

MS-7115 *Version 0B*

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PCI Routing Table

PCI Device	IDSEL	REQ/GNT	INTERRUPT
PCI Slot	AD17	1	B
MINI PCI	AD18	2	C
VT6307 IEEE1394	AD19	4	D
RTL8110SB/8100C LAN	AD22	3	C

Intel (R) Grantsdale (GMCH) + ICH6 Chipset
Intel Prescott LGA775 Processor

CPU:

Intel Prescott - 3.0G & Above

System Chipset:

Intel Grantsdale - GMCH (North Bridge)
Intel ICH6 (South Bridge)

On Board Chipset:

BIOS -- FWH EEPROM
AC'97 Codec -- ALC 880
LPC Super I/O -- W83627THF
LAN -- Realtek 8100C/8110SB
EEE1394 -- VIA VT6307
CLOCK -- ICS954119

Main Memory:

DDR 1 * 2 (Max 2GB)

Expansion Slots:

PCI EXPRESS X16 SLOT * 1


PCI 2.3 SLOT * 1

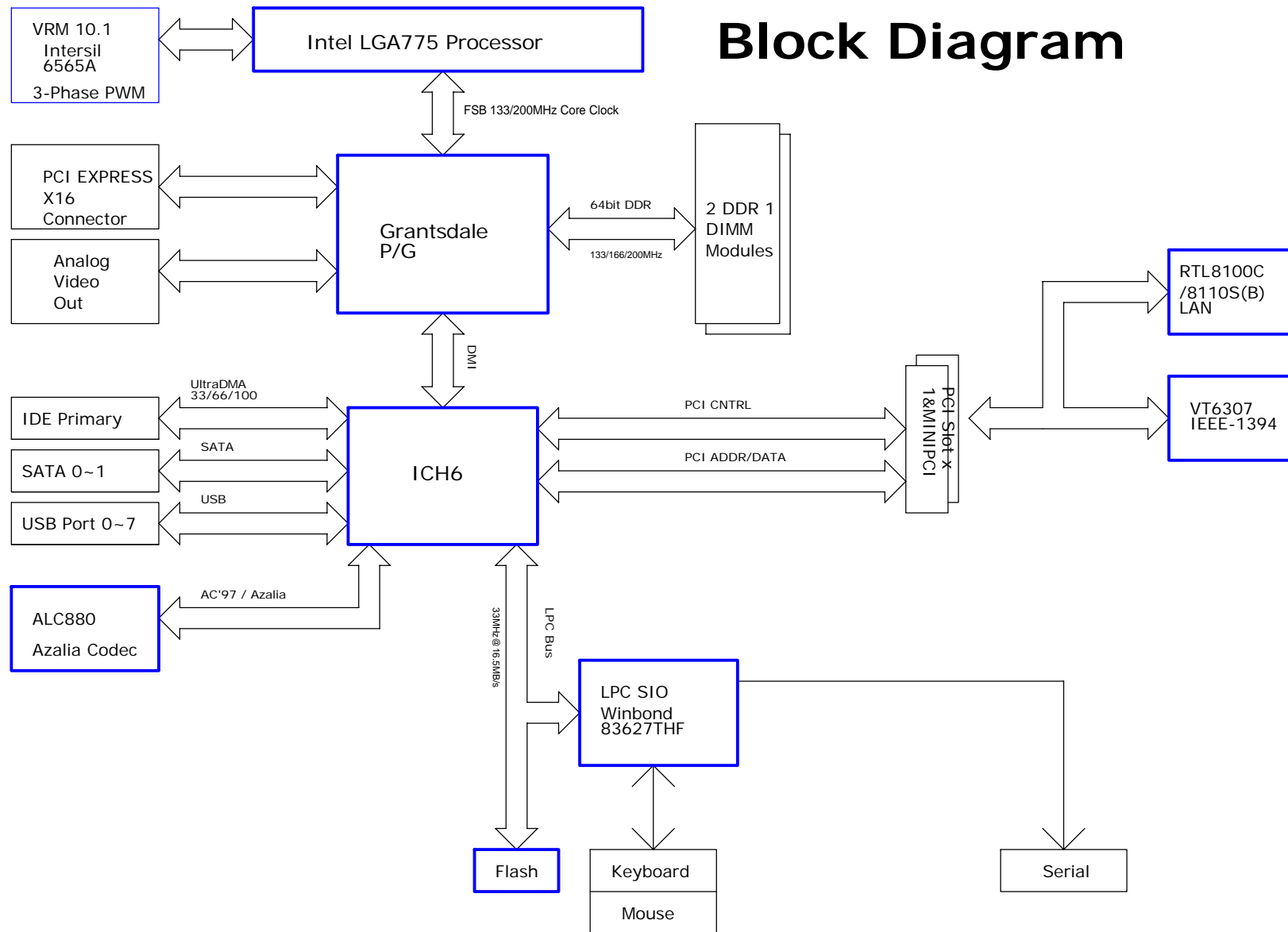
MINI PCI SLOT * 1

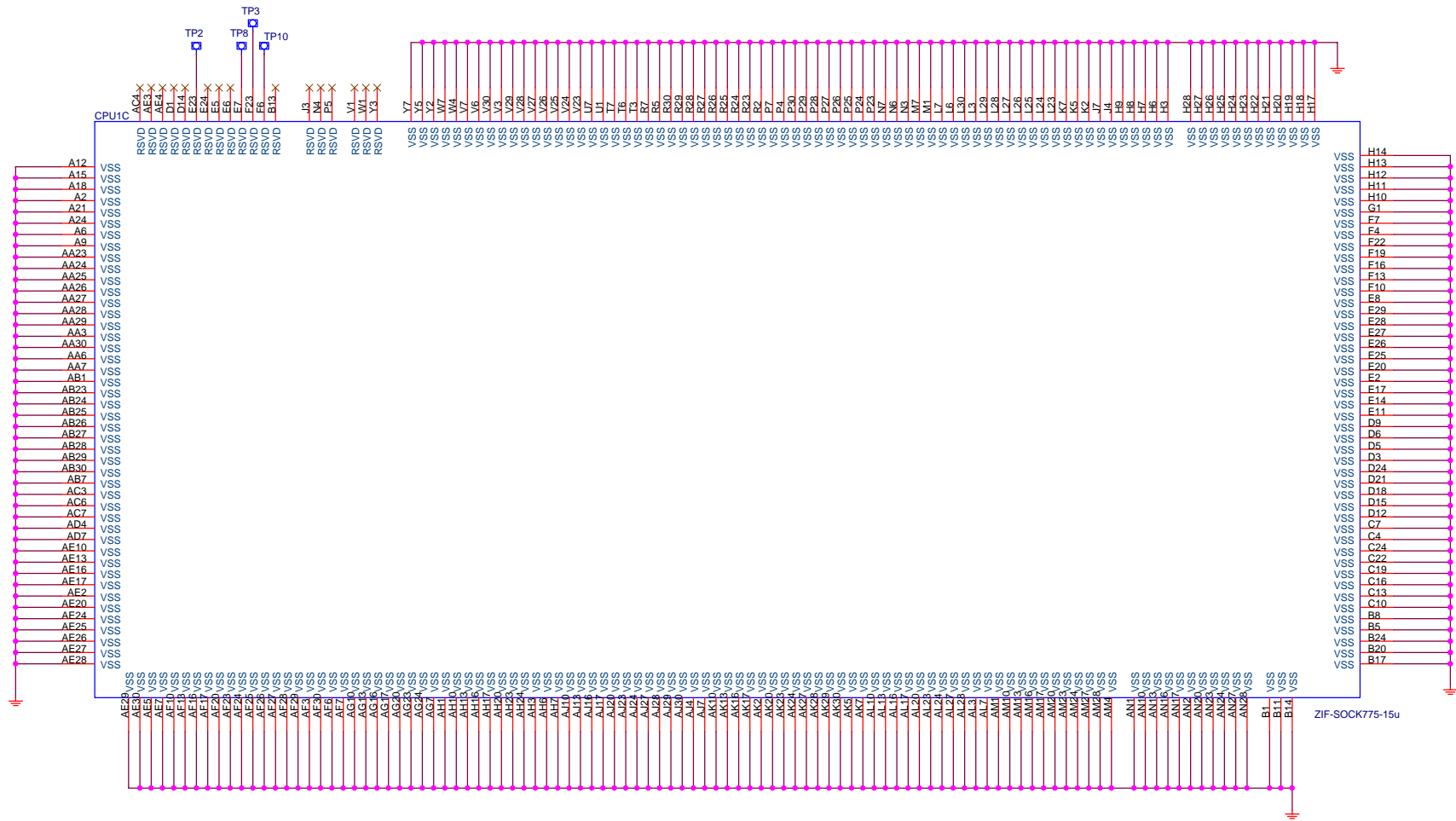
Intersil PWM:

