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CRU51-M2

VER:1.3

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BIOSTAR GROUP

Title: COVER SHEET

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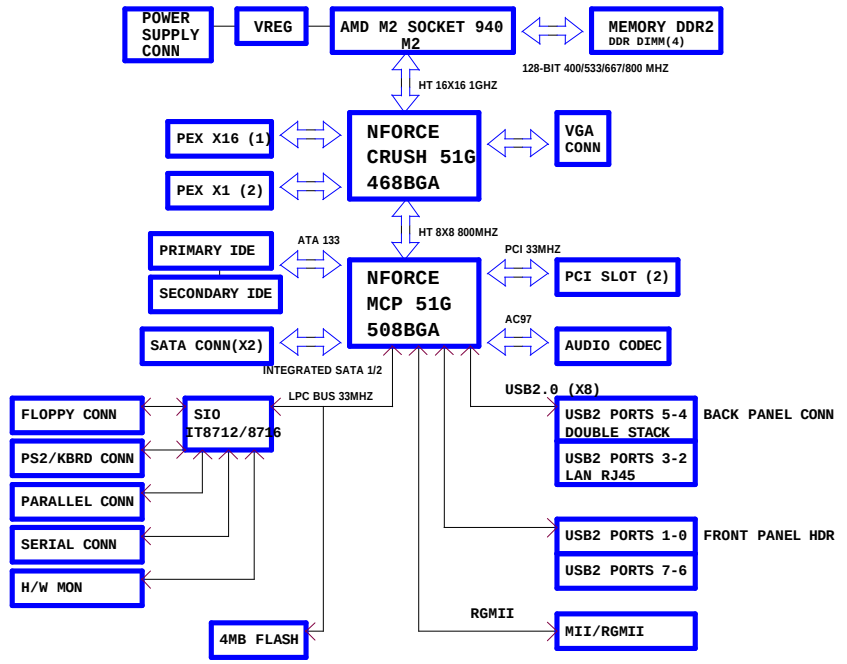

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Title: SYSTEM BLOCK

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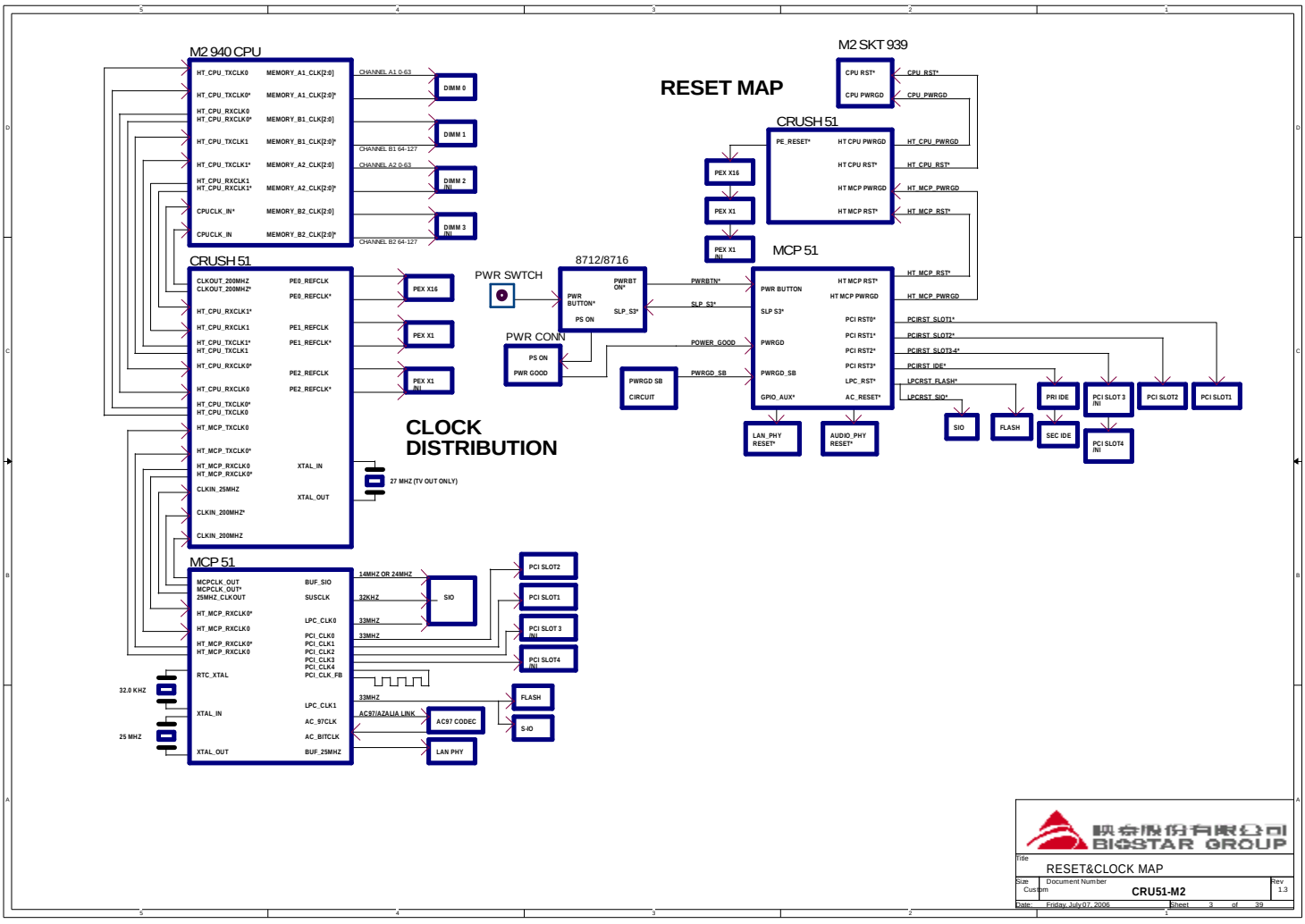


CPU VID TABLE

VID [4..0]	VDD	VID [4..0]	VDD
0X00000	1.550V	0X10000	1.150V
0X00001	1.525V	0X10001	1.125V
0X00010	1.500V	0X10010	1.100V
0X00011	1.475V	0X10011	1.075V
0X00100	1.450V	0X10100	1.050V
0X00101	1.425V	0X10101	1.025V
0X00110	1.400V	0X10110	1.000V
0X00111	1.375V	0X10111	0.975V
0X01000	1.350V	0X11000	0.950V
0X01001	1.325V	0X11001	0.925V
0X01010	1.300V	0X11010	0.900V
0X01011	1.275V	0X11011	0.875V
0X01100	1.250V	0X11100	0.850V
0X01101	1.225V	0X11101	0.825V
0X01110	1.200V	0X11110	0.800V
0X01111	1.175V	0X11111	OFF

PCI INTERRUPT/IDSEL MAP

BACK PANEL SLOT	PCI BUS#	DEVICE#	IDSEL PIN	PCI SLOT INTA*	PCI SLOT INTB*	PCI SLOT INTC*	PCI SLOT INTD*	REQ/GNT
1	01	0X05	22	P_INTY*	P_INTZ*	P_INTW*	P_INTX*	1/1
2	01	0X06	24	P_INTW*	P_INTX*	P_INTY*	P_INTZ*	2/2
3	01	0X07						
4	01	0X08						
5	01	0X09						
6	01	0X0A						

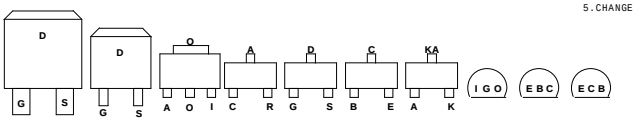
SMBUS ADDRESS MAP

DEVICE	SMBUS #	ADDRESS
SLOT		
DIMM 0	0	1010 000 = 0X50
DIMM 1	0	1010 001 = 0X51
DIMM 2	0	1010 010 = 0X52
DIMM 3	0	1010 011 = 0X53
SIO	1	0101 101 = 0X2D
PCI SLOT 1	1	ARP
PCI SLOT 2	1	ARP
PCI SLOT 3	1	ARP
PCI SLOT 4	1	ARP
DDC BUS	A	?
DDC BUS	B	?

PCI DEVICE MAP

DEVICE	PCI BUS#	FUNCTION	IDSEL PIN	DEVICE ID
MCP51	MCP51 LOGICAL PCI BUS 0	0X01-0X0F	--	--
MAC /MAC	0	XA	0	0X56/57
PCI-PCI BRIDGE	0	X9	0	0X005C
SATA1	0	X8	0	0X0055
SATA0	0	X8	0	0X0054
IDE	0	X6	0	0X0053
MODEM CODEC	0	X4	1	0X0058
AUDIO CODEC	0	X4	0	0X0059
USB 2.0	0	X2	1	0X005B
USB 1.1	0	X2	0	0X005A
SHAPE TRIM	0	X1	2	0X005F
LDT	0	X0	0	0X005E
SMBUS2	0	X1	1	0X0052
LEGACY SLAVE	0	?	?	0X00D3
LPC	0	X1	0	0X005D/51
LOGICAL PCI BUS	1	?	?	?
PCI SLOT 1				
PCI SLOT 2				
PCI SLOT 3				
PCI SLOT 4				
PCI SLOT 5				

22U/25DE	5*7 mm
100U/16DE	6.3*11 mm
220U/10DE	6.3*11 mm
470U/16DE	8*11 mm
1000U/10DE	8*14 mm
1500U/16DE	10*25 mm
3300U/25DE	10*25 mm



TO-263	TO-252	SOT-223	SOT-23	SOT-23	SOT-23	SOT-23	TO-92	TO-92	TO-92
PHB55N03 90N02	20N03 TM3055TL-S PHD55N03	AMS1117	LM431	2N7002 SIZ303S SI2301S	2N3904 2N3906 MMBT2907A 2N2222A	BAT54C BAT54S	LM431 78L05-D LM432	2N2222A 2N2097A	HSD882-D

CRU51-M9

1. CPU --- AMD Socket 939(3-Phase Power)
2. CHIPSET --- NF C51G IGP + NF MCP51
3. MEMORY ---Dual Channel DDR SDRAM X 2 (Max. 2GB)
4. SLOTS --- PEX X16 (x1),PEX X1 (x1),PCI (x2)
5. CODEC --- Realtek ALC655 5.1 Channel Audio
6. LAN PHY --- RTL8201
7. LPC/SIO --- IT8712F
8. SATA -- INTEGRATED(x2)
9. PCB Size --- 24.4cmx24.4cm, 4-Layer

CHANGE LIST

1.Q37 2N7002 CHANGE 2N3904 FOR POWER_SB TIMING
2.ADD C398 10U/10V FOR POWER_SB TIMING
3.PHY RST FOR S3 WAKE CAN WORK R134,C187 /NI, R136 0
4.DEL VID[0..5] TO MCP51.IT8712
5.ADD C45 1U/10V , R16 10K--> 100K FOR +2.6V
6.ADD U5,R83,R82(22) R84,R81(0)/NI FOR ON BOARD VGA PLUG INTO THE MONITOR CAN'T BOOT UP
7.ADD HEATSINK FOR S/B
8.R262.R264 20K --> 56K FOR KBRST,A20GATE BECOMING 3.3V
9.DEL R217,R222 SLEEPBTNJ CHANGE FROM S/B EXSMI PIN. R206 MOVE NEAR S/B
10.ADD OV-->R222,R281,R282,R283 /NI,R217
11.ADD LED-->D14,D15,D16,D17,R64,R66,R67,R74,R108,R149, SW-->PWRSW1,RSTSW2,R62,R63
12.DEL CT31,PWRGD,C3,C4,C6,C7,C13,CT5,CT19,C209,C210,C230,C211,C212,C213,C227,C228,C229,C17(BOM)
13.AR19 0 /NI FOR AUDIO CLK TO 24Mhz
14.ADD FOR EMI BC92,AR23,AL8,FB24
15.FOR EMI C9,C10,C12,C14-->47P
C8,C193,C196,AC32,C331-->104P
C395,C394,C393,C392,C391,C390,C389,C388,C383C387,C382,C386,C381,C385,C378,C384,C380-->100P
C116,C119,C123-->33P
AR22-->0
C343-->103P
C342-->102P
C336-->10P H1,H2-->COMMOM CHOKE
16.DEL BOM FOR EMI FB6 /NI

