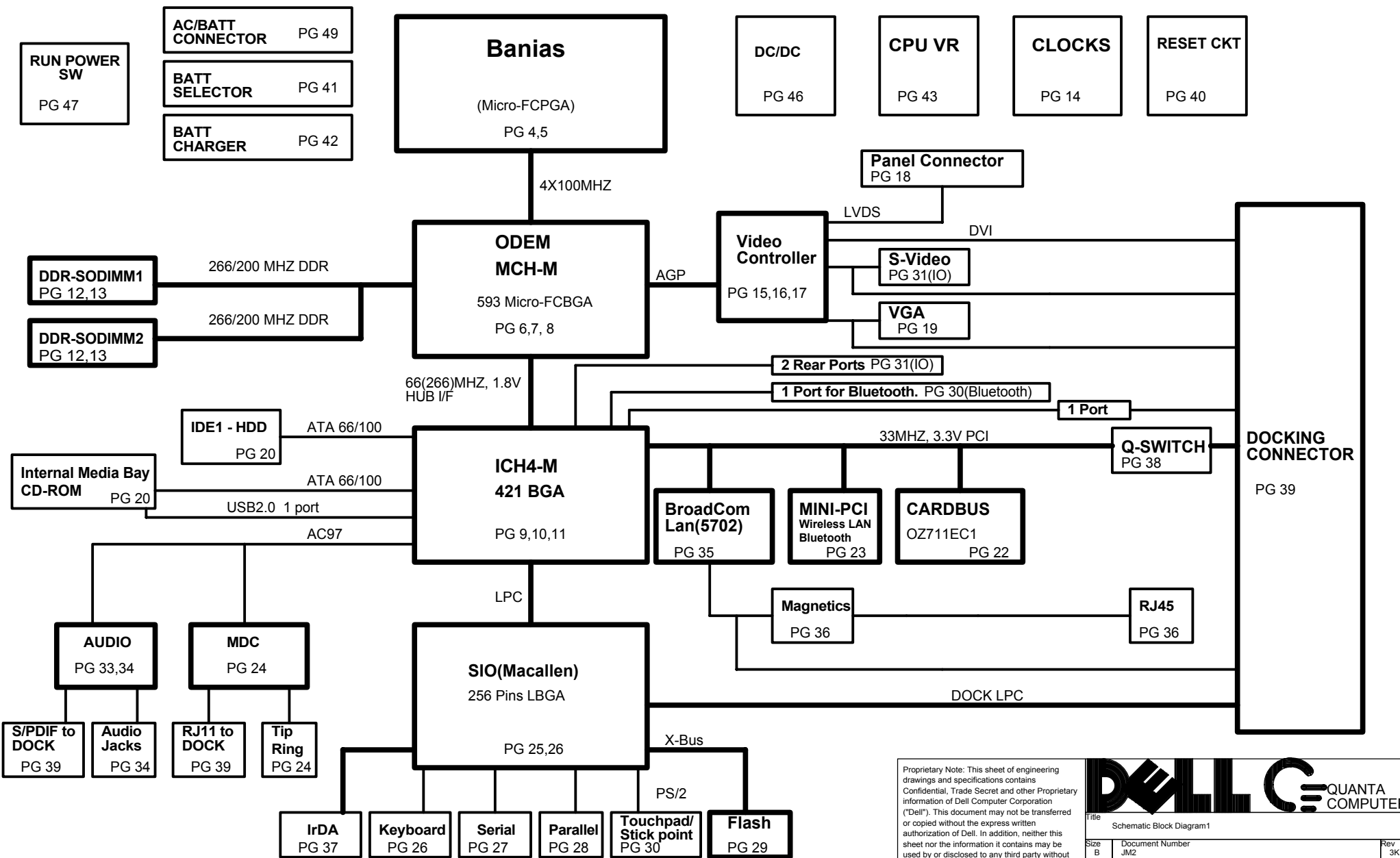


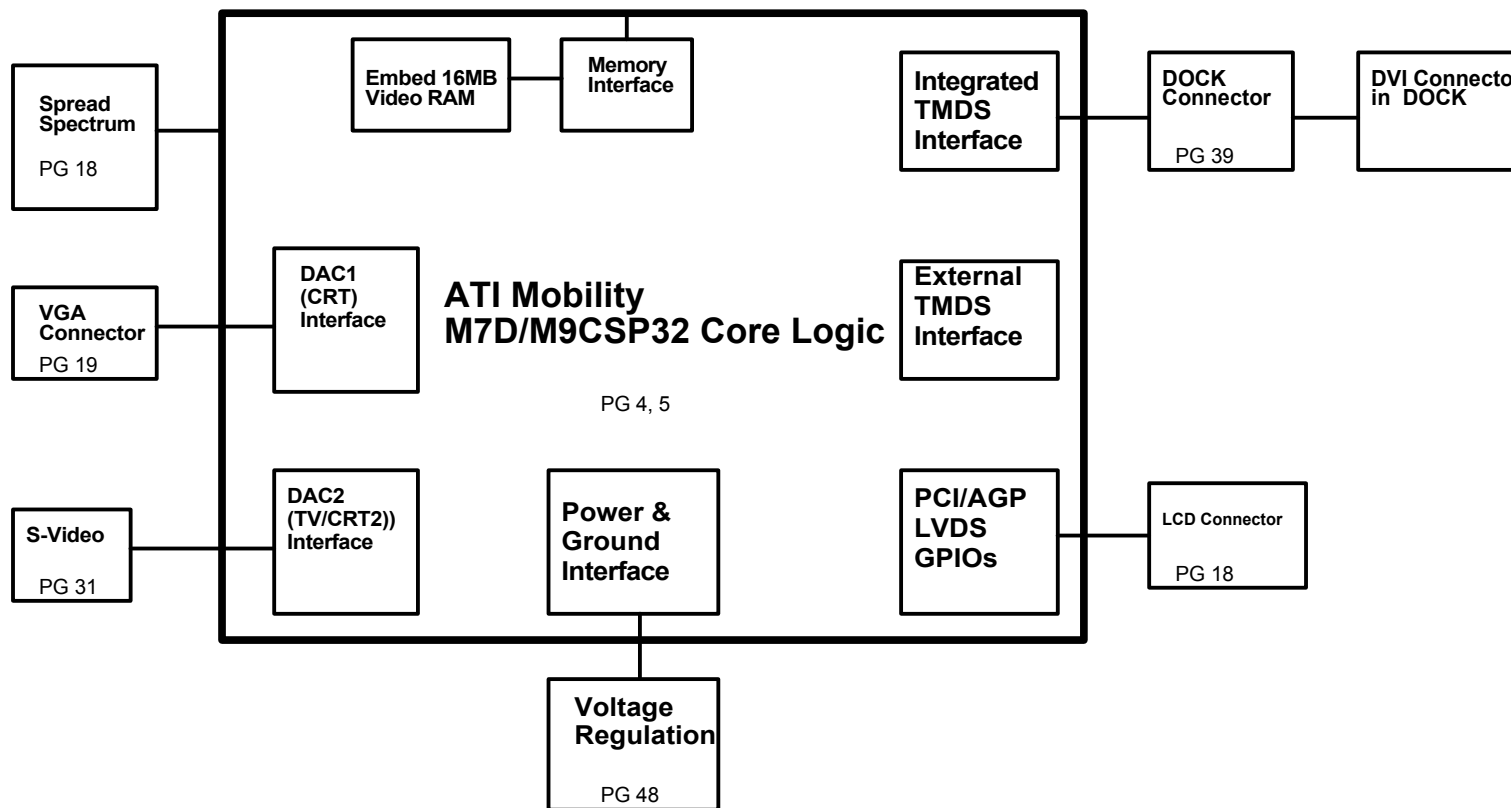
BONDI II

PWA:4U853, Rev A04
SCH: 7U239, Rev A03



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File: Schematic Block Diagram 1
 Size B | Document Number JM2 | Rev 3K
 Date: 星期五, 六月 06, 2003 | Sheet 1 of 49



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| | | |
|-----------------------------------|------------------------|-----------|
| Title Schematic Block Diagram2 | | |
| Size B | Document Number JM2 | Rev 1A |
| Date: 星期日, 六月 06, 2003 | Sheet 2 of 49 | |

INDEX


| Pg# | Description | DNI LIST |
|-------|------------------------------|----------|
| 1 | Schematic Block Diagram 1 | |
| 2 | Schematic Block Diagram 2 | |
| 3 | FRONTPAGE | |
| 4-5 | Banias | |
| 6-8 | Odem MCH-M | |
| 9-11 | ICH4 | |
| 12-13 | DDR SO-DIMM(200P) | |
| 14 | CLOCK GENERATOR | |
| 15-17 | M7/M9 Graphics | |
| 18-19 | LCD CONN,CY25245 & CRT CONN | |
| 20 | IDE (HDD&CD_ROM) | |
| 21 | PAD& SCREW | |
| 22 | O2_OZ711E1&CONN | |
| 23-24 | MINI-PCI & MDC CONN | |
| 25-26 | SIO | |
| 27-28 | SERIAL & PARALLEL | |
| 29 | FLASH | |
| 30-31 | TOUCH PAD & SWITCH&LED | |
| 32 | FAN & THERMAL | |
| 33-34 | AC97 CODEC & connector | |
| 35-36 | LAN(KENAI32-LAVON) & JACK | |
| 37 | FIR | |
| 38-39 | DOCKING Buffer and connector | |
| 40 | Reset circuit | |
| 41 | RTC BATTERY | |
| 42-43 | Battery Selector & Charger | |
| 44 | CPU Power | |
| 45 | 1.2V, 1.5V, 1.8VS.2.5VS | |
| 46 | D/D Power | |
| 47 | RUN POWER SW | |
| 48 | VGA DC/DC | |
| 49 | DCIN,Batt | |
| 50 | CPU I/O Power | |

Power & Ground

| Label | Pg# | Description | Control Signal |
|--|-----------|-----------------------------|----------------|
| DC_IN+ | | AC ADAPTER (20V) | |
| PBATT+ | | MAIN BATTERY + (10~17V) | |
| PWR_SRC | | MAIN POWER (10~20V) | |
| RTC_PWR3_3V | | RTC & PCL POWER (3_3V) | |
| +12V | | +12V | DRUNPWROK |
| VHCORE | | CPU CORE POWER (1.25/1.15V) | RUNPWROK |
| V1_2RUN | | AGTL+ POWER (1.2V) | RUNPWROK |
| | | | |
| +3VRUN | | SLP_S3# CTRLD POWER | RUN_ON |
| +3VSUS | | SLP_S5# CTRLD POWER | SUS_ON |
| +5VALW | | 8051 POWER (5V) | |
| +5VRUN | | SLP_S3# CTRLD POWER | RUN_ON |
| +5VSUS | | SLP_S5# CTRLD POWER | SUS_ON |
| +5VHDD | | HDD POWER (5V) | HDDC_EN# |
| +5VMOD | | MODULE POWER (5V) | MODC_EN# |
| STRB#5V | | EXTERNAL FDD POWER (5V) | FDD/LPT# |
| +5VFAN1, +5VFAN2 | | FAN POWER (5V) | FAN_OFF/ON# |
| VDDA | | AUDIO ANALOG POWER (5V) | RUN_ON |
| 1_8VSUS | | RESUME WELL IN ICH | |
| 1_8VRUN | | SLP_S3# CTRLD POWER | |
| +3VALW | | 8051 POWER (3V) | |
| V1_5RUN | | AGP I/O POWER | |
| | | | |
|  GND | ALL PAGES | DIGITAL GROUND | |
|  AGND | | AUDIO GND | |
|  GNDP | | CPU POWER GND | |
|  CGNDP | | CHARGER GND | |
|  DGNDP | | DC/DC POWER GND | |
|  LANGND | | COMBO CONN GND | |

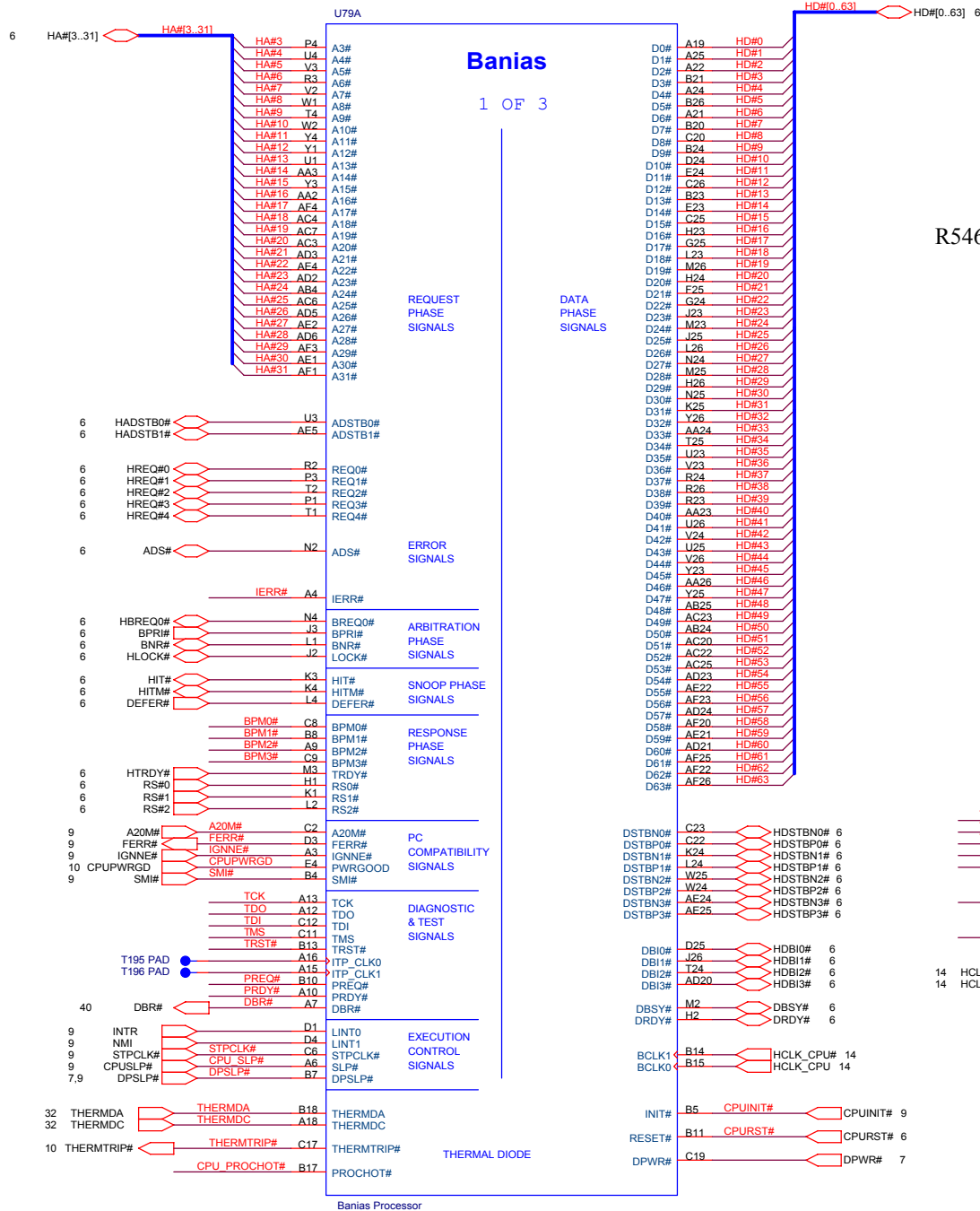
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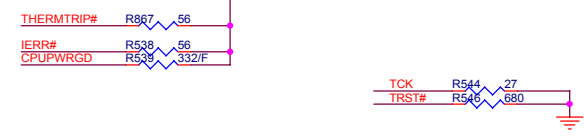
File: Index, DNI, Power & Ground

| | | |
|------------------------|---------------------|--------|
| Size B | Document Number JM2 | Rev 1A |
| Date: 星期五, 六月 06, 2003 | Sheet 3 of 49 | |

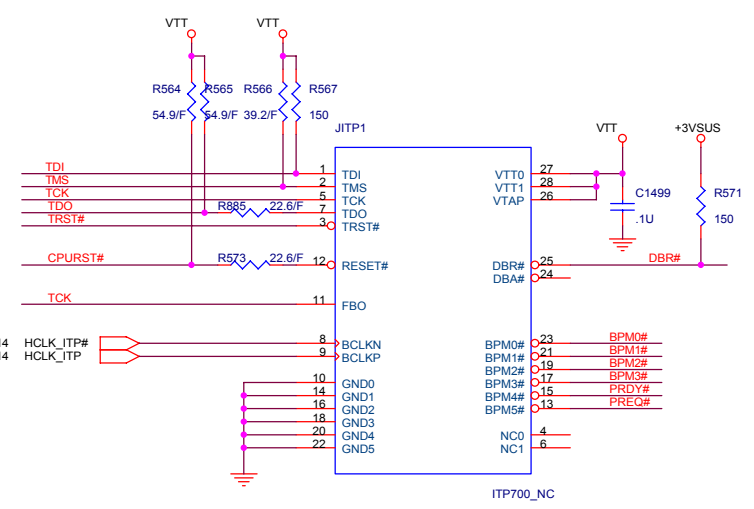
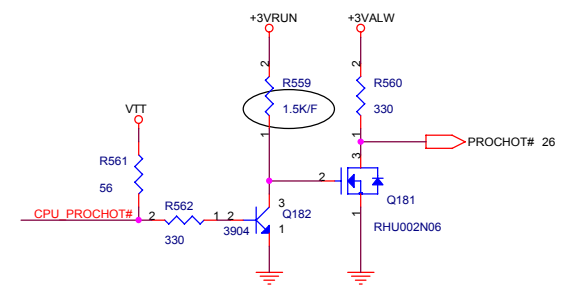


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R867 should be close to ICH4



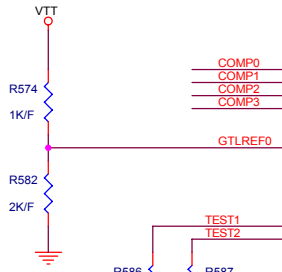
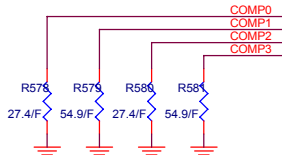
R546 should be place within 2" of the processor ; others place near ITP



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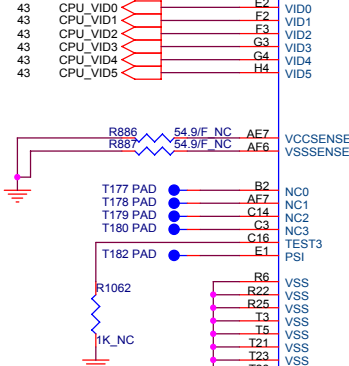
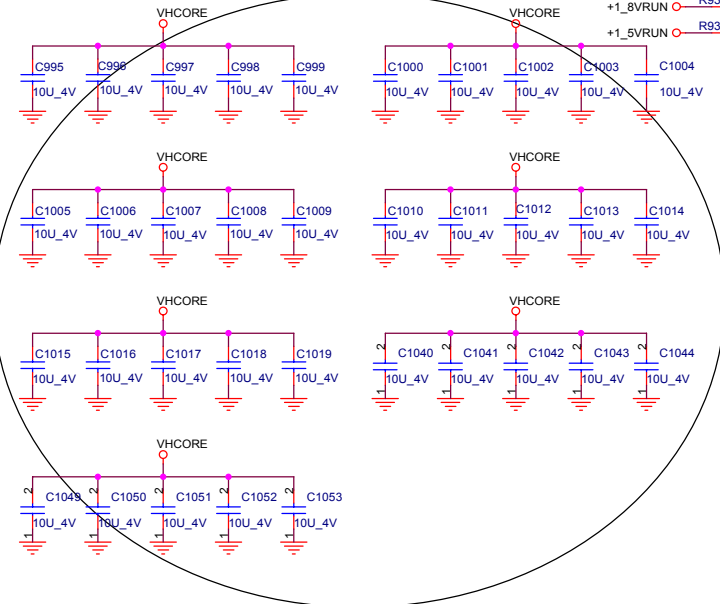
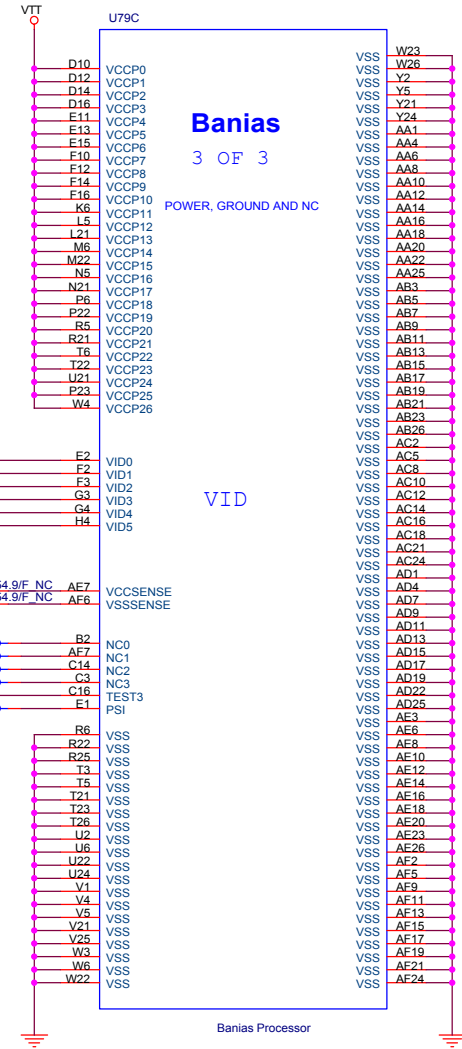
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|-------|------------------|-------------------------|---------|
| Title | | Banias Processor (HOST) | |
| Size | Document Number | Rev | |
| | JM2 | 3K | |
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Banias
2 OF 3

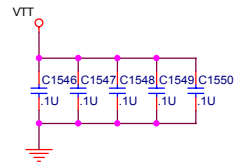
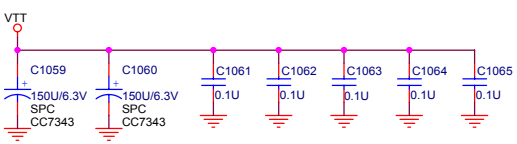
POWER, GROUND, RESERVED SIGNALS

| | |
|-----|-----|
| VSS | A2 |
| VSS | A5 |
| VSS | A8 |
| VSS | A11 |
| VSS | A14 |
| VSS | A17 |
| VSS | A20 |
| VSS | A23 |
| VSS | A26 |
| VSS | B3 |
| VSS | B6 |
| VSS | B9 |
| VSS | B12 |
| VSS | B16 |
| VSS | B19 |
| VSS | B22 |
| VSS | B25 |
| VSS | C1 |
| VSS | C4 |
| VSS | C7 |
| VSS | C10 |
| VSS | C13 |
| VSS | C15 |
| VSS | C18 |
| VSS | C21 |
| VSS | C24 |
| VSS | D2 |
| VSS | D7 |
| VSS | D9 |
| VSS | D11 |
| VSS | D13 |
| VSS | D15 |
| VSS | D17 |
| VSS | D19 |
| VSS | D21 |
| VSS | D23 |
| VSS | D26 |
| VSS | E3 |
| VSS | E6 |
| VSS | E8 |
| VSS | E10 |
| VSS | E12 |
| VSS | E14 |
| VSS | E16 |
| VSS | E18 |
| VSS | E20 |
| VSS | E22 |
| VSS | F1 |
| VSS | F4 |
| VSS | F5 |
| VSS | F7 |
| VSS | F9 |
| VSS | F11 |
| VSS | F13 |
| VSS | F15 |
| VSS | F17 |
| VSS | F19 |
| VSS | F21 |
| VSS | F24 |
| VSS | G2 |
| VSS | G6 |
| VSS | G22 |
| VSS | G23 |
| VSS | H3 |
| VSS | H5 |
| VSS | H21 |
| VSS | H25 |
| VSS | J1 |
| VSS | J4 |
| VSS | J6 |
| VSS | J22 |
| VSS | J24 |
| VSS | K2 |
| VSS | K5 |
| VSS | K21 |
| VSS | K23 |
| VSS | K26 |
| VSS | L3 |
| VSS | L6 |
| VSS | L22 |
| VSS | L25 |
| VSS | M1 |
| VSS | M4 |
| VSS | M5 |
| VSS | M21 |
| VSS | M24 |
| VSS | N3 |
| VSS | N6 |
| VSS | N22 |
| VSS | N23 |
| VSS | N26 |
| VSS | P2 |
| VSS | P5 |
| VSS | P21 |
| VSS | P24 |
| VSS | R1 |
| VSS | R4 |



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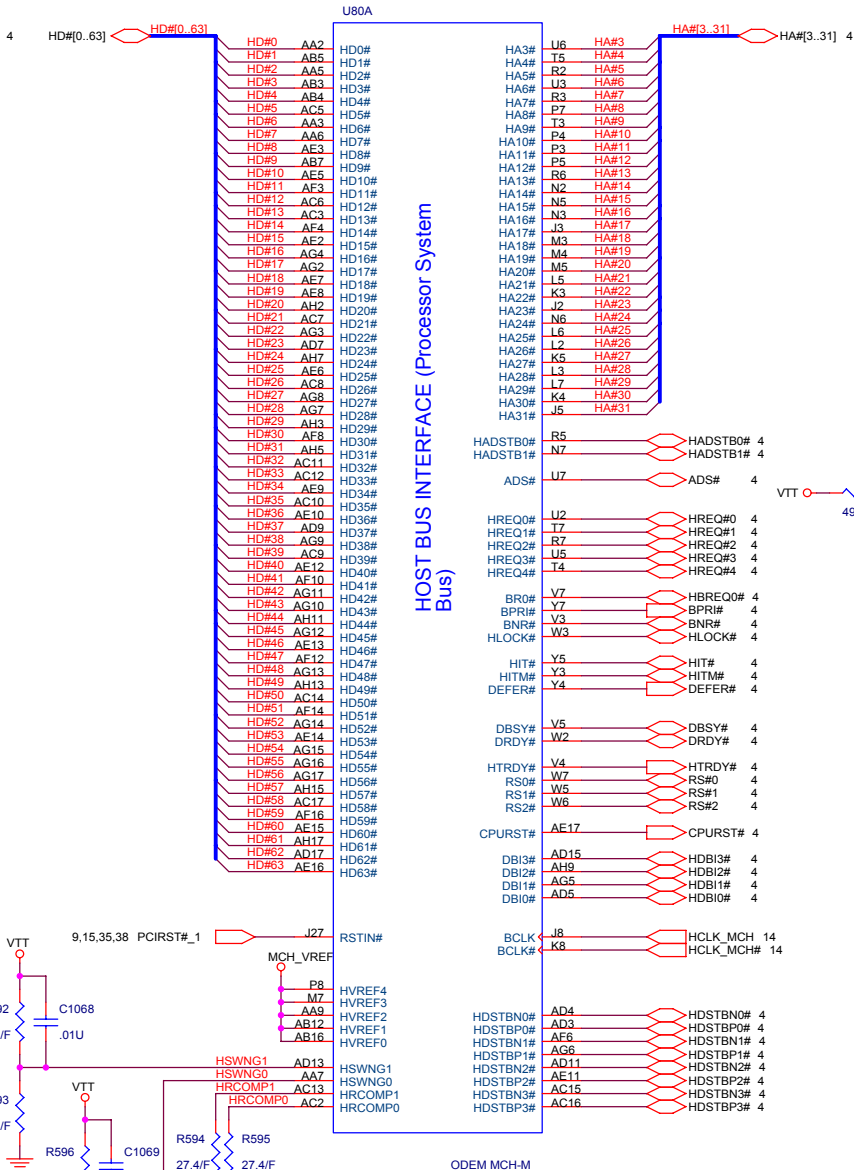
Total caps = 2633 uF
ESR = 15m ohm/5 // 5m ohm/25 // 5m ohm/15



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| | | |
|-----------------------------------|------------------------|---------------|
| Title Banias Processor (POWER) | | |
| Size | Document Number JM2 | Rev 3K |
| Date: | 星期五, 六月 06, 2003 | Sheet 5 of 49 |



