

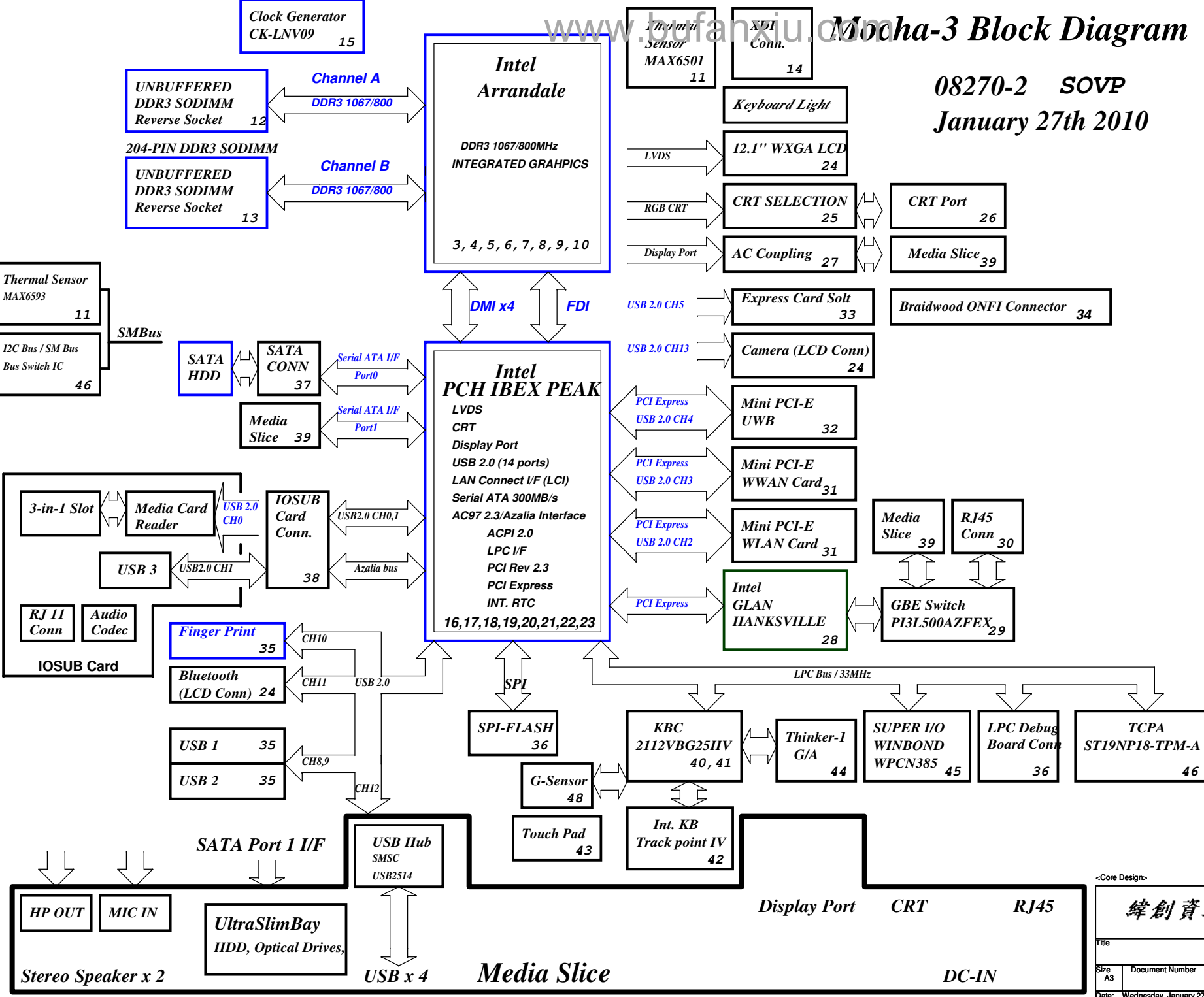
08270-2 SOVP
January 27th 2010

PCB Layer Stackup

- L1:Component
- L2:GND
- L3:Signal 1
- L4:VCC
- L5:Signal 2
- L6:Signal 3
- L7:GND
- L8:Signal 4
- L9:GND
- L10:Component

Battery Charger/Selector
BQ24741 50

| INPUTS | OUTPUTS |
|----------------------|--------------|
| DOCK_PWR20_F | M-BAT-PWR |
| System DC/DC | |
| TPS51222 | 55 |
| VINT20 | VCC5M |
| | VCC3M |
| CPU DC/DC | |
| ADP3212 | 56 |
| VINT20 | VCCPUCORE |
| GMCH GFX CORE | |
| ADP3211 | 58 |
| VINT20 | VCCGFXCORE |
| VCCIR5A | |
| VT356FCX | 59 |
| VCC5V_OUT | VCCIR5A |
| VCC0R75B | |
| MAX1510 | 60 |
| VCCIR5A | VCC0R75B |
| VCCIR8B | |
| BD3551HFN | 61 |
| VCC3M | VCCIR8B |
| VCCIR05LAN | |
| VT356FCX | 62 |
| VCC5V_OUT | VCCIR05LAN |
| VCCIR05B_VTT | |
| VT357FCX | 63 |
| VCC5V_OUT | VCCIR05B_VTT |

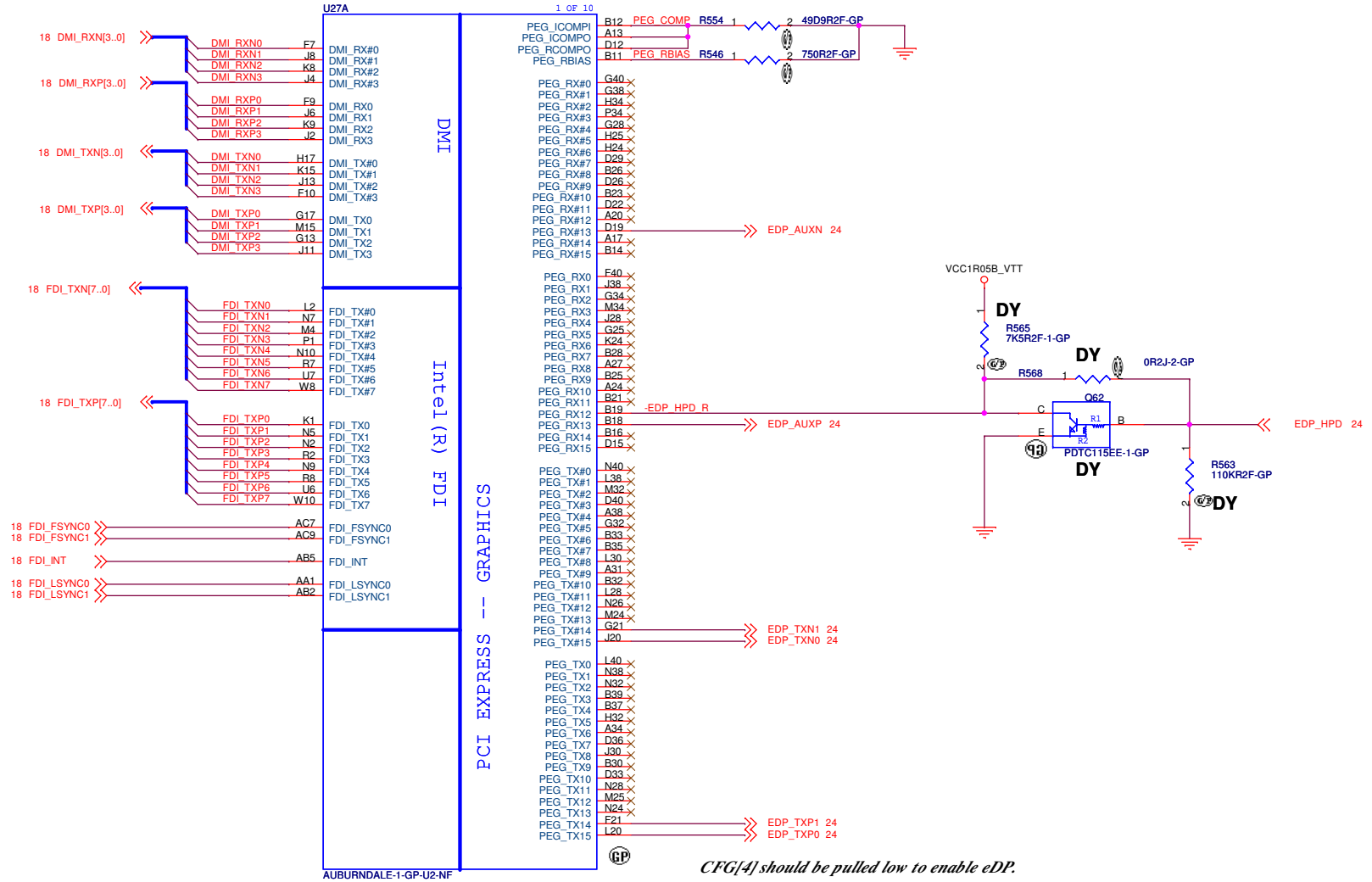


<Core Design>

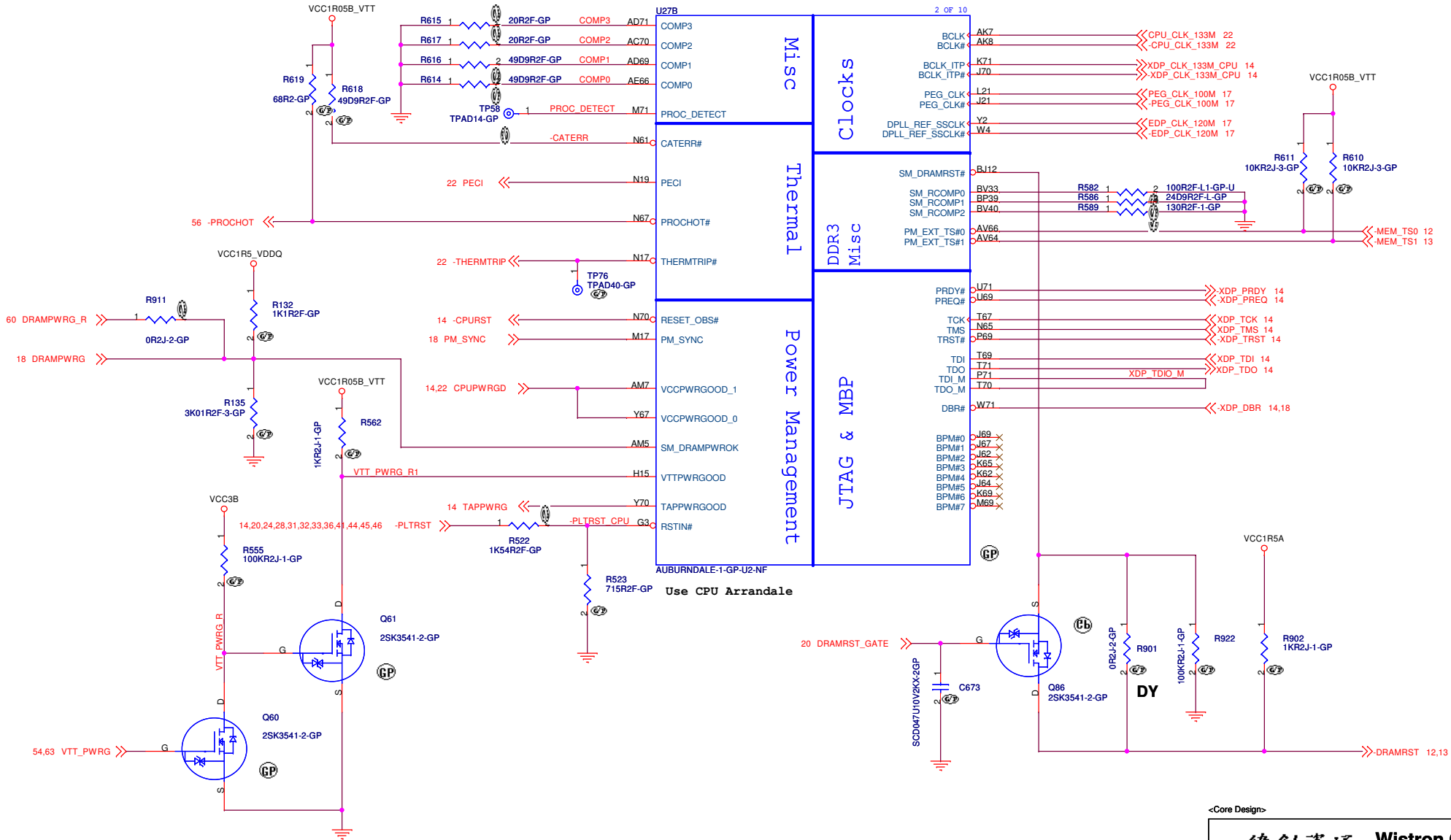
緯創資通 Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.

File: **Block Diagram**

| | | |
|-----------------------------------|-----------------|-----------|
| Size A3 | Document Number | Rev |
| | Mocha-3 | -2 |
| Date: Wednesday, January 27, 2010 | Sheet 1 of 70 | |



COMP0/1/2/3 : TRACE Length <0.5"
 COMP0/1/2/3 : 10mil width traces, 20mil spacing

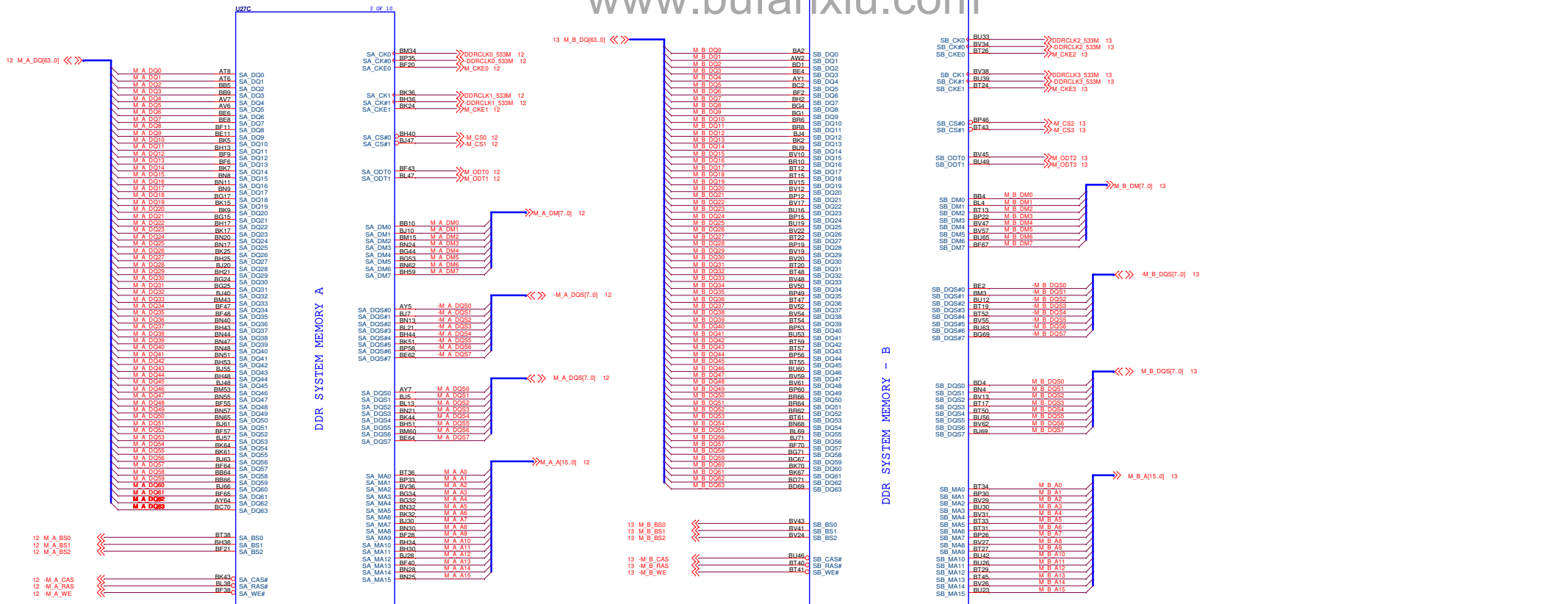


<Core Design>

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

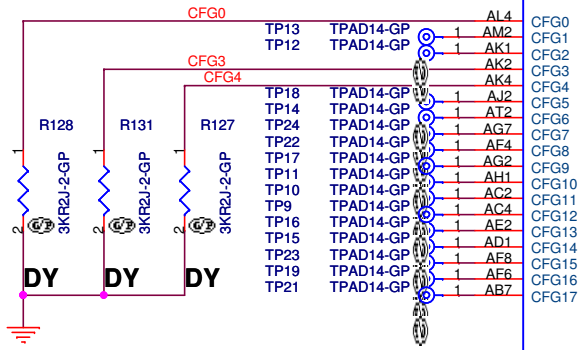
Title: **Arrandale CPU(2/8):CLK/MISC/JTAG**

| | | |
|-----------------------------------|-----------------|---------------|
| Size A3 | Document Number | Rev -2 |
| Date: Wednesday, January 27, 2010 | | Sheet 4 of 70 |

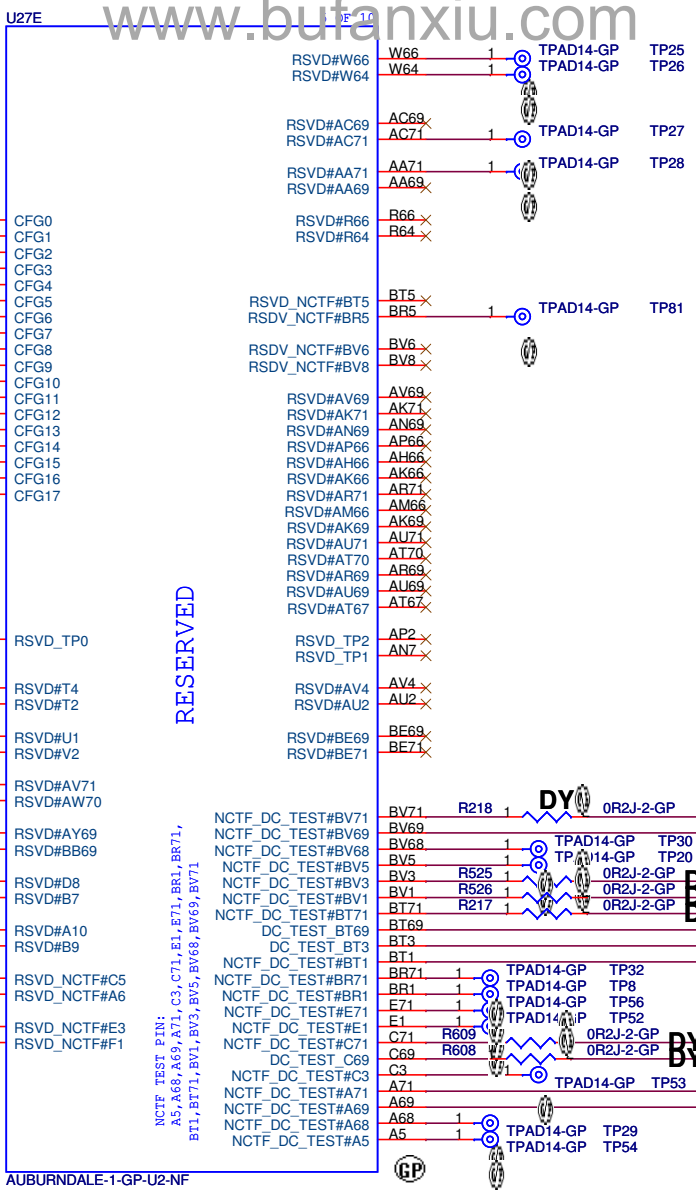


AUBURDALE-1-GP-U2-NF Use CPU Arrandale

AUBURDALE-1-GP-U2-NF Use CPU Arrandale



| | | ASM | DY |
|--------|-----------------------|-------------|---------|
| CFG[0] | PEG CONFIG | BIFURCATION | SINGLE |
| CFG[3] | PEG LANE REVERSAL | REVERSE | NORMAL |
| CFG[4] | DISPLAY PORT PRESENCE | ENABLE | DISABLE |



RESERVED

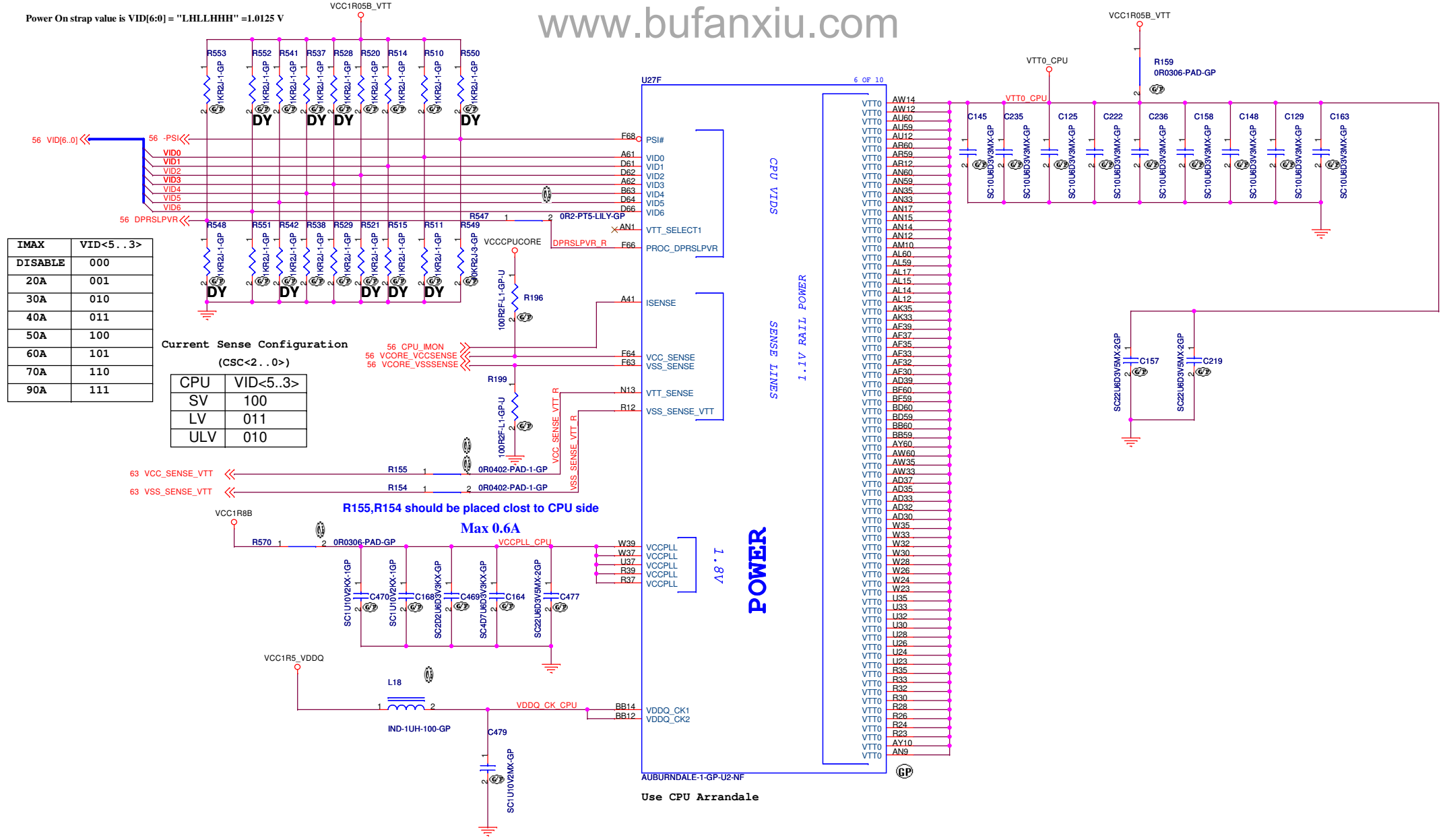
NCTF_TEST_PIN:
A5, A68, A69, A71, C3, C71, E1, E71, BR1, BR71, BT1, BT71, BV3, BV5, BV68, BV69, BV71

AUBURNDALE-1-GP-U2-NF
Use CPU Arrandale

<Core Design>

| | | | |
|------------------------------------|-----------------|---|-------|
| | | Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichin, Taipei Hsien 221, Taiwan, R.O.C. | |
| Arrandale CPU(4/8):CFG/RSVD | | | |
| Size | Document Number | Rev | |
| Custom | | Mocha-3 -2 | |
| Date: Wednesday, January 27, 2010 | | Sheet 6 | of 70 |

Power On strap value is VID[6:0] = "LHLLHHH" = 1.0125 V



| IMAX | VID<5..3> |
|---------|-----------|
| DISABLE | 000 |
| 20A | 001 |
| 30A | 010 |
| 40A | 011 |
| 50A | 100 |
| 60A | 101 |
| 70A | 110 |
| 90A | 111 |

Current Sense Configuration
(CSC<2..0>)

| CPU | VID<5..3> |
|-----|-----------|
| SV | 100 |
| LV | 011 |
| ULV | 010 |

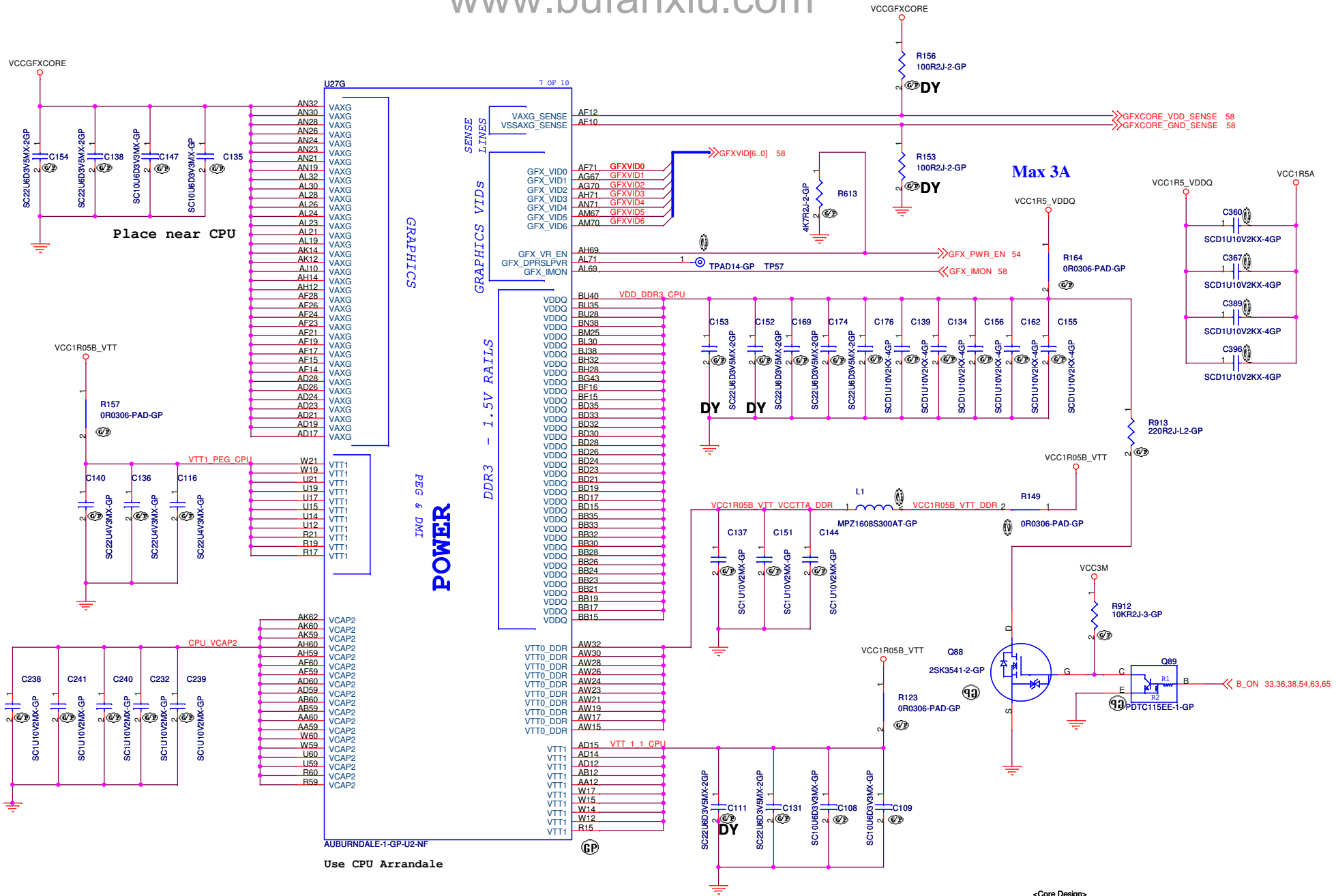
R155, R154 should be placed close to CPU side
Max 0.6A

Use CPU Arrandale

| Pin | Signal |
|------|--------|
| AW14 | VTT0 |
| AW12 | VTT0 |
| AU60 | VTT0 |
| AU59 | VTT0 |
| AU12 | VTT0 |
| AR60 | VTT0 |
| AR59 | VTT0 |
| AR12 | VTT0 |
| AN60 | VTT0 |
| AN59 | VTT0 |
| AN35 | VTT0 |
| AN33 | VTT0 |
| AN17 | VTT0 |
| AN15 | VTT0 |
| AN14 | VTT0 |
| AN12 | VTT0 |
| AM10 | VTT0 |
| AL60 | VTT0 |
| AL59 | VTT0 |
| AL17 | VTT0 |
| AL15 | VTT0 |
| AL14 | VTT0 |
| AL12 | VTT0 |
| AK35 | VTT0 |
| AK33 | VTT0 |
| AF39 | VTT0 |
| AF37 | VTT0 |
| AF35 | VTT0 |
| AF33 | VTT0 |
| AF32 | VTT0 |
| AF30 | VTT0 |
| AD39 | VTT0 |
| BF60 | VTT0 |
| BF59 | VTT0 |
| BD60 | VTT0 |
| BD59 | VTT0 |
| BB60 | VTT0 |
| BB59 | VTT0 |
| AY60 | VTT0 |
| AW60 | VTT0 |
| AW35 | VTT0 |
| AW33 | VTT0 |
| AD37 | VTT0 |
| AD35 | VTT0 |
| AD33 | VTT0 |
| AD32 | VTT0 |
| AD30 | VTT0 |
| W35 | VTT0 |
| W33 | VTT0 |
| W32 | VTT0 |
| W30 | VTT0 |
| W28 | VTT0 |
| W26 | VTT0 |
| W24 | VTT0 |
| W23 | VTT0 |
| U35 | VTT0 |
| U33 | VTT0 |
| U32 | VTT0 |
| U30 | VTT0 |
| U28 | VTT0 |
| U26 | VTT0 |
| U24 | VTT0 |
| U23 | VTT0 |
| R35 | VTT0 |
| R33 | VTT0 |
| R32 | VTT0 |
| R30 | VTT0 |
| R28 | VTT0 |
| R26 | VTT0 |
| R24 | VTT0 |
| R23 | VTT0 |
| AY10 | VTT0 |
| AN9 | VTT0 |

<Core Design>

| | |
|--|-----------------|
| | |
| Wistron Corporation 21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C. | |
| Arrandale CPU(5/8):Power | |
| Size A3 | Document Number |
| Mocha-3 | |
| Date: Wednesday, January 27, 2010 | Sheet 7 of 70 |
| Rev | -2 |

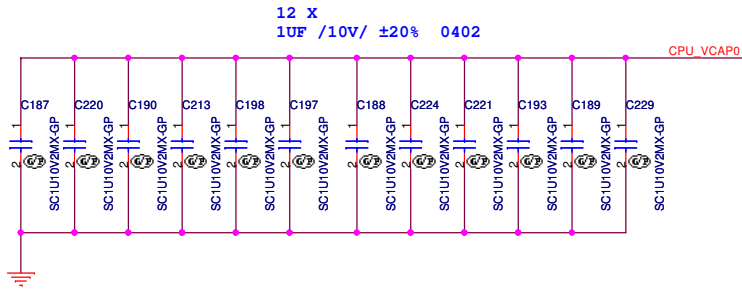


<Core Design>

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

Title: **Arrandale CPU(6/8):GFX/PWR**

| | | | |
|-----------------------------------|-----------------|----------------|--------|
| Size A3 | Document Number | Mocha-3 | Rev -2 |
| Date: Wednesday, January 27, 2010 | Sheet 8 | of | 70 |

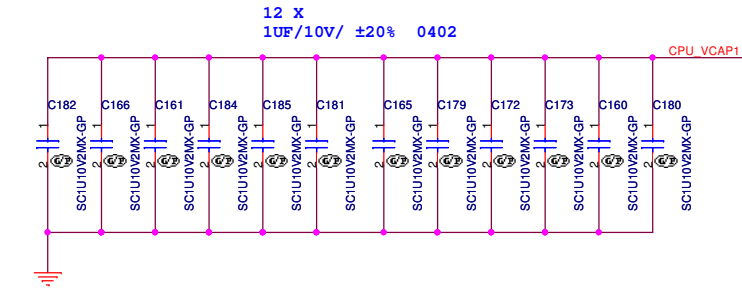


- BD55 VCAP0
- BD51 VCAP0
- BD48 VCAP0
- BB55 VCAP0
- BB51 VCAP0
- BB48 VCAP0
- AY57 VCAP0
- AY53 VCAP0
- AY50 VCAP0
- AW57 VCAP0
- AW53 VCAP0
- AW50 VCAP0
- AJ55 VCAP0
- AJ51 VCAP0
- AL48 VCAP0
- AR55 VCAP0
- AR51 VCAP0
- AR48 VCAP0
- AN57 VCAP0
- AN53 VCAP0
- AN50 VCAP0
- AL57 VCAP0
- AL53 VCAP0
- AL50 VCAP0
- AK57 VCAP0
- AK53 VCAP0
- AK50 VCAP0

POWER

CPU CORE SUPPLY

- VCC AF57
- VCC AF55
- VCC AF53
- VCC AF51
- VCC AF50
- VCC AF48
- VCC AF46
- VCC AF44
- VCC AF42
- VCC AF41
- VCC AD55
- VCC AD51
- VCC AD48
- VCC AD44
- VCC AD41
- VCC AB55
- VCC AB51
- VCC AB48
- VCC AB44
- VCC AB41
- VCC AA55
- VCC AA51
- VCC AA48
- VCC AA44
- VCC AA41
- VCC W55
- VCC W51
- VCC W48
- VCC W44
- VCC W41
- VCC U55
- VCC UJ51
- VCC U48
- VCC U44
- VCC U41
- VCC B55
- VCC B51
- VCC B48
- VCC B44
- VCC B41
- VCC P60
- VCC N55
- VCC N51
- VCC N48
- VCC N44
- VCC N42
- VCC M60
- VCC M51
- VCC M44
- VCC L55
- VCC K60
- VCC K51
- VCC K44
- VCC J55
- VCC H60
- VCC H51
- VCC H44
- VCC G60
- VCC G55
- VCC G51
- VCC G44
- VCC F55
- VCC F60
- VCC E57
- VCC E53
- VCC E50
- VCC E46
- VCC E42
- VCC D59
- VCC D57
- VCC D55
- VCC D54
- VCC D52
- VCC D50
- VCC D48
- VCC D47
- VCC D45
- VCC D43
- VCC B60
- VCC B56
- VCC B53
- VCC B49
- VCC B46
- VCC B42
- VCC A57
- VCC A54
- VCC A50
- VCC A47
- VCC A43



- BD44 VCAP1
- BD41 VCAP1
- BD37 VCAP1
- BB44 VCAP1
- BB41 VCAP1
- BB37 VCAP1
- AY46 VCAP1
- AY42 VCAP1
- AY39 VCAP1
- AW46 VCAP1
- AW42 VCAP1
- AW39 VCAP1
- AJ44 VCAP1
- AJ41 VCAP1
- AJ37 VCAP1
- AR44 VCAP1
- AR41 VCAP1
- AR37 VCAP1
- AN46 VCAP1
- AN42 VCAP1
- AN39 VCAP1
- AL46 VCAP1
- AL42 VCAP1
- AL39 VCAP1
- AK46 VCAP1
- AK42 VCAP1
- AK39 VCAP1

AUBURNDAL-1-GP-U2-NF

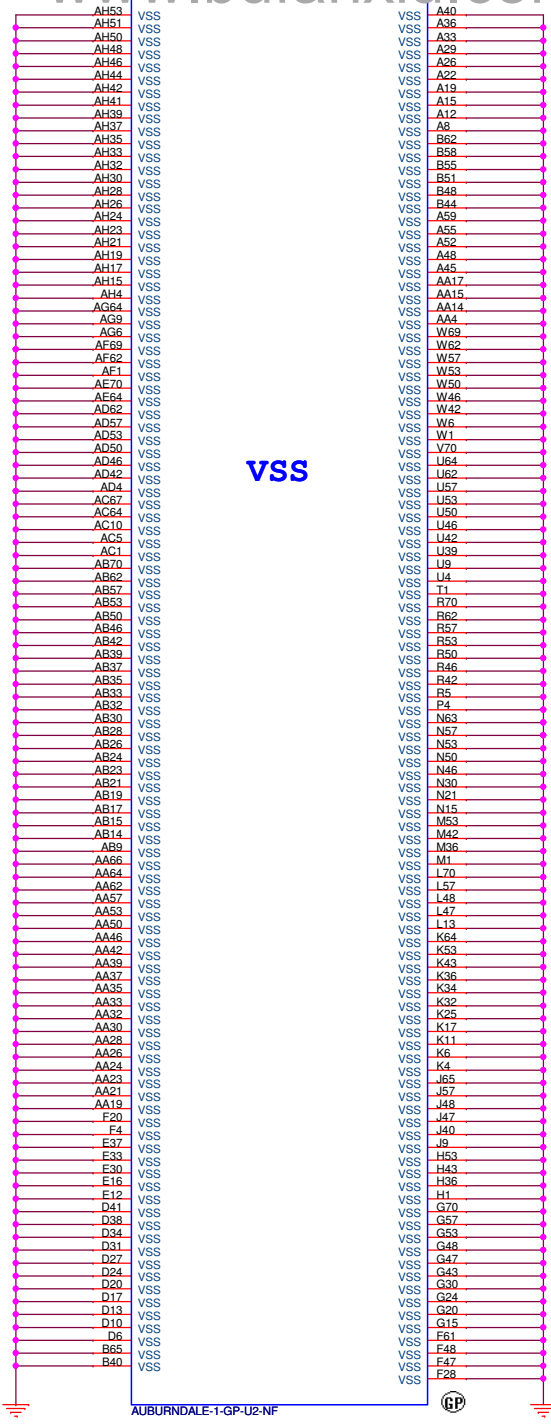
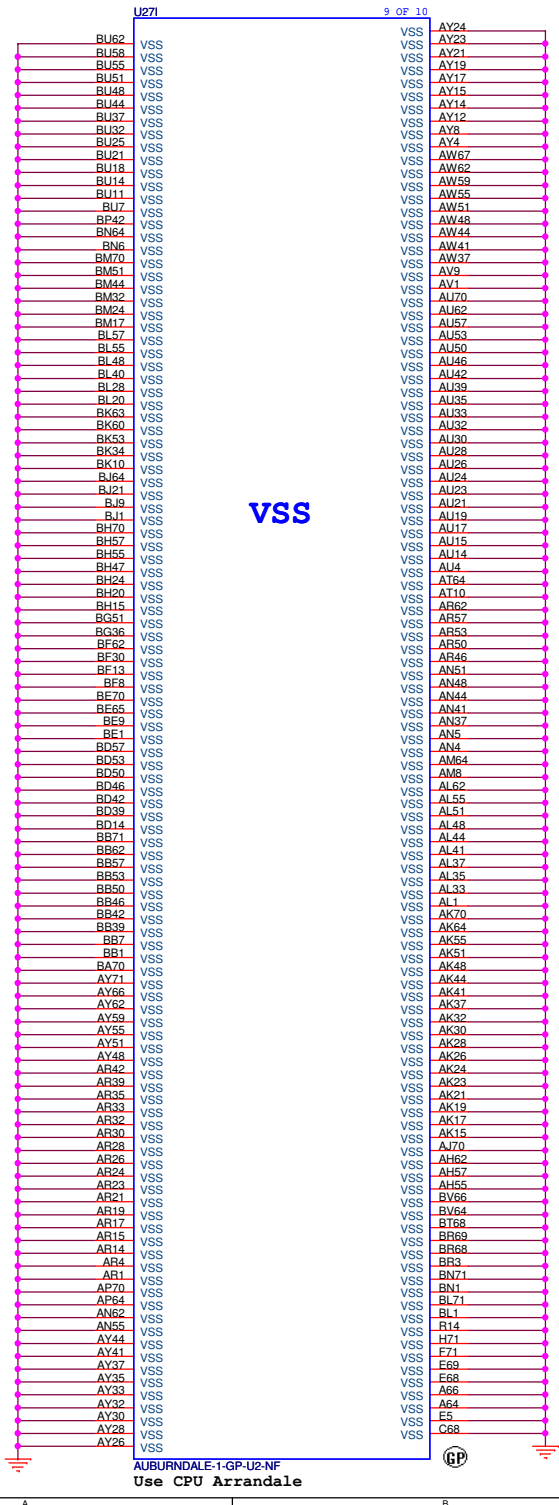
Use CPU Arrandale

