

Last Schematic Update Date:
09/28/2001

MS-6559

VERSION:1.0

SIS 645/650 CHIPSET

Willamette/Northwood 478pin mPGA-B Processor Schematics

CPU:

Willamette/Northwood mPGA-478B Processor

System Brookdale Chipset:

SIS 645/650 (North Bridge)

+961A (South Bridge)

On Board Chipset:

LPC Super I/O -- W83697HF

Expansion Slots:

AGP2.0 SLOT * 1

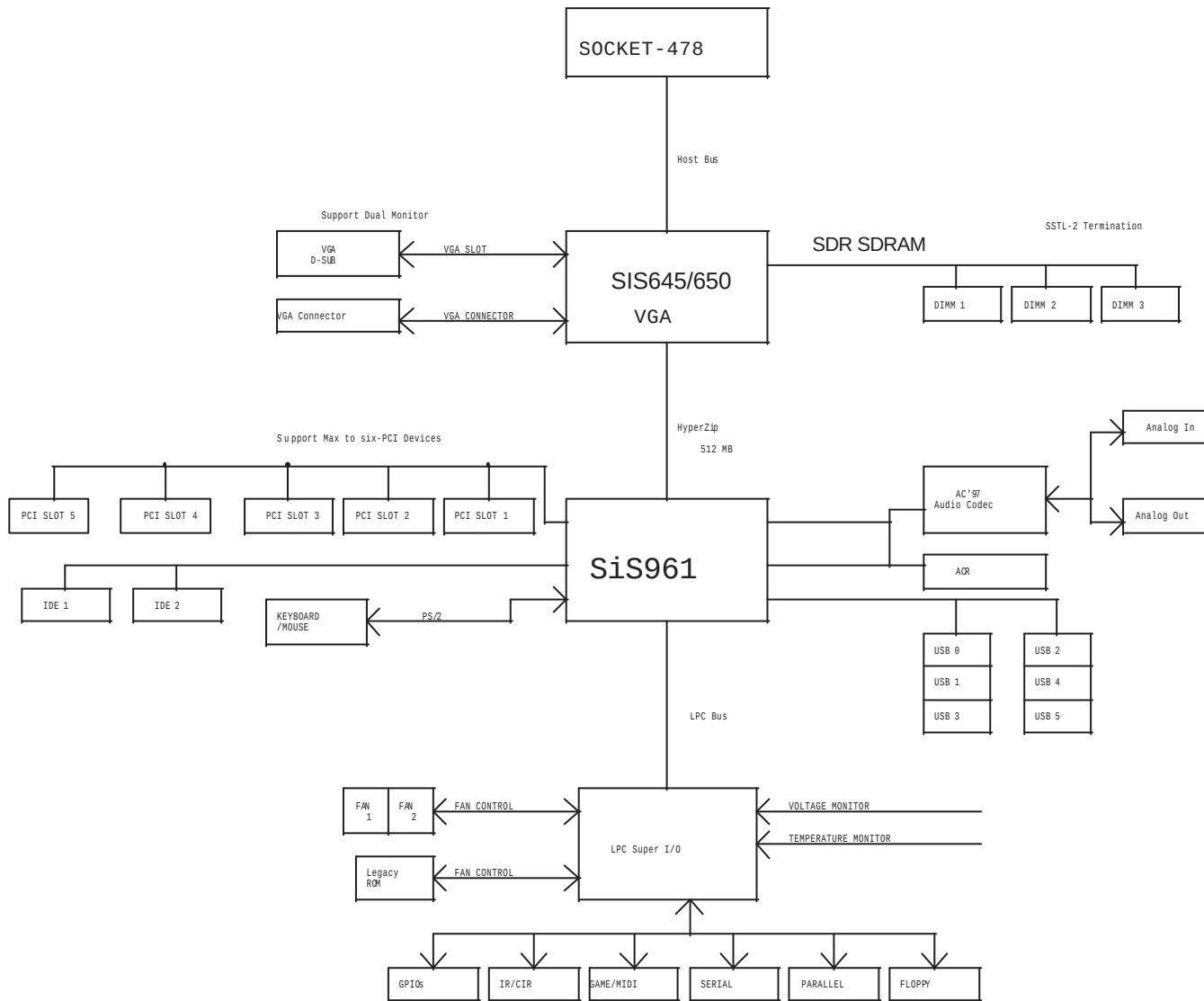
PCI2.2 SLOT* 5

CNR SLOT * 1

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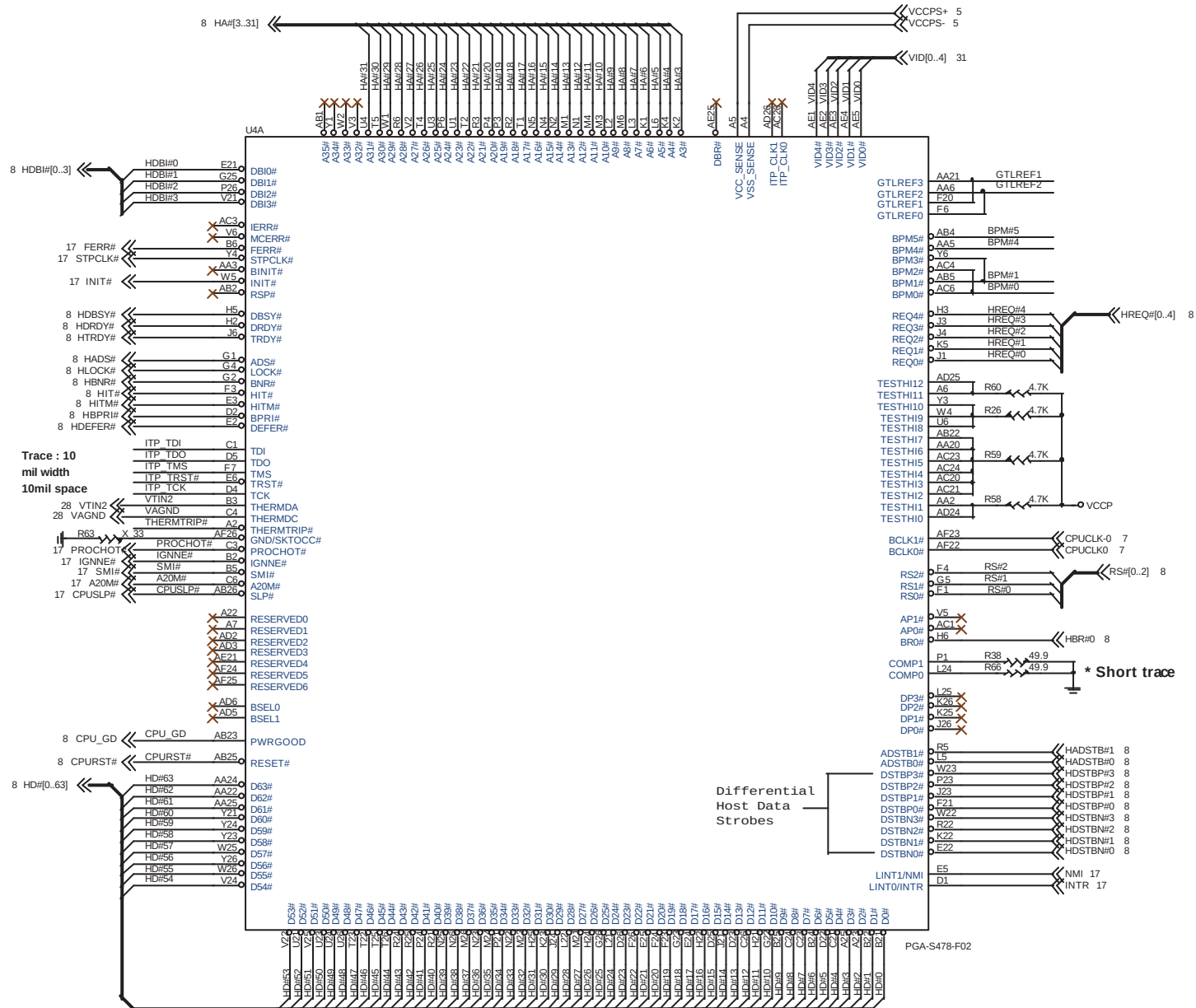


System Block Diagram

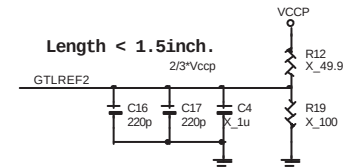
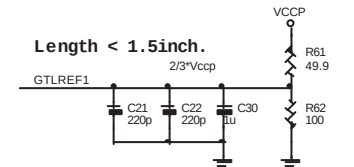


MICRO-STAR INT'L CO., LTD.			
File System Block Diagram			
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CPU SIGNAL BLOCK



CPU GTL REFERENCE VOLTAGE BLOCK



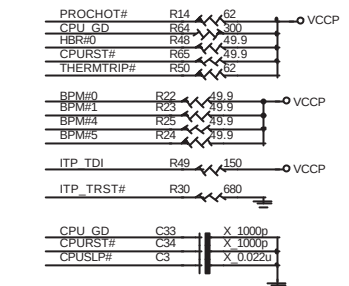
Every pin put one 220pF cap near it.
Trace Width 15mils, Space 15mils.
Keep the voltage dividers within 1.5 inches of the first GTLREF Pin

CPU ITP BLOCK



CPU STRAPPING RESISTORS

ALL COMPONENTS CLOSE TO CPU



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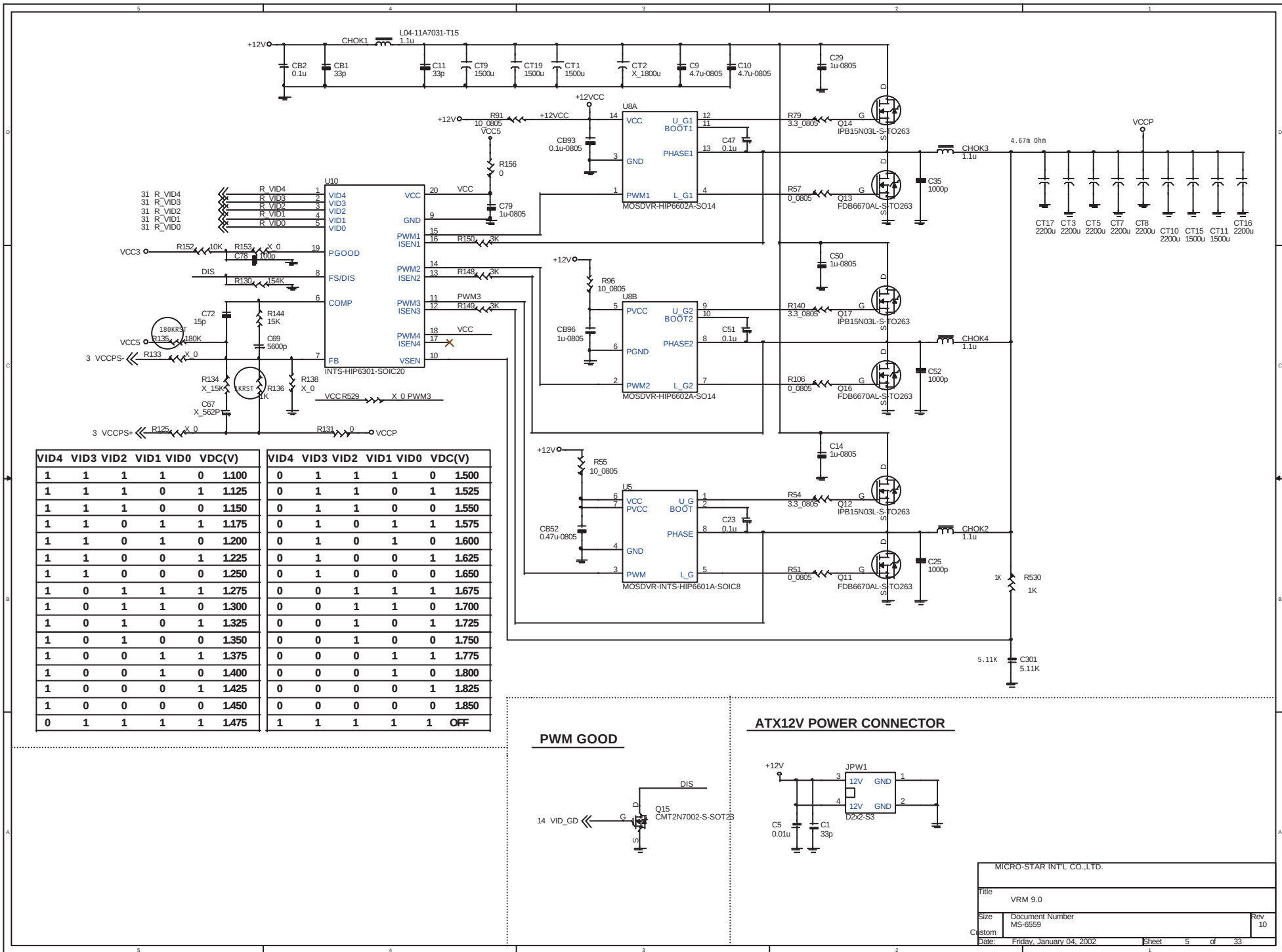
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Size	Document Number MS-6559
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Custom
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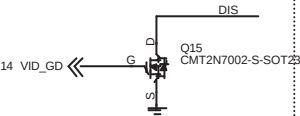
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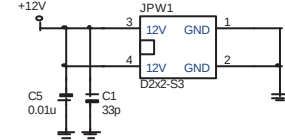
VID4	VID3	VID2	VID1	VID0	VDC(V)
1	1	1	1	0	1.100
1	1	1	0	1	1.125
1	1	1	0	0	1.150
1	1	0	1	1	1.175
1	1	0	1	0	1.200
1	1	0	0	1	1.225
1	1	0	0	0	1.250
1	0	1	1	1	1.275
1	0	1	1	0	1.300
1	0	1	0	1	1.325
1	0	1	0	0	1.350
1	0	0	1	1	1.375
1	0	0	1	0	1.400
1	0	0	0	1	1.425
1	0	0	0	0	1.450
0	1	1	1	1	1.475

