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Project Code & Schematics Subject: **H830-L Main Board_6L**

PCB P/N:	**1P-0093200-6010 (NANYA)** **1P-0093J00-6010 (IRIS)** **1P-0093500-6010 (HANNSTAR)**
BT DB P/N:	**1P-1093200-6010 (NANYA)** **1P-1093J03-6010 (IRIS)** **1P-1093503-6010 (HANNSTAR)**
LED DB P/N:	**1P-1093201-6010 (NANYA)** **1P-1093J01-6010 (IRIS)** **1P-1093502-6010 (HANNSTAR)**
P/B DB P/N:	**1P-1093202-6010 (NANYA)** **1P-1093J00-6010 (IRIS)** **1P-1093501-6010 (HANNSTAR)**

P. Leader	Check by	Design by

Title: **Index Page**

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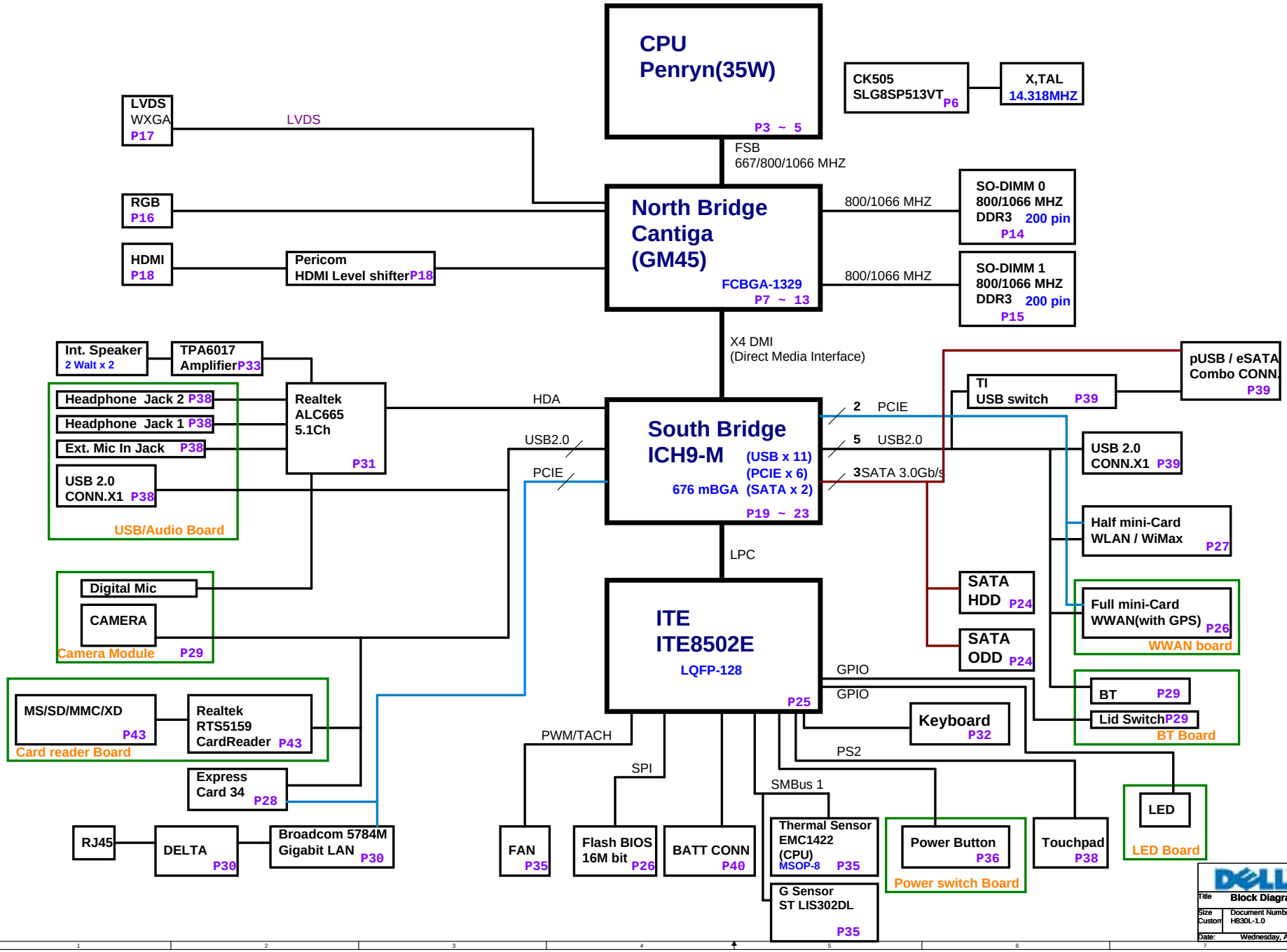
H830(Montevina UMA)



Title	Block Diagram		
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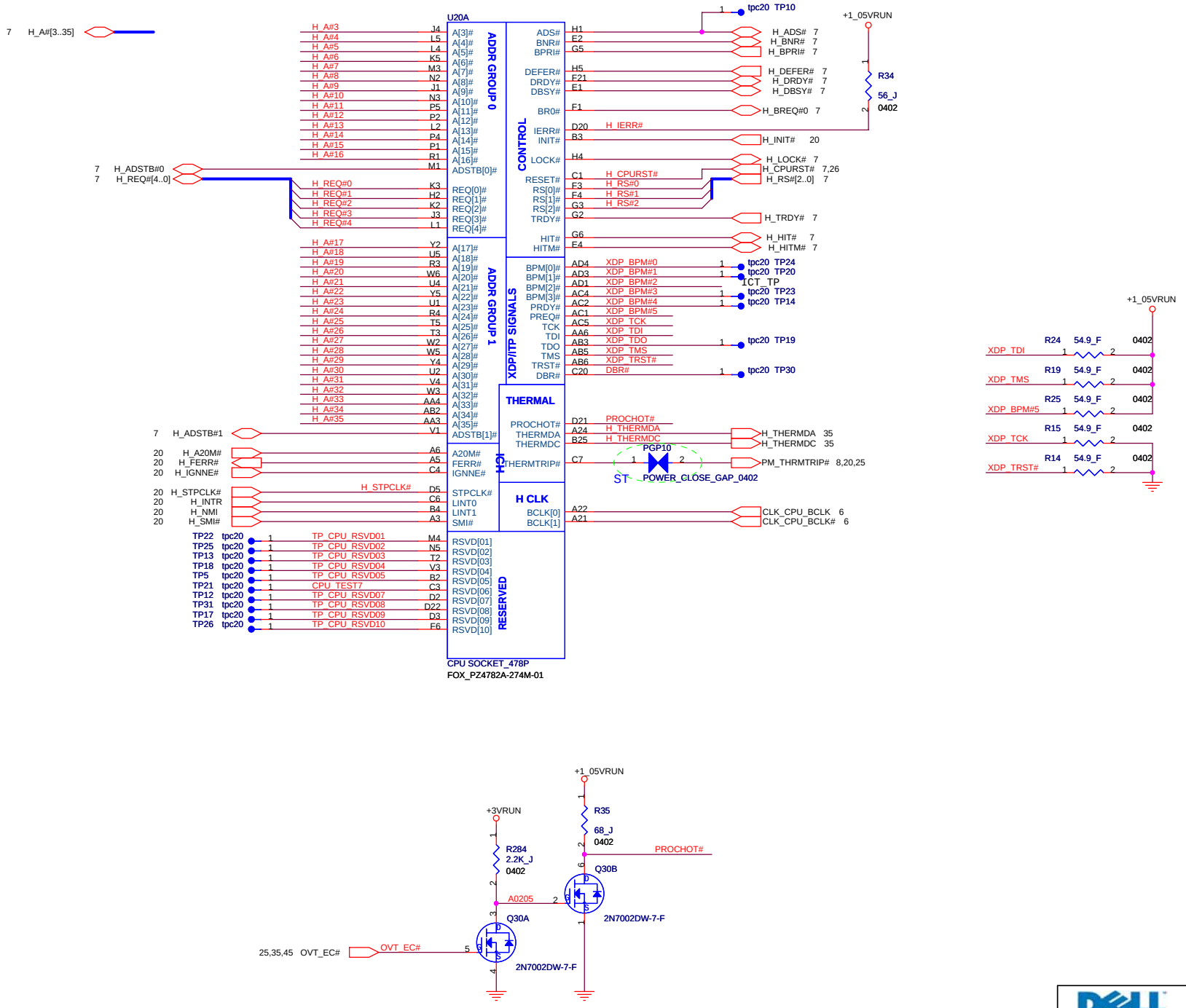

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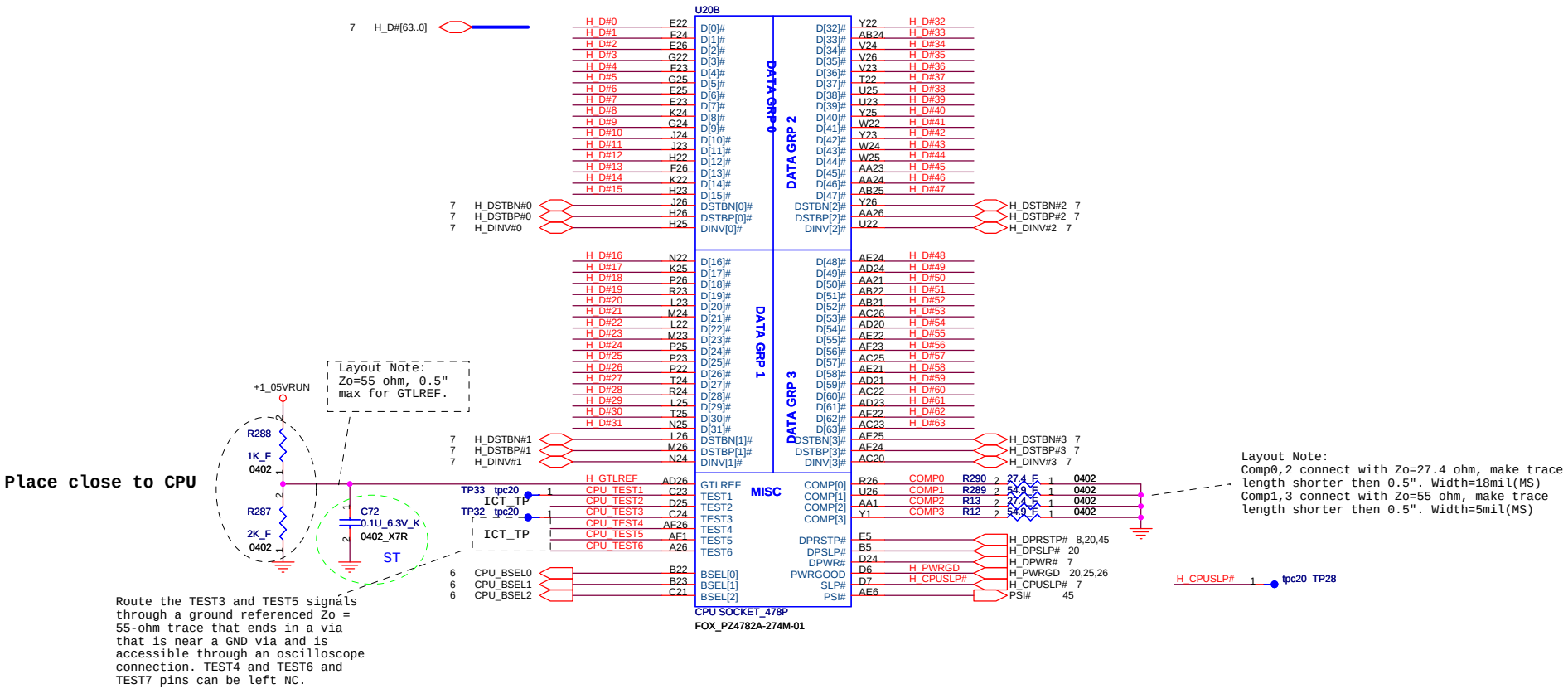

Title	Penryn (HOST BUS) 2/3	
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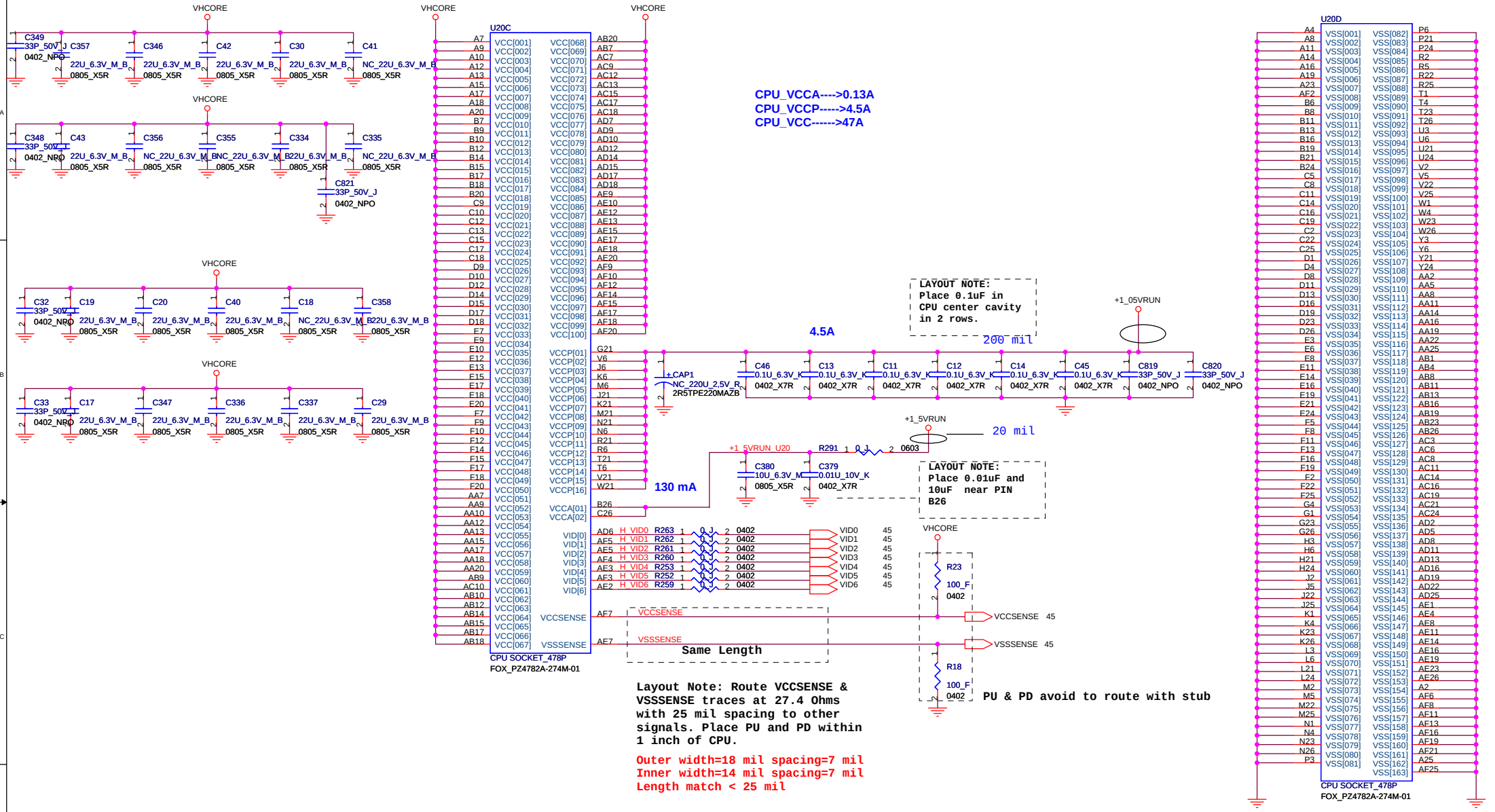

Title	Penryn (POWER/GROUND) 3/3	
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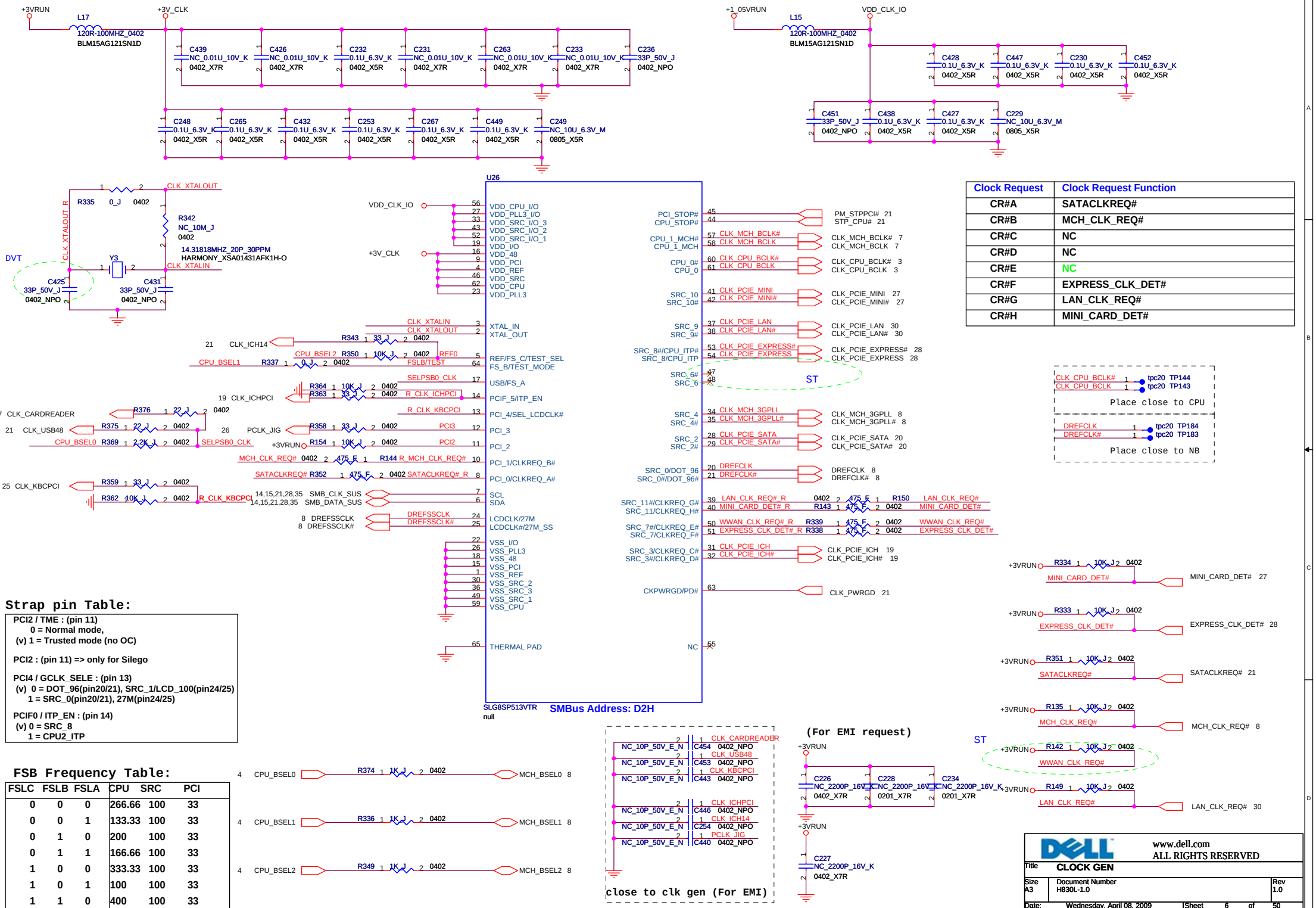
+3VRUN
L17
120R-100MHZ_0402
BLM15AG121SN1D
+3V_CLK
C439 NC_0.01U_10V_K 0402_X7R
C426 NC_0.01U_10V_K 0402_X7R
C232 0.1U_6.3V_K 0402_X5R
C231 NC_0.01U_10V_K 0402_X7R
C263 NC_0.01U_10V_K 0402_X7R
C233 NC_0.01U_10V_K 0402_X7R
C236 33P_50V_J 0402_NPO
C248 0.1U_6.3V_K 0402_X5R
C265 0.1U_6.3V_K 0402_X5R
C432 0.1U_6.3V_K 0402_X5R
C253 0.1U_6.3V_K 0402_X5R
C267 0.1U_6.3V_K 0402_X5R
C449 0.1U_6.3V_K 0402_X5R
C249 NC_10U_6.3V_M 0805_X5R
+1_05VRUN
L15
120R-100MHZ_0402
BLM15AG121SN1D
VDD_CLK_IO
C428 0.1U_6.3V_K 0402_X5R
C447 0.1U_6.3V_K 0402_X5R
C230 0.1U_6.3V_K 0402_X5R
C452 0.1U_6.3V_K 0402_X5R
C451 33P_50V_J 0402_NPO
C438 0.1U_6.3V_K 0402_X5R
C427 0.1U_6.3V_K 0402_X5R
C229 NC_10U_6.3V_M 0805_X5R
CLK_XTALOUT
R335 0_J 0402
R342 NC_10M_J 0402
CLK_XTALOUT_R
DVT
Y3
14.31818MHZ_20P_30PPM
HARMONY_XSA01431AFK1H-O
CLK_XTALIN
C425 33P_50V_J 0402_NPO
C431 33P_50V_J 0402_NPO
U26
VDD_CLK_IO
+3V_CLK
VDD_CPU_I/O
VDD_PLL3_I/O
VDD_SRC_I/O_3
VDD_SRC_I/O_2
VDD_SRC_I/O_1
VDD_I/O
VDD_48
VDD_PCI
VDD_REF
VDD_SRC
VDD_CPU
VDD_PLL3
XTAL_IN
XTAL_OUT
REF/FS_C/TEST_SEL
FS_B/TEST_MODE
USB/FS_A
PCIF_5/ITP_EN
PCI_4/SEL_LCDCLK#
PCI_3
PCI_2
PCI_1/CLKREQ_B#
PCI_0/CLKREQ_A#
SCL
SDA
LCDCLK/27M
LCDCLK#/27M_SS
VSS_I/O
VSS_PLL3
VSS_48
VSS_PCI
VSS_REF
VSS_SRC_2
VSS_SRC_3
VSS_SRC_1
VSS_CPU
THERMAL PAD
PCI_STOP#
CPU_STOP#
CPU_1_MCH#
CPU_1_MCH
CPU_0#
CPU_0
SRC_10
SRC_10#
SRC_9
SRC_9#
SRC_8#/CPU_ITP#
SRC_8/CPU_ITP
SRC_6#
SRC_6
SRC_4
SRC_4#
SRC_2
SRC_2#
SRC_0/DOT_96
SRC_0#/DOT_96#
SRC_11#/CLKREQ_G#
SRC_11/CLKREQ_H#
SRC_7#/CLKREQ_E#
SRC_7/CLKREQ_F#
SRC_3/CLKREQ_C#
SRC_3#/CLKREQ_D#
CKPWRGD/PD#
NC
SLG8SP513VTR
null
SMBus Address: D2H
PM_STPPCI# 21
STP_CPU# 21
CLK_MCH_BCLK# 7
CLK_MCH_BCLK 7
CLK_CPU_BCLK# 3
CLK_CPU_BCLK 3
CLK_PCIE_MINI 27
CLK_PCIE_MINI# 27
CLK_PCIE_LAN 30
CLK_PCIE_LAN# 30
CLK_PCIE_EXPRESS# 28
CLK_PCIE_EXPRESS 28
ST
CLK_MCH_3GPLL 8
CLK_MCH_3GPLL# 8
CLK_PCIE_SATA 20
CLK_PCIE_SATA# 20
DREFCLK 8
DREFCLK# 8
CLK_PCIE_ICH 19
CLK_PCIE_ICH# 19
CLK_PWRGD 21
CLK_ICH14
CLK_ICHPCI
CLK_CARDREADER
CLK_USB48
CLK_KBCPCI
PCLK_JIG
R_CLK_ICHPCI
R_CLK_KBCPCI
SELPSB0_CLK
CPU_BSEL0
CPU_BSEL1
CPU_BSEL2
REF0
PCI3
PCI2
MCH_CLK_REQ#
SATACLKREQ#
SMB_CLK_SUS
SMB_DATA_SUS
DREFSSCLK
DREFSSCLK#
LAN_CLK_REQ#
MINI_CARD_DET#
WWAN_CLK_REQ#
EXPRESS_CLK_DET#
Clock Request
Clock Request Function
CR#A SATACLKREQ#
CR#B MCH_CLK_REQ#
CR#C NC
CR#D NC
CR#E NC
CR#F EXPRESS_CLK_DET#
CR#G LAN_CLK_REQ#
CR#H MINI_CARD_DET#
CLK_CPU_BCLK# tpc20 TP144
CLK_CPU_BCLK tpc20 TP143
Place close to CPU
DREFCLK tpc20 TP184
DREFCLK# tpc20 TP183
Place close to NB
Strap pin Table:
PCI2 / TME : (pin 11)
0 = Normal mode,
(v) 1 = Trusted mode (no OC)
PCI2 : (pin 11) => only for Silego
PCI4 / GCLK_SELE : (pin 13)
(v) 0 = DOT_96(pin20/21), SRC_1/LCD_100(pin24/25)
1 = SRC_0(pin20/21), 27M(pin24/25)
PCIF0 / ITP_EN : (pin 14)
(v) 0 = SRC_8
1 = CPU2_ITP
FSB Frequency Table:
FSLC FSLB FSLA CPU SRC PCI
0 0 0 266.66 100 33
0 0 1 133.33 100 33
0 1 0 200 100 33
0 1 1 166.66 100 33
1 0 0 333.33 100 33
1 0 1 100 100 33
1 1 0 400 100 33
CPU_BSEL0 R374 1K_J 0402 MCH_BSEL0
CPU_BSEL1 R336 1K_J 0402 MCH_BSEL1
CPU_BSEL2 R349 1K_J 0402 MCH_BSEL2
close to clk gen (For EMI)
(For EMI request)
C226 NC_2200P_16V_K 0402_X7R
C228 NC_2200P_16V_K 0201_X7R
C234 NC_2200P_16V_K 0201_X7R
C227 NC_2200P_16V_K 0402_X7R
R334 10K_J 0402 MINI_CARD_DET#
R333 10K_J 0402 EXPRESS_CLK_DET#
R351 10K_J 0402 SATACLKREQ#
R135 10K_J 0402 MCH_CLK_REQ#
R142 10K_J 0402 WWAN_CLK_REQ#
R149 10K_J 0402 LAN_CLK_REQ#
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Title CLOCK GEN
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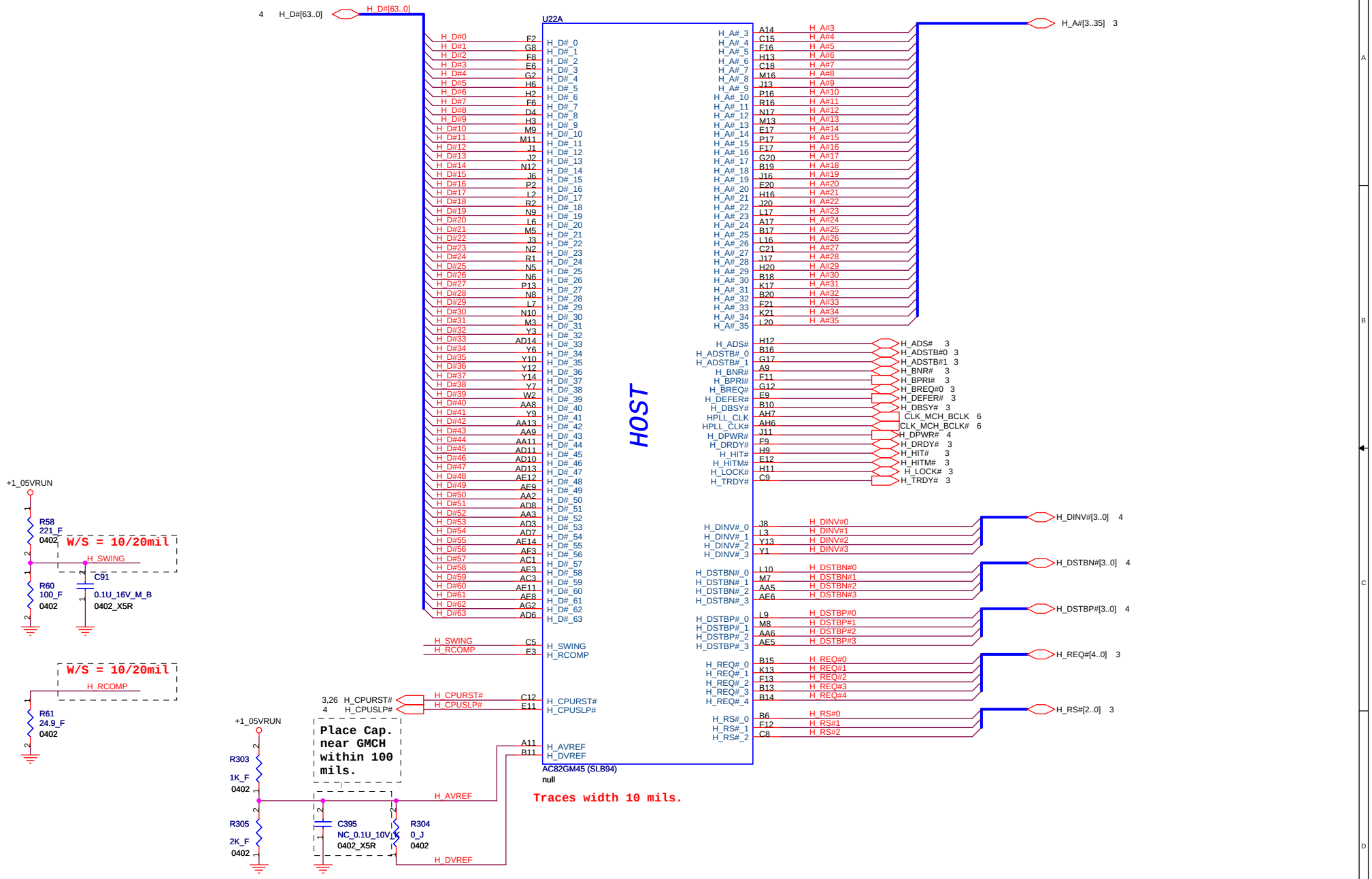

