GA-AB350-GAMING 3

Revision : 1.01

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34	CPU SMD CAP TOP, PCIE x1
35	CPU / AUDIO / PCIE/REAR LED
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37	IT8792 EC1

2015.12.30--B.L

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Title: COVER SHEET		
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Model Name:GA-AB350-GAMING 3

Component value change history

Version: 1.01

P-Code: U98126-0

Date	Change Item		Reason
2016.07.??	New BOM Release.	PCB: 0.1	
2016.09.30	New BOM Release.	PCB: 0.1	CHANGE ITE8686 BX to CX MOS change to ON SOCKET CHANGE BK
2016.12.12	New BOM Release.	PCB: 0.1	1. modify from Gaming A8 to AB350-Gaming 3 2. del RGB LED , 組值修改 R:470 G:330 B:270 3. Add EC SCH (for DUAL-BIOS) 4. PM_SMI SCH (add PR30) 5. DDR4 Layout 方式修改 6. Debug LED GPIO 定義(from EC & 8686) 7. Add AGPIO85 (for clear CMOS) 8. ORTC 匹配電容不上件,BIOS setting "1" for 12.5pf 9. TPM pin1 接至 LPC_CK0 10. VPP_SPD 改上MR0 (VPP_MEM) 11. Solt color spec 修改 12. PT Crystal 加串一顆0 ohm 13. DAC POWER GPIO change to AGPIO16 14. Audio connect change to 一般用料(無鍍金) 15. MOATR2 open 16. PWM DR23 change to 3.57k/4/1 17. MOS 改用ON 用料 18. TMOS change to 12SP2-S09425-M1R/M2R/M3R 19. PR7 change to 10p , PC15/PC16 NA
	E-BOM CHANGE		1. PR16 change to 8.2K 2. PC34 2.2u 3. R347 change to 10K 4. SIO change to CX
2017.01.11	1.0B BOM Release.	PCB: 1.01	1. ECR100 PULL TO VCC3 / ECR21 NA (EC ATXPG) 2. OR13 NA / ADD OR1/ECR3 1K PULL DOWN預留 (FOR 48M) 3. ADD PCB_BAR_K1/K2 4. FPQ351 上件 5. LED R:470-->120 , G:330-->82 , B:270-->62 ohm 6. DDR 分壓 7. DR25 CHANGE TO 154K(PR0)

Circuit or PCB layout change for next version

Date	Change Item	Reason
2016.08.05	PCB 1.01	1. USB 3.0 redriver remove, Peter Pan ask. 2. 2.2U change to 0402 size.

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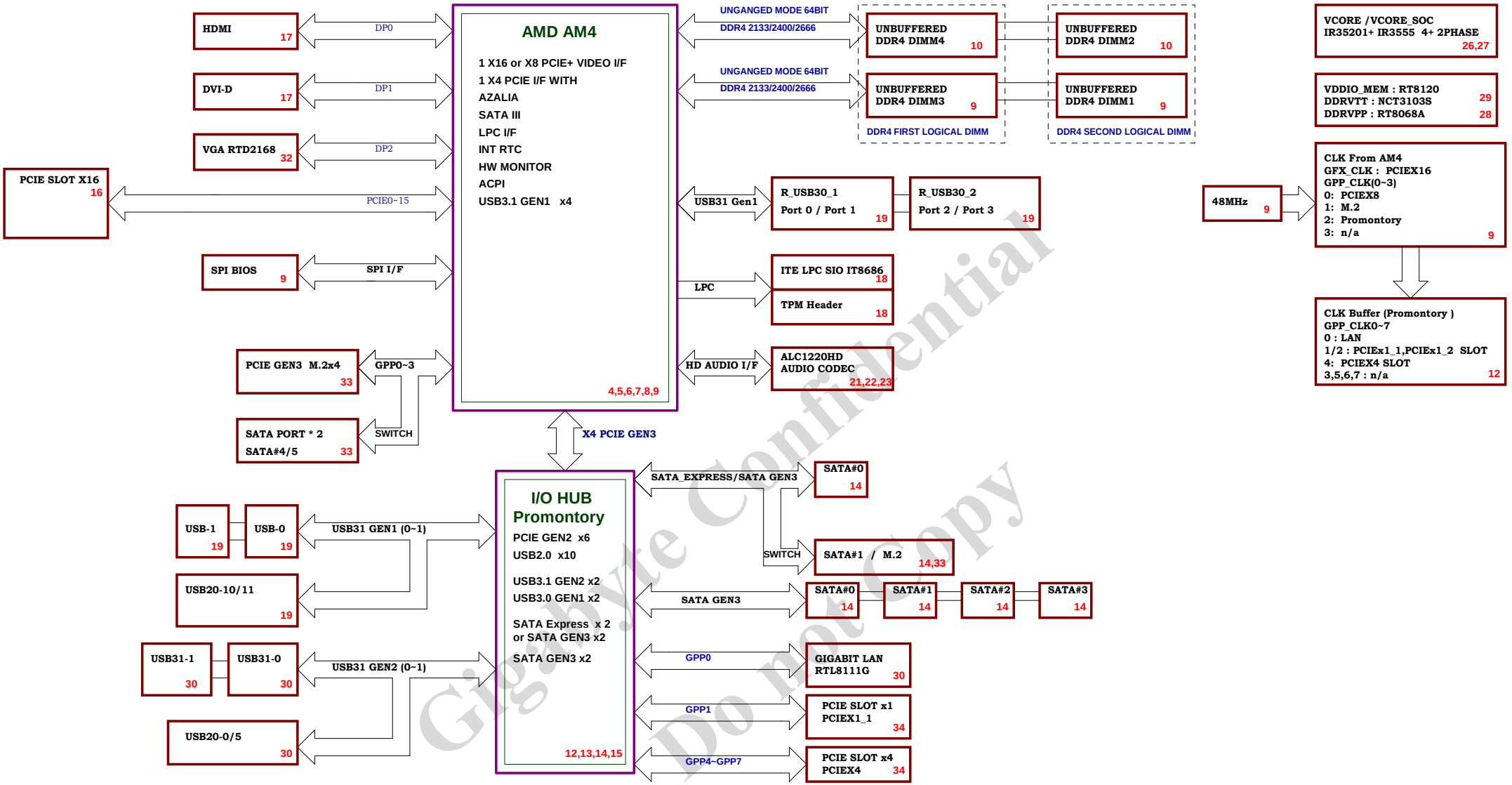

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Title: BLOCK DIAGRAM

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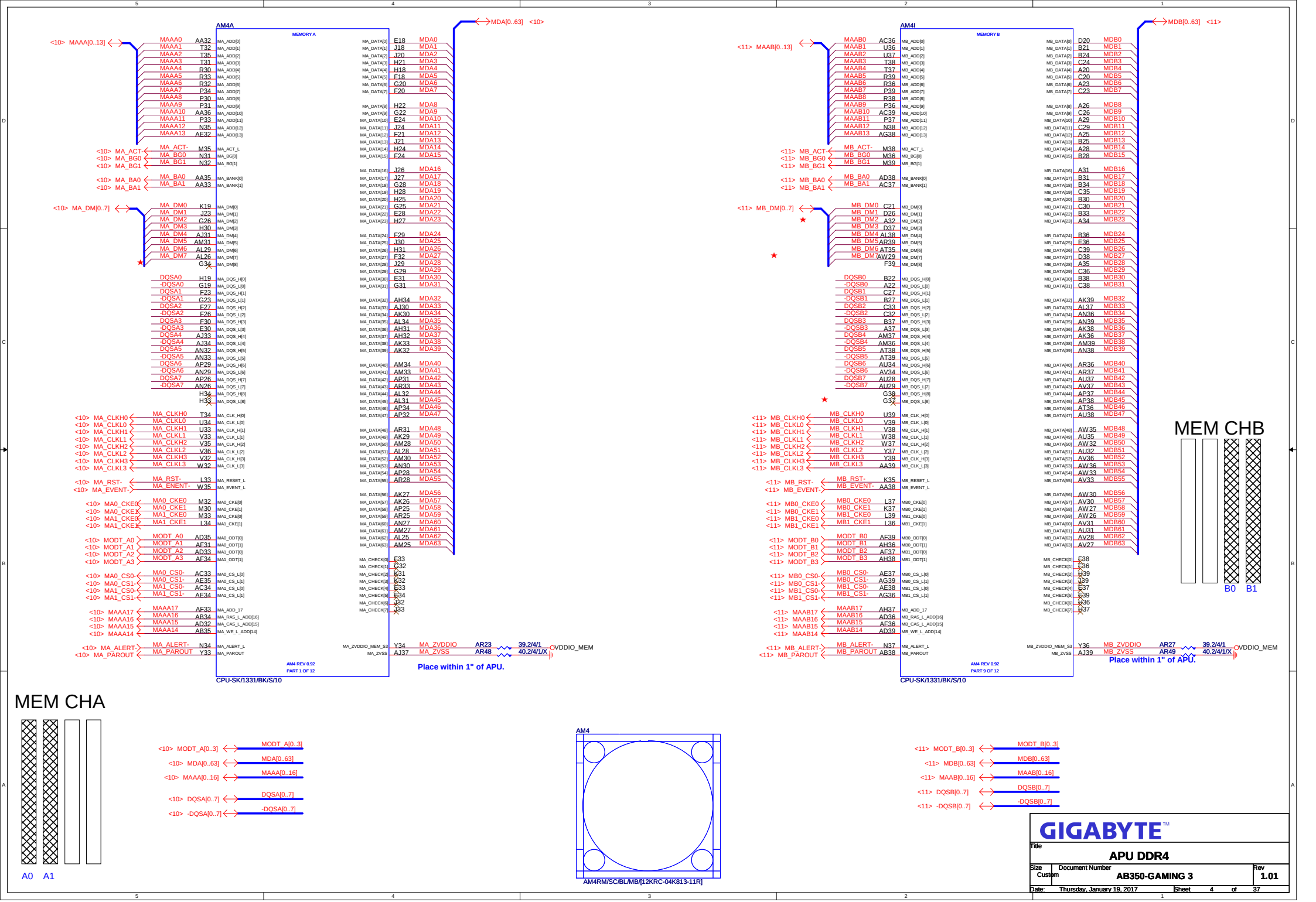
AM4A
MEMORY A
MDA[0..63]
MAAA[0..13]
MA_ACT-
MA_BG0
MA_BG1
MA_BA0
MA_BA1
MA_DM[0..7]
DQSA0
-DQSA0
DQSA1
-DQSA1
DQSA2
-DQSA2
DQSA3
-DQSA3
DQSA4
-DQSA4
DQSA5
-DQSA5
DQSA6
-DQSA6
DQSA7
-DQSA7
MA_CLKH0
MA_CLKL0
MA_CLKH1
MA_CLKL1
MA_CLKH2
MA_CLKL2
MA_CLKH3
MA_CLKL3
MA_RST-
MA_ENENT-
MA0_CKE0
MA0_CKE1
MA1_CKE0
MA1_CKE1
MODT_A0
MODT_A1
MODT_A2
MODT_A3
MA0_CS0-
MA0_CS1-
MA1_CS0-
MA1_CS1-
MAAA17
MAAA16
MAAA15
MAAA14
MA_ALERT-
MA_PAROUT
MA_ZVDDIO_MEM_S3
MA_ZVSS
MA_ZVDDIO
MA_ZVSS
AR23
AR48
39.2/4/1
40.2/4/1/X
VDDIO_MEM
Place within 1" of APU.
AM4 REV 0.92
PART 1 OF 12
CPU-SK/1331/BK/S/10
AM4I
MEMORY B
MDB[0..63]
MAAB[0..13]
MB_ACT-
MB_BG0
MB_BG1
MB_BA0
MB_BA1
MB_DM[0..7]
DQSB0
-DQSB0
DQSB1
-DQSB1
DQSB2
-DQSB2
DQSB3
-DQSB3
DQSB4
-DQSB4
DQSB5
-DQSB5
DQSB6
-DQSB6
DQSB7
-DQSB7
MB_CLKH0
MB_CLKL0
MB_CLKH1
MB_CLKL1
MB_CLKH2
MB_CLKL2
MB_CLKH3
MB_CLKL3
MB_RST-
MB_EVENT-
MB0_CKE0
MB0_CKE1
MB1_CKE0
MB1_CKE1
MODT_B0
MODT_B1
MODT_B2
MODT_B3
MB0_CS0-
MB0_CS1-
MB1_CS0-
MB1_CS1-
MAAB17
MAAB16
MAAB15
MAAB14
MB_ALERT-
MB_PAROUT
MB_ZVDDIO_MEM_S3
MB_ZVSS
MB_ZVDDIO
MB_ZVSS
AR27
AR49
39.2/4/1
40.2/4/1/X
VDDIO_MEM
Place within 1" of APU.
AM4 REV 0.92
PART 9 OF 12
CPU-SK/1331/BK/S/10
MEM CHB
B0
B1
MEM CHA
A0
A1
MODT_A[0..3]
MDA[0..63]
MAAA[0..16]
DQSA[0..7]
-DQSA[0..7]
AM4
AM4RM/SC/BL/MB/[12KRC-04K813-11R]
MODT_B[0..3]
MDB[0..63]
MAAB[0..16]
DQSB[0..7]
-DQSB[0..7]
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Title
APU DDR4
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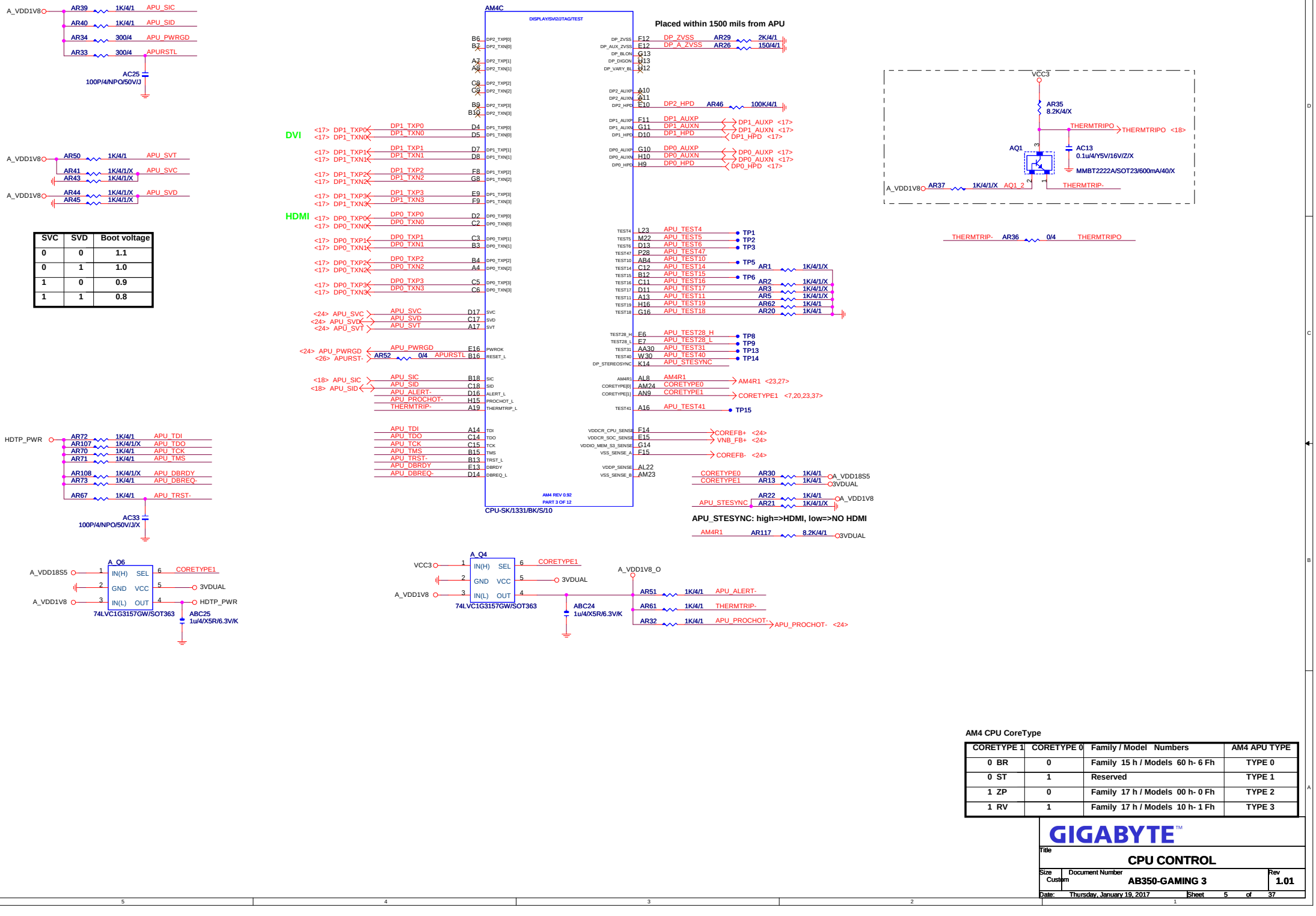
AM4C
DISPLAY/SVI2/JTAG/TEST
Placed within 1500 mils from APU
CPU-SK/1331/BK/S/10
AM4 REV 0.92
PART 3 OF 12
DVI
HDMI
SVC SVD Boot voltage
0 0 1.1
0 1 1.0
1 0 0.9
1 1 0.8
APU_STESYNC: high=>HDMI, low=>NO HDMI
74LVC1G3157GW/SOT363
AM4 CPU CoreType
CORETYPE 1 | CORETYPE 0 | Family / Model Numbers | AM4 APU TYPE
0 BR | 0 | Family 15 h / Models 60 h- 6 Fh | TYPE 0
0 ST | 1 | Reserved | TYPE 1
1 ZP | 0 | Family 17 h / Models 00 h- 0 Fh | TYPE 2
1 RV | 1 | Family 17 h / Models 10 h- 1 Fh | TYPE 3
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Title
CPU CONTROL
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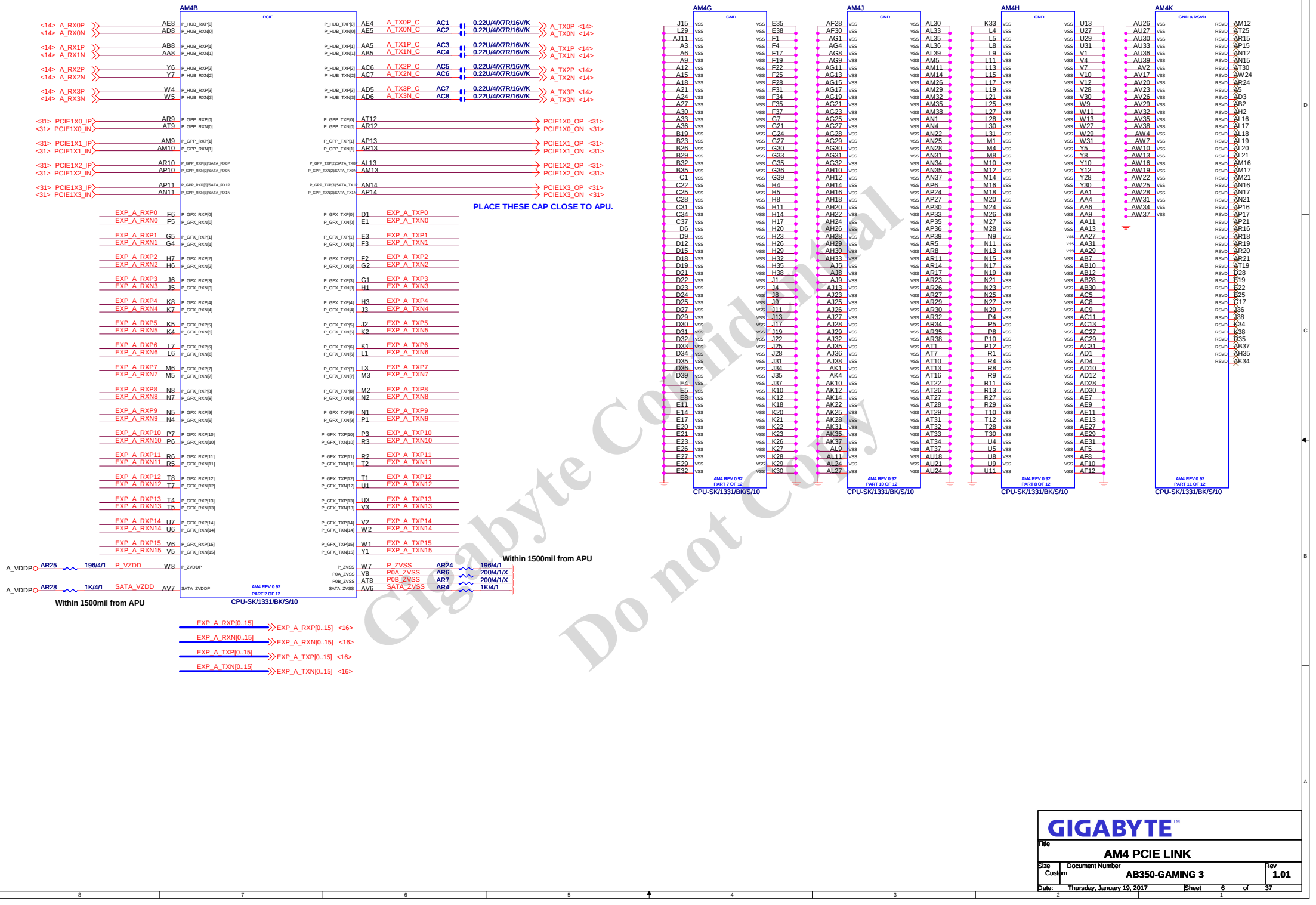

