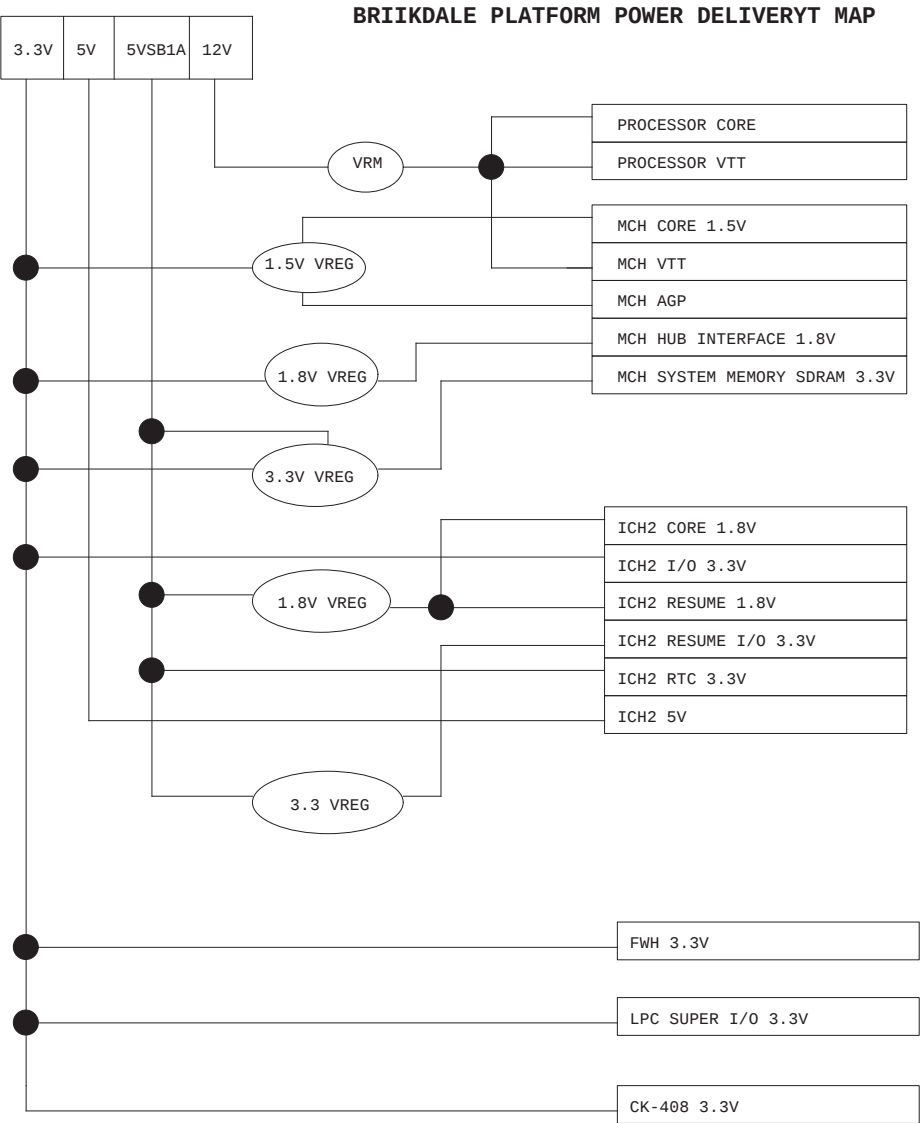
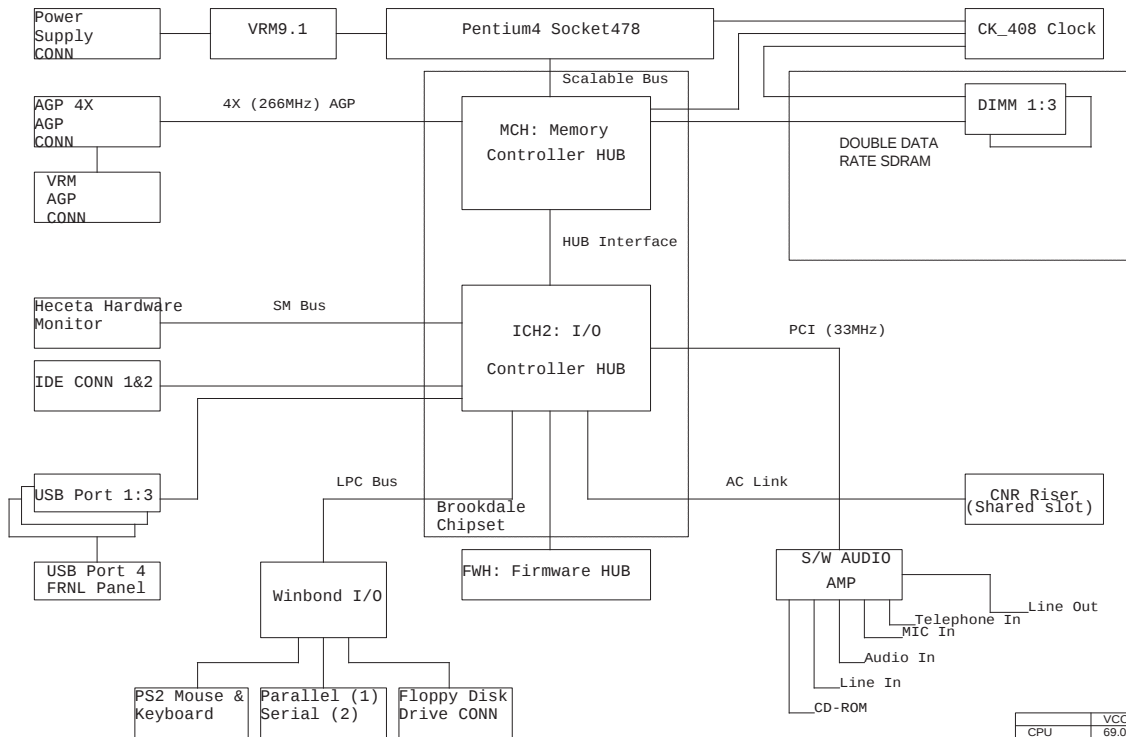


MS-6566 INTEL (R)
Brookdale/ICH2
CHIPSET
Pentium 4 in 478 pinPackage/Northwood
Processor SCHEMATICS

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POWER CONSUMPTION

	VCCP	VCC_AGP	VCC1_8	VCC3_DIMM	VCC3	VCC5	VCC5_SB	+12V	-12V
CPU	69.0A	0	0	0	0	0	0	0	0
PMCH	2.4A	NOTE1	0.2A	2.0A	0	0	0	0	0
ICH2	0	0	NOTE3	0	NOTE3	0	NOTE3	0	0
CLOCK	0	0	0	0	0	0	0	0	0
CODEC	0	0	0	0	0	0	0	0	0
FWH	0	0	0	0	0	0	0	0	0
LAN	0	0	0	0	0	0	0	0	0
SIO				0			0	0	0
782D				0			0	0	0
SC2433	0	0	0	0	0	0	0	0	0
SC1205	0	0	0	0	0	0	0	0	0
SC1547	0	0			0	0	0	0	0
DIMM	0	0	0	NOTE2	0	0	NOTE2	0	0
CNR	0	0	0	0			0	0	0
AGP	0	8.0A	0		6.0A	2.0A	?	1.0A	0
PCI	0	0	0	0			0	0	0
USB	0	0	0	0	0	0	0	0	0
FAN	0	0	0	0	0	0	0	0	0
TTL	0	0	0	0			0	0	0
OTHER									

NOTE1 --- MCH
 $VCC_AGP = VCC1_5 (1.5A) + VCC_AGP (0.37A)$

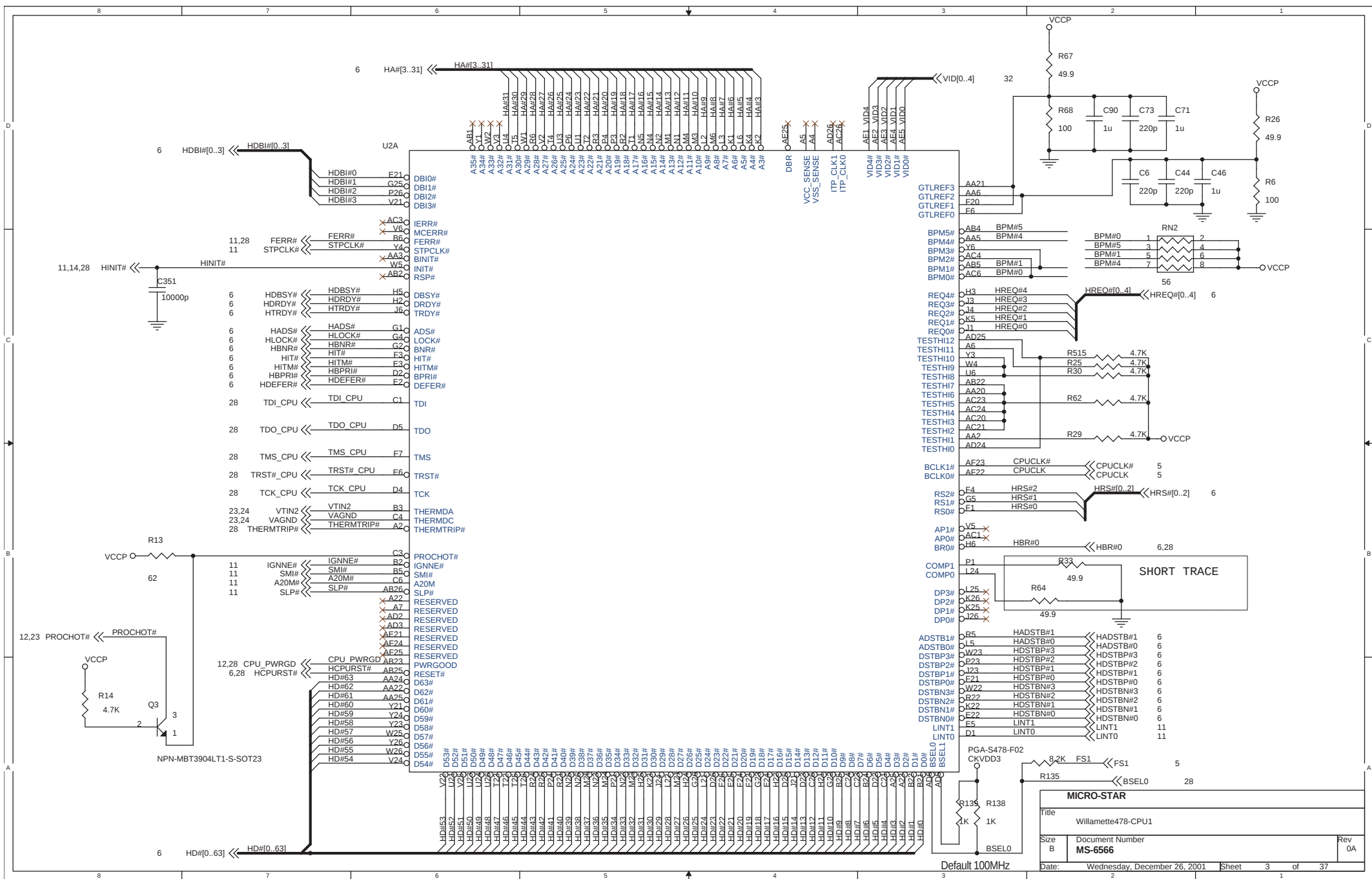
NOTE2 --- DIMM
 $S0 STATE --- 2.0A * 3 = 6.0A ---> VCC3$
 $S1/S3 STATE --- 200mA * 3 = 600mA ---> VCC3_SB$
 $VCC3_SB ---> 600mA * 3.3V/5V = 396mA ---> VCC5_SB$

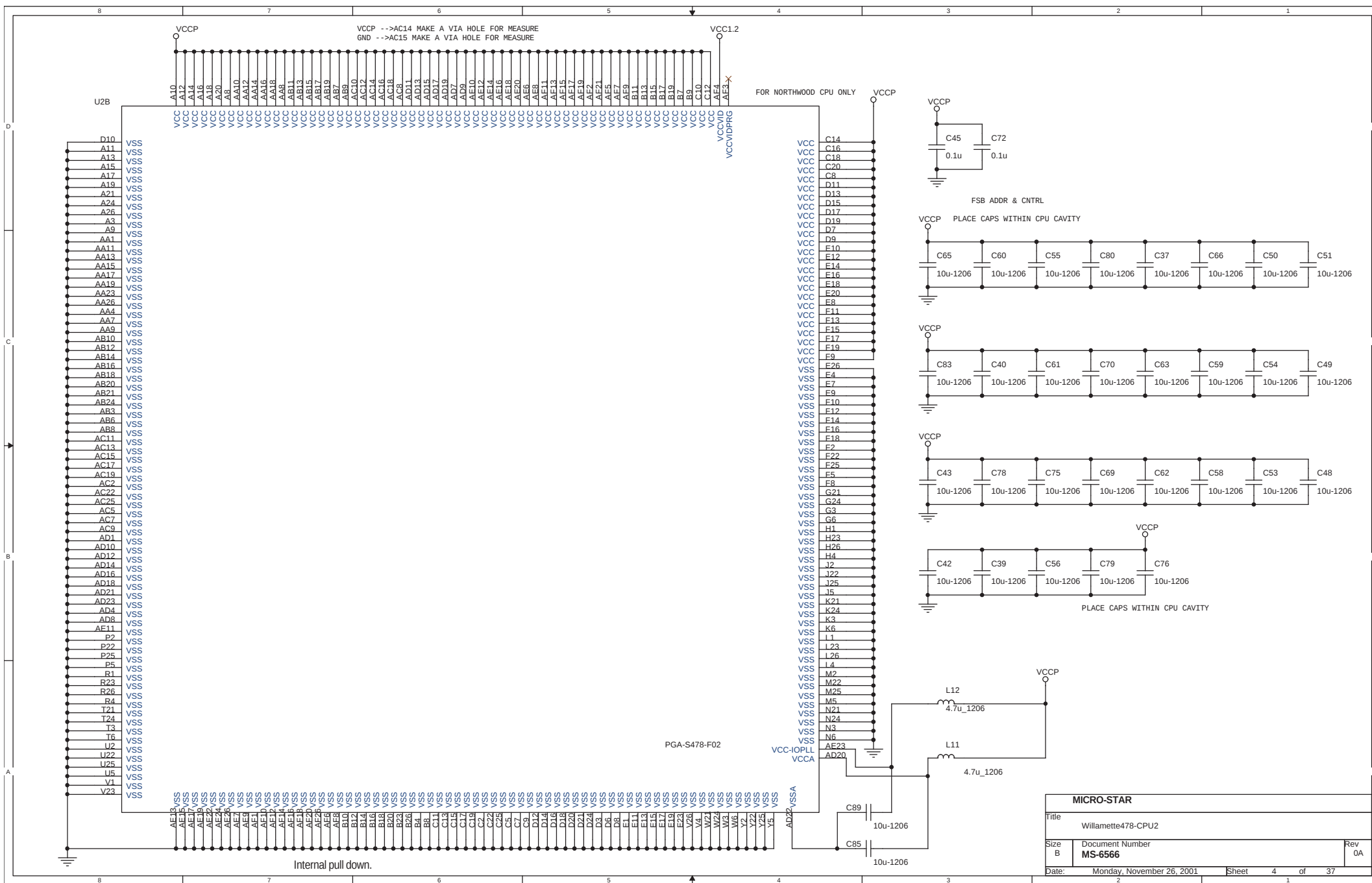
Power	S0	S1	S3/S4/S5
1.8V	300mA	100mA	N/A
1.8V_LAN	35mA	20mA	N/A
VCC1_8SB	45mA	30mA	7mA
VCC3	410mA	5mA	N/A
VCC3+562ET	230mA	210mA	N/A
VCC3_SB	25mA	0.6mA	N/A