<Core Design>

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

Title **Arrandale CPU(7/8): VCC&VCAP**

| | | |
|-----------------------------------|-----------------|---------------|
| Size A3 | Document Number | Rev -2 |
| Date: Wednesday, January 27, 2010 | | Sheet 9 of 70 |



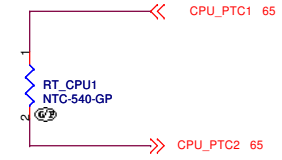
VSS

<Core Design>

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

Title **Arrandale CPU(8/8): GND**

| | | |
|-----------------------------------|-----------------------------------|------------------|
| Size Custom | Document Number Mocha-3 | Rev -2 |
| Date: Wednesday, January 27, 2010 | Sheet 10 of 70 | |



It should be arranged near CPU instead of CPU thermal sensor

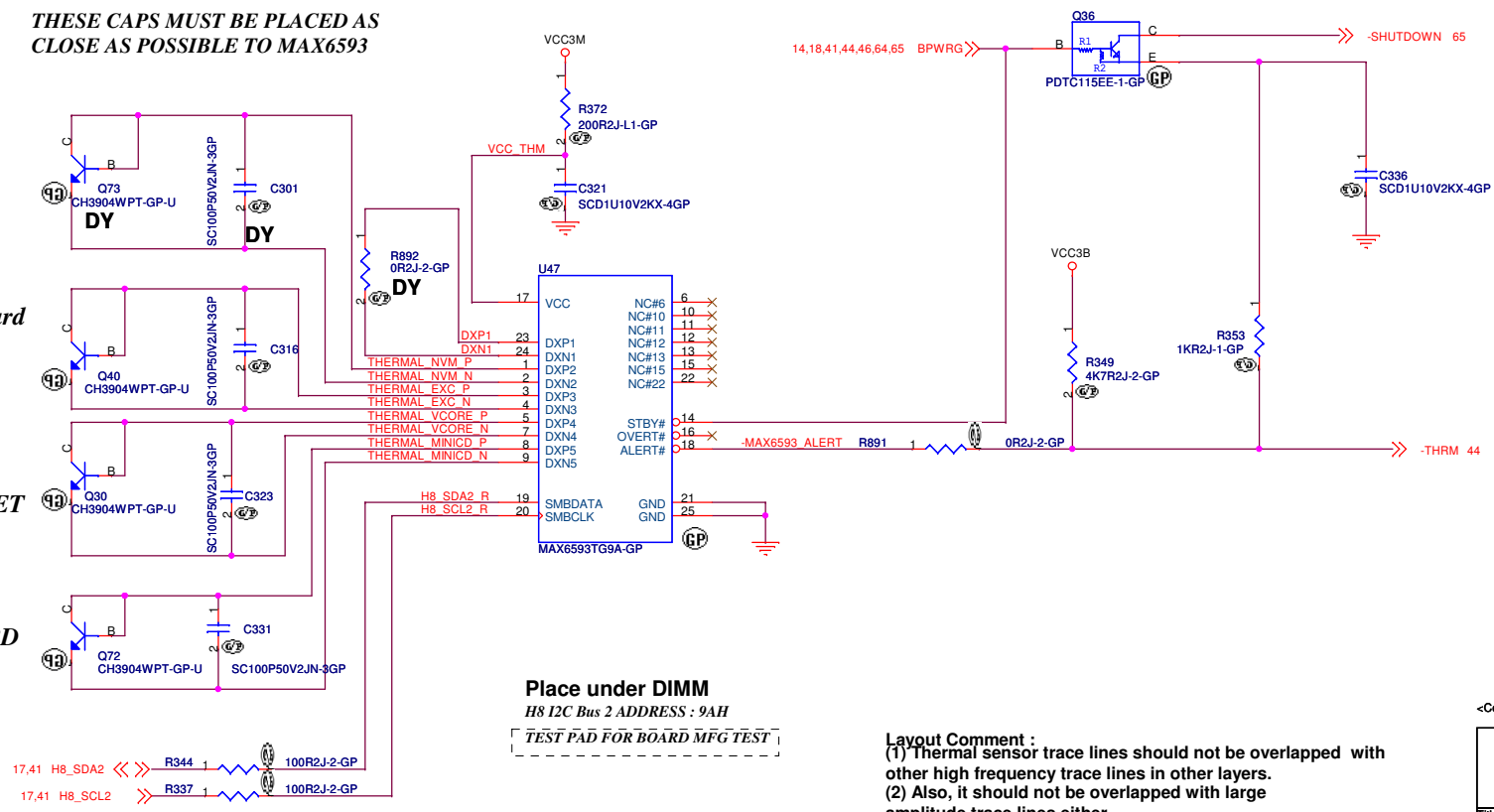
THESE CAPS MUST BE PLACED AS CLOSE AS POSSIBLE TO MAX6593

TO NVM

TO Express Card

TO VCORE FET

TO MINI CARD

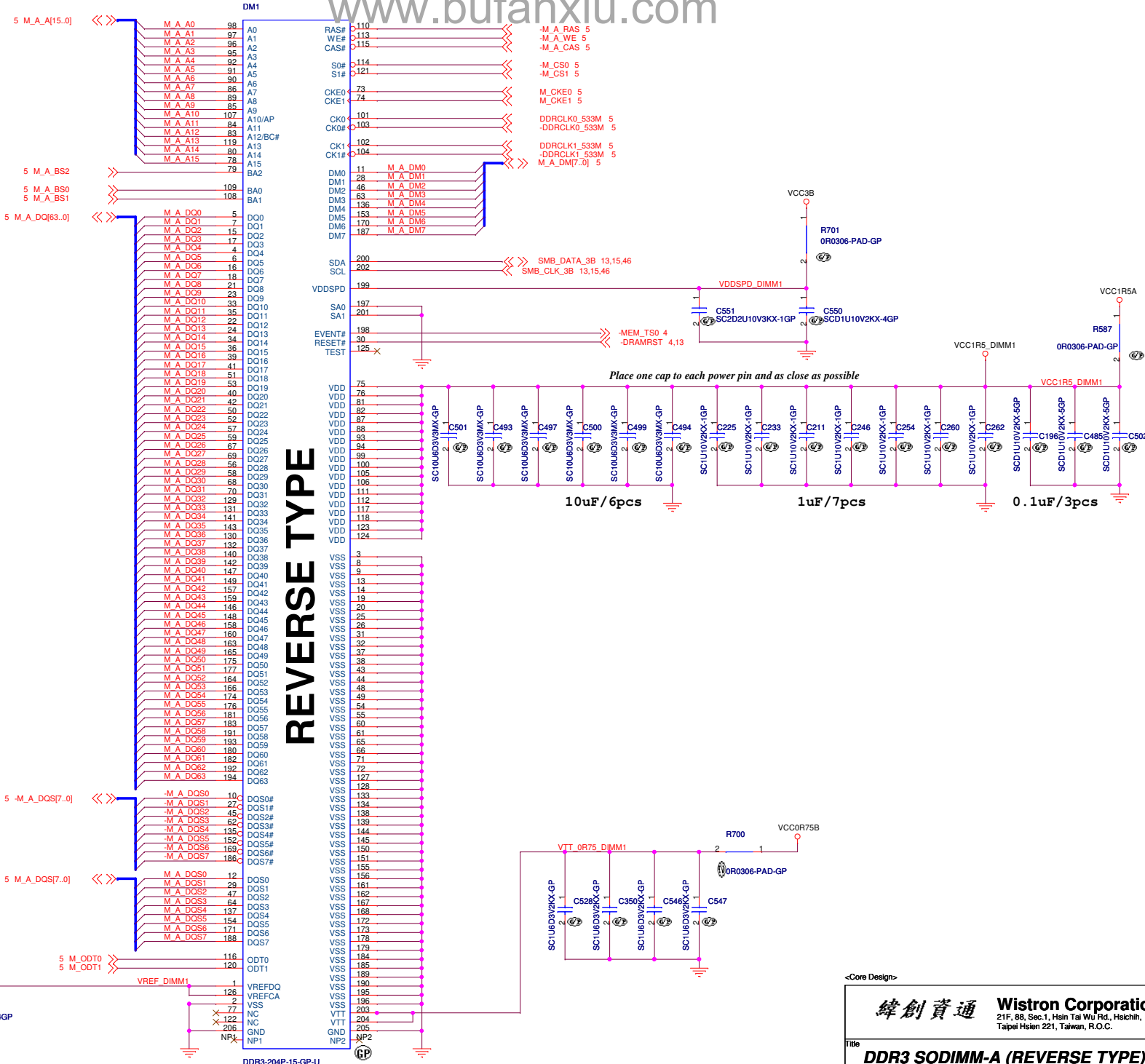


Place under DIMM
H8 I2C Bus 2 ADDRESS : 9AH
TEST PAD FOR BOARD MFG TEST

Layout Comment :
(1) Thermal sensor trace lines should not be overlapped with other high frequency trace lines in other layers.
(2) Also, it should not be overlapped with large amplitude trace lines either.

<Core Design>

| | |
|---|-----------------|
| | |
| Wistron Corporation 21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C. | |
| THERMAL SENSOR | |
| Title | |
| Size A3 | Document Number |
| Date: Wednesday, January 27, 2010 | Sheet 11 of 70 |
| Mocha-3 | |
| Rev | -2 |



DM1
 20.F1272.204 Tyco
 62.10017.M21 Foxconn

REVERSE TYPE

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

Place caps close to pin1 as possible

<Core Design>

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

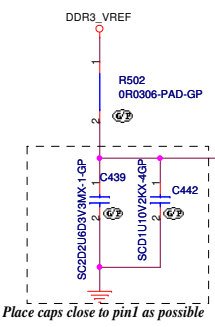
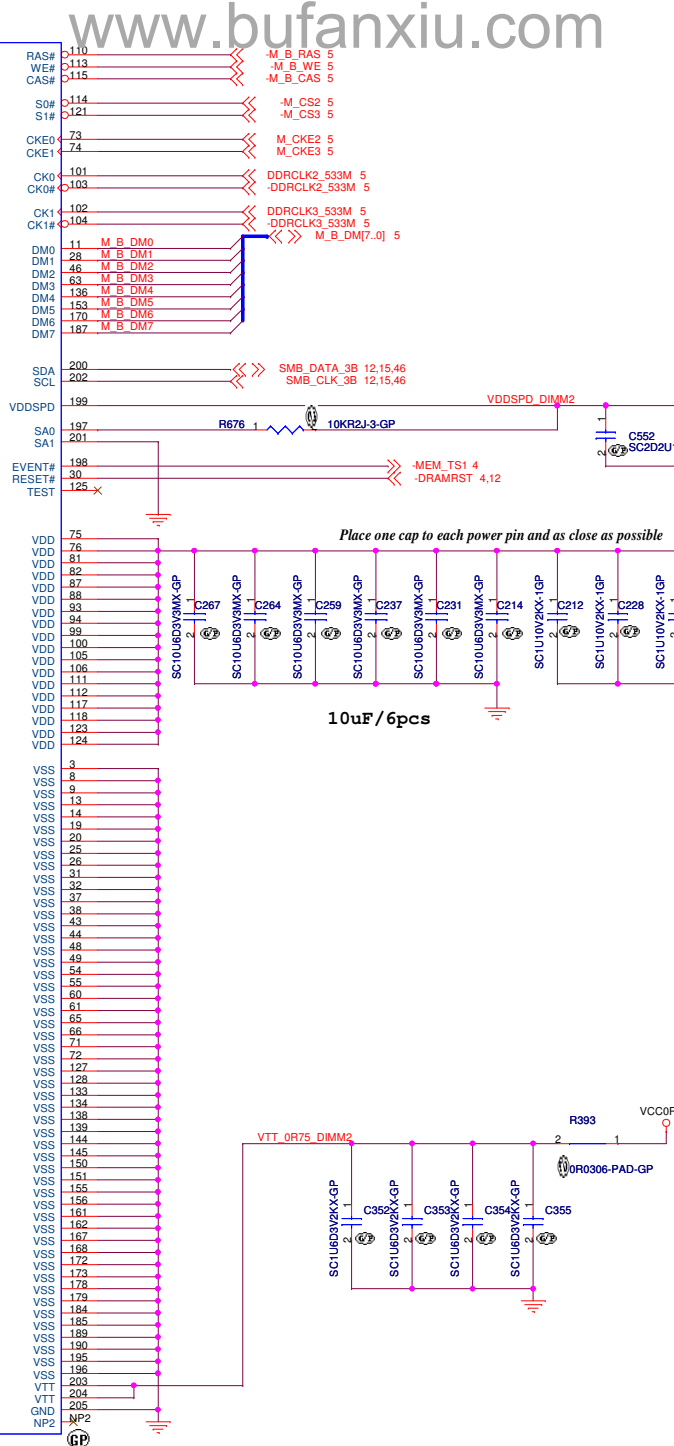
Title: **DDR3 SODIMM-A (REVERSE TYPE)**

| | | |
|--------|-----------------|-----------|
| Size | Document Number | Rev |
| Custom | Mocha-3 | -2 |

Date: Wednesday, January 27, 2010 Sheet 12 of 70

DM2
20.F1272.204 Tyco
62.10017.M21 Foxconn

| | | | |
|------------------|-----------|-----|---------|
| 5 M_B_A[15..0] | M_B_A0 | 98 | A0 |
| | M_B_A1 | 97 | A1 |
| | M_B_A2 | 96 | A2 |
| | M_B_A3 | 95 | A3 |
| | M_B_A4 | 92 | A4 |
| | M_B_A5 | 91 | A5 |
| | M_B_A6 | 90 | A6 |
| | M_B_A7 | 86 | A7 |
| | M_B_A8 | 89 | A8 |
| | M_B_A9 | 85 | A9 |
| | M_B_A10 | 107 | A10/AP |
| | M_B_A11 | 84 | A11 |
| | M_B_A12 | 83 | A12/BC# |
| | M_B_A13 | 119 | A13 |
| | M_B_A14 | 80 | A14 |
| | M_B_A15 | 78 | A15 |
| | | 79 | BA2 |
| | | 109 | BA0 |
| | | 108 | BA1 |
| 5 M_B_BS2 | | | |
| 5 M_B_BS0 | M_B_DQ0 | 5 | DQ0 |
| 5 M_B_BS1 | M_B_DQ1 | 7 | DQ1 |
| 5 M_B_DQ[63..0] | M_B_DQ2 | 15 | DQ2 |
| | M_B_DQ3 | 17 | DQ3 |
| | M_B_DQ4 | 4 | DQ4 |
| | M_B_DQ5 | 6 | DQ5 |
| | M_B_DQ6 | 16 | DQ6 |
| | M_B_DQ7 | 18 | DQ7 |
| | M_B_DQ8 | 21 | DQ8 |
| | M_B_DQ9 | 23 | DQ9 |
| | M_B_DQ10 | 33 | DQ10 |
| | M_B_DQ11 | 35 | DQ11 |
| | M_B_DQ12 | 22 | DQ12 |
| | M_B_DQ13 | 24 | DQ13 |
| | M_B_DQ14 | 34 | DQ14 |
| | M_B_DQ15 | 36 | DQ15 |
| | M_B_DQ16 | 39 | DQ16 |
| | M_B_DQ17 | 41 | DQ17 |
| | M_B_DQ18 | 51 | DQ18 |
| | M_B_DQ19 | 53 | DQ19 |
| | M_B_DQ20 | 40 | DQ20 |
| | M_B_DQ21 | 42 | DQ21 |
| | M_B_DQ22 | 50 | DQ22 |
| | M_B_DQ23 | 52 | DQ23 |
| | M_B_DQ24 | 57 | DQ24 |
| | M_B_DQ25 | 59 | DQ25 |
| | M_B_DQ26 | 67 | DQ26 |
| | M_B_DQ28 | 56 | DQ28 |
| | M_B_DQ29 | 58 | DQ29 |
| | M_B_DQ30 | 68 | DQ30 |
| | M_B_DQ31 | 70 | DQ31 |
| | M_B_DQ32 | 129 | DQ32 |
| | M_B_DQ33 | 131 | DQ33 |
| | M_B_DQ34 | 141 | DQ34 |
| | M_B_DQ35 | 143 | DQ35 |
| | M_B_DQ36 | 130 | DQ36 |
| | M_B_DQ37 | 132 | DQ37 |
| | M_B_DQ38 | 140 | DQ38 |
| | M_B_DQ39 | 142 | DQ39 |
| | M_B_DQ40 | 147 | DQ40 |
| | M_B_DQ41 | 149 | DQ41 |
| | M_B_DQ42 | 157 | DQ42 |
| | M_B_DQ43 | 159 | DQ43 |
| | M_B_DQ44 | 146 | DQ44 |
| | M_B_DQ45 | 148 | DQ45 |
| | M_B_DQ46 | 158 | DQ46 |
| | M_B_DQ47 | 160 | DQ47 |
| | M_B_DQ48 | 163 | DQ48 |
| | M_B_DQ49 | 165 | DQ49 |
| | M_B_DQ50 | 175 | DQ50 |
| | M_B_DQ51 | 177 | DQ51 |
| | M_B_DQ52 | 164 | DQ52 |
| | M_B_DQ53 | 166 | DQ53 |
| | M_B_DQ54 | 174 | DQ54 |
| | M_B_DQ55 | 176 | DQ55 |
| | M_B_DQ56 | 181 | DQ56 |
| | M_B_DQ57 | 183 | DQ57 |
| | M_B_DQ58 | 191 | DQ58 |
| | M_B_DQ59 | 193 | DQ59 |
| | M_B_DQ60 | 180 | DQ60 |
| | M_B_DQ61 | 182 | DQ61 |
| | M_B_DQ62 | 192 | DQ62 |
| | M_B_DQ63 | 194 | DQ63 |
| 5 -M_B_DQS[7..0] | -M_B_DQS0 | 10 | DQS0# |
| | -M_B_DQS1 | 27 | DQS1# |
| | -M_B_DQS2 | 49 | DQS2# |
| | -M_B_DQS3 | 69 | DQS3# |
| | -M_B_DQS4 | 135 | DQS4# |
| | -M_B_DQS5 | 152 | DQS5# |
| | -M_B_DQS6 | 169 | DQS6# |
| | -M_B_DQS7 | 186 | DQS7# |
| 5 M_B_DQS[7..0] | M_B_DQS0 | 12 | DQS0 |
| | M_B_DQS1 | 29 | DQS1 |
| | M_B_DQS2 | 47 | DQS2 |
| | M_B_DQS3 | 64 | DQS3 |
| | M_B_DQS4 | 137 | DQS4 |
| | M_B_DQS5 | 154 | DQS5 |
| | M_B_DQS6 | 171 | DQS6 |
| | M_B_DQS7 | 188 | DQS7 |
| 5 M_ODT2 | ODT0 | 116 | DQS7# |
| 5 M_ODT3 | ODT1 | 120 | DQS0# |
| VREF_DIMM2 | VREFDQ | 1 | DQS1# |
| | VREFCA | 126 | DQS2# |
| | VSS | 77 | DQS3# |
| | NC | 122 | DQS4# |
| | GND | 206 | DQS5# |
| | NP1 | | DQS6# |
| | | | DQS7# |



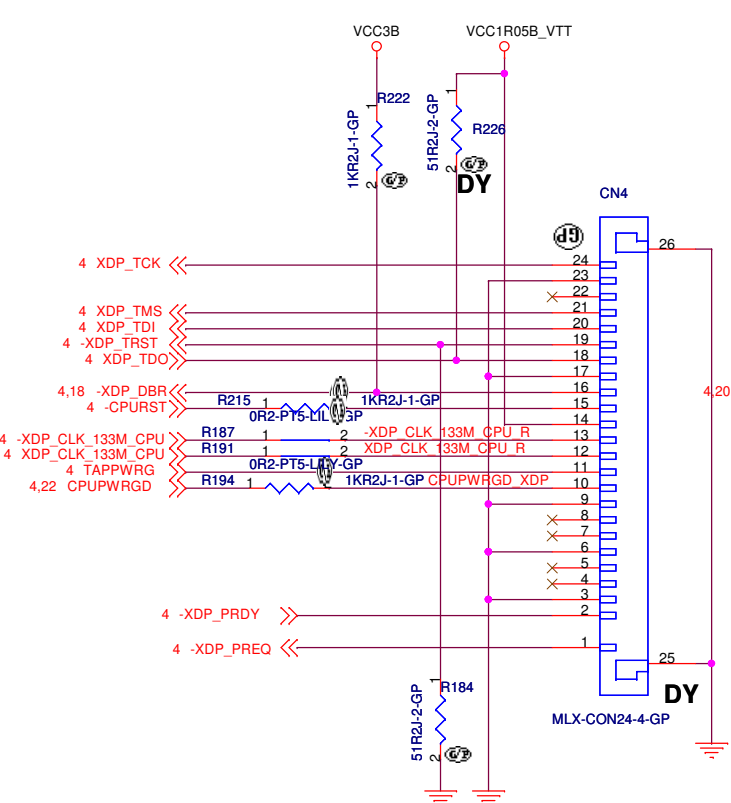
<Core Design>

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

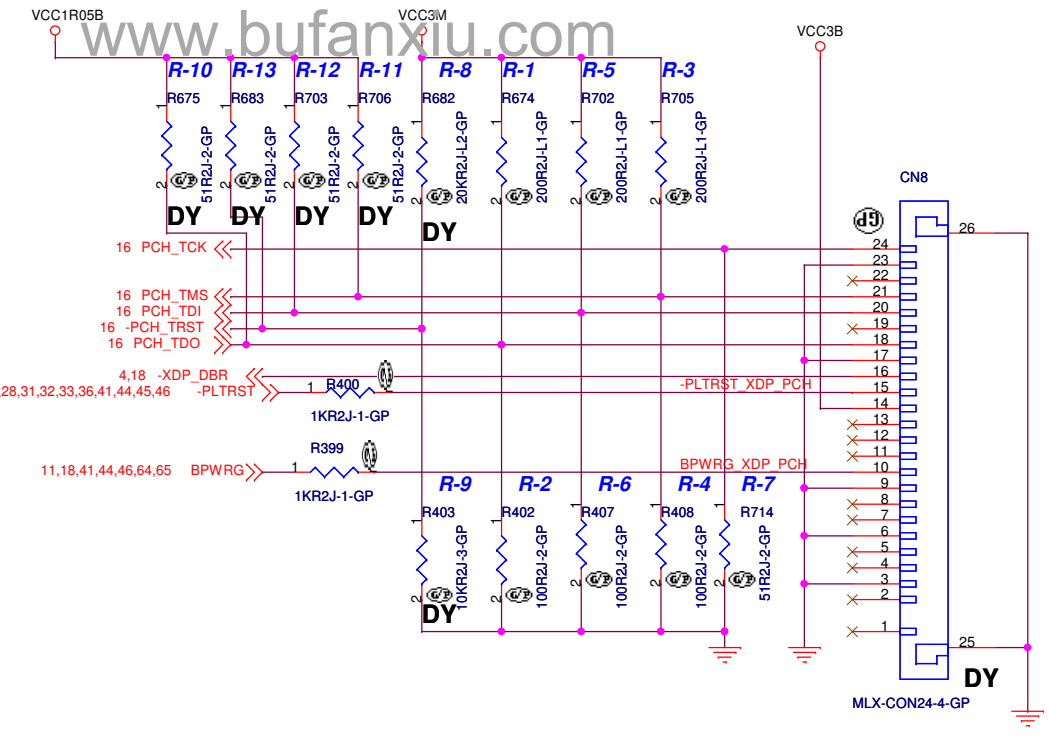
Title: **DDR3 SODIMM-B (REVERSE TYPE)**

| | | |
|--------|-----------------|-----------|
| Size | Document Number | Rev |
| Custom | Mocha-3 | -2 |

Date: Wednesday, January 27, 2010 Sheet 13 of 70



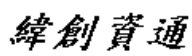
DEBUG Interface for Processor.



DEBUG Interface for PCH.

| PCH Pin | | PCH JTAG Enable | | PCH JTAG Disable | | Production | |
|---------|------|-----------------|----------|------------------|---------|------------|---------|
| | | ES1 | ES2 | ES1 | ES2 | Enable | Disable |
| TDO | R-1 | DY | 200 Ohms | DY | DY | DY | DY |
| | R-2 | DY | 100 Ohms | DY | DY | DY | DY |
| | R-10 | DY | DY | DY | DY | 51 Ohms | DY |
| TMS | R-3 | 200 Ohms | 200 Ohms | DY | DY | DY | DY |
| | R-4 | 100 Ohms | 100 Ohms | DY | DY | DY | DY |
| | R-11 | DY | DY | DY | DY | 51 Ohms | DY |
| TDI | R-5 | 200 Ohms | 200 Ohms | 20K Ohms | DY | DY | DY |
| | R-6 | 100 Ohms | 100 Ohms | 10K Ohms | DY | DY | DY |
| | R-12 | DY | DY | DY | DY | 51 Ohms | DY |
| TCK | R-7 | 51 Ohms | 51 Ohms | 51 Ohms | 51 Ohms | 51 Ohms | 51 Ohms |
| TRST# | R-8 | 20K Ohms | DY | DY | DY | DY | DY |
| | R-9 | 10K Ohms | DY | DY | DY | DY | DY |
| | R-13 | DY | DY | DY | DY | DY | DY |

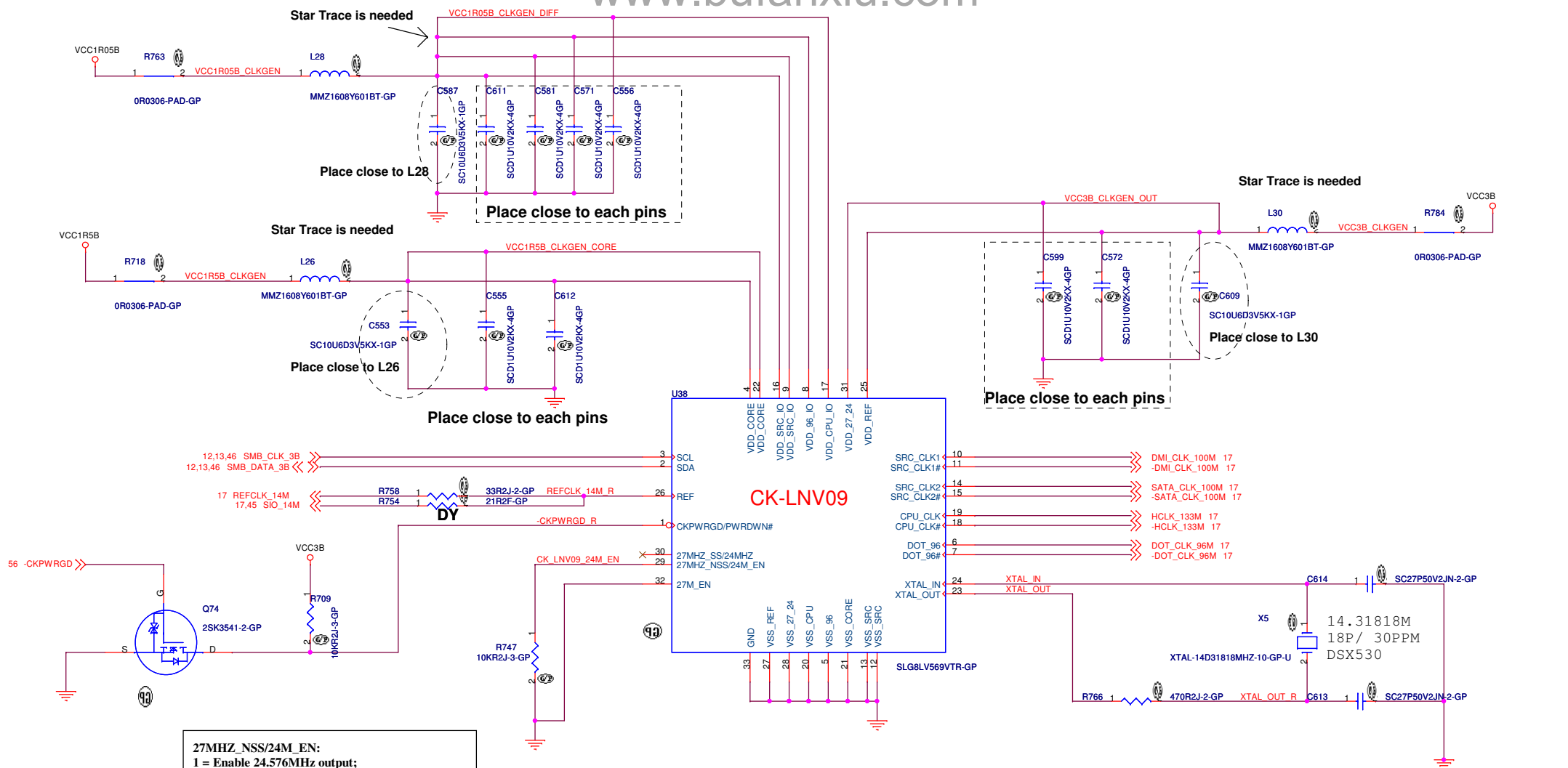
<Core Design>


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

Title: **XDP CONN**

Size: Custom | Document Number: **Mocha-3** | Rev: **-2**

Date: Wednesday, January 27, 2010 | Sheet 14 of 70



27MHZ_NSS/24M_EN:
 1 = Enable 24.576MHz output;
 0 = Disable 24.576MHz output;

27M_EN:
 1 = Enable 27MHZ_NSS and 27MHZ_SS outputs ;
 0 = Disable 27MHZ_NSS and 27MHZ_SS outputs ;

| Source | Vendor P/N | Wistron P/N |
|--------|----------------------|--------------|
| KDS | 1Y714318CE1F /DSX530 | 82.30005.B41 |

U38

| | | | |
|---------|---------|-------------------|--------------|
| Primary | Silego | SLG8LV569 Rev:WA | 71.08569.A03 |
| 2nd | IDT | ICS9LVRS396BKLF | 71.09396.A03 |
| 3th | Realtek | RTM890N-634 Rev:C | 71.00890.A03 |

<Core Design>

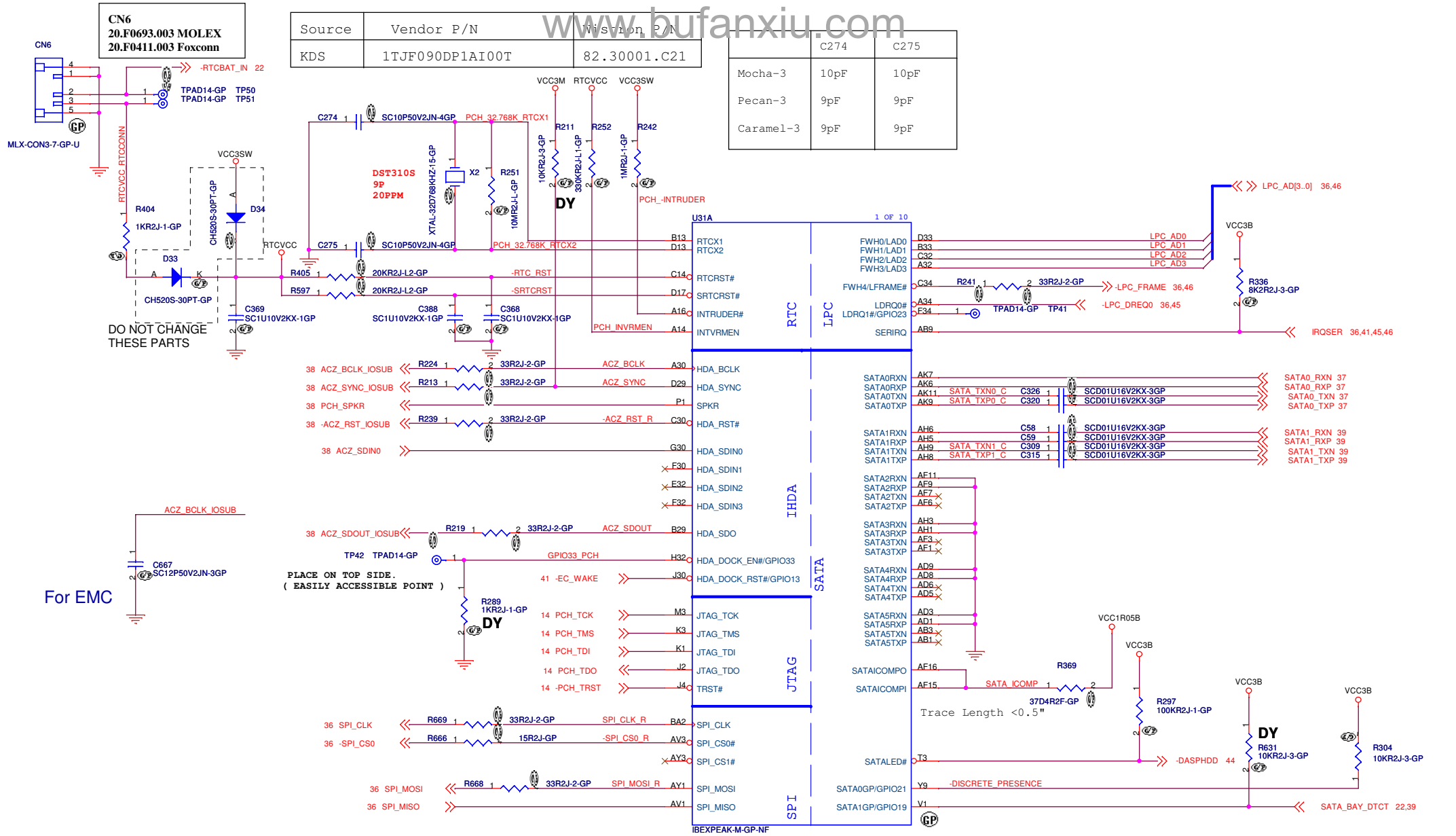
緯創資通 Wistron Corporation
 21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.

Title: **CLOCK GEN(CK-LNV09)**

| | | |
|-----------------------------------|-----------------|----------------|
| Size A3 | Document Number | Rev -2 |
| Date: Wednesday, January 27, 2010 | | Sheet 15 of 70 |

| Source | Vendor P/N | Version |
|--------|-----------------|--------------|
| KDS | 1TJF090DP1AI00T | 82.30001.C21 |

| | C274 | C275 |
|-----------|------|------|
| Mocha-3 | 10pF | 10pF |
| Pecan-3 | 9pF | 9pF |
| Caramel-3 | 9pF | 9pF |



| | | | |
|-----------|------|------|------|
| AMT | YES | NO | NO |
| Braidwood | YES | YES | NO |
| U31 | QM57 | HM57 | HM55 |

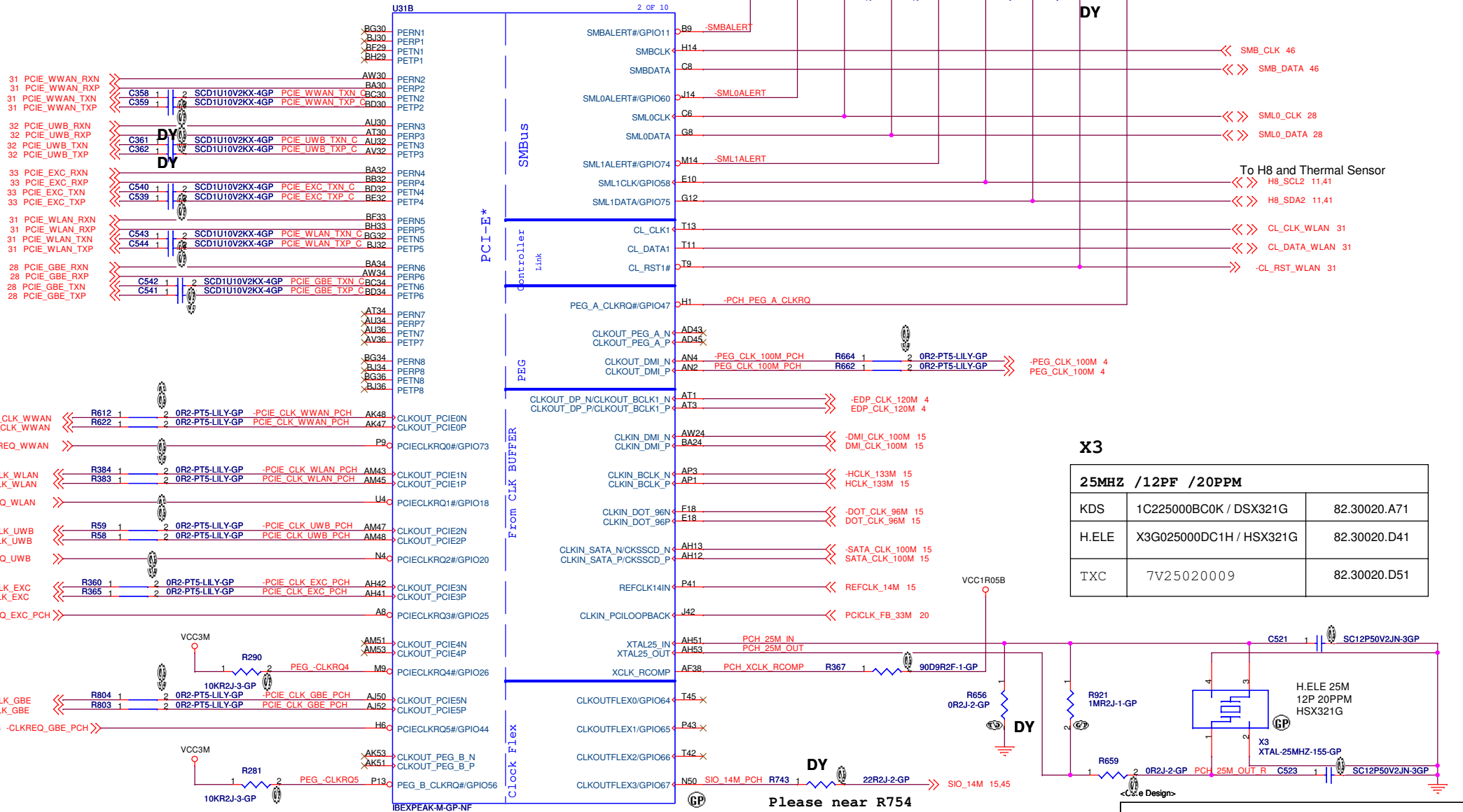
<Core Design>

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

Title: **PCH(1/8) : HDA/JTAG/SPI/SATA**

| | | |
|---------|-----------------|--------|
| Size A3 | Document Number | Rev -2 |
|---------|-----------------|--------|

Date: Wednesday, January 27, 2010 Sheet 16 of 70



X3

| 25MHZ /12PF /20PPM | | |
|--------------------|-------------------------|--------------|
| KDS | 1C22500BC0K / DSX321G | 82.30020.A71 |
| H.ELE | X3G025000DC1H / HSX321G | 82.30020.D41 |
| TXC | 7V25020009 | 82.30020.D51 |

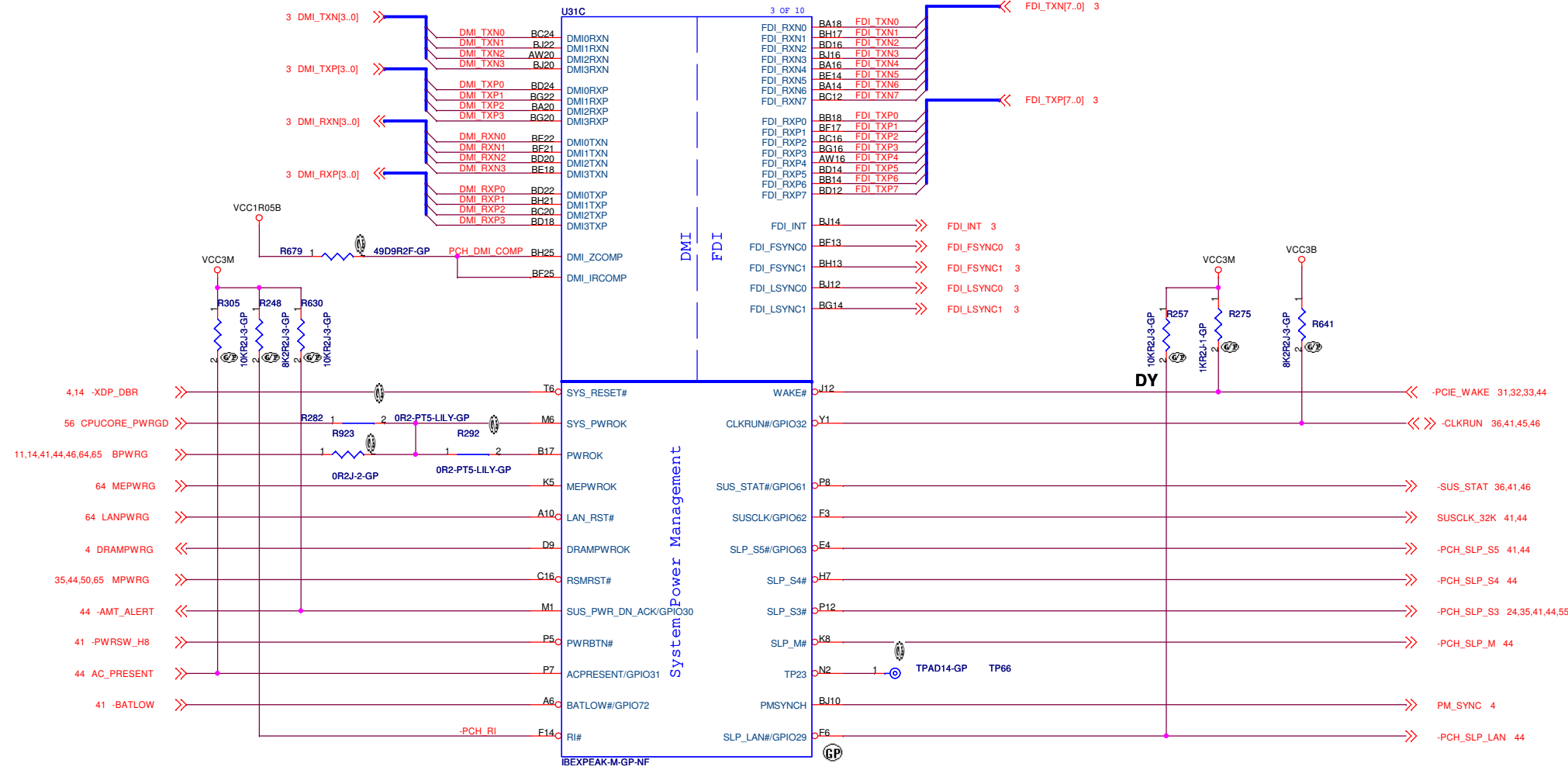
緯創資通 Wistron Corporation
 21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.

