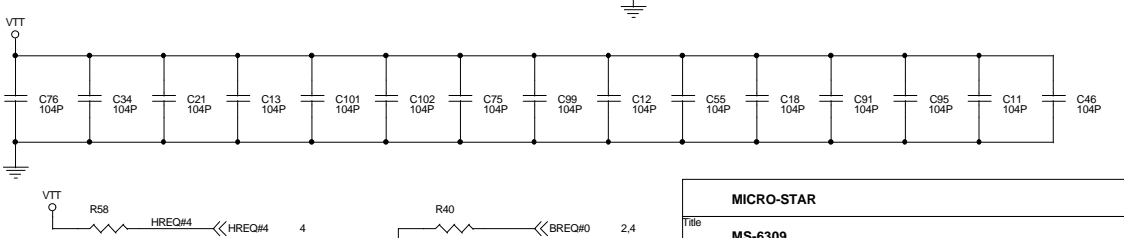
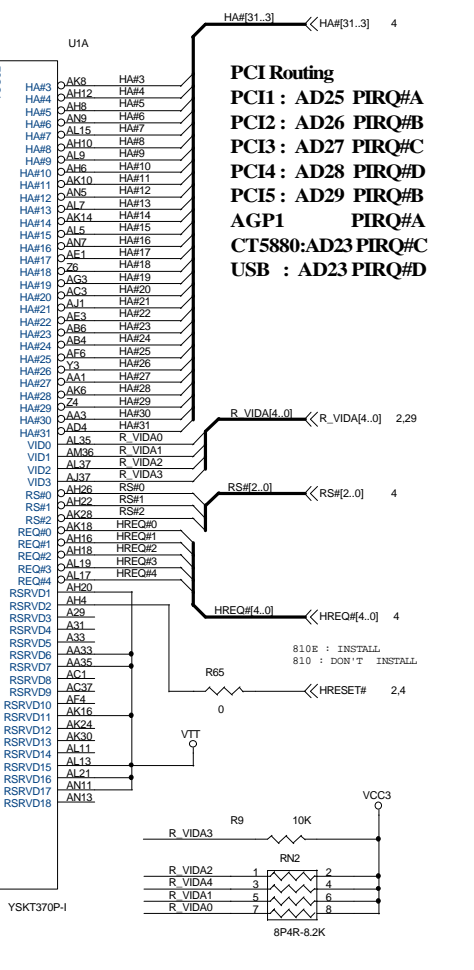
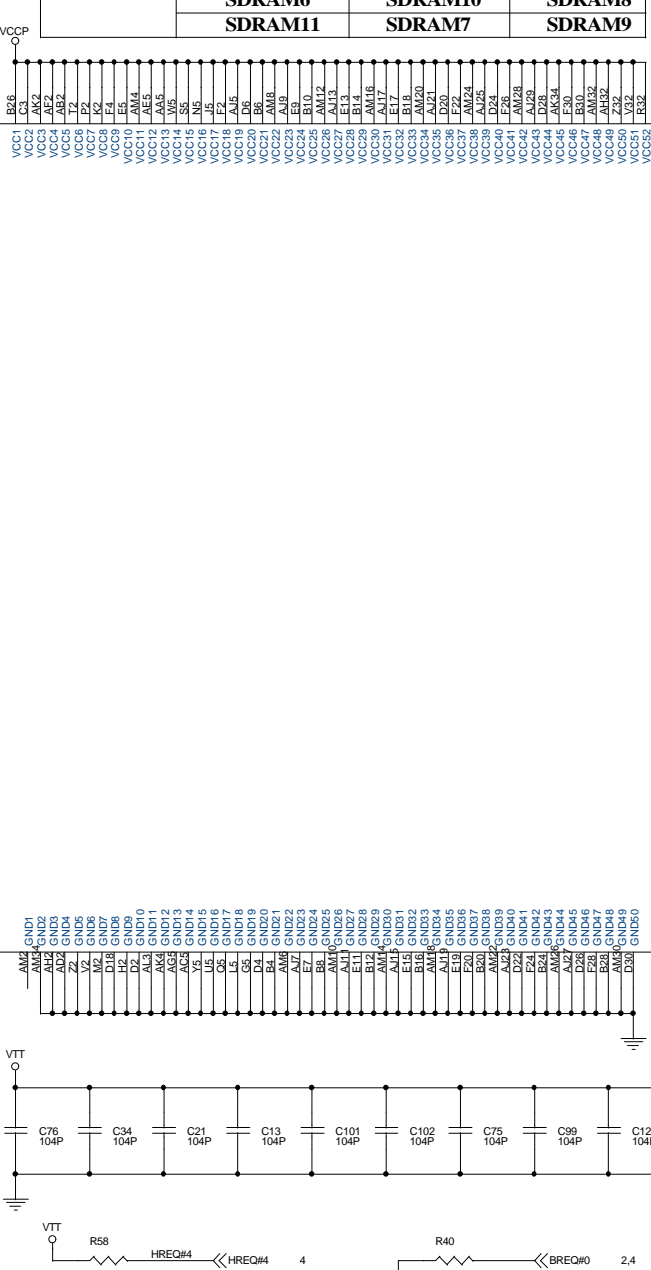
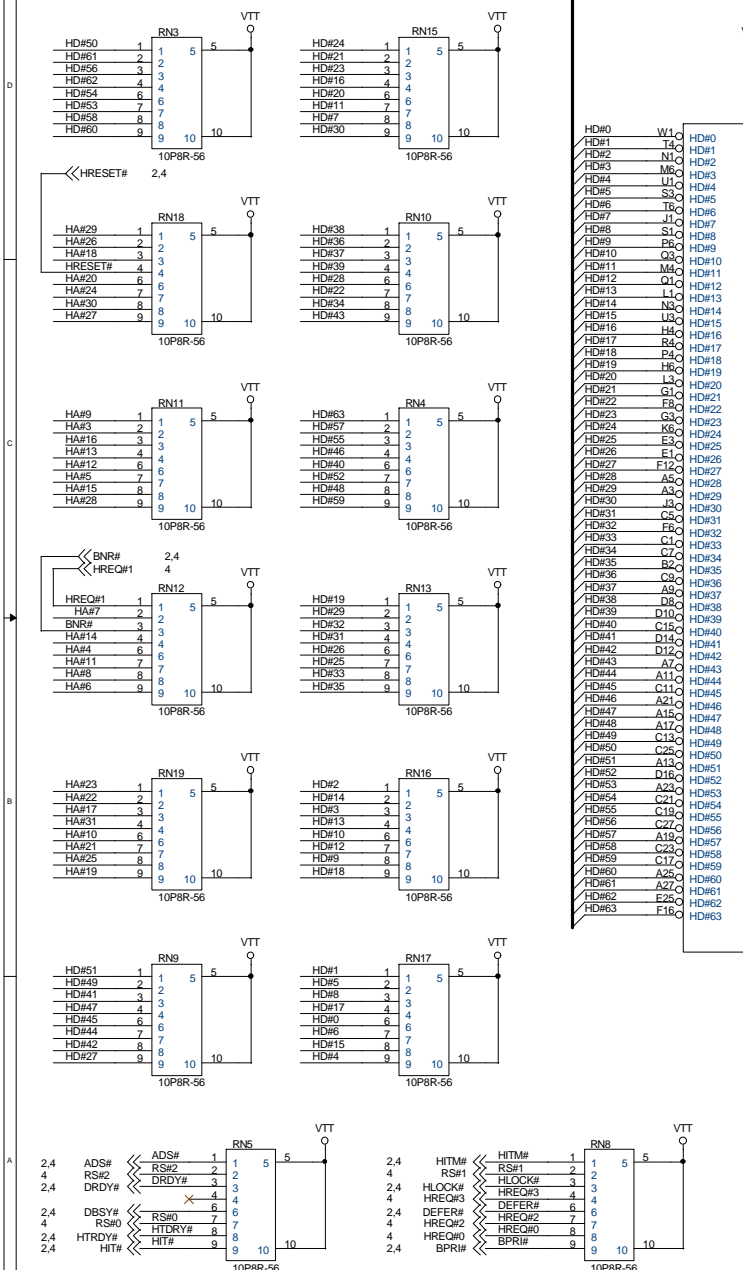


GTL TERMINATION

DIMM	DIMM1	DIMM2	DIMM3
Clock Buffer	SDRAM4	SDRAM0	SDRAM2
	SDRAM5	SDRAM1	SDRAM3
	SDRAM6	SDRAM10	SDRAM8
	SDRAM11	SDRAM7	SDRAM9

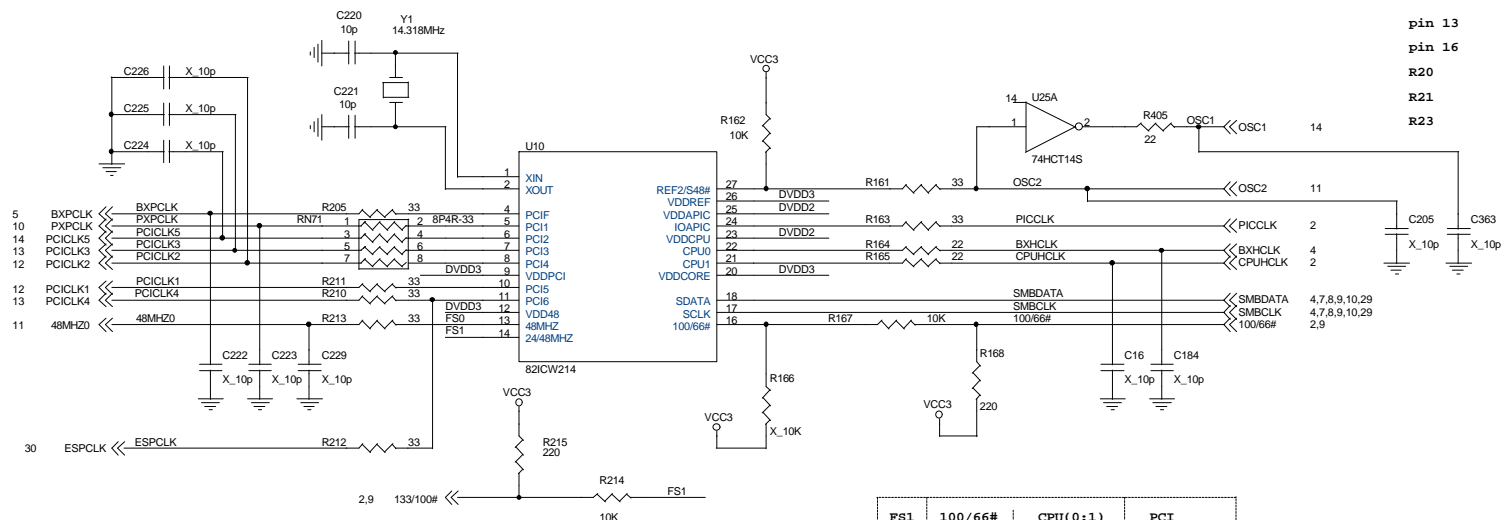
16309100



MICRO-STAR		
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Size	Document Number	Rev
B	SOCKET 370 (Part 1)	1.0
Date:	Friday, January 21, 2000	Sheet 1 of 30

Clock gen : default use W214/IC WORK

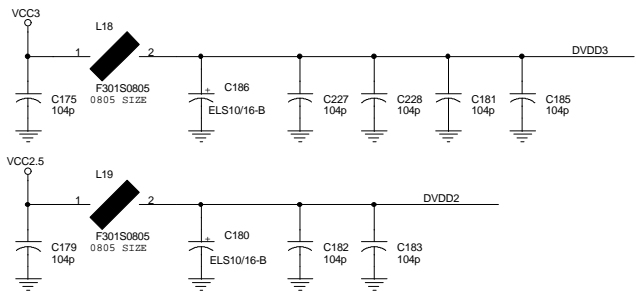
	W196	W214
pin 13	48MHz	48MHz/FS0
pin 16	FS0	PWRDWN#
R20	10K	NC
R21	NC	10K
R23	NC	10K



FS1	100/66#	CPU (0:1)	PCI
1	1	1.33 MHZ	33.3 MHZ
1	0	1.05 MHZ	35 MHZ
0	1	1.00 MHZ	33.3 MHZ
0	0	66.8 MHZ	33.3 MHZ

CLOCK OUTPUT TRACE LIMIT.