Title	Cantiga (HOST) 1/7	
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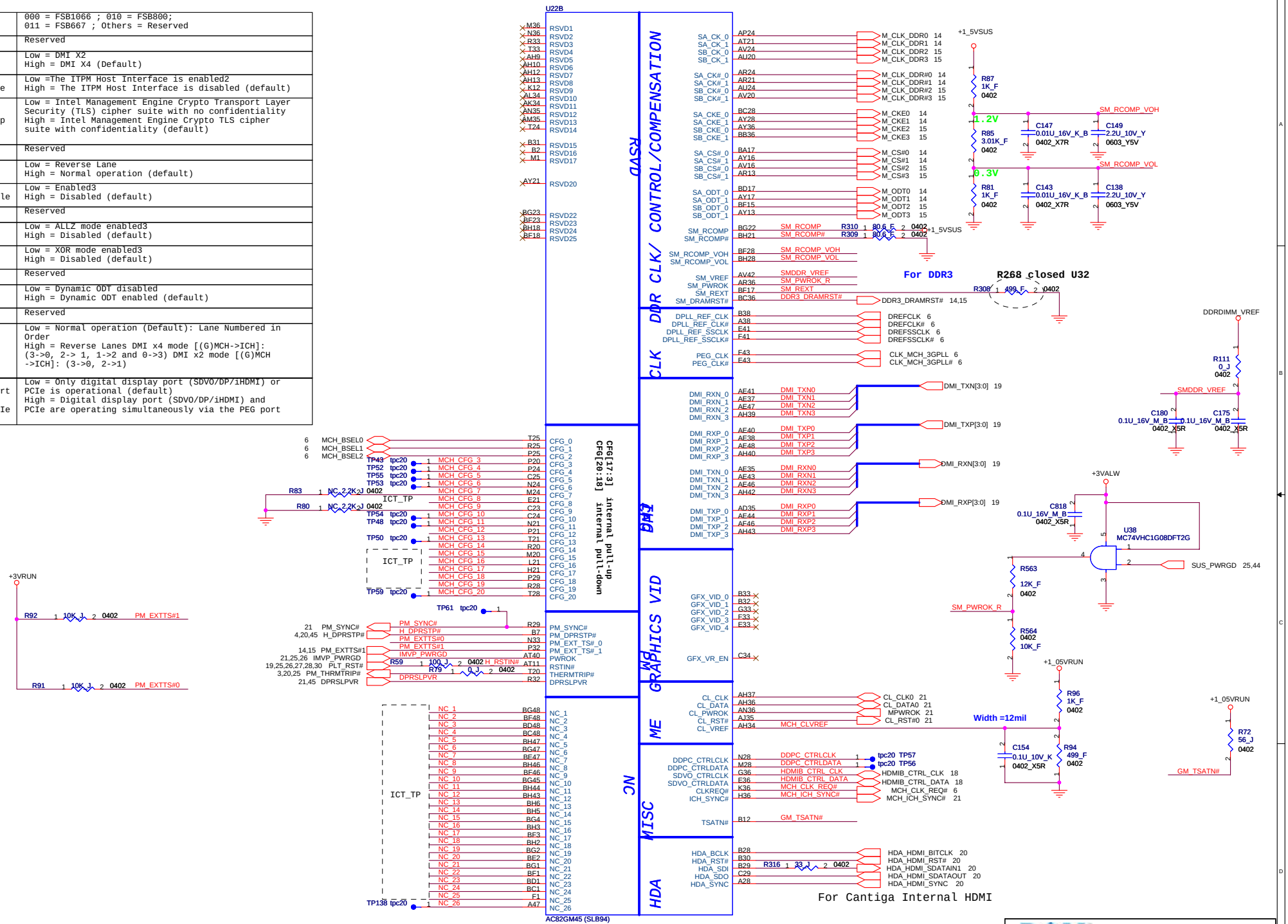
MCH_CFG_0~2 FSB Frequency	000 = FSB1066 ; 010 = FSB800; 011 = FSB667 ; Others = Reserved
MCH_CFG_3~4	Reserved
MCH_CFG_5 DMI X2 Select	Low = DMI X2 High = DMI X4 (Default)
MCH_CFG_6 ITPM Host Interface	Low =The ITPM Host Interface is enabled2 High = The ITPM Host Interface is disabled (default)
MCH_CFG_7 Intel Management Engine Crypto Strap	Low = Intel Management Engine Crypto Transport Layer Security (TLS) cipher suite with no confidentiality High = Intel Management Engine Crypto TLS cipher suite with confidentiality (default)
MCH_CFG_8	Reserved
MCH_CFG_9 PCIE Graphics Lane	Low = Reverse Lane High = Normal operation (default)
MCH_CFG_10 PCIE Loopback enable	Low = Enabled3 High = Disabled (default)
MCH_CFG_11	Reserved
MCH_CFG_12 ALLZ	Low = ALLZ mode enabled3 High = Disabled (default)
MCH_CFG_13 XOR	Low = XOR mode enabled3 High = Disabled (default)
MCH_CFG_14~15	Reserved
MCH_CFG_16 FSB Dynamic ODT	Low = Dynamic ODT disabled High = Dynamic ODT enabled (default)
MCH_CFG_17~18	Reserved
MCH_CFG_19 DMI Lane Reversal	Low = Normal operation (Default): Lane Numbered in Order High = Reverse Lanes DMI x4 mode [(G)MCH->ICH]: (3->0, 2-> 1, 1->2 and 0->3) DMI x2 mode [(G)MCH ->ICH]: (3->0, 2->1)
MCH_CFG_20 Digital Display Port (SDVO/ DP/iHDMI) Concurrent with PCIe	Low = Only digital display port (SDVO/DP/iHDMI) or PCIe is operational (default) High = Digital display port (SDVO/DP/iHDMI) and PCIe are operating simultaneously via the PEG port



Title	Cantiga (DMI) 2/7	
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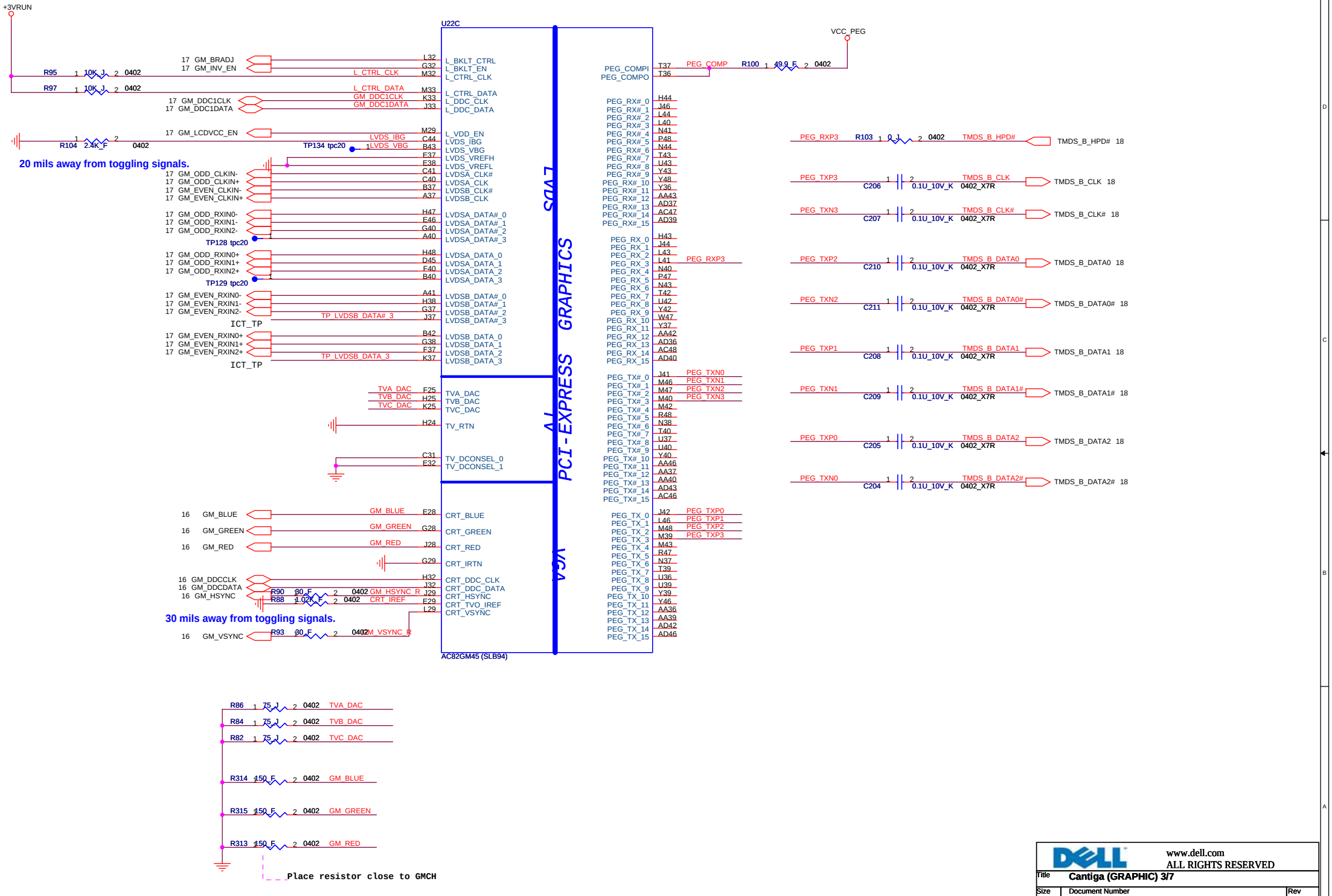
+3VRUN
U22C
VCC_PEG
R95 10K_J 0402
R97 10K_J 0402
R104 2.4K_F 0402
20 mils away from toggling signals.
30 mils away from toggling signals.
TP134 tpc20
TP128 tpc20
TP129 tpc20
ICT_TP
ICT_TP
R100 49.9_F 0402
R103 0_J 0402
C206 0.1U_10V_K 0402_X7R
C207 0.1U_10V_K 0402_X7R
C210 0.1U_10V_K 0402_X7R
C211 0.1U_10V_K 0402_X7R
C208 0.1U_10V_K 0402_X7R
C209 0.1U_10V_K 0402_X7R
C205 0.1U_10V_K 0402_X7R
C204 0.1U_10V_K 0402_X7R
R90 80_F 0402
R88 1.02K_F 0402
R93 80_F 0402
R86 75_J 0402
R84 75_J 0402
R82 75_J 0402
R314 150_F 0402
R315 150_F 0402
R313 150_F 0402
Place resistor close to GMCH
LVDS
PCI-EXPRESS
GRAPHICS
VGA
AC82GM45 (SLB94)
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Title Cantiga (GRAPHIC) 3/7
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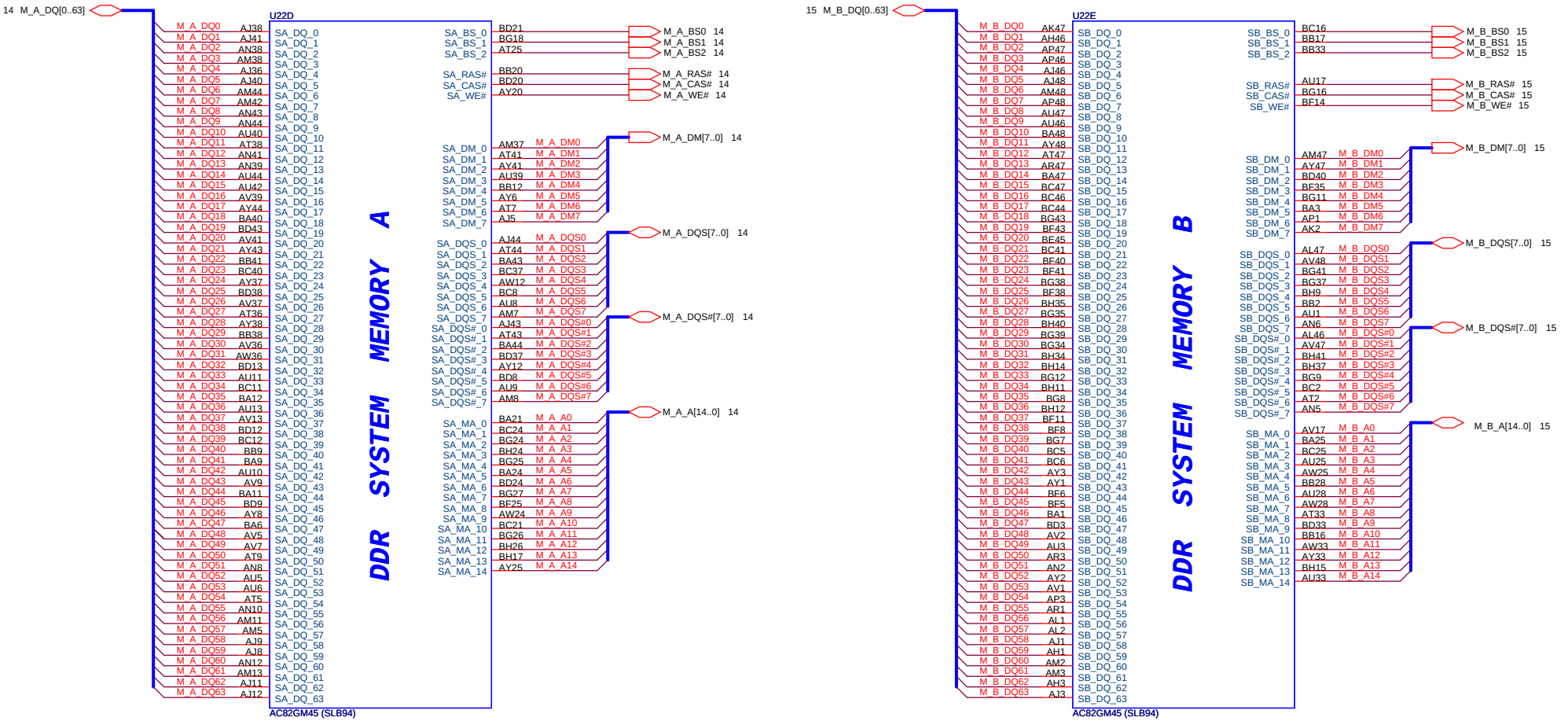

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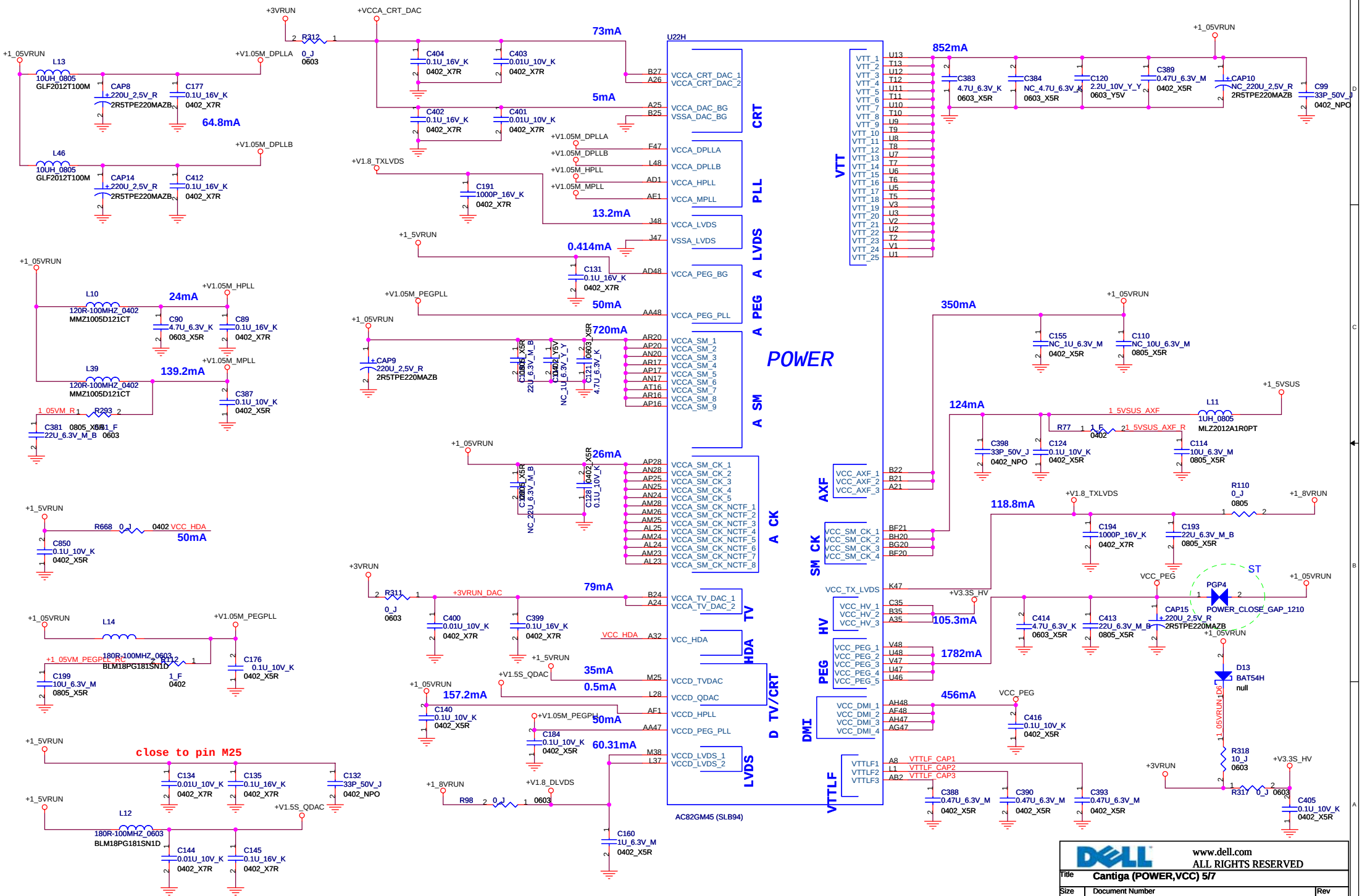
POWER
U22H
AC82GM45 (SLB94)
CRT
PLL
LVDS
PEG
SM
CK
TV
HDA
DMI
VTTLF
VTT
AXF
+3VRUN
+VCCA_CRT_DAC
+1_05VRUN
+V1.05M_DPLLA
+V1.05M_DPLLB
+V1.8_TXLVDS
+1_5VRUN
+V1.05M_HPLL
+V1.05M_MPLL
+V1.05M_PEGPLL
+1_8VRUN
+1_5VSUS
+3VRUN_DAC
+V1.5S_QDAC
+V1.8_DLVDS
+V3.3S_HV
VCC_HDA
VCC_PEG
73mA
5mA
64.8mA
13.2mA
0.414mA
50mA
720mA
26mA
79mA
35mA
0.5mA
157.2mA
50mA
60.31mA
852mA
350mA
124mA
118.8mA
105.3mA
1782mA
456mA
24mA
139.2mA
close to pin M25
VCCA_CRT_DAC_1
VCCA_CRT_DAC_2
VCCA_DAC_BG
VSSA_DAC_BG
VCCA_DPLLA
VCCA_DPLLB
VCCA_HPLL
VCCA_MPLL
VCCA_LVDS
VSSA_LVDS
VCCA_PEG_BG
VCCA_PEG_PLL
VCCA_SM_1
VCCA_SM_2
VCCA_SM_3
VCCA_SM_4
VCCA_SM_5
VCCA_SM_6
VCCA_SM_7
VCCA_SM_8
VCCA_SM_9
VCCA_SM_CK_1
VCCA_SM_CK_2
VCCA_SM_CK_3
VCCA_SM_CK_4
VCCA_SM_CK_5
VCCA_SM_CK_NCTF_1
VCCA_SM_CK_NCTF_2
VCCA_SM_CK_NCTF_3
VCCA_SM_CK_NCTF_4
VCCA_SM_CK_NCTF_5
VCCA_SM_CK_NCTF_6
VCCA_SM_CK_NCTF_7
VCCA_SM_CK_NCTF_8
VCCA_TV_DAC_1
VCCA_TV_DAC_2
VCC_HDA
VCCD_TVDAC
VCCD_QDAC
VCCD_HPLL
VCCD_PEG_PLL
VCCD_LVDS_1
VCCD_LVDS_2
VCC_AXF_1
VCC_AXF_2
VCC_AXF_3
VCC_SM_CK_1
VCC_SM_CK_2
VCC_SM_CK_3
VCC_SM_CK_4
VCC_TX_LVDS
VCC_HV_1
VCC_HV_2
VCC_HV_3
VCC_PEG_1
VCC_PEG_2
VCC_PEG_3
VCC_PEG_4
VCC_PEG_5
VCC_DMI_1
VCC_DMI_2
VCC_DMI_3
VCC_DMI_4
VTTLF1
VTTLF2
VTTLF3
VTT_1
VTT_2
VTT_3
VTT_4
VTT_5
VTT_6
VTT_7
VTT_8
VTT_9
VTT_10
VTT_11
VTT_12
VTT_13
VTT_14
VTT_15
VTT_16
VTT_17
VTT_18
VTT_19
VTT_20
VTT_21
VTT_22
VTT_23
VTT_24
VTT_25
VTTLF_CAP1
VTTLF_CAP2
VTTLF_CAP3
L13
10UH_0805
GLF2012T100M
L46
L10
120R-100MHZ_0402
MMZ1005D121CT
L39
L14
180R-100MHZ_0603
BLM18PG181SN1D
L12
L11
1UH_0805
MLZ2012A1R0PT
R312
0_J
0603
R311
R668
R293
R77
R110
CAP8
CAP14
CAP9
CAP10
CAP15
PGP4
POWER_CLOSE_GAP_1210
D13
BAT54H
null
R318
R317
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3.06A

U22F

+1_05VRUN

VCC CORE

POWER

VCC NCTF

AC82GM45 (SLB94)

+1_5VSUS

4.14A

8.7A => GM45
9.6A => GM47

U22G

VCC SM POWER

VCC GFX NCTF

VCC GFX

VCC SM LF

AC82GM45 (SLB94)

When stuff GM47,
2x330 µF, 6 mOhm ESR (12 mOhm ESR each capacitor)

308 mils from the Edge.

Cavity Capacitors

Place C837 where LVDS and DDR2 taps.

Place on the Edge.

370 mils from the Edge.

Cavity Capacitors

ICT_TP

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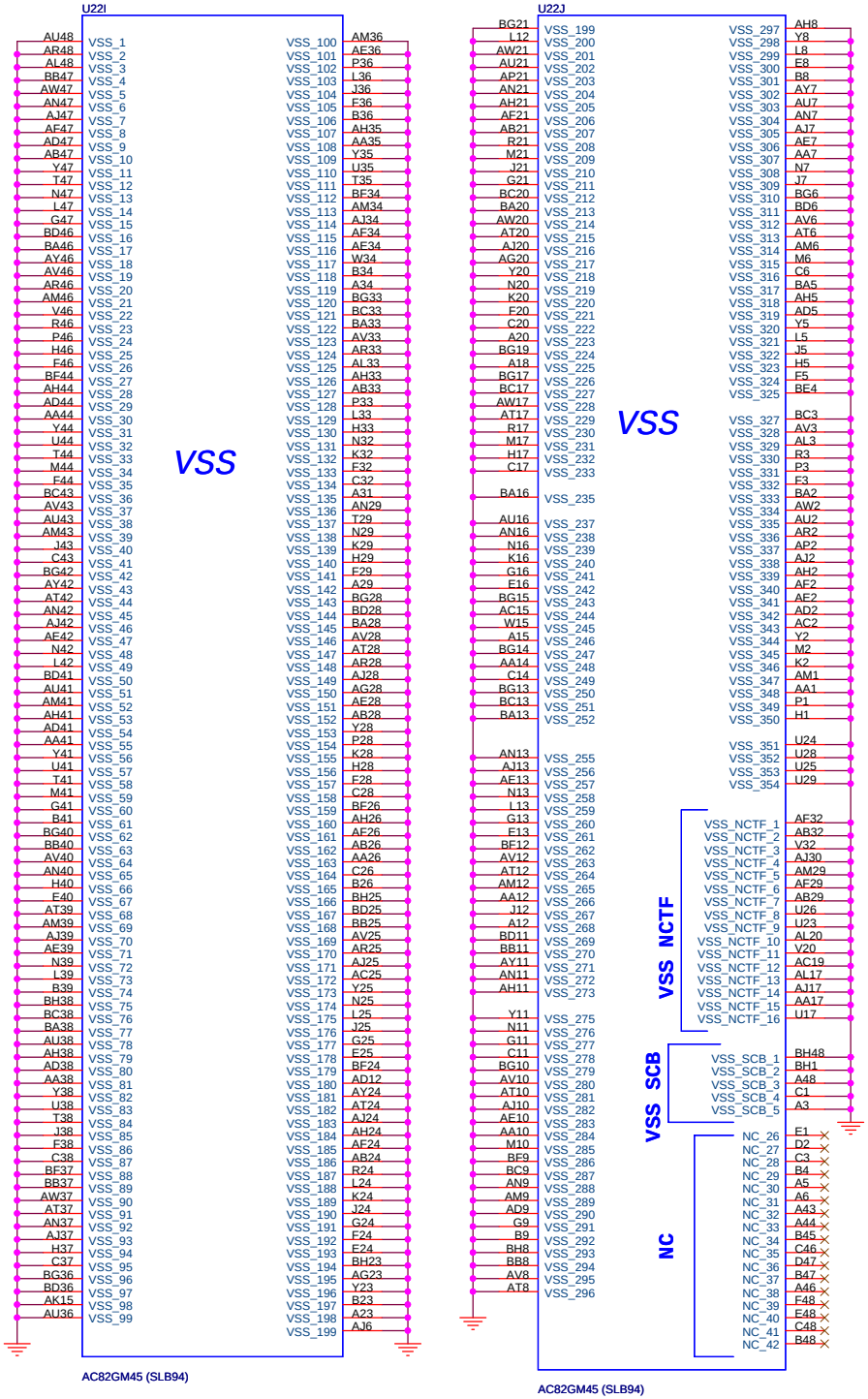

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Title	Cantiga (VSS) 7/7	
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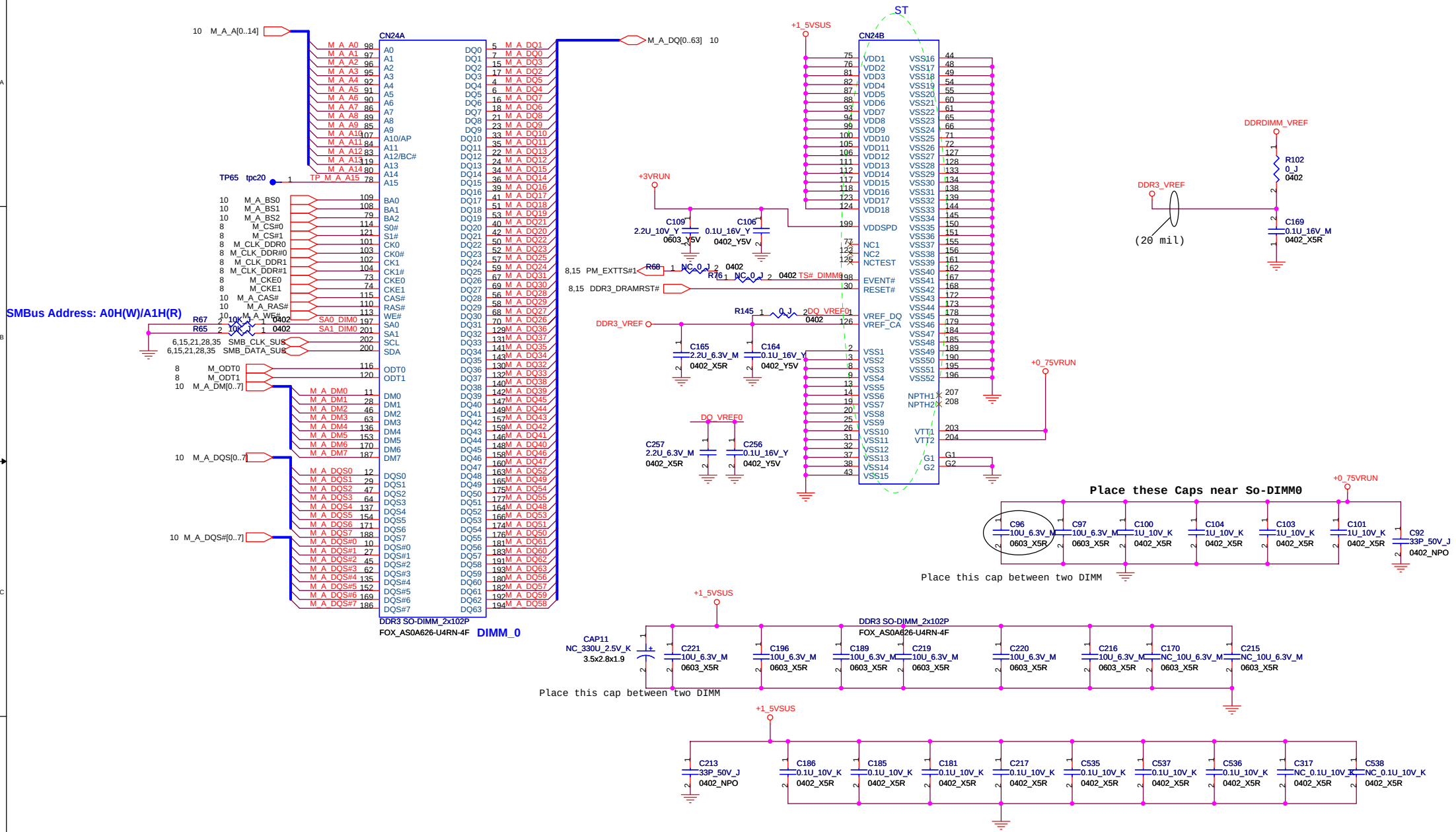

Title	DDR3 SO-DIMM_0	
Size A3	Document Number H830L-1.0	Rev 1.0
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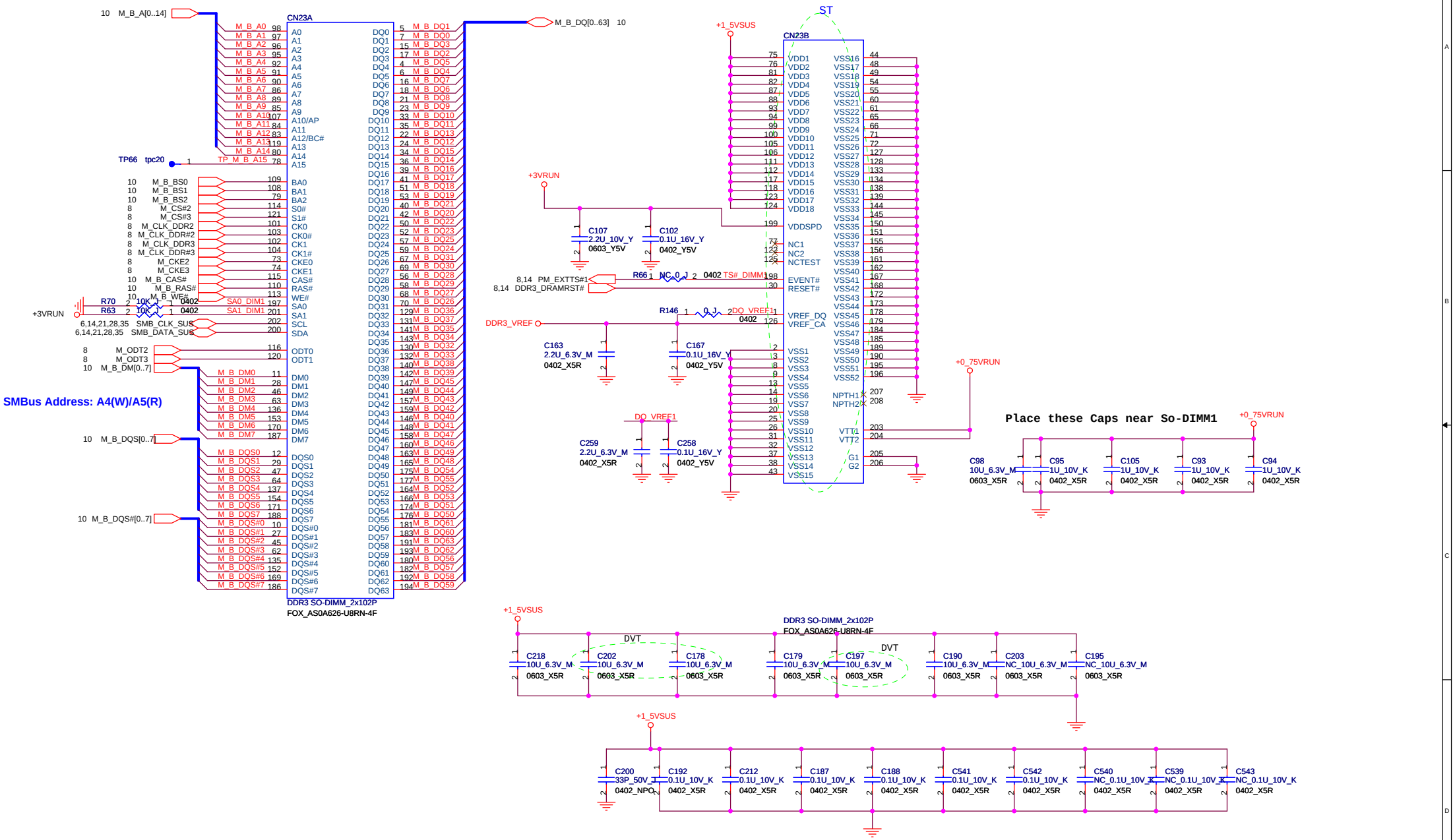