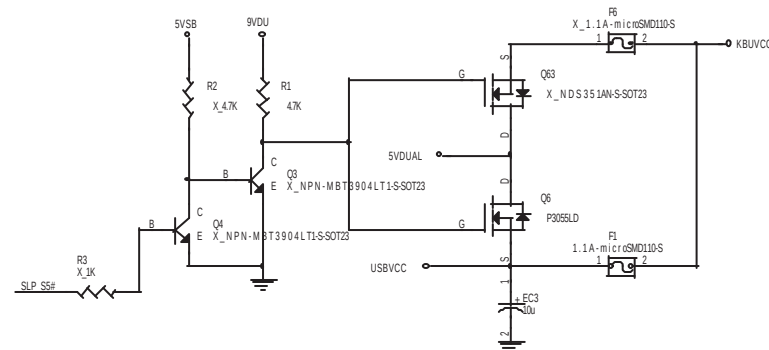
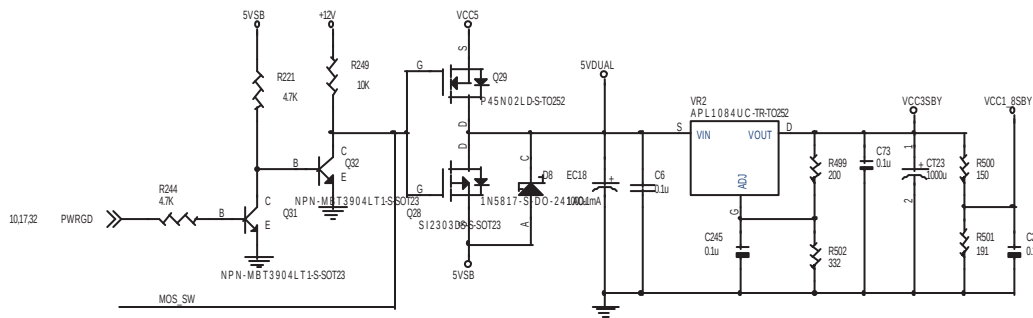
VID4	VID3	VID2	VID1	VID0	VDC(V)
0	1	1	1	0	1.500
0	1	1	0	1	1.525
0	1	1	0	0	1.550
0	1	0	1	1	1.575
0	1	0	1	0	1.600
0	1	0	0	1	1.625
0	1	0	0	0	1.650
0	0	1	1	1	1.675
0	0	1	1	0	1.700
0	0	1	0	1	1.725
0	0	1	0	0	1.750
0	0	0	1	0	1.775
0	0	0	1	0	1.800
0	0	0	0	1	1.825
0	0	0	0	0	1.850
1	1	1	1	1	OFF

PWM GOOD

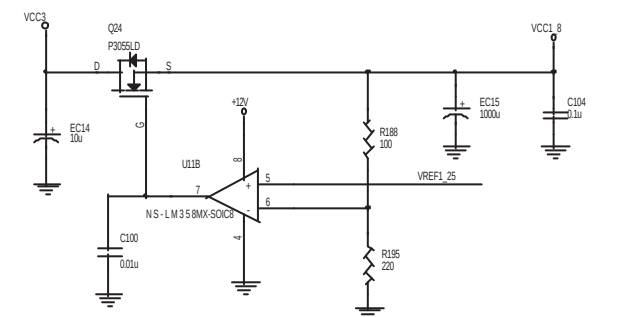
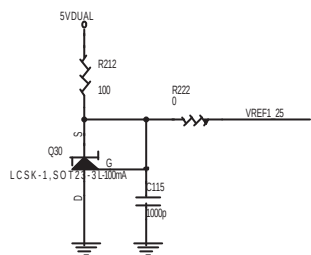
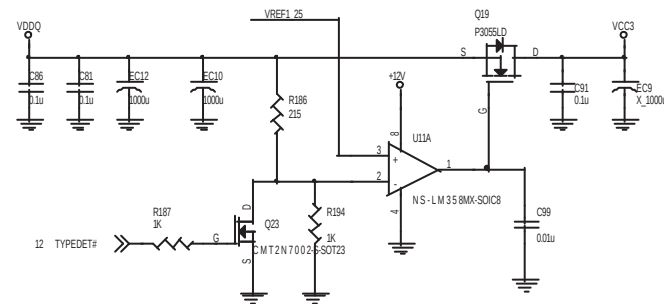
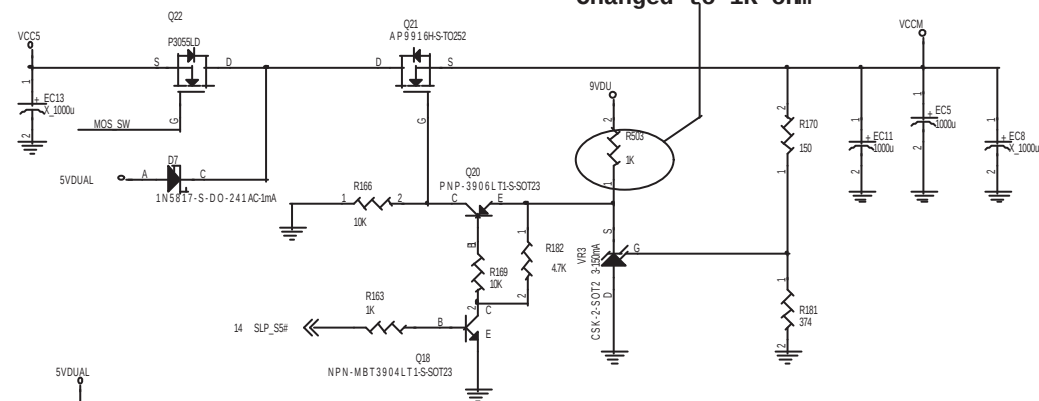


