First International Computer, Inc

Portable Computer Group HW Department

Board name : MotherBoard Schematic

Project : AMD S1 + Nvidia C51D + MCP51

Version : 0.6(PTB51)

Initial Date : 05/13/2006

Confidential

Manager Sign by : Avery Lee

Drawing by : Jason Lee

Total confirm by :Adam Cho

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1. Schematic Page Description :

FIC Schematic Ver : 0.1

2. PCI BUS Description :

IDSEL	CHIP
AD22	1394 VIA VT6311S

PCIINT	CHIP
IRQA	1394 VIA VT6311S
IRQB	——
IRQC	——
IRQD	——

BUSMASTER

REQ	CHIP
REQ0 / GNT0	——
REQ1 / GNT1	1394 VIA VT6311S
REQ2 / GNT2	——
REQ3 / GNT3	——
REQ4 / GNT4	——

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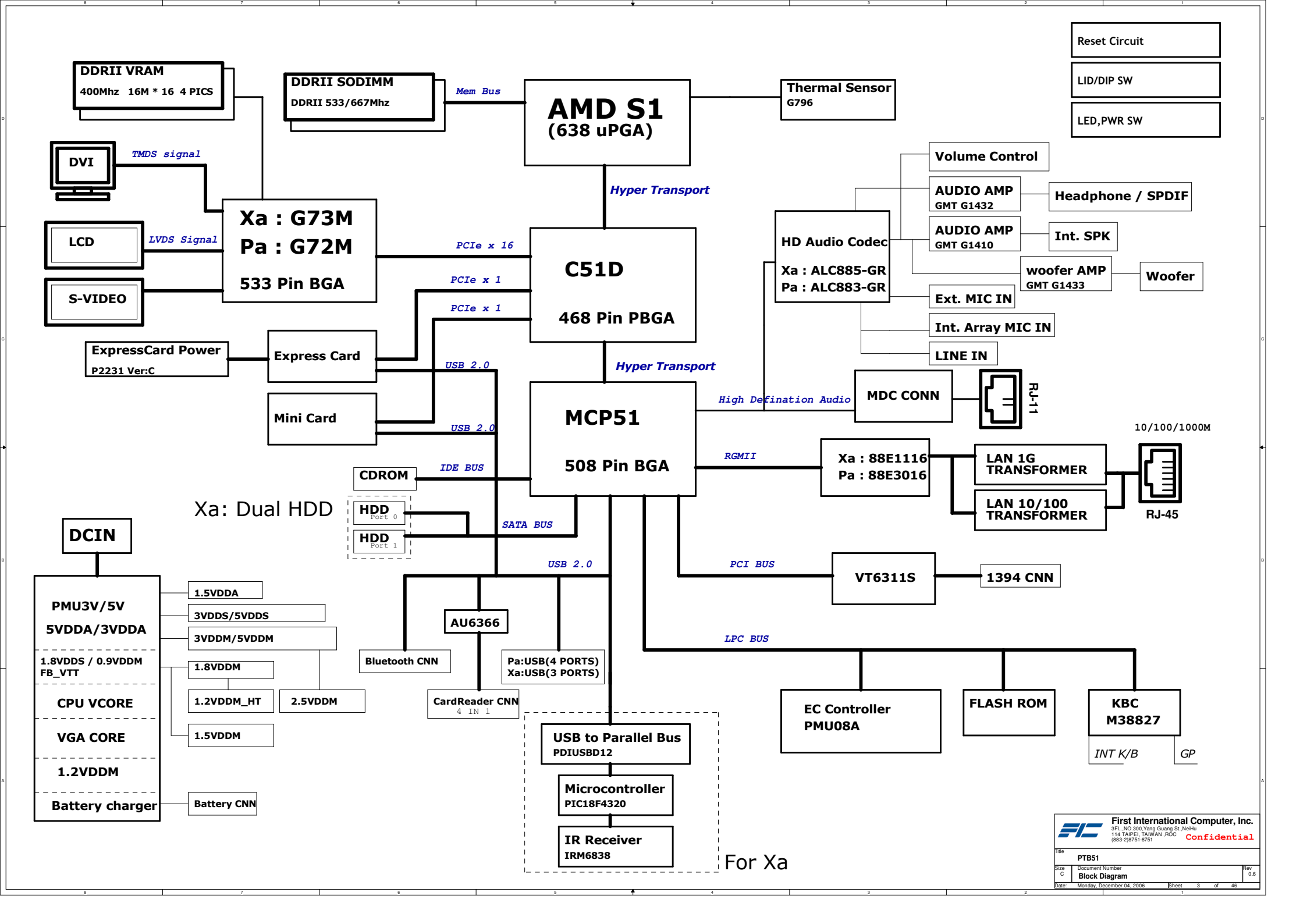
Reset Circuit
LID/DIP SW
LED,PWR SW
DDRII VRAM
400Mhz 16M * 16 4 PICS
DDRII SODIMM
DDRII 533/667Mhz
Mem Bus
AMD S1
(638 uPGA)
Thermal Sensor
G796
DVI
TMDS signal
LCD
LVDS Signal
S-VIDEO
Xa : G73M
Pa : G72M
533 Pin BGA
PCIe x 16
Hyper Transport
C51D
468 Pin PBGA
PCIe x 1
PCIe x 1
Volume Control
AUDIO AMP
GMT G1432
Headphone / SPDIF
AUDIO AMP
GMT G1410
Int. SPK
HD Audio Codec
Xa : ALC885-GR
Pa : ALC883-GR
woofer AMP
GMT G1433
Woofer
Ext. MIC IN
Int. Array MIC IN
LINE IN
ExpressCard Power
P2231 Ver:C
Express Card
USB 2.0
Hyper Transport
Mini Card
USB 2.0
MCP51
508 Pin BGA
High Defination Audio
MDC CONN
RJ-11
10/100/1000M
RGMII
Xa : 88E1116
Pa : 88E3016
LAN 1G
TRANSFORMER
LAN 10/100
TRANSFORMER
RJ-45
IDE BUS
CDROM
Xa: Dual HDD
HDD
Port 0
HDD
Port 1
SATA BUS
DCIN
USB 2.0
PCI BUS
VT6311S
1394 CNN
PMU3V/5V
5VDDA/3VDDA
1.5VDDA
3VDDS/5VDDS
3VDDM/5VDDM
1.8VDDS / 0.9VDDM
FB_VTT
1.8VDDM
CPU VCORE
1.2VDDM_HT
2.5VDDM
VGA CORE
1.5VDDM
1.2VDDM
Battery charger
Battery CNN
AU6366
Bluetooth CNN
Pa:USB(4 PORTS)
Xa:USB(3 PORTS)
CardReader CNN
4 IN 1
LPC BUS
EC Controller
PMU08A
FLASH ROM
KBC
M38827
INT K/B
GP
USB to Parallel Bus
PDIUSBD12
Microcontroller
PIC18F4320
IR Receiver
IRM6838
For Xa
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4. Net name Description :

Voltage Rails

DCIN	Primary DC system power supply
PMU5V	5.0V always on power rail by LATCH or ACIN
PMU3V	3.3V always on power rail by LATCH or ACIN
5VDDA	5.0V always on power rail by DCON or PSUSC0
3VDDA	3.3V always on power rail by DCON or PSUSC0
1.5VDDA	1.5V always on power rail by DCON or PSUSC0
5VDDS	5.0V power rail
3VDDS	3.3V power rail
1.8VDDS	1.8V power rail
FB_VTT	0.9V power rail for VGA
0.9VDDM	0.9V DDR Termination Voltage
5VDDM	5.0V suspend power rail
3VDDM	3.3V suspend power rail
2.5VDDM	2.5V suspend power rail
1.5VDDM	1.5V suspend power rail
VDD_CORE	Core Voltage for VGA
VCPU_CORE	Core Voltage for CPU
1.2VDDM	VCC For CPU & NB
+1.2VHT	VCC For CPU & NB Hyper Transport

Part Naming Conventions

C = Capacitor
CN = Connector
D = Diode
F = Fuse
L = Inductor
Q = Transistor
R = Resistor
RP = Resistor Pack
U = Arbitrary Logic Device
Y = Crystal and Osc

Net Name Suffix

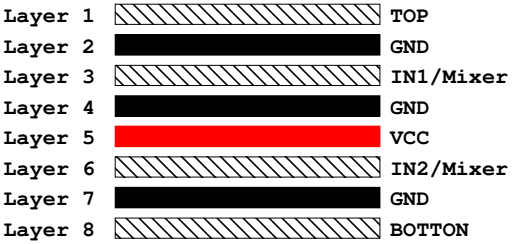
0 = Active Low signal

Signal Conditioning

_D_ = Damped (by a resistor)
_Q_ = Isolated (by a Q-switch)
_L_ = Filtered (by an inductor or bead)

5.Board Stack up Description

PCB Layers



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6.Schematic modify Item and History :

V0.1 --> V0.2

1.Modify LED circuit for Pa and Xa co-layout.
2.Change Card Reader from AU6333 to AU6366.
3.R38,R41 change to 56k ohm,C670 change to2200pF,C658 change to 1500pF,Del R385,Add C47 0.1uF (tune power sequence)
4.CLK_PMU08 change connect point from R451 to R592
5.Add D51,R589 47k ohm (Solve HTMCP_RST# Glitch)
6.Revise CN21 Anolog connection.
7.Change Q11 from 06-20726-01 to 06-23930-01
8.Add 0.1uF between U5 pin1,pin2 ,Remove D14.
9.Change Headphone AMP from M441 to G1410
10.R236 change to NU

V0.2 --> V0.3

1.Change JP1, JP2, JP3, JP9, JP15, JP19, JP23 to 0 ohm 11-14214-00
2.Change C16, C17 from 10-40729-02 to 10-60092-01
3.Add C883 10-52810-02 on Vcpu_core plane
4.L77, L79 changed from 12-01986-01 to 12-01955-01
5.C686 changed from NU to stuff.
6.CPU VDDIO_FB_L change to NC (FSC recommend)
7.Add PCIE CLK serial 0 hm resister R603,R604,R605,R606,R607,R608 (FSC recommend)
8.C647,C652 change from 18pf to 27pf, C630,C633 change from 12pf to 18pf(tune crystal timing)
9.D13,R201,C379,R205 change to NU,R205 stuff, Add R600 10k ohm pull down (solve KBC issue)
10.For EMI solution
  Add R272,R273,R274,R275,R276,R277,R278,R279 22 ohm
  Add C870,C871,C872,C873,C874,C875,C876,C877,C6,C5,C518,C520 5pF
  Add C551,C548,C546,C880,C881 10pF
  Add C878,C568,C569 100pF,C571 150pF, C480 1000pF
  Del L41,L42, Add R238,R239,R385,R521 10ohm

V0.3 --> V0.4

1.Del R571, Change R572 from 910 to 1K, change D17 to one lens LED for behavior issue.
2.Del Q65, Change Q70 to P-MOS (06-20593-01) for behavior issue.
3.Add C884, C885, C886, C887 location but no stuff to prevent noise issue.
4.Del JP7, JP18, JP25, JP13, JP24, JP11, JP10, JP8, JP12, JP14, JP29, JP4, JP22, JP6, JP21, JP5, JP17 to short.
5.C45(47pF), C55(33pF) change to 150pF, R31 change from 12k to 18k.
6.Add R613 between R531 to GND.
7.C1, C2, C535, C597 from NU to stuff .
8.Change L81, L82 to 0 ohm, add C891, C892, C893 for L1 enable function.
9.Add Card control power solution
10.R375 0 ohm change to NU, R595 10K ohm stuff
11.Add Lan PHY power control circuit.
12.Modify RF LED circuit.
13.Modify DVI circuit.
14.Modify Audio Mute circuit.
15.For EMI solution
   Add C494 200pF
   Add R189 0 ohm
   Add C898,C899,C900,C901,C902,C903,C904,C905 5pF (NU)
   Add one spring
   Add R258,R329,R436 0 ohm (NU)
16.R337 2K ohm change to NU, R335 10K ohm stuff
17.U58 change to NU, R550 4.7K ohm stuff
18.L55, L56 change to 300 bead, C523,C526 change to NU(Modify for Microvision issue)
19.R264 change from220 ohm to 82 ohm, R573 change from220 ohm to 470 ohm.

V0.4 --> V0.5

1.Add R620, R621 0 ohm (NU)
2.Add R622 for EMI solution
3.Del R451, C707

PTB50V0.5 --> XTB70V0.1

1.Add internal MIC OP-AMP circuit
2.Del L39,L40,C778,C755
3.JP15 change to 0 ohm short
4.C15 stuff
5.For EMI solution
  C5, C6 change to 33pF
  R272,R273,R276,R277,R278,R279 change to 18nH
  R274,R275 change to 15nH
  R258,R329,R622 0 ohm stuff
  C551 change to 220pF

V0.1 --> V0.2

1.Modify USB port power from 5VDDM to 5VDDA

XTB70 V0.2 --> PTB50V0.6

1.Change USB power: 5VDDM to 5VDDA
2.Change KBC power: from M power plane to A power plane
3.Modift Bluetooth circuit.
  R457 change to 1K ohm
  U31.1 change 3VDDA

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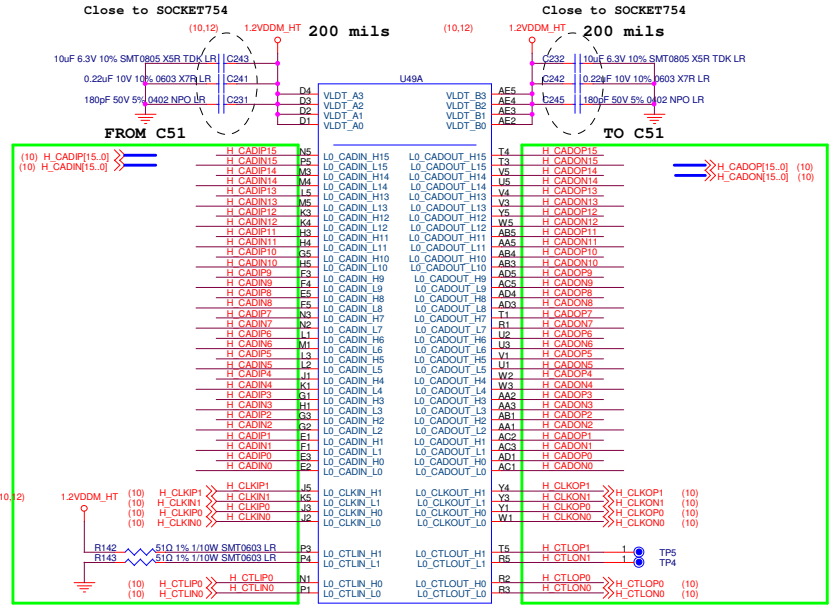
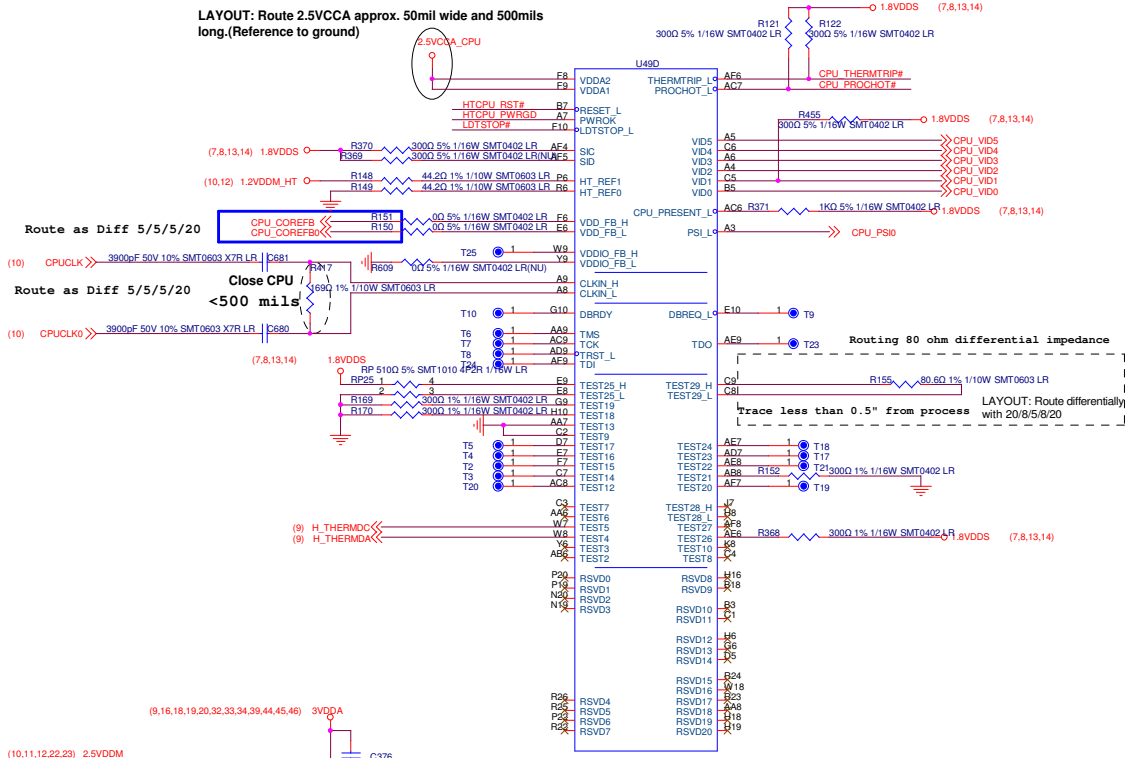
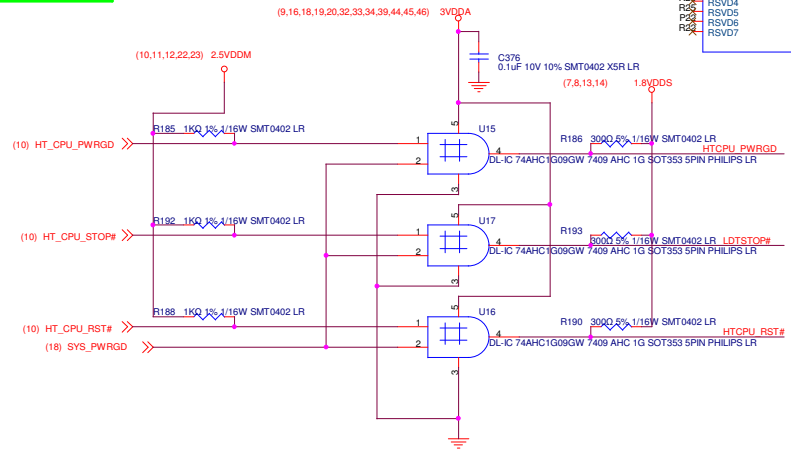
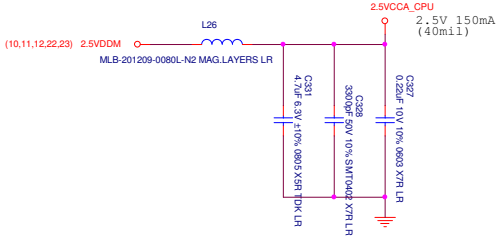
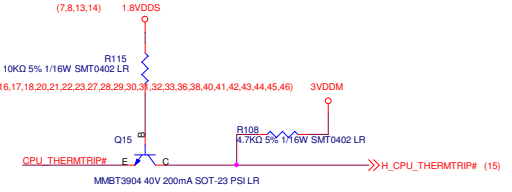
ClawHammer HT Interface





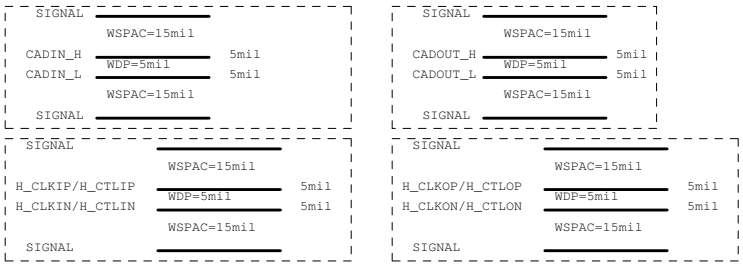






HT BUS General Routing Rules:

1. HT BUS is easy to route,and uses minmal board space.
2. HT BUS length must be greater than 1" and less than 12.0".
3. All CAD/CTL/CLK within a clock group must route at same layer.
4. HT BUS is Ground-referenced differential link.
5. Differential pair length matching within 30 mils.
6. CAD_H to CAD_L length matching within 30 mils.
7. CAD to CAD length matching within 120 mils.
8. CAD to CLK length matching within 60 mils.
9. CLK to CLK length matching within 600 mils(max).
10. CAD/CAD# and CTL/CTL# shall be treated identically within a clock group.



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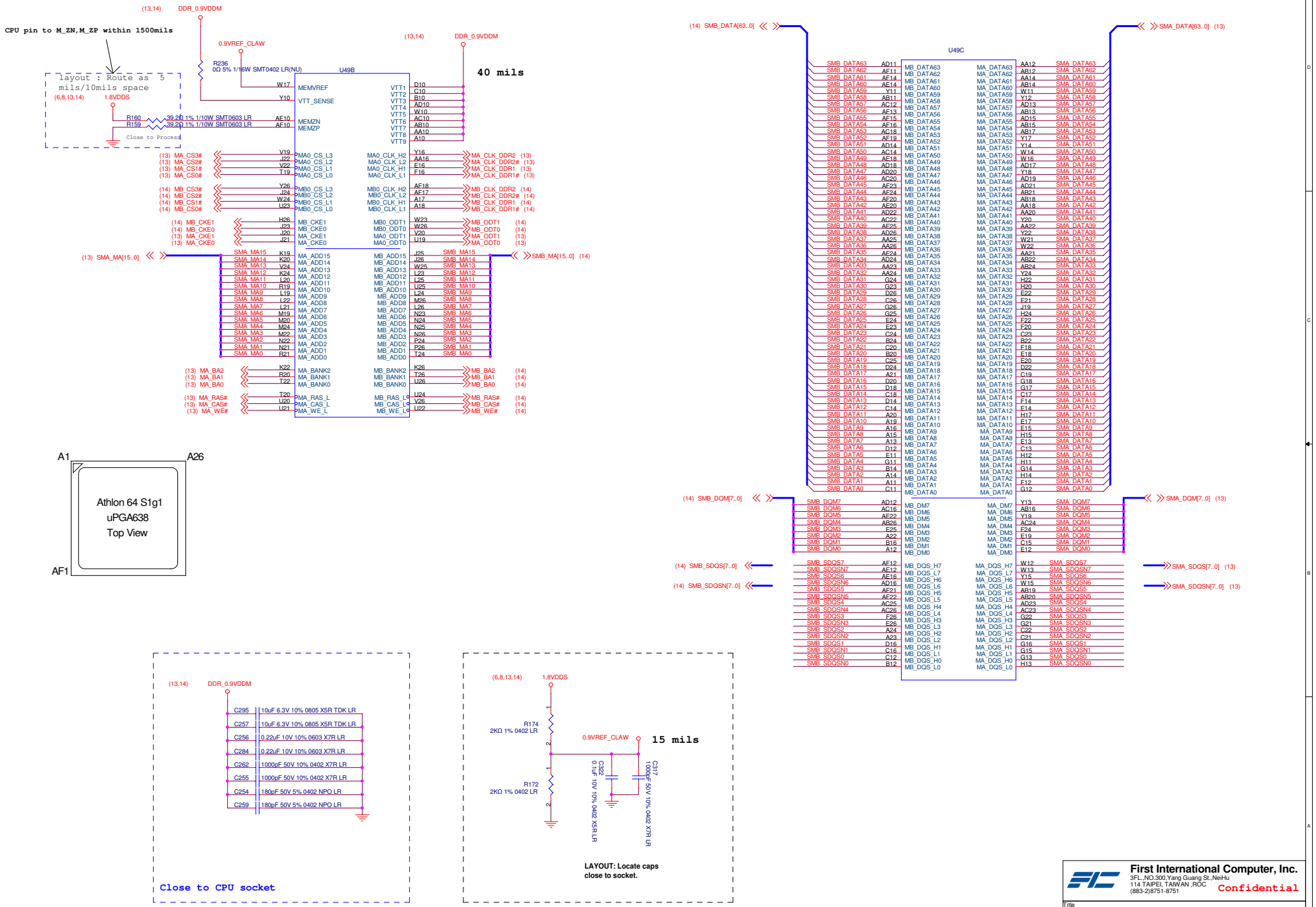
Clawhammer DDR Interface



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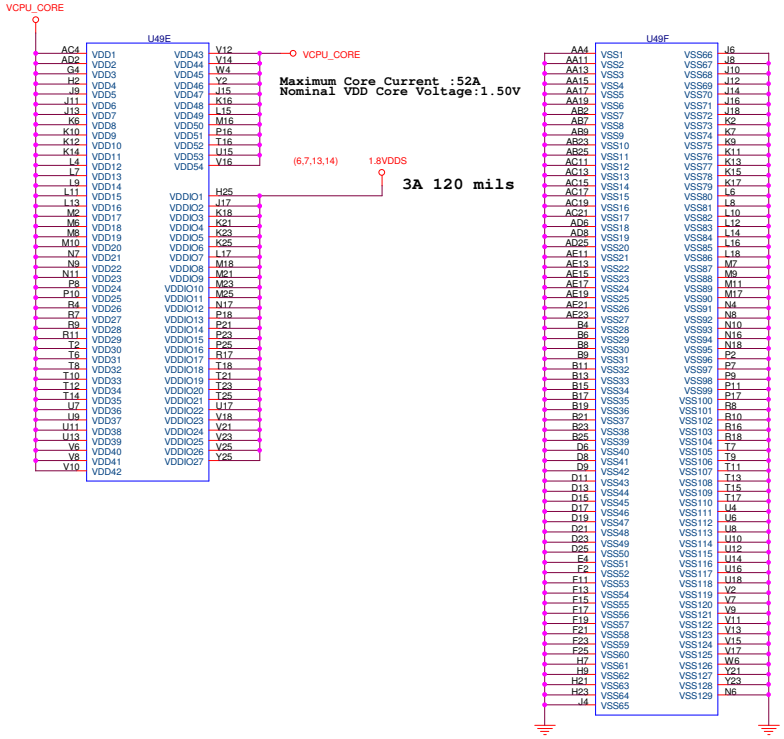

