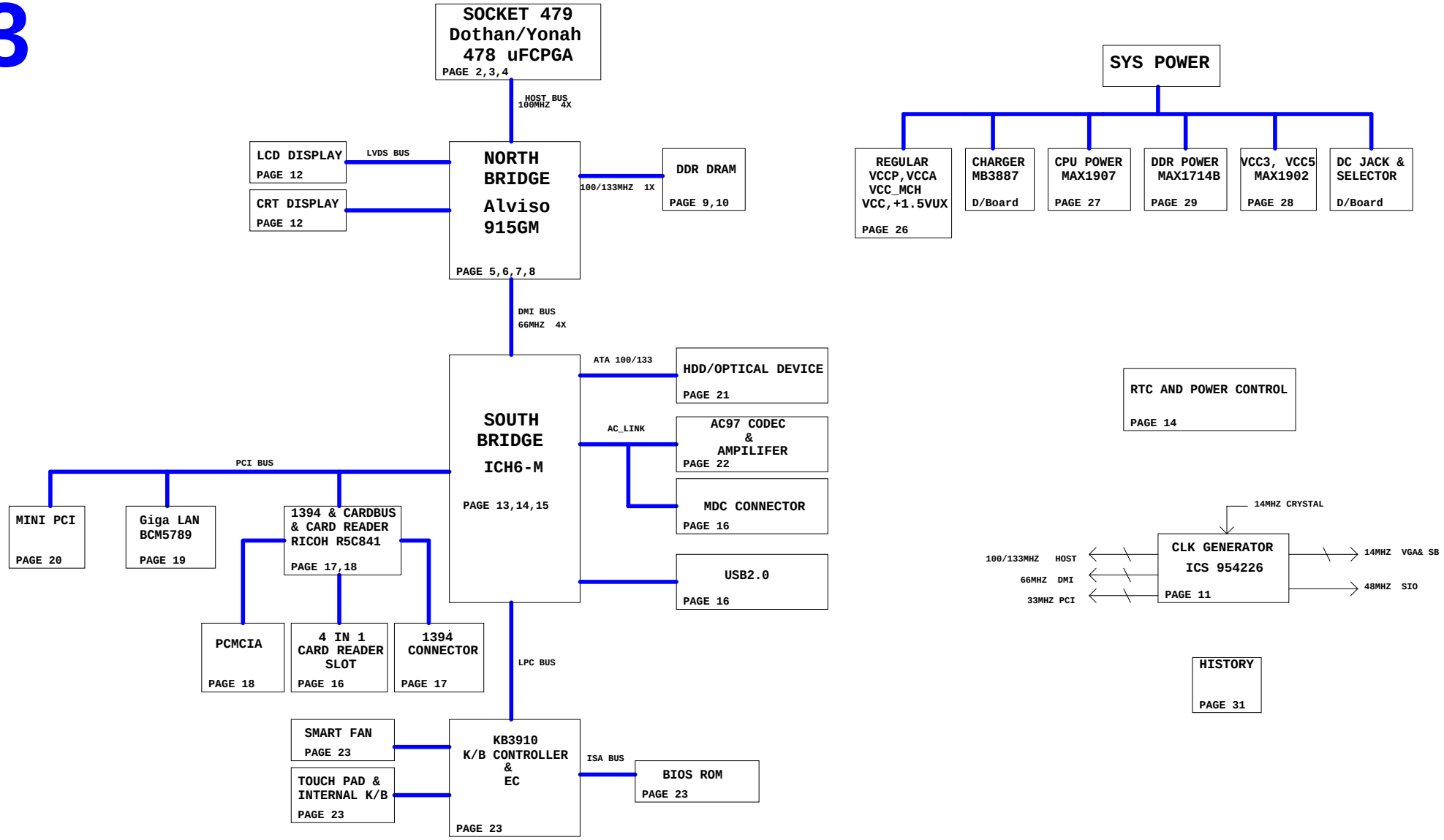
223



PCB P/N:15-F63-011000

PAGE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
REV	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
DATE	06/24/05	06/24/05	06/24/05	06/24/05	06/24/05	06/24/05	06/24/05	06/24/05	06/24/05	06/24/05	06/24/05	06/24/05	06/24/05	06/24/05	06/24/05	06/24/05	06/24/05	06/24/05

PAGE	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34		
REV	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0				
DATE	06/24/05	06/24/05	06/24/05	06/24/05	06/24/05	06/24/05	06/24/05	06/24/05	06/24/05	06/24/05	06/24/05	06/24/05	06/24/05	06/24/05				

Approved by	Checked by	Designed by

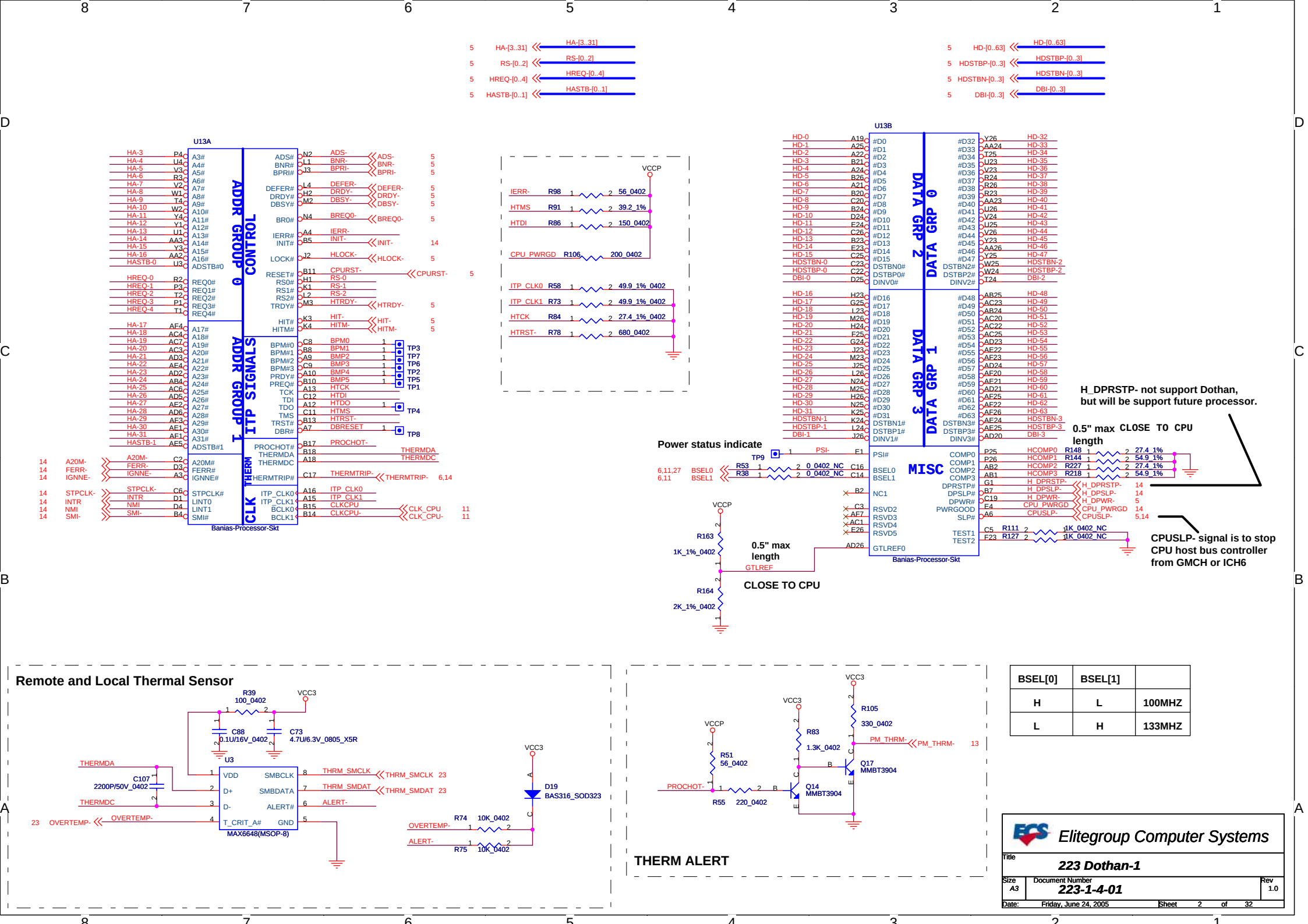
P.Leader

Elitegroup Computer Systems

Title: 223 BLOCK DIAGRAM

Size: A2 | Document Number: 223-1-4-01 | Rev: 1.0

Date: Friday, June 24, 2005 | Sheet 1 of 32



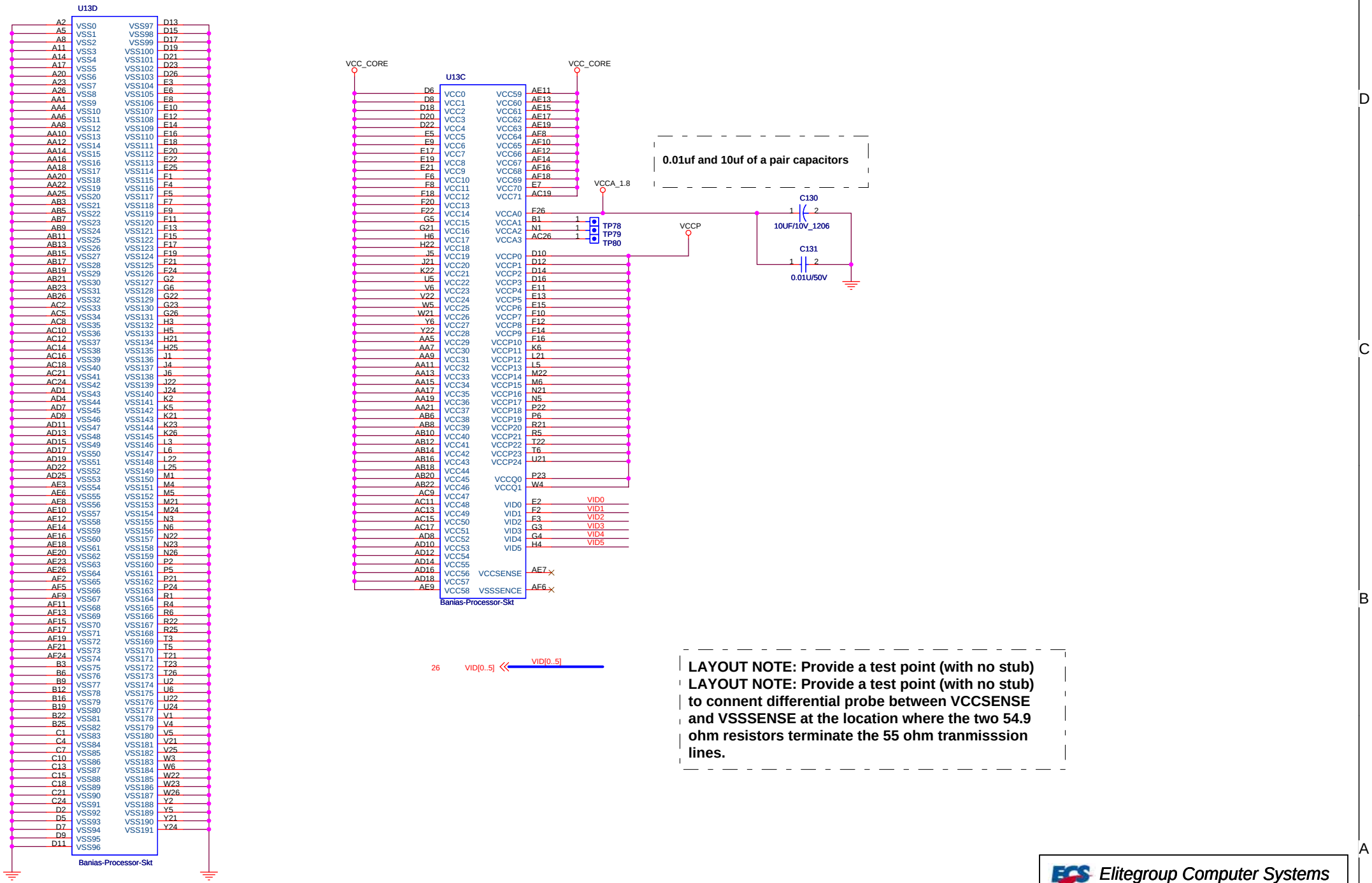
BSEL[0]	BSEL[1]	
H	L	100MHZ
L	H	133MHZ

Elitegroup Computer Systems

Title: 223 Dothan-1

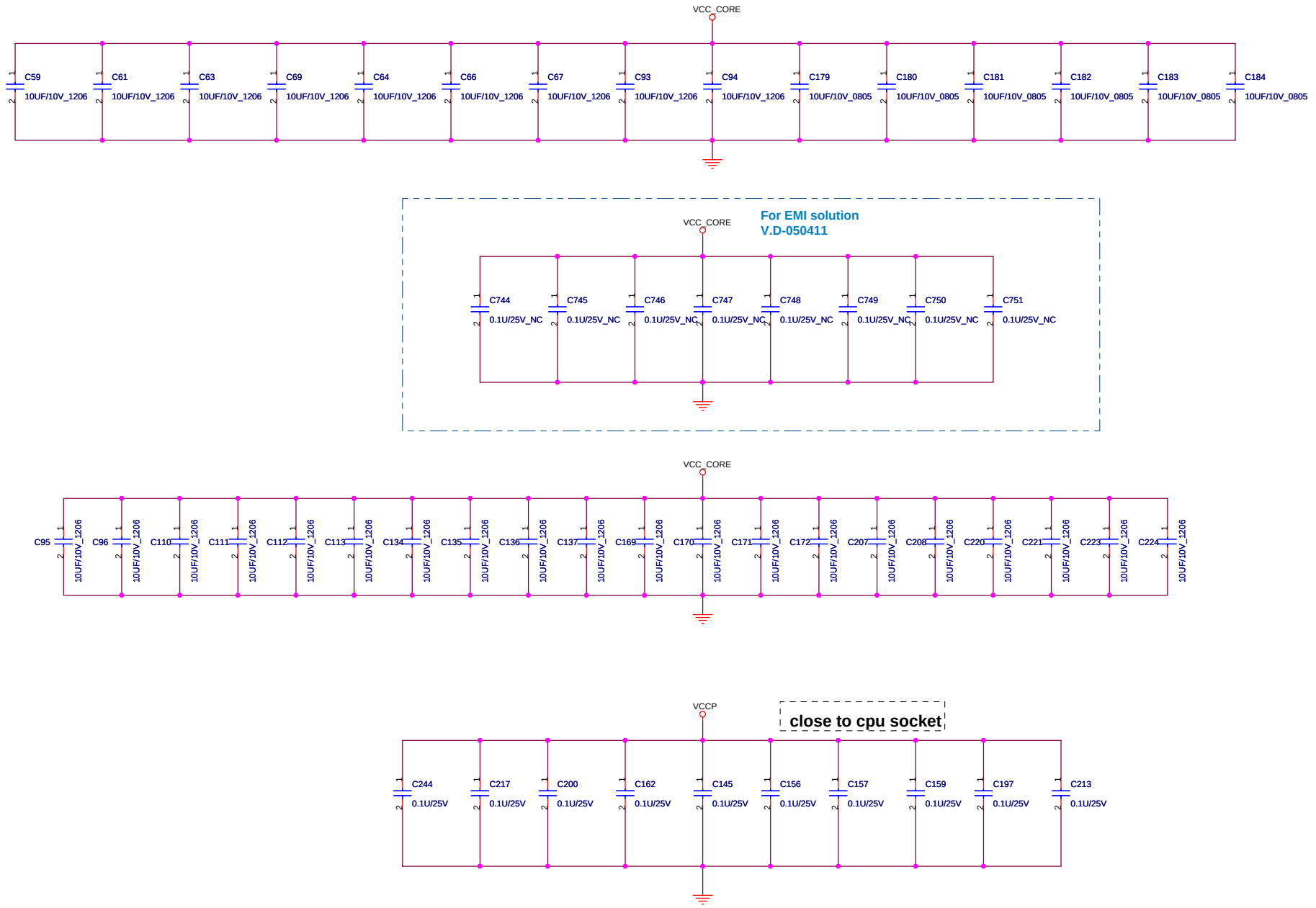
Size: A3 | Document Number: 223-1-4-01 | Rev: 1.0

Date: Friday, June 24, 2005 | Sheet 2 of 32



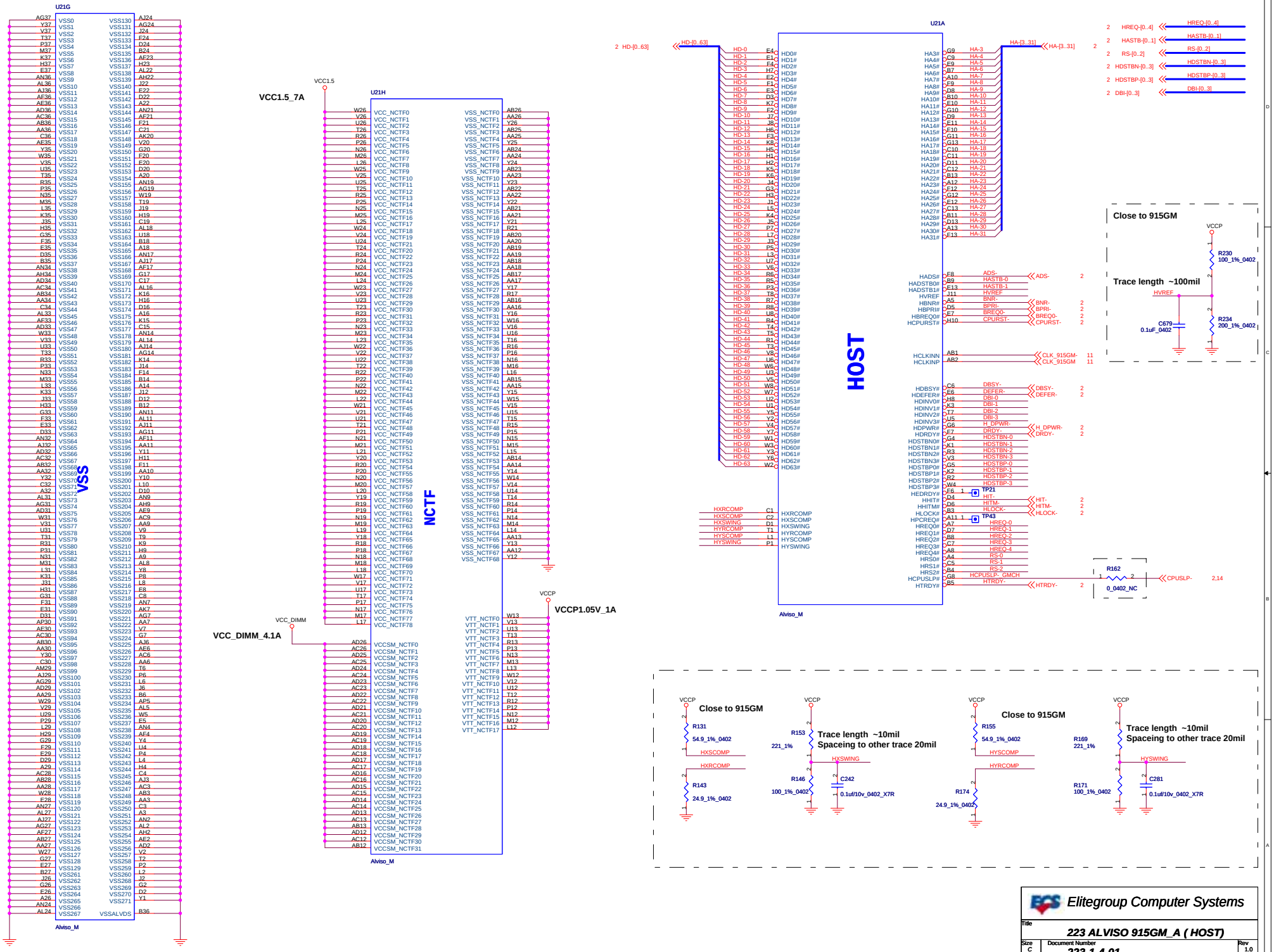
Elitegroup Computer Systems

Title	223 Dothan-2	
Size A3	Document Number 223-1-4-01	Rev 1.0
Date: Friday, June 24, 2005	Sheet 3 of 32	



