

Revision : 1.01

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25	FAN/HWMO/COM/ KB_MS

[illegible]

A vertical number line with four points labeled A, B, C, and D from bottom to top. An arrow points to point C.

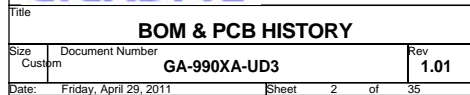
4 Layer, 4mil 50ohm +/- 15% L P-Code: U98094-0

4 Layer, 4mil 50ohm +/- 15% L P-Code: U98094-0

A vertical number line with four points labeled A, B, C, and D from bottom to top. An arrow points to point C.

A vertical number line with four points labeled A, B, C, and D from bottom to top. An arrow points to point C.

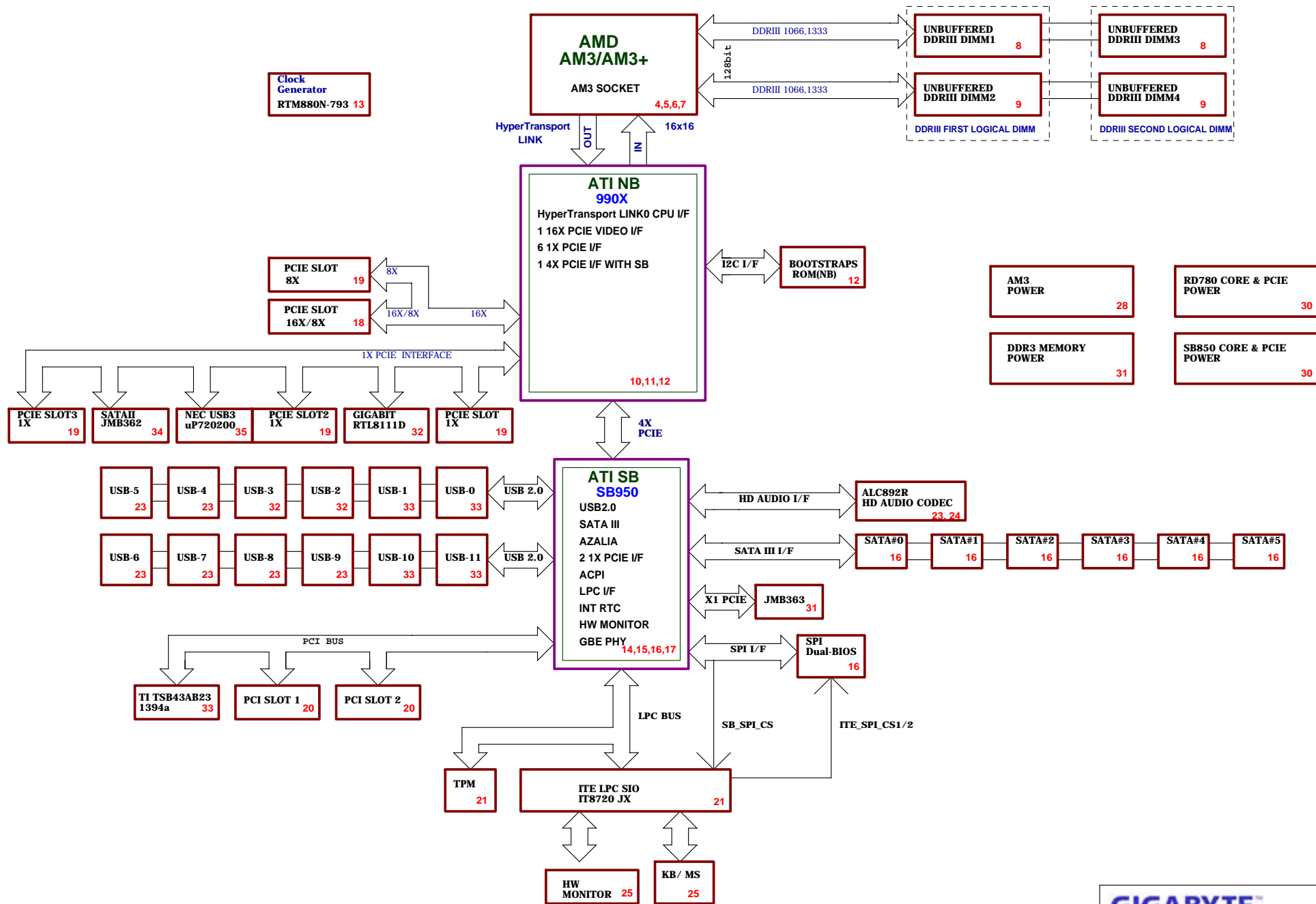
A vertical number line with four points labeled A, B, C, and D from bottom to top. An arrow points to point C.



Size Custom	Document Number GA-990XA-1J3	Rev 1.01
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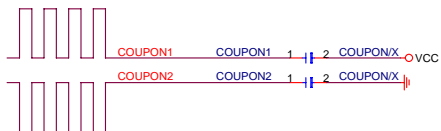
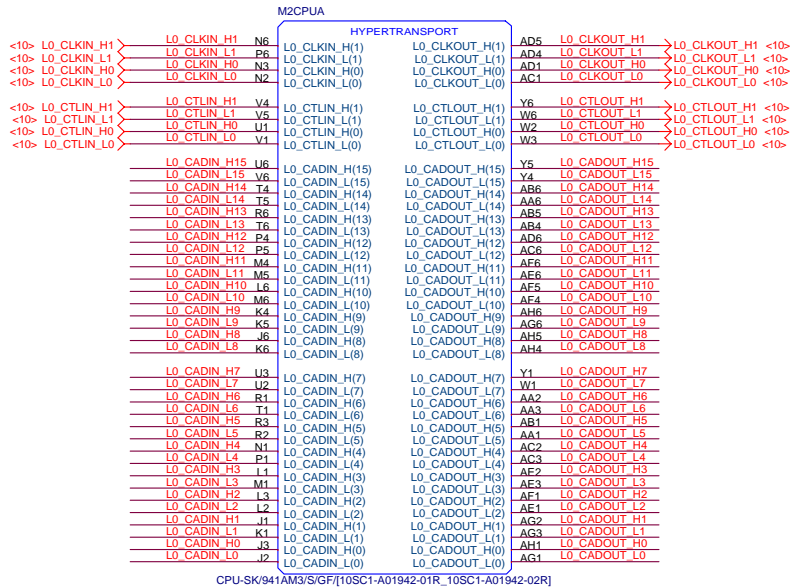
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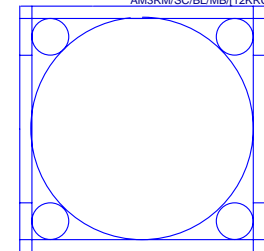
L0_CADIN_L[0..15] <L0_CADIN_L[0..15] <10>
L0_CADIN_H[0..15] <L0_CADIN_H[0..15] <10>
L0_CADOUT_L[0..15] <L0_CADOUT_L[0..15] <10>
L0_CADOUT_H[0..15] <L0_CADOUT_H[0..15] <10>

CPU_VDD_RUN = VCORE
CPU_VDDA_RUN = VDDA25
VLDT_RUN = VCC12_HT
CPU_VDDIO_SUS = DDR15V
CPU_VDDR = CPU_VDDR12

VLDT_A = VCC12_HT
VLDT_B = HT12B



M2CPU
AM3RM/SC/BL/MB[12KRC-04K812-21R_12KRC-04K812-22R]



GIGABYTE™			
Title			
CPU HYPER TRANSPORT			
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VCORE_NB

ABC5 22uB/X5R5

ABC6 22uB/X5R5 3V/M

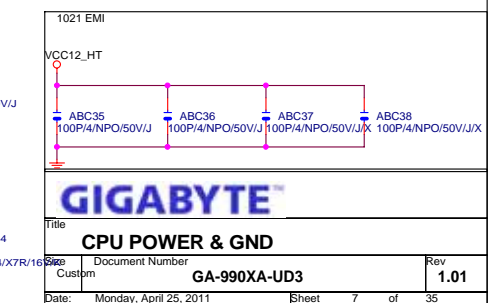
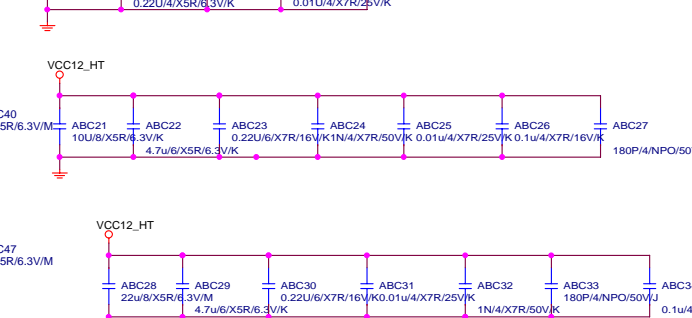
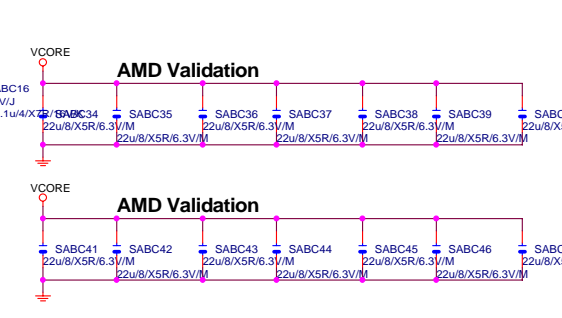
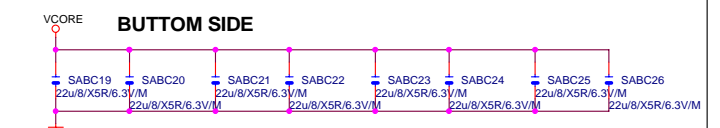
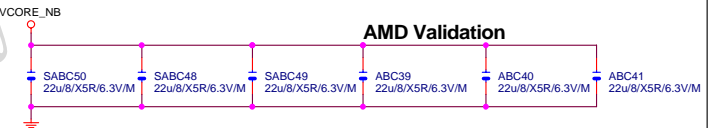
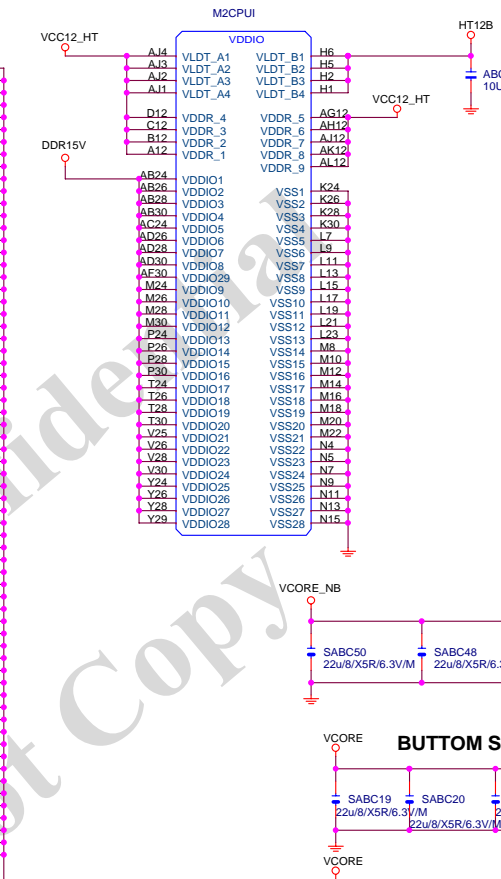
ABC7 4.7uB/X5R5 6.3V/K