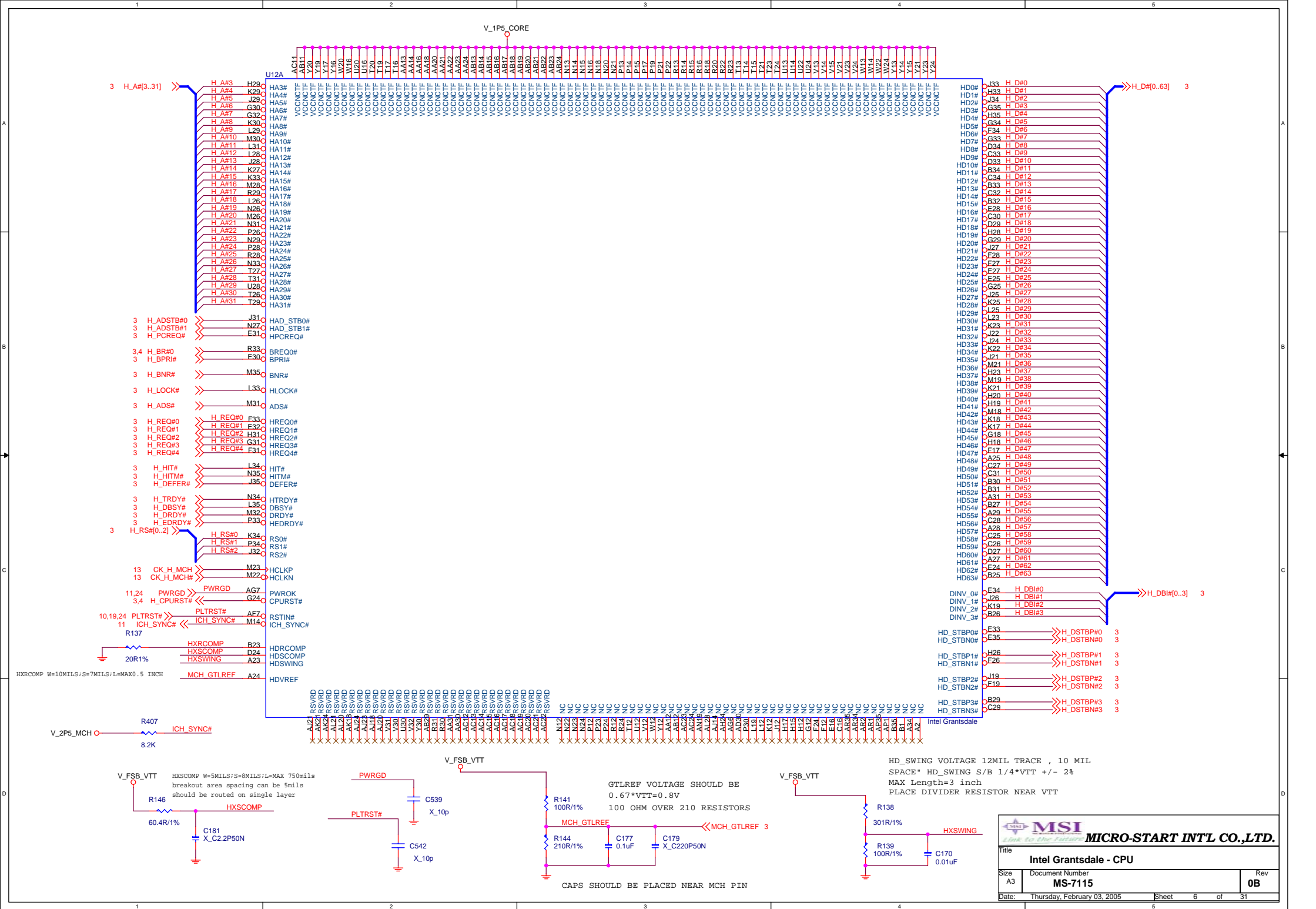
Controller: HIP6561 3 Phase

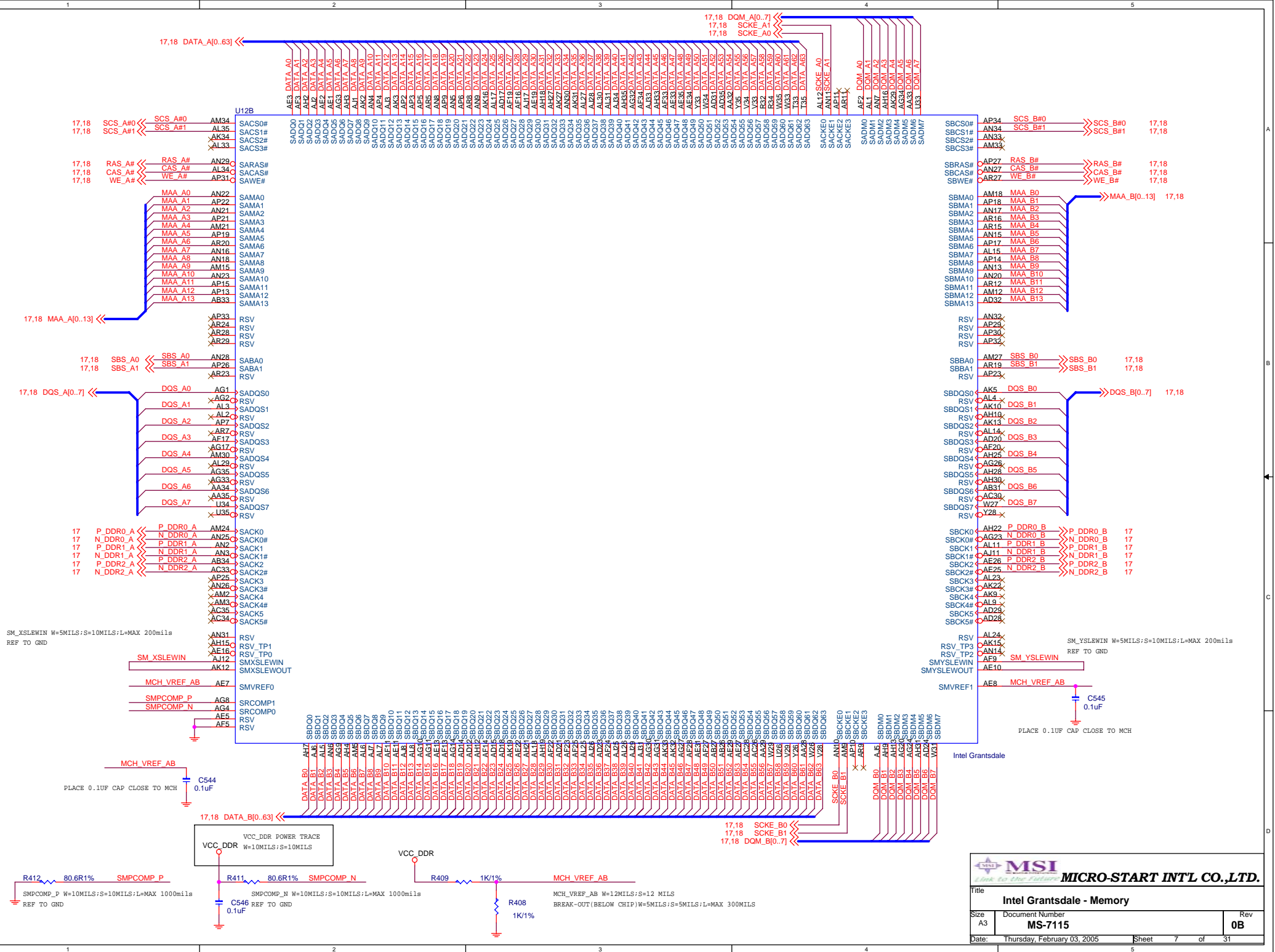
Driver: HIP6602B * 1 + HIP6601B * 1

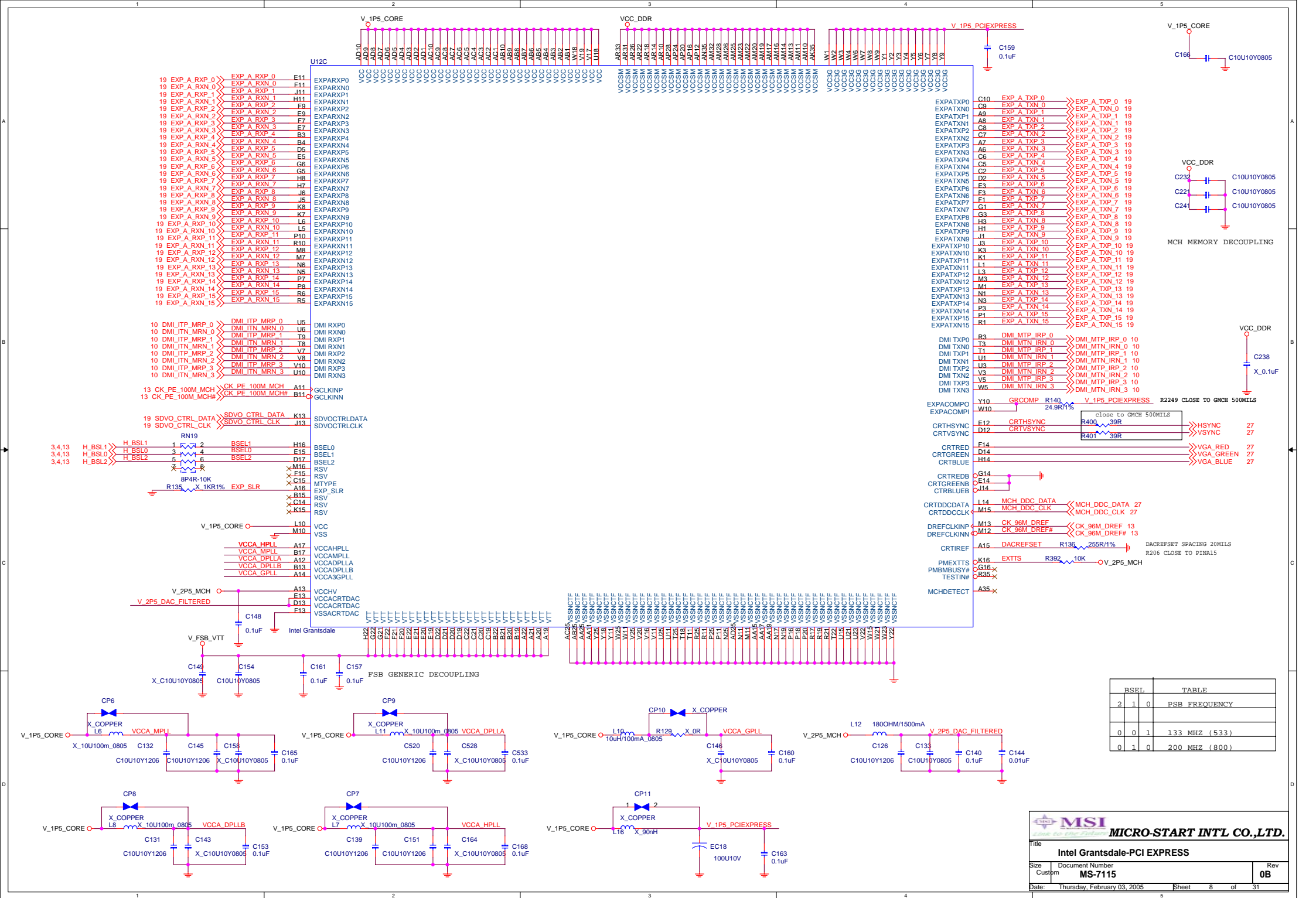
 MICRO-START INT'L CO.,LTD.		
Title COVER SHEET		
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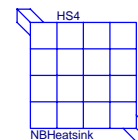