Elitegroup Computer Systems

Title: 223 Dothan-3		
Size: B	Document Number: 223-1-4-01	Rev: 1.0
Date: Friday, June 24, 2005	Sheet 4 of 32	

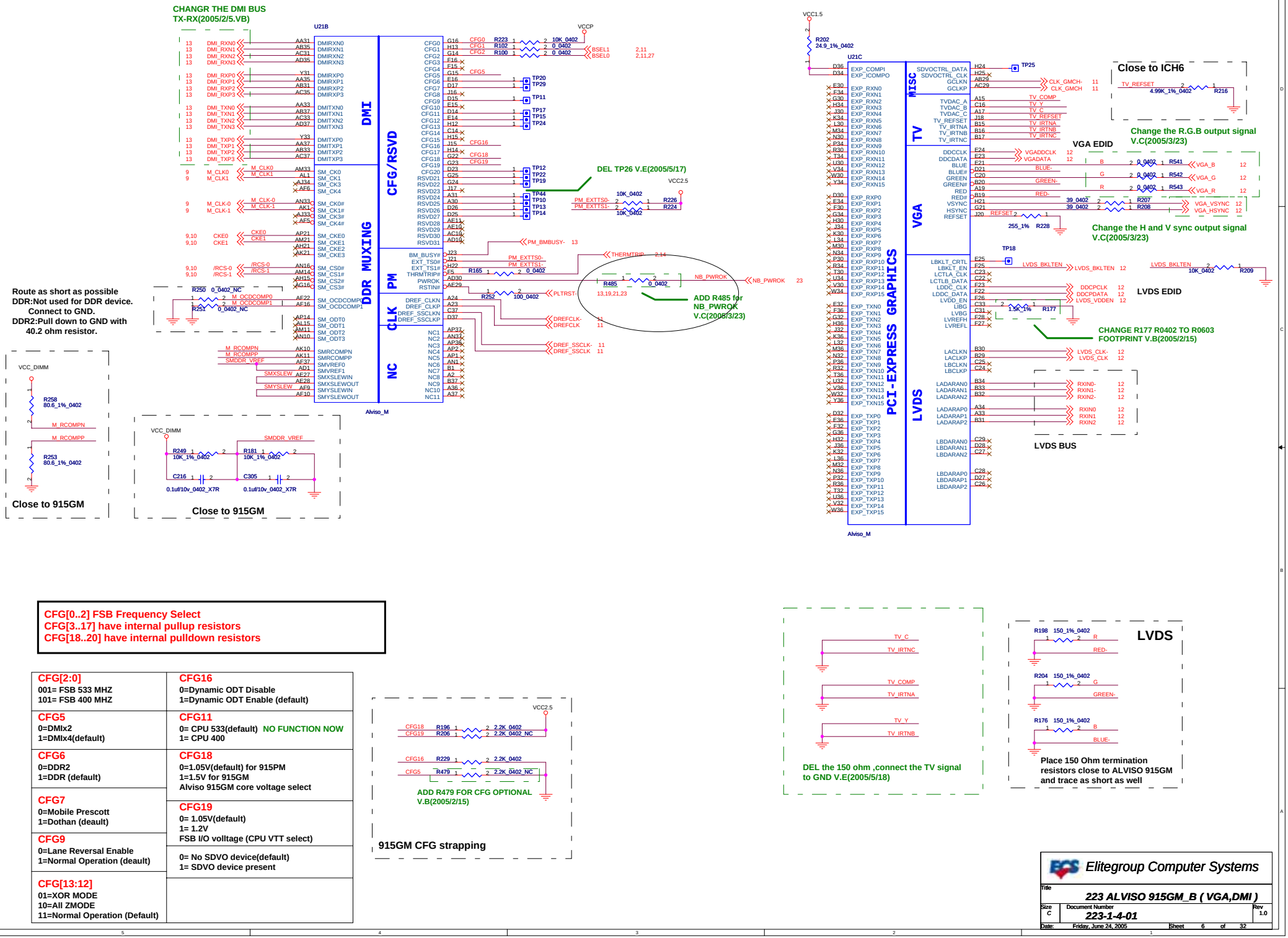


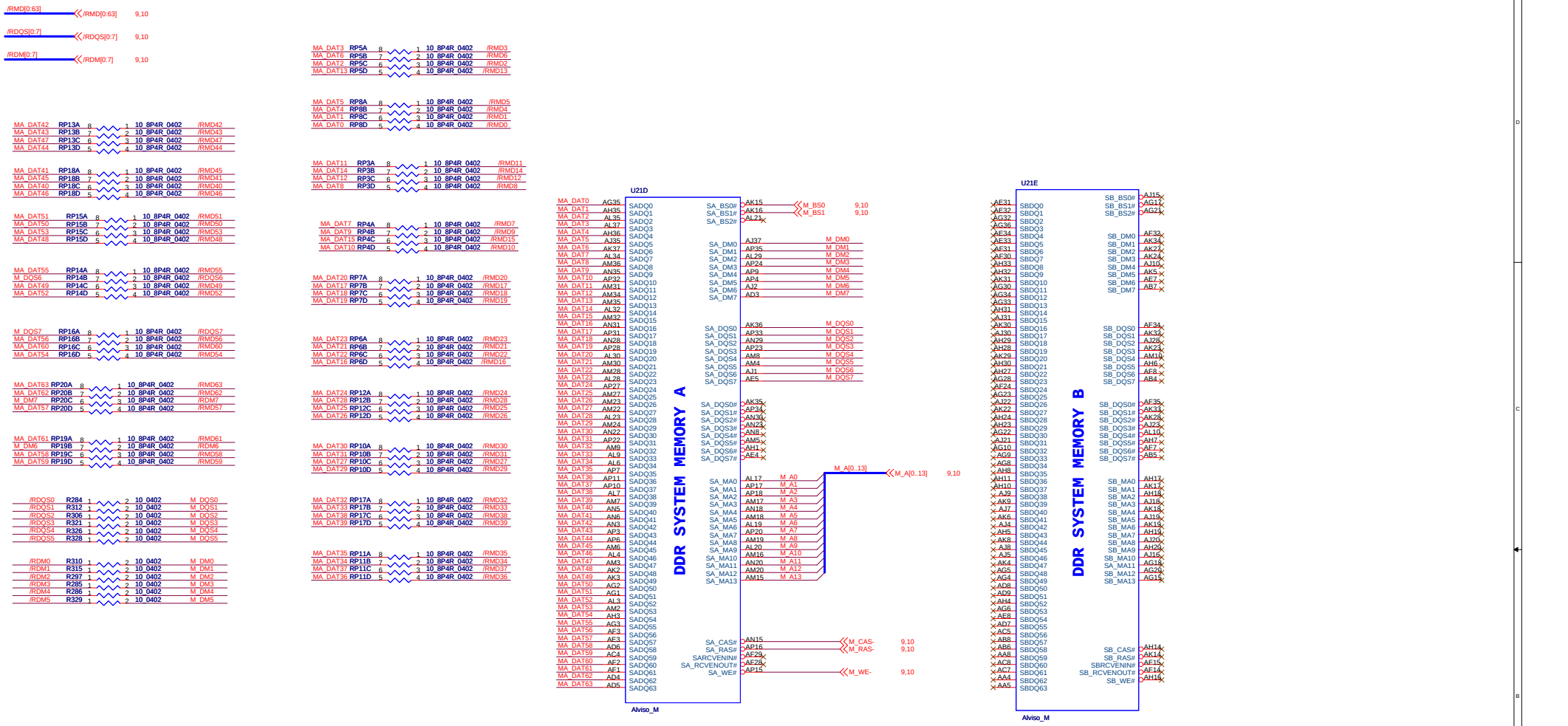
Elitegroup Computer Systems

Title: 223 ALVISO 915GM_A (HOST)

Size	Document Number	Rev
C	223-1-4-01	1.0

Date: Friday, June 24, 2005 Sheet 5 of 32


CHANGR THE DMI BUS
TX-RX(2005/2/5.VB)
U21B
DMI
CFG/RSVD
DDR MUXING
PM
CLK
NC
Alviso_M
DEL TP26 V.E(2005/5/17)
ADD R485 for
NB_PWROK
V.C(2006/3/23)
Route as short as possible
DDR:Not used for DDR device.
Connect to GND.
DDR2:Pull down to GND with
40.2 ohm resistor.
Close to 915GM
Close to 915GM
U21C
PCI-EXPRESS GRAPHICS
MISC
TV
VGA
LVDS
Close to ICH6
Change the R.G.B output signal
V.C(2005/3/23)
VGA EDID
Change the H and V sync output signal
V.C(2005/3/23)
LVDS EDID
CHANGE R177 R0402 TO R0603
FOOTPRINT V.B(2005/2/15)
LVDS BUS
CFG[0..2] FSB Frequency Select
CFG[3..17] have internal pullup resistors
CFG[18..20] have internal pulldown resistors
CFG[2:0]
001= FSB 533 MHZ
101= FSB 400 MHZ
CFG16
0=Dynamic ODT Disable
1=Dynamic ODT Enable (default)
CFG5
0=DMIx2
1=DMIx4(default)
CFG11
0= CPU 533(default) NO FUNCTION NOW
1= CPU 400
CFG6
0=DDR2
1=DDR (default)
CFG18
0=1.05V(default) for 915PM
1=1.5V for 915GM
Alviso 915GM core voltage select
CFG7
0=Mobile Prescott
1=Dothan (deault)
CFG19
0= 1.05V(default)
1= 1.2V
FSB I/O volltage (CPU VTT select)
CFG9
0=Lane Reversal Enable
1=Normal Operation (deault)
0= No SDVO device(default)
1= SDVO device present
CFG[13:12]
01=XOR MODE
10=All ZMODE
11=Normal Operation (Default)
ADD R479 FOR CFG OPTIONAL
V.B(2005/2/15)
915GM CFG strapping
DEL the 150 ohm ,connect the TV signal
to GND V.E(2005/5/18)
LVDS
Place 150 Ohm termination
resistors close to ALVISO 915GM
and trace as short as well
Elitegroup Computer Systems
223 ALVISO 915GM_B (VGA,DMI)
223-1-4-01
Friday, June 24, 2005
Sheet 6 of 32

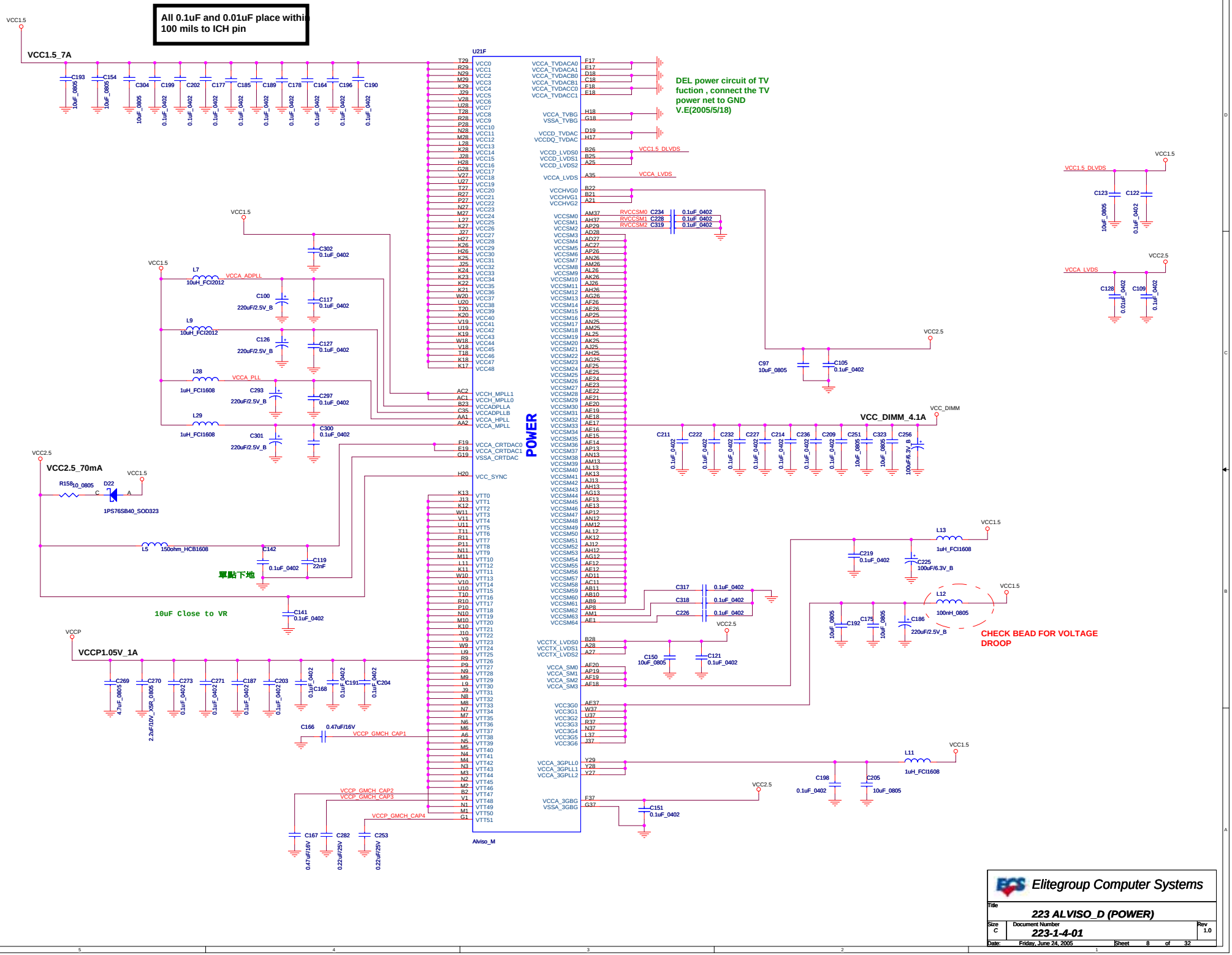


Elitegroup Computer Systems

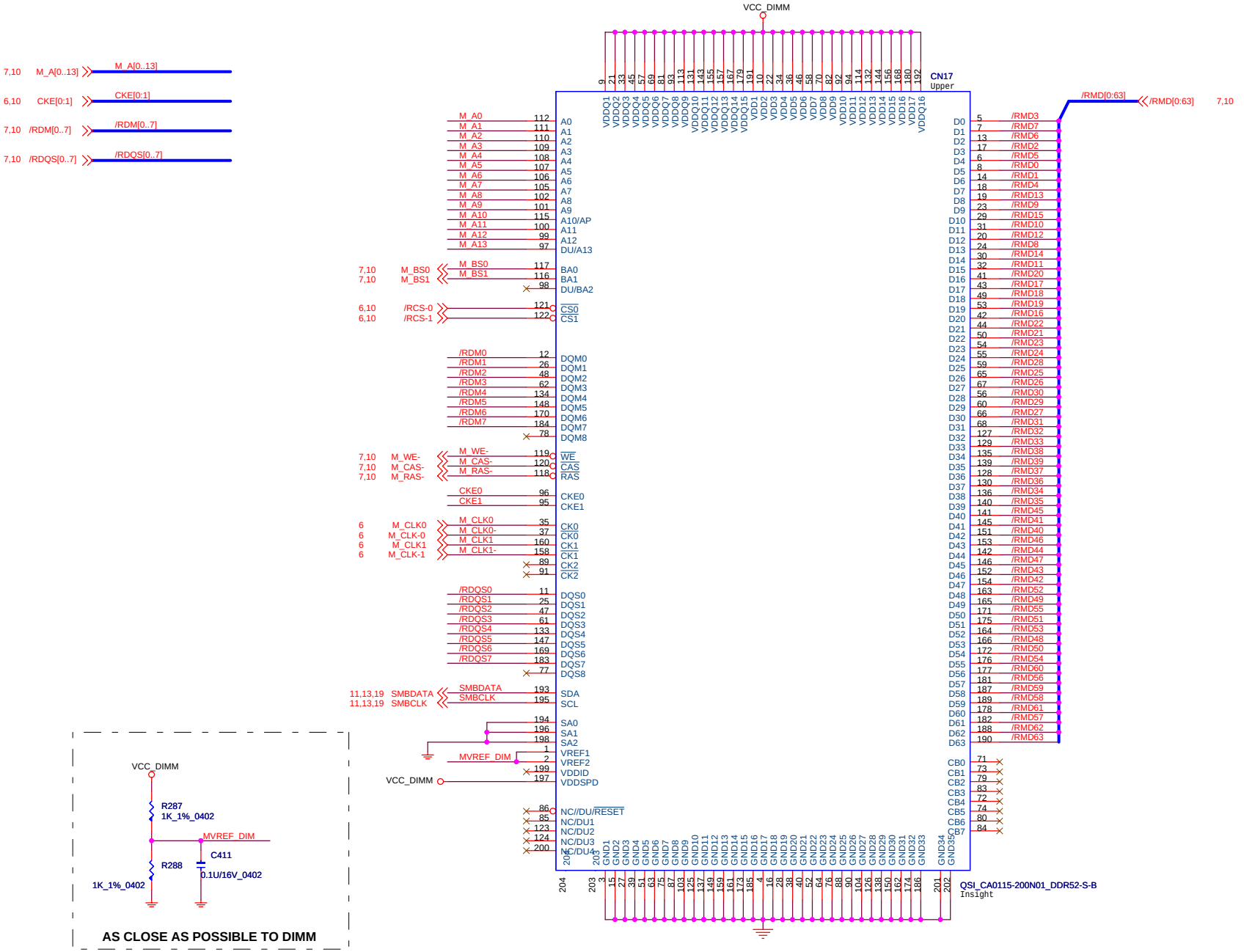
Title: 223 ALVISO_C (DDR)

Size	Document Number	Rev
C	223-1-4-01	1.0

Date: Friday, June 24, 2005 Sheet 7 of 32



Elitegroup Computer Systems			
Title: 223 ALVISO_D (POWER)			
Size: C	Document Number: 223-1-4-01		Rev: 1.0
Date: Friday, June 24, 2005	Sheet 8 of 32		



Elitegroup Computer Systems

Title	223 DDR SODIMM	
Size: A3	Document Number: 223-1-4-01	Rev: 1.0
Date: Friday, June 24, 2005	Sheet 9 of 32	

DDR Parallel Termination

/RMD[0..63] /RMD[0..63] 7,9
/RDQS[0..7] /RDQS[0..7] 7,9
M_A[0..13] M_A[0..13] 7,9
/RCS-[0..1] /RCS-[0..1] 6,9
CKE[0:1] CKE[0:1] 6,9
M_BS[0..1] M_BS[0..1] 7,9
/RDM[0..7] /RDM[0..7] 7,9