Title	DDR3 SO-DIMM_1
Size	A3
Document Number	H830L-1.0
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Date:	Wednesday, April 08, 2009
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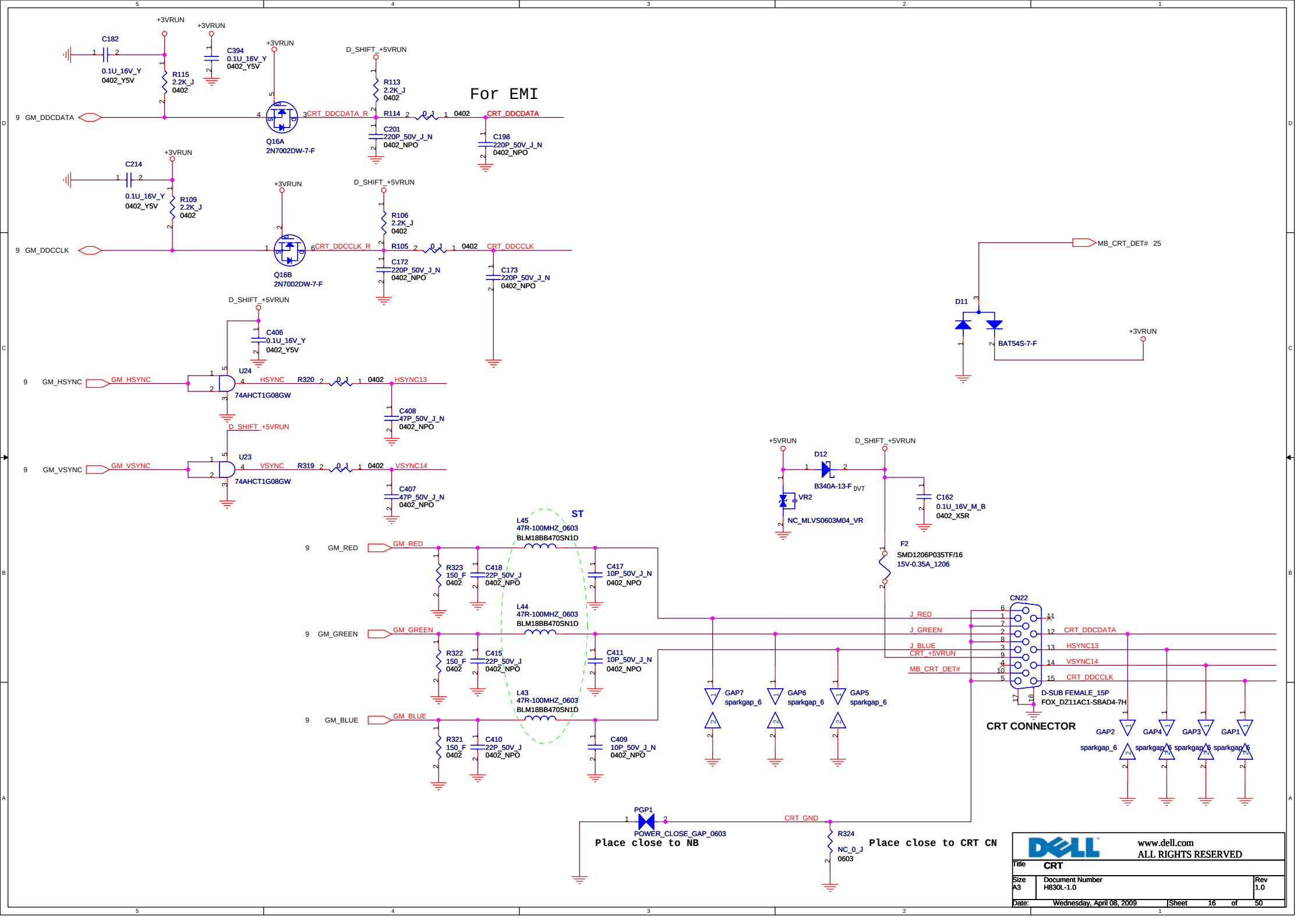
For EMI
ST
CRT CONNECTOR
Place close to NB
Place close to CRT CN
C182
0.1U_16V_Y
0402_Y5V
R115
2.2K_J
0402
C394
0.1U_16V_Y
0402_Y5V
R113
2.2K_J
0402
R114
0_J
0402
C201
220P_50V_J_N
0402_NPO
C198
220P_50V_J_N
0402_NPO
Q16A
2N7002DW-7-F
GM_DDCDATA
CRT_DDCDATA_R
CRT_DDCDATA
C214
0.1U_16V_Y
0402_Y5V
R109
2.2K_J
0402
R106
2.2K_J
0402
R105
0_J
0402
C172
220P_50V_J_N
0402_NPO
C173
220P_50V_J_N
0402_NPO
Q16B
2N7002DW-7-F
GM_DDCCLK
CRT_DDCCLK_R
CRT_DDCCLK
C406
0.1U_16V_Y
0402_Y5V
U24
74AHCT1G08GW
GM_HSYNC
HSYNC
R320
0_J
0402
HSYNC13
C408
47P_50V_J_N
0402_NPO
U23
74AHCT1G08GW
GM_VSYNC
VSYNC
R319
0_J
0402
VSYNC14
C407
47P_50V_J_N
0402_NPO
MB_CRT_DET# 25
D11
BAT54S-7-F
+3VRUN
D12
B340A-13-F_DVT
VR2
NC_MLVS0603M04_VR
+5VRUN
D_SHIFT_+5VRUN
C162
0.1U_16V_M_B
0402_X5R
F2
SMD1206P035TF/16
15V-0.35A_1206
L45
47R-100MHZ_0603
BLM18BB470SN1D
L44
47R-100MHZ_0603
BLM18BB470SN1D
L43
47R-100MHZ_0603
BLM18BB470SN1D
GM_RED
GM_GREEN
GM_BLUE
R323
150_F
0402
C418
22P_50V_J
0402_NPO
C417
10P_50V_J_N
0402_NPO
R322
150_F
0402
C415
22P_50V_J
0402_NPO
C411
10P_50V_J_N
0402_NPO
R321
150_F
0402
C410
22P_50V_J
0402_NPO
C409
10P_50V_J_N
0402_NPO
J_RED
J_GREEN
J_BLUE
CRT_+5VRUN
MB_CRT_DET#
GAP7
GAP6
GAP5
sparkgap_6
CN22
D-SUB FEMALE_15P
FOX_DZ11AC1-SBAD4-7H
CRT_DDCDATA
HSYNC13
VSYNC14
CRT_DDCCLK
GAP2
GAP4
GAP3
GAP1
PGP1
POWER_CLOSE_GAP_0603
CRT_GND
R324
NC_0_J
0603
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CRT
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A3
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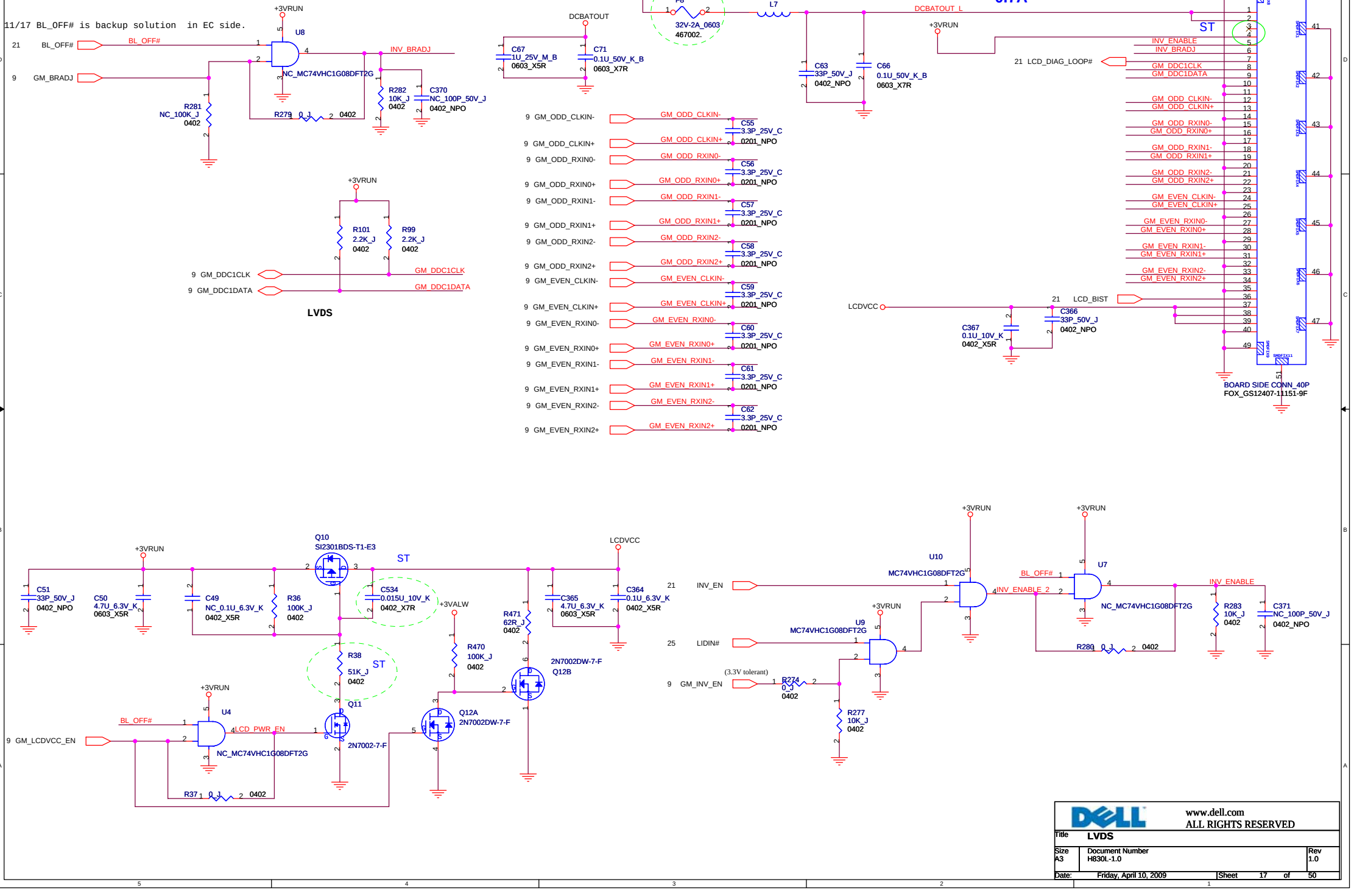
11/17 BL_OFF# is backup solution in EC side.



Title	LVDS	
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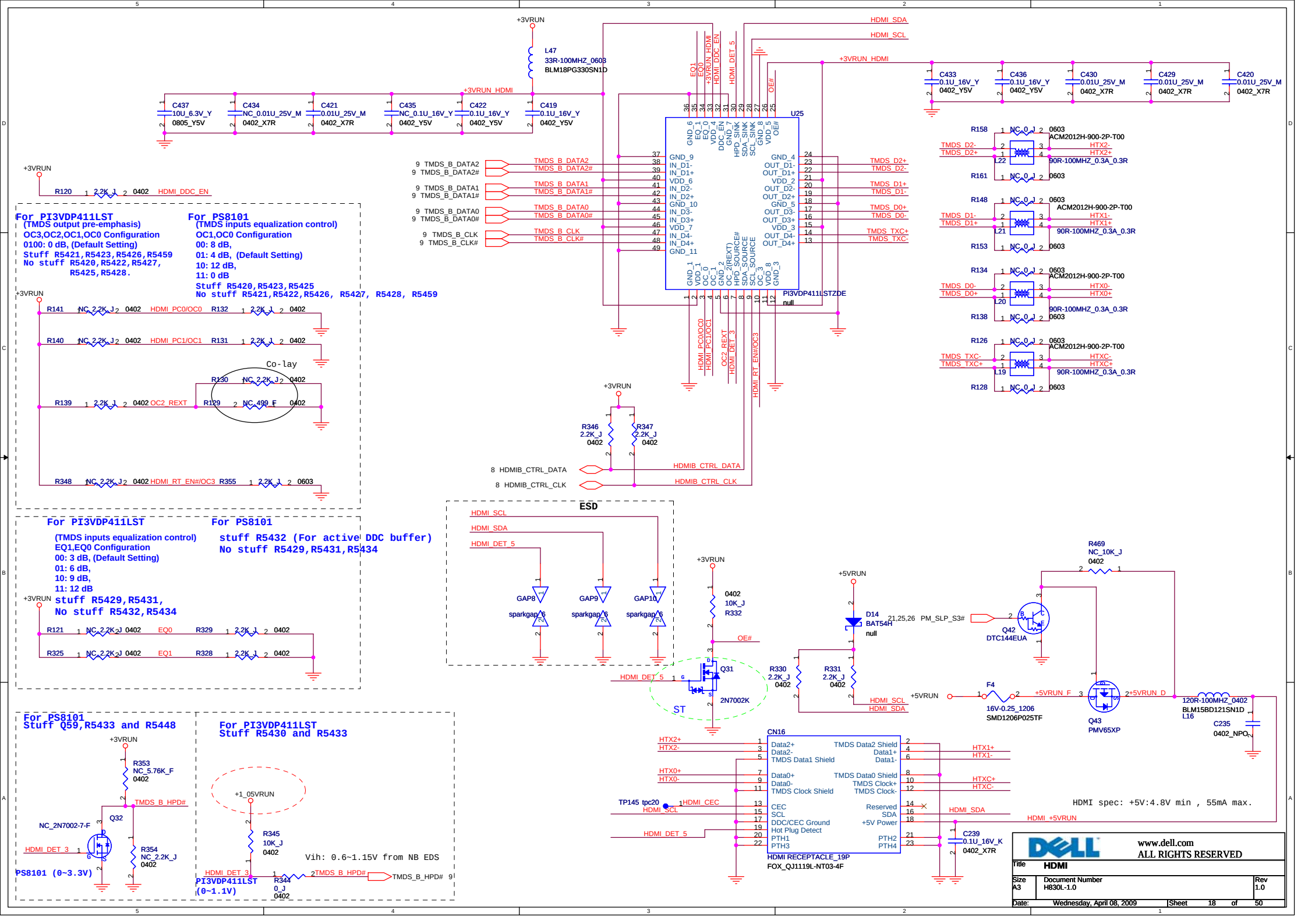
For PI3VDP411LST
(TMDS output pre-emphasis)
OC3,OC2,OC1,OC0 Configuration
0100: 0 dB, (Default Setting)
Stuff R5421,R5423,R5426,R5459
No stuff R5420,R5422,R5427,
R5425,R5428.
For PS8101
(TMDS inputs equalization control)
OC1,OC0 Configuration
00: 8 dB,
01: 4 dB, (Default Setting)
10: 12 dB,
11: 0 dB
Stuff R5420,R5423,R5425
No stuff R5421,R5422,R5426, R5427, R5428, R5459
For PI3VDP411LST
(TMDS inputs equalization control)
EQ1,EQ0 Configuration
00: 3 dB, (Default Setting)
01: 6 dB,
10: 9 dB,
11: 12 dB
stuff R5429,R5431,
No stuff R5432,R5434
For PS8101
stuff R5432 (For active DDC buffer)
No stuff R5429,R5431,R5434
ESD
For PS8101
Stuff Q59,R5433 and R5448
PS8101 (0~3.3V)
For PI3VDP411LST
Stuff R5430 and R5433
PI3VDP411LST
(0~1.1V)
Vih: 0.6~1.15V from NB EDS
HDMI spec: +5V:4.8V min , 55mA max.
U25
PI3VDP411LSTZDE
null
CN16
HDMI RECEPTACLE_19P
FOX_QJ1119L-NT03-4F
Co-lay
ST
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Title HDMI
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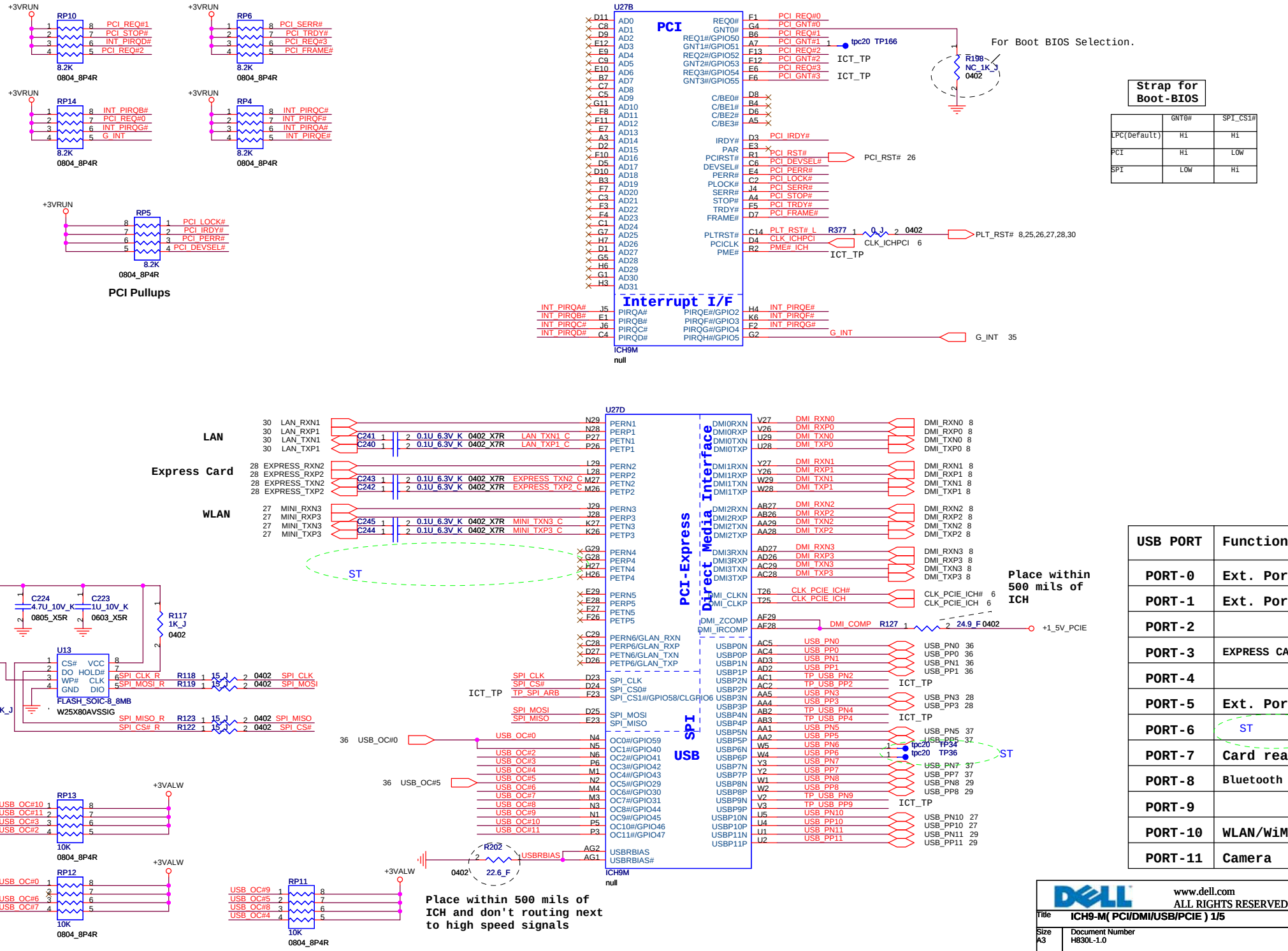

USB PORT	Function
PORT-0	Ext. Port
PORT-1	Ext. Port
PORT-2	
PORT-3	EXPRESS CARD
PORT-4	
PORT-5	Ext. Port
PORT-6	ST
PORT-7	Card reader
PORT-8	Bluetooth
PORT-9	
PORT-10	WLAN/WiMAX
PORT-11	Camera

Title	ICH9-M(PCI/DMI/USB/PCIE) 1/5	
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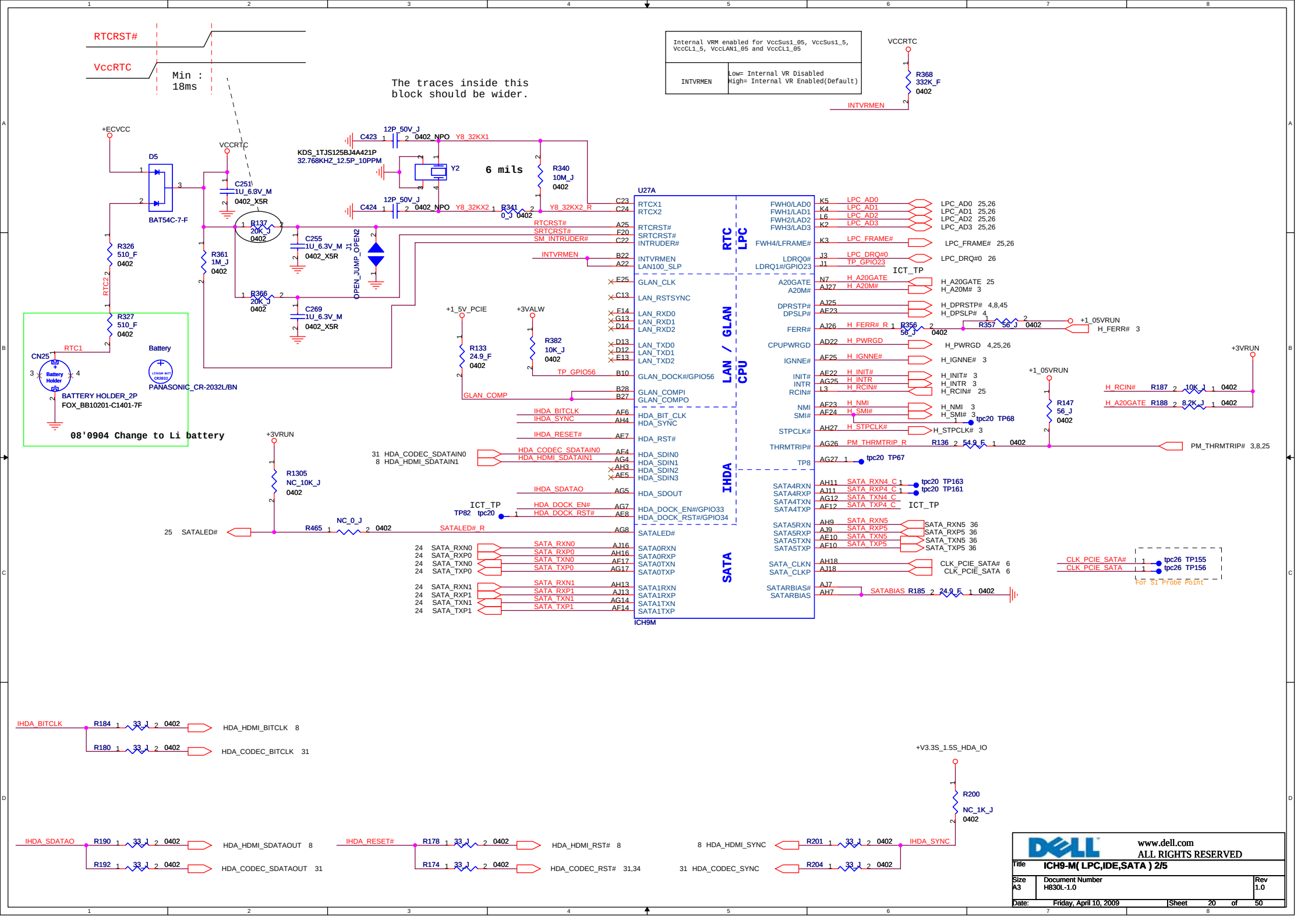
RTCRST#
VccRTC
Min : 18ms
The traces inside this block should be wider.
Internal VRM enabled for VccSus1_05, VccSus1_5, VccCL1_5, VccLAN1_05 and VccCL1_05
INTVRMEN
Low= Internal VR Disabled
High= Internal VR Enabled(Default)
VCCRTC
R368 332K_F 0402
INTVRMEN
+ECVCC
D5
BAT54C-7-F
C251 1U_6.3V_M 0402_X5R
R326 510_F 0402
R361 1M_J 0402
R327 510_F 0402
RTC2
RTC1
CN25
Battery Holder
Battery
PANASONIC_CR-2032L/BN
BATTERY HOLDER_2P
FOX_BB10201-C1401-7F
08'0904 Change to Li battery
R137 20K_J 0402
R366 20K_J 0402
C255 1U_6.3V_M 0402_X5R
C269 1U_6.3V_M 0402_X5R
OPEN_JUMP_OPEN2
J1
C423 12P_50V_J 0402_NPO
C424 12P_50V_J 0402_NPO
KDS_1TJS125BJ4A421P
32.768KHZ_12.5P_10PPM
Y2
6 mils
R340 10M_J 0402
R341 0_J 0402
Y8_32KX1
Y8_32KX2
Y8_32KX2_R
U27A
RTCX1
RTCX2
RTCRST#
SRTCRST#
INTRUDER#
INTVRMEN
LAN100_SLP
RTC
LPC
FWH0/LAD0
FWH1/LAD1
FWH2/LAD2
FWH3/LAD3
FWH4/LFRAME#
LDRQ0#
LDRQ1#/GPIO23
LPC_AD0
LPC_AD1
LPC_AD2
LPC_AD3
LPC_FRAME#
LPC_DRQ#0
TP_GPIO23
ICT_TP
GLAN_CLK
LAN_RSTSYNC
LAN_RXD0
LAN_RXD1
LAN_RXD2
LAN_TXD0
LAN_TXD1
LAN_TXD2
GLAN_DOCK#/GPIO56
GLAN_COMPI
GLAN_COMPO
LAN / GLAN
CPU
A20GATE
A20M#
DPRSTP#
DPSLP#
FERR#
CPUPWRGD
IGNNE#
INIT#
INTR
RCIN#
NMI
SMI#
STPCLK#
THRMTRIP#
TP8
H_A20GATE
H_A20M#
H_DPRSTP#
H_DPSLP#
H_FERR#
H_PWRGD
H_IGNNE#
H_INIT#
H_INTR
H_RCIN#
H_NMI
H_SMI#
H_STPCLK#
PM_THRMTRIP#
R356 56_J 0402
R357 56_J 0402
R147 56_J 0402
R136 54.9_F 0402
+1_05VRUN
+3VRUN
+1_5V_PCIE
+3VALW
R133 24.9_F 0402
R382 10K_J 0402
TP_GPIO56
GLAN_COMP
R187 10K_J 0402
R188 8.2K_J 0402
H_RCIN#
H_A20GATE
IHDA_BITCLK
IHDA_SYNC
IHDA_RESET#
HDA_BIT_CLK
HDA_SYNC
HDA_RST#
HDA_SDIN0
HDA_SDIN1
HDA_SDIN2
HDA_SDIN3
HDA_SDOUT
HDA_DOCK_EN#/GPIO33
HDA_DOCK_RST#/GPIO34
IHDA
HDA_CODEC_SDATAIN0
HDA_HDMI_SDATAIN1
31 HDA_CODEC_SDATAIN0
8 HDA_HDMI_SDATAIN1
IHDA_SDATAO
HDA_DOCK_EN#
HDA_DOCK_RST#
ICT_TP
TP82 tpc20
R1305 NC_10K_J 0402
R465 NC_0_J 0402
25 SATALED#
SATALED#_R
SATALED#
SATA0RXN
SATA0RXP
SATA0TXN
SATA0TXP
SATA1RXN
SATA1RXP
SATA1TXN
SATA1TXP
SATA
SATA_RXN0
SATA_RXP0
SATA_TXN0
SATA_TXP0
SATA_RXN1
SATA_RXP1
SATA_TXN1
SATA_TXP1
24 SATA_RXN0
24 SATA_RXP0
24 SATA_TXN0
24 SATA_TXP0
24 SATA_RXN1
24 SATA_RXP1
24 SATA_TXN1
24 SATA_TXP1
SATA4RXN
SATA4RXP
SATA4TXN
SATA4TXP
SATA5RXN
SATA5RXP
SATA5TXN
SATA5TXP
SATA_CLKN
SATA_CLKP
SATABIAS#
SATABIAS
SATA_RXN4_C
SATA_RXP4_C
SATA_TXN4_C
SATA_TXP4_C
SATA_RXN5
SATA_RXP5
SATA_TXN5
SATA_TXP5
SATA_RXN5 36
SATA_RXP5 36
SATA_TXN5 36
SATA_TXP5 36
CLK_PCIE_SATA#
CLK_PCIE_SATA
CLK_PCIE_SATA# 6
CLK_PCIE_SATA 6
SATABIAS R185 24.9_F 0402
tpc20 TP163
tpc20 TP161
tpc20 TP68
tpc20 TP67
tpc26 TP155
tpc26 TP156
For SI Probe Point
ICH9M
IHDA_BITCLK
R184 33_J 0402
R180 33_J 0402
HDA_HDMI_BITCLK 8
HDA_CODEC_BITCLK 31
IHDA_SDATAO
R190 33_J 0402
R192 33_J 0402
HDA_HDMI_SDATAOUT 8
HDA_CODEC_SDATAOUT 31
IHDA_RESET#
R178 33_J 0402
R174 33_J 0402
HDA_HDMI_RST# 8
HDA_CODEC_RST# 31,34
8 HDA_HDMI_SYNC
31 HDA_CODEC_SYNC
R201 33_J 0402
R204 33_J 0402
IHDA_SYNC
+V3.3S_1.5S_HDA_IO
R200 NC_1K_J 0402
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Title ICH9-M(LPC,IDE,SATA) 2/5
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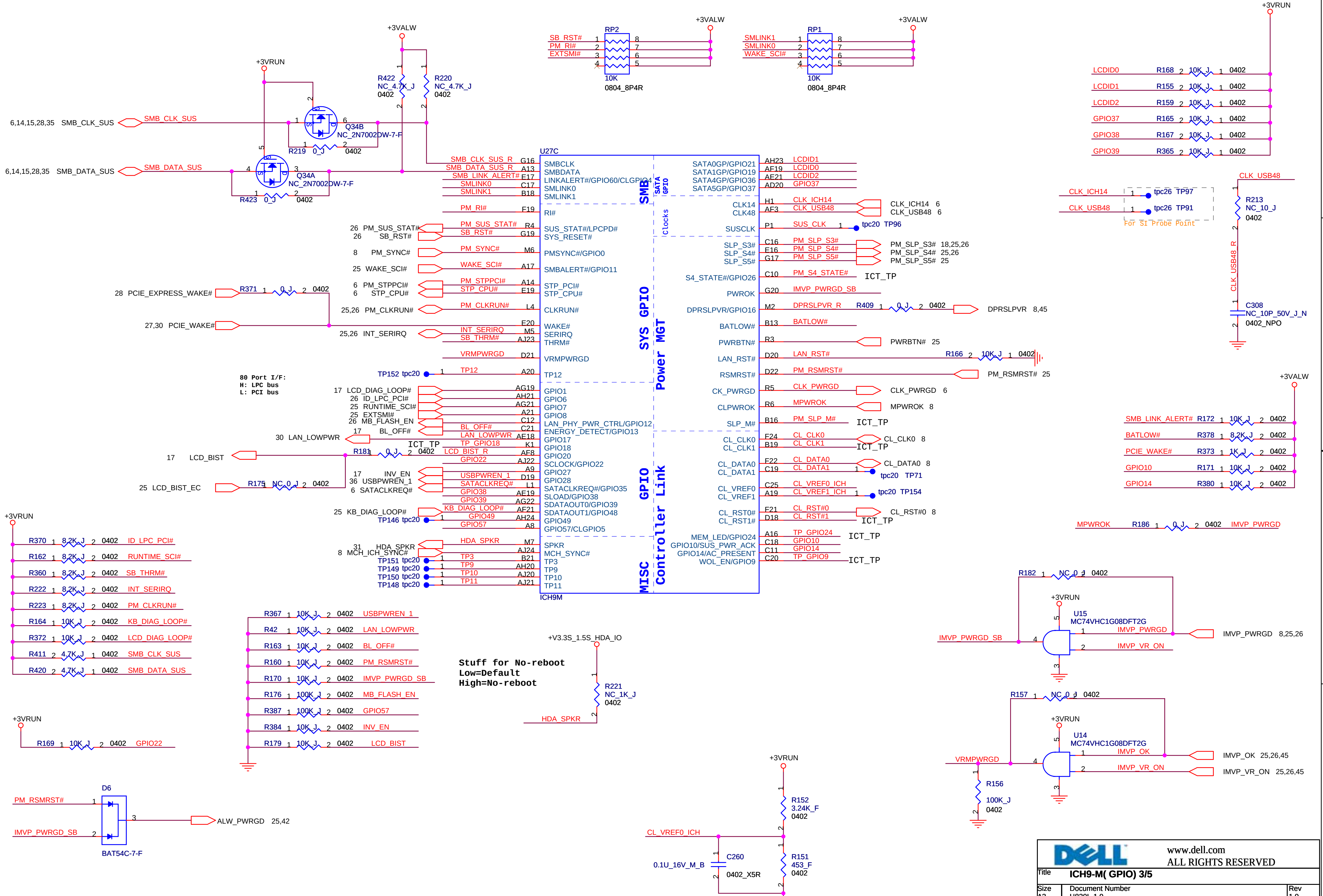