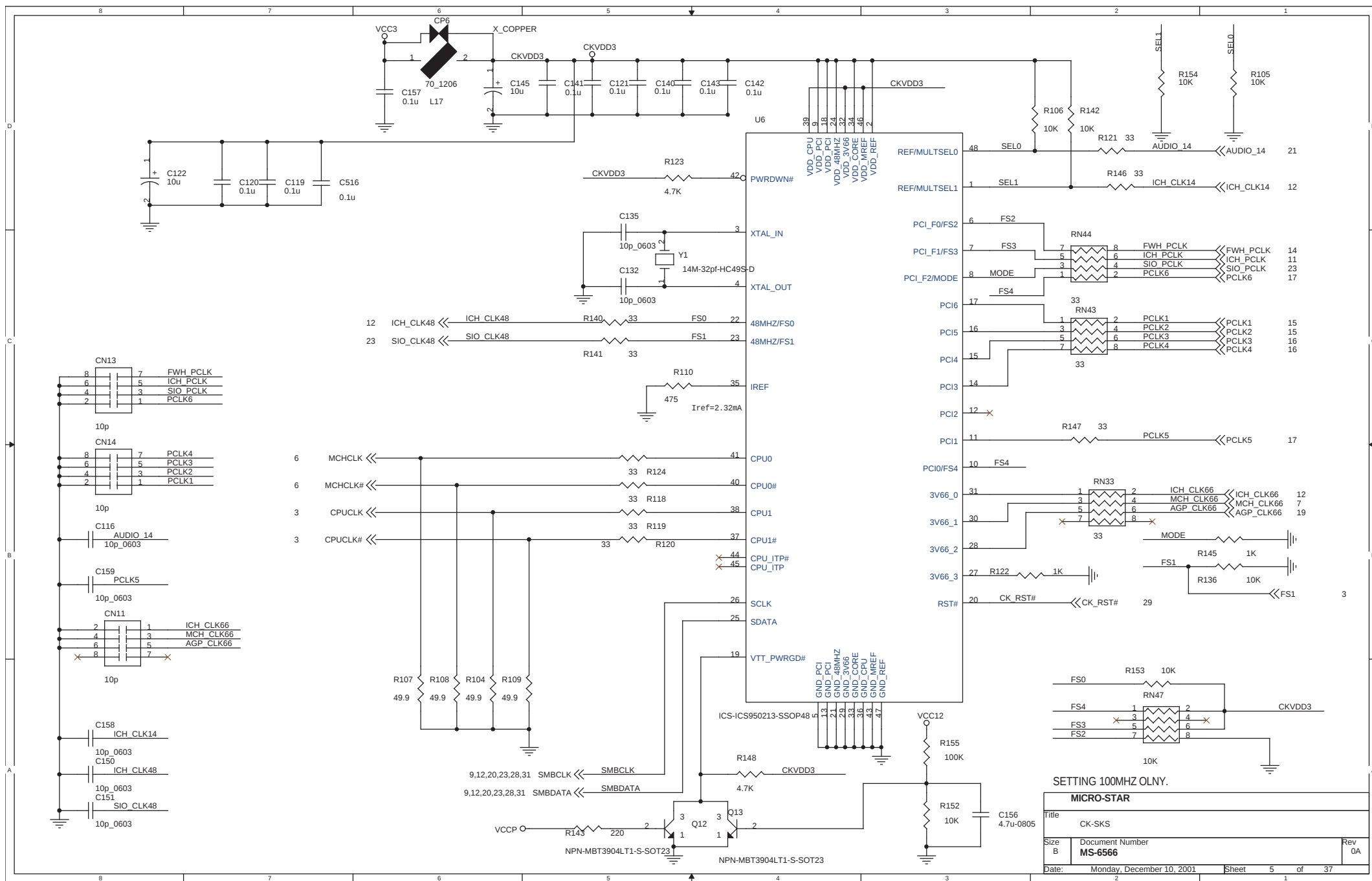
$VCC3_SB =$
 $VCC1_8SB =$
 $VCC5_SB = VCC3_SB + VCC1_8SB$

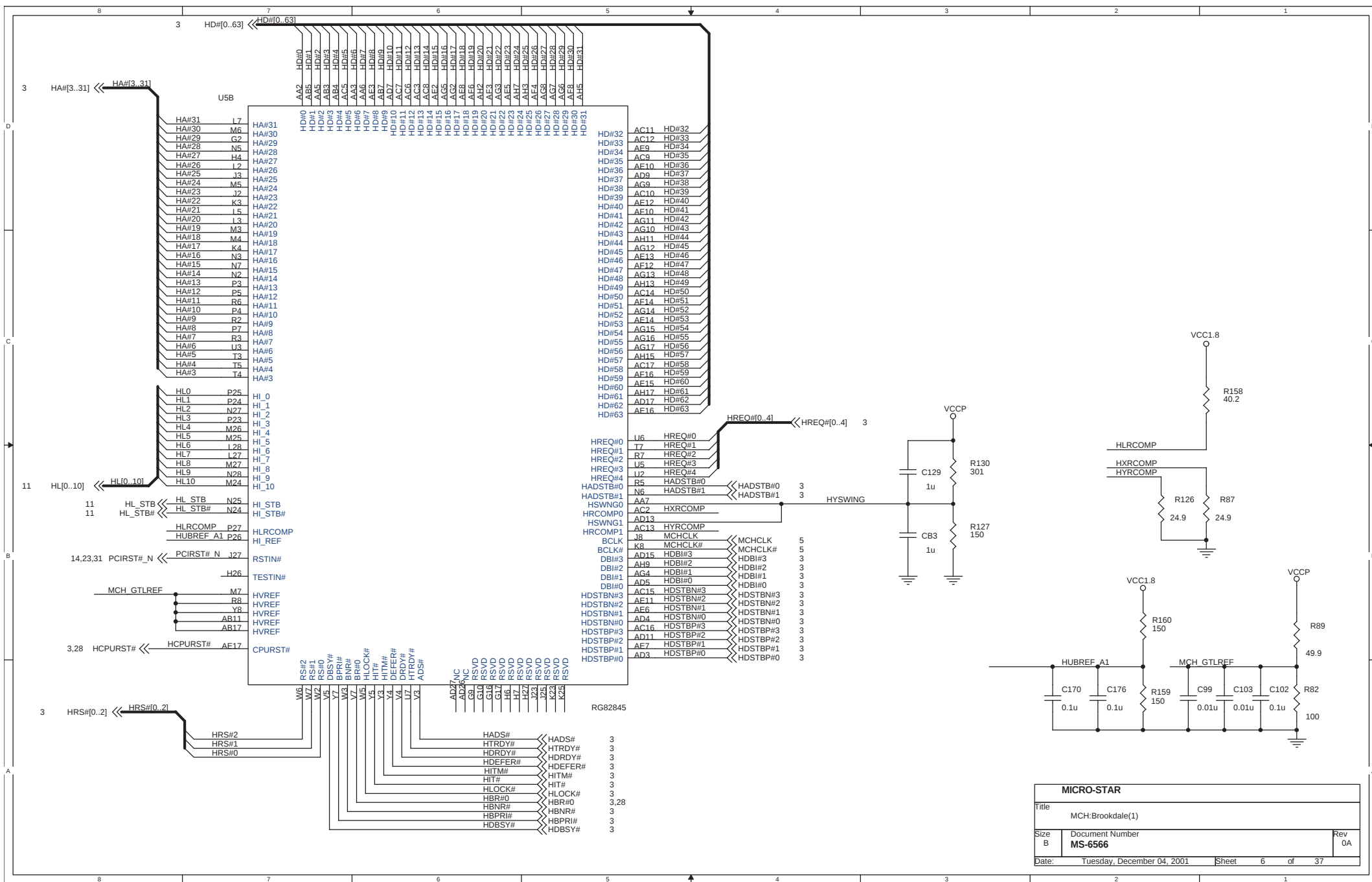
H/W Project Leader : Andy Chen
H/W Project Engineer : Prudence Wang

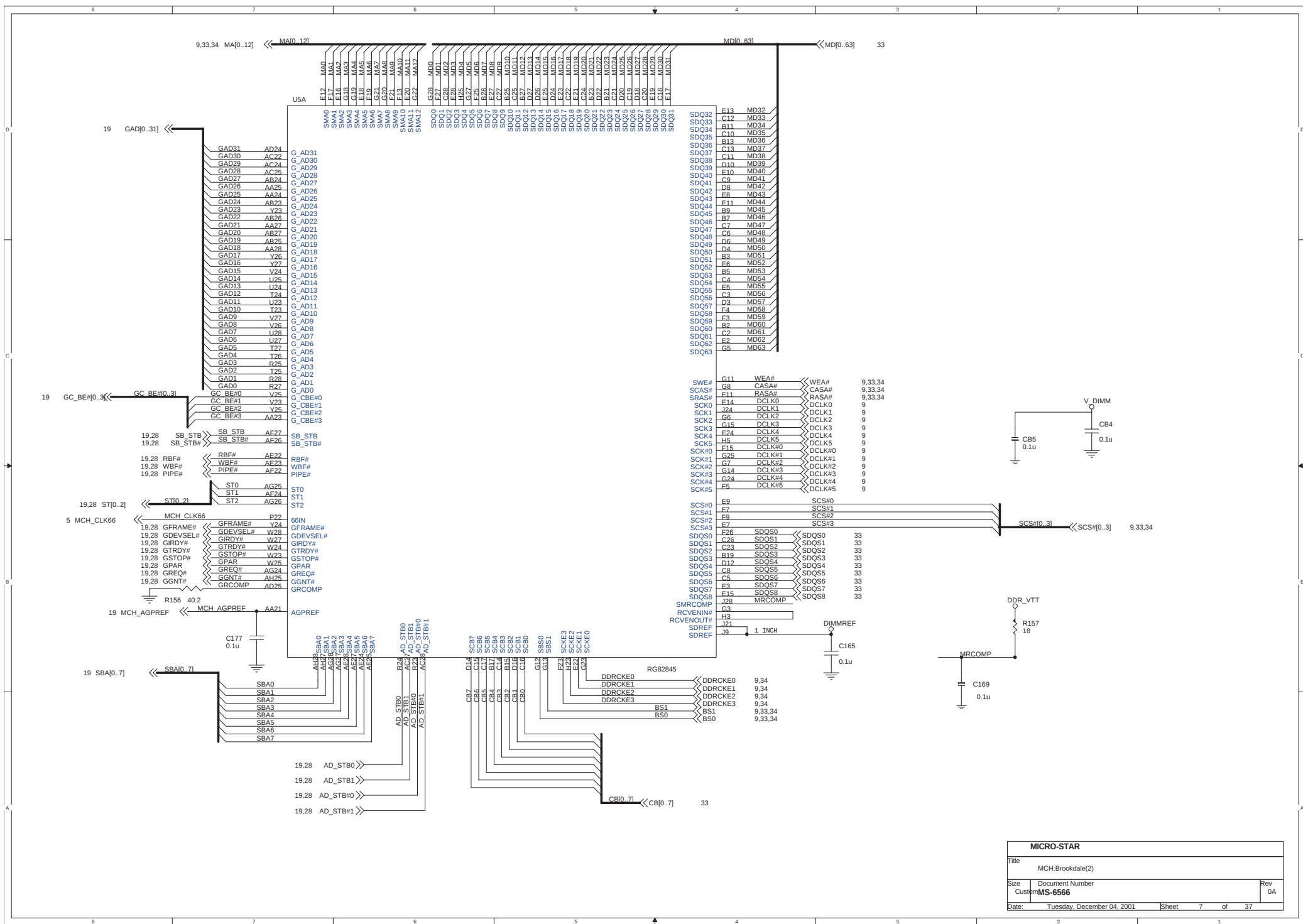
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Block Diagram		
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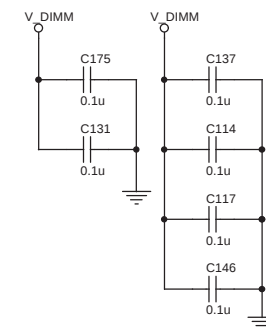
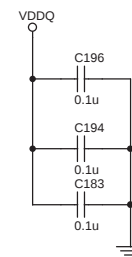
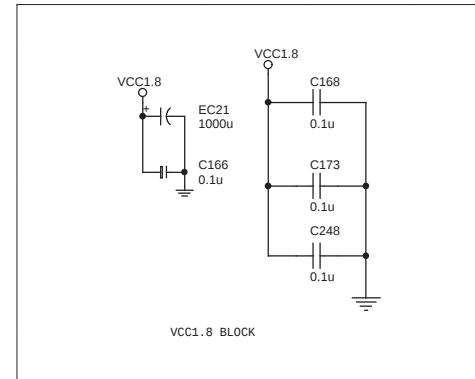
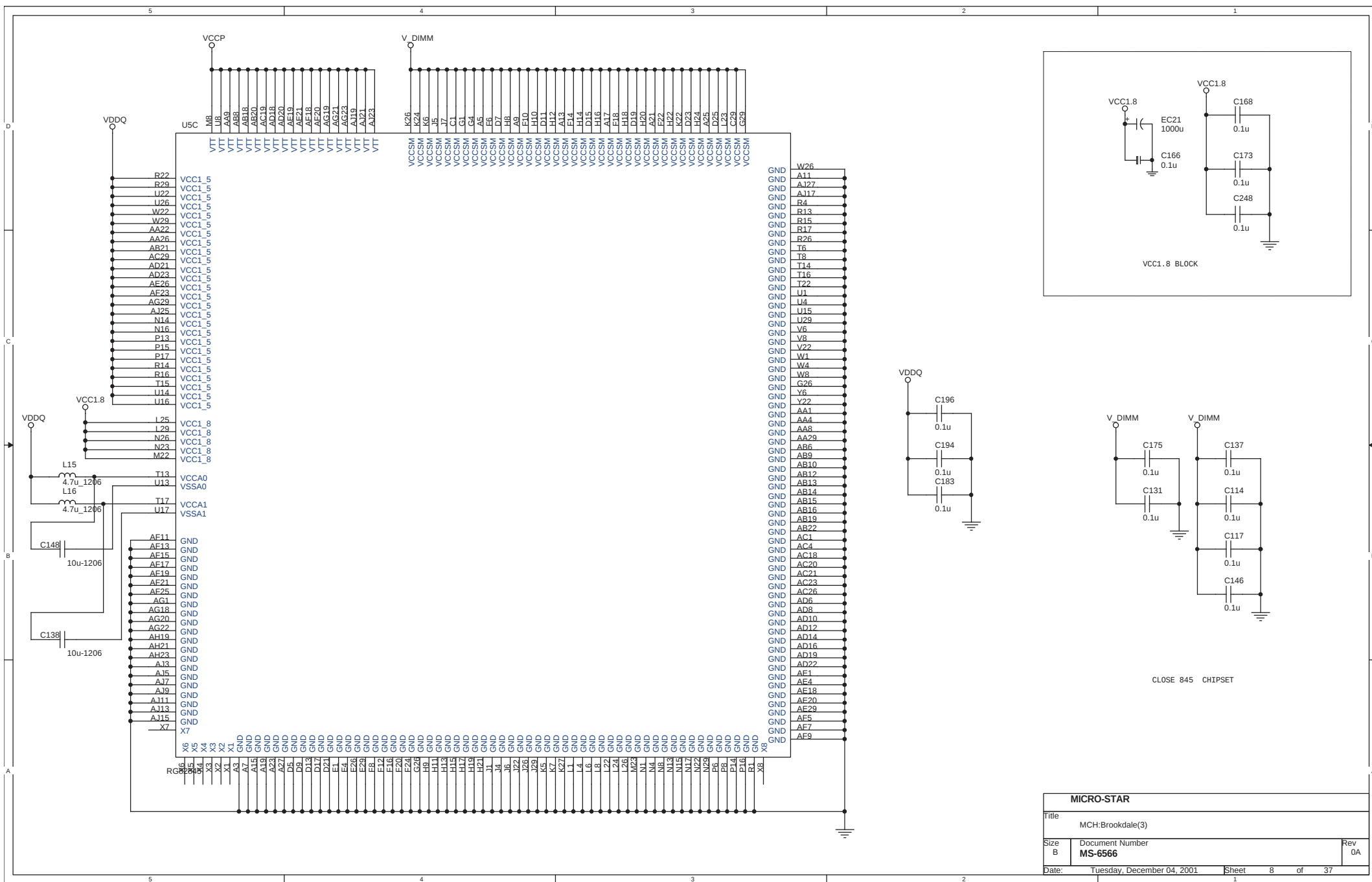