DDR_VTT

RP21A 8 1 56_8P4R_0402 /RMD5
RP21B 7 2 56_8P4R_0402 /RMD0
RP21C 6 3 56_8P4R_0402 /RDM0
RP21D 5 4 56_8P4R_0402 /RMD1

RP23A 8 1 56_8P4R_0402 /RMD6
RP23B 7 2 56_8P4R_0402 /RDQS0
RP23C 6 3 56_8P4R_0402 /RMD7
RP23D 5 4 56_8P4R_0402 /RMD3

RP24A 8 1 56_8P4R_0402 /RMD12
RP24B 7 2 56_8P4R_0402 /RMD8
RP24C 6 3 56_8P4R_0402 /RDM1
RP24D 5 4 56_8P4R_0402 /RMD14

RP25A 8 1 56_8P4R_0402 /RMD10
RP25B 7 2 56_8P4R_0402 /RDQS1
RP25C 6 3 56_8P4R_0402 /RMD9
RP25D 5 4 56_8P4R_0402 /RMD13

RP27A 8 1 56_8P4R_0402 /RMD16
RP27B 7 2 56_8P4R_0402 /RMD22
RP27C 6 3 56_8P4R_0402 /RDM2
RP27D 5 4 56_8P4R_0402 /RMD21

RP26A 8 1 56_8P4R_0402 /RDQS2
RP26B 7 2 56_8P4R_0402 /RMD18
RP26C 6 3 56_8P4R_0402 /RMD17
RP26D 5 4 56_8P4R_0402 /RMD20

RP29A 8 1 56_8P4R_0402 /RMD26
RP29B 7 2 56_8P4R_0402 /RDQS3
RP29C 6 3 56_8P4R_0402 /RMD28
RP29D 5 4 56_8P4R_0402 /RMD24

RP28A 8 1 56_8P4R_0402 /RMD30
RP28B 7 2 56_8P4R_0402 /RMD29
RP28C 6 3 56_8P4R_0402 /RDM3
RP28D 5 4 56_8P4R_0402 /RMD27

RP34A 8 1 56_8P4R_0402 /RMD37
RP34B 7 2 56_8P4R_0402 /RMD36
RP34C 6 3 56_8P4R_0402 /RMD34
RP34D 5 4 56_8P4R_0402 /RMD35

RP36A 8 1 56_8P4R_0402 /RDQS4
RP36B 7 2 56_8P4R_0402 /RMD39
RP36C 6 3 56_8P4R_0402 /RMD38
RP36D 5 4 56_8P4R_0402 /RMD33

RP37A 8 1 56_8P4R_0402 /RMD44
RP37B 7 2 56_8P4R_0402 /RMD47
RP37C 6 3 56_8P4R_0402 /RMD43
RP37D 5 4 56_8P4R_0402 /RMD42

RP42A 8 1 56_8P4R_0402 /RMD52
RP42B 7 2 56_8P4R_0402 /RMD46
RP42C 6 3 56_8P4R_0402 /RMD40
RP42D 5 4 56_8P4R_0402 /RDM5

RP43A 8 1 56_8P4R_0402 /RMD51
RP43B 7 2 56_8P4R_0402 /RMD55
RP43C 6 3 56_8P4R_0402 /RDQS6
RP43D 5 4 56_8P4R_0402 /RMD49

RP38A 8 1 56_8P4R_0402 /RMD53
RP38B 7 2 56_8P4R_0402 /RMD48
RP38C 6 3 56_8P4R_0402 /RDM6
RP38D 5 4 56_8P4R_0402 /RMD50

RP48A 8 1 56_8P4R_0402
RP48B 7 2 56_8P4R_0402 /RMD63
RP48C 6 3 56_8P4R_0402 /RMD58
RP48D 5 4 56_8P4R_0402 /RMD59

RP40A 8 1 56_8P4R_0402 /RMD61
RP40B 7 2 56_8P4R_0402 /RMD57
RP40C 6 3 56_8P4R_0402 /RDM7
RP40D 5 4 56_8P4R_0402 /RMD62

R305 1 2 56_0402 /RMD2
R308 1 2 56_0402 /RMD15
R309 1 2 56_0402 /RMD19
R311 1 2 56_0402 /RMD25

DDR_VTT

RP35A 8 1 56_8P4R_0402 /RMD32
RP35B 7 2 56_8P4R_0402 /RCS-0
RP35C 6 3 56_8P4R_0402 M_WE- M_WE- 7,9
RP35D 5 4 56_8P4R_0402 M_BS0

RP33A 8 1 56_8P4R_0402 M_A10
RP33B 7 2 56_8P4R_0402 M_A1
RP33C 6 3 56_8P4R_0402 M_A3
RP33D 5 4 56_8P4R_0402 M_A5

C465 1 2 10UF/10V_1206

RP32A 8 1 56_8P4R_0402 M_BS1
RP32B 7 2 56_8P4R_0402 M_RAS- M_RAS- 7,9
RP32C 6 3 56_8P4R_0402 M_CAS- M_CAS- 7,9
RP32D 5 4 56_8P4R_0402 /RCS-1

RP31A 8 1 56_8P4R_0402 M_A6
RP31B 7 2 56_8P4R_0402 M_A4
RP31C 6 3 56_8P4R_0402 M_A2
RP31D 5 4 56_8P4R_0402 M_A0

R314 1 2 56_0402 CKE1
R408 1 2 56_0402 M_A11
R410 1 2 56_0402 M_A8

RP30A 8 1 56_8P4R_0402 M_A13
RP30B 7 2 56_8P4R_0402 M_A7
RP30C 6 3 56_8P4R_0402 M_A9
RP30D 5 4 56_8P4R_0402 M_A12

RP41A 8 1 56_8P4R_0402 /RDQS5
RP41B 7 2 56_8P4R_0402 /RMD45
RP41C 6 3 56_8P4R_0402 /RMD41
RP41D 5 4 56_8P4R_0402 /RDM4

RP39A 8 1 56_8P4R_0402 /RMD54
RP39B 7 2 56_8P4R_0402 /RMD60
RP39C 6 3 56_8P4R_0402 /RMD56
RP39D 5 4 56_8P4R_0402 /RDQS7

R396 1 2 56_0402 /RMD4
R401 1 2 56_0402 /RMD11
R403 1 2 56_0402 /RMD23
R406 1 2 56_0402 /RMD31

DDR_VTT
CKE0 R407 1 2 56_0402

DDR_VTT
C449 2 1 0.1U/16V_0402
C448 2 1 0.1U/16V_0402
C444 2 1 0.1U/16V_0402
C443 2 1 0.1U/16V_0402
C447 2 1 0.1U/16V_0402
C442 2 1 0.1U/16V_0402

DIMM DECOUPLING

DDR_VTT
C441 1 2 0.1U/16V_0402
C446 1 2 0.1U/16V_0402
C445 1 2 0.1U/16V_0402
C513 1 2 0.1U/16V_0402
C514 1 2 0.1U/16V_0402
C516 1 2 0.1U/16V_0402
C509 1 2 0.1U/16V_0402
C506 1 2 0.1U/16V_0402
C508 1 2 0.1U/16V_0402
C503 1 2 0.1U/16V_0402
C510 1 2 0.1U/16V_0402
C511 1 2 0.1U/16V_0402
C502 1 2 0.1U/16V_0402

DDR_VTT
C504 1 2 0.1U/16V_0402
C505 1 2 0.1U/16V_0402
C512 1 2 0.1U/16V_0402
C517 1 2 0.1U/16V_0402
C500 1 2 0.1U/16V_0402
C498 1 2 0.1U/16V_0402

DDR_VTT
C458 1 2 0.1U/16V_0402
C463 1 2 0.1U/16V_0402
C459 1 2 0.1U/16V_0402
C462 1 2 0.1U/16V_0402
C460 1 2 0.1U/16V_0402
C461 1 2 0.1U/16V_0402
C455 1 2 0.1U/16V_0402
C456 1 2 0.1U/16V_0402
C457 1 2 0.1U/16V_0402
C450 1 2 0.1U/16V_0402
C451 1 2 0.1U/16V_0402
C454 1 2 0.1U/16V_0402
C452 1 2 0.1U/16V_0402
C453 1 2 0.1U/16V_0402

DIMM DECOUPLING

VCC_DIMM
C431 1 2 0.1U/16V_0402
C430 1 2 0.1U/16V_0402
C429 1 2 0.1U/16V_0402
C428 1 2 0.1U/16V_0402
C432 1 2 0.1U/16V_0402
C434 1 2 0.1U/16V_0402
C433 1 2 0.1U/16V_0402
C427 1 2 0.1U/16V_0402
C426 1 2 0.1U/16V_0402
C425 1 2 0.1U/16V_0402
C435 1 2 0.1U/16V_0402
C424 1 2 0.1U/16V_0402
C423 1 2 0.1U/16V_0402
C422 1 2 0.1U/16V_0402
C320 1 2 0.1U/16V_0402
C412 1 2 0.1U/16V_0402
C390 1 2 0.1U/16V_0402
C316 1 2 0.1U/16V_0402
C394 1 2 0.1U/16V_0402
C396 1 2 0.1U/16V_0402
C397 1 2 0.1U/16V_0402
C399 1 2 0.1U/16V_0402
C370 1 2 0.1U/16V_0402
C371 1 2 0.1U/16V_0402
C374 1 2 0.1U/16V_0402
C382 1 2 0.1U/16V_0402
C383 1 2 0.1U/16V_0402
C387 1 2 0.1U/16V_0402
C389 1 2 0.1U/16V_0402
C366 1 2 0.1U/16V_0402
C401 1 2 0.1U/16V_0402

DDR_VTT
C497 1 2 0.1U/16V_0402
C496 1 2 0.1U/16V_0402
C495 1 2 0.1U/16V_0402
C494 1 2 0.1U/16V_0402
C478 1 2 0.1U/16V_0402
C421 1 2 0.1U/16V_0402
C488 1 2 0.1U/16V_0402

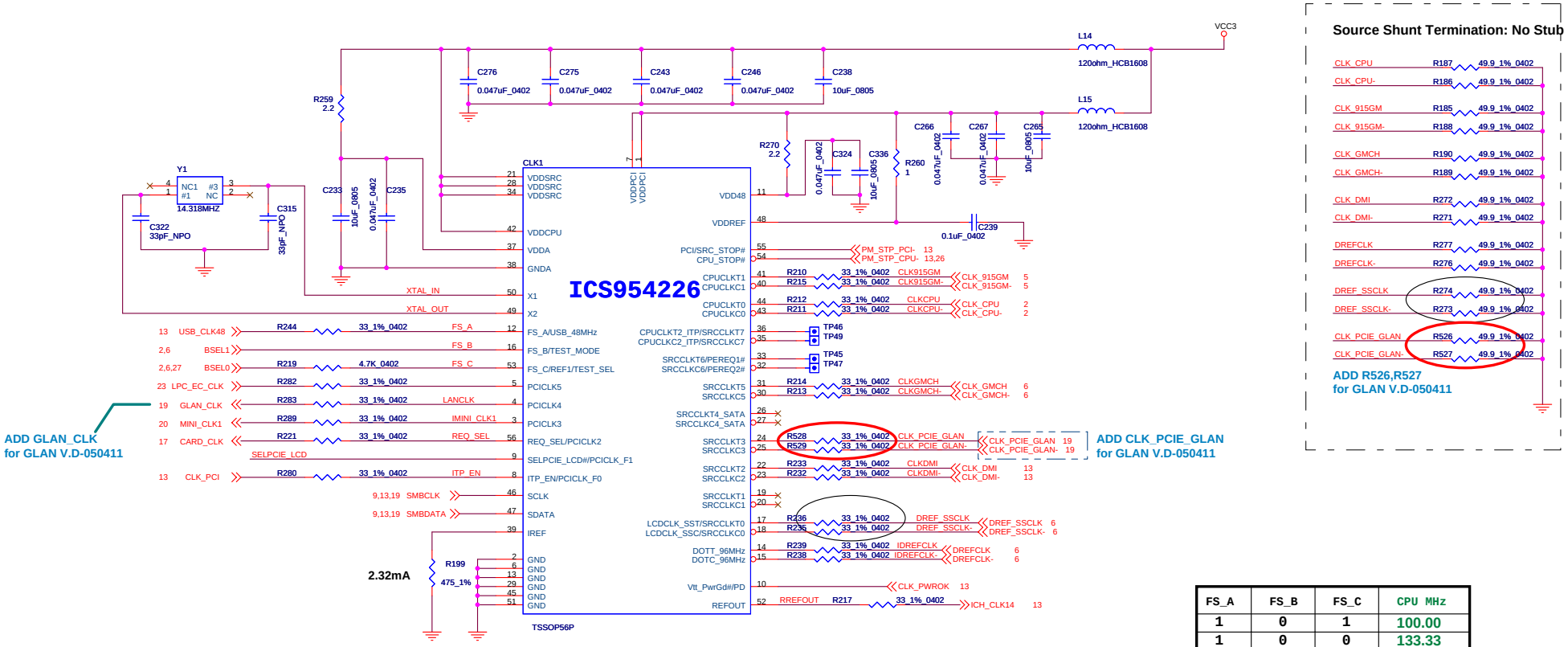
DDR_VTT
C420 1 2 0.1U/16V_0402
C485 1 2 0.1U/16V_0402
C483 1 2 0.1U/16V_0402
C419 1 2 0.1U/16V_0402
C418 1 2 0.1U/16V_0402
C481 1 2 0.1U/16V_0402
C479 1 2 0.1U/16V_0402

Elitegroup Computer Systems

Title: 223 DDR Termination

Size: A3 | Document Number: 223-1-4-01 | Rev: 1.0

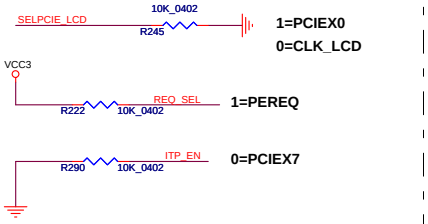
Date: Friday, June 24, 2005 | Sheet 10 of 32



Source Shunt Termination: No Stub

FS_A	FS_B	FS_C	CPU MHz
1	0	1	100.00
1	0	0	133.33
1	1	1	200.00
1	1	0	166.66
0	0	1	333.33
0	0	0	266.66
0	1	1	400.00
0	1	0	200.00

