

IB85D-MHS

B85MG

REV:0.6

CPU:
LGA1150

System Chipset:
LYNXPOINT-B85

Main Memory:
Dual Channel/DDR-III*2(Max 32GB)
DDR3-2600(OC)/ 2400(OC)/ 2200(OC)/ 2133(OC)/ 1866(OC)/ 1800(OC)/ 1600/ 1333 /1066

Onboard Device:

Super I/O IT8728F-EX
LAN Realtek 8111G
HD Codec ALC887

Power solution:

CPU Voltage Regulators:4Phase by ISL95812
DDR Voltage Regulators:1Phase by UP1514

Expansion Slots:

PCI EXPRESS 16X SLOT*1
PCI EXPRESS 1X SLOT*2

REAR IO:

PS/2 Keyboard + Mouse Ports
VGA Port
DVI Port
2 layer USB3.0(2.0) Ports
Gb RJ-45 +2 USB2.0 Ports
Audio Jackets

Front I/O:

SATA3 * 4
USB 2.0 Header * 2
USB 3.0 Header * 1
CPU /System1 FAN
SPDIF Out * 1
Front Audio Header
Serial Header
Parallel Header
CIR Header

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| 41 | BOM |

Table 1-2. Desktop Lync Point SKUs

| Feature Set | SKU Name | | | | | |
|---|---|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| | Intel® Q87 Express Chipset | Intel® Q85 Express Chipset | Intel® B85 Express Chipset | Intel® Z87 Express Chipset | Intel® H87 Express Chipset | Intel® H81 Express Chipset |
| Flexible I/O | Yes | No | No | Yes | Yes | No |
| PCI Express® 2.0 Ports | 8 ¹ | 8 | 8 | 8 ¹ | 8 ¹ | 6 |
| Total number of USB ports | 14 | 14 | 12 ^{2,3} | 14 | 14 | 12 ³ |
| • USB 3.0 Capable Ports (SuperSpeed and all USB 2.0 speeds) | 4(0) ¹ | 4 | 4 | 4(0) ² | 4(0) ² | 2 ³ |
| • USB 2.0 Only Ports | 10(8) ¹ | 10 | 8 | 10(8) ² | 10(8) ² | 8 |
| Total number of SATA ports | 4(0) ^{1,2} | 6 | 6 | 4(0) ^{1,2} | 4(0) ^{1,2} | 4 ¹ |
| • SATA Ports (6 Gb/s, 3 Gb/s, and 1.5 Gb/s) | 6 | 4 ^{1,2} | 4 ^{1,2} | 6 | 6 | 2 ^{1,2} |
| • SATA Ports (3 Gb/s and 1.5 Gb/s only) | 0 | 2 | 2 | 0 | 0 | 2 |
| VGA | Yes | Yes | Yes | Yes | Yes | Yes |
| Intel® Rapid Storage Technology | Intel® RAID 0/1/5/10 Support | Yes | No | No | Yes | No |
| | Intel® Smart Response Technology ^{1,4} | Yes | No | No | Yes | No |
| Intel® Anti-Theft Technology ^{1,5} | Yes | Yes | Yes | Yes | Yes | Yes |
| Intel® Active Management Technology v9.0 | Yes | No | No | No | No | No |
| Intel® Small Business Advantage ^{1,6} | Yes | Yes | Yes | No | Yes ^{1,7} | No |
| Intel® Rapid Start Technology ^{1,8} | Yes | Yes | Yes | Yes | Yes | No |
| Intel® Identity Protection Technology (Intel® IPT) ^{1,9} | Yes | No | No | No | No | No |
| Near Field Communication ^{1,10} | Yes | Yes | Yes | Yes | Yes | Yes |
| ACPI S1 State Support | Yes | Yes | Yes | Yes | Yes | Yes |

HW Engineer:

Date:

HW Leader1:

Date:

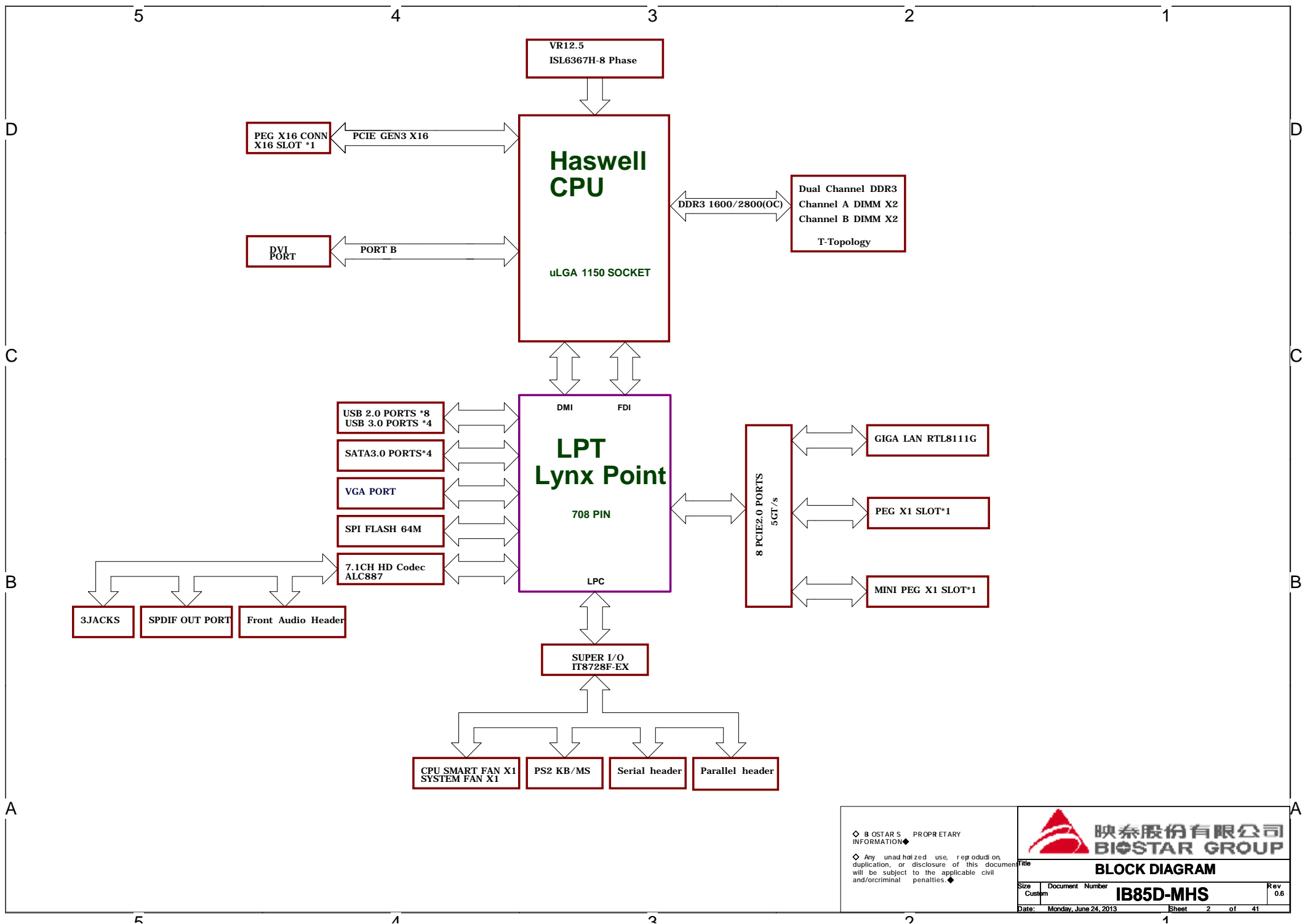
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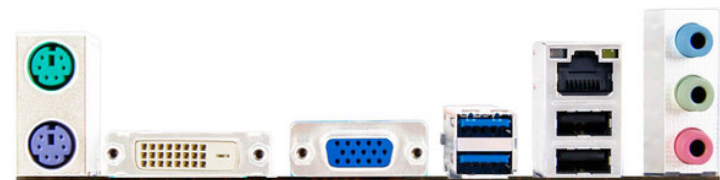
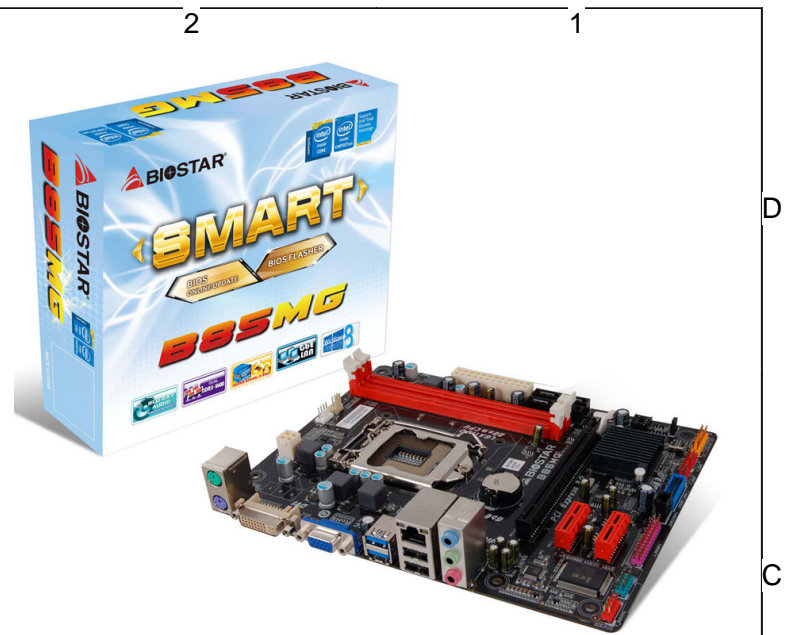
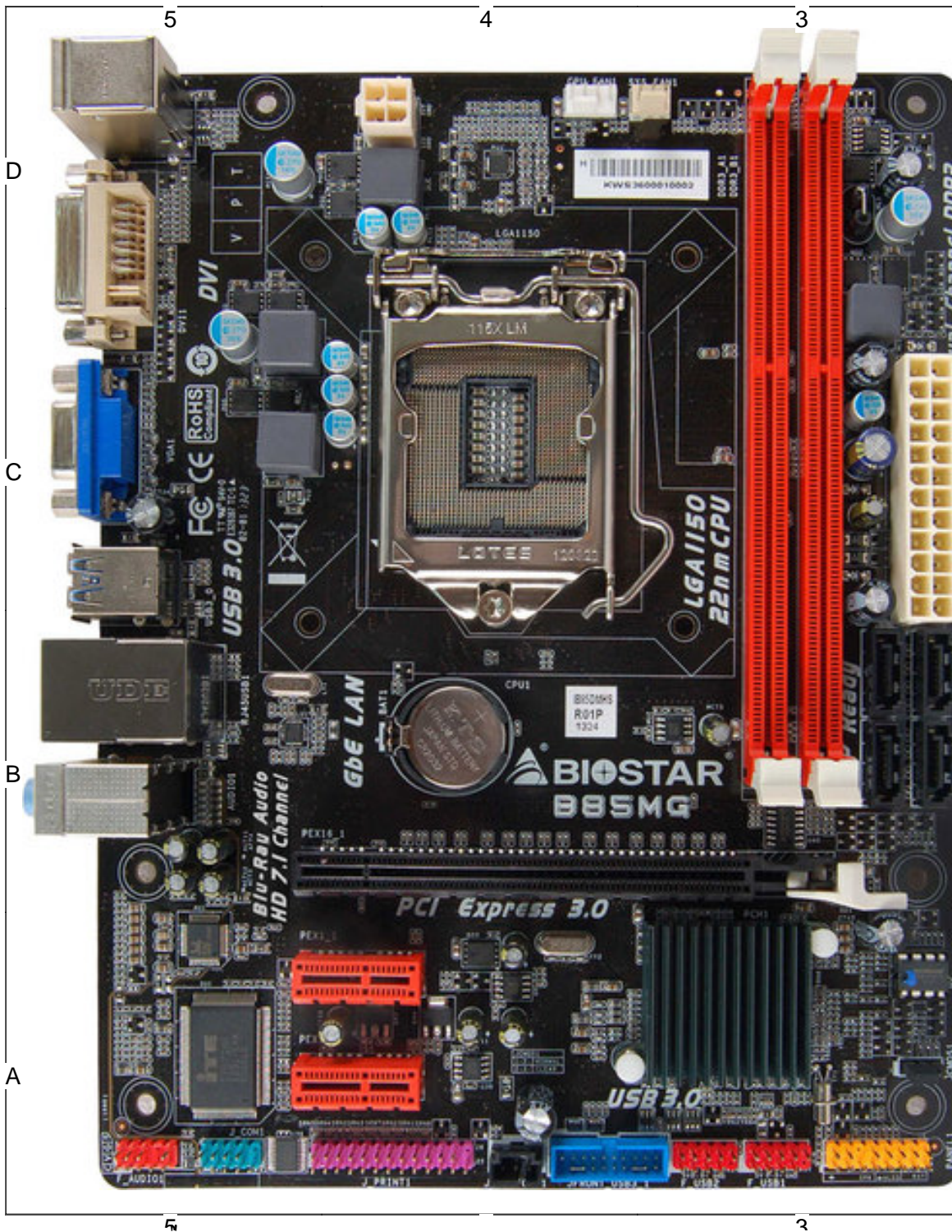
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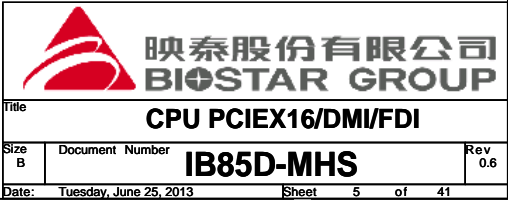
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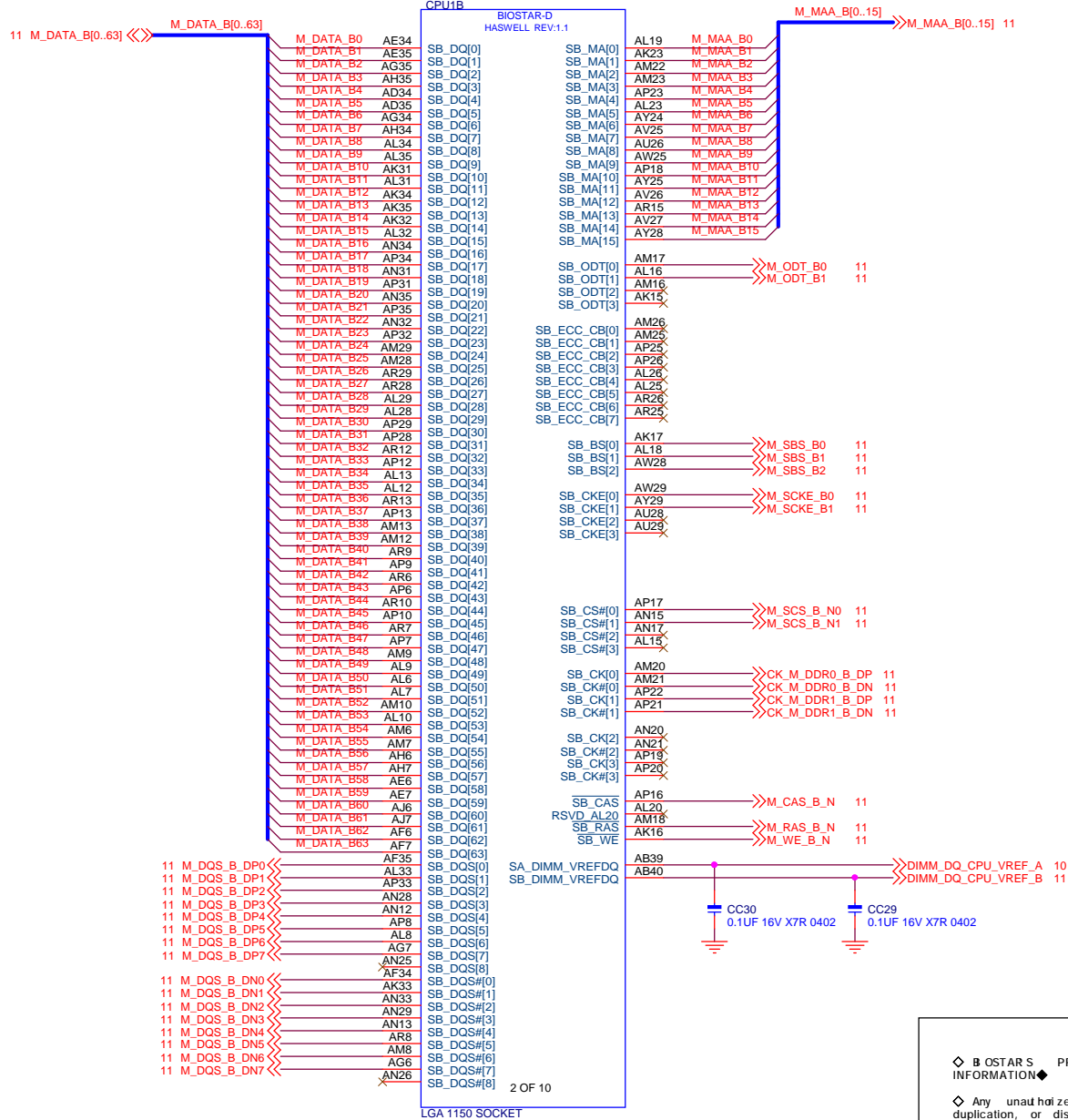
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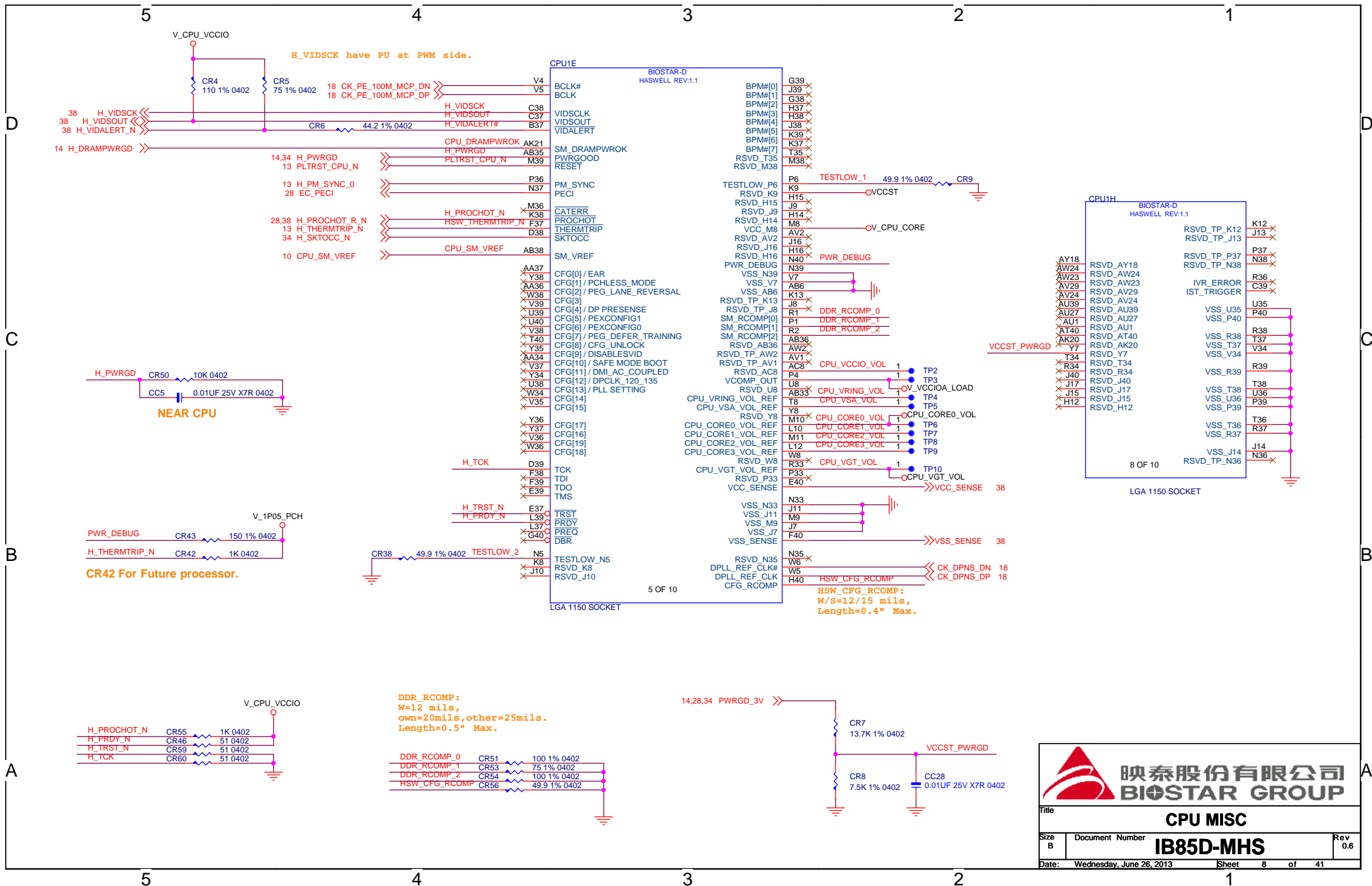