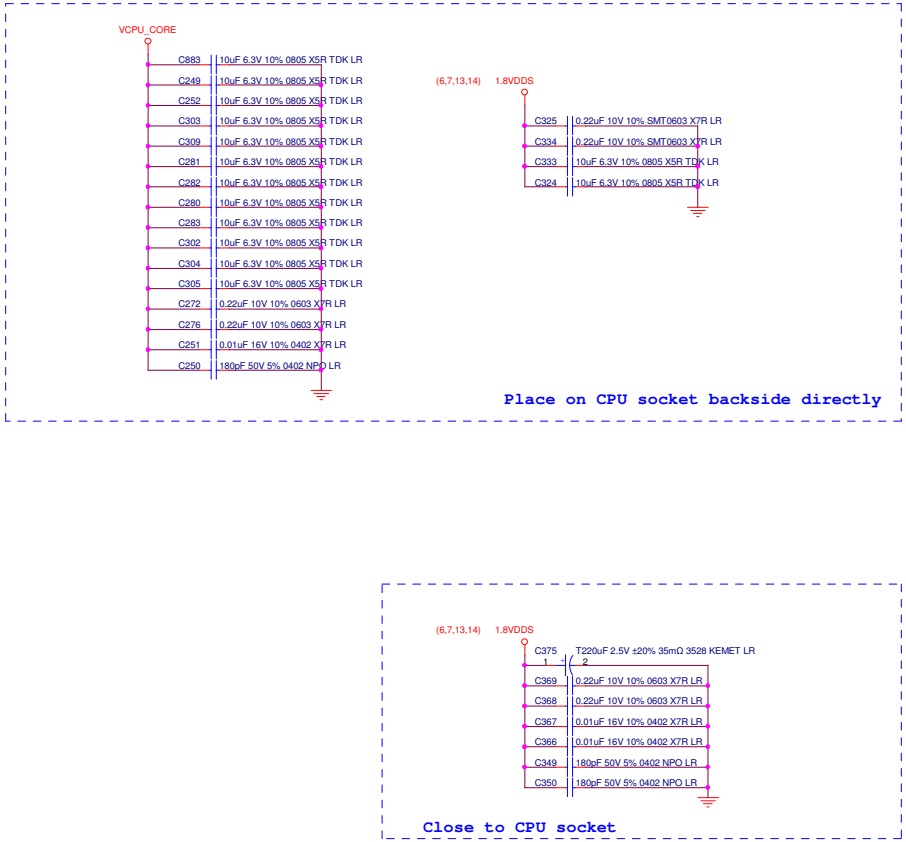

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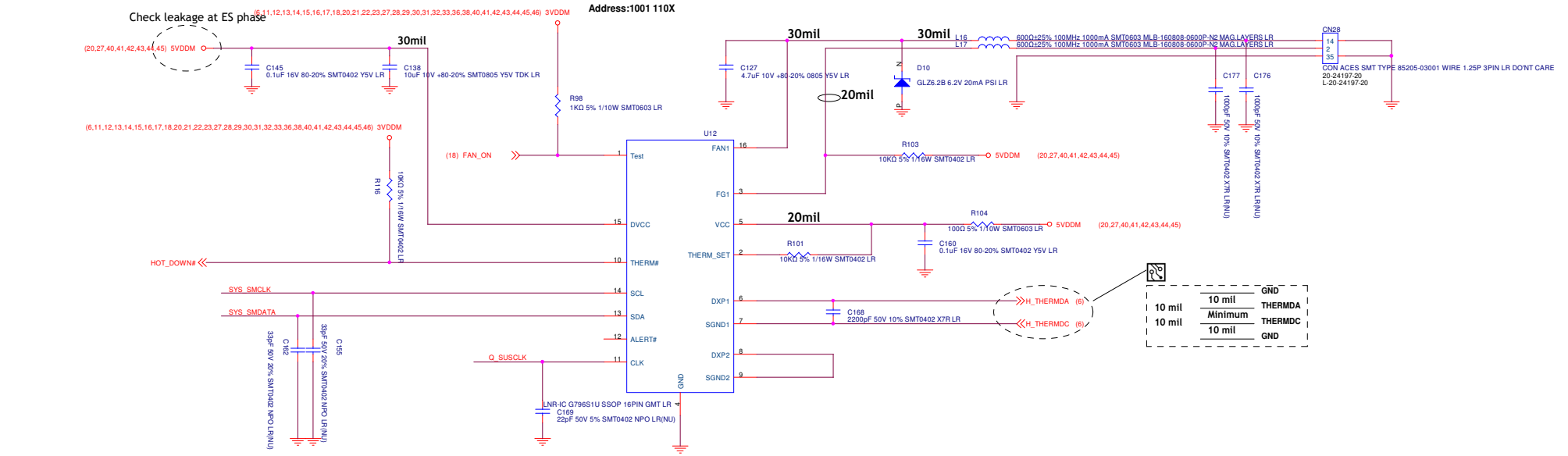
THERMAL SENSOR



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Title	PTB51	
Size C	Document Number CPU Thermal/Fan CNN	Rev 0.6
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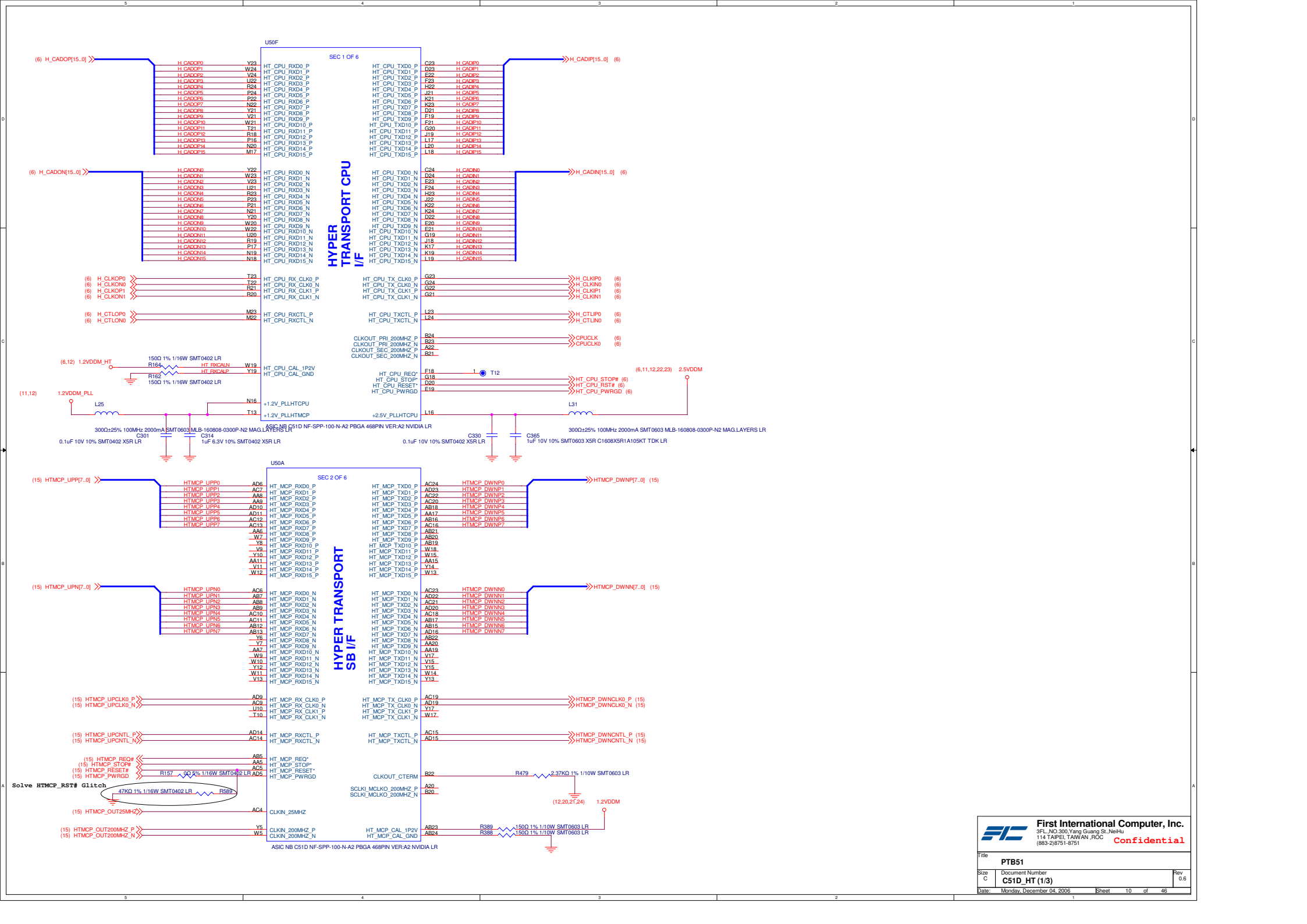
U50F
SEC 1 OF 6
HYPER TRANSPORT CPU I/F
ASIC NB C51D NF-SPP-100-N-A2 PBGA 468PIN VER:A2 NVIDIA LR
U50A
SEC 2 OF 6
HYPER TRANSPORT SB I/F
ASIC NB C51D NF-SPP-100-N-A2 PBGA 468PIN VER:A2 NVIDIA LR
Solve HTMCP_RST# Glitch
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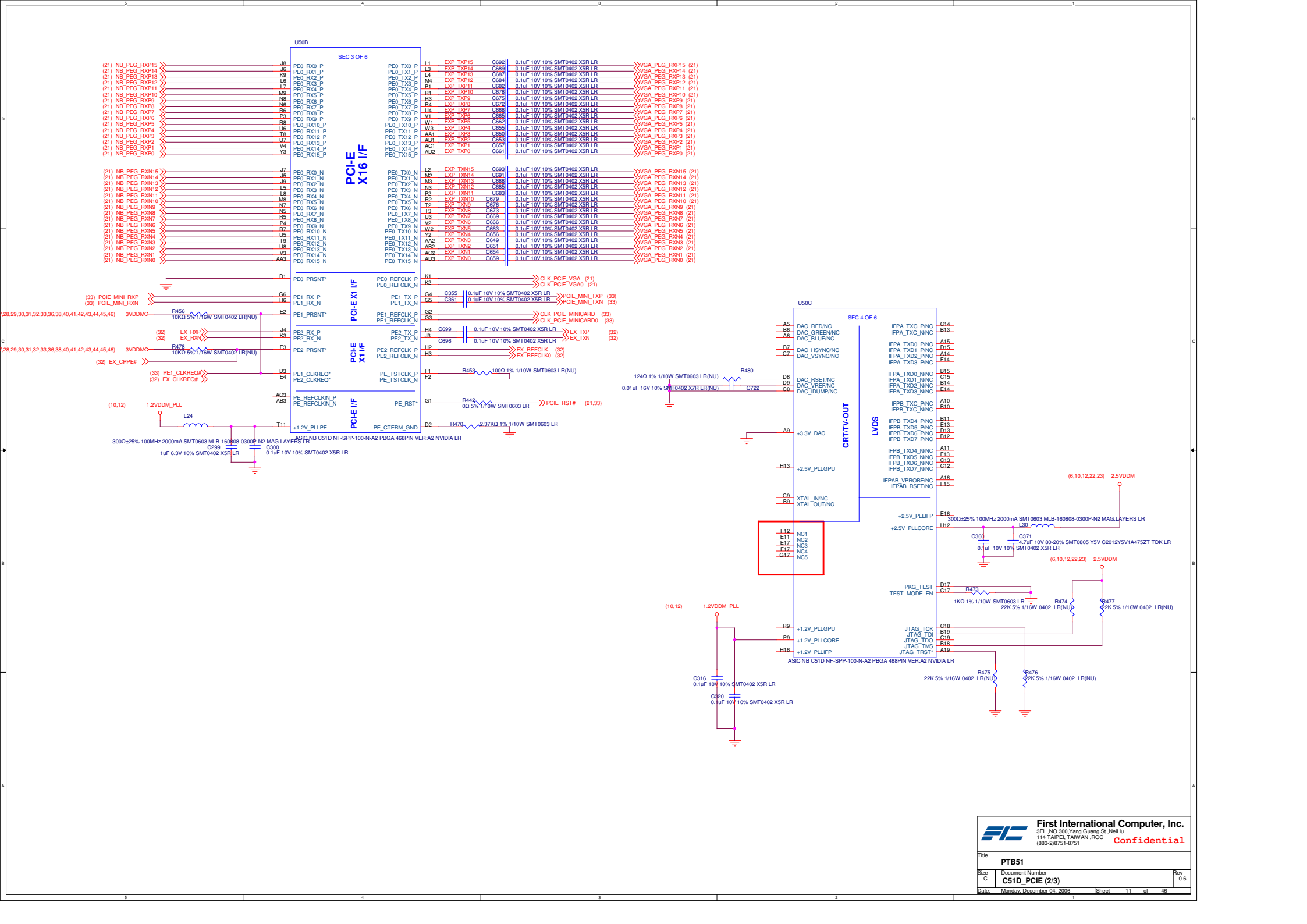
U50B
SEC 3 OF 6
PCI-E X16 I/F
PCI-E X1 I/F
PCI-E X1 I/F
PCI-E I/F
ASIC NB C51D NF-SPP-100-N-A2 PBGA 468PIN VER:A2 NVIDIA LR
U50C
SEC 4 OF 6
CRT/TV-OUT
LVDS
ASIC NB C51D NF-SPP-100-N-A2 PBGA 468PIN VER:A2 NVIDIA LR
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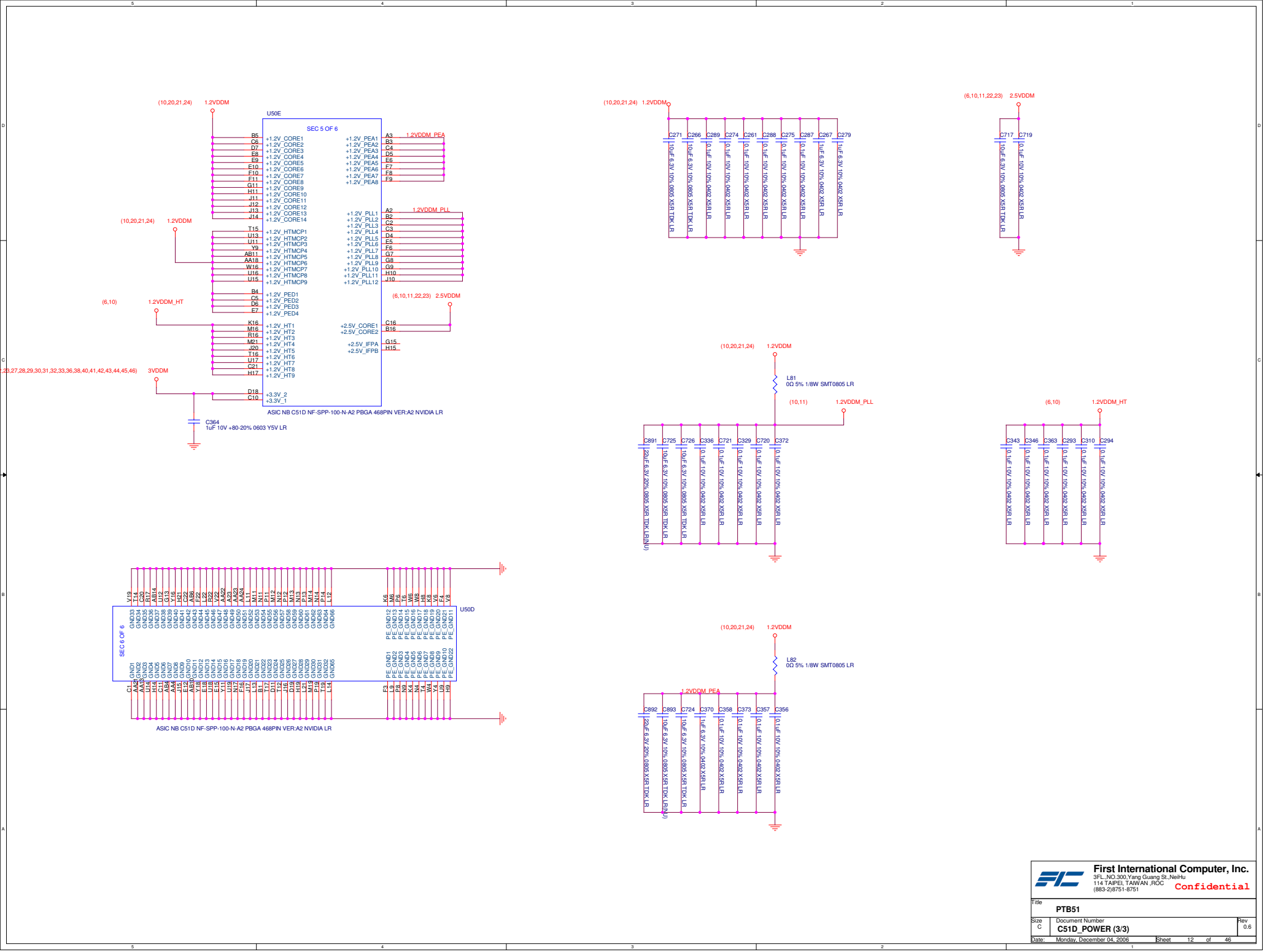

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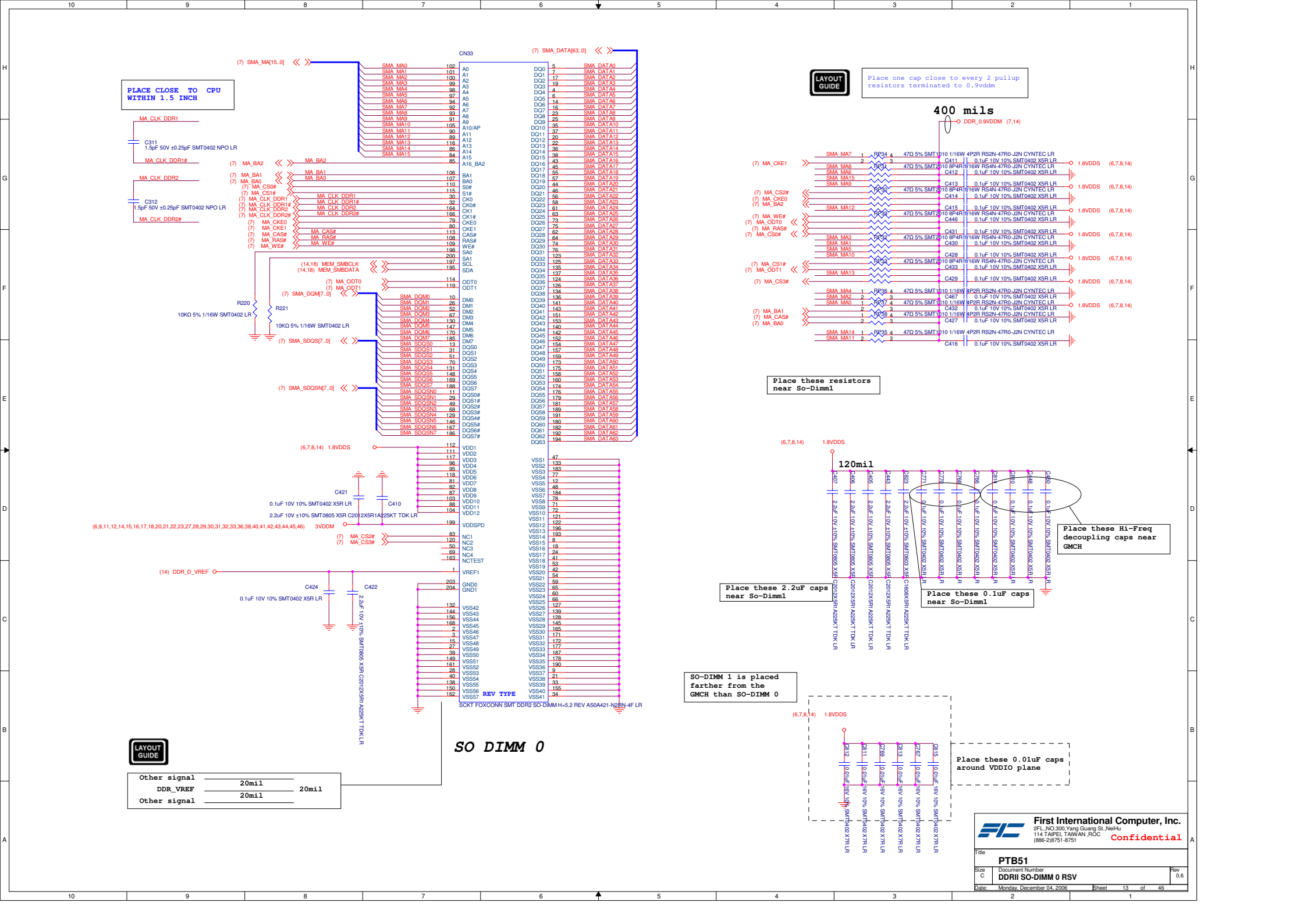
PLACE CLOSE TO CPU WITHIN 1.5 INCH
CN33
(7) SMA_MA[15..0]
(7) SMA_DATA[63..0]
MA_CLK_DDR1
C311
1.5pF 50V ±0.25pF SMT0402 NPO LR
MA_CLK_DDR1#
MA_CLK_DDR2
C312
1.5pF 50V ±0.25pF SMT0402 NPO LR
MA_CLK_DDR2#
(7) MA_BA2
(7) MA_BA1
(7) MA_BA0
(7) MA_CS0#
(7) MA_CS1#
(7) MA_CLK_DDR1
(7) MA_CLK_DDR1#
(7) MA_CLK_DDR2
(7) MA_CLK_DDR2#
(7) MA_CKE0
(7) MA_CKE1
(7) MA_CAS#
(7) MA_RAS#
(7) MA_WE#
(14,18) MEM_SMBCLK
(14,18) MEM_SMBDATA
(7) MA_ODT0
(7) MA_ODT1
(7) SMA_DQM[7..0]
(7) SMA_SDQS[7..0]
(7) SMA_SDQSN[7..0]
R220
10KΩ 5% 1/16W SMT0402 LR
R221
10KΩ 5% 1/16W SMT0402 LR
(6,7,8,14) 1.8VDDS
C421
0.1uF 10V 10% SMT0402 X5R LR
C410
2.2uF 10V ±10% SMT0805 X5R C2012X5R1A225KT TDK LR
(6,9,11,12,14,15,16,17,18,20,21,22,23,27,28,29,30,31,32,33,36,38,40,41,42,43,44,45,46)
3VDDM
(7) MA_CS2#
(7) MA_CS3#
(14) DDR_D_VREF
C424
0.1uF 10V 10% SMT0402 X5R LR
C422
2.2uF 10V ±10% SMT0805 X5R C2012X5R1A225KT TDK LR
REV TYPE
SCKT FOXCONN SMT DDR2 SO-DIMM H=5.2 REV AS0A421-N2RN-4F LR
SO DIMM 0
LAYOUT GUIDE
Other signal
DDR_VREF
Other signal
20mil
20mil
LAYOUT GUIDE
Place one cap close to every 2 pullup resistors terminated to 0.9vddm
400 mils
DDR_0.9VDDM (7,14)
(7) MA_CKE1
(7) MA_CKE0
(7) MA_BA2
(7) MA_WE#
(7) MA_ODT0
(7) MA_RAS#
(7) MA_CS0#
(7) MA_CS2#
(7) MA_CS1#
(7) MA_ODT1
(7) MA_CS3#
(7) MA_BA1
(7) MA_CAS#
(7) MA_BA0
1.8VDDS (6,7,8,14)
Place these resistors near So-Dimm1
(6,7,8,14) 1.8VDDS
120mil
Place these 2.2uF caps near So-Dimm1
Place these 0.1uF caps near So-Dimm1
Place these Hi-Freq decoupling caps near GMCH
SO-DIMM 1 is placed farther from the GMCH than SO-DIMM 0
(6,7,8,14) 1.8VDDS
Place these 0.01uF caps around VDDIO plane
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DDRII SO-DIMM 0 RSV
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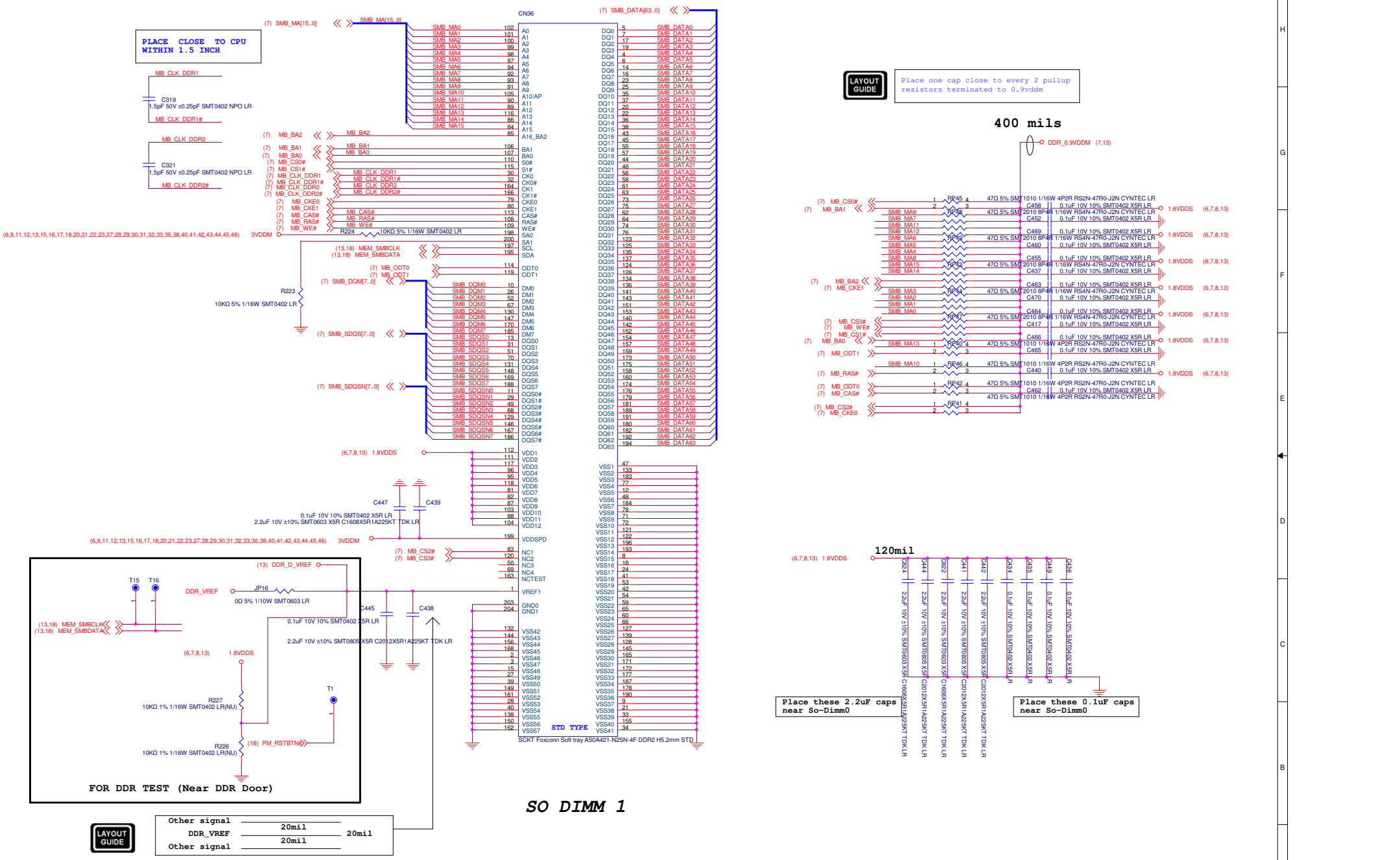
PLACE CLOSE TO CPU WITHIN 1.5 INCH
CN36
SMB_MA[15..0]
SMB_DATA[63..0]
MB_CLK_DDR1
C319
1.5pF 50V ±0.25pF SMT0402 NPO LR
MB_CLK_DDR1#
MB_CLK_DDR2
C321
1.5pF 50V ±0.25pF SMT0402 NPO LR
MB_CLK_DDR2#
R224
10KΩ 5% 1/16W SMT0402 LR
3VDDM
R223
10KΩ 5% 1/16W SMT0402 LR
SMB_DQM[7..0]
SMB_SDQS[7..0]
SMB_SDQSN[7..0]
1.8VDDS
C447
C439
0.1uF 10V 10% SMT0402 X5R LR
2.2uF 10V ±10% SMT0603 X5R C1608X5R1A225KT TDK LR
VDDSPD
MB_CS2#
MB_CS3#
STD TYPE
SCKT Foxconn Soft tray AS0A421-N2SN-4F DDR2 H5.2mm STD
DDR_D_VREF
JP16
0Ω 5% 1/10W SMT0603 LR
C445
C438
0.1uF 10V 10% SMT0402 X5R LR
2.2uF 10V ±10% SMT0805X5R C2012X5R1A225KT TDK LR
MEM_SMBCLK
MEM_SMBDATA
R227
10KΩ 1% 1/16W SMT0402 LR(NU)
R226
10KΩ 1% 1/16W SMT0402 LR(NU)
T1
PM_RSTBTN#
FOR DDR TEST (Near DDR Door)
LAYOUT GUIDE
Other signal 20mil
DDR_VREF 20mil
Other signal
SO DIMM 1
LAYOUT GUIDE
Place one cap close to every 2 pullup resistors terminated to 0.9vddm
400 mils
DDR_0.9VDDM
RP45
RP43
RP44
RP40
RP39
RP42
RP41
RP46
47Ω 5% SMT1010 1/16W 4P2R RS2N-47R0-J2N CYNTEC LR
47Ω 5% SMT2010 8P4R 1/16W RS4N-47R0-J2N CYNTEC LR
0.1uF 10V 10% SMT0402 X5R LR
1.8VDDS
120mil
2.2uF 10V ±10% SMT0603 X5R C1608X5R1A225KT TDK LR
0.1uF 10V 10% SMT0402 X5R LR
Place these 2.2uF caps near So-Dimm0
Place these 0.1uF caps near So-Dimm0
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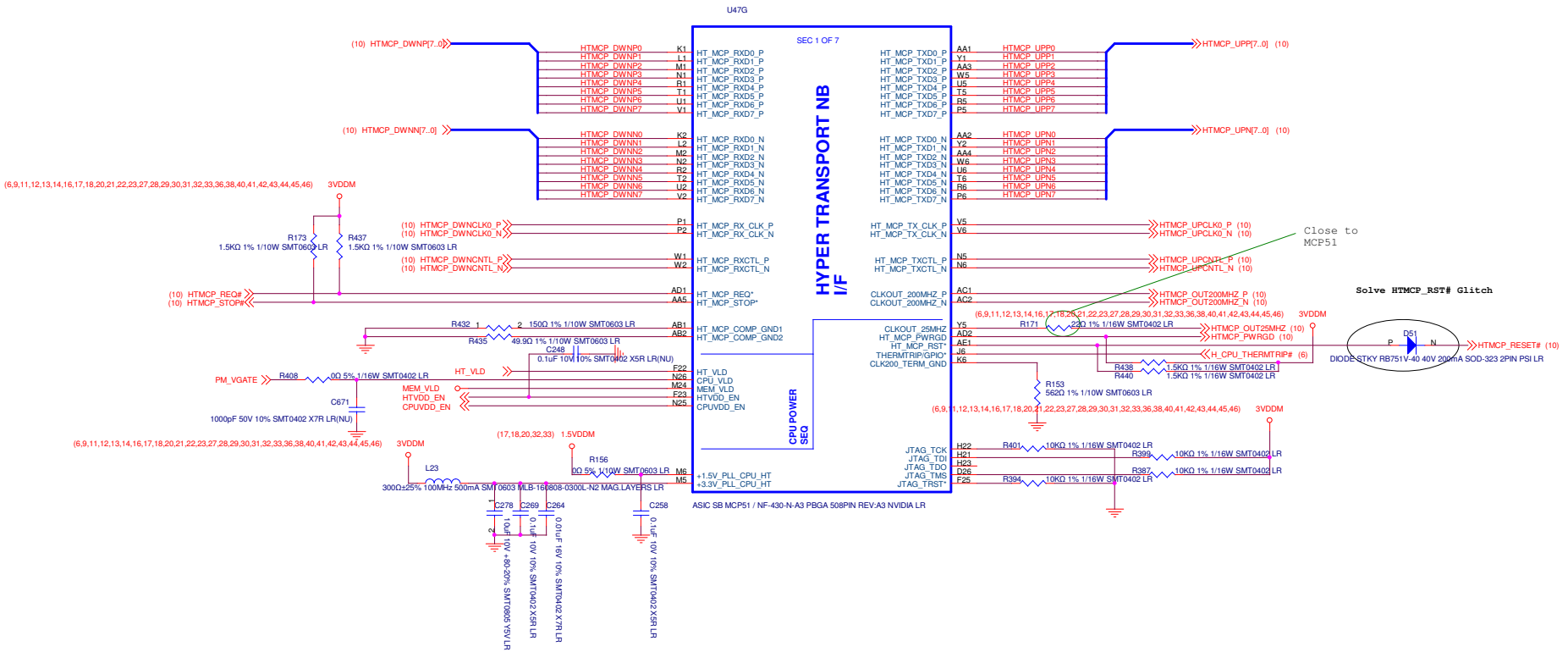
Confidential
Title
PTB51
Size C
Document Number
DDRII SO-DIMM 1 STD
Rev 0.6
Date: Monday, December 04, 2006
Sheet 14 of 46