5.CHANGE HEATSINK FOR N/B TO SHORT

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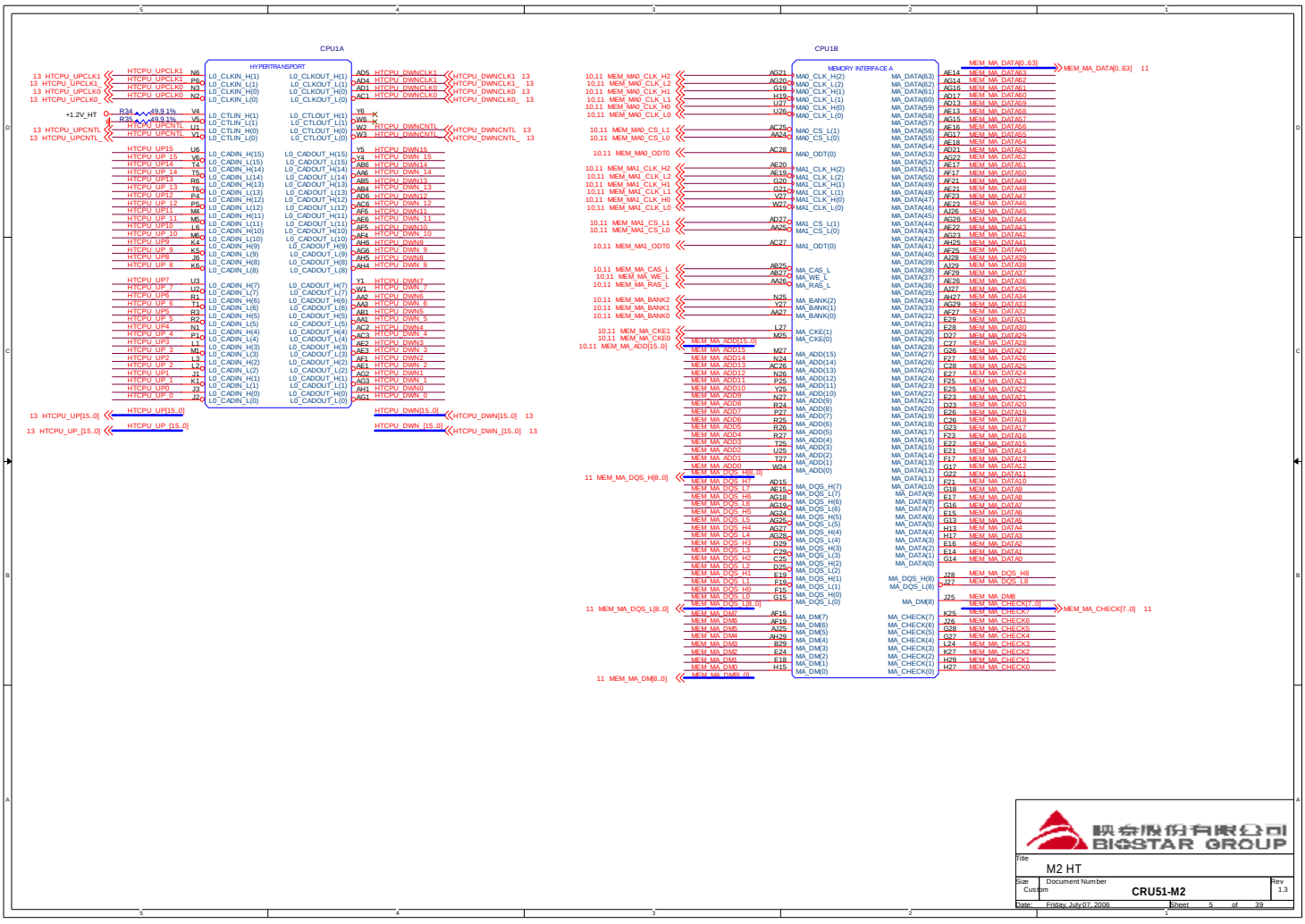
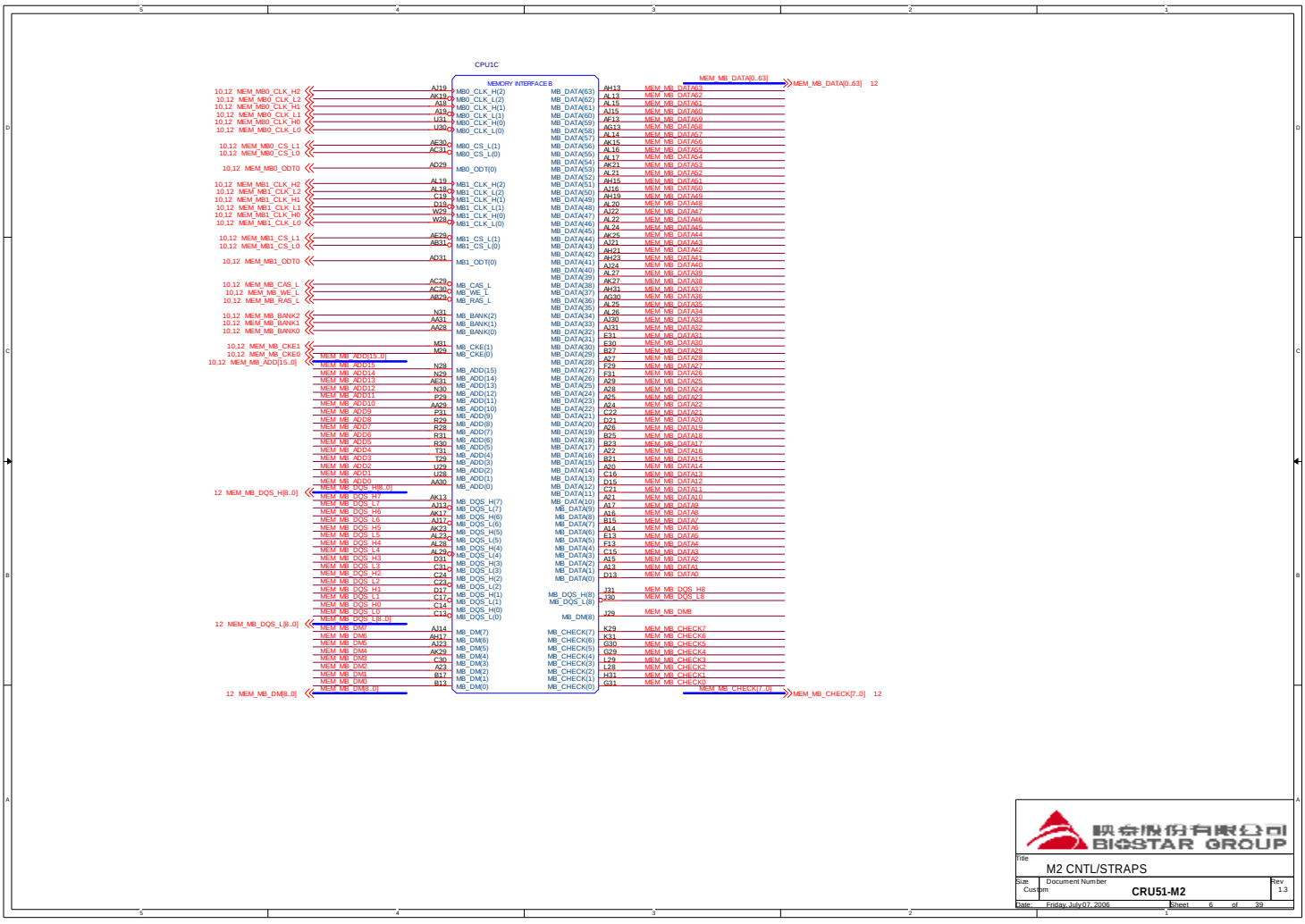
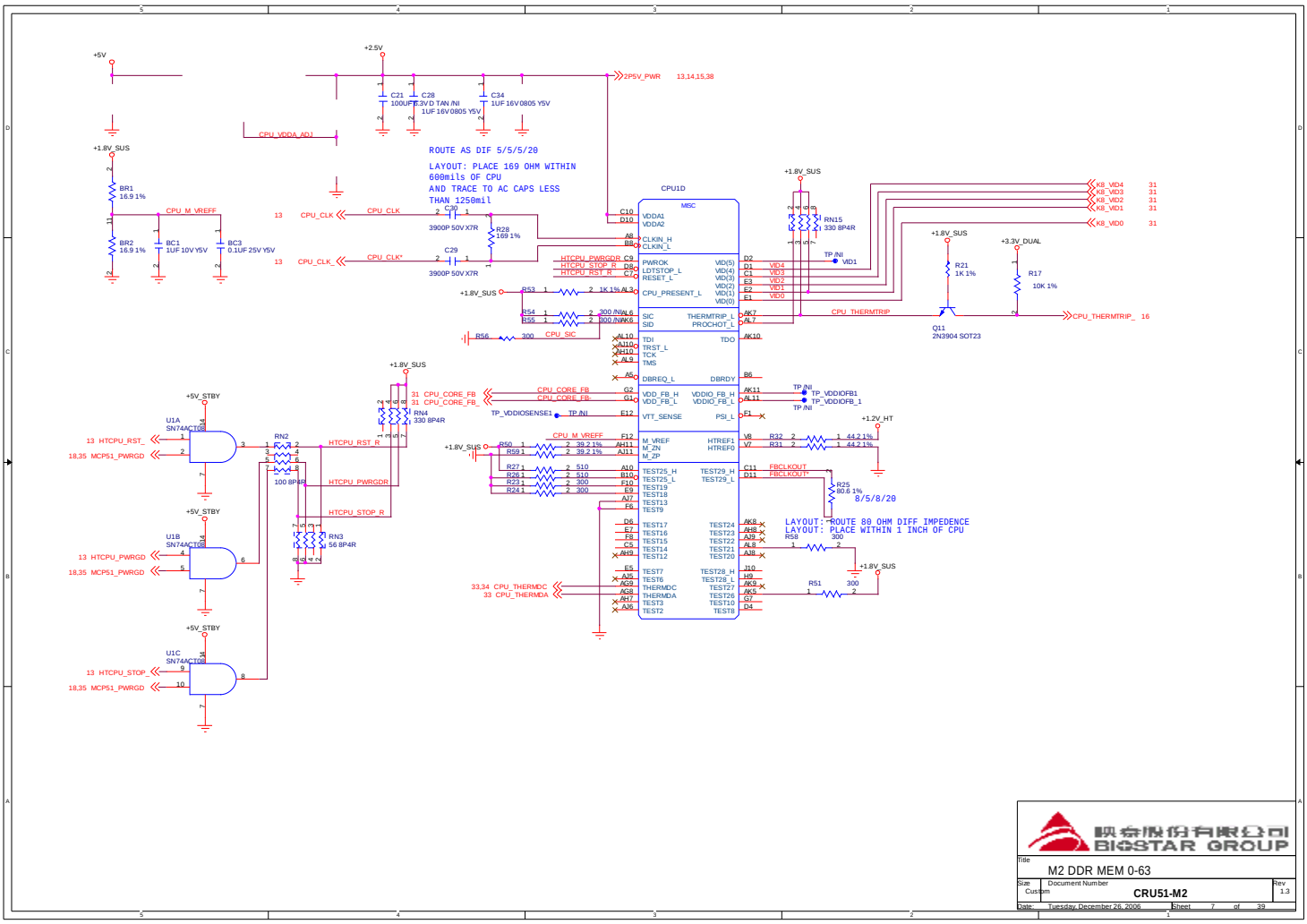
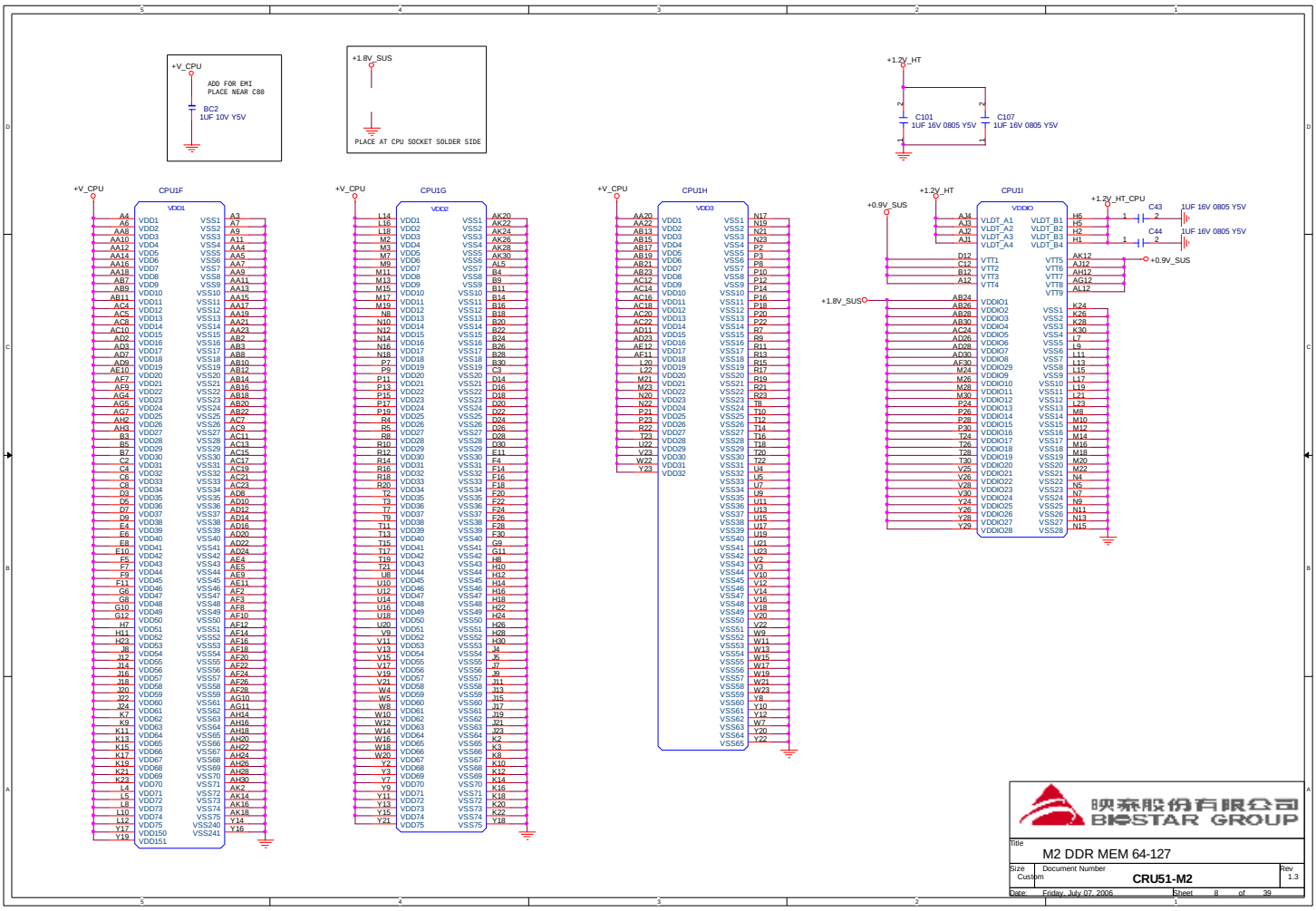
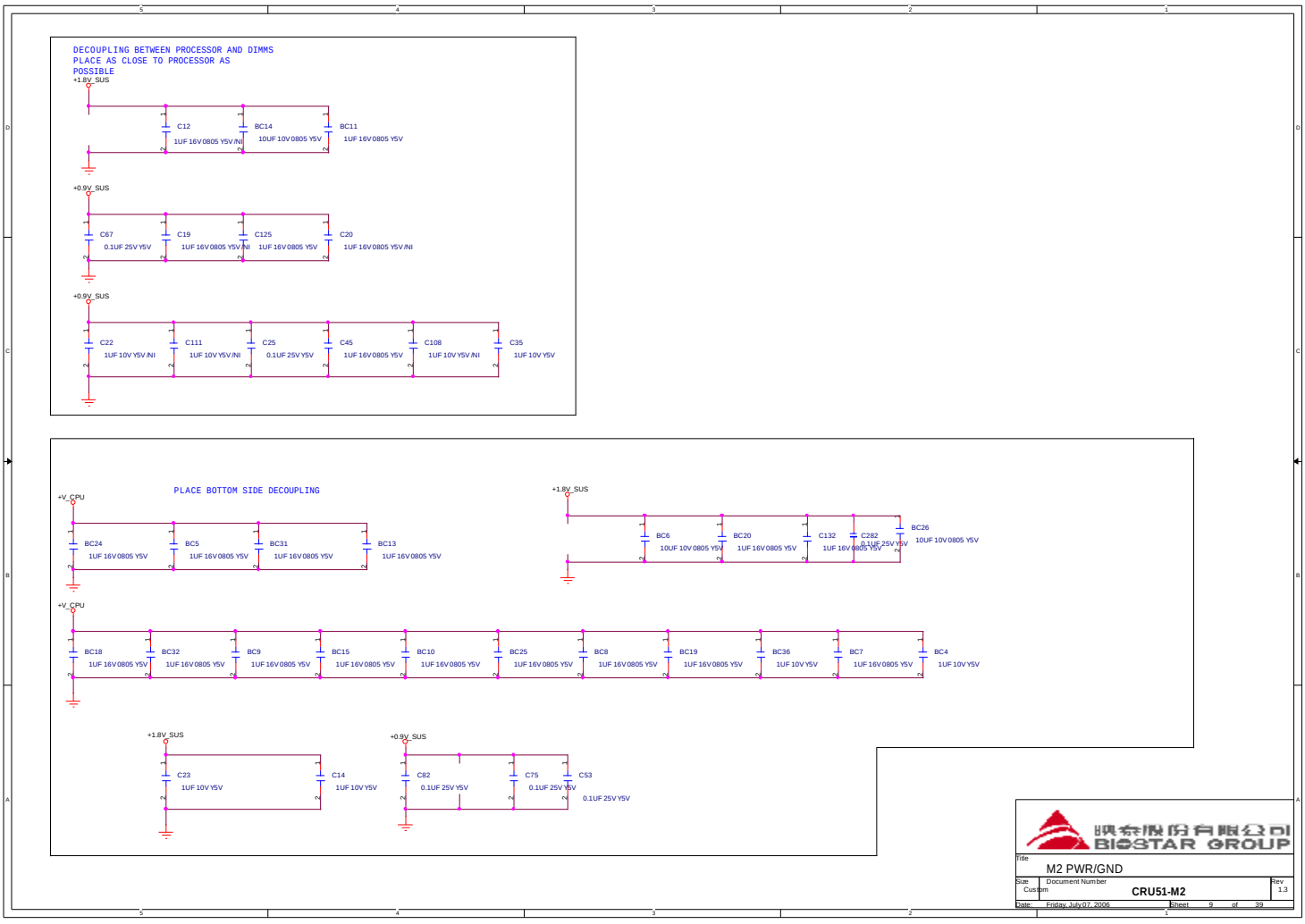
Title	SPEC&CHANGE LIST	
Size: Custom	Document Number: CRU51-M2	Rev: 1.3
Date: Friday, July 07, 2006	Sheet 4 of 39	