ATX12V POWER CONNECTOR

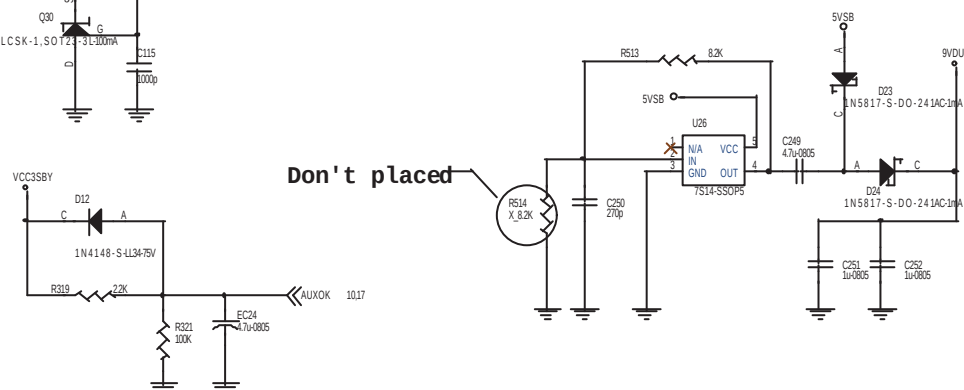


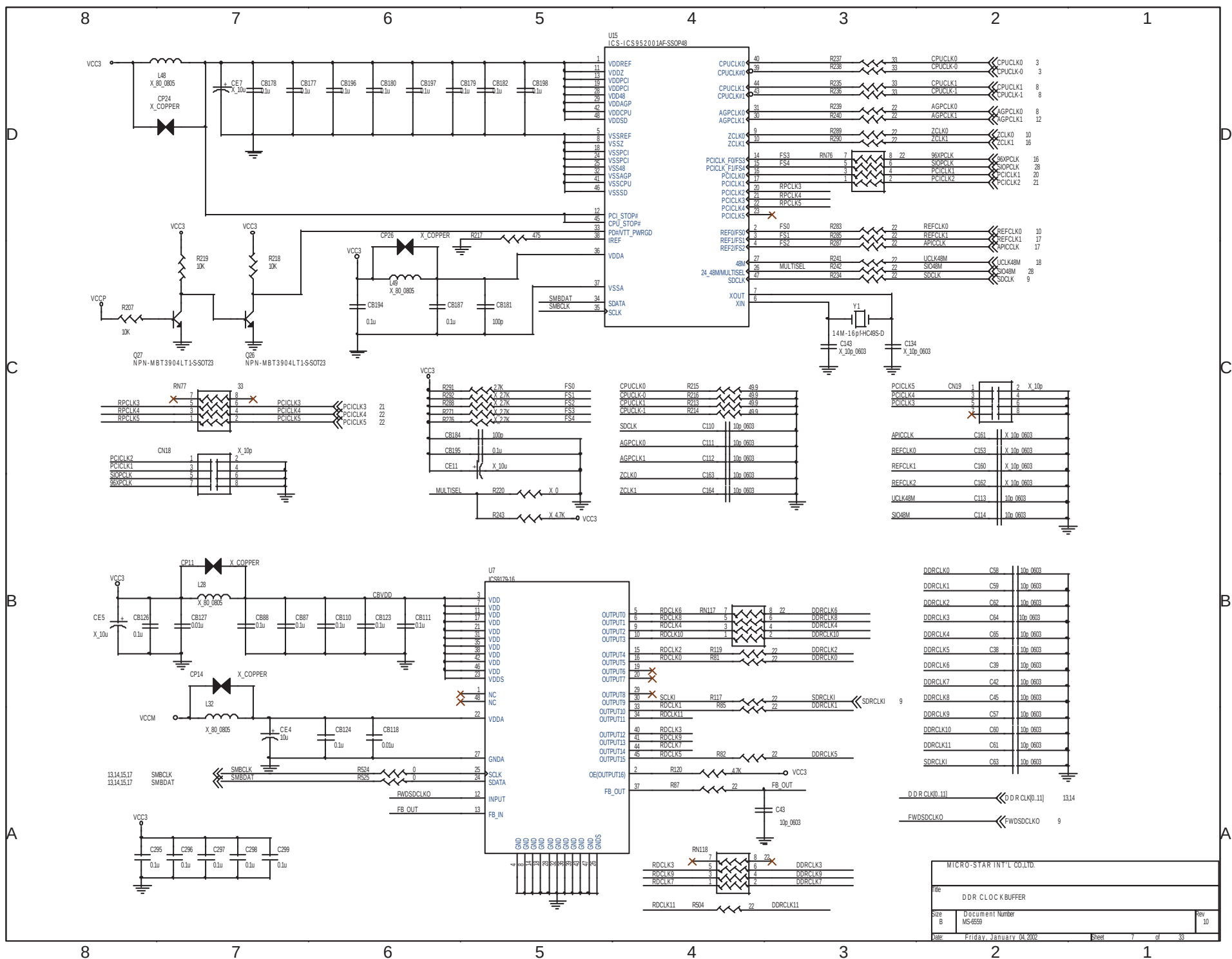


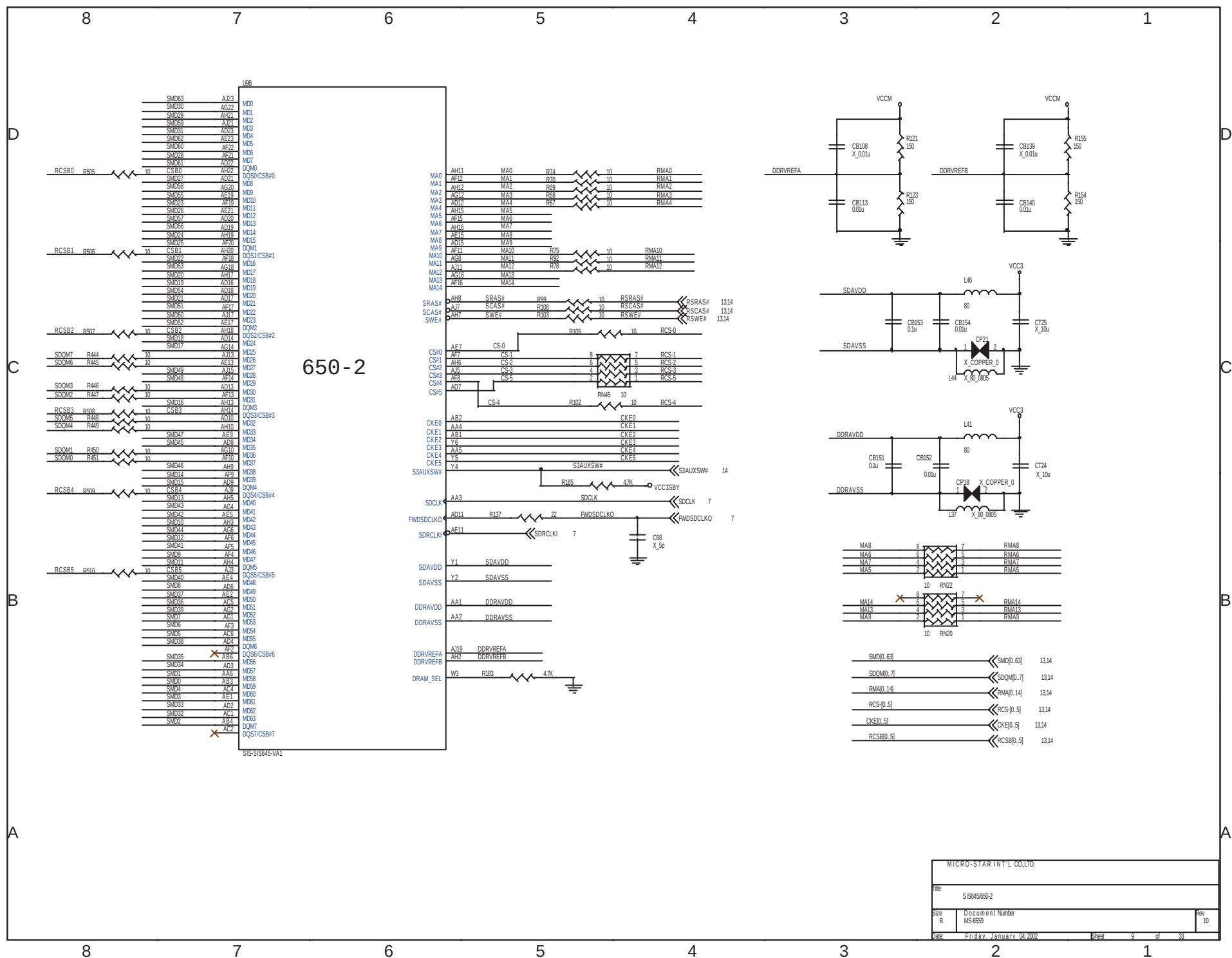
Changed to 1K ohm

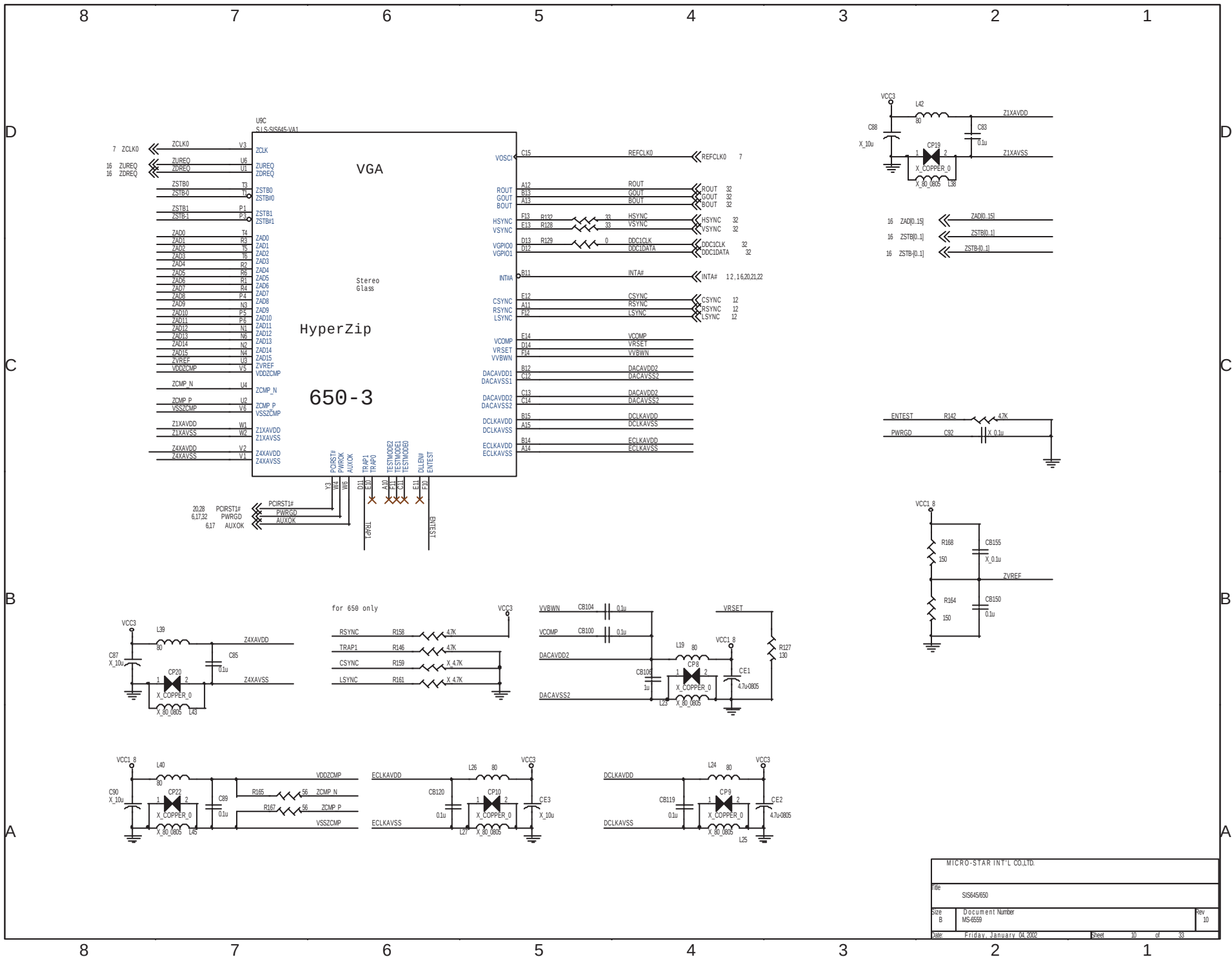


Don't placed



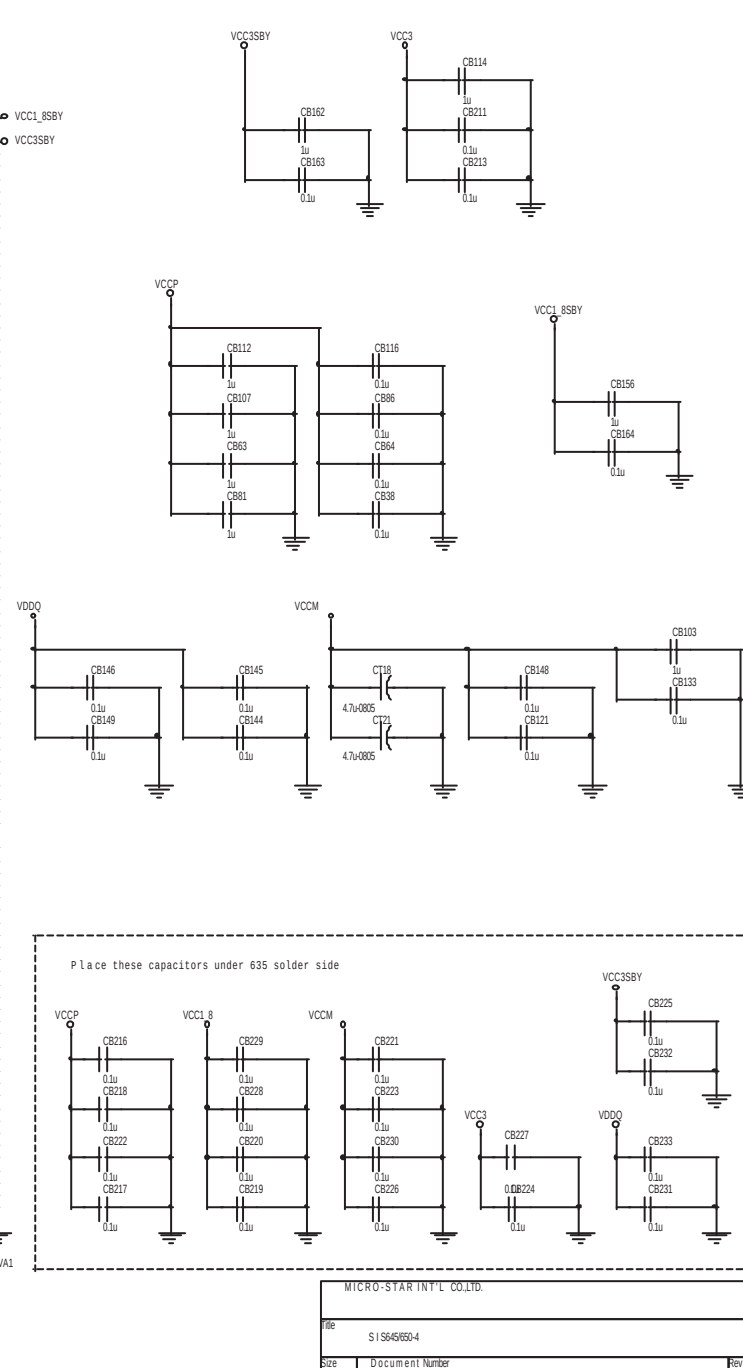
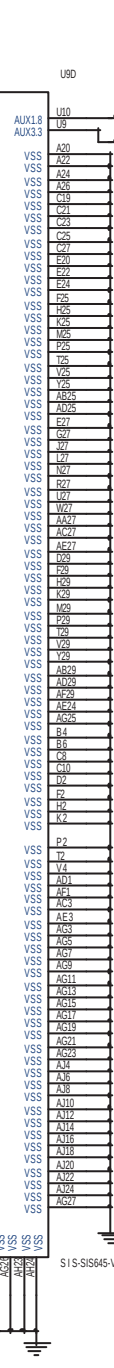
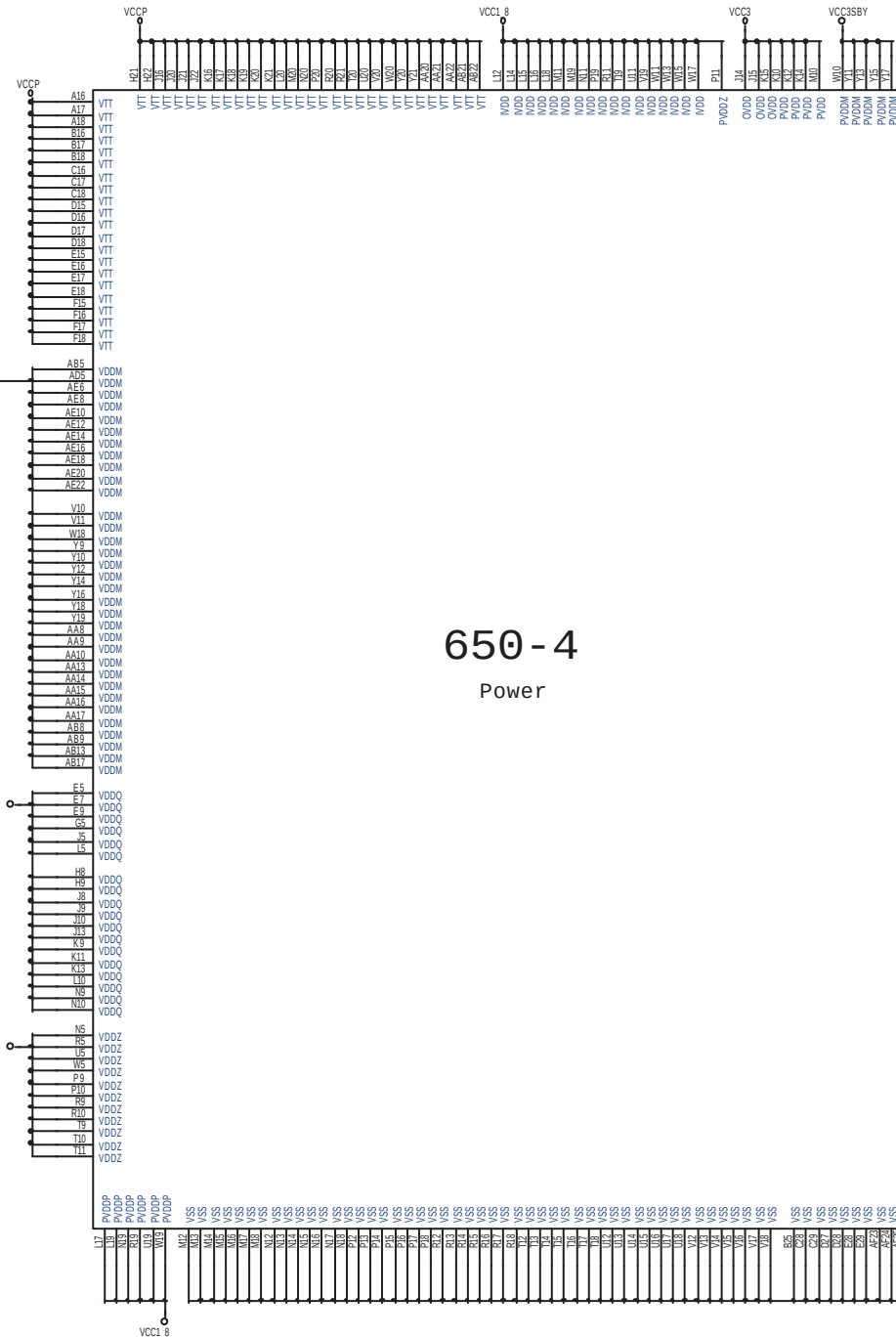




