

GA-AX370-Gaming K3

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2015.12.30~B.L

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Title

COVER SHEET

Size Custom

Document Number

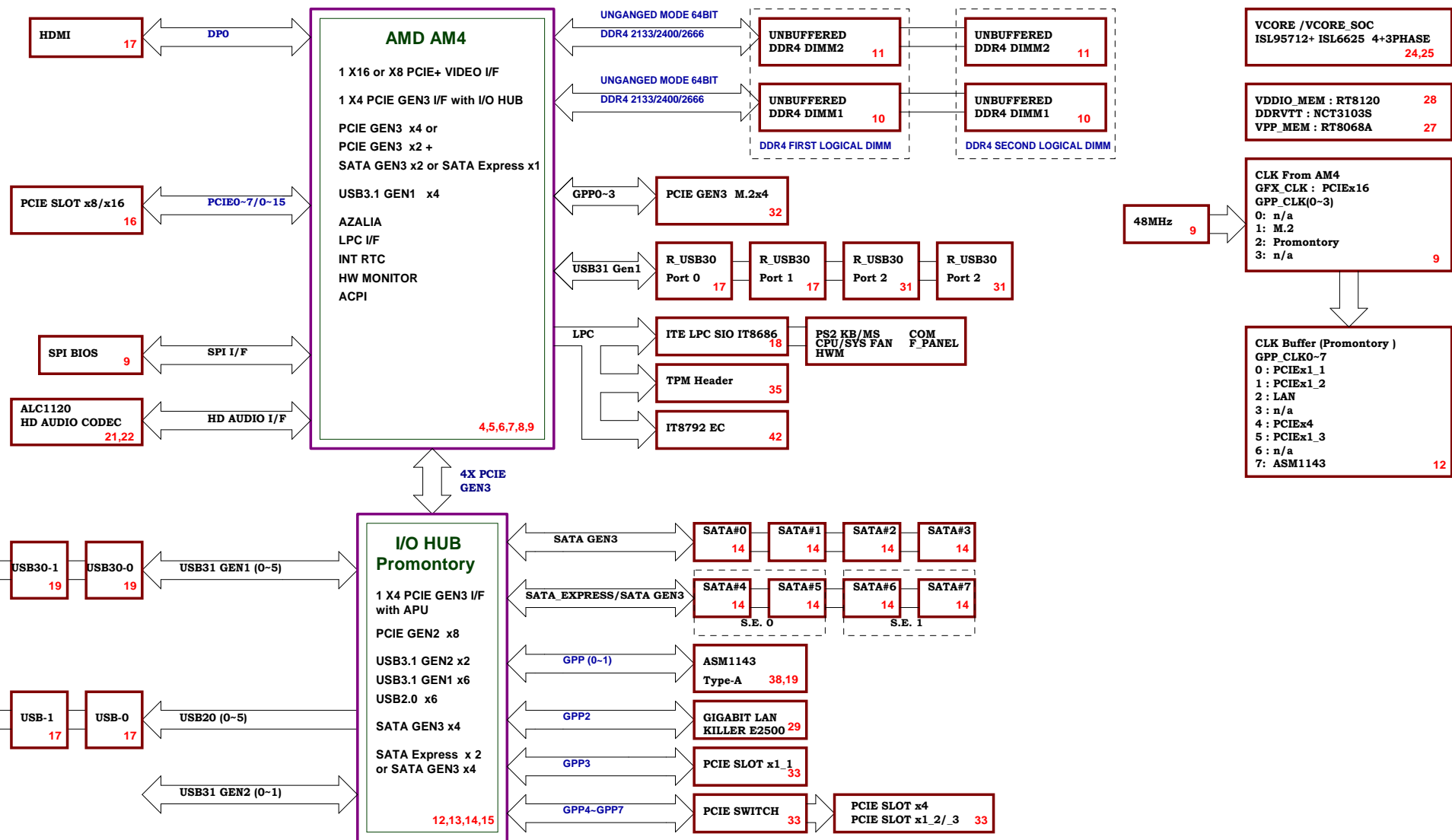
GA-AX370-Gaming K3

Rev

1.0

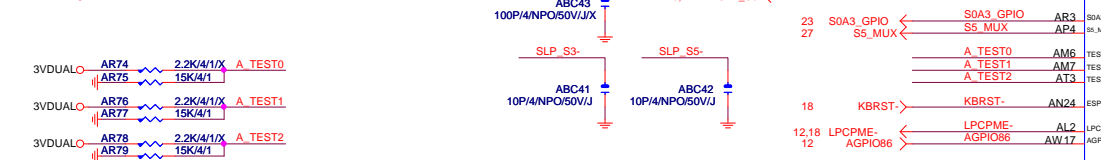
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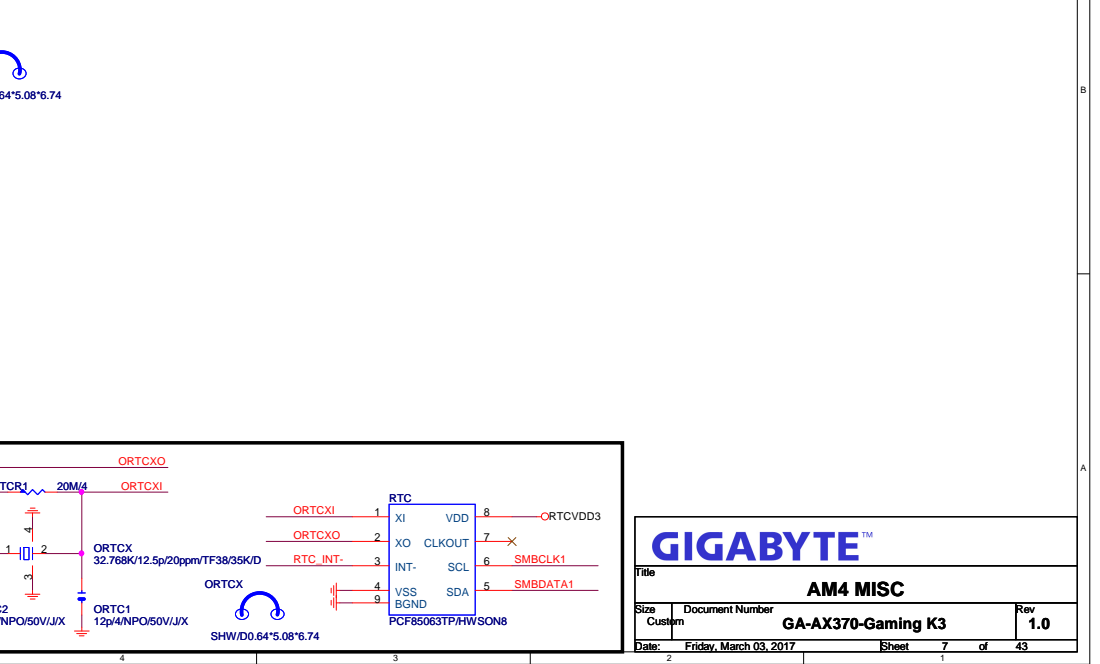
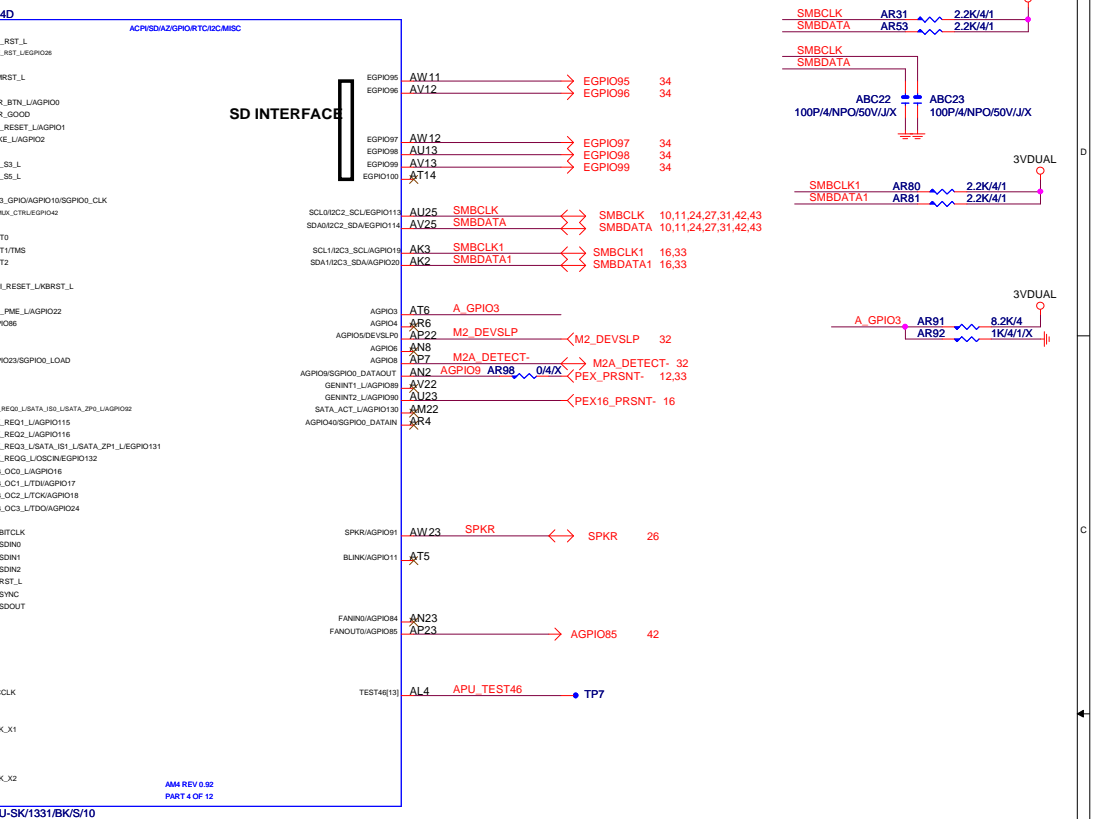
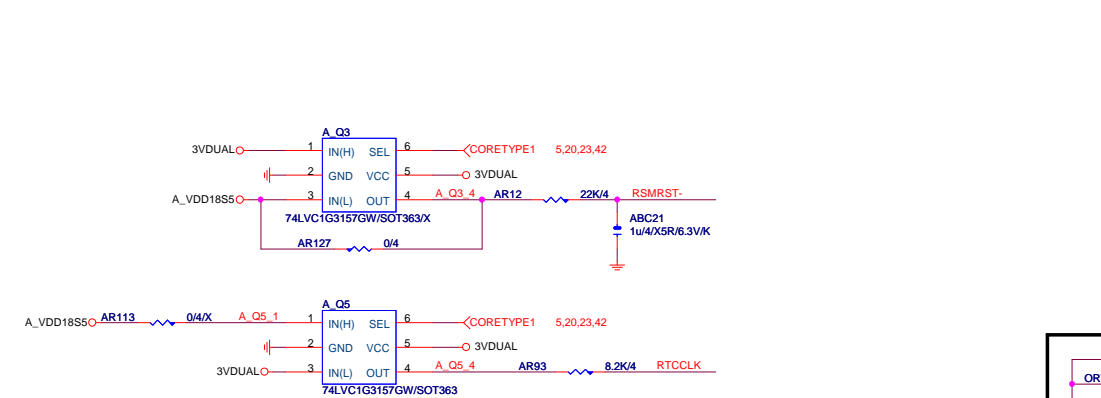
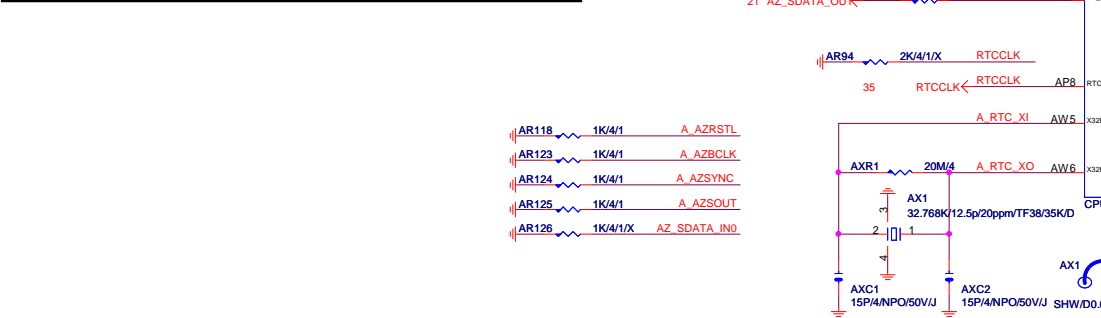


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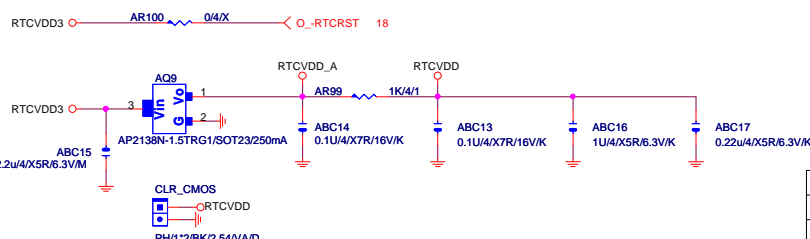
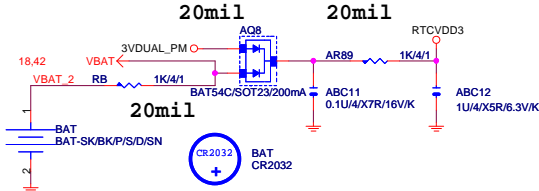
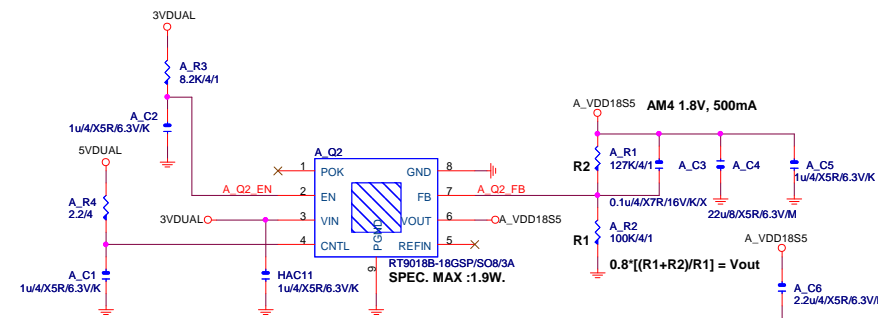
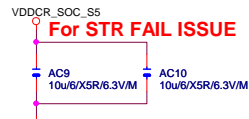
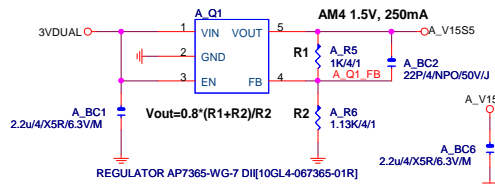
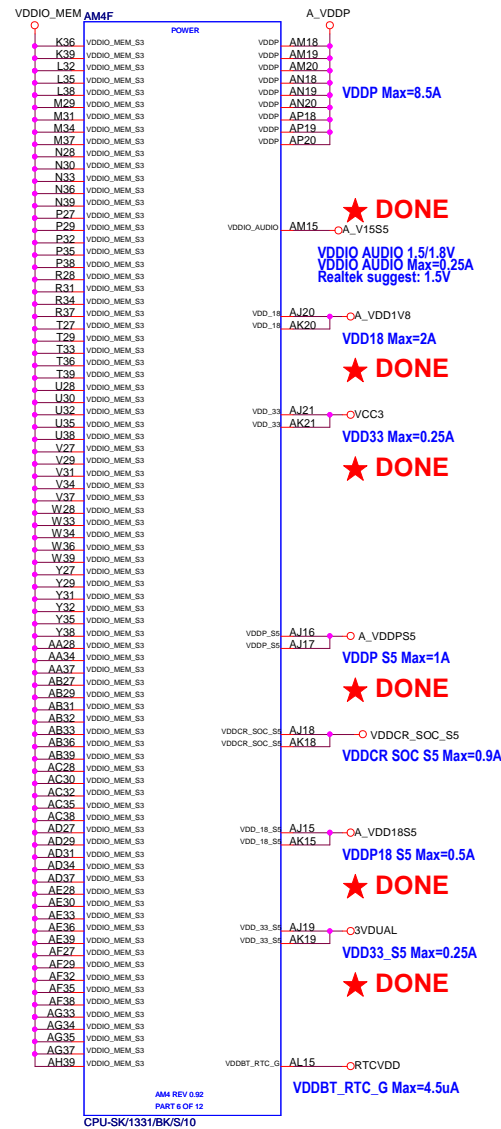




TEST0	TEST1	TEST2	Description
0	0	0	FCH TAP accessible from APU when TAPEN is asserted FCH JTAG pins overloaded for multiple functions, in this configuration the FCH JTAG are used as non-JTAG pins
0	0	1	Reserve
0	1	X	Reserve
1	TMS	0	FCH JTAG multi-function pins are configured as JTAG pins, in this configuration the FCH TAP can be accessed from FCH JTAG pins
1	TMS	1	Use on JTAG only, Yuba JTAG enable.



