

Model Name: 8I915ME-GL

Revision 1.02

DATE:05/02-1

SHEET TITLE

|    |                            |
|----|----------------------------|
| 01 | COVER SHEET                |
| 02 | BLOCK DIAGRAM              |
| 03 | BOM & PCB MODIFY HISTORY   |
| 04 | P4_LGA775_A                |
| 05 | P4_LGA775_B                |
| 06 | P4_LGA775_C                |
| 07 | P4_LGA775_D                |
| 08 | VCORE POWER                |
| 09 | GMCH-GRANTSDALE_HOST       |
| 10 | GMCH-GARNTSDALE_DDR        |
| 11 | GMCH-GRANTSDALE_PCI E, DMI |
| 12 | GMCH-GRANTSDALE_INT VGA    |
| 13 | GMCH-GRANTSDALE_GND        |
| 14 | GMCH-GRANTSDALE_PWR        |
| 15 | DDR CHANNEL A              |
| 16 | DDR CHANNEL B              |
| 17 | DDR TERMINATION            |
| 18 | FAN & WOL                  |
| 19 | ICH6 PCI, USB, DMI, LAN    |
| 20 | ICH6 IDE, GPIO, SATA, CTRL |
| 21 | ICH6 VCC, GND              |
| 22 | CLK GEN                    |

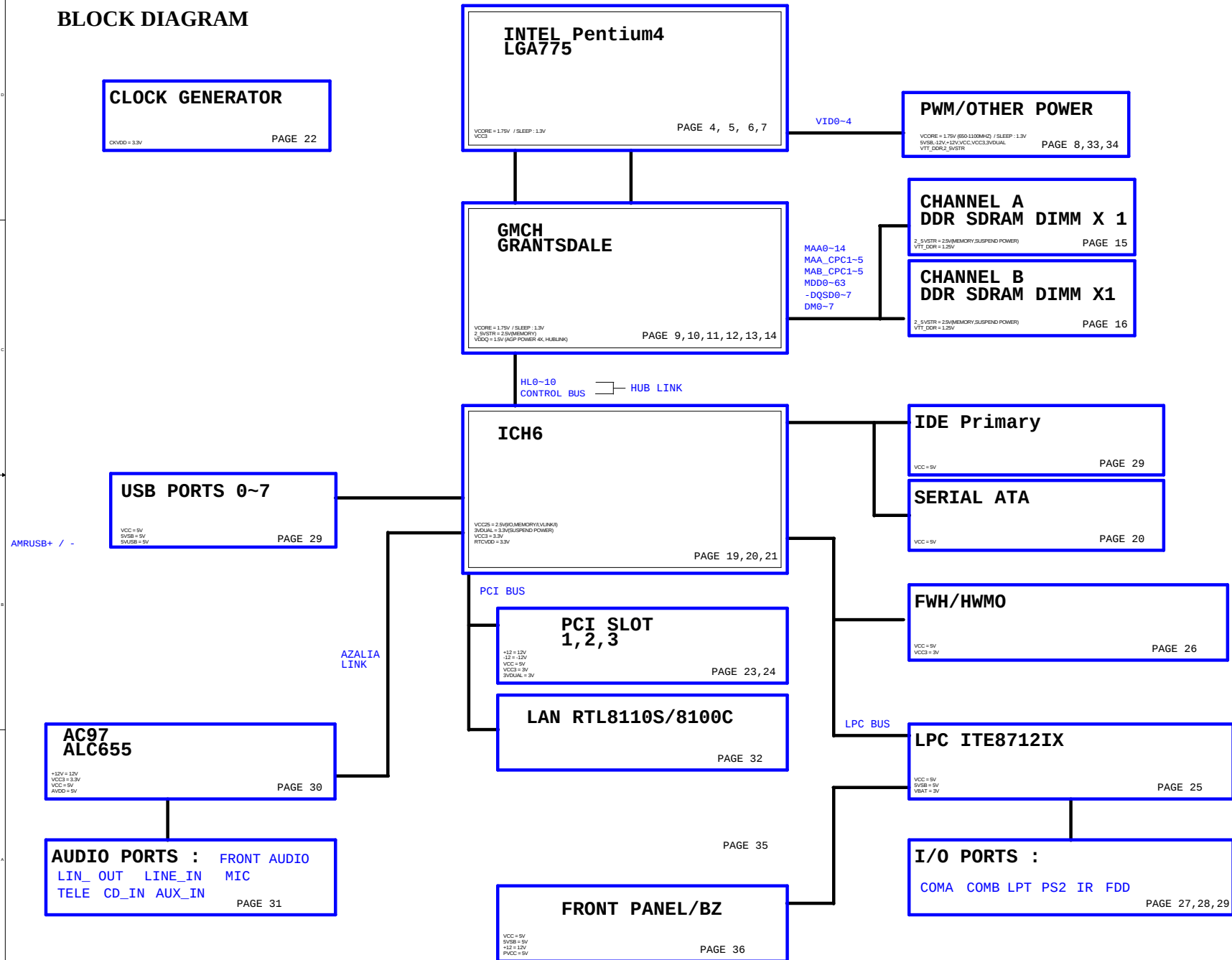
SHEET TITLE

|    |                          |
|----|--------------------------|
| 23 | PCI SLOT 1,2             |
| 24 | PCI SLOT 3               |
| 25 | ITE8712HX                |
| 26 | HWM0/FAN/FWH BIOS        |
| 27 | KB_MS                    |
| 28 | COM/LPT/FDD              |
| 29 | (FRONT+REAR)USB/RING/IDE |
| 30 | AC97 CODEC ALC655        |
| 31 | AUDIO JACK               |
| 32 | LAN RTL8110S/8100C       |
| 33 | ATX POWER CONN.          |
| 34 | ALL POWER                |
| 35 | FRONT PANEL/BZ           |
|    |                          |

COMPONENT SIDE  
(1 oz. Copper)  
VCC SIDE  
(1 oz. Copper)  
GND SIDE  
(1 oz. Copper)  
SOLDER SIDE  
(1 oz. Copper)

|             |                      |               |         |
|-------------|----------------------|---------------|---------|
| GIGABYTE    |                      |               |         |
| Title       |                      |               |         |
| Cover Sheet |                      |               |         |
| Size        | Document Number      | GA-8I915ME-GL | Rev     |
| Custom      |                      |               | 1.02    |
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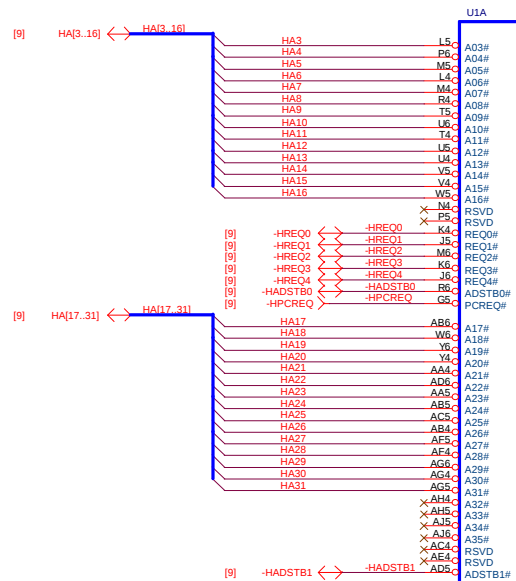
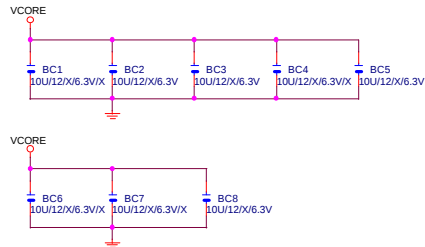
# BLOCK DIAGRAM



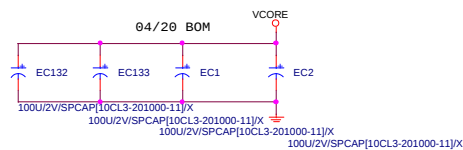
**Version: 1.02**

2005/01/10

[illegible][illegible]



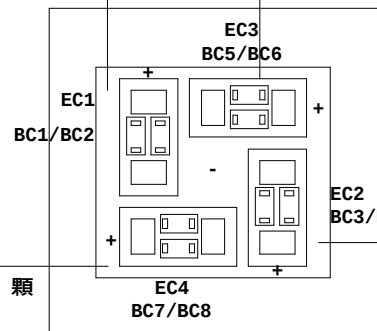
SP-CAP X 4PCS



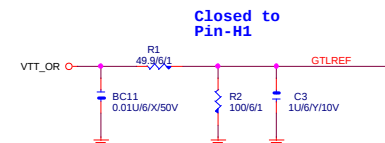
LGA775ID[11SC1-920775-01]

上100U/2V/SPCAP 上10U/12/X/6.3V X2 顆

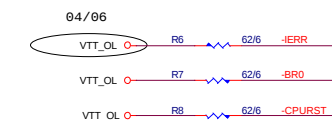
上10U/12/X/6.3V X2 顆



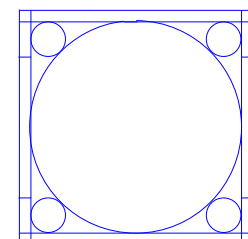
上100U/2V/SPCAP



Closed to Pin-H1



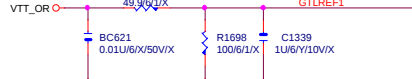
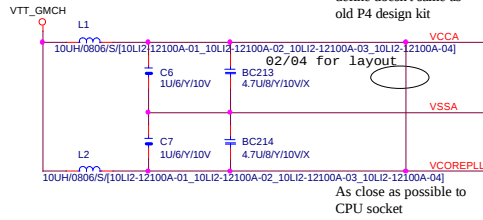
CR CPU RETENTION/X



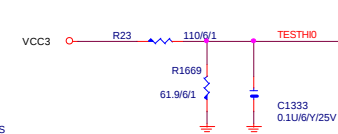
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|-------------|----------------------|---------------|---------|
| GIGABYTE    |                      |               |         |
| P4 LGA775-A |                      |               |         |
| Size Custom | Document Number      | GA-8I915ME-GL |         |
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Closed to  
Pin-H2

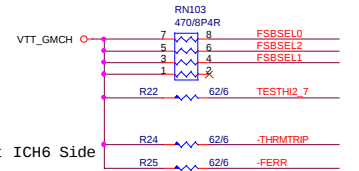
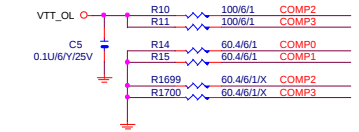
**Note:**  
VCCA & VCOREPLL  
define doesn't same as  
old P4 design kit



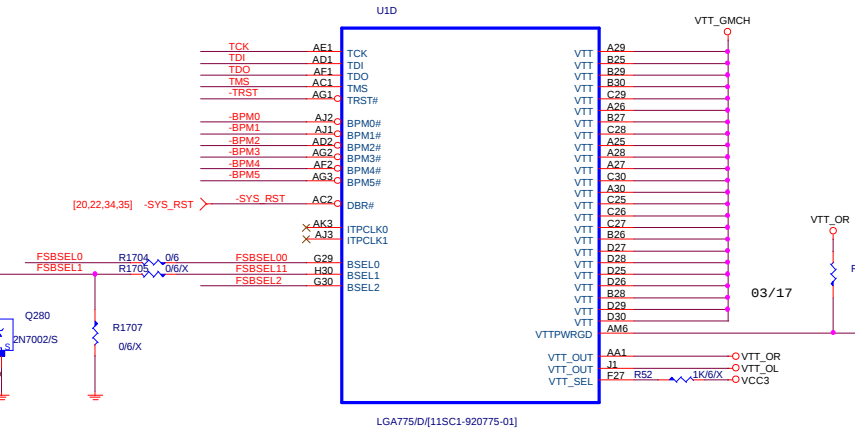
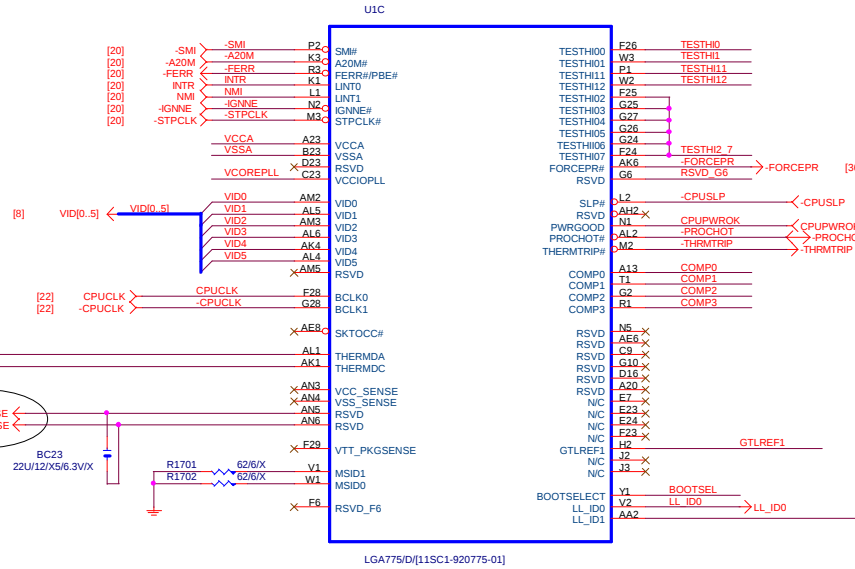
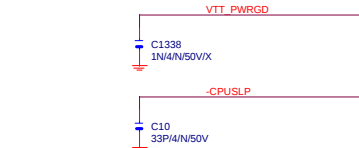
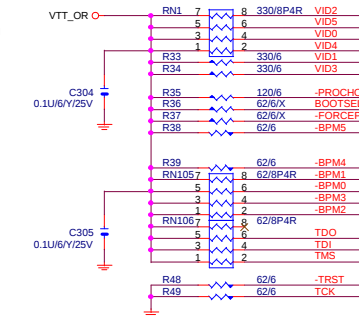
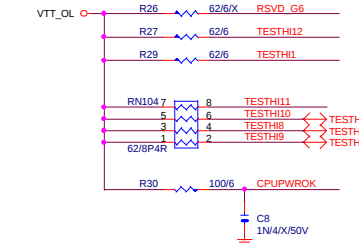
[7,9] GTL\_DET TESTH0



