

# Dasher-2 Block Diagram

LDB-2 91.4RA01.001

Mar. 09, 2012

## PCB Layer Stackup

- L1:Component
- L2:GND
- L3:Signal 1
- L4:VCC
- L5:Signal 2
- L6:Signal 3
- L7:GND
- L8:Component

## Battery Charger/Selector

|            |               |
|------------|---------------|
| BQ24760 74 |               |
| INPUTS     | OUTPUTS       |
| DOCK_PWR20 | CHARGER_OUT12 |

## System DC/DC

|                 |       |
|-----------------|-------|
| TPS51220ARSN 78 |       |
| VINT20          | VCC5M |
|                 | VCC3M |

## CPU DC/DC

|                    |            |
|--------------------|------------|
| VT1318M/VT1324S 79 |            |
| VCC5M_OUT          | VCCCPUCORE |

## GMCH GFX CORE

|            |            |
|------------|------------|
| VT1324S 80 |            |
| VCC5M_OUT  | VCCGFXCORE |

## VCC1R5A

|             |         |
|-------------|---------|
| VT357FCX 85 |         |
| VCC5M_OUT   | VCC1R5A |

## VCC0R75B

|                 |          |
|-----------------|----------|
| TPS51200DRCR 86 |          |
| VCC1R5A         | VCC0R75B |

## VCC1R8B

|           |         |
|-----------|---------|
| BD9139 89 |         |
| VCC5M_OUT | VCC1R8B |

## VCC1R05AMT

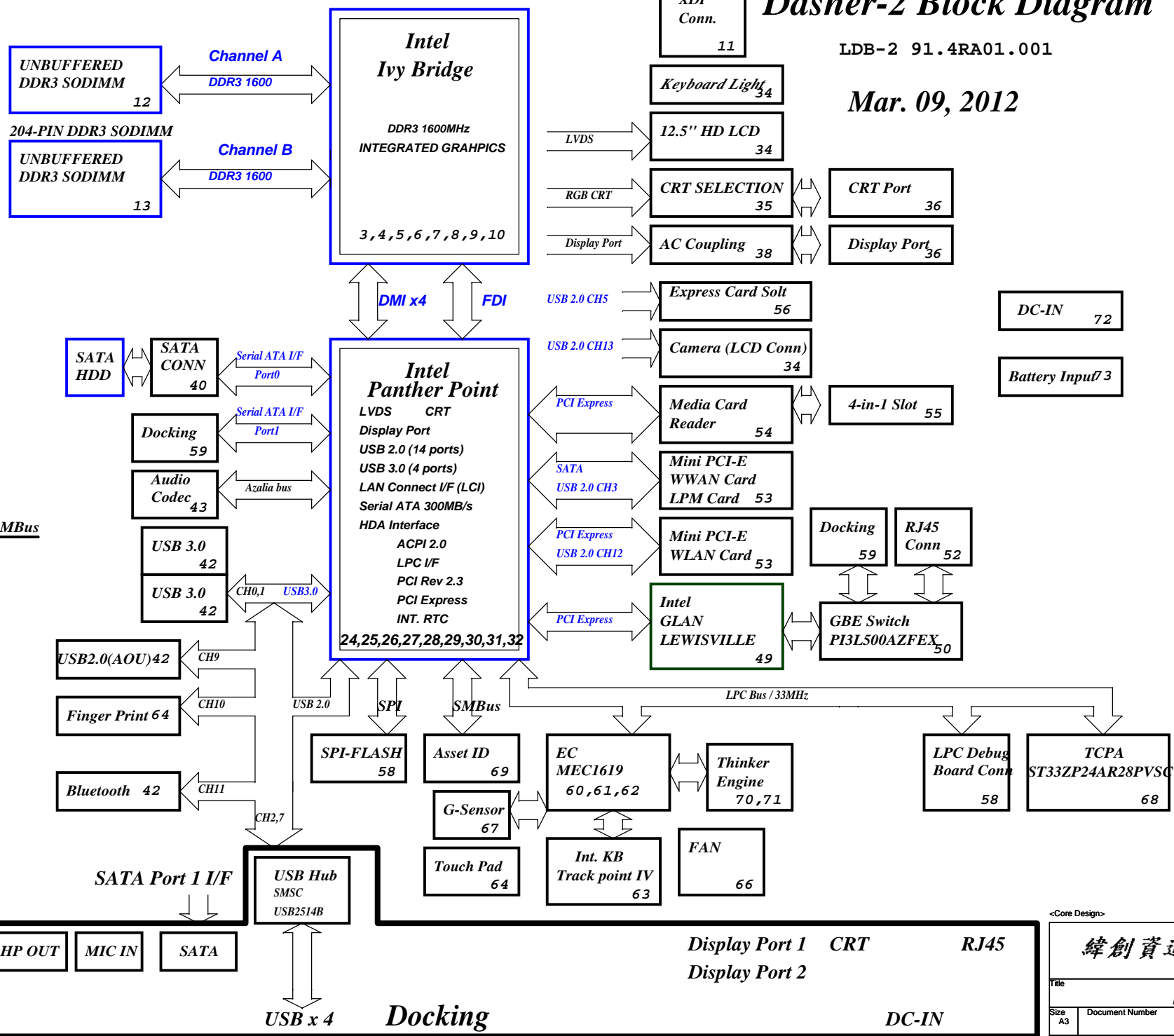
|             |            |
|-------------|------------|
| VT356FCX 84 |            |
| VCC5M_OUT   | VCC1R05LAN |

## VCC1R05B\_VTT

|           |              |
|-----------|--------------|
| VT356 83  |              |
| VCC5M_OUT | VCC1R05B_VTT |

## VCCSA

|           |       |
|-----------|-------|
| VT370 90  |       |
| VCC5M_OUT | VCCSA |



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|                              |                 |     |
|------------------------------|-----------------|-----|
| File                         |                 |     |
| Block Diagram                |                 |     |
| Size A3                      | Document Number | Rev |
|                              | Dasher-2        | -1  |
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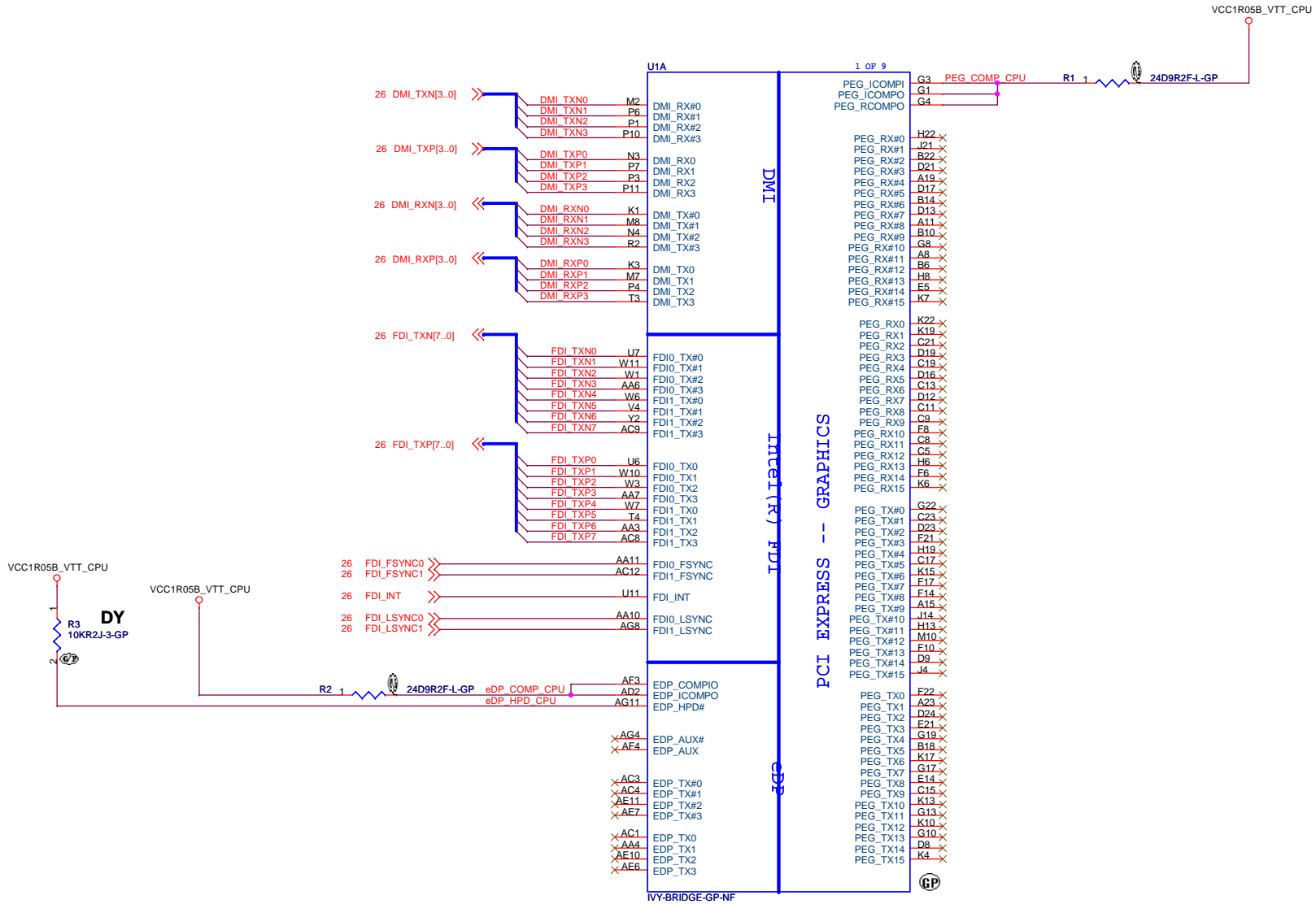
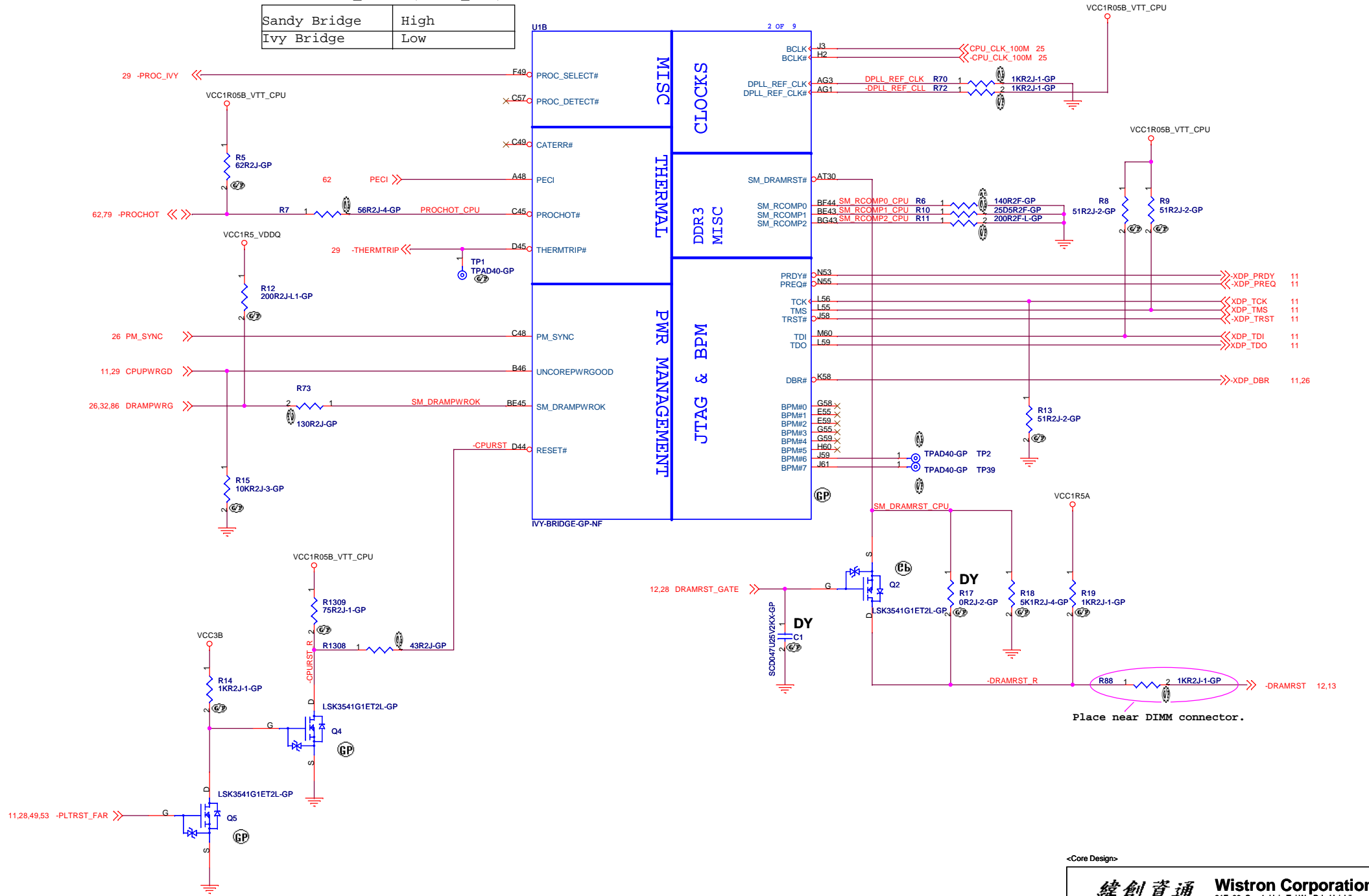
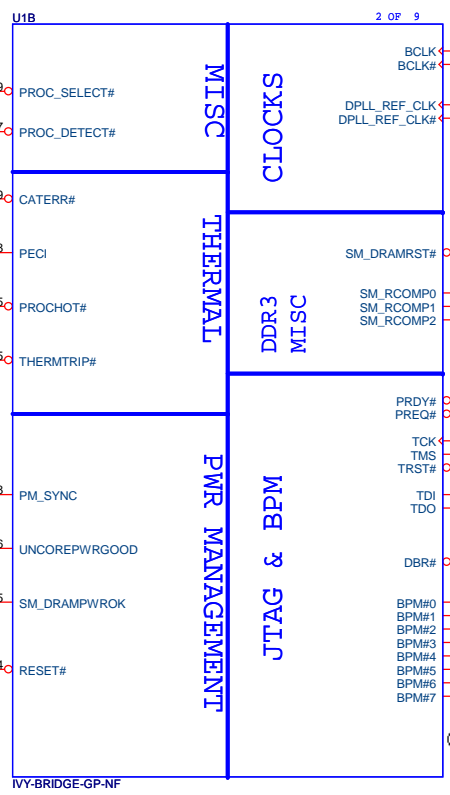


Table -PROC\_SELECT(-PROC\_IVY)

|              |      |
|--------------|------|
| Sandy Bridge | High |
| Ivy Bridge   | Low  |

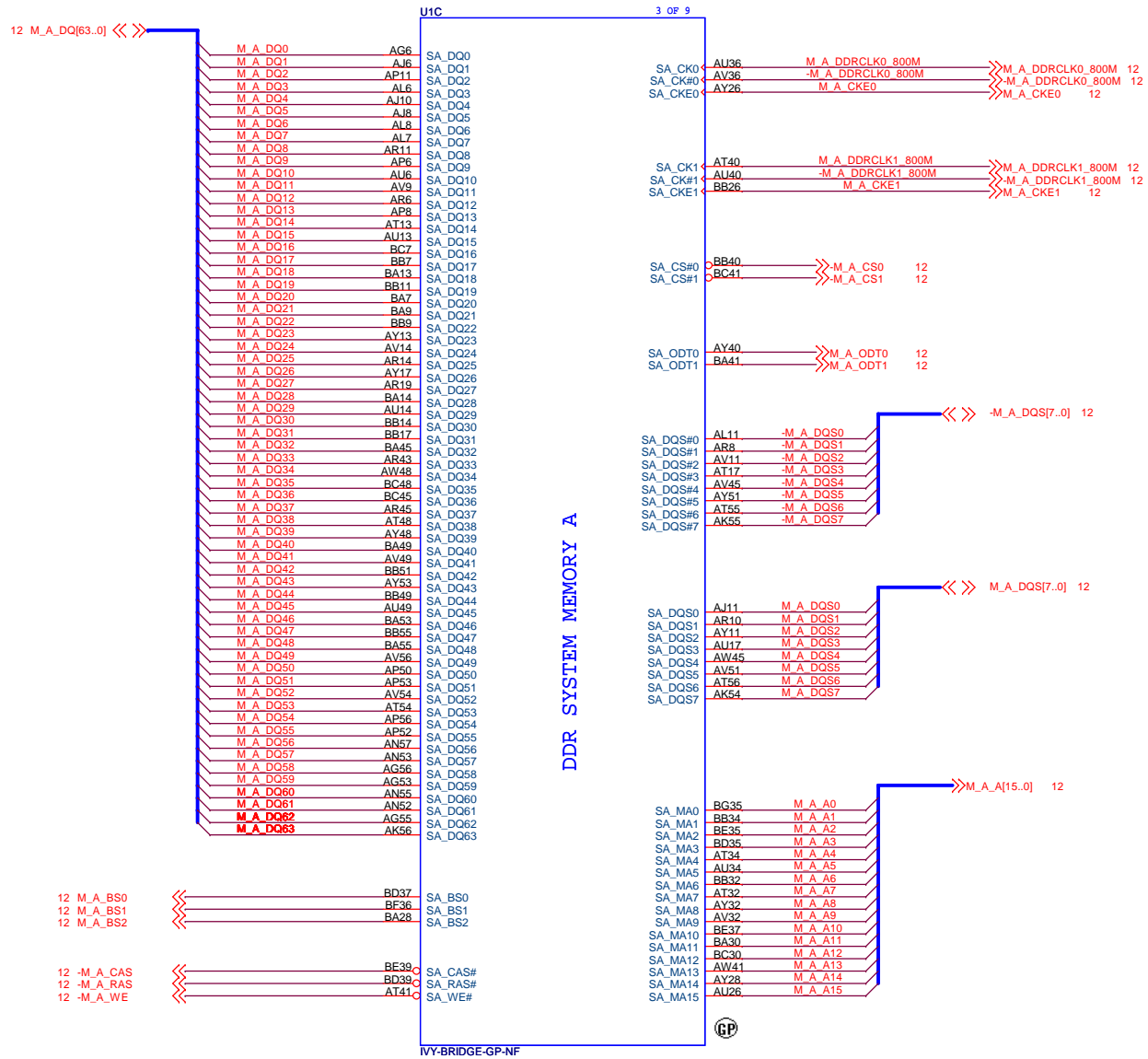


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Title: **CPU(2/8):CLK/MISC/JTAG**

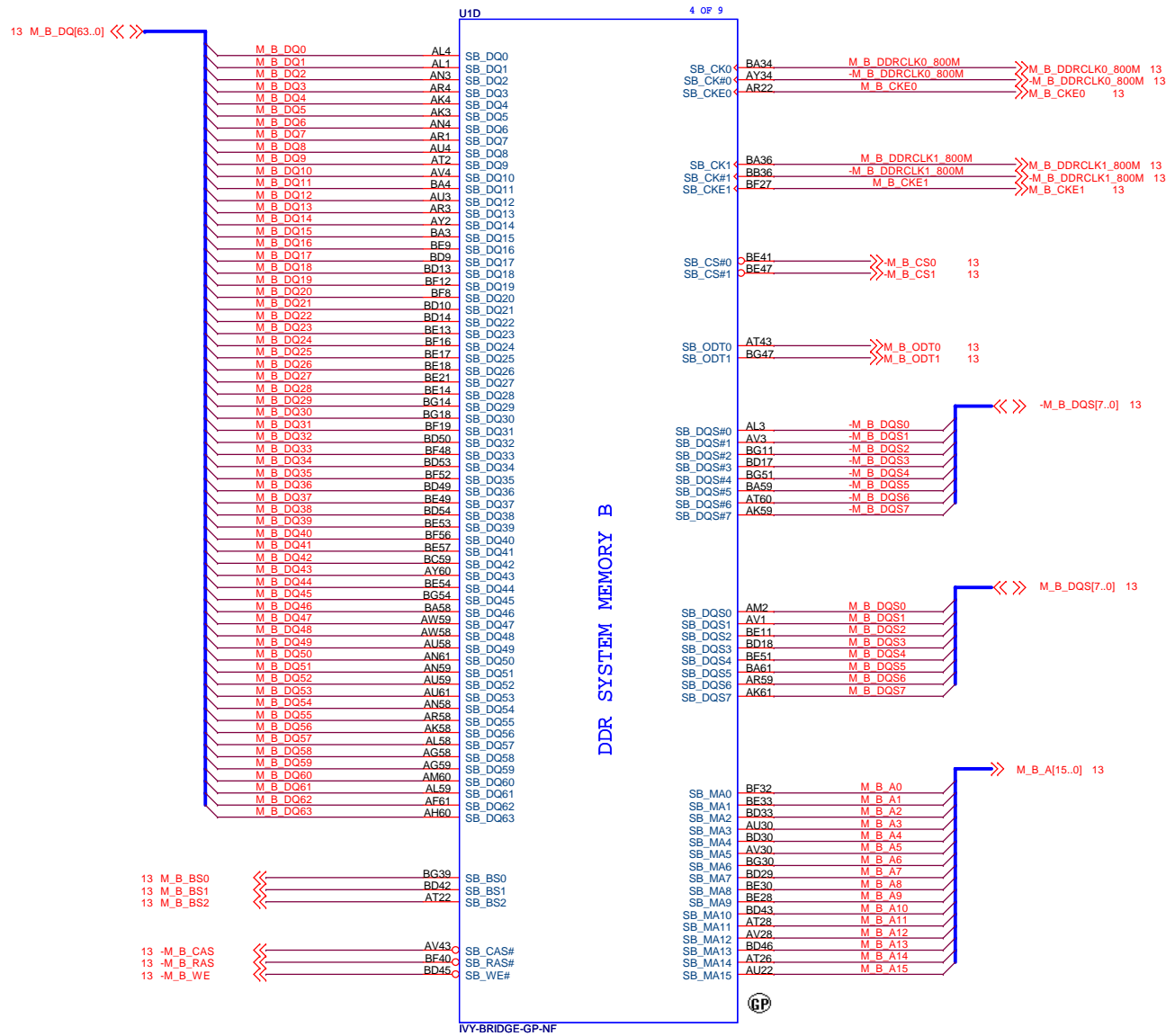
|                              |                                 |               |
|------------------------------|---------------------------------|---------------|
| Size A3                      | Document Number <b>Dasher-2</b> | Rev <b>-1</b> |
| Date: Friday, March 09, 2012 | Sheet 4 of                      | 101           |



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|   |                                    |                  |
|---|------------------------------------|------------------|
| Title<br><b>CPU(3/8):DDR3 Channel-A</b> |                                    |                  |
| Size<br>A3                              | Document Number<br><b>Dasher-2</b> | Rev<br><b>-1</b> |
| Date: Friday, March 09, 2012            | Sheet 5 of                         | 101              |



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Title **CPU(4/8):DDR3 Channel-B**

Size A3 Document Number **Dasher-2** Rev **-1**

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- U1F POWER 6 OF 9
- VCCCPUCORE
- A26 VCC1
  - A29 VCC2
  - A31 VCC3
  - A34 VCC4
  - A36 VCC5
  - A38 VCC6
  - A39 VCC7
  - A42 VCC8
  - C26 VCC9
  - D27 VCC10
  - C32 VCC11
  - C34 VCC12
  - C37 VCC13
  - C39 VCC14
  - D37 VCC15
  - VCC16
  - D34 VCC17
  - D34 VCC18
  - D37 VCC19
  - D38 VCC20
  - VCC21
  - D42 VCC22
  - E26 VCC23
  - E29 VCC24
  - F34 VCC25
  - F37 VCC26
  - F38 VCC27
  - F39 VCC28
  - F46 VCC29
  - F48 VCC30
  - F49 VCC31
  - F54 VCC32
  - F57 VCC33
  - F58 VCC34
  - F62 VCC35
  - G42 VCC36
  - H25 VCC37
  - H28 VCC38
  - H28 VCC39
  - H29 VCC40
  - H32 VCC41
  - H32 VCC42
  - H33 VCC43
  - H37 VCC44
  - H38 VCC45
  - H40 VCC46
  - J25 VCC47
  - J28 VCC48
  - J28 VCC49
  - J29 VCC50
  - J32 VCC51
  - J34 VCC52
  - J35 VCC53
  - J37 VCC54
  - K36 VCC55
  - K40 VCC56
  - K42 VCC57
  - K26 VCC58
  - K27 VCC59
  - K29 VCC60
  - K32 VCC61
  - K34 VCC62
  - K35 VCC63
  - K37 VCC64
  - K39 VCC65
  - K42 VCC66
  - L26 VCC67
  - L28 VCC68
  - L33 VCC69
  - L36 VCC70
  - VCC71
  - L40 VCC72
  - N26 VCC73
  - N30 VCC74
  - N34 VCC75
  - N38 VCC76

**POWER**

CORE SUPPLY

PGM IO AND DDR IO

OUTPUT RAILS

SV/ID

SENSE LINES

- VCCIO1 AF46
- VCCIO2 AG48
- VCCIO3 AG50
- VCCIO4 AG51
- VCCIO5 AG51
- VCCIO6 AJ17
- VCCIO7 AJ21
- VCCIO8 AJ25
- VCCIO9 AJ43
- VCCIO10 AJ47
- VCCIO11 AK50
- VCCIO12 AK51
- VCCIO13 AL14
- VCCIO14 AL15
- VCCIO15 AL16
- VCCIO16 AL20
- VCCIO17 AL22
- VCCIO18 AL26
- VCCIO19 AL45
- VCCIO20 AL48
- VCCIO21 AM18
- VCCIO22 AM17
- VCCIO23 AM21
- VCCIO24 AM43
- VCCIO25 AM47
- VCCIO26 AN20
- VCCIO27 AN42
- VCCIO28 AN45
- VCCIO29 AN48

- VCCIO30 AA14
- VCCIO31 AA15
- VCCIO32 AB17
- VCCIO33 AB20
- VCCIO34 AC13
- VCCIO35 AD16
- VCCIO36 AD18
- VCCIO37 AD21
- VCCIO38 AE14
- VCCIO39 AE15
- VCCIO40 AE16
- VCCIO41 AE18
- VCCIO42 AE20
- VCCIO43 AG15
- VCCIO44 AG16
- VCCIO45 AG17
- VCCIO46 AG20
- VCCIO47 AG21
- VCCIO48 AJ14
- VCCIO49 AJ15

- VCCIO50 W16
- VCCIO51 W17

VCCIO\_SEL BC22

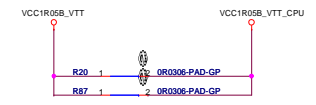
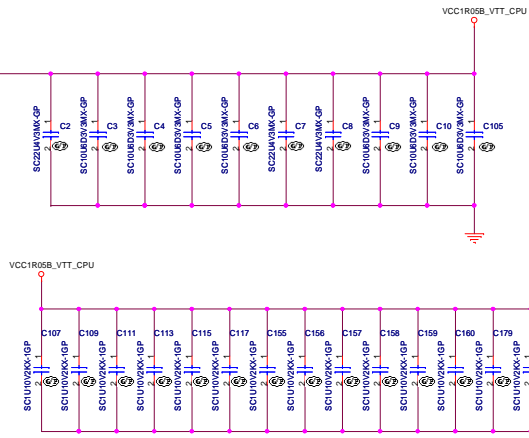
VCCPOE1 AM25  
VCCPOE2 AN22

VIDALERT# A44 VIDALERT CPU  
VIDSCLK B43  
VIDSOUT C44

VCC\_SENSE F43 VCC\_SENSE CPU  
VSS\_SENSE G43 VSS\_SENSE CPU

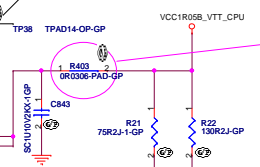
VCCIO\_SENSE AN16  
VSS\_SENSE\_VCCIO AN17

WY:BRIDGE:GP:NF

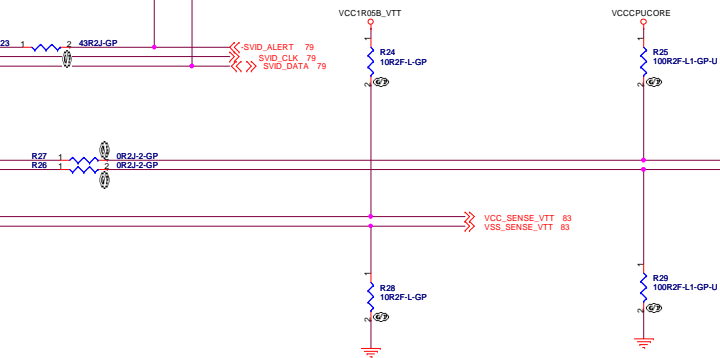


need a Via to measure VCCIO\_SEL voltage level.

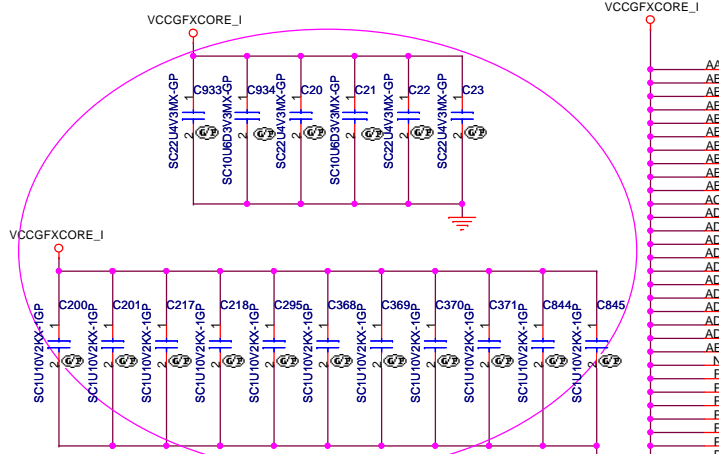
no 0.01 ohm 1% 0402 RES



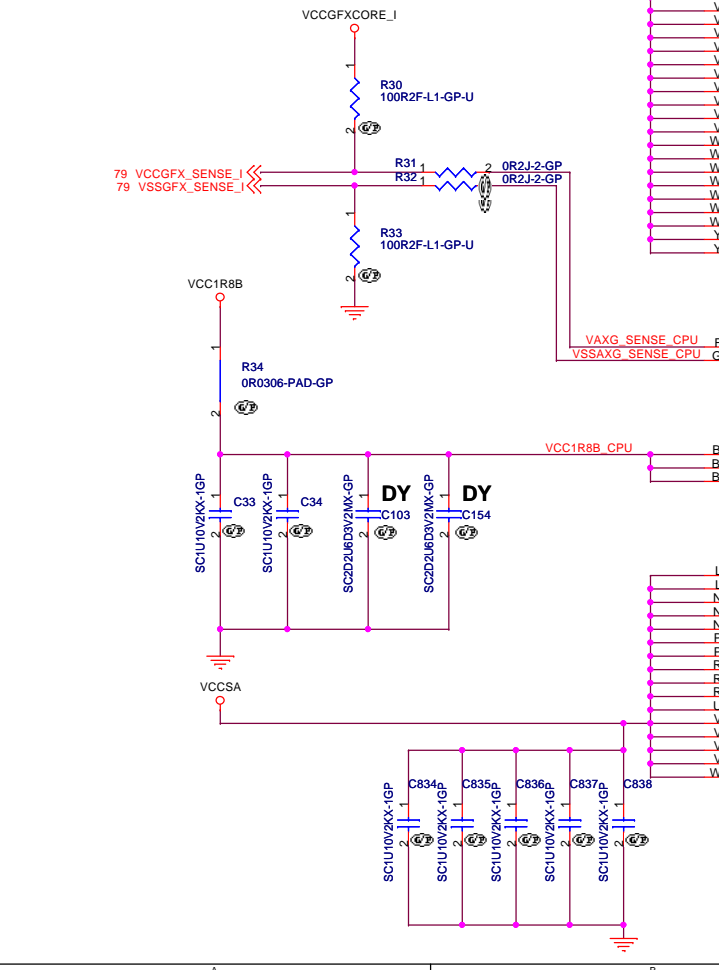
$Z_0 = 27.4 \text{ OHM}$   
PU/PD < 1inch



# POWER



As for placement, please follow  
 "Huron River Platform Power Delivery Design Guide Rev1.0"  
 (Intel DocNo.439028)



| Pin  | Signal           | Category  |
|------|------------------|-----------|
| AA46 | VAXG1            | GRAPHICS  |
| AB47 | VAXG2            |           |
| AB50 | VAXG3            |           |
| AB51 | VAXG4            |           |
| AB52 | VAXG4            |           |
| AB53 | VAXG5            |           |
| AB55 | VAXG6            |           |
| AB57 | VAXG7            |           |
| AB56 | VAXG8            |           |
| AB58 | VAXG9            |           |
| AD47 | VAXG11           |           |
| AD48 | VAXG12           |           |
| AD50 | VAXG14           |           |
| AD51 | VAXG15           |           |
| AD52 | VAXG16           |           |
| AD53 | VAXG17           |           |
| AD55 | VAXG18           |           |
| AD56 | VAXG19           |           |
| AD58 | VAXG20           |           |
| AD59 | VAXG21           |           |
| AE46 | VAXG22           |           |
| N45  | VAXG23           |           |
| P47  | VAXG24           |           |
| P48  | VAXG25           |           |
| P50  | VAXG26           |           |
| P51  | VAXG27           |           |
| P52  | VAXG28           |           |
| P53  | VAXG29           |           |
| P55  | VAXG30           |           |
| P56  | VAXG31           |           |
| P61  | VAXG32           |           |
| T48  | VAXG33           |           |
| T58  | VAXG34           |           |
| T59  | VAXG35           |           |
| U48  | VAXG36           |           |
| V47  | VAXG37           |           |
| V48  | VAXG38           |           |
| V50  | VAXG40           |           |
| V51  | VAXG41           |           |
| V52  | VAXG42           |           |
| V53  | VAXG43           |           |
| V56  | VAXG44           |           |
| V58  | VAXG45           |           |
| V59  | VAXG47           |           |
| W50  | VAXG48           |           |
| W51  | VAXG49           |           |
| W52  | VAXG50           |           |
| W53  | VAXG51           |           |
| W55  | VAXG52           |           |
| W56  | VAXG53           |           |
| W61  | VAXG54           |           |
| Y48  | VAXG54           |           |
| Y48  | VAXG54           |           |
| Y61  | VAXG56           |           |
| F45  | VAXG_SENSE_CPU   |           |
| G45  | VSSAXG_SENSE_CPU |           |
| BB3  | VCCPLL1          | 1.8V RAIL |
| BC1  | VCCPLL2          |           |
| BC4  | VCCPLL3          |           |
| L17  | VCCSA1           | SA RAIL   |
| L21  | VCCSA2           |           |
| N16  | VCCSA3           |           |
| N20  | VCCSA4           |           |
| N22  | VCCSA4           |           |
| P17  | VCCSA5           |           |
| P20  | VCCSA7           |           |
| R16  | VCCSA8           |           |
| R18  | VCCSA9           |           |
| R21  | VCCSA10          |           |
| U15  | VCCSA11          |           |
| V16  | VCCSA12          |           |
| V17  | VCCSA13          |           |
| V18  | VCCSA14          |           |
| V21  | VCCSA15          |           |
| W20  | VCCSA16          |           |

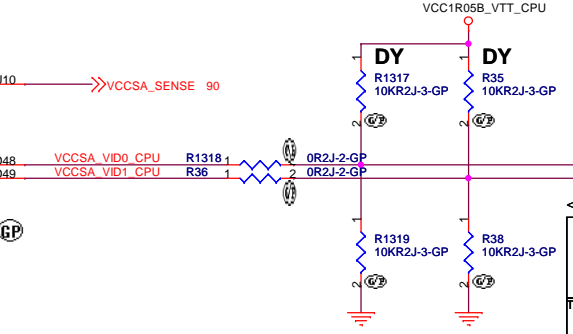
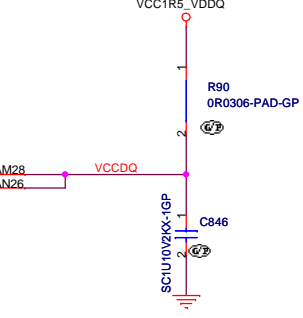
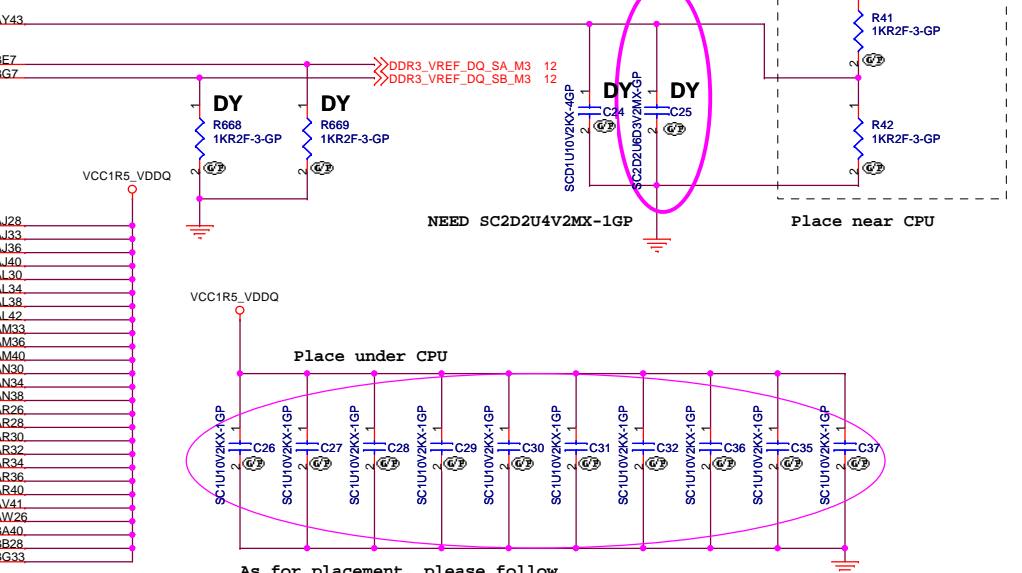
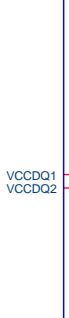
DDR3 - 1.5V RAILS

QUIET RAILS

SENSE LINES

VCCSA VID Lines

IVY-BRIDGE-GP-NF



|              | VCCSA_SEL0 | VCCSA_SEL1 | VCCSA            |
|--------------|------------|------------|------------------|
| Sandy Bridge | LOW        | 0<br>1     | 0.90V<br>0.80V   |
| Ivy Bridge   | High       | 0<br>1     | 0.725V<br>0.675V |

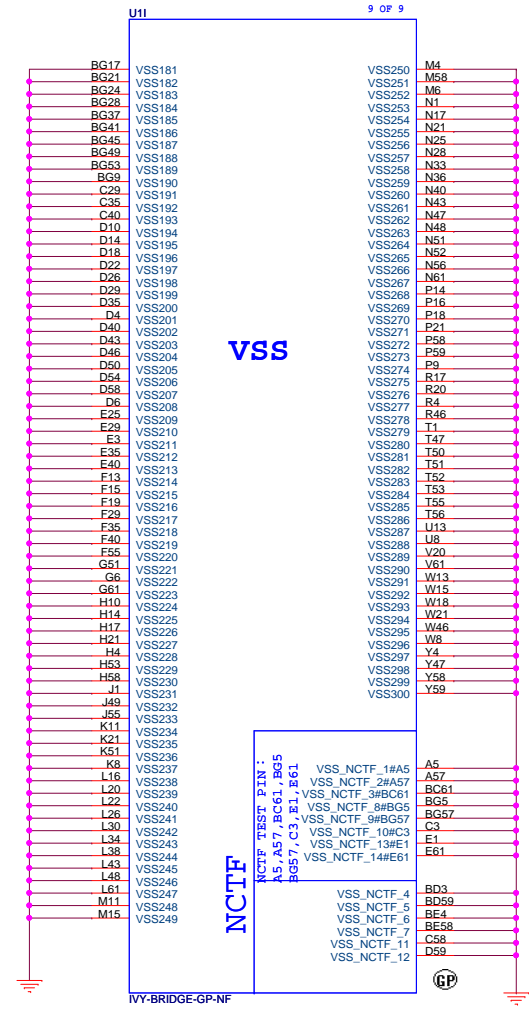
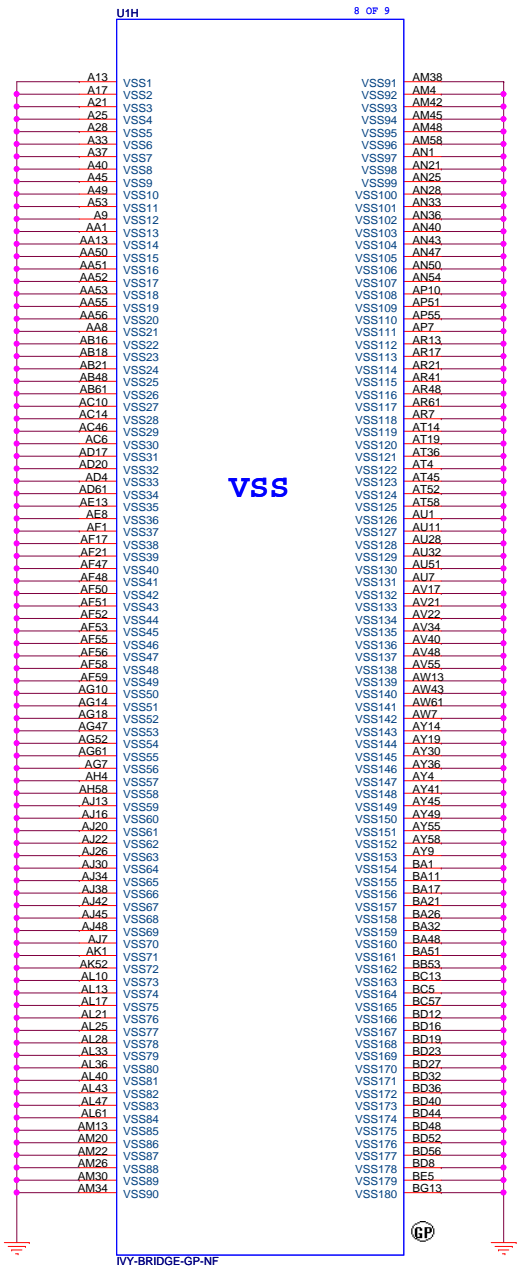
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Title: **CPU(6/8):Graphics Power**

|                              |                 |                 |               |
|------------------------------|-----------------|-----------------|---------------|
| Size A3                      | Document Number | <b>Dasher-2</b> | Rev <b>-1</b> |
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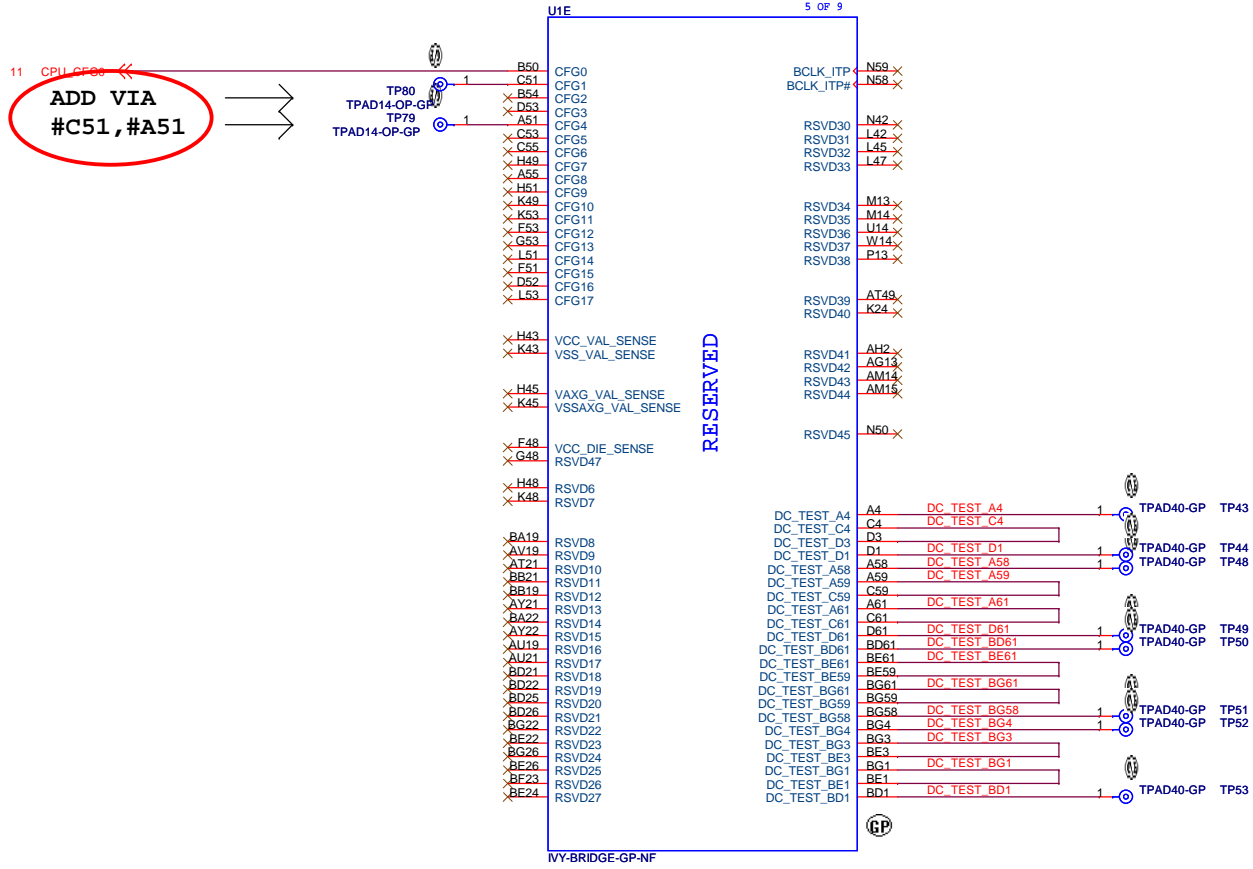
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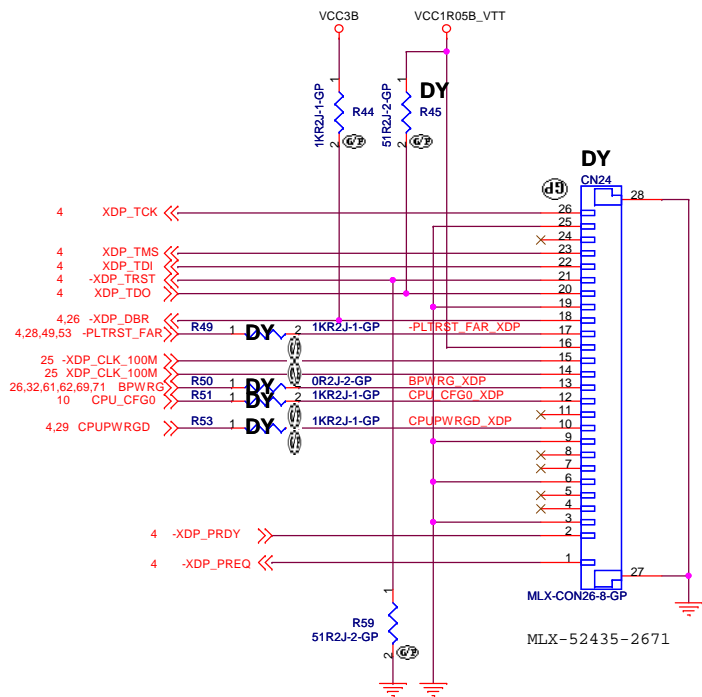
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Title **CPU(7/8):GND**

|        |                 |     |
|--------|-----------------|-----|
| Size   | Document Number | Rev |
| Custom | <b>Dasher-2</b> | -1  |