U27C
ICH9M
SMB
SATA GPIO
Clocks
SYS GPIO
Power MGT
GPIO
Controller Link
MISC
SMBCLK
SMBDATA
LINKALERT#/GPIO60/CLGPIO4
SMLINK0
SMLINK1
RI#
SUS_STAT#/LPCPD#
SYS_RESET#
PMSYNC#/GPIO0
SMBALERT#/GPIO11
STP_PCI#
STP_CPU#
CLKRUN#
WAKE#
SERIRQ
THRM#
VRMPWRGD
TP12
GPIO1
GPIO6
GPIO7
GPIO8
LAN_PHY_PWR_CTRL/GPIO12
ENERGY_DETECT/GPIO13
GPIO17
GPIO18
GPIO20
SCLOCK/GPIO22
GPIO27
GPIO28
SATACLKREQ#/GPIO35
SLOAD/GPIO38
SDATAOUT0/GPIO39
SDATAOUT1/GPIO48
GPIO49
GPIO57/CLGPIO5
SPKR
MCH_SYNC#
TP3
TP9
TP10
TP11
SATA0GP/GPIO21
SATA1GP/GPIO19
SATA4GP/GPIO36
SATA5GP/GPIO37
CLK14
CLK48
SUSCLK
SLP_S3#
SLP_S4#
SLP_S5#
S4_STATE#/GPIO26
PWROK
DPRSLPVR/GPIO16
BATLOW#
PWRBTN#
LAN_RST#
RSMRST#
CK_PWRGD
CLPWROK
SLP_M#
CL_CLK0
CL_CLK1
CL_DATA0
CL_DATA1
CL_VREF0
CL_VREF1
CL_RST0#
CL_RST1#
MEM_LED/GPIO24
GPIO10/SUS_PWR_ACK
GPIO14/AC_PRESENT
WOL_EN/GPIO9
6,14,15,28,35 SMB_CLK_SUS
6,14,15,28,35 SMB_DATA_SUS
Q34B NC_2N7002DW-7-F
Q34A NC_2N7002DW-7-F
R422 NC_4.7K_J 0402
R220 NC_4.7K_J 0402
R219 0_J 0402
R423 0_J 0402
RP2 10K 0804_8P4R
RP1 10K 0804_8P4R
SB_RST#
PM_RI#
EXTSMI#
SMLINK1
SMLINK0
WAKE_SCI#
+3VALW
+3VRUN
LCDID0 R168 10K_J 0402
LCDID1 R155 10K_J 0402
LCDID2 R159 10K_J 0402
GPIO37 R165 10K_J 0402
GPIO38 R167 10K_J 0402
GPIO39 R365 10K_J 0402
CLK_ICH14 tpc26 TP97
CLK_USB48 tpc26 TP91
For SI Probe Point
R213 NC_10_J 0402
C308 NC_10P_50V_J_N 0402_NPO
CLK_ICH14 6
CLK_USB48 6
tpc20 TP96
PM_SLP_S3# 18,25,26
PM_SLP_S4# 25,26
PM_SLP_S5# 25
ICT_TP
IMVP_PWRGD_SB
R409 0_J 0402
DPRSLPVR 8,45
PWRBTN# 25
R166 10K_J 0402
PM_RSMRST# 25
CLK_PWRGD 6
MPWROK 8
CL_CLK0 8
CL_DATA0 8
tpc20 TP71
tpc20 TP154
CL_RST#0 8
SMB_LINK_ALERT# R172 10K_J 0402
BATLOW# R378 8.2K_J 0402
PCIE_WAKE# R373 1K_J 0402
GPIO10 R171 10K_J 0402
GPIO14 R380 10K_J 0402
MPWROK R186 0_J 0402 IMVP_PWRGD
26 PM_SUS_STAT#
26 SB_RST#
8 PM_SYNC#
25 WAKE_SCI#
6 PM_STPPCI#
6 STP_CPU#
28 PCIE_EXPRESS_WAKE#
R371 0_J 0402
25,26 PM_CLKRUN#
27,30 PCIE_WAKE#
25,26 INT_SERIRQ
TP152 tpc20
80 Port I/F:
H: LPC bus
L: PCI bus
17 LCD_DIAG_LOOP#
26 ID_LPC_PCI#
25 RUNTIME_SCI#
25 EXTSMI#
26 MB_FLASH_EN
17 BL_OFF#
30 LAN_LOWPWR
17 LCD_BIST
R181 0_J 0402
25 LCD_BIST_EC
R175 NC_0_J 0402
17 INV_EN
36 USBPWREN_1
6 SATACLKREQ#
25 KB_DIAG_LOOP#
TP146 tpc20
31 HDA_SPKR
8 MCH_ICH_SYNC#
TP151 tpc20
TP149 tpc20
TP150 tpc20
TP148 tpc20
R370 8.2K_J 0402 ID_LPC_PCI#
R162 8.2K_J 0402 RUNTIME_SCI#
R360 8.2K_J 0402 SB_THRM#
R222 8.2K_J 0402 INT_SERIRQ
R223 8.2K_J 0402 PM_CLKRUN#
R164 10K_J 0402 KB_DIAG_LOOP#
R372 10K_J 0402 LCD_DIAG_LOOP#
R411 4.7K_J 0402 SMB_CLK_SUS
R420 4.7K_J 0402 SMB_DATA_SUS
R169 10K_J 0402 GPIO22
R367 10K_J 0402 USBPWREN_1
R42 10K_J 0402 LAN_LOWPWR
R163 10K_J 0402 BL_OFF#
R160 10K_J 0402 PM_RSMRST#
R170 10K_J 0402 IMVP_PWRGD_SB
R176 100K_J 0402 MB_FLASH_EN
R387 100K_J 0402 GPIO57
R384 10K_J 0402 INV_EN
R179 10K_J 0402 LCD_BIST
+V3.3S_1.5S_HDA_IO
R221 NC_1K_J 0402
HDA_SPKR
Stuff for No-reboot
Low=Default
High=No-reboot
R182 NC_0_J 0402
U15 MC74VHC1G08DFT2G
IMVP_PWRGD 8,25,26
IMVP_VR_ON
R157 NC_0_J 0402
U14 MC74VHC1G08DFT2G
VRMPWRGD
R156 100K_J 0402
IMVP_OK 25,26,45
IMVP_VR_ON 25,26,45
D6 BAT54C-7-F
PM_RSMRST#
ALW_PWRGD 25,42
R152 3.24K_F 0402
R151 453_F 0402
CL_VREF0_ICH
C260 0.1U_16V_M_B 0402_X5R

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Title	ICH9-M(GPIO) 3/5		
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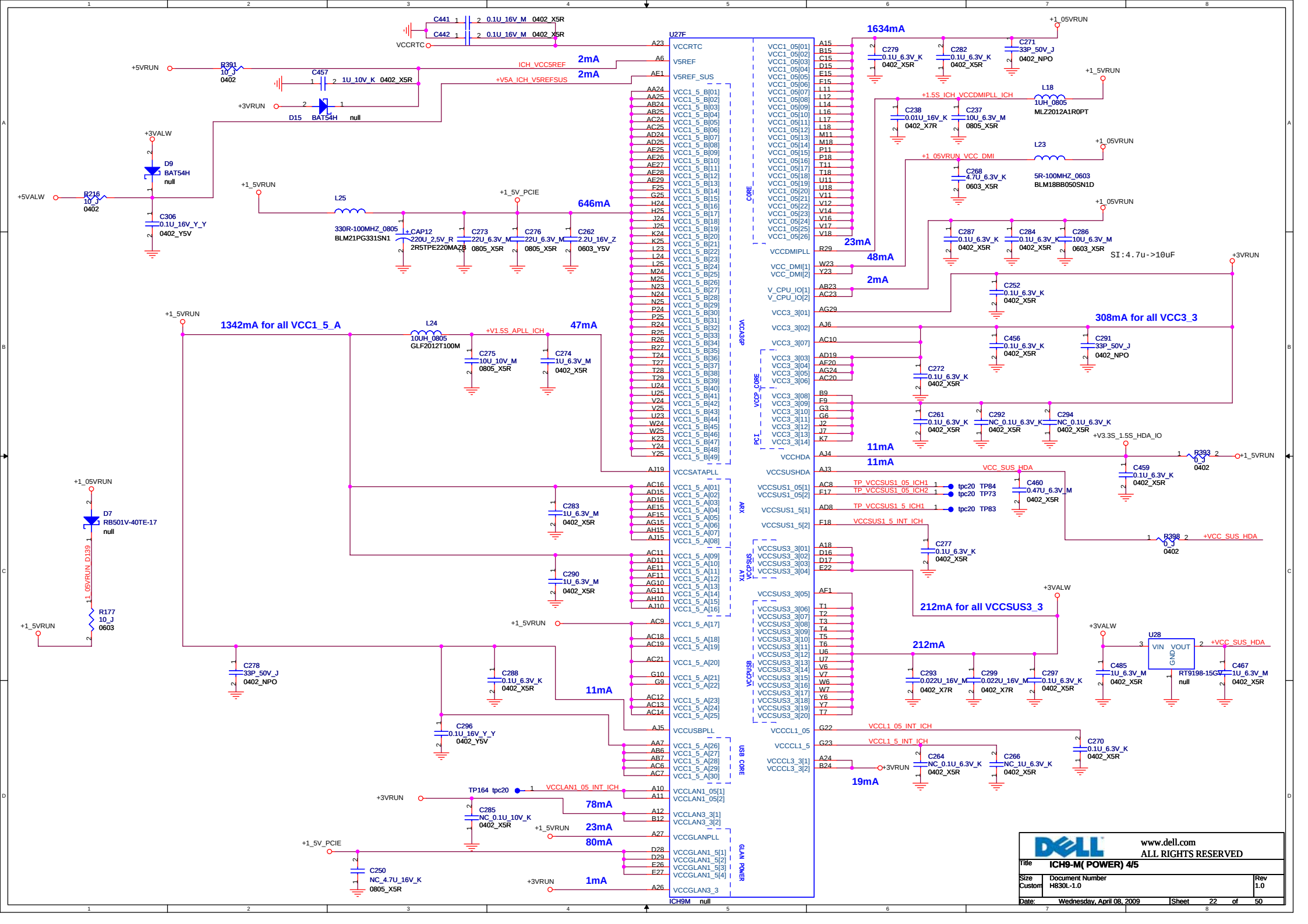
U27F
ICH9M
null
VCCRTC
V5REF
V5REF_SUS
CORE
VCCDMIPLL
VCC_DMI[1]
VCC_DMI[2]
V_CPU_IO[1]
V_CPU_IO[2]
VCC3_3[01]
VCC3_3[02]
VCC3_3[07]
VCC3_3[03]
VCC3_3[04]
VCC3_3[05]
VCC3_3[06]
VCC3_3[08]
VCC3_3[09]
VCC3_3[10]
VCC3_3[11]
VCC3_3[12]
VCC3_3[13]
VCC3_3[14]
VCCHDA
VCCSUSHDA
VCCSUS1_05[1]
VCCSUS1_05[2]
VCCSUS1_1[1]
VCCSUS1_1[2]
VCCSUS3_3[01]
VCCSUS3_3[02]
VCCSUS3_3[03]
VCCSUS3_3[04]
VCCSUS3_3[05]
VCCSUS3_3[06]
VCCSUS3_3[07]
VCCSUS3_3[08]
VCCSUS3_3[09]
VCCSUS3_3[10]
VCCSUS3_3[11]
VCCSUS3_3[12]
VCCSUS3_3[13]
VCCSUS3_3[14]
VCCSUS3_3[15]
VCCSUS3_3[16]
VCCSUS3_3[17]
VCCSUS3_3[18]
VCCSUS3_3[19]
VCCSUS3_3[20]
VCCCL1_05
VCCCL1_5
VCCCL3_3[1]
VCCCL3_3[2]
VCC1_5_B[01]
VCC1_5_B[02]
VCC1_5_B[03]
VCC1_5_B[04]
VCC1_5_B[05]
VCC1_5_B[06]
VCC1_5_B[07]
VCC1_5_B[08]
VCC1_5_B[09]
VCC1_5_B[10]
VCC1_5_B[11]
VCC1_5_B[12]
VCC1_5_B[13]
VCC1_5_B[14]
VCC1_5_B[15]
VCC1_5_B[16]
VCC1_5_B[17]
VCC1_5_B[18]
VCC1_5_B[19]
VCC1_5_B[20]
VCC1_5_B[21]
VCC1_5_B[22]
VCC1_5_B[23]
VCC1_5_B[24]
VCC1_5_B[25]
VCC1_5_B[26]
VCC1_5_B[27]
VCC1_5_B[28]
VCC1_5_B[29]
VCC1_5_B[30]
VCC1_5_B[31]
VCC1_5_B[32]
VCC1_5_B[33]
VCC1_5_B[34]
VCC1_5_B[35]
VCC1_5_B[36]
VCC1_5_B[37]
VCC1_5_B[38]
VCC1_5_B[39]
VCC1_5_B[40]
VCC1_5_B[41]
VCC1_5_B[42]
VCC1_5_B[43]
VCC1_5_B[44]
VCC1_5_B[45]
VCC1_5_B[46]
VCC1_5_B[47]
VCC1_5_B[48]
VCC1_5_B[49]
VCCSATAPLL
VCCUSBPLL
VCCLAN1_05[1]
VCCLAN1_05[2]
VCCLAN3_3[1]
VCCLAN3_3[2]
VCCGLANPLL
VCCGLAN1_5[1]
VCCGLAN1_5[2]
VCCGLAN1_5[3]
VCCGLAN1_5[4]
VCCGLAN3_3
VCC1_5_A[01]
VCC1_5_A[02]
VCC1_5_A[03]
VCC1_5_A[04]
VCC1_5_A[05]
VCC1_5_A[06]
VCC1_5_A[07]
VCC1_5_A[08]
VCC1_5_A[09]
VCC1_5_A[10]
VCC1_5_A[11]
VCC1_5_A[12]
VCC1_5_A[13]
VCC1_5_A[14]
VCC1_5_A[15]
VCC1_5_A[16]
VCC1_5_A[17]
VCC1_5_A[18]
VCC1_5_A[19]
VCC1_5_A[20]
VCC1_5_A[21]
VCC1_5_A[22]
VCC1_5_A[23]
VCC1_5_A[24]
VCC1_5_A[25]
VCC1_5_A[26]
VCC1_5_A[27]
VCC1_5_A[28]
VCC1_5_A[29]
VCC1_5_A[30]
VCCA3GP
VCCP_CORE
PCI
AXY
VCCPSUS
VCCPUSB
USB CORE
GLAN POWER
1634mA
23mA
48mA
2mA
646mA
1342mA for all VCC1_5_A
47mA
11mA
78mA
23mA
80mA
1mA
308mA for all VCC3_3
212mA for all VCCSUS3_3
212mA
19mA
SI:4.7u->10uF
+5VRUN
+3VRUN
+3VALW
+5VALW
+1_5VRUN
+1_05VRUN
+1_5V_PCIE
+1.5S_ICH_VCCDMIPLL_ICH
+1_05VRUN_VCC_DMI
+V3.3S_1.5S_HDA_IO
VCC_SUS_HDA
+VCC_SUS_HDA
ICH_VCC5REF
+V5A_ICH_V5REFSUS
+V1.5S_APLL_ICH
VCCL1_05_INT_ICH
VCCL1_5_INT_ICH
TP_VCCSUS1_05_ICH1
TP_VCCSUS1_05_ICH2
TP_VCCSUS1_5_ICH1
VCCSUS1_5_INT_ICH
VCCLAN1_05_INT_ICH
C441 0.1U_16V_M 0402_X5R
C442 0.1U_16V_M 0402_X5R
R391 10_J 0402
C457 1U_10V_K 0402_X5R
D15 BAT54H null
D9 BAT54H null
R216 10_J 0402
C306 0.1U_16V_Y_Y 0402_Y5V
L25 330R-100MHZ_0805 BLM21PG331SN1
+CAP12 220U_2,5V_R 2R5TPE220MAZB
C273 22U_6.3V_M 0805_X5R
C276 22U_6.3V_M 0805_X5R
C262 2.2U_16V_Z 0603_Y5V
L24 10UH_0805 GLF2012T100M
C275 10U_10V_M 0805_X5R
C274 1U_6.3V_M 0402_X5R
C283 1U_6.3V_M 0402_X5R
C290 1U_6.3V_M 0402_X5R
D7 RB501V-40TE-17 null
R177 10_J 0603
C278 33P_50V_J 0402_NPO
C288 0.1U_6.3V_K 0402_X5R
C296 0.1U_16V_Y_Y 0402_Y5V
C285 NC_0.1U_10V_K 0402_X5R
C250 NC_4.7U_16V_K 0805_X5R
C279 0.1U_6.3V_K 0402_X5R
C282 0.1U_6.3V_K 0402_X5R
C271 33P_50V_J 0402_NPO
L18 1UH_0805 MLZ2012A1R0PT
C238 0.01U_16V_K 0402_X7R
C237 10U_6.3V_M 0805_X5R
L23 5R-100MHZ_0603 BLM18BB050SN1D
C268 4.7U_6.3V_K 0603_X5R
C287 0.1U_6.3V_K 0402_X5R
C284 0.1U_6.3V_K 0402_X5R
C286 10U_6.3V_M 0603_X5R
C252 0.1U_6.3V_K 0402_X5R
C456 0.1U_6.3V_K 0402_X5R
C291 33P_50V_J 0402_NPO
C272 0.1U_6.3V_K 0402_X5R
C261 0.1U_6.3V_K 0402_X5R
C292 NC_0.1U_6.3V_K 0402_X5R
C294 NC_0.1U_6.3V_K 0402_X5R
C459 0.1U_6.3V_K 0402_X5R
R393 0 0402
C460 0.47U_6.3V_M 0402_X5R
R398 0 0402
C277 0.1U_6.3V_K 0402_X5R
C293 0.022U_16V_M 0402_X7R
C299 0.022U_16V_M 0402_X7R
C297 0.1U_6.3V_K 0402_X5R
U28 RT9198-15GV null
C485 1U_6.3V_M 0402_X5R
C467 1U_6.3V_M 0402_X5R
C270 0.1U_6.3V_K 0402_X5R
C264 NC_0.1U_6.3V_K 0402_X5R
C266 NC_1U_6.3V_K 0402_X5R
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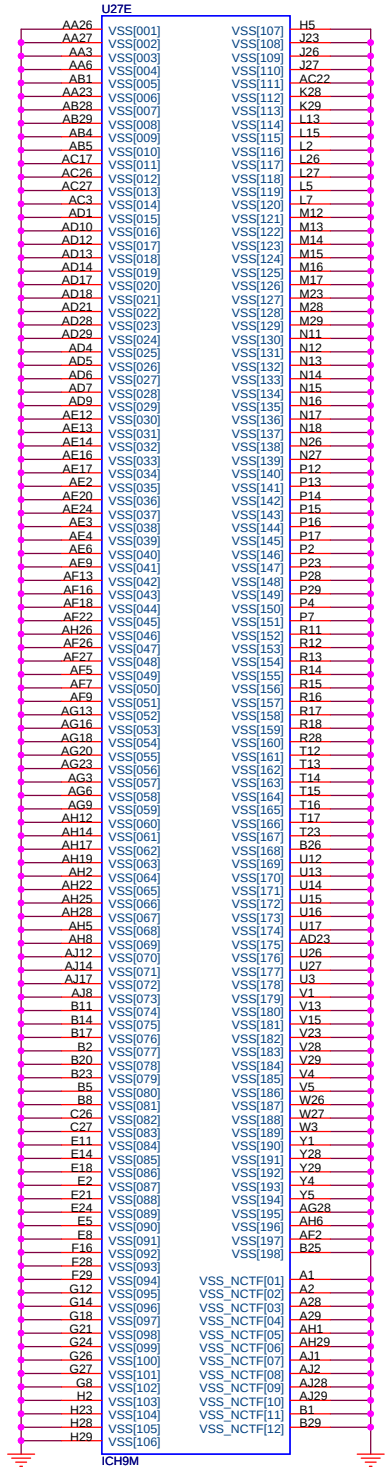
ALL RIGHTS RESERVED
Title ICH9-M(POWER) 4/5
Size Custom
Document Number H830L-1.0
Rev 1.0
Date: Wednesday, April 08, 2009
Sheet 22 of 50



Title	ICH9-M(GND) 5/5	
Size A3	Document Number H830L-1.0	Rev 1.0
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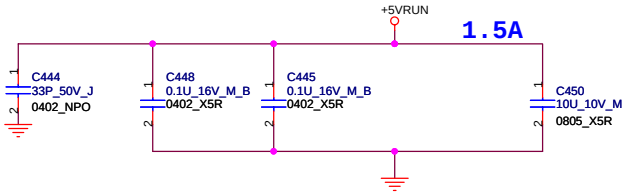
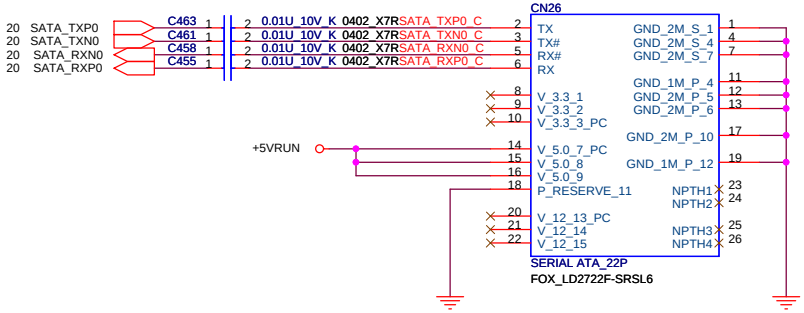
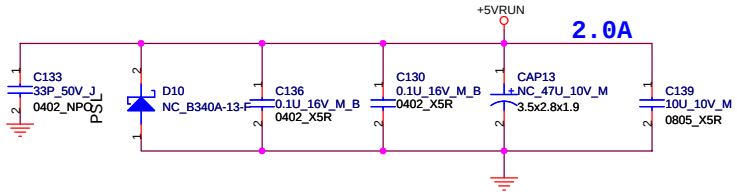
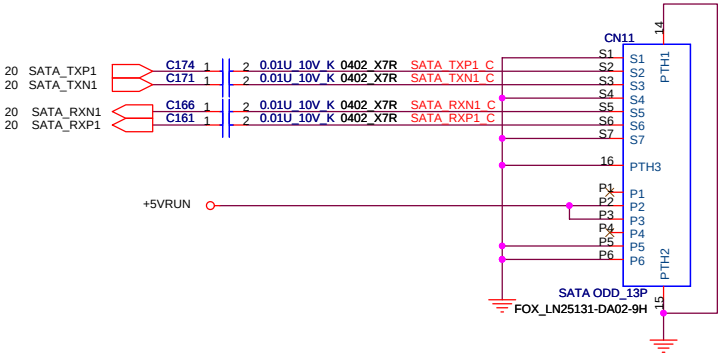
SATA HDD CONN





SATA ODD CONN





H830 change new CN

ODD CON ADAPTER

Add CN68 need 2N-0013009-FKG0 in BOM

Title	SATA HDD/ODD	
Size A3	Document Number H830L-1.0	Rev 1.0
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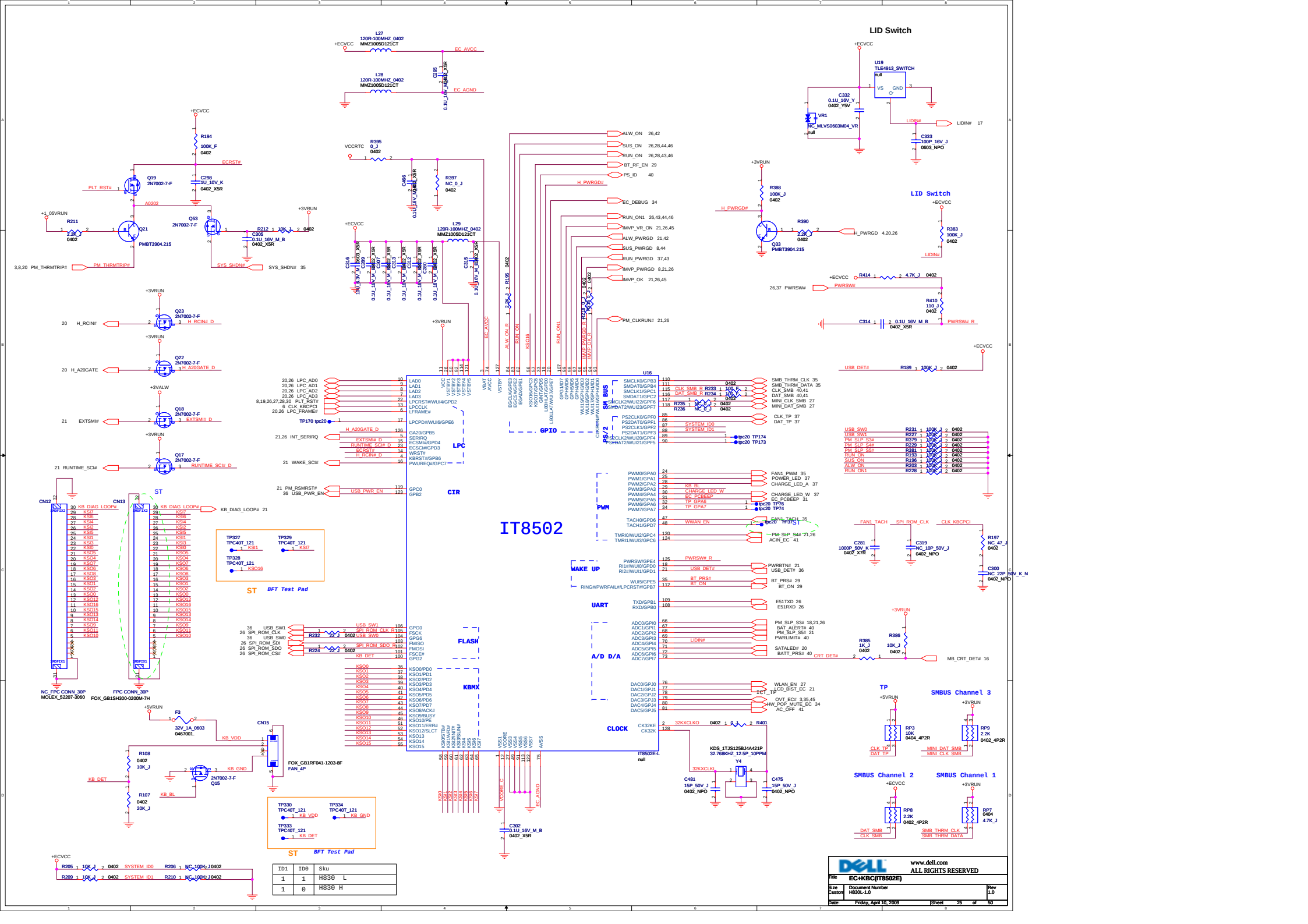
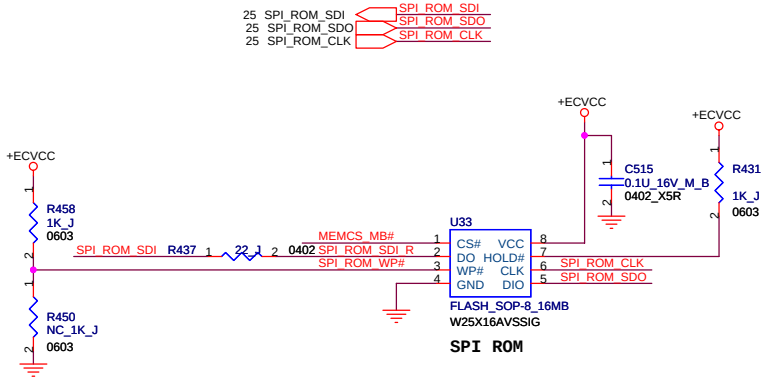
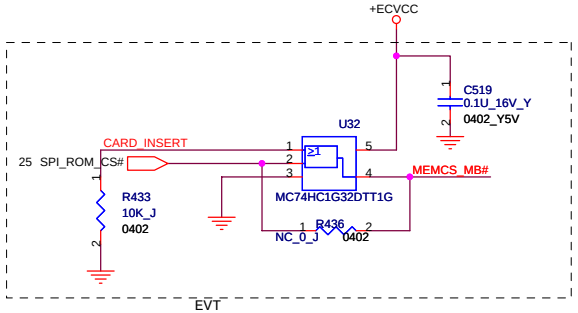