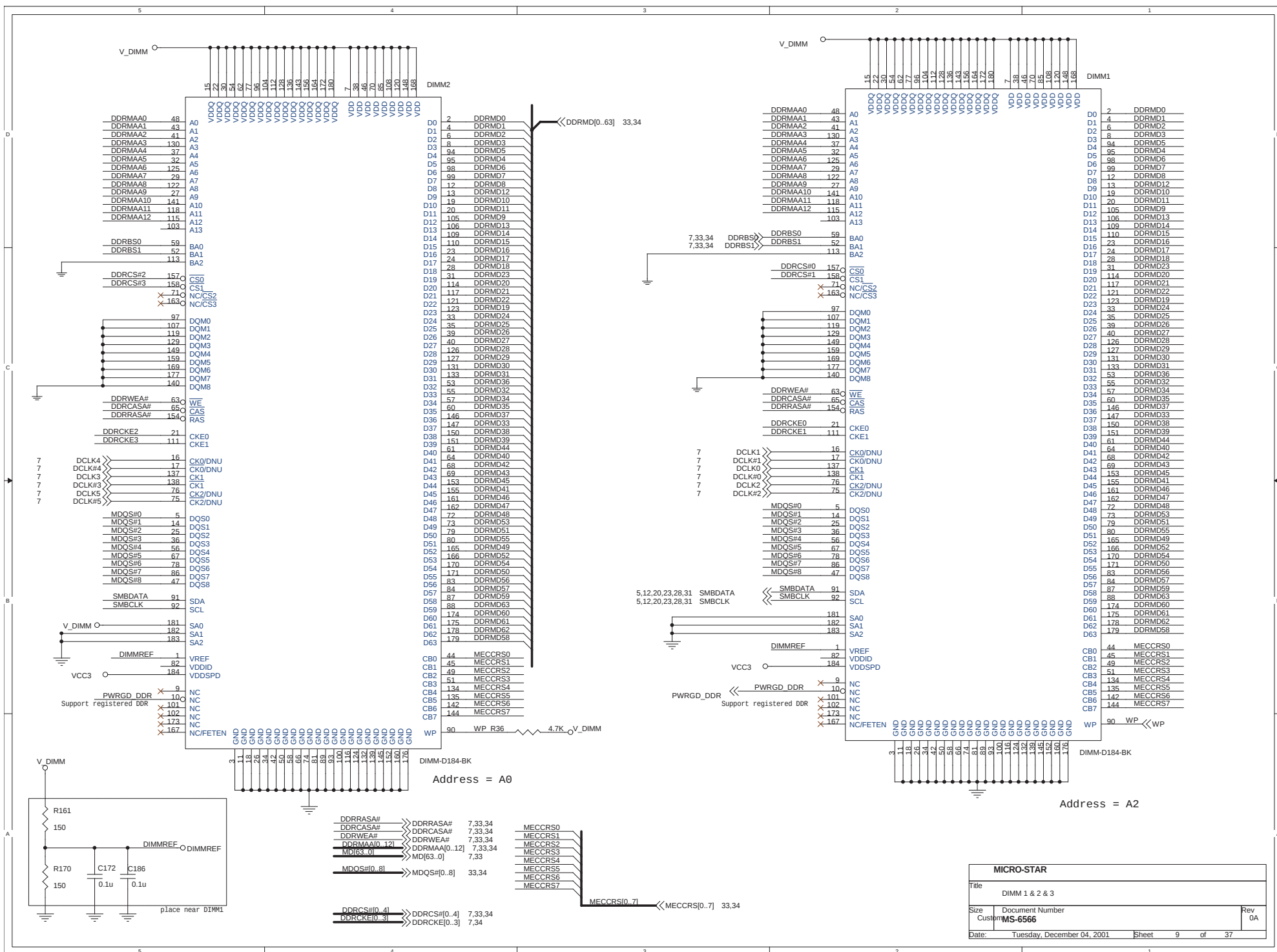




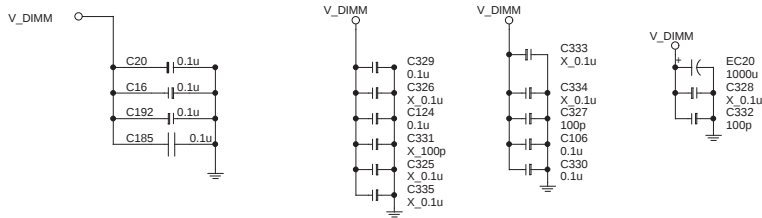


CLOSE 845 CHIPSET

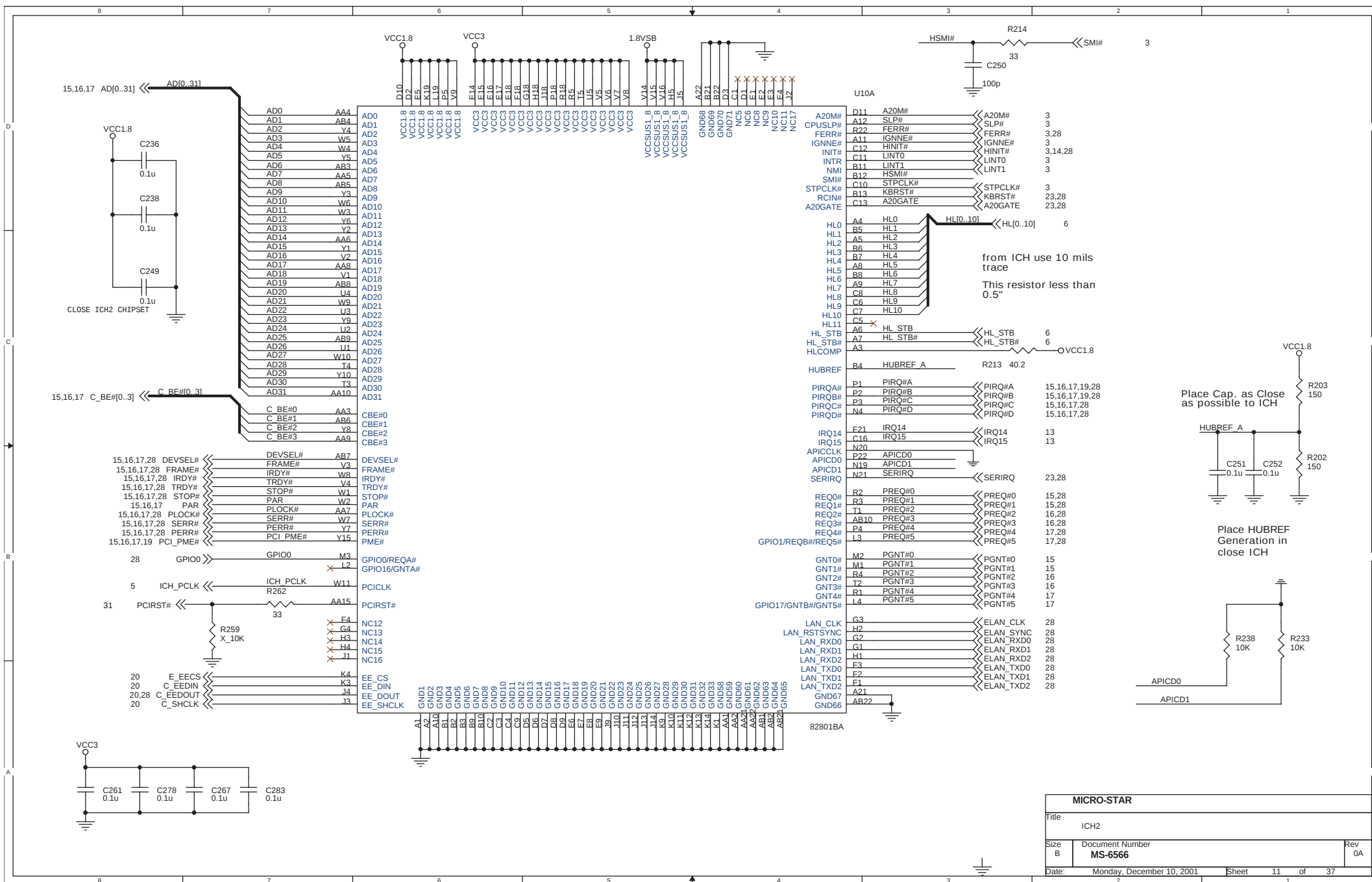
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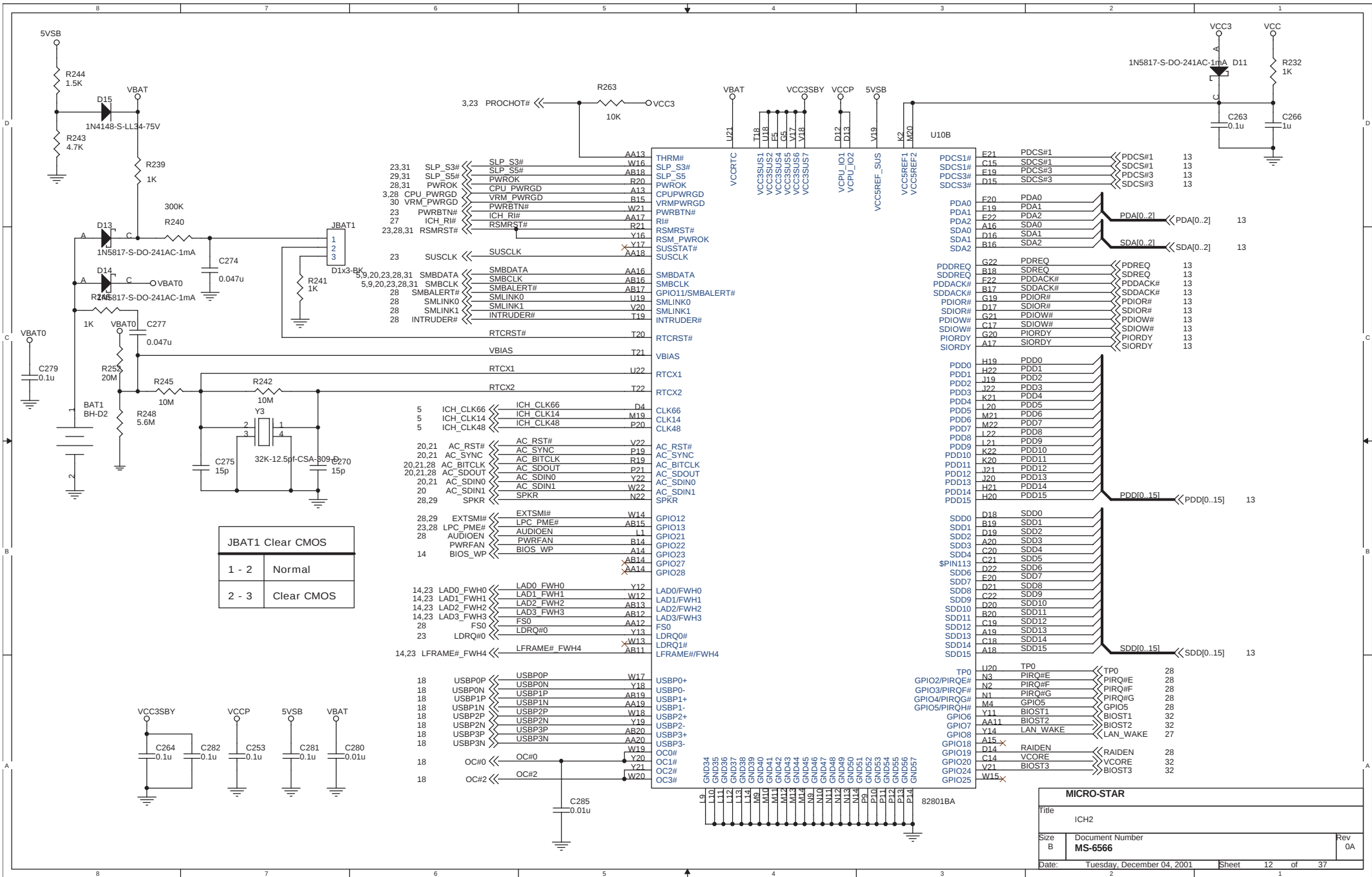


DECOUPLING CAPACITORS

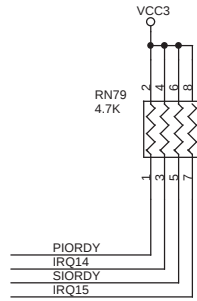
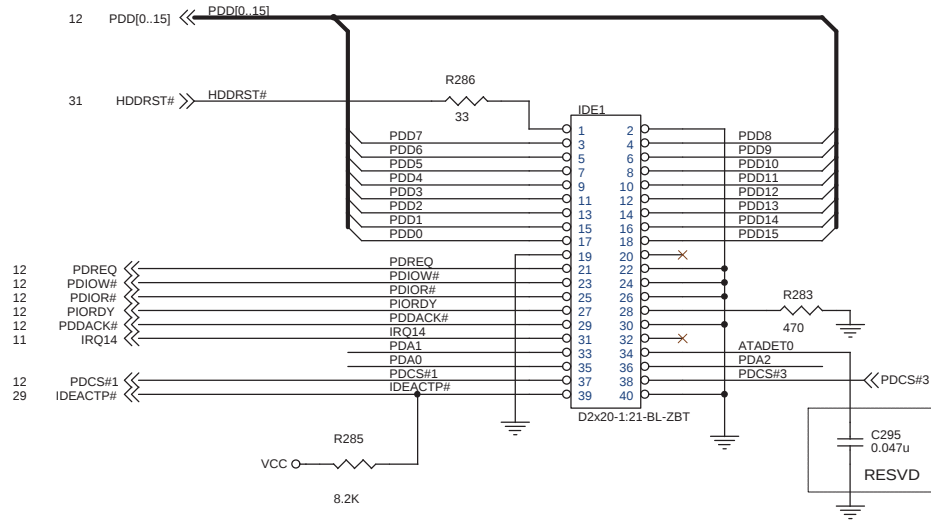


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DIMM 1 & 2 & 3			
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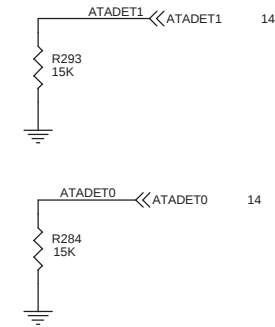
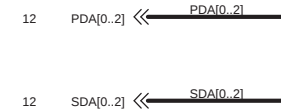
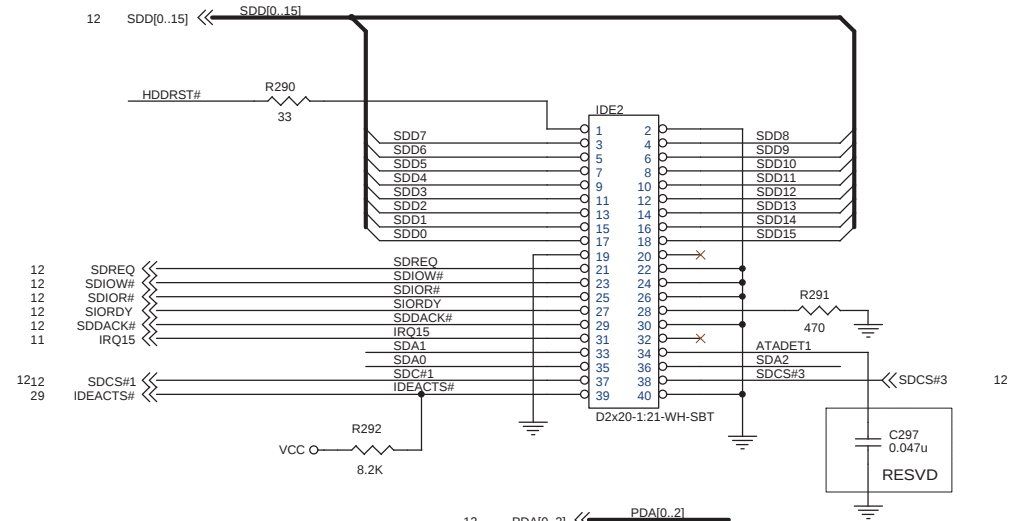




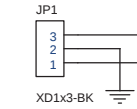
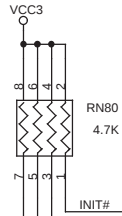
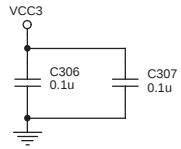
PRIMARY IDE CONN.



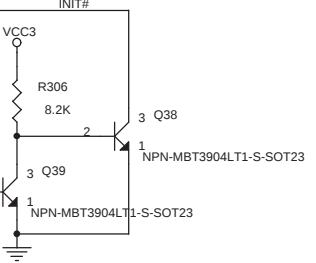
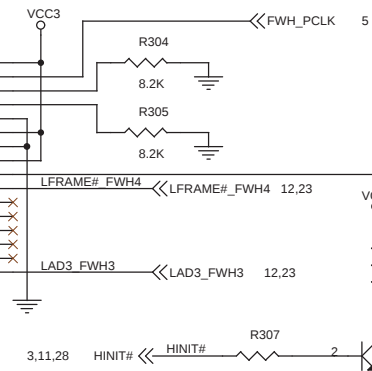
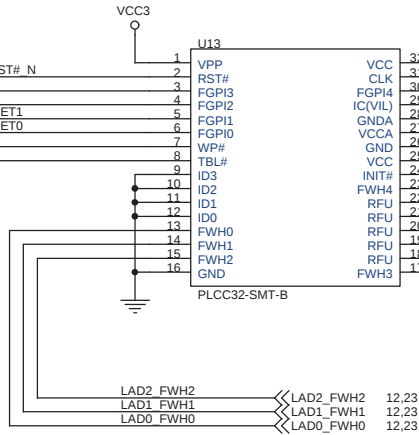
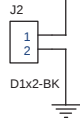
SECONDARY IDE CONN.