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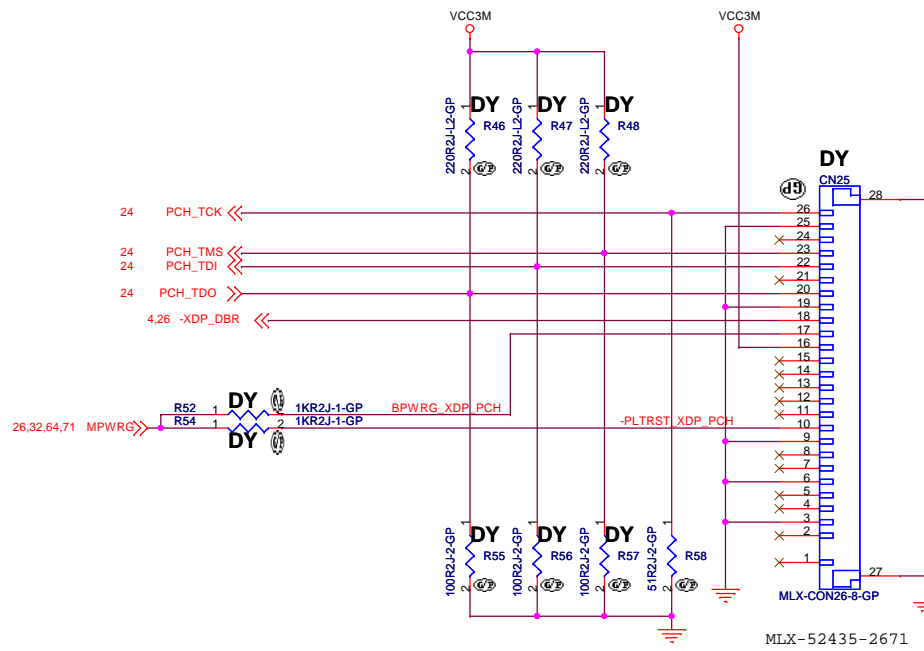


**DEBUG Interface for Processor.**

**XDP1** NOTE:"ASM" FOR PDV/SDV ONLY

|        |      | ENABLE | DISABLE |
|--------|------|--------|---------|
| TDO    | R45  | ASM    | DY      |
| TRST#  | R59  | ASM    | ASM     |
| DBRST# | R44  | ASM    | ASM     |
| RESET# | R49  | ASM    | DY      |
| CFG0   | R51  | ASM    | DY      |
| PWRGD  | R53  | ASM    | DY      |
| BPWRG  | R50  | ASM    | DY      |
|        | CN24 | ASM    | DY      |

FVT Logic



**DEBUG Interface for PCH.**

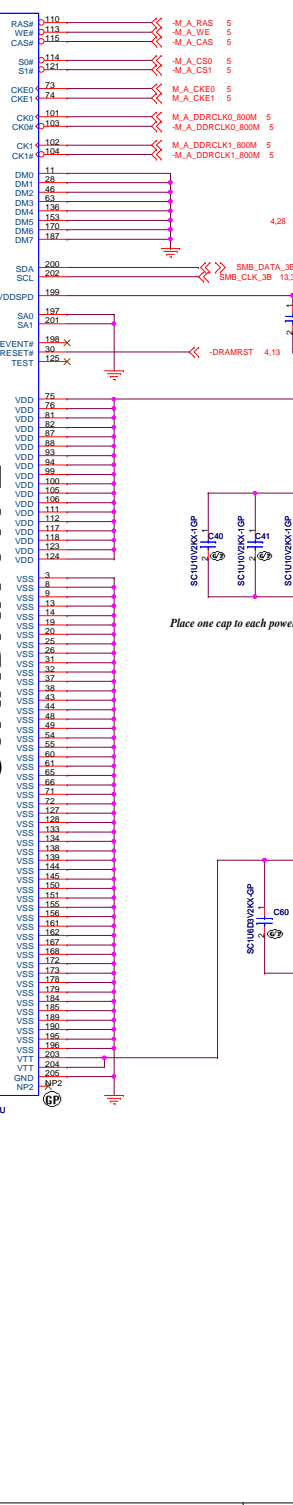
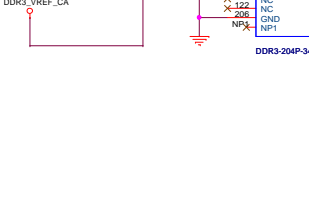
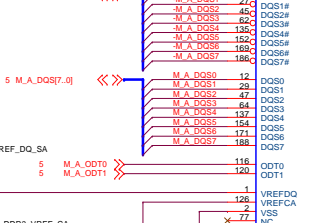
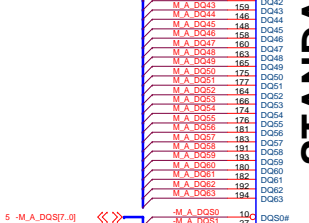
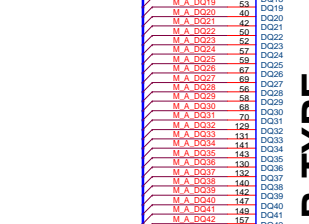
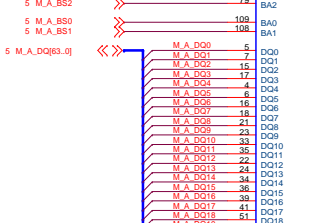
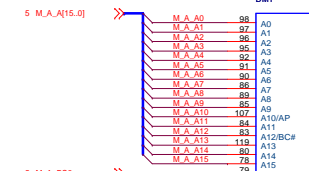
**XDP2** NOTE:"ASM" FOR PDV/SDV ONLY

|       |      | ENABLE | DISABLE |
|-------|------|--------|---------|
| TDO   | R46  | 220    | DY      |
|       | R55  | 100    | DY      |
| TMS   | R48  | 220    | DY      |
|       | R57  | 100    | DY      |
| TDI   | R47  | 220    | DY      |
|       | R56  | 100    | DY      |
| TCK   | R58  | 51     | 51      |
| MPWRG | R52  | ASM    | DY      |
|       | R54  | ASM    | DY      |
|       | CN25 | ASM    | DY      |

FVT Logic

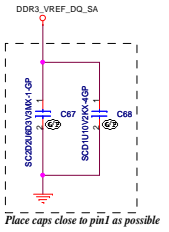
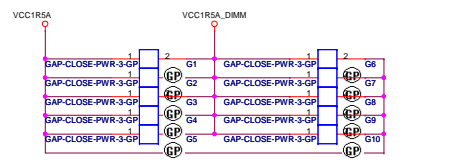
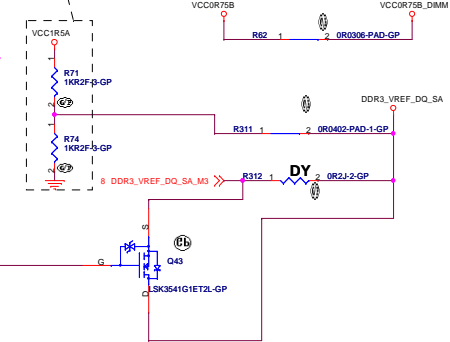
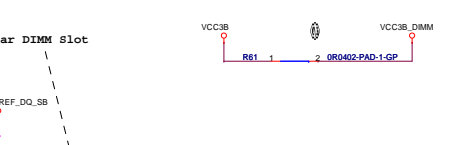
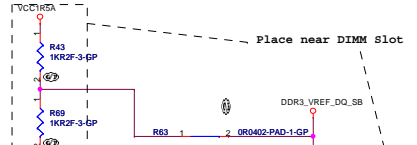
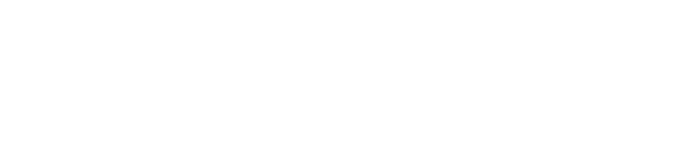
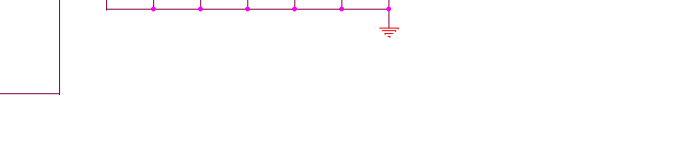
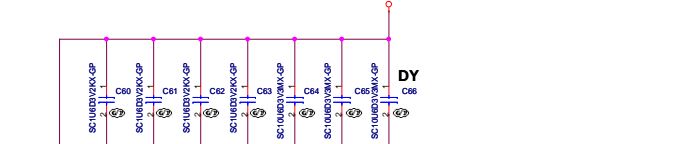
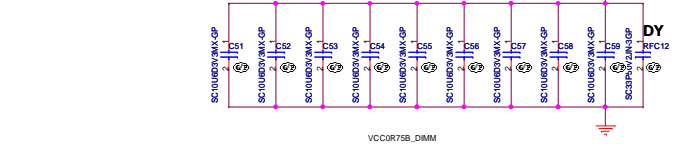
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| <b>緯創資通</b>                  |                 | <b>Wistron Corporation</b>   |           |
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| <b>Title</b>                 |                 |  |           |
| <b>XDP Connector</b>         |                 |  |           |
| Size                         | Document Number | Rev  |           |
| A3                           | <b>Dasher-2</b> | <b>-1</b>  |           |
| Date: Friday, March 09, 2012 |                 | Sheet  | 11 of 101 |

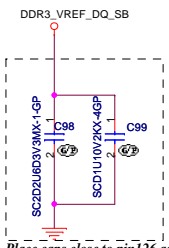
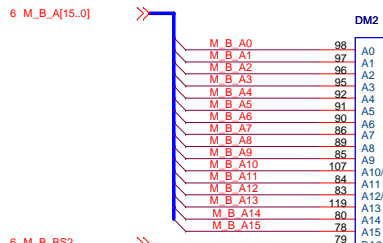


**STANDAR TYPE**

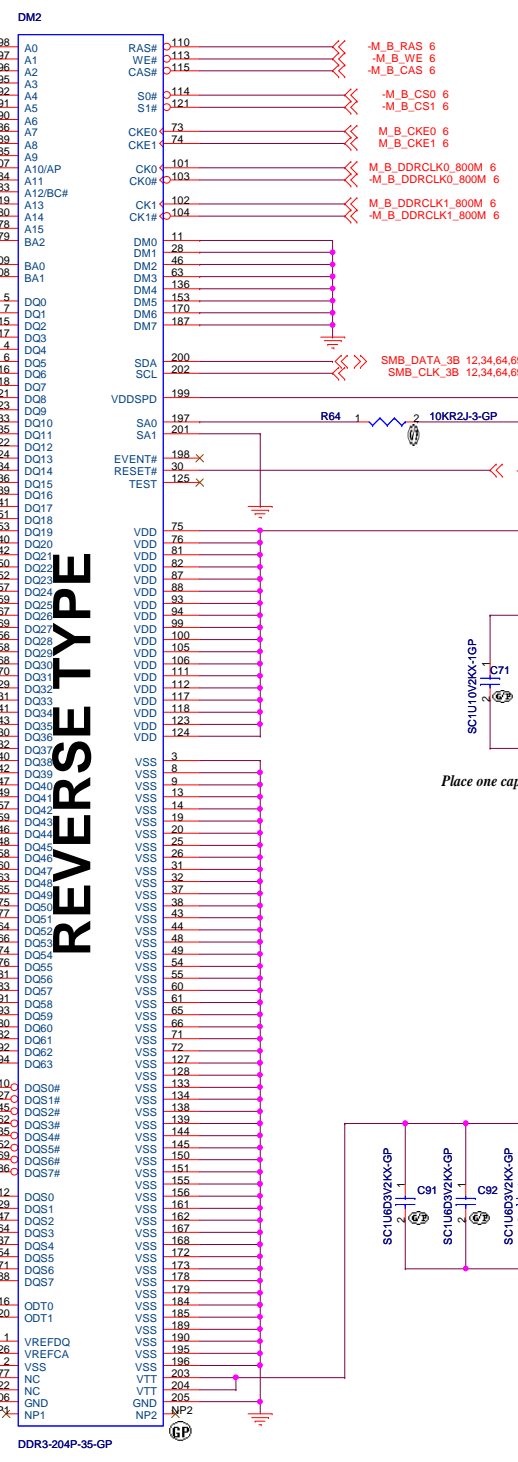
Place one cap to each power pin and as close as possible



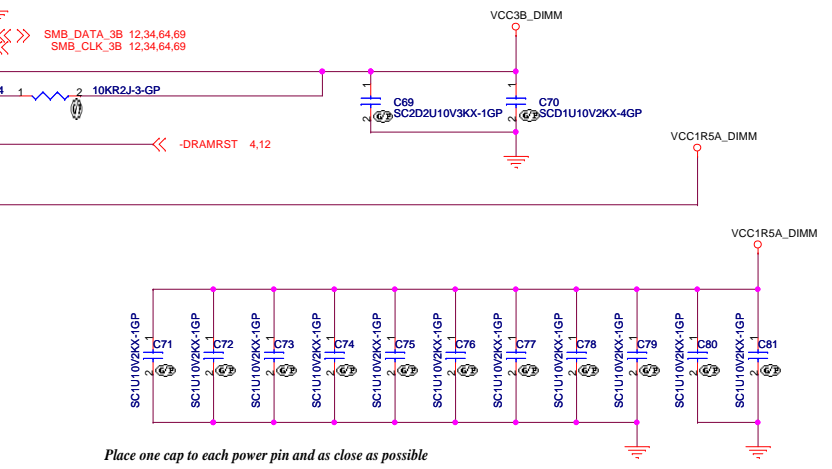
Place caps close to pin1 as possible



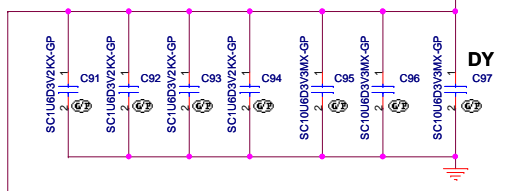
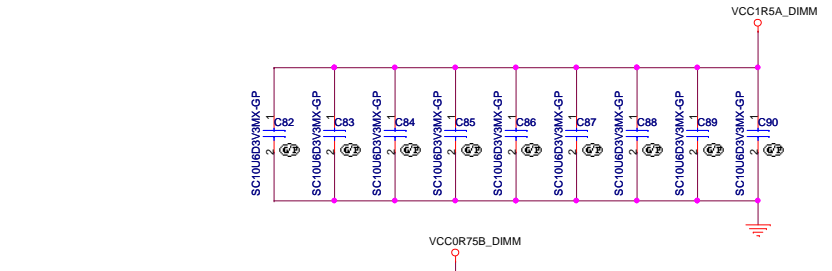
Place caps close to pin126 as possible



REVERSE TYPE



Place one cap to each power pin and as close as possible



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Title: **DDR3 SODIMM-B**

|        |                 |           |
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| Size   | Document Number | Rev       |
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緯創資通 **Wistron Corporation**  
21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih,  
Taipei Hsien 221, Taiwan, R.O.C.

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| Size<br>A3                       | Document Number<br><b>Dasher-2</b> | Rev<br><b>-1</b> |
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Title

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Title

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Document Number

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Rev

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| Date: Tuesday, February 21, 2012 | Sheet 20                           | of 101           |

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| Date: Tuesday, February 21, 2012 | Sheet 22                           | of 101           |

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Taipei Hsien 221, Taiwan, R.O.C.

Title

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Size  
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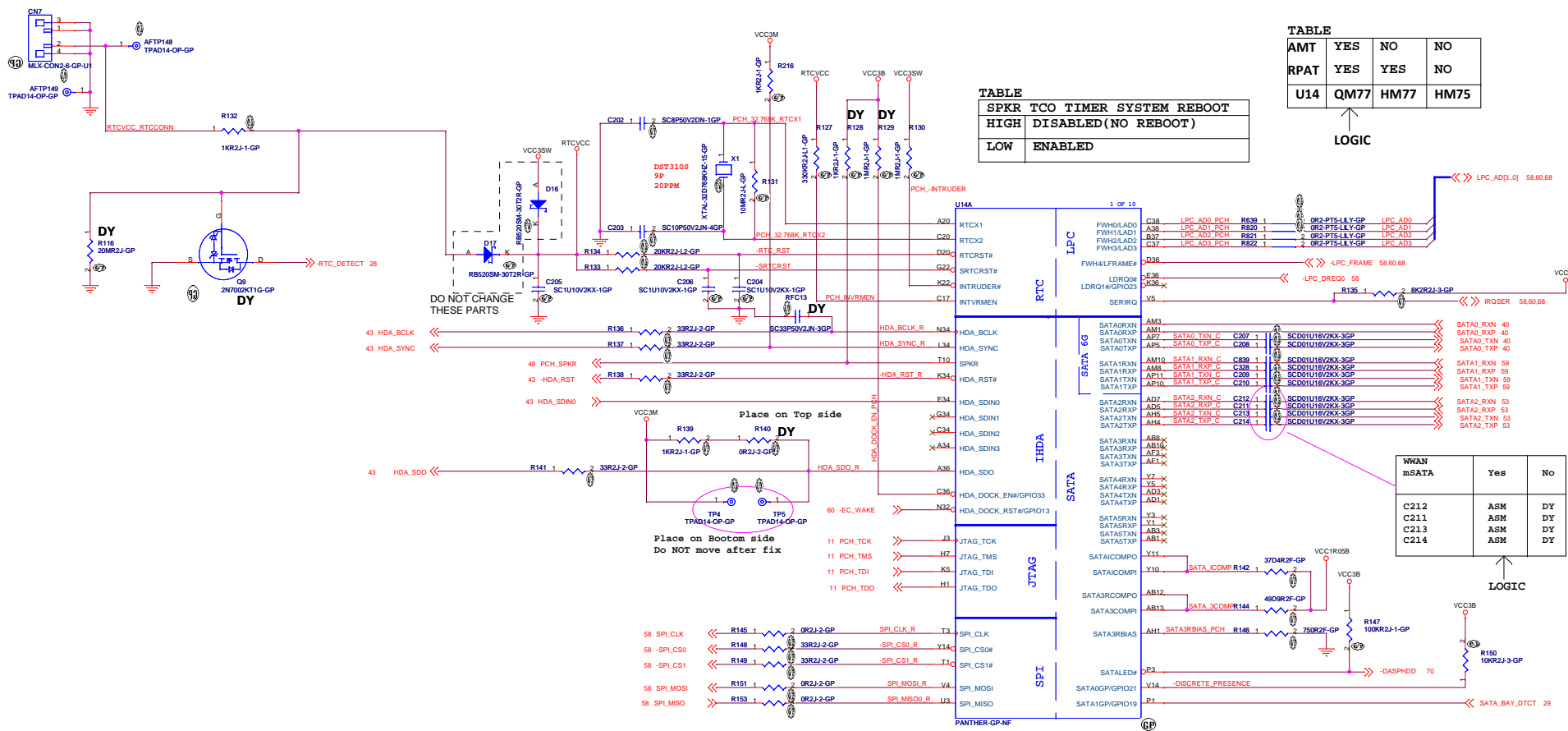
Document Number

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Rev  
-1

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| TABLE                        |
|------------------------------|
| SPKR TCO TIMER SYSTEM REBOOT |
| HIGH DISABLED(NO REBOOT)     |
| LOW ENABLED                  |

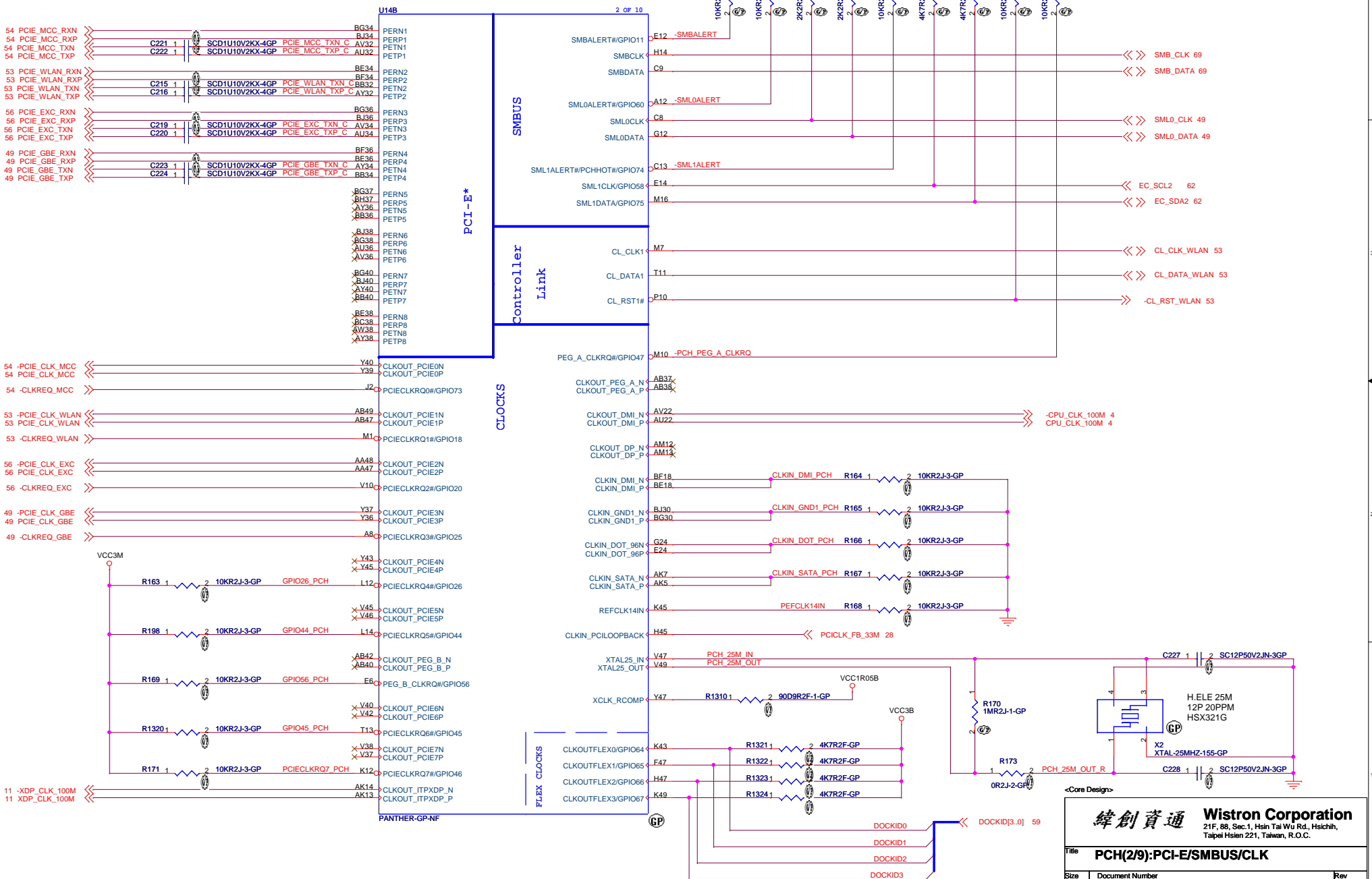
| TABLE |      |      |      |
|-------|------|------|------|
| AMT   | YES  | NO   | NO   |
| RPAT  | YES  | YES  | NO   |
| U14   | QM77 | HM77 | HM75 |

LOGIC

| WWAN mSATA | Yes | No |
|------------|-----|----|
| C212       | ASM | DY |
| C211       | ASM | DY |
| C213       | ASM | DY |
| C214       | ASM | DY |

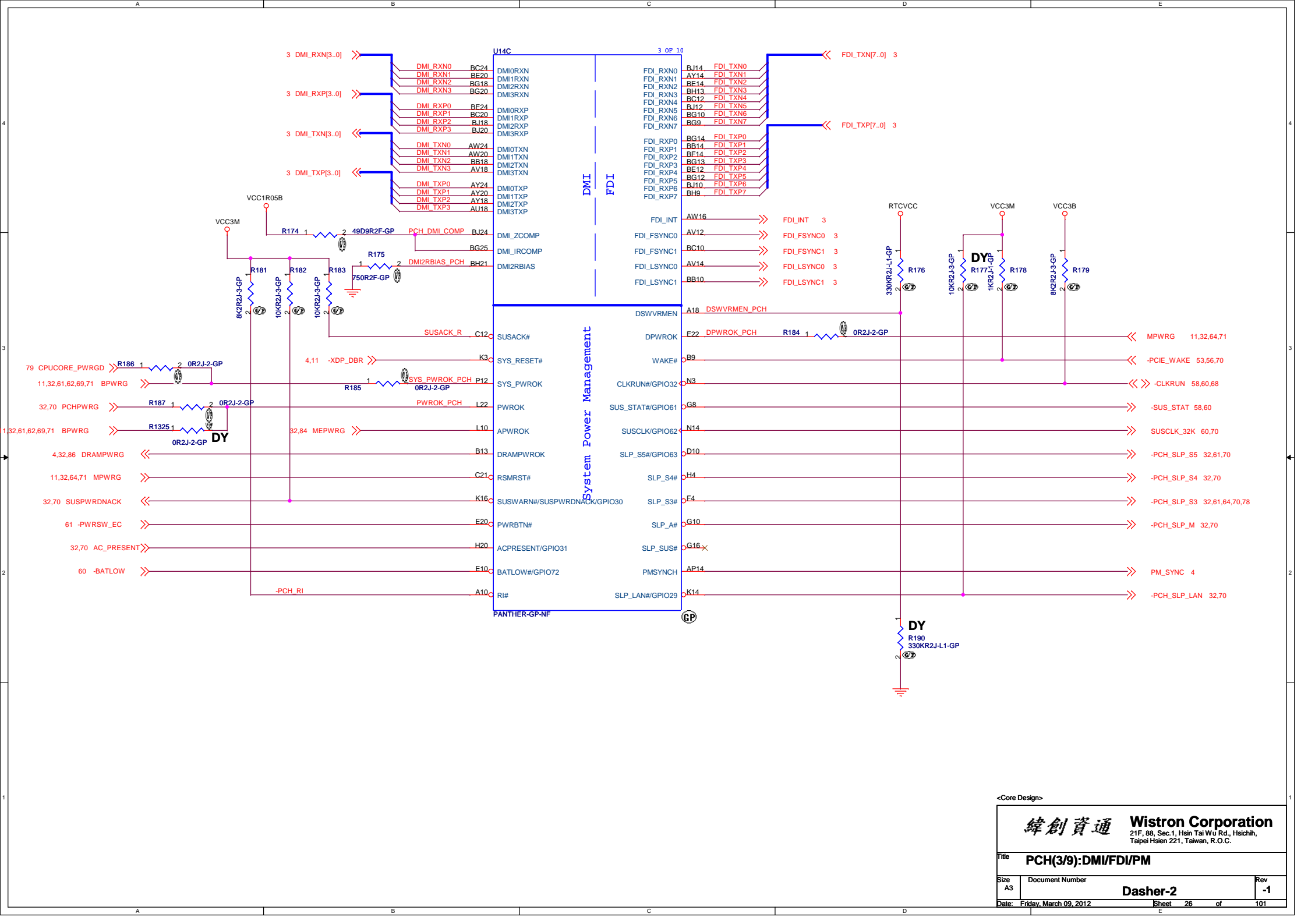
LOGIC





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|                                       |                 |           |
|---------------------------------------|-----------------|-----------|
| <b>Title</b> PCH(2/9):PCI-E/SMBUS/CLK |                 |           |
| Size                                  | Document Number | Rev       |
| Custom                                | <b>Dasher-2</b> | <b>-1</b> |
| Date: Friday, March 09, 2012          | Sheet 25 of     | 101       |



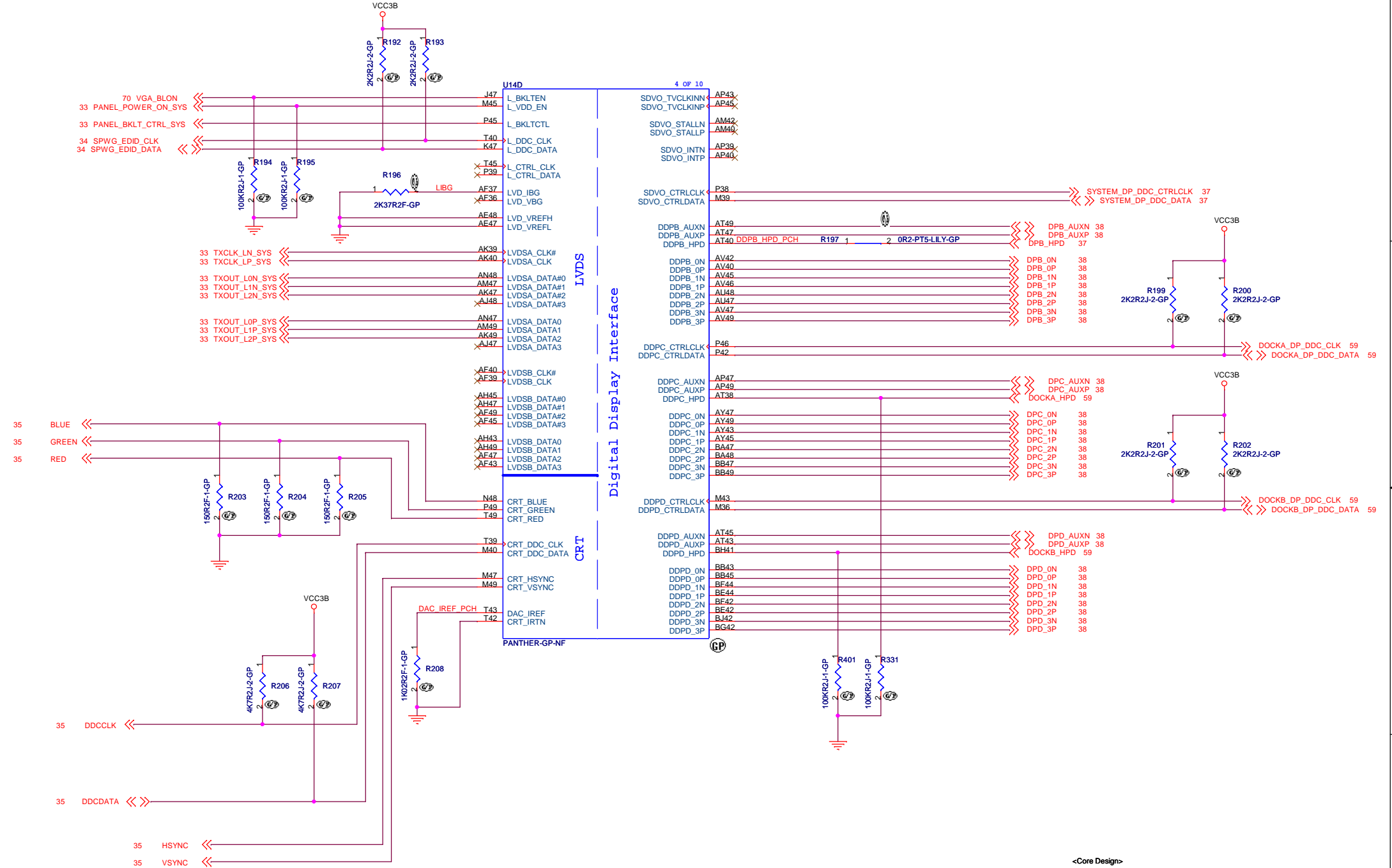
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緯創資通 Wistron Corporation  
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Taipei Hsien 221, Taiwan, R.O.C.

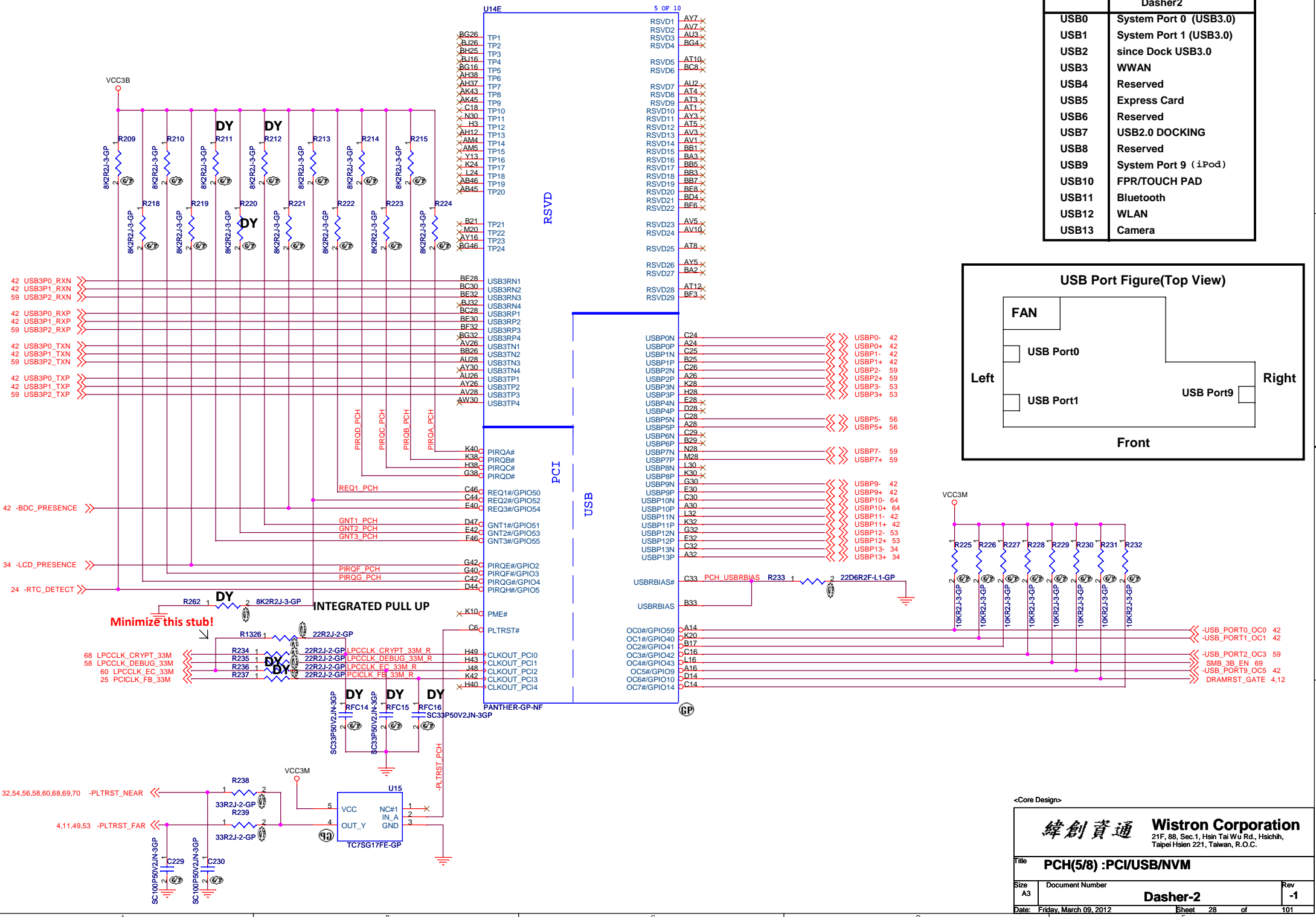
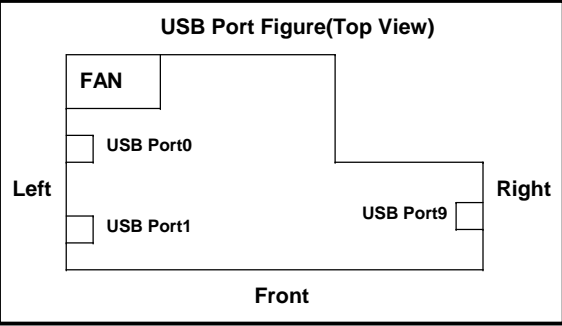
Title PCH(3/9):DMI/FDI/PM

Size A3 Document Number Dasher-2 Rev -1

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| Dasher2 |                        |
|---------|------------------------|
| USB0    | System Port 0 (USB3.0) |
| USB1    | System Port 1 (USB3.0) |
| USB2    | since Dock USB3.0      |
| USB3    | WWAN                   |
| USB4    | Reserved               |
| USB5    | Express Card           |
| USB6    | Reserved               |
| USB7    | USB2.0 DOCKING         |
| USB8    | Reserved               |
| USB9    | System Port 9 (iPod)   |
| USB10   | FPR/TOUCH PAD          |
| USB11   | Bluetooth              |
| USB12   | WLAN                   |
| USB13   | Camera                 |



<Core Design>

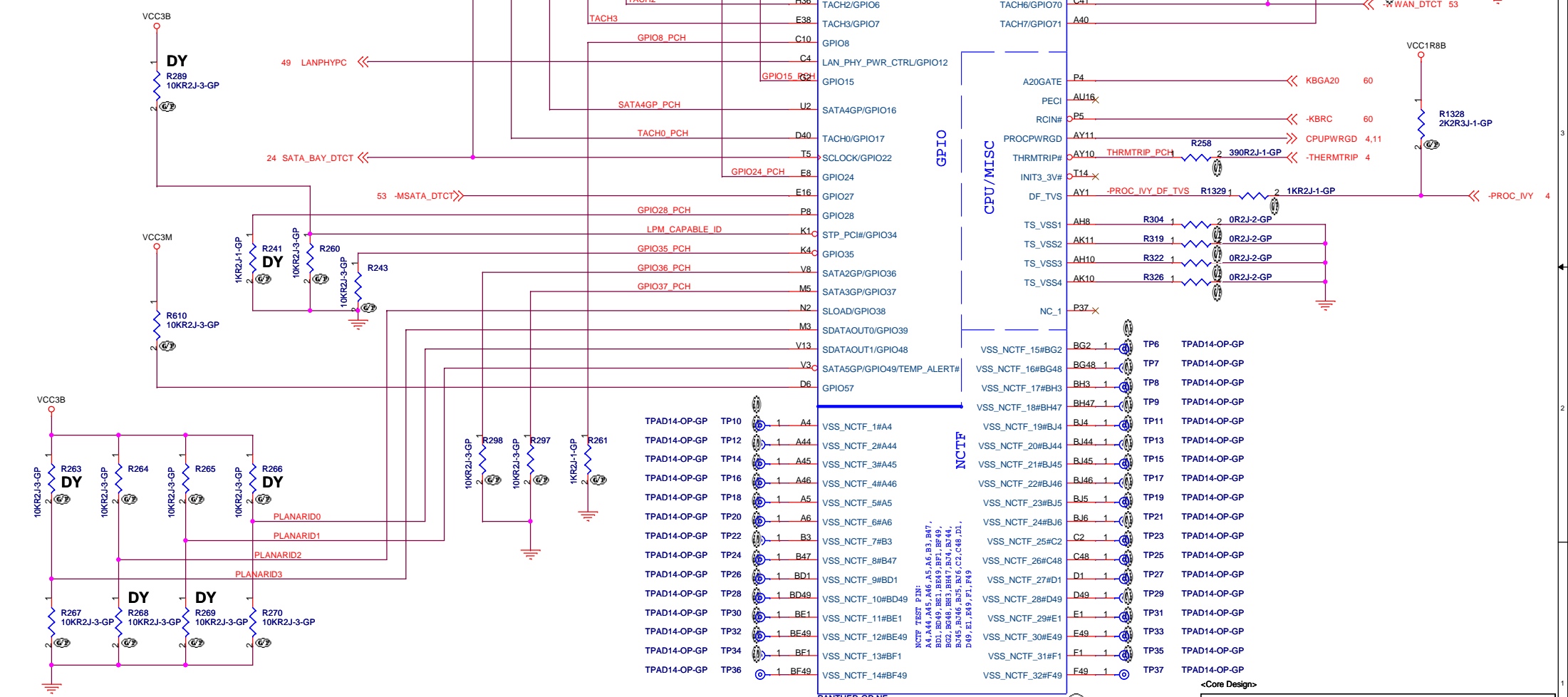
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|       |                               |                 |
|-------|-------------------------------|-----------------|
| Title | <b>PCH(5/8) : PCI/USB/NVM</b> |                 |
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| A3    | <b>Dasher-2</b>               | <b>-1</b>       |
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|              |                            |
|--------------|----------------------------|
| <b>GPIO8</b> | <b>INTEGRATED CLOCKING</b> |
| <b>HIGH</b>  | <b>DISABLE(BTM)</b>        |
| <b>LOW</b>   | <b>ENABLE(FCIM)</b>        |

|               |                             |
|---------------|-----------------------------|
| <b>GPIO15</b> | <b>ME CRYPTO STRAP</b>      |
| <b>HIGH</b>   | <b>WITH CONFIDENTIALITY</b> |
| <b>LOW</b>    | <b>NO CONFIDENTIALITY</b>   |

|               |                               |
|---------------|-------------------------------|
| <b>GPIO34</b> | <b>LPM CAPABILITY</b>         |
| <b>HIGH</b>   | <b>LPM CAPABLE PLANAR</b>     |
| <b>LOW</b>    | <b>LPM NON-SUPPORT PLANAR</b> |