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QUANTA COMPUTER

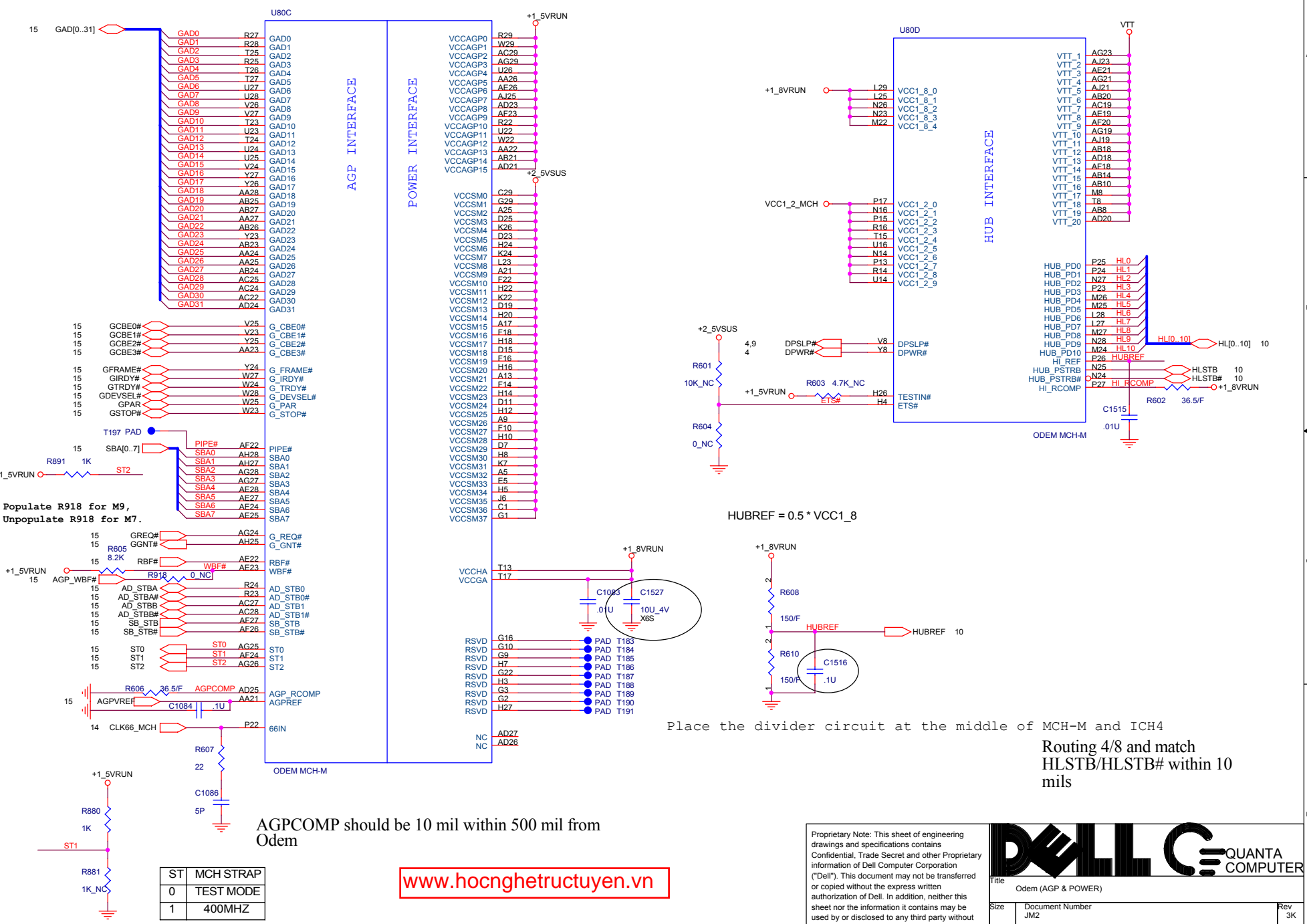
Title: Odem (HOST)

Size: Document Number JM2

Date: 星期五, 六月 06, 2003

Sheet: 6 of 49

Rev: 3B



Populate R918 for M9,
Unpopulate R918 for M7.

| ST | MCH STRAP |
|----|-----------|
| 0 | TEST MODE |
| 1 | 400MHZ |

AGPCOMP should be 10 mil within 500 mil from Odem

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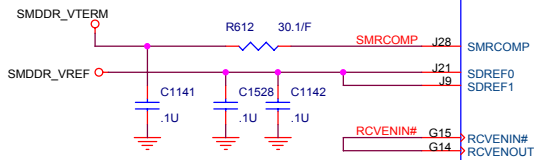
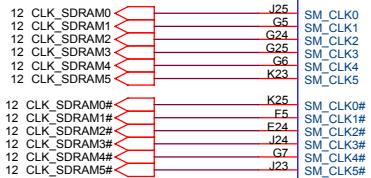
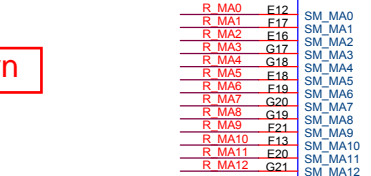
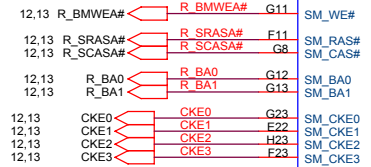
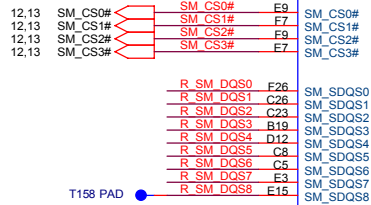
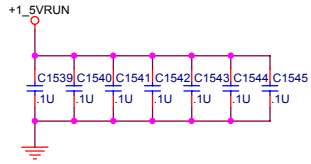
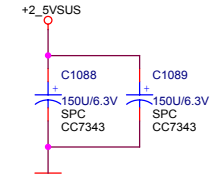
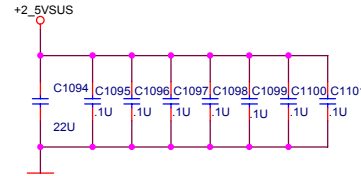
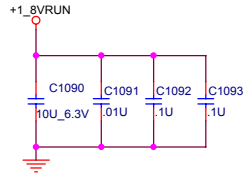
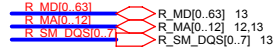
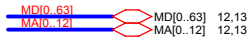
Place the divider circuit at the middle of MCH-M and ICH4

Routing 4/8 and match
HLSTB/HLSTB# within 10
mils

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| | | | |
|-------|------------------|--------------------|---------|
| Title | | Odem (AGP & POWER) | |
| Size | Document Number | Rev | |
| | JM2 | 3K | |
| Date: | 星期五, 六月 06, 2003 | Sheet | 7 of 49 |



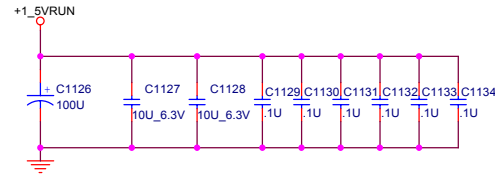
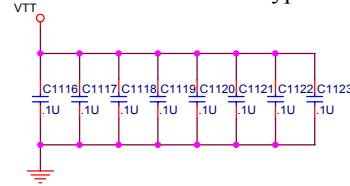
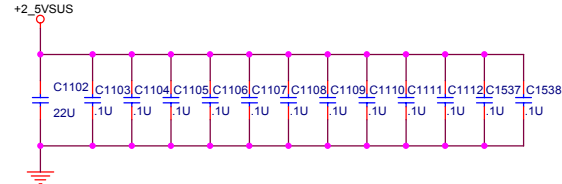
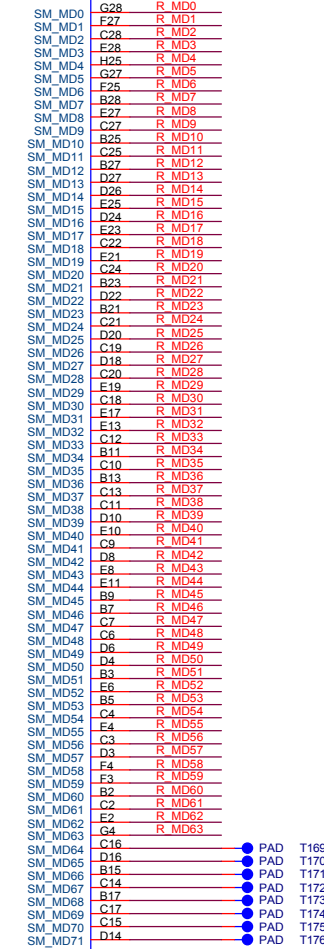
U80B

DDR INTERFACE

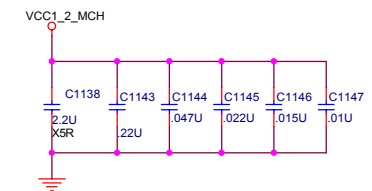
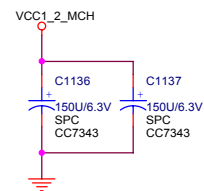
ODEM MCH-M

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RCVENIN# and RCVENOUT# ROUTING RULE
 L1 - MCH-M Feedback Signal Pin to Signal Via: Max = 40 mils
 L2 - MCH-M RCVENOUT# Signal Via to RCVENIN# Signal Via: Must = 100 mils +/- 5mils
 L3 - Signal Via to MCH-M Feedback Signal Pin: Max = 40 mils



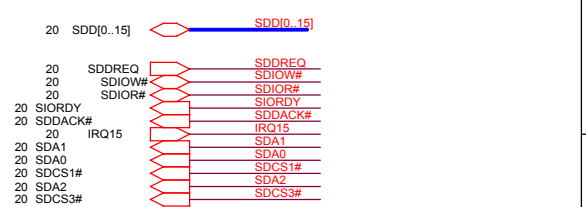
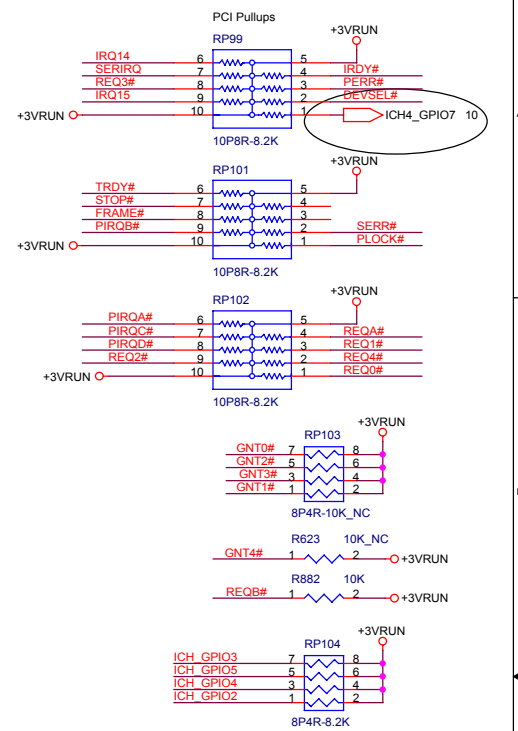
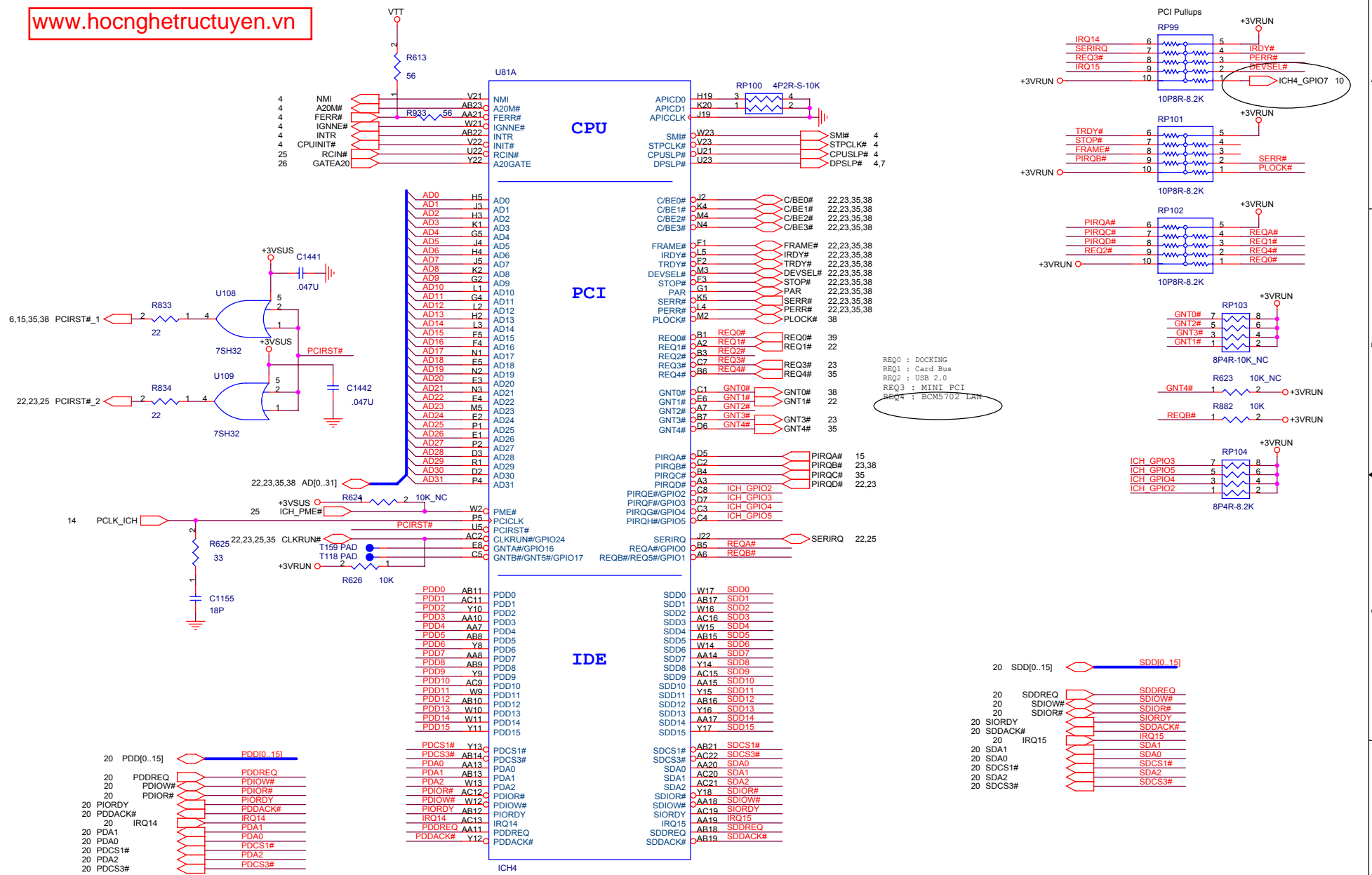
Place the bypass caps close to Odem MCH-M



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| | | | |
|-------|------------------|--------------|---------|
| Title | | Odem (DDR) | |
| Size | Document Number | Rev | |
| | JM2 | 2E | |
| Date: | 星期五, 六月 06, 2003 | Sheet | 8 of 49 |



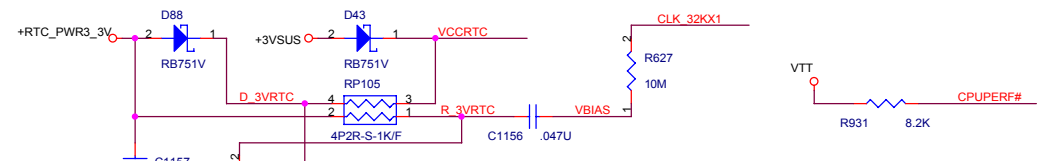
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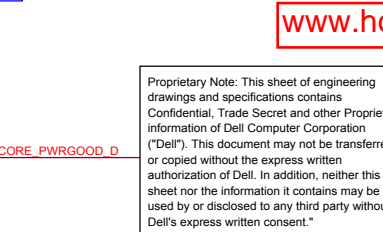
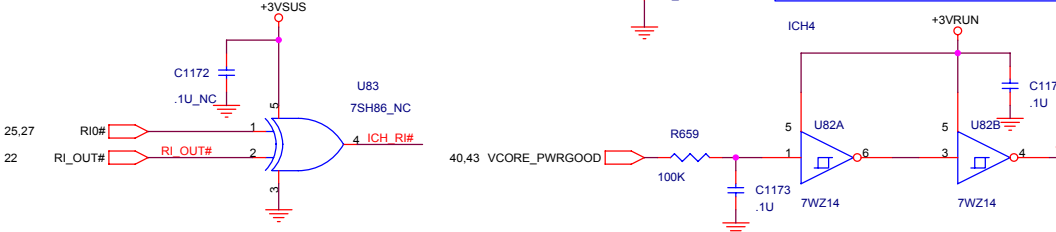
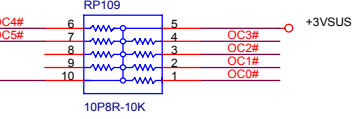
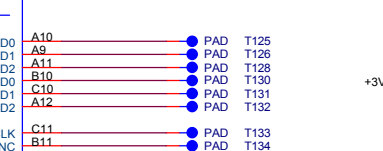
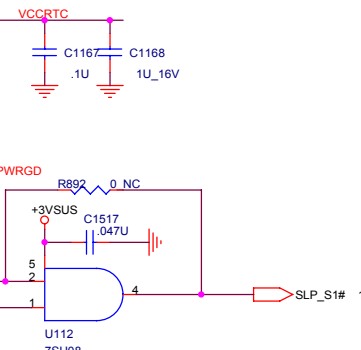
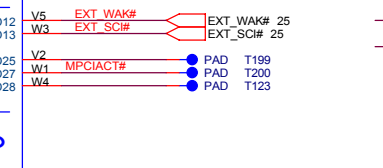
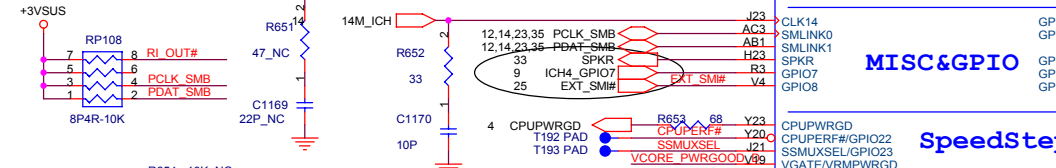
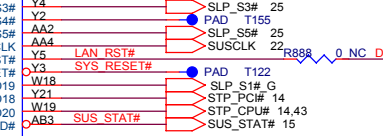
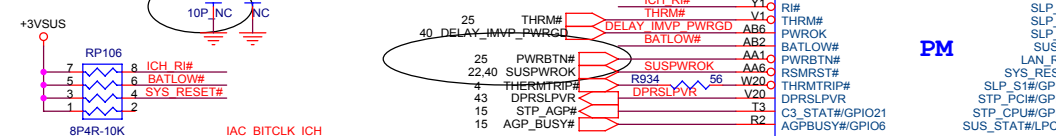
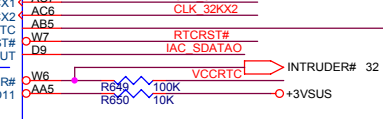
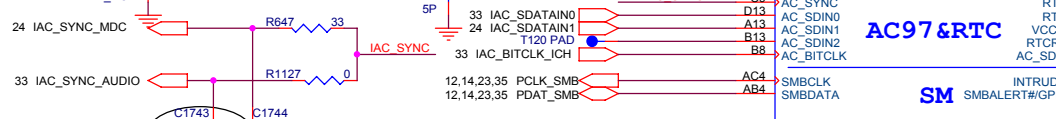
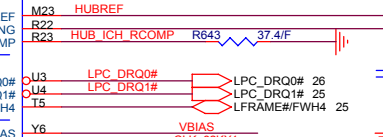
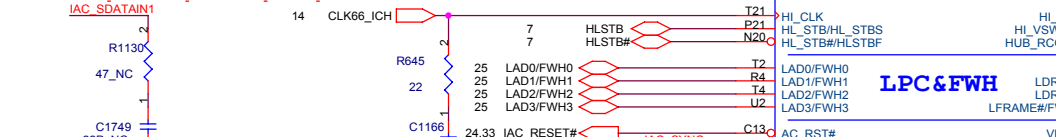
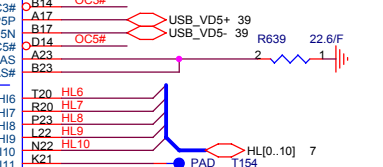
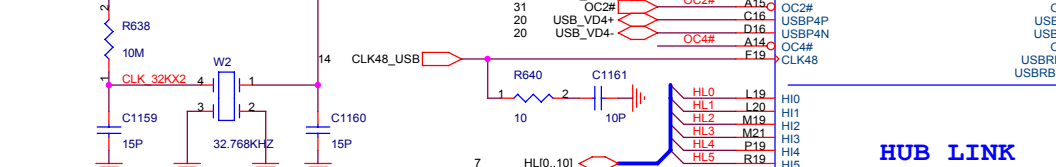
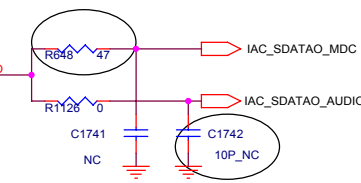
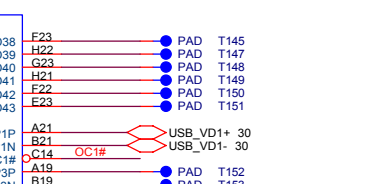
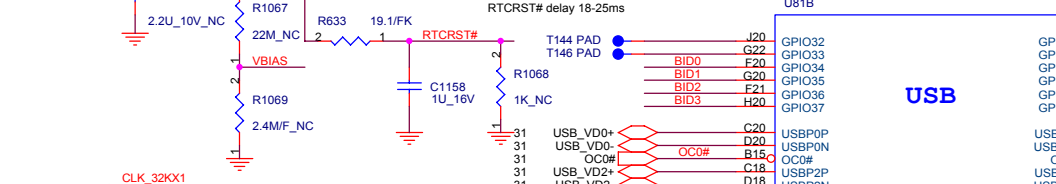
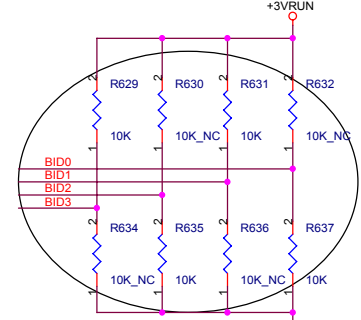
Title: ICH4-M (CPU,PCI,IDE)

Size: Document Number JM2 Rev 3C

Date: 星期五, 六月 06, 2003 Sheet 9 of 49



| BID3 | BID2 | BID1 | BID0 | Board Revision |
|------|------|------|------|----------------|
| 0 | 0 | 0 | 0 | PROTO1 |
| 0 | 0 | 1 | 0 | PROTO2 |
| 0 | 0 | 1 | 1 | PROTO3 |
| 0 | 1 | 0 | 0 | PROTO4 |
| 0 | 1 | 0 | 1 | PROTO4.5 |
| 0 | 1 | 1 | 0 | Proto 5 |
| 0 | 1 | 1 | 1 | Proto 5.5 |
| 1 | 0 | 0 | 0 | Pre-QT |
| 1 | 0 | 0 | 1 | QT (A00) |
| 1 | 0 | 1 | 0 | A01 |



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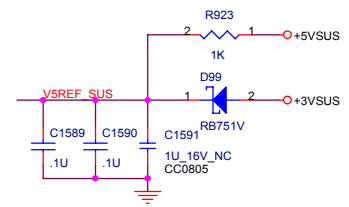
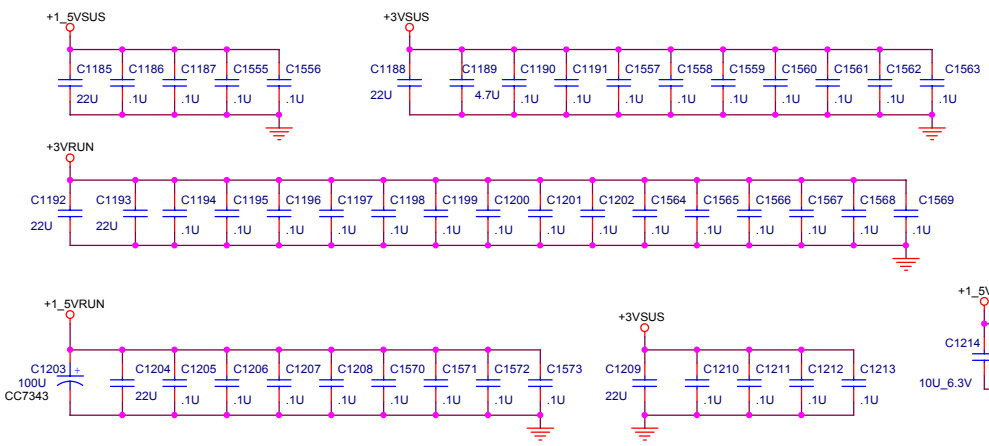
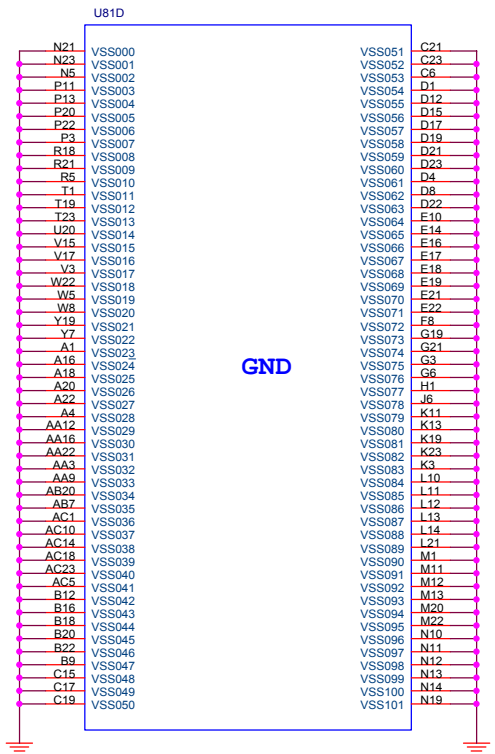
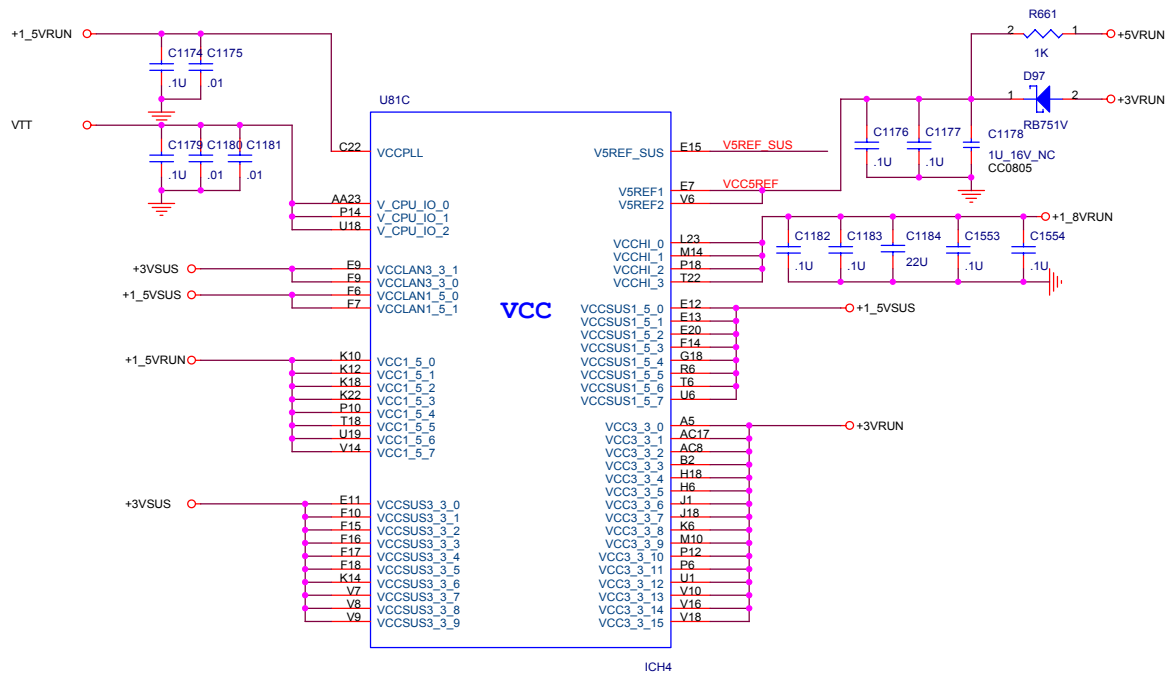
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Size: Document Number JM2