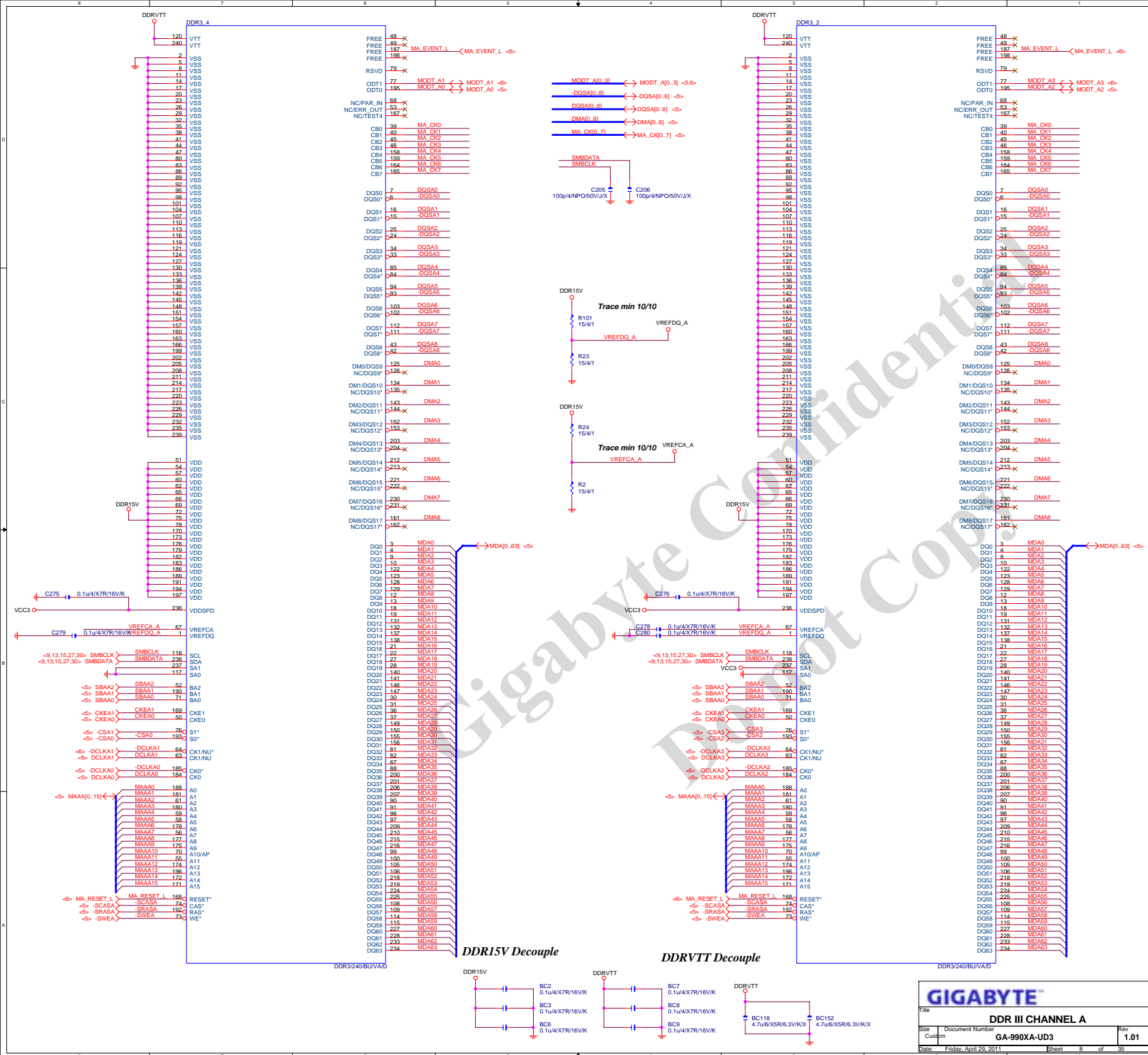
ABC8 0.22uB/X7R7 16V/K

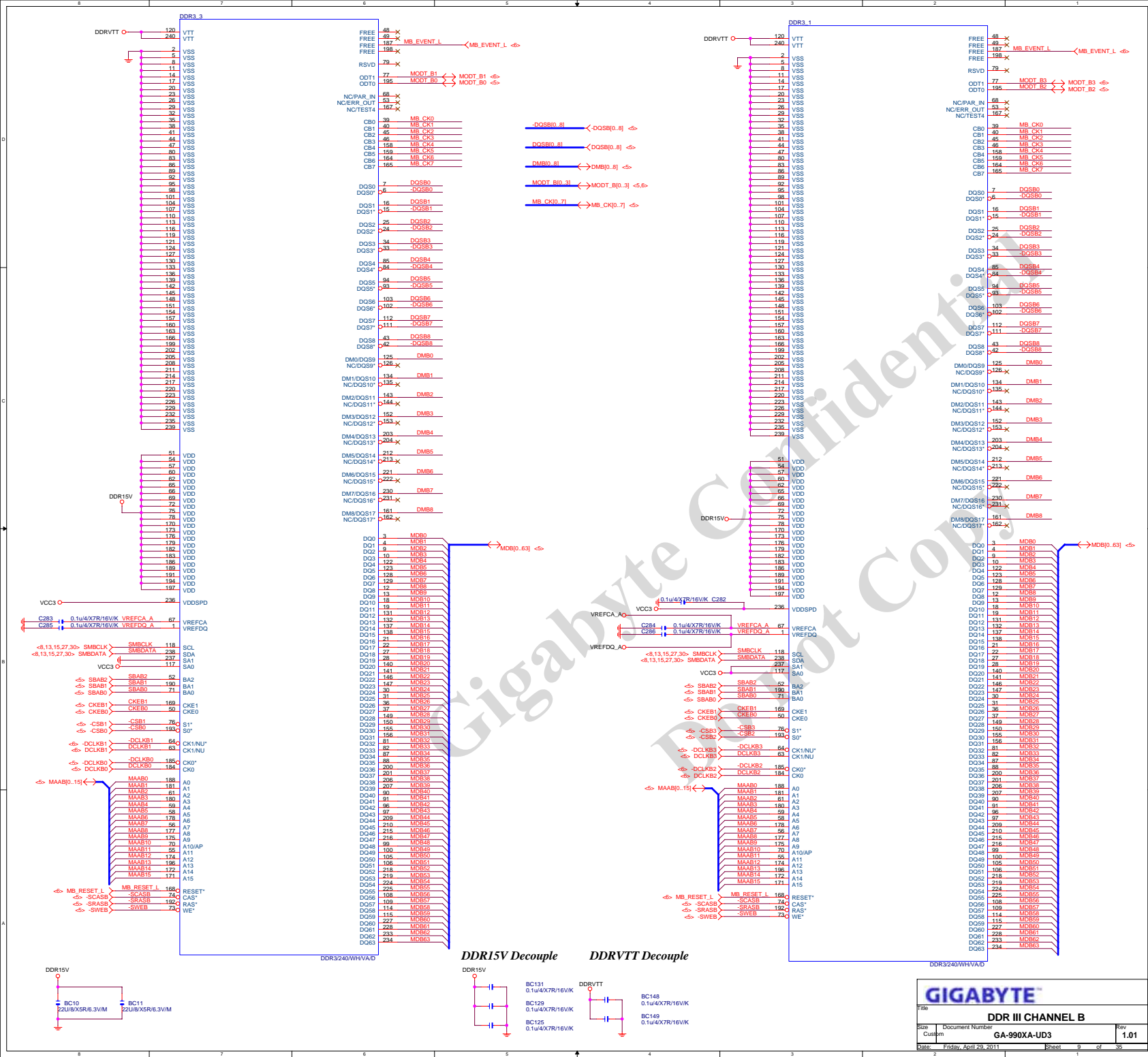
ABC9 0.01uA/X7R7 25V/K

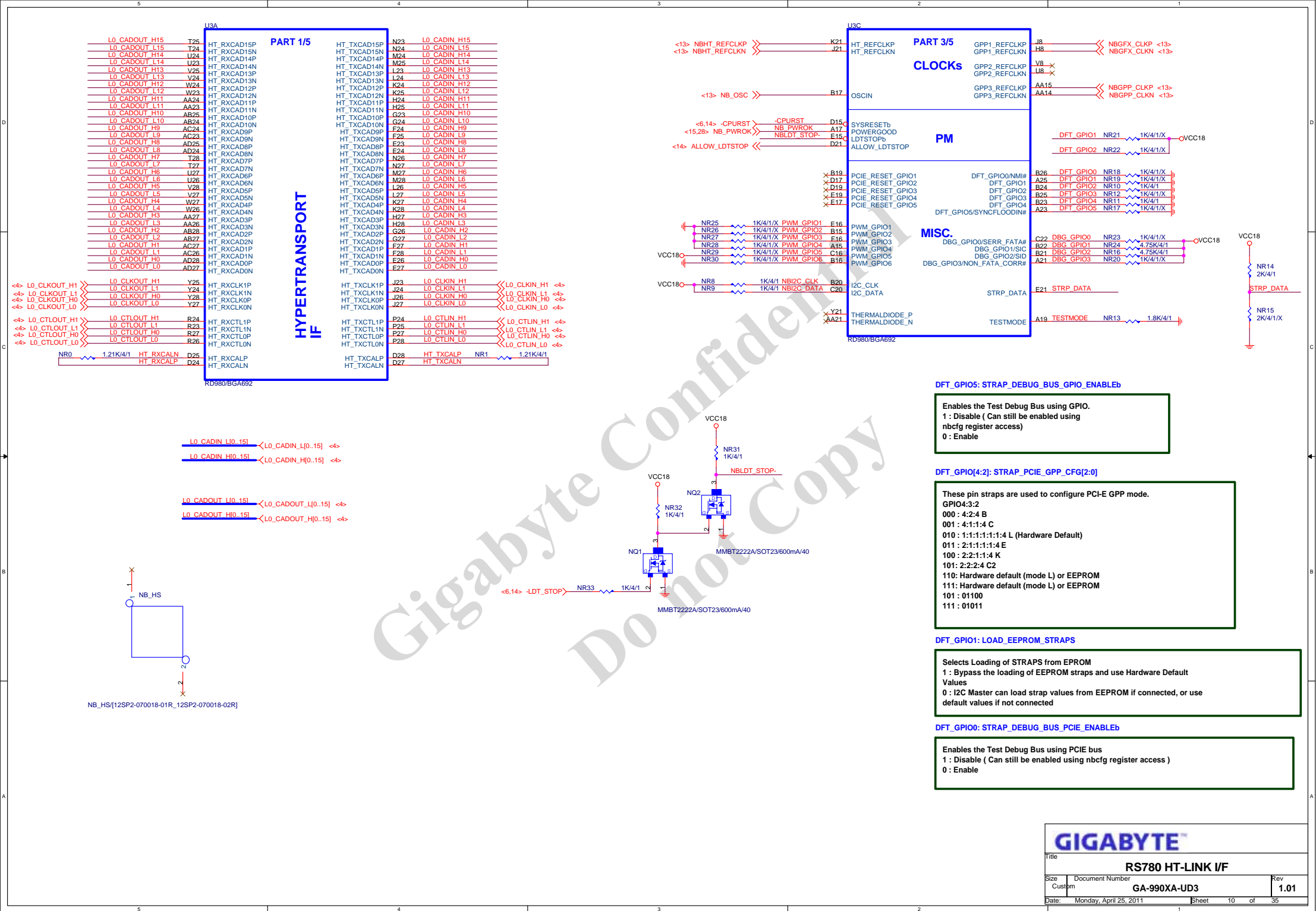
ABC10 160P/NPO/50V/J

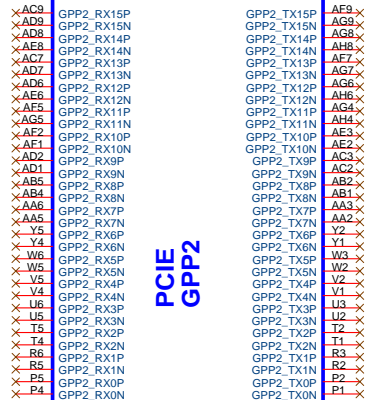
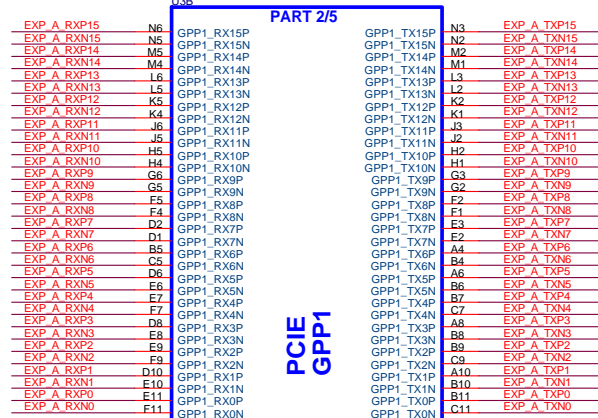
GND



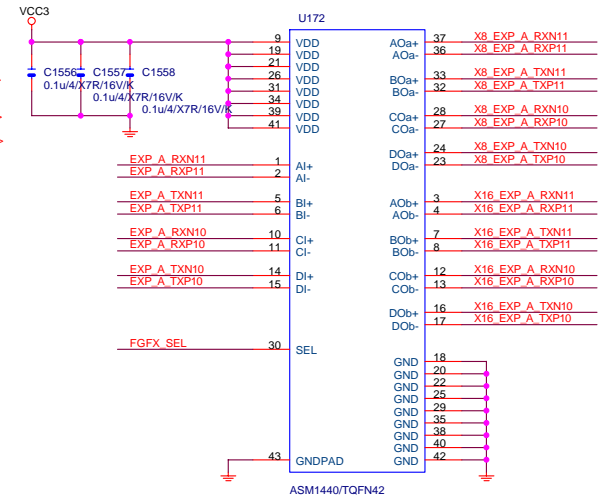
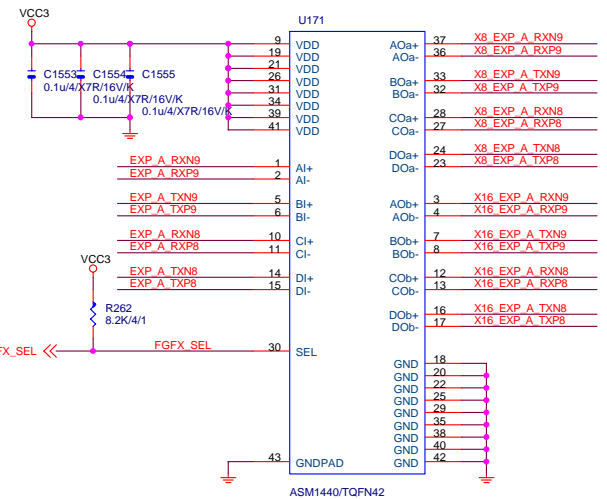
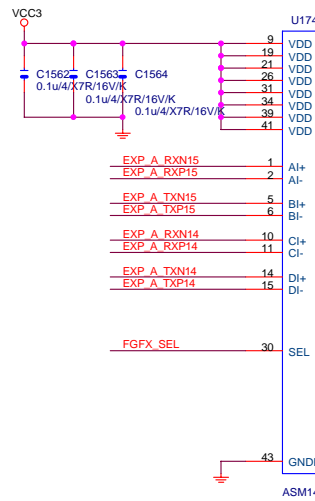








RD980/BGA692

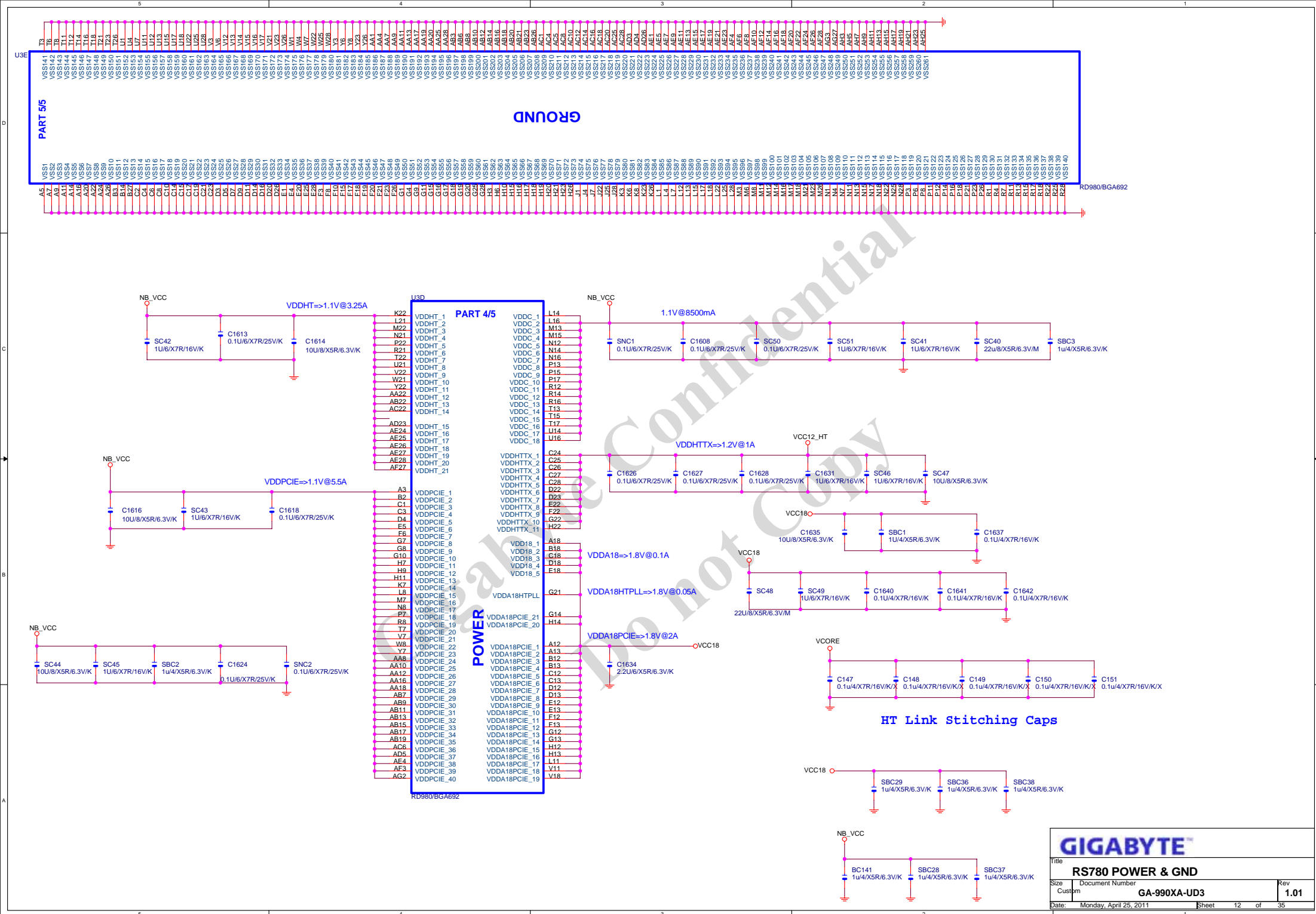


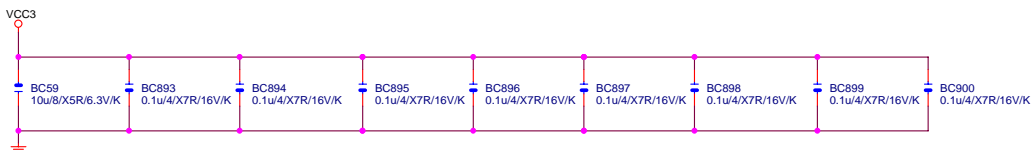
Function	SEL
xI--> xOa	L (X 8)
xI--> xOb	H (X 16)

