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18	RS780-SYSTEM
19	RS780-PWOER&SBD_MEM
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21	SB710-PCIE/PCI/CPU/LPC
22	SB710-ACPI/GPIO/USB/AUD
23	SB710-SATA/IDE/HWM/SPI
24	SB710-POWER&DECOUPLING
25	SB710-STRAPS
26	CRT
27	PCI-E 16X SLOT
28	PCI SLOT
29	NONE
30	USB CONN
31	CODEC VT1708B/ALC662
32	AUDIO CONNECTOR
33	SUPER I/O ITE8728
34	FAN CONTROL
35	PS2 CONN
36	COM&LPT CONNECTOR
37	ATX PWR / FRONT PANEL / LED
38	OVER VOLTAGE IC
39	FRONT USB
40	PWRGD / MISC DC-DC
41	VCC_CORE DC-DC CONVER
42	MEMORY POWER
43	NB/SB CORE POWER
44	Realtek RTL8105T
45	BOM

A78LD-M3S (RS780&SB710)

REV 7.1

DDR3 X 2 Dual channel , PCI-Ex16 X 1 , PCI X 1 , Realtek 10/100 PCI-E Lan , AMD AM3

DATE :2011/04/21

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Title	COVER	
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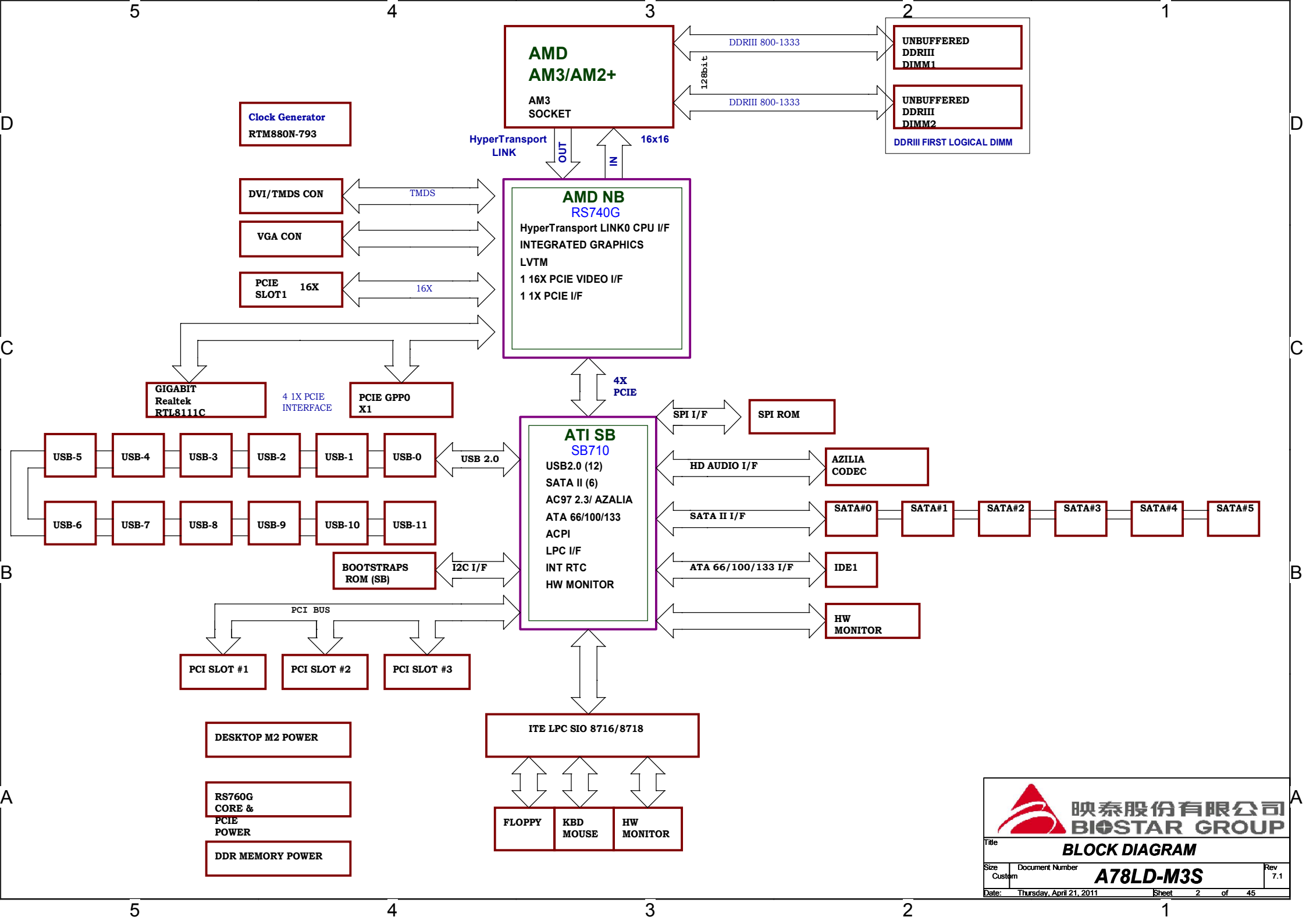

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Title	BLOCK DIAGRAM	
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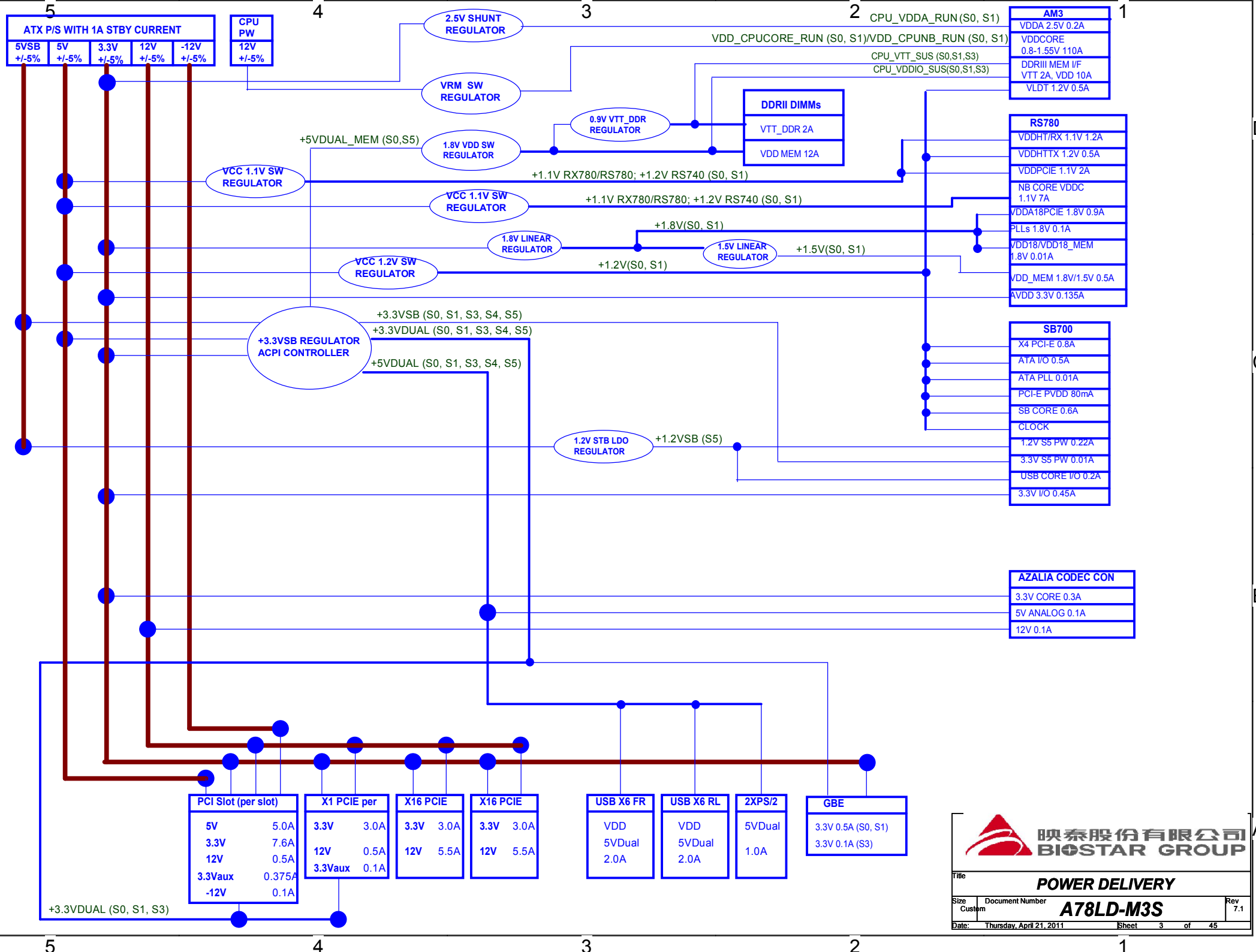
ATX P/S WITH 1A STBY CURRENT
5VSB +/-5%
5V +/-5%
3.3V +/-5%
12V +/-5%
-12V +/-5%
CPU PW
12V +/-5%
2.5V SHUNT REGULATOR
VRM SW REGULATOR
0.9V VTT_DDR REGULATOR
1.8V VDD SW REGULATOR
VCC 1.1V SW REGULATOR
VCC 1.1V SW REGULATOR
1.8V LINEAR REGULATOR
1.5V LINEAR REGULATOR
VCC 1.2V SW REGULATOR
+3.3VSB REGULATOR ACPI CONTROLLER
1.2V STB LDO REGULATOR
CPU_VDDA_RUN (S0, S1)
VDD_CPUCORE_RUN (S0, S1)/VDD_CPUNB_RUN (S0, S1)
CPU_VTT_SUS (S0,S1,S3)
CPU_VDDIO_SUS(S0,S1,S3)
+5VDUAL_MEM (S0,S5)
+1.1V RX780/RS780; +1.2V RS740 (S0, S1)
+1.1V RX780/RS780; +1.2V RS740 (S0, S1)
+1.8V(S0, S1)
+1.5V(S0, S1)
+1.2V(S0, S1)
+3.3VSB (S0, S1, S3, S4, S5)
+3.3VDUAL (S0, S1, S3, S4, S5)
+5VDUAL (S0, S1, S3, S4, S5)
+1.2VSB (S5)
+3.3VDUAL (S0, S1, S3)
AM3
VDDA 2.5V 0.2A
VDDCORE 0.8-1.55V 110A
DDRIII MEM I/F VTT 2A, VDD 10A
VLDT 1.2V 0.5A
DDRII DIMMs
VTT_DDR 2A
VDD MEM 12A
RS780
VDDHT/RX 1.1V 1.2A
VDDHTTX 1.2V 0.5A
VDDPCIE 1.1V 2A
NB CORE VDDC 1.1V 7A
VDDA18PCIE 1.8V 0.9A
PLLs 1.8V 0.1A
VDD18/VDD18_MEM 1.8V 0.01A
VDD_MEM 1.8V/1.5V 0.5A
AVDD 3.3V 0.135A
SB700
X4 PCI-E 0.8A
ATA I/O 0.5A
ATA PLL 0.01A
PCI-E PVDD 80mA
SB CORE 0.6A
CLOCK
1.2V S5 PW 0.22A
3.3V S5 PW 0.01A
USB CORE I/O 0.2A
3.3V I/O 0.45A
AZALIA CODEC CON
3.3V CORE 0.3A
5V ANALOG 0.1A
12V 0.1A
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 0.1A
X16 PCIE
3.3V 3.0A
12V 5.5A
X16 PCIE
3.3V 3.0A
12V 5.5A
USB X6 FR
VDD
5VDual
2.0A
USB X6 RL
VDD
5VDual
2.0A
2XPS/2
5VDual
1.0A
GBE
3.3V 0.5A (S0, S1)
3.3V 0.1A (S3)
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BIOSTAR GROUP
Title
POWER DELIVERY
Size
Custom
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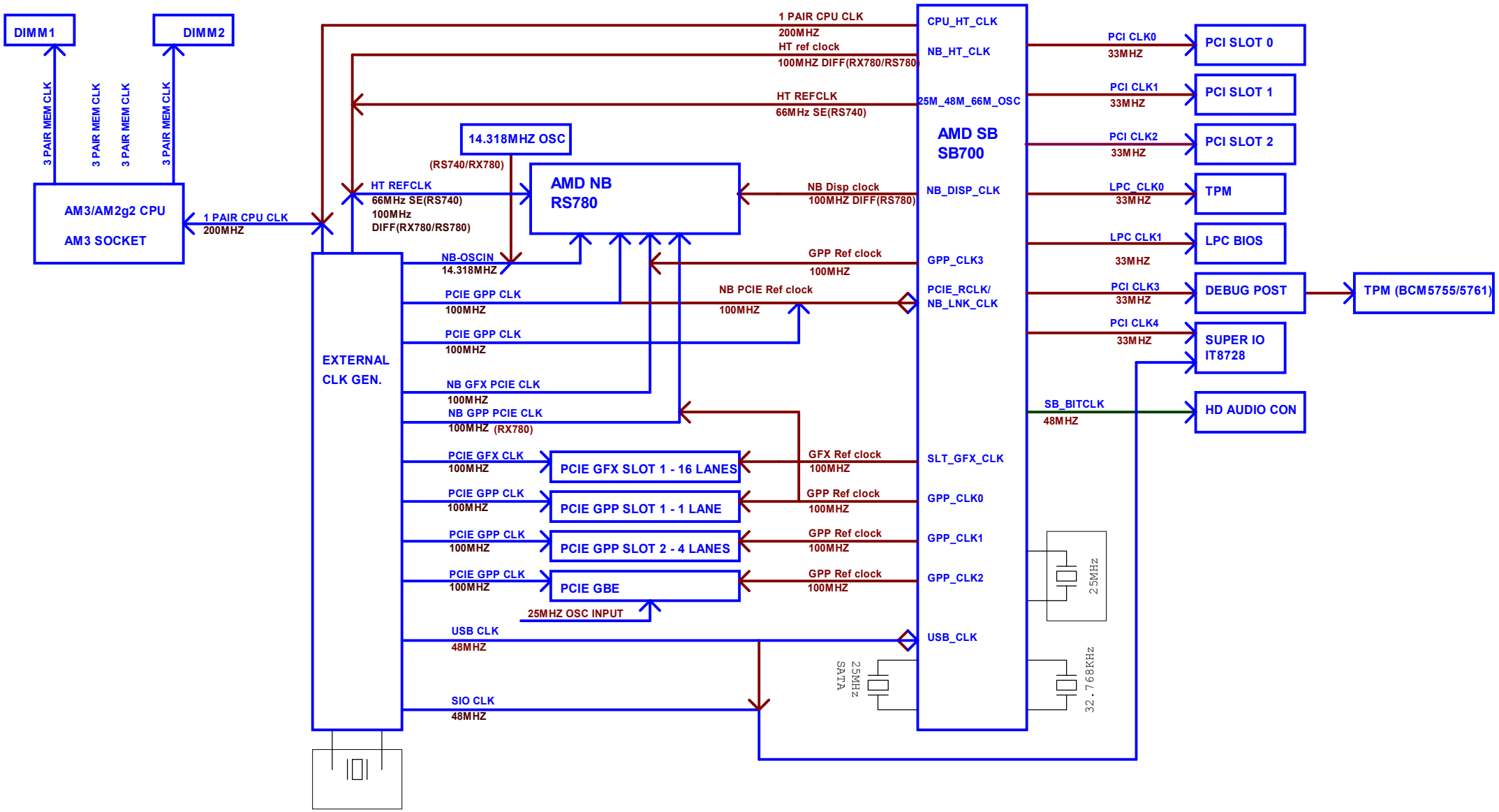

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Title: CLOCK DISTRIBUTION

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1.Change NB to RS780

2.Change SUPER IO to IT8728

3.Change Codec to VT1708B

4.Change Lan Chip to RTL8105T

5.Remove Floppy Connector

6.Remove SPDIF Out Connector

7.Modify BAT Socket

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Title: REVISION HISTORY

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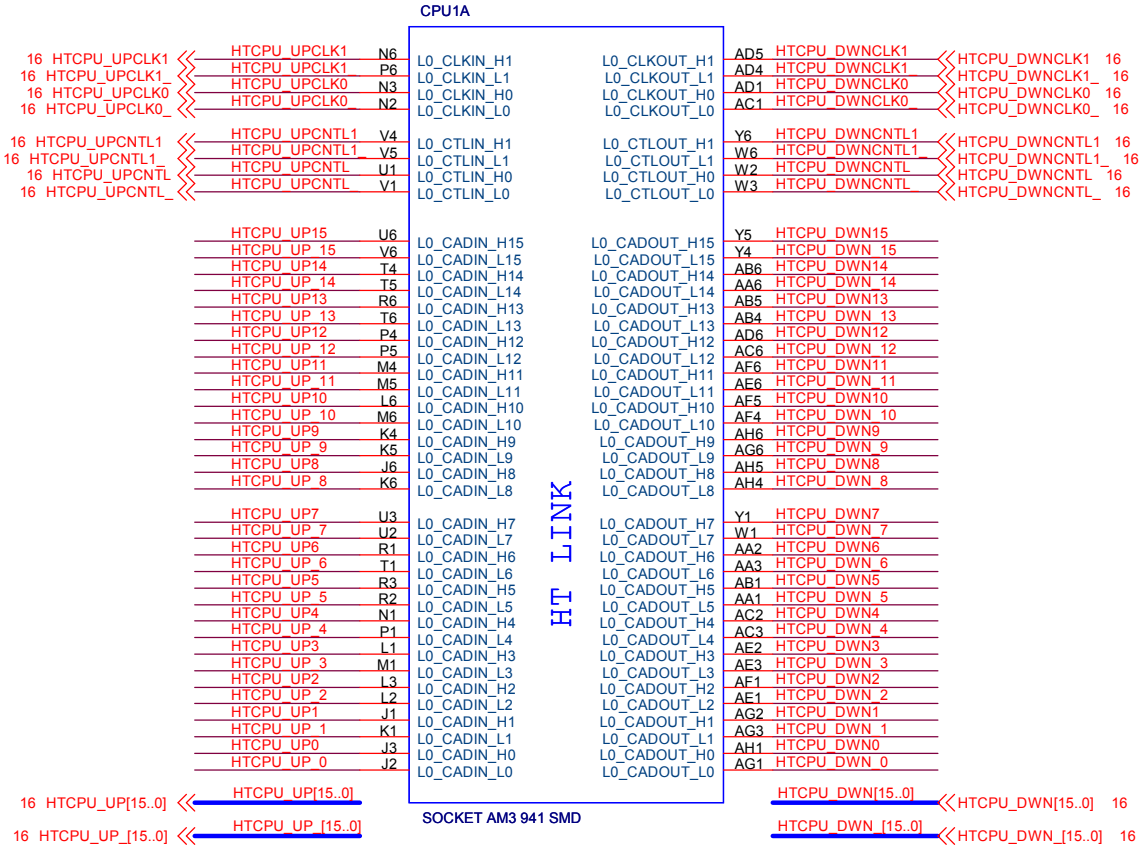
HyperTransport