NET	TRACE	MIN	MAX
R193 - CPU	H	1.0"	9.0"
R194 - U7	H+3.25"	1.0"	12.0"
R225 - PCI1	H+4.8"	1.0"	12.5"
R224 - PCI2	H+4.8"	1.0"	12.5"
R223 - PCI3	H+4.8"	1.0"	12.5"
R226 - PCI4	H+7.3"	1.0"	12.5"
R221 - U7	H+7.3"	1.0"	15.0"
R220 - U18	H+7.3"	1.0"	15.0"



MICRO-STAR

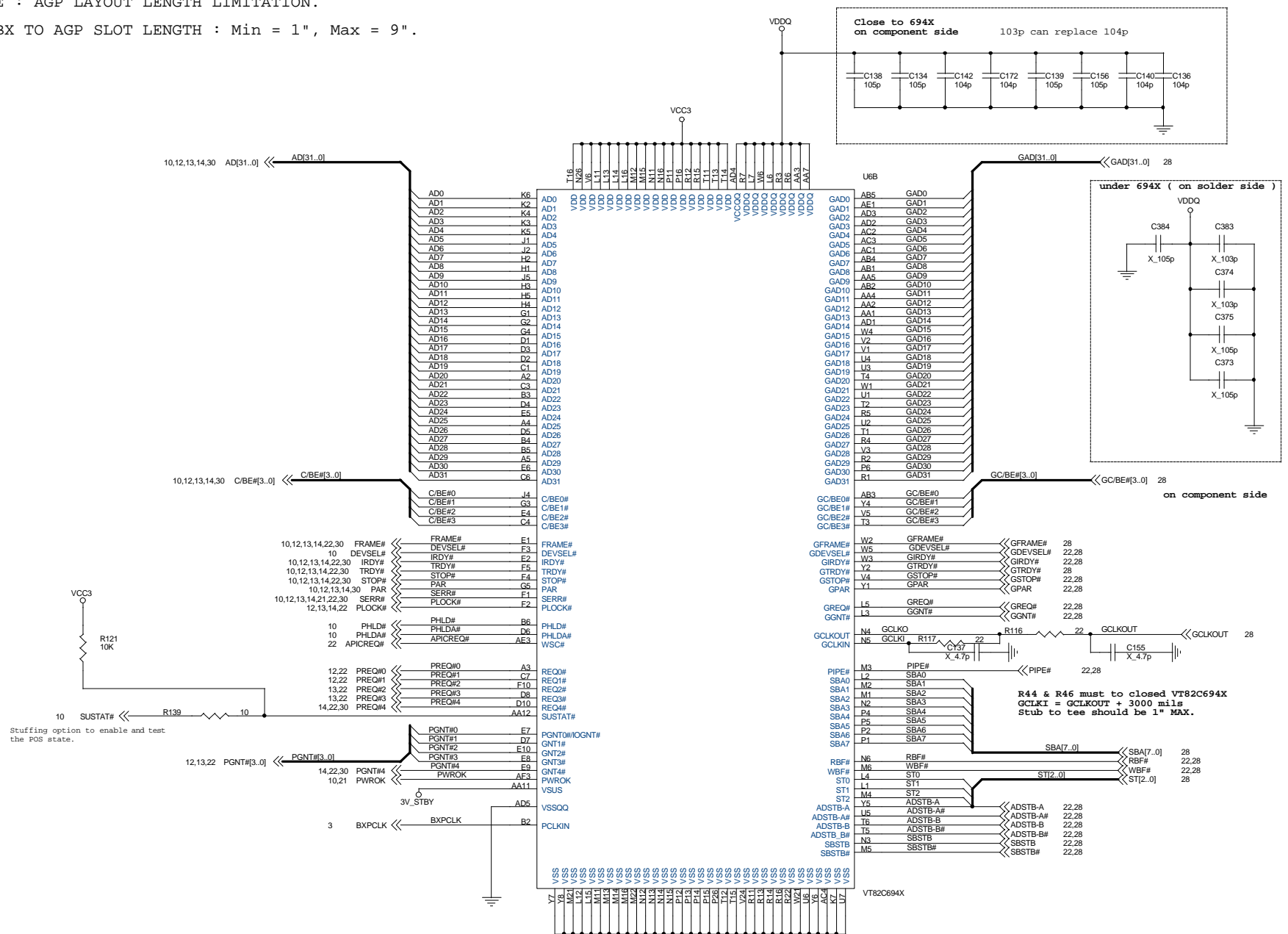
Title: **MS-6309**

Size: B Document Number: CLOCK SYNTHESIZER Rev: 1.0

Date: Friday, January 21, 2000 Sheet: 3 of 29

NOTE : AGP LAYOUT LENGTH LIMITATION.

440BX TO AGP SLOT LENGTH : Min = 1", Max = 9".

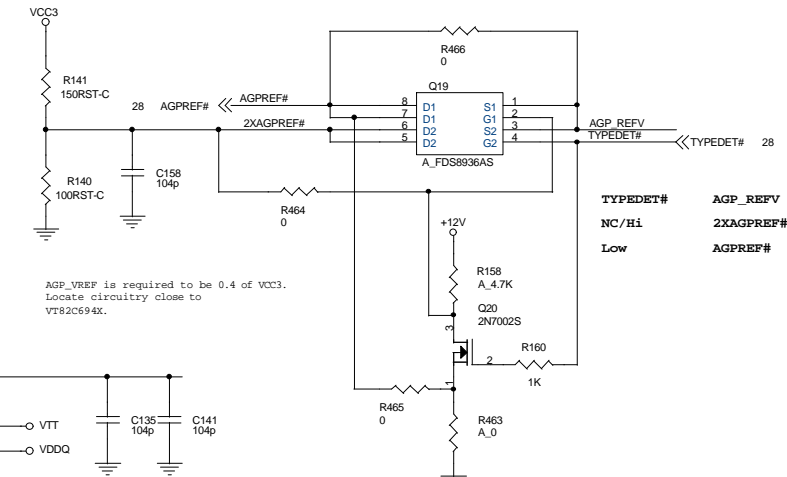
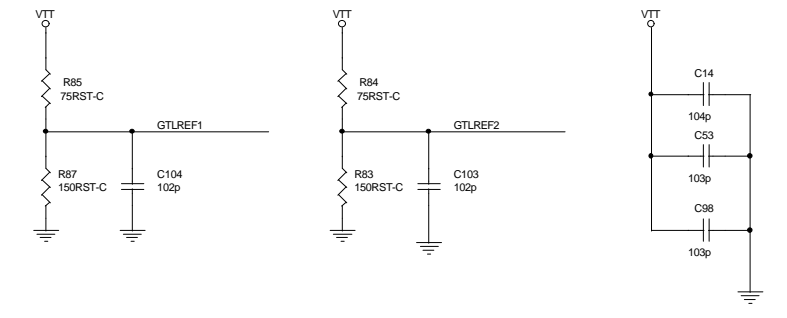
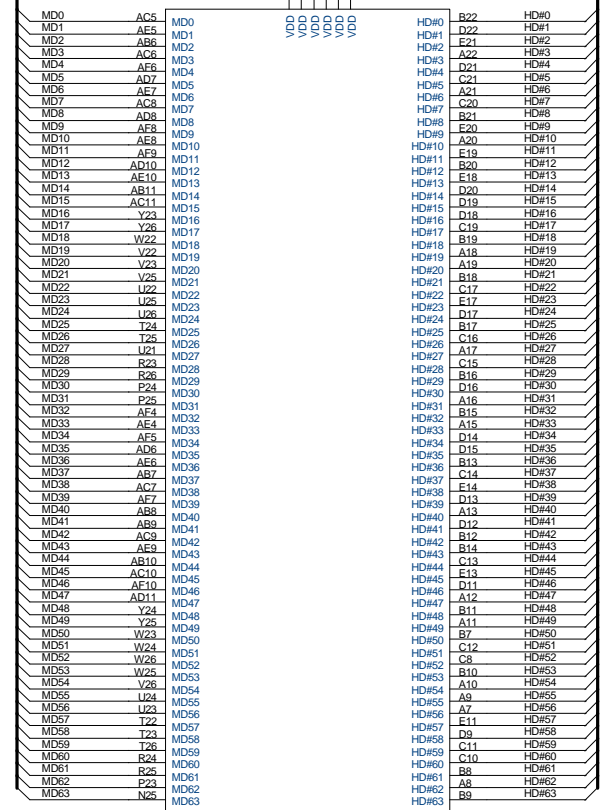


MICRO-STAR			
Title			
MS-6309			
Size	Document Number		Rev
B	VT82C694X PCI AND AGP INTERFACE		1.0
Date:	Friday, January 21, 2000	Sheet	5 of 29

7,8,9 MD[63..0] << MD[63..0]

HD#[63..0] << HD#[63..0] 1

7,8,9 MECC[7..0] << MECC[7..0]

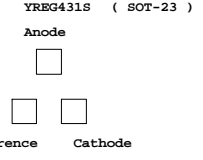
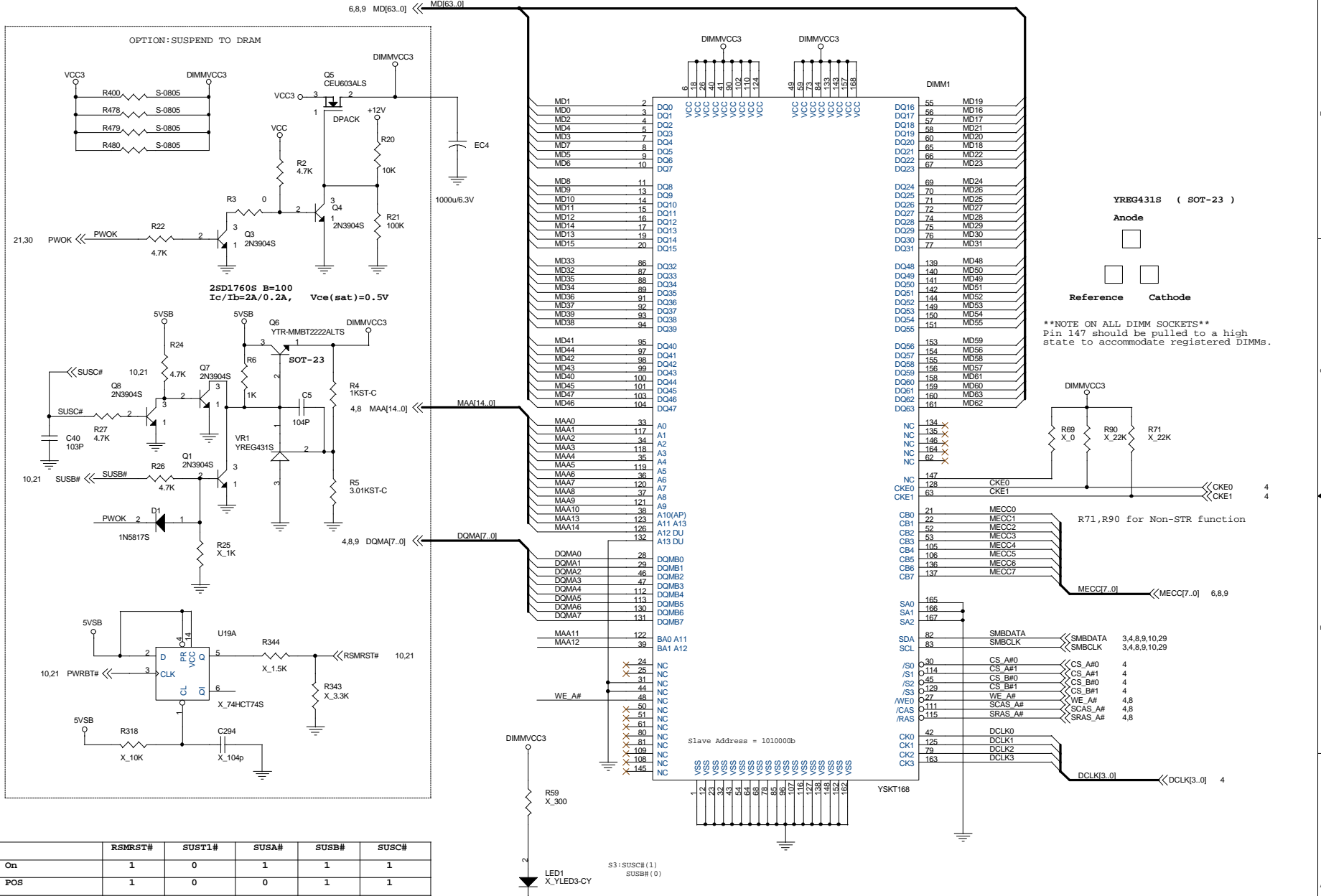


AGP_VREF is required to be 0.4 of VCC3.
Locate circuitry close to VT82C694X.