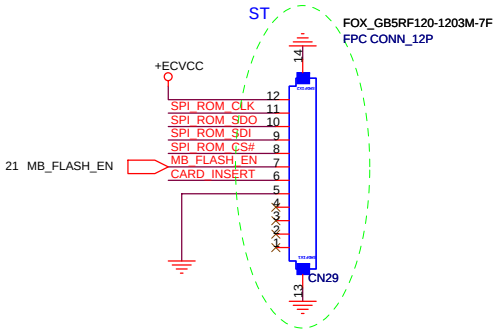
ID1	ID0	Sku
1	1	H830 L
1	0	H830 H



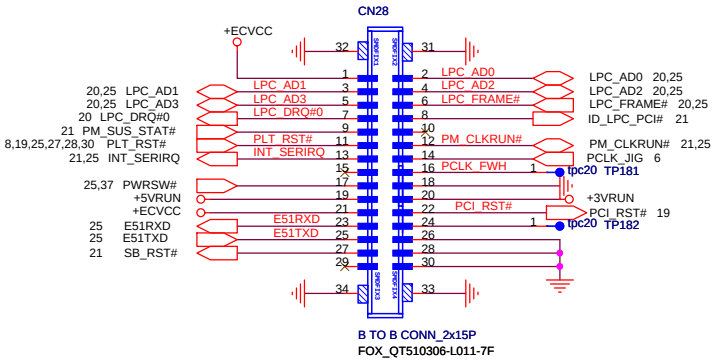
SPI ROM



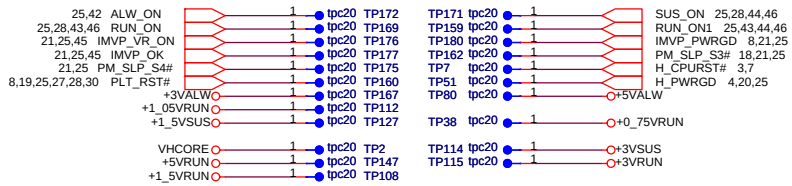
EVT
When MP, change U11 no stuff, R233 stuff



EXTERNAL SPI ROM INTERFACE



JIG-120



Title	Flash ROM/SPI	
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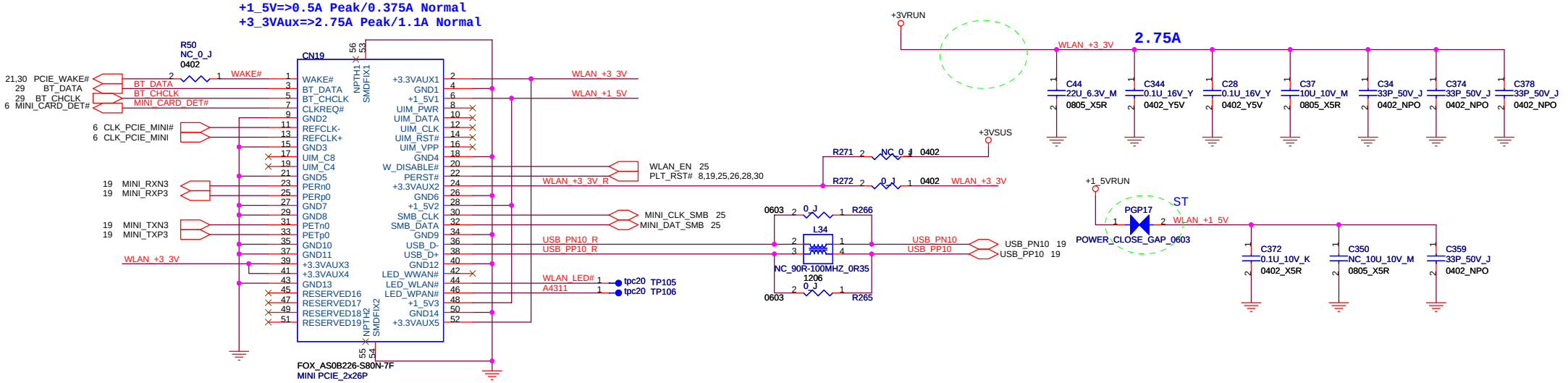
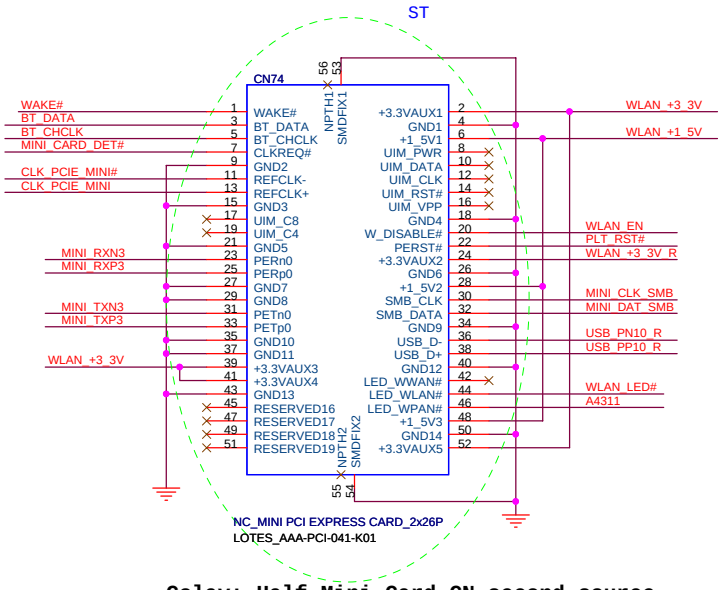
Date: Wednesday, April 08, 2009	Sheet 26 of 50	

+1_5V=>0.5A Peak/0.375A Normal
+3_3VAux=>2.75A Peak/1.1A Normal



Half Mini Card for WLAN or WiMAX



Colay: Half Mini Card CN second source

Title	WLAN/WiMAX Mini-PCIE Card	
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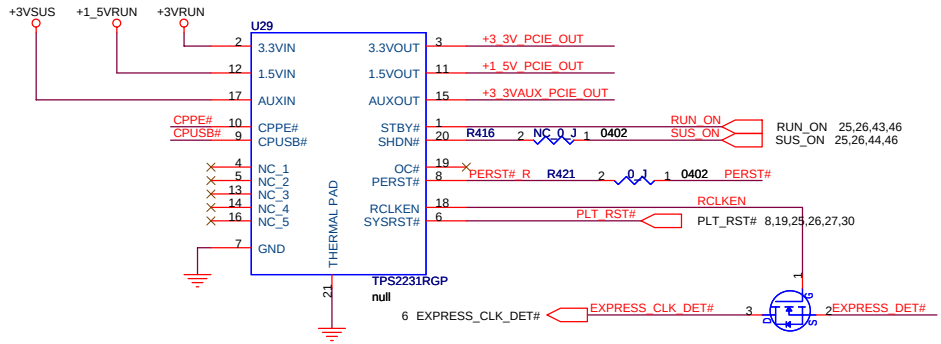
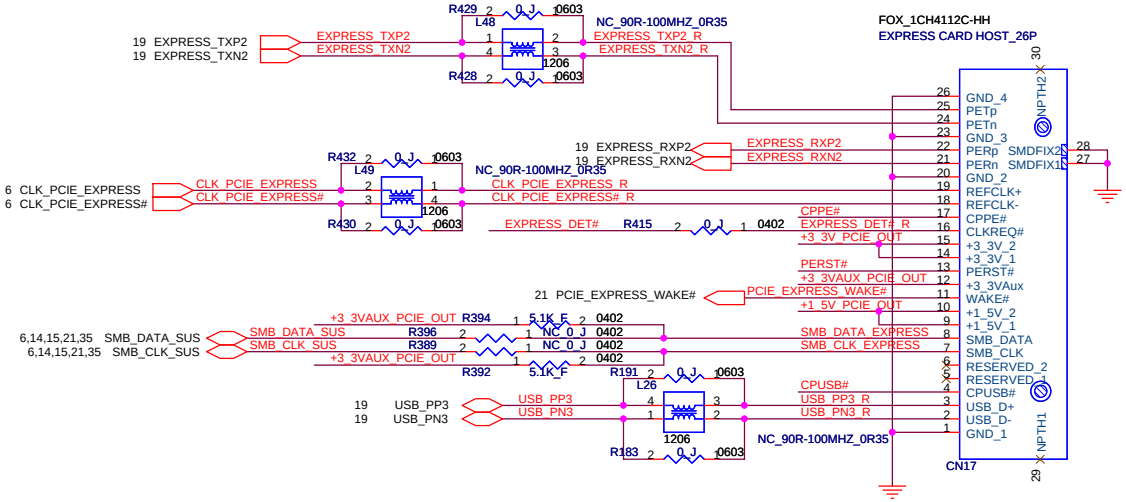
Date: Friday, April 10, 2009	Sheet 27 of 50	

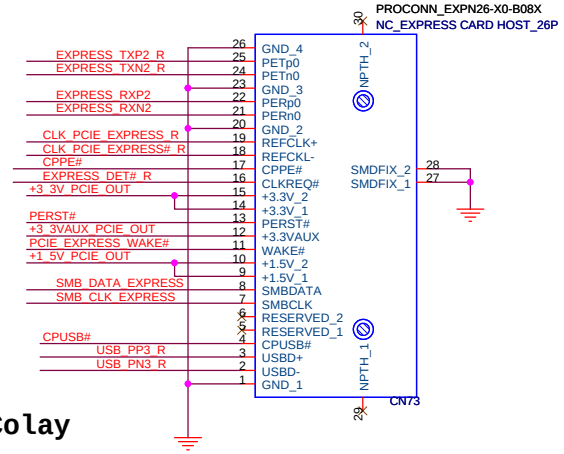
+1_5V=>650mA
+3_3VAux=>275mA
+3_3V=>1.3A

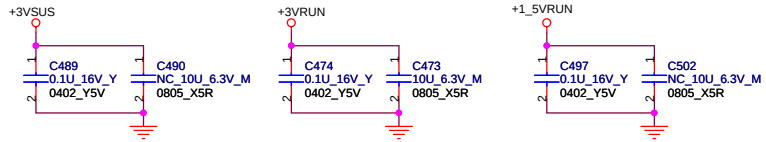
Express Card Power Switch



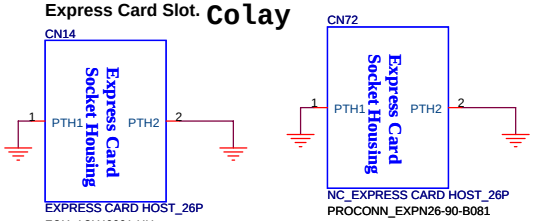


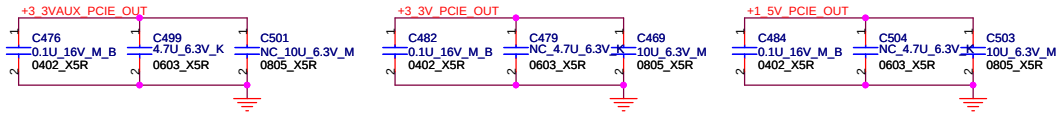
Colay



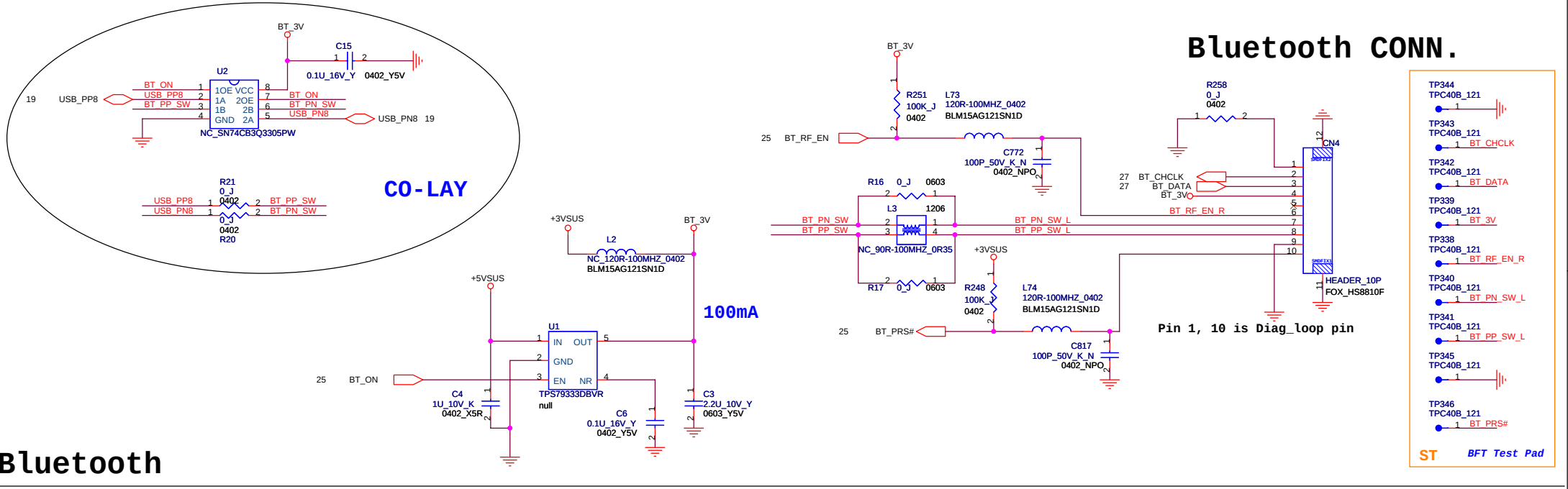


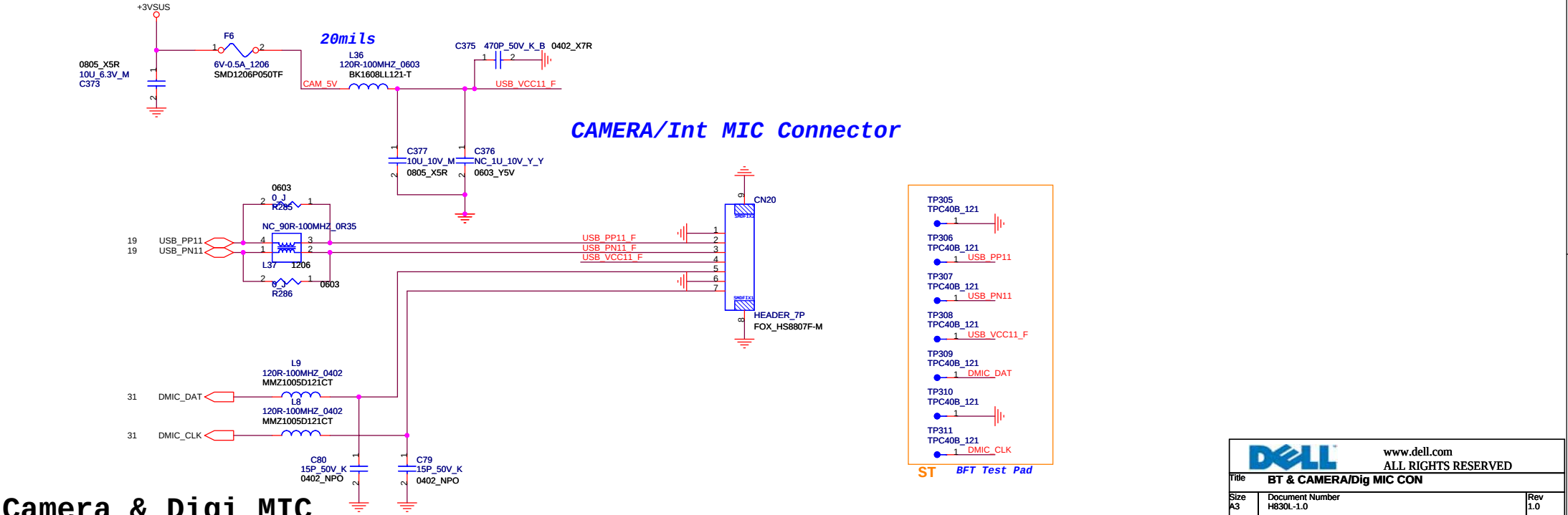
Express Card Slot. Colay



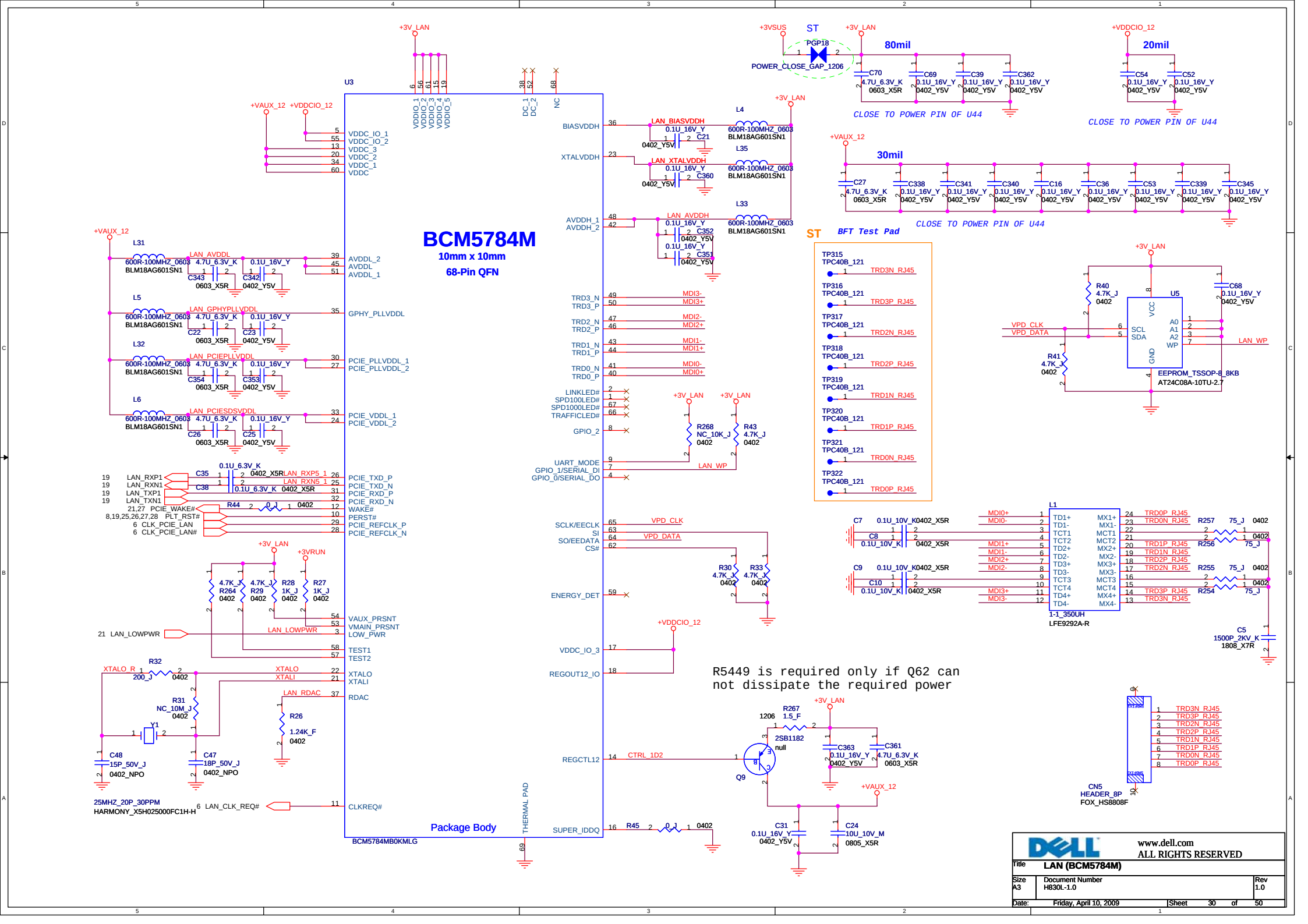


Title	Express card	
Size A3	Document Number H830L-1.0	Rev 1.0
Date: Wednesday, April 08, 2009	Sheet 28 of 50	





Title	BT & CAMERA/Dig MIC CON	
Size A3	Document Number H830L-1.0	Rev 1.0
Date: Wednesday, April 08, 2009	Sheet 29 of 50	


BCM5784M
10mm x 10mm
68-Pin QFN
U3
BCM5784MB0KMLG
Package Body
THERMAL PAD
ST
BFT Test Pad
80mil
20mil
30mil
CLOSE TO POWER PIN OF U44
R5449 is required only if Q62 can not dissipate the required power
EEPROM_TSSOP-8_8KB
AT24C08A-10TU-2.7
1-1_350UH
LFE9292A-R
HEADER_8P
FOX_HS8808F
25MHZ_20P_30PPM
HARMONY_X5H025000FC1H-H
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ALL RIGHTS RESERVED
Title LAN (BCM5784M)
Size A3
Document Number H830L-1.0
Rev 1.0
Date: Friday, April 10, 2009
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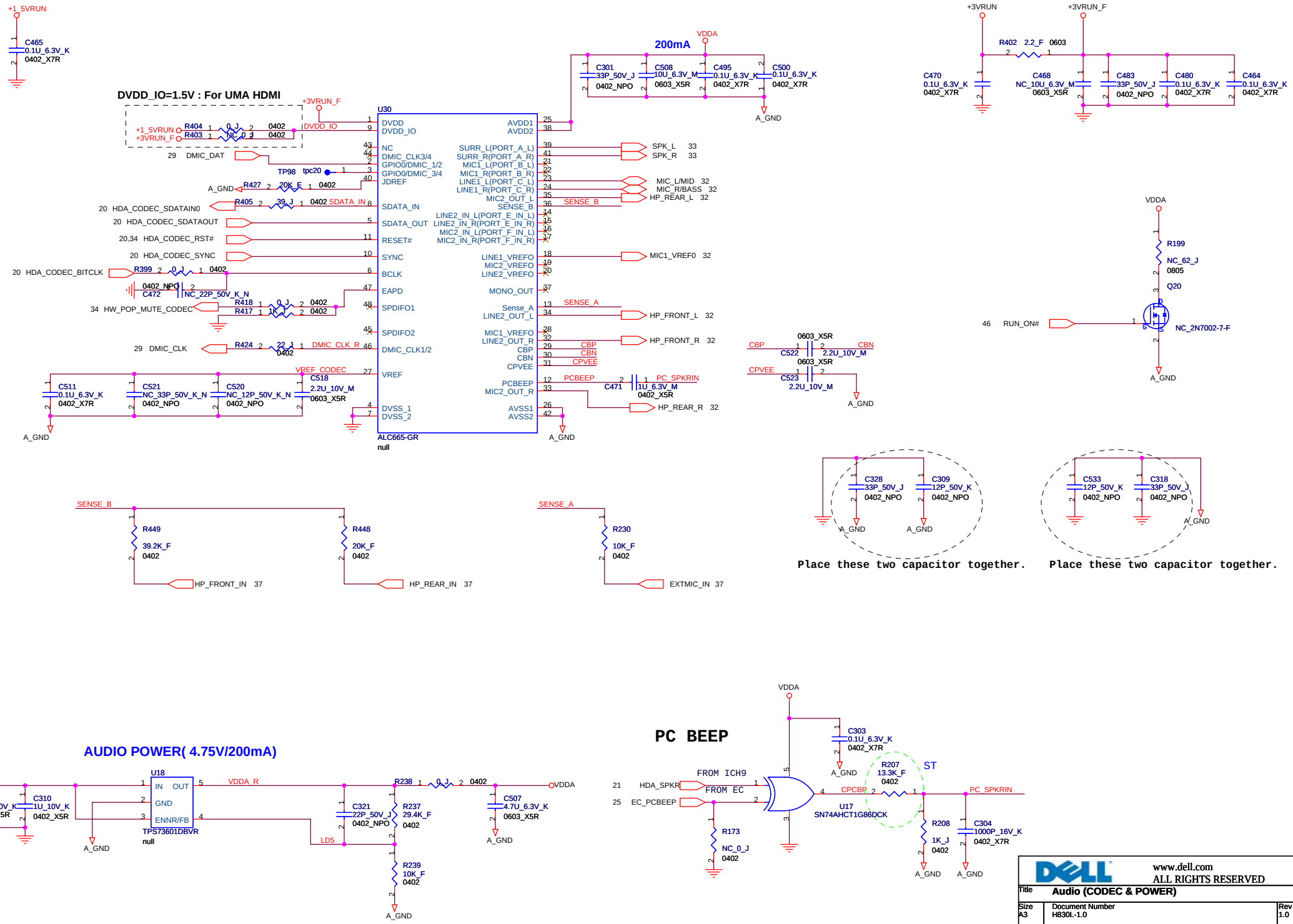
DVDD_IO=1.5V : For UMA HDMI
200mA
U30
ALC665-GR
null
Place these two capacitor together.
Place these two capacitor together.
AUDIO POWER(4.75V/200mA)
U18
TPS73601DBVR
null
PC BEEP
U17
SN74AHCT1G86DCK
FROM ICH9
FROM EC
ST
www.dell.com
ALL RIGHTS RESERVED
Title
Audio (CODEC & POWER)
Size
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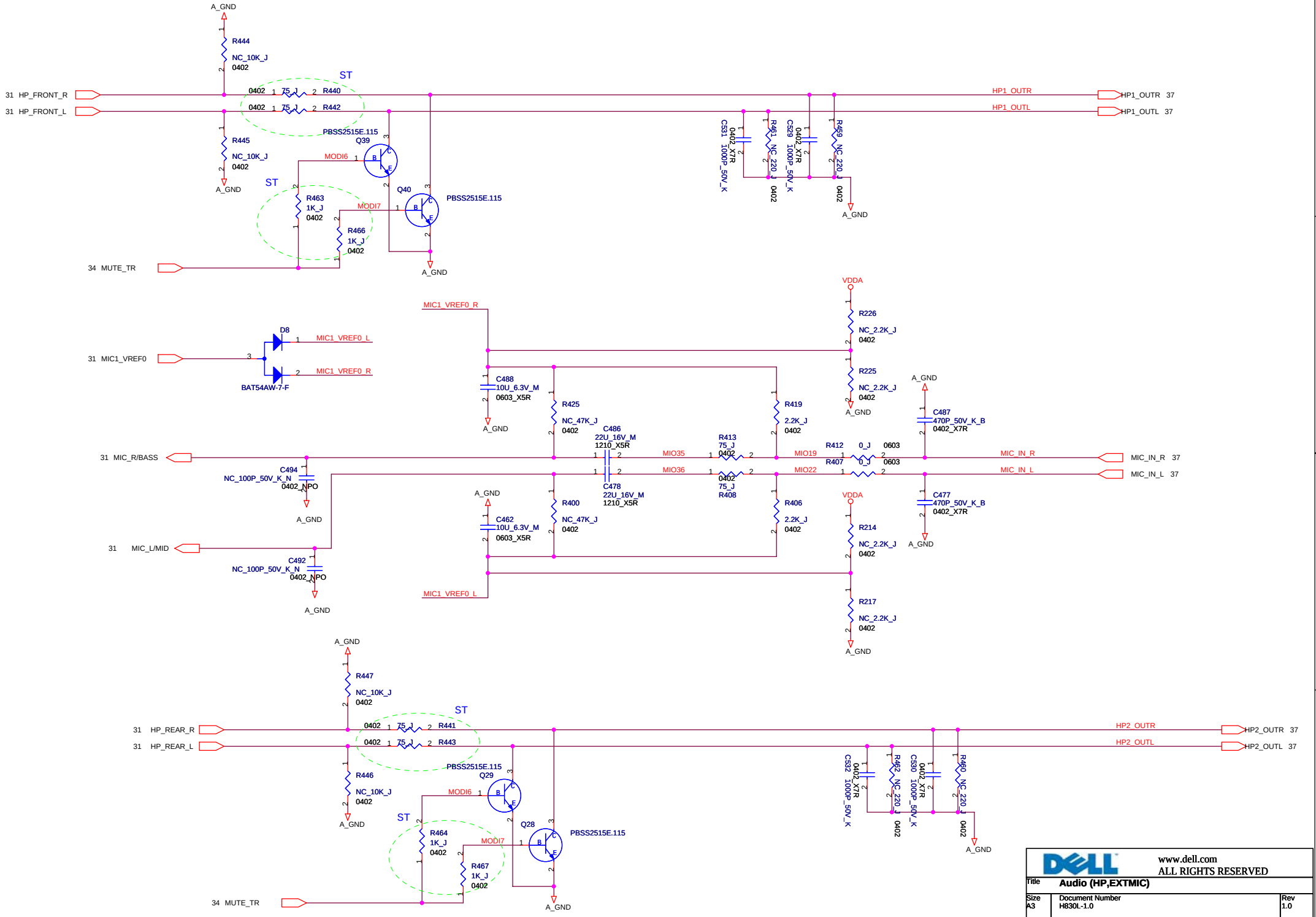
A_GND
R444
NC_10K_J
0402
ST
31 HP_FRONT_R
31 HP_FRONT_L
0402 75_J R440
0402 75_J R442
HP1_OUTR
HP1_OUTL
HP1_OUTR 37
HP1_OUTL 37
PBSS2515E.115
Q39
MODI6
R445
NC_10K_J
0402
C531 1000P_50V_K 0402_X7R
R461 NC_220_J 0402
C529 1000P_50V_K 0402_X7R
R459 NC_220_J 0402
ST
R463
1K_J
0402
MODI7
Q40
PBSS2515E.115
R466
1K_J
0402
34 MUTE_TR
VDDA
MIC1_VREF0_R
D8
MIC1_VREF0_L
31 MIC1_VREF0
MIC1_VREF0_R
BAT54AW-7-F
R226
NC_2.2K_J
0402
R225
NC_2.2K_J
0402
C488
10U_6.3V_M
0603_X5R
R425
NC_47K_J
0402
C486
22U_16V_M
1210_X5R
R419
2.2K_J
0402
C487
470P_50V_K_B
0402_X7R
31 MIC_R/BASS
MIO35
MIO36
R413
75_J
0402
R412 0_J 0603
R407 0_J 0603
MIO19
MIO22
MIC_IN_R
MIC_IN_L
MIC_IN_R 37
MIC_IN_L 37
C494
NC_100P_50V_K_N
0402_NPO
C478
22U_16V_M
1210_X5R
R408
0402
75_J
C462
10U_6.3V_M
0603_X5R
R400
NC_47K_J
0402
R406
2.2K_J
0402
C477
470P_50V_K_B
0402_X7R
31 MIC_L/MID
C492
NC_100P_50V_K_N
0402_NPO
R214
NC_2.2K_J
0402
MIC1_VREF0_L
R217
NC_2.2K_J
0402
R447
NC_10K_J
0402
ST
31 HP_REAR_R
31 HP_REAR_L
0402 75_J R441
0402 75_J R443
HP2_OUTR
HP2_OUTL
HP2_OUTR 37
HP2_OUTL 37
R446
NC_10K_J
0402
PBSS2515E.115
Q29
MODI6
C532 1000P_50V_K 0402_X7R
R462 NC_220_J 0402
C530 1000P_50V_K 0402_X7R
R460 NC_220_J 0402
ST
R464
1K_J
0402
MODI7
Q28
PBSS2515E.115
R467
1K_J
0402
34 MUTE_TR
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ALL RIGHTS RESERVED
Title
Audio (HP,EXTMIC)
Size
A3
Document Number
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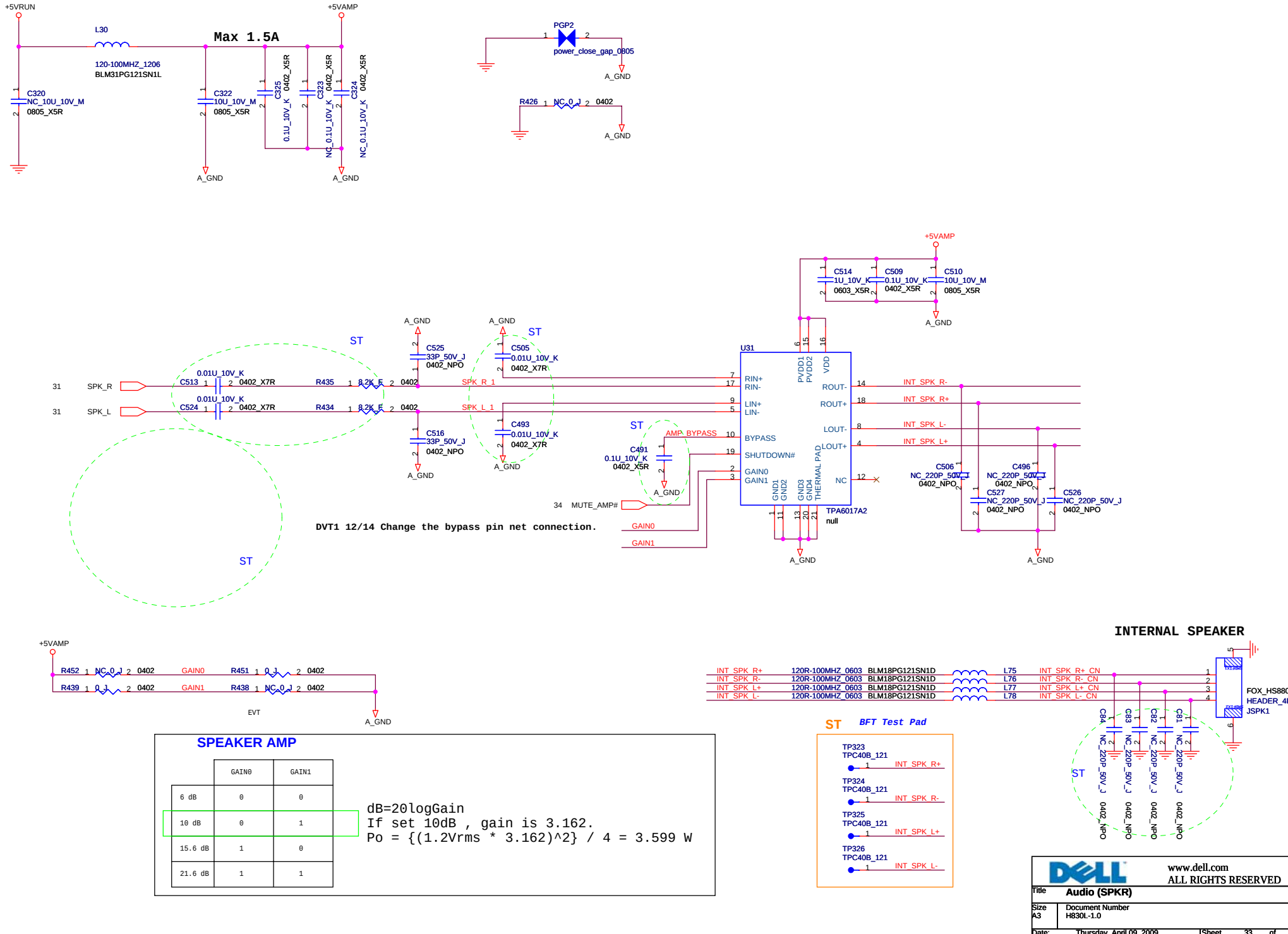
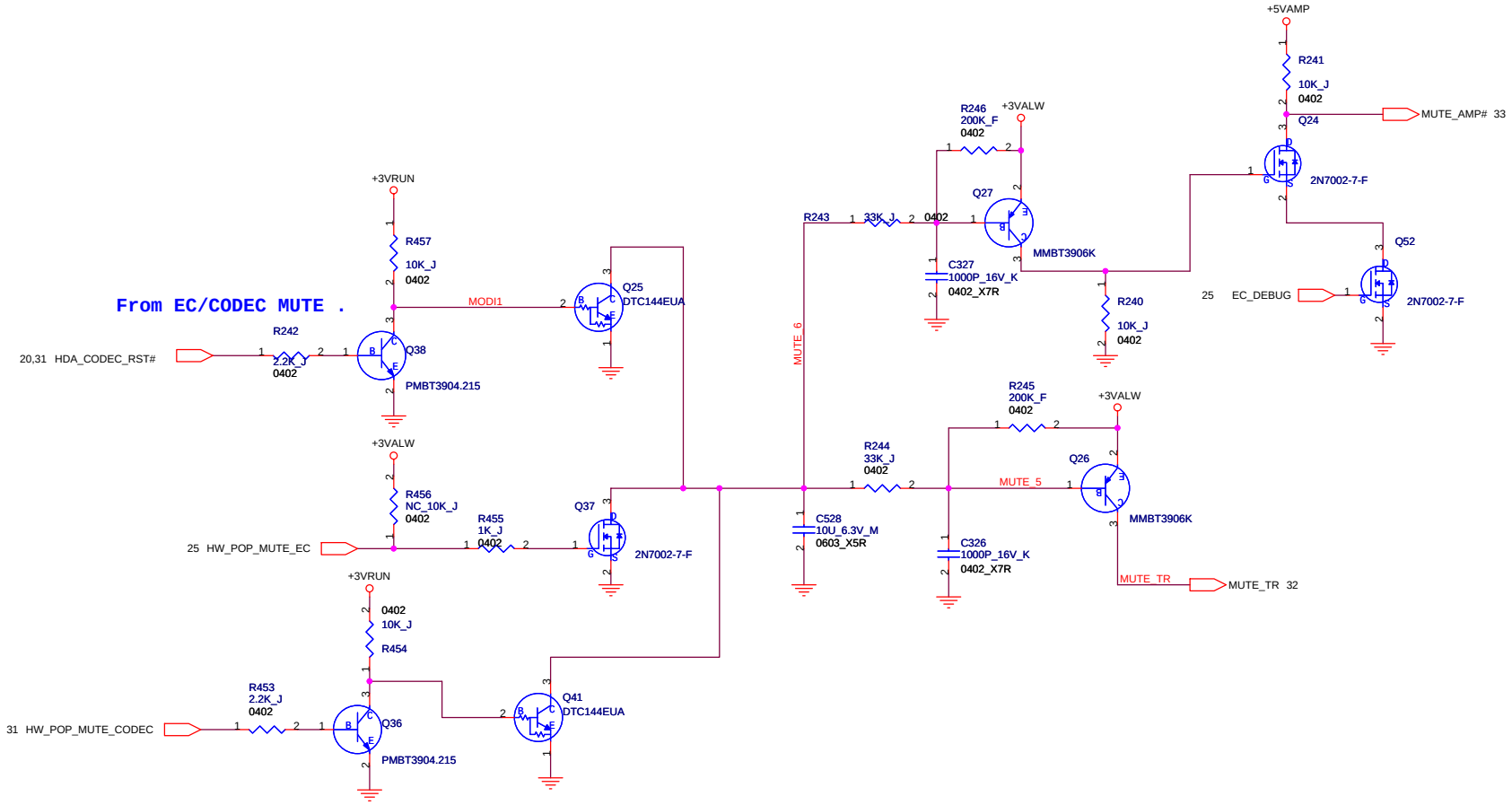