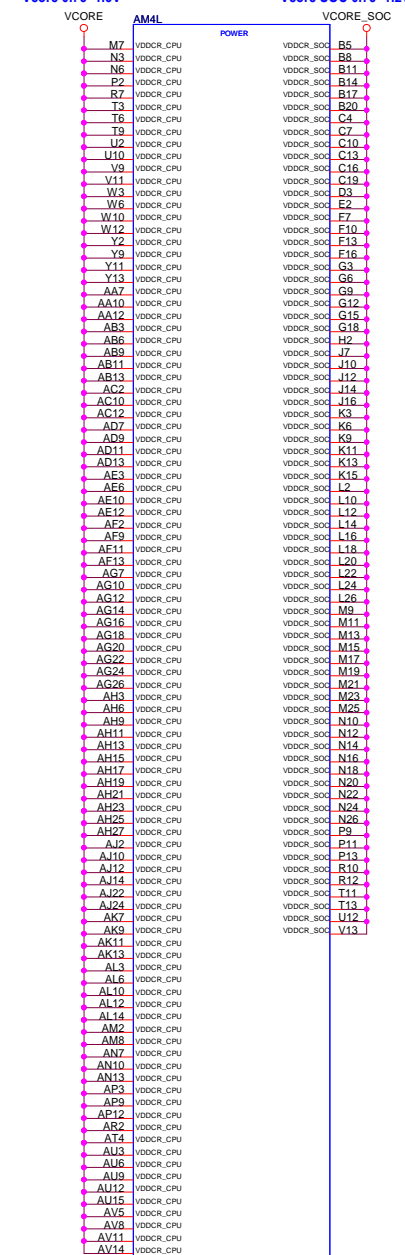
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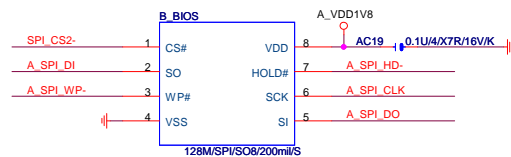
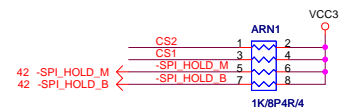
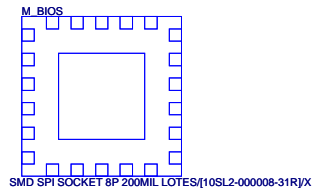


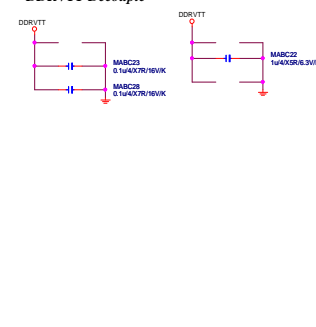
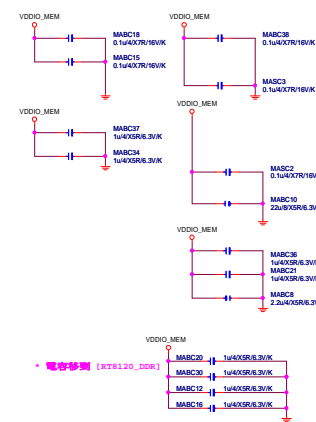
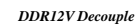
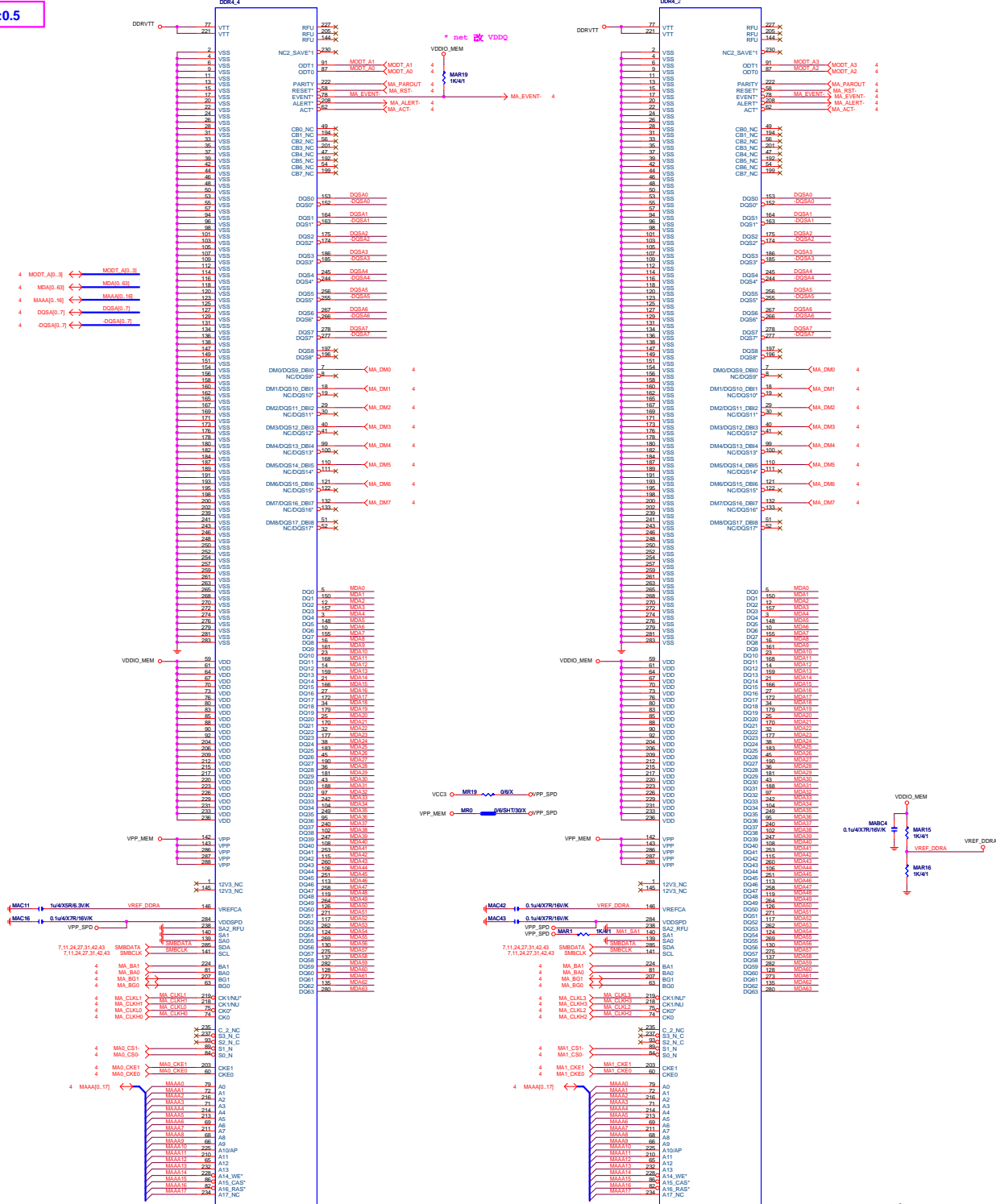
CLR_CMOS	
SHORT	CLEAR CMOS
OPEN	NORMAL

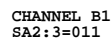
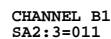
NOT ADD ICT FOR RTCVDD PIN

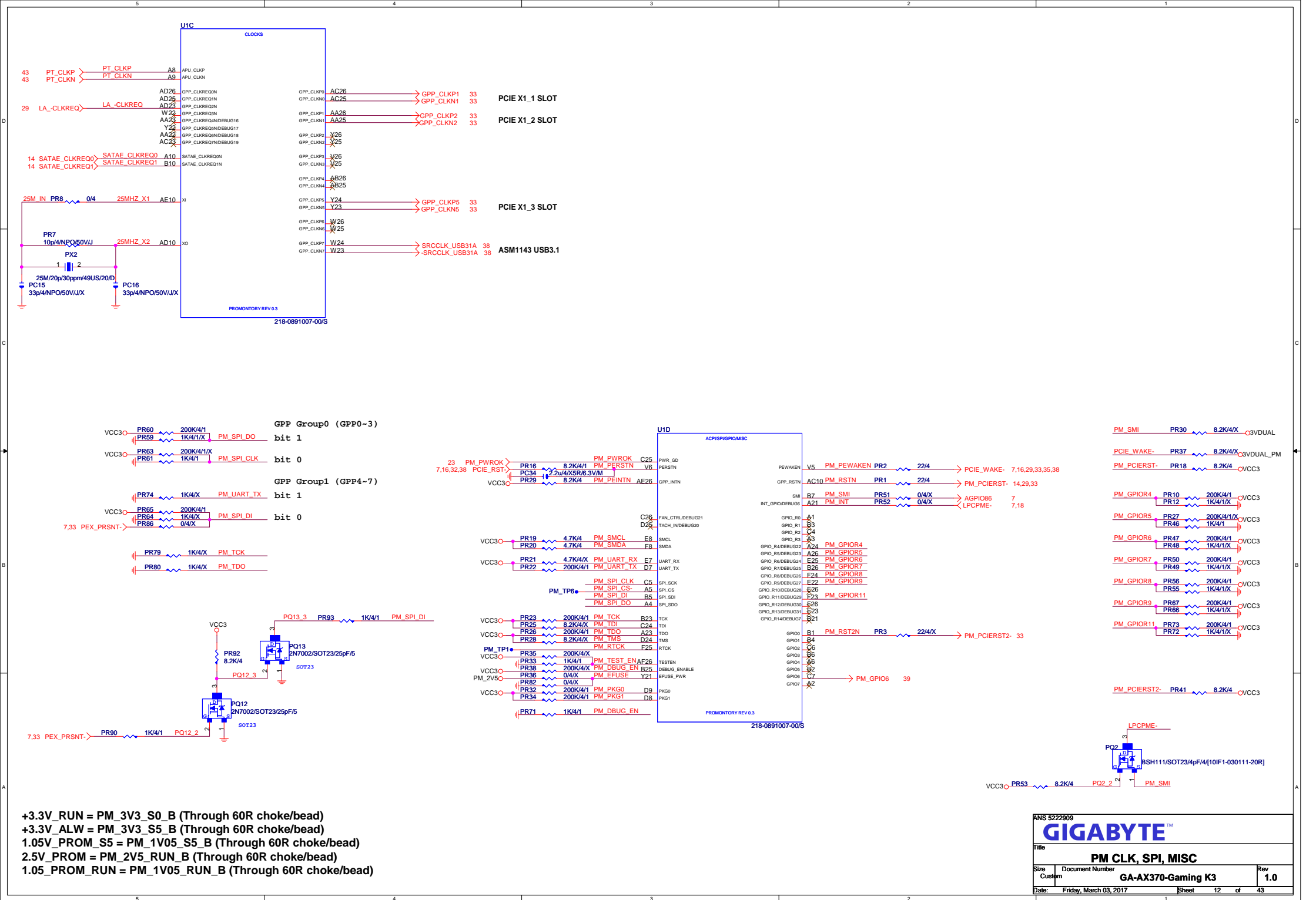
Vcore EDC =125A
Vcore 0.75-1.5V

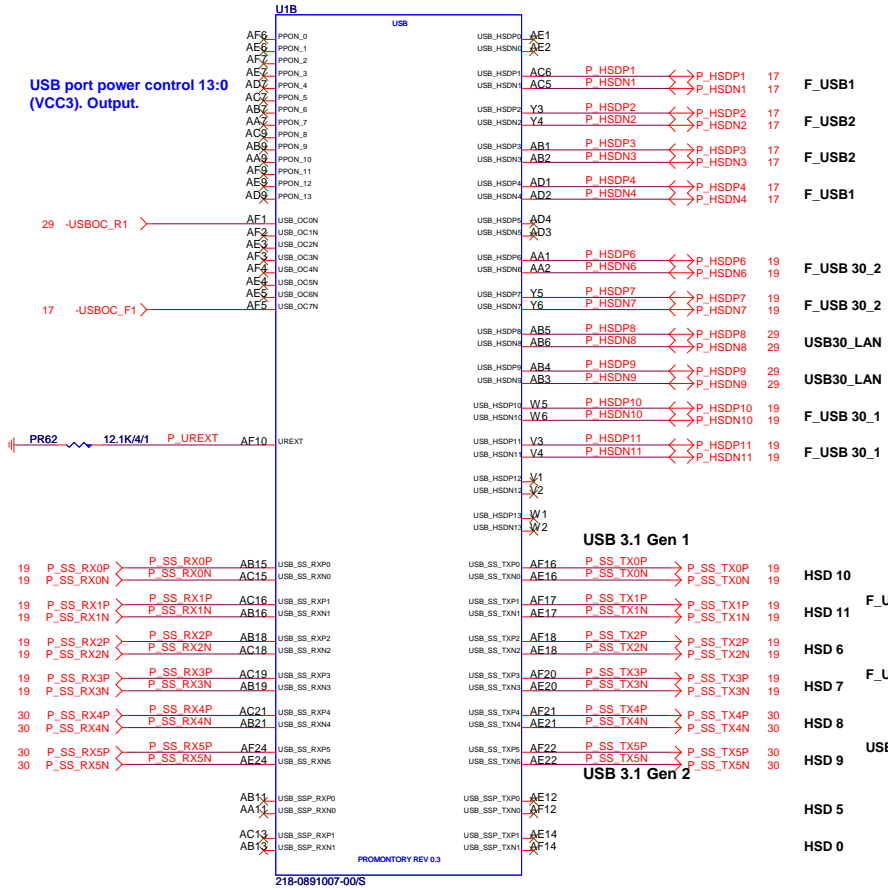




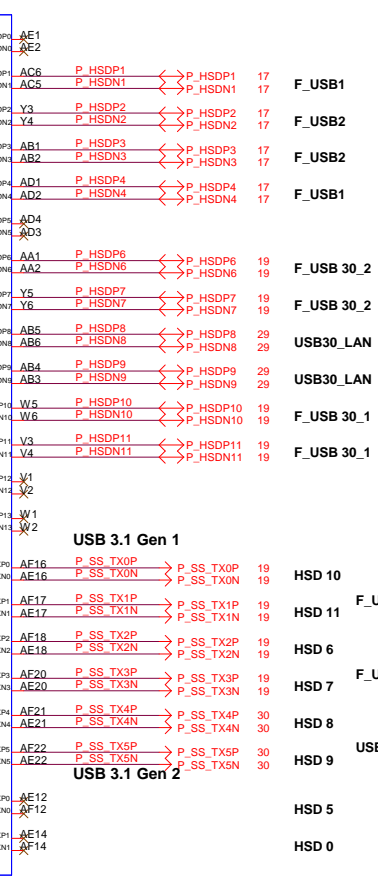








USB3.1	USB2.0	USB_OC
USB_SSP_TX/RXP/N[0]	USB_HSDP/N[5]	USB_OC0N
USB_SSP_TX/RXP/N[1]	USB_HSDP/N[0]	USB_OC1N
USB3.0	USB2.0	USB_OC
USB_SS_TX/RXP/N[0]	USB_HSDP/N[10]	USB_OC2N
USB_SS_TX/RXP/N[1]	USB_HSDP/N[11]	USB_OC3N
USB_SS_TX/RXP/N[2]	USB_HSDP/N[6]	USB_OC4N
USB_SS_TX/RXP/N[3]	USB_HSDP/N[7]	USB_OC5N
USB_SS_TX/RXP/N[4]	USB_HSDP/N[8]	USB_OC6N
USB_SS_TX/RXP/N[5]	USB_HSDP/N[9]	USB_OC7N
	USB_HSDP/N[1]	USB_OC7N
	USB_HSDP/N[2]	USB_OC7N
	USB_HSDP/N[3]	USB_OC7N
	USB_HSDP/N[4]	USB_OC7N
	USB_HSDP/N[12]	USB_OC7N
	USB_HSDP/N[13]	USB_OC7N



BUS Model	USB			
	3.1 Gen2 10 Gbps	3.1 Gen1 5 Gbps	2.0	Debug Port
PROM4	USB_SSP Port0~1	USB_SS Port 0~5	USB_HSD Port0~13	USB_SSP Port0
PROM2	USB_SSP Port0~1	USB_SS Port 0~1	USB_HSD Port0~5 USB_HSD Port10~13	USB_SSP Port0
PROM1	USB_SSP Port0	USB_SS Port0 USB_SSP Port1	USB_HSD Port0~5 USB_HSD Port10, 12~13	USB_SSP Port0

