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A78LD-M2S (RS780L&SB710)

REV 6.2

DDR2 X 2 Dual channel , PCI-Ex16 X 1 ,
PCI X 2 , Realtek 10/100 PCI-E Lan , AMD
K8-940

DATE :2010/03/04

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Title COVER		
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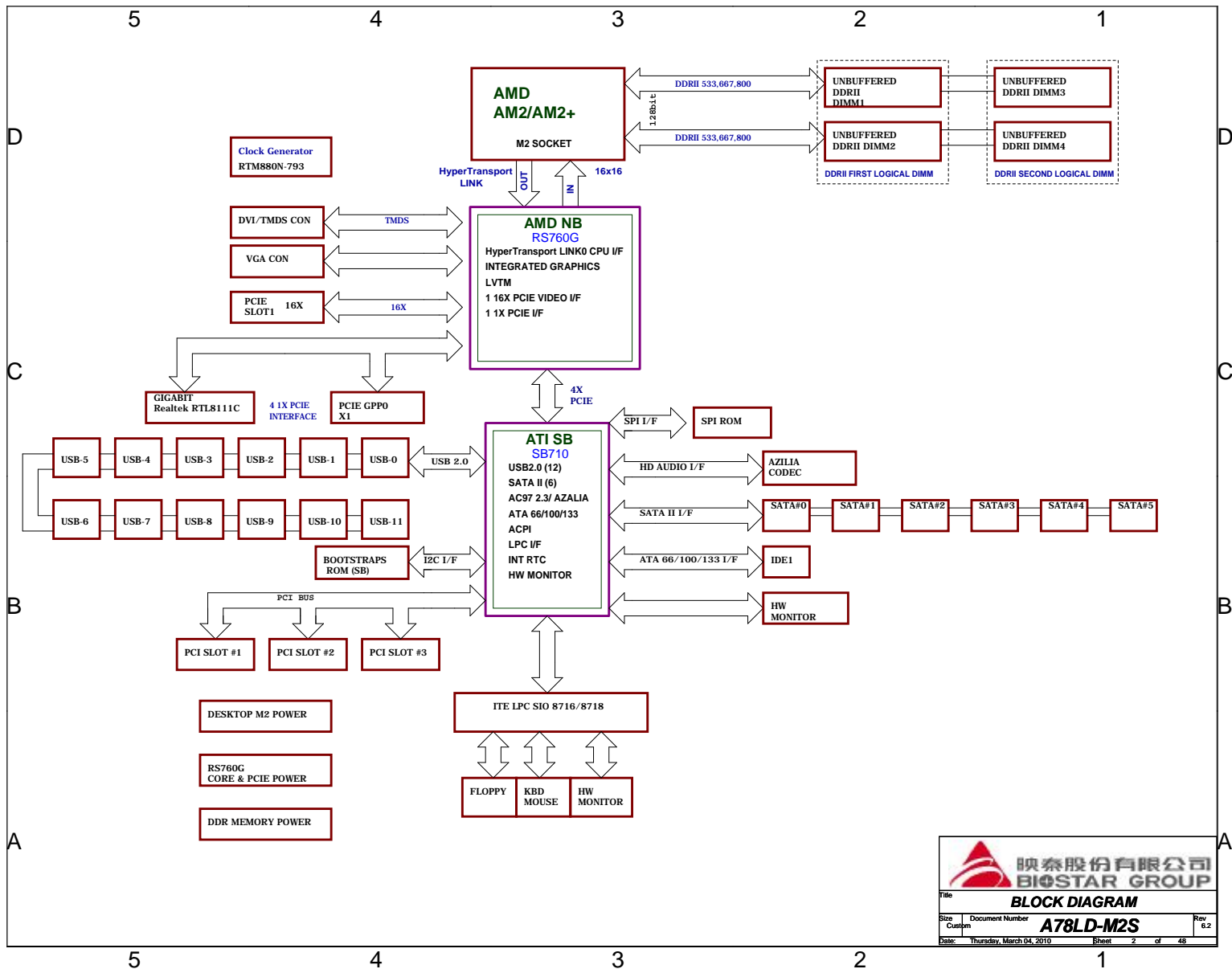
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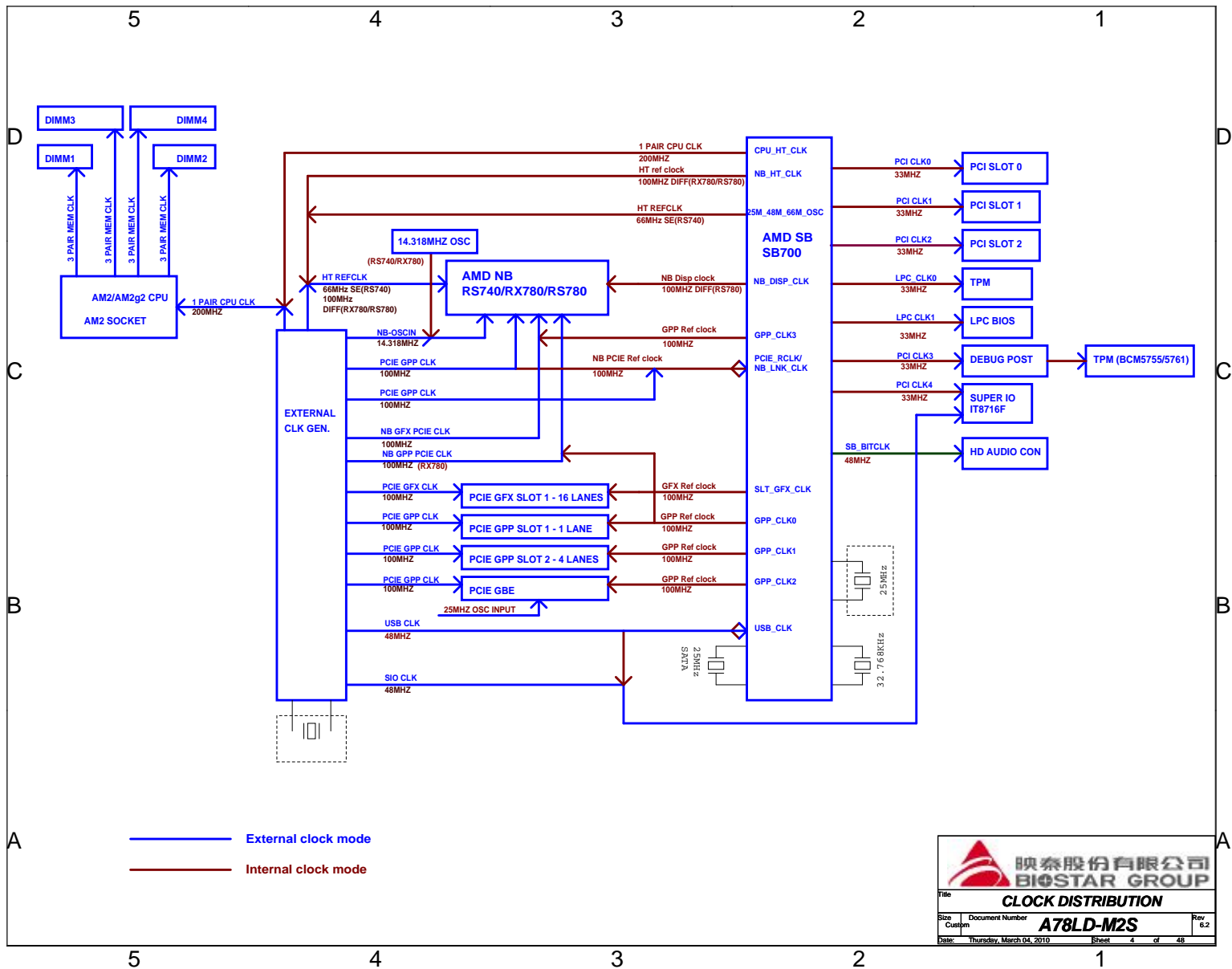
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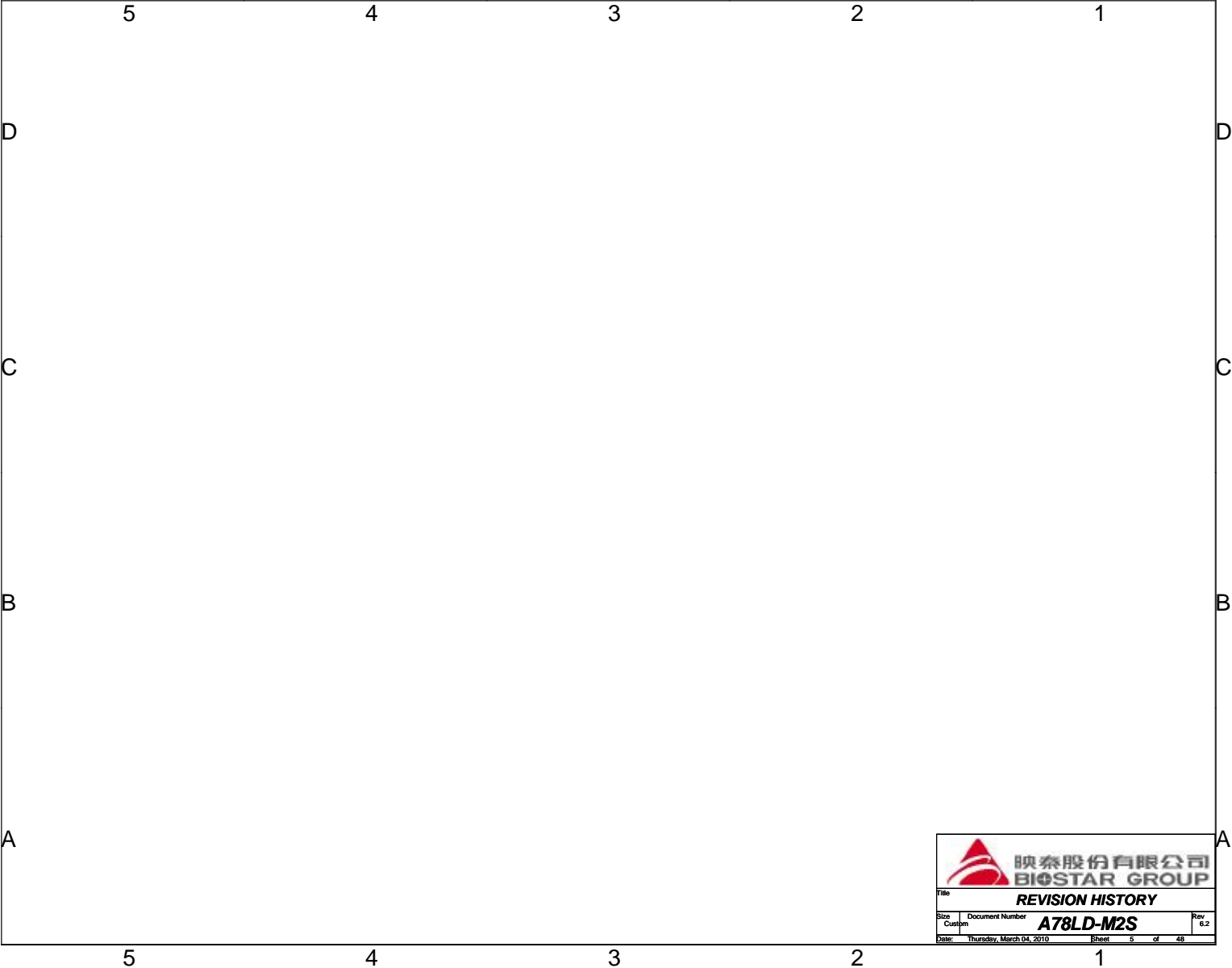
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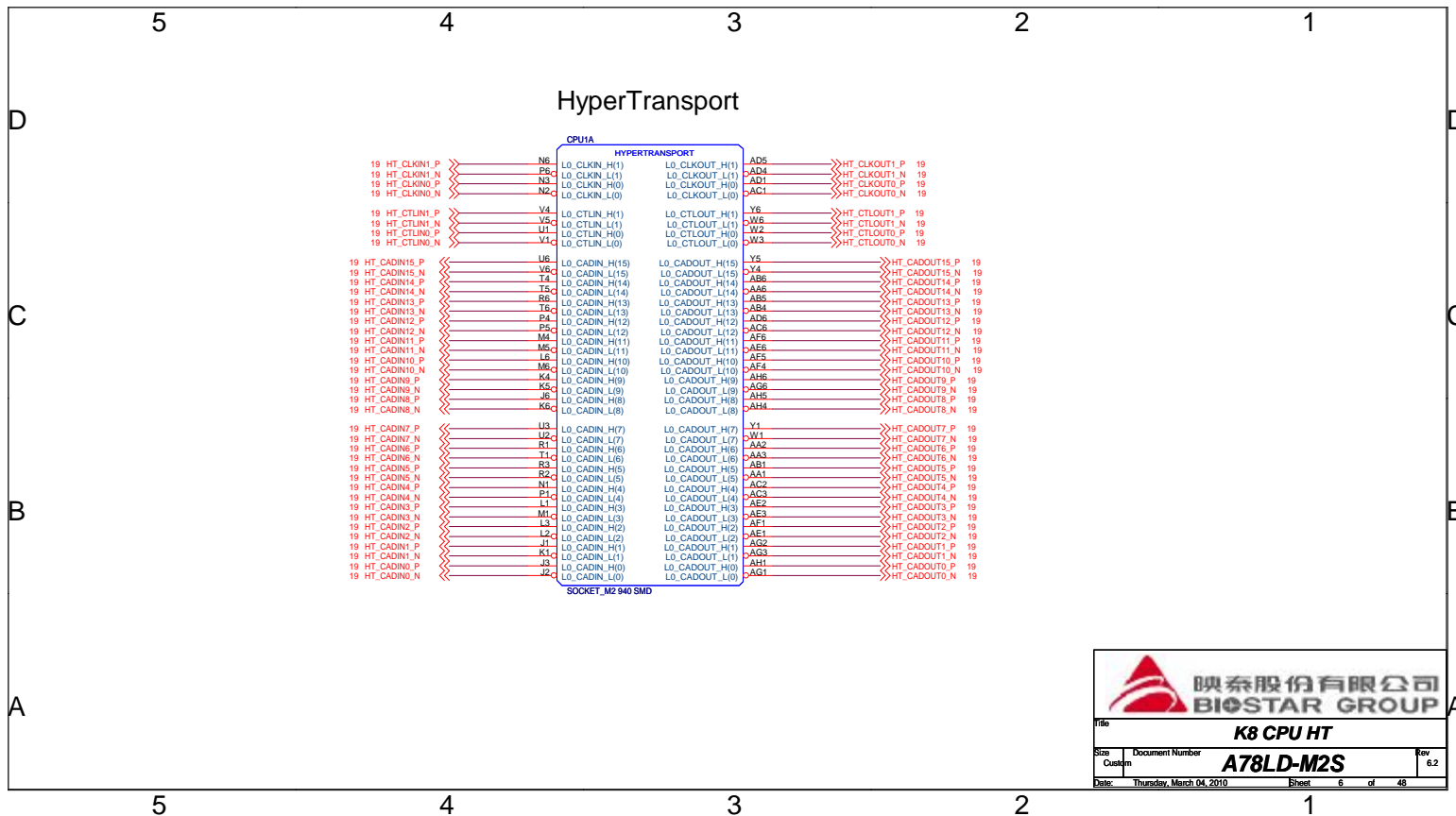
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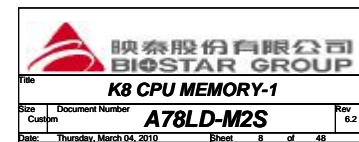
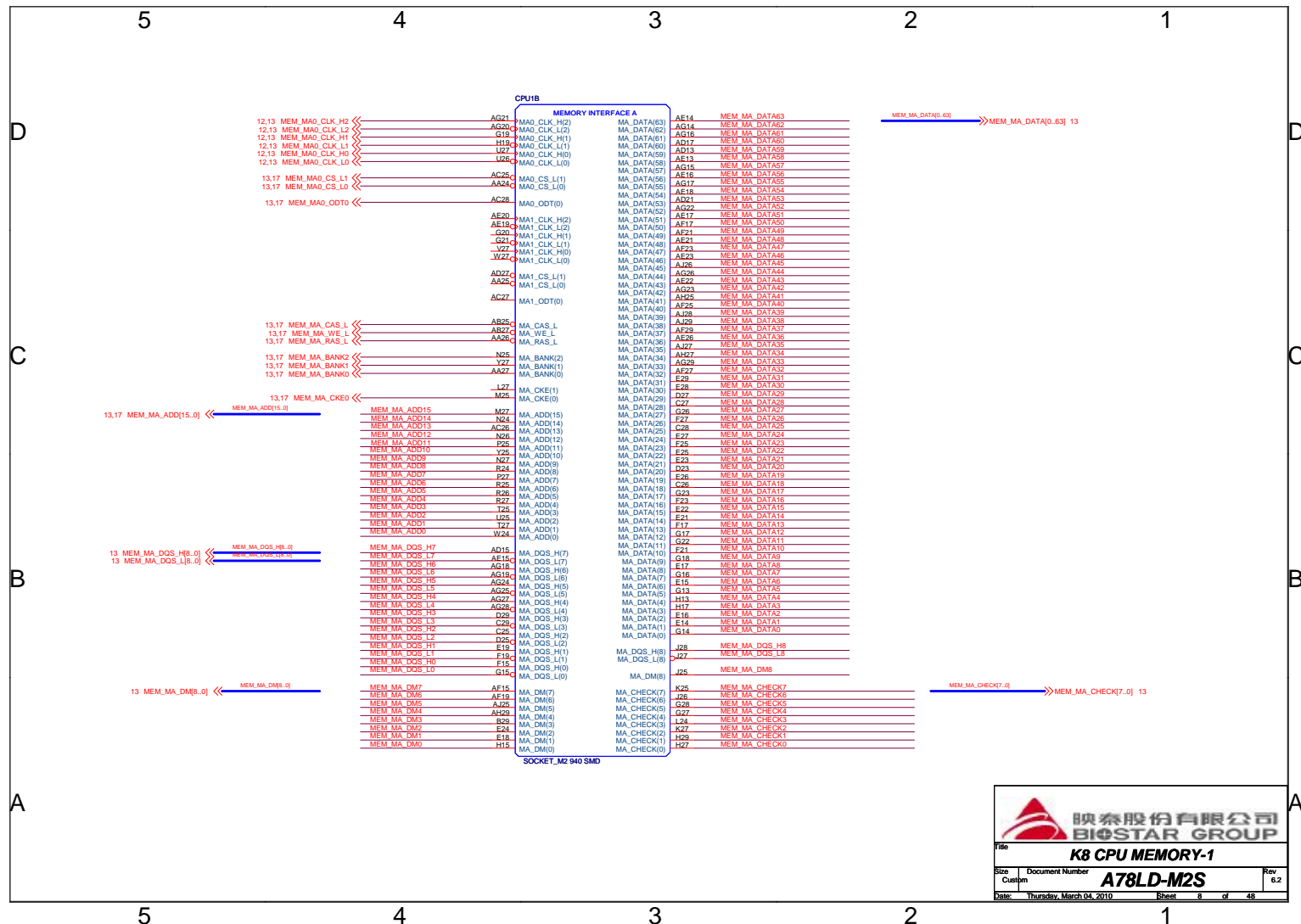