OPTION : A
+Q19, +R463, +R158, +Q20 (2N3904S)
-R466, -R464, -R465, -Q20 (2N7002S)

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B	VT82C 694X DATA BUS	1.0
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IF ENABLE SUSPEND TO DRAM JDIM1 AND JDIM2 SHORT



****NOTE ON ALL DIMM SOCKETS****
Pin 147 should be pulled to a high state to accommodate registered DIMMs.

	RSMRST#	SUST1#	SUSA#	SUSB#	SUSC#
On	1	0	1	1	1
POS	1	0	0	1	1
STR	1	0	0	0	1
STD/Soft-off	1	0	0	0	0
Mechanical-off	0	0	0	0	0

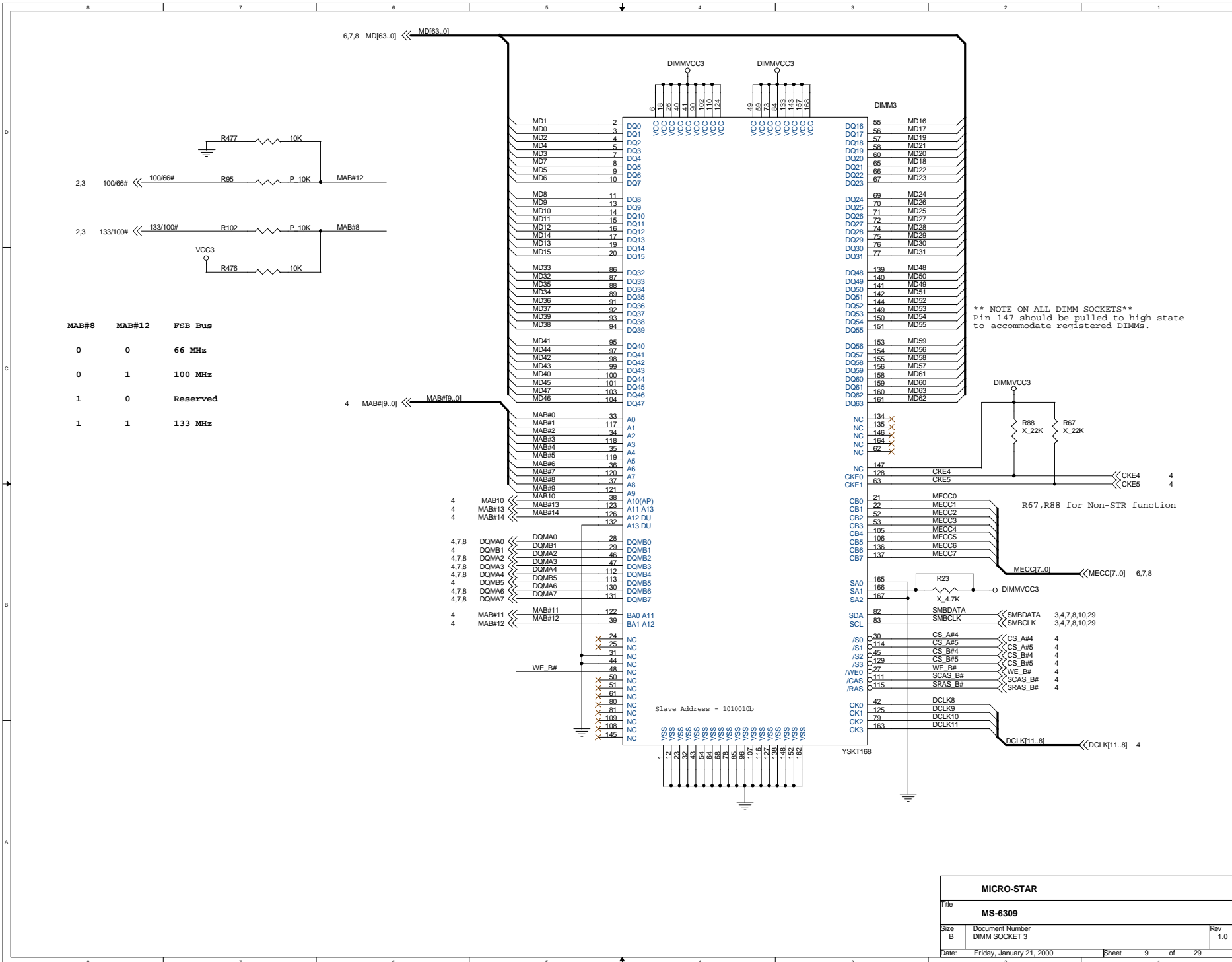
S3 WAKE UP:
NORMAL REFRESH ENABLE
GPO19 LOW -> HIGH -> RESTORE

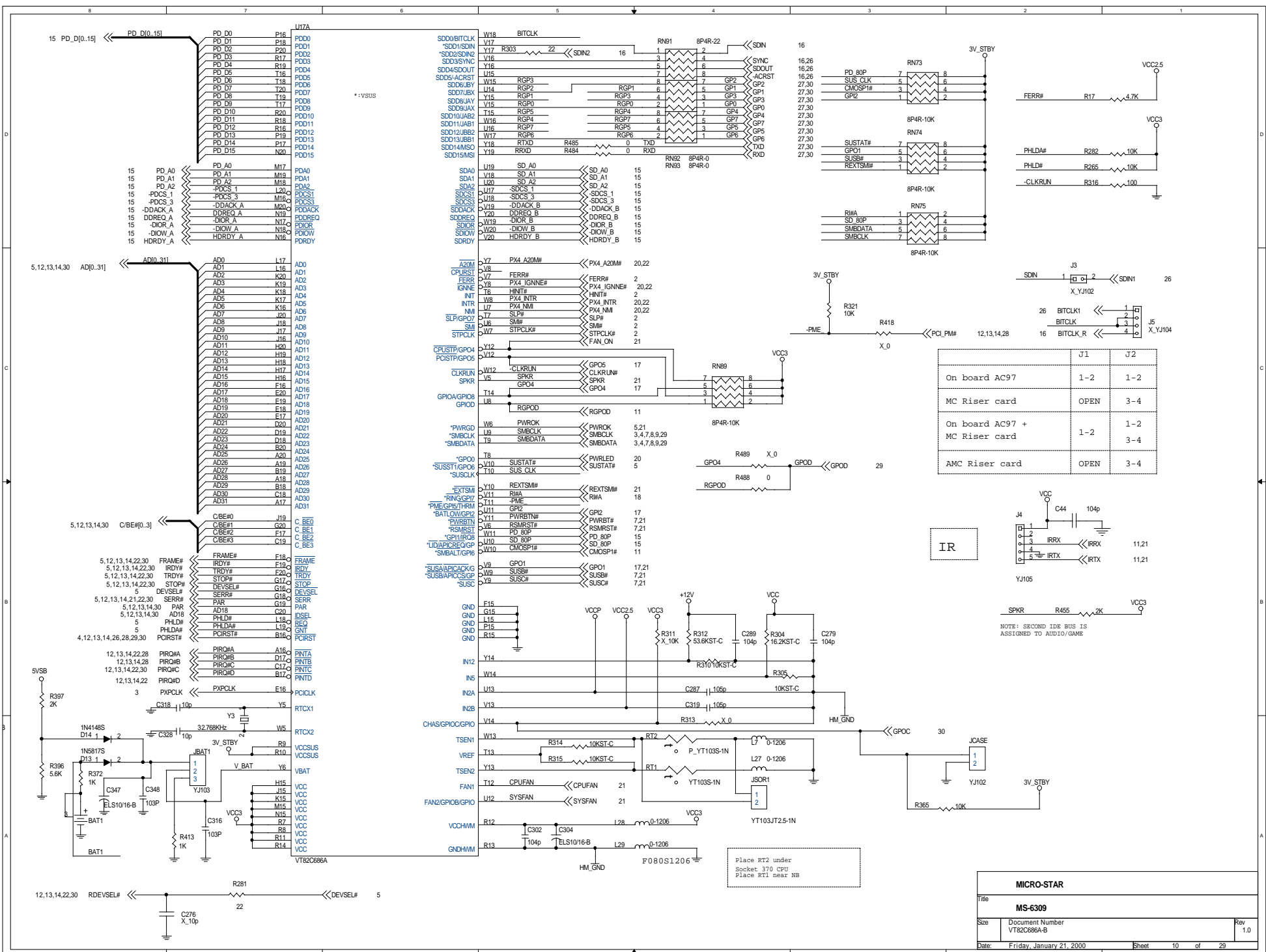
MICRO-STAR

Title: **MS-6309**

Size B Document Number DIMM SOCKET 1 Rev 1.0

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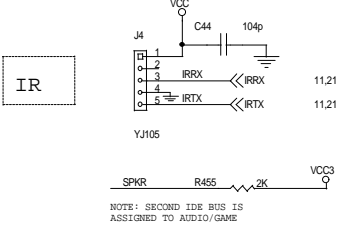




U17A

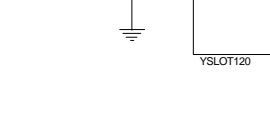
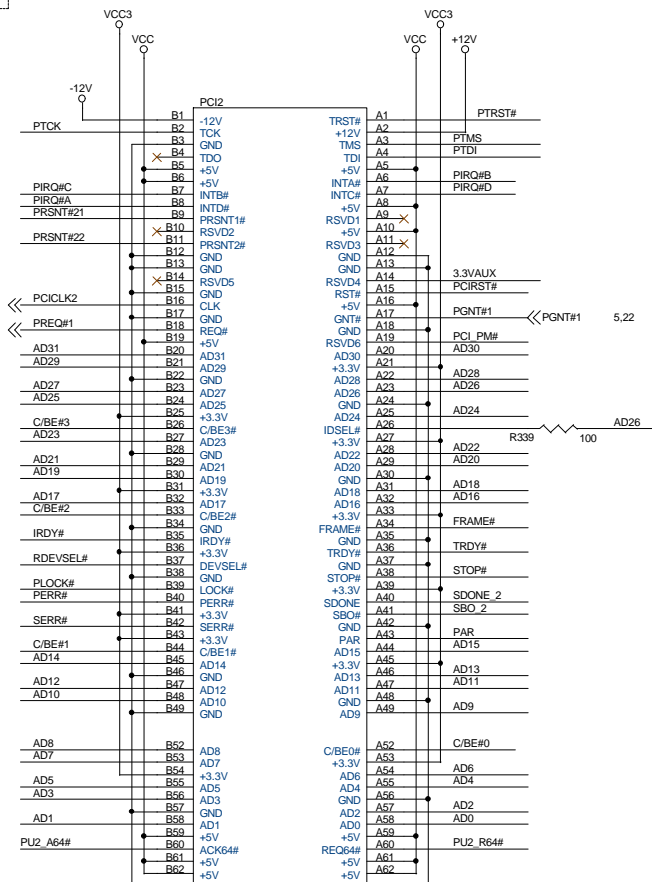
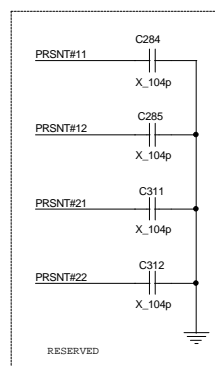
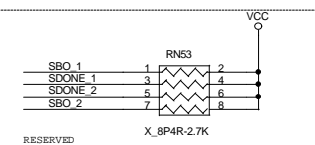
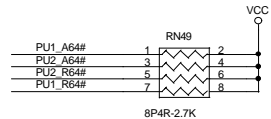
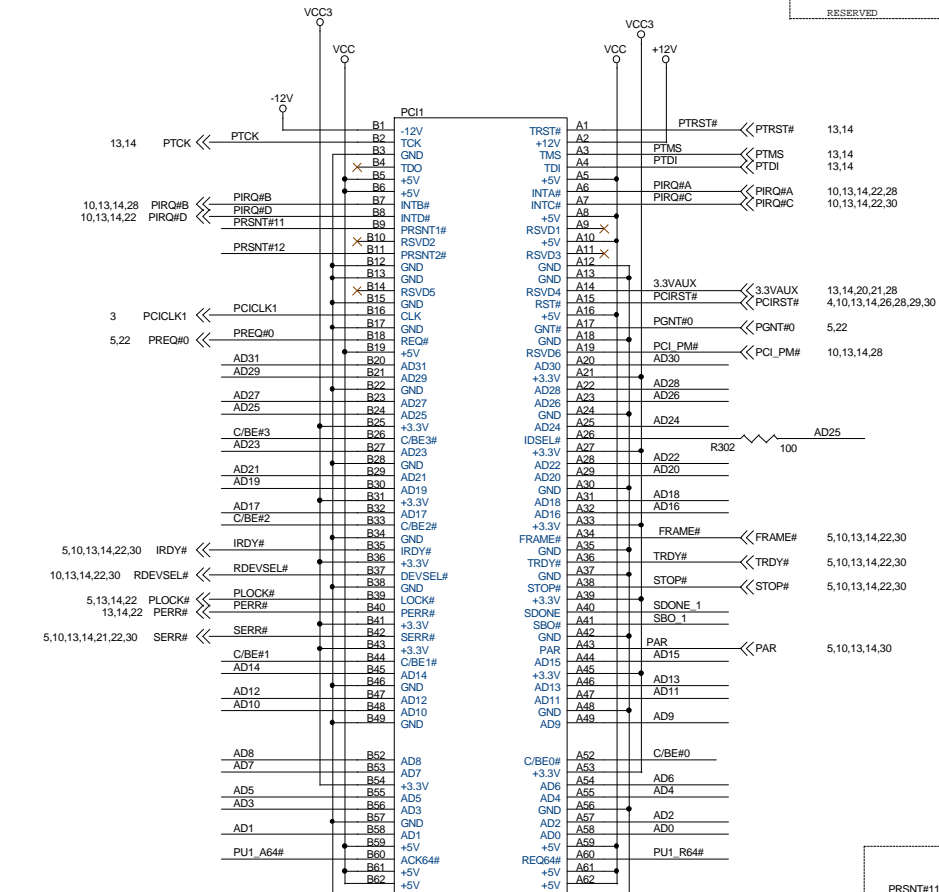
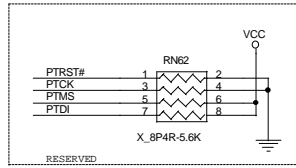
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PD03	R17	PD03	SD_A3	W15	SD_A3	SD_A3	15
PD04	R16	PD04	SD_A4	W14	SD_A4	SD_A4	15
PD05	T16	PD05	SD_A5	W13	SD_A5	SD_A5	15
PD06	T18	PD06	SD_A6	W12	SD_A6	SD_A6	15
PD07	T20	PD07	SD_A7	W11	SD_A7	SD_A7	15
PD08	T19	PD08	SD_A8	W10	SD_A8	SD_A8	15
PD09	T17	PD09	SD_A9	W09	SD_A9	SD_A9	15
PD10	R20	PD10	SD_A10	W08	SD_A10	SD_A10	15
PD11	R19	PD11	SD_A11	W07	SD_A11	SD_A11	15
PD12	R18	PD12	SD_A12	W06	SD_A12	SD_A12	15
PD13	R17	PD13	SD_A13	W05	SD_A13	SD_A13	15
PD14	P17	PD14	SD_A14	W04	SD_A14	SD_A14	15
PD15	P20	PD15	SD_A15	W03	SD_A15	SD_A15	15
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PD A4	M15	PD A4	SD A4	W14	SD A4	SD A4	15
PD A5	M14	PD A5	SD A5	W13	SD A5	SD A5	15
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PD A7	M12	PD A7	SD A7	W11	SD A7	SD A7	15
PD A8	M11	PD A8	SD A8	W10	SD A8	SD A8	15
PD A9	M10	PD A9	SD A9	W09	SD A9	SD A9	15
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PD A15	M04	PD A15	SD A15	W03	SD A15	SD A15	15
PD A16	M03	PD A16	SD A16	W02	SD A16	SD A16	15
PD A17	M02	PD A17	SD A17	W01	SD A17	SD A17	15
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PD A97	M00	PD A97	SD A97	W00	SD A97	SD A97	15
PD A98	M00	PD A98	SD A98	W00	SD A98	SD A98	15
PD A99	M00	PD A99	SD A99	W00	SD A99	SD A99	15
PD A100	M00	PD A100	SD A100	W00	SD A100	SD A100	15