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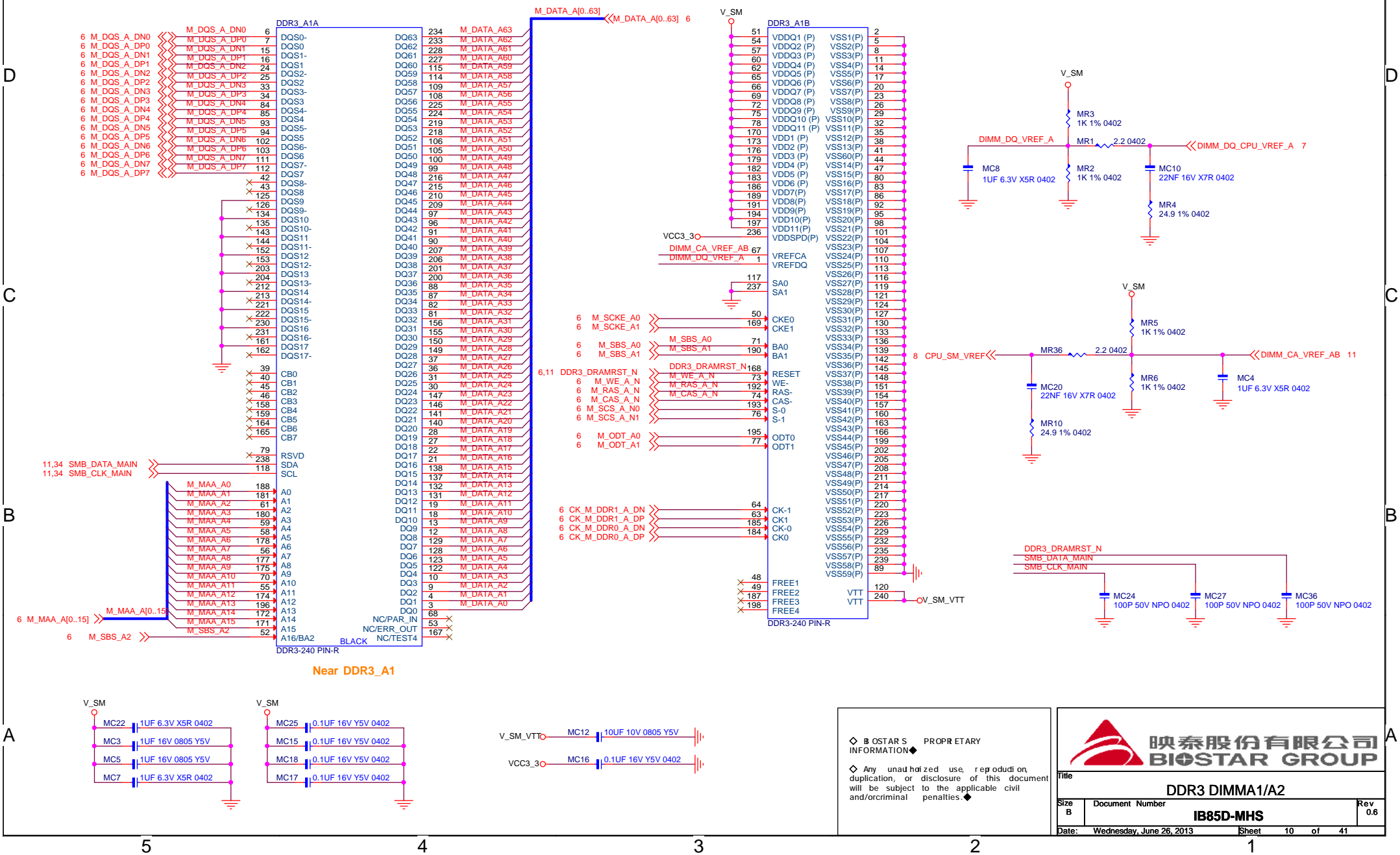








MEMORY PART: M+Reference



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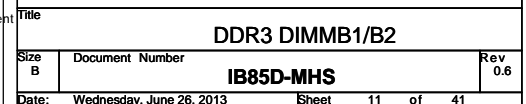
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Title: **DDR3 DIMM1/A2**

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PCH PART: Y+Reference

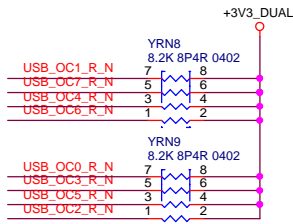
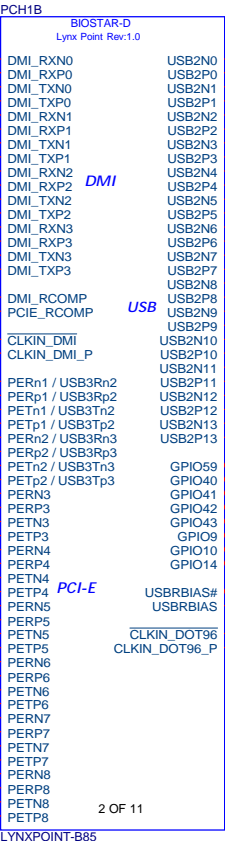
DMI:85 ohm.
Length=9" max

DMI_RCOMP
W=8 mils,
length=0.32"max

PCI-E X1 SLOT

PCI-E X1 SLOT

GBE 8111G



USBRBIAS_PCH,DMI2RBIAS
W/S=4/15 mils,length=0.45"max

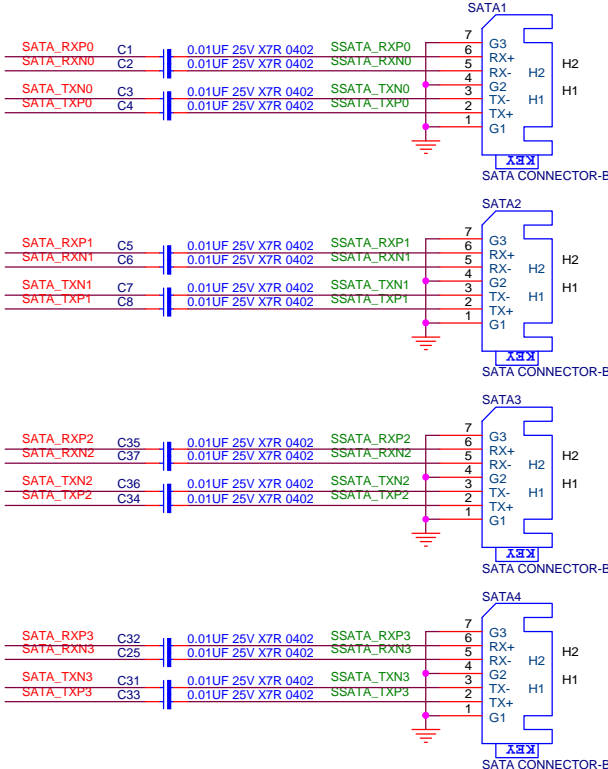
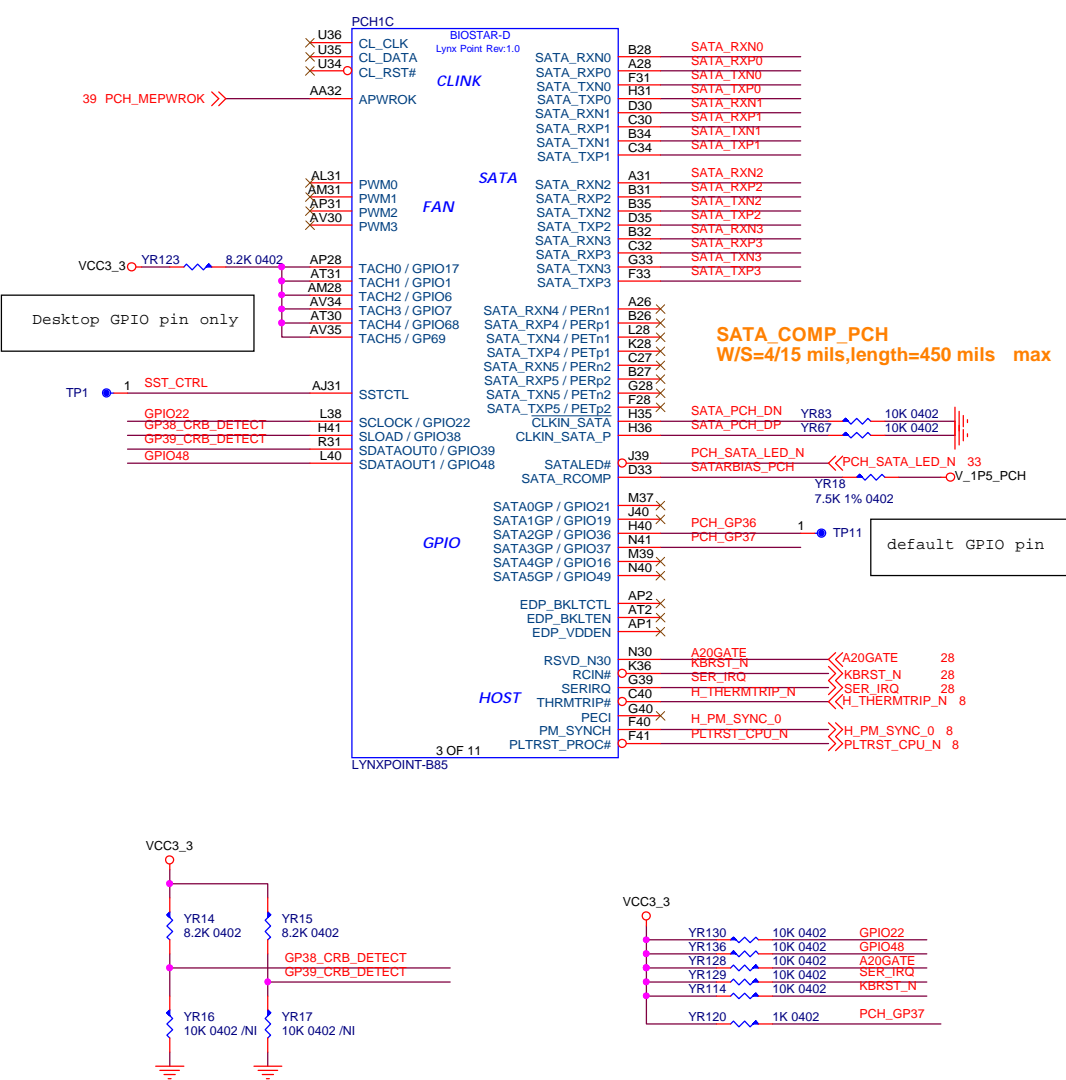
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| PCH DMI/PCIE/USB | | |
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PCH PART: Y+Reference