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Title	K8 CPU HT	
Size: Custom	Document Number: A78LD-M3S	Rev: 7.1
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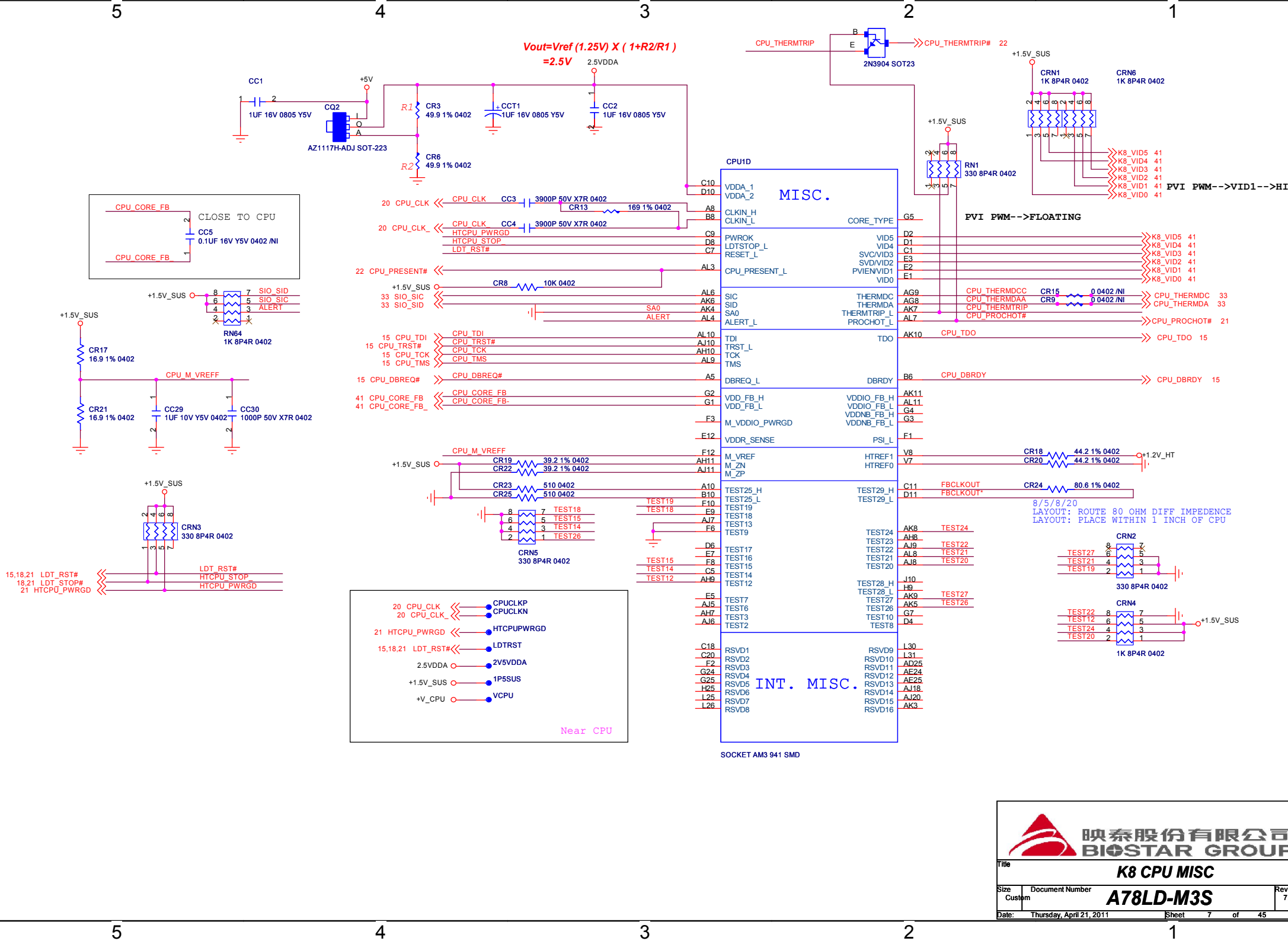
Vout=Vref (1.25V) X (1+R2/R1)
=2.5V
2.5VDDA
CC1
1UF 16V 0805 Y5V
+5V
CQ2
AZ1117H-ADJ SOT-223
R1
CR3
49.9 1% 0402
R2
CR6
49.9 1% 0402
CCT1
1UF 16V 0805 Y5V
CC2
1UF 16V 0805 Y5V
CPU_THERMTRIP
2N3904 SOT23
CPU_THERMTRIP# 22
+1.5V_SUS
CRN1
1K 8P4R 0402
CRN6
1K 8P4R 0402
RN1
330 8P4R 0402
K8_VID5 41
K8_VID4 41
K8_VID3 41
K8_VID2 41
K8_VID1 41
K8_VID0 41
PVI PWM-->VID1-->HI
PVI PWM-->FLOATING
CPU_CORE_FB
CLOSE TO CPU
CC5
0.1UF 16V Y5V 0402 /NI
CPU_CORE_FB_
RN64
1K 8P4R 0402
SIO_SID
SIO_SIC
ALERT
CR17
16.9 1% 0402
CPU_M_VREFF
CR21
16.9 1% 0402
CC29
1UF 10V Y5V 0402
CC30
1000P 50V X7R 0402
CRN3
330 8P4R 0402
LDT_RST#
HTCPU_STOP_
HTCPU_PWRGD
15,18,21 LDT_RST#
18,21 LDT_STOP#
21 HTCPU_PWRGD
20 CPU_CLK
20 CPU_CLK_
CC3
3900P 50V X7R 0402
CR13
169 1% 0402
CC4
3900P 50V X7R 0402
HTCPU_PWRGD
HTCPU_STOP_
LDT_RST#
22 CPU_PRESENT#
CR8
10K 0402
33 SIO_SIC
33 SIO_SID
SA0
ALERT
15 CPU_TDI
15 CPU_TRST#
15 CPU_TCK
15 CPU_TMS
CPU_TDI
CPU_TRST#
CPU_TCK
CPU_TMS
15 CPU_DBREQ#
CPU_DBREQ#
41 CPU_CORE_FB
41 CPU_CORE_FB_
CPU_CORE_FB
CPU_CORE_FB-
CPU_M_VREFF
CR19
39.2 1% 0402
CR22
39.2 1% 0402
CR23
510 0402
CR25
510 0402
CRN5
330 8P4R 0402
TEST18
TEST15
TEST14
TEST26
TEST19
TEST18
TEST15
TEST14
TEST12
20 CPU_CLK
20 CPU_CLK_
21 HTCPU_PWRGD
15,18,21 LDT_RST#
2.5VDDA
+1.5V_SUS
+V_CPU
CPUCLKP
CPUCLKN
HTCPUPWRGD
LDTRST
2V5VDDA
1P5SUS
VCPU
Near CPU
CPU1D
MISC.
VDDA_1
VDDA_2
CLKIN_H
CLKIN_L
CORE_TYPE
PWROK
LDTSTOP_L
RESET_L
CPU_PRESENT_L
VID5
VID4
SVC/VID3
SVD/VID2
PVIEN/VID1
VID0
SIC
SID
SA0
ALERT_L
THERMDC
THERMDA
THERMTRIP_L
PROCHOT_L
TDI
TRST_L
TCK
TMS
TDO
DBREQ_L
DBRDY
VDD_FB_H
VDD_FB_L
VDDIO_FB_H
VDDIO_FB_L
VDDNB_FB_H
VDDNB_FB_L
M_VDDIO_PWRGD
VDDR_SENSE
PSI_L
M_VREF
M_ZN
M_ZP
HTREF1
HTREF0
TEST25_H
TEST25_L
TEST19
TEST18
TEST13
TEST9
TEST29_H
TEST29_L
TEST24
TEST23
TEST22
TEST21
TEST20
TEST17
TEST16
TEST15
TEST14
TEST12
TEST28_H
TEST28_L
TEST27
TEST26
TEST10
TEST8
TEST7
TEST6
TEST3
TEST2
INT. MISC.
RSVD1
RSVD2
RSVD3
RSVD4
RSVD5
RSVD6
RSVD7
RSVD8
RSVD9
RSVD10
RSVD11
RSVD12
RSVD13
RSVD14
RSVD15
RSVD16
SOCKET AM3 941 SMD
CPU_THERMDCC
CPU_THERMDAA
CPU_THERMTRIP
CPU_PROCHOT#
CR15
CR9
0 0402 /NI
CPU_THERMDC 33
CPU_THERMDA 33
CPU_PROCHOT# 21
CPU_TDO
CPU_TDO 15
CPU_DBRDY
CPU_DBRDY 15
CR18
CR20
44.2 1% 0402
+1.2V_HT
FBCLKOUT
FBCLKOUT*
CR24
80.6 1% 0402
8/5/8/20
LAYOUT: ROUTE 80 OHM DIFF IMPEDENCE
LAYOUT: PLACE WITHIN 1 INCH OF CPU
CRN2
330 8P4R 0402
CRN4
1K 8P4R 0402
Title
K8 CPU MISC
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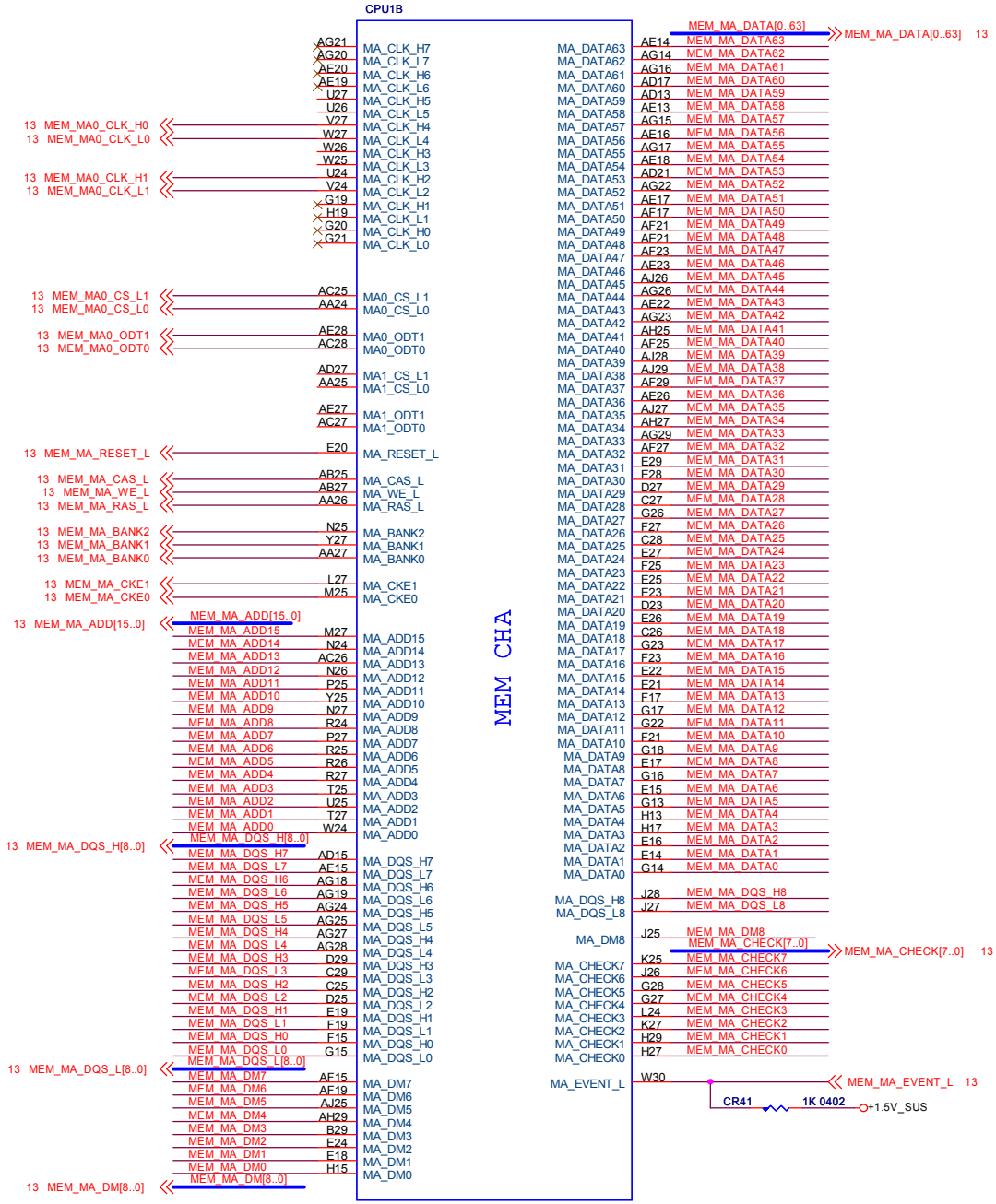

Title	K8 CPU MEMORY-1
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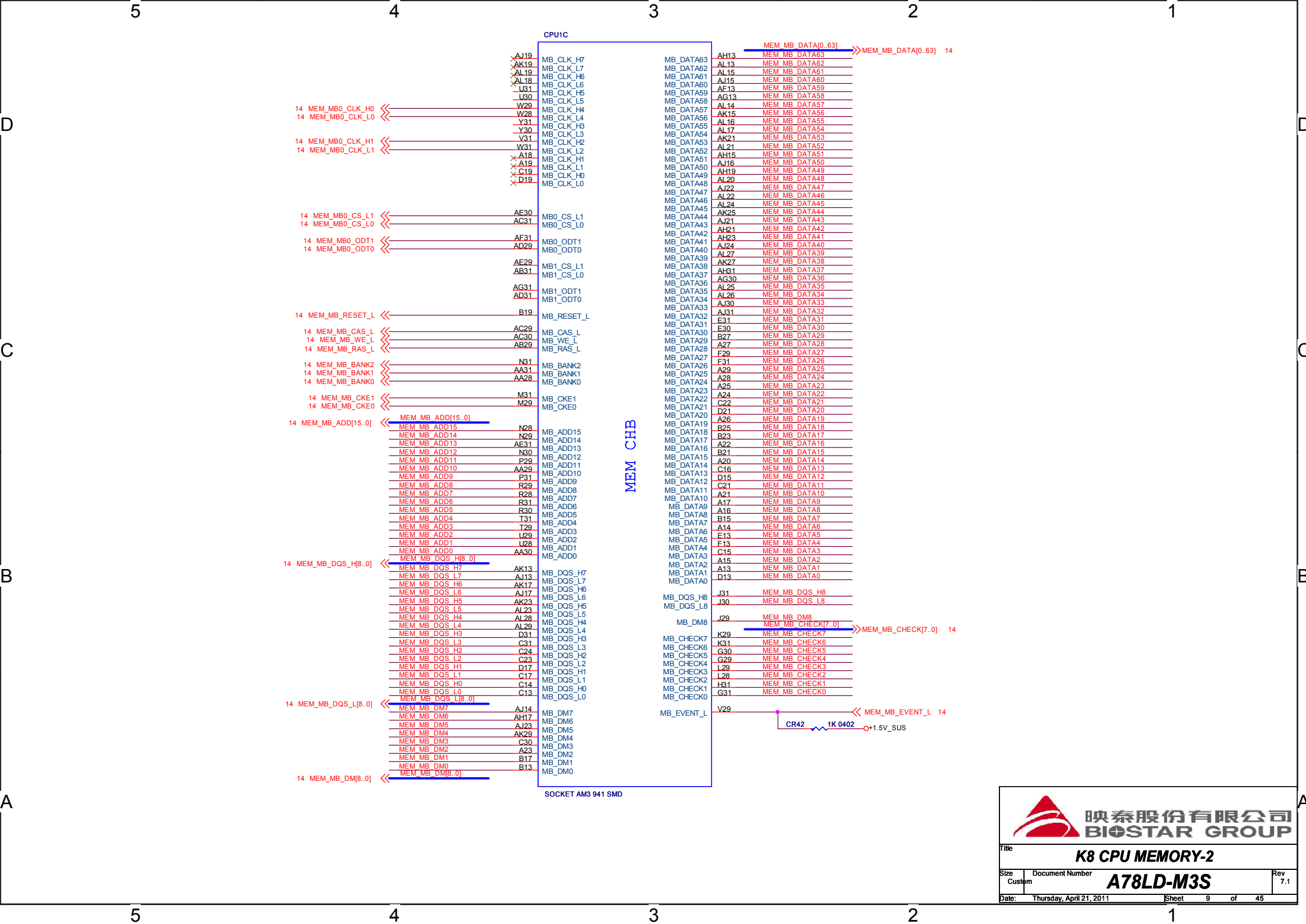

Title	K8 CPU MEMORY-2		
Size: Custom	Document Number: A78LD-M3S		Rev: 7.1
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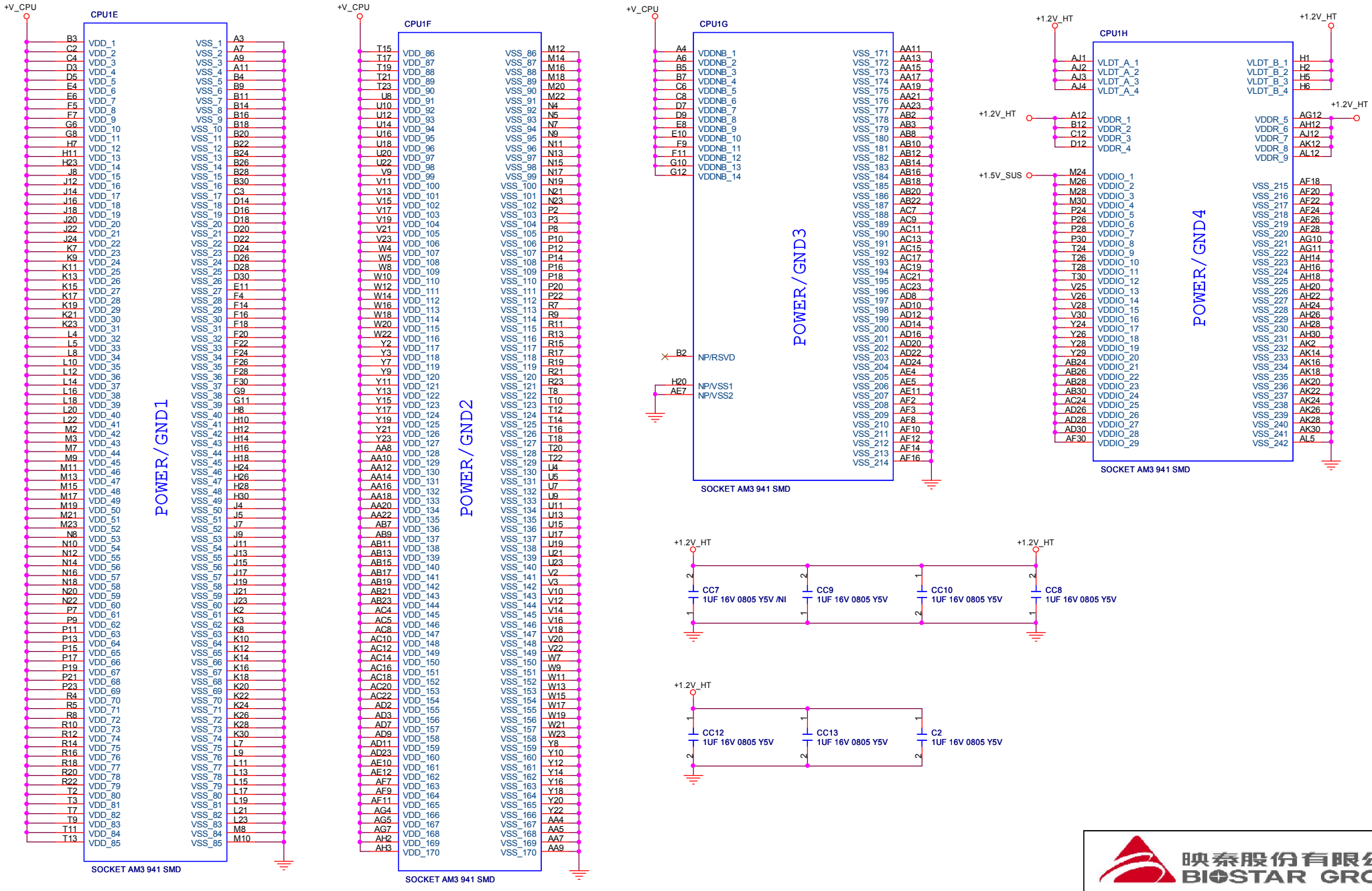

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Title: **K8 CPU POWER**

Size	Document Number	Rev
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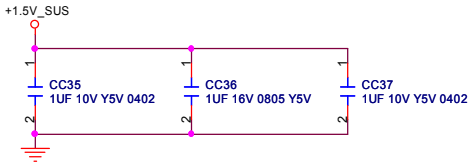

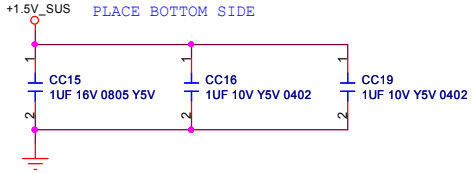

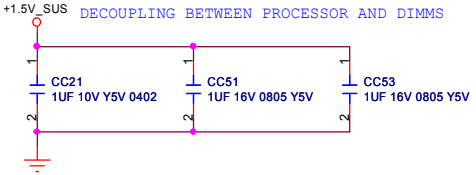

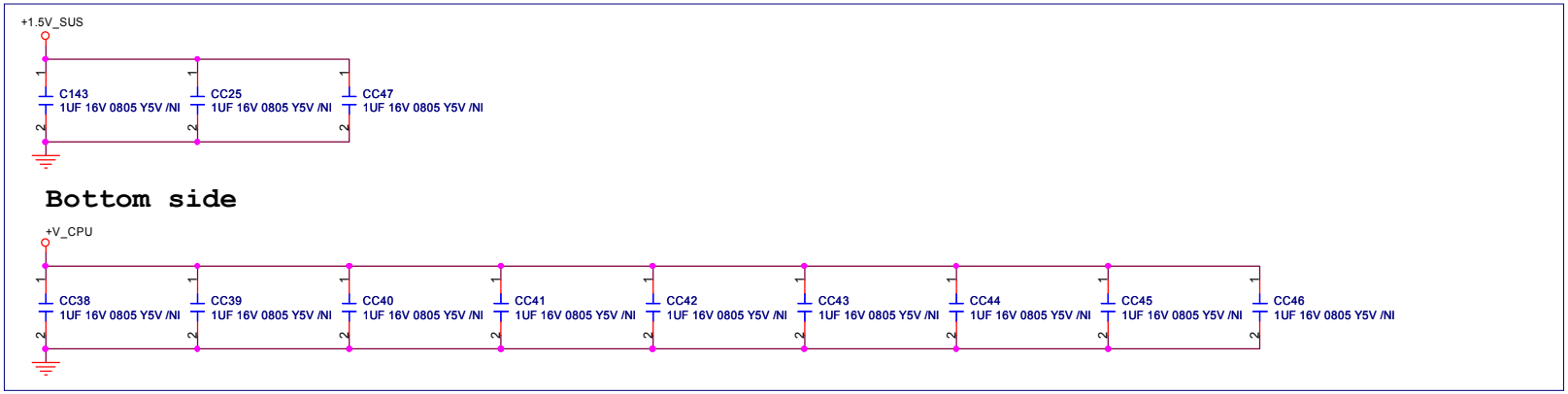

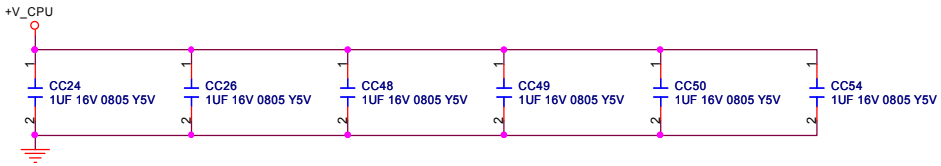

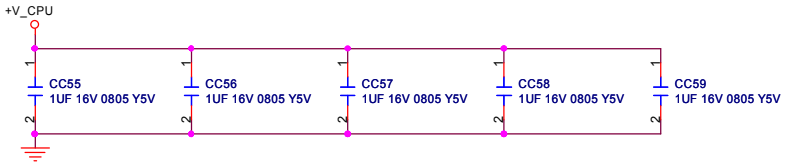

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Title	CPU DECPOULING CAP	
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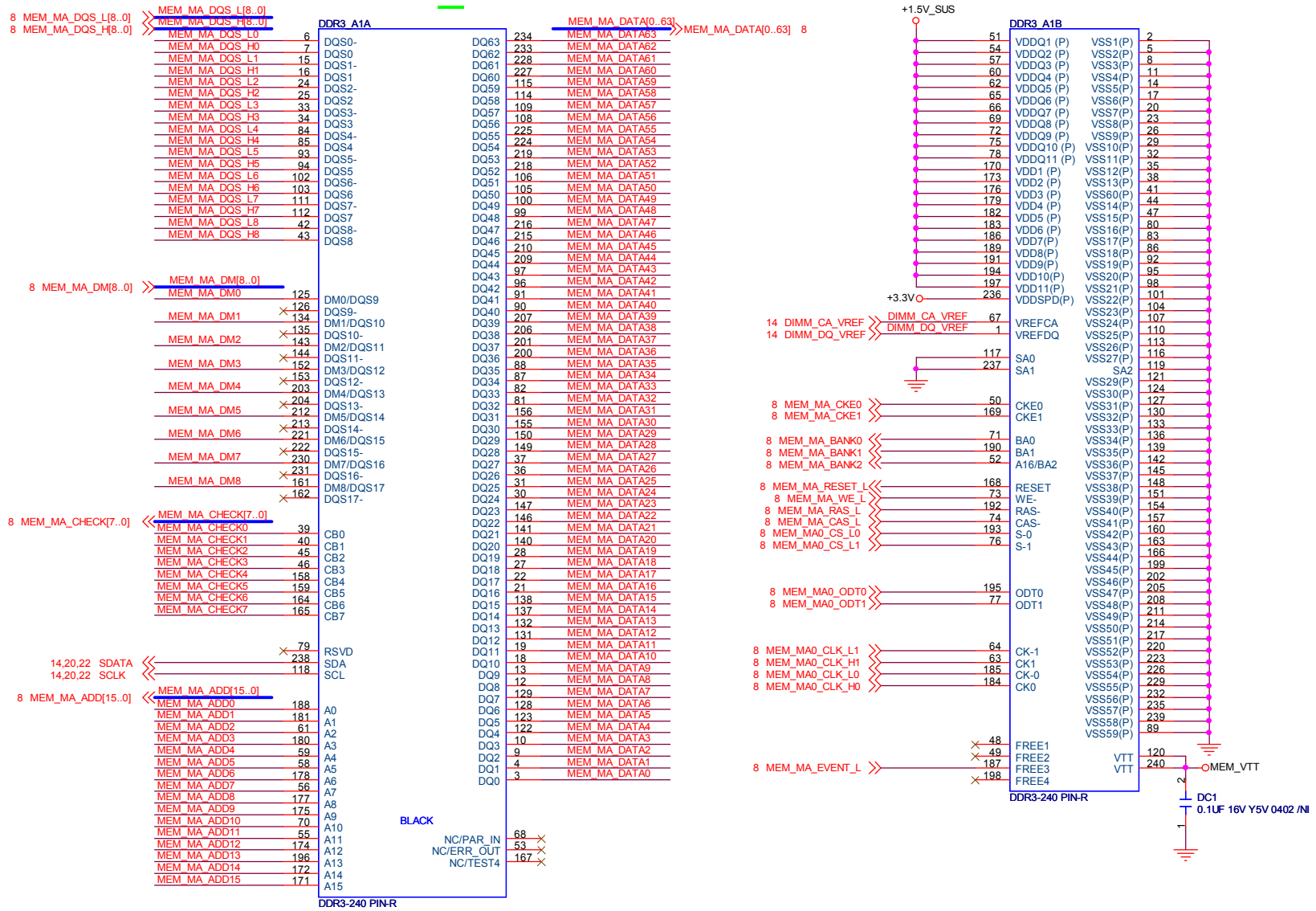
DDR3_A1