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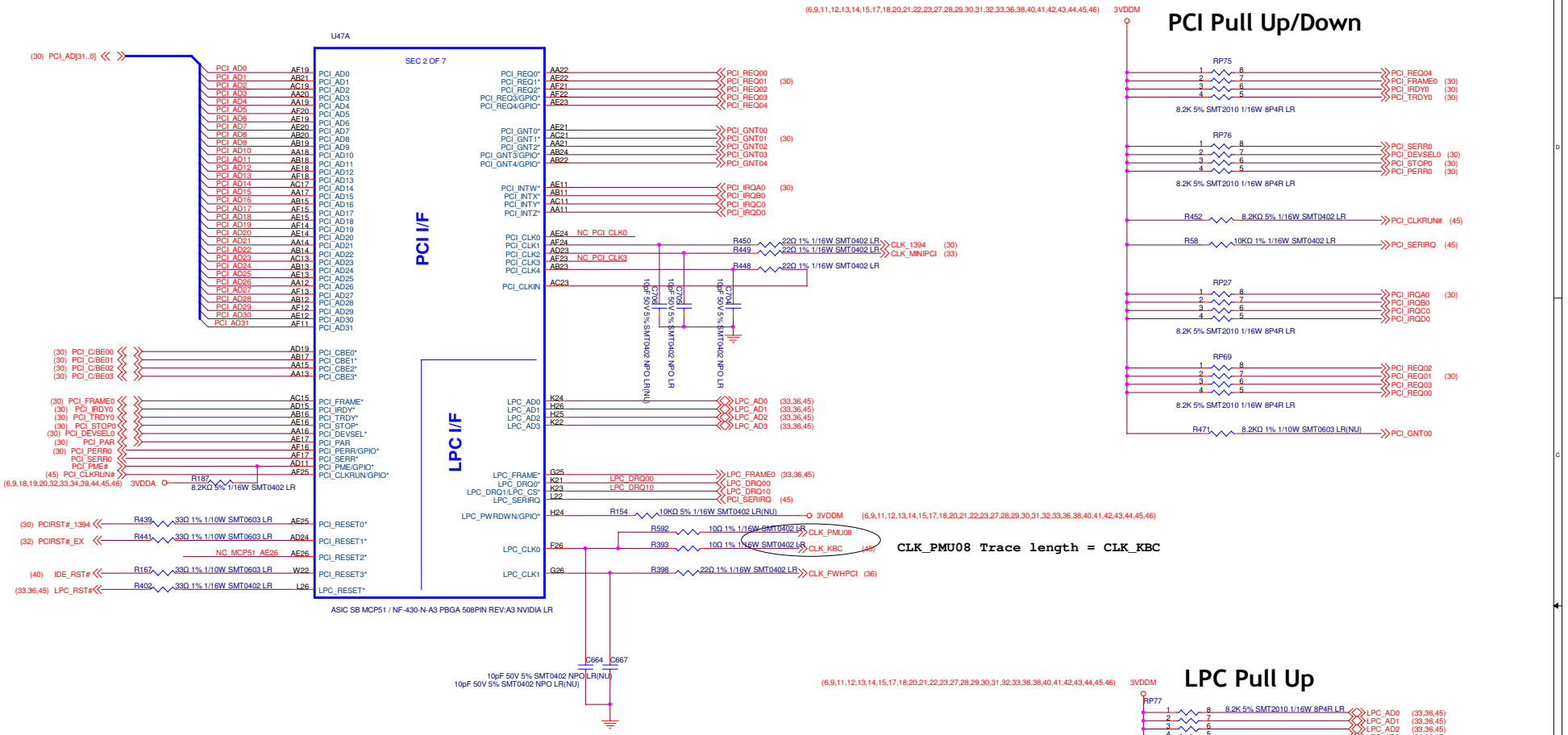
Title: PTB51

Size: C | Document Number: MCP51 HT(1/6) | Rev: 0.6

Date: Monday, December 04, 2006 | Sheet 15 of 46



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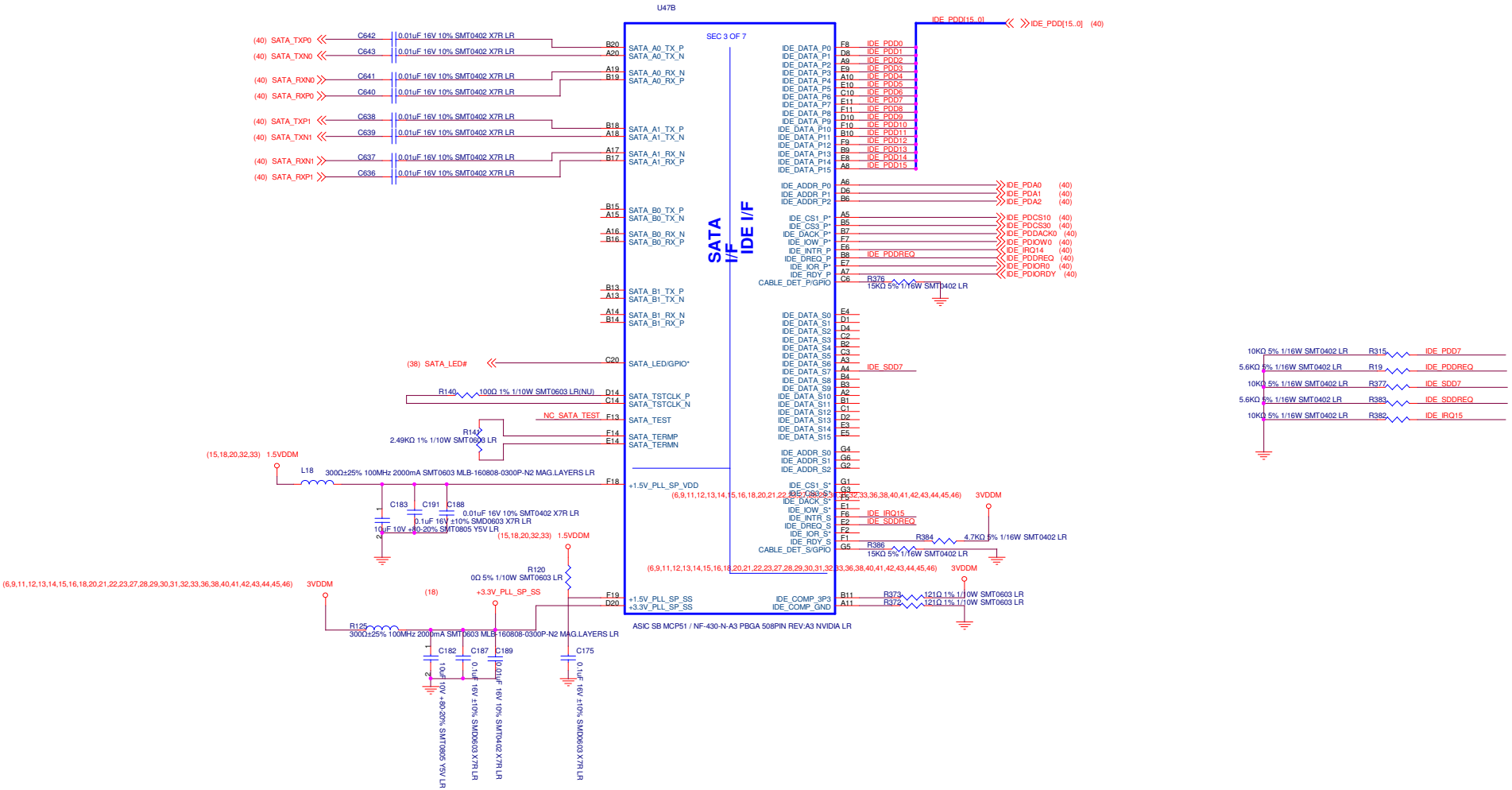
Title	PTB51	
Size C	Document Number MCP51 PCI/LPC (2/6)	Rev 0.6
Date: Monday, December 04, 2006	Sheet 16 of 46	



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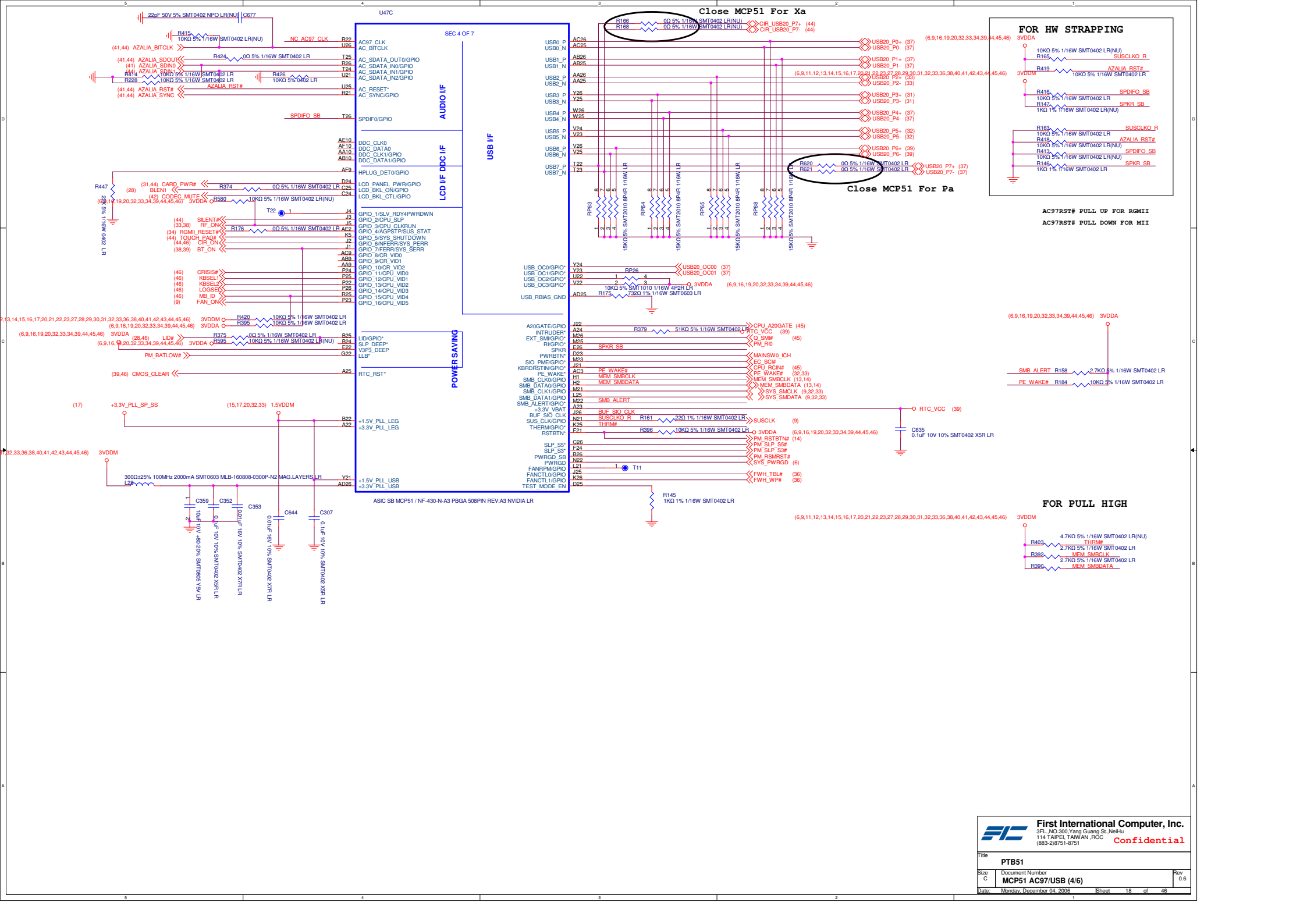
Title: PTB51

Size: C | Document Number: MCP51 SATA/PATA (3/6) | Rev: 0.6

Date: Monday, December 04, 2006 | Sheet 17 of 46


Close MCP51 For Xa
Close MCP51 For Pa
FOR HW STRAPPING
FOR PULL HIGH
AC97RST# PULL UP FOR RGMII
AC97RST# PULL DOWN FOR MII
U47C
SEC 4 OF 7
AUDIO I/F
DDC I/F
LCD I/F
USB I/F
POWER SAVING
ASIC SB MCP51 / NF-430-N-A3 PBGA 508PIN REV:A3 NVIDIA LR
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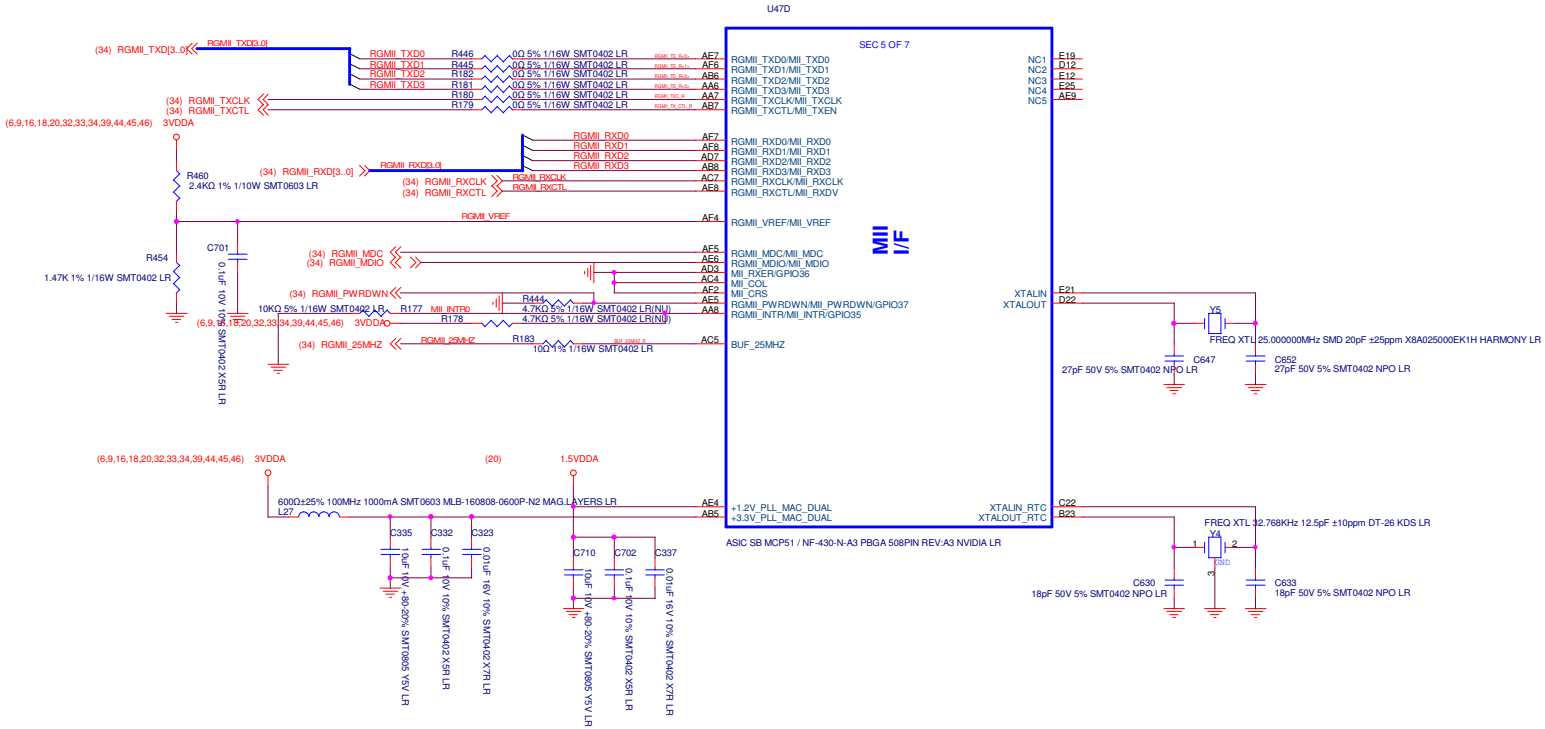
PTB51
MCP51 AC97/USB (4/6)
Monday, December 04, 2006



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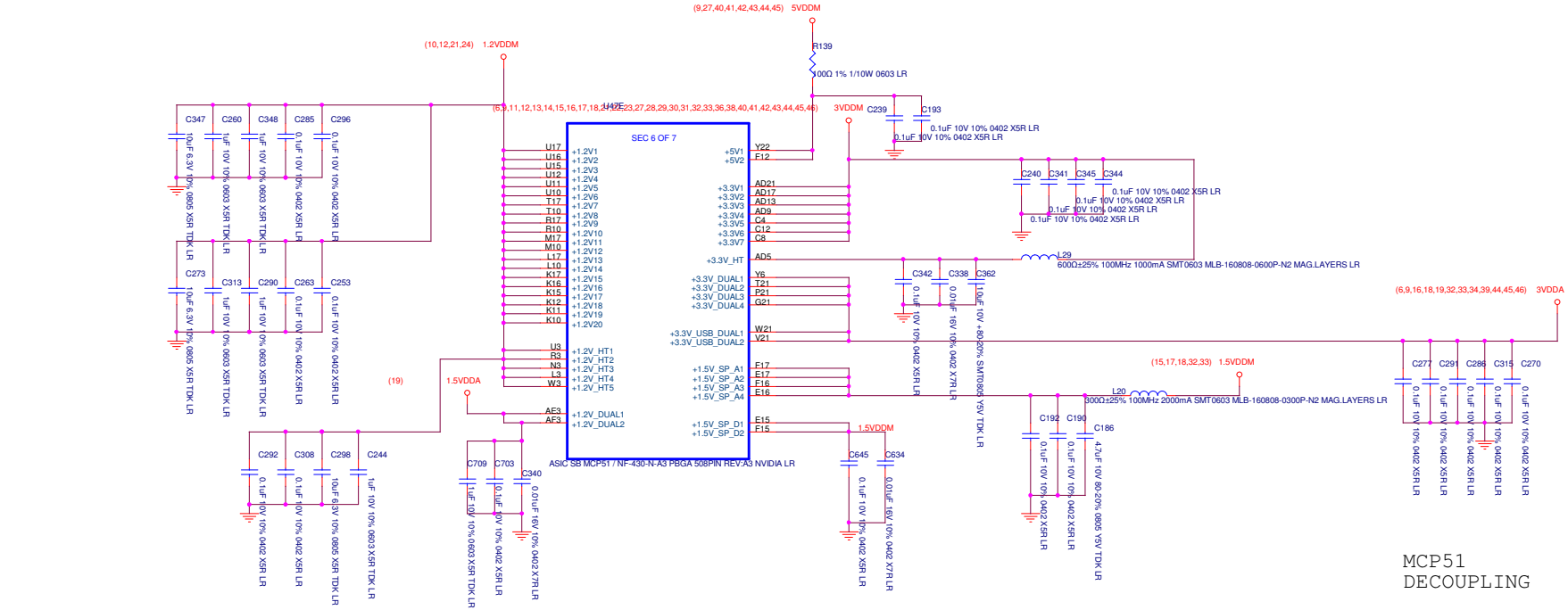
Title	PTB51	
Size C	Document Number MCP51 RGMII (5/6)	Rev 0.6
Date: Monday, December 04, 2006	Sheet 19 of 46	



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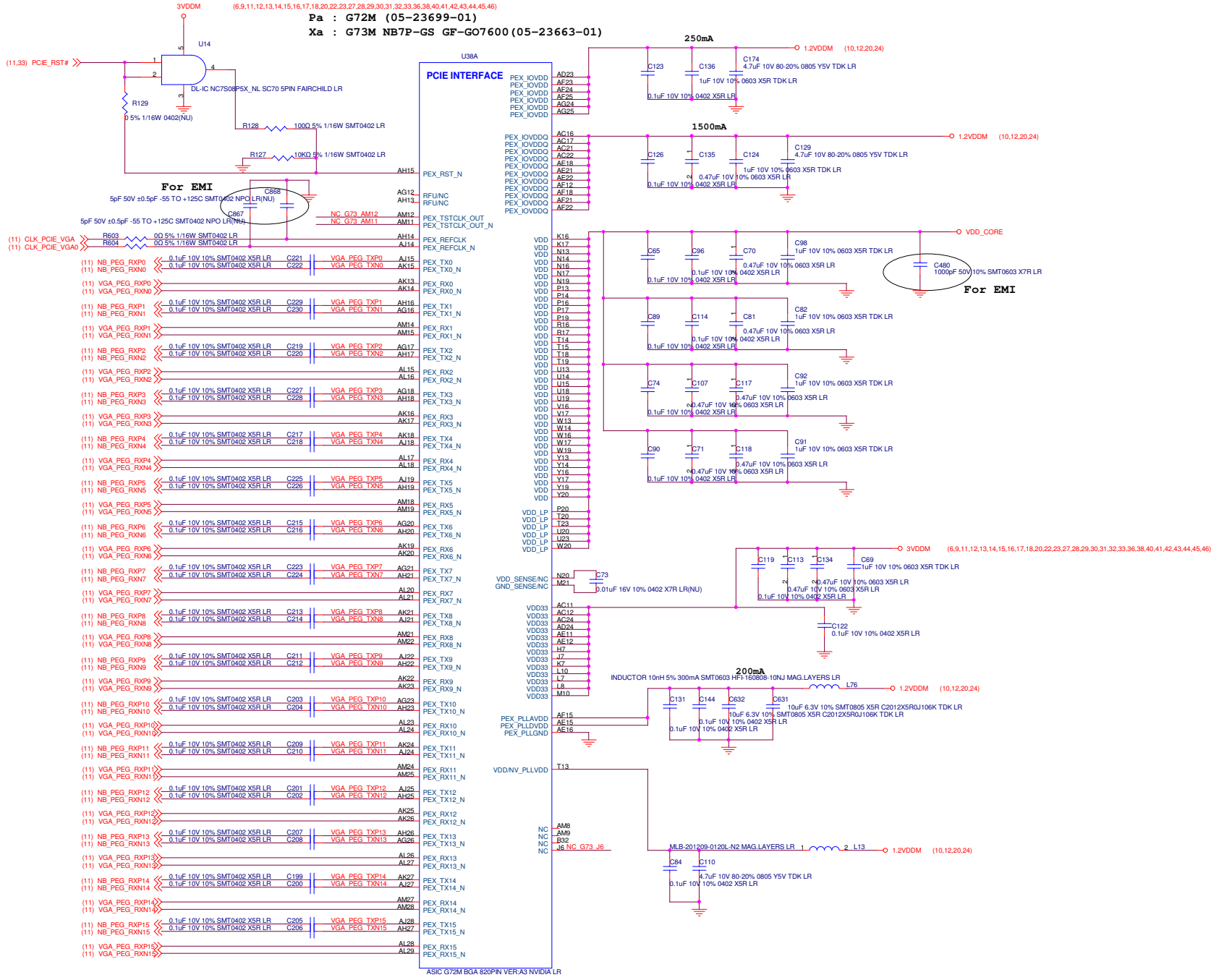
Title	PTB51	
Size C	Document Number MCP51 POWER (6/6)	Rev 0.6
Date: Monday, December 04, 2006	Sheet 20 of 46	