SPEAKER AMP

	GAIN0	GAIN1
6 dB	0	0
10 dB	0	1
15.6 dB	1	0
21.6 dB	1	1

dB=20logGain
If set 10dB , gain is 3.162.
Po = {(1.2Vrms * 3.162)^2} / 4 = 3.599 W

Title	Audio (SPKR)	
Size A3	Document Number H830L-1.0	Rev 1.0
Date: Thursday, April 09, 2009	Sheet 33 of 50	



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Title	Audio (MUTE)	
Size A3	Document Number H830L-1.0	Rev 1.0
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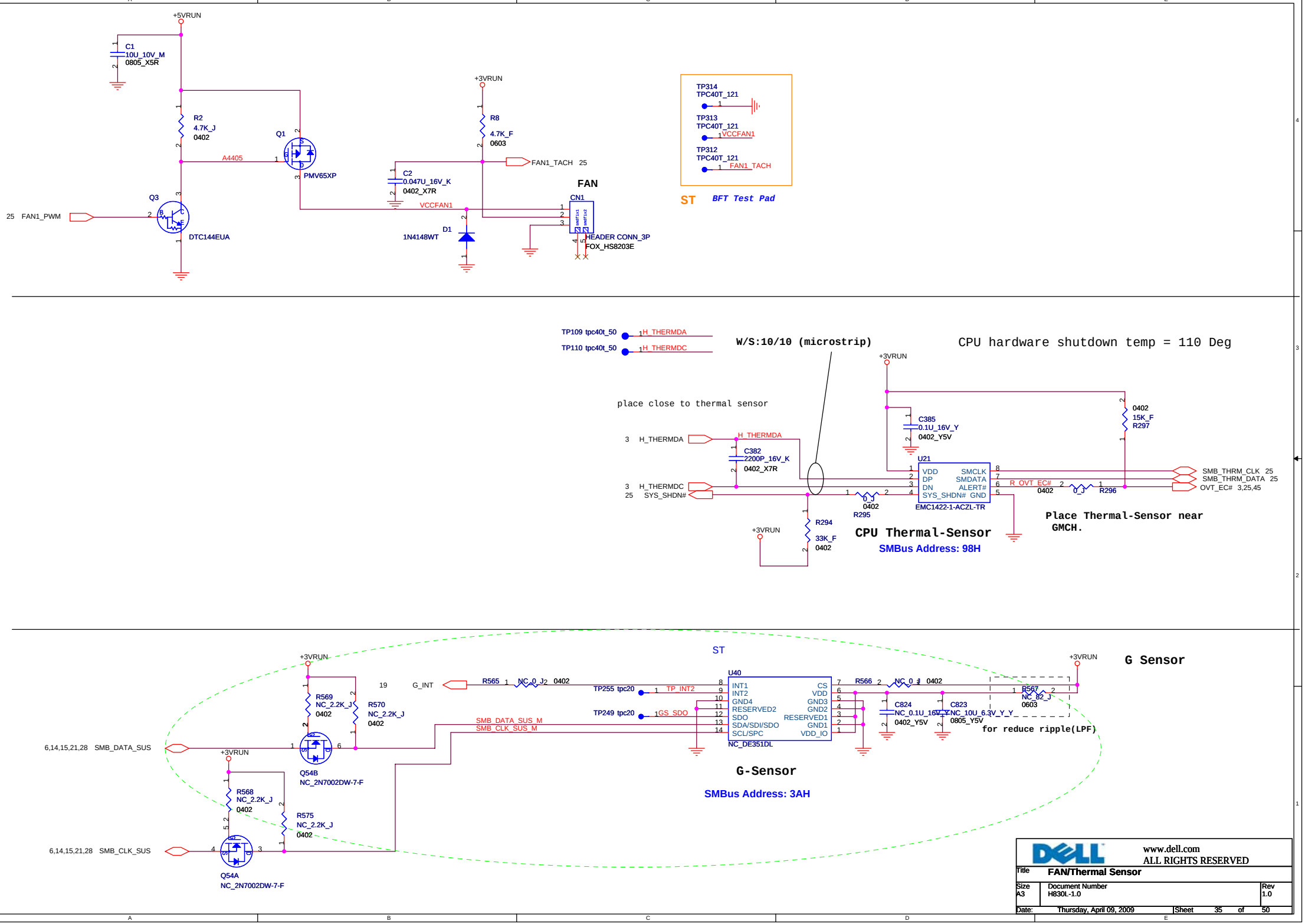
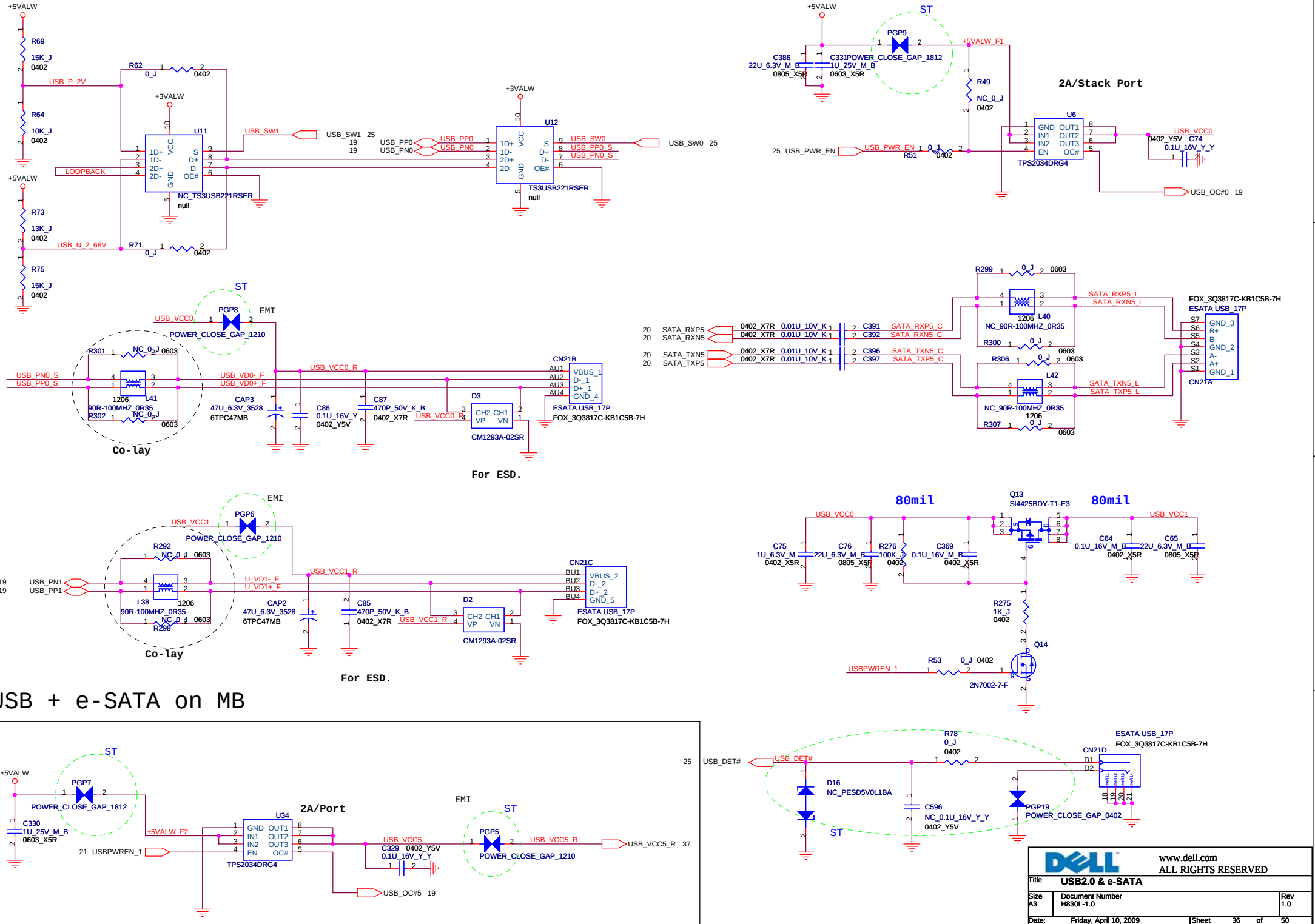


Title	FAN/Thermal Sensor	
Size A3	Document Number H830L-1.0	Rev 1.0
Date: Thursday, April 09, 2009	Sheet 35 of 50	


+5VALW
R69
15K_J
0402
USB_P_2V
R64
10K_J
0402
R73
13K_J
0402
USB_N_2_68V
R75
15K_J
0402
R62
0_J
0402
R71
0_J
0402
LOOPBACK
+3VALW
U11
1D+
1D-
2D+
2D-
VCC
GND
S
D+
D-
OE#
NC_TS3USB221RSER
null
USB_SW1
USB_SW1 25
USB_PP0
USB_PN0
U12
TS3USB221RSER
USB_SW0
USB_PP0_S
USB_PN0_S
USB_SW0 25
ST
PGP8
EMI
USB_VCC0
POWER_CLOSE_GAP_1210
R301
NC_0_J
0603
USB_PN0_S
USB_PP0_S
USB_VD0- F
USB_VD0+ F
L41
1206
90R-100MHZ_0R35
R302
USB_VCC0_R
CAP3
47U_6.3V_3528
6TPC47MB
C86
0.1U_16V_Y
0402_Y5V
C87
470P_50V_K_B
0402_X7R
D3
CH2 CH1
VP VN
CM1293A-02SR
CN21B
VBUS_1
D-_1
D+_1
GND_4
ESATA USB_17P
FOX_3Q3817C-KB1C5B-7H
Co-lay
For ESD.
+5VALW
ST
PGP9
C386
22U_6.3V_M_B
0805_X5R
C331POWER_CLOSE_GAP_1812
1U_25V_M_B
0603_X5R
+5VALW_F1
R49
NC_0_J
0402
2A/Stack Port
U6
GND
OUT1
IN1
OUT2
IN2
OUT3
EN
OC#
TPS2034DRG4
USB_VCC0
0402_Y5V
C74
0.1U_16V_Y_Y
USB_OC#0 19
25 USB_PWR_EN
USB_PWR_EN
R51
0_J
0402
R299
0_J
0603
SATA_RXP5_L
SATA_RXN5_L
L40
1206
NC_90R-100MHZ_0R35
R300
R306
L42
SATA_TXN5_L
SATA_TXP5_L
R307
FOX_3Q3817C-KB1C5B-7H
ESATA USB_17P
GND_3
B+
B-
GND_2
A-
A+
GND_1
CN21A
20 SATA_RXP5
20 SATA_RXN5
20 SATA_TXN5
20 SATA_TXP5
0402_X7R 0.01U_10V_K
C391
C392
C396
C397
SATA_RXP5_C
SATA_RXN5_C
SATA_TXN5_C
SATA_TXP5_C
EMI
PGP6
USB_VCC1
POWER_CLOSE_GAP_1210
R292
NC_0_J
0603
19 USB_PN1
19 USB_PP1
U_VD1- F
U_VD1+ F
L38
1206
90R-100MHZ_0R35
R298
USB_VCC1_R
CAP2
47U_6.3V_3528
6TPC47MB
C85
470P_50V_K_B
0402_X7R
D2
CH2 CH1
VP VN
CM1293A-02SR
CN21C
VBUS_2
D-_2
D+_2
GND_5
ESATA USB_17P
FOX_3Q3817C-KB1C5B-7H
Co-lay
For ESD.
80mil
Q13
SI4425BDY-T1-E3
80mil
USB_VCC0
USB_VCC1
C75
1U_6.3V_M
0402_X5R
C76
22U_6.3V_M_B
0805_X5R
R276
100K_J
0402
C369
0.1U_16V_M_B
0402_X5R
C64
0.1U_16V_M_B
0402_X5R
C65
22U_6.3V_M_B
0805_X5R
R275
1K_J
0402
Q14
USBPWREN_1
R53
0_J
0402
2N7002-7-F
USB + e-SATA on MB
ST
PGP7
+5VALW
POWER_CLOSE_GAP_1812
C330
1U_25V_M_B
0603_X5R
+5VALW_F2
21 USBPWREN_1
U34
2A/Port
TPS2034DRG4
USB_VCC5
C329
0402_Y5V
0.1U_16V_Y_Y
USB_OC#5 19
EMI
PGP5
POWER_CLOSE_GAP_1210
USB_VCC5_R
USB_VCC5_R 37
25 USB_DET#
USB_DET#
R78
0_J
0402
D16
NC_PESD5V0L1BA
C596
NC_0.1U_16V_Y_Y
0402_Y5V
PGP19
POWER_CLOSE_GAP_0402
CN21D
D1
D2
ESATA USB_17P
FOX_3Q3817C-KB1C5B-7H
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ALL RIGHTS RESERVED
Title
USB2.0 & e-SATA
Size
A3
Document Number
H830L-1.0
Rev
1.0
Date:
Friday, April 10, 2009
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36
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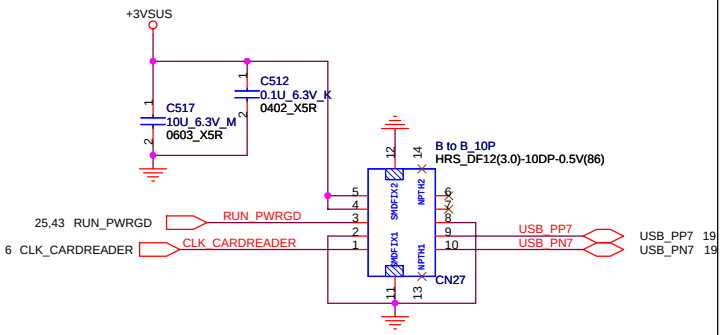
50

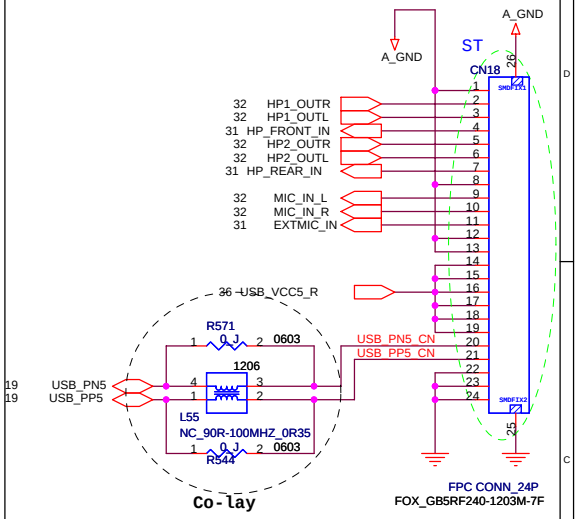


Cardreader Board

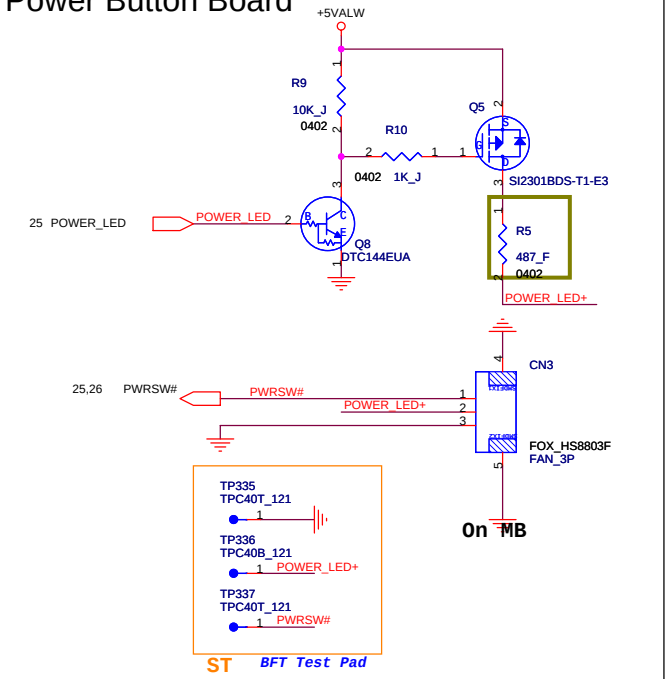
ST

WWAN Board

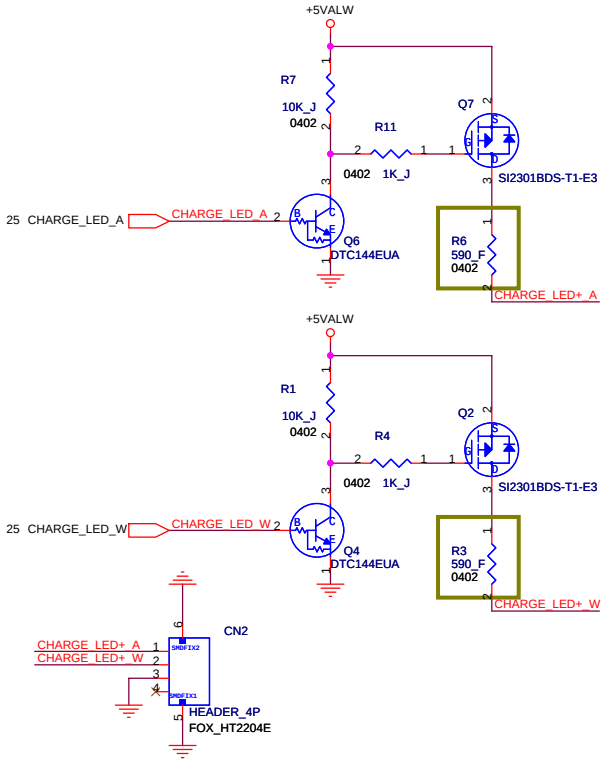
Audio_USB Board
On MB



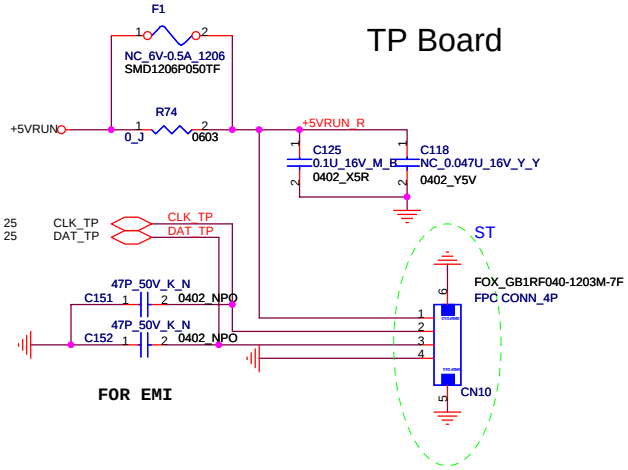
Power Button Board



LED Board



TP Board



Title	DB board connector (MB)	
Size A3	Document Number H830L-1.0	Rev 1.0
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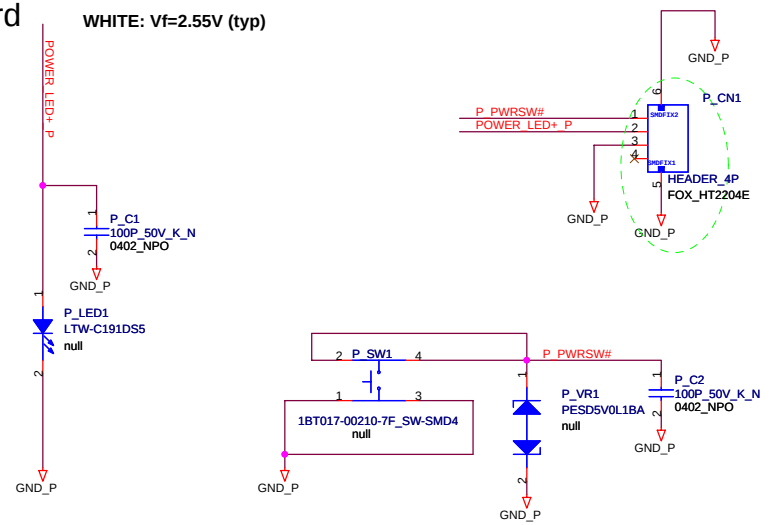
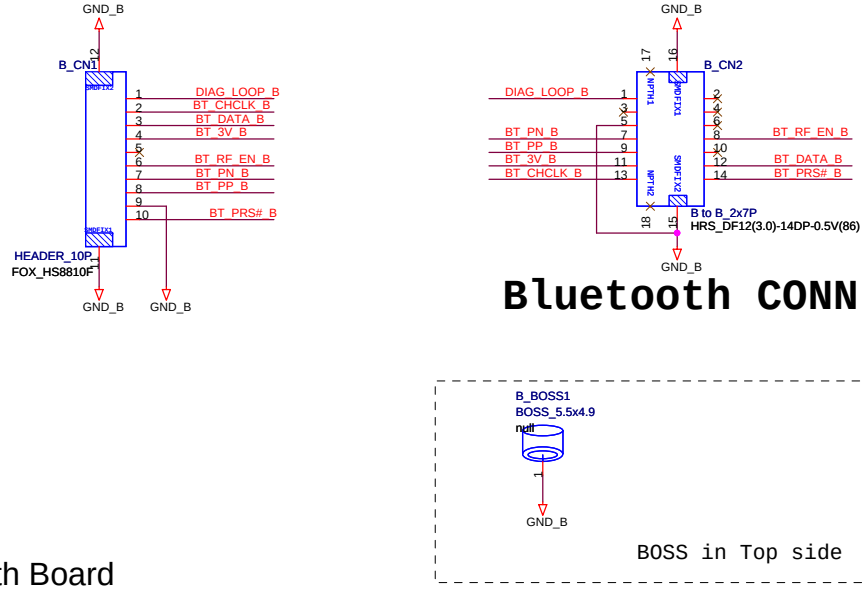
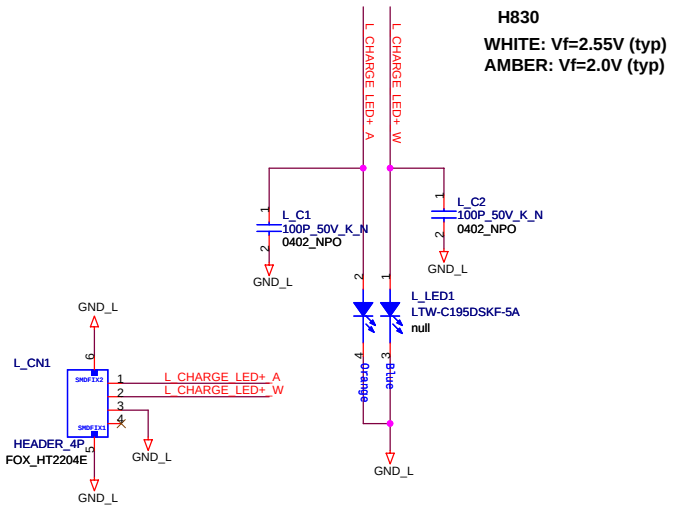
Power Button Board