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Title	DDR DIMM-1	
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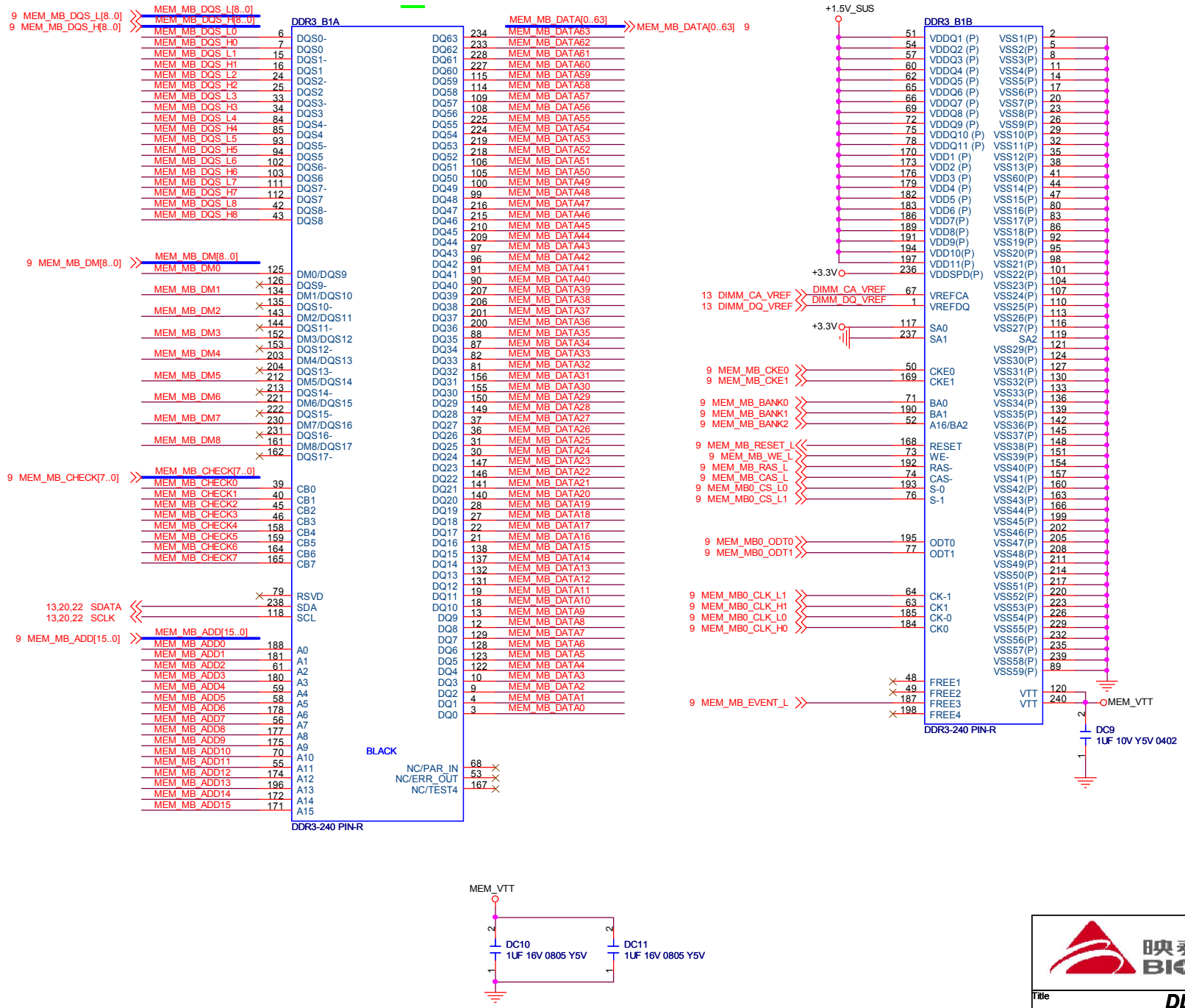
DDR3_B1



Title	DDR DIMM-2
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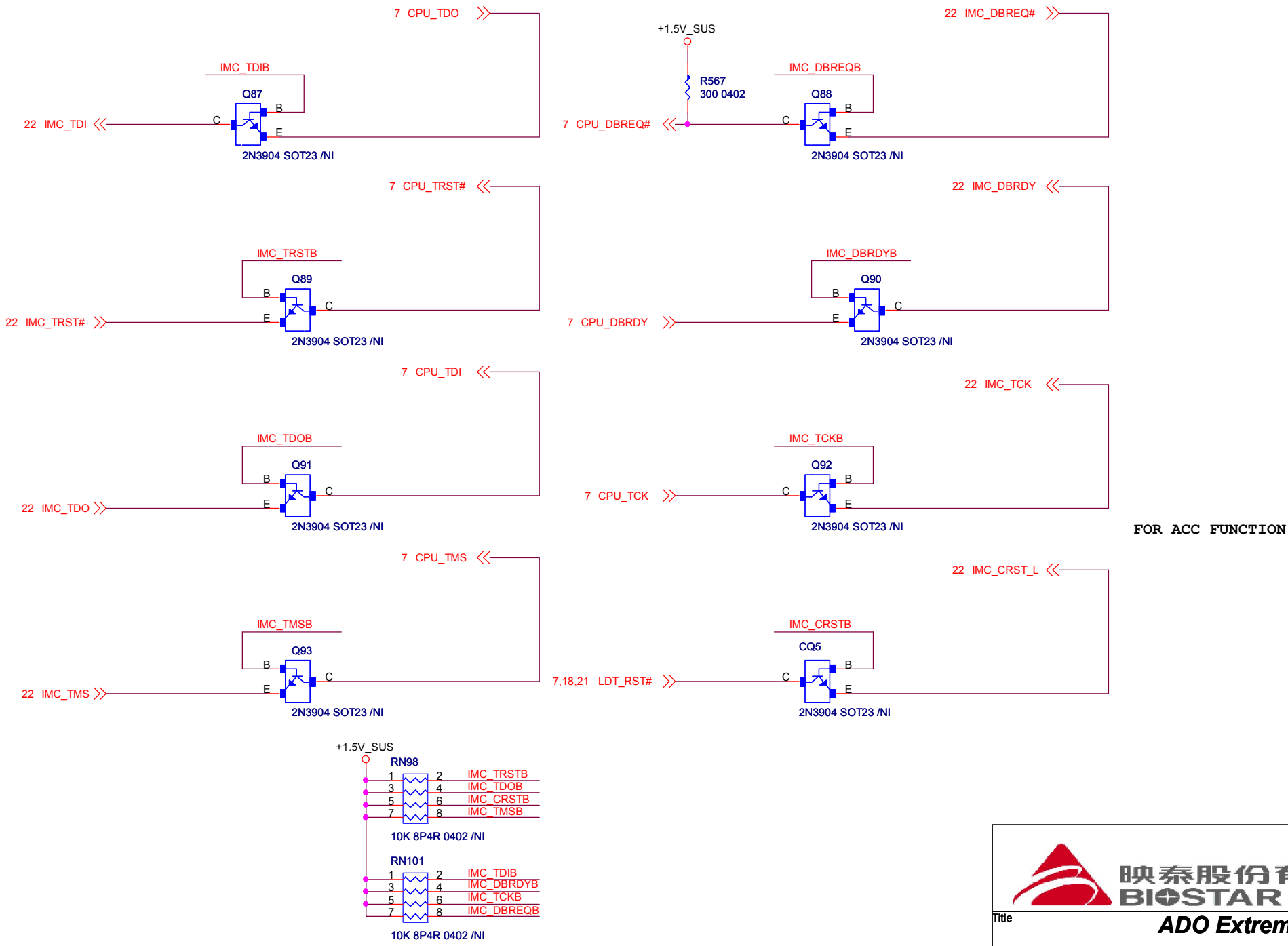

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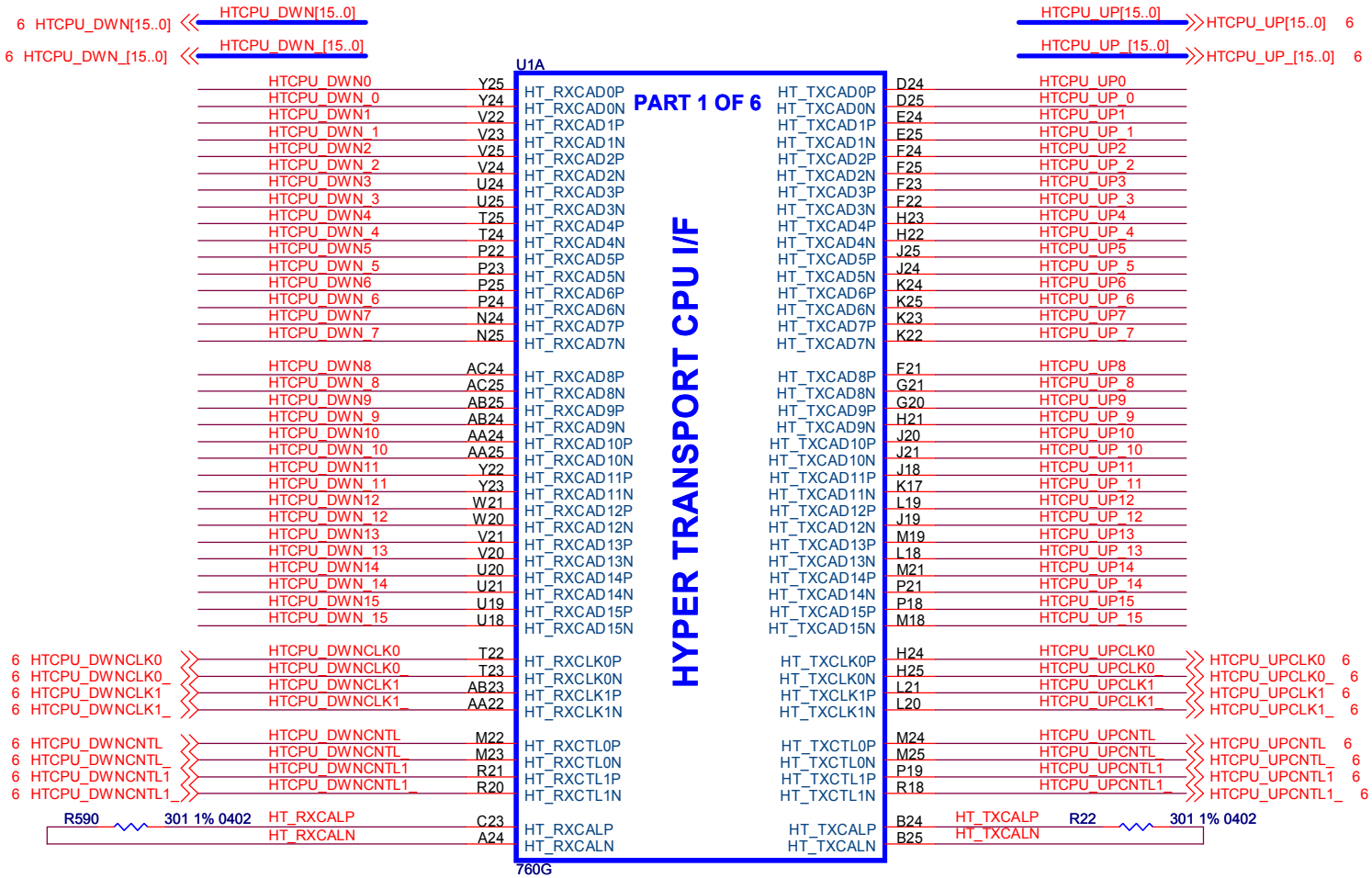
BIOSTAR GROUP

Title	ADO Extreme	
Size: Custom	Document Number: A78LD-M3S	Rev: 7.1
Date: Thursday, April 21, 2011	Sheet 15 of 45	



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BIOSTAR GROUP

Title	RS780 PCI-E	
Size: Custom	Document Number: A78LD-M3S	Rev: 7.1
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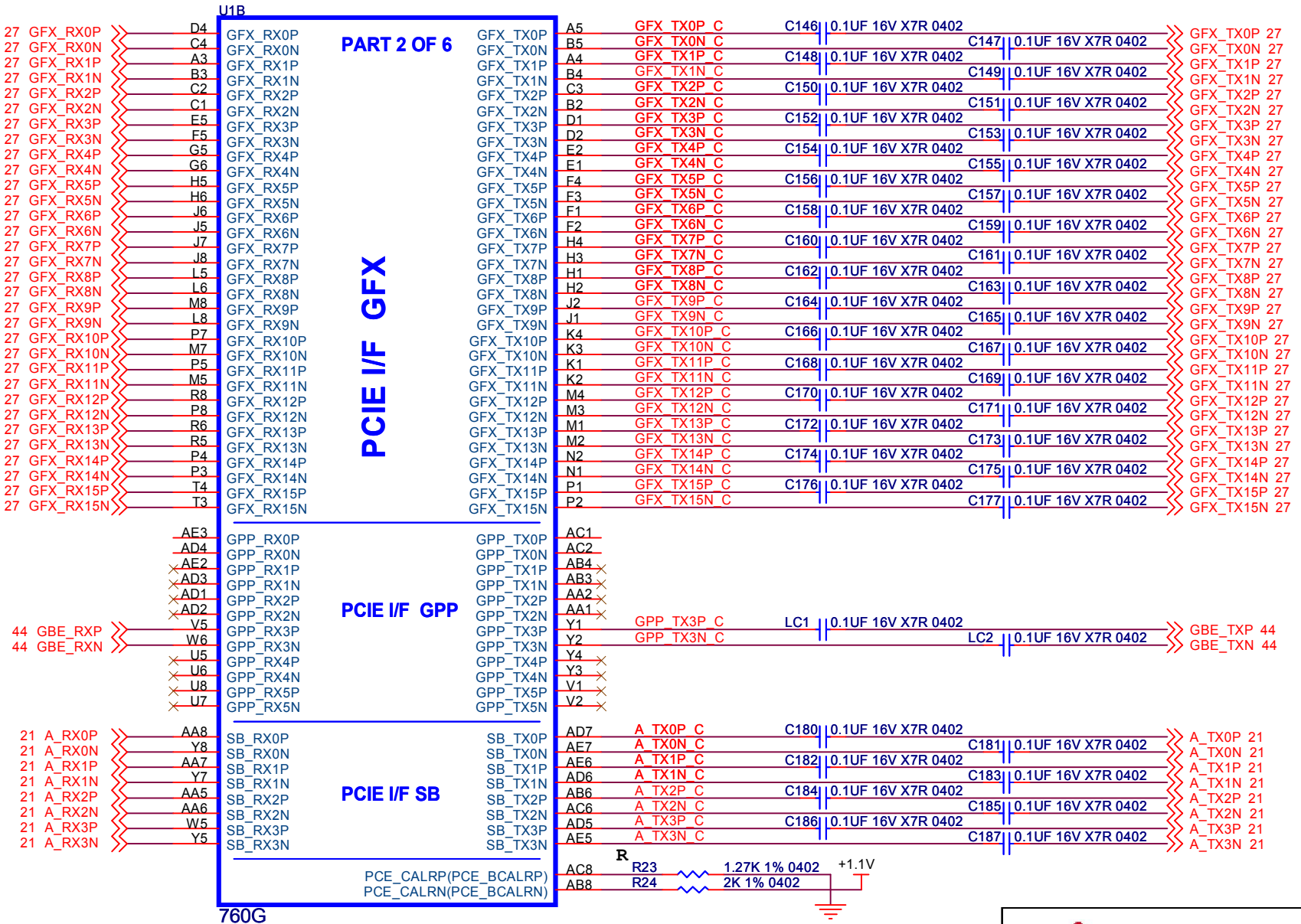

Title	RS780 PCI-E
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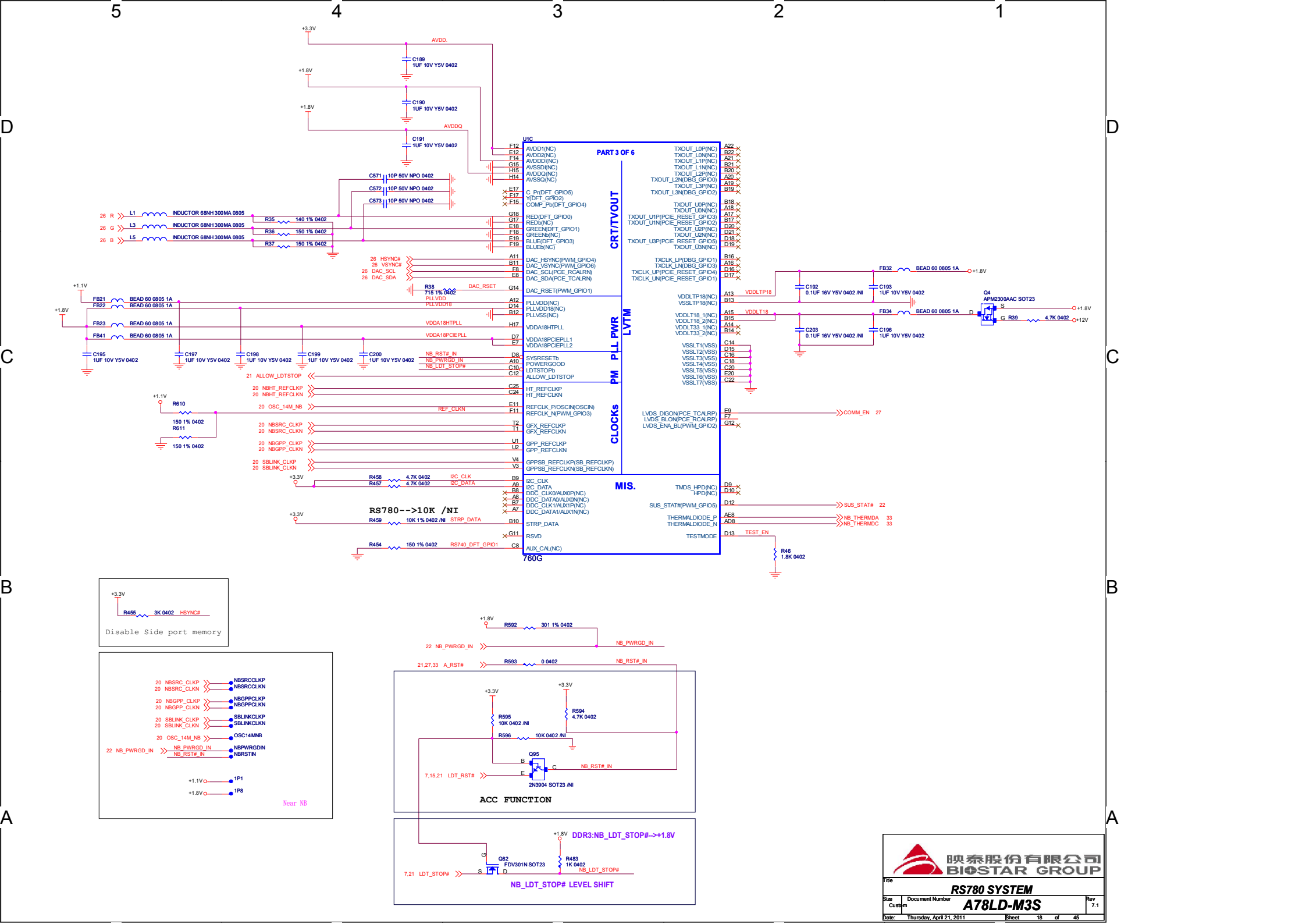
映泰股份有限公司 BIOSTAR GROUP


