

MS-6568 VER:0A

CPU: AMD Socket-462 Processor

Chipset: SiS 740 SIS 961A SOUTH BRIDGE

LPC I/O: W83697HF

AC'97 CODEC:Realtek ALC201A

Expansion: PCI Slot * 3
CNR Slot * 1

GPIO Table on SIS961			
GPIO_0	I/O	MAIN	Pull-Up
GPIO_1	I/O	MAIN	Pull-Up
GPIO_2	I/O	MAIN	THERM#
GPIO_3	I/O	MAIN	EXTSMI#
GPIO_4	I/O	MAIN	Pull-Up
GPIO_5	I/O	MAIN	PREQ#5(Pull-Up)
GPIO_6	I/O	MAIN	PGNT#5(Pull-Up)
GPI_7	I/O	RESUME	LPCPME#
GPI_8	I	RESUME	RING
GPI_9	I	RESUME	RESERVED
GPI_10	I	RESUME	RESERVED
GPIO_11	I/O	RESUME	RESERVED Pull-Up
GPIO_12	I/O	RESUME	Pull-Up
GPIO_13	I/O	RESUME	Flash Rom protection H: Disable, L: Enable
GPIO_14	I/O	RESUME	Pull-Up
GPIO_15	I/O	RESUME	KBDAT
GPIO_16	I/O	RESUME	KBCLK
GPIO_17	I/O	RESUME	MSDAT
GPIO_18	I/O	RESUME	MSCLK
GPIO_19	I/O	RESUME	SMBCLK
GPIO_20	I/O	RESUME	SMBDAT

Model option table

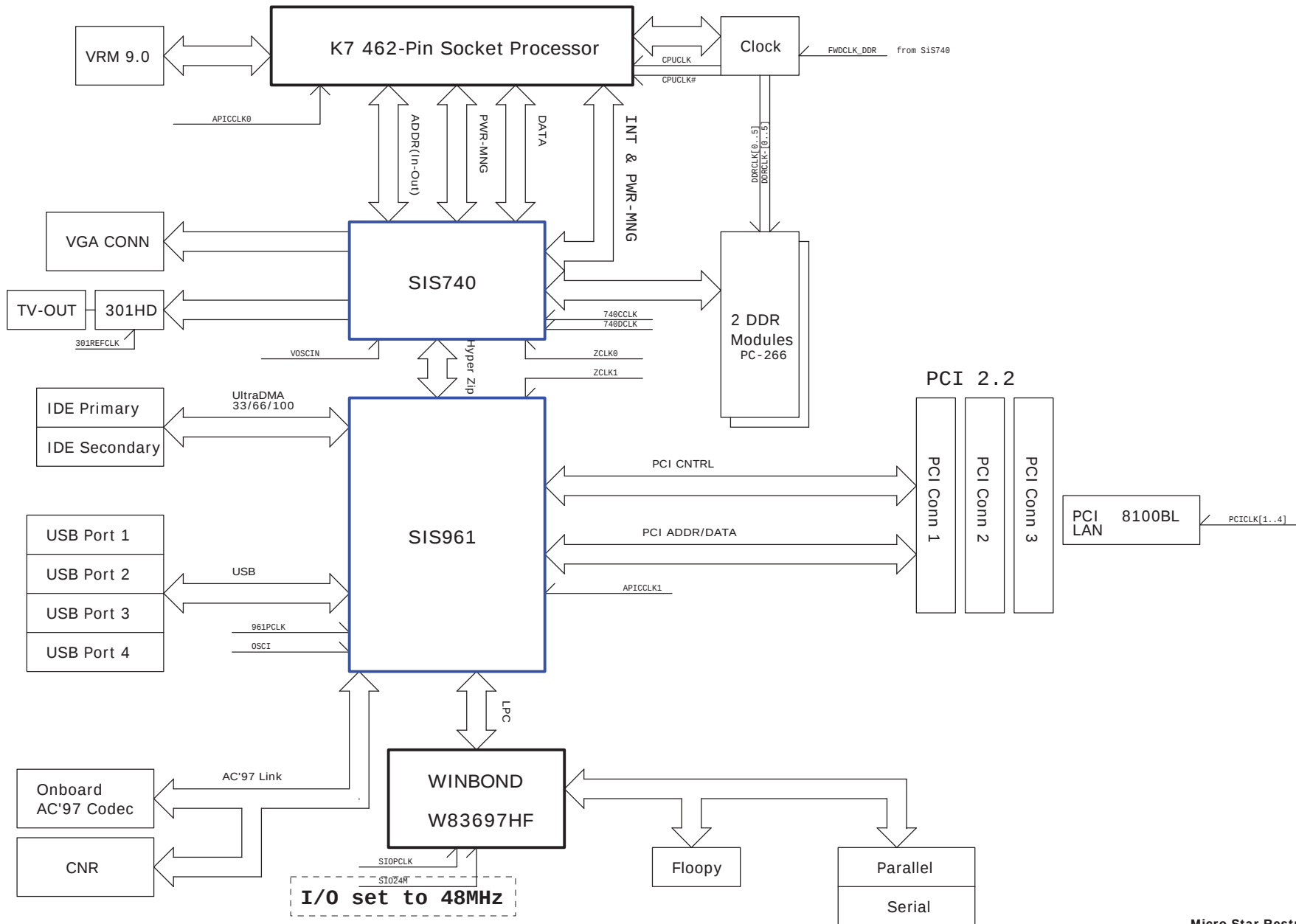
Model type	Function	BOM Config	ERP BOM No.
MS6568	Option:STD(W/TV)	Cfg6568-00A-STD	501/601-6568-A10
MS6568	Option:A(w/o TV)	Cfg6568-00A-A	

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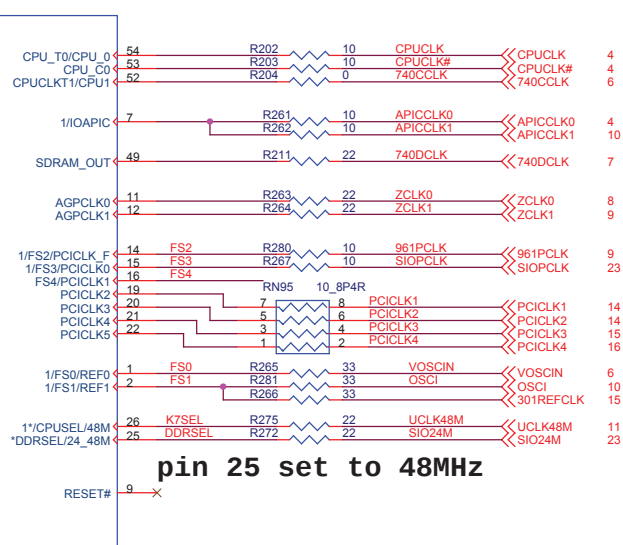
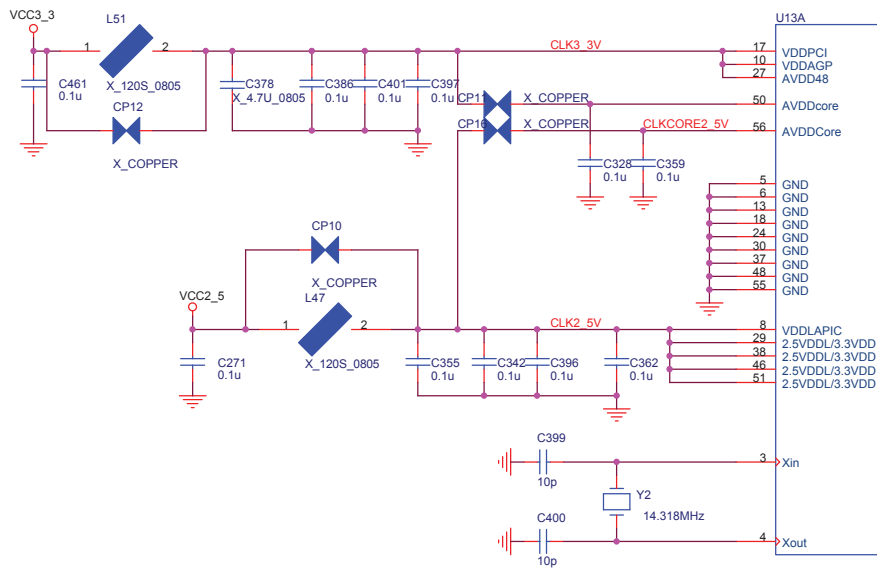
Title	Cover Sheet	Rev
Document Number	MS-6568	0A
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MS-6568 Block Diagram



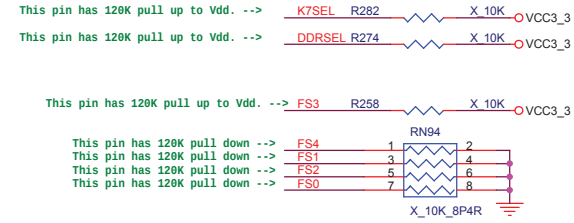
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File	Block Diagram	Rev
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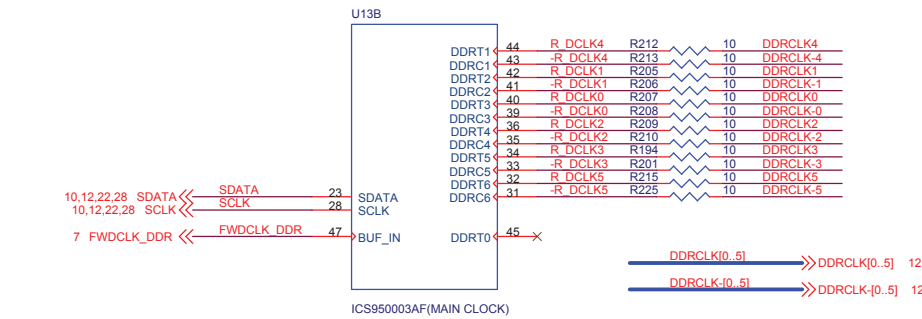
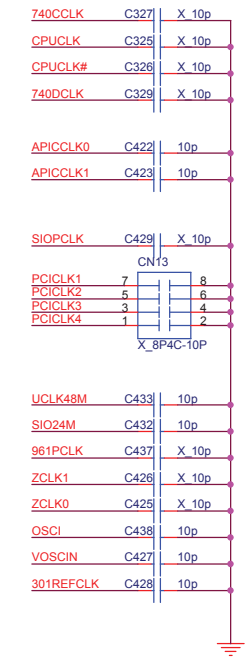


pin 25 set to 48MHz

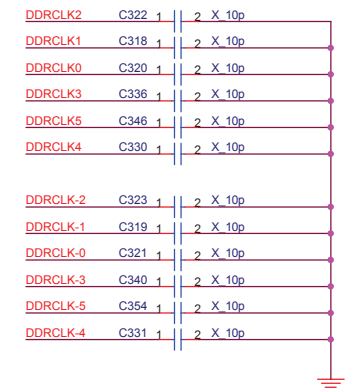
1:These pins have 2X driver strength.
*:These input have 120K internal pull-up resistor to VDD



By-Pass Capacitors Place near to the Clock Buffer



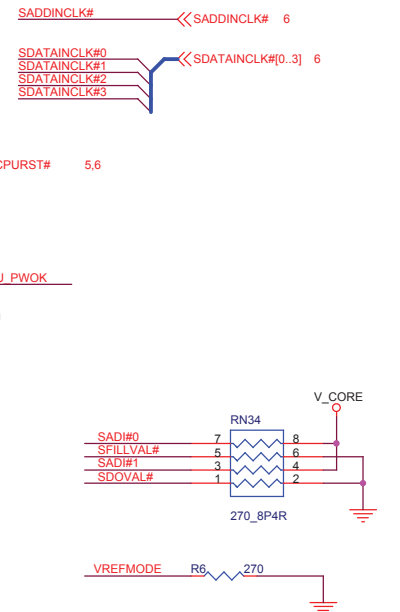
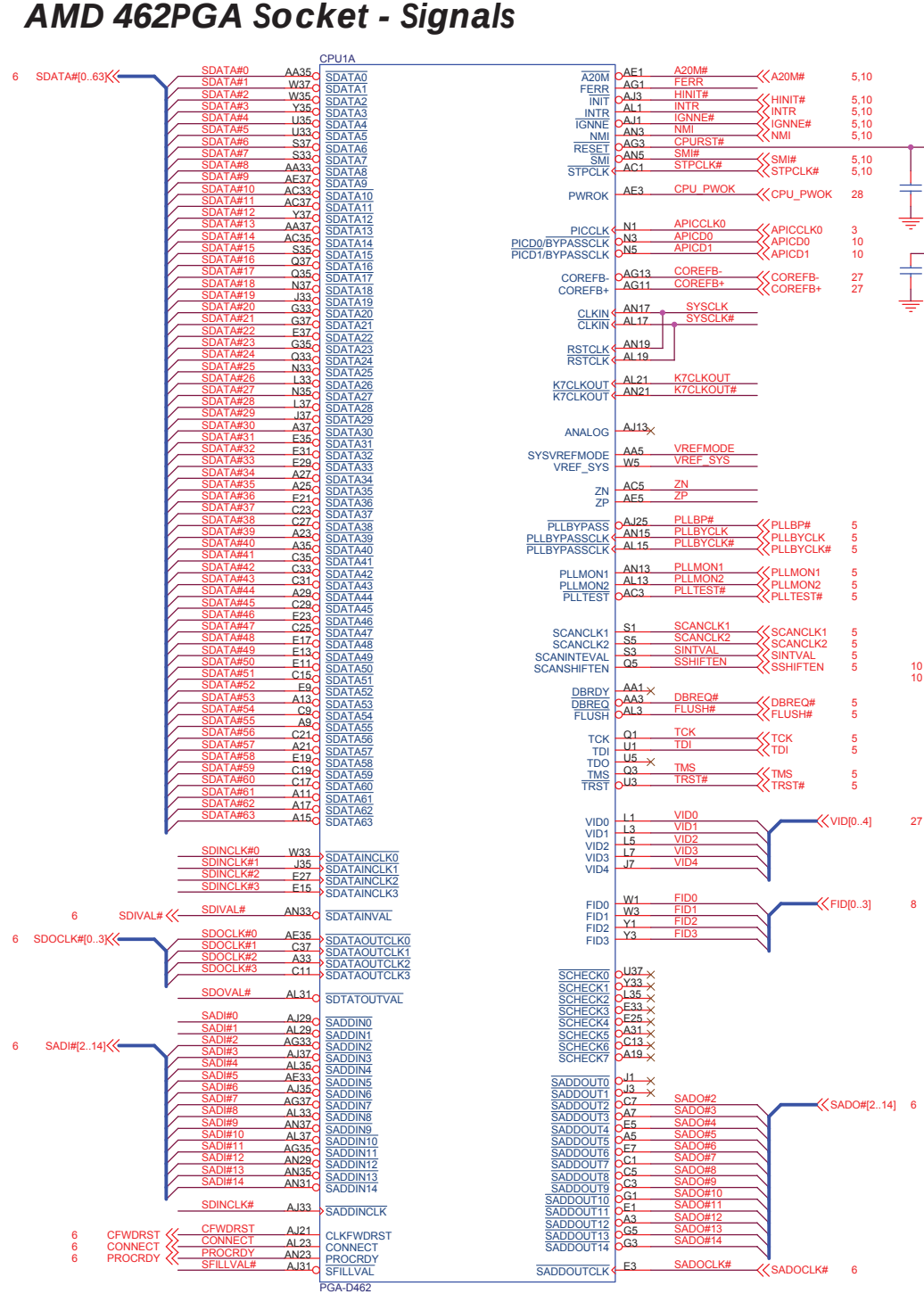
By-Pass Capacitors Place near to the Clock Buffer