GIGABYTE

RS780 PCIE I/F ,Switch

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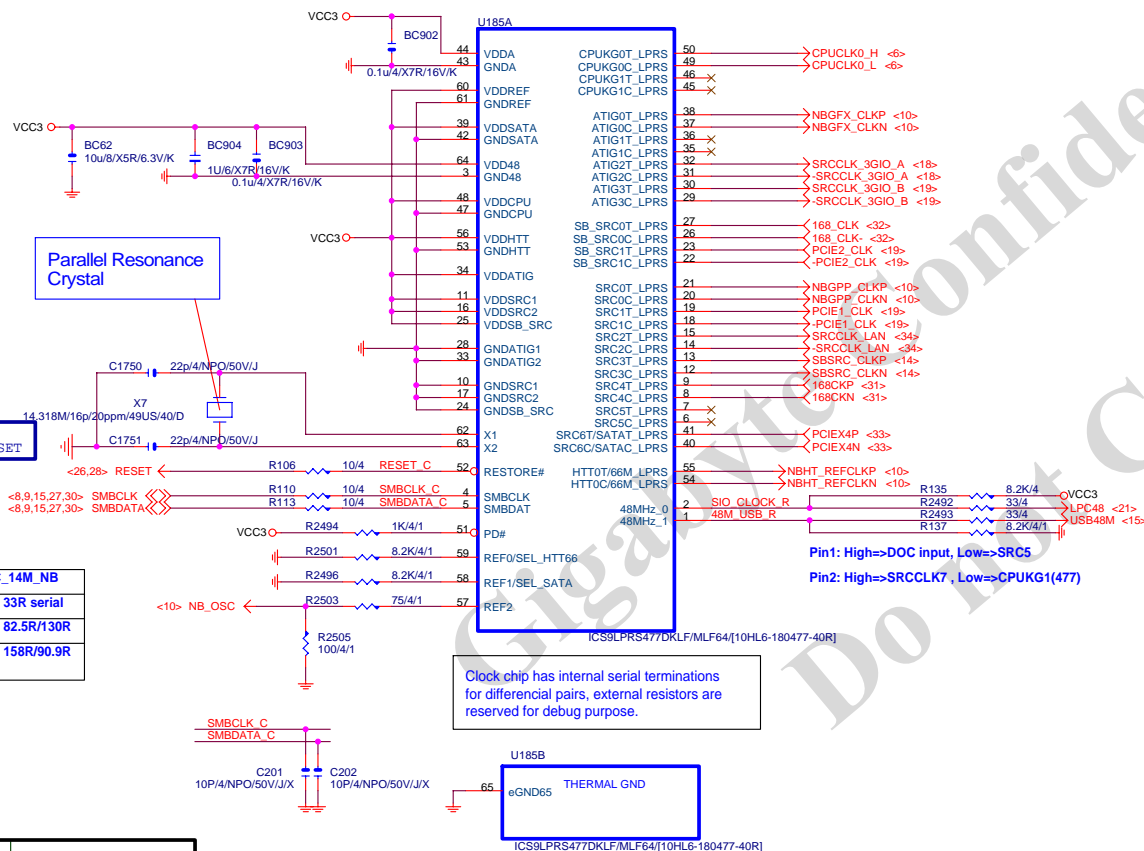
- 1- PLACE ALL THE SERIES TERMINATION RESISTORS AS CLOSE TO U800 AS POSSIBLE
- 2- ROUTE ALL SRCCLKTx AND SRCCLKCx AS DIFFERENT PAIR RULE
- 3- PUT DECOUPLING CAPS CLOSE TO U800 POWER PIN

Place R800/801 less than 500 mills away from U800
R851 less than 100 mills away from R800/801
route CPU clock as 100ohm differential pair

NB CLOCK INPUT TABLE

NB CLOCKS	RS740	RX780	RS780	
HT_REFCLKP	66M SE(SE)	100M DIFF	100M DIFF	
HT_REFCLKN	NC	100M DIFF	100M DIFF	
REFCLK_P	14M SE (3.3V)	14M SE (1.8V)	14M SE (1.1V)	100M DIFF
REFCLK_N	NC	NC	vref	100M DIFF
GFX_REFCLK*	100M DIFF	100M DIFF	100M DIFF	100M DIFF
GPP_REFCLK	NC	100M DIFF	100M DIFF(OUT)	
GPPSB_REFCLK	100M DIFF	100M DIFF	100M DIFF	

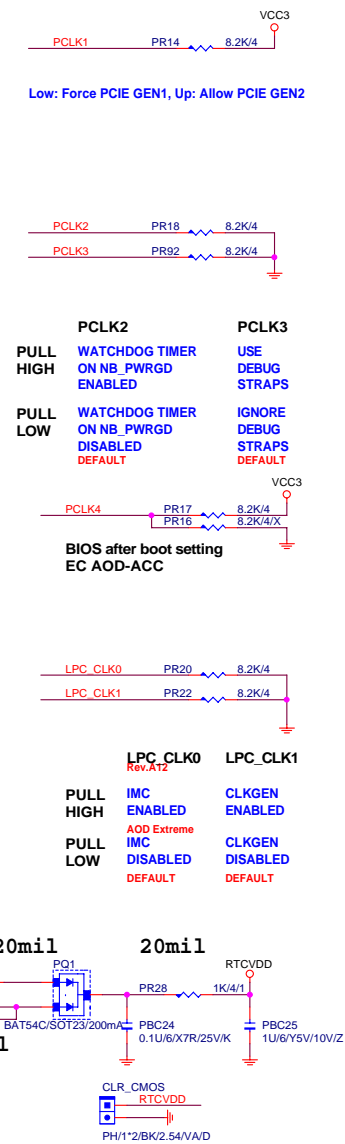
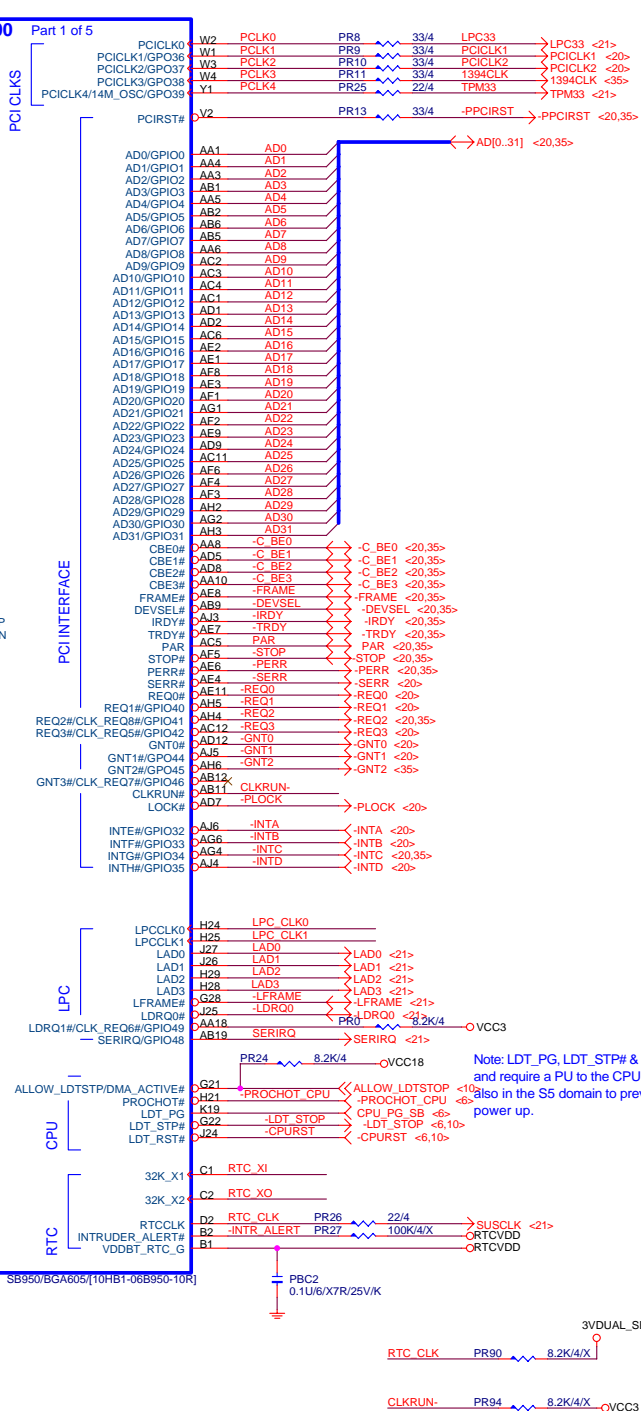
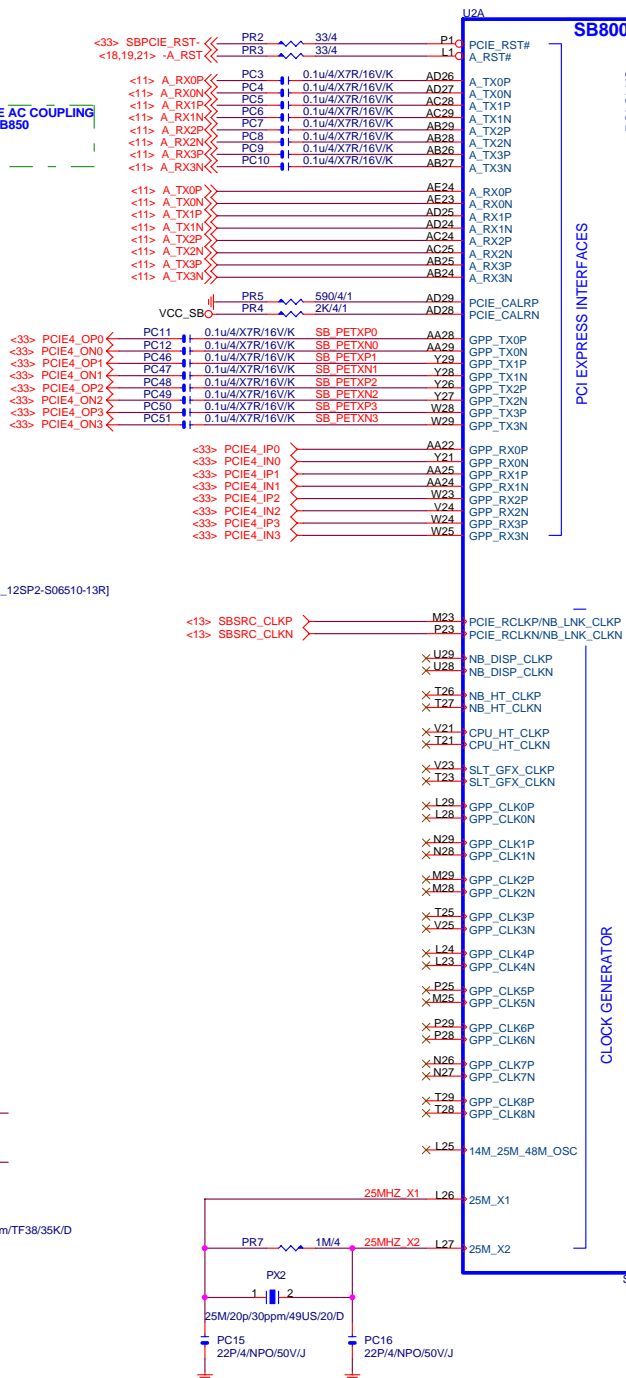
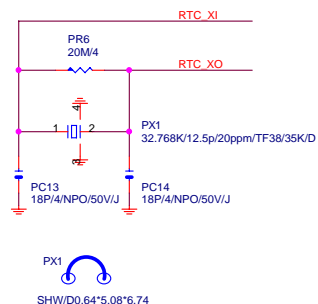
* the GFX_REFCLK input is required for all cases



	OSC_14M_NB
RS740	3.3V 33R serial
RX780	1.8V 82.5R/130R
RS780 (Single-ended)	1.1V 158R/90.9R