U1C
PART 3 OF 6
760G
CRT/TVOUT
LVTM
PLL PWR
PM
CLOCKs
MIS.
AVDD1(NC)
AVDD2(NC)
AVDD3(NC)
AVSSD(NC)
AVDDQ(NC)
AVSSQ(NC)
C_Pr(DFT_GPIO5)
Y(DFT_GPIO2)
COMP_Pb(DFT_GPIO4)
RED(DFT_GPIO0)
REDb(NC)
GREEN(DFT_GPIO1)
GREENb(NC)
BLUE(DFT_GPIO3)
BLUEb(NC)
DAC_HSYNC(PWM_GPIO4)
DAC_VSYNC(PWM_GPIO6)
DAC_SCL(PCE_RCALRN)
DAC_SDA(PCE_TCALRN)
DAC_RSET(PWM_GPIO1)
PLLVDD(NC)
PLLVDD18(NC)
PLLVSS(NC)
VDDA18HTPLL
VDDA18PCIEPLL1
VDDA18PCIEPLL2
SYSRESETb
POWERGOOD
LDTSTOPb
ALLOW_LDTSTOP
HT_REFCLKP
HT_REFCLKN
REFCLK_P/OSCIN(OSCIN)
REFCLK_N(PWM_GPIO3)
GFX_REFCLKP
GFX_REFCLKN
GPP_REFCLKP
GPP_REFCLKN
GPPSB_REFCLKP(SB_REFCLKP)
GPPSB_REFCLKN(SB_REFCLKN)
I2C_CLK
I2C_DATA
DDC_CLK0/AUXDP(NC)
DDC_DATA0/AUX0N(NC)
DDC_CLK1/AUX1P(NC)
DDC_DATA1/AUX1N(NC)
STRP_DATA
RSVD
AUX_CAL(NC)
TXOUT_L0P(NC)
TXOUT_L0N(NC)
TXOUT_L1P(NC)
TXOUT_L1N(NC)
TXOUT_L2P(NC)
TXOUT_L2N(DBG_GPIO0)
TXOUT_L3P(NC)
TXOUT_L3N(DBG_GPIO2)
TXOUT_U0P(NC)
TXOUT_U0N(NC)
TXOUT_U1P(PCIE_RESET_GPIO3)
TXOUT_U1N(PCIE_RESET_GPIO2)
TXOUT_U2P(NC)
TXOUT_U2N(NC)
TXOUT_U3P(PCIE_RESET_GPIO5)
TXOUT_U3N(NC)
TXCLK_LP(DBG_GPIO1)
TXCLK_LN(DBG_GPIO3)
TXCLK_UP(PCIE_RESET_GPIO4)
TXCLK_UN(PCIE_RESET_GPIO1)
VDDLTP18(NC)
VSSLTP18(NC)
VDDLT18_1(NC)
VDDLT18_2(NC)
VDDLT33_1(NC)
VDDLT33_2(NC)
VSSLT1(VSS)
VSSLT2(VSS)
VSSLT3(VSS)
VSSLT4(VSS)
VSSLT5(VSS)
VSSLT6(VSS)
VSSLT7(VSS)
LVDS_DIGON(PCE_TCALRP)
LVDS_BLON(PCE_RCALRP)
LVDS_ENA_BL(PWM_GPIO2)
TMDS_HPD(NC)
HPD(NC)
SUS_STAT#(PWM_GPIO5)
THERMALDIODE_P
THERMALDIODE_N
TESTMODE
C189 1UF 10V Y5V 0402
C190 1UF 10V Y5V 0402
C191 1UF 10V Y5V 0402
C571 10P 50V NPO 0402
C572 10P 50V NPO 0402
C573 10P 50V NPO 0402
L1 INDUCTOR 68NH 300MA 0805
L3 INDUCTOR 68NH 300MA 0805
L5 INDUCTOR 68NH 300MA 0805
R35 140 1% 0402
R36 150 1% 0402
R37 150 1% 0402
R38 715 1% 0402
FB21 BEAD 60 0805 1A
FB22 BEAD 60 0805 1A
FB23 BEAD 60 0805 1A
FB41 BEAD 60 0805 1A
FB32 BEAD 60 0805 1A
FB34 BEAD 60 0805 1A
C192 0.1UF 16V Y5V 0402 /NI
C193 1UF 10V Y5V 0402
C203 0.1UF 16V Y5V 0402 /NI
C196 1UF 10V Y5V 0402
C195 1UF 10V Y5V 0402
C197 1UF 10V Y5V 0402
C198 1UF 10V Y5V 0402
C199 1UF 10V Y5V 0402
C200 1UF 10V Y5V 0402
Q4 APM2300AAC SOT23
R39 4.7K 0402
R610 150 1% 0402
R611 150 1% 0402
R458 4.7K 0402
R457 4.7K 0402
R459 10K 1% 0402 /NI
R454 150 1% 0402
R46 1.8K 0402
RS780-->10K /NI
NB_RST#_IN
NB_PWRGD_IN
NB_LDT_STOP#
ALLOW_LDTSTOP
NBHT_REFCLKP
NBHT_REFCLKN
OSC_14M_NB
REF_CLKN
NBSRC_CLKP
NBSRC_CLKN
NBGPP_CLKP
NBGPP_CLKN
SBLINK_CLKP
SBLINK_CLKN
HSYNC#
VSYNC#
DAC_SCL
DAC_SDA
DAC_RSET
I2C_CLK
I2C_DATA
STRP_DATA
RS740_DFT_GPIO1
COMM_EN
SUS_STAT#
NB_THERMDA
NB_THERMDC
TEST_EN
Disable Side port memory
R455 3K 0402 HSYNC#
Near NB
NBSRCCLKP
NBSRCCLKN
NBGPPCLKP
NBGPPCLKN
SBLINKCLKP
SBLINKCLKN
OSC14MNB
NBPWRGDIN
NBRSTIN
1P1
1P8
R592 301 1% 0402
R593 0 0402
A_RST#
R595 10K 0402 /NI
R594 4.7K 0402
R596 10K 0402 /NI
Q95
2N3904 SOT23 /NI
LDT_RST#
ACC FUNCTION
DDR3:NB_LDT_STOP#-->+1.8V
Q82 FDV301N SOT23
R483 1K 0402
LDT_STOP#
NB_LDT_STOP# LEVEL SHIFT
映泰股份有限公司
BIOSTAR GROUP
RS780 SYSTEM
A78LD-M3S
Size Custom
Document Number
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Date: Thursday, April 21, 2011
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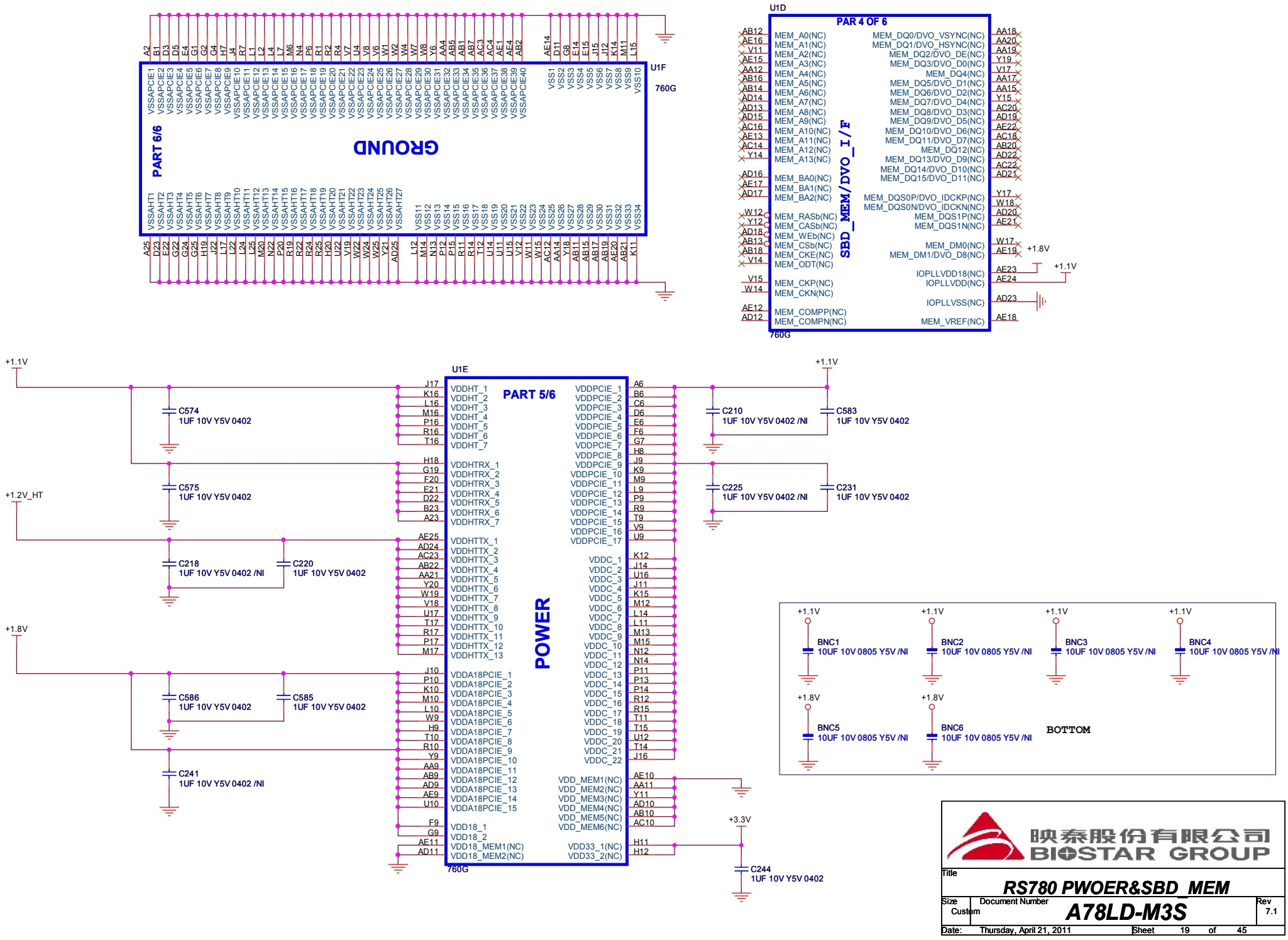
U1F
760G
PART 6/6
GROUND
U1D
PAR 4 OF 6
SBD_MEM/DVO_I/F
760G
U1E
PART 5/6
POWER
760G
+1.1V
+1.2V_HT
+1.8V
+3.3V
C574 1UF 10V Y5V 0402
C575 1UF 10V Y5V 0402
C218 1UF 10V Y5V 0402 /NI
C220 1UF 10V Y5V 0402
C586 1UF 10V Y5V 0402
C585 1UF 10V Y5V 0402
C241 1UF 10V Y5V 0402 /NI
C210 1UF 10V Y5V 0402 /NI
C583 1UF 10V Y5V 0402
C225 1UF 10V Y5V 0402 /NI
C231 1UF 10V Y5V 0402
C244 1UF 10V Y5V 0402
BNC1 10UF 10V 0805 Y5V /NI
BNC2 10UF 10V 0805 Y5V /NI
BNC3 10UF 10V 0805 Y5V /NI
BNC4 10UF 10V 0805 Y5V /NI
BNC5 10UF 10V 0805 Y5V /NI
BNC6 10UF 10V 0805 Y5V /NI
BOTTOM
映泰股份有限公司
BIOSTAR GROUP
Title
RS780 PWOER&SBD_MEM
Size Custom
Document Number
A78LD-M3S
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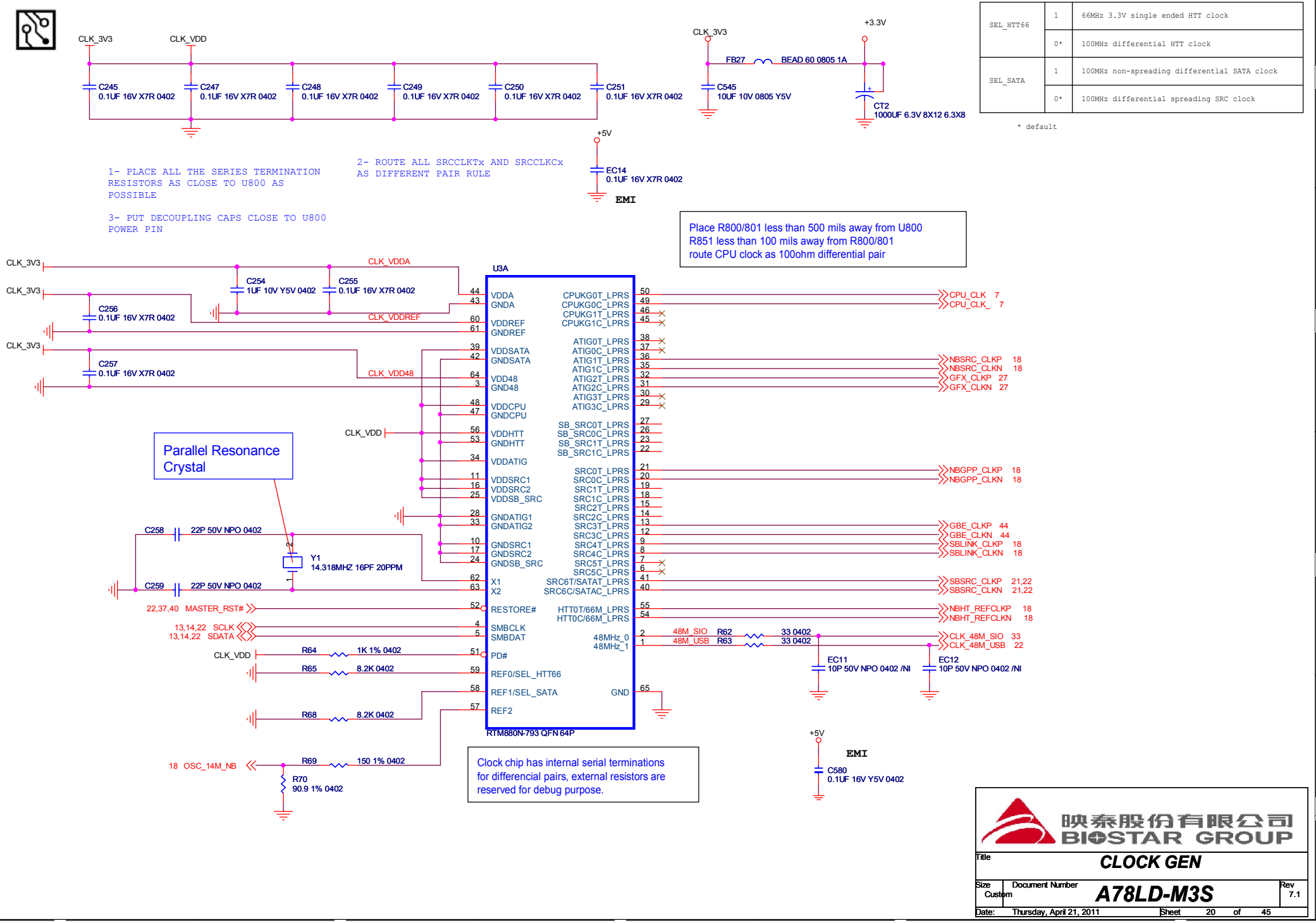
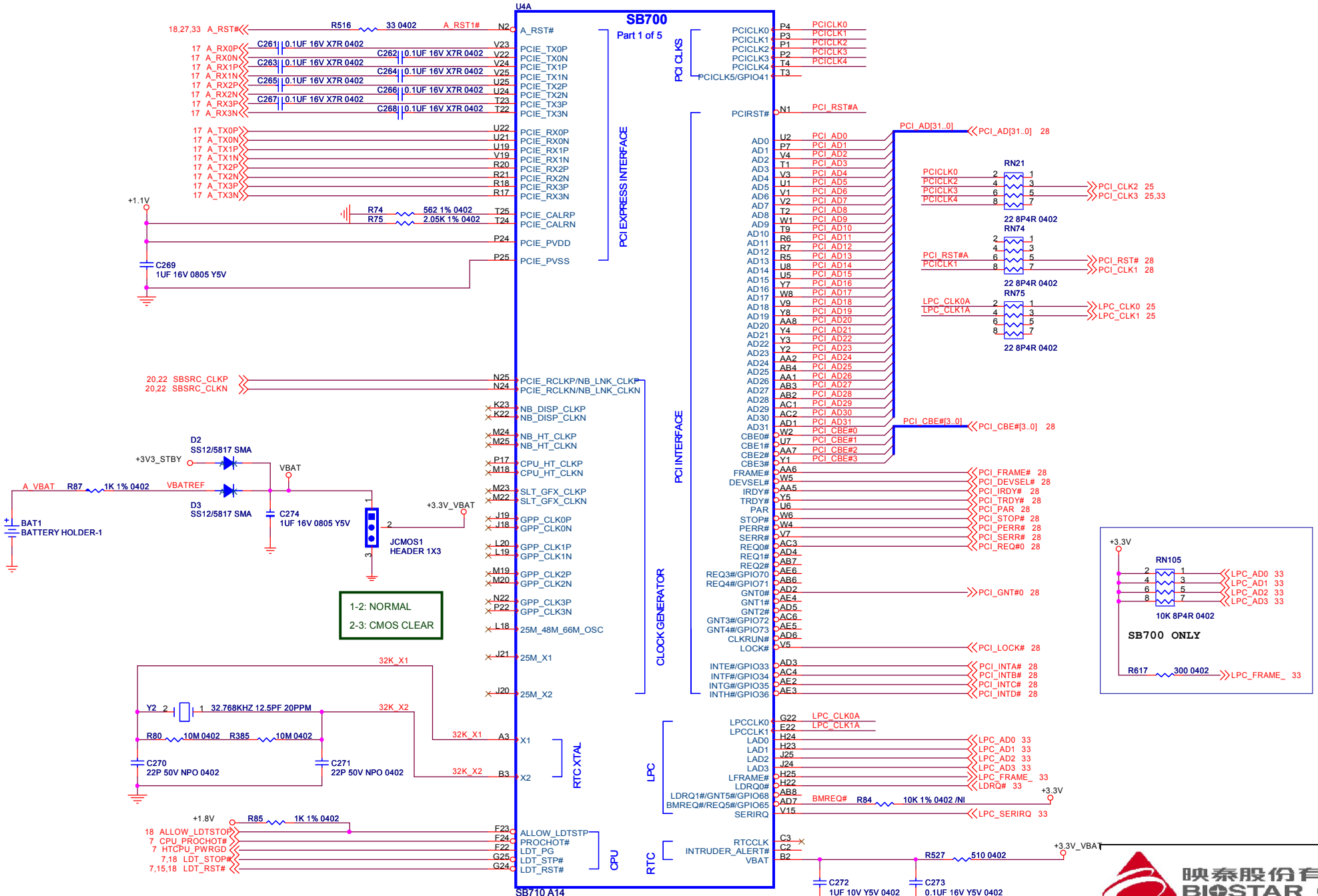


映泰股份有限公司 BIOSTAR GROUP

Title	CLOCK GEN		
Size: Custom	Document Number: A78LD-M3S		Rev: 7.1
Date: Thursday, April 21, 2011	Sheet 20 of 45		



