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IH61W-MHS

REV 8.0

CPU:

Intel Sandy/Ivy Bridge processors in LGA1155 Package 95W

System Chipset:

Cugar Point H61

Main Memory:

Dual Channel/DDR- III* 2(Max 16GB) 1066/1333

DDR3- 1600 /1333 /1066 /800

Onboard Device:

Super I/O:IT8772E

LAN:Atheros AR8152

HD Codec:VIA VT1708S 3 jacks

Power solution:

CPU Voltage Regulators:2phase by ISL6363

AXG voltage Regulators:1phase by ISL6363

VTT voltage Regulators:1Phase by FP6326

DDR voltage Regulators:1Phase by FP6326

Expansion Slots:

PCI EXPRESS 16X SLOT* 1

PCI EXPRESS 1X SLOT* 1

REAR IO:

PS/2 KB/MS

VGA

2 layer USB2.0 Ports

2 layer USB2.0 + RJ- 45 Ports

Audio Jackets

Front I/O:

SATA2 * 4

USB Header * 2

CPU /System1

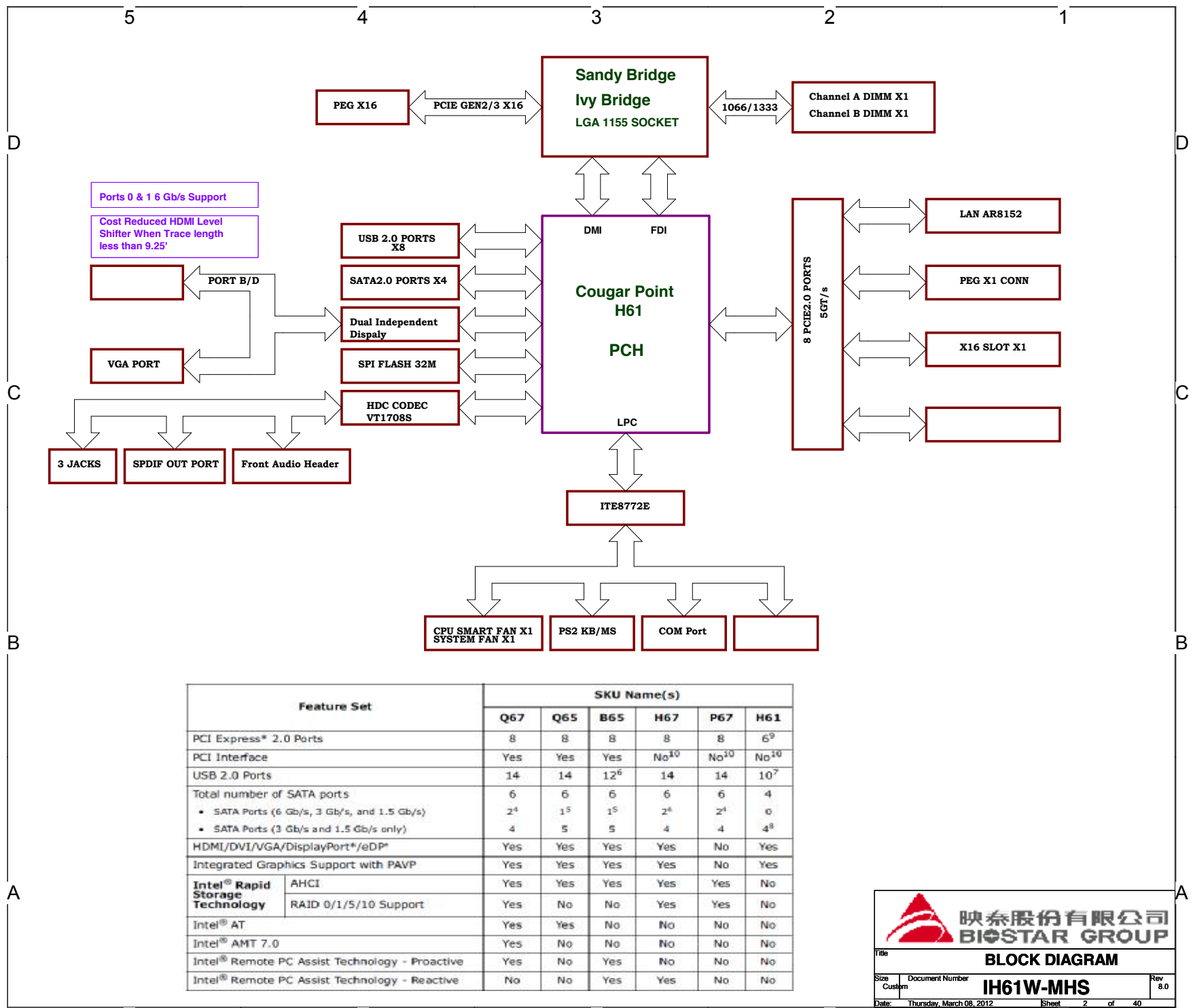
Front Audio Header

COM1

HW Engineer	ELI	Date	2011/ 03/ 08
HW Leader1	Cobra	Date	
HW Leader2	Belle	Date	

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5 4 3 2 1

D

C

B

A

5 4 3 2 1

Change from IH61N-MHS 6.1:

- 1. Remove S3
- 2. Remove DVI
- 3. Remove PCI-E Slot
- 4 .Remove V_SA
- 5 .Remove Audio 12v to 5v
- 6 .Change PWM to UP1625Q
- 7 .Change LAN to RTL8105T

Change from 0.7


- 1.DDR3=1.525V
- 2.Change LAN to AR8152
- 3.Change Audio VCC to +5V_STBY
- 4.Change Logic VCC to +3v3_DUAL
- 5.Change 2N7002 to 3904 for Q27

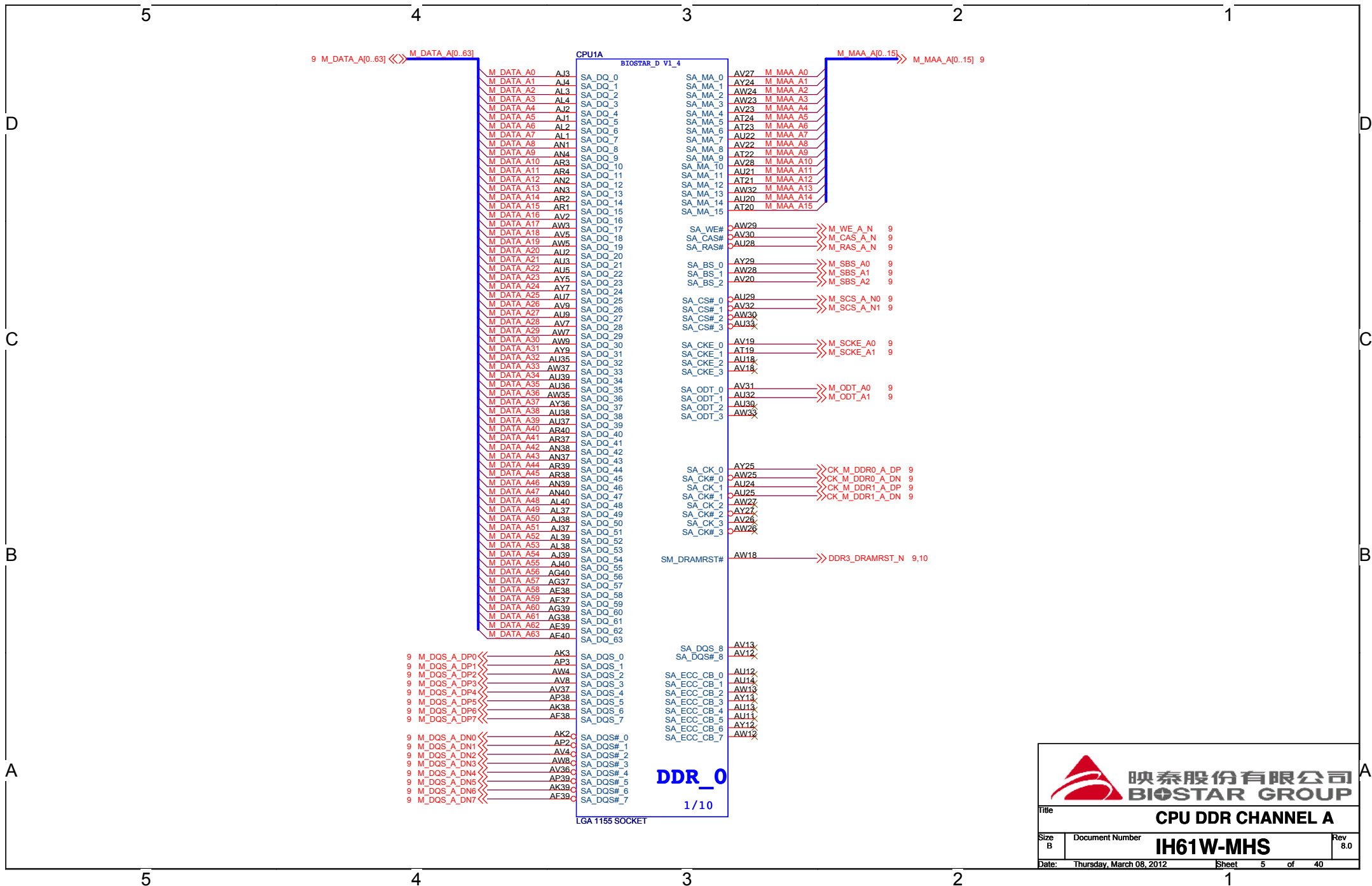
Change from 0.71

- 1.Add Model Name
- 2.Fine tune Eup
- 3.Fine tune RTC
- 4.Change low noise CHOKE
- 5.Add CPU PWM NTC
- 6.Change DDR voltage to 1.52v
- 7.Change PCIE16X AC Coupling Capacitor to 0.1uF

Change from 7.0

- 1.Change ALC662 to VIA1708S
- 2.Change IT8728 to IT8772
- 3.Remove CPU PWM Input Choke
- 4.Remove CPU PWM Low Side Mosfet
- 5.Remove LPT Header
- 6.Change UP0105 to az1117 For 3VSB
- 7.Change PCH Voltage to 1.06V
- 8.Change +3V3_STBY to 3.26V

		
Title CHANGE LIST		
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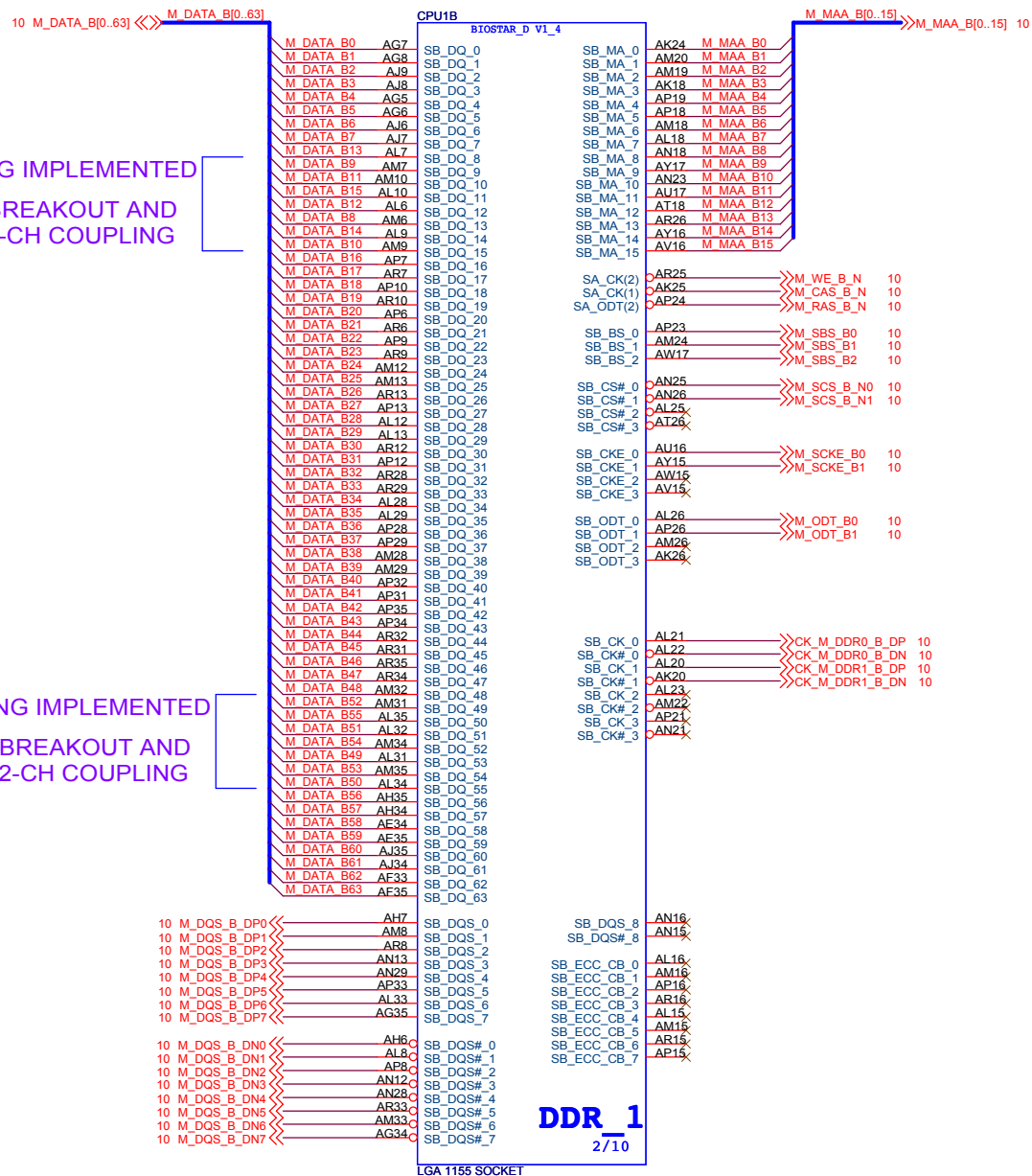
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Title: CPU DDR CHANNEL A

