ELITEGROUP 946GZT-AM Rev: A

Schematics Version History Table :

Circuit Ver.	PCB Ver.	Total Page	Modified Page(s)	Date
A	A	44		06/05/10

Page Title of Schematic :

Elitegroup Computer Systems

Title: **Cover Sheet**

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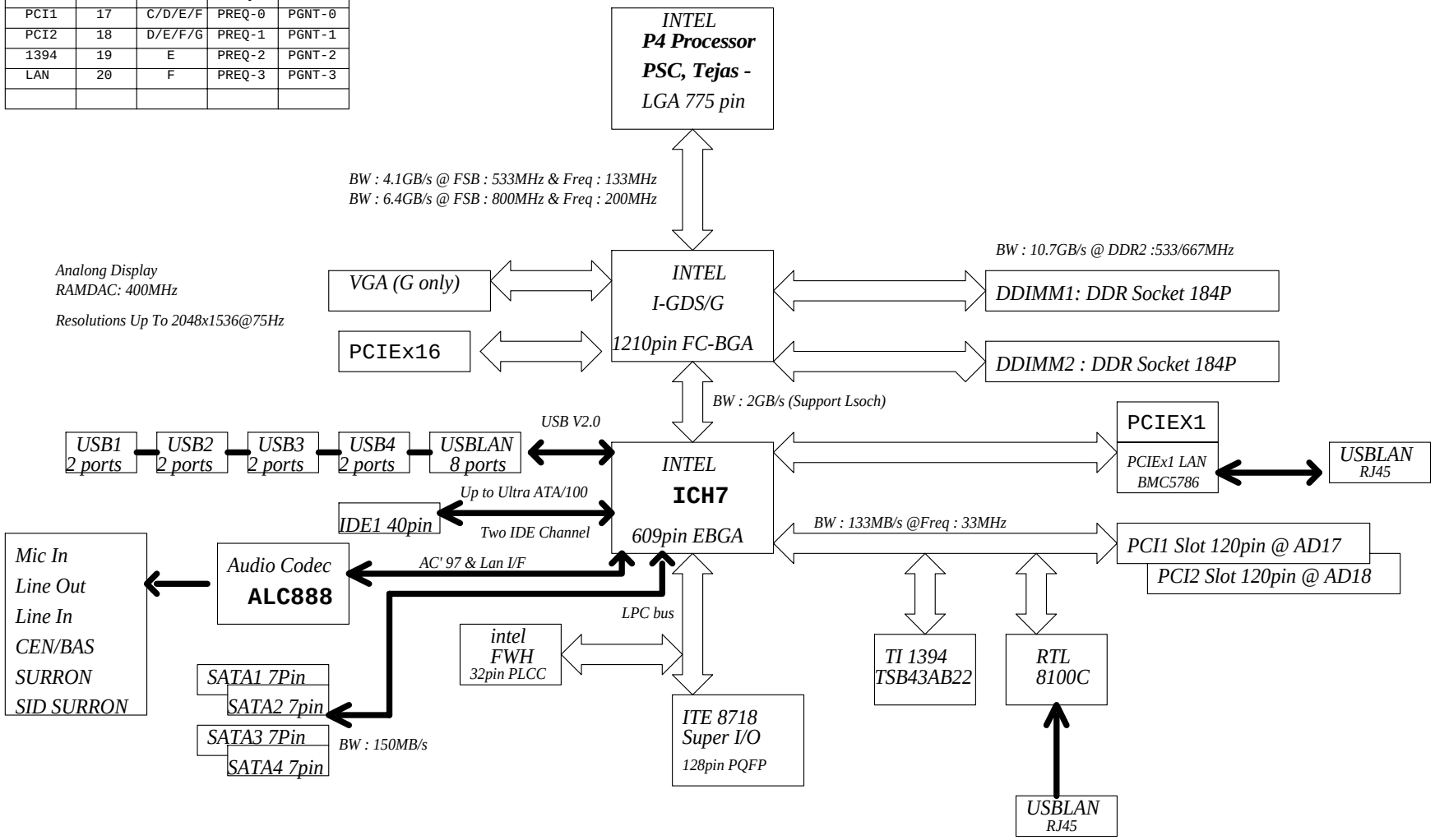
PCI LAN ICH7
ALC888
SIZE : Max 2GB (Four 512Mb X 8 Double-Sided DEVICES)

DEVICE	IDSEL	INT#	REQ#	GNT#
PCI1	17	C/D/E/F	PREQ-0	PGNT-0
PCI2	18	D/E/F/G	PREQ-1	PGNT-1
1394	19	E	PREQ-2	PGNT-2
LAN	20	F	PREQ-3	PGNT-3



PCB : 244 x 244 mm ; 4 layers

Elitegroup Computer Systems

Title: **946-System Block DiagamM**

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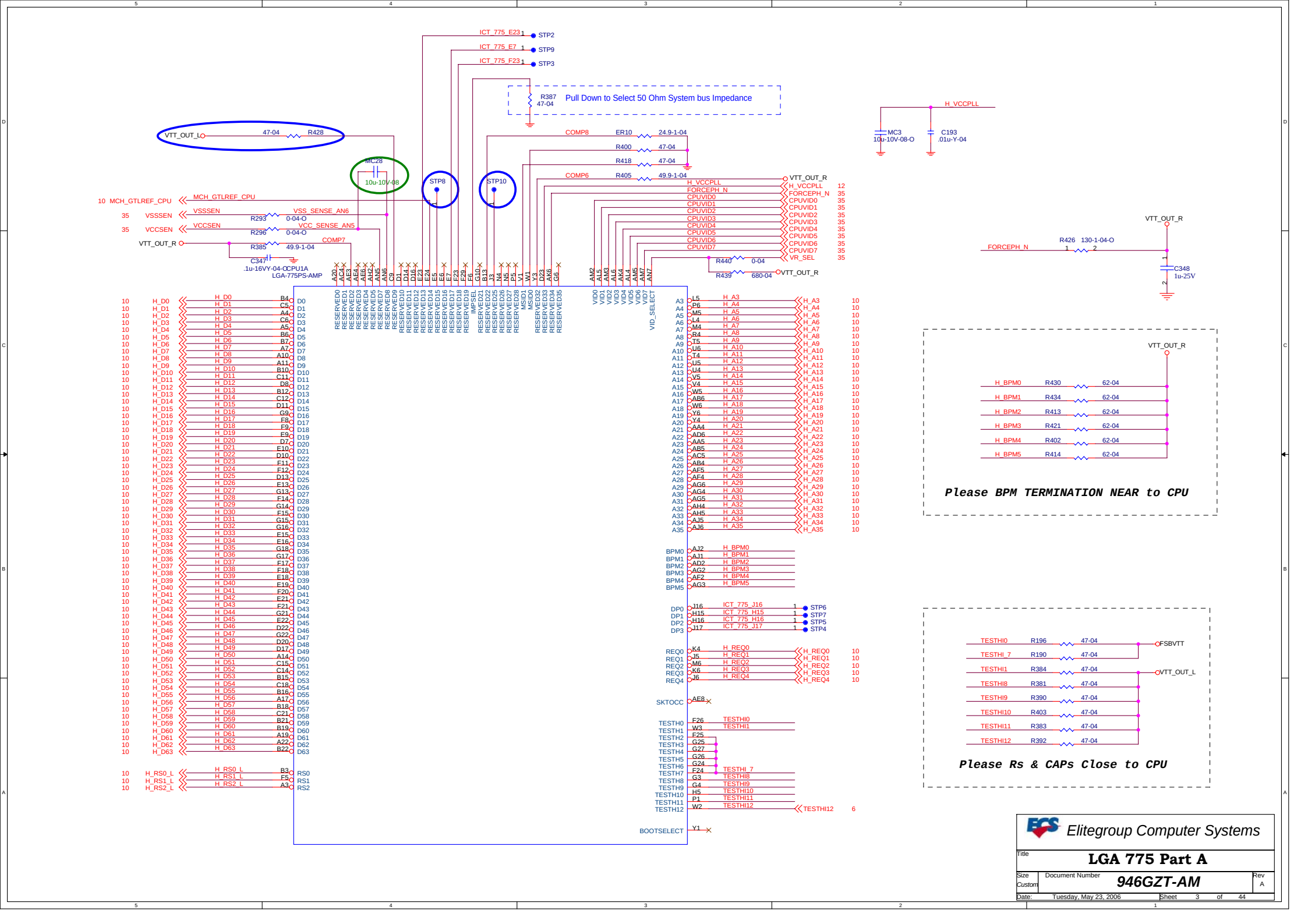
ICT_775_E23
STP2
ICT_775_E7
STP9
ICT_775_F23
STP3
R387
47-04
Pull Down to Select 50 Ohm System bus Impedance
VTT_OUT_L
47-04
R428
C128
10u-10V-08
STP8
STP10
COMP8
ER10
24.9-1-04
R400
47-04
R418
47-04
COMP6
R405
49.9-1-04
10 MCH_GTLREF_CPU
MCH_GTLREF_CPU
35 VSSSEN
VSSSEN
R293
0-04-O
VSS_SENSE_AN6
35 VCCSEN
VCCSEN
R296
0-04-O
VCC_SENSE_AN5
VTT_OUT_R
R385
49.9-1-04
COMP7
C347
.1u-16VY-04-O
CPU1A
LGA-775PS-AMP
H_VCCPLL
FORCEPH_N
CPUVID0
CPUVID1
CPUVID2
CPUVID3
CPUVID4
CPUVID5
CPUVID6
CPUVID7
VR_SEL
R440
0-04
R439
680-04
VTT_OUT_R
MC3
10u-10V-08-O
C193
.01u-Y-04
H_VCCPLL
VTT_OUT_R
FORCEPH_N
R426
130-1-04-O
C348
1u-25V
H_BPM0
R430
62-04
H_BPM1
R434
62-04
H_BPM2
R413
62-04
H_BPM3
R421
62-04
H_BPM4
R402
62-04
H_BPM5
R414
62-04
Please BPM TERMINATION NEAR to CPU
H_D0
H_D1
H_D2
H_D3
H_D4
H_D5
H_D6
H_D7
H_D8
H_D9
H_D10
H_D11
H_D12
H_D13
H_D14
H_D15
H_D16
H_D17
H_D18
H_D19
H_D20
H_D21
H_D22
H_D23
H_D24
H_D25
H_D26
H_D27
H_D28
H_D29
H_D30
H_D31
H_D32
H_D33
H_D34
H_D35
H_D36
H_D37
H_D38
H_D39
H_D40
H_D41
H_D42
H_D43
H_D44
H_D45
H_D46
H_D47
H_D48
H_D49
H_D50
H_D51
H_D52
H_D53
H_D54
H_D55
H_D56
H_D57
H_D58
H_D59
H_D60
H_D61
H_D62
H_D63
H_RS0_L
H_RS1_L
H_RS2_L
RESERVED0
RESERVED1
RESERVED2
RESERVED3
RESERVED4
RESERVED5
RESERVED7
RESERVED8
RESERVED9
RESERVED10
RESERVED11
RESERVED12
RESERVED13
RESERVED14
RESERVED15
RESERVED16
RESERVED17
RESERVED18
RESERVED19
IMPSEL
RESERVED21
RESERVED22
RESERVED25
RESERVED26
RESERVED27
RESERVED28
MSID1
MSID0
RESERVED32
RESERVED33
RESERVED34
RESERVED35
VID0
VID1
VID2
VID3
VID4
VID5
VID6
VID7
VID_SELECT
H_A3
H_A4
H_A5
H_A6
H_A7
H_A8
H_A9
H_A10
H_A11
H_A12
H_A13
H_A14
H_A15
H_A16
H_A17
H_A18
H_A19
H_A20
H_A21
H_A22
H_A23
H_A24
H_A25
H_A26
H_A27
H_A28
H_A29
H_A30
H_A31
H_A32
H_A33
H_A34
H_A35
BPM0
BPM1
BPM2
BPM3
BPM4
BPM5
H_BPM0
H_BPM1
H_BPM2
H_BPM3
H_BPM4
H_BPM5
DP0
DP1
DP2
DP3
ICT_775_J16
ICT_775_H15
ICT_775_H16
ICT_775_J17
STP6
STP7
STP5
STP4
REQ0
REQ1
REQ2
REQ3
REQ4
H_REQ0
H_REQ1
H_REQ2
H_REQ3
H_REQ4
SKTOCC
TESTHI0
TESTHI1
TESTHI_7
TESTHI8
TESTHI9
TESTHI10
TESTHI11
TESTHI12
BOOTSELECT
TESTHI0
R196
47-04
FSBVTT
TESTHI_7
R190
47-04
TESTHI1
R384
47-04
VTT_OUT_L
TESTHI8
R381
47-04
TESTHI9
R390
47-04
TESTHI10
R403
47-04
TESTHI11
R383
47-04
TESTHI12
R392
47-04
Please Rs & CAPs Close to CPU
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LGA 775 Part A
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Place componets as close as possible to Processor socket
trace width to cap must be no smaller than 12 Mils

CPU1B

LGA-775PS-AMP

LL= LOAD LINE for load line select

GTLREF= 0.67 * VTT = 0.8V
GTLREF GENERATION CIRCUITS

CPU SIGNAL TERMINATION CLOSE TO CPU

BSEL resistors can be removed IF ONLY TEJAS AND CEDAR MILL ARE SUPPORTED

PLACE TDO TERMINATION NEAR CONNECTOR

PLACE TCK/TDI/TMS TERMINATION NEAR CPU WITHIN 1.5" OF CPU, IDEALLY NEXT TO IT.

PLACE TRST_L TERMINATION ANYWHERE ON ROUTE

Place outside Socket Cavity

2N3904S

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Title	LGA 775 Part B	
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Title: LGA 775 Part C			
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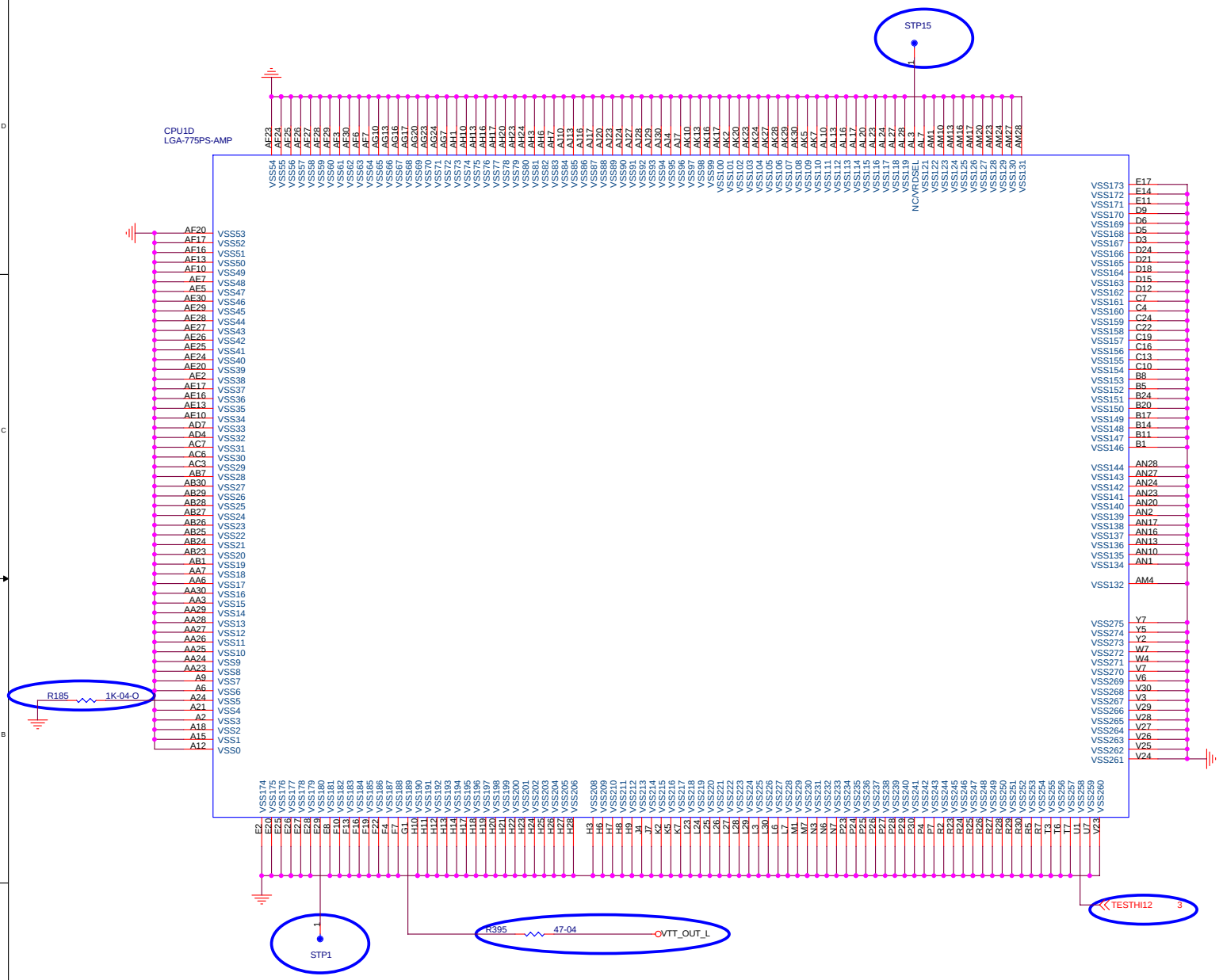

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Title: **LGA 775 Part D**

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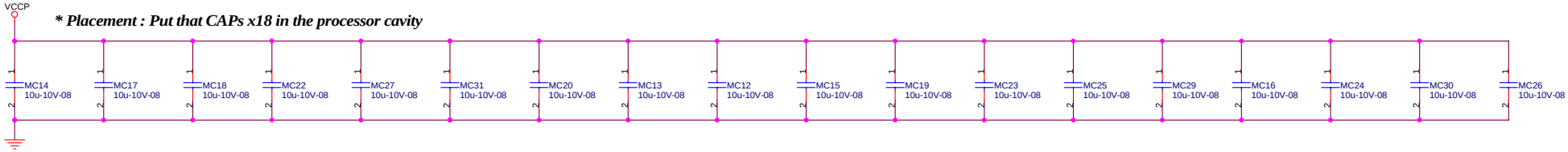