Title	SB710 PCIE/PCI/CPU/LPC
Size	Custom
Document Number	A78LD-M3S
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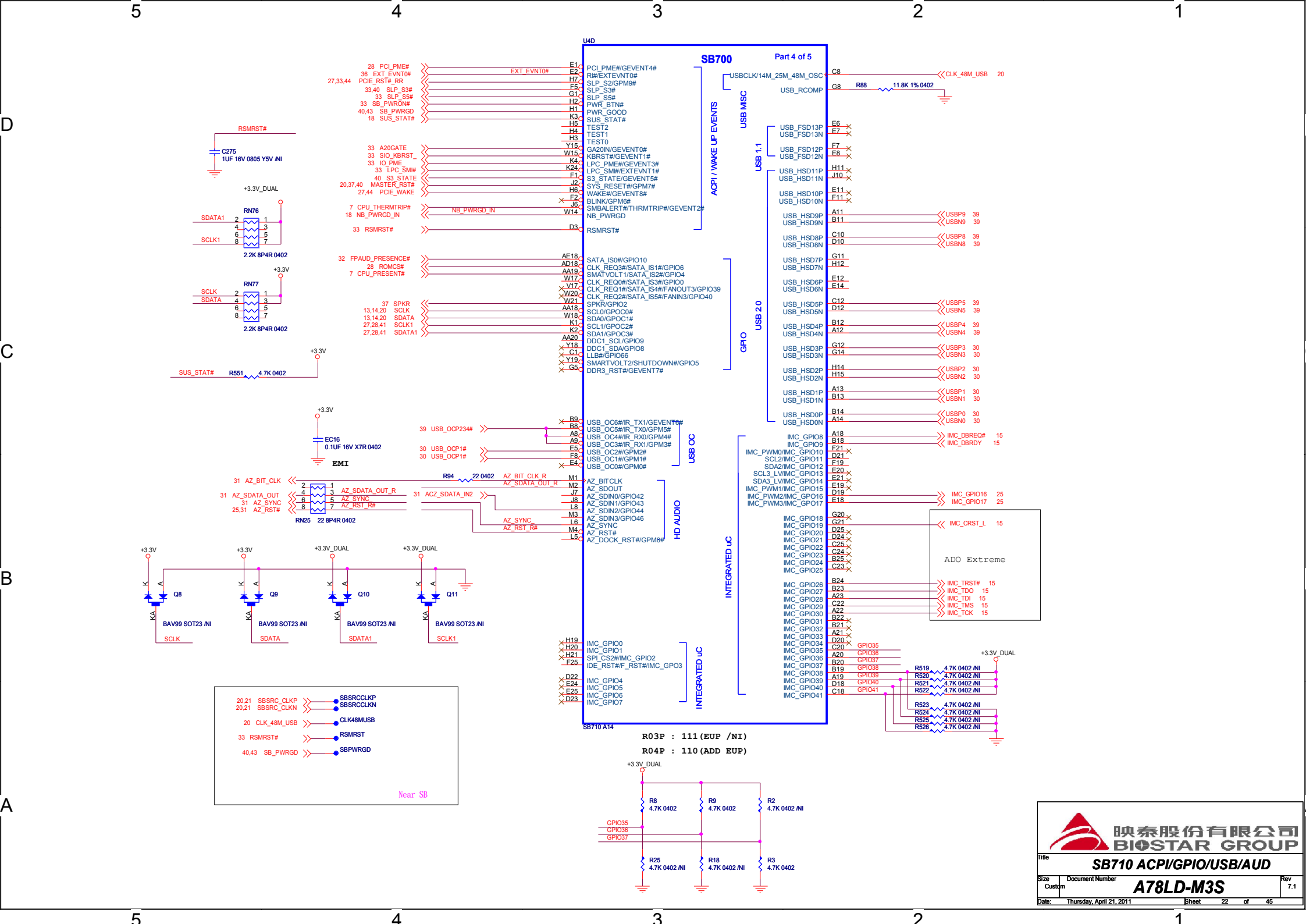
SB700
Part 4 of 5
U4D
SB710 A14
PCI_PME#/GEVENT4#
RI#/EXTEVNT0#
SLP_S2/GPM9#
SLP_S3#
SLP_S5#
PWR_BTN#
PWR_GOOD
SUS_STAT#
TEST2
TEST1
TEST0
GA20IN/GEVENT0#
KBRST#/GEVENT1#
LPC_PME#/GEVENT3#
LPC_SMI#/EXTEVNT1#
S3_STATE/GEVENT5#
SYS_RESET#/GPM7#
WAKE#/GEVENT8#
BLINK/GPM6#
SMBALERT#/THRMTRIP#/GEVENT2#
NB_PWRGD
RSMRST#
SATA_IS0#/GPIO10
CLK_REQ3#/SATA_IS1#/GPIO6
SMATVOLT1/SATA_IS2#/GPIO4
CLK_REQ0#/SATA_IS3#/GPIO0
CLK_REQ1#/SATA_IS4#/FANOUT3/GPIO39
CLK_REQ2#/SATA_IS5#/FANIN3/GPIO40
SPKR/GPIO2
SCL0/GPOC0#
SDA0/GPOC1#
SCL1/GPOC2#
SDA1/GPOC3#
DDC1_SCL/GPIO9
DDC1_SDA/GPIO8
LLB#/GPIO66
SMARTVOLT2/SHUTDOWN#/GPIO5
DDR3_RST#/GEVENT7#
USB_OC6#/IR_TX1/GEVENT6#
USB_OC5#/IR_TX0/GPM5#
USB_OC4#/IR_RX0/GPM4#
USB_OC3#/IR_RX1/GPM3#
USB_OC2#/GPM2#
USB_OC1#/GPM1#
USB_OC0#/GPM0#
AZ_BITCLK
AZ_SDOUT
AZ_SDIN0/GPIO42
AZ_SDIN1/GPIO43
AZ_SDIN2/GPIO44
AZ_SDIN3/GPIO46
AZ_SYNC
AZ_RST#
AZ_DOCK_RST#/GPM8#
IMC_GPIO0
IMC_GPIO1
SPI_CS2#/IMC_GPIO2
IDE_RST#/F_RST#/IMC_GPO3
IMC_GPIO4
IMC_GPIO5
IMC_GPIO6
IMC_GPIO7
USBCLK/14M_25M_48M_OSC
USB_RCOMP
USB_FSD13P
USB_FSD13N
USB_FSD12P
USB_FSD12N
USB_HSD11P
USB_HSD11N
USB_HSD10P
USB_HSD10N
USB_HSD9P
USB_HSD9N
USB_HSD8P
USB_HSD8N
USB_HSD7P
USB_HSD7N
USB_HSD6P
USB_HSD6N
USB_HSD5P
USB_HSD5N
USB_HSD4P
USB_HSD4N
USB_HSD3P
USB_HSD3N
USB_HSD2P
USB_HSD2N
USB_HSD1P
USB_HSD1N
USB_HSD0P
USB_HSD0N
IMC_GPIO8
IMC_GPIO9
IMC_PWM0/IMC_GPIO10
SCL2/IMC_GPIO11
SDA2/IMC_GPIO12
SCL3_LV/IMC_GPIO13
SDA3_LV/IMC_GPIO14
IMC_PWM1/IMC_GPIO15
IMC_PWM2/IMC_GPIO16
IMC_PWM3/IMC_GPO17
IMC_GPIO18
IMC_GPIO19
IMC_GPIO20
IMC_GPIO21
IMC_GPIO22
IMC_GPIO23
IMC_GPIO24
IMC_GPIO25
IMC_GPIO26
IMC_GPIO27
IMC_GPIO28
IMC_GPIO29
IMC_GPIO30
IMC_GPIO31
IMC_GPIO32
IMC_GPIO33
IMC_GPIO34
IMC_GPIO35
IMC_GPIO36
IMC_GPIO37
IMC_GPIO38
IMC_GPIO39
IMC_GPIO40
IMC_GPIO41
ACPI / WAKE UP EVENTS
USB MSC
USB 1.1
USB 2.0
GPIO
USB OC
HD AUDIO
INTEGRATED uC
INTEGRATED uC
R03P : 111(EUP /NI)
R04P : 110(ADD EUP)
ADO Extreme
Near SB
C275 1UF 16V 0805 Y5V /NI
RN76 2.2K 8P4R 0402
RN77 2.2K 8P4R 0402
R551 4.7K 0402
EC16 0.1UF 16V X7R 0402
EMI
RN25 22 8P4R 0402
R94 22 0402
Q8 Q9 Q10 Q11
BAV99 SOT23 /NI
R88 11.8K 1% 0402
R519 R520 R521 R522 R523 R524 R525 R526 4.7K 0402 /NI
R8 R9 R2 R25 R18 R3 4.7K 0402
R2 4.7K 0402 /NI
R25 R18 4.7K 0402 /NI
R3 4.7K 0402
+3.3V
+3.3V_DUAL
RSMRST#
SUS_STAT#
SDATA1
SCLK1
SCLK
SDATA
SBSRCCLKP
SBSRCCLKN
CLK48MUSB
RSMRST
SBPWRGD
AZ_BIT_CLK
AZ_SDATA_OUT
AZ_SYNC
AZ_RST#
AZ_SDATA_IN2
AZ_BIT_CLK_R
AZ_SDATA_OUT_R
AZ_SYNC_R
AZ_RST_R#
USB_OCP234#
USB_OCP1#
IMC_DBREQ#
IMC_DBRDY
IMC_CRST_L
IMC_TRST#
IMC_TDO
IMC_TDI
IMC_TMS
IMC_TCK
IMC_GPIO16
IMC_GPIO17
CLK_48M_USB
USBP9 USBN9
USBP8 USBN8
USBP5 USBN5
USBP4 USBN4
USBP3 USBN3
USBP2 USBN2
USBP1 USBN1
USBP0 USBN0
GPIO35
GPIO36
GPIO37
GPIO38
GPIO39
GPIO40
GPIO41
NB_PWRGD_IN
映泰股份有限公司
BIOSTAR GROUP
SB710 ACPI/GPIO/USB/AUD
A78LD-M3S
Custom
Rev 7.1
Thursday, April 21, 2011
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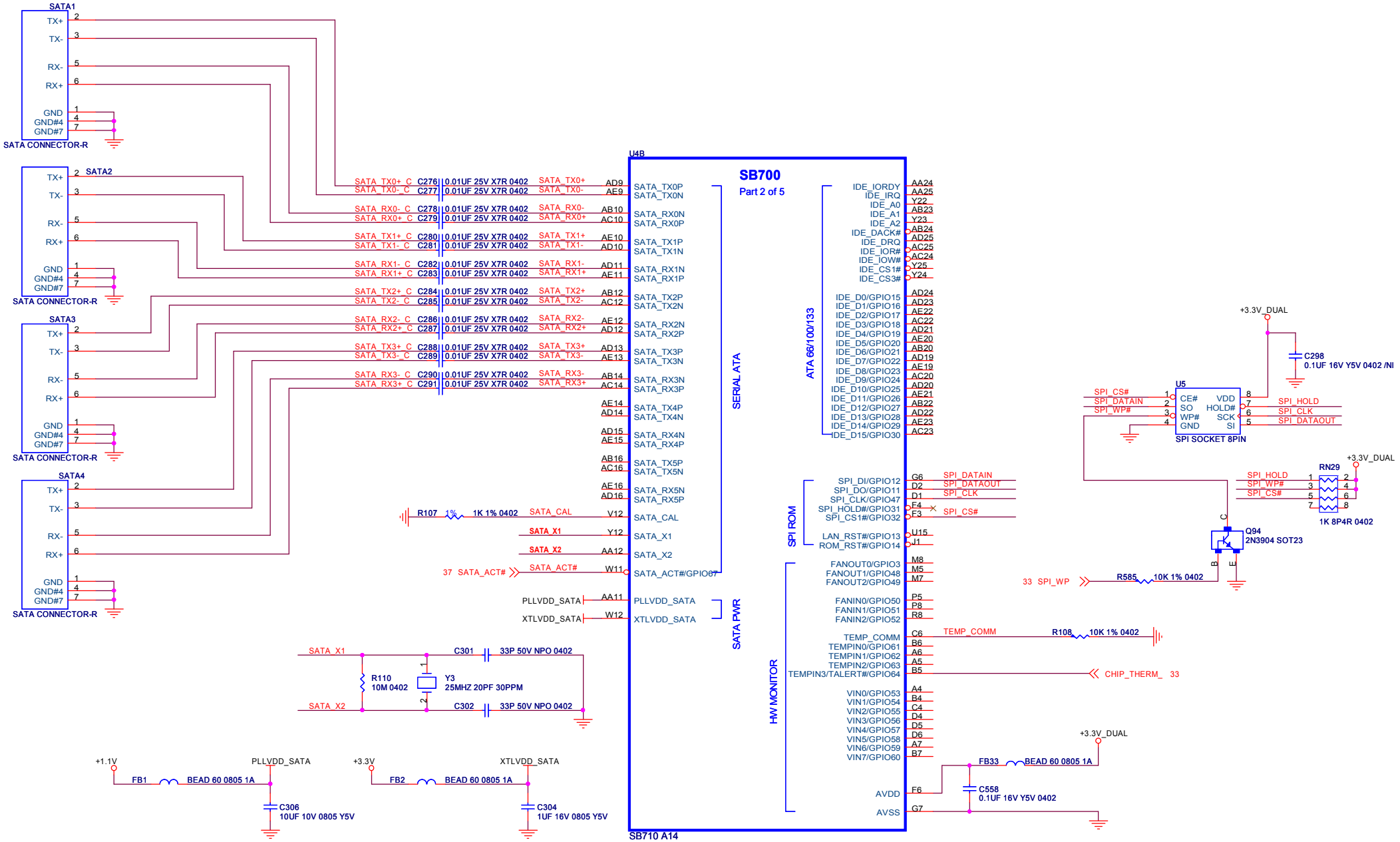

Title	SB710 SATA/IDE/SPI
Size	Custom
Document Number	A78LD-M3S
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Date:	Thursday, April 21, 2011
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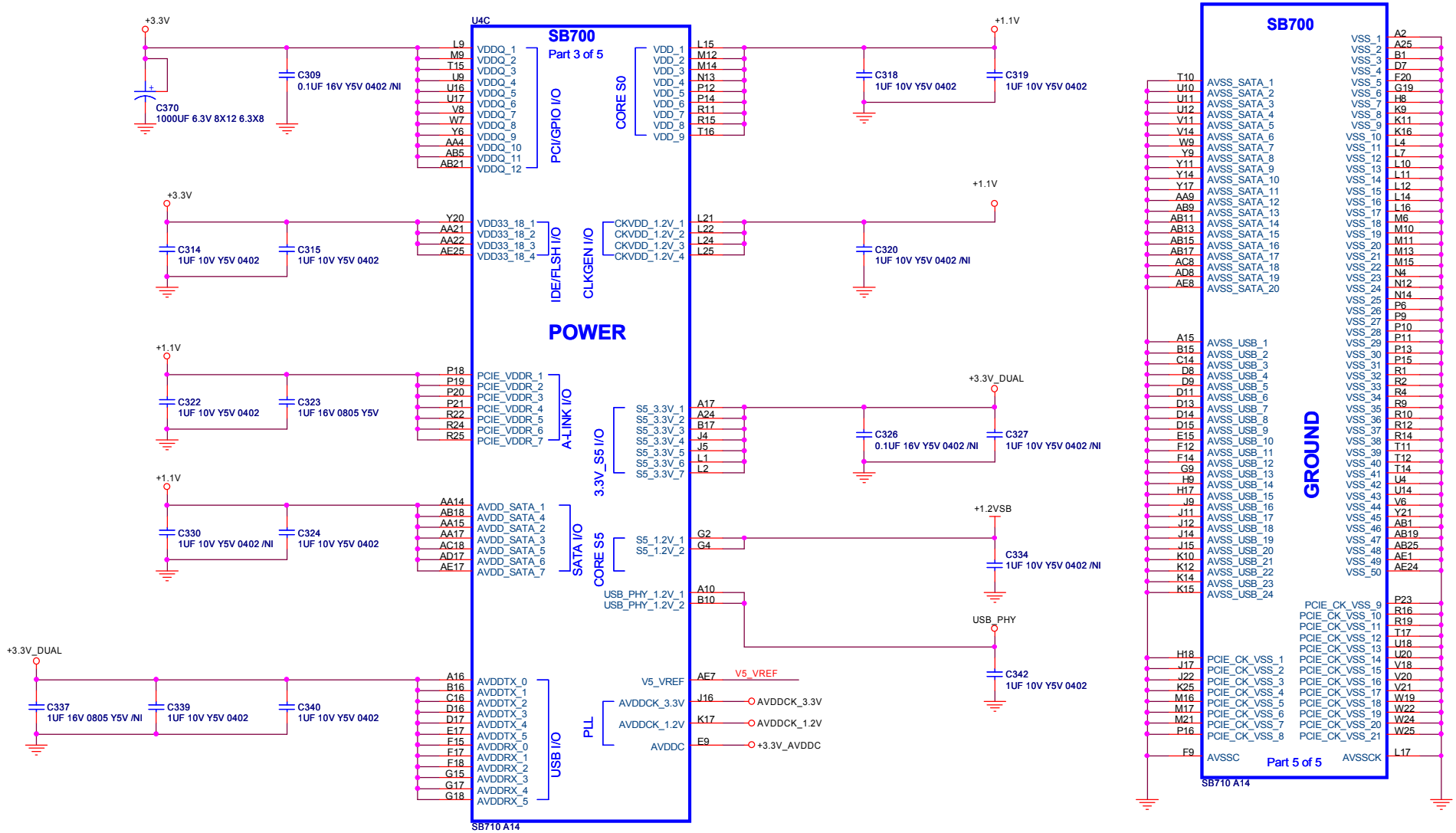

Title	SB710 POWER
Size	Custom
Document Number	A78LD-M3S
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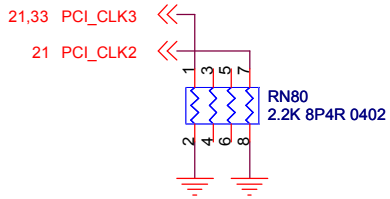

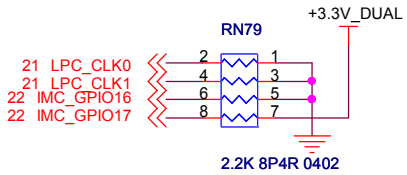

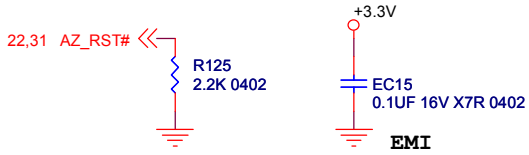

REQUIRED STRAPS

NOTE: SB700 HAS INTERNAL 15K PULL UP RESISTOR FOR RTC_CLK

	PCI_CLK2	PCI_CLK3	PCI_CLK4	PCI_CLK5	LPC_CLK0	LPC_CLK1	AZ_RST#	IMC_GPIO17 IMC_GPIO16
PULL HIGH	WATCHDOG TIMER ON NB_PWRGD ENABLED	USE DEBUG STRAPS	RESERVED	RESERVED	ENABLE PCI MEM BOOT	CLKGEN ENABLED	IMC ENABLED	ROM TYPE: H, L = SPI ROM DEFAULT
PULL LOW	WATCHDOG TIMER ON NB_PWRGD DISABLED DEFAULT	IGNORE DEBUG STRAPS DEFAULT			DISABLE PCI MEM BOOT DEFAULT	CLKGEN DISABLED DEFAULT	IMC DISABLED DEFAULT	

OVERLAP COMMON PADS WHERE POSSIBLE FOR DUAL-OP RESISTORS.

DEBUG STRAPS

SB700 HAS 15K INTERNAL PU FOR PCI_AD[28:23]

	PCI_AD28	PCI_AD27	PCI_AD26	PCI_AD25	PCI_AD24	PCI_AD23
PULL HIGH	USE LONG RESET DEFAULT	USE PCI PLL DEFAULT	USE ACPI BCLK DEFAULT	USE IDE PLL DEFAULT	USE DEFAULT PCIE STRAPS DEFAULT	RESERVED
PULL LOW	USE SHORT RESET	BYPASS PCI PLL	BYPASS ACPI BCLK	BYPASS IDE PLL	USE EEPROM PCIE STRAPS	

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Title: SB710 STRAP

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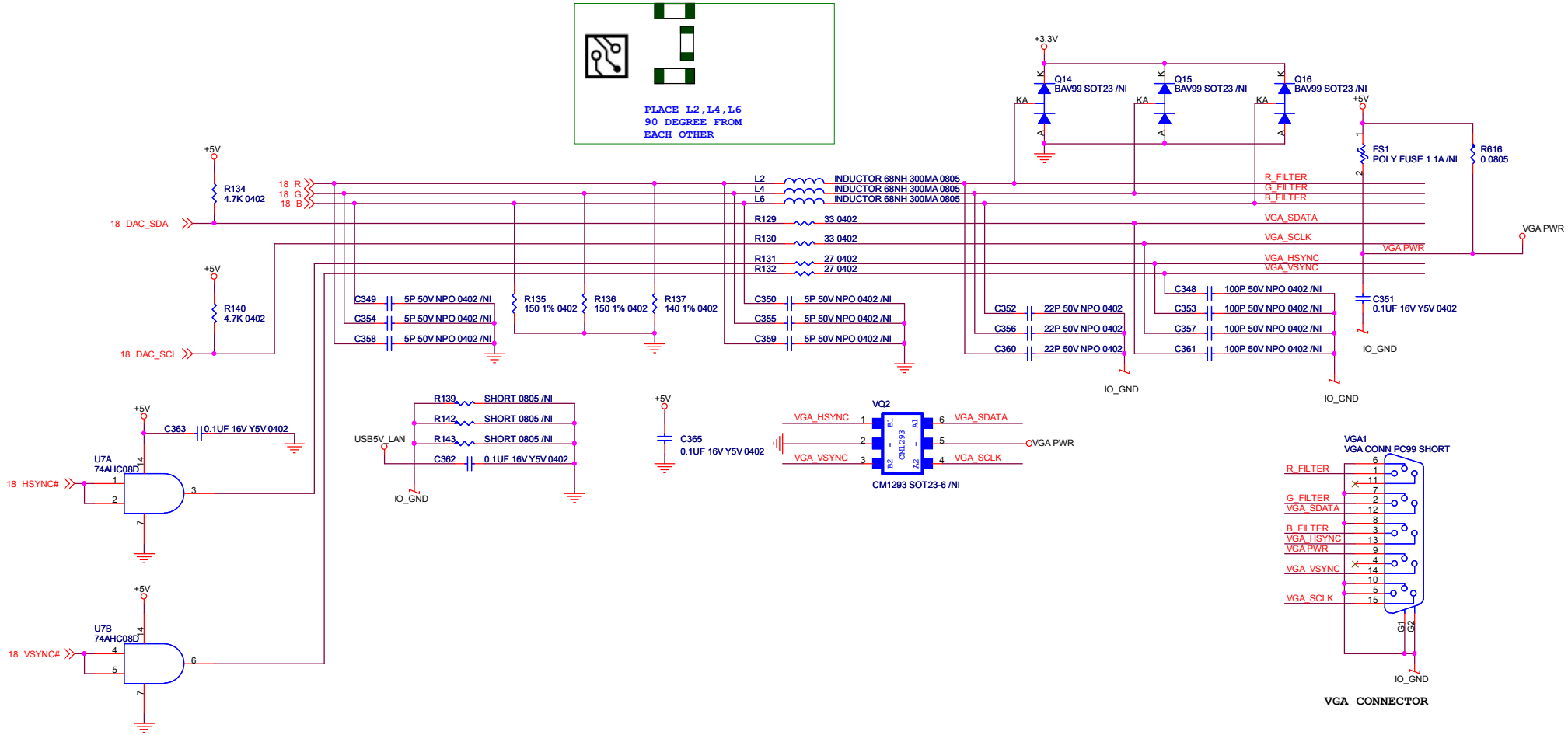

Title	CRT
Size	Custom
Document Number	A78LD-M3S
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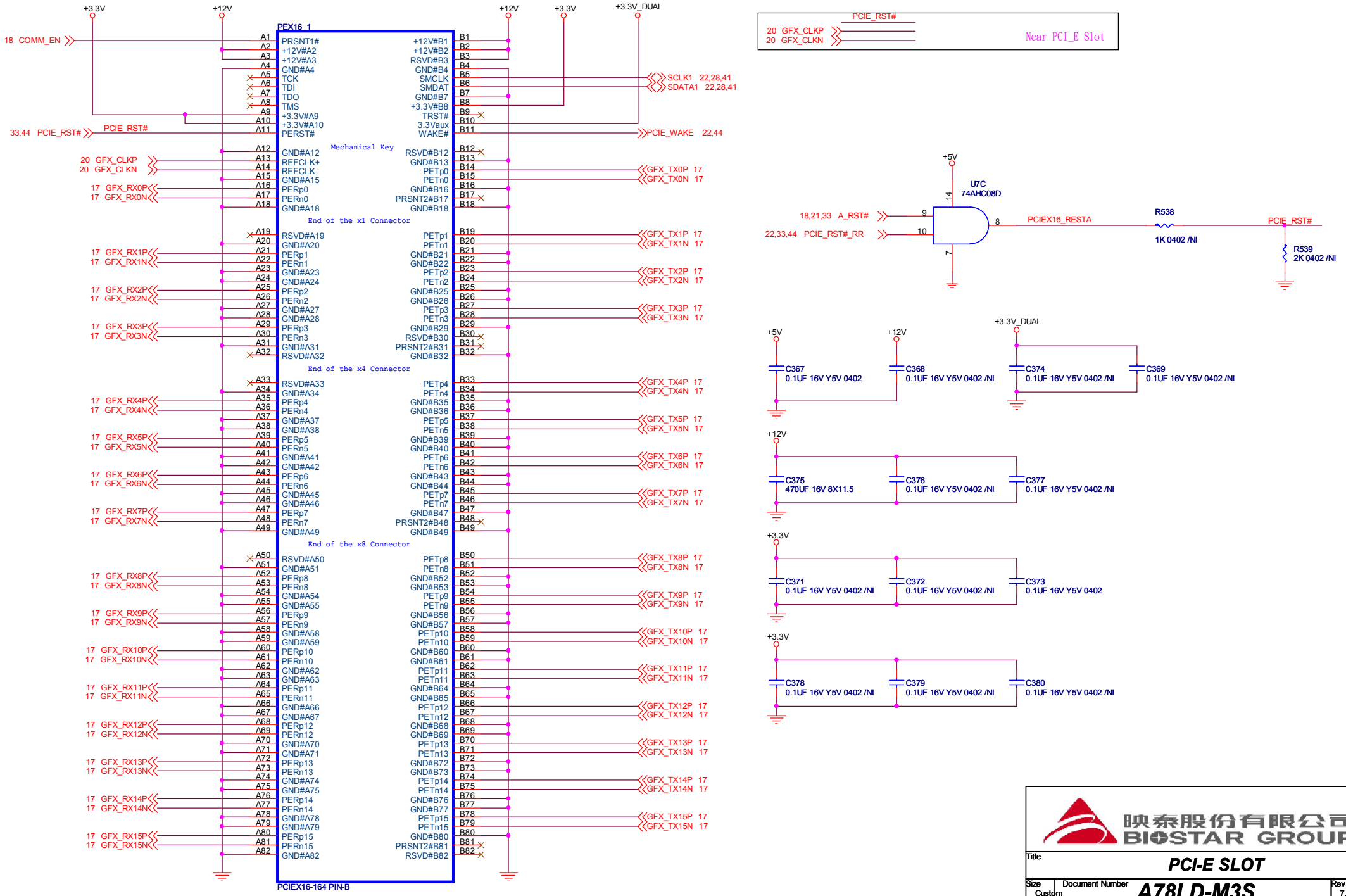
映泰股份有限公司
BIOSTAR GROUP



映泰股份有限公司
BIOSTAR GROUP

Title	PCI-E SLOT	
Size: Custom	Document Number: A78LD-M3S	Rev: 7.1
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IDSEL:AD21 , INT:ABCD , REQ0 & GNT0 , PCI_CLK3

