

Jan 15'09

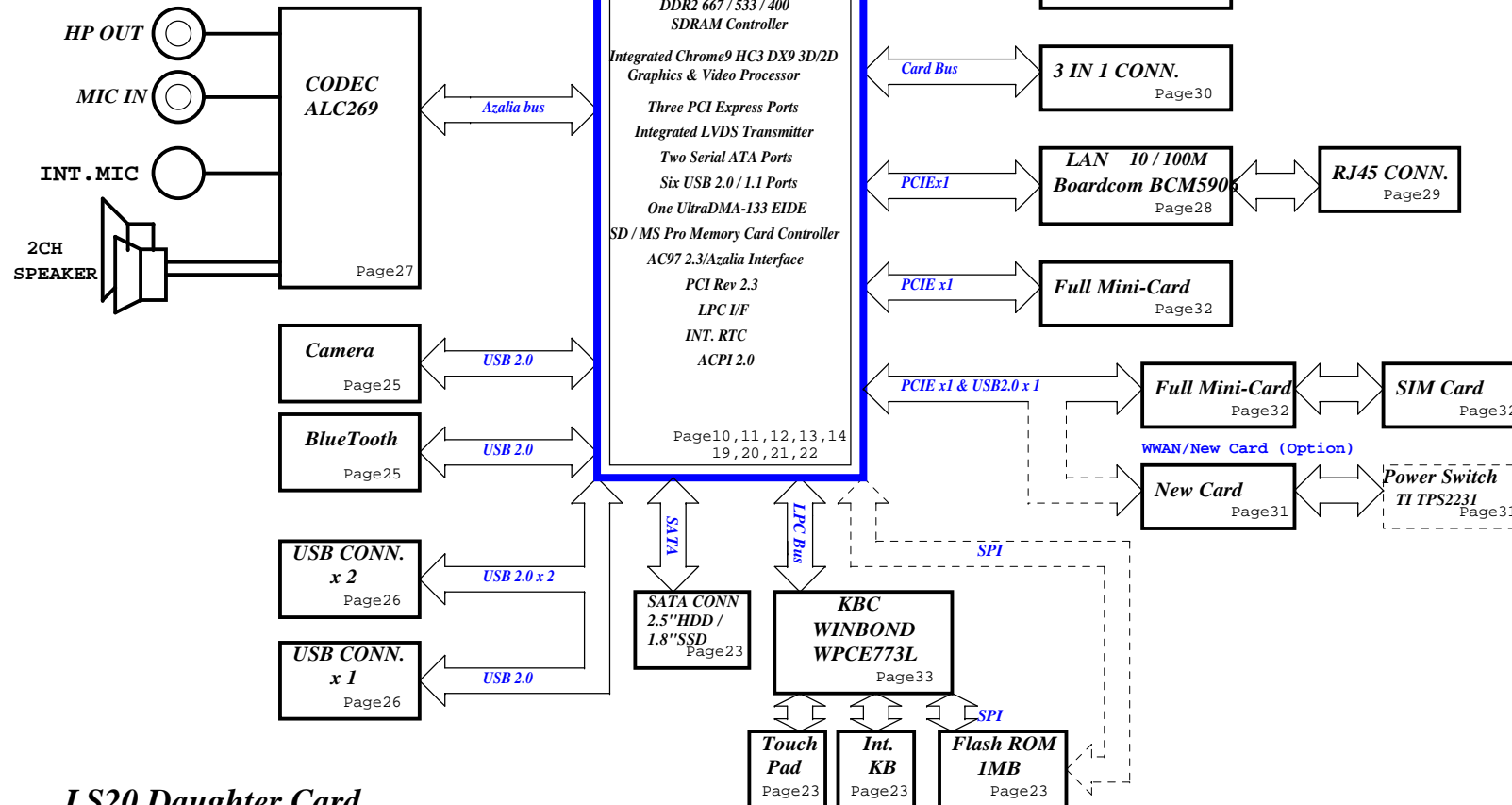
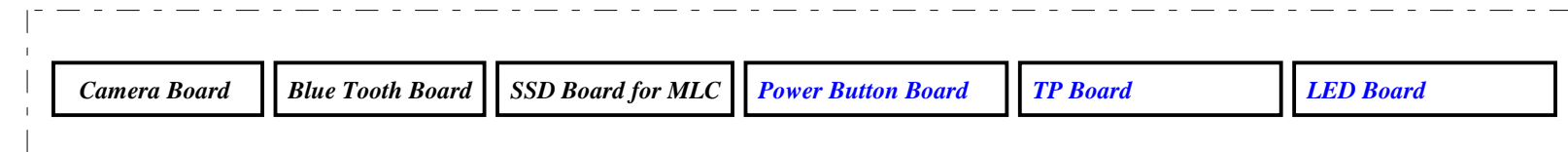
D

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LS20 Daughter Card



LS20-VIA Block Diagram

LS20-SB_0115

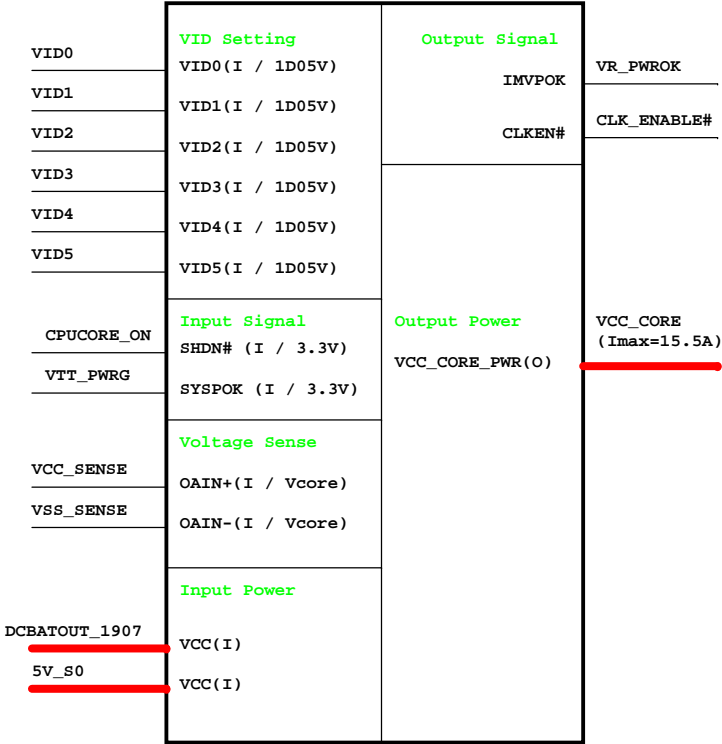
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L1:	Signal 1
L2:	VCC
L3:	Signal 2
L4:	Signal 3
L5:	GND
L6:	Signal 4

System DC/DC ISL62392	
INPUTS	OUTPUTS
DCBATOUT	5V_S5 3D3V_S5
Battery Charger/Selector BQ24705	
DCBATOUT	BT+
CPU DC/DC MAX1907	
DCBATOUT	VCC_CORE
SYSTEM DC / DC RT8207	
DCBATOUT	ID8V_S3 DDR2_VREF_S3 DDR2_VREF_S0
SYSTEM DC / DC NX2139A	
DCBATOUT	ID5V_S5
ID5V_S5	ID05V_S0

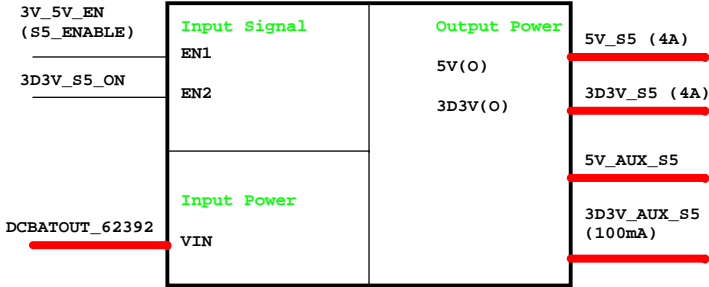
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21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C		
Title		
Block Diagram		
Size A3	Document Number	Rev SB
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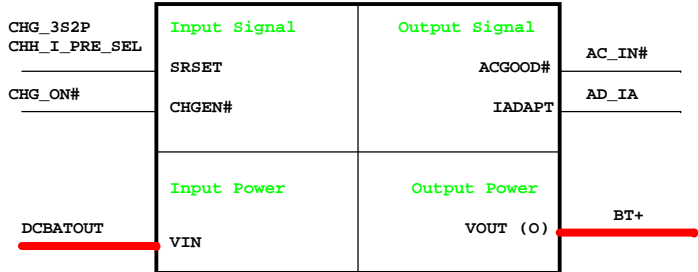
CPU_CORE - MAX1907



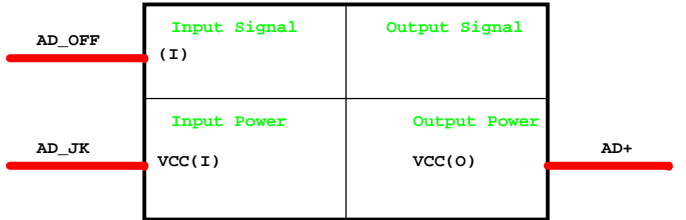
5V/3D3V - ISL62392



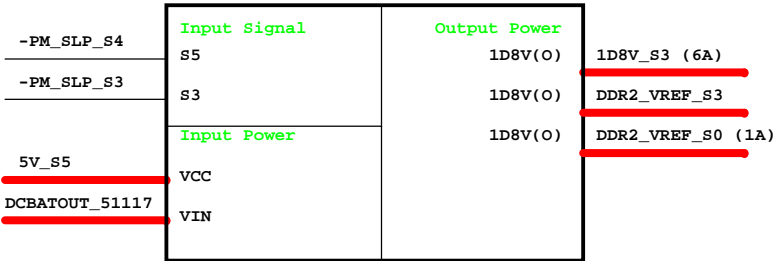
Charger - BQ24705



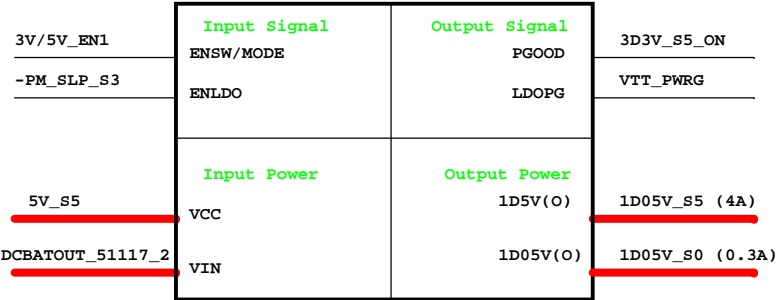
Adapter



1D8V - RT8207



1D5V/ 1D05V - NX2139

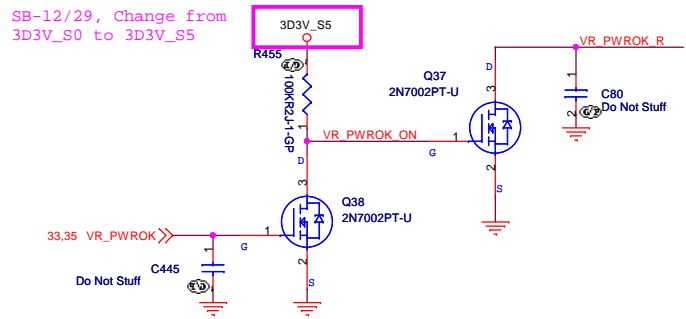
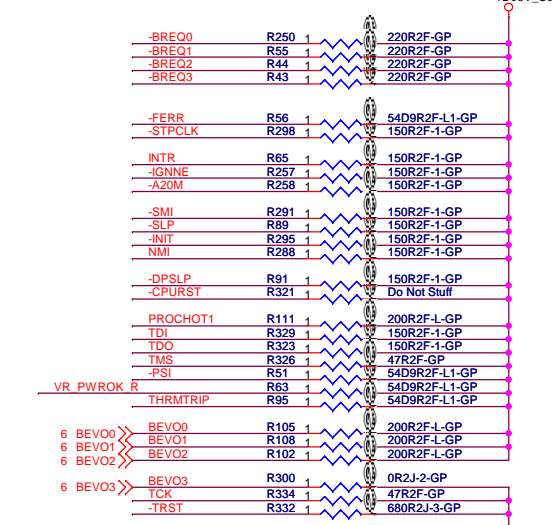