Pa : G72M (05-23699-01)

Xa : G73M NB7P-GS GF-GO7600(05-23663-01)



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Title	PTB51	
Size C	Document Number G7X PCI-EXPRESS	Rev 0.6
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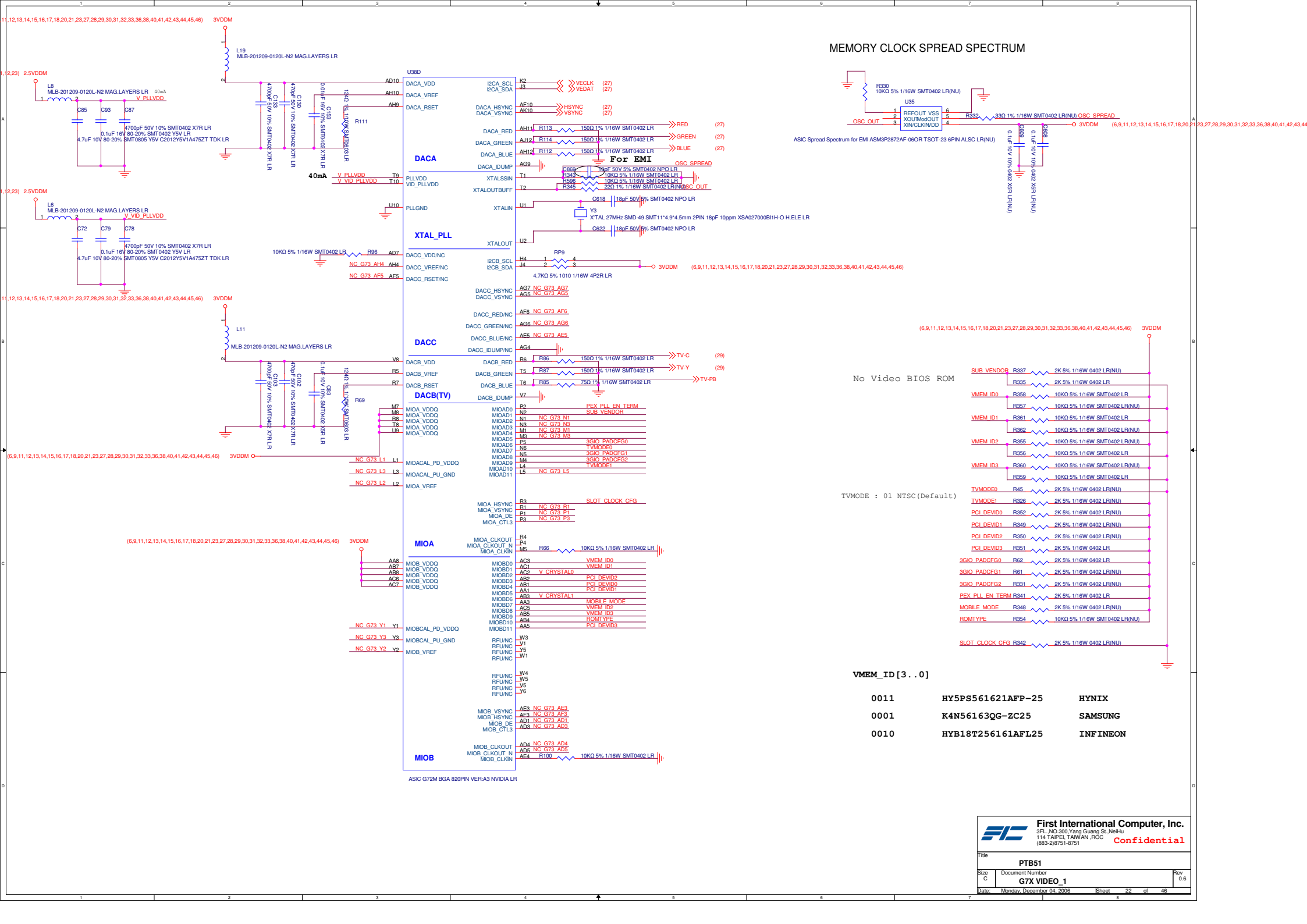
MEMORY CLOCK SPREAD SPECTRUM
U38D
DACA
DACC
DACB(TV)
MIOA
MIOB
XTAL_PLL
For EMI
40mA
ASIC G72M BGA 820PIN VER:A3 NVIDIA LR
ASIC Spread Spectrum for EMI ASM3P2872AF-06OR TSOT-23 6PIN ALSC LR(NU)
No Video BIOS ROM
TVMODE : 01 NTSC(Default)
VMEM_ID[3..0]
0011 HY5PS561621AFP-25 HYNIX
0001 K4N56163QG-ZC25 SAMSUNG
0010 HYB18T256161AFL25 INFINEON
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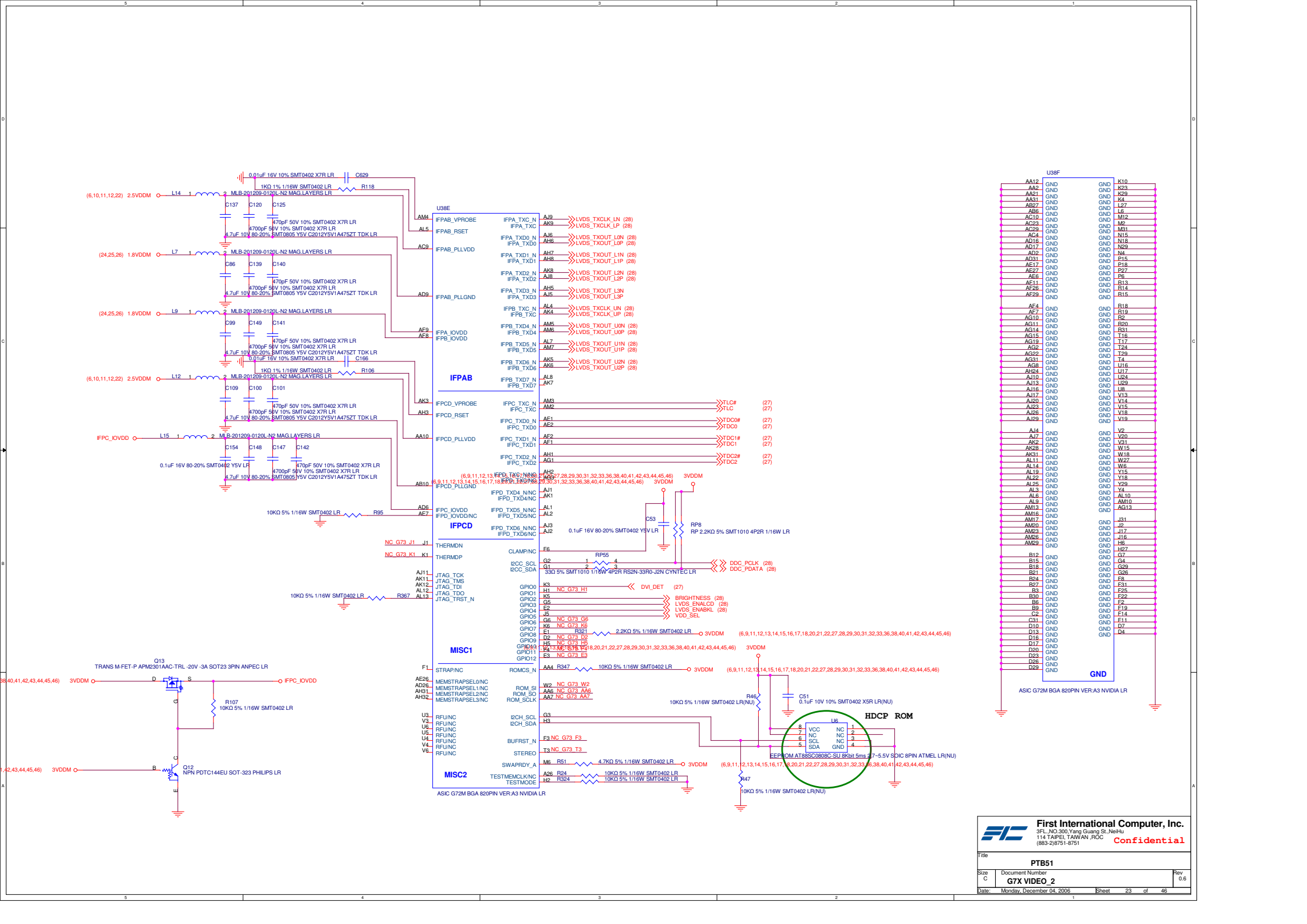
PTB51
G7X VIDEO_1
Monday, December 04, 2006
Sheet 22 of 46



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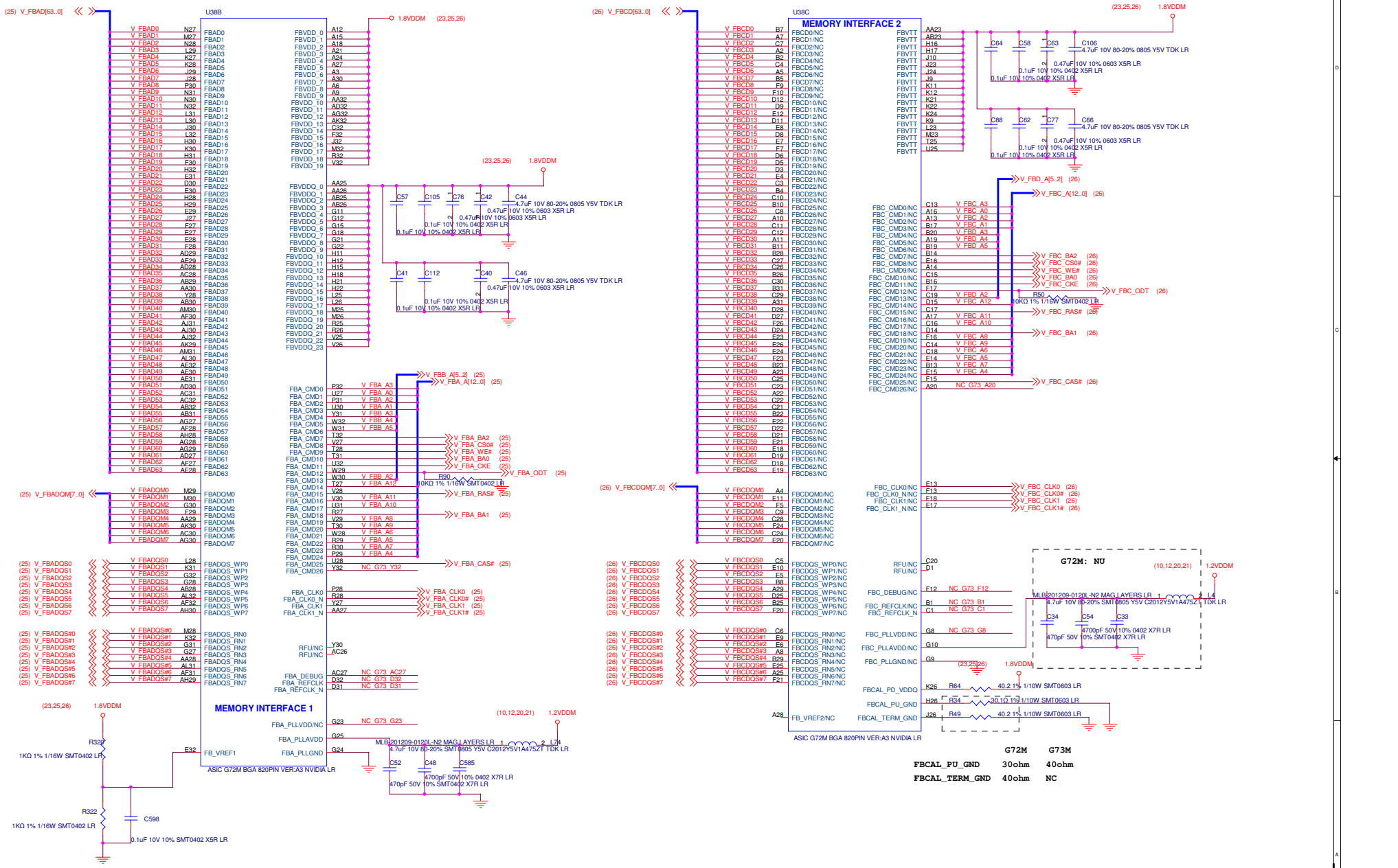
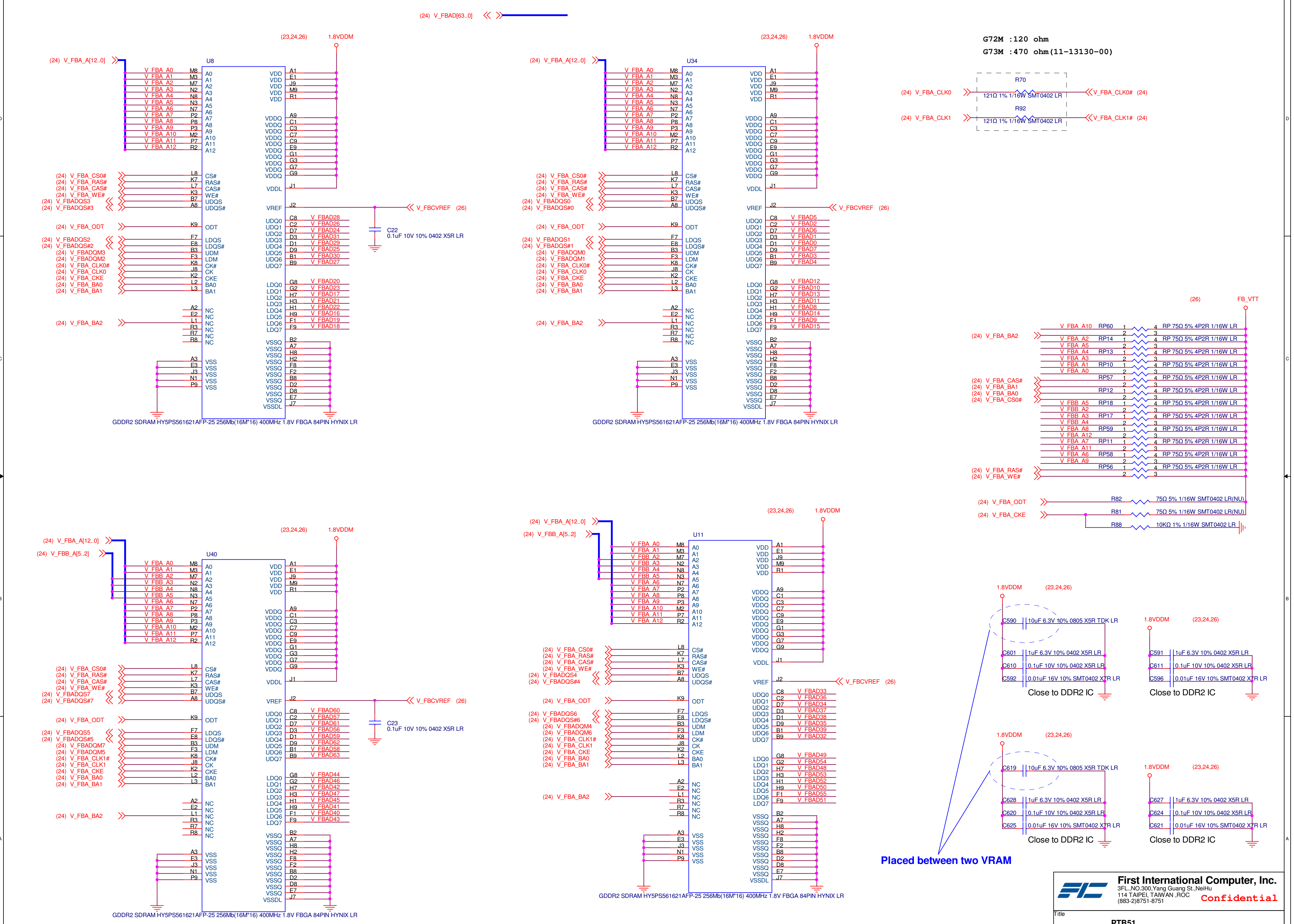
Title	PTB51	
Size C	Document Number G7X VIDEO_2	Rev 0.6
Date: Monday, December 04, 2006	Sheet 23 of 46	



Company	First International Computer, Inc.
Address	3FL.,NO.300,Yang Guang St.,NeiHu 114 TAIPEI, TAIWAN ,ROC
Phone	(883-2)8751-8751
Confidential	Confidential
Title	PTB51
Size	C
Document Number	G7X MEM CHANEL
Rev	0.6
Date	Monday, December 04, 2006
Sheet	24 of 46



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Title		
PTB51		
Size C	Document Number: VGA DDR2_A CHANNEL	Rev 0.6
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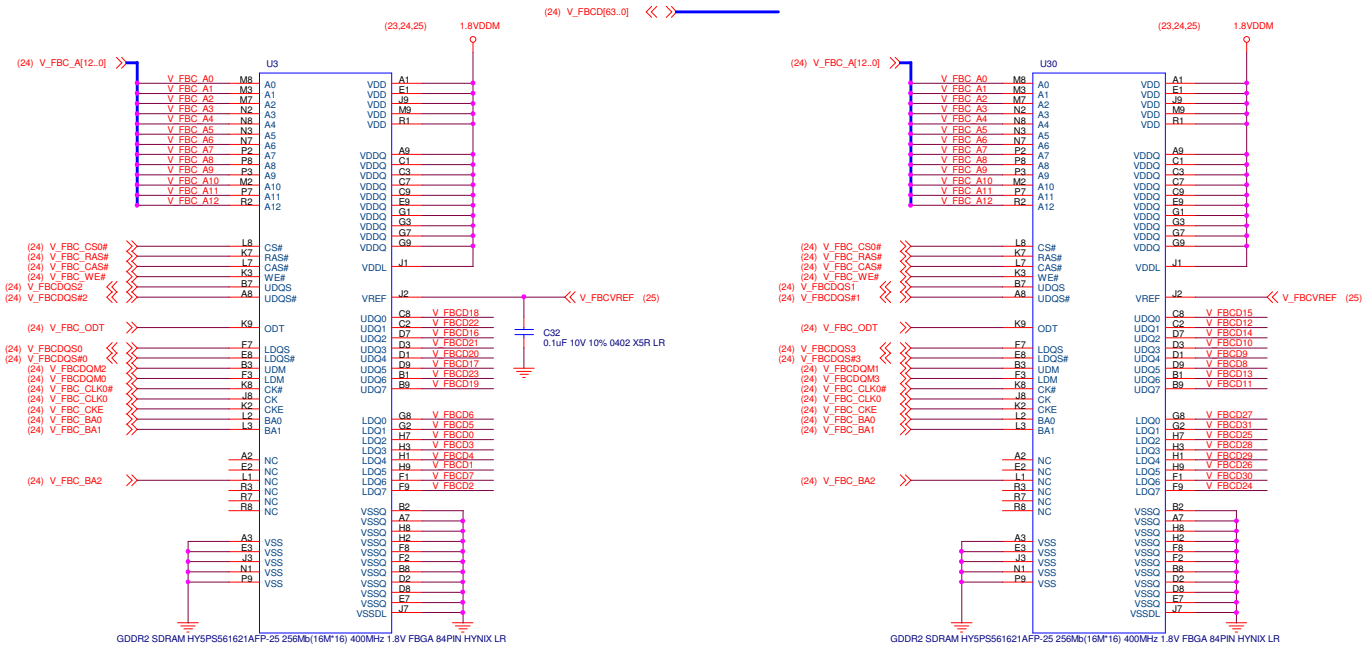
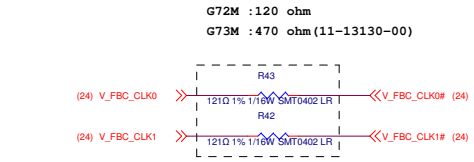
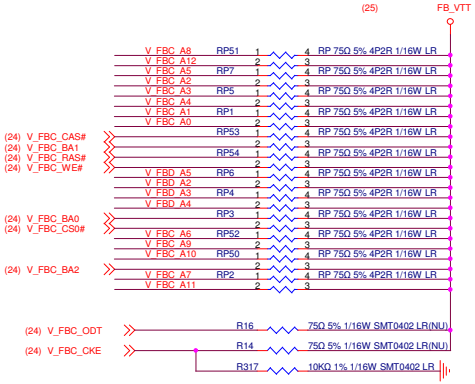
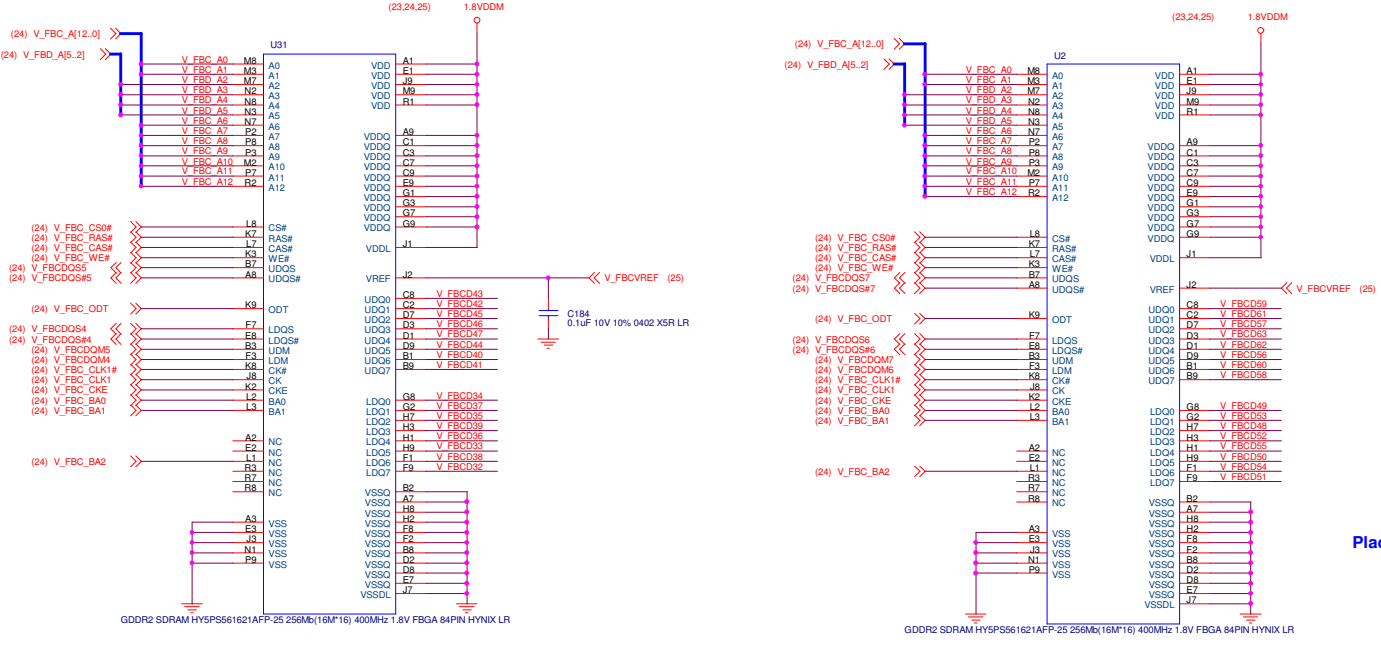
Pa: No Stuff
Xa: Stuff

G72M :120 ohm
G73M :470 ohm(11-13130-00)









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Title: PTB51
Size: C
Document Number: VGA DDR2_C CHANNEL
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CRT CIRCUIT

USE 47 ohms@100MHZ
BLM18BB470SN1(MURATA)

LAYOUT GUIDE

20 mil	Other Signal
20 mil	MXM_RED
20 mil	MXM_GREEN
20 mil	MXM_BLUE
	Other Signal

(22) RED
(22) GREEN
(22) BLUE

WIDTH=5 MILS Z0=50 ohms
WIDTH=5 MILS Z0=50 ohms
WIDTH=5 MILS Z0=50 ohms

(10mil)
(10mil)

WIDTH= 8 MILS Z0=75 ohms
WIDTH= 8 MILS Z0=75 ohms
WIDTH= 8 MILS Z0=75 ohms

CRT5VS
C542 0.1uF 16V 80-20% 0402 Y5V LF(NU)
D26A D26B D26C
IMN10T108 SC-74 ROHM LR
D25A D25B D25C
IMN10T108 SC-74 ROHM LR

(9,20,40,41,42,43,44,45) 5VDDM
DIODE STKY MSCD104 40V 1A SMT0805 2PIN LR
D2
20mil
L2 600Ω±25% 100MHz 2000mA SMT0805 MLB-201209-0600P-N2 MAG.LAYERS LR
CRT5VS
20mil
C3 0.1uF 16V 80-20% 0402 Y5V LF

L62 68nH±5% SMT0805 CLH2012T-68NJ-N CHILISIN LR
L63 68nH±5% SMT0805 CLH2012T-68NJ-N CHILISIN LR
L64 68nH±5% SMT0805 CLH2012T-68NJ-N CHILISIN LR