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12 BIOS_WP << BIOS_WP



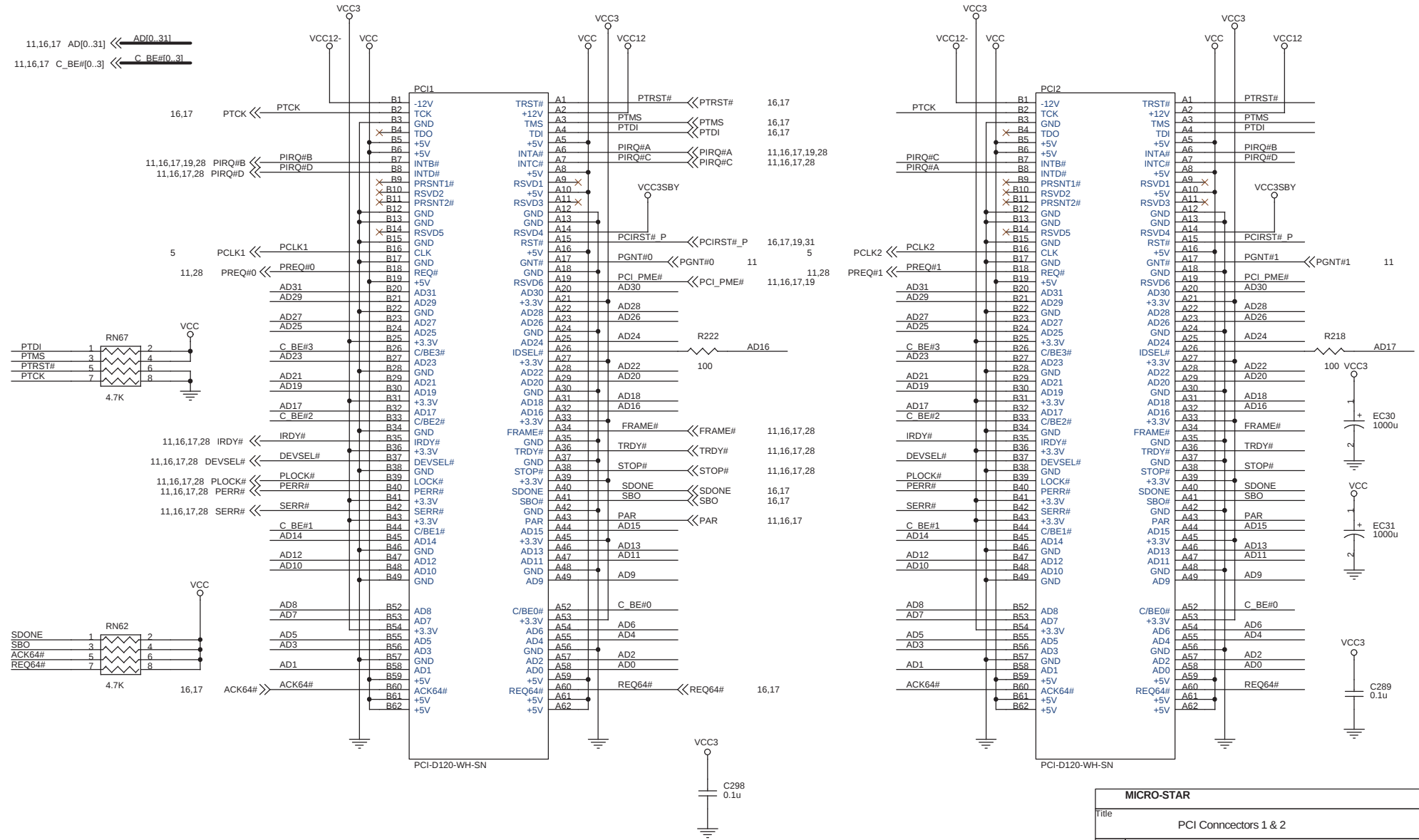
JP1 Gateway	
1 - 2	Flash from FDD
2 - 3	Boot auto clear CMOS

J6 BIOS PROTECT	
SHORT	Locked
OPEN	Unlocked

*

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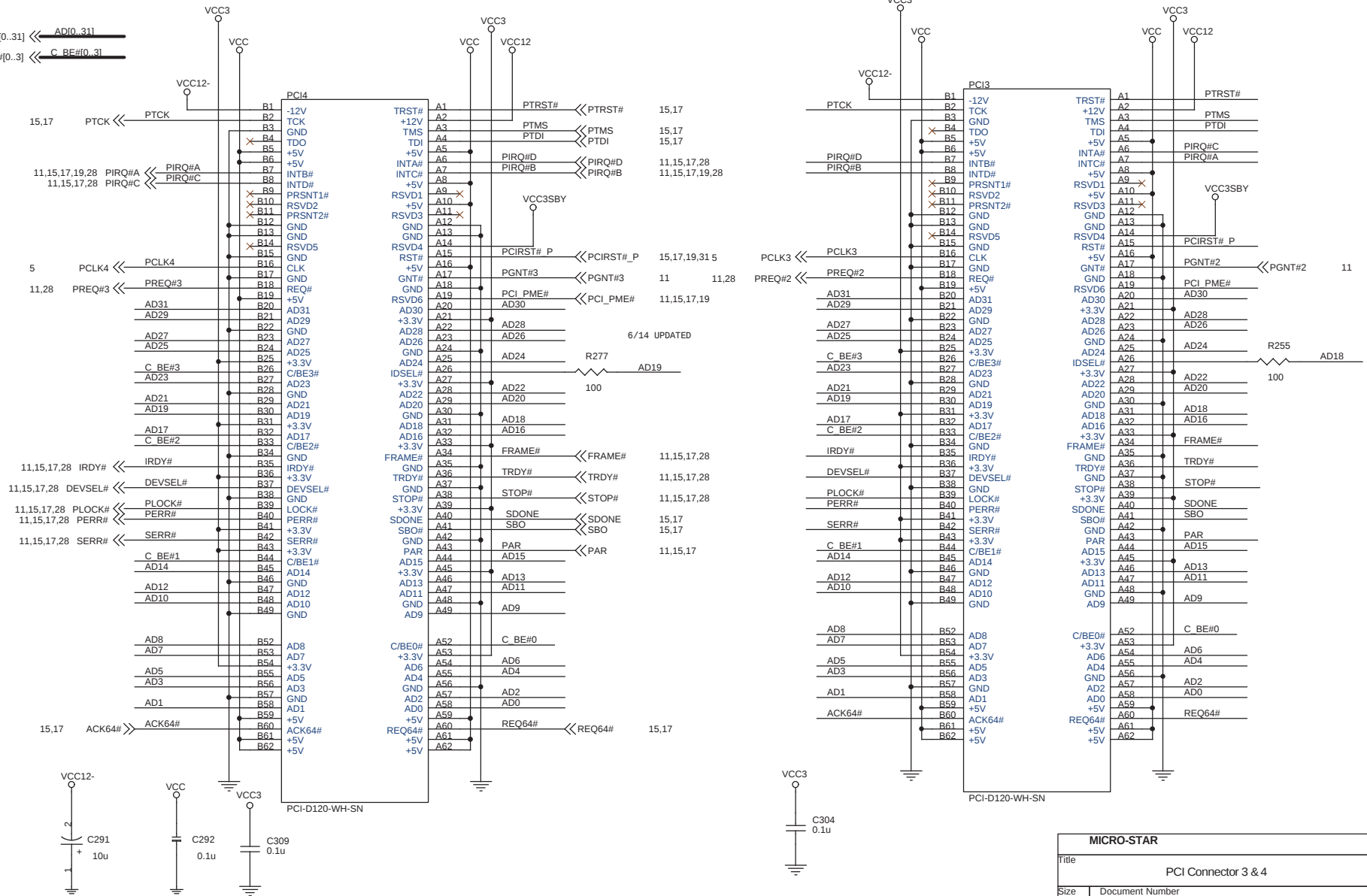
32/33 PCI Connector 1 & 2



MICRO-STAR			
Title			
PCI Connectors 1 & 2			
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32/33 PCI Connector 3 & 4

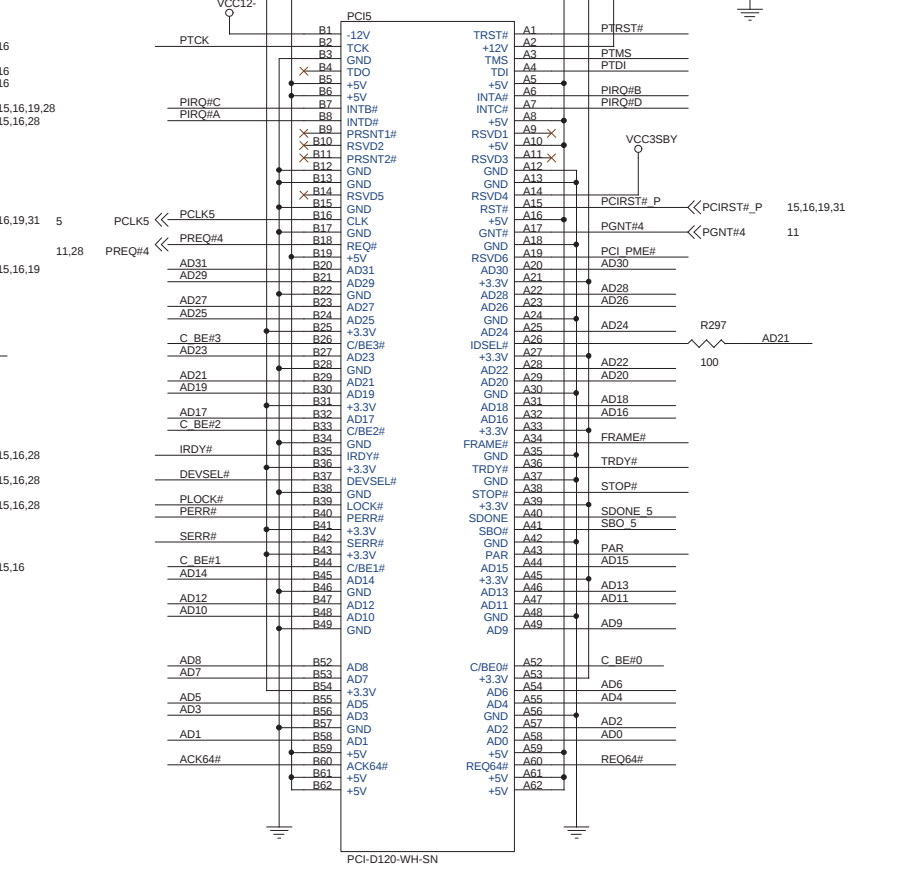
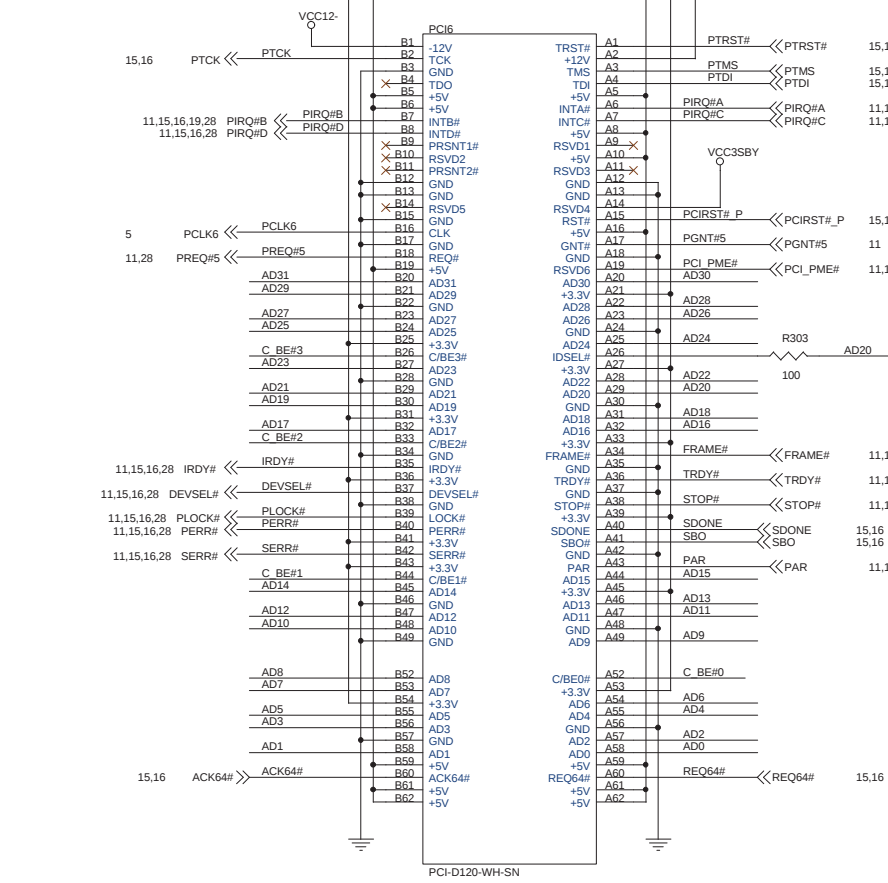
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11,15,17 C_BE#[0..3] << C_BE#[0..3]



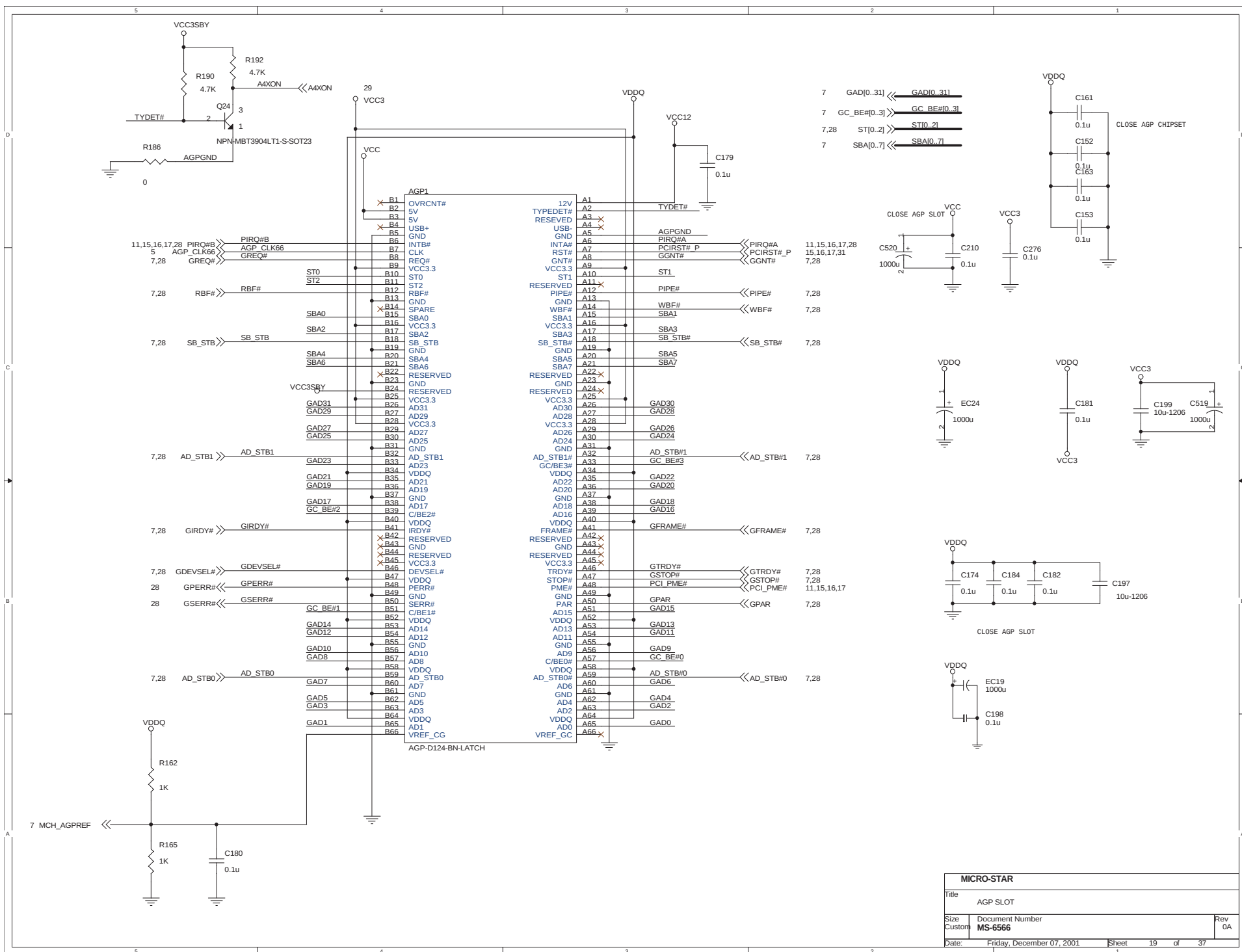
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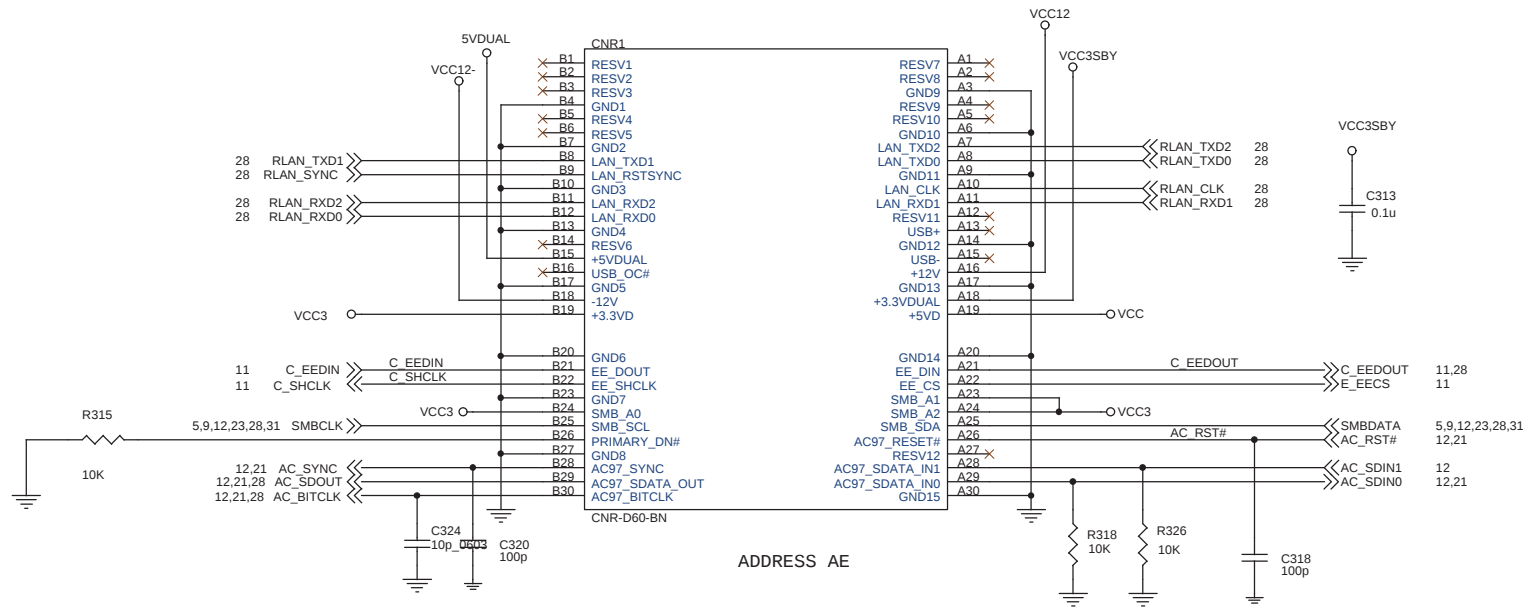
32/33 PCI Connector 5 & 6