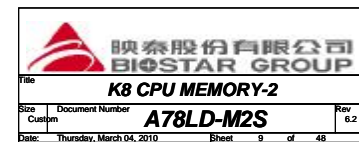
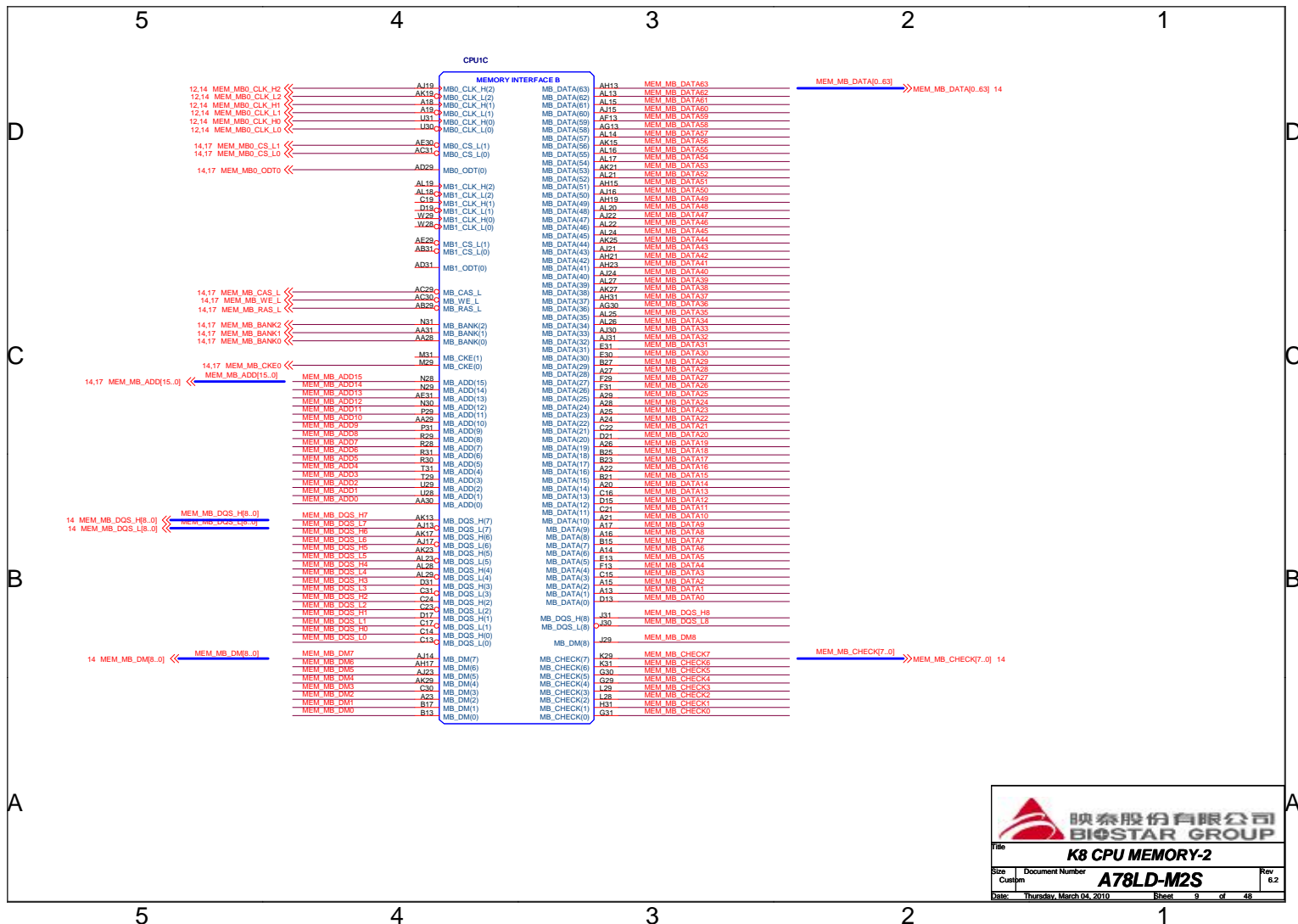
 映泰股份有限公司 BIOTAR GROUP		
Title REVISION HISTORY		
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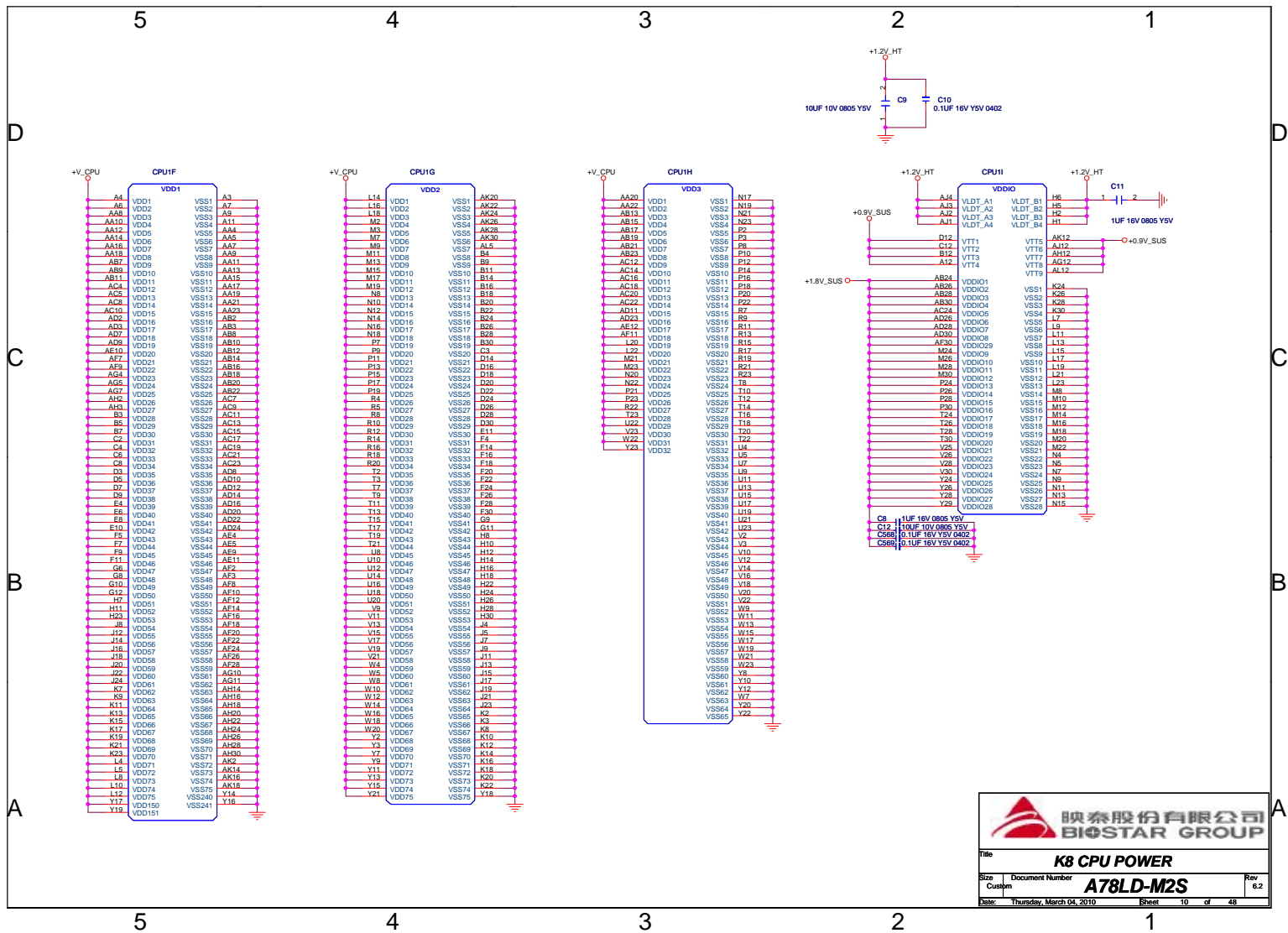