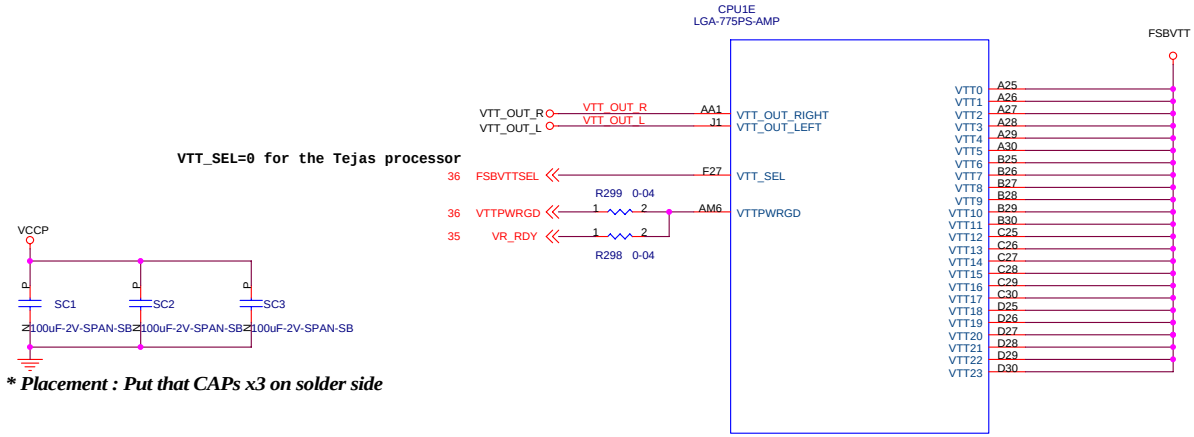

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Title: **LGA 775 Part E**

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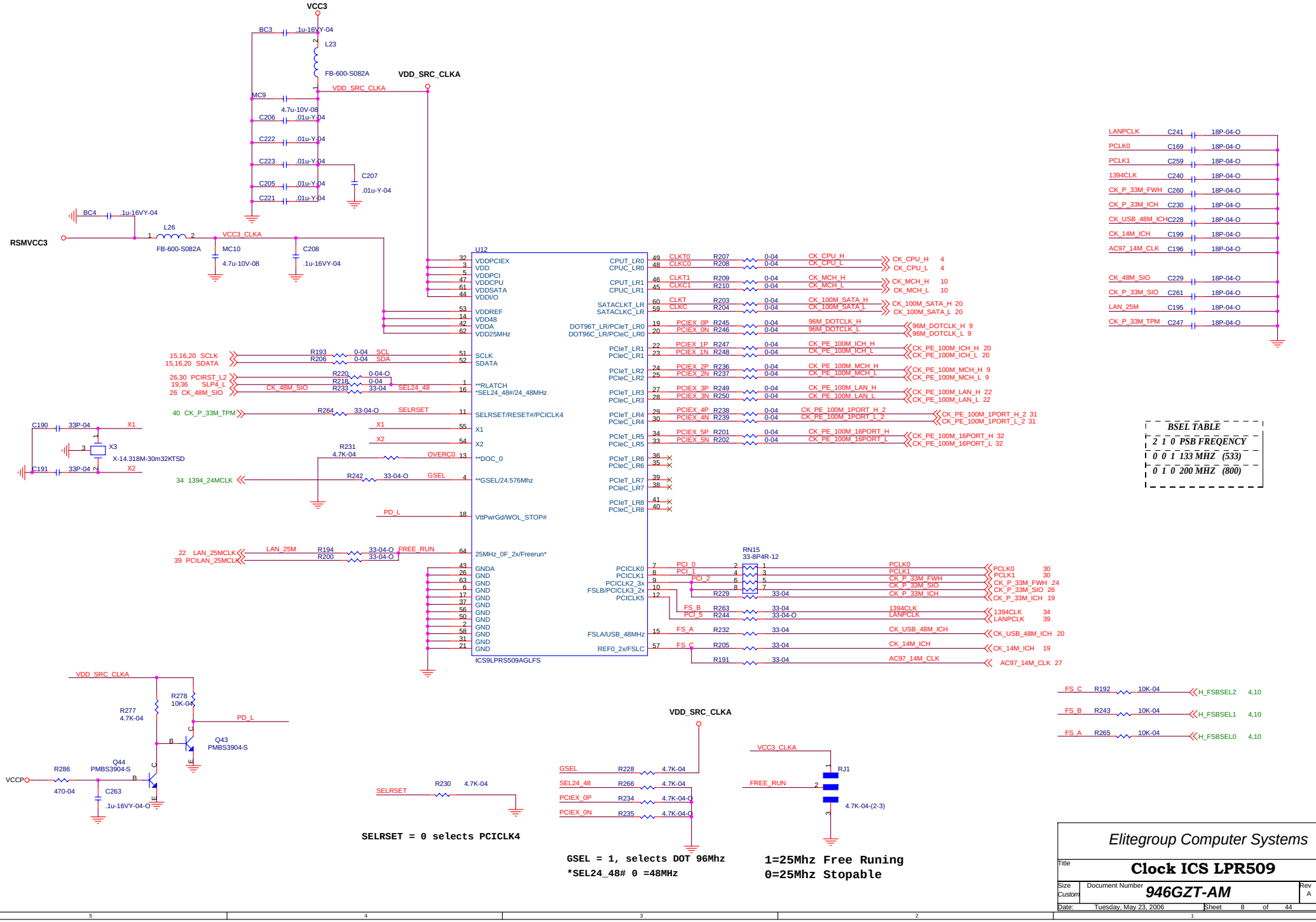
VCC3
BC3 .1u-16VY-04
L23
FB-600-S082A
VDD_SRC_CLKA
MC9 4.7u-10V-08
C206 .01u-Y-04
C222 .01u-Y-04
C223 .01u-Y-04
C205 .01u-Y-04
C221 .01u-Y-04
C207 .01u-Y-04
BC4 .1u-16VY-04
L26
RSMVCC3
FB-600-S082A
VCC3_CLKA
MC10 4.7u-10V-08
C208 .1u-16VY-04
U12
VDDPCIEX
VDD
VDDPCI
VDDCPU
VDDSATA
VDDI/O
VDDREF
VDD48
VDDA
VDD25MHz
SCLK
SDATA
**RLATCH
*SEL24_48#/24_48MHz
SELRSET/RESET#/PCICLK4
X1
X2
**DOC_0
**GSEL/24.576Mhz
VttPwrGd/WOL_STOP#
25MHz_0F_2x/Freerun*
GNDA
GND
ICS9LPRS509AGLFS
15,16,20 SCLK
15,16,20 SDATA
26,30 PCIRST_L2
19,36 SLP4_L
26 CK_48M_SIO
40 CK_P_33M_TPM
34 1394_24MCLK
22 LAN_25MCLK
39 PCILAN_25MCLK
PD_L
C190 33P-04
C191 33P-04
X3
X-14.318M-30m32KTSD
R231 4.7K-04
R242 33-04-O
R193 0-04
R206 0-04
R220 0-04-O
R218 0-04
R233 33-04
R264 33-04-O
R194 33-04-O
R200 33-04-O
CPUT_LR0
CPUC_LR0
CPUT_LR1
CPUC_LR1
SATACLKT_LR
SATACLKC_LR
DOT96T_LR/PCIeT_LR0
DOT96C_LR/PCIeC_LR0
PCIeT_LR1
PCIeC_LR1
PCIeT_LR2
PCIeC_LR2
PCIeT_LR3
PCIeC_LR3
PCIeT_LR4
PCIeC_LR4
PCIeT_LR5
PCIeC_LR5
PCIeT_LR6
PCIeC_LR6
PCIeT_LR7
PCIeC_LR7
PCIeT_LR8
PCIeC_LR8
CK_CPU_H
CK_CPU_L
CK_MCH_H
CK_MCH_L
CK_100M_SATA_H
CK_100M_SATA_L
96M_DOTCLK_H
96M_DOTCLK_L
CK_PE_100M_ICH_H
CK_PE_100M_ICH_L
CK_PE_100M_MCH_H
CK_PE_100M_MCH_L
CK_PE_100M_LAN_H
CK_PE_100M_LAN_L
CK_PE_100M_1PORT_H_2
CK_PE_100M_1PORT_L_2
CK_PE_100M_16PORT_H
CK_PE_100M_16PORT_L
RN15
33-8P4R-12
PCLK0
PCLK1
CK_P_33M_FWH
CK_P_33M_SIO
CK_P_33M_ICH
1394CLK
LANPCLK
CK_USB_48M_ICH
CK_14M_ICH
AC97_14M_CLK
FS_A
FS_B
FS_C
FSLA/USB_48MHz
REF0_2x/FSLC
LANPCLK C241 18P-04-O
PCLK0 C169 18P-04-O
PCLK1 C259 18P-04-O
1394CLK C240 18P-04-O
CK_P_33M_FWH C260 18P-04-O
CK_P_33M_ICH C230 18P-04-O
CK_USB_48M_ICH C228 18P-04-O
CK_14M_ICH C199 18P-04-O
AC97_14M_CLK C196 18P-04-O
CK_48M_SIO C229 18P-04-O
CK_P_33M_SIO C261 18P-04-O
LAN_25M C195 18P-04-O
CK_P_33M_TPM C247 18P-04-O
BSEL TABLE
2 1 0 PSB FREQENCY
0 0 1 133 MHZ (533)
0 1 0 200 MHZ (800)
FS_C R192 10K-04 H_FSBSEL2 4,10
FS_B R243 10K-04 H_FSBSEL1 4,10
FS_A R265 10K-04 H_FSBSEL0 4,10
VDD_SRC_CLKA
R278 10K-04
R277 4.7K-04
PD_L
Q43 PMBS3904-S
Q44 PMBS3904-S
R286 470-04
C263 .1u-16VY-04-O
VCCP
SELRSET
R230 4.7K-04
SELRSET = 0 selects PCICLK4
GSEL R228 4.7K-04
SEL24_48 R266 4.7K-04
PCIEX_0P R234 4.7K-04-O
PCIEX_0N R235 4.7K-04-O
GSEL = 1, selects DOT 96Mhz
*SEL24_48# 0 =48MHz
VCC3_CLKA
RJ1
FREE_RUN
4.7K-04-(2-3)
1=25Mhz Free Runing
0=25Mhz Stopable
Elitegroup Computer Systems
Title
Clock ICS LPR509
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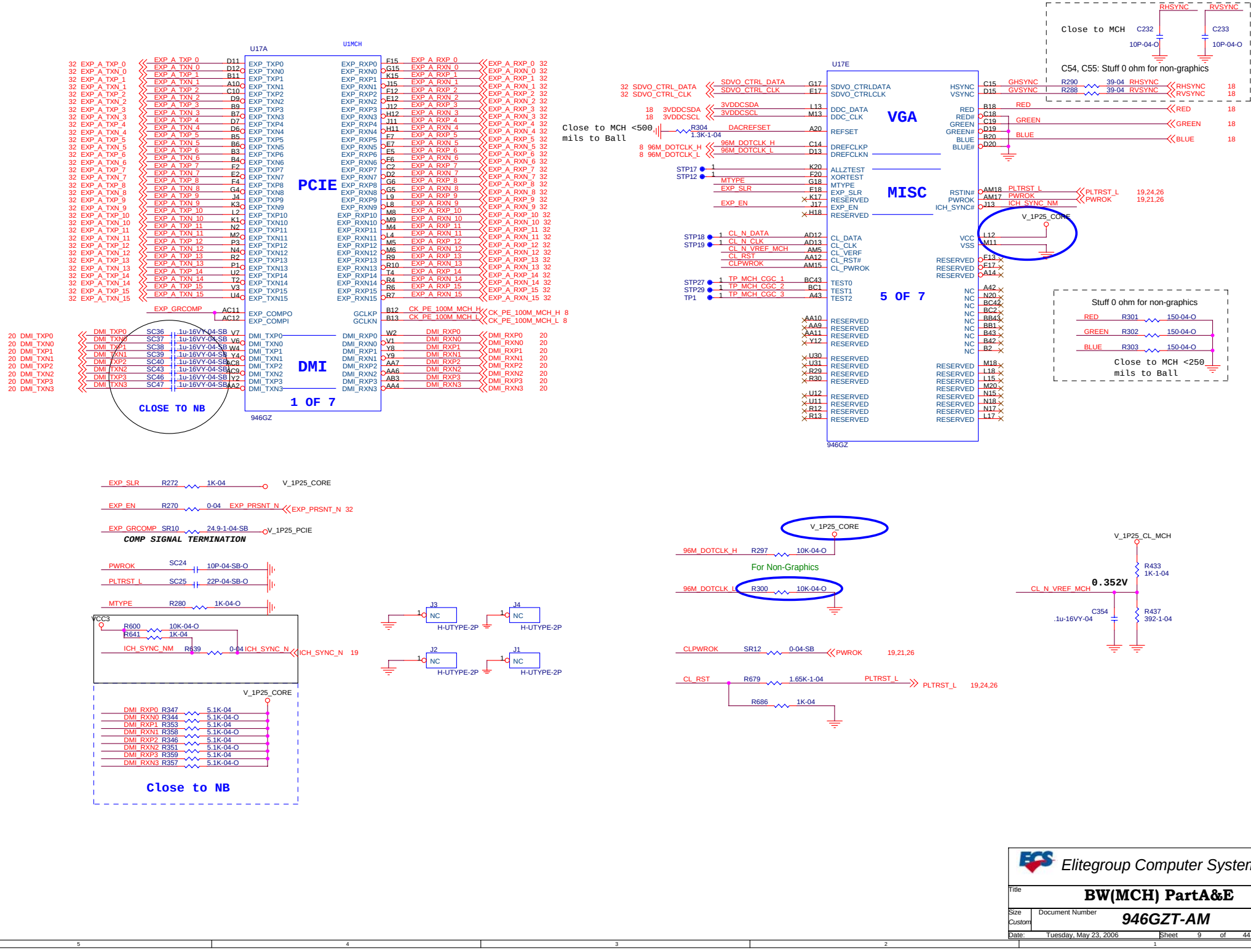
U17A
U1MCH
PCIE
DMI
1 OF 7
946GZ
CLOSE TO NB
U17E
VGA
MISC
5 OF 7
946GZ
Close to MCH <500 mils to Ball
Close to MCH
C54, C55: Stuff 0 ohm for non-graphics
Stuff 0 ohm for non-graphics
Close to MCH <250 mils to Ball
COMP SIGNAL TERMINATION
Close to NB
For Non-Graphics
0.352V
Elitegroup Computer Systems
BW(MCH) PartA&E
946GZT-AM
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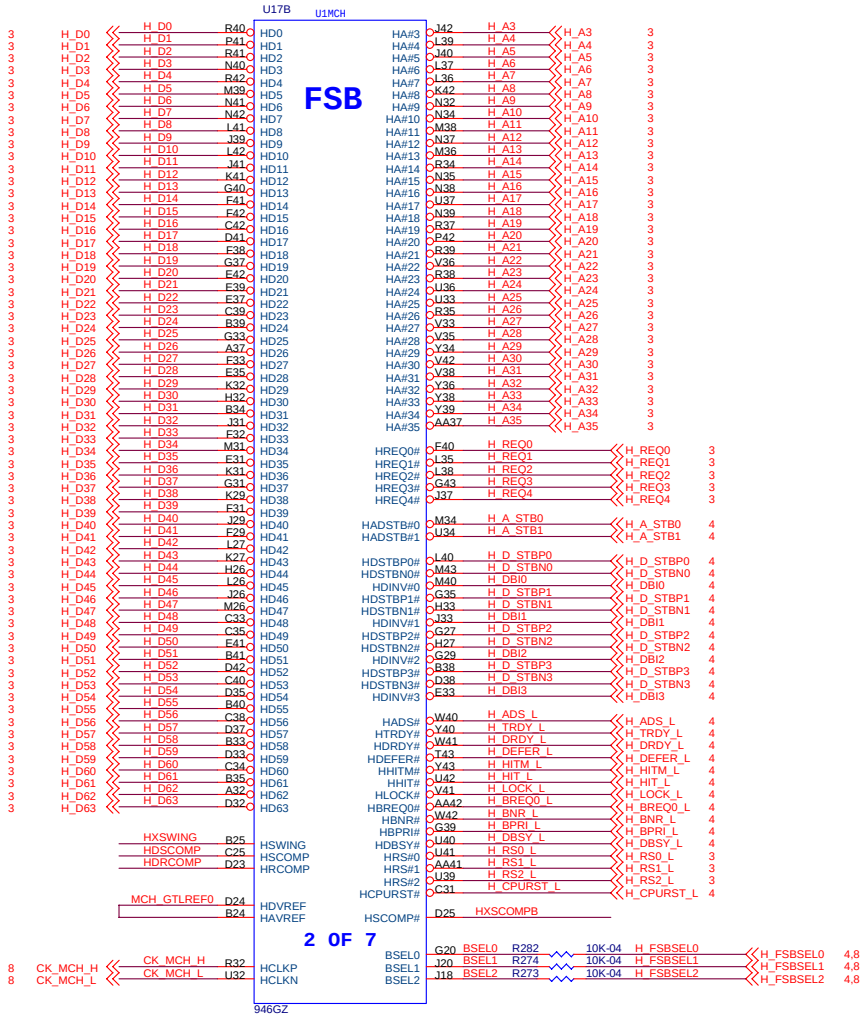

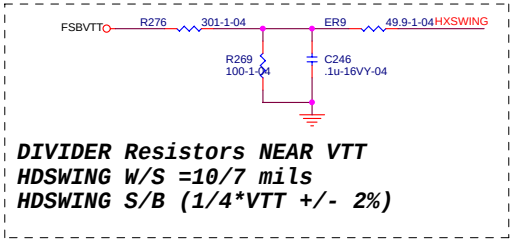

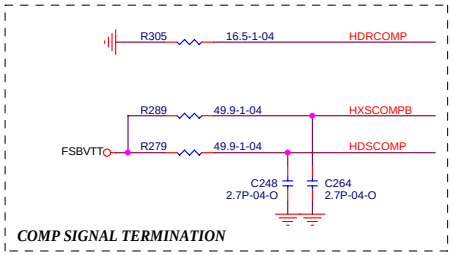

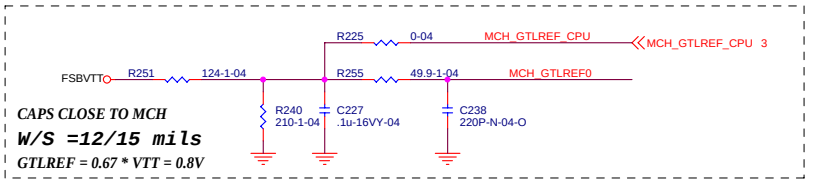

BSEL TABLE				
2	1	0	PSB	FREQUENCY
0	0	0	267	MHz (1067)
0	0	1	133	MHz (533)
0	1	0	200	MHz (800)

Elitegroup Computer Systems

Title: **BW(MCH) PartB**

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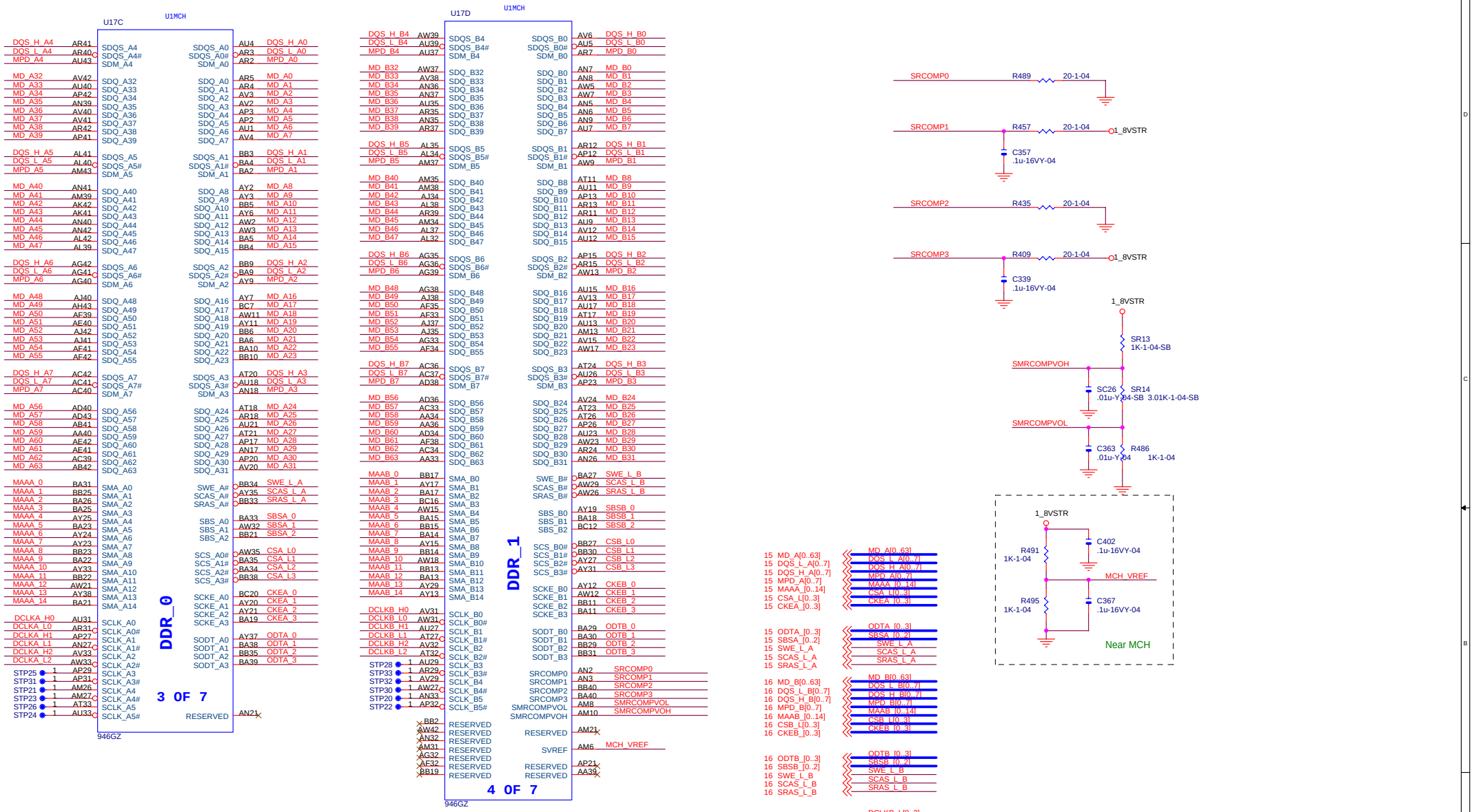