11,15,16 AD[0..31] << ADI[0..31]
11,15,16 C_BE#[0..3] << C_BE#[0..3]



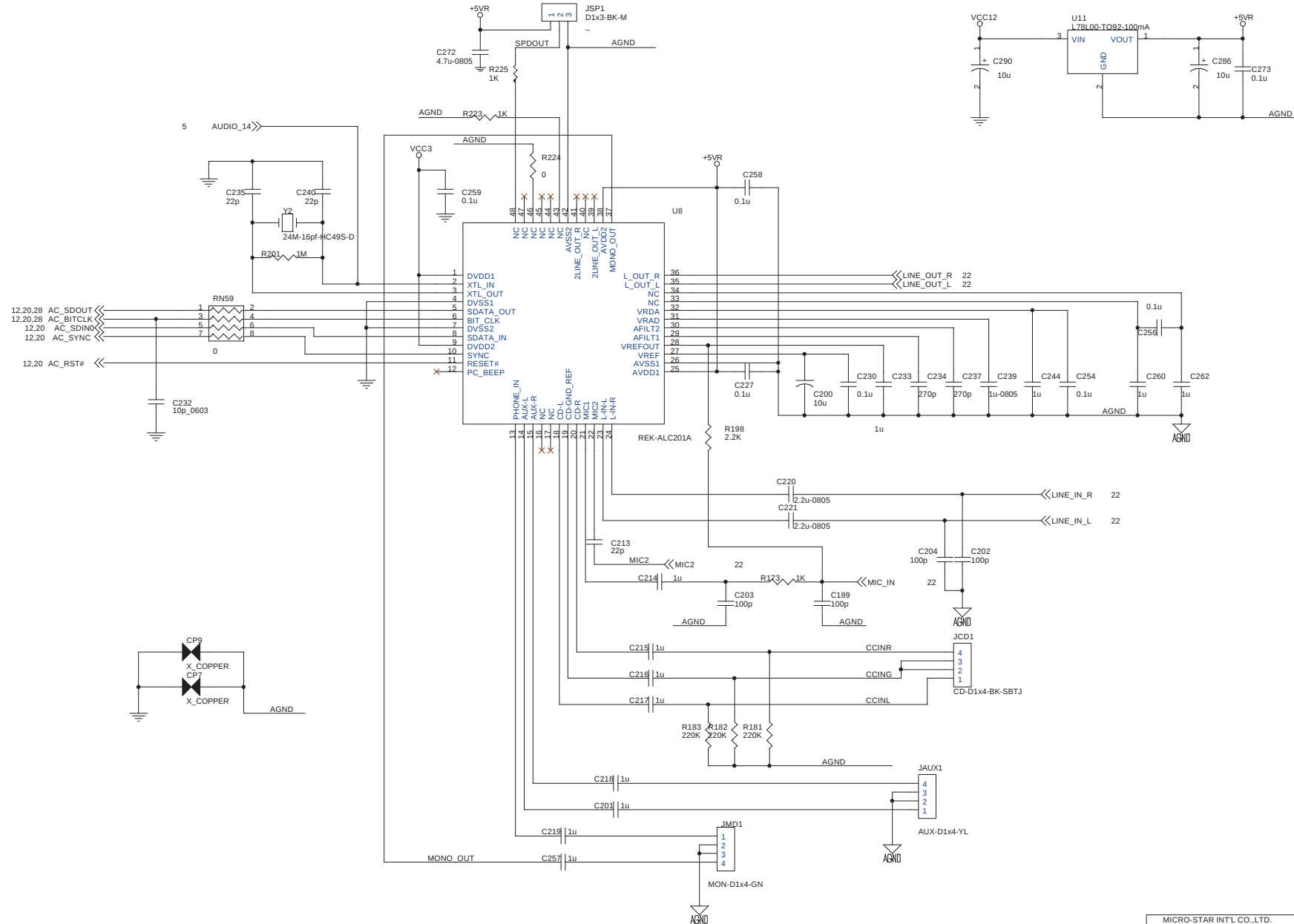
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PCI Connector 5 & 6		
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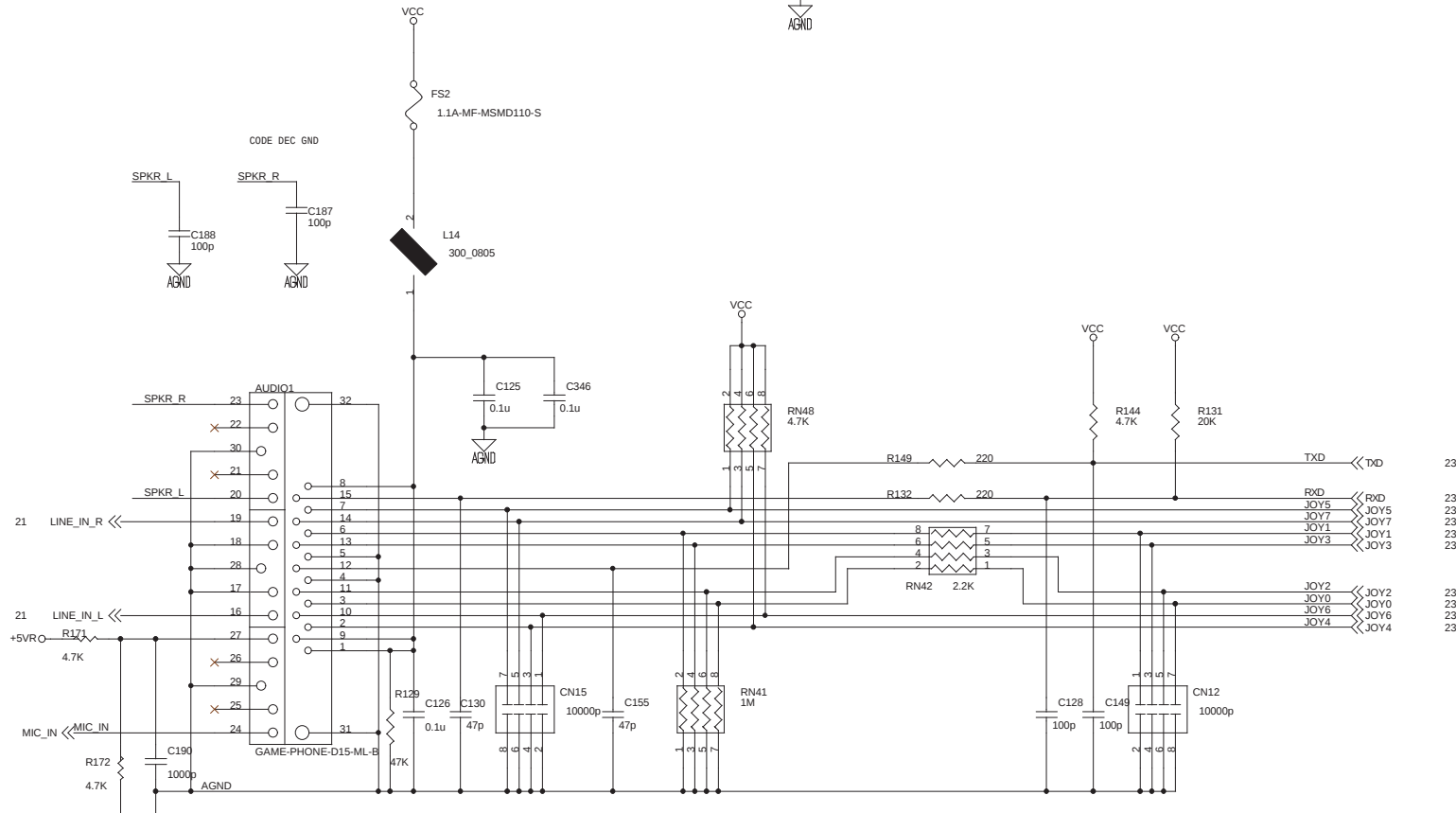
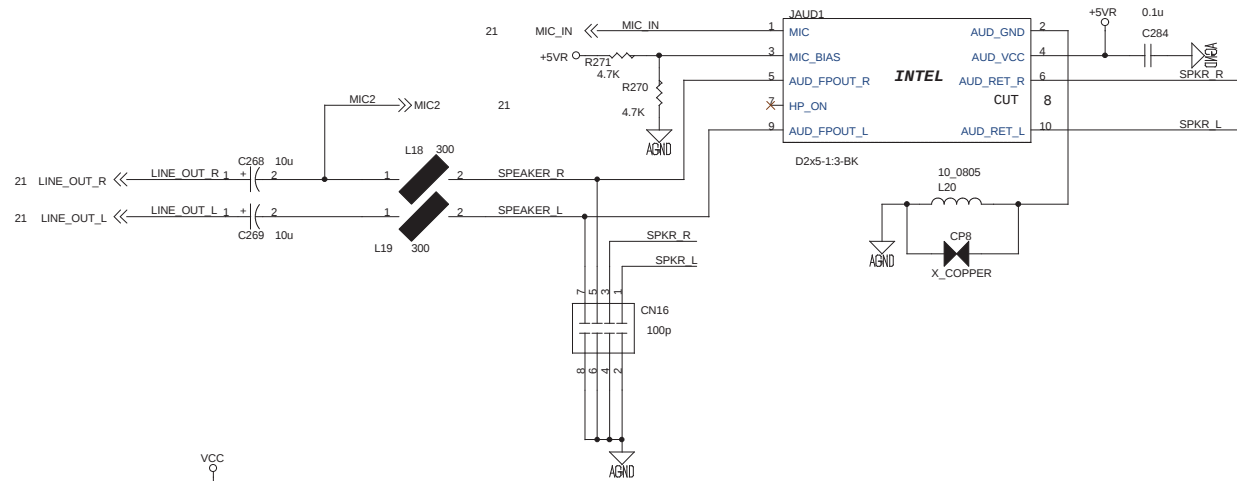


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CNR AND AUDIO HEADER			
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ALC201A/202A/STAC9756

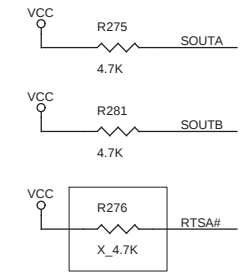
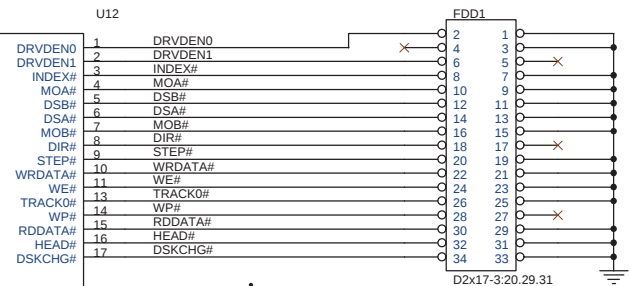


MSI/INTEL AUDIO CONNECTOR



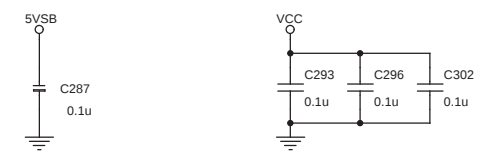
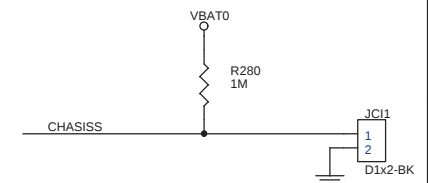
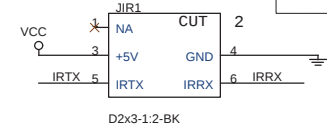
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FLOPPY DISK HEADER

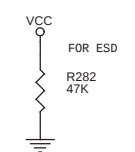


SOUTA	L: Disable KBC	H: Enable KBC
SOUTB	L: 24MHZ	H: 48MHZ
RTSA#	L: CFAD=2E	H: CFAD=4E
DTRA#	L: PNP Default	L: PNP no Default

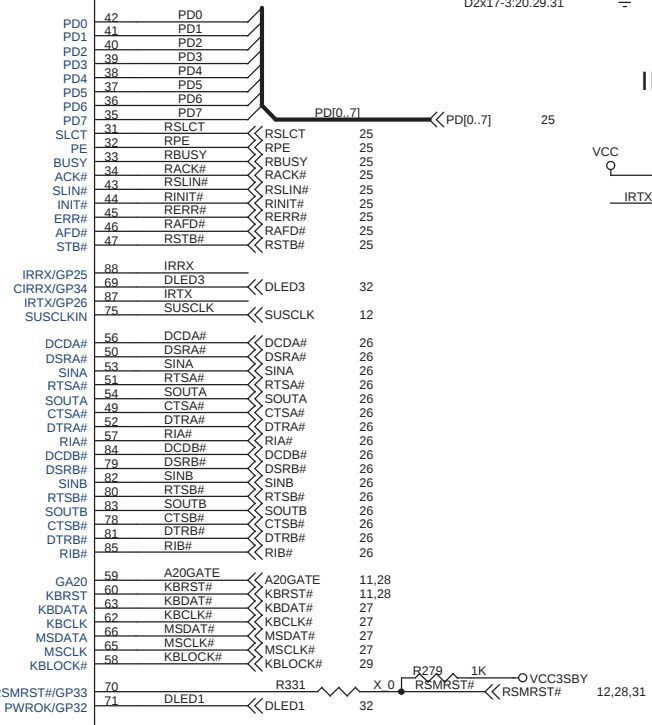
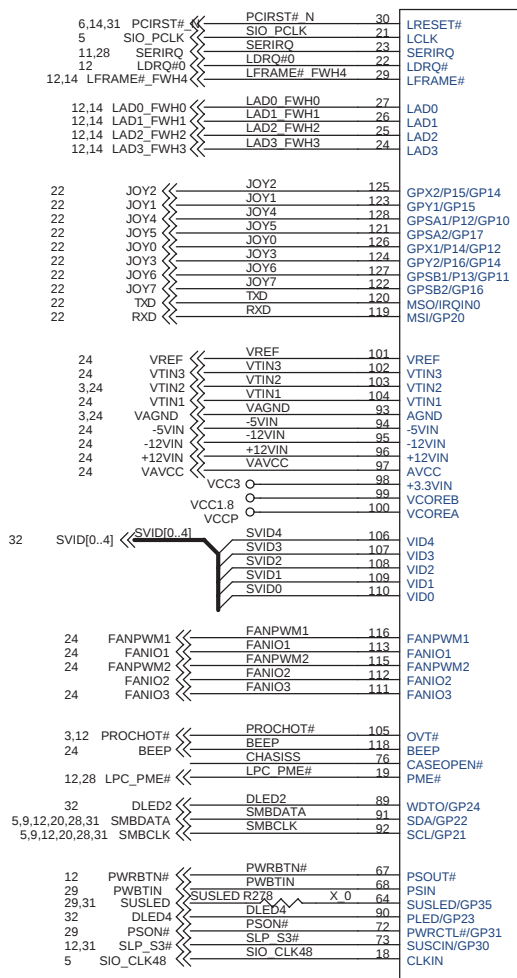
IR HEADER