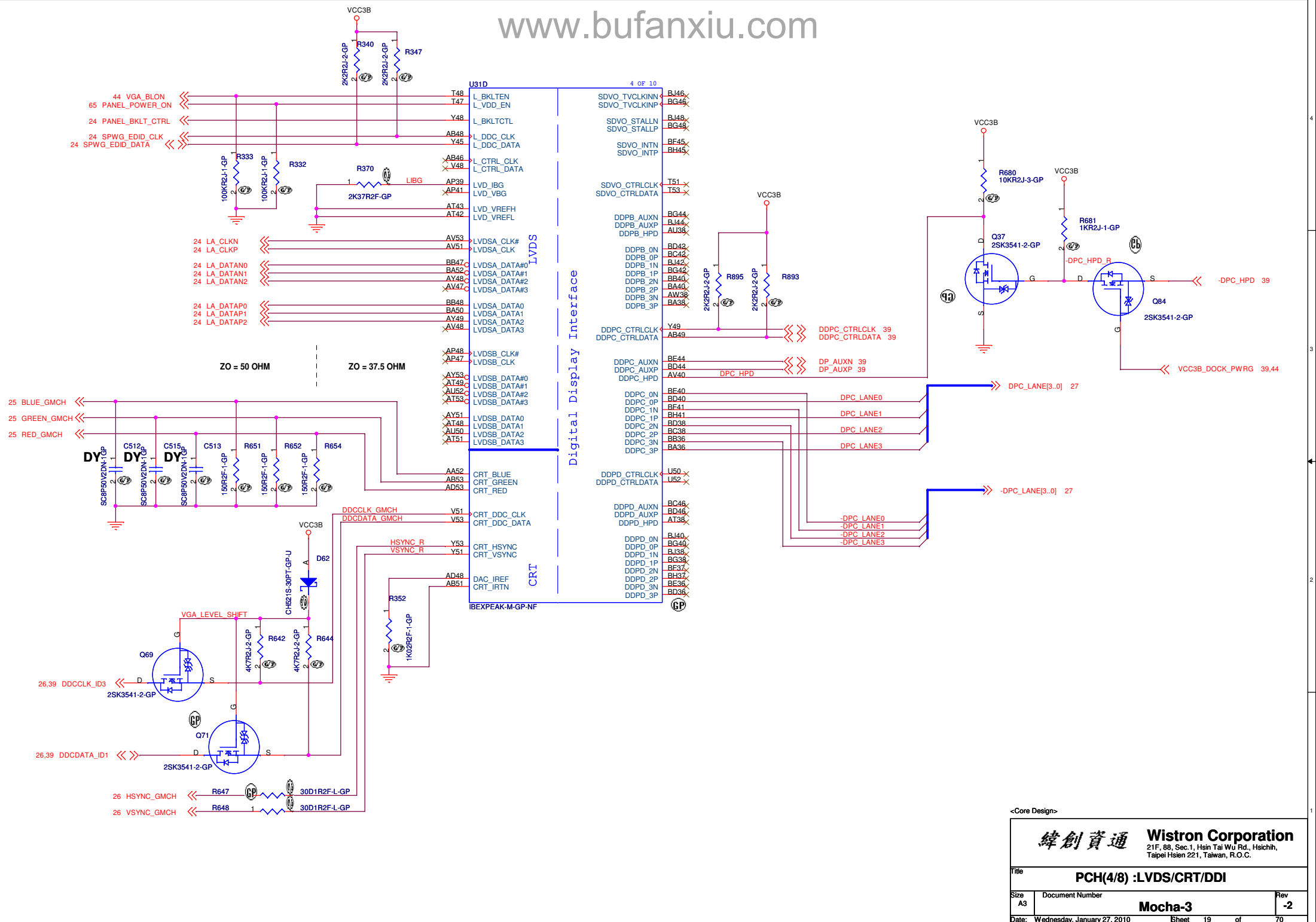
Title: **PCH(2/8) : PCIE/SMBUS/CLK**

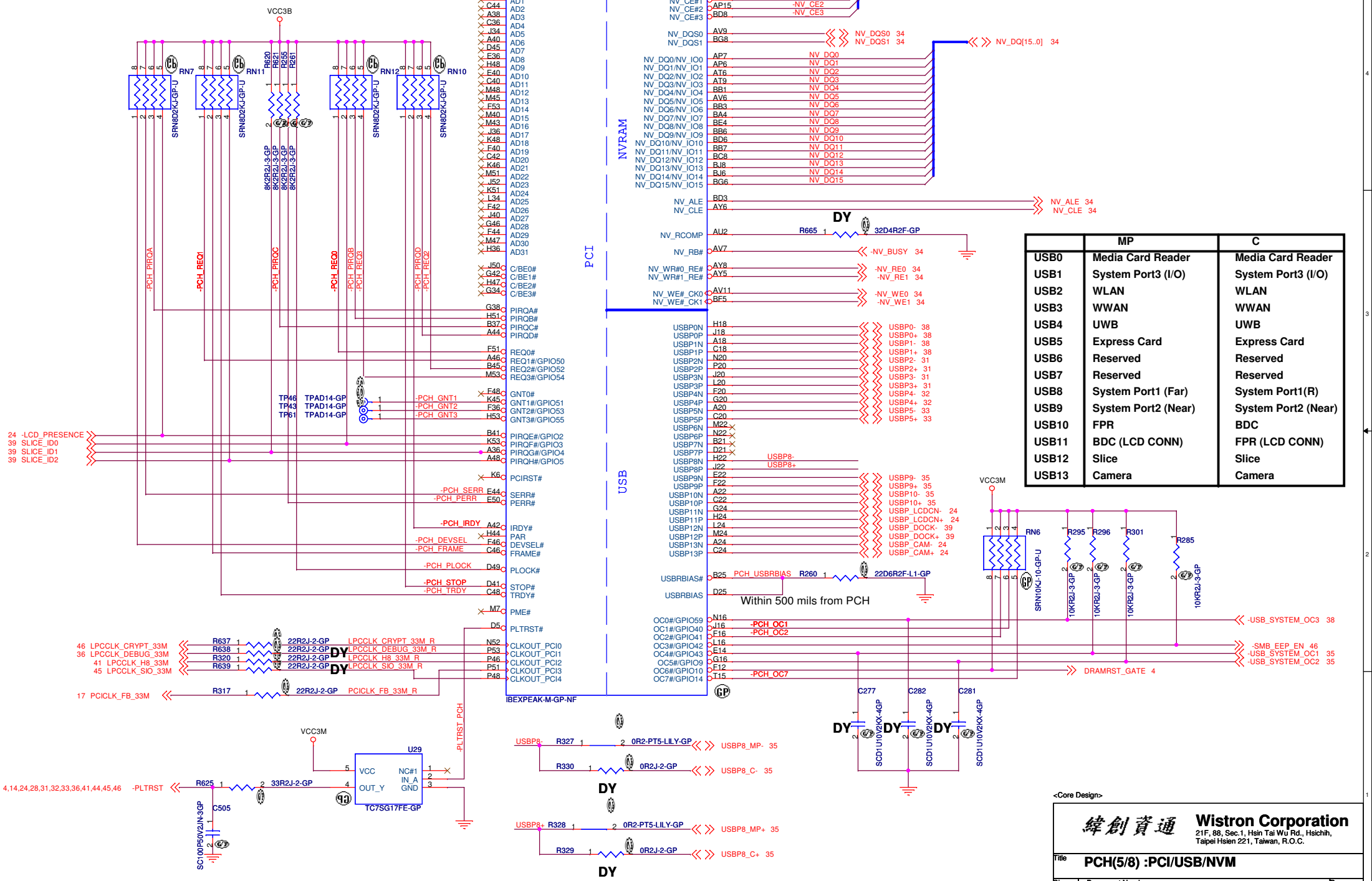
Size A3 Document Number **Mocha-3** Rev **-2**

Date: Wednesday, January 27, 2010 Sheet 17 of 70

Please near R754



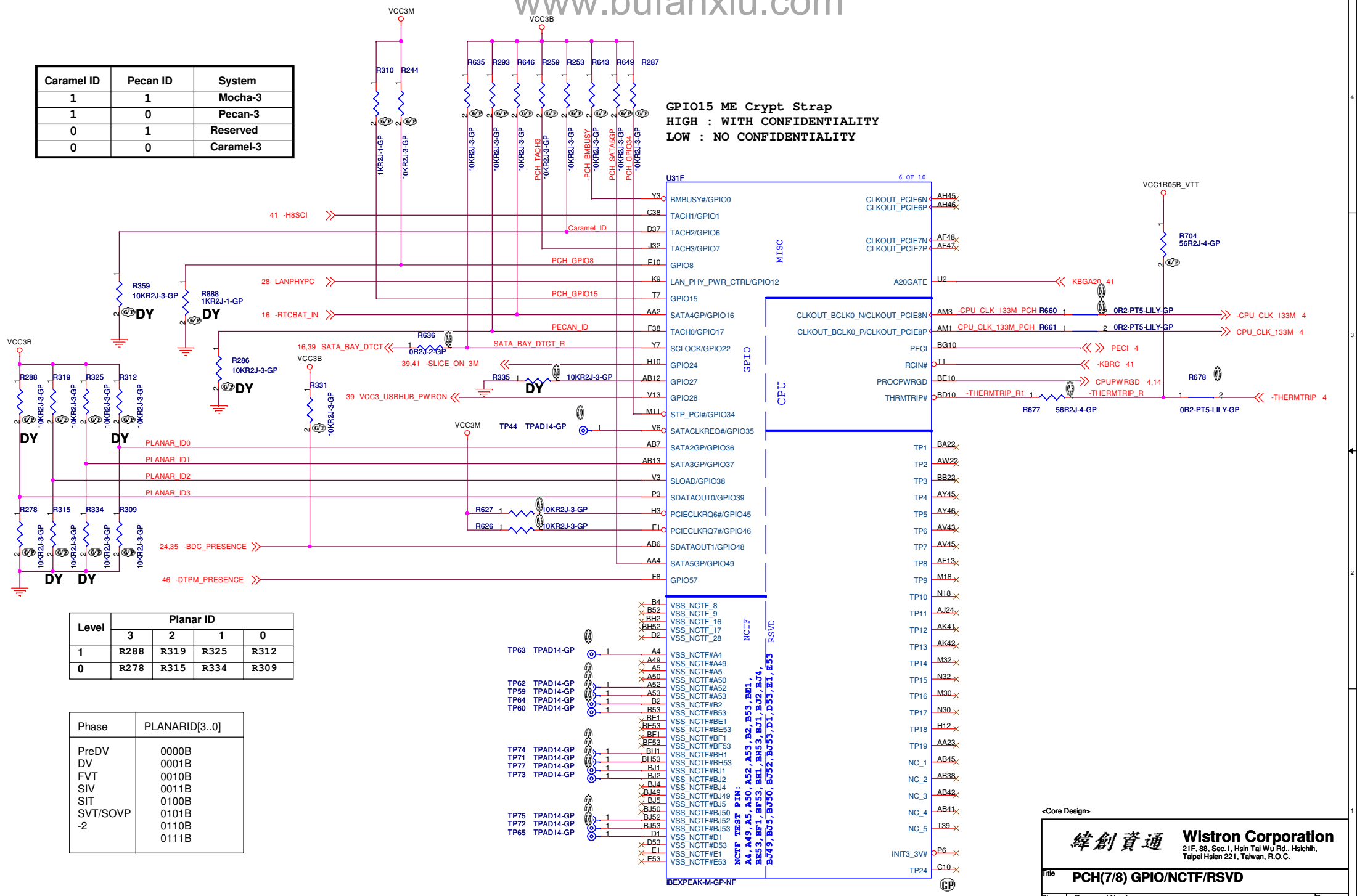




| | MP | C |
|-------|---------------------|---------------------|
| USB0 | Media Card Reader | Media Card Reader |
| USB1 | System Port3 (I/O) | System Port3 (I/O) |
| USB2 | WLAN | WLAN |
| USB3 | WWAN | WWAN |
| USB4 | UWB | UWB |
| USB5 | Express Card | Express Card |
| USB6 | Reserved | Reserved |
| USB7 | Reserved | Reserved |
| USB8 | System Port1 (Far) | System Port1(R) |
| USB9 | System Port2 (Near) | System Port2 (Near) |
| USB10 | FPR | BDC |
| USB11 | BDC (LCD CONN) | FPR (LCD CONN) |
| USB12 | Slice | Slice |
| USB13 | Camera | Camera |

| Caramel ID | Pecan ID | System |
|------------|----------|-----------|
| 1 | 1 | Mocha-3 |
| 1 | 0 | Pecan-3 |
| 0 | 1 | Reserved |
| 0 | 0 | Caramel-3 |

GPIO15 ME Crypt Strap
HIGH : WITH CONFIDENTIALITY
LOW : NO CONFIDENTIALITY



| Level | Planar ID | | | |
|-------|-----------|------|------|------|
| | 3 | 2 | 1 | 0 |
| 1 | R288 | R319 | R325 | R312 |
| 0 | R278 | R315 | R334 | R309 |

| Phase | PLANARID[3..0] |
|----------|----------------|
| PreDV | 0000B |
| DV | 0001B |
| FVT | 0010B |
| SIV | 0011B |
| SIT | 0100B |
| SVT/SOVP | 0101B |
| -2 | 0110B |
| | 0111B |

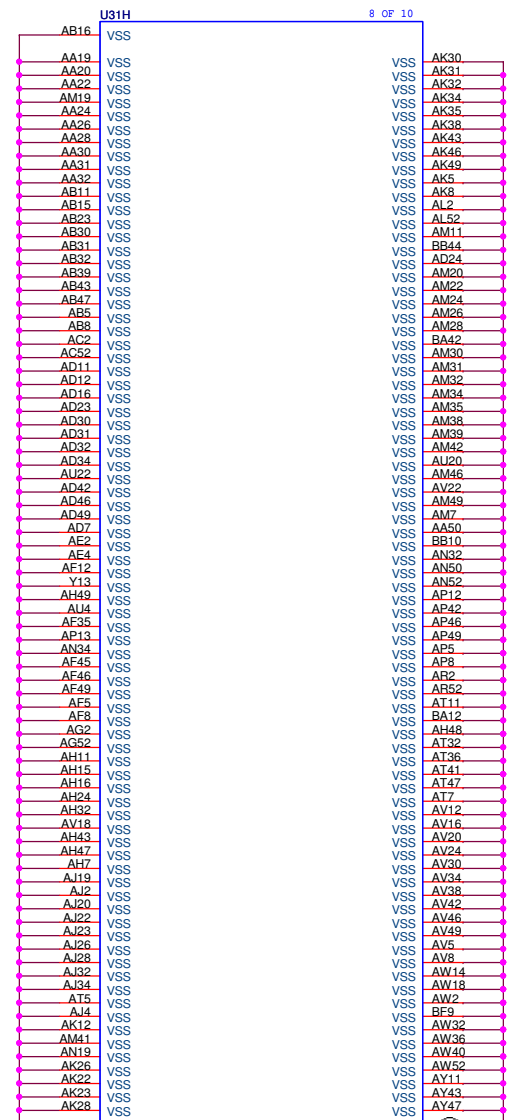
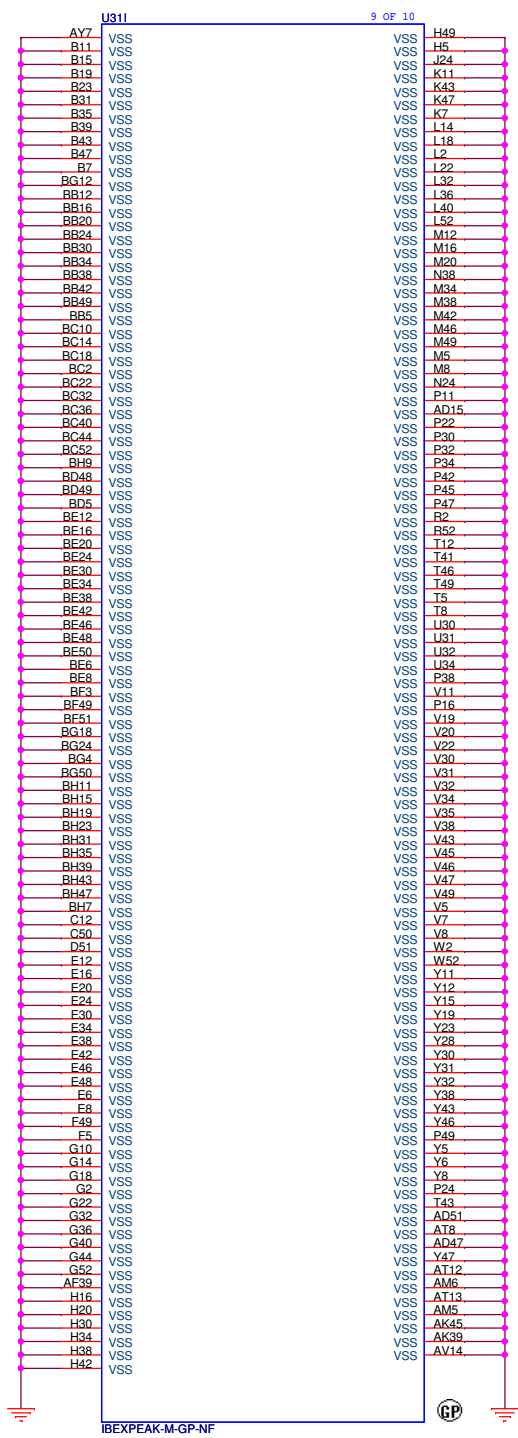
- X B4 VSS_NCTF_8
- X B52 VSS_NCTF_9
- X BH2 VSS_NCTF_16
- X BH52 VSS_NCTF_17
- X D2 VSS_NCTF_28
- X A4 VSS_NCTF#A4
- X A49 VSS_NCTF#A49
- X A5 VSS_NCTF#A5
- X A50 VSS_NCTF#A50
- X A52 VSS_NCTF#A52
- X A53 VSS_NCTF#A53
- X B2 VSS_NCTF#B2
- X B3 VSS_NCTF#B3
- X BE1 VSS_NCTF#BE1
- X BE33 VSS_NCTF#BE33
- X BF1 VSS_NCTF#BF1
- X BE53 VSS_NCTF#BE53
- X BH1 VSS_NCTF#BH1
- X BH53 VSS_NCTF#BH53
- X B11 VSS_NCTF#B11
- X BJ2 VSS_NCTF#BJ2
- X BJ4 VSS_NCTF#BJ4
- X BJ49 VSS_NCTF#BJ49
- X BJ5 VSS_NCTF#BJ5
- X BJ50 VSS_NCTF#BJ50
- X BJ52 VSS_NCTF#BJ52
- X BJ53 VSS_NCTF#BJ53
- X D1 VSS_NCTF#D1
- X D53 VSS_NCTF#D53
- X E1 VSS_NCTF#E1
- X E53 VSS_NCTF#E53

<Core Design>

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

Title PCH(7/8) GPIO/NCTF/RSVD

| | | | |
|-----------------------------------|-----------------|----------------|--------|
| Size A3 | Document Number | Mocha-3 | Rev -2 |
| Date: Wednesday, January 27, 2010 | Sheet 22 | of | 70 |



<Core Design>

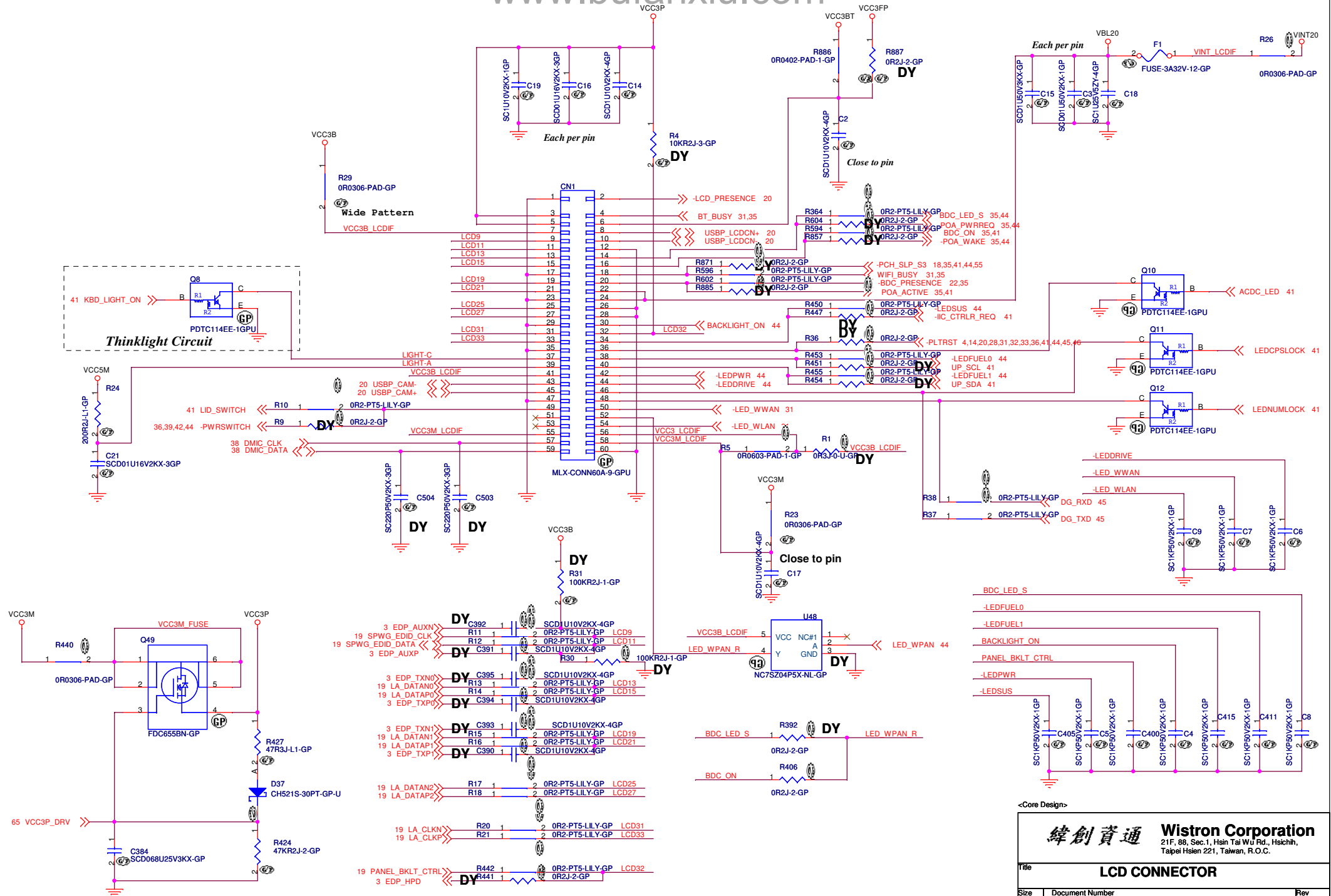
緯創資通 Wistron Corporation
 21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.

Title: **PCH(8/8) :GND**

| | | |
|-----------------------------------|---------------------------------|----------------|
| Size: A3 | Document Number: Mocha-3 | Rev: -2 |
| Date: Wednesday, January 27, 2010 | | Sheet 23 of 70 |

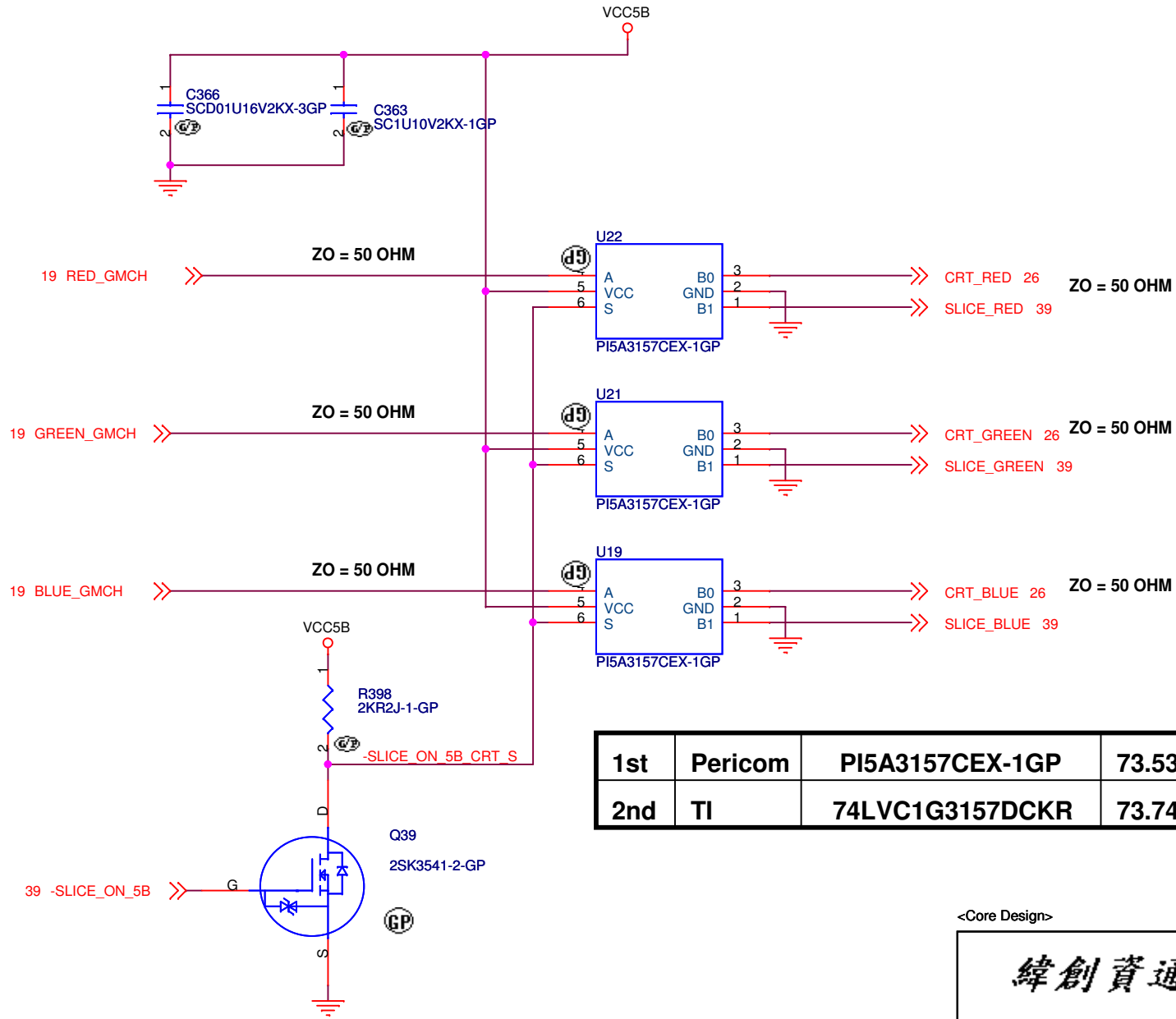
LCD / Inverter Connector

www.buifanxiu.com



<Core Design>

| | | | |
|-----------------------------------|-----------------|--|-------|
| 緯創資通 | | Wistron Corporation | |
| | | 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C. | |
| LCD CONNECTOR | | | |
| File | Document Number | | Rev |
| A3 | Mocha-3 | | -2 |
| Date: Wednesday, January 27, 2010 | Sheet | 24 | of 70 |



| | | | |
|-----|---------|-----------------|--------------|
| 1st | Pericom | PI5A3157CEX-1GP | 73.53157.A0J |
| 2nd | TI | 74LVC1G3157DCKR | 73.74157.CHH |

<Core Design>

緯創資通

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

Title

CRT SELECTOR

Size
A4

Document Number

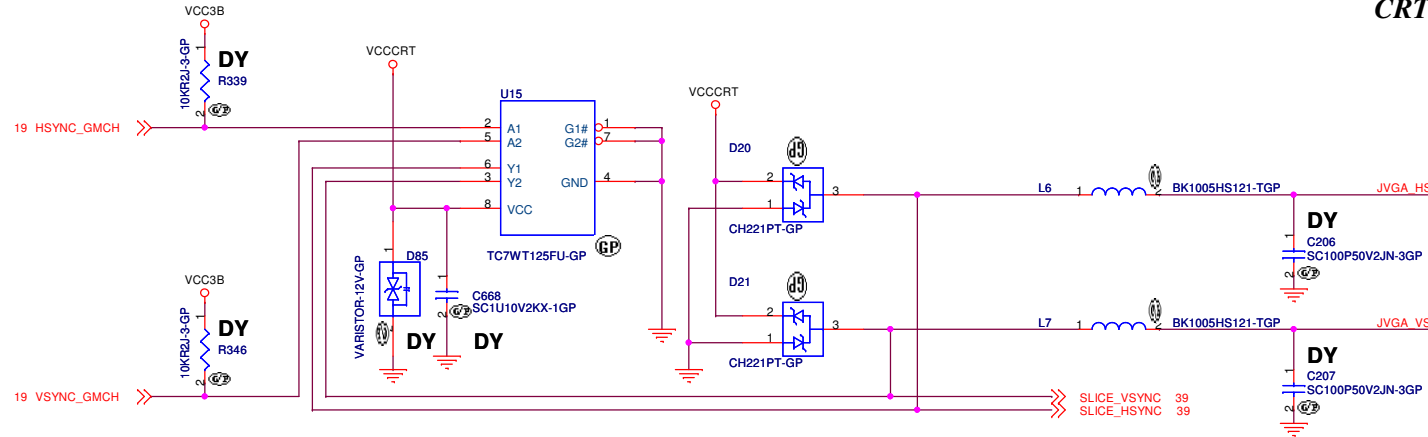
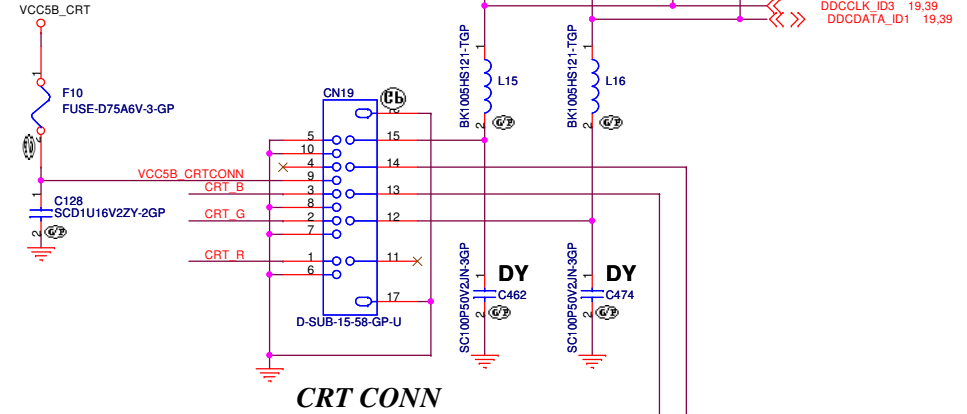
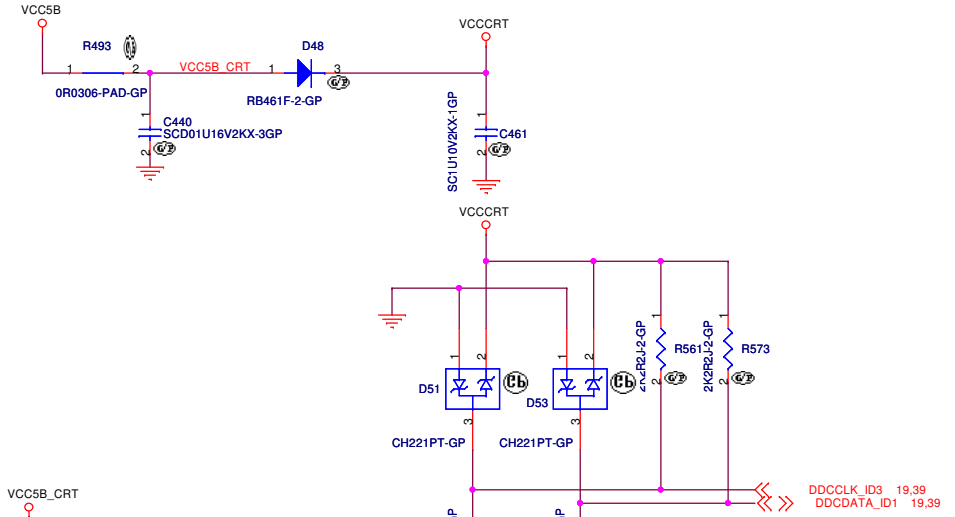
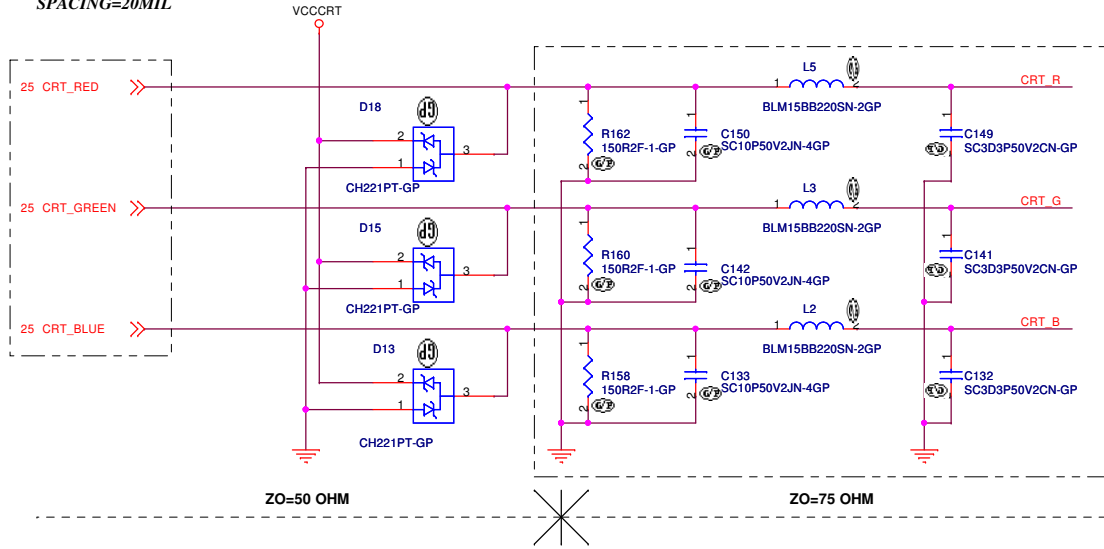
Mocha-3