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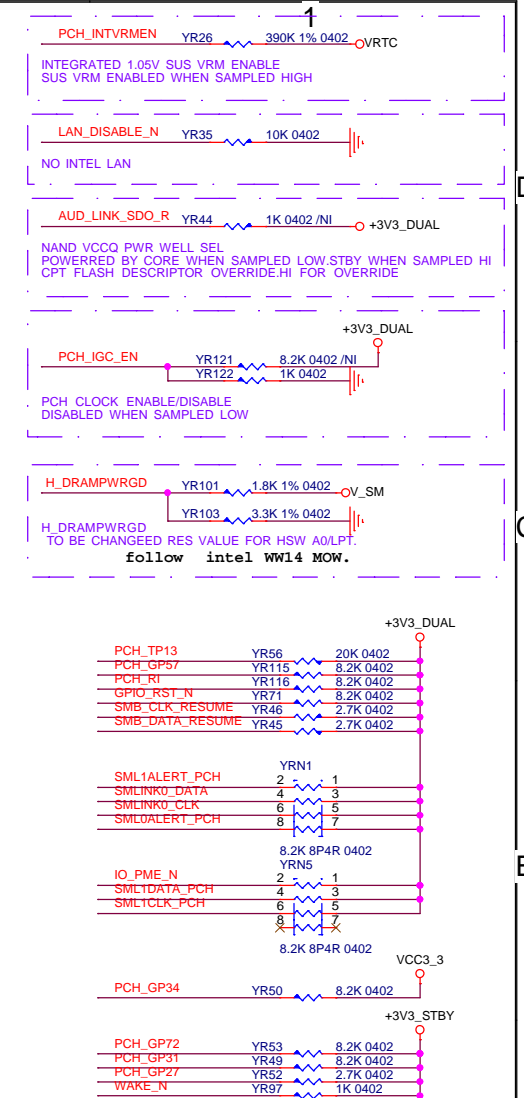
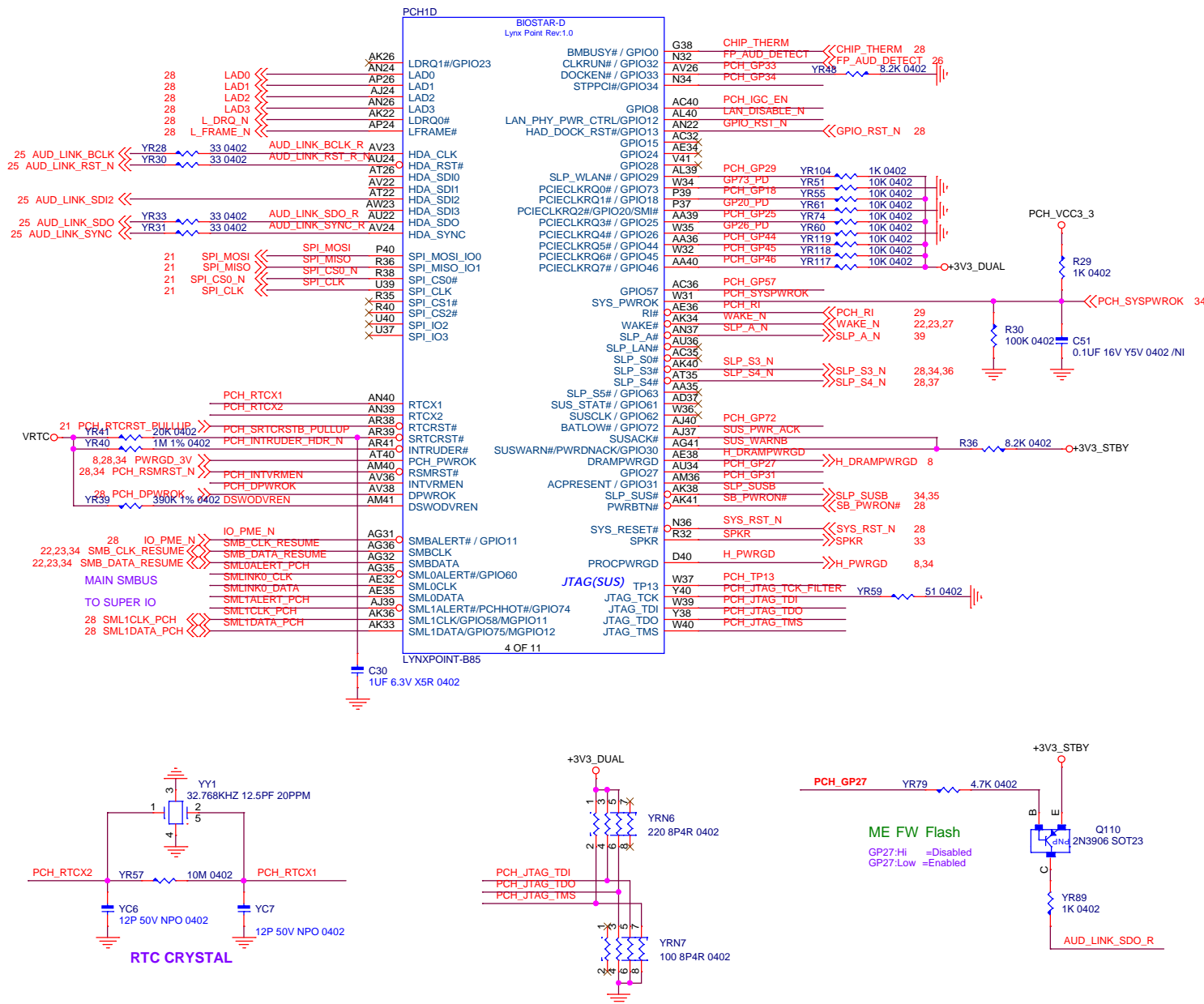
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Title: **PCH CLINK/SATA/CPU HOST**

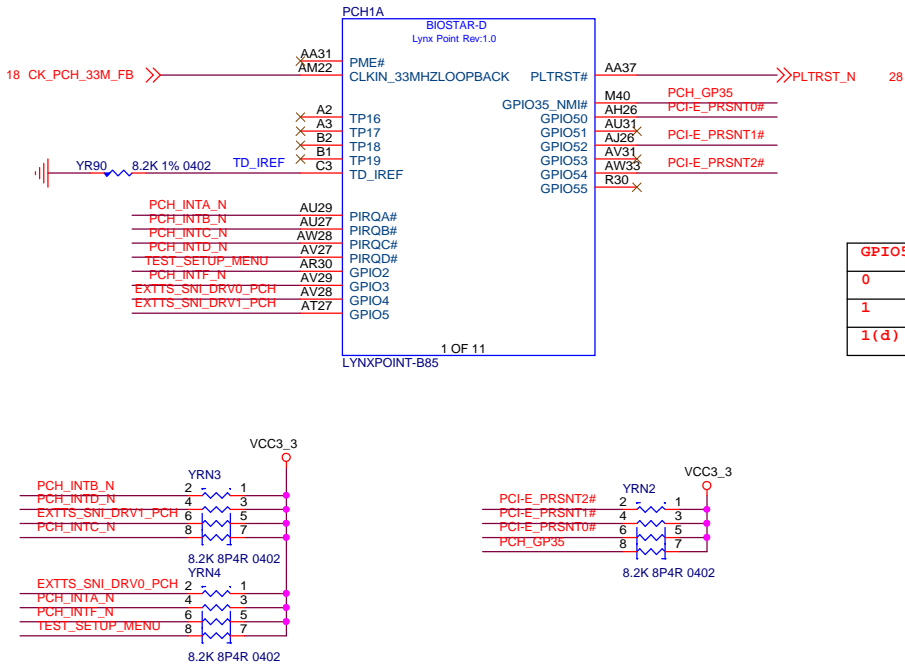
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PCH PART: ⁵Y+Reference



PCH PART: Y+Reference



| GPIO51 | GPIO19 | |
|--------|--------|-----|
| 0 | 0 | LPC |
| 1 | 0 | PCI |
| 1(d) | 1(d) | SPI |

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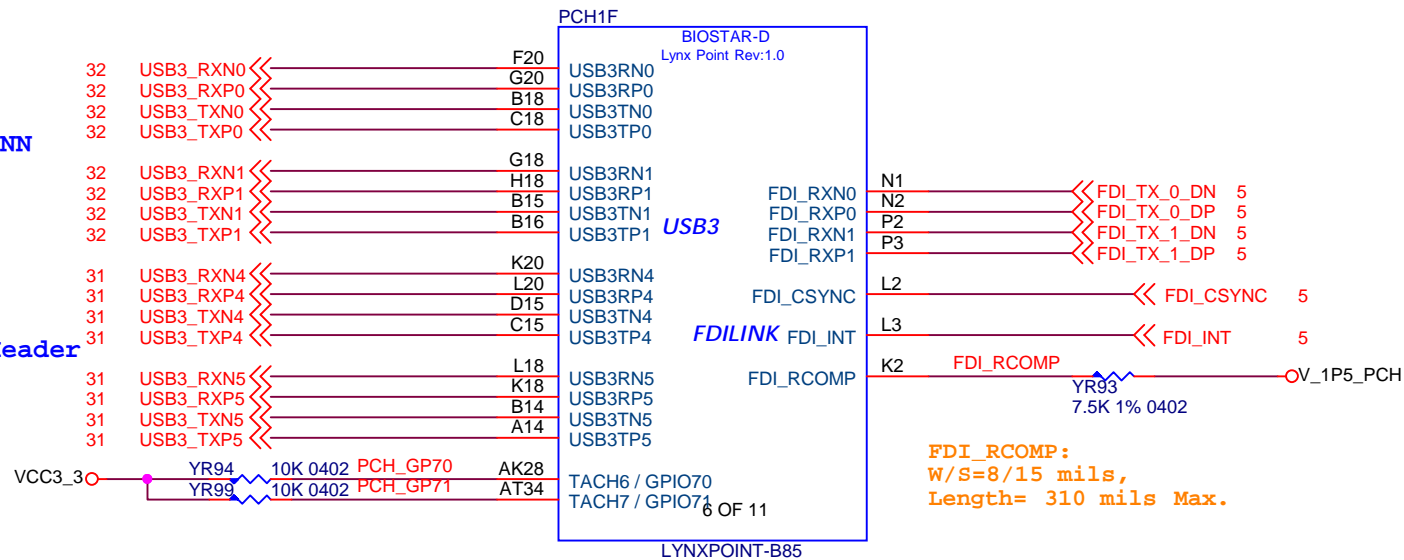


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| Title PCH NVRAM | | |
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PCH PART: Y+Reference

Real USB CONN

Front USB Header



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Title **PCH USB3/FDI LINK**

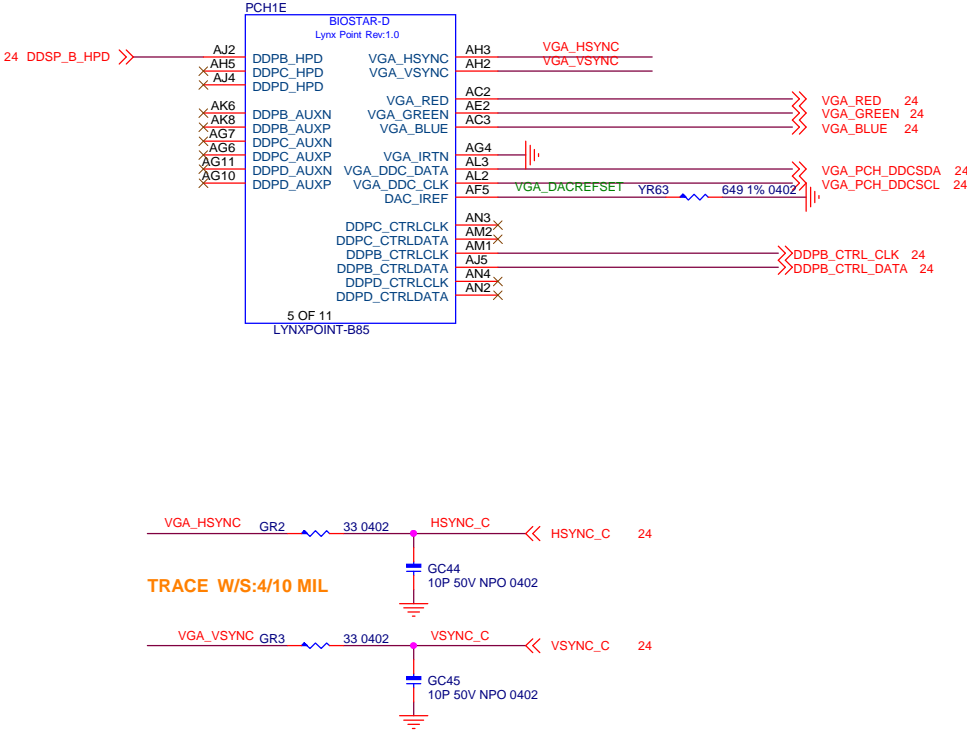
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PCH PART: Y+Reference