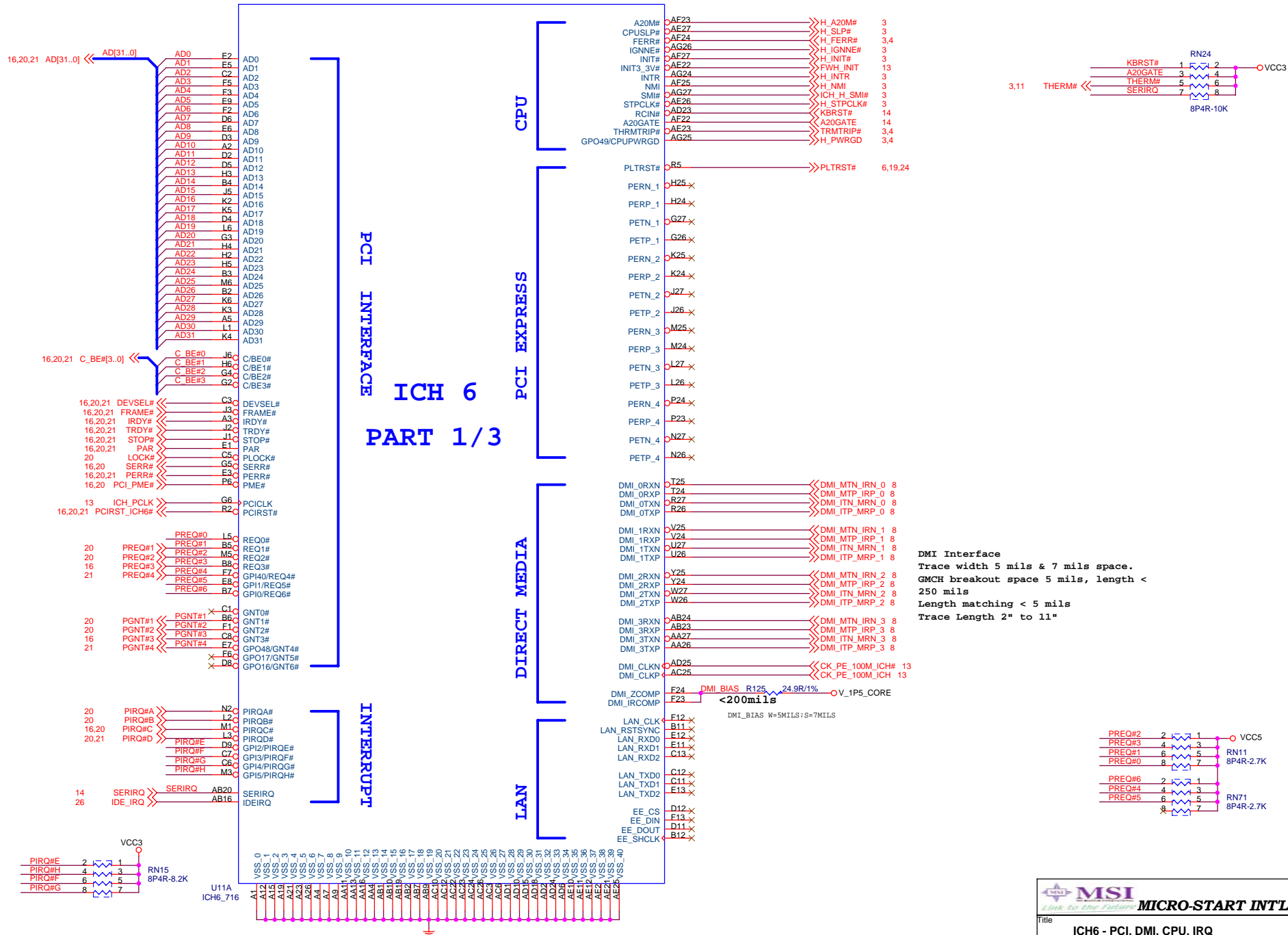


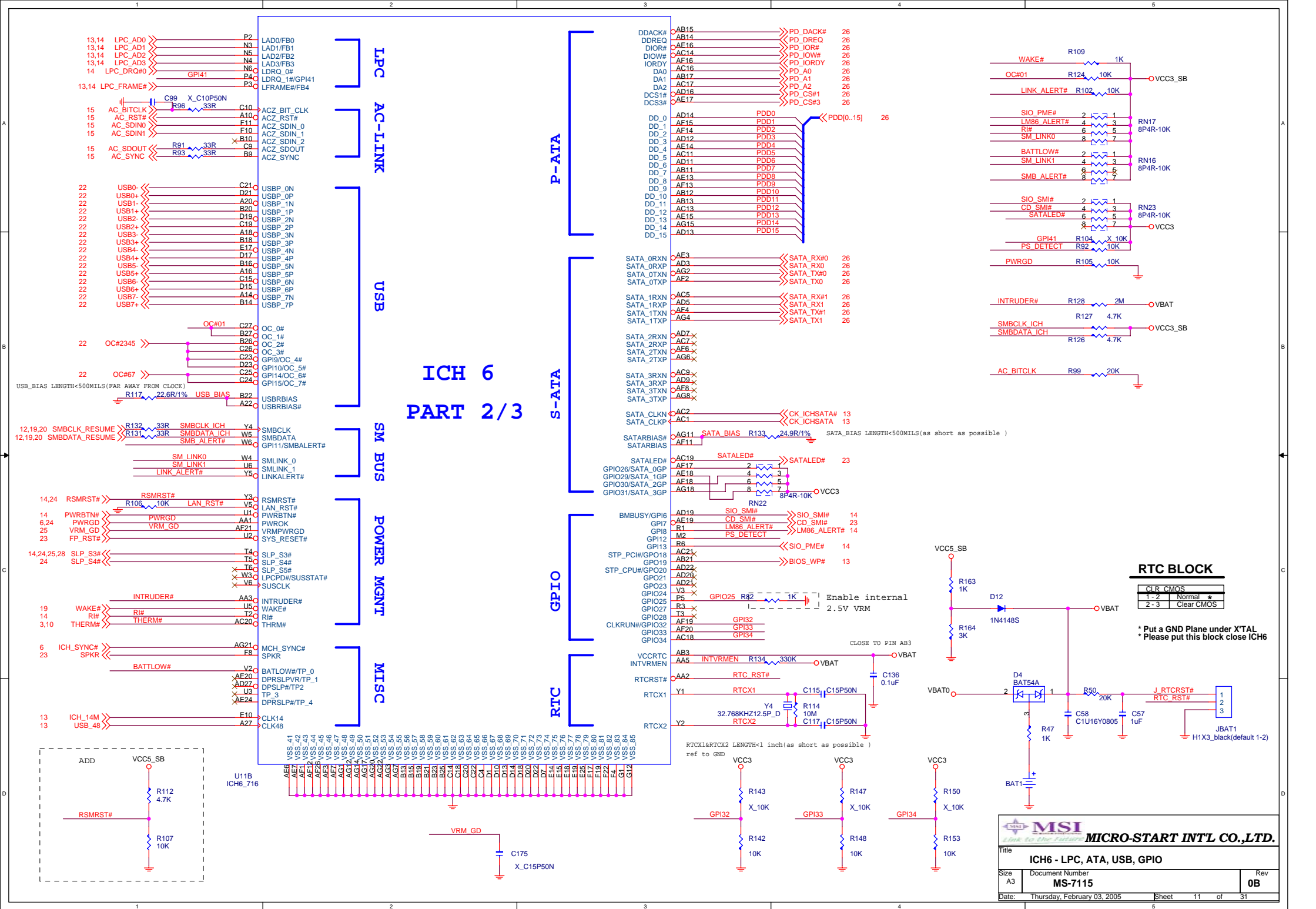


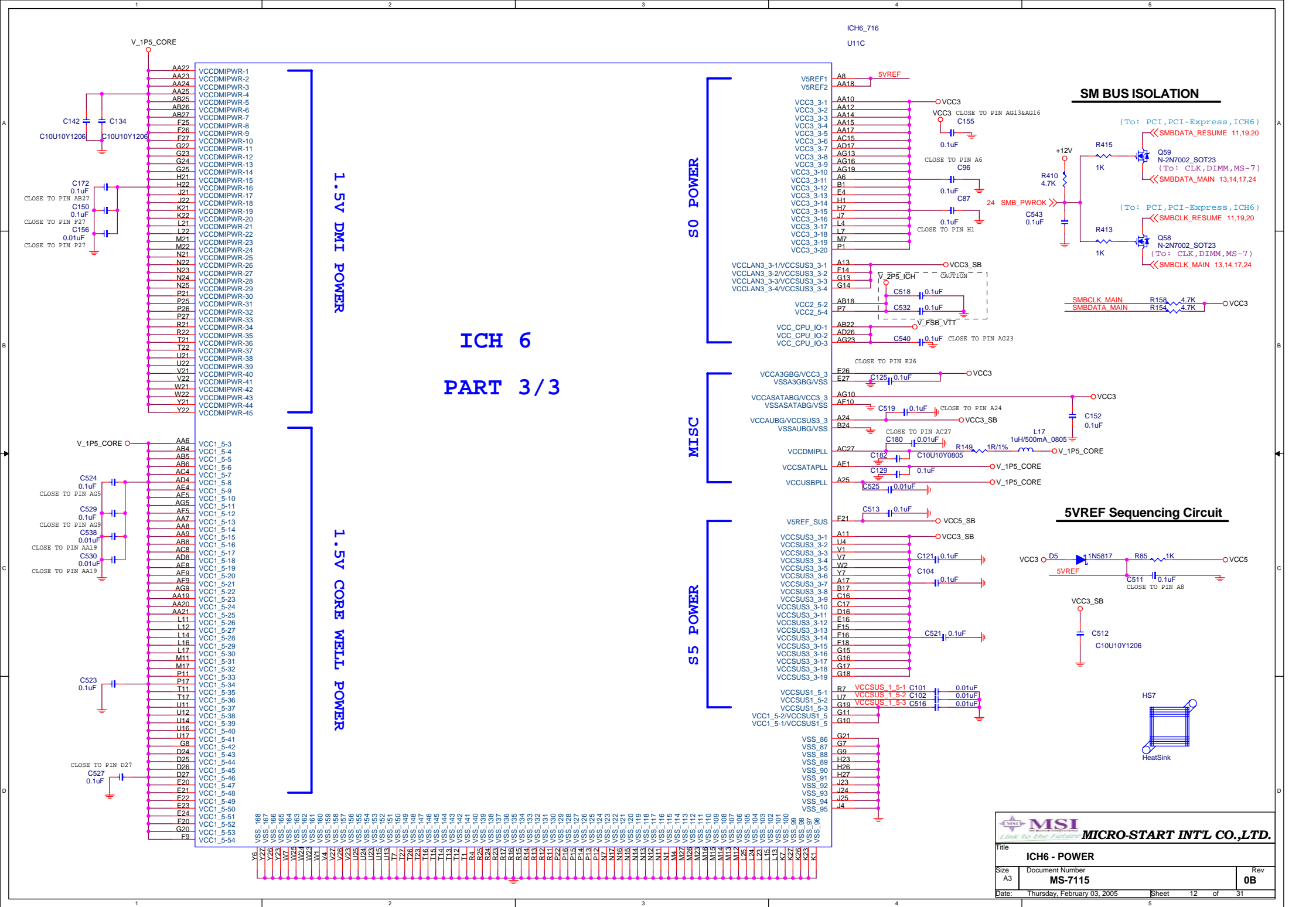




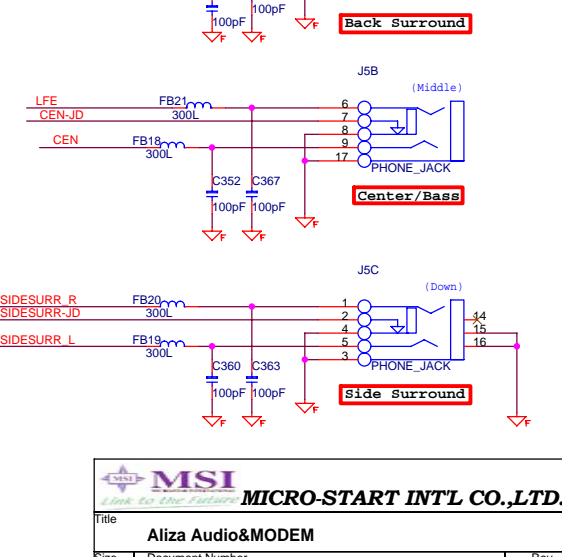
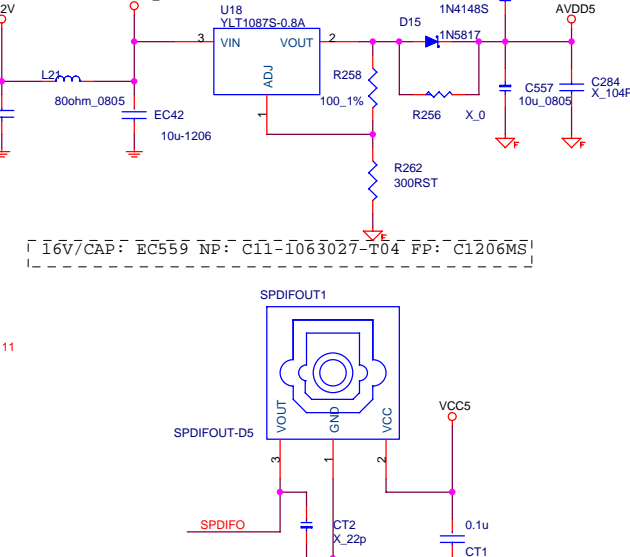
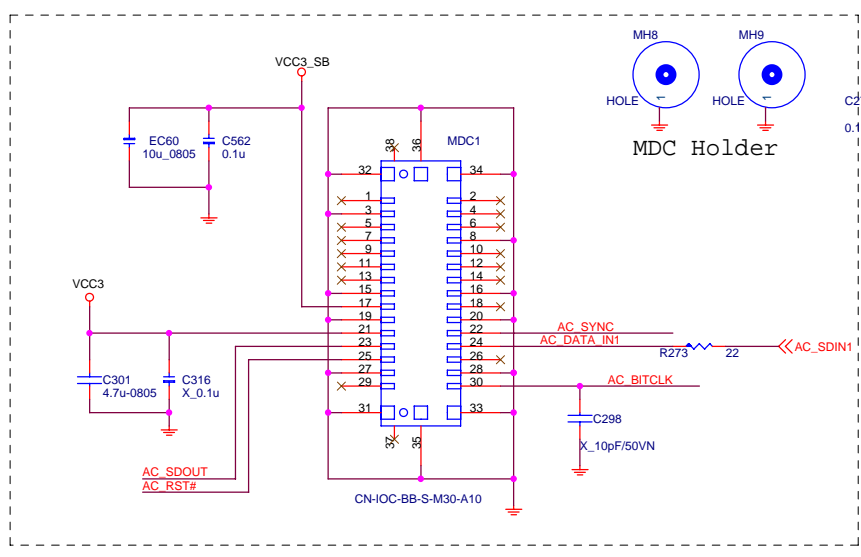
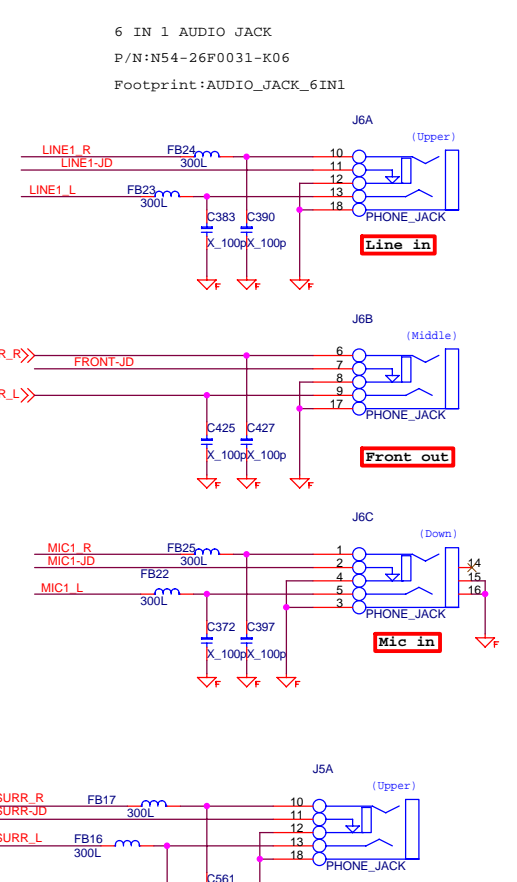
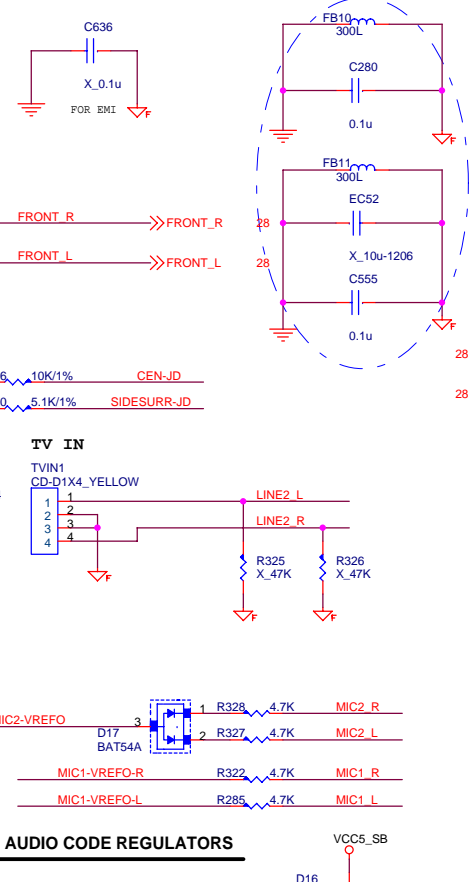
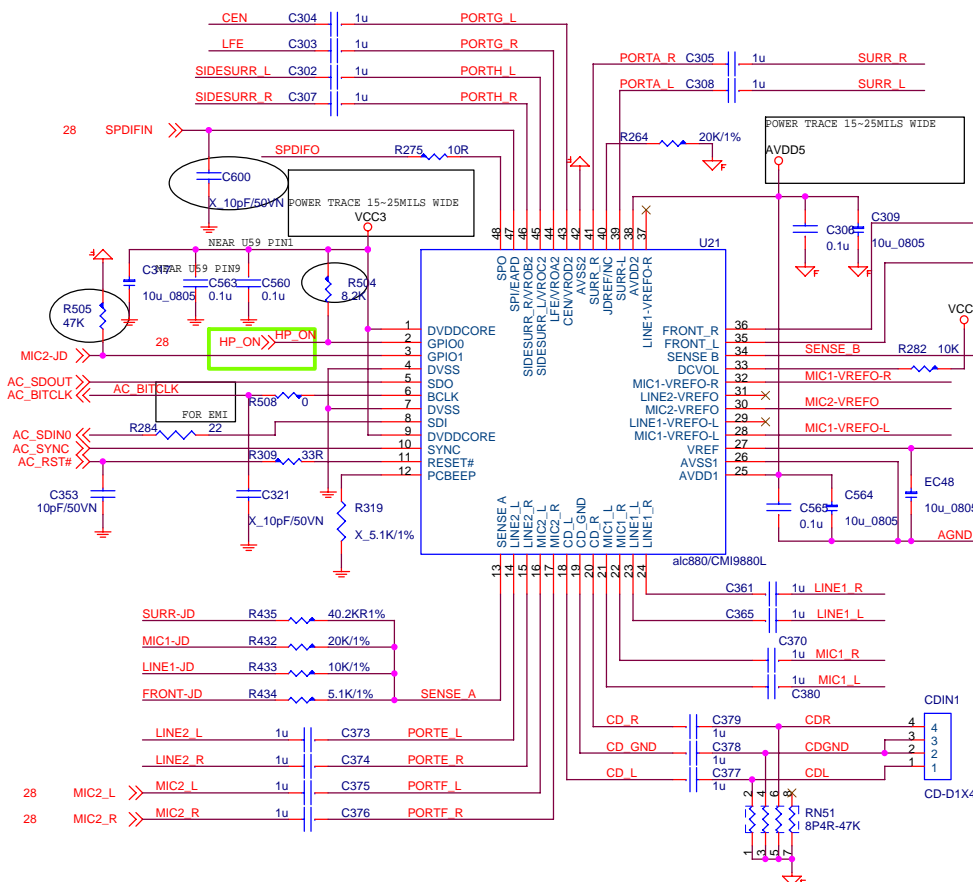




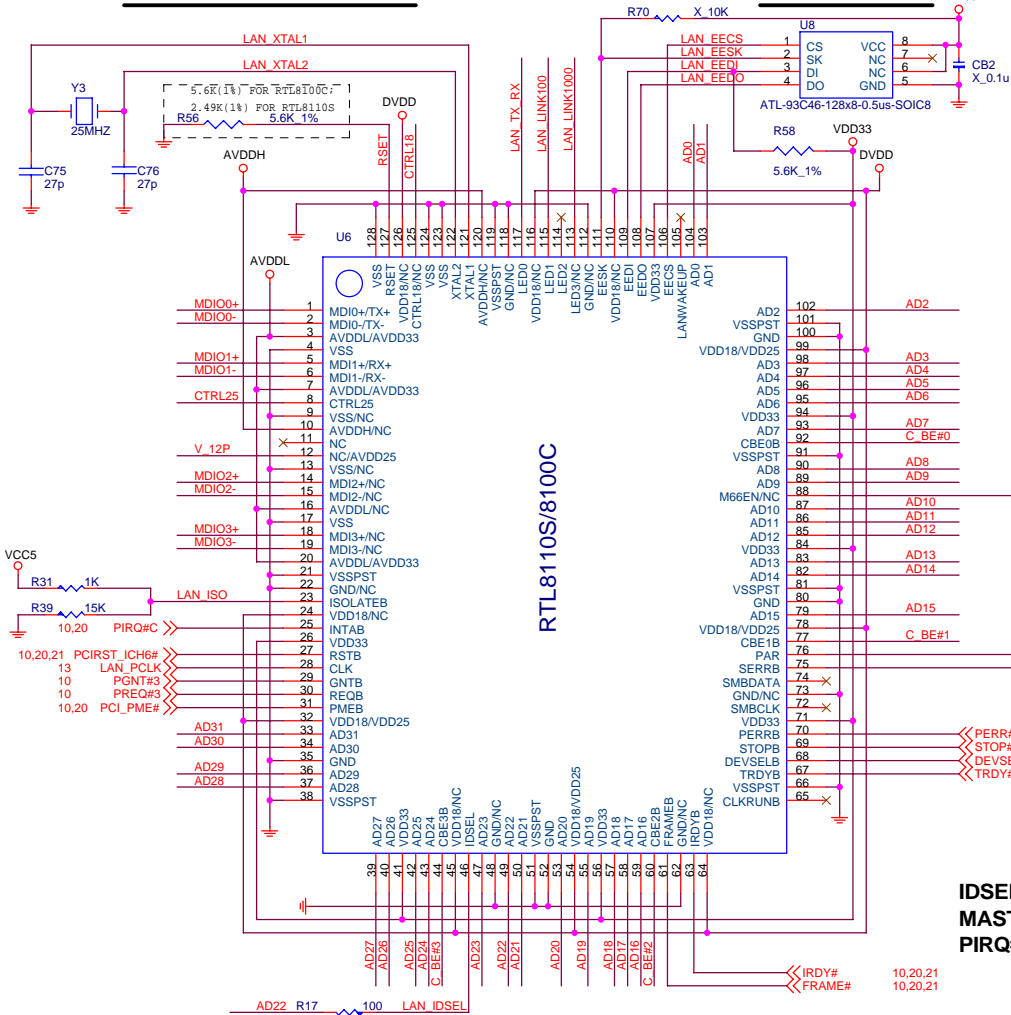




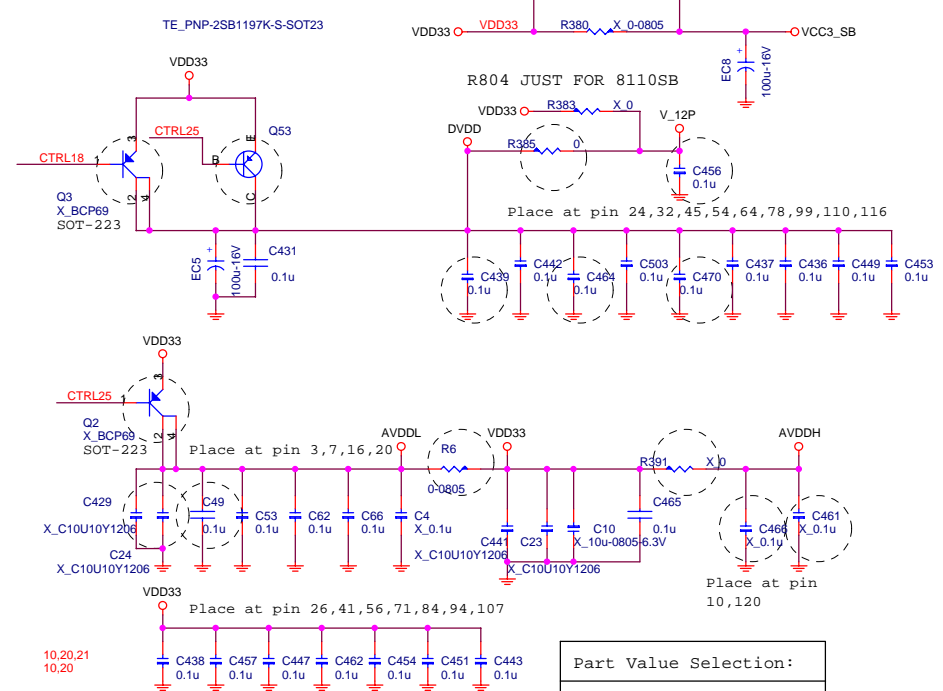
[illegible]



PCI LAN RTL8110S/8100C



LAN EEPROM



	DVDD	DVDDA	AVDDL	AVDDH	V-12
8100C	2.5V	2.5V	3.3V	X	2.5V
8110S	1.8V	1.8V	2.5V	3.3V	X

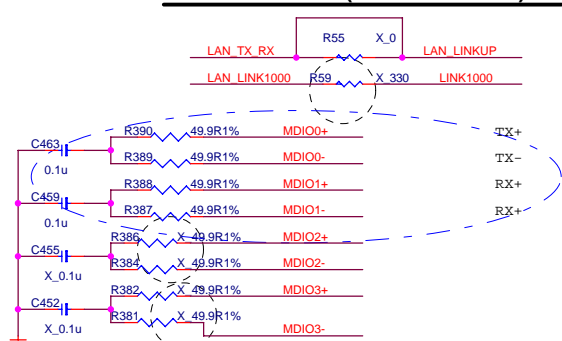
```
Part Value Selection:
GbE: 8110S LAN(1000M)
TE: 8100C LAN(10/100M)
L: With LAN option
X: No Stuff
```

```

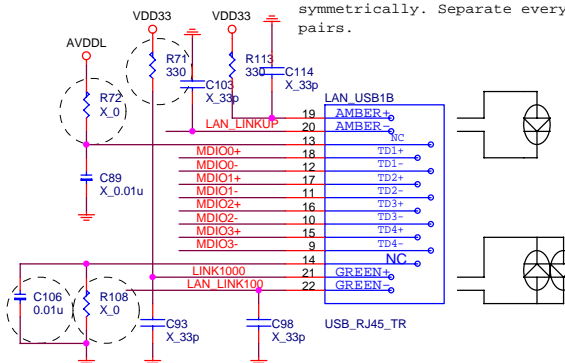
IDSEL = AD29
MASTER = PREQ#3
PIRQ#G

```

RJ45 Connector (with transformer)



1- MDIO+ & MDIO- pairs should be 100-ohm differential impedance. Route equal length and symmetrically. Separate every pairs.