Rev
-2

Date: Wednesday, January 27, 2010

Sheet 25 of 70

GND GUARDING
EACH SIGNAL WIDTH DEPENDS ON ZO(TRACE IMPEDANCE)
SPACING=20MIL



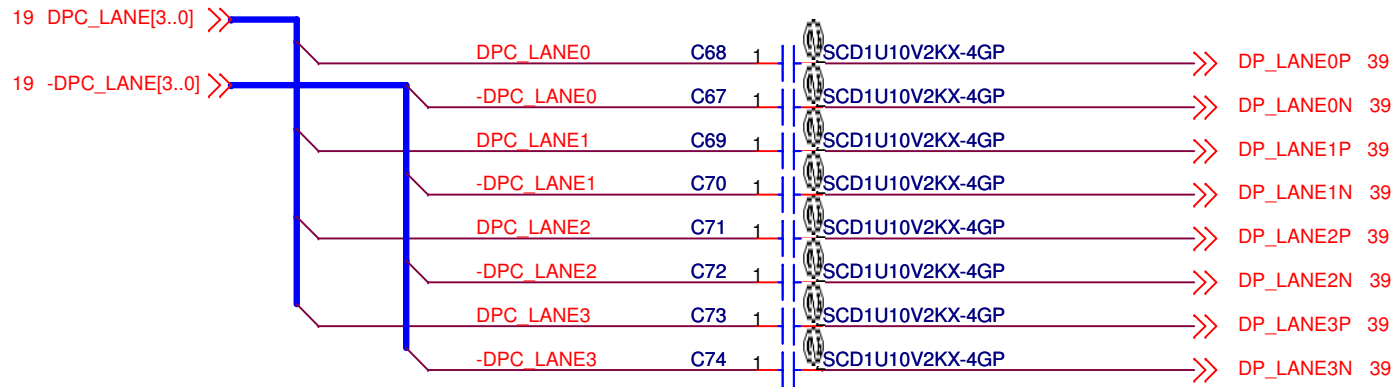
<Core Design>

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

File: **EXT CRT INTERFACE**

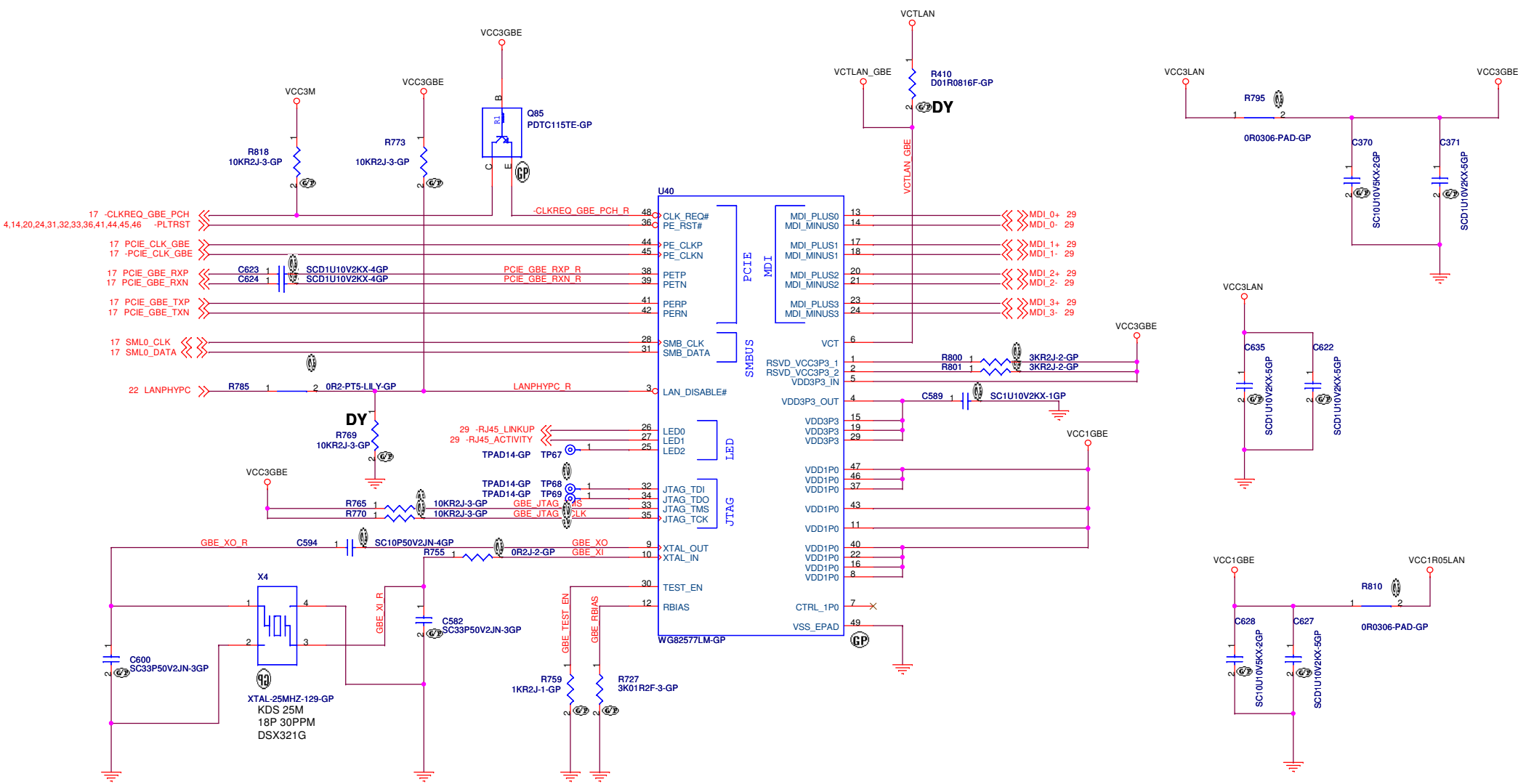
| | | |
|-----------------------------------|-----------------|----------------|
| Size A3 | Document Number | Rev -2 |
| Date: Wednesday, January 27, 2010 | | Sheet 26 of 70 |

System DP: GMCH to SLICE Connector



<Core Design>

| | | | |
|---|-----------------------------------|---|------------------|
|  | | Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C. | |
| Title Display Port AC Coupling | | | |
| Size A | Document Number Mocha-3 | | Rev -2 |
| Date: Wednesday, January 27, 2010 | | Sheet 27 of | 70 |



| 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 |

| AMT | YES | NO |
|-----|---------|---------|
| U40 | 82577LM | 82577LC |

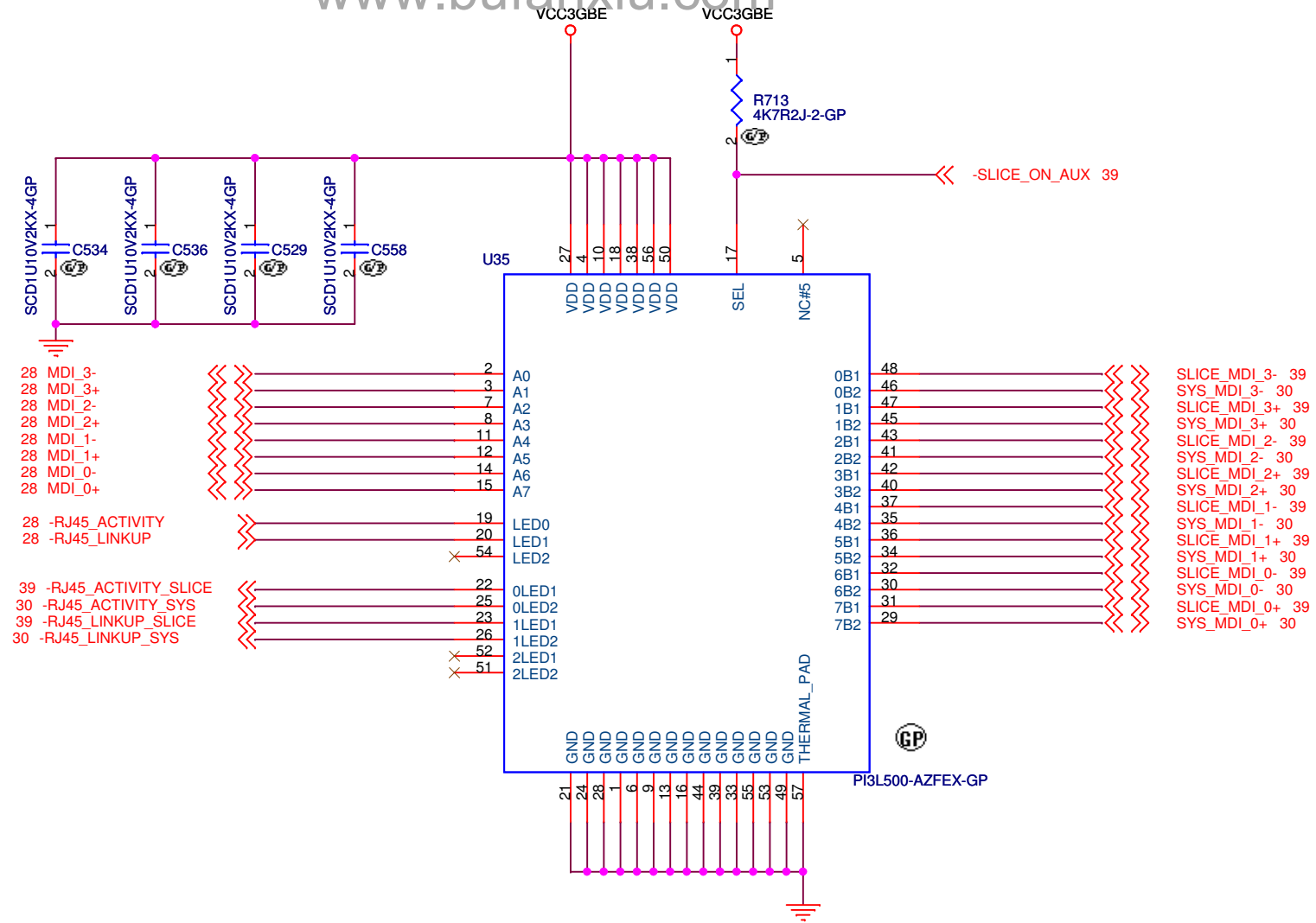
<Core Design>

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

Title: **GBE Hanksville**

Size: A3 | Document Number: **Mocha-3** | Rev: **-2**

Date: Wednesday, January 27, 2010 | Sheet: 28 of 70



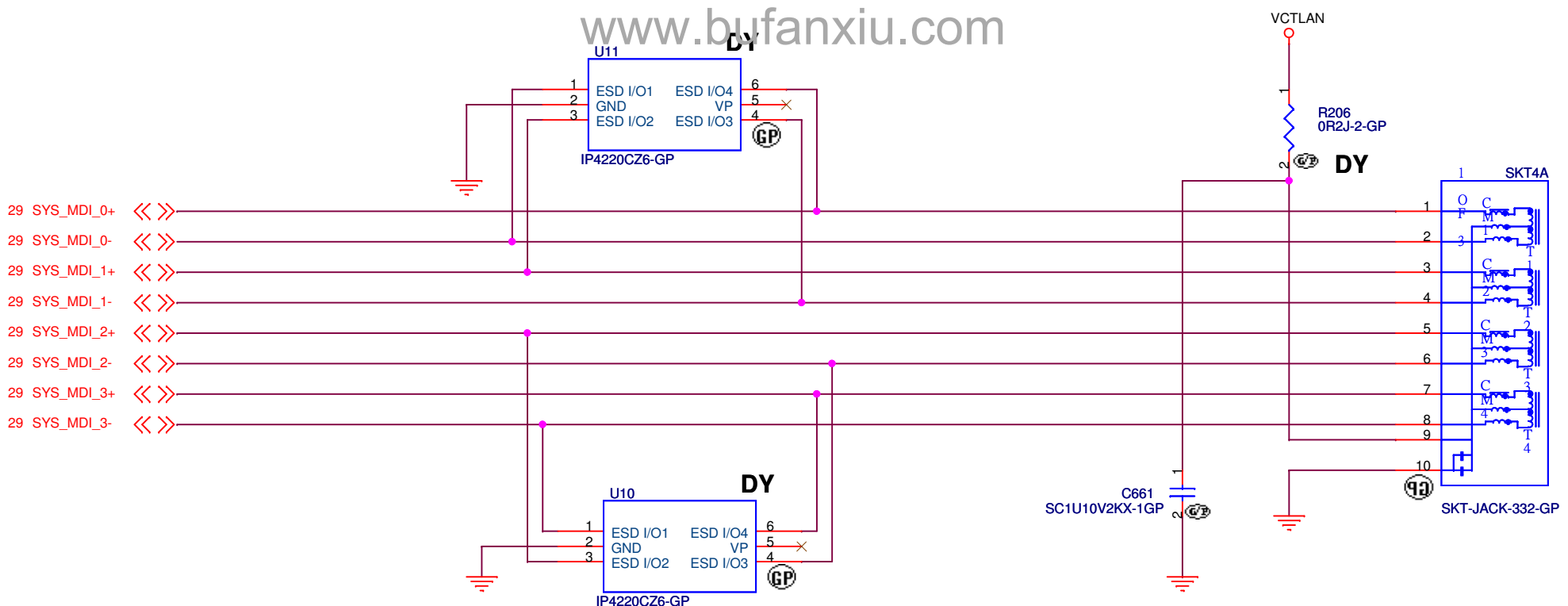
| | | Vendor P/N | Wistron P/N |
|-----|---------|---------------|--------------|
| 1st | Pericom | PI3L500AZFEX | 73.3L500.003 |
| 2nd | TI | TS3L500AERHUR | 73.3L500.A0V |

<Core Design>

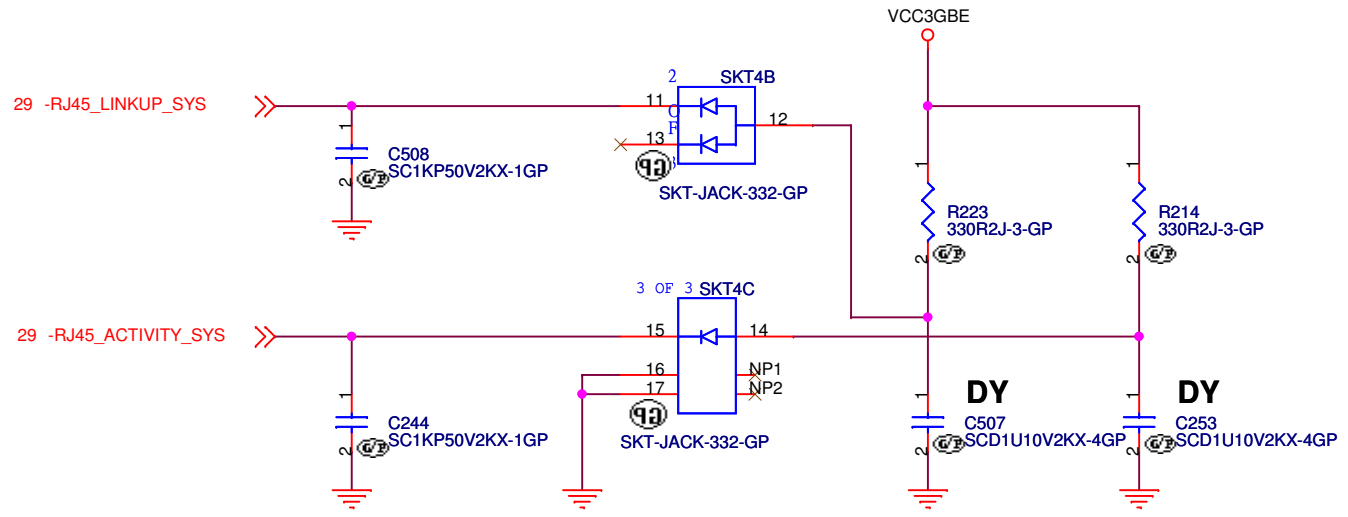

Wistron Corporation
 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
 Taipei Hsien 221, Taiwan, R.O.C.

GBE LAN SW


| | | |
|------------|-----------------------------------|------------------|
| Size A4 | Document Number Mocha-3 | Rev -2 |
|------------|-----------------------------------|------------------|



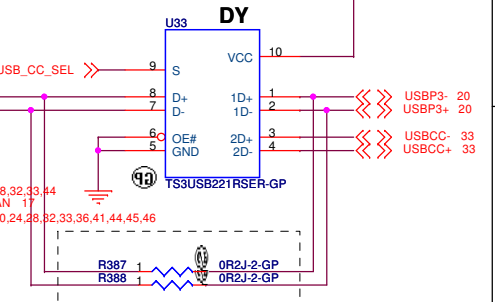
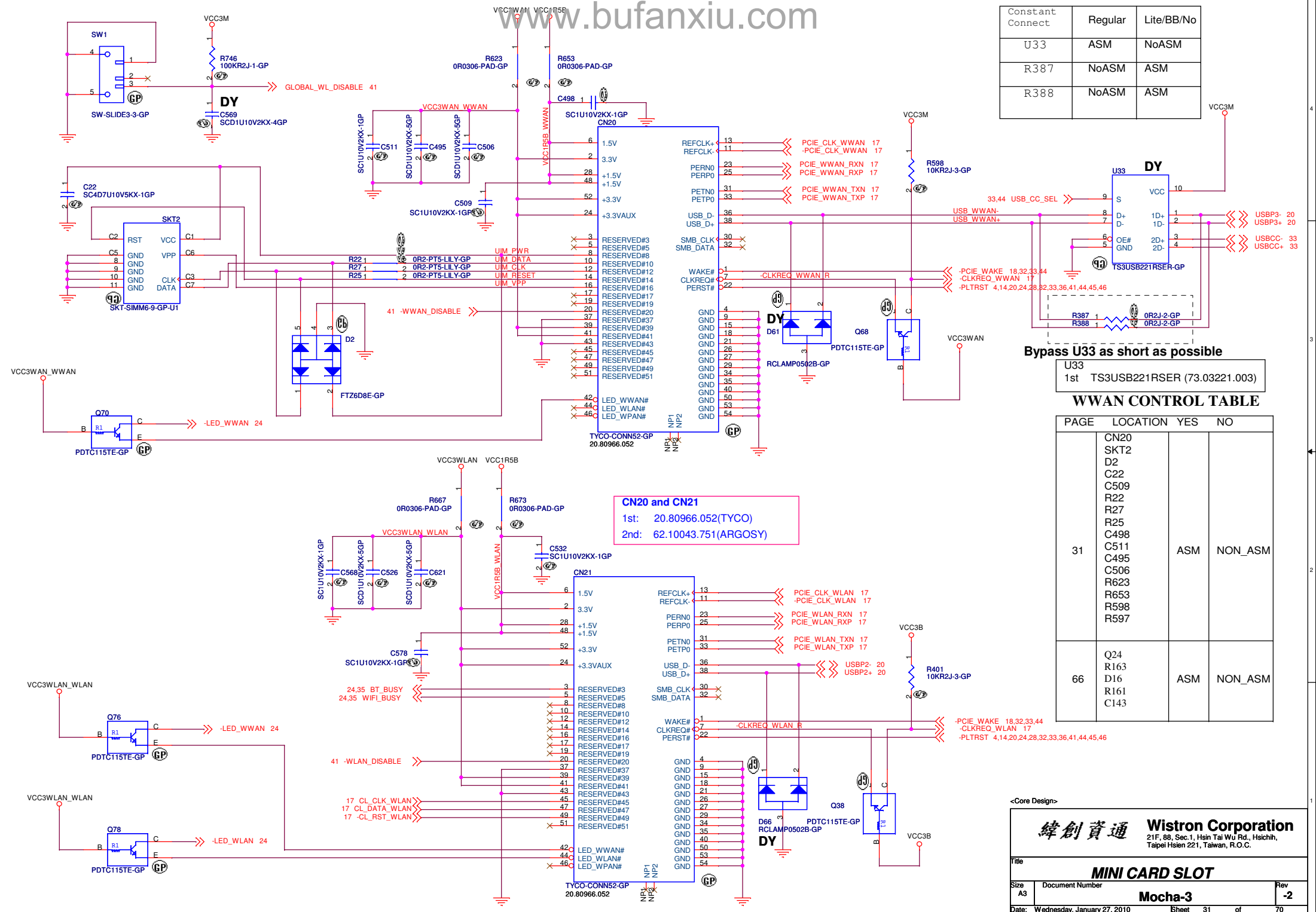
SKT4
 22.10308.021 Tyco
 22.10311.001 Pulse (SVT drop it)
 22.10177.D01 SUYIN



<Core Design>

| | | |
|---|-----------------------------------|----------------|
|  Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C. | | |
| Title RJ45 CONN | | |
| Size A4 | Document Number Mocha-3 | Rev -2 |
| Date: Wednesday, January 27, 2010 | | Sheet 30 of 70 |

| Constant Connect | Regular | Lite/BB/No |
|------------------|---------|------------|
| U33 | ASM | NoASM |
| R387 | NoASM | ASM |
| R388 | NoASM | ASM |



Bypass U33 as short as possible
 U33
 1st TS3USB221RSER (73.03221.003)

WWAN CONTROL TABLE

| PAGE | LOCATION | YES | NO |
|------|----------|-----|---------|
| 31 | CN20 | | |
| | SKT2 | | |
| | D2 | | |
| | C22 | | |
| | C509 | | |
| | R22 | | |
| | R27 | | |
| | R25 | | |
| | C498 | | |
| | C511 | | |
| | C495 | ASM | NON_ASM |
| | C506 | | |
| | R623 | | |
| | R653 | | |
| | R598 | | |
| R597 | | | |
| 66 | Q24 | | |
| | R163 | | |
| | D16 | ASM | NON_ASM |
| | R161 | | |
| | C143 | | |

CN20 and CN21
 1st: 20.80966.052(TYCO)
 2nd: 62.10043.751(ARGOSY)

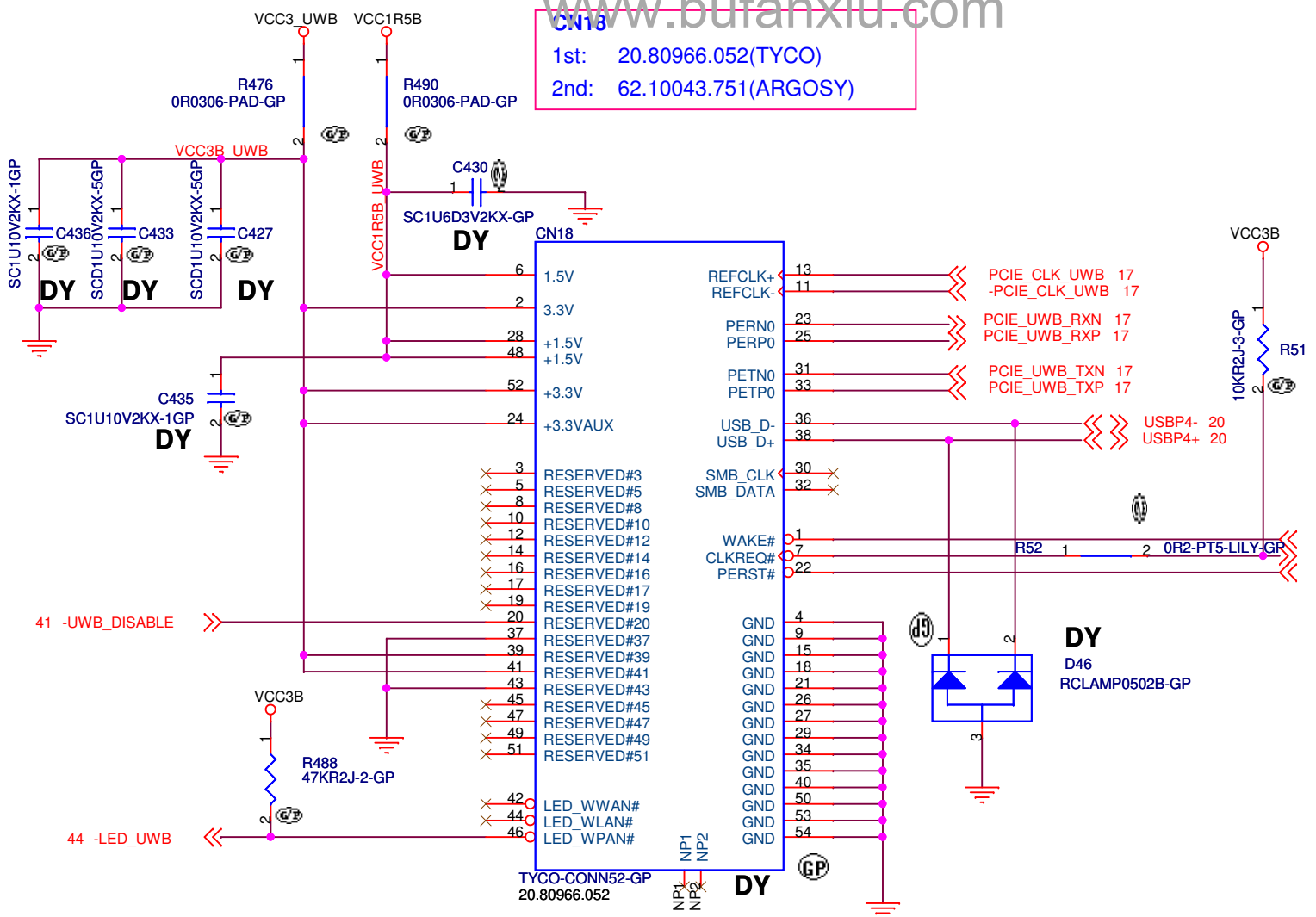
Wistron Corporation
 21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.

MINI CARD SLOT

Mocho-3

Rev -2

Date: Wednesday, January 27, 2010 Sheet 31 of 70

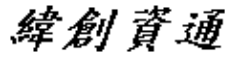


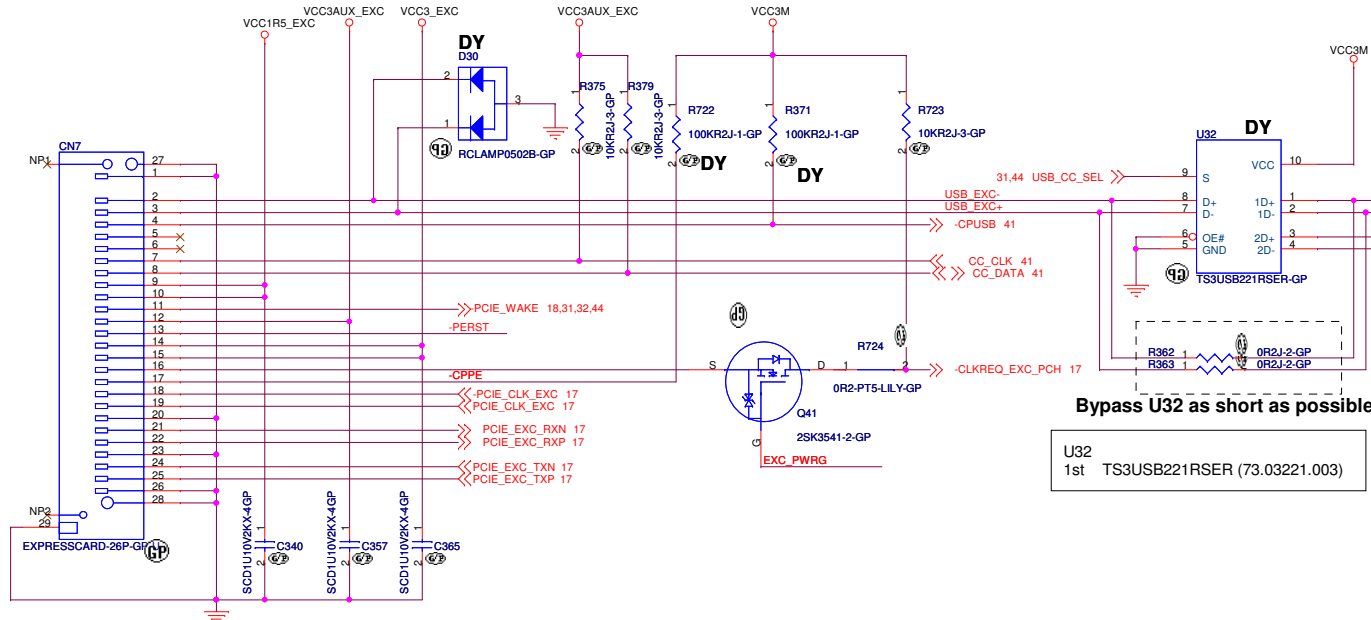
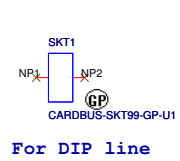
CN18
 1st: 20.80966.052(TYCO)
 2nd: 62.10043.751(ARGOSY)

| UWB | YES | NO |
|------|-----|-----|
| CN18 | ASM | DY |
| C427 | ASM | DY |
| C433 | ASM | DY |
| C436 | ASM | DY |
| C430 | ASM | DY |
| C435 | ASM | DY |
| D46 | DY | DY |
| R51 | ASM | ASM |
| R52 | ASM | DY |
| R488 | ASM | ASM |
| R62 | ASM | DY |

-PCIE_WAKE 18,31,33,44
 -CLKREQ_UWB 17
 -PLTRST 4,14,20,24,28,31,33,36,41,44,45,46

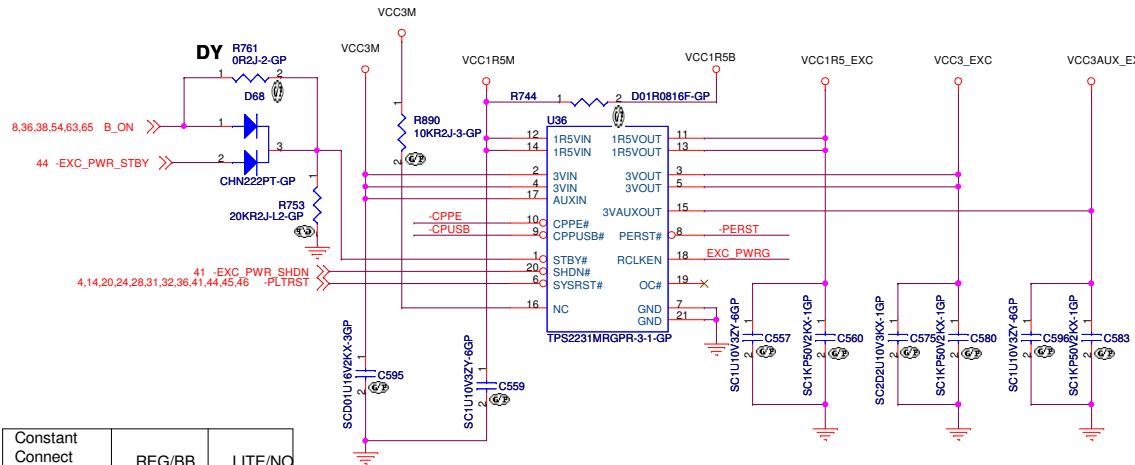
<Core Design>

| | |
|---|-----------------------------------|
|  Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C. | |
| MINI CARD SLOT 2 | |
| Size A4 | Document Number Mocha-3 |
| Date Wednesday, January 27, 2010 | Rev -2 |
| Sheet 32 of 70 | |



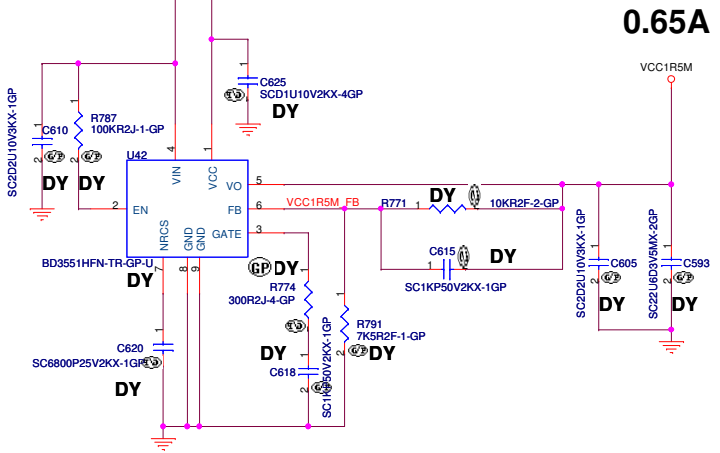
| Constant Connect | REG | LITE/BB/NO |
|------------------|-------|------------|
| U32 | ASM | NoASM |
| R362 | NoASM | ASM |
| R363 | NoASM | ASM |

| Constant Connect | REG/BB | REG/BB | LITE/NO |
|------------------|-----------------------------|---------------------------|---------------------------|
| U36 | BD4156MUV TPS2231MRGPR-3 | BD4156MUV TPS2231MRGPR | BD4156MUV TPS2231MRGPR |
| R890 | ASM | DY | DY |
| R744 | ASM | DY | ASM |
| U42 | DY | ASM | DY |
| R787 | DY | ASM | DY |
| C610 | DY | ASM | DY |
| C625 | DY | ASM | DY |
| C620 | DY | ASM | DY |
| R774 | DY | DY | DY |
| C618 | DY | DY | DY |
| R771 | DY | ASM | DY |
| R791 | DY | ASM | DY |
| C615 | DY | DY | DY |
| C605 | DY | ASM | DY |
| C593 | DY | ASM | DY |



| Constant Connect | REG/BB | LITE/NO |
|------------------|--------|---------|
| D68 | ASM | NoASM |
| R753 | ASM | NoASM |
| R761 | NoASM | ASM |

| | | U36 | Wistron P/N |
|-----|------|---------------|--------------|
| 1st | Ti | TPS2231MRGP-3 | 74.02231.D73 |
| 2nd | Rohm | BD4156MUV-E2 | 74.04156.07T |
| 3rd | | | |



<Core Design>

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

Title: **Express Card Slot/PWR**

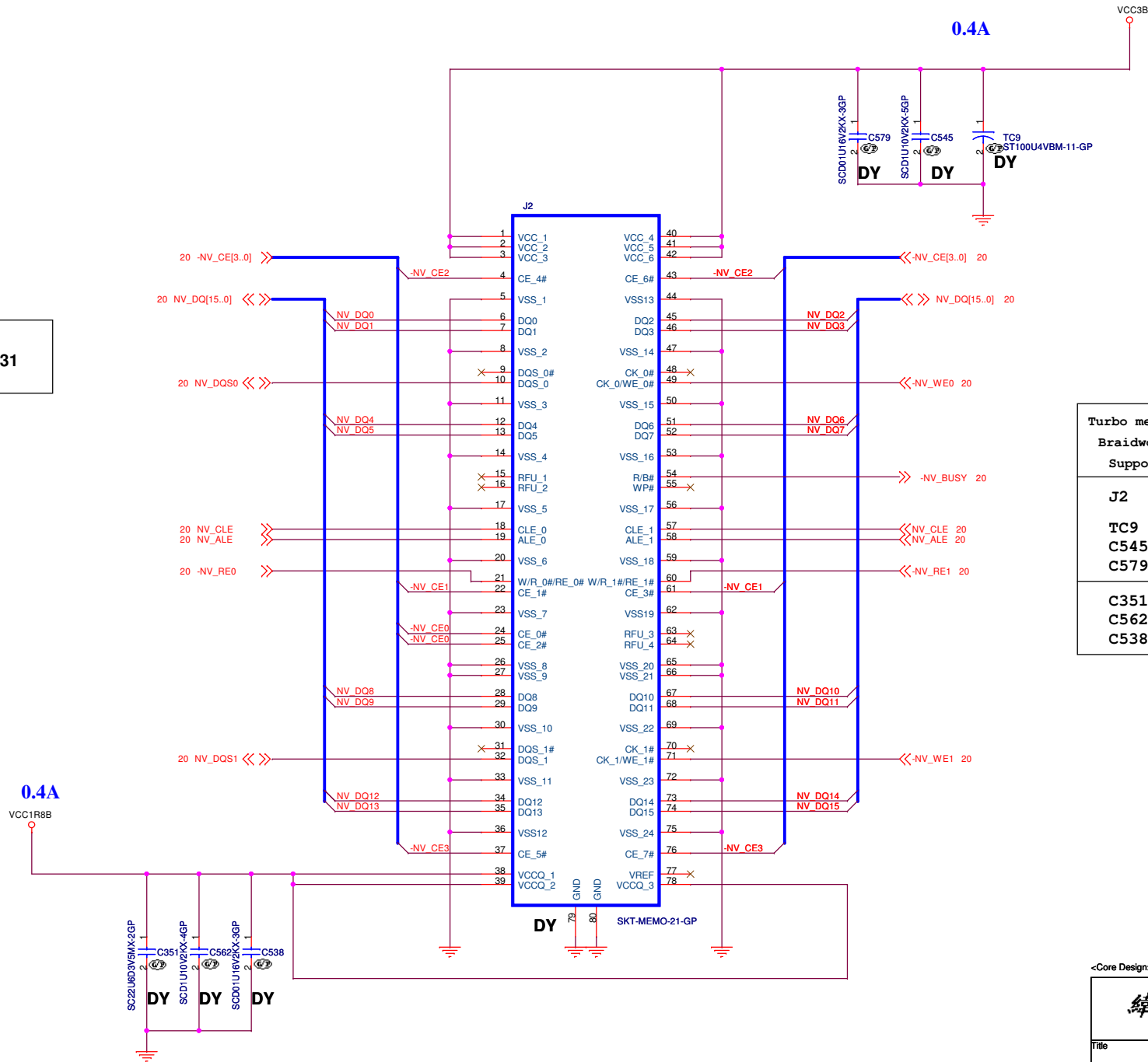
Size: Custom Document Number: Mocha-3 Rev: -2

Date: Wednesday, January 27, 2010 Sheet: 33 of 70

J2
62.10034.331

0.4A
VCC1R8B

0.4A
VCC3B



| Turbo memory Braidwood Support | YES | NO |
|--------------------------------|-----|----|
| J2 | ASM | DY |
| TC9 | ASM | DY |
| C545 | DY | DY |
| C579 | DY | DY |
| C351 | ASM | DY |
| C562 | DY | DY |
| C538 | DY | DY |

<Core Design>

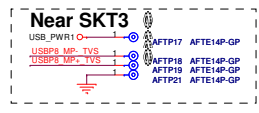
緯創資通 Wistron Corporation
21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.