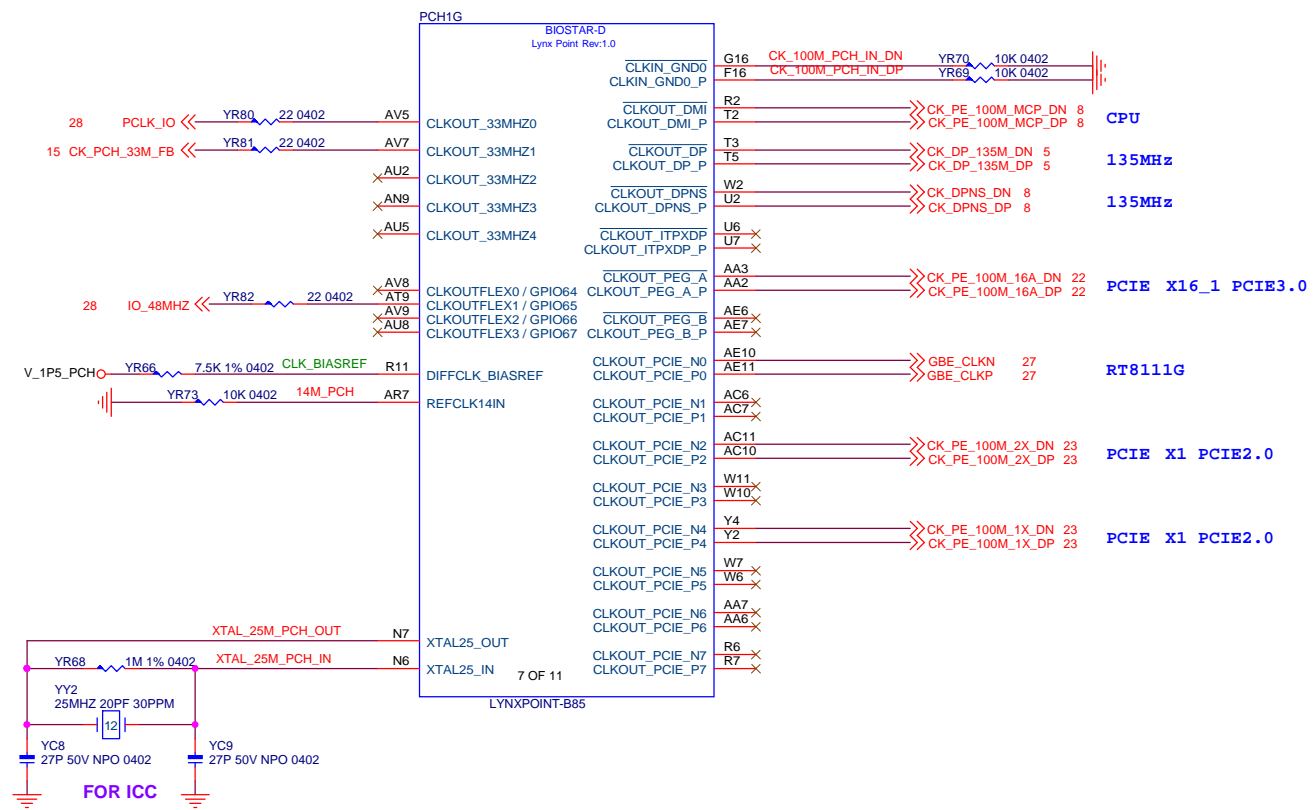
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| Title | | |
| PCH VGA/DISPLAY PORT | | |
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PCH PART: Y+Reference



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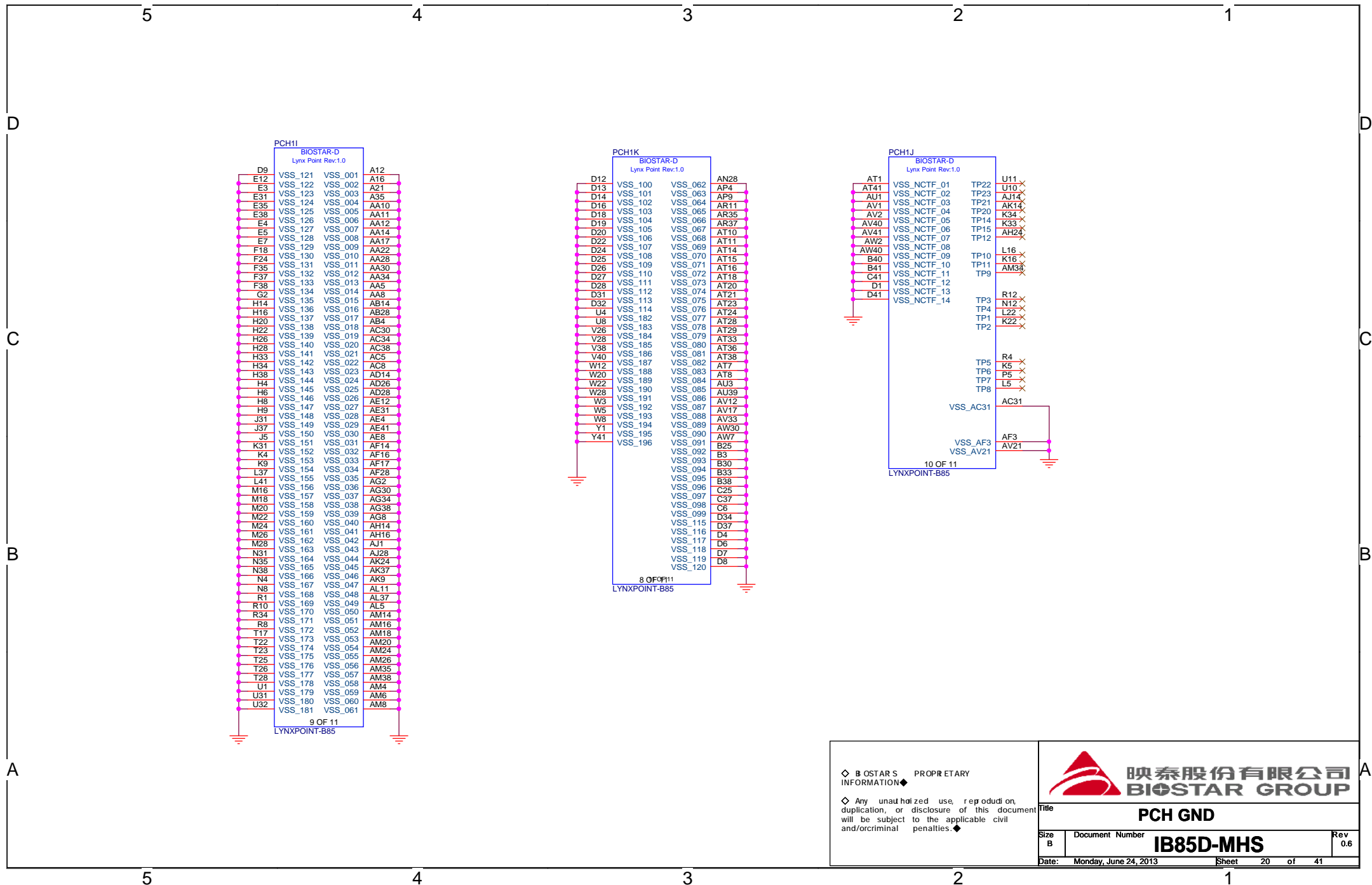


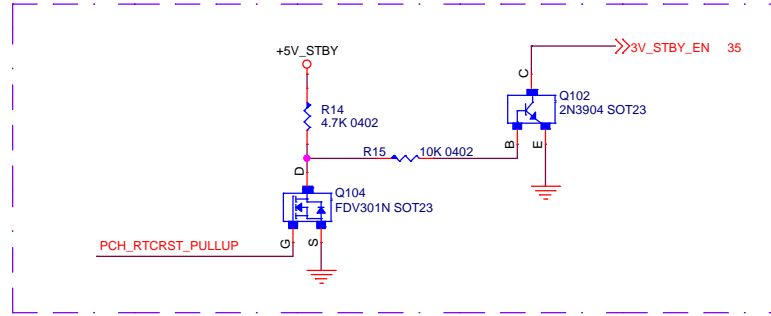
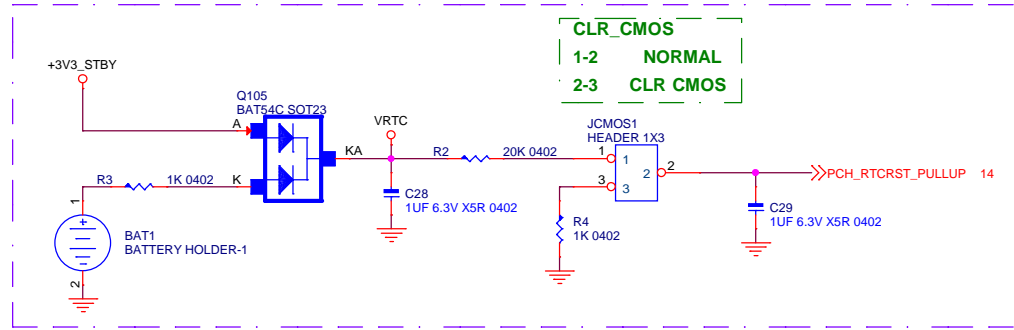
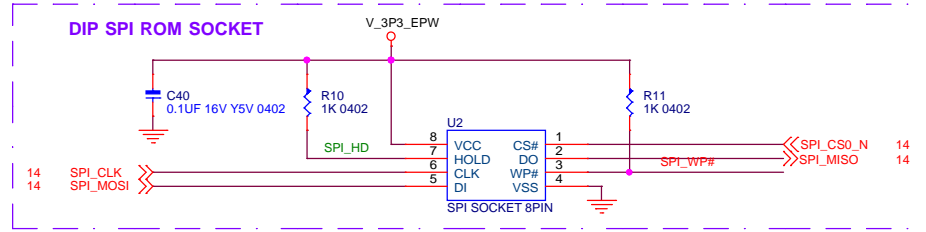
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Title
PCH CLOCK BUFFER

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Title: **SPI ROM/RTC CRYSTAL/BAT**

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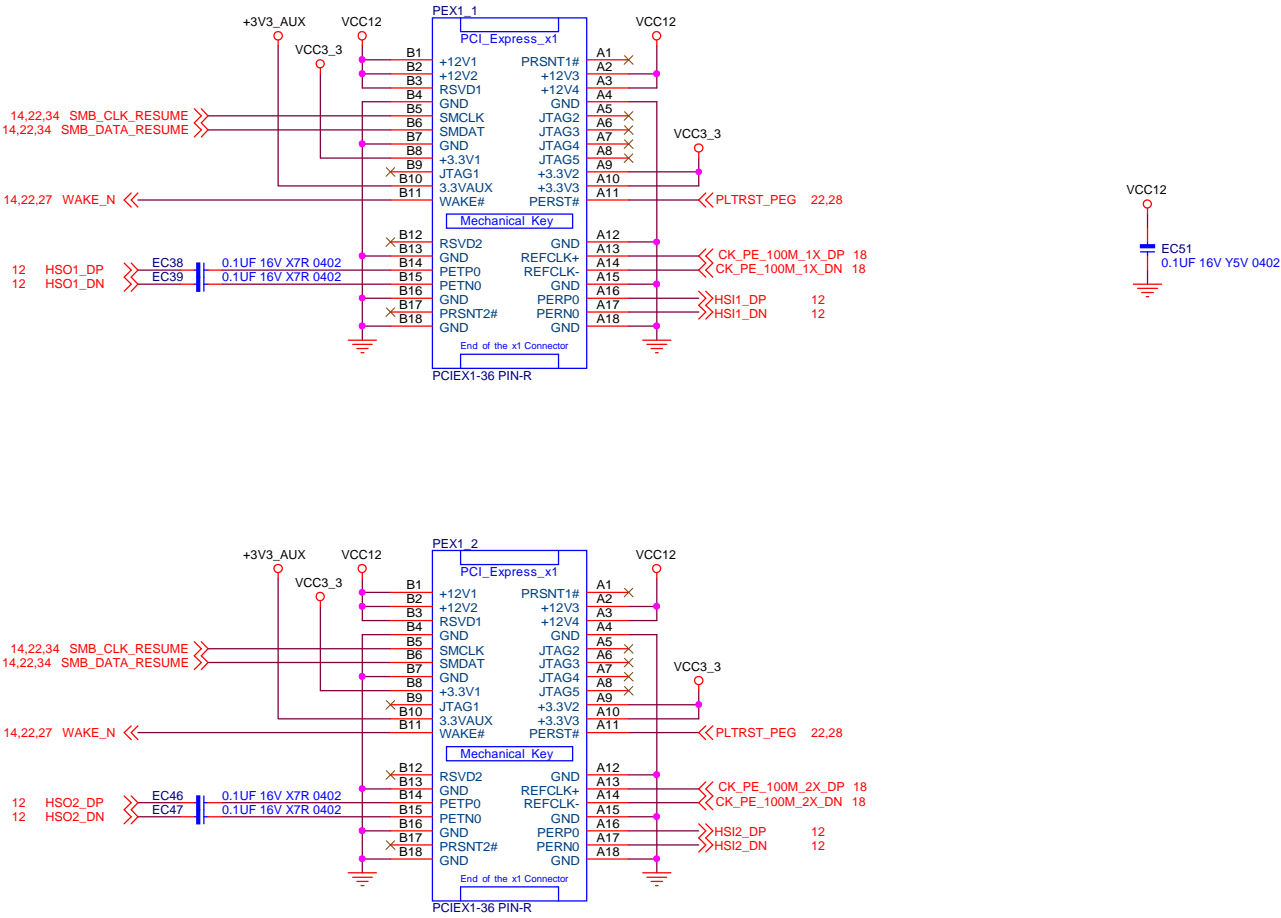
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SLOT PART: E+Reference



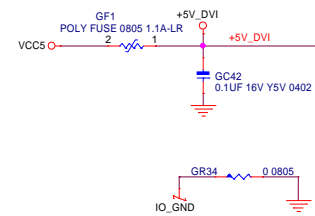
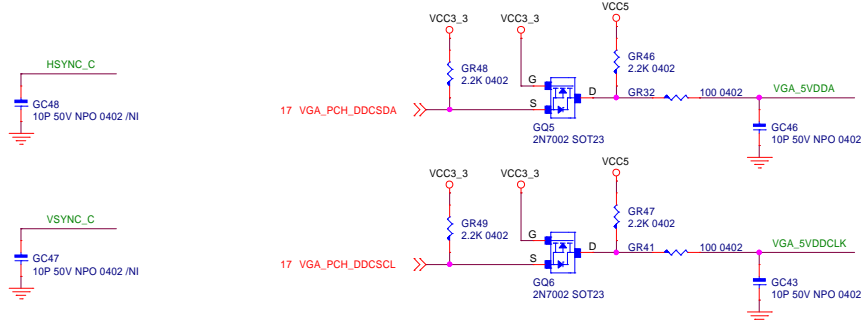
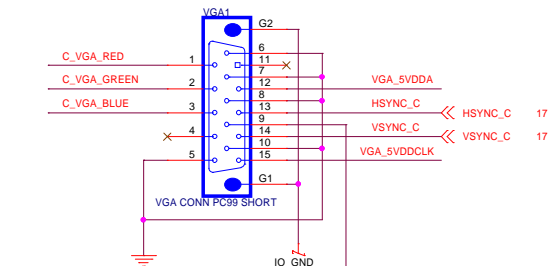
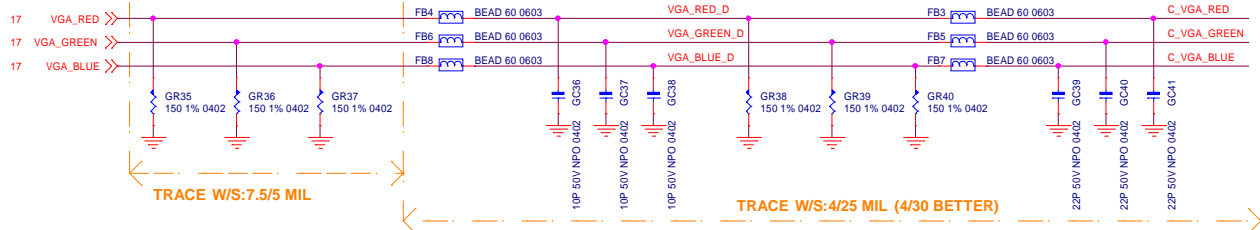
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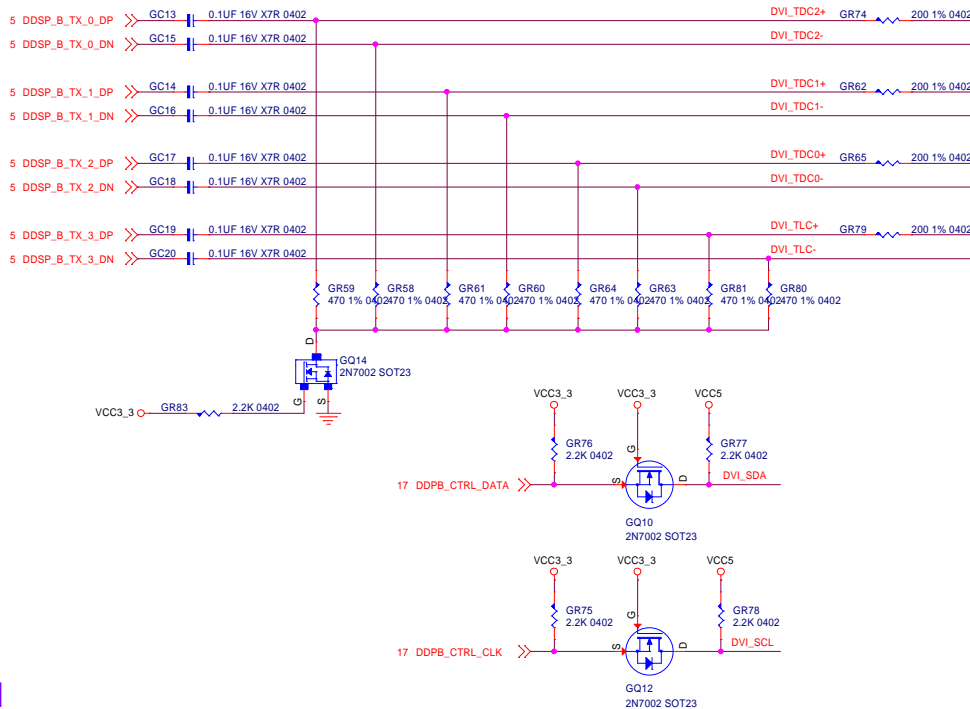
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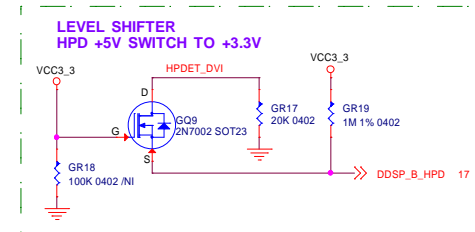
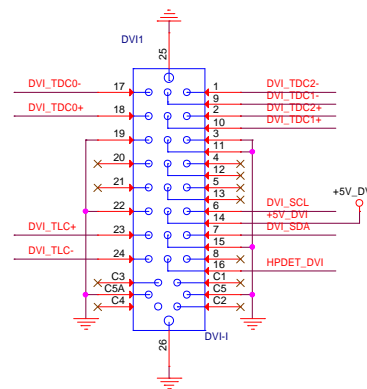
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D_SUB