File K8 CPU HT	
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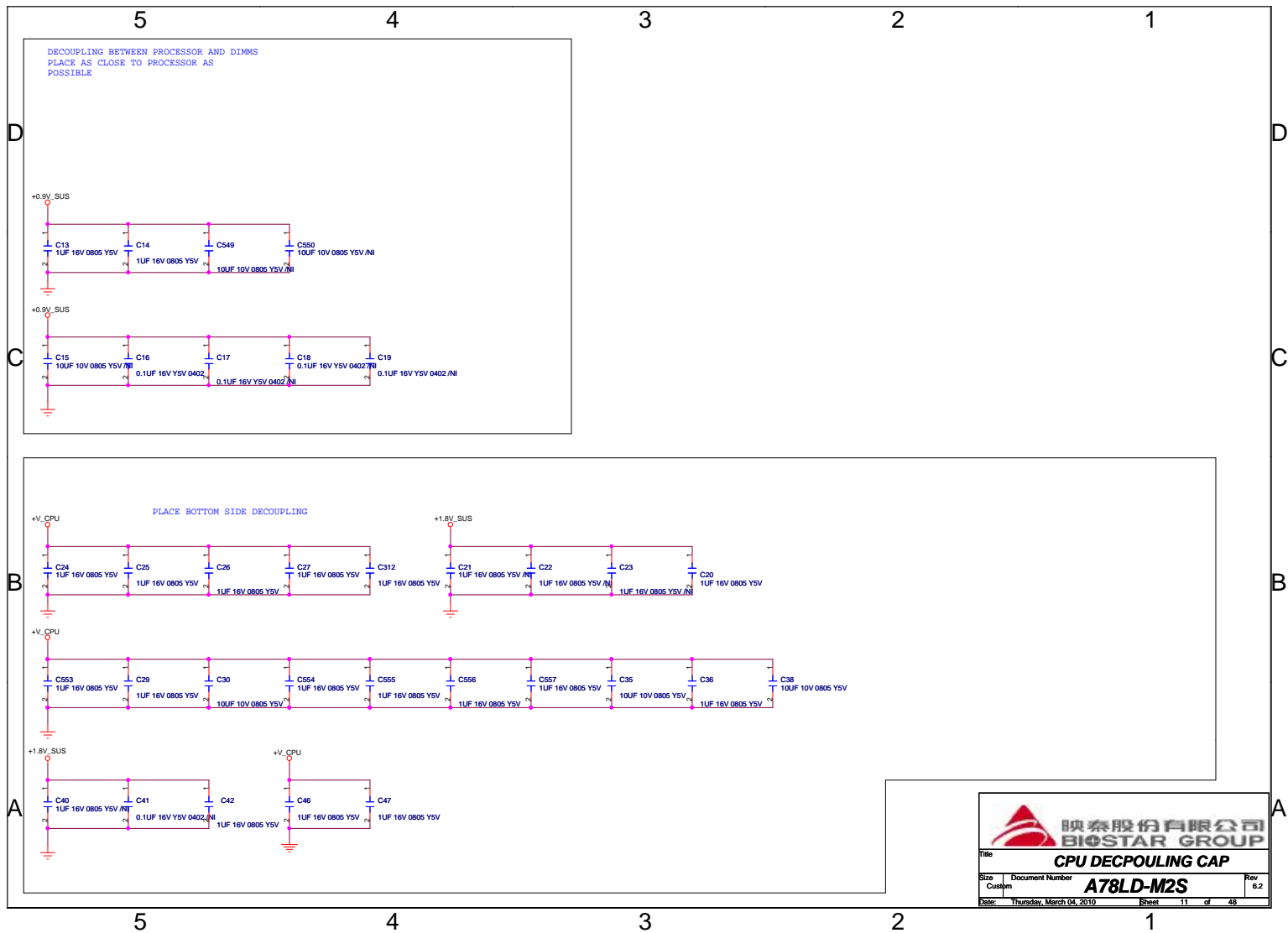



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File: **K8 CPU POWER**

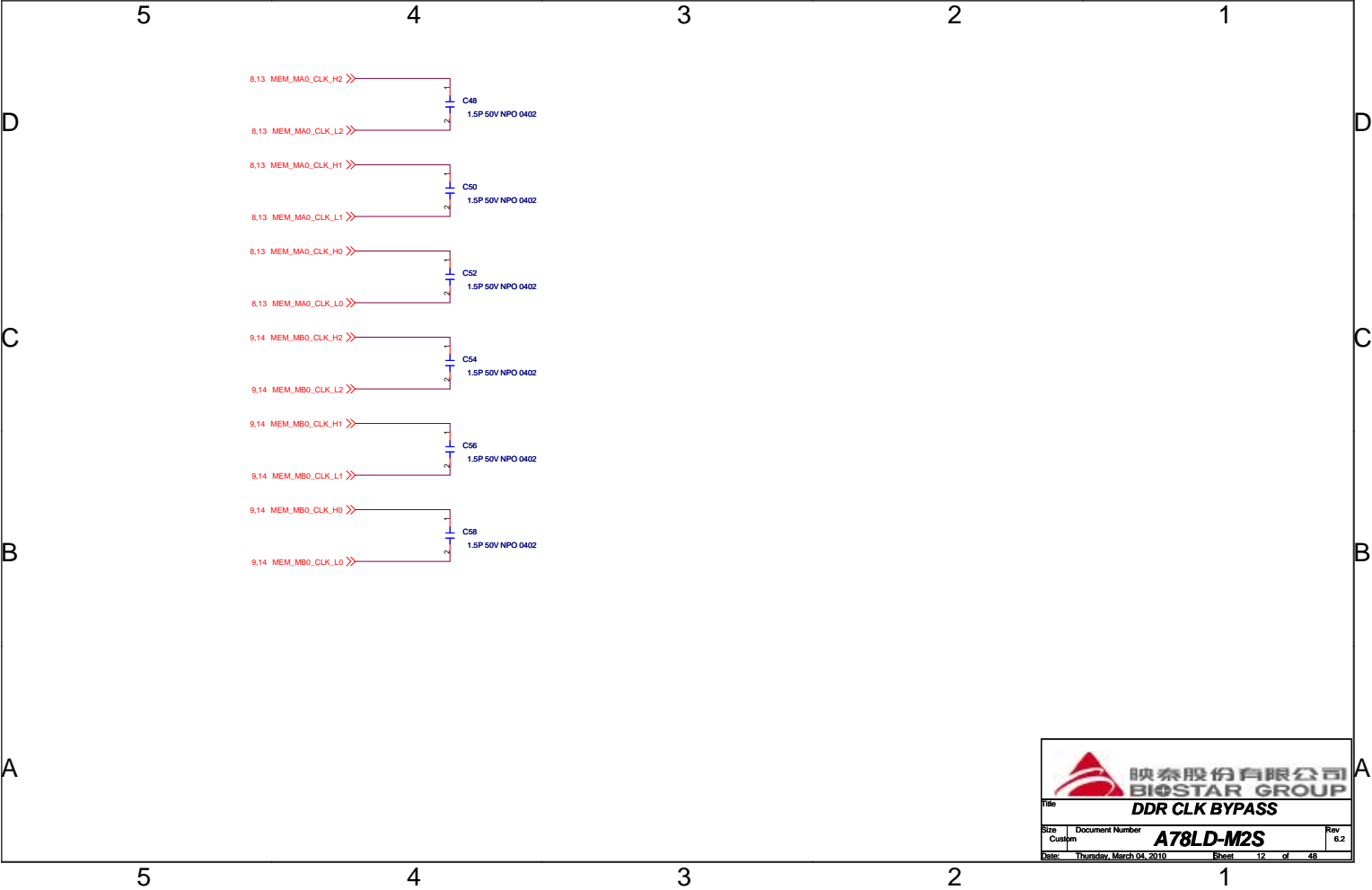
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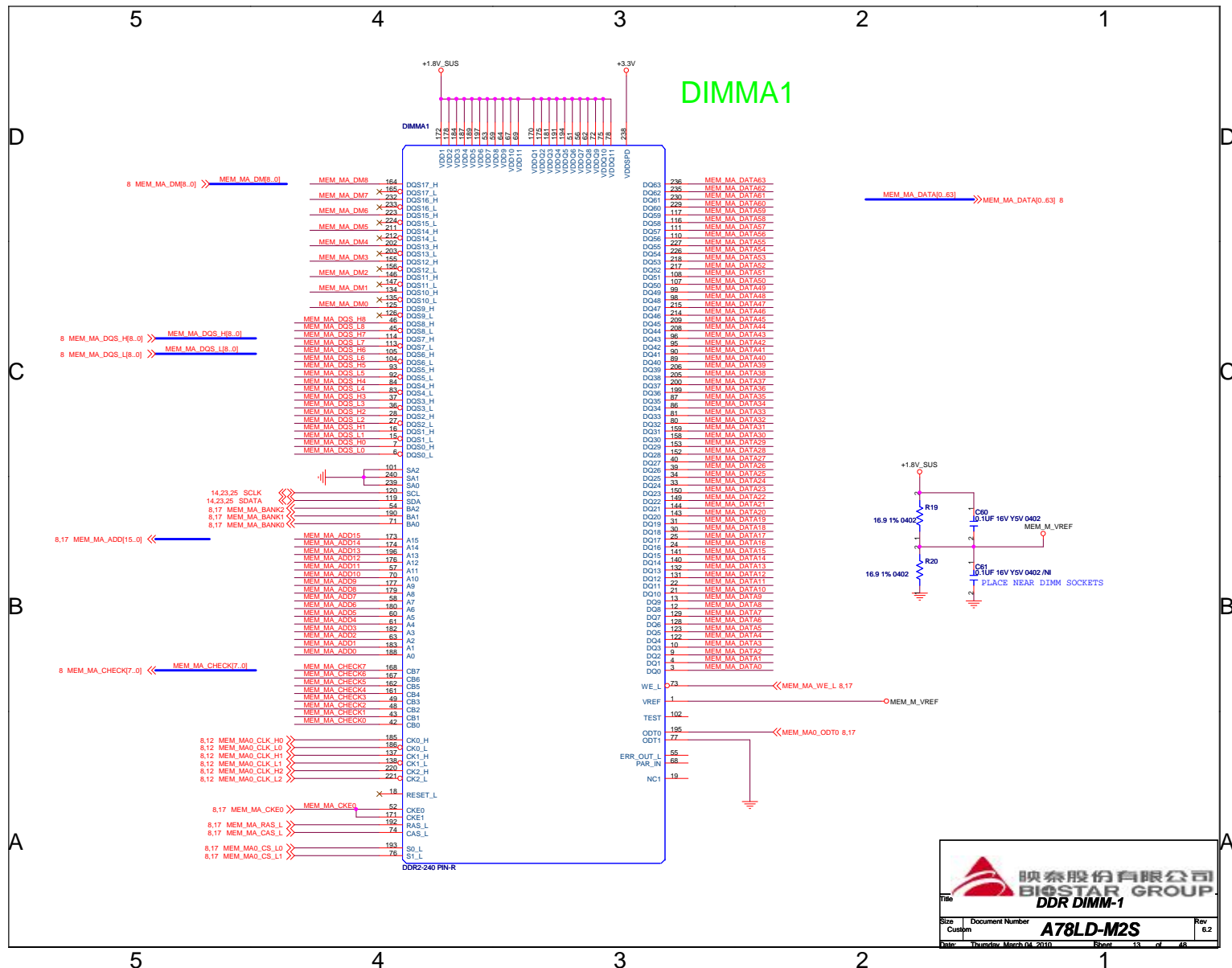
Date: **Thursday, March 04, 2010** Sheet: **10** of **48**