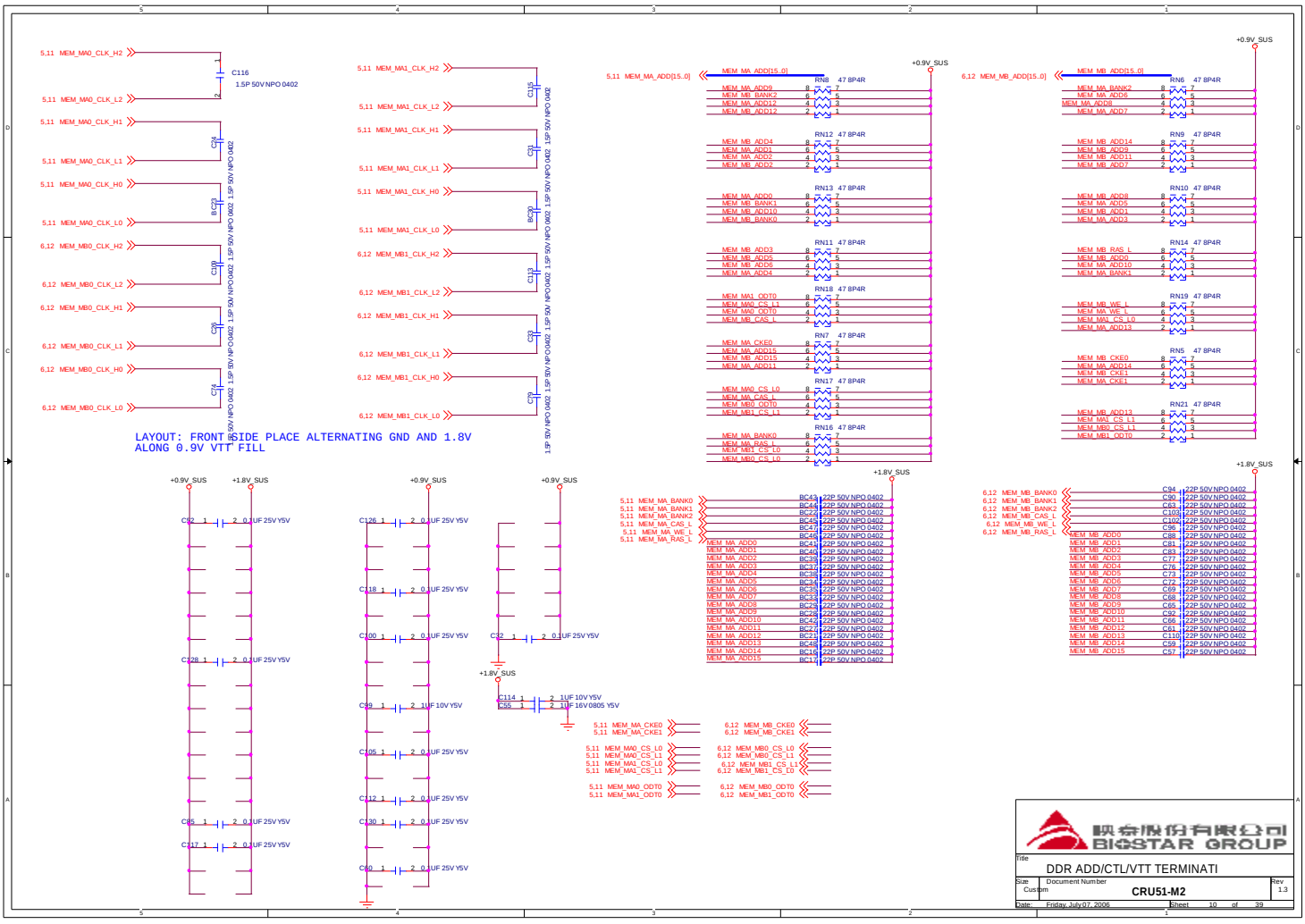


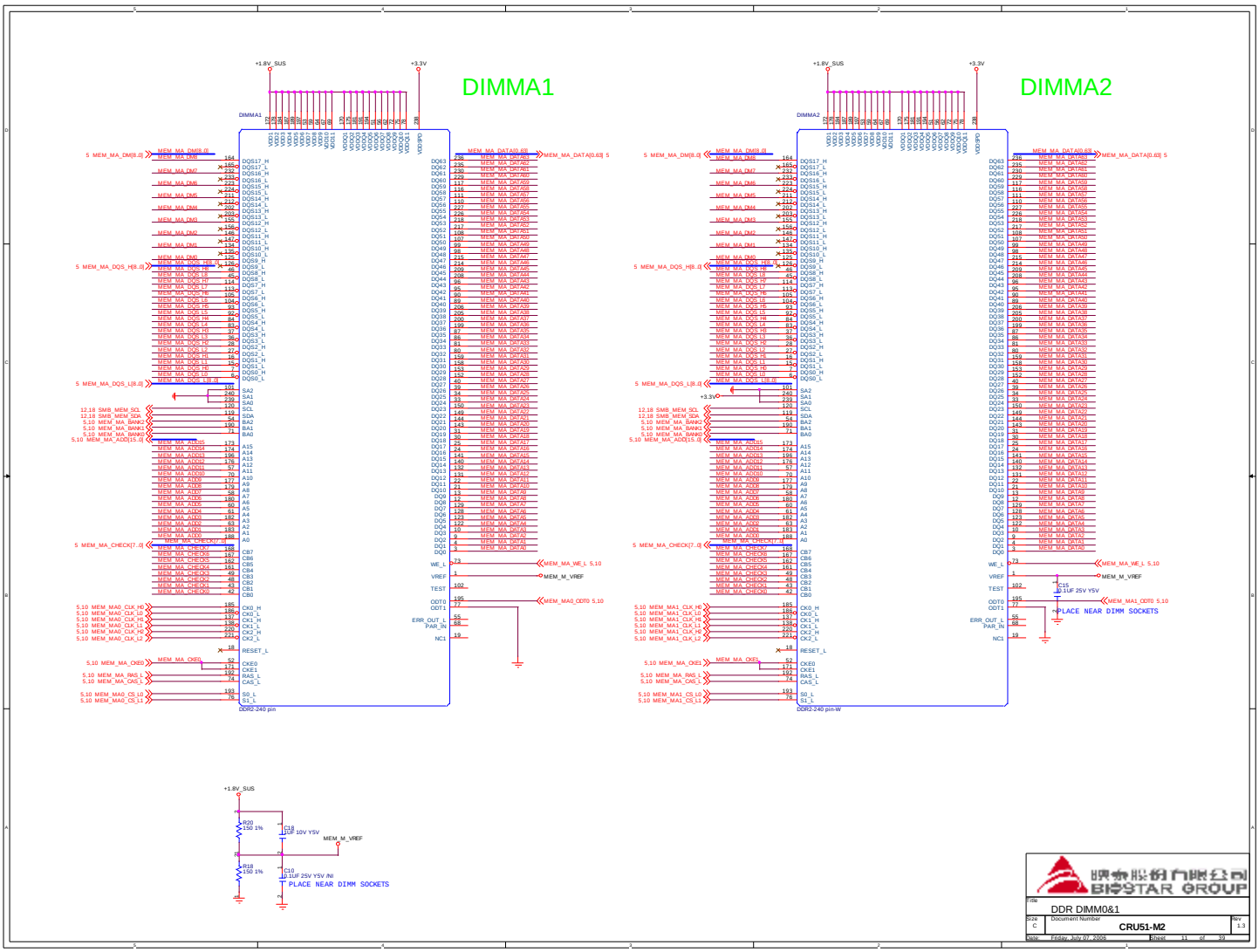


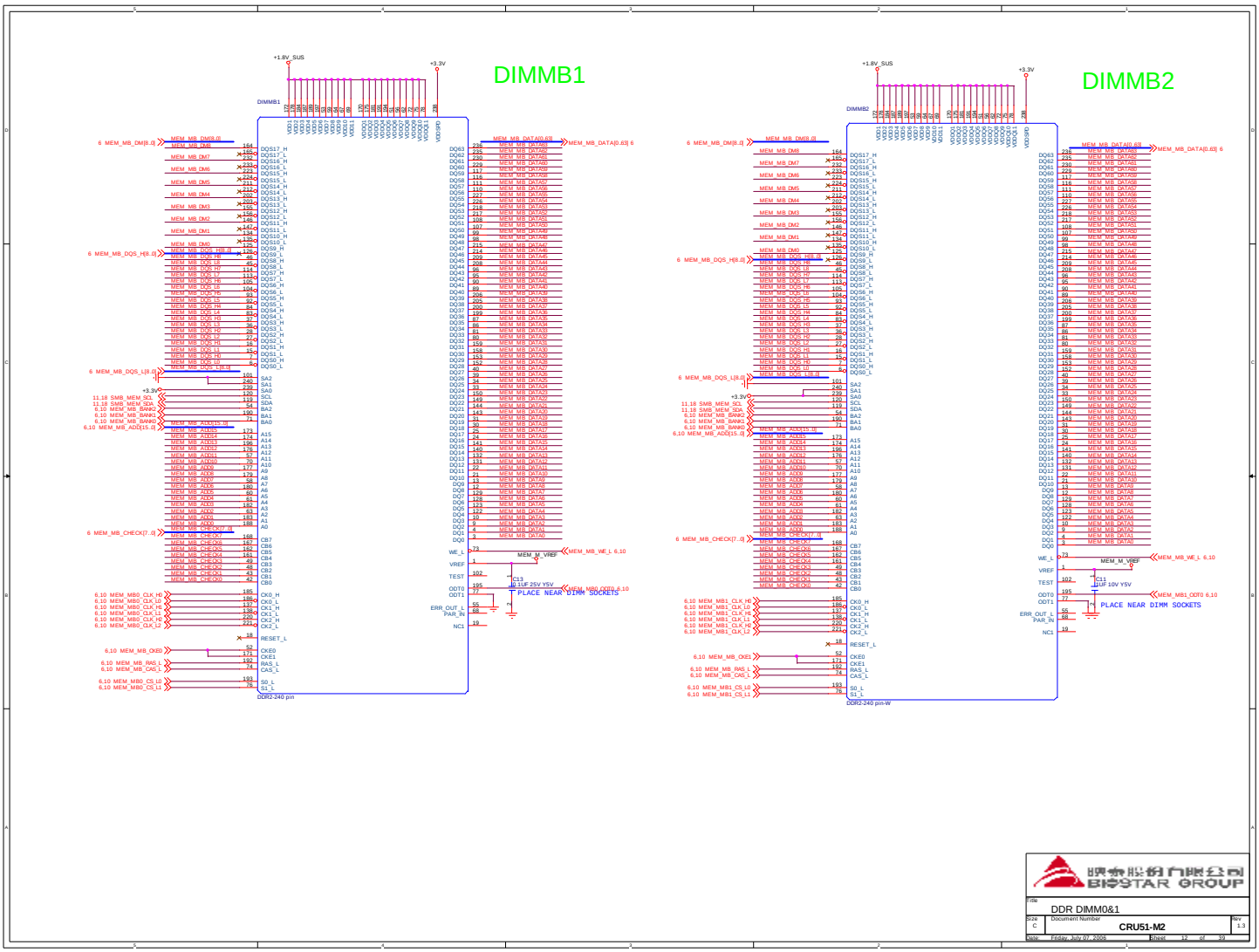


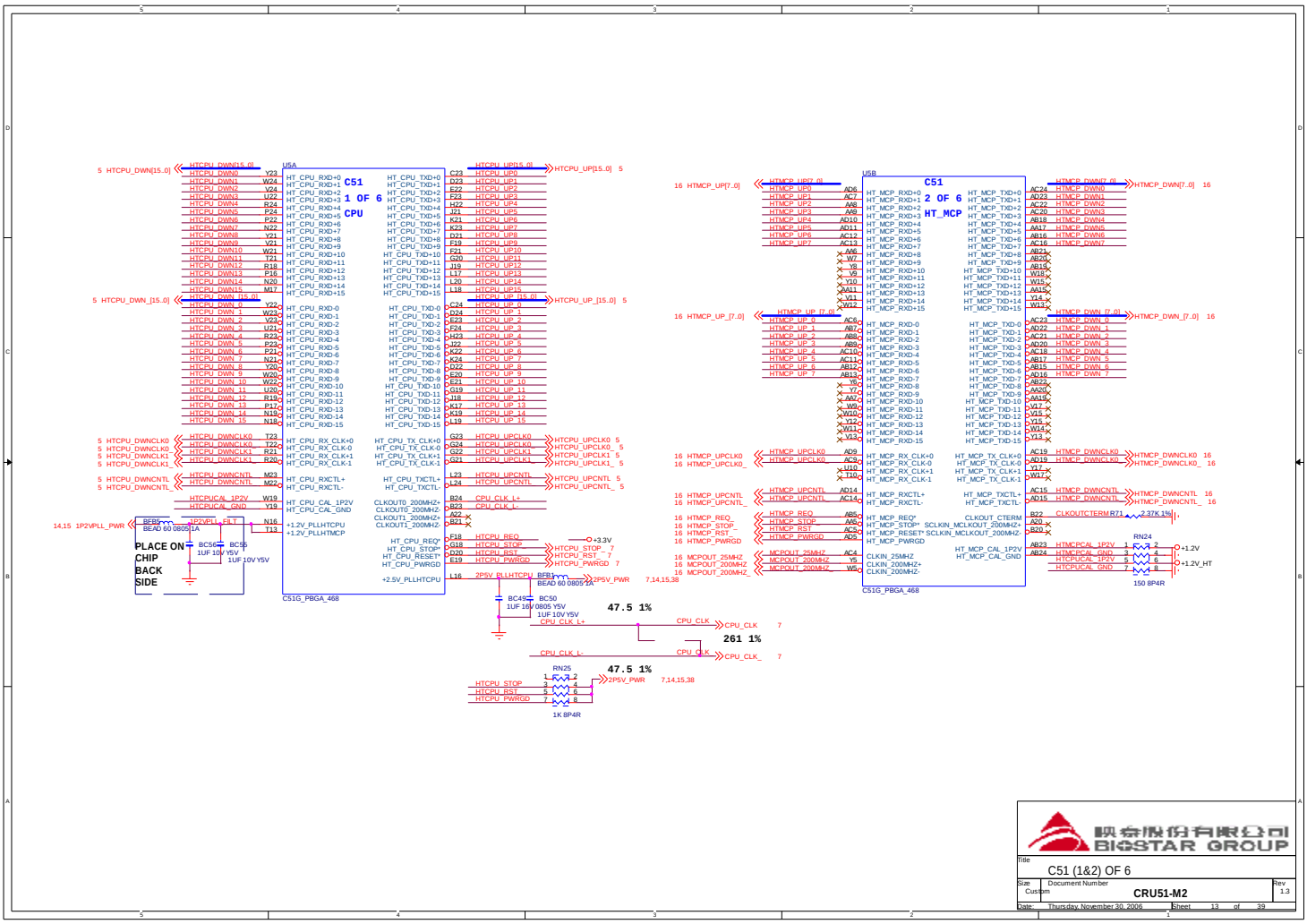


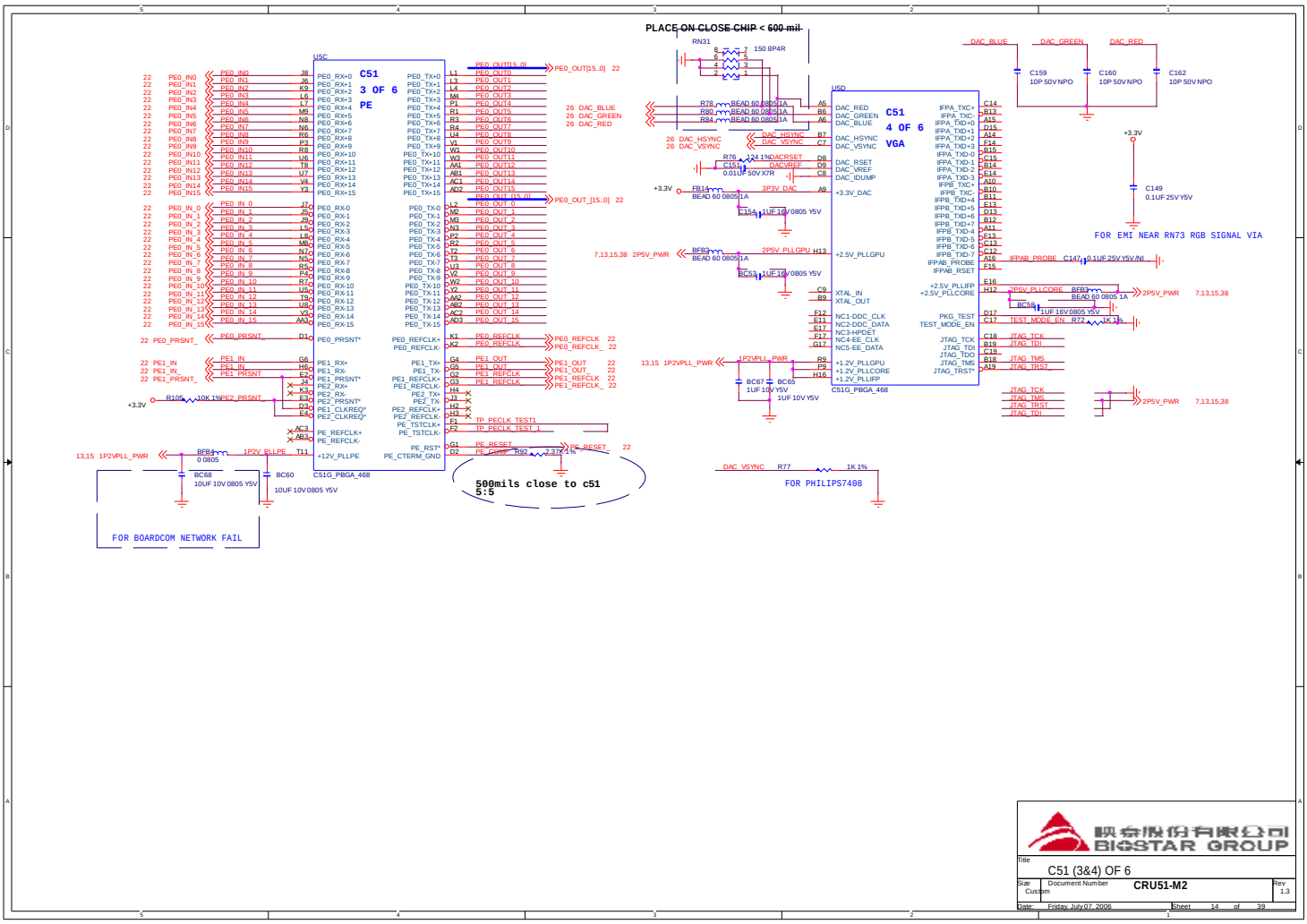


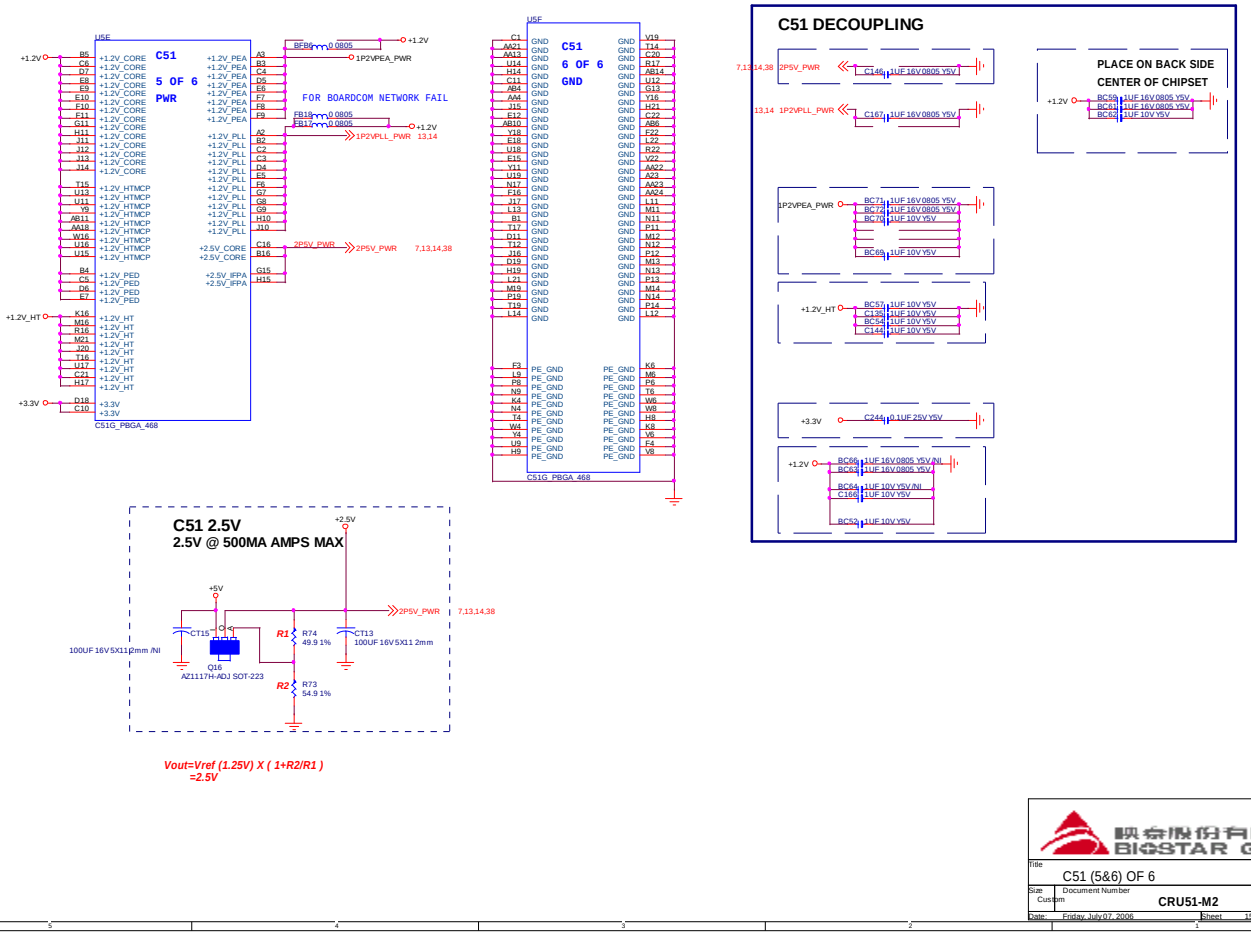