Title: **Braidwood ONFI Connector**

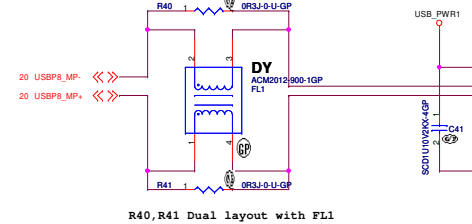
| | | |
|----------|---------------------------------|----------------|
| Size: A3 | Document Number: Mocha-3 | Rev: -2 |
|----------|---------------------------------|----------------|

Date: Wednesday, January 27, 2010 Sheet 34 of 70

Del these circuits for Caramel-3

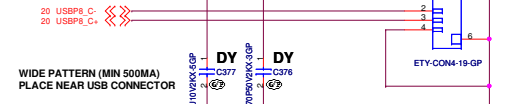


WIDE PATTERN (MIN 500MA)
PLACE NEAR USB CONNECTOR

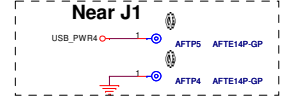


R40, R41 Dual layout with FL1

WIDE PATTERN (MIN 500MA)
PLACE NEAR USB CONNECTOR

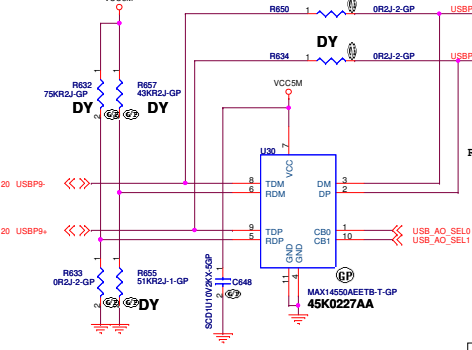


For Caramel



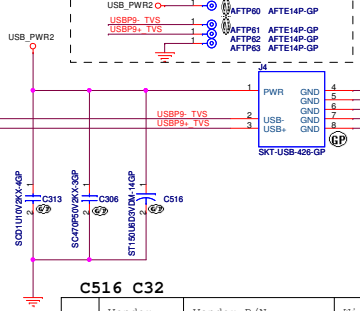
For Caramel

WIDE PATTERN (MIN 500MA)
PLACE NEAR USB CONNECTOR



R645, R640 Dual layout with FL2

WIDE PATTERN (MIN 500MA)
PLACE NEAR USB CONNECTOR



| | Vendor | Vendor P/N | Wistron P/N |
|-----|---------|-------------|--------------------------|
| 1st | NXP | IP4223C26 | 83.42236.0AE |
| 2nd | SEMTECH | SRV05-4.TCT | 83.00005.BAE / 41U5451AA |
| 3rd | AOS | AO28904CIL | 83.08904.0AE |

| INT DIVIDER | EXT DIVIDER |
|-------------|-------------|
| R632 DY | 75K |
| R633 0 | 51K |
| R657 DY | 43K |
| R655 DY | 51K |

| CB1 (USB_A0_SEL1) | CB0 (USB_A0_SEL0) | Function Mode |
|-------------------|-------------------|----------------|
| Low | Low | Auto |
| Low | High | Force Resistor |
| High | Low | Force Short |
| High | High | Pass Through |

U34 (Need the discharge function)

| | Vendor | Vendor P/N | Wistron P/N |
|-----|--------|-----------------|--------------|
| 1st | TI | TPS2065DGN-1-GP | 74.02065.A79 |
| 2nd | Rohm | BD8014FVJ | 74.08014.07G |

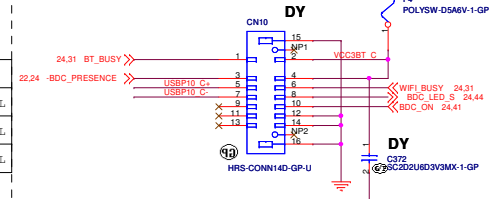
C516 C32

| | Vendor | Vendor P/N | Wistron P/N |
|-----|-----------|----------------------|--------------|
| 1st | NEC/TOKIN | TLP5LV03157M(40)12RE | 77.C1571.02L |
| 2nd | SANYO | 6TPC150M | 77.21571.03L |
| 3rd | PANASONIC | EEFCX0J151R | 79.15710.2BL |

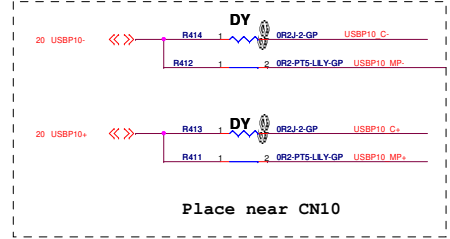
U23 U24

| | Vendor | Vendor P/N | Wistron P/N |
|-----|--------|-----------------|--------------|
| 1st | TI | TPS2065DGN-1-GP | 74.02065.A79 |
| 2nd | TI | TPS2065DGN-GP | 41A1229AA |
| 3rd | Rohm | BD8014FVJ | 74.08014.07G |

Bluetooth Module



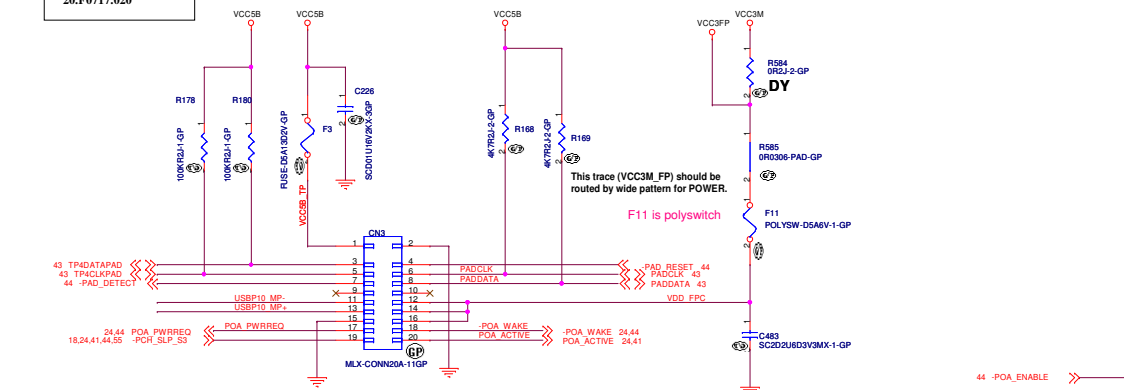
For Caramel



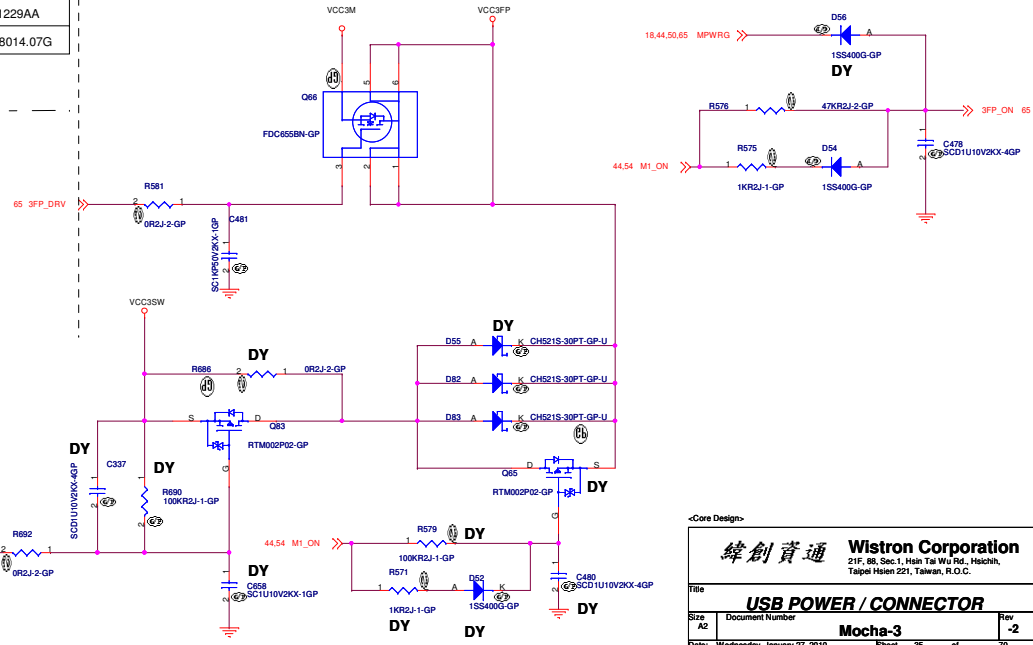
Place near CN10

Fingerprint Reader / Touch PAD

CN3 MOLEX 54722-0204 20.F0717.020



Please put CN3 on TOP side



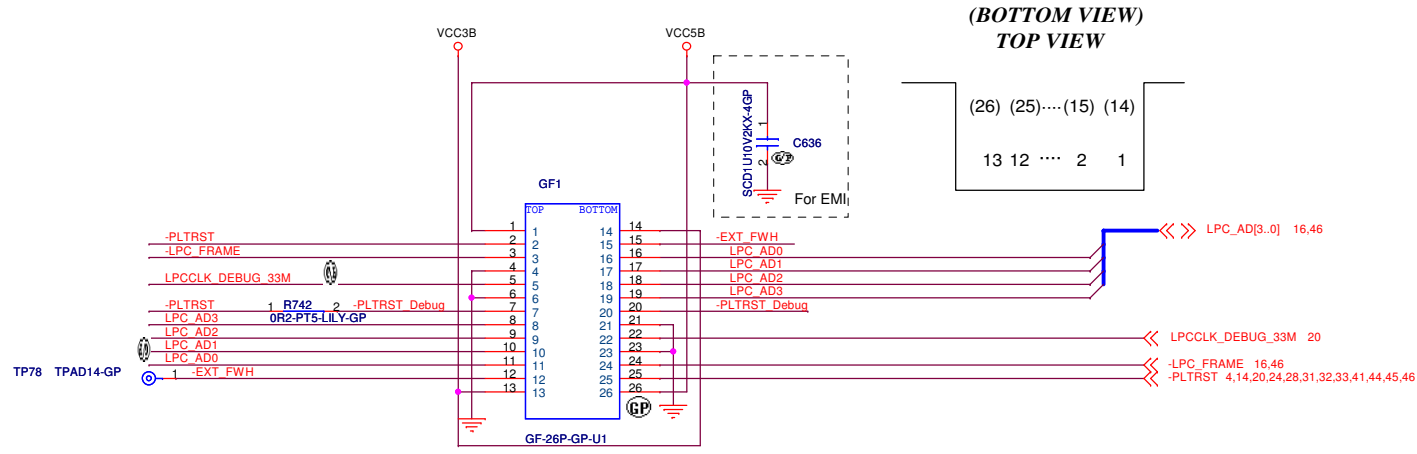
緯創資通 Wistron Corporation
 21F, 88, Sec.1, Hsien Tai Wu Rd., Hsuehchi, Taipei Hsien 221, Taiwan, R.O.C.

File: **USB POWER / CONNECTOR**

Size: A2 Document Number: **Mocha-3** Rev: -2

Date: Wednesday, January 27, 2010 Sheet: 35 of 70

Golden Finger for Debug Board

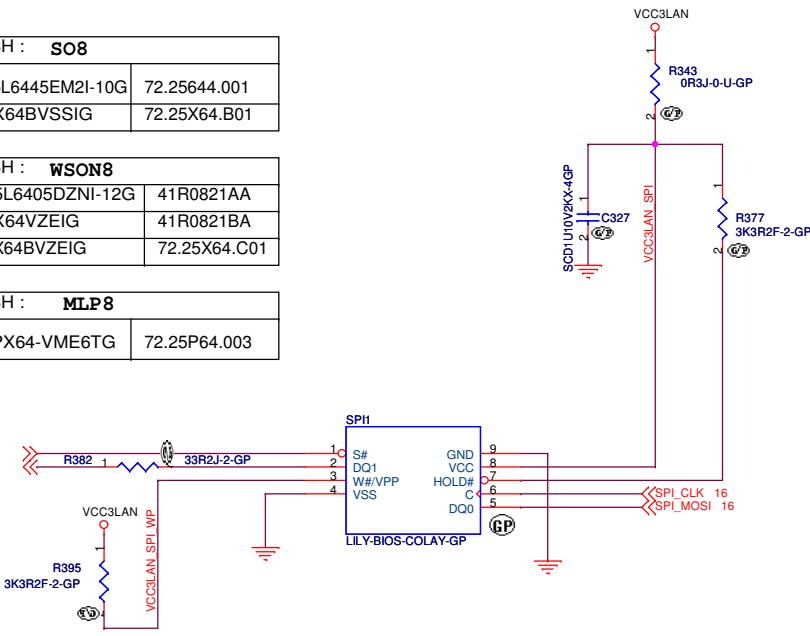


| | | |
|-------------------------------|-------------------|--------------|
| 64Mbit SPI FLASH : SO8 | | |
| MXIC | MX25L6445EM2I-10G | 72.25644.001 |
| Winbond | W25X64BVSSIG | 72.25X64.B01 |

| | | |
|---------------------------------|-------------------|--------------|
| 64Mbit SPI FLASH : WSON8 | | |
| MXIC | MX25L6405DZNI-12G | 41R0821AA |
| Winbond | W25X64VZEIG | 41R0821BA |
| Winbond | W25X64BVZEIG | 72.25X64.C01 |

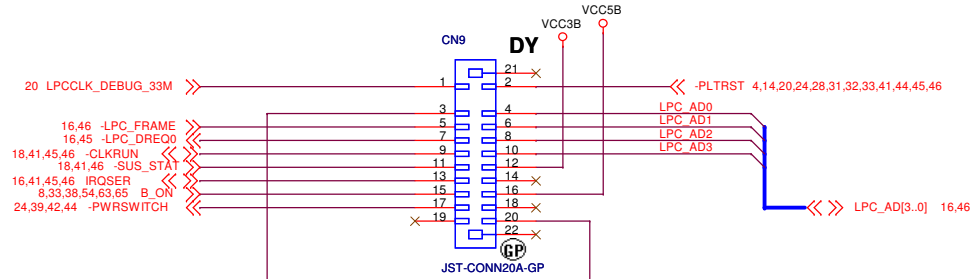
| | | |
|--------------------------------|----------------|--------------|
| 64Mbit SPI FLASH : MLP8 | | |
| Numonyx | M25PX64-VME6TG | 72.25P64.003 |

| ICP Enable | |
|------------|-----------|
| R343 | RB520S-30 |
| R666 | 470 5% |
| R669 | 470 5% |
| R668 | 470 5% |
| R382 | 470 5% |



SO8 and WSON8 are both supported!

Debug card connector



Put "easy-to -access" place

| Debug | Enable | Disable |
|-------|--------|---------|
| CN9 | ASM | DY |
| R638 | ASM | DY |

| SF 100 PIN HEADER INTERFACE (Top View) | | | |
|--|-------------|--------|-----------|
| 1 | VCC R343.2 | GND | GND 2 |
| 3 | CS# R666.1 | R669.1 | CLK 4 |
| 5 | MISO R382.2 | R668.1 | MOSI 6 |
| 7 | (KEY) N/A | N/A | (RESET) 8 |

<Core Design>

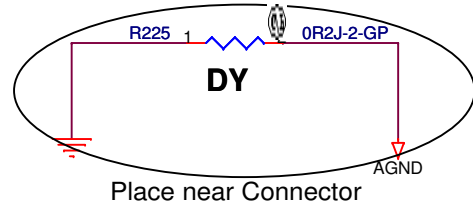
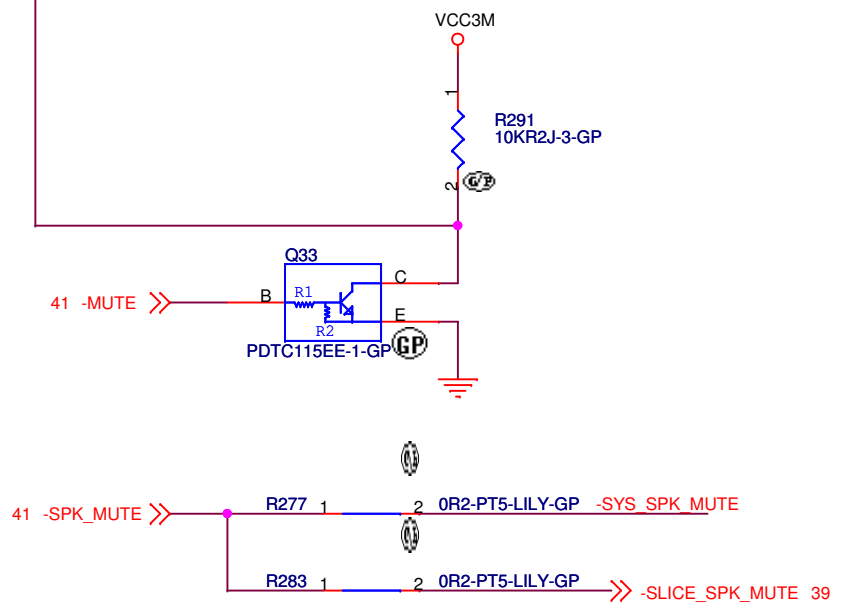
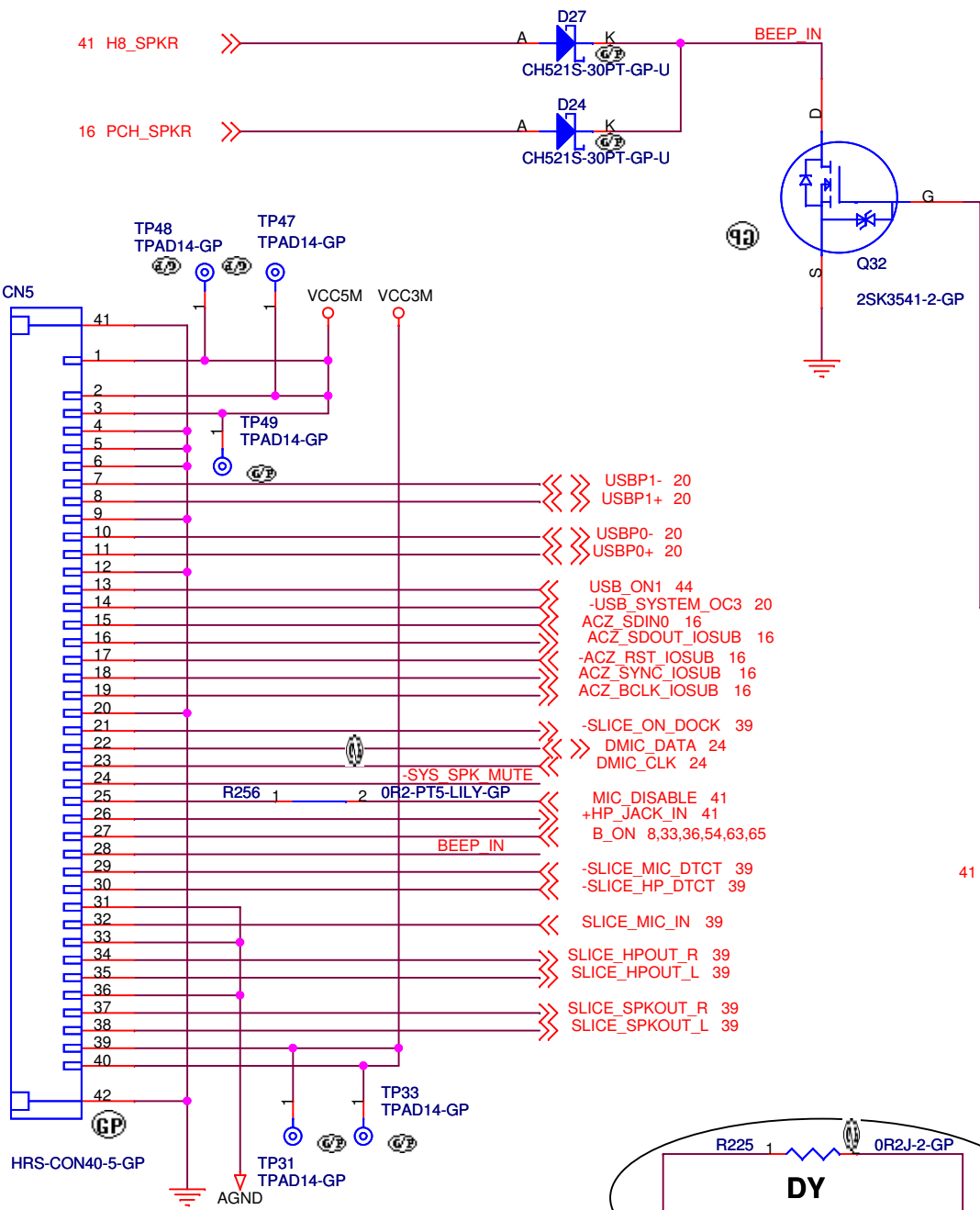
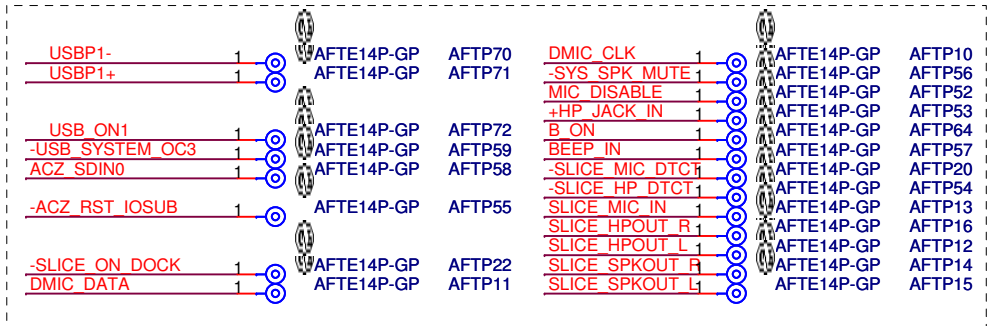
緯創資通 Wistron Corporation
21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.

Title: **SPI&LPC debug card**

Size A3 Document Number: **Mocho-3** Rev: **-2**

Date: Wednesday, January 27, 2010 Sheet 36 of 70

Near CN5

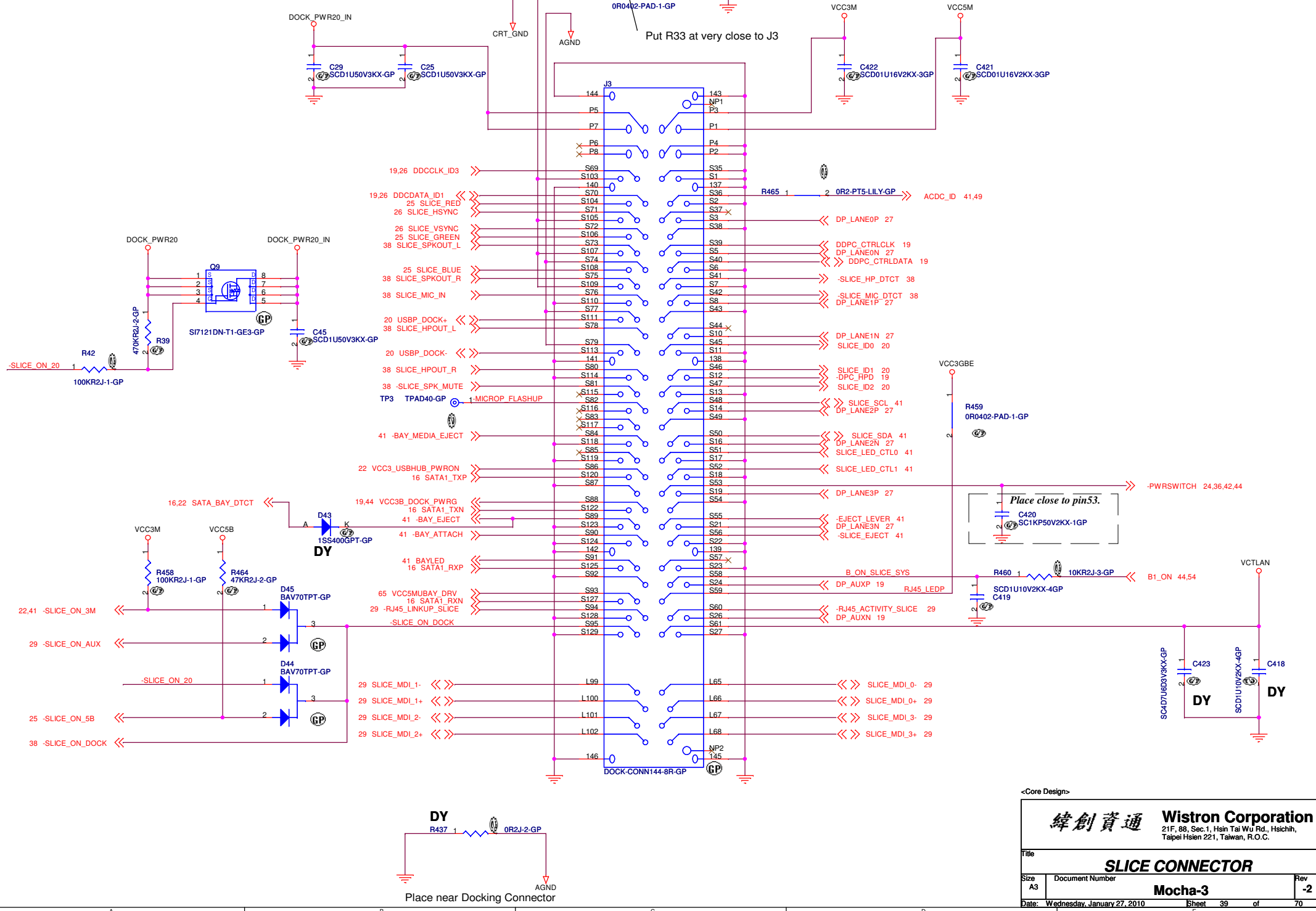


<Core Design>

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

Title **SUB-CARD CONNECTOR**

Size A4 Document Number **Mocha-3** Rev **-2**



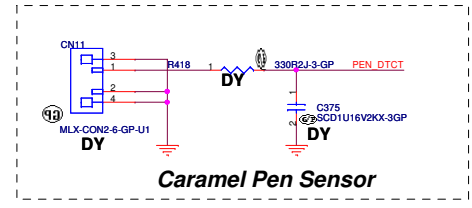
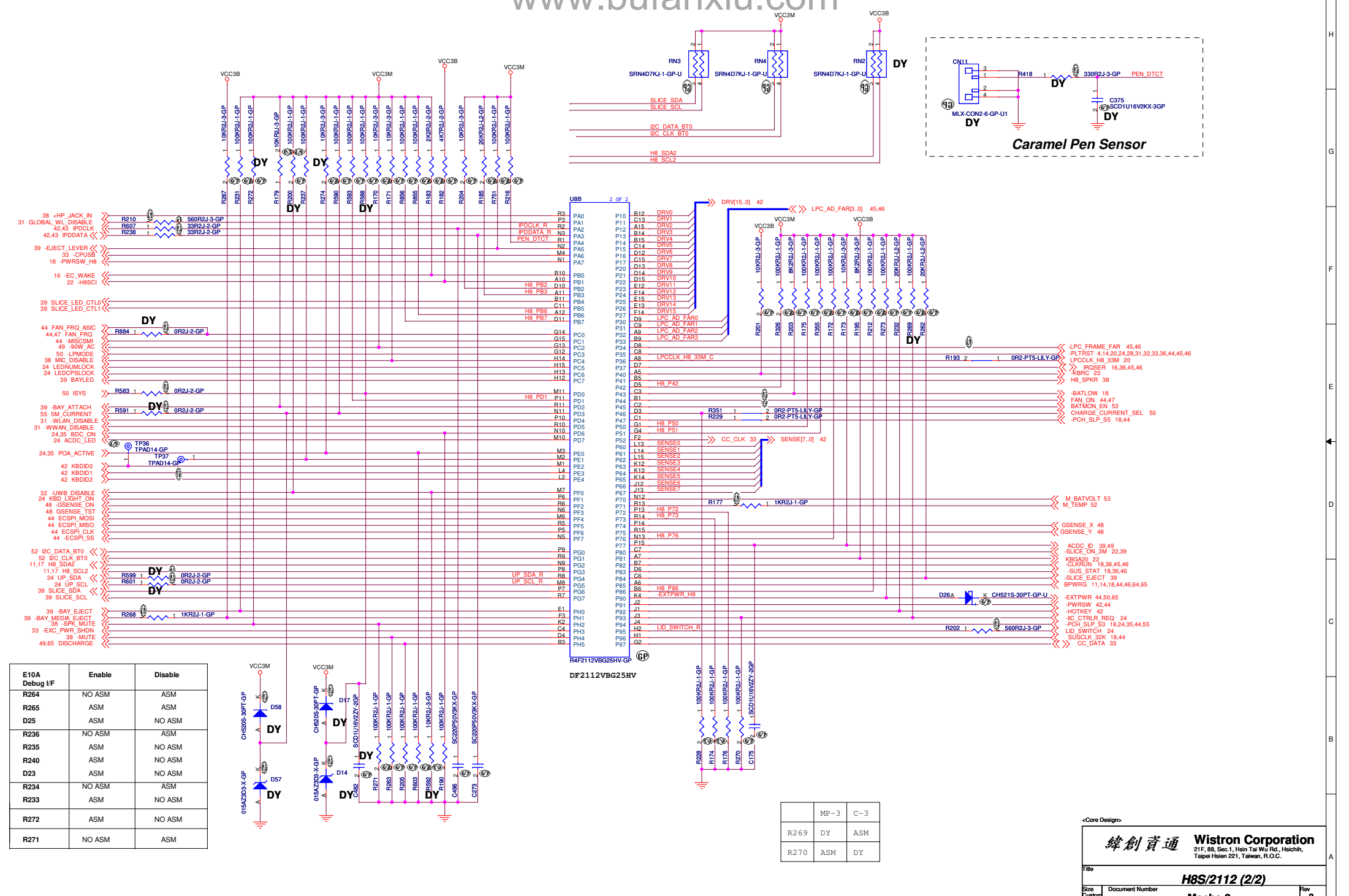
<Core Design>

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

Title: **SLICE CONNECTOR**

| | | |
|-----------------------------------|-----------------|----------------|
| Size A3 | Document Number | Rev -2 |
| Date: Wednesday, January 27, 2010 | | Sheet 39 of 70 |

Mocha-3



| E10A Debug I/F | Enable | Disable |
|----------------|--------|---------|
| R264 | NO ASM | ASM |
| R265 | ASM | ASM |
| D25 | ASM | NO ASM |
| R236 | NO ASM | ASM |
| R235 | ASM | NO ASM |
| R240 | ASM | NO ASM |
| R243 | ASM | NO ASM |
| R234 | NO ASM | ASM |
| R233 | ASM | NO ASM |
| R272 | ASM | NO ASM |
| R271 | NO ASM | ASM |

| | | |
|------|------|-----|
| | MP-3 | C-3 |
| R269 | DY | ASM |
| R270 | ASM | DY |

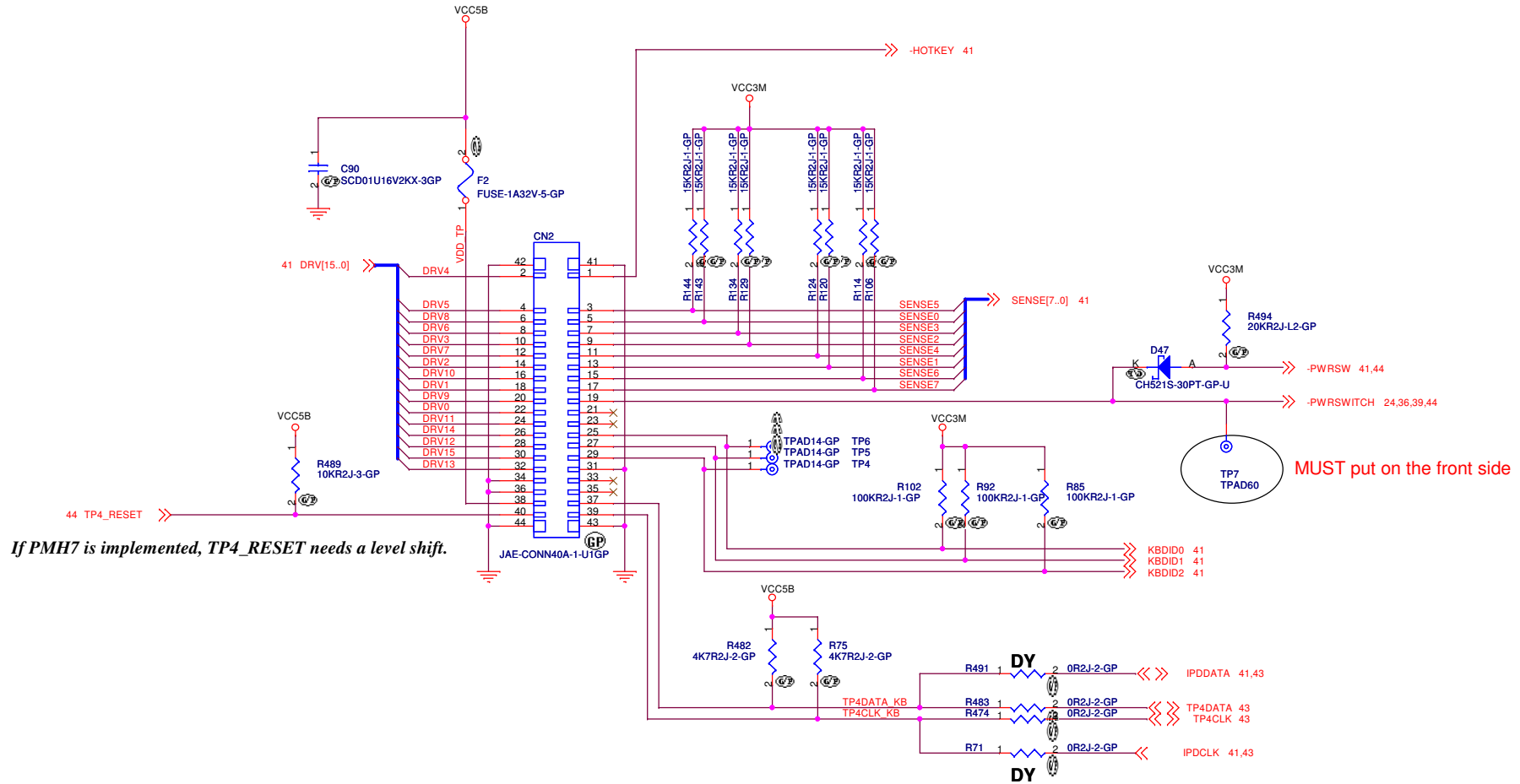
Wistron Corporation
 21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.

H8S/2112 (2/2)

Document Number: **Mocha-3**

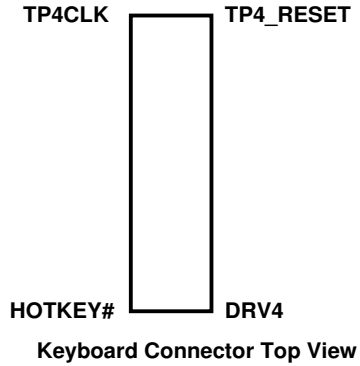
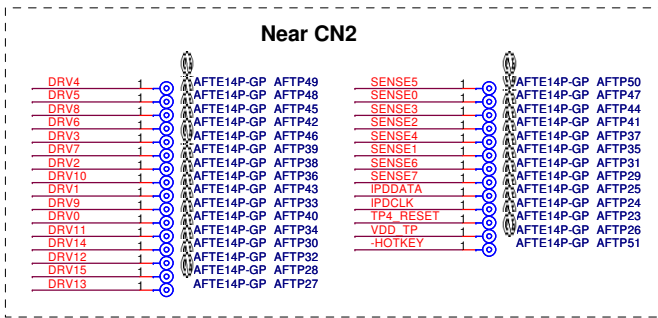
Date: Wednesday, January 27, 2010 Sheet 41 of 70

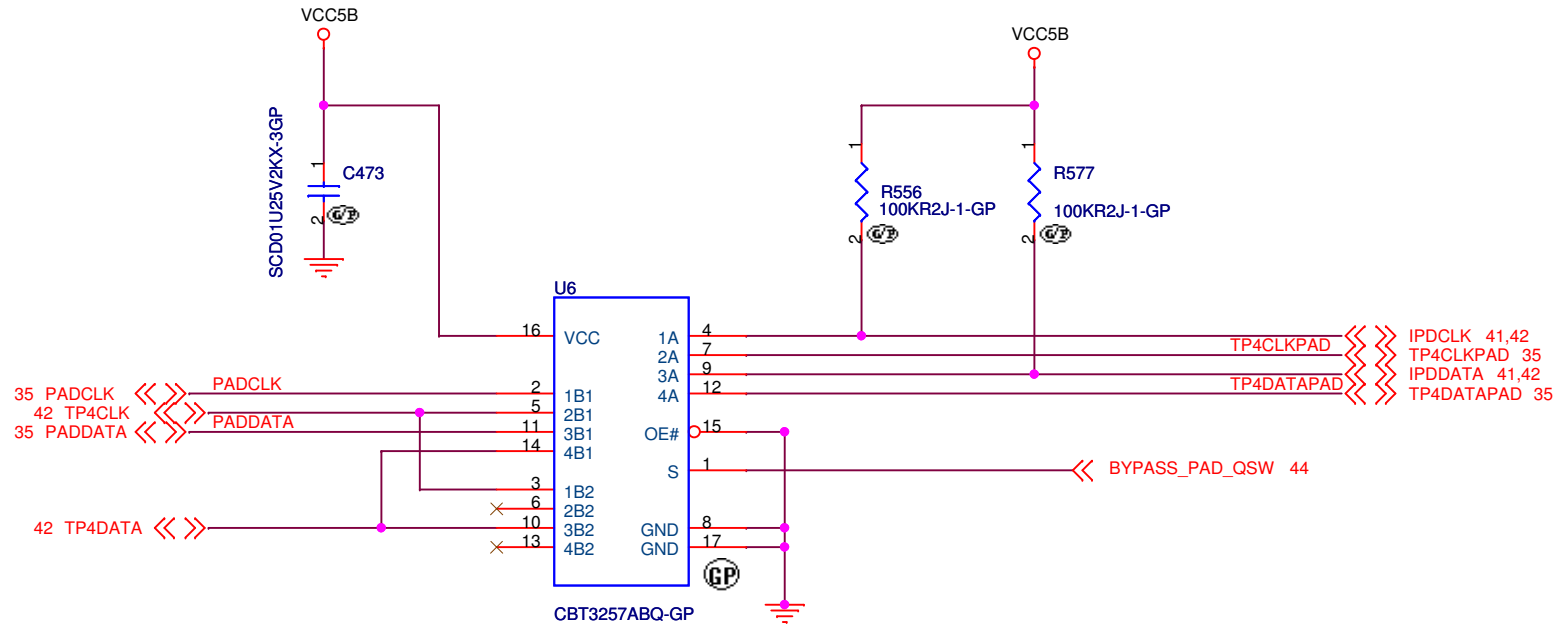
Keyboard Connector



MUST put on the front side

If PMH7 is implemented, TP4_RESET needs a level shift.