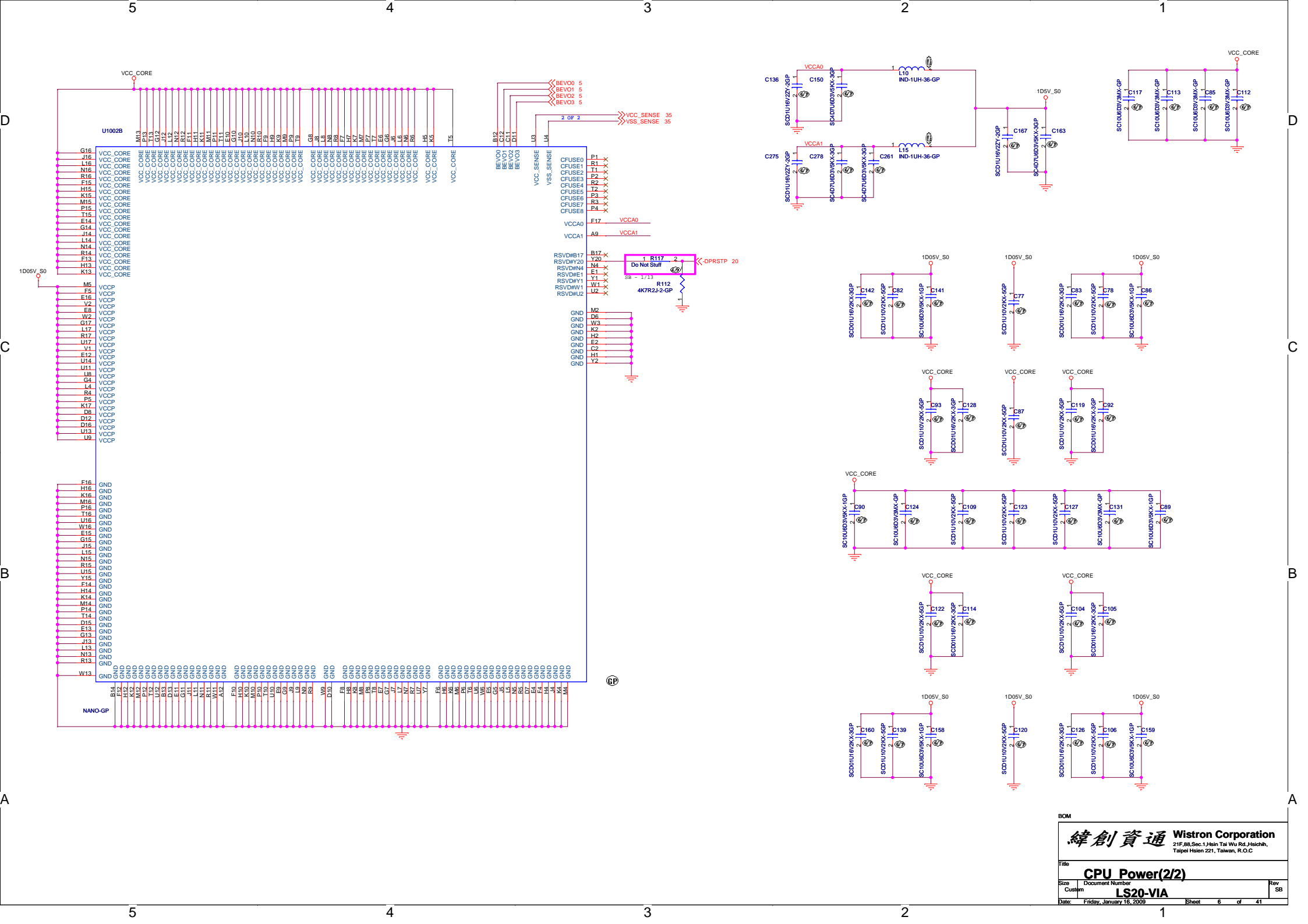
PLANAR_ID[3..0]

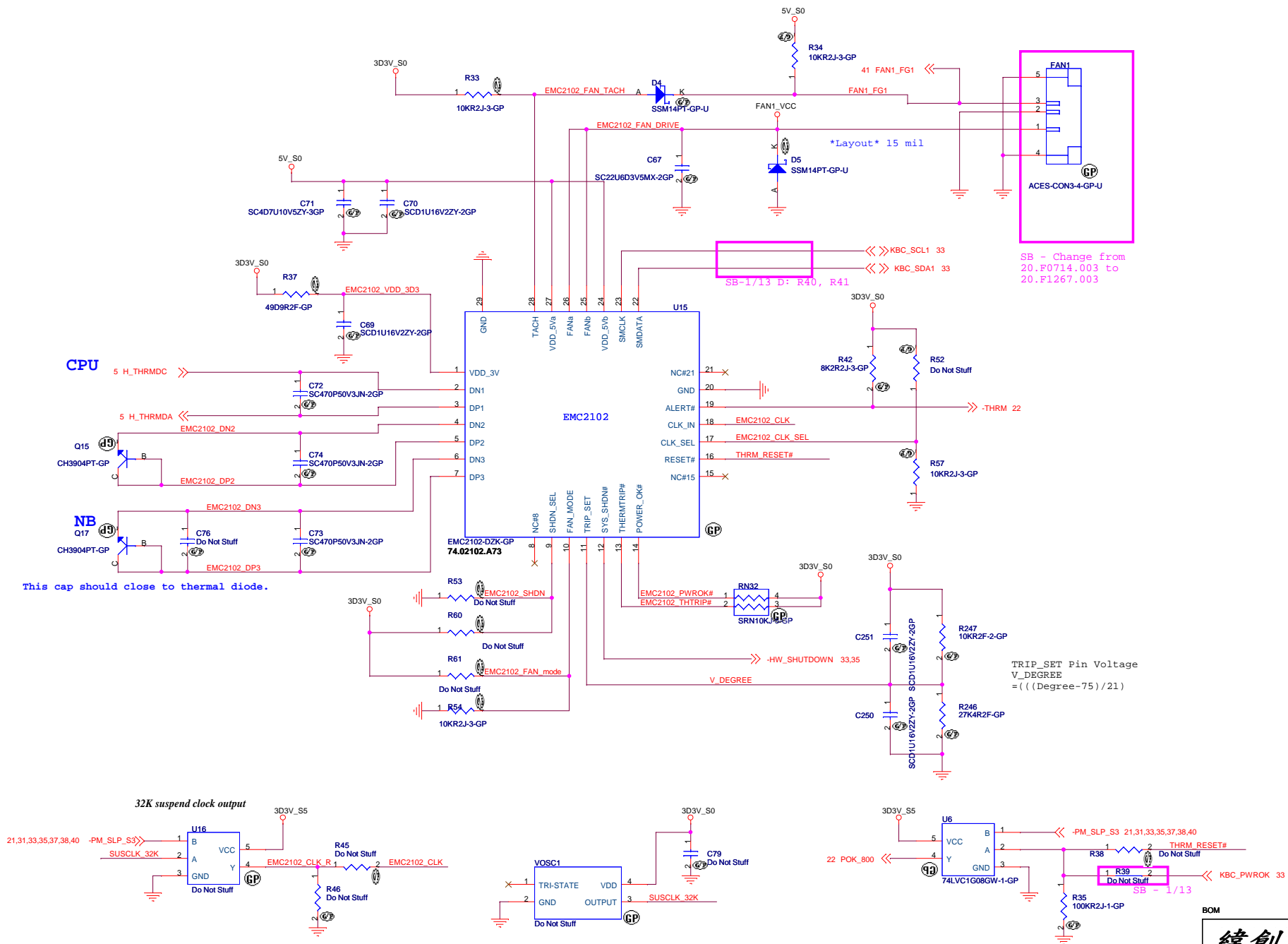
KBC	---	106	105	101	Planar ID Version	Planar PCB Version
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	0	0	0	1		
	0	0	1	0		
	0	0	1	1		
	0	1	0	0		
	0	1	0	1		
	0	1	1	0		
	0	1	1	1		

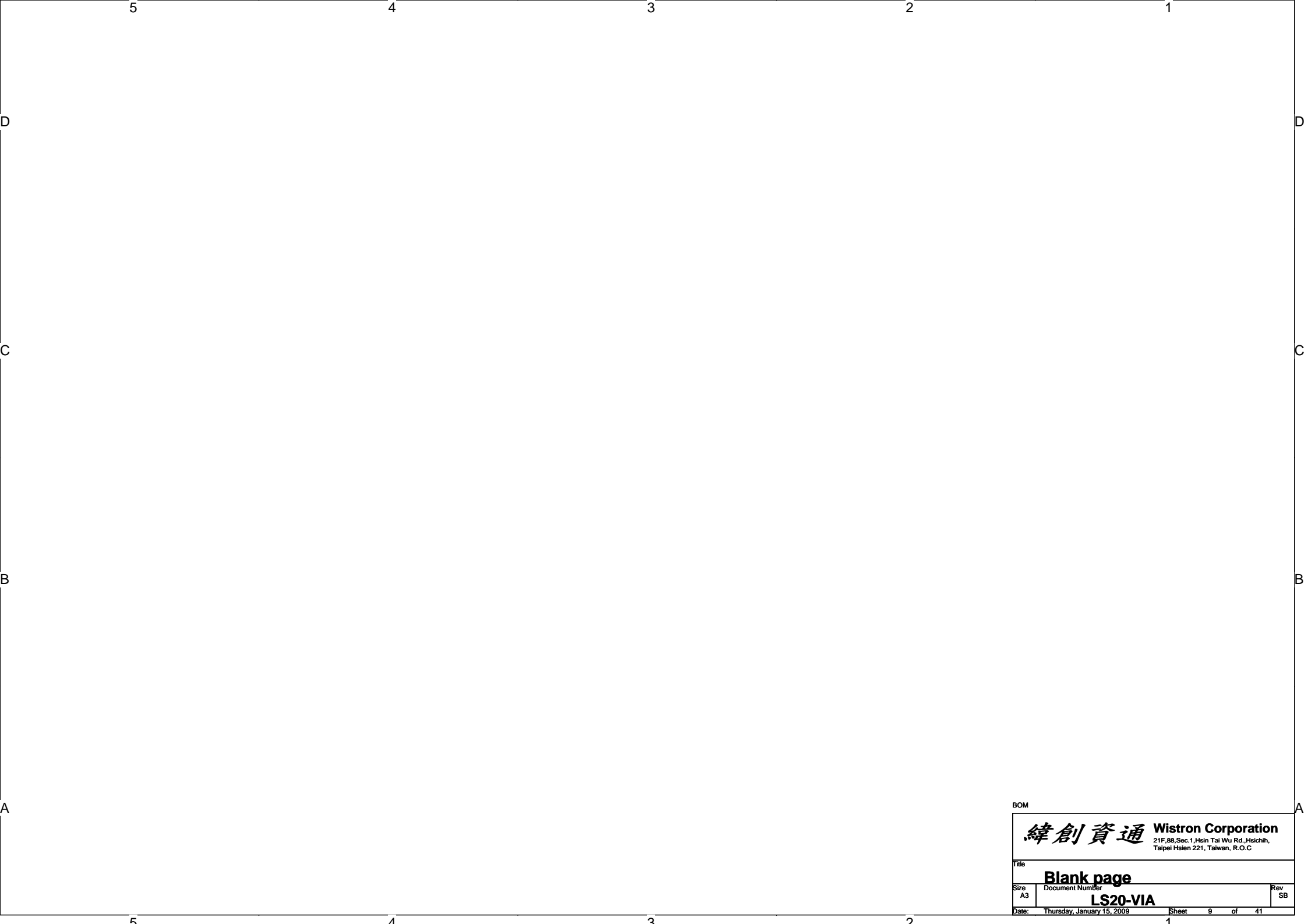
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Title		
Reference		
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4