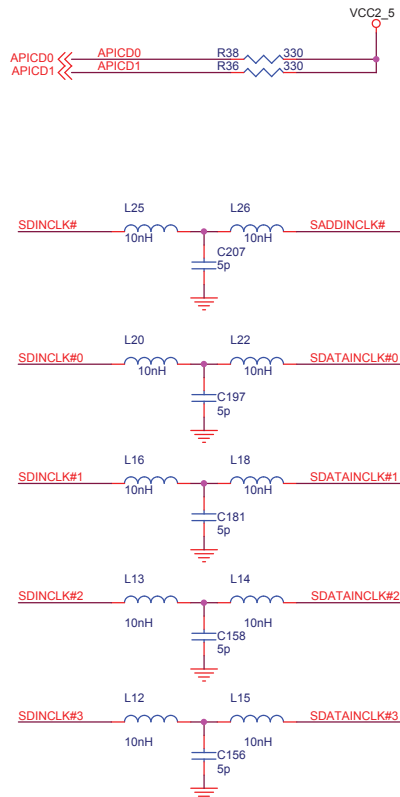
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File	Clock Generator	Rev
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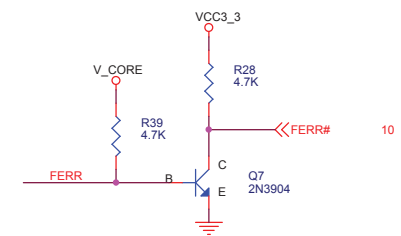
AMD 462PGA Socket - Signals



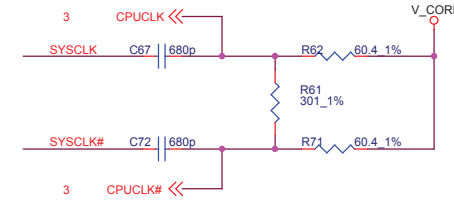
CPU APIC BLOCK



CPU FERR BLOCK

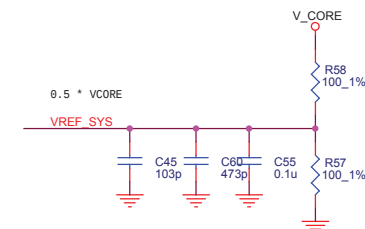


CPU SYCLK BLOCK

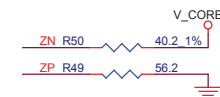


Near socket-A

CPU SYSCLK REFERENCE BLOCK

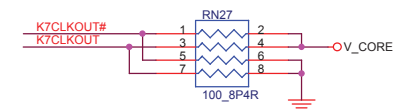


CPU ZN / ZP BLOCK



match the transmission line
Push-pull compensation circuit

CPU K7CLKOUT BLOCK

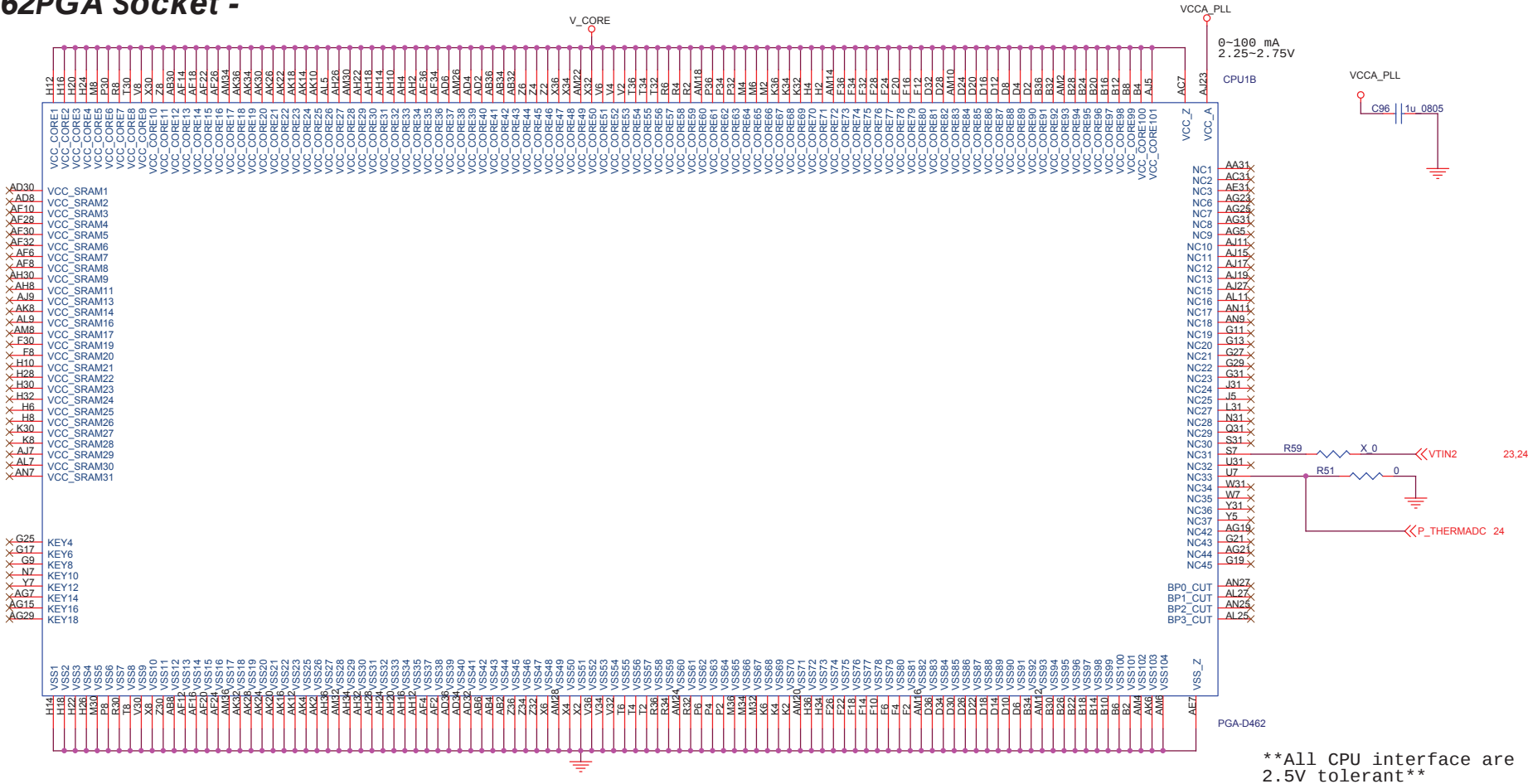


** Trace lengths of CLKOUT and -CLKOUT are between 2" and 3"*

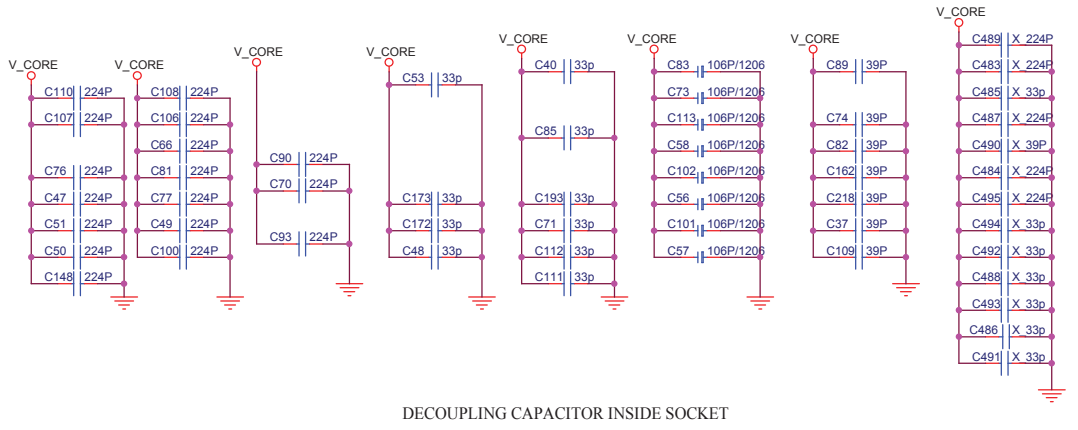
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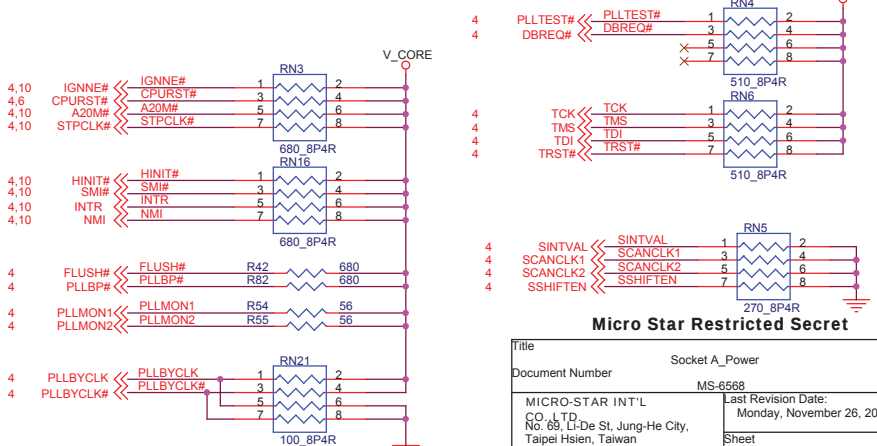
AMD 462PGA Socket - Power



CPU DECOUPLING CAPACITORS



CPU PULL-UP / DOWN BLOCK

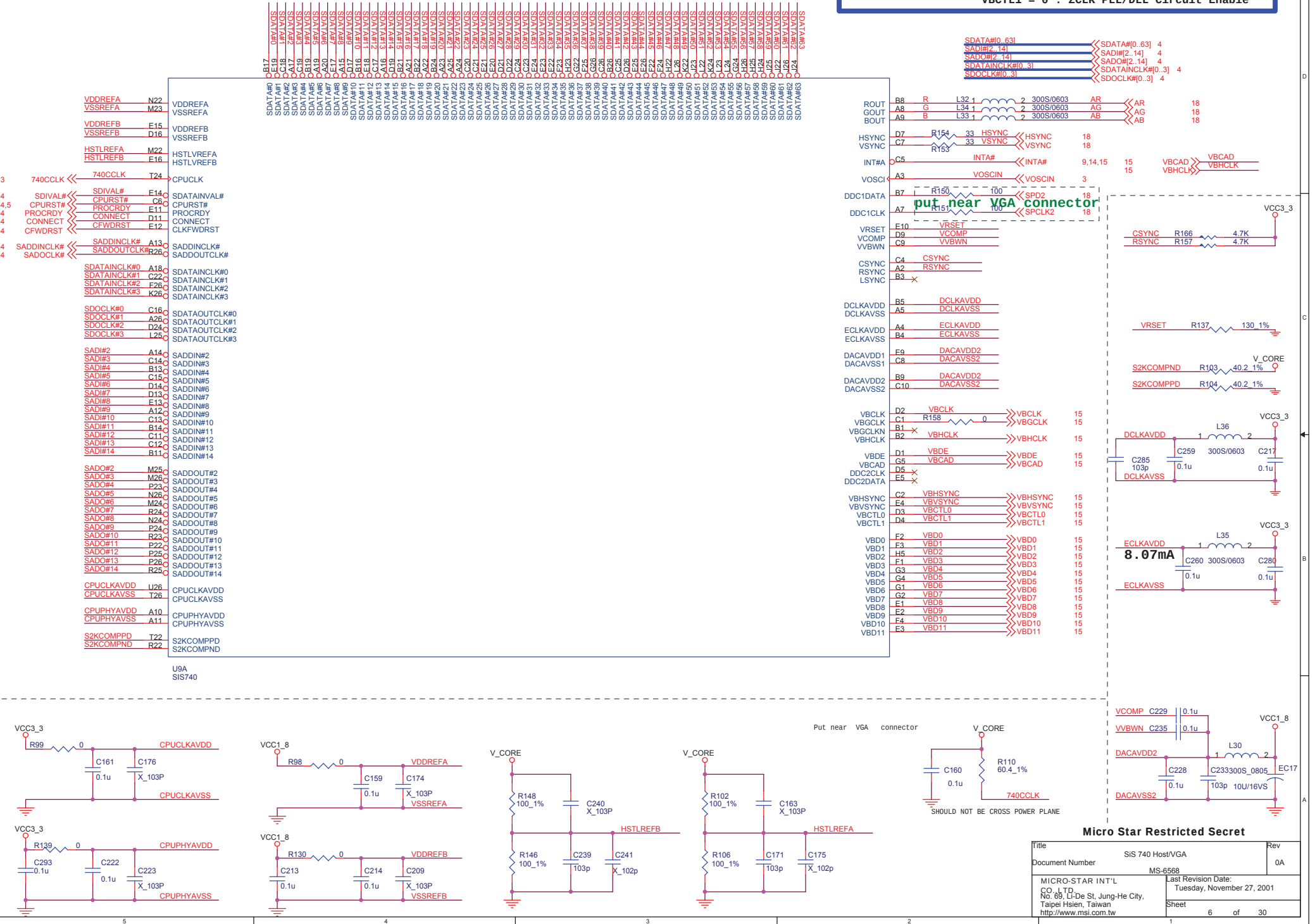


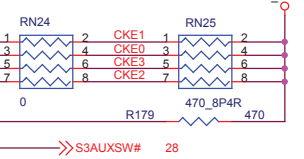
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Document Number	MS-6568	0A
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SiS 740 Host

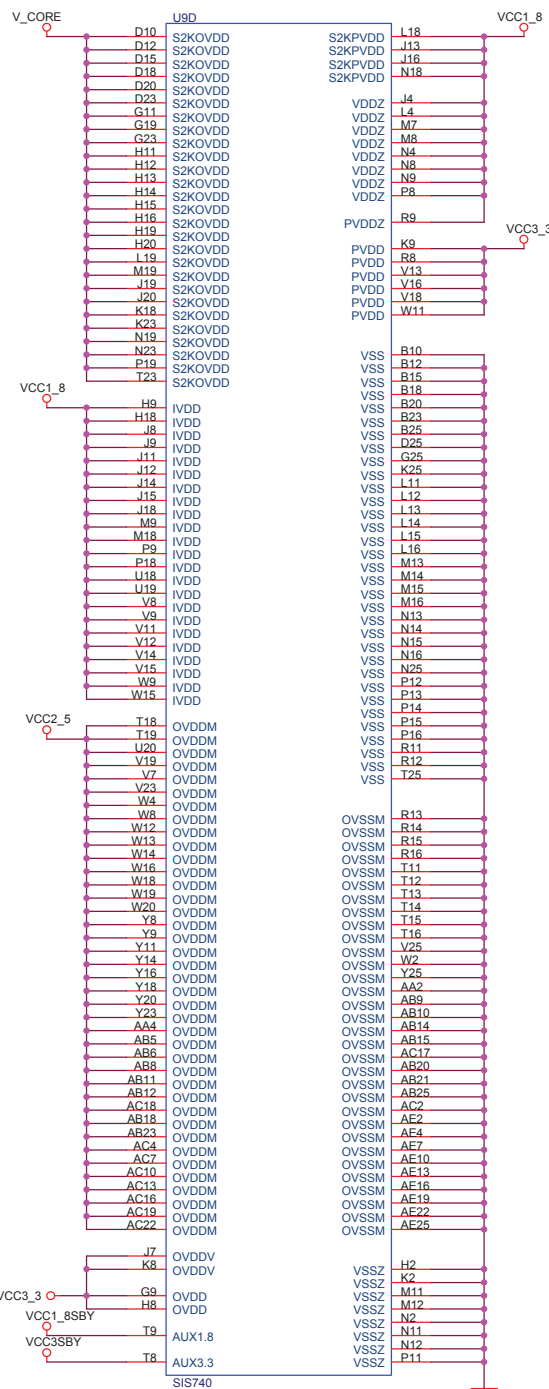
Hardware strapping

CSYNC	=	1	::	VB voltage select 3.3V
RSYNC	=	1	::	VGA interface function enable
LSYNC	=	0	::	Disable external panel link
VBCTL0	=	0	::	Select NTSC
VBCTL1	=	0	::	ZCLK PLL/DLL Circuit Enable