N58-22F0031-S42 for GIGALAN
N58-22F0061-S42 for 10/100

DEFAULT 10/100, () for GIGALAN OPTION



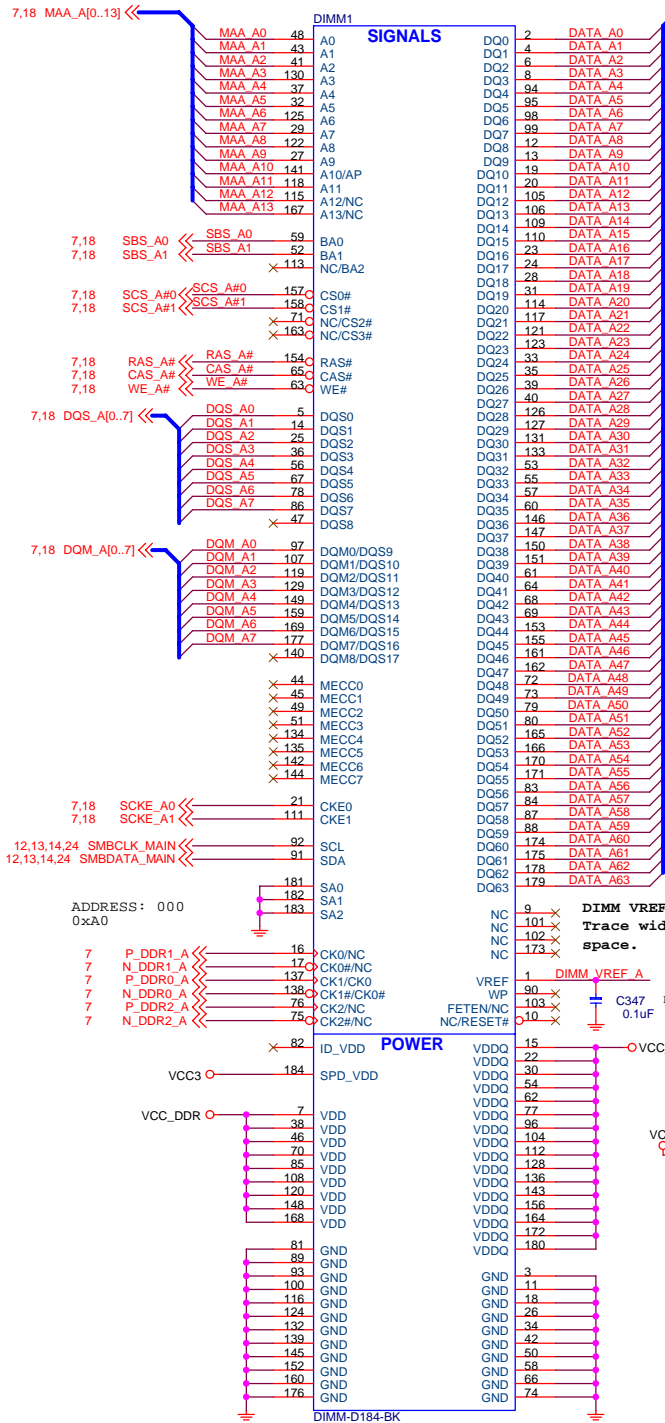
Title REALTEK LAN 8110S/8100C

Size A3	Document Number MS-7115
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Rev	
0B	

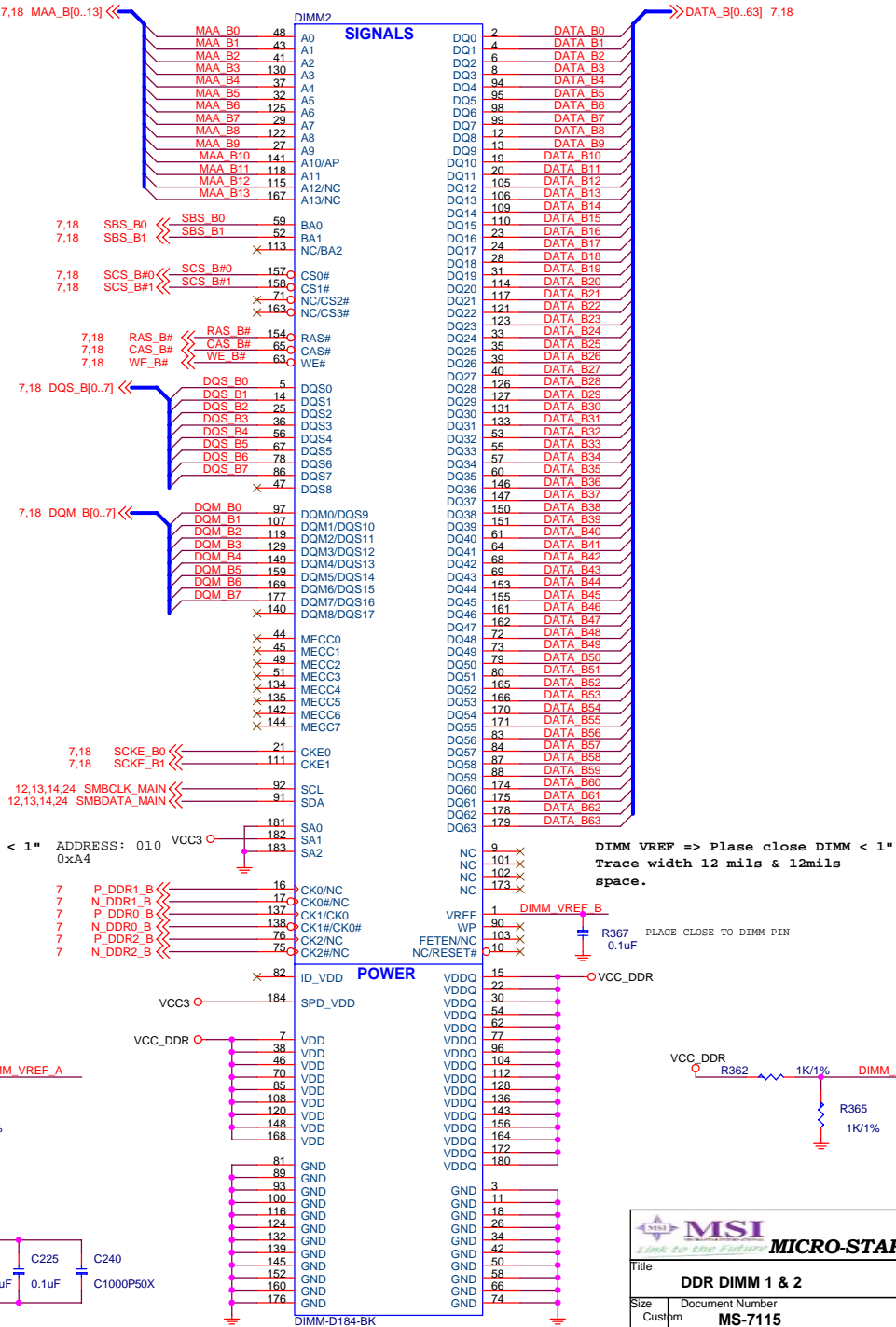
Channel A

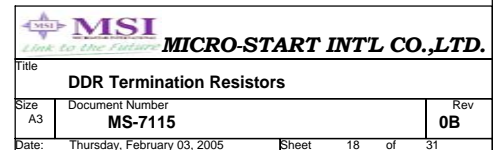
DDR DIMM1



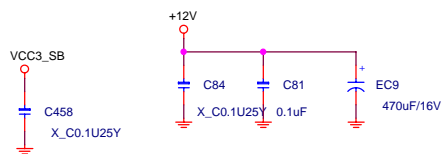
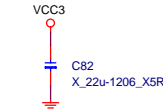
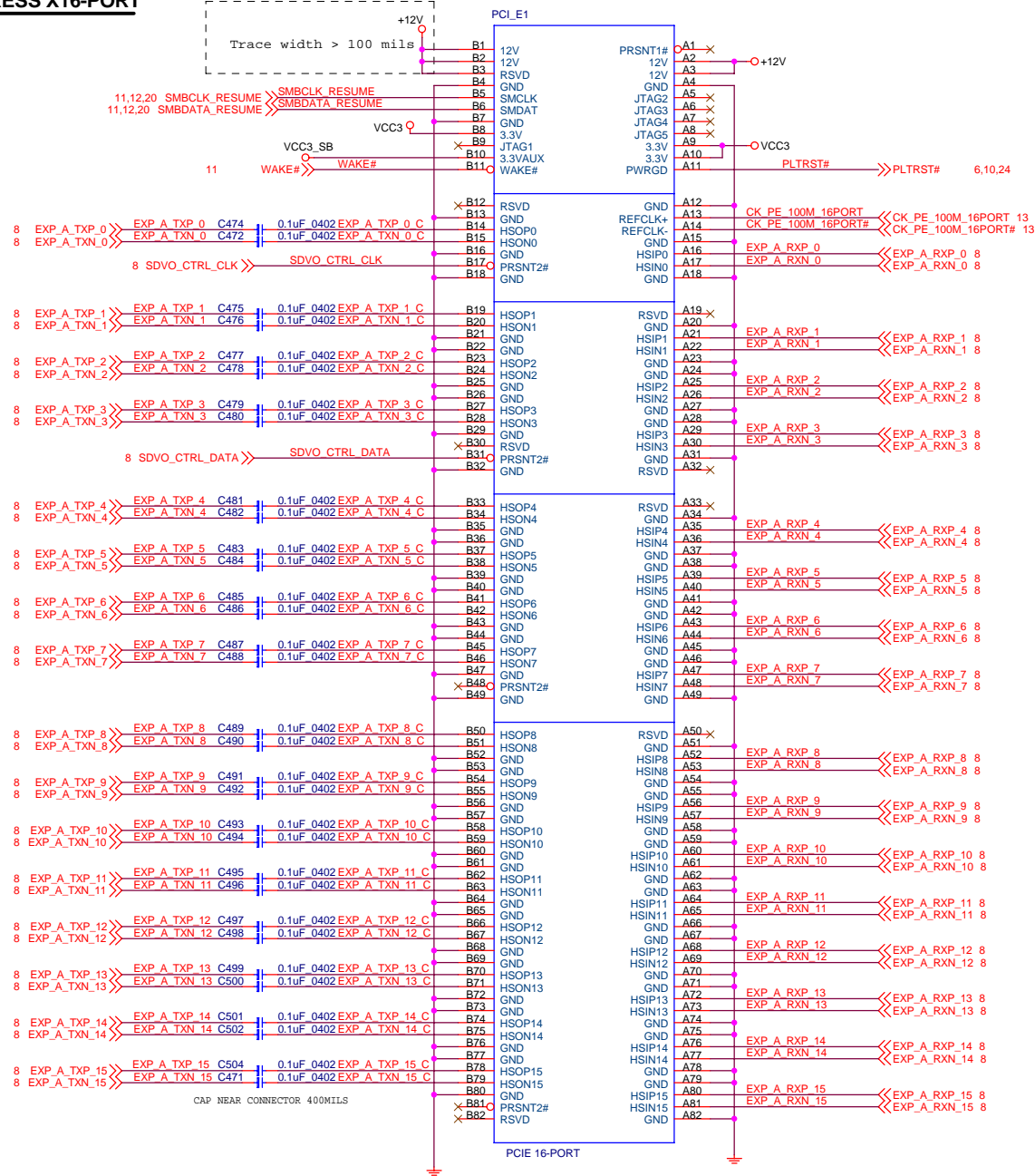
Channel B

DDR DIMM2

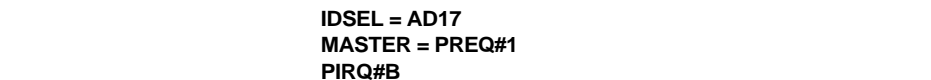




PCI EXPRESS X16-PORT

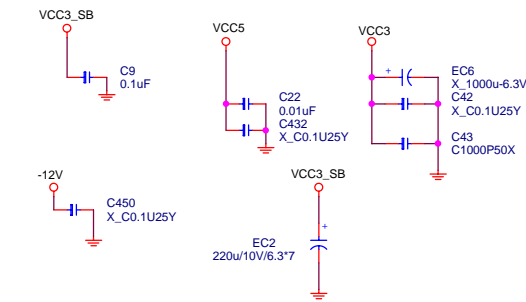


MICRO-START INT'L CO.,LTD.		
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PCI -Express X16 Port		
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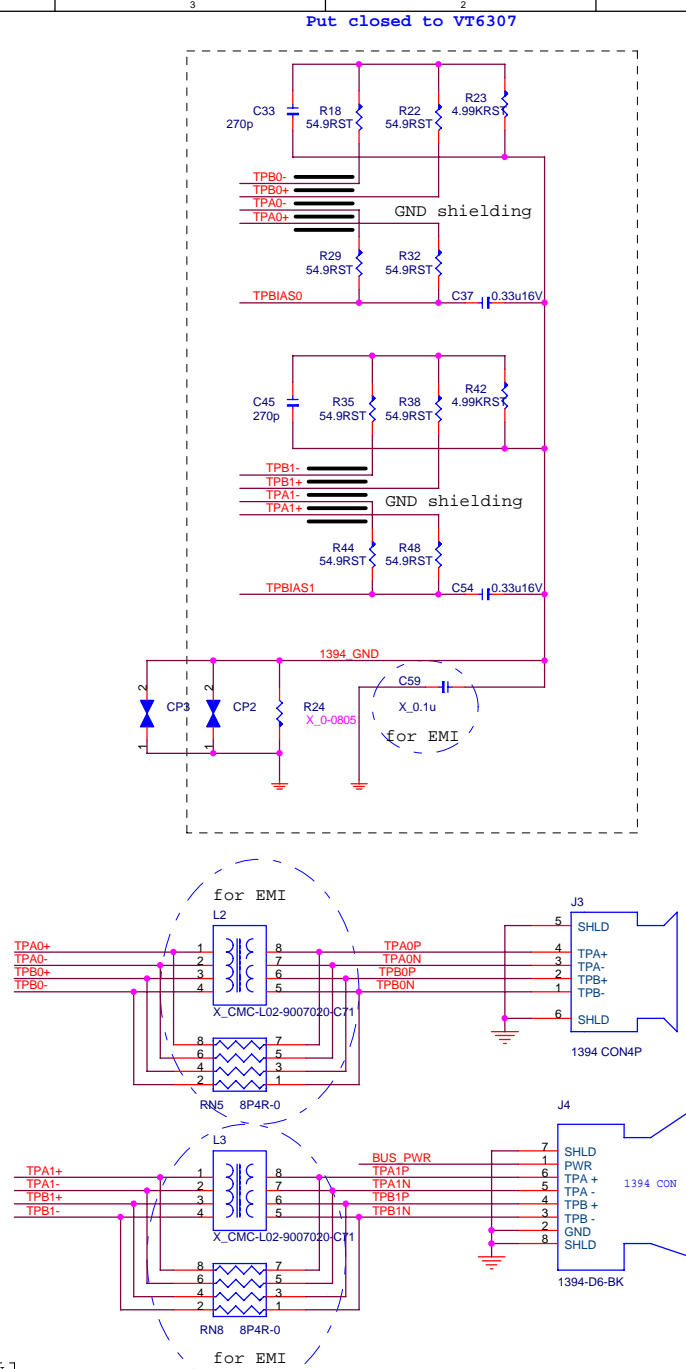
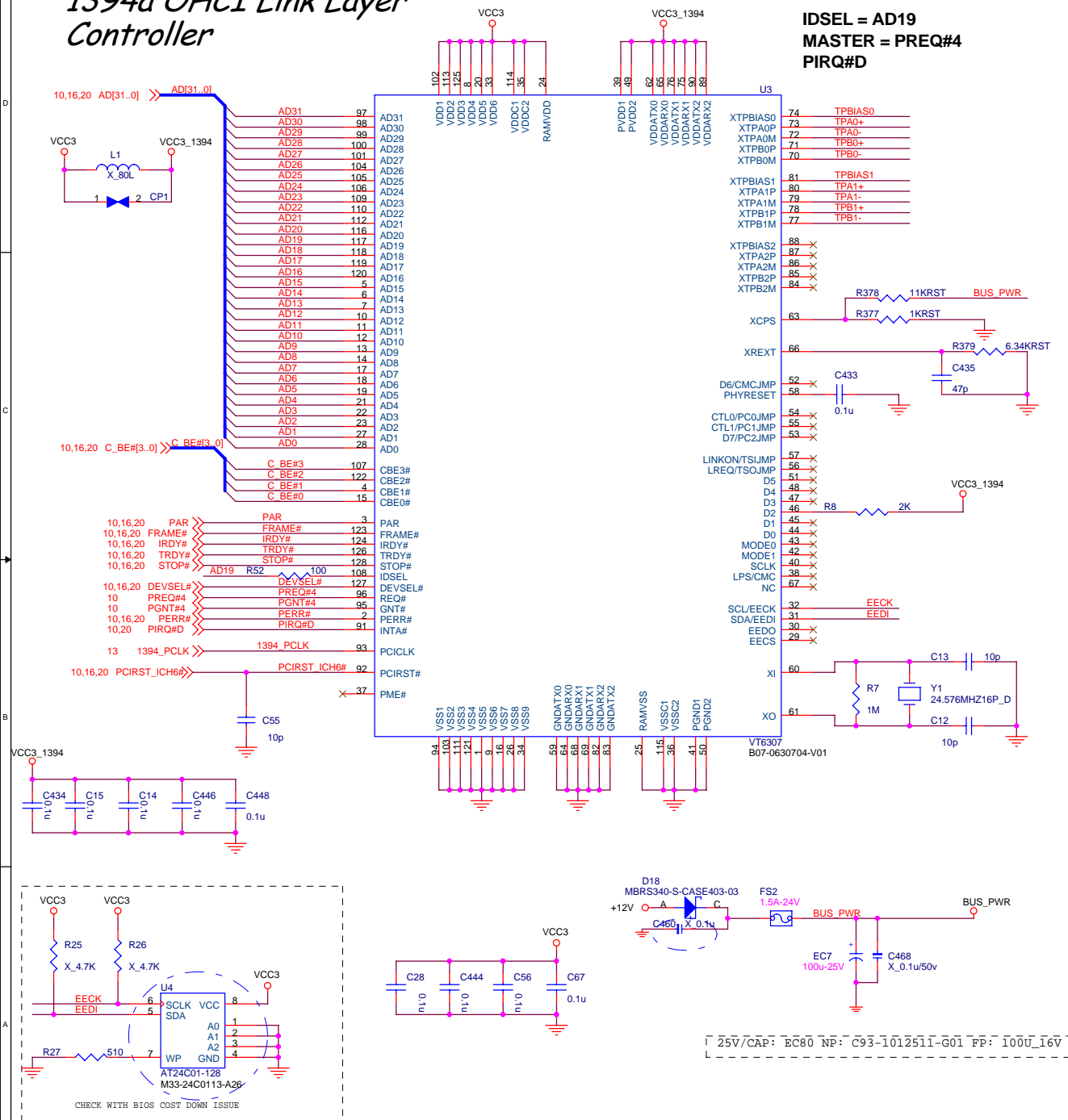