Distribute near the VCC power pin of the LPC

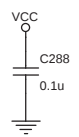


SIO

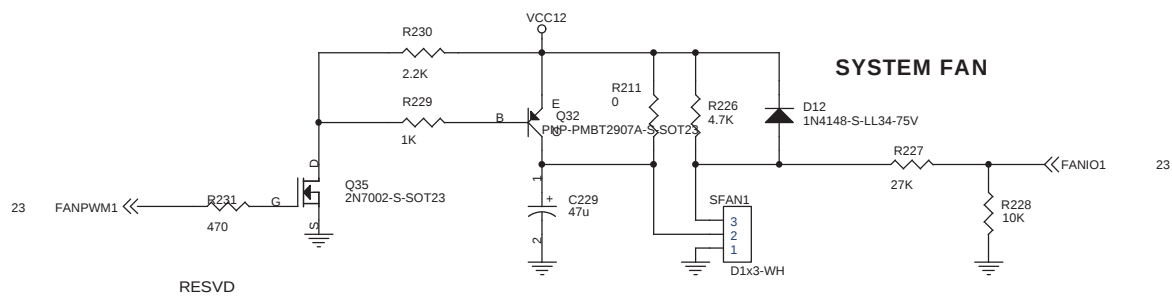
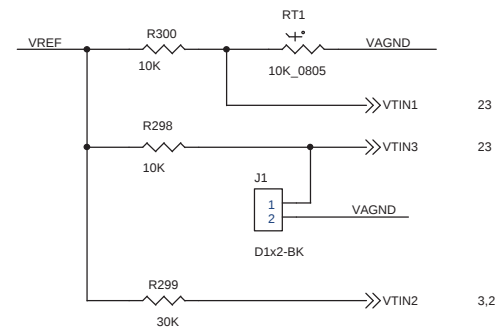
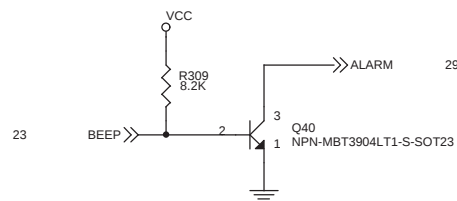
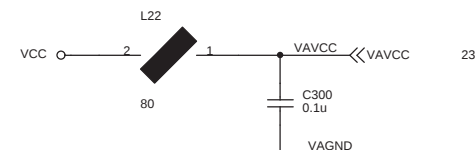
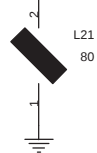
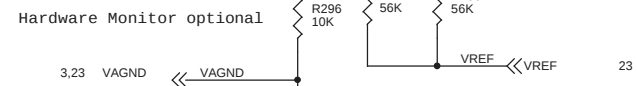
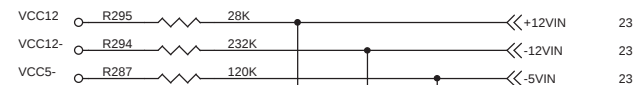
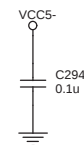
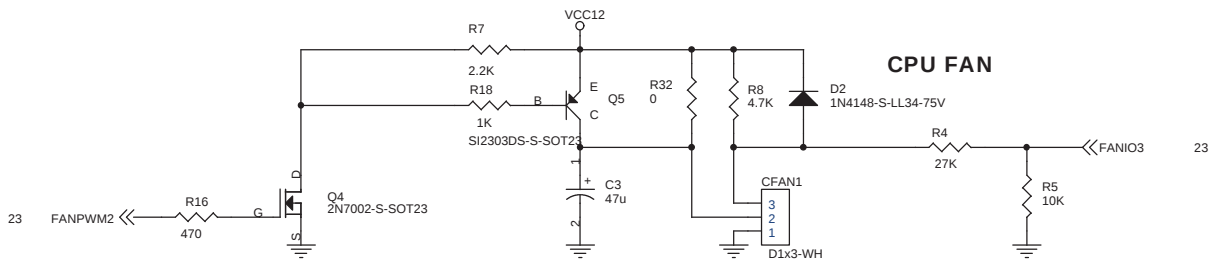


83627HF - REVG

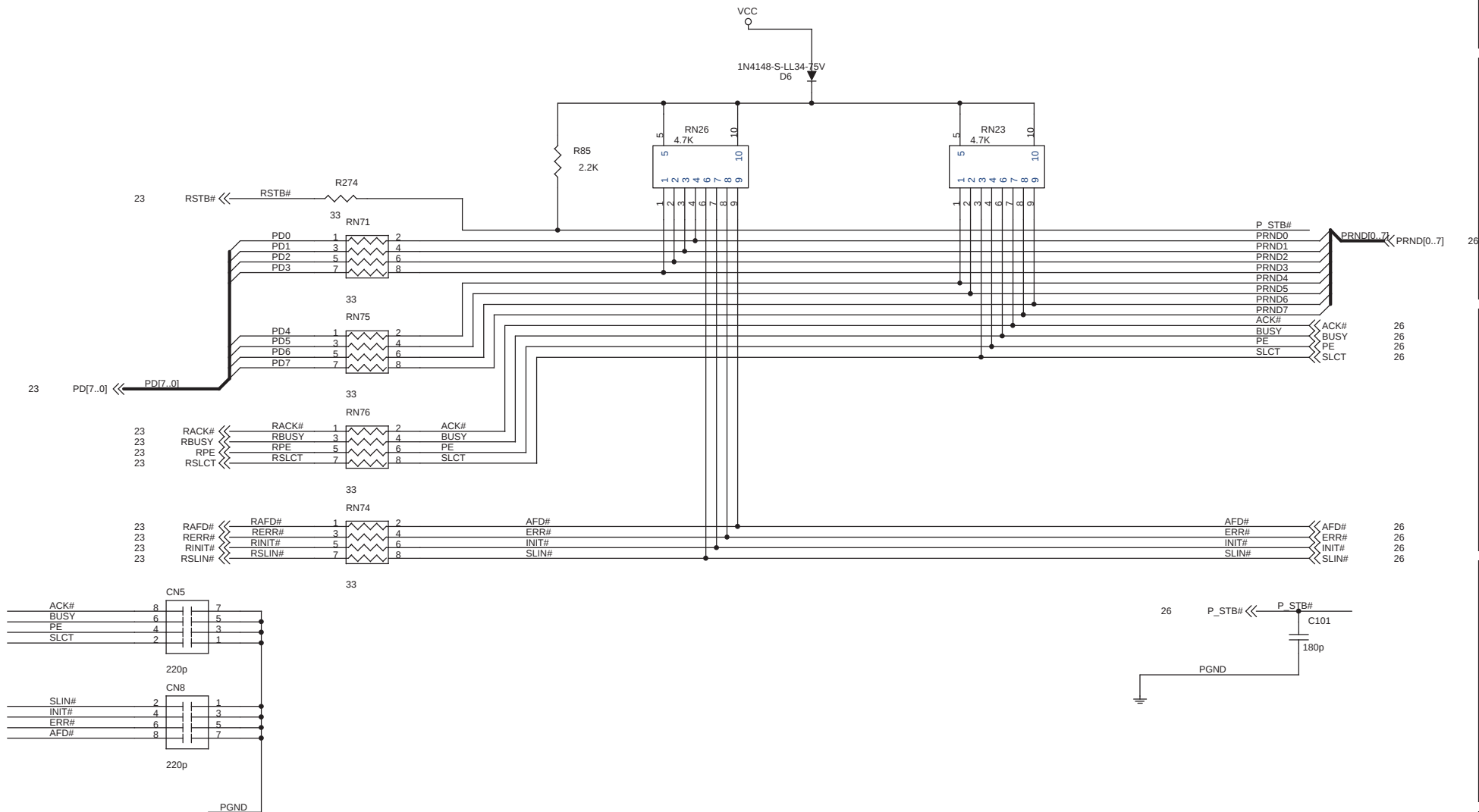
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LPC SIO			
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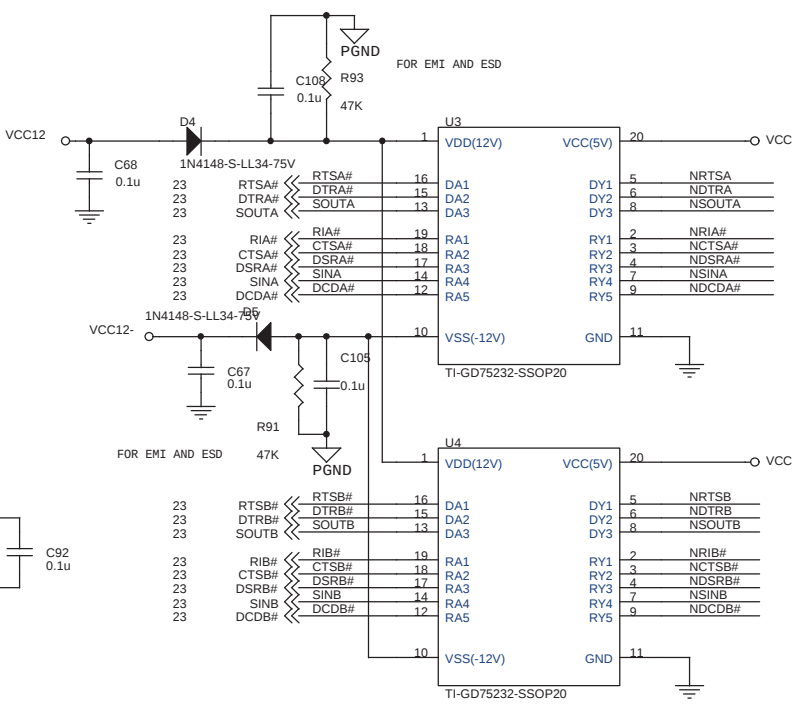
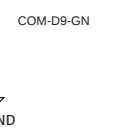
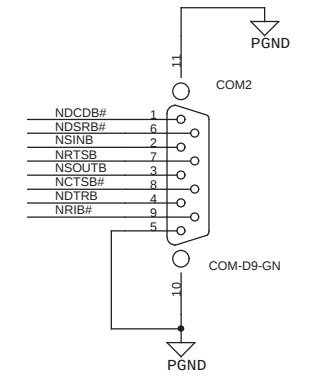
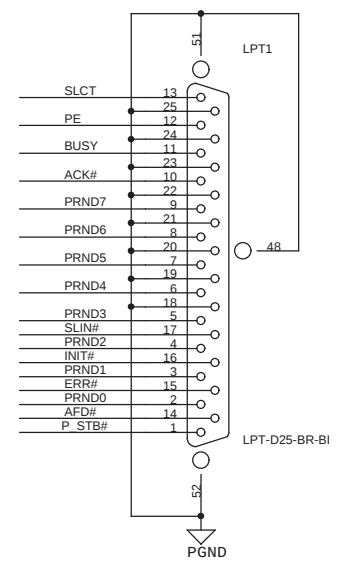
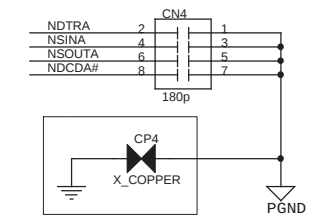
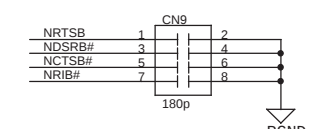
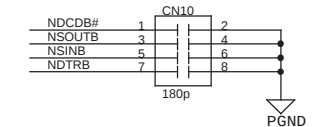
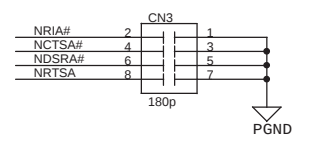
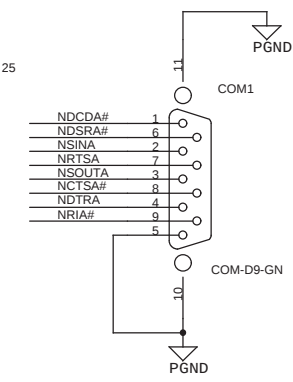
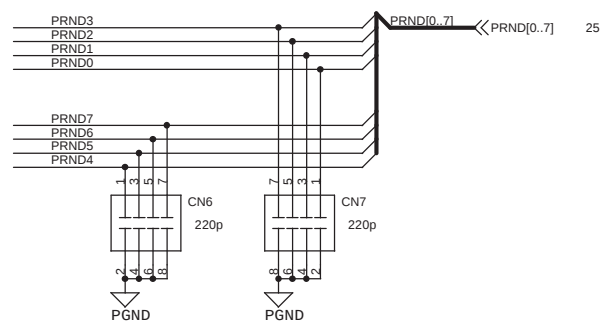


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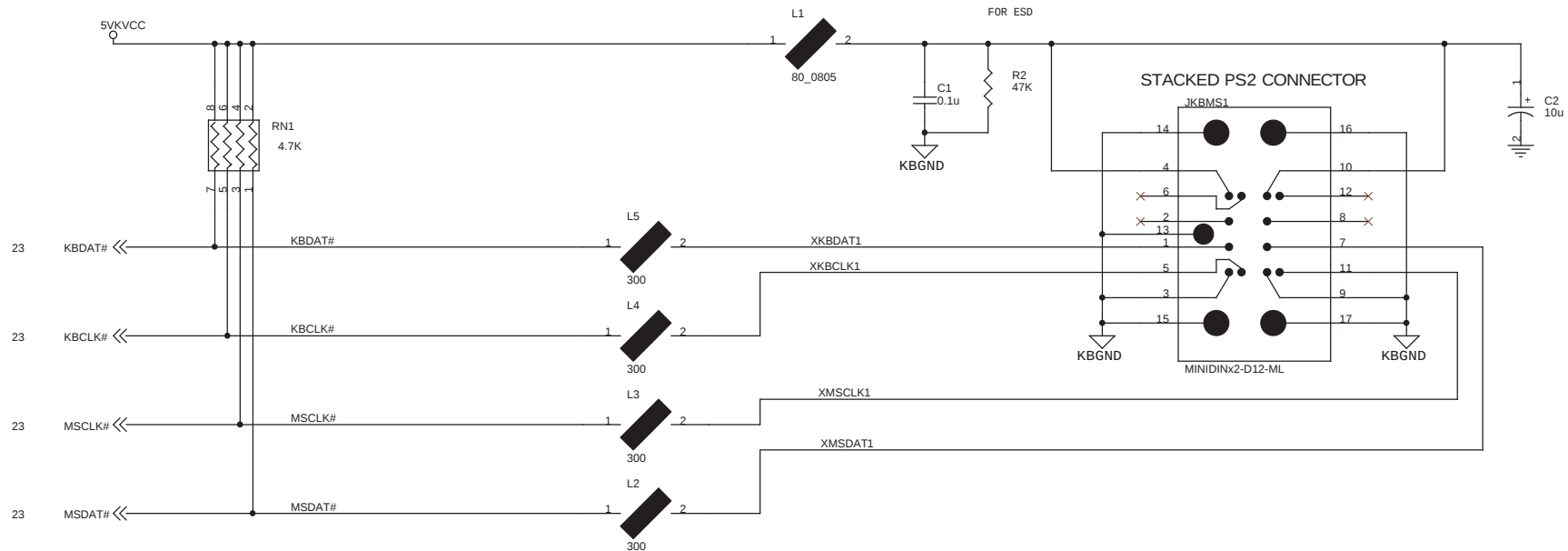


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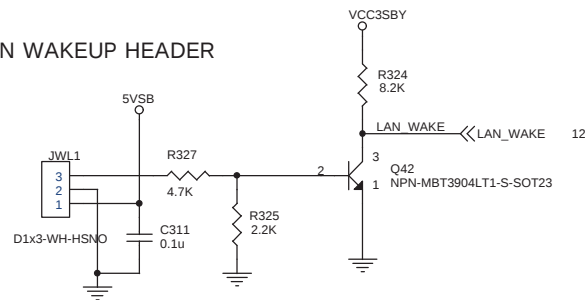
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ERR#	ERR#	25
INIT#	INIT#	25
SLIN#	SLIN#	25
P_STB#	P_STB#	25



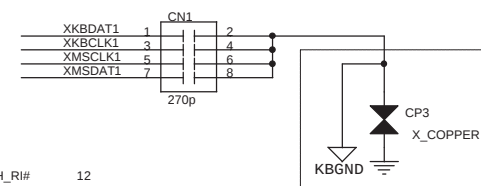
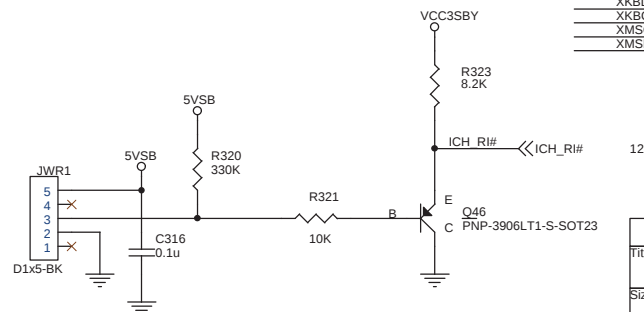
MICRO-STAR			
Title			
LPT/COM Port			
Size	Document Number	Rev	
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LAN WAKEUP HEADER

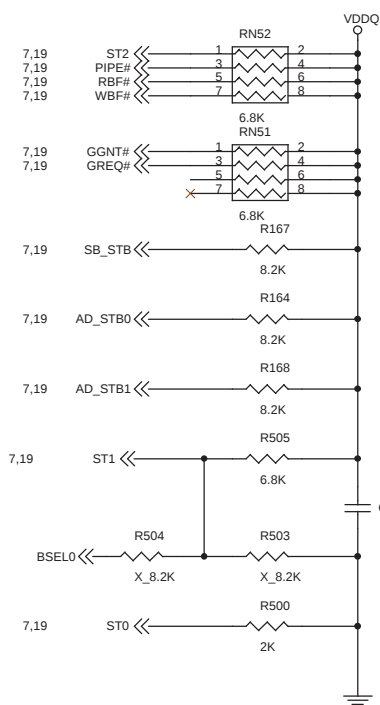
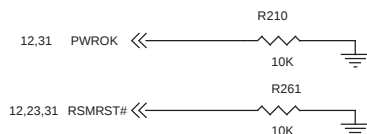
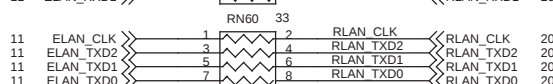
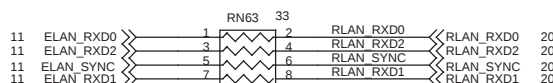
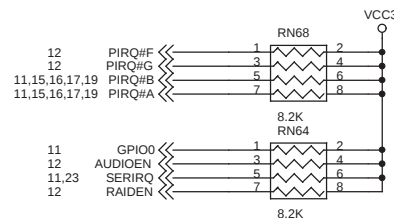
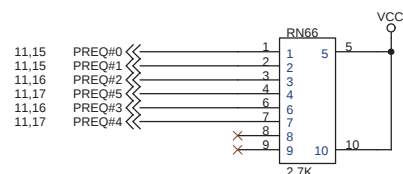