Hardware Strap, No Stub

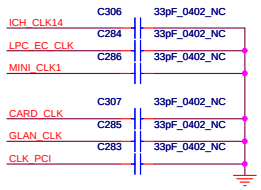


ITP_EN
0=PCIEX
1=CPU_TTP

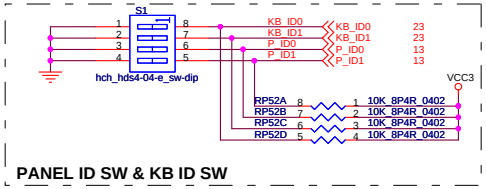
REQ_SEL
0=PCIEX
1=PEREQ

SELPCIE_LCD
0=LCDCLK
1=PCIEX

12/21

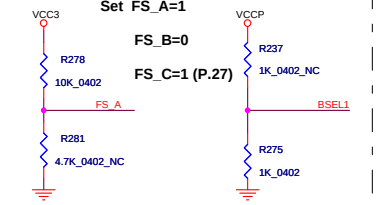


No Stub, No Stuff



PANEL ID SW & KB ID SW

Set FS_A=1



Title	223 CLOCK GENERATOR
Size	Custom
Document Number	223-1-4-01
Rev	1.0
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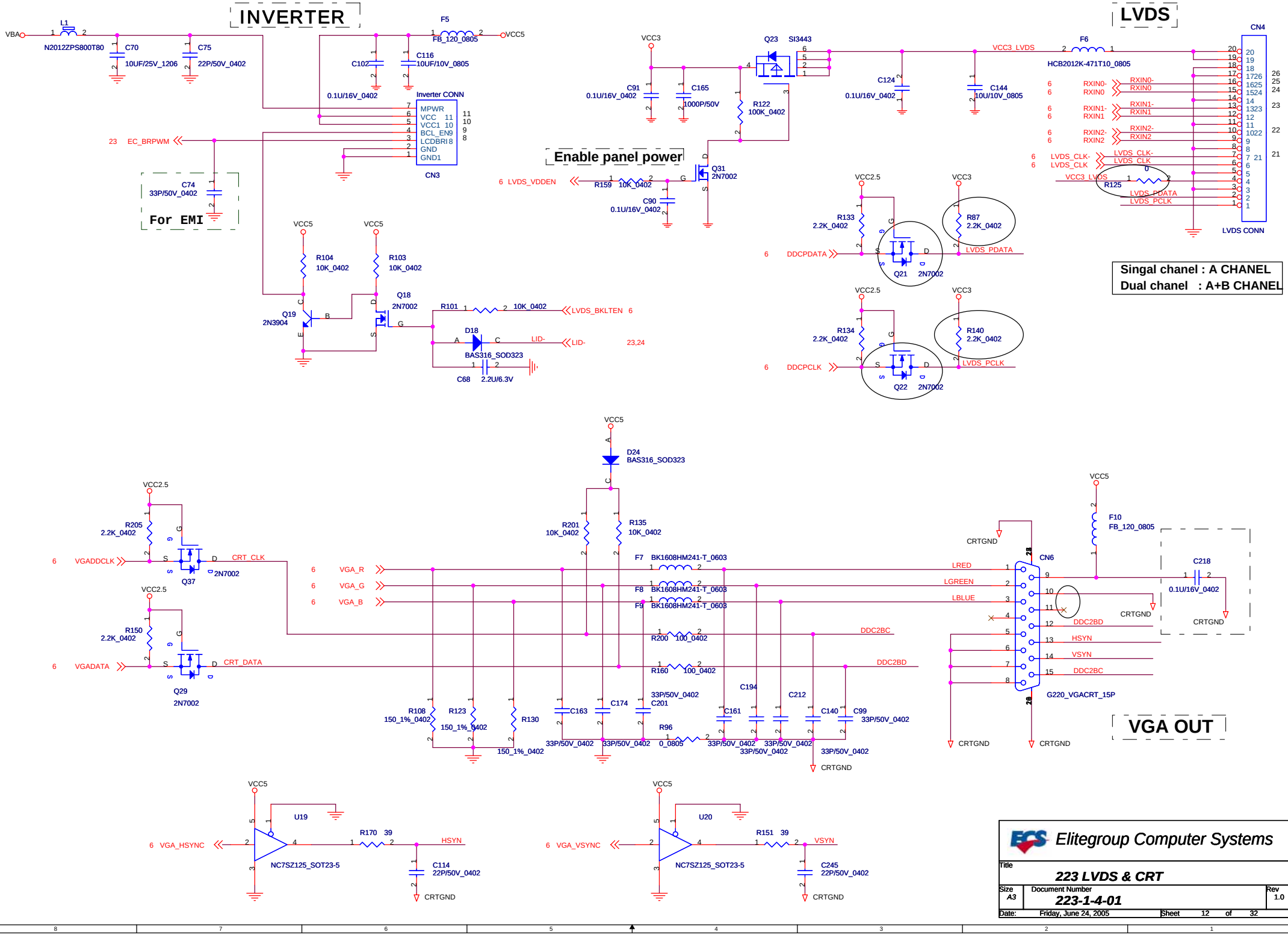
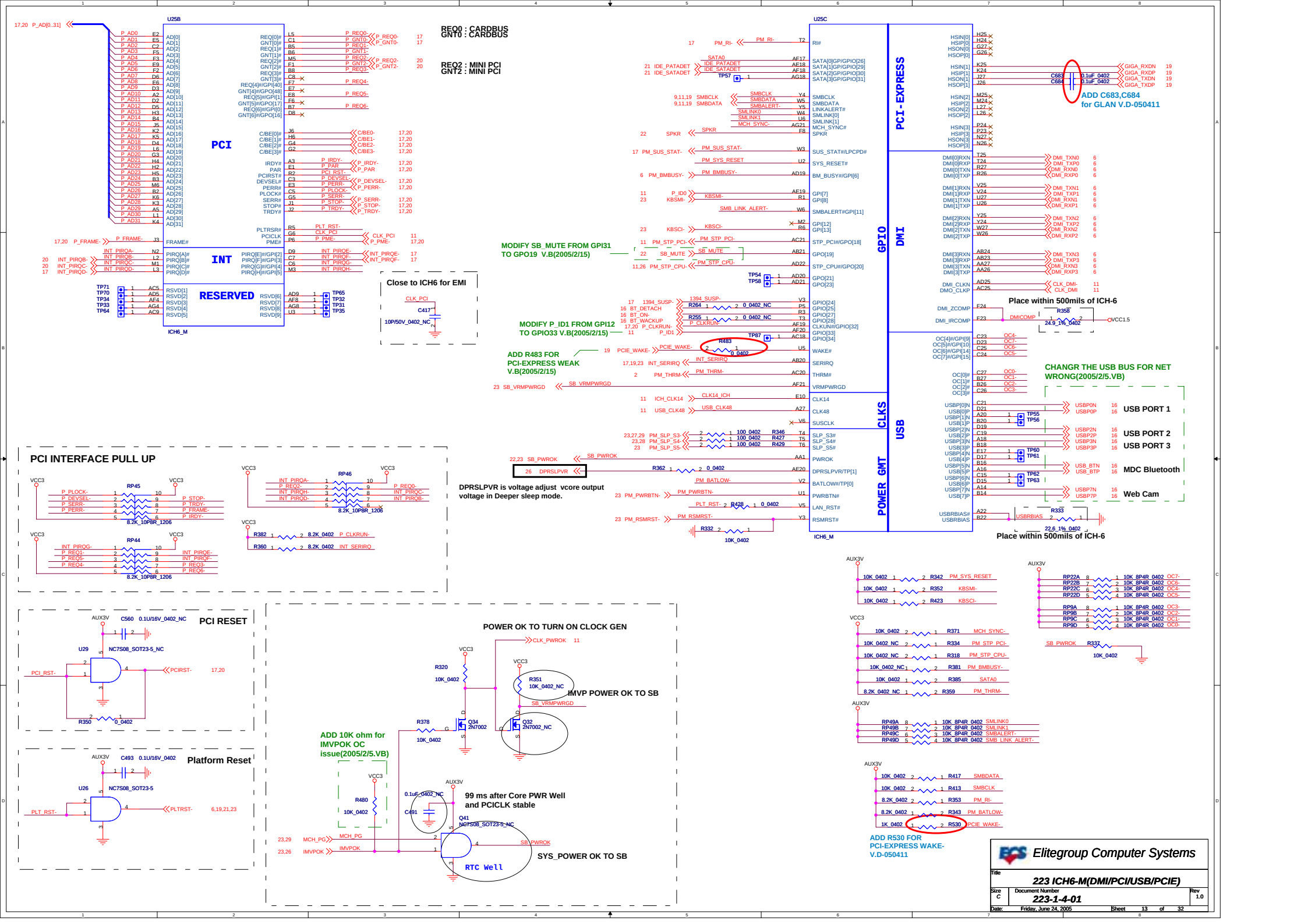
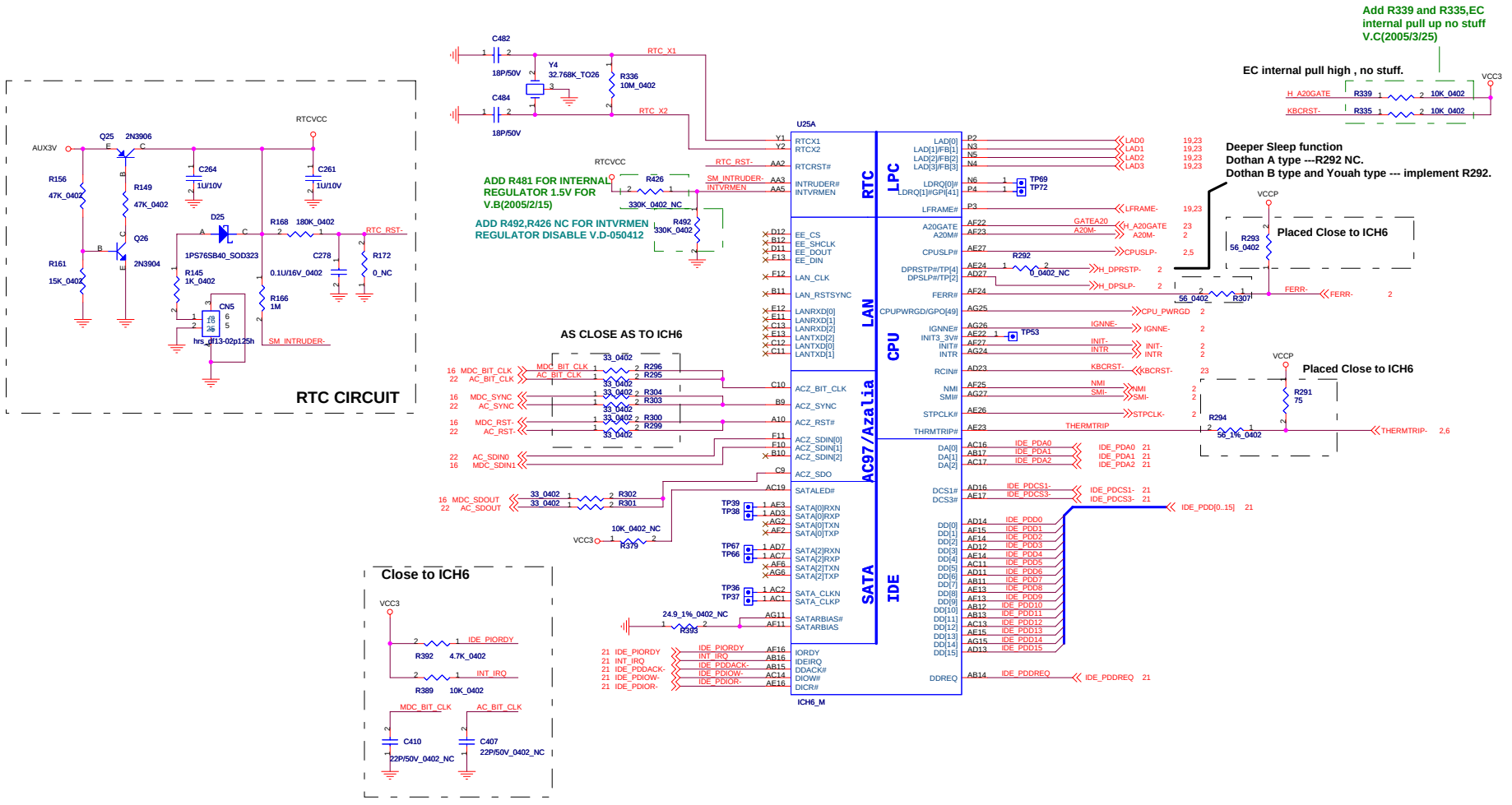
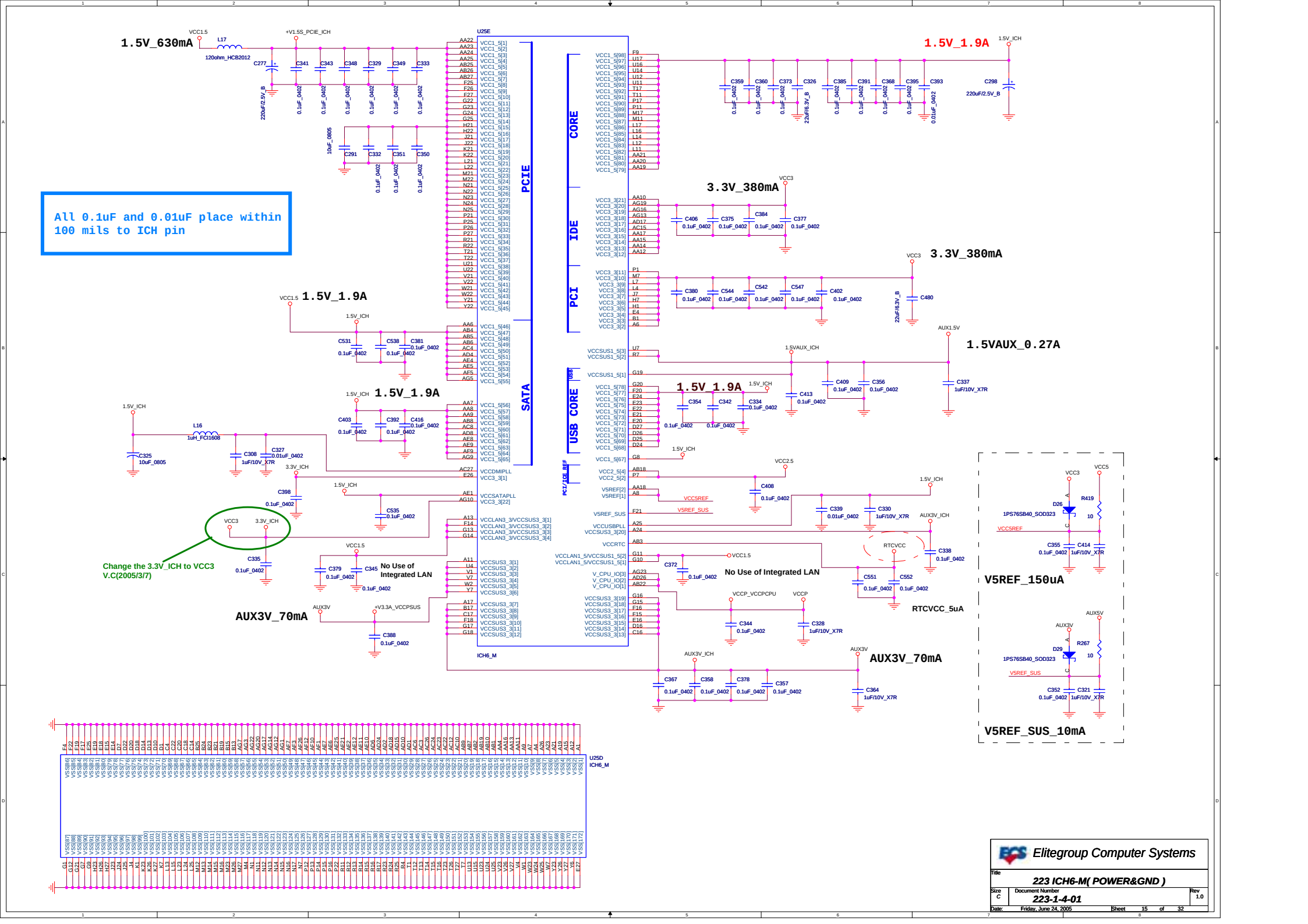

INVERTER
LVDS
VBA
L1
N2012ZPS800T80
C70
10UF/25V_1206
C75
22P/50V_0402
F5
FB_120_0805
VCC5
C102
0.1U/16V_0402
C116
10UF/10V_0805
Inverter CONN
MPWR
VCC
VCC1
BCL_EN
LCDBRI
GND
GND1
CN3
23 EC_BRPWM
C74
33P/50V_0402
For EMI
VCC3
C91
0.1U/16V_0402
C165
1000P/50V
Q23 SI3443
R122
100K_0402
C124
0.1U/16V_0402
VCC3_LVDS
C144
10U/10V_0805
F6
HCB2012K-471T10_0805
CN4
RXIN0-
RXIN0
RXIN1-
RXIN1
RXIN2-
RXIN2
LVDS_CLK-
LVDS_CLK
LVDS_PDATA
LVDS_PCLK
LVDS CONN
Enable panel power
6 LVDS_VDDEN
R159 10K_0402
Q31
2N7002
C90
0.1U/16V_0402
R125
VCC2.5
R133
2.2K_0402
R87
2.2K_0402
6 DDCPDATA
Q21
2N7002
R134
2.2K_0402
R140
2.2K_0402
6 DDCPCLK
Q22
2N7002
Singal chanel : A CHANEL
Dual chanel : A+B CHANEL
R104
10K_0402
R103
10K_0402
Q18
2N7002
Q19
2N3904
R101
10K_0402
LVDS_BKLTEN 6
D18
BAS316_SOD323
LID-
23,24
C68
2.2U/6.3V
D24
BAS316_SOD323
R205
2.2K_0402
6 VGADDCLK
CRT_CLK
Q37
2N7002
R150
2.2K_0402
6 VGADATA
CRT_DATA
Q29
2N7002
R201
10K_0402
R135
10K_0402
6 VGA_R
6 VGA_G
6 VGA_B
F7 BK1608HM241-T_0603
F8 BK1608HM241-T_0603
F9 BK1608HM241-T_0603
R200 100_0402
R160 100_0402
DDC2BC
DDC2BD
R108
150_1%_0402
R123
150_1%_0402
R130
150_1%_0402
C163
33P/50V_0402
C174
33P/50V_0402
C201
33P/50V_0402
R96
0_0805
C161
33P/50V_0402
C194
33P/50V_0402
C212
33P/50V_0402
C140
33P/50V_0402
C99
33P/50V_0402
CRTGND
F10
FB_120_0805
C218
0.1U/16V_0402
CN6
LRED
LGREEN
LBLUE
DDC2BD
HSYN
VSYN
DDC2BC
G220_VGACRT_15P
VGA OUT
U19
NC7SZ125_SOT23-5
6 VGA_HSYNC
R170 39
HSYN
C114
22P/50V_0402
U20
NC7SZ125_SOT23-5
6 VGA_VSYNC
R151 39
VSYN
C245
22P/50V_0402
Elitegroup Computer Systems
Title
223 LVDS & CRT
Size A3
Document Number 223-1-4-01
Rev 1.0
Date: Friday, June 24, 2005
Sheet 12 of 32


REQ0 : CARDBUS
GNT0 : CARDBUS
REQ2 : MINI PCI
GNT2 : MINI PCI
U25B
PCI
INT
RESERVED
ICH6_M
U25C
PCI - EXPRESS
DMI
GPIO
CLKS
USB
POWER GMT
ICH6_M
MODIFY SB_MUTE FROM GPI31 TO GPO19 V.B(2005/2/15)
MODIFY P_ID1 FROM GPI12 TO GPIO33 V.B(2005/2/15)
ADD R483 FOR PCI-EXPRESS WEAK V.B(2005/2/15)
DPRSLPVR is voltage adjust vcore output voltage in Deeper sleep mode.
Close to ICH6 for EMI
ADD C683,C684 for GLAN V.D-050411
Place within 500mils of ICH-6
CHANGR THE USB BUS FOR NET WRONG(2005/2/5.VB)
USB PORT 1
USB PORT 2
USB PORT 3
MDC Bluetooth
Web Cam
PCI INTERFACE PULL UP
PCI RESET
Platform Reset
POWER OK TO TURN ON CLOCK GEN
IMVP POWER OK TO SB
ADD 10K ohm for IMVPOK OC issue(2005/2/5.VB)
99 ms after Core PWR Well and PCICLK stable
SYS_POWER OK TO SB
RTC Well
ADD R530 FOR PCI-EXPRESS WAKE-V.D-050411
Elitegroup Computer Systems
223 ICH6-M(DMI/PCI/USB/PCIE)
223-1-4-01
Friday, June 24, 2005



Elitegroup Computer Systems

Title	223 ICH6-M(CPU/RTC/IDE/ACZ)	
Size: Custom	Document Number: 223-1-4-01	Rev: 1.0
Date: Friday, June 24, 2005	Sheet 14 of 32	


1.5V_630mA
L17
120ohm_HCB2012
VCC1.5
+V1.5S_PCIE_ICH
C277
220uF/2.5V_B
C341
C343
C348
C329
C349
C333
0.1uF_0402
10uF_0805
C291
C332
C351
C350
U25E
PCIE
CORE
IDE
PCI
USB CORE
SATA
USB
PCI7_ACIE_REF
ICH6_M
1.5V_1.9A
C359
C360
C373
C326
C385
C391
C368
C395
C393
22uF/6.3V_B
0.01uF_0402
C298
220uF/2.5V_B
3.3V_380mA
VCC3
C406
C375
C384
C377
C380
C544
C542
C547
C402
C480
22uF/6.3V_B
1.5VAUX_0.27A
AUX1.5V
1.5VAUX_ICH
C409
C356
C337
1uF/10V_X7R
C531
C538
C381
C403
C392
C416
C325
10uF_0805
L16
1uH_FC1608
C308
C327
0.01uF_0402
3.3V_ICH
C398
C535
C354
C342
C334
C413
C408
C339
C330
AUX3V_ICH
C338
RTCVCC
C551
C552
RTCVCC_5uA
C372
No Use of Integrated LAN
Change the 3.3V_ICH to VCC3
V.C(2005/3/7)
C335
C379
C345
No Use of
Integrated LAN
AUX3V_70mA
AUX3V
+V3.3A_VCCPSUS
C388
VCCP_VCCPCPU
VCCP
C344
C328
C367
C358
C378
C357
C364
V5REF_150uA
R419
D26
1PS76SB40_SOD323
VCC5REF
C355
C414
V5REF_SUS_10mA
AUX5V
R267
D29
V5REF_SUS
C352
C321
All 0.1uF and 0.01uF place within
100 mils to ICH pin
U25D
ICH6_M
Elitegroup Computer Systems
223 ICH6-M(POWER&GND)
Size C
Document Number 223-1-4-01
Rev 1.0
Date: Friday, June 24, 2005
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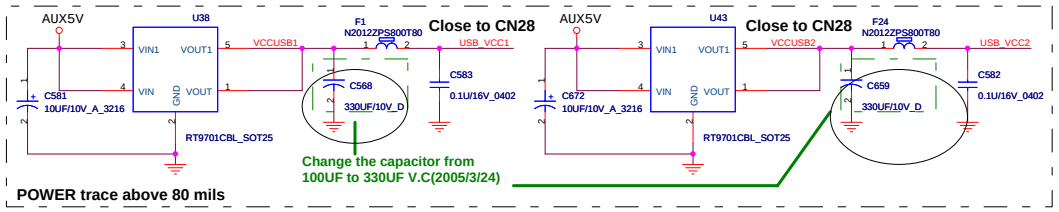
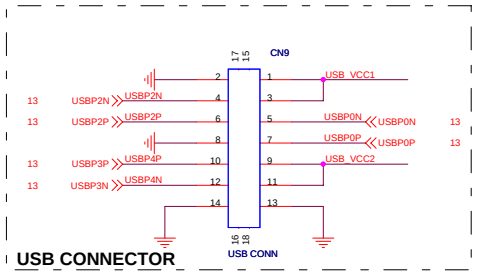
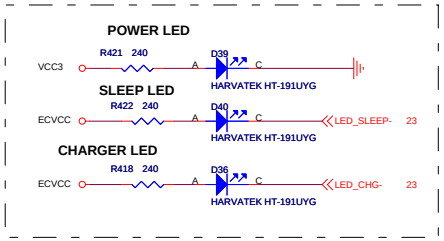
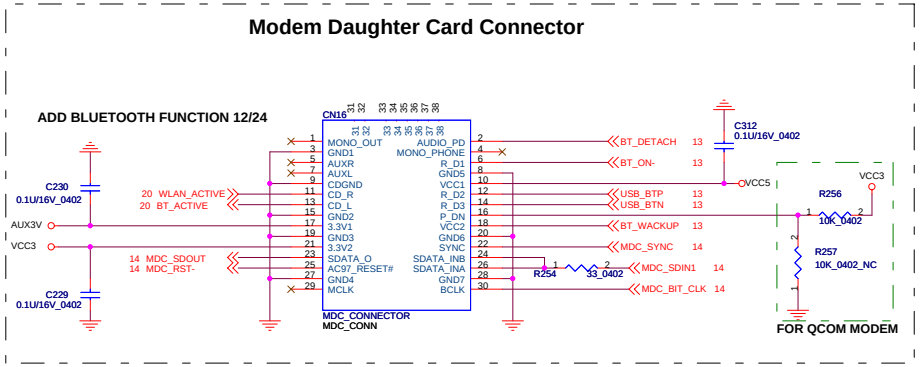
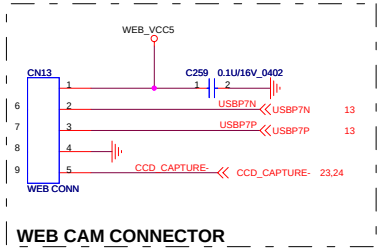
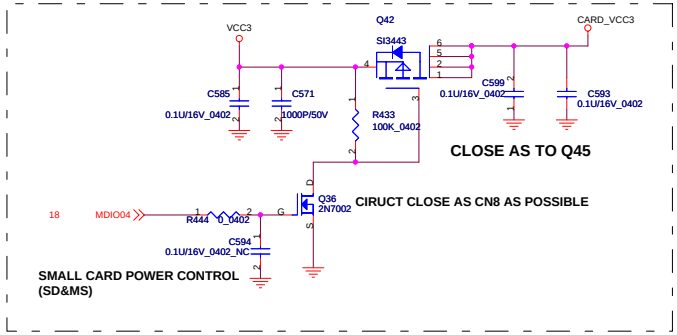