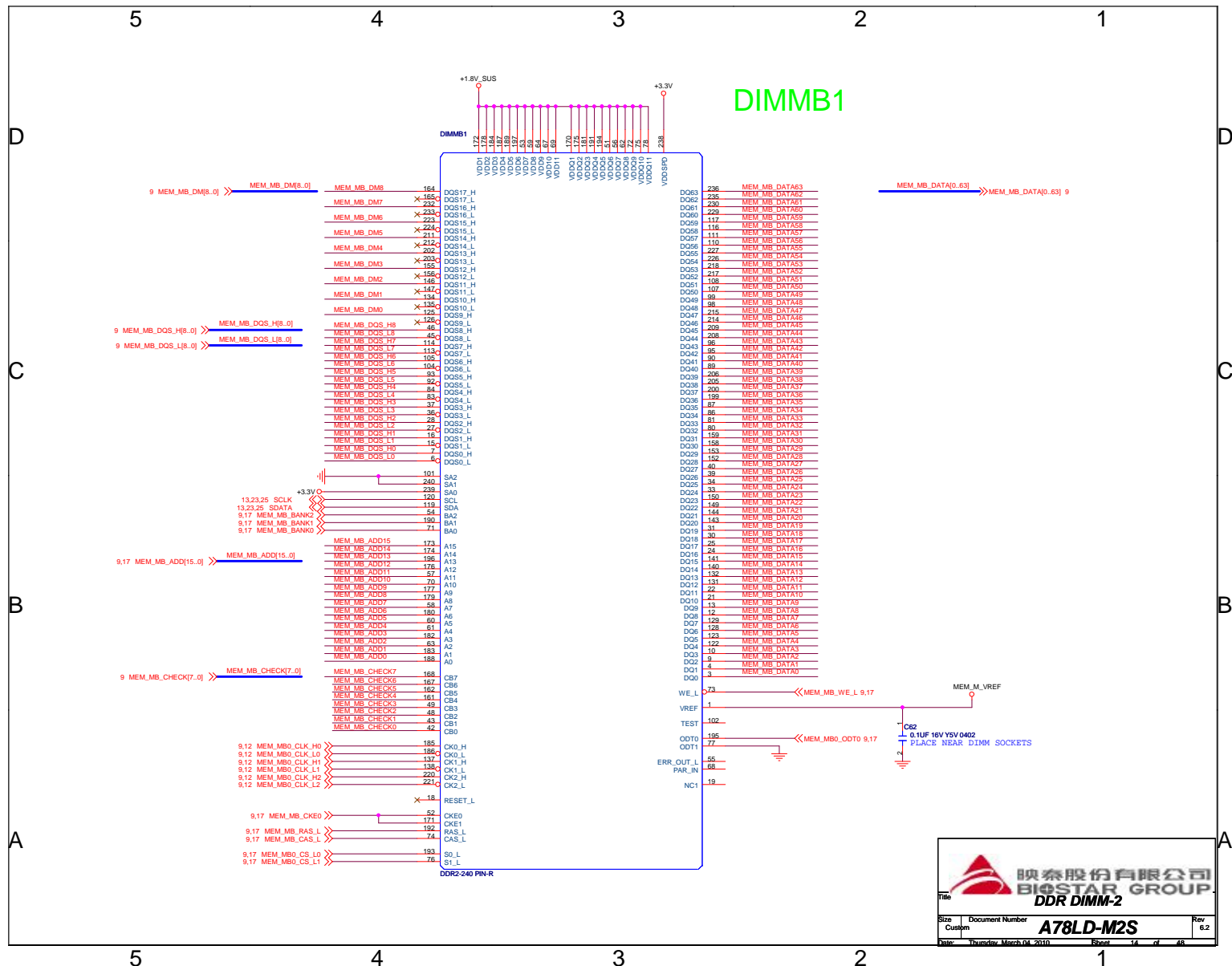


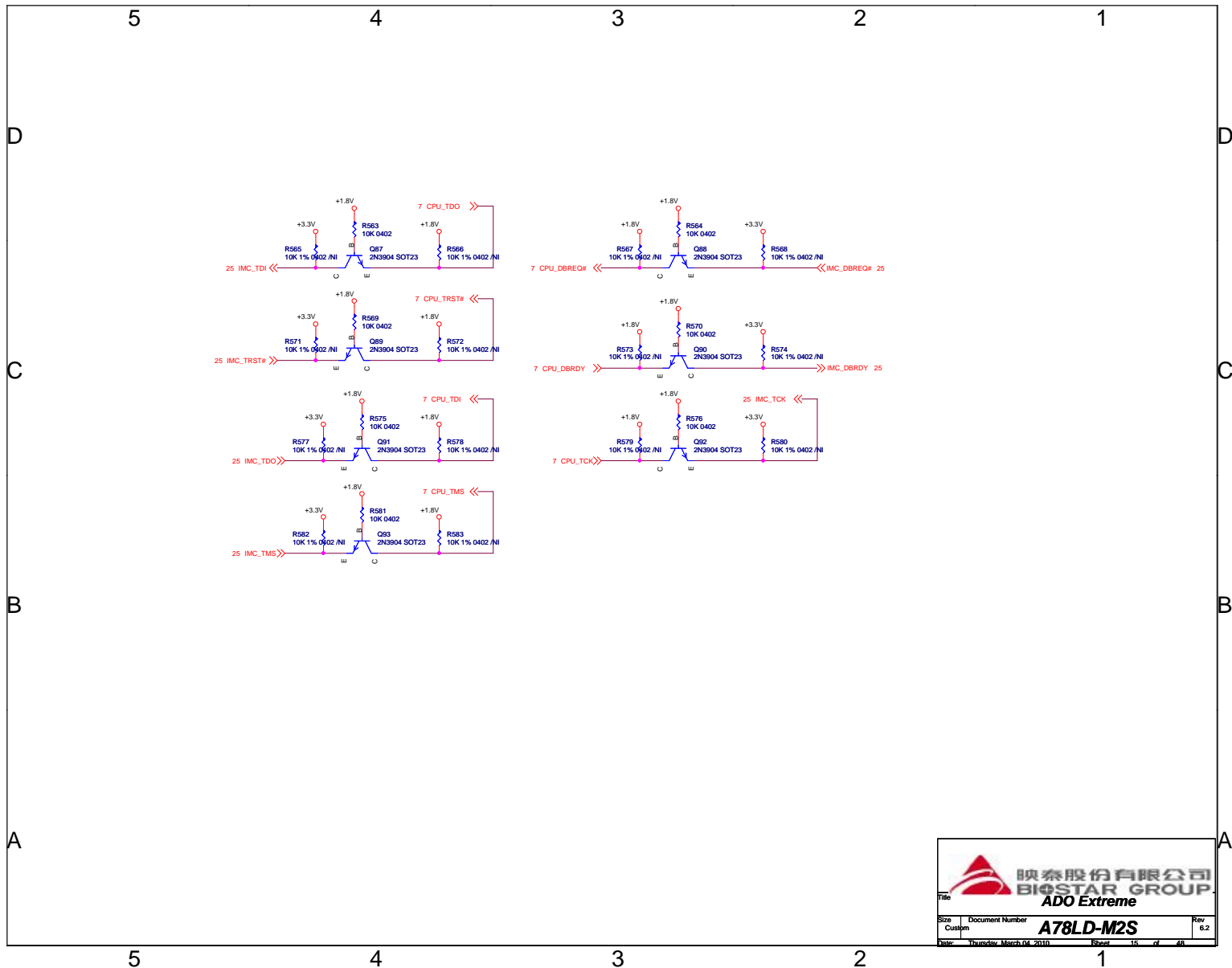
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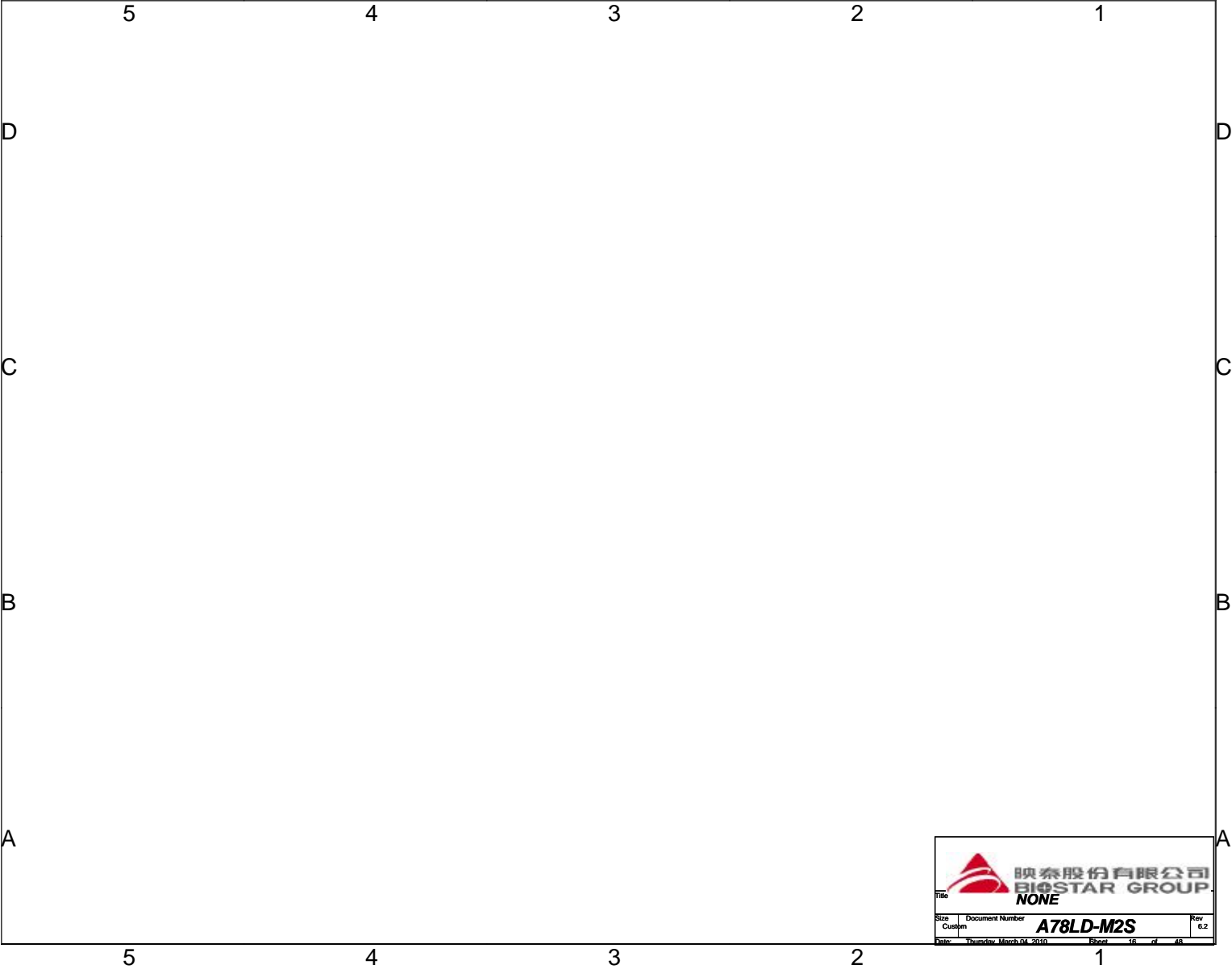
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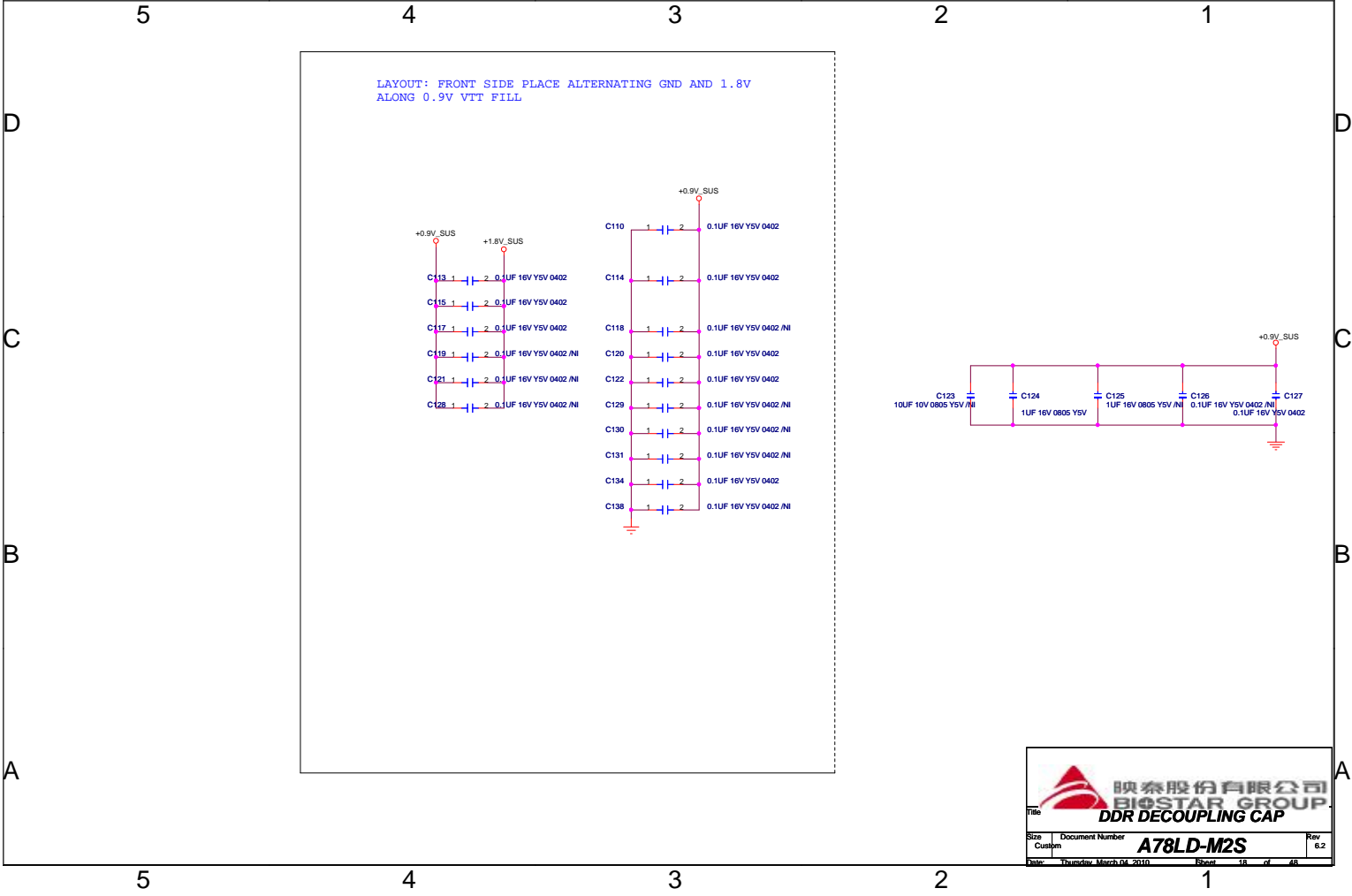