INTERNAL MODEM WAKEUP HEADER



MICRO-STAR			
Title			
Keyboard/Mouse			
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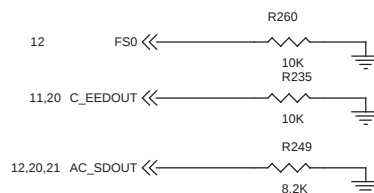
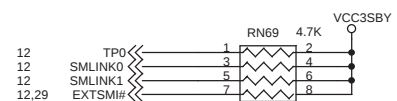
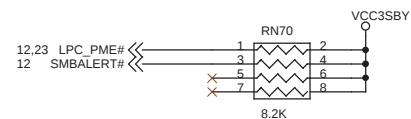
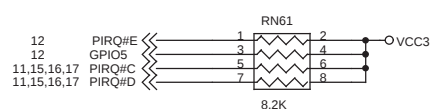
AGP

[illegible]

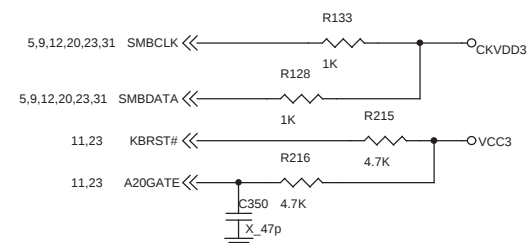
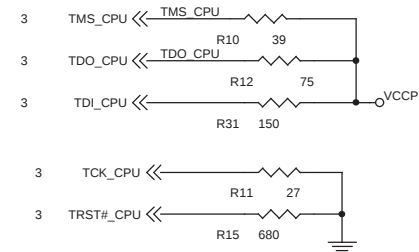
3 THERMTRIP# <<< THERMTRIP# R45 62 OVCCP

3,11 FERR# <<< R9 62 OVCCP

12 INTRUDER# <<< R256 92 OVBAT

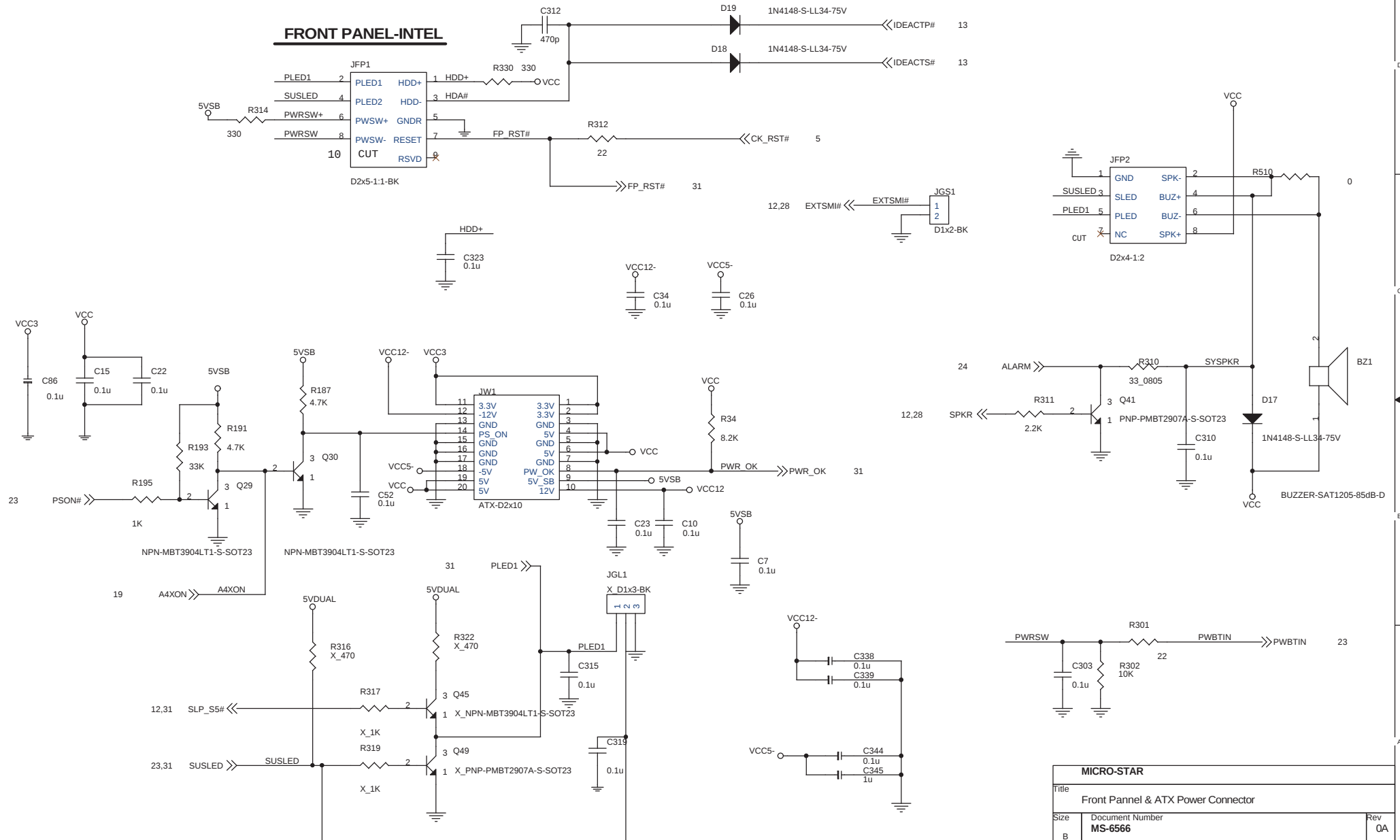


Timing diagram showing three digital signals: HINIT#, CPU_PWRGD, and HBR#0. Each signal is shown as a square wave with a period of 300 units. HINIT# has a high pulse of 27 units (R27) and a low pulse of 300 units. CPU_PWRGD has a high pulse of 65 units (R65) and a low pulse of 300 units. HBR#0 has a high pulse of 48 units (R48) and a low pulse of 49.9 units. All signals are connected to VCCP.

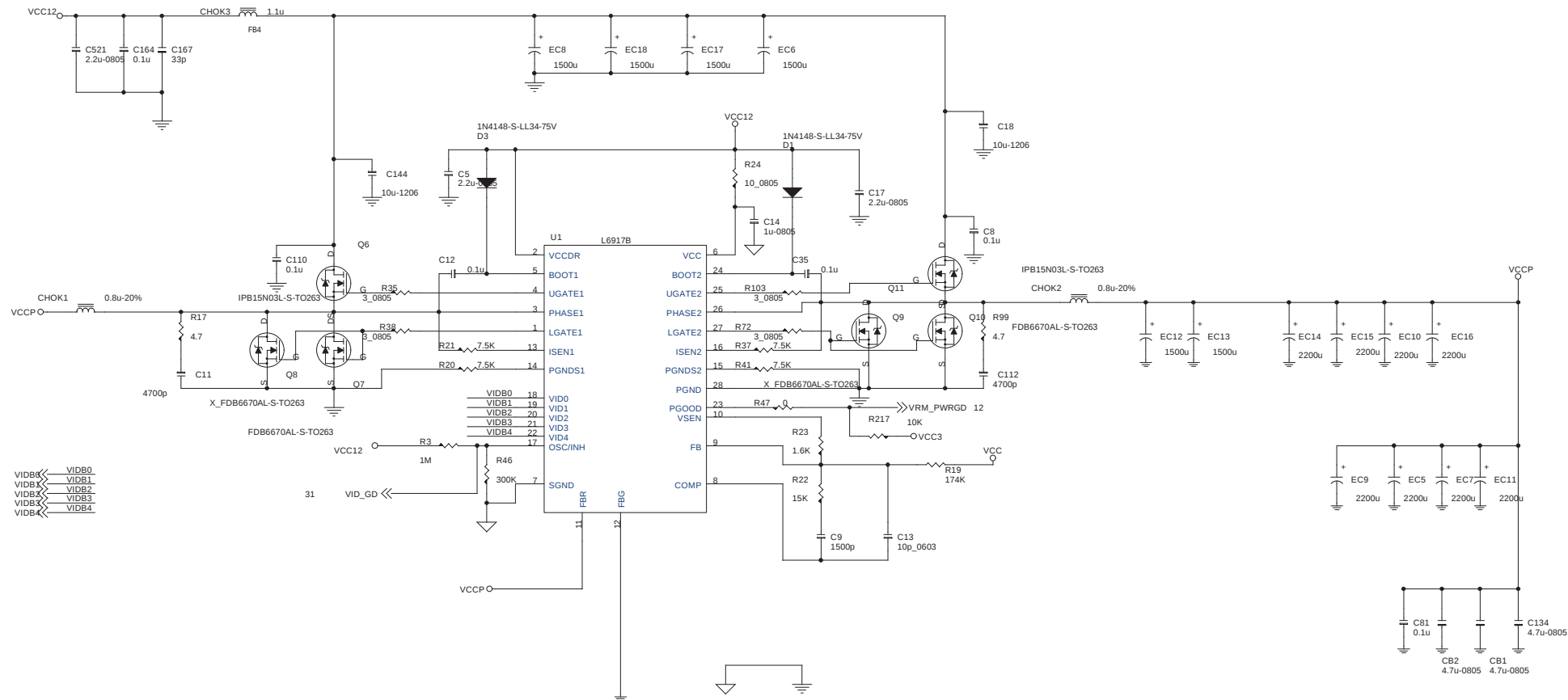


MICRO-STAR			
Title Pull-up Resistors			
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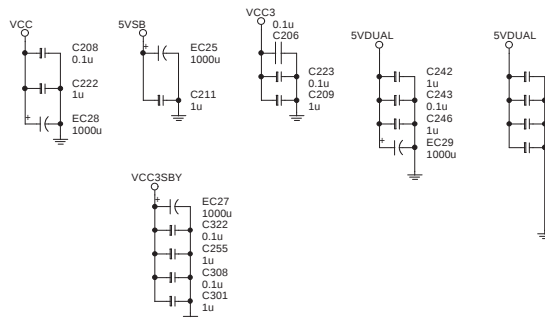
Front Pannel & ATX Power Connector



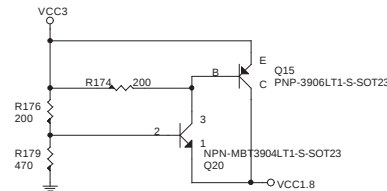
MICRO-STAR			
Title			
Front Pannel & ATX Power Connector			
Size	Document Number	Rev	
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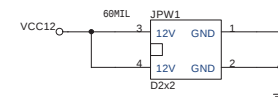
REGULATORS OUTPUT DECOUPLING CAPACITORS



1.8V/3.3V SEQUENCE CIRCUIT

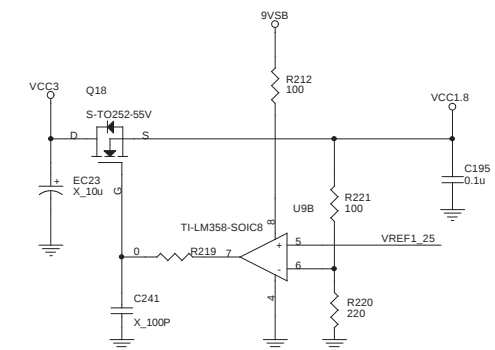
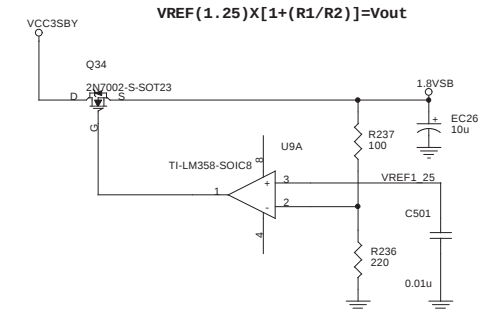
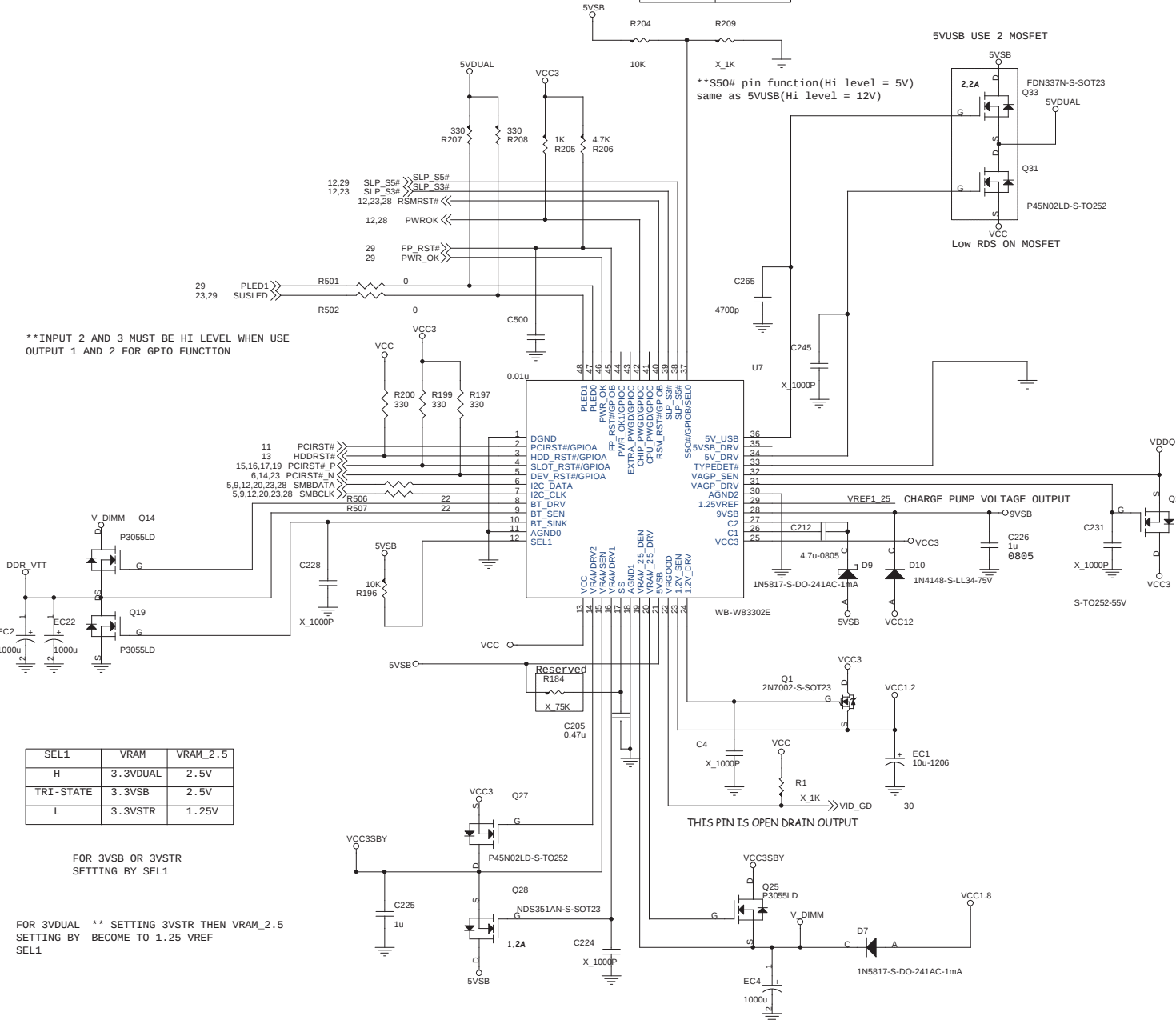