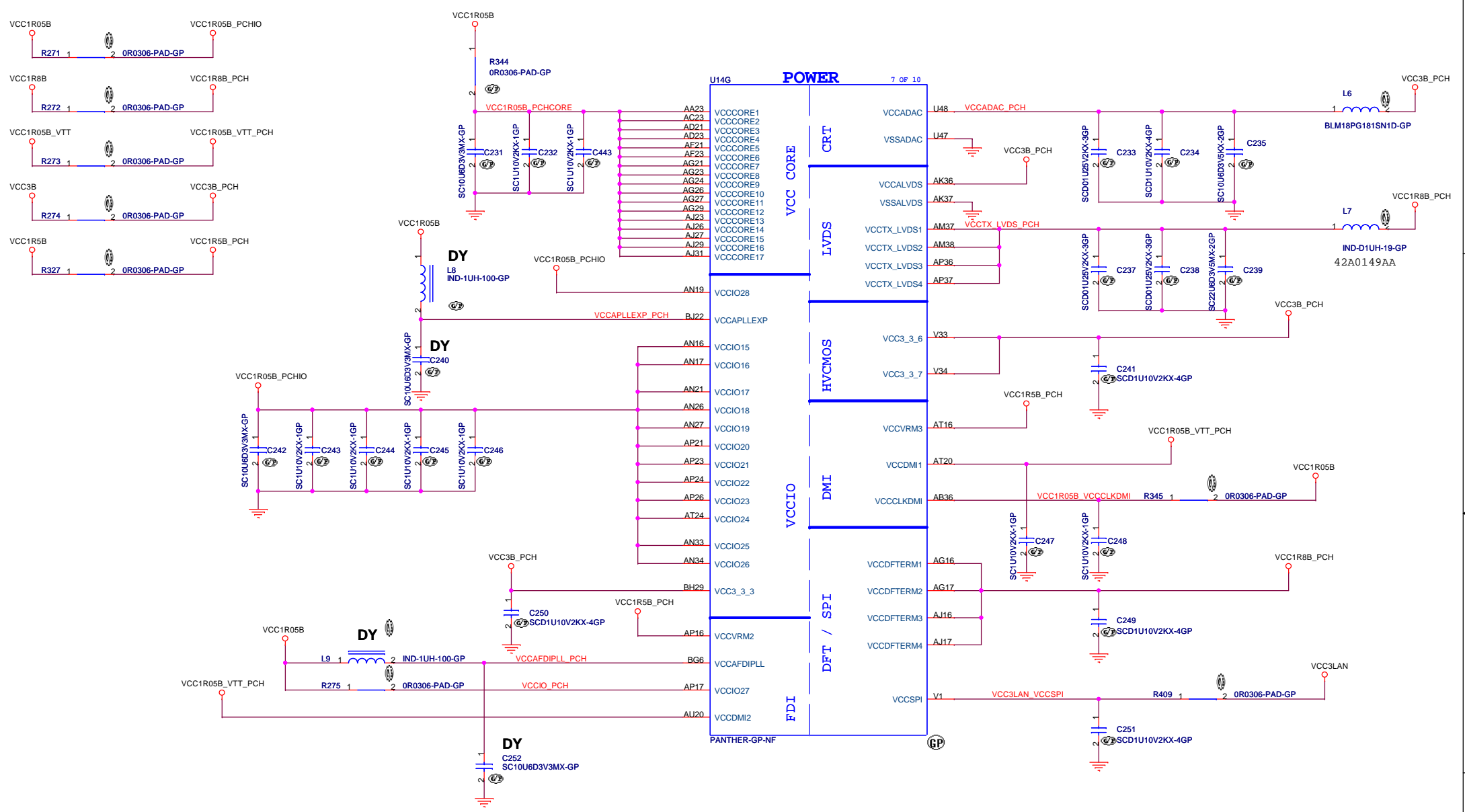


PLANAR ID: 0110 for SVT

NCTF TEST PIN:  
 A4, A44, A46, A5, A6, B1, B47,  
 B1, B49, B61, B64, B67, B69,  
 B82, B86, B83, B87, B74, B74,  
 B75, B76, B75, B76, C2, C8, D1,  
 D49, E1, B49, F1, F49

<Core Design>

|  |                 |
|--|-----------------|
| <b>緯創資通 Wistron Corporation</b>  |                 |
| 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C. |                 |
| <b>Title PCH(6/9):GPIO/NCTF/RSVD</b>                                       |                 |
| Size A3  | Document Number |
| <b>Dasher-2</b>  |                 |
| Date: Friday, March 09, 2012   | Sheet 29 of 101 |
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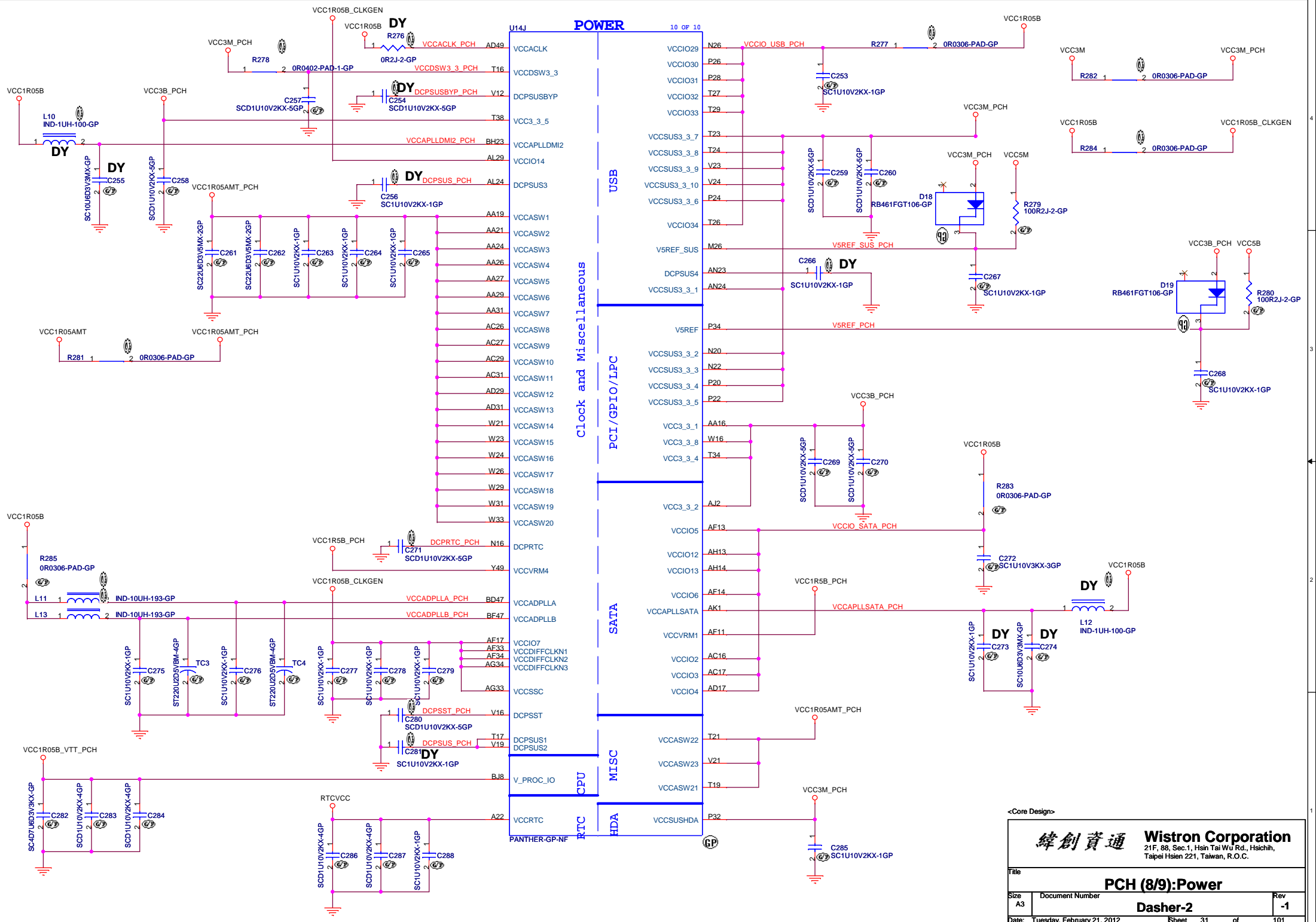


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Title: **PCH(7/9):Power**

|                                  |                                  |                |
|----------------------------------|----------------------------------|----------------|
| Size: A3                         | Document Number: <b>Dasher-2</b> | Rev: <b>-1</b> |
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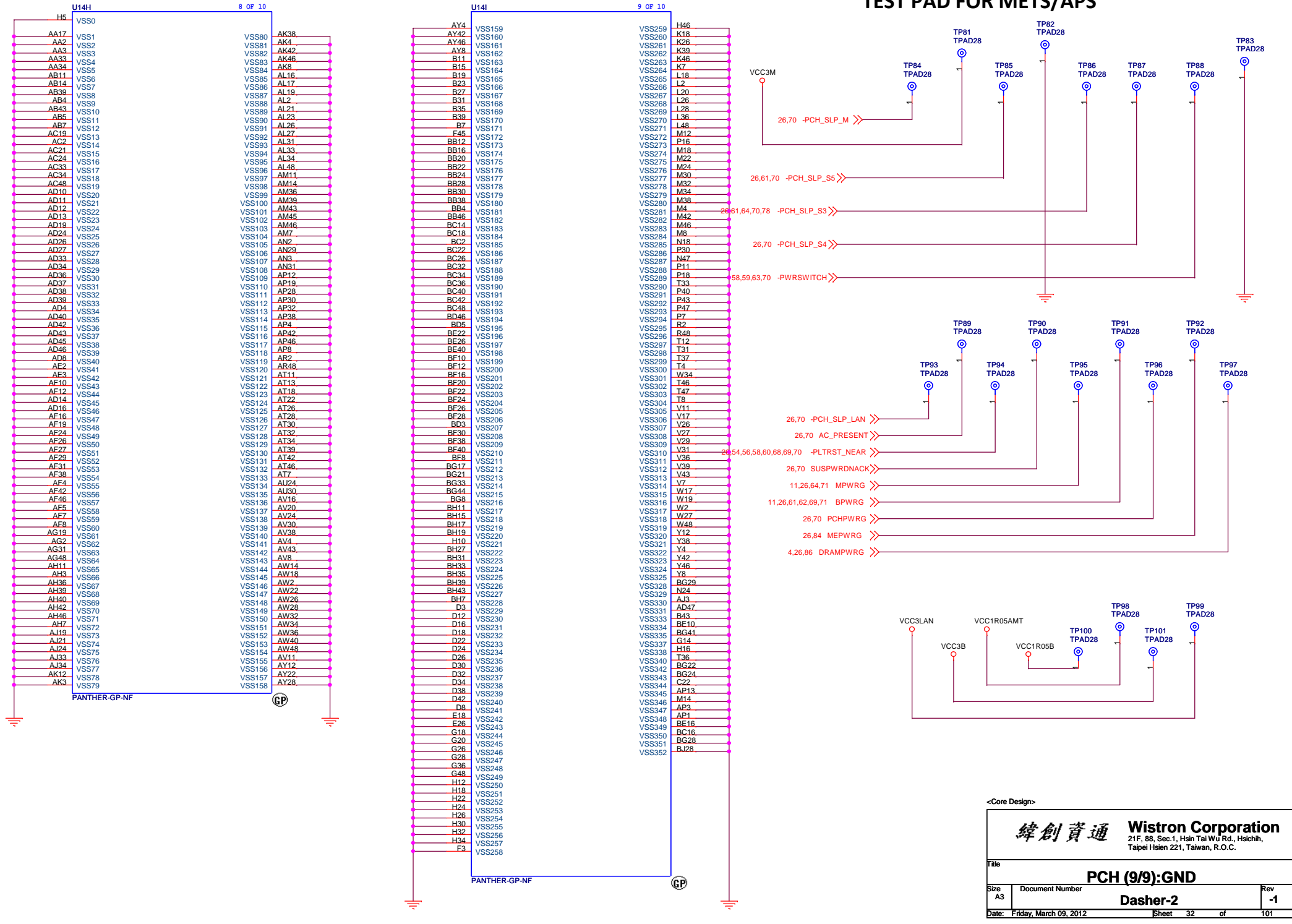


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| <b>Wistron Corporation</b><br>21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,<br>Taipei Hsien 221, Taiwan, R.O.C. |                            |                 |
| <b>PCH (8/9):Power</b>  |                            |                 |
| Title   |                            |                 |
| Size  | Document Number            | Rev             |
| A3  |                            | <b>-1</b>       |
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# TEST PAD FOR METS/APS



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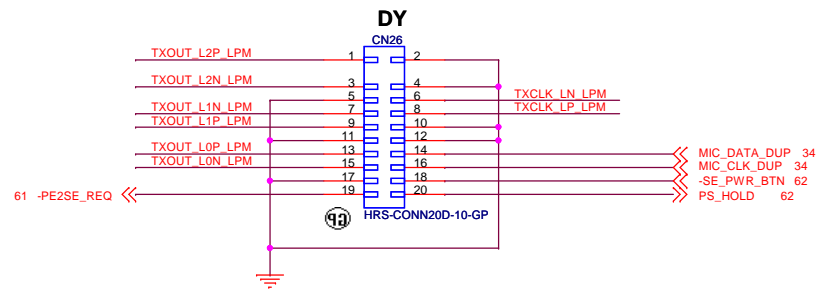
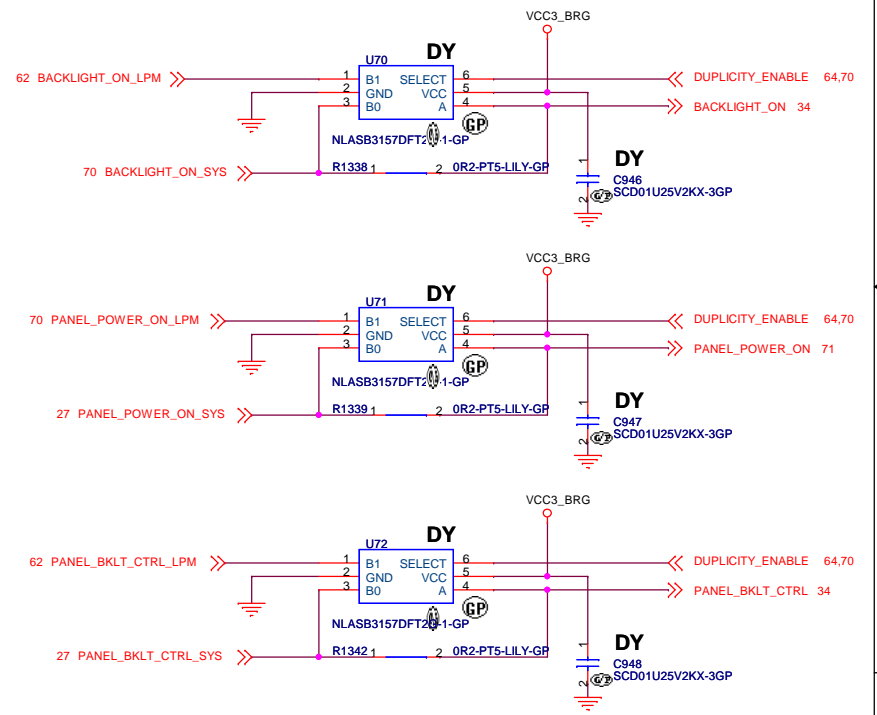
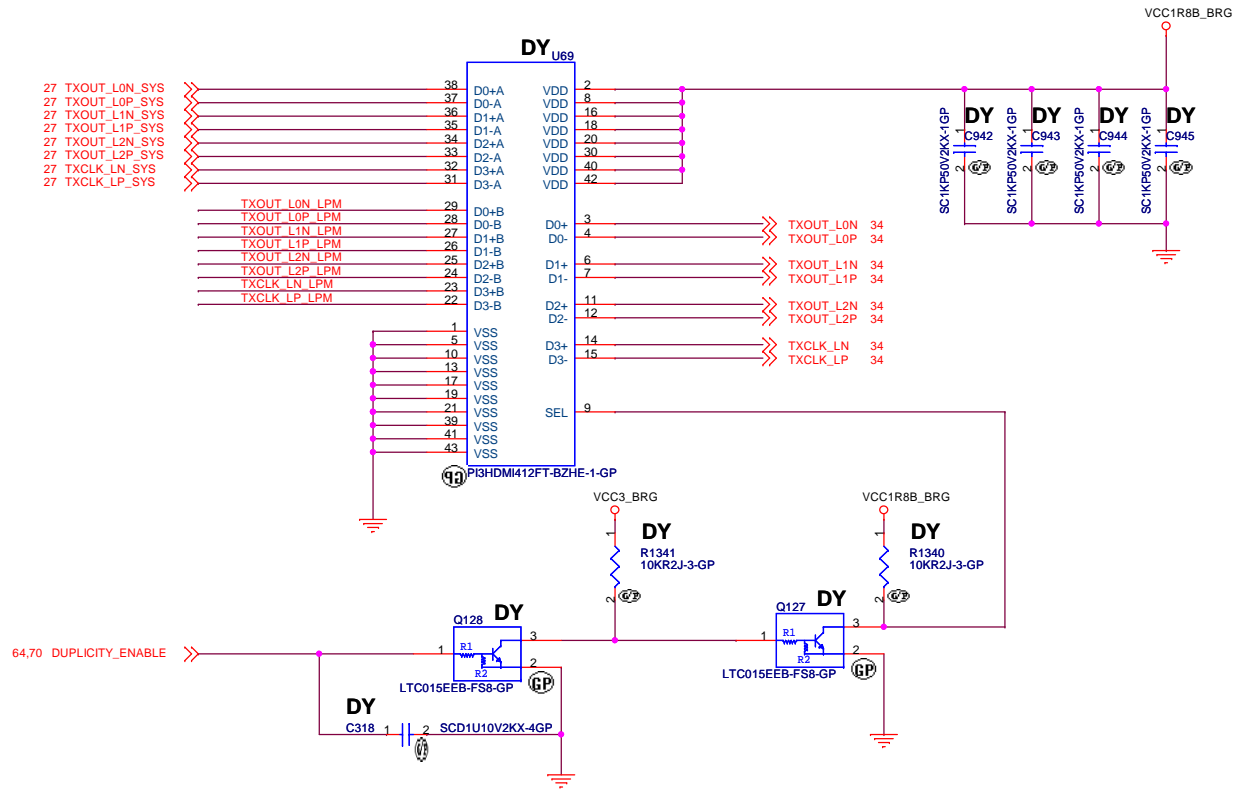
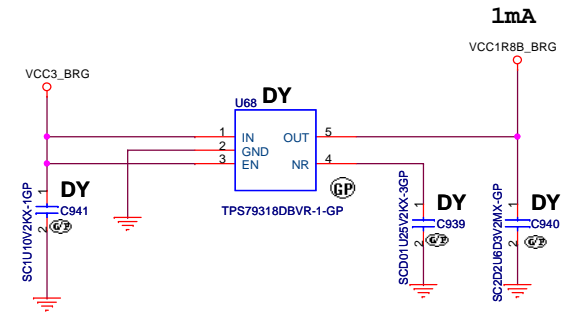
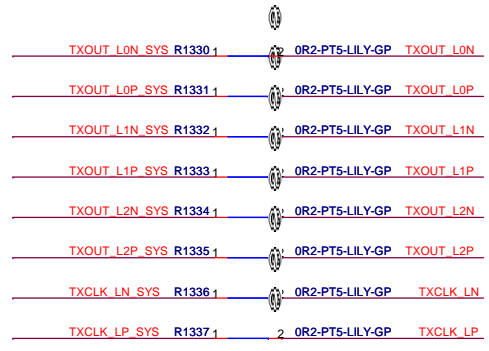
**緯創資通** **Wistron Corporation**  
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Title: **PCH (9/9):GND**

|                              |                                  |                |
|------------------------------|----------------------------------|----------------|
| Size: A3                     | Document Number: <b>Dasher-2</b> | Rev: <b>-1</b> |
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| supplier | Vendor P/N     | Wistron P/N  |
|----------|----------------|--------------|
| Pericom  | PIHDMI412-BZHE | 71.03412.B0G |
| TI       | TS3DV421RUAR   | 71.03421.003 |



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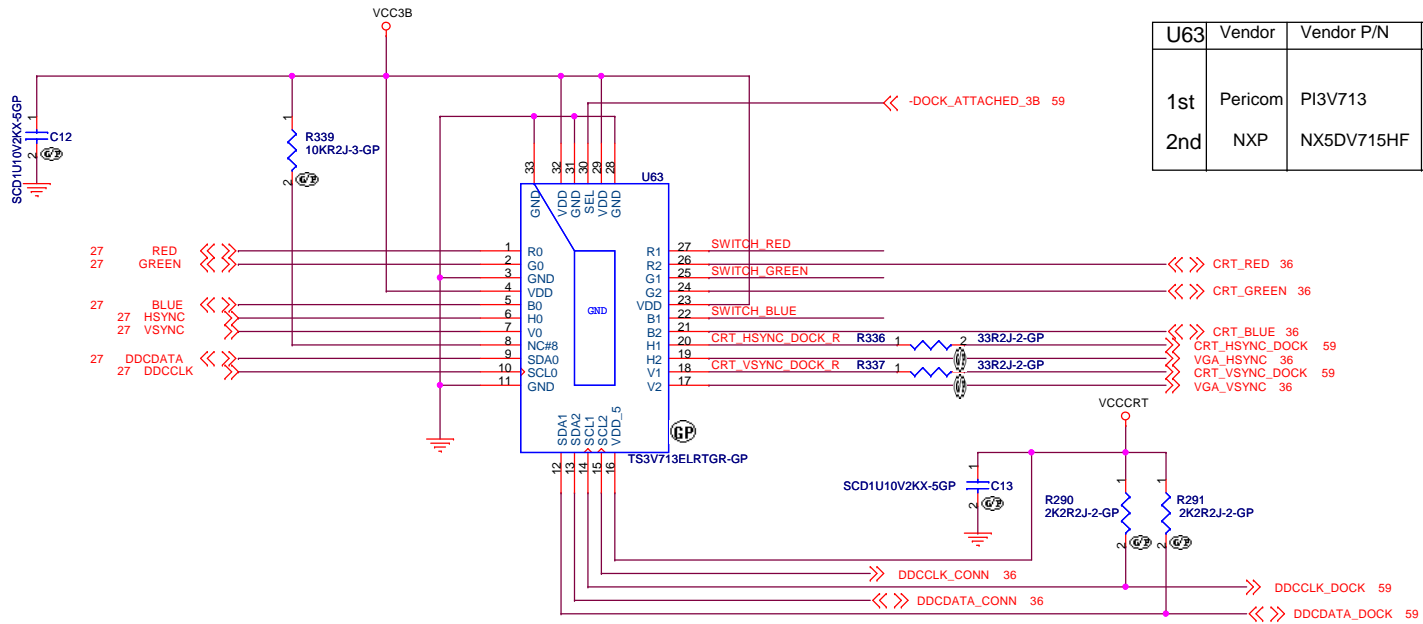
**緯創資通 Wistron Corporation**  
 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,  
 Taipei Hsien 221, Taiwan, R.O.C.

Title: **LPM LVDS SW/Connector**

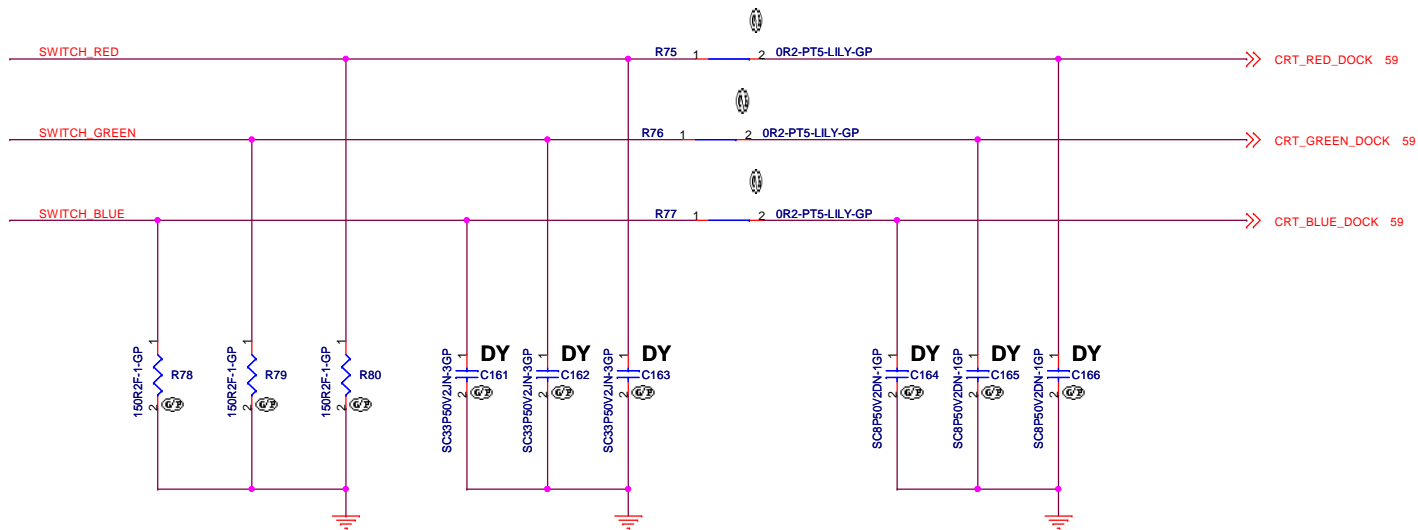
Size A3 Document Number: **Dasher-2** Rev: **-1**

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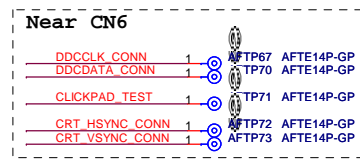
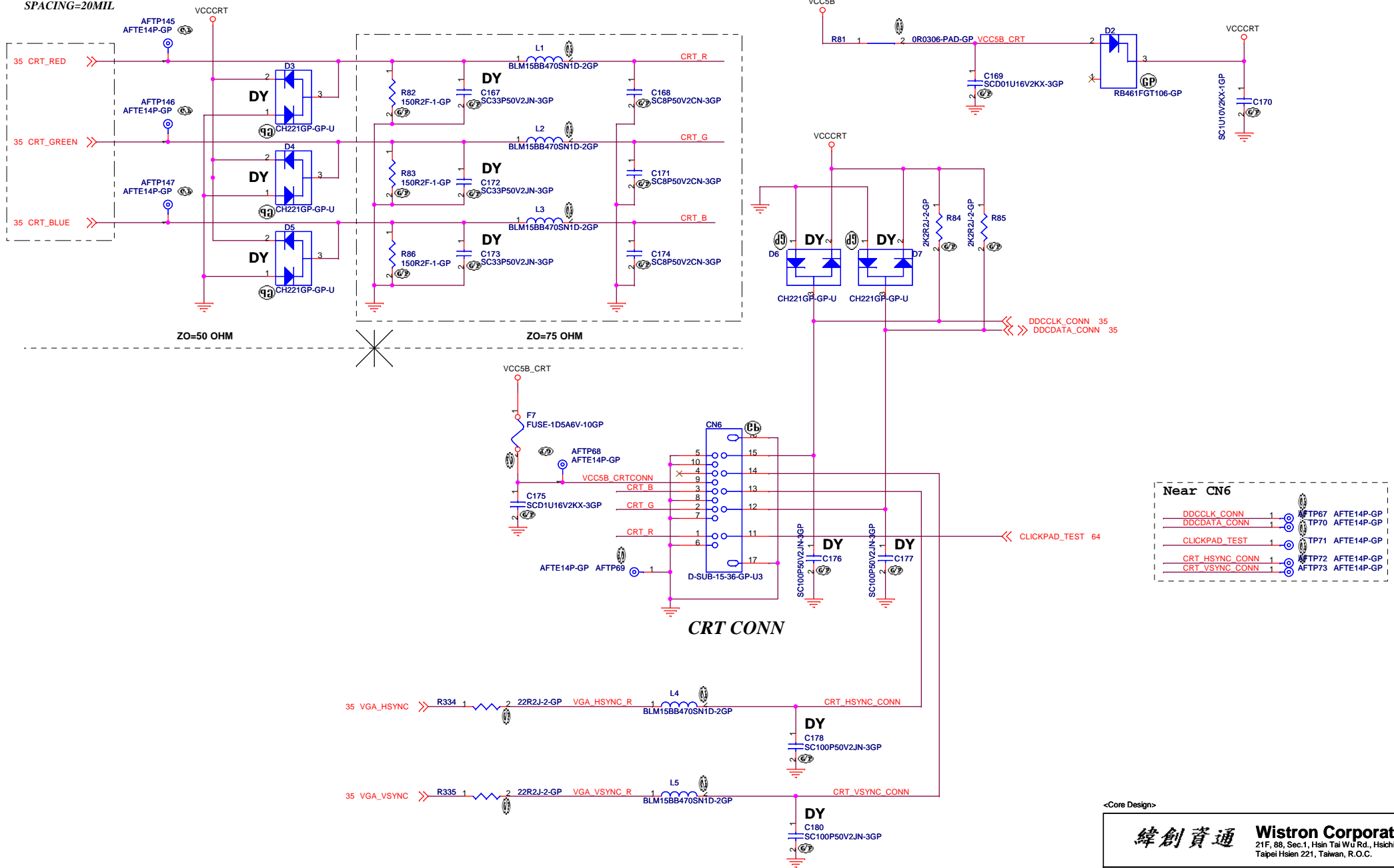
| U63 | Vendor  | Vendor P/N | Wistron P/N  |
|-----|---------|------------|--------------|
| 1st | Pericom | PI3V713    | 73.3V713.A01 |
| 2nd | NXP     | NX5DV715HF | 73.05715.003 |

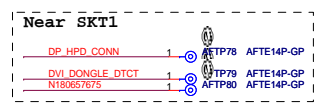
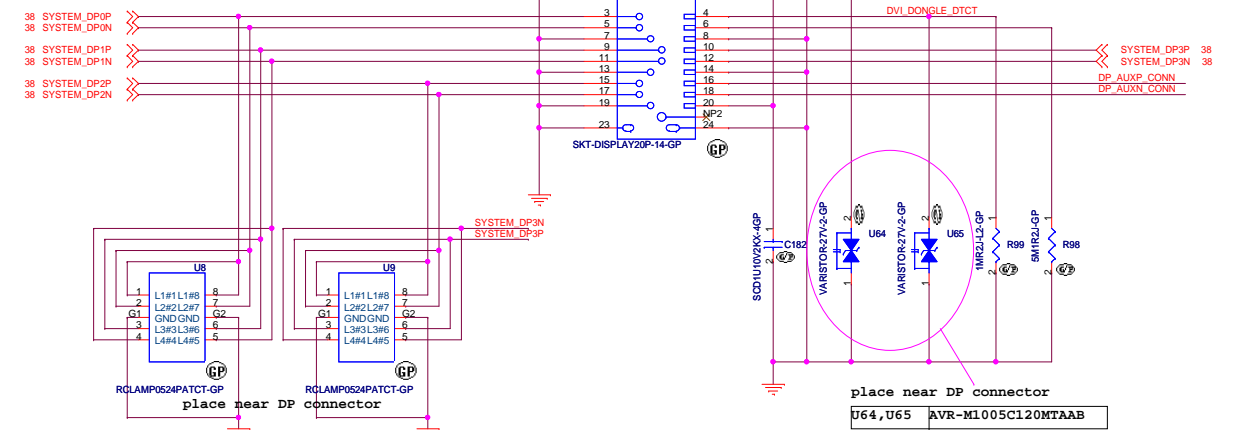
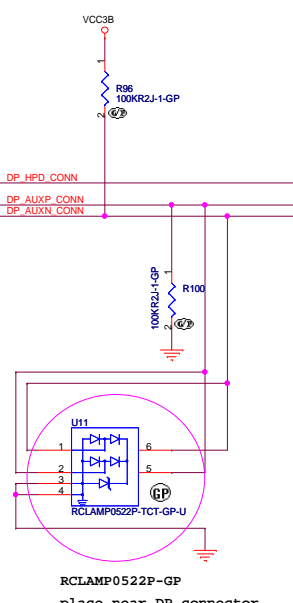
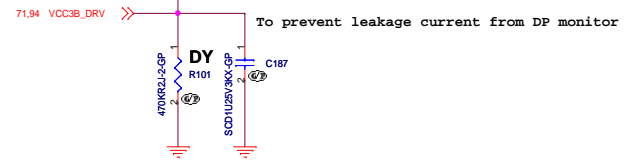
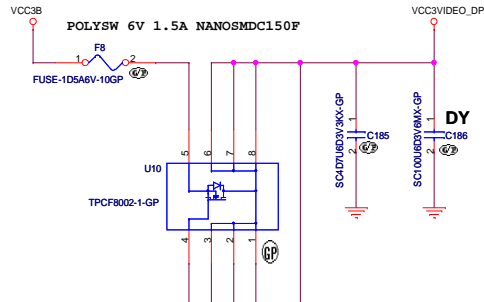
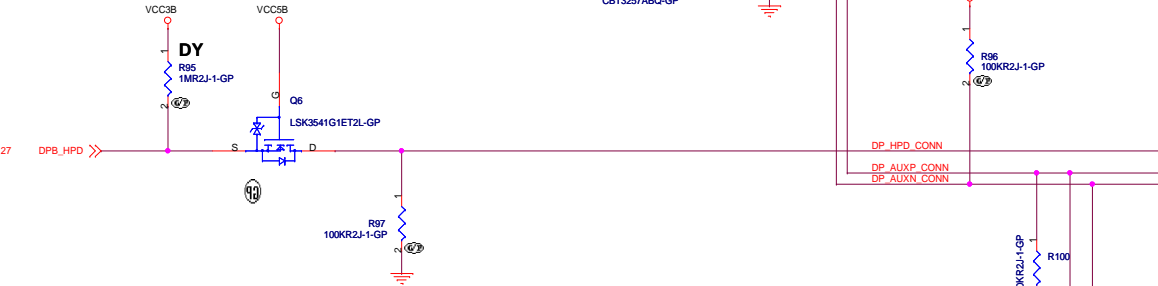
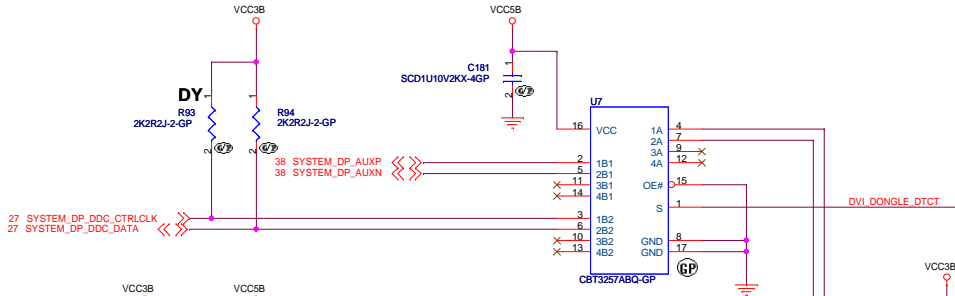


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|  <b>Wistron Corporation</b><br>21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,<br>Taipei Hsien 221, Taiwan, R.O.C. |                                    |           |
| <b>CRT SELECTOR</b>   |                                    |           |
| Size<br>A3  | Document Number<br><b>Dasher-2</b> | Rev<br>-1 |
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**GND GUARDING**  
**EACH SIGNAL WIDTH DEPENDS ON ZO(TRACE IMPEDANCE)**  
**SPACING=20MIL**





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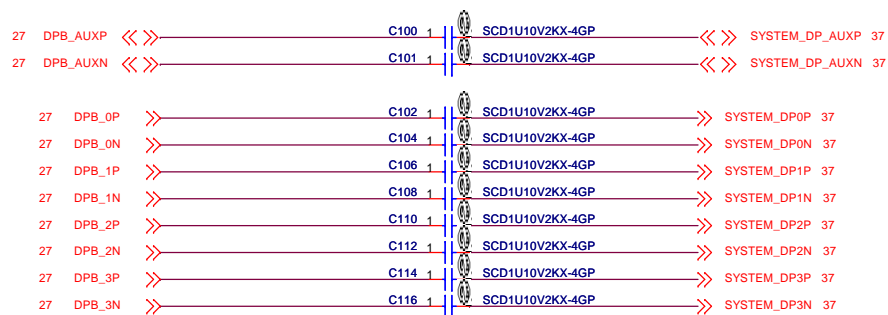
**緯創資通 Wistron Corporation**  
21F, 88, Sec.1, Hsien Ta Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.

Title: **Display Port Connector**

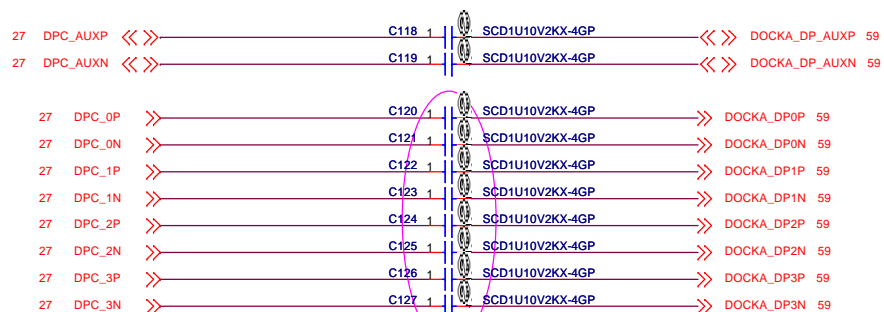
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| Size   | Document Number | Rev |
| Custom | <b>Dasher-2</b> | -1  |

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### System DP Connector

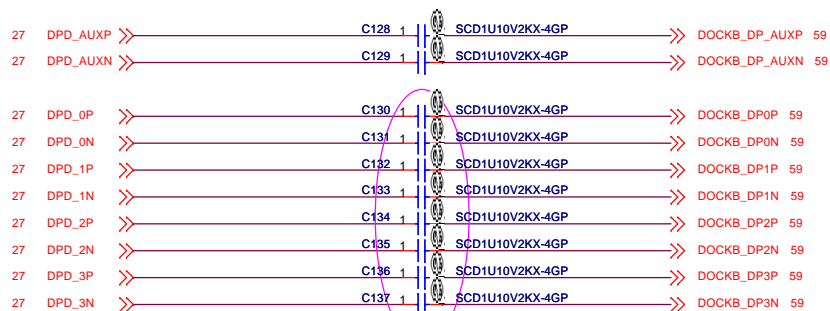


### Docking DP Connector A



Place Near Docking Connector

### Docking DP Connector B



Place Near Docking Connector

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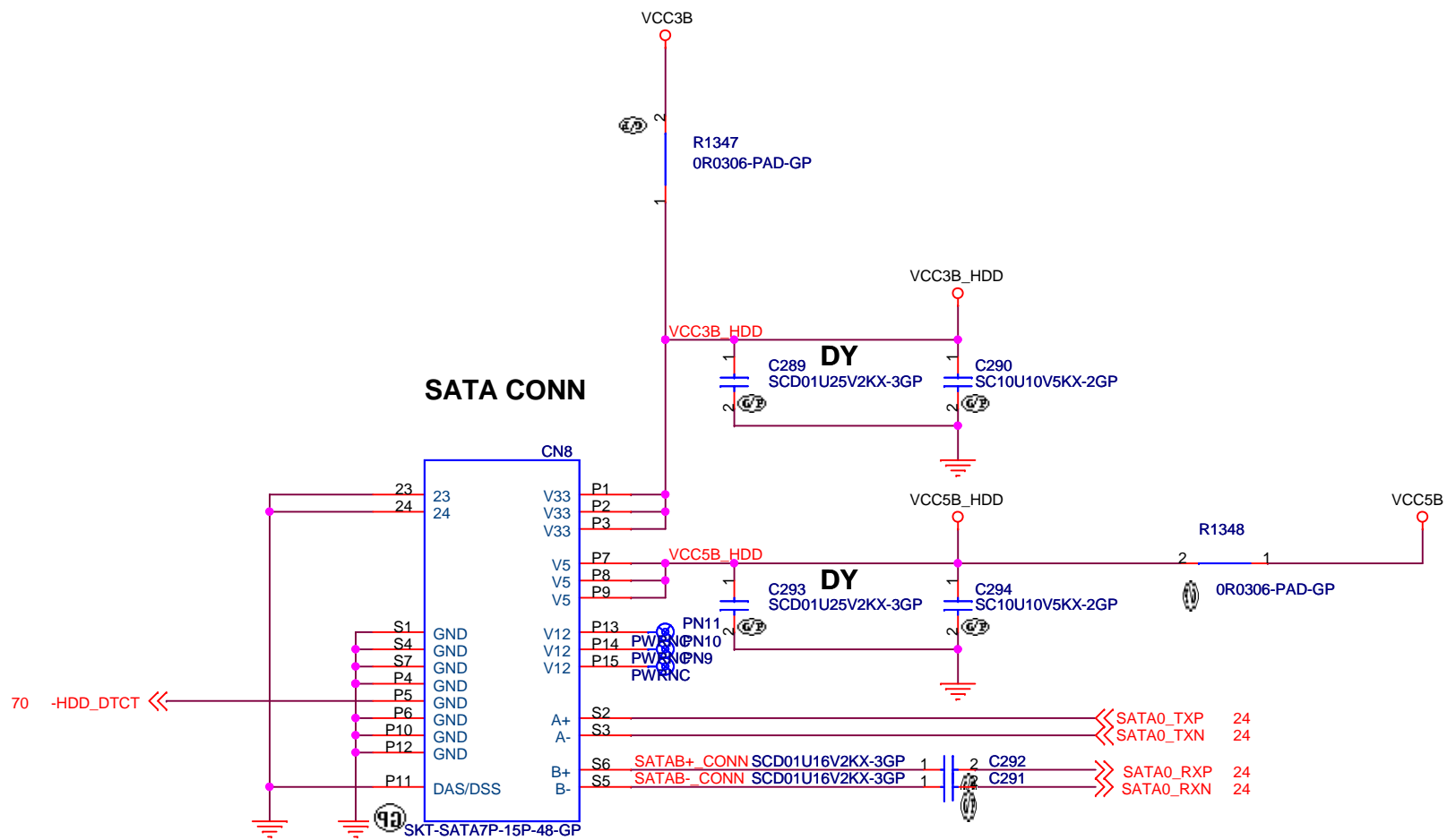
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|  <b>Wistron Corporation</b><br>21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih,<br>Taipei Hsien 221, Taiwan, R.O.C. |                                    |
| <b>Display Port AC Coupling</b>  |                                    |
| Title<br>Size<br>A3  | Document Number<br><b>Dasher-2</b> |
| Date: Friday, March 09, 2012   | Rev<br><b>-1</b>                   |
| Sheet 38 of 101  |                                    |

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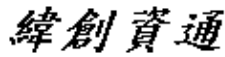
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| Size                             | Document Number | Rev             |
| A3                               | <b>Dasher-2</b> | <b>-1</b>       |
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|   |                                    |                  |
|---|------------------------------------|------------------|
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| <b>Title</b><br><b>SATA Connector</b>   |                                    |                  |
| Size<br>A4  | Document Number<br><b>Dasher-2</b> | Rev<br><b>-1</b> |
| Date: Friday, March 09, 2012  |                                    | Sheet 40 of 101  |