Date: 星期五, 六月 06, 2003

Sheet: 10 of 49

Rev: 31

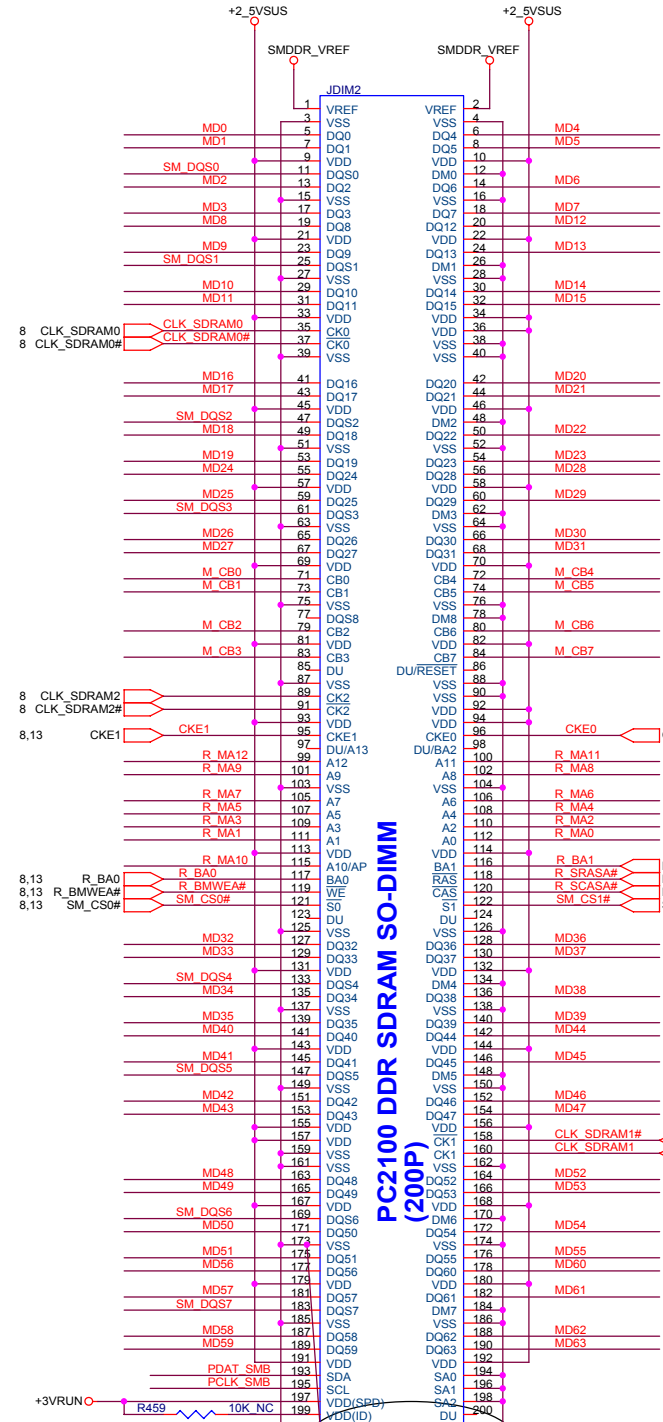


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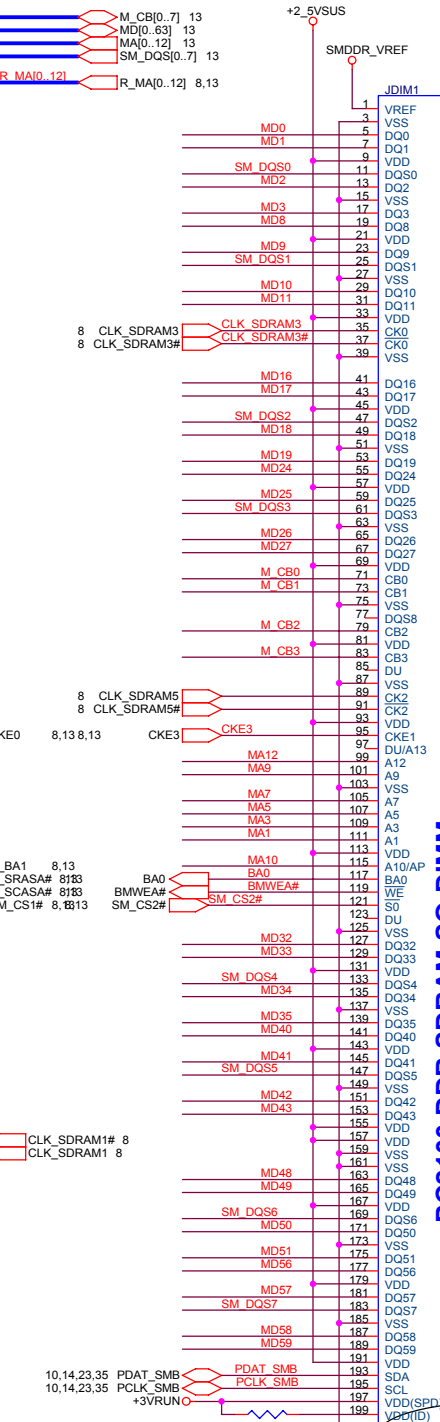


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| Title: ICH4-M (POWER&GND) | | |
| Size: JM2 | Document Number: JM2 | Rev: 3A |
| Date: 星期五, 六月 06, 2003 | Sheet: 11 | of 49 |



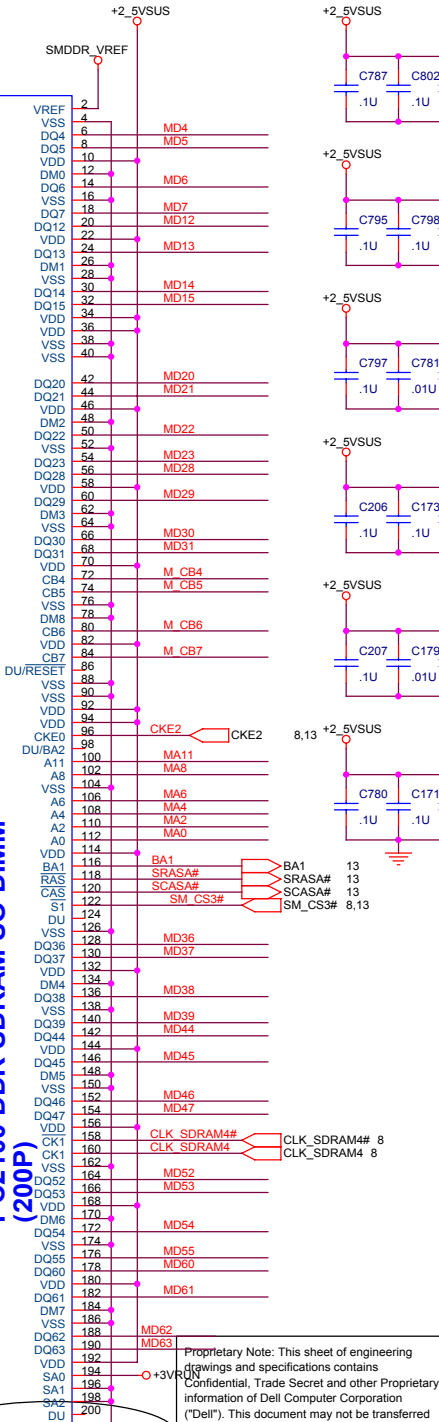
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CKE 0,1

CLOCK 3,4,5
CKE 2,3



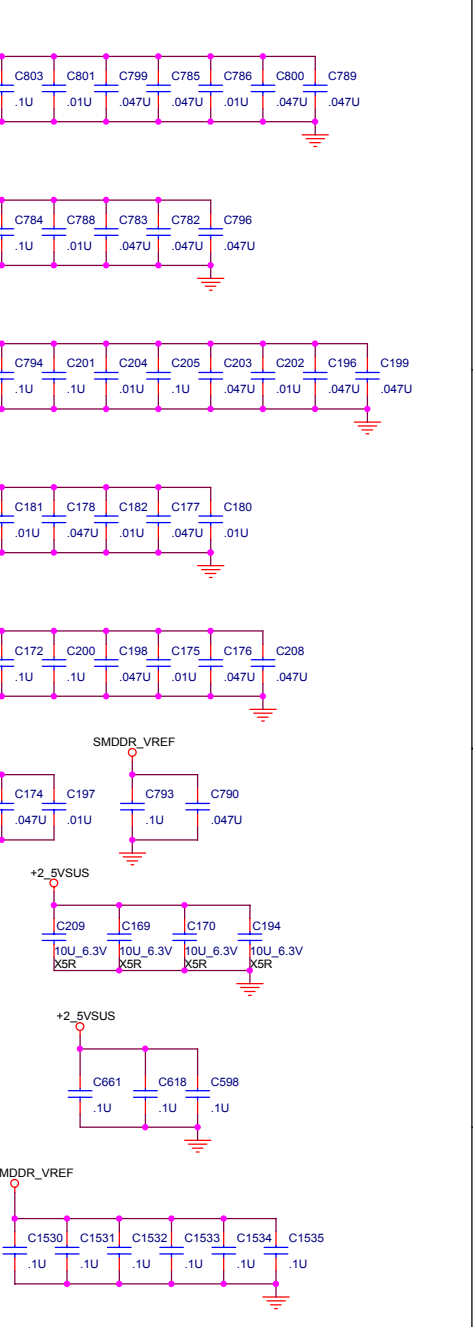
CLOCK 0,1,2
CKE 0,1

CLOCK 3,4,5
CKE 2,3



CLOCK 0,1,2
CKE 0,1

CLOCK 3,4,5
CKE 2,3



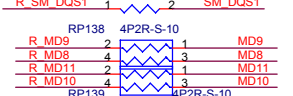
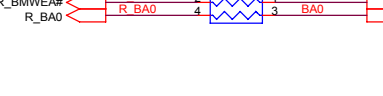
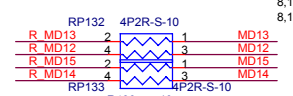
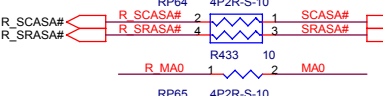
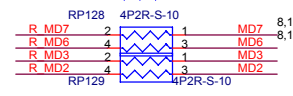
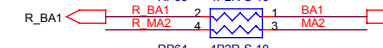
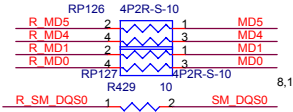
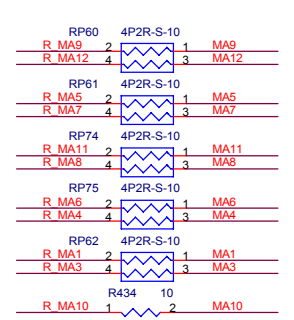
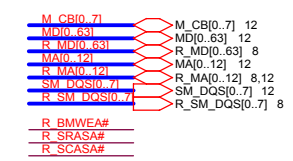
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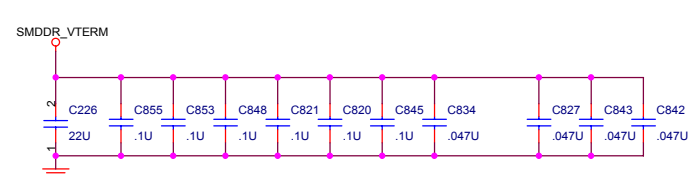
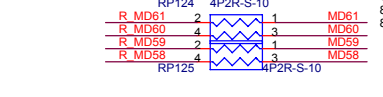
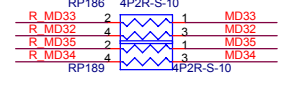
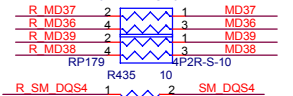
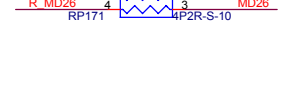
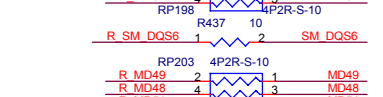
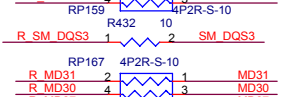
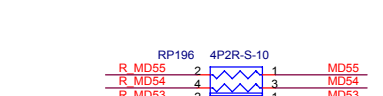
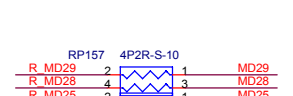
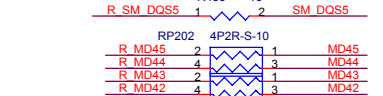
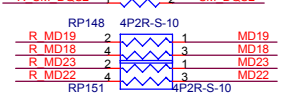
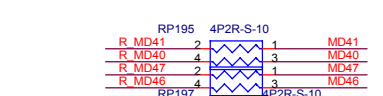
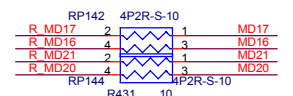
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|------|-----------------|-----|
| Size | Document Number | Rev |
| | JM2 | 3F |

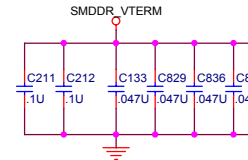
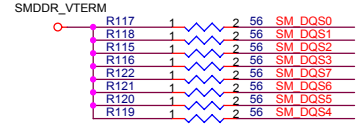
Date: 星期六 06. 2003 Sheet 12 of 49



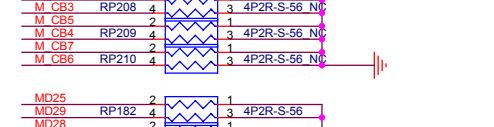
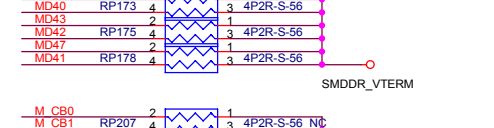
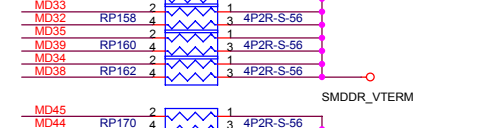
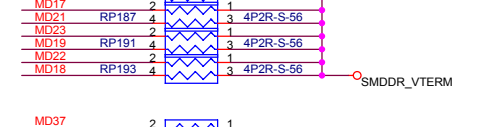
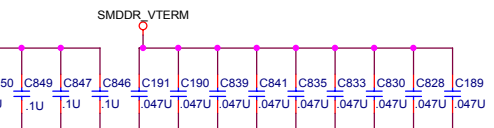
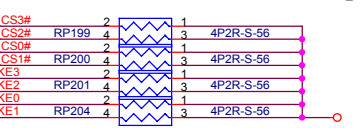
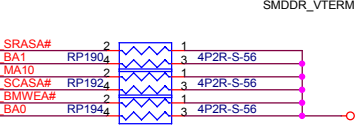
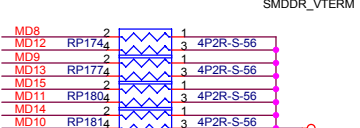
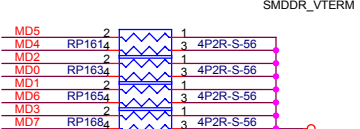
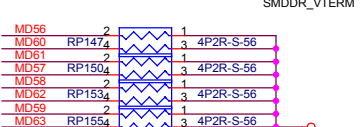
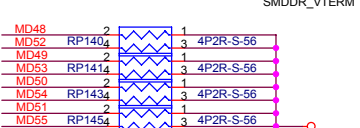
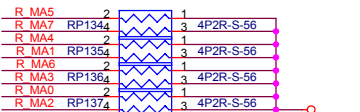
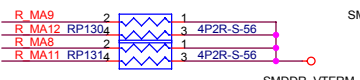
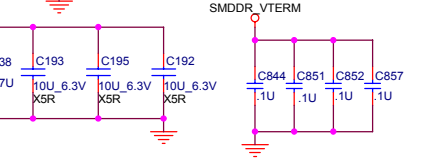
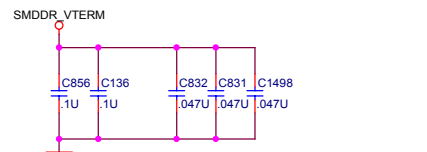
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Place Rterms close to JDIMM 1



For terminal R-pack.



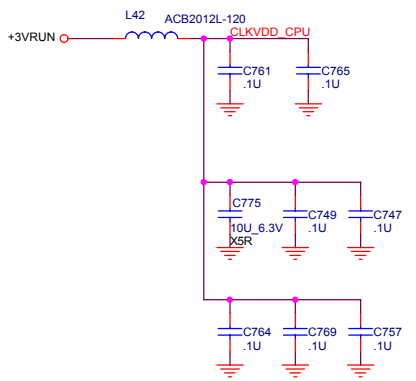
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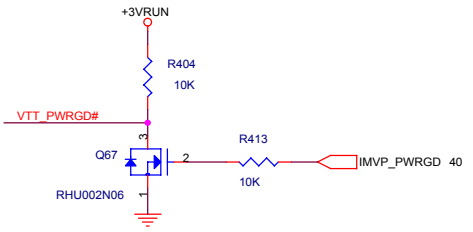
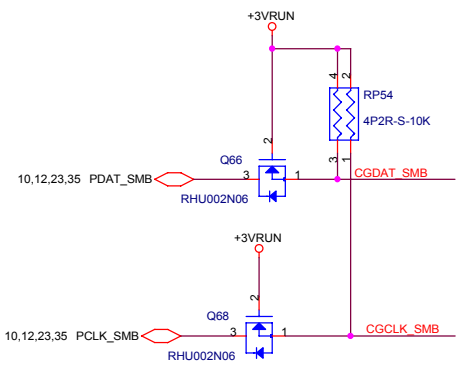
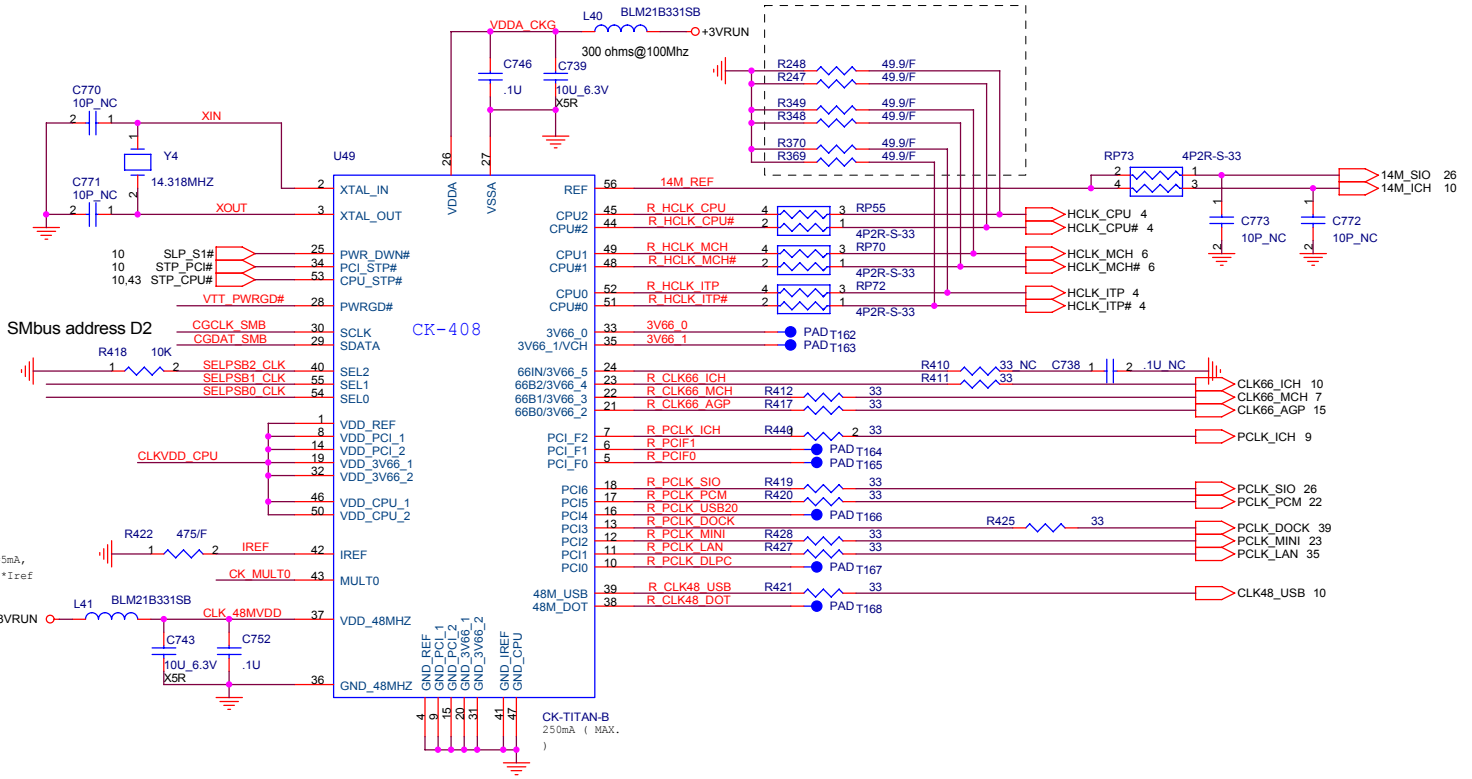
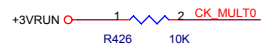
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| Title | | DDR RES.ARRAY | |
| Size | Document Number | Rev | |
| | JM2 | 1A | |
| Date: | 星期五, 六月 06, 2003 | Sheet | 13 of 49 |

| S2 | S1 | S0 | CPU | 3V66[0..4] | 3V66_5/66IN |
|----|----|----|-----|------------|-------------|
| 1 | 0 | 0 | 66 | 66IN | 66 Input |
| 1 | 0 | 1 | 100 | 66IN | 66 Input |
| 1 | 1 | 0 | 200 | 66IN | 66 Input |
| 1 | 1 | 1 | 133 | 66IN | 66 Input |
| 0 | 0 | 0 | 66 | 66 | 66 Input |
| 0 | 0 | 1 | 100 | 66 | 66 Input |
| 0 | 1 | 0 | 200 | 66 | 66 Input |
| 0 | 1 | 1 | 133 | 66 | 66 Input |

Place these termination to close CK408.



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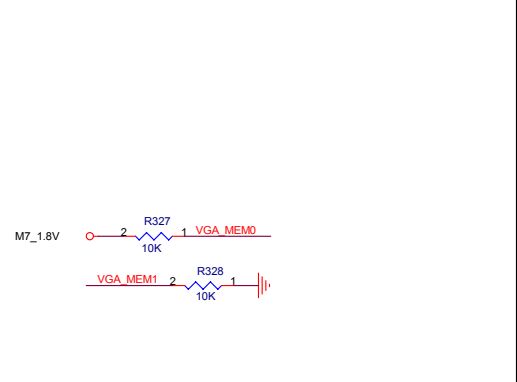
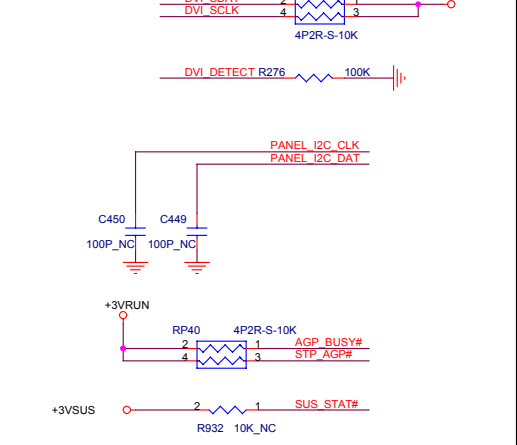
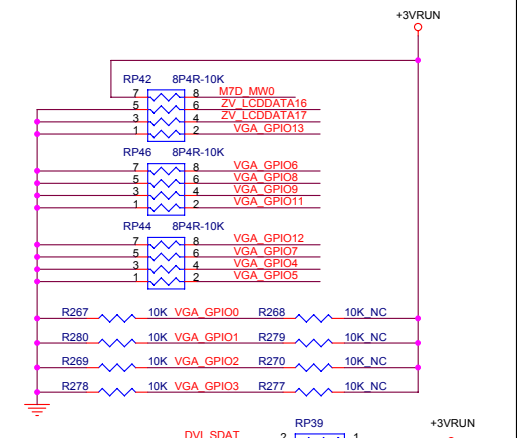
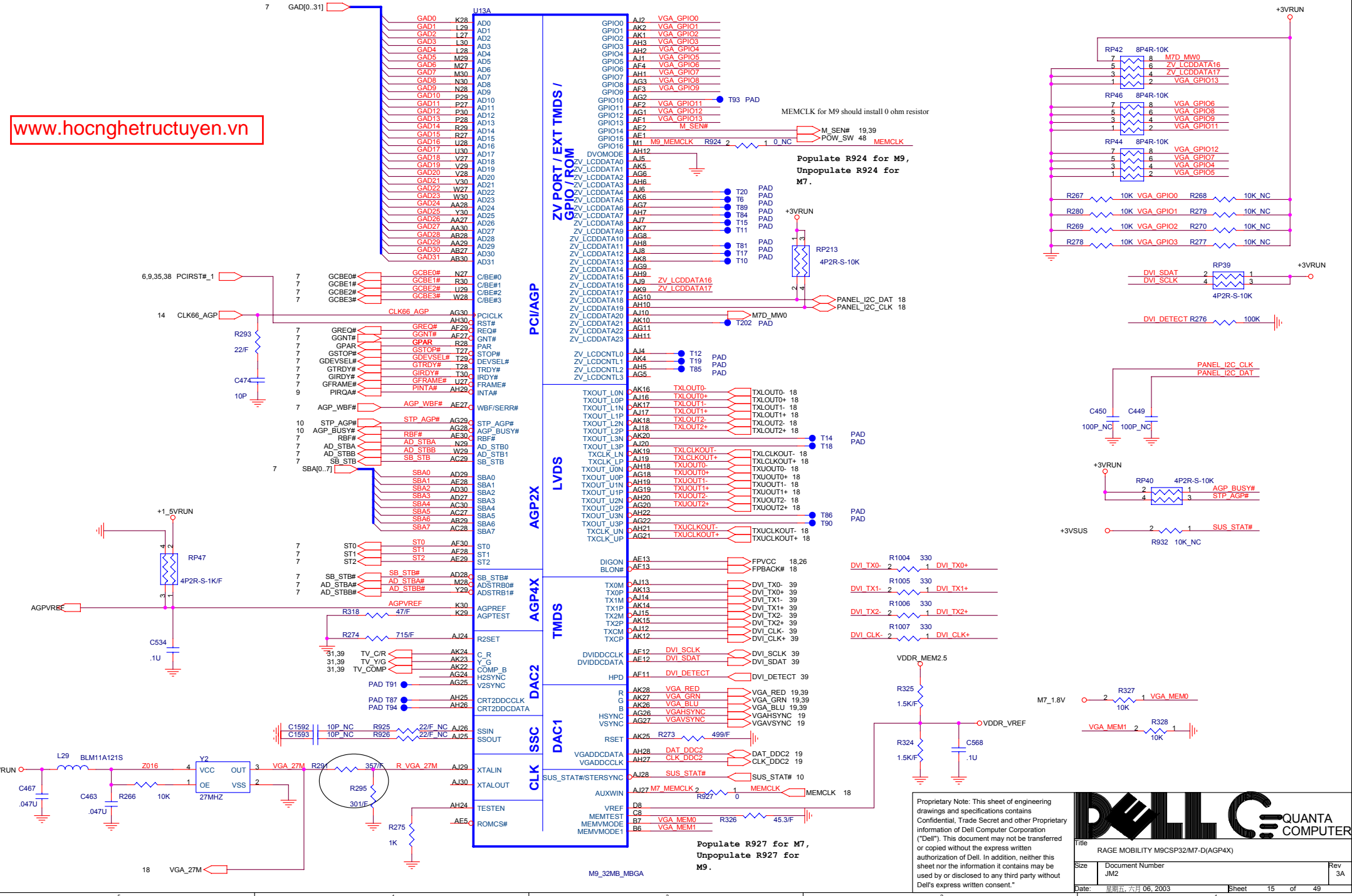
These are for backdrive issue

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| | | | |
|-------|------------------|-------|-----------------|
| Title | | | CLOCK GENERATOR |
| Size | Document Number | Rev | |
| | JM2 | 1A | |
| Date: | 星期五, 六月 06, 2003 | Sheet | 14 of 49 |

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Title: RAGE MOBILITY M9CSP32M7-D(AGP4X)

Size: Document Number JM2

Date: 星期五, 六月 06, 2003

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Rev 3A

Populate R927 for M7,
Unpopulate R927 for M9.