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Title	C51 (5&6) OF 6	
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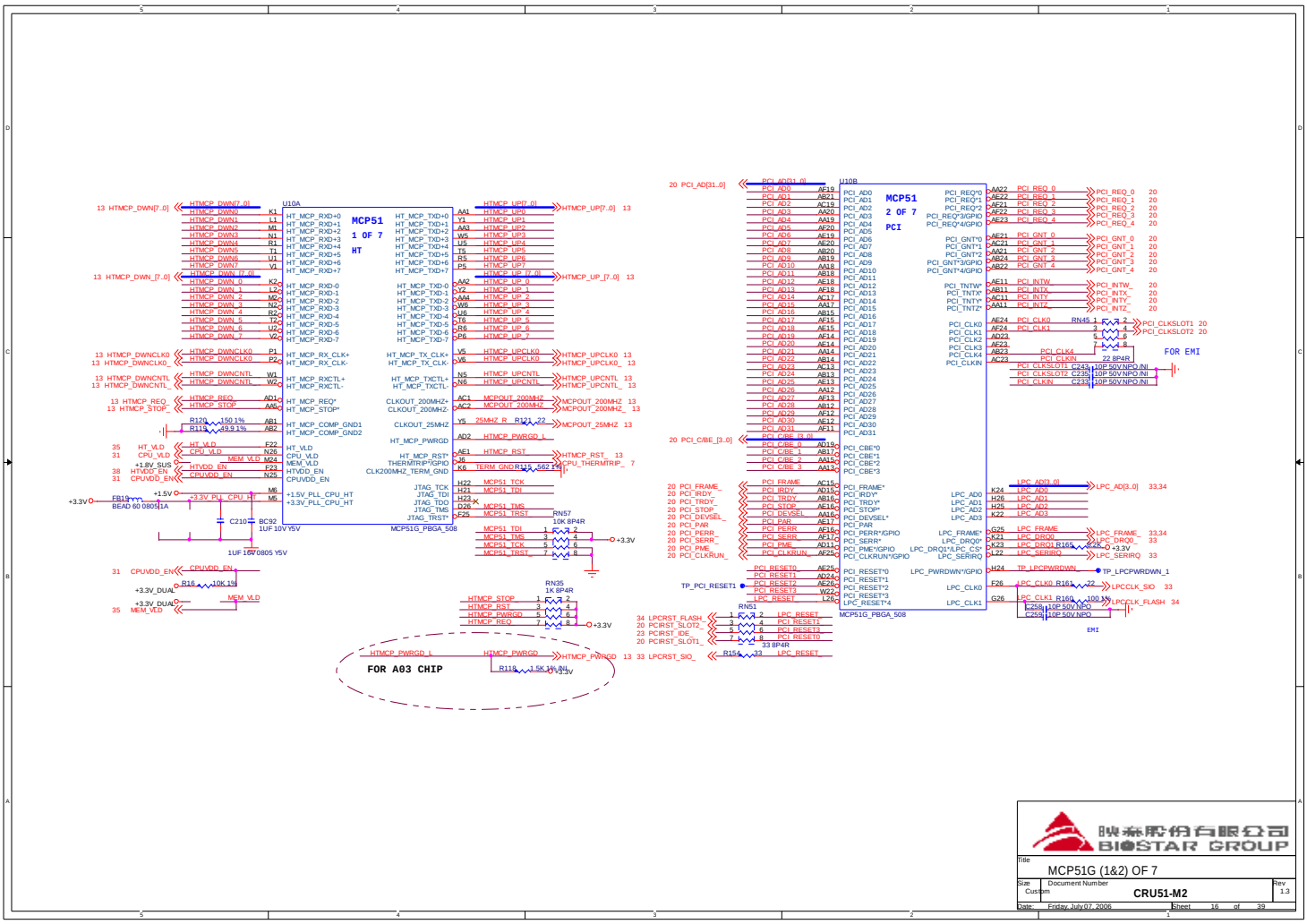
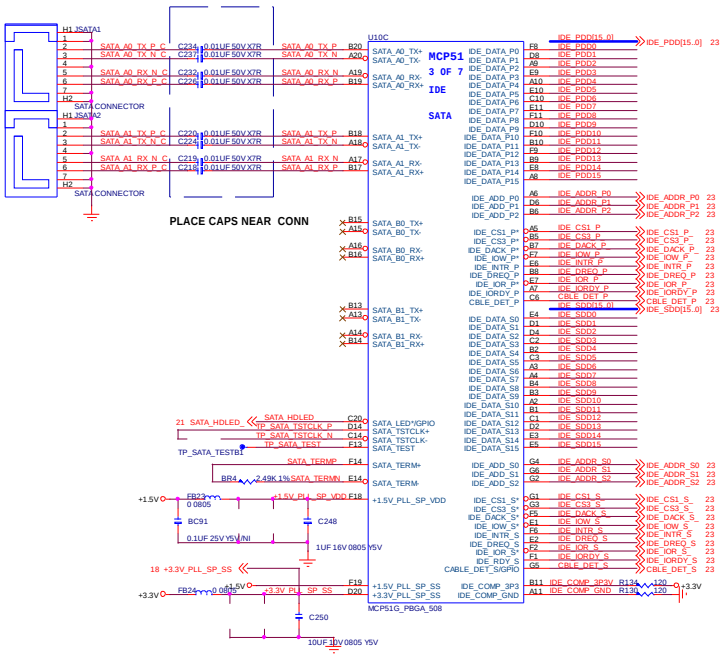
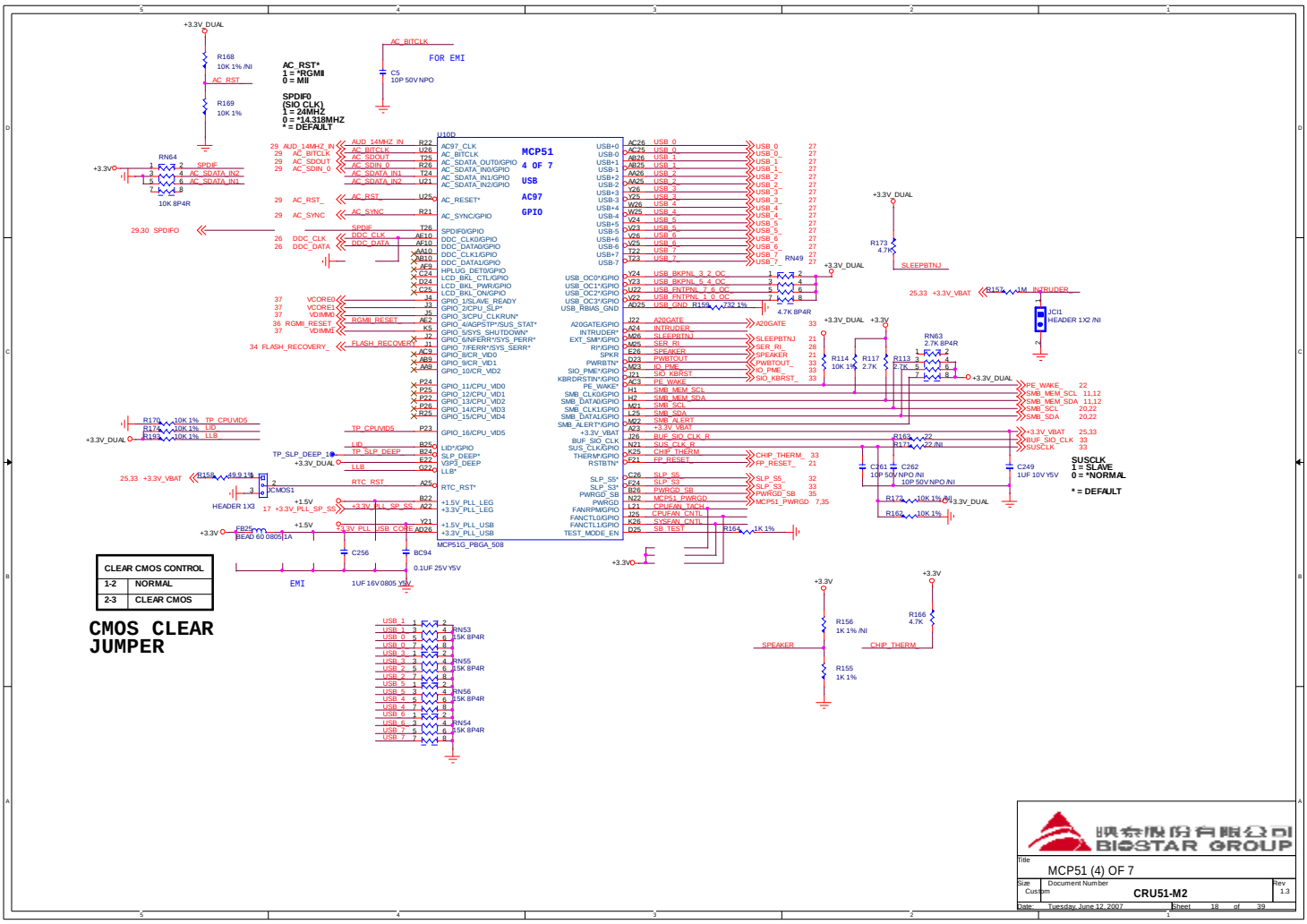
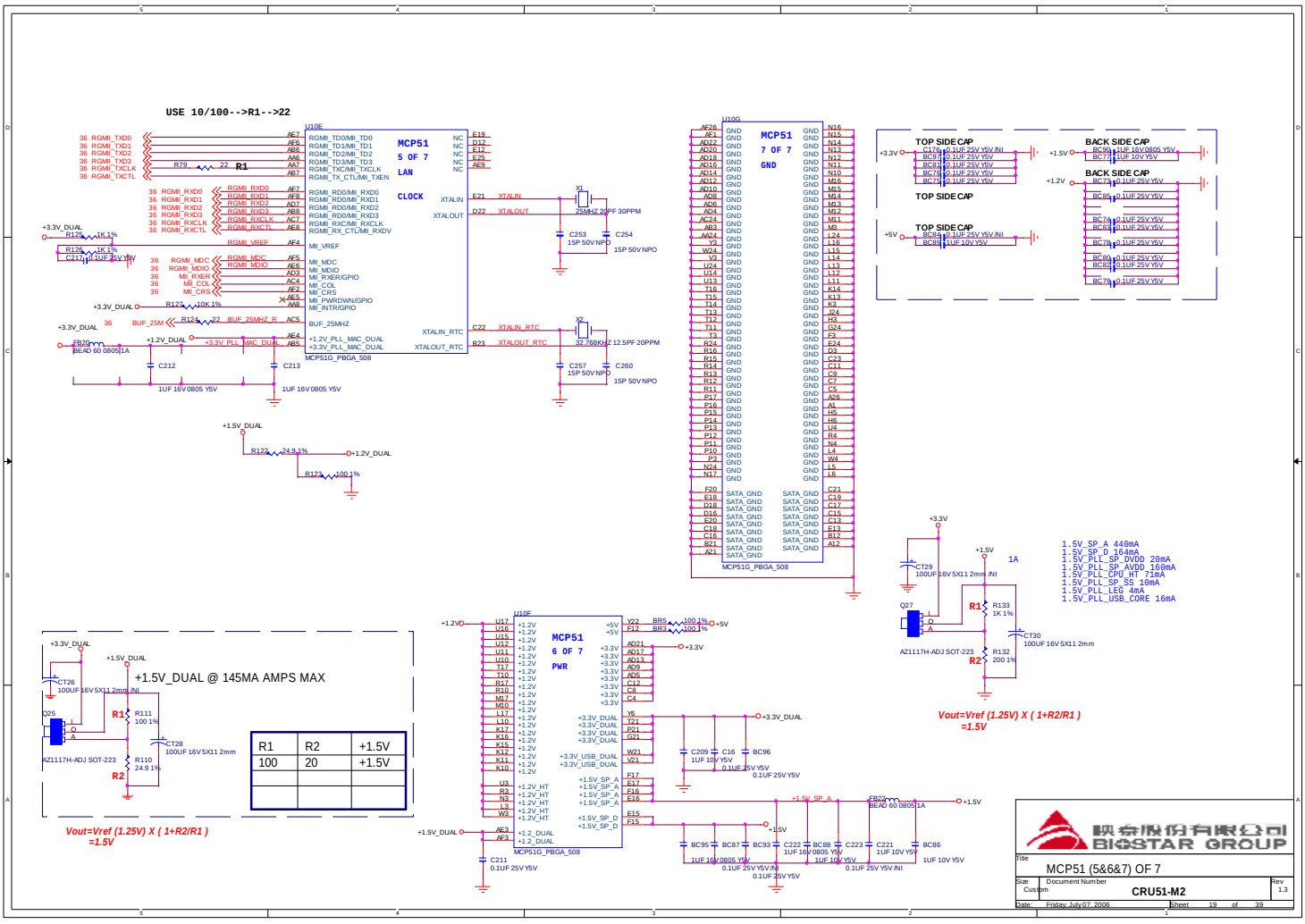
Date: Friday, July 07, 2006	Sheet 15 of 39	