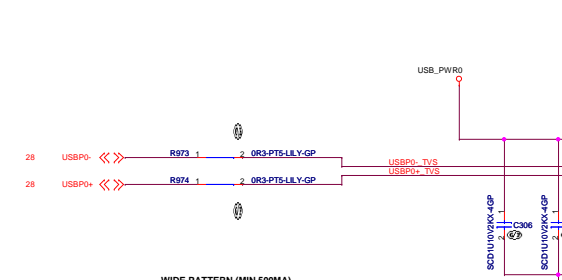
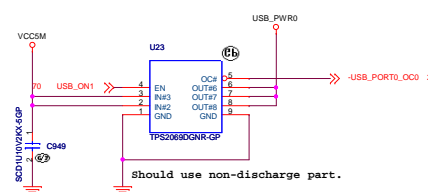
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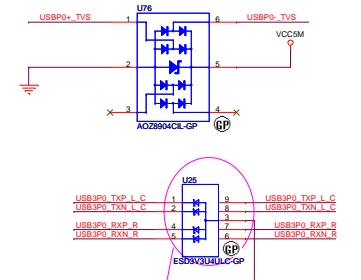
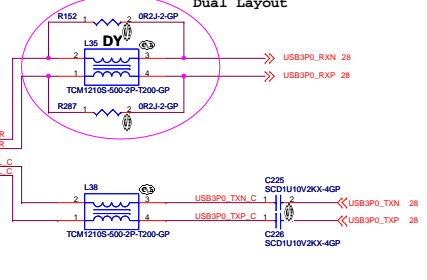
|              |                            |   |           |
|--------------|----------------------------|---|-----------|
| 緯創資通         |                            | <b>Wistron Corporation</b>  |           |
|              |                            | 21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C. |           |
| Title        |                            |   |           |
| <b>BLANK</b> |                            |   |           |
| Size         | Document Number            | Rev   |           |
| A3           |                            |   | -1        |
| Date:        | Tuesday, February 21, 2012 | Sheet   | 41 of 101 |

**USB3.0 port0**

|               |     |            |              |
|---------------|-----|------------|--------------|
| U23, U18      | TI  | TPS2069DGN | 74.02069.079 |
| USB3.0 Enable | GMT | G548A1F51U | 74.00548.A79 |

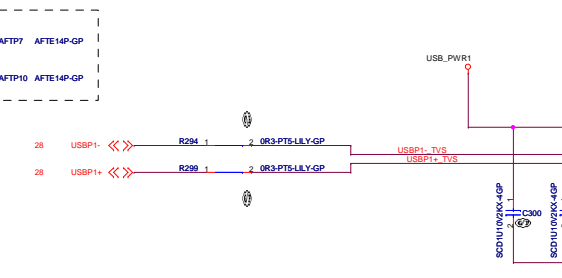
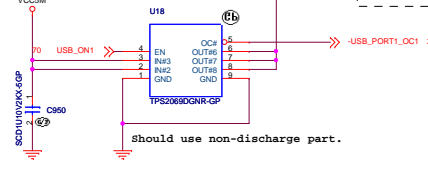


|                    |            |                 |              |
|--------------------|------------|-----------------|--------------|
| L35, L38, L41, L42 | 1st:TDK    | TCM1210S-500-2P | 68.01210.20E |
|                    | 2nd:Murata | DLP118A350HLZL  | 68.11350.201 |

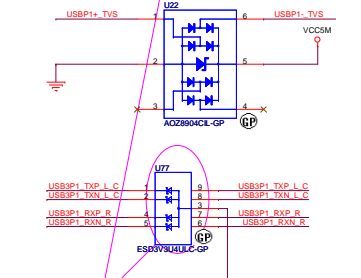
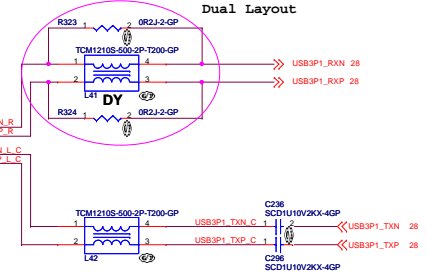


**USB3.0 port1**

|     |    |                |  |
|-----|----|----------------|--|
| U18 | TI | TPS2069DGNR-GP |  |
|-----|----|----------------|--|

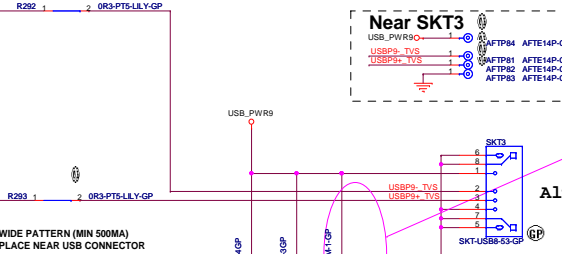
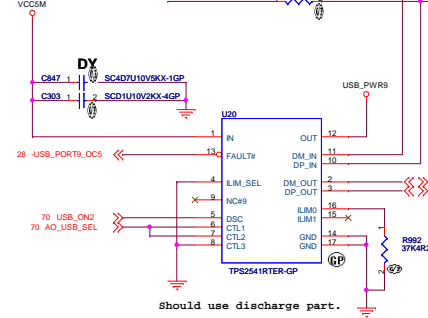


|                    |            |                 |              |
|--------------------|------------|-----------------|--------------|
| L35, L38, L41, L42 | 1st:TDK    | TCM1210S-500-2P | 68.01210.20E |
|                    | 2nd:Murata | DLP118A350HLZL  | 68.11350.201 |

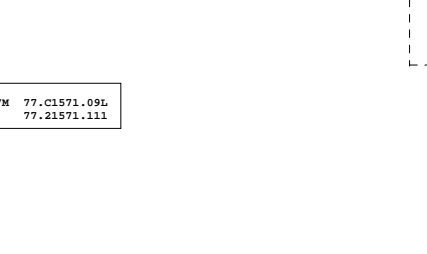


**USB port9 (Always On USB)**

|     |    |             |              |
|-----|----|-------------|--------------|
| U20 | TI | TPS2541RTER | 74.02541.073 |
|-----|----|-------------|--------------|



|                  |                |               |              |
|------------------|----------------|---------------|--------------|
| C299, C303, C305 | 1st: NEC Tokin | TEPSLB20J157M | 77.C1571.09L |
|                  | 2nd: SANYO     | 6TPE150MAZB   | 77.21571.111 |



|          |              |                         |              |
|----------|--------------|-------------------------|--------------|
| U25, U77 | 1st:Infineon | ESD3V3U4ULC             | 83.3V3U4.0A0 |
|          | 2nd:NXP      | IP4294CZ10-TBR          | 83.04294.0A0 |
|          | 3rd:AMC      | AZ1045-04F DFN2510P 10E | 83.01045.AA0 |

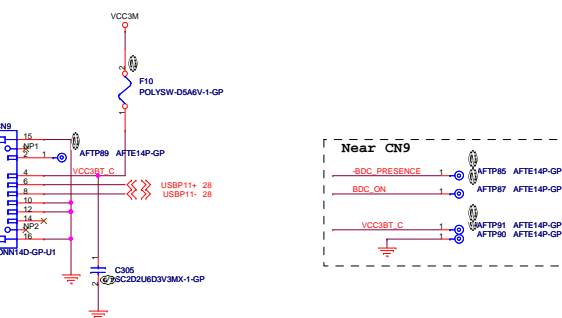
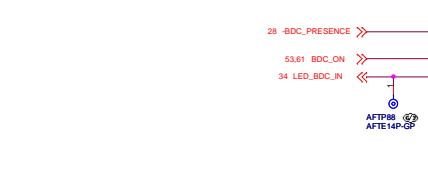
|               |                 |              |              |
|---------------|-----------------|--------------|--------------|
| U76, U22, U19 | 1st:AOS         | AC28904CIL   | 83.08904.0AE |
|               | 2nd:Little Fuse | SP3002-04HTG | 84.03200.0AF |

**Always on port**

| Always On USB Part List (U20) |                               |                           |
|-------------------------------|-------------------------------|---------------------------|
| TI                            | ~SDV                          | FVT~                      |
|                               | TPS2541RTER<br>(74.02541.073) | TPS2541RTER(74.02541.073) |
|                               |                               | TPS2541A(74.02541. A73)   |

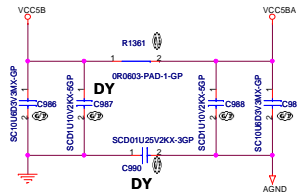
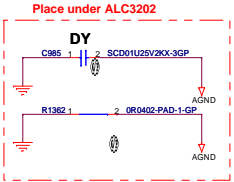
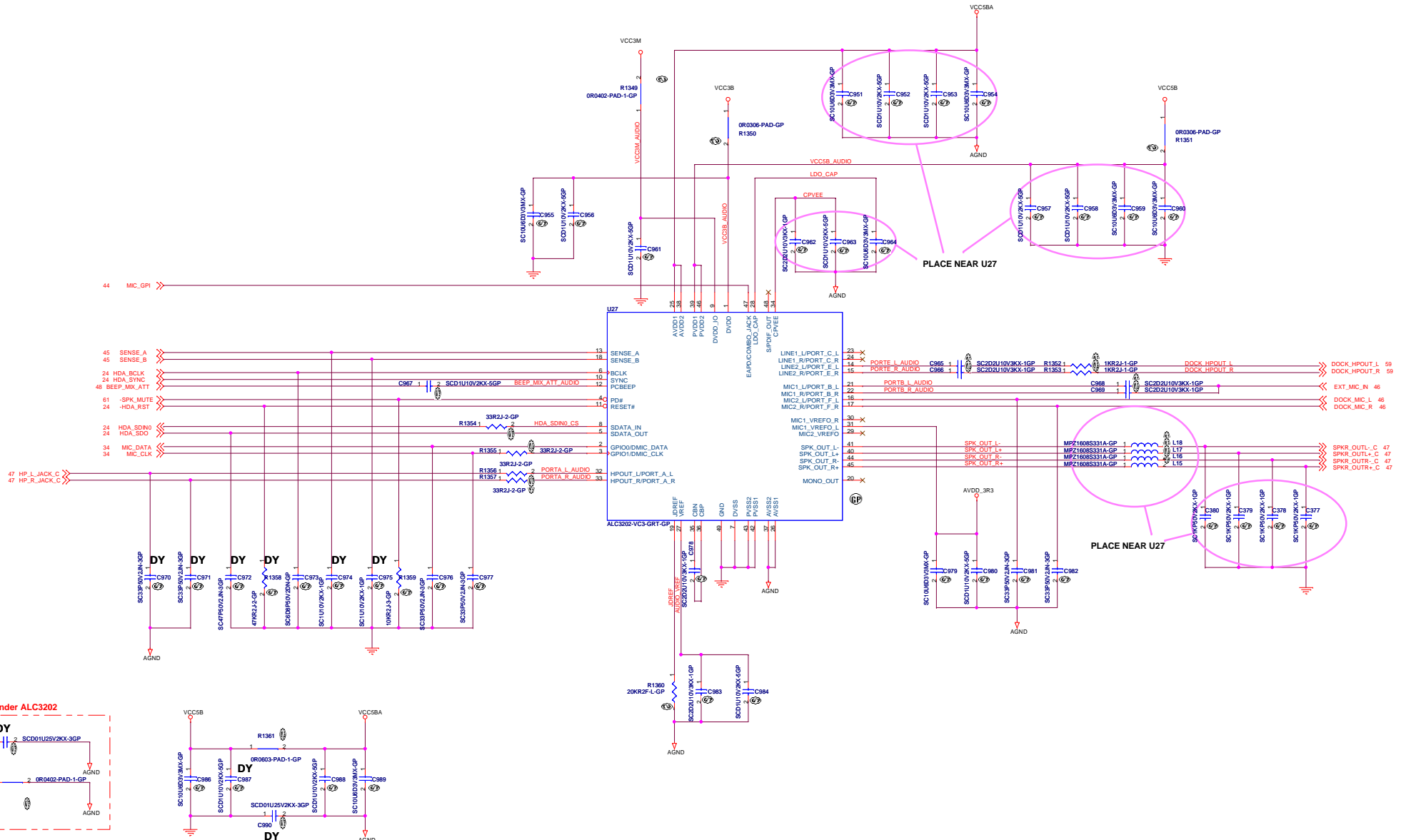
**Bluetooth Module**

|     |    |                  |  |
|-----|----|------------------|--|
| CN9 | TI | HESCONN14D-GP-U1 |  |
|-----|----|------------------|--|



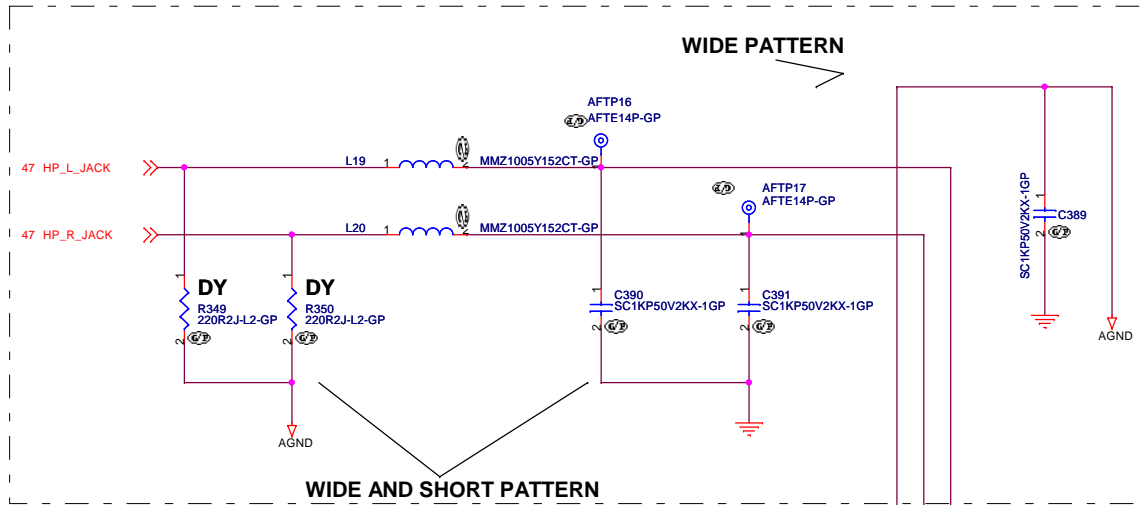
**PSIT Config.**

|                     | PSIT-1   | PSIT-2 | PSIT-3 | PSIT-4 | PSIT-5   | PSIT-6 |
|---------------------|----------|--------|--------|--------|----------|--------|
| L35, L41            | No ASM   | No ASM | No ASM | No ASM | No ASM   | No ASM |
| L38, L42            | TDK      | No ASM | No ASM | TDK    | No ASM   | Murata |
| U25, U77            | Infineon | NXP    | AMC    | NXP    | Infineon | AMC    |
| R152, 287, 323, 324 | ASM      | ASM    | ASM    | ASM    | ASM      | ASM    |
| R320, 321, 325, 328 | No ASM   | ASM    | ASM    | No ASM | ASM      | No ASM |

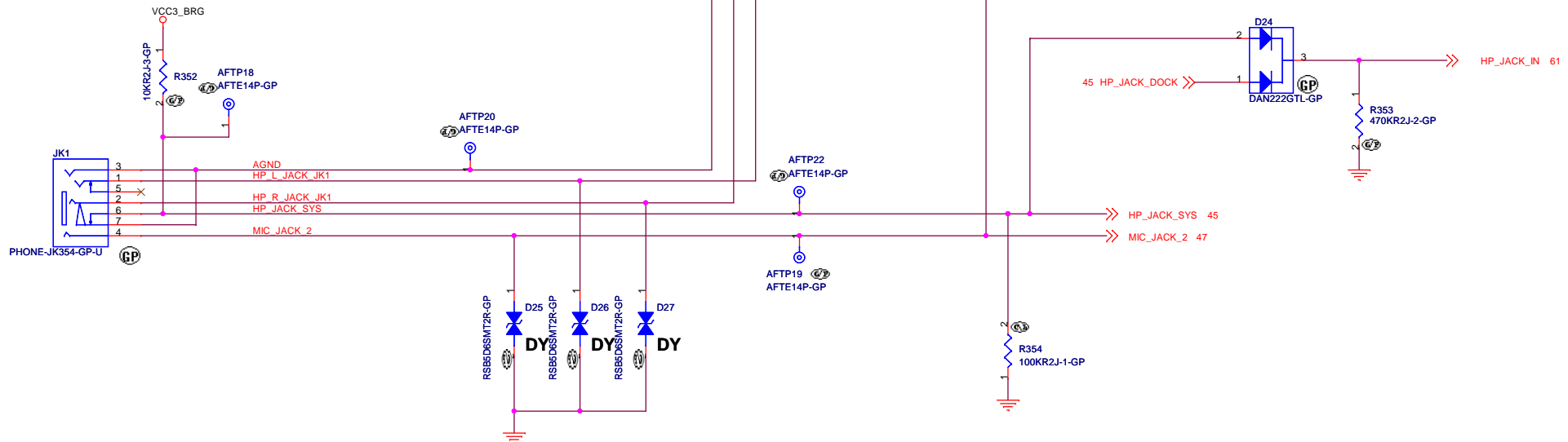


# NEAR HEADPHONE CONN

WIDE PATTERN

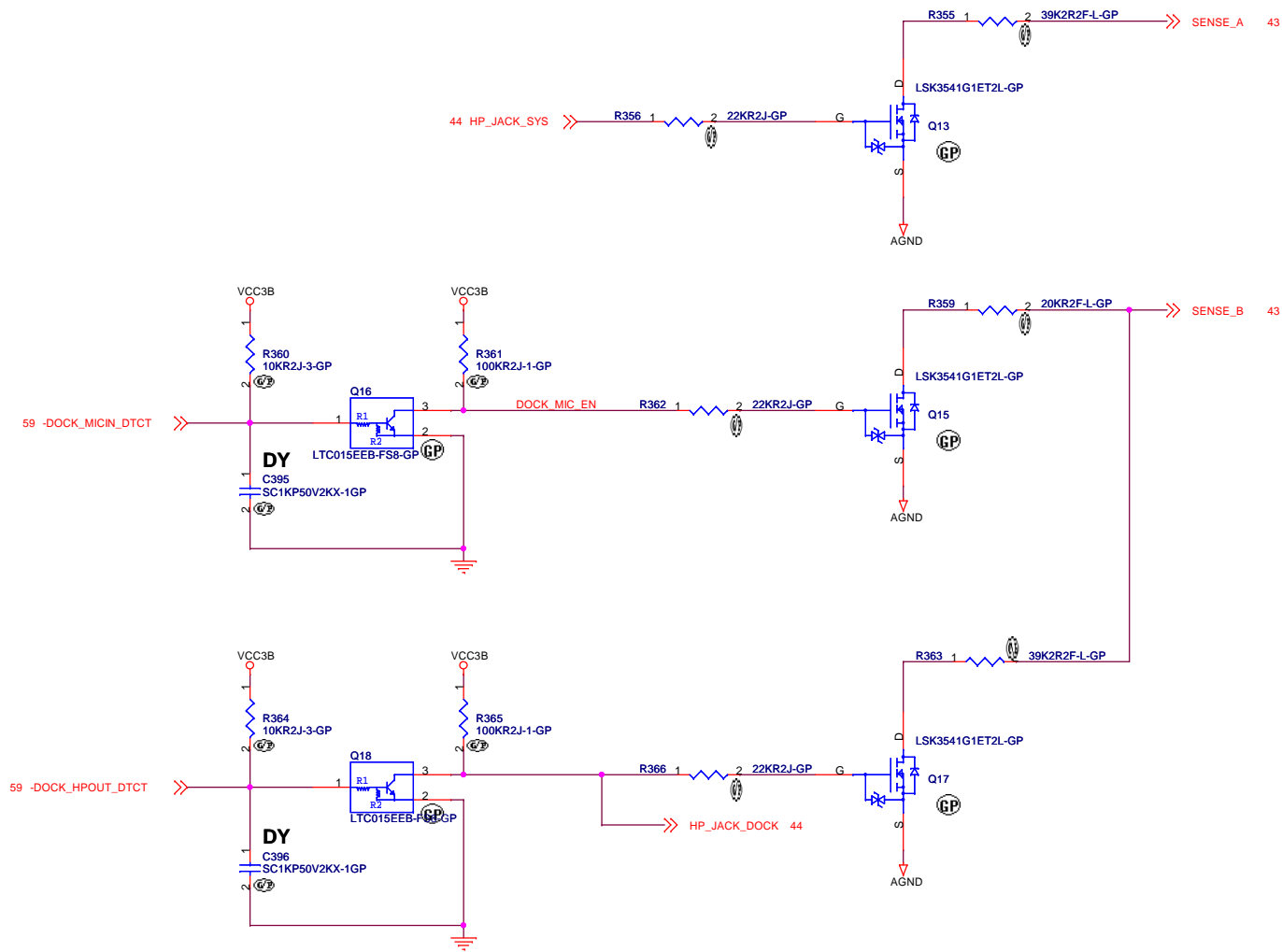


WIDE AND SHORT PATTERN



<Core Design>

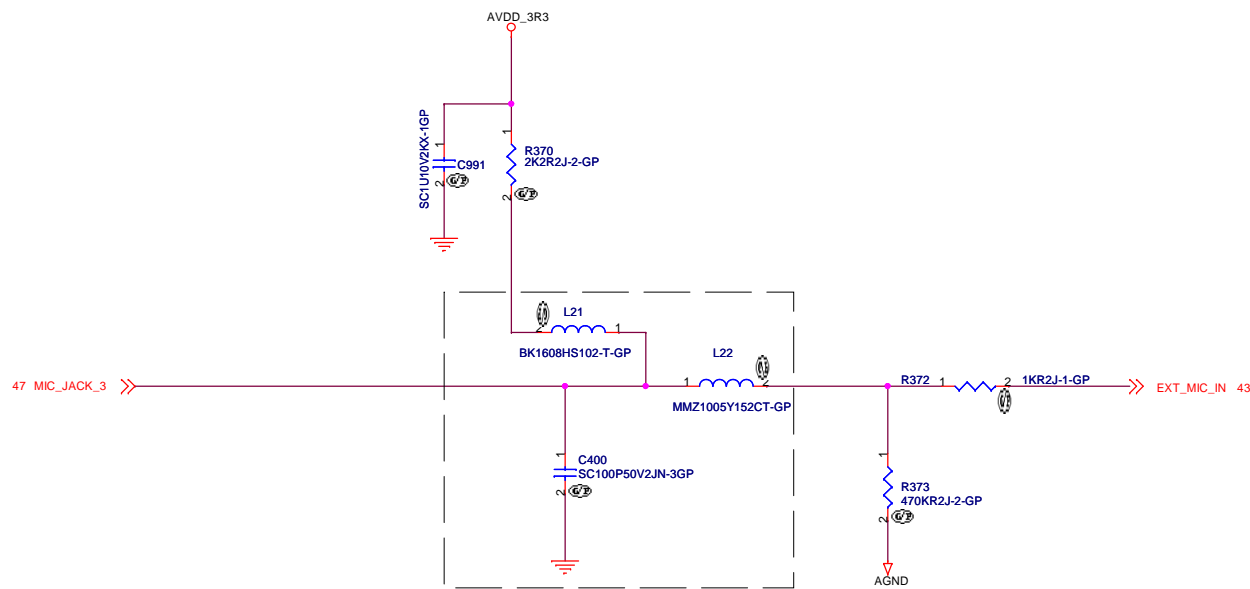
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|--|------------------------------------|
|  <b>Wistron Corporation</b><br>21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih,<br>Taipei Hsien 221, Taiwan, R.O.C. |                                    |
| <b>Audio Connector</b>   |                                    |
| Title<br>Size A3   | Document Number<br><b>Dasher-2</b> |
| Date: Friday, March 09, 2012   | Sheet 44 of 101                    |
| Rev<br>-1  |                                    |



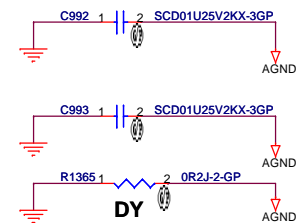
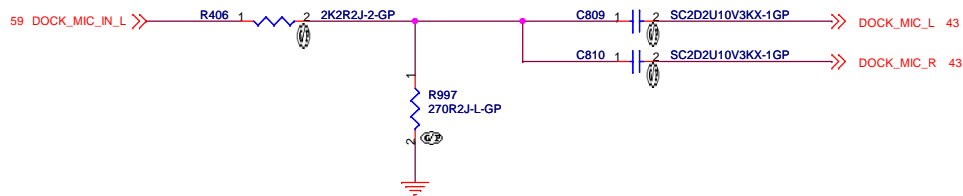
<Core Design>

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 Taipei Hsien 221, Taiwan, R.O.C.

|                         |                        |                 |
|-------------------------|------------------------|-----------------|
| Title                   |                        |                 |
| <b>Audio Jack Sense</b> |                        |                 |
| Size                    | Document Number        | Rev             |
| A3                      | <b>Dasher-2</b>        | -1              |
| Date:                   | Friday, March 09, 2012 | Sheet 45 of 101 |

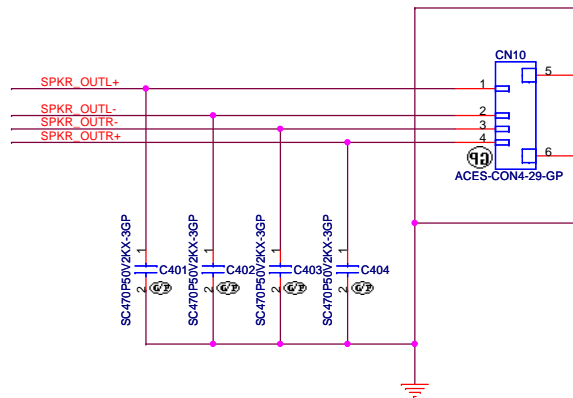


**NEAR EXT MIC CONN**



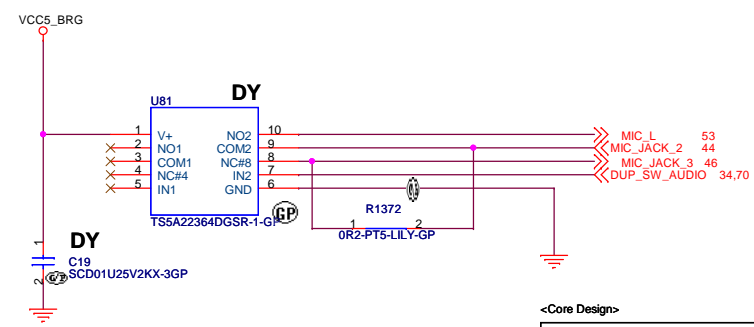
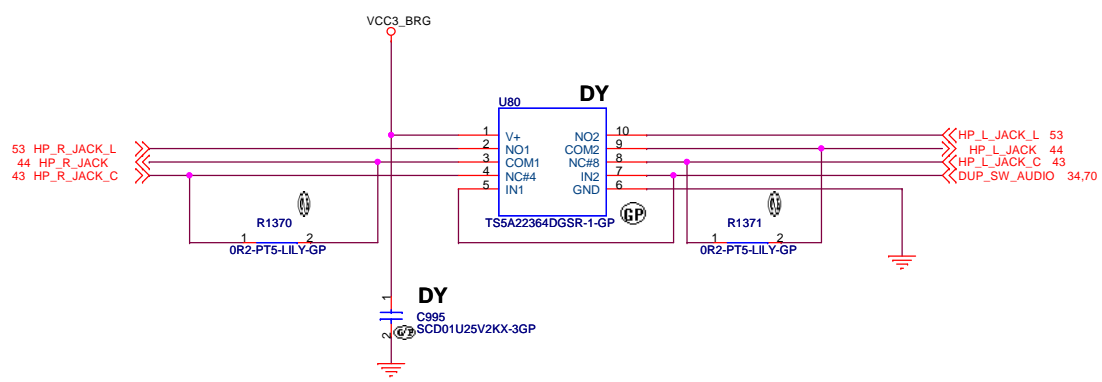
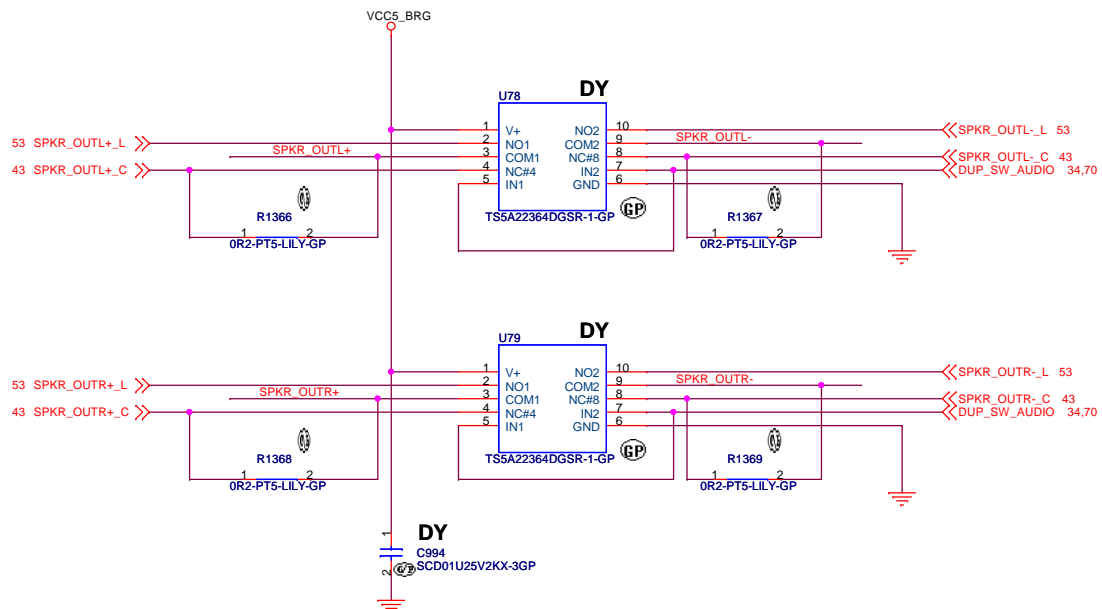
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|  |                                    |                  |
|--|------------------------------------|------------------|
|  <b>Wistron Corporation</b><br>21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih,<br>Taipei Hsien 221, Taiwan, R.O.C. |                                    |                  |
| <b>Audio Ext MIC I/F</b>   |                                    |                  |
| Size<br>A3   | Document Number<br><b>Dasher-2</b> | Rev<br><b>-1</b> |
| Date: Friday, March 09, 2012   | Sheet 46 of                        | 101              |



**Near CN10**

|           |   |        |            |
|-----------|---|--------|------------|
| SPKR_OUT+ | 1 | AFTP92 | AFTE14P-GP |
| SPKR_OUT- | 1 | AFTP93 | AFTE14P-GP |
| SPKR_OUT+ | 1 | AFTP94 | AFTE14P-GP |
| SPKR_OUT- | 1 | AFTP95 | AFTE14P-GP |

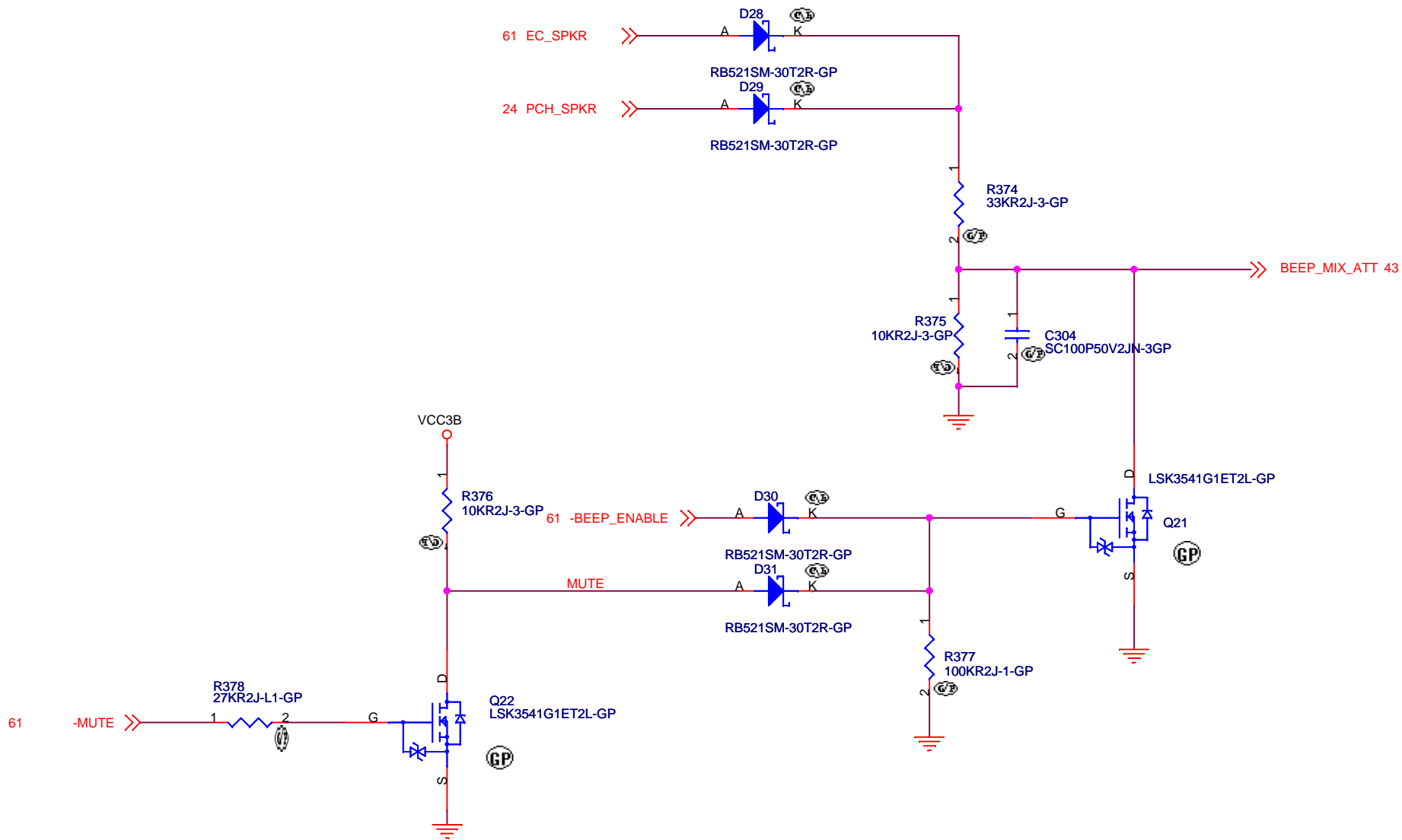


<Core Design>

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**AUDIO SPEAKER**

|       |                        |                 |
|-------|------------------------|-----------------|
| File  |                        |                 |
| Size  | Document Number        | Rev             |
| A3    | <b>Dasher-2</b>        | -1              |
| Date: | Friday, March 09, 2012 | Sheet 47 of 101 |

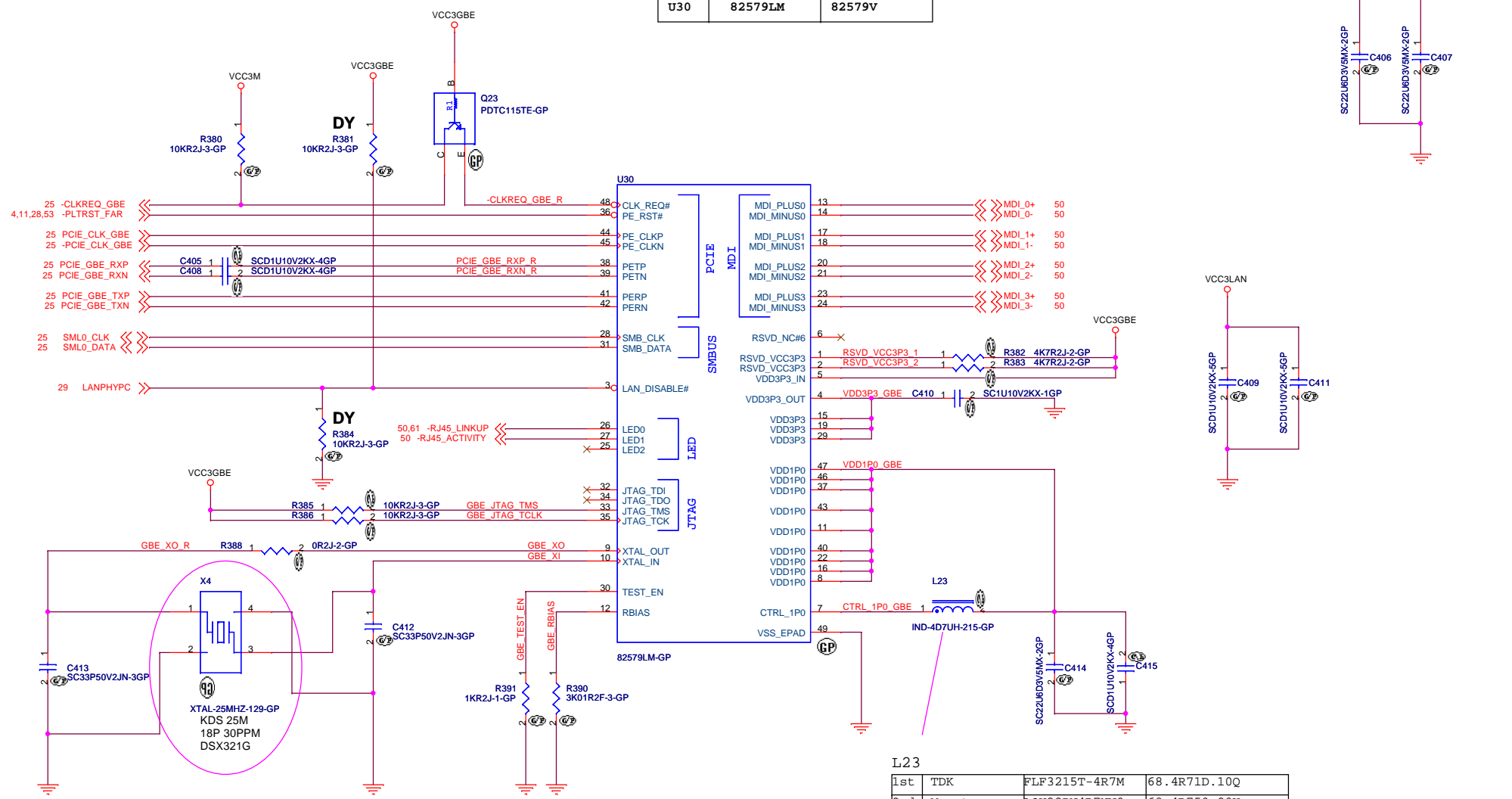


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|   |                                    |
|---|------------------------------------|
|  <b>Wistron Corporation</b><br>21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,<br>Taipei Hsien 221, Taiwan, R.O.C. |                                    |
| <b>Audio BEEP</b>   |                                    |
| Size<br>A4  | Document Number<br><b>Dasher-2</b> |
| Date: Friday, March 09, 2012  | Rev<br>-1                          |
| Sheet 48 of 101   |                                    |



|     |         |        |
|-----|---------|--------|
| AMT | YES     | NO     |
| U30 | 82579LM | 82579V |



| X4  |       |                          |              |
|-----|-------|--------------------------|--------------|
| 1st | KDS   | DSX321G 25M 18P 30PPM    | 82.30020.B11 |
| 2nd | H.ELE | HSX321S 25M 18P 30PPM    | 82.30020.B21 |
| 3rd | TXC   | 7V25020001 25M 18P 30PPM | 41U6141AA    |

| L23 |             |               |              |
|-----|-------------|---------------|--------------|
| 1st | TDK         | FLF3215T-4R7M | 68.4R71D.10Q |
| 2nd | Murata      | LQH32PN4R7NN0 | 68.4R750.20H |
| 3rd | Taiyo Yuden | BRL3225T4R7M  | 68.4R71E.10I |

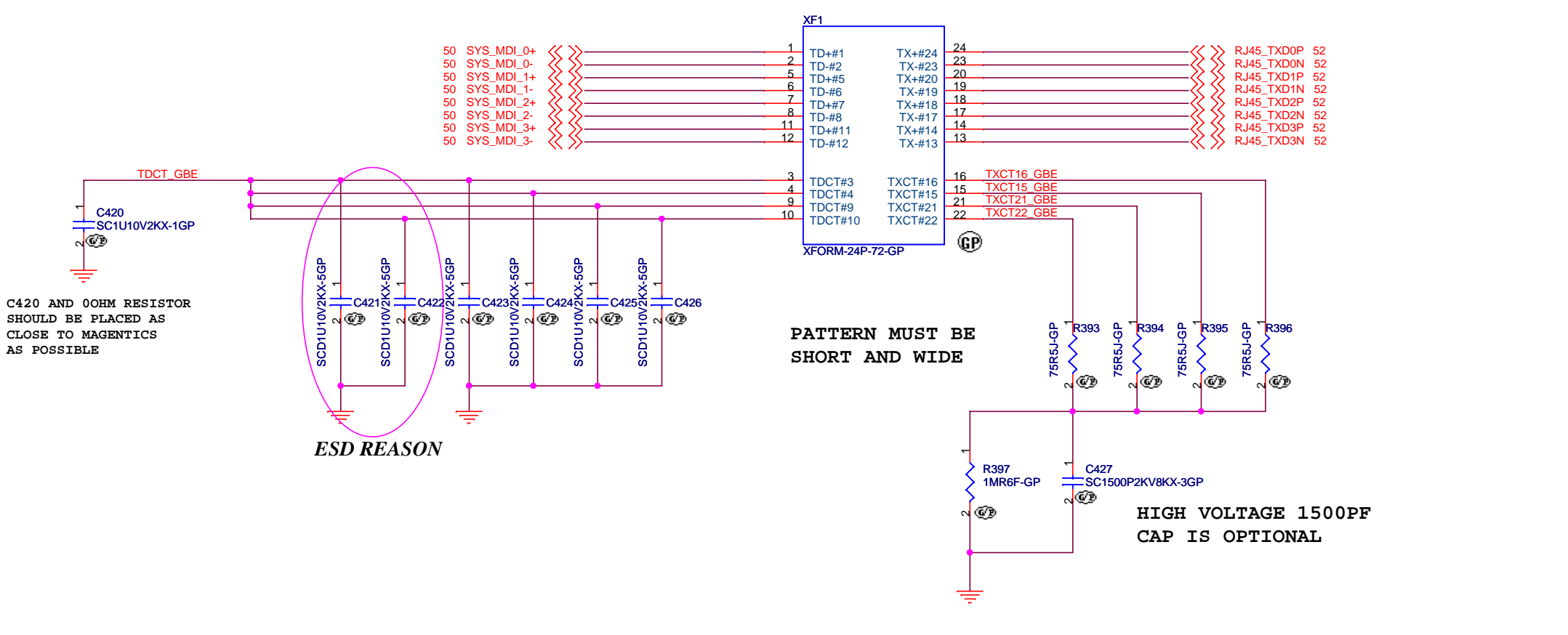
<Core Design>

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Title: **GBE Lewisville**

|                              |                 |                 |
|------------------------------|-----------------|-----------------|
| Size A3                      | Document Number | Rev -1          |
| Date: Friday, March 09, 2012 |                 | Sheet 49 of 101 |