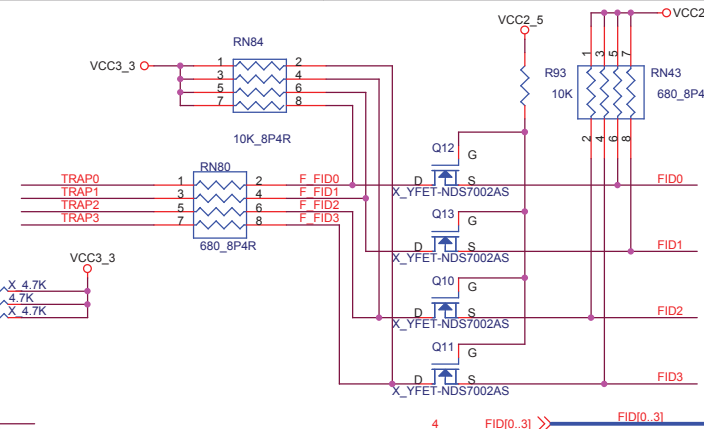
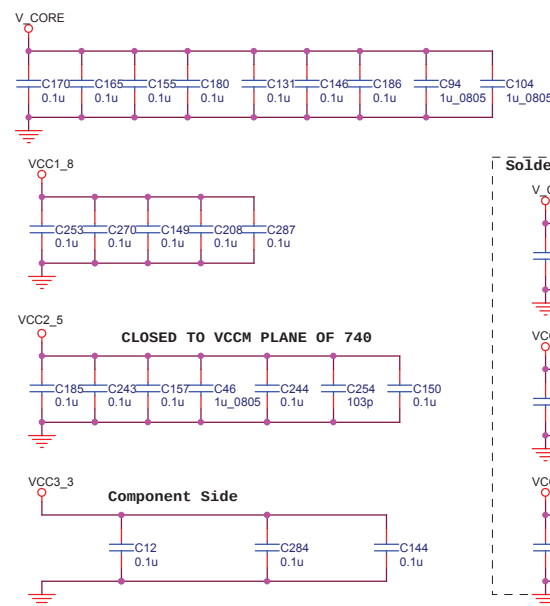
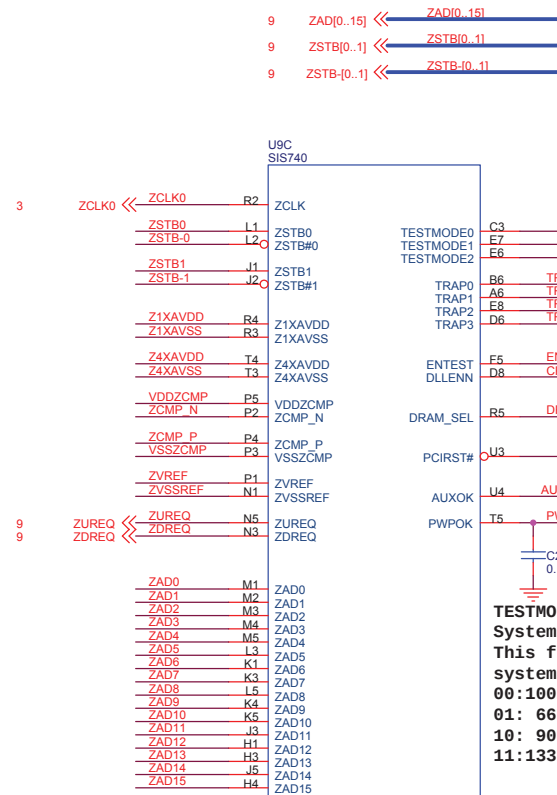




SiS 740 Power

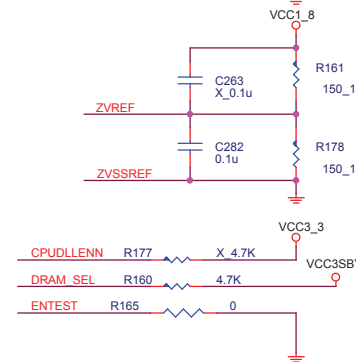
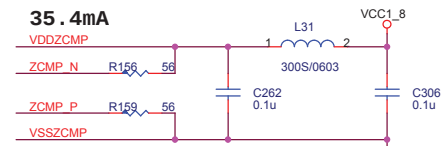
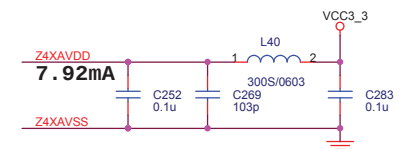
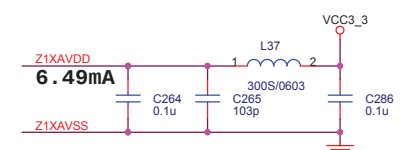


SiS 740 Mutiol / AUX



CPUCLK SDCLK PLL/DLL Circuit Enable

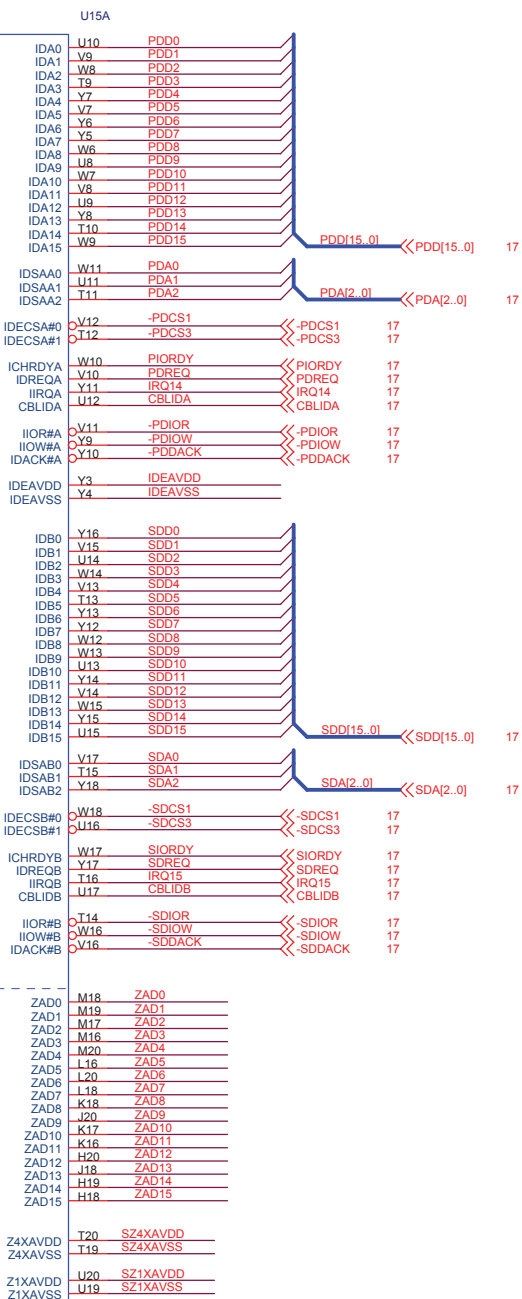
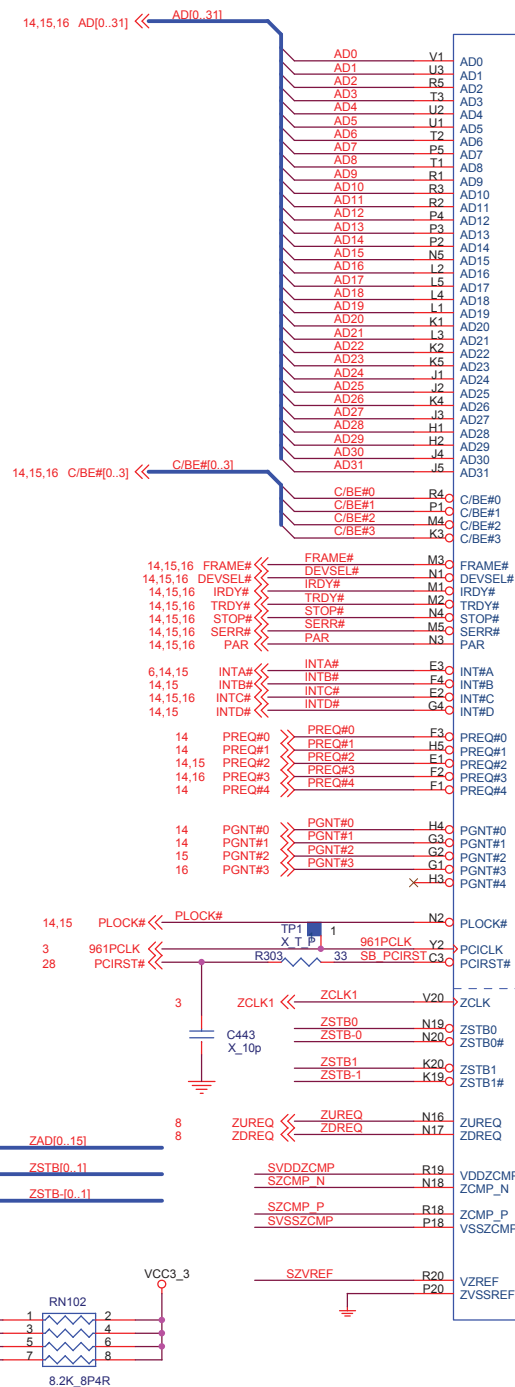
DDR/SDR SDRAM Selection = 1: DDR SDRAM



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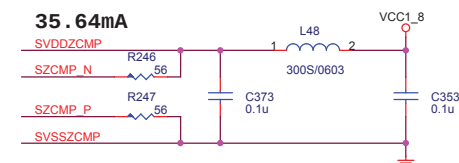
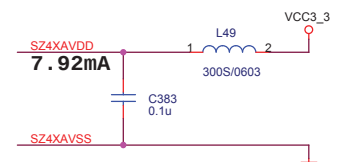
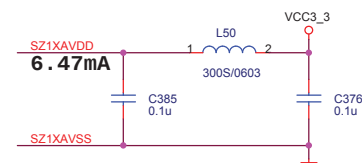
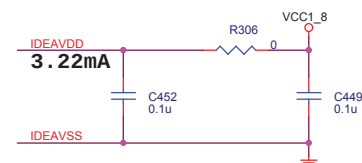
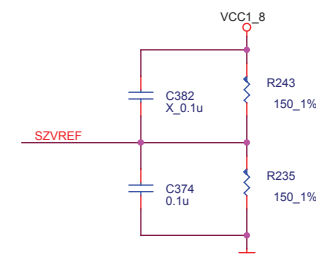
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Document Number	MS-6568		0A
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SiS 740 PCI and IDE

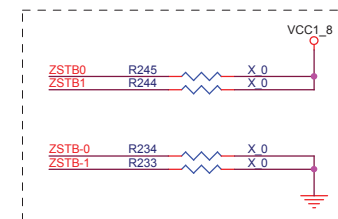


SIS961

Analog Power supplies of Transzip
function for 961A Chip.



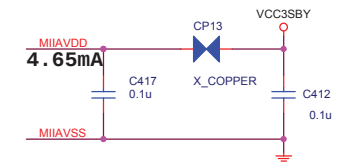
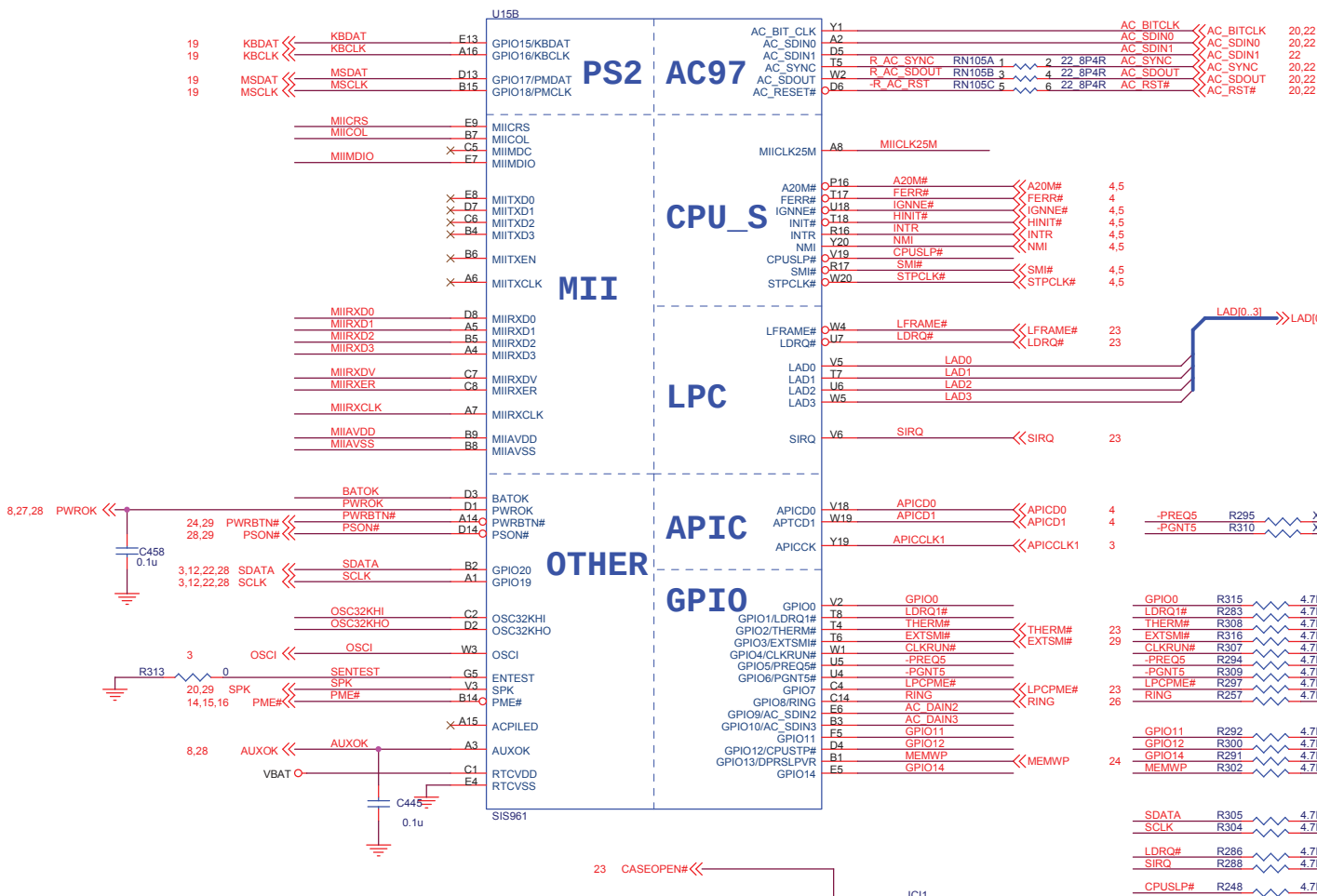
Put near 961A Chip.