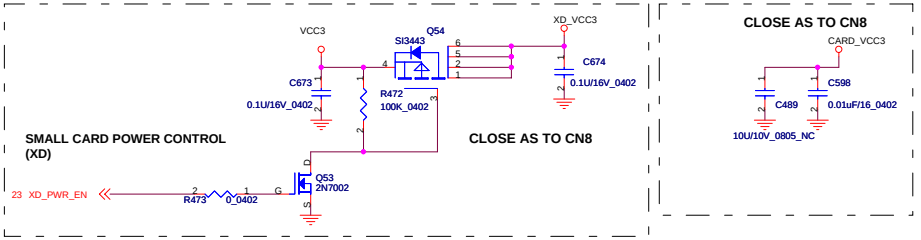


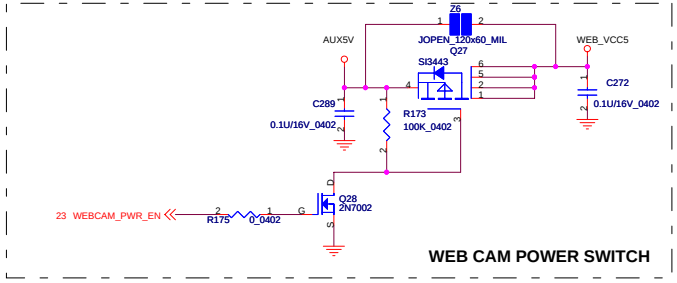


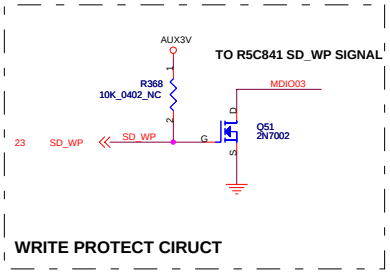


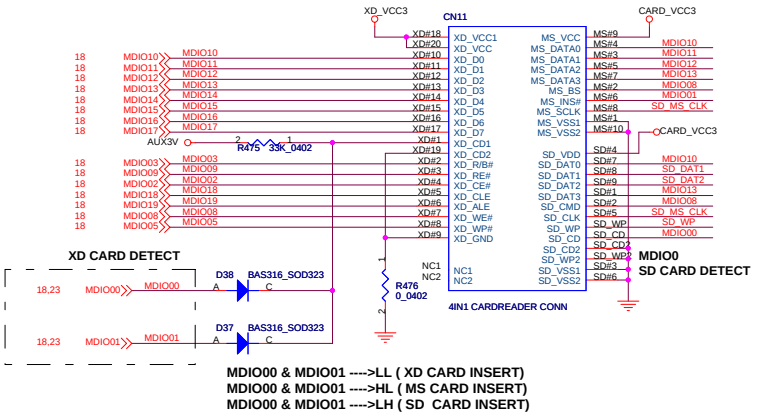


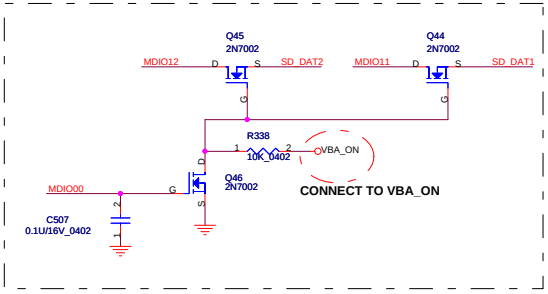


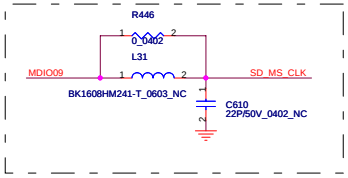










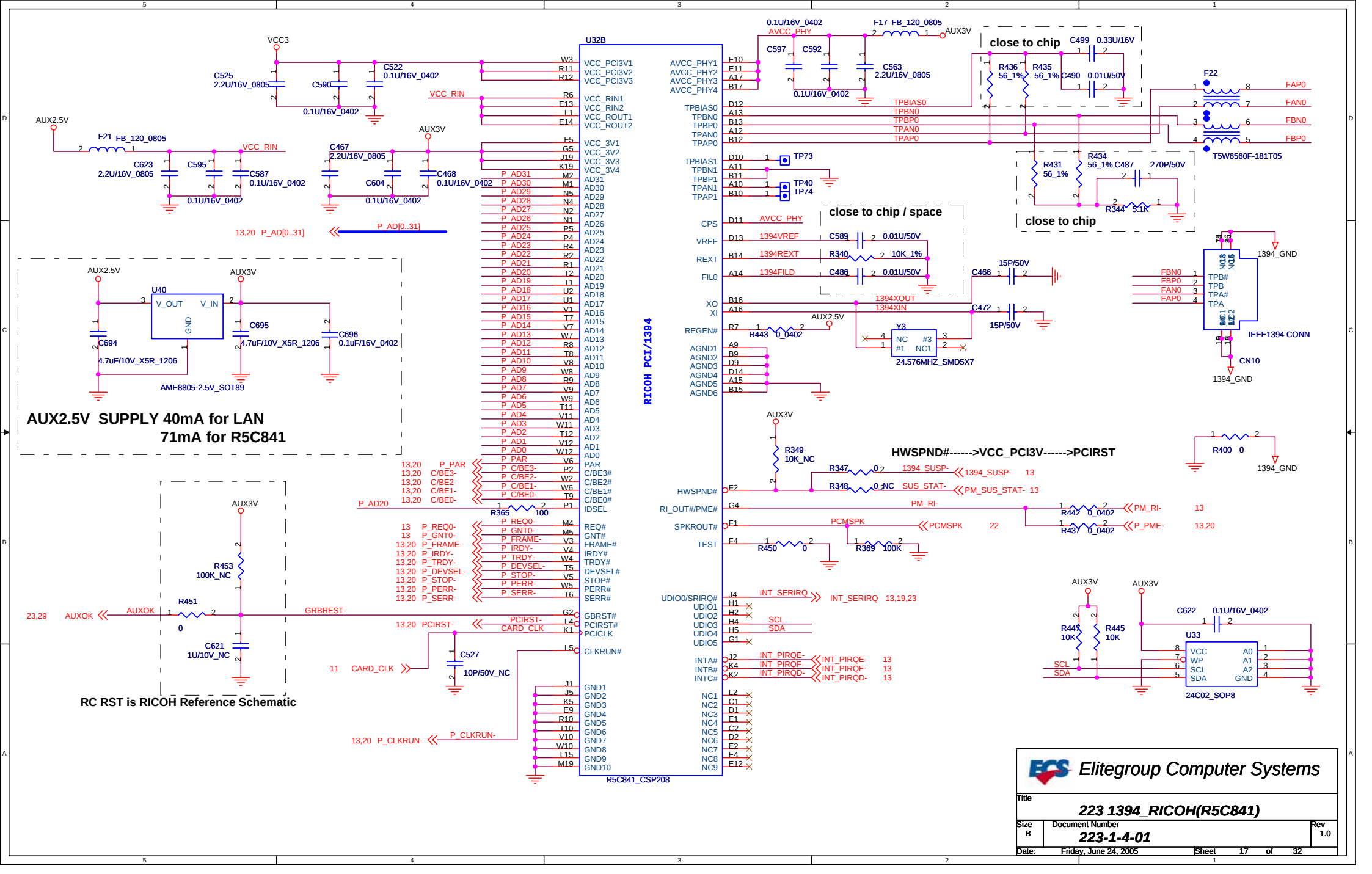


Elitegroup Computer Systems

Title: 223 USB/LED/MDC/CARDREADER

Size: Custom | Document Number: 223-1-4-01 | Rev: 1.0

Date: Friday, June 24, 2005 | Sheet 16 of 32


U32B
RICOH PCI/1394
R5C841_CSP208
AUX2.5V SUPPLY 40mA for LAN
71mA for R5C841
AME8805-2.5V_SOT89
RC RST is RICOH Reference Schematic
close to chip
close to chip / space
HWSPND#------>VCC_PCI3V------>PCIRST
IEEE1394 CONN
24.576MHZ_SMD5X7
T5W6560F-181T05
24C02_SOP8
Elitegroup Computer Systems
223 1394_RICOH(R5C841)
223-1-4-01
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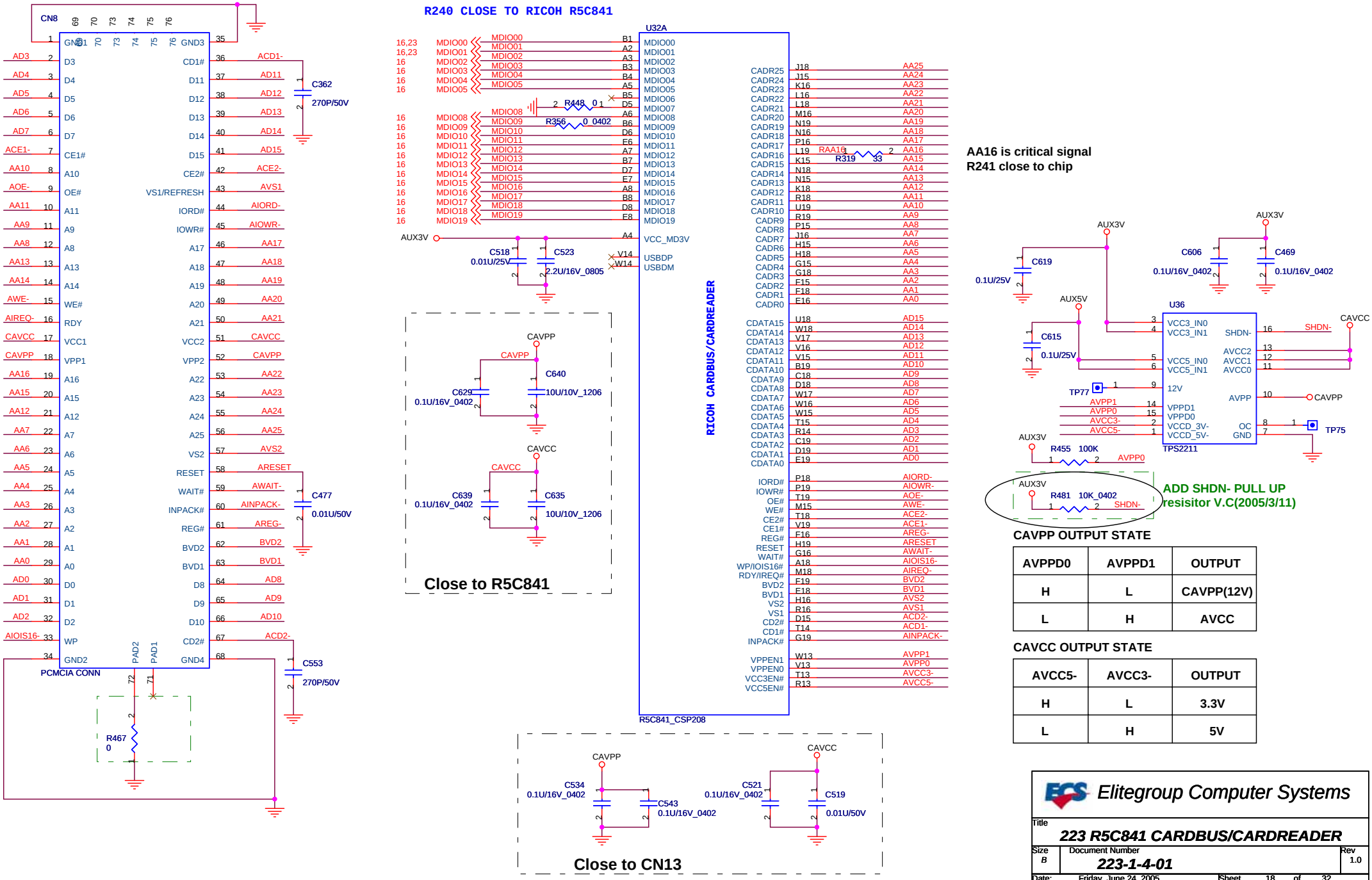