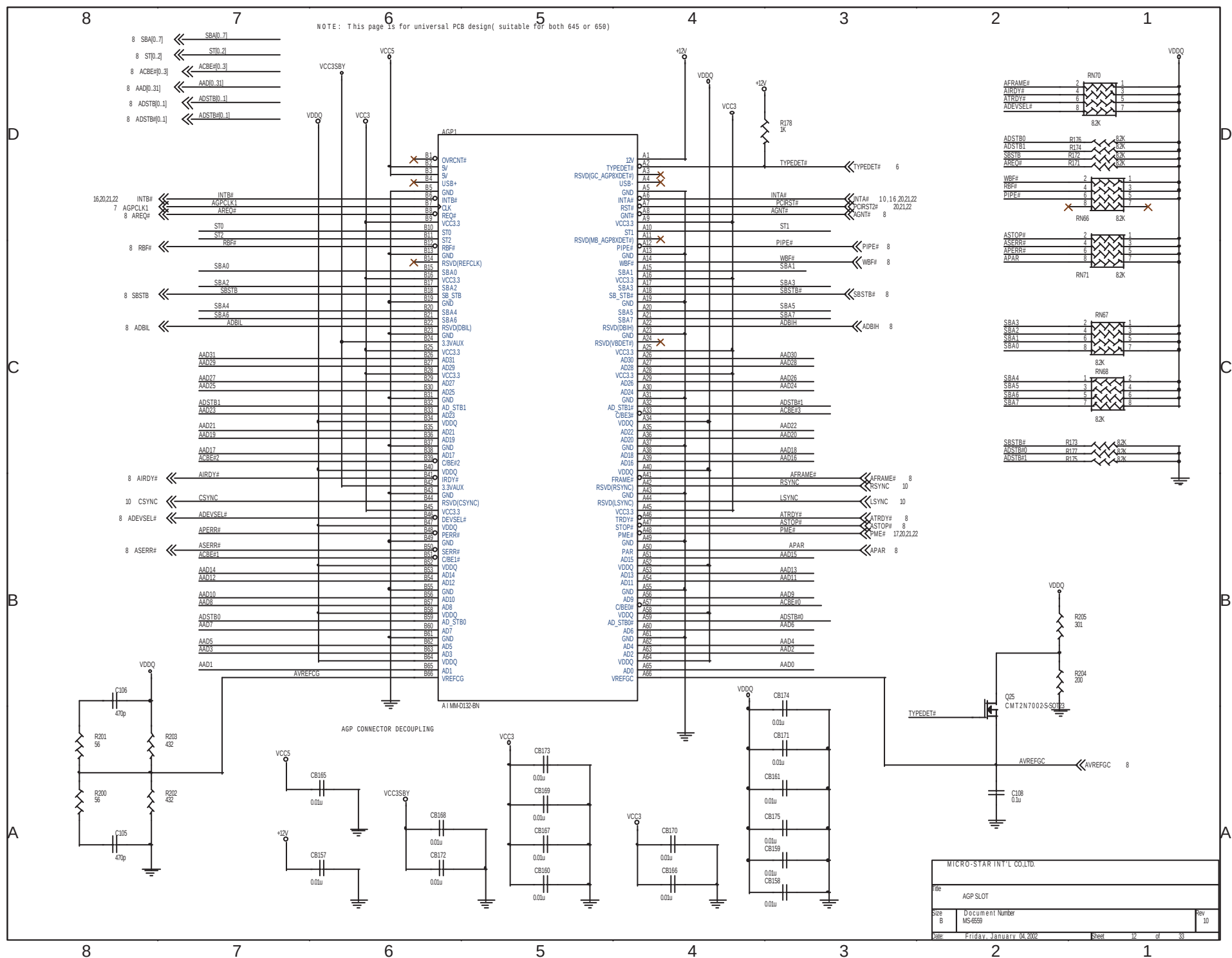


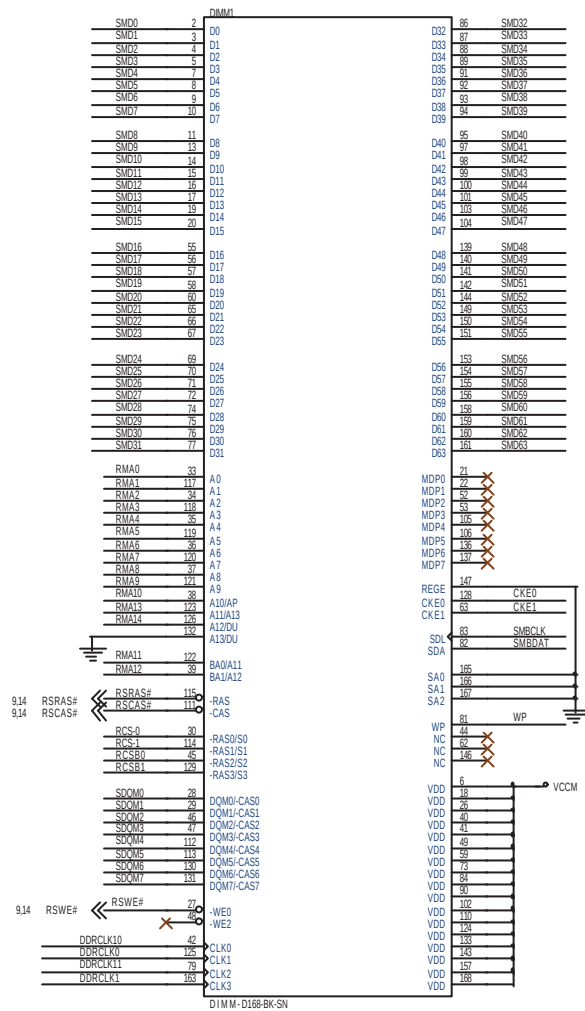
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650-4 Power



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9.14 SMD[0..63] << SMD[0..63]

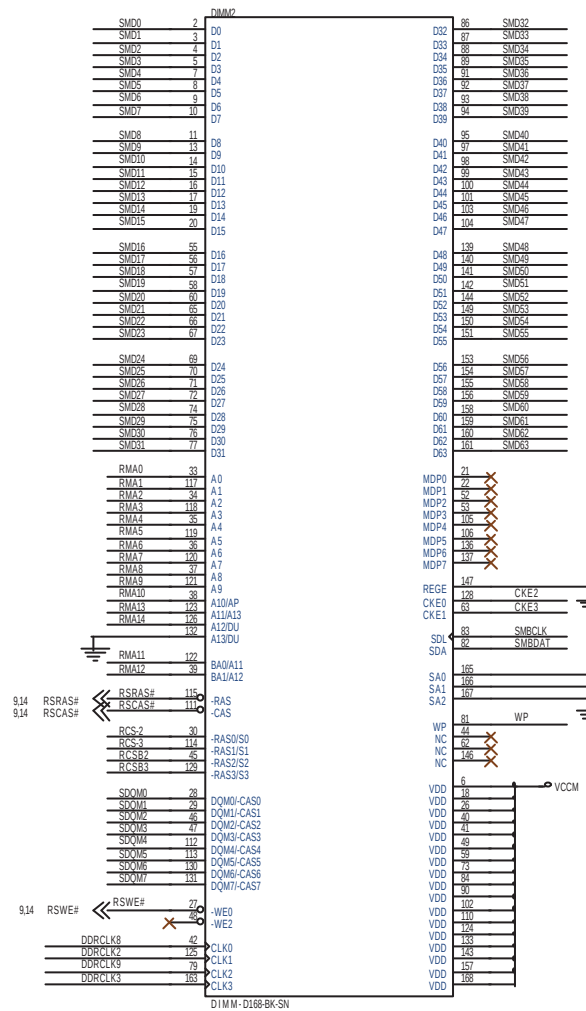
9.14 RMA[0..14] << RMA[0..14]

9.14 SDQ[0..7] << SDQ[0..7]

9.14 RCS[0..5] << RCS[0..5]

9.14 CK0[0..5] << CK0[0..5]

7.14 D D R CLK[0..11] << D D R CLK[0..11]

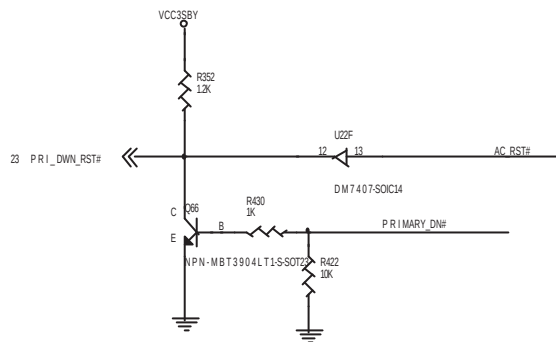
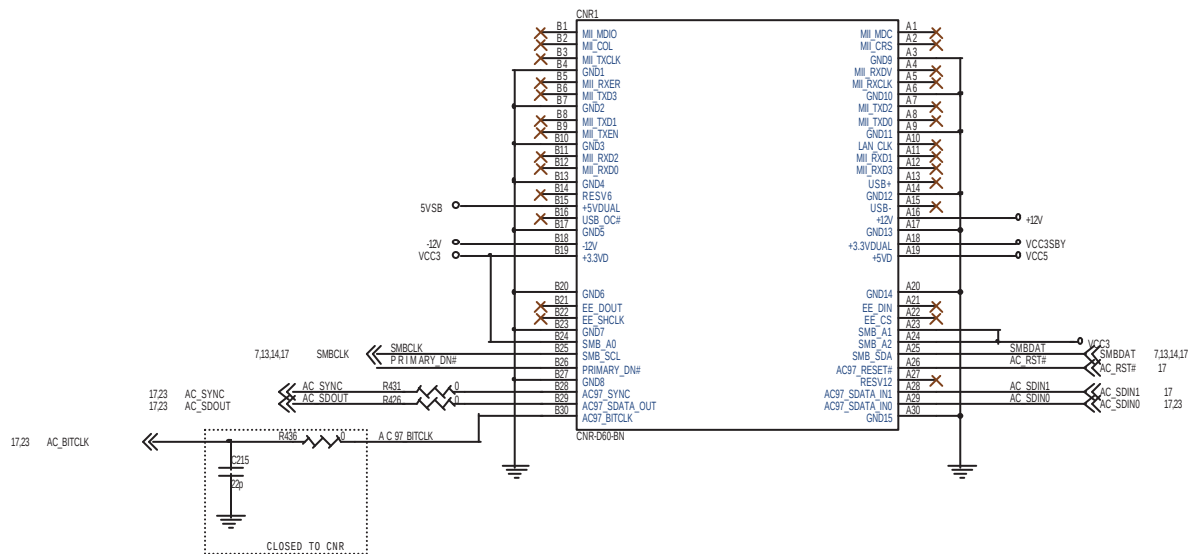


7.14,15,17 SMBCLK << SMBCLK

7.14,15,17 SMBDAT << SMBDAT

14 WP << WP

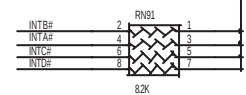
RCSB[0..5] << RCSB[0..5]



JCNR1	AUDIO DOWN
1 - 2	Disable onboard audio
2 - 3	Auto Mode

Default 2 - 3

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File			
CNR CONNECTOR			
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20.21.22 PREQ#0..4

20.21.22 PGNT#0..4

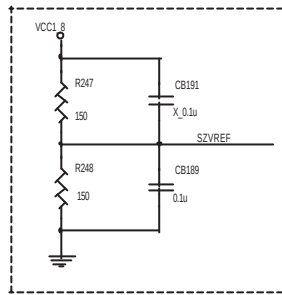
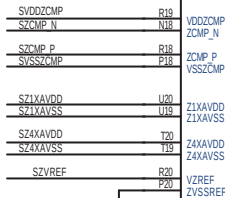
20.21.22 CBE#0..3

10, 12, 20.21.22 INTA#
20.21.22 INTB#
20.21.22 INT#
20.21.22 INTD#

20.21.22 FRAME#
20.21.22 IRDY#
20.21.22 TRDY#
20.21.22 STOP#

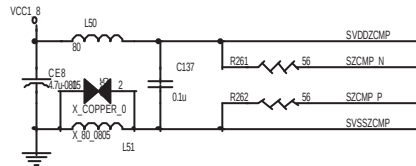
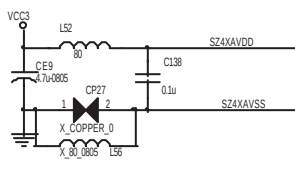
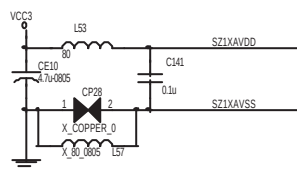
20.21.22 SERR#
20.21.22 PAR
20.21.22 DEVSEL#
20.21.22 PLOCK#

7 96XPCLK
20.26 PCIRST#



10 ZAD[0..15]

Analog Power supplies of Transzip function for 962 Chip.