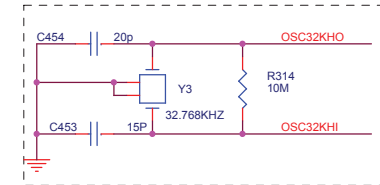
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Document Number	MS-6568	00A
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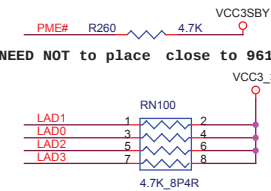
Programable on-die pull-high strength for CPU_S:
(Infinite, 150, 110, 56 Ohm)



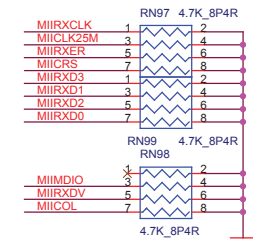
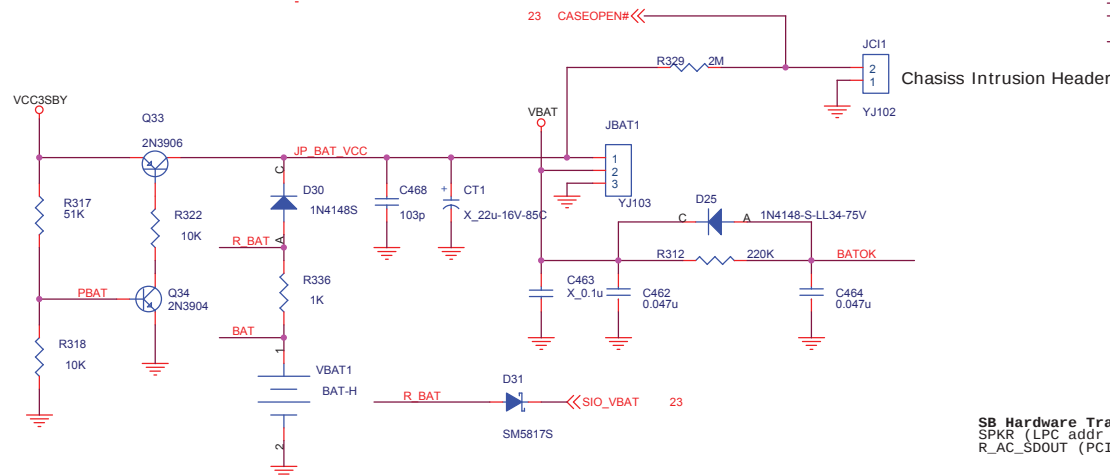
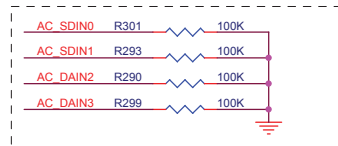
Put closed to 961A CHIP



NEED NOT to place close to 961A



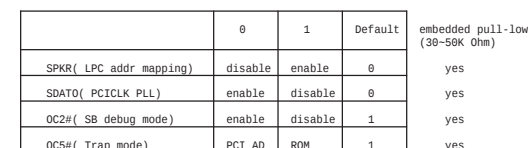
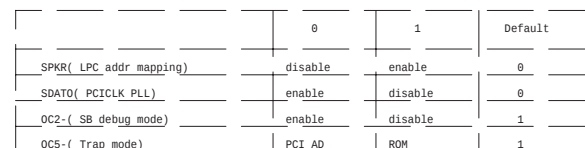
AC '97 Pull-Down:



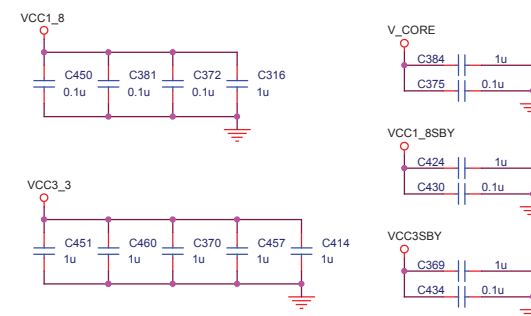
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Document Number	MS-6568	0A	
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SB Hardware Trap			
SPKR (LPC addr mapping)	0/Disable	1/Enable	Default=0
R_AC_SDOUT (PCICLK PLL)	0/Enable	1/Disable	Default=0

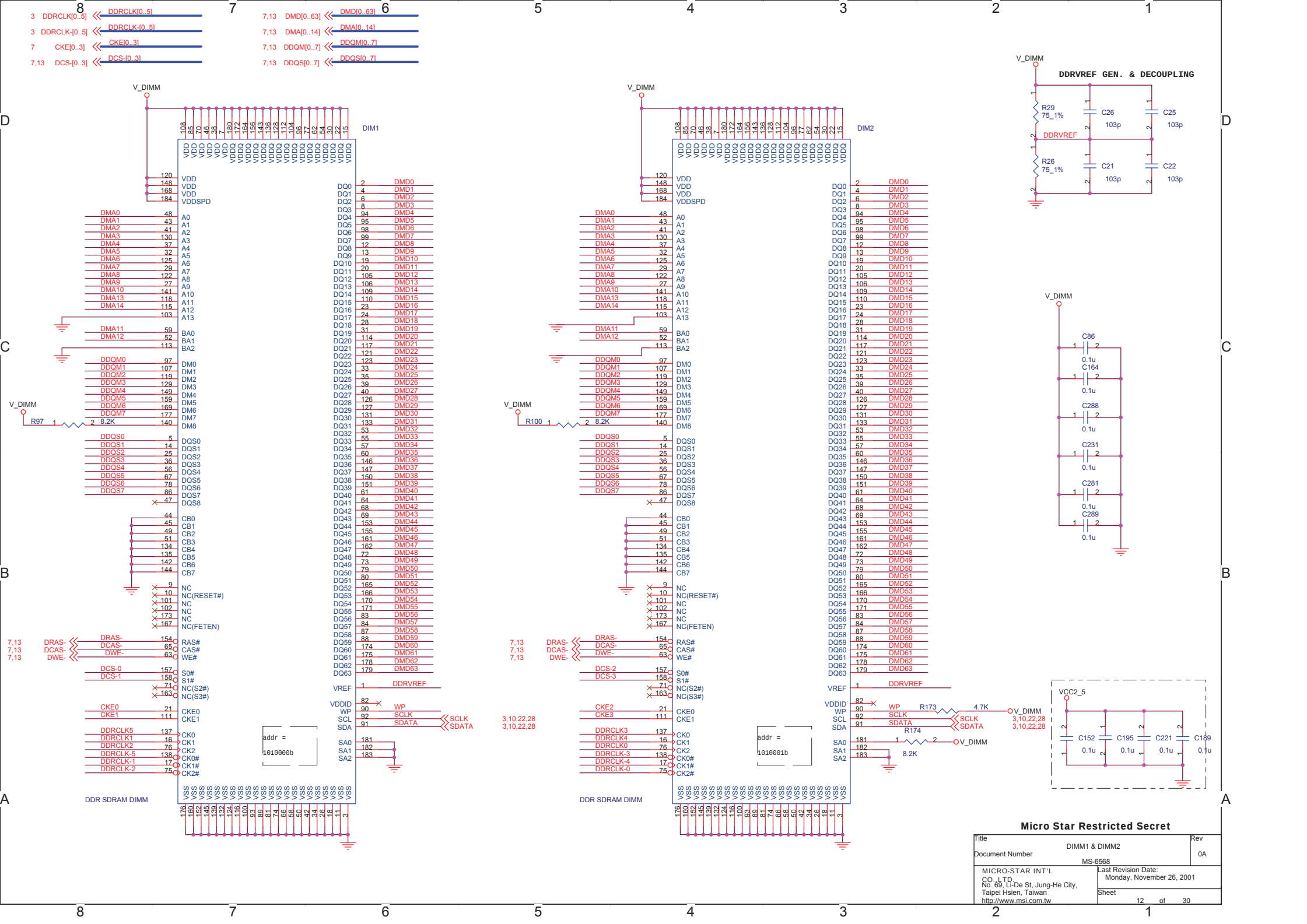


Place around SIS961



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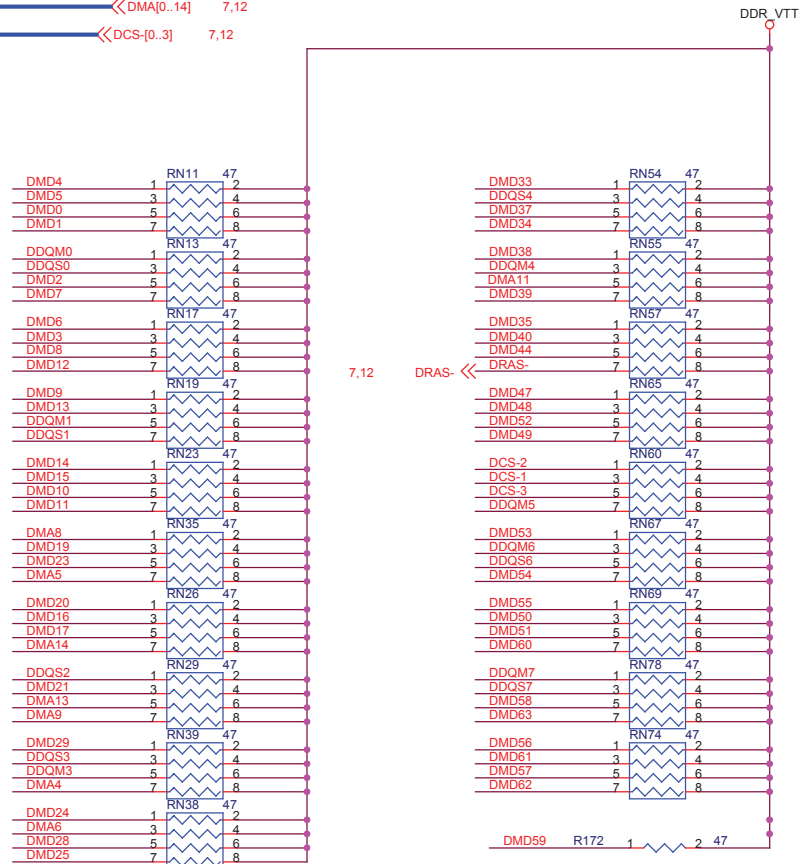
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Document Number	MS-6568		0A
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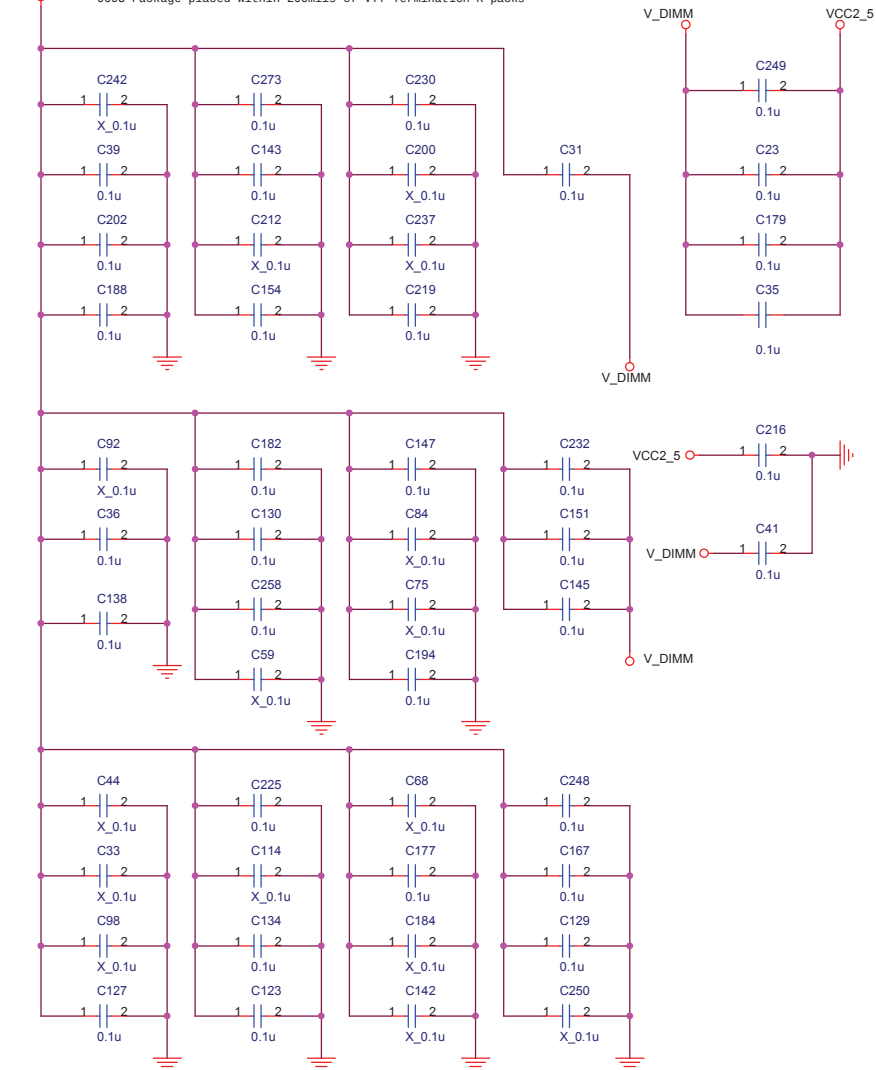
DMD[0..63] << DMD[0..63] 7,12
 DDQM[0..7] << DDQM[0..7] 7,12
 DDQS[0..7] << DDQS[0..7] 7,12
 DMA[0..14] << DMA[0..14] 7,12
 DCS[0..3] << DCS[0..3] 7,12

SSTL-2 Termination Resistors

(Note: The termination resistors are only for DDR application)

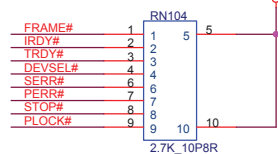
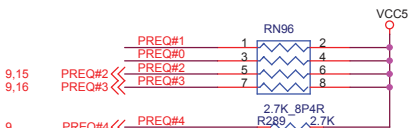
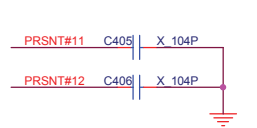
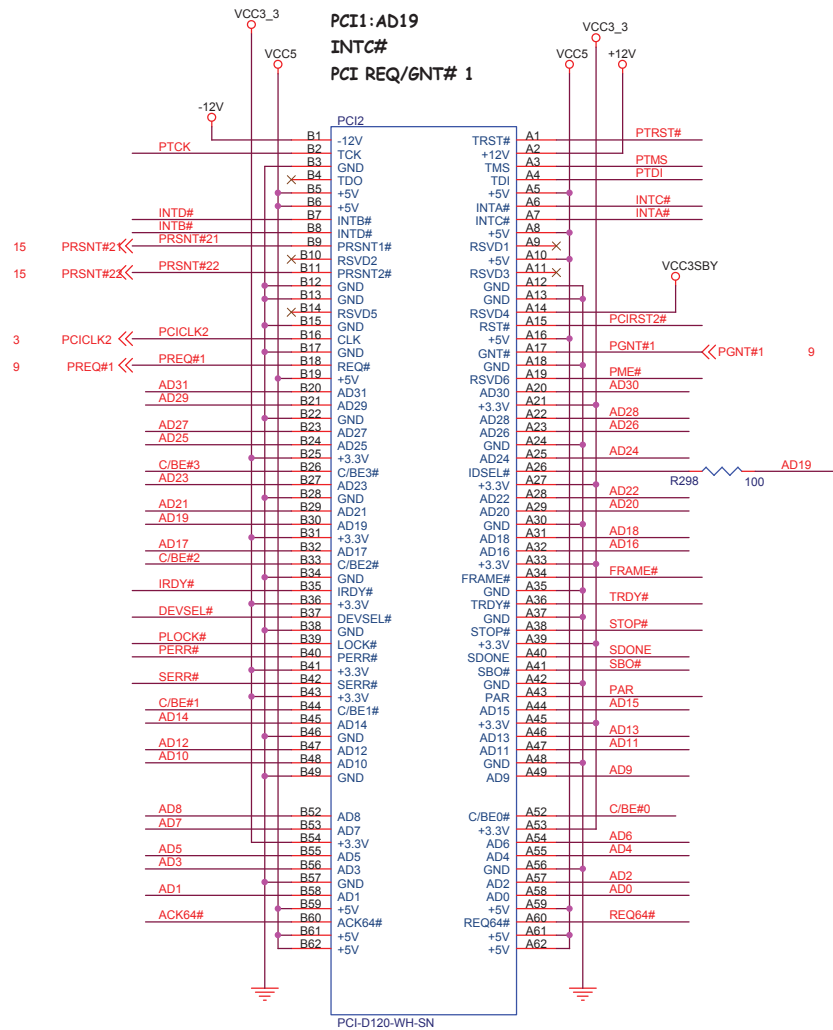


DDR_VTT
 DECOUPLING CAPACITOR FOR SSTL-2 END TERMINATION VTT ISLAND
 0603 Package placed within 200mils of VTT Termination R-packs