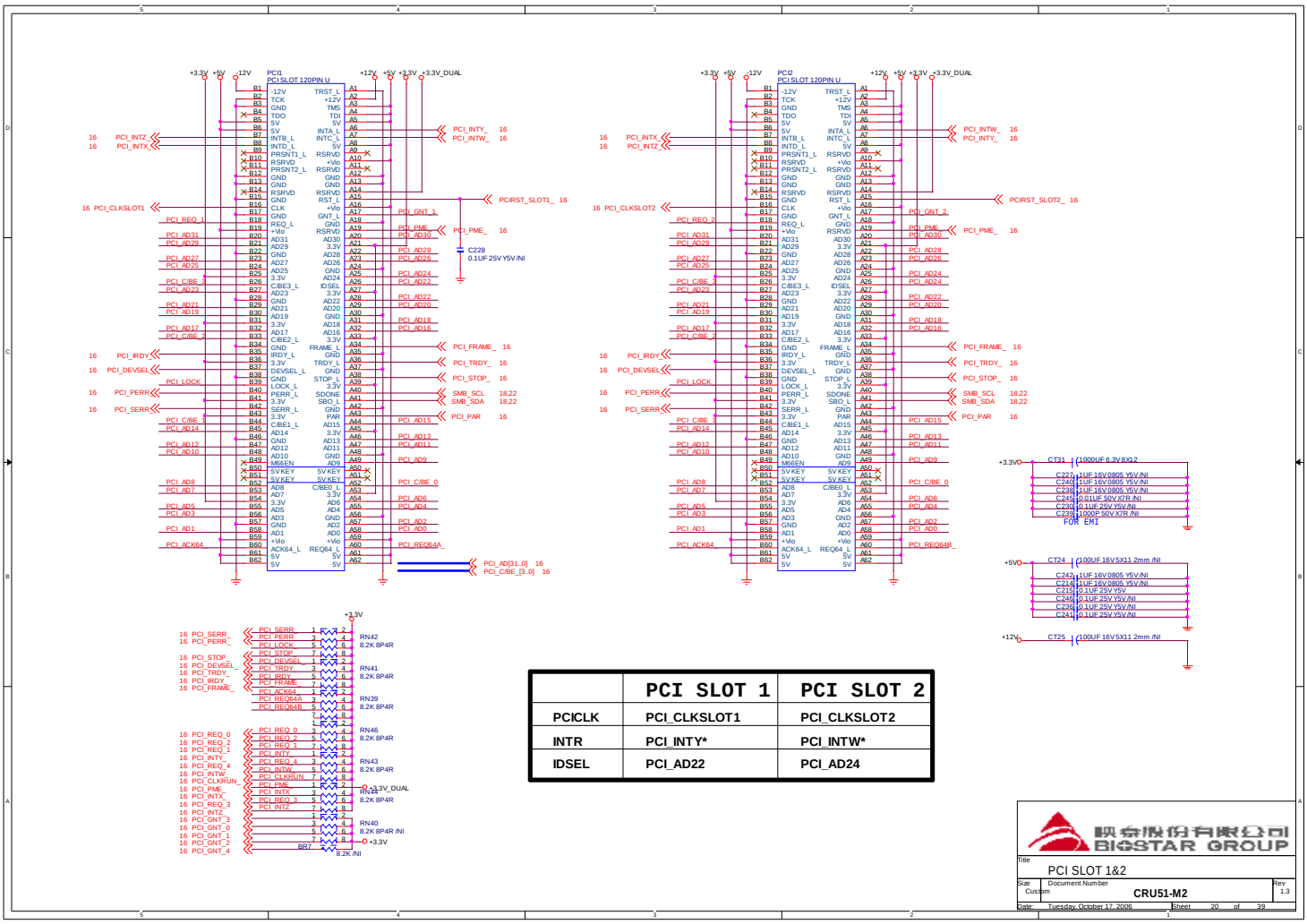




Title	MCP51 (3) OF 7	
Size: Custom	Document Number: CRU51-M2	Rev: 1.3
Date: Tuesday, October 17, 2006	Sheet 17 of 39	







	PCI SLOT 1	PCI SLOT 2
PCICLK	PCI_CLKSLOT1	PCI_CLKSLOT2
INTR	PCI_INTY*	PCI_INTW*
IDSEL	PCI_AD22	PCI_AD24

Title	PCI SLOT 1&2	
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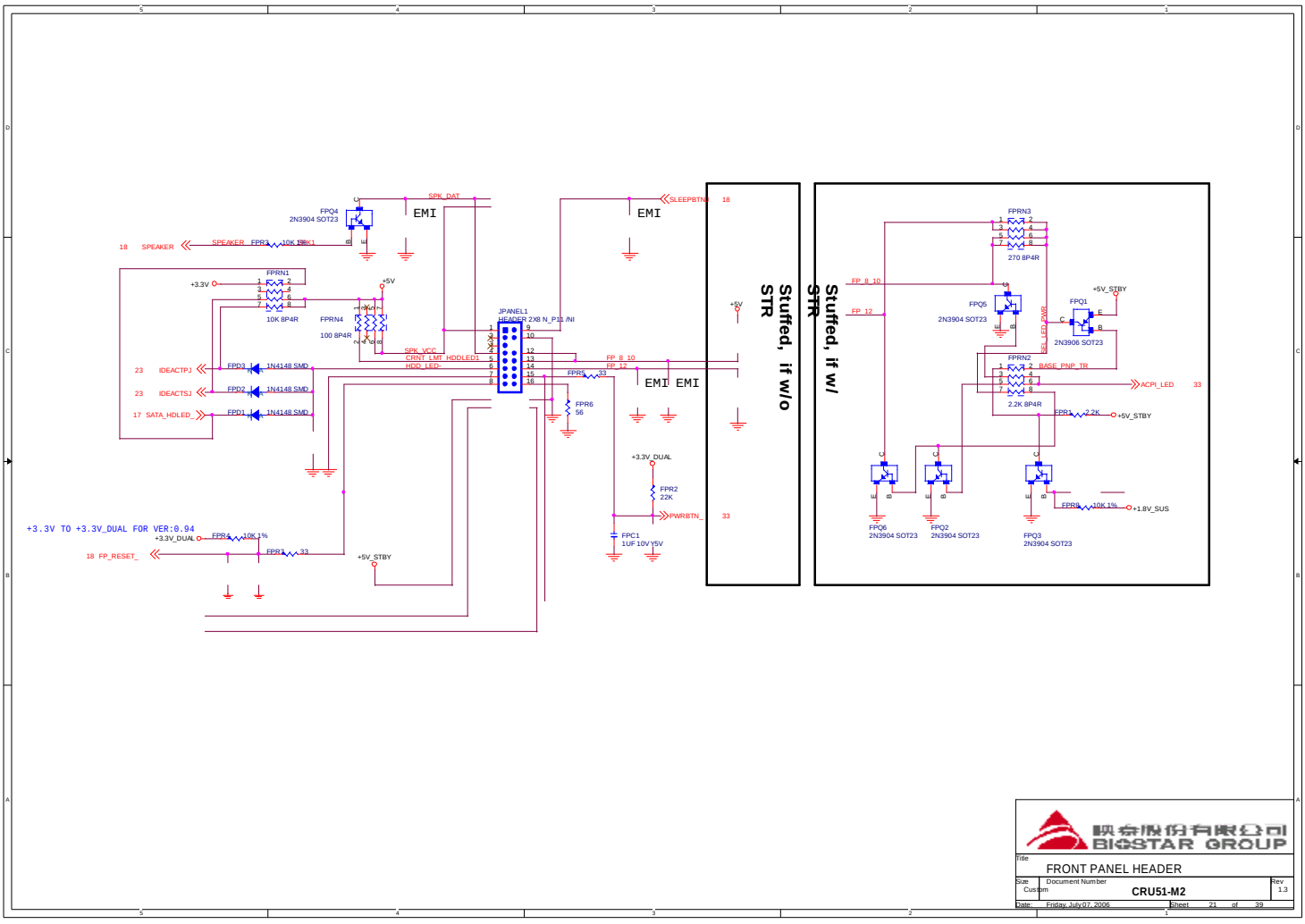