Place outside of CPU socket

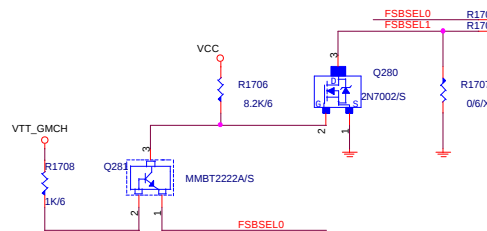


Locate at ICH6 Side



CPU

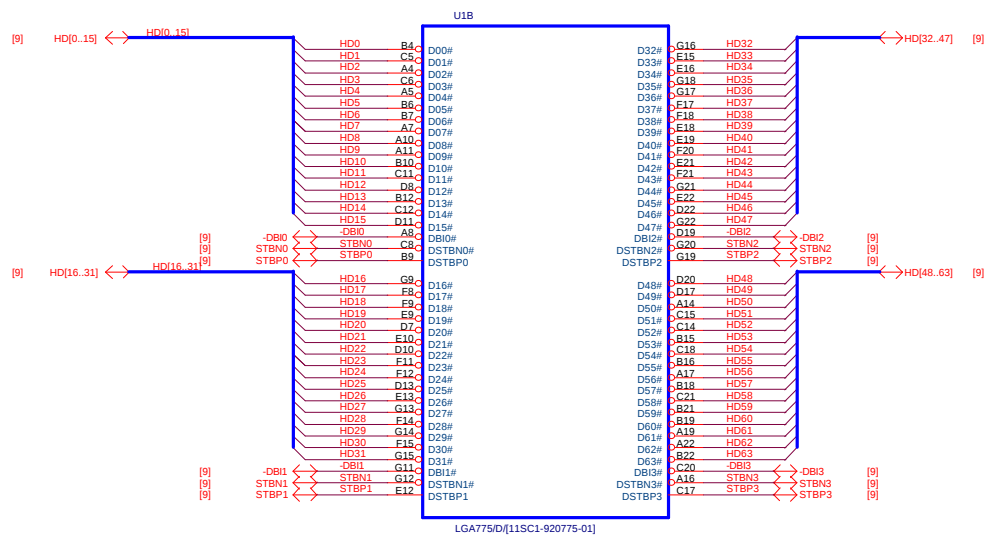
| FSBSEL2 | FSBSEL1 | FSBSEL0 | Clock  |   |
|---------|---------|---------|--------|---|
| 1       | 0       | 0       | 100MHz | X |
| 0       | 0       | 1       | 133MHz |   |
| 0       | 1       | 1       | 166MHz | X |
| 0       | 1       | 0       | 200MHz |   |
| 0       | 0       | 0       | 266MHz |   |

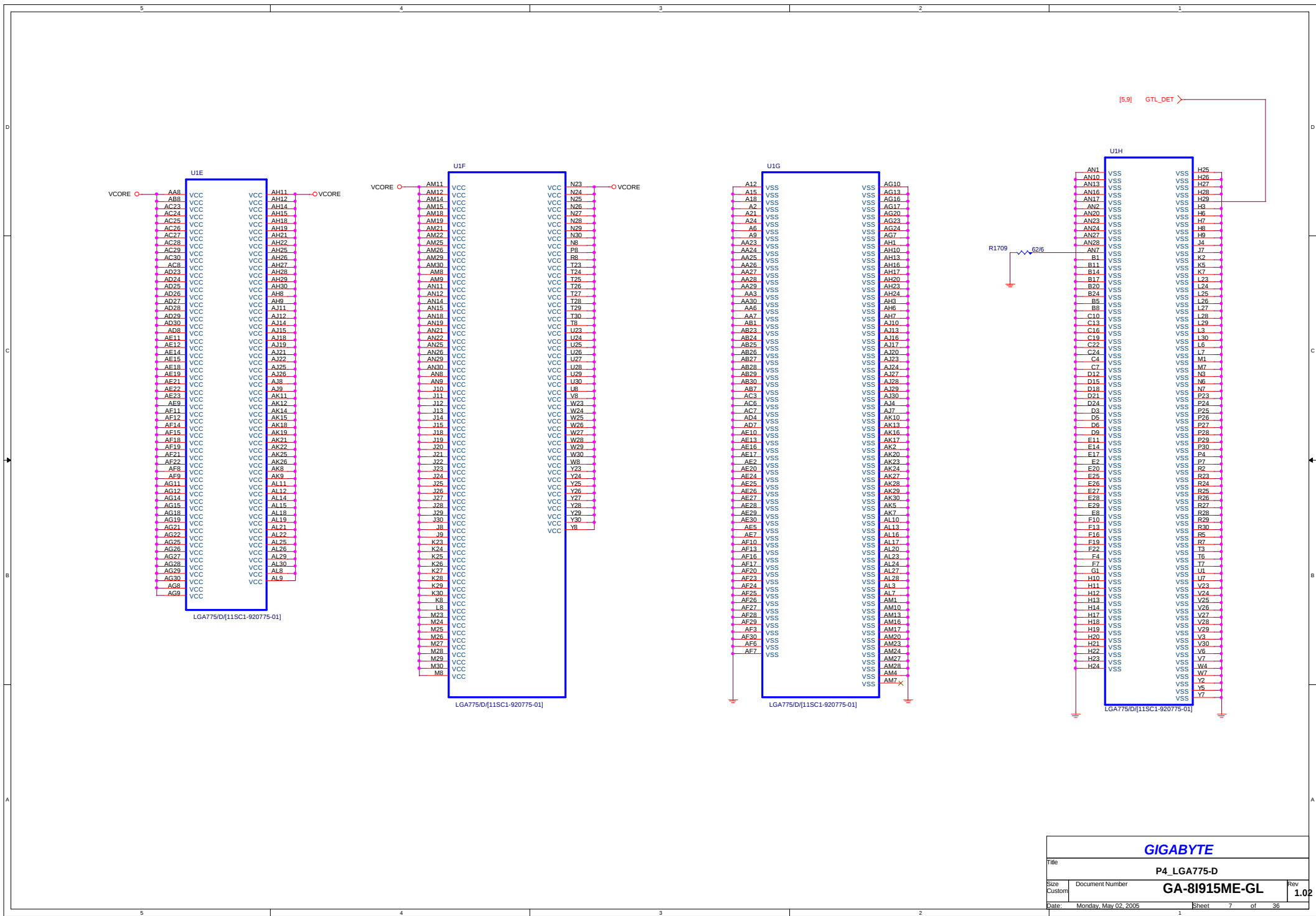


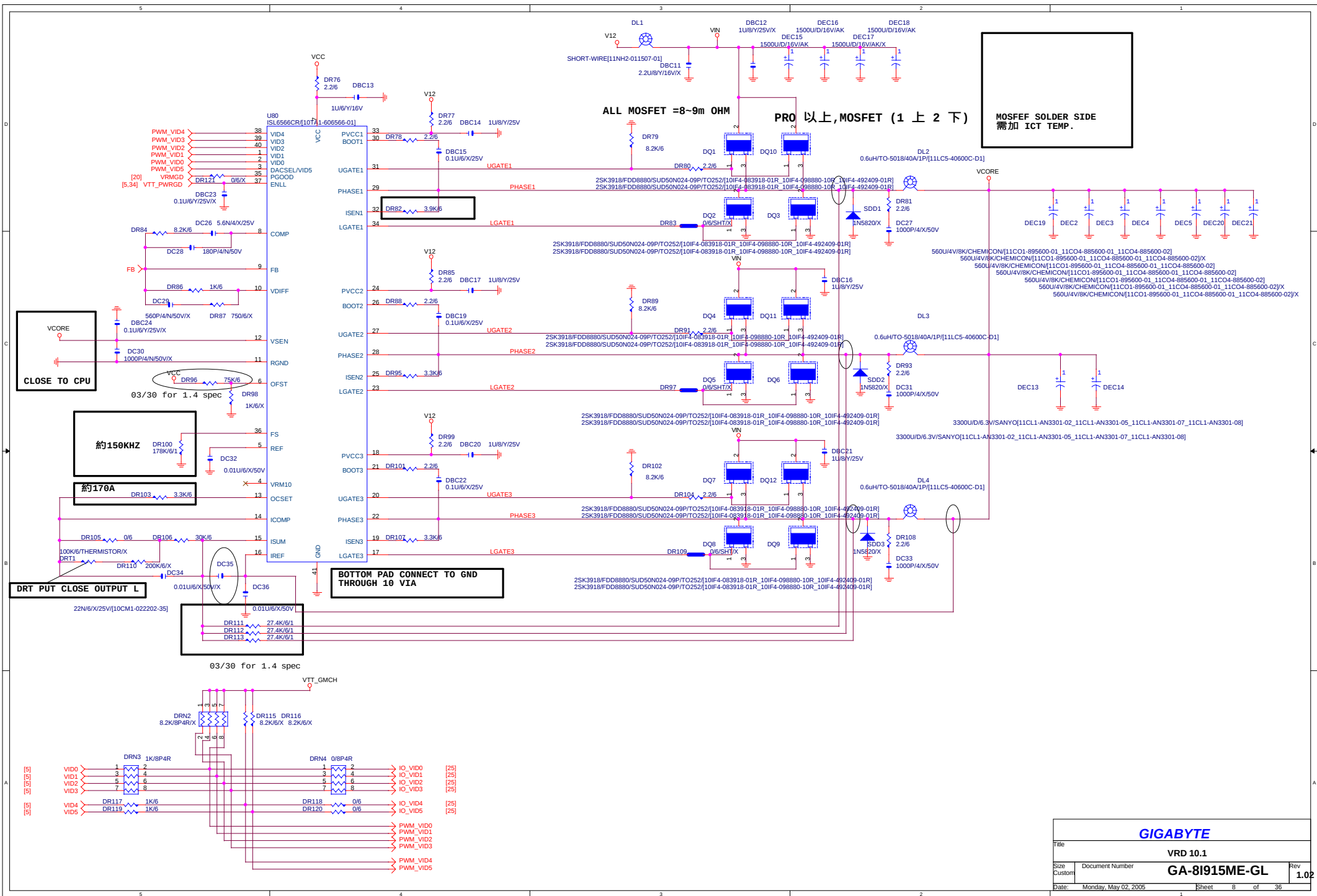
**GIGABYTE**

P4 LGA775-B

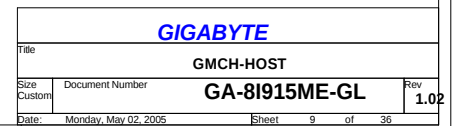
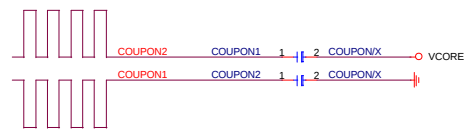
|       |                      |               |
|-------|----------------------|---------------|
| Title | Document Number      | Rev           |
|       | GA-8I915ME-GL        | 1.02          |
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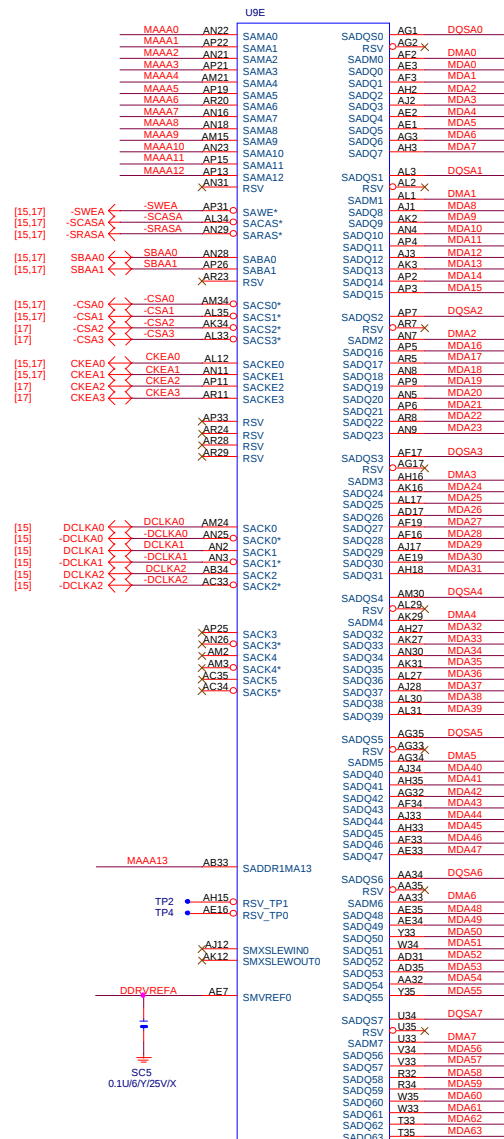




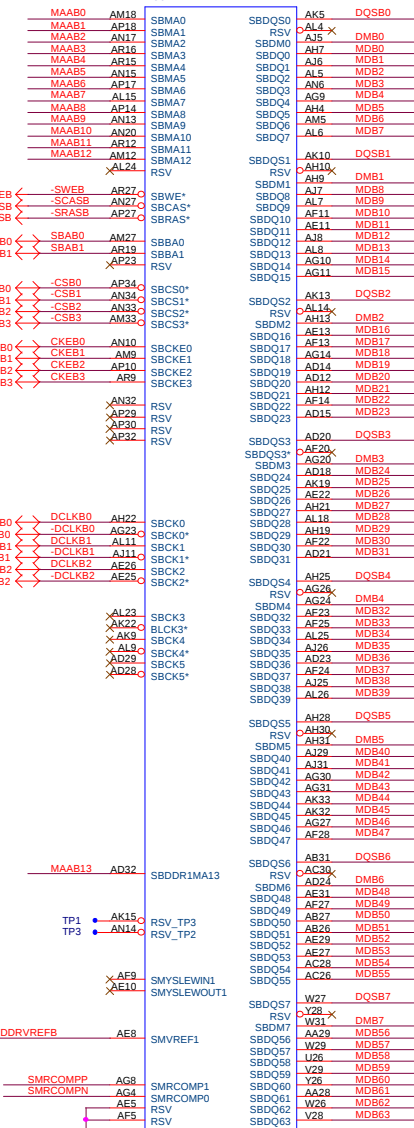
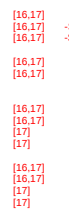


|                 |                      |                      |             |
|-----------------|----------------------|----------------------|-------------|
| <b>GIGABYTE</b> |                      |                      |             |
| Title           |                      |                      |             |
| VRD 10.1        |                      |                      |             |
| Size            | Document Number      | <b>GA-8I915ME-GL</b> | Rev         |
| Custom          |                      |                      | <b>1.02</b> |
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|                 |                      | 1                    |             |