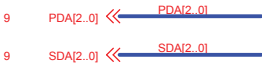
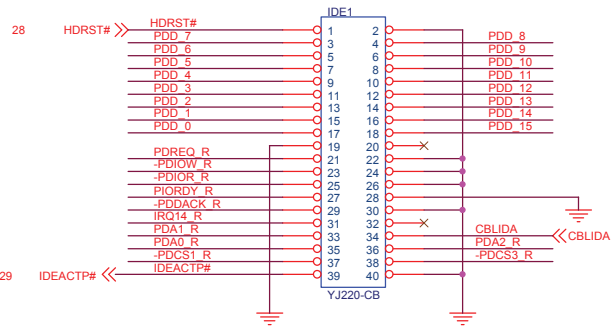
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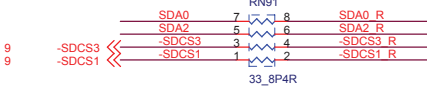
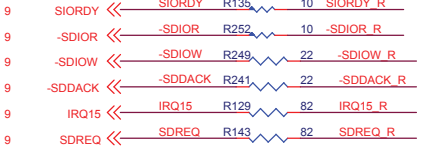
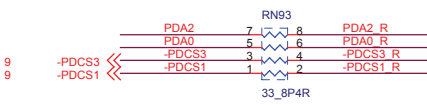
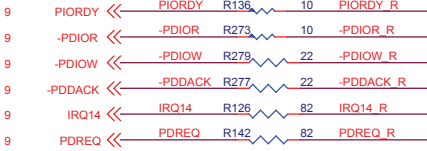
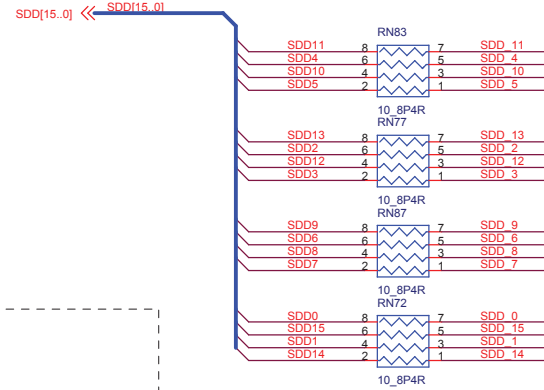
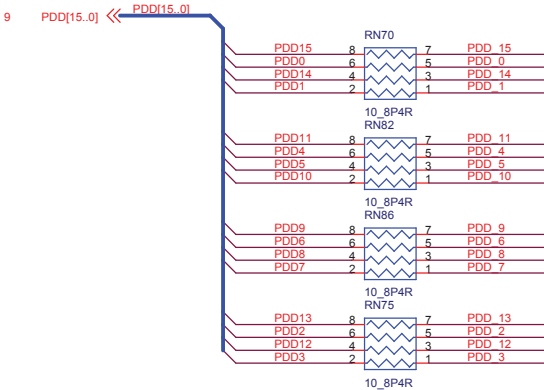
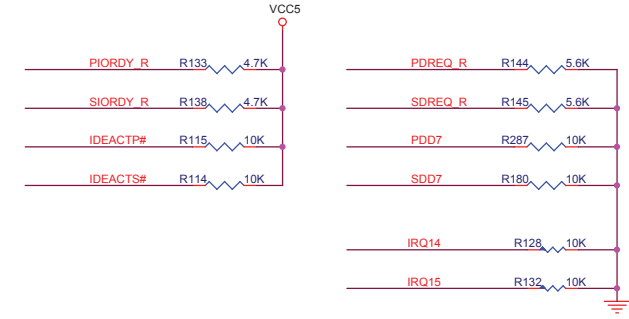
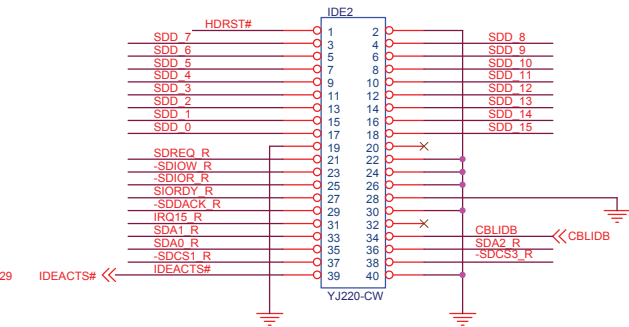


ATA 33/66/100 Connector

PRIMARY IDE CONN.



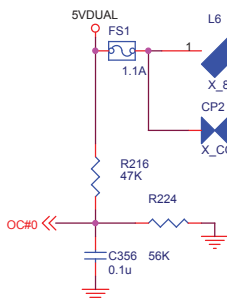
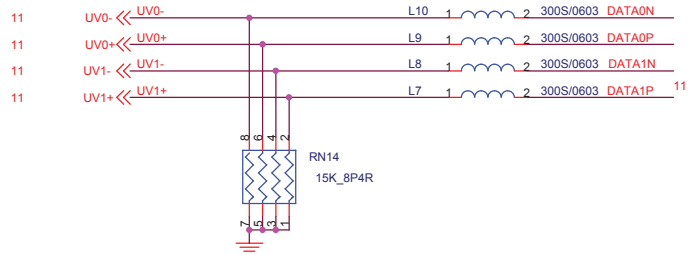
SECONDARY IDE CONN.



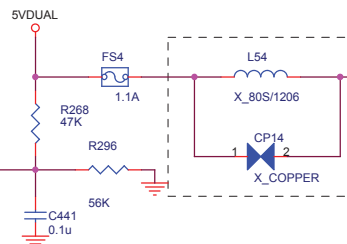
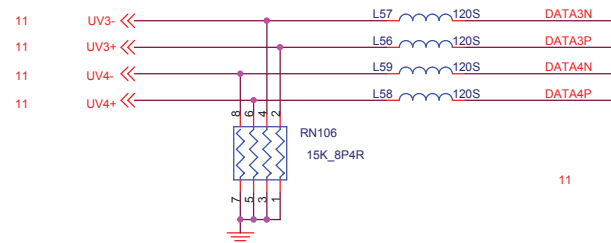
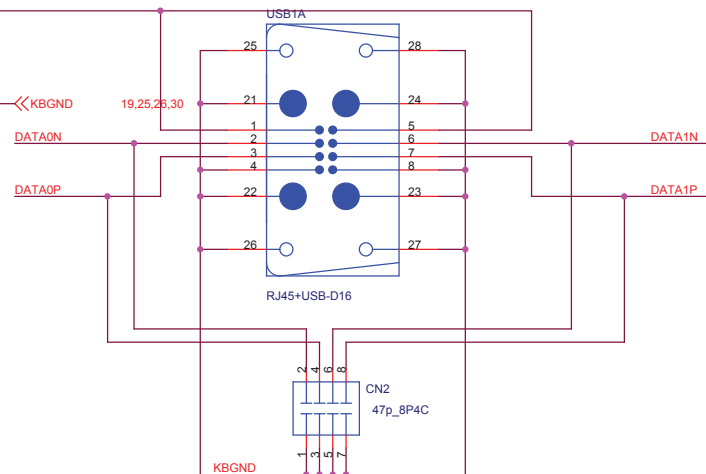
Micro Star Restricted Secret

Title		IDE CONNECTOR	Rev
Document Number		MS-6568	0A
MICRO-STAR INT'L CO., LTD. No. 69, Li-De St, Jung-He City, Taipei Hsien, Taiwan http://www.msi.com.tw		Last Revision Date: Monday, November 26, 2001	
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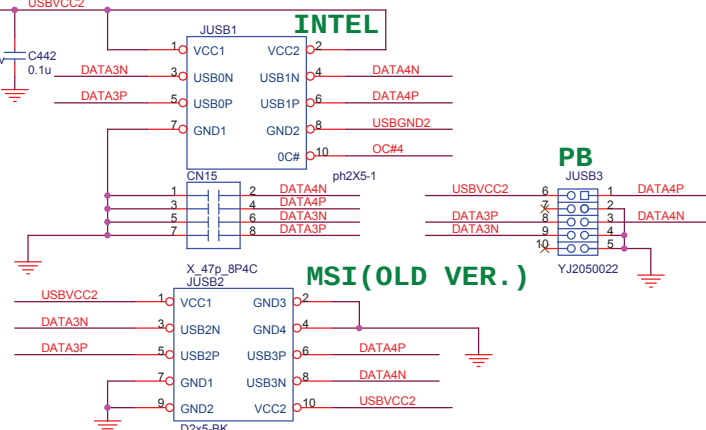
USB CONNECT



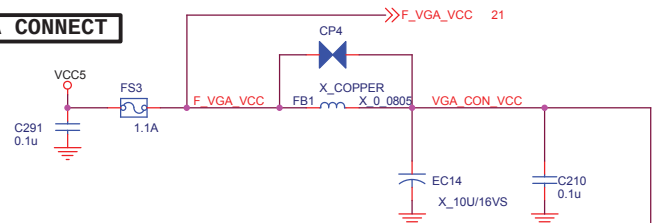
USB port 1,2 connector



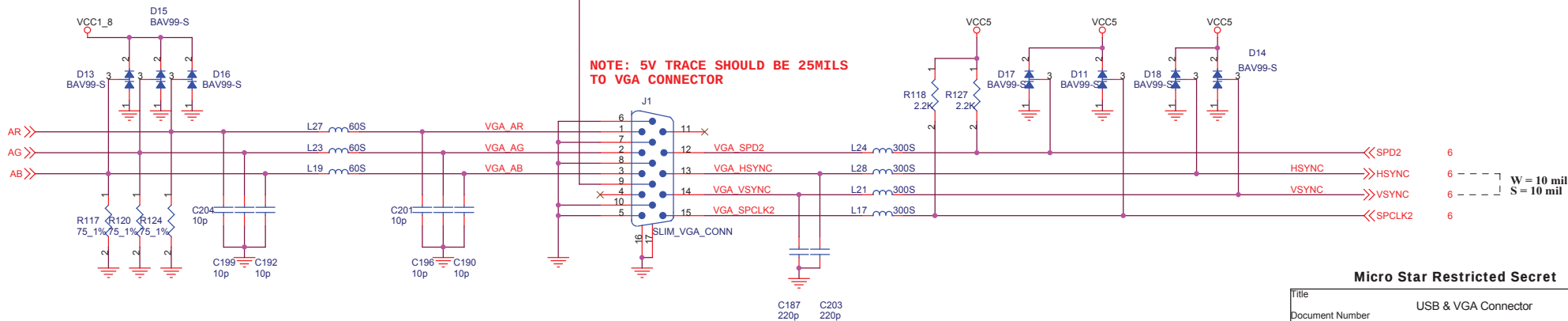
USB port 3,4 connector



VGA CONNECT



NOTE: 5V TRACE SHOULD BE 25MILS TO VGA CONNECTOR

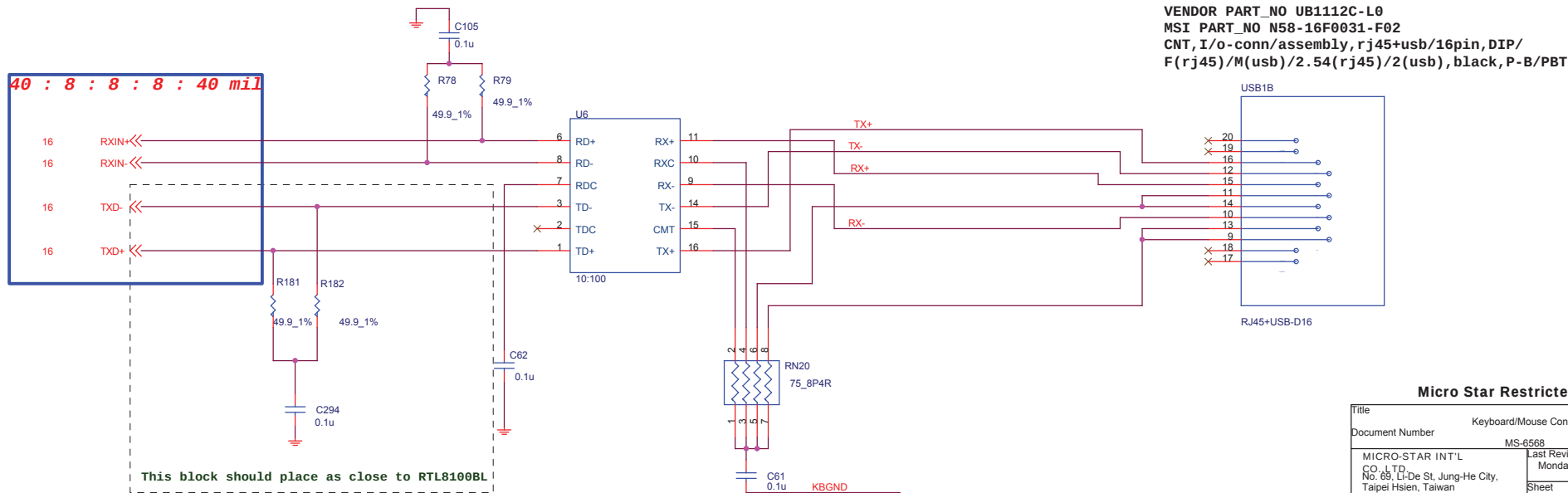
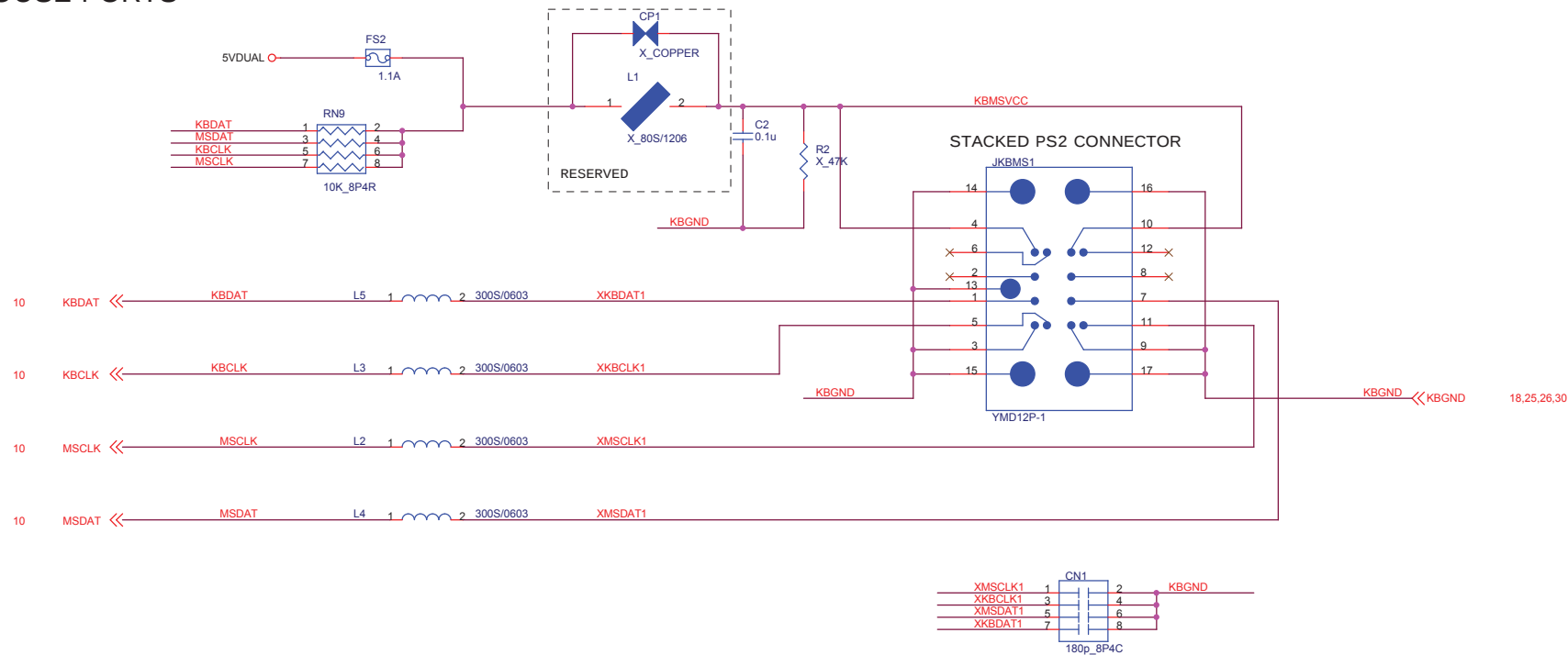