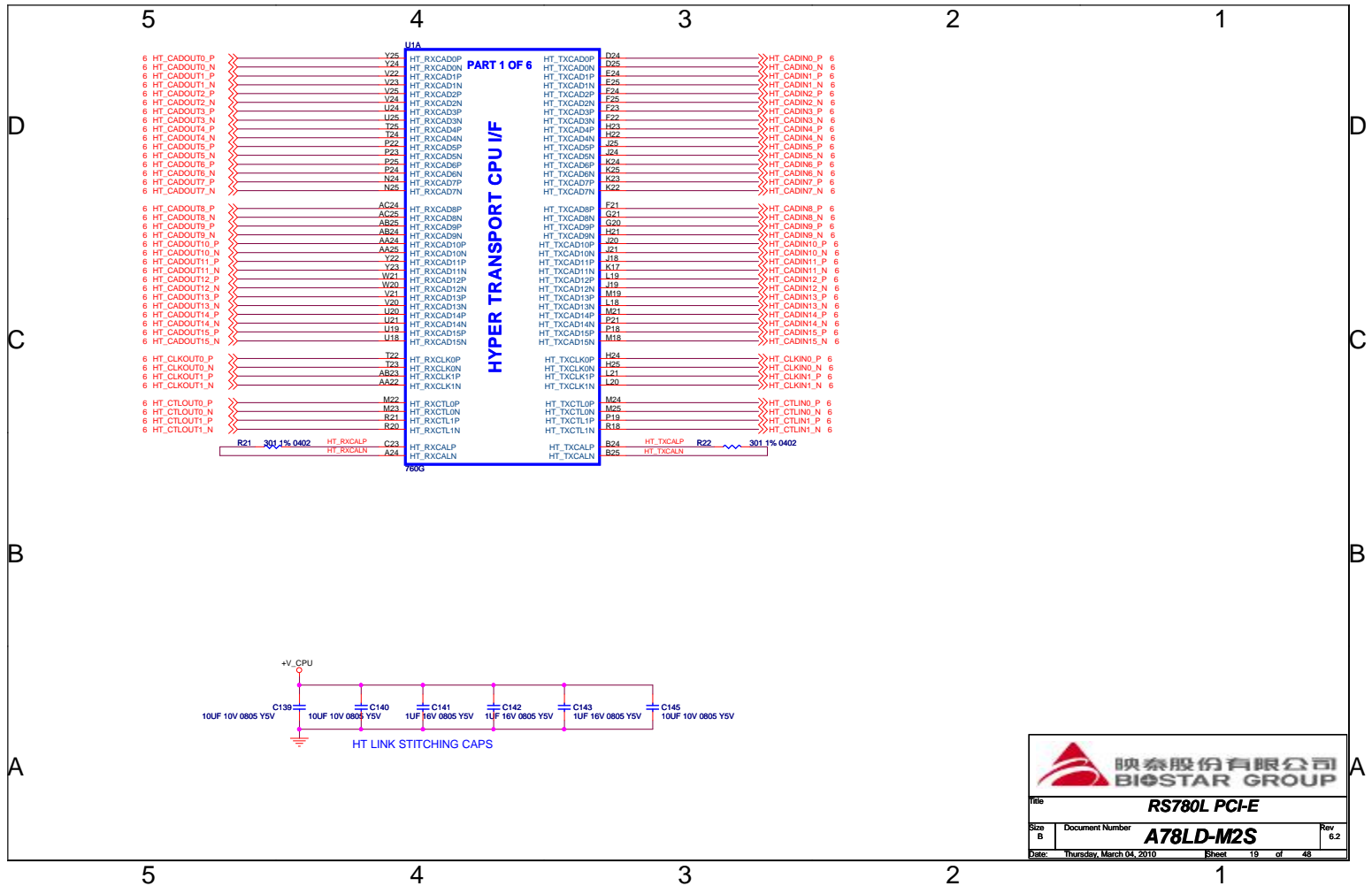


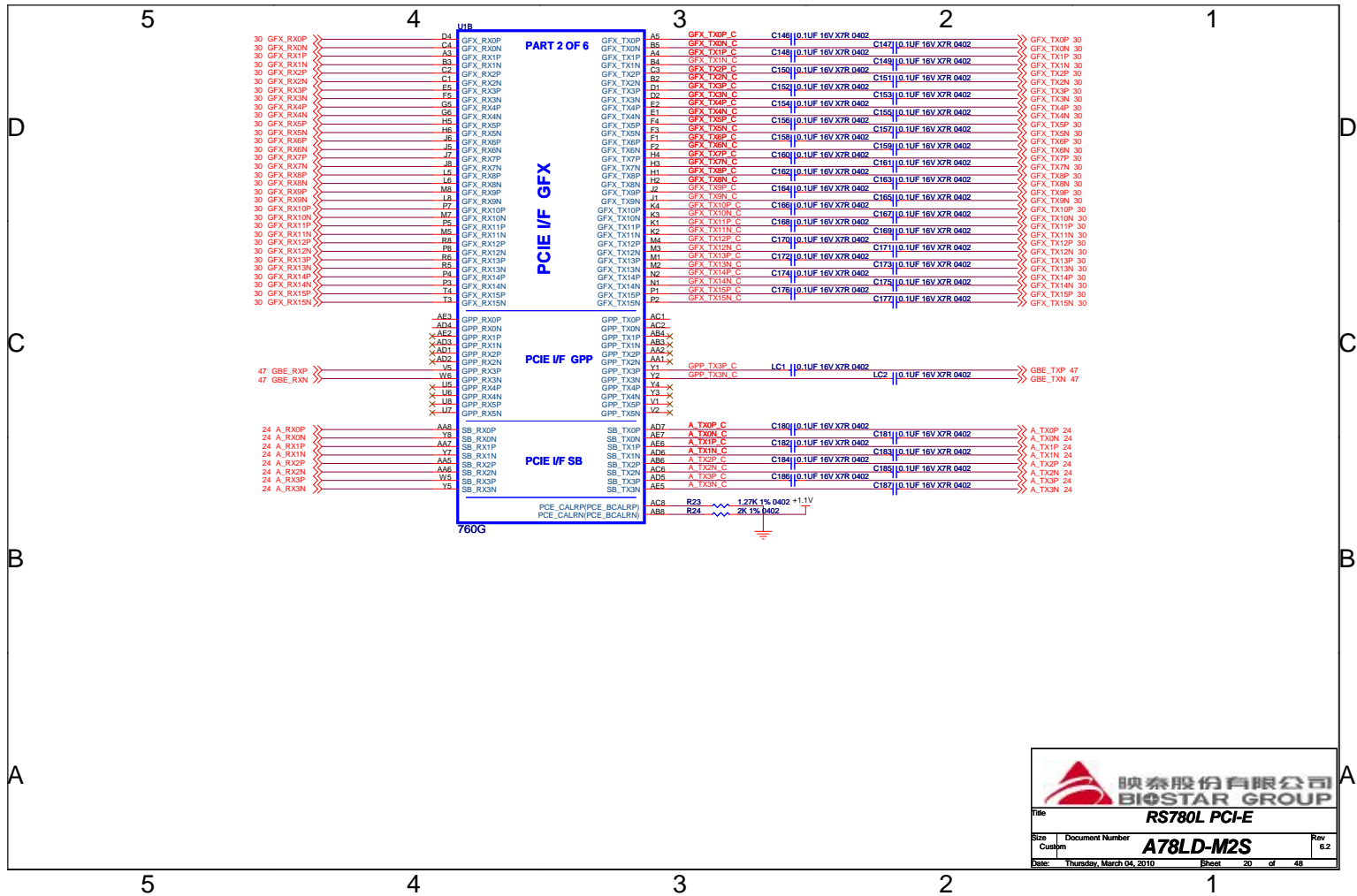


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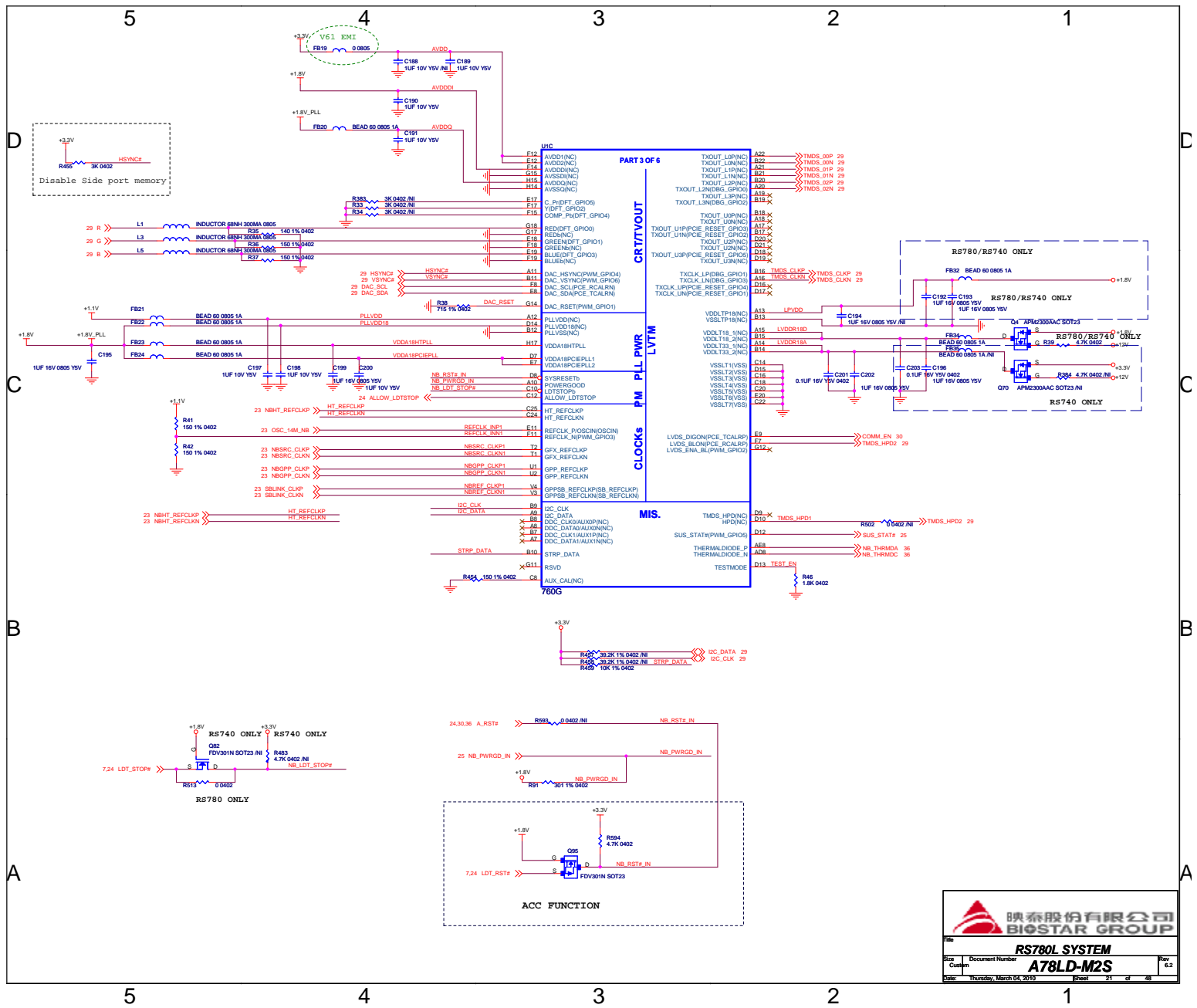


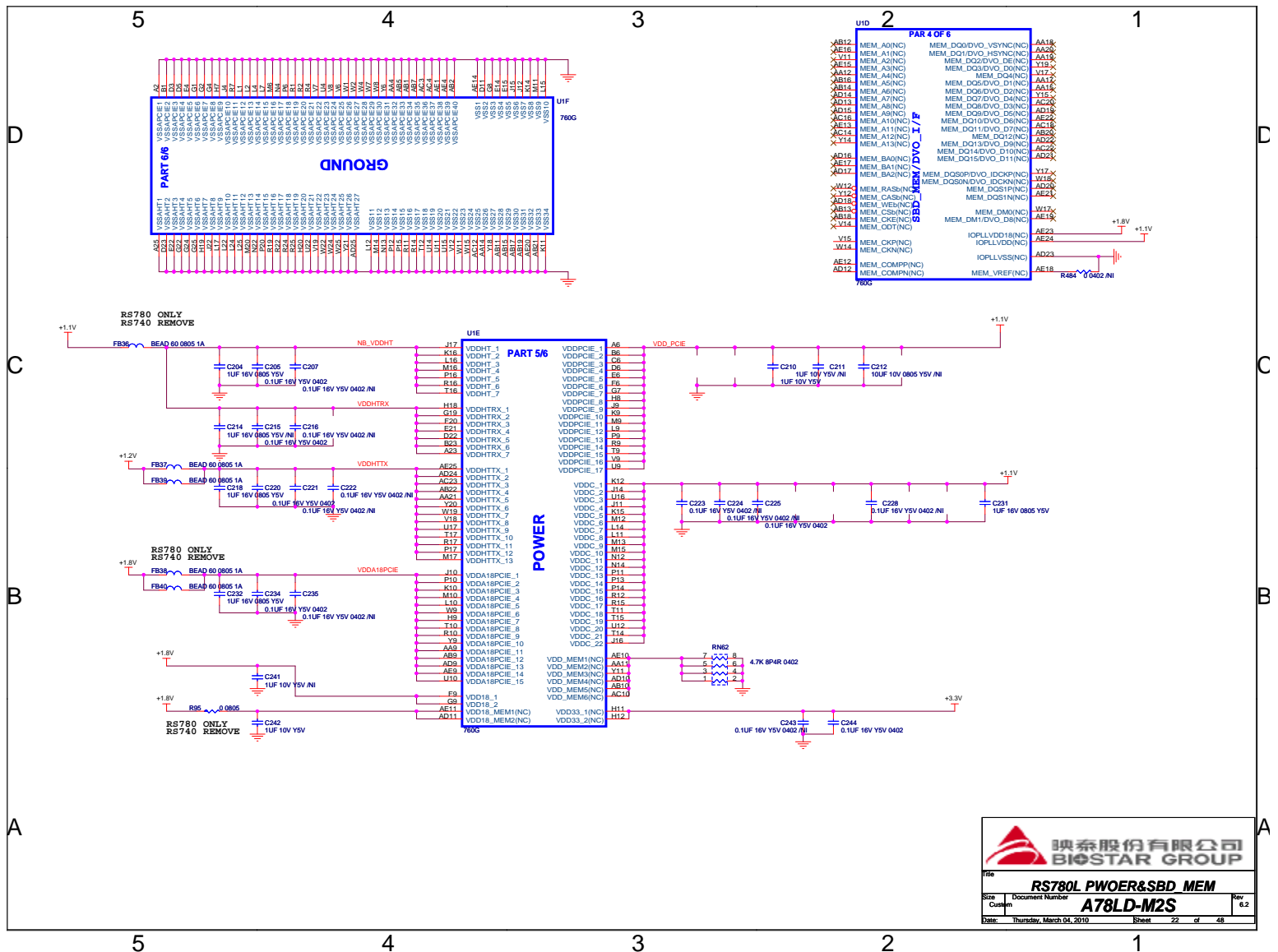
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Title RS780L PCI-E

Size Document Number A78LD-M2S Rev 6.2

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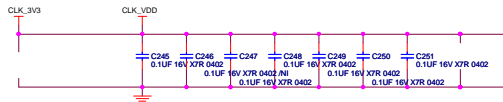
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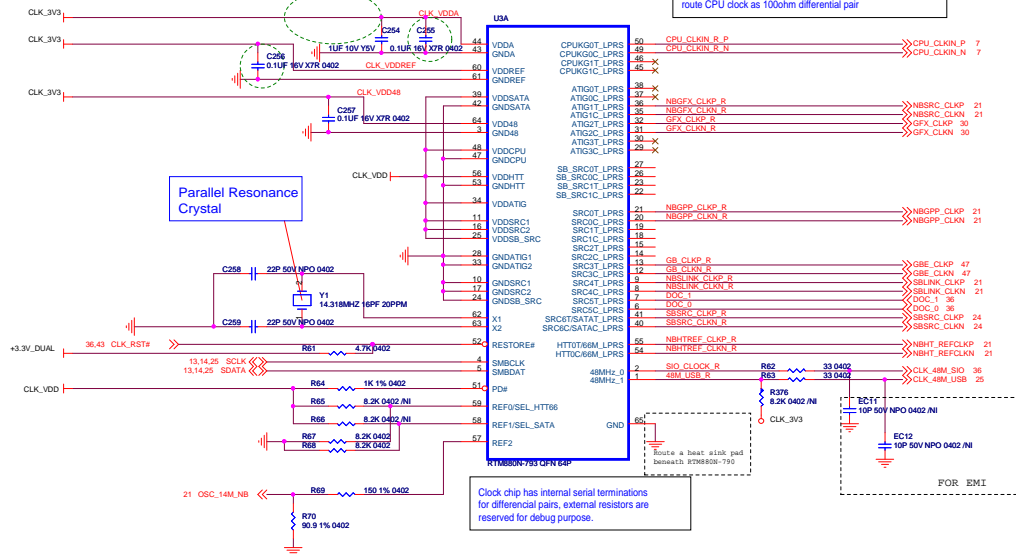


1- PLACE ALL THE SERIES TERMINATION
RESISTORS AS CLOSE TO U800 AS
POSSIBLE

2- ROUTE ALL, SRCLKTX AND SRCLKRX
AS DIFFERENT PAIR RULE

3- PUT DECOUPLING CAPS CLOSE TO U800
POWER PIN

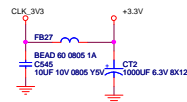
Place R800/R801 less than 500 mils away from U800
R851 less than 100 mils away from R800/R801
route CPU dock as 100ohm differential pair



Clock chip has internal serial terminations
for differential pairs, external resistors are
reserved for debug purpose.