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DQ REMAPPING IMPLEMENTED
TO IMPROVE BREAKOUT AND
MINIMIZE CH-2-CH COUPLING

DQ REMAPPING IMPLEMENTED
TO IMPROVE BREAKOUT AND
MINIMIZE CH-2-CH COUPLING



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Title: **CPU DDR CHANNEL A**

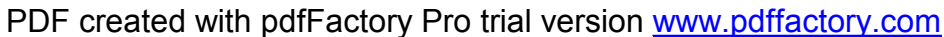
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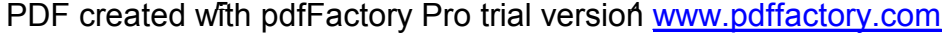
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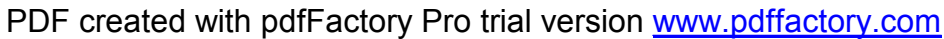
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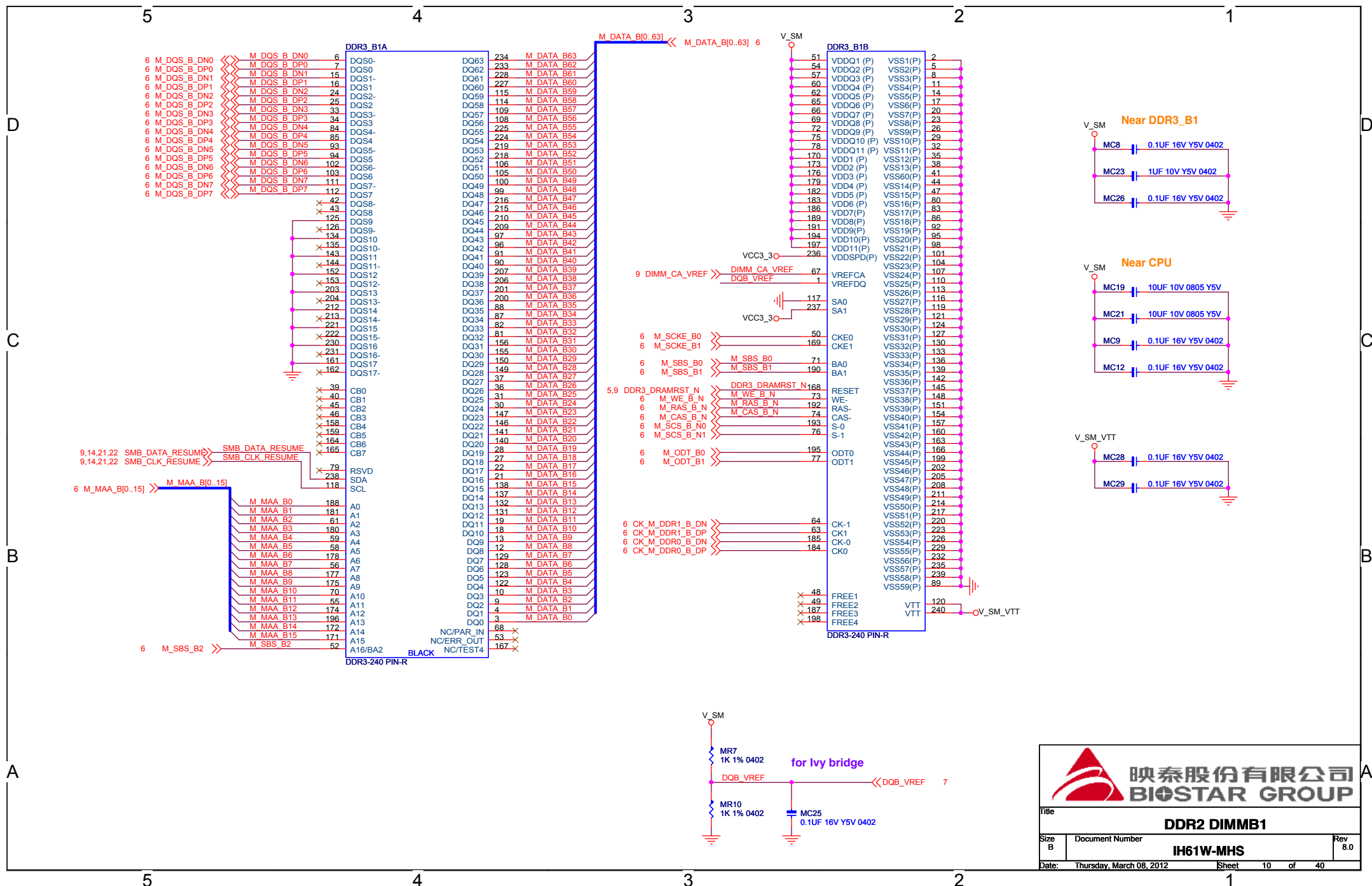
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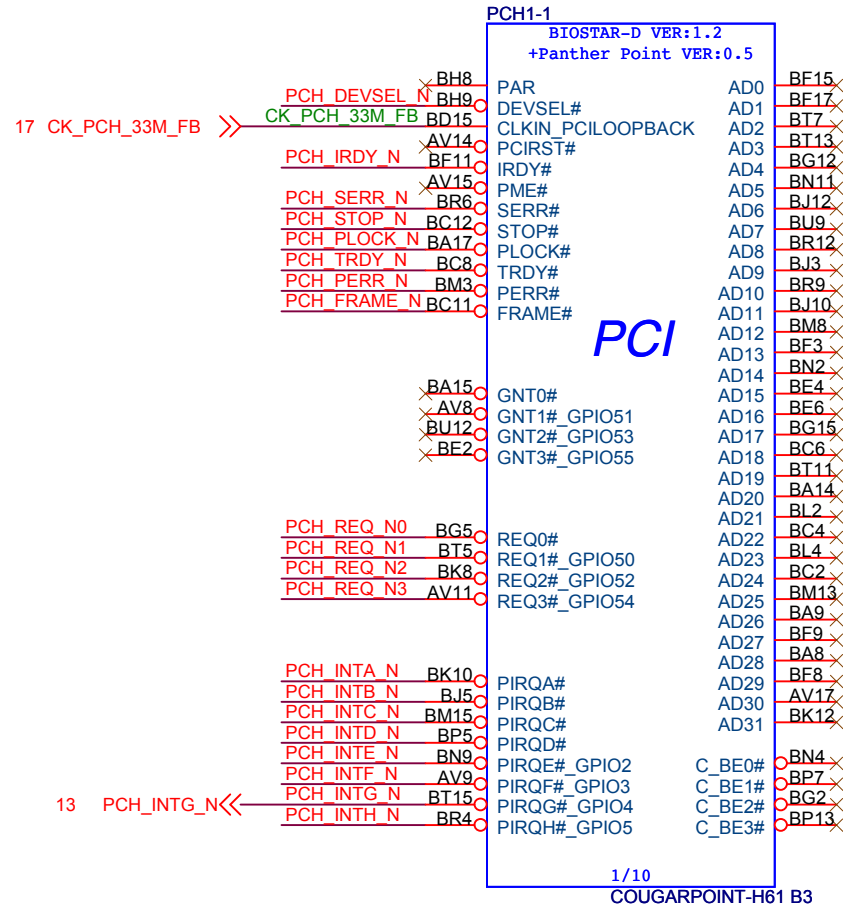
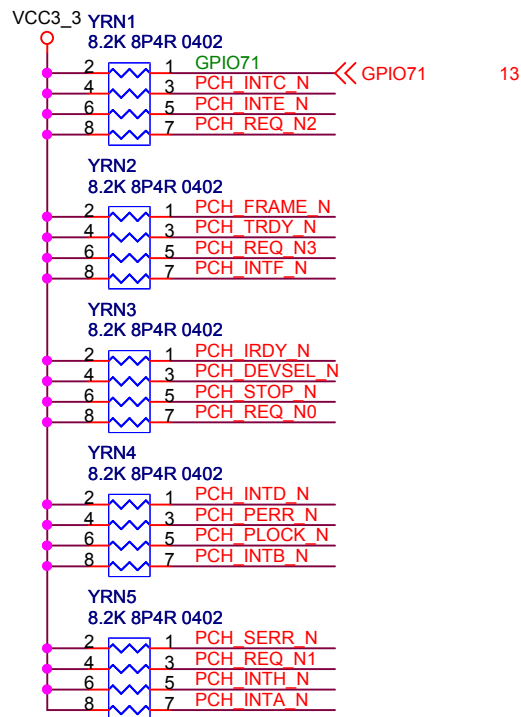
Rev 8.0