ALL the component close to VGA connector as possible

Micro Star Restricted Secret

File	USB & VGA Connector	Rev
Document Number	MS-6568	0A
MICRO-STAR INT'L	Last Revision Date:	
CO., LTD.	Monday, November 26, 2001	
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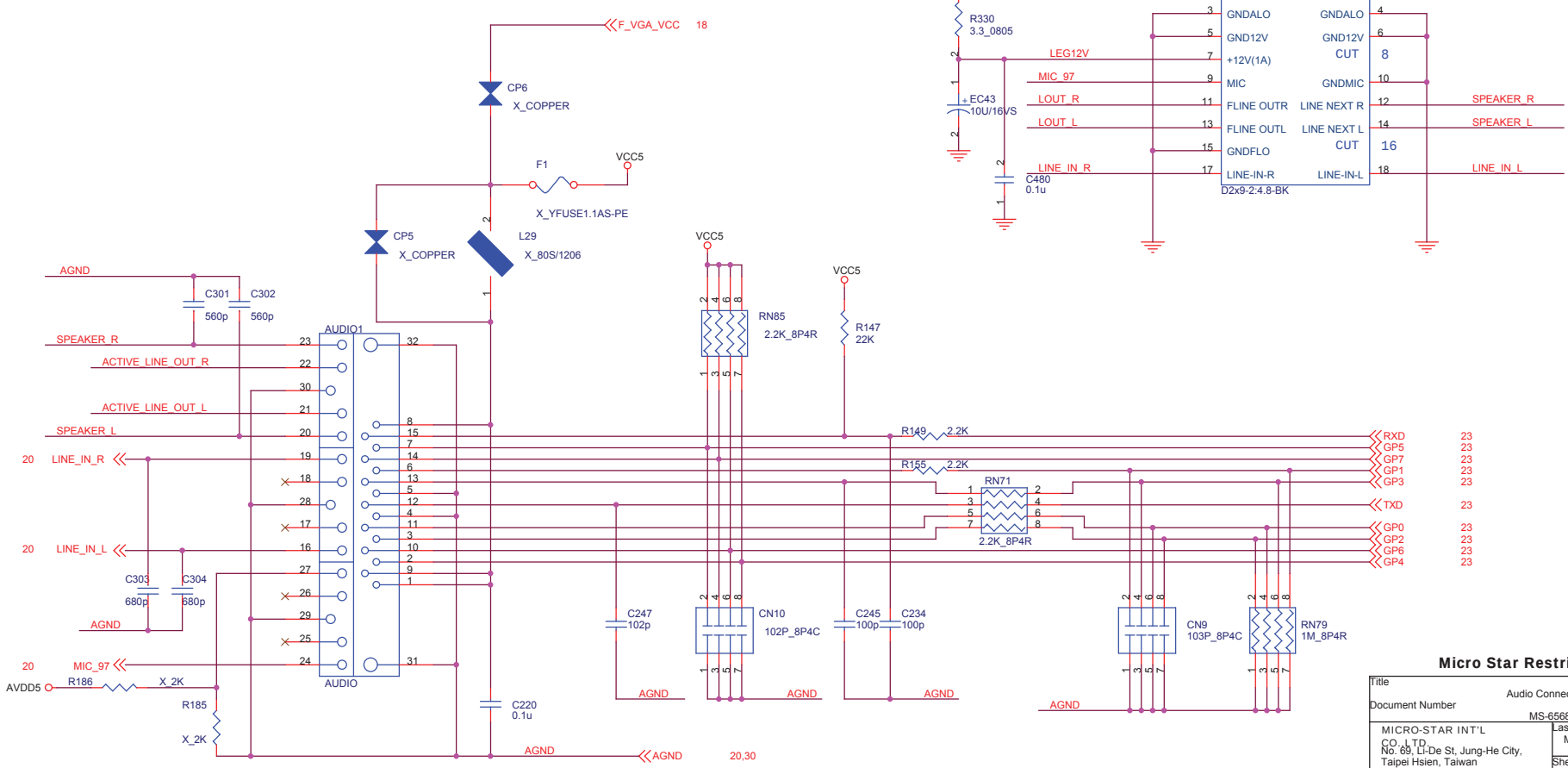
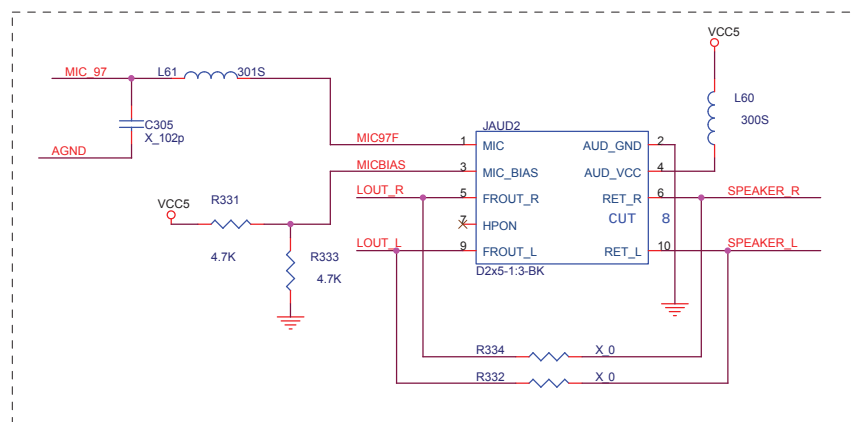
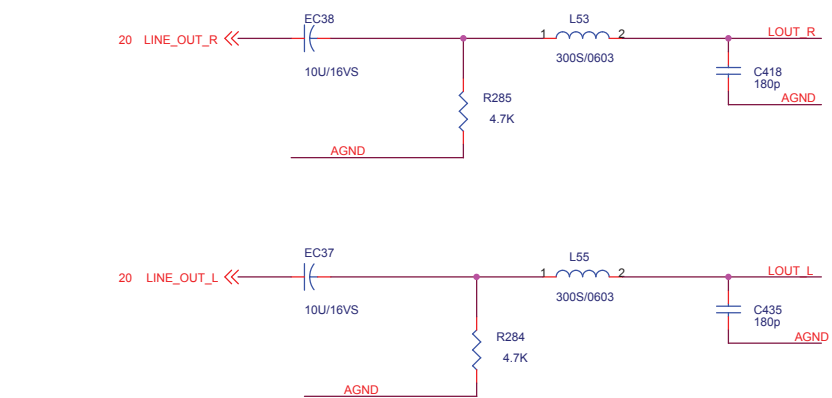
KEYBOARD/MOUSE PORTS



FOXCONN
VENDOR PART_NO UB1112C-L0
MSI PART_NO N58-16F0031-F02
CNT, I/o-conn/assembly,rj45+usb/16pin,DIP/
F(rj45)/M(usb)/2.54(rj45)/2(usb),black,P-B/PBT

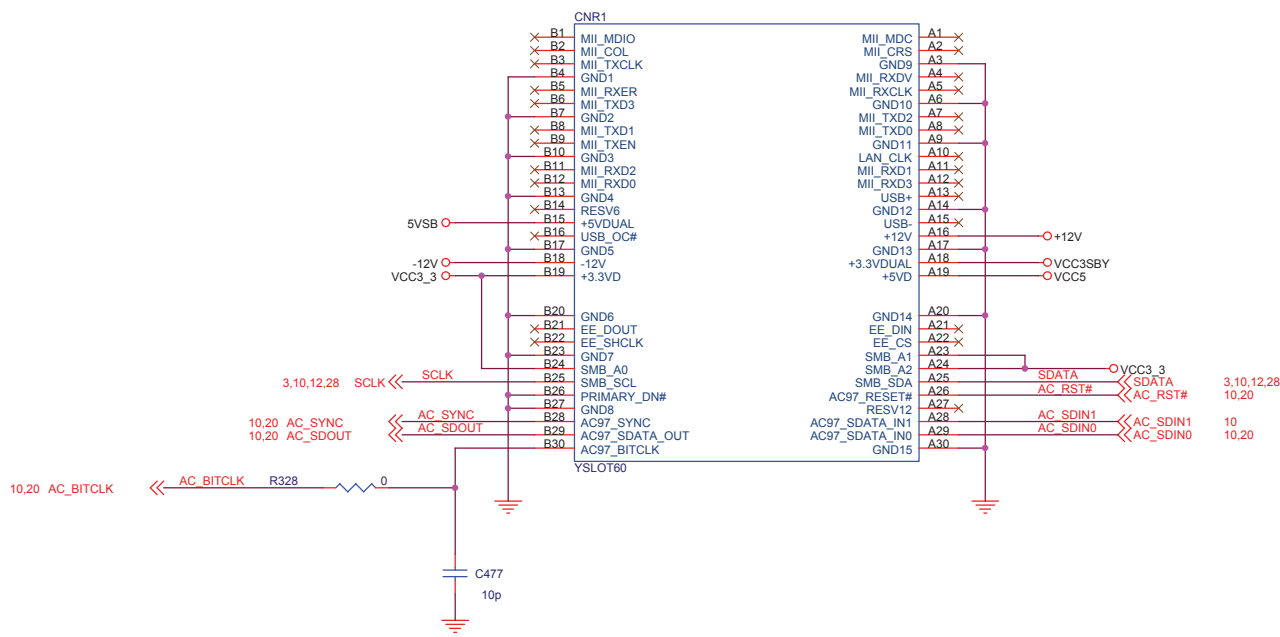
Micro Star Restricted Secret

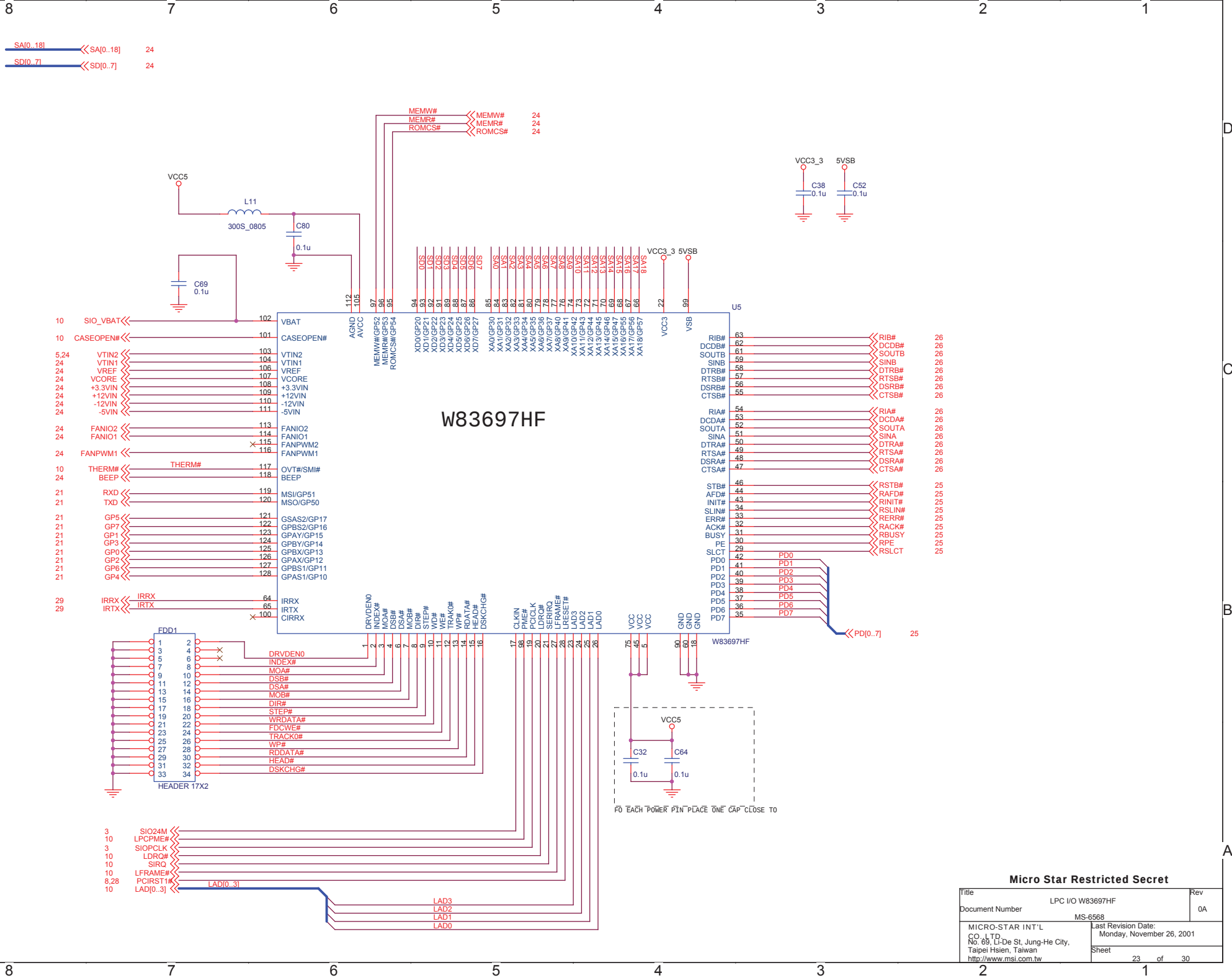
Title	Keyboard/Mouse Connector	Rev
Document Number	MS-6568	0A
MICRO-STAR INT'L CO., LTD. No. 68, Q-De St, Jung-He City, Taipei Hsien, Taiwan http://www.msi.com.tw	Last Revision Date: Monday, November 26, 2001	
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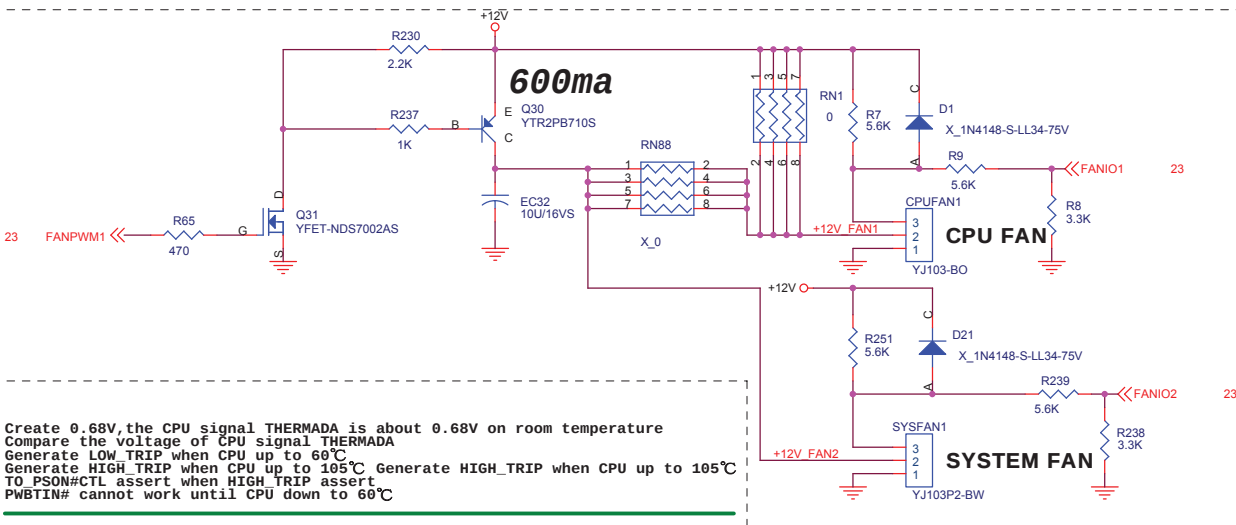
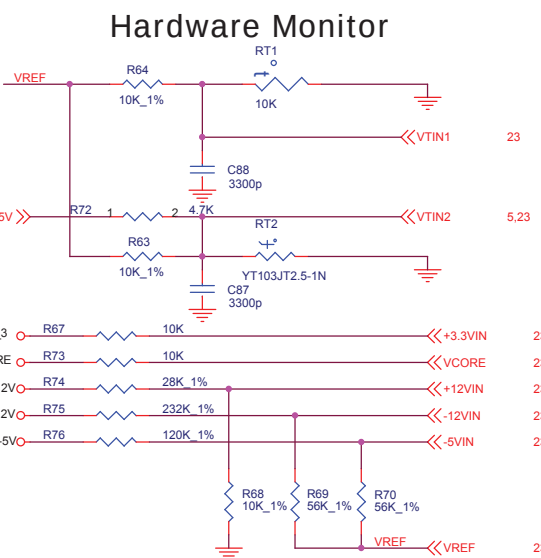
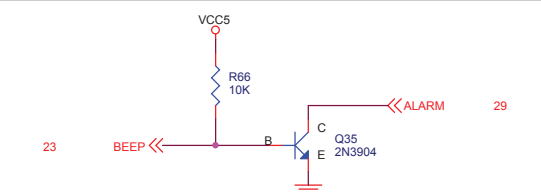
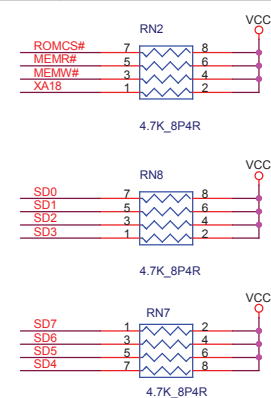
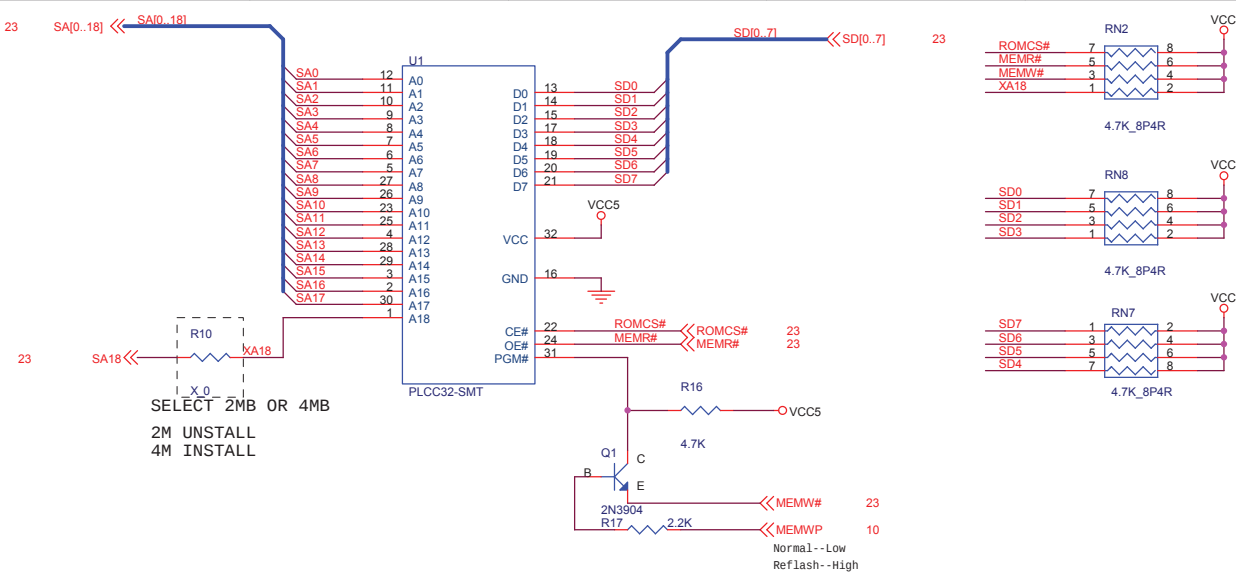