ANS 522909

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Title**PM USB**

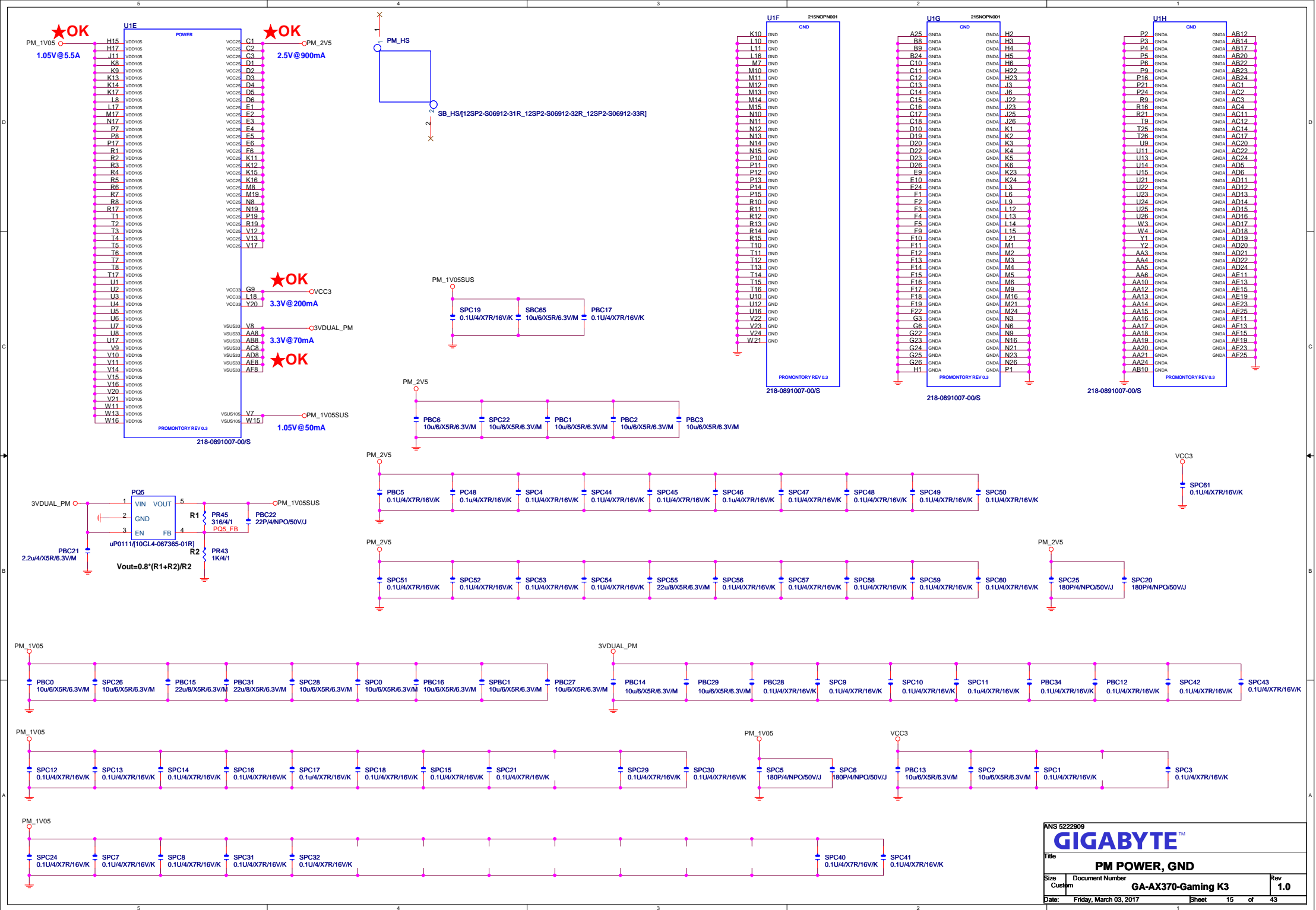
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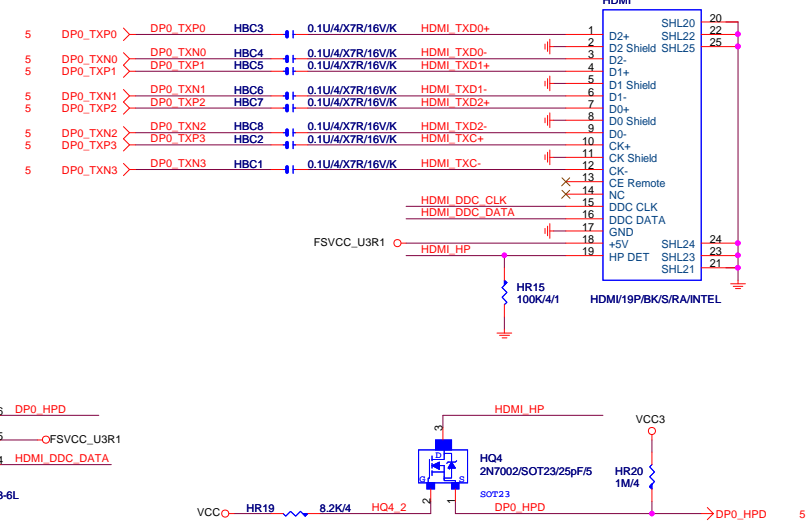
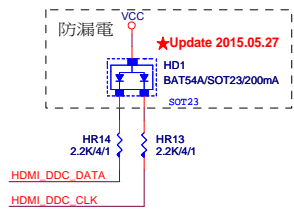
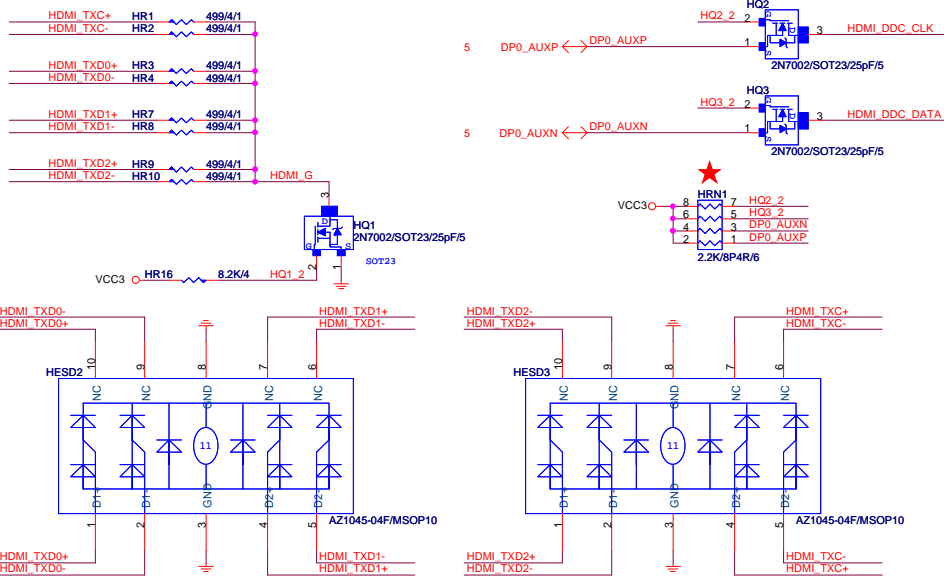
Document Number**GA-AX370-Gaming K3**

Rev**1.0**

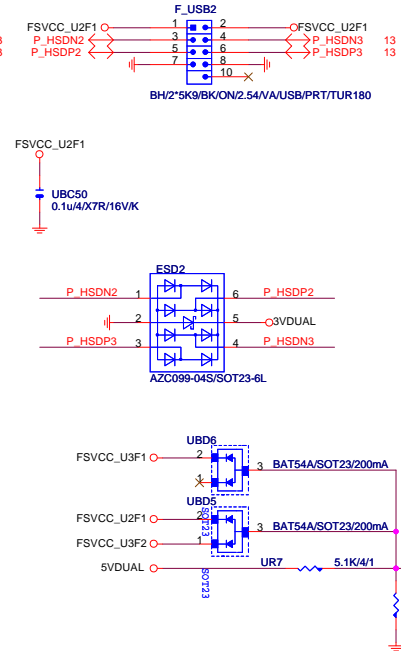
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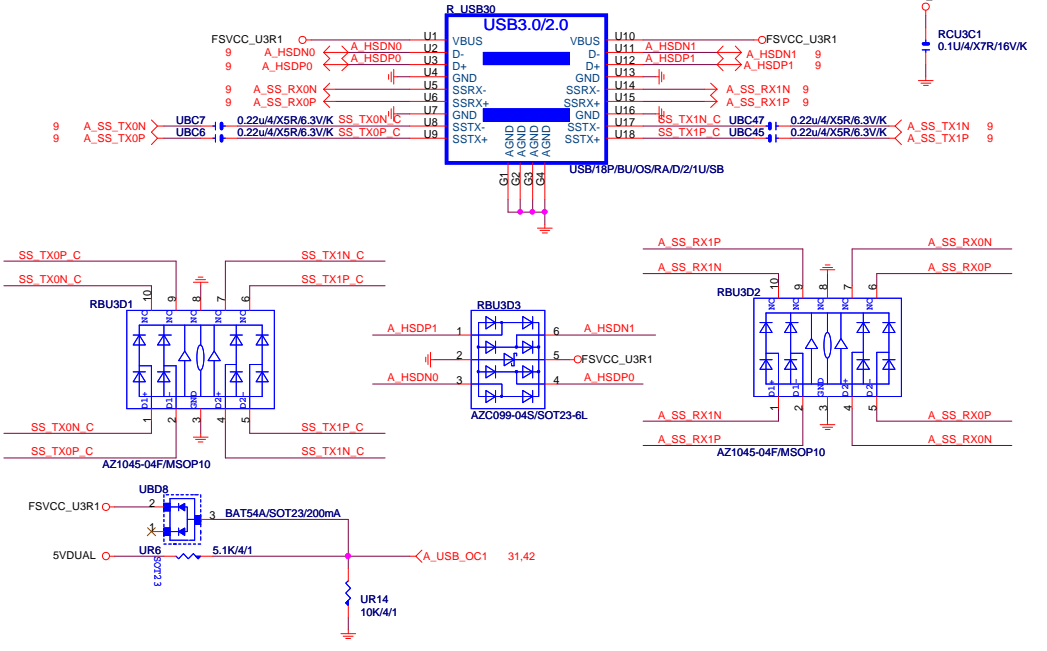
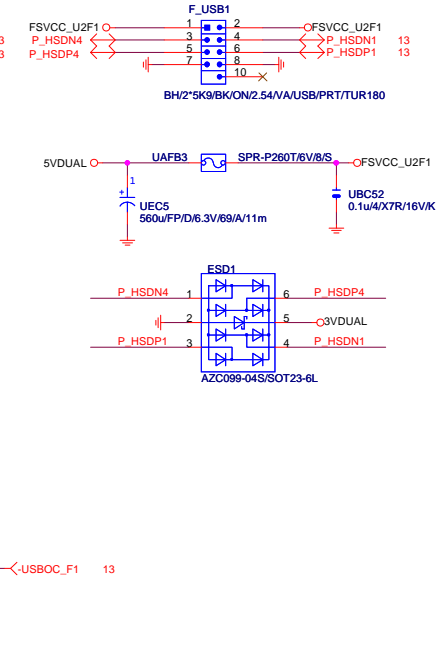




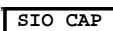
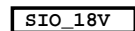
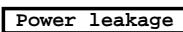
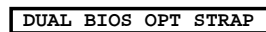
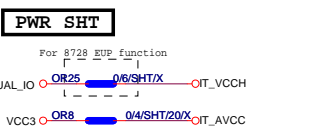
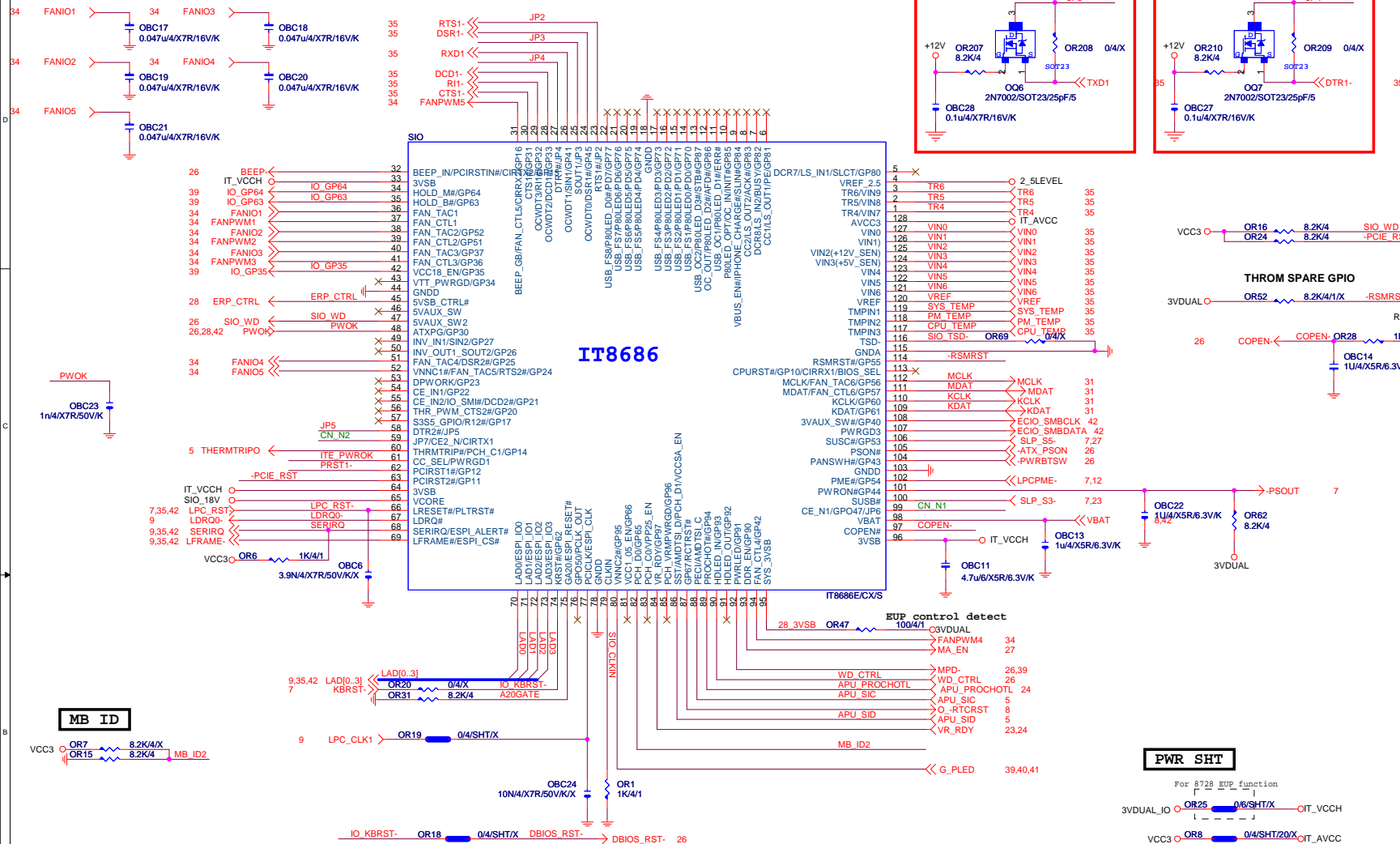
FRONT SIDE USB2



FRONT SIDE USB1



SIO IT8686 REV:0.7



FAN TABLE		
	CPU_FAN	FAN_CTL1 FAN_TAC1
	SYS_FAN1	FAN_CTL2 FAN_TAC2
	SYS_FAN2	FAN_CTL3 FAN_TAC3
	SYS_FAN3	FAN_CTL4 FAN_TAC4
	OPT_FAN OR SYS_FAN4	FAN_CTL5 FAN_TAC5
	THRMTRIP	PIN56
	PROCHOT	PIN89