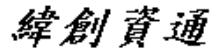
C420 AND 0OHM RESISTOR SHOULD BE PLACED AS CLOSE TO MAGNETICS AS POSSIBLE

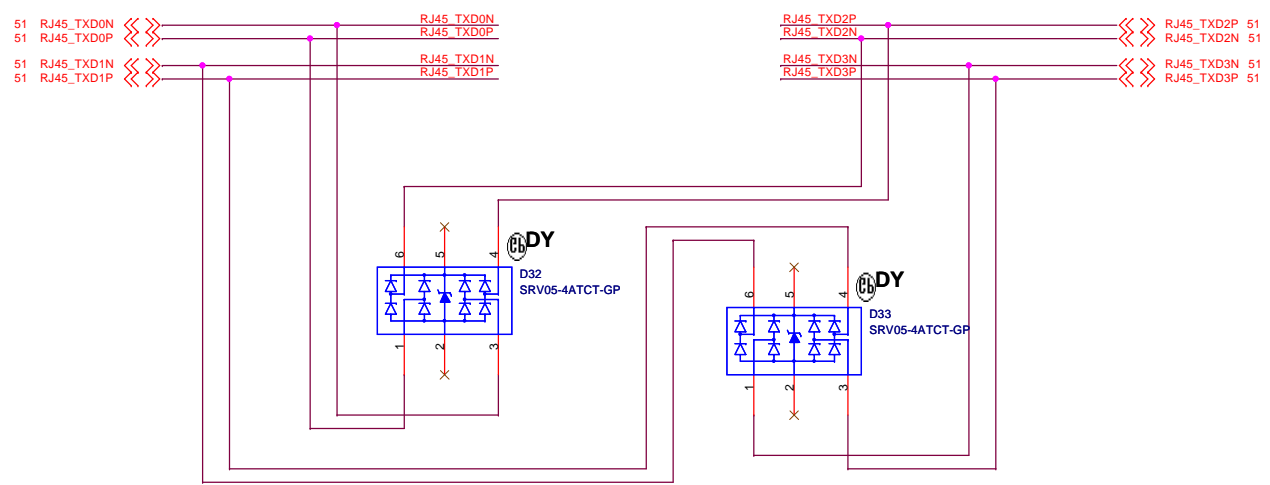
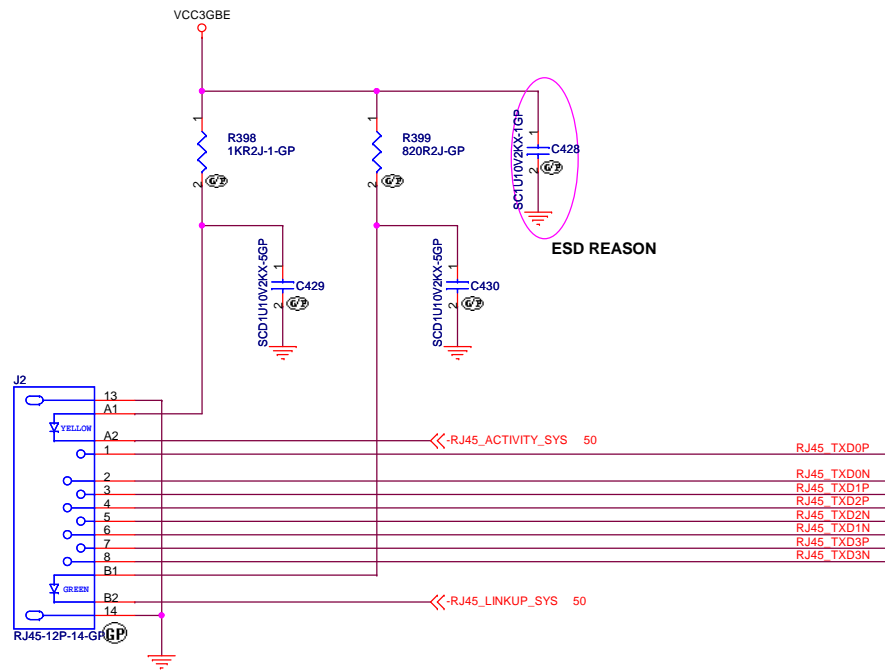
**ESD REASON**

**PATTERN MUST BE SHORT AND WIDE**

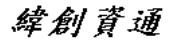
**HIGH VOLTAGE 1500PF CAP IS OPTIONAL**

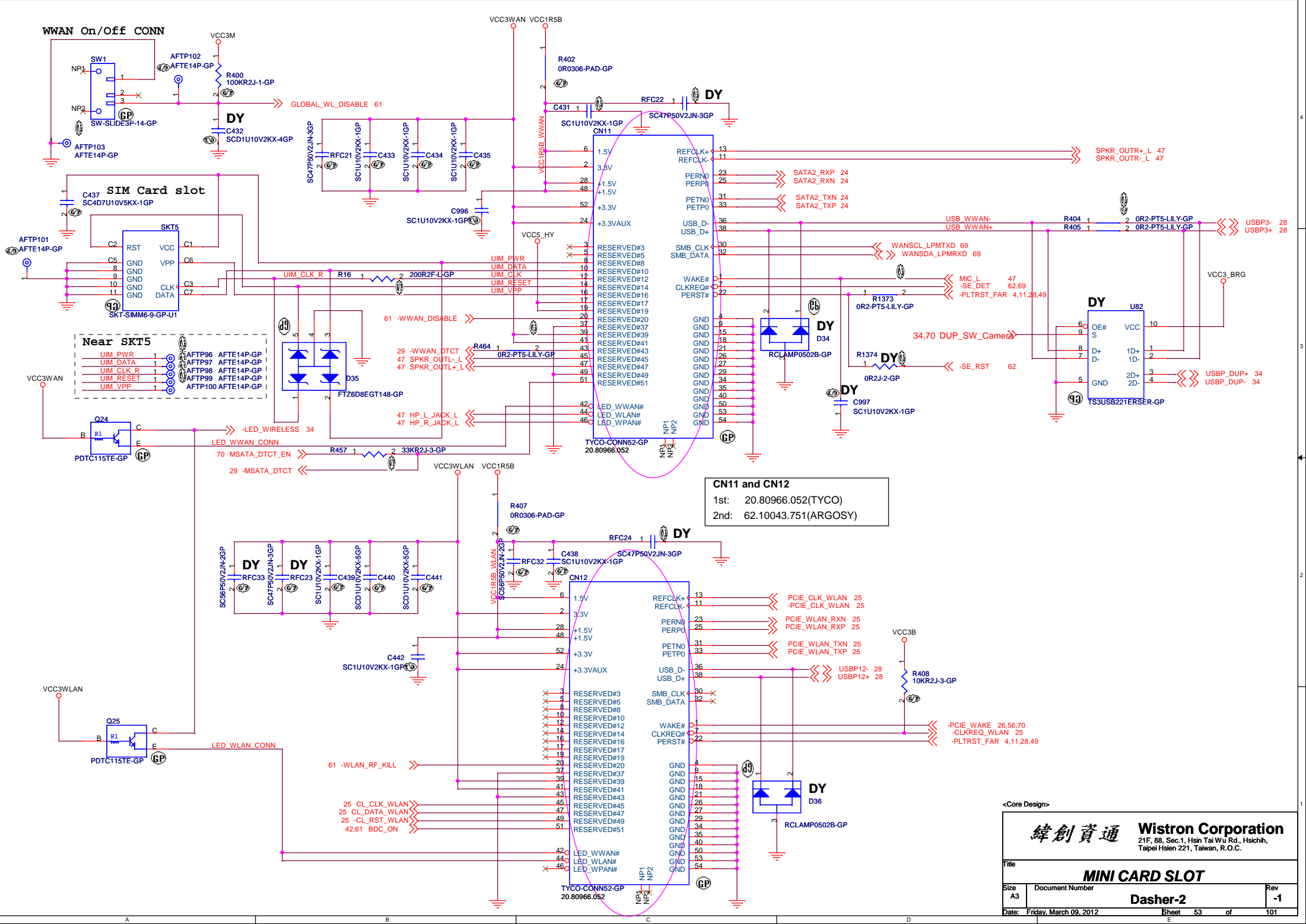
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|--|-----------------|--------|
|  <b>Wistron Corporation</b><br>21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C. |                 |        |
| <b>GBE MAGNETICS</b>   |                 |        |
| Title  |                 |        |
| Size Custom  | Document Number | Rev -1 |
| <b>Dasher-2</b>  |                 |        |
| Date: Friday, March 09, 2012   | Sheet 51 of 101 |        |

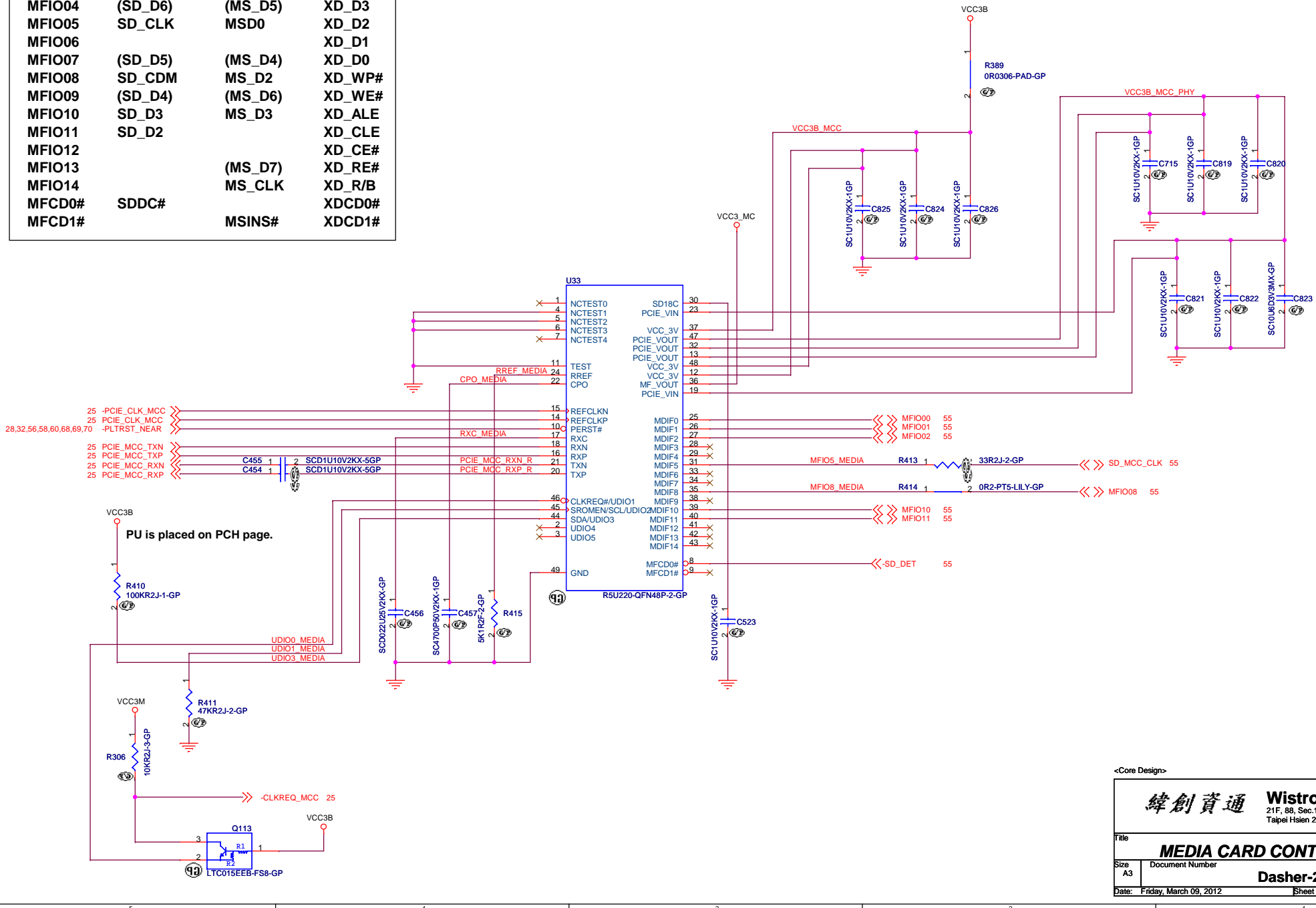


<Core Design>

|   |                                    |                  |
|---|------------------------------------|------------------|
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| <b>Title</b>  |                                    |                  |
| <b>RJ45 CONNECTOR</b>   |                                    |                  |
| Size<br>A3  | Document Number<br><b>Dasher-2</b> | Rev<br><b>-1</b> |
| Date: Friday, March 09, 2012  | Sheet 52 of                        | 101              |



| MEDIA I/F | SD/MMC  | MEMORYSTICK | XD     |
|-----------|---------|-------------|--------|
| MFIO00    | SDWP#   | MSBS        | XD_D7  |
| MFIO01    | SD_D1   |             | XD_D6  |
| MFIO02    | SD_D0   | MS_D1       | XD_D5  |
| MFIO03    | (SD_D7) |             | XD_D4  |
| MFIO04    | (SD_D6) | (MS_D5)     | XD_D3  |
| MFIO05    | SD_CLK  | MSD0        | XD_D2  |
| MFIO06    |         |             | XD_D1  |
| MFIO07    | (SD_D5) | (MS_D4)     | XD_D0  |
| MFIO08    | SD_CDM  | MS_D2       | XD_WP# |
| MFIO09    | (SD_D4) | (MS_D6)     | XD_WE# |
| MFIO10    | SD_D3   | MS_D3       | XD_ALE |
| MFIO11    | SD_D2   |             | XD_CLE |
| MFIO12    |         |             | XD_CE# |
| MFIO13    |         | (MS_D7)     | XD_RE# |
| MFIO14    |         | MS_CLK      | XD_R/B |
| MFCD0#    | SDDC#   |             | XDCD0# |
| MFCD1#    |         | MSINS#      | XDCD1# |



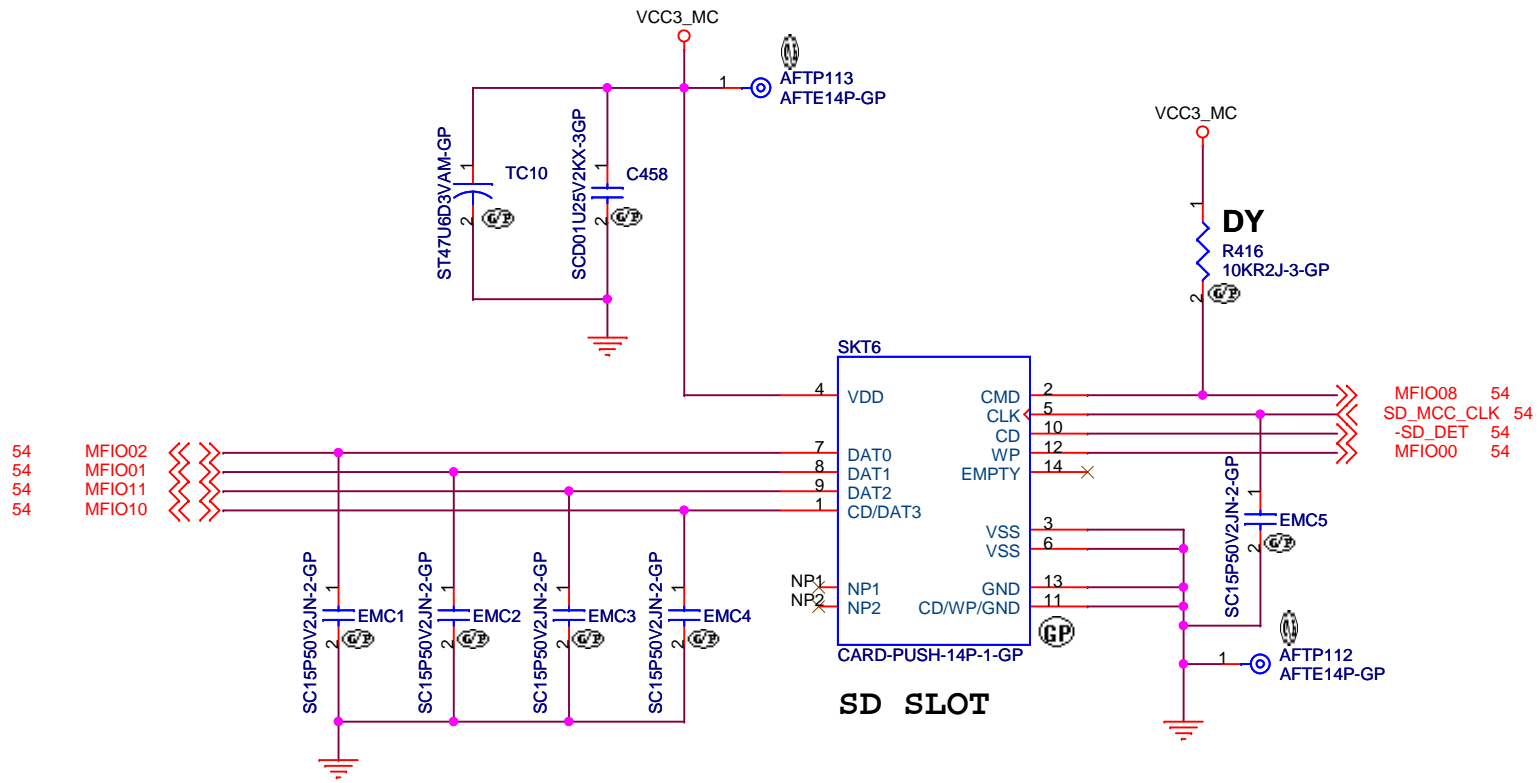
<Core Design>

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Title: **MEDIA CARD CONTROLLER**

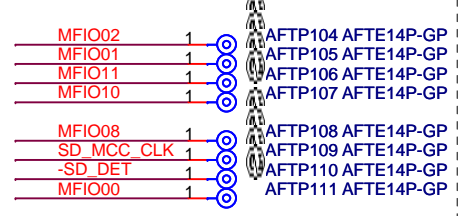
Size: A3 Document Number: **Dasher-2** Rev: **-1**

Date: Friday, March 09, 2012 Sheet 54 of 101

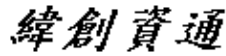


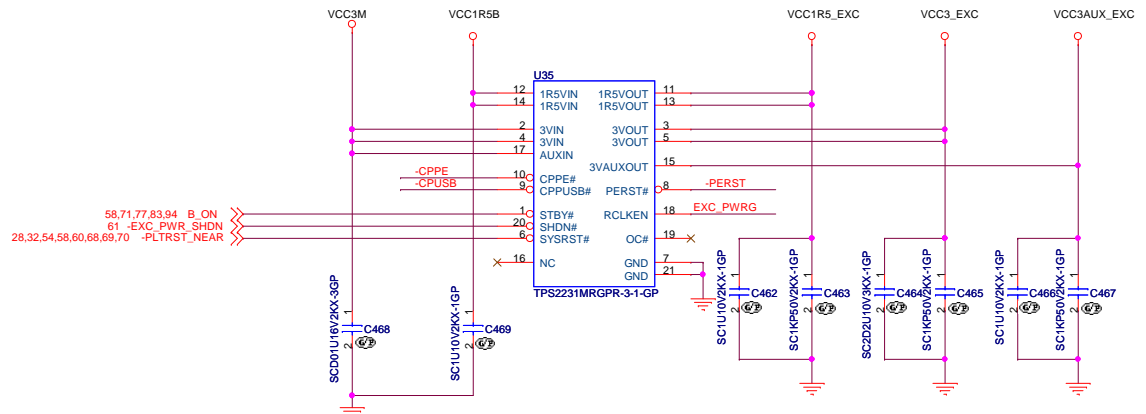
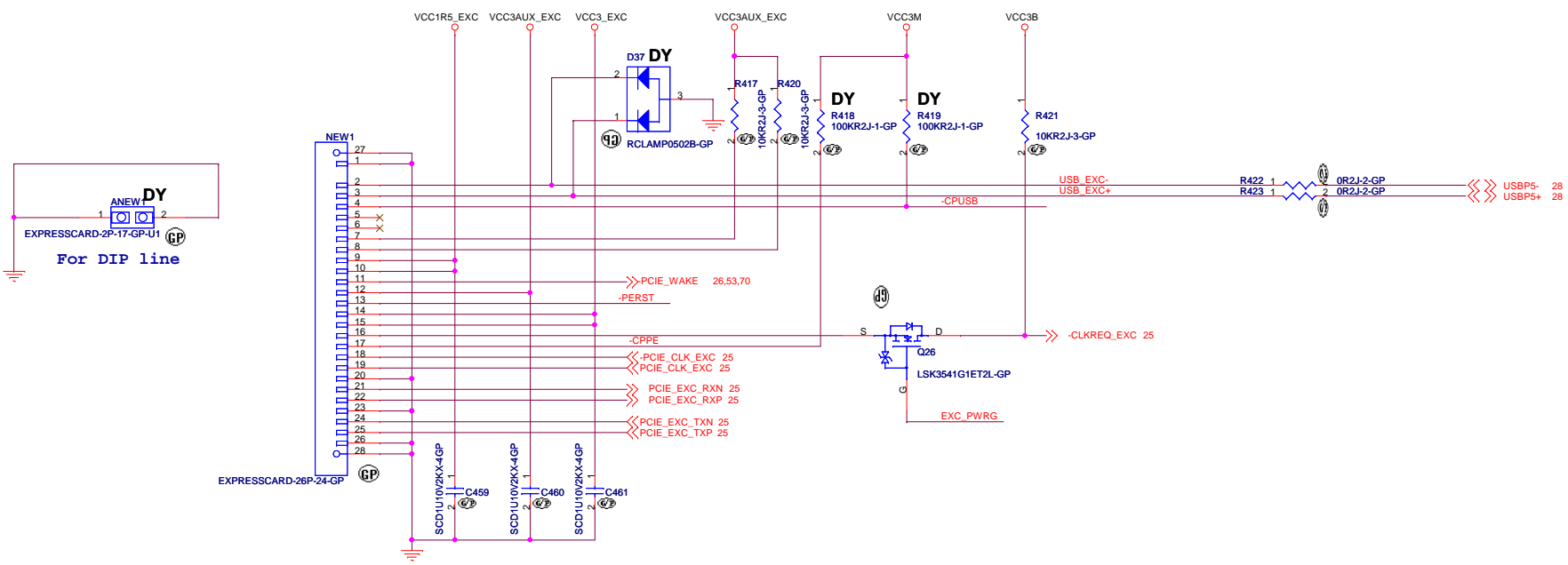
MFIO08 54  
 SD\_MCC\_CLK 54  
 -SD\_DET 54  
 MFIO00 54

**Near SKT6**



<Core Design>

|   |                                    |
|---|------------------------------------|
|  <b>Wistron Corporation</b><br>21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,<br>Taipei Hsien 221, Taiwan, R.O.C. |                                    |
| <b>Media Card Slot</b>  |                                    |
| Title<br>Size<br>A4   | Document Number<br><b>Dasher-2</b> |
| Date<br>Friday, March 09, 2012  | Rev<br><b>-1</b>                   |
| Sheet 55 of 101   |                                    |



|     |      |               |              |
|-----|------|---------------|--------------|
| U35 | TI   | TPS2231MRGP-3 | 45K0234BA    |
|     | Rohm | BD4156MUV-GTR | 74.04156.A73 |
|     | Rohm | BD4157MUV-GE2 | 74.04157.A73 |

<Core Design>

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Title: **Express Card Connector**

Size: Custom Document Number: **Dasher-2** Rev: **-1**

Date: Friday, March 05, 2012 E Sheet 56 of 101



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<Core Design>

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Taipei Hsien 221, Taiwan, R.O.C.

Title

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Size

A

Document Number

**Dasher-2**

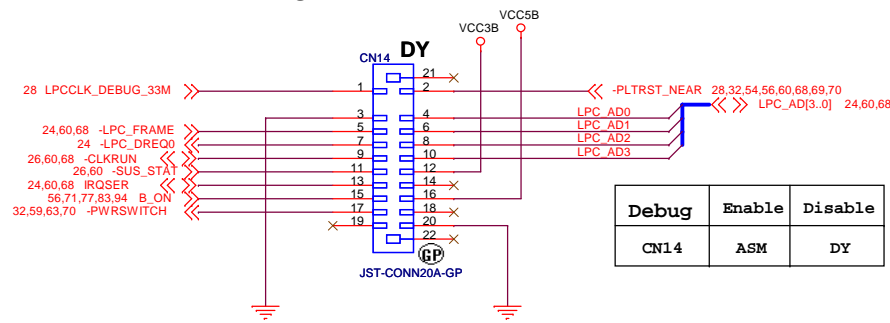
Rev

**-1**

Date: Tuesday, February 21, 2012

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# Debug card connector

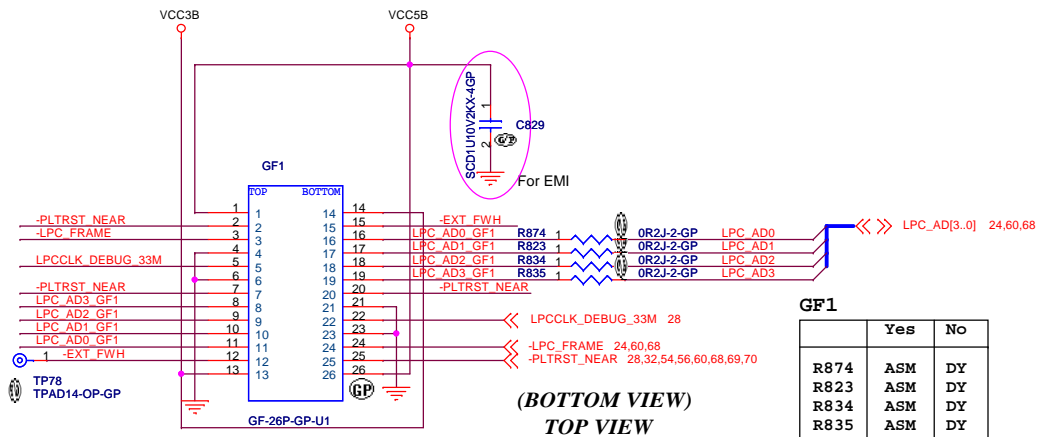


|  | Debug | Enable | Disable |
|--|-------|--------|---------|
|  | CN14  | ASM    | DY      |

Put "easy-to-access" place

| 4MB     |              |                   |              |
|---------|--------------|-------------------|--------------|
| SO8     | Marconix     | MX25L3206EM2I-12G | 72.25320.C01 |
|         | Winbond      | W25Q032BVSSIG     | 72.25Q32.A01 |
|         | Eon          | EN25QH32-104HIP   | 72.02532.B01 |
|         | Numonyx      | N25Q032A13ESEC0   | 72.25Q32.C01 |
| 8MB     |              |                   |              |
| SO8     | Marconix     | MX25L6406EM2I-12G | 72.25640.D01 |
|         | Winbond      | W25Q064CVSSIG     | 72.25Q64.B01 |
|         | Eon          | EN25QH64-104HIP   | 72.02564.001 |
|         | Numonyx      | N25Q064A13ESEC0   | 72.25Q64.G01 |
| Winbond | W25Q64FVSSIG | 72.25Q64.F01      |              |

# Golden Finger for Debug Board

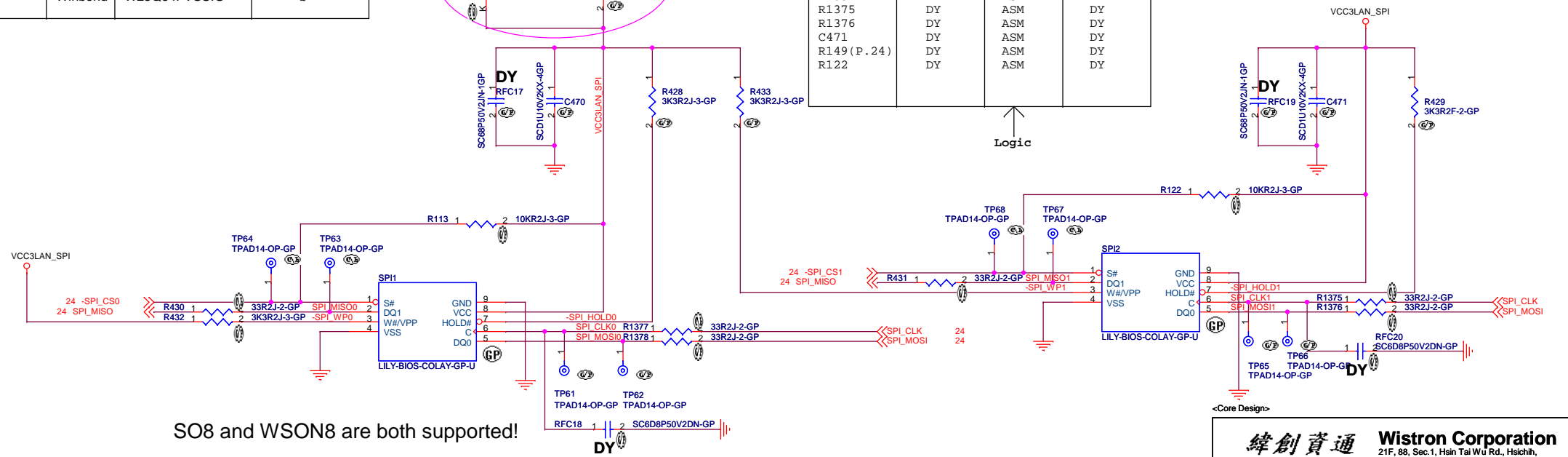
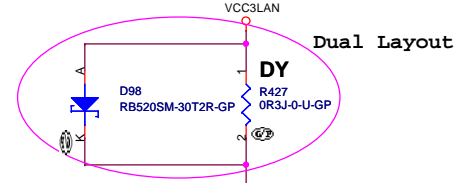


|      | Yes | No |
|------|-----|----|
| R874 | ASM | DY |
| R823 | ASM | DY |
| R834 | ASM | DY |
| R835 | ASM | DY |
| R235 | ASM | DY |

Logic

Configuration Table

|              | CONFIG-1<br>16MB | CONFIG-2<br>12MB | CONFIG-3<br>8MB |
|--------------|------------------|------------------|-----------------|
| SPI1         | 16MB             | 8MB              | 8MB             |
| SPI2         | DY               | 4MB              | DY              |
| R429         | DY               | ASM              | DY              |
| R431         | DY               | ASM              | DY              |
| R433         | DY               | ASM              | DY              |
| R1375        | DY               | ASM              | DY              |
| R1376        | DY               | ASM              | DY              |
| C471         | DY               | ASM              | DY              |
| R149 (P. 24) | DY               | ASM              | DY              |
| R122         | DY               | ASM              | DY              |



SO8 and WSON8 are both supported!

<Core Design>

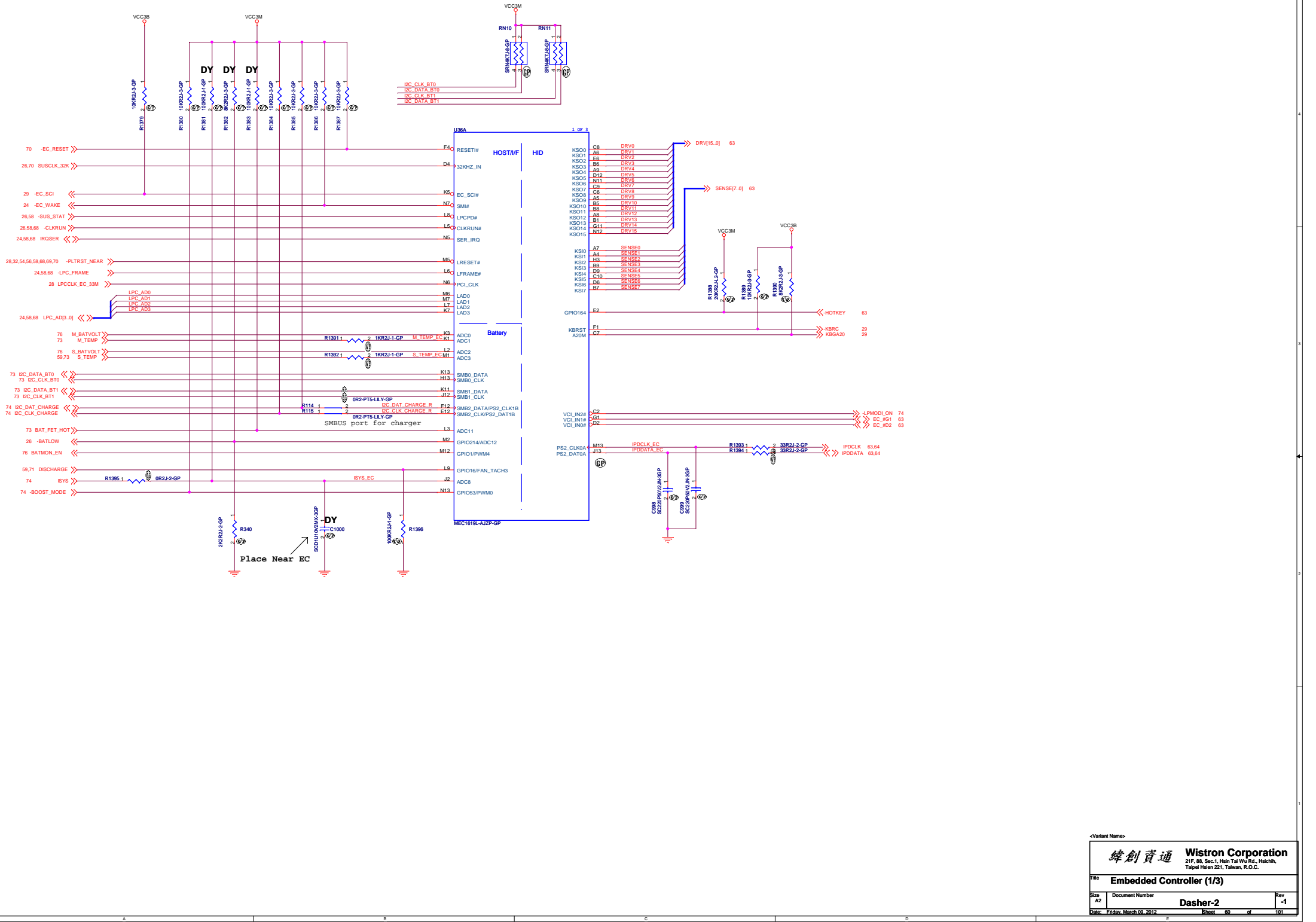
**緯創資通 Wistron Corporation**  
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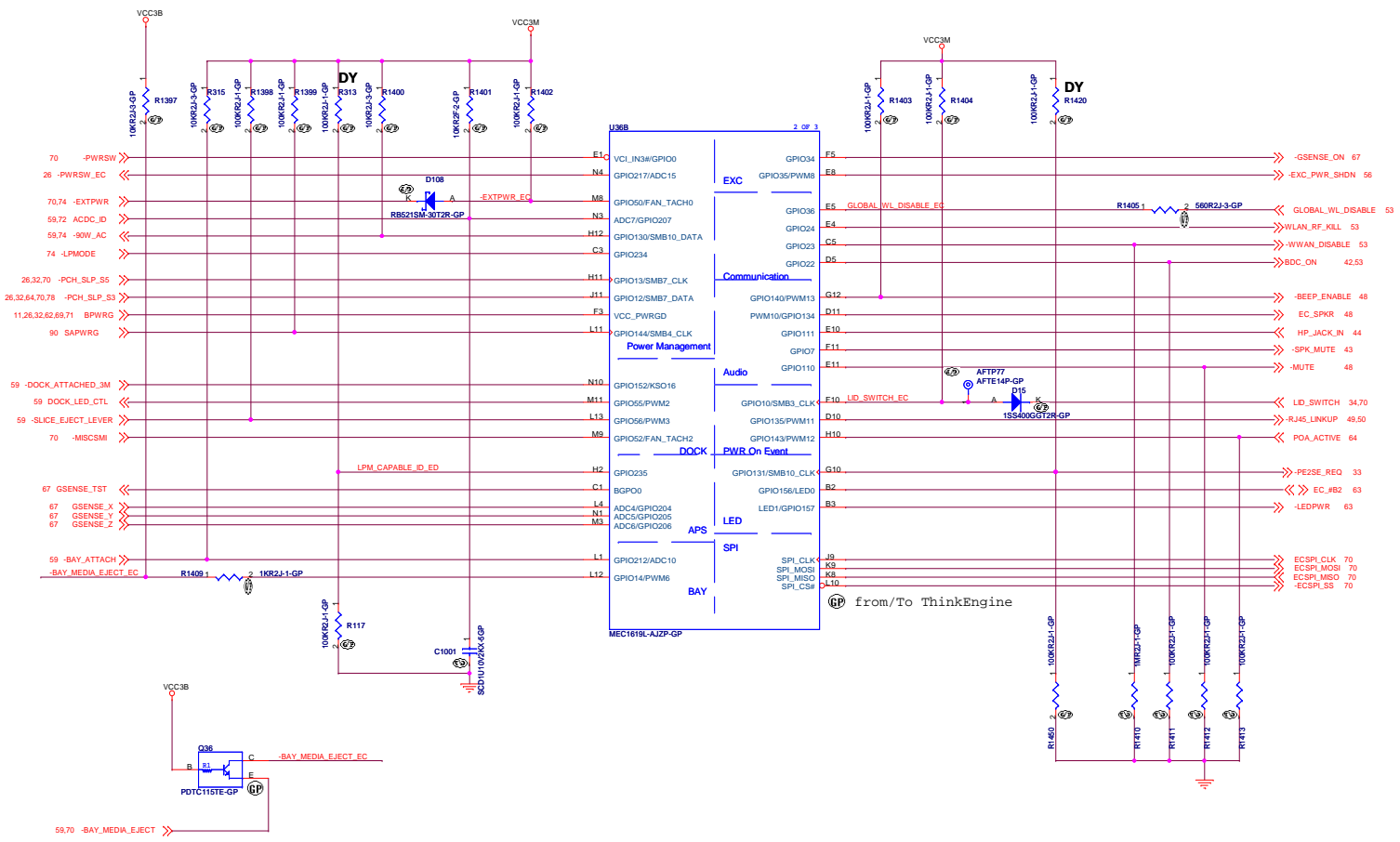
Title: **SPI&LPC debug card**

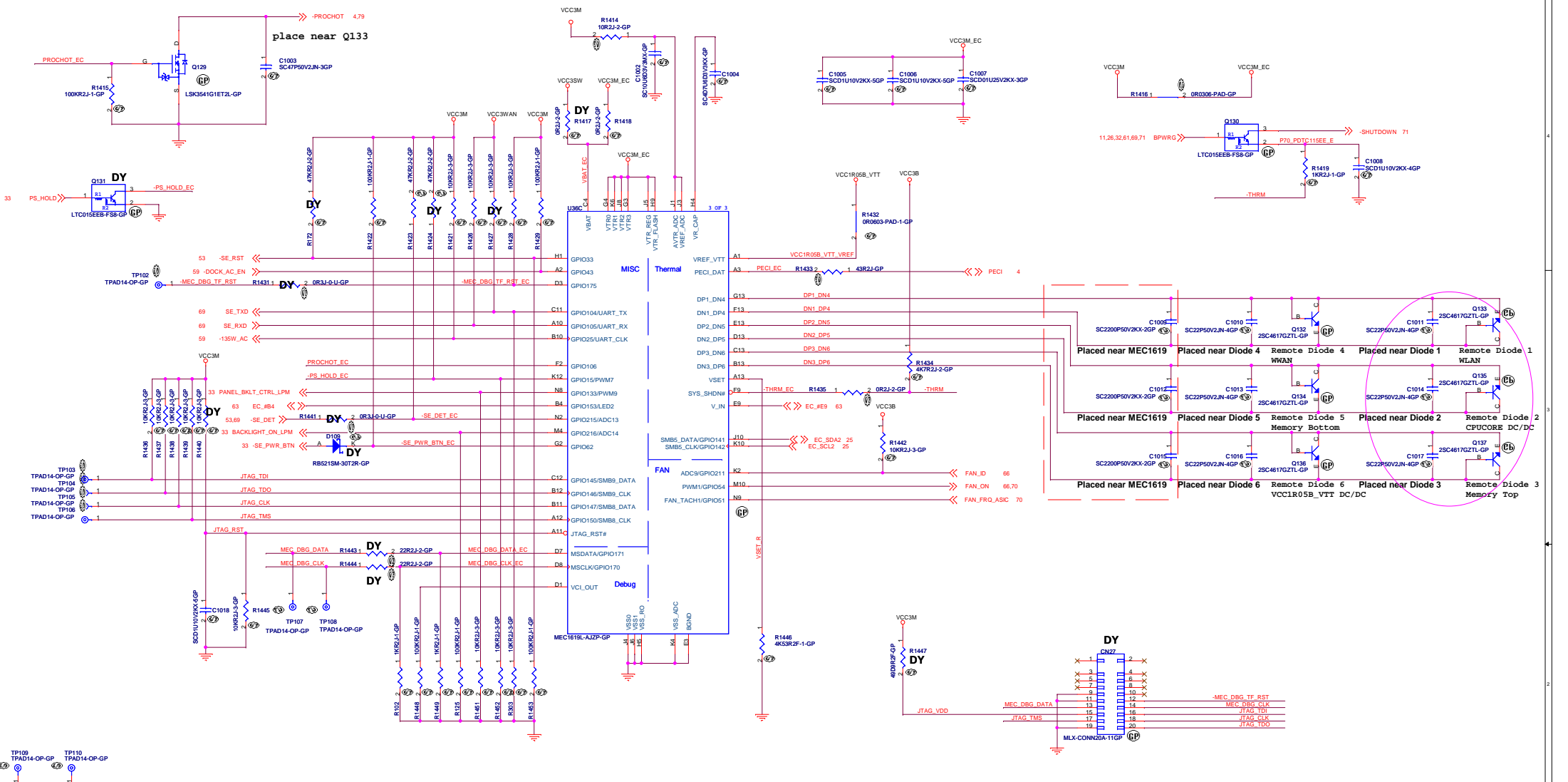
Size: A3 Document Number: **Dasher-2** Rev: **-1**

Date: Friday, March 09, 2012 Sheet 58 of 101





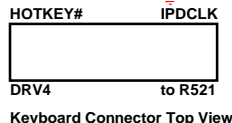
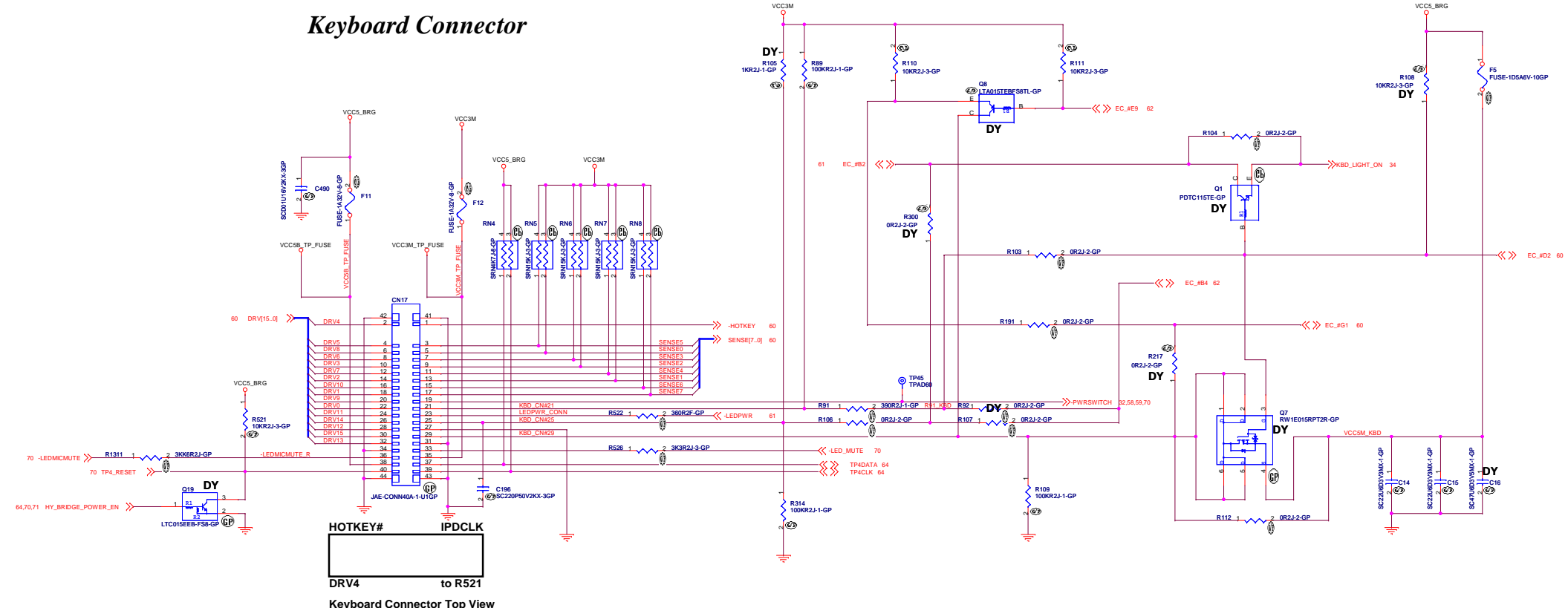




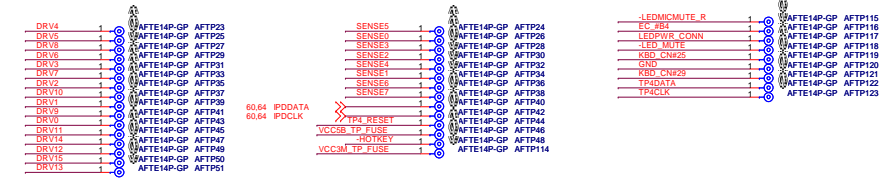
| JTAG debug port |        |         |  |
|-----------------|--------|---------|--|
|                 | Enable | Disable |  |
| R1440           | ASM    | DY      |  |
| R1445           | DY     | ASM     |  |
| R1447           | ASM    | DY      |  |

| Trace FIFO debug port |        |         |  |
|-----------------------|--------|---------|--|
|                       | Enable | Disable |  |
| R1443                 | ASM    | DY      |  |
| R1444                 | ASM    | DY      |  |
| R102                  | DY     | ASM     |  |