SEL_HTT66	1	66MHz 3.3V single ended HTT clock
	0*	100MHz differential HTT clock
SEL_SATA	1	100MHz non-spreading differential SATA clock
	0*	100MHz differential spreading SRC clock

* default



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File		CLOCK GEN	
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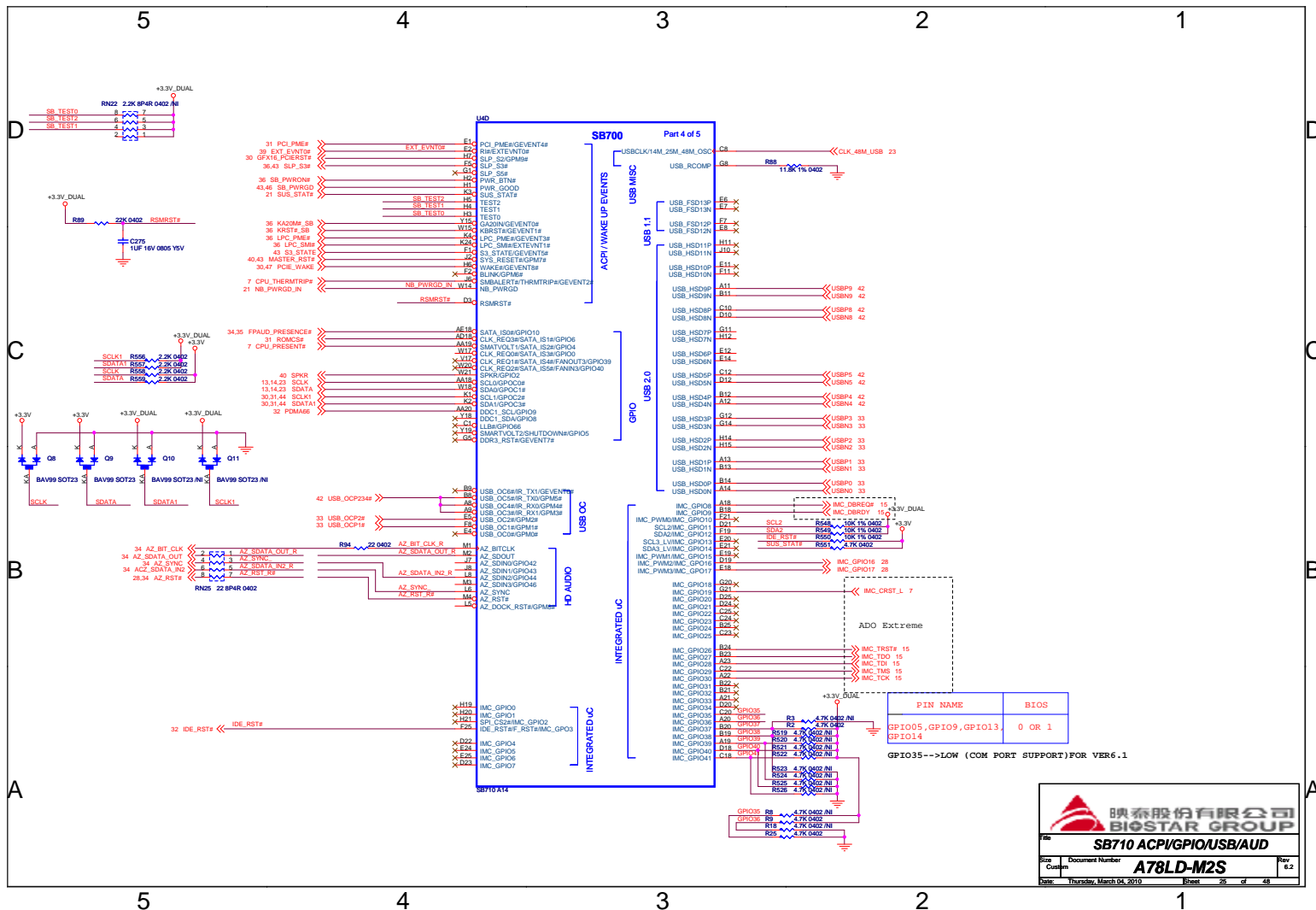
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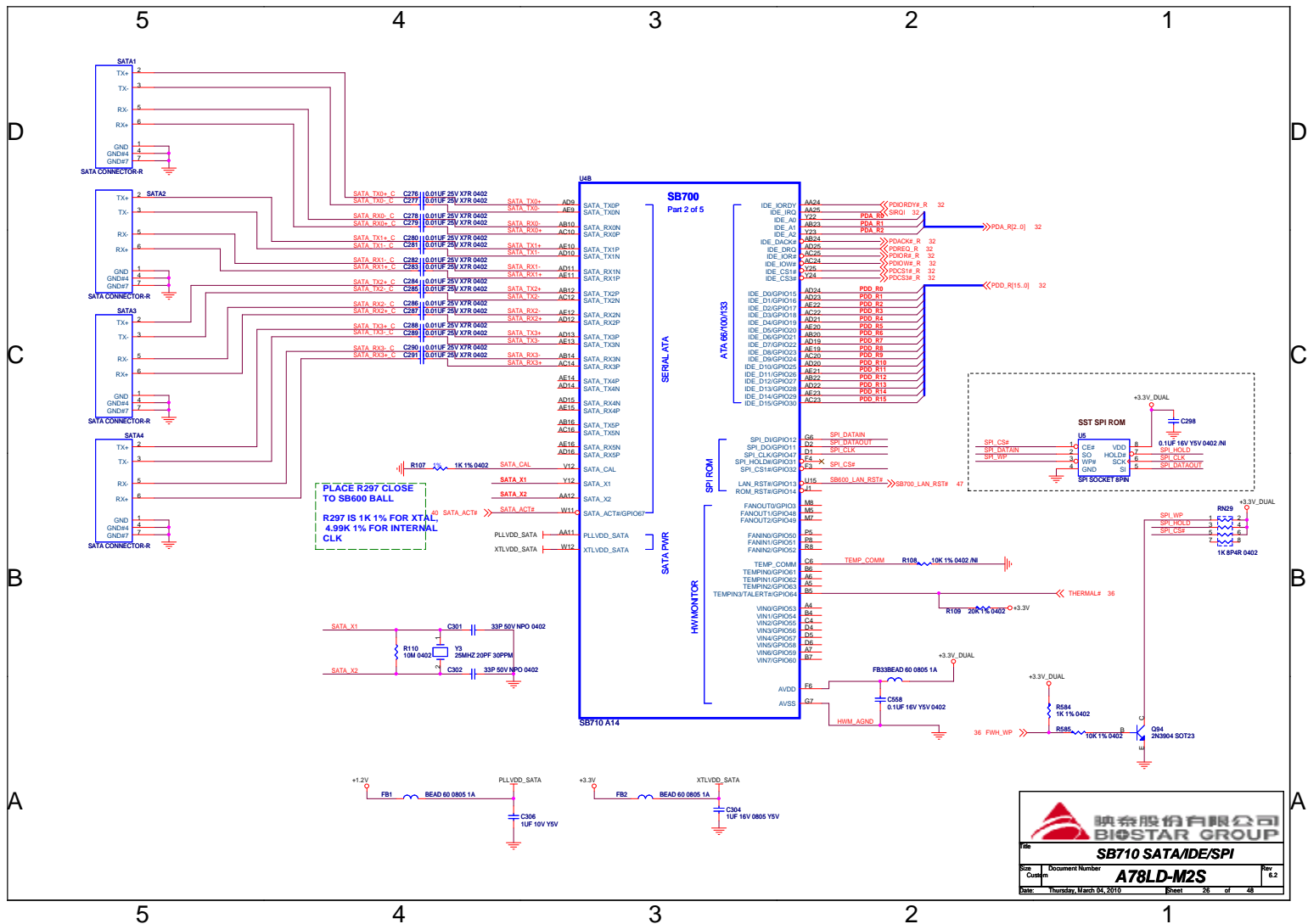
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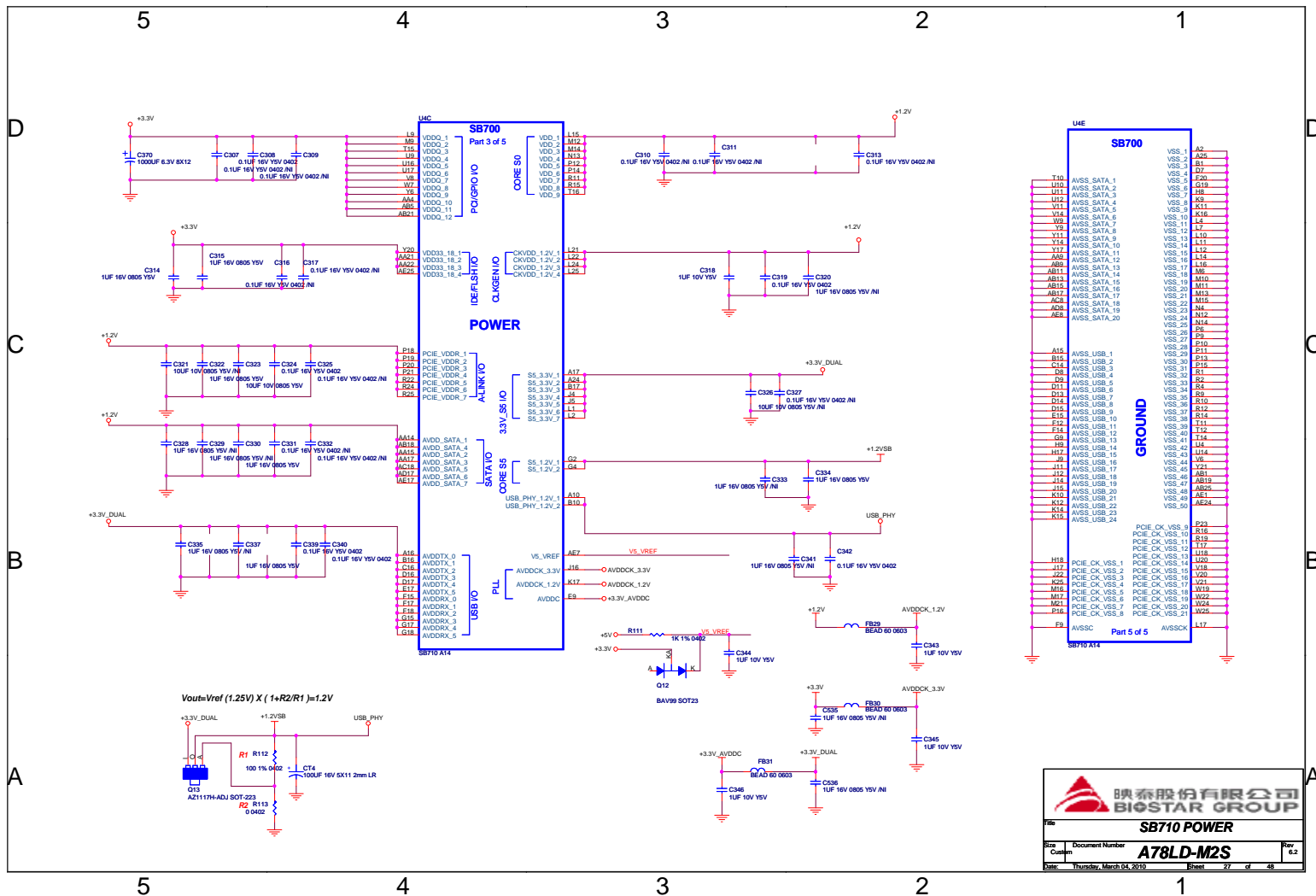
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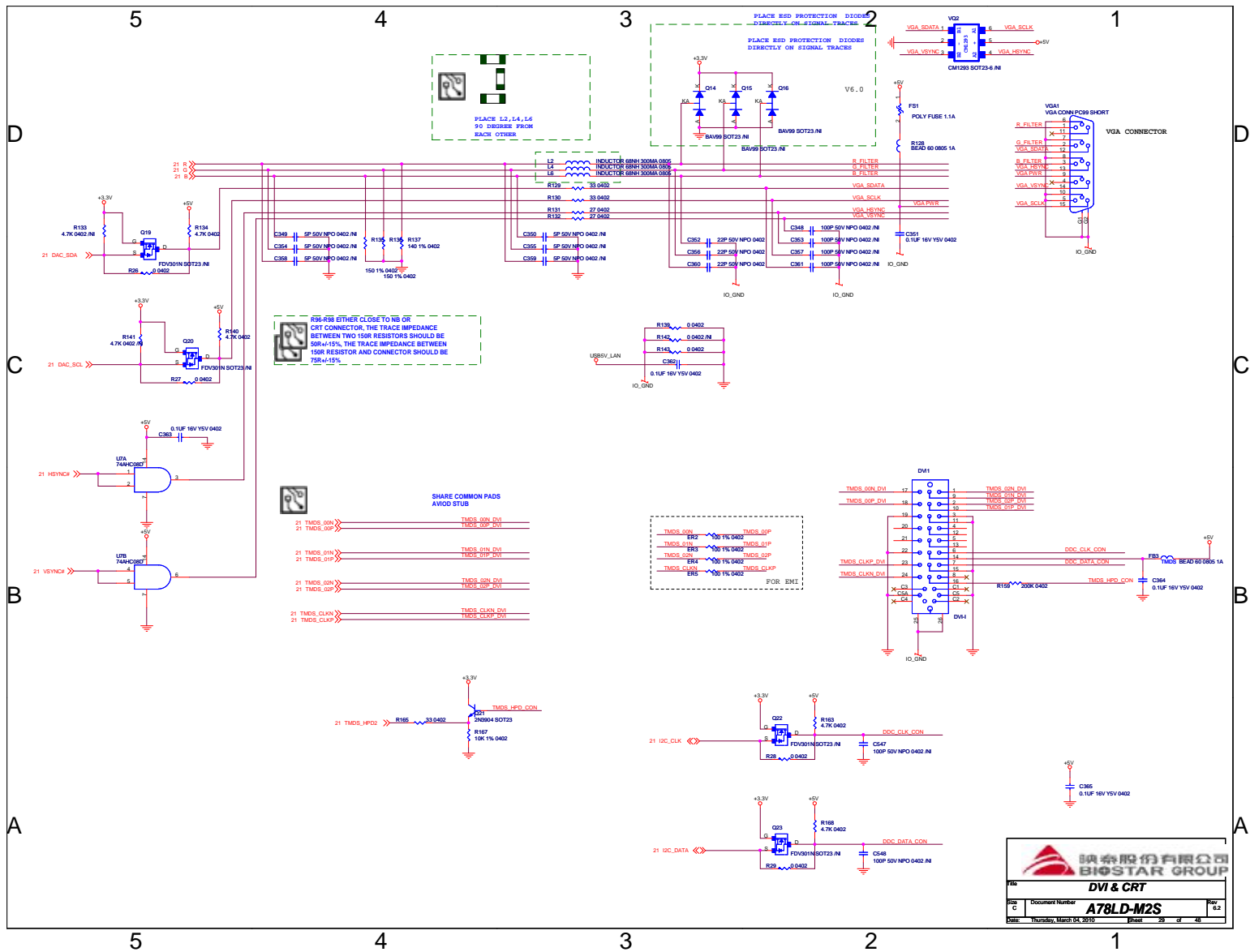
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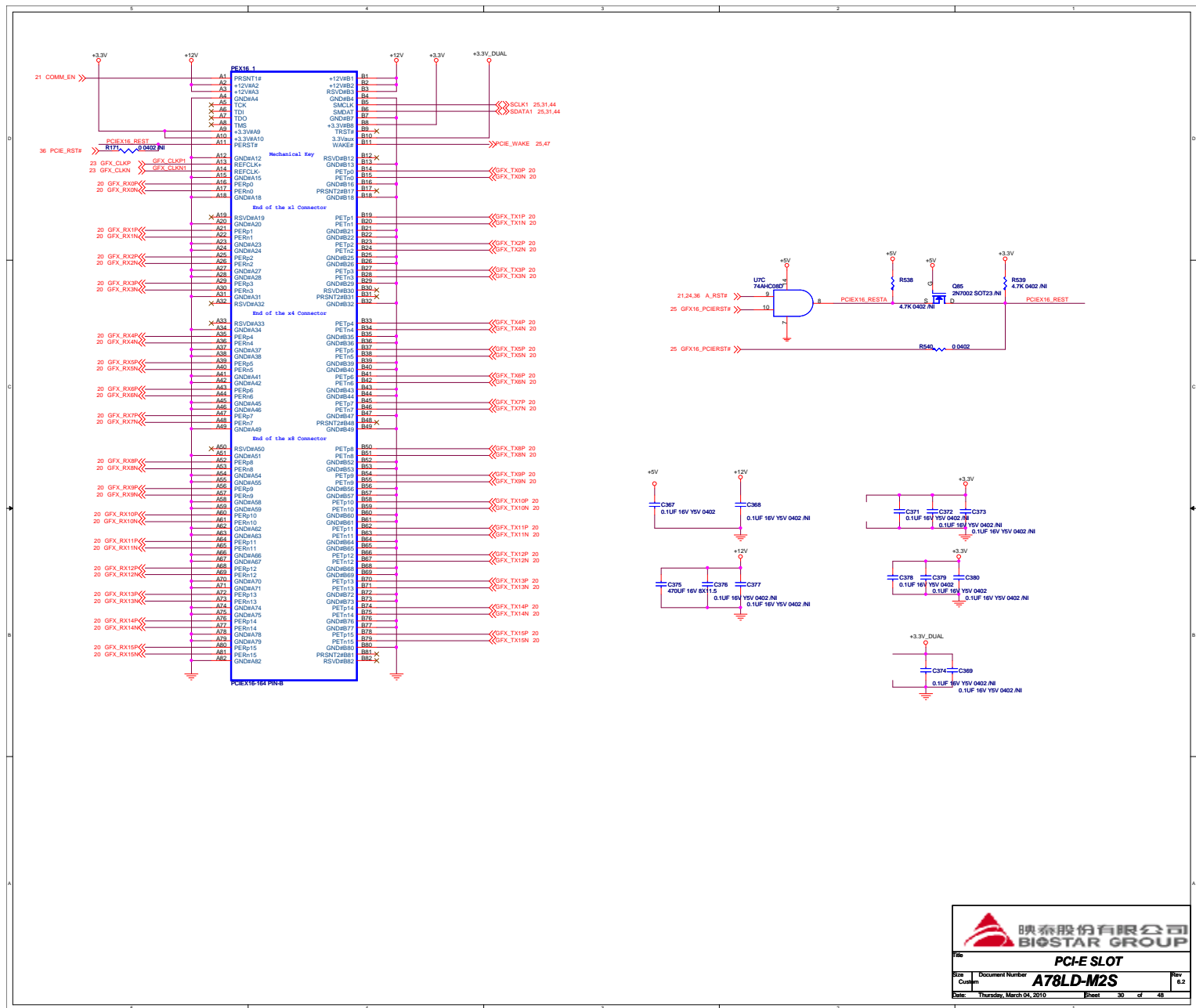
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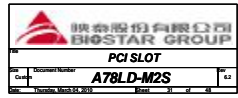
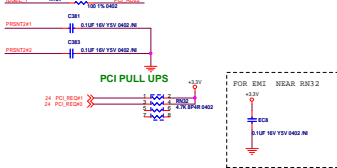
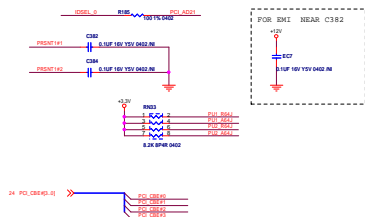
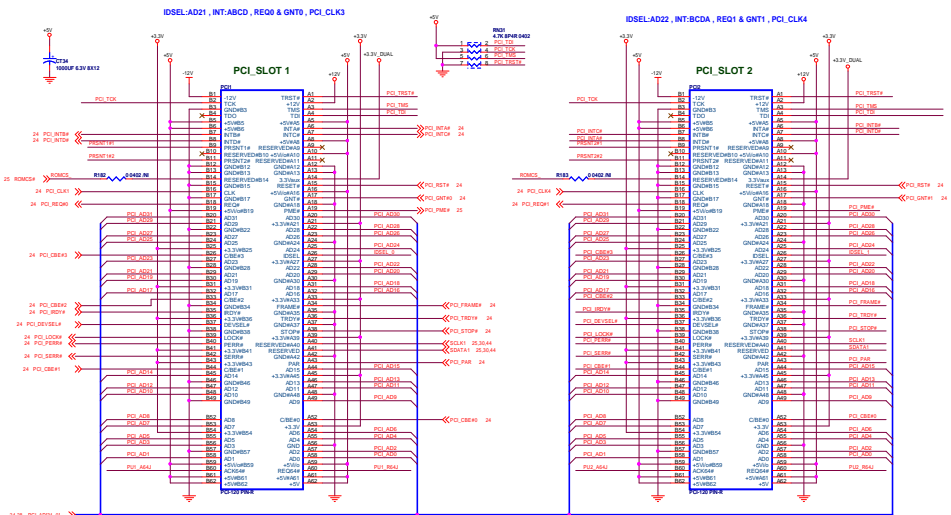