IDSEL:AD22 , INT:BCDA , REQ1 & GNT1 , PCI_CLK4

PCI_SLOT 1

PCI1

PCI-120 PIN-R

CT34
1000UF 6.3V 8X12 6.3X8

RN31
4.7K 8P4R 0402

R182 0 0402 /NI

R185 100 1% 0402

C382 0.1UF 16V Y5V 0402 /NI

C384 0.1UF 16V Y5V 0402 /NI

RN33
8.2K 8P4R 0402

FOR EMI NEAR C382
EC7 0.1UF 16V Y5V 0402 /NI

FOR EMI NEAR RN32
EC8 0.1UF 16V Y5V 0402 /NI

FOR EMI NEAR C409
EC1 0.1UF 16V Y5V 0402

Near PCI Slot

B1	-12V	TRST#	A1
B2	TCK	+12V	A2
B3	GND#B3	TMS	A3
B4	TDO	TDI	A4
B5	+5V#B5	+5V#A5	A5
B6	+5V#B6	INTA#	A6
B7	INTB#	INTC#	A7
B8	INTD#	+5V#A8	A8
B9	PRSNT1#	RESERVED#A9	A9
B10	RESERVED#B10	+5Vi/o#A10	A10
B11	PRSNT2#	RESERVED#A11	A11
B12	GND#B12	GND#A12	A12
B13	GND#B13	GND#A13	A13
B14	RESERVED#B14	3.3Vaux	A14
B15	GND#B15	RESET#	A15
B16	CLK	+5Vi/o#A16	A16
B17	GND#B17	GNT#	A17
B18	REQ#	GND#A18	A18
B19	+5Vi/o#B19	PME#	A19
B20	AD31	AD30	A20
B21	AD29	+3.3V#A21	A21
B22	GND#B22	AD28	A22
B23	AD27	AD26	A23
B24	AD25	GND#A24	A24
B25	+3.3V#B25	AD24	A25
B26	C/BE#3	IDSEL	A26
B27	AD23	+3.3V#A27	A27
B28	GND#B28	AD22	A28
B29	AD21	AD20	A29
B30	AD19	GND#A30	A30
B31	+3.3V#B31	AD18	A31
B32	AD17	AD16	A32
B33	C/BE#2	+3.3V#A33	A33
B34	GND#B34	FRAME#	A34
B35	IRDY#	GND#A35	A35
B36	+3.3V#B36	TRDY#	A36
B37	DEVSEL#	GND#A37	A37
B38	GND#B38	STOP#	A38
B39	LOCK#	+3.3V#A39	A39
B40	PERR#	RESERVED#A40	A40
B41	+3.3V#B41	RESERVED	A41
B42	SERR#	GND#A42	A42
B43	+3.3V#B43	PAR	A43
B44	C/BE#1	AD15	A44
B45	AD14	+3.3V#A45	A45
B46	GND#B46	AD13	A46
B47	AD12	AD11	A47
B48	AD10	GND#A48	A48
B49	GND#B49	AD9	A49
B52	AD8	C/BE#0	A52
B53	AD7	+3.3V	A53
B54	+3.3V#B54	AD6	A54
B55	AD5	AD4	A55
B56	AD3	GND	A56
B57	GND#B57	AD2	A57
B58	AD1	AD0	A58
B59	+5Vi/o#B59	+5Vi/o	A59
B60	ACK64#	REQ64#	A60
B61	+5V#B61	+5V#A61	A61
B62	+5V#B62	+5V	A62

Title: PCI SLOT

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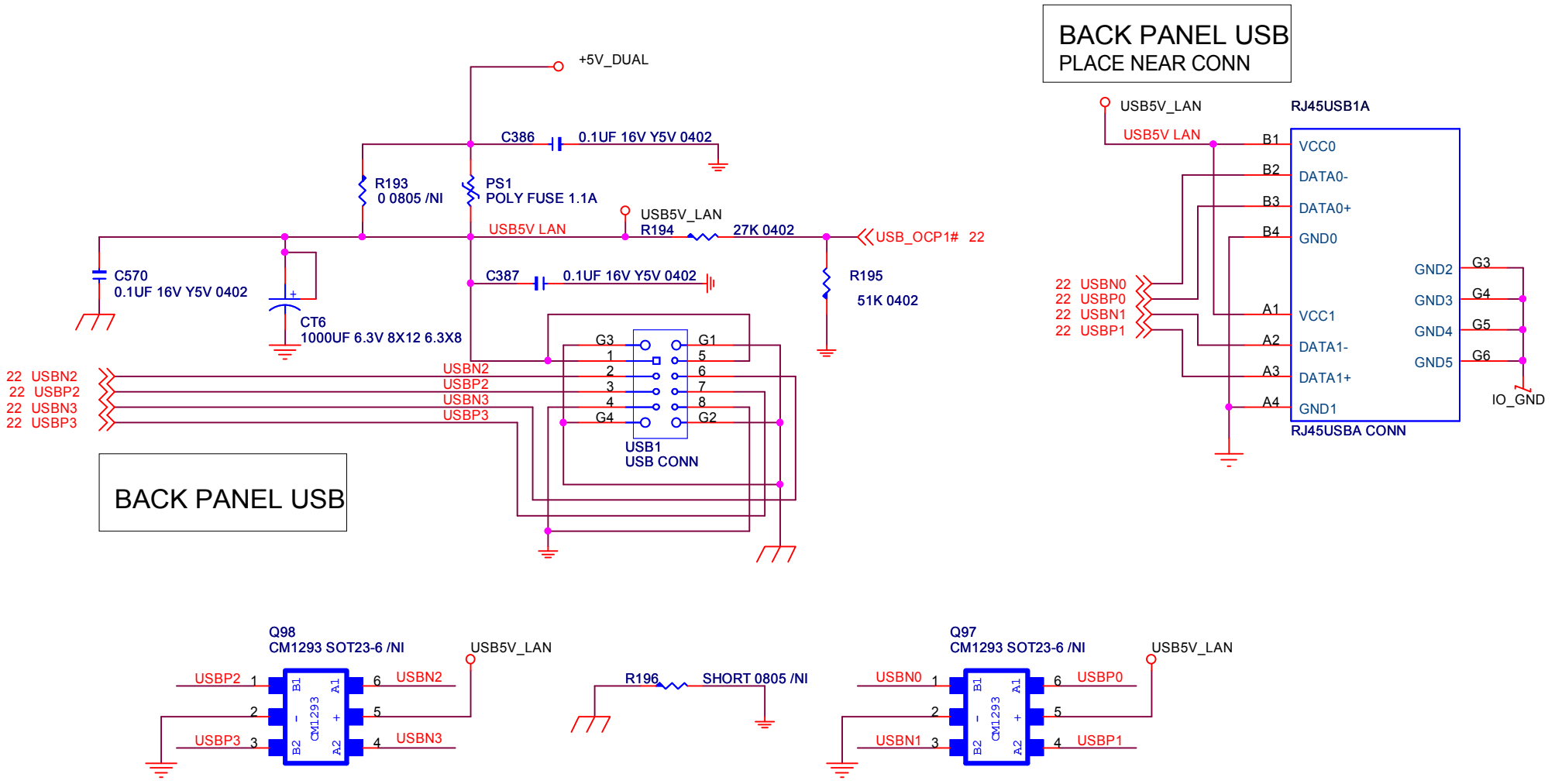

映泰股份有限公司 BIOSTAR GROUP		
Title	**USB CONN**	
Size: Custom	Document Number: **A78LD-M3S**	Rev: 7.1
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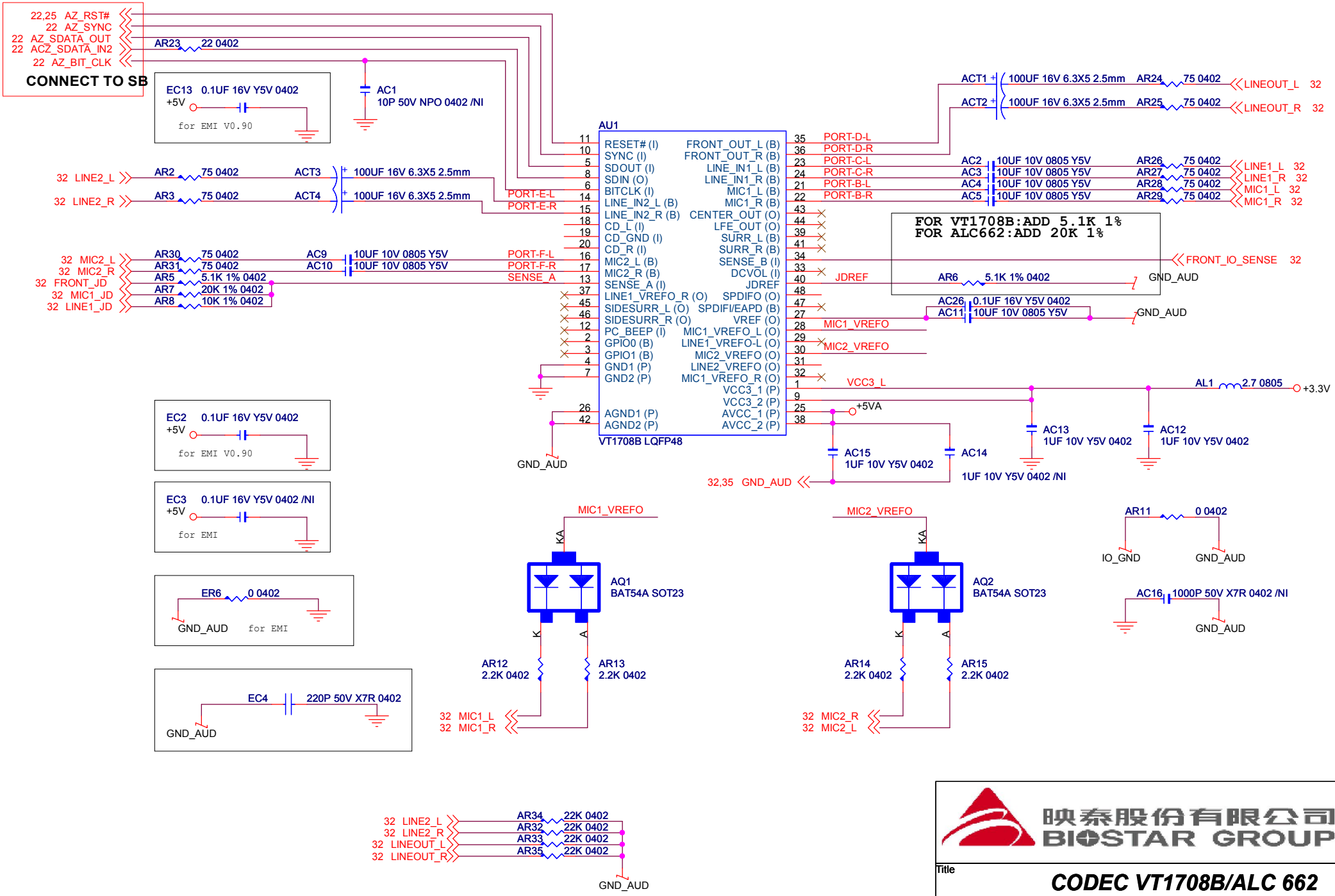

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Title: **CODEC VT1708B/ALC 662**

Size	Document Number	Rev
Custom	**A78LD-M3S**	7.1

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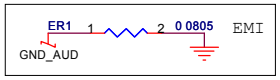
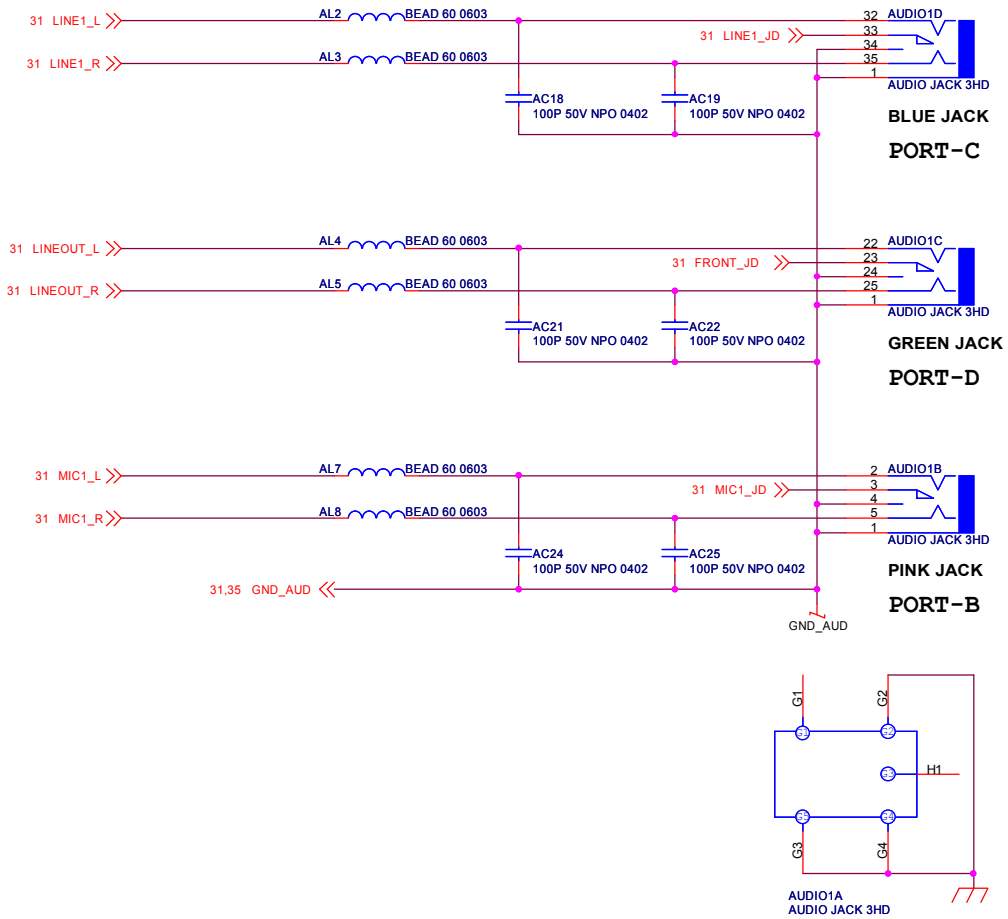
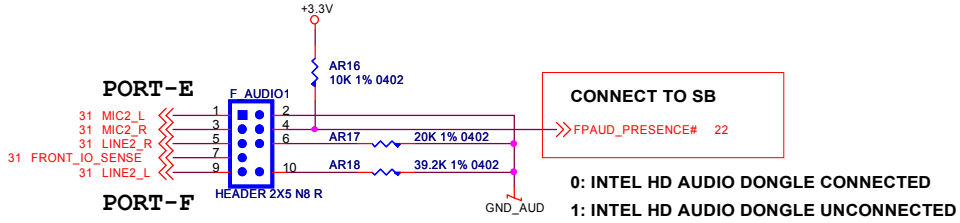
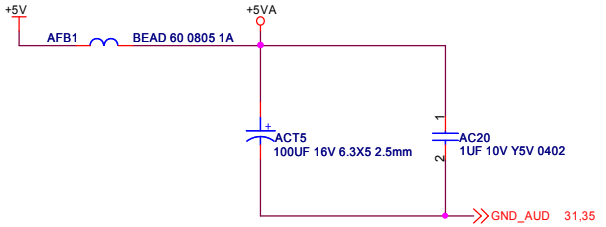


Rear Panel Onboard Analog I/O





AUDIO ANALOG POWER



Vout=Vref (1.25V) X (1+R2/R1)
=5V

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Title	AUDIO CONNECTOR	
Size: Custom	Document Number: A78LD-M3S	Rev: 7.1
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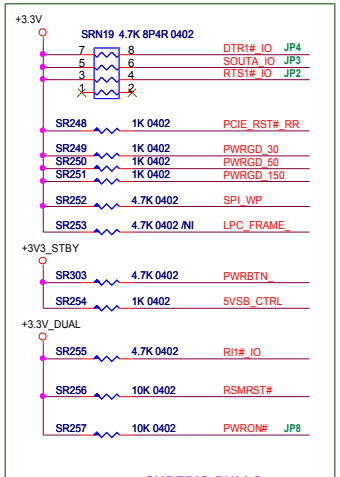
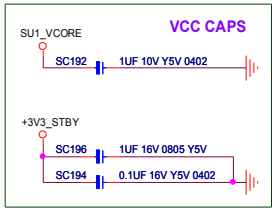
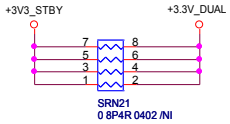
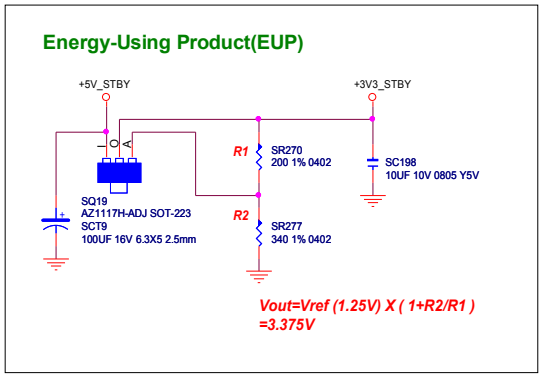
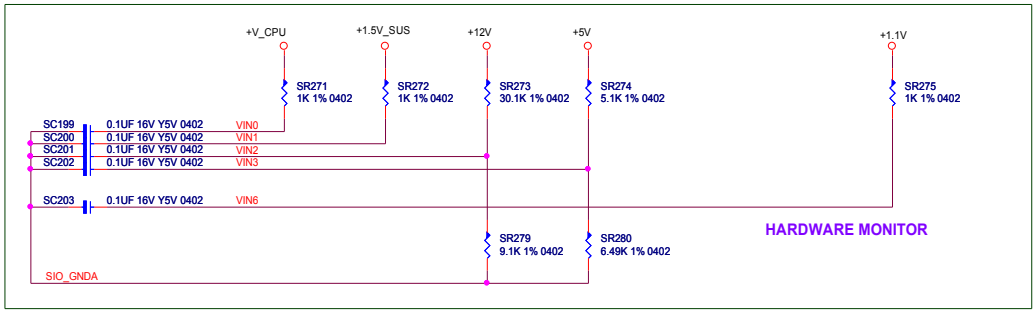
SUPERIO PART: S+Reference

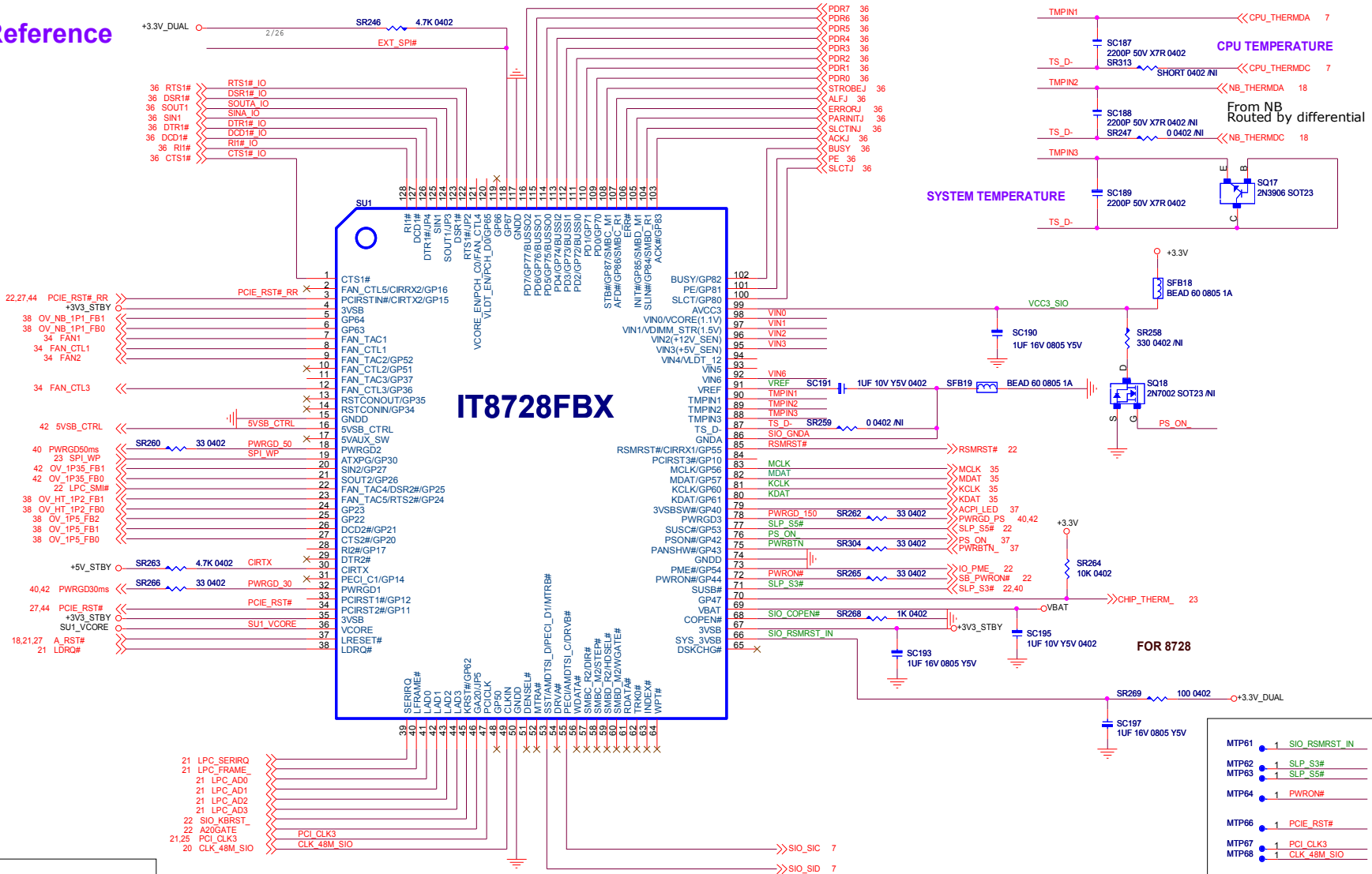


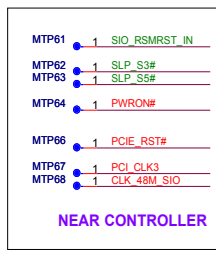












映泰股份有限公司 BIOSTAR GROUP

Title	SUPER I/O ITE 8728		
Size: Custom	Document Number: A78LD-M3S		Rev: 7.1
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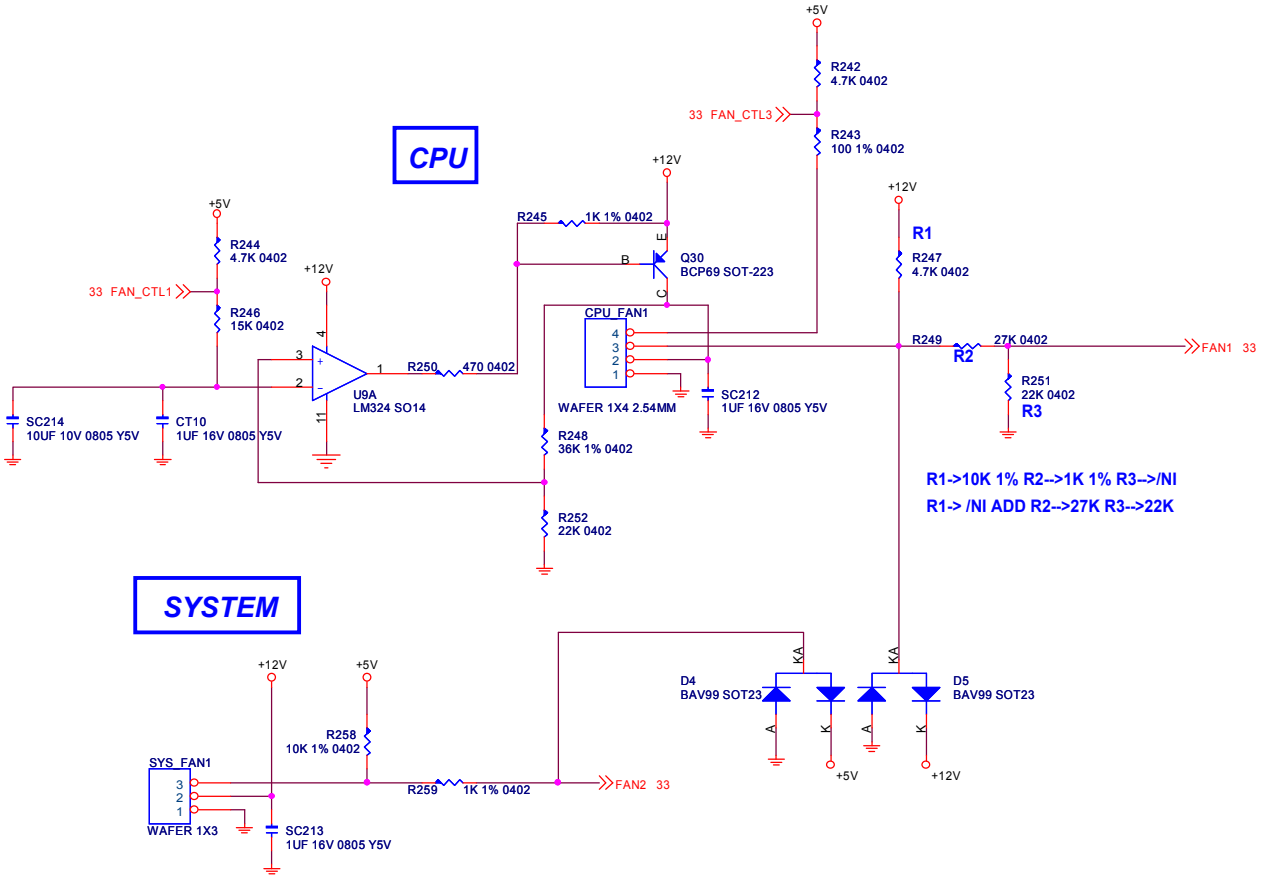
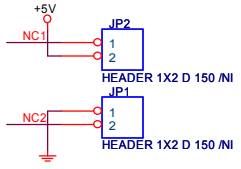