On board AC97	J1 1-2	J2 1-2
MC Riser card	OPEN	3-4
On board AC97 + MC Riser card	1-2	1-2
		3-4
AMC Riser card	OPEN	3-4



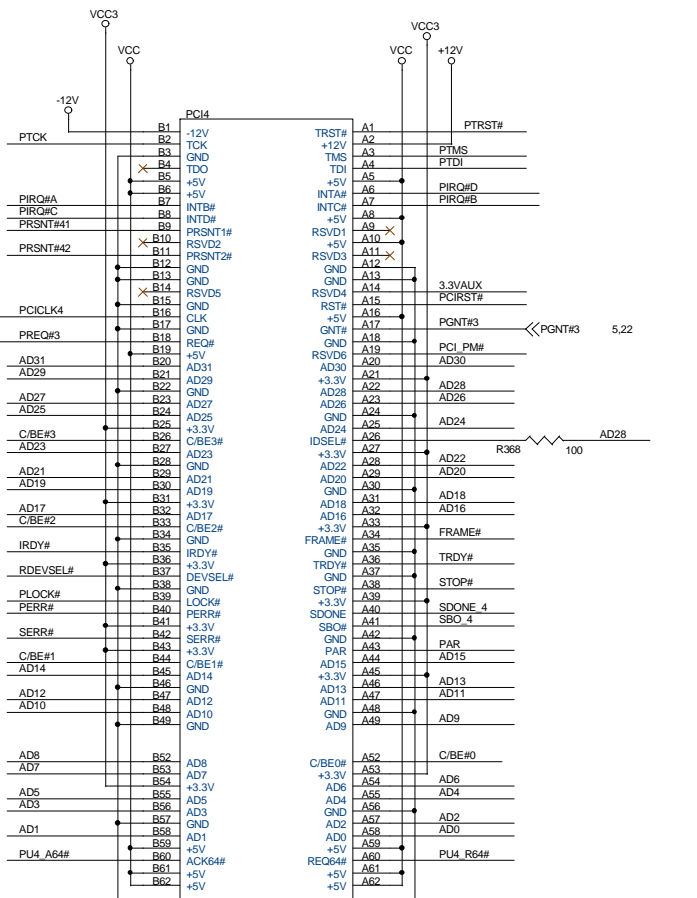
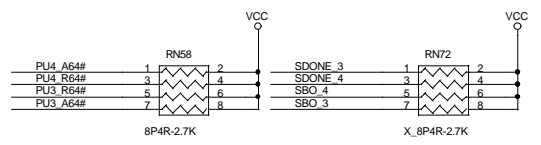
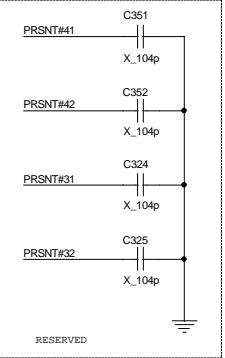
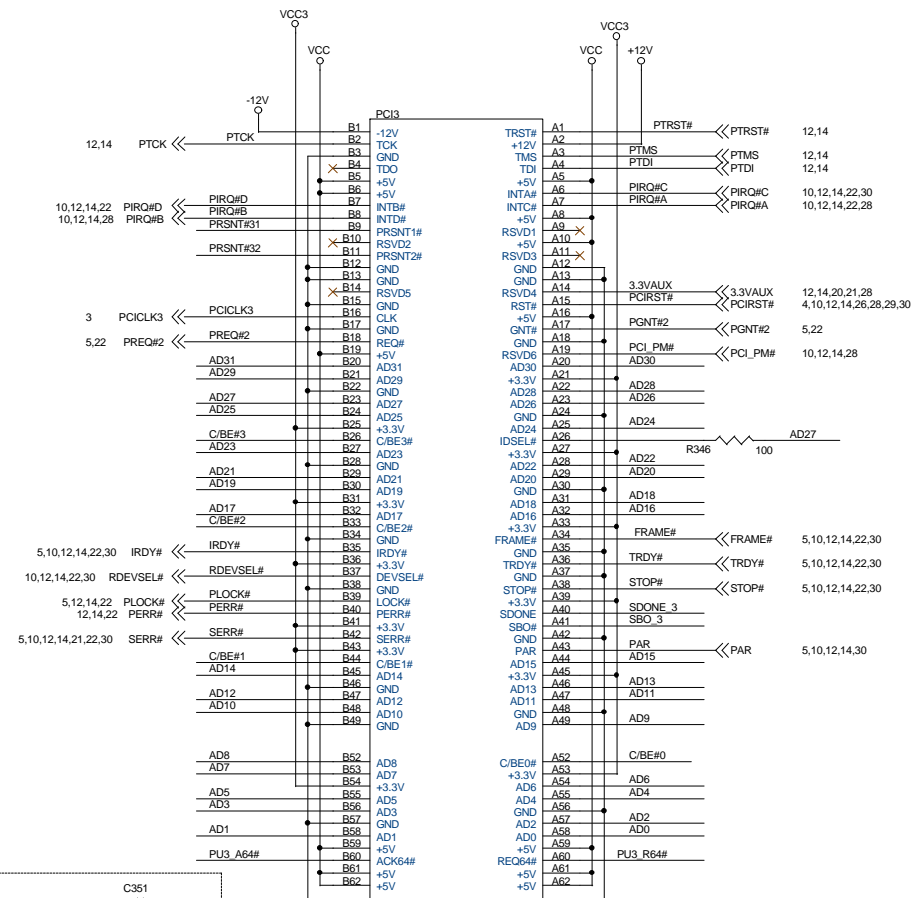
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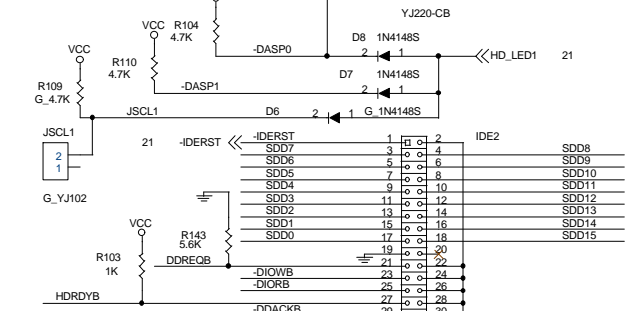
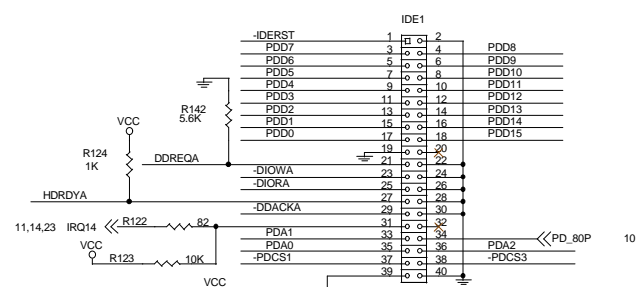
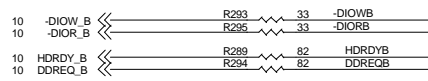
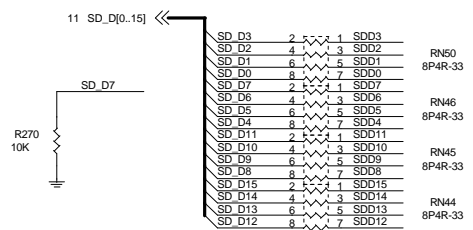
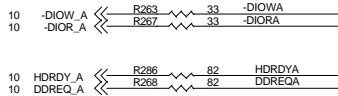
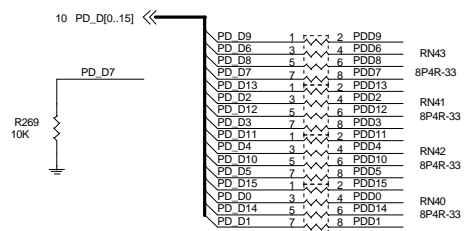
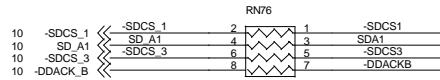
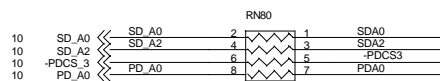
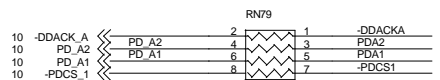
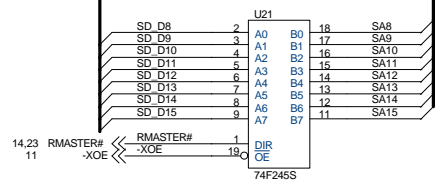
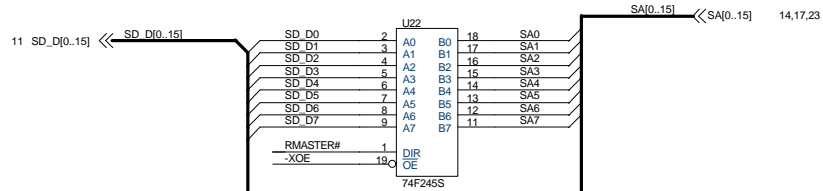


MICRO-STAR		
Title		
MS-6309		
Size	Document Number	Rev
B	PCI CONNECTOR 1 & 2	1.0
Date:	Friday, January 21, 2000	Sheet 12 of 29

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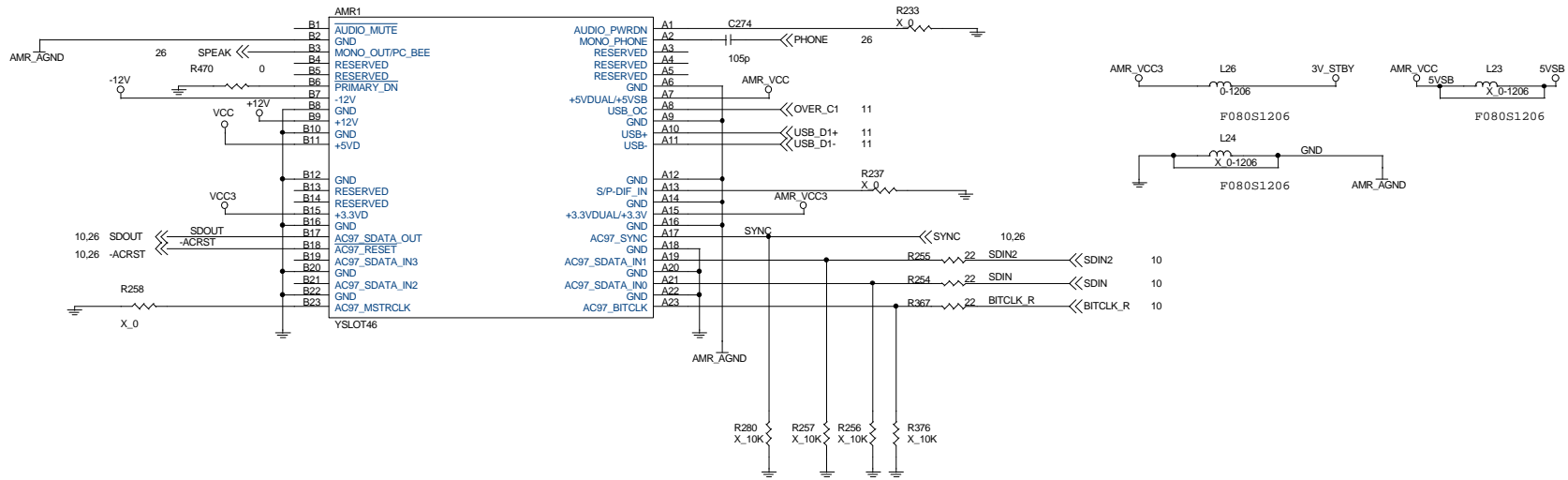


MICRO-STAR		
Title MS-6309		
Size B	Document Number PCI CONNECTOR 1 & 2	Rev 1.0
Date: Friday, January 21, 2000	Sheet 13	of 29