CNN_RED
CNN_GREEN
CNN_BLUE

R282 150Ω 1% 1/16W 0402 LF
R283 150Ω 1% 1/16W 0402 LF
R284 150Ω 1% 1/16W 0402 LF

C538 15pF 50V 5% SMT0402 NPO LR
C539 15pF 50V 5% SMT0402 NPO LR
C540 15pF 50V 5% SMT0402 NPO LR

10Ω 5% 1/16W SMT0402 LR R271
10Ω 5% 1/16W SMT0402 LR R270

CNN_HSYNC
CNN_VSYNC

C530 22pF 50V 5% SMT0402 NPO LR(NU)
C529 22pF 50V 5% SMT0402 NPO LR(NU)
C528 22pF 50V 5% SMT0402 NPO LR(NU)

C527 27pF 50V 5% 0402 NPO LF(NU)
C531 27pF 50V 5% 0402 NPO LF(NU)

WIDTH=4 MILS Z0=55 ohms
WIDTH=4 MILS Z0=55 ohms

(22) HSYNC
U27
DL-IC 74AHCT1G126GW SC-88A(SOT353) 5PIN PHILIPS LR

CRT5VS
C534
0.1uF 16V 80-20% 0402 Y5V LF

(22) VSYNC
U26
DL-IC 74AHCT1G126GW SC-88A(SOT353) 5PIN PHILIPS LR

C870 5pF 50V ±0.5pF SMT0402 NPO LR(NU)
C871 5pF 50V ±0.5pF SMT0402 NPO LR(NU)

R615 300Ω 1% 1/10W SMT0603 LR
C894 0.068uF 16V 10% SMT0402 X5R LR

(23) TDC2#
(23) TDC2
R272 INDUCTOR 18nH 10% 200mA SMT0402 HFI-100505-18NK MAG.LAYERS LR
R273 INDUCTOR 18nH 10% 200mA SMT0402 HFI-100505-18NK MAG.LAYERS LR

VECLK_CONN
VEDAT_CONN

For EMI
C6 33pF 50V 5% SMT0402 NPO LR
C5 33pF 50V 5% SMT0402 NPO LR

(23) TDC1#
(23) TDC1
R274 INDUCTOR 15nH 10% 250mA SMT0402 HFI-100505-15NK MAG.LAYERS LR
R275 INDUCTOR 15nH 10% 250mA SMT0402 HFI-100505-15NK MAG.LAYERS LR
R616 300Ω 1% 1/10W SMT0603 LR
C893 0.068uF 16V 10% SMT0402 X5R LR

C872 C873
5pF 50V ±0.5pF SMT0402 NPO LR(NU) CRT5VS

(23) TDC0#
(23) TDC0
R276 INDUCTOR 18nH 10% 200mA SMT0402 HFI-100505-18NK MAG.LAYERS LR
R277 INDUCTOR 18nH 10% 200mA SMT0402 HFI-100505-18NK MAG.LAYERS LR
R617 300Ω 1% 1/10W SMT0603 LR
C895 0.068uF 16V 10% SMT0402 X5R LR

C874 C875
5pF 50V ±0.5pF SMT0402 NPO LR(NU)

(23) TLC
(23) TLC#
R278 INDUCTOR 18nH 10% 200mA SMT0402 HFI-100505-18NK MAG.LAYERS LR
R279 INDUCTOR 18nH 10% 200mA SMT0402 HFI-100505-18NK MAG.LAYERS LR
R618 300Ω 1% 1/10W SMT0603 LR
C897 0.068uF 16V 10% SMT0402 X5R LR

C876 C877
5pF 50V ±0.5pF SMT0402 NPO LR(NU)

DVI_DET_A
CNN_VSYNC
CNN_BLU
CNN_HSYNC
CNN_RED
CNN_GREEN

06/25 MODIFY

CN21
TMDS_D2-
TMDS_D2+
TMDS_D1-
TMDS_D1+
TMDS_D0-
TMDS_D0+
TMDS_CLK-
TMDS_CLK+
CASE
CASE#M3
TMDS Data2-
TMDS Data2+
TMDS Data2/4 Shield
TMDS Data4-
TMDS Data4+
DDC Clock
DDC Data
Analog VSYNC
TMDS Data1-
TMDS Data1+
TMDS Data1/3 Shield
TMDS Data3-
TMDS Data3+
+5V Power
GND (for +5V)
Hot Plug Detect
TMDS Data0-
TMDS Data0+
TMDS Data0/5 Shield
TMDS Data5-
TMDS Data5+
TMDS Clock Shield
TMDS Clock+
TMDS Clock-
Analog Red
Analog Green
Analog Blue
Analog HYNC
Analog GND
Analog GND#C6
CASE#M4
CASE#M2

R1 0Ω 5% 1/10W SMT0603 LR
CON SUYIN DIP CN 29P 070939FR029SX37PR SUYIN 29PIN

(2,3,33,36,38,40,41,42,43,44,45,46) 3VDDM
R280 2.2KΩ 5% 1/16W SMT0402 LR
Q2
R5 4.7KΩ 5% 1/16W SMT0402 LR
CRT5VS
(22) VECLK
VECLK_CONN
TRANS M-FET-N 2N7002 60V 115mA SOT-23 3PIN PSI LR

(2,3,32,33,36,38,40,41,42,43,44,45,46) 3VDDM
R281 2.2KΩ 5% 1/16W SMT0402 LR
Q1
R4 4.7KΩ 5% 1/16W SMT0402 LR
CRT5VS
(22) VEDAT
VEDAT_CONN
TRANS M-FET-N 2N7002 60V 115mA SOT-23 3PIN PSI LR

(6,9,11,12,13,14,15,16,17,18,20,21,22,23,28,29,30,31,32,33,36,38,40,41,42,43,44,45,46) 3VDDM
10KΩ 5% 1/16W 0402 LF R3
L1 MLB-201209-0120L-N2 MAG.LAYERS LR
(23) DVI_DET
DVI_DET_A
C4 220pF 50V 10% SMT0402 X7R LR

For EMI
C878 100pF 50V 5% SMT0402 NPO LR
R2 100KΩ 5% 1/16W SMT0402 LR
D1
DIODE SWITCHING BAV99 SOT-23 3PIN PANJIT LR

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Title: PTB51
Size: C
Document Number: DVI Port
Rev: 0.6
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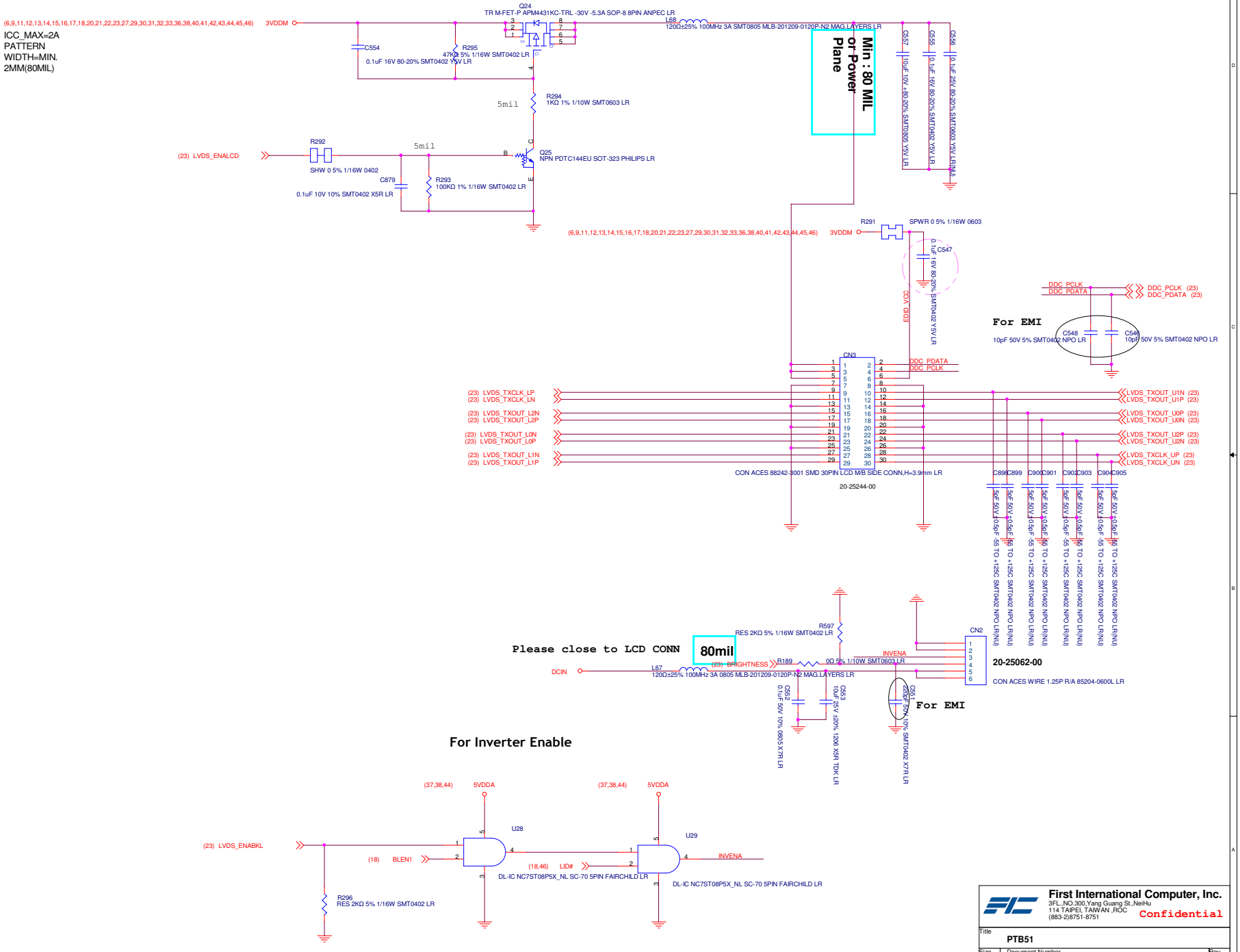
ICC_MAX=2A
PATTERN
WIDTH=MIN.
2MM(80MIL)
Min : 80 MIL
or Power
Plane
For EMI
Please close to LCD CONN
80mil
For Inverter Enable
CON ACES 88242-3001 SMD 30PIN LCD M/B SIDE CONN,H=3.9mm LR
20-25244-00
20-25062-00
CON ACES WIRE 1.25P R/A 85204-0600L LR
DL-IC NC7ST08P5X_NL SC-70 5PIN FAIRCHILD LR
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PTB51
LCD CNN
Monday, December 04, 2006
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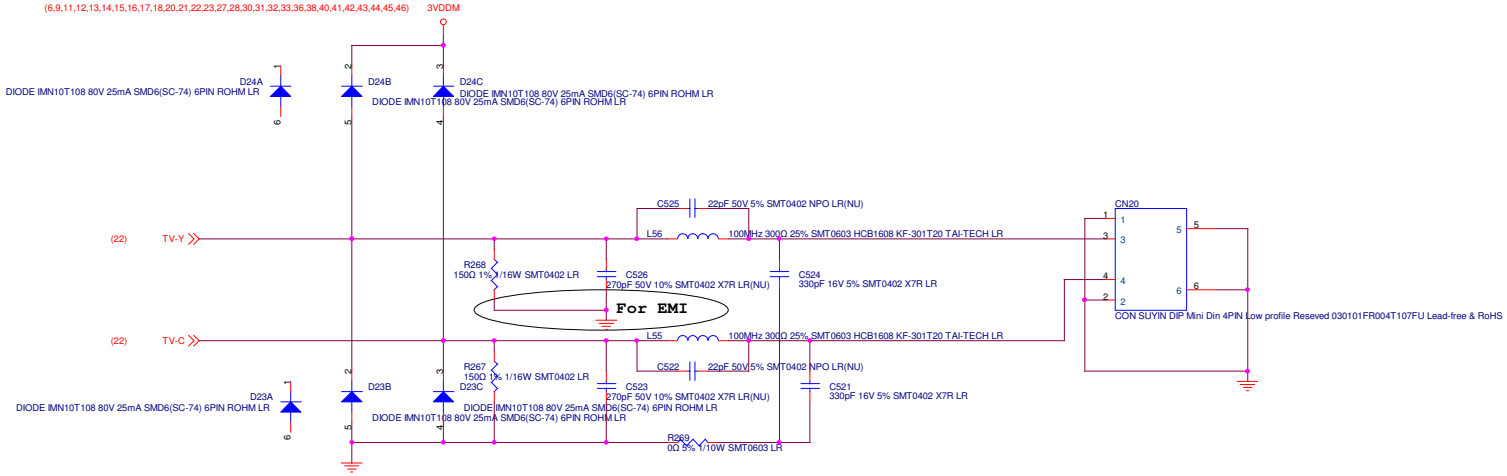
TV OUT CIRCUIT



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Title	PTB51	
Size: C	Document Number: TV Port	Rev: 0.6
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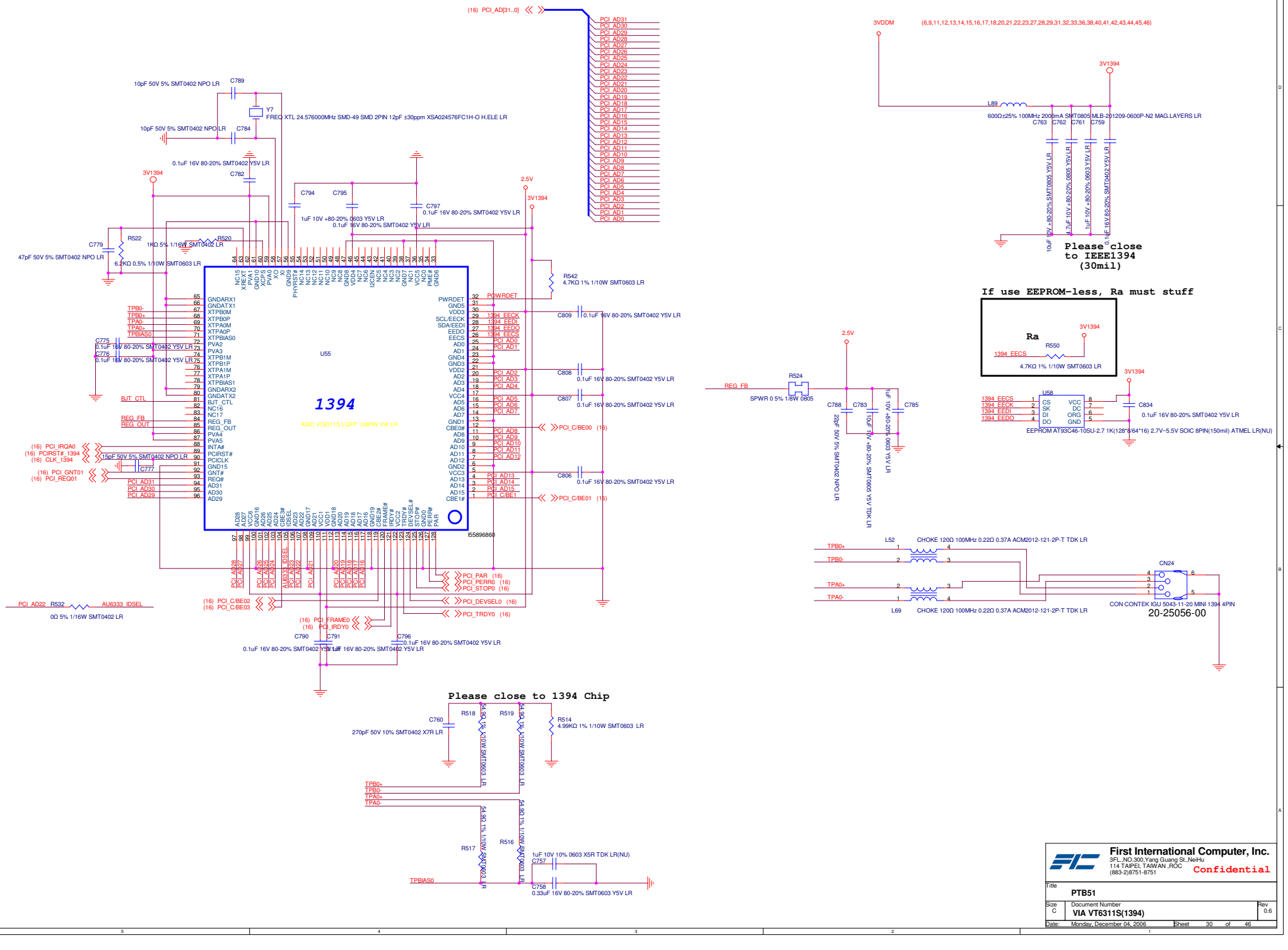

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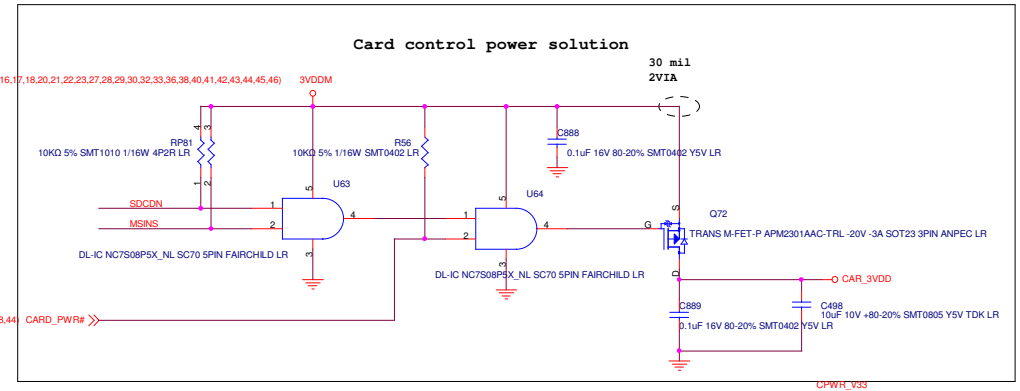
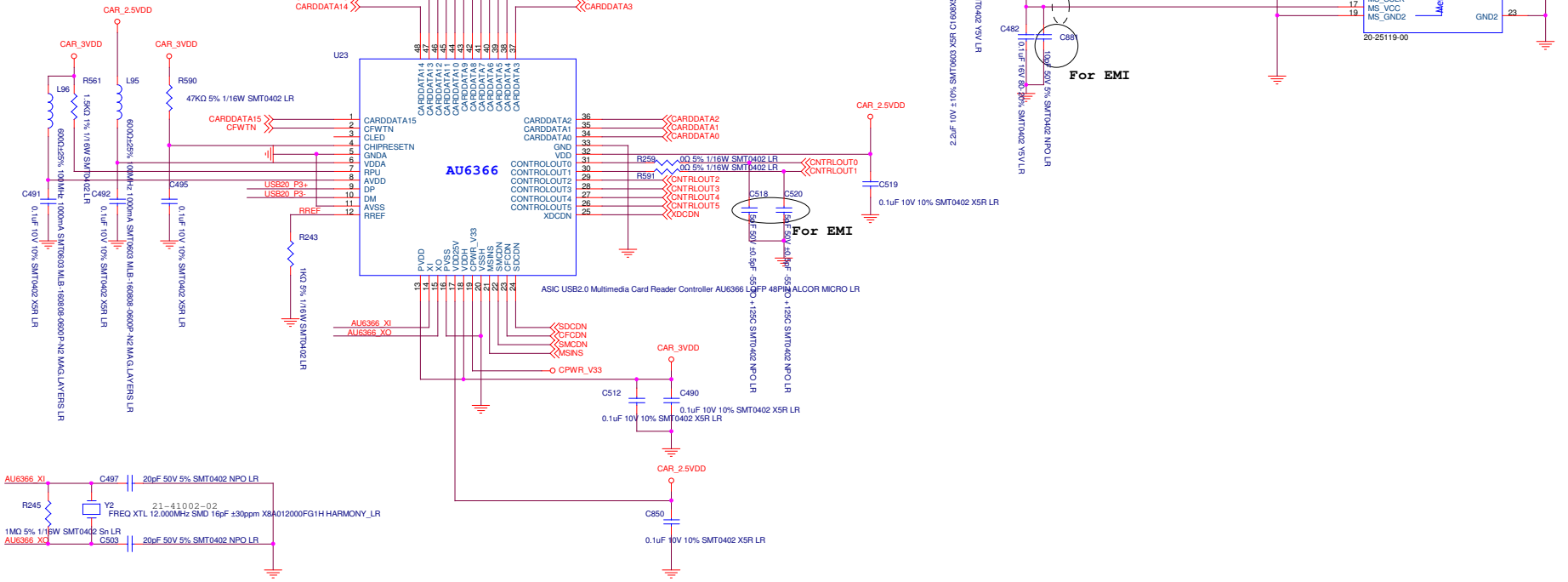
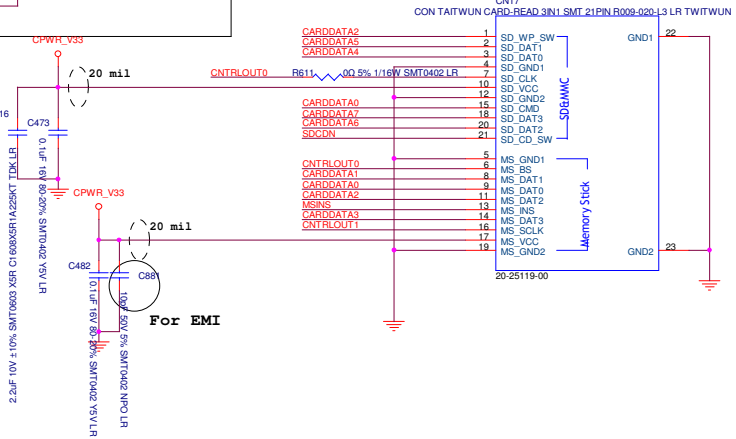
Title	PTB51	
Size C	Document Number VIA VT6311S(1394)	Rev 0.6
Date: Monday, December 04, 2006	Sheet 30 of 46	

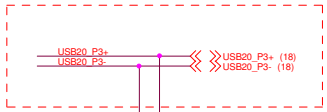
Pa: Stuff
Xa: No Stuff



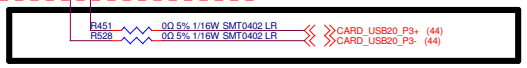




INTERFACE



Pa: No Stuff
Xa: Stuff



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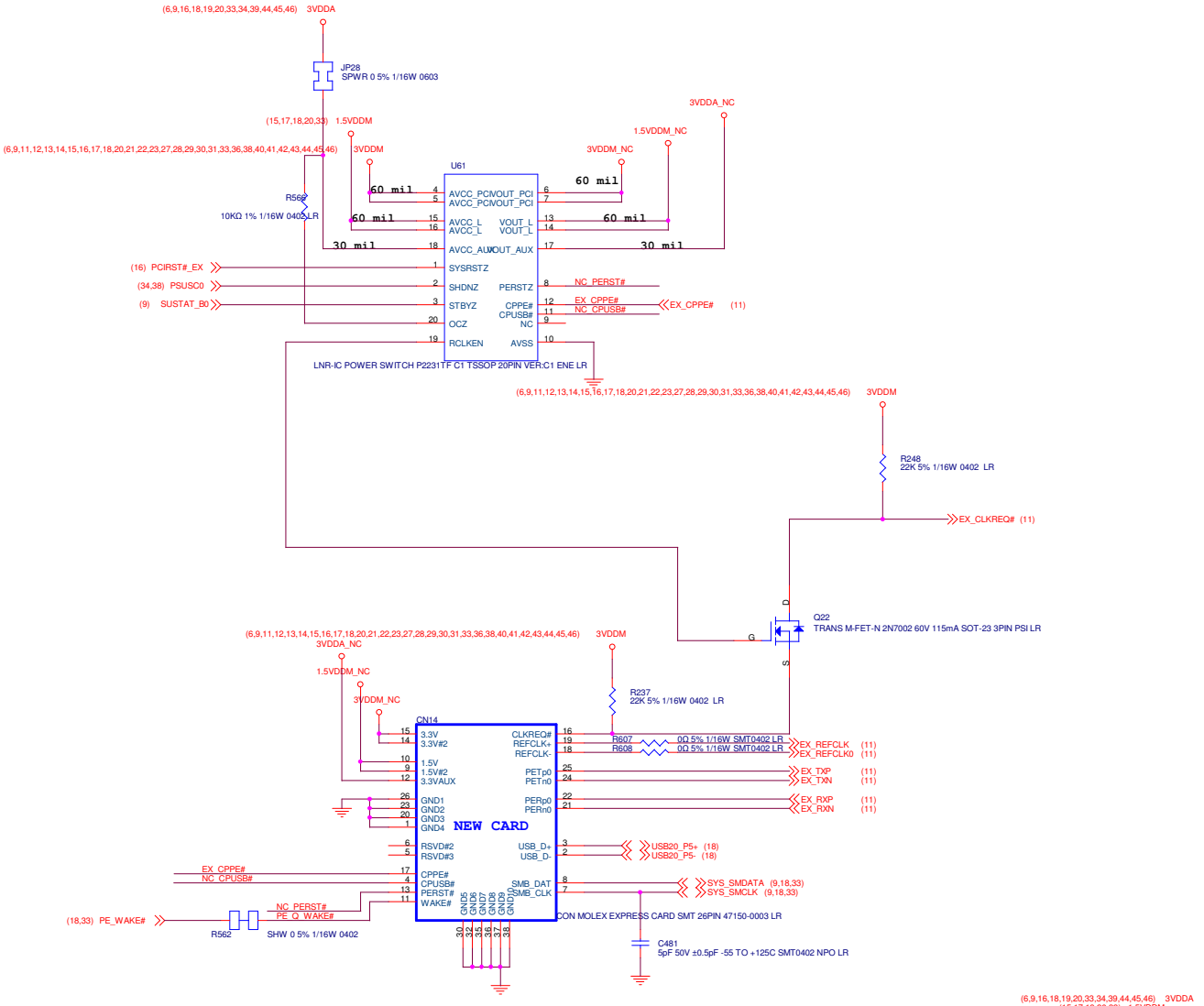
Title	PTB51	
Size C	Document Number Cardreader AU6366	Rev 0.6
Date: Monday, December 04, 2006	Sheet 31 of 46	