DVI CONNECTOR DVI CONNECTOR TYPE ACCORD WITH SPEC

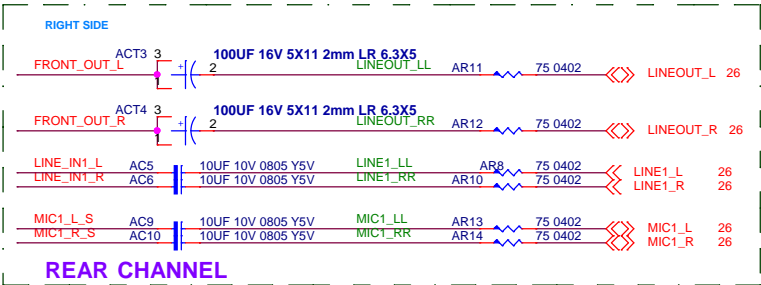
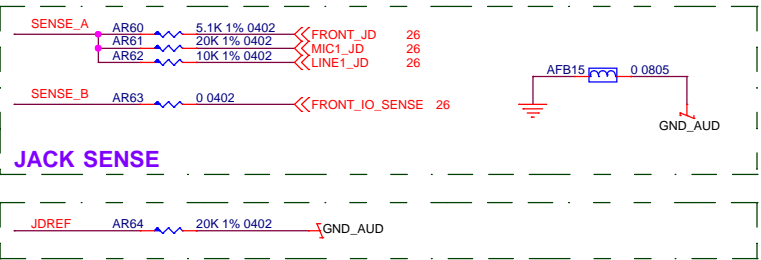
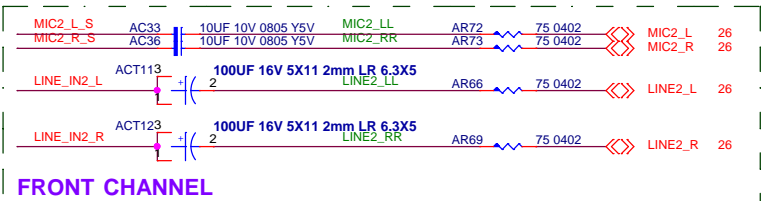
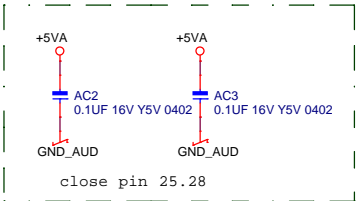
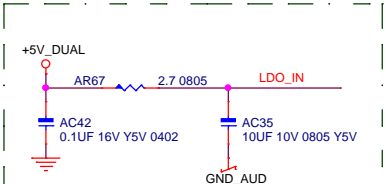
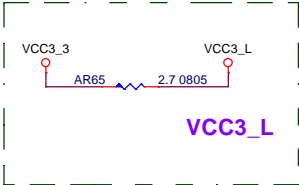
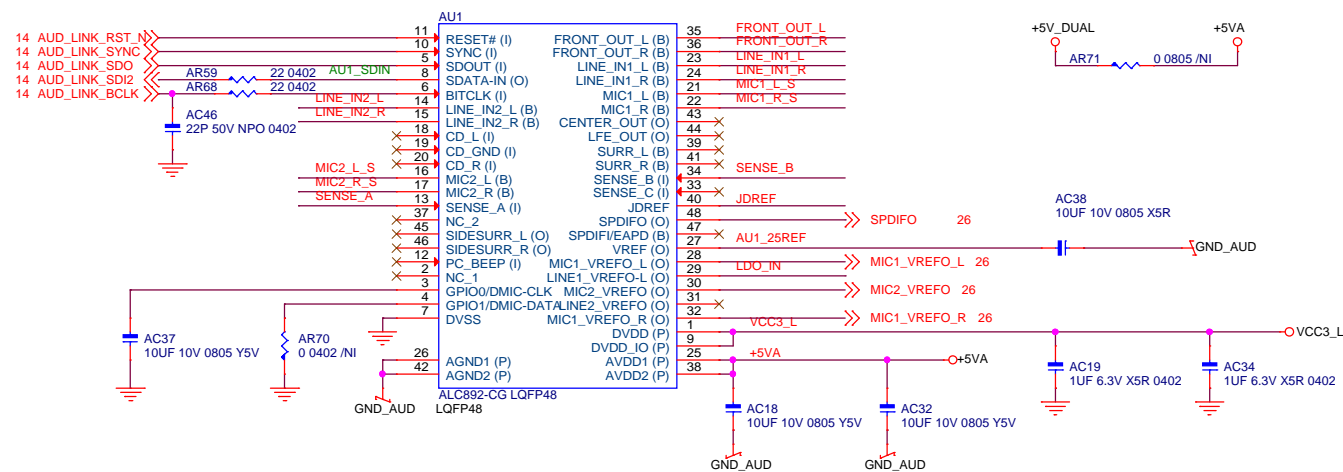


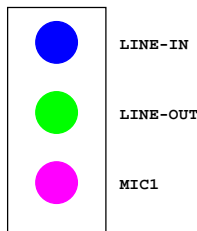
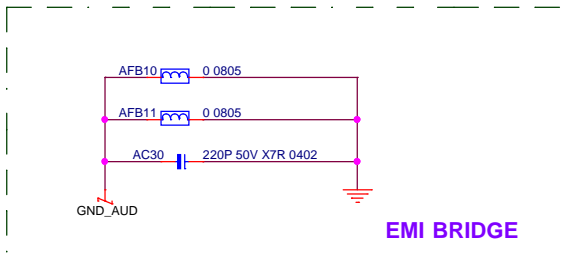
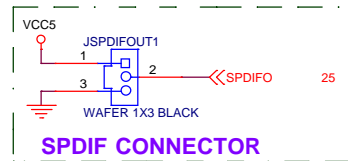
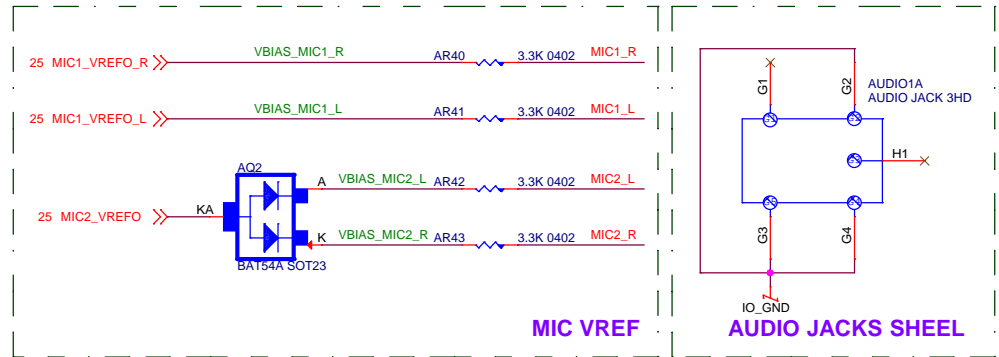
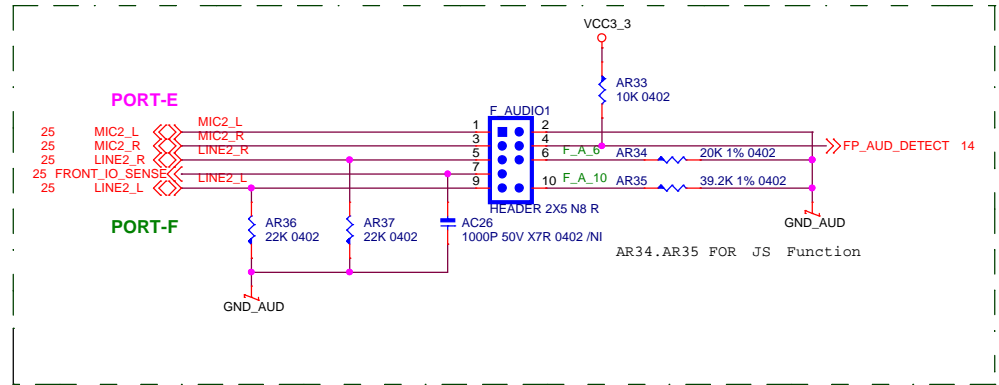
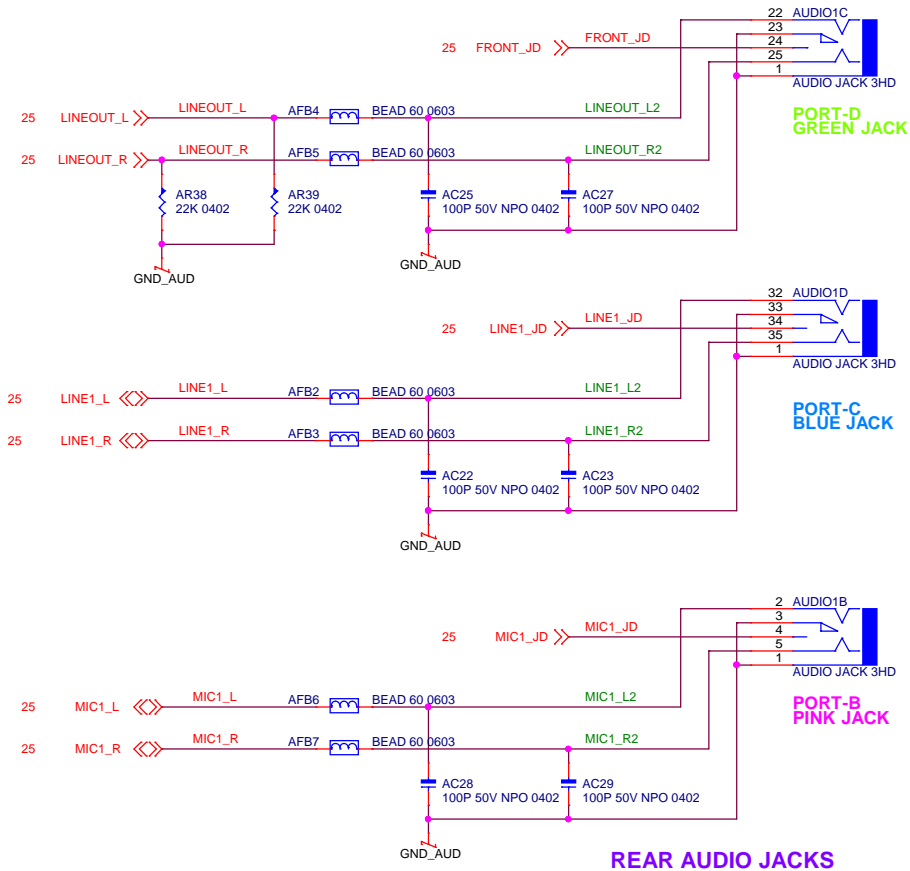
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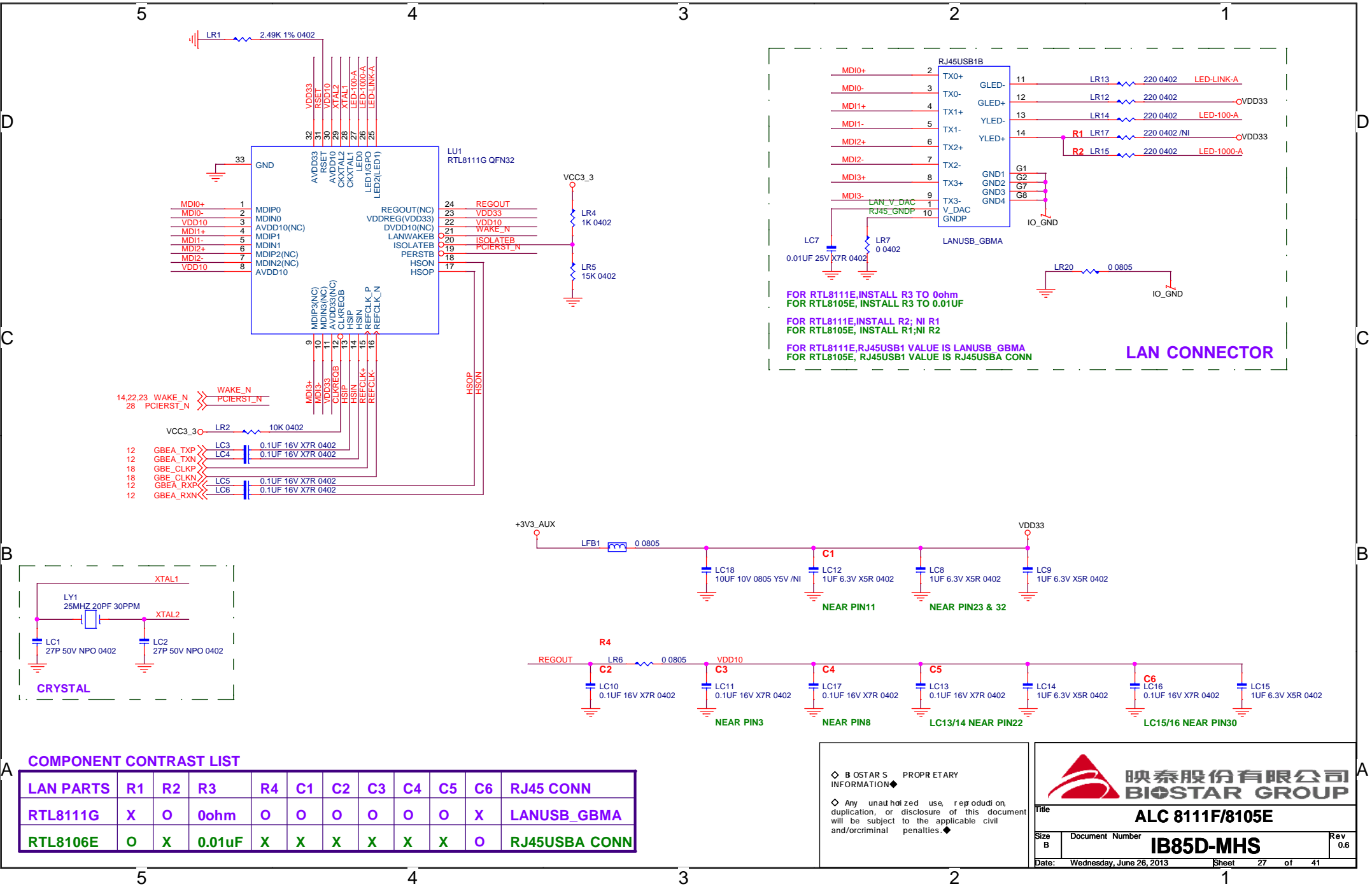
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| | |
| VGA/DVI CONNECTOR | |
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AUDIO PART: A+Reference