PCI

IDE

961A-1

HyperZip

U18A

IDEAVDD
IDEAVSS

ICHRDYA
IDREQA
IRQA
CBLIDA

IDOR-A
IDOW-A
IDACK-A

IDSA-A1
IDSA-A0

IDCS-A1
IDCS-A0

ICHRDYB
IDREQB
IRQB
CBLIDB

IDOR-B
IDOW-B
IDACK-B

IDSA-B1
IDSA-B0

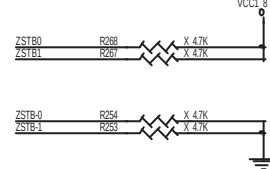
IDCS-B1
IDCS-B0

IDA0
IDA1
IDA2
IDA3
IDA4
IDA5
IDA6
IDA7
IDA8
IDA9
IDA10
IDA11
IDA12
IDA13
IDA14
IDA15

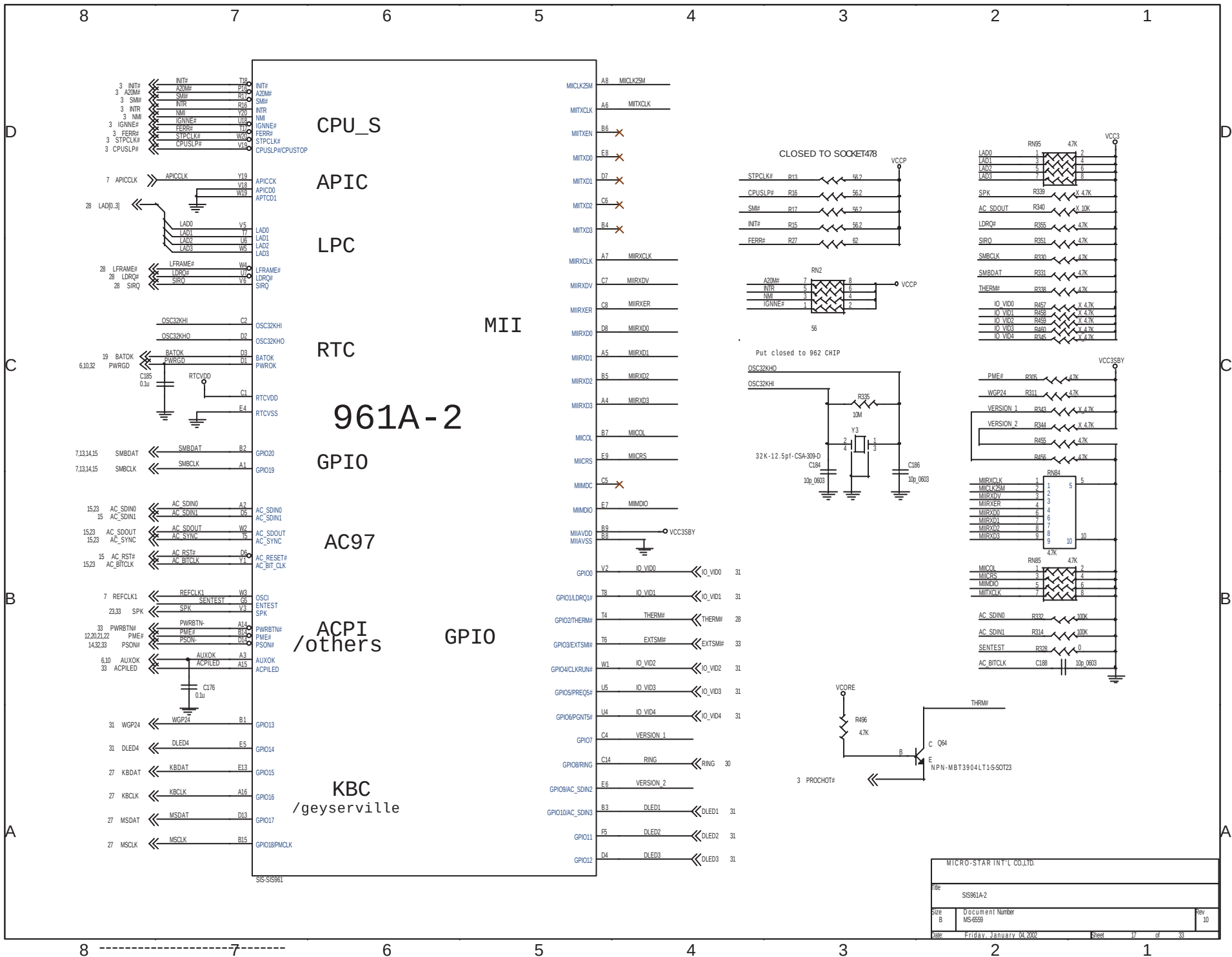
IDB0
IDB1
IDB2
IDB3
IDB4
IDB5
IDB6
IDB7
IDB8
IDB9
IDB10
IDB11
IDB12
IDB13
IDB14
IDB15

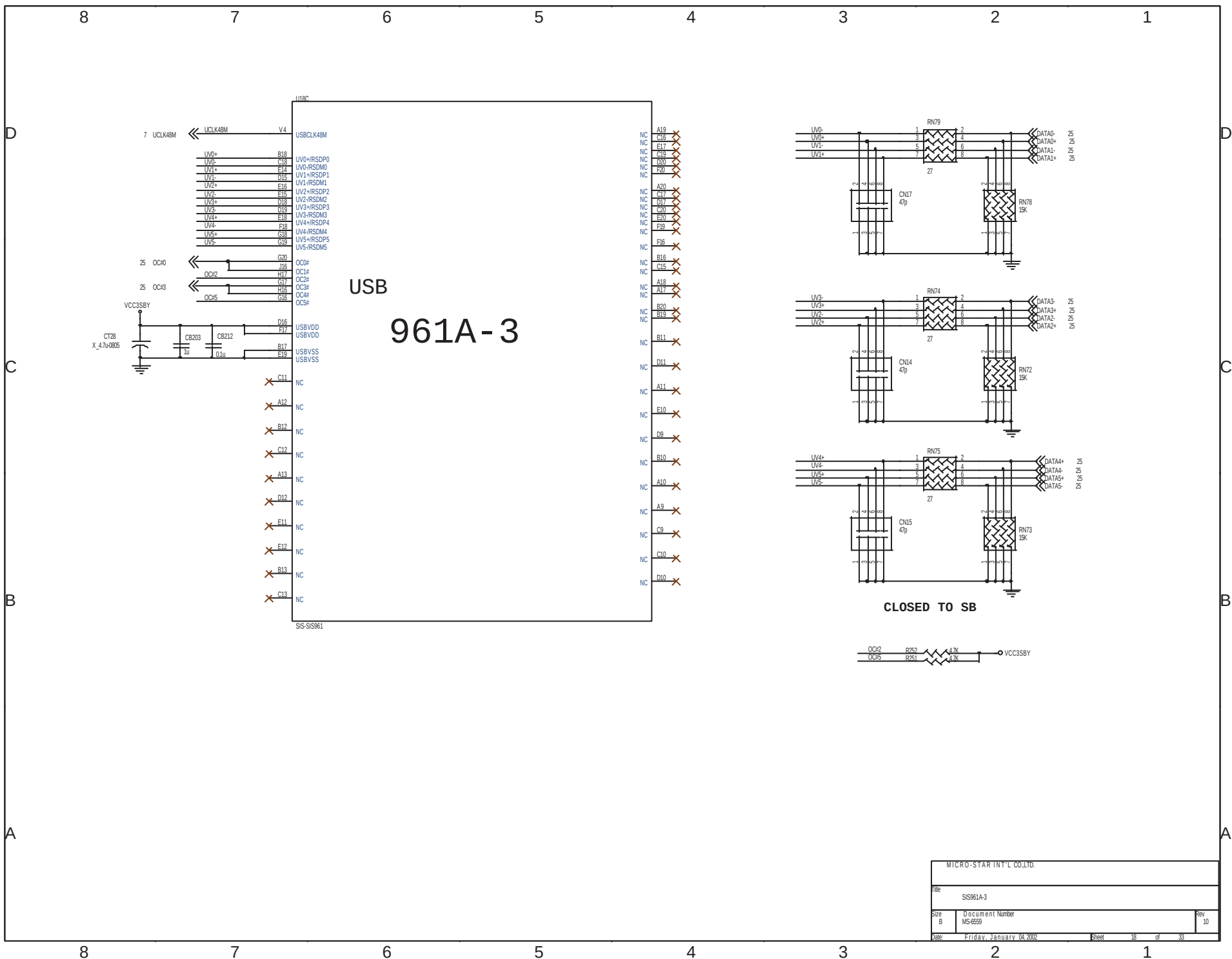
SIS-SIS961

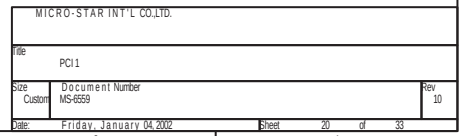
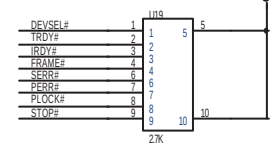
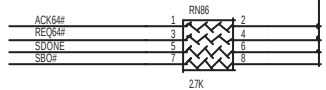
Put near 961A Chip.