<Core Design>

緯創資通

Wistron Corporation

21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title **TOUCH PAD CONNECTOR**

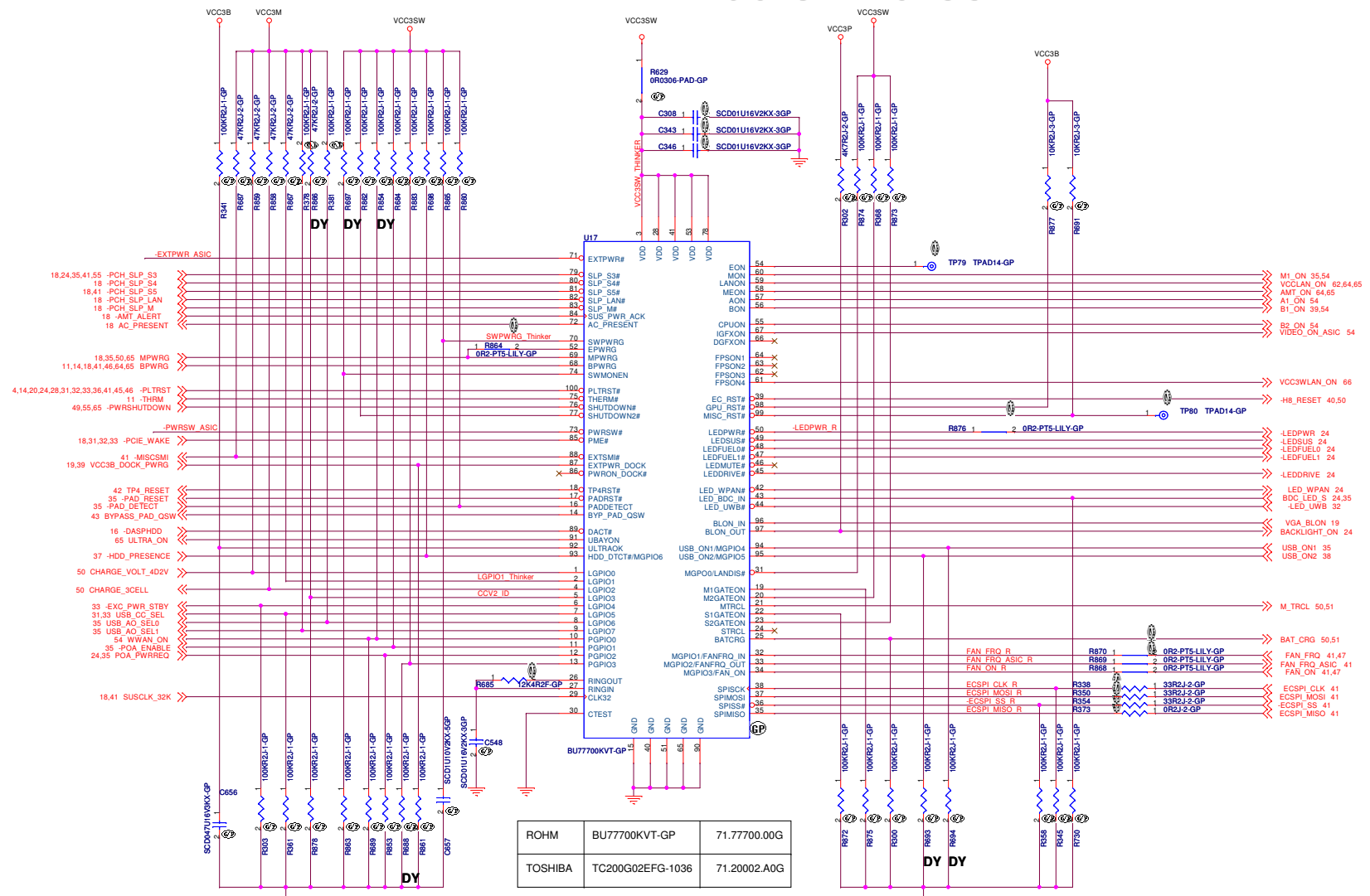
Size A4 Document Number

Mocha-3

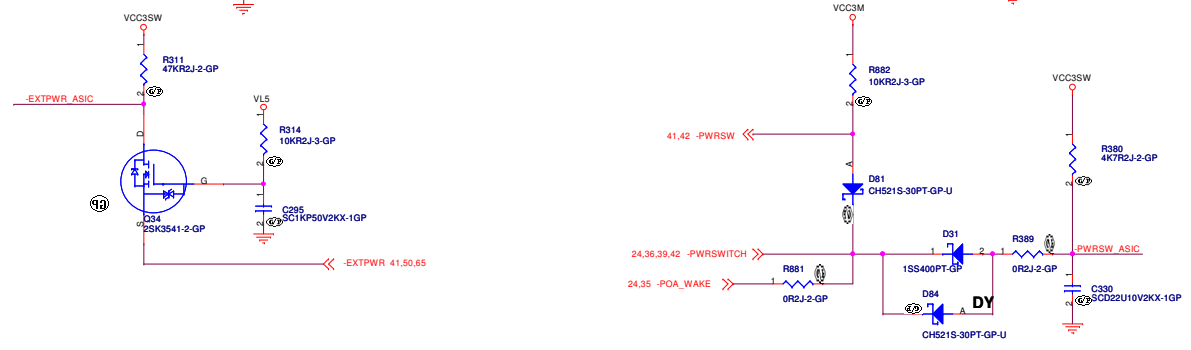
Rev **-2**

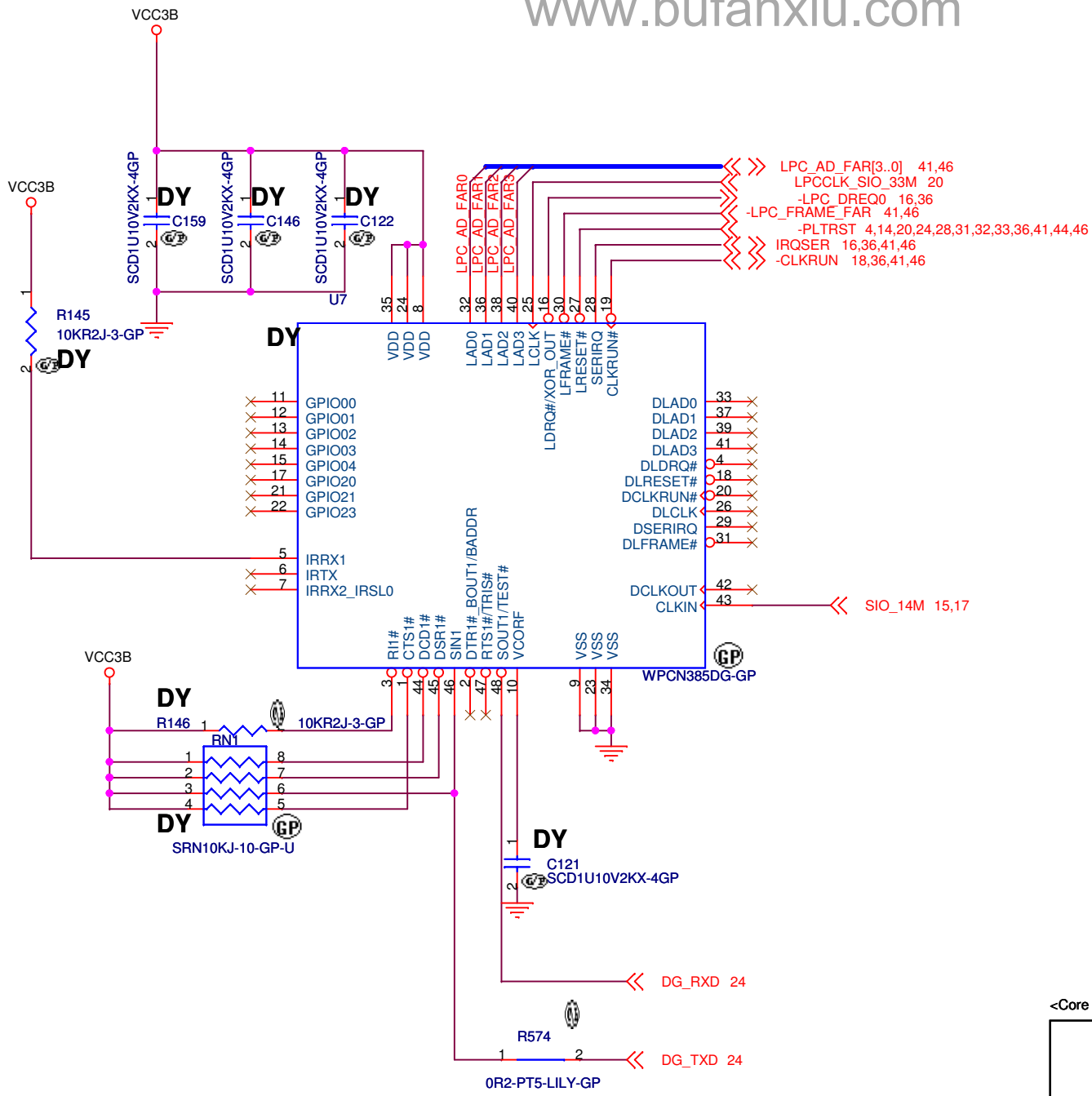
Date: Wednesday, January 27, 2010

Sheet 43 of 70



| | | |
|---------|------------------|--------------|
| ROHM | BU77700KV-GP | 71.77700.00G |
| TOSHIBA | TC200G02EFG-1036 | 71.20002.A0G |

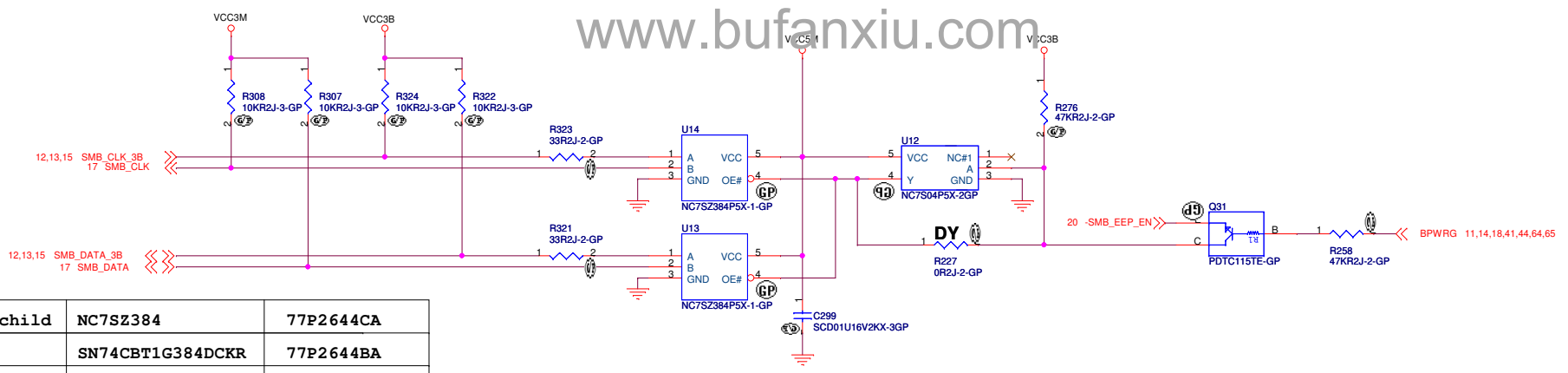




| | MP | Caramel |
|------|----|---------|
| U7 | DY | ASM |
| C159 | DY | ASM |
| C146 | DY | ASM |
| C122 | DY | ASM |
| R145 | DY | ASM |
| R146 | DY | ASM |
| RN1 | DY | ASM |
| R574 | DY | ASM |
| C121 | DY | ASM |

<Core Design>

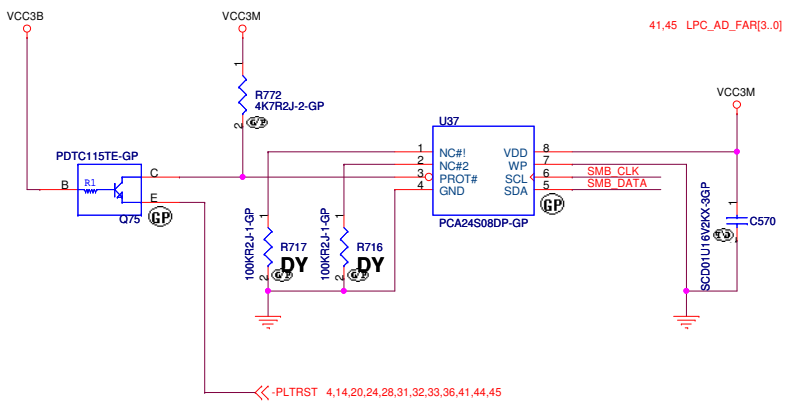
| | |
|---|--|
| Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C. | |
| Title WPCN385SDG | |
| Size A4 | Document Number Mocha-3 |
| Date: Wednesday, January 27, 2010 | Rev -2 |
| Sheet 45 of 70 | |



U13, U14

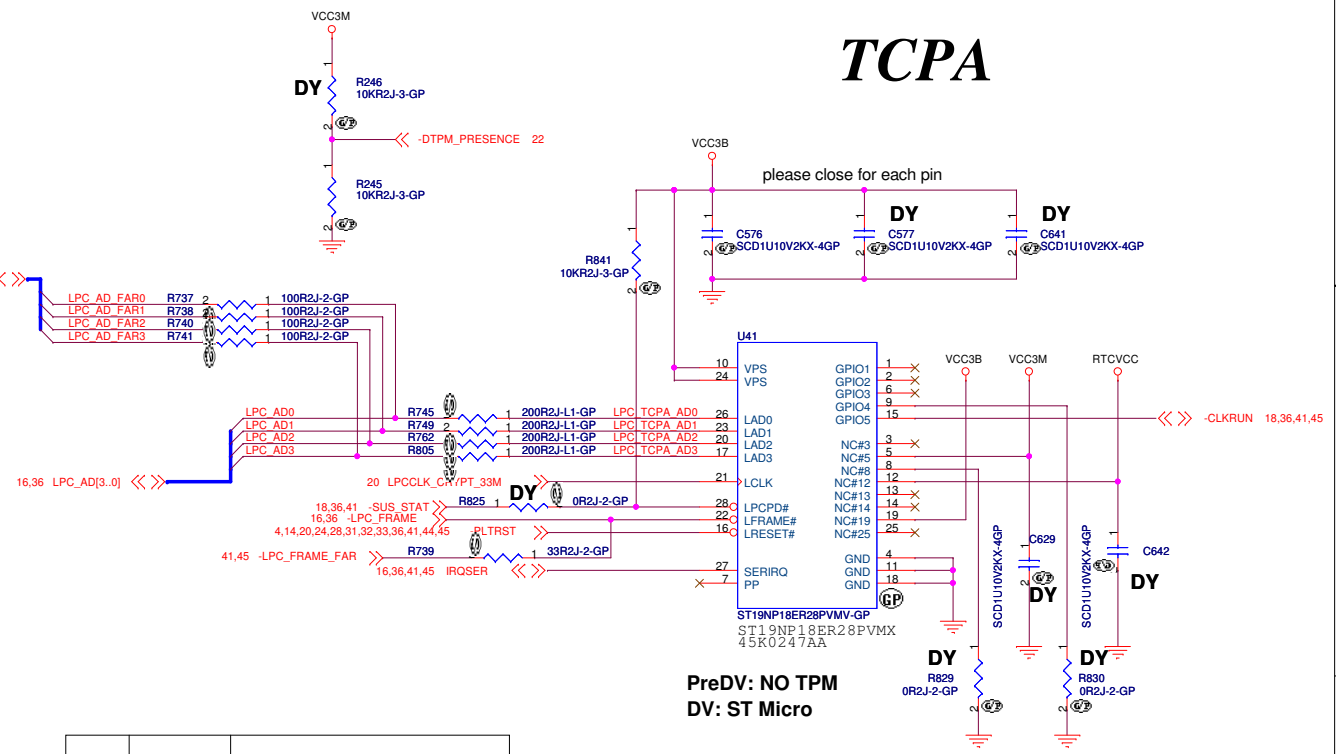
| | | | |
|-----|-----------|------------------|-----------|
| 1st | Fairchild | NC7S2384 | 77P2644CA |
| 2nd | TI | SN74CBT1G384DCKR | 77P2644BA |
| 3rd | Toshiba | TC7SB384FU | 77P2644AA |

EEPROM



| | | | |
|-----|---------|--------------------|--------------|
| | Vendor | U37 | Part Number |
| 1st | PHILIPS | PCA24S08D TSSOP 8P | 72.24S08.00Q |
| 2nd | ROHM | BUL08-1FVJ-W | 72.BUL08.00Q |

TCPA



| | | |
|------|--------|----------------------------|
| | NO TPM | ST Micro ST19NP18-TPM-A |
| U41 | NO_ASM | ASM |
| C576 | NO_ASM | ASM |
| C577 | NO_ASM | NO_ASM |
| R825 | NO_ASM | ASM |
| R829 | NO_ASM | NO_ASM |
| R830 | NO_ASM | NO_ASM |
| R841 | NO_ASM | NO_ASM |
| R246 | ASM | NO_ASM |
| R245 | NO_ASM | ASM |

Change U41 ST Microelectronics TPM from ST19NP18ER28PVMV (F/W Rev: 1.2.8.C) to ST19NP18ER28PVMX (F/W Rev: 1.2.8.10)

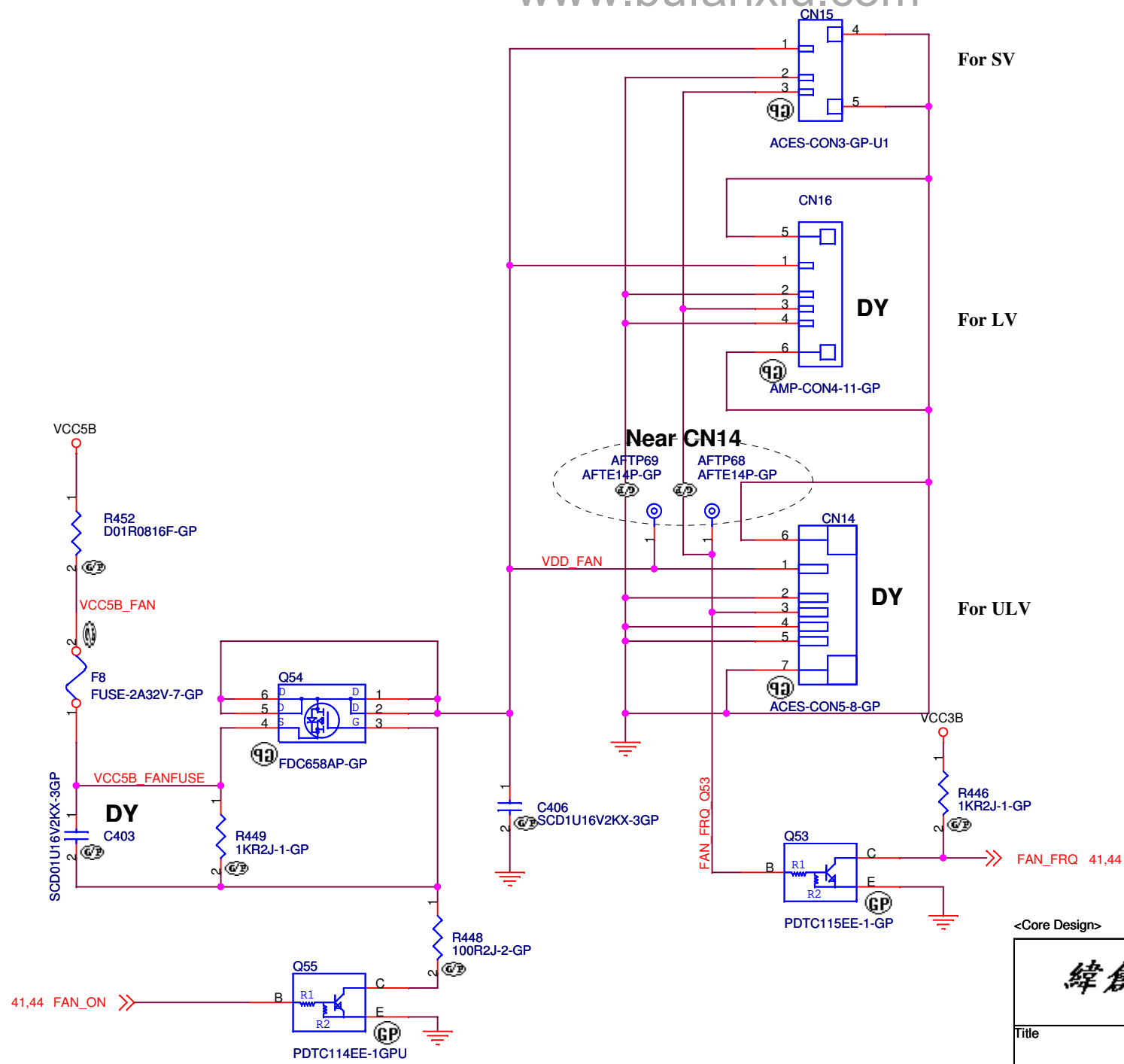
<Core Design>

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

Title: **EEPROM/TCPA**

Size: Custom Document Number: Mocha-3 Rev: -2

Date: Wednesday, January 27, 2010 Sheet: 46 of 70



| CN15 | | |
|------|--------------|------|
| 1st | 20.F0714.003 | Aces |
| 2nd | 20.D0201.103 | Tyco |

| CN16 | | |
|------|--------------|------|
| 1st | 20.D0201.104 | Tyco |
| 2nd | 20.F0714.004 | Aces |

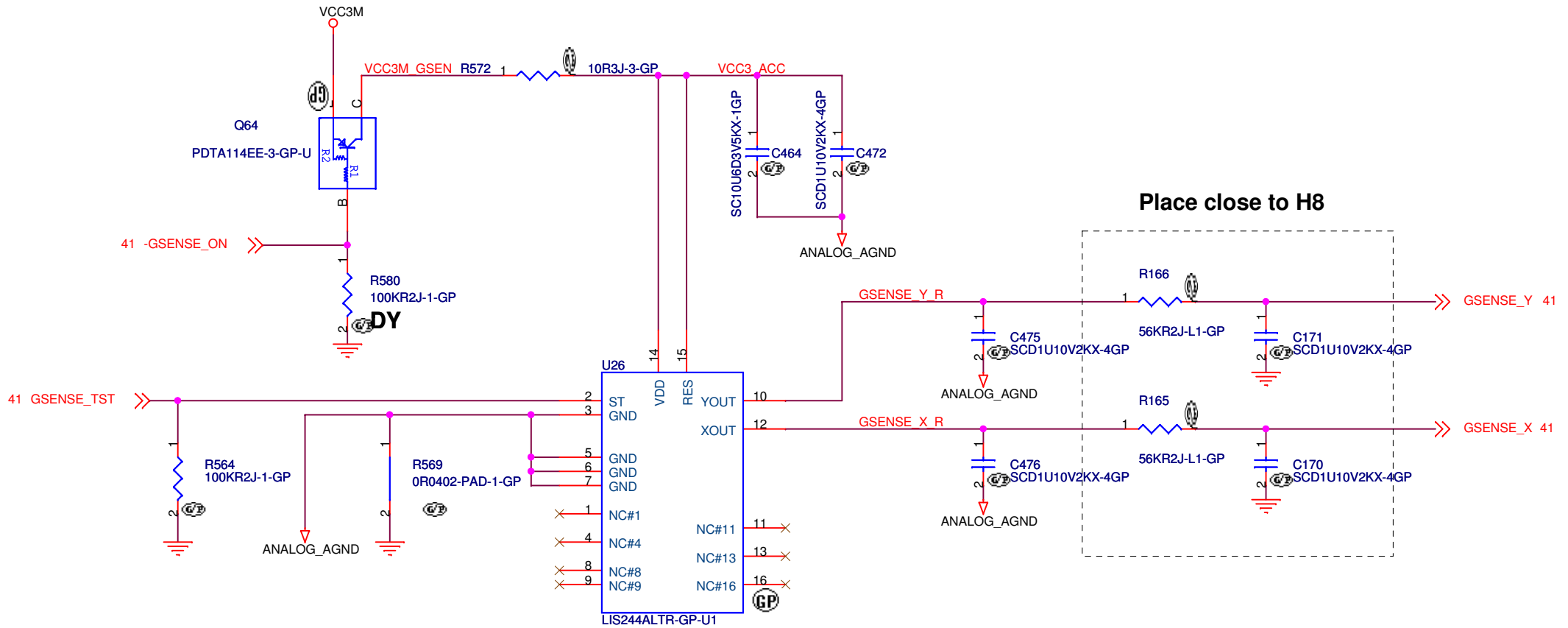
| CN14 | | |
|------|--------------|------|
| 1st | 20.F0714.005 | Aces |
| 2nd | | |

<Core Design>

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

FAN CONTROL

| | | |
|------------|-----------------------------------|------------------|
| Size A4 | Document Number Mocha-3 | Rev -2 |
|------------|-----------------------------------|------------------|



U26

| | | |
|---------|------------------|--------------|
| Primary | STMicro LIS244AL | 74.00244.0BZ |
| Second | STMicro LIS34AL | 74.00034.0BZ |

Layout Comment :


(1) Place C475,C476,Q64,R572,R580
C464,C472,R564,R569 close to U26

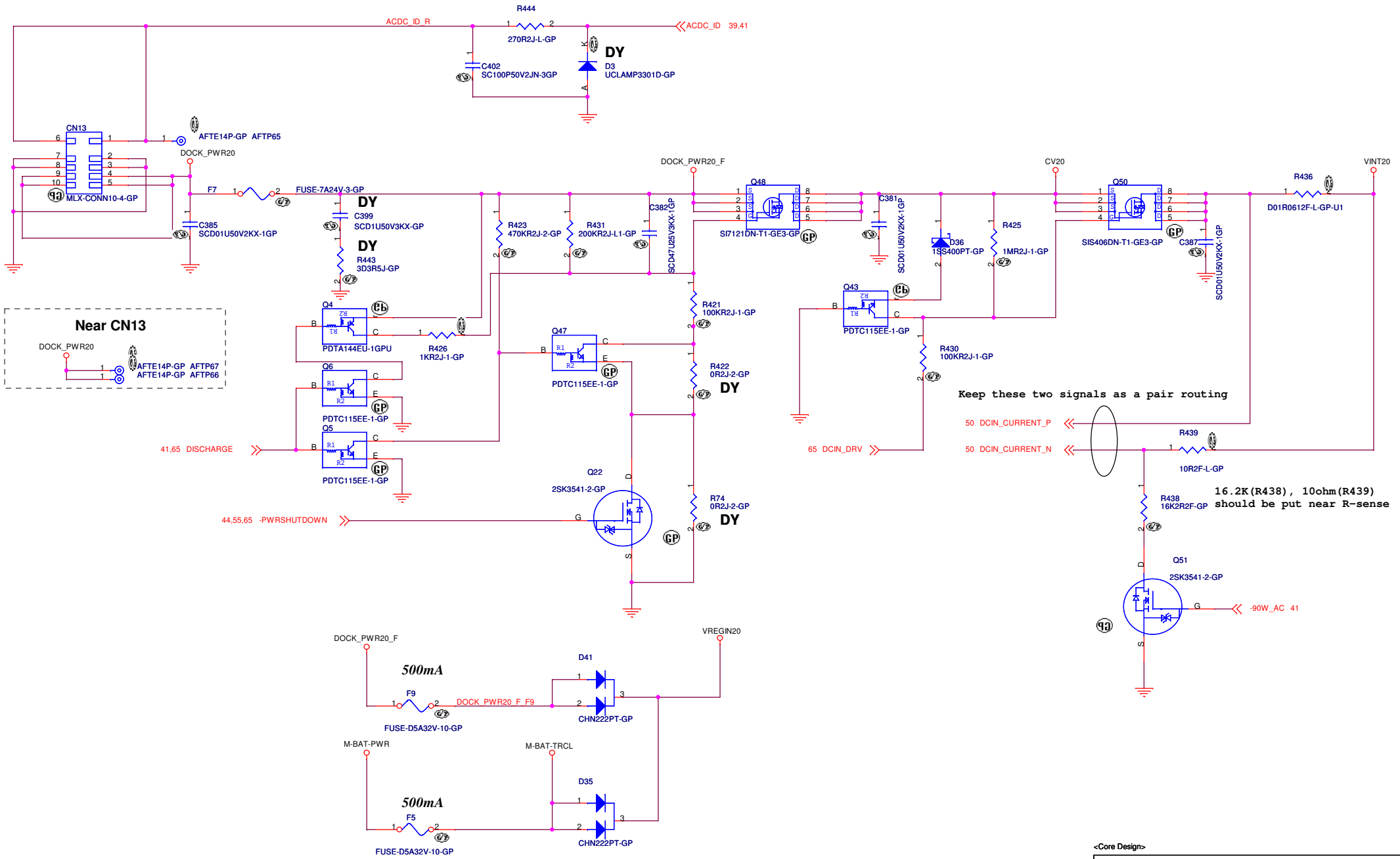
(2) Avoid routing under DCDC switching area.

Width = 6 mil & Spacing = 10 mil
for three Output traces

| | | |
|-----------|---------------------|----------|
| | LIS244AL LIS34AL | No Accel |
| R580 | NO_ASM | ASM |
| R564 | ASM | ASM |
| All other | ASM | NO_ASM |

<Core Design>

| | |
|---|-----------------------------------|
|  Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C. | |
| Title G-SENSOR | |
| Size A4 | Document Number Mocha-3 |
| Date Wednesday, January 27, 2010 | Rev -2 |
| Sheet 48 of 70 | |



Keep these two signals as a pair routing

50 DCIN_CURRENT_P

50 DCIN_CURRENT_N

16.2K (R438), 10ohm (R439) should be put near R-sense

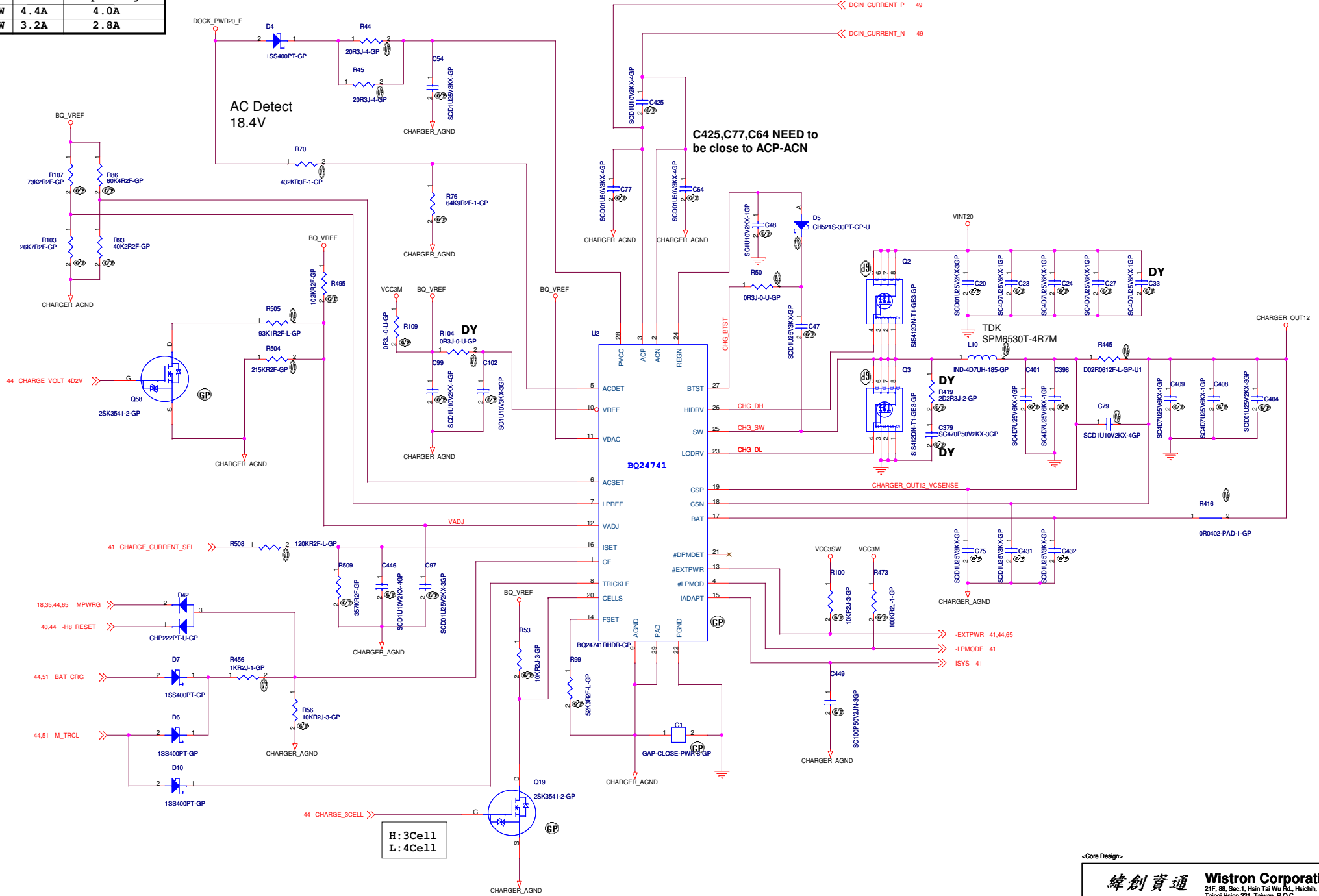
<Core Design>

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

Title: **DC-IN AND CHARGER (1/2)**

| | | |
|-----------------------------------|--------------------------|---------|
| Size: A3 | Document Number: Mocha-3 | Rev: -2 |
| Date: Wednesday, January 27, 2010 | Sheet: 49 of 70 | |

| | Total | Stop Charge |
|-----|-------|-------------|
| 90W | 4.4A | 4.0A |
| 65W | 3.2A | 2.8A |

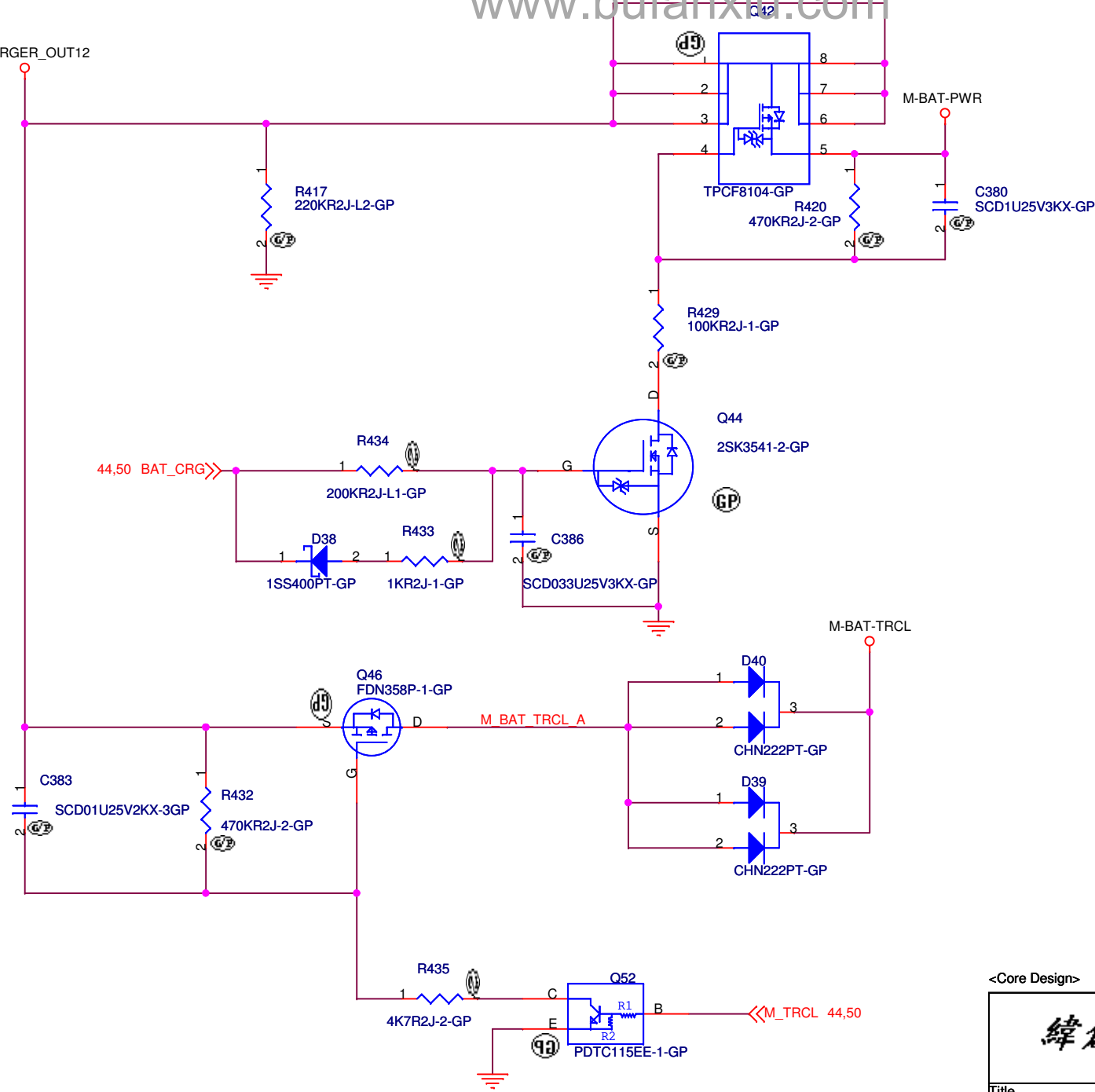


<Core Design>

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

| | | | |
|--------|-----------------------------|--------------------------------|----------|
| Title | | DC-IN AND CHARGER (2/2) | |
| Size | Document Number | Rev | |
| Custom | Mocha-3 | -2 | |
| Date: | Wednesday, January 27, 2010 | Sheet | 50 of 70 |

CHARGER_OUT12



<Core Design>

緯創資通

Wistron Corporation

21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.

Title

CHARGER SELECT

Size
A4

Document Number

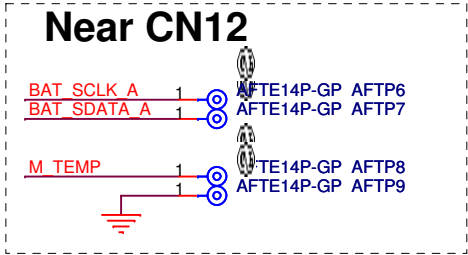
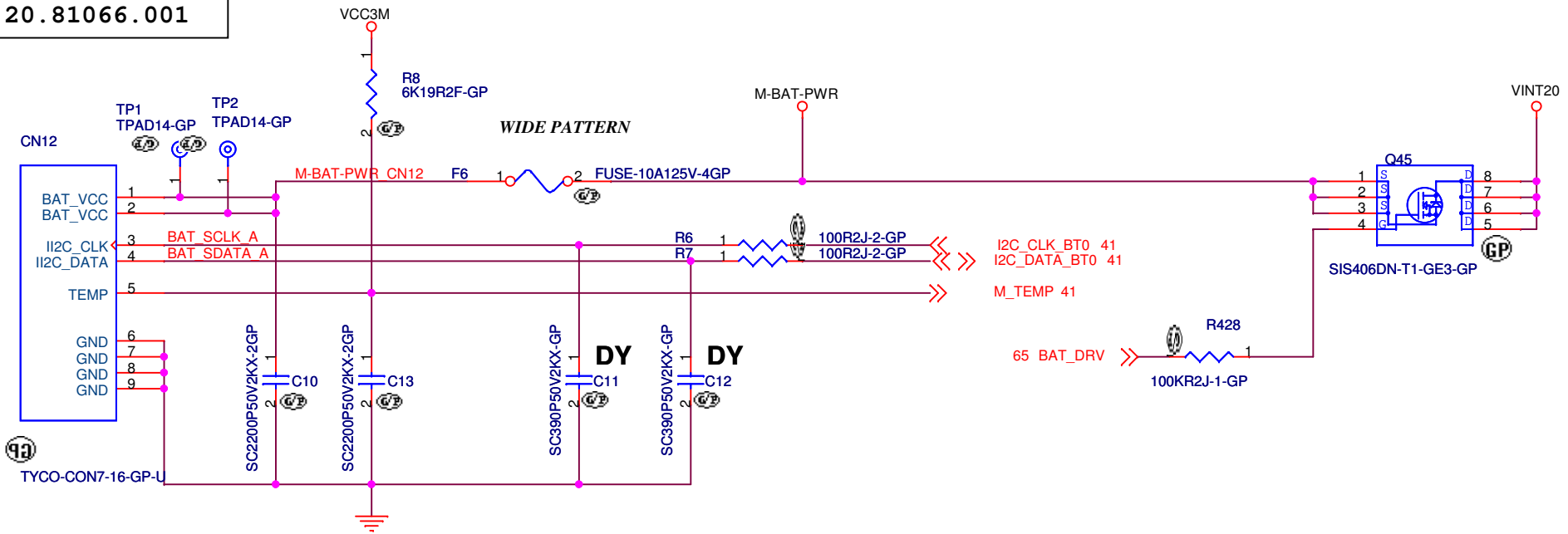
Mocha-3

Rev
-2

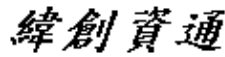
Date: Wednesday, January 27, 2010

Sheet 51 of 70

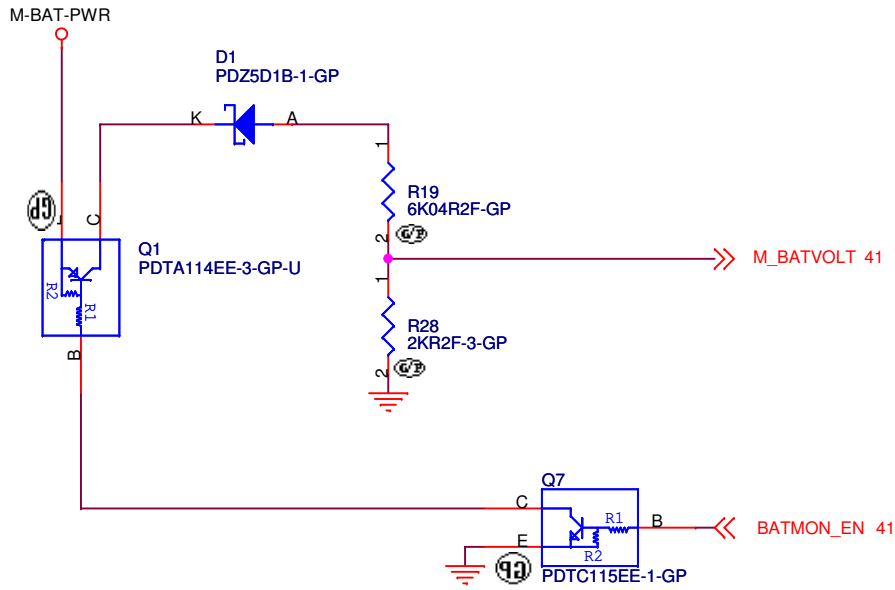
CN12
AMP 2041614-1
20.81066.001



<Core Design>

| | | |
|---|-----------------------------------|------------------|
|  Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C. | | |
| BATTERY INPUT | | |
| Size A4 | Document Number Mocha-3 | Rev -2 |
| Date: Wednesday, January 27, 2010 | | Sheet 52 of 70 |

$$V_{OUT} = 0.249 (V_{BAT} - 5)$$



<Core Design>

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

Title

BATTERY MONITOR

Size
A4

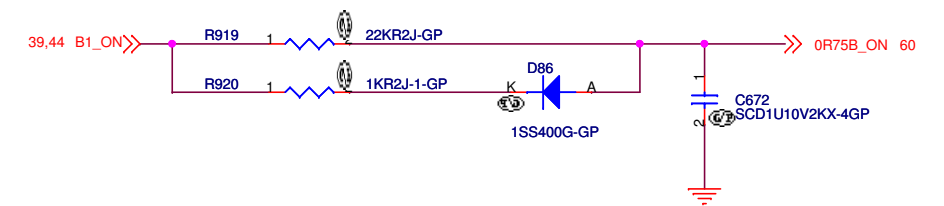
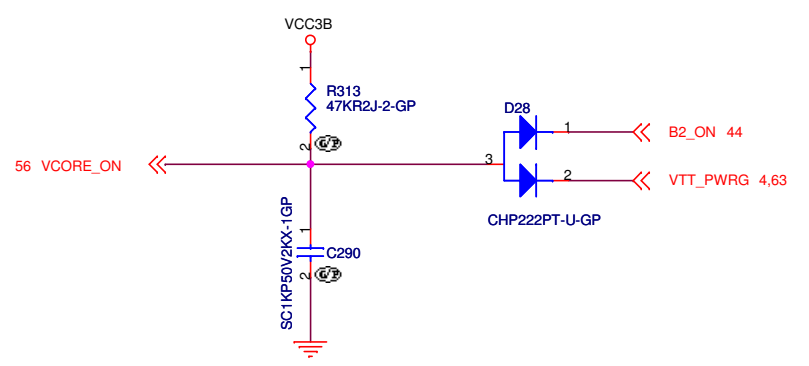
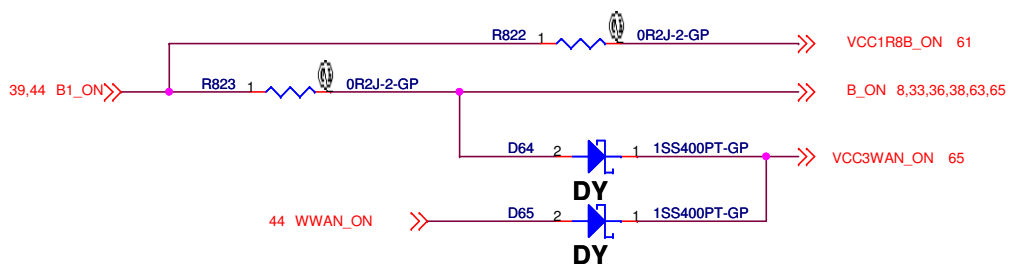
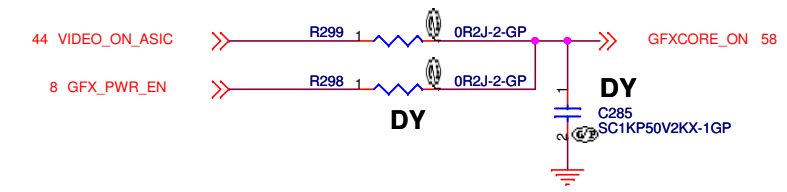
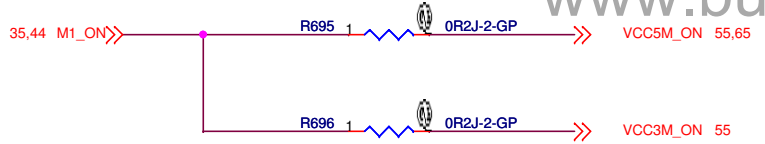
Document Number