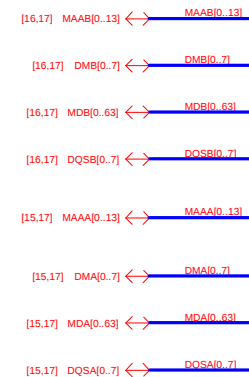
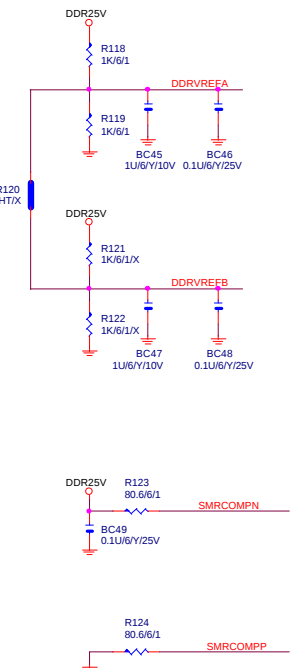




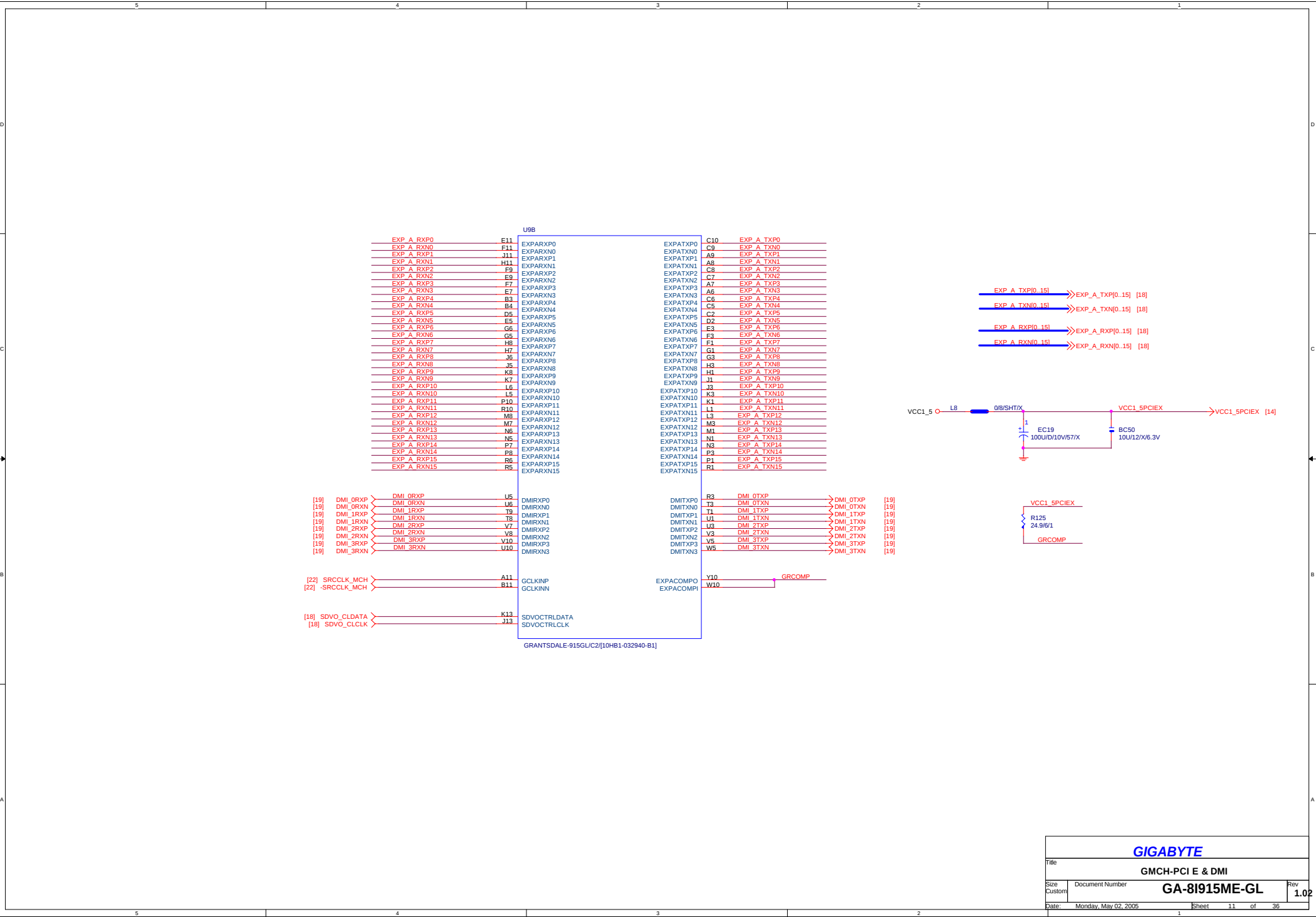
GRANTSDALE-915GL/C2[10HB1-032940-B1]

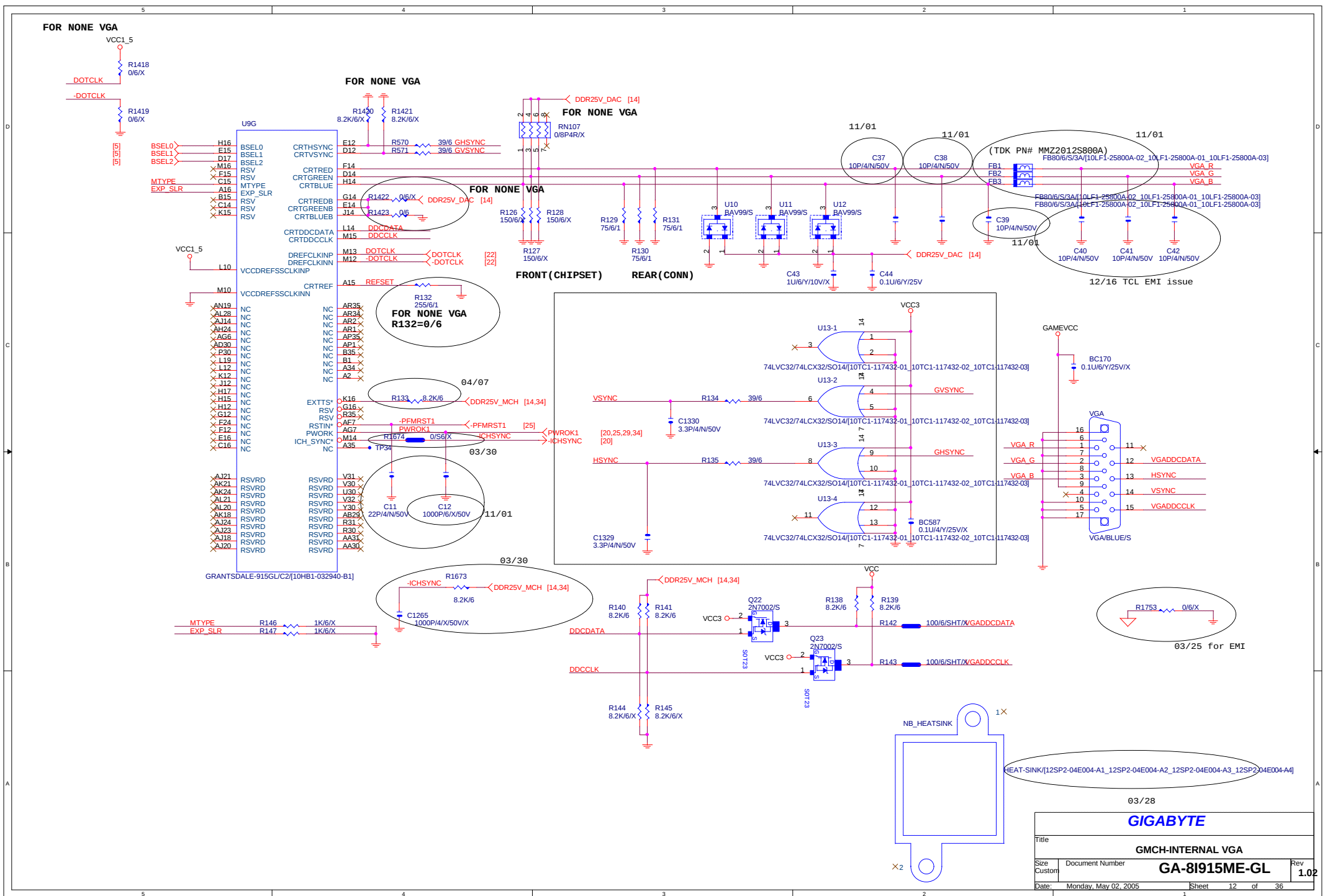


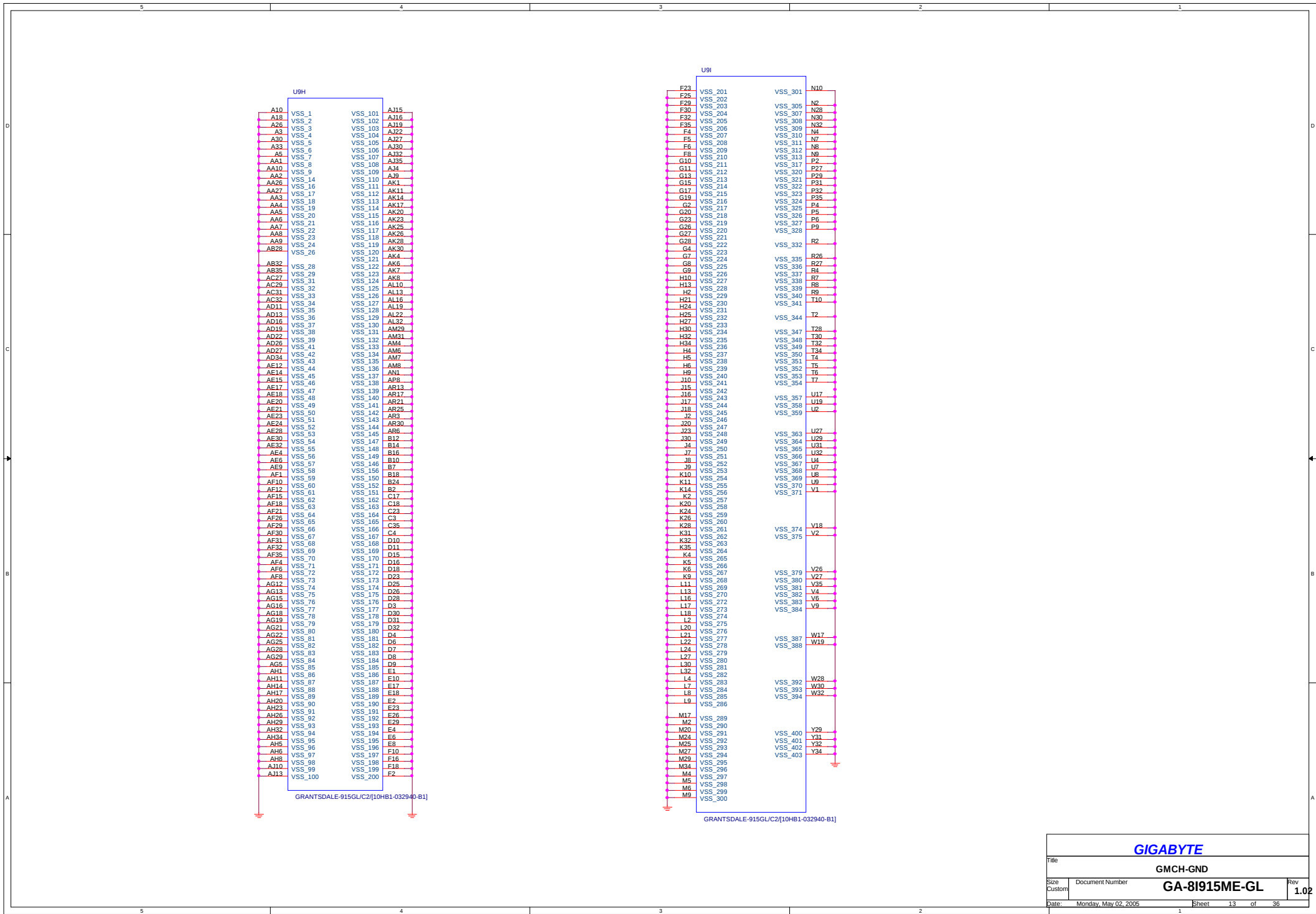
GRANTSDALE-915GL/C2[10HB1-032940-B1]