5 mil 60歐姆 測試點



映泰股份有限公司
BIOSTAR GROUP

Title	FAN CONTROL	
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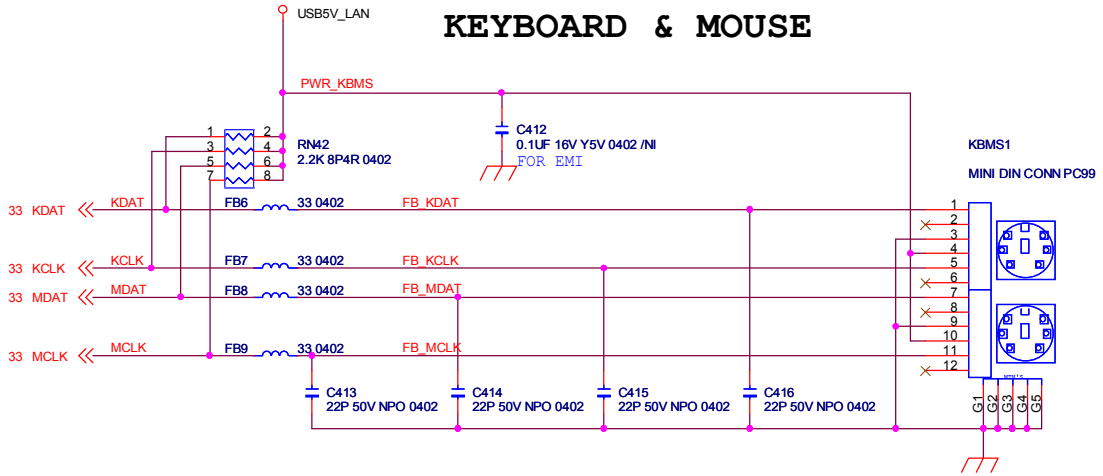
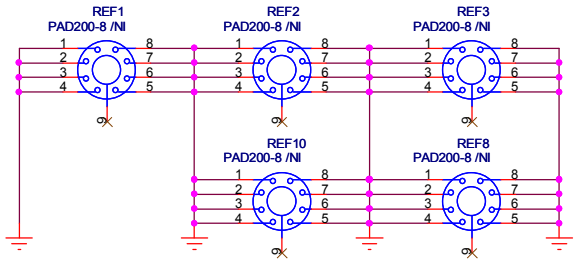
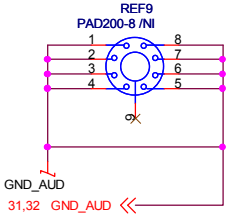
KEYBOARD & MOUSE







映泰股份有限公司
BIOSTAR GROUP

Title	PS2 CONN	
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COM1

+5V
+12V
U10
ST75185CTR TSSOP /NI
-12V

33 DCD1#
33 DSR1#
33 SIN1
33 RTS1#
33 SOUT1
33 CTS1#
33 DTR1#
33 RI1#

RIN1
RIN2
RIN3
DOUT1
DOUT2
RIN4
DOUT3
-XRI1

C418 220P 50V X7R 0402 /NI
C419 220P 50V X7R 0402 /NI
C420 220P 50V X7R 0402 /NI
C421 220P 50V X7R 0402 /NI
C422 220P 50V X7R 0402 /NI
C423 220P 50V X7R 0402 /NI
C424 220P 50V X7R 0402 /NI
C425 220P 50V X7R 0402 /NI

+3.3V_DUAL
-XRI1
RN44
10K 8P4R 0402 /NI
22 EXT_EVNT0#
Q32
2N3904 SOT23 /NI
D6
1N4148 SMD /NI

WAKE ON LAN

J_COM1
RIN1
DOUT2
DOUT1
-XRI1
RIN3
DOUT3
RIN2
RIN4
HEADER 2X5 N10 G /NI

COM PORT

COM PORT PIN ASSIGNMENT

RN45
22 8P4R 0402
33 STROBEJ
33 ALFJ
33 PARINITJ
33 SLCTINJ
STROBEJ
ALFJ
PARINITJ
SLCTINJ
-STB
AFD
-INIT
-SLIN

RN46
22 8P4R 0402
33 PDR7
33 PDR6
33 PDR5
33 PDR4
PDR7
PDR6
PDR5
PDR4
P_PRD7
P_PRD6
P_PRD5
P_PRD4

RN51
22 8P4R 0402
33 PDR3
33 PDR2
33 PDR1
33 PDR0
PDR3
PDR2
PDR1
PDR0
P_PRD3
P_PRD2
P_PRD1
P_PRD0

+5V
D7
SS12/5817 SMA
C426
0.1UF 16V Y5V 0402 /NI
FOR EMI
R264
2.2K 0402
RN47
2.2K 8P4R 0402
RN48
2.2K 8P4R 0402
RN49
2.2K 8P4R 0402
RN50
2.2K 8P4R 0402

33 SLCTJ
33 ACKJ
33 BUSY
33 PE
33 ERRORJ
SLCTJ
P_PRD7
ACKJ
BUSY
PE
P_PRD4
P_PRD5
P_PRD6
P_PRD3
-STB
P_PRD2
P_PRD1
P_PRD0
ERRORJ
AFD
-INIT
-SLIN

+5V
FOR EMI near R265
EC10
1000P 50V X7R 0402 /NI
R265
SHORT 0805 /NI
IO_GND
R266
SHORT 0805 /NI
IO_GND

J_PRINT1
-STB
P_PRD0
P_PRD1
P_PRD2
P_PRD3
P_PRD4
P_PRD5
P_PRD6
P_PRD7
ACKJ
BUSY
PE
SLCTJ
AFD
ERRORJ
-INIT
-SLIN
HEADER 2X13 N26

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BIOSTAR GROUP

Title
COM & PRINTER CONNECTOR

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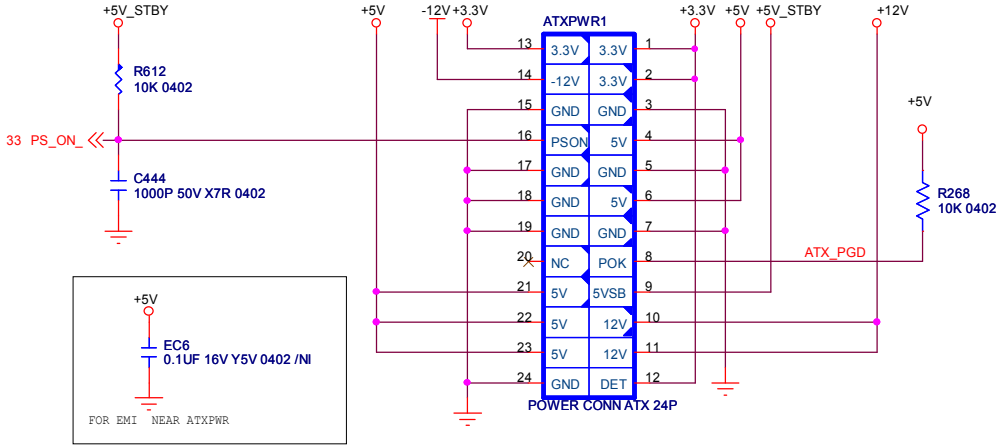
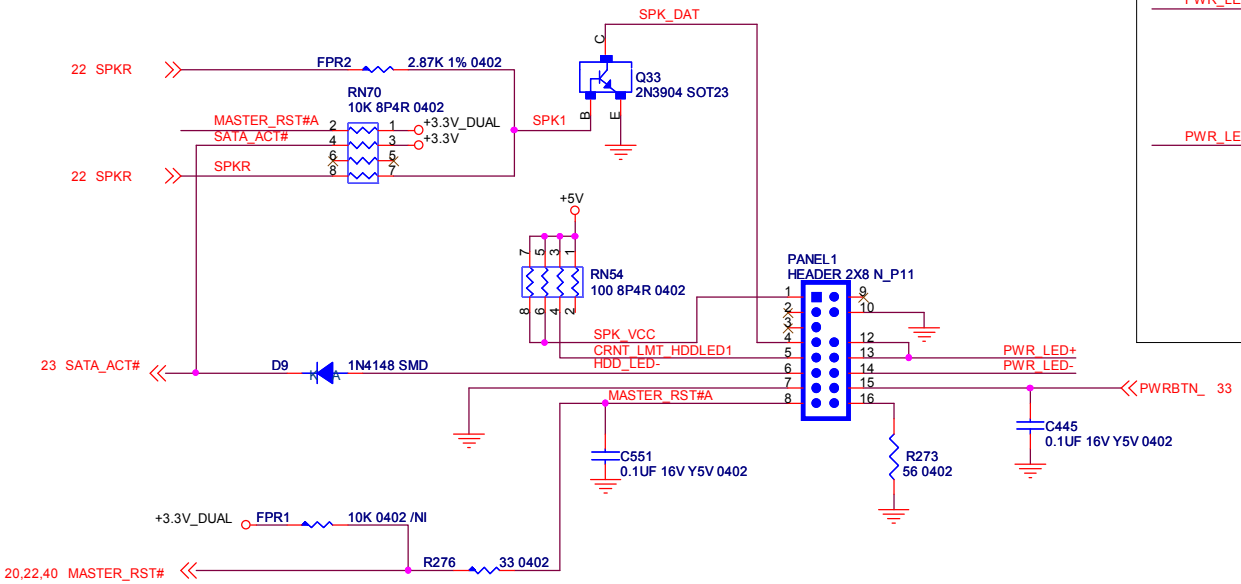
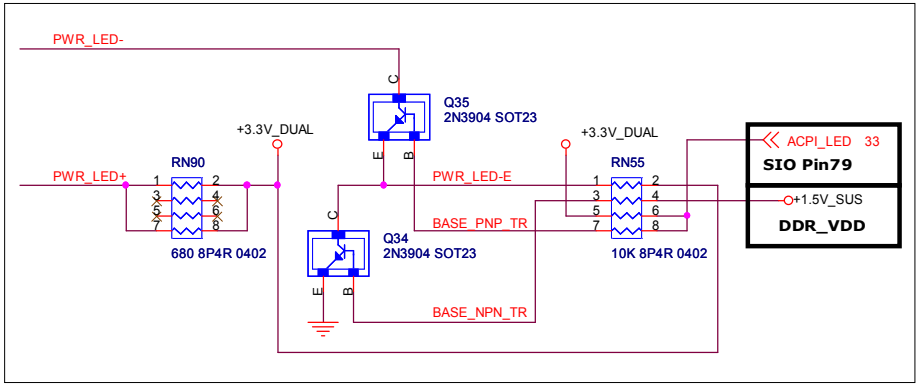


LED_D2	LED_D1	MESSAGE
OFF	OFF	ABNORMAL
OFF	ON	MEMORY ERROR
ON	OFF	VGA ERROR
ON	ON	NORMAL





BIOSTAR GROUP 映泰股份有限公司

Title: **ATX PWR / FRONT PANEL**

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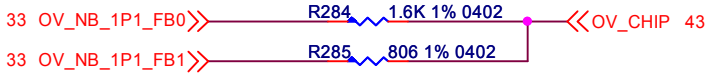
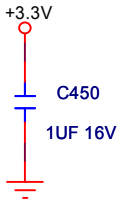
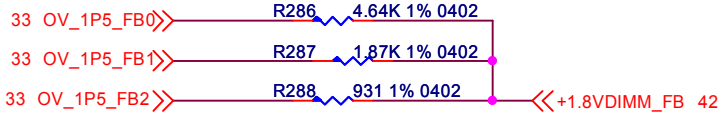


CORE VOLTAGE	OV_NB_1P1_FB1	OV_NB_1P1_FB0
+1.240V	1	1
+1.295V	1	0
+1.349V	0	1
+1.404V	0	0



DUAL +3.3V



+1.5VDIMM_FB	VDIMM0	VDIMM1	VDIMM2
Default 1.509V	1	1	1
1.547V	0	1	1
1.605V	1	0	1
1.644V	0	0	1
1.703V	1	1	0
1.742V	0	1	0
1.799V	1	0	0
1.838V	0	0	0

0V_VCORE	OV_VCORE0	OV_VCORE1
Default V_CPU	1	1
+3.3%	0	1
+6.6%	1	0
+10%	0	0

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BIOSTAR GROUP

Title: OVER VOLTAGE

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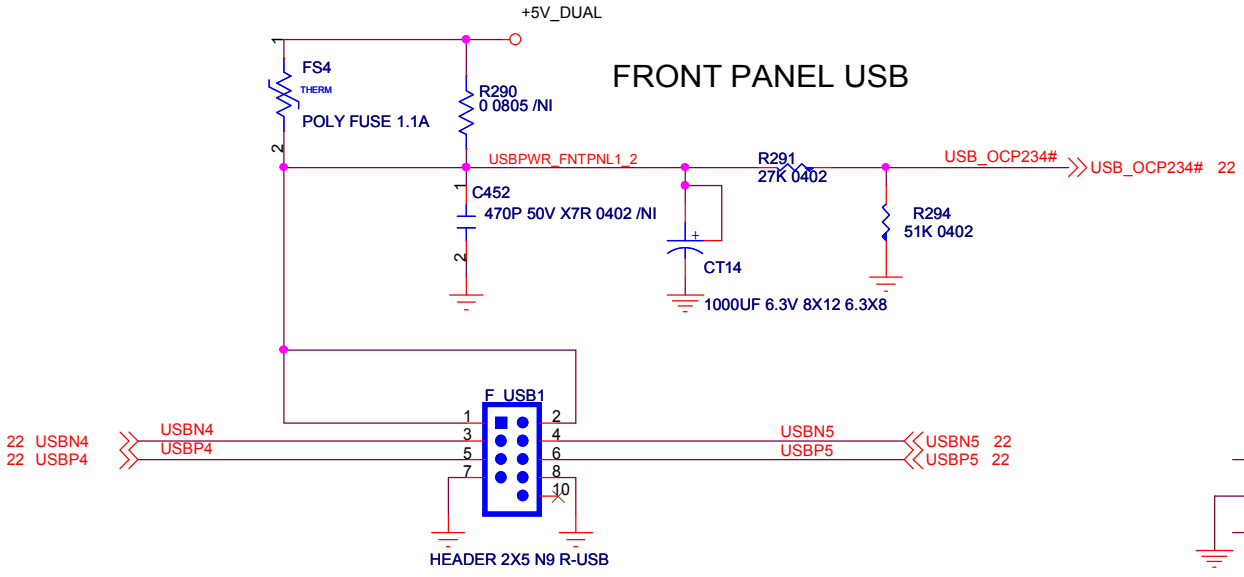

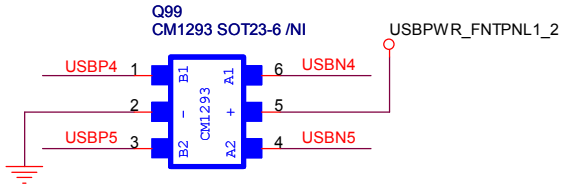

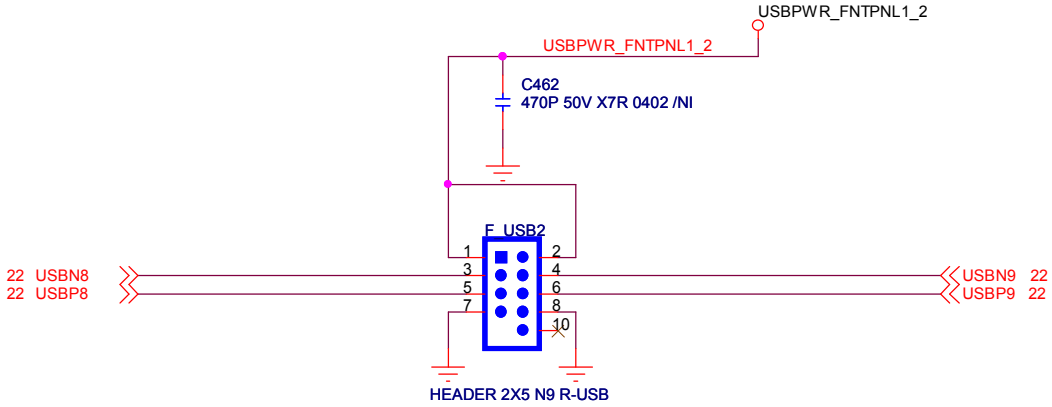

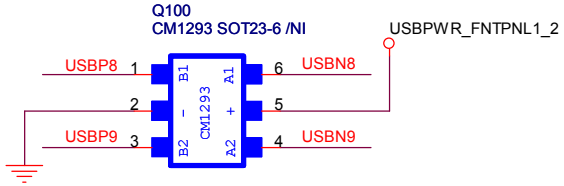

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BIOSTAR GROUP

Title	FRONT USB		
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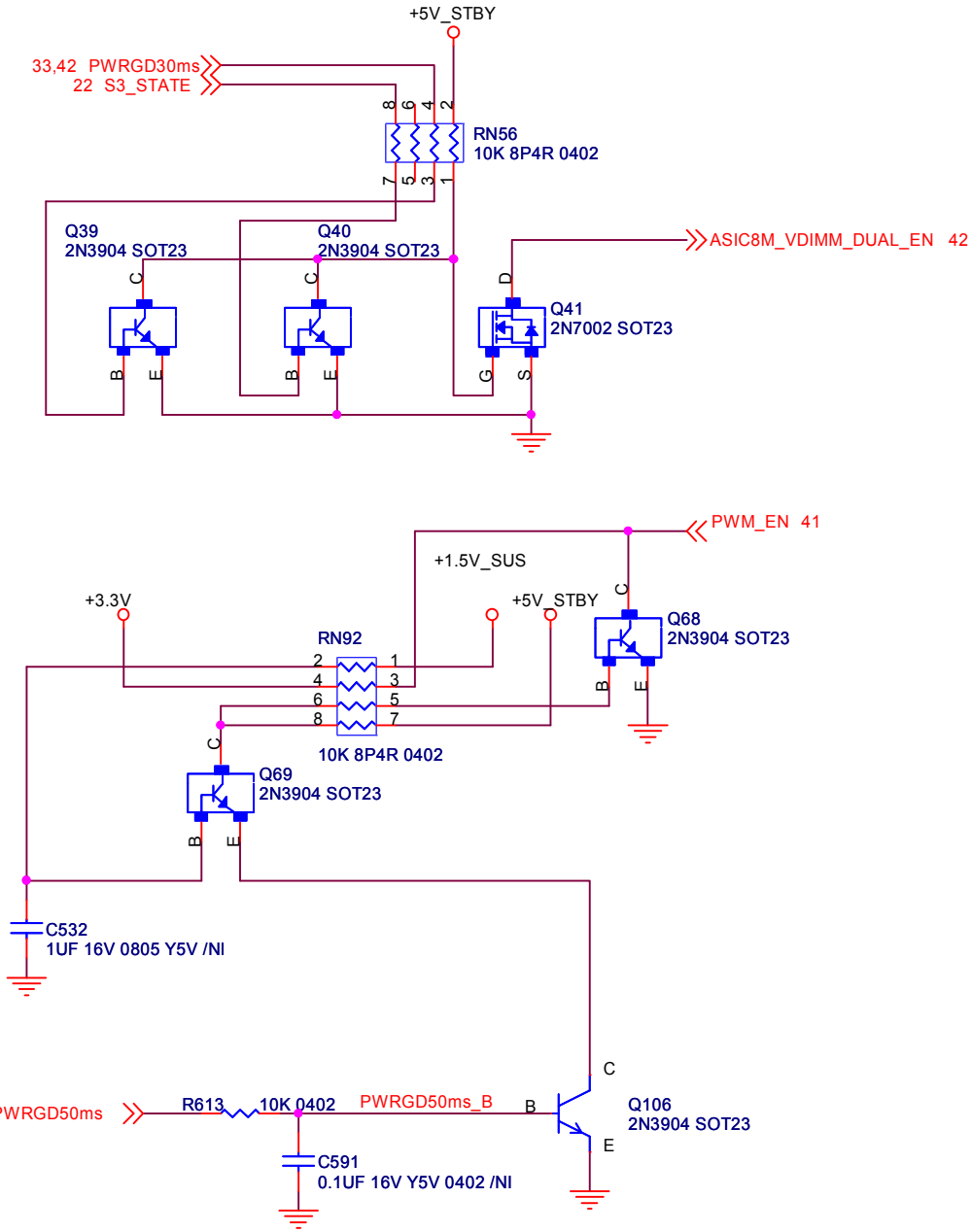
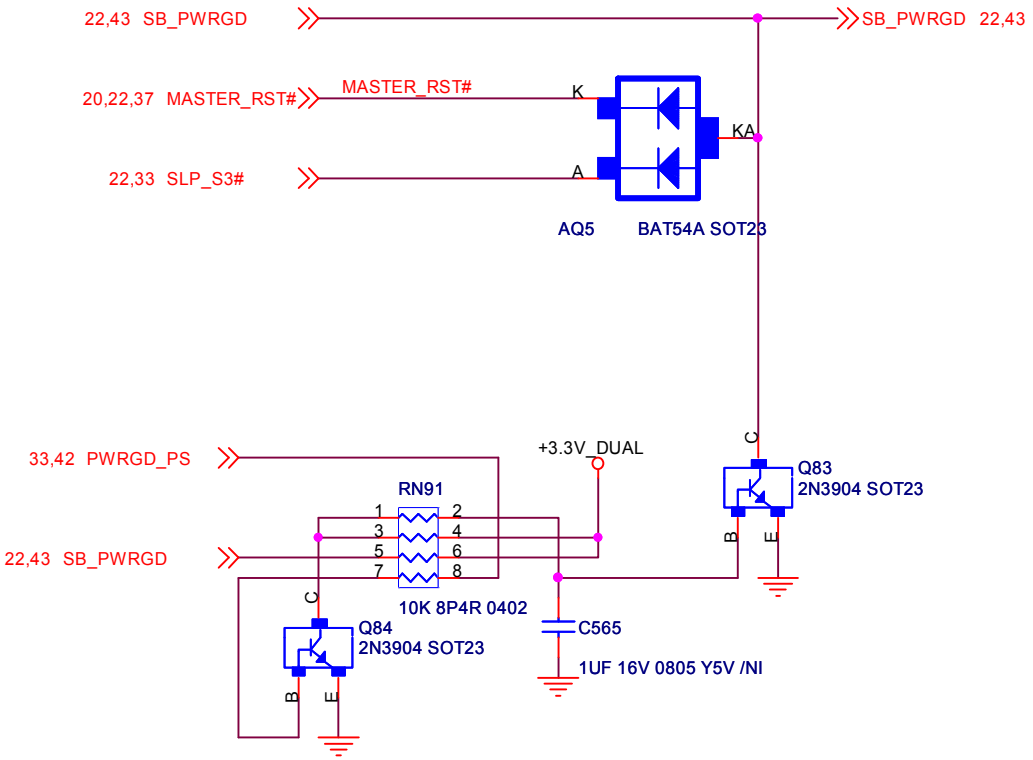
ATHLON64 POWER GOOD & ENABLES CIRCUIT