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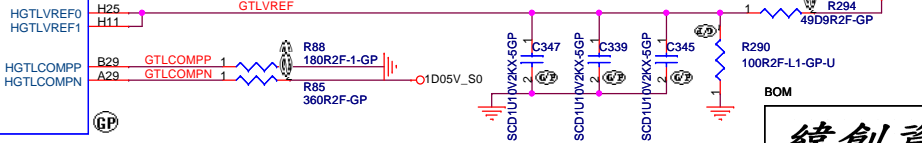
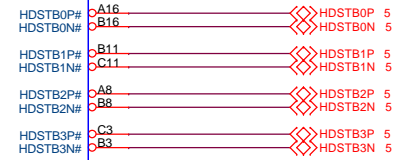
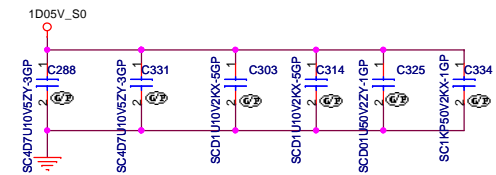
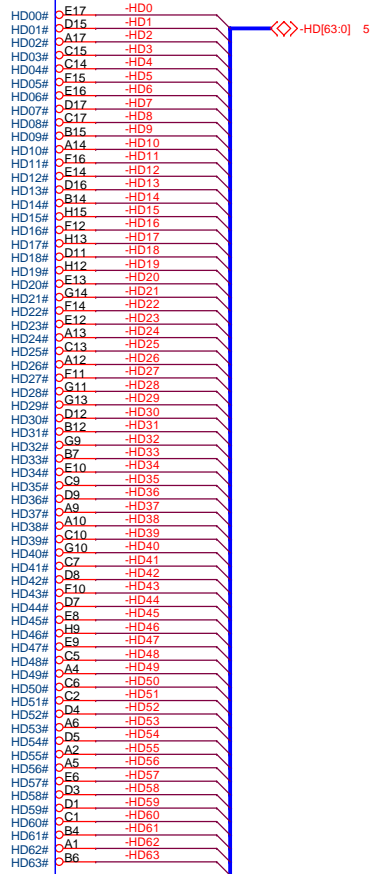
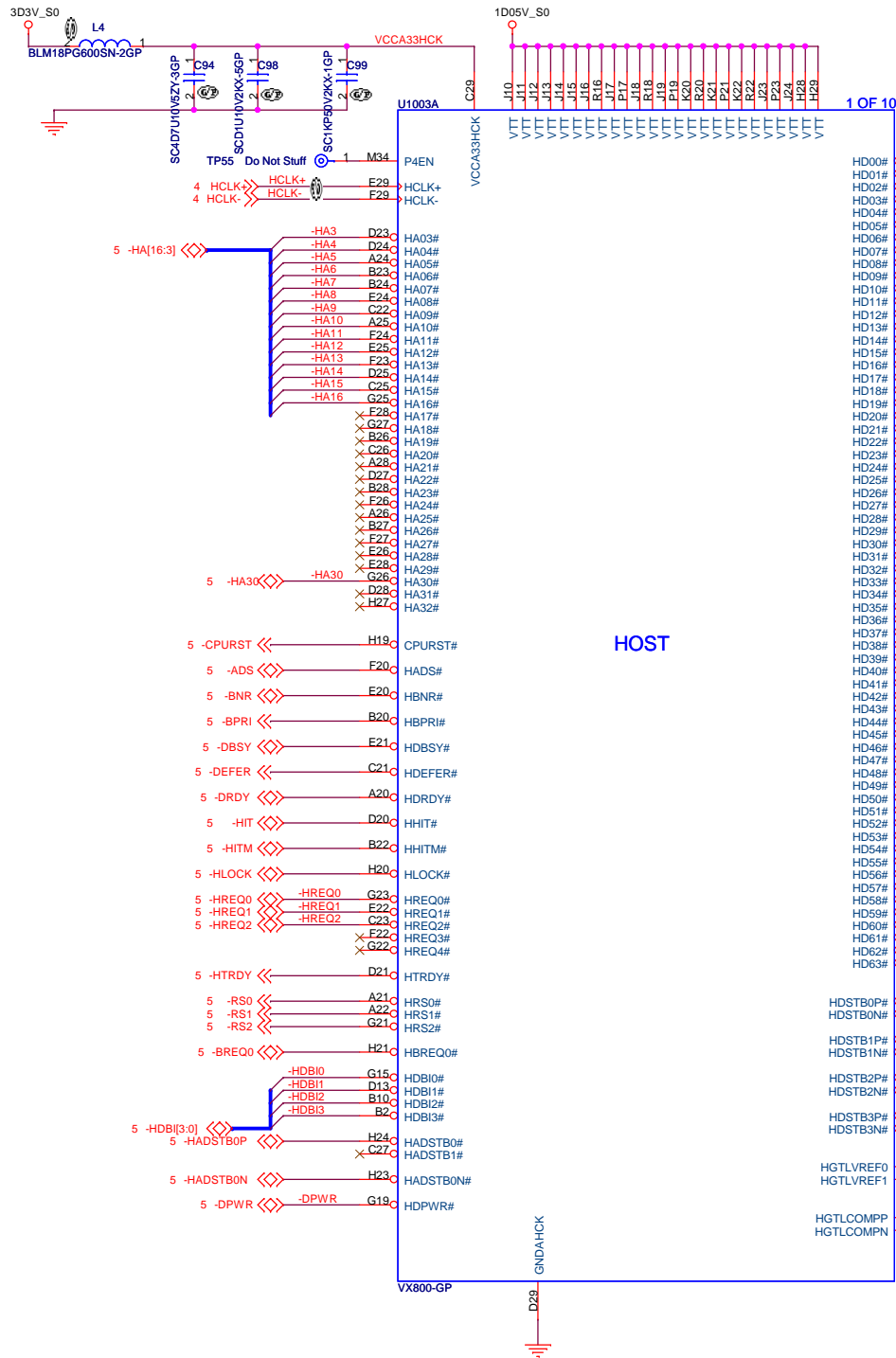
5

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17,18 M_A_DQ[63..0] <<>

M_A DQ0 AB34 MDA0
M_A DQ1 AB35 MDA1
M_A DQ2 Y34 MDA2
M_A DQ3 A333 MDA3
M_A DQ4 Y37 MDA4
M_A DQ5 AA36 MDA5
M_A DQ6 AA34 MDA6
M_A DQ7 Y36 MDA7
M_A DQ8 W37 MDA8
M_A DQ9 V35 MDA9
M_A DQ10 Y34 MDA10
M_A DQ11 W34 MDA11
M_A DQ12 W36 MDA12
M_A DQ13 W35 MDA13
M_A DQ14 Y33 MDA14
M_A DQ15 V33 MDA15
M_A DQ16 U37 MDA16
M_A DQ17 U36 MDA17
M_A DQ18 R36 MDA18
M_A DQ19 T36 MDA19
M_A DQ20 U40 MDA20
M_A DQ21 U38 MDA21
M_A DQ22 T35 MDA22
M_A DQ23 T37 MDA23
M_A DQ24 R35 MDA24
M_A DQ25 R34 MDA25
M_A DQ26 N34 MDA26
M_A DQ27 P34 MDA27
M_A DQ28 T33 MDA28
M_A DQ29 R37 MDA29
M_A DQ30 N33 MDA30
M_A DQ31 R33 MDA31
M_A DQ32 C38 MDA32
M_A DQ33 D37 MDA33
M_A DQ34 C37 MDA34
M_A DQ35 A38 MDA35
M_A DQ36 F36 MDA36
M_A DQ37 C39 MDA37
M_A DQ38 B38 MDA38
M_A DQ39 A37 MDA39
M_A DQ40 E36 MDA40
M_A DQ41 D36 MDA41
M_A DQ42 B34 MDA42
M_A DQ43 E34 MDA43
M_A DQ44 B36 MDA44
M_A DQ45 A36 MDA45
M_A DQ46 C34 MDA46
M_A DQ47 C34 MDA47
M_A DQ48 F34 MDA48
M_A DQ49 E32 MDA49
M_A DQ50 C33 MDA50
M_A DQ51 B32 MDA51
M_A DQ52 G33 MDA52
M_A DQ53 G32 MDA53
M_A DQ54 A33 MDA54
M_A DQ55 C32 MDA55
M_A DQ56 F31 MDA56
M_A DQ57 G30 MDA57
M_A DQ58 D30 MDA58
M_A DQ59 H30 MDA59
M_A DQ60 H32 MDA60
M_A DQ61 G31 MDA61
M_A DQ62 C30 MDA62
M_A DQ63 E30 MDA63

17,18 M_A_BS0 J34 MBAA0
17,18 M_A_BS1 J37 MBAA1
17,18 M_A_BS2 K35 MBAA2

17,18 -M_A_RAS H36C MSRASA#
17,18 -M_A_CAS H40C MSCASA#
17,18 -M_A_WE G40C MSWEA#

MEMORY CH - A

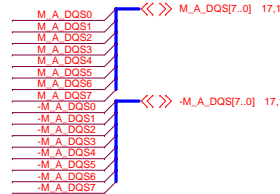
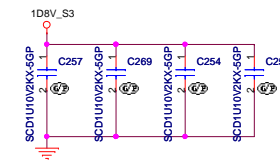
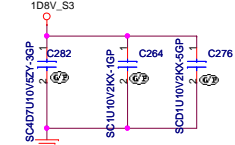
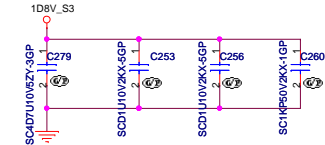
U1003B

VX800-GP

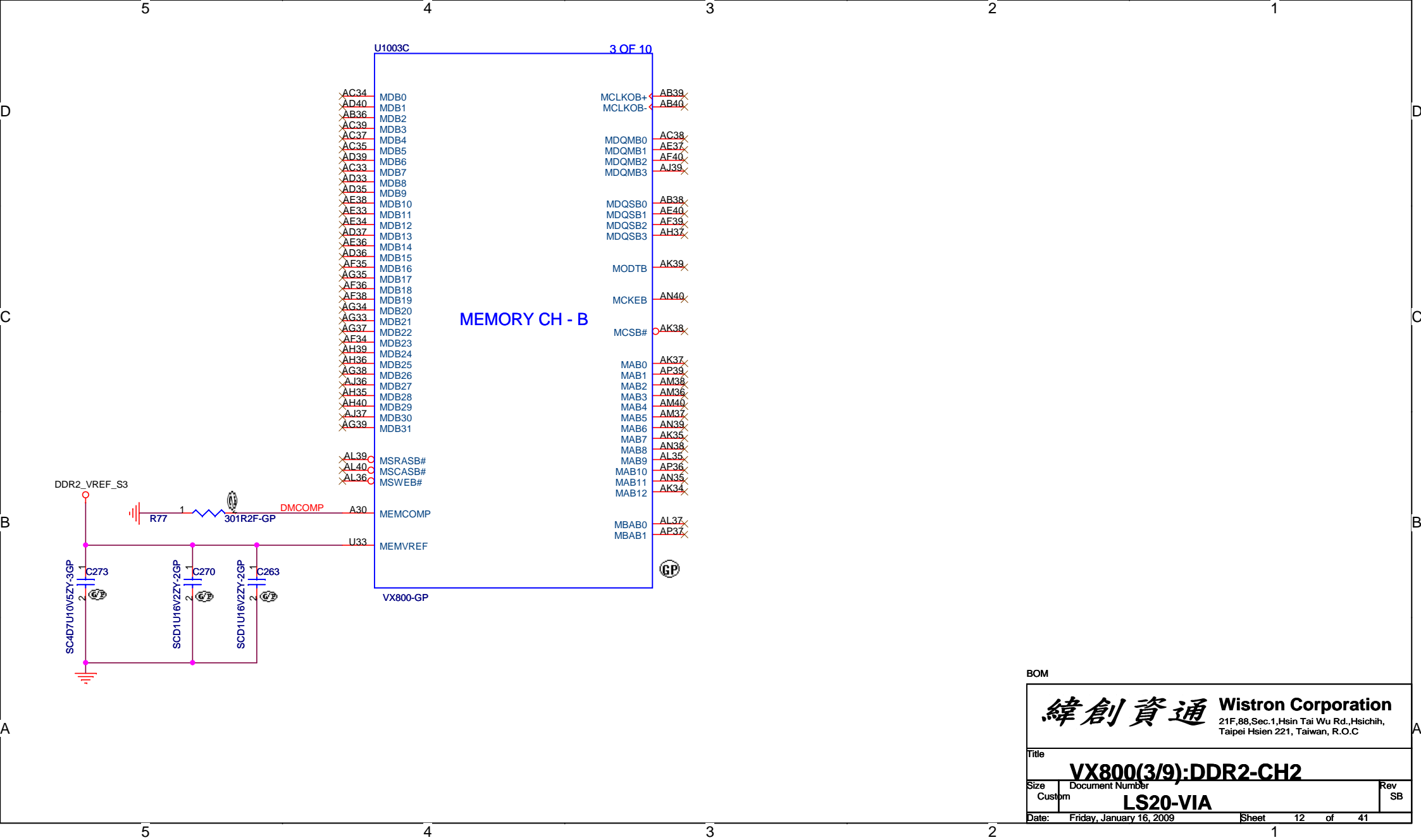
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GP