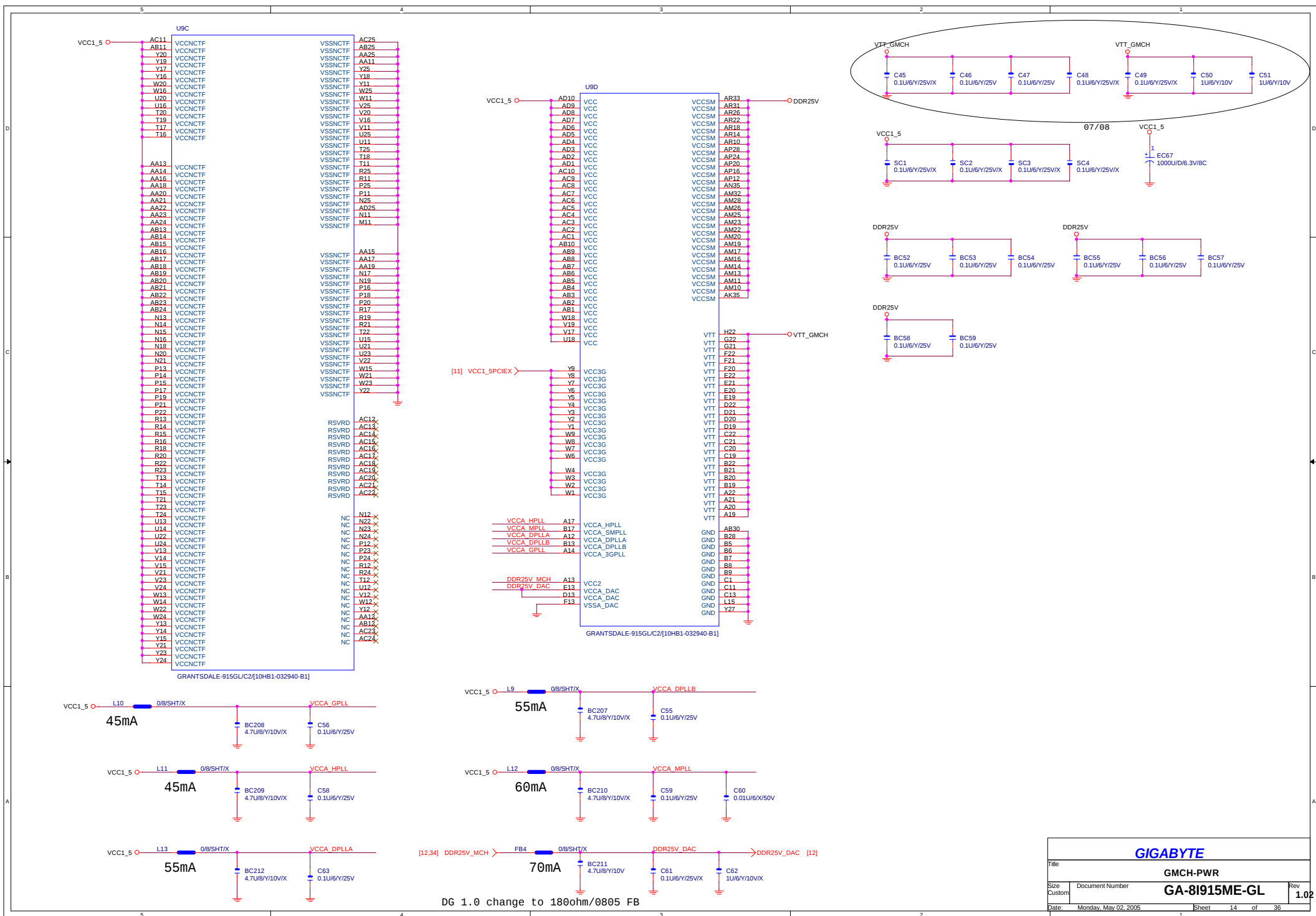


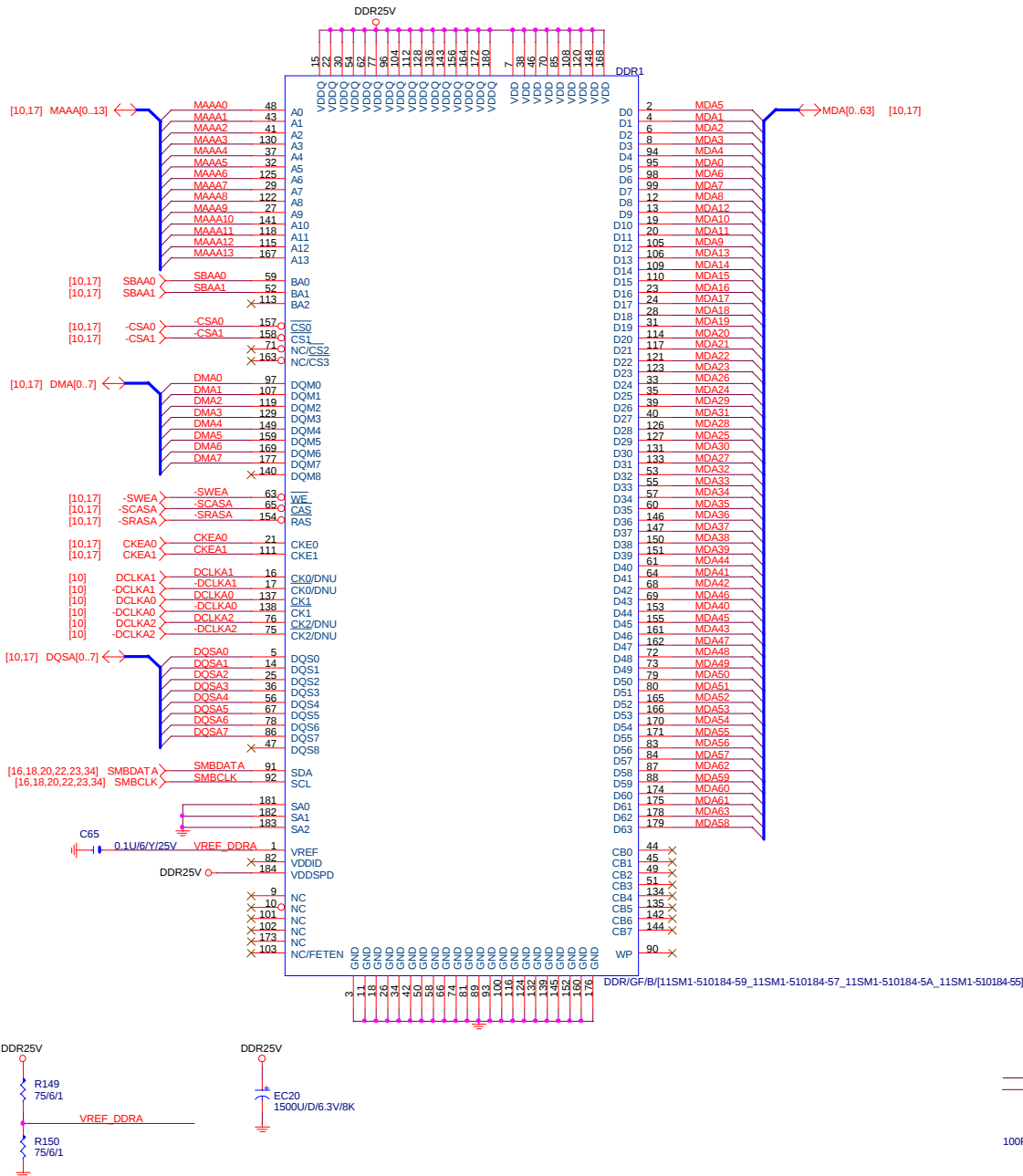
| GIGABYTE |                      |               |          |
|----------|----------------------|---------------|----------|
| GMCH-DDR |                      |               |          |
| Title    | Document Number      | Rev           | 1.02     |
| Size     | Custom               | GA-8I915ME-GL |          |
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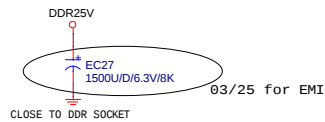
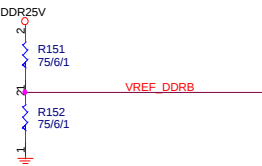
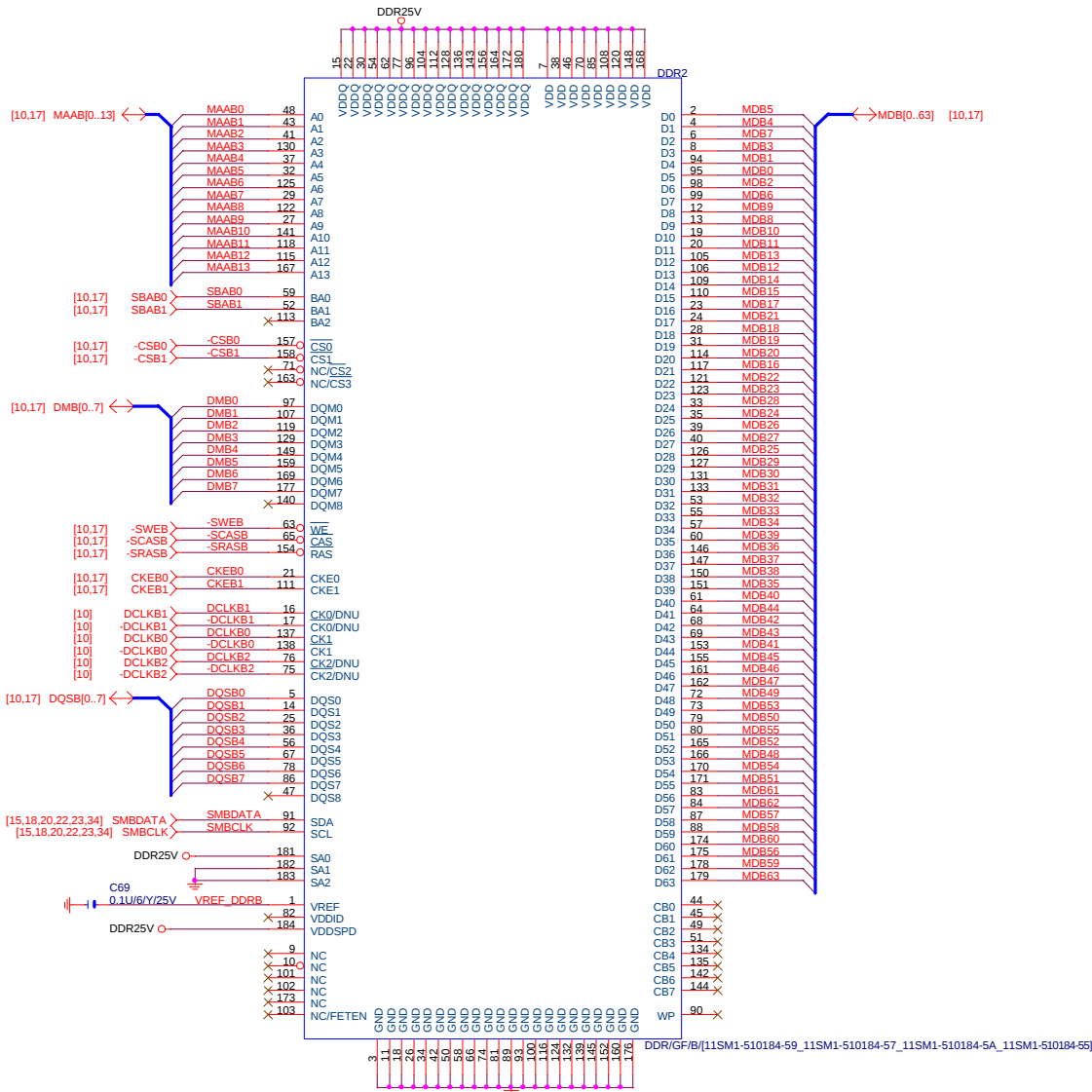