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Title	BW(MCH) PartC&D		
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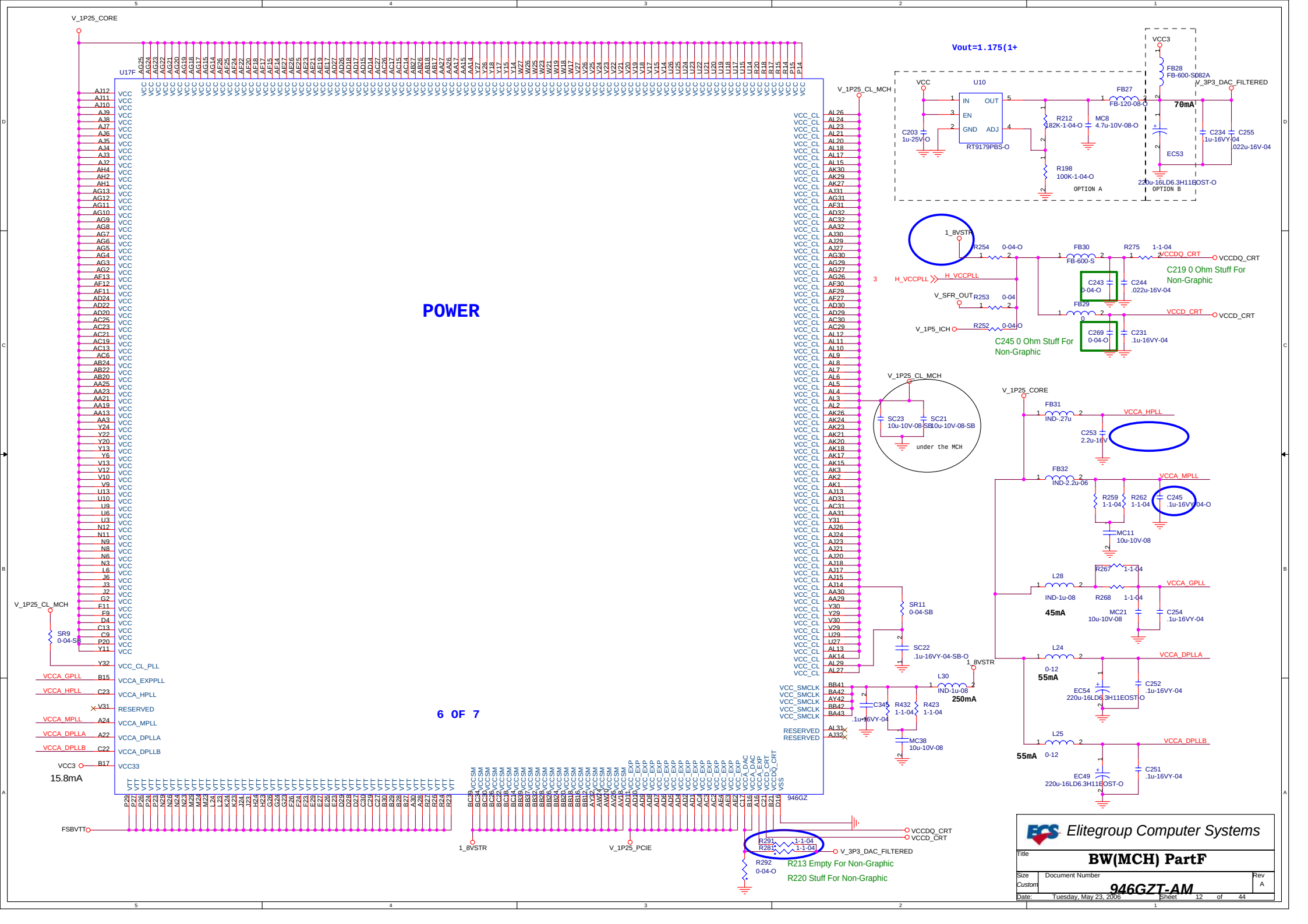
POWER
6 OF 7
U17F
946GZ
V_1P25_CORE
V_1P25_CL_MCH
Vout=1.175(1+
U10
RT9179PBS-O
OPTION A
OPTION B
70mA
V_3P3_DAC_FILTERED
1_8VSTR
H_VCCPLL
V_SFR_OUT
V_1P5_ICH
VCCDQ_CRT
VCCD_CRT
C219 0 Ohm Stuff For Non-Graphic
C245 0 Ohm Stuff For Non-Graphic
under the MCH
VCCA_HPLL
VCCA_MPLL
VCCA_GPLL
VCCA_DPLLA
VCCA_DPLLB
45mA
55mA
250mA
15.8mA
FSBVTT
V_1P25_PCIE
R213 Empty For Non-Graphic
R220 Stuff For Non-Graphic
Elitegroup Computer Systems
BW(MCH) PartF
946GZT-AM
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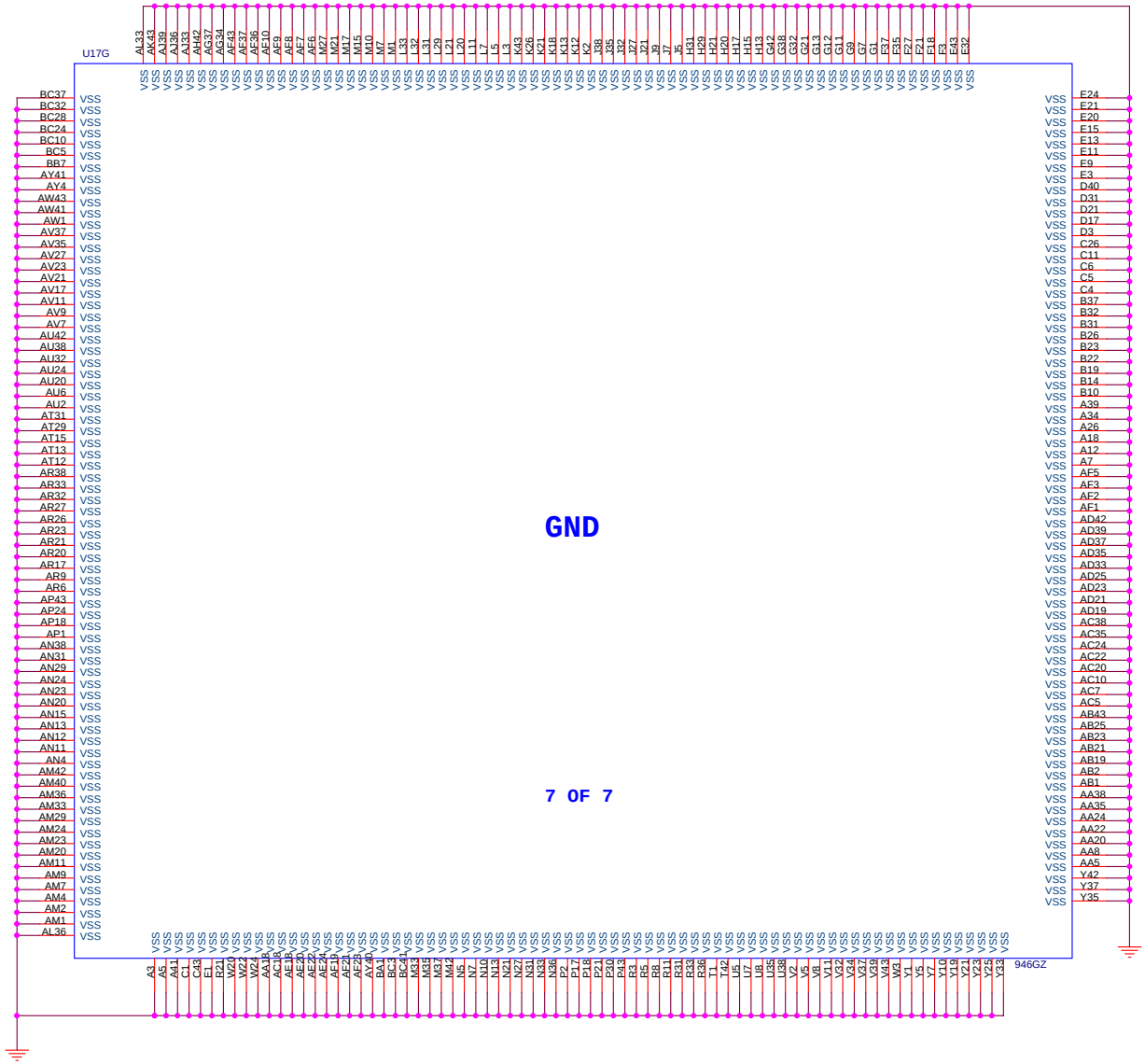

Elitegroup Computer Systems	
Title	BW(MCH) PartG
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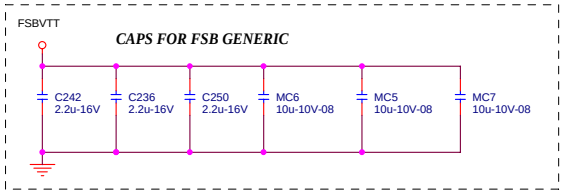

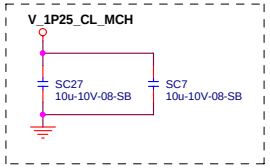

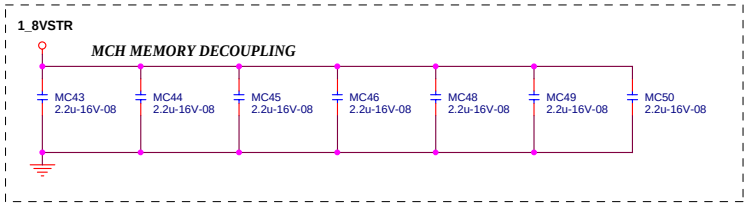

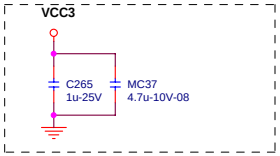

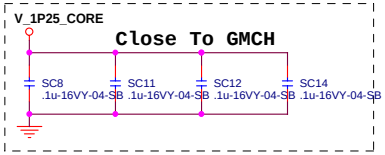

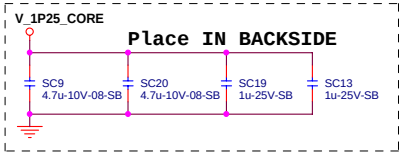

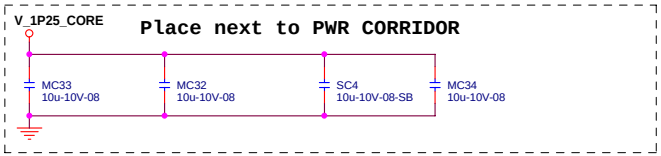

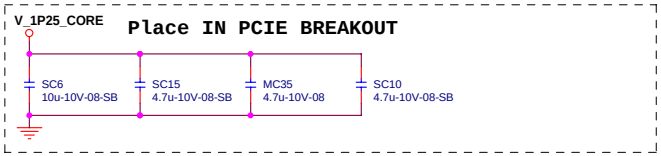

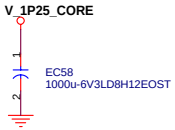

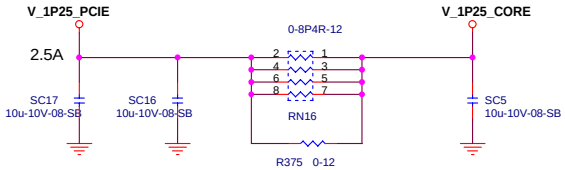

Elitegroup Computer Systems

Title	**BW(MCH) DCPL**	
Size: Custom	Document Number: **946GZT-AM**	Rev: A
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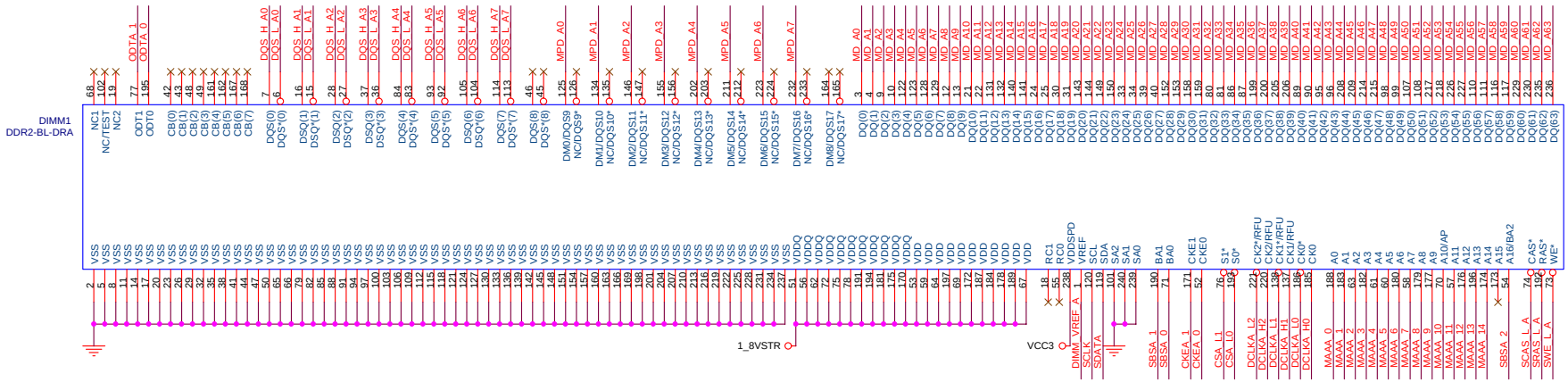

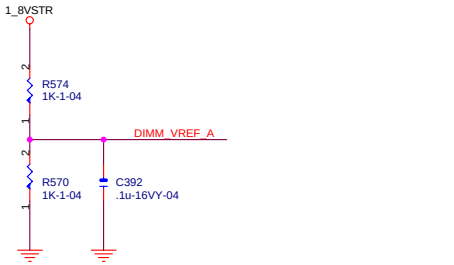

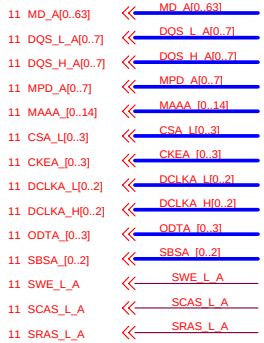

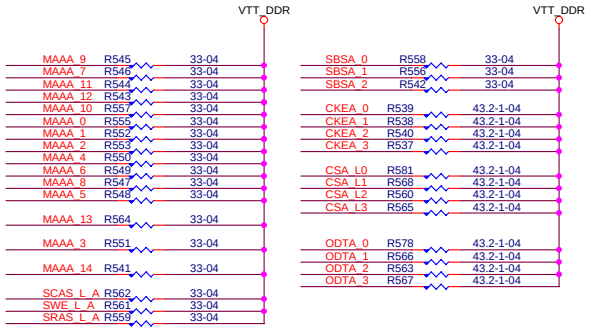

Elitegroup Computer Systems

Title: **DIMM1(DDR2SDRAM)**

Size	Document Number	Rev
Custom	946GZT-AM	A

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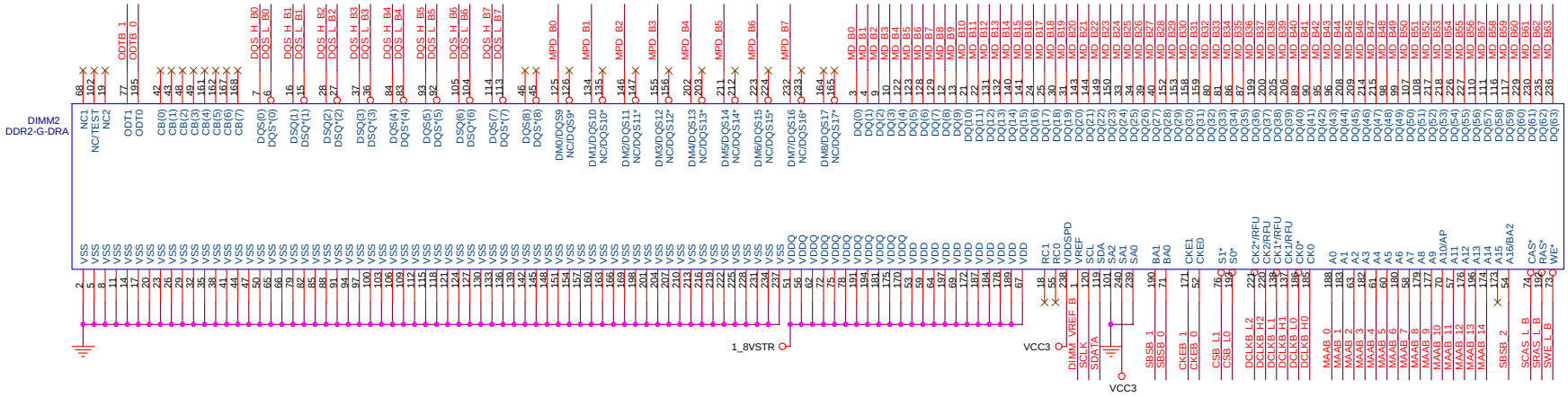

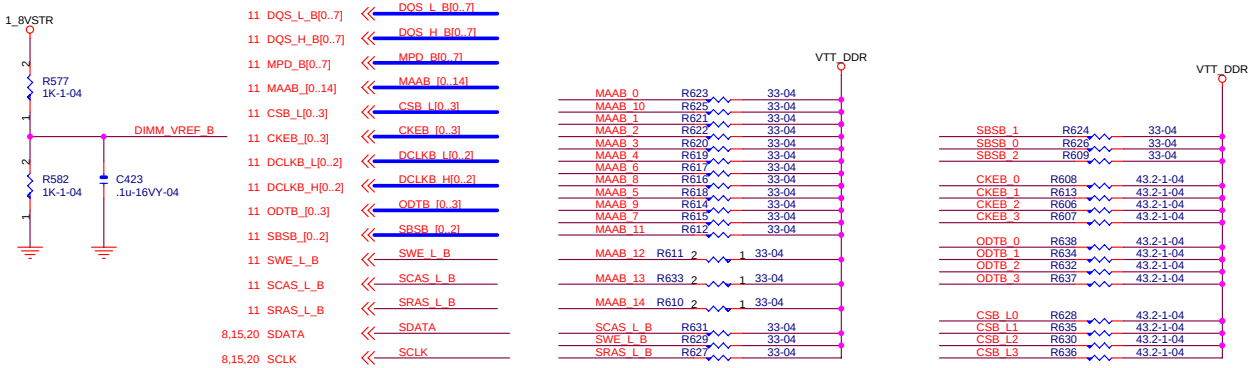

Company	Elitegroup Computer Systems
Title	DIMM2(DDR2SDRAM)
Size	Custom
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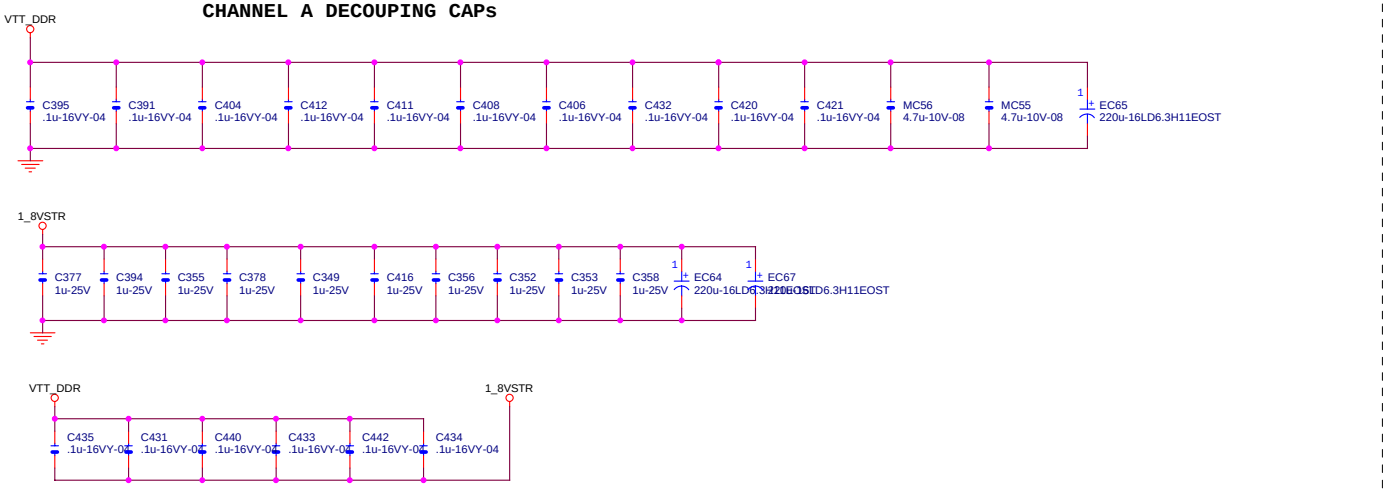
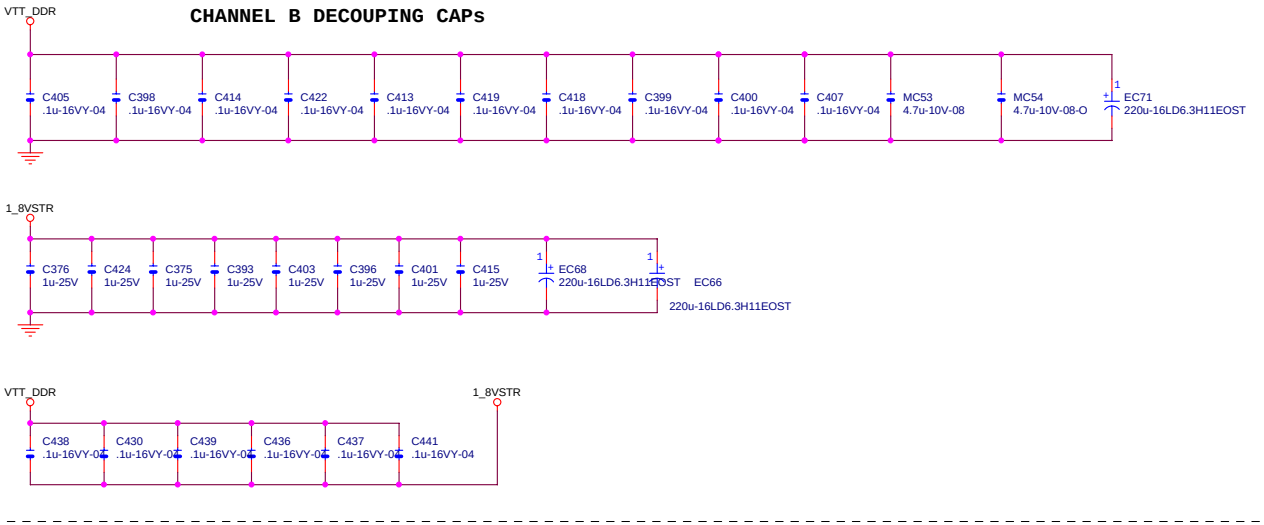
CHANNEL A DECOUPING CAPs



CHANNEL B DECOUPING CAPs



Elitegroup Computer Systems

Title: **DIMM Decouping**

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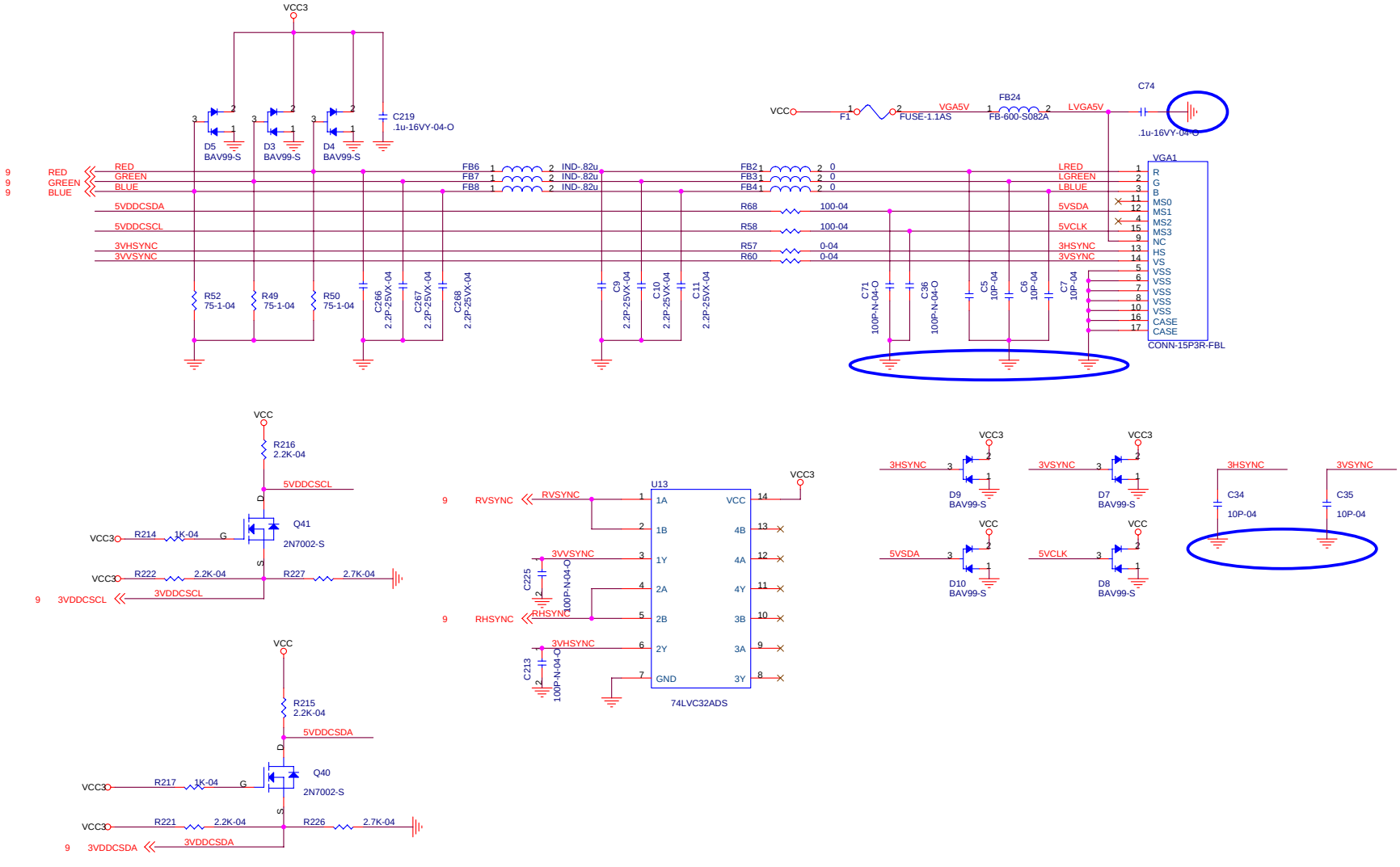