MCLKOA0+ AA37 MCLKOA0+ 1 R252 22R2J-2-GP >>> DDRCLK0_533M 16,17
MCLKOA0- AA38 MCLKOA0- 1 R253 22R2J-2-GP >>> -DDRCLK0_533M 16,17
MCLKOA1+ N37 MCLKOA1+ 1 R248 22R2J-2-GP >>> DDRCLK1_533M 18
MCLKOA1- N38 MCLKOA1- 1 R249 22R2J-2-GP >>> -DDRCLK1_533M 18
MCLKOA2+ V40 MCLKOA2+ 1 R50 22R2J-2-GP >>> DDRCLK2_533M 18
MCLKOA2- V39 MCLKOA2- 1 R49 22R2J-2-GP >>> -DDRCLK2_533M 18
MCLKOA3+ D39 MCLKOA3+ 1 R47 22R2J-2-GP >>> DDRCLK3_533M 16,17
MCLKOA3- D40 MCLKOA3- 1 R48 22R2J-2-GP >>> -DDRCLK3_533M 16,17
MCLKOA4+ N40 X
MCLKOA4- P40 X
MCLKOA5+ P39 X
MCLKOA5- P38 X
MDQMA0 AA40 M_A DM0 >>> M_A_DM[7..0] 17,18
MDQMA1 V38 M_A DM1
MDQMA2 R39 M_A DM2
MDQMA3 N36 M_A DM3
MDQMA4 B30 M_A DM4
MDQMA5 D35 M_A DM5
MDQMA6 D32 M_A DM6
MDQMA7 E31 M_A DM7
MDQSA0+ Y39 M_A DQS0
MDQSA0- Y40 -M_A DQS0
MDQSA1+ W39 M_A DQS1
MDQSA1- W38 -M_A DQS1
MDQSA2+ T39 M_A DQS2
MDQSA2- T40 -M_A DQS2
MDQSA3+ P36 M_A DQS3
MDQSA3- P35 -M_A DQS3
MDQSA4+ A40 M_A DQS4
MDQSA4- B40 -M_A DQS4
MDQSA5+ B35 M_A DQS5
MDQSA5- C35 -M_A DQS5
MDQSA6+ D33 M_A DQS6
MDQSA6- E33 -M_A DQS6
MDQSA7+ B31 M_A DQS7
MDQSA7- A31 -M_A DQS7
MODTA0 H39 >>> M_ODT0 17,18
MODTA1 E38 M_ODT1 >>> M_ODT0 17,18 Do Not Stuff TP10
MODTA2 G37 >>> M_ODT2 18
MODTA3 F37 >>> M_ODT3 18
MCKEA0 K33 M_CKE1 >>> M_CKE0 17,18
MCKEA1 L33 >>> M_CKE2 18 Do Not Stuff TP54
MCKEA2 L35 >>> M_CKE3 18
MCSA0+ F39 -M_CS1 >>> -M_CS0 17,18
MCSA1+ F40 -M_CS2 >>> -M_CS2 18 Do Not Stuff TP6
MCSA2+ G38 -M_CS3 >>> -M_CS3 18
MCSA3+ E39
MAA0 J38 M_A A0 >>> M_A_A[13..0] 17,18
MAA1 L37 M_A A1
MAA2 K36 M_A A2
MAA3 K39 M_A A3
MAA4 K37 M_A A4
MAA5 L39 M_A A5
MAA6 J35 M_A A6
MAA7 K33 M_A A7
MAA8 K40 M_A A8
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MAA11 L40 M_A A11
MAA12 M38 M_A A12
MAA13 H38 M_A A13



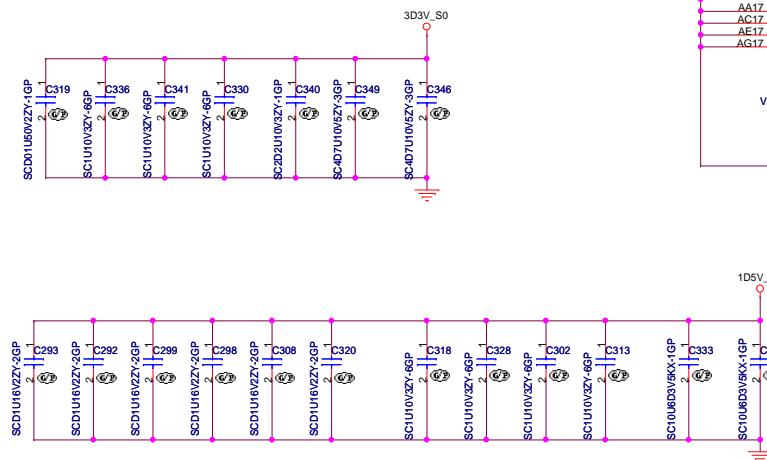
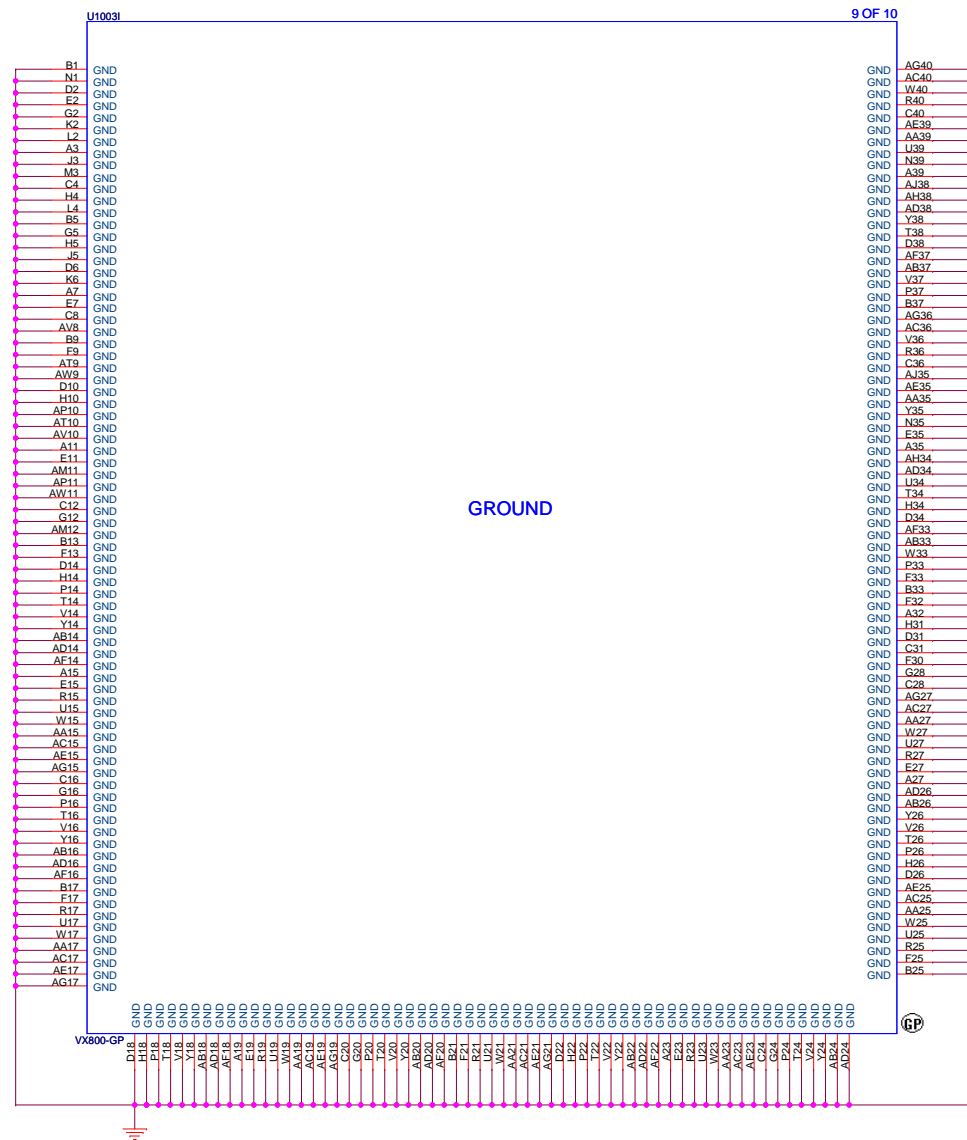
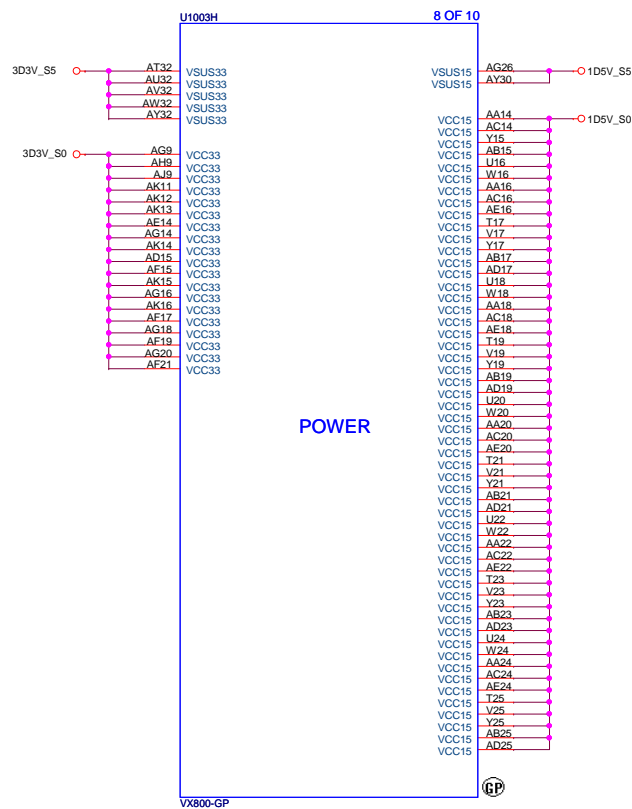
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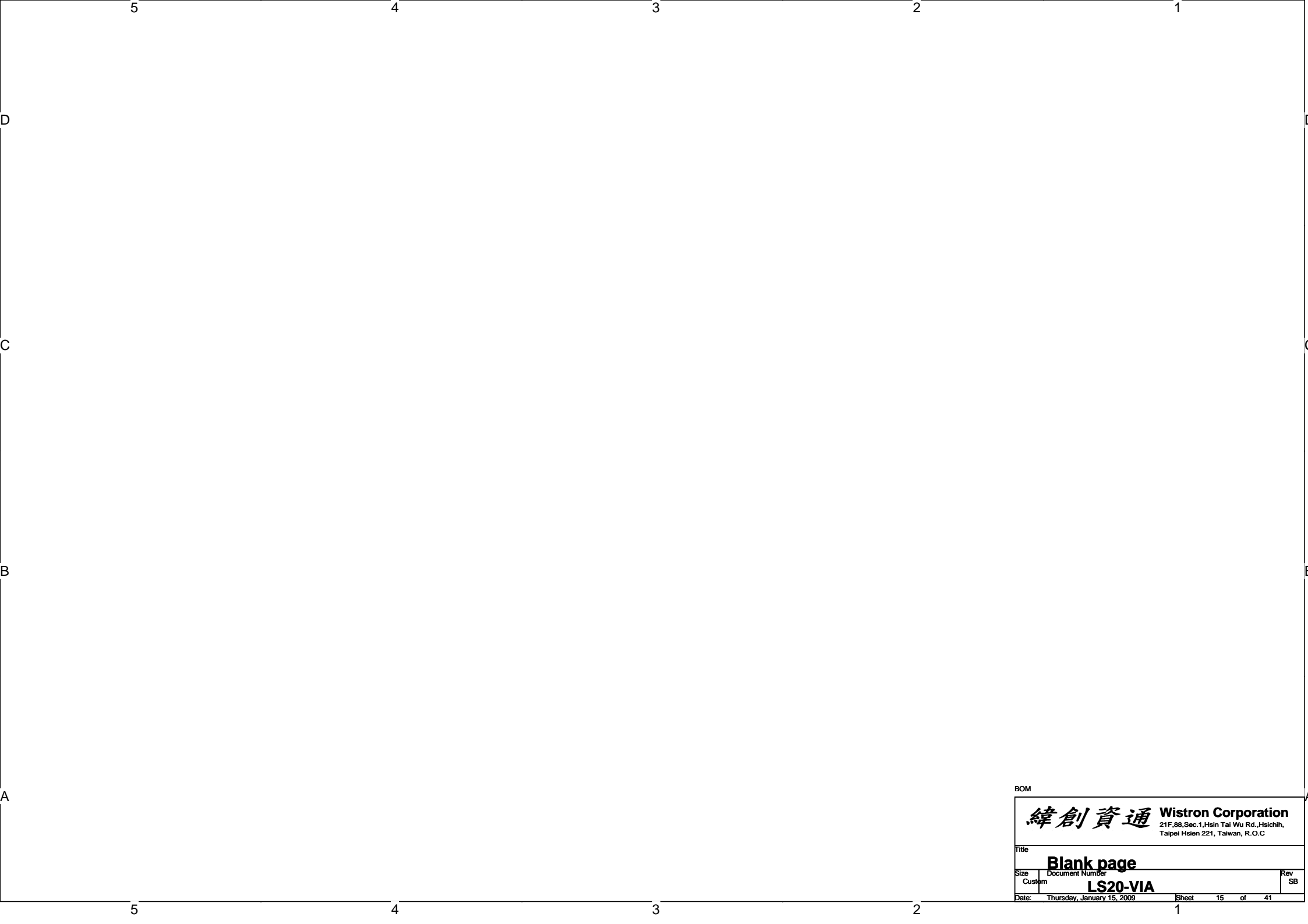