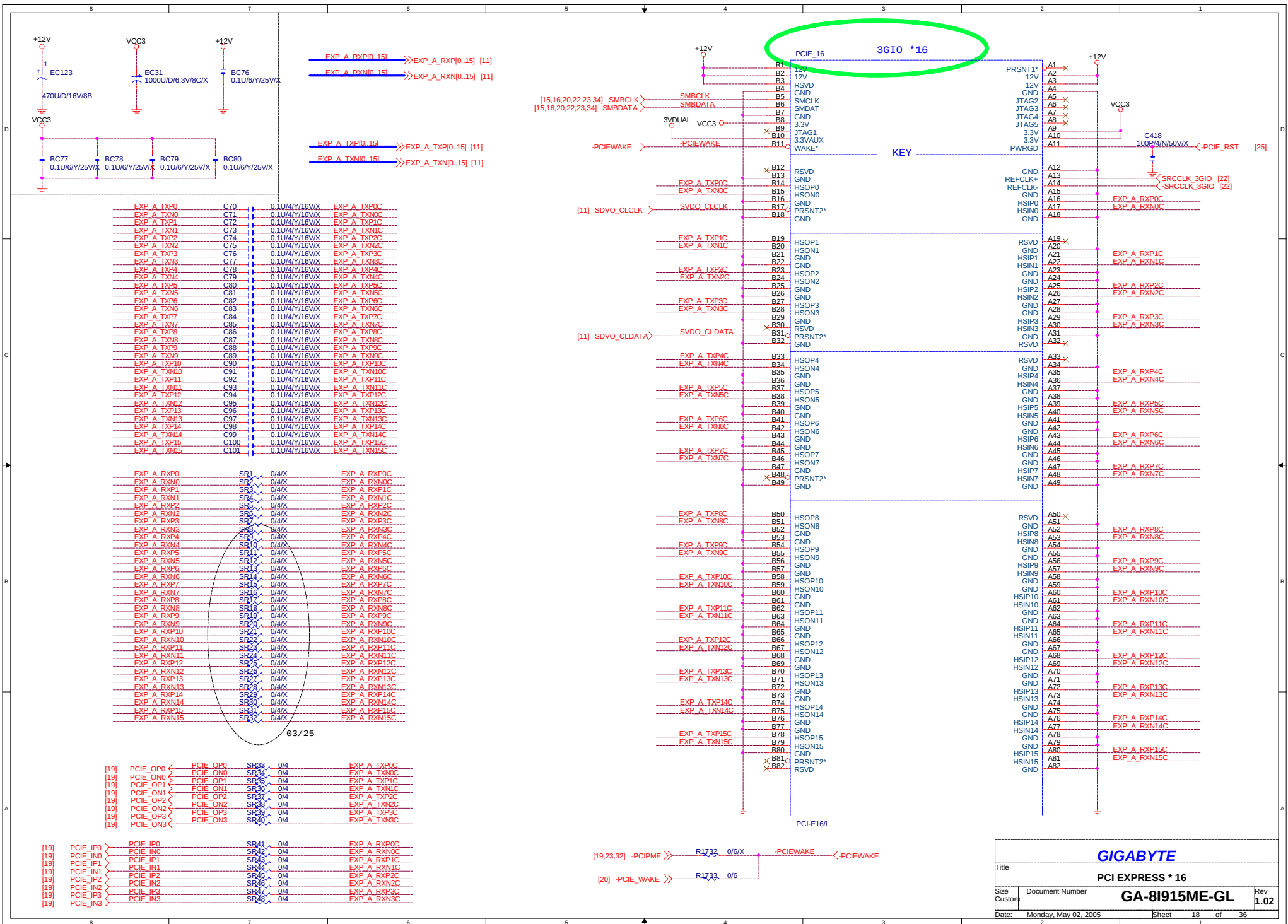






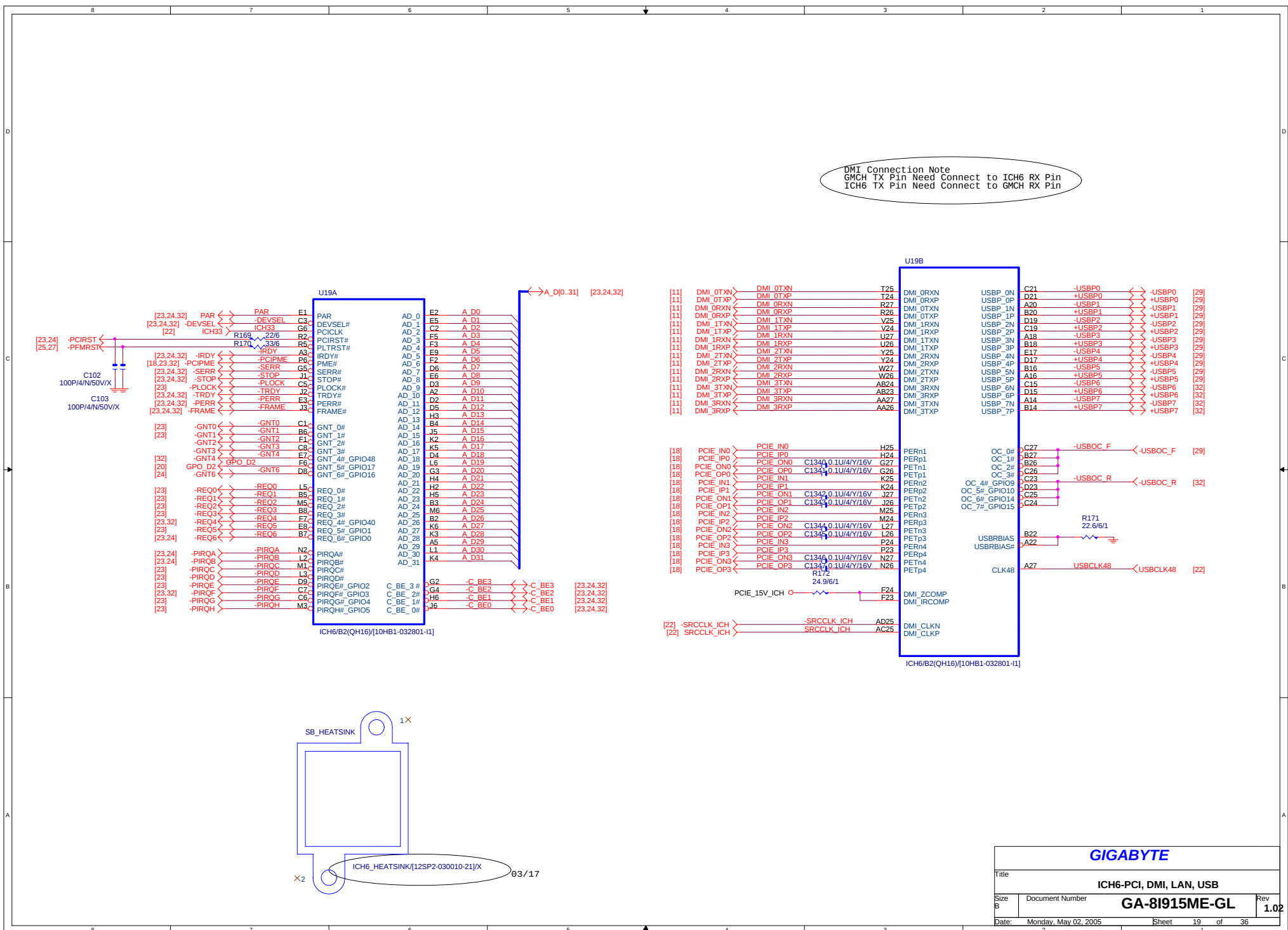
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|---------------|----------------------|---------------|----------|
| Title         |                      |               |          |
| DDR CHANNEL B |                      |               |          |
| Size          | Document Number      | GA-8I915ME-GL |          |
| B             |                      |               | Rev 1.02 |
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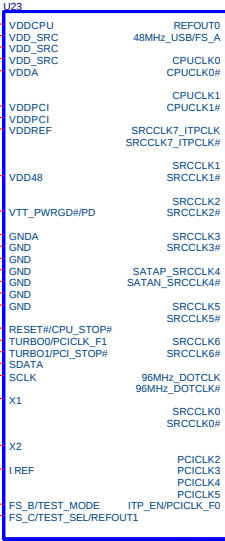
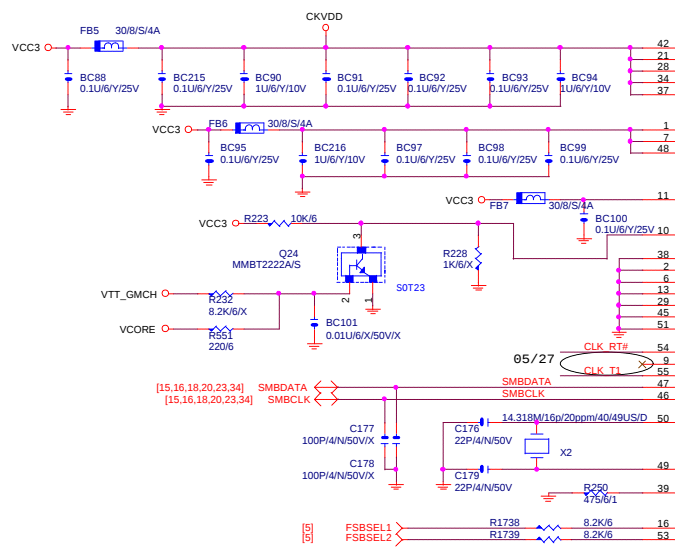
GIGABYTE

|                            |                 |               |                  |
|----------------------------|-----------------|---------------|------------------|
| Title                      |                 |               | PCI EXPRESS * 16 |
| Size                       | Document Number | GA-8I915ME-GL |                  |
| Custom                     |                 | Rev           | 1.02             |
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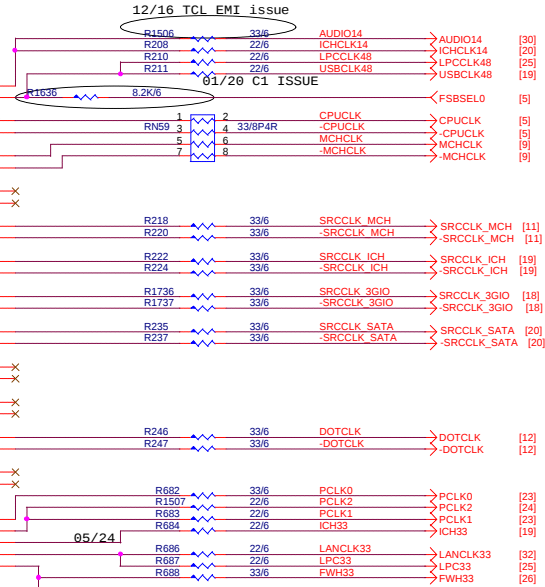
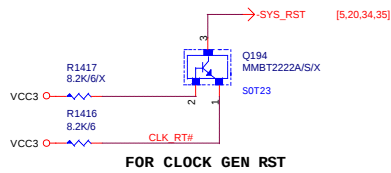