M9_32MB_MBGA

| | | | |
|-----|--------|--------|-----|
| J30 | MDDA0 | MDQB0 | C7 |
| J29 | MDDA1 | MDQB1 | D7 |
| H30 | MDDA2 | MDQB2 | D6 |
| F30 | MDDA3 | MDQB3 | C4 |
| F29 | MDDA4 | MDQB4 | D4 |
| E29 | MDDA5 | MDQB5 | C3 |
| J28 | MDDA6 | MDQB6 | D3 |
| J27 | MDDA7 | MDQB7 | A5 |
| H28 | MDDA8 | MDQB8 | B5 |
| H27 | MDDA9 | MDQB9 | A4 |
| E28 | MDDA10 | MDQB10 | B4 |
| F28 | MDDA11 | MDQB11 | B2 |
| F27 | MDDA12 | MDQB12 | A1 |
| E28 | MDDA13 | MDQB13 | B1 |
| E27 | MDDA14 | MDQB14 | E4 |
| D30 | MDDA15 | MDQB15 | E3 |
| D29 | MDDA16 | MDQB16 | F3 |
| C30 | MDDA17 | MDQB17 | F4 |
| C29 | MDDA18 | MDQB18 | H3 |
| A30 | MDDA19 | MDQB19 | H4 |
| A29 | MDDA20 | MDQB20 | J3 |
| A28 | MDDA21 | MDQB21 | J4 |
| B28 | MDDA22 | MDQB22 | C1 |
| D28 | MDDA23 | MDQB23 | D1 |
| C28 | MDDA24 | MDQB24 | D2 |
| D27 | MDDA25 | MDQB25 | F1 |
| C27 | MDDA26 | MDQB26 | F2 |
| D26 | MDDA27 | MDQB27 | G1 |
| C26 | MDDA28 | MDQB28 | G2 |
| D24 | MDDA29 | MDQB29 | R1 |
| C24 | MDDA30 | MDQB30 | R2 |
| D18 | MDDA31 | MDQB31 | T1 |
| C18 | MDDA32 | MDQB32 | T2 |
| D17 | MDDA33 | MDQB33 | V1 |
| C17 | MDDA34 | MDQB34 | V2 |
| D15 | MDDA35 | MDQB35 | W1 |
| C15 | MDDA36 | MDQB36 | W2 |
| D14 | MDDA37 | MDQB37 | T3 |
| C14 | MDDA38 | MDQB38 | T4 |
| B17 | MDDA39 | MDQB39 | U3 |
| A17 | MDDA40 | MDQB40 | U4 |
| B16 | MDDA41 | MDQB41 | W3 |
| B14 | MDDA42 | MDQB42 | W4 |
| A14 | MDDA43 | MDQB43 | Y3 |
| B13 | MDDA44 | MDQB44 | Y4 |
| A13 | MDDA45 | MDQB45 | Y1 |
| D13 | MDDA46 | MDQB46 | Y2 |
| C13 | MDDA47 | MDQB47 | AA1 |
| D12 | MDDA48 | MDQB48 | AA2 |
| C12 | MDDA49 | MDQB49 | AC1 |
| D10 | MDDA50 | MDQB50 | AC2 |
| C10 | MDDA51 | MDQB51 | AD1 |
| D9 | MDDA52 | MDQB52 | AD2 |
| C9 | MDDA53 | MDQB53 | AA3 |
| B12 | MDDA54 | MDQB54 | AA4 |
| A12 | MDDA55 | MDQB55 | AB3 |
| B11 | MDDA56 | MDQB56 | AB4 |
| A11 | MDDA57 | MDQB57 | AD3 |
| B9 | MDDA58 | MDQB58 | AD4 |
| A9 | MDDA59 | MDQB59 | AE3 |
| B8 | MDDA60 | MDQB60 | AE4 |
| A8 | MDDA61 | MDQB61 | H2 |
| B7 | MDDA62 | MDQB62 | H1 |
| A7 | MDDA63 | MDQB63 | J2 |
| | | | J1 |
| | | | K3 |
| | | | K4 |
| | | | L4 |
| | | | M3 |
| | | | M4 |
| | | | N2 |
| | | | N1 |
| | | | N4 |
| | | | N3 |
| | | | D5 |
| | | | B3 |
| | | | G3 |
| | | | E1 |
| | | | U1 |
| | | | V3 |
| | | | AB1 |
| | | | AC3 |
| | | | C5 |
| | | | A3 |
| | | | G4 |
| | | | E2 |
| | | | U2 |
| | | | V4 |
| | | | AB2 |
| | | | AC4 |
| | | | P4 |
| | | | R3 |
| | | | R4 |
| | | | P2 |
| | | | P3 |
| | | | P1 |
| | | | K2 |
| | | | K1 |
| | | | L2 |
| | | | L1 |
| | | | M2 |

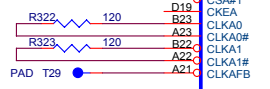
MEMORY INTERFACE

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| | | |
|-----|-----|-----|
| L15 | VSS | T15 |
| M10 | VSS | U15 |
| N10 | VSS | V15 |
| P10 | VSS | W15 |
| R10 | VSS | Y15 |
| T10 | VSS | L16 |
| U10 | VSS | M16 |
| V10 | VSS | N16 |
| W10 | VSS | P16 |
| Y10 | VSS | R16 |
| A2 | VSS | T16 |
| B2 | VSS | U16 |
| N11 | VSS | V16 |
| P11 | VSS | W16 |
| R11 | VSS | Y16 |
| T11 | VSS | L17 |
| U11 | VSS | M17 |
| V11 | VSS | N17 |
| W11 | VSS | P17 |
| Y11 | VSS | R17 |
| L12 | VSS | T17 |
| M12 | VSS | U17 |
| N12 | VSS | V17 |
| P12 | VSS | W17 |
| R12 | VSS | Y17 |
| T12 | VSS | L18 |
| U12 | VSS | M18 |
| F2 | VSS | N18 |
| W12 | VSS | P18 |
| Y12 | VSS | R18 |
| L13 | VSS | T18 |
| M13 | VSS | U18 |
| N13 | VSS | Y18 |
| P13 | VSS | W18 |
| R13 | VSS | Y18 |
| T13 | VSS | L19 |
| U13 | VSS | M19 |
| V13 | VSS | N19 |
| W13 | VSS | P19 |
| Y13 | VSS | R19 |
| U3 | VSS | T18 |
| L14 | VSS | U19 |
| M14 | VSS | V19 |
| N14 | VSS | W19 |
| P14 | VSS | Y19 |
| R14 | VSS | L20 |
| Y4 | VSS | M20 |
| U14 | VSS | N20 |
| V14 | VSS | P20 |
| W14 | VSS | R20 |
| Y14 | VSS | T20 |
| L15 | VSS | U20 |
| M15 | VSS | V20 |
| N15 | VSS | W20 |
| R15 | VSS | Y20 |
| | | L21 |
| | | M21 |
| | | N21 |
| | | P21 |
| | | R21 |
| | | T21 |
| | | U21 |
| | | V21 |
| | | W21 |
| | | Y21 |
| | | P15 |
| | | G20 |
| | | G21 |
| | | G22 |
| | | G23 |
| | | G24 |
| | | G7 |
| | | G8 |
| | | G9 |
| | | H23 |
| | | H24 |
| | | H7 |
| | | H8 |
| | | J24 |
| | | J7 |
| | | K24 |
| | | K7 |
| | | L24 |
| | | L7 |
| | | M24 |
| | | M7 |
| | | N24 |
| | | N7 |
| | | P24 |
| | | P7 |
| | | R24 |
| | | R7 |
| | | T24 |
| | | T7 |
| | | U24 |
| | | U7 |
| | | V24 |
| | | V7 |
| | | W24 |
| | | W7 |
| | | Y24 |
| | | Y7 |

GROUND

M3_32MB_MBGA

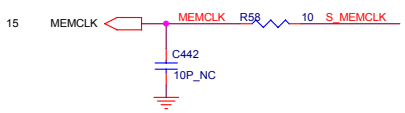
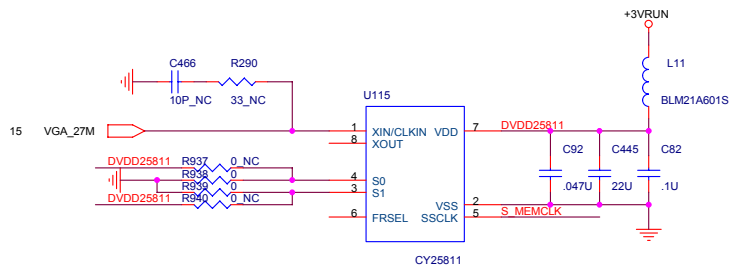
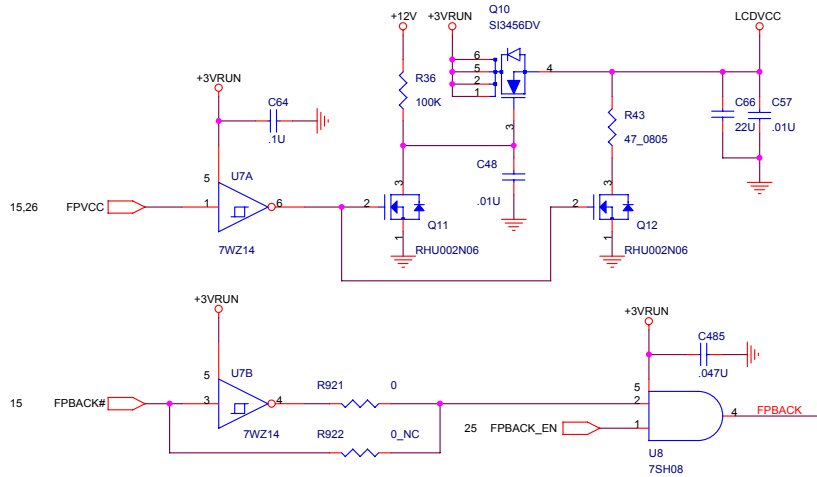


M3_32MB_MBGA

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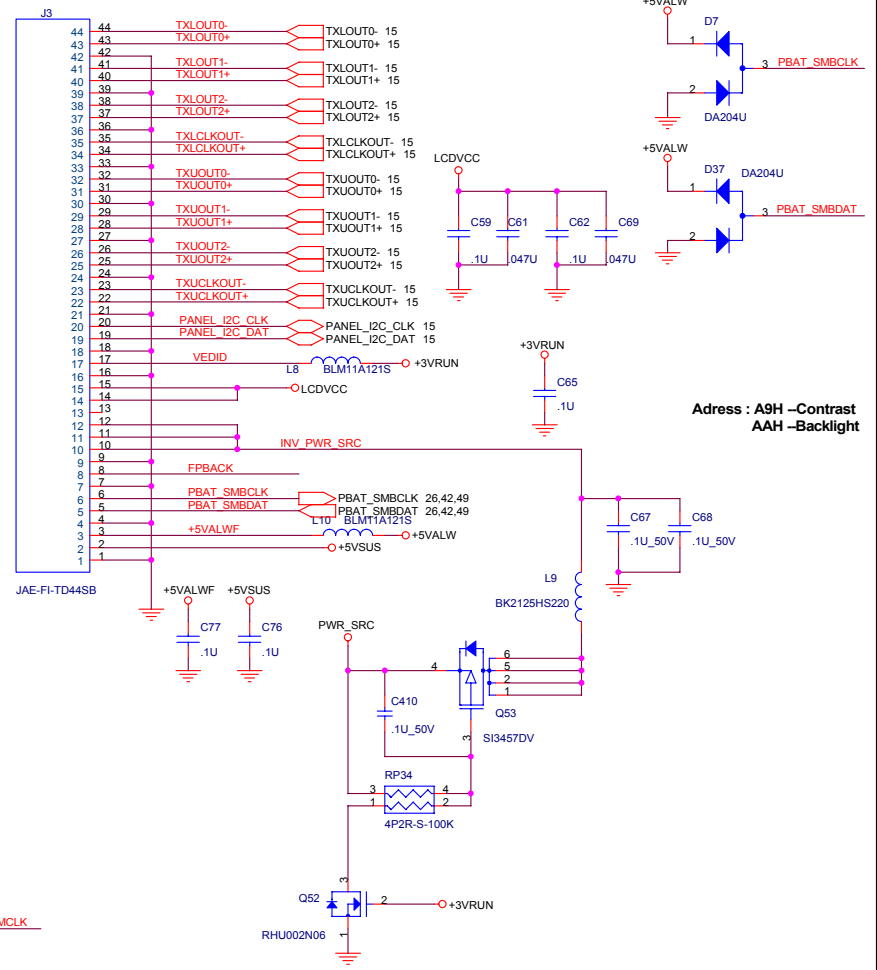


| | | |
|---------------------------------|------------------|----------------|
| Title | | |
| RAGE MOBILITY M9CSP32M7-D_B_MEM | | |
| Size | Document Number | Rev |
| | JM2 | 1A |
| Date: | 星期五, 六月 06, 2003 | Sheet 16 of 49 |



| | | | | | | | | | |
|------|---------|---------|---------|---------|-------|-------|-------|-------|-----------|
| S1 | 0 | 0 | 0 | NC | 1 | 1 | NC | 1 | NC |
| S0 | 0 | NC | 1 | 0 | 1 | 0 | 1 | NC | NC |
| Mode | Center | Center | Center | Center | Down | Down | Down | Down | No spread |
| Rate | +/-1.2% | +/-0.9% | +/-0.5% | +/-0.4% | -2.5% | -1.8% | -1.5% | -0.6% | 0 |

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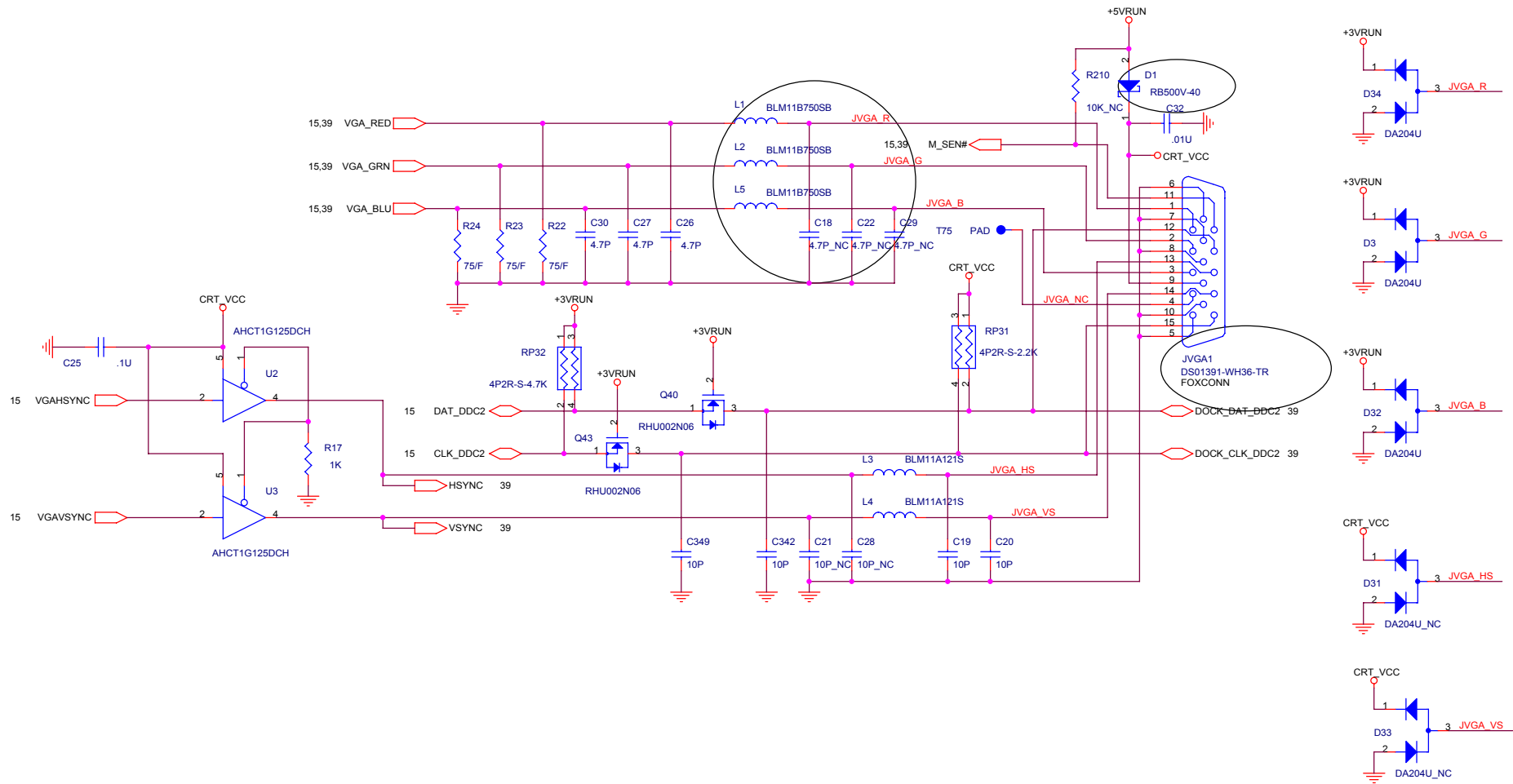


Address : A9H - Contrast
AAH - Backlight

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QUANTA COMPUTER

| | | |
|-------|------------------|------------------|
| Title | | LCD CONN&CY25245 |
| Size | Document Number | JM2 |
| Date: | 星期五, 六月 06, 2003 | Sheet 18 of 49 |
| | | Rev 1A |

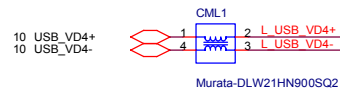
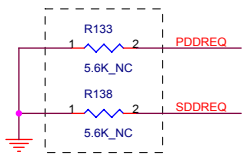


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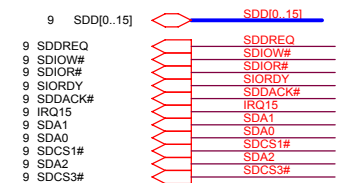
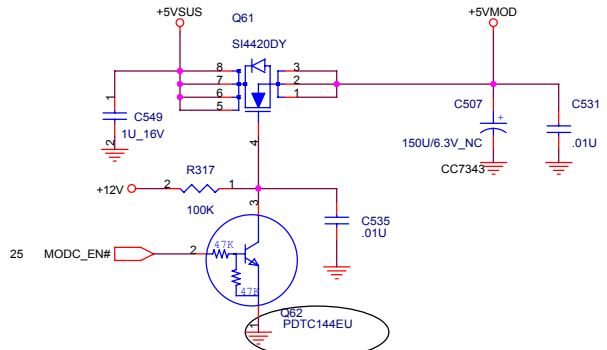
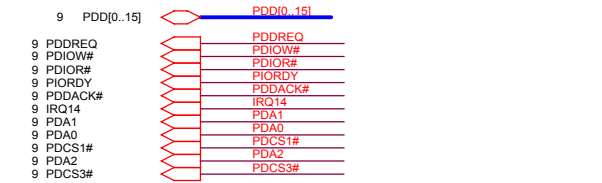
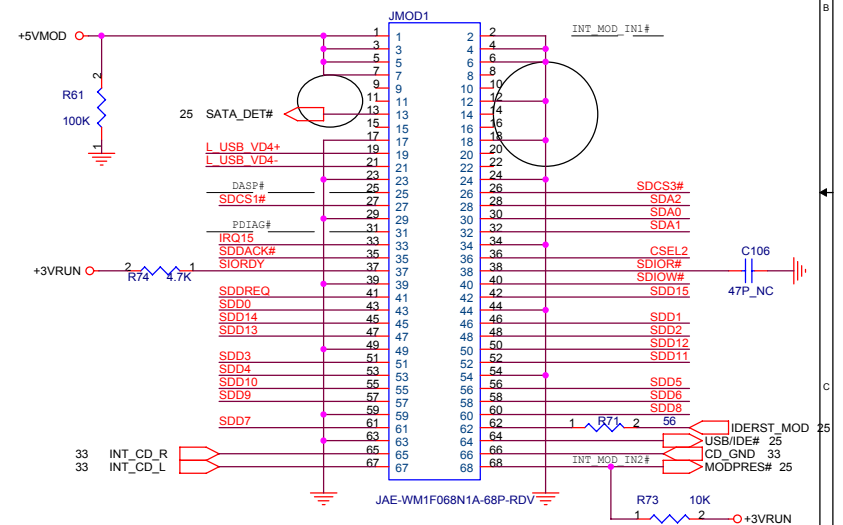
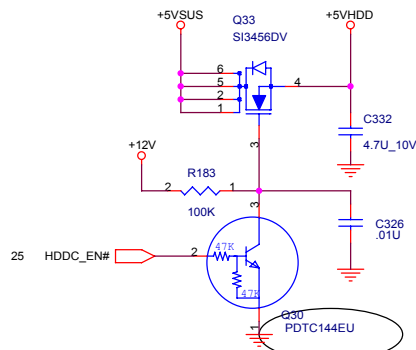
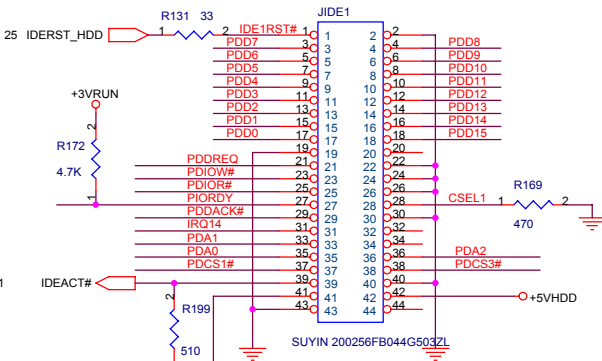
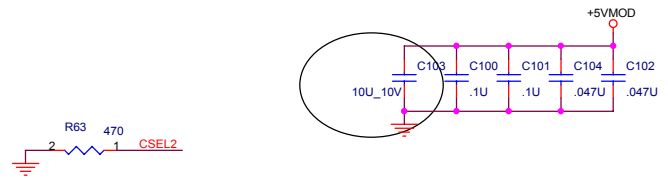
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| Title | | CRT CONN | |
| Size | Document Number | Rev | |
| | JM2 | 3F | |
| Date: | 星期五, 六月 06, 2003 | Sheet | 19 of 49 |



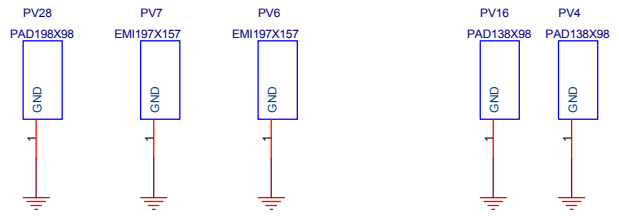
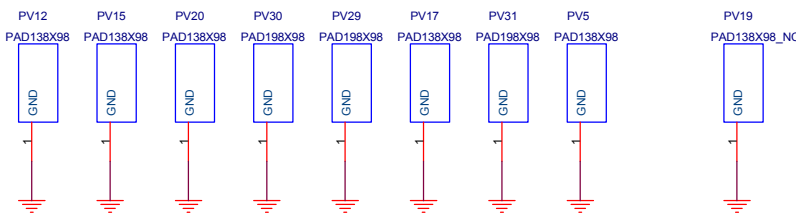
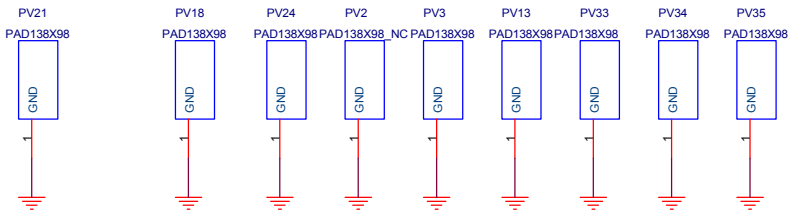
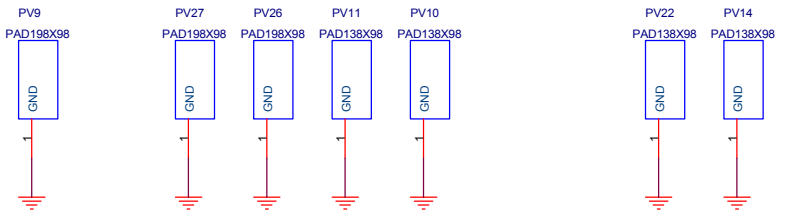
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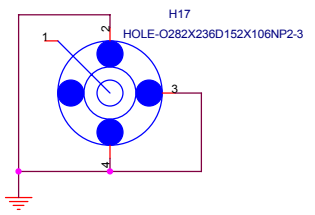
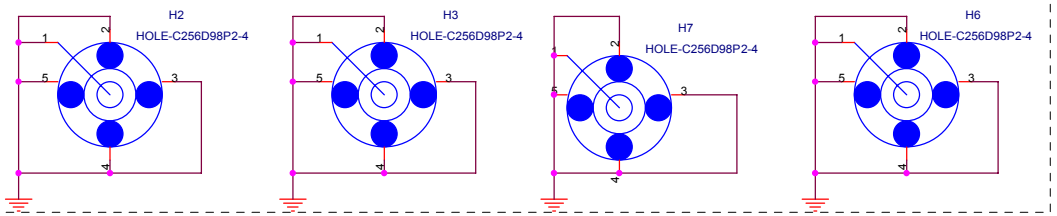


| | | | |
|-------|------------------|------------------|----------|
| Title | | IDE (HDD&CD_ROM) | |
| Size | Document Number | Rev | |
| 61 | JM2 | 3K | |
| Date: | 星期五, 六月 06, 2003 | Sheet | 20 of 49 |

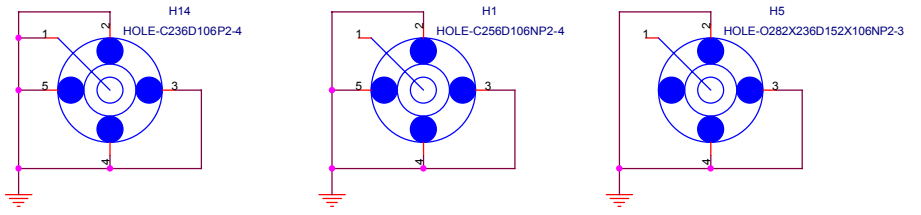


FOR AUDIO FOR DOCKING

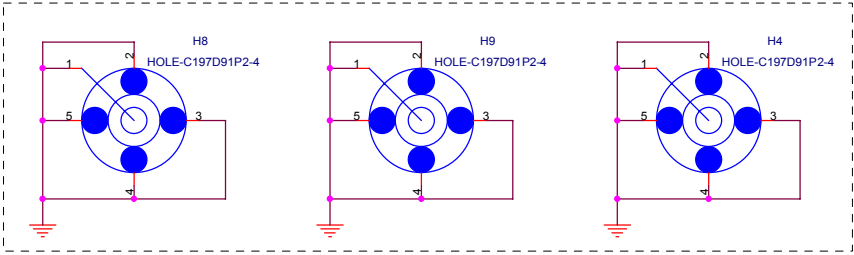
CPU



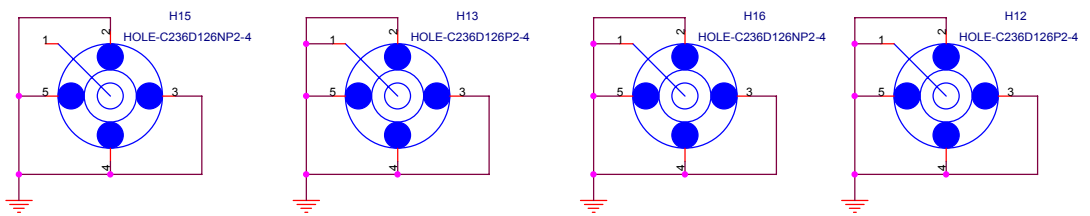
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HEAT SINK



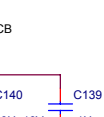
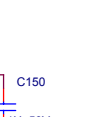
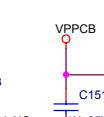
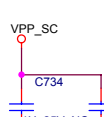
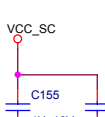
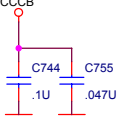
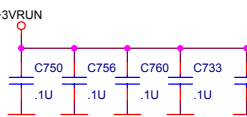
HDD



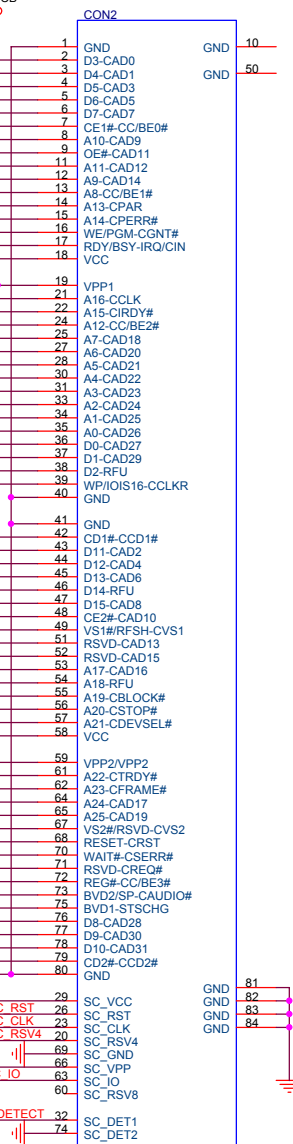
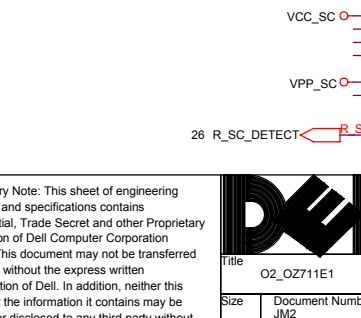
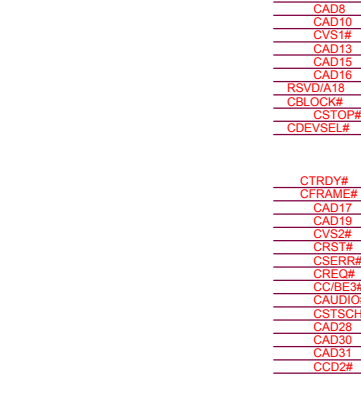
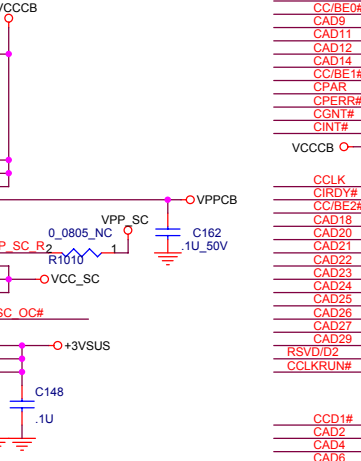
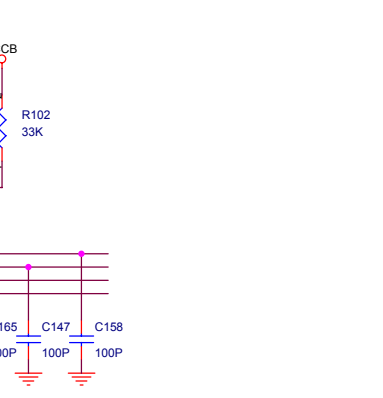
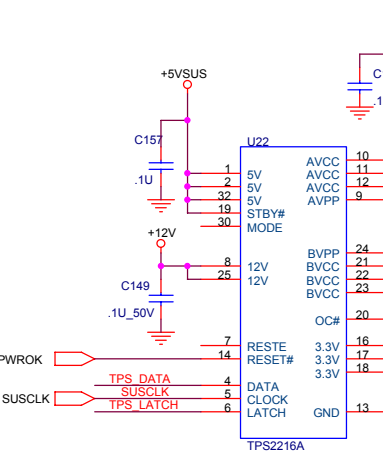
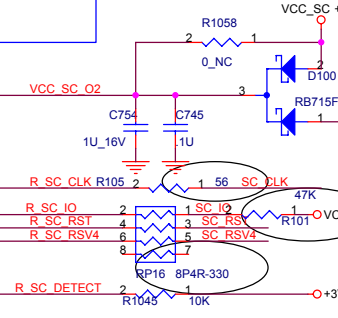
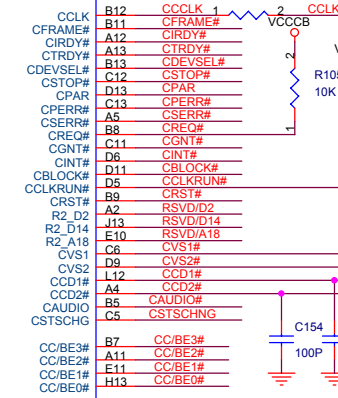
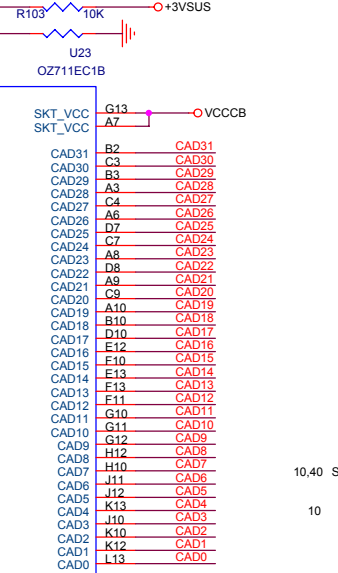
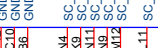
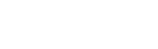
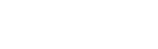
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| | | |
|-------|------------------|----------------|
| Title | | SCREW PAD |
| Size | Document Number | Rev |
| | JM2 | 3A |
| Date: | 星期五, 六月 06, 2003 | Sheet 21 of 49 |