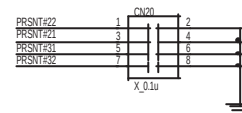
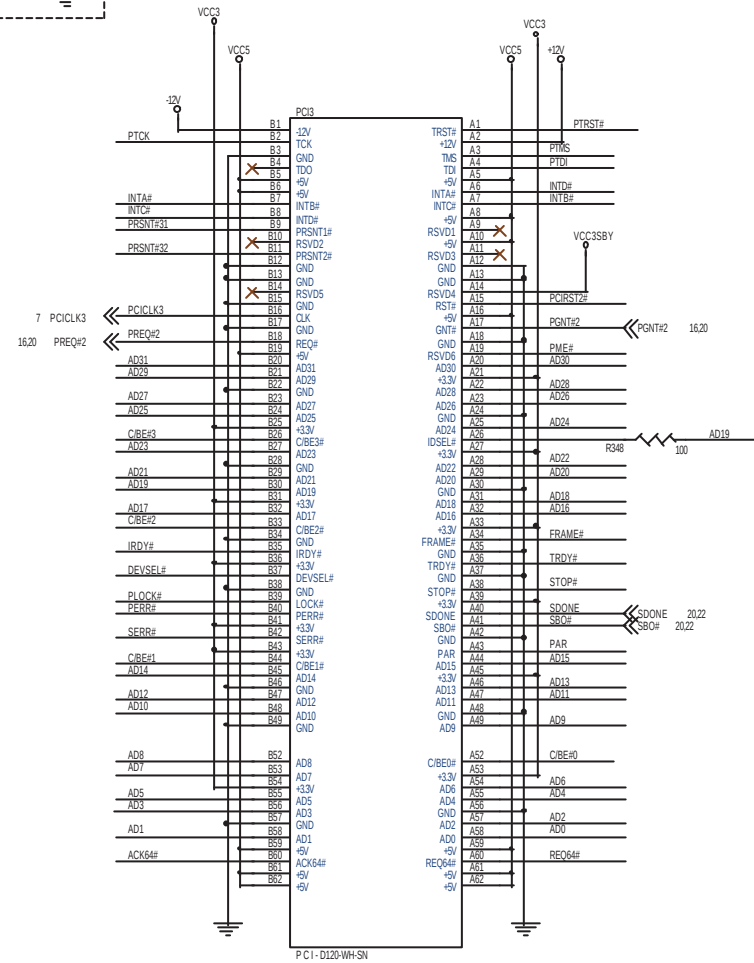
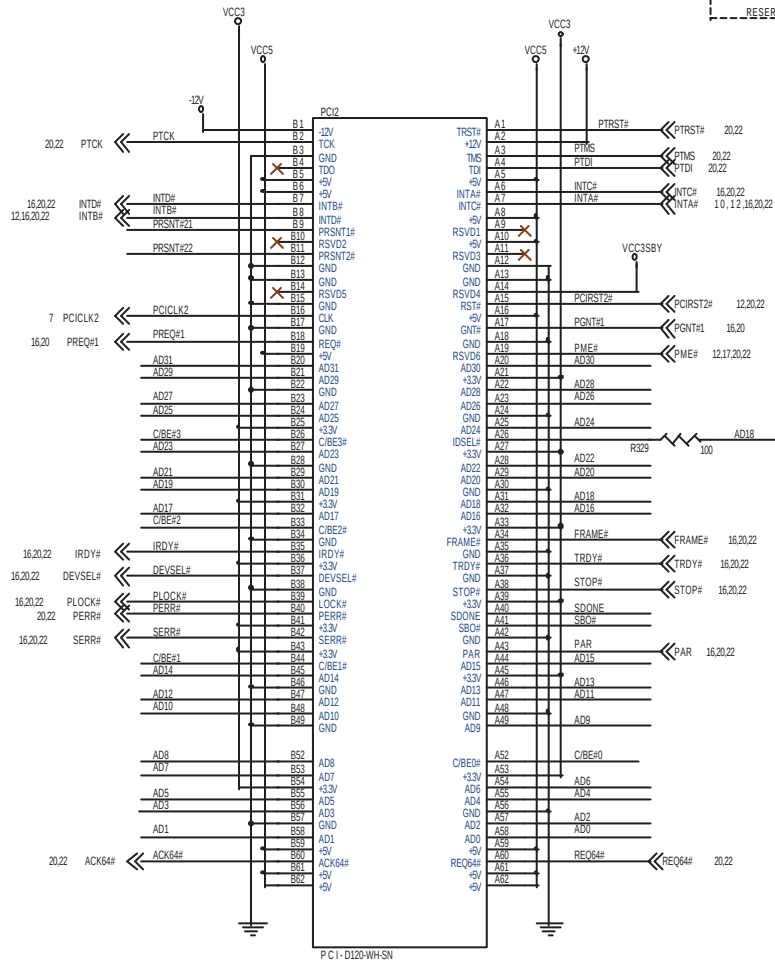
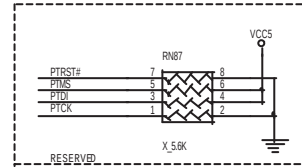
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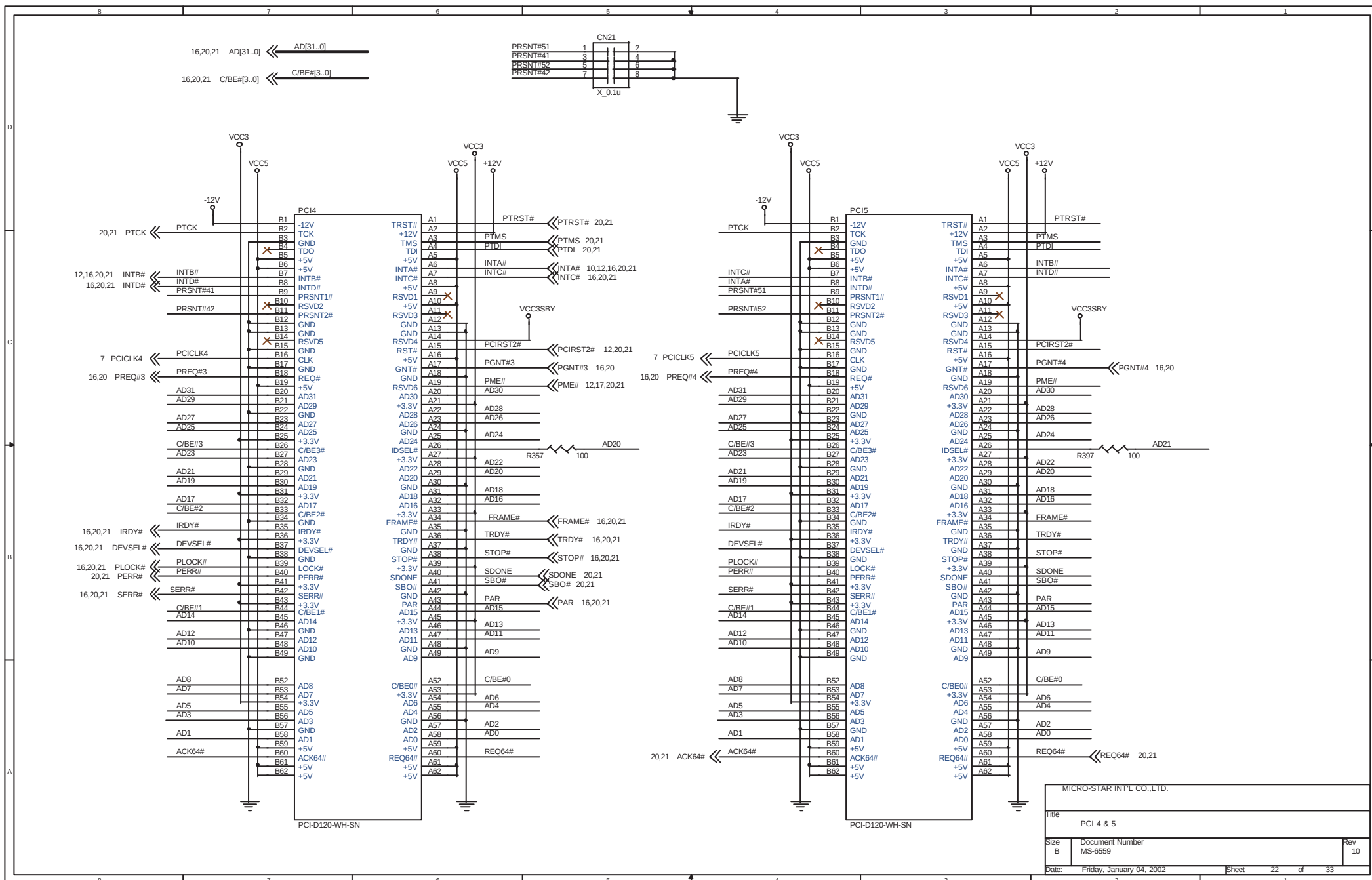


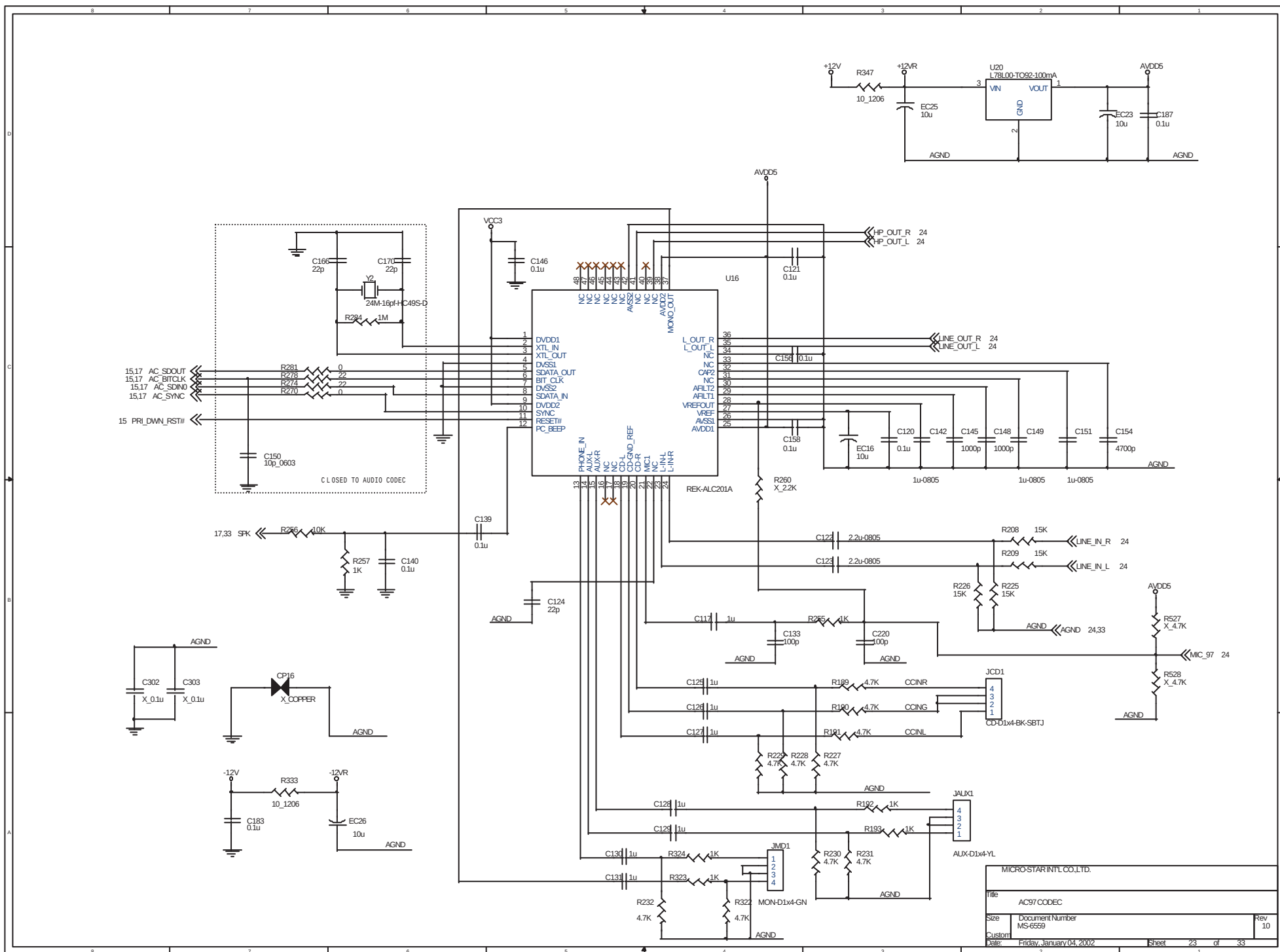


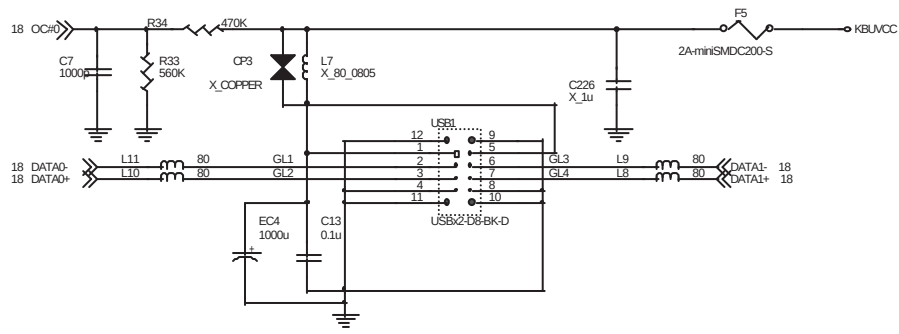
16,20,22 AD[31..0] << AD[31..0]
16,20,22 CBE#[3..0] << CBE#[3..0]



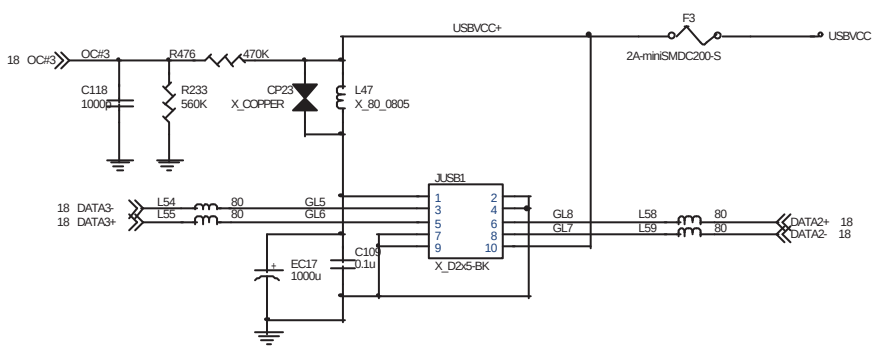
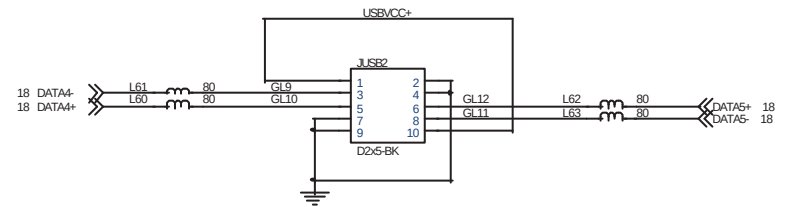
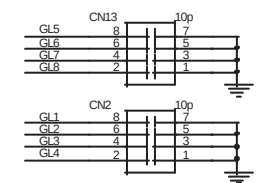
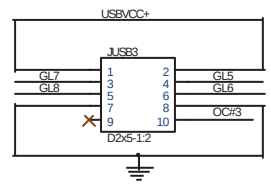
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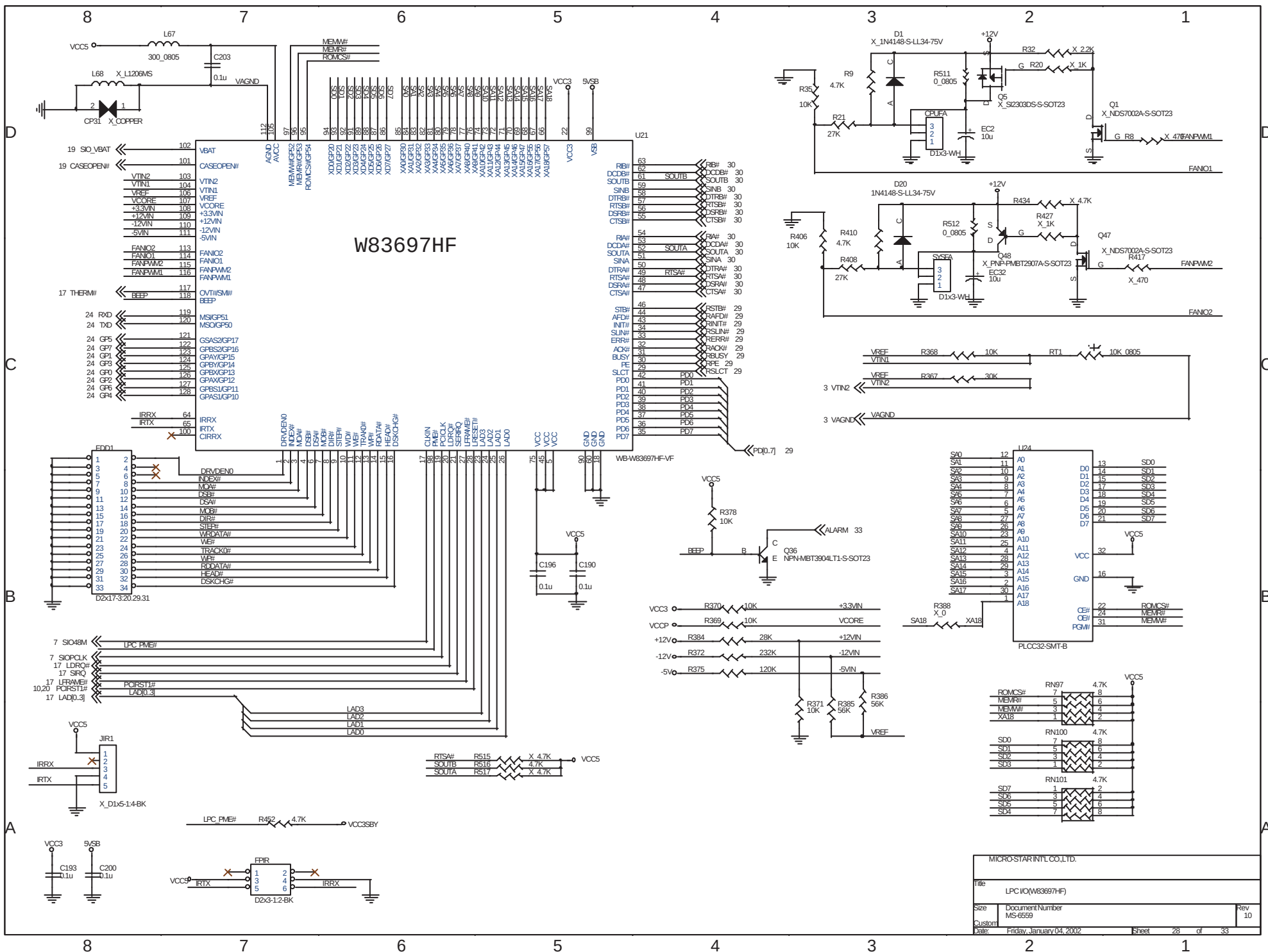