DEVSEL# 8 7
 TRDY# 6 5
 FRAME# 4 3
 IRDY# 2 1

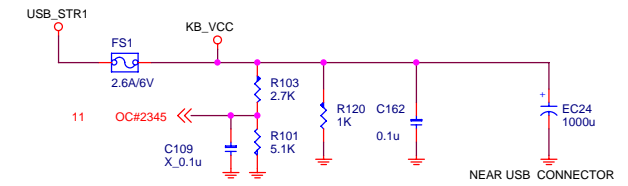
VCC5
 RN2
 8P4R-2.7K



1394a OHCI Link Layer Controller

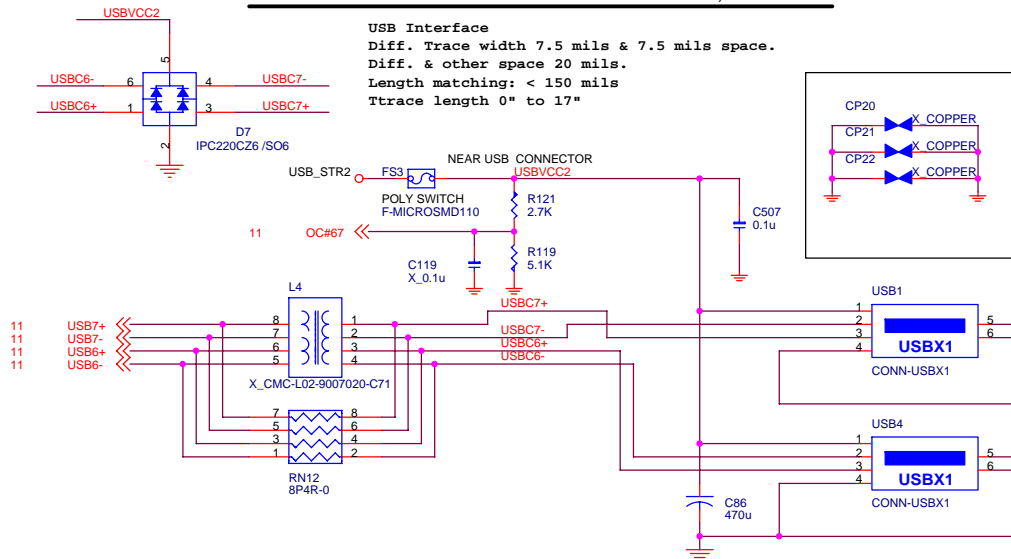


POWER CIRCUIT FOR USB PORT 1~4

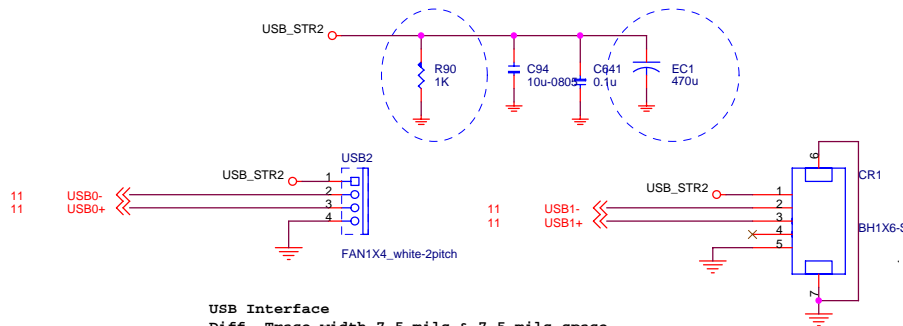


FRONT USB CONNECTOR FOR USB PORT 6,7

USB Interface
Diff. Trace width 7.5 mils & 7.5 mils space.
Diff. & other space 20 mils.
Length matching: < 150 mils
Ttrace length 0" to 17"



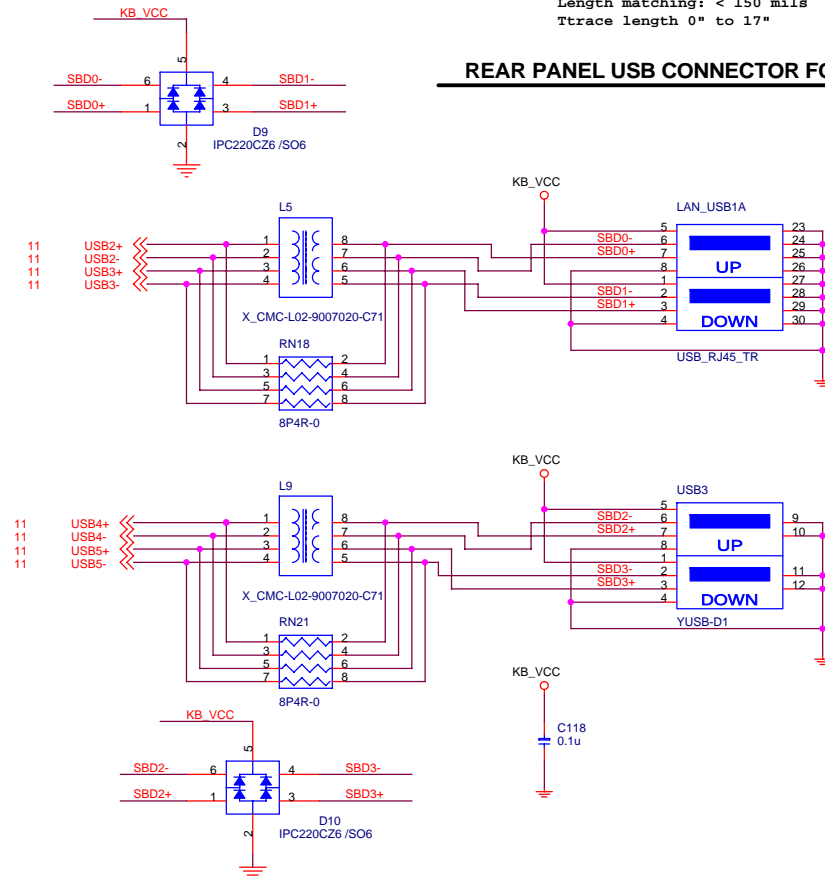
MCE IR CONNECTOR

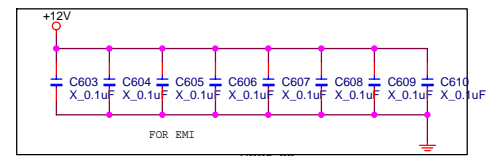


USB Interface
Diff. Trace width 7.5 mils & 7.5 mils space.
Diff. & other space 20 mils.
Length matching: < 150 mils
Ttrace length 0" to 17"

REAR PANEL USB CONNECTOR FOR USB PORT 1~4

USB Interface
Diff. Trace width 7.5 mils & 7.5 mils space.
Diff. & other space 20 mils.
Length matching: < 150 mils
Ttrace length 0" to 17"





atch circuit.

14 T_CRIT_A#

PS_ON#

S Q34 D S Q37 D

X_N-2N7002_SOT23

T_CRIT_A#

24 AGP_PTECT

VCC5_SB

R181

X_5.1K

Q32

X_2N7002

D13

X_1PS226_SOT23

1

2

PWRBTN_L

R171

X_180K

Q33

X_2N7002

Q70

X_2N7002

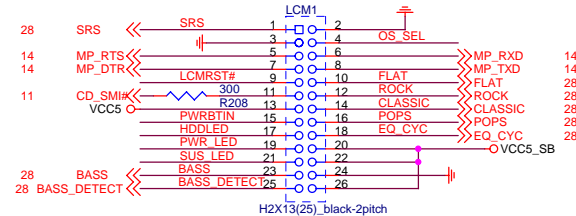
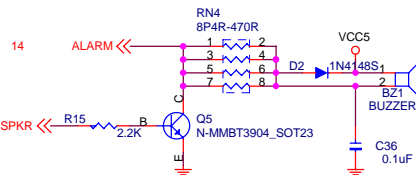
R506

X_1K

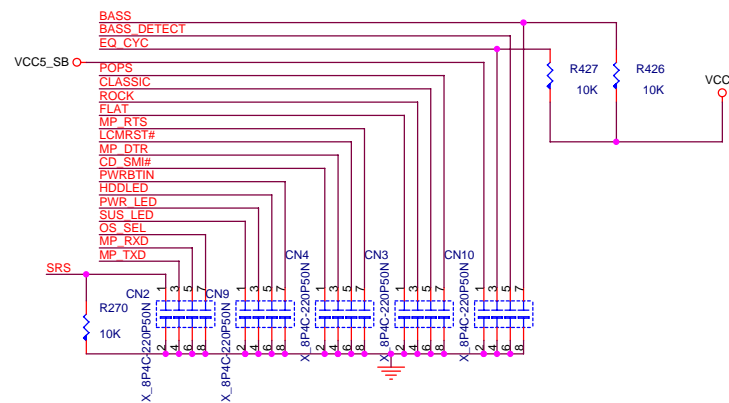
R507

X_1K

14 T_CRIT_A#

[illegible]

ON LCM: LCM 1 MODE	PLED1 PIN19	PLED2 PIN21	LED State
S0/ INSTANT-ON	H	L	Green
S1	Flash	L	Flash Green / 1Hz
S3	L	H	Yellow
S4/5	L	L	Dark



ACPI Controller

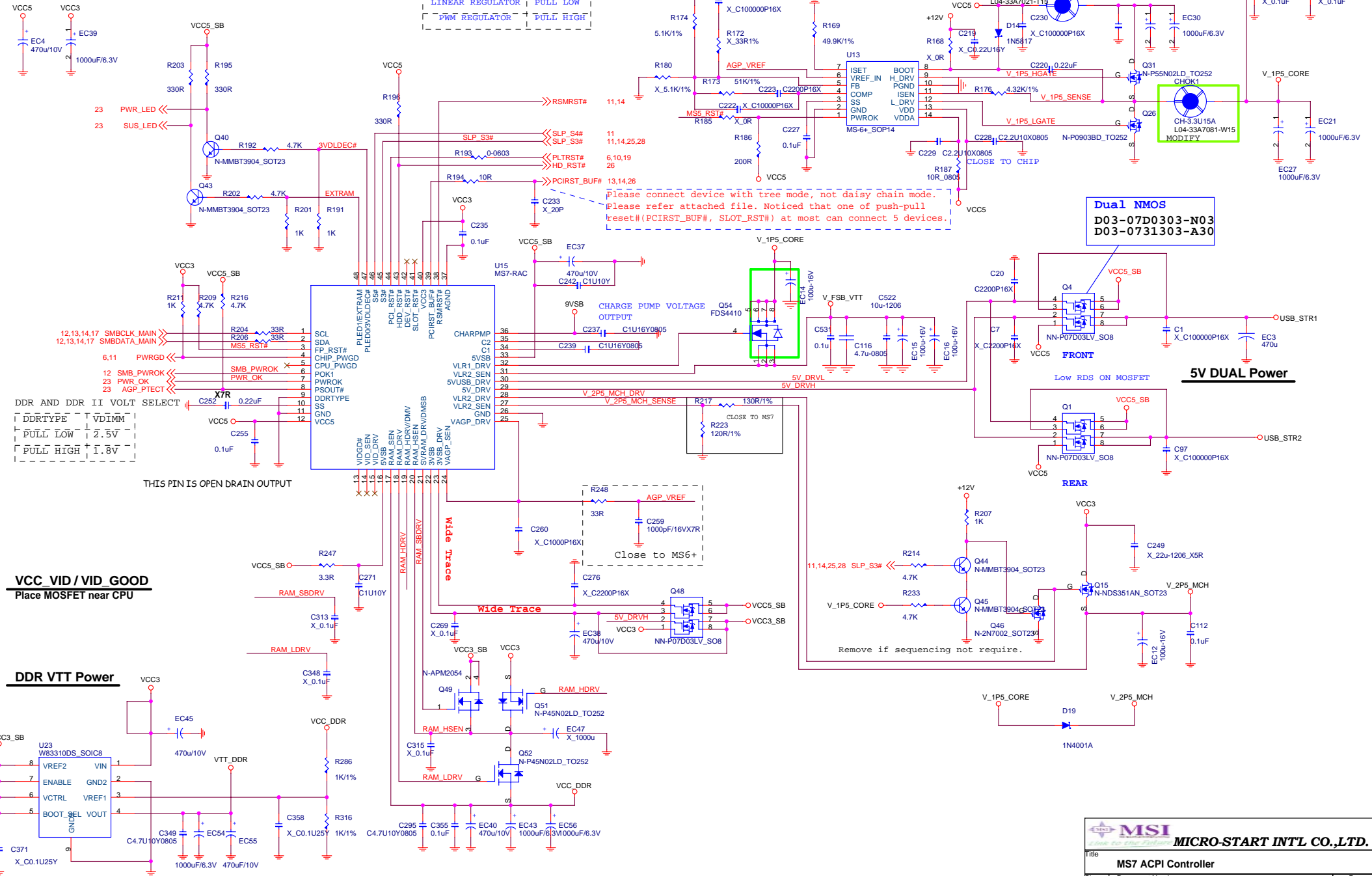
3VSB MODE SELECT

3VSB MODE	3VOLDRC#
SINGLE MOSFET	PULL HIGH
DUAL MOSFET	PULL LOW

VDIMM LINEAR OR PWM SELECT

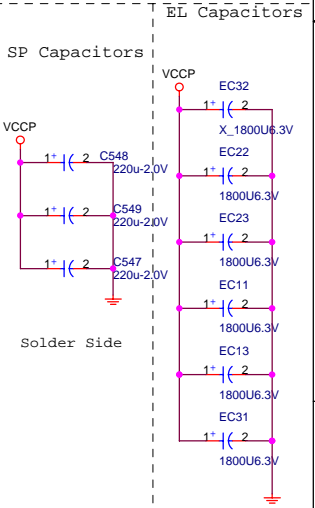
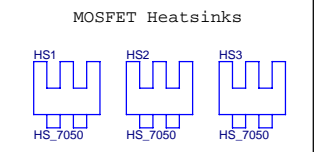
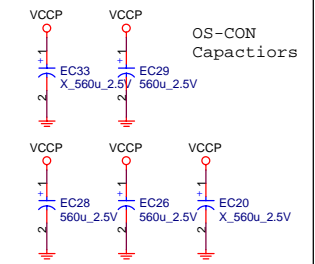
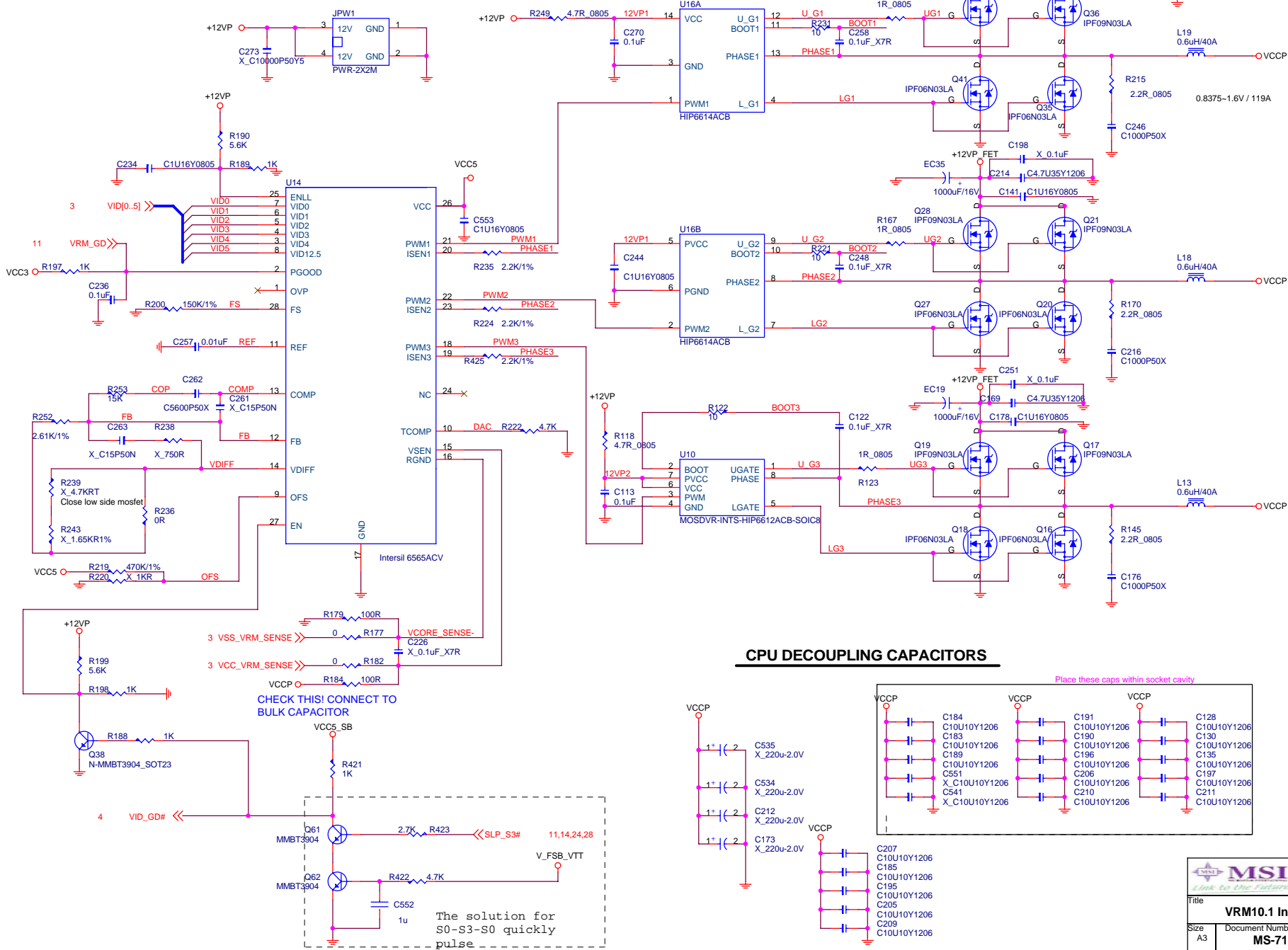
VDIMM MODE	EXTRAM
LINEAR REGULATOR	PULL LOW
PWM REGULATOR	PULL HIGH