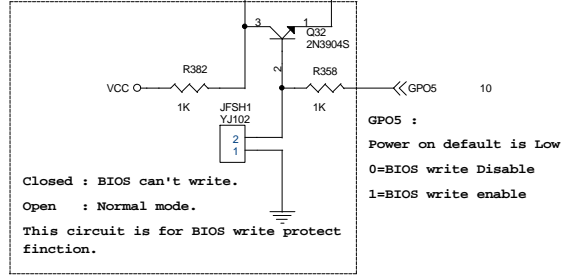
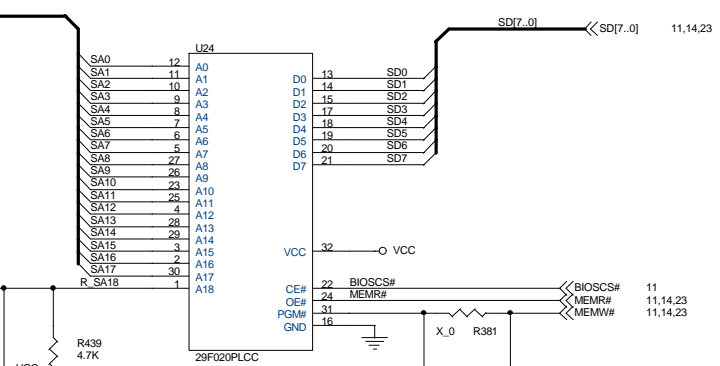
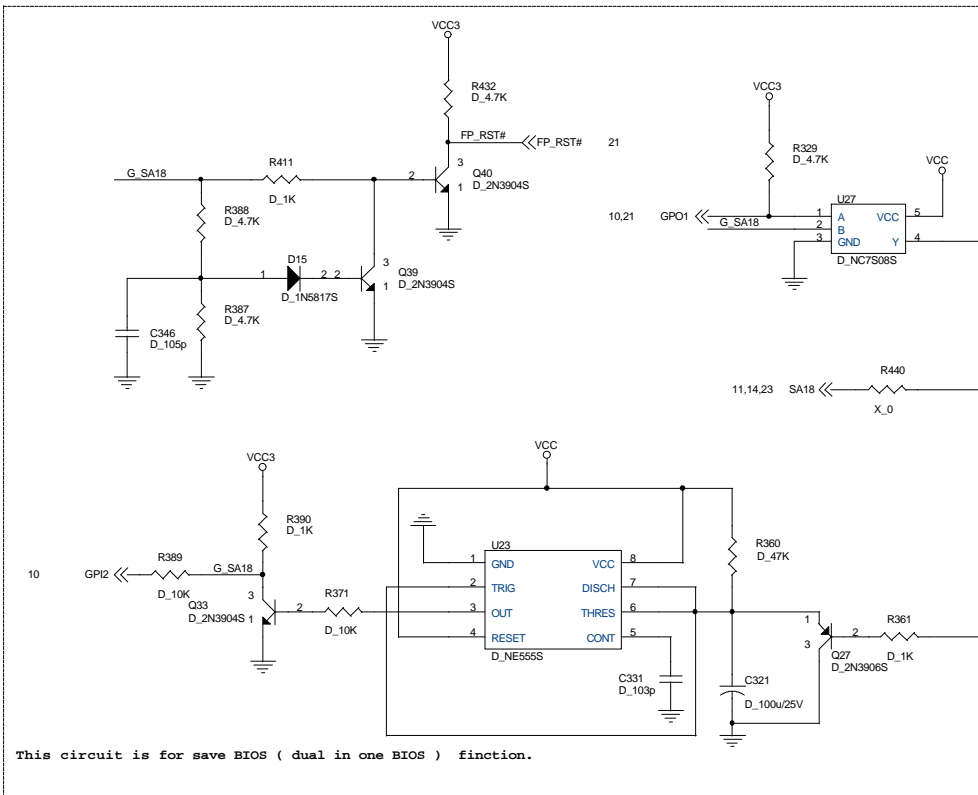


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R470 : Install for S/W audio on board.
 Remove for H/W audio on board.



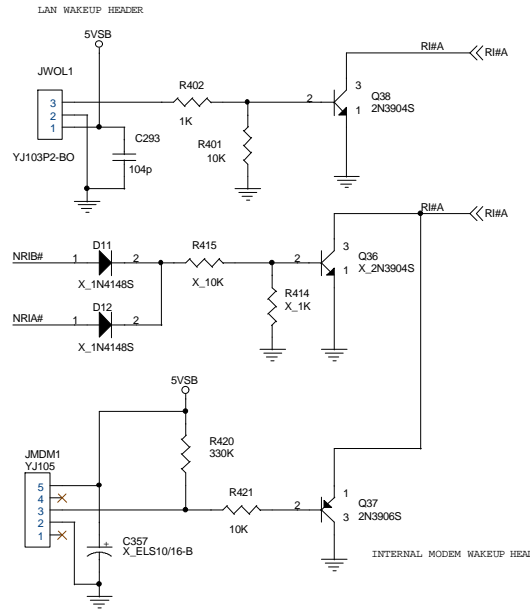
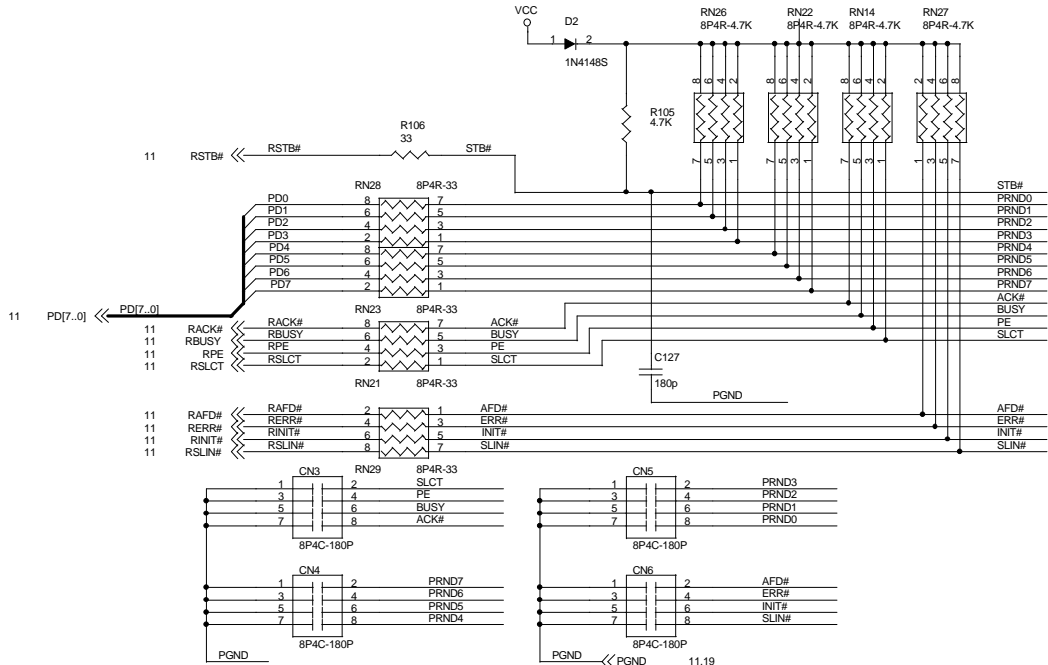
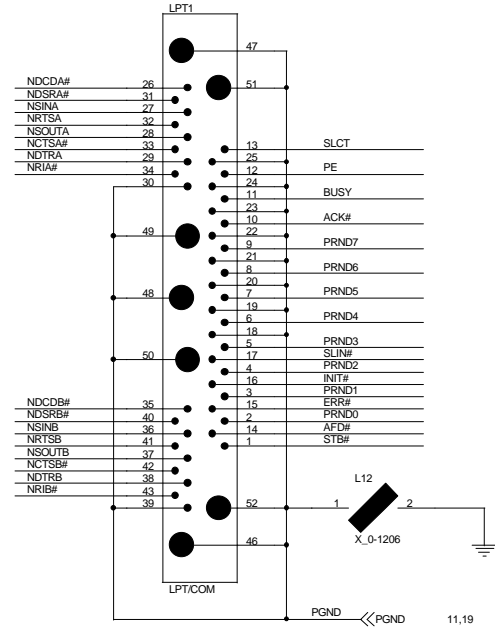
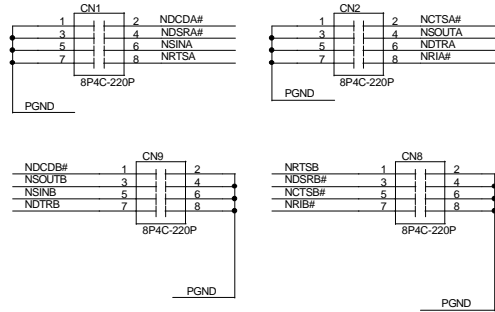
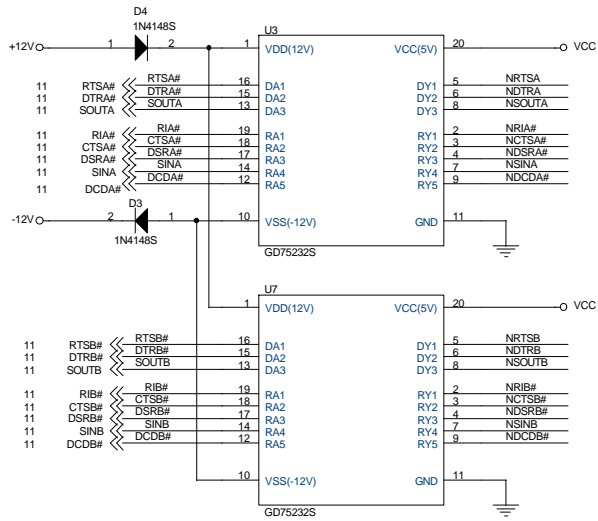
MICRO-STAR		
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GPO4 default is Hi

NOTE : 1. Option W : must be remove R381
 2. R440 for S/W save BIOS
 3. if use save BIOS function than flash must be use 29F040PLCC

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B	FLASH MEMORY	1.0
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B	COM1/COM2/LPT1 CONNECTOR	1.0
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If used KB & MS wake up
install JVSBI jumper,
else used jumper wise
short 2-3 pin.