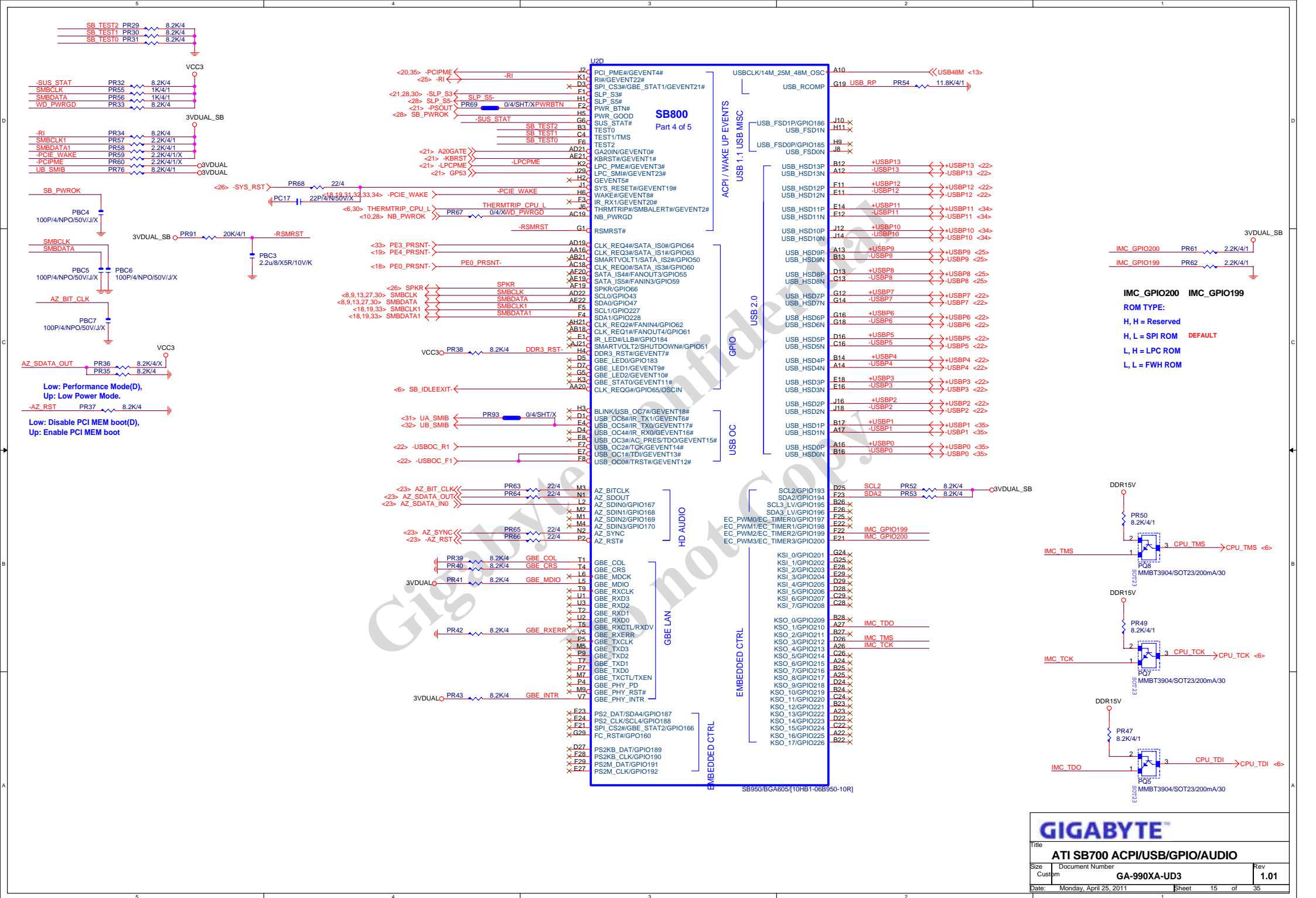
REF0/SEL_HTT66	HTT CLOCK
0	100.00 DIFFERENTIAL
1	66.66 SINGLE END

REF1/SEL_SATA	SRC6/SATA
0	100.00 DIFFERENTIAL SPREADING SRC CLOCK
1	100.00 NON-SPREADING DIFFERENTIAL SATA CLOCK



CLR_CMOS	
SHORT	CLEAR CMOS
OPEN	NORMAL

NOT ADD ICT FOR RTCVDD PIN





PLACE SATA CAL
RES VERY CLOSE
TO BALL OF U600

NOTE:

R650 IS 1K 1% FOR 25MHz
XTAL, 4.99K 1% FOR 100MHz
INTERNAL CLOCK

VCC_SBC PR75 1K/4/1 SATA_CALRP AB14
PR74 931/4/1 SATA_CALRN AA14

<26> -SATA_LED -SATA_LED AD11

TP5 SATA_X1 AD16

TP7 SATA_X2 AC16

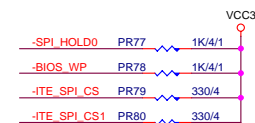
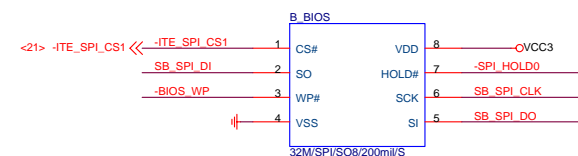
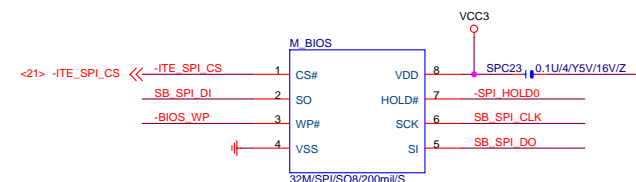
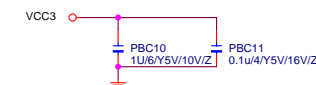
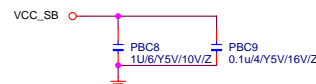
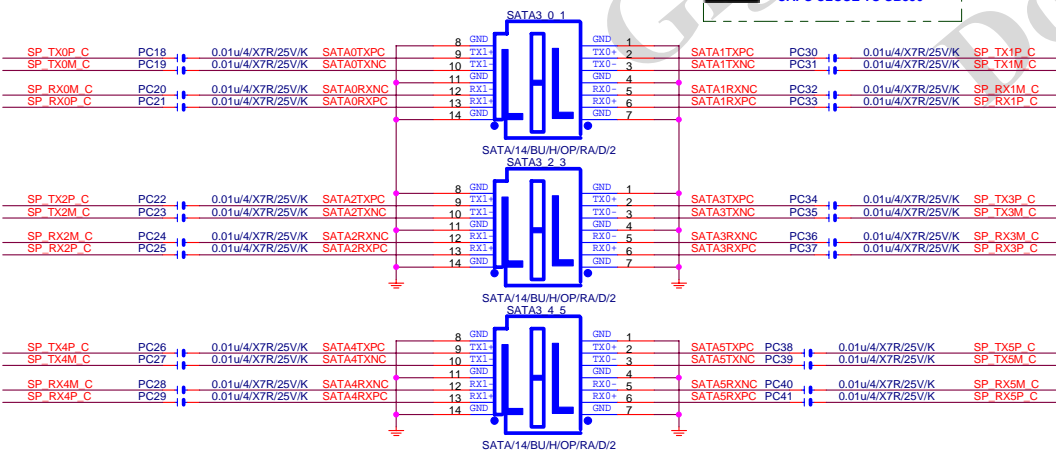
<21> -SB_SPL_CS_ITE << SB_SPL_DI PR70 22/4 SB_SPL_DI_R J5
SB_SPL_DO PR71 22/4 SB_SPL_DO_R E2
SB_SPL_CLK PR72 22/4 SB_SPL_CLK_R K4
SB_SPL_CS_ITE PR73 22/4 SB_SPL_CS- K9

X G22

SB950/BGA605/[10HB1-08B950-10R]