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Title: PTB51

Size: C | Document Number: New Card(express card) | Rev: 0.6

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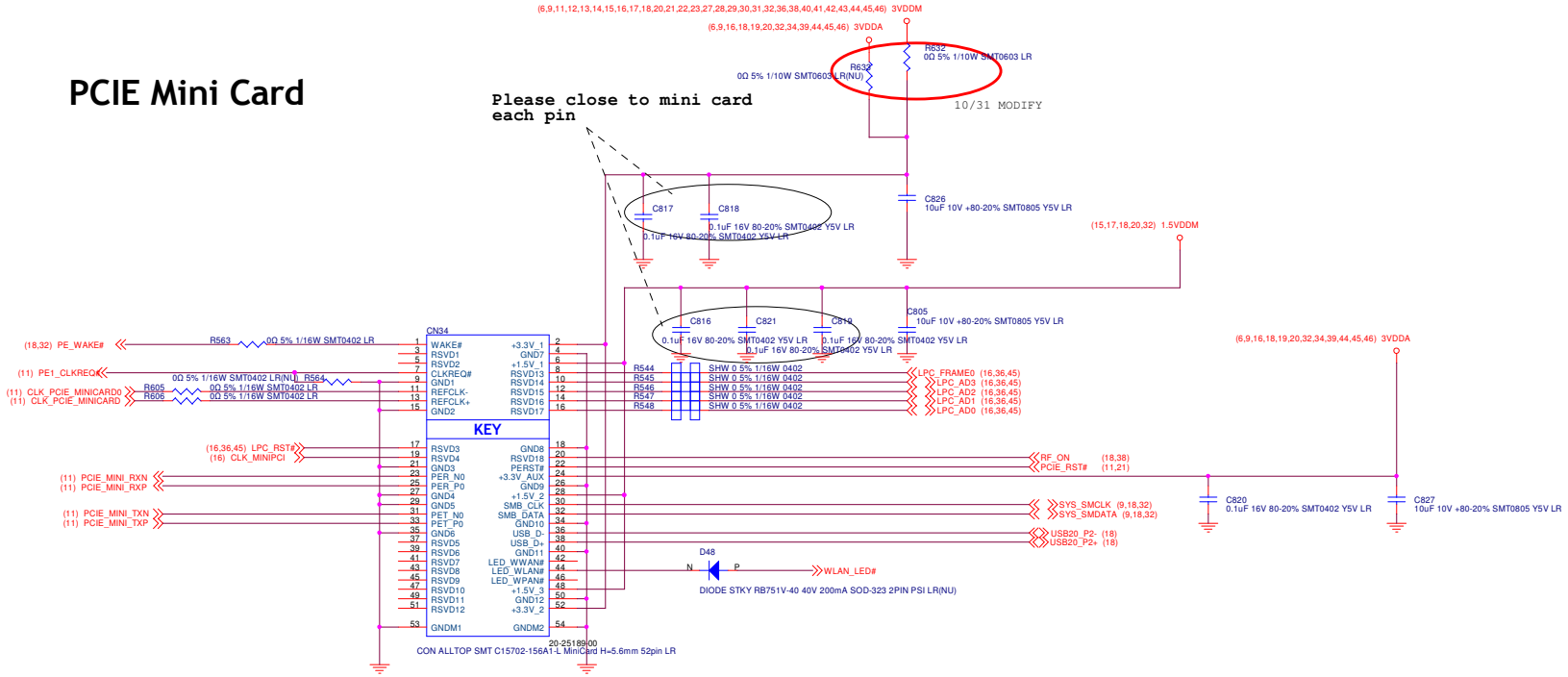
PCIE Mini Card



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Title	PTB51	
Size C	Document Number PCIE Mini Card	Rev 0.6
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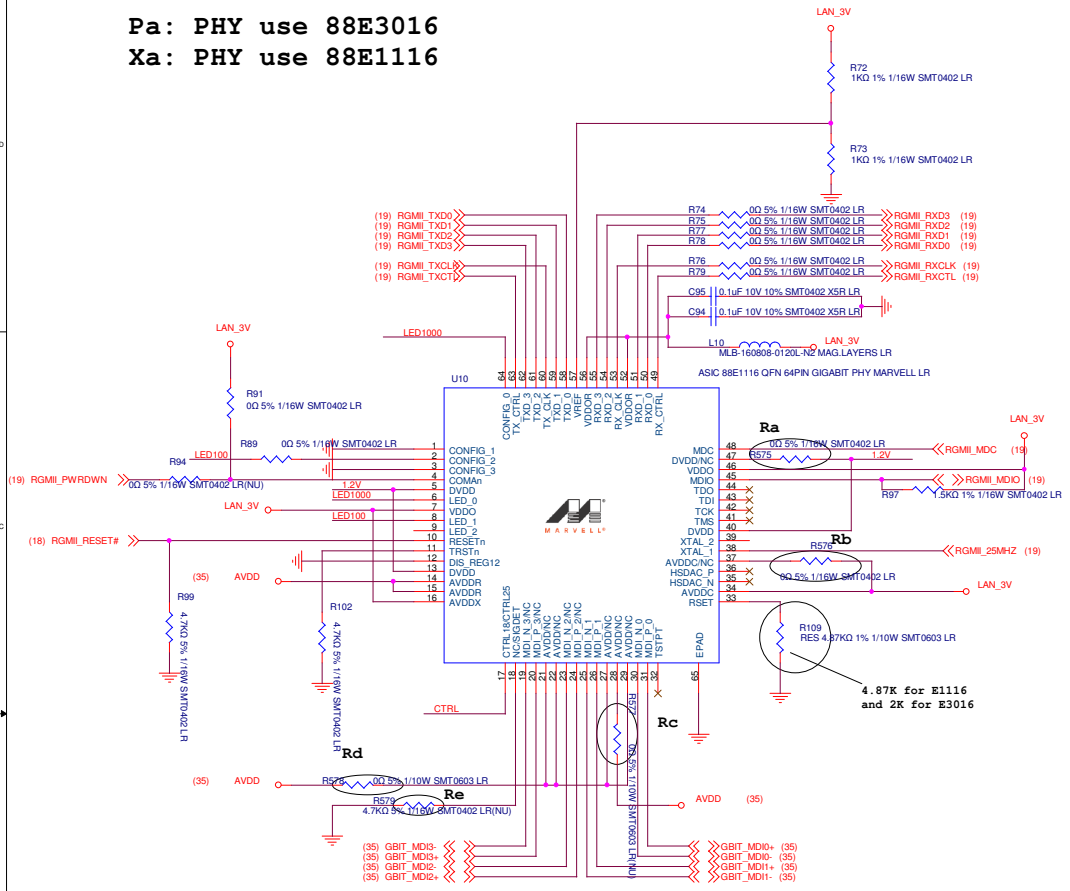
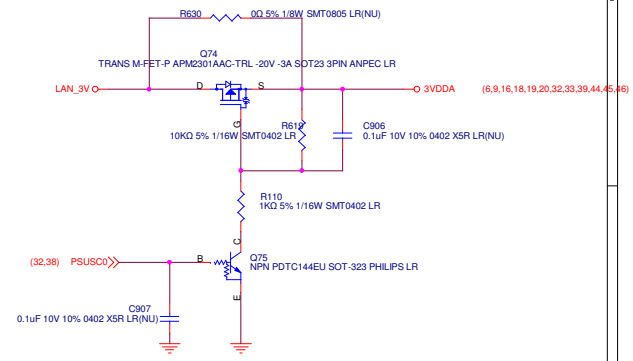
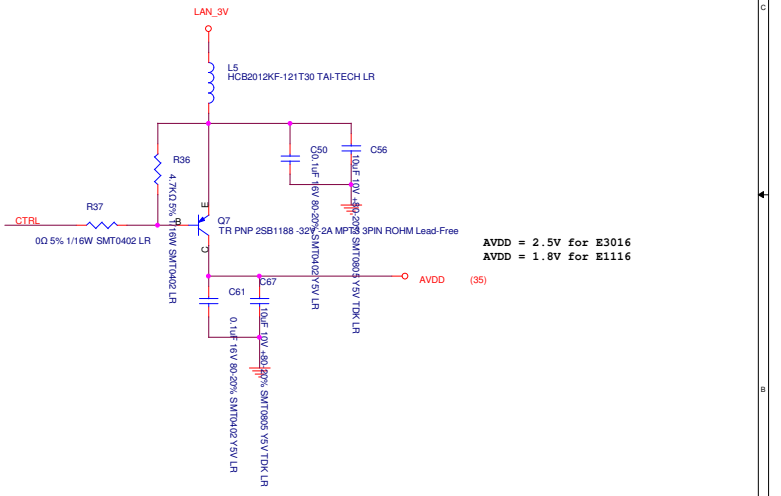
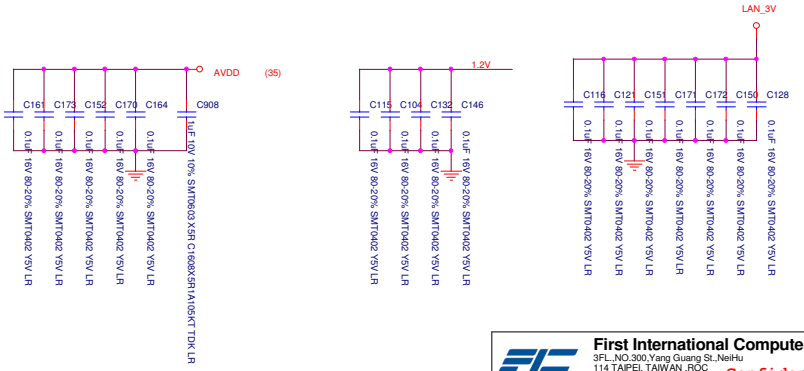
Pa: PHY use 88E3016
Xa: PHY use 88E1116



	for 88E3016	for 88E1116
Ra	NU	STUFF
Rb	NU	STUFF
Rc	STUFF	NU
Rd	NU	STUFF
Re	STUFF	NU







Layout Guide

1. The Lan Chip should be placed as close as possible to the transfer.
2. The resistor connected to RSET pin should be placed near to the Lan Chip,and away from signal traces(ex:MDI0+/-) and clock signals as far as possible.
3. The transfer should be placed as close as possible to the RJ45 connector.
4. The crystal should be placed far away from I/O ports and high frequency signal.
5. The termination resistors and capacitors should be placed closely to the Lan Chip.
6. The decoupling capacitors should be placed as close as posslble to the power pins,such that the distance from IC power pin to the capacitor is within 200mils.
7. Traces routed from the Lan Chip to the transfer,and to the RJ45 connector should be as short as possible.
8. The 10-12cm maximum lenghth between Lan Chip and transfer is achievable only when there's no interferences around.
9. All 4 pairs of the differential resister(49.9k) must close to Lan Chip,and make them(4pairs) as same as distant.
10. PLACE GND PLANE AS LARGE AS POSSIBLE
11. If power pins are next to each other and there is not much room to accommodate multipe capacitors,then the power pins can share the same capacitors.
12. It's important to separate digital signals from analog signals.If it is unavoidable to cross digtal signals with analong power do it at 90 degree angle.
13. The digital power plane should be separated from analog areas.
14. All analog decoupling capacitors should be placed as close to the IC as possible and the traces should be short.
15. The Lan Chip pin 1 facing the transformer,then you can make the signal shorter.

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Title	PTB51	
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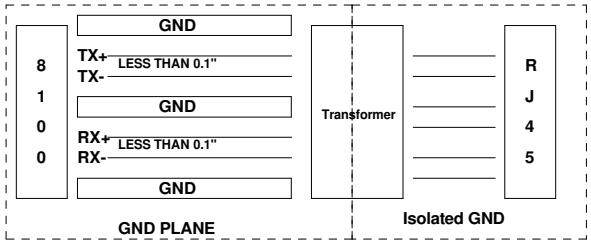
TX
RX

100 ohm ---> trace 4 mil , space 10 mil
50 mil space from other signals
Total Tace Length no more thans 4.8"
2 Differential pairs must have the same length



Pa: Transformer use LFE8450(12-01905-01)
Xa: Transformer use LFE9248(12-01904-01)

(34) AVDD
R126 0Ω 5% 1/10W SMT0603 LR
R130 0Ω 5% 1/16W SMT0402 LR

U44 TRANSFOMER LFE9248 24PIN DELTA LR

(34) GBIT_MDI0+	1	TCT1	MCT1	24	R407 75Ω 1% 1/16W SMT0402 LR
(34) GBIT_MDI0-	2	TD1+	MX1+	23	LAN_TXD0+
	3	TD1-	MX1-	22	LAN_TXD0-
(34) GBIT_MDI1+	4	TCT2	MCT2	21	R406 75Ω 1% 1/16W SMT0402 LR
(34) GBIT_MDI1-	5	TD2+	MX2+	20	LAN_TXD1+
	6	TD2-	MX2-	19	LAN_TXD1-
(34) GBIT_MDI2+	7	TCT3	MCT3	18	R405 75Ω 1% 1/16W SMT0402 LR
(34) GBIT_MDI2-	8	TD3+	MX3+	17	LAN_TXD2+
	9	TD3-	MX3-	16	LAN_TXD2-
(34) GBIT_MDI3+	10	TCT4	MCT4	15	R404 75Ω 1% 1/16W SMT0402 LR
(34) GBIT_MDI3-	11	TD4+	MX4+	14	LAN_TXD3+
	12	TD4-	MX4-	13	LAN_TXD3-

PLACE RC NETWORKS CLOSE TO PHY CHIP

R128 49.9Ω 1% 1/16W SMT0402 LR
R137 49.9Ω 1% 1/16W SMT0402 LR
R136 49.9Ω 1% 1/16W SMT0402 LR
R135 49.9Ω 1% 1/16W SMT0402 LR
R134 49.9Ω 1% 1/16W SMT0402 LR
R133 49.9Ω 1% 1/16W SMT0402 LR
R132 49.9Ω 1% 1/16W SMT0402 LR
R131 49.9Ω 1% 1/16W SMT0402 LR

C197 0.01uF 16V 10% SMT0402 X7R LR
C196 0.01uF 16V 10% SMT0402 X7R LR
C195 0.01uF 16V 10% SMT0402 X7R LR
C194 0.01uF 16V 10% SMT0402 X7R LR

C180 0.1uF 16V 80-20% SMT0402 Y5V LR
C181 0.1uF 16V 80-20% SMT0402 Y5V LR

R144 0Ω 5% 1/4W SMT1206 LR
LAN_CGND

C246 1500pF 2KV ±10% SMT1206 X7R 1206B152K202LT WALSIN LR

C238 1000pF 50V 10% SMT0402 X7R LR
C236 1000pF 50V 10% SMT0402 X7R LR
C233 10uF 10V +80-20% SMT0805 Y5V LR
C234 10uF 10V +80-20% SMT0805 Y5V LR
C237 1000pF 50V 10% SMT0402 X7R LR
C235 1000pF 50V 10% SMT0402 X7R LR

These 3 capacitors across the CHASSIS_GND to GND split, are located below the magnetics module. Place as close as possible to the magnetics module.

These 3 capacitors across the CHASSIS_GND to GND split, are located below the magnetics module. Place as close as possible to the magnetics module.

10mil

All stuff for use 88E1116 ,
NU for use 88E3016

L21 COMMON-MODE CHOKE 180Ω 25% 100MHz 400mA SMT1012 8PIN YCM1012V4SF-181T04 YOSONIC LR

LAN_TXD1+ 4 3 LAN_TXD1-
LAN_TXD0- 2 1 LAN_TXD0+
5 6 LAN_L_TXD1+
7 8 LAN_L_TXD0-

L22

LAN_TXD3- 4 3 LAN_TXD3+
LAN_TXD2- 2 1 LAN_TXD2+
5 6 LAN_L_TXD3+
7 8 LAN_L_TXD2-

COMMON-MODE CHOKE 180Ω 25% 100MHz 400mA SMT1012 8PIN YCM1012V4SF-181T04 YOSONIC LR

CN29

LAN_L_TXD0+ 1
LAN_L_TXD0- 2
LAN_L_TXD1+ 3
LAN_L_TXD1- 4
5
6
LAN_L_TXD2+ 7
LAN_L_TXD2- 8

SP1 9 13
SP2 10 14
LAN_CGND

CN 8PIN C10005-10804 ALLTOP
20-21321-03

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Title: PTB51
Size: C
Document Number: GIGA TRANSFORMER
Rev: 0.6
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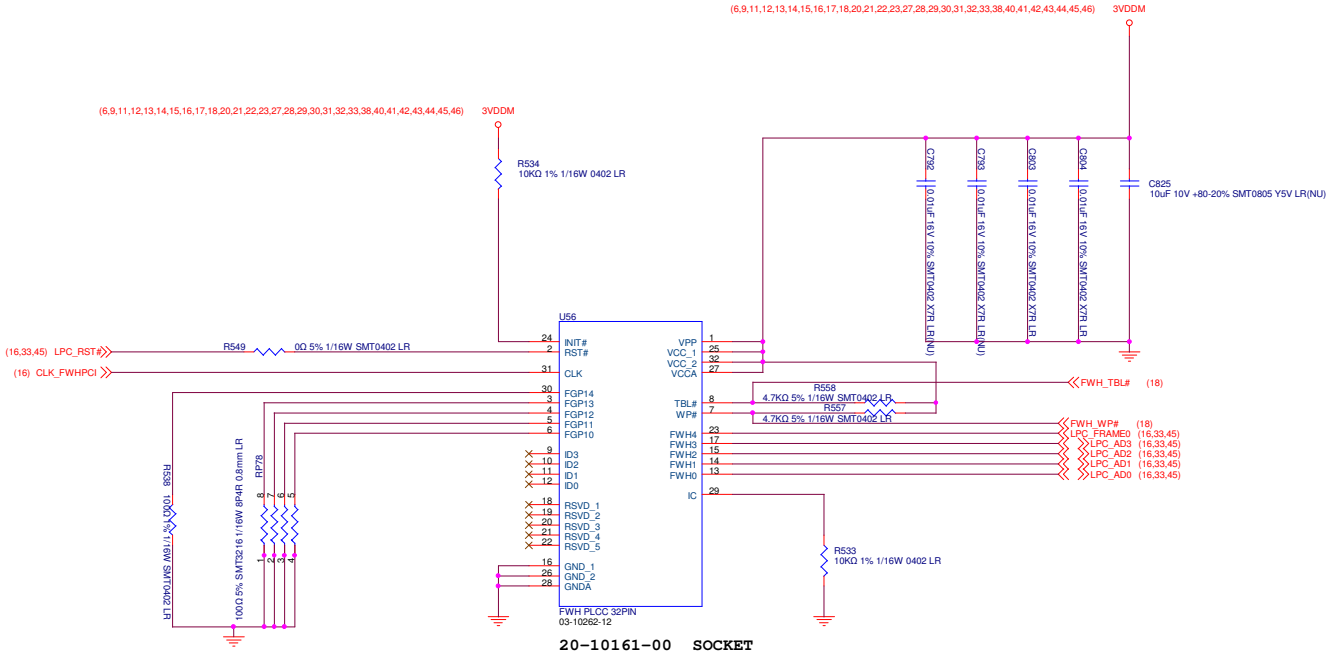

20-10161-00 SOCKET

03-10262-12 Flash ROM PM49FL004TL-33JCE
4Mbit(512K*8) PMC LR

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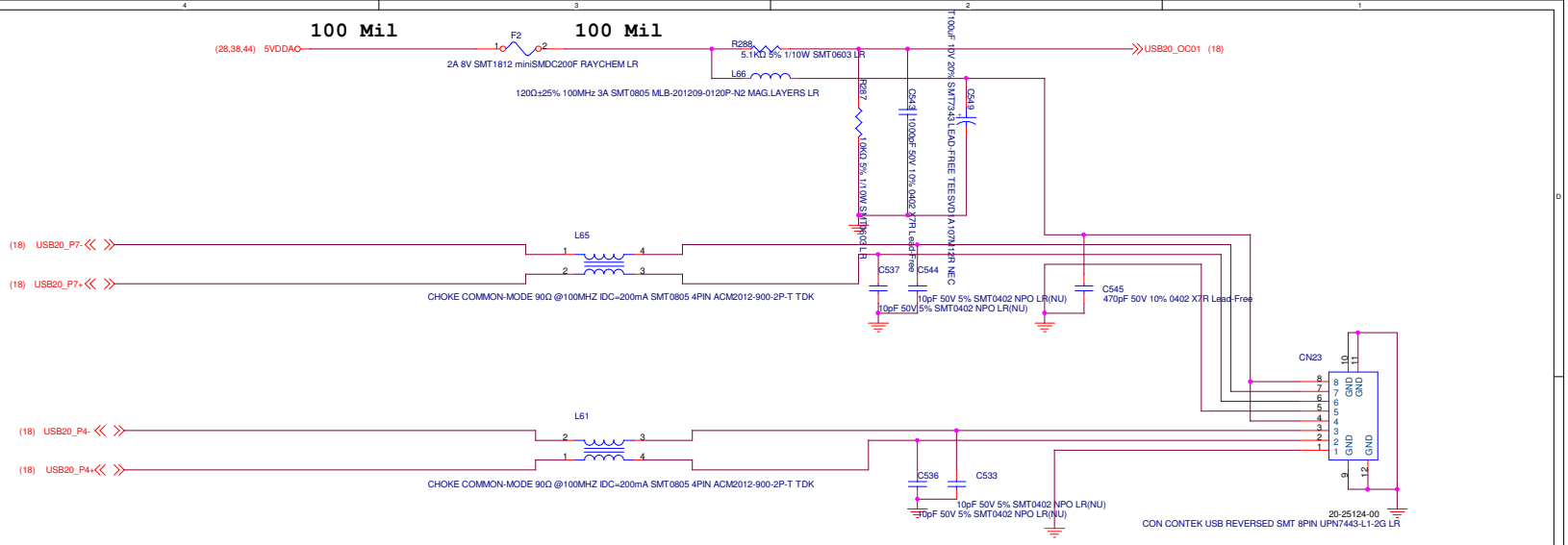
5 mil GND_POWER

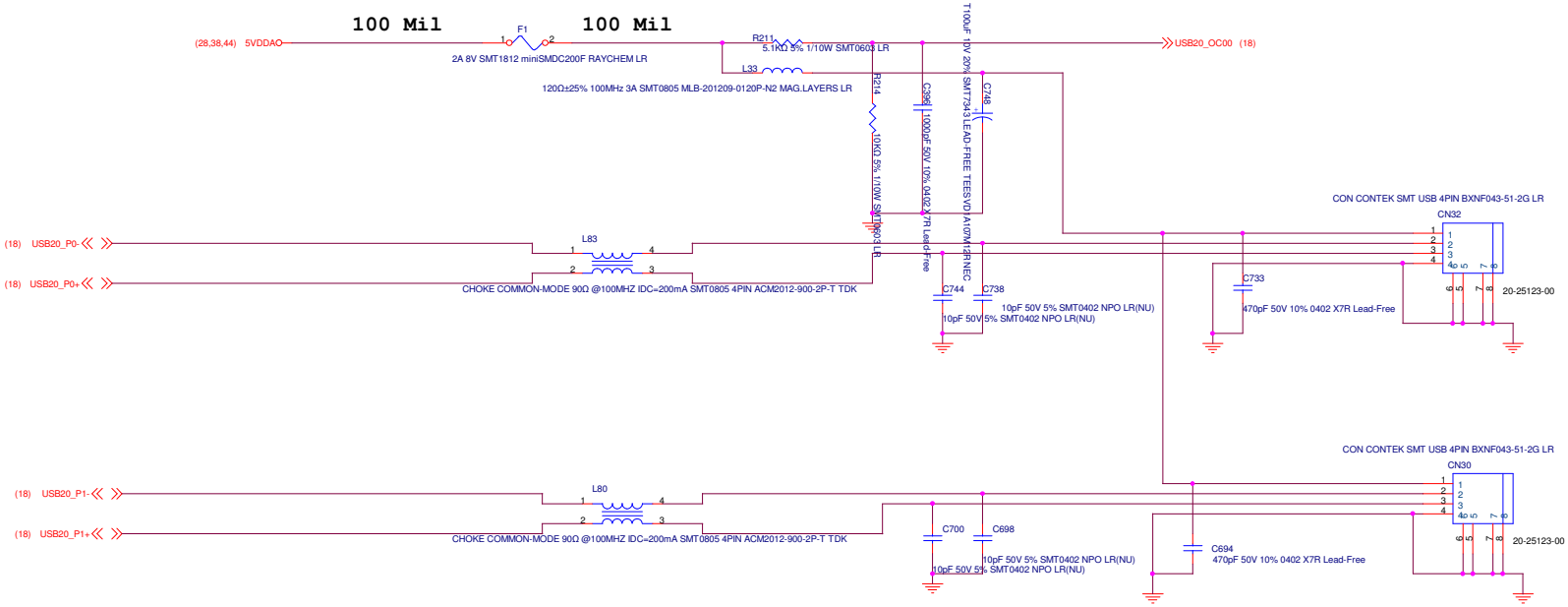
5 mil (10 mil) USB20_P+

5 mil (5 mil) USB20_P-

5 mil (10 mil) GND_POWER

USBP+/- must same length





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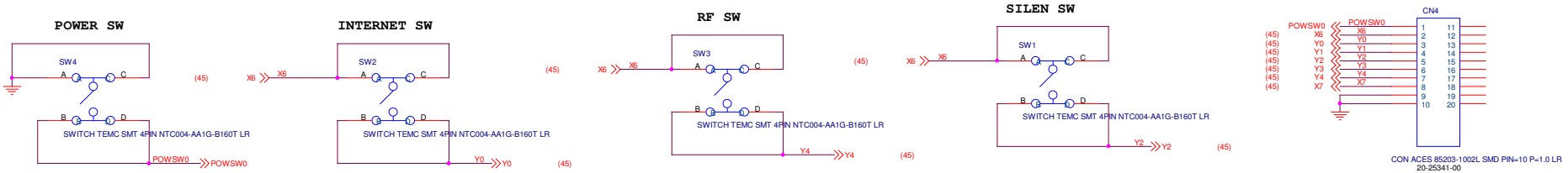
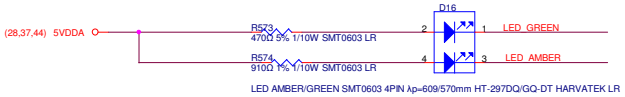
Pa: Switch Xa: No stuff