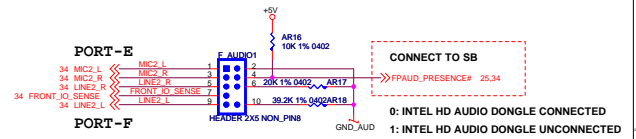
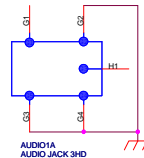
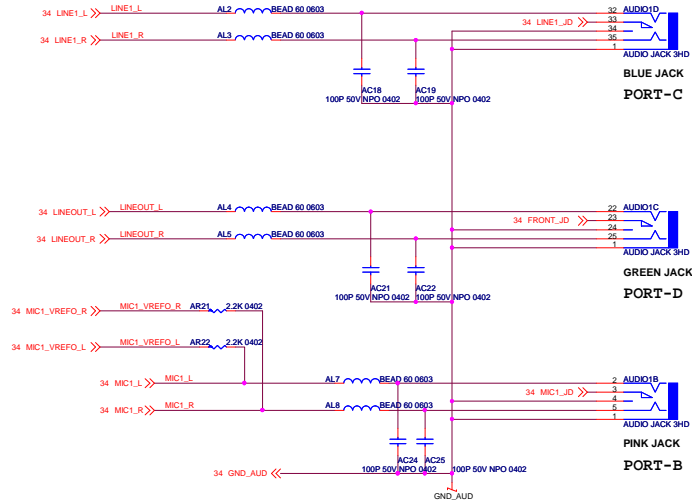
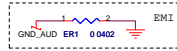




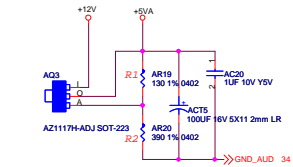




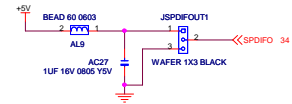
Rear Panel Onboard Analog I/O



AUDIO ANALOG POWER



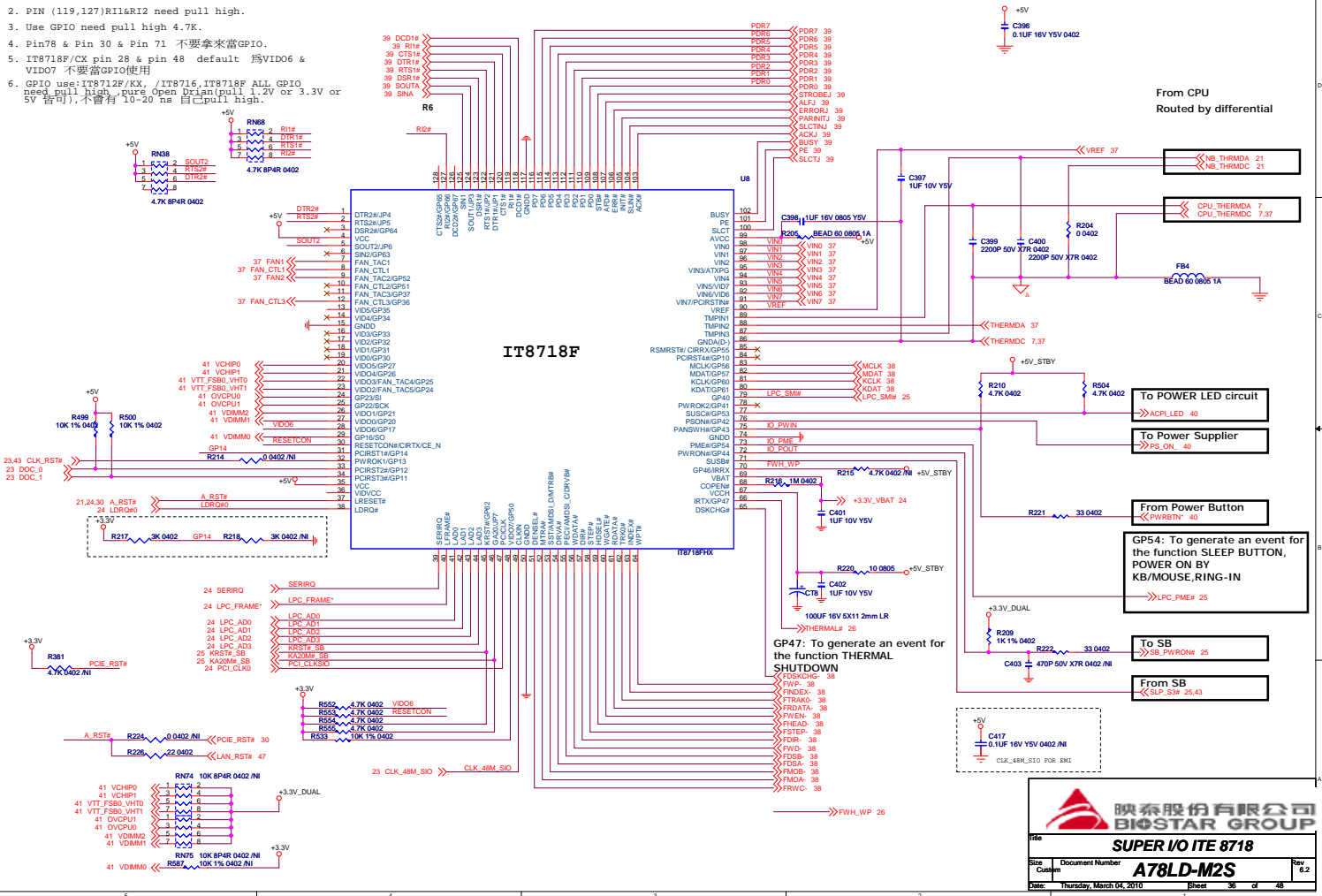
$$V_{out} = V_{ref} (1.25V) \times (1 + R2/R1) = 5V$$



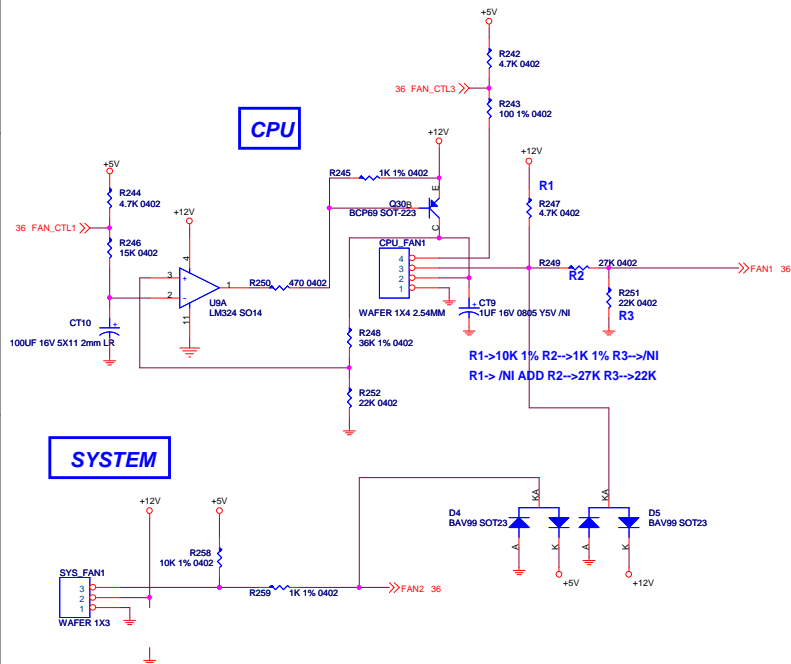
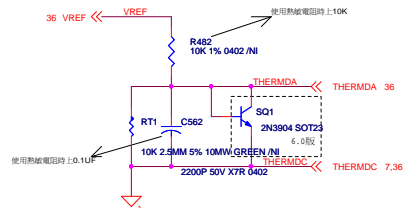

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BIOSSTAR GROUP**

AUDIO CONNECTOR	
File	A78LD-M2S
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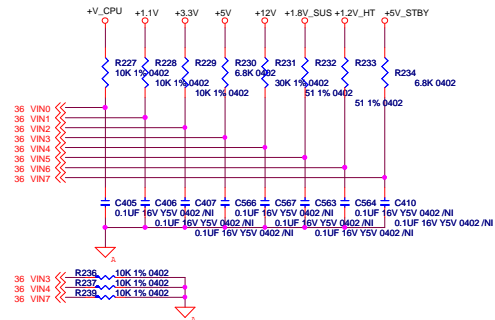
1. IT8718F PIN(28,48) VIDO6 SVIDO7 need pull high.
2. PIN (119,127)RI1&RI2 need pull high.
3. Use GPIO need pull high 4.7K.
4. Pin78 & Pin 30 & Pin 71 不要拿來當GPIO.
5. IT8718F/CX pin 28 & pin 48 default 為VIDO6 & VIDO7 不要當GPIO使用
6. GPIO 使用:IT8712P/KX, IT8716, IT8718F ALL GPIO 在 Open Drain(pull 1.2V or 3.3V or 5V 皆可)不能有 10-20 ns 上拉 pull high.