Elitegroup Computer Systems		
Title	VGA	
Size: Custom	Document Number: 946GZT-AM	Rev: A
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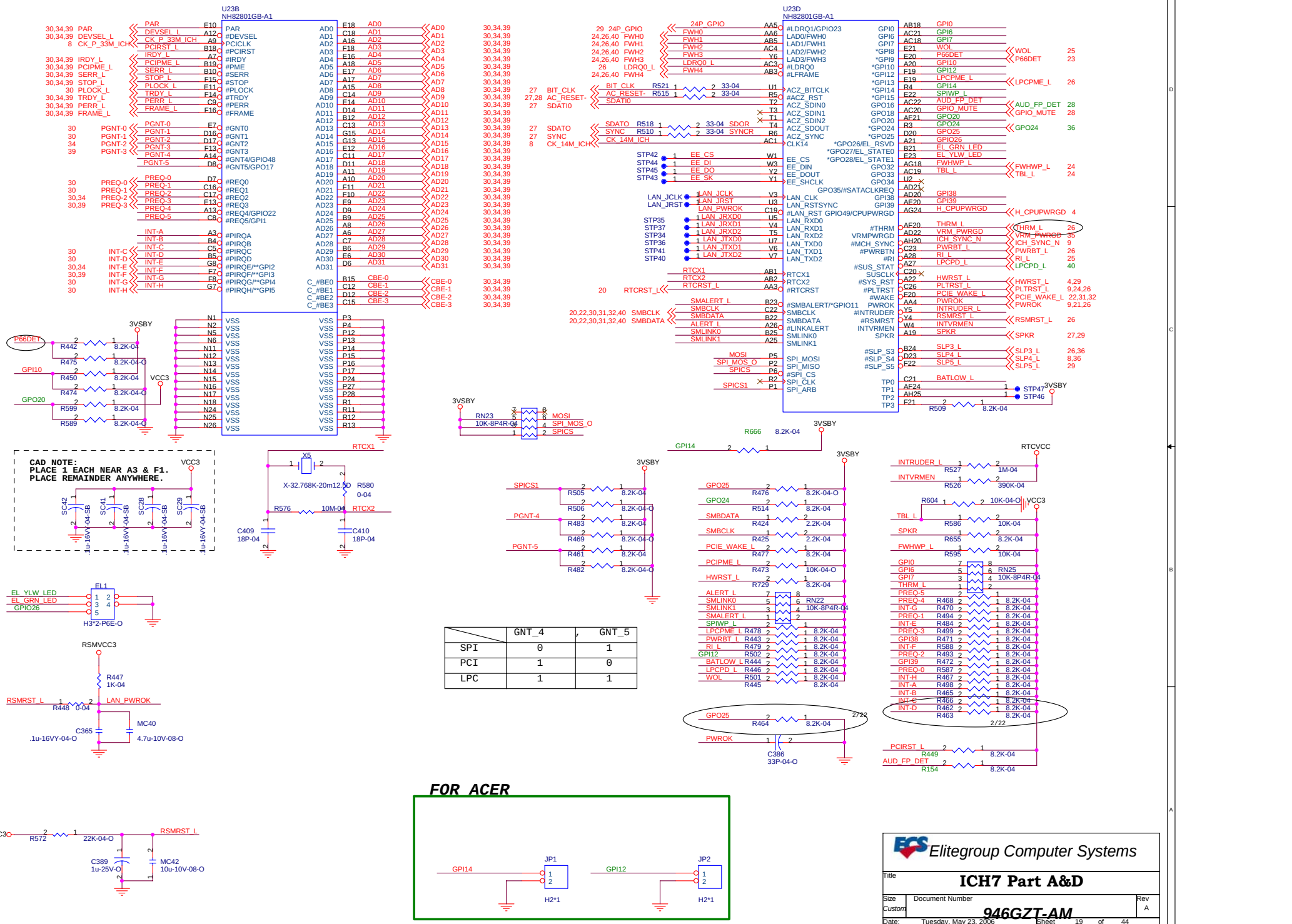
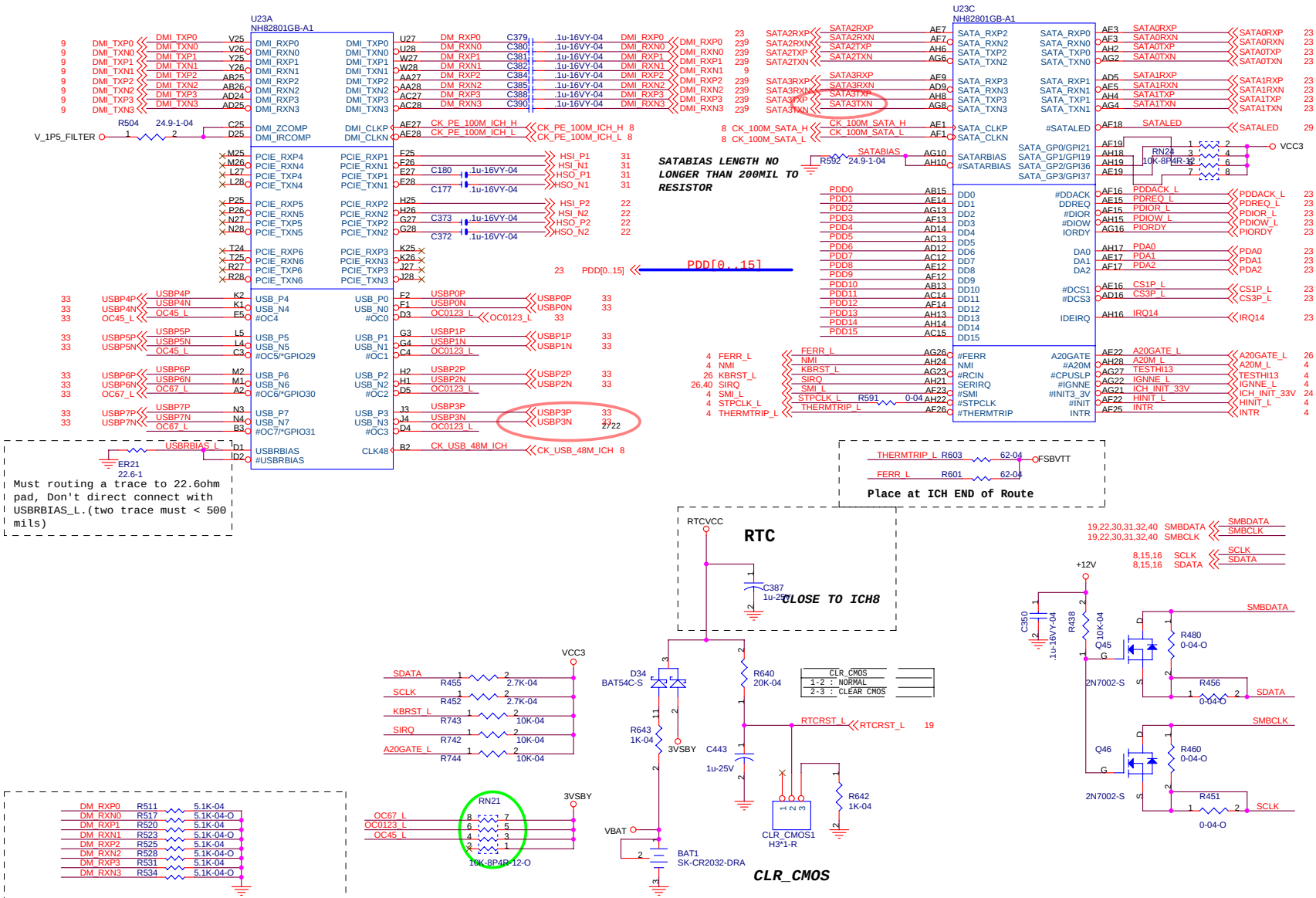


	GNT_4	GNT_5
SPI	0	1
PCI	1	0
LPC	1	1


U23A
NH82801GB-A1
U23C
NH82801GB-A1
SATABIAS LENGTH NO LONGER THAN 200MIL TO RESISTOR
PDD[0..15]
Must routing a trace to 22.6ohm pad, Don't direct connect with USBRBIAS_L.(two trace must < 500 mils)
Place at ICH END of Route
RTC
CLOSE TO ICH8
CLR_CMOS
Close to IGH7
Elitegroup Computer Systems
ICH7 Part B&C
946GZT-AM
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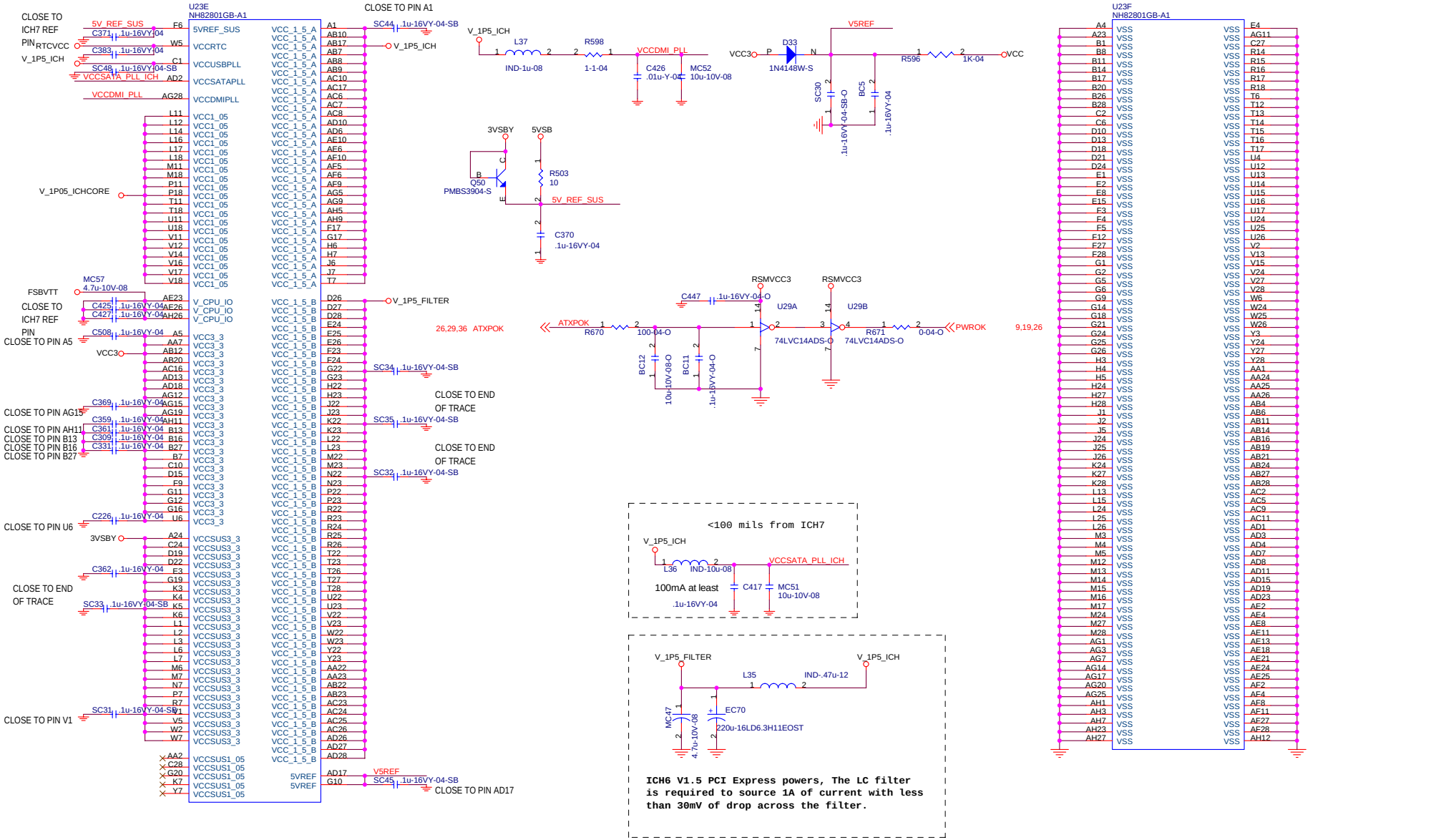

Elitegroup Computer Systems

Title	ICH7 Part E&F	
Size: Custom	Document Number: 946GZT-AM	Rev: A
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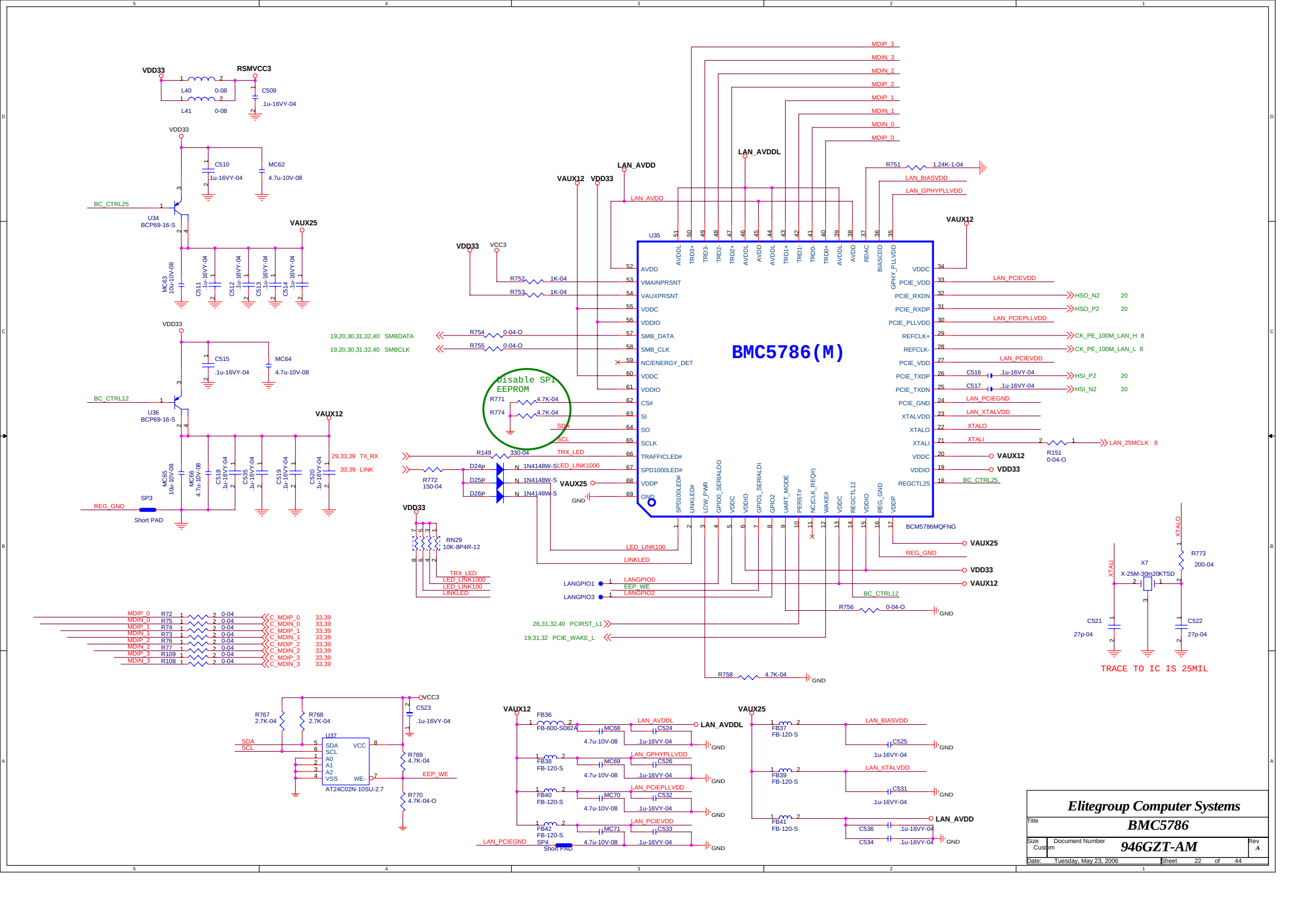
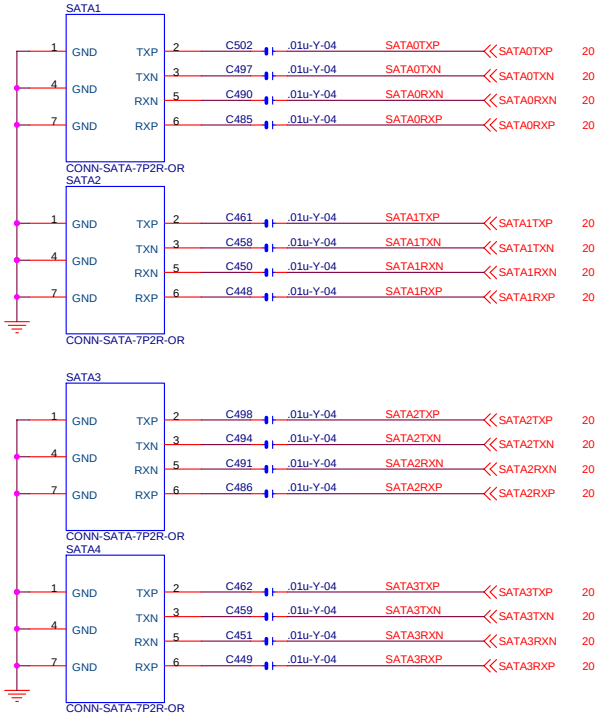
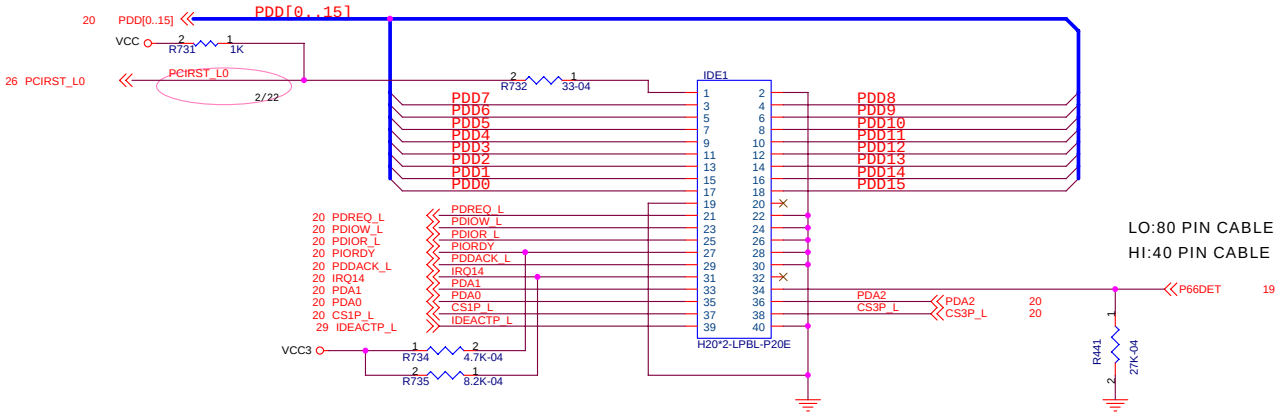
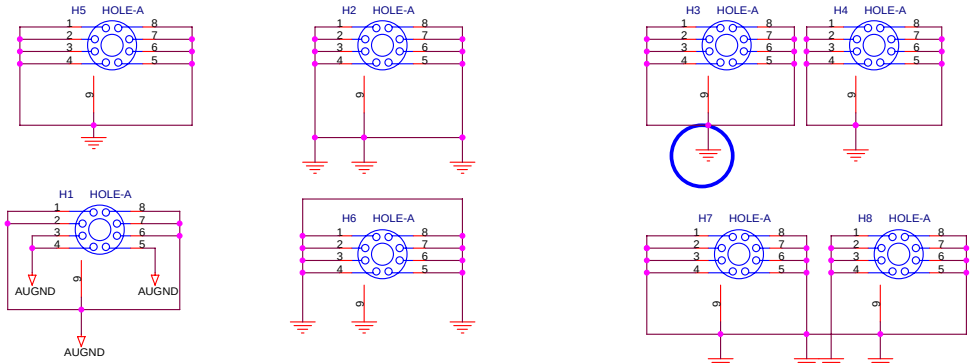
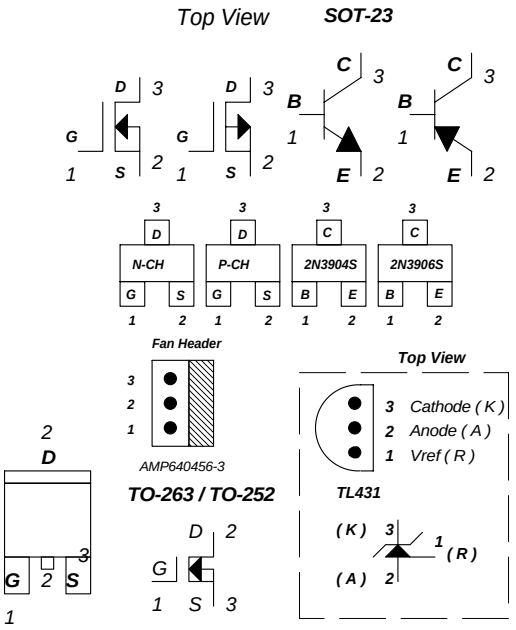