AGP POWER

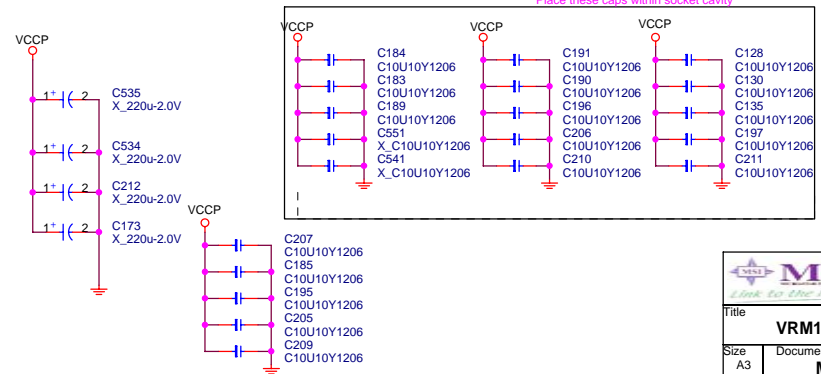


Voltage Regular Module

MOSFET Gate signal : 20 mils
Phase signal : 20 mils
Boot signal : 16 mils



CPU DECOUPLING CAPACITORS



MICRO-START INT'L CO.,LTD.		
Title VRM10.1 Intersil 6565 3Phase		
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SERIAL ATA CONNECTOR BLOCK


ATA 33/66/100 IDE Connectors

FAN CONTROL

CPU FAN

FAN control dealy circuit

SYSTEM FAN

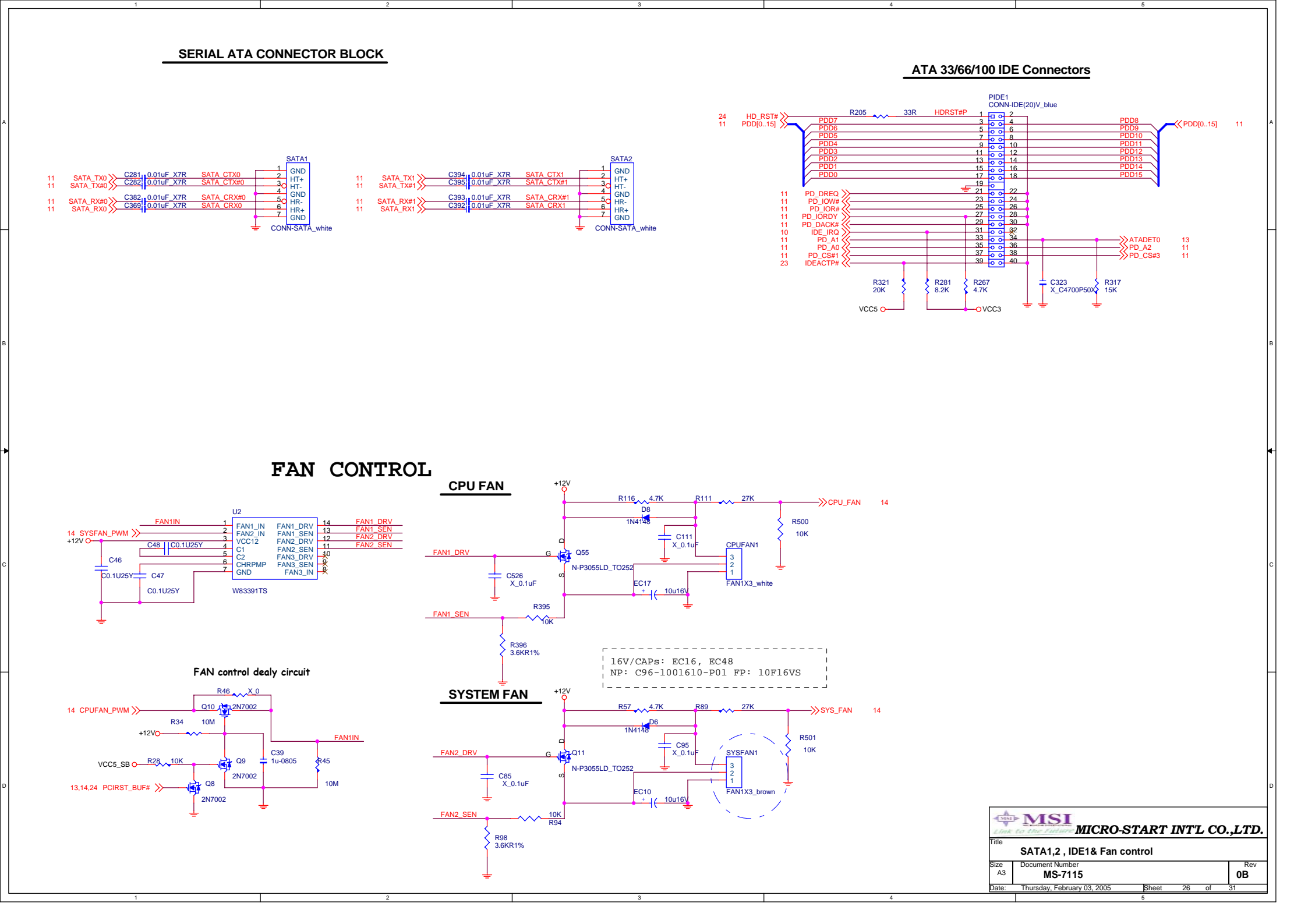
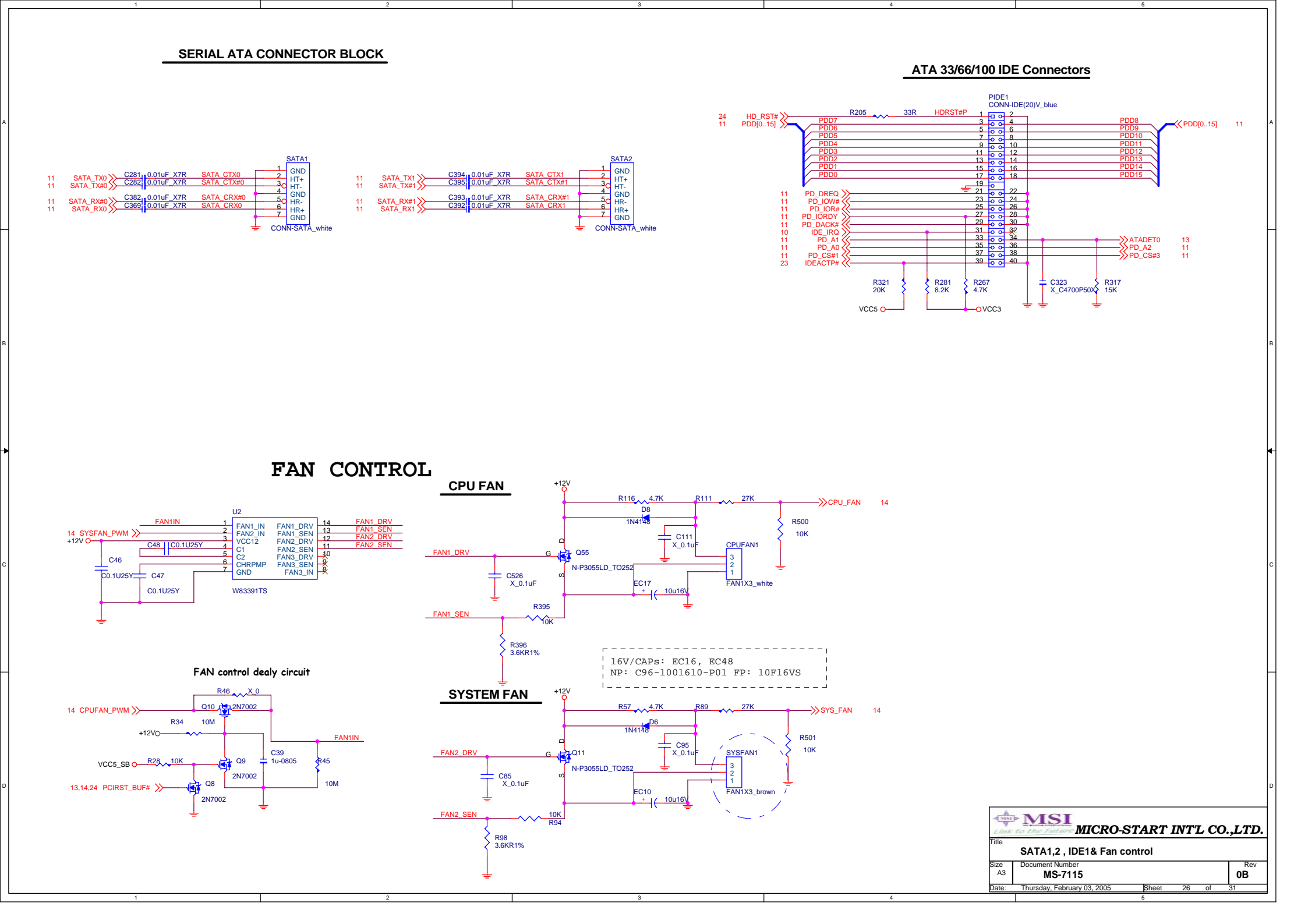
 MICRO-START INT'L CO.,LTD.		
Title SATA1,2 , IDE1& Fan control		
Size A3	Document Number MS-7115	Rev 0B
Date: Thursday, February 03, 2005	Sheet 26 of 31	

SERIAL ATA CONNECTOR BLOCK

ATA 33/66/100 IDE Connectors

FAN CONTROL

CPU FAN



SERIAL ATA CONNECTOR BLOCK


ATA 33/66/100 IDE Connectors

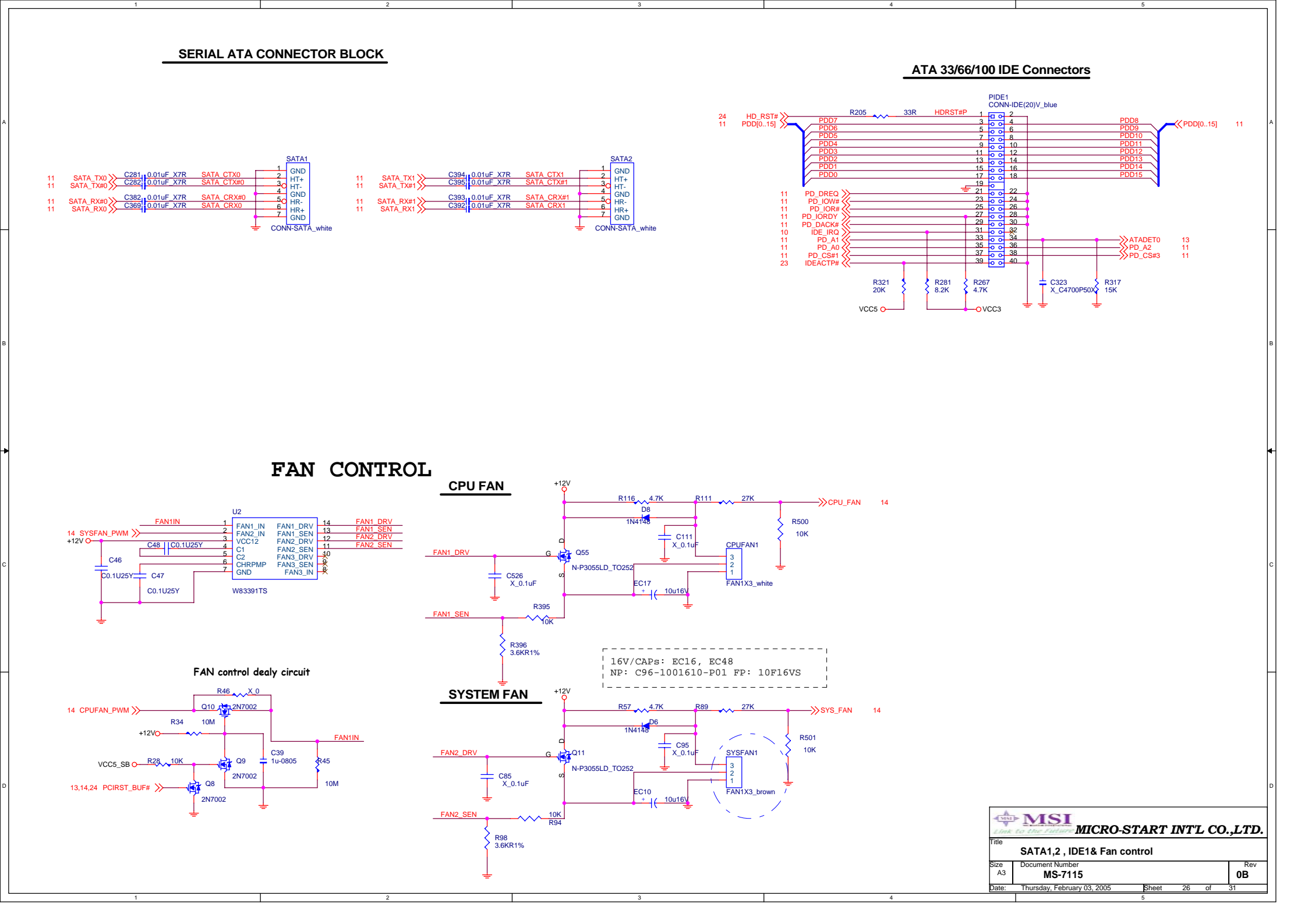
FAN CONTROL

CPU FAN

FAN control dealy circuit

SYSTEM FAN

 MICRO-START INT'L CO.,LTD.		
Title		
SATA1,2 , IDE1& Fan control		
Size	Document Number	Rev
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SERIAL ATA CONNECTOR BLOCK