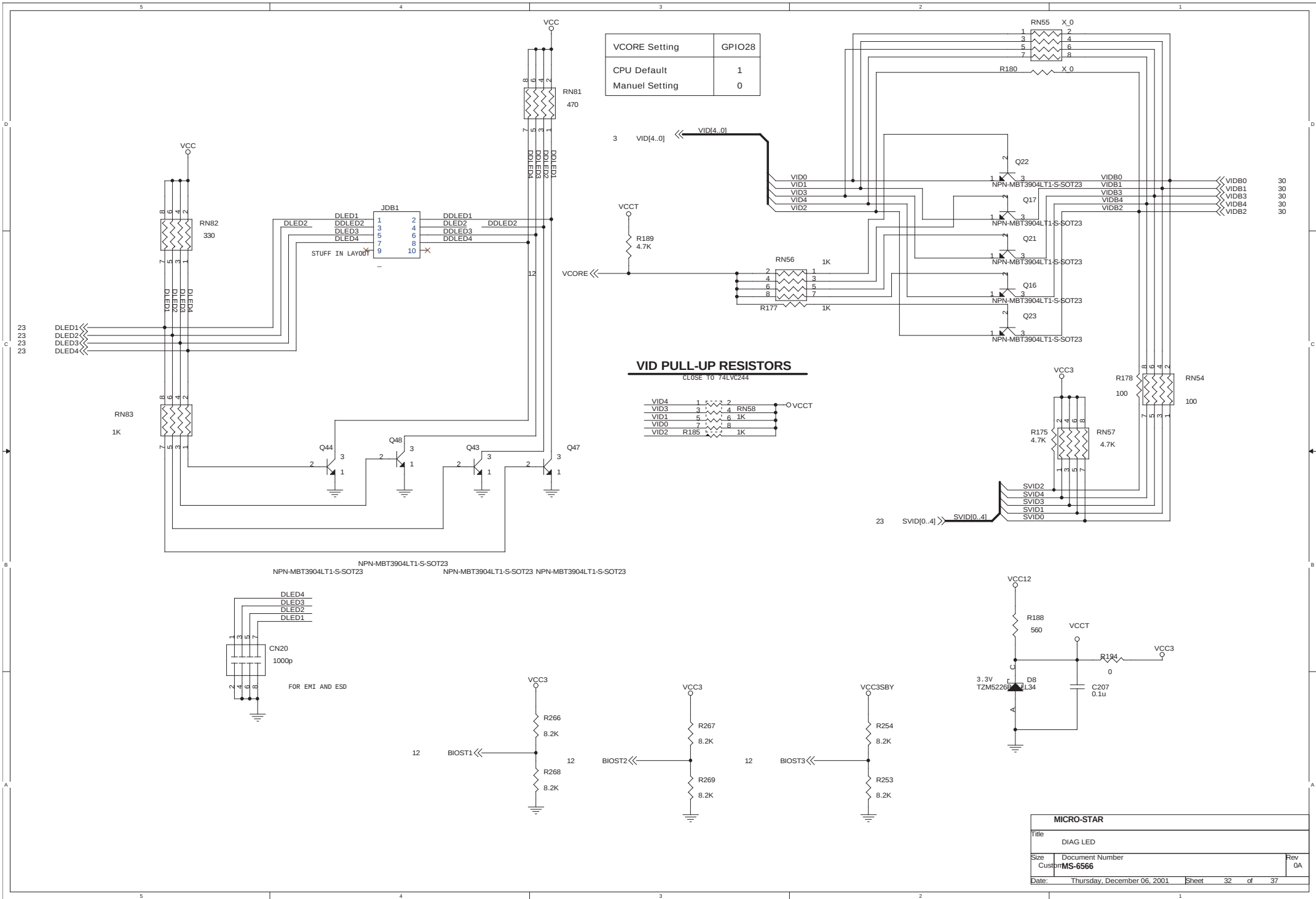
ATX12V POWER CONNECTOR



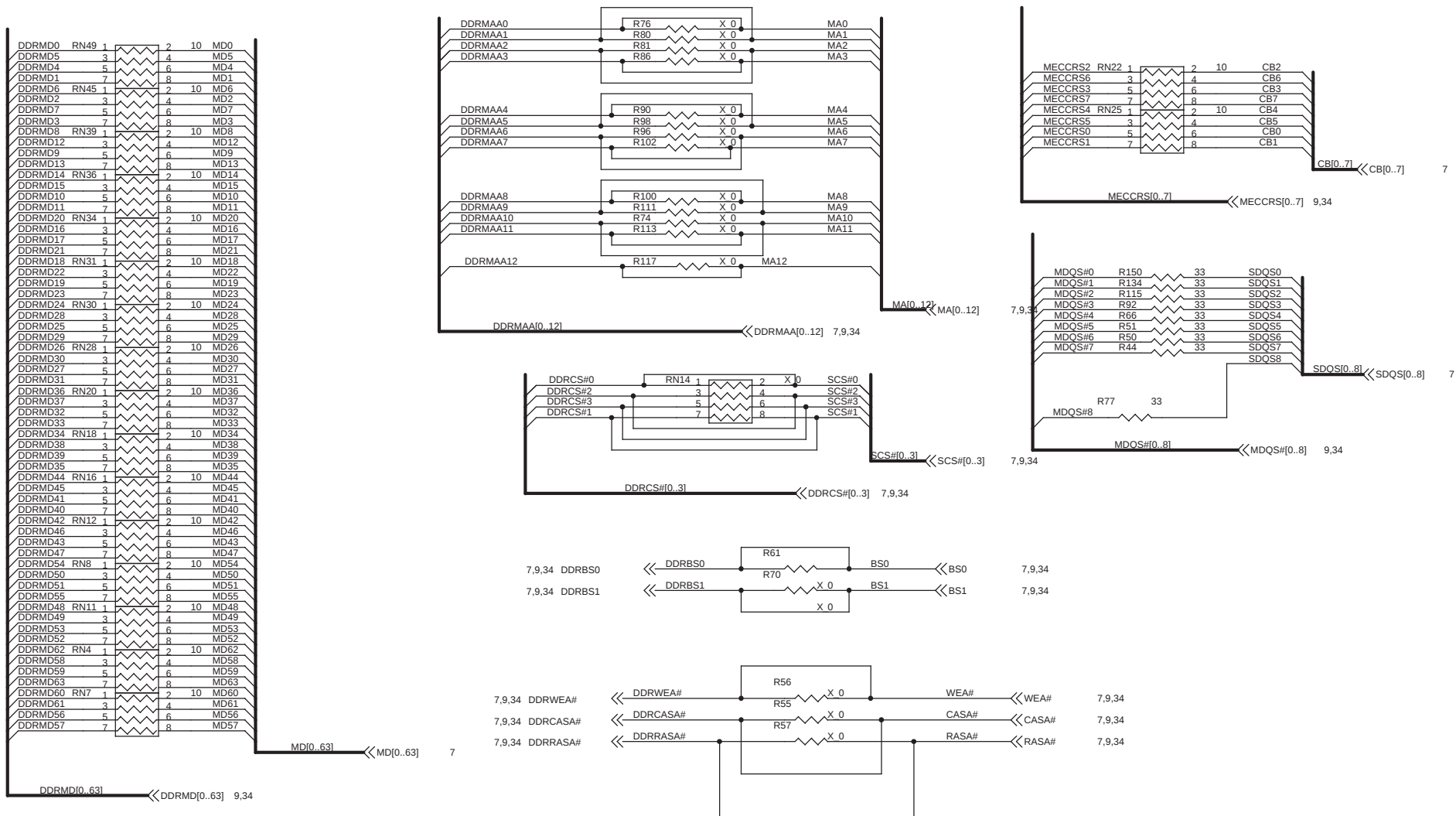
MICRO-STAR INT'L CO.,LTD.			
Title	VRM 9.0		
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SEL0	5VUSB
H	2 MOSFET
L	1 MOSFET

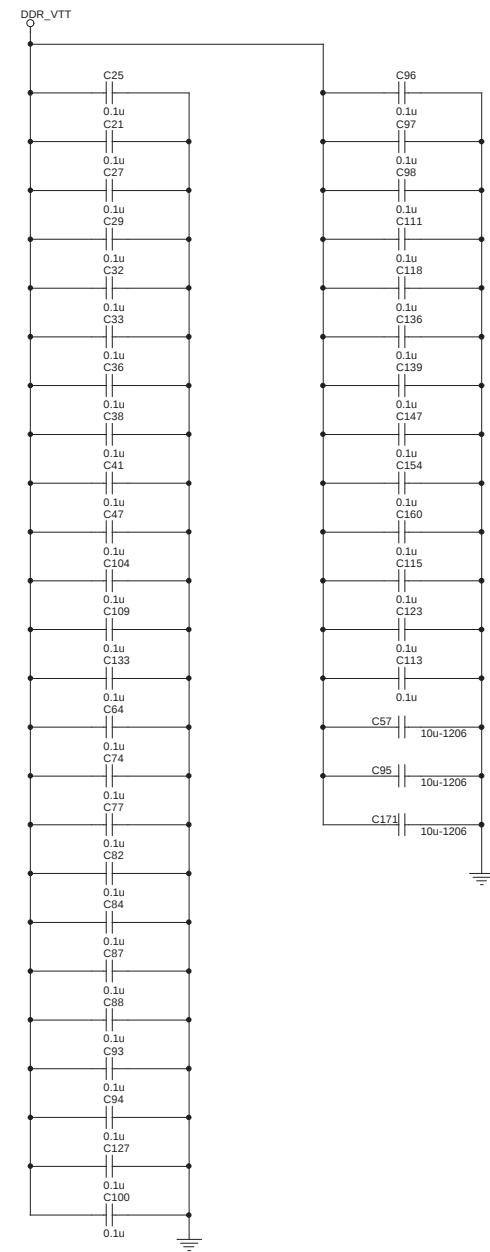
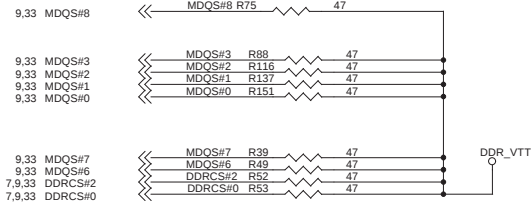
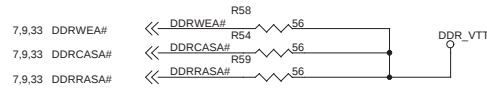
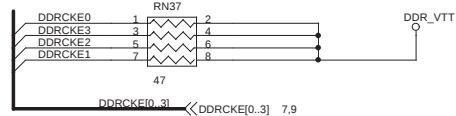
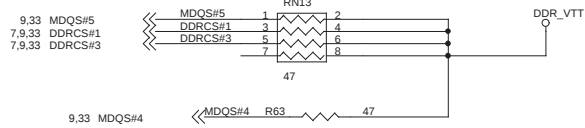
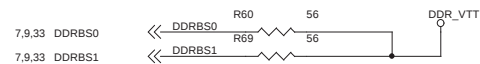
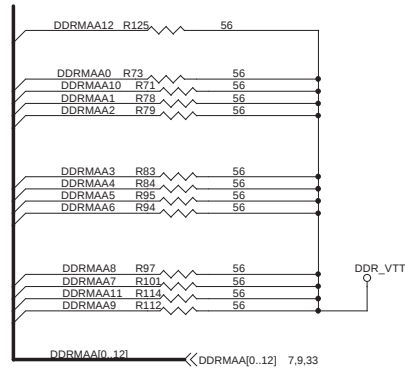
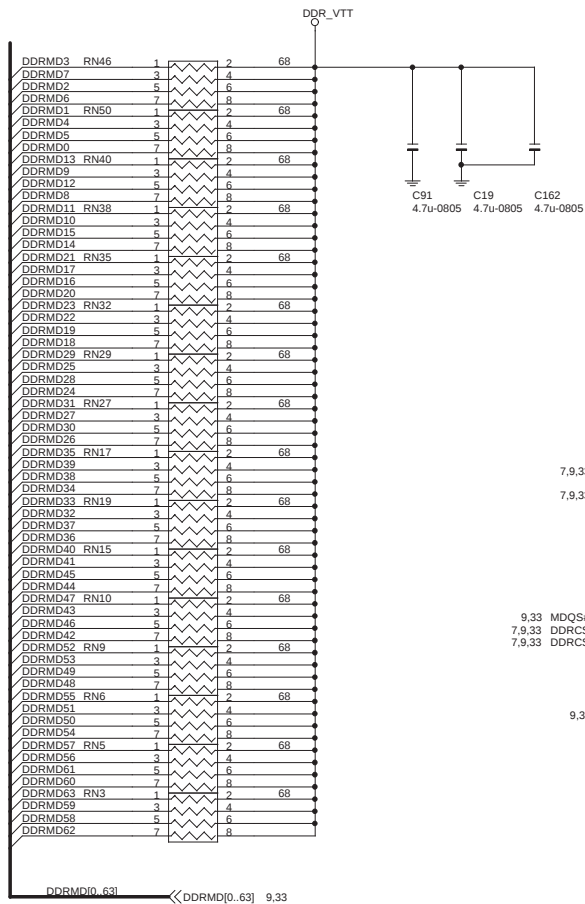




MICRO-STAR		
Title DIAG LED		
Size Custom	Document Number MS-6566	Rev 0A
Date Thursday, December 06, 2001	Sheet 32	of 37

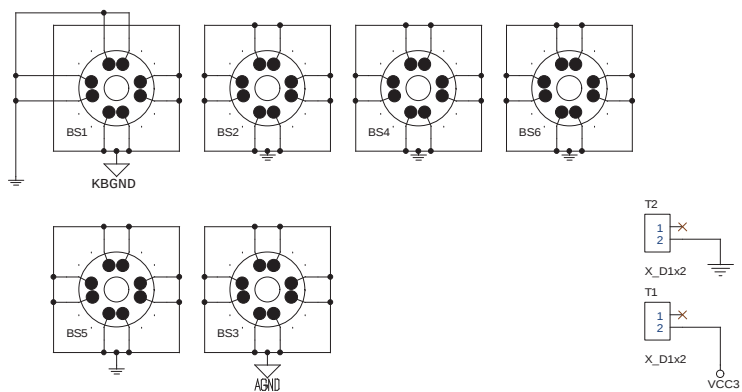


MICRO-STAR			
Title			
DDR DRAM DANPING			
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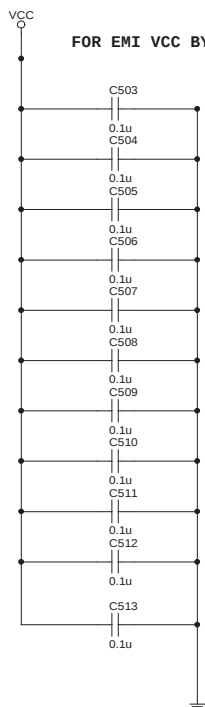


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PCB OTHER COMPONENT



FOR EMI VCC BYPASS



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5					4					3					2					1				
Revision Initial ver: 0A on 10/15/01 Schematic Initial Revision 0A. GERBER RELEASE 11/06/01 Revision change list from ver: 0A to ver: 0B on																								
D																								
C																								
B																								
A																								
5					4					3					2					1				

MICRO-STAR			
Title Revision History			
Size	Document Number		Rev
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		1	

General Purpose I/O Spec.

ICH2

GPIO Pin	Type	Function
GPIO 0	I	PULL UP VCC3 8.2K
GPIO 1	I	REQ#5
GPIO 2~4	I	PIRQE~F#
GPIO 5	I	PIRQH#
GPIO 6	I	BIOST1
GPIO 7	I	BIOST2
GPIO 8	I	LAN Wake Up
GPIO 9	I	AC'97 Serial Data1 In
GPIO 10	I	Not Implemented
GPIO 11	I	SMBALTER#
GPIO 12	I	External SMI
GPIO 13	I	LPC PME
GPIO 14~15	I	Not Implemented
GPIO 16	O	Non Connect
GPIO 17	O	GNT5#
GPIO 18	O	Not Implemented
GPIO 19	O	Not Implemented
GPIO 20	O	VCORE
GPIO 21	O	Not Implemented
GPIO 22	OD	PWRFAN
GPIO 23	O	BIOS_WP
GPIO 24	O	BIOST3
GPIO 25	O	Not Implemented
GPIO 26	O	Not Implemented
GPIO 27	I/O	Not Implemented
GPIO 28	I/O	Not Implemented
GPIO 29~31	I/O	Not Implemented

FWH

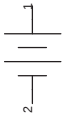
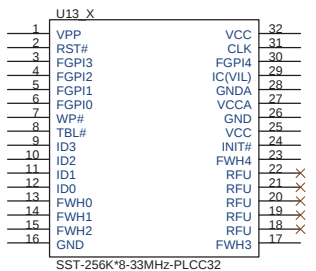
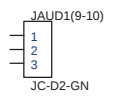
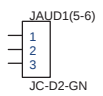
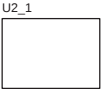
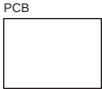
GPIO Pin	Type	Function
GPI 0	I	ATA IDE 1 Detect
GPI 1	I	ATA IDE 2 Detect
GPI 2	I	Reserved
GPI 3	I	Reserved

DLED-Super I/O

GPIO Pin	Type	Function
GP32	I/OD	DLED1
GP24	I/OD	DLED2
GP34	I/OD	DLED3
GP33	I/OD	RSMRST#
GP23	I/OD	DLED4

DEVICE	ICH INT Pin	IDSEL	
PCI Slot 1	INTA# INTB# INTC# INTD#	AD16	PREQ0# PGNT0# PCLK1
PCI Slot 2	INTB# INTC# INTD# INTA#	AD17	PREQ1# PGNT1# PCLK2
PCI Slot 3	INTC# INTD# INTA# INTB#	AD18	PREQ2# PGNT2# PCLK3
PCI Slot 4	INTD# INTA# INTB# INTC#	AD19	PREQ3# PGNT3# PCLK4
PCI Slot 5	INTB# INTC# INTD# INTA#	AD21	PREQ4# PGNT4# PCLK5
PCI Slot6	INTA# INTB# INTC# INTD#	AD20	PREQ7# PGNT7# PCLK7

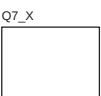
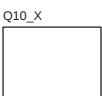
MANUAL PART



BAT1_X
BAT-B-CR2032-P-3V-220mAh



JC-D2-GN



MICRO-STAR			
Title			
MANUAL PARTS			
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