CAVPP OUTPUT STATE

AVPPD0	AVPPD1	OUTPUT
H	L	CAVPP(12V)
L	H	AVCC

CAVCC OUTPUT STATE

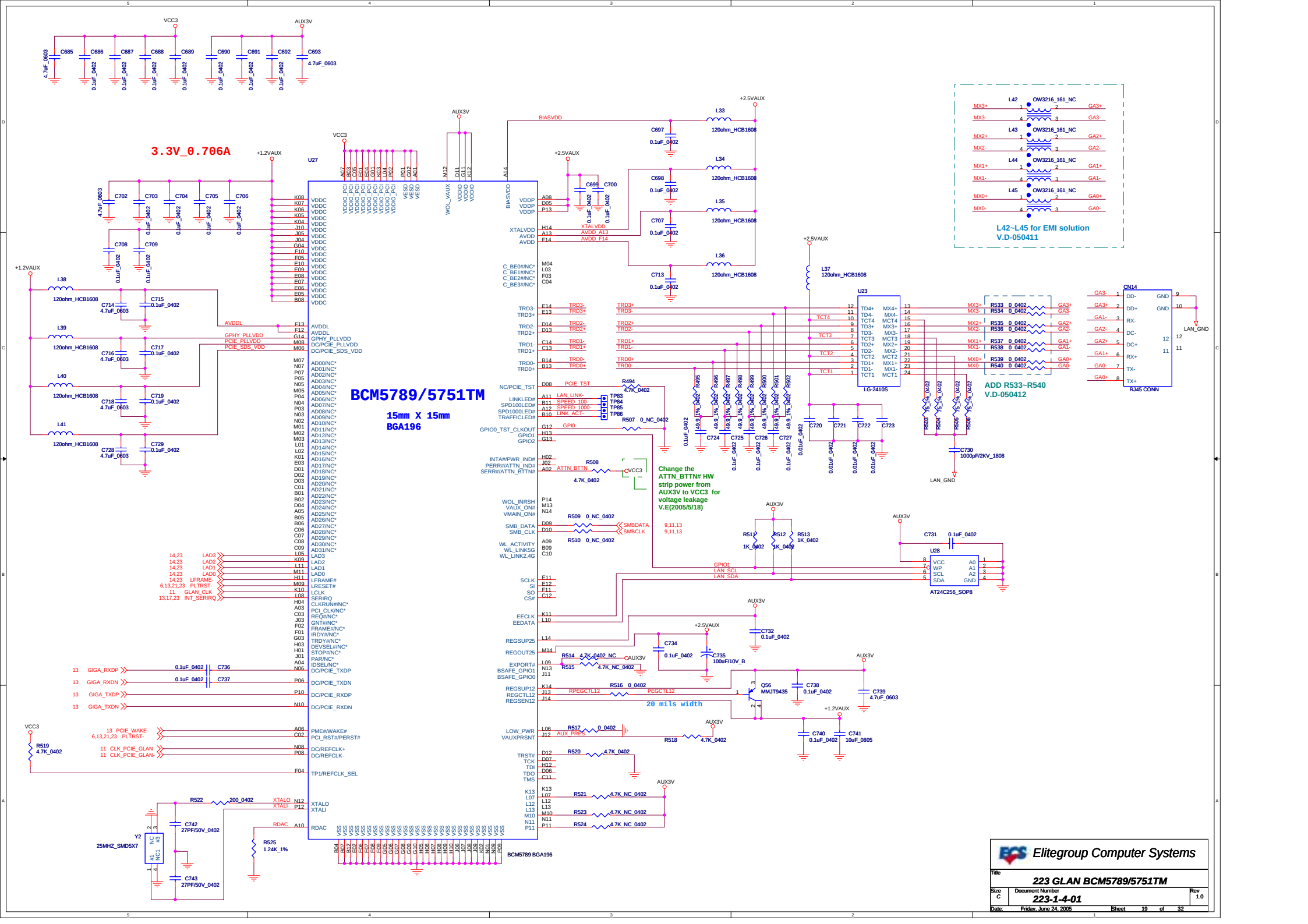
AVCC5-	AVCC3-	OUTPUT
H	L	3.3V
L	H	5V

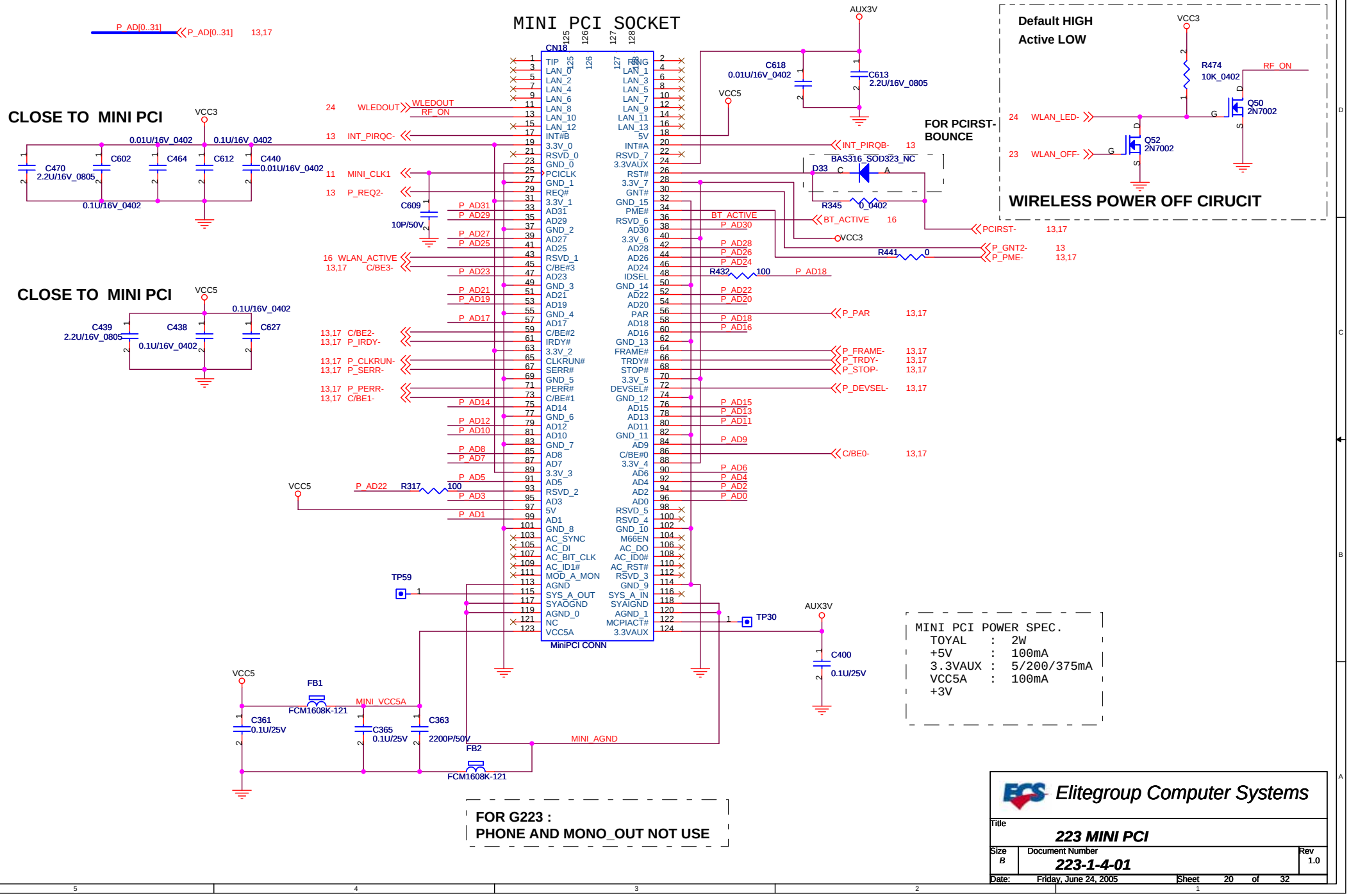
Elitegroup Computer Systems

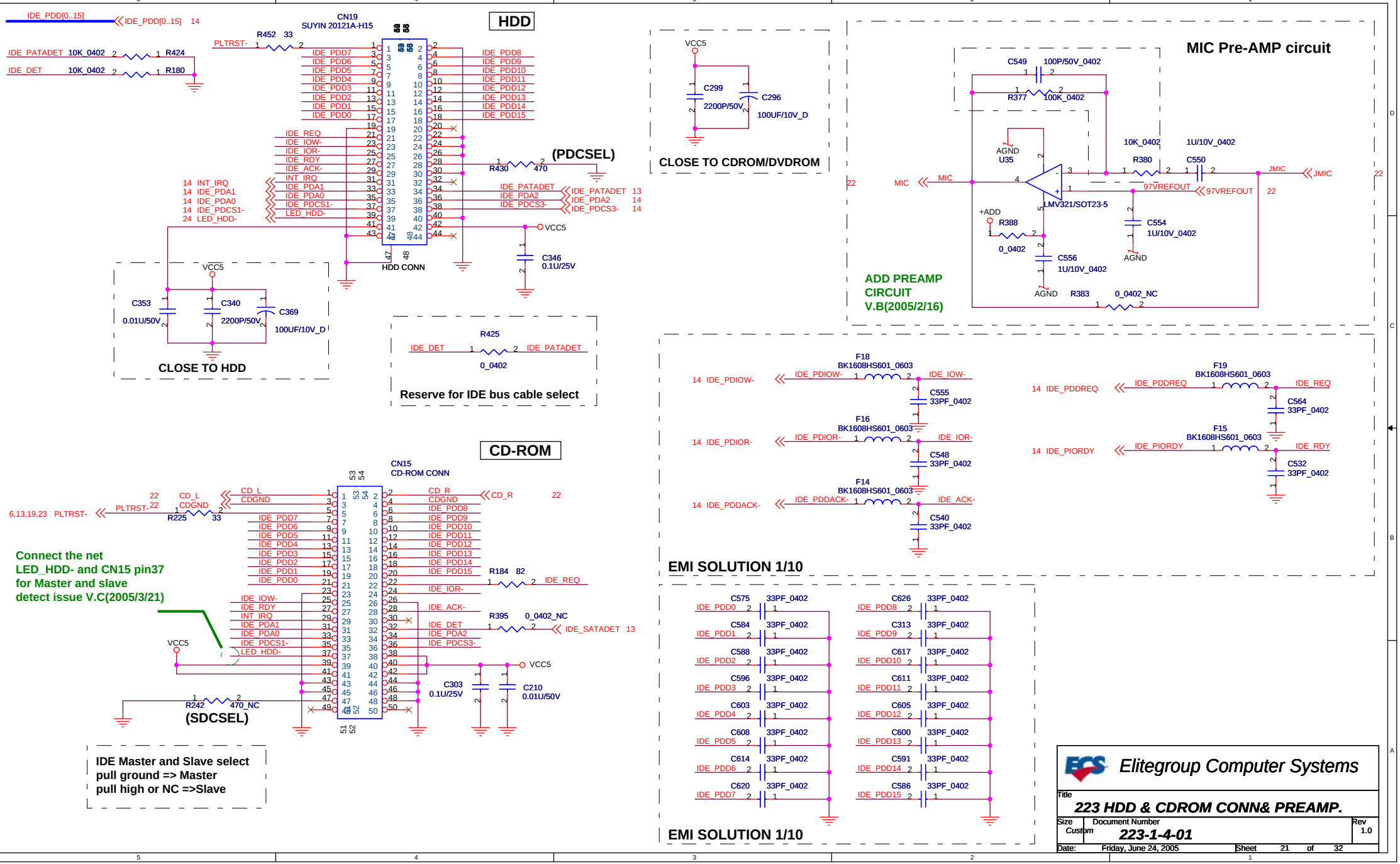
Title: 223 R5C841 CARDBUS/CARDREADER

Size: B | Document Number: 223-1-4-01 | Rev: 1.0

Date: Friday, June 24, 2005 | Sheet 18 of 32


3.3V_0.706A
BCM5789/5751TM
15mm X 15mm
BGA196
U27
BCM5789 BGA196
L42~L45 for EMI solution
V.D-050411
ADD R533~R540
V.D-050412
Change the
ATTN_BTTN# HW
strip power from
AUX3V to VCC3 for
voltage leakage
V.E(2005/5/18)
20 mils width
LG-2410S
RJ45 CONN
AT24C256_SOP8
Elitegroup Computer Systems
223 GLAN BCM5789/5751TM
223-1-4-01
Friday, June 24, 2005


MINI PCI SOCKET
CN18
MiniPCI CONN
P_AD[0..31]
P_AD[0..31] 13,17
CLOSE TO MINI PCI
CLOSE TO MINI PCI
VCC3
VCC5
AUX3V
C470 2.2U/16V_0805
C602
C464
C612
C440 0.01U/16V_0402
0.01U/16V_0402
0.1U/16V_0402
C439 2.2U/16V_0805
C438 0.1U/16V_0402
C627
C609 10P/50V
C618 0.01U/16V_0402
C613 2.2U/16V_0805
C400 0.1U/25V
C361 0.1U/25V
C365 0.1U/25V
C363 2200P/50V
FB1 FCM1608K-121
FB2 FCM1608K-121
MINI_VCC5A
MINI_AGND
WLEDOUT
RF_ON
INT_PIRQC-
MINI_CLK1
P_REQ2-
WLAN_ACTIVE
C/BE3-
C/BE2-
P_IRDY-
P_CLKRUN-
P_SERR-
P_PERR-
C/BE1-
INT_PIRQB-
BT_ACTIVE
PCIRST-
P_GNT2-
P_PME-
P_PAR
P_FRAME-
P_TRDY-
P_STOP-
P_DEVSEL-
C/BE0-
R345 0_0402
R441 0
R432 100
R317 100
D33 BAS316_SOD323_NC
FOR PCIRST-BOUNCE
Default HIGH
Active LOW
R474 10K_0402
Q50 2N7002
Q52 2N7002
WLAN_LED-
WLAN_OFF-
WIRELESS POWER OFF CIRUCIT
TP59
TP30
MINI PCI POWER SPEC.
TOYAL : 2W
+5V : 100mA
3.3VAUX : 5/200/375mA
VCC5A : 100mA
+3V
FOR G223 :
PHONE AND MONO_OUT NOT USE
Elitegroup Computer Systems
Title
223 MINI PCI
Size B
Document Number
223-1-4-01
Rev 1.0
Date: Friday, June 24, 2005
Sheet 20 of 32


HDD
CN19
SUYIN 20121A-H15
IDE_PDD[0..15]
IDE_PDD[0..15] 14
IDE_PATADET 10K_0402 R424
IDE_DET 10K_0402 R180
PLTRST- R452 33
IDE_PDD7 IDE_PDD6 IDE_PDD5 IDE_PDD4 IDE_PDD3 IDE_PDD2 IDE_PDD1 IDE_PDD0
IDE_PDD8 IDE_PDD9 IDE_PDD10 IDE_PDD11 IDE_PDD12 IDE_PDD13 IDE_PDD14 IDE_PDD15
IDE_REQ IDE_IOW- IDE_IOR- IDE_RDY IDE_ACK- INT_IRQ IDE_PDA1 IDE_PDA0 IDE_PDCS1- LED_HDD-
14 INT_IRQ
14 IDE_PDA1
14 IDE_PDA0
14 IDE_PDCS1-
24 LED_HDD-
IDE_PATADET IDE_PDA2 IDE_PDCS3-
IDE_PATADET 13
IDE_PDA2 14
IDE_PDCS3- 14
(PDCSEL)
R430 470
VCC5
C346 0.1U/25V
HDD CONN
VCC5
C353 0.01U/50V
C340 2200P/50V
C369 100UF/10V_D
CLOSE TO HDD
R425
IDE_DET IDE_PATADET
0_0402
Reserve for IDE bus cable select
VCC5
C299 2200P/50V
C296 100UF/10V_D
CLOSE TO CDROM/DVDROM
MIC Pre-AMP circuit
C549 100P/50V_0402
R377 100K_0402
AGND
U35
LMV321/SOT23-5
10K_0402
1U/10V_0402
R380
C550
MIC
JMIC
97VREFOUT
+ADD
R388 0_0402
C554 1U/10V_0402
C556 1U/10V_0402
AGND
R383 0_0402_NC
ADD PREAMP CIRCUIT V.B(2005/2/16)
EMI SOLUTION 1/10
F18 BK1608HS601_0603
14 IDE_PDIOW-
IDE_PDIOW- IDE_IOW-
C555 33PF_0402
F16 BK1608HS601_0603
14 IDE_PDIOR-
IDE_PDIOR- IDE_IOR-
C548 33PF_0402
F14 BK1608HS601_0603
14 IDE_PDDACK-
IDE_PDDACK- IDE_ACK-
C540 33PF_0402
F19 BK1608HS601_0603
14 IDE_PDDREQ
IDE_PDDREQ IDE_REQ
C564 33PF_0402
F15 BK1608HS601_0603
14 IDE_PIORDY
IDE_PIORDY IDE_RDY
C532 33PF_0402
CD-ROM
CN15
CD-ROM CONN
22 CD_L
CDGND
PLTRST- 22
6,13,19,23 PLTRST-
R225 33
CD_L CDGND
CD_R CDGND 22
IDE_PDD7 IDE_PDD6 IDE_PDD5 IDE_PDD4 IDE_PDD3 IDE_PDD2 IDE_PDD1 IDE_PDD0
IDE_PDD8 IDE_PDD9 IDE_PDD10 IDE_PDD11 IDE_PDD12 IDE_PDD13 IDE_PDD14 IDE_PDD15
IDE_IOW- IDE_RDY INT_IRQ IDE_PDA1 IDE_PDA0 IDE_PDCS1- LED_HDD-
IDE_IOR- IDE_ACK- IDE_DET IDE_PDA2 IDE_PDCS3-
R184 82
IDE_REQ
R395 0_0402_NC
IDE_SATADET 13
VCC5
C303 0.1U/25V
C210 0.01U/50V
R242 470_NC
(SDCSEL)
Connect the net LED_HDD- and CN15 pin37 for Master and slave detect issue V.C(2005/3/21)
IDE Master and Slave select
pull ground => Master
pull high or NC =>Slave
EMI SOLUTION 1/10
C575 33PF_0402 IDE_PDD0
C584 33PF_0402 IDE_PDD1
C588 33PF_0402 IDE_PDD2
C596 33PF_0402 IDE_PDD3
C603 33PF_0402 IDE_PDD4
C608 33PF_0402 IDE_PDD5
C614 33PF_0402 IDE_PDD6
C620 33PF_0402 IDE_PDD7
C626 33PF_0402 IDE_PDD8
C313 33PF_0402 IDE_PDD9
C617 33PF_0402 IDE_PDD10
C611 33PF_0402 IDE_PDD11
C605 33PF_0402 IDE_PDD12
C600 33PF_0402 IDE_PDD13
C591 33PF_0402 IDE_PDD14
C586 33PF_0402 IDE_PDD15
Elitegroup Computer Systems
Title
223 HDD & CDROM CONN& PREAMP.
Size Custom
Document Number 223-1-4-01
Rev 1.0
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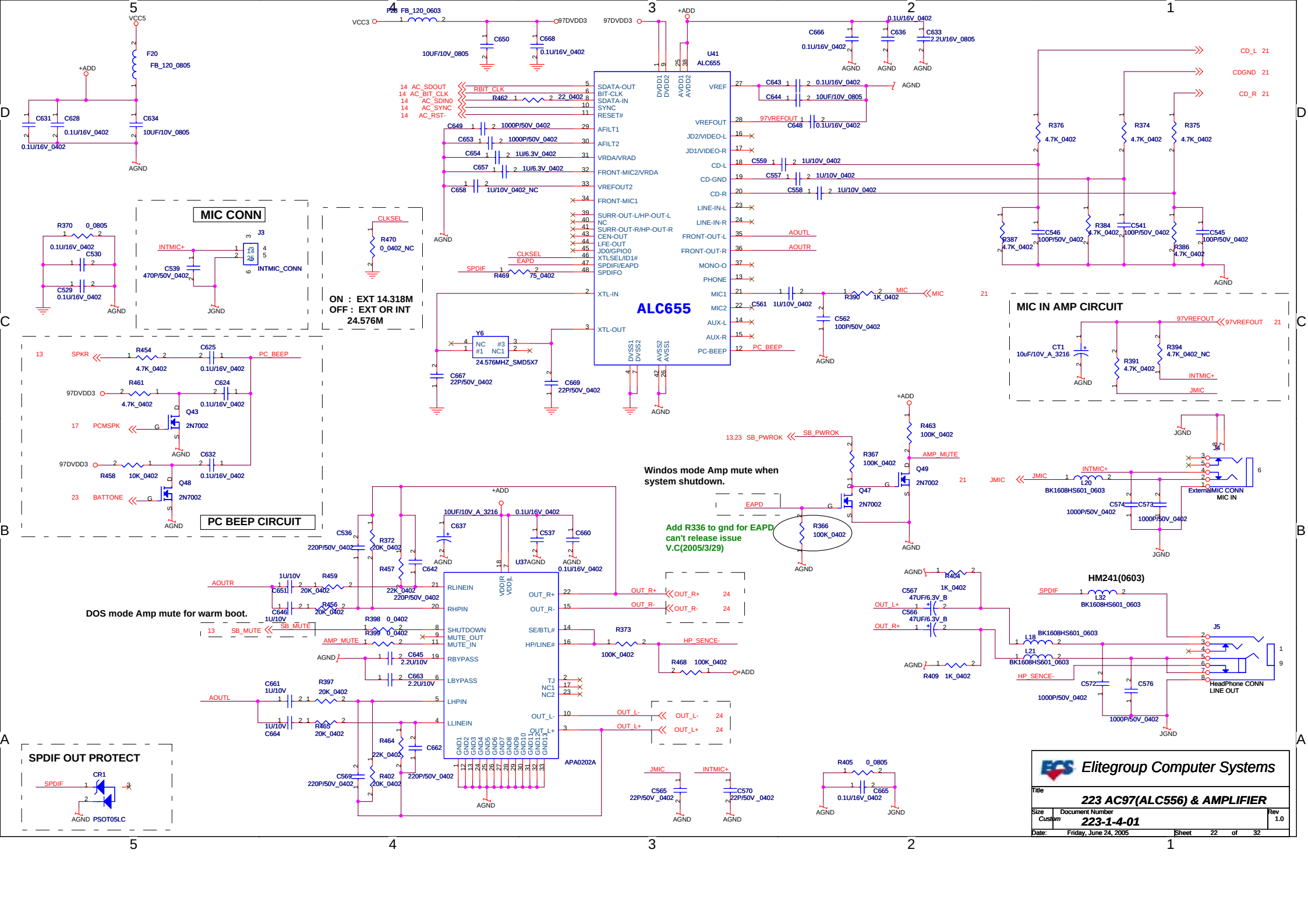
ALC655
MIC CONN
PC BEEP CIRCUIT
SPDIF OUT PROTECT
MIC IN AMP CIRCUIT
ON : EXT 14.318M
OFF : EXT OR INT
24.576M
DOS mode Amp mute for warm boot.
Windos mode Amp mute when
system shutdown.
Add R336 to gnd for EAPD
can't release issue
V.C(2005/3/29)
HM241(0603)
APA0202A
Elitegroup Computer Systems
223 AC97(ALC556) & AMPLIFIER
223-1-4-01
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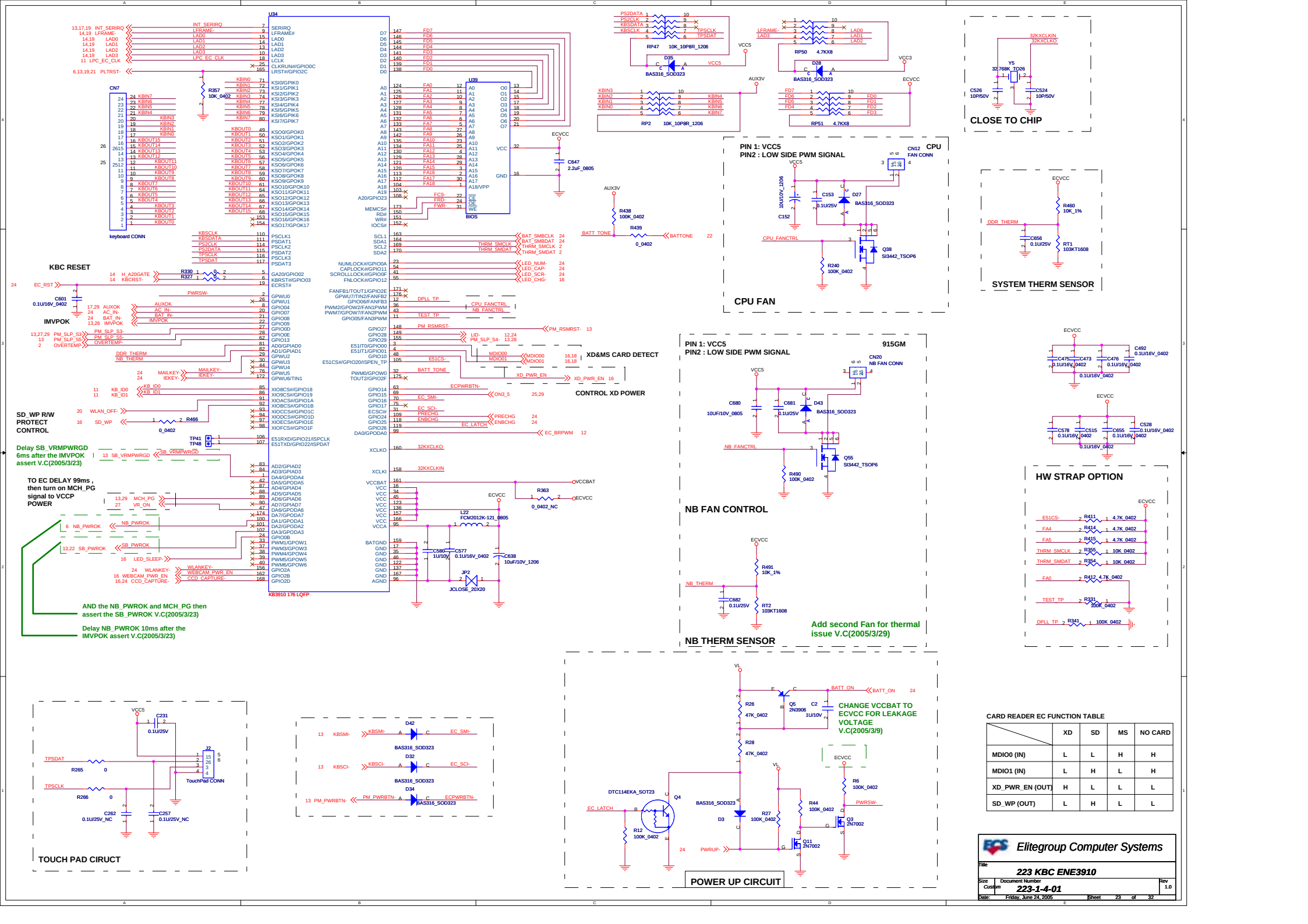