Temperature Sensing

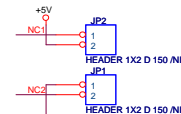


Voltage Sensing



hardware monitor

5 mil 60 歐姆 測試點

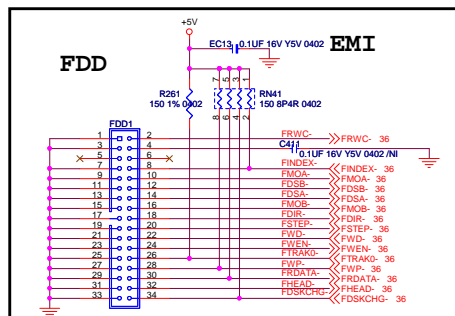


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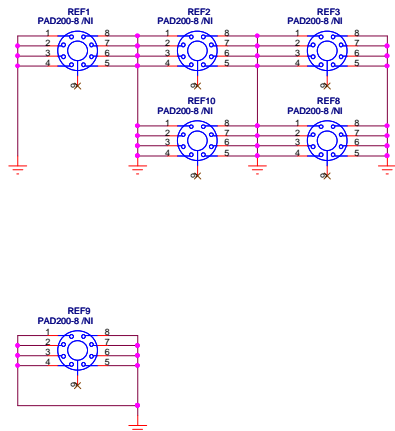
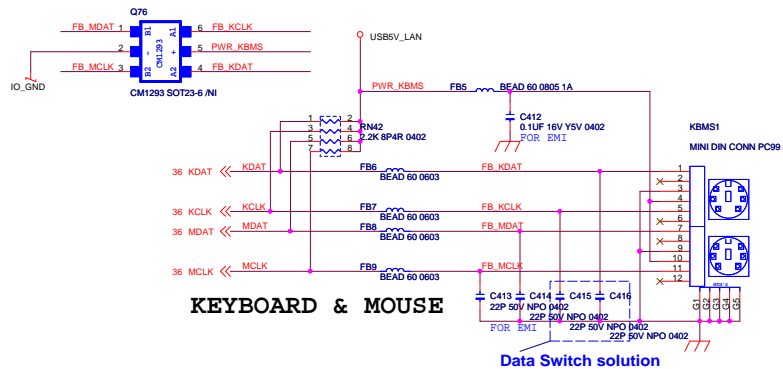
Title: **HW MONITOR/FAN CONTROL**

Size: Custom Document Number: **A78LD-M2S** Rev: 6.2

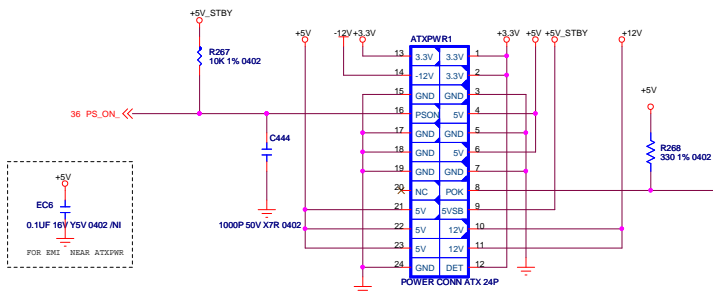
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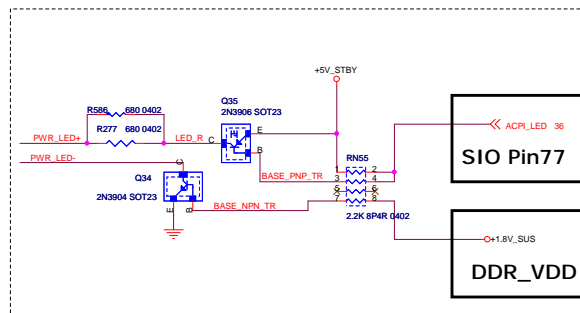
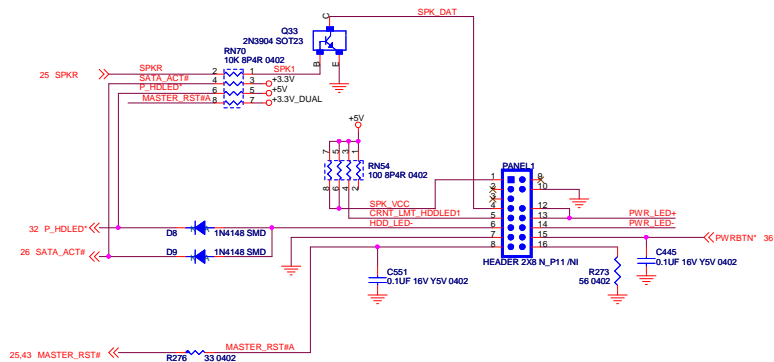
BOX 2X17 NS-R

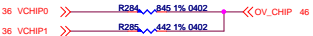


 映泰股份有限公司 BIOSTAR GROUP	
Title FDD / PS2 CONN	
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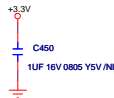


LED_D2	LED_D1	MESSAGE
OFF	OFF	ABNORMAL
OFF	ON	MEMORY ERROR
ON	OFF	VGA ERROR
ON	ON	NORMAL





DUAL +3.3V



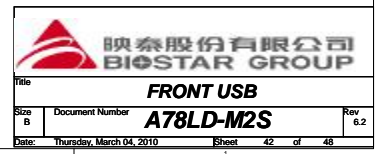
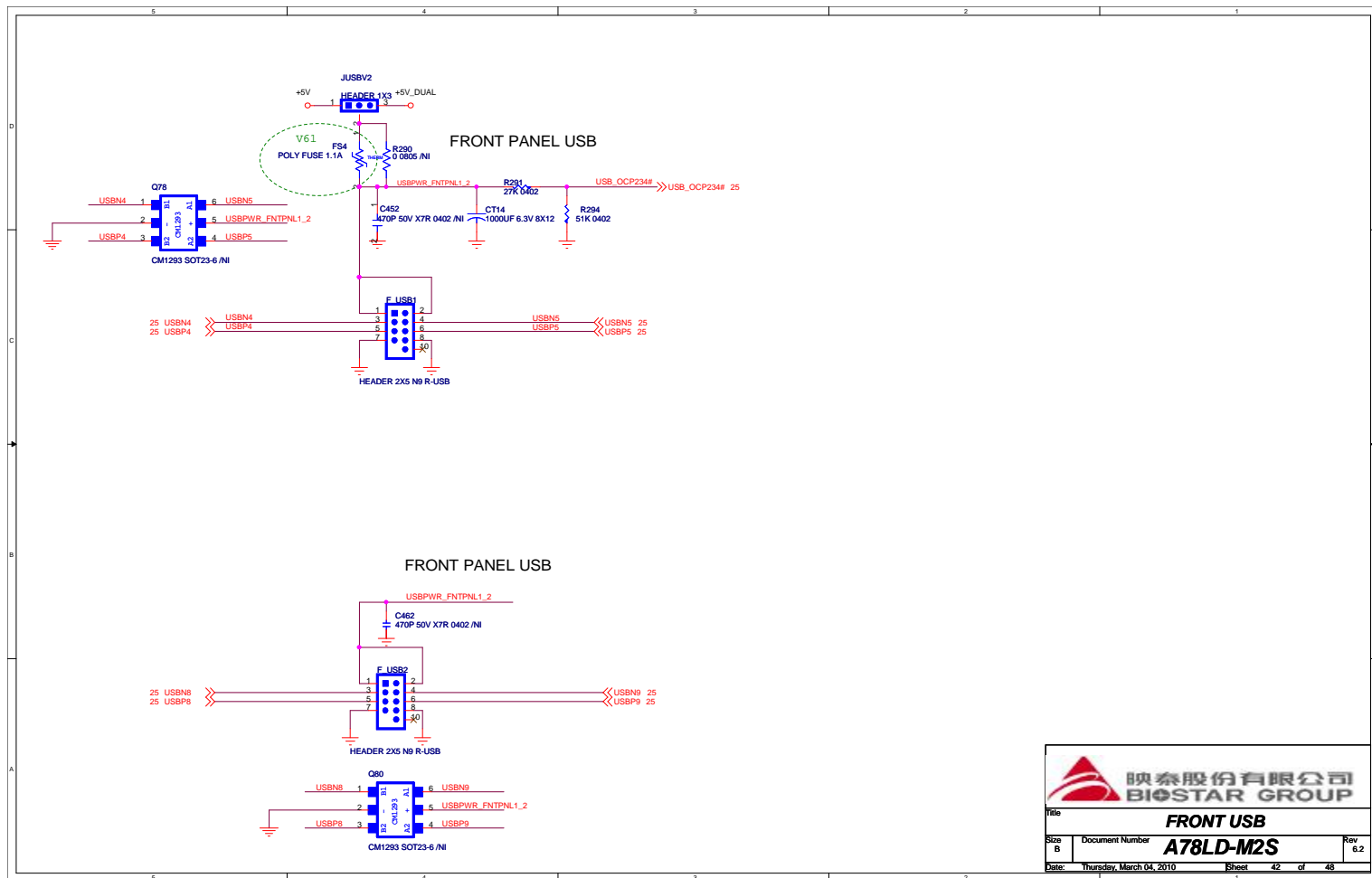
+1.2V	OV_CHIP1	OV_CHIP0
+1.20V	1	1
+1.29V	0	1
+1.38V	1	0
+1.45V	0	0

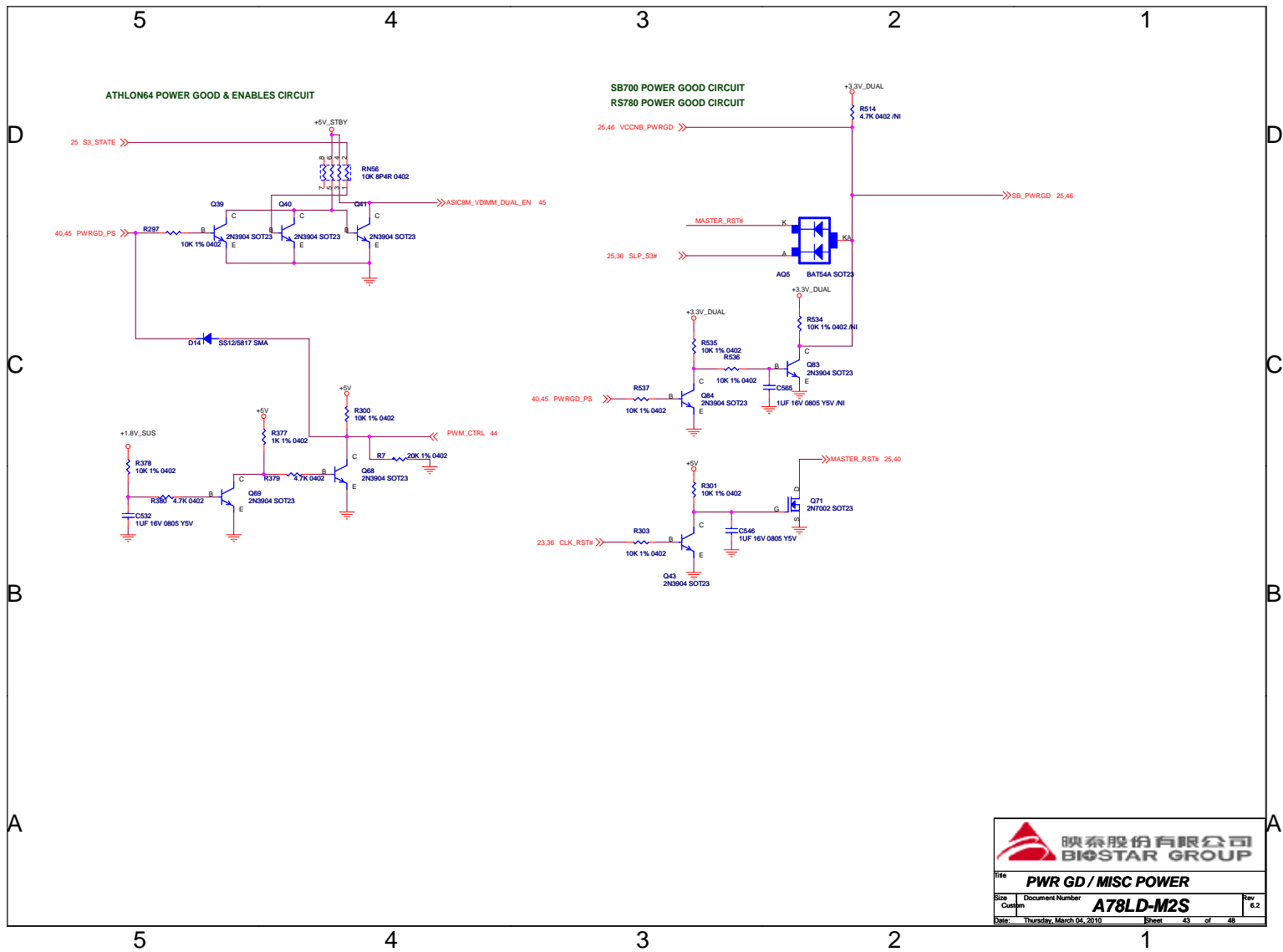
+1.8VDIMM_FB	VDIMM0	VDIMM1	VDIMM2
Default 1.956V	1	1	1
2.054V	0	1	1
2.152V	1	0	1
2.250V	0	0	1
2.350V	1	1	0
2.448V	0	1	0
2.545V	1	0	0
2.643V	0	0	0

0V_VCORE	OV_VCORE1	OV_LDT1
Default V_CPU	1	1
+7.8%	0	1
+15%	1	0
+23%	0	0



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