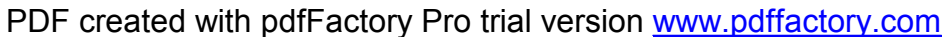


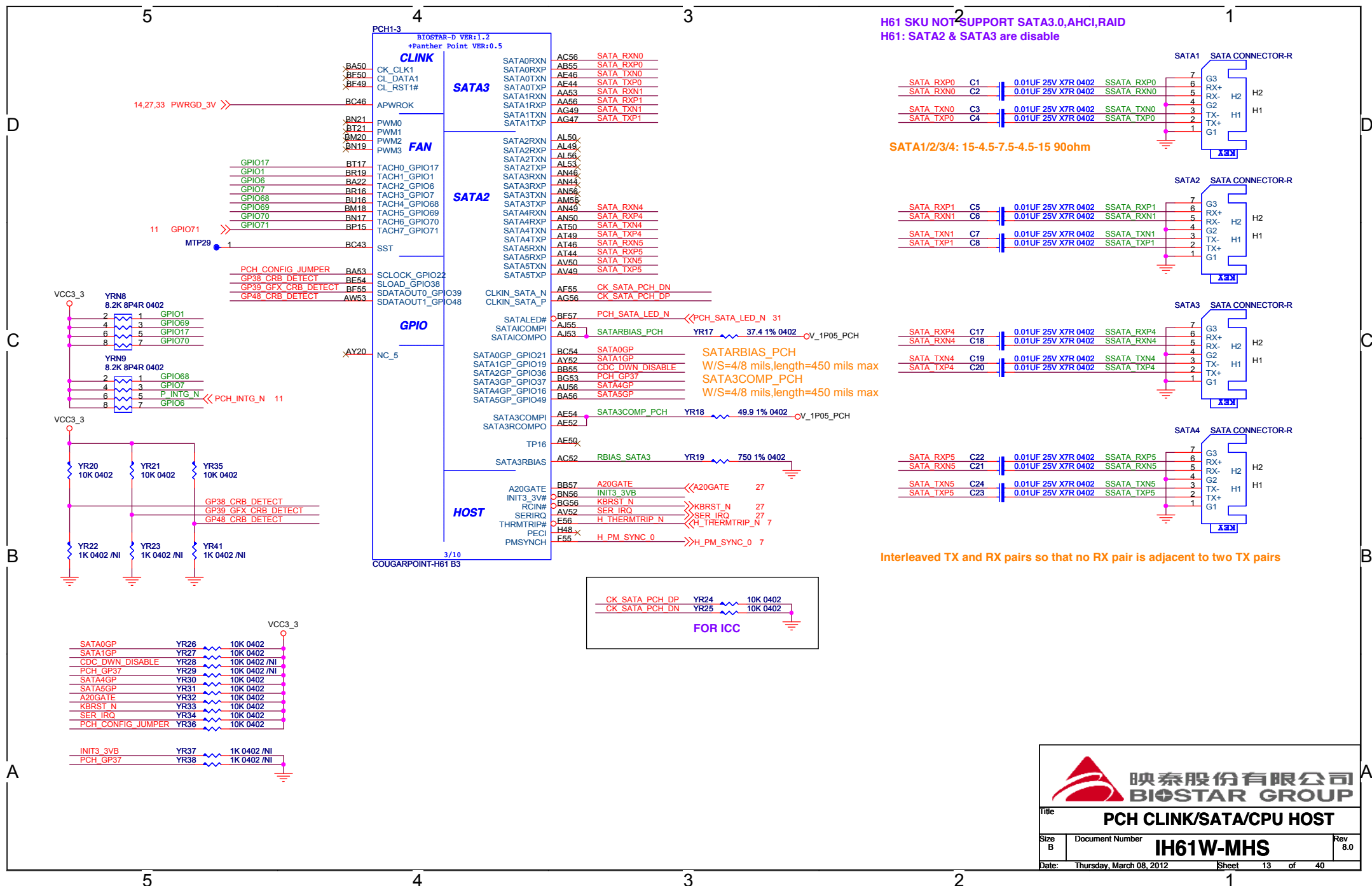


WEAK INTERNAL PULLUPS ON GNT*.DEFAULT SPI BOOT DEVICE

GNT1	GNT0/SATA1GP	BOOT DEVICE
0	0	LPC
0	1	NANO
1	0	PCI
1	1	SPI

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Title PCH PCI		
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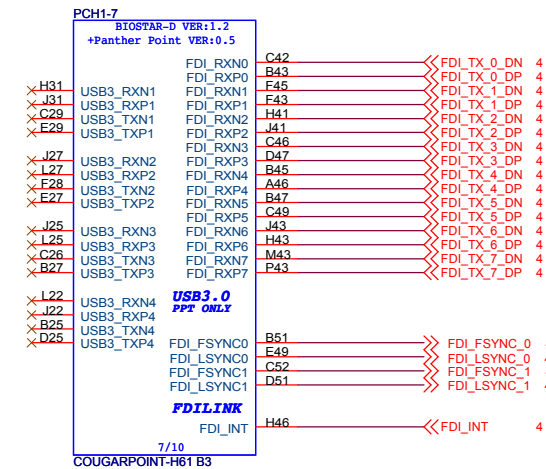
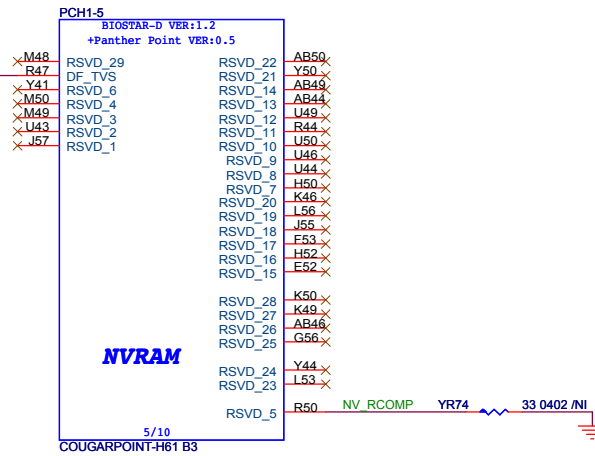




DMI/FDI Termination Select

H:For Sandy Bridge

L:For Ivy Bridge



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Title: PCH NVRAM & FDI LINK

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3.3V TOLERANT,HIGH ACTIVE

VCC3_3

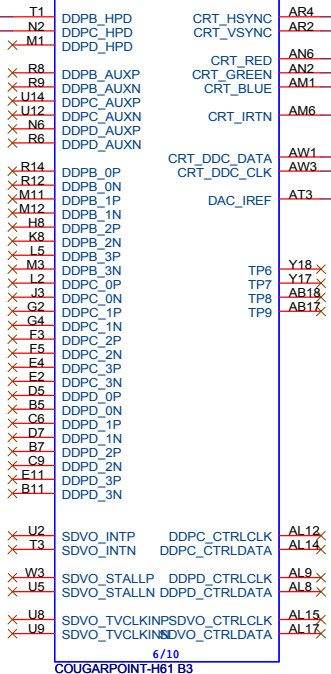
YR96
1K 0402 /NI

DDSP_C_HPD

YR95
1K 0402

PCH1-6

BIOSTAR-D VER:1.2
+Panther Point VER:0.5

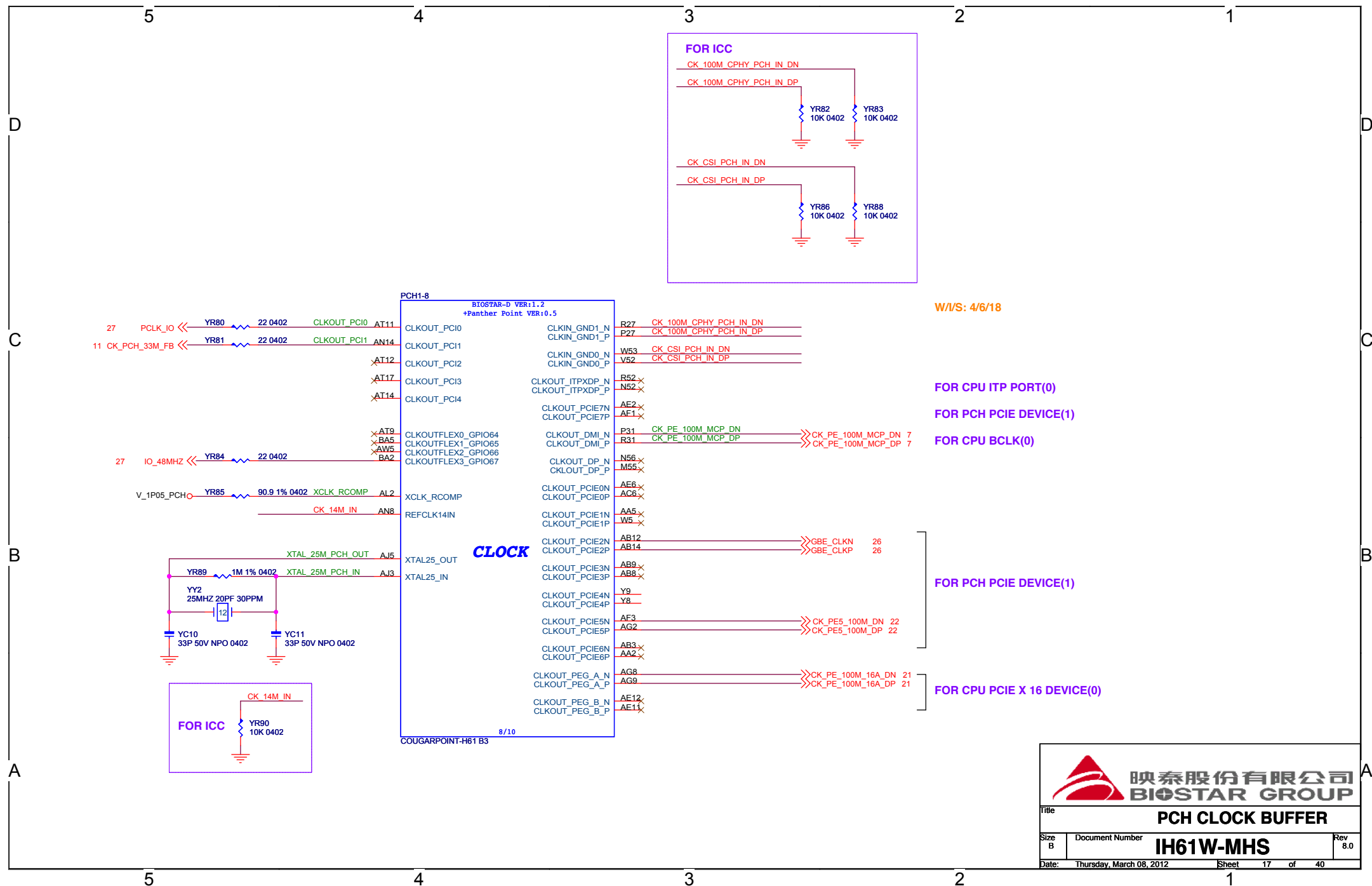


	FUNCTION
PORTB	DVI OR SDVO
PORTC	DISPLAY PORT
PORTD	HDMI/DVI/eDP

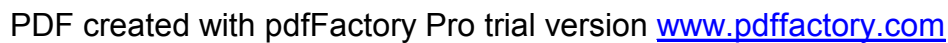
REMOVE LEVEL SHIFTER WHEN TRACE
LENGHT LESS THAN 9.25 INCHES

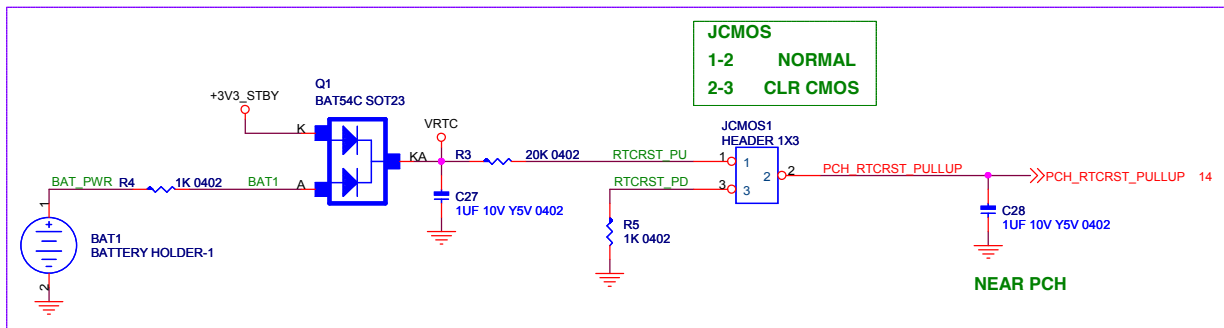
If DisplayPort interface is not implemented,
the Main Link, aux channel differential
signals and HPD signals can be left as No
Connects./DG108

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Title PCH VGA/DISPLAY PORT		
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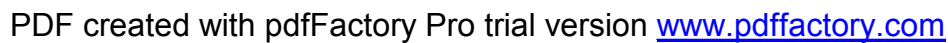