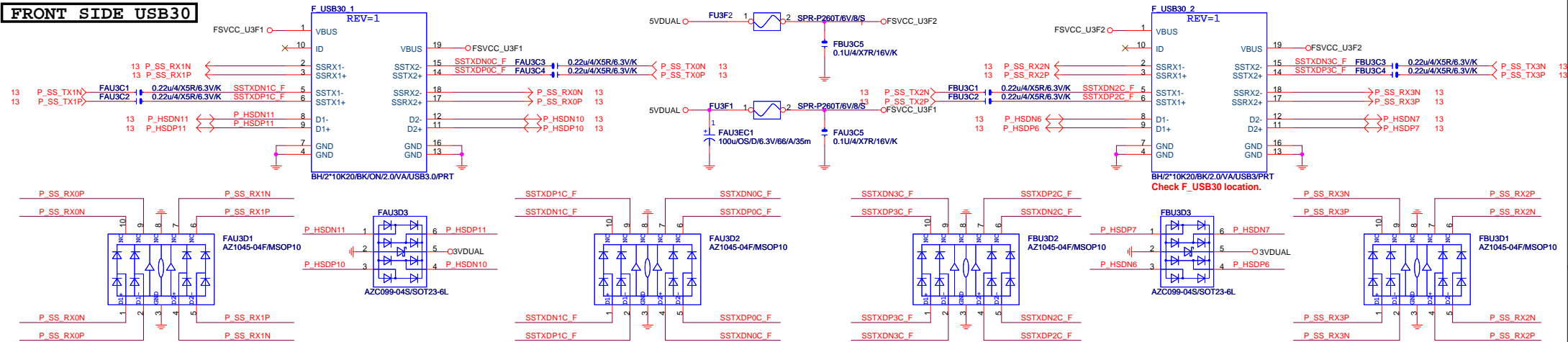
JP2	1	Disable WDT to rest PWROK
	0	Enable WDT to rest PWROK
JP3		Dual-BIOS CS pin mode select bit "0" See the below table
JP4	1	LPC/ESPI power VCCBT = 3.3V
	0	LPC/ESPI power VCCBT = 1.8V
JP5	1	LPC I/F
	0	ESPI I/F
JP6	1	Enable Dual BIOS Function (for GigaByte Only)
	0	Disable Dual BIOS Function (for GigaByte Only)
JP7		Dual-BIOS CE pin mode select bit "1" See the below table
JP7	1 1	CE pin disable (Hold pin mode)
	1 0	CE mode 1
JP3	0 1	CE mode 2
	0 0	CE mode 3

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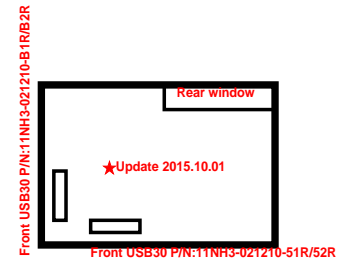
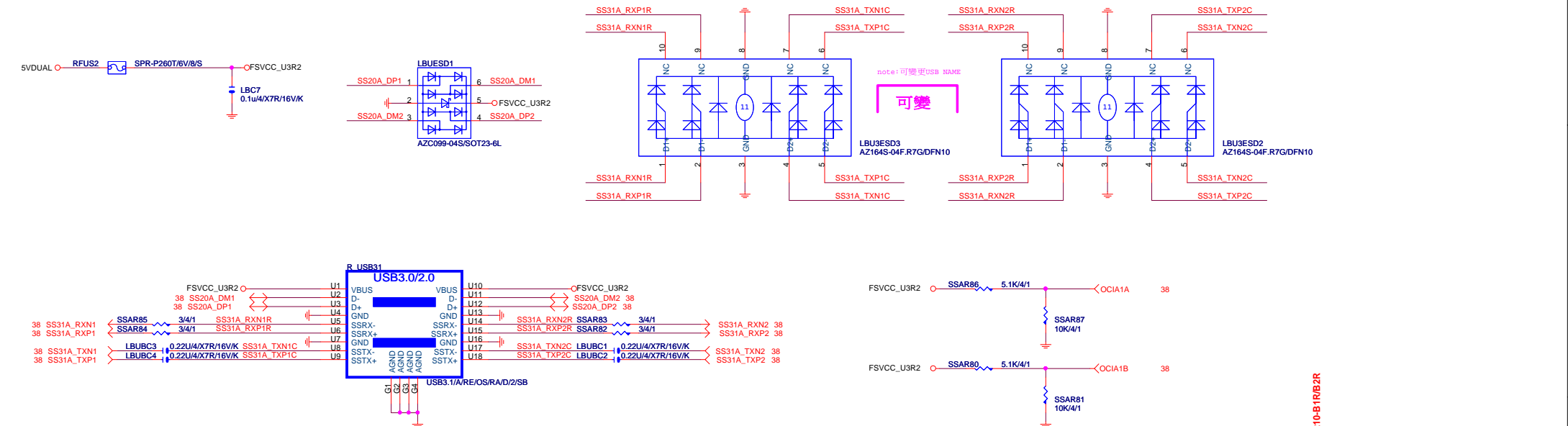
IT 8686 LPC IO

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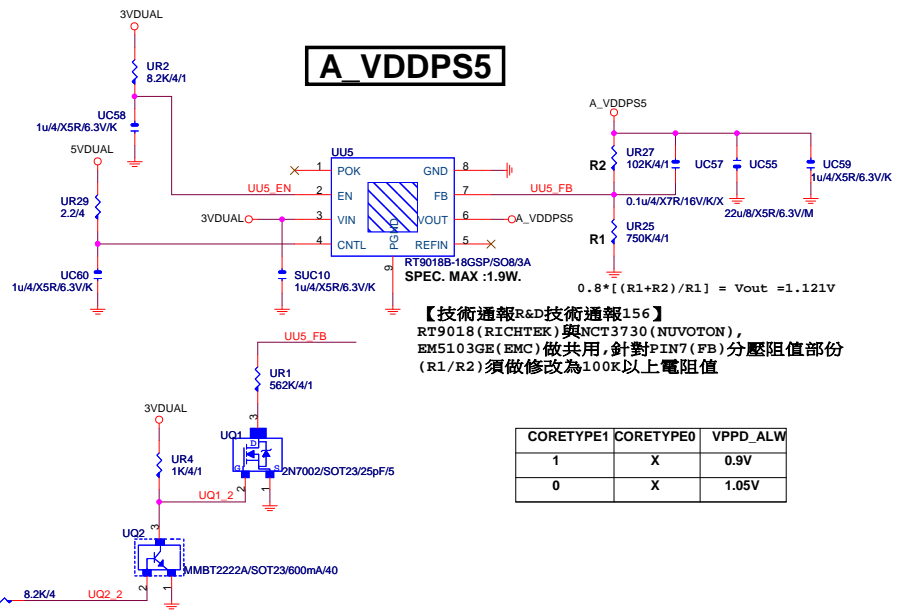
FRONT SIDE USB30



For USB3.1 TypeA SCH



A_VDDPS5

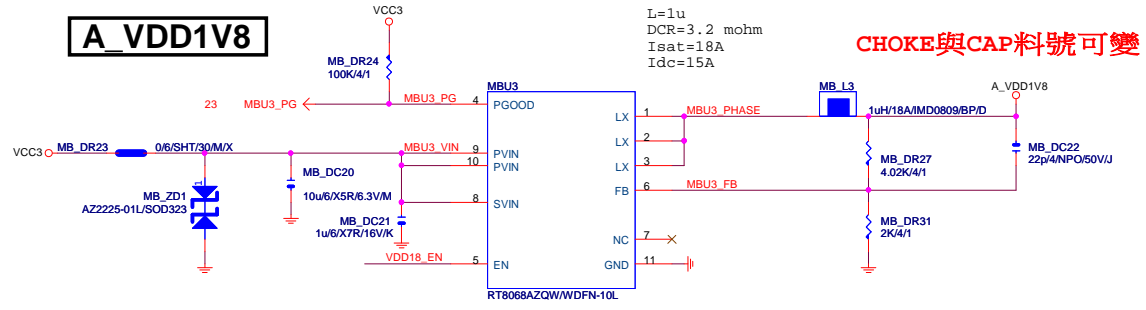


【技術通報R&D技術通報156】
RT9018 (RICHTEK) 與 NCT3730 (NUVOTON),
EM5103GE (EMC) 做共用, 針對 PIN7 (FB) 分壓阻值部份
(R1/R2) 須做修改為 100K 以上電阻值

CORETYPE1	CORETYPE0	VPPD_ALW
1	X	0.9V
0	X	1.05V

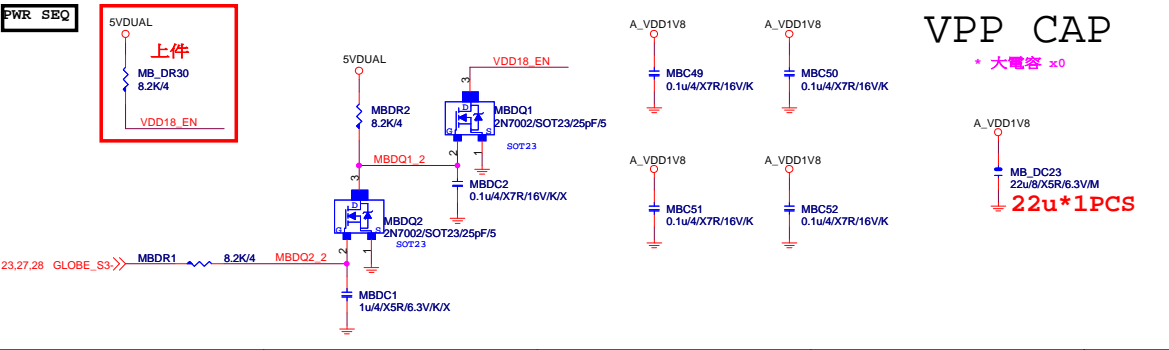
REV:0.4

A_VDD1V8



CHOKE與CAP料號可變

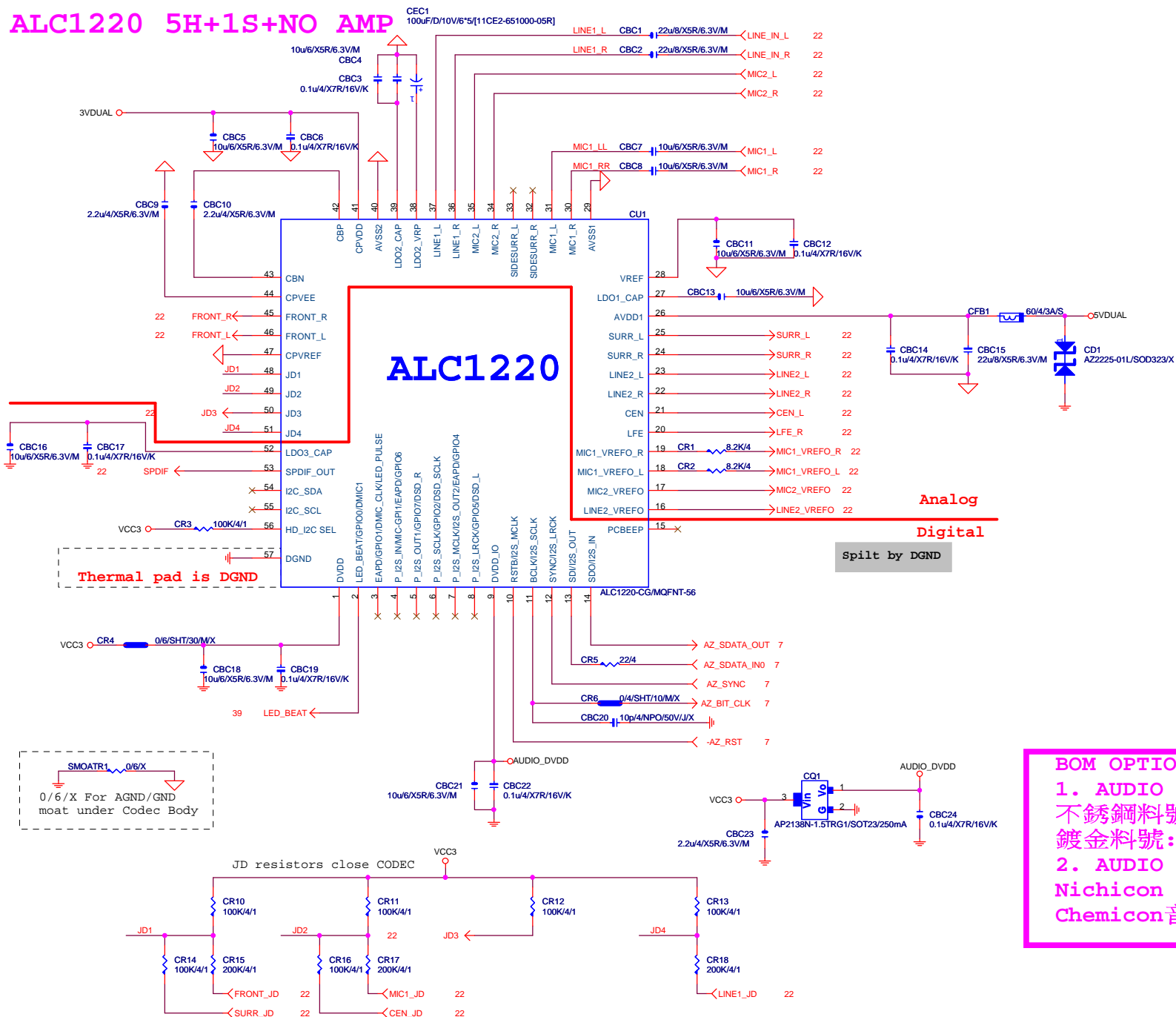
PWR SEQ



VPP CAP

* 大電容 ∞0
22u*1PCS

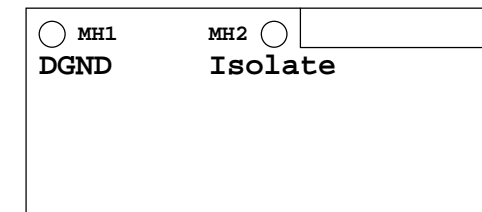
ALC1220 5H+1S+NO AMP



LAYOUT注意: 螺絲孔下GND方式

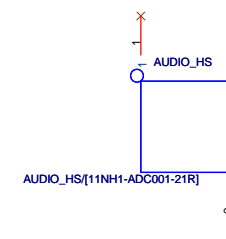
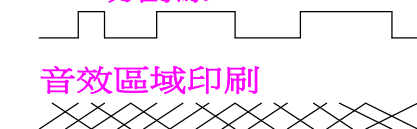
1. MH1下DGND

2. MH2一律改為Isolate



LAYOUT注意: 是否要加?

AGND切割線



BOM OPTION :

1. AUDIO CONNECT

不銹鋼料號: 11NR6-403025-A3R

鍍金料號: 11NR6-403025-92R

2. AUDIO CAP

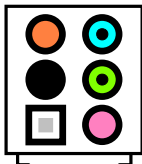
Nichicon MW音效電容 : 11CE1-651000-12R

Chemicon音效電容 : 11CE2-651000-05R

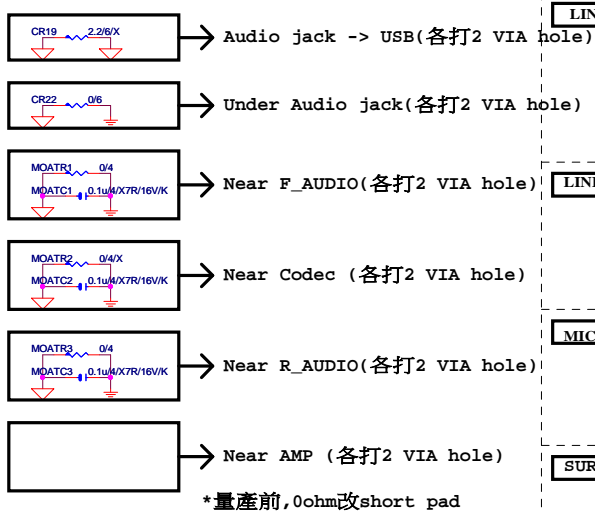
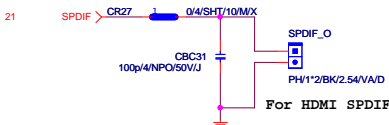
Gigabyte Technology

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Size	Document Number	Rev	
Custom	GA-AX370-Gaming K3	1.0	
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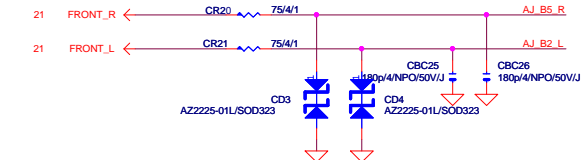
AZALIA JACK



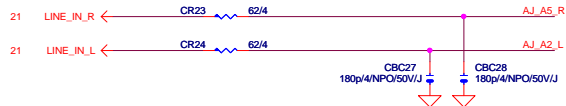
SPDIF_OUT



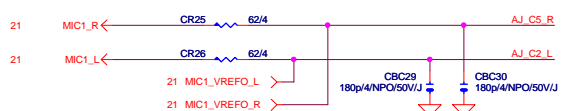
LINE-OUT



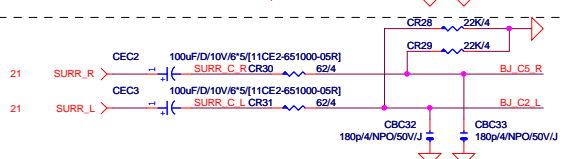
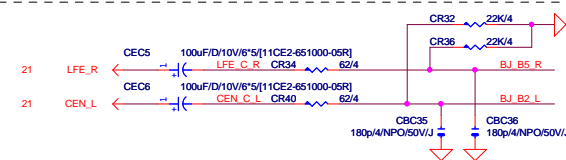
LINE-IN



