SD013000080)                                                                                                                                                                                                                                              |
| 36 | For EMI team request to add snubber and gate resistor<br>Modify the CUP CORE load line and compensation | Add snuber PR155,PR165(6.8ohm_SD011680880), PC109,PC118(680p_SE024681J80) and gate resistor PR154,PR162(1ohm_SD013100B80)<br>Change PC103 to 0.022u(SE076223K80), PC104 to 2.2u(SE107225K80), PR185 to 4.42K(SD000004J80),<br>PC129 to 0.1u(SE076104K80, add PC126 (0.018U_SE025183J80), delete PC105 and PC106 |

|    |                                                                              |                                          |
|----|------------------------------------------------------------------------------|------------------------------------------|
| 31 | Modify the CPU OTP point from 84 degC to 87 degC<br>for thermal team request | Change PR36 from 22K to 20K(SD034200280) |
|----|------------------------------------------------------------------------------|------------------------------------------|

PVT

|                 |                                                       |                                                                                                                      |
|-----------------|-------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| 32,34,<br>35,36 | For EMI team request to add bead to reduce board band | Add PL12,PL13,PL14(SM010020720);PC137,PC138,PC139(330p_SE074331K80);PC140(680p_SE074681K80);PC141(3300p_SE074332K80) |
| 33              | Reduce the power consumption on S3/S4                 | Add PR188(0_0402_5%) and unpop PR89                                                                                  |
| 36              | Solve the high frequency noise.                       | Change PC99 from 100U to 220U(SF22004M210)                                                                           |

Pre-MP

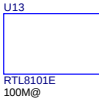
|    |                                                           |                                                             |
|----|-----------------------------------------------------------|-------------------------------------------------------------|
| 36 | For EMI solution                                          | Add PC142 (0.01u_0402)                                      |
| 36 | PC99 was interfere with logic low so change to small size | Change PC99 from 220U to 100U and add PC143,PC144(68U_25V). |

| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |  | Compal Secret Data         |                 | Compal Electronics, Inc. |       |    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------|-----------------|--------------------------|-------|----|
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  | Size                       | Document Number | 0.1                      |       |    |
| Date:                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  | Tuesday, December 26, 2006 | Sheet           | 37                       | of    | 38 |

PIR (Product Improve Record)

FOR ISPD

LAN



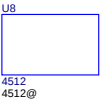
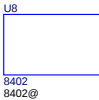
TRANSFORMER



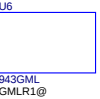
PCB



Card BUS



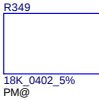
SB



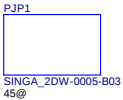
NB



SKU ID



DC - JACK



|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                    |            |                          |                            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------------|------------|--------------------------|----------------------------|
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |            | Compal Secret Data |            | Compal Electronics, Inc. |                            |
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2006/10/03 | Deciphered Date    | 2009/11/13 | Title                    | ISPD                       |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                    |            | Date:                    | Tuesday, December 26, 2006 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                    |            | Sheet                    | 38 of 37                   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                    |            | Rev                      | 0.1                        |