Pa: LED indicator control logic

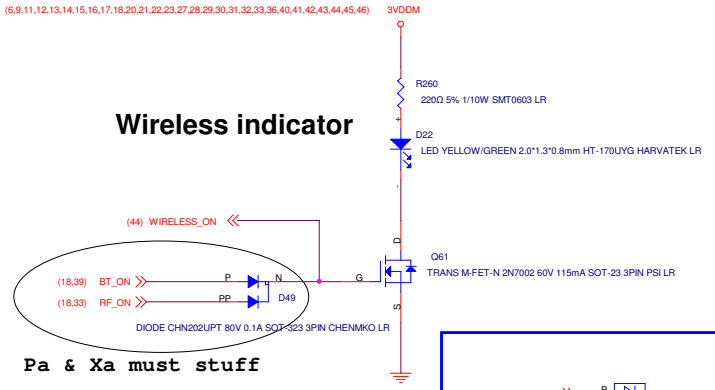
Xa: No stuff

Power indicator

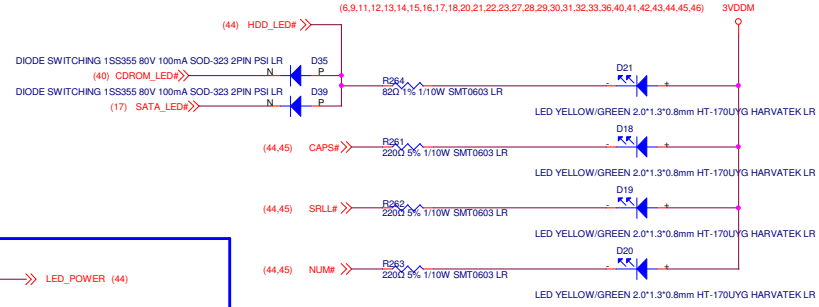


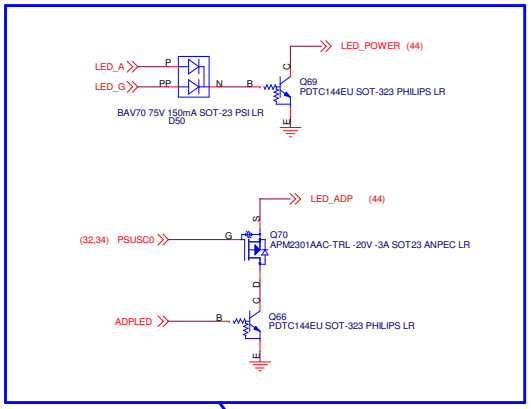
Charge indicator

Wireless indicator



Pa & Xa must stuff

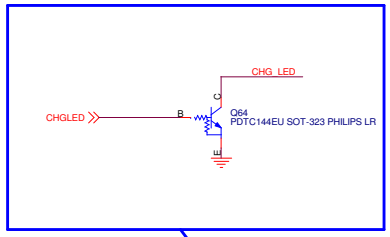




NOTICE

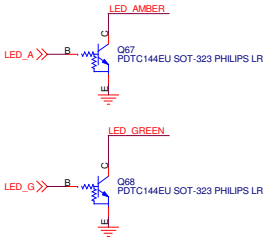
PTB50 → NO STUFF

XTB70 → ALL STUFF



NOTICE

PTB50 / XTB70 → ALL STUFF



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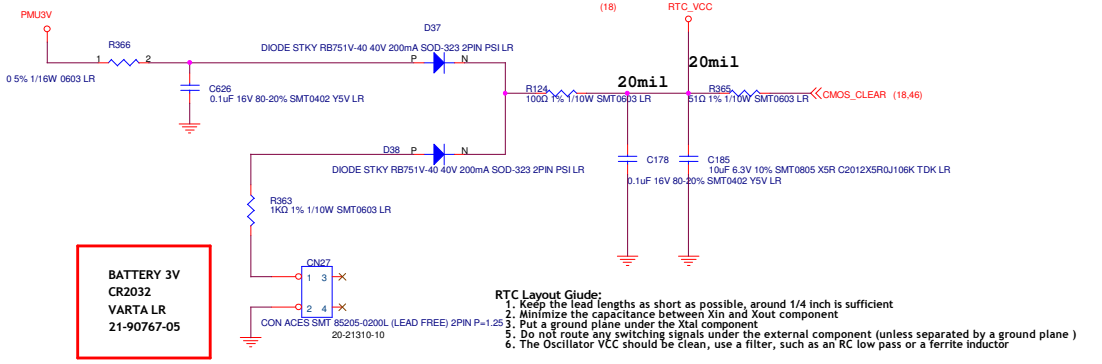
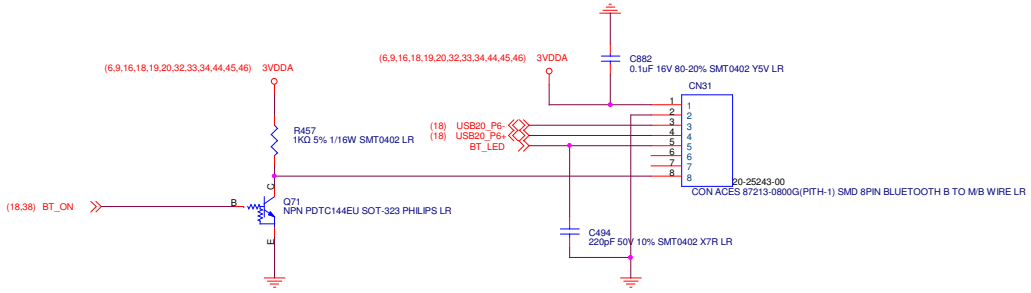
RTC Discharge Circuit



BLUETOOTH



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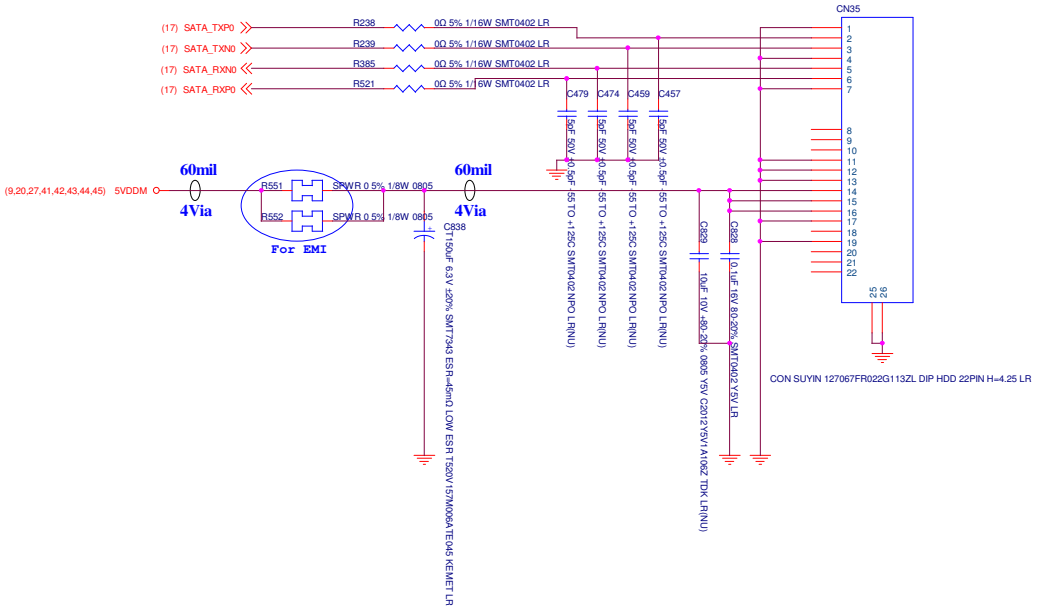
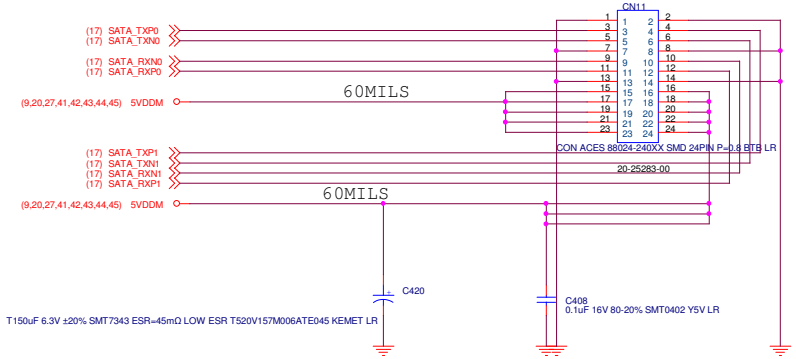
HDD I/F

For Pa



For Xa

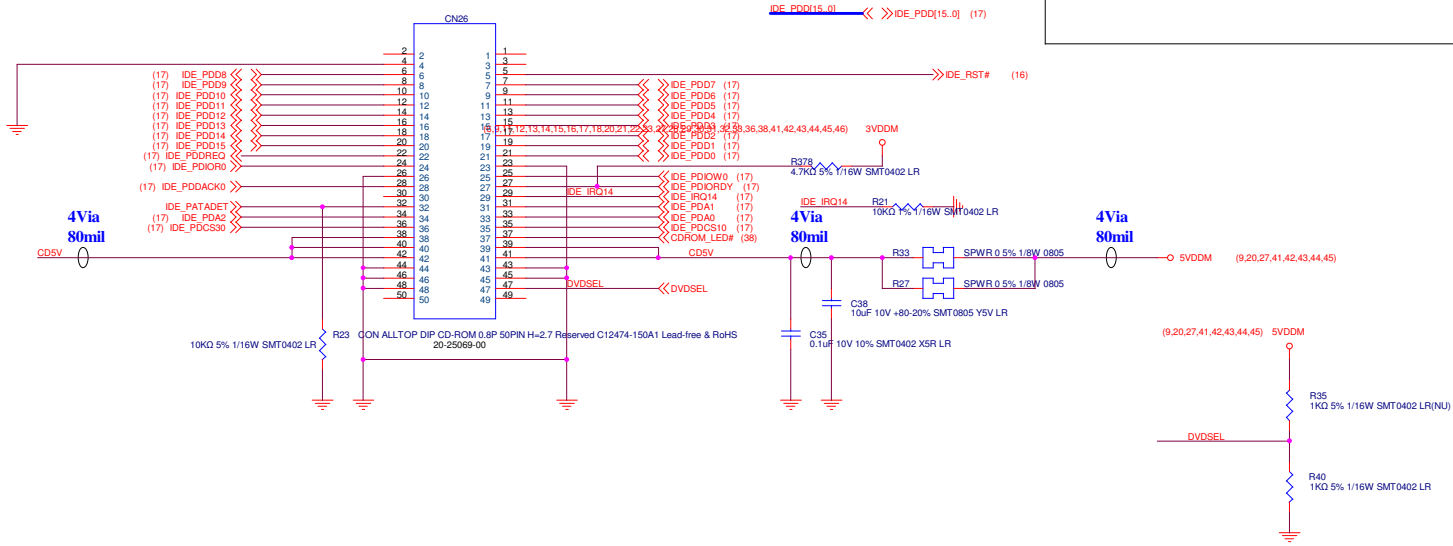


SATA Layout Note:

MS or SL:

* Zdif = 100 Ohm +/- 10%. TX & RX should refer GND.No via & stubs.The Best layer is Top.
* TX/RX trace length < 2 inchs.
* TX+/- need matching trace ±10 mils length.
* RX+/- need matching trace ±10 mils length.
* SATA Pair to Pair Trace matching trace ±10 mils length.

CD-ROM CNN



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Title	PTB51	
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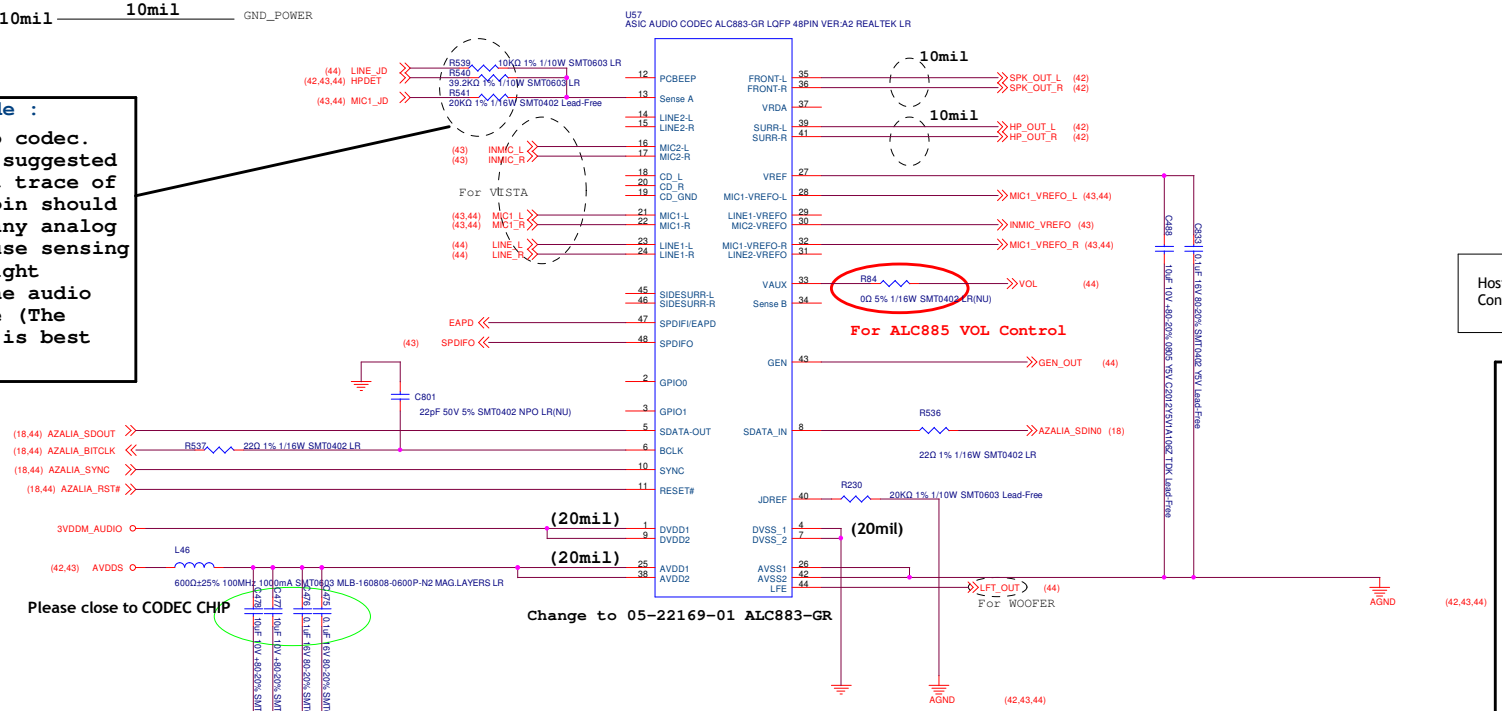
10mil GND_POWER
10mil 10mil AZALIA_PCBEEP
10mil 10mil GND_POWER
10mil GND_POWER
10mil 10mil AZALIA_BITCLK
10mil 10mil GND_POWER

10mil GND_POWER
10mil 10mil 14MCLK_AZALIA
10mil 10mil GND_POWER

Pa : ALC883-GR
Xa : ALC885-GR

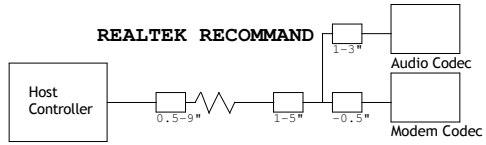
Layout guide :

1. Close to codec.
2. Realtek suggested that layout trace of the sense pin should away form any analog trace because sensing current might distorts the audio performance (The bottom lay is best choice).

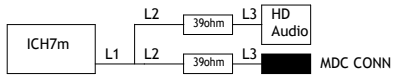


A_GND 10mil
SPK_OUT_R / HP_OUT_L 10mil
A_GND 10mil
SPK_OUT_R / HP_OUT_L 10mil
A_GND 10mil

REALTEK RECOMMAND



HD Audio-ACZ_SDOUT/ACZ_SYNC/ACZ_BITCLK/ACZ_RESET#



Trace Impedance	Routing Requirement	Trace Length
55 +/- 15%	4 on 7(stripline) 5 on 7(microstrip)	L1 = 0.5"~2.5" L2 <= 0.1" L3 = 1"~8"

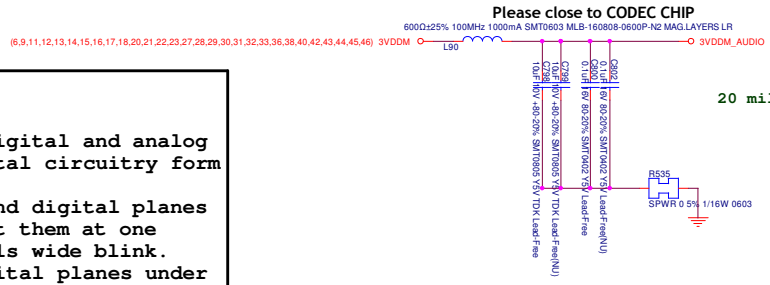
*** L3 can be extened up to 15" if HD Audio docking is not used

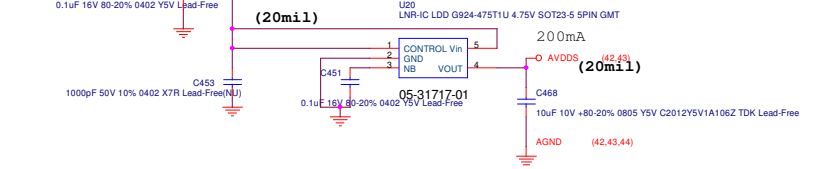
HD Audio-ACZ_SDIN

Trace Impedance	Routing Requirement	Trace Length
55 +/- 15%	4 on 7(stripline) 5 on 7(microstrip)	L1 = 0.1"~15" L2 <= 0.5"

*** Breakout can be routed 4 on 4 up to 500 mils

CODEC POWER





Layout guide :

1. The codec is partitioned into a digital and analog sections to help isolated noisy digital circuitry form quiet analog circuitry.
2. The layout separates the analog and digital planes with a 60 to 100 mils gap and connect them at one point beneath the codec with a 50 mils wide blink.
3. Never route digital traces or digital planes under the analog ground areas. Analog components should be located over analog planes (ground and power planes) and digital components should be located over digital planes.

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Title	PTB51	
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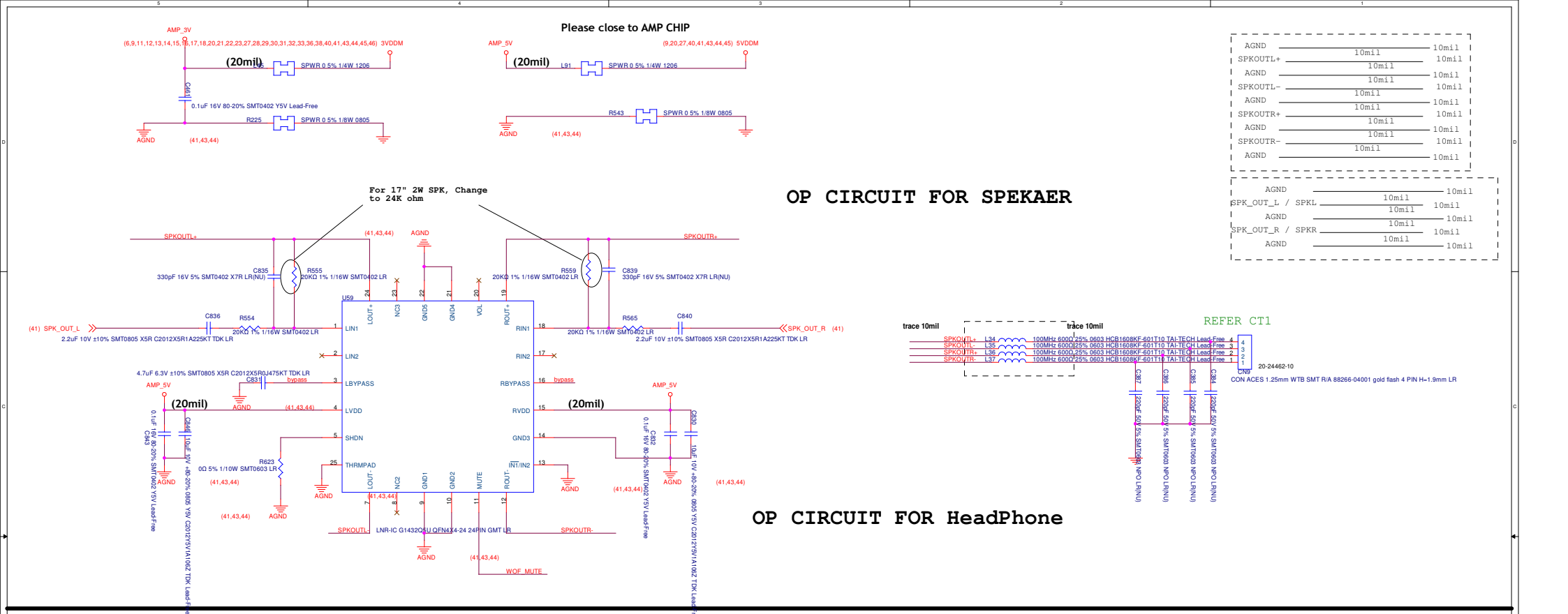
Please close to AMP CHIP
AMP_3V
(6,9,11,12,13,14,15,16,17,18,20,21,22,23,27,28,29,30,31,32,33,36,38,40,41,43,44,45,46) 3VDDM
(20mil)
L92
SPWR 0.5% 1/4W 1206
C461
0.1uF 16V 80-20% SMT0402 Y5V Lead-Free
R225
SPWR 0.5% 1/8W 0805
AGND
(41,43,44)
AMP_5V
(9,20,27,40,41,43,44,45) 5VDDM
(20mil)
L91
SPWR 0.5% 1/4W 1206
R543
SPWR 0.5% 1/8W 0805
AGND
(41,43,44)
AGND 10mil
SPKOUTL+ 10mil
AGND 10mil
SPKOUTL- 10mil
AGND 10mil
SPKOUTR+ 10mil
AGND 10mil
SPKOUTR- 10mil
AGND 10mil
OP CIRCUIT FOR SPEKAER
For 17" 2W SPK, Change to 24K ohm
SPKOUTL+
(41,43,44)
AGND
SPKOUTR+
C835
330pF 16V 5% SMT0402 X7R LR(NU)
R555
20KΩ 1% 1/16W SMT0402 LR
R559
20KΩ 1% 1/16W SMT0402 LR
C839
330pF 16V 5% SMT0402 X7R LR(NU)
U59
LOUT+
NC3
GND5
GND4
VOL
ROUT+
(41) SPK_OUT_L
C836
2.2uF 10V ±10% SMT0805 X5R C2012X5R1A225KT TDK LR
R554
20KΩ 1% 1/16W SMT0402 LR
LIN1
LIN2
RIN1
RIN2
R565
20KΩ 1% 1/16W SMT0402 LR
C840
2.2uF 10V ±10% SMT0805 X5R C2012X5R1A225KT TDK LR
SPK_OUT_R (41)
4.7uF 6.3V ±10% SMT0805 X5R C2012X5R0J475KT TDK LR
C831
bypass
LBYPASS
RBYPASS
bypass
AMP_5V
(20mil)
AGND
(41,43,44)
LVDD
RVDD
(20mil)
AMP_5V
0.1uF 16V 80-20% SMT0402 Y5V Lead-Free
C843
C846
10uF 10V +80-20% 0805 Y5V C2012Y5V1A106Z TDK Lead-Free
SHDN
GND3
R623
0Ω 5% 1/10W SMT0603 LR
THRMPAD
INT/IN2
C830
0.1uF 16V 80-20% SMT0402 Y5V Lead-Free
C832
10uF 10V +80-20% 0805 Y5V C2012Y5V1A106Z TDK Lead-Free
(41,43,44)
AGND
LOUT-
NC2
GND1
GND2
MUTE
ROUT-
SPKOUTL-
LNR-IC G1432C5U QFN4X4-24 24PIN GMT LR
SPKOUTR-
WOF_MUTE
REFER CT1
trace 10mil
trace 10mil
SPKOUTL+ L34 100MHz 600Ω 25% 0603 HCB1608KF-601T10 TAI-TECH Lead-Free 4
SPKOUTL- L35 100MHz 600Ω 25% 0603 HCB1608KF-601T10 TAI-TECH Lead-Free 3
SPKOUTR+ L36 100MHz 600Ω 25% 0603 HCB1608KF-601T10 TAI-TECH Lead-Free 2
SPKOUTR- L37 100MHz 600Ω 25% 0603 HCB1608KF-601T10 TAI-TECH Lead-Free 1
CN9
20-24462-10
CON ACES 1.25mm WTB SMT R/A 88266-04001 gold flash 4 PIN H=1.9mm LR
C827
C826
C825
C824
220pF 50V 5% SMT0603 NPO LR(NU)
OP CIRCUIT FOR HeadPhone
AMP_3V
U66
(44) WOF_MUTE
WOF_MUTE
DL-IC NC7SZ32P5X_NL SC-70 5PIN FAIRCHILD LR
R614
10KΩ 5% 1/16W SMT0402 LR
(41,43,44) AGND
Q73
TRANS M-FET-N 2N7002 60V 115mA SOT-23 3PIN PSI LR
CODEC_MUTE (18)
AGND
(41,43,44)
AMP_3V
U25
(43) PCHPDET
PCHPDET
DL-IC NC7S08P5X_NL SC70 5PIN FAIRCHILD LR
AGND
(41,43,44)
C914
0.1uF 10V 10% SMT0402 X5R LR(NU)
AGND
(41,43,44)
(41,43)
AVDDS
(9,20,27,40,41,43,44,45) 5VDDM
R256
10KΩ 5% 1/16W SMT0402 LR
R247
100KΩ 1% 1/16W SMT0402 LR
Q23
TRANS M-FET-N 2N7002 60V 115mA SOT-23 3PIN PSI LR
HPDET
HPDET (41,43,44)
C504
0.1uF 10V 10% SMT0402 X5R LR
AGND
(41,43,44)
AMP_3V
C857
2.2uF 10V ±10% SMT0805 X5R C2012X5R1A225KT TDK LR
(43) PCHPDET
PCHPDET
U60
SHDNL
PVDD
C1P
PGND
AGND
(41,43,44)
SHDNR
C1N
AMP_3V
AGND
SGND
NC2
G1410VSS
(20mil)
(41,43,44)
SVDD
PVSS
C858
2.2uF 10V ±10% SMT0805 X5R C2012X5R1A225KT TDK LR
INL
THRMPAD
AGND
(41,43,44)
OUTL
SVSS
OUTR
INR
LNR-IC G1410Q4U QFN3X3-16 16PIN GMT LR
20KΩ 1% 1/16W SMT0402 Lead-Free
R581
R582
20KΩ 1% 1/16W SMT0402 Lead-Free
G1410VSS
C859
C860
470pF 50V 10% SMT0402 X7R LR(NU)
R583
20KΩ 1% 1/16W SMT0402 Lead-Free
R584
20KΩ 1% 1/16W SMT0402 Lead-Free
R585
1KΩ 1% 1/16W SMT0402 LR
R586
1KΩ 1% 1/16W SMT0402 LR
C861
10uF 10V +80-20% 0805 Y5V C2012Y5V1A106Z TDK Lead-Free
C862
10uF 10V +80-20% 0805 Y5V C2012Y5V1A106Z TDK Lead-Free
(41) HP_OUT_L
AGND
(41,43,44)
AGND
(41,43,44)
HP_OUT_R (41)
HP_R (43,44)
HP_L (43,44)
First International Computer, Inc.
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PTB51
Size
Custom
Document Number
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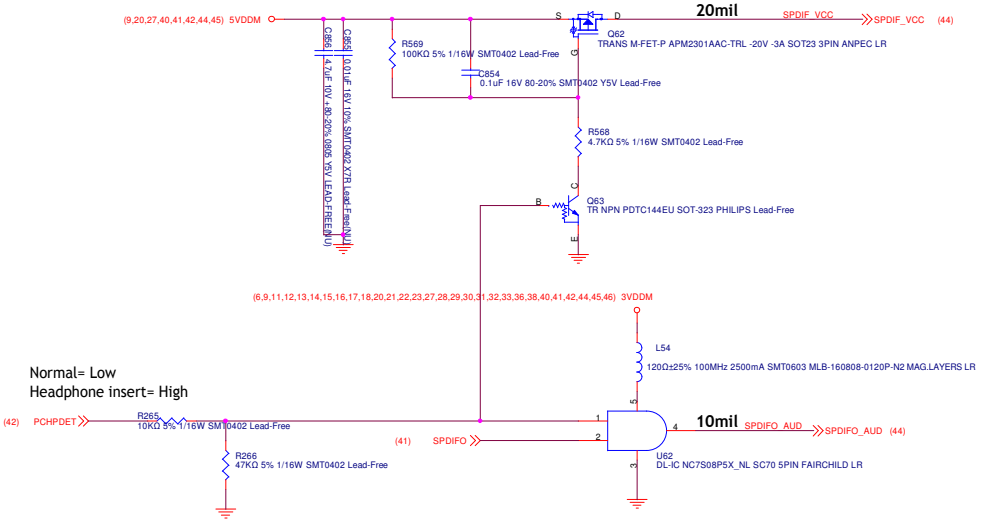
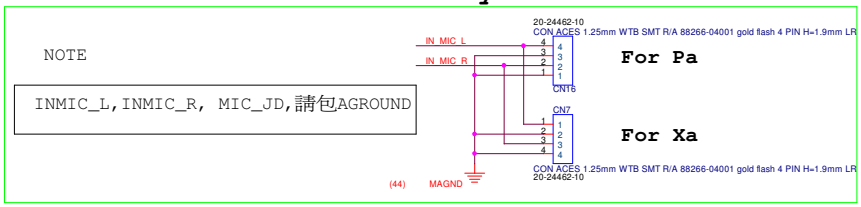
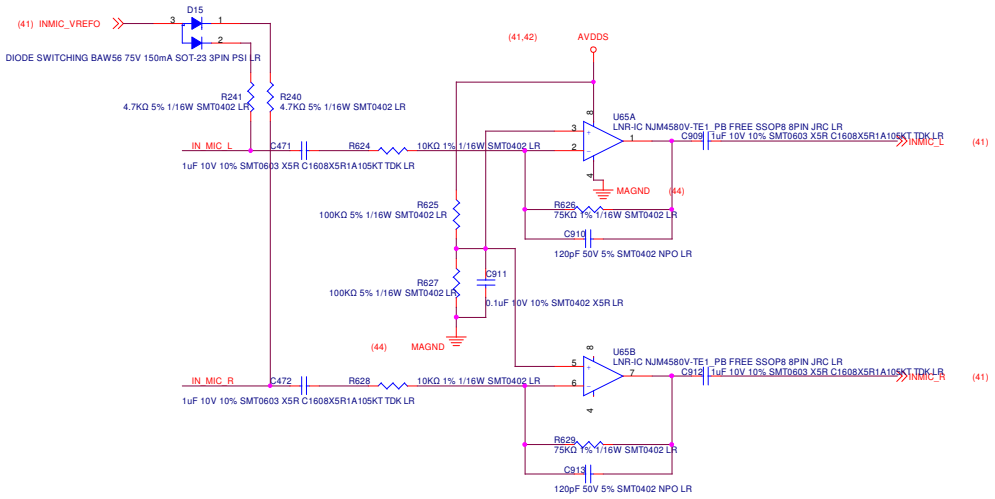
S/PDIF Power