COMPONENT CONTRAST LIST

| LAN PARTS | R1 | R2 | R3 | R4 | C1 | C2 | C3 | C4 | C5 | C6 | RJ45 CONN |
|-----------|----|----|--------|----|----|----|----|----|----|----|---------------|
| RTL8111G | X | O | 0ohm | O | O | O | O | O | O | X | LANUSB_GBMA |
| RTL8106E | O | X | 0.01uF | X | X | X | X | X | X | O | RJ45USBA_CONN |

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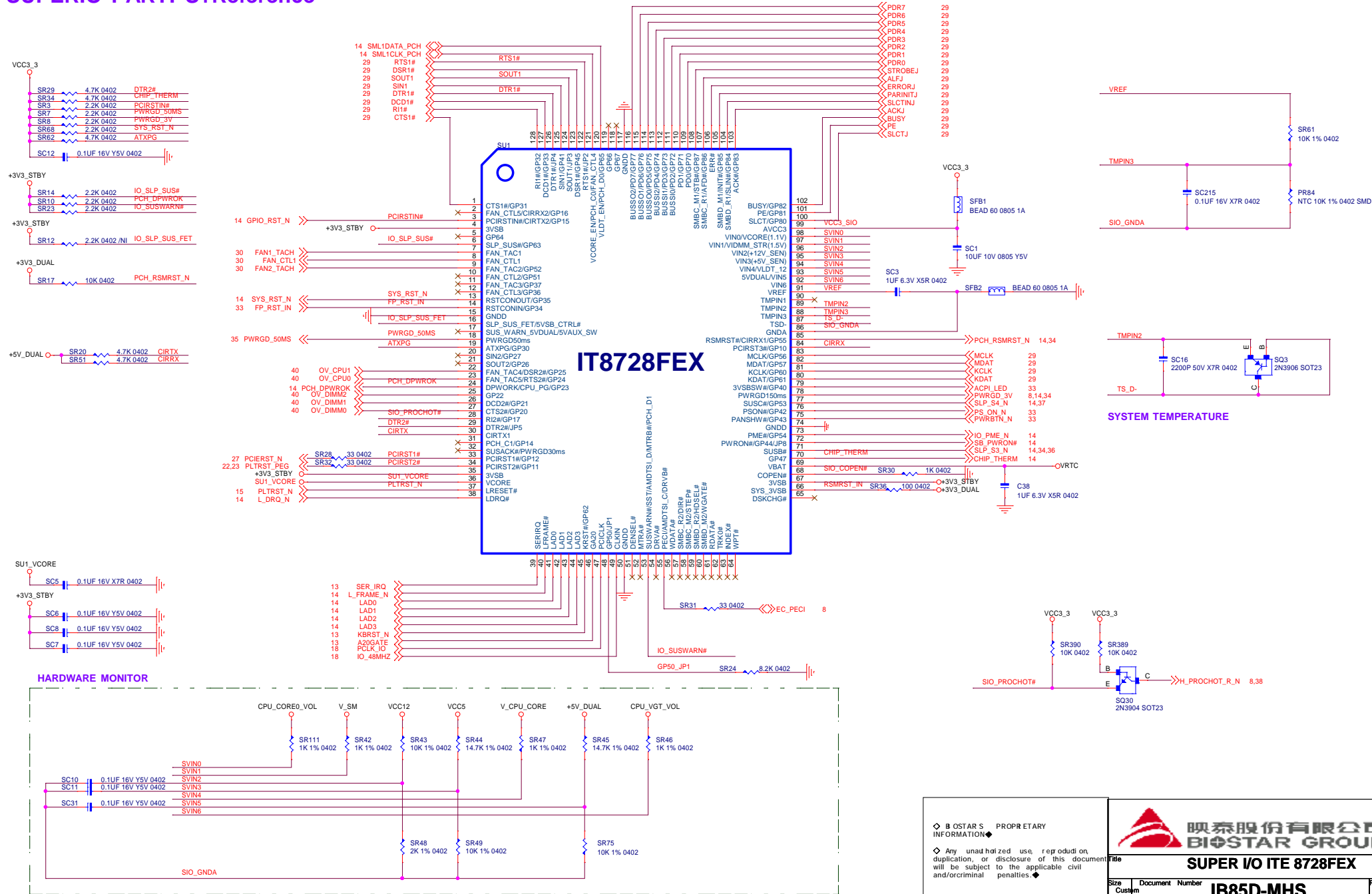
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SUPERIO PART: S+Reference



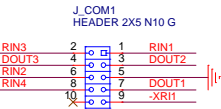
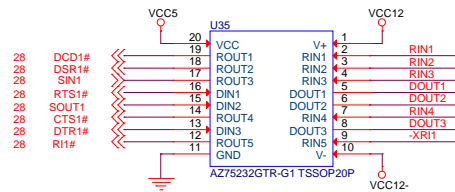
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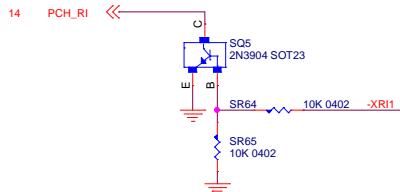
SUPER I/O ITE 8728FEX

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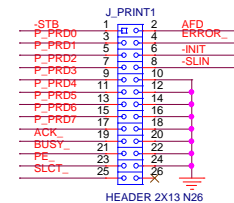
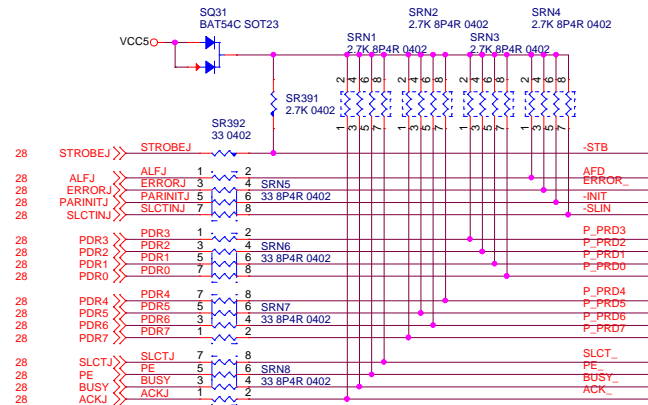
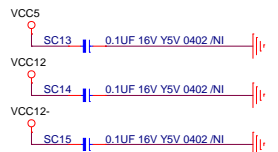
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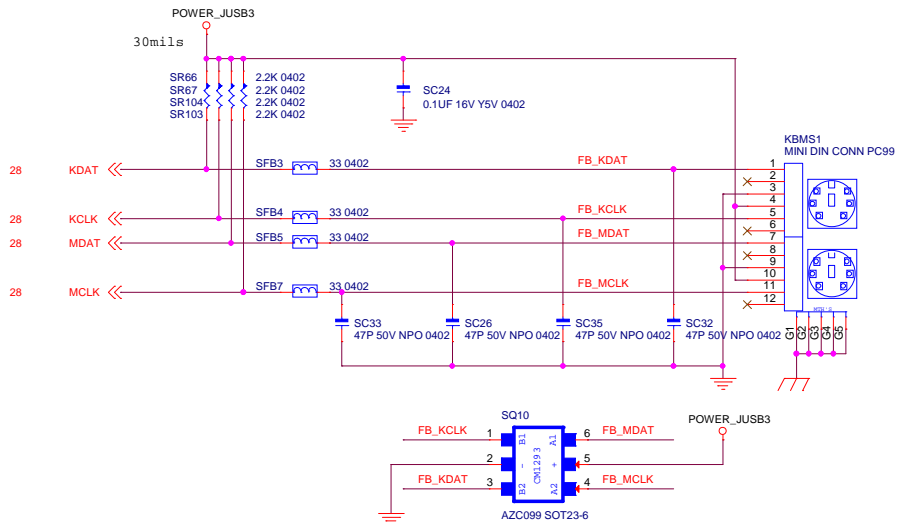
COM PORT



WAKE ON RING



PARALLEL CONNECTOR



KEYBOARD & MOUSE

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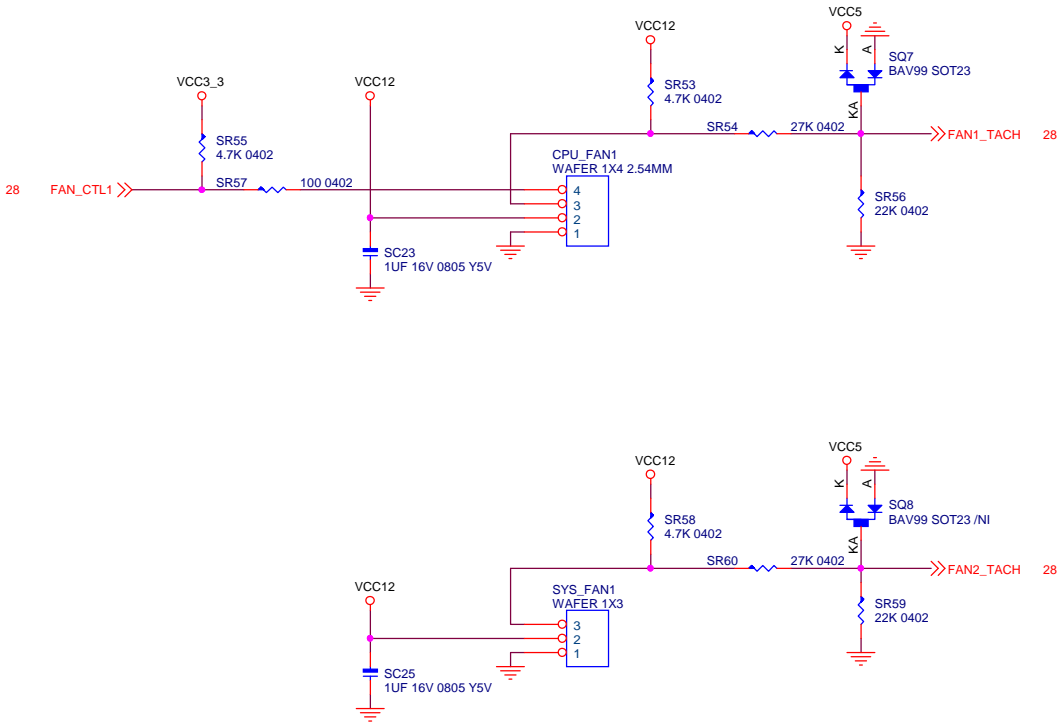
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COM1 / PS2 CONN


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CPU FAN/SYSTEM FAN1/SYSTEM FAN2



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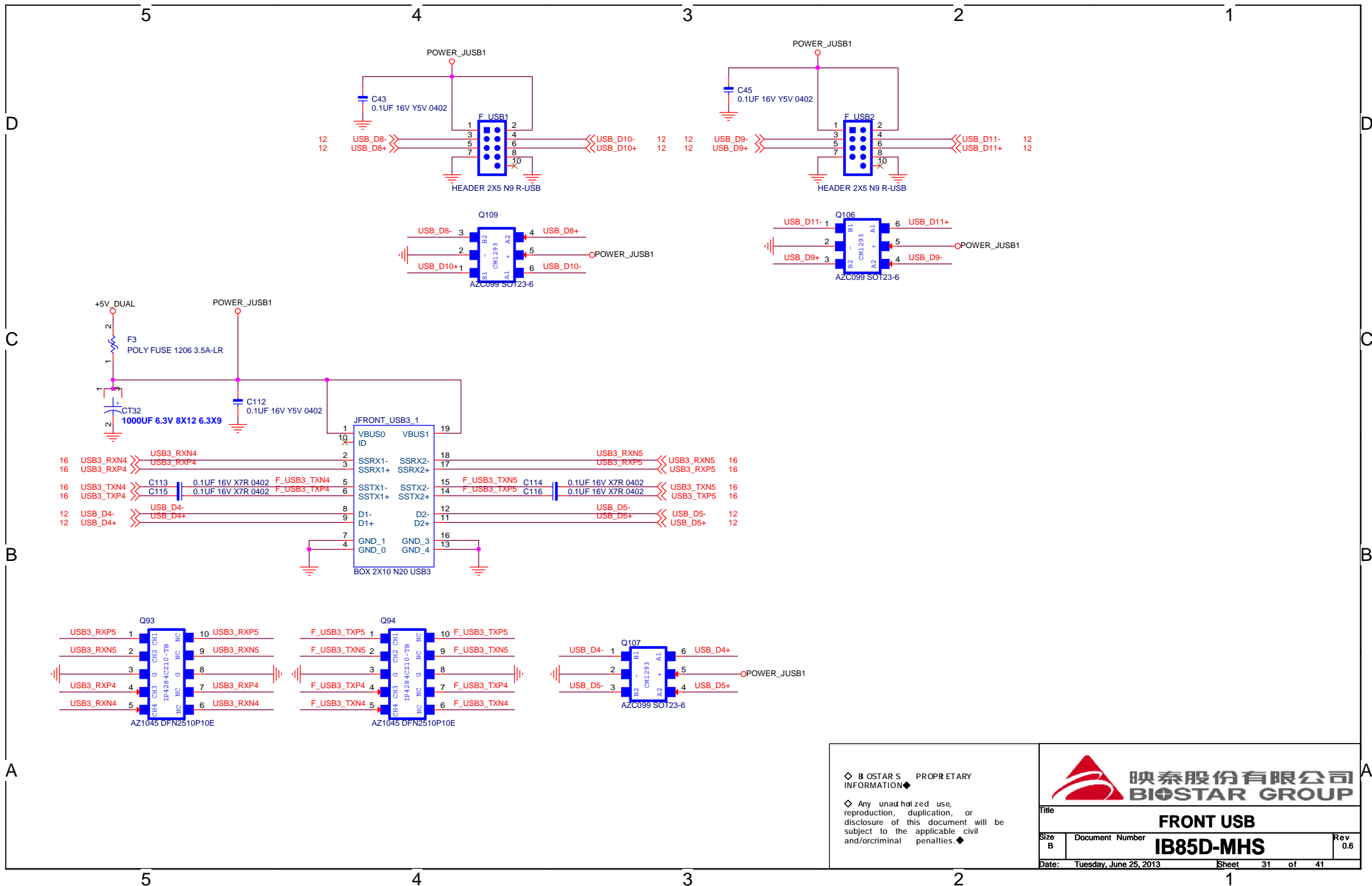