CardBus+Smart Card: Keep SCB to high
CardBus only: Keep SCB to low



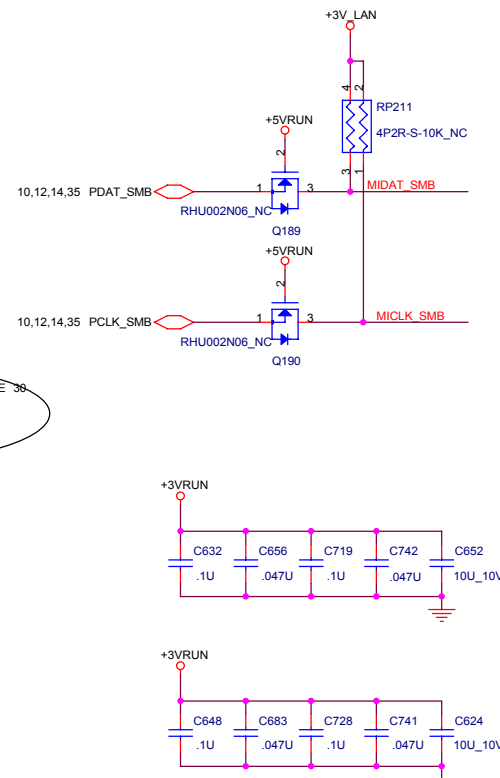
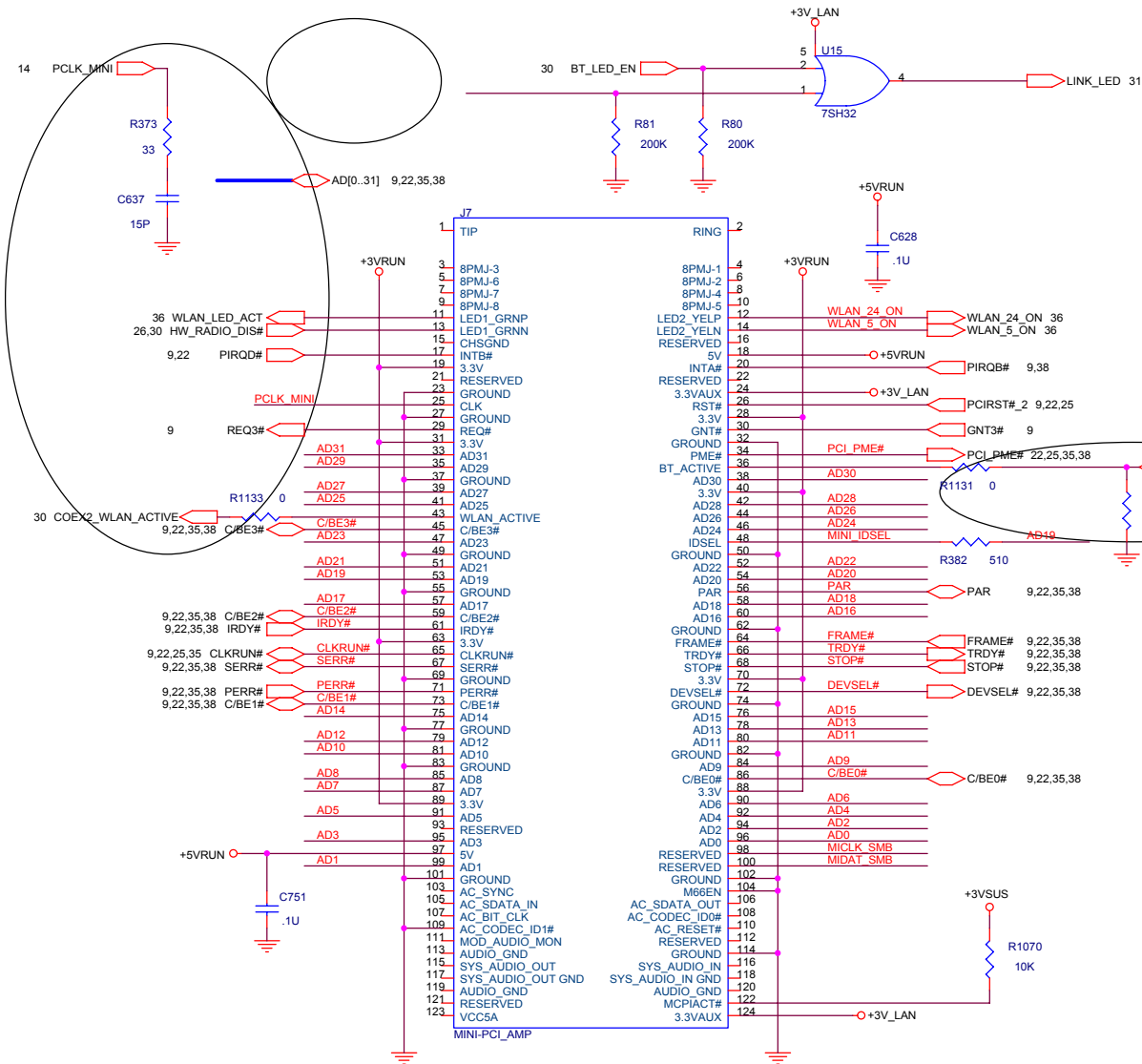
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Need to check power plane

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| | | | |
|-------|------------------|------------|----------|
| Title | | O2_OZ711E1 | |
| Size | Document Number | Rev 3G | |
| JM2 | | | |
| Date: | 星期五, 六月 06, 2003 | Sheet | 22 of 49 |

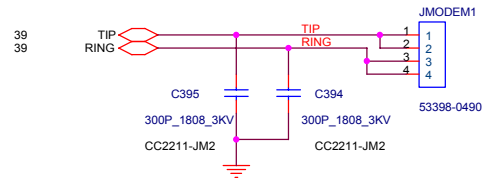
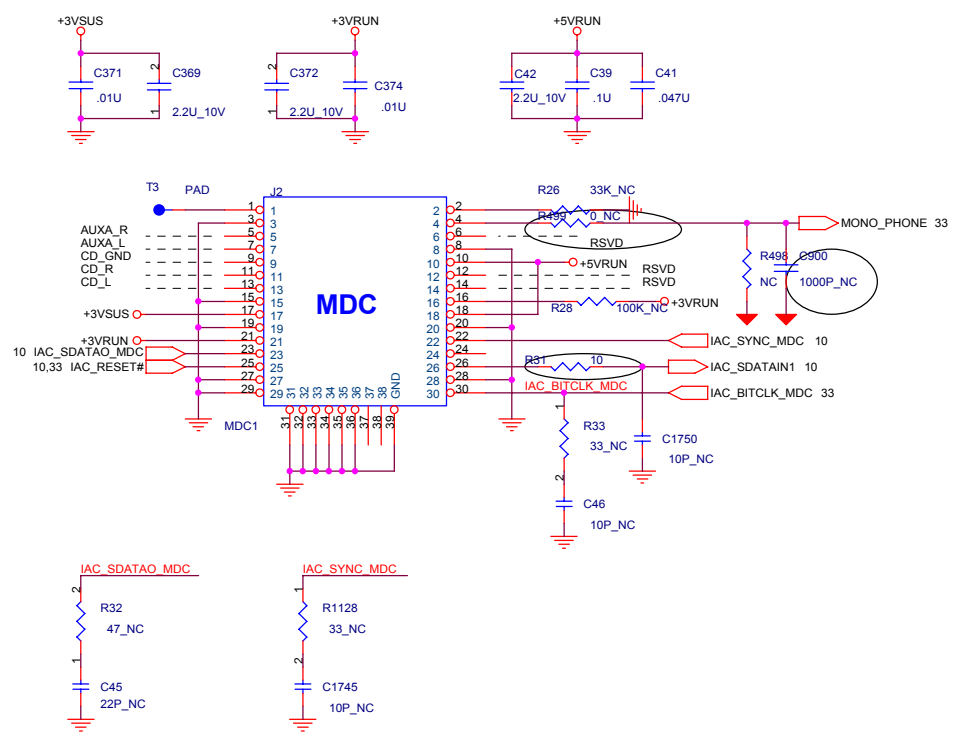


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| | | |
|------------------------|------------------------|----------------|
| Title MINI-PCI &MDC | | |
| Size | Document Number JM2 | Rev 3A |
| Date: | 星期六, 六月 06, 2003 | Sheet 23 of 49 |

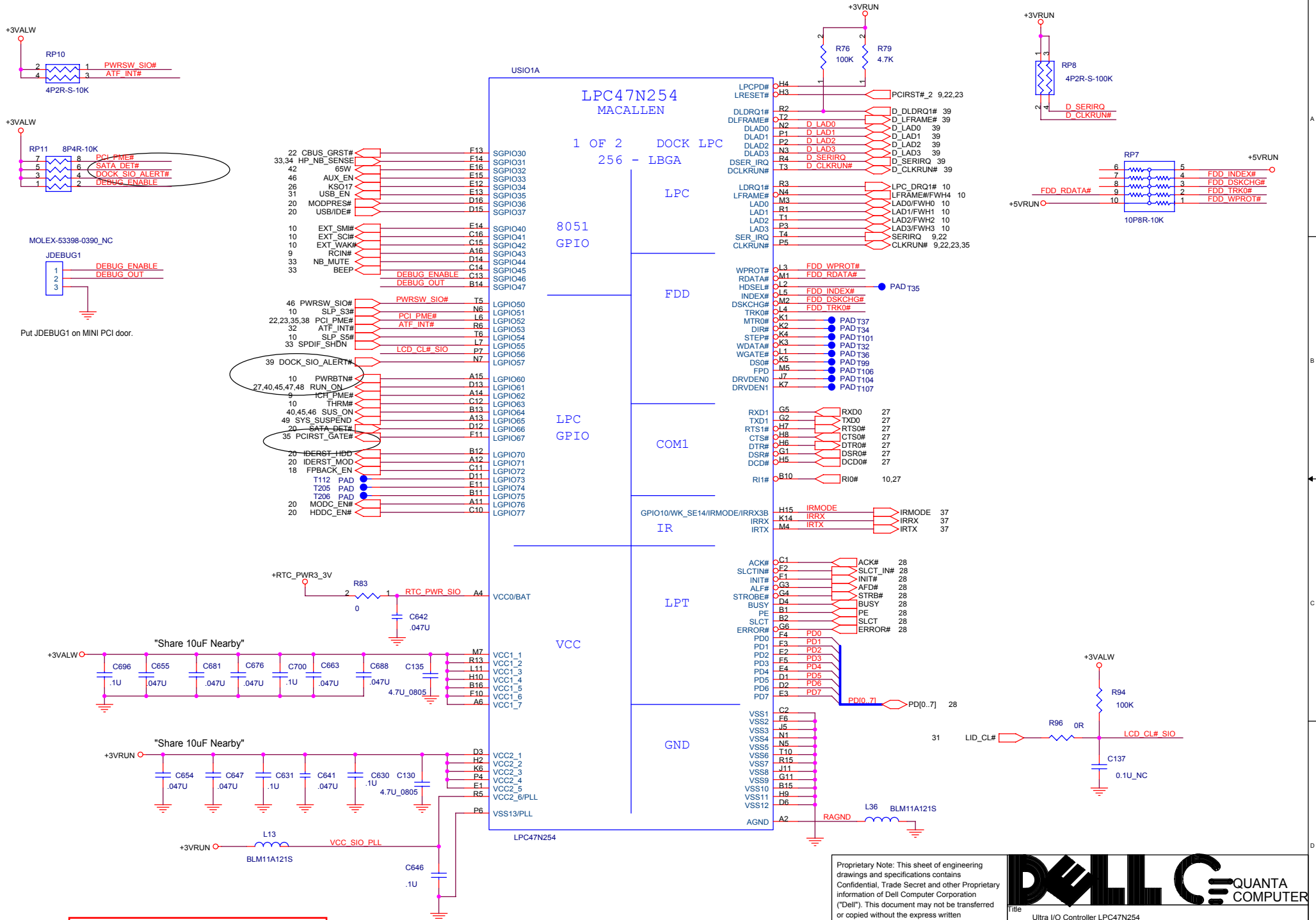


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|-------|------------------|-----------|-----|-------|
| Title | | MDC CONN. | Rev | 3A |
| Size | Document Number | | JM2 | |
| Date: | 星期五, 六月 06, 2003 | Sheet | 24 | of 49 |

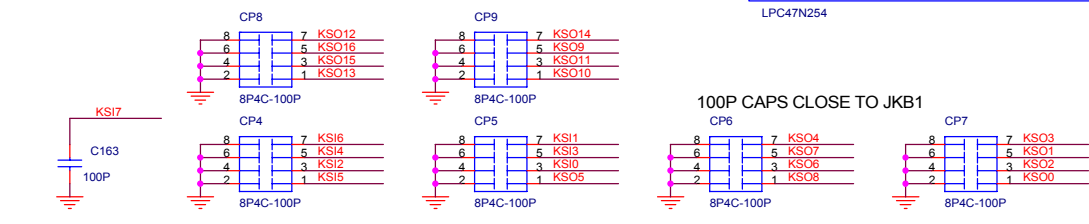
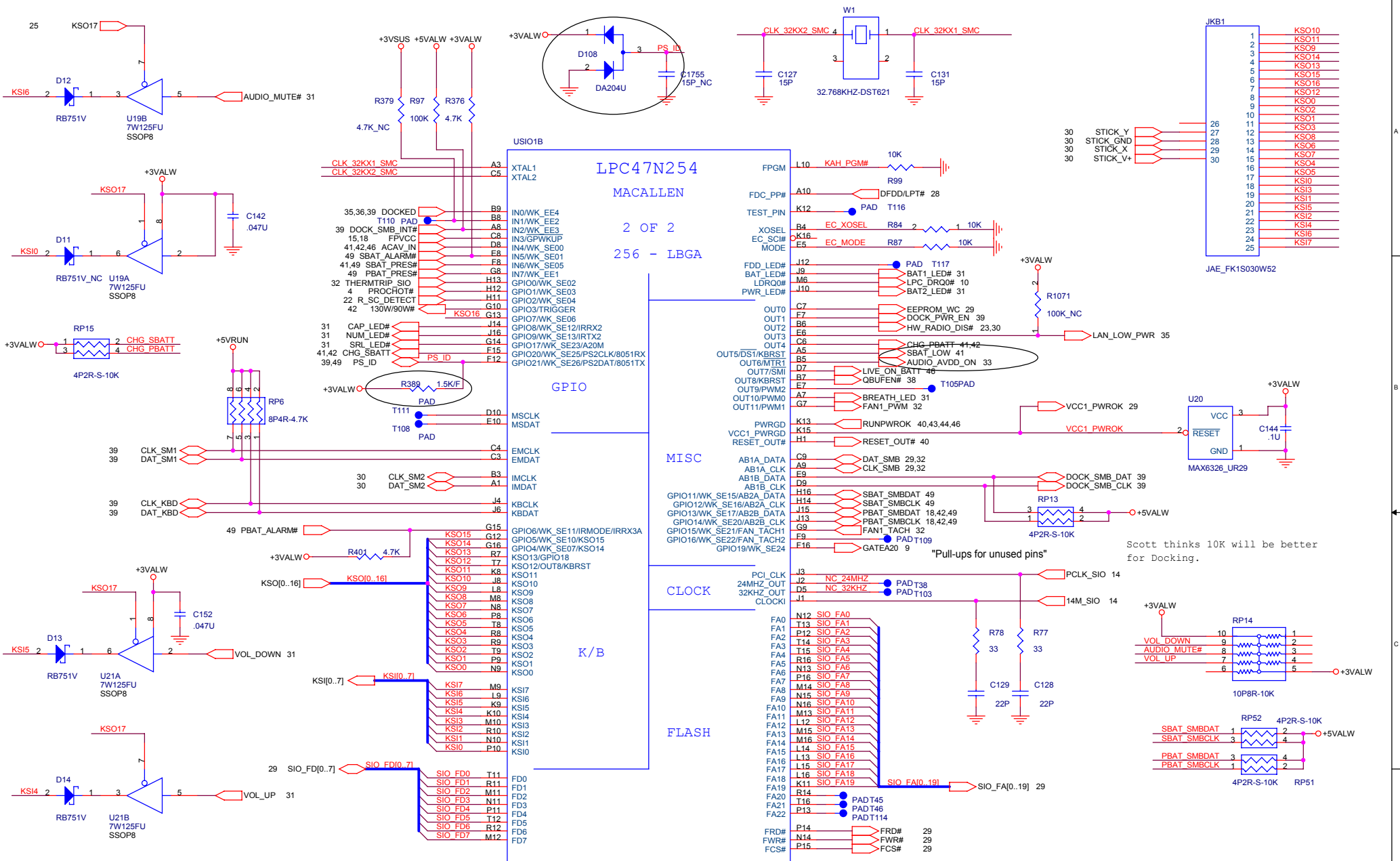


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| | | |
|---|------------------------|----------------|
| Title Ultra I/O Controller LPC47N254 | | |
| Size | Document Number JM2 | Rev 3D |
| Date: | 星期五, 六月 06, 2003 | Sheet 25 of 49 |

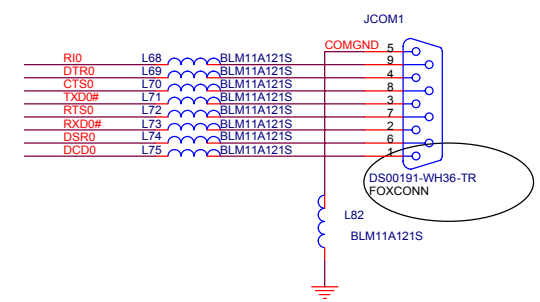
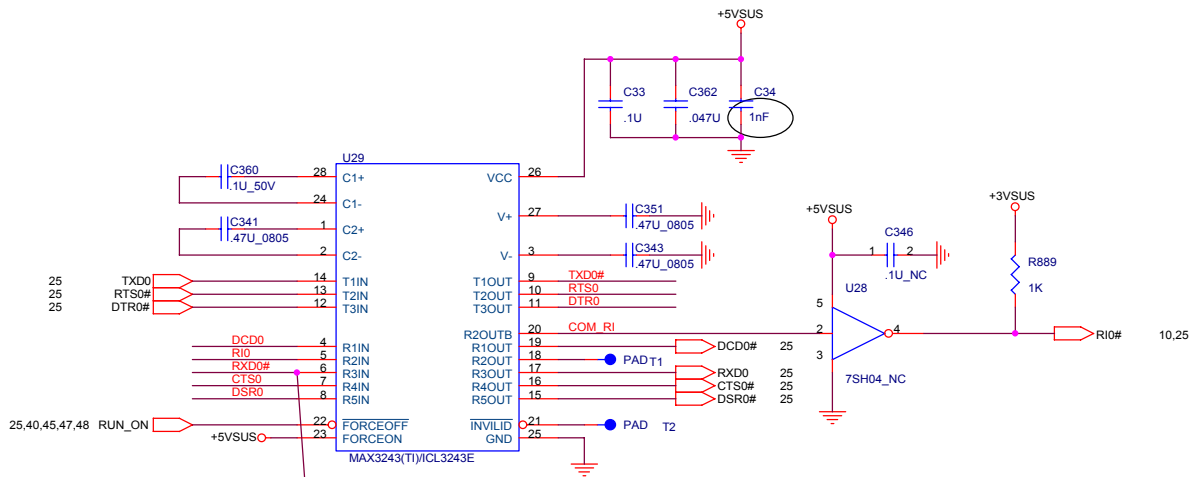


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| | | |
|------|-----------------|-----|
| Size | Document Number | Rev |
| | JM2 | 3F |

Date: 星期六 06. 2003 Sheet 26 of 49



If MAX3243 pin 22 tied to RUN_ON, then it can not support Ring Out

Place these beads close to JCOM1 as soon as possible

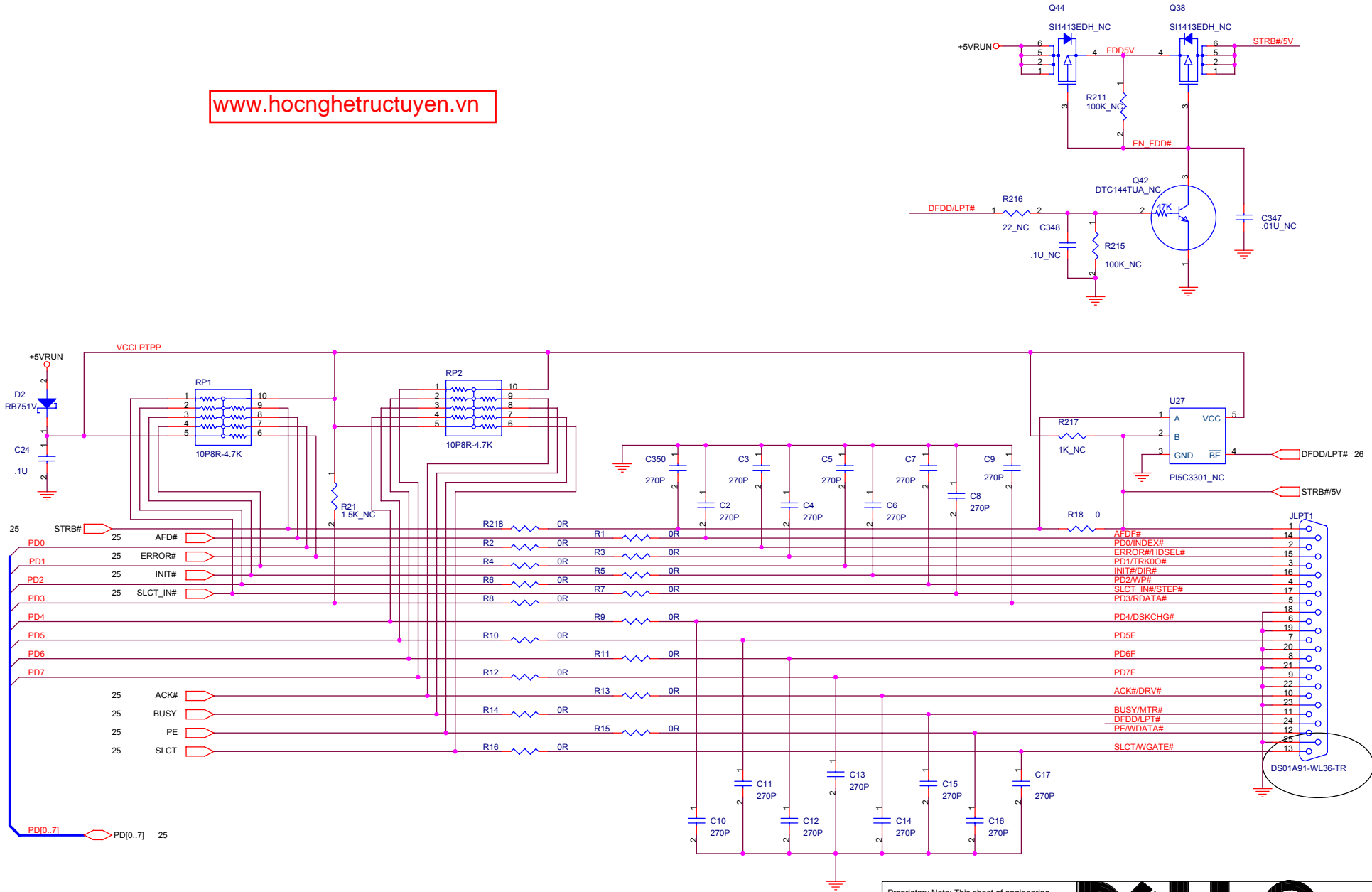
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| | | |
|------------------------|---------------------|--------|
| Title SERIAL PORT | | |
| Size | Document Number JM2 | Rev 3K |
| Date: 星期五, 六月 06, 2003 | Sheet 27 of 49 | |

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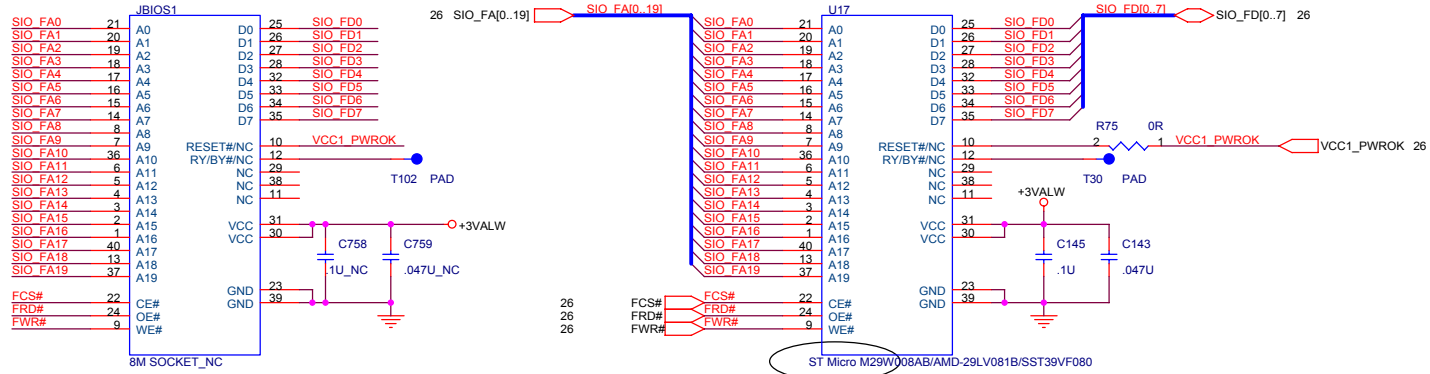


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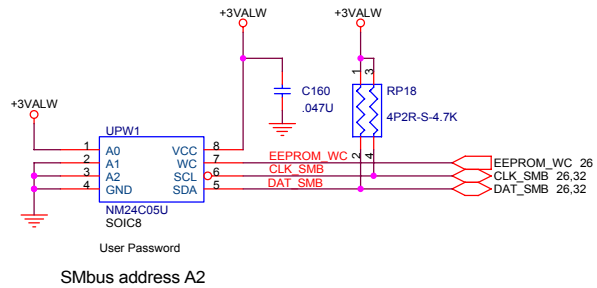
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|-------|---------------------|----------------|
| File | PARALLEL CONN. | |
| Size | Document Number JM2 | Rev 3F |
| Date: | 星期五, 六月 06, 2003 | Sheet 28 of 49 |

8Mbit (1M Byte),NO PLCC TYPE



AMD :Pin 10 is RESET# ; Pin12 is RY/BY#
SST :Pin10,12 are NC

- 1.AMD-29LV081B require MAX 500nS Tready for it's hardware reset.And MAX6326_UR29 has >100mS reset timing.So we can tie it's reset# pin to +3VALW directly.
- 2.SIO has internal 20 mS delay of VCC1_PWROK

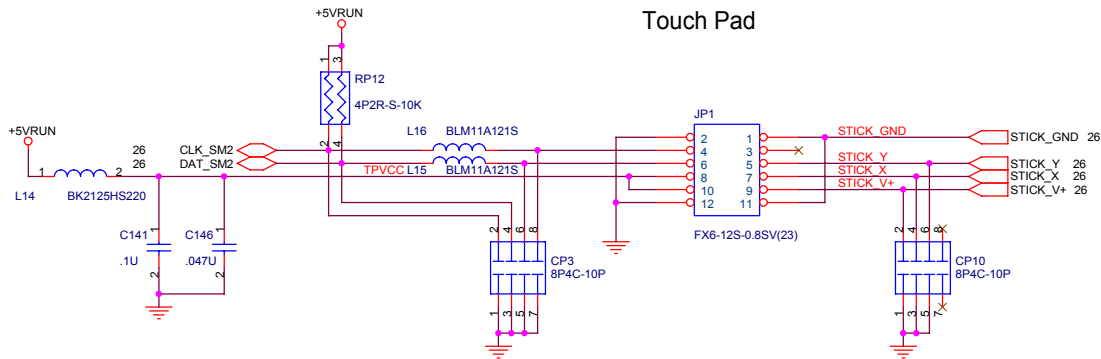


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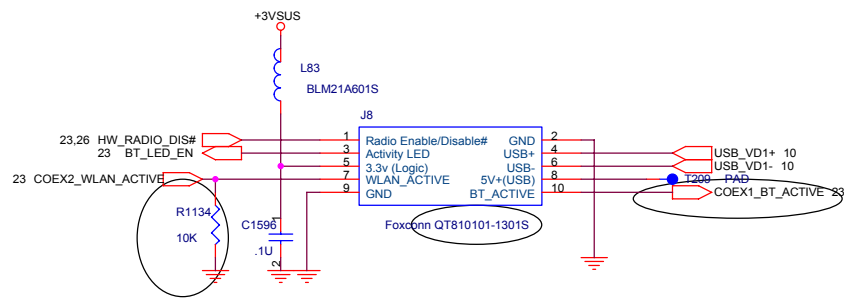
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| | | | | |
|-------|------------------|-------|-----|-------|
| Title | FLASH | | Rev | 3A |
| Size | Document Number | | | |
| | JM2 | | | |
| Date: | 星期五, 六月 06, 2003 | Sheet | 29 | of 49 |