PLACE SATA AC COUPLING
CAPS CLOSE TO SB850

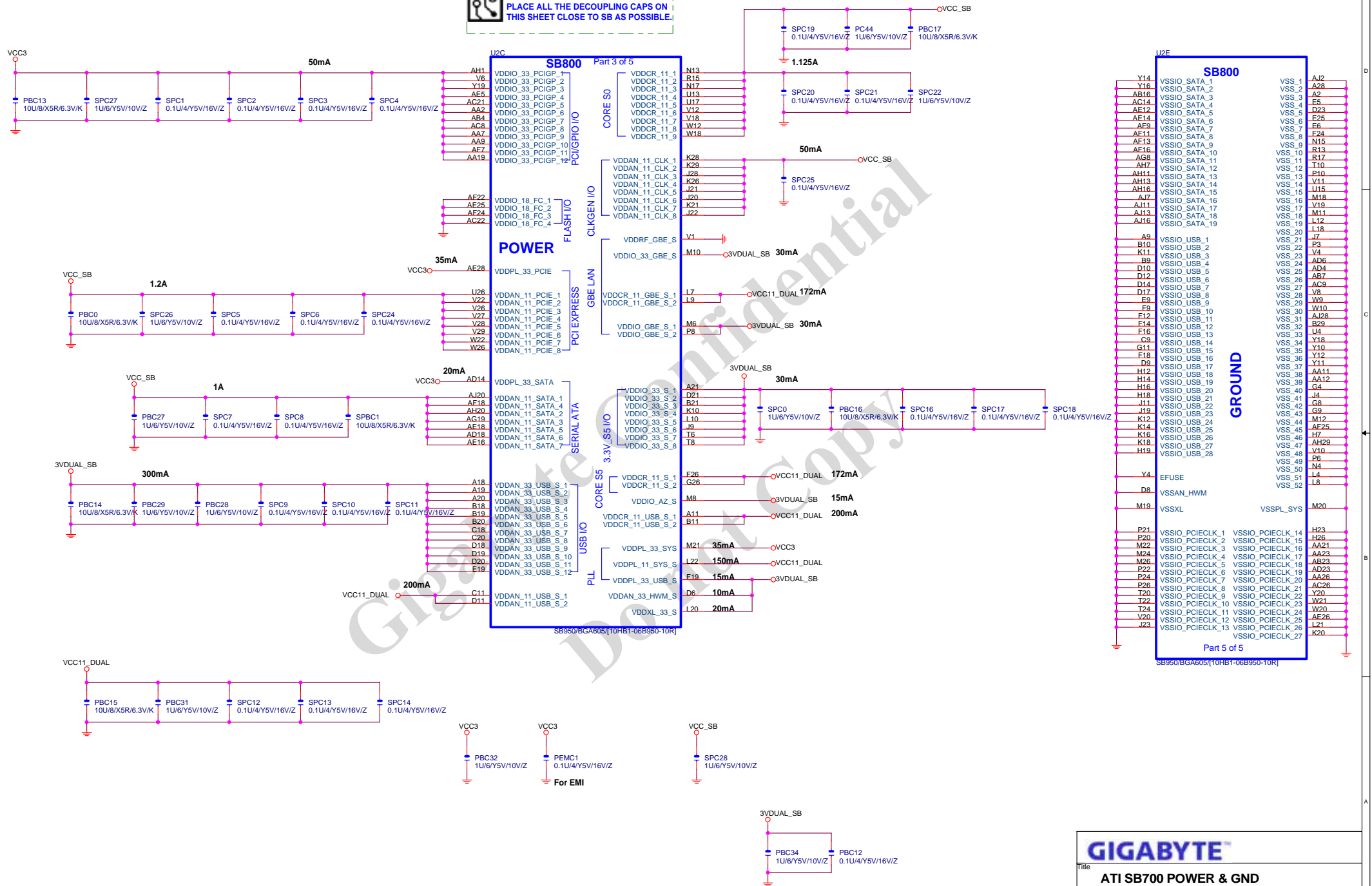


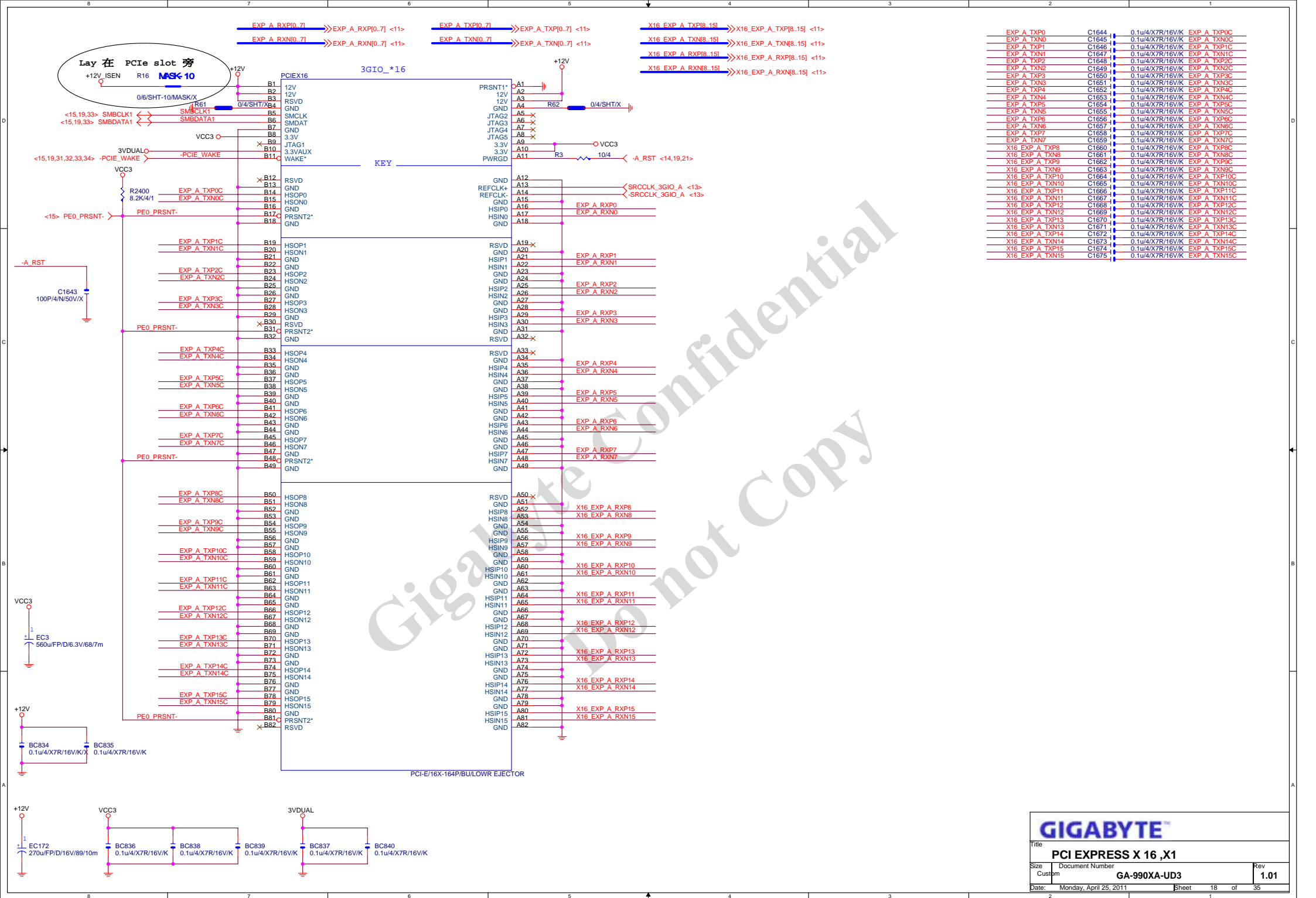
GIGABYTE

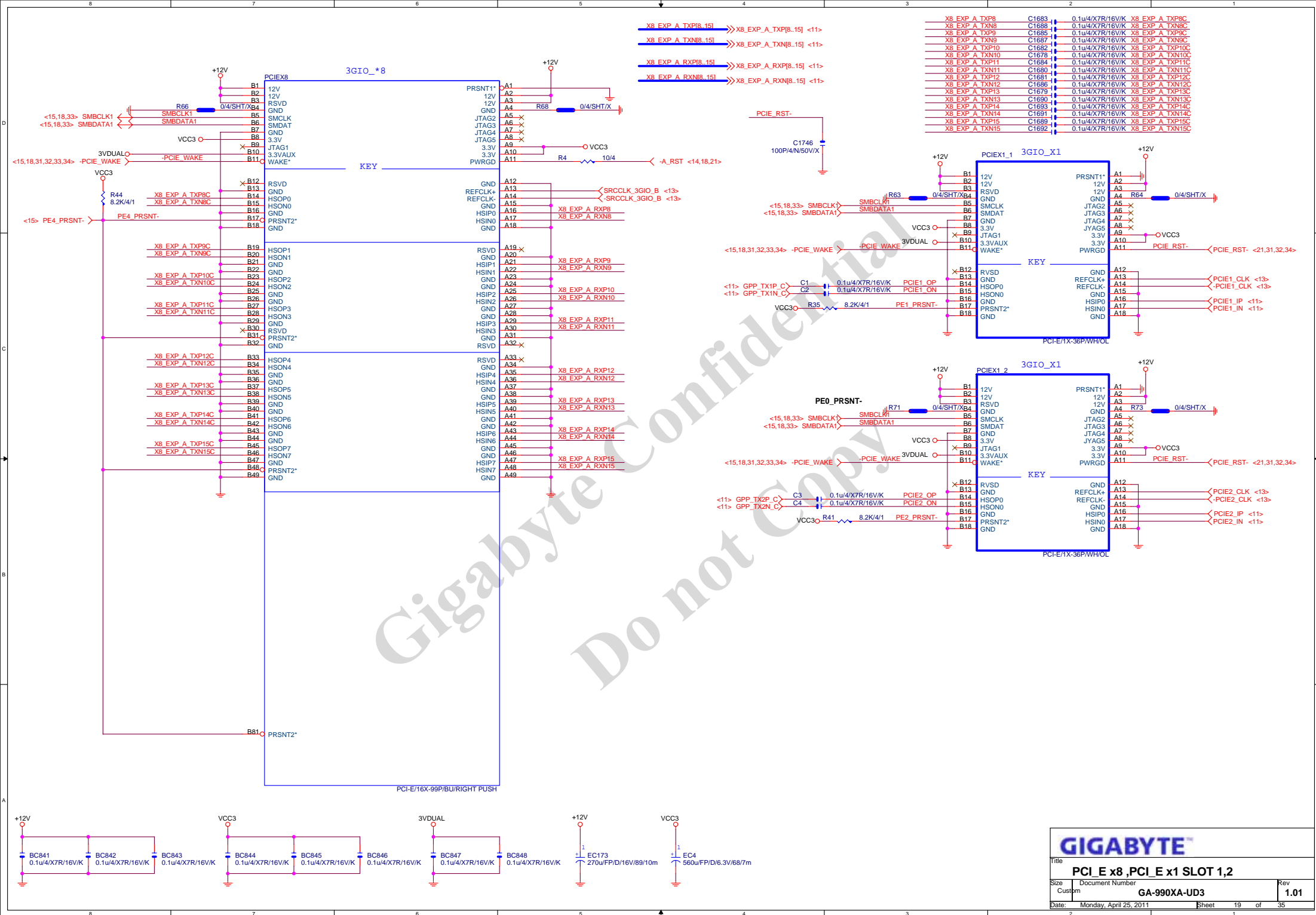
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Size			Document Number		
Custm			GA-990XA-UD3		
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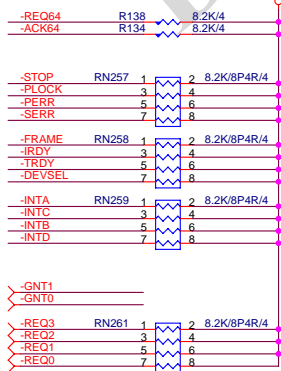
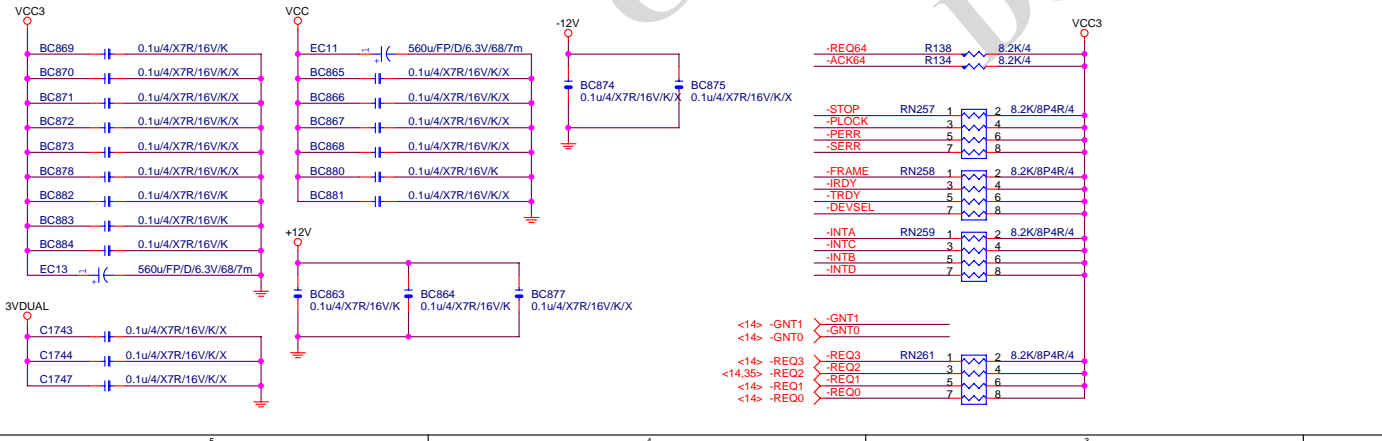
PLACE ALL THE DECOUPLING CAPS ON THIS SHEET CLOSE TO SB AS POSSIBLE.

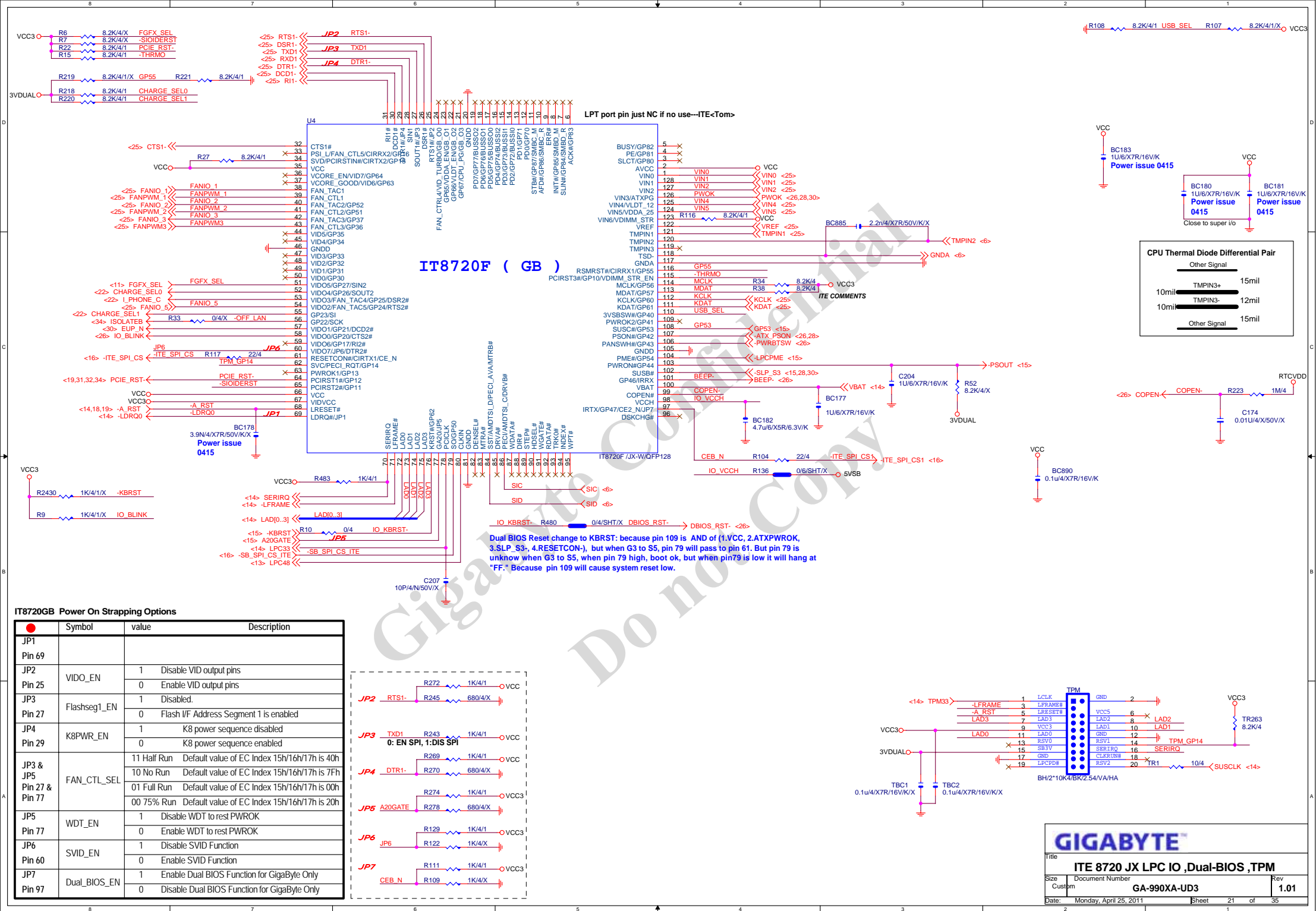




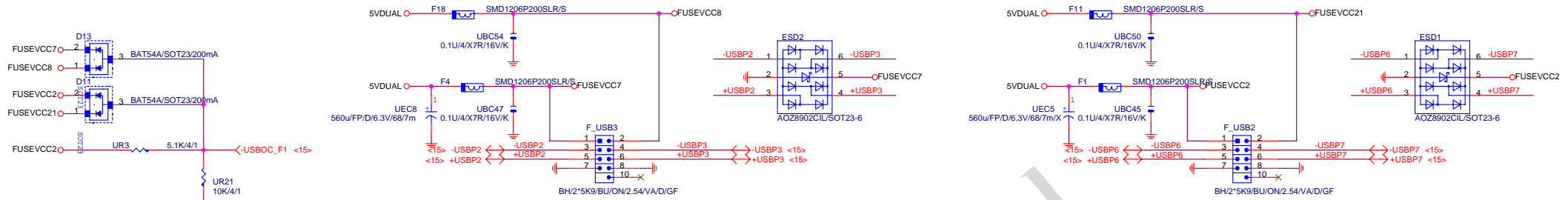


<14,35> AD[0..31] ↔ AD[0..31]

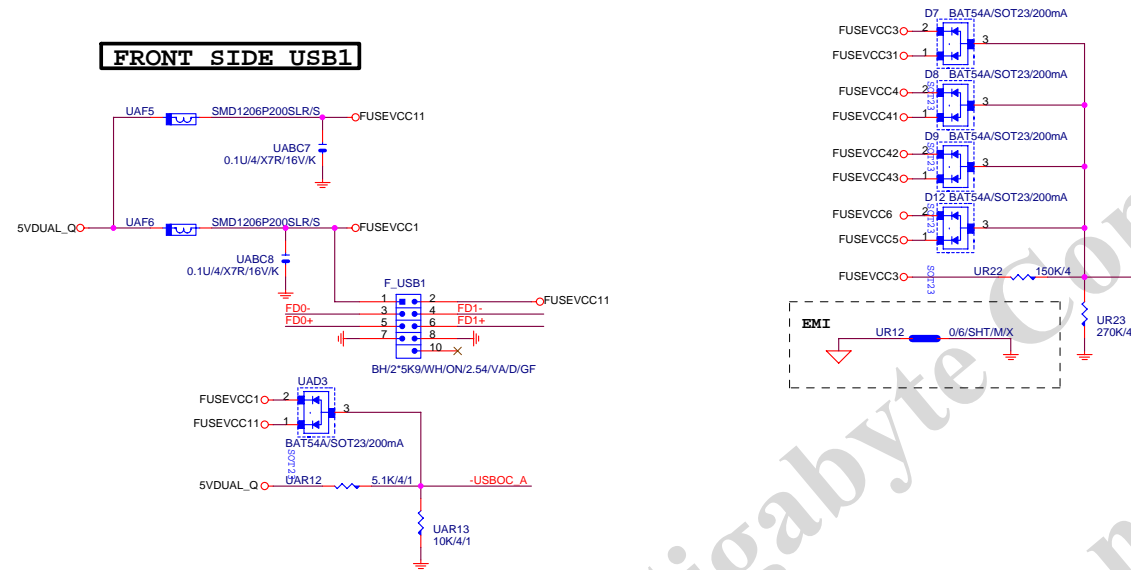




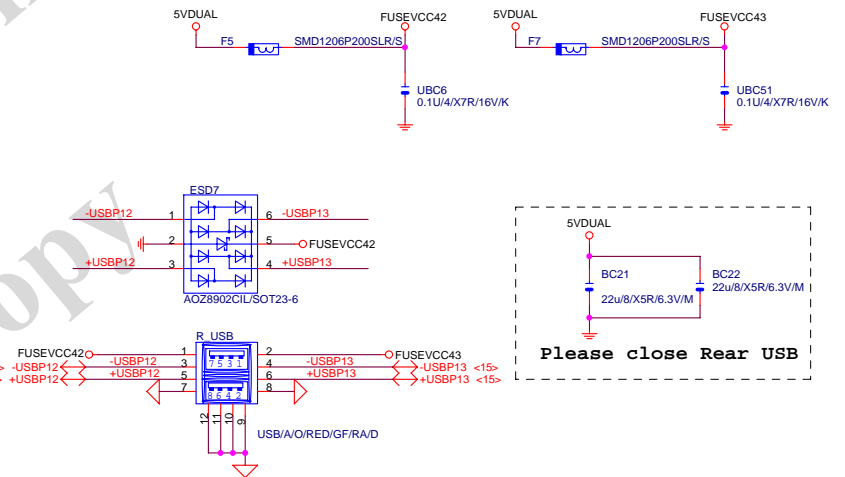
FRONT SIDE USB2



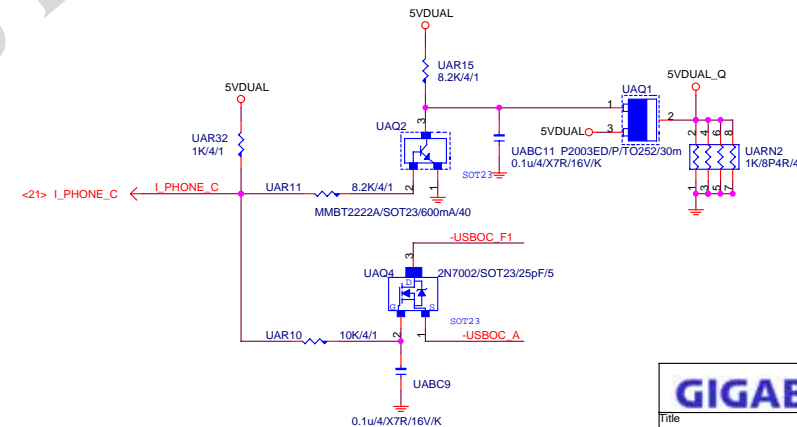
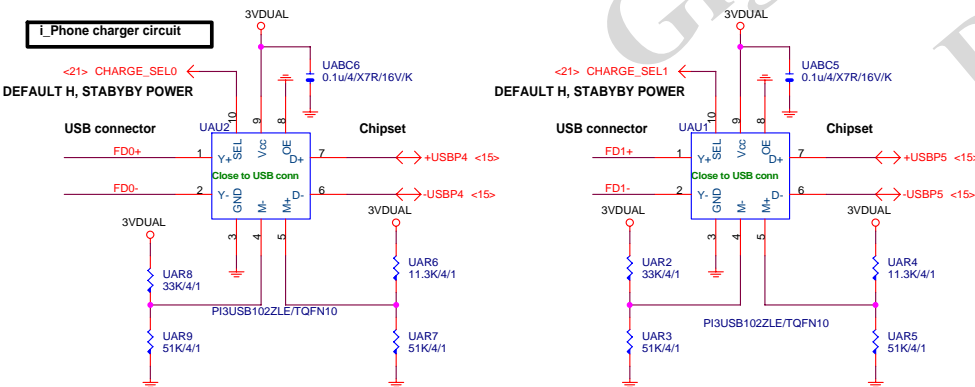
FRONT SIDE USB1