Elitegroup Computer Systems			
Title	BMC5786		
Size: Custom	Document Number: 946GZT-AM		Rev: A
Date: Tuesday, May 23, 2006	Sheet 22 of 44		









Elitegroup Computer Systems

Title: **SATA & IDE Connector**

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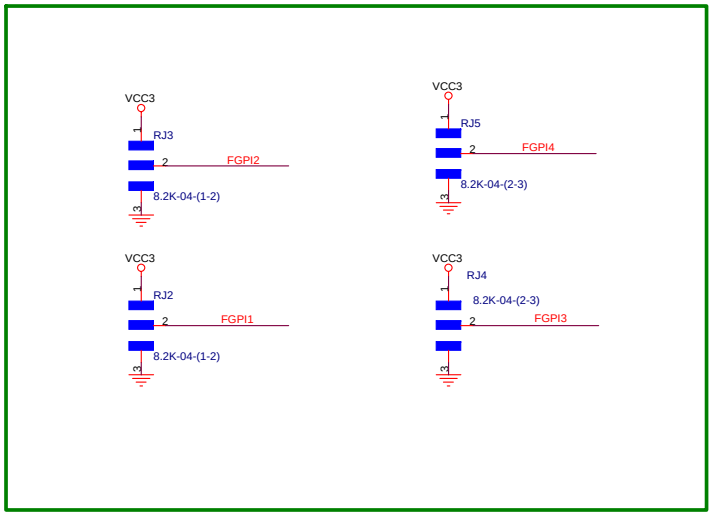

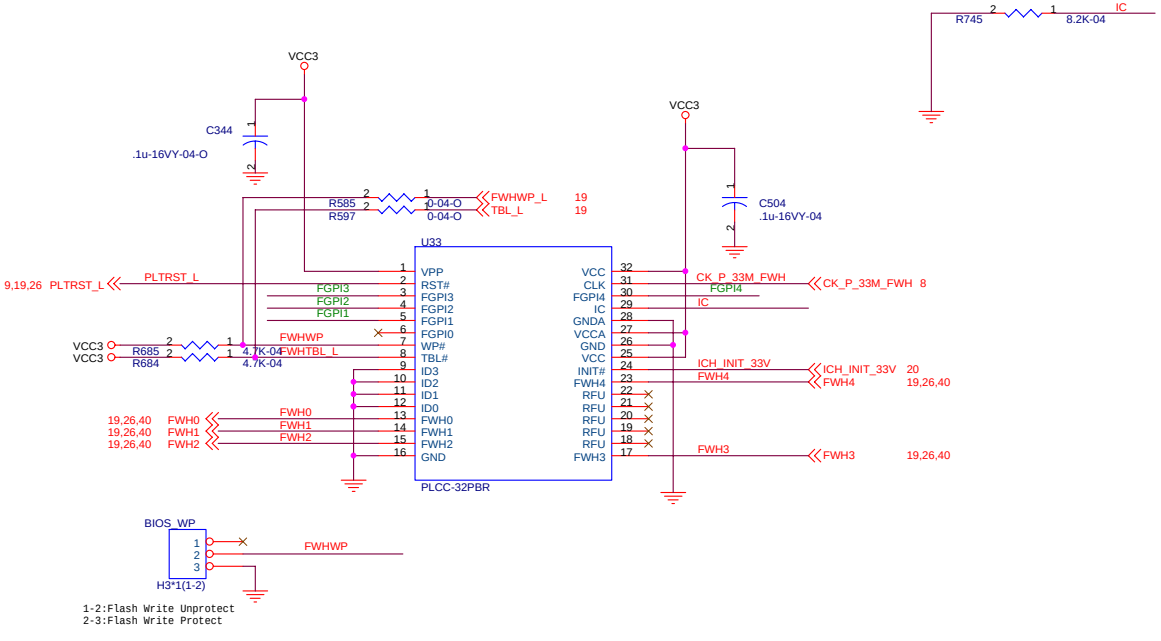

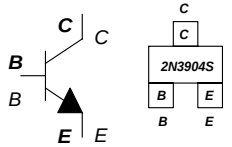

Elitegroup Computer Systems

Title	**FWH & SPI**	
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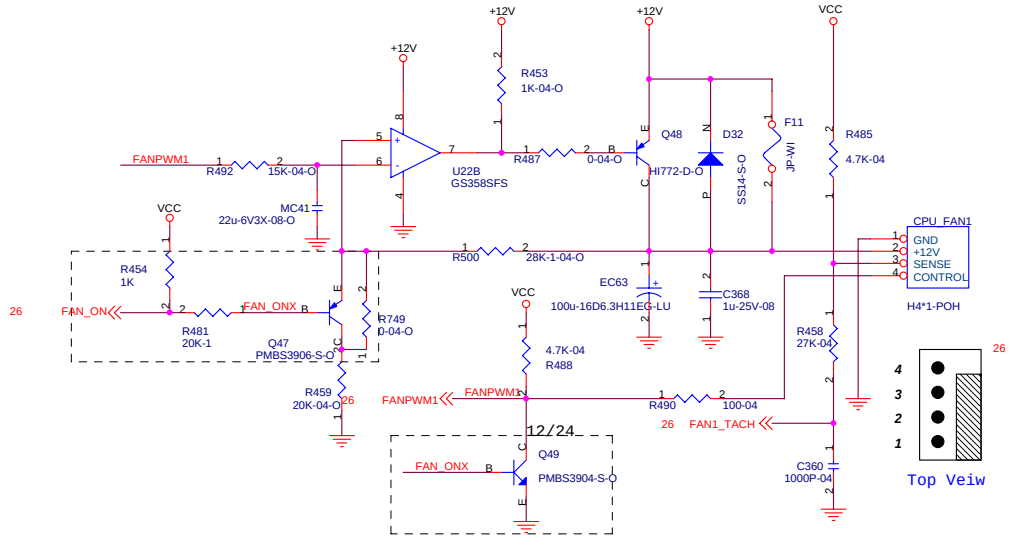

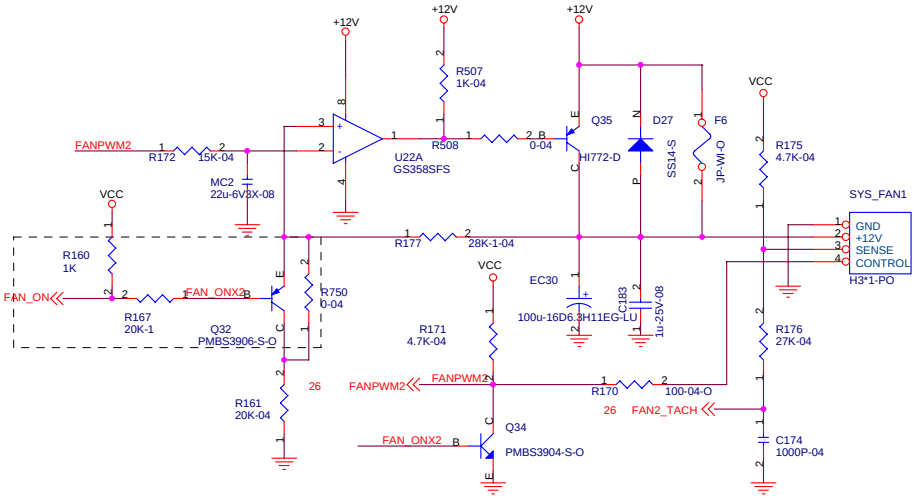

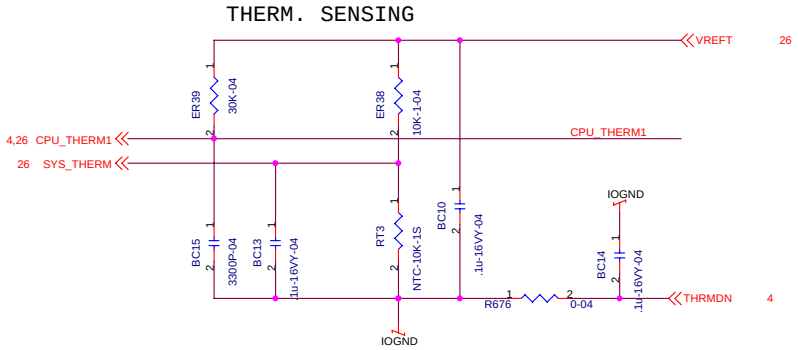

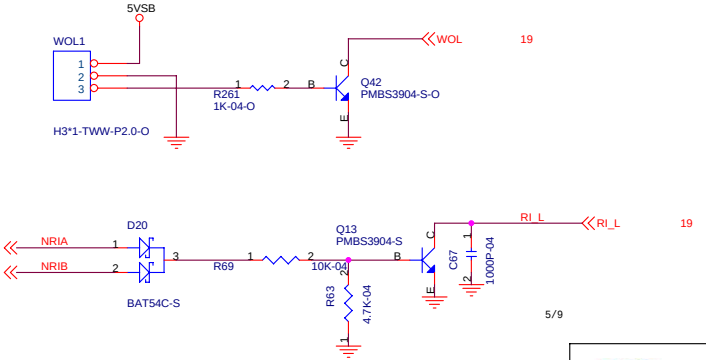

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Elitegroup Computer Systems		
Title: H/W Monitor		
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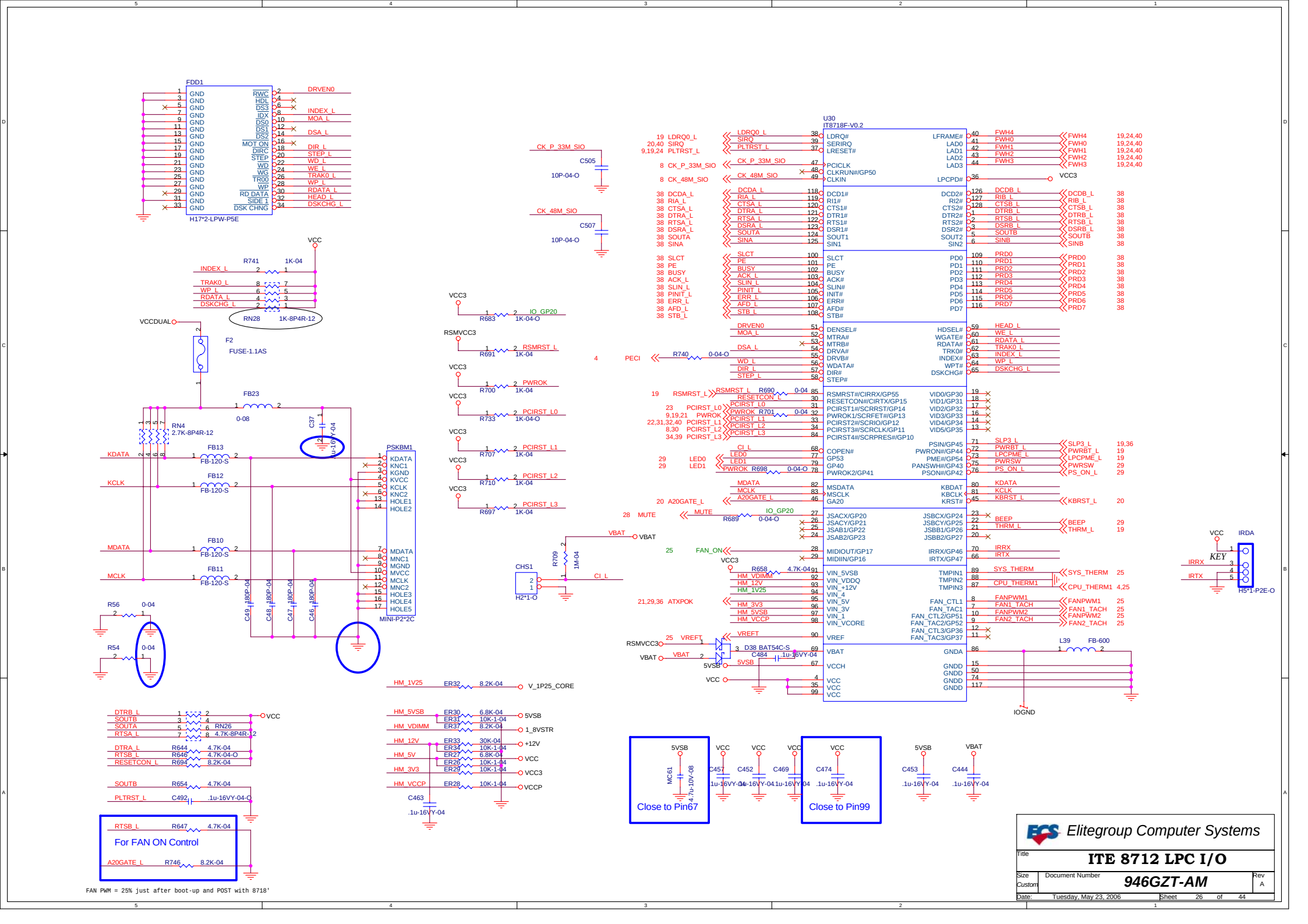
FDD1
H17*2-LPW-P5E
U30
IT8718F-V0.2
LDRQ#
SERIRQ
LRESET#
PCICLK
CLKRUN#/GP50
CLKIN
LPCPD#
LFRAME#
LAD0
LAD1
LAD2
LAD3
DCD1#
RI1#
CTS1#
DTR1#
RTS1#
DSR1#
SOUT1
SIN1
DCD2#
RI2#
CTS2#
DTR2#
RTS2#
DSR2#
SOUT2
SIN2
SLCT
PE
BUSY
ACK#
SLIN#
INIT#
ERR#
AFD#
STB#
PD0
PD1
PD2
PD3
PD4
PD5
PD6
PD7
DENSEL#
MTRA#
MTRB#
DRVA#
DRVB#
WDATA#
DIR#
STEP#
HDSEL#
WGATE#
RDATA#
TRK0#
INDEX#
WPT#
DSKCHG#
RSMRST#/CIRRX/GP55
RESETCON#/CIRTX/GP15
PCIRST1#/SCRRST/GP14
PWROK1/SCRFET#/GP13
PCIRST2#/SCRIO/GP12
PCIRST3#/SCRCLK/GP11
PCIRST4#/SCRPRES#/GP10
COPEN#
GP53
GP40
PWROK2/GP41
VID0/GP30
VID1/GP31
VID2/GP32
VID3/GP33
VID4/GP34
VID5/GP35
PSIN/GP45
PWRON#/GP44
PME#/GP54
PANSWH#/GP43
PSON#/GP42
MSDATA
MSCLK
GA20
KBDAT
KBCLK
KRST#
JSACX/GP20
JSACY/GP21
JSAB1/GP22
JSAB2/GP23
JSBCX/GP24
JSBCY/GP25
JSBB1/GP26
JSBB2/GP27
MIDIOUT/GP17
MIDIIN/GP16
IRRX/GP46
IRTX/GP47
VIN_5VSB
VIN_VDDQ
VIN_+12V
VIN_4
VIN_5V
VIN_3V
VIN_1
VIN_VCORE
VREF
TMPIN1
TMPIN2
TMPIN3
FAN_CTL1
FAN_TAC1
FAN_CTL2/GP51
FAN_TAC2/GP52
FAN_CTL3/GP36
FAN_TAC3/GP37
VBAT
VCCH
VCC
VCC
VCC
GNDA
GNDD
GNDD
GNDD
GNDD
PSKBM1
MINI-P2*2C
RN4
2.7K-8P4R-12
RN28
1K-8P4R-12
RN26
4.7K-8P4R-12
F2
FUSE-1.1AS
FB23
FB13
FB12
FB10
FB11
FB-120-S
0-08
CHS1
H2*1-O
D38 BAT54C-S
L39
FB-600
IRDA
H5*1-P2E-O
KEY
IOGND
For FAN ON Control
Close to Pin67
Close to Pin99
FAN PWM = 25% just after boot-up and POST with 8718'
Elitegroup Computer Systems
ITE 8712 LPC I/O
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Placement put on EC

PCR C25 1u-25V-O PORT-C_R
PCL C66 1u-25V-O PORT-C_L
PBR C65 1u-25V-O PORT-B_R
PBL C80 1u-25V-O PORT-B_L

Verfout bias for stereo microphone.

Place near Chip

Place near CODEC each PIN

Resistors Networks

U2
ALC888-GRS

ALC888/ALC655
Co-layout

BITCLK
ALC880 SB->CODEC
ALC655 CODEC->SB

Elitegroup Computer Systems

Title: AUDIO (ALC655/888)
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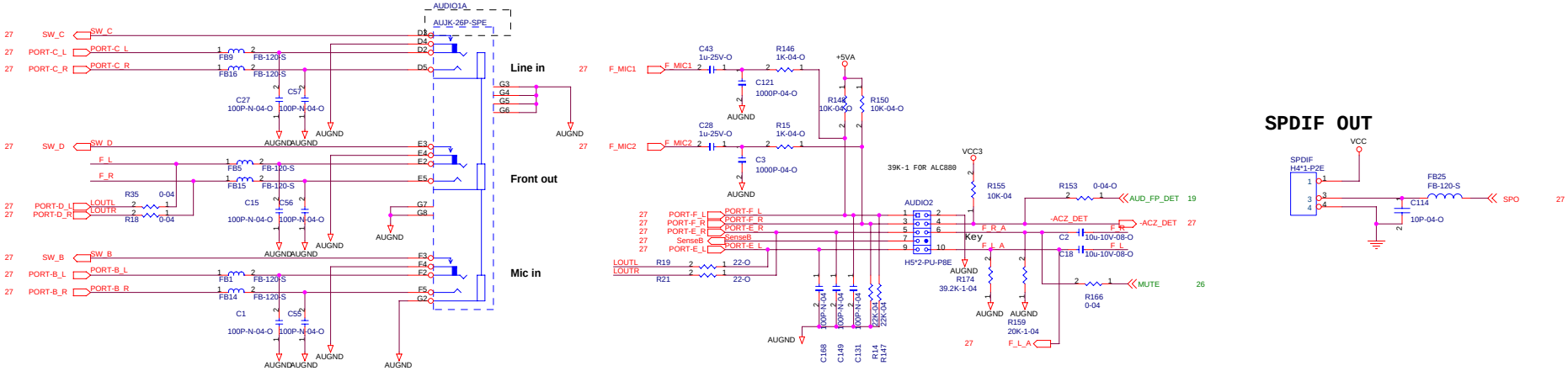

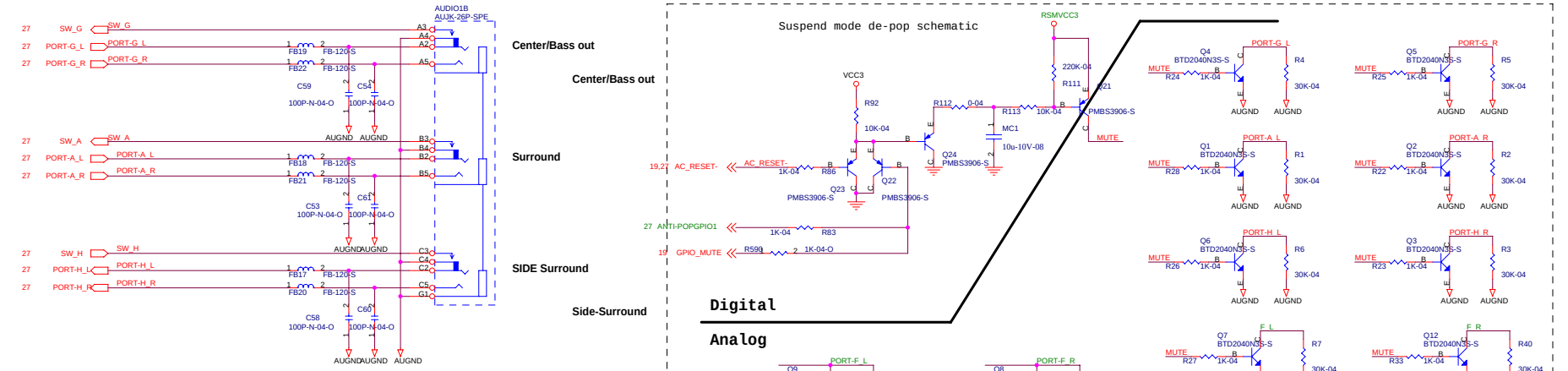

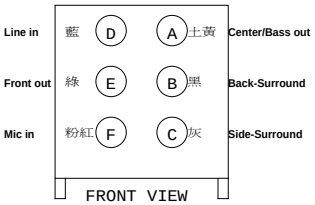

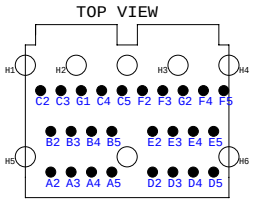

Elitegroup Computer Systems	
Title: AUDIO (ALC655/888)	
Size: C	Document Number: 946GZT-AM
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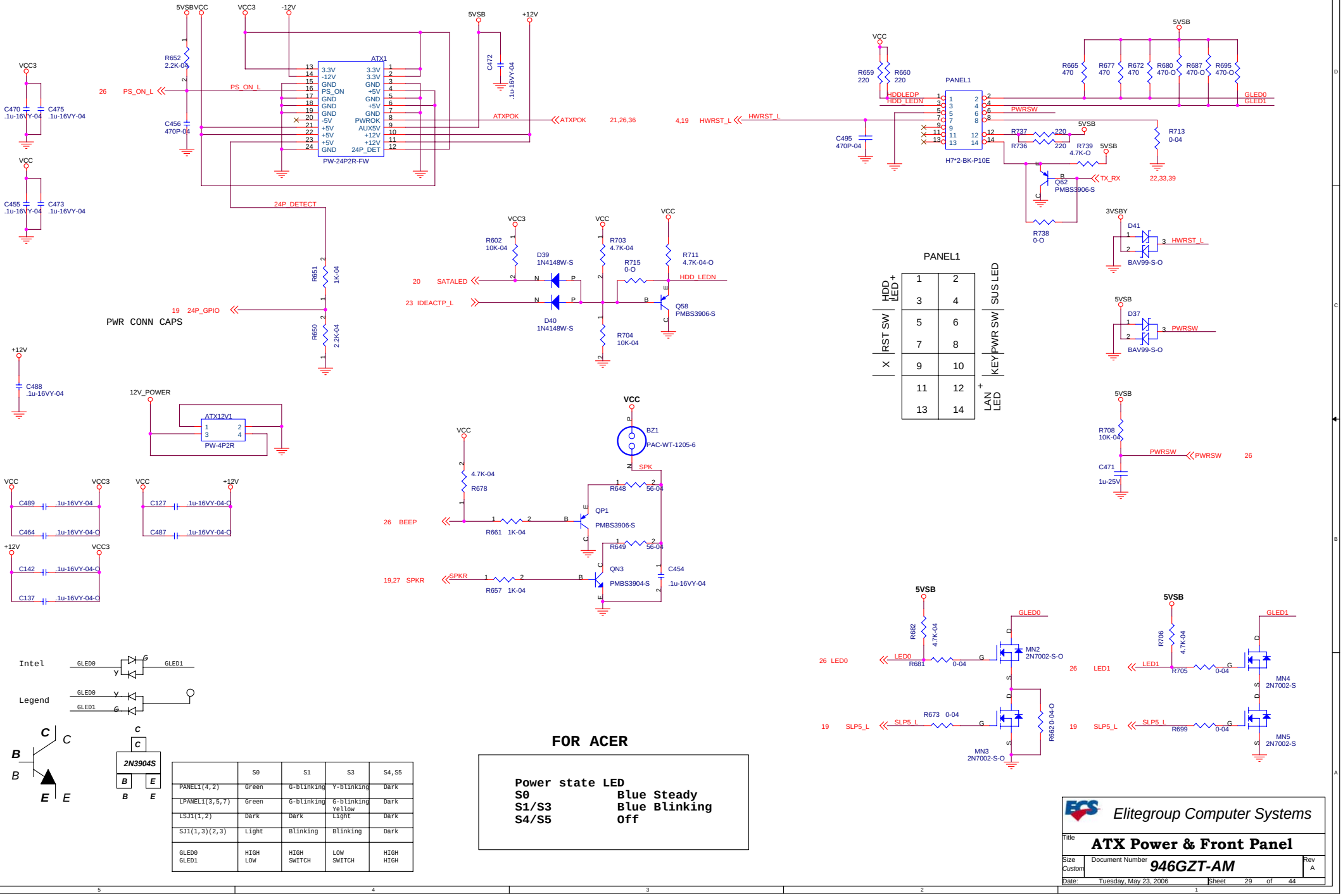