CARD READER EC FUNCTION TABLE

	XD	SD	MS	NO CARD
MDIO0 (IN)	L	L	H	H
MDIO1 (IN)	L	H	L	H
XD_PWR_EN (OUT)	H	L	L	L
SD_WP (OUT)	L	H	L	L

Elitegroup Computer Systems

Title: 223 KBC ENE3910

Size: Custom | Document Number: 223-1-4-01 | Rev: 1.0

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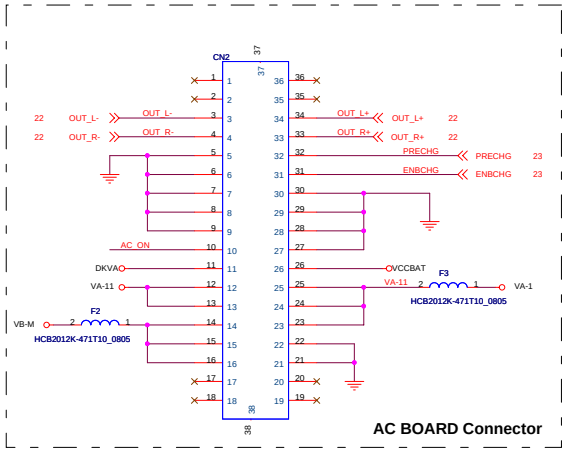
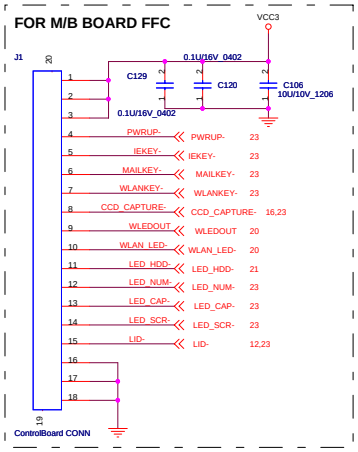
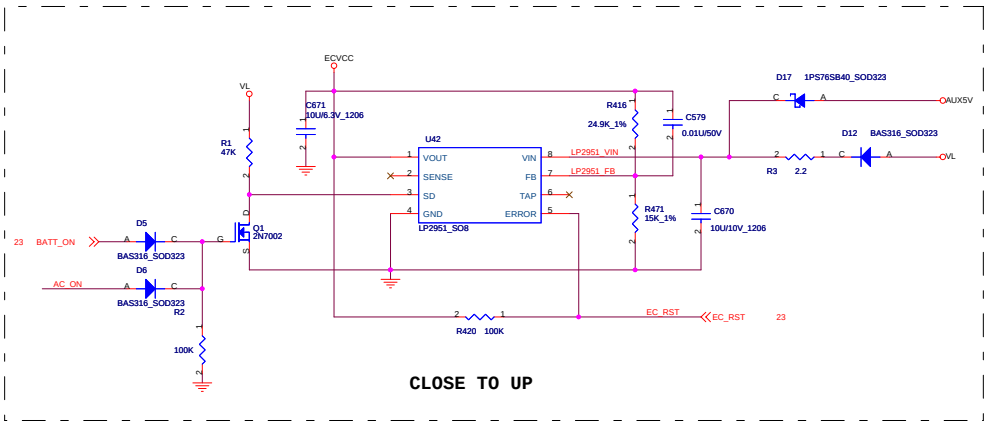
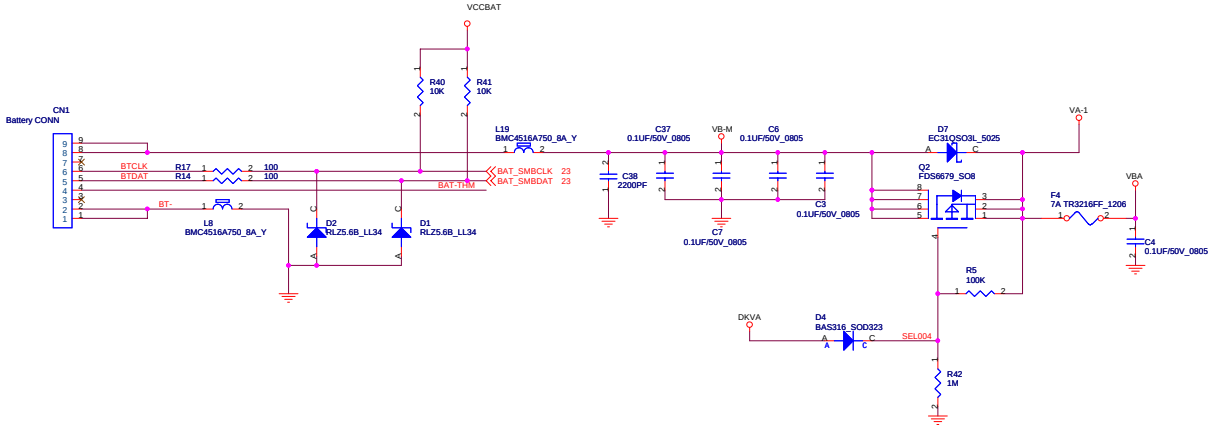
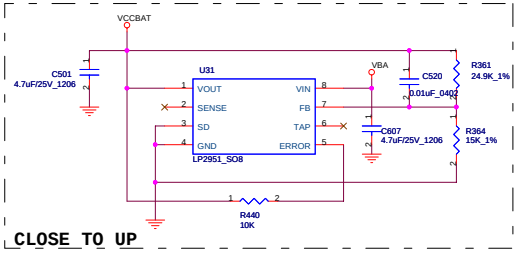


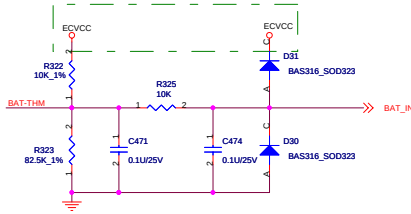








CHANGE VCCBAT TO ECVCC FOR LEAKAGE VOLTAGE V.C(2005/3/23)



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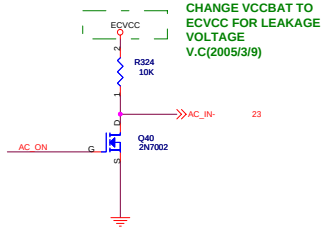
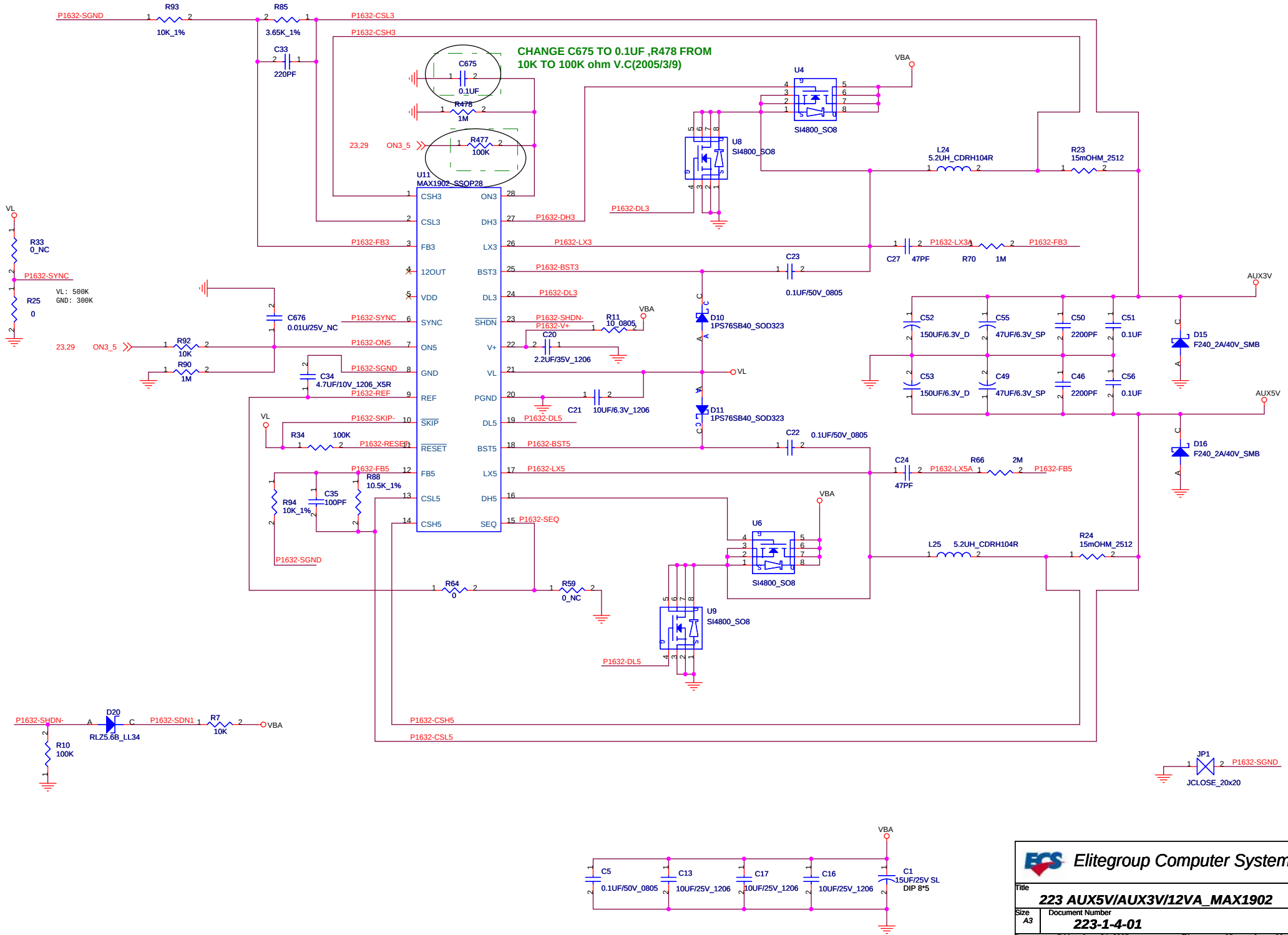


Elitegroup Computer Systems			
Title: 223 POWER CHARGER			
Size: A2	Document Number: 223-1-4-01		Rev: 1.0
Date: Friday, June 24, 2005	Sheet 24 of 32		



Elitegroup Computer Systems		
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Size A3	Document Number 223-1-4-01	Rev 1.0
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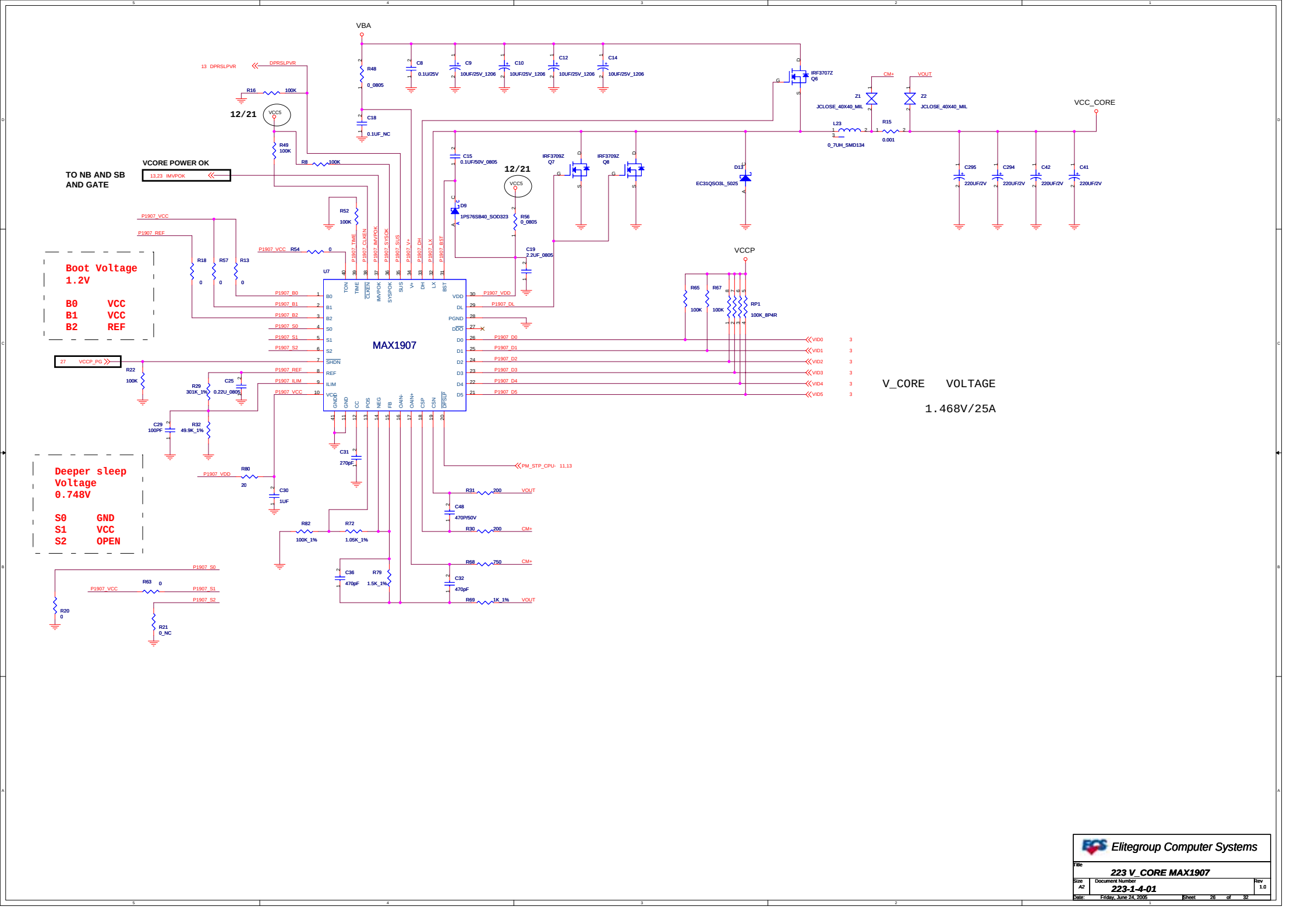

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Date:	Friday, June 24, 2005
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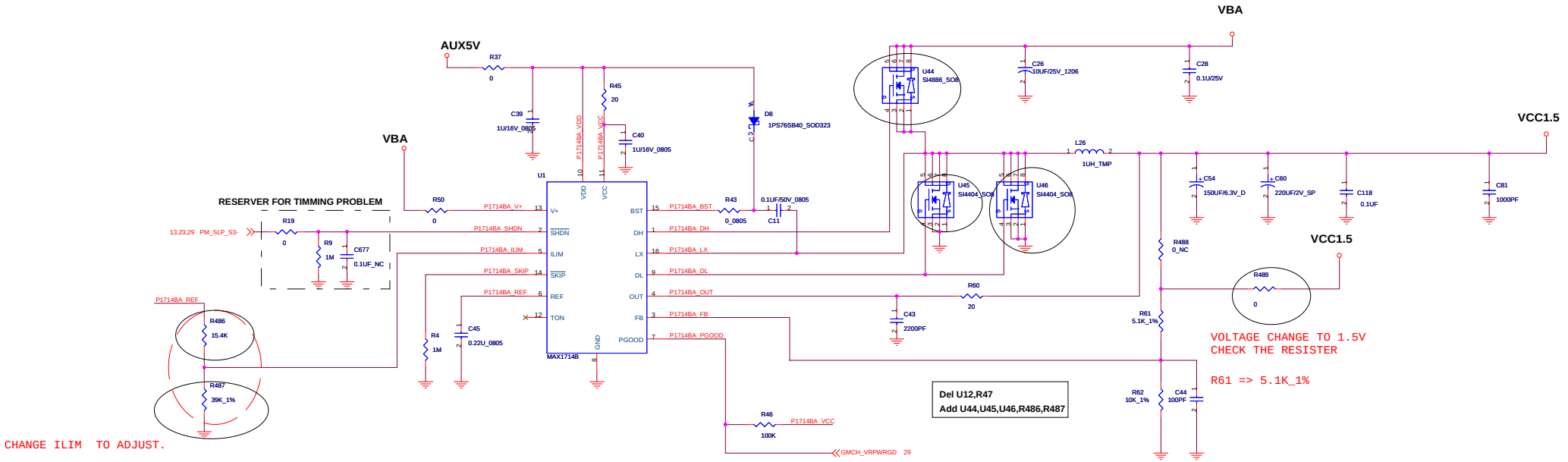