# Keyboard Connector



## Near CN17



## KBD Table1

|                 |                | case1 | case2 | case3 | case4 |
|-----------------|----------------|-------|-------|-------|-------|
| CS12 KBD w/o BL |                | v     | v     | v     |       |
| CS12 KBD w BL   |                |       | v     | v     |       |
| CS09            |                |       |       | v     | v     |
| Parts#          | parts          | case1 | case2 | case3 | case4 |
| R108            | 10k_5%_0402    | DY    | DY    | ASM   | ASM   |
| R104            | 0.5%_0402      | ASM   | ASM   | DY    | DY    |
| R89             | 100k_5%_0402   | ASM   | ASM   | ASM   | ASM   |
| R105            | 1k_5%_0402     | ASM   | DY    | ASM   | ASM   |
| R111            | 10k_5%_0402    | ASM   | ASM   | ASM   | ASM   |
| R110            | 10k_5%_0402    | DY    | ASM   | ASM   | ASM   |
| R92             | 0.5%_0402      | DY    | DY    | ASM   | ASM   |
| R91             | 390_5%_0402    | DY    | ASM   | ASM   | ASM   |
| R107            | 0.5%_0402      | DY    | ASM   | DY    | DY    |
| R103            | 0.5%_0402      | ASM   | ASM   | DY    | DY    |
| R106            | 0.5%_0402      | DY    | ASM   | ASM   | ASM   |
| R112            | 0.5%_0402      | DY    | ASM   | DY    | DY    |
| R109            | 100k_5%_0402   | DY    | ASM   | ASM   | DY    |
| R191            | 0.5%_0402      | ASM   | ASM   | DY    | ASM   |
| R217            | 0.5%_0402      | DY    | DY    | ASM   | DY    |
| R300            | 0.5%_0402      | DY    | DY    | ASM   | ASM   |
| C16             | 47uF_6.3V_0805 | DY    | DY    | DY    | DY    |
| C15             | 10uF_6.3V_0603 | DY    | ASM   | ASM   | DY    |
| C14             | 10uF_6.3V_0603 | DY    | ASM   | ASM   | DY    |
| Q1              | LTC015TE       | DY    | DY    | ASM   | ASM   |
| Q8              | LTA015TE       | DY    | DY    | ASM   | DY    |
| Q7              | RW1E015RP      | DY    | DY    | ASM   | DY    |
| F5              | 1.5A/6A Fuse   | DY    | ASM   | DY    | DY    |
|                 | 1.5A/6V PolySW | DY    | DY    | ASM   | DY    |
| R314            | 100K_5%_0402   | DY    | ASM   | DY    | DY    |

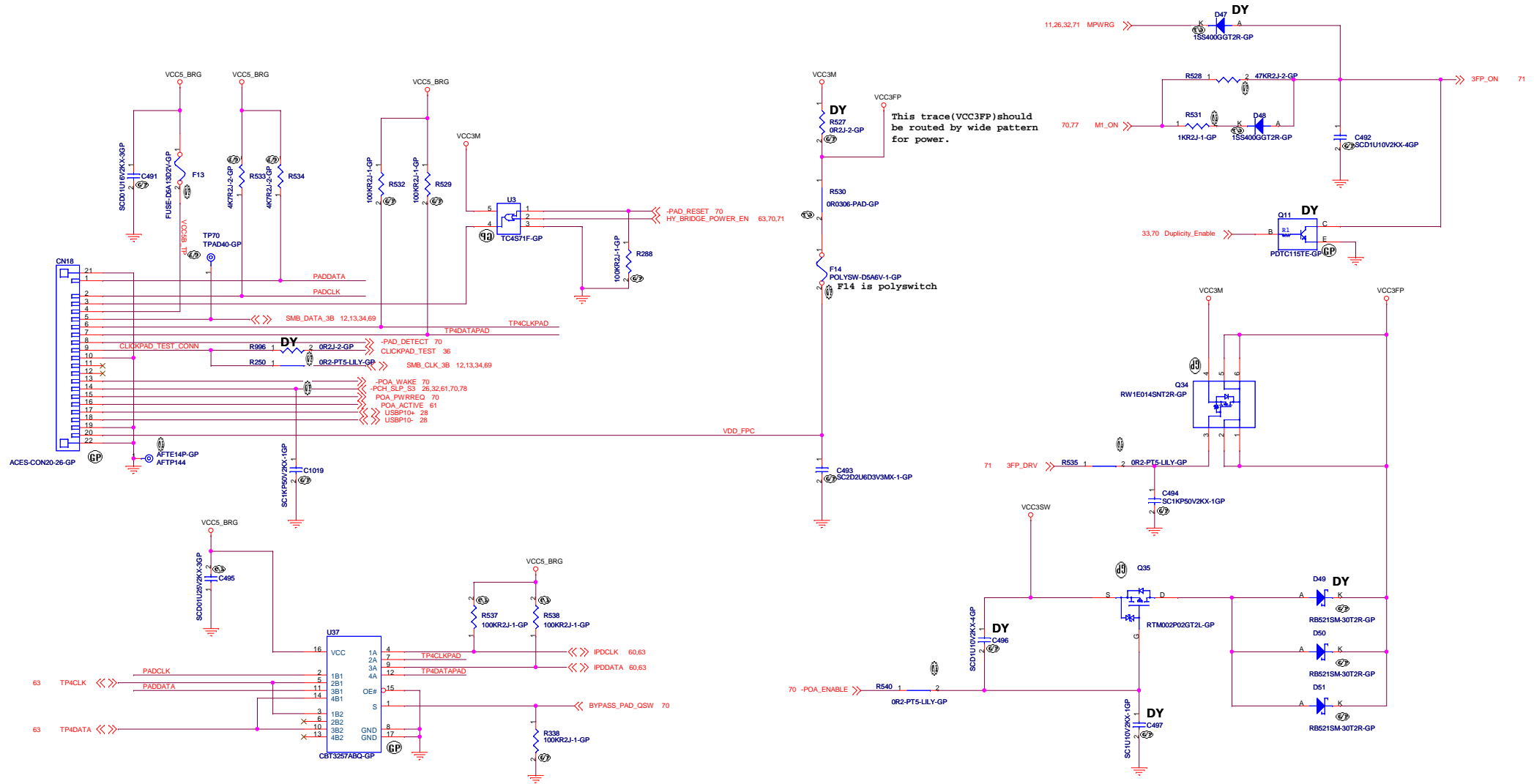
## KBD Table2

|        |       |
|--------|-------|
| Pre-DV | case4 |
| SDV    | case2 |
| FVT    | case2 |
| PreSIT | case2 |
| SIT    | case2 |

← Logic

<Core Design>

# Fingerprint Reader / Touch PAD



Near CN18

|                    |   |           |         |
|--------------------|---|-----------|---------|
| PADDATA            | 1 | AFT14P-GP | AFTP124 |
| PADCLK             | 1 | AFT14P-GP | AFTP125 |
| -PAD_RESET         | 1 | AFT14P-GP | AFTP126 |
| VCC5B_TP           | 1 | AFT14P-GP | AFTP127 |
| TP4CLKPAD          | 1 | AFT14P-GP | AFTP128 |
| TP4DATAPAD         | 1 | AFT14P-GP | AFTP129 |
| -PAD_DETECT        | 1 | AFT14P-GP | AFTP130 |
| CLICKPAD_TEST_CONN | 1 | AFT14P-GP | AFTP131 |
| -POA_WAKE          | 1 | AFT14P-GP | AFTP132 |
| 3PCH_SLP_S3        | 1 | AFT14P-GP | AFTP133 |
| POA_PWRREQ         | 1 | AFT14P-GP | AFTP134 |
| POA_ACTIVE         | 1 | AFT14P-GP | AFTP135 |
| VDD_FPC            | 1 | AFT14P-GP | AFTP136 |

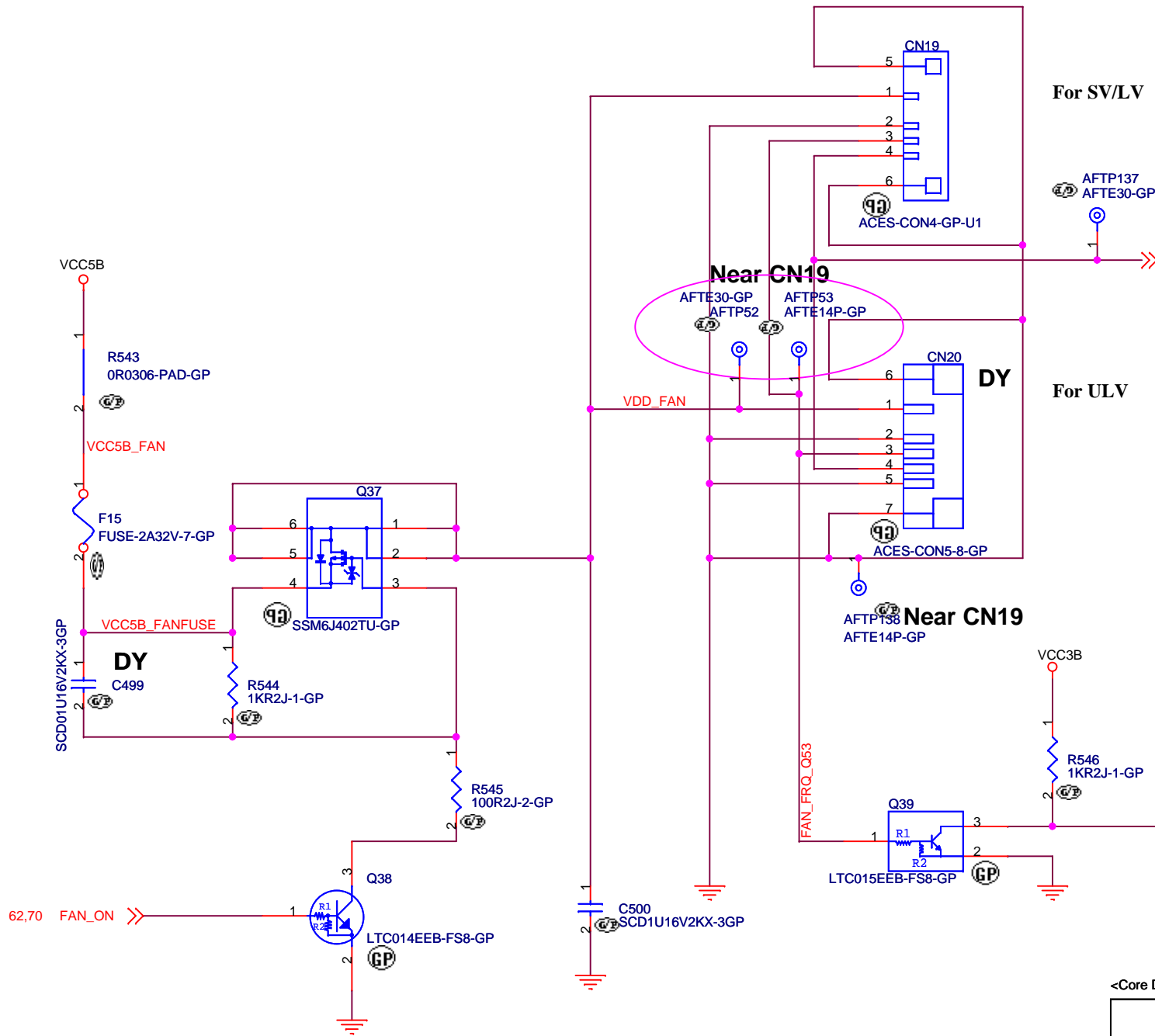
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<Core Design>

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|----------------------------------|-----------------|---|-----------|
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| Title                            |                 |   |           |
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| Size                             | Document Number |   | Rev       |
| A                                | <b>Dasher-2</b> |   | <b>-1</b> |
| Date: Tuesday, February 21, 2012 |                 | Sheet 65 of   | 101       |



For SV/LV

Near CN19

FAN\_ID 62

SV

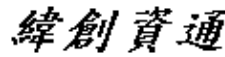
| FAN_ID | Thermal module   |
|--------|------------------|
| 1      | DELTA or Toshiba |
| 0      | AVC              |

For ULV

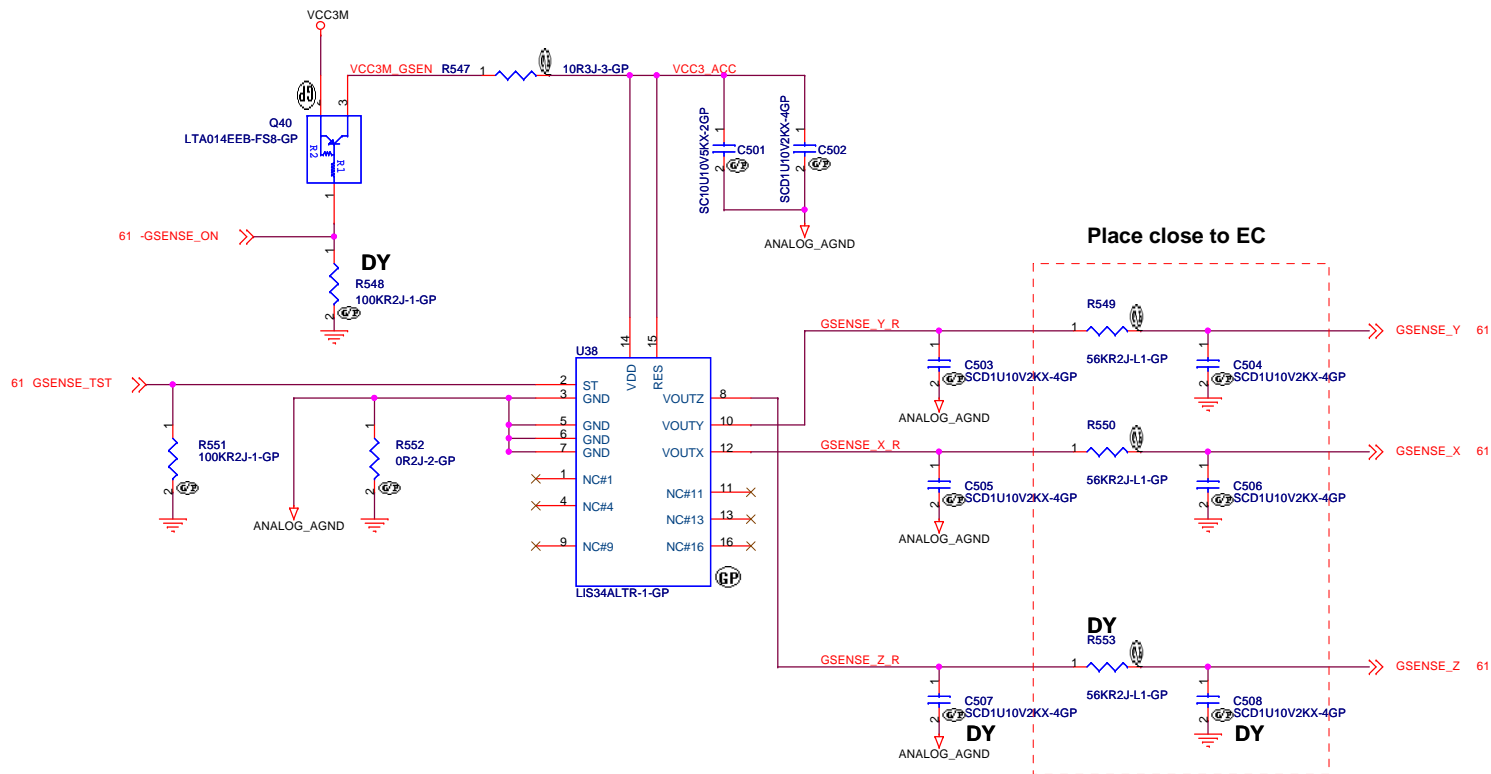
ULV

| FAN_ID | Thermal module |
|--------|----------------|
| 1      | Toshiba        |
| 0      | AVC or DELTA   |

<Core Design>


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|                              |                 |                 |
|------------------------------|-----------------|-----------------|
| <b>FAN Control</b>           |                 |                 |
| Size A4                      | Document Number | Rev -1          |
| <b>Dasher-2</b>              |                 |                 |
| Date: Friday, March 09, 2012 |                 | Sheet 66 of 101 |



**U38**

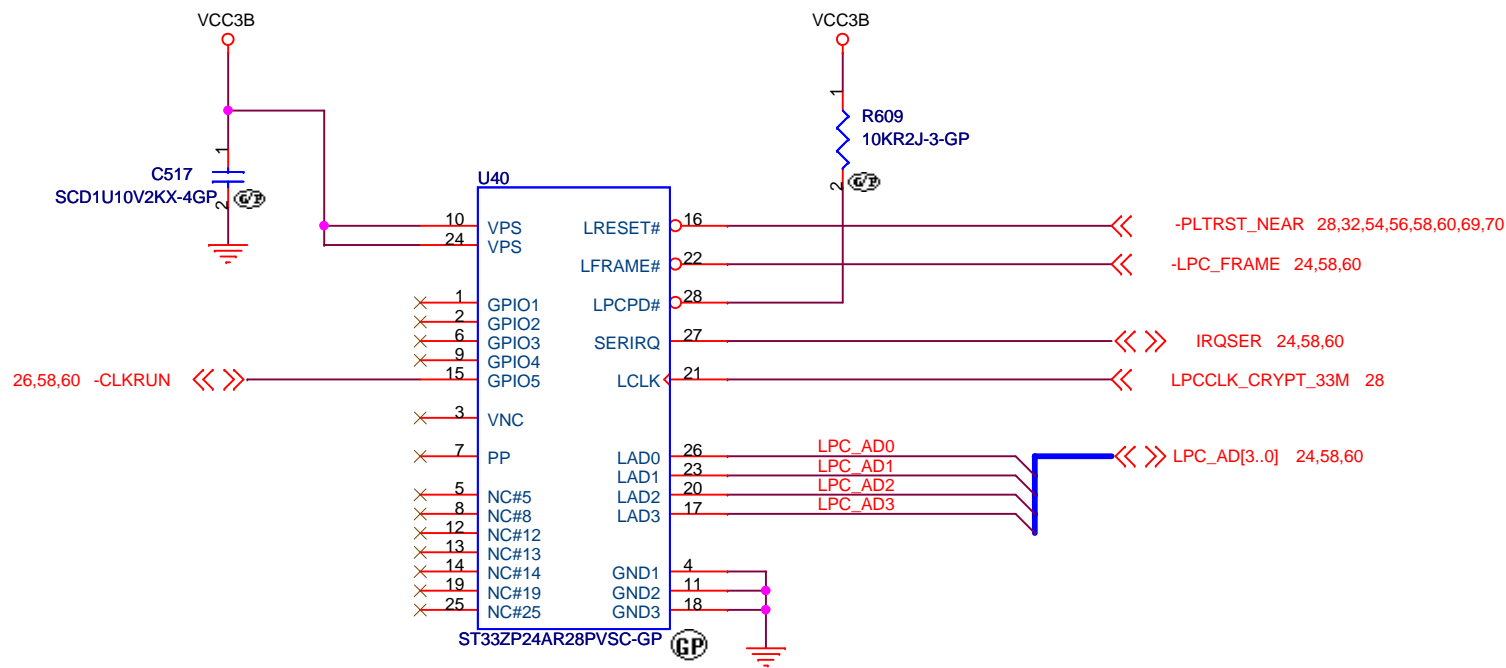
|         |                   |              |
|---------|-------------------|--------------|
| Primary | STMicro LIS34AL   | 41R0828AA    |
| Second  | Kionix KXTC8-2850 | 74.KXTC8.0BZ |
| Third   |                   |              |

**Layout Comment :**

- (1) Avoid routing under DCDC switching area.

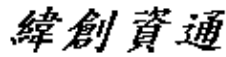
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|  |                                    |
|--|------------------------------------|
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| <b>G-SENSOR</b>  |                                    |
| Size<br>A3   | Document Number<br><b>Dasher-2</b> |
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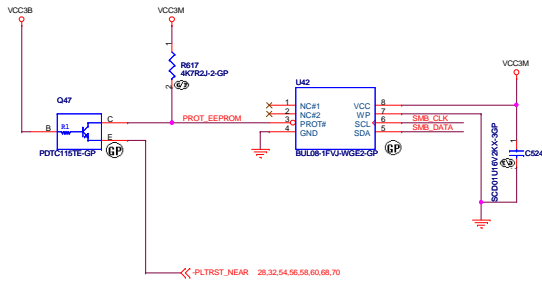


|                                    |   |
|------------------------------------|---|
| BU                                 | After SDV   |
| ST19NP18ER28PVMO<br>(71.19N18.T0W) | ST33ZP24AR28PVxx<br>xx="OG" for SDV(71.03324.A0W),<br>"RC" for FVT, PreSIT (FW 1.2.C.0)(71.03324.C0W)<br>SC for SIT (not PreSIT) FW 1.2.D.0(71.03324.D0W) |

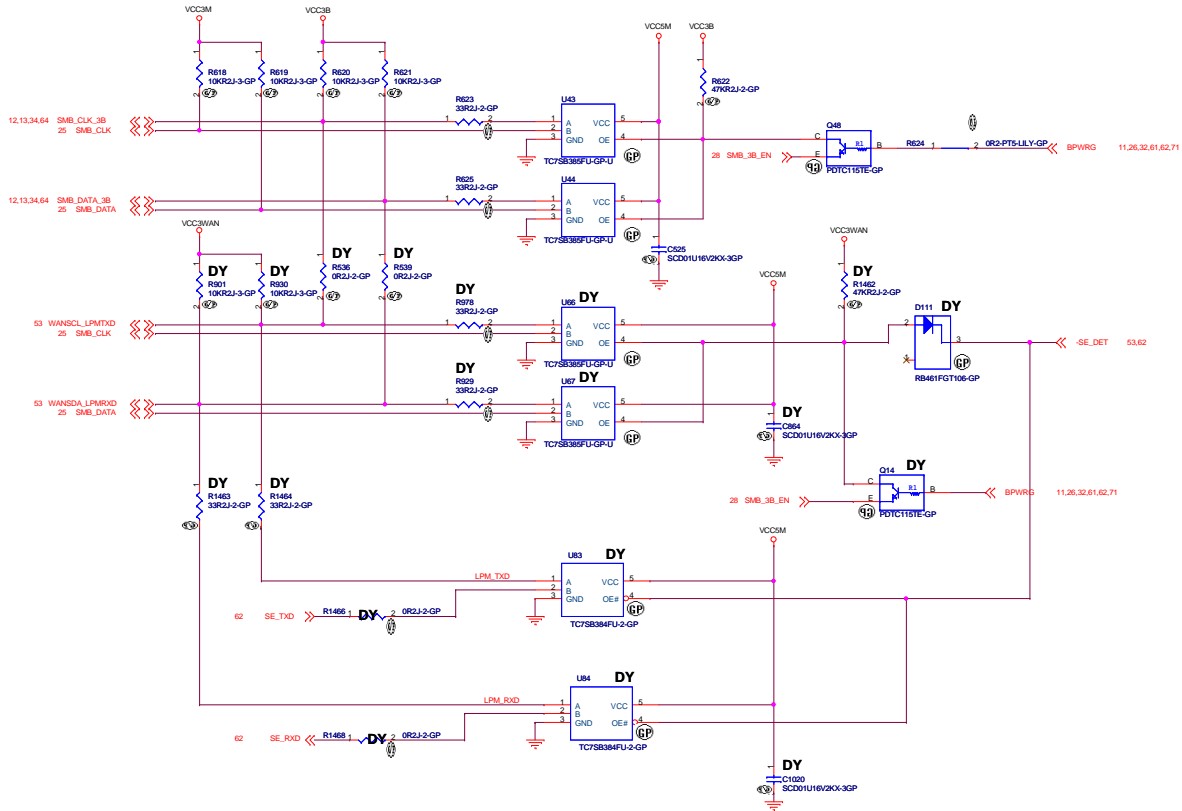
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|---|------------------------------------|------------------|
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| <b>TPM</b>  |                                    |                  |
| Size<br>A4  | Document Number<br><b>Dasher-2</b> | Rev<br><b>-1</b> |
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# EEPROM

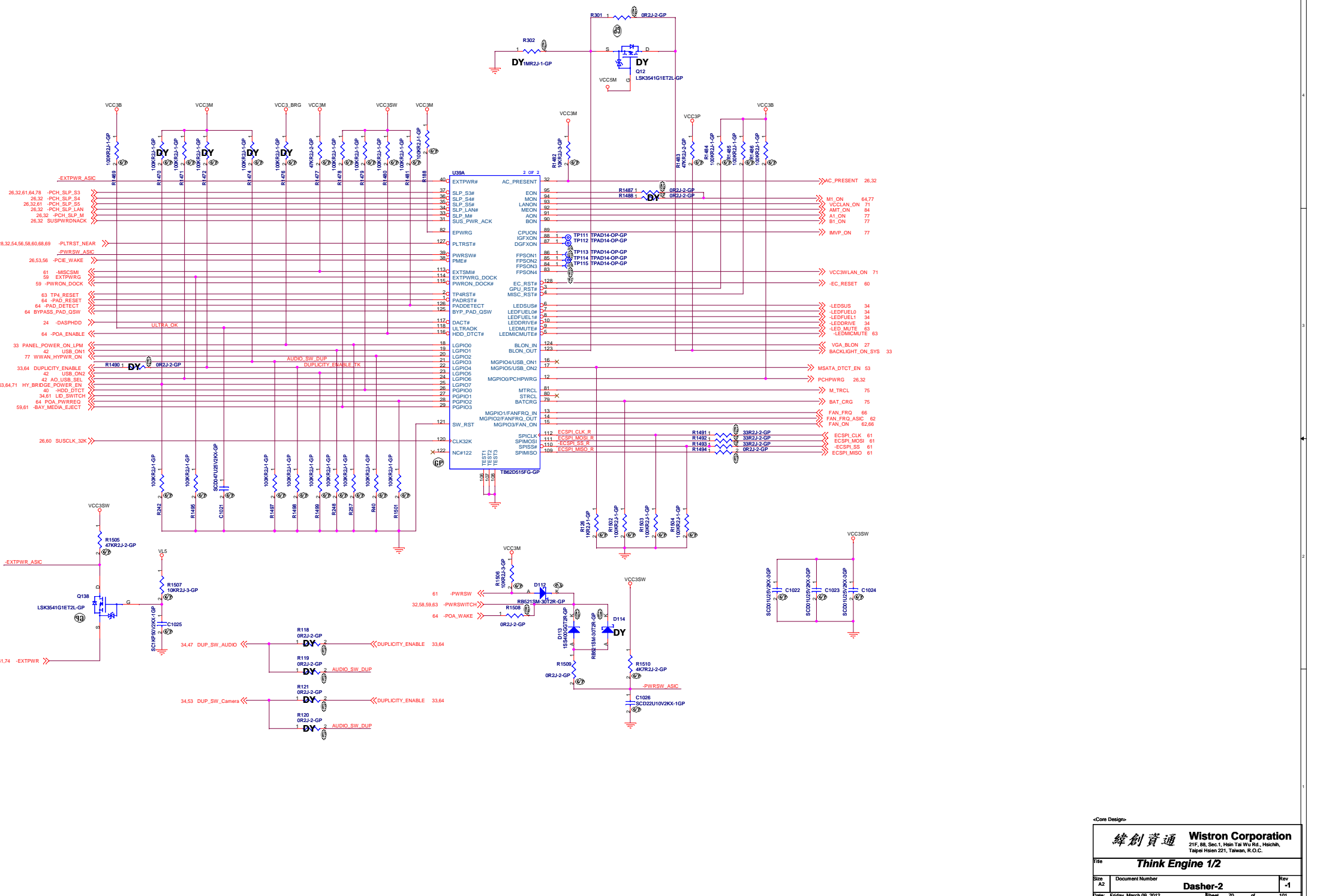


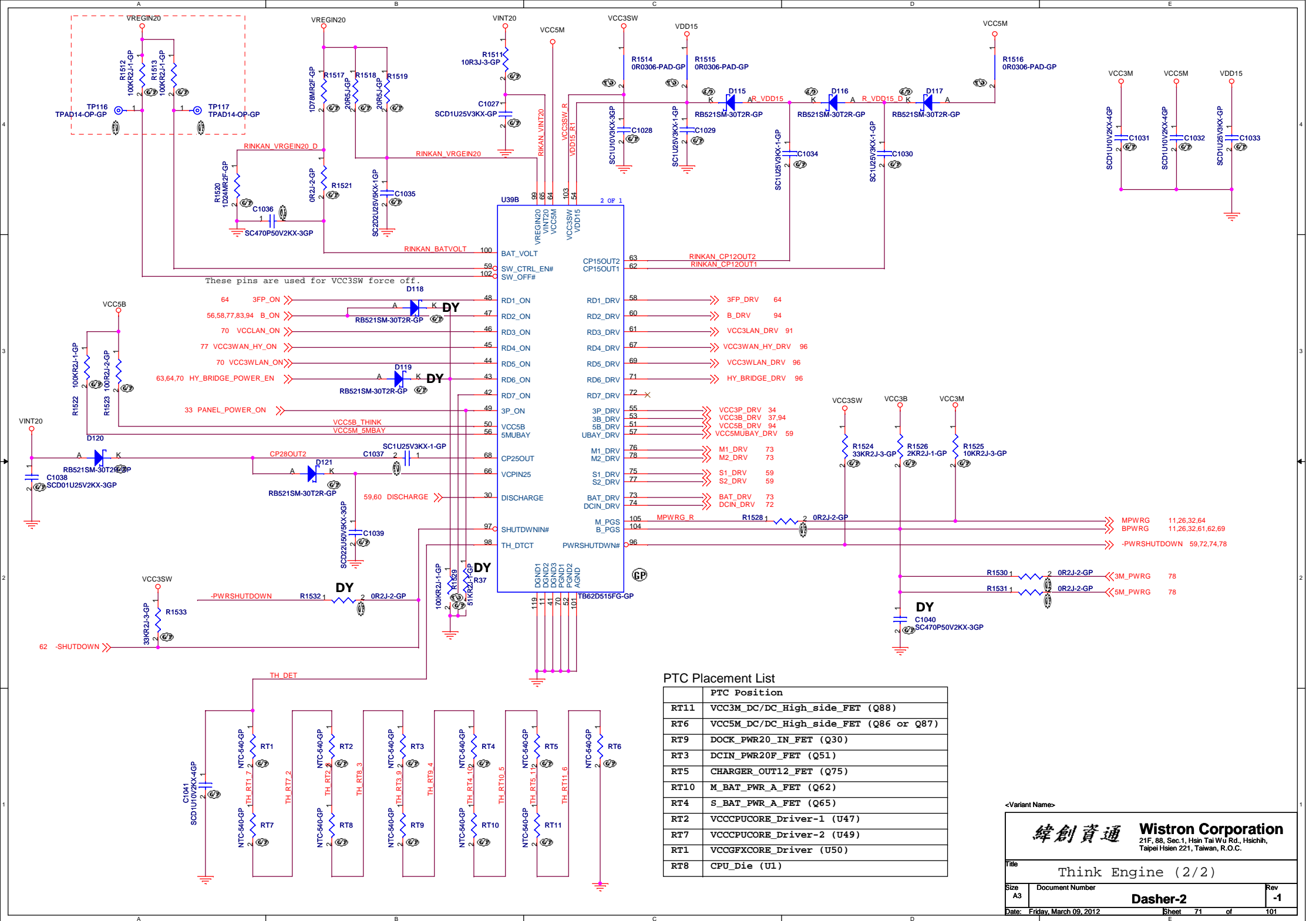
|     | Vendor | U42          | Part Number  |
|-----|--------|--------------|--------------|
| 1st | ROHM   | BUL08-1FVJ-W | 72.BUL08.A0Q |
| 2nd | NXP    | PCA24S08ADP  | 72.24S08.A0Q |
| 3rd | Sanyo  | LE26CAP08TT  | 72.26C08.00R |



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These pins are used for VCC3SW force off.

**PTC Placement List**

| RT#  | PTC Position                           |
|------|--|
| RT11 | VCC3M_DC/DC_High_side_FET (Q88)        |
| RT6  | VCC5M_DC/DC_High_side_FET (Q86 or Q87) |
| RT9  | DOCK_PWR20_IN_FET (Q30)                |
| RT3  | DCIN_PWR20F_FET (Q51)                  |
| RT5  | CHARGER_OUT12_FET (Q75)                |
| RT10 | M_BAT_PWR_A_FET (Q62)                  |
| RT4  | S_BAT_PWR_A_FET (Q65)                  |
| RT2  | VCCCPUCORE_Driver-1 (U47)              |
| RT7  | VCCCPUCORE_Driver-2 (U49)              |
| RT1  | VCCGFXCORE_Driver (U50)                |
| RT8  | CPU_Die (U1)                           |

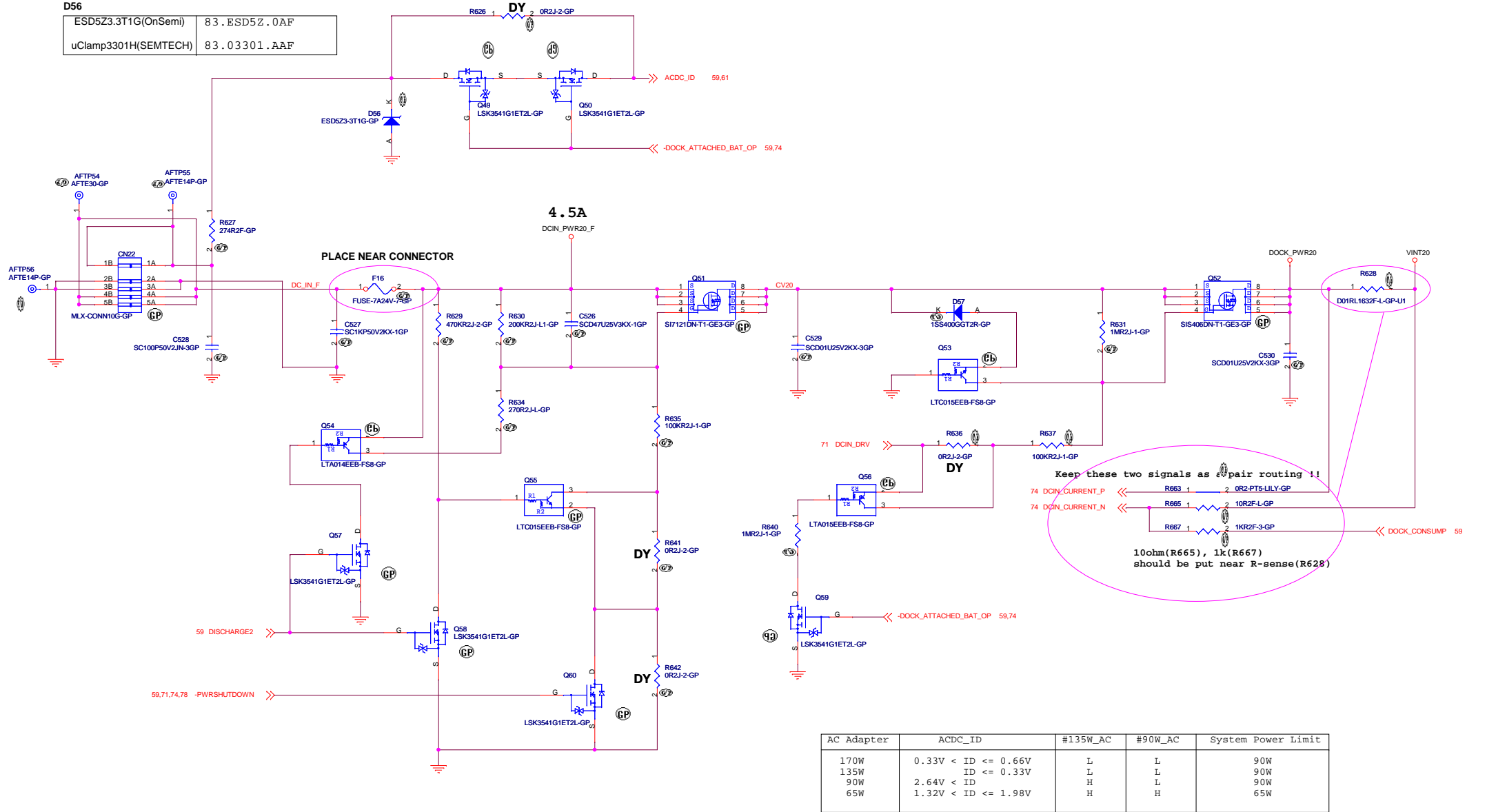
<Variant Name>

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Title: Think Engine (2/2)

|                              |                 |        |
|------------------------------|-----------------|--------|
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|            |                      |              |
|------------|----------------------|--------------|
| <b>D56</b> | ESD5Z3.3T1G(OnSemi)  | 83.ESD5Z.0AF |
|            | uClamp3301H(SEMTECH) | 83.03301.AAF |



| AC Adapter | ACDC_ID             | #135W_AC | #90W_AC | System Power Limit |
|------------|---------------------|----------|---------|--------------------|
| 170W       | 0.33V < ID <= 0.66V | L        | L       | 90W                |
| 135W       | ID <= 0.33V         | L        | L       | 90W                |
| 90W        | 2.64V < ID          | H        | L       | 90W                |
| 65W        | 1.32V < ID <= 1.98V | H        | H       | 65W                |

| PEAK SHIFT | YES    | NO     |
|------------|--------|--------|
| R641       | NO-ASM | ASM    |
| R629       | ASM    | NO-ASM |
| Q58        | ASM    | NO-ASM |
| Q55        | ASM    | NO-ASM |

Logic

<Core Design>

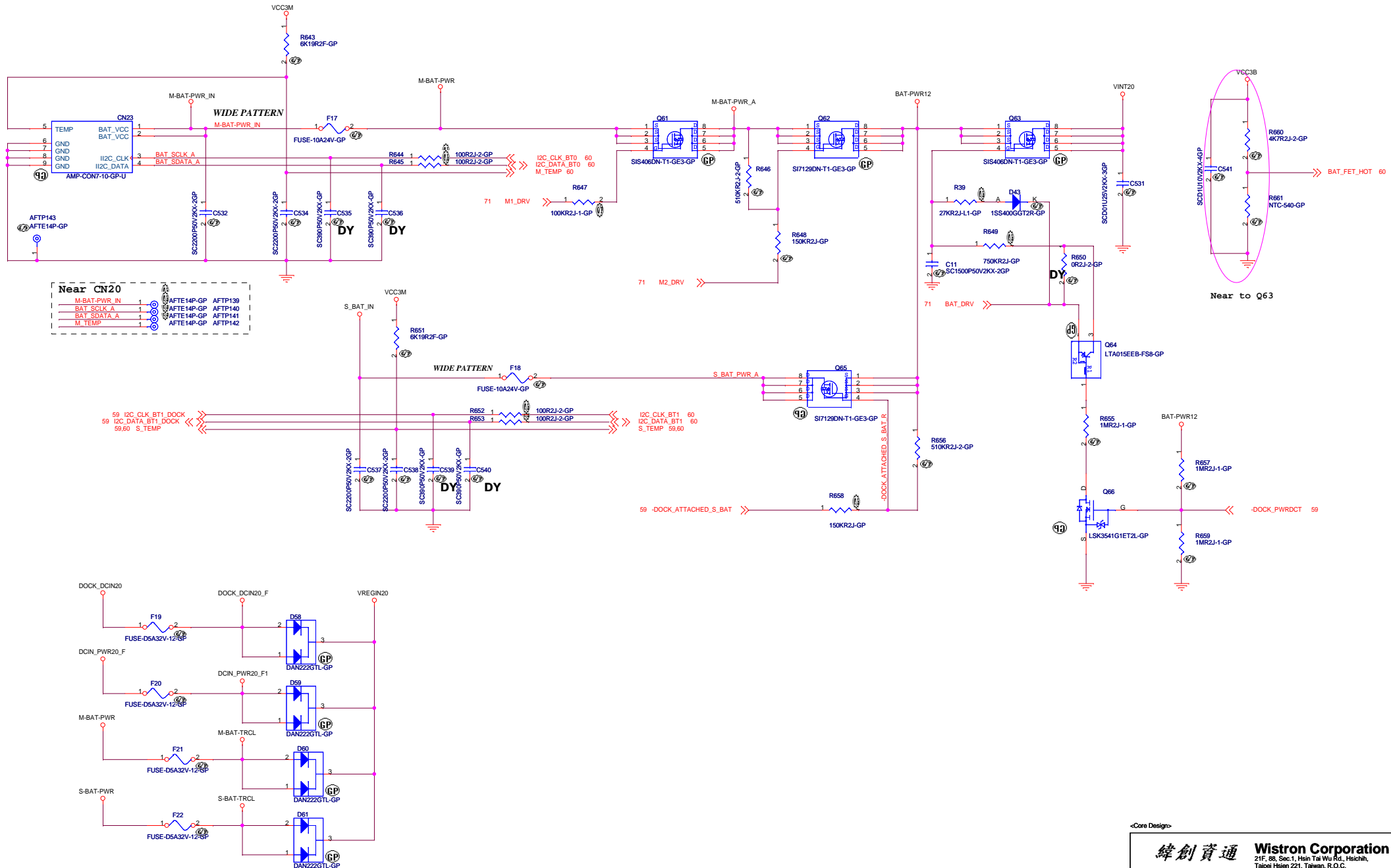
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Title: **DC-IN**

Size: Custom Document Number: **Dasher-2** Rev: **-1**

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**Near CN20**

|              |   |            |         |
|--------------|---|------------|---------|
| M-BAT-PWR_IN | 1 | AFTF14P-GP | AFTP139 |
| BAT_SCLK_A   | 1 | AFTF14P-GP | AFTP140 |
| BAT_SDATA_A  | 1 | AFTF14P-GP | AFTP141 |
| M_TEMP       | 1 | AFTF14P-GP | AFTP142 |

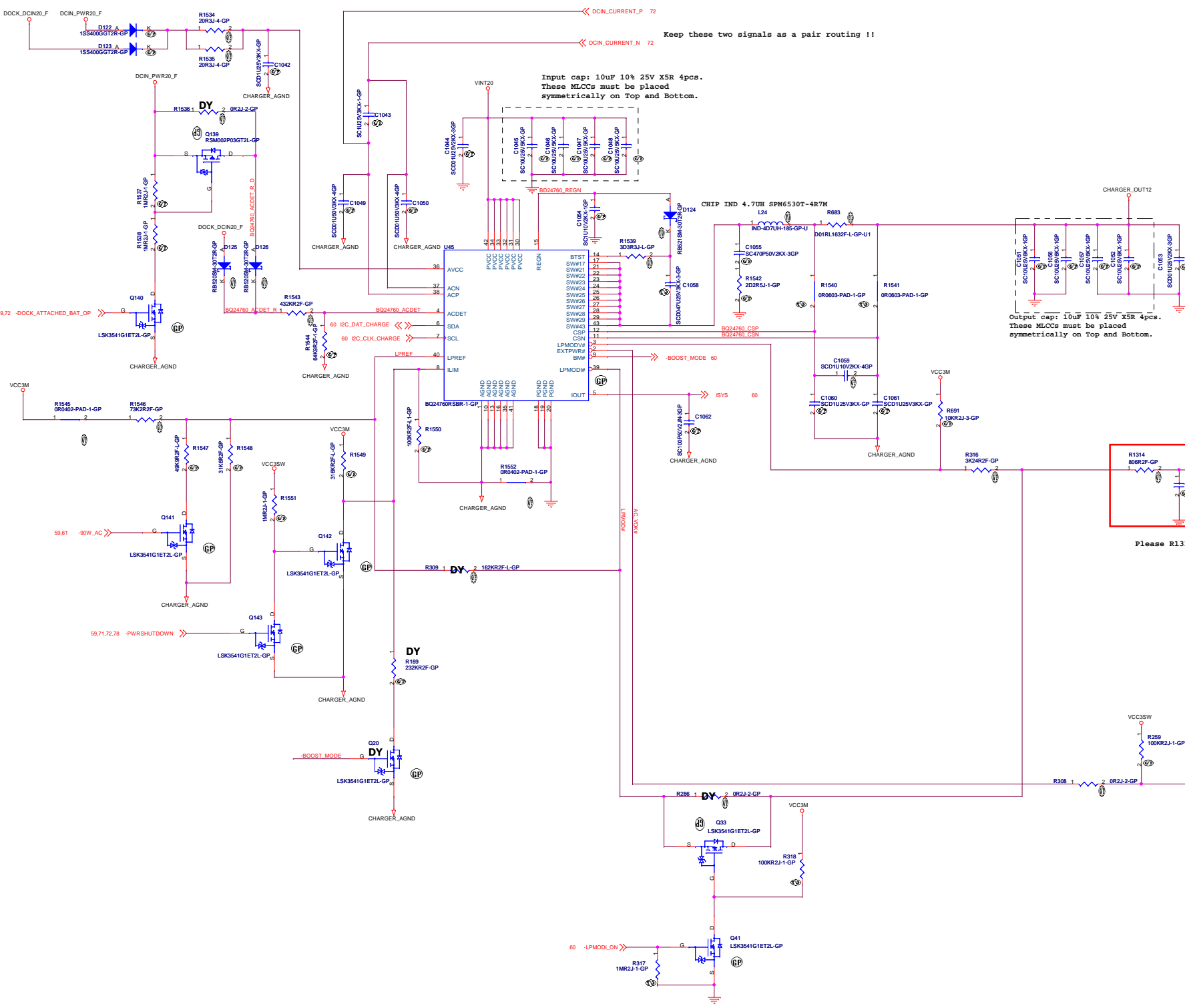
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Title: **BATTERY INPUT**

Size: Custom    Document Number: **Dasher-2**    Rev: **-1**

Date: Friday, March 09, 2012    Sheet: 73 of 101

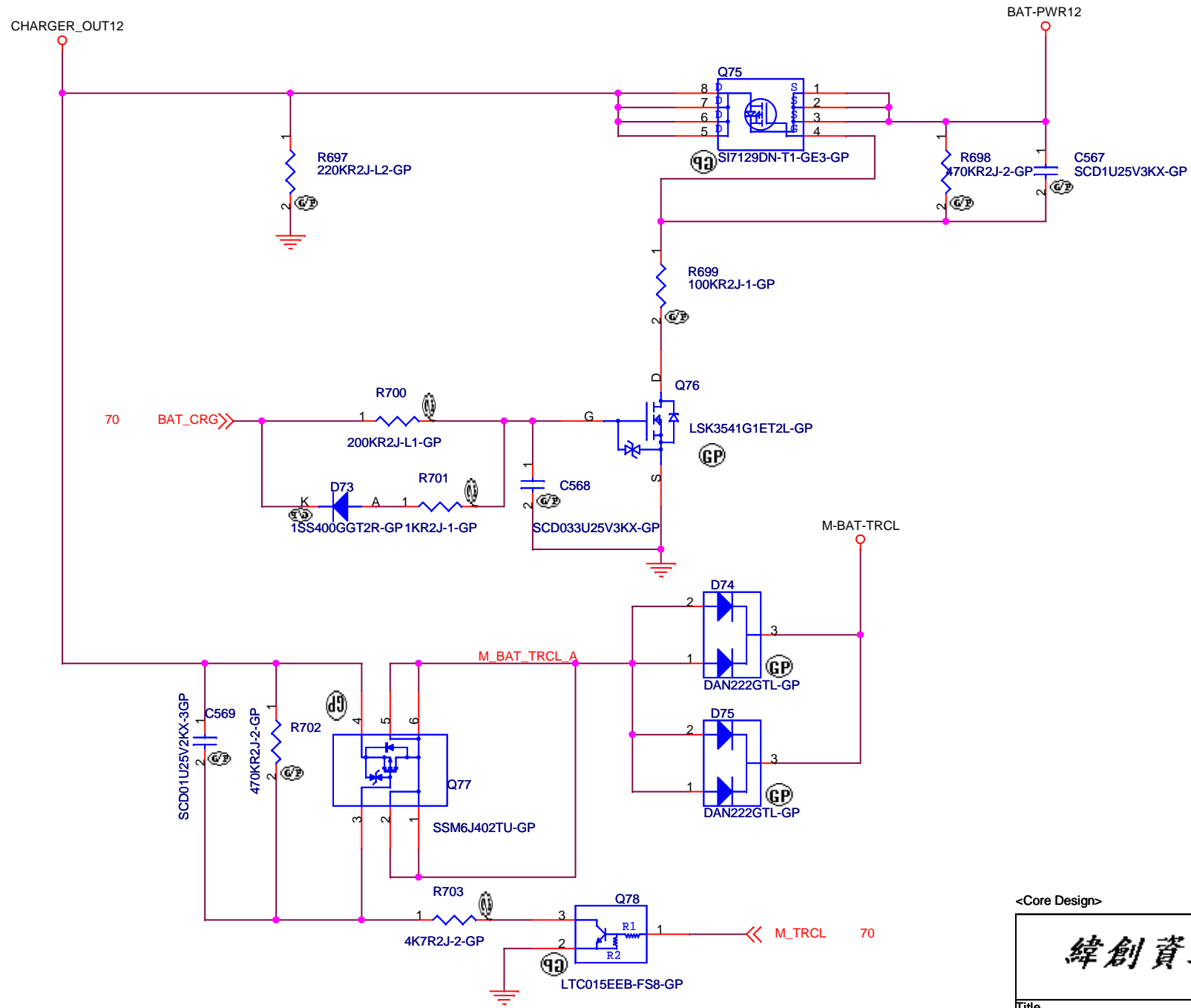


Keep these two signals as a pair routing !!