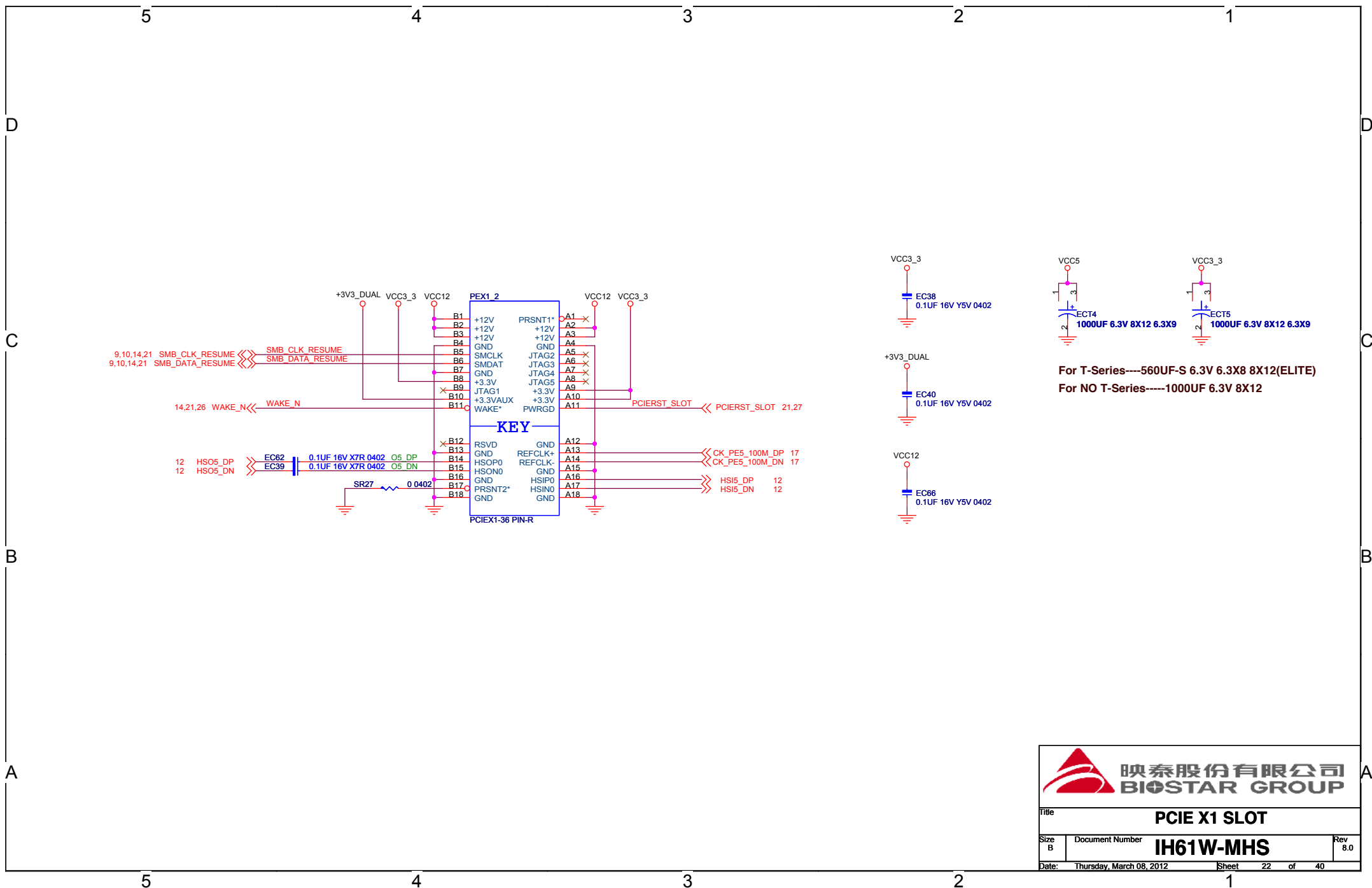
Title		
PCH CLOCK BUFFER		
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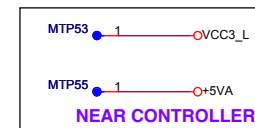
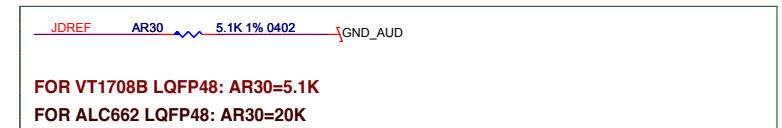
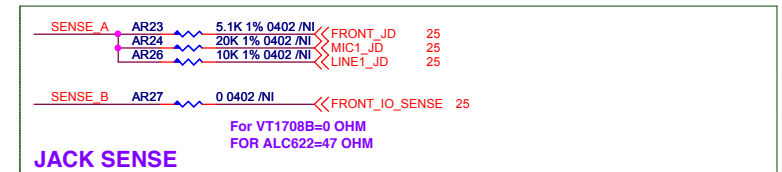
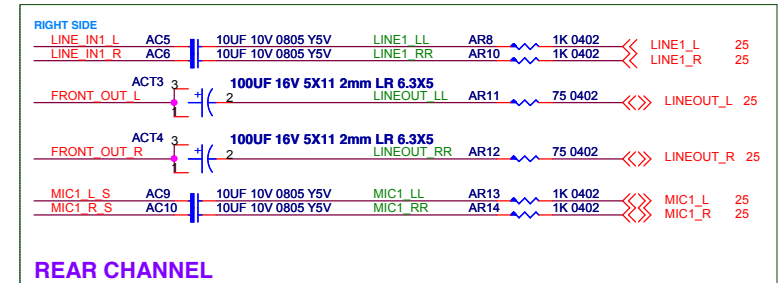
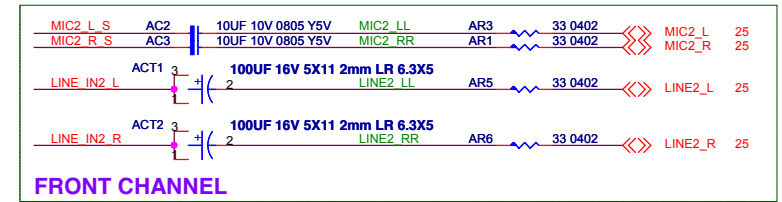
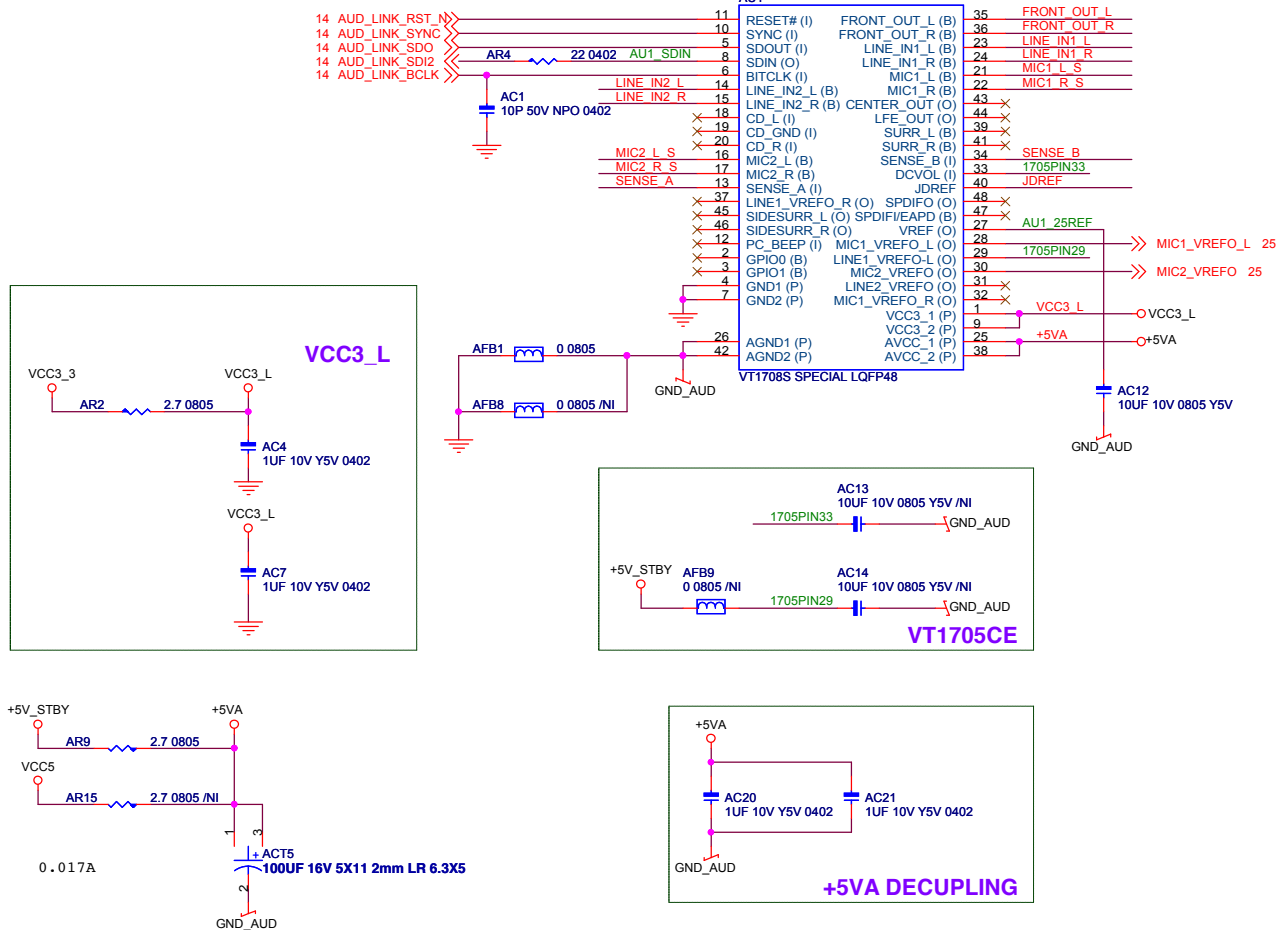



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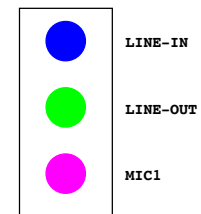
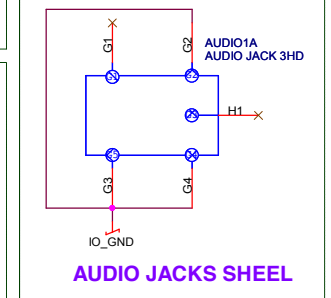
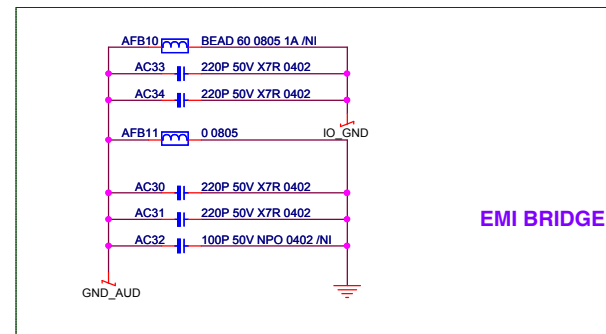
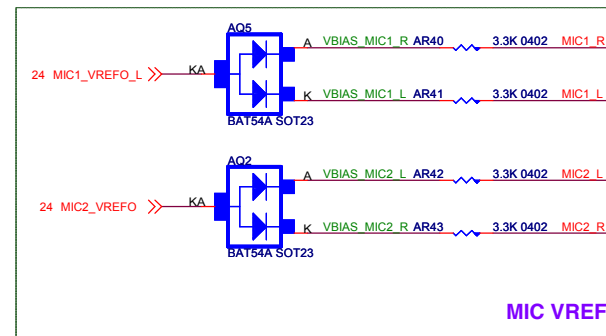
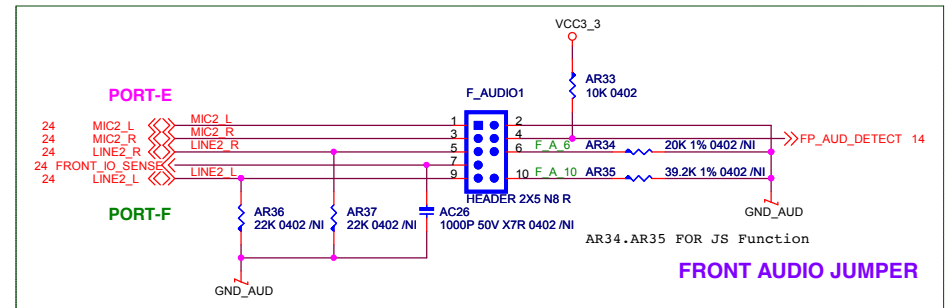
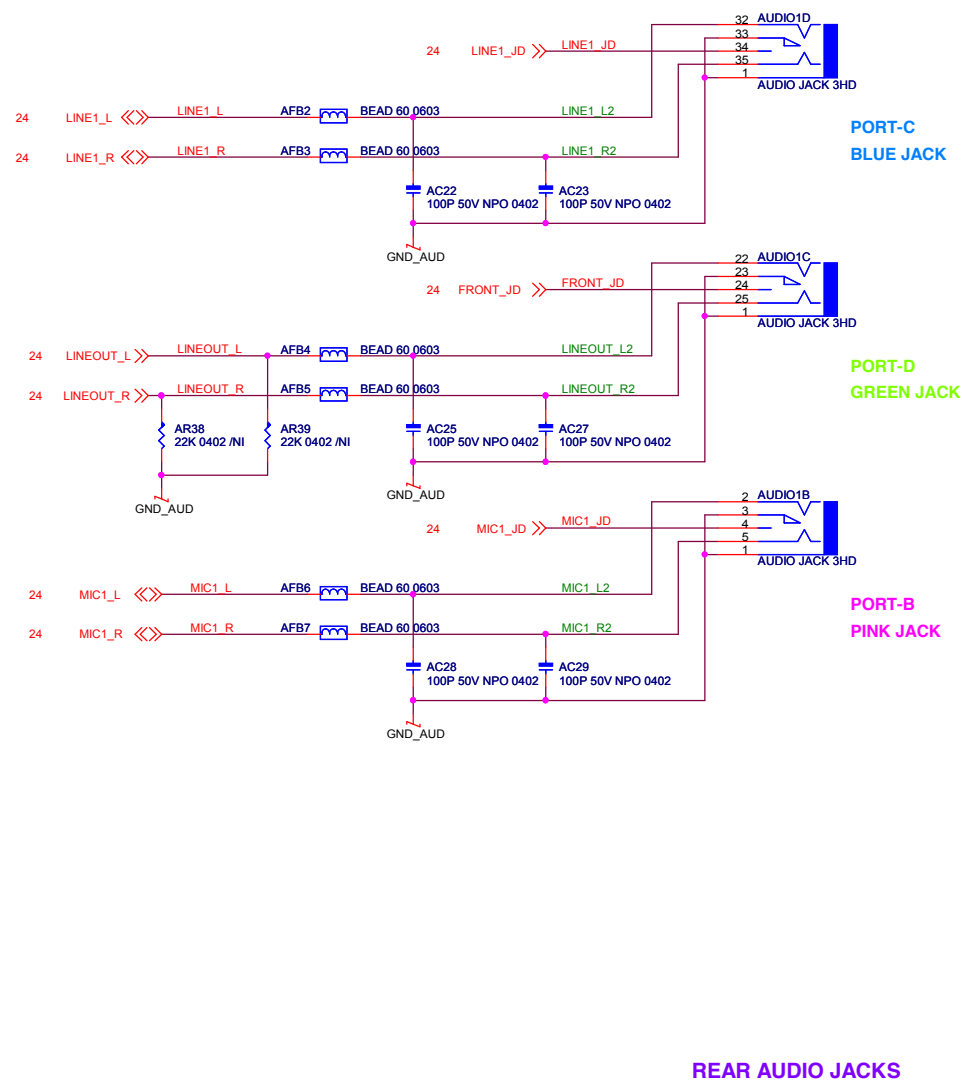