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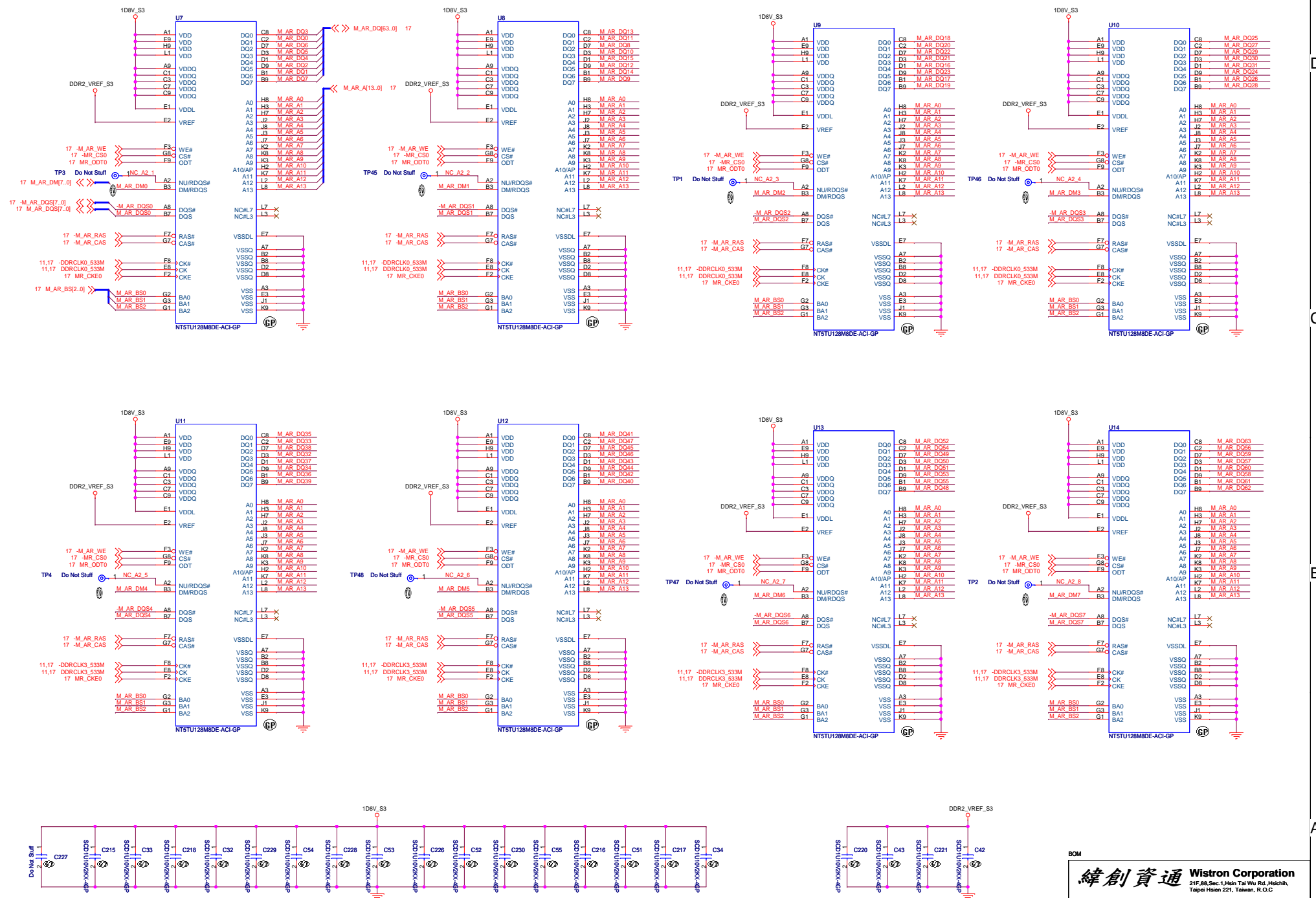


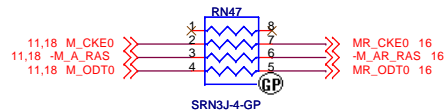
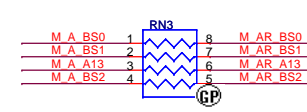
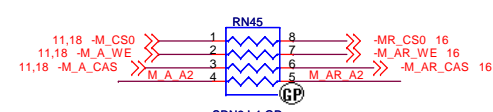
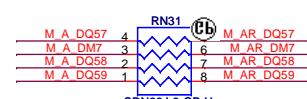
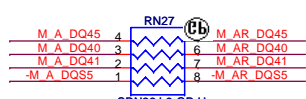
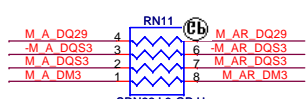
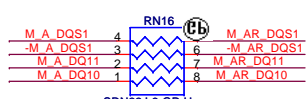
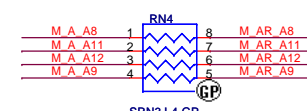
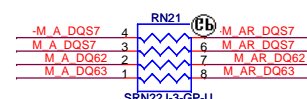
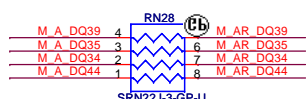
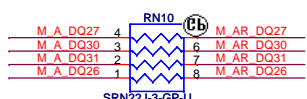
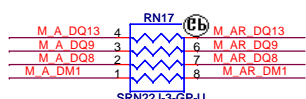
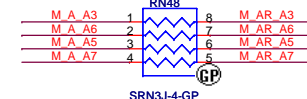
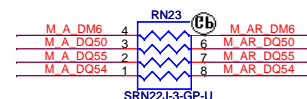
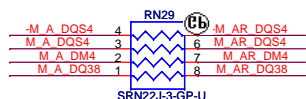
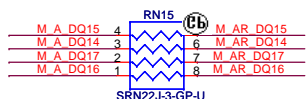
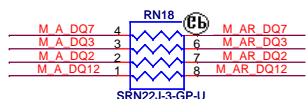
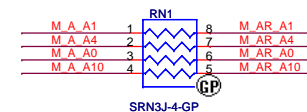
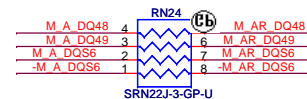
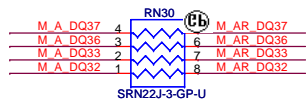
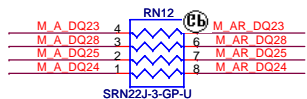
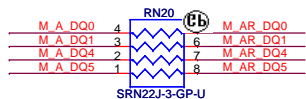
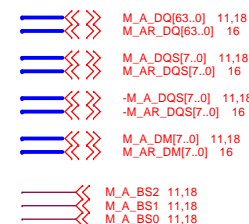
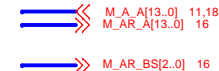
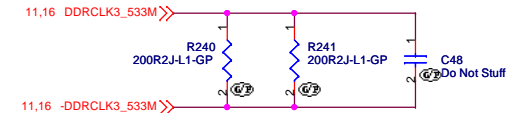
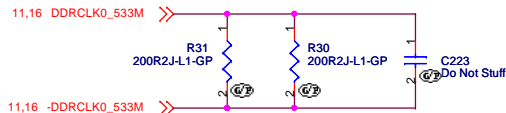
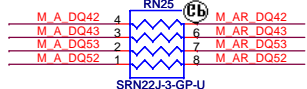
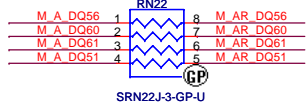
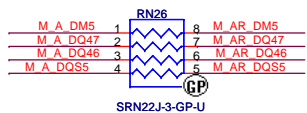
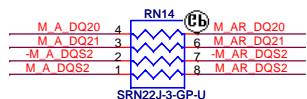
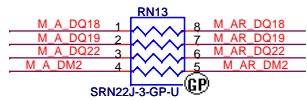
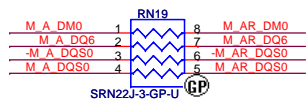


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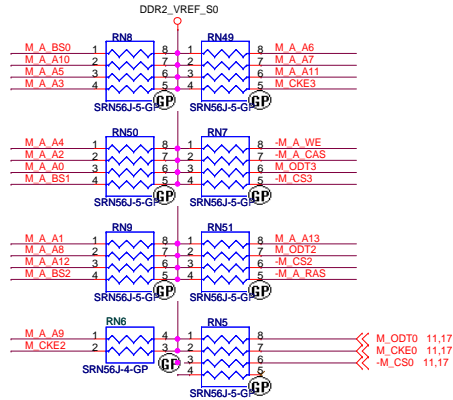
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On-board DDR2 Memory