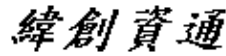
Input cap: 10uF 10% 25V X5R 4pcs.  
These MLCCs must be placed  
symmetrically on Top and Bottom.

Output cap: 10uF 10% 25V X5R 4pcs.  
These MLCCs must be placed  
symmetrically on Top and Bottom.

Please R1314 and C842 near BC

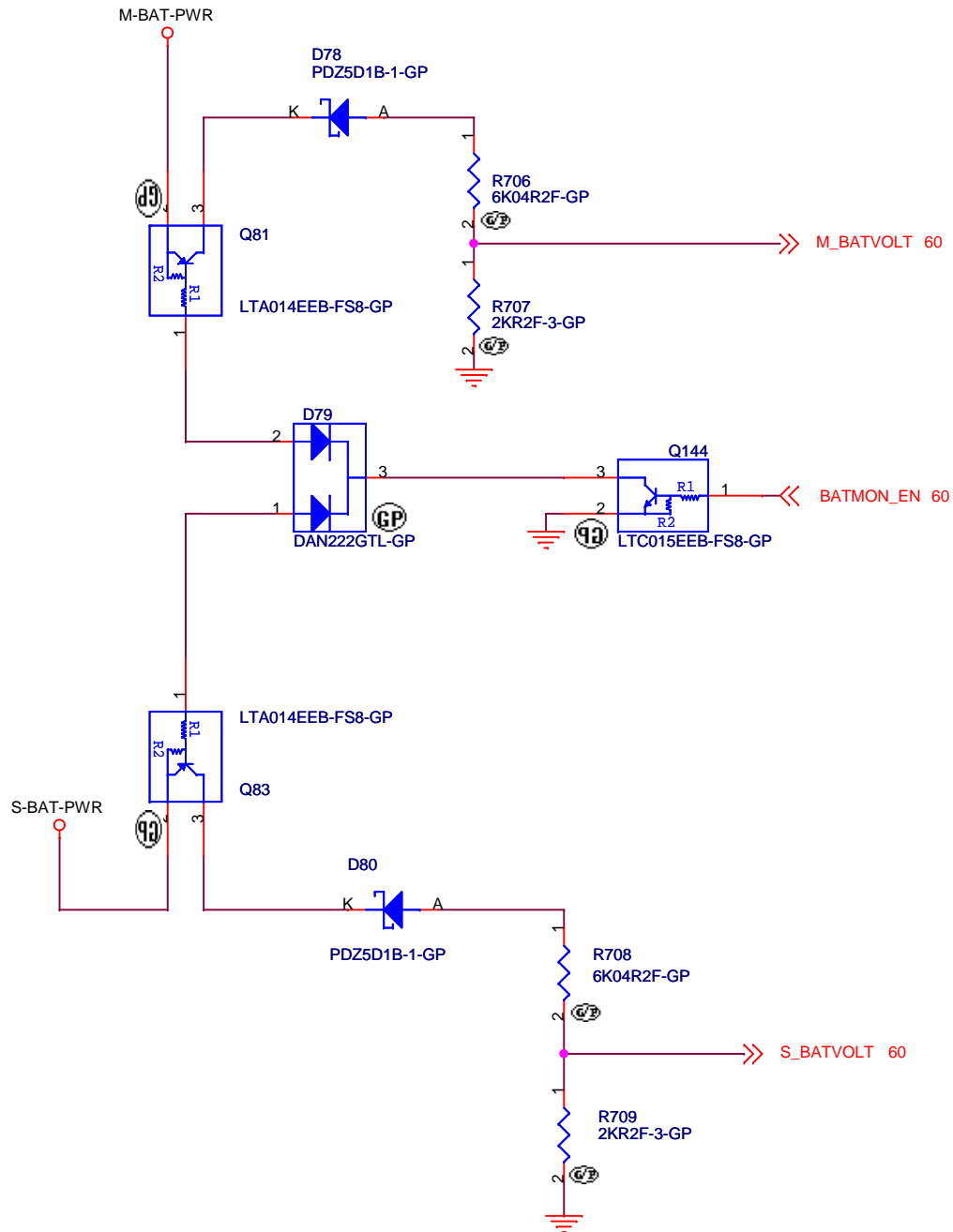


<Core Design>

|   |  |
|---|--|
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|---|--|

|                                |                                    |                  |
|--------------------------------|------------------------------------|------------------|
| <b>CHARGER SELECT</b>          |                                    |                  |
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$$V_{OUT} = 0.249 (V_{BAT} - 5)$$



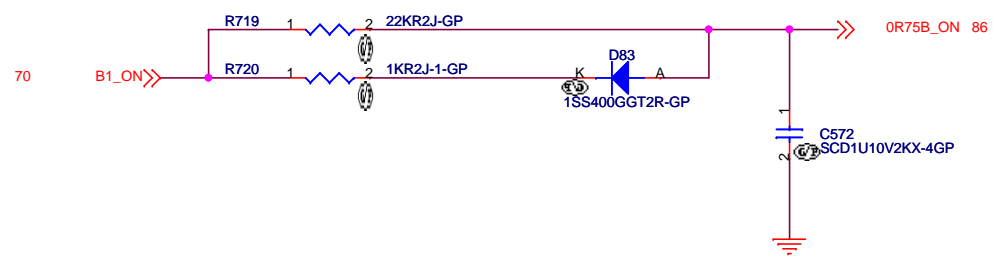
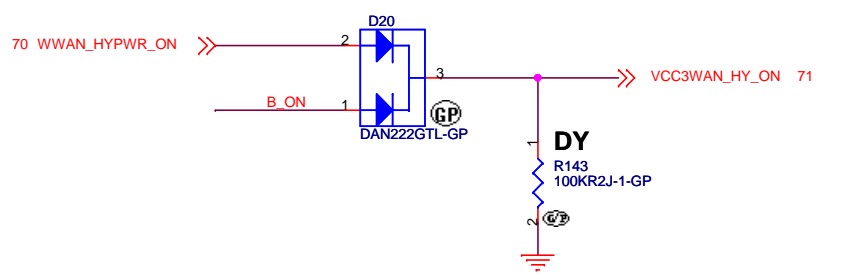
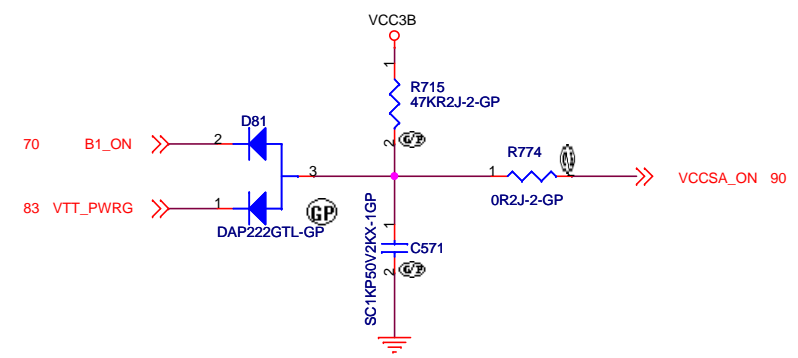
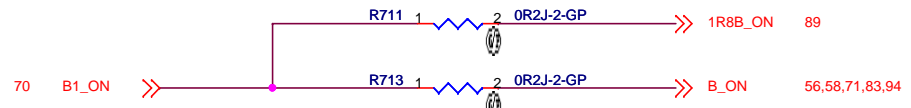
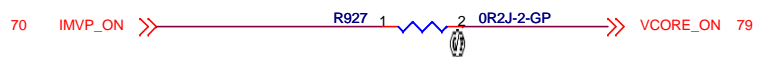
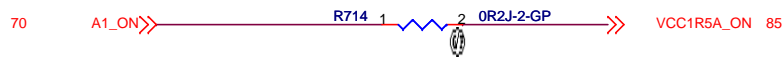
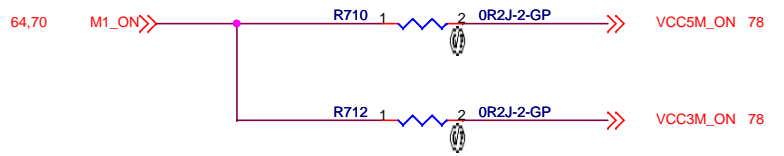
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Title  
**BATTERY MONITOR**

|            |                                    |                  |
|------------|------------------------------------|------------------|
| Size<br>A4 | Document Number<br><b>Dasher-2</b> | Rev<br><b>-1</b> |
|------------|------------------------------------|------------------|

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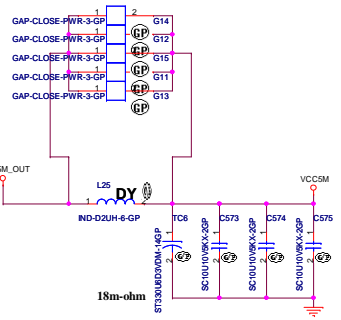


|                       |                |               |               |              |
|-----------------------|----------------|---------------|---------------|--------------|
| <b>AOAC Duplicity</b> | <b>YES YES</b> | <b>YES NO</b> | <b>NO YES</b> | <b>NO NO</b> |
| <b>D20</b>            | <b>ASM</b>     | <b>ASM</b>    | <b>ASM</b>    | <b>DY</b>    |
| <b>R143</b>           | <b>DY</b>      | <b>DY</b>     | <b>DY</b>     | <b>ASM</b>   |

↑  
Logic

<Core Design>

|                       |                        |  |           |
|-----------------------|------------------------|--|-----------|
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| <b>POWER SEQUENCE</b> |                        |  |           |
| <b>Dasher-2</b>       |                        |  |           |
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| Size                  | Custom                 | Document Number  | Rev -1    |



|                | SIT-1 & SIT-3                         | Other config                        |
|----------------|---------------------------------------|-------------------------------------|
| C576/C577/C578 | 10U 25V X5R K1206 T1.9 (78.10622.L6L) | 10U 25V K1206 X5R 13 (78.10622.L5L) |
| C581/C582/C583 |                                       |                                     |

Input cap: 10uF 10% 25V X5R 8pcs. These MLCCs must be placed symmetrically on Top and Bottom.

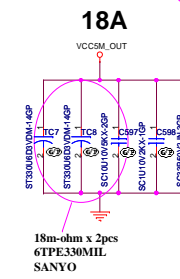
Input cap: 10uF 10% 25V X5R 4pcs. These MLCCs must be placed symmetrically on Top and Bottom.

| L27                       |              |
|---------------------------|--------------|
| MPLCH0740L2R2 (NEC TOKIN) | 68.2R21C.10T |
| SPM6540T-2R2M (TDK)       | 68.2R21E.10E |

| L26                    |              |
|------------------------|--------------|
| MPC1055L1R3(NEC/TOKIN) | 68.1R310.20A |
| FDU1050D-H-1R5M(TOKO)  | 68.1R51B.10K |

Need common pad with Toshiba, Infineon, Vishay, etc

Need common pad with Toshiba, Infineon, Vishay, etc



18m-ohm x 2pcs 6TPE330MIL SANYO

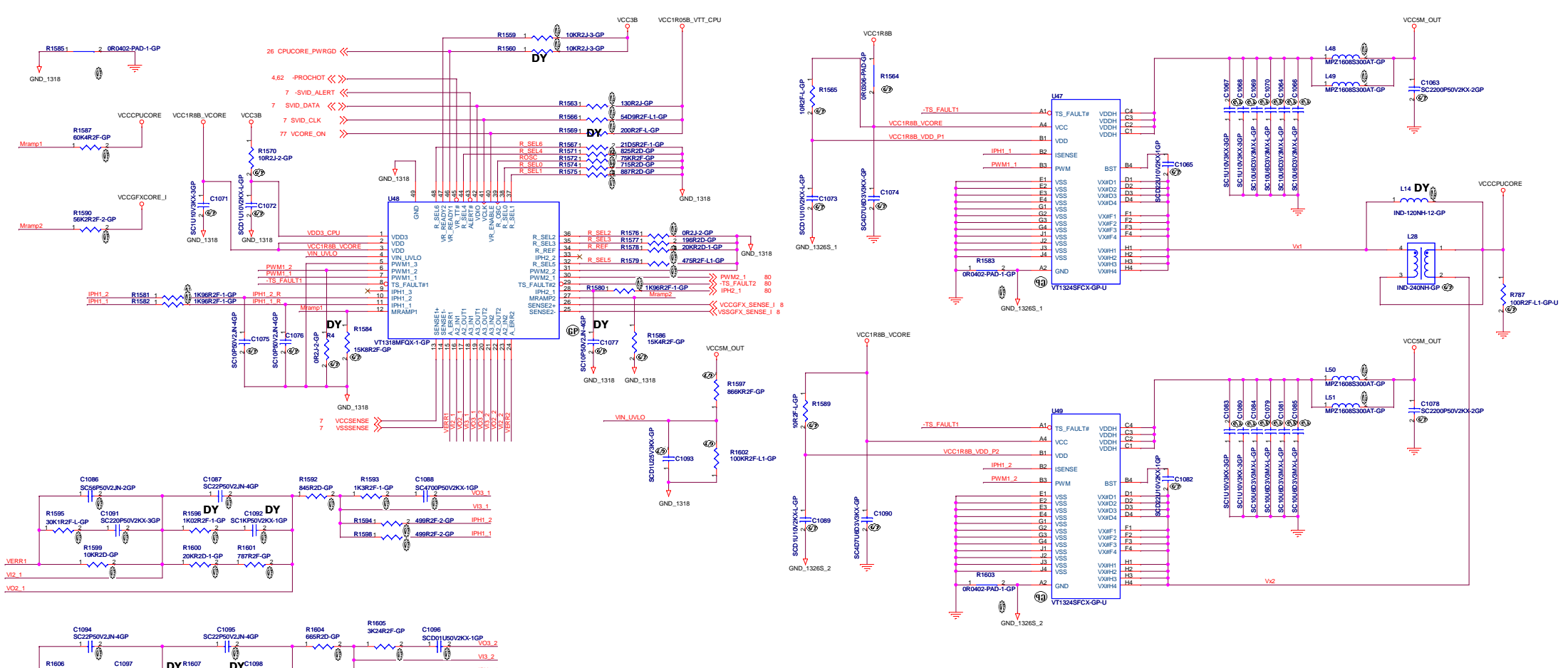
| VCC5M | VCC3M | Auto-Skip | OOA    | S0:Auto-Skip<br>S3:OOA | S0:OOA<br>S3:Auto-Skip |
|-------|-------|-----------|--------|------------------------|------------------------|
| R747  | R743  | ASM       | NO ASM | NO ASM                 | NO ASM                 |
| R748  | R744  | NO ASM    | ASM    | ASM                    | ASM                    |
| R751  | R749  | NO ASM    | NO ASM | ASM                    | ASM                    |
| R1556 | R1555 | NO ASM    | NO ASM | NO ASM                 | ASM                    |
| R1558 | R1557 | NO ASM    | NO ASM | ASM                    | NO ASM                 |
| Q146  | Q145  | NO ASM    | NO ASM | NO ASM                 | ASM                    |
| Q93   | Q92   | NO ASM    | NO ASM | ASM                    | ASM                    |

<Core Design>

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**DC-DC VCC3M/VCC5M**

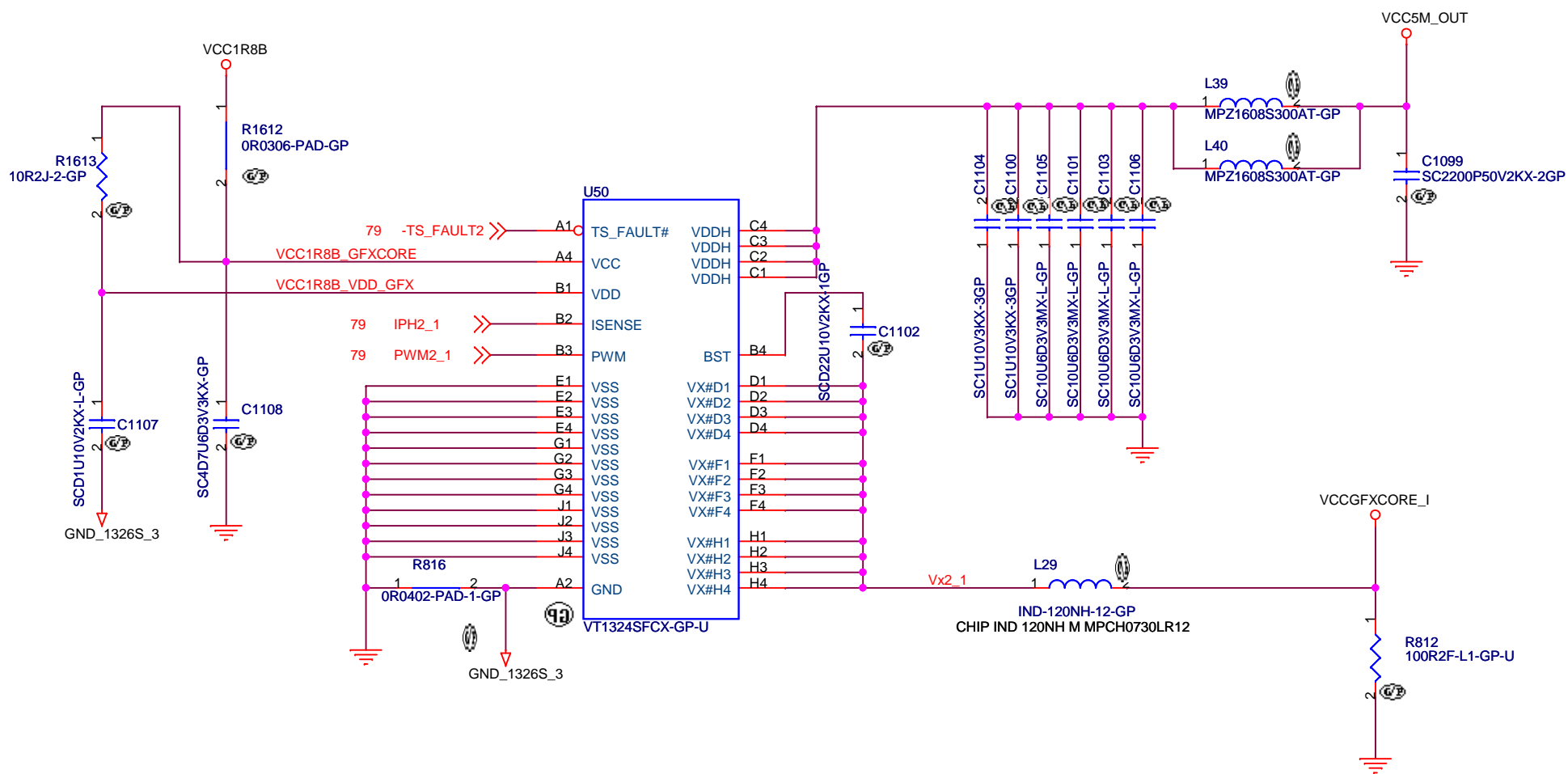
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 Size: \_\_\_\_\_ Document Number: \_\_\_\_\_ Rev: \_\_\_\_\_  
 Customer: \_\_\_\_\_ Dasher-2 \_\_\_\_\_ -1  
 Date: Friday, March 09, 2012 Sheet 78 of 101



~Variant Name~

|   |                 |
|---|-----------------|
| 緯創資通 Wistron Corporation  |                 |
| 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsinshih, Taipei Hsien 221, Taiwan, R.O.C. |                 |
| File  | DC-DC VCCPUORE  |
| Size  | Document Number |
| Custom  | Dasher-2        |
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Title **VCCGFXCORE**

|            |                                    |                  |
|------------|------------------------------------|------------------|
| Size<br>A4 | Document Number<br><b>Dasher-2</b> | Rev<br><b>-1</b> |
|------------|------------------------------------|------------------|

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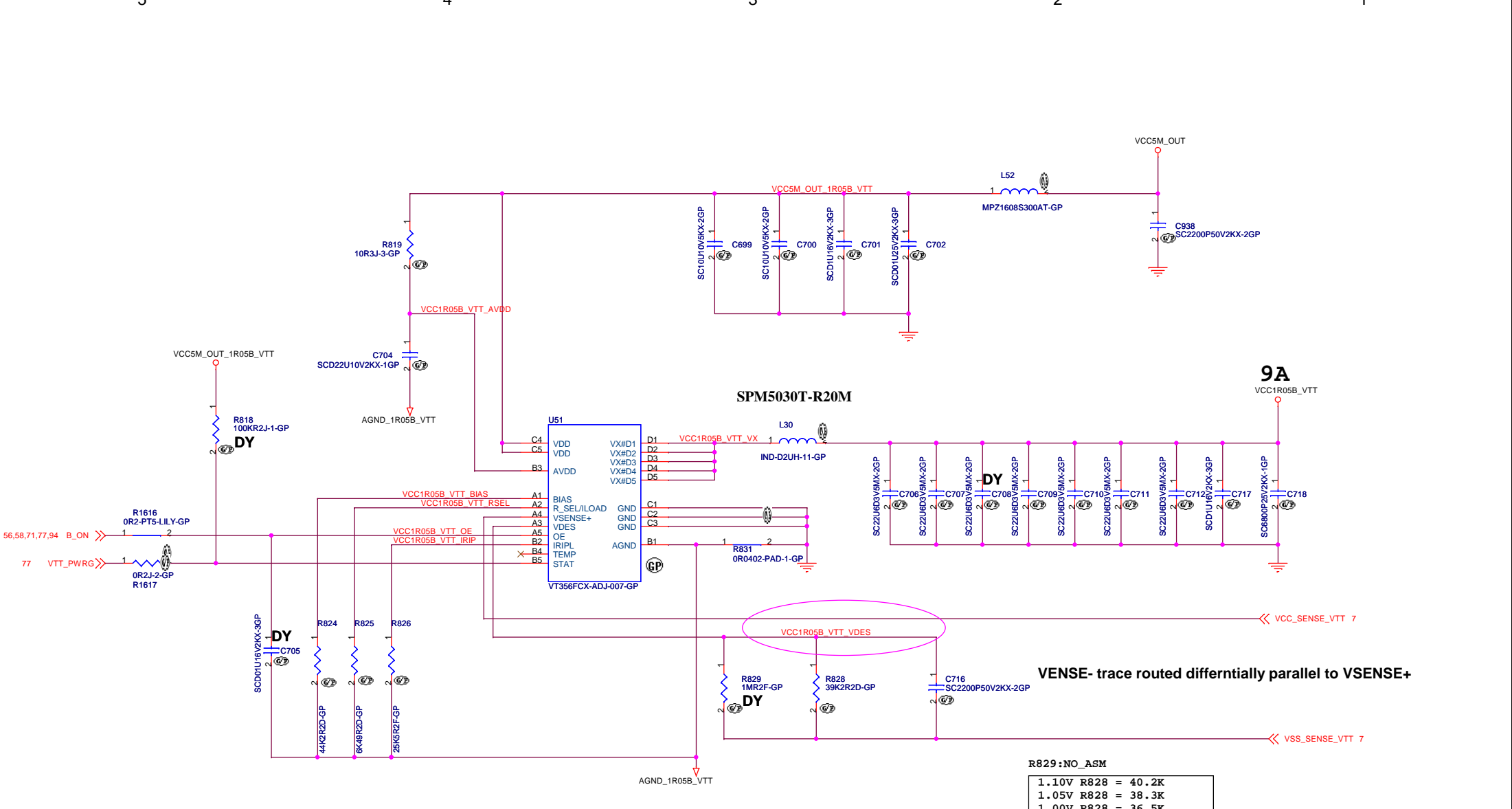




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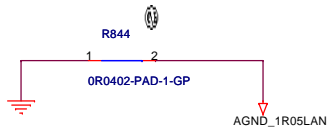
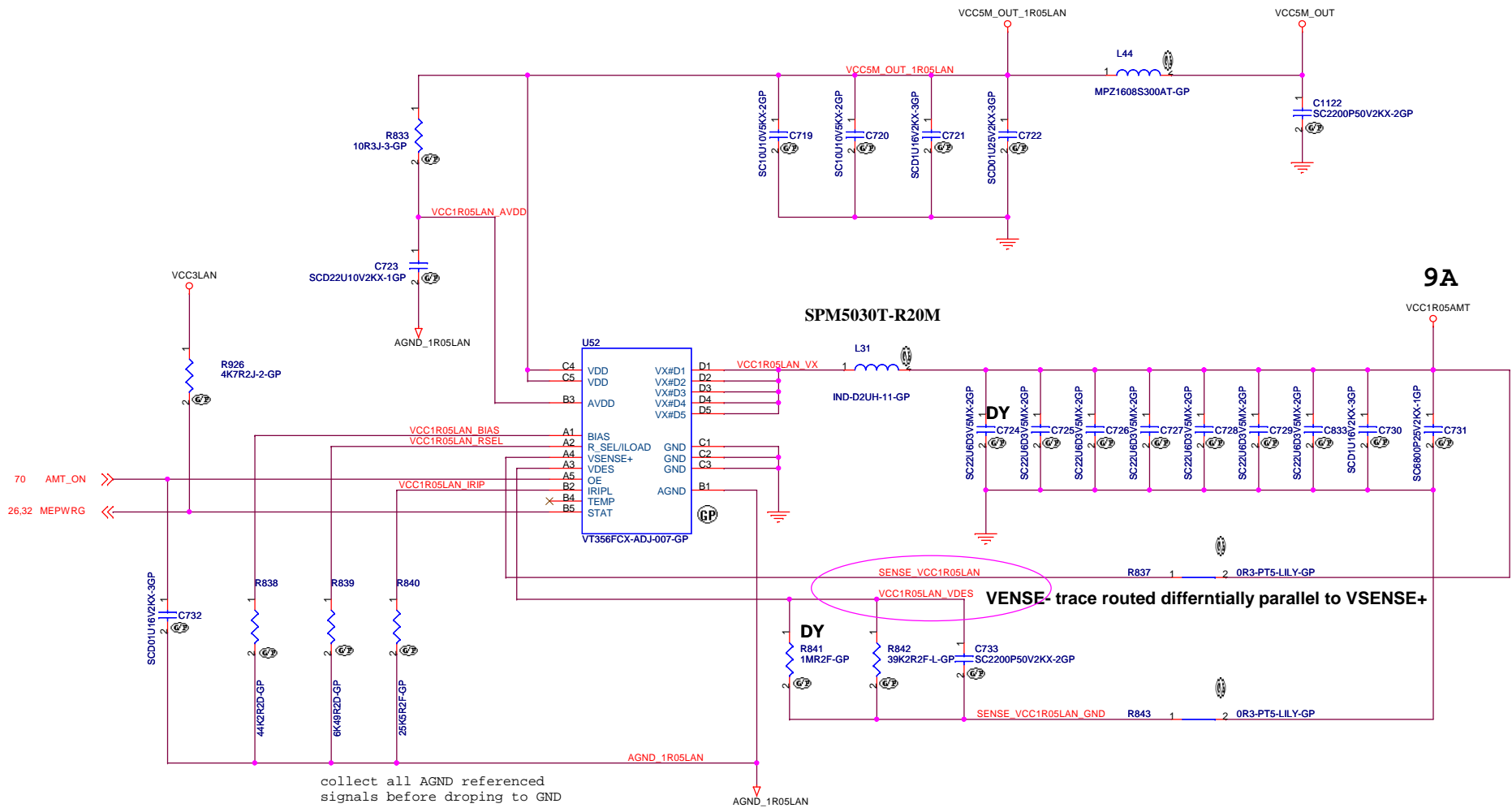
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| A3           | <b>Dasher-2</b>            |   | <b>-1</b> |
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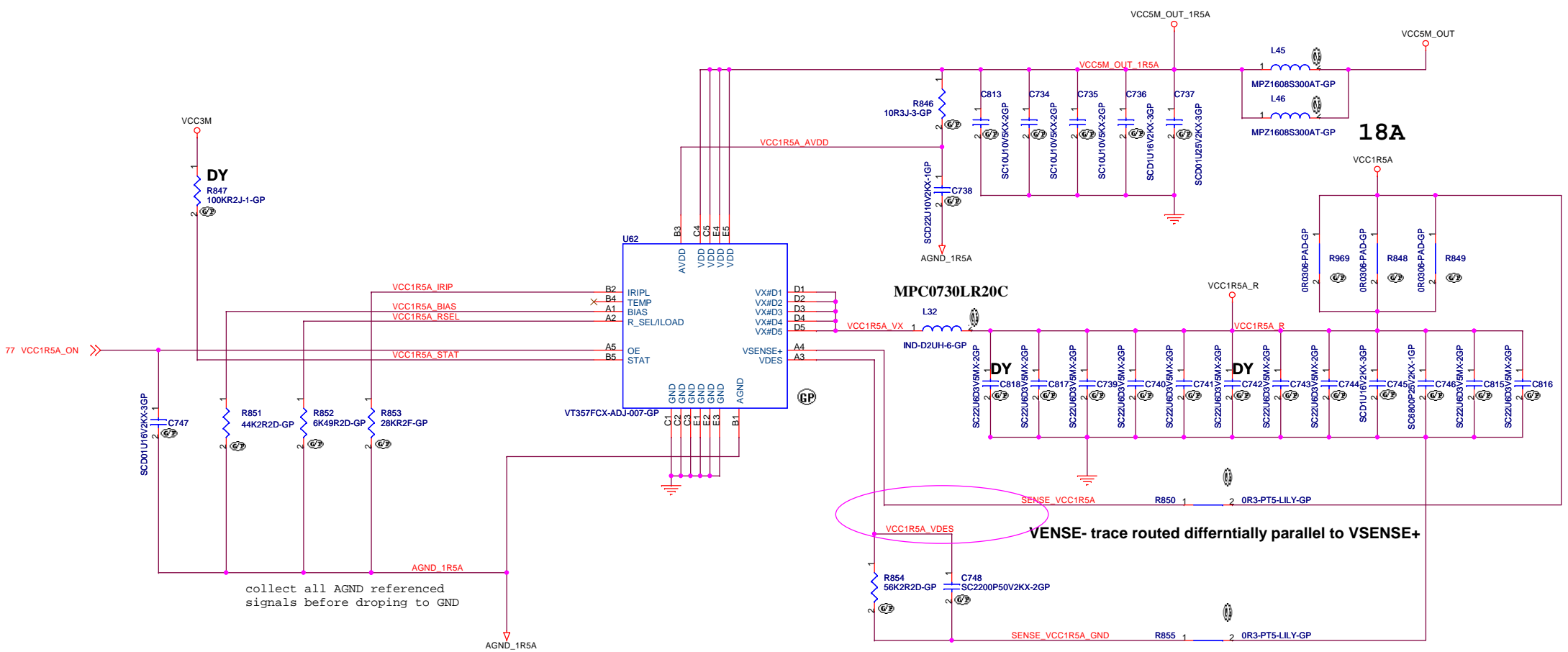


**R829:NO\_ASM**

|                         |              |
|-------------------------|--------------|
| 1.10V                   | R828 = 40.2K |
| 1.05V                   | R828 = 38.3K |
| 1.00V                   | R828 = 36.5K |
| VOUT = 1.212*R828/44.2K |              |

VENSE- trace routed differentially parallel to VSENSE+



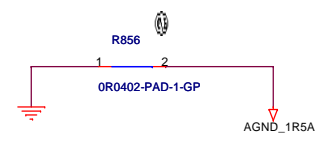


77 VCC1R5A\_ON >>

collect all AGND referenced signals before dropping to GND

VENSE- trace routed differentially parallel to VSENSE+

Don't connect AGND and GND under the chip



<Core Design>

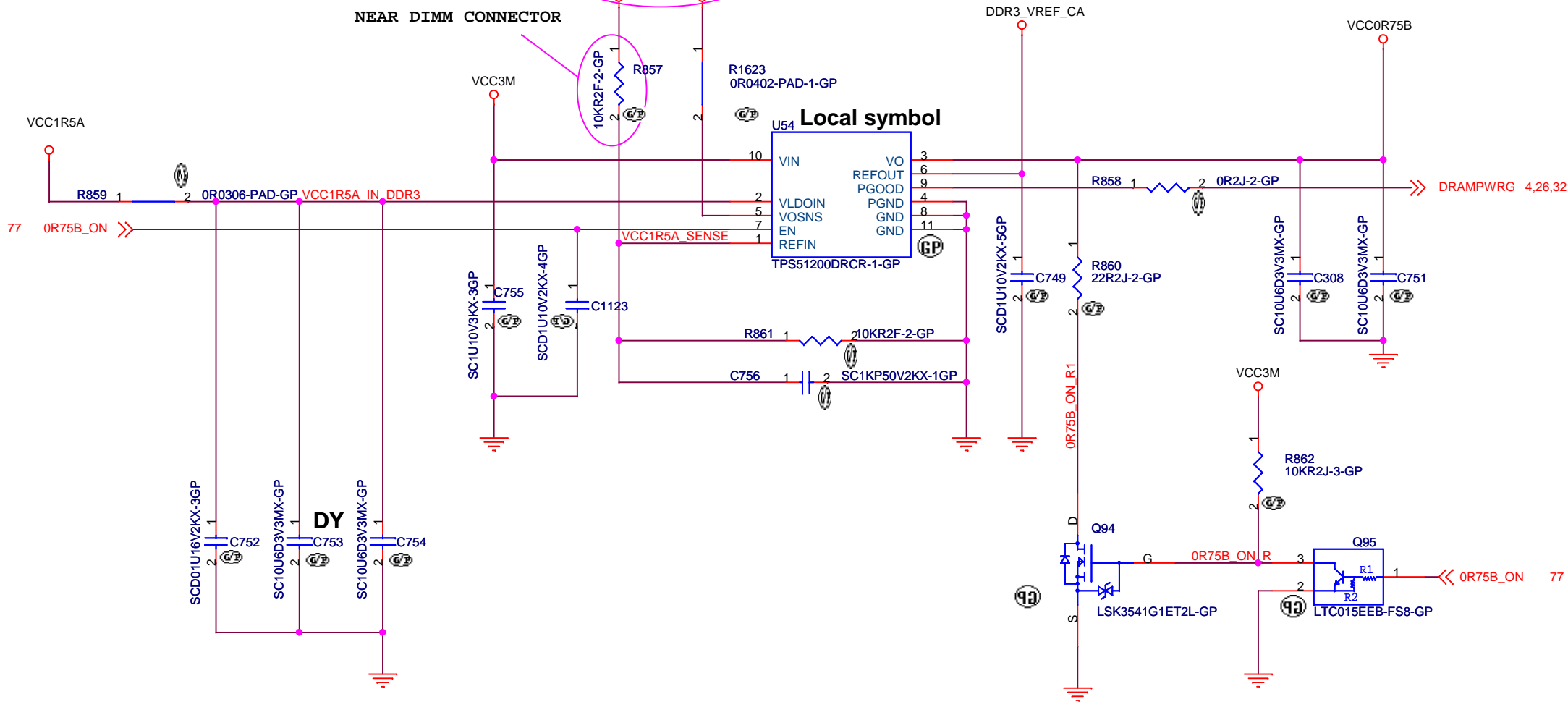
**緯創資通 Wistron Corporation**  
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Title: **DC-DC VCC1R5A**

|                              |                 |        |
|------------------------------|-----------------|--------|
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CONNECT TO DIMM CONNECTOR  
 VCC1R5A VCC0R75B

1A



<Core Design>

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Title **DC-DC VCC0R75B**

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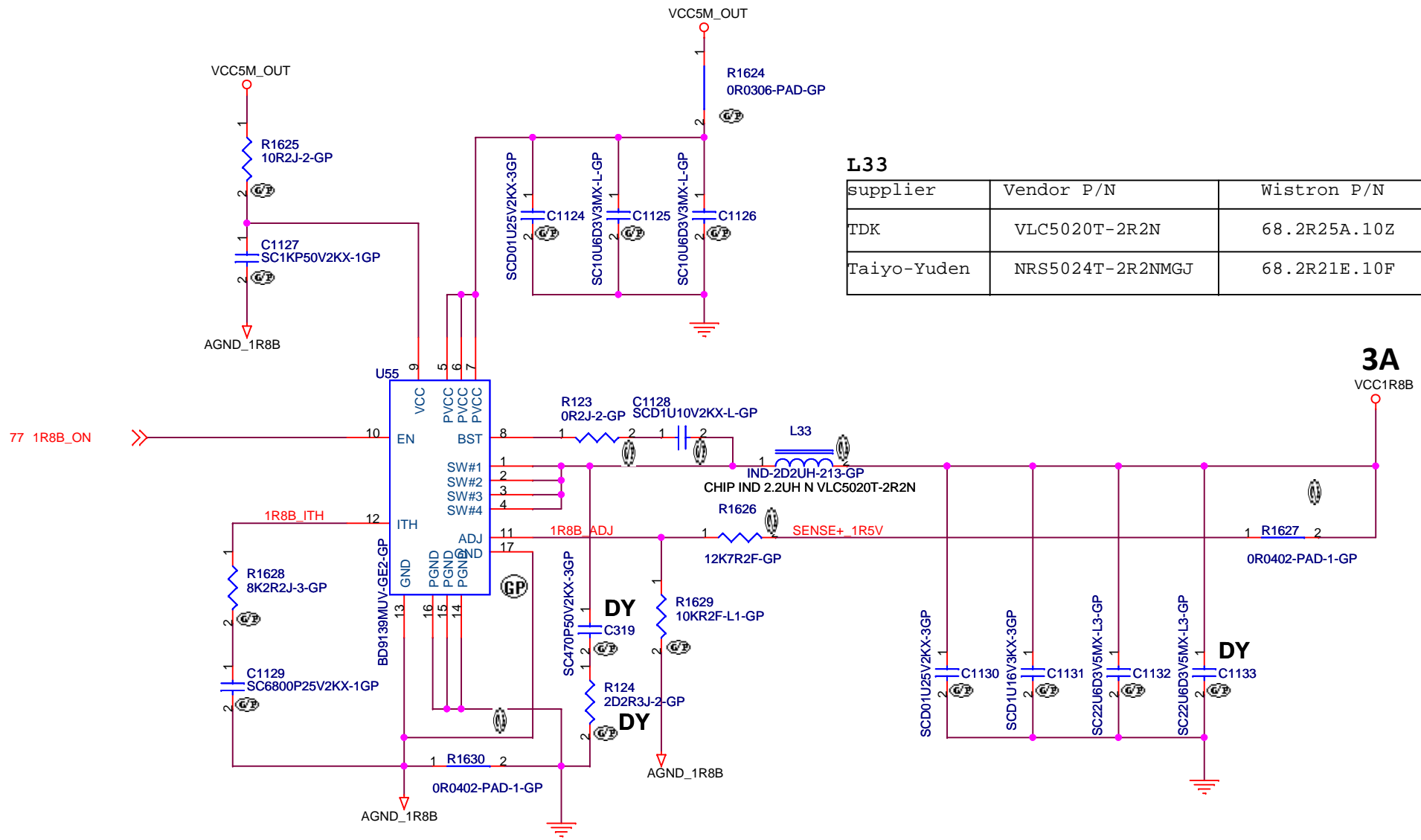
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<Core Design>

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| <b>緯創資通</b>  |                            |  | <b>Wistron Corporation</b>  |           |        |
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| Title        |                            |  |   |           |        |
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| Size         | Document Number            |  |   | Rev       |        |
| A4           | <b>Dasher-2</b>            |  |   | <b>-1</b> |        |
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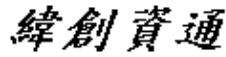