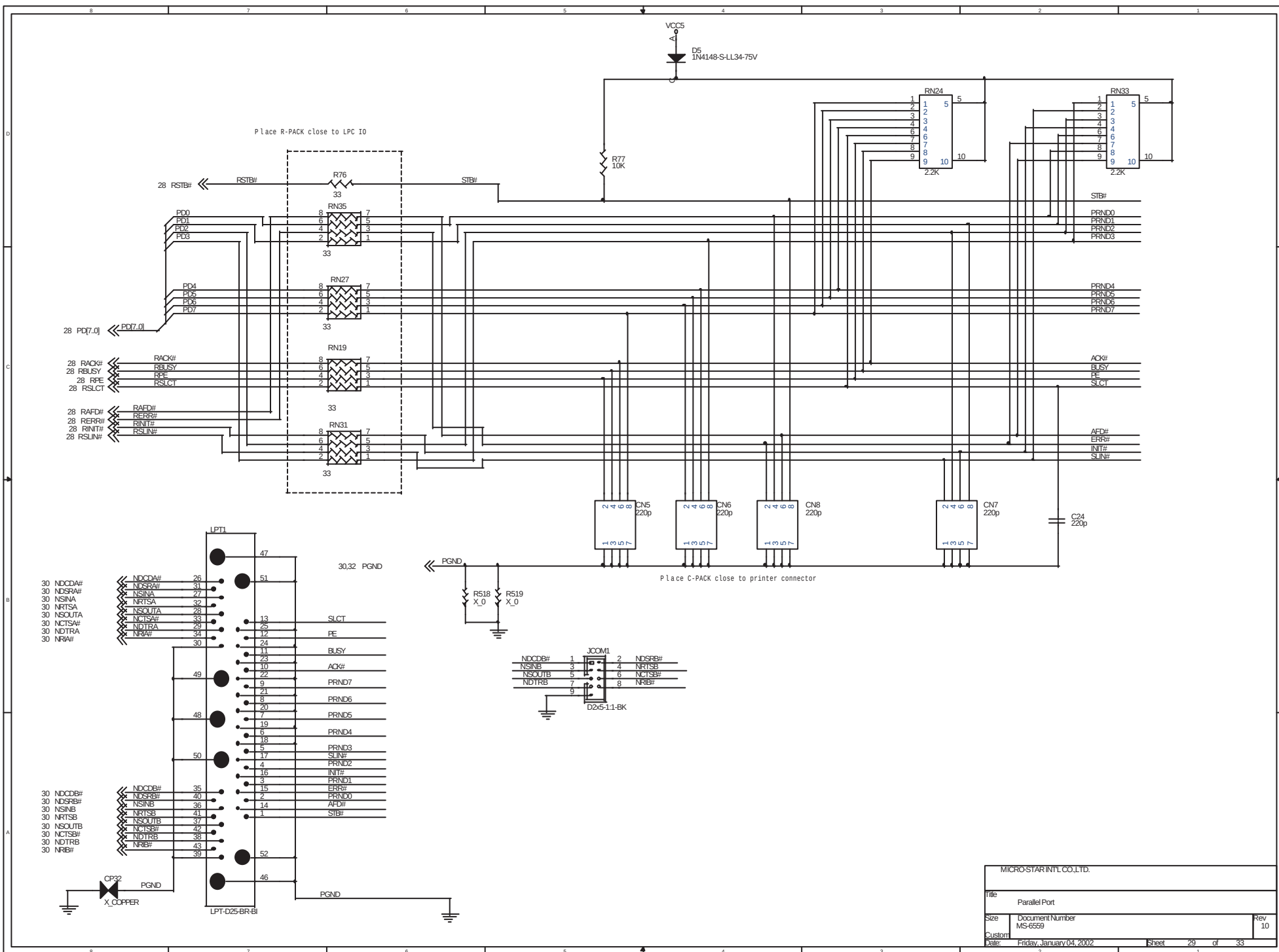
GL9 C229	10p 0603
GL10 C230	10p 0603
GL11 C231	10p 0603
GL12 C232	10p 0603

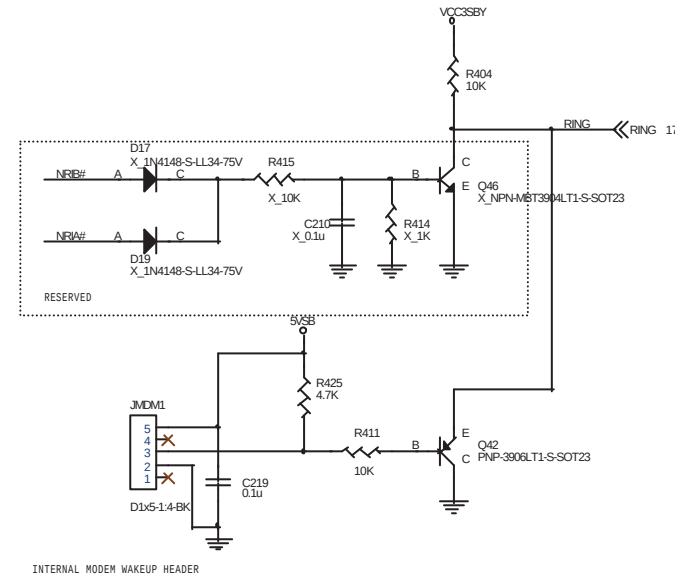
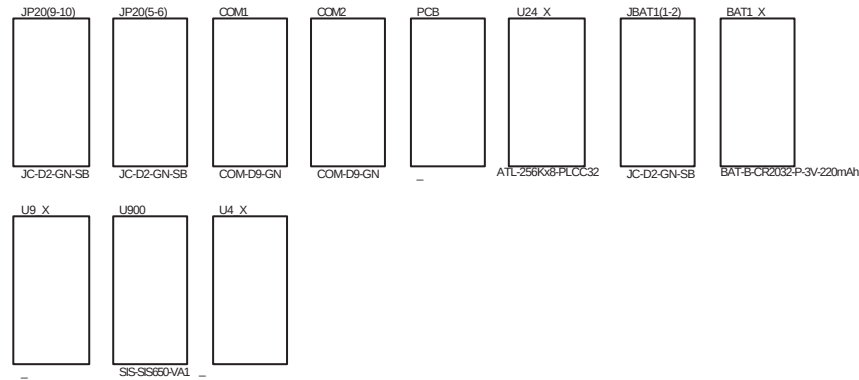
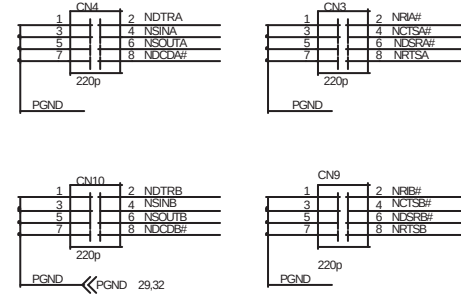
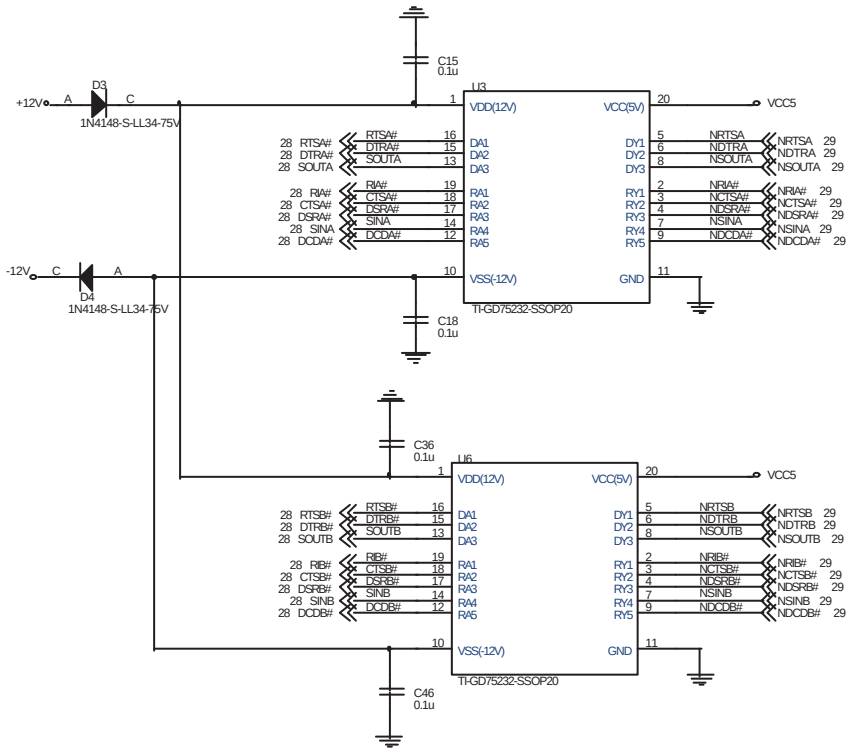