AUDIO PART: A+Reference



				
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Title CODEC VT1708S				
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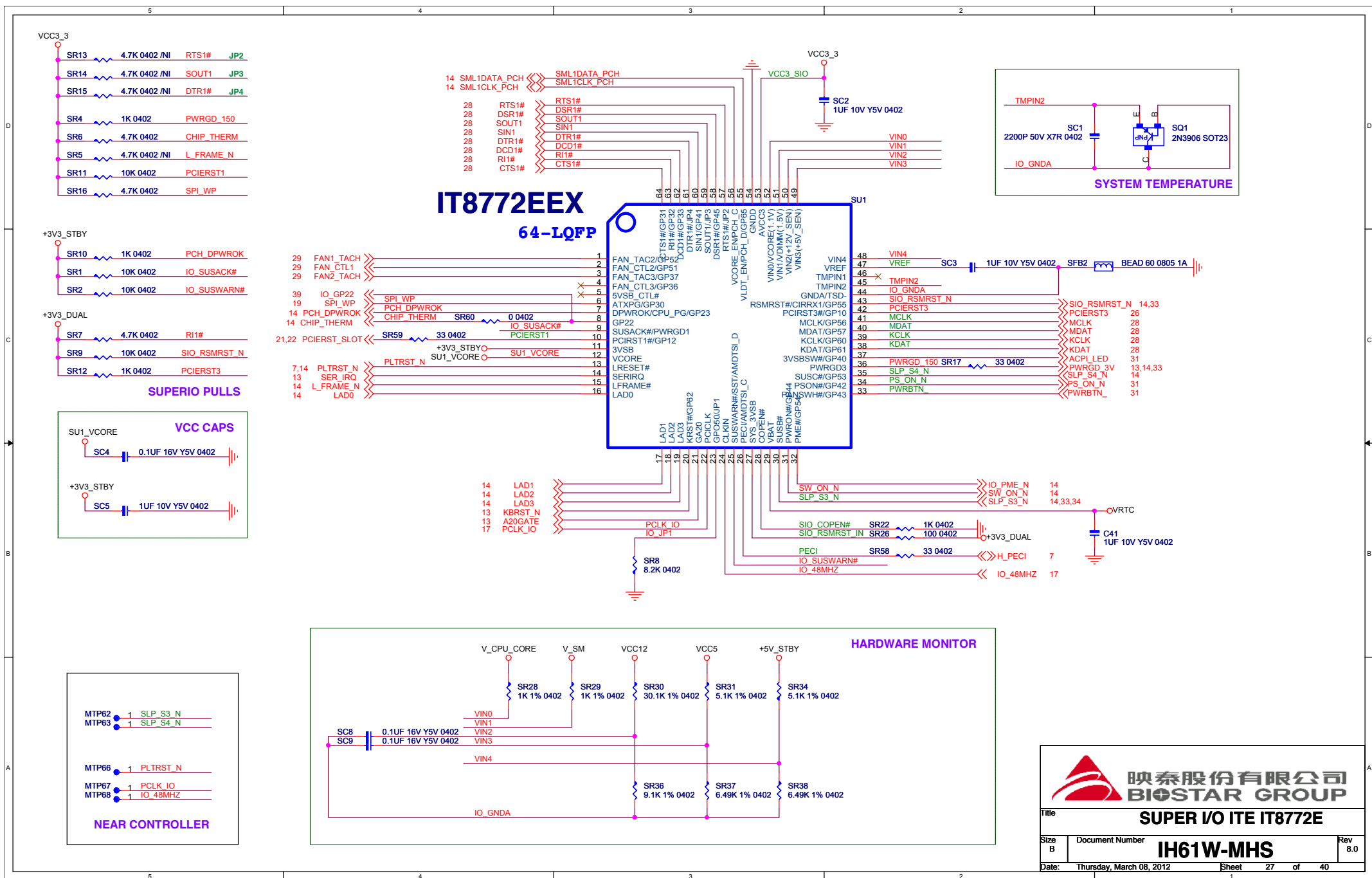


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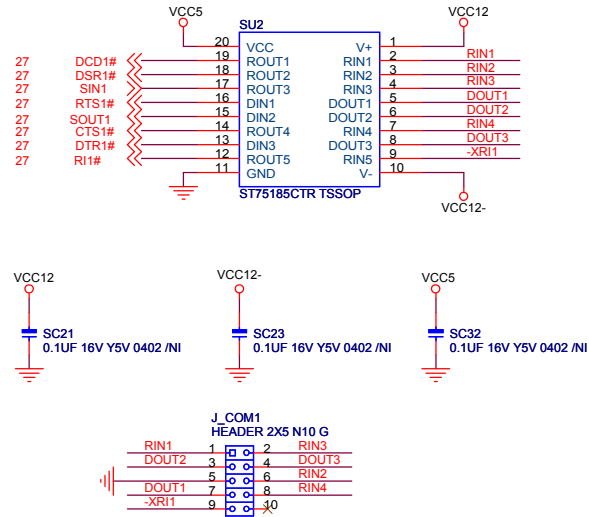
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Size Custom Document Number **IH61W-MHS** Rev 8.0

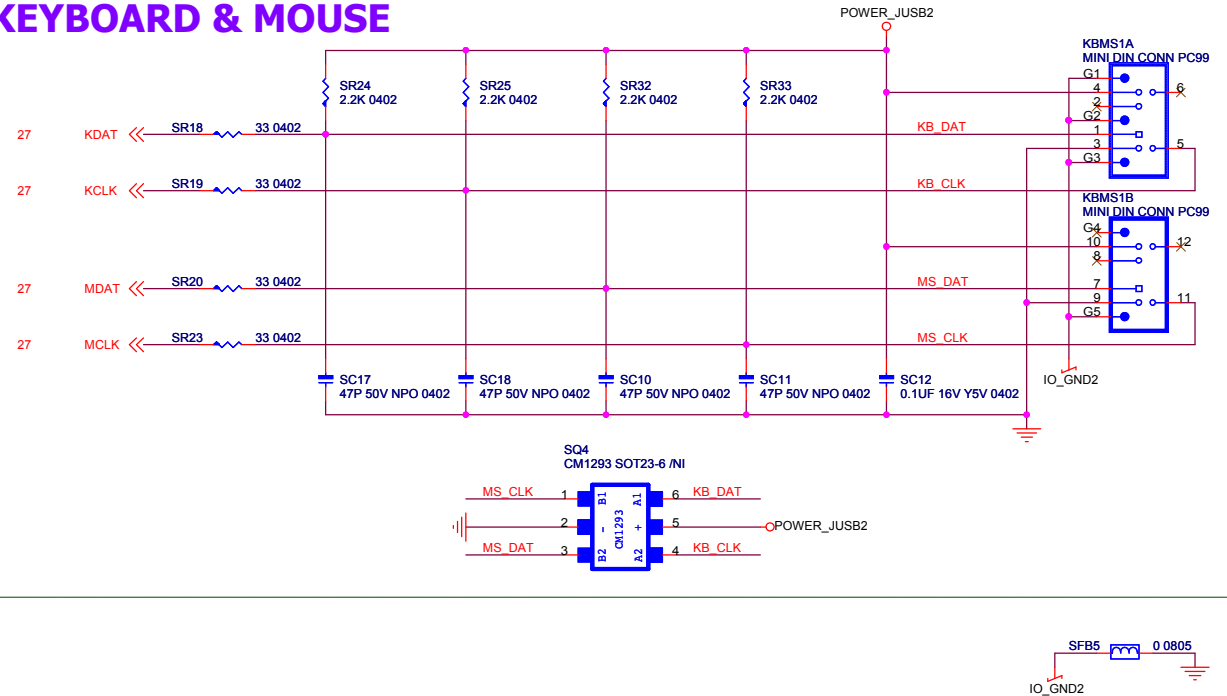
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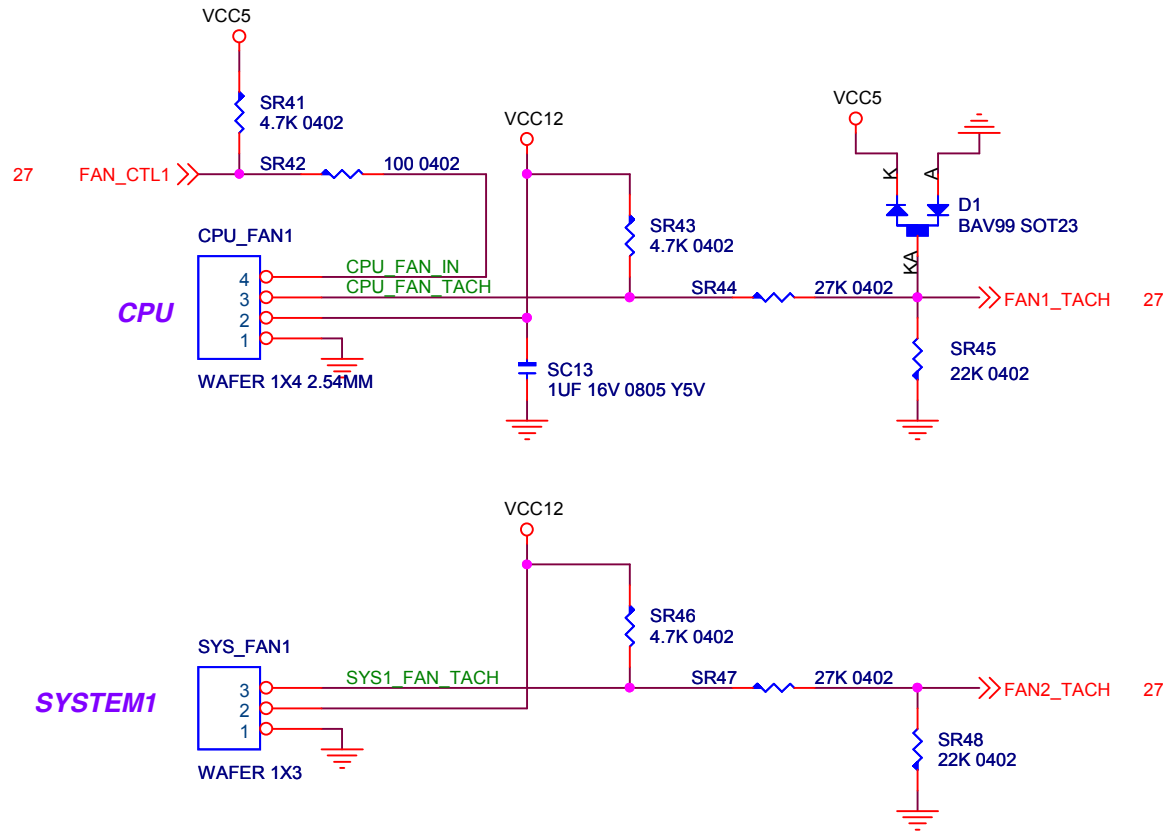
COM PORT




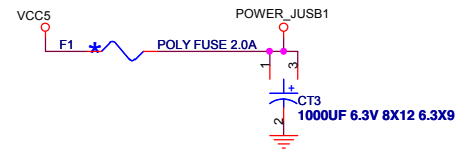
KEYBOARD & MOUSE



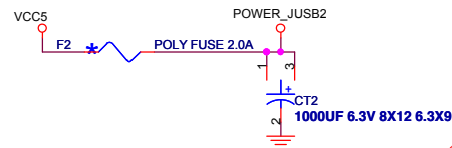
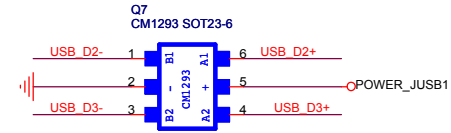
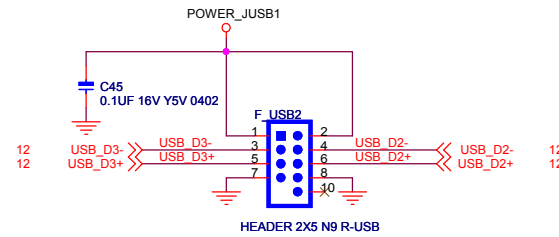
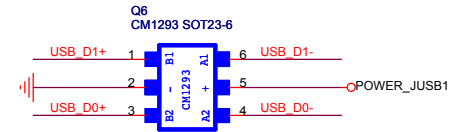
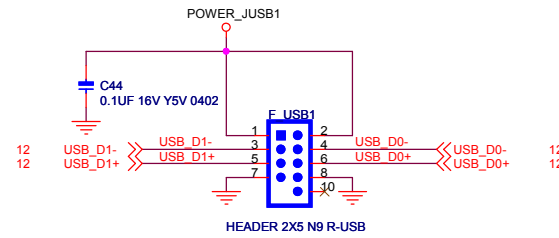
CPU FAN/SYSTEM FAN1