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Title	PWR GD / MISC POWER	
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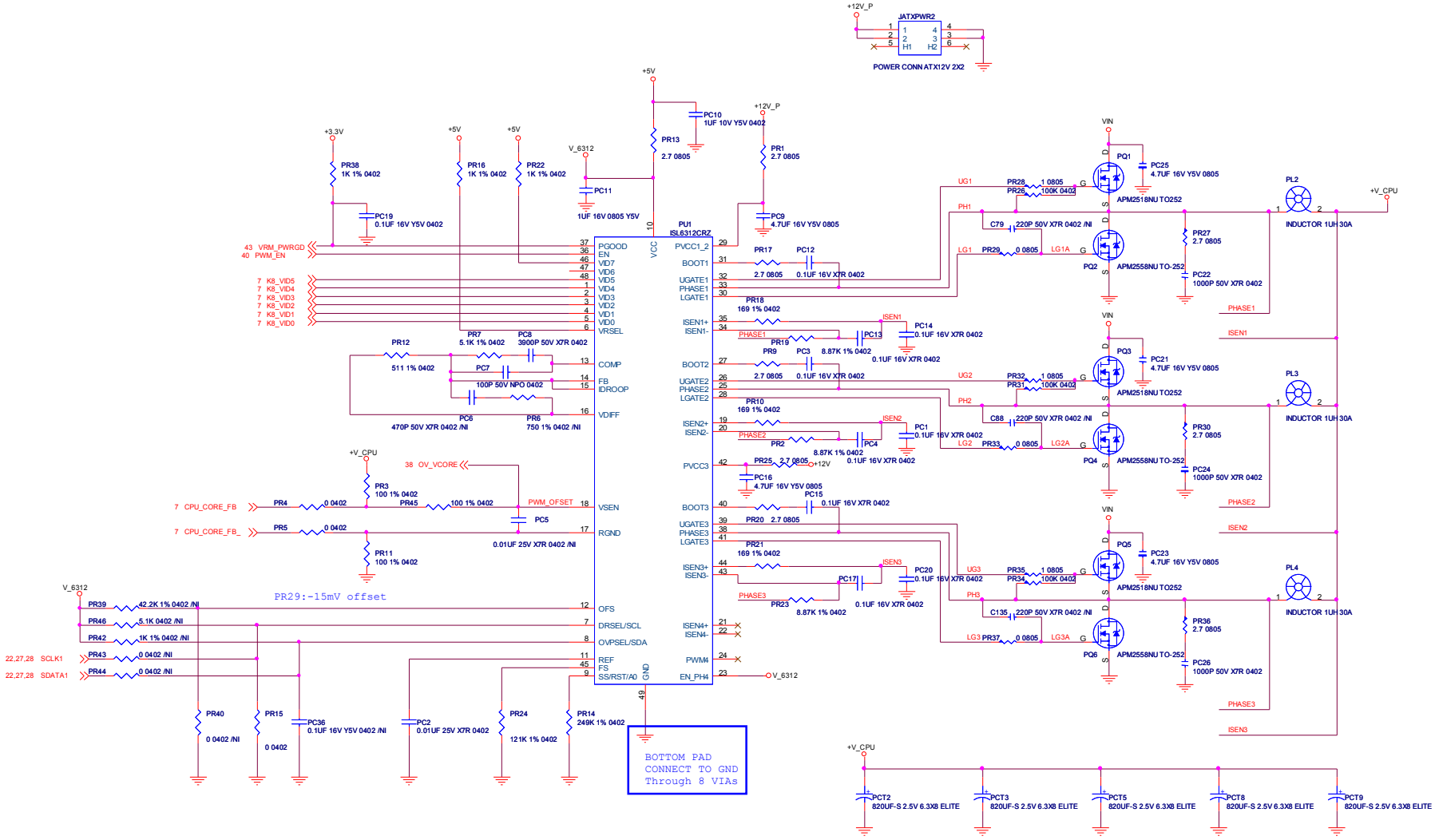

BIOSTAR GROUP 映泰股份有限公司

Title	VCORE POWER SUPPLY	
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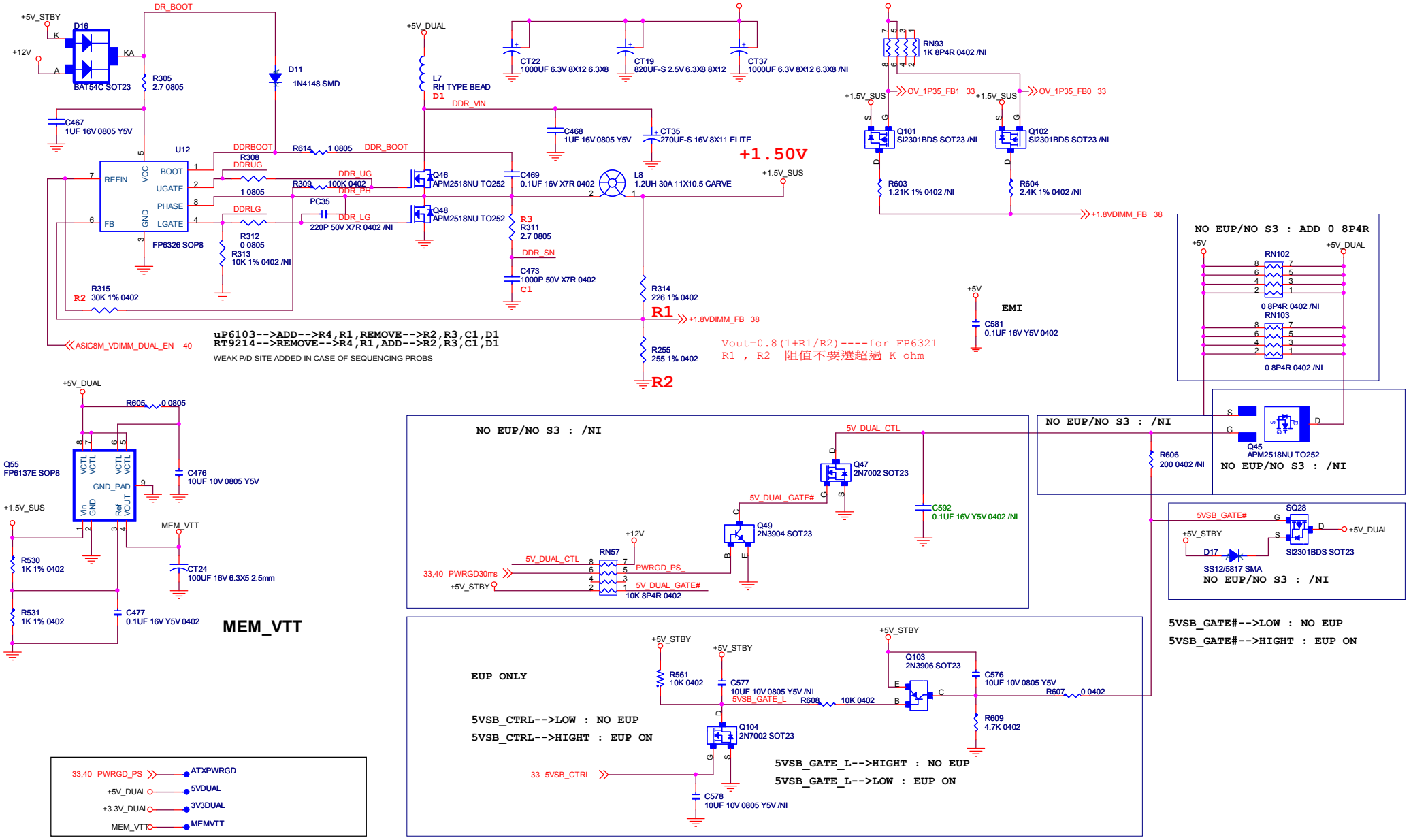

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BIOSTAR GROUP

Title	MEMORY POWER	
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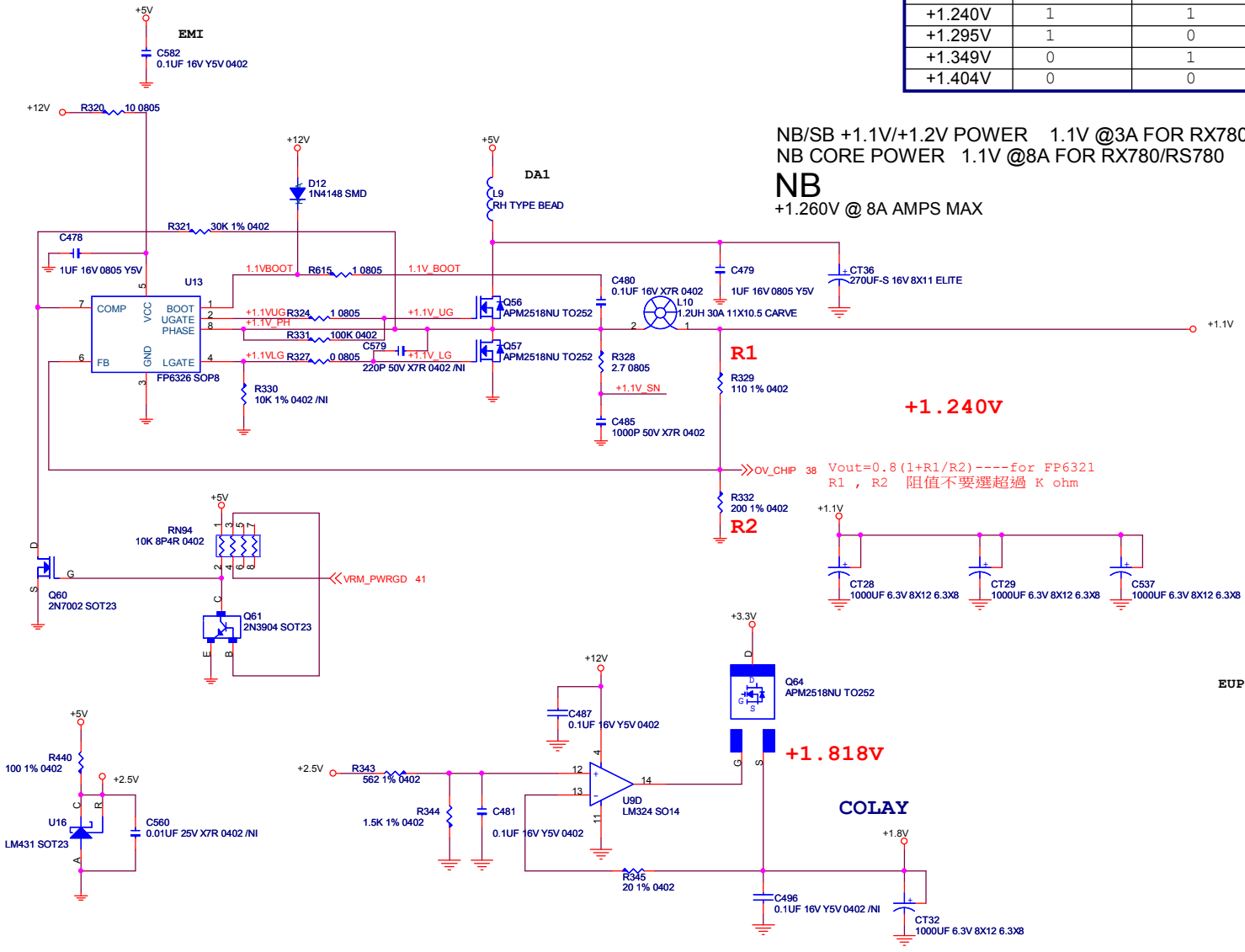
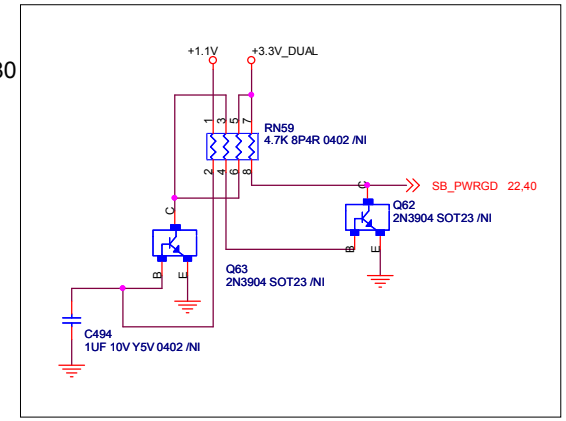
CORE VOLTAGE	OV_NB_1P1_FB1	OV_NB_1P1_FB0
+1.240V	1	1
+1.295V	1	0
+1.349V	0	1
+1.404V	0	0

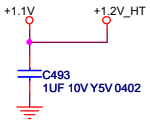
NB/SB +1.1V/+1.2V POWER 1.1V @3A FOR RX780/RS780
NB CORE POWER 1.1V @8A FOR RX780/RS780

NB

+1.260V @ 8A AMPS MAX

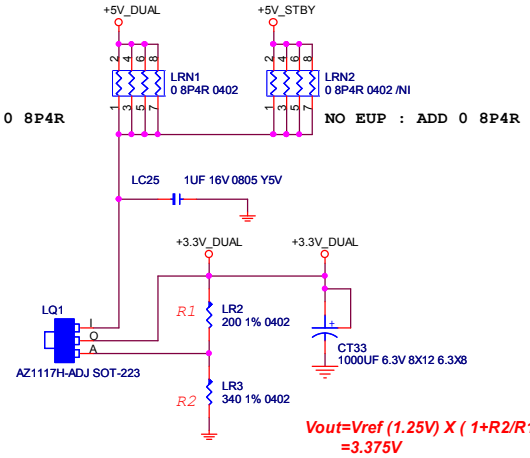






EUP : ADD 0 8P4R

NO EUP : ADD 0 8P4R



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Title	NB/SB CORE POWER	
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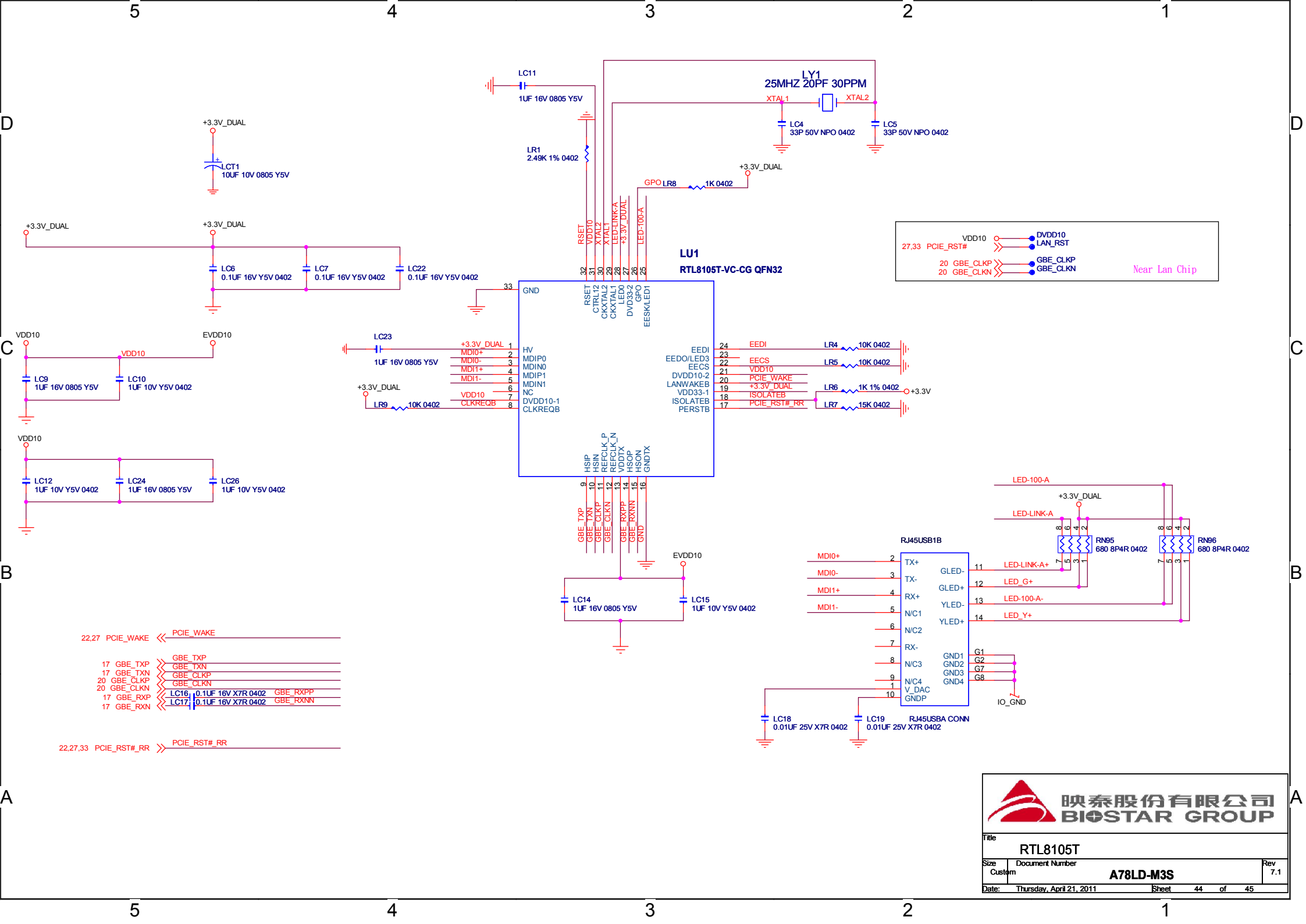
LC11
1UF 16V 0805 Y5V
LY1
25MHZ 20PF 30PPM
XTAL1
XTAL2
LC4
33P 50V NPO 0402
LC5
33P 50V NPO 0402
LR1
2.49K 1% 0402
+3.3V_DUAL
LCT1
10UF 10V 0805 Y5V
GPO
LR8
1K 0402
LU1
RTL8105T-VC-CG QFN32
RSET
VDD10
XTAL2
XTAL1
LED-LINK-A
+3.3V_DUAL
LED-100-A
GND
RSET
CTRL12
CKXTAL2
CKXTAL1
LED0
DVD33-2
GPO
EESK/LED1
HV
MDIP0
MDIN0
MDIP1
MDIN1
NC
DVDD10-1
CLKREQB
EEDI
EEDO/LED3
EECS
DVDD10-2
LANWAKEB
VDD33-1
ISOLATEB
PERSTB
HSIP
HSIN
REFCLK_P
REFCLK_N
VDDTX
HSOP
HSON
GNDTX
GBE_TXP
GBE_TXN
GBE_CLKP
GBE_CLKN
GBE_RXPP
GBE_RXNN
GND
LC6
0.1UF 16V Y5V 0402
LC7
0.1UF 16V Y5V 0402
LC22
0.1UF 16V Y5V 0402
LC23
1UF 16V 0805 Y5V
LR9
10K 0402
LR4
10K 0402
LR5
10K 0402
LR6
1K 1% 0402
LR7
15K 0402
+3.3V
LC9
1UF 16V 0805 Y5V
LC10
1UF 10V Y5V 0402
LC12
1UF 10V Y5V 0402
LC24
1UF 16V 0805 Y5V
LC26
1UF 10V Y5V 0402
LC14
1UF 16V 0805 Y5V
LC15
1UF 10V Y5V 0402
VDD10
EVDD10
VDD10
LAN_RST
GBE_CLKP
GBE_CLKN
Near Lan Chip
RJ45USB1B
TX+
TX-
RX+
N/C1
N/C2
RX-
N/C3
N/C4
V_DAC
GNDP
GLED-
GLED+
YLED-
YLED+
GND1
GND2
GND3
GND4
RN95
680 8P4R 0402
RN96
680 8P4R 0402
LED-LINK-A+
LED_G+
LED-100-A-
LED_Y+
IO_GND
LC18
0.01UF 25V X7R 0402
LC19
0.01UF 25V X7R 0402
RJ45USBA CONN
PCIE_WAKE
GBE_TXP
GBE_TXN
GBE_CLKP
GBE_CLKN
LC16
0.1UF 16V X7R 0402
LC17
0.1UF 16V X7R 0402
GBE_RXPP
GBE_RXNN
PCIE_RST#_RR
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(BAT1)

電池

3V BATTERY SONY

JUSBV1(1_2)
JUMPER 2P R /NI

JUSBV2(1_2)
JUMPER 2P R /NI

JCMOS1(1_2)
JUMPER 2P B

(Y2)
X'TAL WIRE

(U5)

FLASH ROM

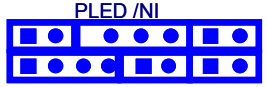
SPI MX25L8005 DIP

New JPANEL1
JPANEL1 2*8

PANEL1(9_10)
HEADER 1X2 /NI

PANEL1(15_16)
HEADER 1X2 /NI

PANEL1(11_14)
PLED /NI



PANEL1(1_4)
SPK /NI

PANEL1(7_8)
RST /NI

PANEL1(5_6)
HLED /NI

LB1

LB1

A780L M2G+-LB1 /NI

PCB

PCB

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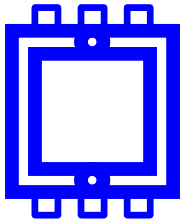
(CPU1)



AM2RM-B

(PCB)

泡棉

POLON 235X182

(U1)

北橋散熱片

NBHS-A74GC

(U4)

南橋散熱片

SB SMALL-AMD

映泰股份有限公司
BIOSTAR GROUP

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