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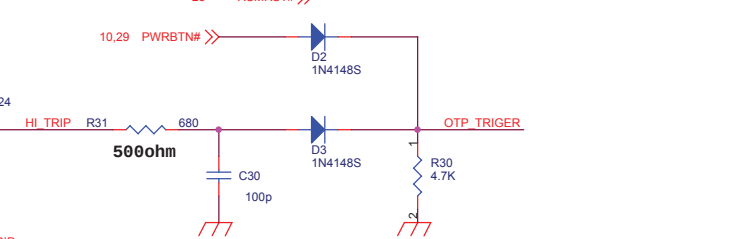
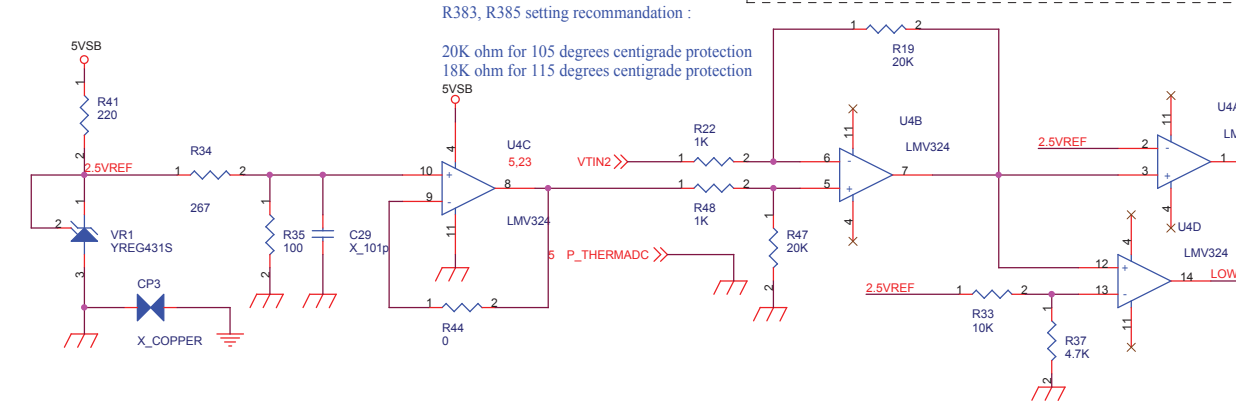
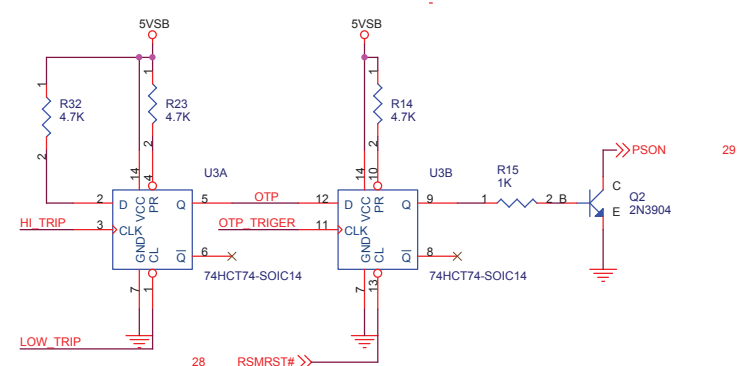
File	Audio Connector	Rev
Document Number	MS-6568	0A
MICRO-STAR INT'L CO., LTD. No. 68, Li-De St, Jung-He City, Taipei Hsien, Taiwan http://www.msi.com.tw		Last Revision Date: Monday, November 26, 2001
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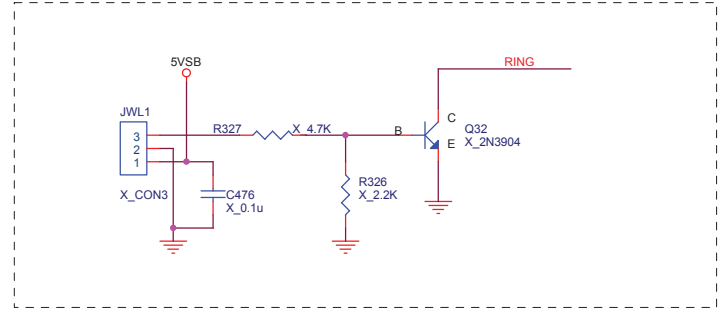
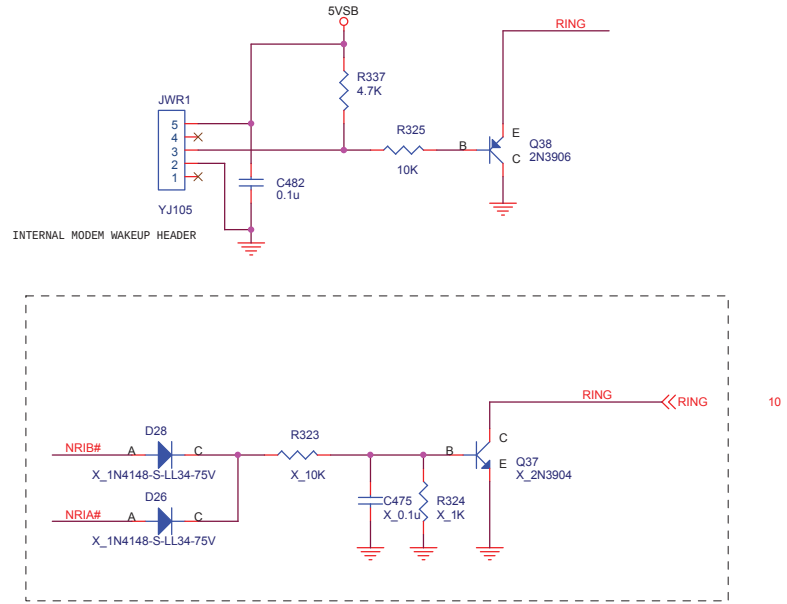
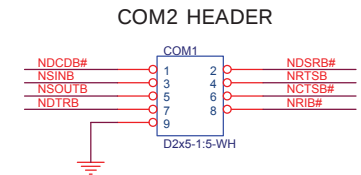
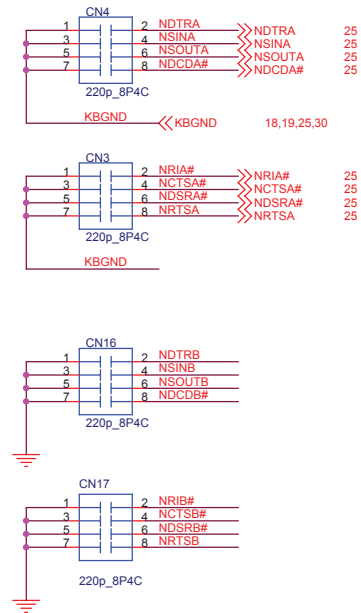
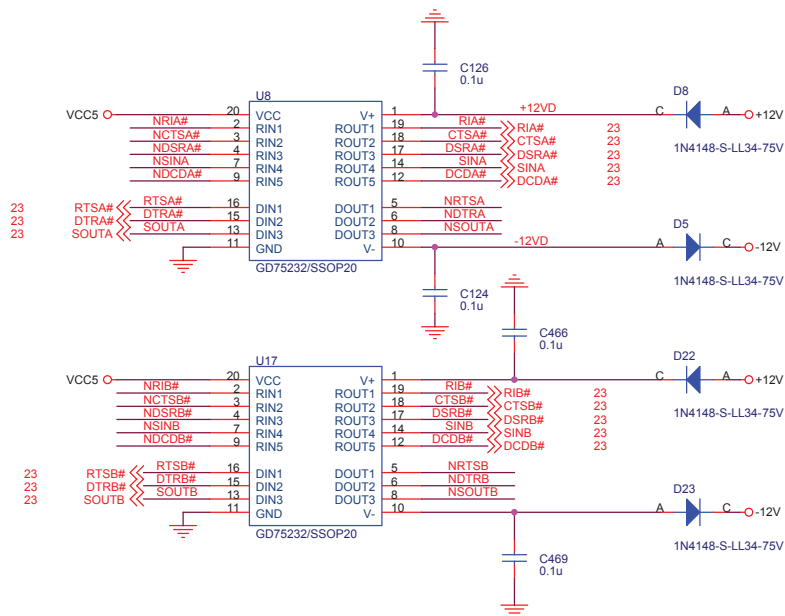


Create 0.68V, the CPU signal THERMADA is about 0.68V on room temperature
 Compare the voltage of CPU signal THERMADA
 Generate LOW_TRIP when CPU up to 60°C
 Generate HIGH_TRIP when CPU up to 105°C
 Generate HIGH_TRIP when CPU up to 105°C
 TO PSON#CTL assert when HIGH TRIP assert
 PWB TIN# cannot work until CPU down to 60°C



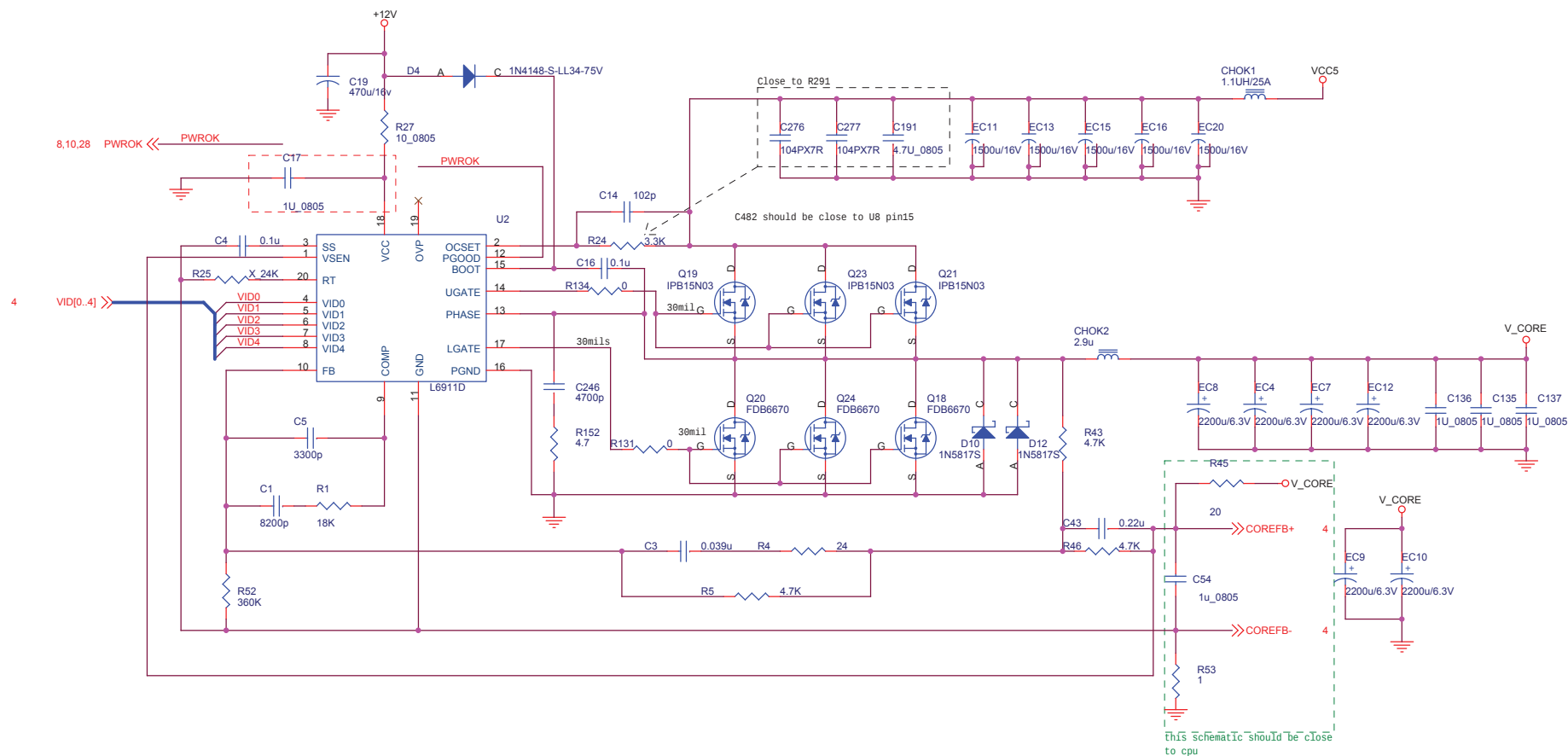
Micro Star Restricted Secret

File	Hardware Monitor	Rev
Document Number	MS-6568	0A
MICRO-STAR INT'L	Last Revision Date:	
CO., LTD.	Thursday, November 29, 2001	
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File	Serial Port	Rev
Document Number	MS-6560	0A
MICRO-STAR INT'L		Last Revision Date:
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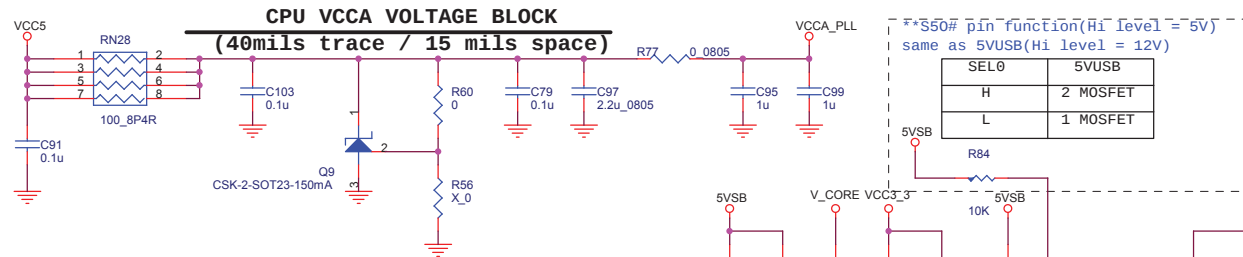