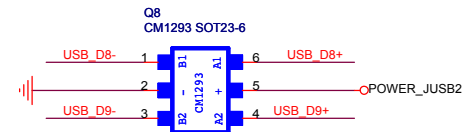
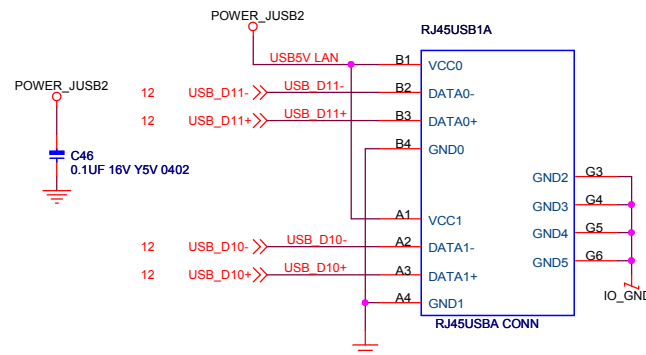
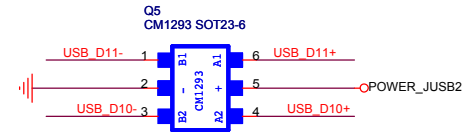
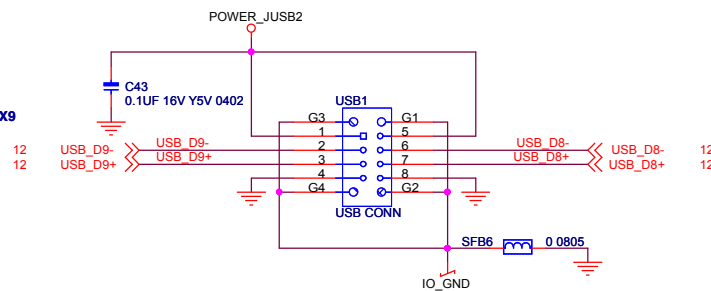
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Title HW MONITOR/FAN CONTROL		
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For T-Series-----560UF-S 6.3V 6.3X8 8X12(ELITE)
For NO T-Series-----1000UF 6.3V 8X12



BACK PANEL USB
PLACE NEAR CONN



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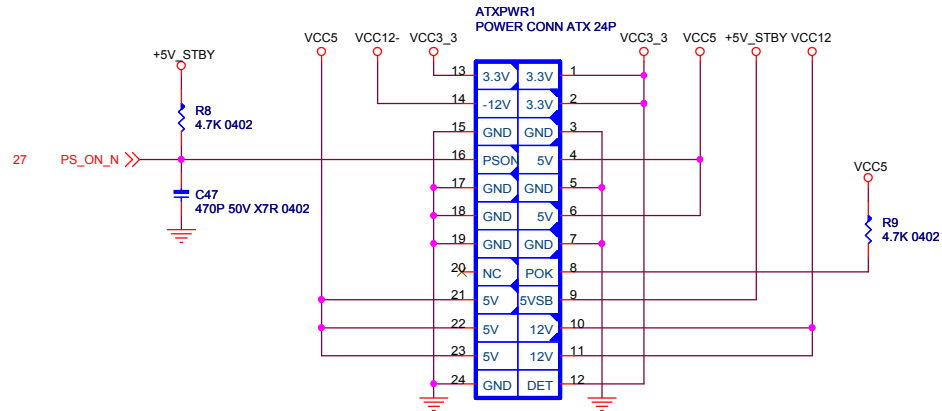
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Size B Document Number: **IH61W-MHS** Rev 8.0

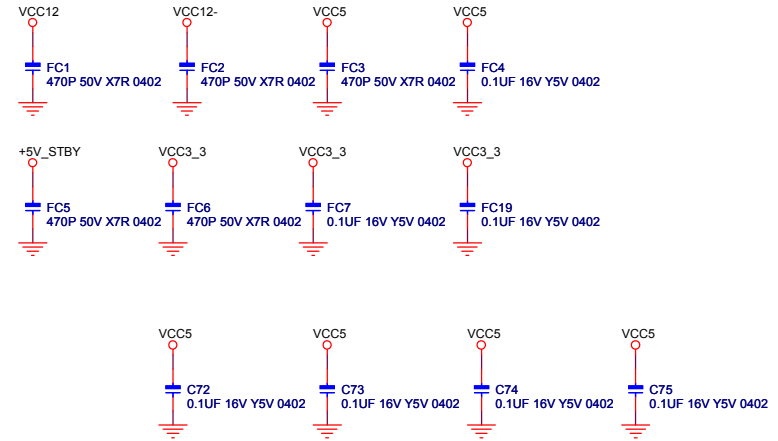
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24 PIN POWER CONNECTOR

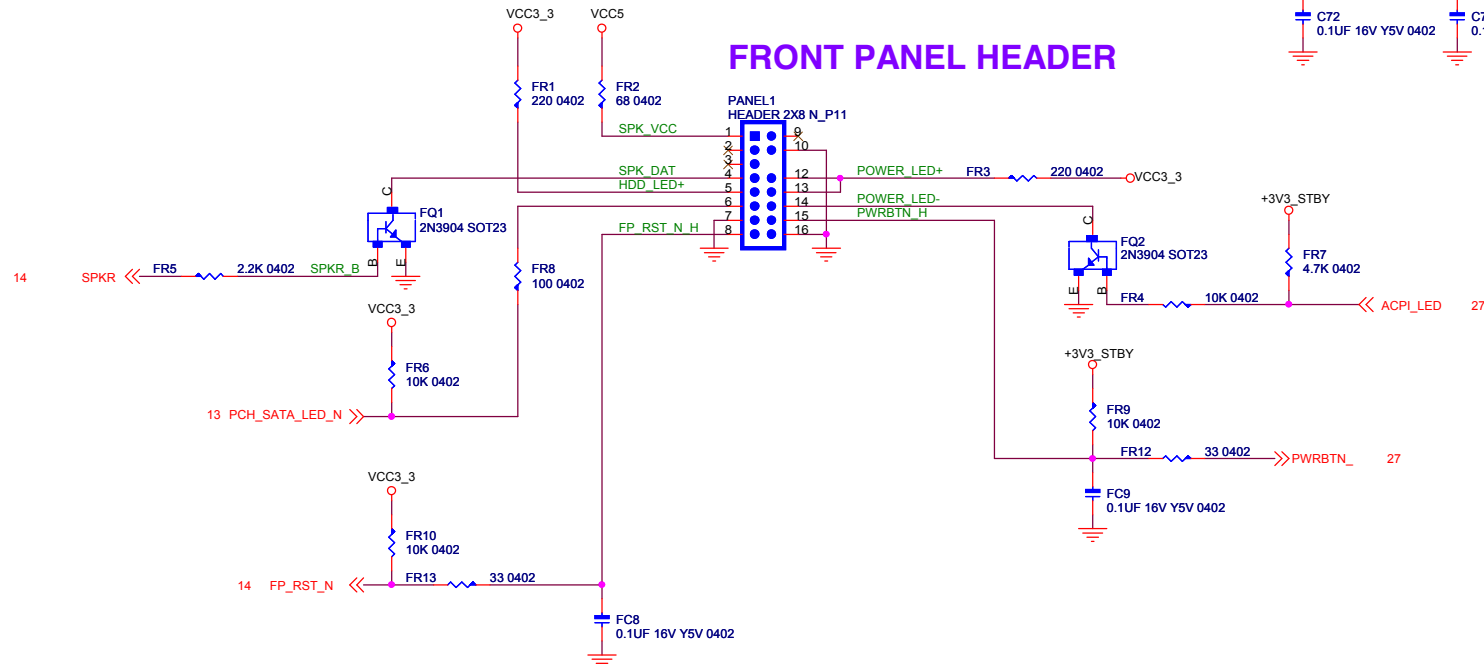
JATXPWR



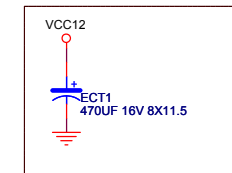
FOR EMI



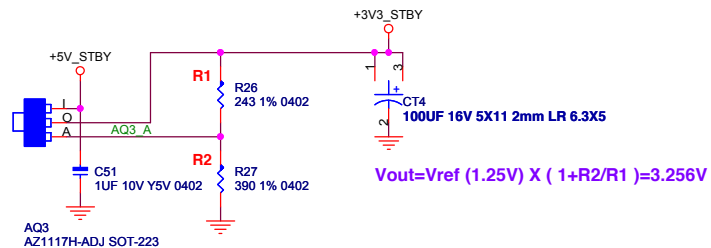
FRONT PANEL HEADER



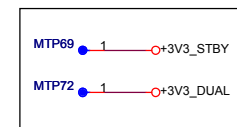
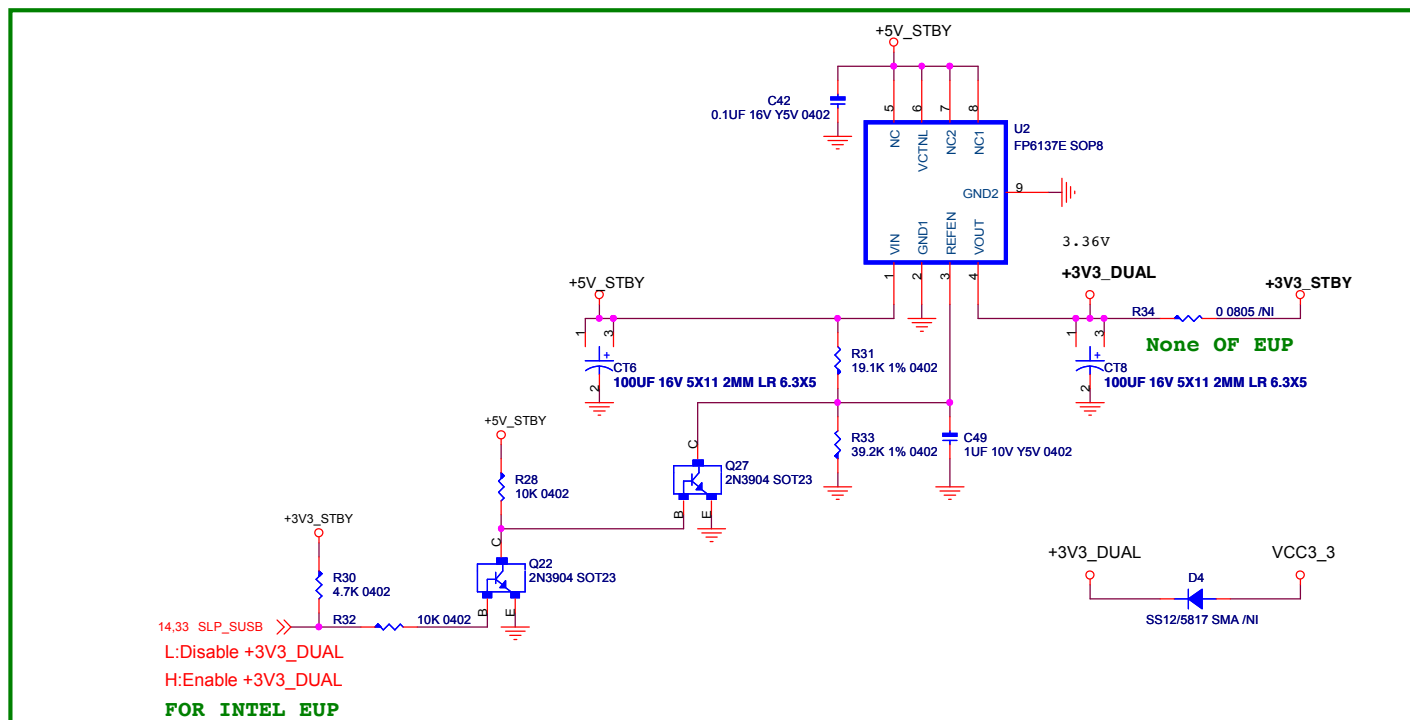
For NO T-Series-----470UF 16V 8X11.5



Title 24PIN POWER CONN&FP			
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CT4,CT5,CT13:
 NETIN: 100UF 16V 5X11 2MM LR 6.3X5
 BOM: 100UF 16V 5X11 2mm LR
 100UF-S 16V 6.3X8 ELITE