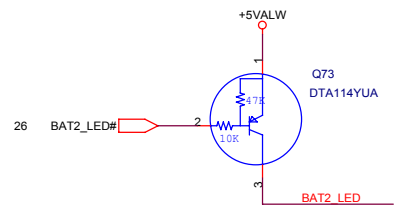
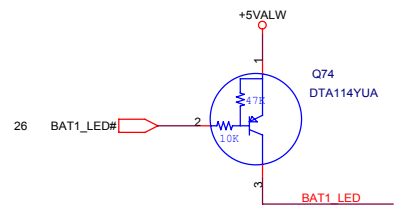
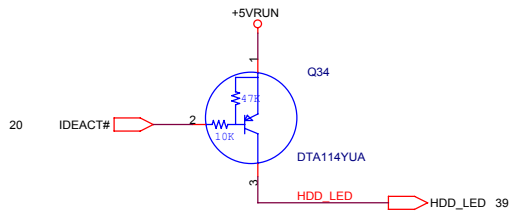
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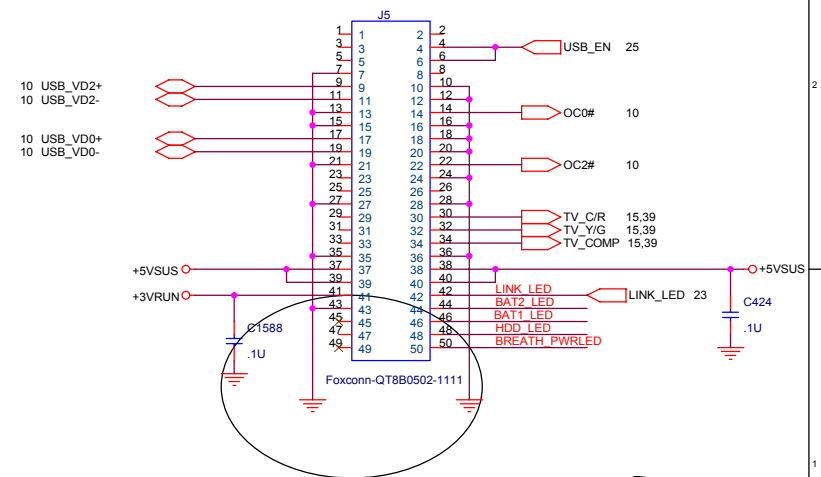
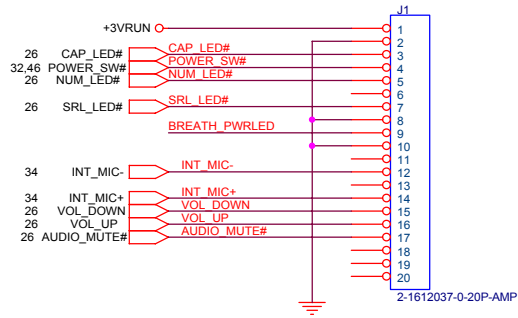
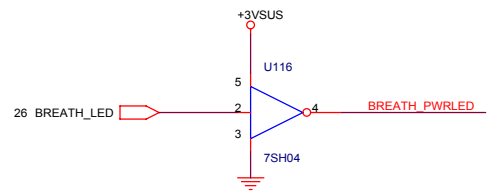
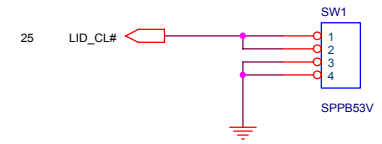
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QUANTA COMPUTER

| | | |
|------------------------------|----------------------|---------|
| File: TOUCH PAD & BULE TOOTH | | Rev: 3A |
| Size: JM2 | Document Number: JM2 | Rev: 3A |
| Date: 星期五, 六月 06, 2003 | Sheet: 30 | of 49 |



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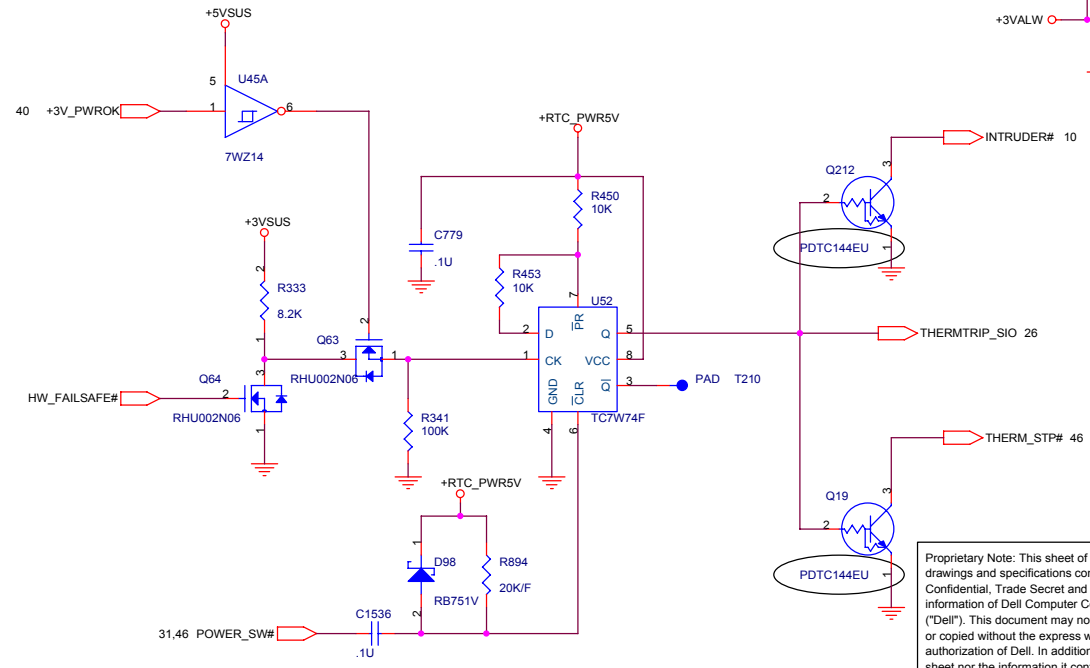
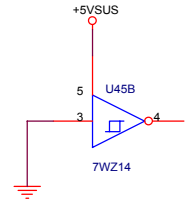
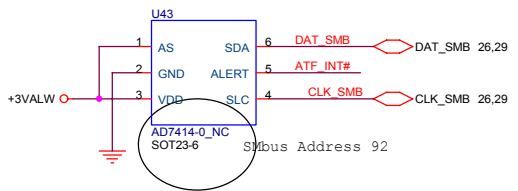
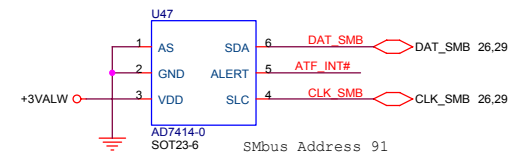
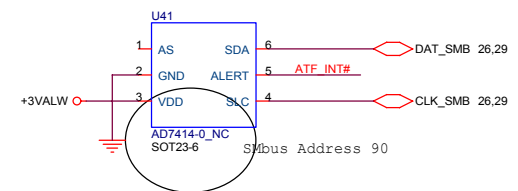
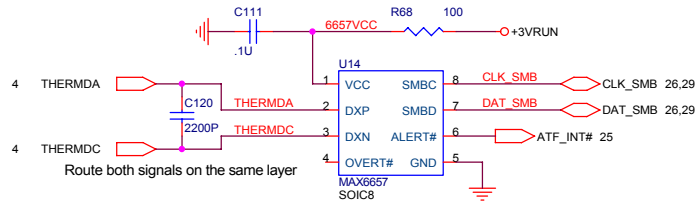
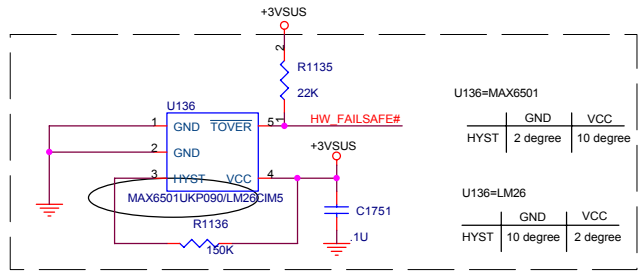
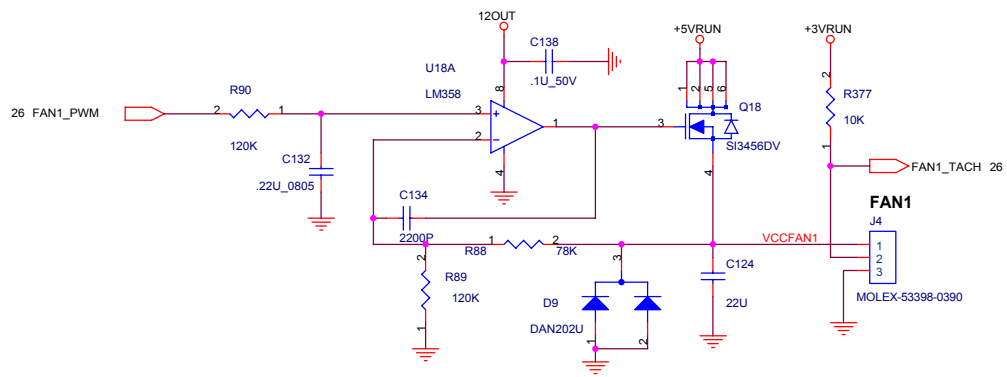


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DELL QUANTA COMPUTER

File: SWITCH & LED

| | | |
|-------|------------------|----------------|
| Size | Document Number | Rev |
| | JM2 | 3G |
| Date: | 星期五, 六月 06, 2003 | Sheet 31 of 49 |

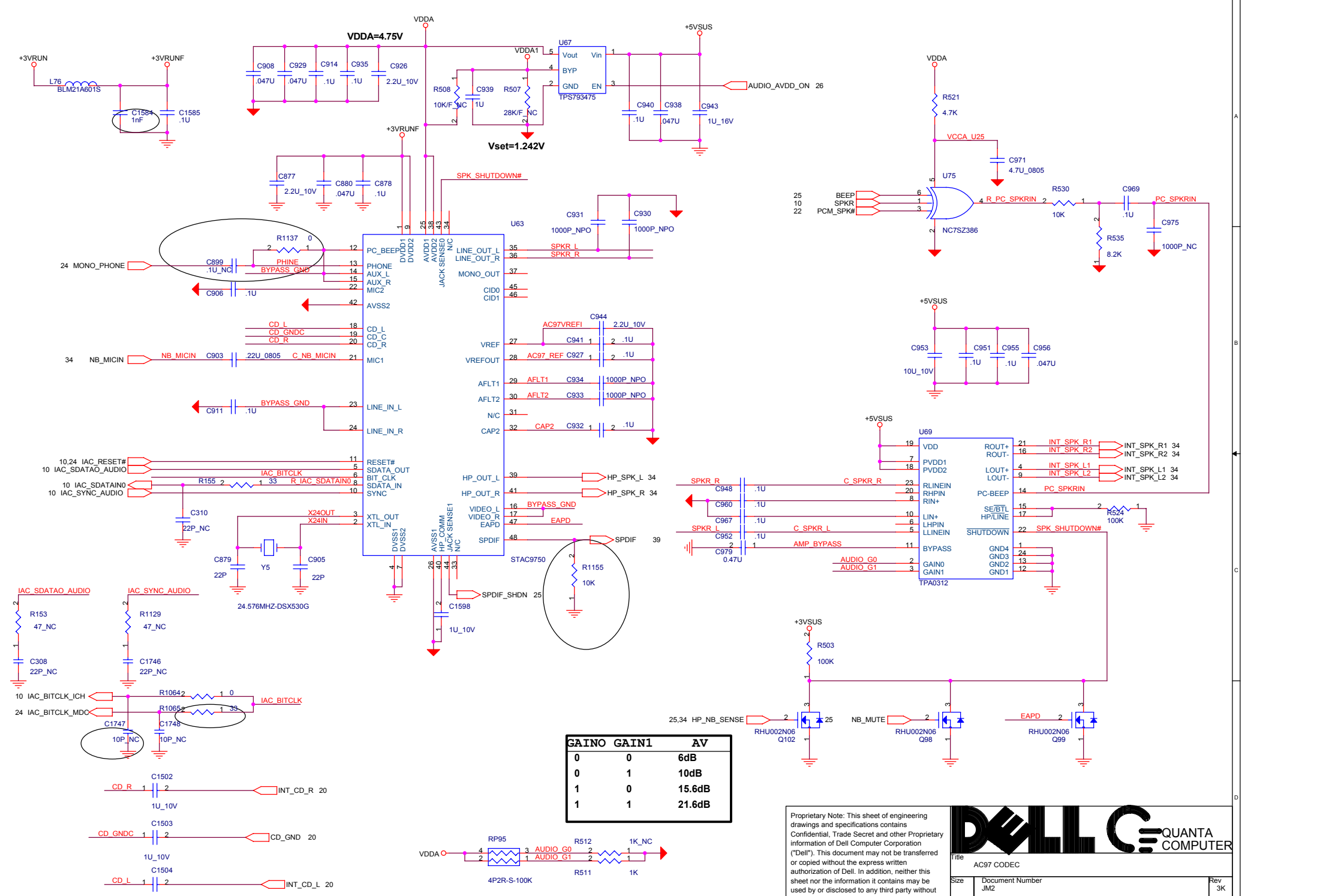


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| | | |
|--------------------|---------------------|----------------|
| File FAN & THERMAL | | |
| Size | Document Number JM2 | Rev 3K |
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| GAIN0 | GAIN1 | AV |
|-------|-------|--------|
| 0 | 0 | 6dB |
| 0 | 1 | 10dB |
| 1 | 0 | 15.6dB |
| 1 | 1 | 21.6dB |

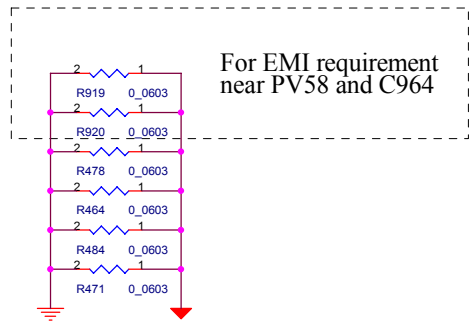
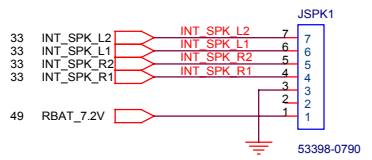
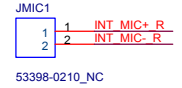
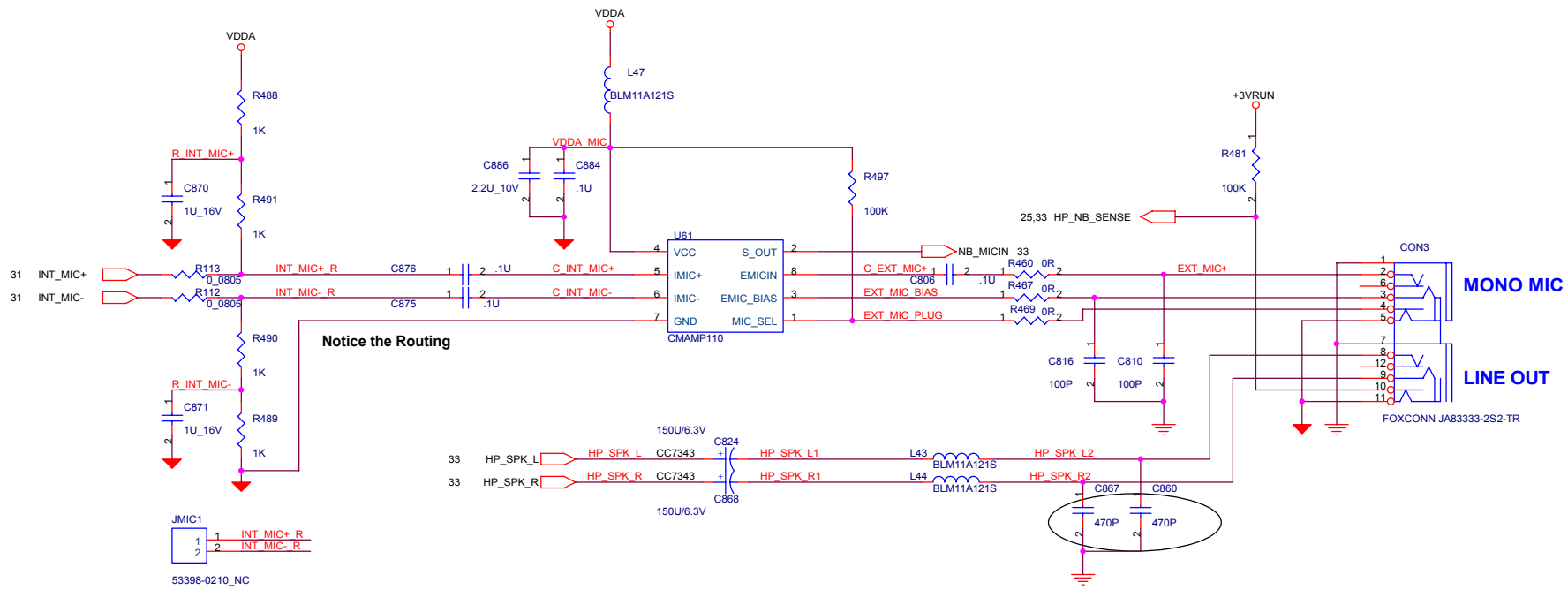
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DELL QUANTA COMPUTER

File: AC97 CODEC

| | | |
|------|-----------------|-----|
| Size | Document Number | Rev |
| | JM2 | 3K |

Date: 星期六, 六月 06, 2003 Sheet 33 of 49

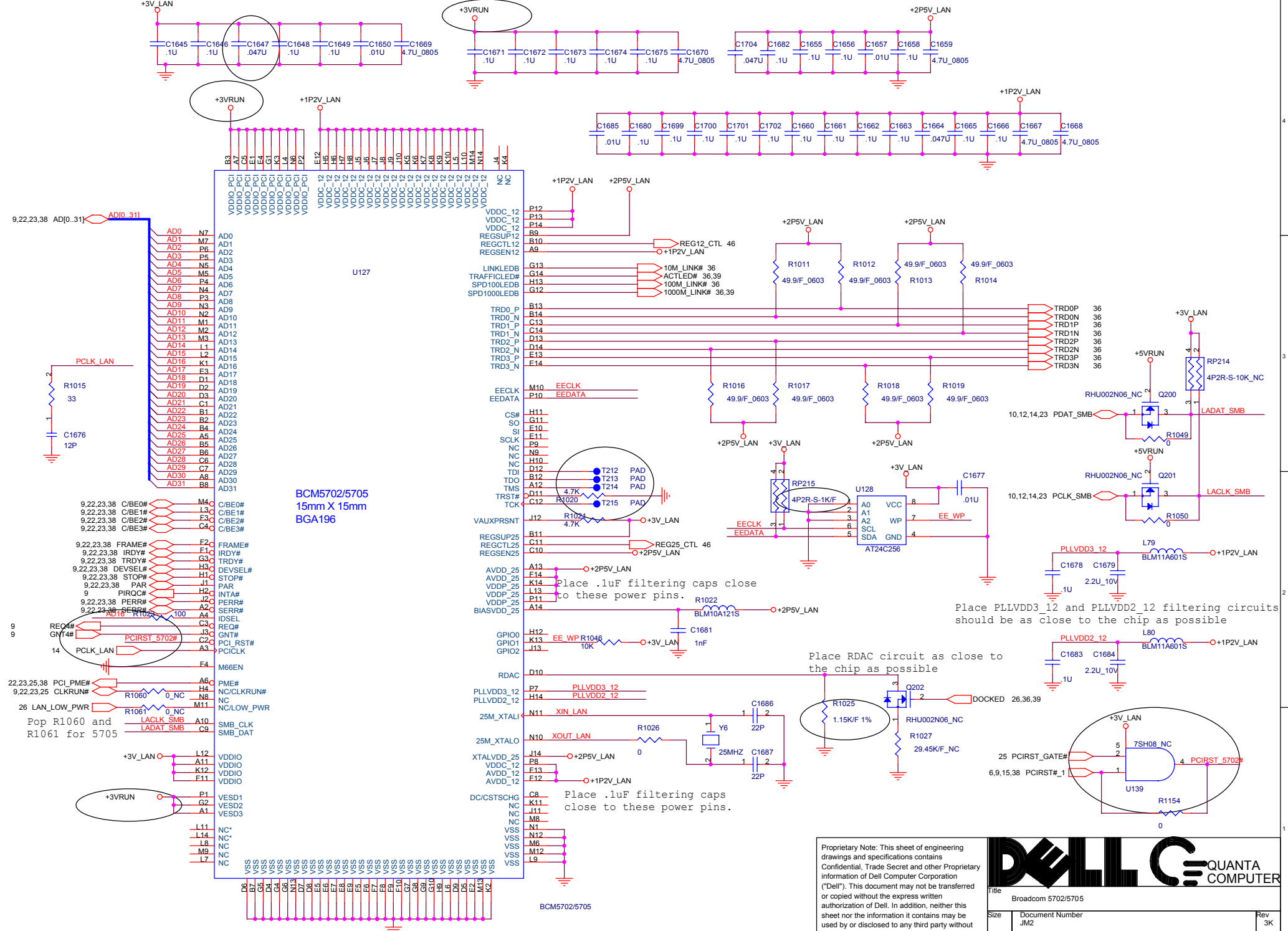


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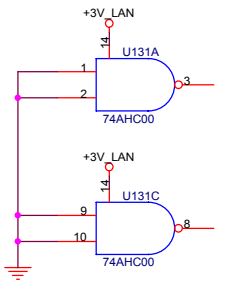
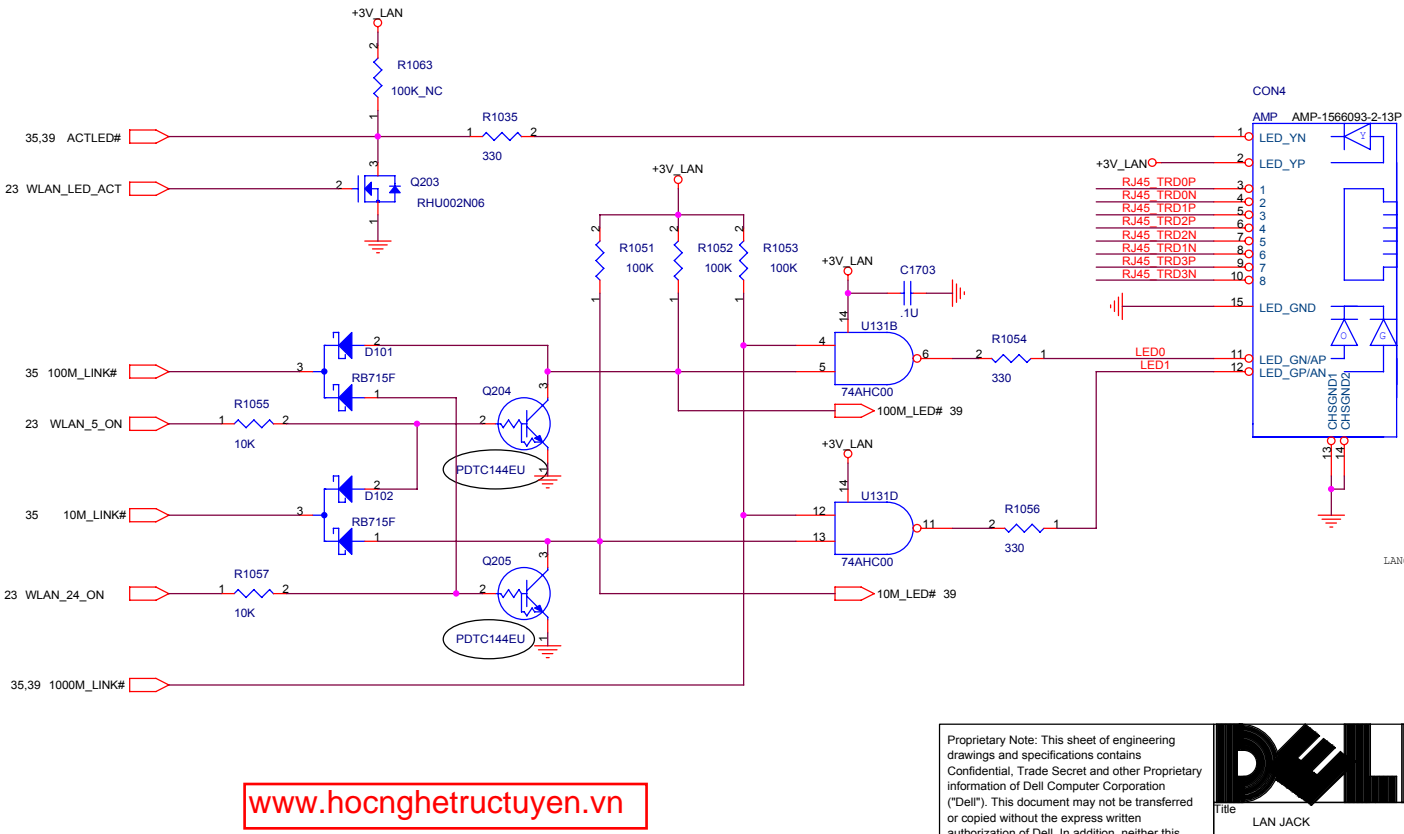
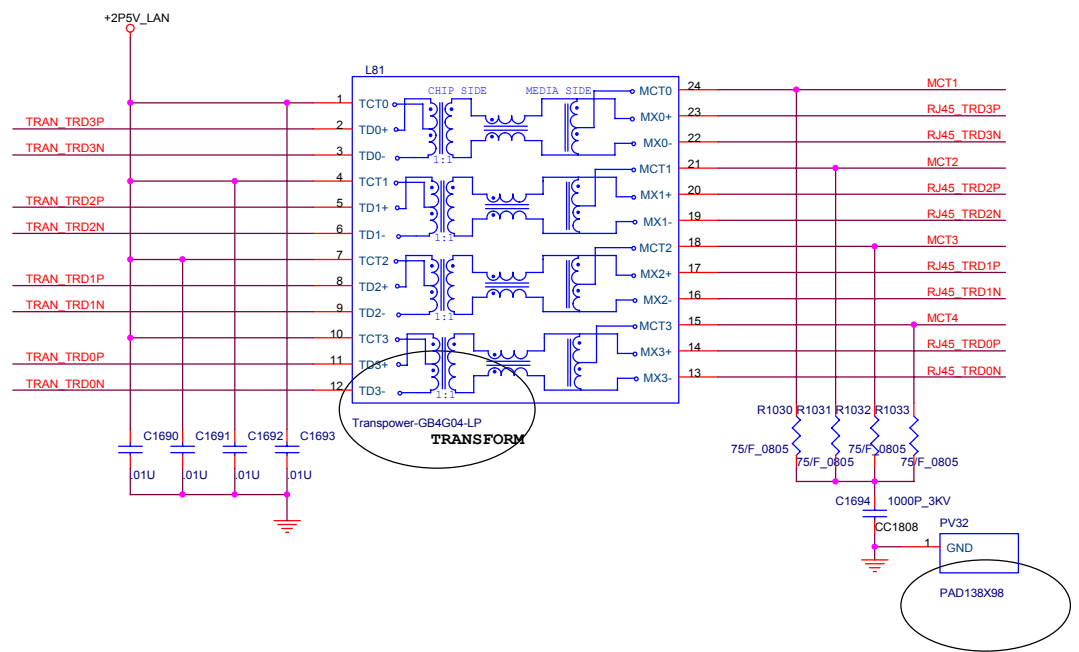
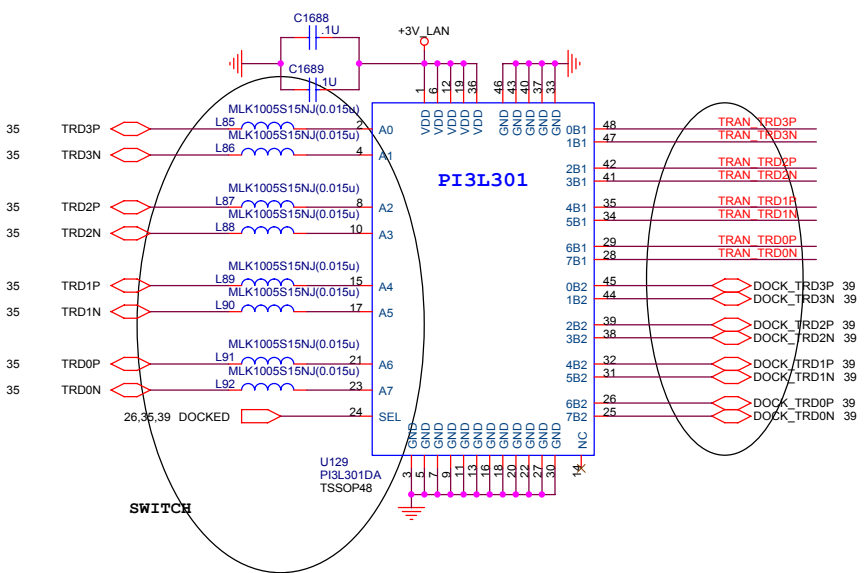
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|-------|------------------|------------|----------|
| Title | | AUDIO CONN | |
| Size | Document Number | Rev | |
| | JM2 | 3F | |
| Date: | 星期五, 六月 06, 2003 | Sheet | 34 of 49 |