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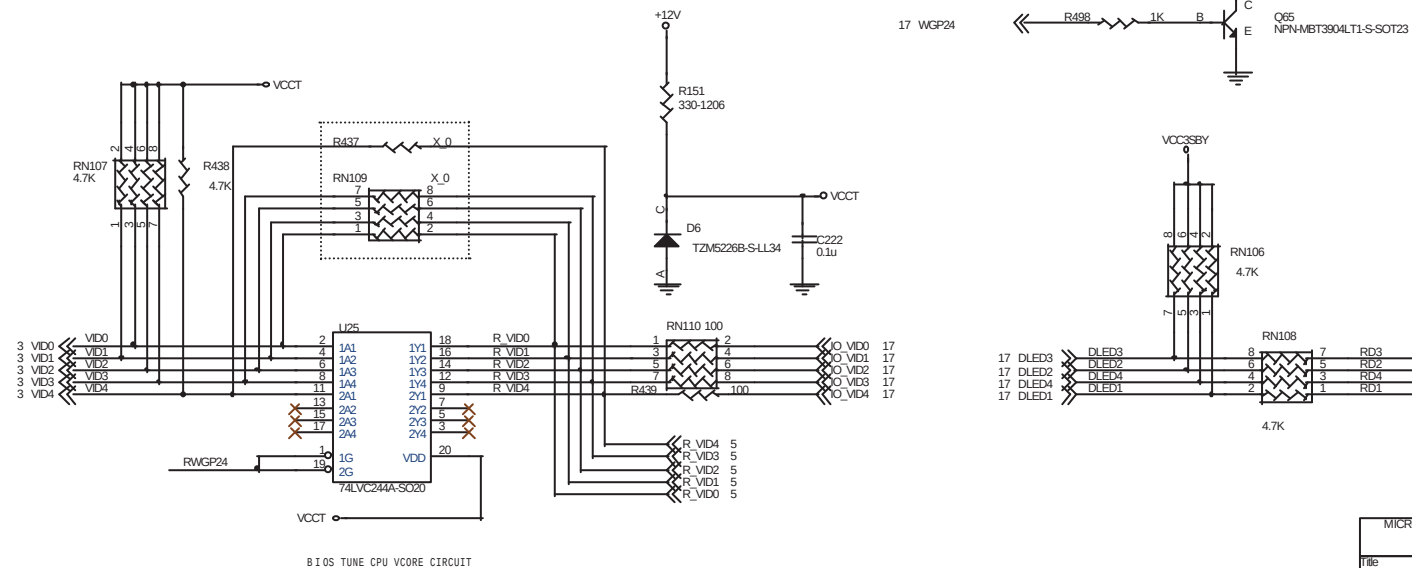
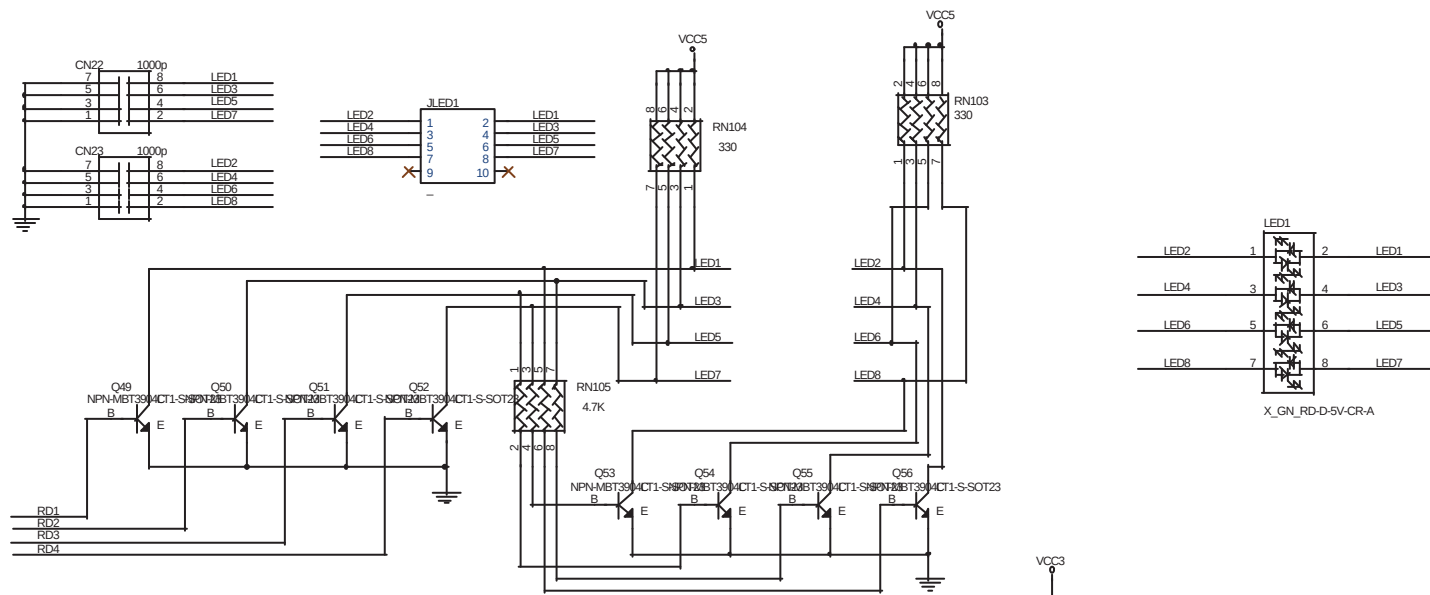






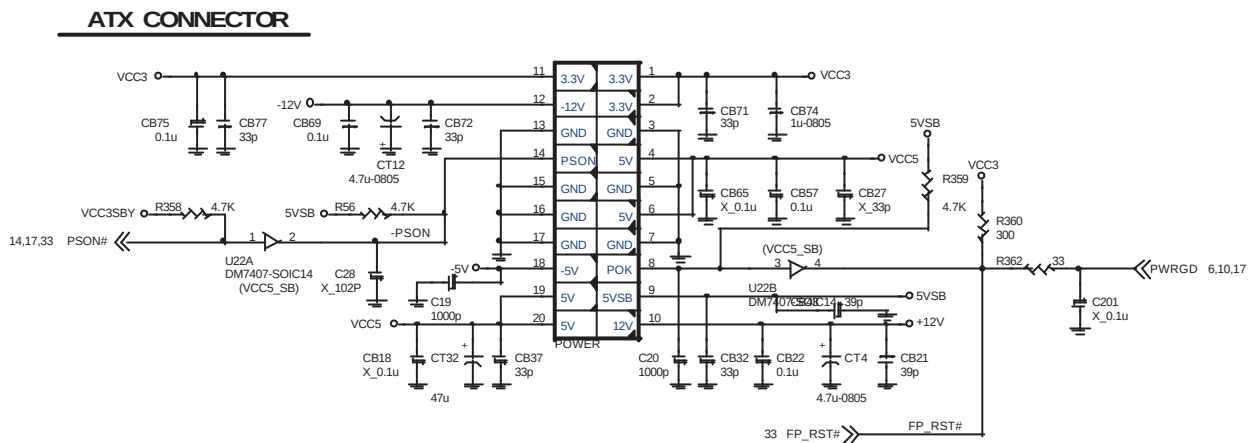
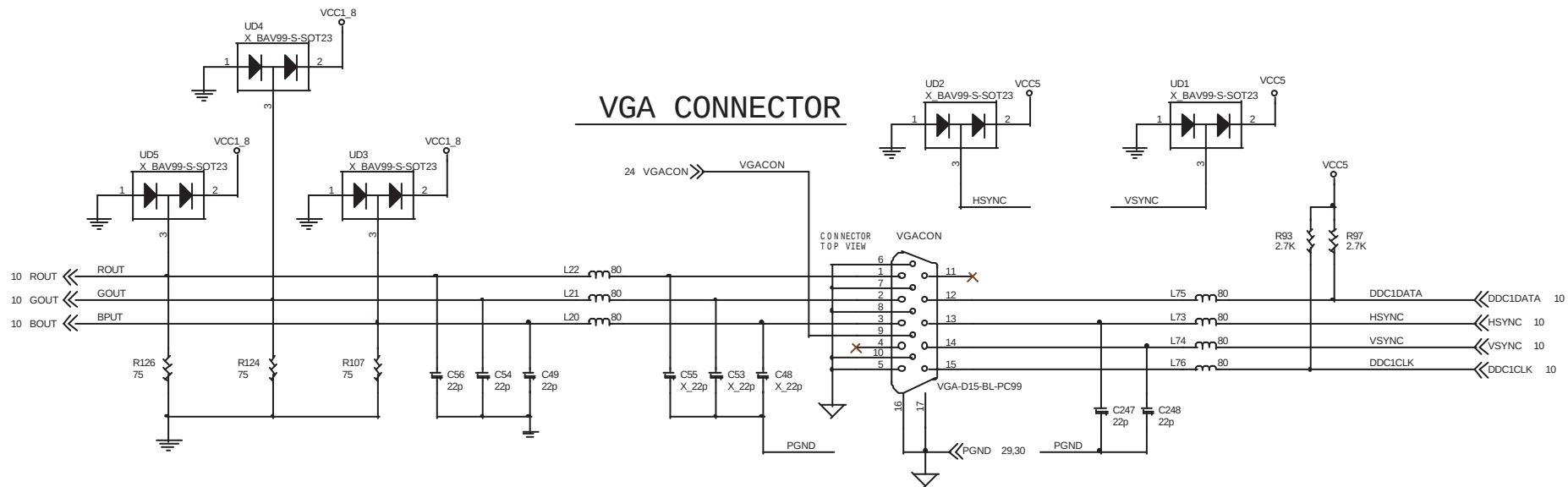


MICRO-STAR INT'L CO., LTD.			
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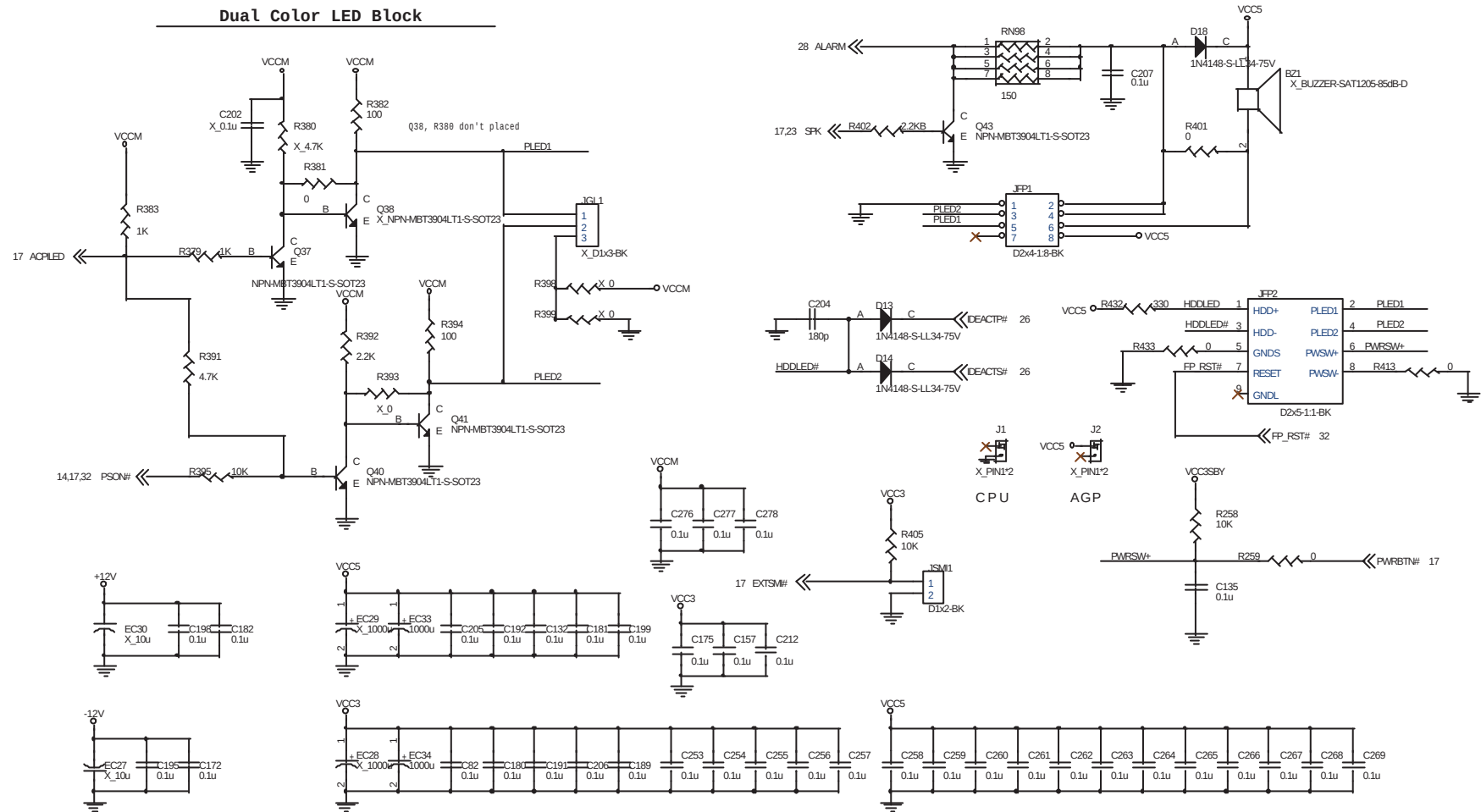
BIOS TUNE CPU Vcore CIRCUIT

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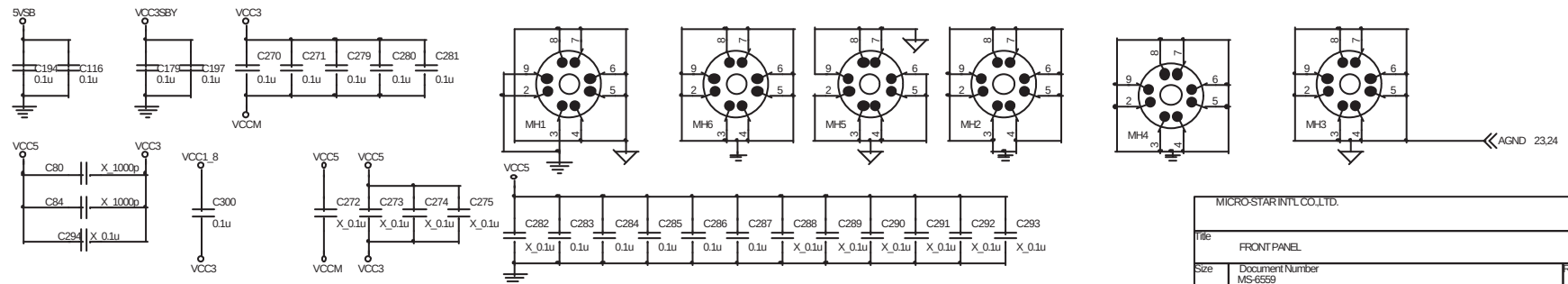


MICRO-STAR INT'L CO.,LTD.		
Title		
ATX POWER CONNECTOR		
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Dual Color LED Block



PCB OTHER COMPONENT



MICRO-STAR INT'L CO., LTD.			
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