Mocha-3

Rev
-2

Date: Wednesday, January 27, 2010

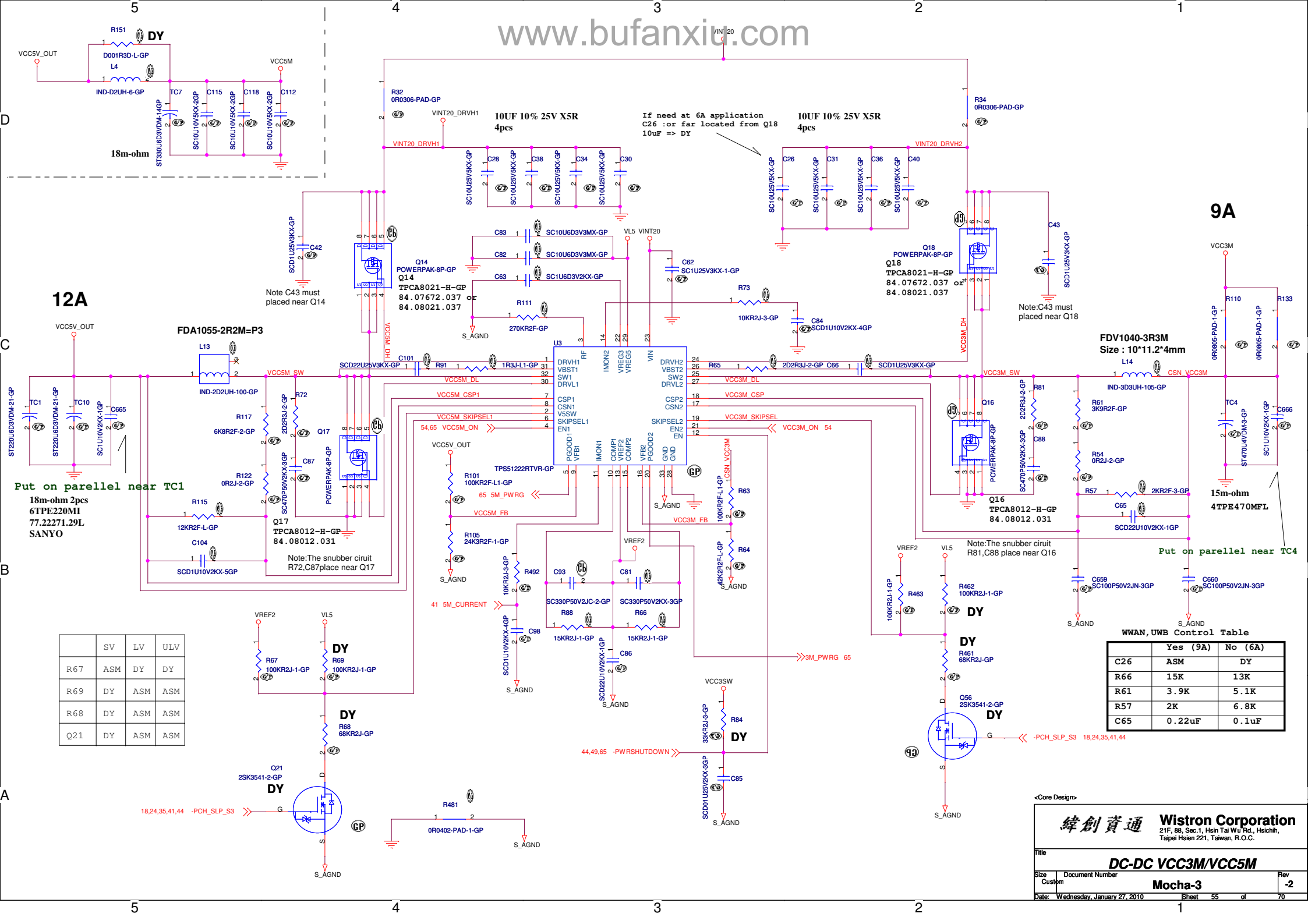
Sheet 53 of 70



| Constant Connect | Enable | Disable |
|------------------|--------|---------|
| D64 | ASM | NoASM |
| D65 | ASM | NoASM |

<Core Design>

| | | |
|-----------------------------------|-----------------------------------|---|
| | | Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C. |
| POWER SEQUENCE | | |
| Size Custom | Document Number Mocha-3 | Rev -2 |
| Date: Wednesday, January 27, 2010 | | Sheet 54 of 70 |



12A

VCC5V_OUT
 TC1
 STZ20U6D3VDM-21-GP
 TC10
 SCD1U10V2KX-1GP
 C665
 18m-ohm 2pcs
 6TPE220MI
 77.22271.29L
 SANYO
 Put on parallel near TC1

FDA1055-2R2M=P3

R117
 6K8R2F-2-GP
 R122
 0R2J-2-GP
 R115
 12KR2F-L-GP
 C104
 SCD1U10V2KX-5GP
 Q17
 POWERPAK-8P-GP
 Note: The snubber circuit
 R72, C87 place near Q17

L13
 IND-2D2UH-100-GP

| | SV | LV | ULV |
|-----|-----|-----|-----|
| R67 | ASM | DY | DY |
| R69 | DY | ASM | ASM |
| R68 | DY | ASM | ASM |
| Q21 | DY | ASM | ASM |

Q21
 2SK3541-2-GP
 DY
 18,24,35,41,44 -PCH_SLP_S3

Note C43 must placed near Q14

Note: The snubber circuit
 R72, C87 place near Q17

VREF2
 VL5
 R67
 100KR2J-1-GP
 DY
 R69
 100KR2J-1-GP

DY
 R68
 68KR2J-2-GP

Q14
 POWERPAK-8P-GP
 Q14
 TPCA8021-H-GP
 84.07672.037
 84.08021.037

R481
 0R0402-PAD-1-GP

S_AGND

10UF 10% 25V X5R
 4pcs

If need at 6A application
 C26 : or far located from Q18
 10uF => DY

10UF 10% 25V X5R
 4pcs

C28
 SC10U25V5KX-GP
 C88
 SC10U25V5KX-GP
 C34
 SC10U25V5KX-GP
 C30
 SC10U25V5KX-GP

C83
 SC10U6D3V3MX-GP
 C82
 SC10U6D3V3MX-GP
 C63
 SC1U6D3V2KX-GP

R111
 270KR2F-GP

U3
 DRVH1
 VBS1T
 SW1
 DRVL1
 IMON2
 VREG3
 VREGS
 VIN
 DRVH2
 VBS2
 SW2
 DRVL2
 IMON1
 COMP1
 VREF2
 COMP2
 VFB1
 PGOOD1
 EN1
 CSN1
 VSSW
 SKIPSEL1
 EN2
 EN
 GND
 GND

R91
 1R3J-L1-GP

VCC5M_CSP1
 VCC5M_SKIPSEL1
 VCC5M_ON

R101
 100KR2F-L1-GP
 65 5M_PWRG

R105
 24K3R2F-1-GP

R492
 10KR2J-3-GP

C93
 SC330P50V2JC-2-GP
 C81
 SC330P50V2KX-3GP

R88
 15KR2J-1-GP
 R66
 15KR2J-1-GP

C98
 SCD1U10V2KX-4GP

41 5M_CURRENT

R42
 10KR2J-3-GP

C86
 SCD22U10V2KX-1GP

44.49.65 -PWRSHUTDOWN

R84
 33KR2J-3-GP

3M_PWRG 65

Q16
 POWERPAK-8P-GP
 Q16
 TPCA8012-H-GP
 84.08012.031

R84
 33KR2J-3-GP
 DY

C85

S_AGND

S_AGND

Q18
 POWERPAK-8P-GP
 Q18
 TPCA8021-H-GP
 84.07672.037
 84.08021.037

R73
 10KR2J-3-GP

C62
 SC1U25V3KX-1-GP

R65
 2D2R3J-2-GP

C66
 SCD1U25V3KX-GP

VCC3M_SW

Q16
 POWERPAK-8P-GP

Q16
 TPCA8012-H-GP
 84.08012.031

R81
 2D2R3J-2-GP

C88
 SC470P50V2KX-3GP

VREF2
 VL5

R462
 100KR2J-1-GP

DY

DY

R461
 68KR2J-GP

Q56
 2SK3541-2-GP
 DY

18,24,35,41,44 -PCH_SLP_S3

S_AGND

S_AGND

S_AGND

S_AGND

S_AGND

S_AGND

S_AGND

S_AGND

FDV1040-3R3M
 Size : 10*11.2*4mm
 L14
 CSN_VCC3M

R61
 3K9R2F-GP

R57
 2KR2F-3-GP

C65
 SCD22U10V2KX-1GP

Put on parallel near TC4

C66
 SC100P50V2JN-3GP

C69
 SC100P50V2JN-3GP

S_AGND

S_AGND

S_AGND

S_AGND

S_AGND

S_AGND

S_AGND

S_AGND

S_AGND

S_AGND

S_AGND

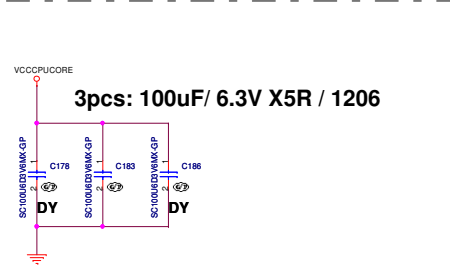
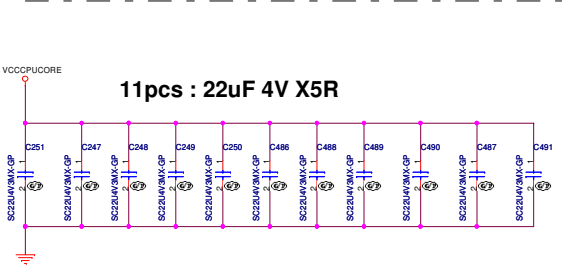
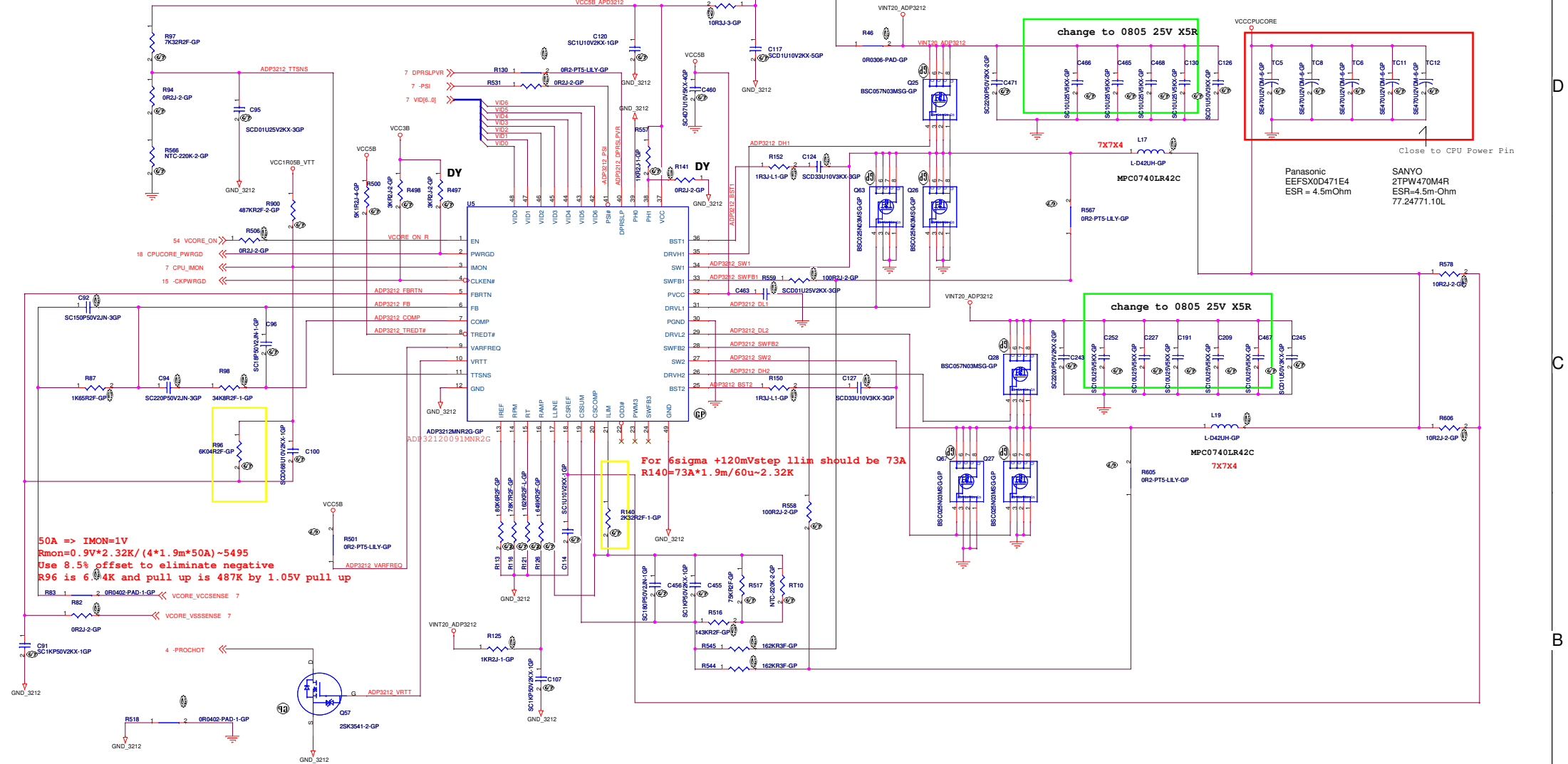
S_AGND

S_AGND

S_AGND

WWAN, UWB Control Table

| | Yes (9A) | No (6A) |
|-----|----------|---------|
| C26 | ASM | DY |
| R66 | 15K | 13K |
| R61 | 3.9K | 5.1K |
| R57 | 2K | 6.8K |
| C65 | 0.22uF | 0.1uF |



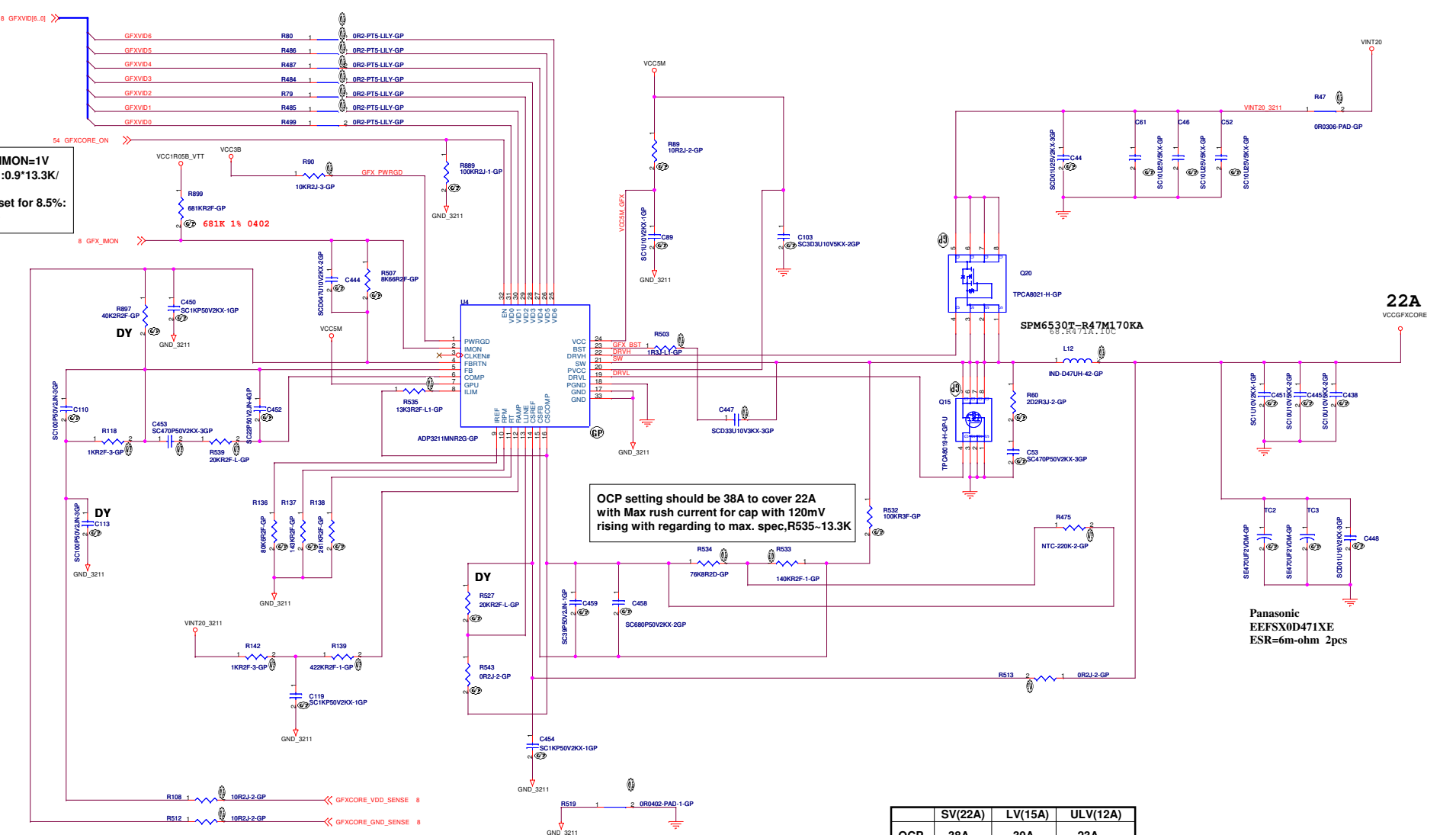
| | SV 2-phase(48A) | LV 2-phase(35A) | ULV 2-phase(27A) |
|------|------------------|-----------------|------------------|
| OCP | 73A | 52A | 42A |
| R96 | 6.04K | 5.36K | 5.76K |
| R140 | 2.32K | 2.61K | 2.1K |
| R545 | 162K | 102K | 102K |
| R544 | 162K | 102K | 102K |
| Q63 | ASM | DY | DY |
| Q67 | ASM | DY | DY |
| TC5 | 470uF / 4.5m-ohm | 330uF / 6m-ohm | 330uF / 6m-ohm |
| TC8 | 470uF / 4.5m-ohm | 330uF / 6m-ohm | 330uF / 6m-ohm |
| TC6 | 470uF / 4.5m-ohm | 330uF / 6m-ohm | 330uF / 6m-ohm |
| TC11 | 470uF / 4.5m-ohm | DY | DY |
| TC12 | 470uF / 4.5m-ohm | DY | DY |
| R900 | 487K | 432K | 464K |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

<Core Design>

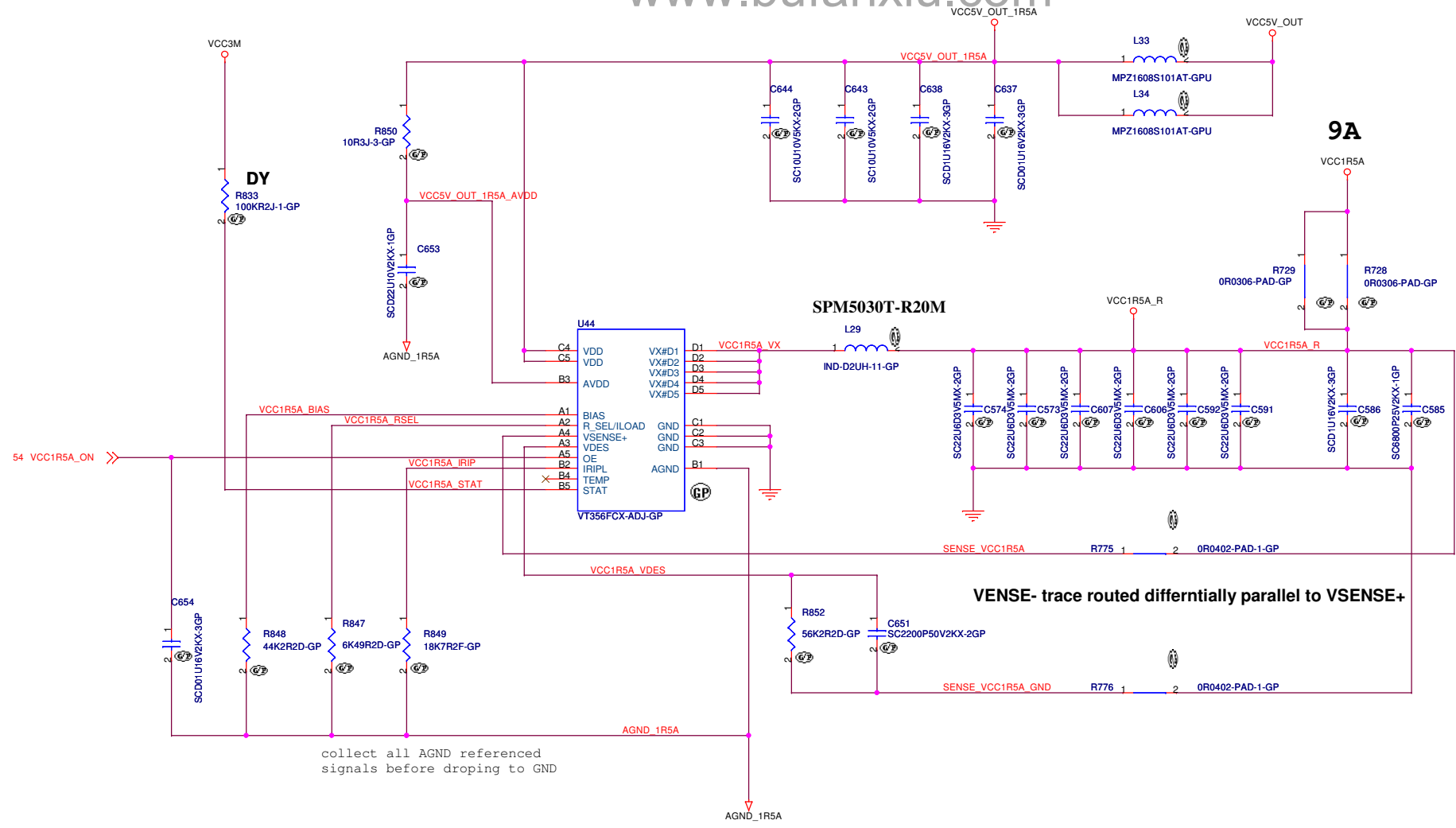
| | | | |
|-----------------------------------|-----------------------------------|---|------------------|
| 緯創資通 | | Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C. | |
| Title DC-DC VCCCPUCORE | | | |
| Size A4 | Document Number Mocha-3 | | Rev -2 |
| Date: Wednesday, January 27, 2010 | | Sheet 57 | of 70 |

I_{out}=22A ==>GFX_IMON=1V
 Ideal R_{mon}(900mV):0.9*13.3K/
 (10*7m-ohm*22A)
 Adding positive offset for 8.5%:
 8.66K+681K pull-up

OCP setting should be 38A to cover 22A
 with Max rush current for cap with 120mV
 rising with regarding to max. spec,R535-13.3K

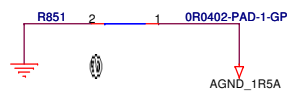


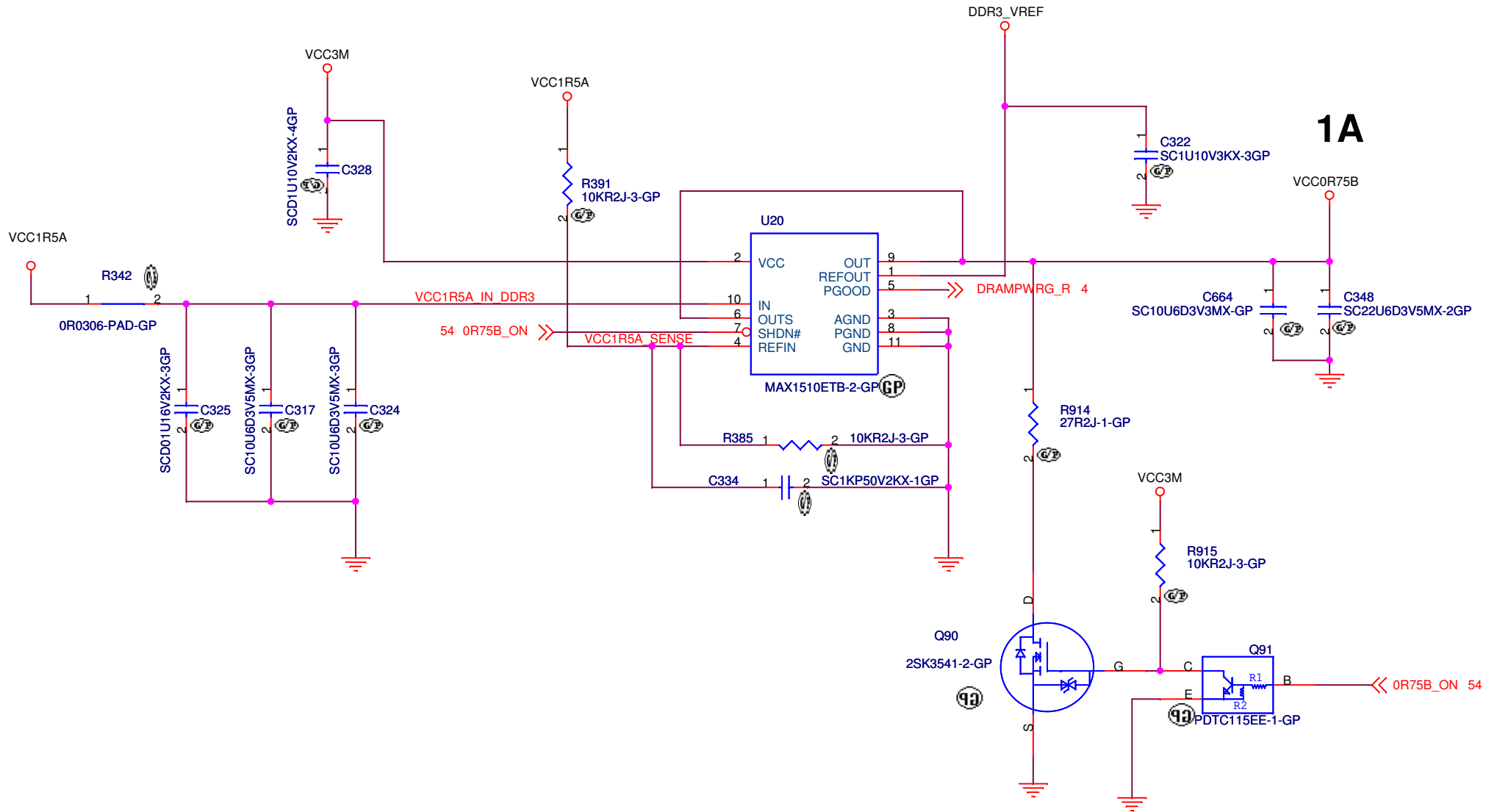
| | SV(22A) | LV(15A) | ULV(12A) |
|------|---------|---------|----------|
| OCP | 38A | 30A | 23A |
| C52 | ASM | DY | DY |
| R507 | 8.66K | 10K | 9.53K |
| R535 | 13.3K | 10.5K | 8.06K |
| R899 | 681K | 787K | 750K |
| TC2 | 470uF | 330uF | 220uF |
| TC3 | 470uF | 330uF | 220uF |



collect all AGND referenced signals before dropping to GND

Don't connect AGND and GND under the chip





1A

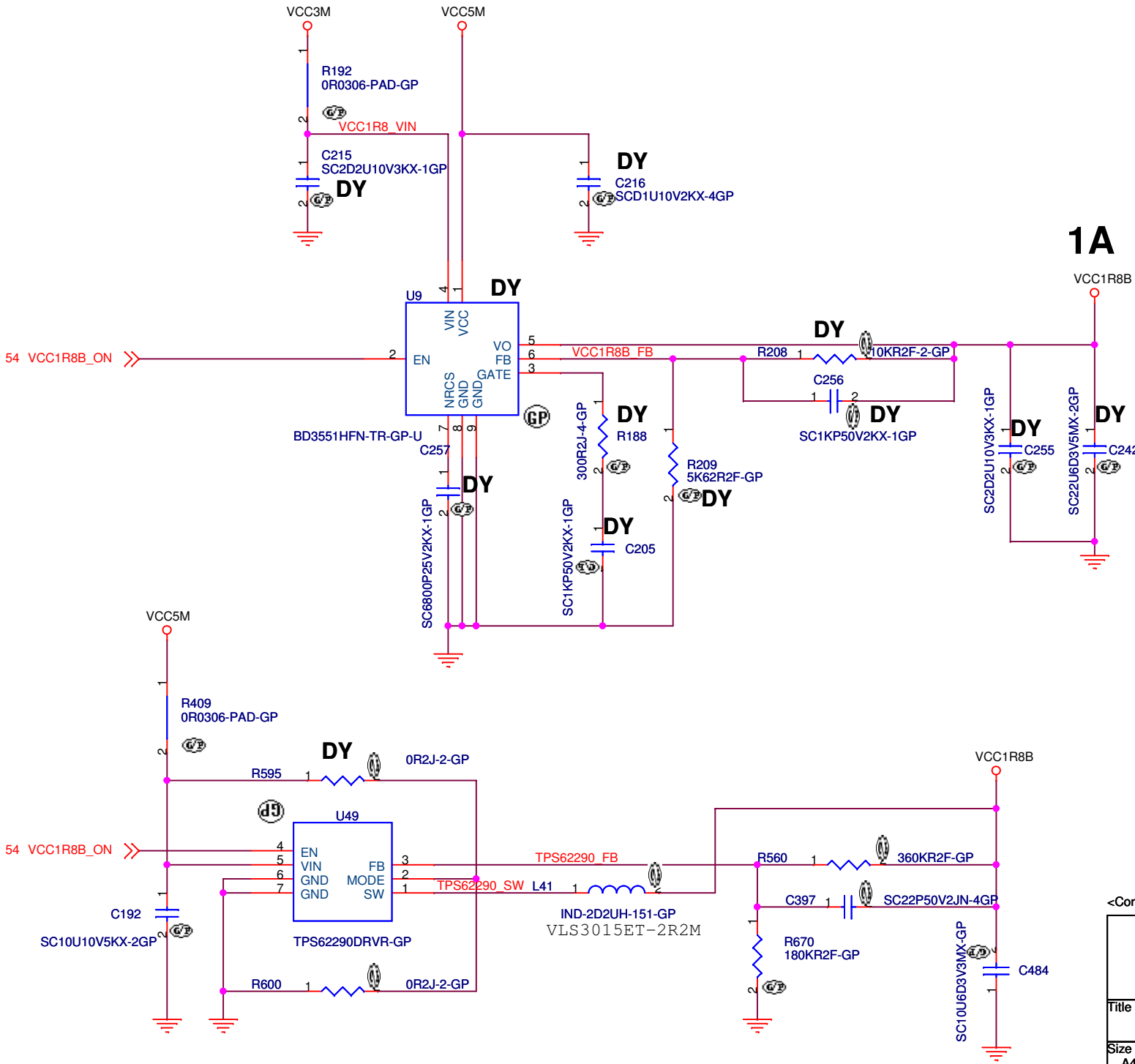
<Core Design>

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

Title **DC-DC VCC0R75B**

| | | |
|---------|-----------------|--------|
| Size A4 | Document Number | Rev -2 |
|---------|-----------------|--------|

Date: Wednesday, January 27, 2010 Sheet 60 of 70

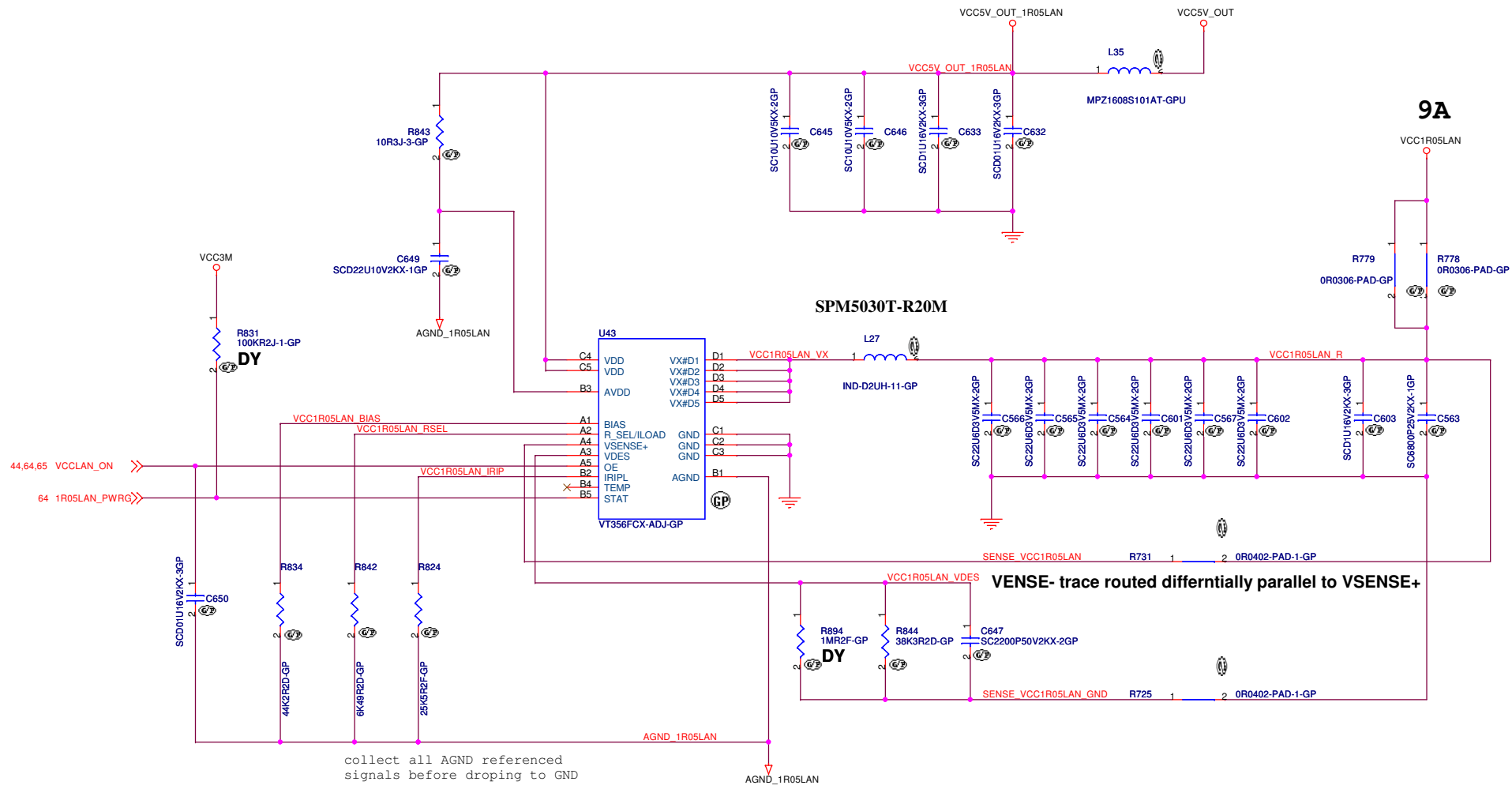


| SOVP | NV/LV/ULV | |
|-------|-----------|-----------|
| SIT-R | | NV |
| SVT | | NV/LV/ULV |
| C215 | ASM | DY |
| C216 | ASM | DY |
| U9 | ASM | DY |
| C257 | ASM | DY |
| R188 | DY | DY |
| C205 | DY | DY |
| R208 | 10K | DY |
| C256 | 1KpF (DY) | DY |
| R209 | 5.62K | DY |
| C255 | ASM | DY |
| C242 | 22uF | DY |
| C192 | DY | ASM |
| R595 | DY | DY |
| U49 | DY | ASM |
| R600 | DY | ASM |
| L41 | DY | ASM |
| R560 | DY | 360K |
| R670 | DY | 180K |
| C397 | DY | 22pF |
| C484 | DY | 10UF |

<Core Design>

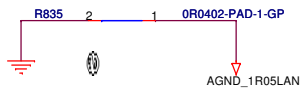
Wistron Corporation
 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
 Taipei Hsien 221, Taiwan, R.O.C.

| | | |
|-----------------------------------|-----------------|-----------|
| Title | | |
| DC-DC VCC1R8B | | |
| Size A4 | Document Number | Rev -2 |
| Mocha-3 | | |
| Date: Wednesday, January 27, 2010 | Sheet 61 | of 70 |