KB password wakeup enable jumper

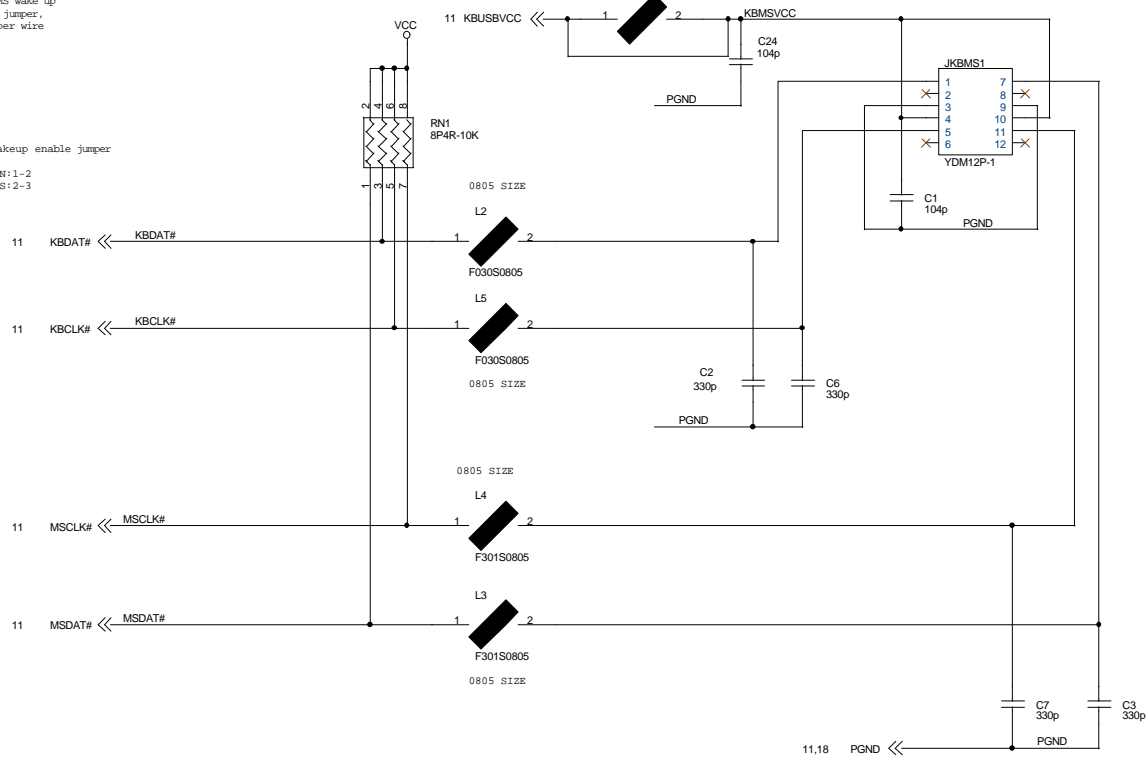
EN:1-2
DIS:2-3

FUSE USE POLY SWITCH FUSE

1206 SIZE

L1 X_0-1206

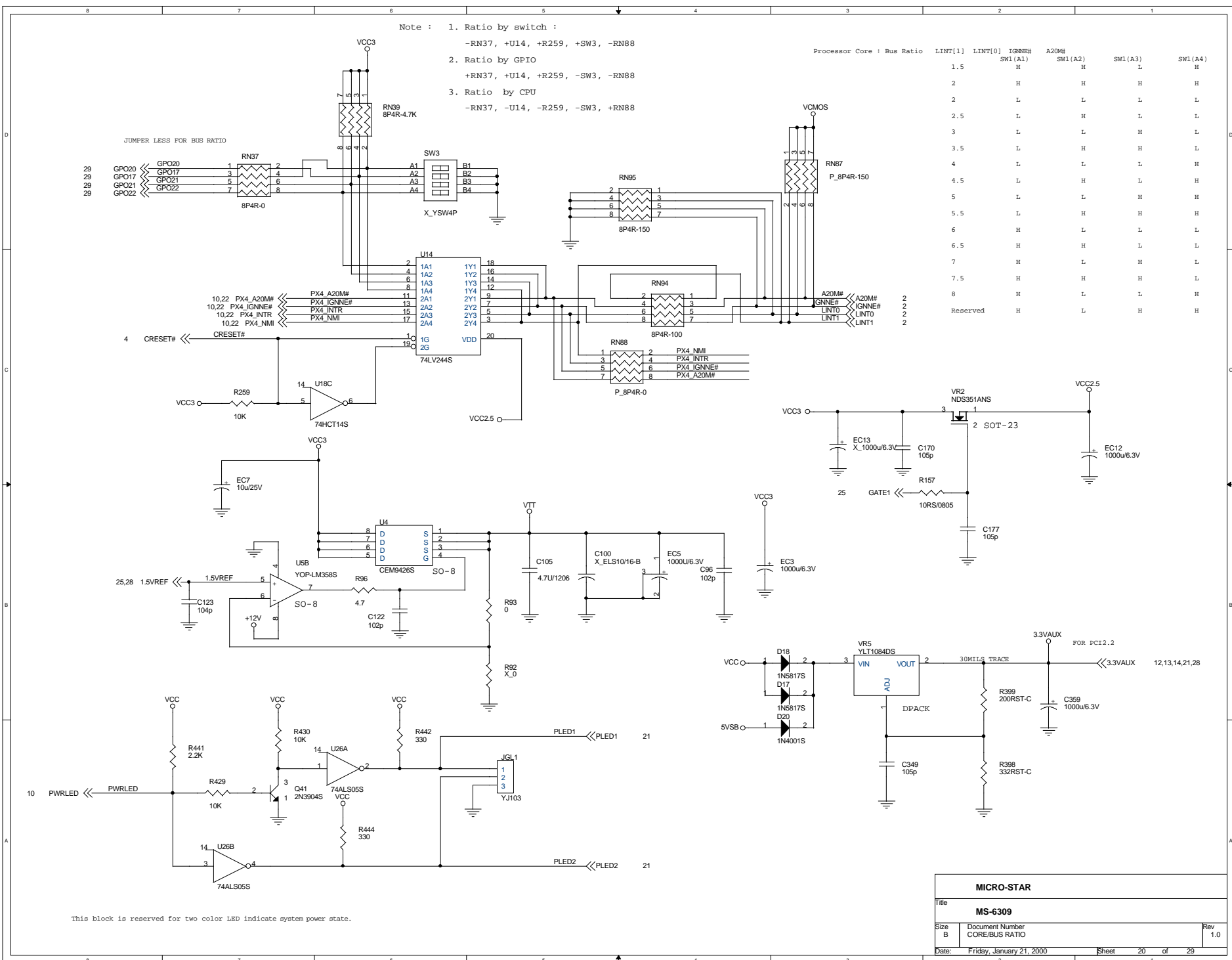
Not support keyboard wakeup.



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B	KEYBOARD	1.0
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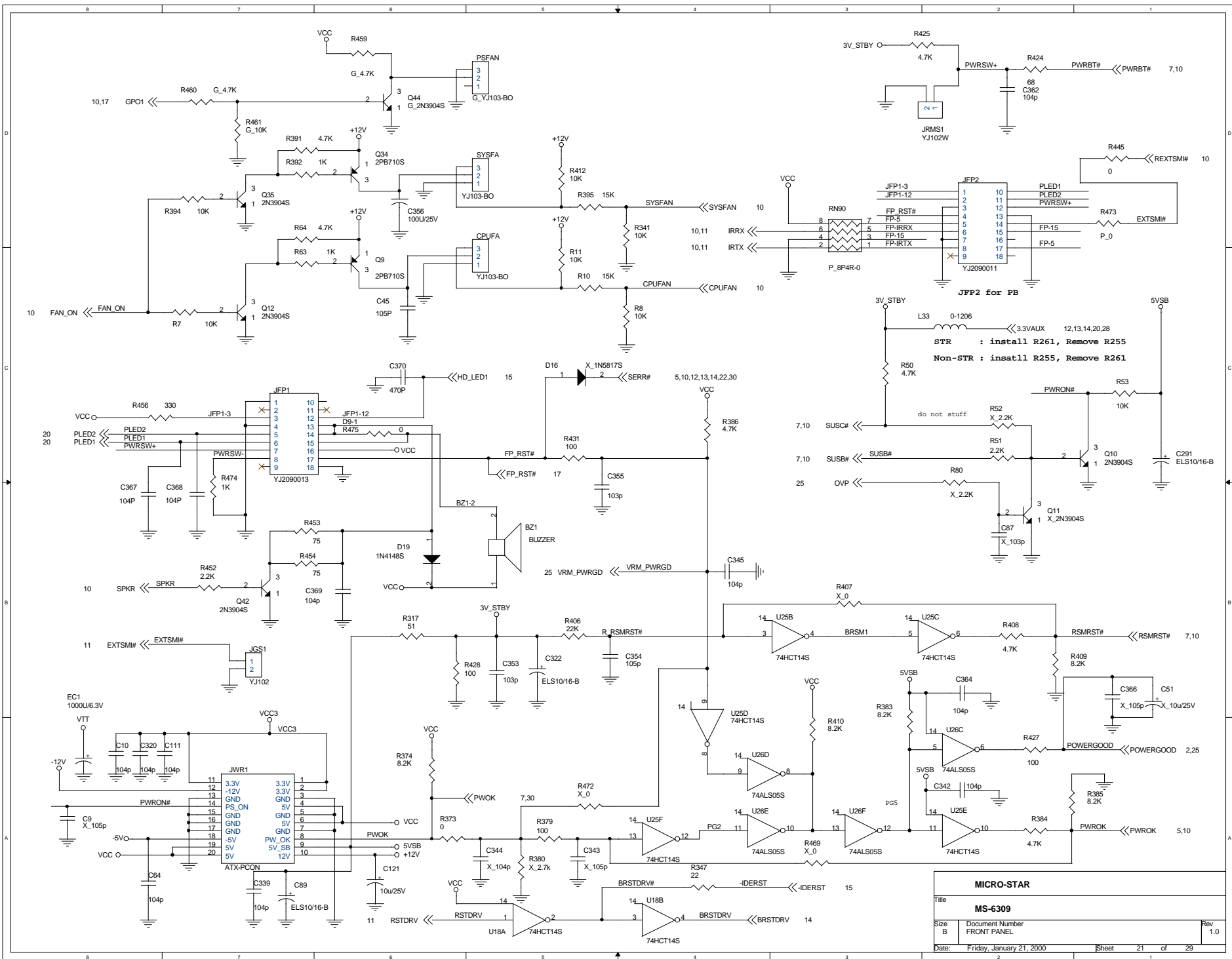
- Note : 1. Ratio by switch :
 -RN37, +U14, +R259, +SW3, -RN88
 2. Ratio by GPIO
 +RN37, +U14, +R259, -SW3, -RN88
 3. Ratio by CPU
 -RN37, -U14, -R259, -SW3, +RN88

Processor Core : Bus Ratio	LINT[1]	LINT[0]	IGNNE#	A20M#	SW1(A2)	SW1(A3)	SW1(A4)
1.5	H	H	H	H	H	H	H
2	L	L	L	L	L	L	L
2.5	L	H	L	L	L	L	L
3	L	L	L	H	H	H	L
3.5	L	H	L	H	H	H	L
4	L	L	L	L	L	L	H
4.5	L	H	L	H	H	H	H
5	L	L	L	L	L	L	H
5.5	L	H	L	H	H	H	H
6	H	L	L	L	L	L	L
6.5	H	H	L	L	L	L	L
7	H	L	L	H	H	H	L
7.5	H	H	L	H	H	H	L
8	H	L	L	L	L	L	H
Reserved	H	L	L	L	L	L	H

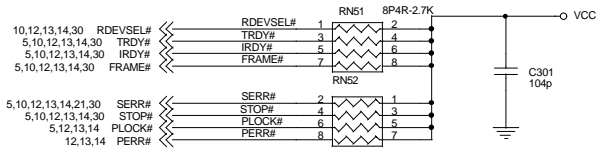


This block is reserved for two color LED indicate system power state.

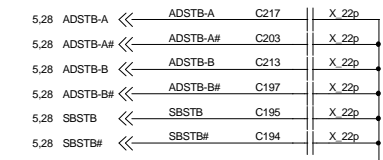
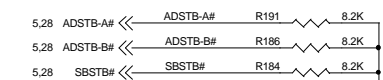
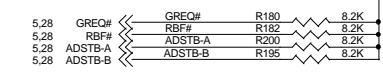
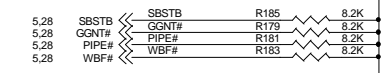
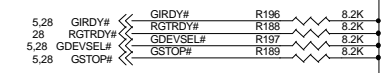
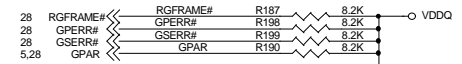
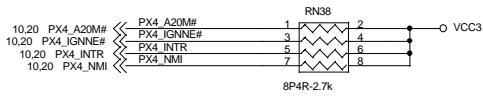
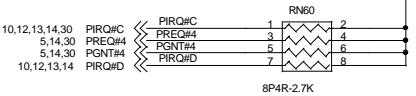
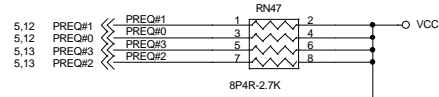
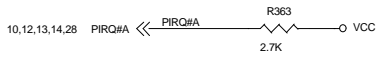
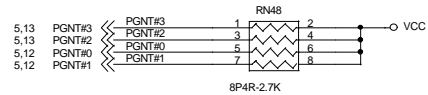
MICRO-STAR		
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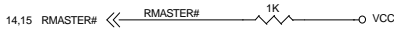
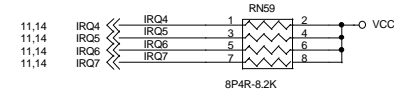
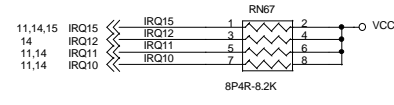
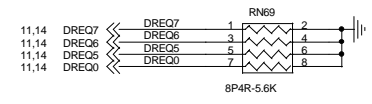
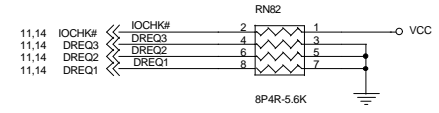
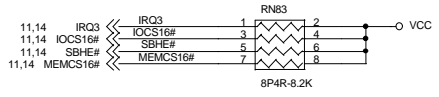
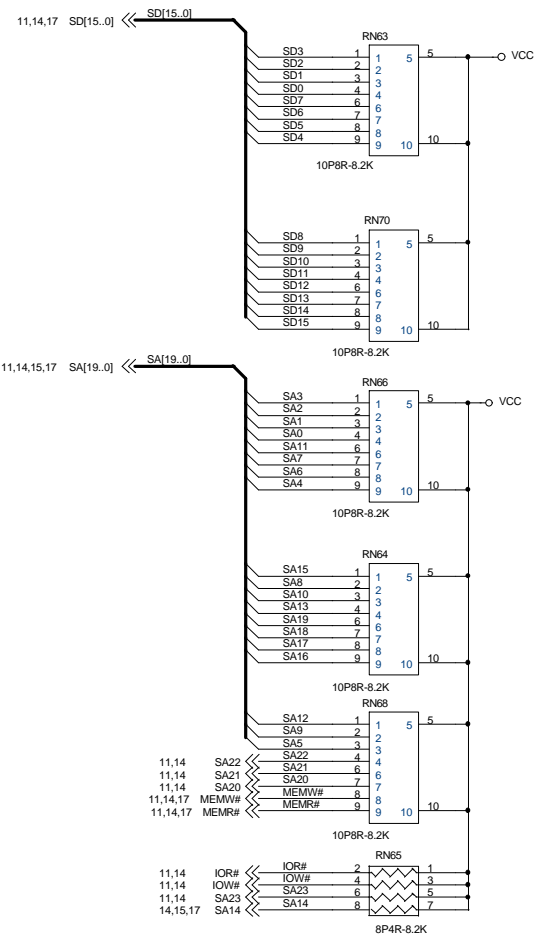
MICRO-STAR	
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B	FRONT PANEL
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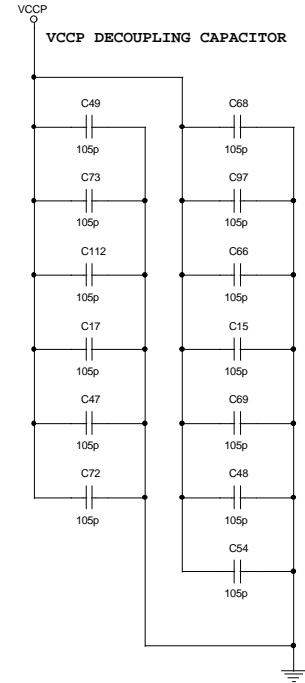
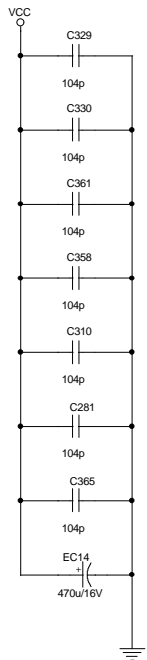
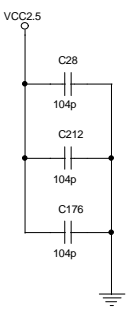
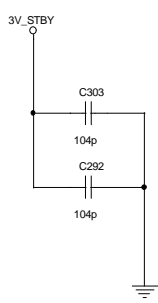
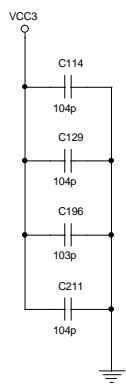
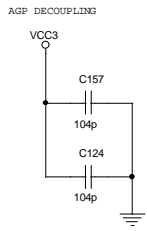
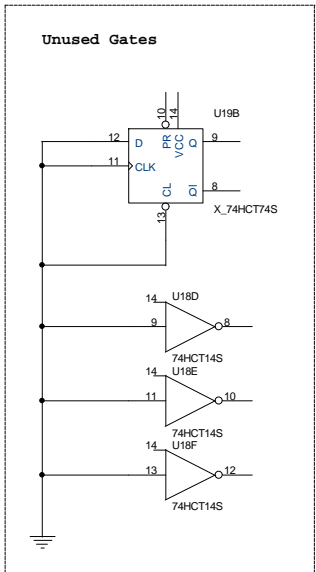
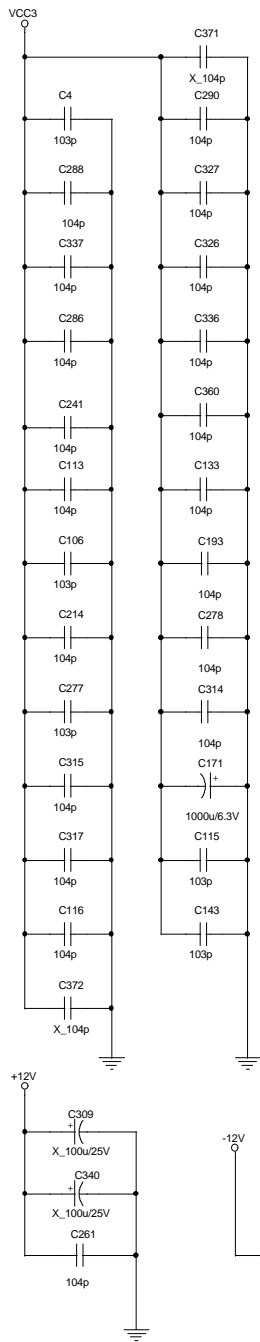
C301
104p