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Title	AM4 PCIE LINK	
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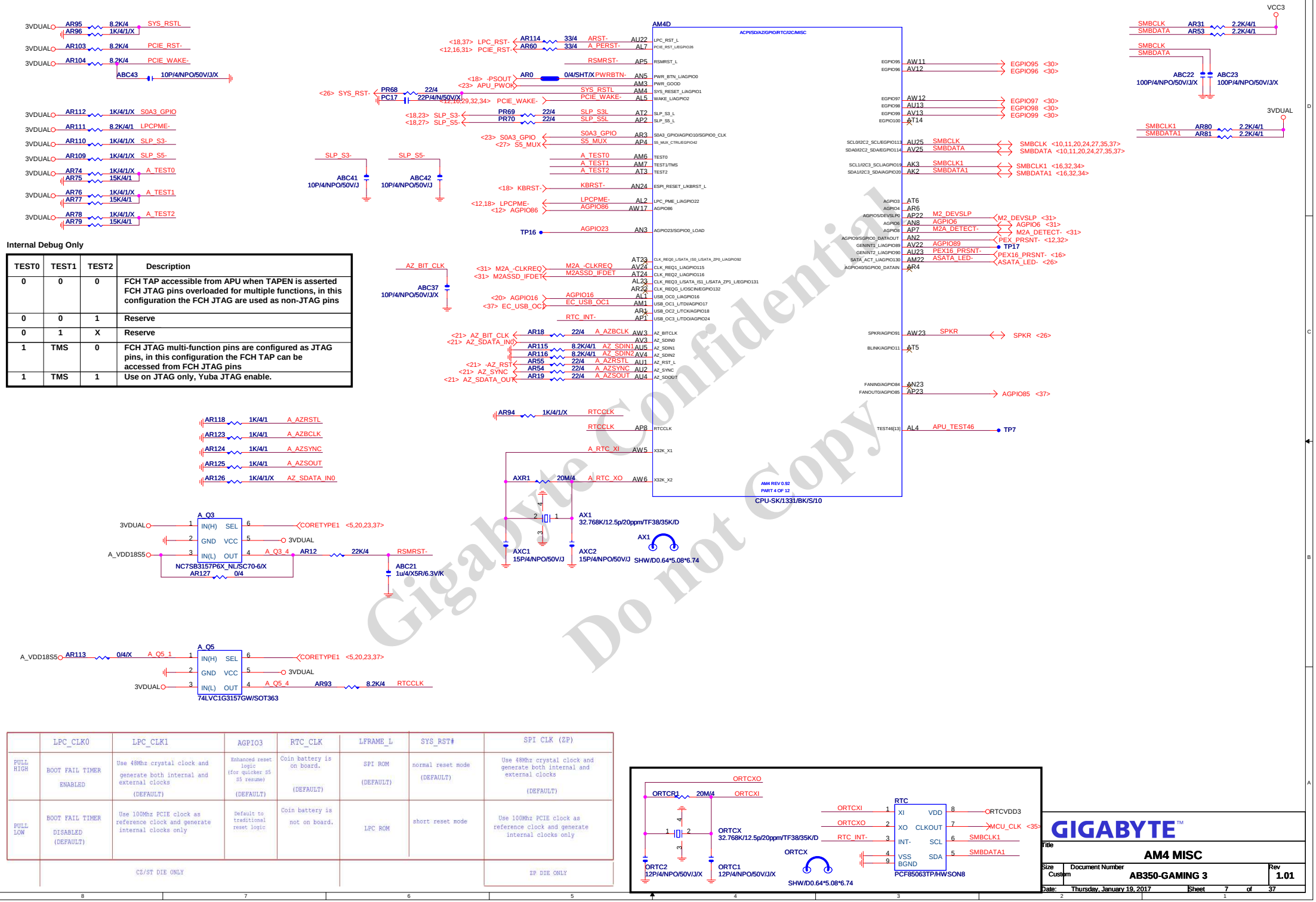

	LPC_CLK0	LPC_CLK1	AGPIO3	RTC_CLK	LFRAME_L	SYS_RST#	SPI CLK (ZP)
PULL HIGH	BOOT FAIL TIMER ENABLED	Use 48Mhz crystal clock and generate both internal and external clocks (DEFAULT)	Enhanced reset logic (for quicker S5 S5 resume) (DEFAULT)	Coin battery is on board. (DEFAULT)	SPI ROM (DEFAULT)	normal reset mode (DEFAULT)	Use 48Mhz crystal clock and generate both internal and external clocks (DEFAULT)
PULL LOW	BOOT FAIL TIMER DISABLED (DEFAULT)	Use 100Mhz PCIE clock as reference clock and generate internal clocks only	Default to traditional reset logic	Coin battery is not on board.	LPC ROM	short reset mode	Use 100Mhz PCIE clock as reference clock and generate internal clocks only
	CZ/ST DIE ONLY						ZP DIE ONLY

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Title	AM4 MISC	
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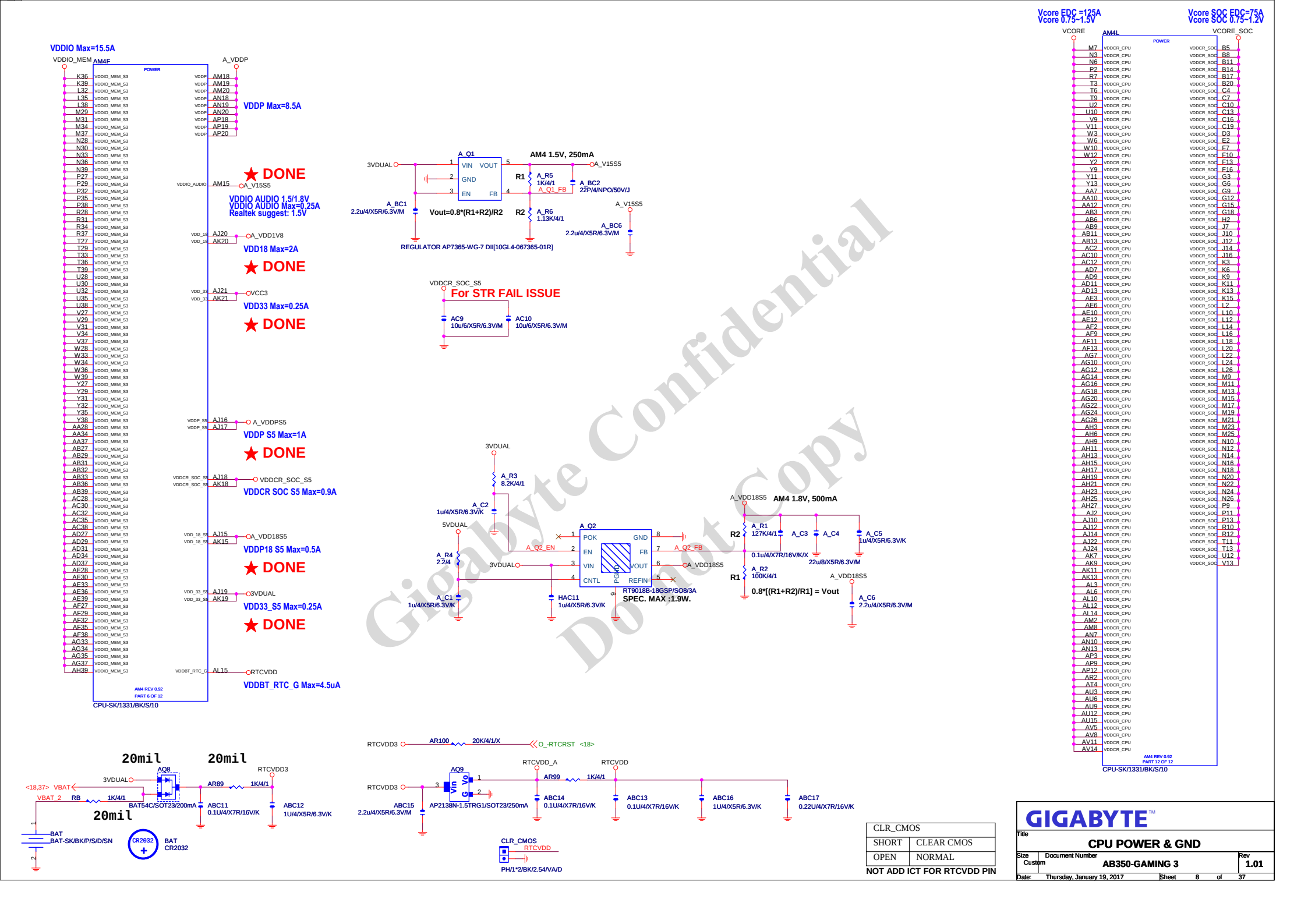

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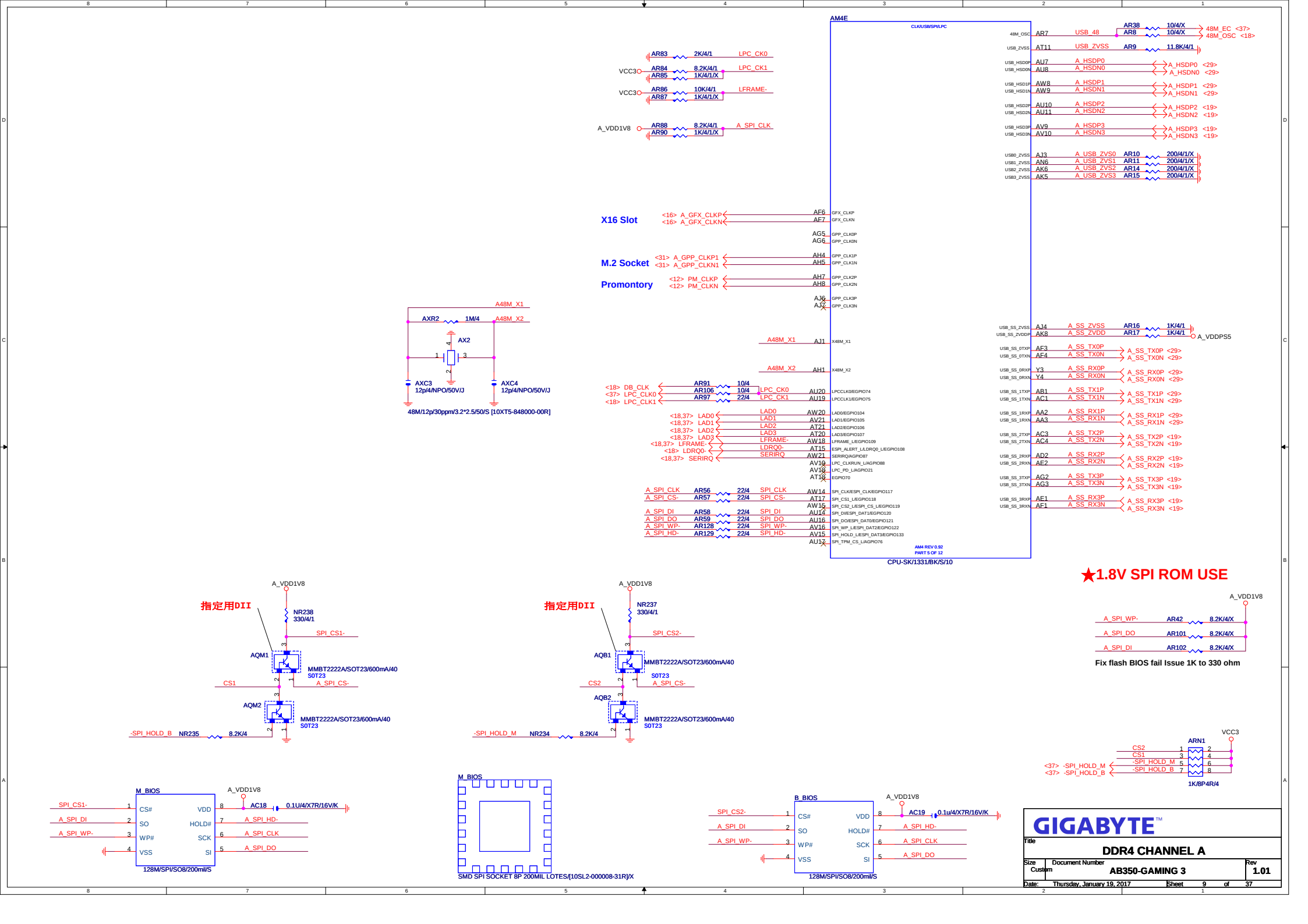
AM4E
CLK/USB/SPI/LPC
CPU-SK/1331/BK/S/10
X16 Slot
M.2 Socket
Promontory
★1.8V SPI ROM USE
Fix flash BIOS fail Issue 1K to 330 ohm
指定用DII
指定用DII
48M/12p/30ppm/3.2*2.5/50/S [10XT5-848000-00R]
128M/SPI/SO8/200mil/S
SMD SPI SOCKET 8P 200MIL LOTES/[10SL2-000008-31R]/X
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Title
DDR4 CHANNEL A
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DDR4_4

DDR4_2

* net 改 VDDQ

DDR12V Decouple

DDRVTT Decouple

* 電容移到 [RT8120_DDR]

CHANNEL A0
SA2:0=000

CHANNEL A1
SA2:2=010

DDR4 CHANNEL A

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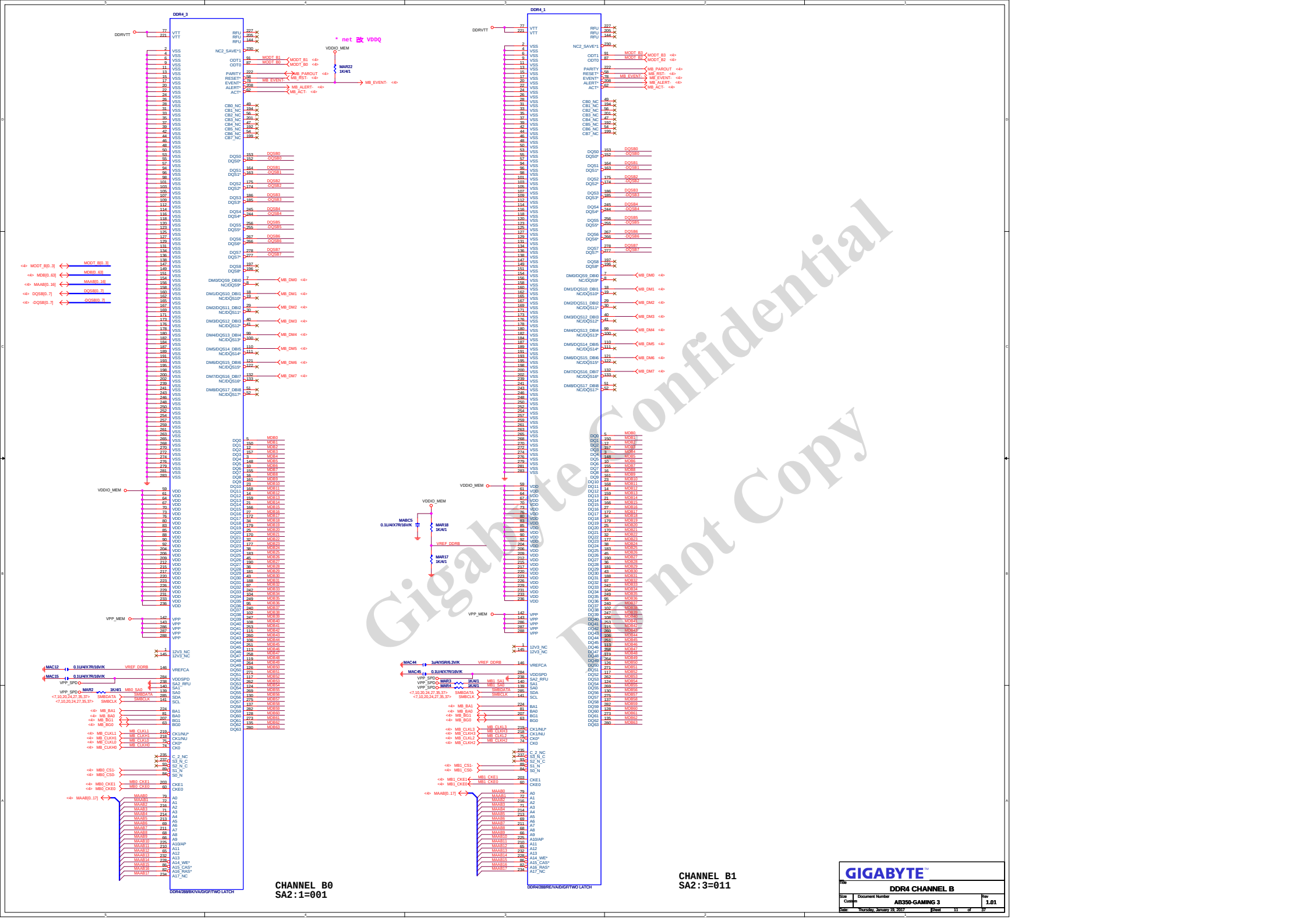

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Title	DDR4 CHANNEL B	
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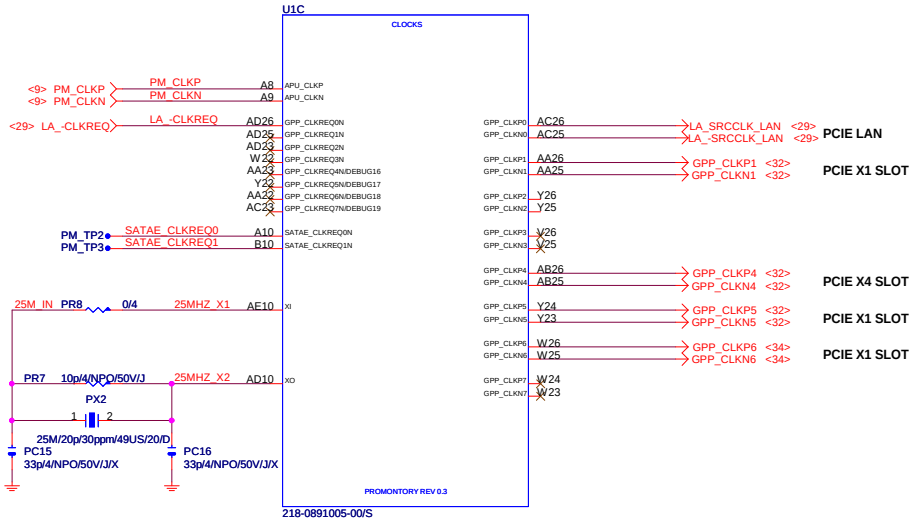
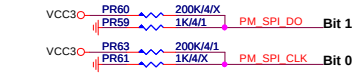
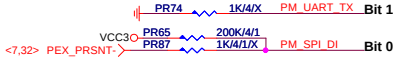
BUS Model	SATA 3.0	SATA Express	PCI Express® Gen2 GPP	PCI Express® CLK
PROM4	SATA port0~3	SATAE port0~3	GPP lane0~7	CLK0~7
PROM2	SATA port0~1	SATAE port0~1	GPP lane0~1 GPP lane4~7	CLK0~1 CLK4~7
PROM1	SATA port0~1	SATAE port0~1	GPP lane4~7	CLK4~7

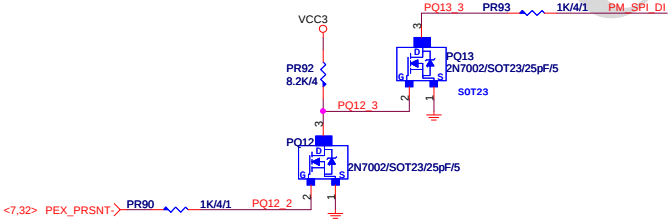


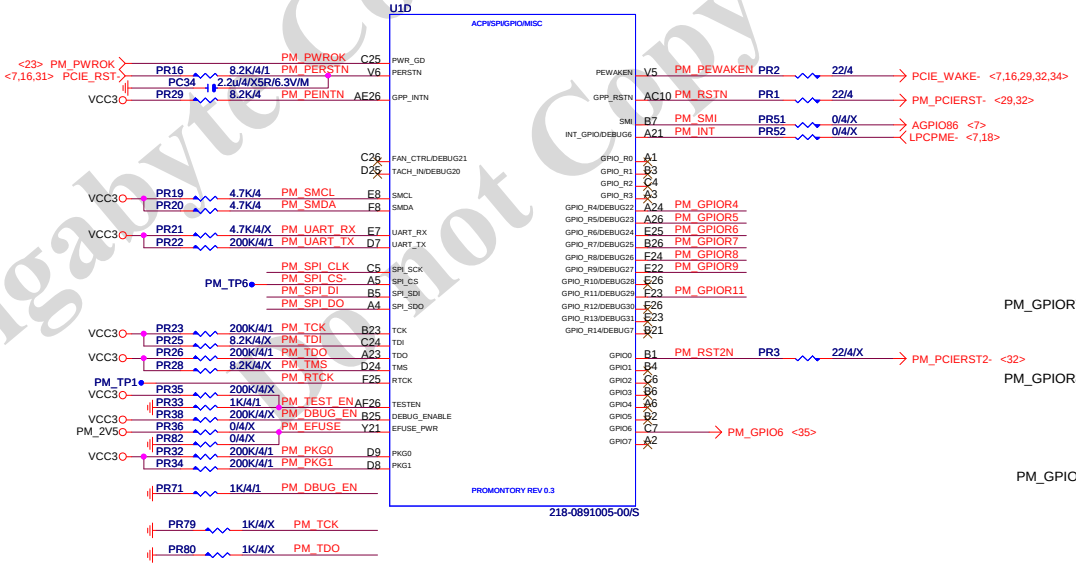
PM GPP Group 0 Strap: 11=> 1PCIe x4, 10=>1PCIe x2, 2PCIex1, 01=>4PCIe x1, 00=>Reserved.
PM GPP Group 0=>0~3

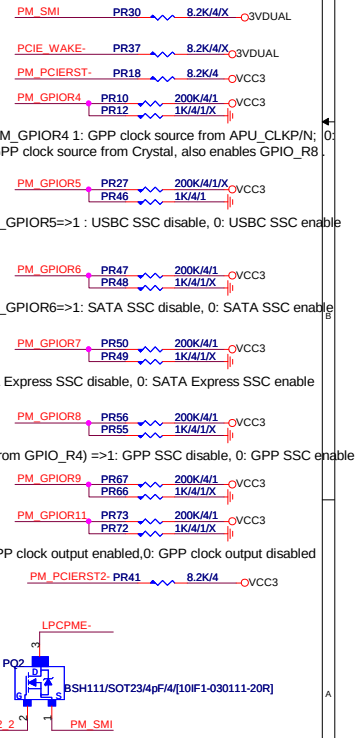


PM GPP Group 1 Strap: 11=> 1PCIe x4, 10=>1PCIe x2, 2PCIex1, 01=>4PCIe x1, 00=>Reserved.
PM GPP Group 1=>4~7









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Title	B350 CLK GEN / GPIO	
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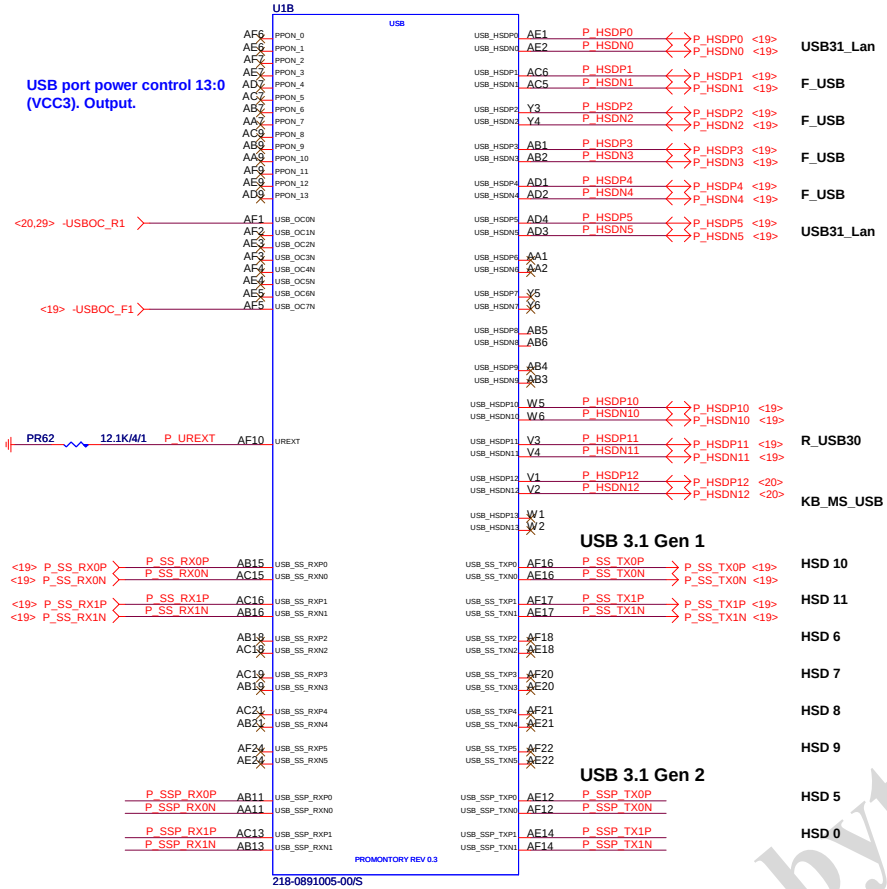