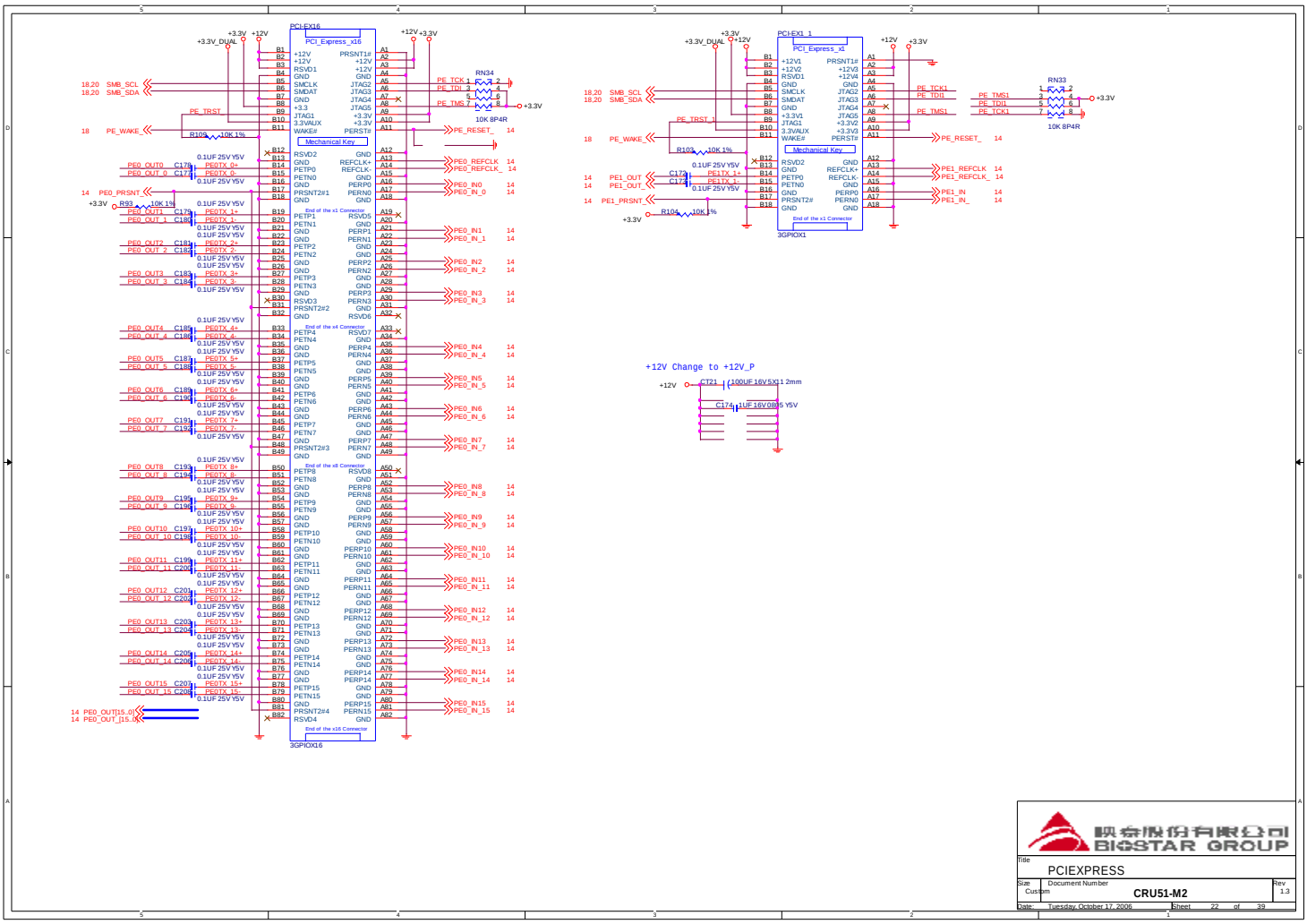

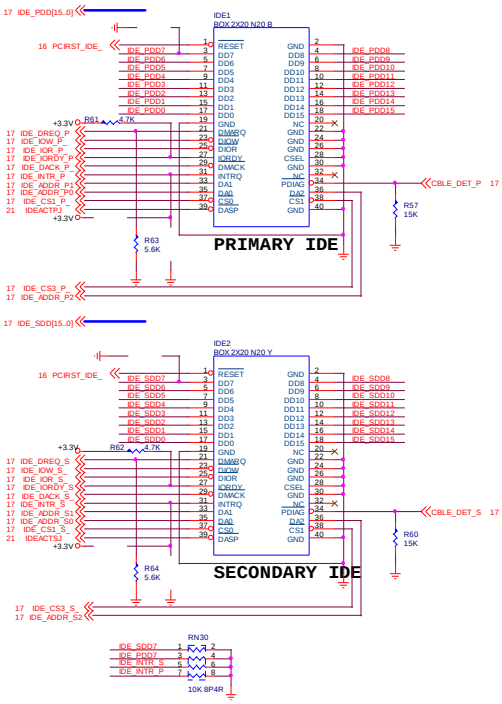

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Title: IDE CONNECTORS

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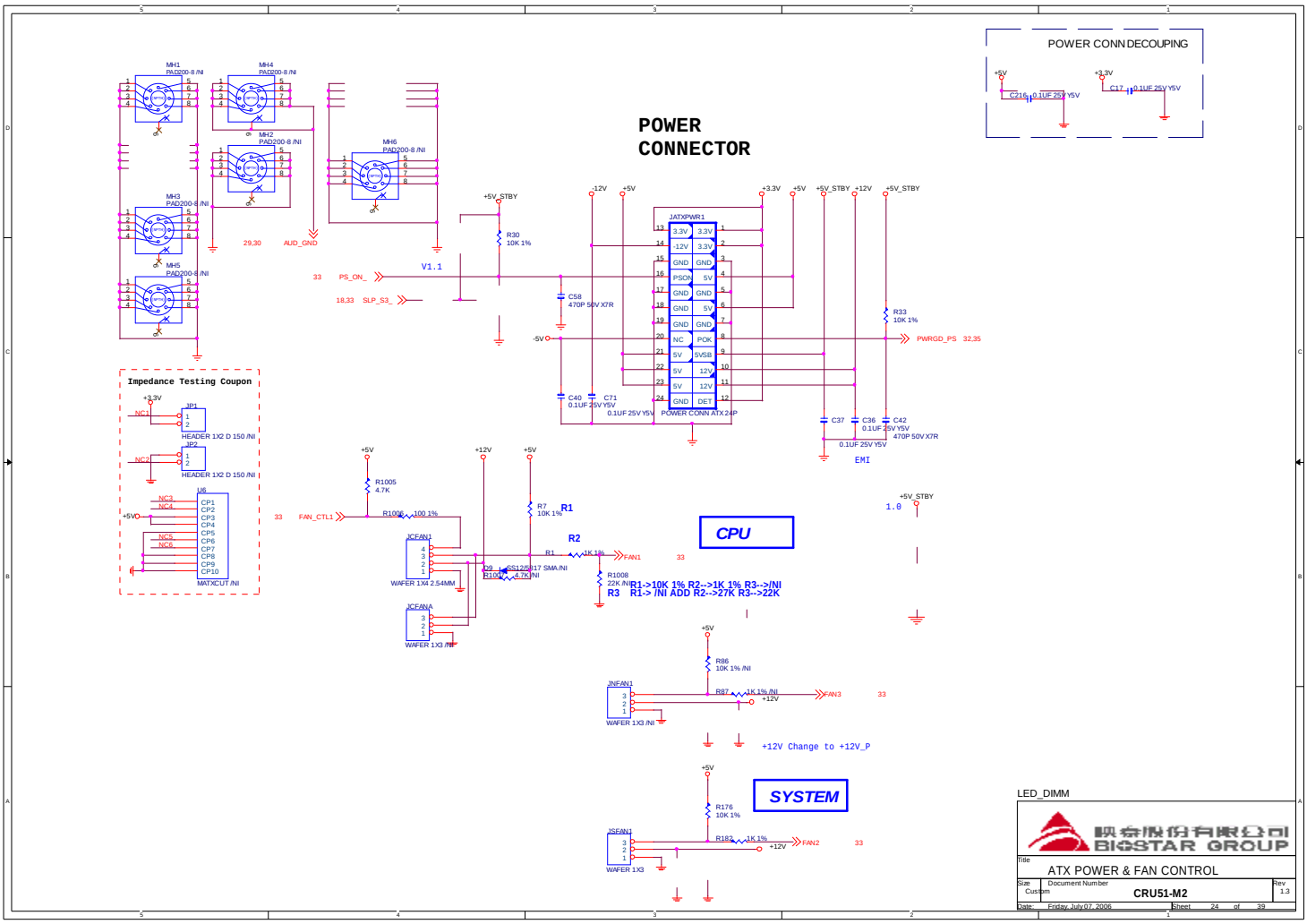

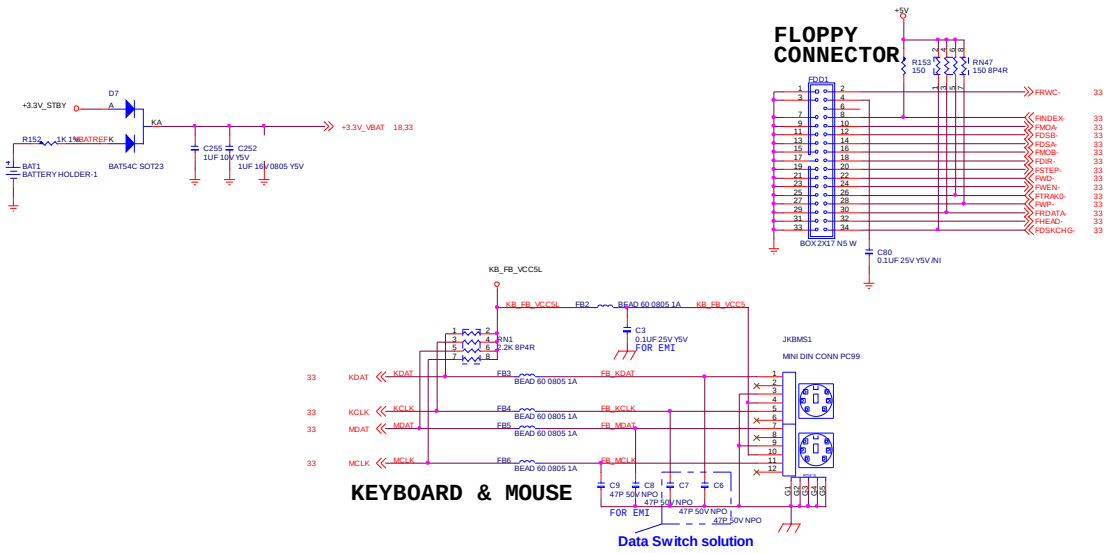

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Title: FLOOY ,KEYBOARD & MOUSE ,CMOS CLEAR

Size: Custom | Document Number: CRU51-M2 | Rev: 1.3

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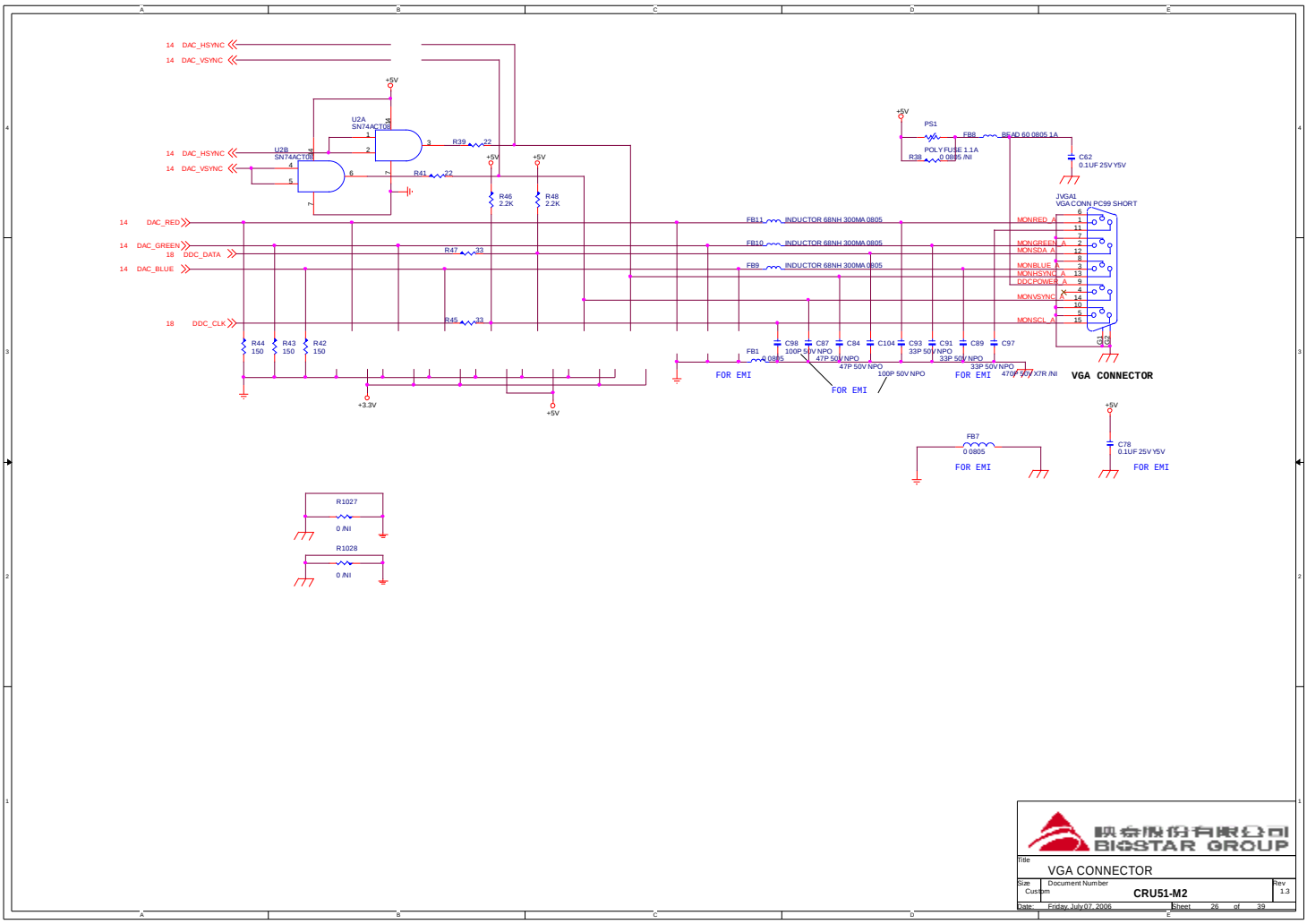

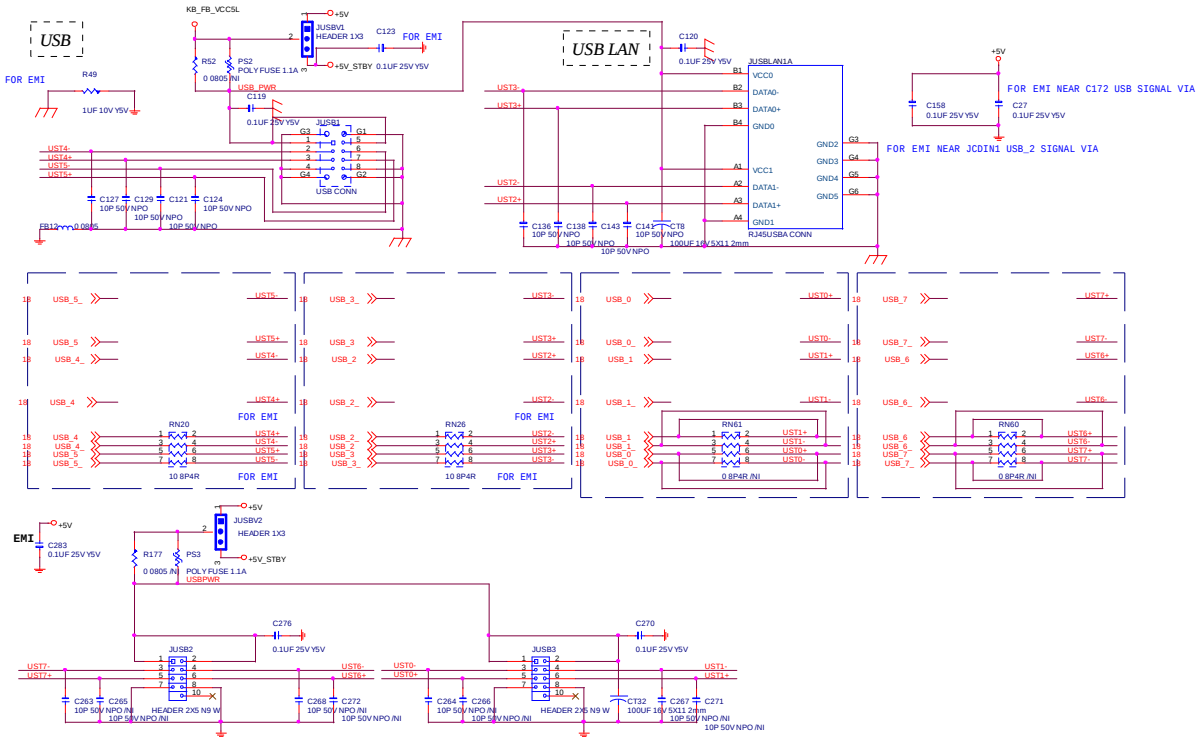

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Title: USB INTERFACE

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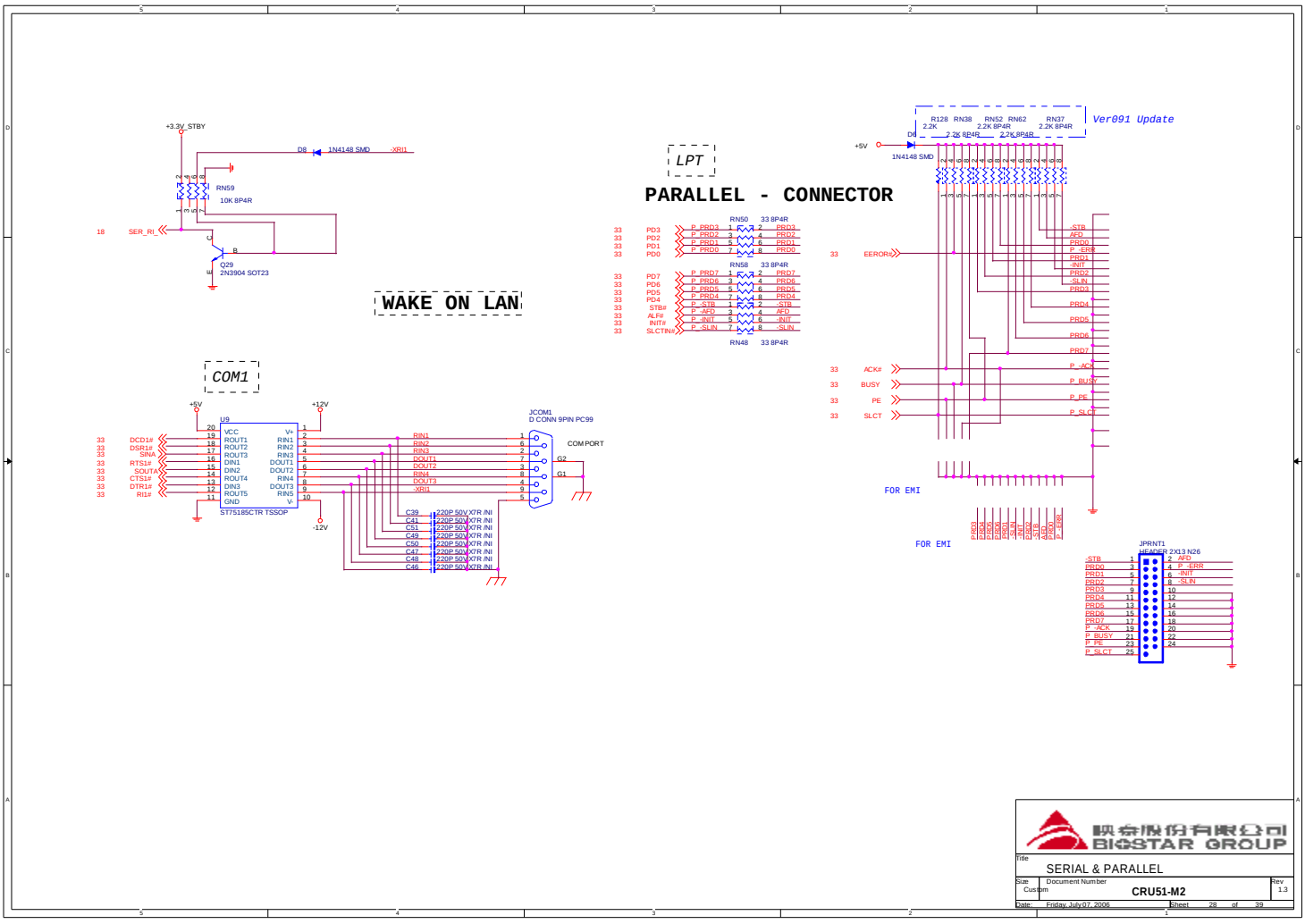