MIC-IN

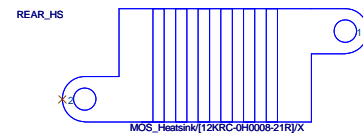


SURROUND

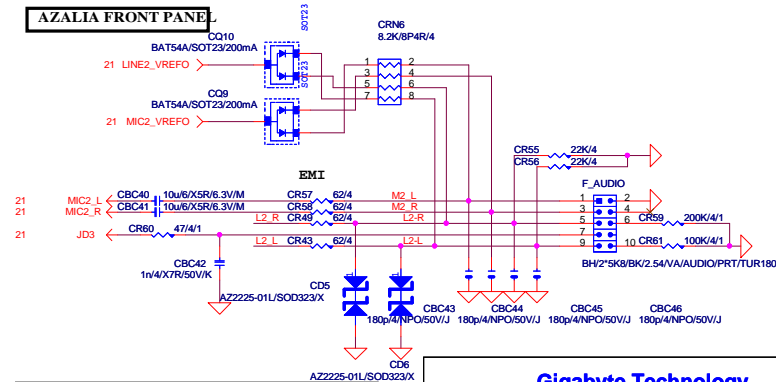
**CEN/LFE**

後窗裝甲

Non AORUS logo
Footprint: Z270_UD_BASE_COVER

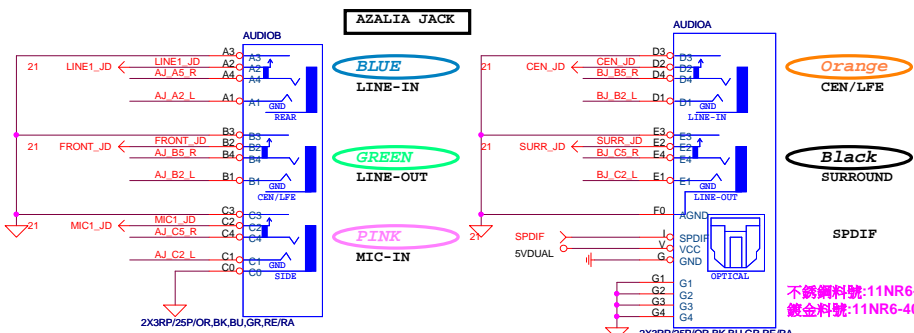


AZALIA FRONT PANE

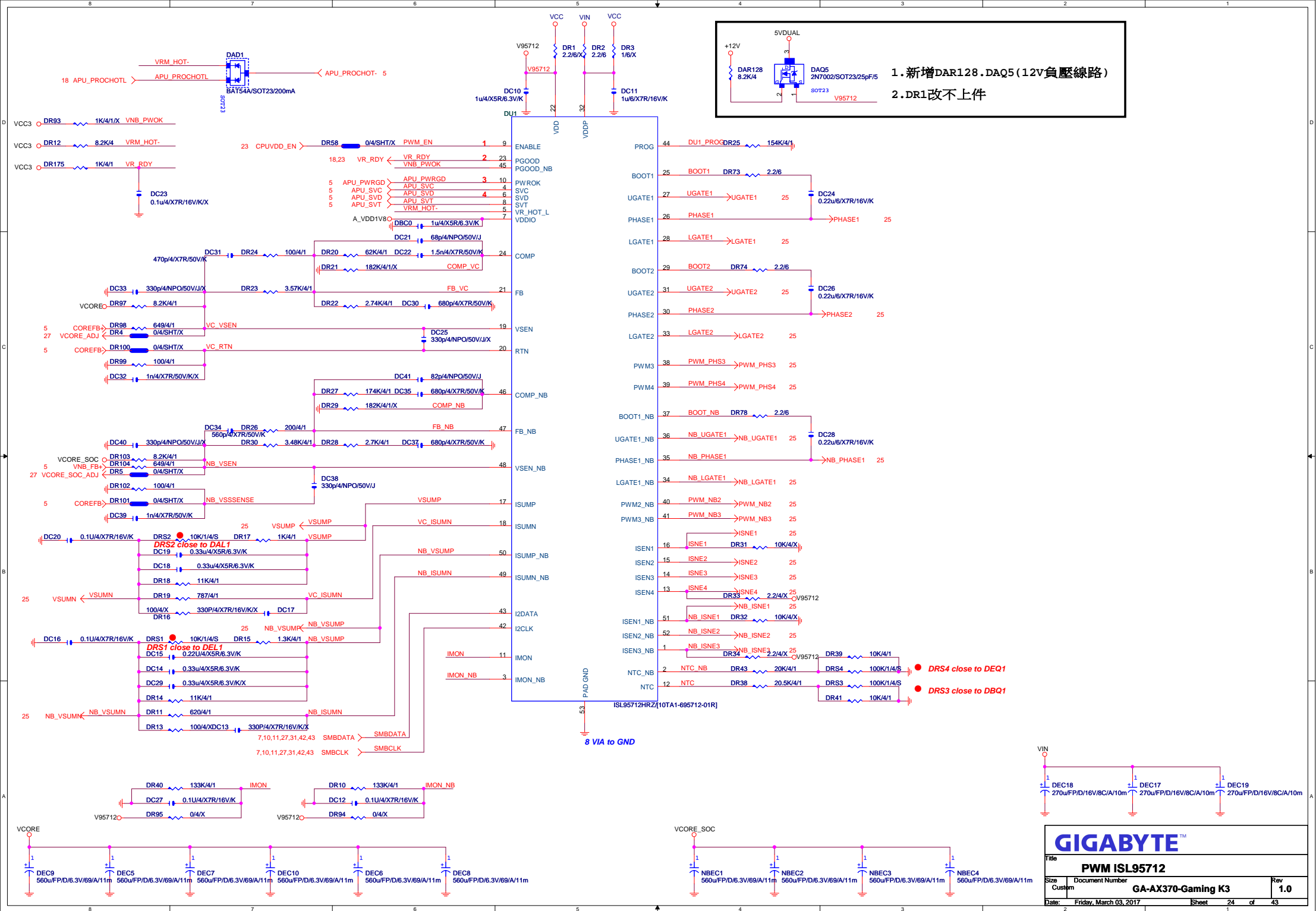


Gigabyte Technology

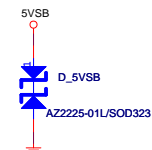
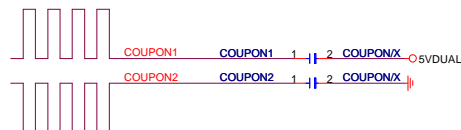
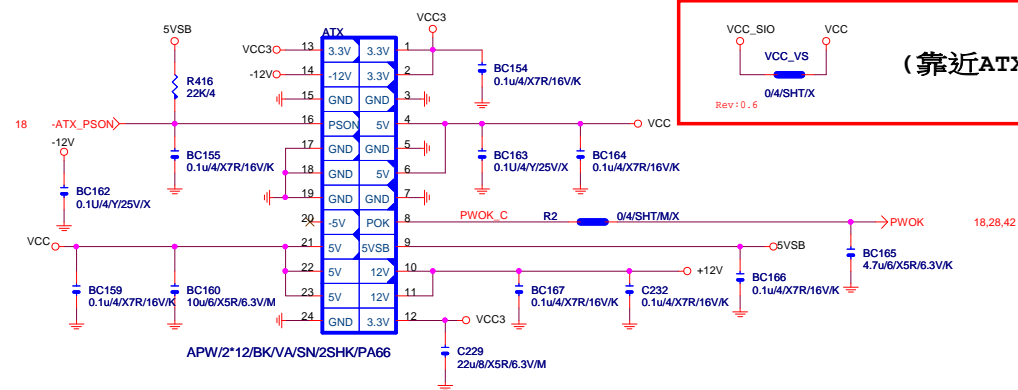
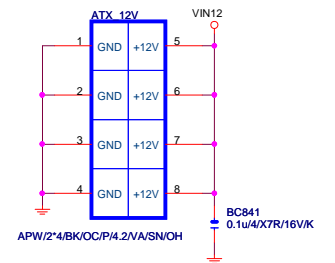
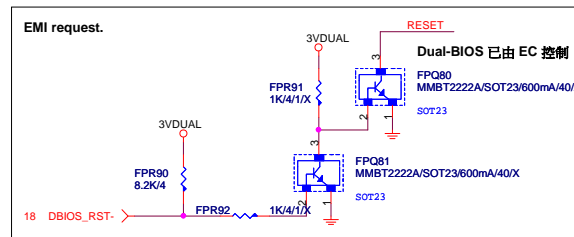
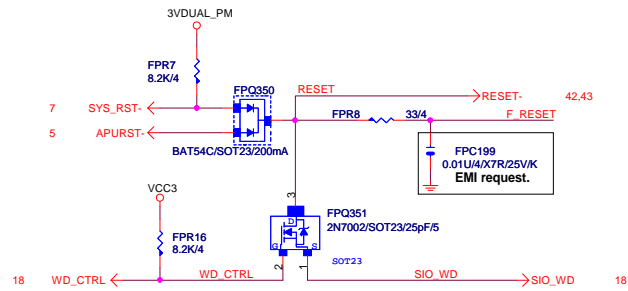
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AUDIO JACK		
Size Custom	Document Number	Rev
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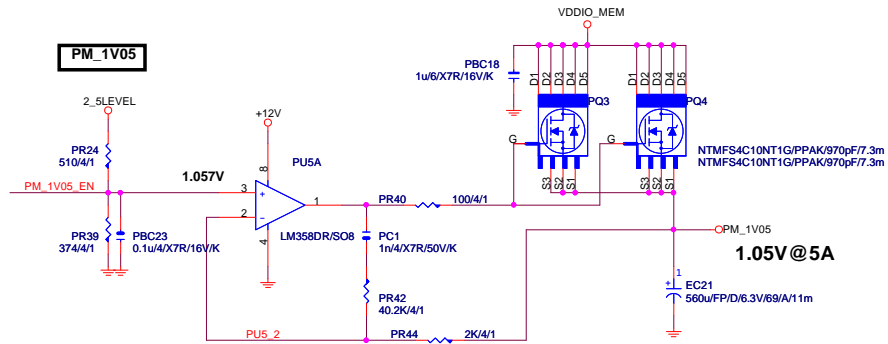
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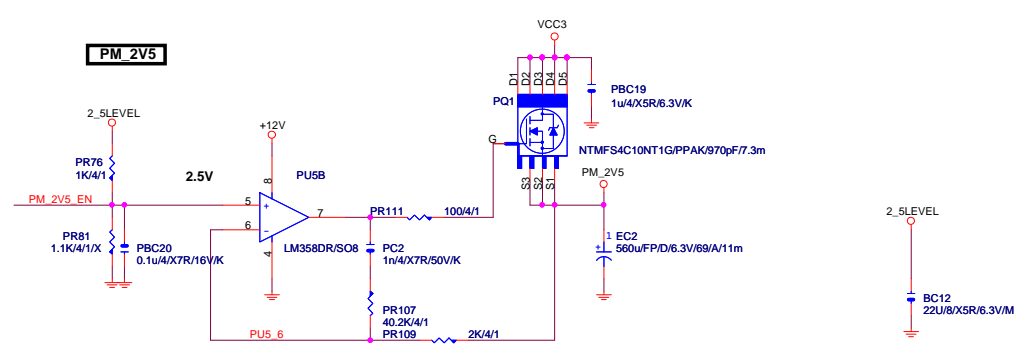




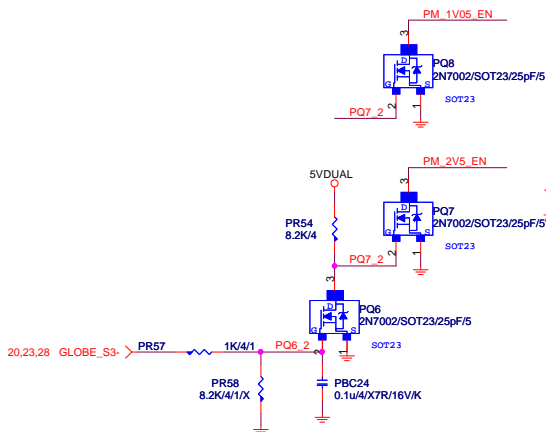
PM_1V05



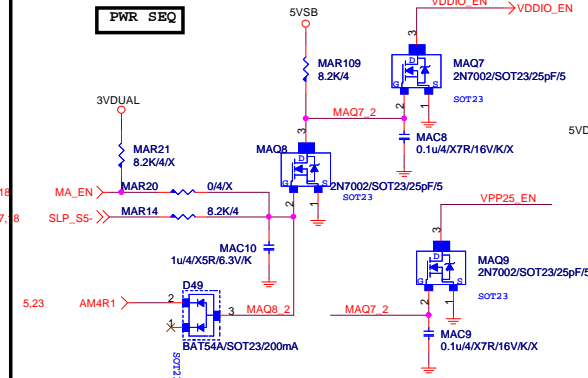
PM_2V5



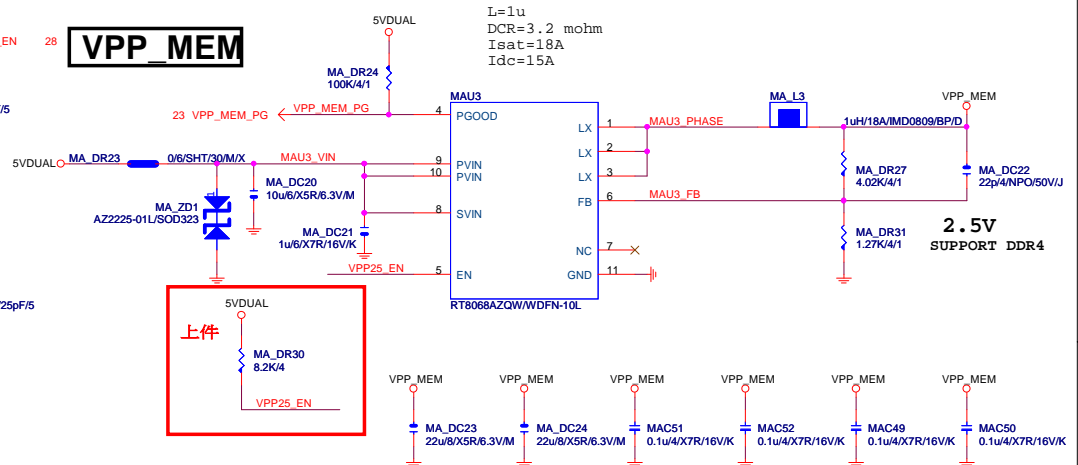
PWR_SEQ



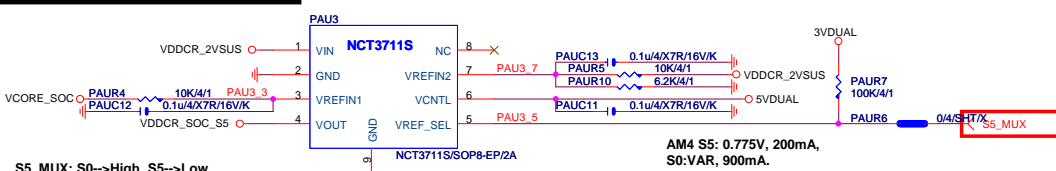
PWR_SEQ



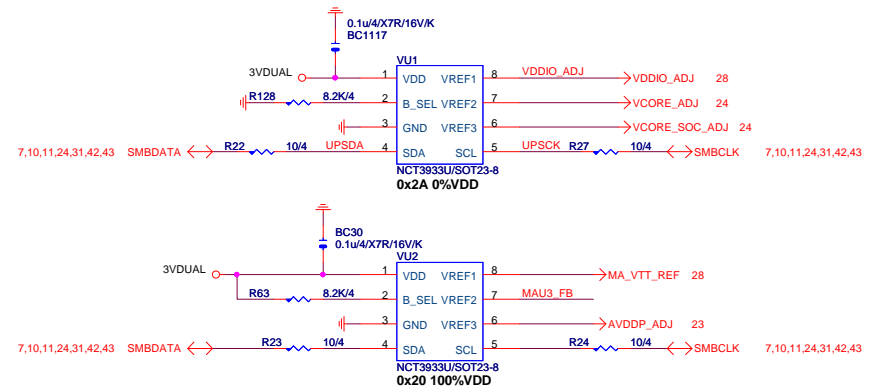
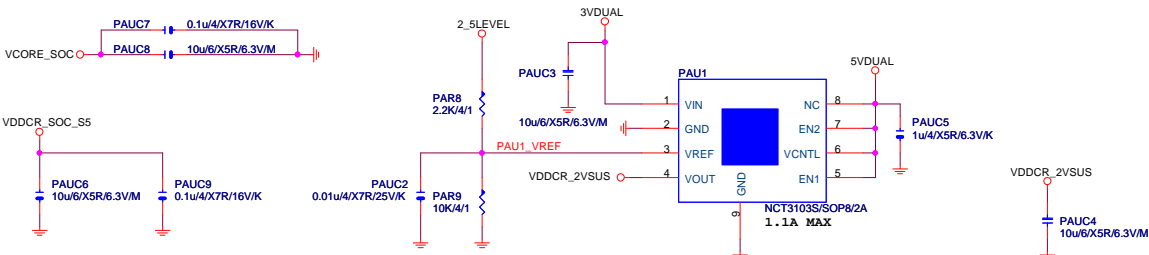
VPP_MEM