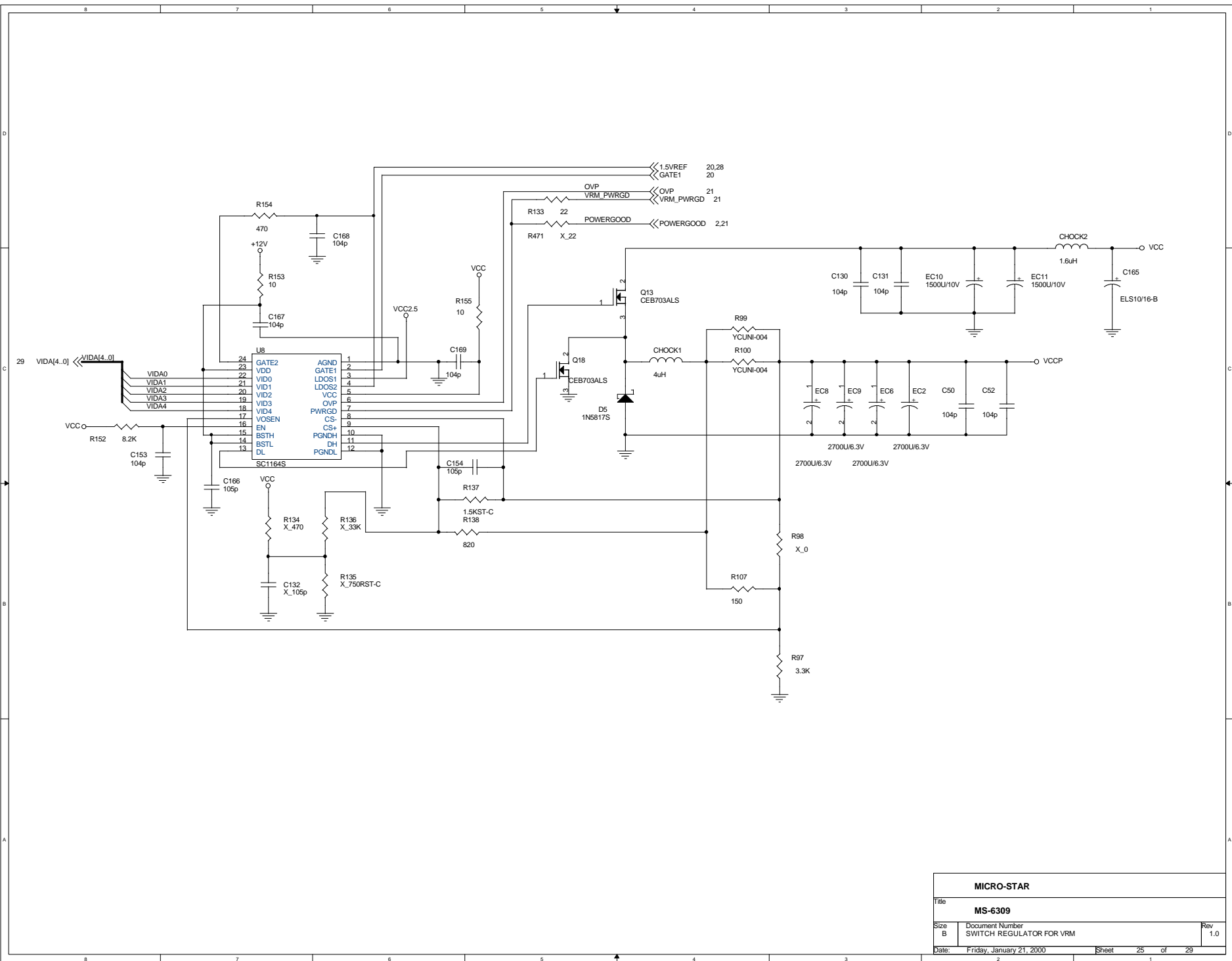
MICRO-STAR		
Title		
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B	BUS RESISTOR	1.0
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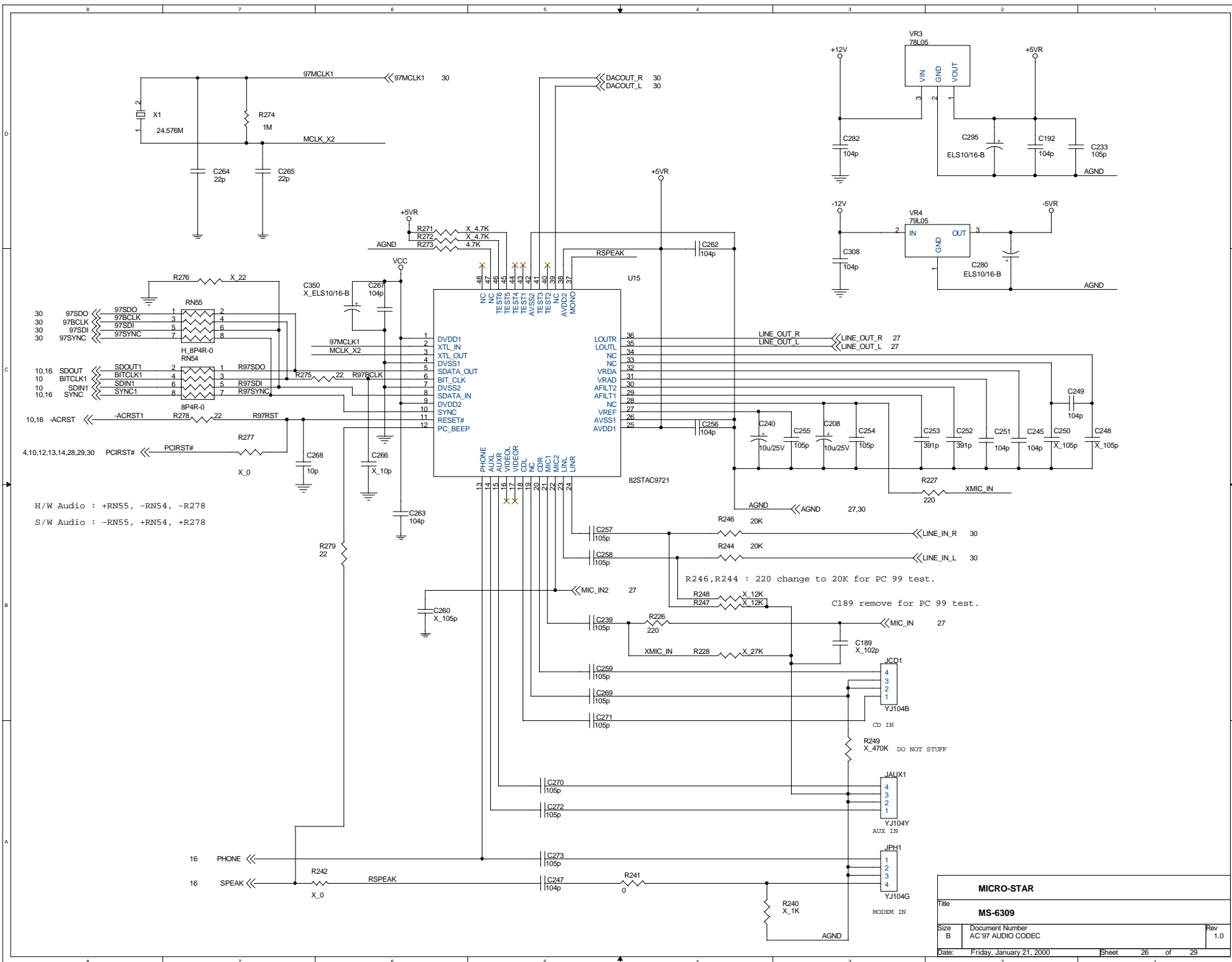
MICRO-STAR		
Title		
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B	ISA BUS RESISTOR	1.0
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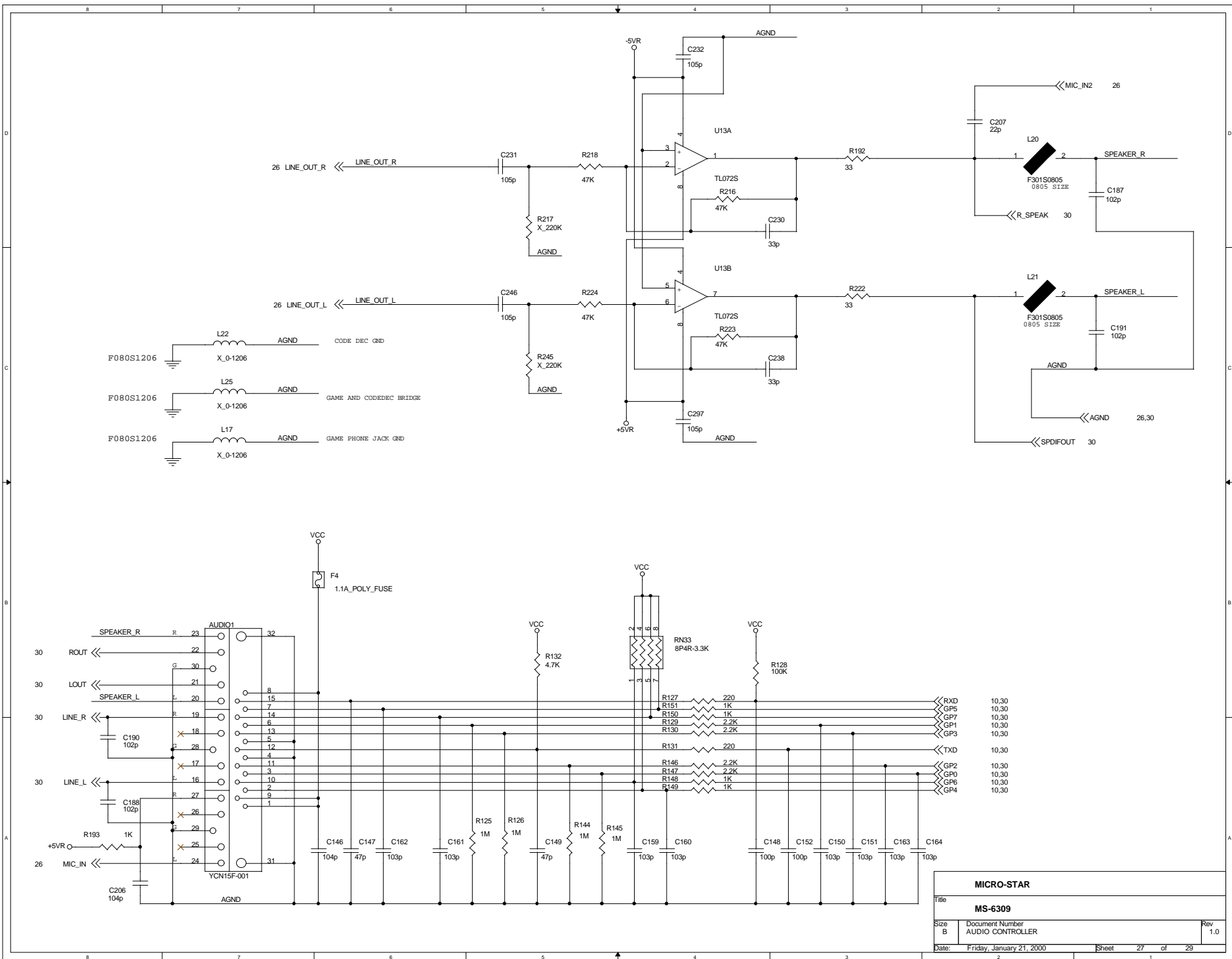
MICRO-STAR		
Title		
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Size	Document Number	Rev
B	DRAM AND 440BX DECOUPLING CAPACITOR	1.0
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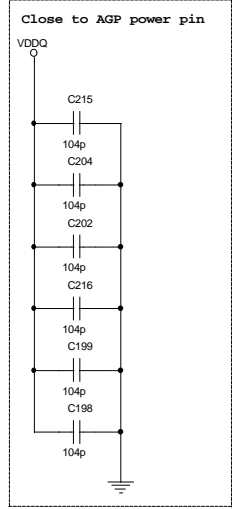
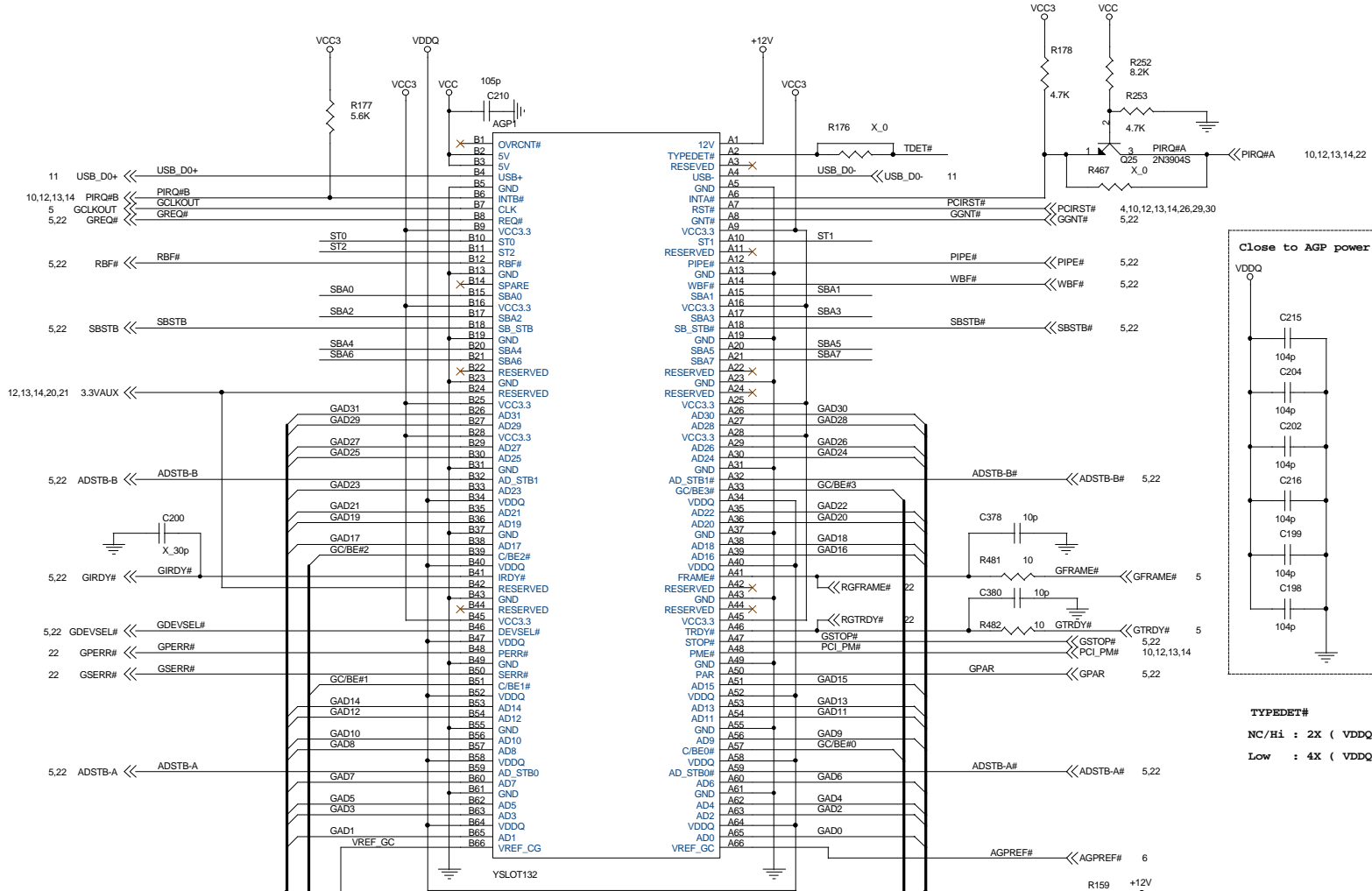
MICRO-STAR		
Title		
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Size	Document Number	Rev
B	SWITCH REGULATOR FOR VRM	1.0
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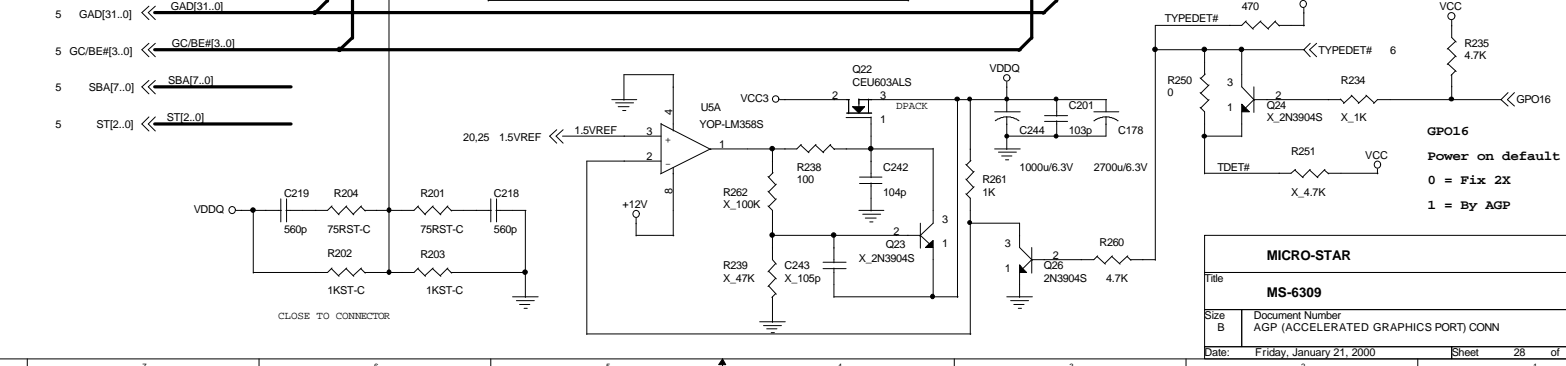