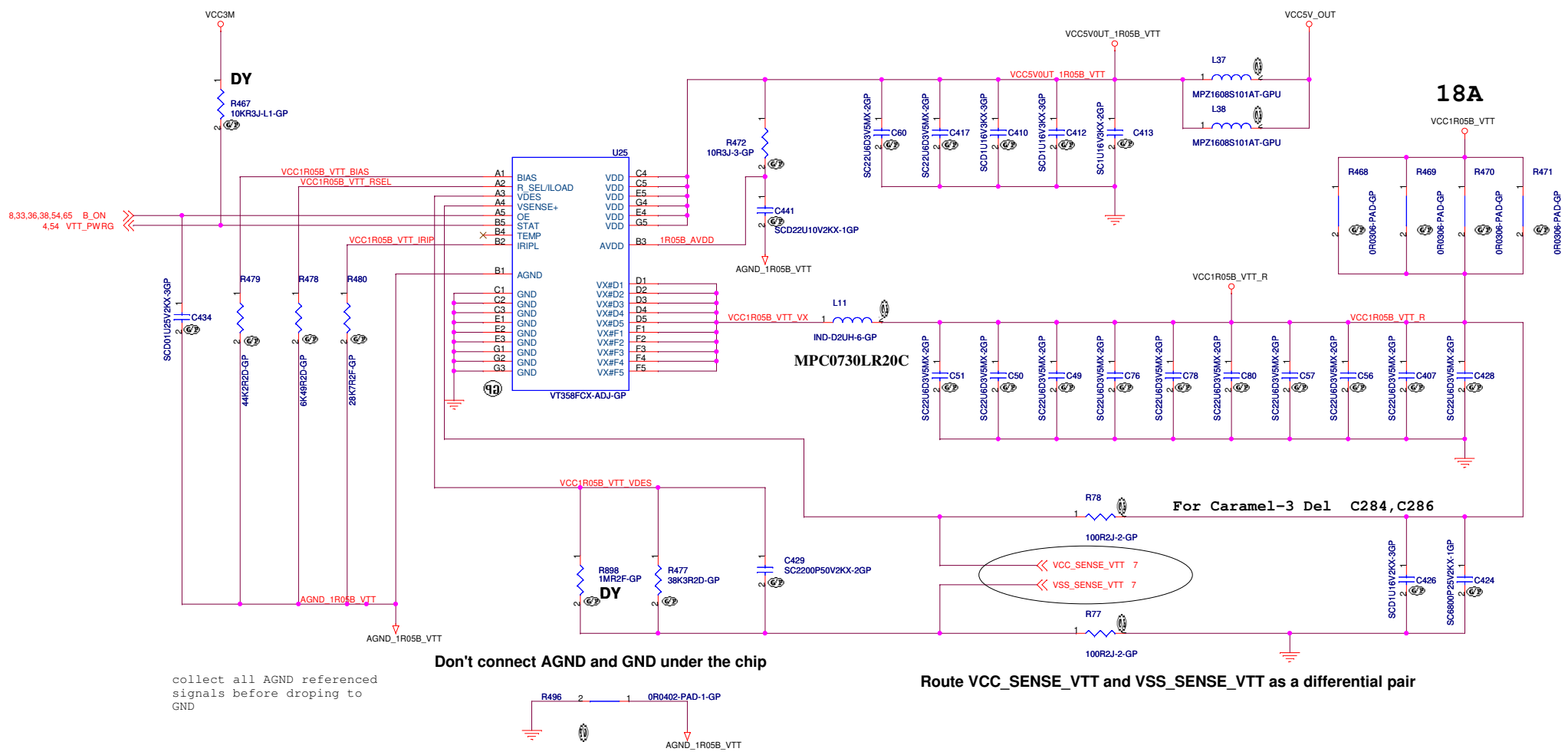
collect all AGND referenced signals before dropping to GND

Don't connect AGND and GND under the chip



<Core Design>

| | | | |
|-----------------------------------|-----------------|--|--------|
| 緯創資通 | | Wistron Corporation | |
| | | 21F, 8B, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C. | |
| DC-DC VCC1R05LAN | | | |
| Size A3 | Document Number | Mocha-3 | |
| Date: Wednesday, January 27, 2010 | Sheet 62 | of | 70 |
| | | | Rev -2 |



collect all AGND referenced signals before dropping to GND

Don't connect AGND and GND under the chip

Route VCC_SENSE_VTT and VSS_SENSE_VTT as a differential pair

| | PreDV | DV |
|------|-------|--------|
| U25 | VT358 | VT357 |
| R478 | 5.9K | 6.49K |
| R480 | 42.2K | 28.7K |
| C284 | ASM | NO_ASM |
| C286 | ASM | NO_ASM |

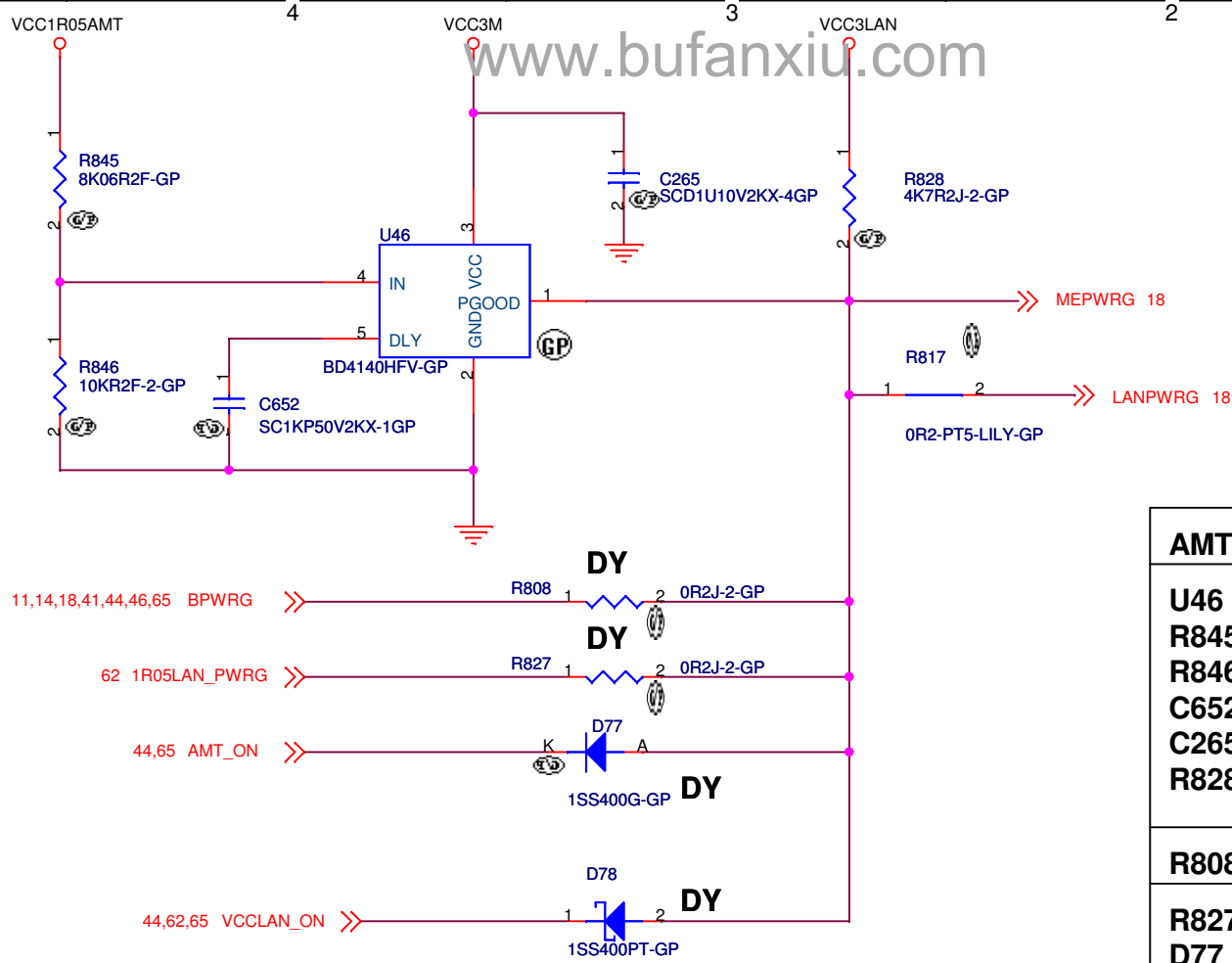
<Core Design>

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

Title: **DC-DC VCC1R05B VTT**

Size: Custom Document Number: **Mocha-3** Rev: **-2**

Date: Wednesday, January 27, 2010 Sheet: 63 of 70

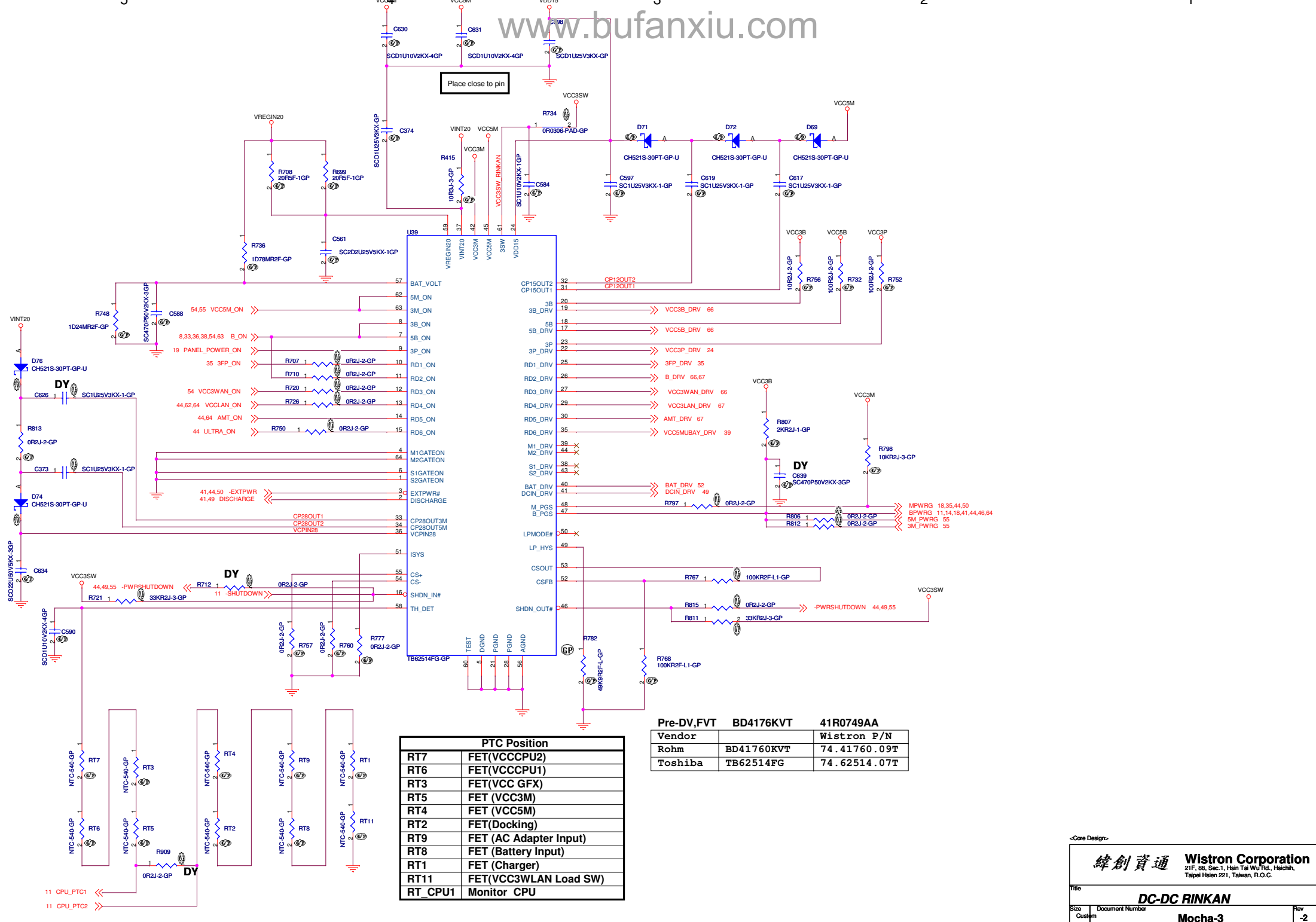


| | AMT | YES | NO |
|------|-----|-----|----|
| U46 | ASM | DY | DY |
| R845 | ASM | DY | DY |
| R846 | ASM | DY | DY |
| C652 | ASM | DY | DY |
| C265 | ASM | DY | DY |
| R828 | ASM | DY | DY |
| R808 | DY | ASM | |
| R827 | DY | DY | DY |
| D77 | DY | DY | DY |
| D78 | DY | DY | DY |
| R817 | ASM | ASM | |

<Core Design>

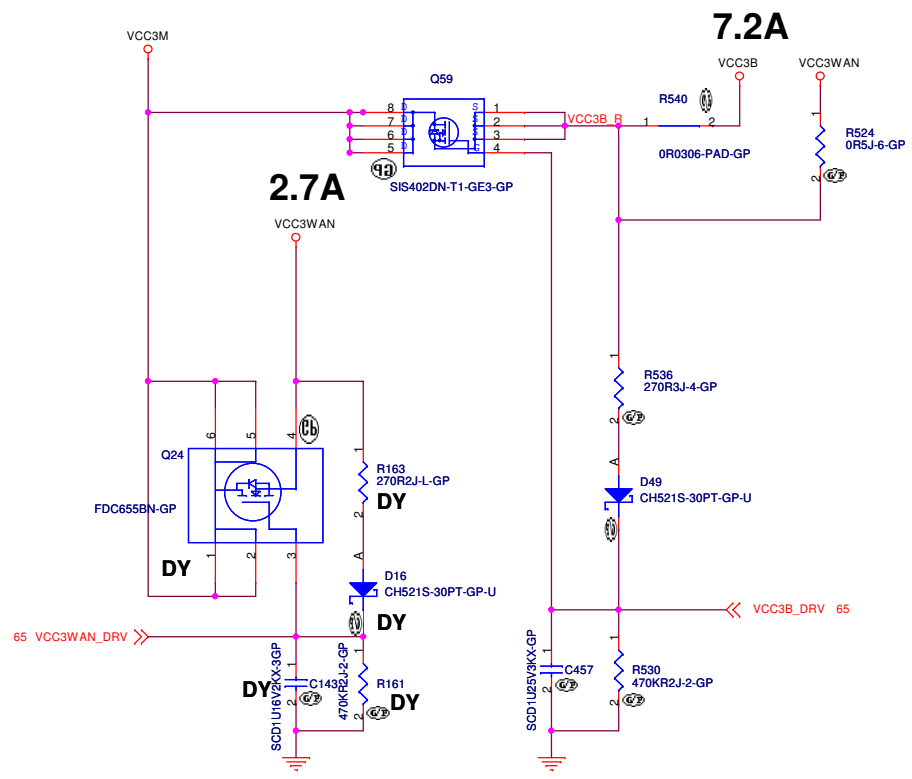
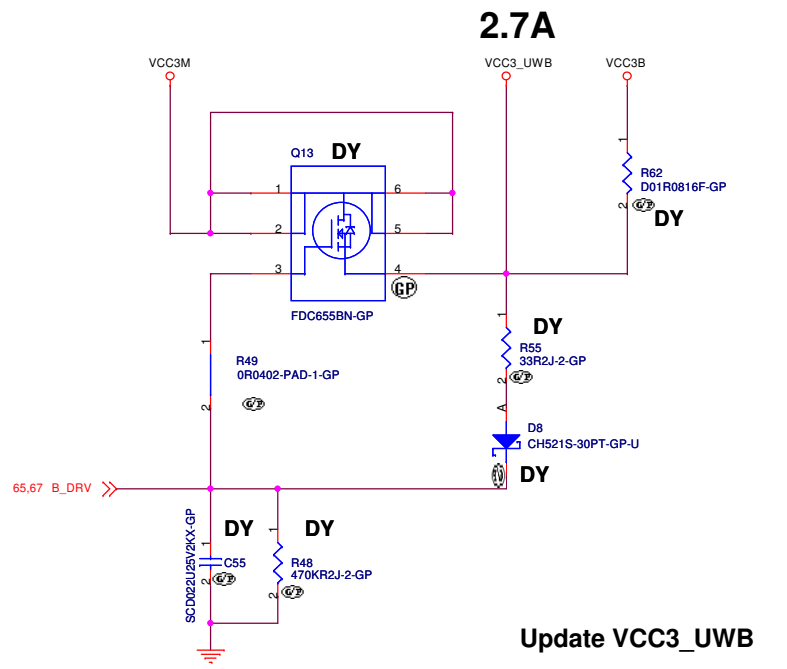
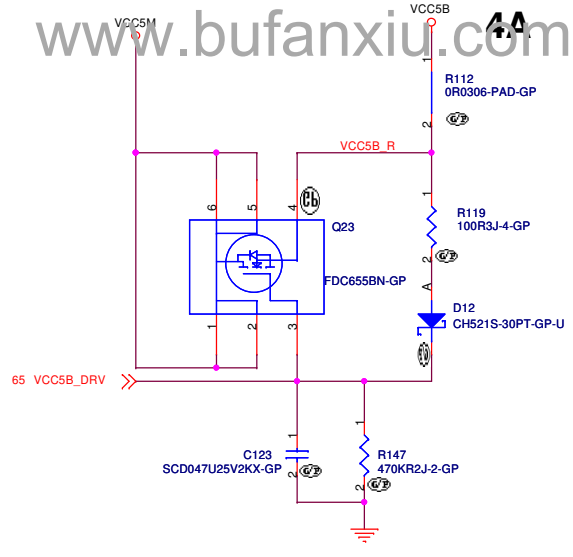
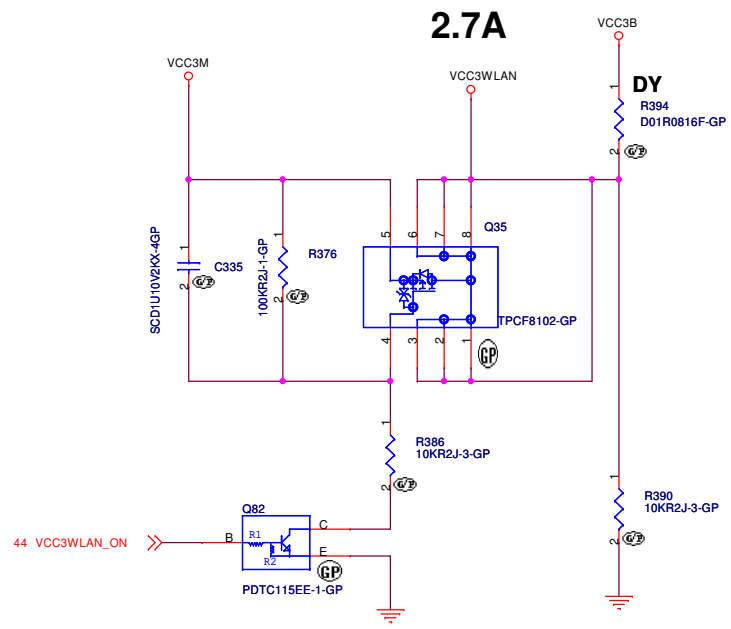
Wistron Corporation
 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
 Taipei Hsien 221, Taiwan, R.O.C.

| | | |
|-----------------------------------|-----------------|-----------|
| Title | | |
| POWER GOOD | | |
| Size A4 | Document Number | Rev -2 |
| Mocha-3 | | |
| Date: Wednesday, January 27, 2010 | Sheet 64 | of 70 |



| PTC Position | |
|--------------|------------------------|
| RT7 | FET(VCCCPU2) |
| RT6 | FET(VCCCPU1) |
| RT3 | FET(VCC GFX) |
| RT5 | FET (VCC3M) |
| RT4 | FET (VCC5M) |
| RT2 | FET(Docking) |
| RT9 | FET (AC Adapter Input) |
| RT8 | FET (Battery Input) |
| RT1 | FET (Charger) |
| RT11 | FET(VCC3WLAN Load SW) |
| RT_CPU1 | Monitor CPU |

| Pre-DV,FVT | BD4176KVT | 41R0749AA |
|------------|------------|--------------|
| Vendor | | Wistron P/N |
| Rohm | BD41760KVT | 74.41760.09T |
| Toshiba | TB62514FG | 74.62514.07T |



| Always-ON | Enable | Disable |
|-----------|--------|---------|
| Q24 | ASM | NoASM |
| R163 | ASM | NoASM |
| D16 | ASM | NoASM |
| R161 | ASM | NoASM |
| C143 | ASM | NoASM |
| R524 | NOASM | ASM |

No-asm for no WWAN CONN. MODEL

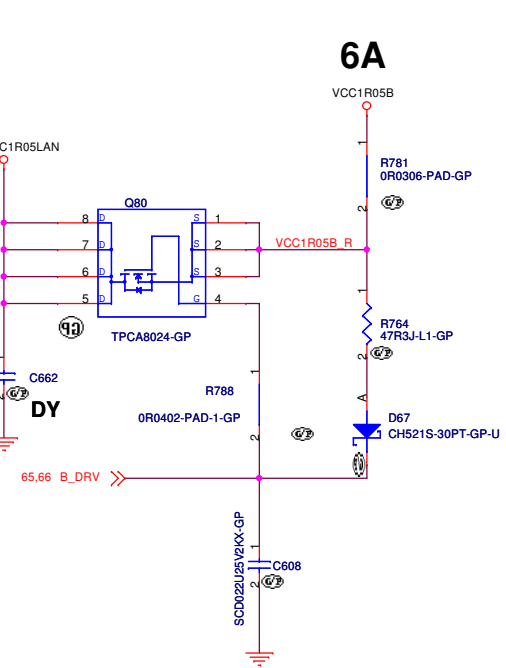
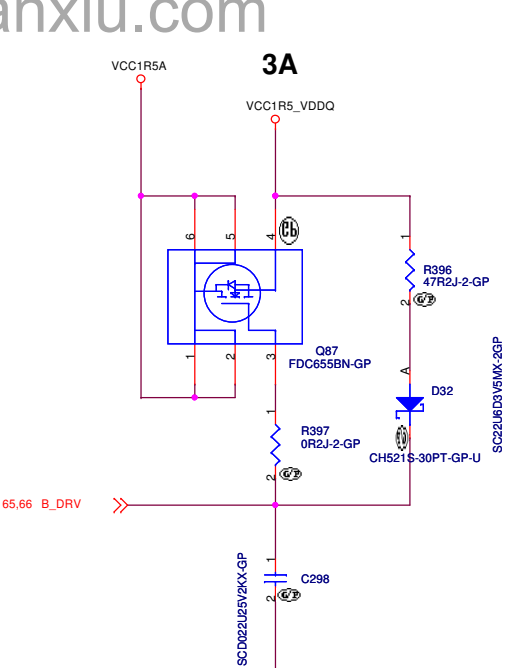
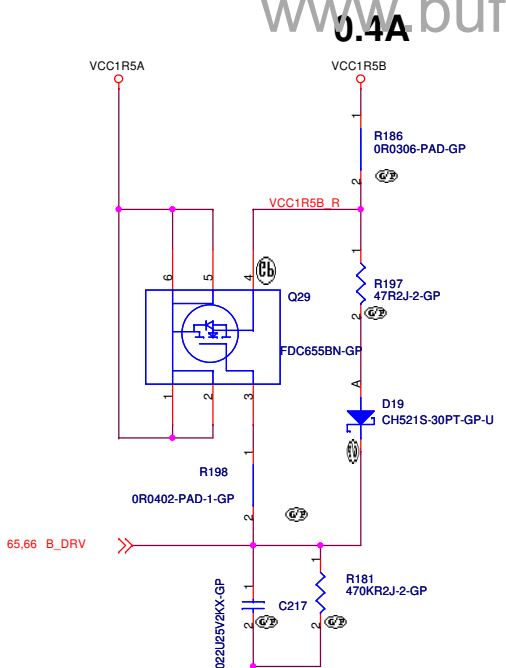
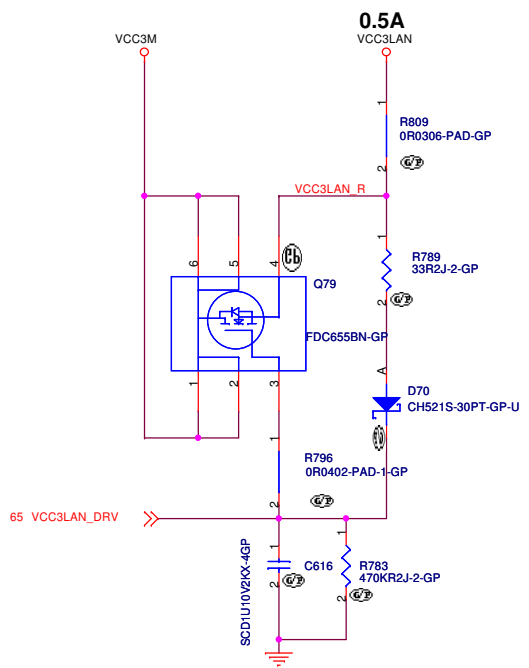
<Core Design>

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

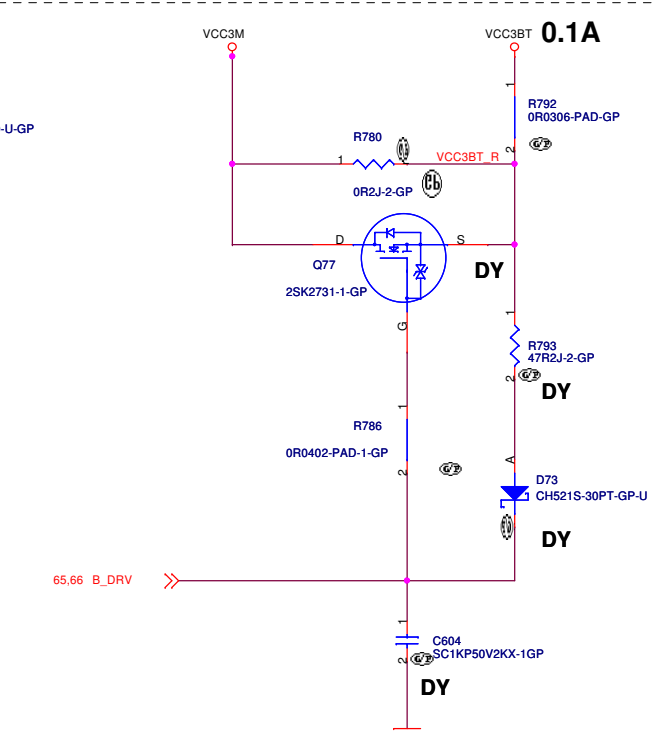
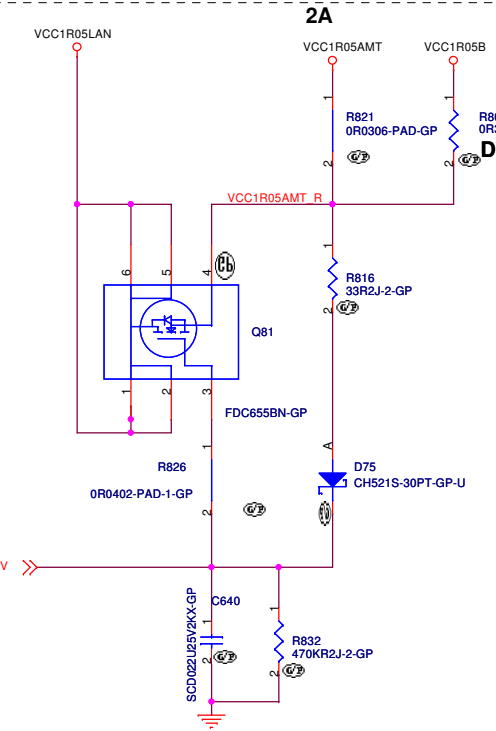
Title: **LOAD SW 1**

Size: A3 Document Number: **Mocha-3** Rev: -2

Date: Wednesday, January 27, 2010 Sheet 66 of 70

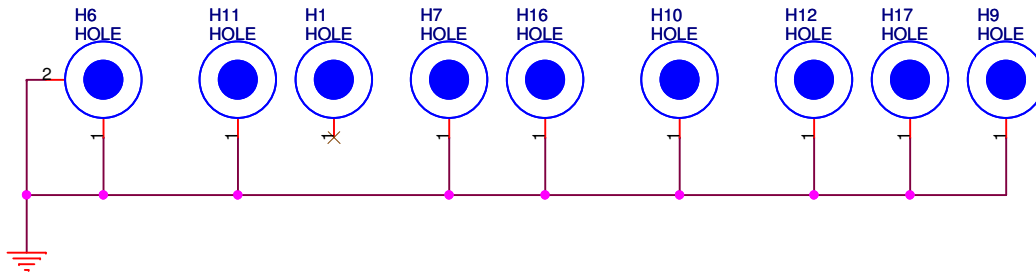
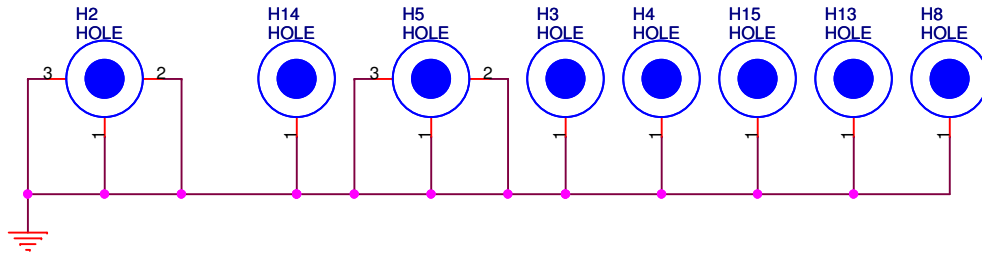


| AMT | YES | NO |
|------|-----|-----|
| Q81 | ASM | DY |
| R826 | ASM | DY |
| R816 | ASM | DY |
| R832 | ASM | DY |
| D75 | ASM | DY |
| C640 | ASM | DY |
| R802 | DY | ASM |
| R821 | ASM | ASM |



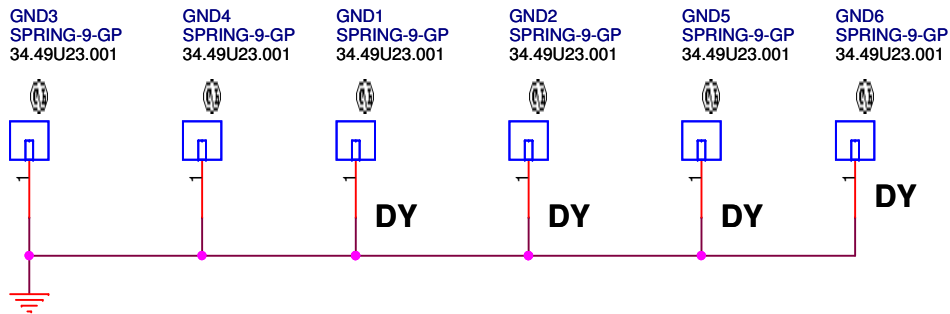
Q77

| 1st | ROHM | 2SK2731 | 84.02731.A31 | DY |
|-----|---------|---------|--------------|----|
| 2nd | TOSHIBA | 2SK2009 | 84.22009.031 | DY |



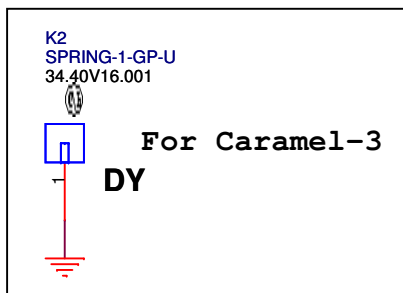
For Caramel-3

| | |
|------------|------------------|
| H2 | HOLE276R95-3P-S |
| H5 | HT7B75R24-3P-S |
| H6 | HOLE276R95-3P-S |
| H11 | HOLE256R98 |
| H12 | HOLE315R95-2P-S |
| H3 | HOLET295B236R138 |
| H4 | HOLET295B236R138 |

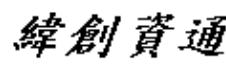


For Caramel-3

| | | | |
|----------|--------------|--------|-----|
| Standoff | 34.4Y421.001 | H3, H4 | ASM |
|----------|--------------|--------|-----|



<Core Design>

| | |
|---|-------------------------------------|
|  Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C. | |
| HOLES/GND/PADS | |
| Title Mocha-3 | Document Number Rev -2 |
| Size A4 | Date: Wednesday, January 27, 2010 |
| Sheet 68 of 70 | Date: Wednesday, January 27, 2010 |

| Function | Location | Mocha-3 | Pecan-3 | Caramel-3 | Function | Location | Mocha-3 | Pecan-3 | Caramel-3 | Function | Location | Mocha-3 | Pecan-3 | Caramel-3 | | |
|-----------|----------|---------|---------|-----------|-------------|----------|---------|---------|-----------|------------|----------|---------|---------|-----------|-----|--|
| USB | R327 | ASM | ASM | DY | Fingerprint | R584 | DY | DY | DY | LCD Conn | R9 | DY | DY | ASM | | |
| | R328 | ASM | ASM | DY | | R585 | ASM | ASM | DY | | R10 | ASM | ASM | DY | DY | |
| | R329 | DY | DY | ASM | | F11 | ASM | ASM | DY | | R1 | DY | DY | ASM | ASM | |
| | R330 | DY | DY | ASM | | C483 | ASM | ASM | DY | | R5 | ASM | ASM | DY | DY | |
| | C377 | DY | DY | ASM | | | | | | | R450 | ASM | ASM | DY | ASM | |
| | C376 | DY | DY | ASM | | | | | | | R447 | DY | DY | ASM | ASM | |
| | J1 | DY | DY | ASM | | R168 | ASM | ASM | ASM | | R36 | DY | DY | ASM | ASM | |
| | U23 | DY | DY | ASM | | R169 | ASM | ASM | ASM | | R35 | ASM | ASM | DY | ASM | |
| C378 | DY | DY | ASM | F3 | ASM | ASM | ASM | R453 | ASM | ASM | DY | ASM | | | | |
| Bluetooth | R411 | ASM | ASM | DY | Touch PAD | R178 | ASM | ASM | ASM | Pen Sensor | CN11 | DY | DY | ASM | | |
| | R412 | ASM | ASM | DY | | R180 | ASM | ASM | ASM | | R418 | DY | DY | ASM | ASM | |
| | R413 | DY | DY | ASM | | CN3 | ASM | ASM | ASM | | C375 | DY | DY | ASM | ASM | |
| | R414 | DY | DY | ASM | | U6 | ASM | ASM | ASM | | | | | | | |
| | CN10 | DY | DY | ASM | | C473 | ASM | ASM | ASM | | | | | | | |
| | F4 | DY | DY | ASM | | R556 | ASM | ASM | ASM | | | | | | | |
| | C372 | DY | DY | ASM | | R577 | ASM | ASM | ASM | | | | | | | |
| | | | | | | R483 | ASM | ASM | ASM | | | | | | | |
| | | | | | | R474 | ASM | ASM | ASM | | | | | | | |
| | | | | | | R491 | DY | DY | DY | | | | | | | |
| | | | | R71 | DY | DY | DY | | | | | | | | | |
| Super IO | U7 | DY | DY | ASM | Pecan ID | R293 | ASM | DY | DY | ASM | uP | R599 | DY | DY | ASM | |
| | C159 | DY | DY | ASM | | R286 | DY | ASM | ASM | ASM | H8 | R269 | DY | DY | ASM | |
| | C146 | DY | DY | ASM | | | | | | | | R270 | DY | ASM | ASM | |
| | C122 | DY | DY | ASM | | | | | | | | | | | | |
| | R145 | DY | DY | ASM | | | | | | | | | | | | |
| | R146 | DY | DY | ASM | | | | | | | | | | | | |
| | RN1 | DY | DY | ASM | | | | | | | | | | | | |
| | R574 | DY | DY | ASM | | | | | | | | | | | | |
| | C121 | DY | DY | ASM | | | | | | | | | | | | |
| | R743 | DY | DY | ASM | | | | | | | | | | | | |
| R754 | DY | DY | ASM | | | | | | | | | | | | | |
| R639 | DY | DY | ASM | | | | | | | | | | | | | |

Support Caramel-3 TouchPAD for SIV ⁷

RF decoupling caps

| Location | Mocha-3 | Pecan-3 | Caramel-3 |
|----------|---------|---------|-----------|
| EC63 | DY | DY | DY |
| EC43 | DY | DY | DY |
| EC61 | DY | DY | DY |
| EC48 | DY | DY | DY |
| EC62 | DY | DY | DY |
| EC35 | DY | DY | DY |
| EC68 | DY | DY | DY |
| EC70 | DY | DY | DY |
| EC71 | DY | DY | DY |
| EC57 | DY | DY | DY |
| EC42 | DY | DY | DY |
| EC46 | DY | DY | DY |
| EC76 | DY | DY | DY |
| EC77 | DY | DY | DY |
| EC83 | DY | DY | DY |
| EC40 | ASM | ASM | ASM |
| EC64 | ASM | ASM | ASM |
| EC22 | ASM | ASM | ASM |
| EC66 | ASM | ASM | ASM |
| EC26 | ASM | ASM | ASM |
| EC32 | ASM | ASM | ASM |
| EC45 | ASM | ASM | ASM |
| EC44 | ASM | ASM | ASM |
| EC65 | ASM | ASM | ASM |
| EC67 | DY | ASM | ASM |
| EC80 | DY | DY | ASM |
| EC69 | DY | DY | ASM |
| EC28 | DY | DY | ASM |
| EC81 | DY | DY | ASM |
| EC87 | DY | DY | ASM |
| EC78 | DY | DY | ASM |
| EC79 | DY | DY | ASM |
| EC82 | DY | DY | ASM |
| EC74 | DY | DY | ASM |
| EC75 | DY | DY | ASM |
| EC72 | DY | DY | DY |
| EC84 | DY | DY | ASM |
| EC85 | DY | DY | ASM |
| EC88 | DY | DY | ASM |
| EC73 | DY | DY | ASM |
| EC86 | DY | DY | ASM |
| EC89 | DY | DY | ASM |
| EC90 | DY | DY | ASM |
| EC91 | DY | DY | ASM |
| EC92 | DY | DY | ASM |
| K2 | DY | DY | ASM |
| EC93 | DEL | DEL | DY |
| EC94 | DEL | DEL | DY |
| EC95 | DEL | DEL | DY |
| EC96 | DEL | DEL | DY |
| EC97 | DEL | DEL | ASM |
| EC98 | DEL | DEL | DY |
| EC99 | DEL | DEL | DY |
| EC100 | DEL | DEL | DY |
| EC102 | DEL | DEL | ASM |
| EC103 | DEL | DEL | ASM |
| EC104 | DEL | DEL | ASM |
| EC105 | DEL | DEL | ASM |

MP-3 change to Caramel-3 planar

| Cut off portion | | | | HOLE Geometry | |
|-----------------|----------|----------|----------|---------------|------------------|
| Location | Location | Location | Location | PCB FootPrint | |
| R40 | DEL | U24 | DEL | H2 | HOLE276R95-3P-S |
| R41 | DEL | C527 | DEL | H5 | HT7B75R24-3P-S |
| FL1 | DEL | U1 | DEL | H6 | HOLE276R95-3P-S |
| C41 | DEL | K1 | DEL | H11 | HOLE256R98 |
| C39 | DEL | C284 | DEL | H12 | HOLE315R95-2P-S |
| C32 | DEL | C286 | DEL | H3 | HOLET295B236R138 |
| SKT3 | DEL | | | H4 | HOLET295B236R138 |

| Location | Mocha-3 | Pecan-3 | Caramel-3 |
|-----------------|---------|---------|-----------|
| L21 (VCC5B_HDD) | ASM | ASM | ASM |
| R43 | DEL | DEL | DEL |
| L31 | NO | NO | ADD |
| R47 | ASM | ASM | DEL |
| L32 | NO | NO | ADD |
| R220 | ASM | ASM | DEL |
| L33 | ASM | ASM | ASM |
| L34 | ASM | ASM | ASM |
| R790 | DEL | DEL | DEL |
| L35 | ASM | ASM | ASM |
| R794 | DEL | DEL | DEL |
| L36 | NO | NO | ADD |
| R821 | ASM | ASM | DEL |
| L37 | ASM | ASM | ASM |
| L38 | ASM | ASM | ASM |
| R457 | DEL | DEL | DEL |
| L39 | NO | NO | ADD |
| R587 | ASM | ASM | DEL |
| L40 | NO | NO | ADD |
| R502 | ASM | ASM | DEL |
| L42 | ASM | ASM | NO |
| R466 | DEL | DEL | ASM |

<Core Design>

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

Title: **MP&Caramel difference list**

Size: Custom Document Number: **Mocha-3** Rev: **-2**

Date: Wednesday, January 27, 2010 Sheet 70 of 70