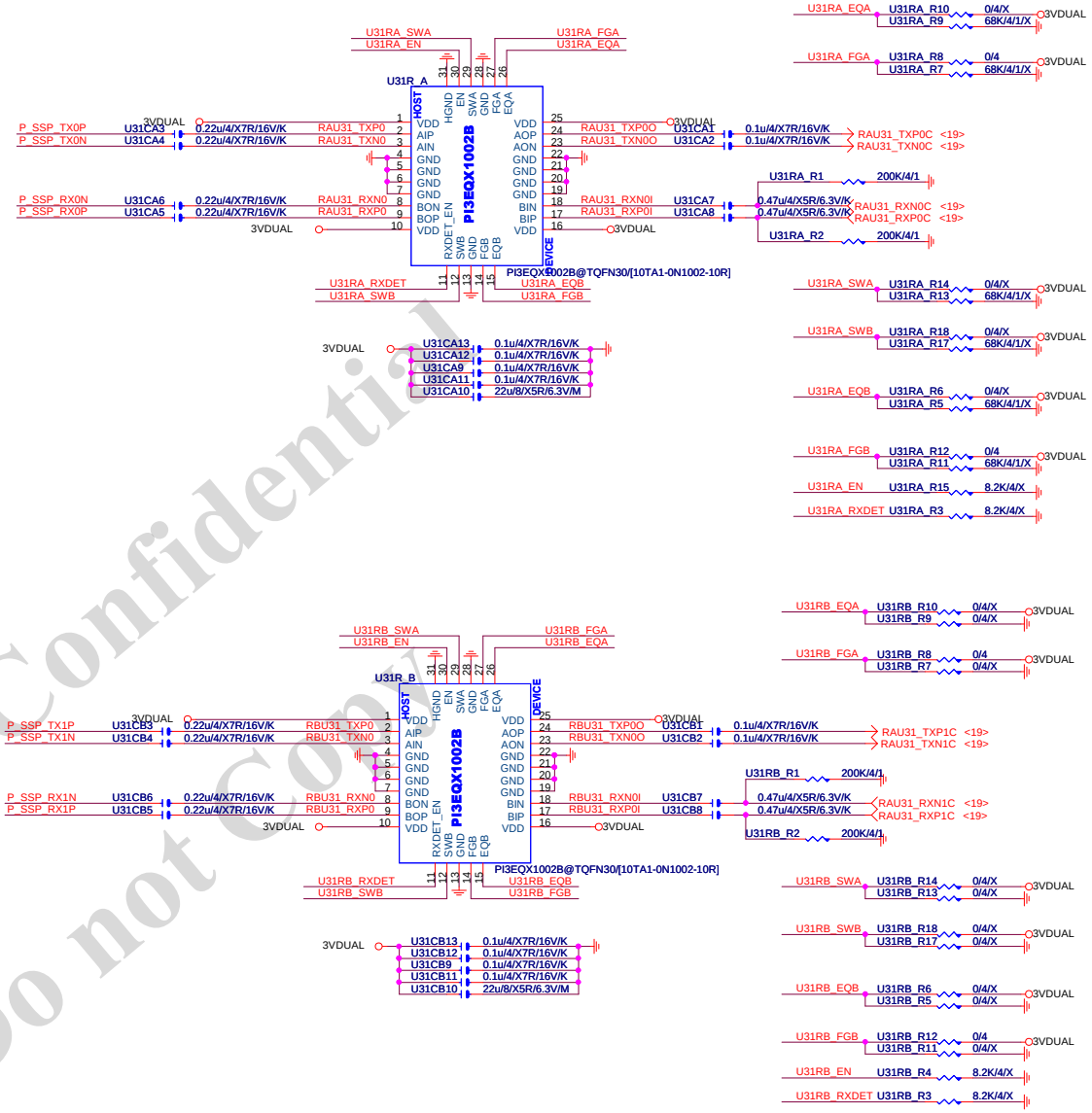

USB3.1	USB2.0	USB_OC
USB_SSP_TX/RXP/N[0]	USB_HSDP/N[5]	USB_OC0N
USB_SSP_TX/RXP/N[1]	USB_HSDP/N[0]	USB_OC1N
USB3.0	**USB2.0**	**USB_OC**
USB_SS_TX/RXP/N[0]	USB_HSDP/N[10]	USB_OC2N
USB_SS_TX/RXP/N[1]	USB_HSDP/N[11]	USB_OC3N
USB_SS_TX/RXP/N[2]	USB_HSDP/N[6]	USB_OC4N
USB_SS_TX/RXP/N[3]	USB_HSDP/N[7]	USB_OC5N
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

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Title: B350 USB , PI3EQX1002B

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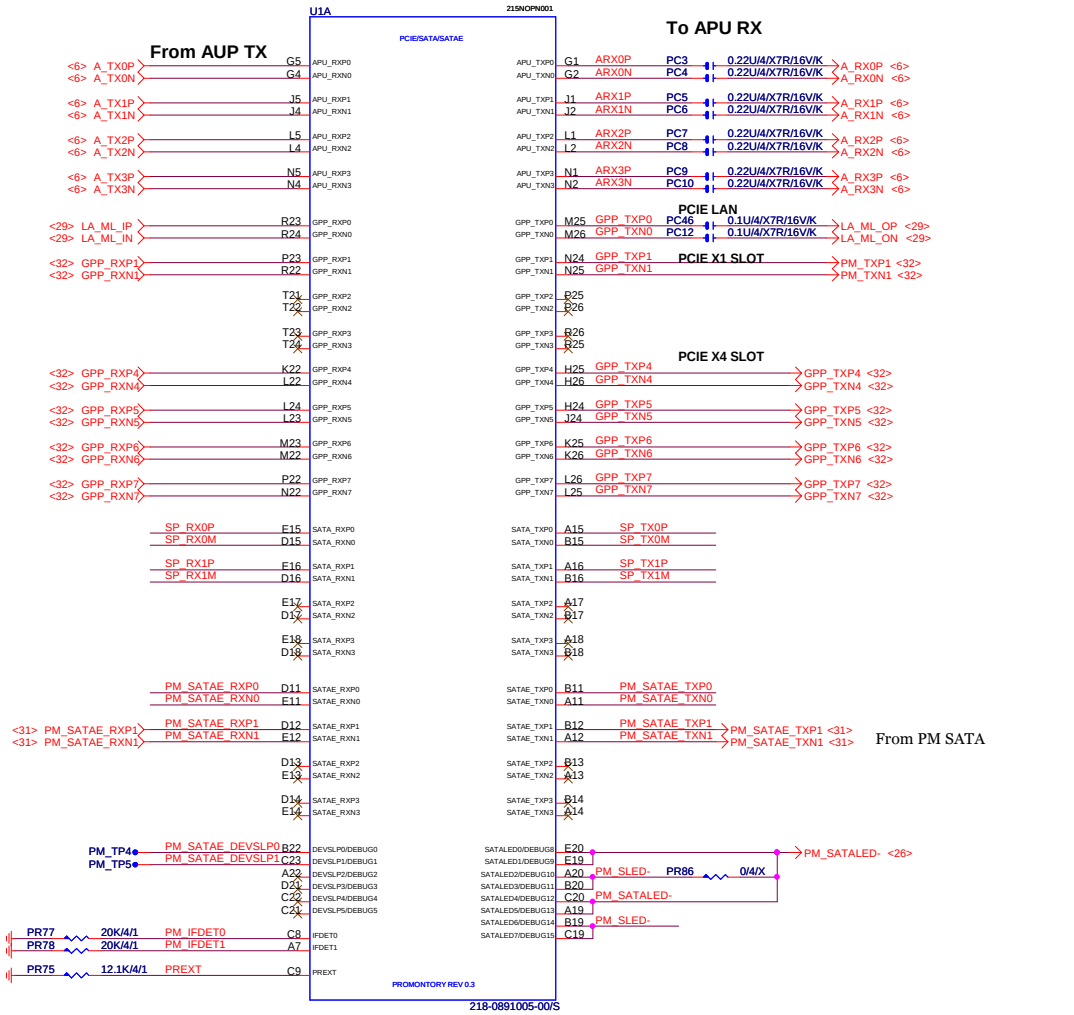

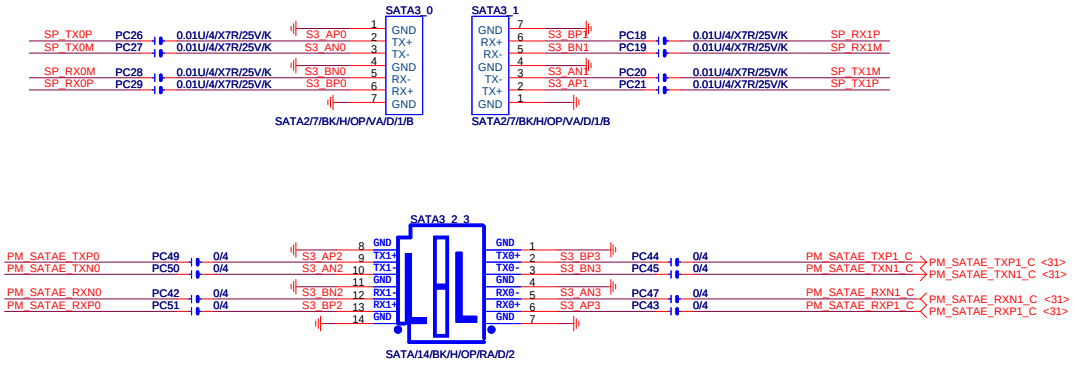

BUS Model	SATA 3.0	SATA Express	PCI Express® Gen2 GPP	PCI Express® CLK
PROM4	SATA port0~3	SATAE port0~3	GPP lane0~7	CLK0~7
PROM2	SATA port0~1	SATAE port0~1	GPP lane0~1 GPP lane4~7	CLK0~1 CLK4~7
PROM1	SATA port0~1	SATAE port0~1	GPP lane4~7	CLK4~7

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Title: B350 SATA/SPI

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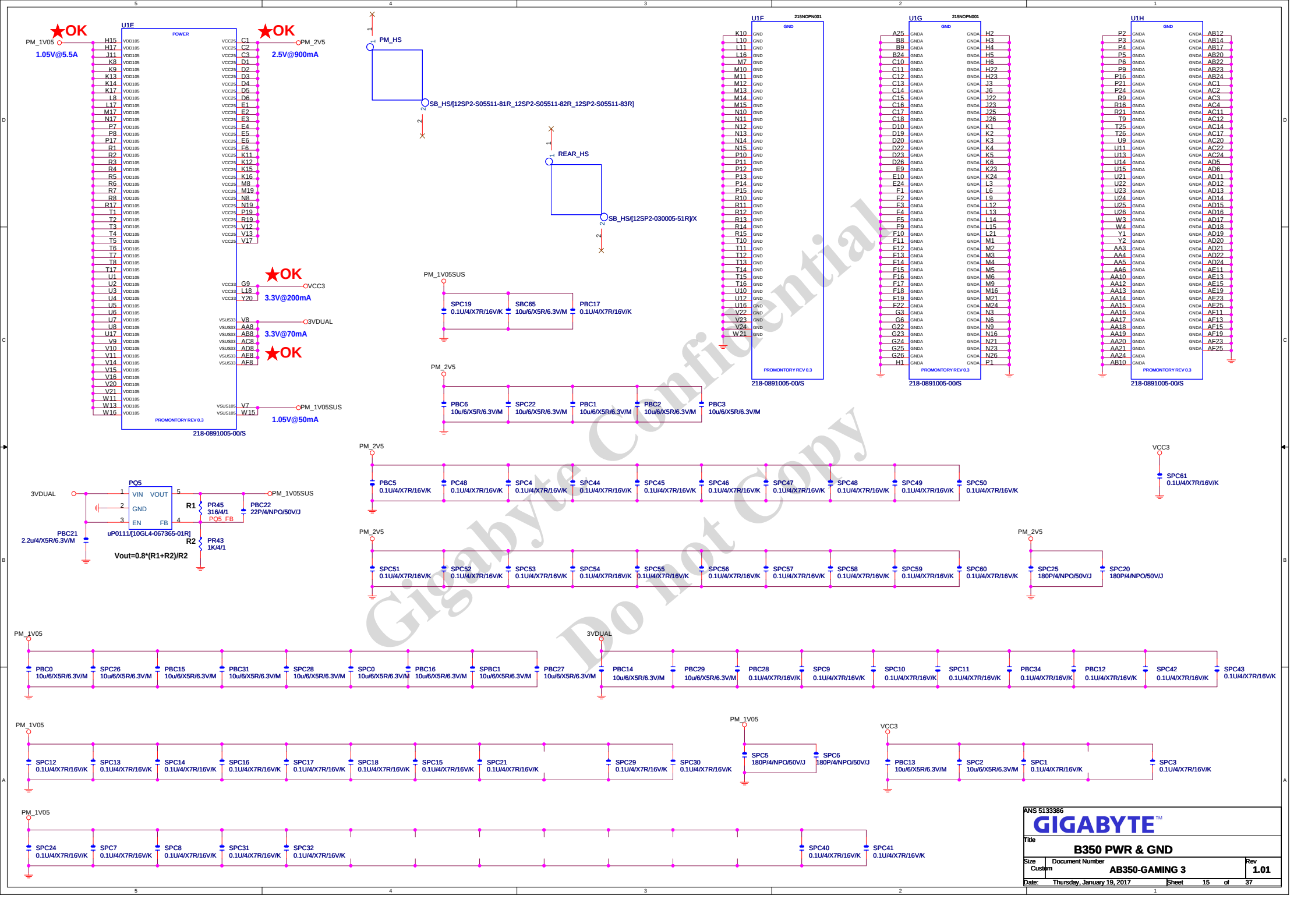
OK
PM_1V05
1.05V@5.5A
U1E
POWER
PROMONTORY REV 0.3
218-0891005-00/S
OK
PM_2V5
2.5V@900mA
OK
VCC3
3.3V@200mA
3VDUAL
3.3V@70mA
OK
PM_1V05SUS
1.05V@50mA
PM_HS
SB_HS/[12SP2-S05511-81R_12SP2-S05511-82R_12SP2-S05511-83R]
REAR_HS
SB_HS/[12SP2-030005-51R]/X
U1F
215NOPN001
GND
PROMONTORY REV 0.3
218-0891005-00/S
U1G
215NOPN001
GND
PROMONTORY REV 0.3
218-0891005-00/S
U1H
GND
PROMONTORY REV 0.3
218-0891005-00/S
PM_1V05SUS
SPC19 0.1U/4/X7R/16V/K
SBC65 10u/6/X5R/6.3V/M
PBC17 0.1U/4/X7R/16V/K
PM_2V5
PBC6 10u/6/X5R/6.3V/M
SPC22 10u/6/X5R/6.3V/M
PBC1 10u/6/X5R/6.3V/M
PBC2 10u/6/X5R/6.3V/M
PBC3 10u/6/X5R/6.3V/M
PQ5
3VDUAL
VIN
VOUT
GND
EN
FB
uP0111/[10GL4-067365-01R]
R1
PR45 316/4/1
PQ5_FB
PBC22 22P/4/NPO/50V/J
PBC21 2.2u/4/X5R/6.3V/M
R2
PR43 1K/4/1
Vout=0.8*(R1+R2)/R2
PM_2V5
PBC5 0.1U/4/X7R/16V/K
PC48 0.1U/4/X7R/16V/K
SPC4 0.1U/4/X7R/16V/K
SPC44 0.1U/4/X7R/16V/K
SPC45 0.1U/4/X7R/16V/K
SPC46 0.1U/4/X7R/16V/K
SPC47 0.1U/4/X7R/16V/K
SPC48 0.1U/4/X7R/16V/K
SPC49 0.1U/4/X7R/16V/K
SPC50 0.1U/4/X7R/16V/K
VCC3
SPC61 0.1U/4/X7R/16V/K
PM_2V5
SPC51 0.1U/4/X7R/16V/K
SPC52 0.1U/4/X7R/16V/K
SPC53 0.1U/4/X7R/16V/K
SPC54 0.1U/4/X7R/16V/K
SPC55 0.1U/4/X7R/16V/K
SPC56 0.1U/4/X7R/16V/K
SPC57 0.1U/4/X7R/16V/K
SPC58 0.1U/4/X7R/16V/K
SPC59 0.1U/4/X7R/16V/K
SPC60 0.1U/4/X7R/16V/K
PM_2V5
SPC25 180P/4/NPO/50V/J
SPC20 180P/4/NPO/50V/J
PM_1V05
PBC0 10u/6/X5R/6.3V/M
SPC26 10u/6/X5R/6.3V/M
PBC15 10u/6/X5R/6.3V/M
PBC31 10u/6/X5R/6.3V/M
SPC28 10u/6/X5R/6.3V/M
SPC0 10u/6/X5R/6.3V/M
PBC16 10u/6/X5R/6.3V/M
SPBC1 10u/6/X5R/6.3V/M
PBC27 10u/6/X5R/6.3V/M
3VDUAL
PBC14 10u/6/X5R/6.3V/M
PBC29 10u/6/X5R/6.3V/M
PBC28 0.1U/4/X7R/16V/K
SPC9 0.1U/4/X7R/16V/K
SPC10 0.1U/4/X7R/16V/K
SPC11 0.1U/4/X7R/16V/K
PBC34 0.1U/4/X7R/16V/K
PBC12 0.1U/4/X7R/16V/K
SPC42 0.1U/4/X7R/16V/K
SPC43 0.1U/4/X7R/16V/K
PM_1V05
SPC12 0.1U/4/X7R/16V/K
SPC13 0.1U/4/X7R/16V/K
SPC14 0.1U/4/X7R/16V/K
SPC16 0.1U/4/X7R/16V/K
SPC17 0.1U/4/X7R/16V/K
SPC18 0.1U/4/X7R/16V/K
SPC15 0.1U/4/X7R/16V/K
SPC21 0.1U/4/X7R/16V/K
SPC29 0.1U/4/X7R/16V/K
SPC30 0.1U/4/X7R/16V/K
PM_1V05
SPC5 180P/4/NPO/50V/J
SPC6 180P/4/NPO/50V/J
VCC3
PBC13 10u/6/X5R/6.3V/M
SPC2 10u/6/X5R/6.3V/M
SPC1 0.1U/4/X7R/16V/K
SPC3 0.1U/4/X7R/16V/K
PM_1V05
SPC24 0.1U/4/X7R/16V/K
SPC7 0.1U/4/X7R/16V/K
SPC8 0.1U/4/X7R/16V/K
SPC31 0.1U/4/X7R/16V/K
SPC32 0.1U/4/X7R/16V/K
SPC40 0.1U/4/X7R/16V/K
SPC41 0.1U/4/X7R/16V/K
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ANS 5133386
GIGABYTE
Title
B350 PWR & GND
Size
Custom
Document Number
AB350-GAMING 3
Rev
1.01
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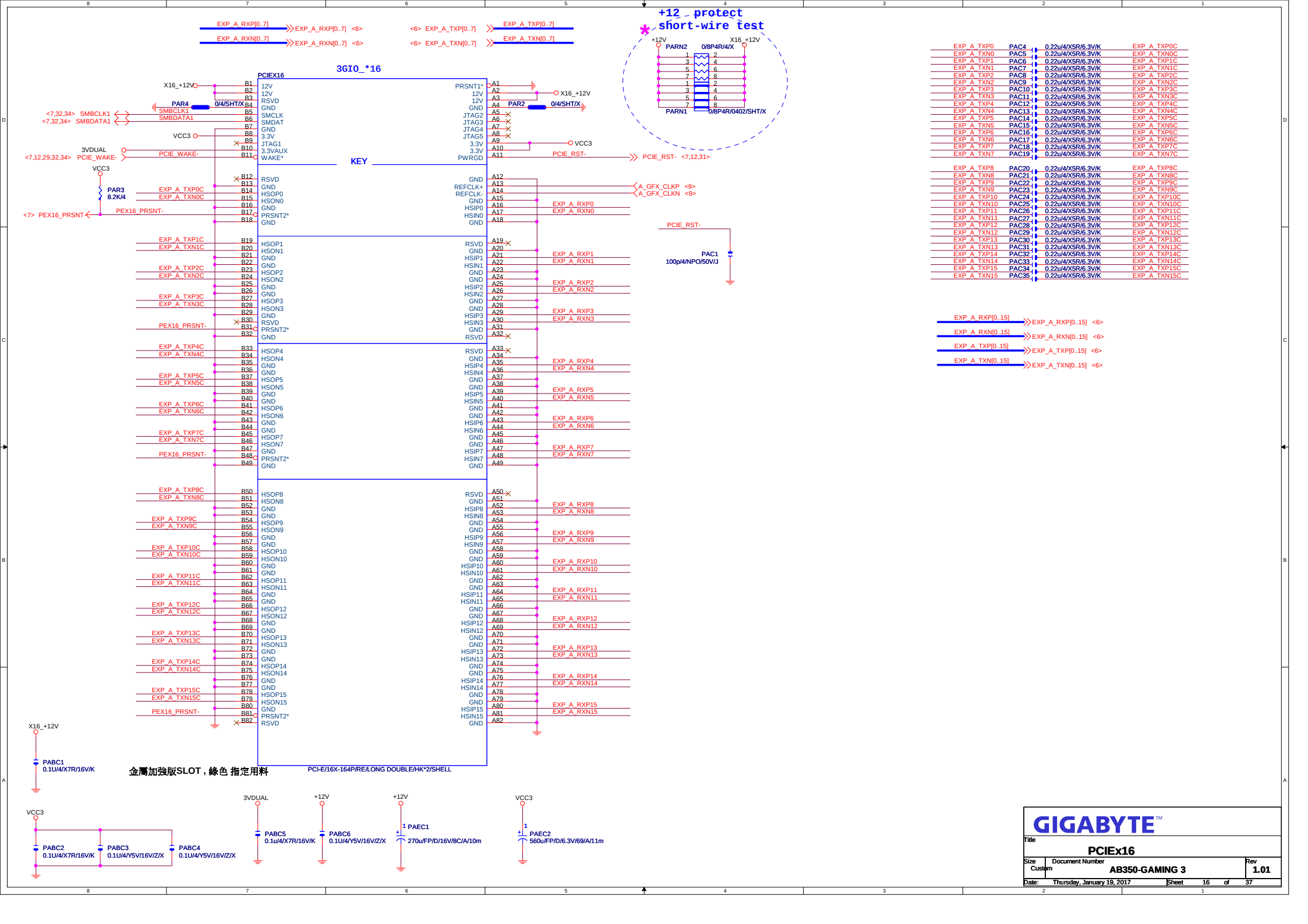
+12 protect
short-wire test
3GIO_*16
PCIEX16
KEY
PCI-E/16X-164P/RE/LONG DOUBLE/HK*2/SHELL
金屬加強版SLOT，綠色 指定用料
PAR1
PAR2
PAR3
PAR4
PAC1
PABC1
PABC2
PABC3
PABC4
PABC5
PABC6
PAEC1
PAEC2
PCIE_RST-
PEX16_PRSNT-
SMBCLK1
SMBDATA1
3VDUAL
VCC3
X16_+12V
GIGABYTE
Title
PCIEx16
Size
Custom
Document Number
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1.01
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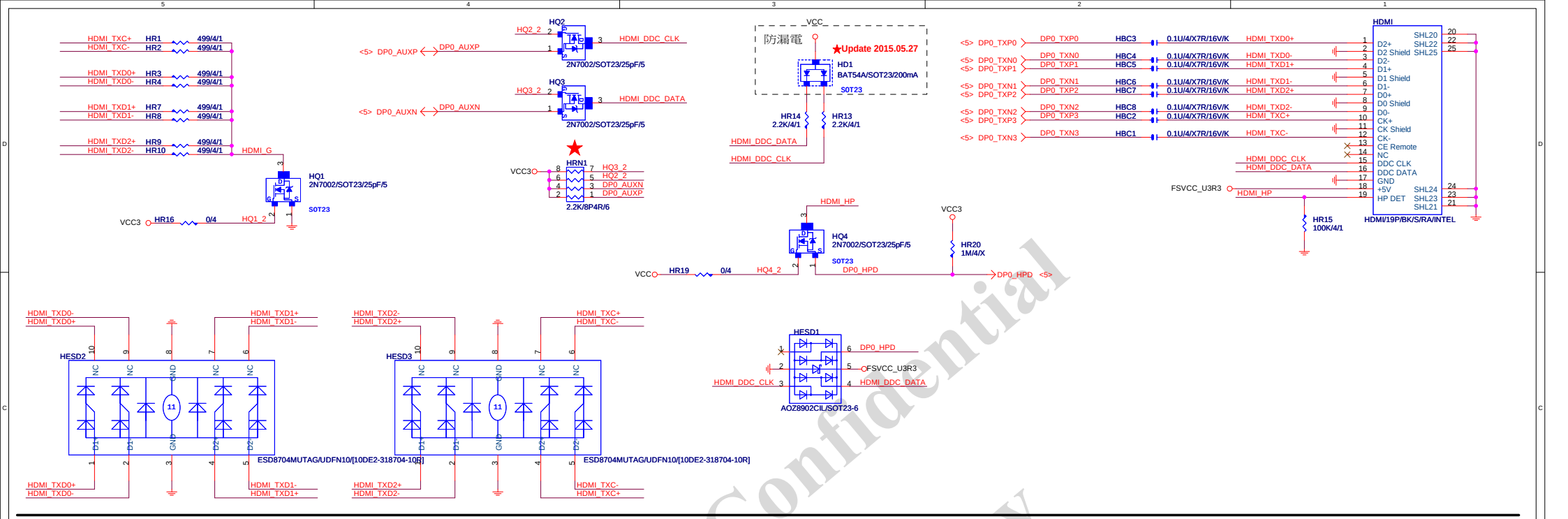
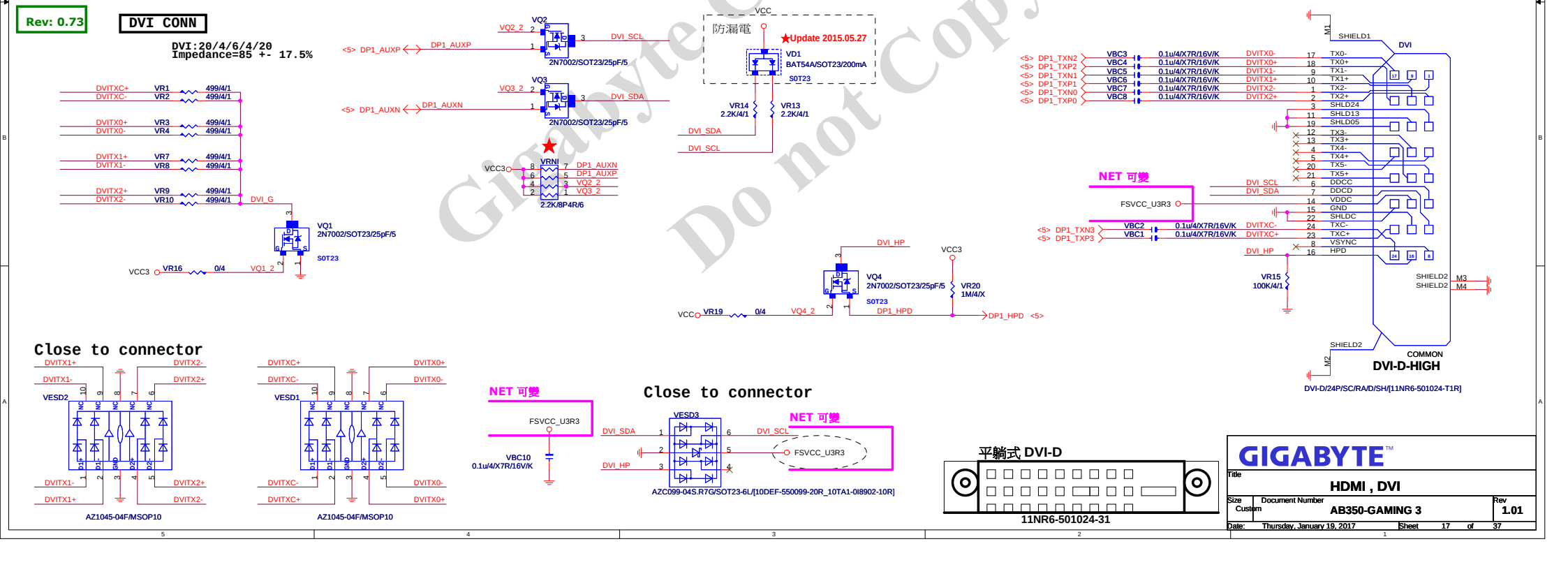
Sheet 16 of 37