Bluetooth Board



LED Board



ST

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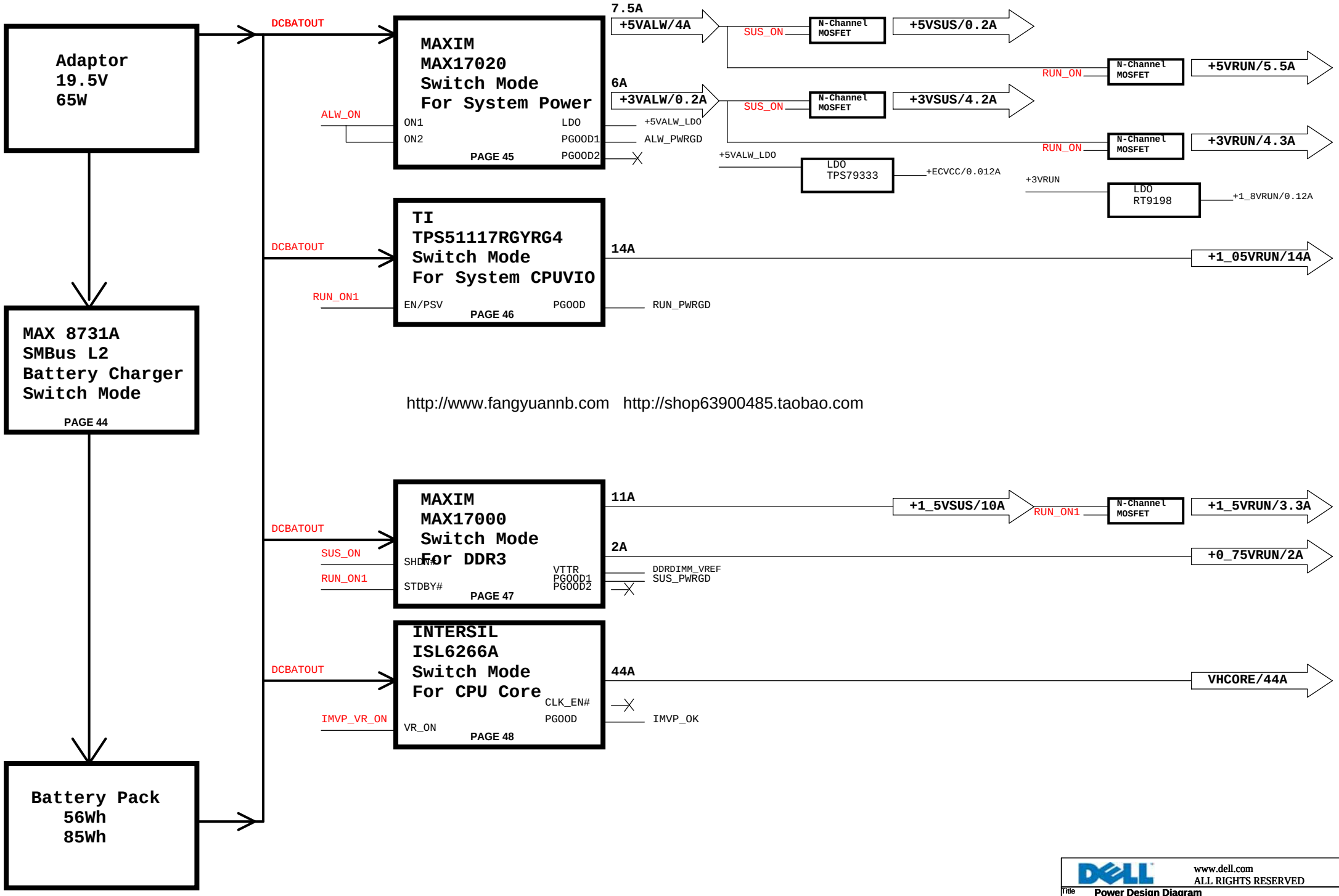
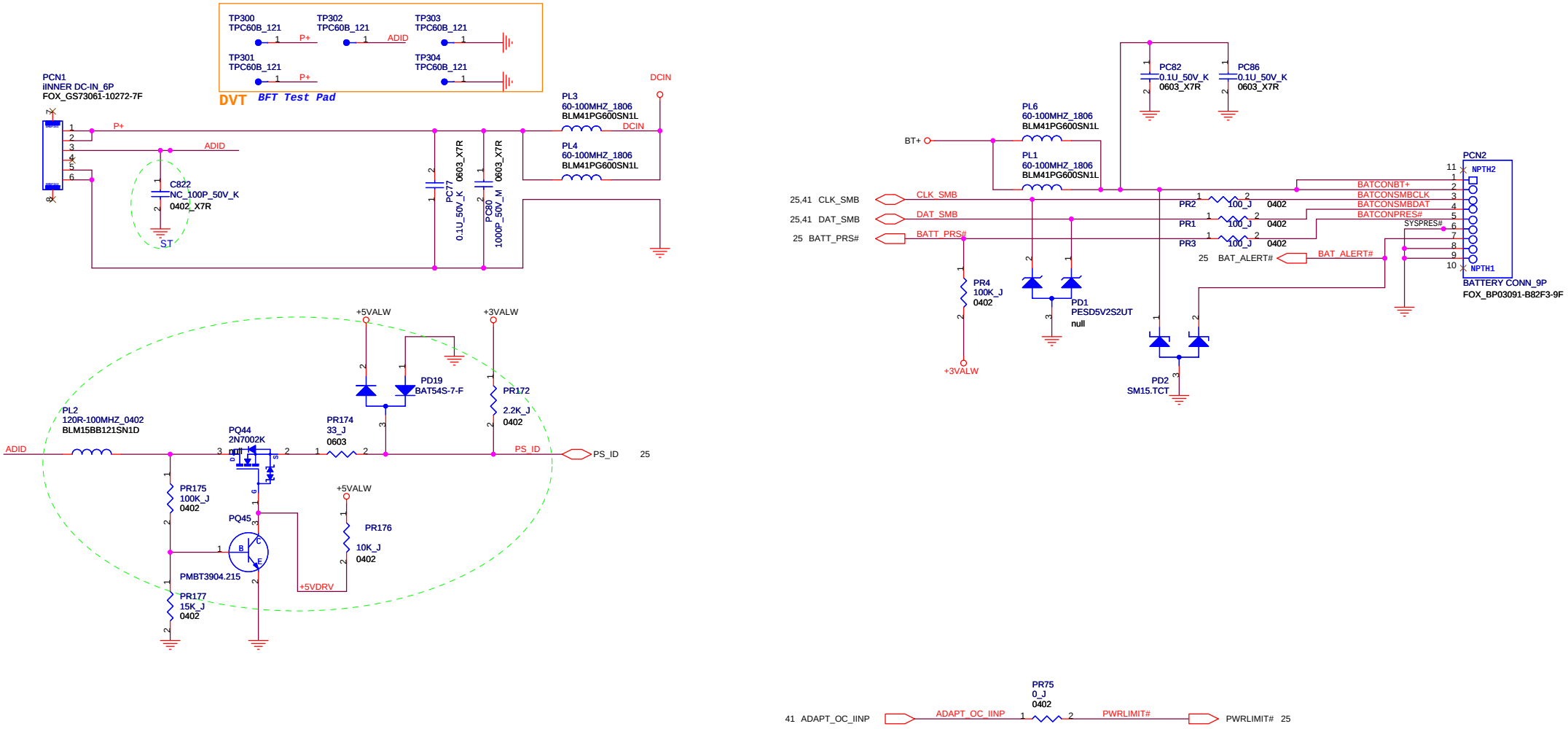
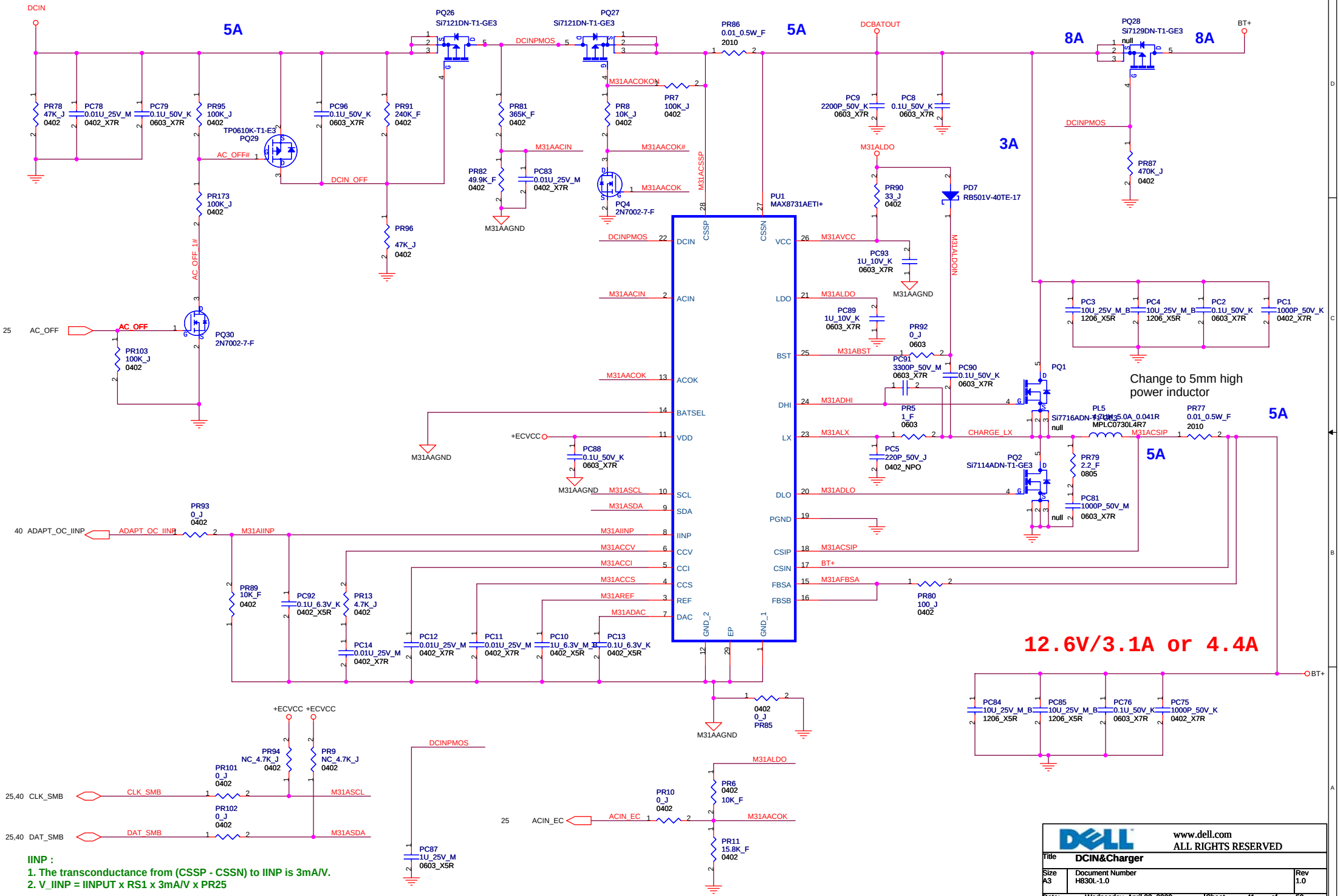
Title	PWR_BTN&LED&BT DB	
Size A3	Document Number H830L-1.0	Rev 1.0
Date: Wednesday, April 08, 2009	Sheet 38 of 50	



Title	Power Design Diagram	
Size A3	Document Number H830L-1.0	Rev 1.0
Date: Wednesday, April 08, 2009	Sheet 39 of 50	



Title	DCIN & Battery	
Size A3	Document Number H830L-1.0	Rev 1.0
Date: Friday, April 10, 2009	Sheet 40 of 50	


DCIN
5A
PQ26
Si7121DN-T1-GE3
PQ27
Si7121DN-T1-GE3
DCINPMOS
PR86
0.01_0.5W_F
2010
5A
DCBATOUT
8A
PQ28
Si7129DN-T1-GE3
null
8A
BT+
PR78
47K_J
0402
PC78
0.01U_25V_M
0402_X7R
PC79
0.1U_50V_K
0603_X7R
PR95
100K_J
0402
TP0610K-T1-E3
PQ29
AC_OFF#
PC96
0.1U_50V_K
0603_X7R
PR91
240K_F
0402
DCIN_OFF
PR81
365K_F
0402
M31AACIN
PR82
49.9K_F
0402
PC83
0.01U_25V_M
0402_X7R
M31AAGND
M31AACOKON
PR7
100K_J
0402
PR8
10K_J
0402
M31AACOK#
M31AACOK
PQ4
2N7002-7-F
M31ACSSP
PC9
2200P_50V_K
0603_X7R
PC8
0.1U_50V_K
0603_X7R
M31ALDO
3A
PR90
33_J
0402
PD7
RB501V-40TE-17
M31ALDOIN
PC93
1U_10V_K
0603_X7R
M31AAGND
DCINPMOS
PR87
470K_J
0402
PR173
100K_J
0402
AC_OFF_1#
PR96
47K_J
0402
PU1
MAX8731AETI+
DCIN
CSSP
CSSN
VCC
M31AVCC
LDO
M31ALDO
BST
M31ABST
DHI
M31ADHI
LX
M31ALX
DLO
M31ADLO
PGND
CSIP
M31ACSIP
CSIN
BT+
FBSA
M31AFBSA
FBSB
ACIN
ACOK
BATSEL
VDD
SCL
SDA
IINP
CCV
CCI
CCS
REF
DAC
GND_2
EP
GND_1
PC3
10U_25V_M_B
1206_X5R
PC4
10U_25V_M_B
1206_X5R
PC2
0.1U_50V_K
0603_X7R
PC1
1000P_50V_K
0402_X7R
25
AC_OFF
AC_OFF
PR103
100K_J
0402
PQ30
2N7002-7-F
PC89
1U_10V_K
0603_X7R
PR92
0_J
0603
PC91
3300P_50V_M
0603_X7R
PC90
0.1U_50V_K
0603_X7R
PQ1
Si7716ADN-T1-GE3
null
PL5
4.7UH_5.0A_0.041R
MPLC0730L4R7
PR77
0.01_0.5W_F
2010
5A
Change to 5mm high power inductor
M31AAGND
+ECVCC
PC88
0.1U_50V_K
0603_X7R
M31AAGND
PR5
1_F
0603
PC5
220P_50V_J
0402_NPO
PQ2
Si7114ADN-T1-GE3
PR79
2.2_F
0805
PC81
1000P_50V_M
0603_X7R
null
5A
40
ADAPT_OC_IINP
PR93
0_J
0402
ADAPT_OC_IINP
M31AIINP
PR89
10K_F
0402
PC92
0.1U_6.3V_K
0402_X5R
PR13
4.7K_J
0402
PC14
0.01U_25V_M
0402_X7R
PC12
0.01U_25V_M
0402_X7R
PC11
0.01U_25V_M
0402_X7R
PC10
1U_6.3V_M_B
0402_X5R
PC13
0.1U_6.3V_K
0402_X5R
PR80
100_J
0402
12.6V/3.1A or 4.4A
BT+
PC84
10U_25V_M_B
1206_X5R
PC85
10U_25V_M_B
1206_X5R
PC76
0.1U_50V_K
0603_X7R
PC75
1000P_50V_K
0402_X7R
0402
0_J
PR85
M31AAGND
+ECVCC
+ECVCC
PR94
NC_4.7K_J
0402
PR9
NC_4.7K_J
0402
PR101
0_J
0402
25,40
CLK_SMB
CLK_SMB
M31ASCL
PR102
0_J
0402
25,40
DAT_SMB
DAT_SMB
M31ASDA
DCINPMOS
PC87
1U_25V_M
0603_X5R
M31ALDO
PR6
0402
10K_F
PR10
0_J
0402
25
ACIN_EC
ACIN_EC
M31AACOK
PR11
15.8K_F
0402
IINP :
1. The transconductance from (CSSP - CSSN) to IINP is 3mA/V.
2. V_IINP = IINPUT x RS1 x 3mA/V x PR25
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Title
DCIN&Charger
Size
A3
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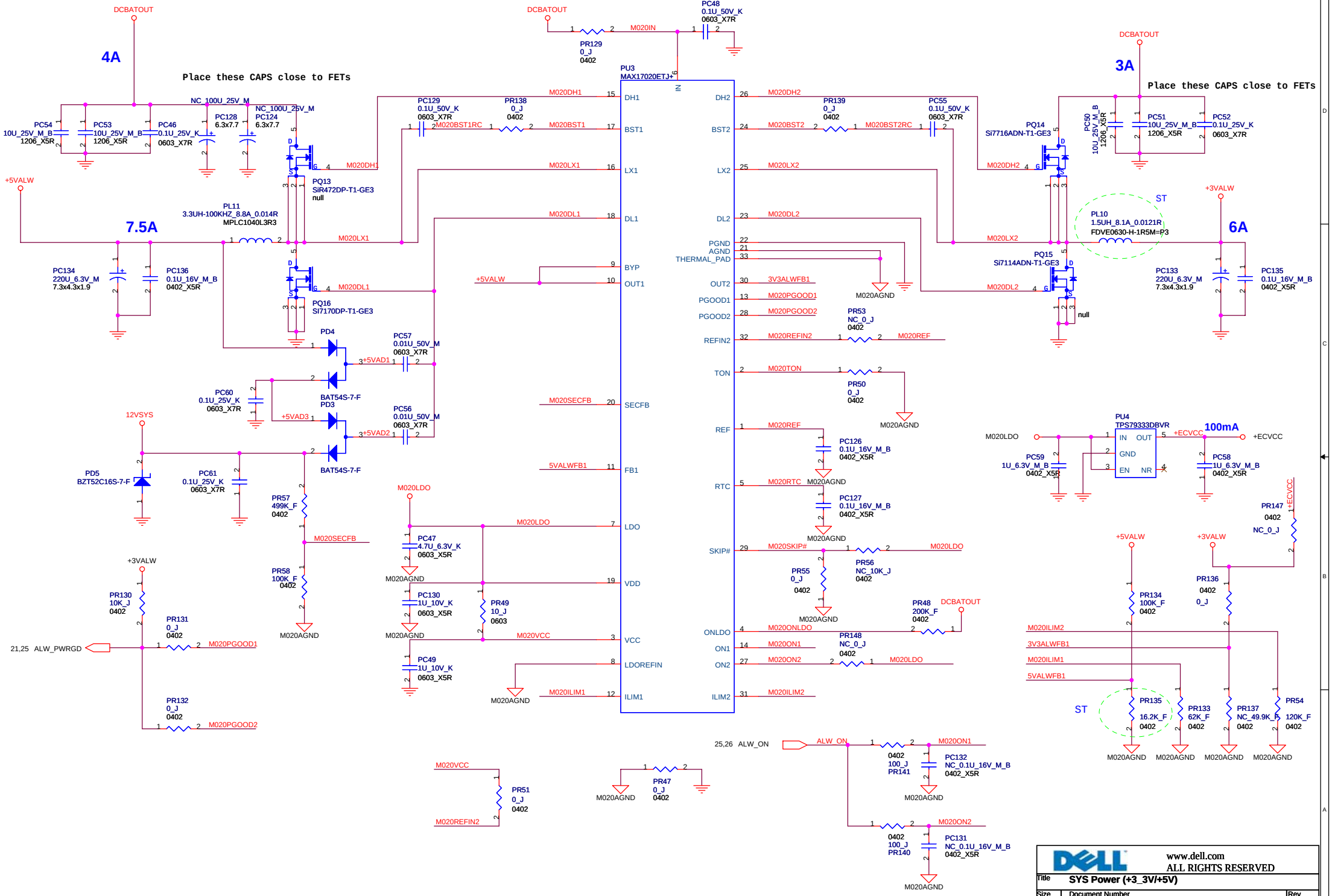
DCBATOUT
4A
Place these CAPS close to FETs
PC54 10U_25V_M_B 1206_X5R
PC53 10U_25V_M_B 1206_X5R
PC46 0.1U_25V_K 0603_X7R
NC_100U_25V_M
PC128 6.3x7.7
NC_100U_25V_M PC124 6.3x7.7
+5VALW
7.5A
PL11 3.3UH-100KHZ_8.8A_0.014R MPLC1040L3R3
PC134 220U_6.3V_M 7.3x4.3x1.9
PC136 0.1U_16V_M_B 0402_X5R
PQ13 SiR472DP-T1-GE3 null
PQ16 SI7170DP-T1-GE3
PD4
PC57 0.01U_50V_M 0603_X7R
PC60 0.1U_25V_K 0603_X7R
BAT54S-7-F PD3
PC56 0.01U_50V_M 0603_X7R
12VSYS
PD5 BZT52C16S-7-F
PC61 0.1U_25V_K 0603_X7R
BAT54S-7-F
PR57 499K_F 0402
PR58 100K_F 0402
M020AGND
+3VALW
PR130 10K_J 0402
PR131 0_J 0402
21,25 ALW_PWRGD
M020PGOOD1
PR132 0_J 0402
M020PGOOD2
DCBATOUT
PC48 0.1U_50V_K 0603_X7R
PR129 0_J 0402
M020IN
PU3 MAX17020ETJ+
PC129 0.1U_50V_K 0603_X7R
PR138 0_J 0402
M020BST1RC
M020DH1
M020BST1
M020LX1
M020DL1
M020LX1
M020DL1
+5VALW
M020SECFB
5VALWFB1
M020LDO
PC47 4.7U_6.3V_K 0603_X5R
PC130 1U_10V_K 0603_X5R
PR49 10_J 0603
PC49 1U_10V_K 0603_X5R
M020VCC
M020ILIM1
M020VCC
PR51 0_J 0402
M020REFIN2
PR47 0_J 0402
DH1
BST1
LX1
DL1
BYP
OUT1
SECFB
FB1
LDO
VDD
VCC
LDOREFIN
ILIM1
DH2
BST2
LX2
DL2
PGND
AGND
THERMAL_PAD
OUT2
PGOOD1
PGOOD2
REFIN2
TON
REF
RTC
SKIP#
ONLDO
ON1
ON2
ILIM2
M020DH2
M020BST2
M020BST2RC
M020LX2
M020DL2
3V3ALWFB1
M020PGOOD1
M020PGOOD2
PR53 NC_0_J 0402
M020REFIN2
M020REF
M020TON
PR50 0_J 0402
M020AGND
PC126 0.1U_16V_M_B 0402_X5R
PC127 0.1U_16V_M_B 0402_X5R
M020SKIP#
PR55 0_J 0402
PR56 NC_10K_J 0402
PR48 200K_F 0402
DCBATOUT
M020ONLDO
PR148 NC_0_J 0402
M020ON1
M020ON2
M020LDO
M020ILIM2
PR139 0_J 0402
PC55 0.1U_50V_K 0603_X7R
PQ14 Si7716ADN-T1-GE3
PQ15 Si7114ADN-T1-GE3
null
3A
Place these CAPS close to FETs
PC50 10U_25V_M_B 1206_X5R
PC51 10U_25V_M_B 1206_X5R
PC52 0.1U_25V_K 0603_X7R
ST
PL10 1.5UH_8.1A_0.0121R FDVE0630-H-1R5M=P3
+3VALW
6A
PC133 220U_6.3V_M 7.3x4.3x1.9
PC135 0.1U_16V_M_B 0402_X5R
PU4 TPS79333DBVR
100mA
M020LDO
IN OUT GND EN NR
+ECVCC
PC59 1U_6.3V_M_B 0402_X5R
PC58 1U_6.3V_M_B 0402_X5R
PR147 0402 NC_0_J
+5VALW
+3VALW
PR134 100K_F 0402
PR136 0402 0_J
M020ILIM2
3V3ALWFB1
M020ILIM1
5VALWFB1
ST
PR135 16.2K_F 0402
PR133 62K_F 0402
PR137 NC_49.9K_F 0402
PR54 120K_F 0402
M020AGND
25,26 ALW_ON
ALW_ON
PR141 0402 100_J
PC132 NC_0.1U_16V_M_B 0402_X5R
PR140 0402 100_J
PC131 NC_0.1U_16V_M_B 0402_X5R
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ALL RIGHTS RESERVED
Title SYS Power (+3_3V/+5V)
Size A3
Document Number H830L-1.0
Rev 1.0
Date: Wednesday, April 08, 2009
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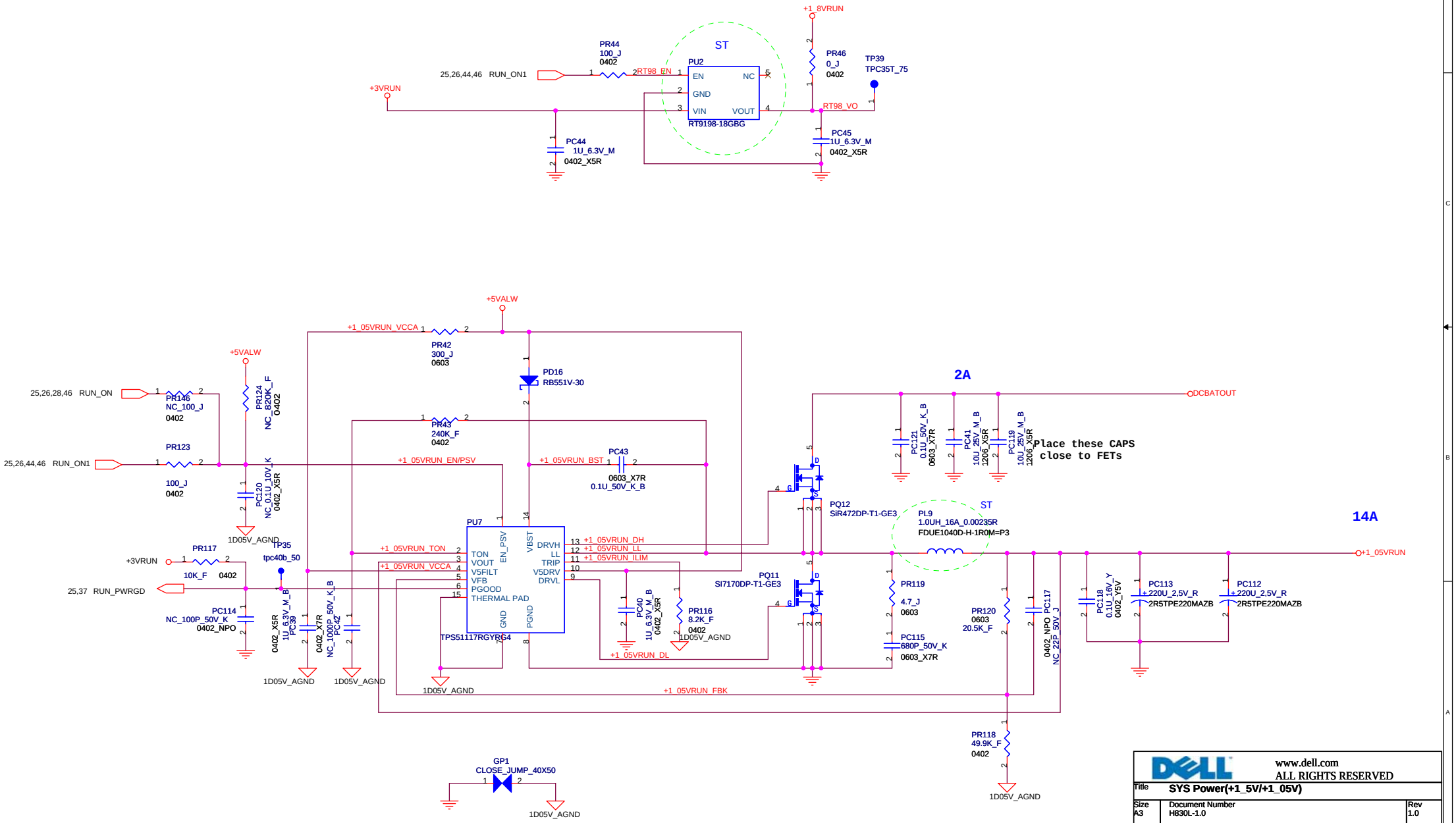
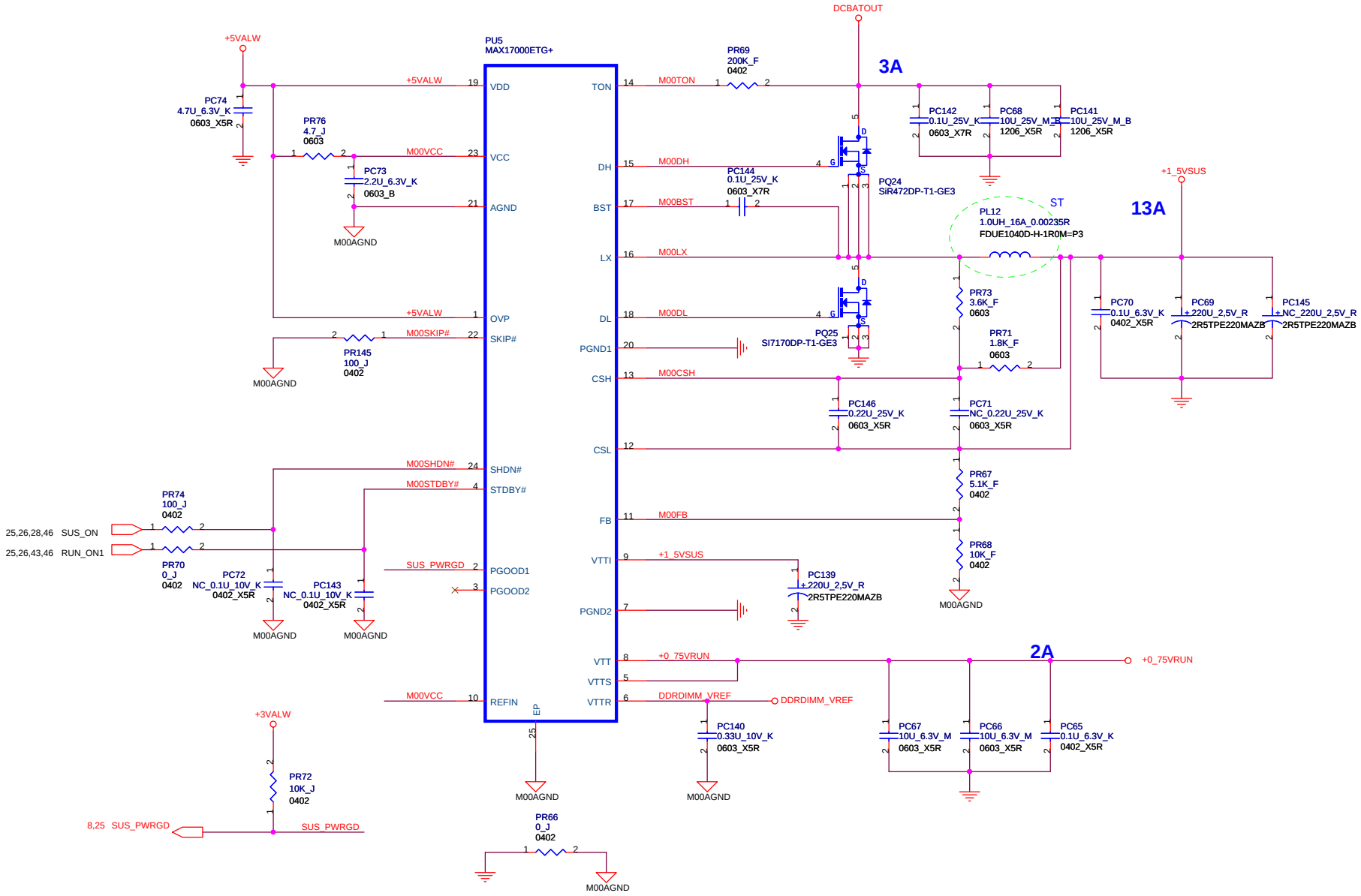
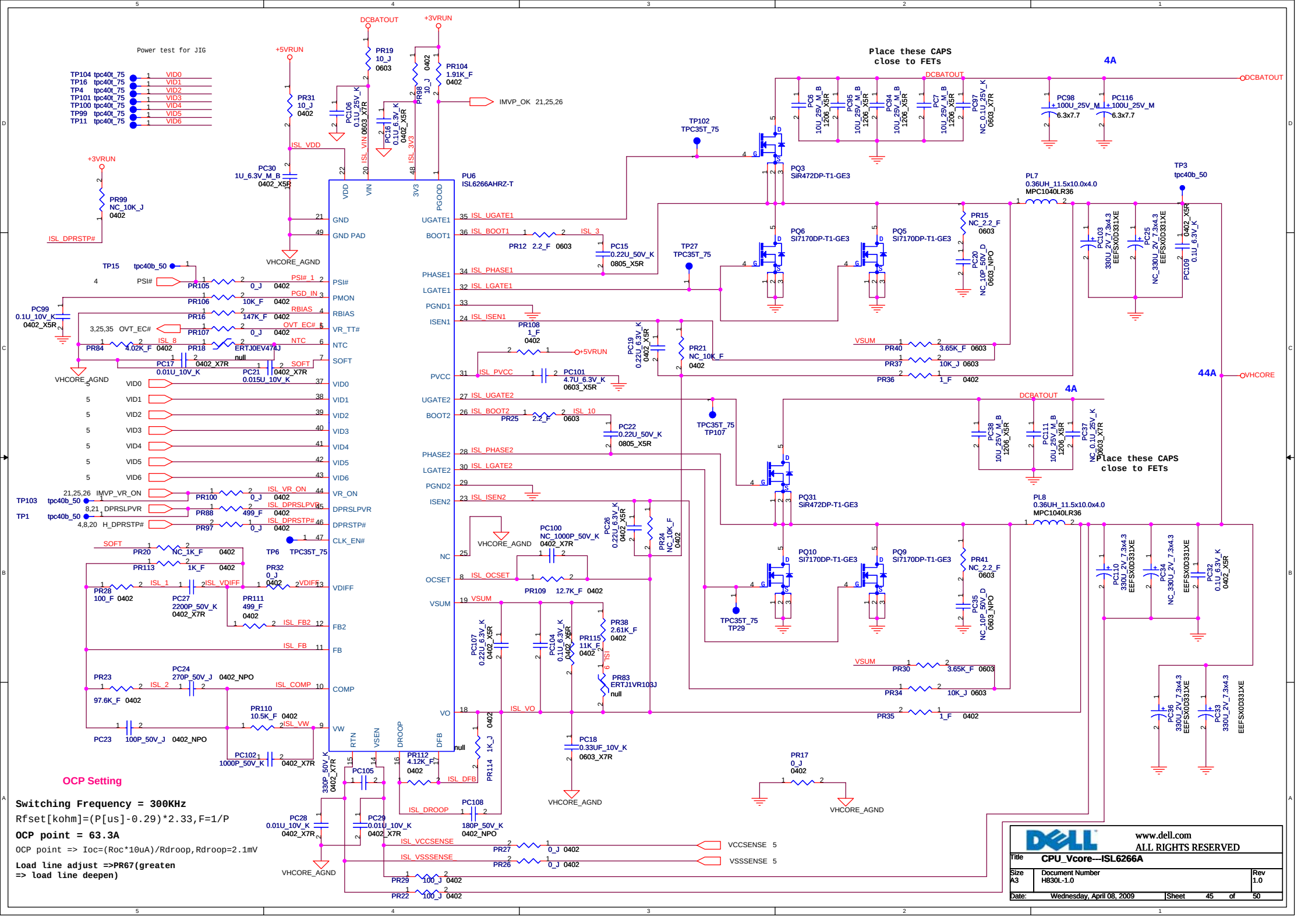