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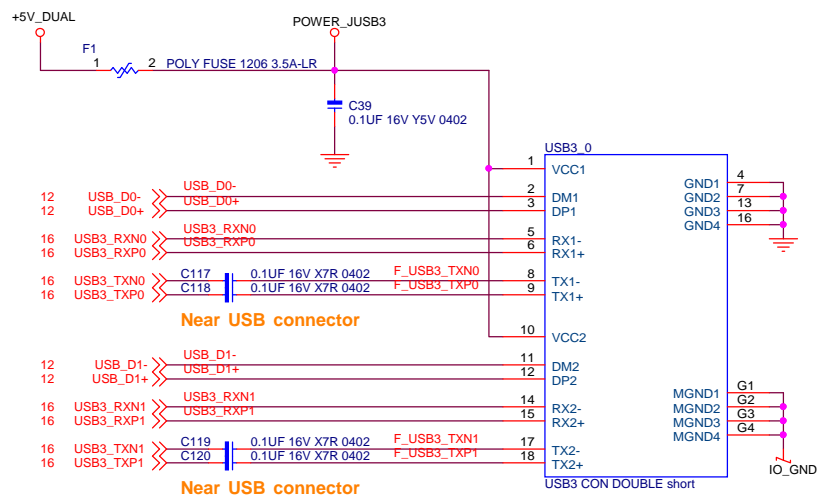
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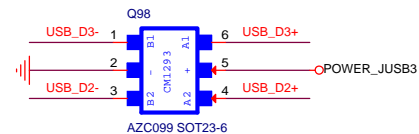
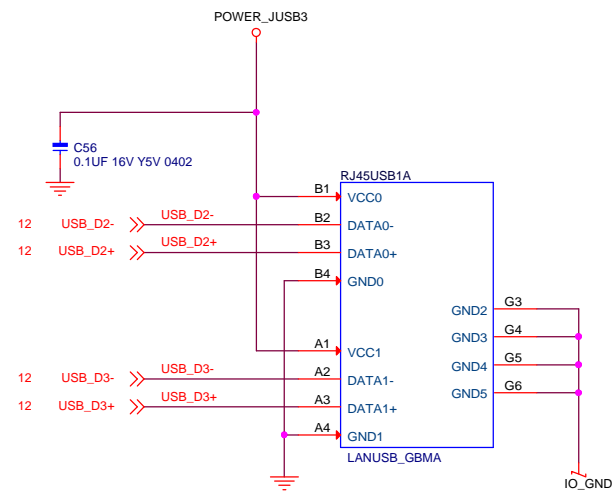
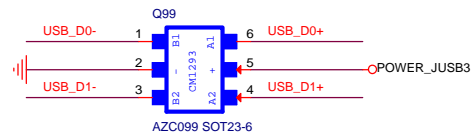
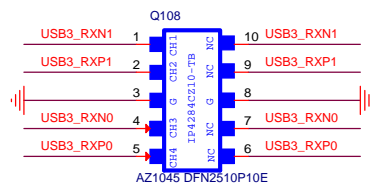
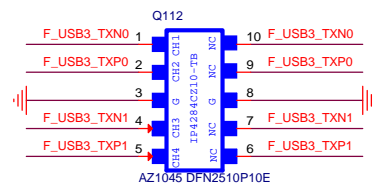
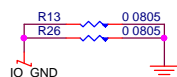


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| FRONT USB | | |
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USB3.0 PORTS



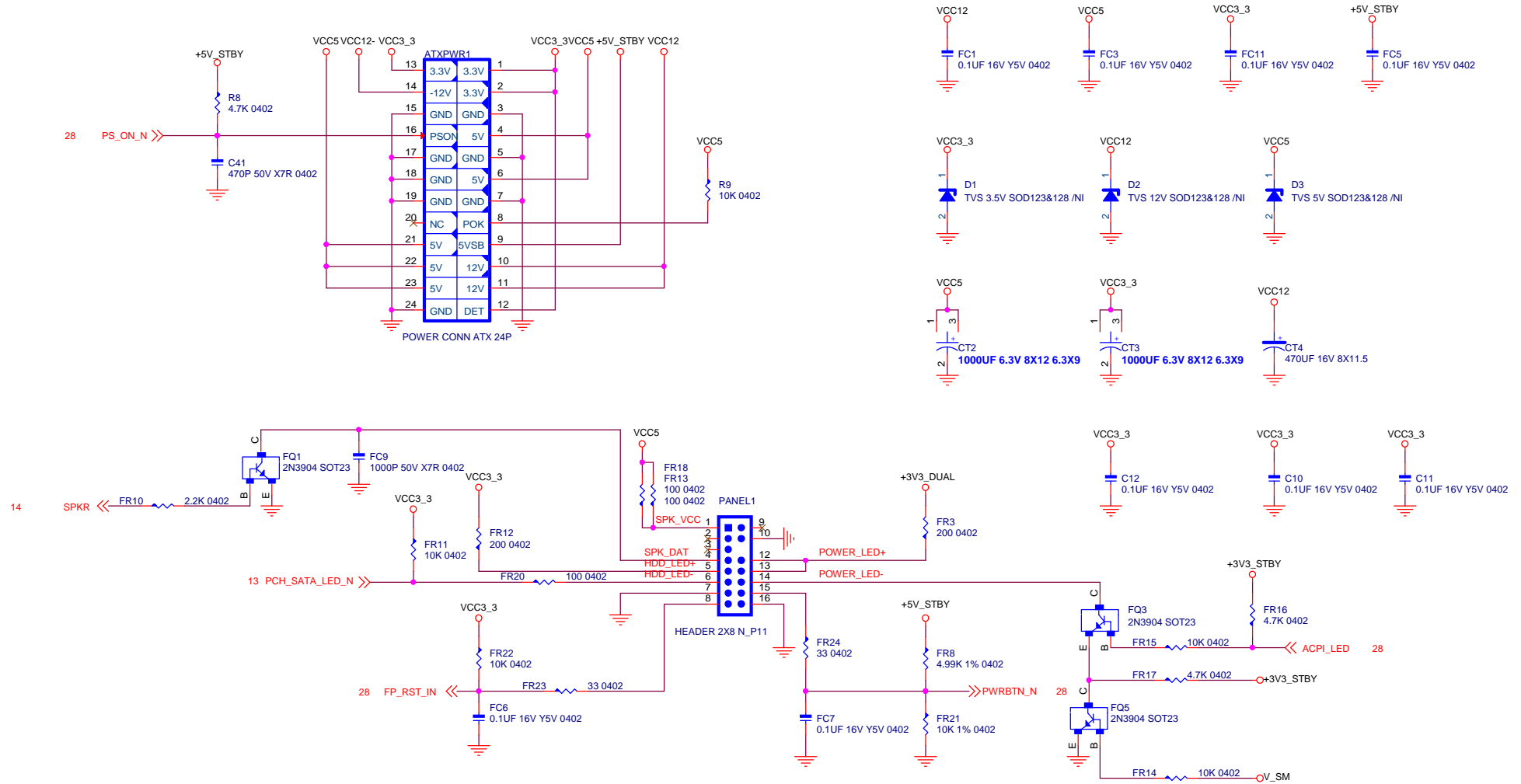
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| USB CONN | | |
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FP PART: F+Reference



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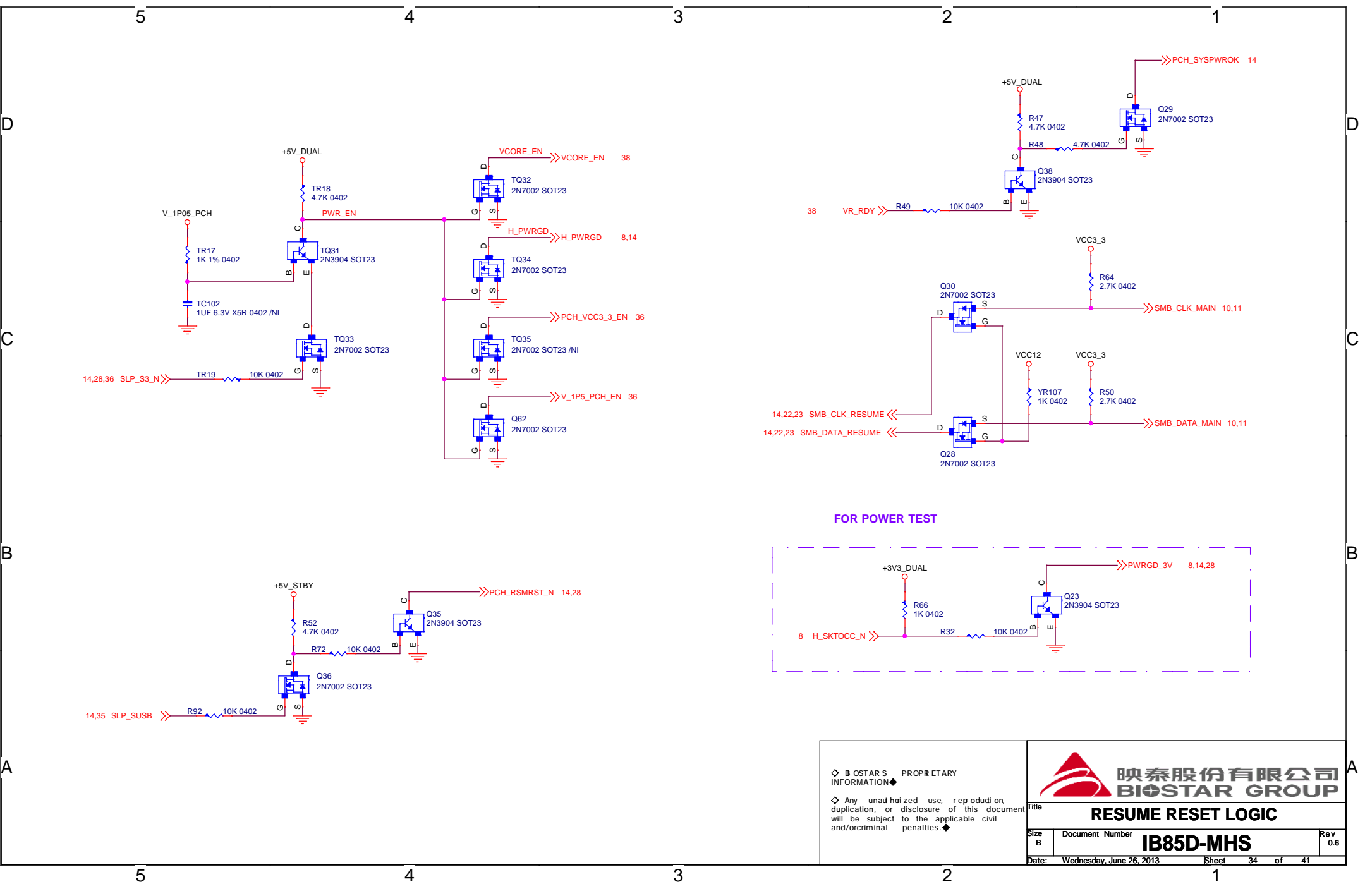
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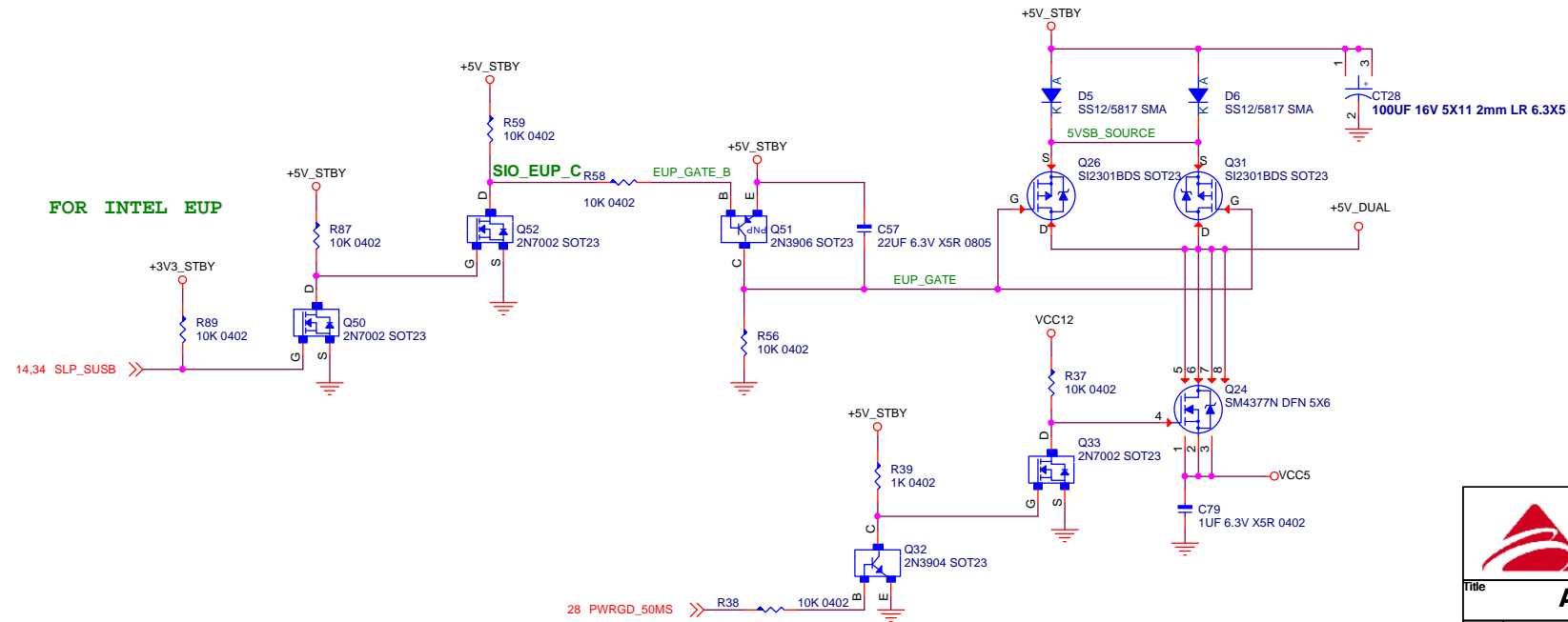
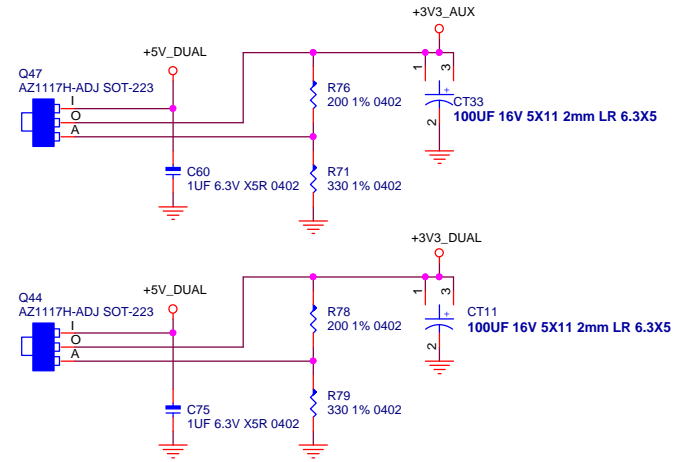
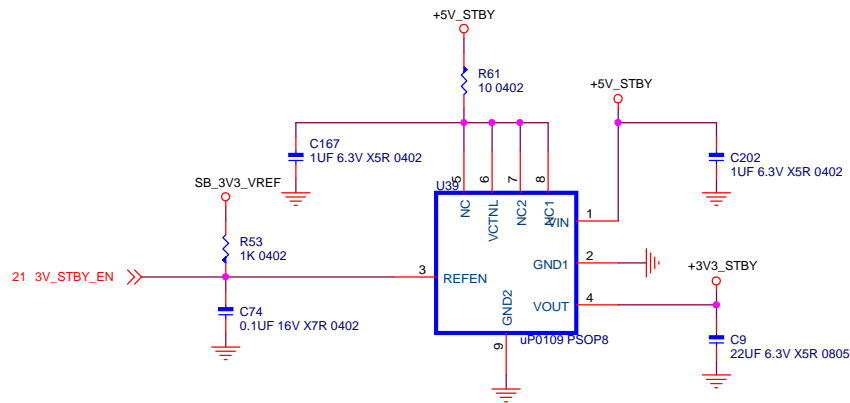
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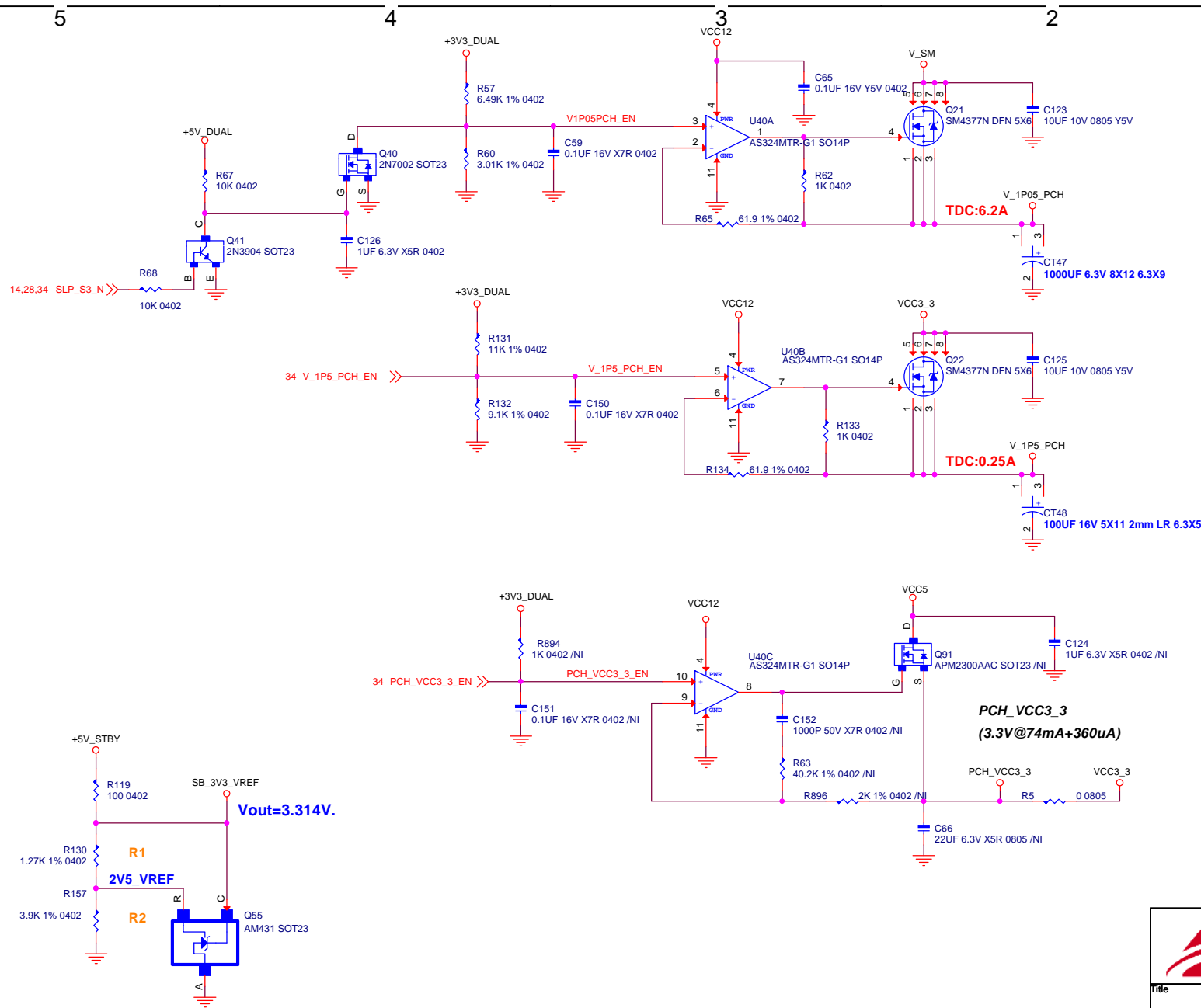