VDDCR_SOC_S5

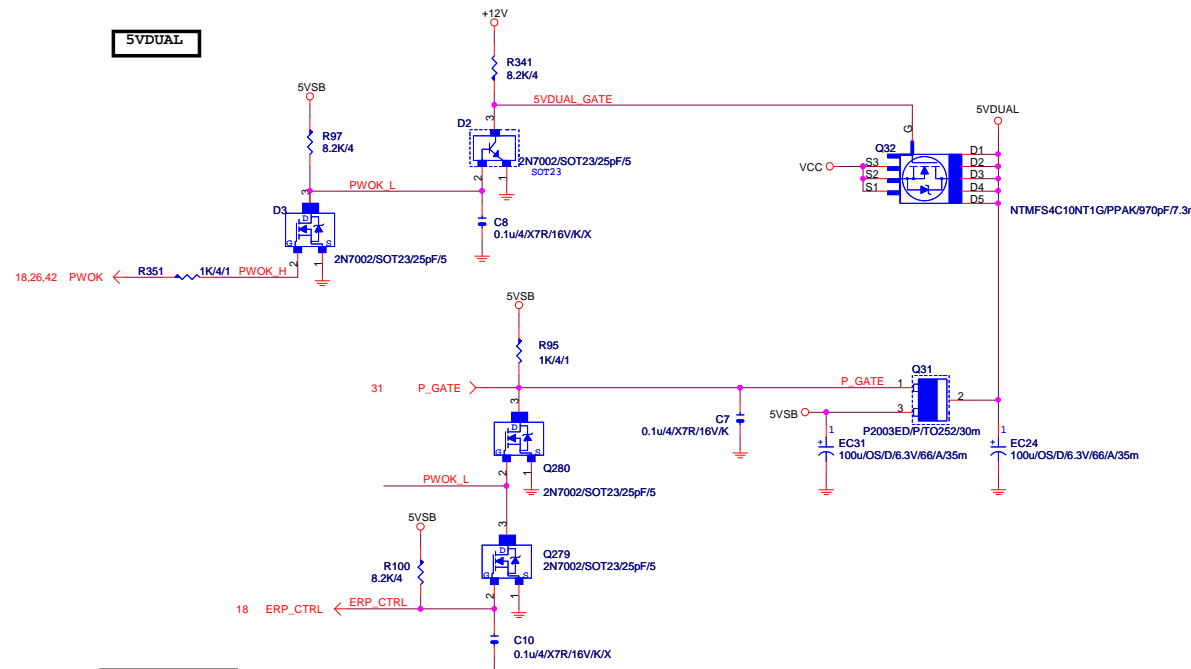


S5_MUX: S0-->High, S5-->Low
H: VDDCR_SOC_S5 will track VCORE_SOC.
L: If VCORE_SOC < 0.775V (OR 0.85V), VDDCR_SOC_S5=0.775V.
If VCORE_SOC >= 0.775V (OR 0.85V), VDDCR_SOC_S5 will track VCORE_SOC.

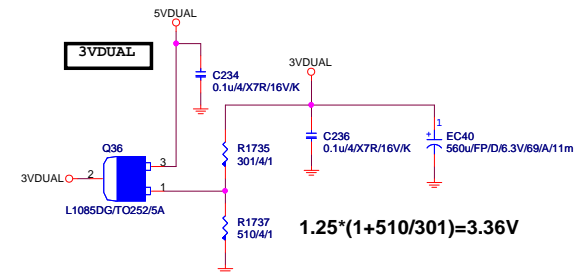


GIGABYTE

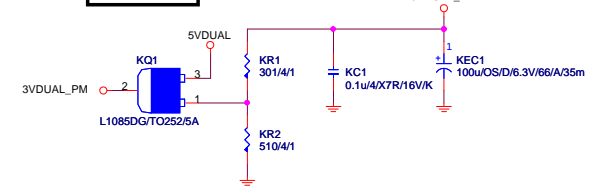
Title		
PM PWR,VPP_MEM,VDDCR_SOC_S5		
Size	Document Number	Rev
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Date:	Friday, March 03, 2017	Sheet 27 of 43



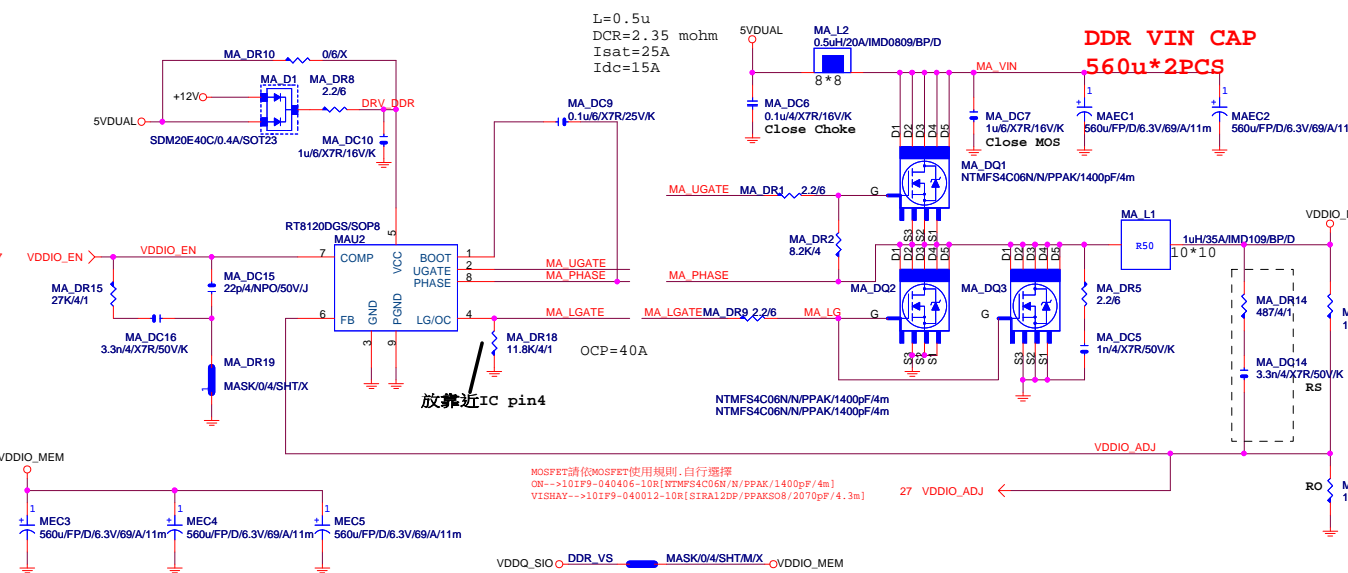
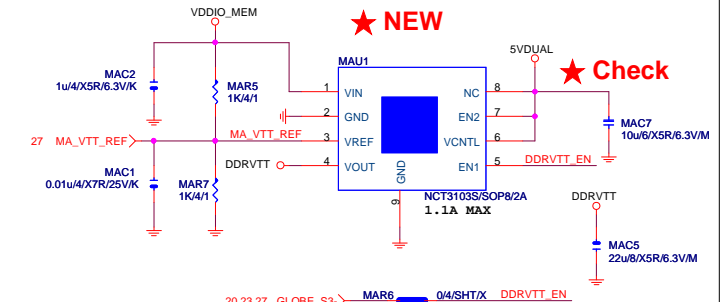
VDDIO_MEM



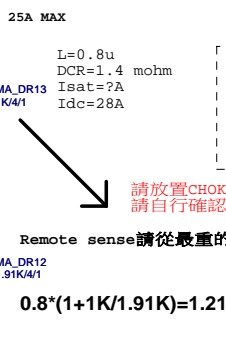
3VDUAL_PM



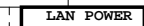
DDR VTT

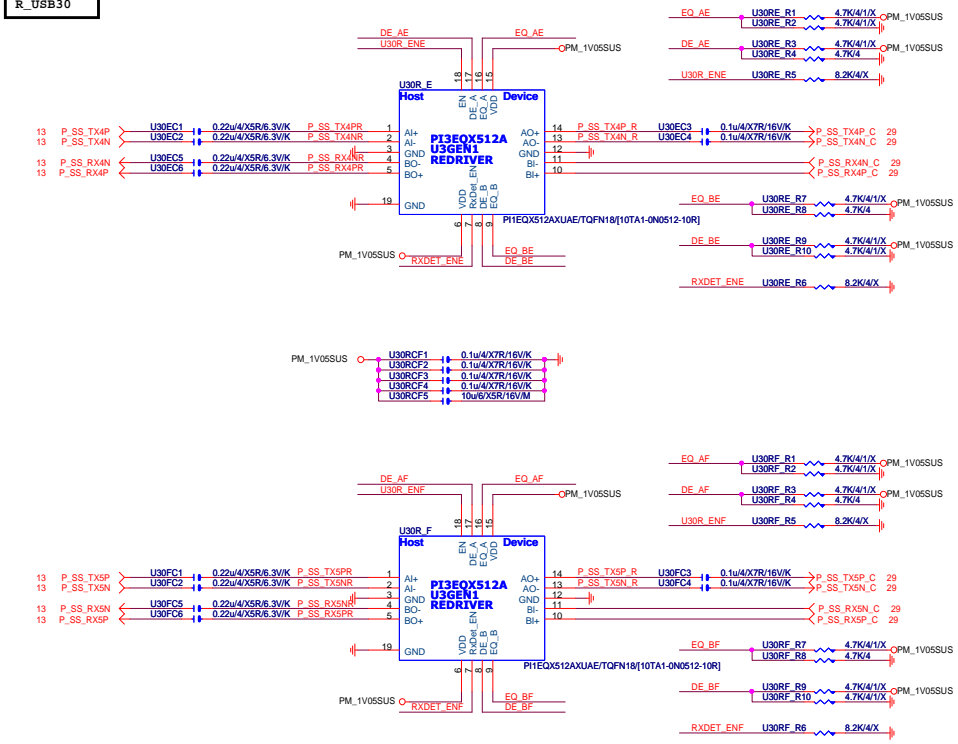


5VDUAL

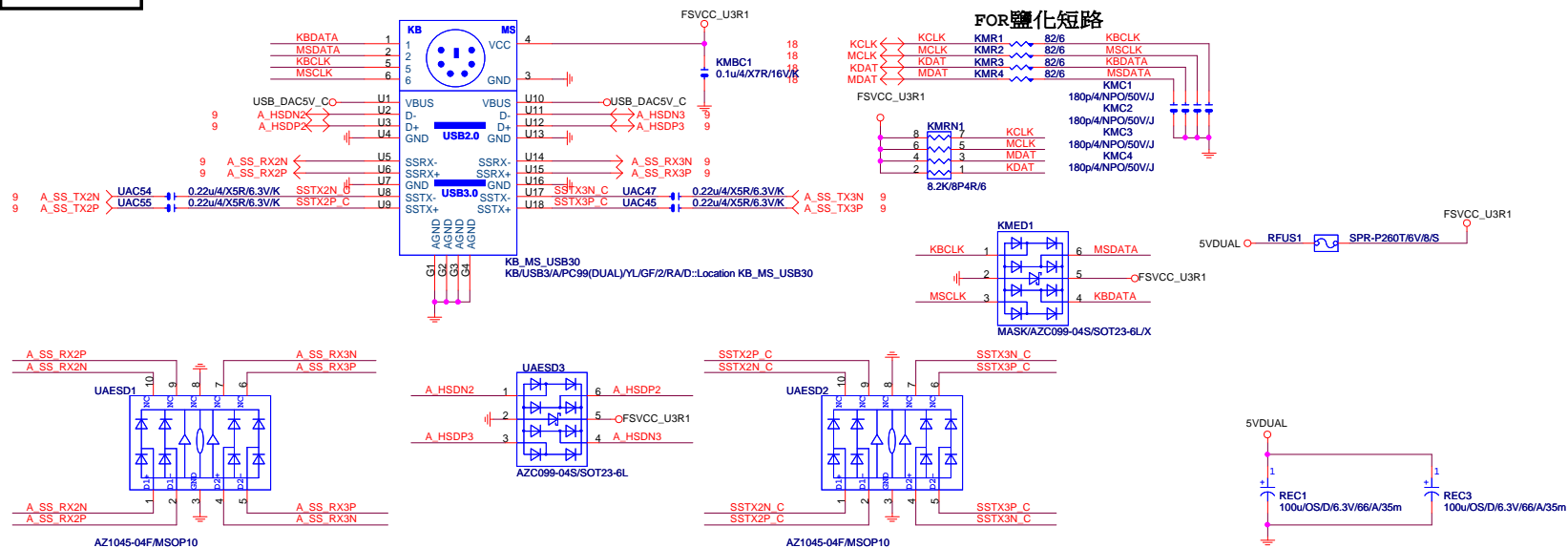


GIGABYTE™		
Title		
DDR POWER, 5VDUAL, 3VDUAL		
Size	Document Number	Rev
Custom	GA-AX370-Gaming K3	1.0
Date:	Friday, March 03, 2017	Sheet 28 of 43