REAR USB



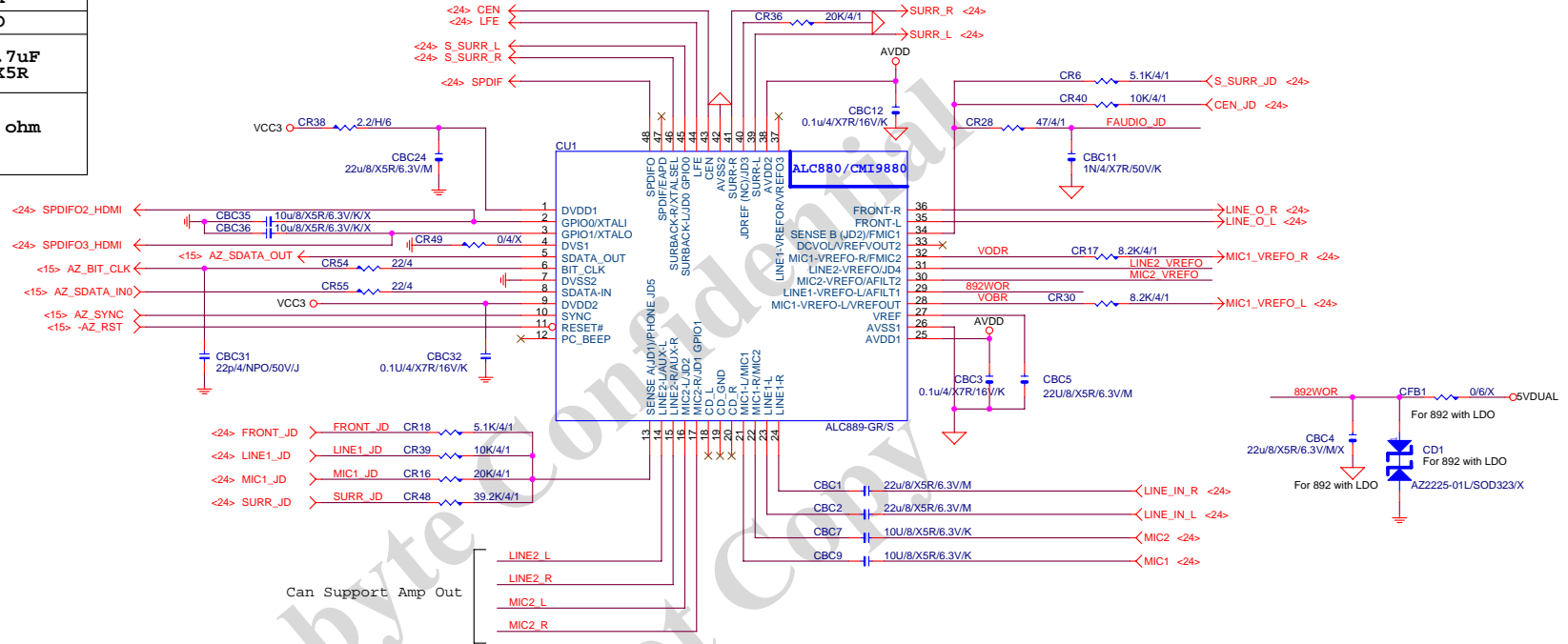
I Phone charger circuit



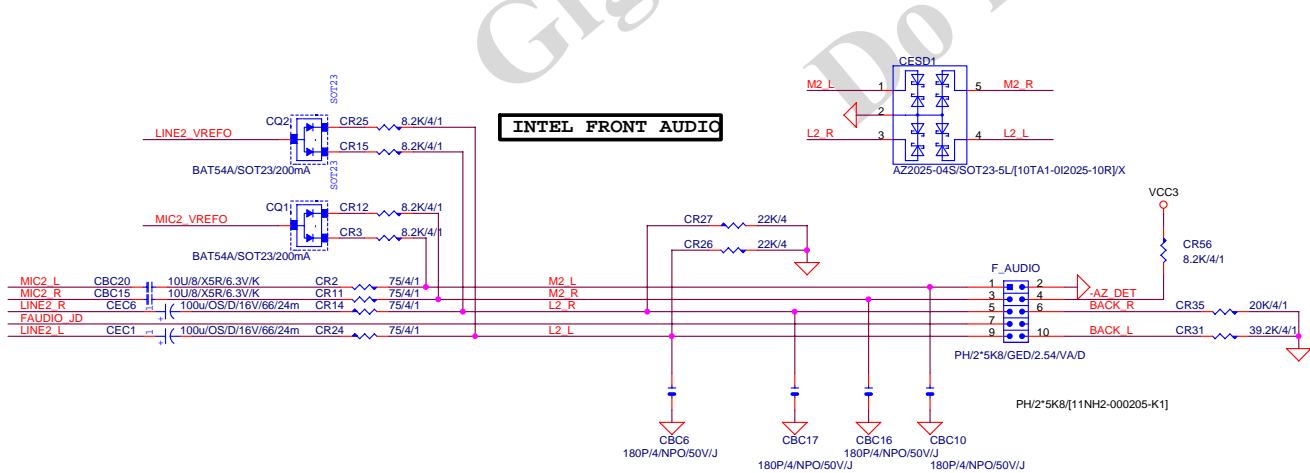
GIGABYTE

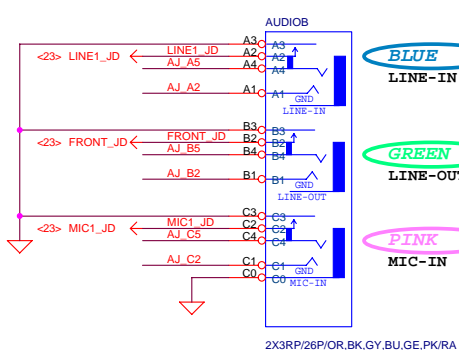
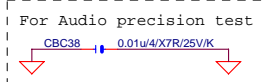
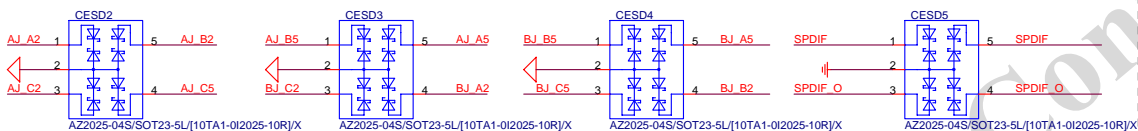
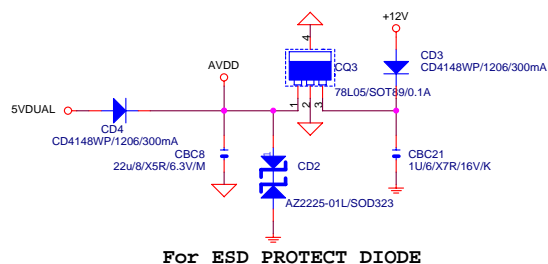
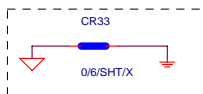
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Size	Document Number	Rev	
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	ALC892R	ALC889	ALC889A
CR16	X	X	O
CR24	X	X	O
CR25	X	O	O
CBC42	10uF/X5R	X	X
CR2	20K/1%	20K/1%	20K/0.1%
CR9	O	O	X
CR10	X	X	O
CBC10/CBC11/CBC12/ CBC13/CBC44/CBC45	4.7uF /X5R	10uF /X5R	4.7uF /X5R
CR4/CR8/CR18/CR23/ CR11/CR12/CR27/CR29/ CR49/CR50/CR43/CR44/ CR45/CR48/CR59/CR60	75 ohm	66 ohm or lower	75 ohm



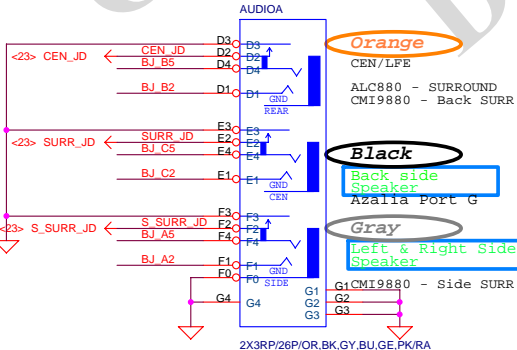
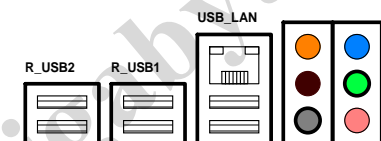
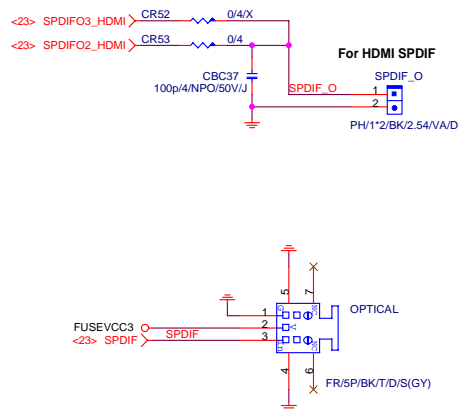
Can Support Amp Out





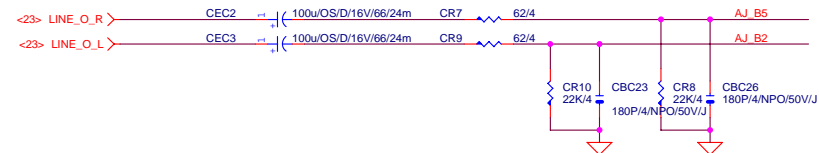
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3R7+15P/[11NR6-403004-11]

SPDIF



A3R7/13P/0BG/[11NR6-403006-71]
3R7+15P/[11NR6-403004-31]