ATA 33/66/100 IDE Connectors

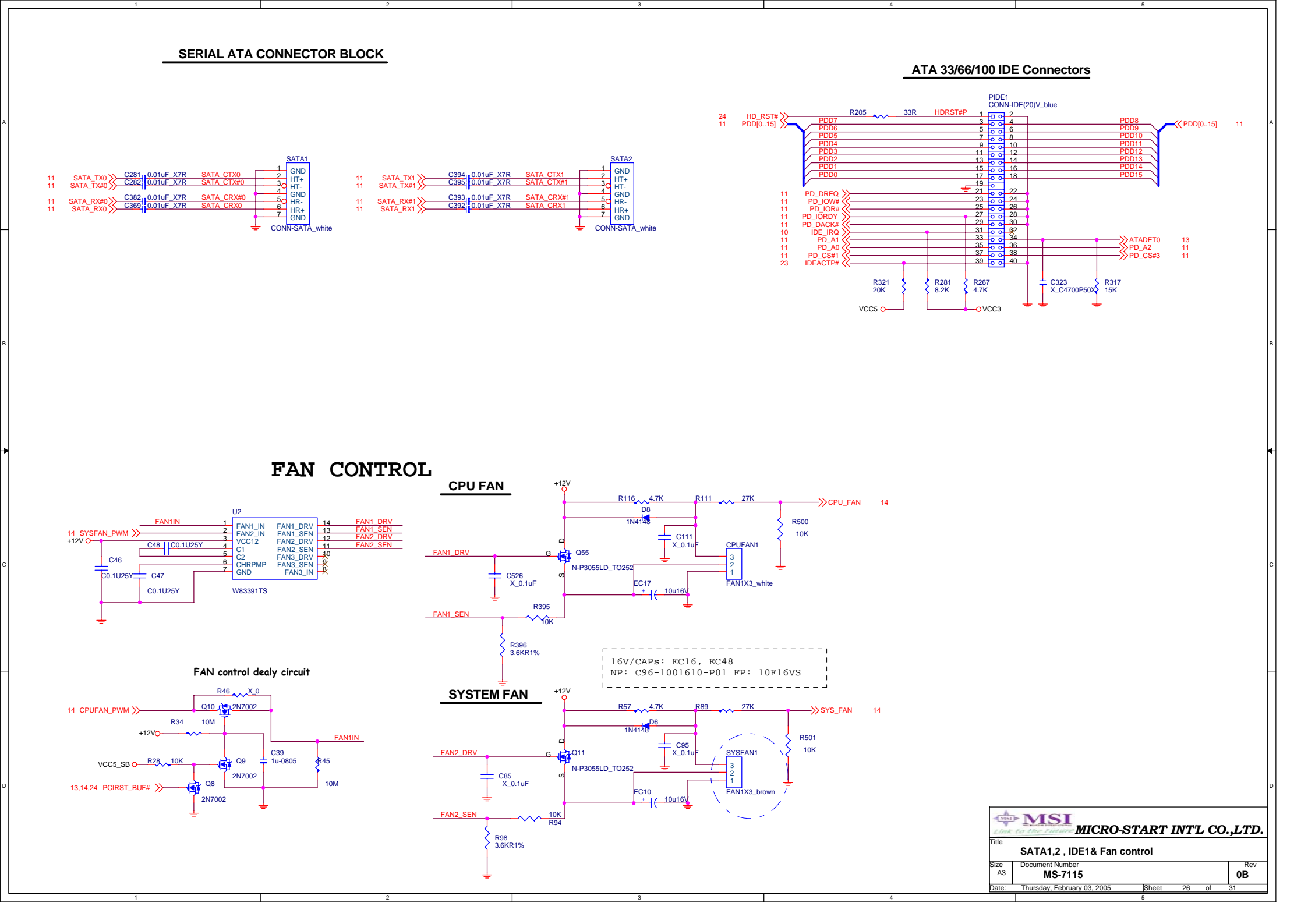
FAN CONTROL

CPU FAN

FAN control dealy circuit

SYSTEM FAN

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SATA1,2 , IDE1& Fan control		
Size	Document Number	Rev
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SERIAL ATA CONNECTOR BLOCK


ATA 33/66/100 IDE Connectors

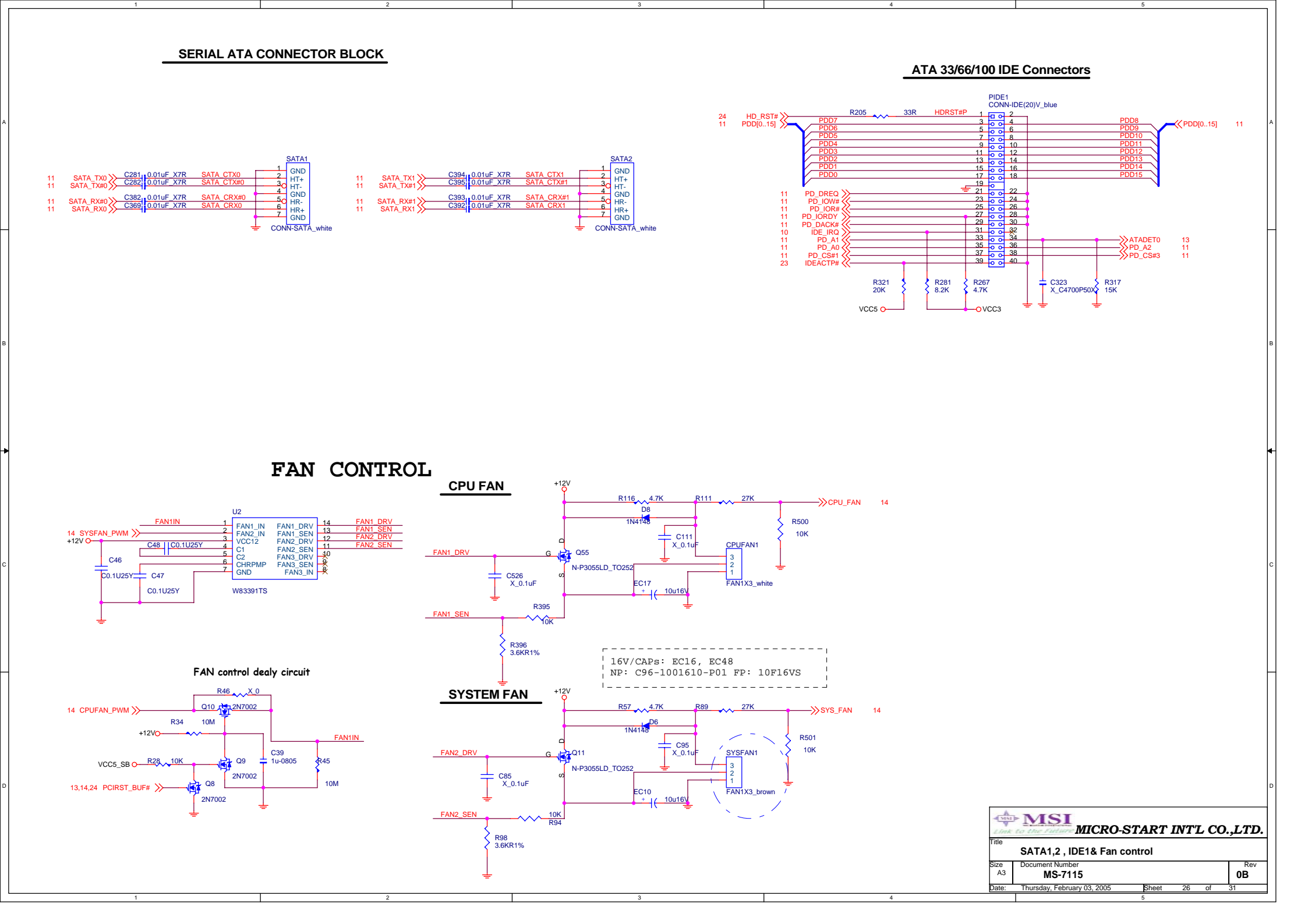
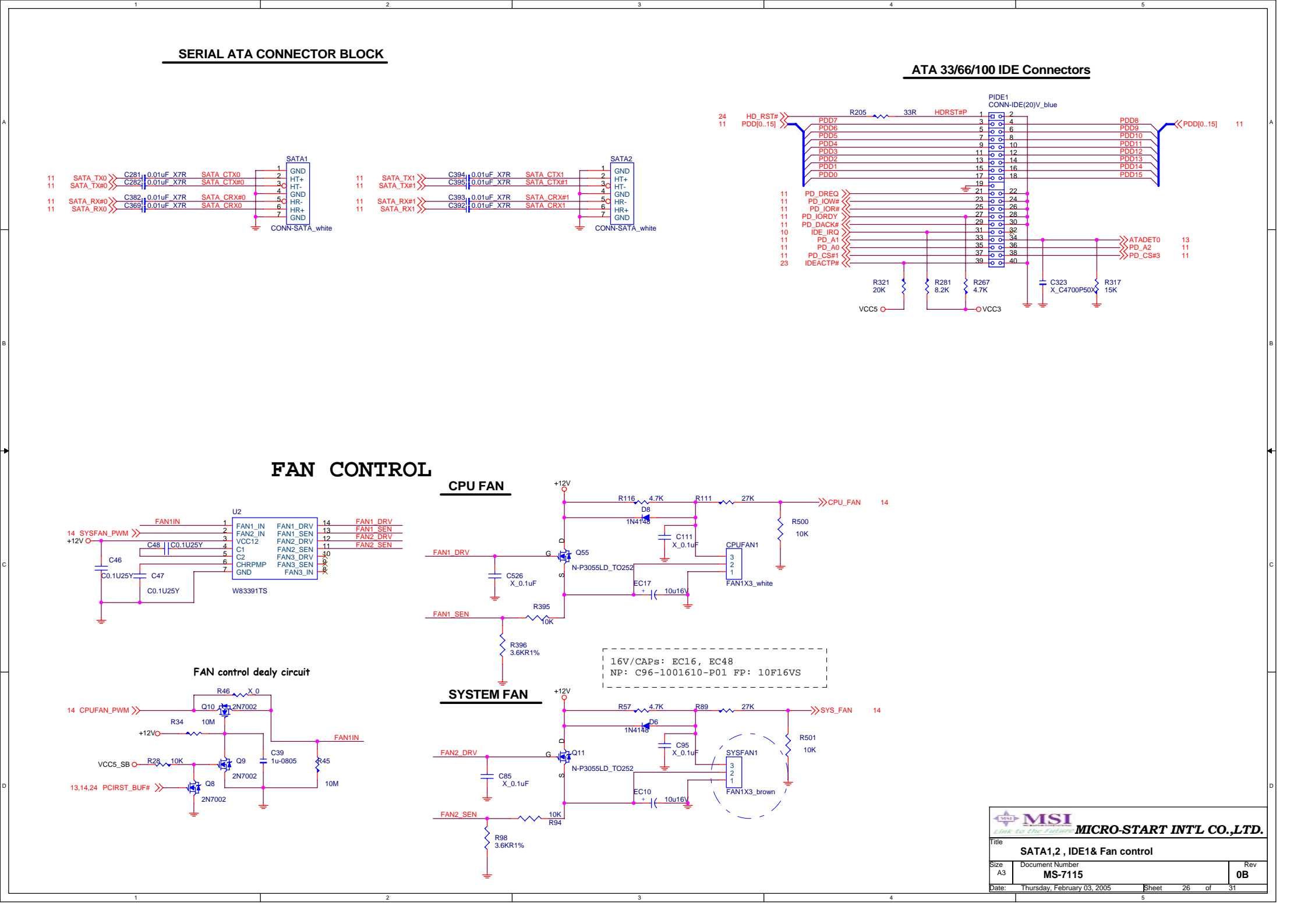
FAN CONTROL

CPU FAN

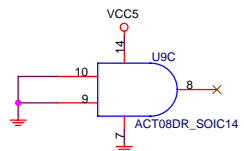
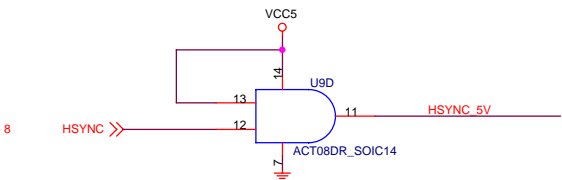
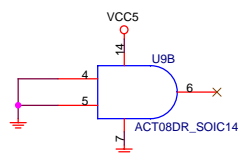
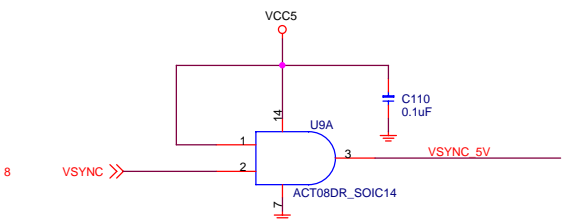
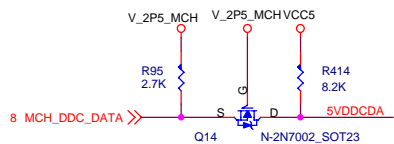
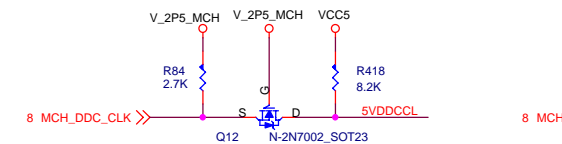
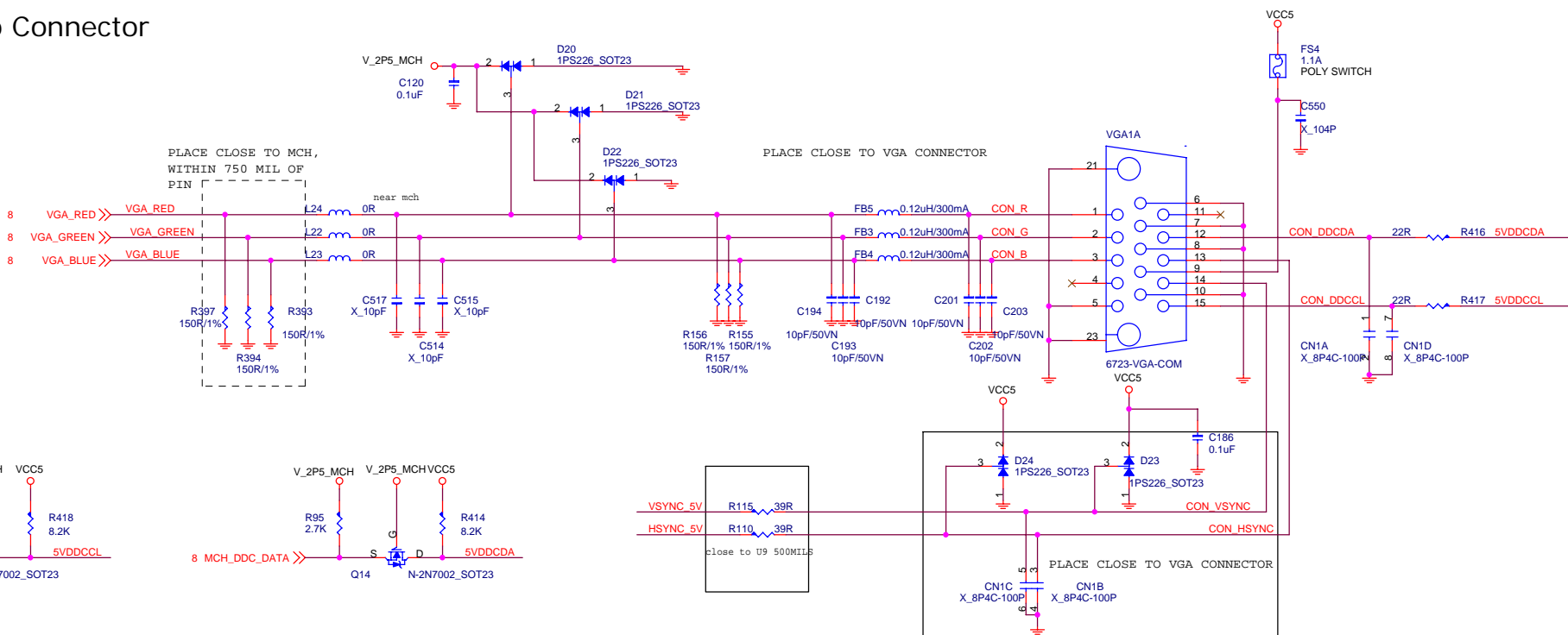
FAN control dealy circuit

SYSTEM FAN

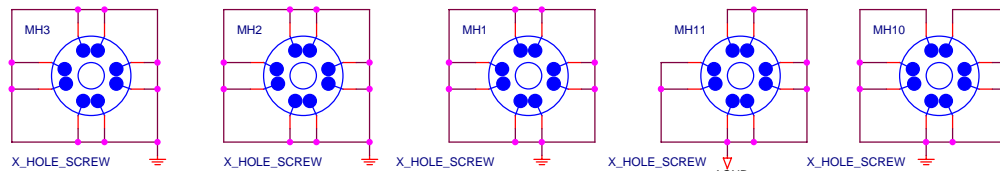
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SATA1,2 , IDE1& Fan control		
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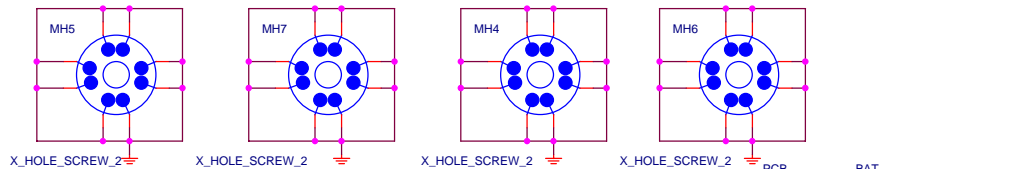
Video Connector



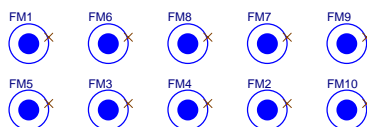
Mounting Holes



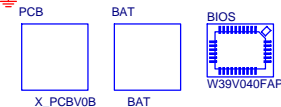
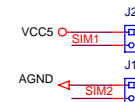
CPU Hole