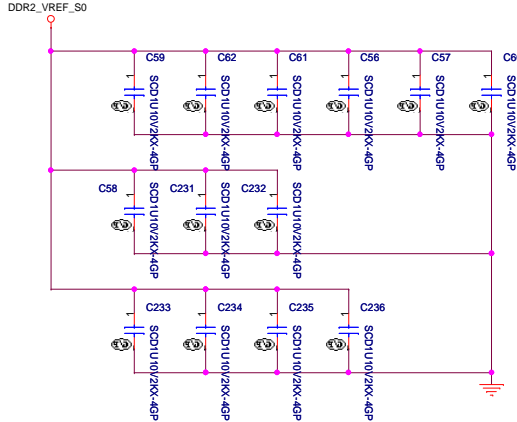




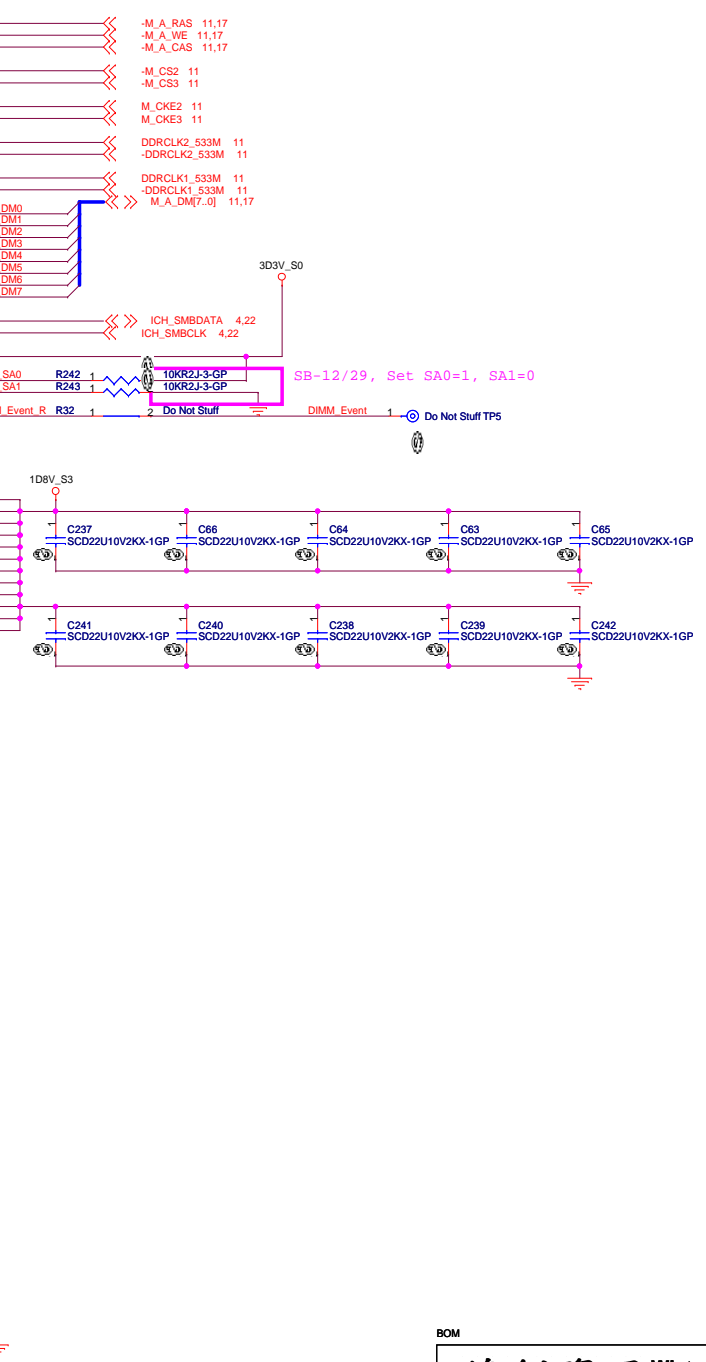
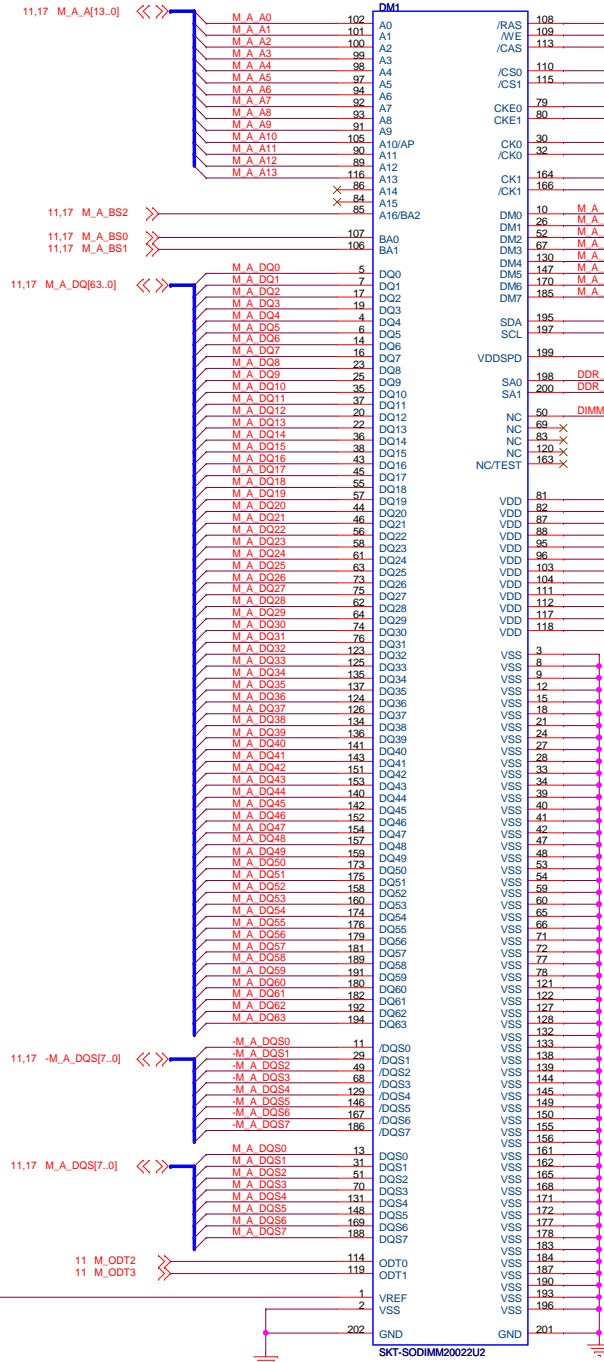
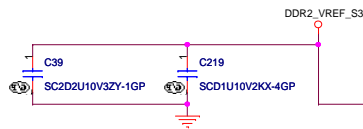
CHANNEL A PARALLEL TERMINATION



PLACE 1 CAP FOR EVERY 2 BITS TERMINATION TO VCC0R9B.

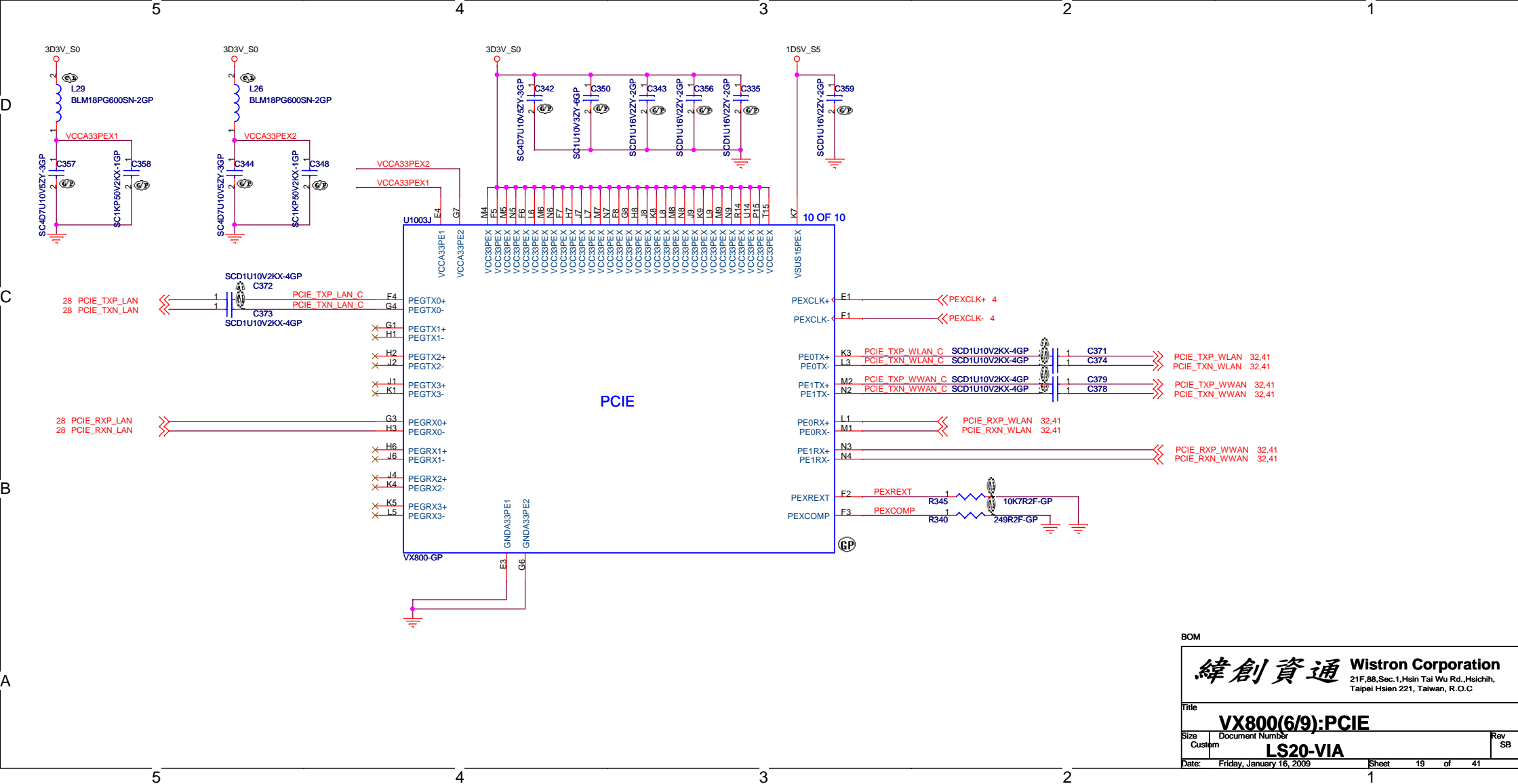


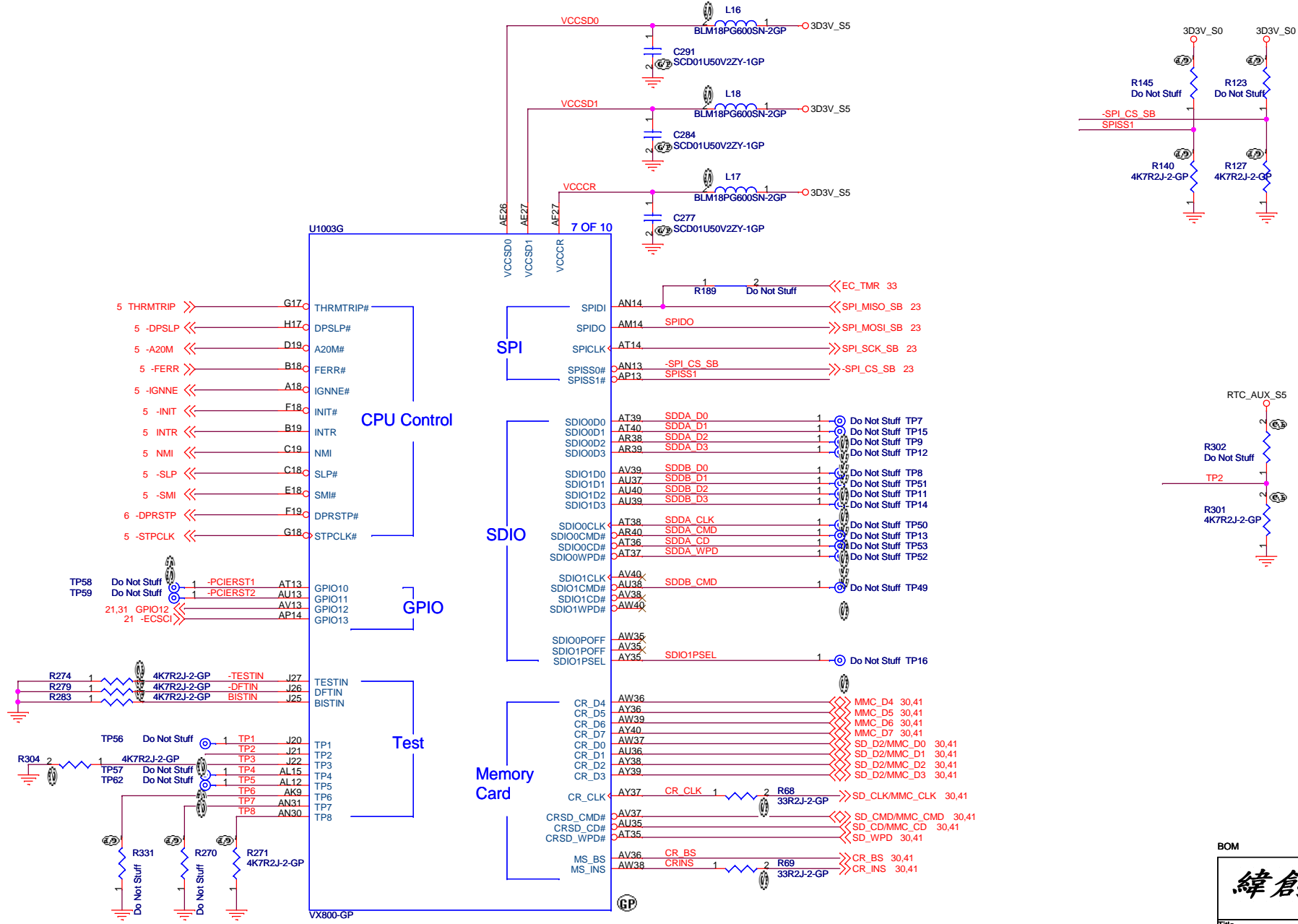
DDR SLOT2 RELATED CAPS ARE REMOVED!