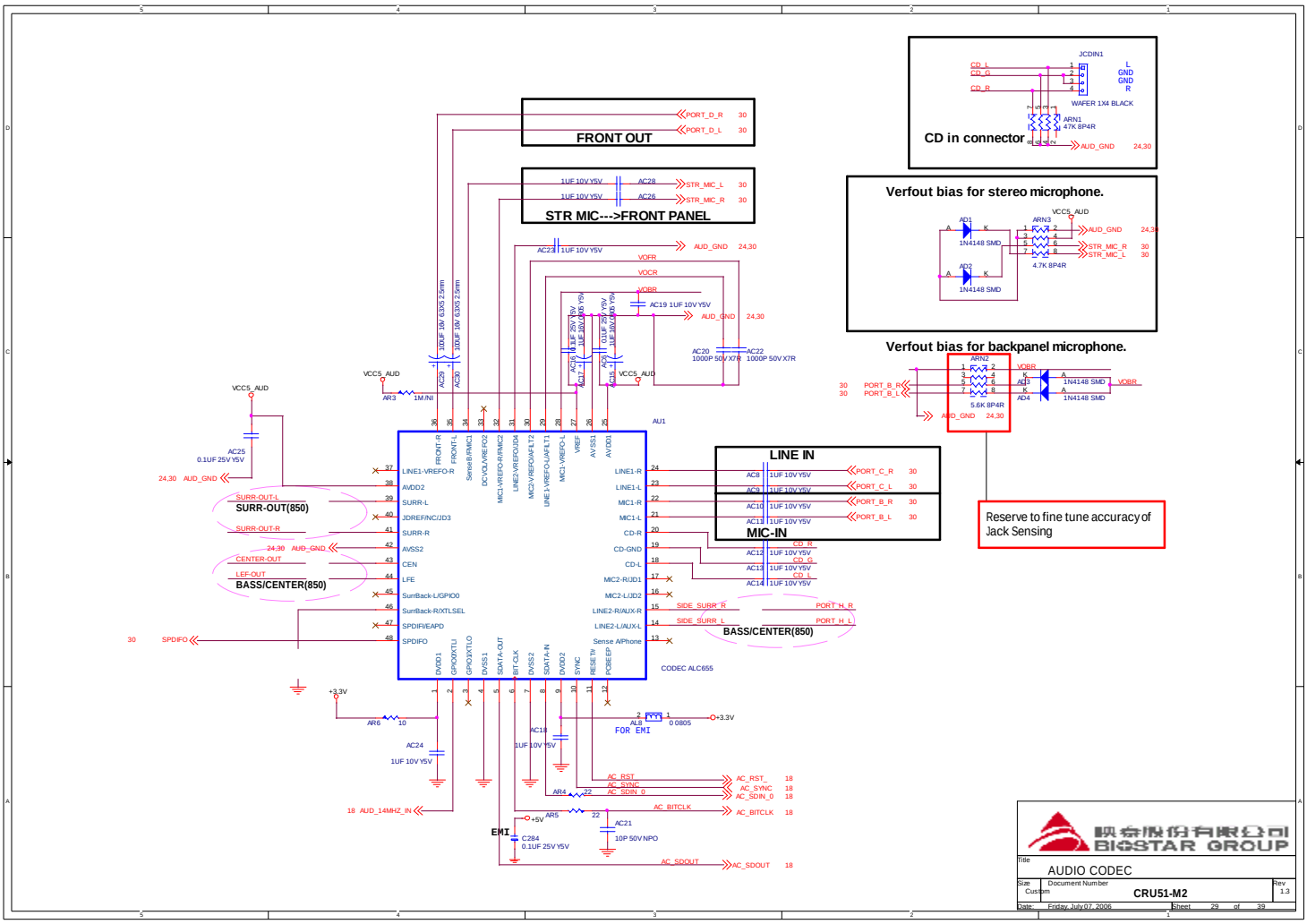

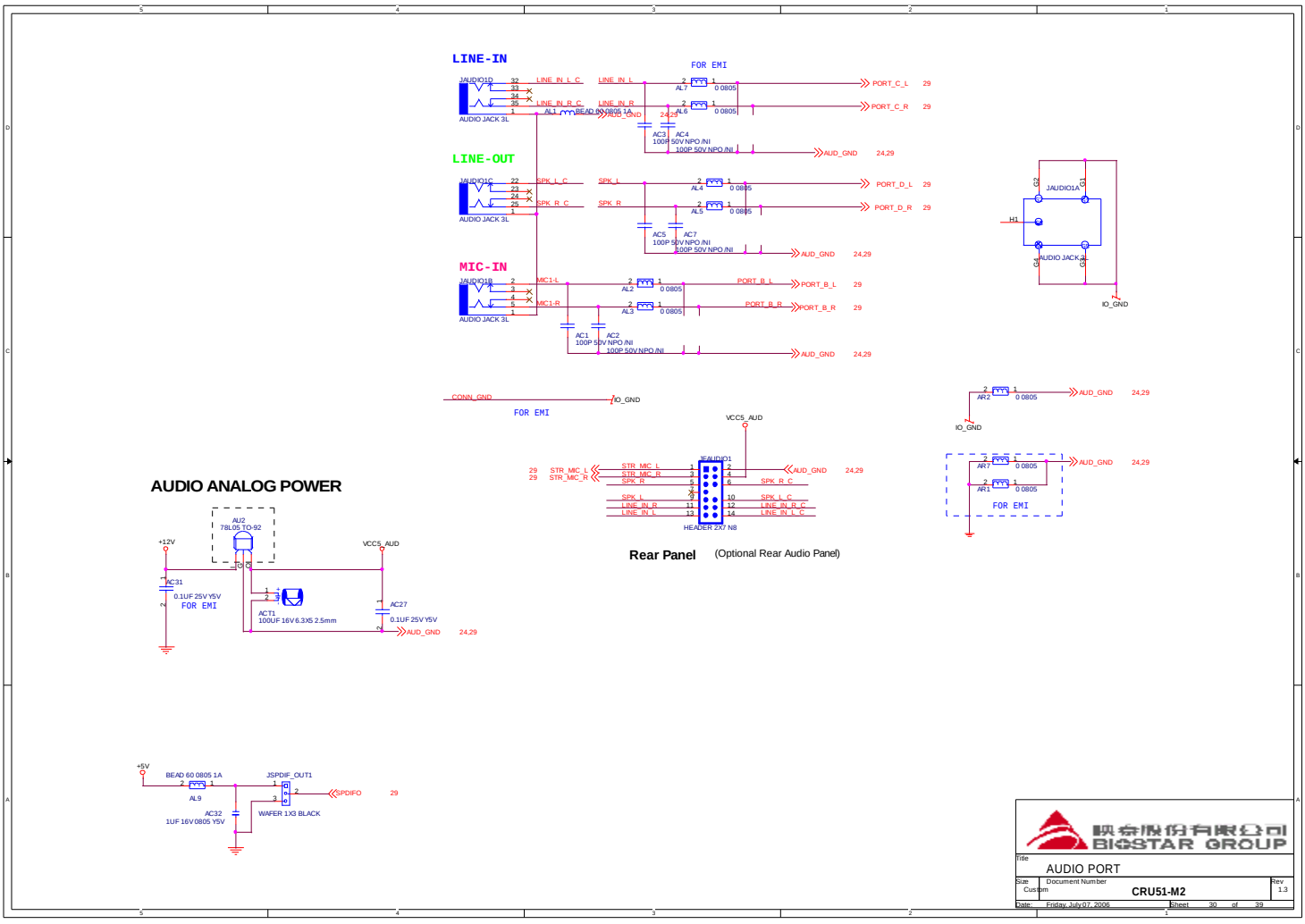

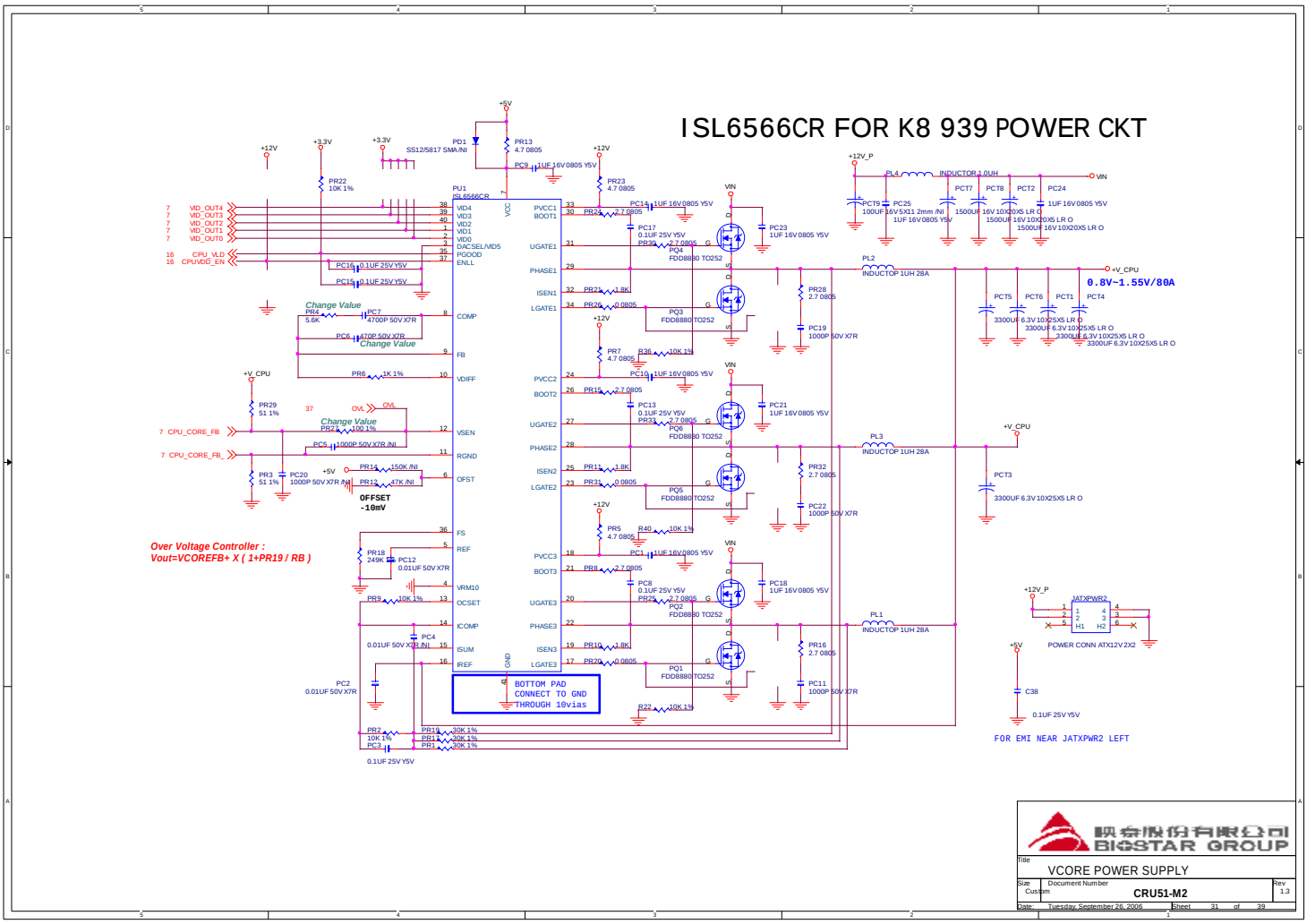

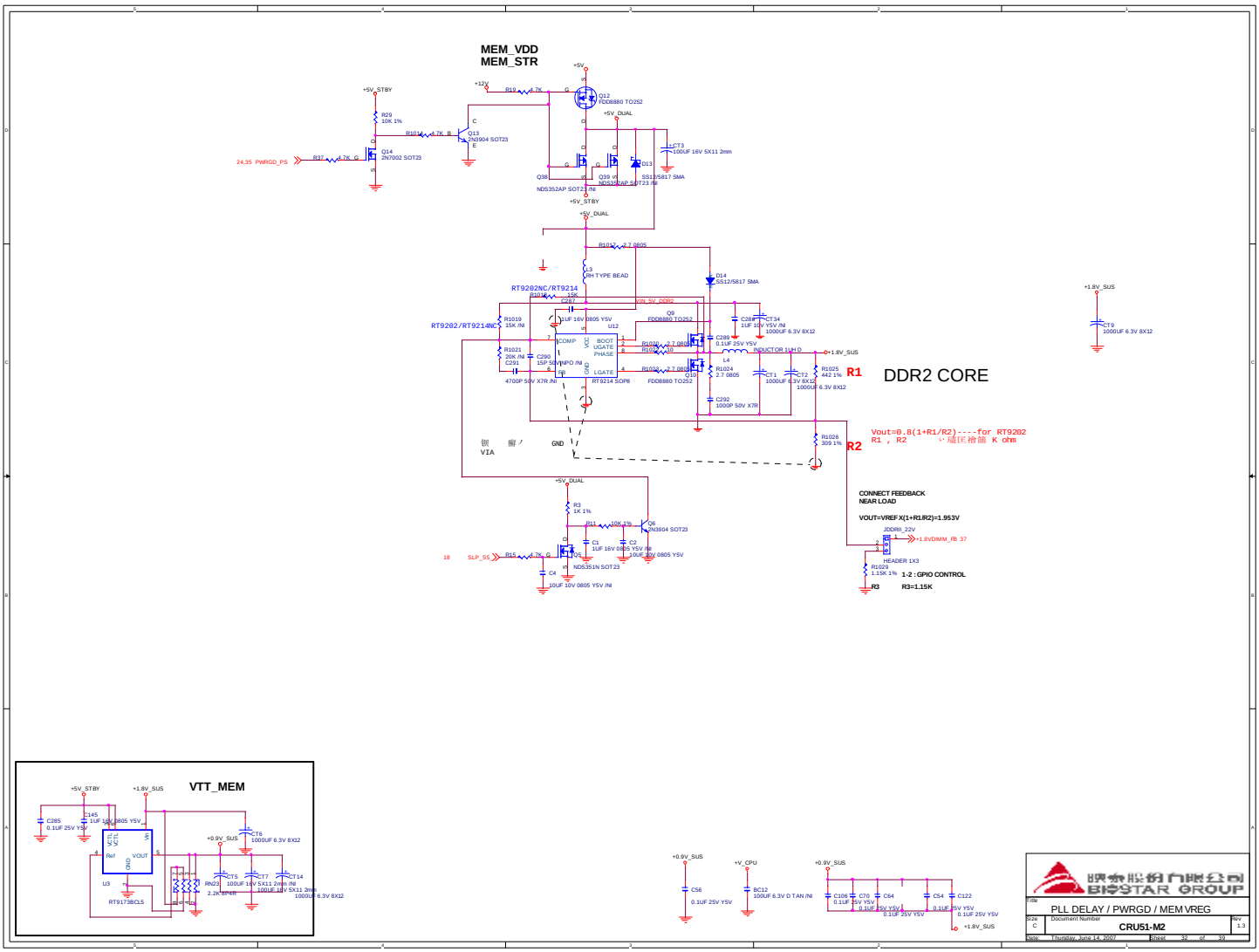

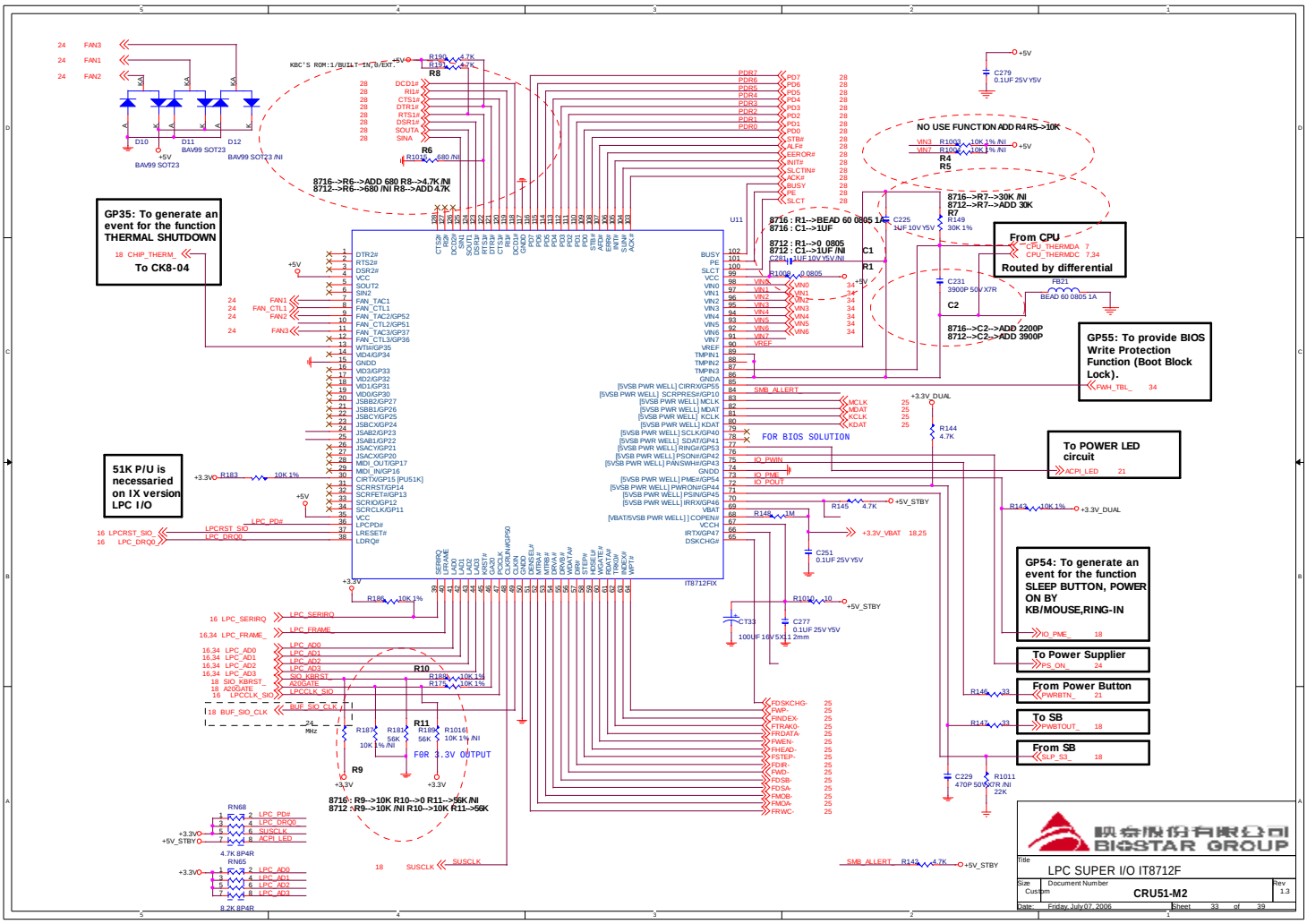

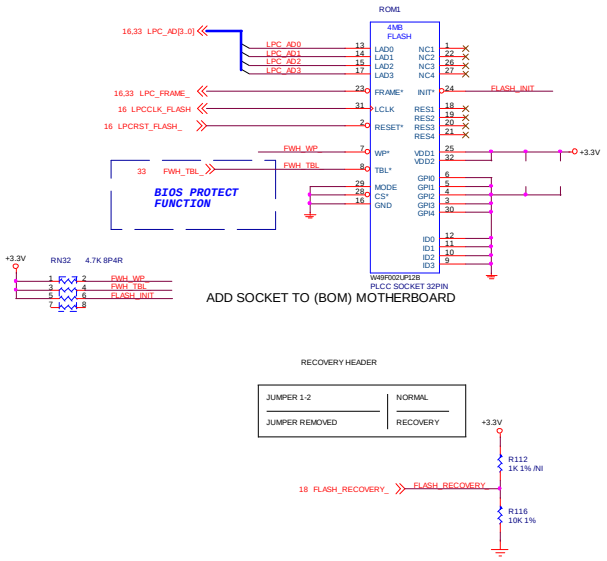

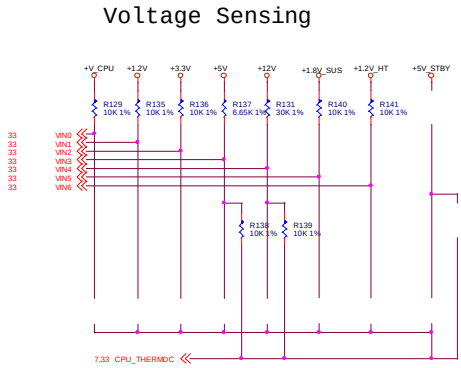

hardware monitor

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Title: FLASH ROM & H/W MON

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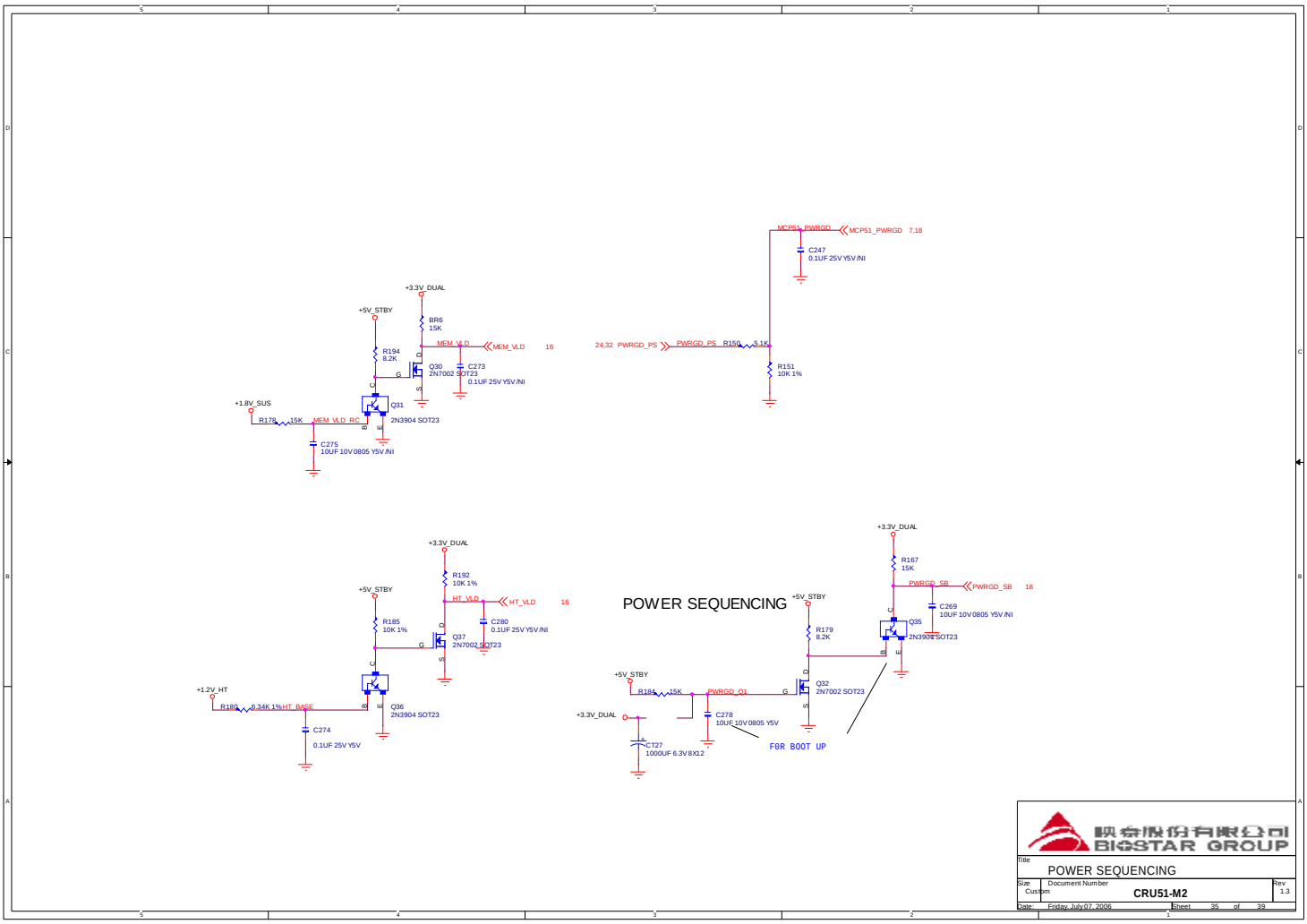

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Title: POWER SEQUENCING

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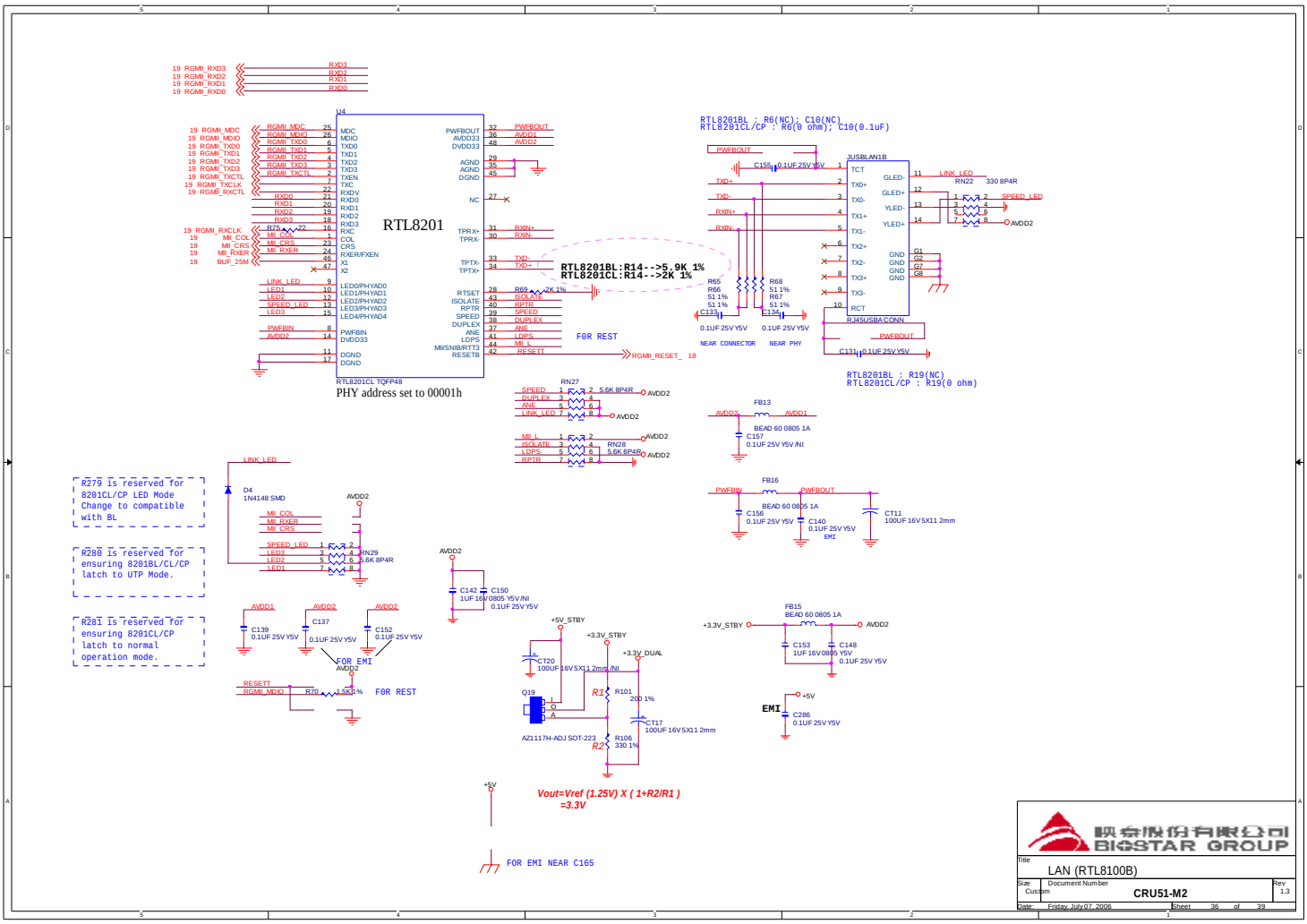
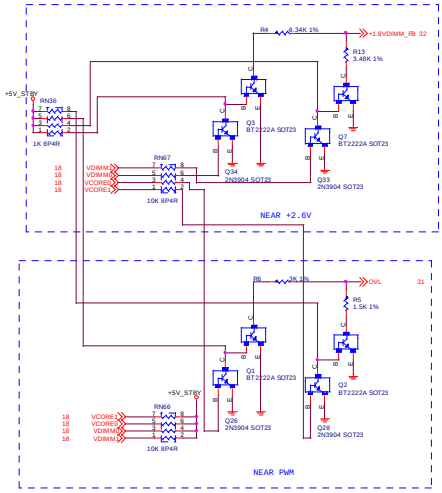


Dimm over voltage	DIMM0 GPIO 3	DIMM1 GPIO 4