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Title	HDMI , DVI	
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Date: Thursday, January 19, 2017	Sheet 17 of 37	

SIO CAP

THROM SPARE GPIO

CPU_FAN

SYS_FAN1

SYS_FAN2

SYS_FAN3 sensor

SYS_FAN4 sensor

MB ID

THRMTRIP

DUAL BIOS OPT STRAP

OR58 上件/OR56 不上件 SINGLE BIOS

OR58 不上件/OR56 上件 DUAL BIOS

SIO_18V

internal power pin, max 22nF cap

IT8686

IT8686E/CX/S

PWR SHT

SIO PU

SIO STRAP

EUP control detect

CLOSE SIO PIN4 2_5LEVEL

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 JP3	1 1	CE pin disable (Hold pin mode)
	1 0	CE mode 1
	0 1	CE mode 2
	0 0	CE mode 3

ErP

ITE COMMENTS

REGULATOR AP7365-WG-7 DII[10GL4-067365-01R]

Vout=0.8*(R1+R2)/R2

For Erp patch

PROCHOT

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

Hardware Monitor circuits

VREF

CPU_TEMP

SYS_TEMP

PCH_TEMP

SYS_TEMP1 10K/1/4/S SYSTEM Thermister

A_VDDP

SOC_SIO

VCORE_SIO

VDDQ_SIO

VCC3

VCC_SIO

+12V

Close to SB

2.0V

2.0V

126~133 degree

CLOSE VCORE MOSFET

CLOSE VCORE_SOC MOSFET

Title	ITE 8628CX , HWM , TPM , KB_MS_USB
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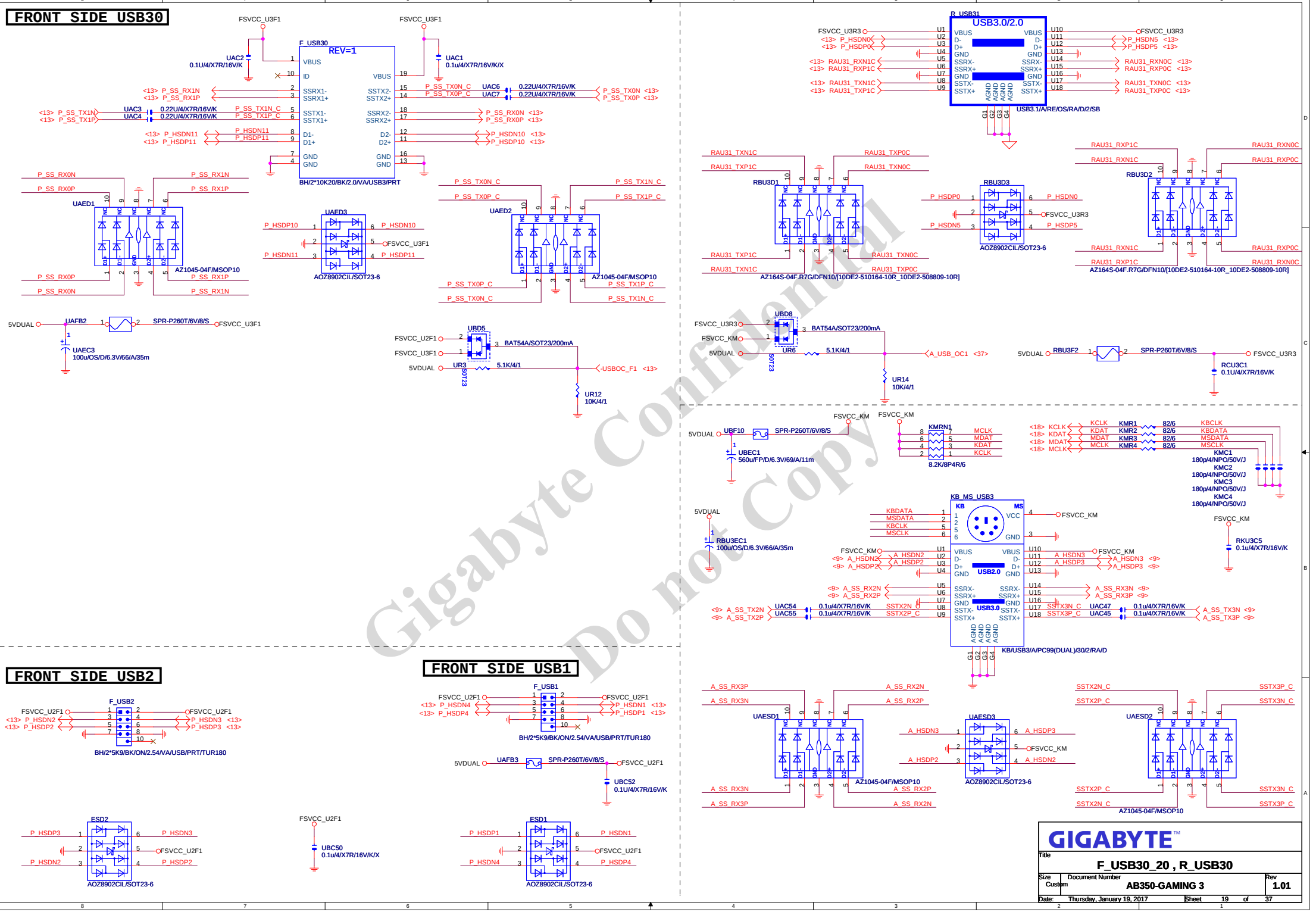

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USB_DAC_A REV:0.12

DACA_U1 RT8288AZSP/SOP8

DACA_C2請跟PIN8.PIN9一起下GND

TO USB_DAC PORT — DACA_Q1 RT9742CNGJ5/SOT23-5 — From Switching

Connector to USB OC PIN

TO USB_DAC PORT — DACA_Q2 RT9742CNGJ5/SOT23-5 — From 5VDUAL

Connector to USB OC PIN

DACA_Q4 BAT54C/SOT23/200mA

DAC power disable by resume GPIO

USB_DAC USB/A/BK/OS/UA/D/1/GF/CASE Au GOLDEN

UBESD1 AOZ8902CIL/SOT23-6

DACA_U2 NCT3933U/SOT23-8 0x28 25%VDD

REV:0.4

A_VDD1V8

MBU3 RT8068AZQW/WDFN-10L

CHOKE與CAP料號可變

L=1u
DCR=3.2 mohm
Isat=18A
Idc=15A

PWR SEQ

* 刪 MA_DR32

上件

VPP CAP

* 大電容 x0

22u*1PCS

A_VDDPS5

RT9018B-18GSP/SO8/3A SPEC. MAX :1.9W.

0.8*[(R1+R2)/R1] = Vout =1.121V

【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

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Title: A_VDD1V8 , A_VDDPS5

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Rev 0.5

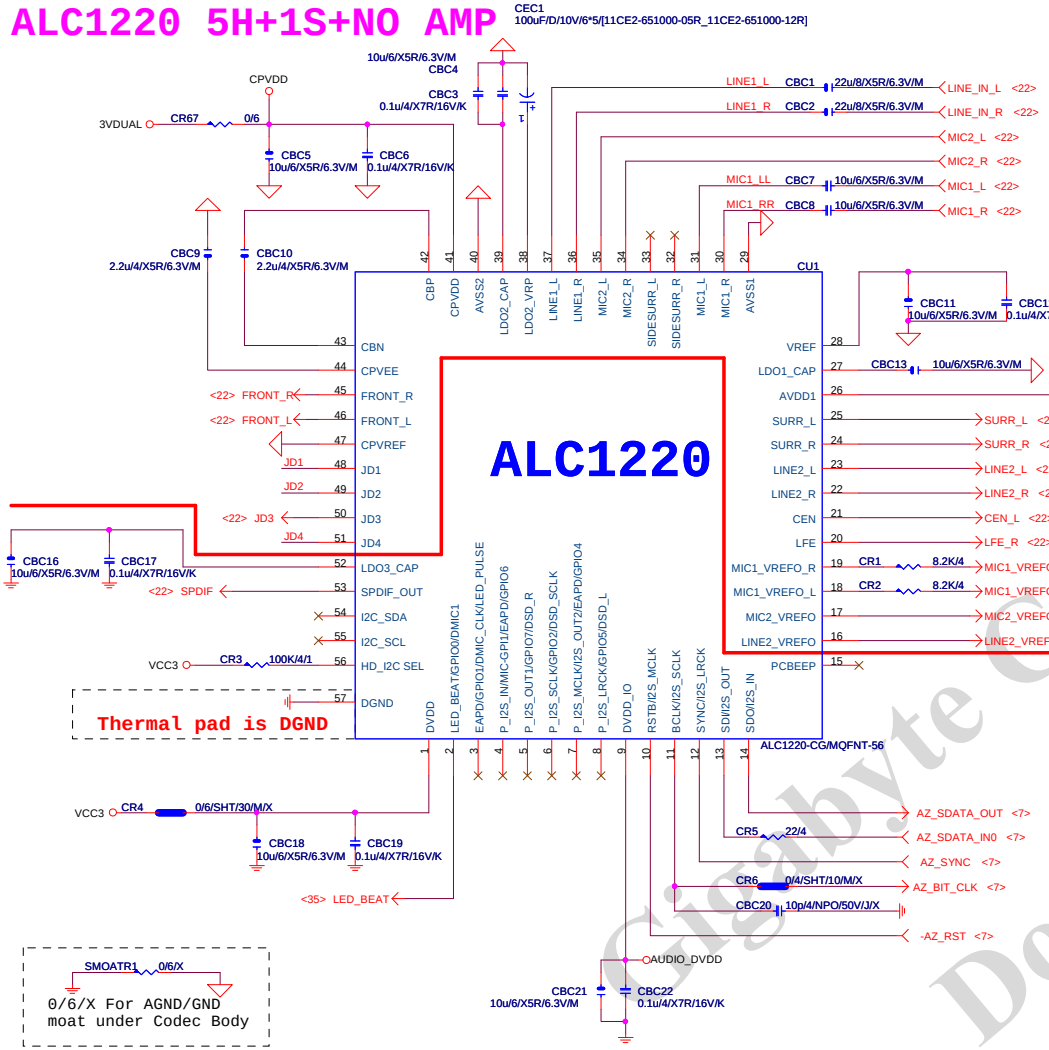
ALC1220 5H+1S+NO AMP

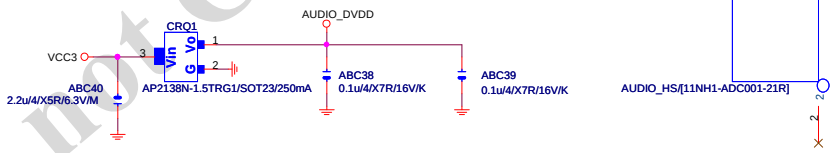
LAYOUT注意:螺絲孔下AGND方式
1. MH1,MH2全部下AGND

MH1 AGND　　MH2 AGND

LAYOUT注意:是否要加?
AGND切割線

音效區域印刷





BOM OPTION :
1. AUDIO CONNECT
不銹鋼料號:11NR6-403025-A2R
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

Title	ALC1220 CODEC	
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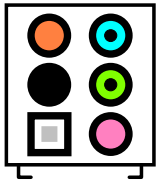
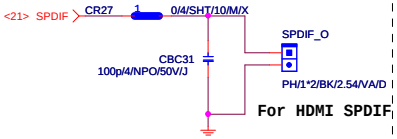
Rev 0.5

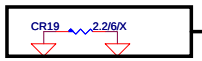
AZALIA JACK



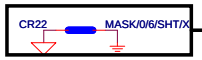
SPDIF_OUT



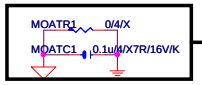
For HDMI SPDIF



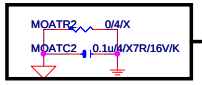
Audio jack -> USB(各打2 VIA hole)



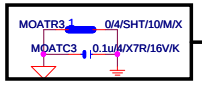
Under Audio jack(各打2 VIA hole)



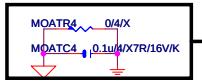
Near F_AUDIO(各打2 VIA hole)



Near Codec (各打2 VIA hole)



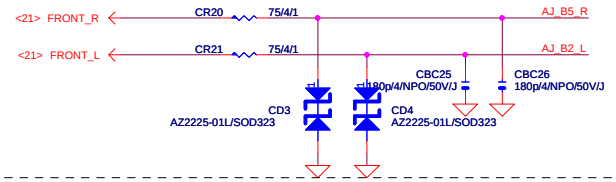
Near R_AUDIO(各打2 VIA hole)



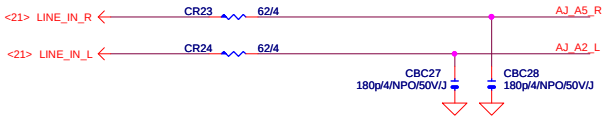
Near AMP (各打2 VIA hole)

*量產前,0ohm改short pad

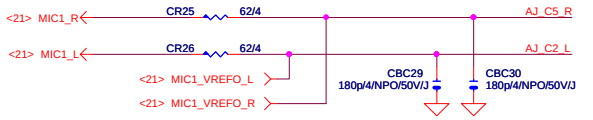
LINE-OUT



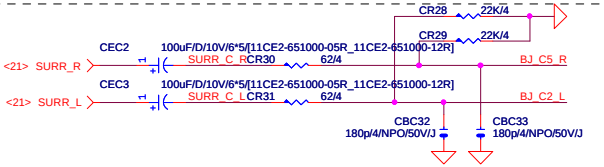
LINE-IN



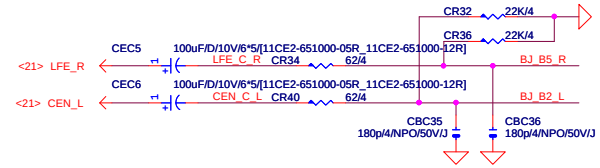
MIC-IN



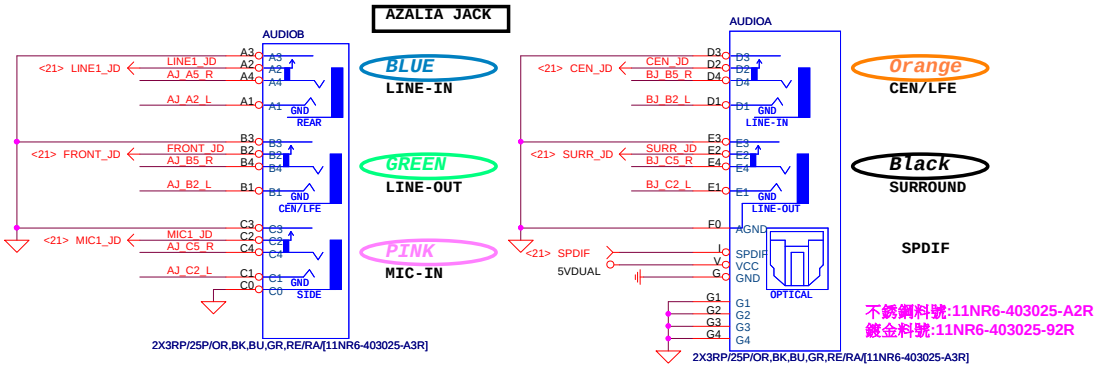
SURROUND



CEN/LFE



AZALIA JACK

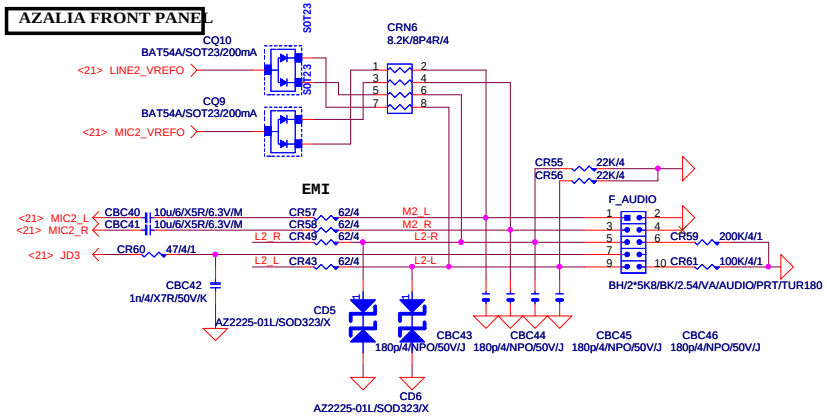


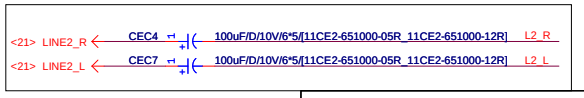
2X3RP/25P/OR,BK,BU,GR,RE/RA/[11NR6-403025-A3R]

2X3RP/25P/OR,BK,BU,GR,RE/RA/[11NR6-403025-A3R]