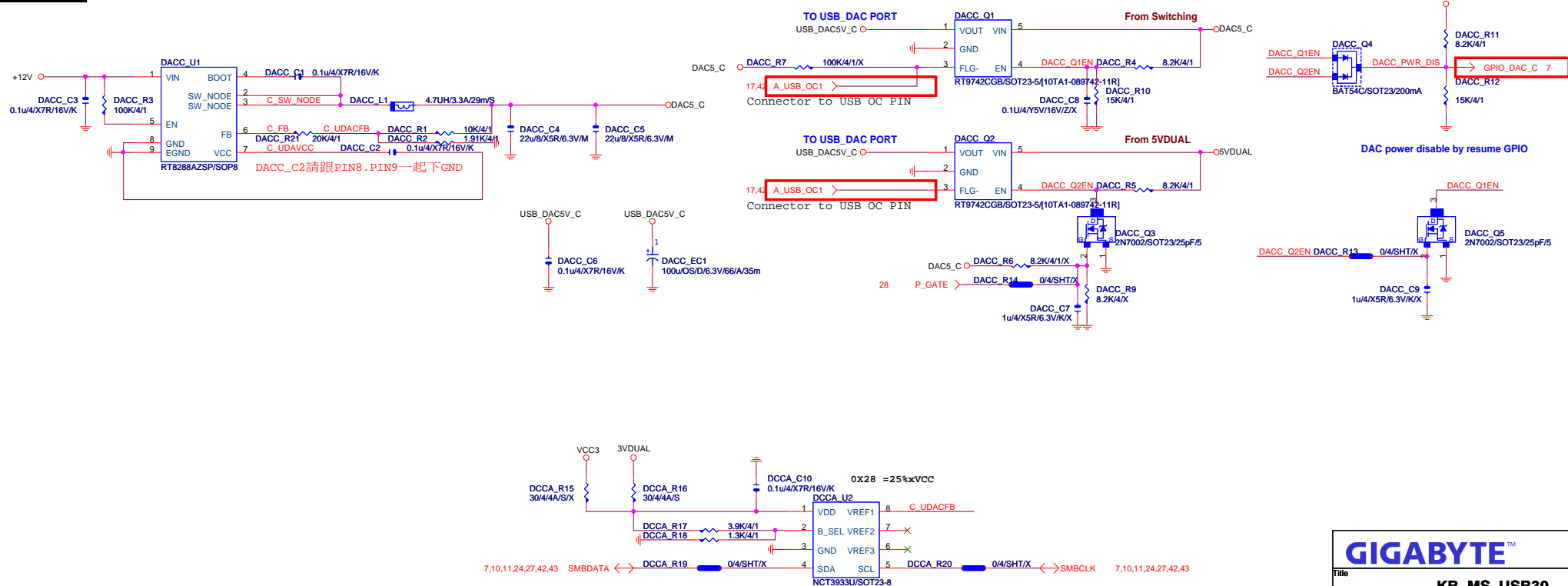




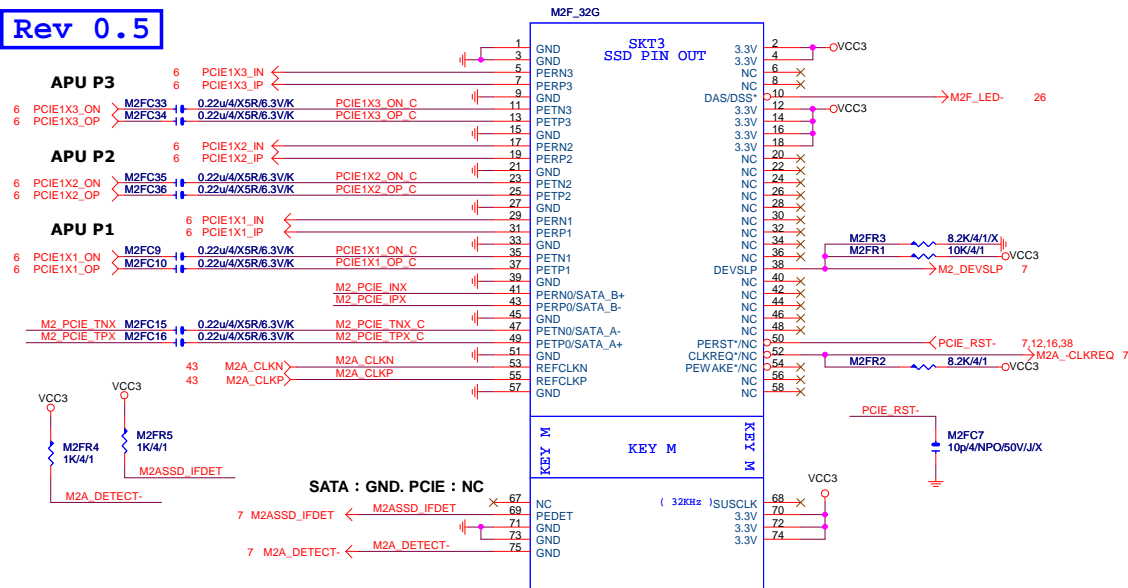
KB/MS/DAC PWR



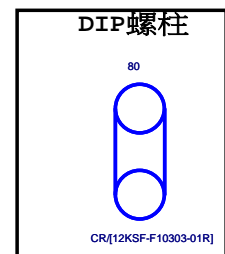
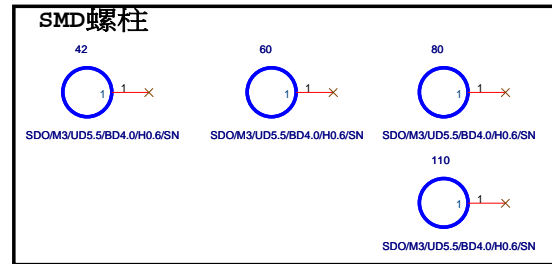
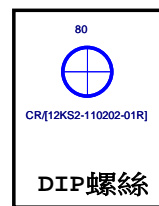
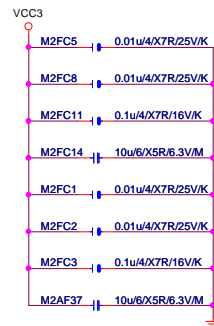
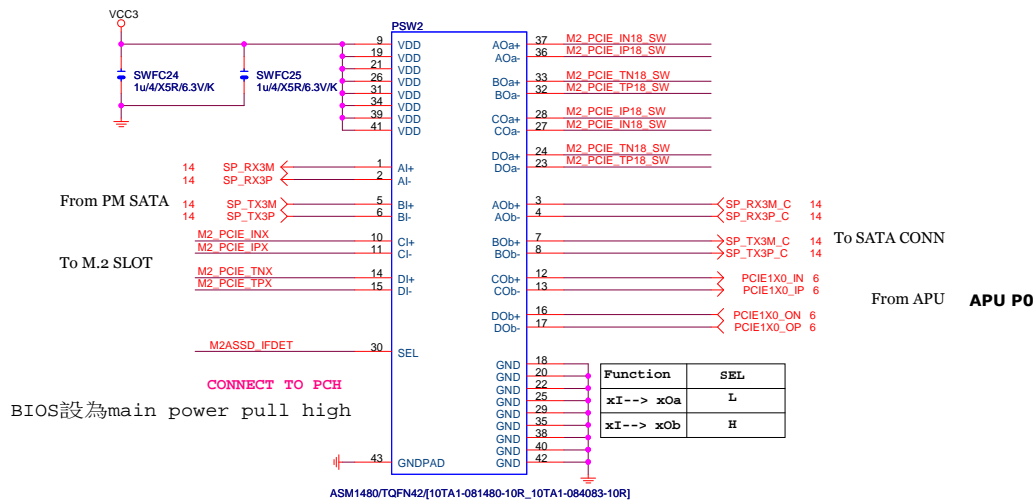
USB_DAC_C REV:0.13

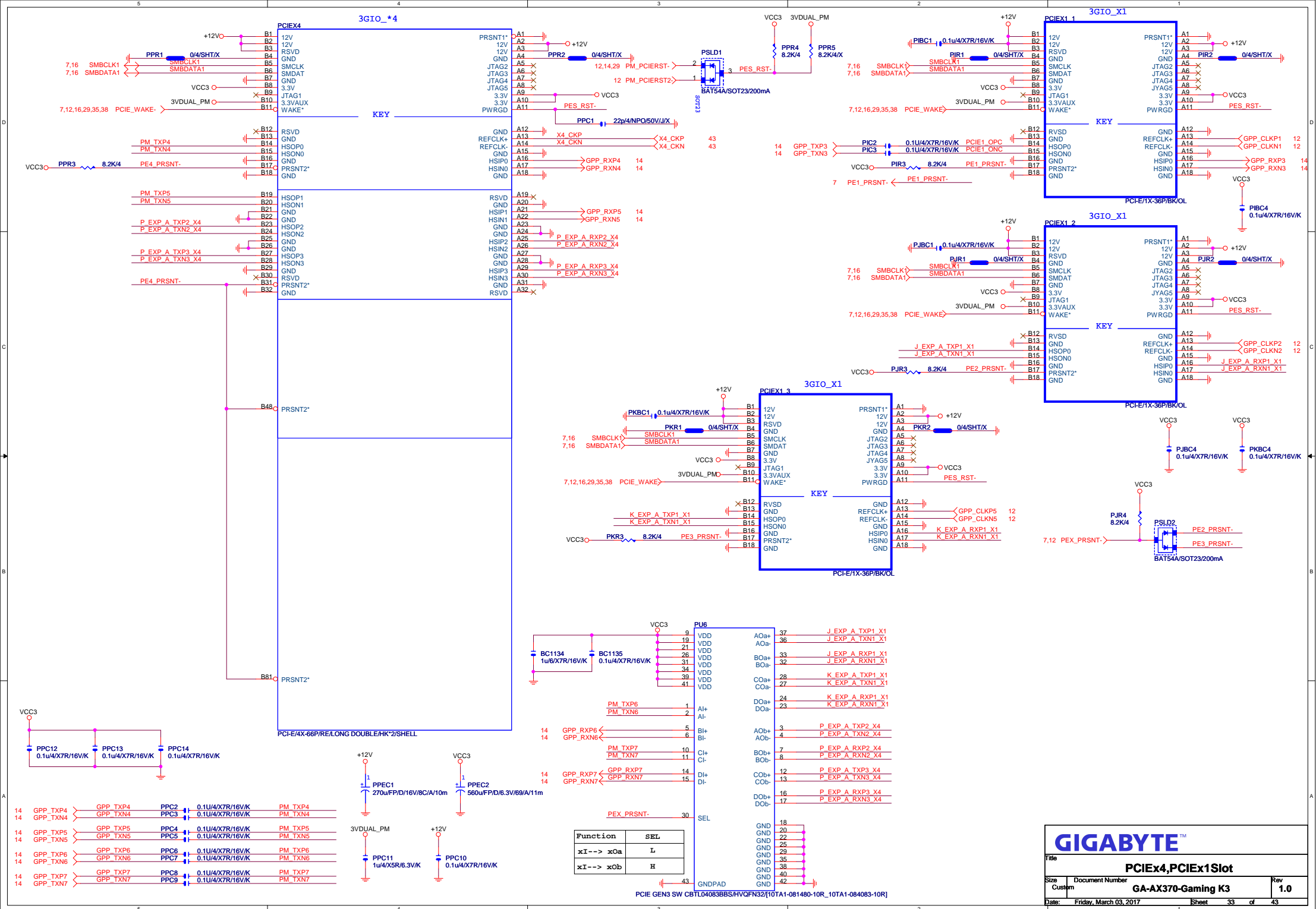


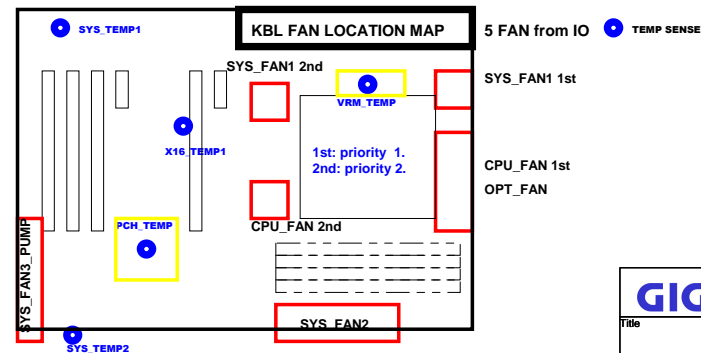
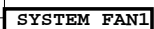
Rev 0.5



M2/67/BK/RA/S/H4.2mm/M KEY
矮件 footprint : NGFF-M-75P-11CM-09MM-SMD

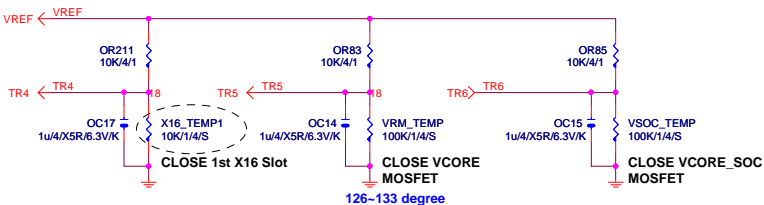
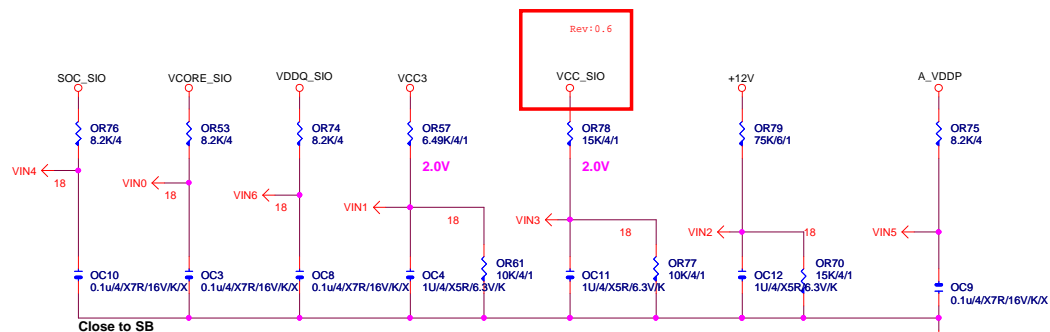
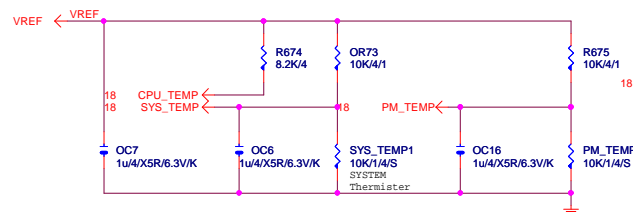




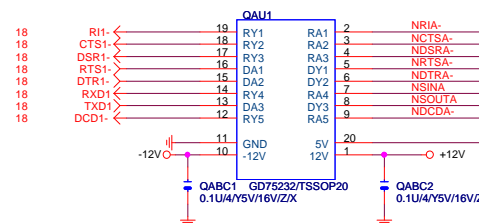


KBL FAN LOCATION MAP REFER TO PAGE.27

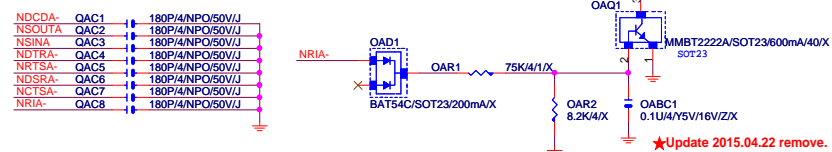
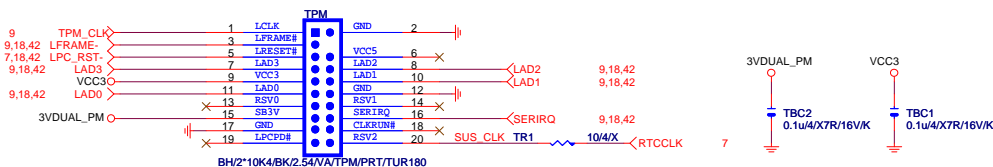
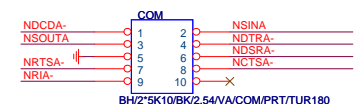
Hardware Monitor circuits



COM PORT



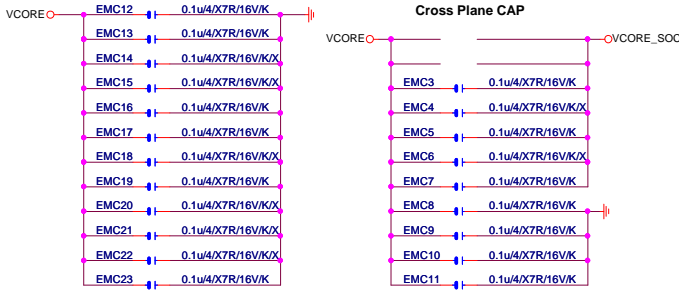
COMA



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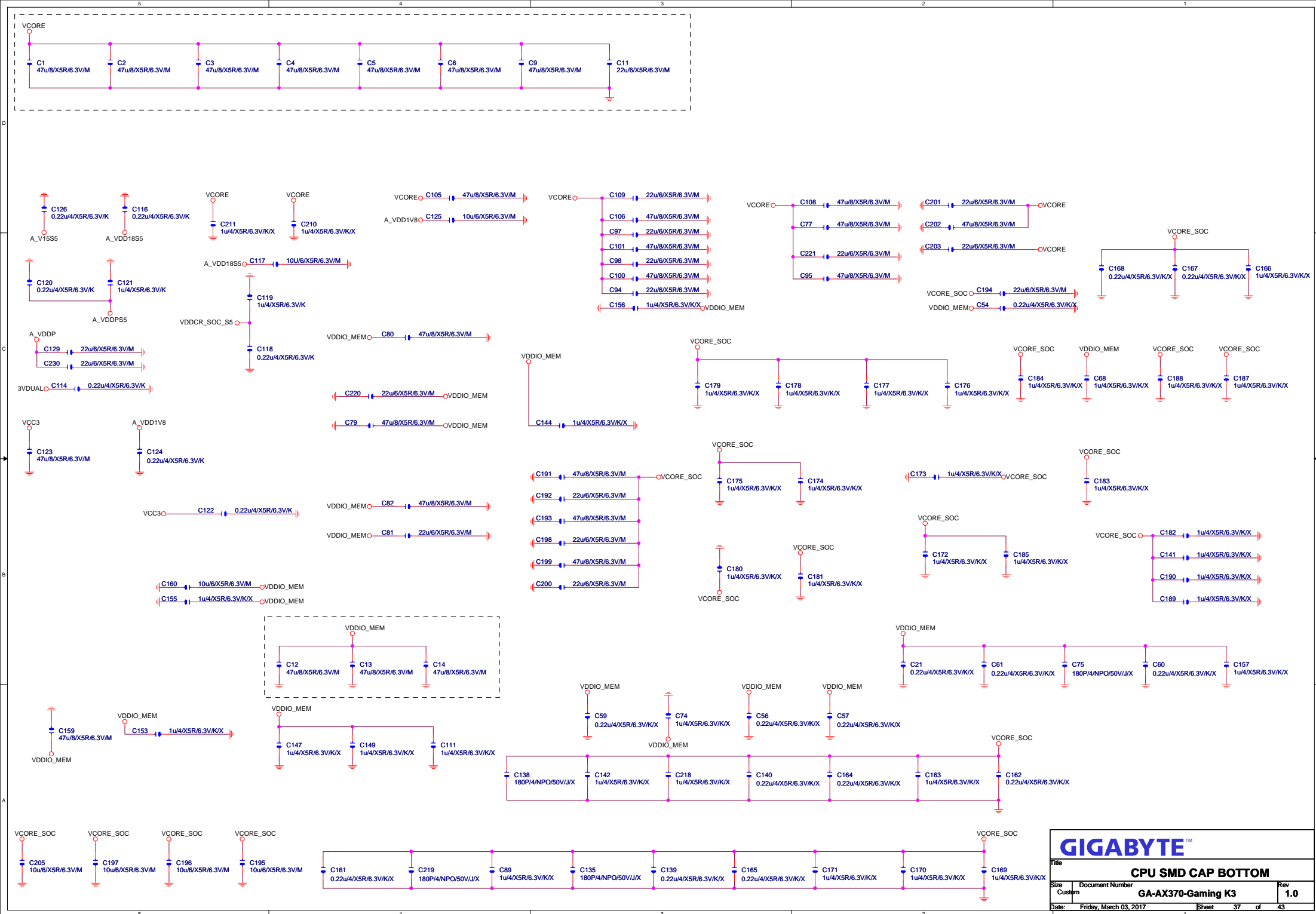
Title		
HWM TPM, COM		
Size	Document Number	Rev
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CPU TOP CAVITY