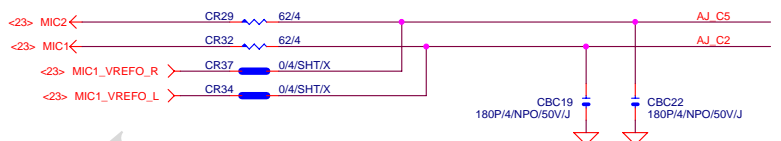
LINE OUT FRONT OUT



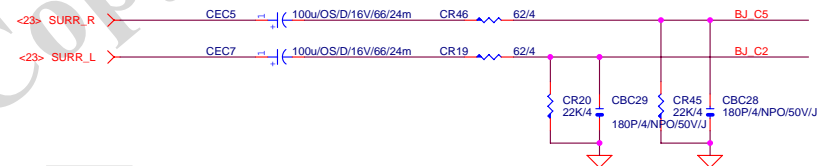
LINE-IN



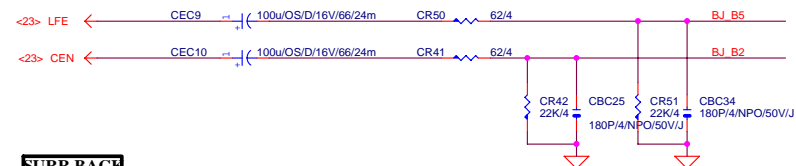
MIC



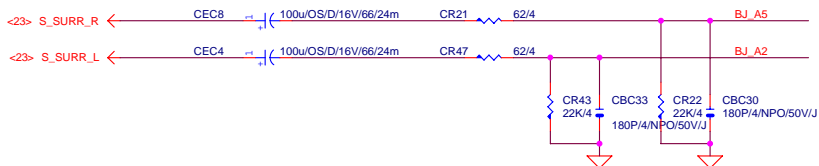
SURROUND



CEN/LFE



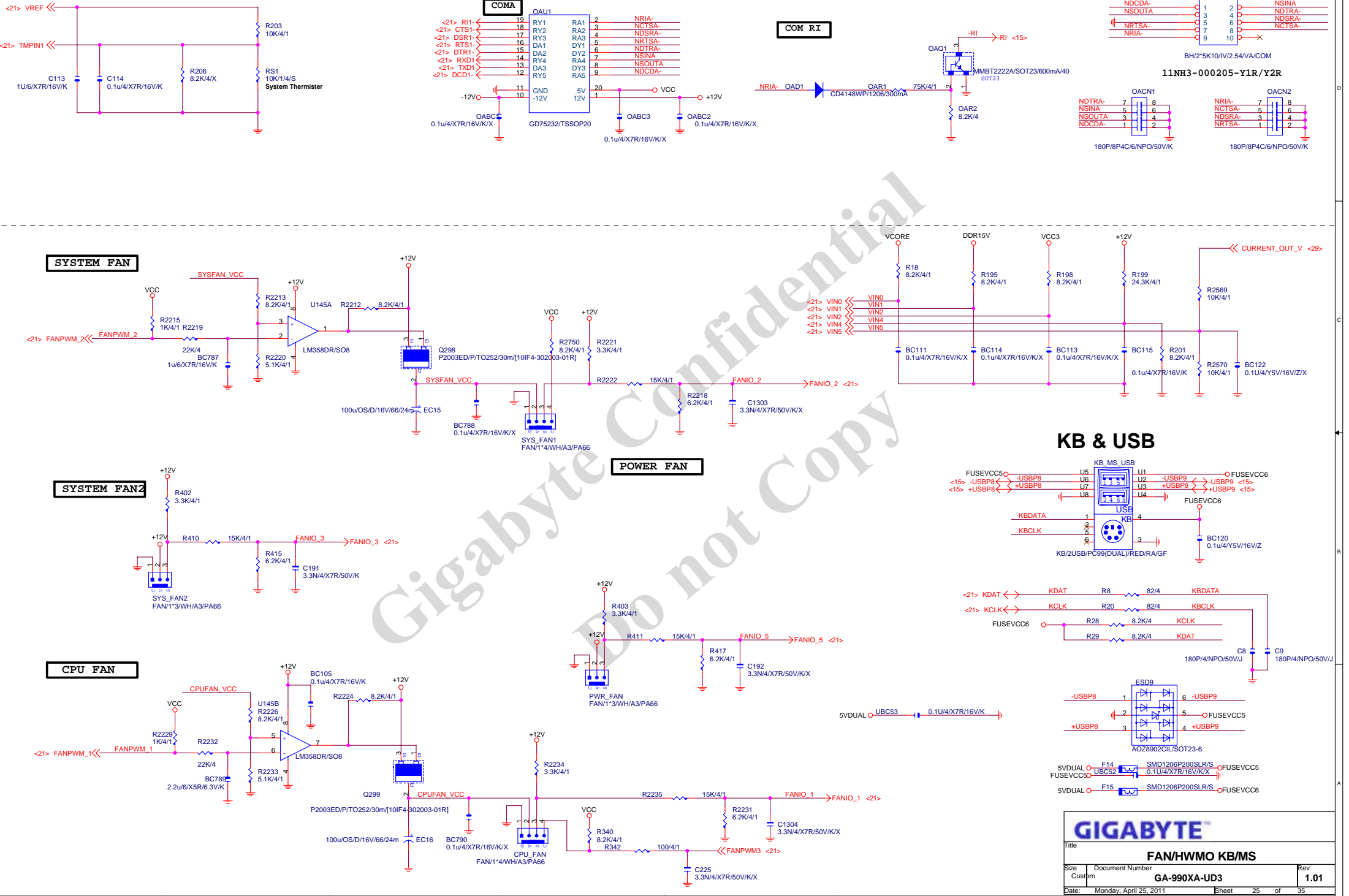
SURR BACK

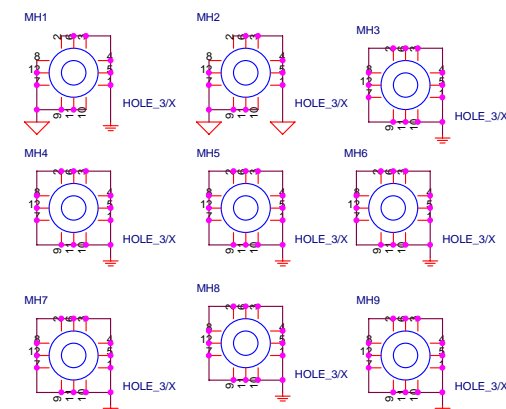
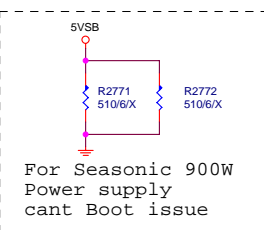
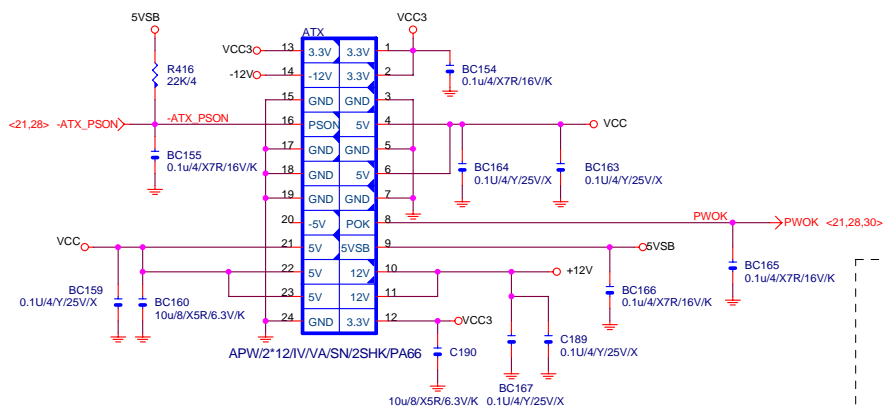
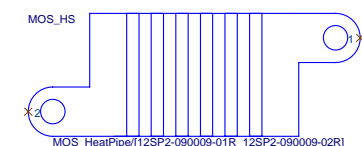
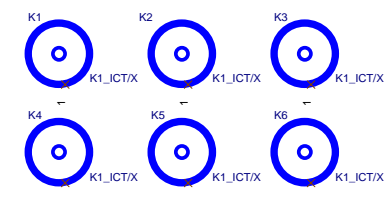
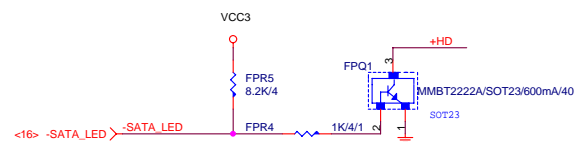
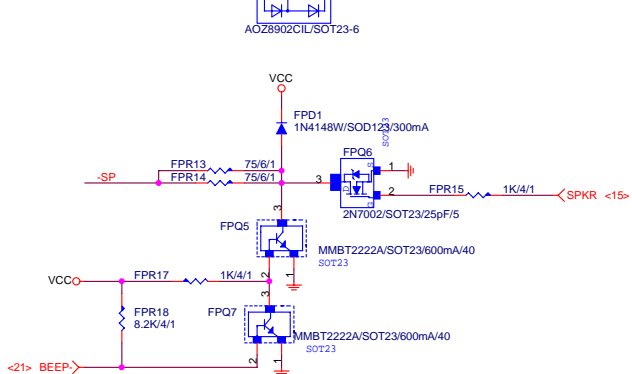
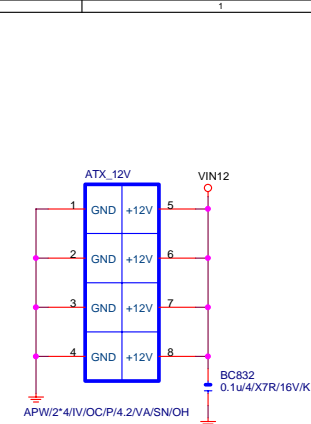


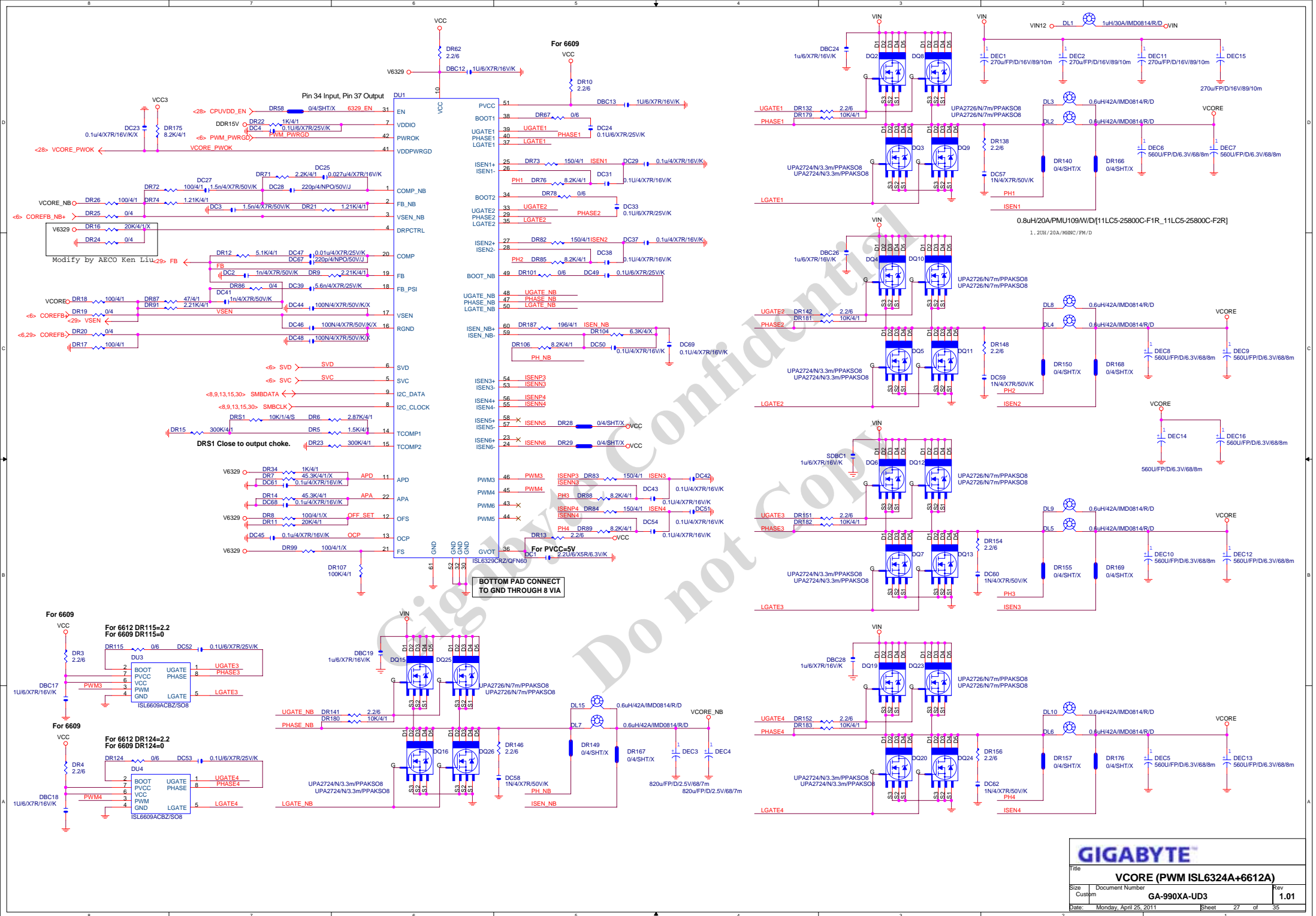
GIGABYTE

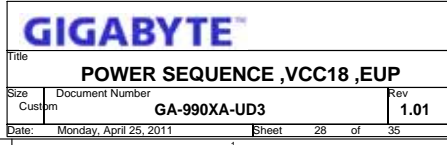
Title	AUDIO JACK	
Size	Document Number	Rev
Cust	GA-990XA-UD3	1.01
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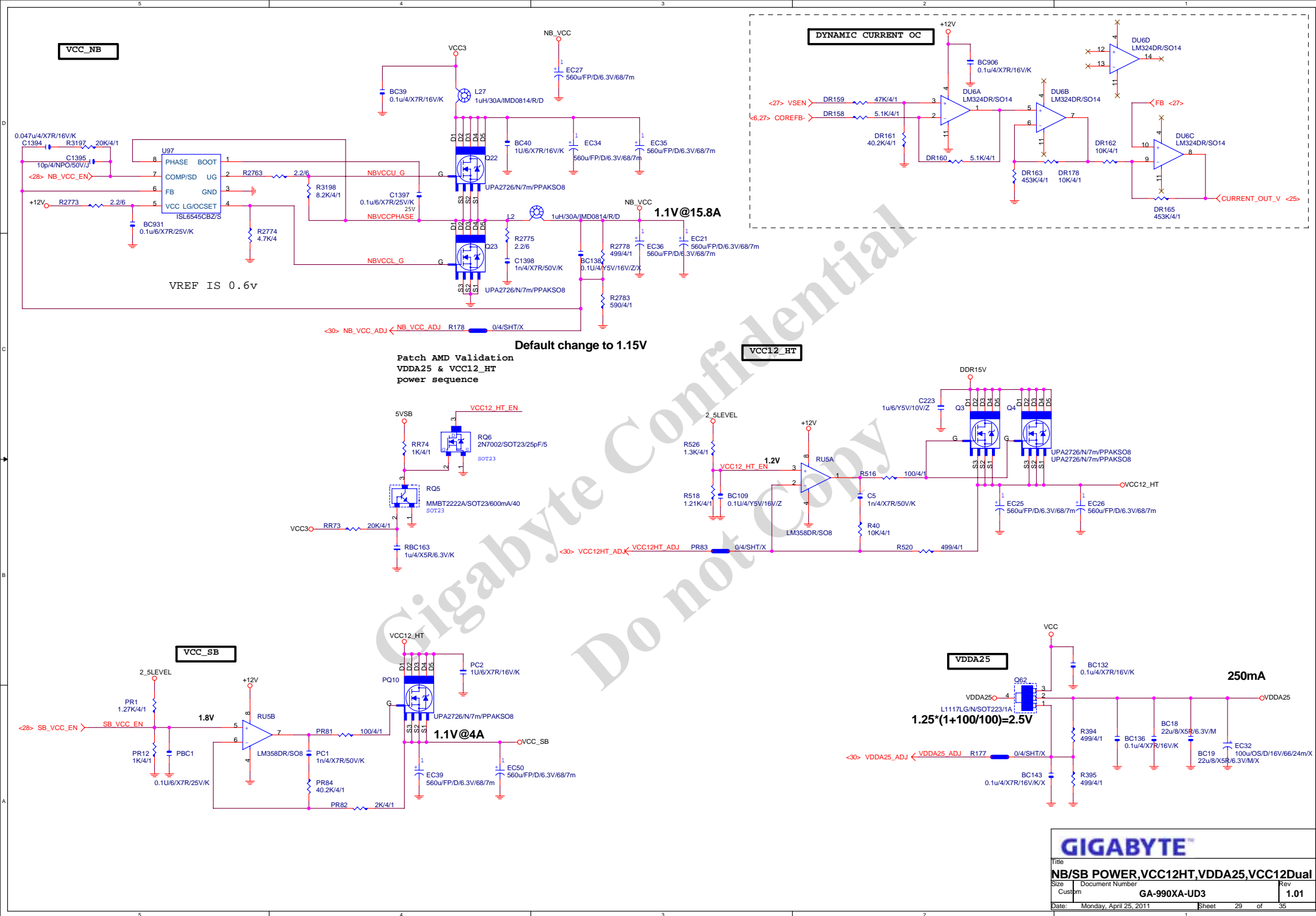
Hardware Monitor circuits