不銹鋼料號:11NR6-403025-A2R
鍍金料號:11NR6-403025-92R

AZALIA FRONT PANEL





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Title	AUDIO JACK	
Size: Custom	Document Number: AB350-GAMING 3	Rev: 1.01
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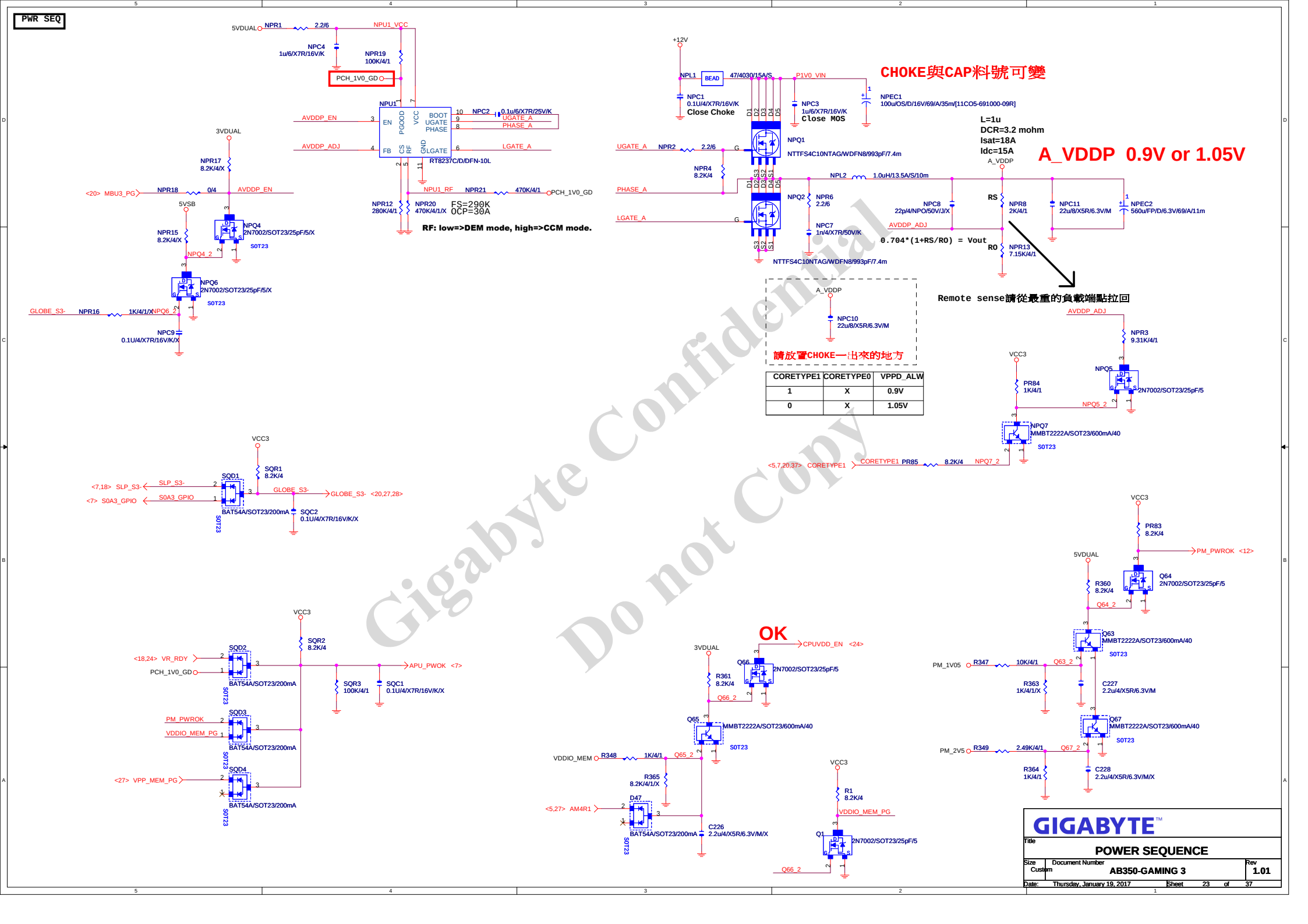
PWR SEQ



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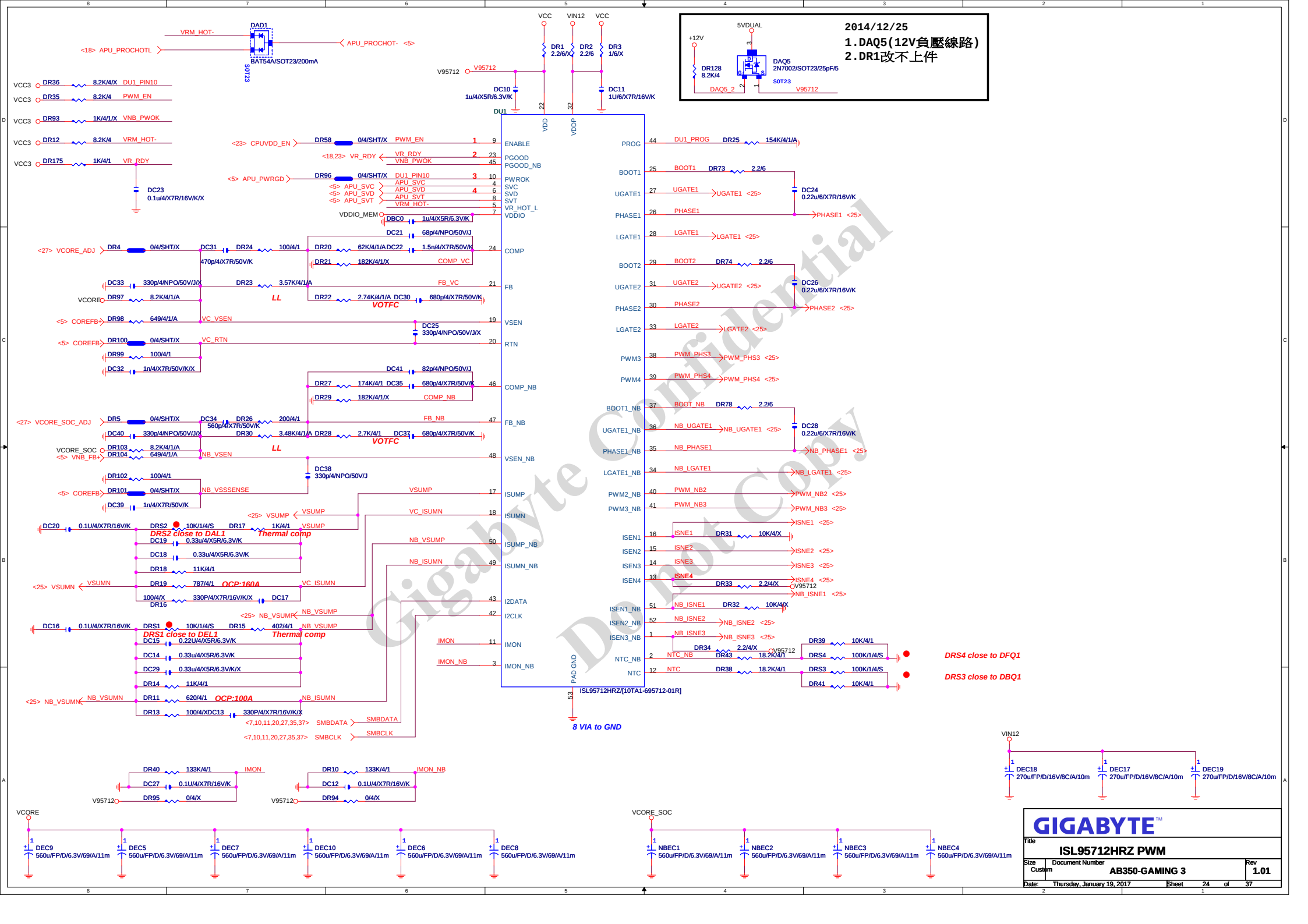
Title	POWER SEQUENCE	
Size: Custom	Document Number: AB350-GAMING 3	Rev: 1.01
Date: Thursday, January 19, 2017	Sheet 23 of 37	


2014/12/25
1.DAQ5(12V負壓線路)
2.DR1改不上件
ISL95712HRZ/[10TA1-695712-01R]
8 VIA to GND
DRS2 close to DAL1
DRS1 close to DEL1
DRS4 close to DFQ1
DRS3 close to DBQ1
OCP:160A
OCP:100A
LL
VOTFC
Thermal comp
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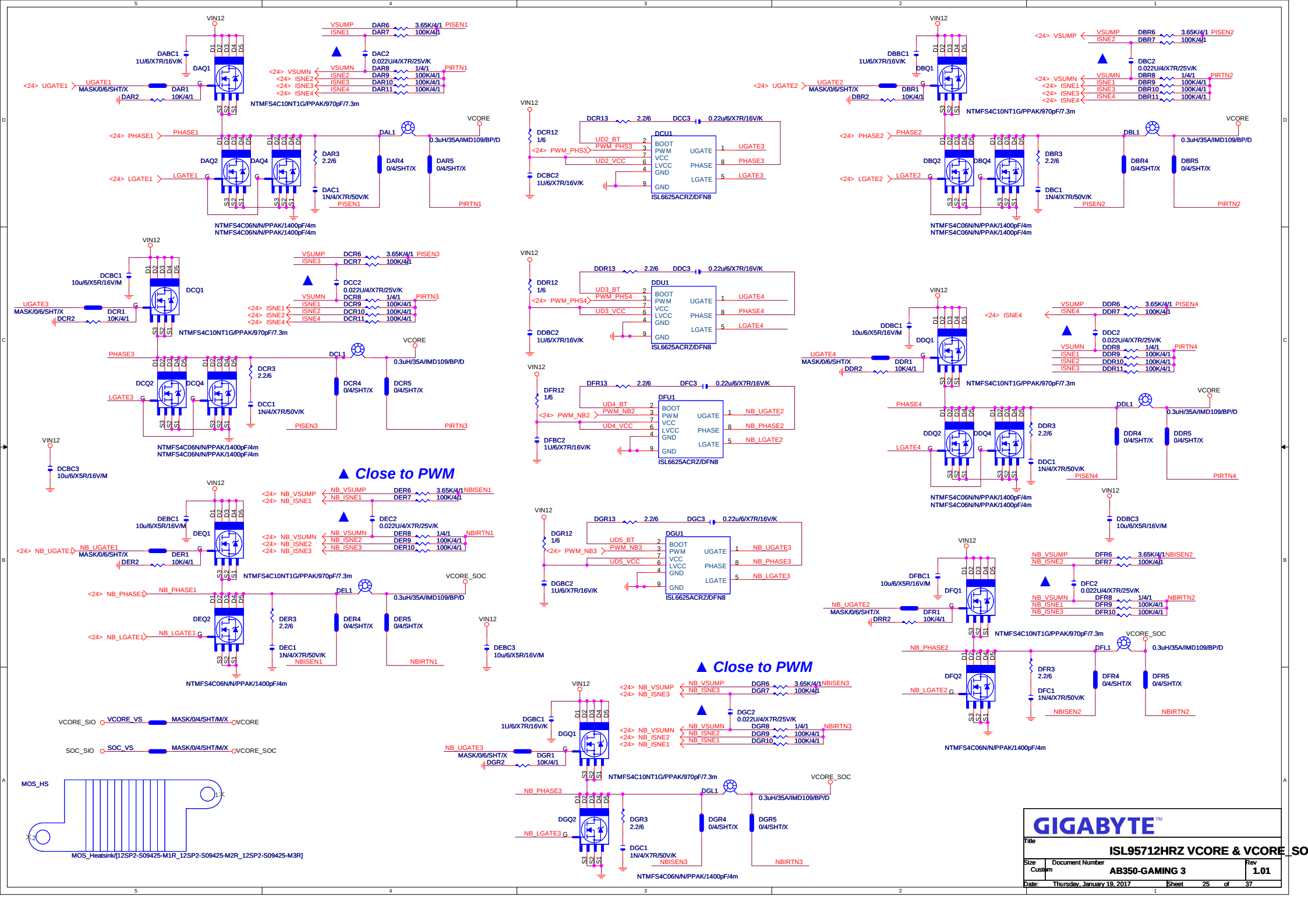
GIGABYTE
ISL95712HRZ PWM
AB350-GAMING 3
1.01
Thursday, January 19, 2017


VIN12
DABC1 1U/6/X7R/16V/K
DAQ1
UGATE1
MASK/0/6/SHT/X
DAR1 10K/4/1
DAR2
NTMFS4C10NT1G/PPAK/970pF/7.3m
VSUMP
ISNE1
DAR6
DAR7
3.65K/4/1
100K/4/1
PISEN1
DAC2 0.022U/4/X7R/25V/K
VSUMN
ISNE2
ISNE3
ISNE4
DAR8
DAR9
DAR10
DAR11
1/4/1
PIRTN1
PHASE1
DAQ2
DAQ4
DAR3 2.2/6
DAC1 1N/4/X7R/50V/K
DAL1
DAR4 0/4/SHT/X
DAR5 0/4/SHT/X
VCORE
0.3uH/35A/IMD109/BP/D
LGATE1
NTMFS4C06N/N/PPAK/1400pF/4m
DCR13 2.2/6
DCC3 0.22u/6/X7R/16V/K
DCR12 1/6
DCBC2 1U/6/X7R/16V/K
DCU1
ISL6625ACRZ/DFN8
BOOT
PWM
VCC
LVCC
GND
UGATE
PHASE
LGATE
UD2_BT
UD2_VCC
PWM_PHS3
UGATE3
PHASE3
LGATE3
DBBC1 1U/6/X7R/16V/K
DBQ1
DBR1 10K/4/1
DBR2
DBC2 0.022U/4/X7R/25V/K
DBR6
DBR7
DBR8
DBR9
DBR10
DBR11
PIRTN2
DBQ2
DBQ4
DBR3 2.2/6
DBC1 1N/4/X7R/50V/K
DBL1
DBR4 0/4/SHT/X
DBR5 0/4/SHT/X
PISEN2
DCBC1 10u/6/X5R/16V/M
DCQ1
DCR1 10K/4/1
DCR2
DCR6
DCR7
DCR8
DCR9
DCR10
DCR11
DCC2 0.022U/4/X7R/25V/K
PIRTN3
DCQ2
DCQ4
DCR3 2.2/6
DCC1 1N/4/X7R/50V/K
DCL1
DCR4 0/4/SHT/X
DCR5 0/4/SHT/X
PISEN3
DCBC3 10u/6/X5R/16V/M
DDR13 2.2/6
DDC3 0.22u/6/X7R/16V/K
DDR12 1/6
DDBC2 1U/6/X7R/16V/K
DDU1
UD3_BT
UD3_VCC
PWM_PHS4
UGATE4
PHASE4
LGATE4
DDBC1 10u/6/X5R/16V/M
DDQ1
DDR1 10K/4/1
DDR2
DDR6
DDR7
DDR8
DDR9
DDR10
DDR11
DDC2 0.022U/4/X7R/25V/K
PIRTN4
DDQ2
DDQ4
DDR3 2.2/6
DDC1 1N/4/X7R/50V/K
DDL1
DDR4 0/4/SHT/X
DDR5 0/4/SHT/X
PISEN4
DDBC3 10u/6/X5R/16V/M
DFR13 2.2/6
DFC3 0.22u/6/X7R/16V/K
DFR12 1/6
DFBC2 1U/6/X7R/16V/K
DFU1
UD4_BT
UD4_VCC
PWM_NB2
NB_UGATE2
NB_PHASE2
NB_LGATE2
DEBC1 10u/6/X5R/16V/M
DEQ1
DER1 10K/4/1
DER2
NB_VSUMP
NB_ISNE1
NB_VSUMN
NB_ISNE2
NB_ISNE3
DER6
DER7
DER8
DER9
DER10
DEC2 0.022U/4/X7R/25V/K
NBIRTN1
DEQ2
DER3 2.2/6
DEC1 1N/4/X7R/50V/K
DEL1
DER4 0/4/SHT/X
DER5 0/4/SHT/X
NBISEN1
VCORE_SOC
DEBC3 10u/6/X5R/16V/M
DGR13 2.2/6
DGC3 0.22u/6/X7R/16V/K
DGR12 1/6
DGBC2 1U/6/X7R/16V/K
DGU1
UD5_BT
UD5_VCC
PWM_NB3
NB_UGATE3
NB_PHASE3
NB_LGATE3
DFBC1 10u/6/X5R/16V/M
DFQ1
DFR1 10K/4/1
DRR2
DFR6
DFR7
DFR8
DFR9
DFR10
DFC2 0.022U/4/X7R/25V/K
NBIRTN2
DFQ2
DFR3 2.2/6
DFC1 1N/4/X7R/50V/K
DFL1
DFR4 0/4/SHT/X
DFR5 0/4/SHT/X
NBISEN2
DGBC1 1U/6/X7R/16V/K
DGQ1
DGR1 10K/4/1
DGR2
DGR6
DGR7
DGR8
DGR9
DGR10
DGC2 0.022U/4/X7R/25V/K
NBIRTN3
DGQ2
DGR3 2.2/6
DGC1 1N/4/X7R/50V/K
DGL1
DGR4 0/4/SHT/X
DGR5 0/4/SHT/X
NBISEN3
▲ Close to PWM
▲ Close to PWM
VCORE_SIO
VCORE_VS
MASK/0/4/SHT/M/X
SOC_SIO
SOC_VS
MOS_HS
MOS_Heatsink[12SP2-S09425-M1R_12SP2-S09425-M2R_12SP2-S09425-M3R]
GIGABYTE
Title
ISL95712HRZ VCORE & VCORE_SO
Size
Custom
Document Number
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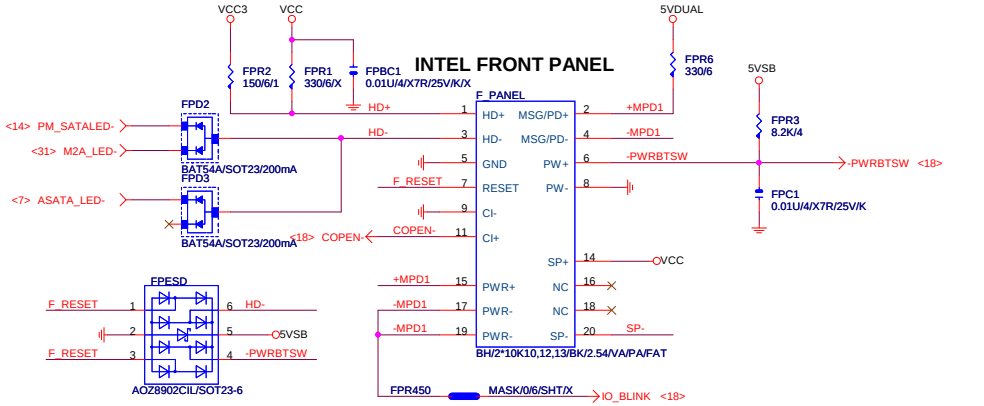
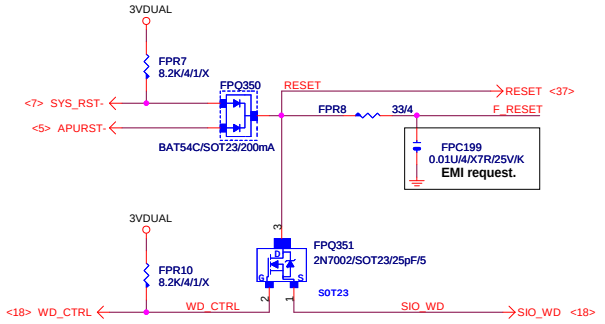
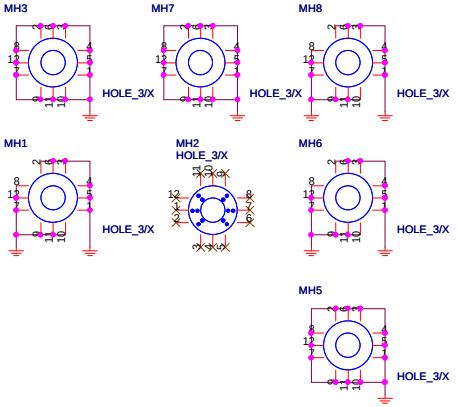
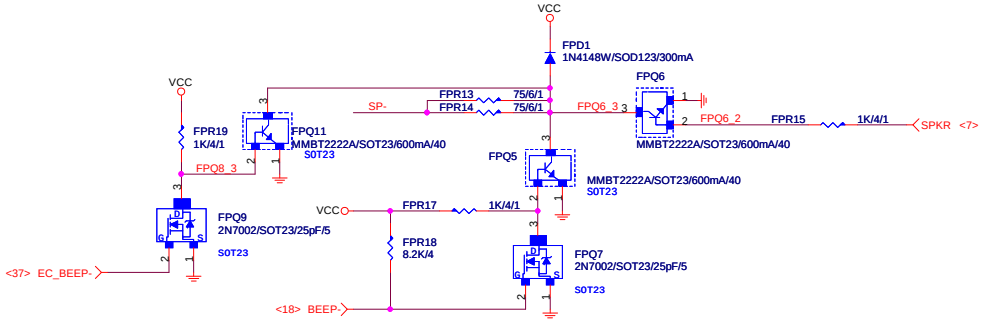
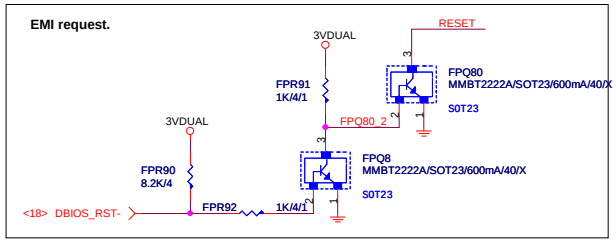
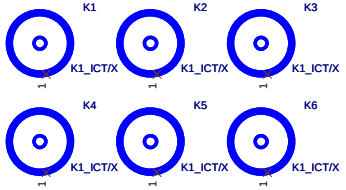