MICRO-STAR		
Title		
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B	AC'97 AUDIO CODEC	1.0
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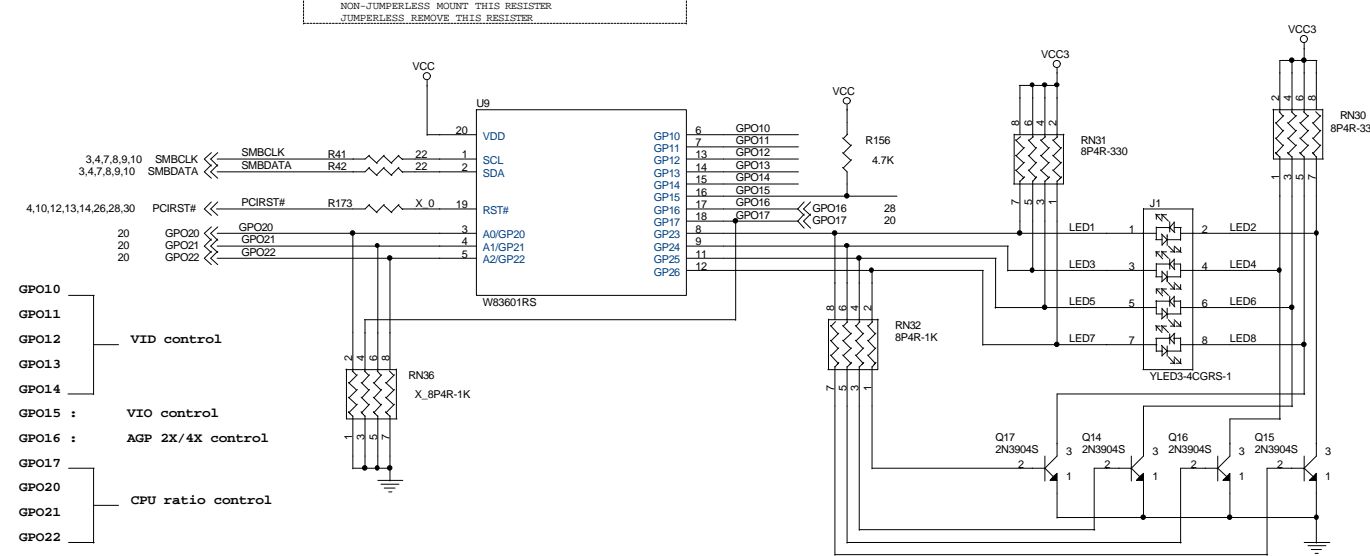
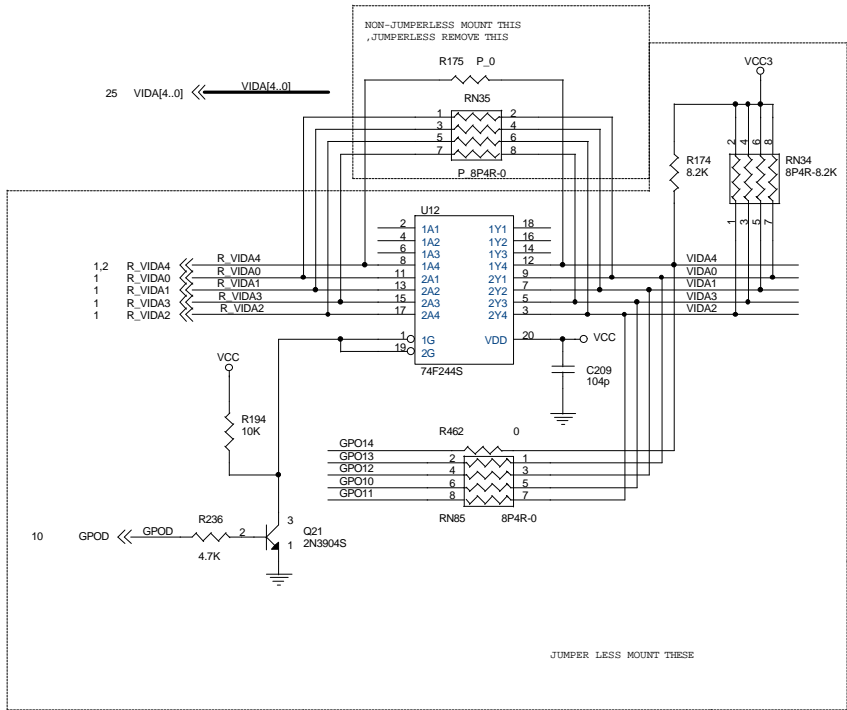
MICRO-STAR		
Title		
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B	AUDIO CONTROLLER	1.0
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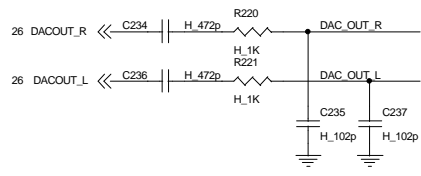
TYPEDET#
 NC/Hi : 2X (VDDQ = 3.3V)
 Low : 4X (VDDQ = 1.5V)



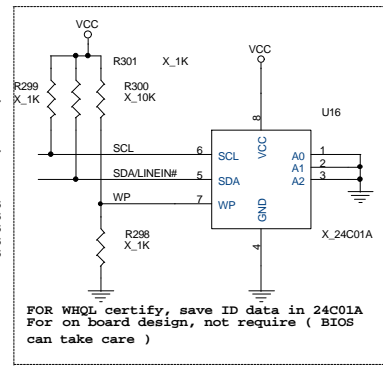
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Size B	Document Number AGP (ACCELERATED GRAPHICS PORT) CONN	Rev 1.0
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CT5880/ES1373 Game port Disabled
 U20 pin 72,73,76,77,78,79 pull up 10K (RN86)



FOR WHQL certify, save ID data in 24C01A
 For on board design, not require (BIOS can take care)