BOM

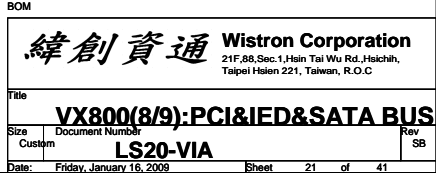
緯創資通 Wistron Corporation 21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsinchu, Taipei Hsien 221, Taiwan, R.O.C.			
Title: DDR2.SODIMM-B			
Size	Document Number	Rev	
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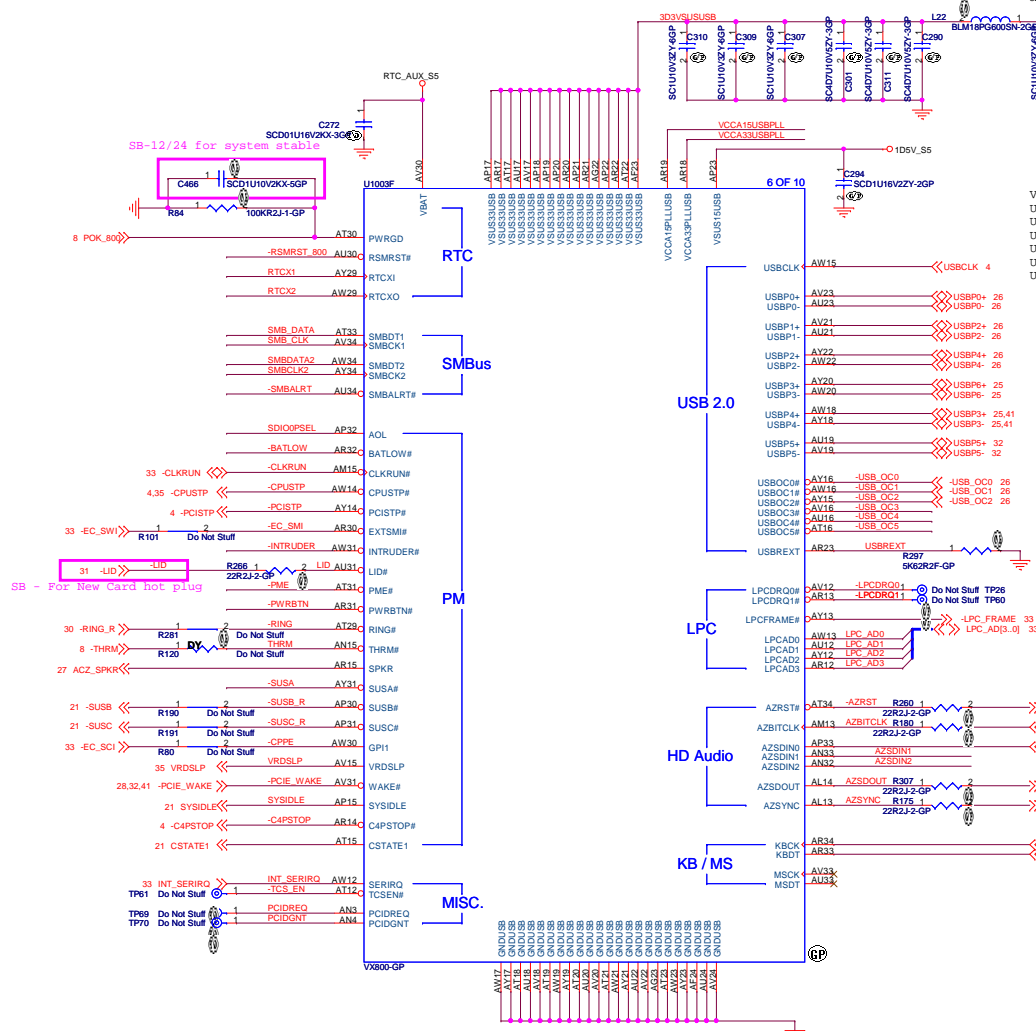
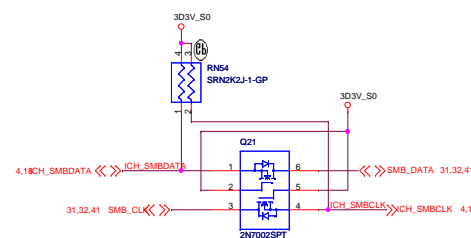
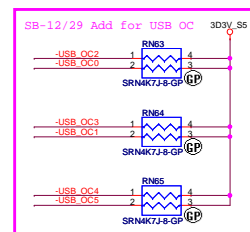
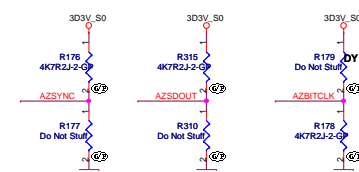
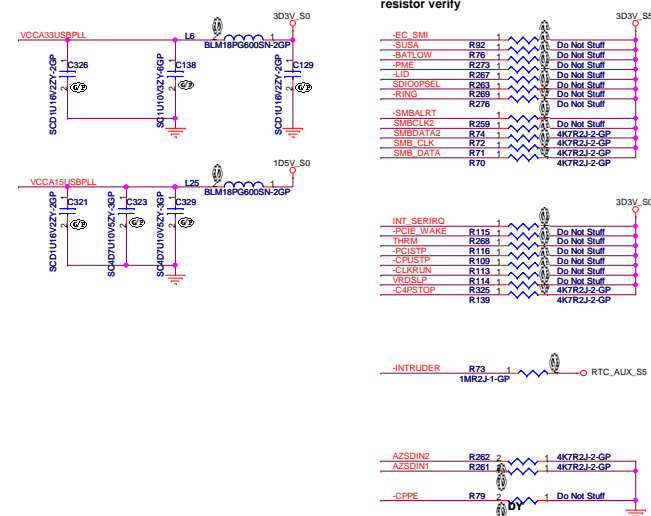
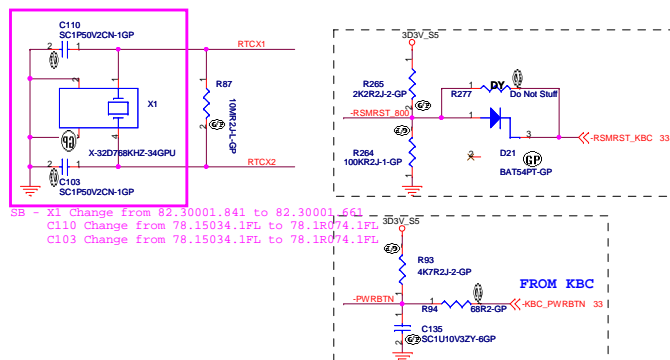
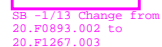




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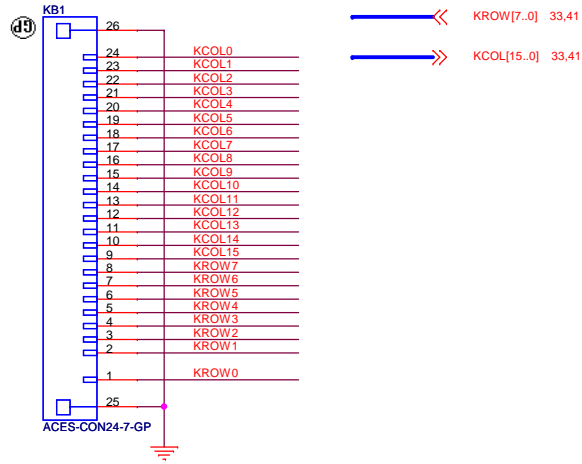
緯創資通 Wistron Corporation 21F,88,Sec.1,Hsin Tai Wu Rd.,Hsichih, Taipei Hsien 221, Taiwan, R.O.C			
Title: VX800(7/9):SPI/SDIO/CR			
Size	Document Number	Rev	
Custom	LS20-VIA	SB	
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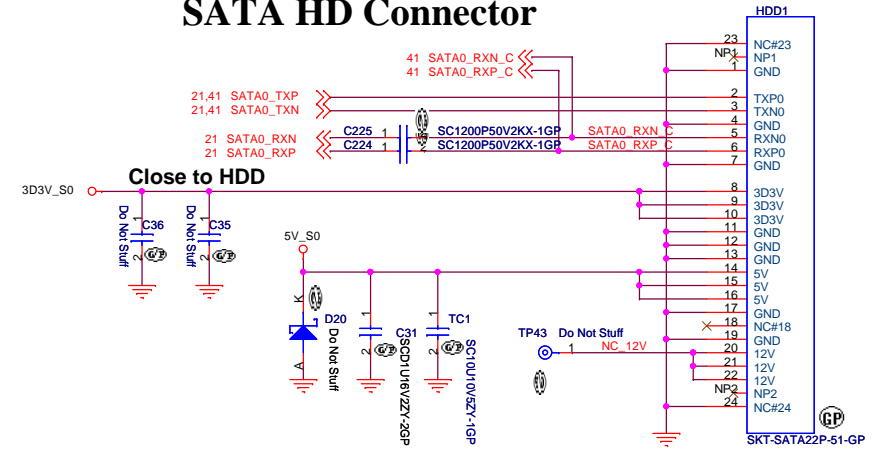


```
VX800 USB
USB0 --> External USB1
USB1 --> External USB2
USB2 --> External USB3
USB3 --> Camera
USB4 --> BlueTooth
USB5 --> Mini-PCIE (WWAN) /New Card
```