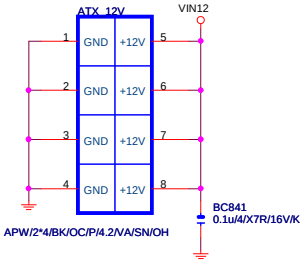




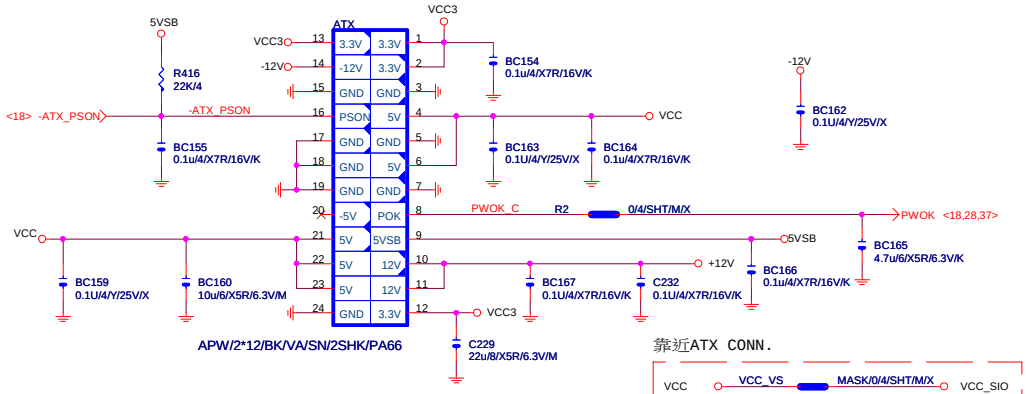


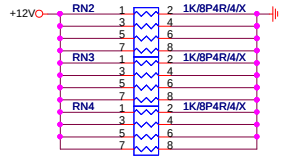


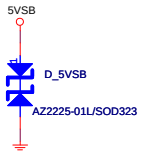




ATX POWER CONNECTOR







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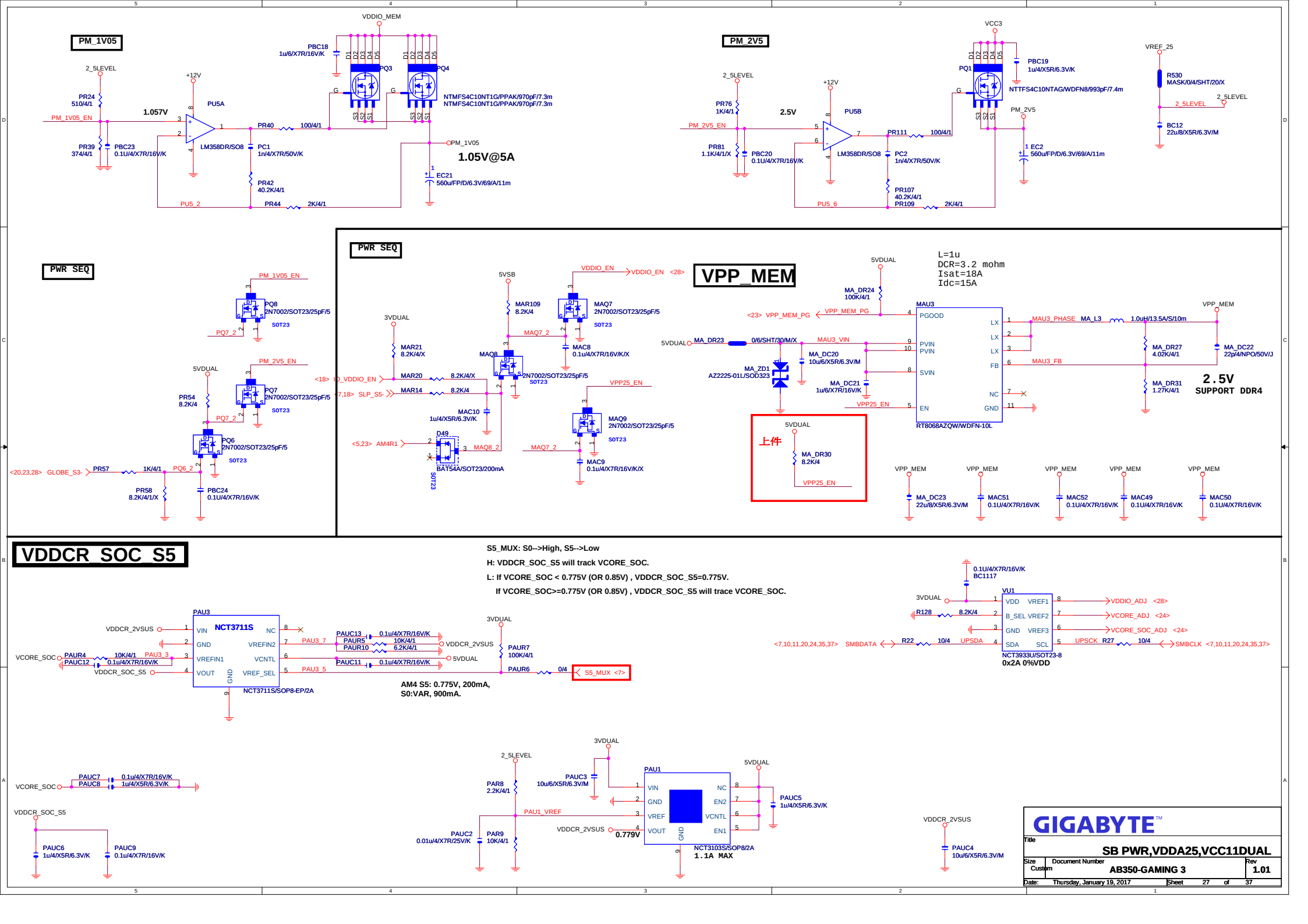
PM_1V05
VDDIO_MEM
PBC18
1u/6/X7R/16V/K
PQ3
PQ4
NTMFS4C10NT1G/PPAK/970pF/7.3m
NTMFS4C10NT1G/PPAK/970pF/7.3m
2_5LEVEL
+12V
PR24
510/4/1
PM_1V05_EN
1.057V
PU5A
PR39
374/4/1
PBC23
0.1U/4/X7R/16V/K
LM358DR/SO8
PR40
100/4/1
PC1
1n/4/X7R/50V/K
PR42
40.2K/4/1
PU5_2
PR44
2K/4/1
PM_1V05
1.05V@5A
EC21
560u/FP/D/6.3V/69/A/11m
PM_2V5
VCC3
PBC19
1u/4/X5R/6.3V/K
PQ1
NTTFS4C10NTAG/WDFN8/993pF/7.4m
VREF_25
R530
MASK/0/4/SHT/20/X
BC12
22u/8/X5R/6.3V/M
PR76
1K/4/1
2.5V
PU5B
PR81
1.1K/4/1/X
PBC20
0.1U/4/X7R/16V/K
PR111
100/4/1
PC2
1n/4/X7R/50V/K
PR107
40.2K/4/1
PR109
2K/4/1
PU5_6
EC2
560u/FP/D/6.3V/69/A/11m
PWR SEQ
PM_1V05_EN
PQ8
2N7002/SOT23/25pF/5
SOT23
PQ7_2
PM_2V5_EN
5VDUAL
PR54
8.2K/4
PQ7
PQ6
PQ6_2
<20,23,28> GLOBE_S3-
PR57
1K/4/1
PR58
8.2K/4/1/X
PBC24
0.1U/4/X7R/16V/K
PWR SEQ
3VDUAL
5VSB
VDDIO_EN
VDDIO_EN <28>
MAR109
8.2K/4
MAQ7
2N7002/SOT23/25pF/5
MAQ7_2
MAR21
8.2K/4/X
MAC8
0.1u/4/X7R/16V/K/X
MAQ8
2N7002/SOT23/25pF/5
<18> D_VDDIO_EN
MAR20
8.2K/4/X
<7,18> SLP_S5-
MAR14
8.2K/4
MAC10
1u/4/X5R/6.3V/K
VPP25_EN
MAQ9
2N7002/SOT23/25pF/5
D49
<5,23> AM4R1
BAT54A/SOT23/200mA
MAQ8_2
MAC9
0.1u/4/X7R/16V/K/X
VPP_MEM
L=1u
DCR=3.2 mohm
Isat=18A
Idc=15A
MA_DR24
100K/4/1
<23> VPP_MEM_PG
MAU3
PGOOD
MA_DR23
0/6/SHT/30/M/X
MAU3_VIN
PVIN
SVIN
MA_DC20
10u/6/X5R/6.3V/M
MA_ZD1
AZ2225-01L/SOD323
MA_DC21
1u/6/X7R/16V/K
EN
LX
FB
NC
GND
MAU3_PHASE
MA_L3
1.0uH/13.5A/S/10m
MAU3_FB
MA_DR27
4.02K/4/1
MA_DR31
1.27K/4/1
MA_DC22
22p/4/NPO/50V/J
RT8068AZQW/WDFN-10L
2.5V
SUPPORT DDR4
上件
MA_DR30
8.2K/4
MA_DC23
22u/8/X5R/6.3V/M
MAC51
0.1U/4/X7R/16V/K
MAC52
0.1U/4/X7R/16V/K
MAC49
0.1U/4/X7R/16V/K
MAC50
0.1U/4/X7R/16V/K
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 trace VCORE_SOC.
PAU3
NCT3711S
VDDCR_2VSUS
VCORE_SOC
PAUR4
PAUC12
10K/4/1
0.1u/4/X7R/16V/K
PAU3_3
VDDCR_SOC_S5
VIN
GND
VREFIN1
VOUT
VREFIN2
VCNTL
VREF_SEL
NC
PAU3_7
PAUC13
0.1u/4/X7R/16V/K
PAUR5
10K/4/1
PAUR10
6.2K/4/1
PAUC11
0.1u/4/X7R/16V/K
PAU3_5
VDDCR_2VSUS
5VDUAL
3VDUAL
PAUR7
100K/4/1
PAUR6
0/4
S5_MUX <7>
NCT3711S/SOP8-EP/2A
AM4 S5: 0.775V, 200mA,
S0:VAR, 900mA.
0.1U/4/X7R/16V/K
BC1117
VU1
3VDUAL
R128
8.2K/4
<7,10,11,20,24,35,37> SMBDATA
R22
10/4
UPSDA
UPSCK
R27
SMBCLK <7,10,11,20,24,35,37>
VDD
B_SEL
GND
SDA
VREF1
VREF2
VREF3
SCL
VDDIO_ADJ <28>
VCORE_ADJ <24>
VCORE_SOC_ADJ <24>
NCT3933U/SOT23-8
0x2A 0%VDD
PAUC7
PAUC8
1u/4/X5R/6.3V/K
PAUC6
PAUC9
2_5LEVEL
PAR8
2.2K/4/1
PAU1_VREF
PAUC2
0.01u/4/X7R/25V/K
PAR9
10K/4/1
PAU1
PAUC3
10u/6/X5R/6.3V/M
VREF
EN2
VCNTL
EN1
PAUC5
0.779V
NCT3103S/SOP8/2A
1.1A MAX
PAUC4
10u/6/X5R/6.3V/M
GIGABYTE
Title
SB PWR,VDDA25,VCC11DUAL
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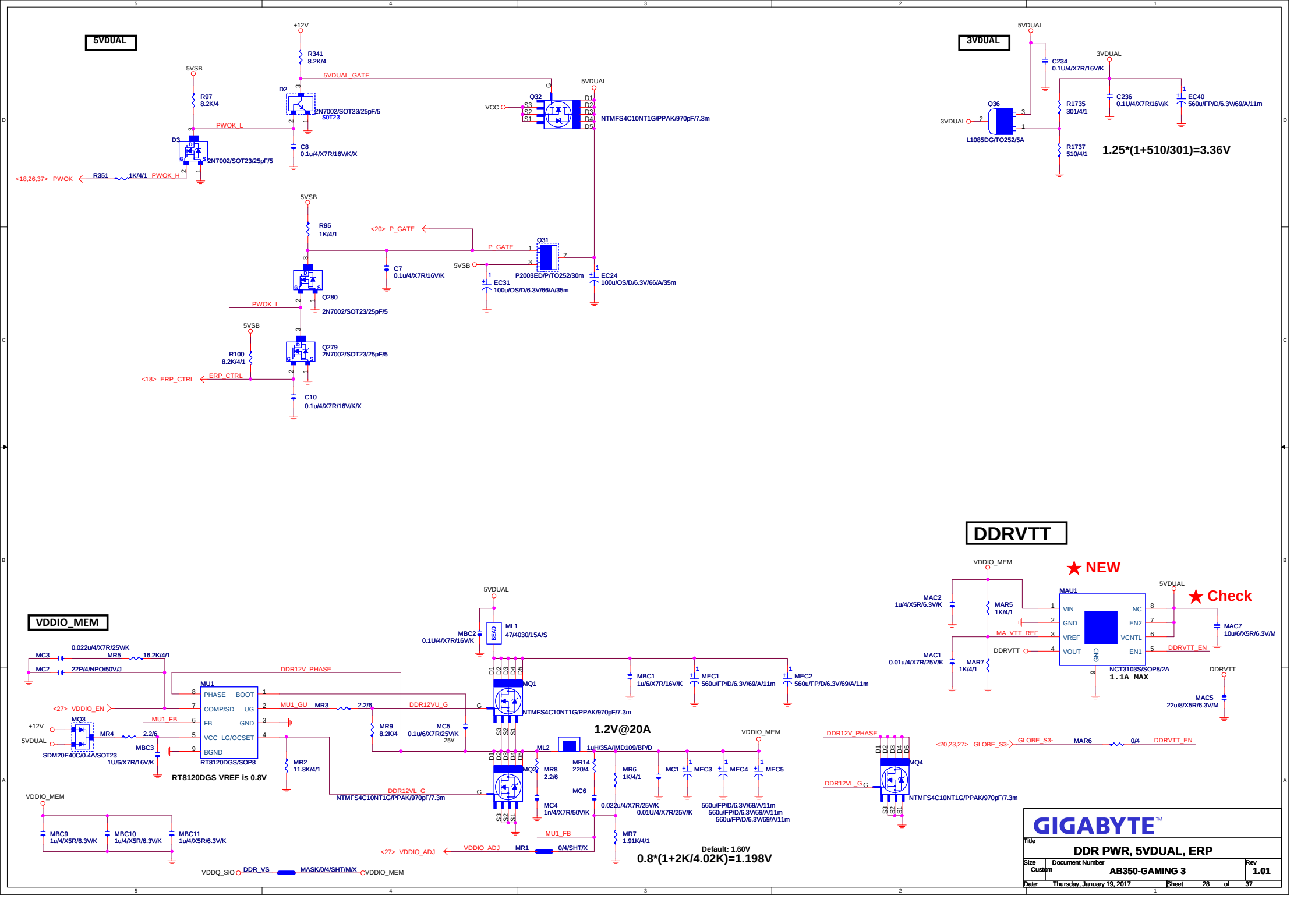
5VDUAL
+12V
R341
8.2K/4
5VDUAL_GATE
5VSB
R97
8.2K/4
D2
2N7002/SOT23/25pF/5
SOT23
PWOK_L
C8
0.1u/4/X7R/16V/K/X
D3
2N7002/SOT23/25pF/5
<18,26,37> PWOK
R351
1K/4/1
PWOK_H
VCC
Q32
NTMFS4C10NT1G/PPAK/970pF/7.3m
R95
1K/4/1
<20> P_GATE
P_GATE
Q31
P2003EDF/PTO252/30m
C7
0.1u/4/X7R/16V/K
EC31
100u/OS/D/6.3V/66/A/35m
EC24
100u/OS/D/6.3V/66/A/35m
Q280
2N7002/SOT23/25pF/5
R100
8.2K/4/1
<18> ERP_CTRL
ERP_CTRL
Q279
2N7002/SOT23/25pF/5
C10
0.1u/4/X7R/16V/K/X
3VDUAL
C234
0.1U/4/X7R/16V/K
C236
0.1U/4/X7R/16V/K
EC40
560u/FP/D/6.3V/69/A/11m
Q36
L1085DG/TO252/5A
R1735
301/4/1
R1737
510/4/1
1.25*(1+510/301)=3.36V
VDDIO_MEM
MC3
0.022u/4/X7R/25V/K
MR5
16.2K/4/1
MC2
22P/4/NPO/50V/J
MU1
PHASE
BOOT
COMP/SD
UG
FB
GND
VCC LG/OCSET
BGND
RT8120DGS/SOP8
<27> VDDIO_EN
MU1_FB
MU1_GU
MR3
2.2/6
DDR12V_PHASE
DDR12VU_G
MR9
8.2K/4
MC5
0.1u/6/X7R/25V/K
25V
MQ3
SDM20E40C/0.4A/SOT23
MR4
2.2/6
MBC3
1U/6/X7R/16V/K
MR2
11.8K/4/1
RT8120DGS VREF is 0.8V
DDR12VL_G
NTMFS4C10NT1G/PPAK/970pF/7.3m
MBC2
0.1U/4/X7R/16V/K
ML1
47/4030/15A/S
MQ1
NTMFS4C10NT1G/PPAK/970pF/7.3m
MBC1
1u/6/X7R/16V/K
MEC1
560u/FP/D/6.3V/69/A/11m
MEC2
560u/FP/D/6.3V/69/A/11m
1.2V@20A
ML2
1uH/35A/IMD109/BP/D
MQ2
MR8
2.2/6
MR14
220/4
MR6
1K/4/1
MC6
0.022u/4/X7R/25V/K
0.01U/4/X7R/25V/K
MC1
MEC3
MEC4
MEC5
560u/FP/D/6.3V/69/A/11m
MC4
1n/4/X7R/50V/K
MR7
1.91K/4/1
MU1_FB
<27> VDDIO_ADJ
VDDIO_ADJ
MR1
0/4/SHT/X
Default: 1.60V
0.8*(1+2K/4.02K)=1.198V
VDDQ_SIO
DDR_VS
MASK/0/4/SHT/M/X
MBC9
1u/4/X5R/6.3V/K
MBC10
1u/4/X5R/6.3V/K
MBC11
1u/4/X5R/6.3V/K
DDRVTT
NEW
Check
MAU1
VIN
GND
VREF
VOUT
NC
EN2
VCNTL
EN1
NCT3103S/SOP8/2A
1.1A MAX
MA_VTT_REF
DDRVTT_EN
MAC2
1u/4/X5R/6.3V/K
MAR5
1K/4/1
MAC1
0.01u/4/X7R/25V/K
MAR7
1K/4/1
MAC7
10u/6/X5R/6.3V/M
MAC5
22u/8/X5R/6.3V/M
DDR12V_PHASE
MQ4
DDR12VL_G
NTMFS4C10NT1G/PPAK/970pF/7.3m
<20,23,27> GLOBE_S3-
GLOBE_S3-
MAR6
0/4
DDRVTT_EN
GIGABYTE
Title
DDR PWR, 5VDUAL, ERP
Size
Custom
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LAN:RTL8111G R1.06

LAR12 2.49K/4/1

LAU1

RTL8111G(S)/8106E

RTL8111G-CG/QFN32

LAX1
25M/16p/30ppm/49US/20/D

LAC5 20p/4/NPO/50V/J

LAC6 20p/4/NPO/50V/J

LAR9 MASK/0/6/SHT/M/X FOR ERP WAKEUP

SRCCLK-->50歐姆:[18/4/10/4/18]

LAR4 1K/4/1

LAR5 15K/4/1/X

LABC4 100p/4/NPO/50V/J/X

LAREQ1 0/4

8.2K/4 LAR1

L1+CLK REQ# 節能:
需對應LA_SRCCLK_LAN之CLKREQ#

LA_ ML-->80歐姆:[15/5/5/5/15]

MDI ESD預留 *

LAESD2 AZC099-04S/SOT23-6L/X

LAESD3 AZC099-04S/SOT23-6L/X

LAN POWER

(CLOSE LAU1 PIN22,30,3,8)

LABC2 1u/4/X5R/6.3V/K

LABC9 0.1u/4/X7R/16V/K

LABC3 0.1u/4/X7R/16V/K

LABC8 0.1u/4/X7R/16V/K

LABC2:1U CLOSE PIN22[REALTEK REQ]

LAN POWER

note: lan power連接及電流

LABC6 0.1u/4/X7R/16V/K

(CLOSE LAU1 PIN23)

LAN POWER

(CLOSE LAU1 PIN:11,32)

LABC18 0.1u/4/X7R/16V/K

LABC27 4.7u/6/X5R/6.3V/K

LABC14 0.1u/4/X7R/16V/K

LABC20 4.7u/6/X5R/6.3V/K

PWR SURGE PWR SURGE

LABC18,27:CLOSE PIN11[REALTEK SURGE]
LABC14,20:CLOSE PIN32[REALTEK SURGE]

LAN POWER

LABC5 0.1u/4/X7R/16V/K

(CLOSE LAU1 PIN24)

USB_LAN

LAN 100 Ohm
USB 90 Ohm

USB30_LAN

USB3.0

USB3+LAN/1G/GO,Y/OS/RA/D/G30/[11NR6-702009-X1R_11NR6-702009-X2R]

LAFB2 MASK/0/4/SHT/M/X

LABC24 0.1u/4/X7R/16V/K/X

UBBC3 0.1u/4/X7R/16V/K

RAU3D2 AZ1045-04F/MSOP10

RAU3D1 AZ1045-04F/MSOP10

UBF5 SPR-P260T/6V/8/S

UBD7 BAT54A/SOT23/200mA

UBR7 150K/4

UBR9 270K/4

RAU3D3 AOZ8902CIL/SOT23-6

EMI SHORT PAD

PS:視EMI需求

GNDR1 MASK/0/4/SHT/M/X

LAR2 MASK/0/4/SHT/M/X

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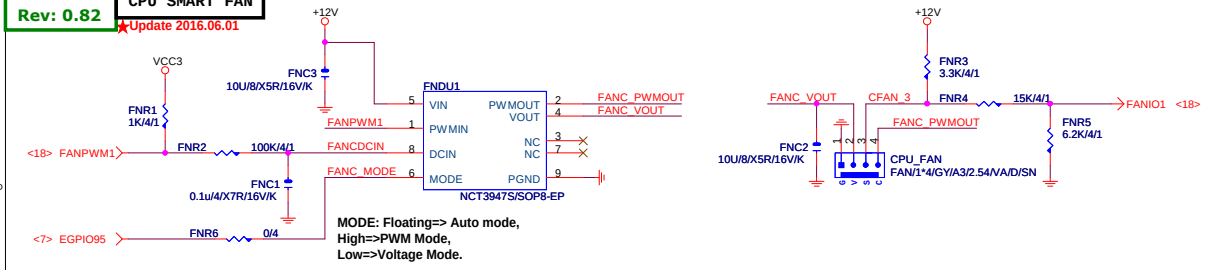
CPU SMART FAN

★Update 2016.06.01



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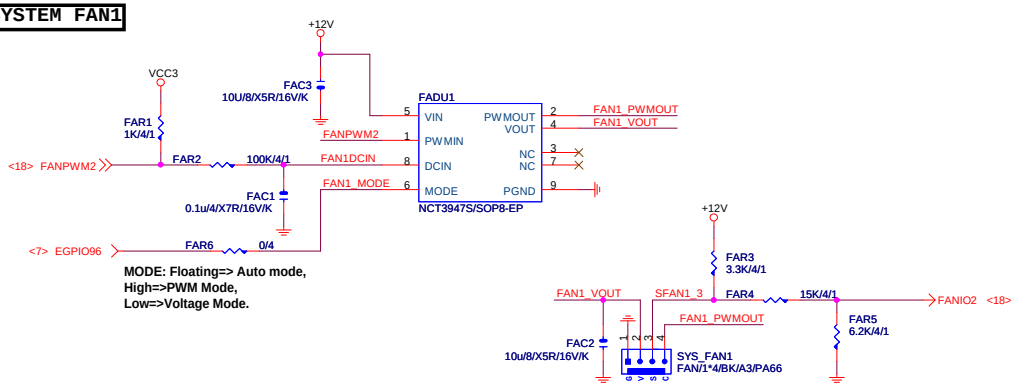
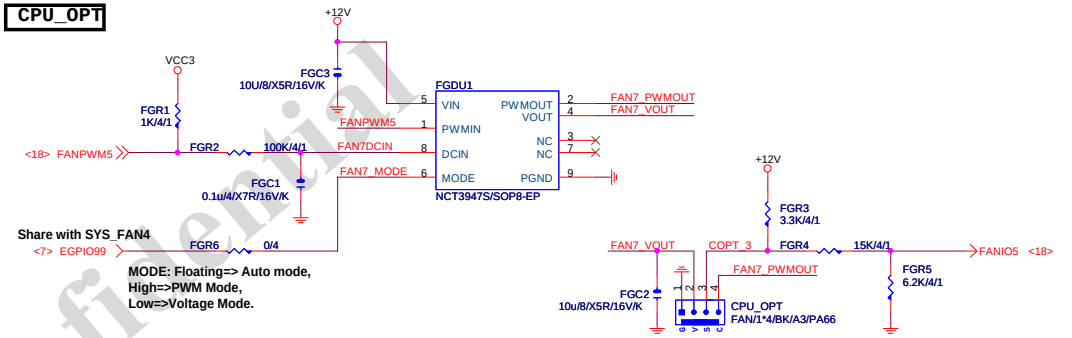