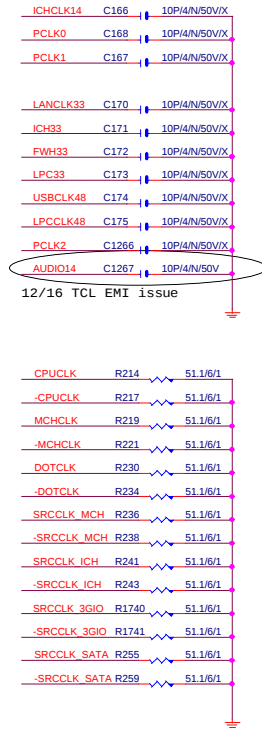


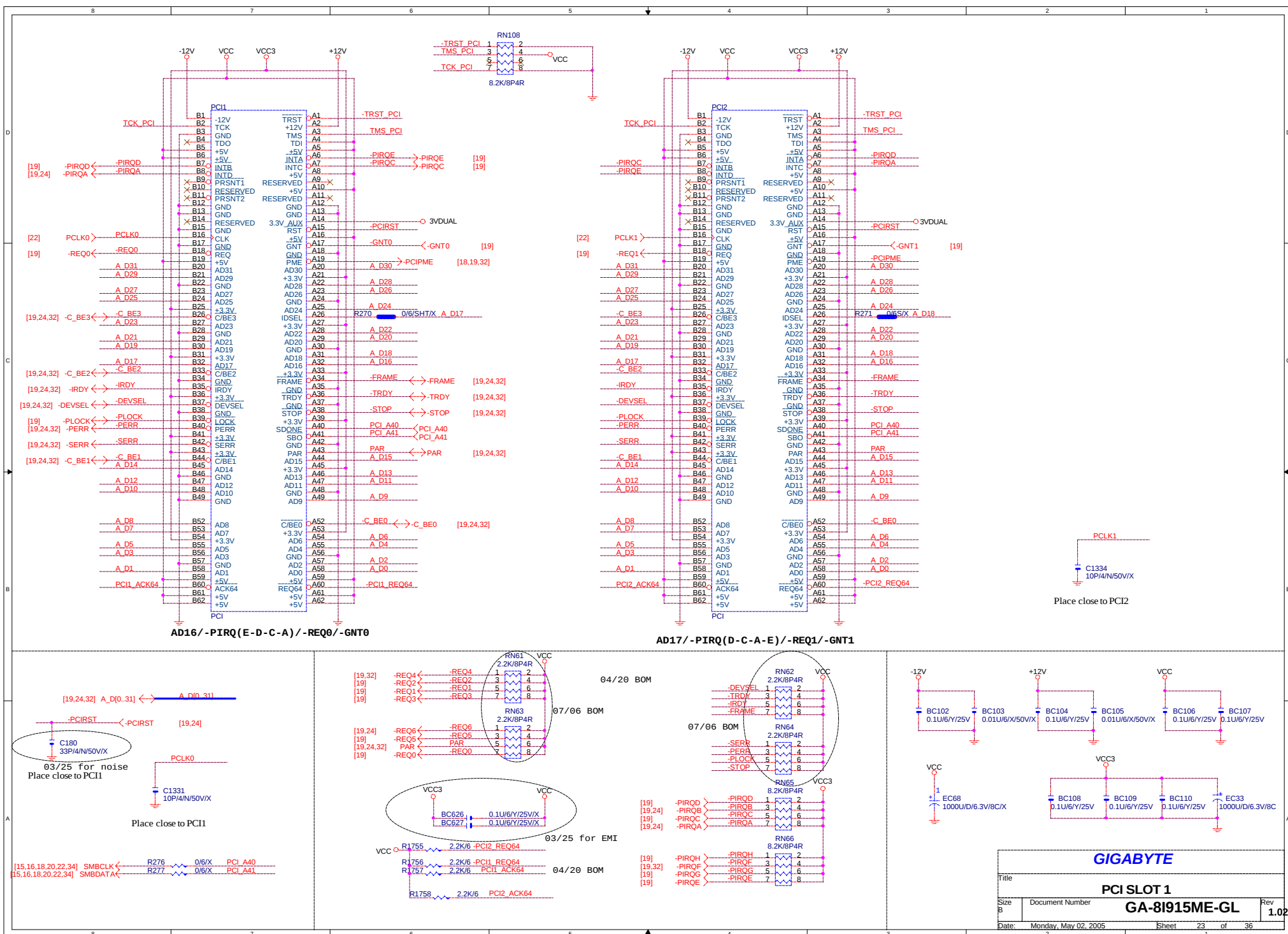


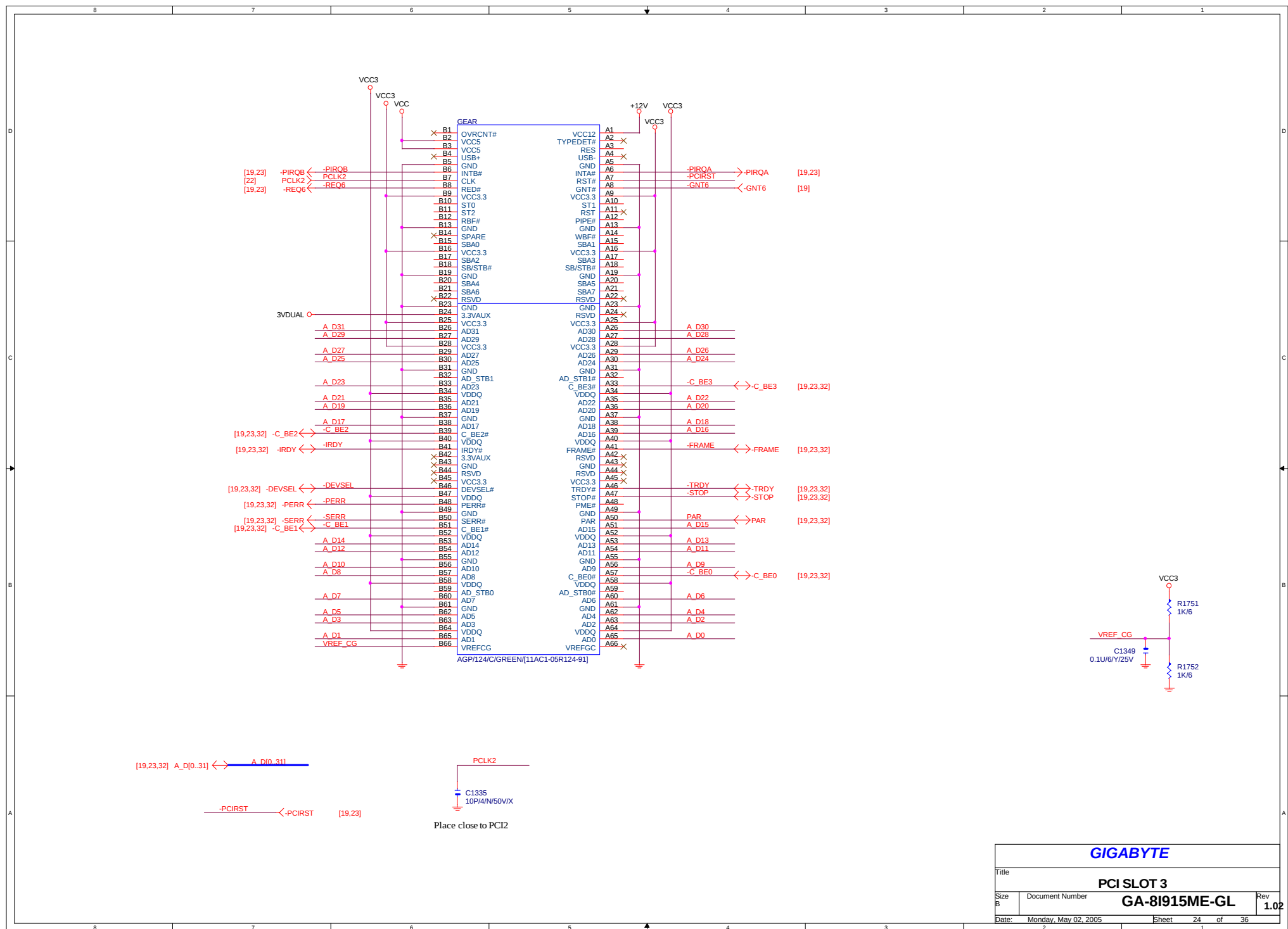
P.D --> PIN35/36 for SRCCLK7



04/06



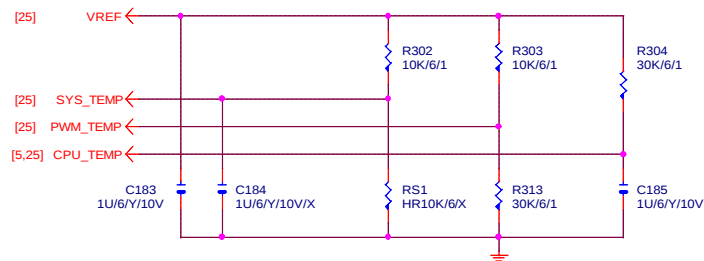




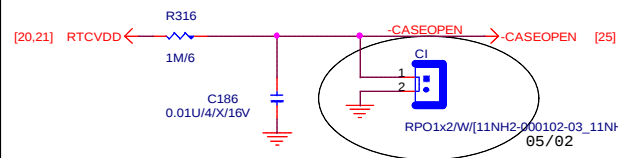


## TEMP. SENSE

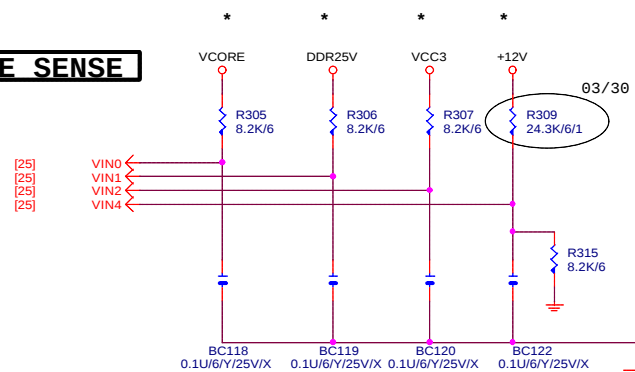
## CPU/SYS FAN



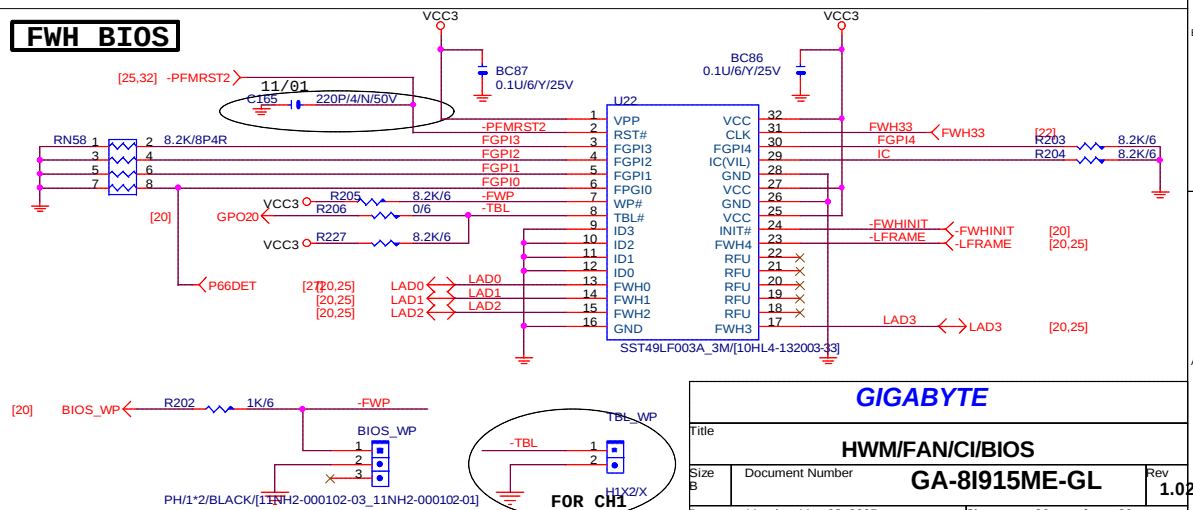
## CASE OPEN (N/A)



## VOLTAGE SENSE



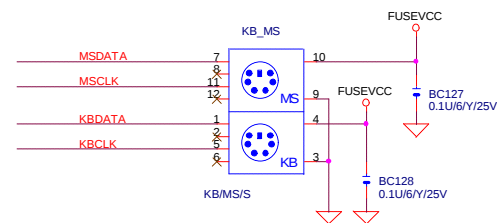
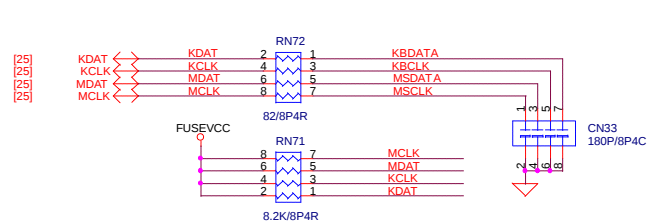
## FWH BIOS



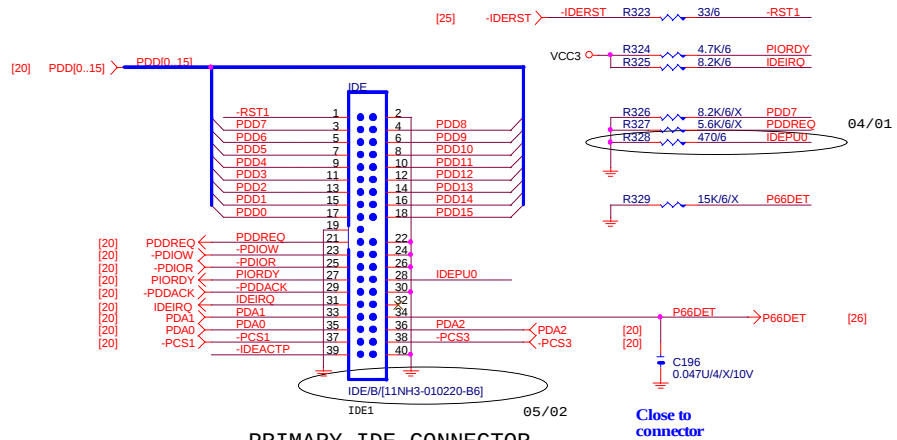
GIGABYTE

|       |                      |                 |          |
|-------|----------------------|-----------------|----------|
| Title |                      | HWM/FAN/CI/BIOS |          |
| Size  | Document Number      | GA-8I915ME-GL   |          |
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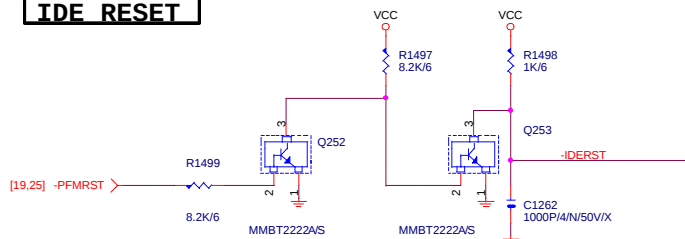
# KB/MS



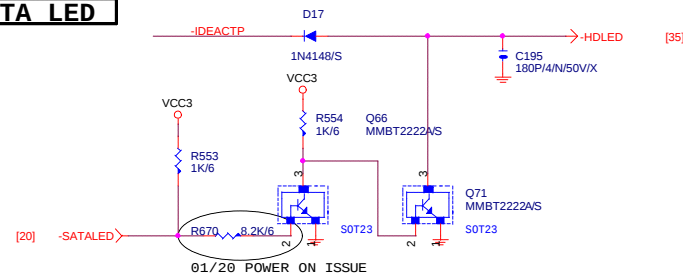
# IDE



# IDE RESET



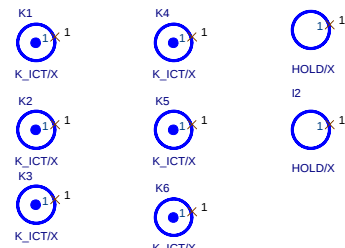
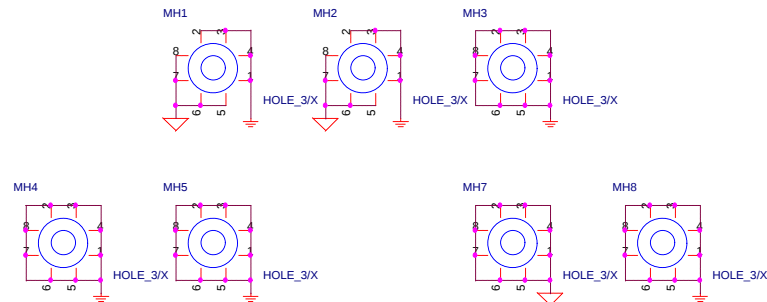
# IDE/SATA LED



PRIMARY IDE CONNECTOR

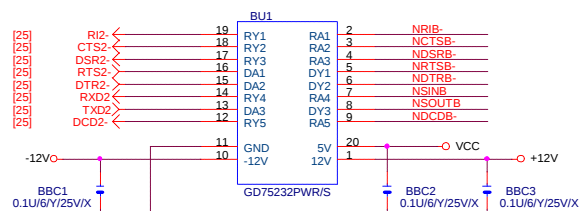
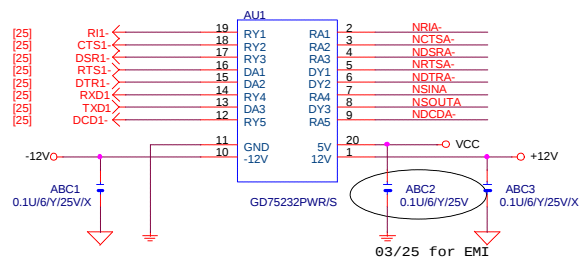
Close to connector

01/20 POWER ON ISSUE

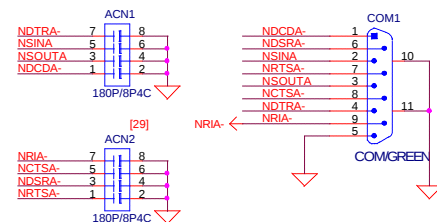
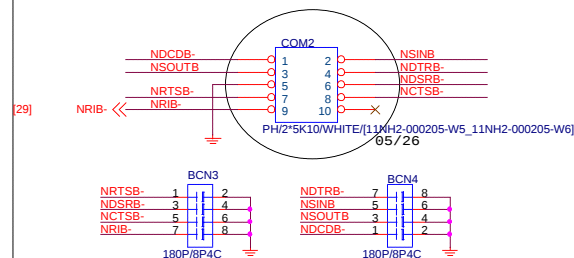


GIGABYTE

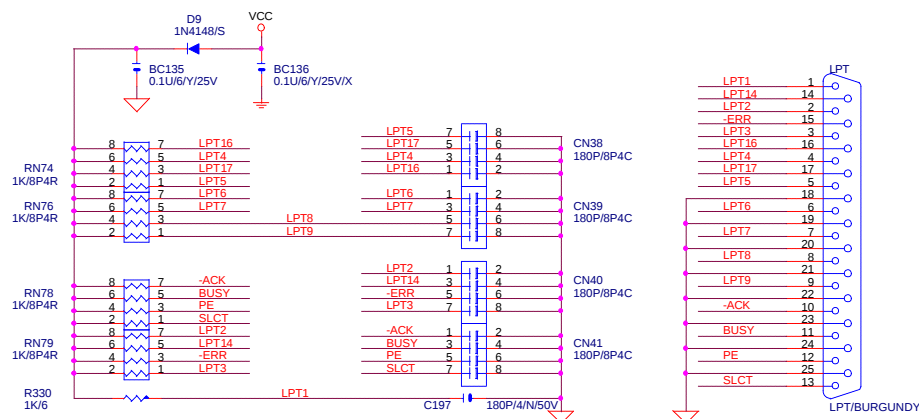
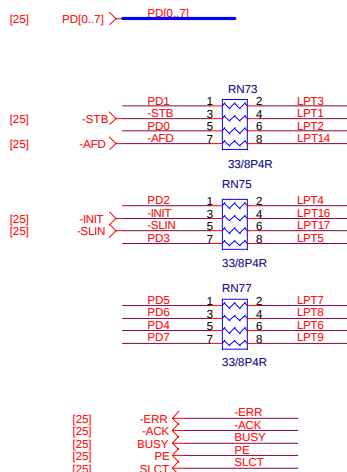
|              |                      |                |
|--------------|----------------------|----------------|
| Title        |                      |                |
| PS/2 KB & MS |                      |                |
| Size         | Document Number      | Rev            |
| B            | GA-8I915ME-GL        | 1.02           |
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**COMA/COMB**