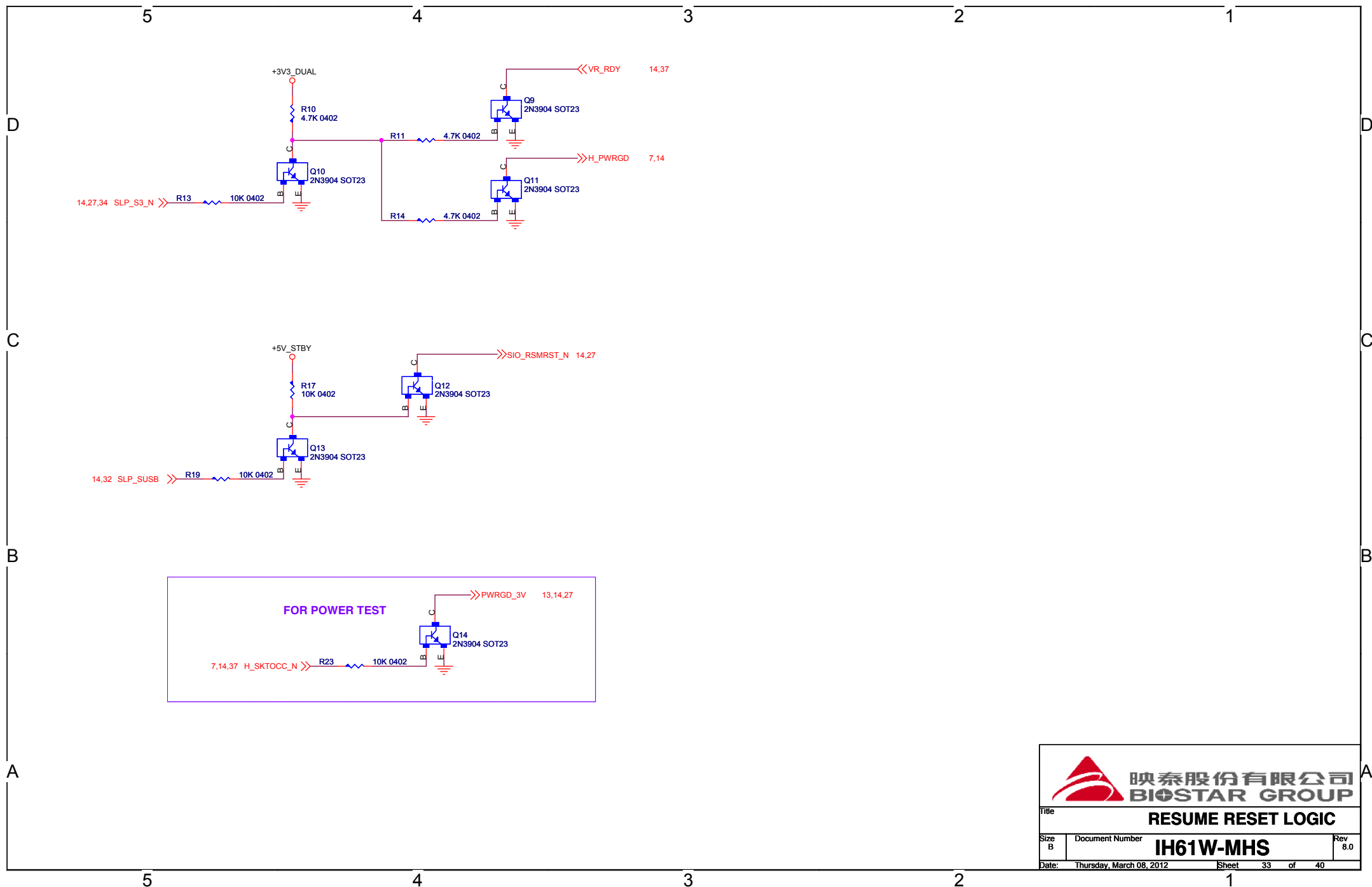


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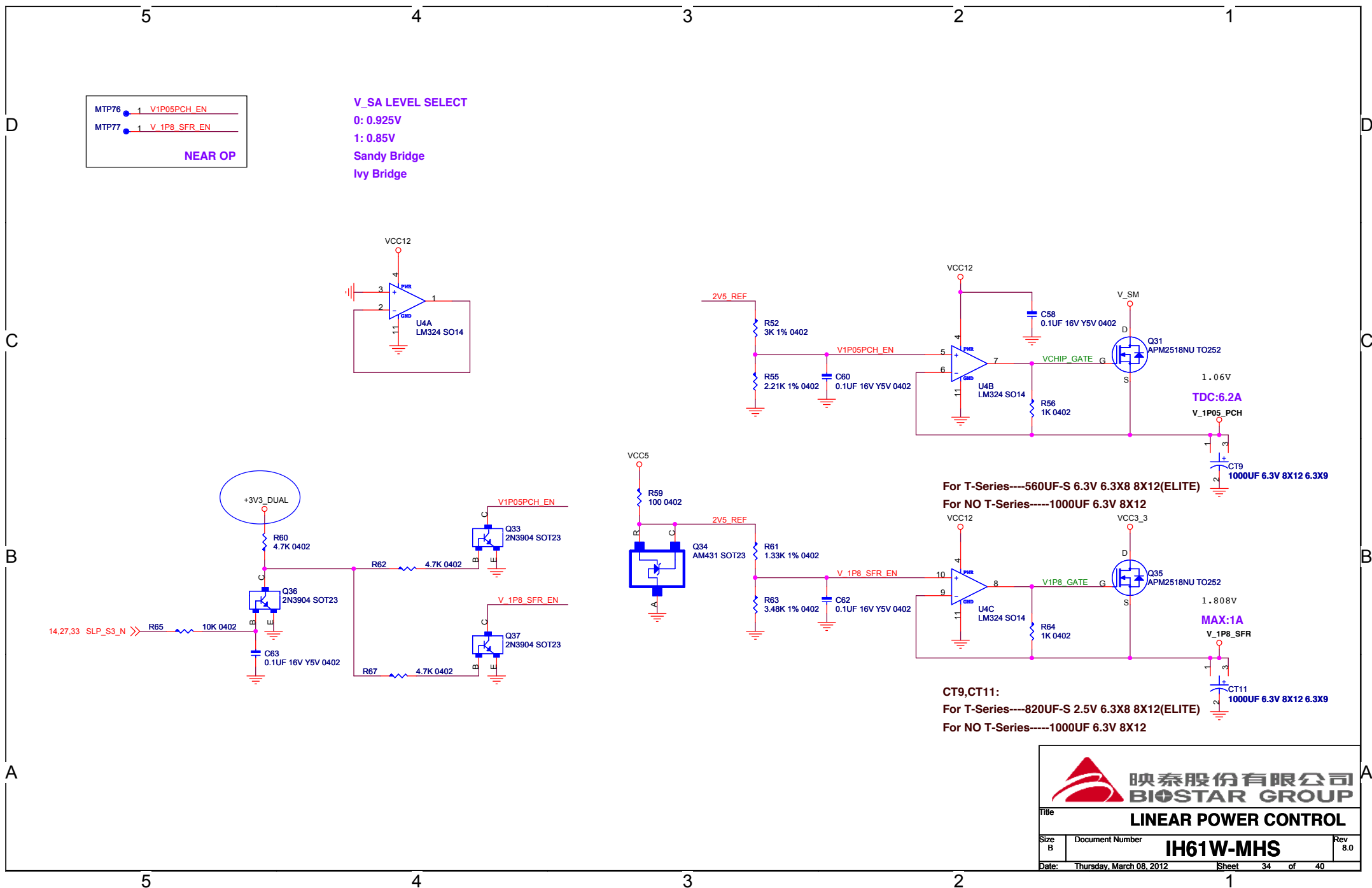
Title **ACPI POWER CONTROL**

Size B Document Number **IH61W-MHS** Rev 8.0

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Title		RESUME RESET LOGIC	
Size B	Document Number	IH61W-MHS	Rev 8.0
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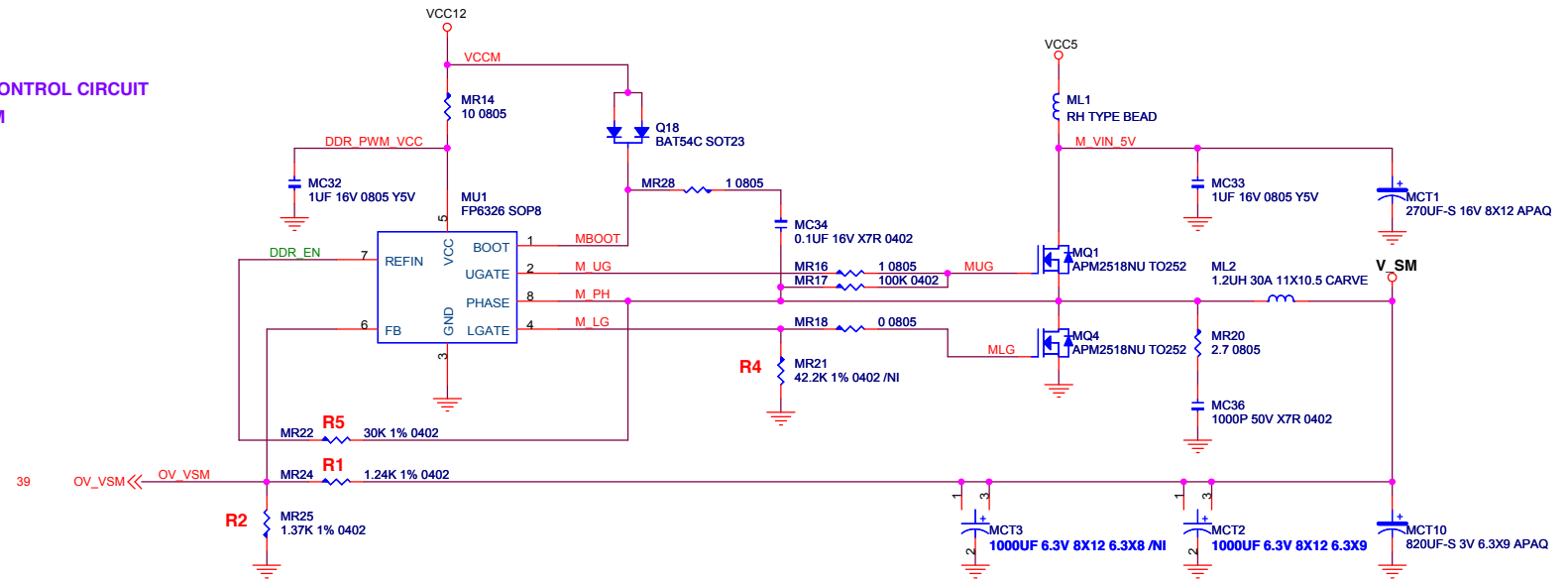
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LINEAR POWER CONTROL

IH61W-MHS

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MEMORY VLOTAGE CONTROL CIRCUIT FOR INTEL PLATFORM



$$V_{SM} = 0.8(1 + R1/R2) = 1.524V \quad (R1 = 1.24K \quad R2 = 1.37K)$$

R5 Only For FP6326

R4 Only For UP6109

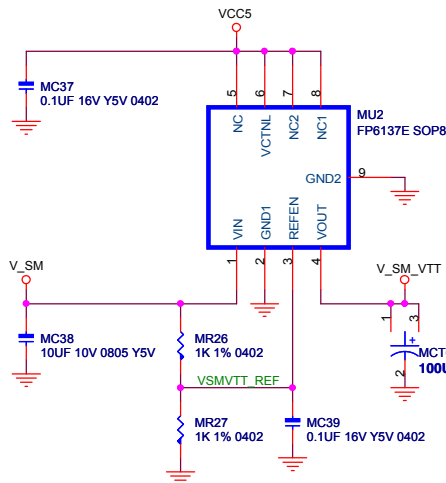
$(40\mu A \cdot R5 - 0.4V) / R_{ds} = I_{OC}$

OCF Set : 31A

FOR ONE LS MOSFET, R5=14.7K 1% FOR ONE LS MOSFET, P0603BDL : R4=42.2K 1%

For T-Series----820UF-S 2.5V 6.3X8 8X12(ELITE)