Default	1	1
2.72V	0	1
2.82V	1	0
2.93V	0	0

7,31 K8_VID4 VID_OUT4 7,31

7,31 K8_VID3 VID_OUT3 7,31
7,31 K8_VID2 VID_OUT2 7,31
7,31 K8_VID1 VID_OUT1 7,31
7,31 K8_VID0 VID_OUT0 7,31



+1.8VDIMM_FB	VDIMM0	VDIMM1
Default 1.944V	1	1
2.00V	0	1
2.045V	1	0
2.100V	0	0

VCORE_OVL	VCORE0	VCORE1
Default 1.550V	1	1
1.602V	0	1
1.653V	1	0
1.705V	0	0

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Title: OVER VOLTAGE		
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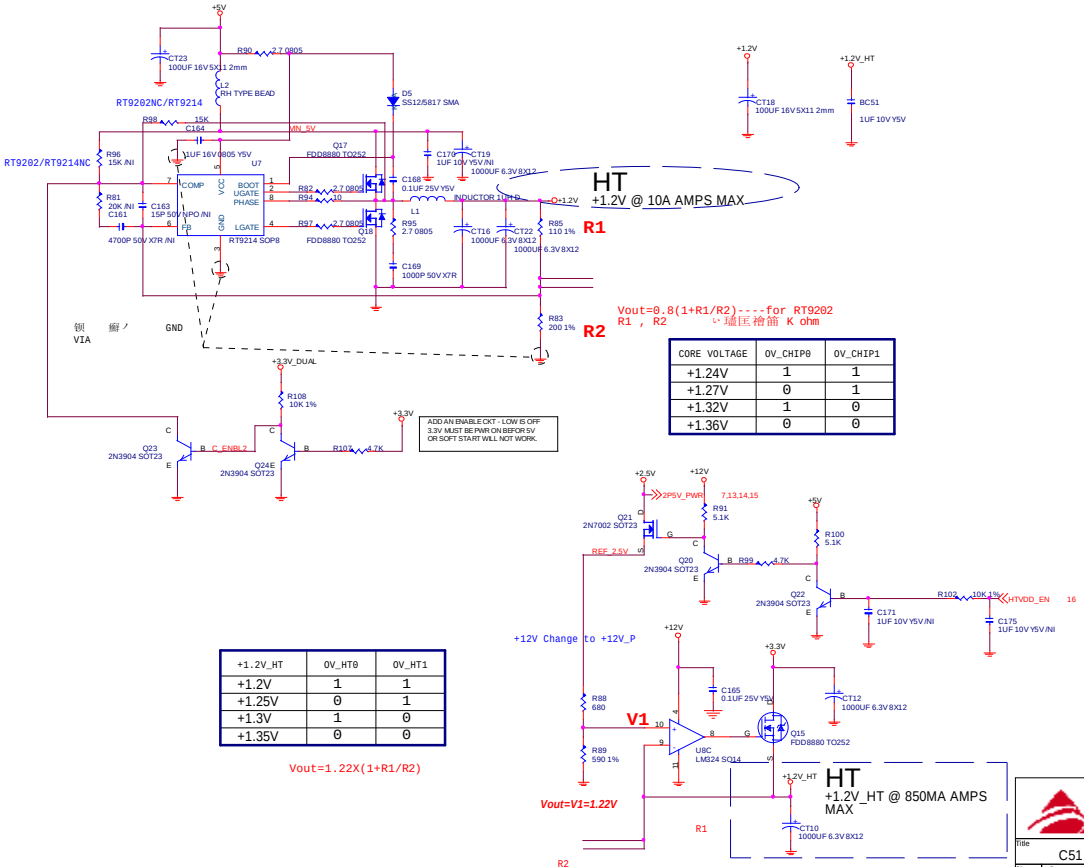
CK51 CORE



CORE VOLTAGE	OV_CHIP0	OV_CHIP1
+1.24V	1	1
+1.27V	0	1
+1.32V	1	0
+1.36V	0	0

+1.2V_HT	OV_HT0	OV_HT1
+1.2V	1	1
+1.25V	0	1
+1.3V	1	0
+1.35V	0	0

BIGSTAR GROUP

Title: C51 CORE

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