GIGABYTE™

Title		
CPU SMD CAP TOP		
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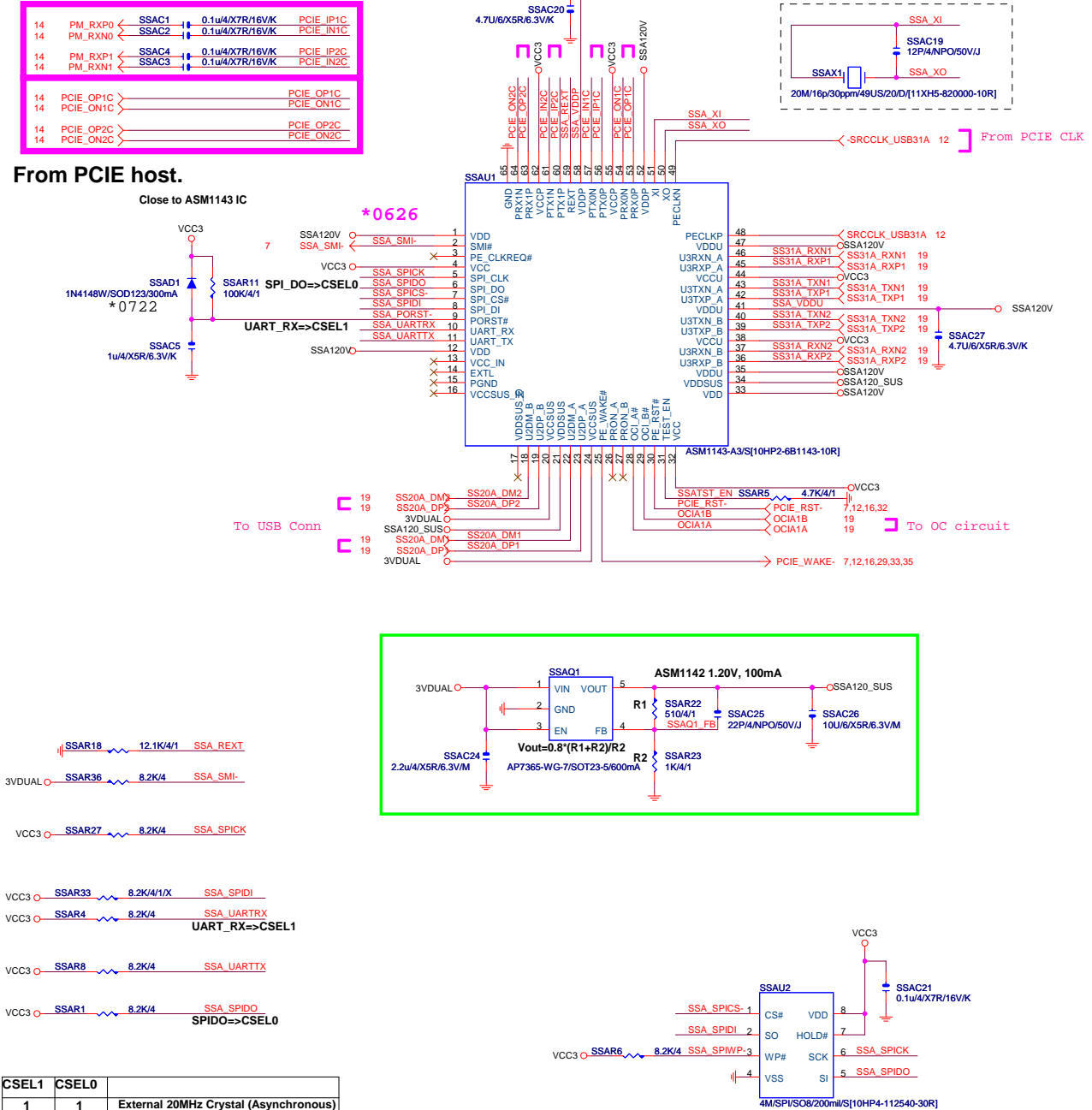


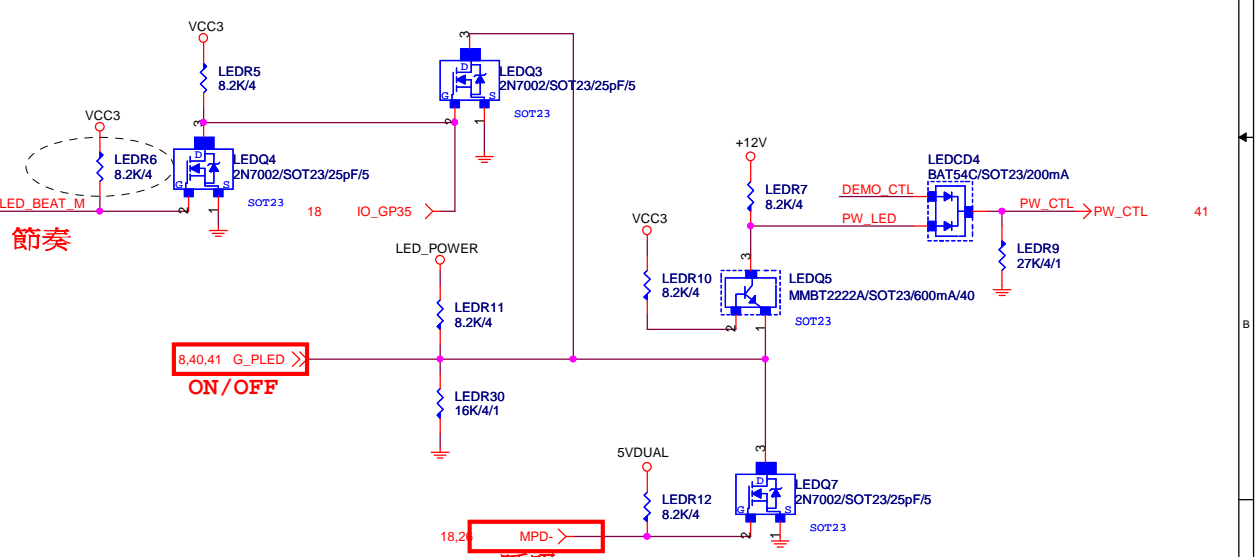
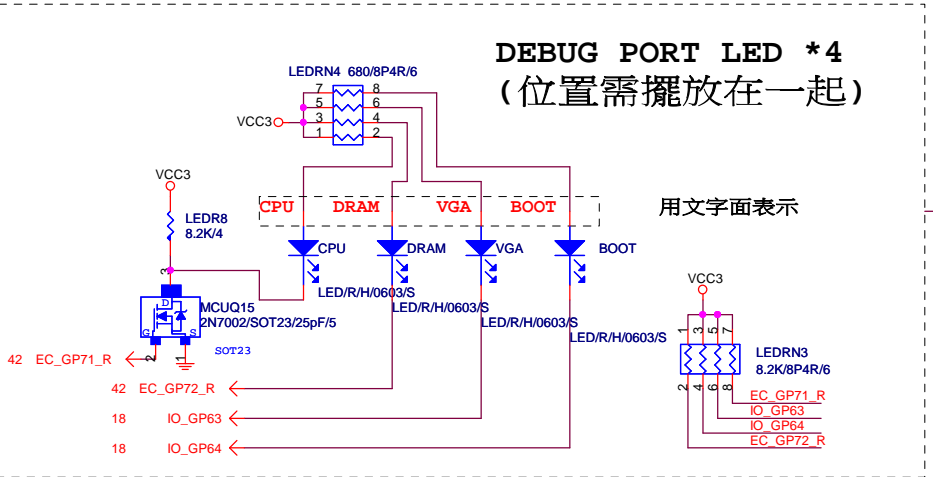
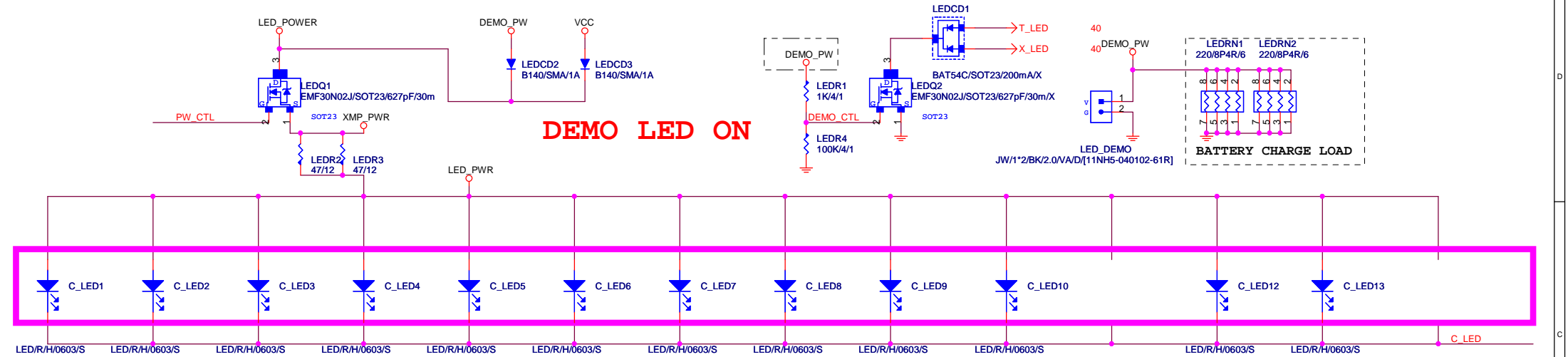
ASM1143 USB3 Host Rev0.63
PCIE Gen3 X1 or PCIE Gen2 X2
To PCIE host.

Color markers can be changed by model

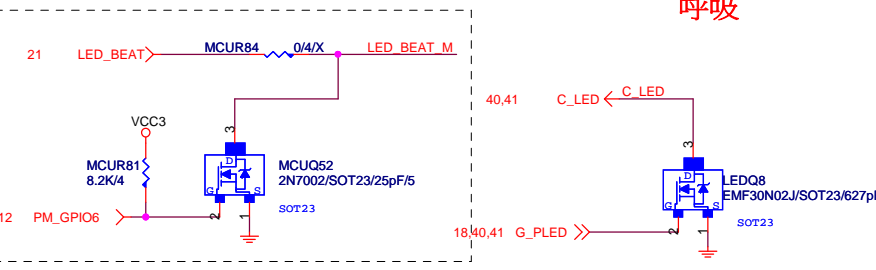
ASM1143 USB3.1

Base on ASM1142 0.3 Reference SCH





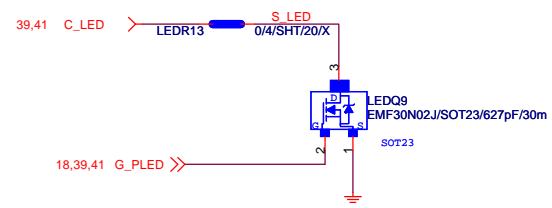
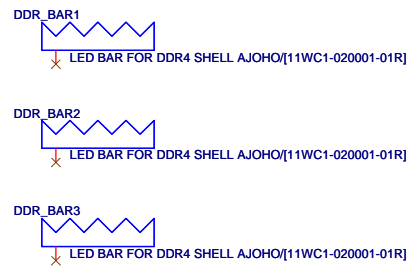
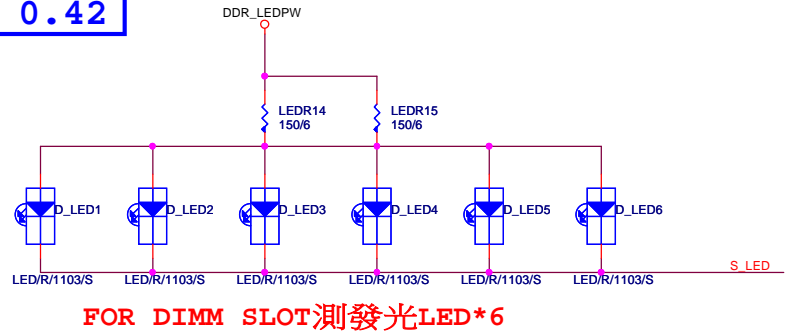
	IO_GP95	IO_GP35	IO_GP91
Still Mode	H	L	L
OFF Mode	L	L	L
Pluse Mode	H	L	BREATH
Beat Mode	H	OD	L



AUDIO LED

Size Document Number
Custom GA-AX370-Gaming K3 Rev 1.0

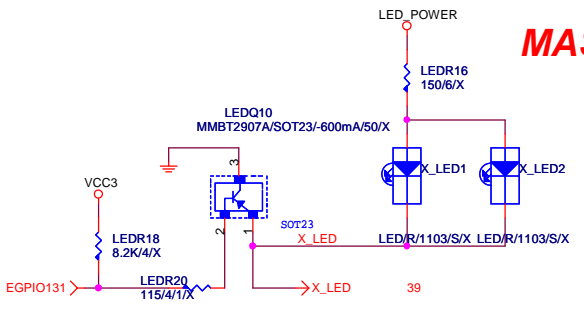
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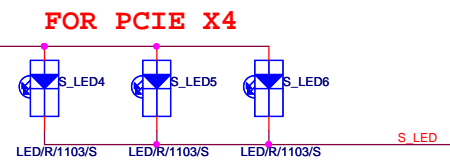
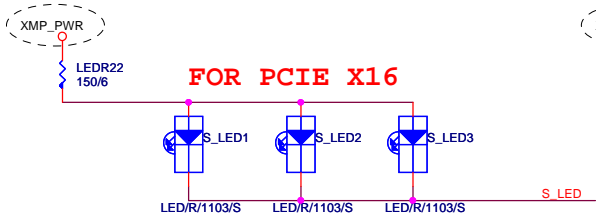
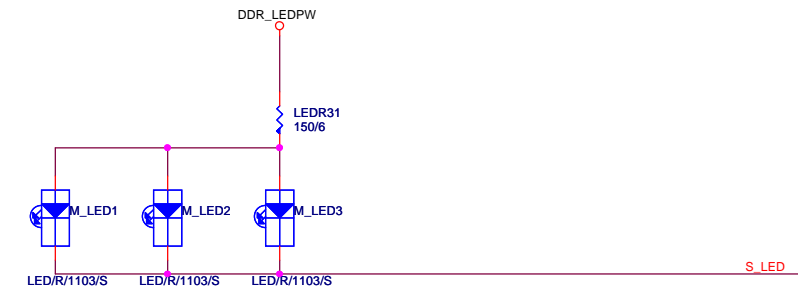
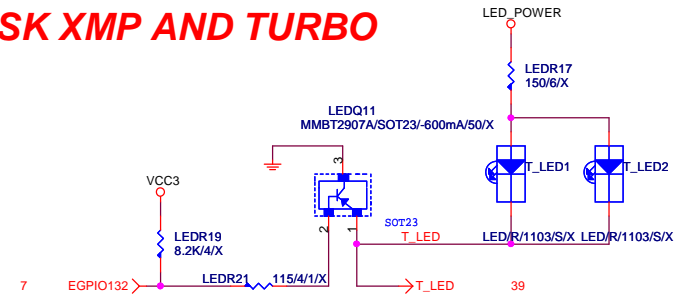
FOR XMP 測發光 LED*2
(靠近DIMM附近放背板鏤空)

FOR TURBO 測發光 LED*2
(靠近DIMM附近背板鏤空)

FOR MODEL NAME測發光LED*4



MASK XMP AND TURBO



LED GPIO PIN DEFINE

EC_GP71	CPU DEBUG
EC_GP72	DDR DEBUG
IO_GP63	VGA DEBUG
IO_GP64	BOOT DEBUG
PM_GPIO5	
PM_GPIO6	software beat mode control
IO_GP35	Beat Mode LED
EGPIO131	XMP LED
EGPIO132	TURBO LED

GIGABYTE™

Title

PCIE/DDR LED

Size

Document Number

Rev

Custom

GA-AX370-Gaming K3

1.0

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Friday, March 03, 2017

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