V4D	V3D	V2D	V1D	V0D	VDC(V)
1	0	1	1	0	1.30
1	0	0	0	1	1.425
1	0	0	0	0	1.45
0	1	1	1	1	1.475
0	1	1	1	0	1.500
0	1	1	0	1	1.525
0	1	1	0	0	1.550
0	1	0	1	1	1.575
0	1	0	1	0	1.600
0	1	0	0	1	1.625
0	1	0	0	0	1.650
0	0	1	1	1	1.675

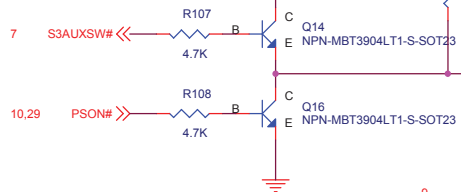
V4D	V3D	V2D	V1D	V0D	VDC(V)
0	0	1	1	0	1.70
0	0	1	0	1	1.725
0	0	1	0	0	1.75
0	0	0	1	1	1.775
0	0	0	1	0	1.80
0	0	0	0	1	1.825
0	0	0	0	0	1.85
1	1	1	1	1	NO CPU

Micro Star Restricted Secret

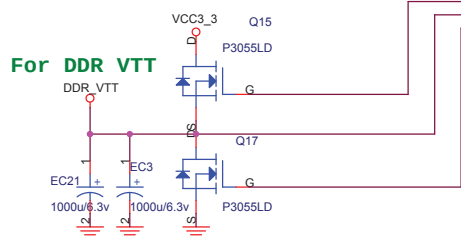
Title	PWM_CS5322	Rev
Document Number	MS-6560	0A
MICRO-STAR INT'L CO., LTD. No. 69, Li-De St, Jung-He City, Taipei Hsien, Taiwan http://www.msi.com.tw	Last Revision Date: Tuesday, November 27, 2001	
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S3AUXSW#	S0	S3	S5
PSON#	0	1	1
SLP_S5#	1	1	0
SLP_S3#	1	0	0



DDRVTT POWER TRANSLATOR



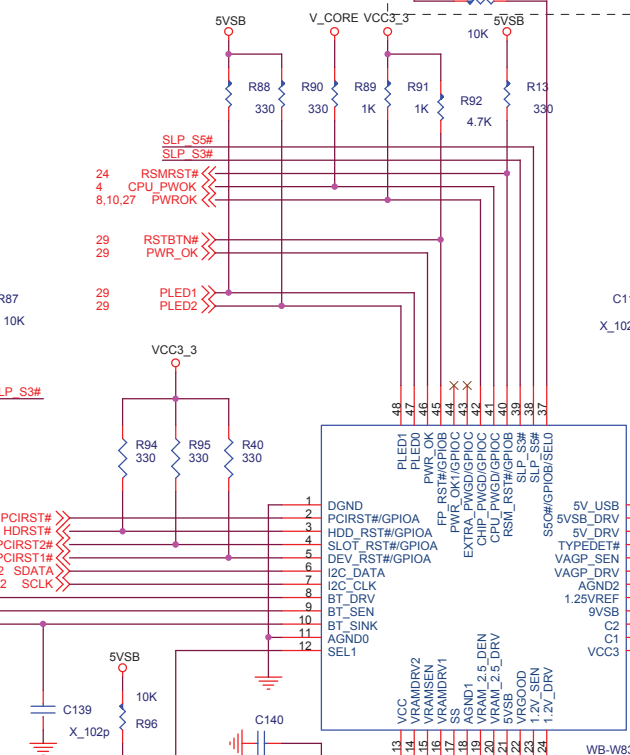
SEL1	VRAM	VRAM_2.5
H	3.3VDUAL	2.5V
TRI-STATE	3.3VSB	2.5V
L	3.3VSTR	1.25V

FOR 3VSB OR 3VSTR
SETTING BY SEL1

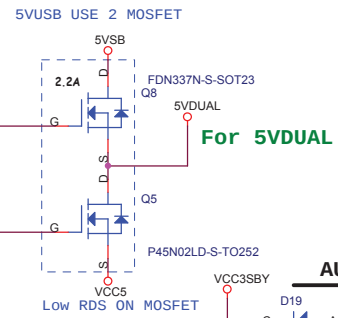
3.3V STANDBY POWER TRANSLATOR

(40mils trace / 15 mils space)

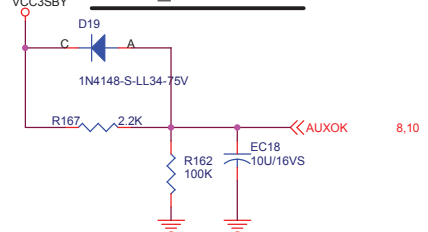
FOR 3VDUAL ** SETTING 3VSTR THEN VRAM_2.5
SETTING BY SEL1 BECOME TO 1.25 VREF



5VDUAL & 5VUSB POWER TRANSLATOR

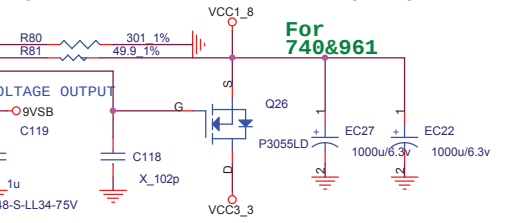


AUX_OK BLOCK



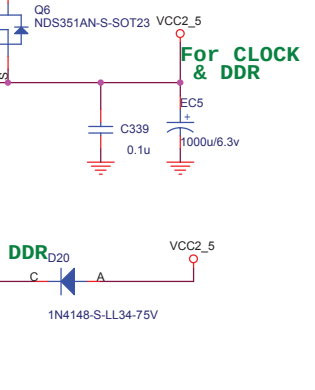
1.8V POWER TRANSLATOR

(50mils trace / 15 mils space)



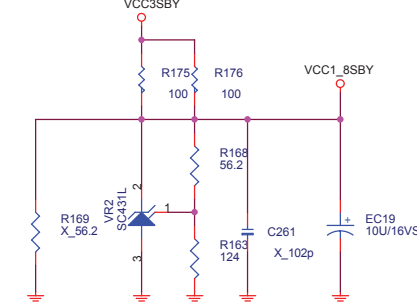
2.5V POWER TRANSLATOR

(30mils trace / 15 mils space)



1.8V STANDBY POWER TRANSLATOR

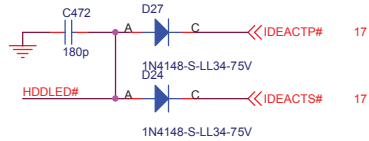
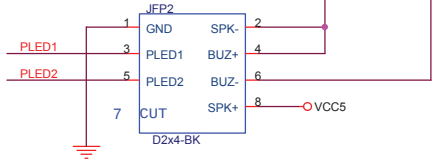
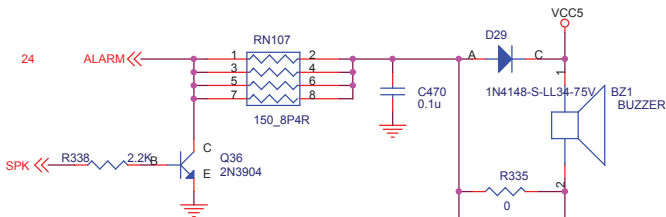
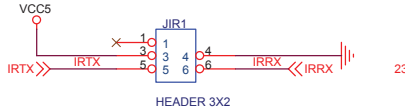
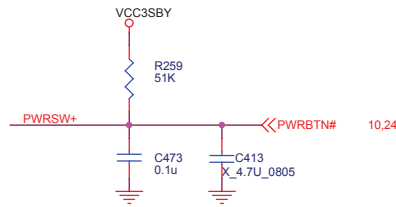
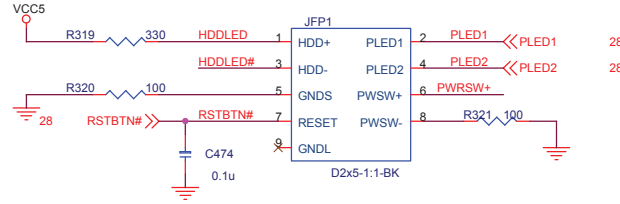
(30mils trace / 15 mils space)



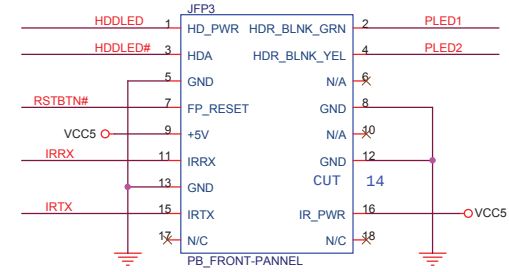
Micro Star Restricted Secret

File	Voltage Regulator 2	Rev
Document Number	MS-6568	0A
MICRO-STAR INT'L	Last Revision Date:	
CO., LTD.	Tuesday, November 27, 2001	
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INTEL / MSI CONN



PB CONN

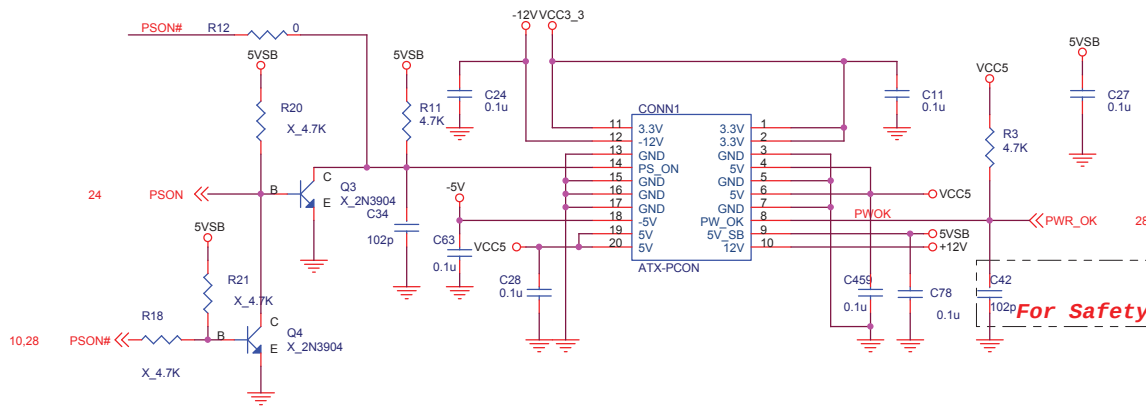


MSI Power On / Suspend LED State

BIOS	S0	S1/S3	S5
Single Color	Green	Off	Off
Dual Color	Green	Red	Off
Green: MSI_LED1=' 1' MSI_LED2=' 0' Red : MSI_LED1=' 0' MSI_LED2=' 1' Single Color S1/S3 status: MSI_LED1=' 0' MSI_LED2=' 1'			

MSI ACPILED & VDIM state

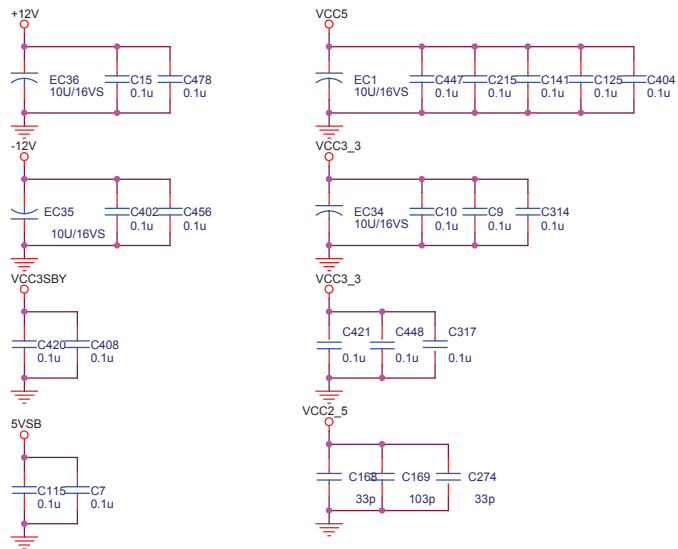
BIOS	S0	S1/S3	S5
Single Color	ACPILED:Low VDIM :Hi	ACPILED:Hi & VDIM:Hi	ACPILED:Hi-z VDIM :Low
Dual Color	ACPILED:Low VDIM :Hi	ACPILED:Hi & VDIM:Hi	ACPILED:Hi-z VDIM :Low
Note : 1). 1Hz means Blinking frequency of ACPILED signal. 2). VDIM is no voltage in S5 state.			



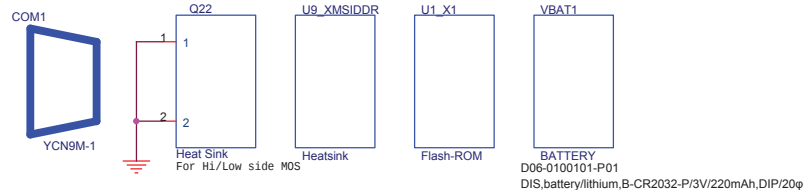
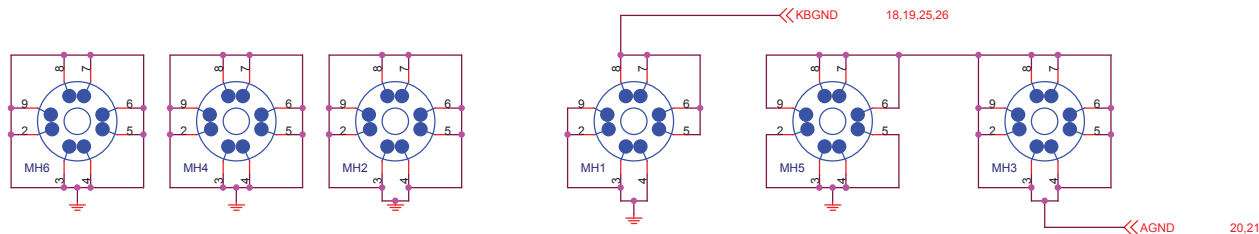
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File	Front Panel	Rev
Document Number	MS-6568	0A
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System Decoupling Capacitors



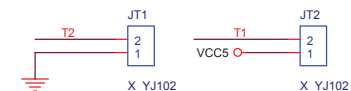
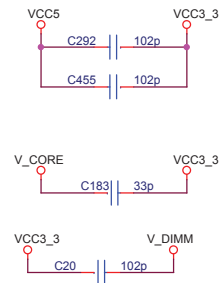
JBAT1(1-2)
JC-D2-RD



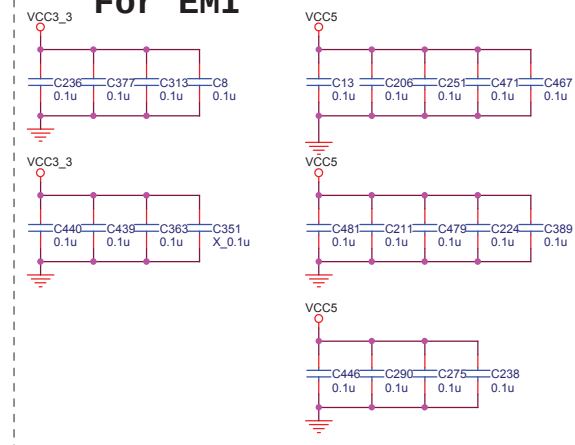
D-YING 定穎 Ding Ying
祥裕 CADAC

P01-656800A-D05
P01-656800A-C48
P01-656800A-K10

High Freq. return current decoupling



For EMI



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