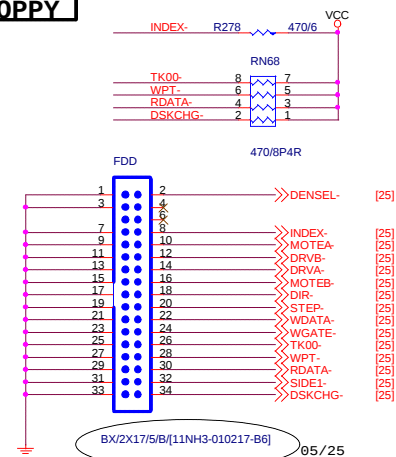
**INTERNAL COMB**



LPT



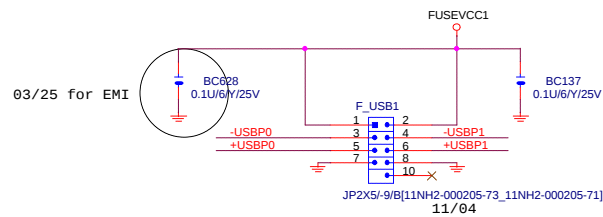
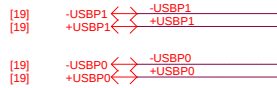
**FLOPPY**



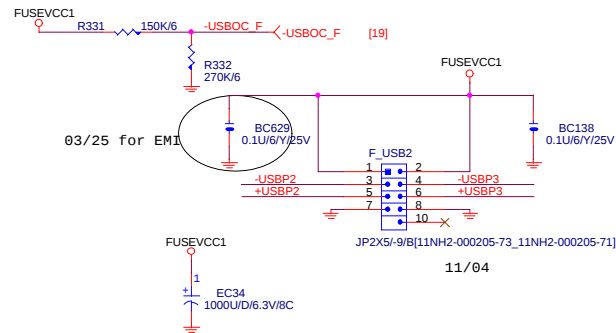
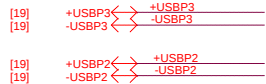
**GIGABYTE**

|               |                      |                |             |
|---------------|----------------------|----------------|-------------|
| Title         |                      |                |             |
| COM, LPT, FDD |                      |                |             |
| Size<br>B     | Document Number      | GA-8I915ME-GL  | Rev<br>1.02 |
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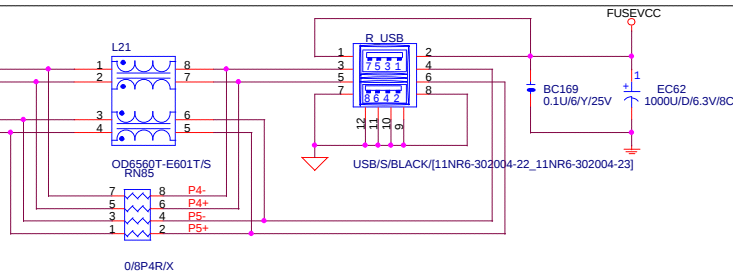
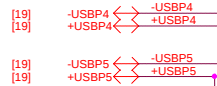
## FRONT\_USB1



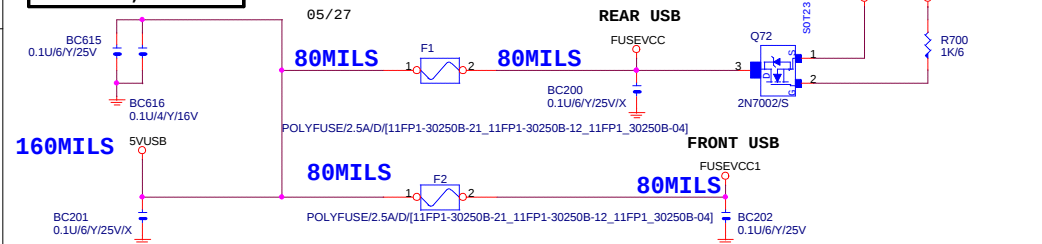
## FRONT\_USB2



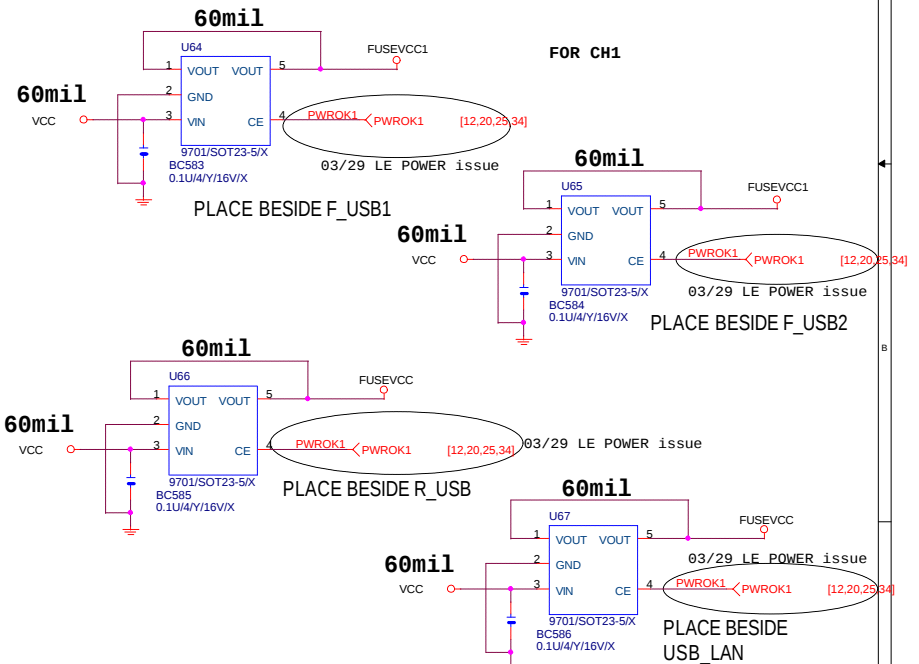
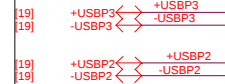
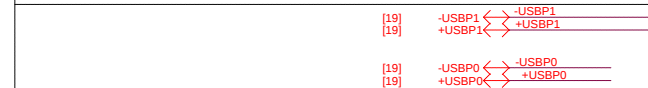
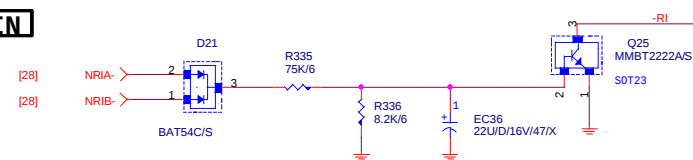
## REAR\_USB



## FUSEVCC, GAMEVCC



## RING\_IN

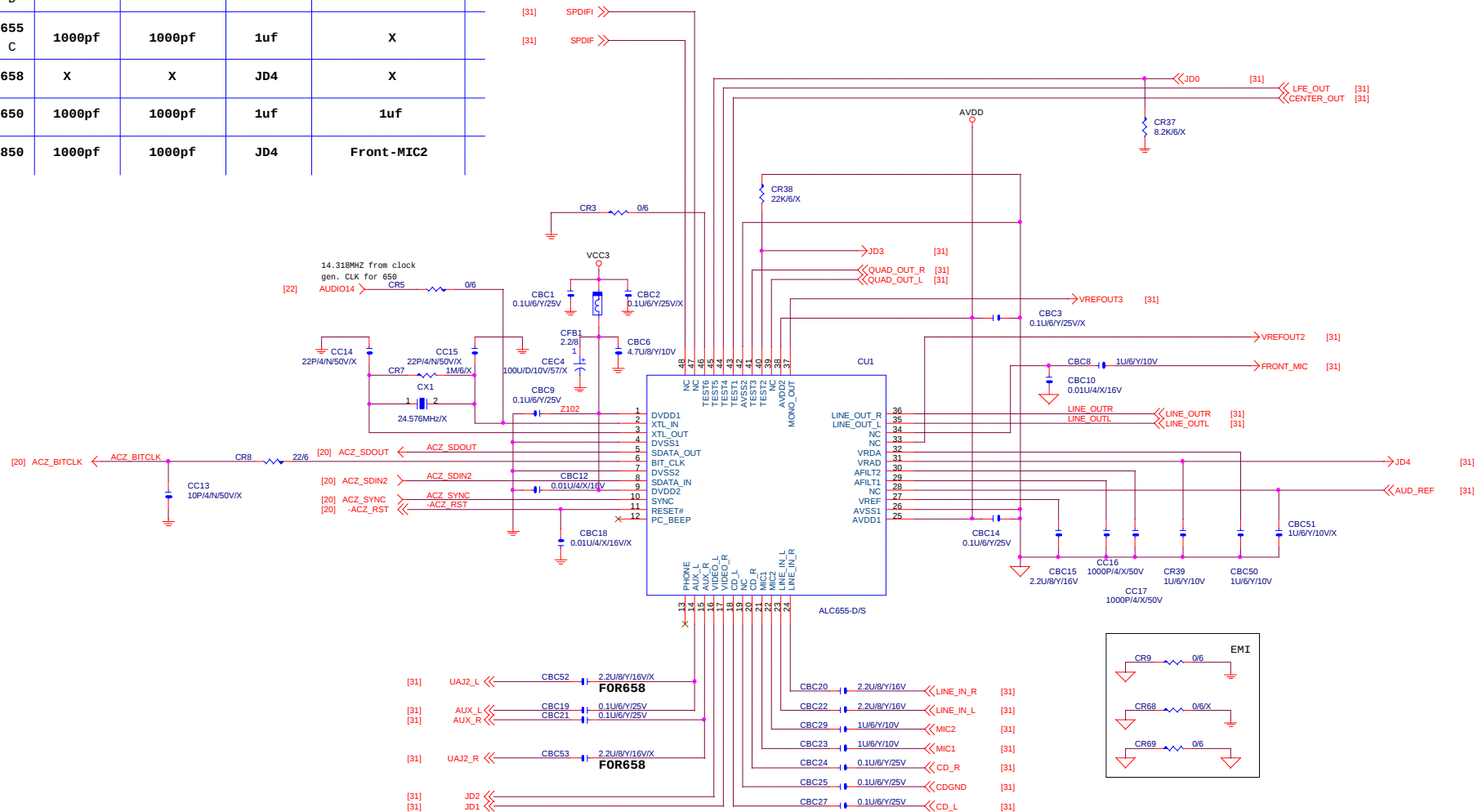


GIGABYTE

|                              |                      |                |
|------------------------------|----------------------|----------------|
| Title                        |                      |                |
| FRONT/REAR USB CONNECTOR/IDE |                      |                |
| Size                         | Document Number      | Rev            |
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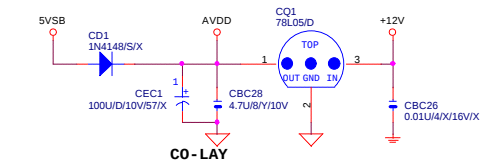
### Filter Cap design:

|                 | Pin-29 | Pin-30 | Pin-31 | Pin-34     |  |
|-----------------|--------|--------|--------|------------|--|
| ALC655<br>Rev D | 1000pf | 1000pf | 1uf    | Front-MIC2 |  |
| ALC655<br>Rev C | 1000pf | 1000pf | 1uf    | X          |  |
| ALC658          | X      | X      | JD4    | X          |  |
| ALC650          | 1000pf | 1000pf | 1uf    | 1uf        |  |
| ALC850          | 1000pf | 1000pf | JD4    | Front-MIC2 |  |



### Arrangement of Jack detection Pin:

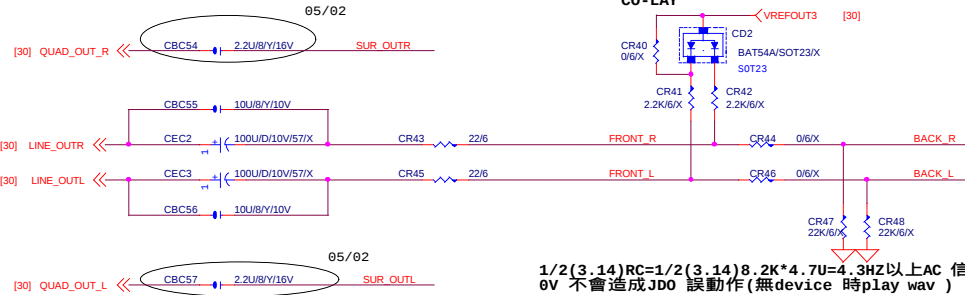
|        | Pin-45(JD0) | Pin-17(JD1)          | Pin-16(JD2)         | Pin-40(JD3)                                   | Pin-31(JD4)                                 | Pin-13(JD5)      |
|--------|-------------|----------------------|---------------------|-----------------------------------------------|---------------------------------------------|------------------|
| ALC655 | for MIC-IN  | for FRONT-OUT        | for LINE-IN         |                                               |                                             |                  |
| ALC658 | for MIC-IN  | for UAJ1             | for UAJ2            | for FRONT-OUT<br>External pull high is needed | for LINE-IN<br>External pull high is needed |                  |
| ALC850 | for MIC-IN  | for Front Pannel OUT | for Front Pannel IN | for FRONT-OUT                                 | for LINE-IN                                 | for SurrBack Out |



## LINE OUT

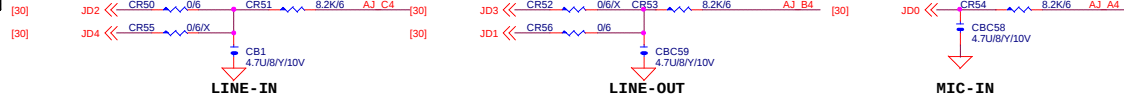
JDO,JD2,GPI00 為偵測DEVICE INPUT 時由LOW TO HIGH Edge trigger(pop manual)

LINE OUT SENSING  
R>4K OHM=>POWER SPEAKER  
4K OHM>R>400 OHM=>MICROPHONE  
R<400 OHM=>HEADPHONE

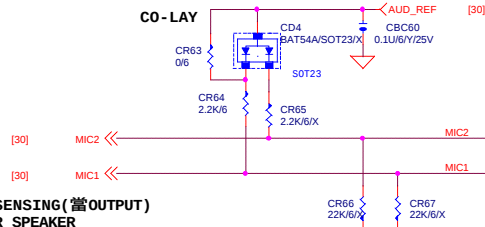


1/2(3.14)RC=1/2(3.14)8.2K\*4.7U=4.3HZ以上AC 信號全部衰減 TO 0V 不會造成JDO 誤動作(無device 時play wav )