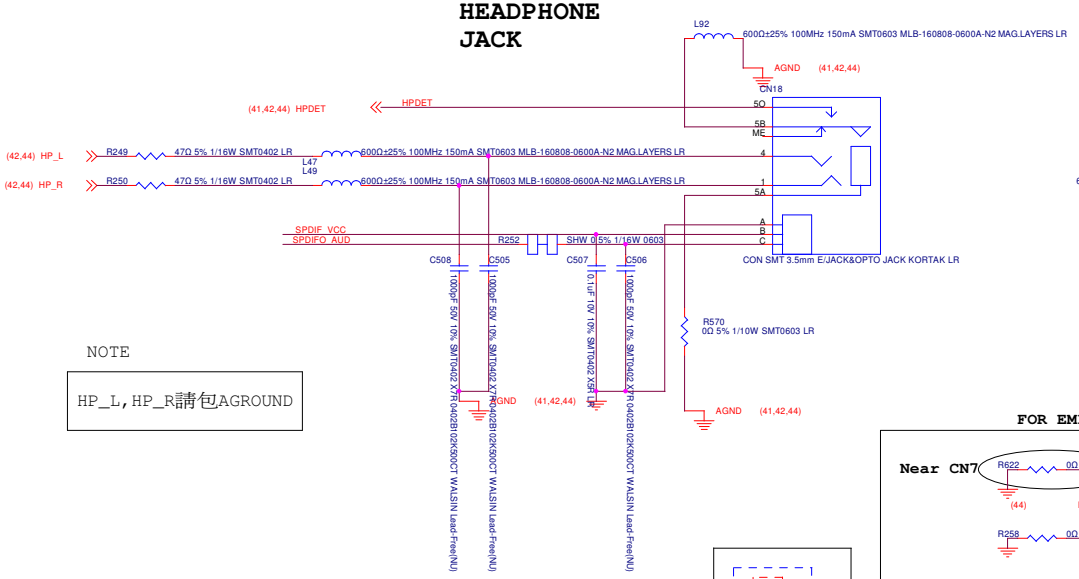


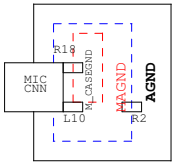
Internal arrary MIC

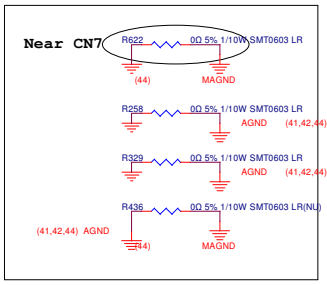




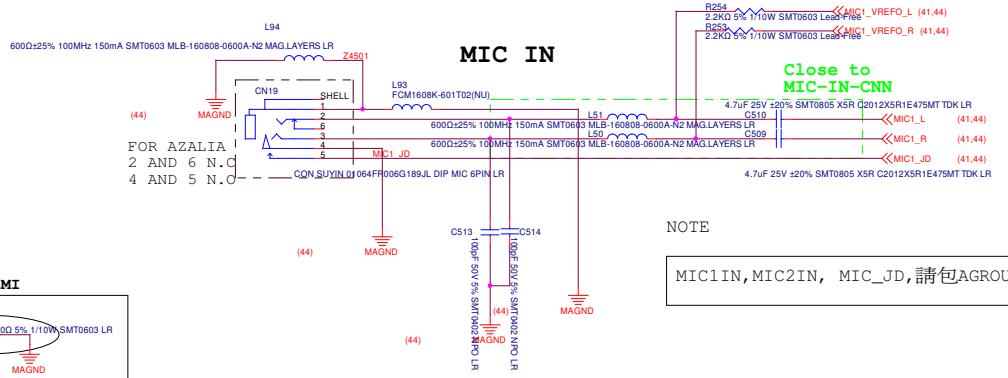
SPDIF & HEADPHONE JACK

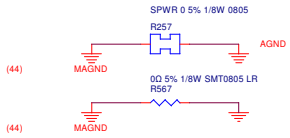






MIC IN





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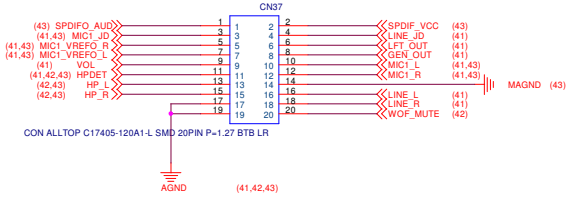
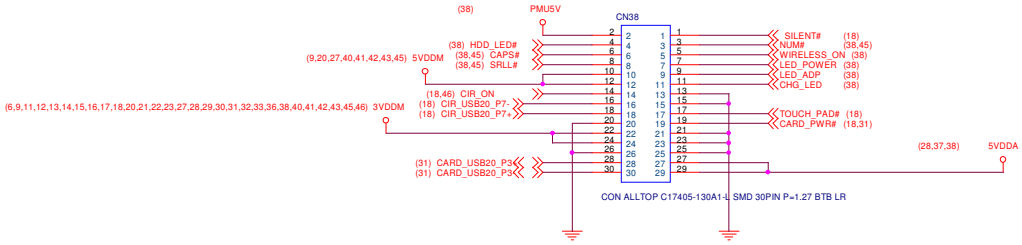
Pa: No Stuff
Xa: Stuff

AUDIO A CNN

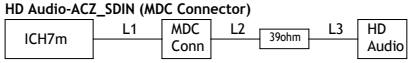


Pa: No Stuff
Xa: Stuff

AUDIO B CNN



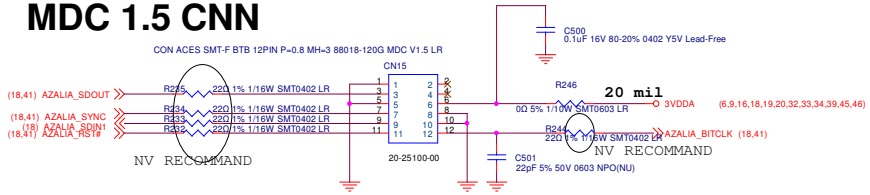
HD Audio-ACZ_SDIN (MDC Connector)



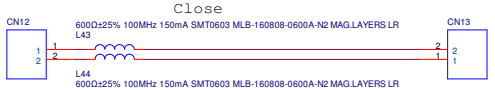
Trace Impedance	Routing Requirement	Trace Length
55 +/- 15%	4 on 7(stripline)	L1 = 0.1"~15" L2 = 0.5"~1.5" L3 = 0.5"

*** Breakout can be routed 4 on 4 up to 400 mils

MDC 1.5 CNN



FOR EMI Solution
Close



CON ACES 1.25mm WTB SMT R/A 88266-02001 gold flash 2 PIN H=1.9mm LR
20-24461-10

CON ACES 1.25mm WTB SMT R/A 88266-02001 gold flash 2 PIN H=1.9mm LR
20-24461-10

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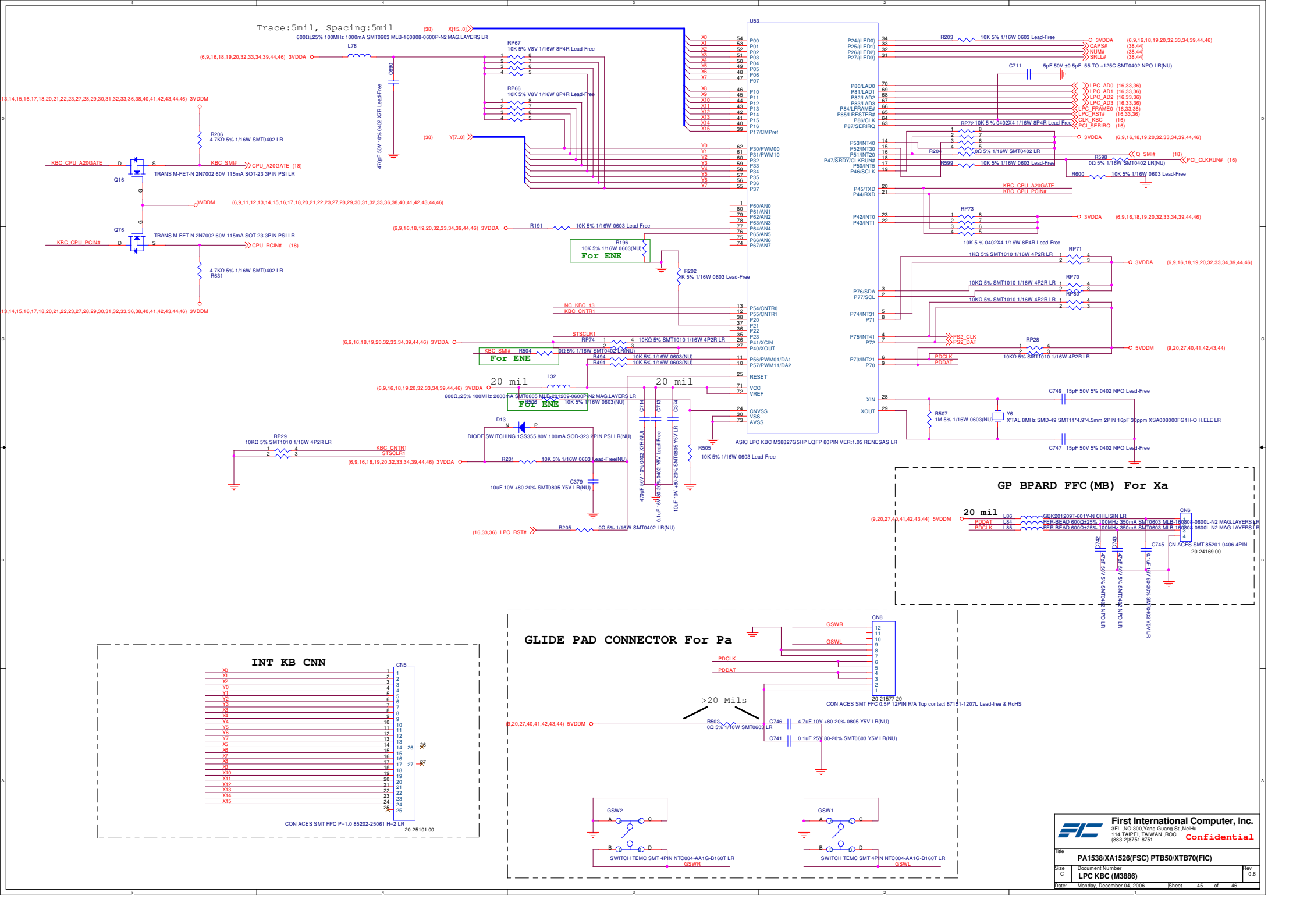
Trace:5mil, Spacing:5mil
600Ω±25% 100MHz 1000mA SMT0603 MLB-160808-0600P-N2 MAG.LAYERS LR
L78
(6,9,16,18,19,20,32,33,34,39,44,46) 3VDDA
C690
470pF 50V 10% 0402 X7R Lead-Free
(38) X[15..0]
(38) Y[7..0]
RP67
10K 5% V8V 1/16W 8P4R Lead-Free
RP66
10K 5% V8V 1/16W 8P4R Lead-Free
U53
P00
P01
P02
P03
P04
P05
P06
P07
P10
P11
P12
P13
P14
P15
P16
P17/CMPref
P30/PWM00
P31/PWM10
P32
P33
P34
P35
P36
P37
P60/AN0
P61/AN1
P62/AN2
P63/AN3
P64/AN4
P65/AN5
P66/AN6
P67/AN7
P54/CNTR0
P55/CNTR1
P20
P21
P22
P23
P41/XCIN
P40/XOUT
P56/PWM01/DA1
P57/PWM11/DA2
RESET
VCC
VREF
CNVSS
VSS
AVSS
ASIC LPC KBC M38827G5HP LQFP 80PIN VER:1.05 RENESAS LR
P24/(LED0)
P25/(LED1)
P26/(LED2)
P27/(LED3)
R203 10K 5% 1/16W 0603 Lead-Free
3VDDA (6,9,16,18,19,20,32,33,34,39,44,46)
CAPS# (38,44)
NUM# (38,44)
SRLL# (38,44)
C711 5pF 50V ±0.5pF -55 TO +125C SMT0402 NPO LR(NU)
P80/LAD0
P81/LAD1
P82/LAD2
P83/LAD3
P84/LFRAME#
P85/LRESTER#
P86/CLK
P87/SERIRQ
LPC_AD0 (16,33,36)
LPC_AD1 (16,33,36)
LPC_AD2 (16,33,36)
LPC_AD3 (16,33,36)
LPC_FRAME0 (16,33,36)
LPC_RST# (16,33,36)
CLK_KBC (16)
PCI_SERIRQ (16)
RP72 10K 5 % 0402X4 1/16W 8P4R Lead-Free
P53/INT40
P52/INT30
P51/INT20
P47/SRDY/CLKRUN#
P50/INT5
P46/SCLK
R204 0Ω 5% 1/16W SMT0402 LR
R599 10K 5% 1/16W 0603 Lead-Free
R598 0Ω 5% 1/16W SMT0402 LR(NU)
R600 10K 5% 1/16W 0603 Lead-Free
Q_SMI# (18)
PCI_CLKRUN# (16)
P45/TXD
P44/RXD
KBC_CPU_A20GATE
KBC_CPU_PCIN#
P42/INT0
P43/INT1
RP73
10K 5 % 0402X4 1/16W 8P4R Lead-Free
RP71
1KΩ 5% SMT1010 1/16W 4P2R LR
RP70
10KΩ 5% SMT1010 1/16W 4P2R LR
RP80
P76/SDA
P77/SCL
P74/INT31
P71
P75/INT41
P72
P73/INT21
P70
PS2_CLK
PS2_DAT
PDCLK
PDDAT
RP28
10KΩ 5% SMT1010 1/16W 4P2R LR
5VDDM (9,20,27,40,41,42,43,44)
XIN
XOUT
R507 1M 5% 1/16W 0603(NU)
Y6 X'TAL 8MHz SMD-49 SMT11*4.9*4.5mm 2PIN 16pF 30ppm XSA008000FG1H-O H.ELE LR
C749 15pF 50V 5% 0402 NPO Lead-Free
C747 15pF 50V 5% 0402 NPO Lead-Free
R191 10K 5% 1/16W 0603 Lead-Free
R196 10K 5% 1/16W 0603(NU)
For ENE
R202 K 5% 1/16W 0603 Lead-Free
NC_KBC_13
KBC_CNTR1
STSCLR1
RP74 10KΩ 5% SMT1010 1/16W 4P2R LR
KBC_SMI# R504 0Ω 5% 1/16W SMT0402 LR(NU)
R494 10K 5% 1/16W 0603(NU)
R491 10K 5% 1/16W 0603(NU)
20 mil
L32
600Ω±25% 100MHz 2000mA SMT0805 MLB-201209-0600P-N2 MAG.LAYERS LR
R506 10K 5% 1/16W 0603(NU)
For ENE
C714
C713
C374
470pF 50V 10% 0402 X7R(NU)
0.1uF 16V ±10% 0402 Y5V Lead-Free
10uF 10V ±80-20% SMT0805 Y5V LR
D13
DIODE SWITCHING 1SS355 80V 100mA SOD-323 2PIN PSI LR(NU)
RP29
10KΩ 5% SMT1010 1/16W 4P2R LR
KBC_CNTR1
STSCLR1
R201 10K 5% 1/16W 0603 Lead-Free(NU)
C379
10uF 10V +80-20% SMT0805 Y5V LR(NU)
R505
10K 5% 1/16W 0603 Lead-Free
R205 0Ω 5% 1/16W SMT0402 LR(NU)
(16,33,36) LPC_RST#
R206
4.7KΩ 5% 1/16W SMT0402 LR
KBC_CPU_A20GATE
KBC_SMI#
CPU_A20GATE (18)
TRANS M-FET-N 2N7002 60V 115mA SOT-23 3PIN PSI LR
Q16
3VDDM (6,9,11,12,13,14,15,16,17,18,20,21,22,23,27,28,29,30,31,32,33,36,38,40,41,42,43,44,46)
Q76
KBC_CPU_PCIN#
CPU_RCIN# (18)
4.7KΩ 5% 1/16W SMT0402 LR
R631
13,14,15,16,17,18,20,21,22,23,27,28,29,30,31,32,33,36,38,40,41,42,43,44,46) 3VDDM
GP BPARD FFC(MB) For Xa
20 mil
(9,20,27,40,41,42,43,44) 5VDDM
L86 GBK201209T-601Y-N CHILISIN LR
L84 FER-BEAD 600Ω±25% 100MHz 350mA SMT0603 MLB-160808-0600L-N2 MAG.LAYERS LR
L85 FER-BEAD 600Ω±25% 100MHz 350mA SMT0603 MLB-160808-0600L-N2 MAG.LAYERS LR
CN6
C745 CN ACES SMT 85201-0406 4PIN
20-24169-00
C742
C743
C744
45pF 50V 5% SMT0402 CH LR
45pF 50V 5% SMT0402 CH LR
0.1uF 16V ±10% SMT0402 Y5V LR
INT KB CNN
CN5
X0
X1
X2
Y0
Y1
Y2
Y3
X3
X4
Y4
Y5
Y6
Y7
X5
X6
X7
X8
X9
X10
X11
X12
X13
X14
X15
CON ACES SMT FPC P=1.0 85202-25061 H=2 LR
20-25101-00
GLIDE PAD CONNECTOR For Pa
CN8
GSWR
GSWL
PDCLK
PDDAT
>20 Mils
(9,20,27,40,41,42,43,44) 5VDDM
R502 0Ω 5% 1/10W SMT0603 LR
C746 4.7uF 10V +80-20% 0805 Y5V LR(NU)
C741 0.1uF 25V 80-20% SMT0603 Y5V LR(NU)
20-21577-20
CON ACES SMT FFC 0.5P 12PIN R/A Top contact 87151-1207L Lead-free & RoHS
GSW2
GSW1
SWITCH TEMC SMT 4PIN NTC004-AA1G-B160T LR
GSWR
SWITCH TEMC SMT 4PIN NTC004-AA1G-B160T LR
GSWL
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Title
PA1538/XA1526(FSC) PTB50/XTB70(FIC)
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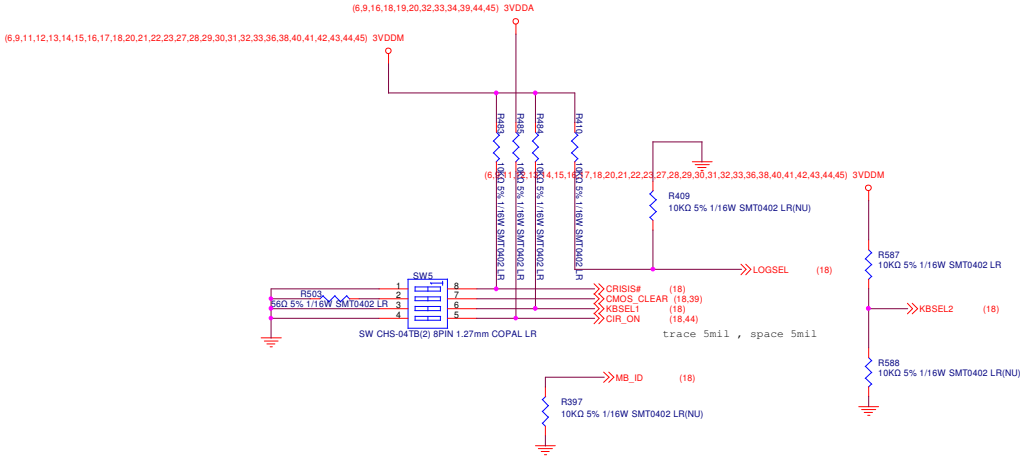
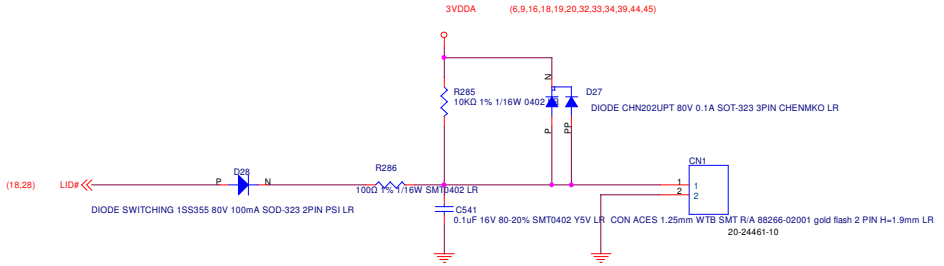
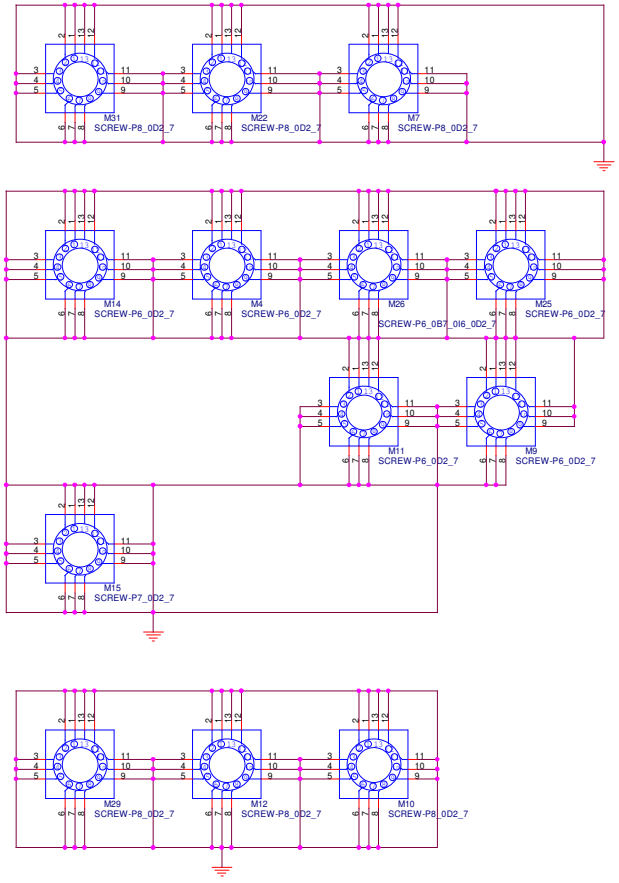
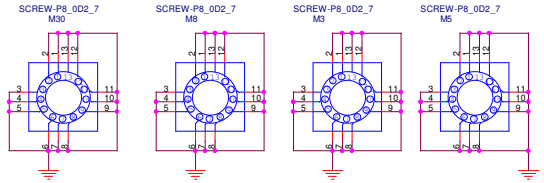
DIP SWITCH

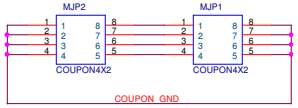


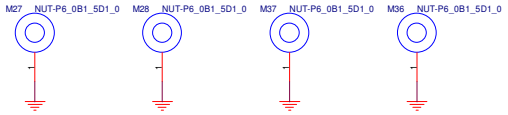
LID Switch

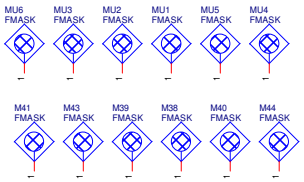


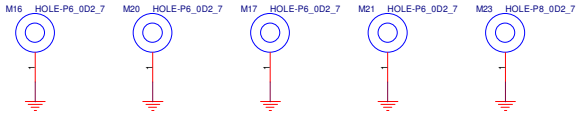


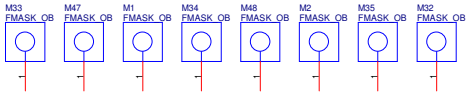


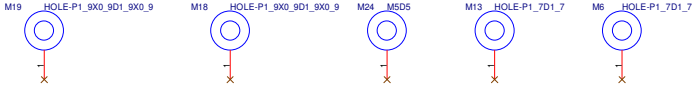












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