	S0	S1	S3	S4,S5
PANEL1(4,2)	Green	G-blinking	Y-blinking	Dark
LPANEL1(3,5,7)	Green	G-blinking	G-blinking Yellow	Dark
LSJ1(1,2)	Dark	Dark	Light	Dark
SJ1(1,3)(2,3)	Light	Blinking	Blinking	Dark
GLED0 GLED1	HIGH LOW	HIGH SWITCH	LOW SWITCH	HIGH HIGH

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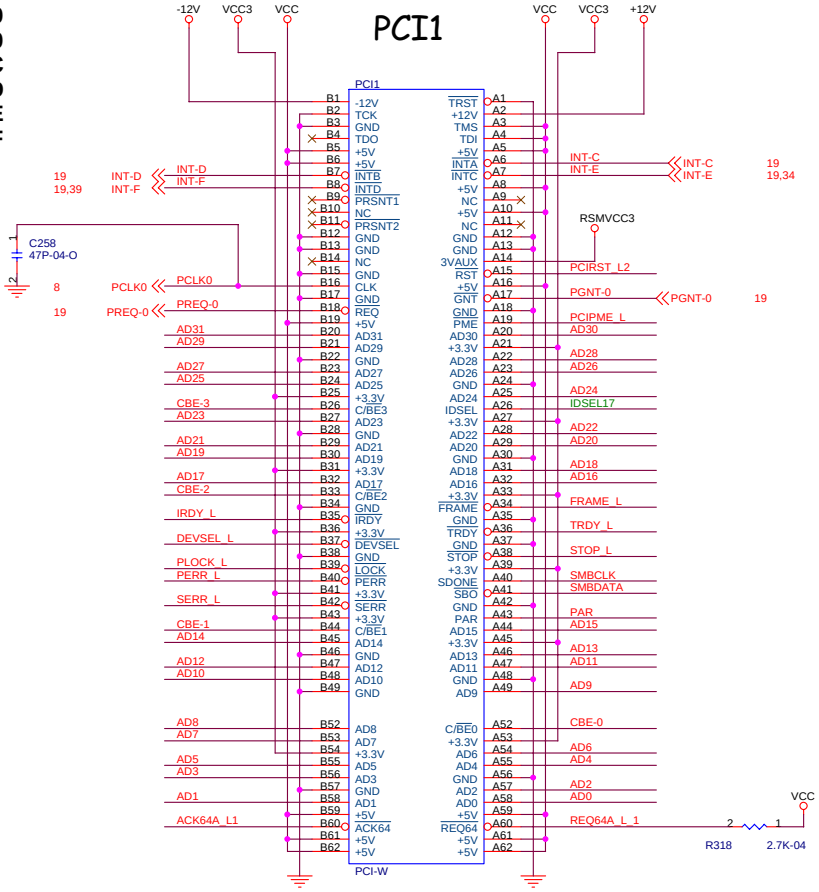
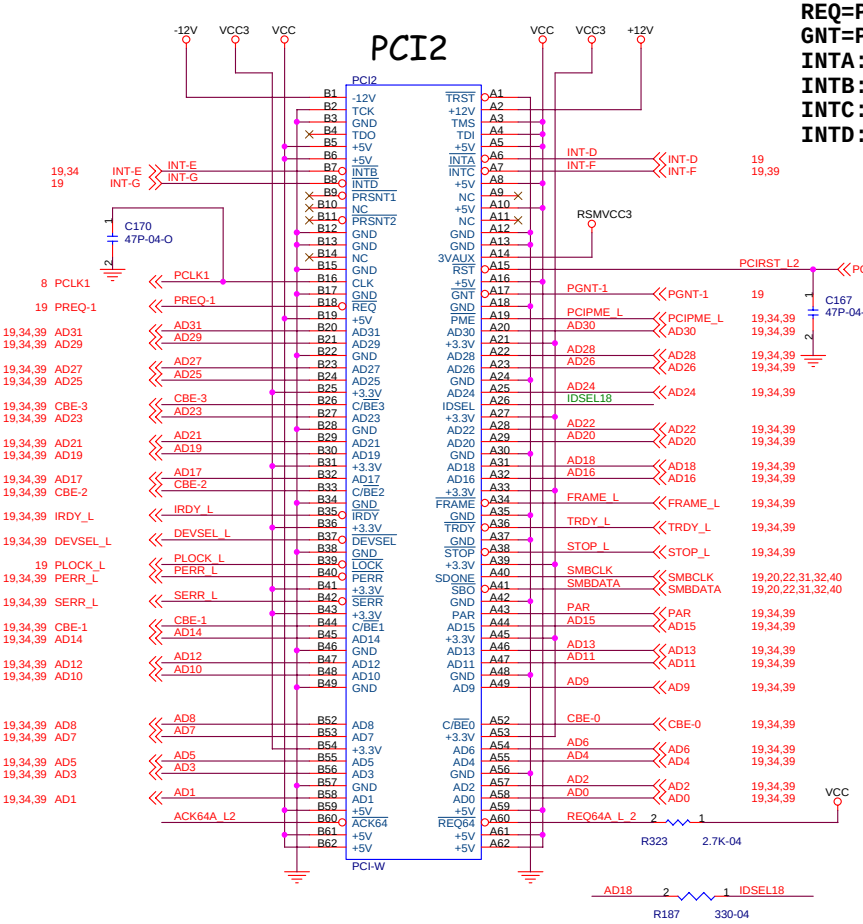
CLK=PCK0
RST=PCIRST_L2
IDSEL=AD17
REQ=PREQ-0
GNT=PGNT-0
INTA:INT-C
INTB:INT-D
INTC:INT-E
INTD:INT-F

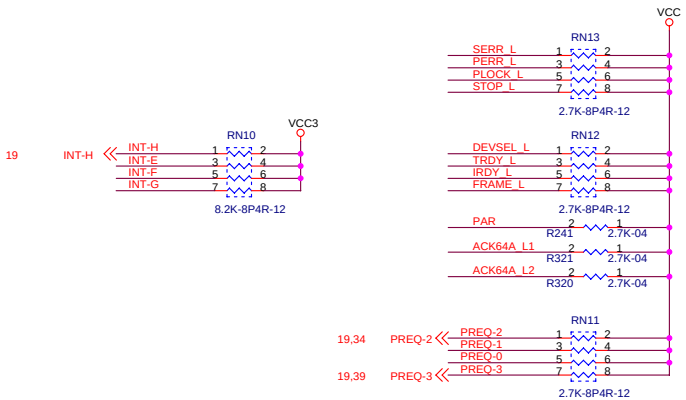
PCI1

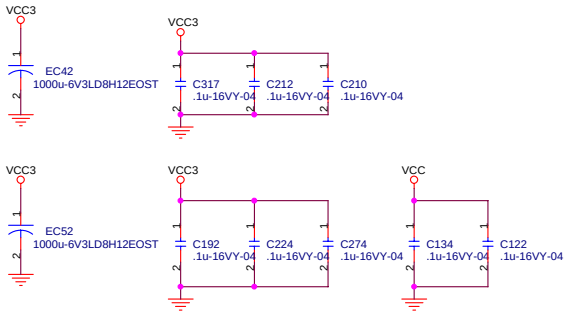


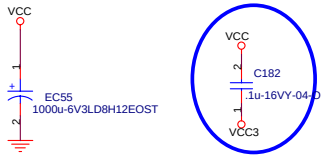
CLK=PCK1
RST=PCIRST_L2
IDSEL=AD18
REQ=PREQ-1
GNT=PGNT-1
INTA:INT-D
INTB:INT-E
INTC:INT-F
INTD:INT-G

PCI2









Elitegroup Computer Systems

Title: **PCI Slot 1&2**

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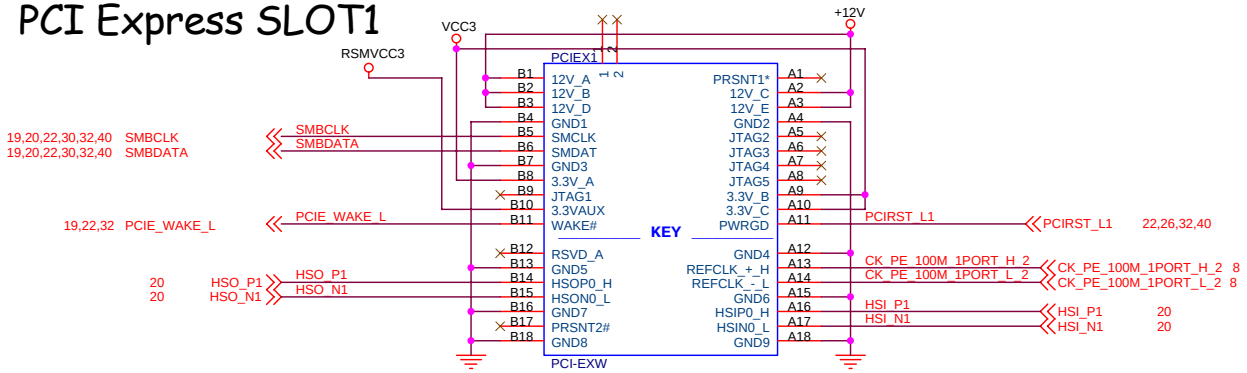
PCI Express SLOT1



Elitegroup Computer Systems		
Title: **PCIE Slot 1**		
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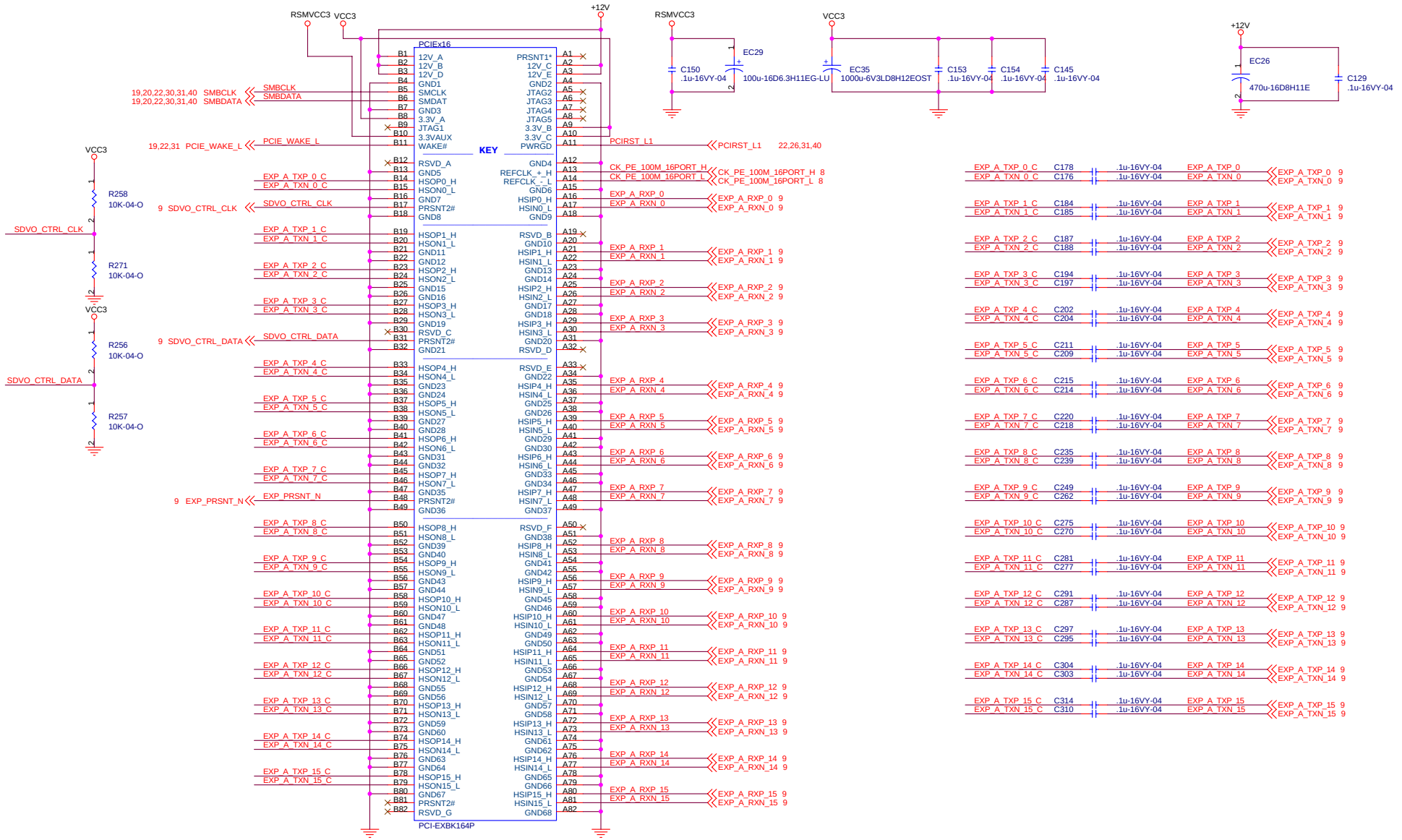

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Title: **PCIE Express 16 -Slot**