CPU_OPT



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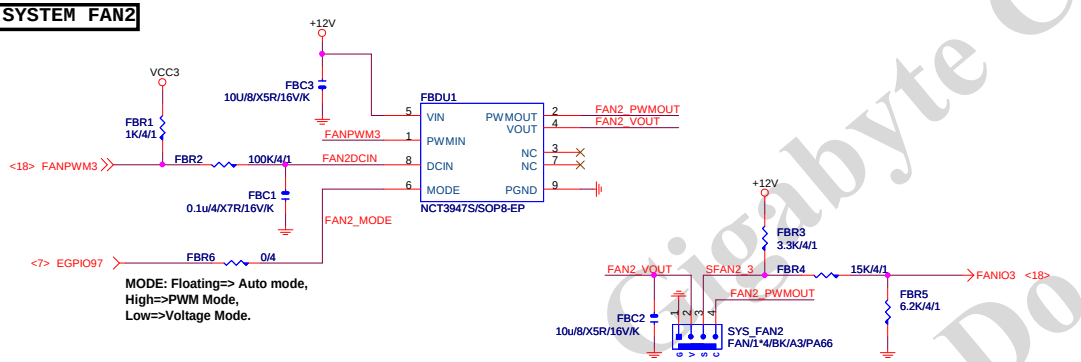
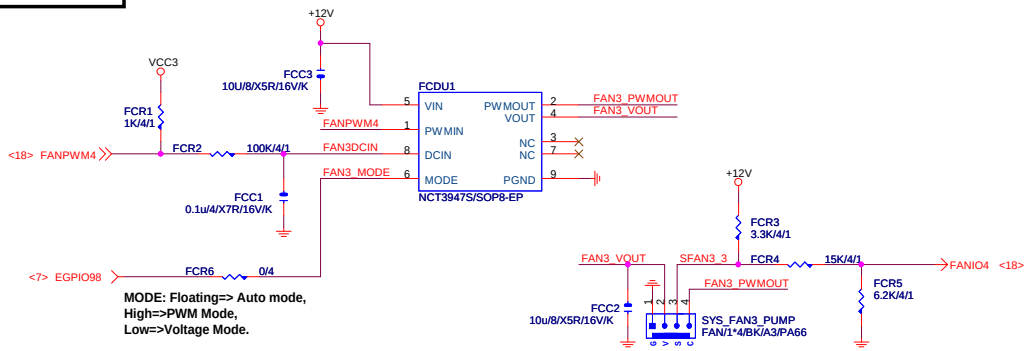
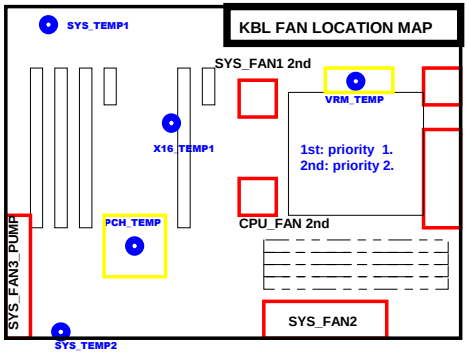


SYSTEM FAN3





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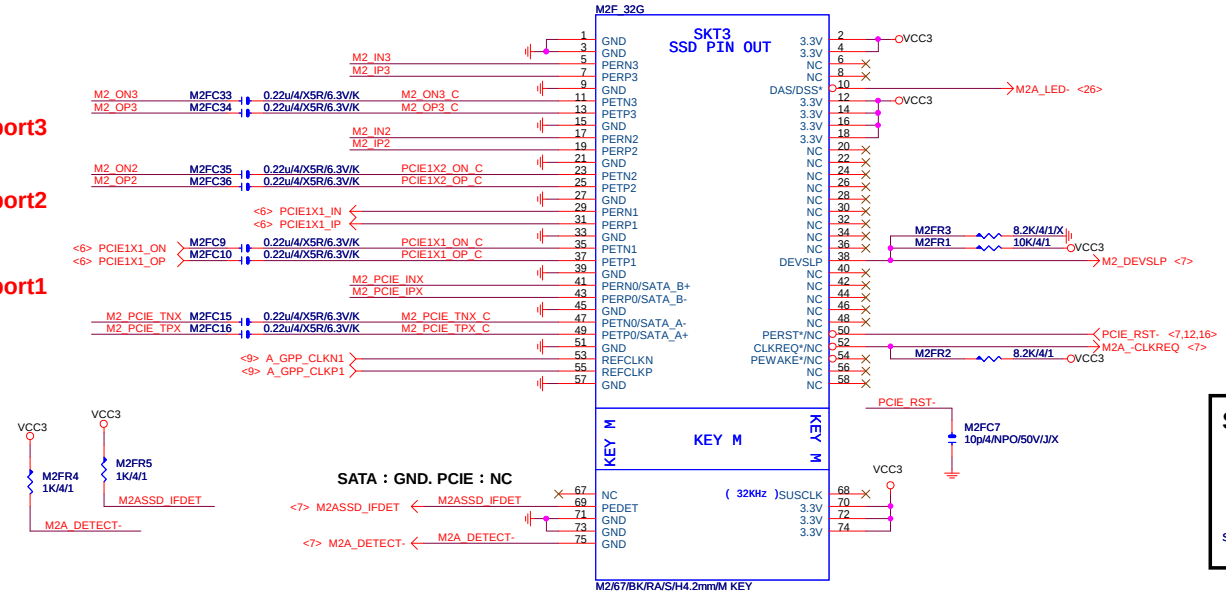
Rev 0.5

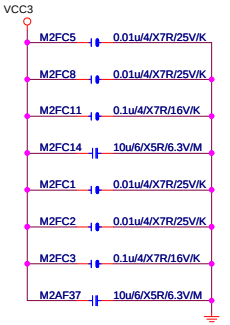
M.2 Lane4 from AM4 port3

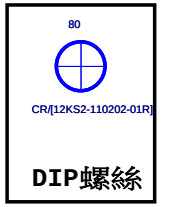
M.2 Lane4 from AM4 port2

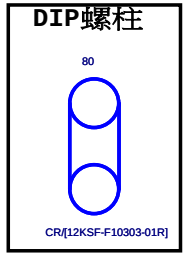
M.2 Lane4 from AM4 port1

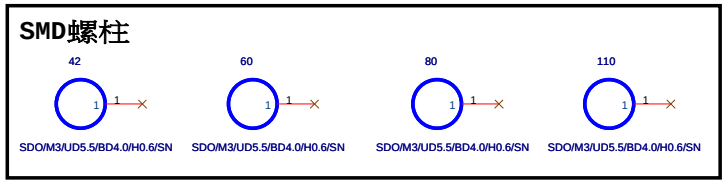
by SWITCH Select

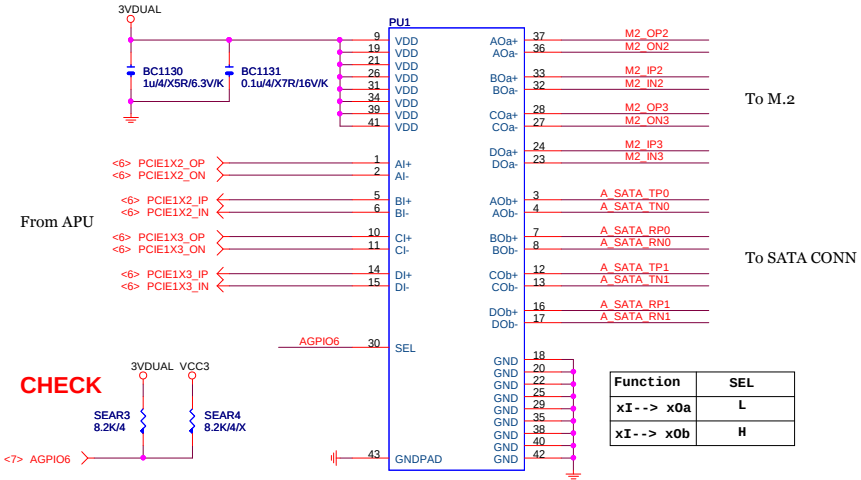




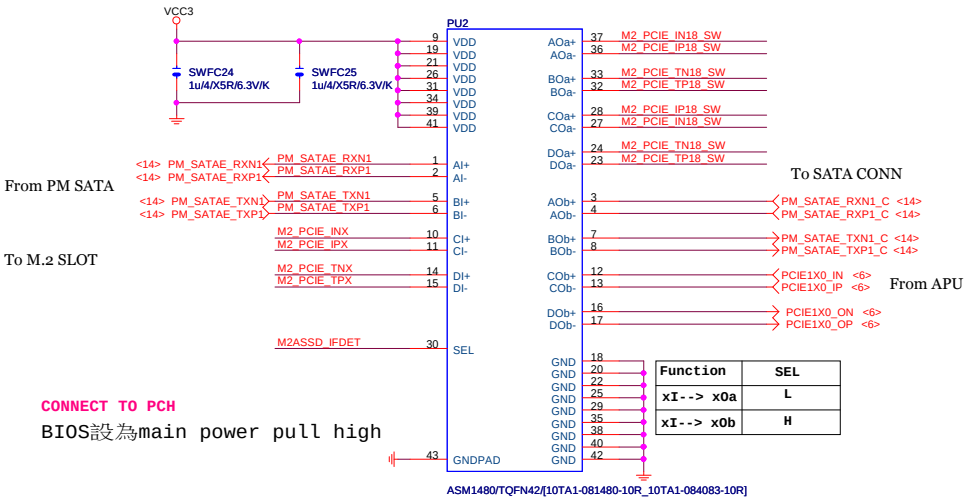




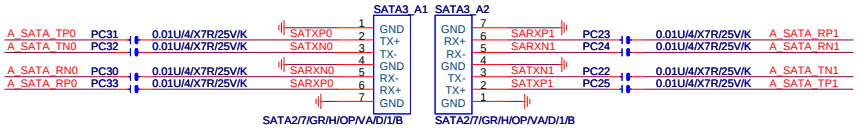




Function	SEL
xI--> xOa	L
xI--> xOb	H



Function	SEL
xI--> xOa	L
xI--> xOb	H



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Title	M.2 SWITCH	
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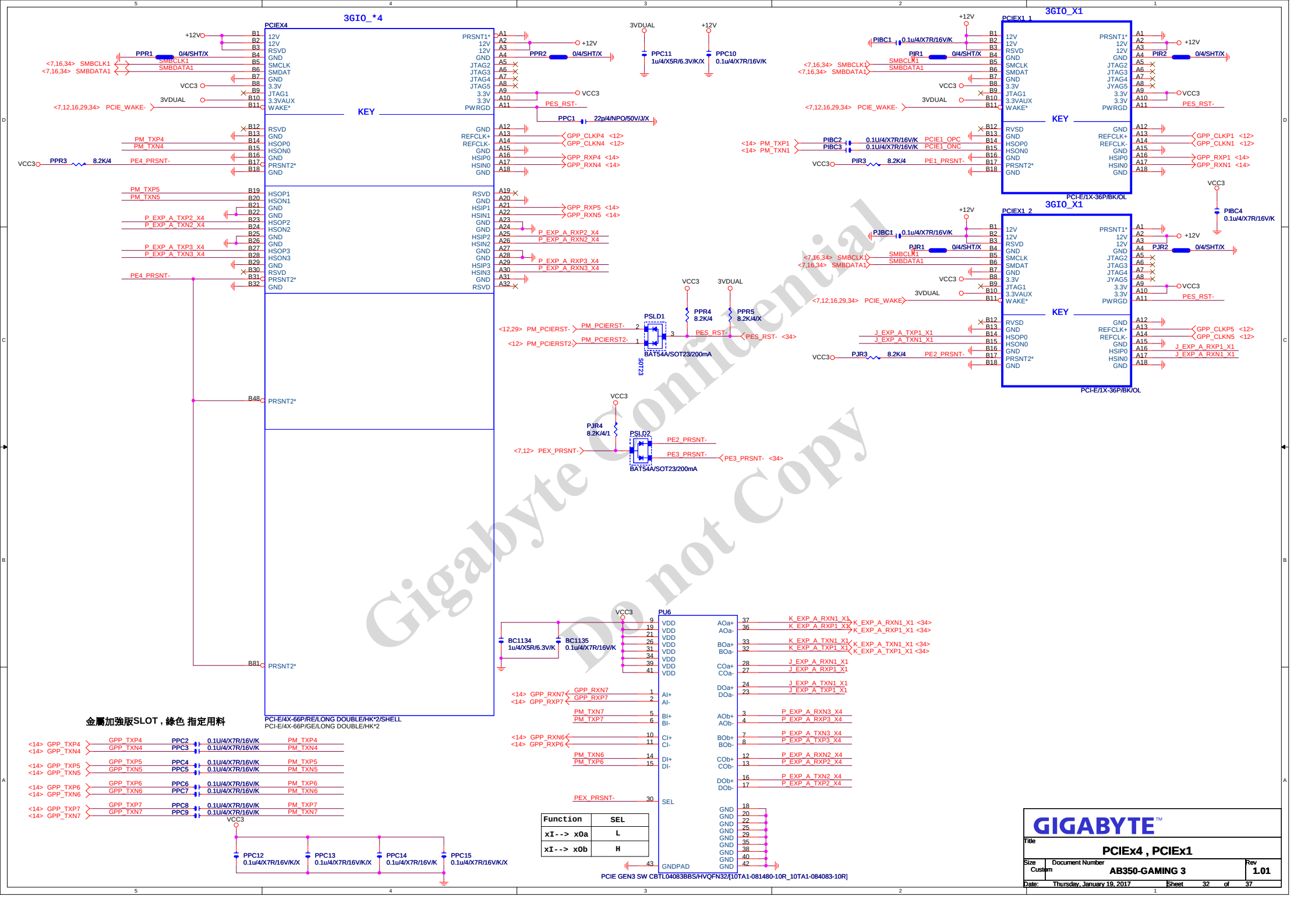
3GIO_*4
PCIEX4
KEY
PCIE-E/4X-66P/RE/LONG DOUBLE/HK*2/SHELL
PCI-E/4X-66P/GE/LONG DOUBLE/HK*2
3GIO_X1
PCIEX1_1
PCIEX1_2
PCI-E/1X-36P/BK/OL
PSLD1
PSLD2
BAT54A/SOT23/200mA
SOT23
PU6
PCIE GEN3 SW CBTL04083BBS/HVQFN32/[10TA1-081480-10R_10TA1-084083-10R]
金屬加強版SLOT，綠色 指定用料
Function
SEL
xI--> xOa
L
xI--> xOb
H
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GIGABYTE
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PCIEx4 , PCIEx1
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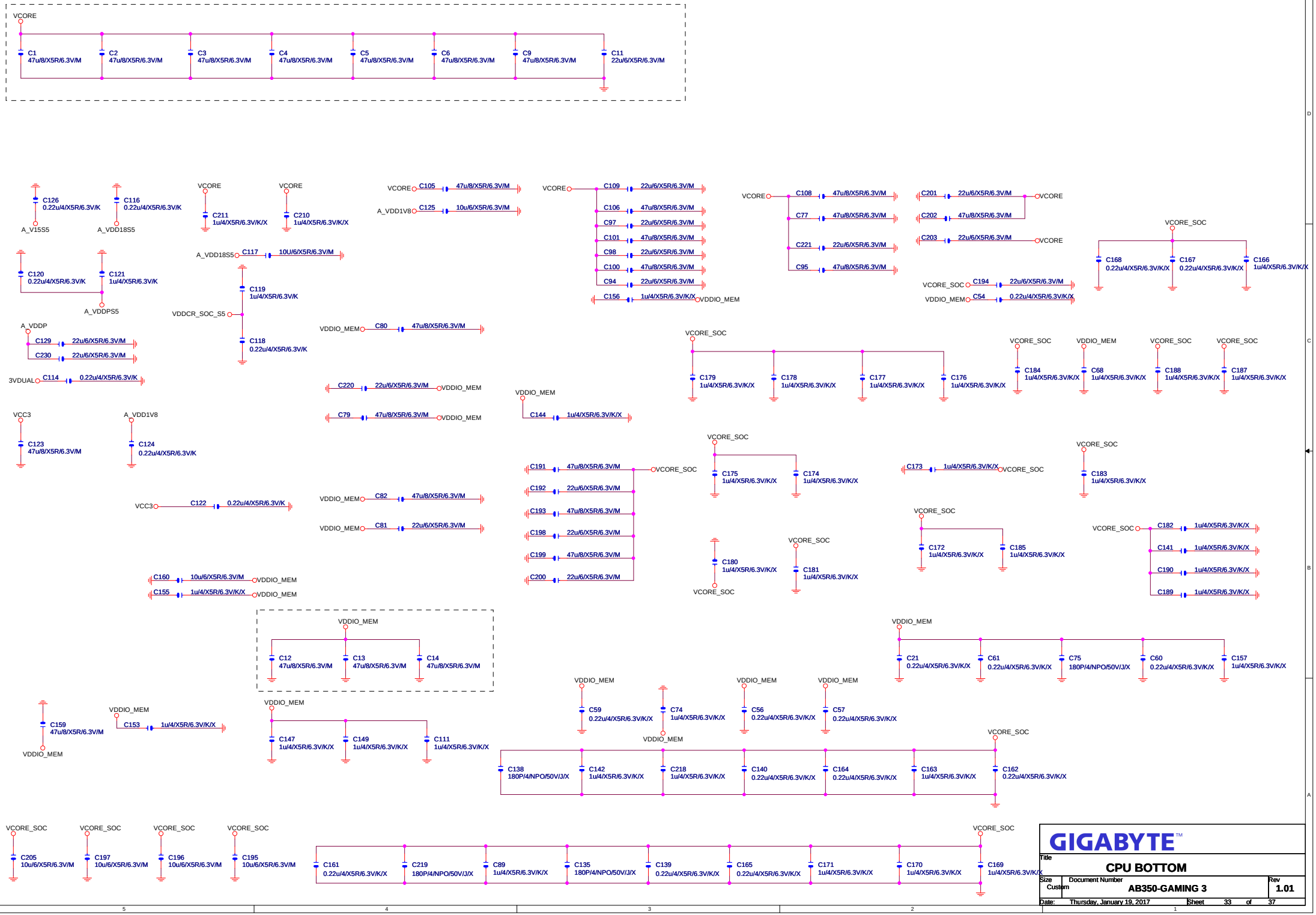
VCORE
C1 47u/8/X5R/6.3V/M
C2 47u/8/X5R/6.3V/M
C3 47u/8/X5R/6.3V/M
C4 47u/8/X5R/6.3V/M
C5 47u/8/X5R/6.3V/M
C6 47u/8/X5R/6.3V/M
C9 47u/8/X5R/6.3V/M
C11 22u/6/X5R/6.3V/M
C126 0.22u/4/X5R/6.3V/K
A_V15S5
C116 0.22u/4/X5R/6.3V/K
A_VDD18S5
VCORE
C211 1u/4/X5R/6.3V/K/X
VCORE
C210 1u/4/X5R/6.3V/K/X
VCORE
C105 47u/8/X5R/6.3V/M
A_VDD1V8
C125 10u/6/X5R/6.3V/M
VCORE
C109 22u/6/X5R/6.3V/M
C106 47u/8/X5R/6.3V/M
C97 22u/6/X5R/6.3V/M
C101 47u/8/X5R/6.3V/M
C98 22u/6/X5R/6.3V/M
C100 47u/8/X5R/6.3V/M
C94 22u/6/X5R/6.3V/M
C156 1u/4/X5R/6.3V/K/X
VDDIO_MEM
VCORE
C108 47u/8/X5R/6.3V/M
C77 47u/8/X5R/6.3V/M
C221 22u/6/X5R/6.3V/M
C95 47u/8/X5R/6.3V/M
C201 22u/6/X5R/6.3V/M
VCORE
C202 47u/8/X5R/6.3V/M
C203 22u/6/X5R/6.3V/M
VCORE
VCORE_SOC
C194 22u/6/X5R/6.3V/M
VDDIO_MEM
C54 0.22u/4/X5R/6.3V/K/X
VCORE_SOC
C168 0.22u/4/X5R/6.3V/K/X
C167 0.22u/4/X5R/6.3V/K/X
C166 1u/4/X5R/6.3V/K/X
C120 0.22u/4/X5R/6.3V/K
C121 1u/4/X5R/6.3V/K
A_VDDPS5
A_VDD18S5
C117 10U/6/X5R/6.3V/M
C119 1u/4/X5R/6.3V/K
VDDCR_SOC_S5
C118 0.22u/4/X5R/6.3V/K
A_VDDP
C129 22u/6/X5R/6.3V/M
C230 22u/6/X5R/6.3V/M
3VDUAL
C114 0.22u/4/X5R/6.3V/K
VDDIO_MEM
C80 47u/8/X5R/6.3V/M
C220 22u/6/X5R/6.3V/M
VDDIO_MEM
C79 47u/8/X5R/6.3V/M
VDDIO_MEM
VDDIO_MEM
C144 1u/4/X5R/6.3V/K/X
VCORE_SOC
C179 1u/4/X5R/6.3V/K/X
C178 1u/4/X5R/6.3V/K/X
C177 1u/4/X5R/6.3V/K/X
C176 1u/4/X5R/6.3V/K/X
VCORE_SOC
C184 1u/4/X5R/6.3V/K/X
VDDIO_MEM
C68 1u/4/X5R/6.3V/K/X
VCORE_SOC
C188 1u/4/X5R/6.3V/K/X
VCORE_SOC
C187 1u/4/X5R/6.3V/K/X
VCC3
C123 47u/8/X5R/6.3V/M
A_VDD1V8
C124 0.22u/4/X5R/6.3V/K
VCORE_SOC
C175 1u/4/X5R/6.3V/K/X
C174 1u/4/X5R/6.3V/K/X
C173 1u/4/X5R/6.3V/K/X
VCORE_SOC
VCORE_SOC
C183 1u/4/X5R/6.3V/K/X
VCC3
C122 0.22u/4/X5R/6.3V/K
VDDIO_MEM
C82 47u/8/X5R/6.3V/M
VDDIO_MEM
C81 22u/6/X5R/6.3V/M
C191 47u/8/X5R/6.3V/M
VCORE_SOC
C192 22u/6/X5R/6.3V/M
C193 47u/8/X5R/6.3V/M
C198 22u/6/X5R/6.3V/M
C199 47u/8/X5R/6.3V/M
C200 22u/6/X5R/6.3V/M
C180 1u/4/X5R/6.3V/K/X
VCORE_SOC
VCORE_SOC
C181 1u/4/X5R/6.3V/K/X
VCORE_SOC
C172 1u/4/X5R/6.3V/K/X
C185 1u/4/X5R/6.3V/K/X
VCORE_SOC
C182 1u/4/X5R/6.3V/K/X
C141 1u/4/X5R/6.3V/K/X
C190 1u/4/X5R/6.3V/K/X
C189 1u/4/X5R/6.3V/K/X
C160 10u/6/X5R/6.3V/M
VDDIO_MEM
C155 1u/4/X5R/6.3V/K/X
VDDIO_MEM
VDDIO_MEM
C12 47u/8/X5R/6.3V/M
C13 47u/8/X5R/6.3V/M
C14 47u/8/X5R/6.3V/M
VDDIO_MEM
C21 0.22u/4/X5R/6.3V/K/X
C61 0.22u/4/X5R/6.3V/K/X
C75 180P/4/NPO/50V/J/X
C60 0.22u/4/X5R/6.3V/K/X
C157 1u/4/X5R/6.3V/K/X
C159 47u/8/X5R/6.3V/M
VDDIO_MEM
VDDIO_MEM
C153 1u/4/X5R/6.3V/K/X
VDDIO_MEM
C147 1u/4/X5R/6.3V/K/X
C149 1u/4/X5R/6.3V/K/X
C111 1u/4/X5R/6.3V/K/X
VDDIO_MEM
C59 0.22u/4/X5R/6.3V/K/X
C74 1u/4/X5R/6.3V/K/X
VDDIO_MEM
VDDIO_MEM
C56 0.22u/4/X5R/6.3V/K/X
VDDIO_MEM
C57 0.22u/4/X5R/6.3V/K/X
VCORE_SOC
C138 180P/4/NPO/50V/J/X
C142 1u/4/X5R/6.3V/K/X
C218 1u/4/X5R/6.3V/K/X
C140 0.22u/4/X5R/6.3V/K/X
C164 0.22u/4/X5R/6.3V/K/X
C163 1u/4/X5R/6.3V/K/X
C162 0.22u/4/X5R/6.3V/K/X
VCORE_SOC
C205 10u/6/X5R/6.3V/M
VCORE_SOC
C197 10u/6/X5R/6.3V/M
VCORE_SOC
C196 10u/6/X5R/6.3V/M
VCORE_SOC
C195 10u/6/X5R/6.3V/M
C161 0.22u/4/X5R/6.3V/K/X
C219 180P/4/NPO/50V/J/X
C89 1u/4/X5R/6.3V/K/X
C135 180P/4/NPO/50V/J/X
C139 0.22u/4/X5R/6.3V/K/X
C165 0.22u/4/X5R/6.3V/K/X
C171 1u/4/X5R/6.3V/K/X
C170 1u/4/X5R/6.3V/K/X
VCORE_SOC
C169 1u/4/X5R/6.3V/K/X
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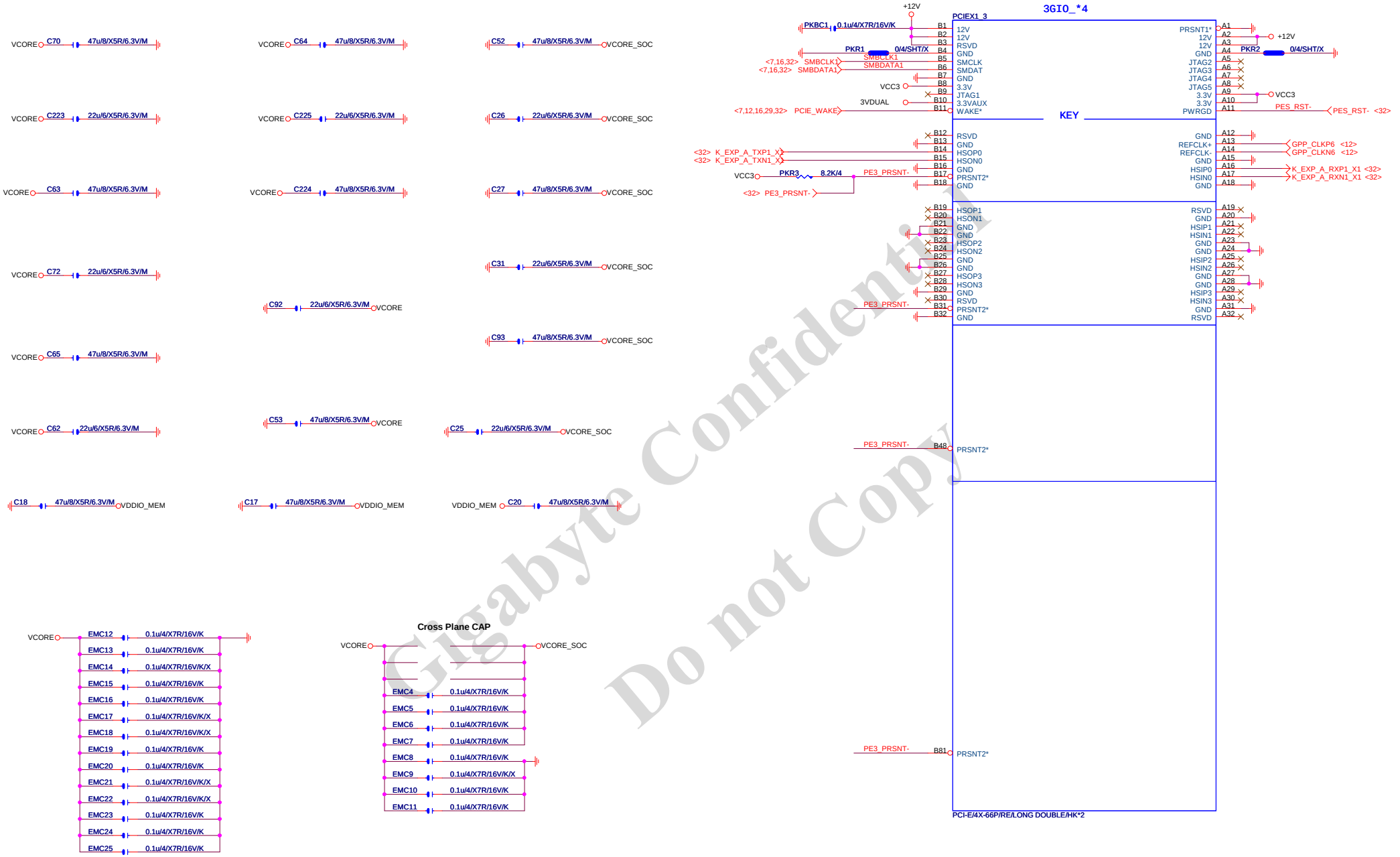
CPU TOP CAVITY