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| | | |
|-------|--------------------|----------------|
| File | Broadcom 5702/5705 | |
| Size | Document Number | Rev |
| | JM2 | 3K |
| Date: | 星期五, 六月 06, 2003 | Sheet 35 of 49 |

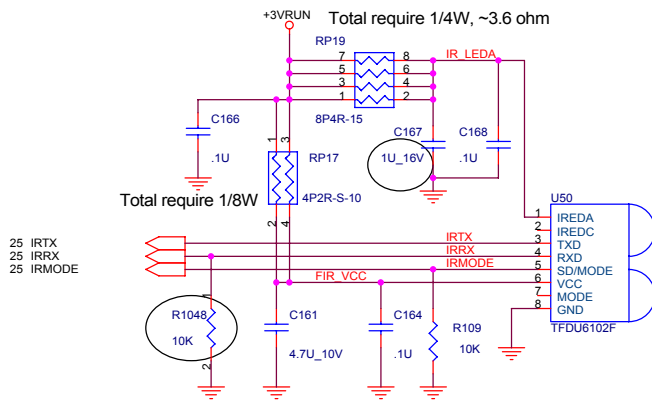


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| | | |
|-------|---------------------|----------------|
| File | LAN JACK | |
| Size | Document Number JM2 | Rev 3K |
| Date: | 星期五, 六月 06, 2003 | Sheet 36 of 49 |



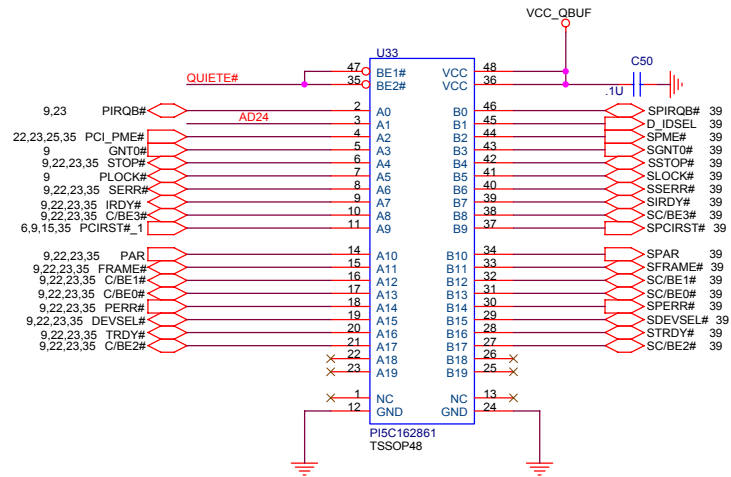
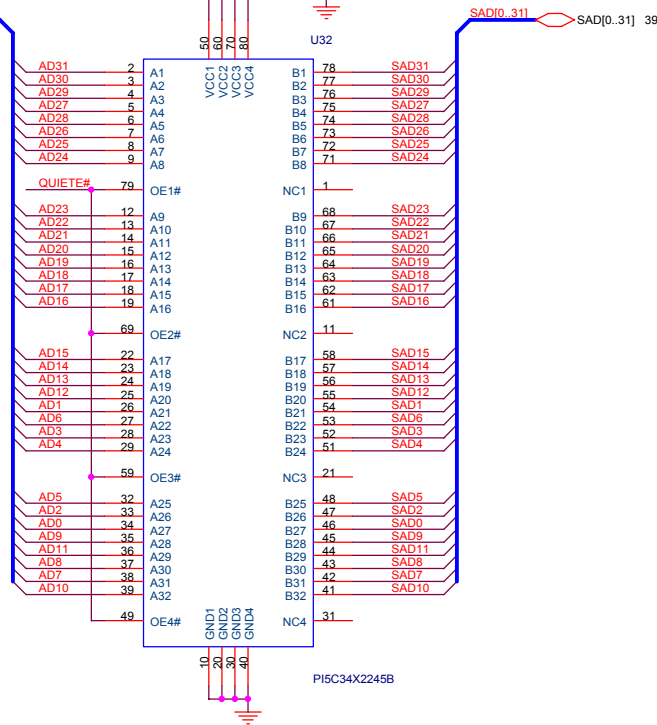
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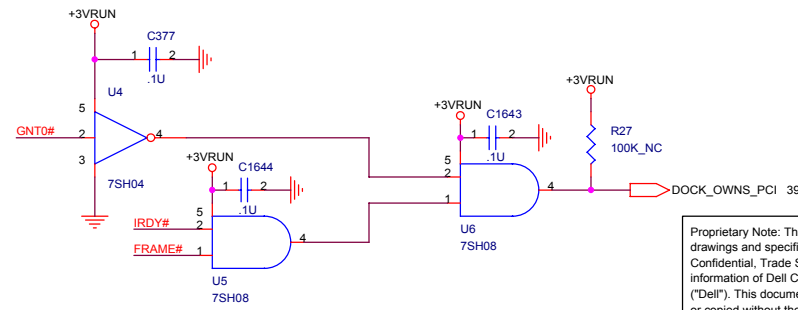
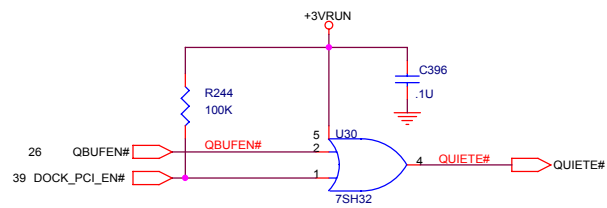


| | | | | |
|-------|------------------|-------|-----|-------|
| File | FIR | | Rev | 3G |
| Size | Document Number | | | |
| | JM2 | | | |
| Date: | 星期五, 六月 06, 2003 | Sheet | 37 | of 49 |

9,22,23,35 AD[0..31]



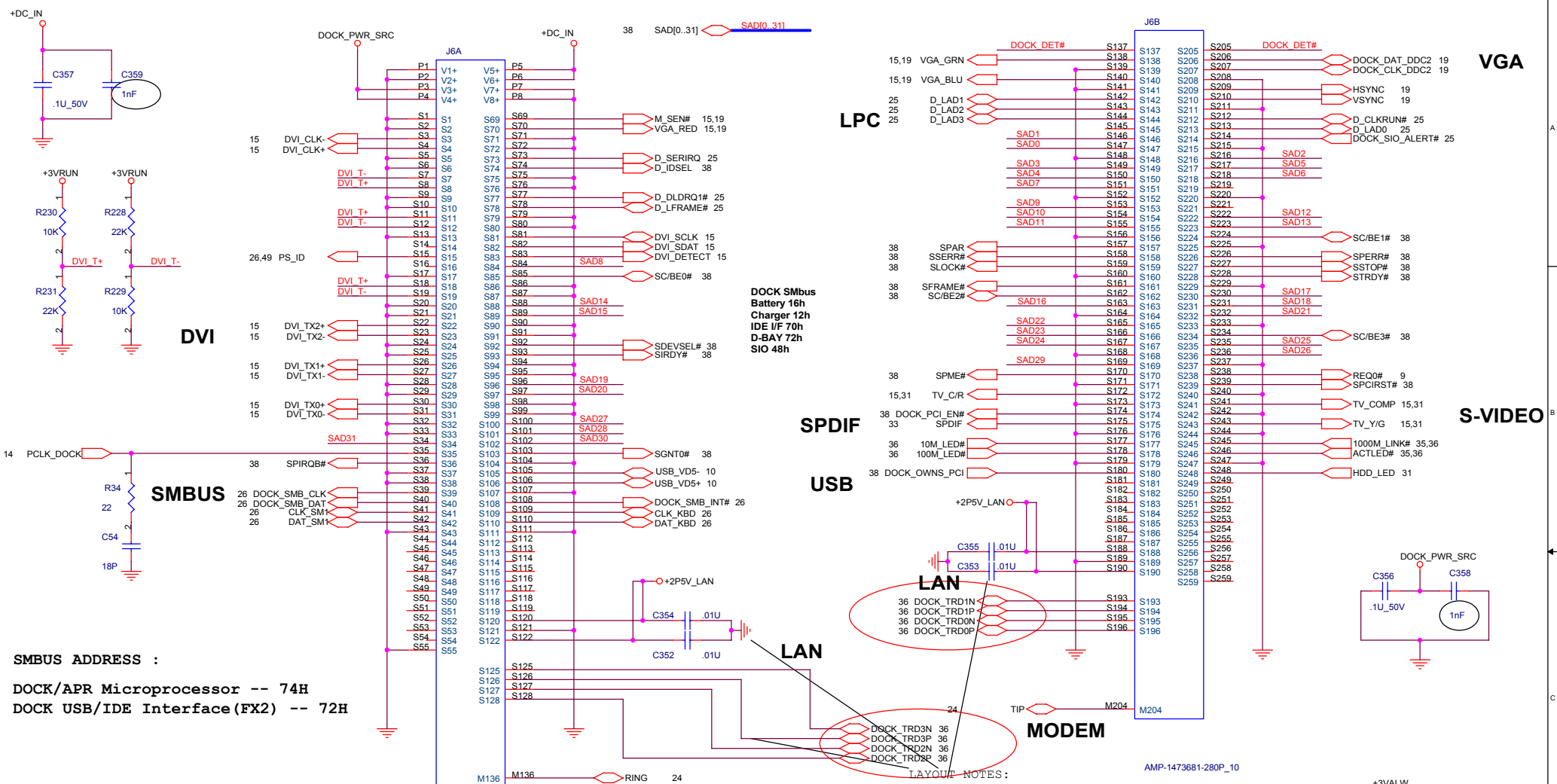
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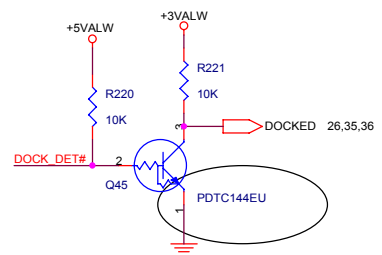
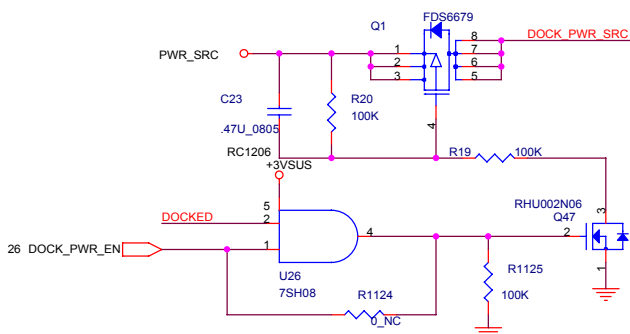
| | | |
|-------------------------|----------------------|---------|
| Title: Docking Q-SWITCH | | |
| Size: JM2 | Document Number: JM2 | Rev: 2E |
| Date: 星期日, 六月 06, 2003 | Sheet: 38 | of 49 |



SMBUS ADDRESS :
DOCK/APR Microprocessor -- 74H
DOCK USB/IDE Interface (FX2) -- 72H

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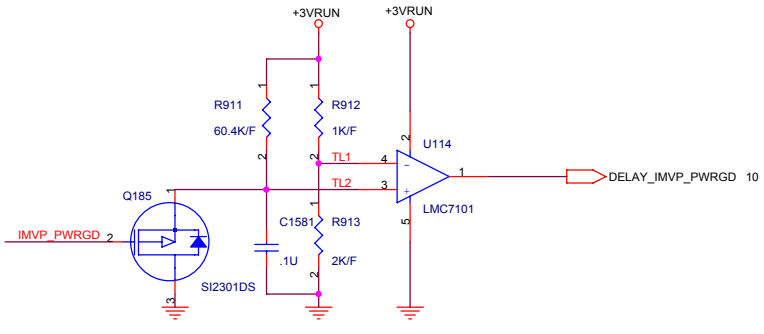
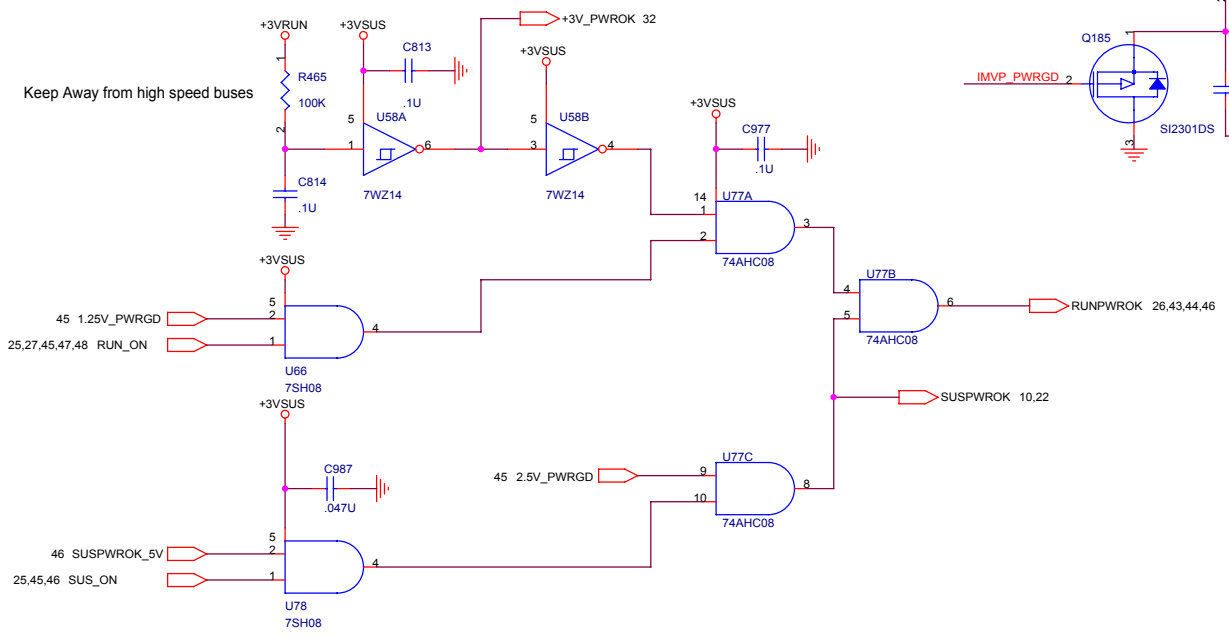
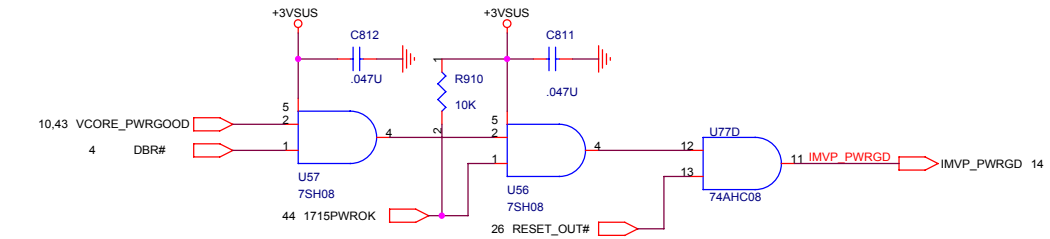
LAYOUT NOTES:
 Terminators should be as close as possible to dock connector pins. Keep traces as short as possible.



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| | | |
|-----------------------------|----------------------|-----------------|
| File: Docking Station Conn. | | |
| Size: | Document Number: JM2 | Rev: 3K |
| Date: | 星期六, 06月 06, 2003 | Sheet: 39 of 49 |



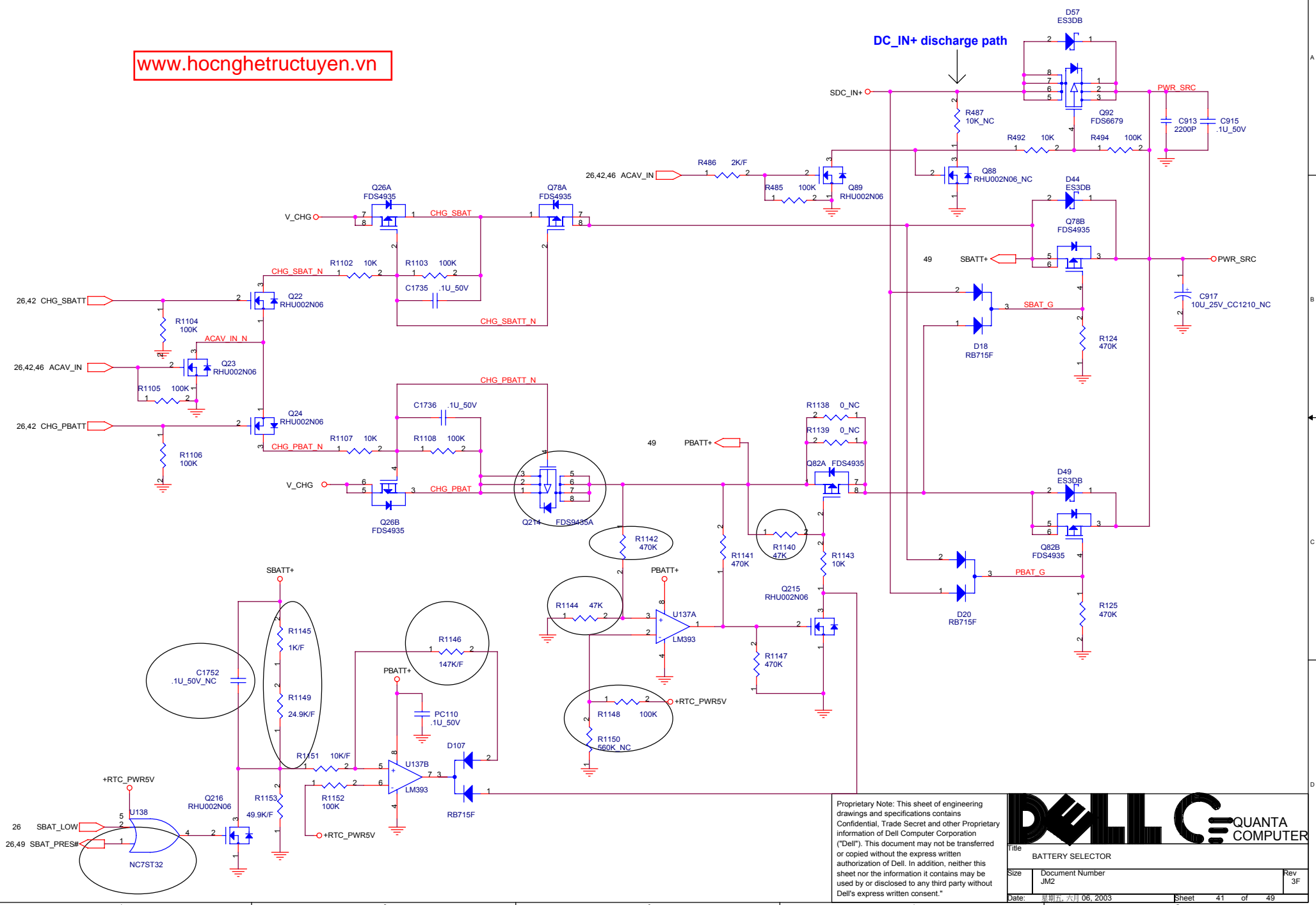
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| | | | | |
|-------|------------------|------------|-----|-------|
| Title | | POWER GOOD | Rev | 1A |
| Size | Document Number | | JM2 | |
| Date: | 星期五, 六月 06, 2003 | Sheet | 40 | of 49 |

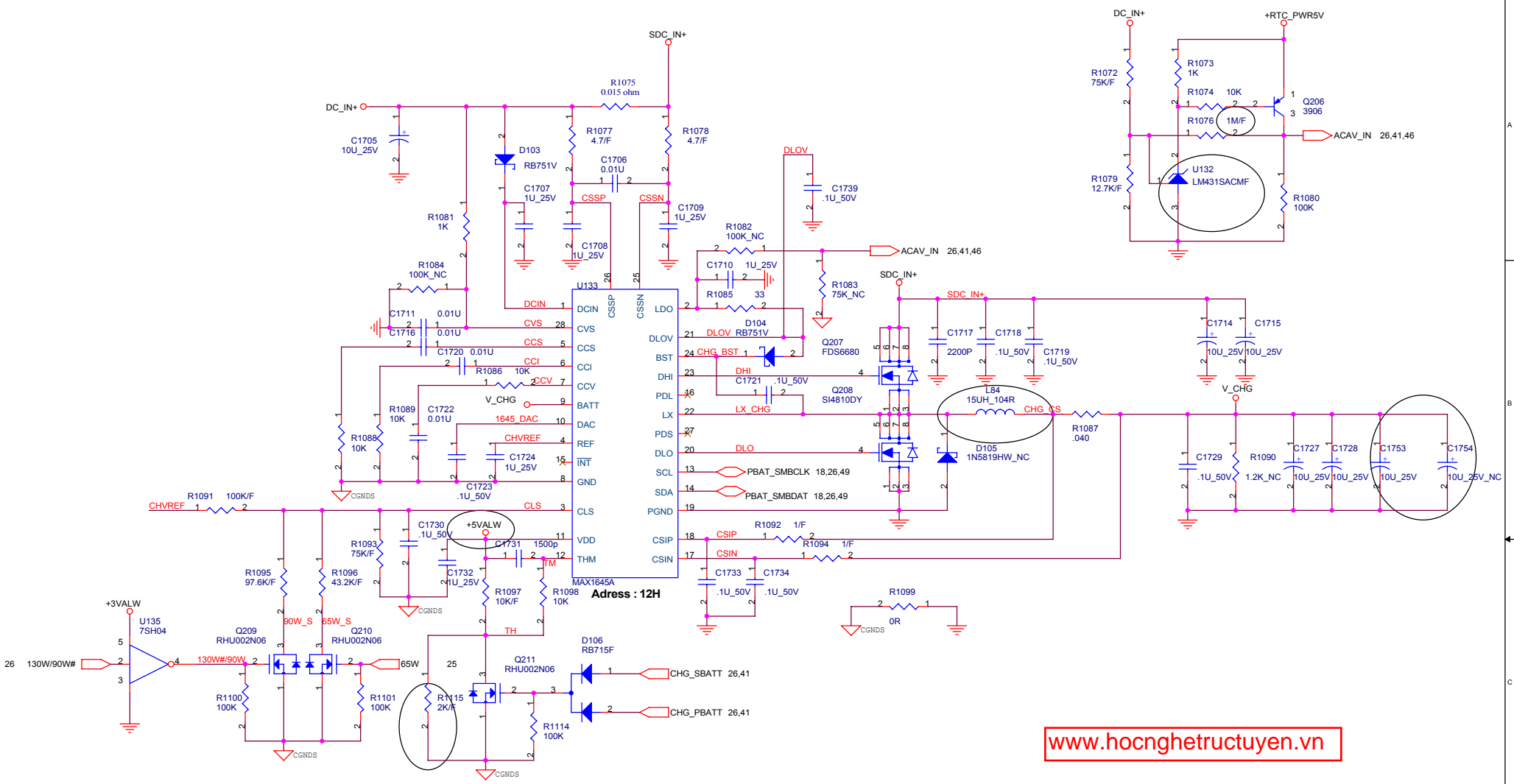
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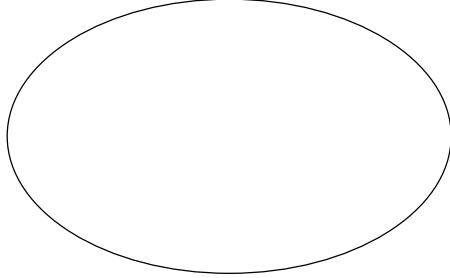
File: BATTERY_SELECTOR

| | | |
|-------|---------------------|----------------|
| Size | Document Number JM2 | Rev 3F |
| Date: | 星期五, 六月 06, 2003 | Sheet 41 of 49 |



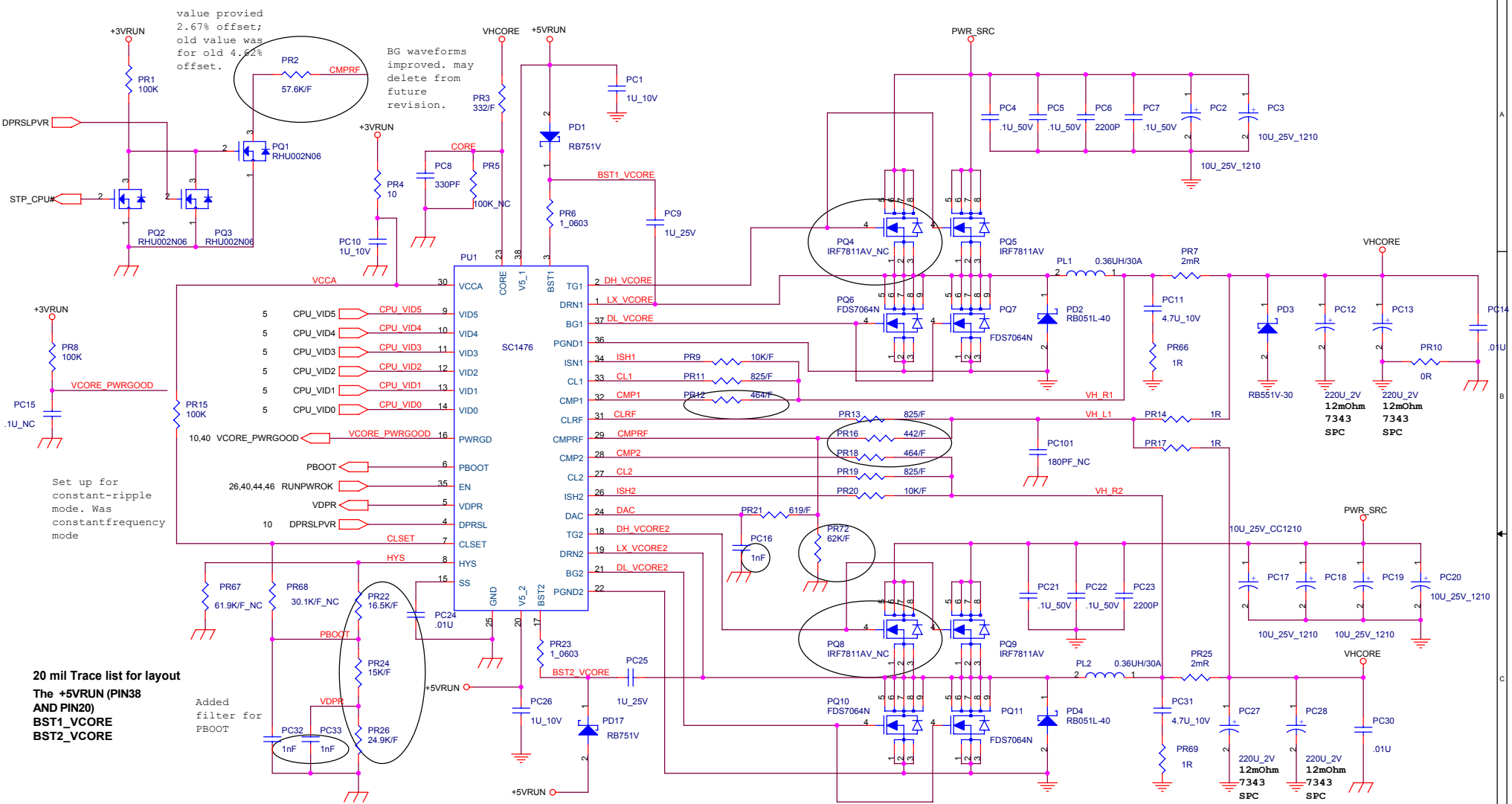
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| | | | |
|-----------|------------------|-----------------|------------------|
| | 65W (2.48A) | 90W (4.0A) | 130W (5.8A) |
| 65W | H | L | L |
| 130W/90W# | H | L | H |



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File: Battery Charger
 Size: Document Number JM2
 Date: 星期五, 六月 06, 2003
 Sheet: 42 of 49
 Rev: 3F



Set up for constant-ripple mode. Was constant-frequency mode

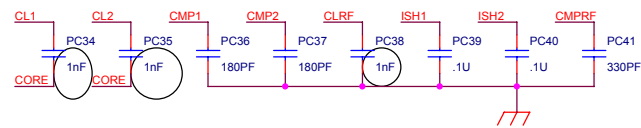
20 mil Trace list for layout
The +5VRUN (PIN38 AND PIN20)
BST1_VCORE
BST2_VCORE

Added filter for PBOOT

| V I D | | | | | | Vcore |
|-------|-------|-------|-------|-------|-------|-------|
| VID 5 | VID 4 | VID 3 | VID 2 | VID 1 | VID 0 | v |
| 0 | 1 | 0 | 1 | 1 | 1 | 1.340 |
| 0 | 1 | 1 | 0 | 0 | 0 | 1.324 |
| 0 | 1 | 1 | 0 | 1 | 0 | 1.292 |
| 0 | 1 | 1 | 1 | 0 | 0 | 1.260 |
| 0 | 1 | 1 | 1 | 0 | 1 | 1.244 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1.212 |
| 1 | 0 | 0 | 0 | 0 | 1 | 1.180 |
| 1 | 0 | 0 | 0 | 1 | 1 | 1.148 |
| 1 | 0 | 0 | 1 | 1 | 0 | 1.100 |
| 1 | 0 | 1 | 0 | 0 | 1 | 1.052 |
| 1 | 0 | 1 | 0 | 1 | 1 | 1.020 |
| 1 | 0 | 1 | 1 | 1 | 0 | 0.972 |
| 1 | 1 | 1 | 0 | 0 | 0 | 0.940 |