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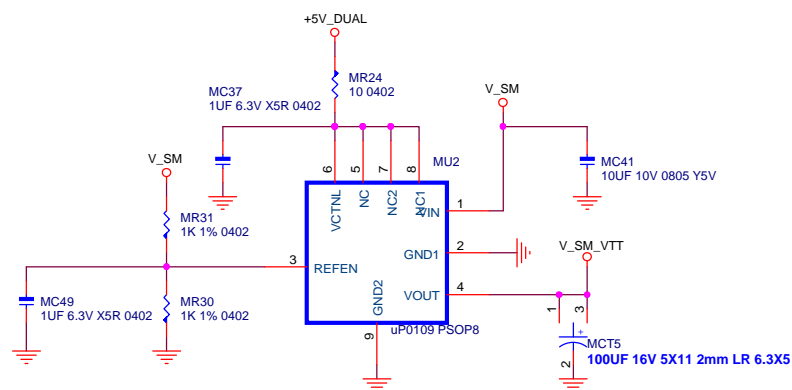
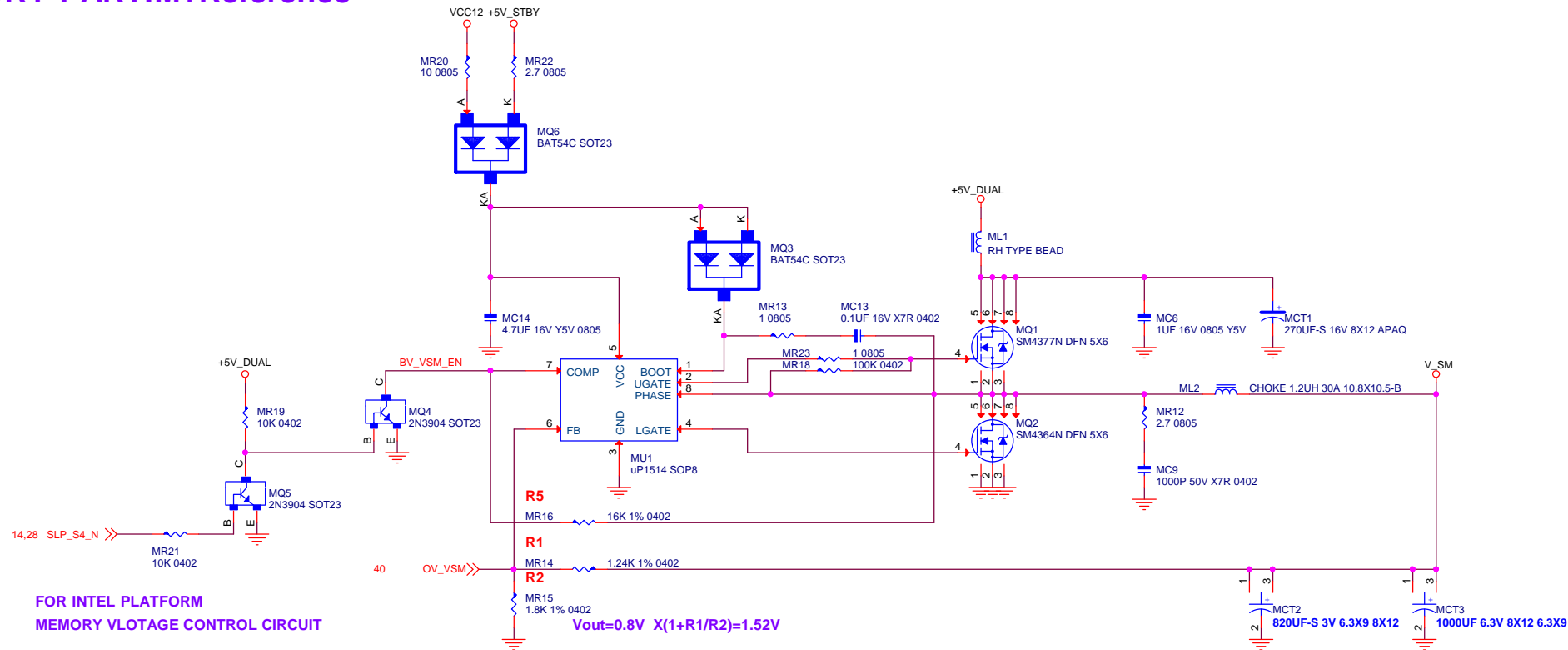


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|-------|--------------------------|-----------|--------------------|
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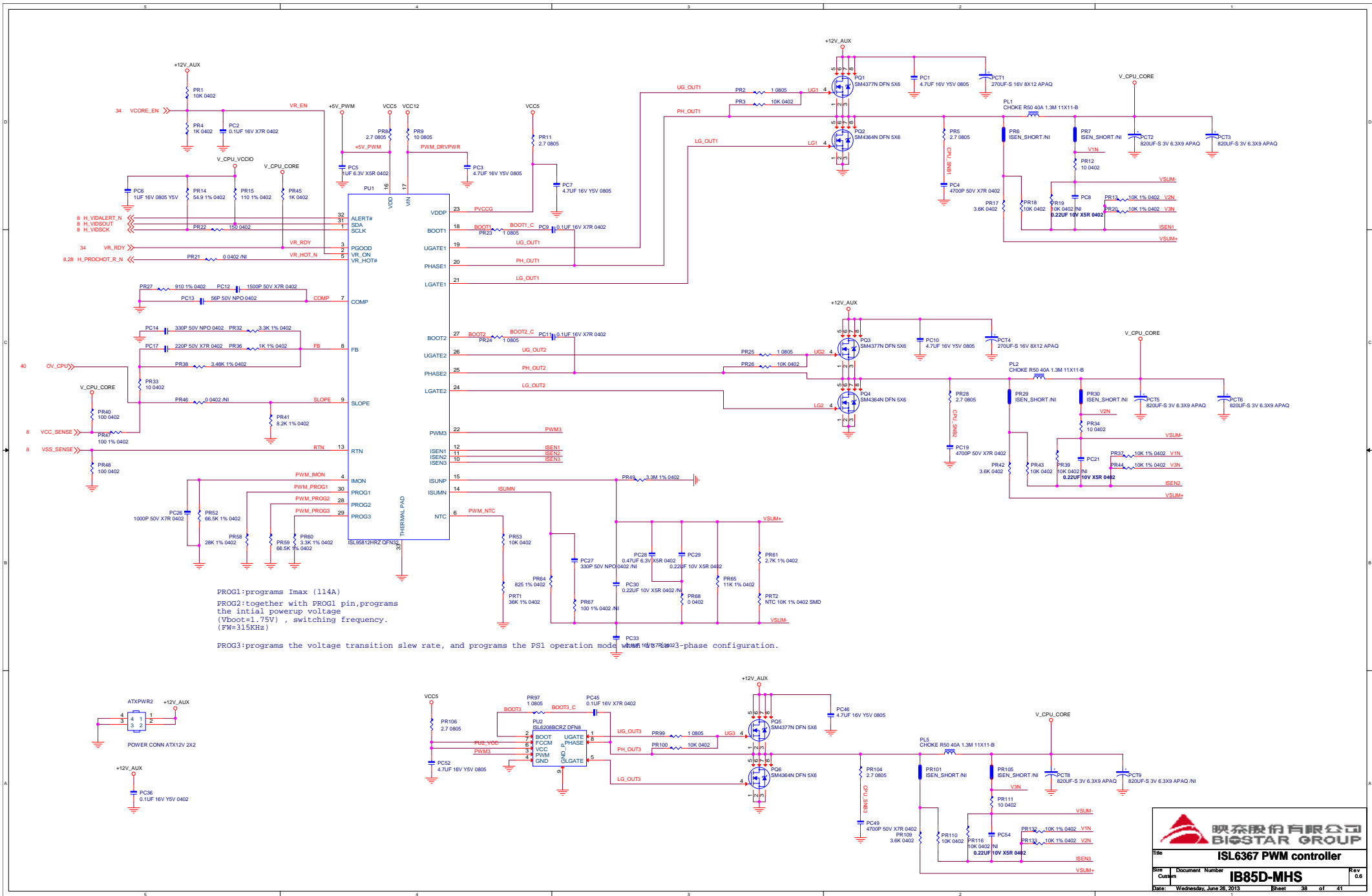
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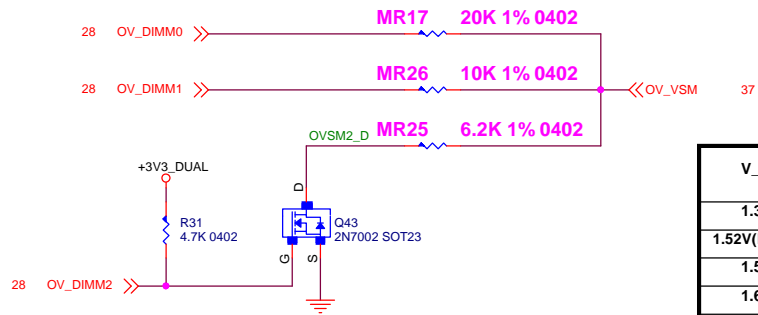


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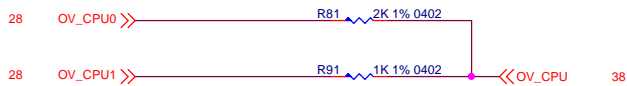


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| VSM DC-DC Converter | | |
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| V_SM | OV_VSM2 | OV_VSM1 | OV_VSM0 |
|----------------|---------|---------|---------|
| 1.36V | 0 | 1 | 1 |
| 1.52V(DEFAULT) | 1 | 1 | 1 |
| 1.57V | 1 | 1 | 0 |
| 1.62V | 1 | 0 | 1 |
| 1.67V | 1 | 0 | 0 |



| V_CPU_CORE | OV_CPU0 | OV_CPU1 |
|------------|---------|---------|
| DEFAULT | 1 | 1 |
| +5% | 0 | 1 |
| +10% | 1 | 0 |
| +15% | 0 | 0 |

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|--------|------------------------|-----------|-------------------------|
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