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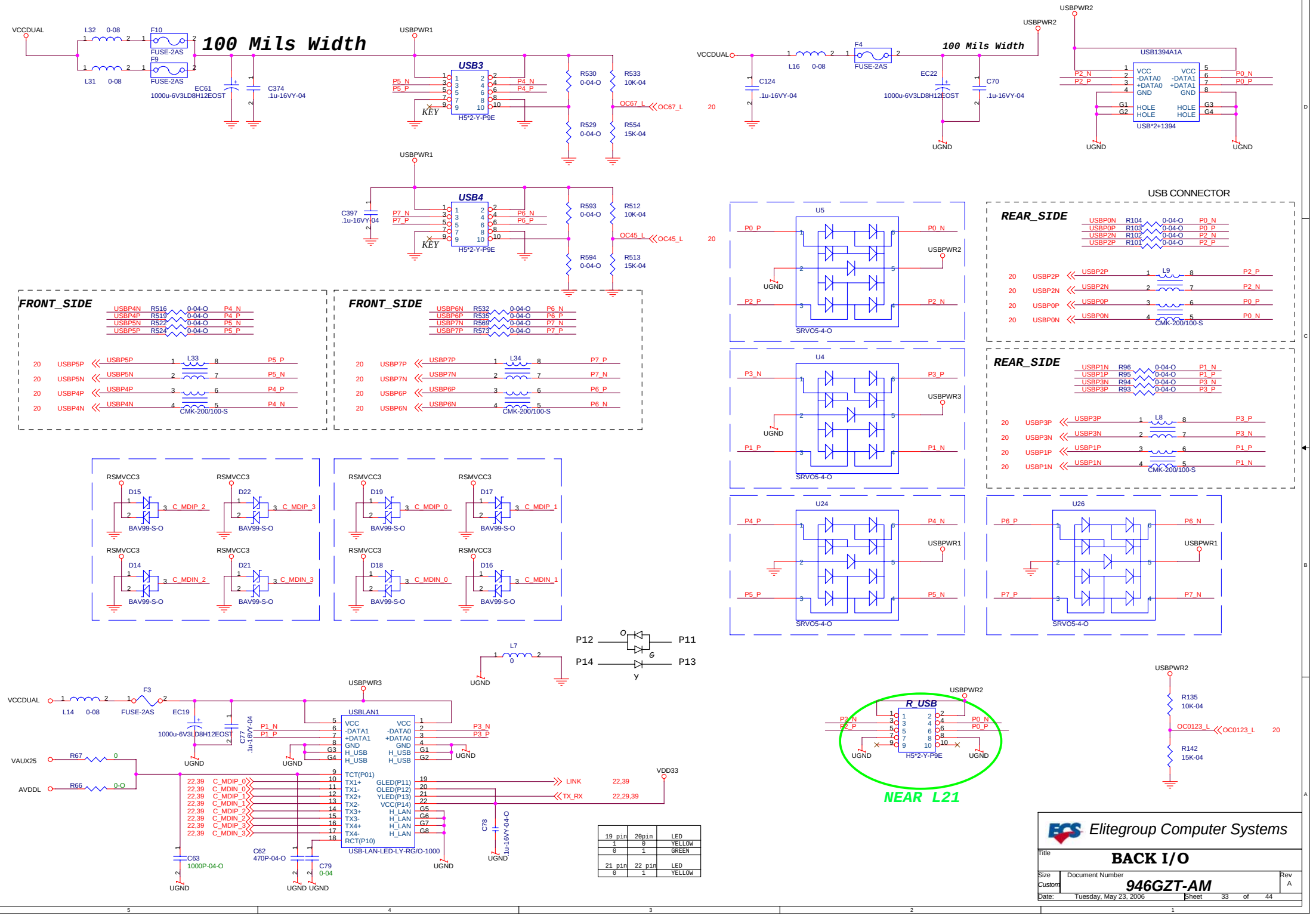
100 Mils Width
USB3
USB4
FRONT_SIDE
REAR_SIDE
USB CONNECTOR
R_USB
NEAR L21
USB1394A1
USB*2+1394
H5*2-Y-P9E
SRVO5-4-O
CMK-200/100-S
USBLAN1
USB-LAN-LED-LY-RG/O-1000
BAV99-S-O
Elitegroup Computer Systems
BACK I/O
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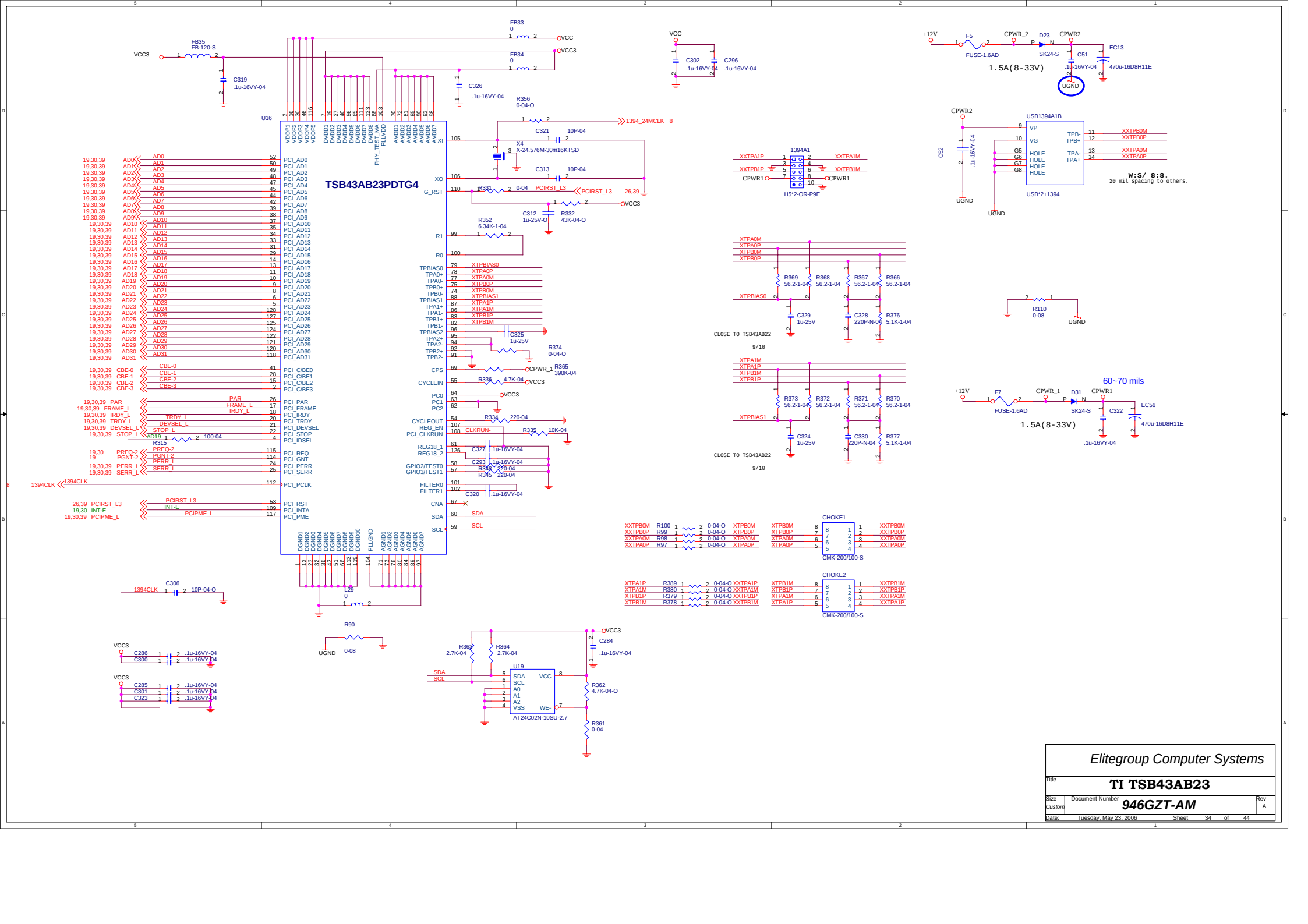
TSB43AB23PDTG4
U16
FB35
FB-120-S
VCC3
C319
.1u-16VY-04
FB33
FB34
VCC
C326
.1u-16VY-04
R356
0-04-O
1394_24MCLK 8
C321
10P-04
X4
X-24.576M-30m16KTSD
C313
10P-04
XO
G_RST
R331
0-04
PCIRST_L3
26,39
C312
1u-25V-O
R332
43K-04-O
R352
6.34K-1-04
R1
R0
TPBIAS0
TPA0+
TPA0-
TPB0+
TPB0-
TPBIAS1
TPA1+
TPA1-
TPB1+
TPB1-
TPBIAS2
TPA2+
TPA2-
TPB2+
TPB2-
CPS
CYCLEIN
PC0
PC1
PC2
CYCLEOUT
REG_EN
PCI_CLKRUN
REG18_1
REG18_2
GPIO2/TEST0
GPIO3/TEST1
FILTER0
FILTER1
CNA
SDA
SCL
XTPBIAS0
XTPA0P
XTPA0M
XTPB0P
XTPB0M
XTPBIAS1
XTPA1P
XTPA1M
XTPB1P
XTPB1M
C325
1u-25V
R374
0-04-O
CPWR_1
R365
390K-04
R336
4.7K-04
VCC3
R334
220-04
CLKRUN-
R335
10K-04
C327
.1u-16VY-04
C293
.1u-16VY-04
R346
220-04
R345
220-04
C320
.1u-16VY-04
PCI_AD0
PCI_AD1
PCI_AD2
PCI_AD3
PCI_AD4
PCI_AD5
PCI_AD6
PCI_AD7
PCI_AD8
PCI_AD9
PCI_AD10
PCI_AD11
PCI_AD12
PCI_AD13
PCI_AD14
PCI_AD15
PCI_AD16
PCI_AD17
PCI_AD18
PCI_AD19
PCI_AD20
PCI_AD21
PCI_AD22
PCI_AD23
PCI_AD24
PCI_AD25
PCI_AD26
PCI_AD27
PCI_AD28
PCI_AD29
PCI_AD30
PCI_AD31
PCI_C/BE0
PCI_C/BE1
PCI_C/BE2
PCI_C/BE3
PCI_PAR
PCI_FRAME
PCI_IRDY
PCI_TRDY
PCI_DEVSEL
PCI_STOP
PCI_IDSEL
PCI_REQ
PCI_GNT
PCI_PERR
PCI_SERR
PCI_PCLK
PCI_RST
PCI_INTA
PCI_PME
R315
100-04
C306
10P-04-O
L29
0
R90
0-08
UGND
C286
C300
C285
C301
C323
.1u-16VY-04
R363
2.7K-04
R364
2.7K-04
U19
AT24C02N-10SU-2.7
C284
R362
4.7K-04-O
R361
0-04
VCC
C302
C296
.1u-16VY-04
+12V
F5
FUSE-1.6AD
1.5A(8-33V)
CPWR_2
D23
SK24-S
CPWR2
C51
EC13
470u-16D8H11E
UGND
USB1394A1B
USB*2+1394
C52
W:S/ 8:8.
20 mil spacing to others.
1394A1
H5*2-OR-P9E
CPWR1
R369
R368
R367
R366
56.2-1-04
C329
1u-25V
C328
220P-N-04
R376
5.1K-1-04
CLOSE TO TSB43AB22
9/10
R373
R372
R371
R370
C324
C330
R377
R110
0-08
60~70 mils
F7
FUSE-1.6AD
SK24-S
C322
EC56
CHOKE1
CHOKE2
CMK-200/100-S
Elitegroup Computer Systems
TI TSB43AB23
946GZT-AM
Custom
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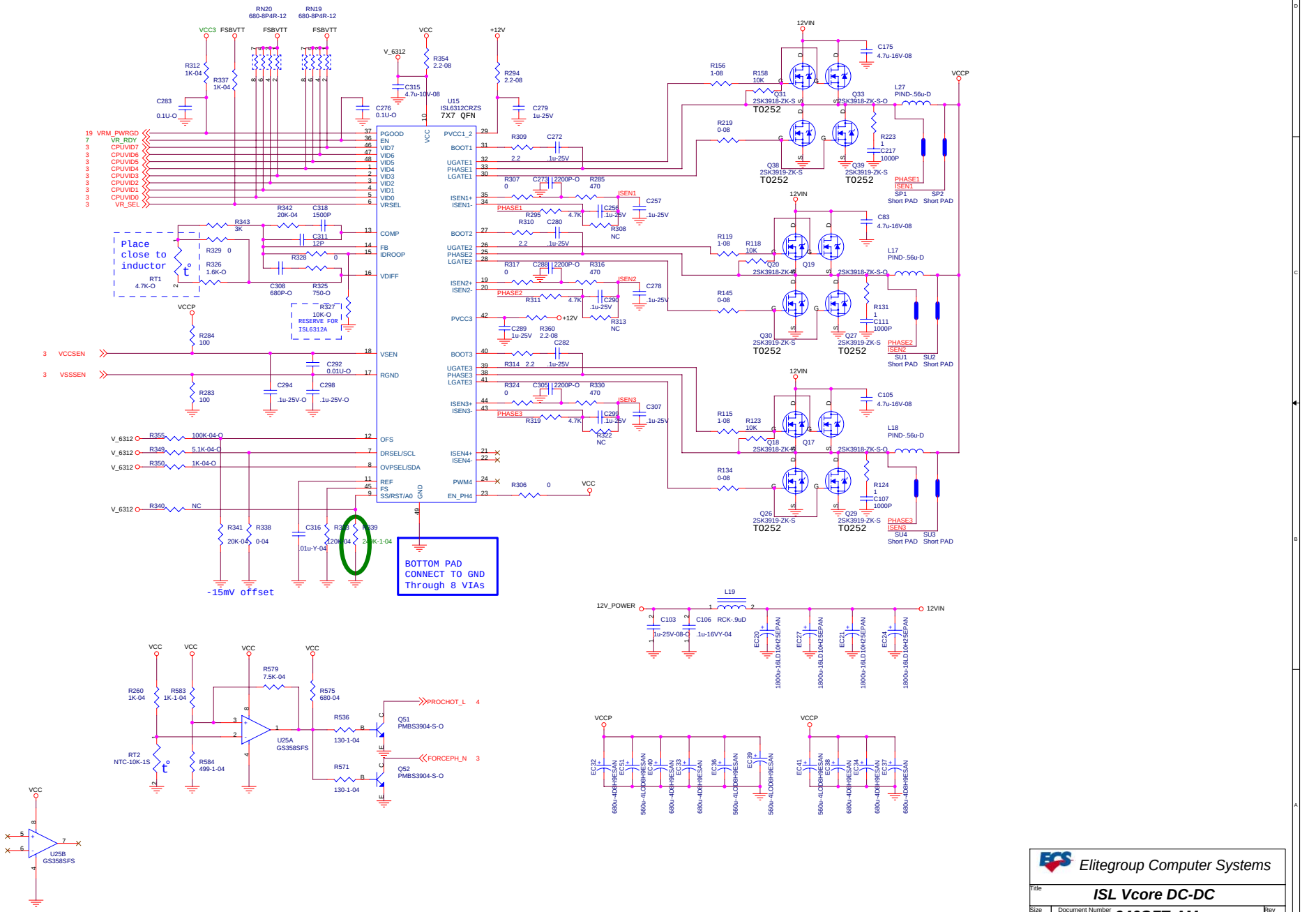
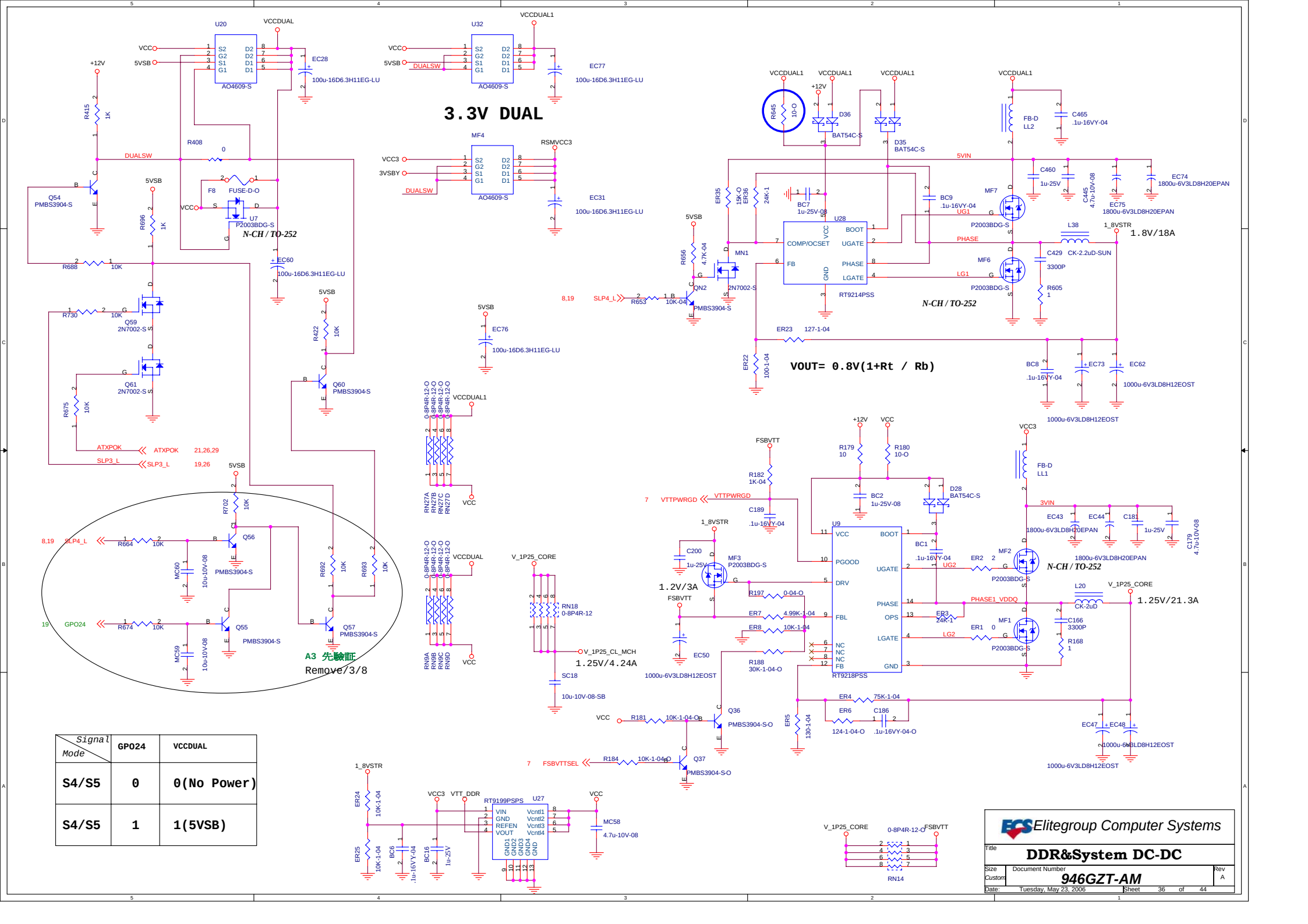
ISL6312/6322CR FOR Intel P4 Broadwater VRD11 POWER CKT - 4 PHASE



Elitegroup Computer Systems			
Title	ISL Vcore DC-DC		
Size C	Document Number 946GZT-AM		Rev A
Date: Tuesday, May 23, 2006	Sheet 35 of 44		



Signal / Mode	GPO24	VCCDUAL
S4/S5	0	0(No Power)
S4/S5	1	1(5VSB)

Elitegroup Computer Systems

Title: DDR&System DC-DC

Size: Custom | Document Number: 946GZT-AM | Rev: A

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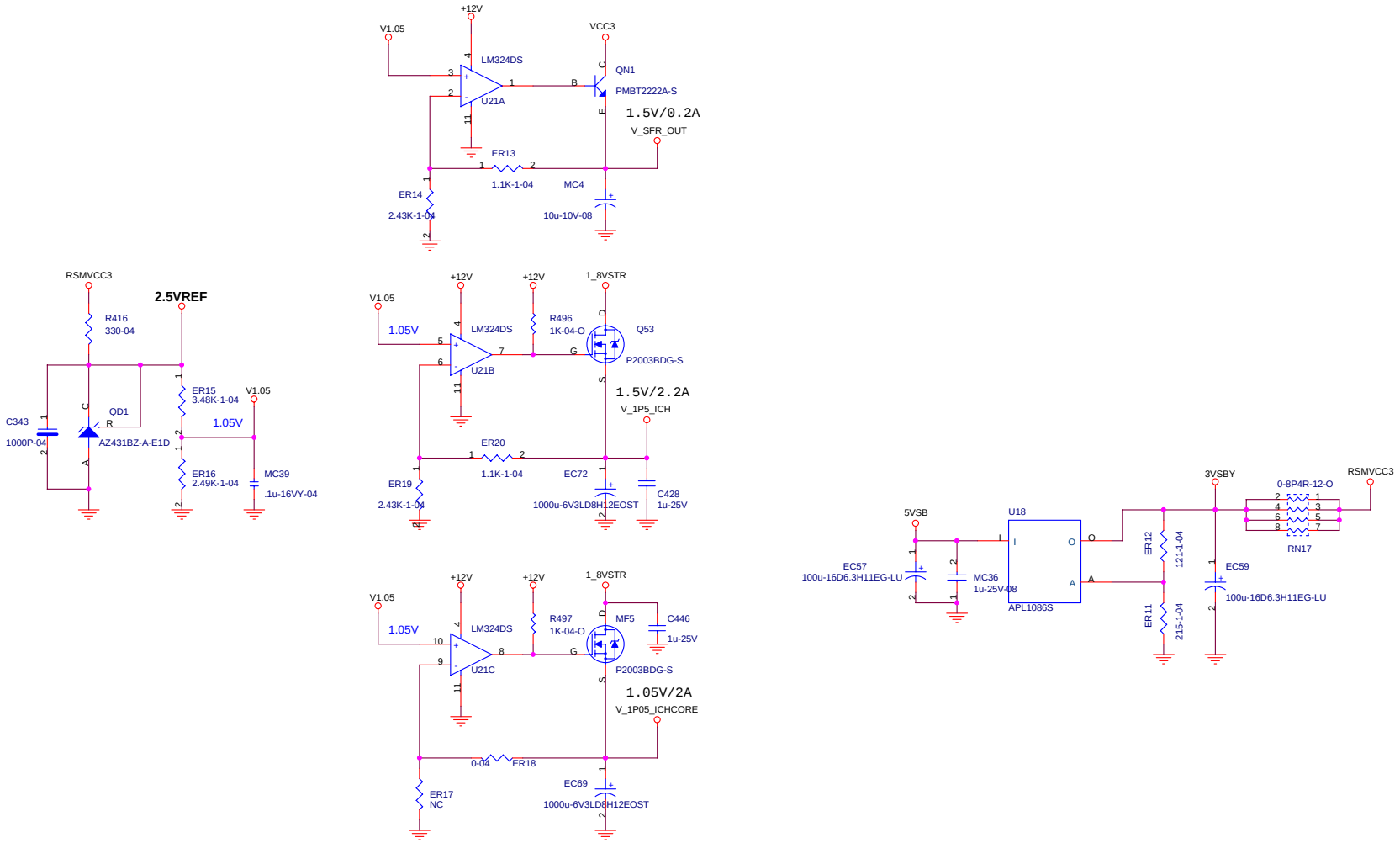

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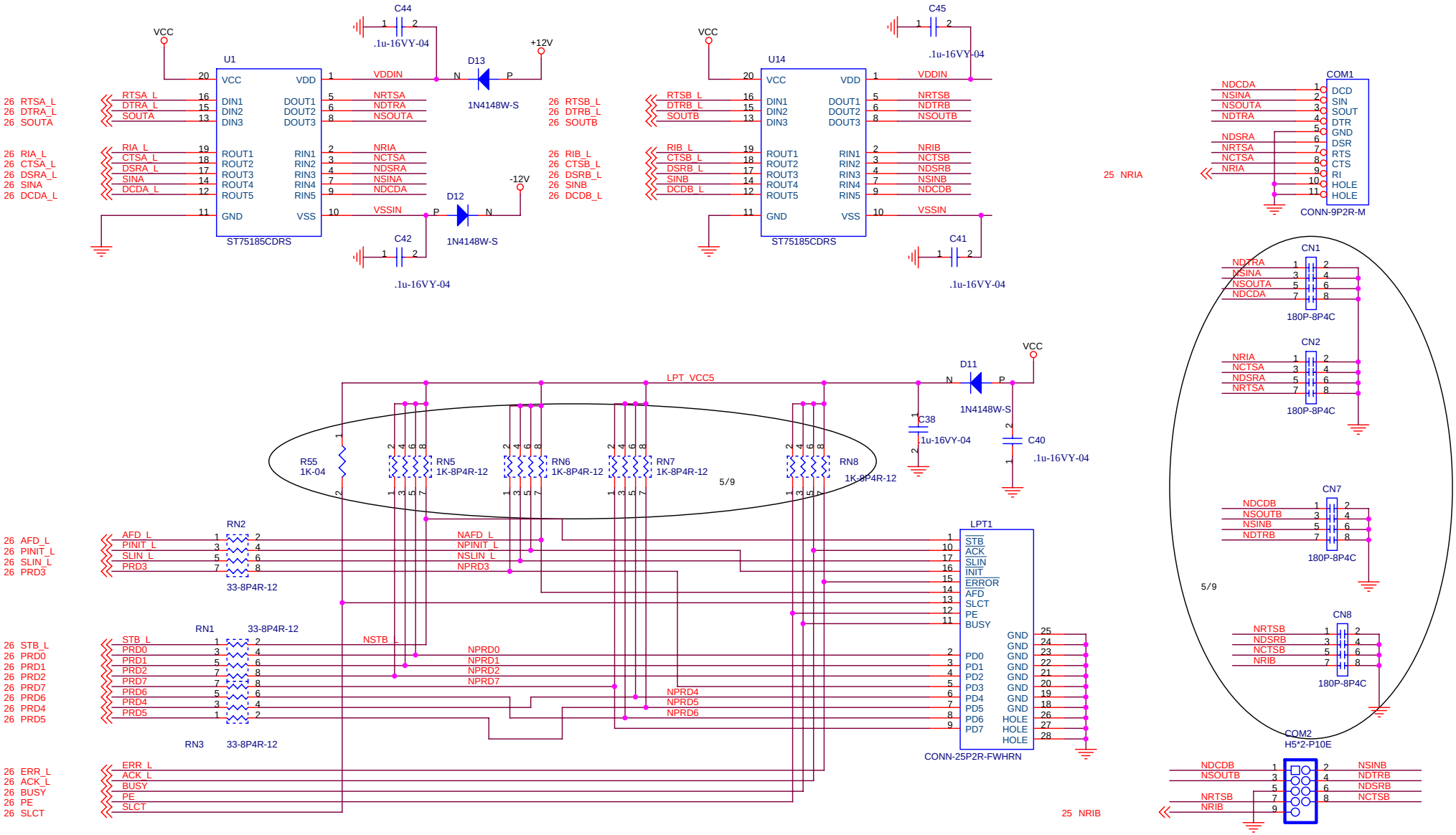
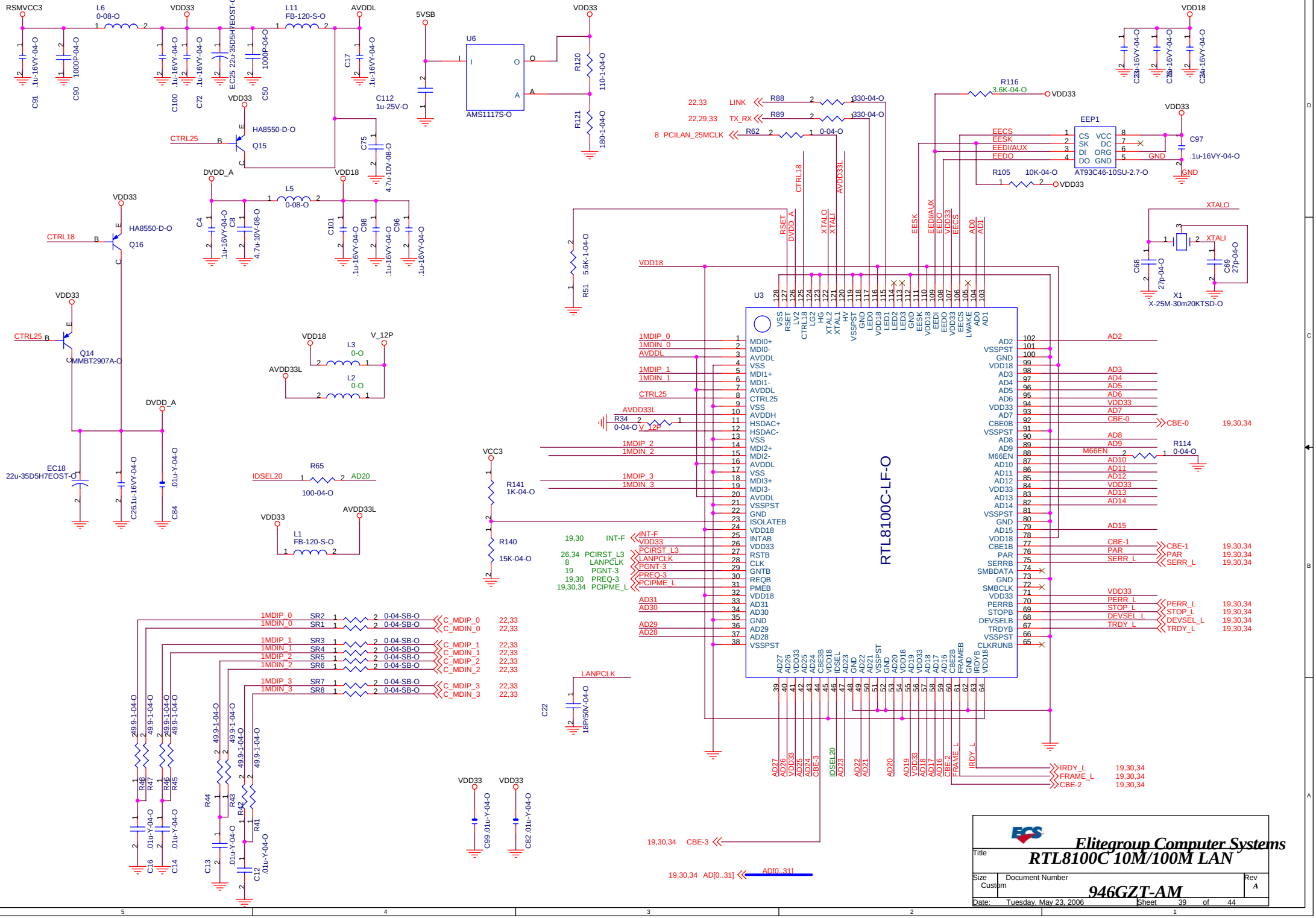
Title: **MIS DC-DC POWER**