## AC97 JACK



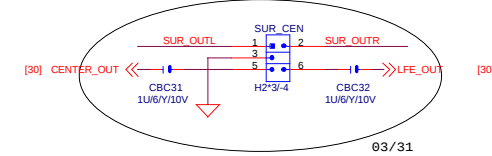
## MIC



MICROPHONE IN SENSING(當OUTPUT)  
R>4K OHM=>POWER SPEAKER  
4K OHM>R>400 OHM=>MICROPHONE  
R<400 OHM=>HEADPHONE

MICROPHONE IN SENSING(當INPUT)(利用vref 偏壓 與CR43,CR32 並聯求出阻抗)  
7.1k ohm>R>2.3k ohm==>microphone in  
R<2.3k ohm or R>7.1k ohm==>unknown device

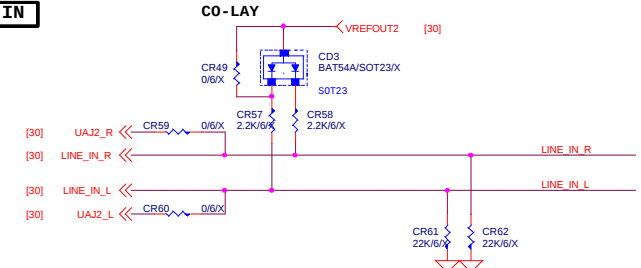
## SUR\_CEN



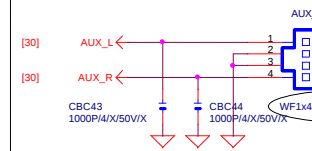
LINE IN SENSING(當OUTPUT)  
R>4K OHM=>POWER SPEAKER  
4K OHM>R>400 OHM=>MICROPHONE  
R<400 OHM=>HEADPHONE

LINE IN SENSING(當INPUT)  
swing of input signal>-40dbv(10mv)====line in device active  
swing of input signal<-40dbv(10mv)====unknown line in device

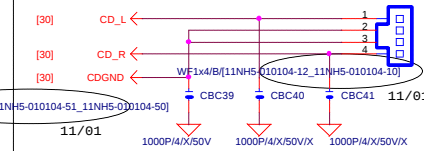
## LINE-IN



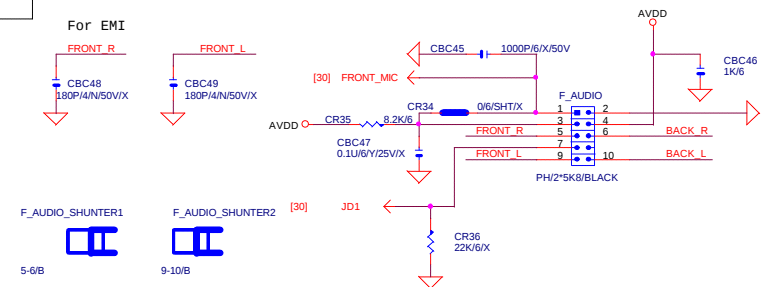
## AUX IN



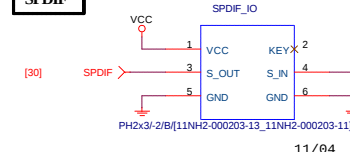
## CD IN



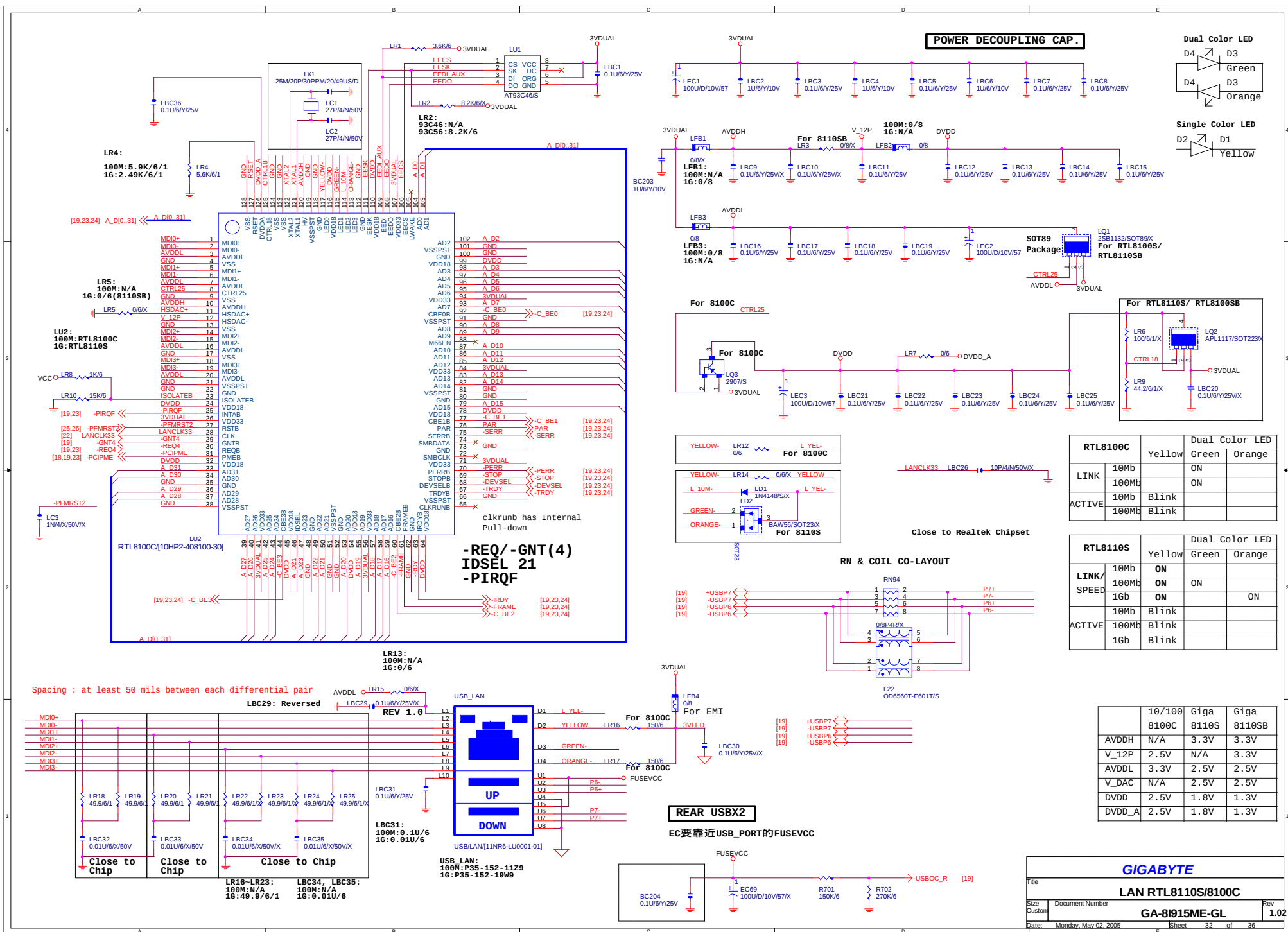
## INTEL FRONT AUDIO



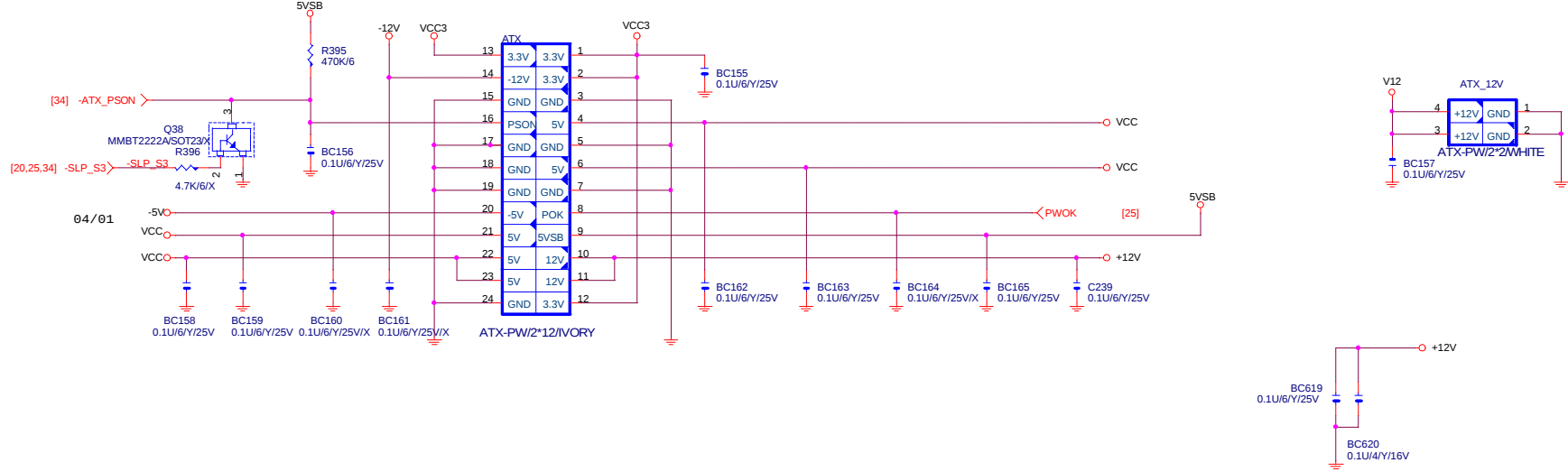
## SPDIF



| GIGABYTE                |                      |       |          |
|-------------------------|----------------------|-------|----------|
| AUDIO OUTPUT, GAME PORT |                      |       |          |
| Title                   | Document Number      | Rev   |          |
|                         | GA-81915ME-GL        | 1.02  |          |
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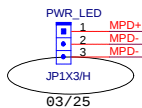
ATX POWER CONNECTOR



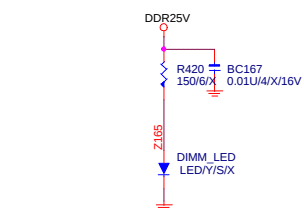
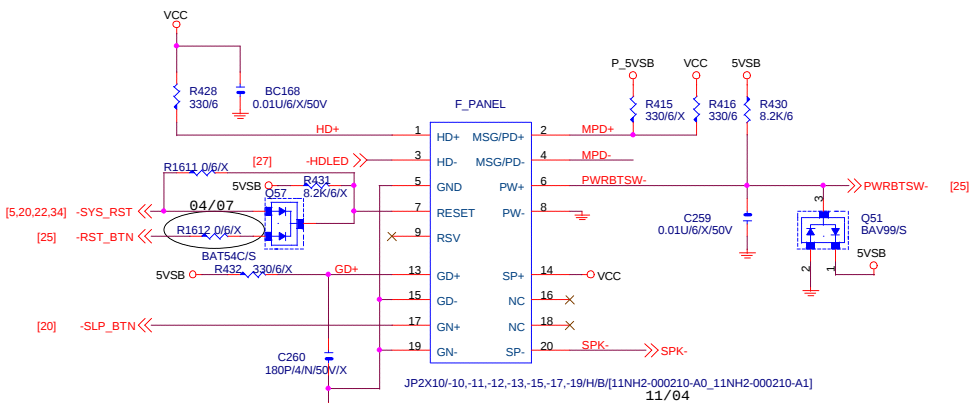
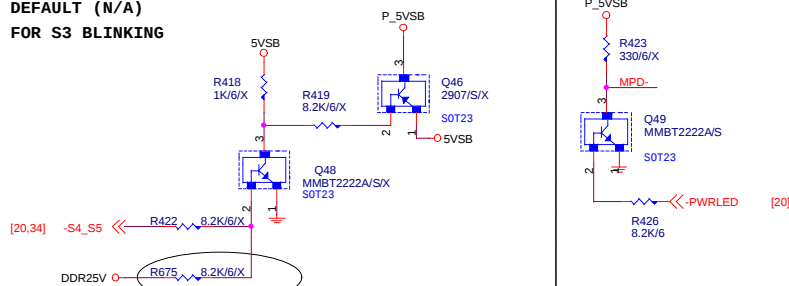


# INTEL FRONT PANEL

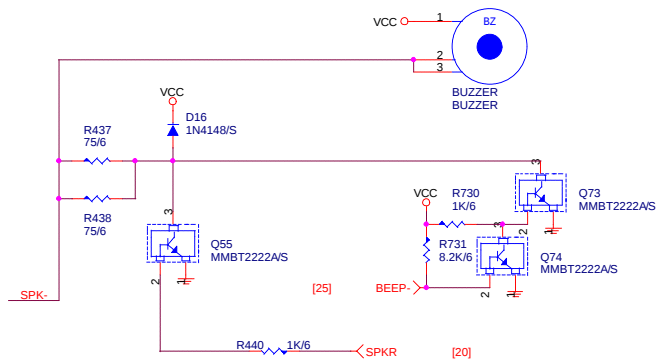
3 PIN POWER LED  
LAYOUT PLACE CLOSE  
TO F\_PANEL



DEFAULT (N/A)  
FOR S3 BLINKING



## BUZZER



States for green LED N01 GP022 only S1 PROGRAMMING LOW

| LED States | ACPI States | GP022 |
|------------|-------------|-------|
| ON         | S1, S3      | 0     |
| OFF        | S0, S5      | 1     |

(GP022 DEFAULT HIGH, main power)

States for a single-color power LED

| LED States     | ACPI States        | GP025 | GP027 | GP024 |
|----------------|--------------------|-------|-------|-------|
| OFF            | S1, S3, S5         | 1     | 1     | N01   |
| Steady Green   | S0                 | 1     | 1     | 1     |
| Blinking Green | S0(message waiting | 1     | B     | 1     |

| LED States      | ACPI States            | GP025 | GP027 | GP022 |
|-----------------|------------------------|-------|-------|-------|
| OFF             | S5                     | 1     | 1     | X     |
| Steady Green    | S0                     | 1     | 1     | 1     |
| Blinking Green  | S0(message waiting     | 1     | B     | 1     |
| Steady Yellow   | S1, S3                 | 1     | 0     | N01   |
| Blinking Yellow | S1, S3(message waiting | 1     | B     | N01   |

GIGABYTE

|        |                      |               |          |
|--------|----------------------|---------------|----------|
| Title  | FRONT PANEL          |               |          |
| Size   | Document Number      | GA-81915ME-GL | Rev      |
| Custom |                      |               | 1.02     |
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