Title	SYS Power(+1_5V/+1_05V)	
Size A3	Document Number H830L-1.0	Rev 1.0
Date: Wednesday, April 08, 2009	Sheet 43 of 50	



DELL	www.dell.com ALL RIGHTS RESERVED		
Title	DDR2 Power(+1_8V/+0_9V)		
Size A3	Document Number H830L-1.0		Rev 1.0
Date:	Wednesday, April 08, 2009	Sheet 44 of 50	


Power test for JIG
TP104 tpc40t_75
TP16 tpc40t_75
TP4 tpc40t_75
TP1101 tpc40t_75
TP100 tpc40t_75
TP99 tpc40t_75
TP11 tpc40t_75
VID0
VID1
VID2
VID3
VID4
VID5
VID6
+5VRUN
+3VRUN
DCBATOUT
PR19 10_J 0603
PR104 1.91K_F 0402
IMVP_OK 21,25,26
PR31 10_J 0402
PC106 0.1U_25V_K 0603_X7R
PC16 0.1U_6.3V_K 0402_X5R
PR98 10_J 0402
ISL_VDD
ISL_VIN
ISL_3V3
PC30 1U_6.3V_M_B 0402_X5R
PR99 NC_10K_J 0402
ISL_DPRSTP#
VHCORE_AGND
PU6
ISL6266AHRZ-T
VDD
VIN
3V3
PGOOD
GND
GND PAD
TP15 tpc40b_50
PSI#
PR105 0_J 0402
PGD_IN
PR106 10K_F 0402
RBIAS
PR16 147K_F 0402
OVT_EC#
PR107 0_J 0402
3,25,35 OVT_EC#
PC99 0.1U_10V_K 0402_X5R
PR84 4.02K_F 0402
ISL_8
PR18 ERTJ0EV474J null
NTC
PC17 0.01U_10V_K 0402_X7R
PC21 0.015U_10V_K 0402_X7R
SOFT
PSI#
PMON
RBIAS
VR_TT#
NTC
SOFT
VID0
VID1
VID2
VID3
VID4
VID5
VID6
21,25,26 IMVP_VR_ON
PR100 0_J 0402
ISL_VR_ON
VR_ON
TP103 tpc40b_50
8,21 DPRSLPVR
PR88 499_F 0402
ISL_DPRSLPVR
DPRSLPVR
TP1 tpc40b_50
4,8,20 H_DPRSTP#
PR97 0_J 0402
ISL_DPRSTP#
DPRSTP#
CLK_EN#
TP6 TPC35T_75
PR20 NC_1K_F 0402
PR113 1K_F 0402
PR32 0_J 0402
PR28 100_F 0402
ISL_1
PC27 2200P_50V_K 0402_X7R
ISL_VDIFF
PR111 499_F 0402
VDIFF
ISL_FB2
FB2
ISL_FB
FB
PC24 270P_50V_J 0402_NPO
PR23 97.6K_F 0402
ISL_2
ISL_COMP
COMP
PR110 10.5K_F 0402
PC23 100P_50V_J 0402_NPO
ISL_VW
VW
PC102 1000P_50V_K 0402_X7R
RTN
VSEN
DROOP
DFB
PR112 4.12K_F 0402
PR114 1K_J 0402
PC105 330P_50V_K 0402_X7R
ISL_DFB
ISL_DROOP
PC108 180P_50V_K 0402_NPO
PC28 0.01U_10V_K 0402_X7R
PC29 0.01U_10V_K 0402_X7R
ISL_VCCSENSE
ISL_VSSSENSE
PR27 0_J 0402
PR26 0_J 0402
VCCSENSE 5
VSSSENSE 5
PR29 100_J 0402
PR22 100_J 0402
ISL_UGATE1
ISL_BOOT1
ISL_PHASE1
ISL_LGATE1
PGND1
ISL_ISEN1
ISL_PVCC
ISL_UGATE2
ISL_BOOT2
ISL_PHASE2
ISL_LGATE2
PGND2
ISL_ISEN2
NC
ISL_OCSET
VSUM
VO
PR12 2.2_F 0603
PC15 0.22U_50V_K 0805_X5R
PR108 1_F 0402
PC19 0.22U_6.3V_K 0402_X5R
PR21 NC_10K_F 0402
PC101 4.7U_6.3V_K 0603_X5R
PR25 2.2_F 0603
ISL_10
PC22 0.22U_50V_K 0805_X5R
PC100 NC_1000P_50V_K 0402_X7R
PC26 0.22U_6.3V_K 0402_X5R
PR24 NC_10K_F 0402
PR109 12.7K_F 0402
PC107 0.22U_6.3V_K 0402_X5R
PC104 0.1U_6.3V_K 0402_X5R
PR115 11K_F 0402
PR38 2.61K_F 0402
PR83 ERTJ1VR103J null
PC18 0.33UF_10V_K 0603_X7R
PR17 0_J 0402
Place these CAPS close to FETs
4A
TP102 TPC35T_75
PQ3 SiR472DP-T1-GE3
PQ6 SI7170DP-T1-GE3
PQ5 SI7170DP-T1-GE3
TP27 TPC35T_75
PC6 10U_25V_M_B 1206_X5R
PC95 10U_25V_M_B 1206_X5R
PC94 10U_25V_M_B 1206_X5R
PC7 10U_25V_M_B 1206_X5R
PC97 NC_0.1U_25V_K 0603_X7R
PC98 100U_25V_M 6.3x7.7
PC116 100U_25V_M 6.3x7.7
PR15 NC_2.2_F 0603
PC20 NC_10P_50V_D 0603_NPO
PL7 0.36UH_11.5x10.0x4.0 MPC1040LR36
TP3 tpc40b_50
PC103 330U_2V_7.3x4.3 EEFSX0D331XE
PC25 NC_330U_2V_7.3x4.3 EEFSX0D331XE
PC109 0.1U_6.3V_K 0402_X5R
VSUM
PR40 3.65K_F 0603
PR37 10K_J 0603
PR36 1_F 0402
VHCORE
44A
TPC35T_75 TP107
PQ31 SiR472DP-T1-GE3
PQ10 SI7170DP-T1-GE3
PQ9 SI7170DP-T1-GE3
TPC35T_75 TP29
PC38 10U_25V_M_B 1206_X5R
PC111 10U_25V_M_B 1206_X5R
PC37 NC_0.1U_25V_K 0603_X7R
PR41 NC_2.2_F 0603
PC35 NC_10P_50V_D 0603_NPO
PL8 0.36UH_11.5x10.0x4.0 MPC1040LR36
PC110 330U_2V_7.3x4.3 EEFSX0D331XE
PC34 NC_330U_2V_7.3x4.3 EEFSX0D331XE
PC32 0.1U_6.3V_K 0402_X5R
PR30 3.65K_F 0603
PR34 10K_J 0603
PR35 1_F 0402
PC36 330U_2V_7.3x4.3 EEFSX0D331XE
PC33 330U_2V_7.3x4.3 EEFSX0D331XE
OCP Setting
Switching Frequency = 300KHz
Rfset[kohm]=(P[us]-0.29)*2.33,F=1/P
OCP point = 63.3A
OCP point => Ioc=(Roc*10uA)/Rdroop,Rdroop=2.1mV
Load line adjust =>PR67(greaten
=> load line deepen)
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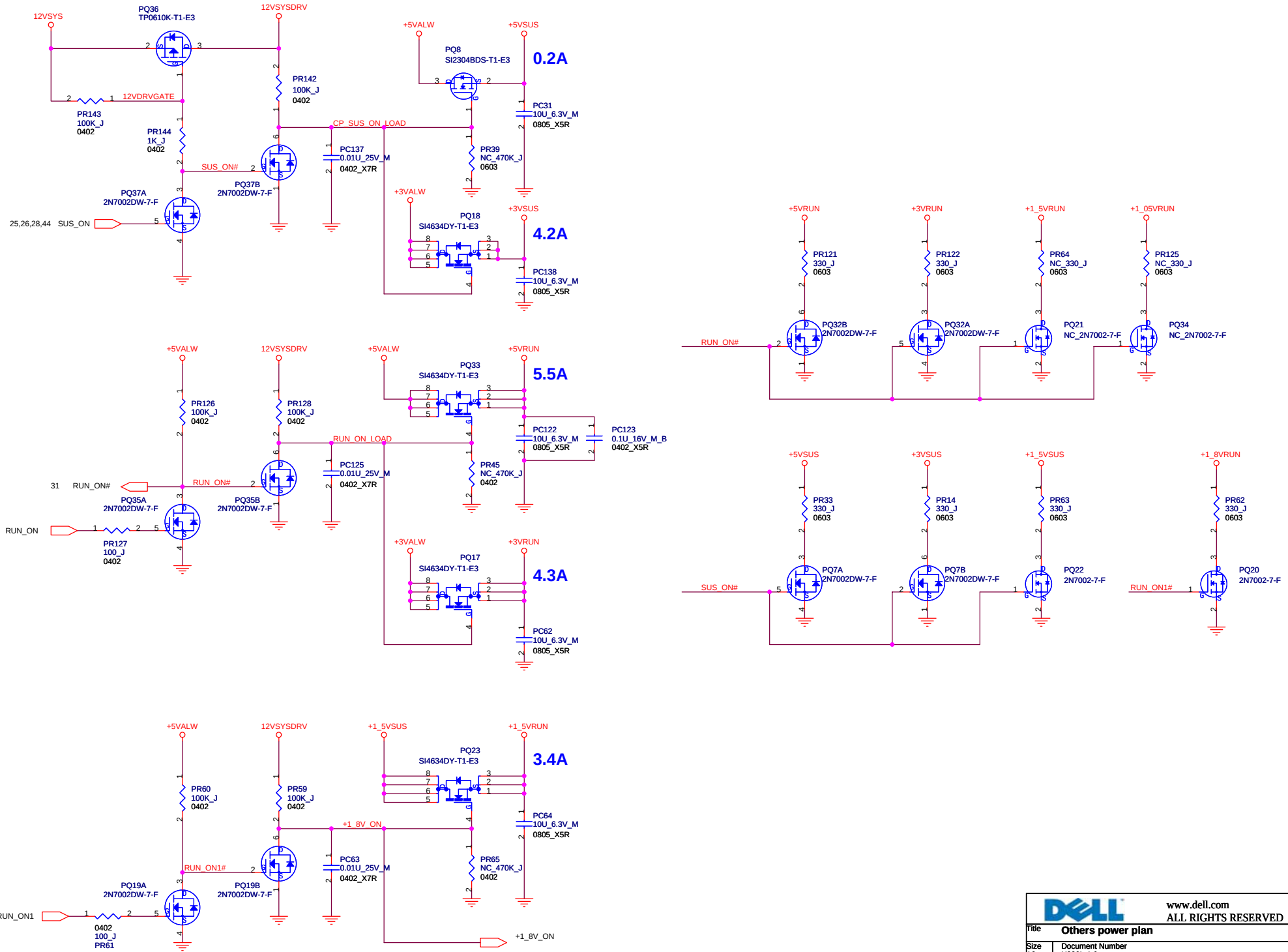

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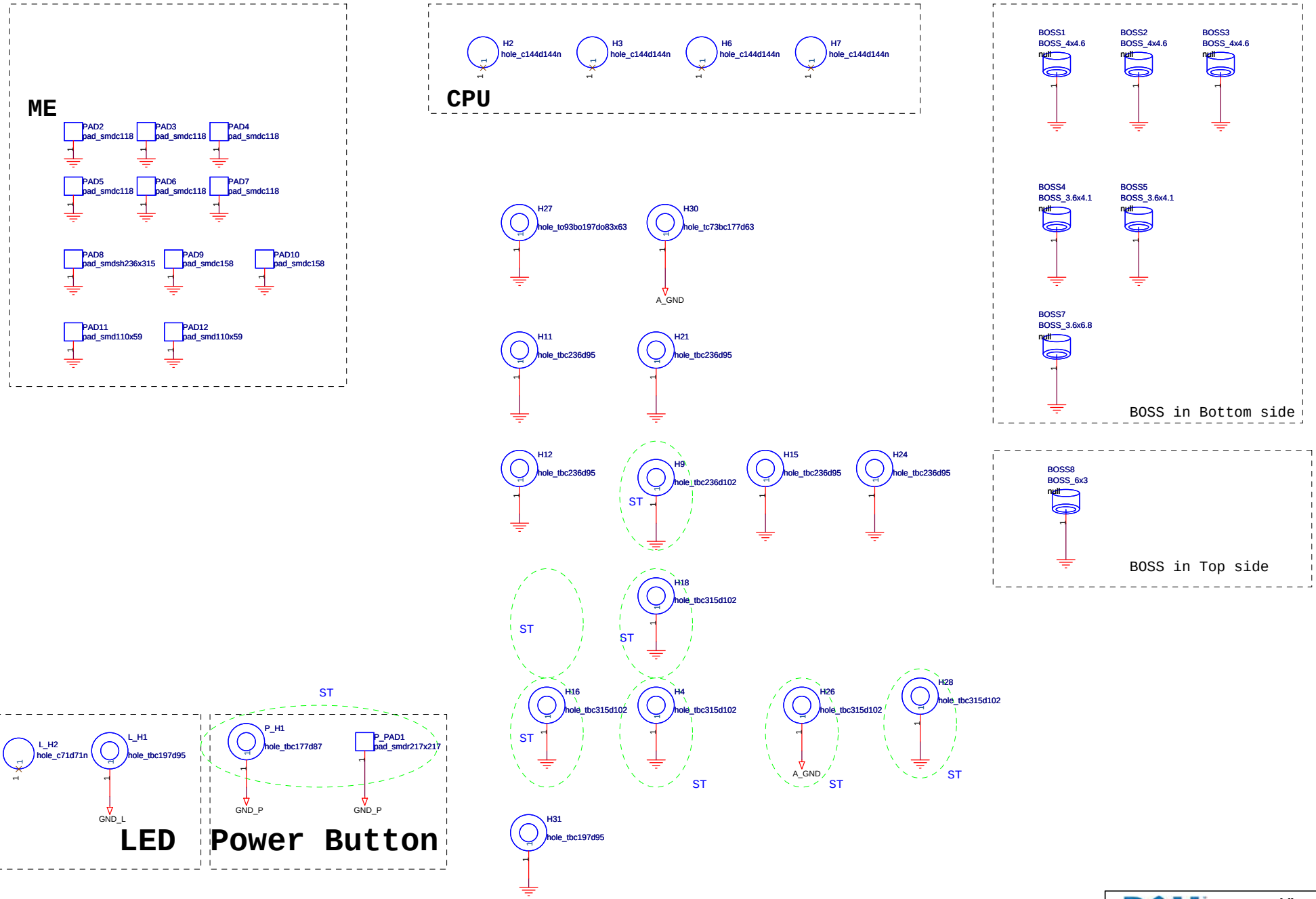

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H830-L EVT -> DVT

(2008/12/29)

P.25 Change KB CN: CN13 to Stuff; CN12 to NC for ME requirement.
P.28 Change Express Card CN: CN14, CN17 to Foxconn for ME requirement.
P.37 Change WWAN CN: CN8 to Stuff; CN7 to NC for ME requirement.
P.41 Change PR87 to 470K from 100K to fix part number error.
P.41 Change PR6 to 10K from 100K to fix part number error.
P.41 Change PR89 to 10K from 8.45K to fix part number error.
P.41 Change PR77, PR86 to CYTEC from WALSIN for purchase requirement.
P.42 Change PR136 to 27K from 33K for fine tune voltage.
P.42 Change PR56 to NC ; PR55 to stuff to fix 3V/5V over-spec issue.
P.43 Change PQ11 to SI7170DP-T1-GE3 from SiR466DP-T1-GE3.
P.45 Change PR108, PR36, PR35 to 1ohm from 100K to fix part number error.
P.45 Change PR20 to NC for ISL6266A improved by internal circuit.

(2008/12/31)

P.25/29/30/33/35/37/40 Add test point TP300~TP337 for DVT BFT test.

(2009/01/06)

P.18 Change L47 vender to PSL vender Murata.
P.29 Add TP338~TP to solve PC_BEEP issue.
P.33 Add Q50, R468,R560,C816,C792 to solve PC_BEEP issue.
P.34 Add Q41 to solve speaker mute issue.
P.37 Change CN3 to 4pin CN from 3pin to avoid confusing with LED Brd CN.
P.38 Reverse L_SMD1 to follow cable pin definition.

(2009/01/08)

P.20 Change RTC battery part number to CR-2032L/BN from CR-2032L/BE for PUR.
P.40 Add PU PR172 for PS_ID.
P.24 Change CN26 (HDD CN) footprint for ME request.
P.24 Change CN26 (HDD CN) footprint for ME request.
P.19 Change R124 to NC for no necessary.

(2009/01/09)

P.14/15 Change C221,C196,C219,C220,C202,C178,C197 to stuff to follow H830H.
P.38 Change R299,R300,R306,R307 to Stuff; L40,L42 to NC to solve e-sata issue.
P.20 Change C423, C424 to 12pF from 15pF for crystal Y2 precision.
P.30 Change C48 to 15pF, C47 to 18pF for crystal Y1 precision.
P.25 Change C481 to 15pF, C475 to 15pF for crystal Y4 precision.
P.06 Change C425 to 27pF for crystal Y3 precision.
P.21 Change USBPWREN_1 to SB GPIO28; GPIO22 connect +3VRUN to solve USB S3 auto resume issue.
P.40 Change TP300, TP301,TP302,TP303,TP304 to TPC60B_75 for TE request.
P.41/42 Change PQ2, PQ15 to Si7114ADN-T1-GE3 for power request.
P.43 Change PQ11 to SI7170DP-T1-GE3 for power request.
P.34 Add Q52 and connect EC_DEBUG to EC to solve PC_BBEP issue.

(2009/01/09-2)

P.30 Change Y1 to X5H025000FC1H-H for vender suggest.
P.20 Change RTC Battery CN25 to BB10201-C1401-7F for ME request.

(2009/01/12)

P.36 Change U6,U34 to HF part RT9703GS for vender suggest.

(2009/01/14)

P.38 Change L_SMD1 to L_CN1 for ME request.
P.48 Del H1,H10 & H23 for ME request.
P.43 Change PU2 to RT9198-18PBG from RT9198-18GBG for PUR request.
P.36 Change U6,U34 back to LF part RT9703PS for vender lead time issue.

(2009/01/16)

P.36 Del eSATA Choke L40 and L42 for improve SI.
P.18 Change HMDI CN CN16 to DIP type for factory EE request.
P.37 Change PWR BTN CN CN3 to 3pin and LED Brd CN CN2 to 4pin for ME request.

(2009/01/19)

P.41 Add PR173 for solve PQ29 derating issue.
P.42 Move PC124 to DCIN5VALW for power request.
P.06 Change C425 to 33pF for crystal Y3 precision.

(2009/01/20)

P.43 Add PD16 for power request.
P.08 Add U38, C818, R563,R564 to solve SUS_PWRGD level drop issue.
P.05 Add C819, C820, C821 for RF request.
P.27 Del D4 and add R469, Q42 and Q43 to solve HDMI CN VCC issue.
P.42 Del PR52 and change PR51 to 0ohm;change PR53 to NC for power request.
P.47 Add PAD2~PAD12 for ME request.

(2009/01/21)

P.17 Change R269 to 62ohm and stuff R360 and Q12; add C534 to solve panel power sequence issue.
P.36 Change USB power switch U34, U6 to TPS2034DRG4 (low Rds on).
P.38 Add BC_CN4 and BC_CN3 for BT second source.
P.52 Add PR146 NC for resevering power sequence test.

(2009/02/02)

P.31 Change C518 to 2.2uF from 10uF to solve S3 pop noise issue.
P.47 Connect H30 to AGND from GND.
P.37 Increse USB_VCC5_R to 6pin from 4pin and decrese AGND, GND pin to improve voltage drop.

(2009/02/02)

P.37 Del colay connector CN6 for ME request.

(2009/02/05)

P.47 Del BOSS6 for ME request.
P.38 Add BC_TP1, BC_TP2.
P.25 Change Q21B(3904) to Q53 (2N7002) to prevent current leakage.
P. Change test point to ICT test point: TP111,TP113,TP116,TP117,TP118,TP119, TP120,TP121,TP122,TP123,TP124,TP125,TP126,TP130,TP131,TP132,TP133,TP135, TP136,P137,TP139,TP140,TP141,TP142,TP153,TP157,TP158,TP178,TP179,TP34,TP36, TP37,TP40,TP41,TP42,TP44,TP45,TP46,TP47,TP49,TP58,TP60,TP62,TP63,TP64,TP69, TP70,TP72,TP75,TP77,TP78,TP79,TP8,TP85,TP86,TP87,TP88,TP89,TP9,TP90,TP92, TP93,TP94,TP95,
P.35 Add U39,U40,R565,R568,R569,R570,R566,R567,C823 for G sensor function.

(2009/02/06)

P.47 Del BOSS6 for ME request.
P.31 Change LDO U18 to TPS73601DBVR for current limit up to 400mA.
P.31 Change R478 to 0ohm from 22ohm for SI.
P.37 Add L55, R544, R571 for EMI.
P.20 Add R465,R1305 and SATALED# for HDD LED.
P.35 Add Q54, R575, TP255, TP249 for G sensor function.
P.28 Add CN72, CN73 for expresscard CN second source.

(2009/02/07)

P.36 Change D2,D3 to PSL vender.
P.51 Change PR136 to 0 ohm and PR137 to NC to solve +3VALW level too high issue. .

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H830-L DVT

(2009/02/10)

P.16 Change C418,C415 & C410 to 22pF for EMI requirement.
P.29 Add L73, L74,C772 & C817 for EMI requirement.
P.16 Change L45,L44,L43 to BLM18BB750SN1D for RGB Tr, Tf issue.
P.33 Del R54,R55,R56,R57 and add L75,L76,L77,L78 for EMI issue.

(2009/02/11)

P.40 Add C822 1000pF on PCN1 pin 3 for EMI requirement.
P.42 Change PR54 to 120k for 3.3V OCP Change.
P.43 Change PR43 to 240k for 1.05V Frequency Change.
P.44 Change PR43 to 1.8k for 1.5V OCP Change
P.41 Change PQ28 to Si7129DN-T1-GE3 for Id Derating Fail
P.44 Change PC69,PC139 to 220uF, for Power IC issue,Maxim FAE instance
P.43 Change PC112,PC113 to 220uF, for Power IC issue,TI FAE instance.
P.44 Change PC145(NC) to 220uF, for Power IC issue,Maxim FAE instance
P.45 Change PC143 to 0.1uF for For Vhcore loadline and transient.
P.45 Change PR111 to 499ohm for Vhcore loadline and transient
P.45 Change PR112 to 4.12Kohm for Vhcore loadline and transient
P.42 Add PR147(NC) 0ohm for +3D3VALWVO from +ECVCC,for PT energy star test.
P.42 Add PR148(NC) 0ohm for M020ON2 from M020LDO,for PT energy star test.

(2009/02/12)

P.30 Change R26 to 1.1K from 1.24k for LAN SI issue.

(2009/02/13)

P.38 Add BC_BOSS1 for BT2 Brd nut.
P.14/15 Add C535,C537,C538,C317,C538,C541,C542,C540,C539,C543 for DDR EMI issue.
P.42 Add PC146 and NC PC71 for DDR power.
P.30 Change R26 to 1.24K from 1.1k for LAN SI issue.
P.40 Add PCN2 toBP03091-B82F3-9F for ME request.
P.16 Change F2 to SMD1206P035TF/16 for fuse derating issue.
P.36 Change F5,F7 to SMD1812P260TF for fuse derating issue.

(2009/02/17)

P.20 Change R1035,R465 to NC to reserve for SATA LED.

H830-L PT -> ST

(2009/03/08)

P.33 Change Q50,R468,C816,C792 to NC because new version Codec solved PC-Beep issue (PT implement. E-ECN)
P.21 Change RTC battery part number to CR-2032L/BN from CR-2032L/BE for PUR request.
P.35 Change U40 G-sensor part number to DE351DL for request.
P.41~45 Remove Power open gap PJ1,PJ2,PJ3,PJ4,PJ5,PJ6,PJ7,PJ8,PJ9,PJ10,PJ11, PJ12,PJ13,PJ14,PJ15,PJ16,PJ17 for power request.
P.42 Change PR135 to 16.2K ohm to solve +5VALW voltage too high issue.

(2009/03/15)

P.42 Change PR135 to 16.2K ohm to solve +5VALW voltage too high issue.
P.17 Change R38 to 51K and C534 to 0.015uF tol solve LCD power sequence issue.
P.25/26/37 Change CN13,CN29,CN18,CN10 material to met tin for ME request.
P.40 Add PR175, PR177, PQ45,PQ44,PR176, PD19,PR174, and del PD5; change C822 to NC_100pF for AD_ID(PS_ID) protection.
P.18 Change Q31 to 2N7002K for HDMI detection pin ESD protection.
P.36 Reserve D16 PESD5V0L1BA NC for USB port detection pin ESD.

(2009/03/16)

P.38 Change P_SMD1 to P_CN1 for ME request.

(2009/03/16)

P.17 Add fuse F8 for LVDS power protection.

(2009/03/17)

P.17 Add fuse F8 for LVDS power protection.
P.37 Change CN8 to 18pin and del C368,C498,C73,C72 for del PCIe interface of WWAN DB.

(2009/03/26)

P.17 LVDS CN, change +3VRUN to pin 10 from pin4 to prevent DCBATOUT short to +3VRUN.
P.47 Del H20 and modify H4,H18,H26,H9,H16,H28 for ME request.
P.20 Del C246,C247 for del PCIe interface of WWAN DB.
P.04 Add C72 to solve H_GTLREF Vpp over-spec issue.
P.47 Modify P_H1 and P_PAD1 for ME request.
P.37 Change WWAN DB CN +3VALW to 8pin from 7pin.
P.27 Add CN74 WLAN CN second source colay with CN17 for ME request.

(2009/03/27)

P.17 LVDS CN, change +3VRUN to pin 10 from pin4 to prevent DCBATOUT short to +3VRUN.

(2009/03/27-2)

P.37 Modify WWAN CN8 pin define.
P.26 LVDS CN, change +3VRUN to pin 4, pin3 to NC prevent DCBATOUT short to +3VRUN.

(2009/03/27-3)

P.31 Change R207 to 13.3K for Realtek recommand.

(2009/03/31)

P.18 Change R386 to NC for 27MHz XTAL.
P.33 Change R435,R434 to 8.2K for 6ohm SPK.
P.14/15 Change DDR CN package: CN24 to AS0A626-U4RN-4F, CN23 to AS0A626-U8RN-4F for SMT.
P.43 Change PU2 to RT9198-18GBG (HF part)for PUR request.

(2009/04/02)

P.33 Change C81,C82,C83 and C84 to NC for EMI request.
P.33 Del Q50,R468,R560,C816,C792 to del reservation for PCBeep.

(2009/04/03)

P.16 Change L43,L44,L45 to BLM18BB470SN1D to solve VGA SI issue.
P.19/25/38 Del CN8,C78,C225,C77 add TP34,TP36,TP37 for WWAN CN PCIe interface cancelled.

(2009/04/05)

P.40 Change BFT Testpoint TP300, TP301,TP302, TP303,TP304 to TPC60B_121 for TE request.
P.25/35/37 Change BFT Testpoint TP327,TP328,TP329,TP330,TP333,TP334,TP312, TP313,TP314,TP335,TP337 to tpc40t_121 for TE request.
P.29/30/33/37 Change BFT Testpoint TP305,TP306,TP307,TP308,TP310,TP338,TP339, TP340,TP341,TP342,TP343,TP344,TP345,TP346,TP309,TP311 TP315,TP316,TP317, TP318,TP319,TP320,TP321,TP322 ,TP323,TP324,TP325,TP326,TP336 to tpc40B_121 for TE request.

(2009/04/08)

P.42 Change PL_10 to FDVE0630-H-1R5M=P3 (HF part) for power request.
P.43 Change PL_9 to FDUE1040D-H-1R0M=P3 (HF part) for power request.
P.44 Change PL_12 to FDUE1040D-H-1R0M=P3 (HF part) for power request.

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(2009/04/08)

P.17 Change F8 to 467002 (32V-2A_0603) forLVDS VCC protection.

P.38 Del BC_CN4,BC_CN3,BC_BOSS1,BC_TP1,BC_TP2 for BT2 board is not necessary.

(2009/04/09)

P.35 Change R568,R575, Q54,R569,R570,R565,U40,C824,R566,C823,R567 to NC for cancelling support G-sensor.

P.33 Change C513,C524,C505,C493 to 0.01uF;C491 to 0.1uF for speaker pop noise.

P.17 Del R270 0ohm for no necessary.

P.27 Del R39 0ohm and change R278 to close gap PGP17.

P.11 Change R116 0ohm to close gap PGP4.

P.36 Change R247,R47,R52 0ohm to close gap PGP5,PGP6,PGP8.

P.36 Change F5,F7 to close gap PGP7,PGP9.

(2009/04/10)

P.30 Change R48 0ohm to close gap PGP18.

P.45 Add C596 NC and PGP19 for USB detection softstart.

P.32 Change R463,R446,R464,R467 to 1K ohm to solve pop noise..

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