Size: Custom | Document Number: **946GZT-AM** | Rev: A

Date: Tuesday, May 23, 2006 | Sheet 37 of 44



Elitegroup Computer Systems		
Title	I/O Ports	
Size: Custom	Document Number: 946GZT-AM	Rev: A
Date: Tuesday, May 23, 2006	Sheet 38 of 44	


RTL8100C-LF-O
U3
U6
AMS1117S-O
Q15
HA8550-D-O
Q16
Q14
MMBT2907A-O
L6
L5
L11
L1
L2
L3
EEP1
AT93C46-10SU-2.7-O
X1
X-25M-30m20KTSD-O
Elitegroup Computer Systems
RTL8100C 10M/100M LAN
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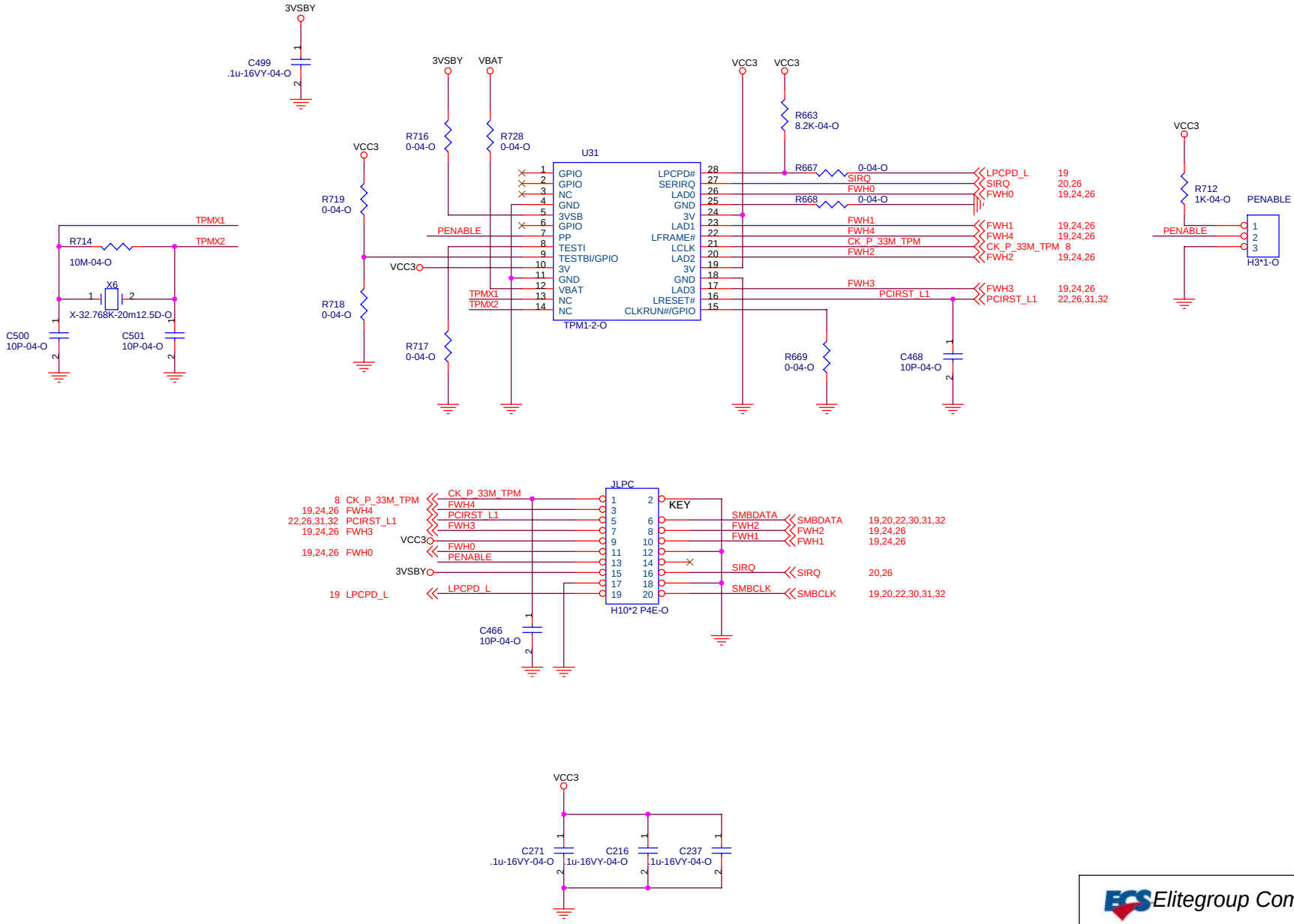

Elitegroup Computer Systems

Title: **TPM**

Size: Custom | Document Number: **946GZT-AM** | Rev: A

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SCH VER	PCB VER	DATE	DESCRIPTION
A	A	2006/05/10	Preliminary release

Elitegroup Computer Systems

Title: **Change list**

Size	Document Number	Rev
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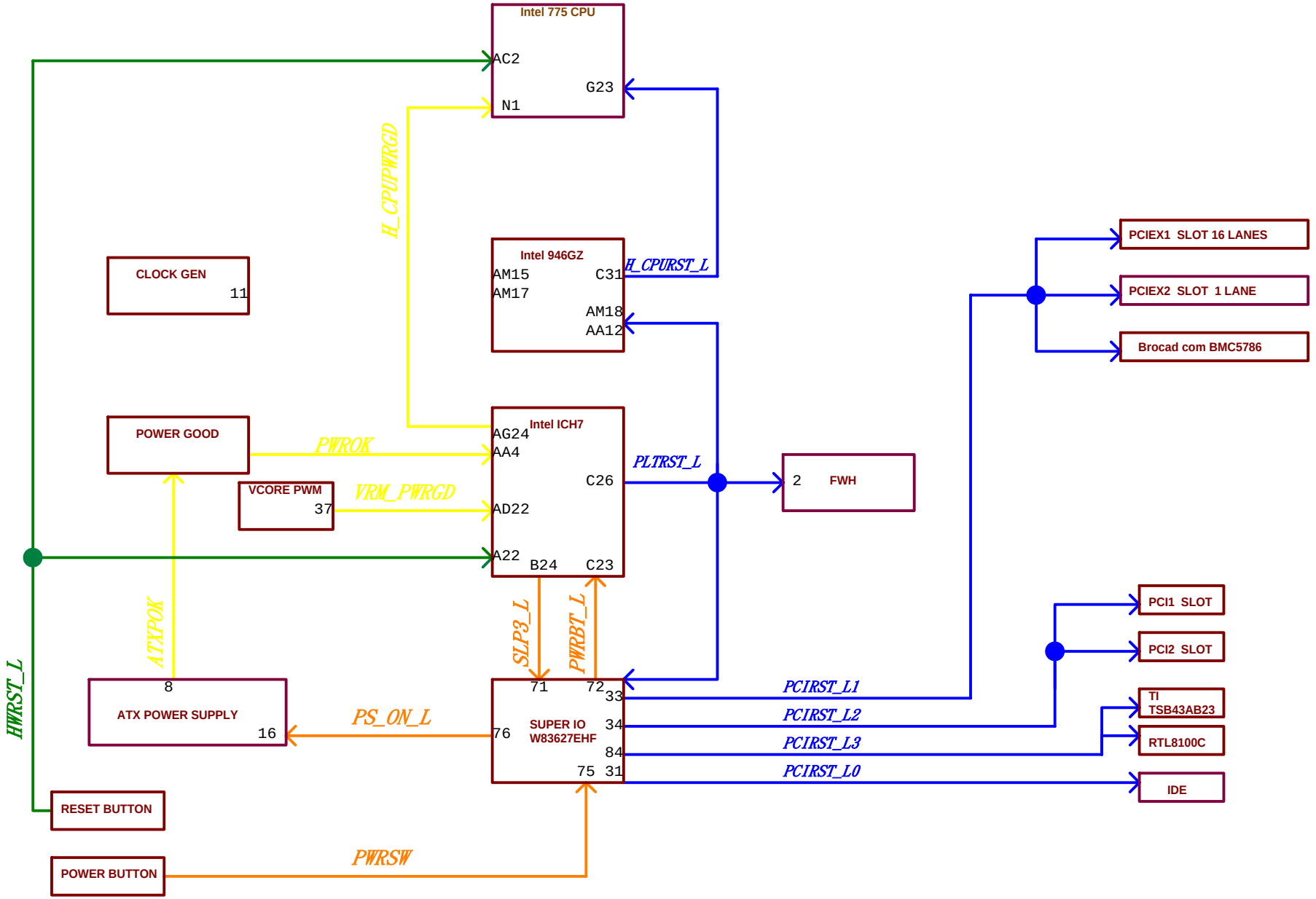

Elitegroup Computer Systems

Title: RESET Diagram

Size: Custom | Document Number: 946GZT-AM | Rev: A

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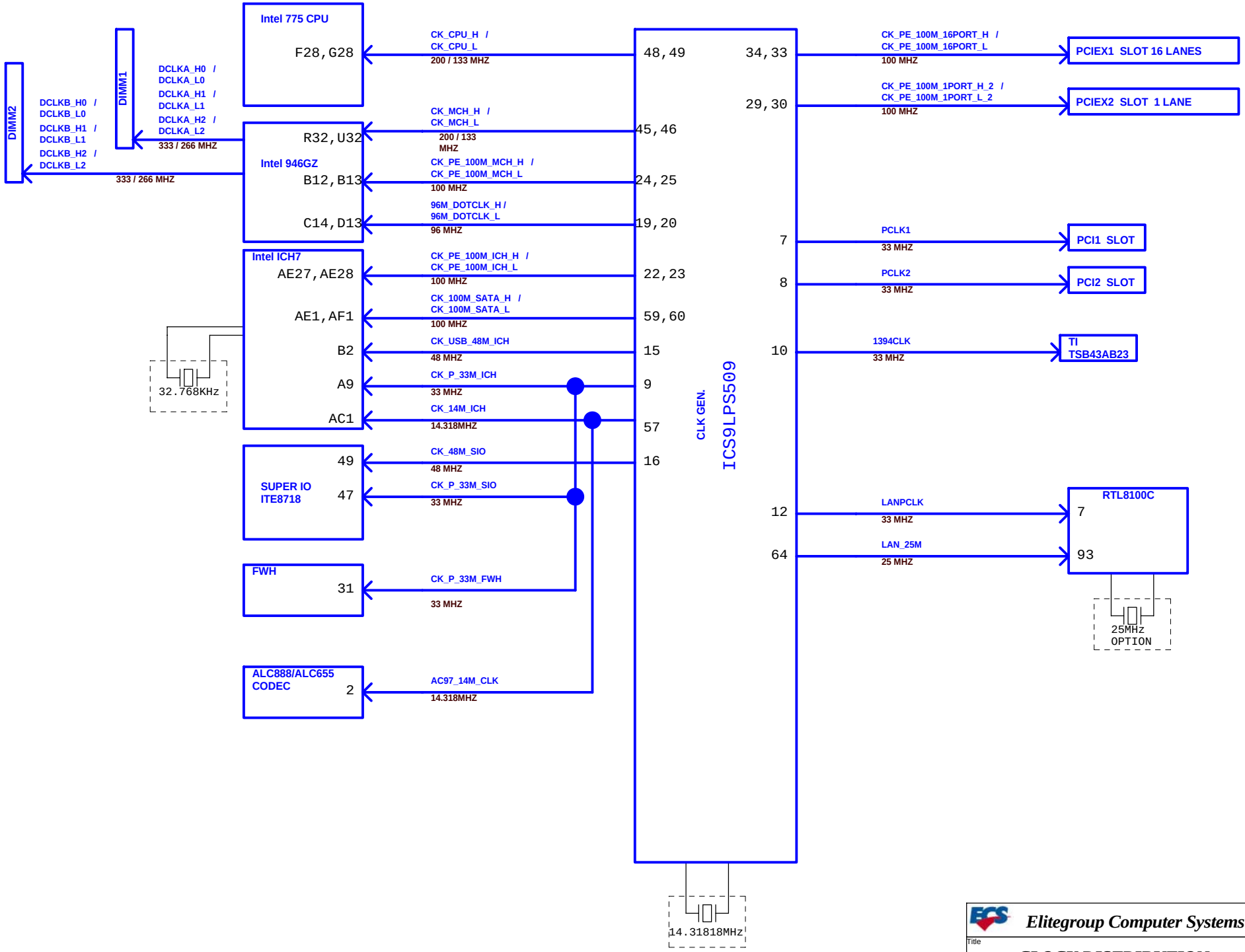

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Title: CLOCK DISTRIBUTION

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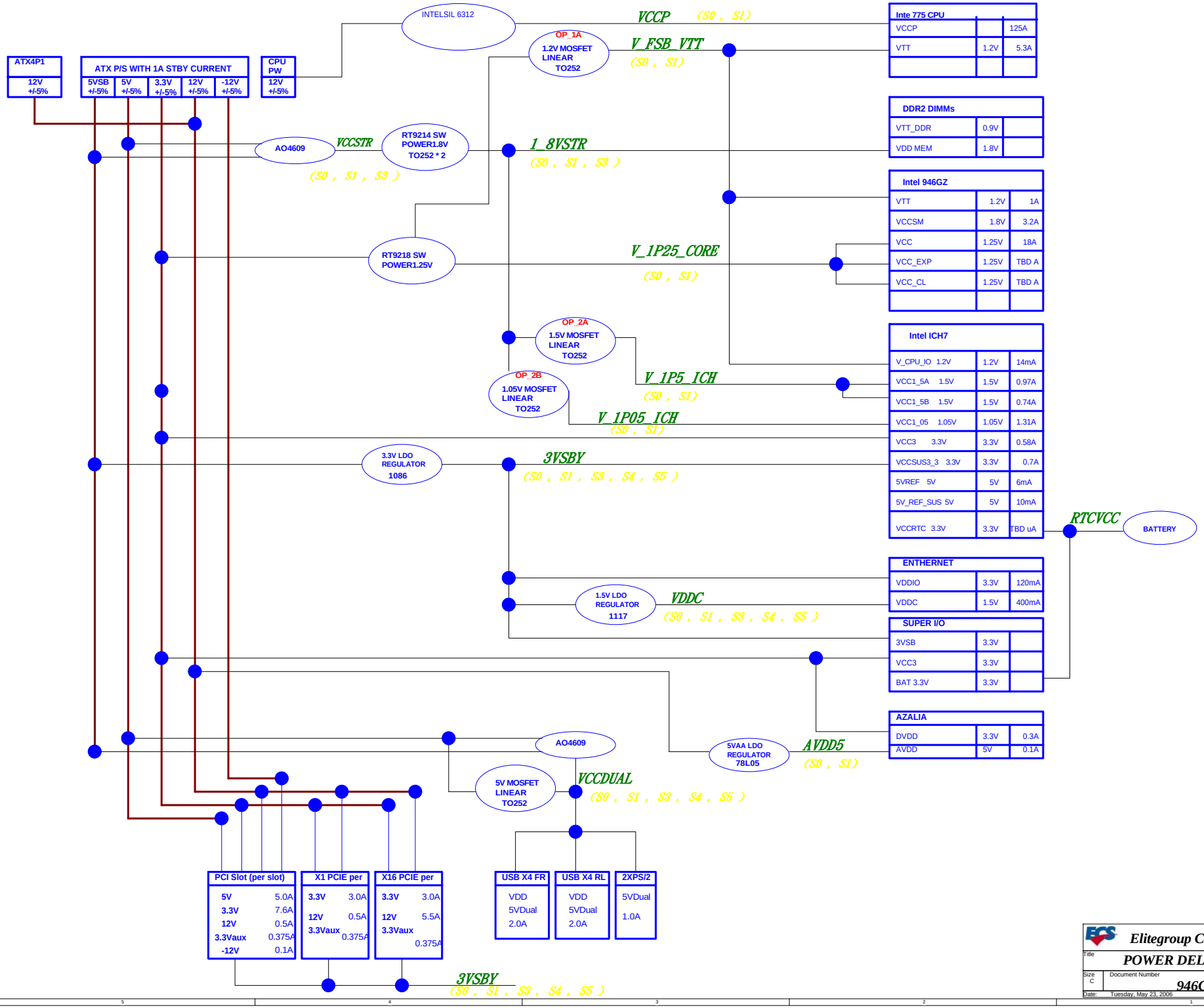
ATX4P1
12V +/-5%
ATX P/S WITH 1A STBY CURRENT
5VSB +/-5%
5V +/-5%
3.3V +/-5%
12V +/-5%
-12V +/-5%
CPU PW
12V +/-5%
INTELSIL 6312
VCCP (S0 , S1)
OP_1A
1.2V MOSFET LINEAR TO252
V_FSB_VTT
(S0 , S1)
Inte 775 CPU
VCCP 125A
VTT 1.2V 5.3A
DDR2 DIMMs
VTT_DDR 0.9V
VDD MEM 1.8V
AO4609
VCCSTR
RT9214 SW POWER1.8V TO252 * 2
1_8VSTR
(S0 , S1 , S3)
Intel 946GZ
VTT 1.2V 1A
VCCSM 1.8V 3.2A
VCC 1.25V 18A
VCC_EXP 1.25V TBD A
VCC_CL 1.25V TBD A
RT9218 SW POWER1.25V
V_1P25_CORE
(S0 , S1)
OP_2A
1.5V MOSFET LINEAR TO252
OP_2B
1.05V MOSFET LINEAR TO252
V_1P5_ICH
(S0 , S1)
V_1P05_ICH
(S0 , S1)
Intel ICH7
V_CPU_IO 1.2V 1.2V 14mA
VCC1_5A 1.5V 1.5V 0.97A
VCC1_5B 1.5V 1.5V 0.74A
VCC1_05 1.05V 1.05V 1.31A
VCC3 3.3V 3.3V 0.58A
VCCSUS3_3 3.3V 3.3V 0.7A
5VREF 5V 5V 6mA
5V_REF_SUS 5V 5V 10mA
VCCRTC 3.3V 3.3V TBD uA
RTCVCC
BATTERY
3.3V LDO REGULATOR 1086
3VSBY
(S0 , S1 , S3 , S4 , S5)
ENTHERNET
VDDIO 3.3V 120mA
VDDC 1.5V 400mA
1.5V LDO REGULATOR 1117
VDDC
(S0 , S1 , S3 , S4 , S5)
SUPER I/O
3VSB 3.3V
VCC3 3.3V
BAT 3.3V 3.3V
AZALIA
DVDD 3.3V 0.3A
AVDD 5V 0.1A
AO4609
5VAA LDO REGULATOR 78L05
AVDD5
(S0 , S1)
5V MOSFET LINEAR TO252
VCCDUAL
(S0 , S1 , S3 , S4 , S5)
PCI Slot (per slot)
5V 5.0A
3.3V 7.6A
12V 0.5A
3.3Vaux 0.375A
-12V 0.1A
X1 PCIE per
3.3V 3.0A
12V 0.5A
3.3Vaux 0.375A
X16 PCIE per
3.3V 3.0A
12V 5.5A
3.3Vaux 0.375A
USB X4 FR
VDD
5VDual
2.0A
USB X4 RL
VDD
5VDual
2.0A
2XPS/2
5VDual
1.0A
3VSBY
(S0 , S1 , S3 , S4 , S5)
Elitegroup Computer Systems
Title
POWER DELIVERY
Size C
Document Number
946GZT-AM
Rev A
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