100 mil Trace list for layout
DH_VCORE
LX_VCORE
DL_VCORE
DH_VCORE2
LX_VCORE2
DL_VCORE2

10 mil Trace list for layout
SC1476
pin 4 pin
pin 7
pin 25
pin 30

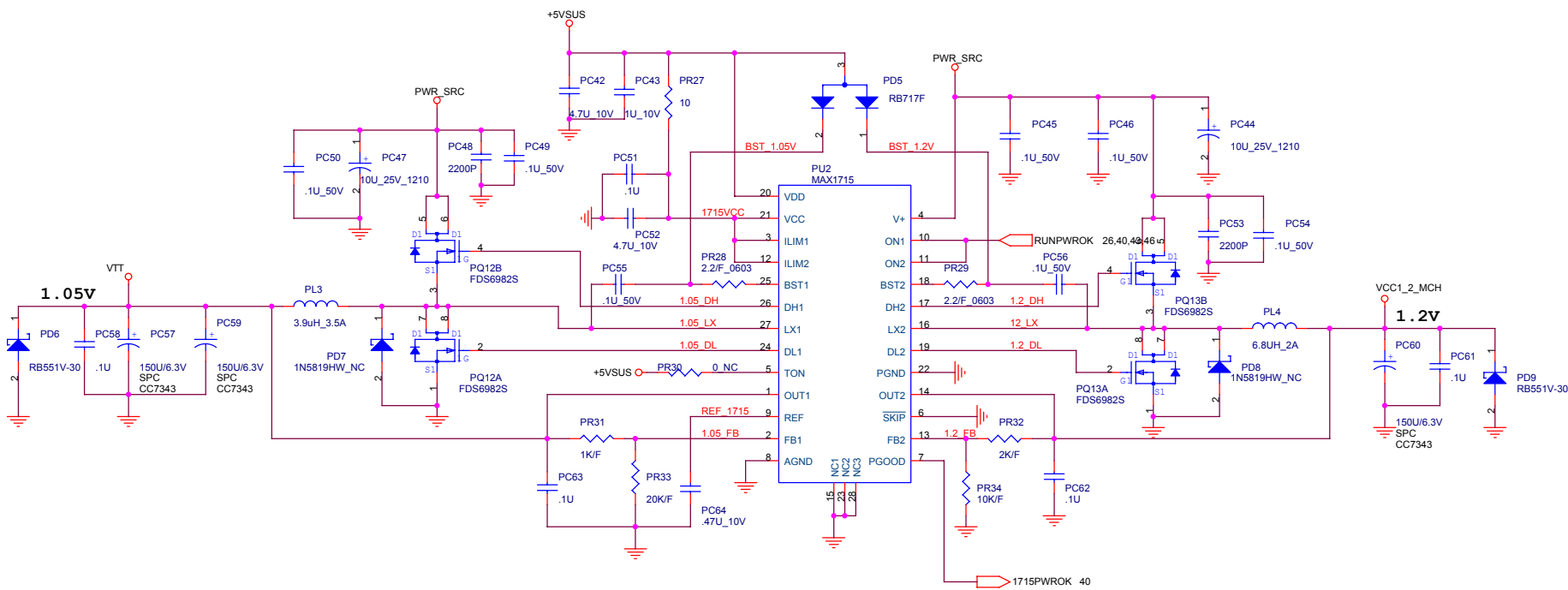


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Title: CPU POWER

| | | |
|------|-----------------|-----|
| Size | Document Number | Rev |
| | JM2 | 3K |

Date: 2003年6月06日 Sheet 43 of 49

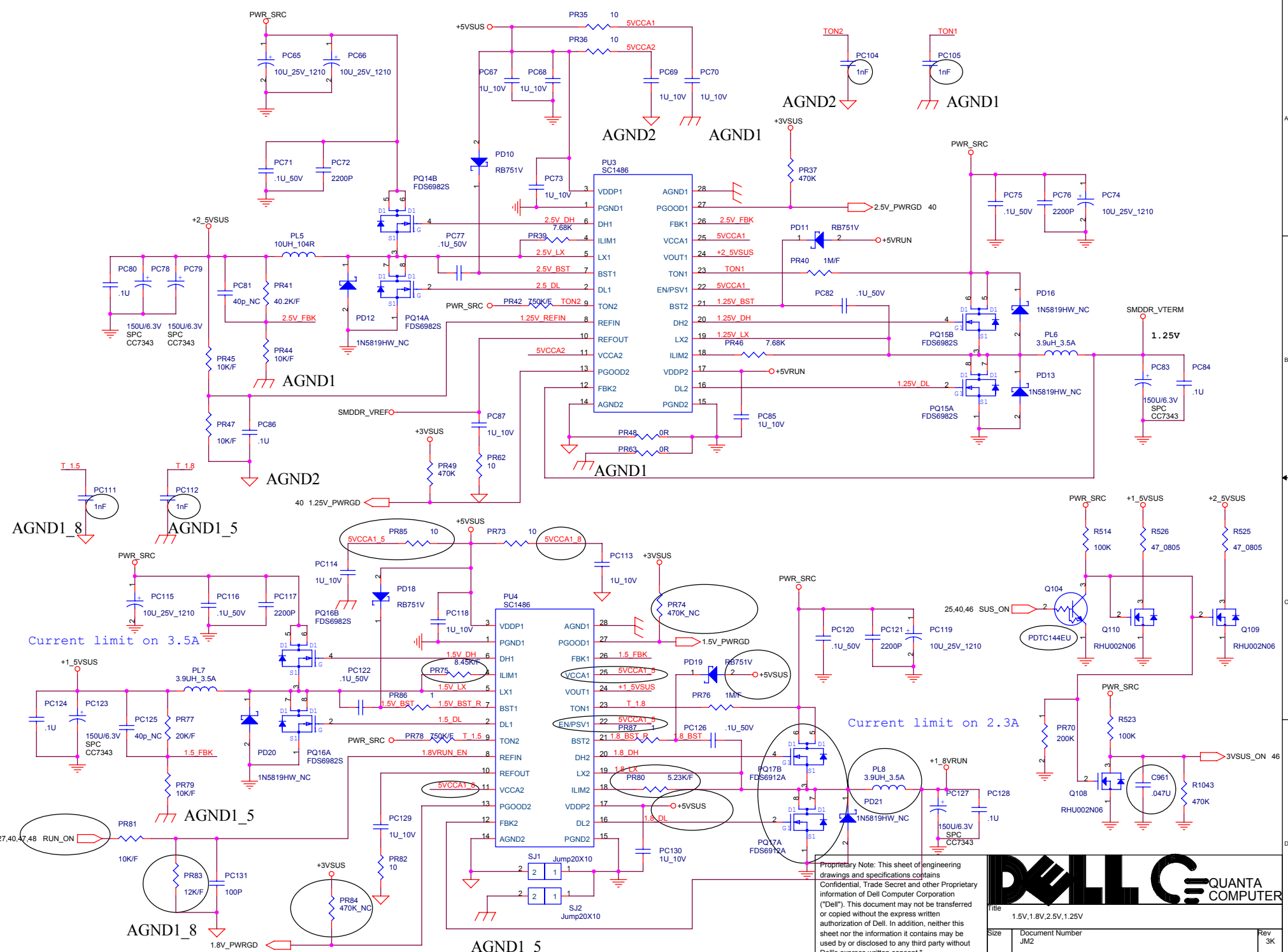


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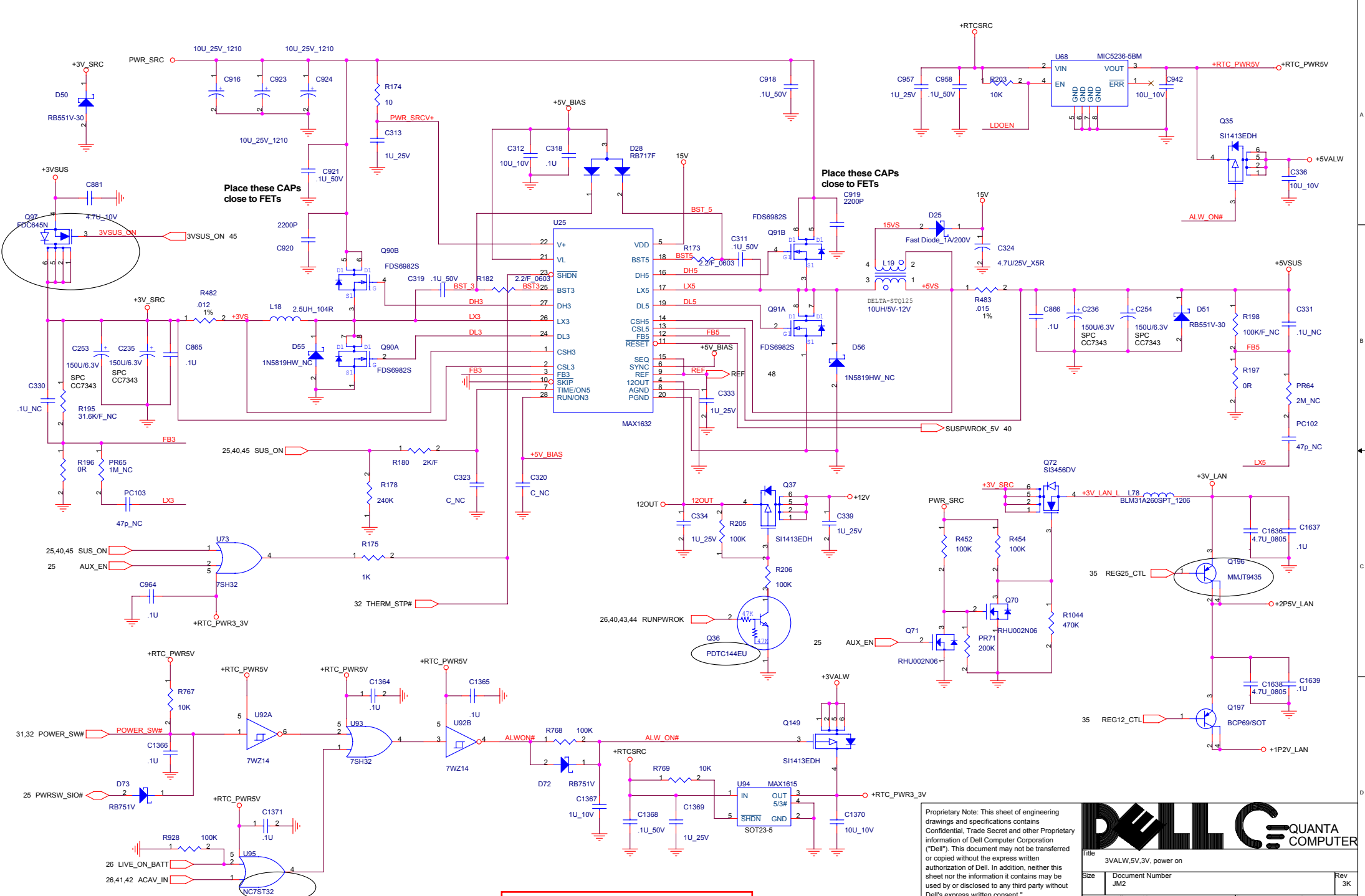


| | | | |
|-------|------------------|----------------------|----------|
| Title | | VTT_1.05V,VCC1_2_MCH | |
| Size | Document Number | Rev | |
| | JM2 | 1A | |
| Date: | 星期三, 六月 06, 2003 | Sheet | 44 of 49 |



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| | | | |
|-------|-----------------|-------------------------|----------|
| Title | | 1.5V, 1.8V, 2.5V, 1.25V | |
| Size | Document Number | Rev | |
| | JM2 | 3K | |
| Date: | 2003年6月06日 | Sheet | 45 of 49 |

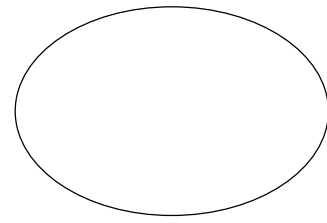
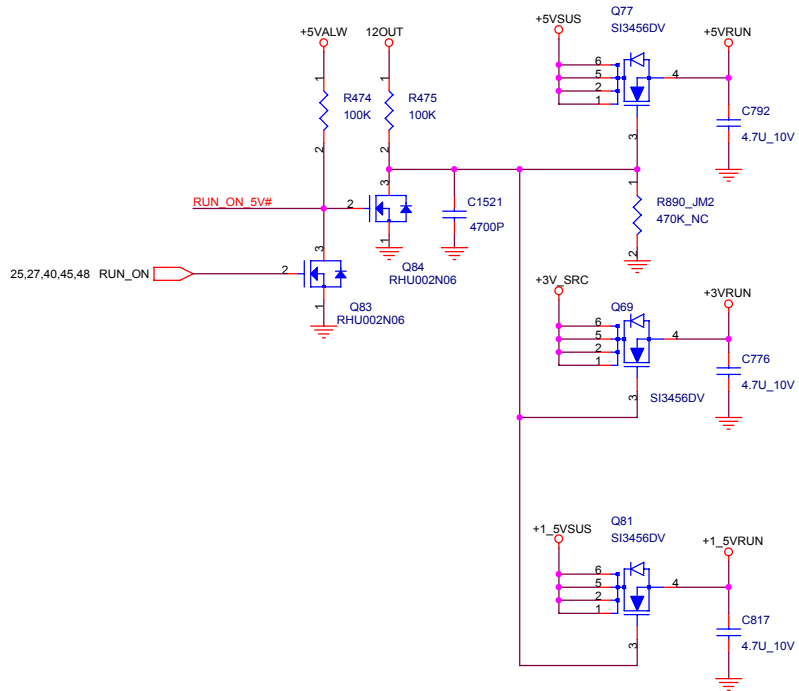


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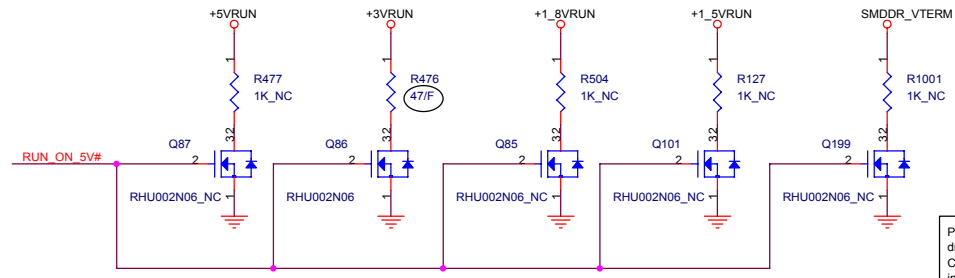
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| | | | | | |
|-------|--|--|----------------------|--|--|
| Title | | | 3VALW_5V_3V_power on | | |
| Size | | | Document Number JM2 | | |
| Date | | | 星期五, 六月 06, 2003 | | |
| Sheet | | | 46 of 49 | | |
| Rev | | | 3K | | |



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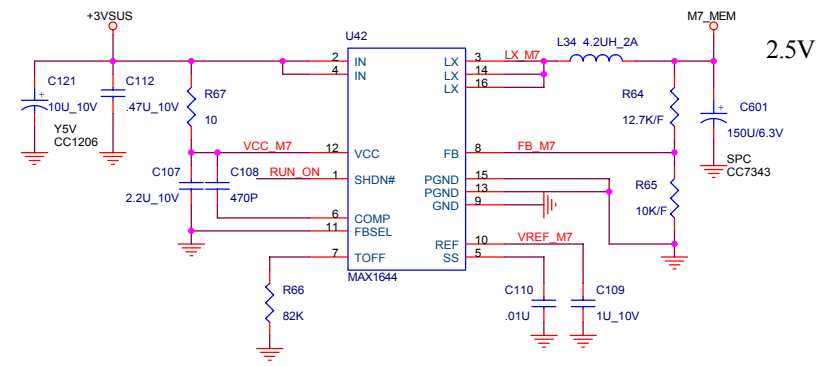
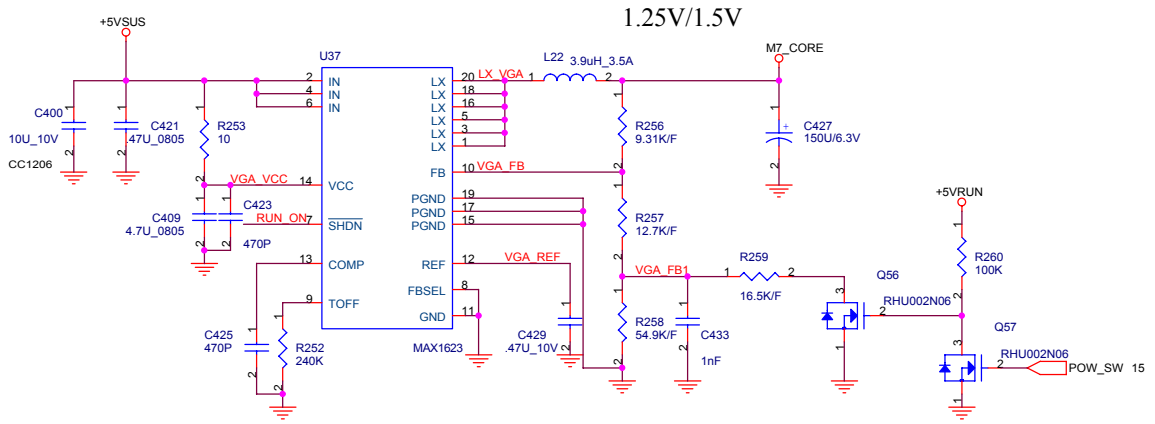
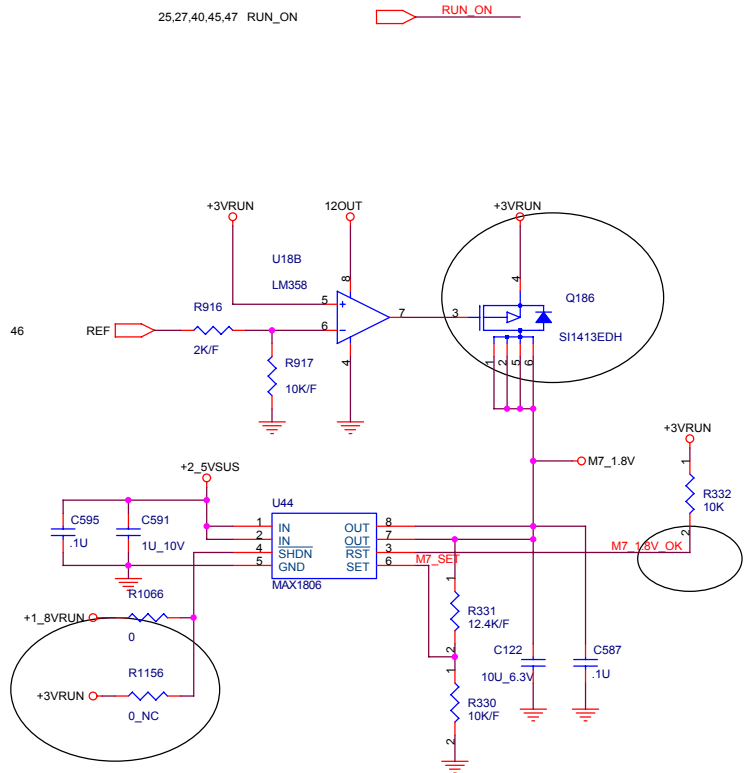
Reserve discharge path

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| | | |
|--------------------------|------------------------|-----------|
| Title RUN POWER SW | | |
| Size JM2 | Document Number JM2 | Rev 3K |
| Date 星期五, 六月 06, 2003 | Sheet 47 of 49 | |

| POW_SW | M7D/M9 CSP 16 32 |
|--------|------------------|
| 0 | 1.5V |
| 1 | 1.25V |



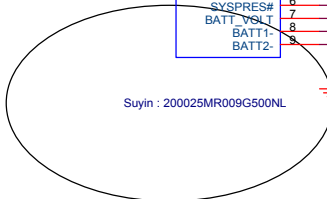
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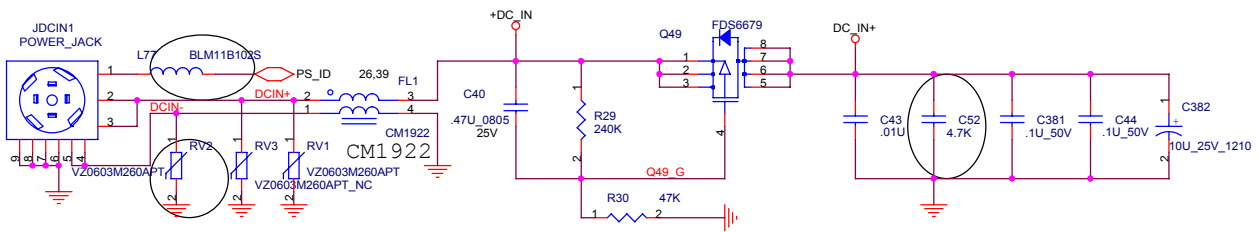
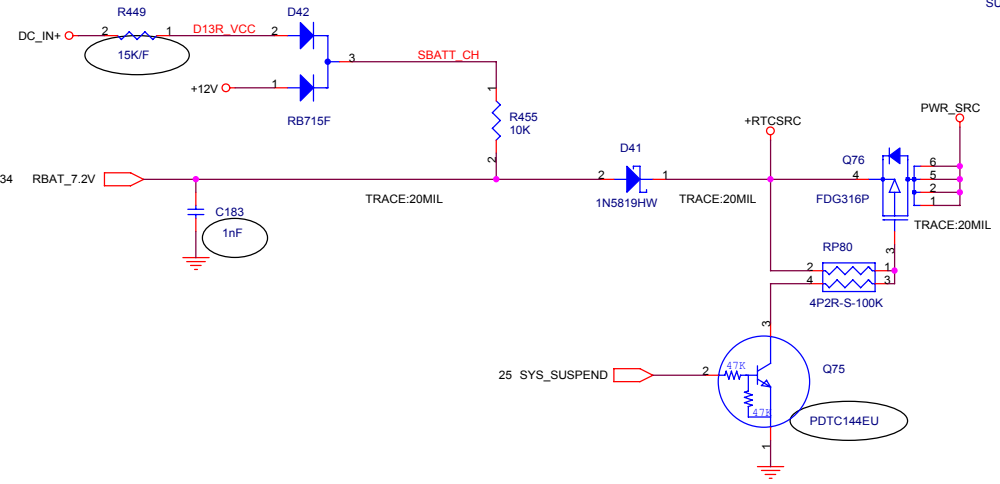
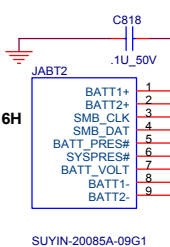
File: VGA DC/DC
 Size: Document Number JM2 Rev 3F
 Date: 星期五, 六月 06, 2003 Sheet 48 of 49

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Address : 16H



Address : 16H



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| | | |
|--------------------------|---------------------|--------|
| File DCIN.BATT CONNECTOR | | |
| Size JM2 | Document Number JM2 | Rev 3K |
| Date: 星期五, 六月 06, 2003 | Sheet 49 | of 49 |

MODEL

REV

CHANGE LIST

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Model

JM2 MB

Page

FM

TO

JM2

1A

Preliminary Release

1

3I

1B

Refer to ECN No. E200205-0561

2

1A

2A

Refer to ECN No. E200206-0072

3

1A

4

1A

3K

2B

Refer to ECN No. E200206-0273

5

2E

3K

2C

Refer to ECN No. E200207-0115

6

3B

2D

Refer to ECN No. E200207-1038

7

3A

3K

2E

Refer to ECN No. E200207-1219, E200207-2119

8

2E

3A

Refer to ECN No. E200208-1667, E200209-1836

9

3C

3B

Refer to ECN No. E200210-0812, E200210-1418

10

3I

3C

Refer to ECN No. E200210-2031, E200211-0167

11

3A

3D

Refer to ECN No. E200211-0897

12

3F

3E

Refer to ECN No. E200211-1860, E200211-2101, E200211-2472

13

1A

3F

Refer to ECN No. E200211-3189

14

1A

3G

Refer to ECN No. E200301-0228, E200301-1028

15

3A

3H

Refer to ECN No. E200301-1742, E200301-2344, E200302-0074, E200302-0685

16

1A

3I

Refer to ECN No. E200302-1751

17

3A

3J

Refer to ECN No. E200302-2889

18

1A

3K

Page 43 : De-pop PQ4 and PQ8 for save cost
 Page 43 : Change PR72 from 100K_NC to 62K/F for correct schematic.
 Page 43 : Change PR2 from 22.6K/F to 57.6K/F for correct schematic.
 Page 27 : Change C34 from 1000P to 1nF for description same as BOM.
 Page 49 : Change C183 from 1000P to 1nF for description same as BOM.
 Page 20 : Change C337 from 1000P to 1nF for description same as BOM.
 Page 39 : Change C358, C359 from 1000P to 1nF for description same as BOM.
 Page 33 : Change C1589 from 1000P to 1nF for description same as BOM.
 Page 43 : Change PC16, PC32, PC33, PC34, PC35, PC38 from 1000P to 1nF for description same as BOM.
 Page 45 : Change PC104, PC105, PC111, PC112 from 1000PF to 1nF for description same as BOM.
 Page 20 : Change Q30, Q62 from DTC144EUA to PDTC144EU for description same as BOM.
 Page 32 : Change Q19, Q212 from DTC144EUA to PDTC144EU for description same as BOM.
 Page 36 : Change Q204, Q205 from DTC144EUA to PDTC144EU for description same as BOM.
 Page 39 : Change Q45 from DTC144EUA to PDTC144EU for description same as BOM.
 Page 45 : Change Q104 from DTC144EUA to PDTC144EU for description same as BOM.
 Page 46 : Change Q36 from DTC144EUA to PDTC144EU for description same as BOM.

19

3F

3K

20

3F

3K

21

3A

22

3G

23

3A

24

3A

25

3D

26

3F

27

3F

3K

28

3F

29

3A

30

3A

31

3G

32

3A

3K

33

3C

3K

34

3F

35

3C

3K

36

3G

3K

37

3G

38

2E

39

2E

3K

40

1A

41

3F

42

3F

43

3C

3K

44

1A

45

3D

3K

46

3H

3K

47

3C

3K

48

3F

49

3F

3K

QUANTA
COMPUTER

PROJECT : JM2

DOC. NO. 204

REV: 3K

ASSY: 31JM2MB0036

APPROVED BY : Eric Liu

CHECKED BY: Kevin Chien

DRAWN BY : Lit Wu

DATE : JUN. 06, 2003

SHEET 1 OF 1

MODEL

REV

CHANGE LIST

JM2

3K

Page 49 : Change Q75 from DTC144EUA to PDTC144EU for description same as BOM.
 Page 5 : Change C996, C998, C1000, C1002, C1003, C1005, C1006, C1007, C1008, C1009, C1010, C1011, C1012, C1013, C1014, C1015, C1018, C1040, C1041, C1042, C1043, C1044, C1049, C1050, C1051, C1052, C1053, C995, C997, C999, C1001, C1004, C1016, C1017, C1019 from 10U_6.3V to 10U_4V for correct schematic.
 Page 7 : Change C1527 from 10U_6.3V to 10U_4V for correct schematic.
 Page 36 : Change L85~L92 from MLK1005S15NJ to MLK1005S15NJ(0.015u) for description clear with BOM.
 Page 36 : Change PV32 from PAD126X98 to PAD138X98 for correct schematic.
 Page 35 : Change RP215 from 4P2R-S-1K to 4P2R-S-1K/F for description same as BOM.
 Page 4 : Change R559 from 1.5K to 1.5K/F for description same as BOM.
 Page 49 : Change R449 from 15K to 15K/F for description same as BOM.
 Page 47 : Change R476 from 47 to 47/F for description same as BOM.
 Page 36 : Change U129 from PI3L301 to PI3L301DA.

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| Page | Model | |
|------|-------|----|
| | JM2 | MB |
| 1 | 3I | |
| 2 | 1A | |
| 3 | 1A | |
| 4 | 1A | 3K |
| 5 | 2E | 3K |
| 6 | 3B | |
| 7 | 3A | 3K |
| 8 | 2E | |
| 9 | 3C | |
| 10 | 3I | |
| 11 | 3A | |
| 12 | 3F | |
| 13 | 1A | |
| 14 | 1A | |
| 15 | 3A | |
| 16 | 1A | |
| 17 | 3A | |
| 18 | 1A | |
| 19 | 3F | |
| 20 | 3F | 3K |
| 21 | 3A | |
| 22 | 3G | |
| 23 | 3A | |
| 24 | 3A | |
| 25 | 3D | |
| 26 | 3F | |
| 27 | 3F | 3K |
| 28 | 3F | |
| 29 | 3A | |
| 30 | 3A | |
| 31 | 3G | |
| 32 | 3A | 3K |
| 33 | 3C | 3K |
| 34 | 3F | |
| 35 | 3C | 3K |
| 36 | 3G | 3K |
| 37 | 3G | |
| 38 | 2E | |
| 39 | 2E | 3K |
| 40 | 1A | |
| 41 | 3F | |
| 42 | 3F | |
| 43 | 3C | 3K |
| 44 | 1A | |
| 45 | 3D | 3K |
| 46 | 3H | 3K |
| 47 | 3C | 3K |
| 48 | 3F | |
| 49 | 3F | 3K |