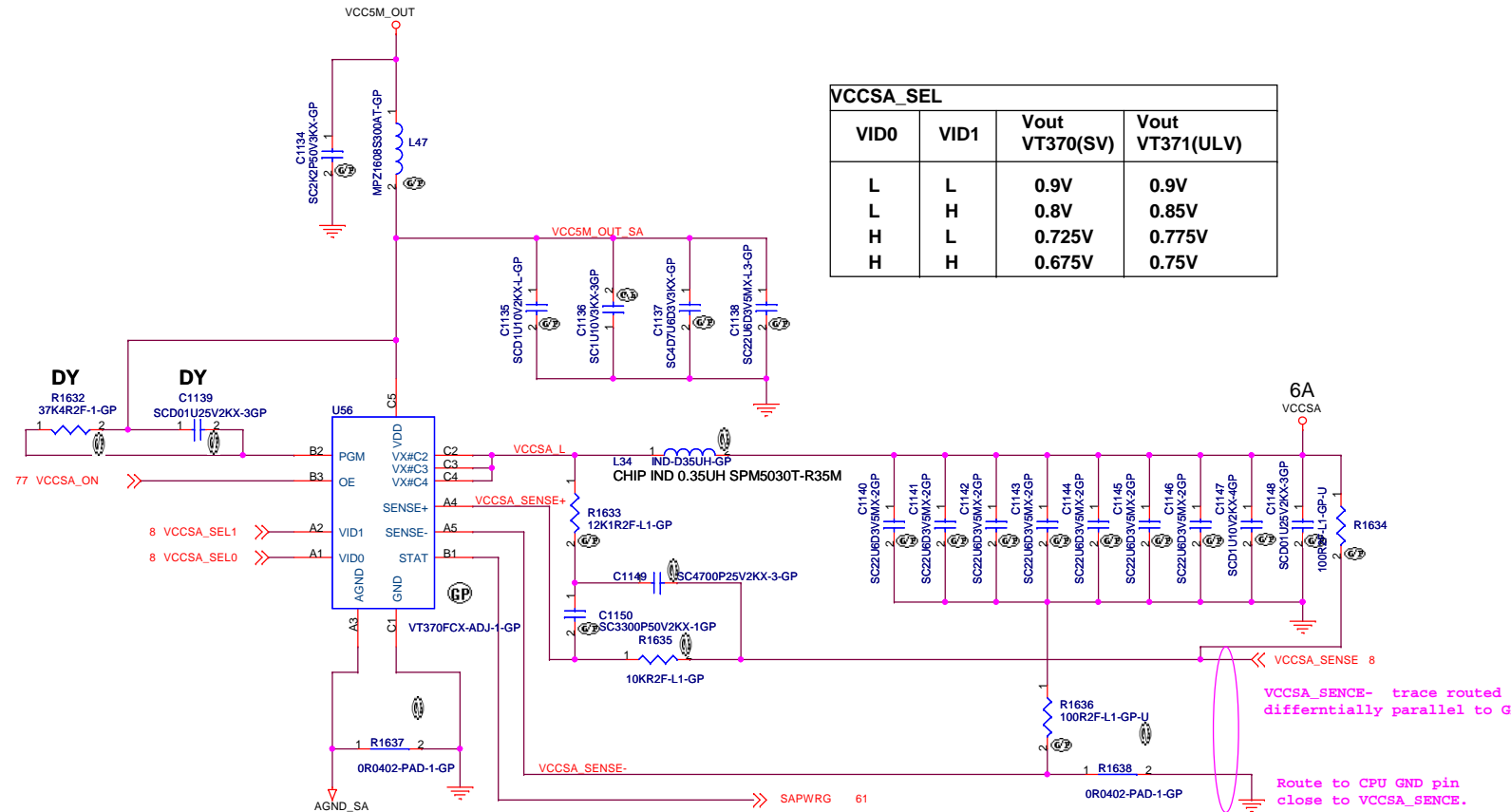


**L33**

| supplier    | Vendor P/N       | Wistron P/N  |
|-------------|------------------|--------------|
| TDK         | VLC5020T-2R2N    | 68.2R25A.10Z |
| Taiyo-Yuden | NRS5024T-2R2NMGJ | 68.2R21E.10F |

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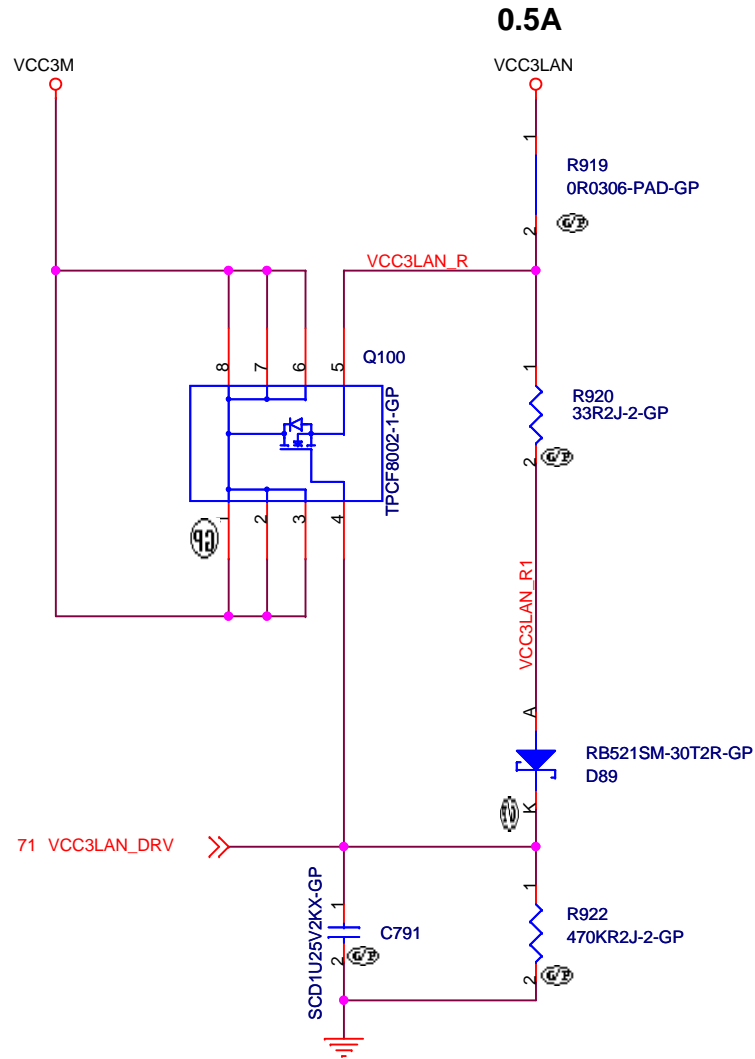
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|  <b>Wistron Corporation</b><br>21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,<br>Taipei Hsien 221, Taiwan, R.O.C. |                                    |
| <b>DC-DC VCC1R8B</b>  |                                    |
| Title<br>DC-DC VCC1R8B  | Document Number<br><b>Dasher-2</b> |
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| VCCSA_SEL |      |                |                 |
|-----------|------|----------------|-----------------|
| VID0      | VID1 | Vout VT370(SV) | Vout VT371(ULV) |
| L         | L    | 0.9V           | 0.9V            |
| L         | H    | 0.8V           | 0.85V           |
| H         | L    | 0.725V         | 0.775V          |
| H         | H    | 0.675V         | 0.75V           |

VCCSA\_SENSE- trace routed differentially parallel to GND

Route to CPU GND pin close to VCCSA\_SENSE.



<Core Design>

緯創資通

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Title

**LOAD SW LAN**

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|----------------------------------|-----------------|--|---|----|--------|
| <b>緯創資通</b>                      |                 |  | <b>Wistron Corporation</b>  |    |        |
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| Title                            |                 |  |   |    |        |
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| Size                             | Document Number |  |   |    | Rev    |
| A4                               | <b>Dasher-2</b> |  |   |    | -1     |
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D

C

B

A

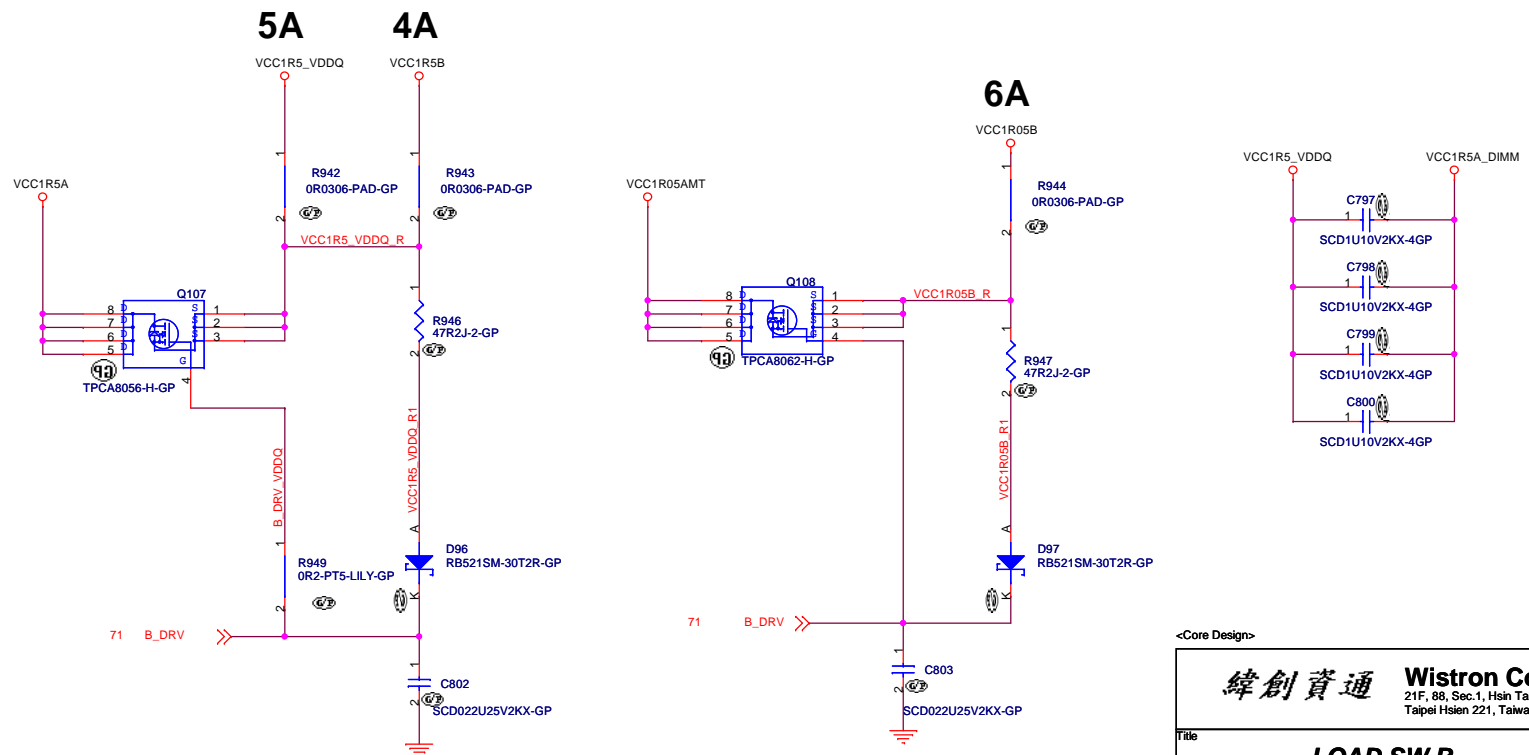
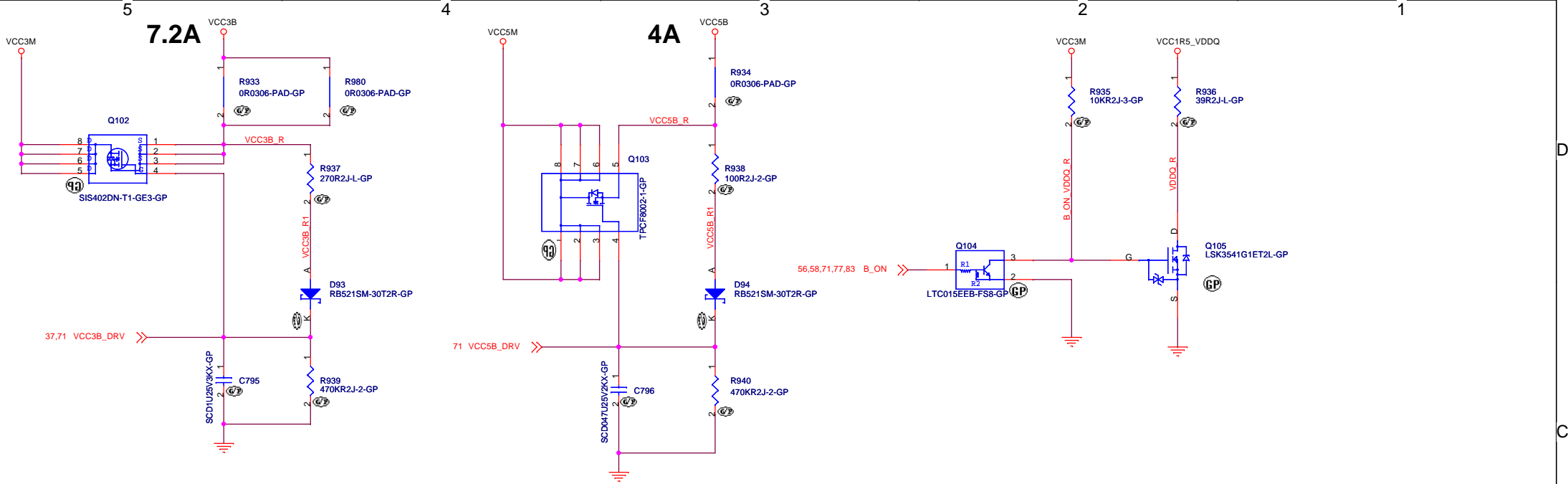
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| Size<br>A4 | Document Number<br><b>Dasher-2</b> | Rev<br>-1 |
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|                  |                        | 21F, 8B, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C. |           |
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| Size             | Document Number        | Rev  |           |
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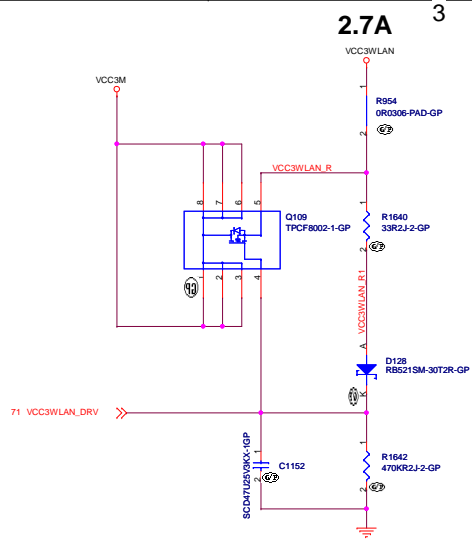
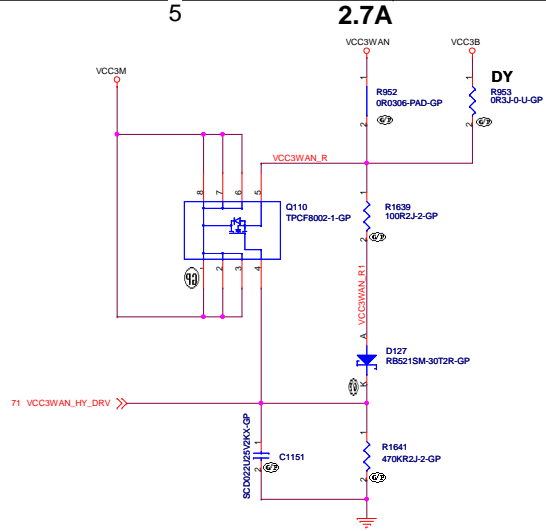
Document Number

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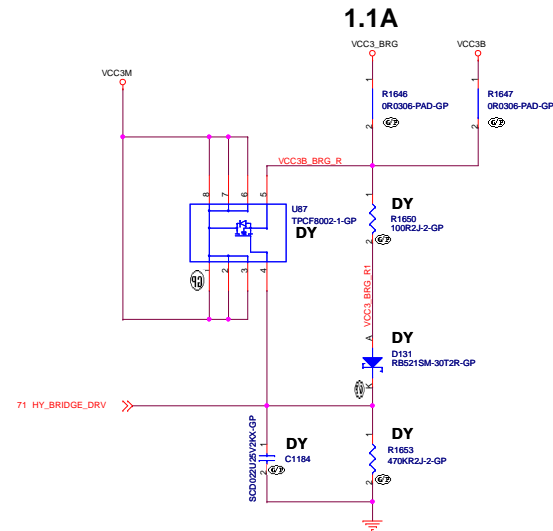
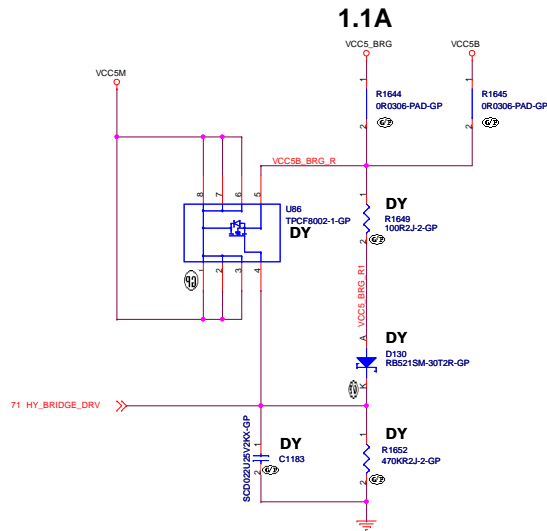
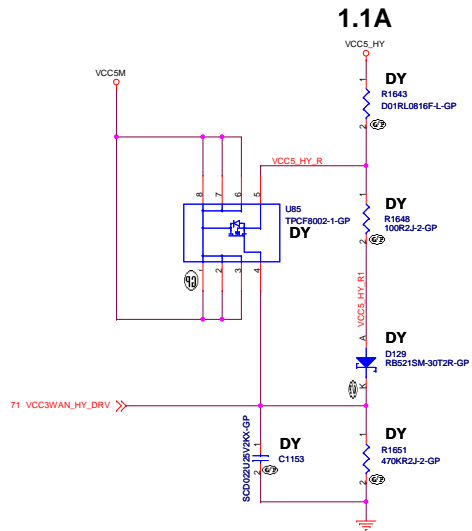
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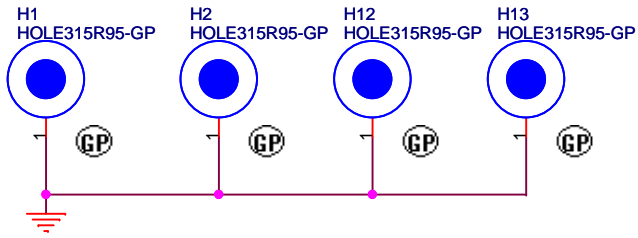
| AOAC      | YES | YES | No  | No  |
|-----------|-----|-----|-----|-----|
| Duplicity | YES | No  | YES | No  |
| Q110      | ASM | ASM | ASM | DY  |
| D127      | ASM | ASM | ASM | DY  |
| R1639     | ASM | ASM | ASM | DY  |
| R1641     | ASM | ASM | ASM | DY  |
| C1151     | ASM | ASM | ASM | DY  |
| R953      | DY  | DY  | DY  | ASM |

Logic

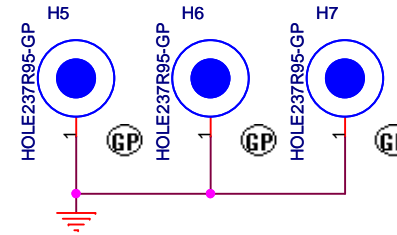




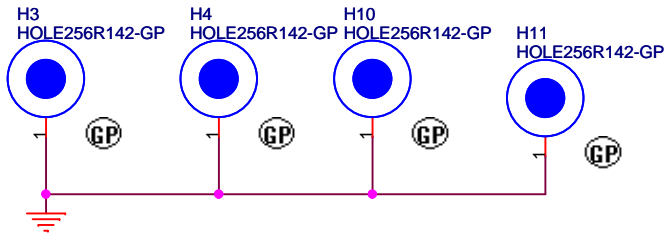
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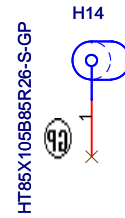
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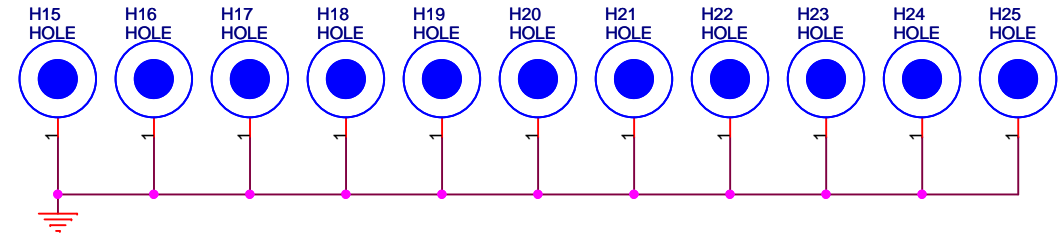
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ZZ.SCREW.191

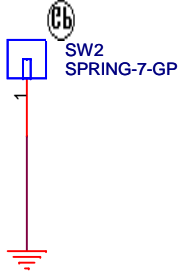


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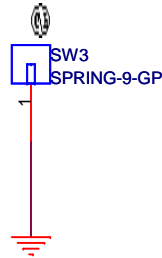
34.49U26.001

GND pad for docking connector



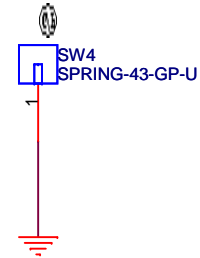
34.49U23.001

GND pad for docking connector



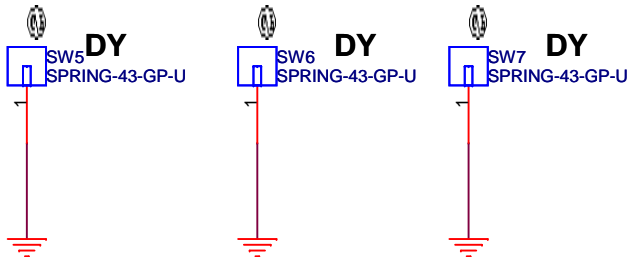
34.15J03.001

spring for EMI



34.15J03.001

spring for RF (SW5~SW7)



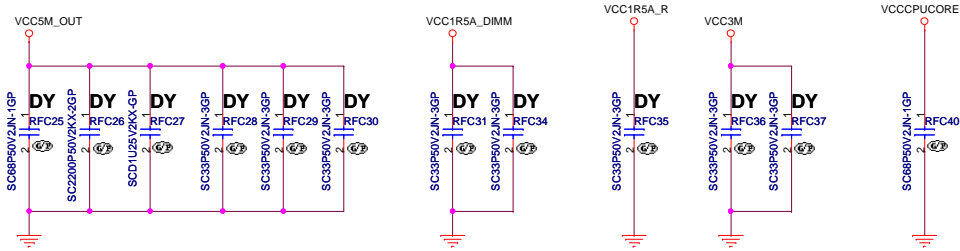
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| <b>緯創資通</b>                      |                 | <b>Wistron Corporation</b>  |           |
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| <b>Title</b>                     |                 |   |           |
| <b>HOLES/GND/PADS</b>            |                 |   |           |
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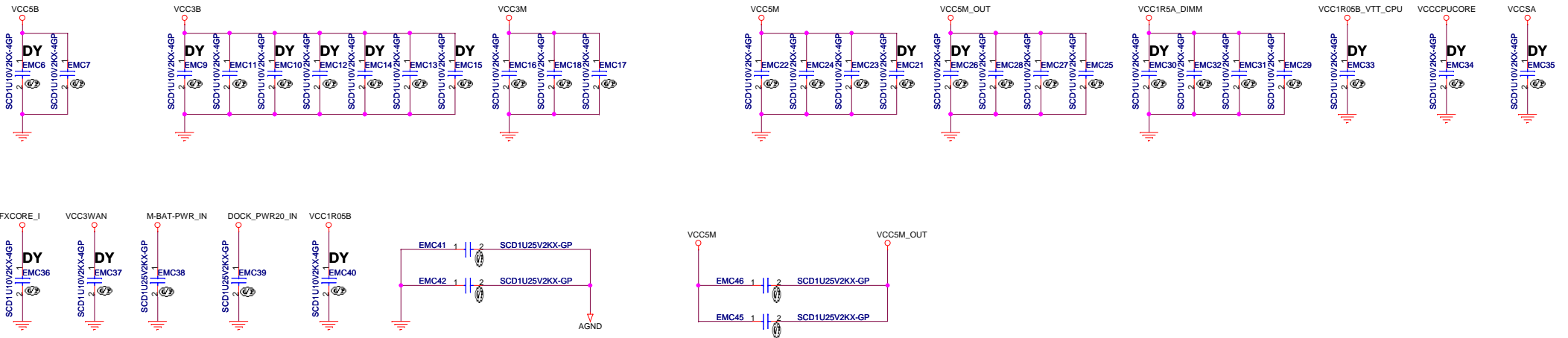


# RF decoupling caps

named as RFCxxx



# Long power trace EMI decoupling caps



<Core Design>

|                    |     | SV           |              | ULV |  |
|--------------------|-----|--------------|--------------|-----|--|
| Master IC          | U48 | VT1318M      | VT1318M      |     |  |
| # of slave for CPU |     | 2            | 2            |     |  |
| Slave for CPU      | U47 | VT1324S      | VT1324S      |     |  |
| Inductor for CPU   | U49 | VT1324S      | no stuff     |     |  |
|                    | L28 | BFW10040     | no stuff     |     |  |
|                    | L14 | no stuff     | MPCH0730LR12 |     |  |
| # of slave for GPU |     | 1            | 1            |     |  |
| Slave for GPU      | U50 | VT1324S      | VT1324S      |     |  |
| Inductor for GPU   | L29 | MPCH0730LR12 | MPCH0730LR12 |     |  |

|          |        | SV    |      | ULV  |       |      |
|----------|--------|-------|------|------|-------|------|
| R_SEL[0] | pin 38 | R1574 | 715  | 0.5% | 280   | 1.0% |
| R_SEL[1] | pin 37 | R1575 | 887  | 0.5% | 825   | 0.5% |
| R_SEL[2] | pin 36 | R1576 | 0    | 5.0% | 0     | 5.0% |
| R_SEL[3] | pin 35 | R1577 | 196  | 0.5% | 196   | 0.5% |
| R_SEL[4] | pin 44 | R1571 | 825  | 0.5% | 825   | 0.5% |
| R_SEL[5] | pin 32 | R1579 | 475  | 1.0% | 402   | 0.5% |
| R_SEL[6] | pin 48 | R1567 | 21.5 | 1.0% | 21.5  | 1.0% |
| R_REF    | pin 34 | R1578 | 20K  | 0.5% | 20K   | 0.5% |
| ROSC     | pin 39 | R1572 | 75K  | 1.0% | 61.9K | 1.0% |

|  |  | SV    |              | ULV      |  |
|--|--|-------|--------------|----------|--|
|  |  | C1090 | 4.7uF        | no stuff |  |
|  |  | R1589 | 10 1.0%      | no stuff |  |
|  |  | C1089 | 0.1uF        | no stuff |  |
|  |  | C1082 | 0.22uF       | no stuff |  |
|  |  | C1083 | 1uF          | no stuff |  |
|  |  | C1080 | 1uF          | no stuff |  |
|  |  | C1084 | 10uF         | no stuff |  |
|  |  | C1079 | 10uF         | no stuff |  |
|  |  | C1081 | 10uF         | no stuff |  |
|  |  | C1085 | 10uF         | no stuff |  |
|  |  | L50   | MPZ1608S300A | no stuff |  |
|  |  | L51   | MPZ1608S300A | no stuff |  |
|  |  | C1078 | 2200pF       | no stuff |  |

### Vcore Coutput

|              |                 | SV    |          |      | ULV      |      |  |
|--------------|-----------------|-------|----------|------|----------|------|--|
| LL_R1_CPU    | pin 15 - pin 16 | R1599 | 10K      | 0.5% | 10K      | 0.5% |  |
| LL_R2_CPU    | pin 16 - pin 17 | R1600 | 20K      | 0.5% | 7.5K     | 0.5% |  |
|              | pin 16 - pin 17 | R1601 | 787      | 1.0% | 453      | 1.0% |  |
| LL_C1_CPU    | pin 15 - pin 16 | C1086 | 56pF     |      | 33pF     |      |  |
| LL_C2_CPU    | pin 16 - pin 17 | C1087 | 22pF     |      | 22pF     |      |  |
| LL_CLEAD_CPU | pin 15 - pin 16 | R1595 | 30.1K    | 1.0% | 15K      | 1.0% |  |
| LL_CLEAD_CPU | pin 15 - pin 16 | C1091 | 220pF    |      | 680pF    |      |  |
| LL_RLAG_CPU  | pin 16 - pin 17 | R1596 | no stuff |      | no stuff |      |  |
| LL_CLAG_CPU  | pin 16 - pin 17 | C1092 | no stuff |      | 487      |      |  |
| RDES_CPU     | pin 17 - pin 18 | R1592 | 845      | 0.5% |          | 0.5% |  |
| RINT_CPU     | pin 18 - pin 19 | R1593 | 1.3K     | 1.0% | 2.74K    | 1.0% |  |
| CINT_CPU     | pin 18 - pin 19 | C1088 | 4700PF   |      | 3300pF   |      |  |
| RPH11        | IPHL_1 - pin 18 | R1598 | 499      | 1.0% | 750      | 1.0% |  |
| RPH12        | IPHL_2 - pin 18 | R1594 | 499      | 1.0% | no stuff | 1.0% |  |
| IPHF11_R     | pin 11          | R1582 | 1.96K    | 1.0% | 1.96K    | 1.0% |  |
| IPHF11_C     | pin 11          | C1076 | 10pF     |      | no stuff |      |  |
| IPHF12_R     | pin 10          | R1581 | 1.96K    | 1.0% | no stuff | 1.0% |  |
| IPHF12_C     | pin 10          | C1075 | 10pF     |      | no stuff |      |  |
| R_MRAMP1     | pin 12          | R1584 | 15.8K    | 1.0% | 13K      | 1.0% |  |
| R_MRAMP1_PU  | pin 12          | R1587 | 60.4K    | 1.0% | 43.2K    | 1.0% |  |
| R_PWM2       | Pin 6           | R4    | no stuff |      | 0        | 5.0% |  |
| LL_R1_GPU    | pin 24 - pin 23 | R1609 | 10K      | 0.5% | 10K      | 0.5% |  |
| LL_R2_GPU    | pin 23 - pin 22 | R1610 | 7.5K     | 0.5% | 7.87K    | 0.5% |  |
|              | pin 23 - pin 22 | R1611 | 237      | 1.0% | 0        | 5.0% |  |
| LL_C1_GPU    | pin 24 - pin 23 | C1094 | 22pF     |      | 22pF     |      |  |
| LL_C2_GPU    | pin 23 - pin 22 | C1095 | 22pF     |      | 22pF     |      |  |
| LL_CLEAD_GPU | pin 24 - pin 23 | R1606 | 30K      | 1.0% | 30K      | 1.0% |  |
| LL_CLEAD_GPU | pin 24 - pin 23 | C1097 | 1200pF   |      | 1000pF   |      |  |
| LL_RLAG_GPU  | pin 23 - pin 22 | R1607 | no stuff |      | no stuff |      |  |
| LL_CLAG_GPU  | pin 23 - pin 22 | C1098 | no stuff |      | no stuff |      |  |
| RDES_GPU     | pin 22 - pin 21 | R1604 | 665      | 0.5% | 665      | 0.5% |  |
| RINT_GPU     | pin 21 - pin 20 | R1605 | 3.24K    | 1.0% | 3.24K    | 1.0% |  |
| CINT_GPU     | pin 21 - pin 20 | C1096 | 10nF     |      | 10nF     |      |  |
| RPH21        | IPH2_1 - pin 21 | R1608 | 1K       | 1.0% | 1K       | 1.0% |  |
| IPHF21_R     | pin 28          | R1580 | 1.96K    | 1.0% | 1.96K    | 1.0% |  |
| IPHF21_C     | pin 28          | C1077 | no stuff |      | no stuff |      |  |
| R_MRAMP2     | pin 27          | R1586 | 15.4K    | 1.0% | 15.4K    | 1.0% |  |
| R_MRAMP2_PU  | pin 27          | R1590 | 56.2K    | 1.0% | 56.2K    | 1.0% |  |

|       |       | SV   |       | ULV  |  |
|-------|-------|------|-------|------|--|
| C687  | 22uF  | 0805 | 22uF  | 0805 |  |
| C669  | 22uF  | 0603 | 22uF  | 0603 |  |
| C671  | 22uF  | 0603 | 22uF  | 0603 |  |
| C673  | 4.7uF | 0603 | 22uF  | 0603 |  |
| C675  | 22uF  | 0603 | 22uF  | 0603 |  |
| C676  | 22uF  | 0603 | 22uF  | 0603 |  |
| C678  | 22uF  | 0603 | 22uF  | 0603 |  |
| C695  | 4.7uF | 0603 | 22uF  | 0603 |  |
| C681  | 4.7uF | 0603 | 22uF  | 0603 |  |
| C682  | 4.7uF | 0603 | 22uF  | 0603 |  |
| C683  | 22uF  | 0603 | 22uF  | 0603 |  |
| C750  | 22uF  | 0603 | 22uF  | 0603 |  |
| C686  | 22uF  | 0603 | 22uF  | 0603 |  |
| C691  | 22uF  | 0603 | 22uF  | 0603 |  |
| C670  | 22uF  | 0603 | 22uF  | 0603 |  |
| C694  | 22uF  | 0603 | 22uF  | 0603 |  |
| C698  | 4.7uF | 0603 | 22uF  | 0603 |  |
| C1112 | 22uF  | 0603 | 22uF  | 0603 |  |
| C1113 | 22uF  | 0603 | 22uF  | 0603 |  |
| C672  | 22uF  | 0603 | 22uF  | 0603 |  |
| C1157 | 22uF  | 0603 | 22uF  | 0603 |  |
| C674  | 22uF  | 0603 | 22uF  | 0603 |  |
| C1160 | 22uF  | 0603 | 22uF  | 0603 |  |
| C689  | 22uF  | 0603 | 22uF  | 0603 |  |
| C1167 | 22uF  | 0603 | 22uF  | 0603 |  |
| C680  | 22uF  | 0603 | 22uF  | 0603 |  |
| C679  | 4.7uF | 0603 | 10uF  | 0603 |  |
| C677  | 4.7uF | 0603 | 10uF  | 0603 |  |
| C1156 | 4.7uF | 0603 | 10uF  | 0603 |  |
| C684  | 10uF  | 0603 | 10uF  | 0603 |  |
| C693  | 4.7uF | 0603 | 10uF  | 0603 |  |
| C1159 | 10uF  | 0603 | 10uF  | 0603 |  |
| C692  | 10uF  | 0603 | 10uF  | 0603 |  |
| C1158 | 4.7uF | 0603 | 10uF  | 0603 |  |
| C1161 | 4.7uF | 0603 | 10uF  | 0603 |  |
| C1162 | 4.7uF | 0603 | 10uF  | 0603 |  |
| C690  | N/A   | 0603 | N/A   | 0603 |  |
| C1109 | N/A   | 0603 | N/A   | 0603 |  |
| C1110 | N/A   | 0603 | N/A   | 0603 |  |
| C1111 | N/A   | 0603 | N/A   | 0603 |  |
| C1163 | N/A   | 0603 | N/A   | 0603 |  |
| C1164 | 22uF  | 0603 | N/A   | 0603 |  |
| C1165 | N/A   | 0603 | N/A   | 0603 |  |
| C1166 | 22uF  | 0603 | N/A   | 0603 |  |
| C1168 | N/A   | 0603 | N/A   | 0603 |  |
| C1169 | 22uF  | 0603 | N/A   | 0603 |  |
| C444  | 2.2uF | 0402 | 2.2uF | 0402 |  |
| C445  | 2.2uF | 0402 | 2.2uF | 0402 |  |
| C446  | 2.2uF | 0402 | 2.2uF | 0402 |  |
| C447  | 2.2uF | 0402 | 2.2uF | 0402 |  |
| C448  | 2.2uF | 0402 | 2.2uF | 0402 |  |
| C449  | 2.2uF | 0402 | 2.2uF | 0402 |  |
| C450  | 2.2uF | 0402 | N/A   | 0402 |  |
| C451  | 2.2uF | 0402 | 2.2uF | 0402 |  |
| C452  | 2.2uF | 0402 | 2.2uF | 0402 |  |
| C453  | 2.2uF | 0402 | 2.2uF | 0402 |  |

|       |       | SV   |       | ULV  |  |
|-------|-------|------|-------|------|--|
| C477  | 2.2uF | 0402 | 2.2uF | 0402 |  |
| C486  | 2.2uF | 0402 | 2.2uF | 0402 |  |
| C518  | 2.2uF | 0402 | 2.2uF | 0402 |  |
| C520  | 2.2uF | 0402 | 2.2uF | 0402 |  |
| C521  | 2.2uF | 0402 | 2.2uF | 0402 |  |
| C522  | 2.2uF | 0402 | N/A   | 0402 |  |
| C533  | 2.2uF | 0402 | 2.2uF | 0402 |  |
| C830  | 2.2uF | 0402 | 2.2uF | 0402 |  |
| C831  | 2.2uF | 0402 | 2.2uF | 0402 |  |
| C832  | 2.2uF | 0402 | 2.2uF | 0402 |  |
| C1172 | N/A   | 0402 | N/A   | 0402 |  |
| C1173 | 2.2uF | 0402 | N/A   | 0402 |  |
| C1174 | 2.2uF | 0402 | N/A   | 0402 |  |
| C1175 | 2.2uF | 0402 | N/A   | 0402 |  |
| C1176 | N/A   | 0402 | N/A   | 0402 |  |
| C1177 | N/A   | 0402 | N/A   | 0402 |  |
| C1178 | 2.2uF | 0402 | 2.2uF | 0402 |  |
| C1179 | 2.2uF | 0402 | 2.2uF | 0402 |  |
| C1180 | 2.2uF | 0402 | 2.2uF | 0402 |  |
| C1181 | 2.2uF | 0402 | 2.2uF | 0402 |  |
| C1182 | 2.2uF | 0402 | 2.2uF | 0402 |  |
| C1185 | 2.2uF | 0402 | 2.2uF | 0402 |  |
| C1186 | 2.2uF | 0402 | 2.2uF | 0402 |  |
| C1187 | 2.2uF | 0402 | 2.2uF | 0402 |  |
| C1188 | 2.2uF | 0402 | 2.2uF | 0402 |  |
| C1189 | 2.2uF | 0402 | 2.2uF | 0402 |  |
| C1190 | 2.2uF | 0402 | 2.2uF | 0402 |  |
| C1191 | 2.2uF | 0402 | 2.2uF | 0402 |  |
| C1192 | 2.2uF | 0402 | 2.2uF | 0402 |  |
| C1193 | 2.2uF | 0402 | 2.2uF | 0402 |  |
| C1194 | 2.2uF | 0402 | 2.2uF | 0402 |  |
| C1195 | 2.2uF | 0402 | 2.2uF | 0402 |  |
| C1196 | 2.2uF | 0402 | 2.2uF | 0402 |  |

<Core Design>

| Config          | Capability |     |     |     |     |     |     |    |     |     |     |     |
|-----------------|------------|-----|-----|-----|-----|-----|-----|----|-----|-----|-----|-----|
|                 | 1          | 2   | 3   | 4   | 5   | 6   | 7   | 8  | 9   | 10  | 11  | 12  |
| AOAC            | Yes        | Yes | Yes | Yes | No  | No  | No  | No | Yes | No  | Yes | No  |
| Anti-Theft      | Yes        | Yes | No  | No  | Yes | Yes | No  | No | Yes | Yes | No  | No  |
| External EEPROM | Yes        | No  | Yes | No  | Yes | No  | Yes | No | Yes | Yes | Yes | Yes |
| Duplicity       | No         | No  | No  | No  | No  | No  | No  | No | Yes | Yes | Yes | Yes |
| U66             | ASM        | ASM | DY  | DY  | DY  | DY  | DY  | DY | ASM | ASM | DY  | DY  |
| U67             | ASM        | ASM | DY  | DY  | DY  | DY  | DY  | DY | ASM | ASM | DY  | DY  |
| C864            | ASM        | ASM | DY  | DY  | DY  | DY  | DY  | DY | ASM | ASM | DY  | DY  |
| R978            | ASM        | ASM | DY  | DY  | DY  | DY  | DY  | DY | ASM | ASM | DY  | DY  |
| R929            | ASM        | ASM | DY  | DY  | DY  | DY  | DY  | DY | ASM | ASM | DY  | DY  |
| R901            | ASM        | ASM | DY  | DY  | DY  | DY  | DY  | DY | ASM | ASM | DY  | DY  |
| R930            | ASM        | ASM | DY  | DY  | DY  | DY  | DY  | DY | ASM | ASM | DY  | DY  |
| R1462           | ASM        | ASM | DY  | DY  | DY  | DY  | DY  | DY | ASM | ASM | DY  | DY  |
| Q14             | ASM        | DY  | DY  | DY  | DY  | DY  | DY  | DY | ASM | ASM | DY  | DY  |
| Q48             | ASM        | DY  | ASM | DY  | ASM | DY  | ASM | DY | ASM | ASM | ASM | ASM |
| R624            | ASM        | DY  | ASM | DY  | ASM | DY  | ASM | DY | ASM | ASM | ASM | ASM |
| R536            | DY         | DY  | DY  | DY  | ASM | ASM | DY  | DY | DY  | DY  | DY  | DY  |
| R539            | DY         | DY  | DY  | DY  | ASM | ASM | DY  | DY | DY  | DY  | DY  | DY  |
| U42             | ASM        | DY  | ASM | DY  | ASM | DY  | ASM | DY | ASM | ASM | ASM | ASM |
| Q47             | ASM        | DY  | ASM | DY  | ASM | DY  | ASM | DY | ASM | ASM | ASM | ASM |
| R617            | ASM        | DY  | ASM | DY  | ASM | DY  | ASM | DY | ASM | ASM | ASM | ASM |
| C524            | ASM        | DY  | ASM | DY  | ASM | DY  | ASM | DY | ASM | ASM | ASM | ASM |
| D111            | DY         | DY  | DY  | DY  | DY  | DY  | DY  | DY | ASM | ASM | DY  | DY  |
| R1463           | DY         | DY  | DY  | DY  | DY  | DY  | DY  | DY | ASM | ASM | ASM | ASM |
| R1464           | DY         | DY  | DY  | DY  | DY  | DY  | DY  | DY | ASM | ASM | ASM | ASM |
| U83             | DY         | DY  | DY  | DY  | DY  | DY  | DY  | DY | ASM | ASM | ASM | ASM |
| U84             | DY         | DY  | DY  | DY  | DY  | DY  | DY  | DY | ASM | ASM | ASM | ASM |
| C1020           | DY         | DY  | DY  | DY  | DY  | DY  | DY  | DY | ASM | ASM | ASM | ASM |
| R1466           | DY         | DY  | DY  | DY  | DY  | DY  | DY  | DY | ASM | ASM | ASM | ASM |
| R1468           | DY         | DY  | DY  | DY  | DY  | DY  | DY  | DY | ASM | ASM | ASM | ASM |

↑  
Logic

|                        |   |   |   |   |
|------------------------|---|---|---|---|
| Duplicity              | Y | Y | N | N |
| Battery Authentication | Y | N | Y | N |
| --> External EEPROM    | Y | Y | Y | N |

↑  
Logic

<Core Design>

|  |                                    |
|--|------------------------------------|
|  <b>Wistron Corporation</b><br>21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih,<br>Taipei Hsien 221, Taiwan, R.O.C. |                                    |
| <b>SMBus Logic Table</b>   |                                    |
| Title  |                                    |
| Size<br>A3   | Document Number<br><b>Dasher-2</b> |
| Date: Tuesday, February 21, 2012   | Rev<br>-1                          |
| Sheet 101 of 101   |                                    |