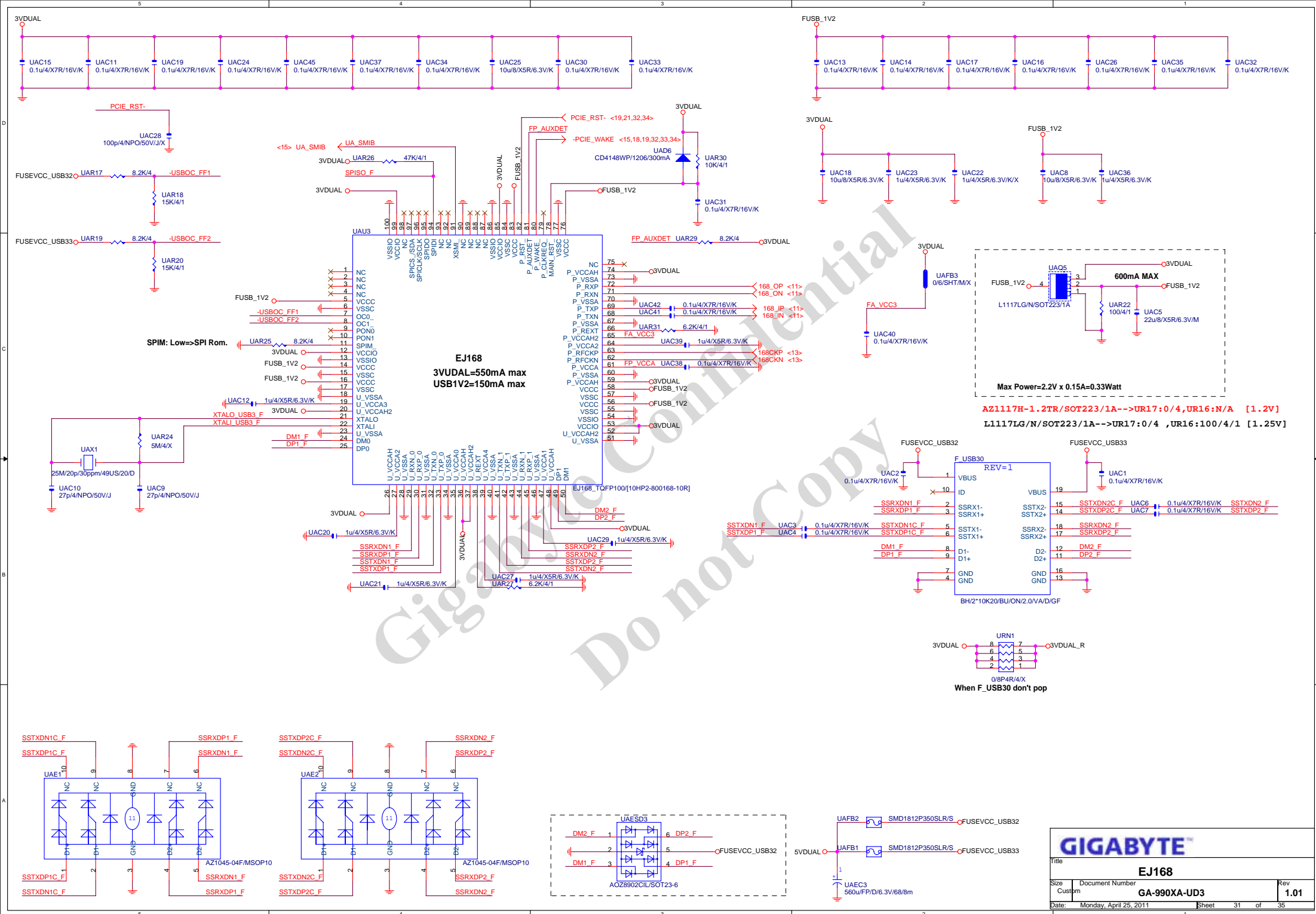


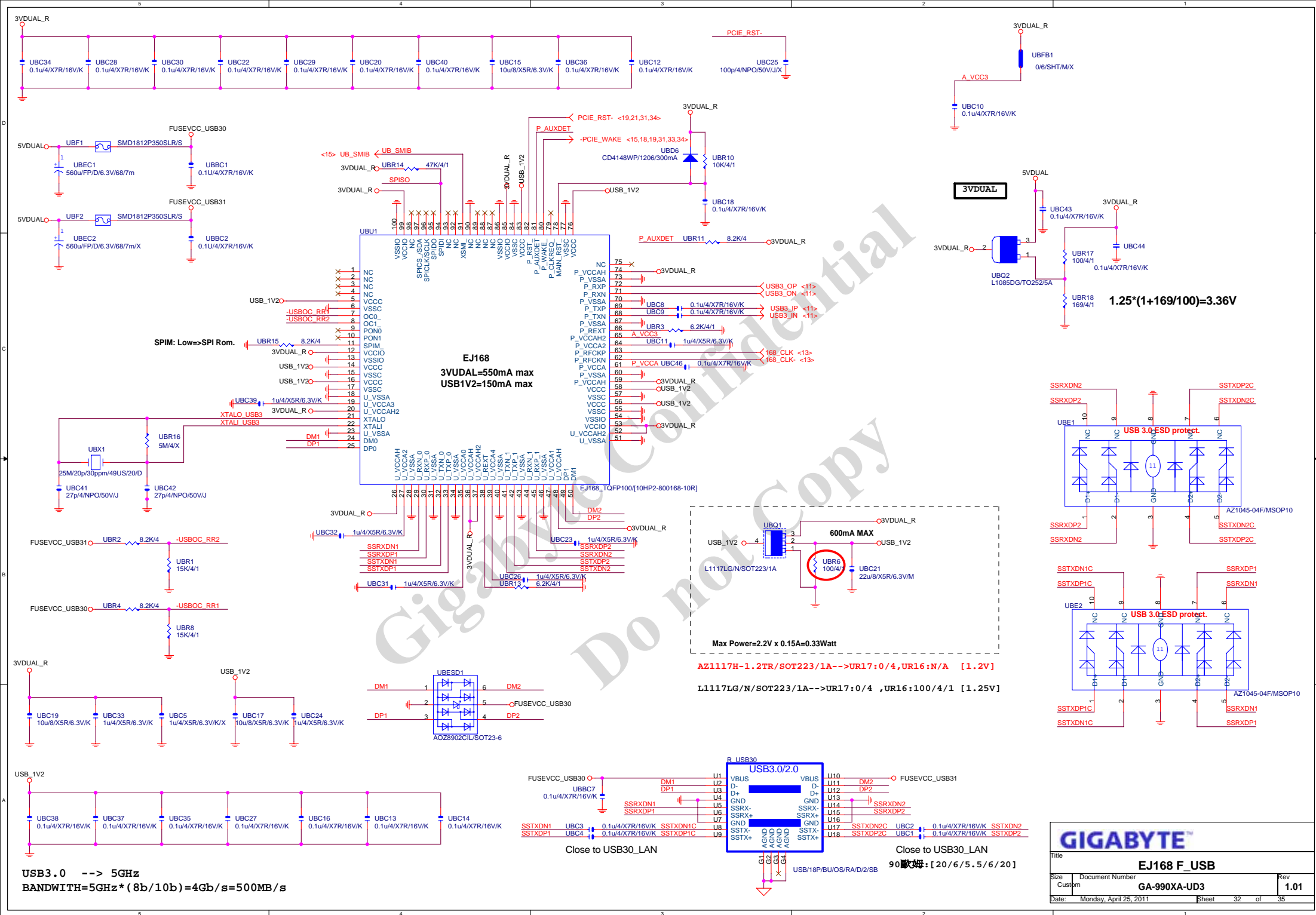




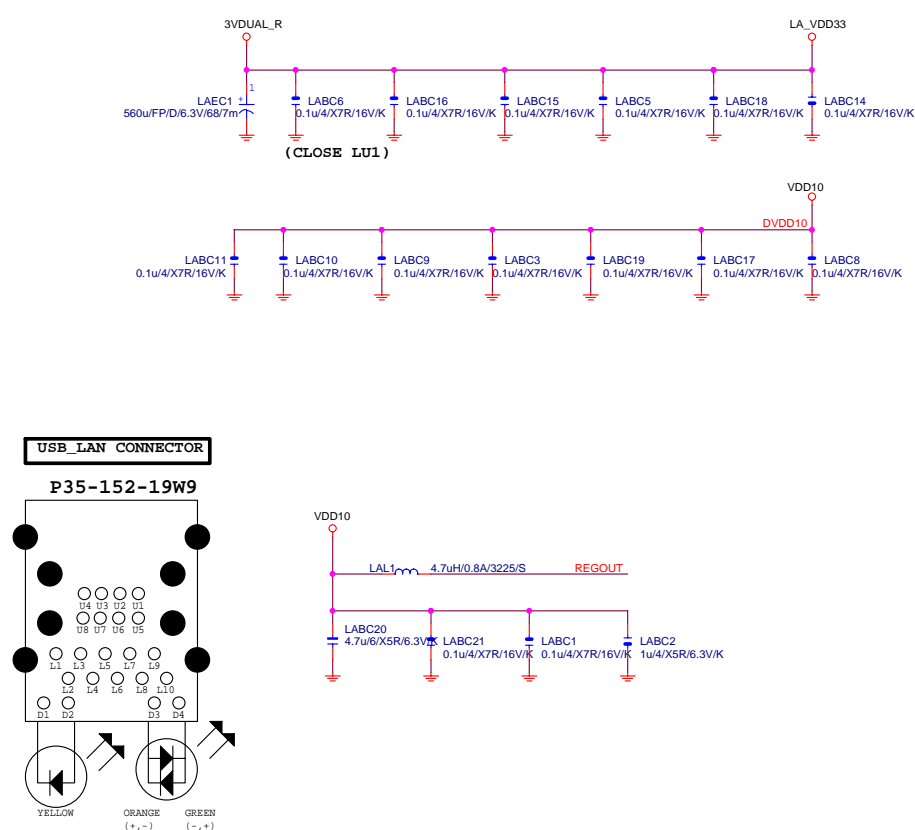
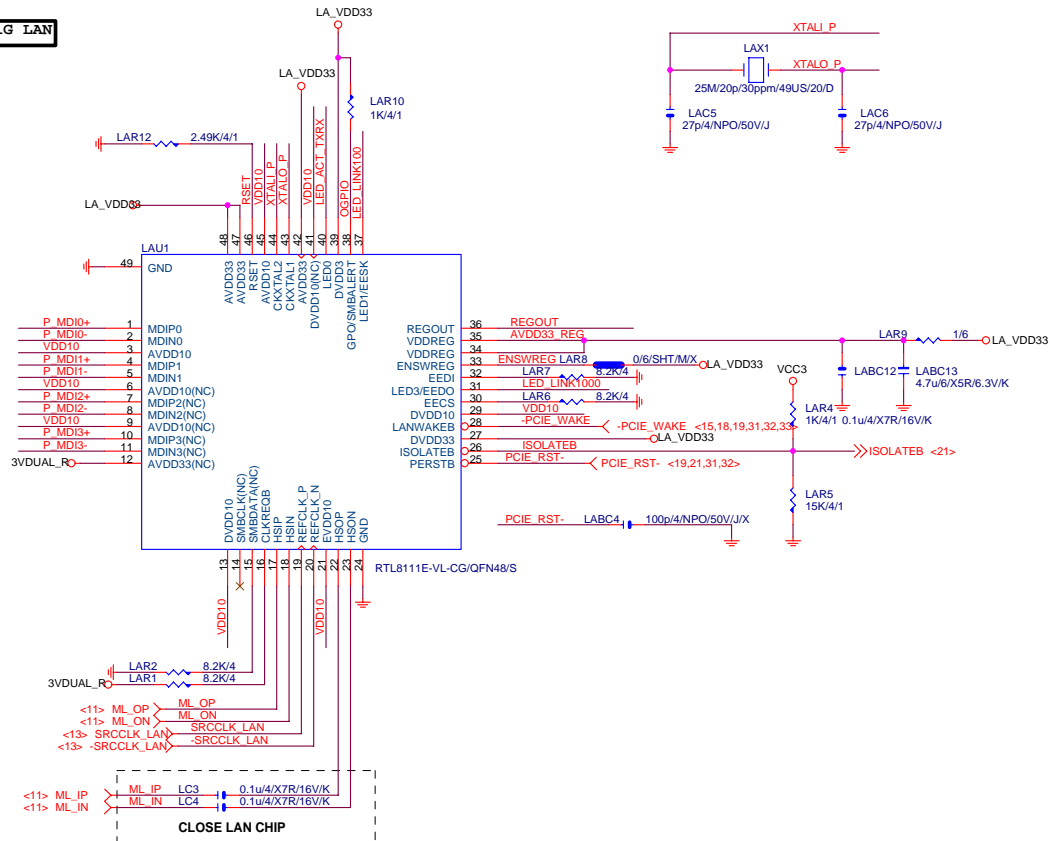






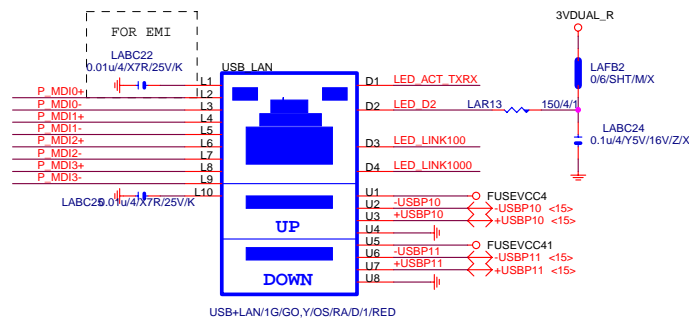


PCIE-1G LAN



USB_LAN

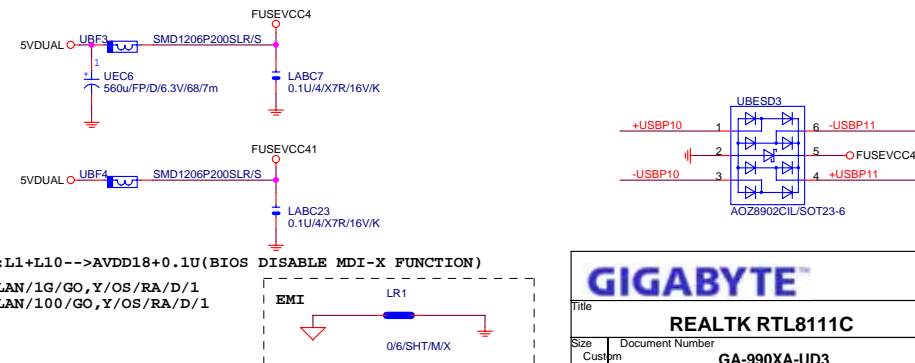
```
RTL8101E:LR38/LC5/LR43/LC6-->O
RTL8111C:LC6-->O
RTL8102E:LC5/LC6-->O
```



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RTL8101E :L1+L10-->AVDD18+0.1U(BIOS  DISABLE MDI-X FUNCTION)
1G  :USB+LAN/1G/GO,Y/OS/RA/D/1
100M:USB+LAN/100/GO,Y/OS/RA/D/1

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