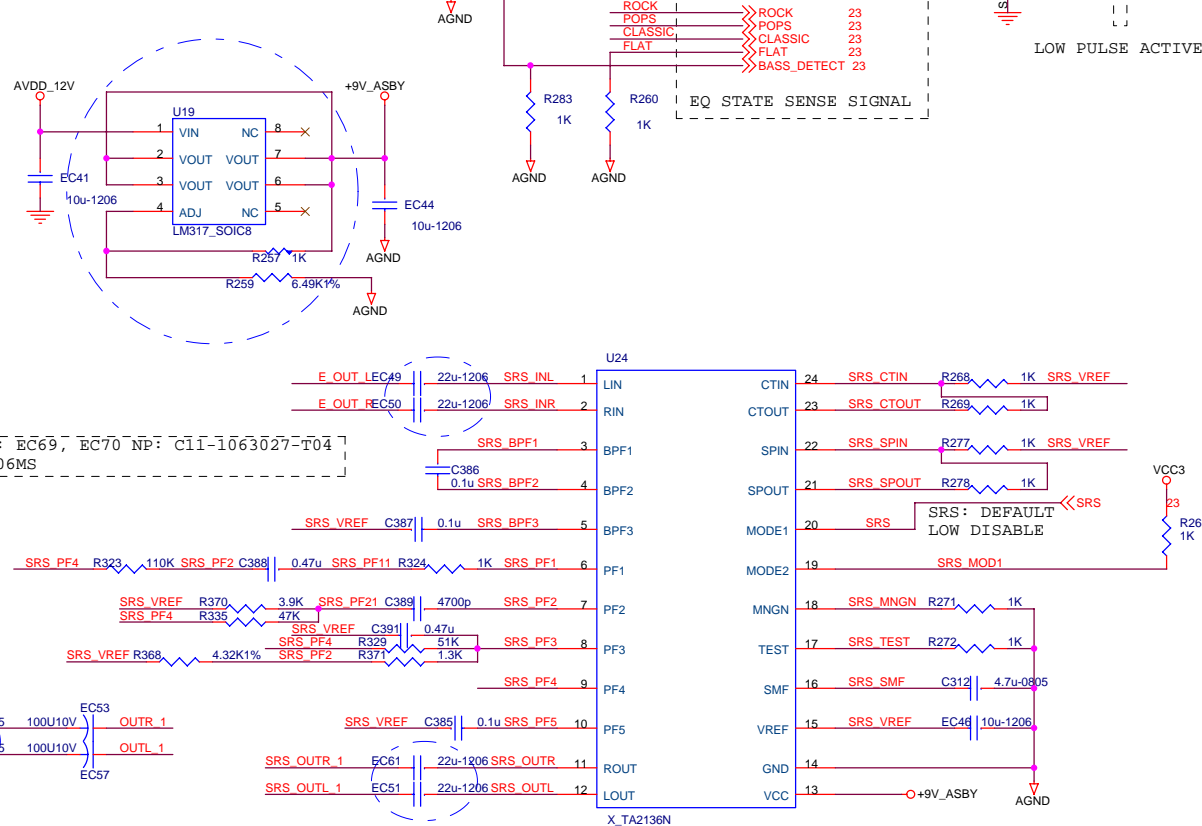
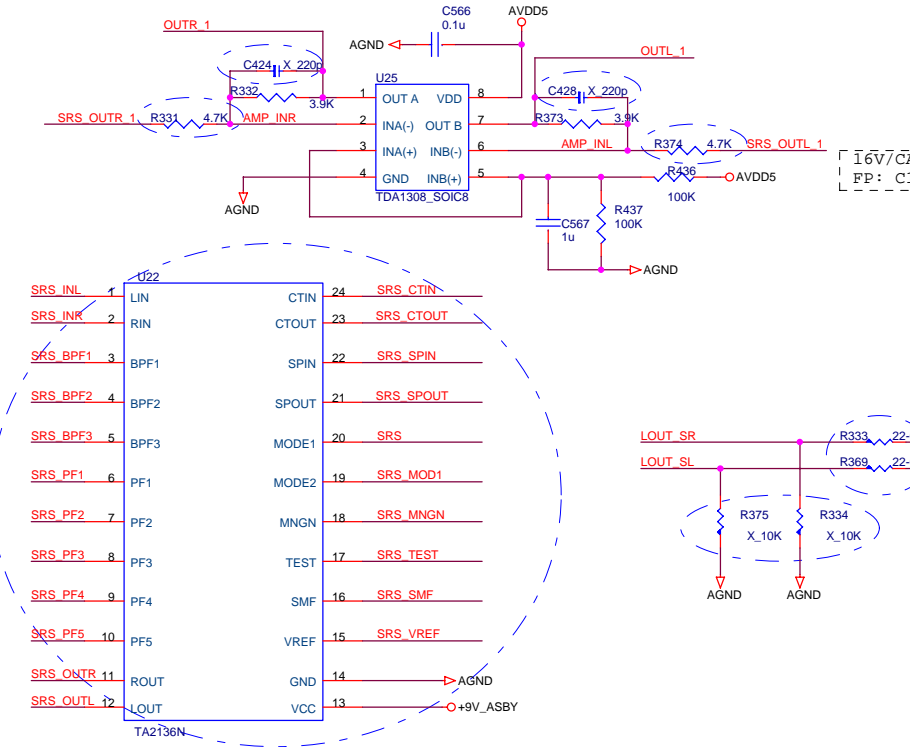
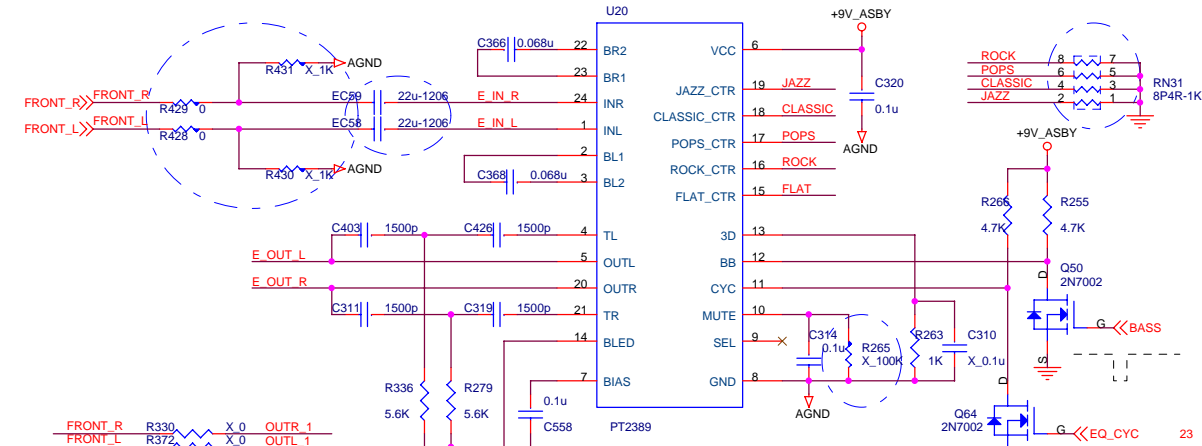
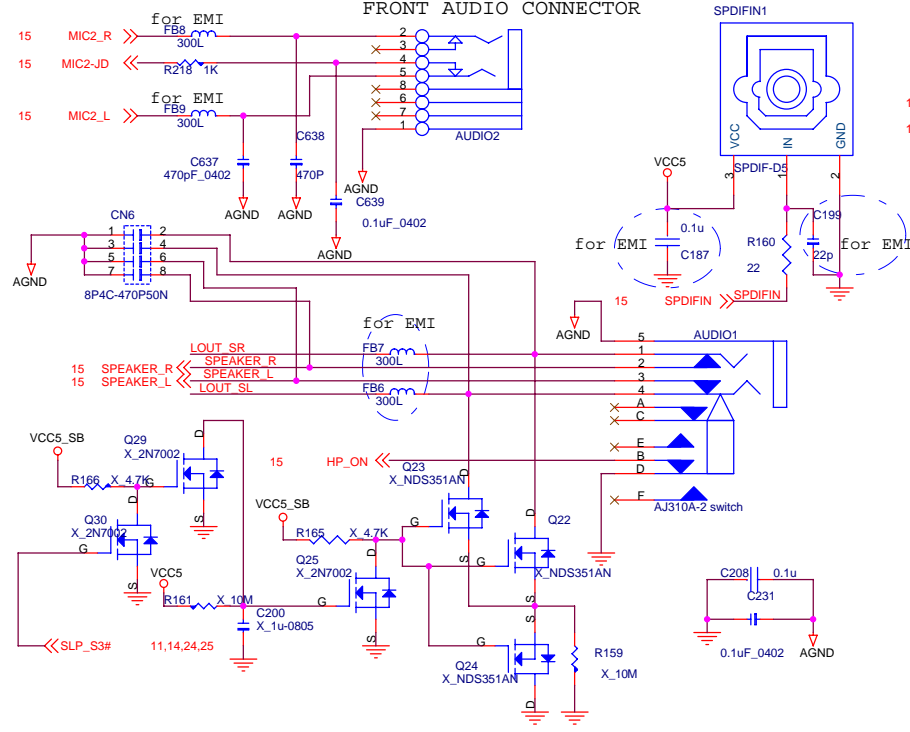
Optics Orientation Holes



Simulation



FRONT AUDIO CONNECTOR



16V/CAP: C565 NP: C93-1011621-G01 FP: 100U_16V

Title			FRONT AUDIO&EQ, SRS
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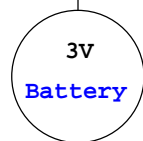
PRESCOTE		
0.8375V - 1.6000V Core	-	95A
1.2V FSB Vtt	-	2.9~3.5 A

Gransdale GMCH		
1.2V FSB Vtt	-	1.0A
2.6V DDR I/O (S0,S1)	-	3.0A
2.6V DDR I/O (S3)	-	250mA
*2.5V DAC	-	0.07A
2.5V HV	-	5mA
1.5V Core (Integrated)	-	9.7A
1.5V Core (Discrete)	-	7.7A
*1.5V PCI Express	-	1.4A

ICH6		
1.2V VCC_CPU	-	14mA
1.5V Core	-	1.88A
*1.5V PCI Express	-	560mA
1.5V SATA	-	430mA
+3.3V VccSus	-	330mA
RTC (G3)	-	5uA
5VRef	-	1mA
5VrefSus	-	10mA
+3.3V	-	220mA

FWH		
+3.3V (S0,S1)	-	107mA

CLOCK GEN:+3.3V 560mA
 SUPERIO:+3.3V:50mA;3.3SBY:50mA
 AUDIO:3.3V:30mA;5V:100mA
 LAN:3.3SBY:400mA
 1394:3.3V:160mA(BUS PWR+12V:1.4A)
 MS7:5VSB:350mA;3.3V:100mA



ISL6556		
VCCP	VRM 10.1	
0.8375V-1.6000V	95A	
4-Phase Switch		

W83310DS		
VTT_DDR		
1.3V Linear	1.0A	

MS7 Regulator		
V_FSB_VTT		
1.2V Linear	4.6A	
VCC_DDR		
2.6V (S0,S1)	7.0A	
Linear(S3)	570mA	
V_2P5_MCH		
2.5V Linear	100mA	
VCC3_SB		
3.3V Linear	1.5A	
5VDUAL1,2		
5V Linear	22mA	

MS6+ Regulator		
V_1P5_CORE		
1.5V Switch	14A	

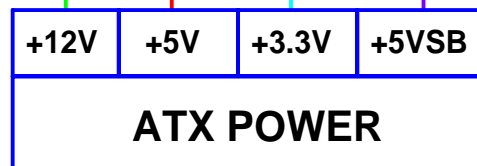
DDR DIMM & TERMINATOR		
1.3V VTT_DDR	-	1.0A
2.6V VCC_DDR (S0,S1)	-	4.0A
2.6V VCC_DDR (S3)	-	160mA

PCI Express x16 slot		
+12V	-	4.4 A
+3.3Vaux (wake)	-	375mA
+3.3Vaux (no wake)	-	20mA
+3.3V	-	3.0A

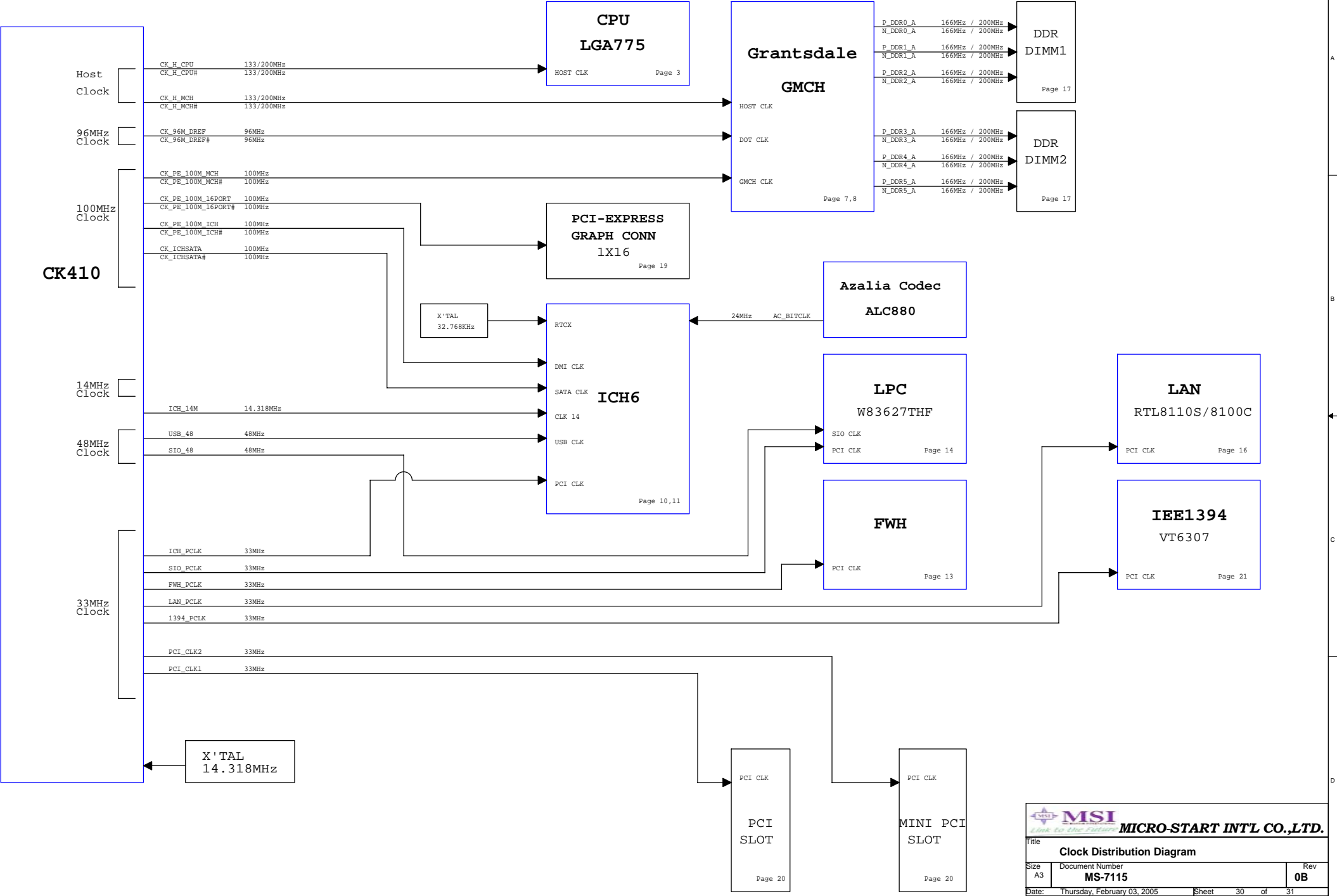
PCI slot x1&mini pci		
+3.3Vaux (wake)	-	375mA
+3.3Vaux (no wake)	-	20mA
+3.3V	-	7.6A
+5V	-	5.0A
+12V	-	0.5A

USB		
+5V (S0,S1)	-	4A
+5V (S3)	-	20mA

PS2		
+5V (S0,S1)	-	345mA
+5V (S3)	-	2.0mA



Clock Distribution Diagram



MS-7115

SCHEMATIC HISTORY

Rev	Date	Page	Description
0A	2005/01/21	14	W83627THF voltage monitor (VIN1-VIN3)can't connect to suspend power,change VIN1 to connect +12V
		15	1.ADD R504,R505 FOR codec GPI pull high or pull low 2.ADD C600 for SPDIFIN signal qulity(option) 3.SIDESURR connect to J5C,SURR connect to J5A
		23	ADD R506,R507,Q70 FOR LATCH CIRCUIT
		26	ADD R500,R501 FOR CORRECT PAN sense value
		28	rename wrong net name(AVDD_5VA--->AVDD5, +12V_ASBY----->AVDD_12V)
	2005/01/25	27	D20,D21,D22 CONNECT TO V_2P5_MCH
	2005/01/27	15	1.FOR EMI; ADD C636 between GND&AGND 2.FOR EMI; ADD R508 at AC_R1TCLK
		18	FOR EMI;1.ADD C618-C629 connect to VCC_DDR, 2.ADD C630-C635 connect between VCC_DDR&VTT_DDR 3.ADD C611-C617 connect to VTT_DDR 4.ADD C601,C602 connect between VCC_DDR&VCC3
	2005/01/27	23	FOR EMI;1.ADD C603-C610 connect to +12V

Rev	Date	Page	Description



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HISTORY		
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