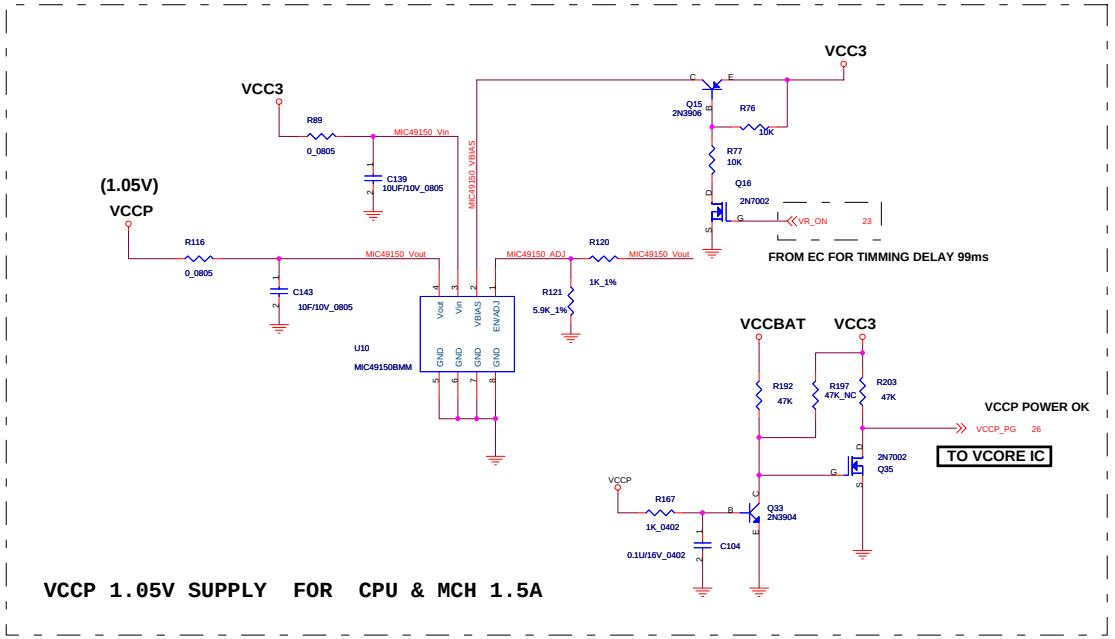

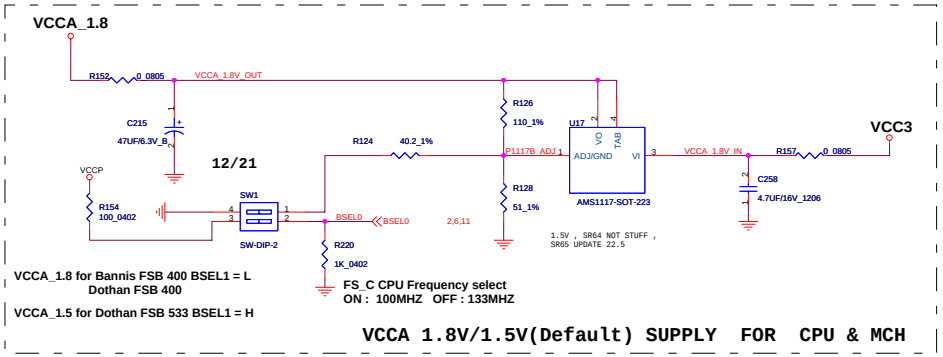

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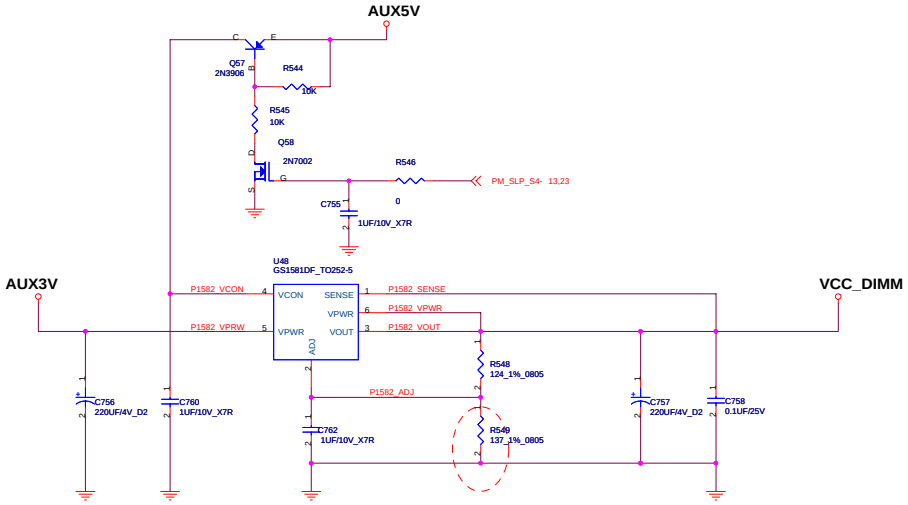
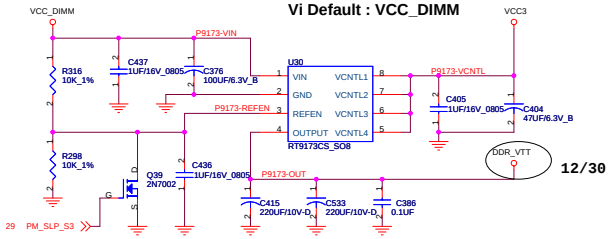
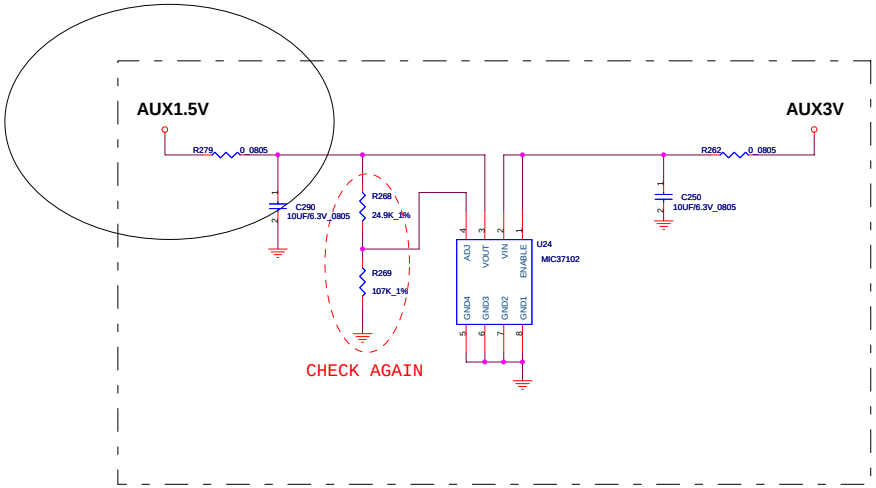
Title	223 VCCA1.8V/VCCP1.05V/VCC1.5V	
Size A2	Document Number 223-1-4-01	Rev 1.0
Date: Friday, June 24, 2005	Sheet 27 of 32	







DIMM_2.5V SUPPLY 3.5A & VTT1.25V 1A FOR DDR

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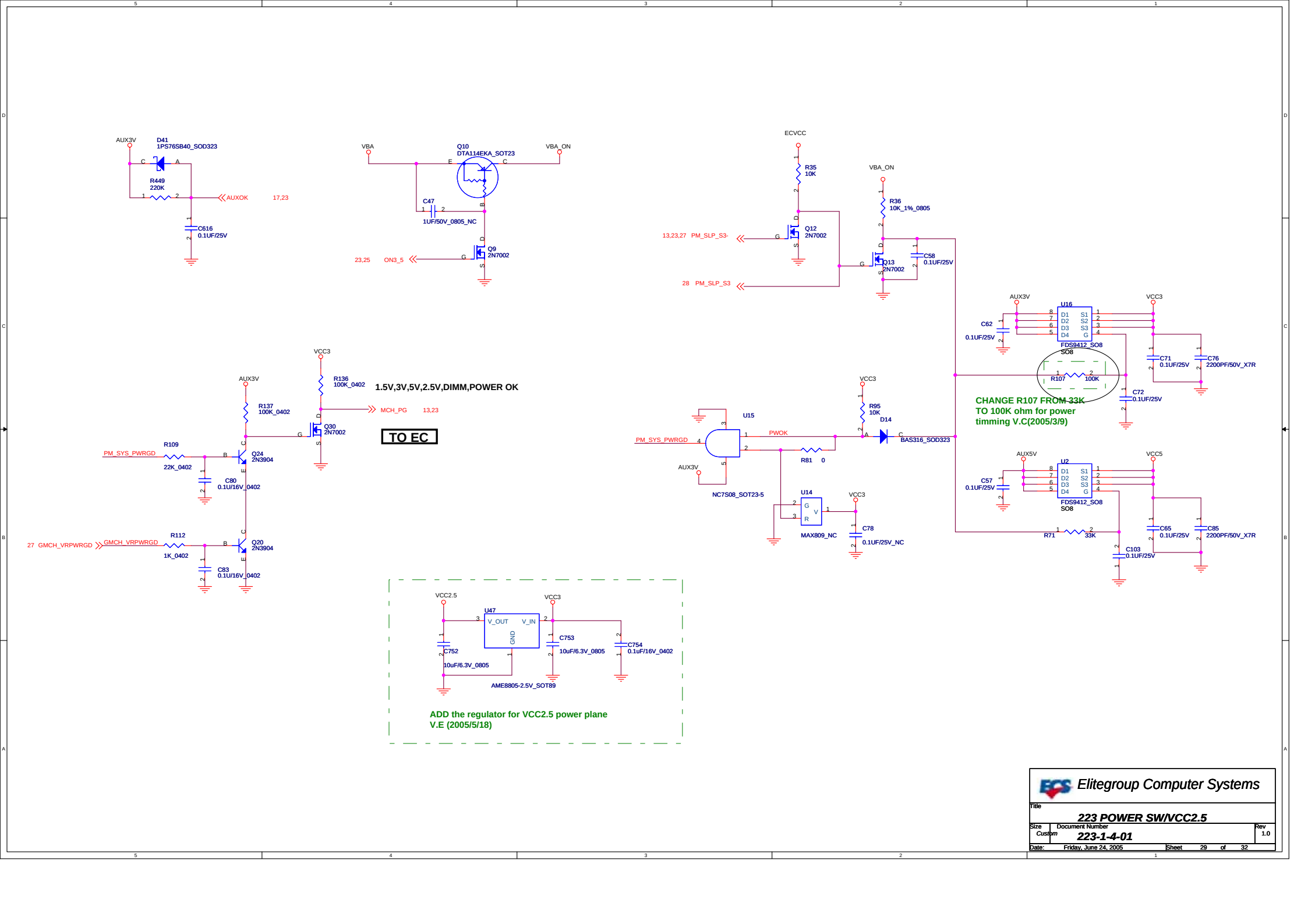
Title	223 MAX1714B_VCCDIMM/AUX1.5V	
Size: A2	Document Number: 223-1-4-01	Rev: 1.0
Date: Friday, June 24, 2005	Sheet 28 of 32	



Elitegroup Computer Systems		
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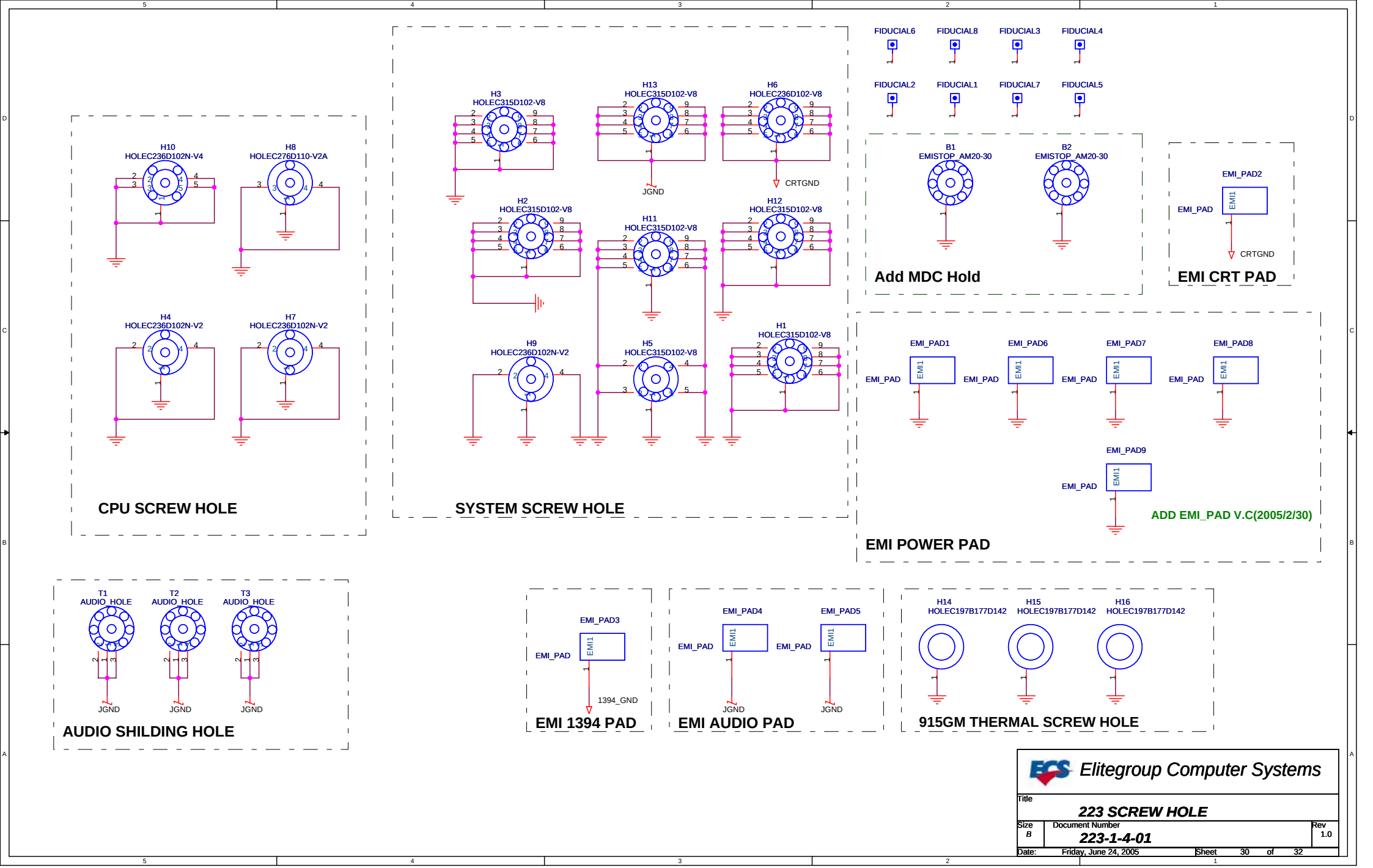
Size: Custom	Document Number: 223-1-4-01	Rev: 1.0
Date: Friday, June 24, 2005	Sheet 29 of 32	



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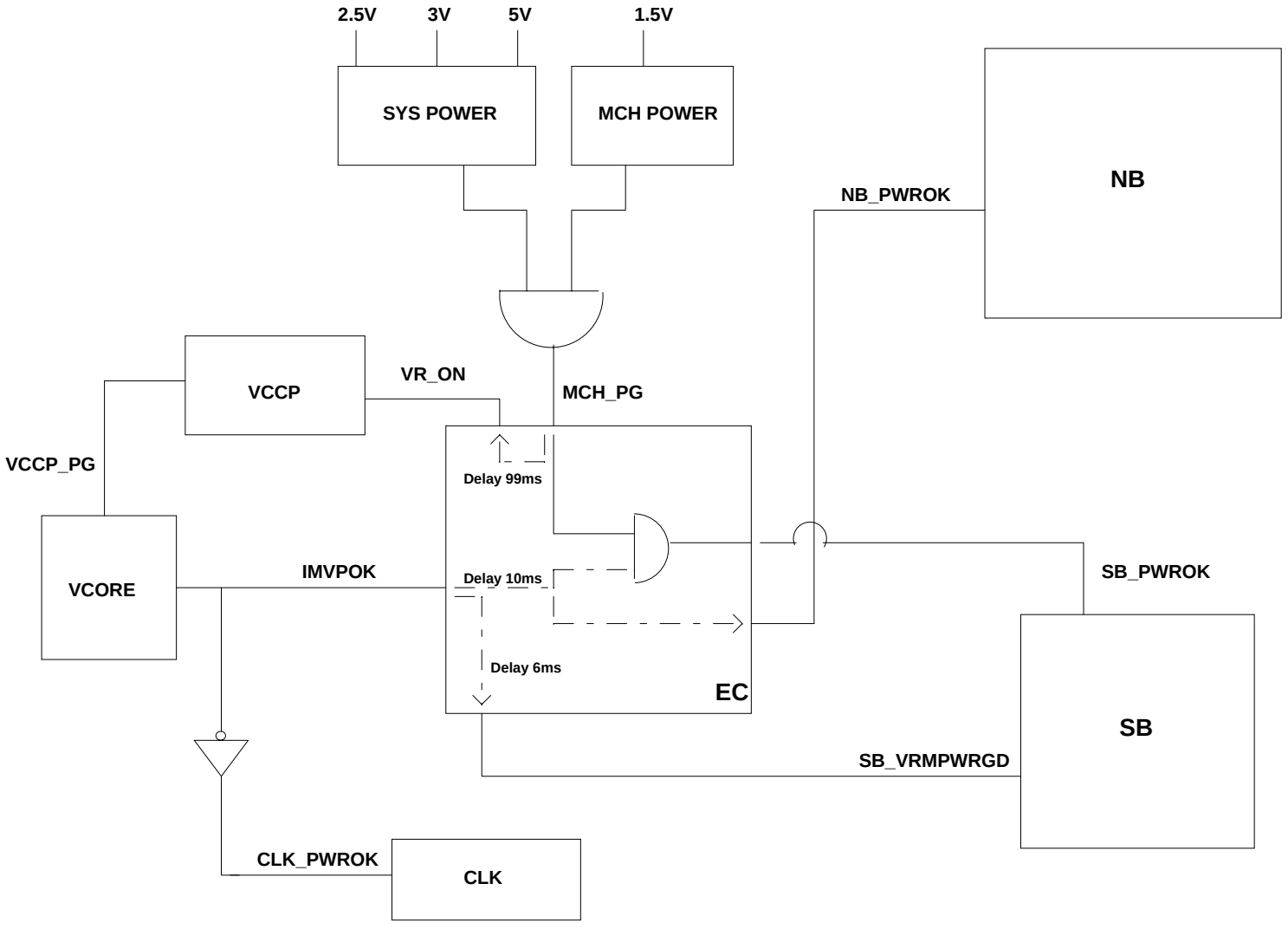
Size B	Document Number 223-1-4-01	Rev 1.0
Date: Friday, June 24, 2005	Sheet 30 of 32	



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Title: 223 POWER SEQUENCE CHART

Size: C | Document Number: 223-1-4-01 | Rev: 1.0

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223 History List

A4 Stage V.A
1.Initial (2005/1/20)

A4 Stage V.B
1.Change the DMI bus error TX-RX(2005/2/5)
2.MODIFY SB_MUTE FROM GPI31 TO GPO19 (2005/2/15)
3.MODIFY P_ID1 FROM GPI12 TO GPIO33 (2005/2/15)
4.ADD R483 FOR PCI-EXPRESS WEAK (2005/2/15)
5.CHANGR THE USB BUS FOR NET WRONG(2005/2/5)
6.ADD 10K ohm for IMVPOK OC issue (2005/2/5)
7.ADD R481 FOR INTERNAL REGULATOR 1.5V (2005/2/15)

A4 Stage V.C
1.Change the SB power net 3.3V_ICH(2005/3/7)

A4 stage V.D
1.U27 from RTL8100 10/100 LAN change to BCM5789 for GIGA LAN.
2.ADD R528,R529 33_1%_0402
R526,R527 49.9_1%_0402
C683,C684 0.1uF_0402
R533~R540 0_0402 FOR GIGA LAN.

3.ADD R530 1K_0402 FOR PCIE_WAKE-.
4.ADD R492,R426 NC FOR INTVRMEN REGULATOR DISABLE.
5.ADD R132,R531 FOR VCC_DIMM CIRCUIT LIMIT-
V.D 050412
6.ADD C274 47uF/6.3V_SP
FOR-V.D 050412

A5 stage V1.0
1.Del Z3,Z4,Z5,Z7.
2.R457,R464 from 20K change to 22K.
3.SB GPIO[34] add test pad.

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