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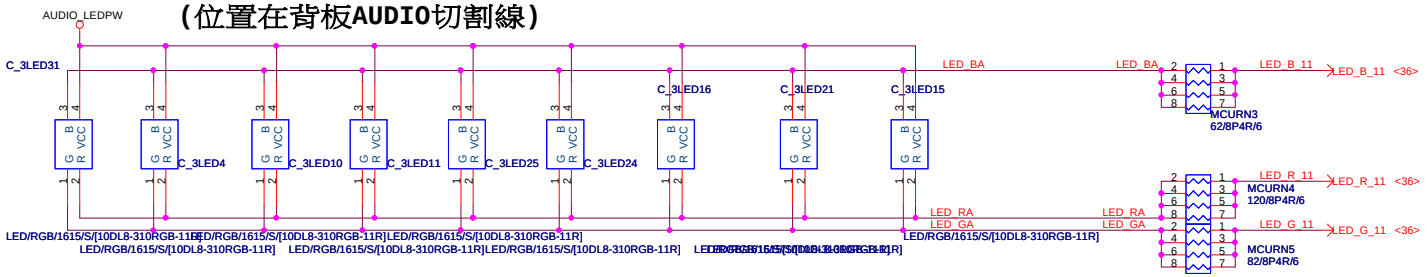
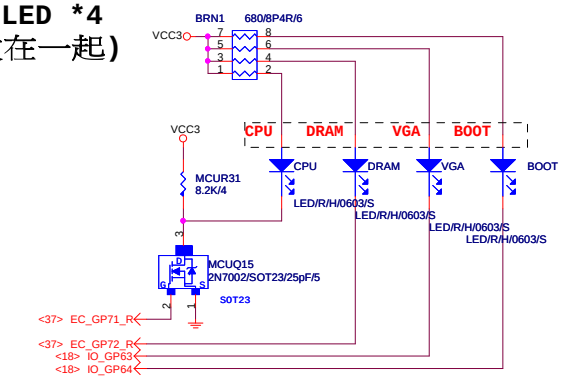
第一區 LED

Rev 0.63

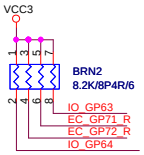
FOR AUDIO 正發光 LED*40
(位置在背板AUDIO切割線)



DEBUG PORT LED *4
(位置需擺放在一起)

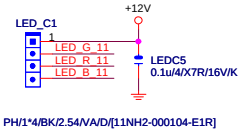


用文字面表示

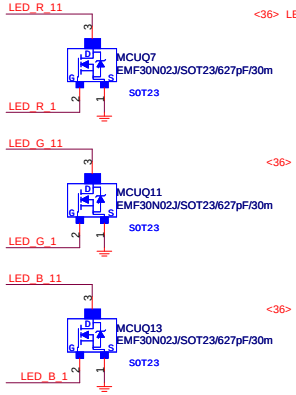


LED GPIO PIN DEFINE

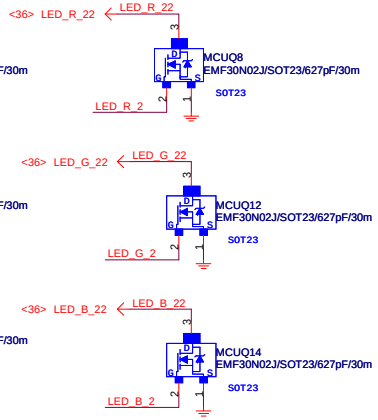
EC_GP71_R	CPU DEBUG
EC_GP72_R	DDR DEBUG
IO_GP63	VGA DEBUG
IO_GP64	BOOT DEBUG
PM_GPIO5	LED_C LED SWITCH

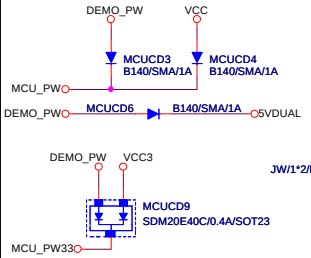


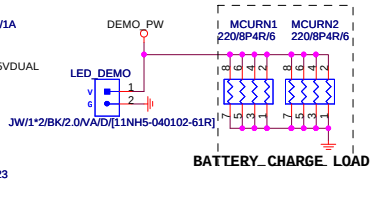
第一區 LED CONTROL

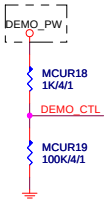


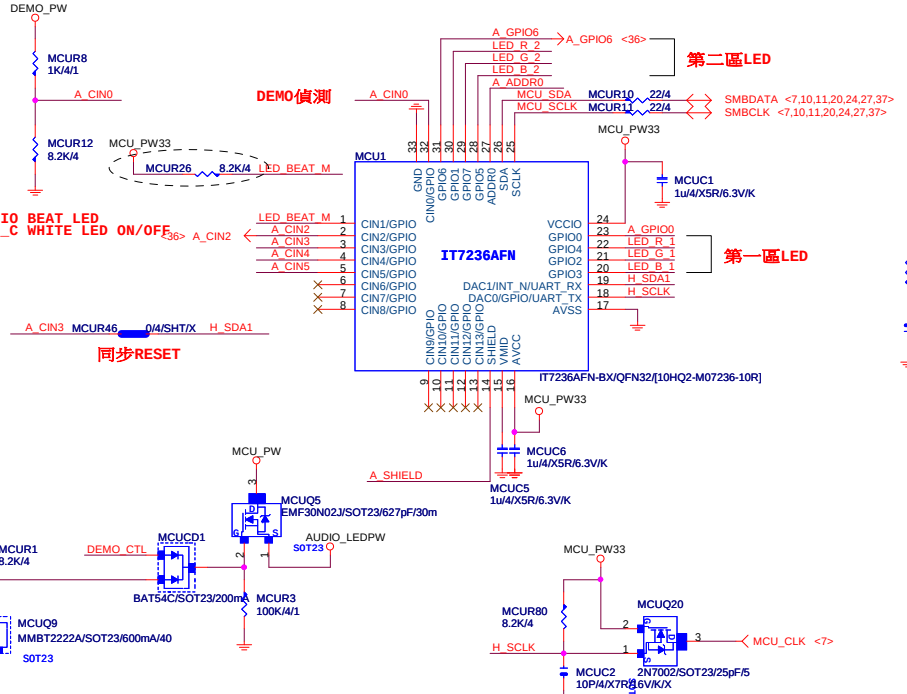
第二區 LED CONTROL

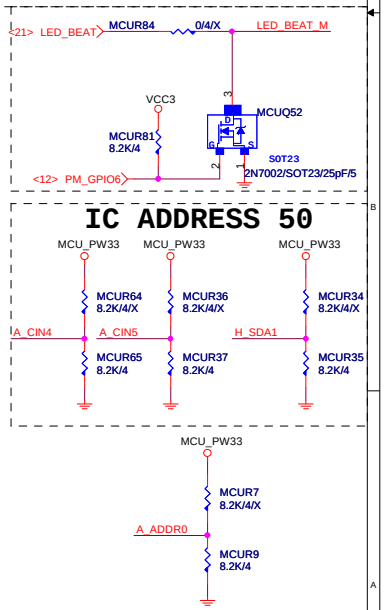












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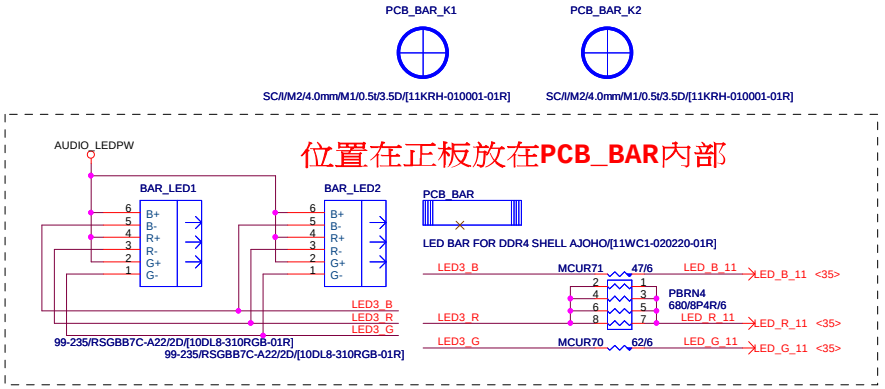
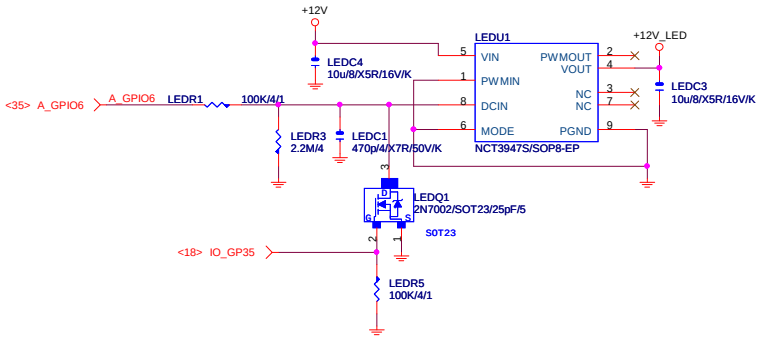
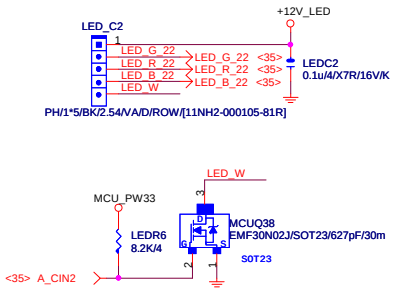
第二區 LED

Rev 0.63



FOR 燈條 LED (LED_C放在PCB左邊板邊位置)





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Title	PCB / PCH / DDR / LED_C LED	
Size: Custom	Document Number: AB350-GAMING 3	Rev: 1.01
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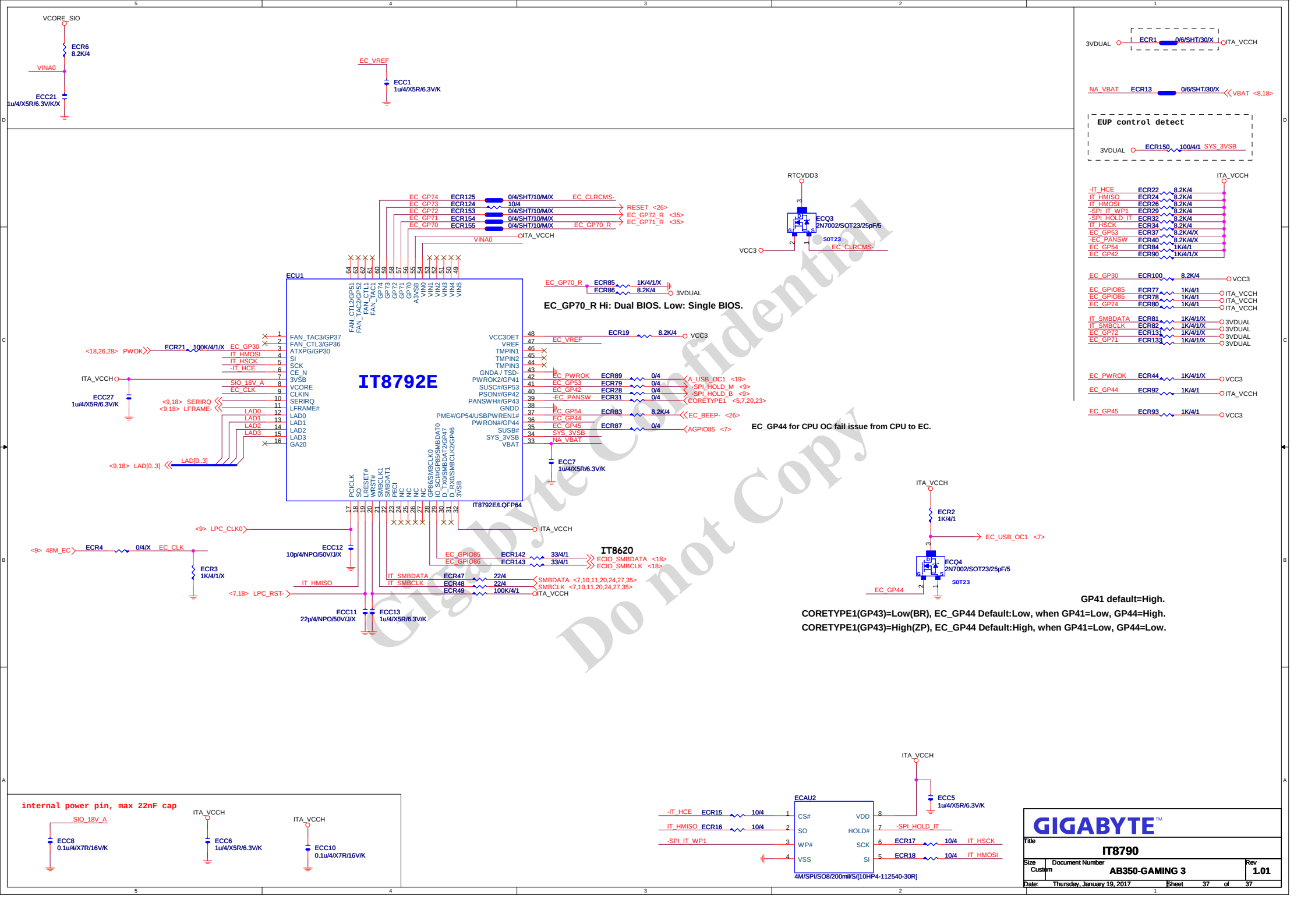
VCORE_SIO
ECR6 8.2K/4
VINA0
ECC21 1u/4/X5R/6.3V/K/X
EC_VREF
ECC1 1u/4/X5R/6.3V/K
3VDUAL
ECR1 0/6/SHT/30/X
ITA_VCCH
NA_VBAT
ECR13 0/6/SHT/30/X
VBAT <8,18>
EUP control detect
3VDUAL
ECR150 100/4/1 SYS_3VSB
RTCVDD3
ECQ3 2N7002/SOT23/25pF/5
SOT23
VCC3
EC_CLRCMS-
ECU1
IT8792E
IT8792E/LQFP64
EC_GP74 ECR125 0/4/SHT/10/M/X EC_CLRCMS-
EC_GP73 ECR124 10/4 RESET <26>
EC_GP72 ECR153 0/4/SHT/10/M/X EC_GP72_R <35>
EC_GP71 ECR154 0/4/SHT/10/M/X EC_GP71_R <35>
EC_GP70 ECR155 0/4/SHT/10/M/X EC_GP70_R
VINA0
EC_GP70_R ECR85 1K/4/1/X
ECR86 8.2K/4
EC_GP70_R Hi: Dual BIOS. Low: Single BIOS.
ECR19 8.2K/4
EC_VREF
EC_PWROK ECR89 0/4 A_USB_OC1 <19>
EC_GP53 ECR79 0/4 -SPI_HOLD_M <9>
EC_GP42 ECR28 0/4 -SPI_HOLD_B <9>
-EC_PANSW ECR31 0/4 CORETYPE1 <5,7,20,23>
EC_GP54 ECR83 8.2K/4 EC_BEEP- <26>
EC_GP45 ECR87 0/4 AGPIO85 <7>
EC_GP44 for CPU OC fail issue from CPU to EC.
ECC7 1u/4/X5R/6.3V/K
<18,26,28> PWOK
ECR21 100K/4/1/X EC_GP30
IT_HMOSI
IT_HSCK
-IT_HCE
SIO_18V_A
EC_CLK
ECC27 1u/4/X5R/6.3V/K
<9,18> SERIRQ
<9,18> LFRAME-
LAD0
LAD1
LAD2
LAD3
<9,18> LAD[0..3]
<9> LPC_CLK0
<9> 48M_EC
ECR4 0/4/X EC_CLK
ECR3 1K/4/1/X
ECC12 10p/4/NPO/50V/J/X
IT8620
EC_GPIO85 ECR142 33/4/1 ECIO_SMBDATA <18>
EC_GPIO86 ECR143 33/4/1 ECIO_SMBCLK <18>
IT_SMBDATA ECR47 22/4 SMBDATA <7,10,11,20,24,27,35>
IT_SMBCLK ECR48 22/4 SMBCLK <7,10,11,20,24,27,35>
ECR49 100K/4/1
IT_HMISO
<7,18> LPC_RST-
ECC11 22p/4/NPO/50V/J/X
ECC13 1u/4/X5R/6.3V/K
ECR2 1K/4/1
EC_USB_OC1 <7>
ECQ4 2N7002/SOT23/25pF/5
SOT23
EC_GP44
GP41 default=High.
CORETYPE1(GP43)=Low(BR), EC_GP44 Default:Low, when GP41=Low, GP44=High.
CORETYPE1(GP43)=High(ZP), EC_GP44 Default:High, when GP41=Low, GP44=Low.
-IT_HCE ECR22 8.2K/4
IT_HMISO ECR24 8.2K/4
IT_HMOSI ECR26 8.2K/4
-SPI_IT_WP1 ECR29 8.2K/4
-SPI_HOLD_IT ECR32 8.2K/4
IT_HSCK ECR34 8.2K/4
EC_GP53 ECR37 8.2K/4/X
-EC_PANSW ECR40 8.2K/4/X
EC_GP54 ECR84 1K/4/1
EC_GP42 ECR90 1K/4/1/X
EC_GP30 ECR100 8.2K/4
EC_GPIO85 ECR77 1K/4/1
EC_GPIO86 ECR78 1K/4/1
EC_GP74 ECR80 1K/4/1
IT_SMBDATA ECR81 1K/4/1/X
IT_SMBCLK ECR82 1K/4/1/X
EC_GP72 ECR131 1K/4/1/X
EC_GP71 ECR133 1K/4/1/X
EC_PWROK ECR44 1K/4/1/X
EC_GP44 ECR92 1K/4/1
EC_GP45 ECR93 1K/4/1
internal power pin, max 22nF cap
SIO_18V_A
ECC8 0.1u/4/X7R/16V/K
ECC6 1u/4/X5R/6.3V/K
ECC10 0.1u/4/X7R/16V/K
ECAU2
-IT_HCE ECR15 10/4
IT_HMISO ECR16 10/4
-SPI_IT_WP1
CS#
SO
WP#
VSS
VDD
HOLD#
SCK
SI
ECC5 1u/4/X5R/6.3V/K
-SPI_HOLD_IT
ECR17 10/4 IT_HSCK
ECR18 10/4 IT_HMOSI
4M/SPI/SO8/200mil/S/[10HP4-112540-30R]
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