For NO T-Series----1000UF 6.3V 8X12

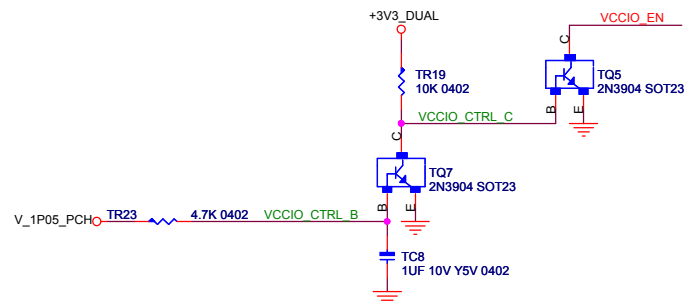
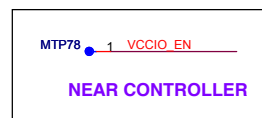
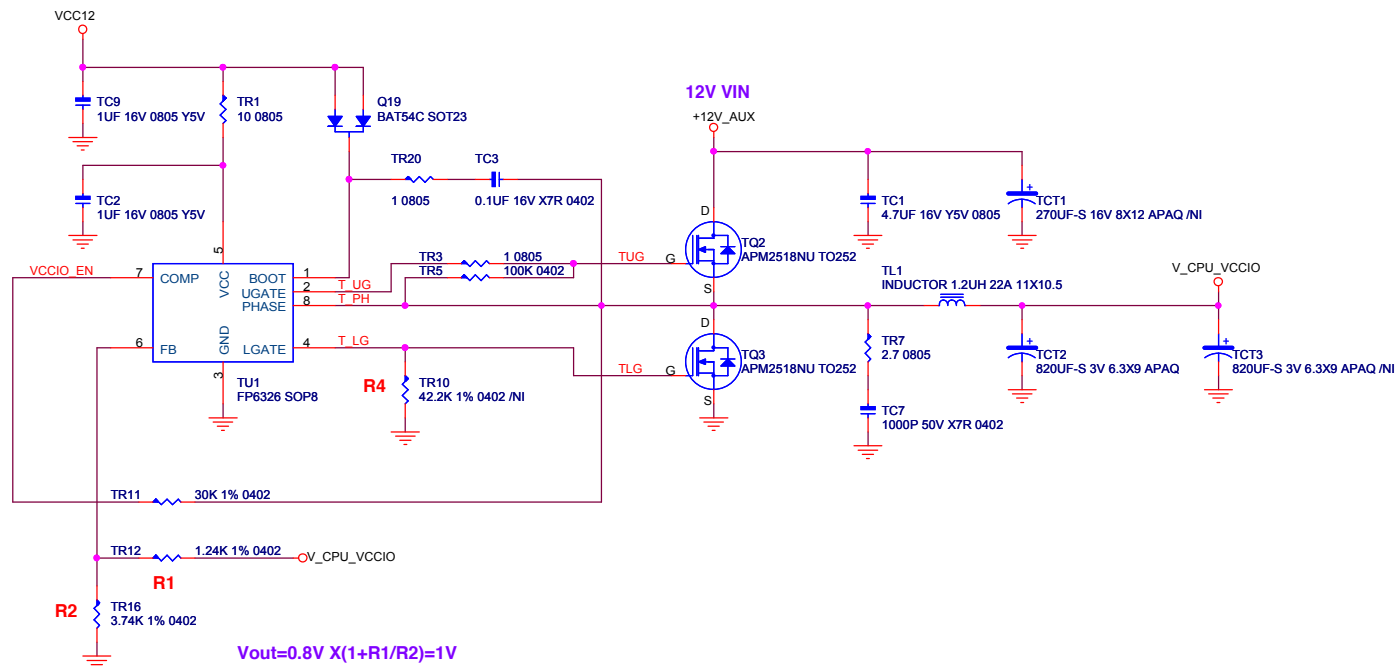


NETIN: 100UF 16V 5X11 2MM LR 6.3X5

BOM: 100UF 16V 5X11 2mm LR

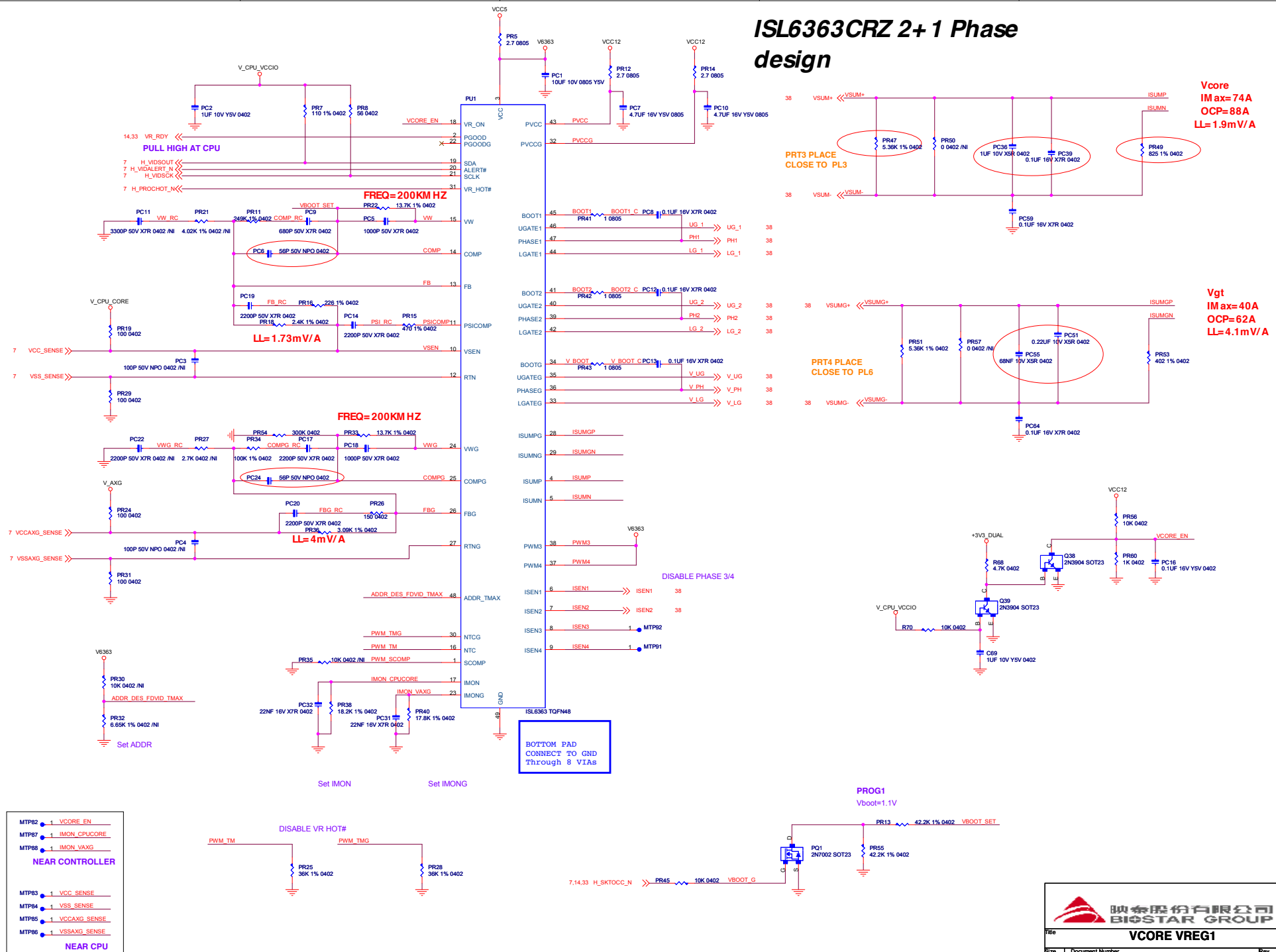
100UF-S 16V 6.3X8 ELITE

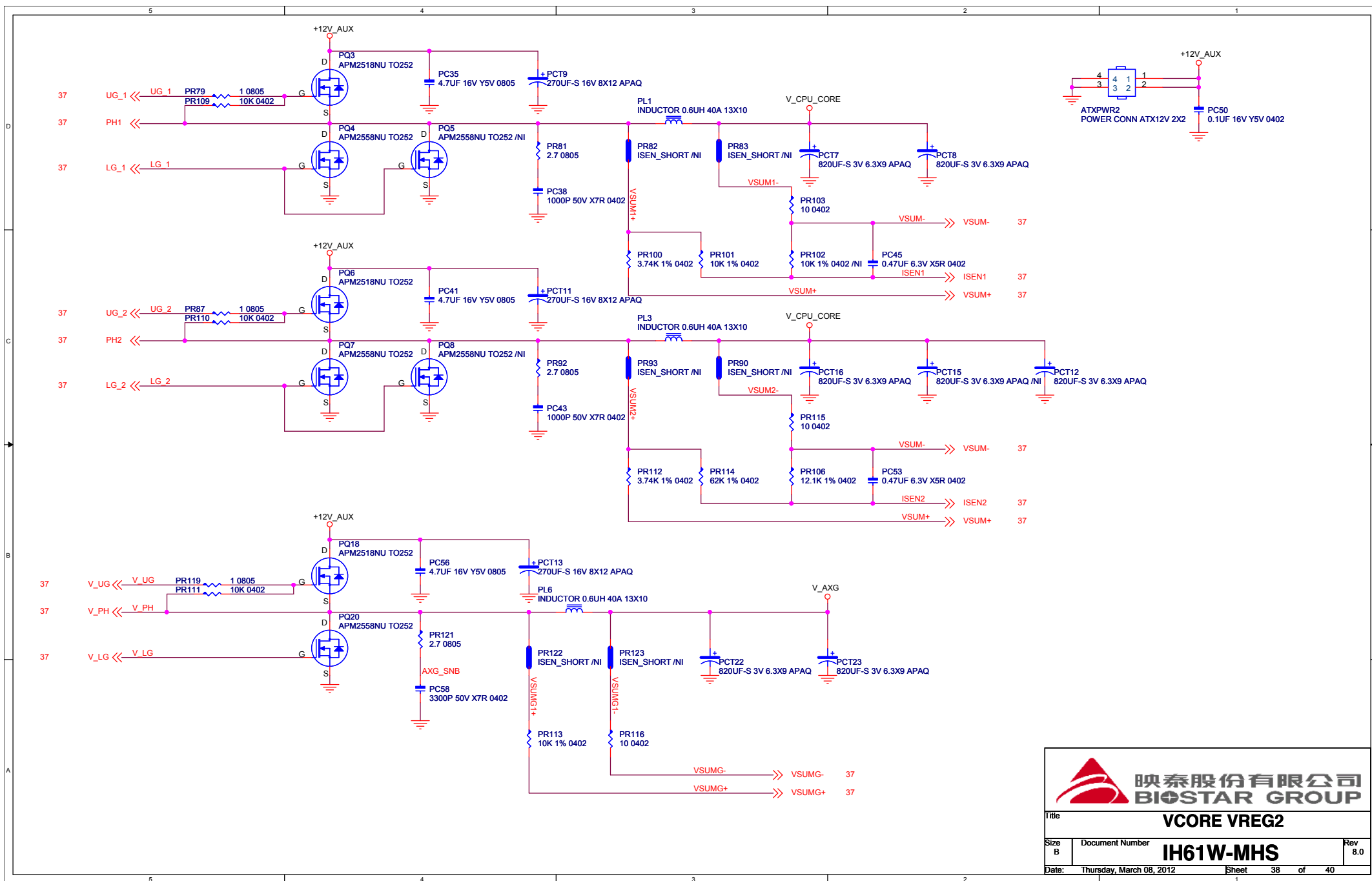
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VSM DC-DC Converter			
Size	Document Number	Rev	
B	IH61W-MHS	8.0	
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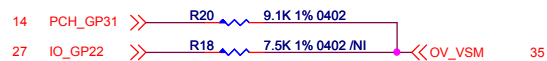


Title VTT DC-DC Conver			
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ISL6363CRZ 2+1 Phase design







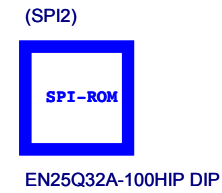
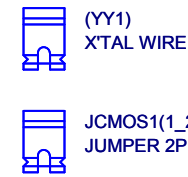
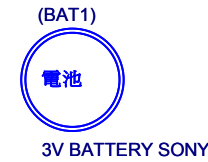
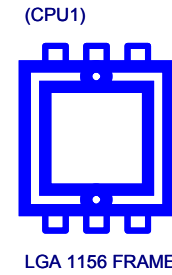
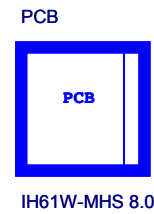
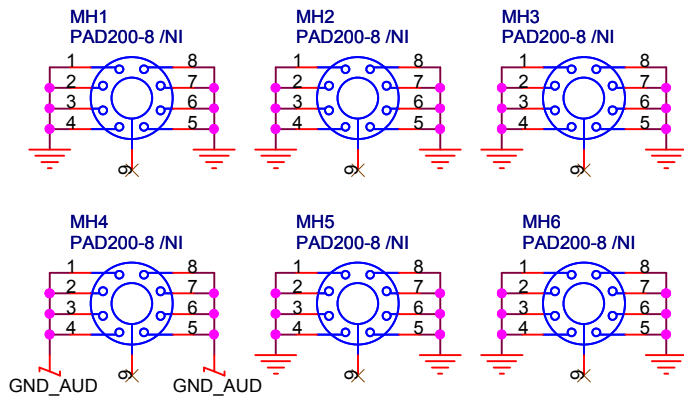
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+10%	1	0
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V_AXG	OV_AXG	OV_AXG1
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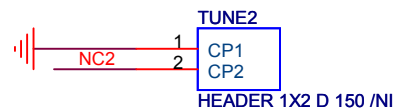
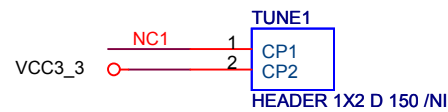
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1.1V	0	1
1.15V	1	0
1.2V	0	0

V_SM	OV_VSM0
1.5V(DEFAULT)	1
1.6V	0

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Impedance Testing Coupon



New PANEL1
PANEL1 2*8

YELLOW COLOR



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