Internal KeyBoard Connector

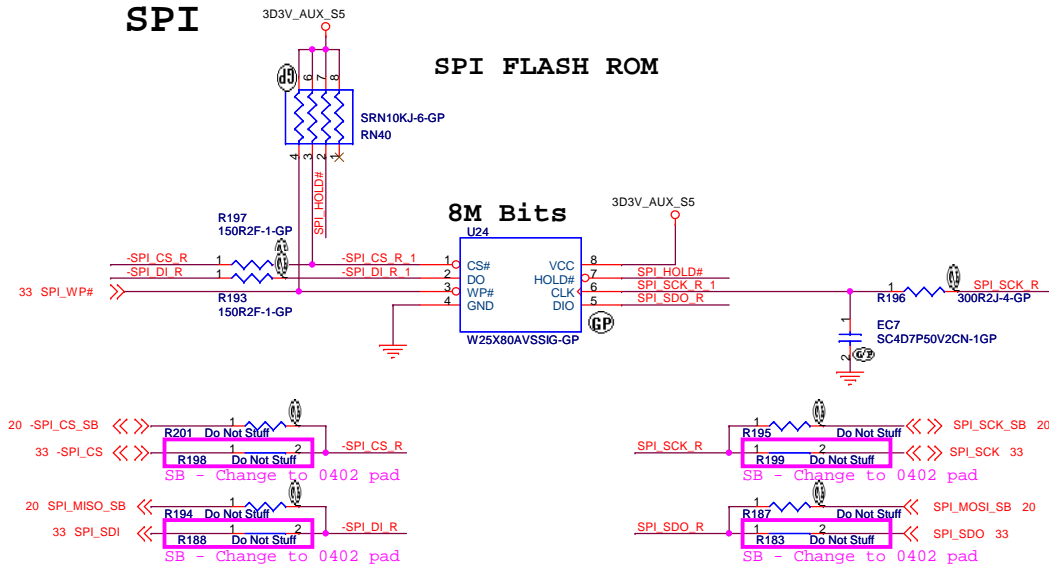


SATA HD Connector

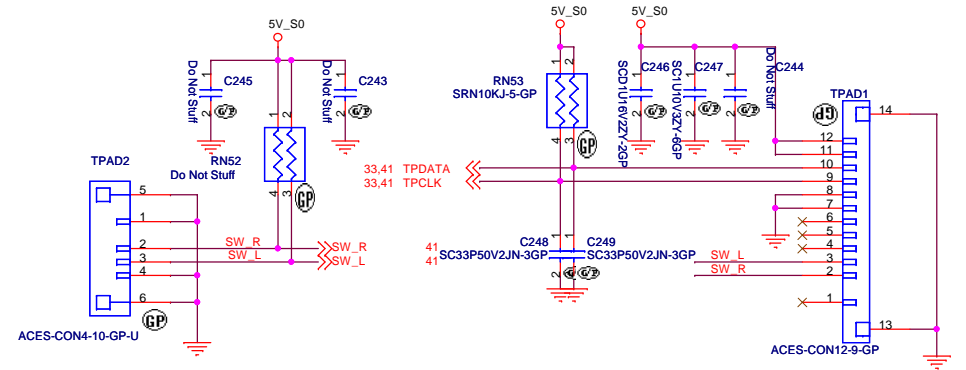


SPI

SPI FLASH ROM



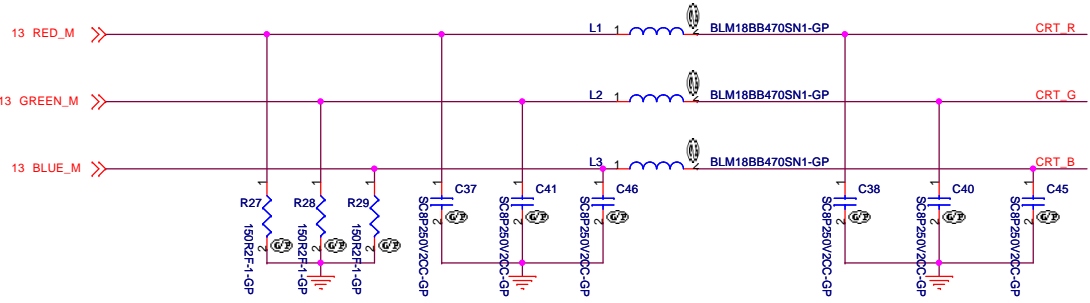
TouchPad Connector



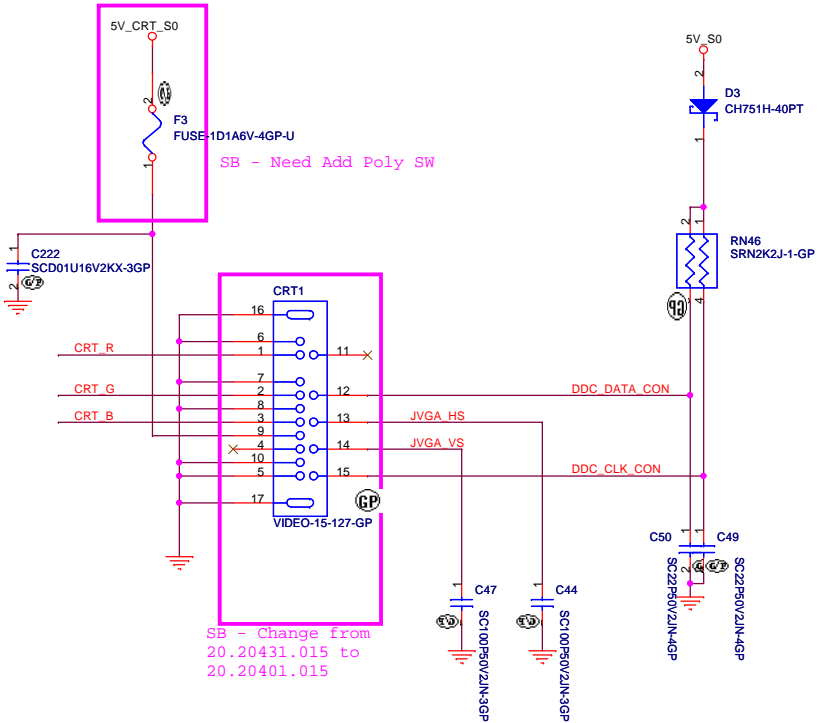
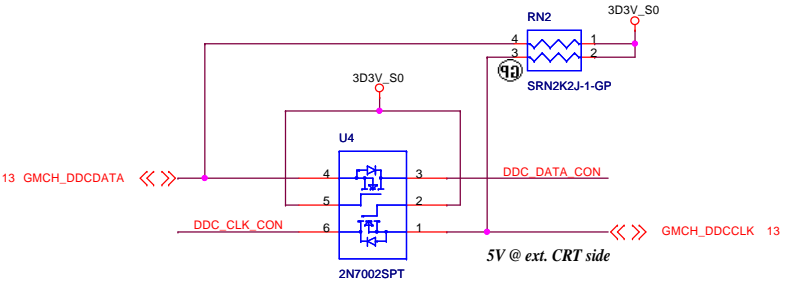
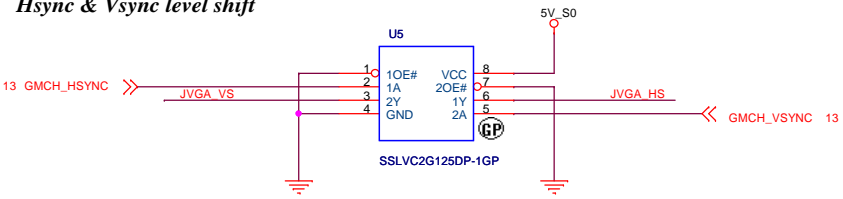
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緯創資通 Wistron Corporation	
21F,88,Sec.1,Hsin Tai Wu Rd.,Hsieh, Taipai Hsien 221, Taiwan, R.O.C	
Title	
HDD/KeyBoard/FWH/TouchPad	
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CRT I/F & CONNECTOR



Hsync & Vsync level shift



To test pad

- 41 CRT_R <<> CRT_R
- 41 CRT_G <<> CRT_G
- 41 CRT_B <<> CRT_B
- 41 JVGA_HS <<> JVGA_HS
- 41 JVGA_VS <<> JVGA_VS
- 41 DDC_DATA_CON <<> DDC_DATA_CON
- 41 DDC_CLK_CON <<> DDC_CLK_CON

緯創資通

Wistron Corporation

21F,88,Sec.1,Hsin Tai Wu Rd.,Hsichih,
Taipei Hsien 221, Taiwan, R.O.C

Title

CRT CONN

Size

Custom

Document Number

LS20-VIA

Date:

Friday, January 16, 2009

Sheet

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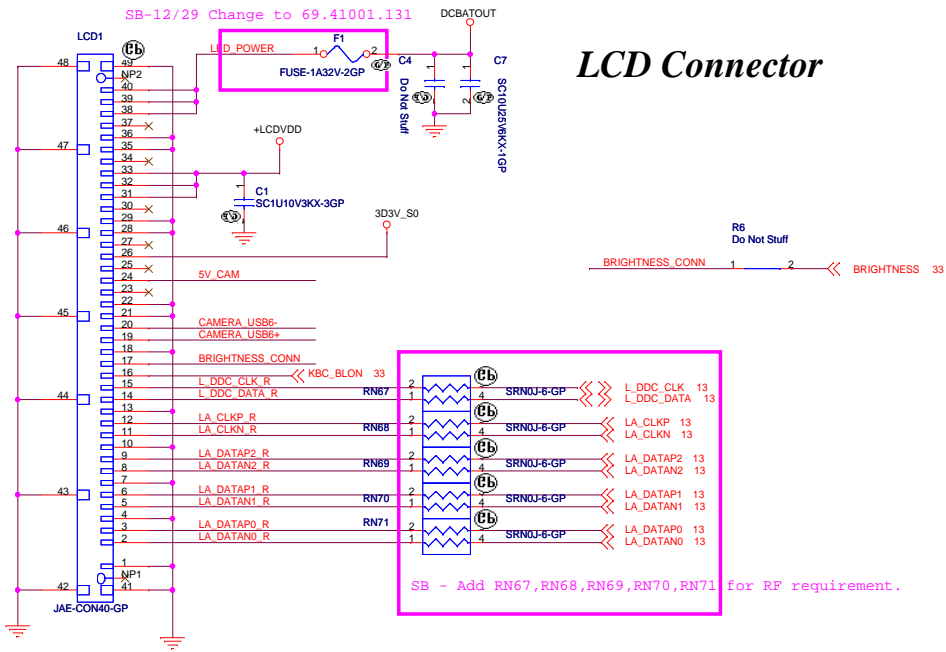
of

41

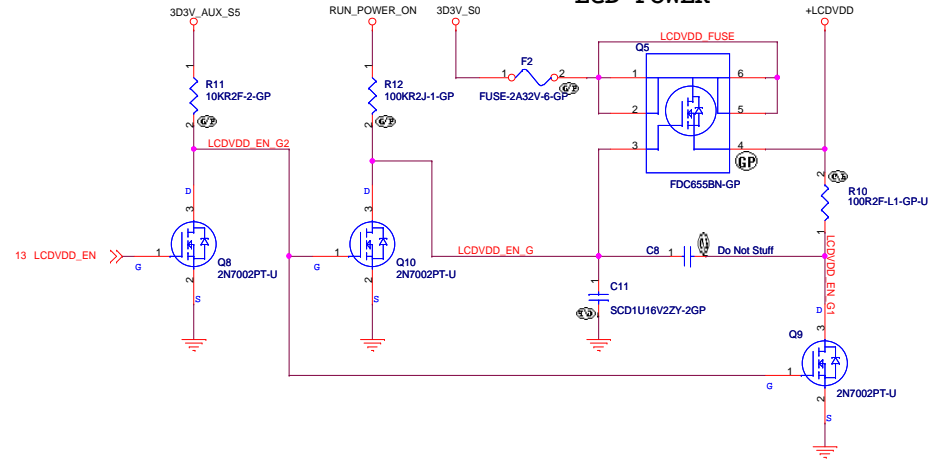
Rev

SB

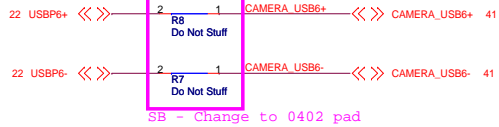
LCD Connector



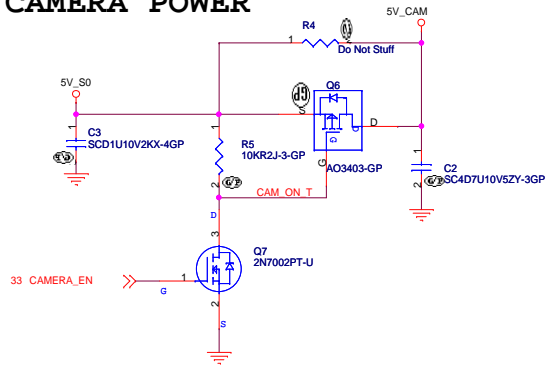
LCD POWER



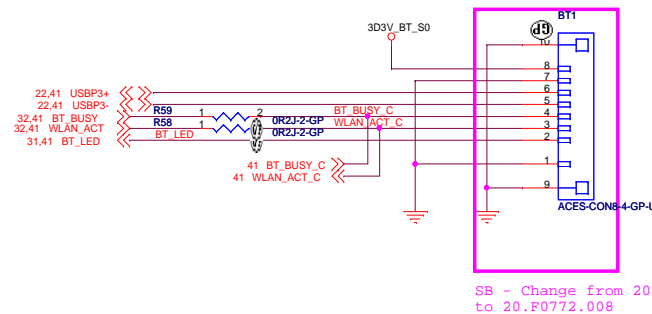
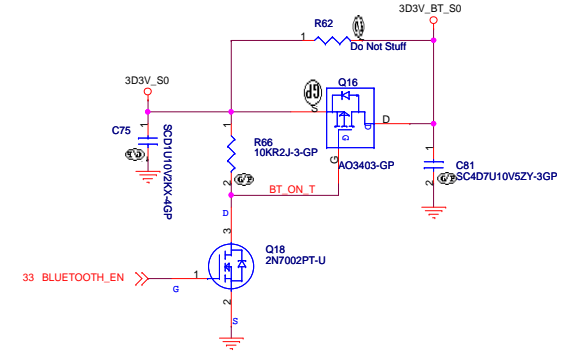
CAMERA



CAMERA POWER



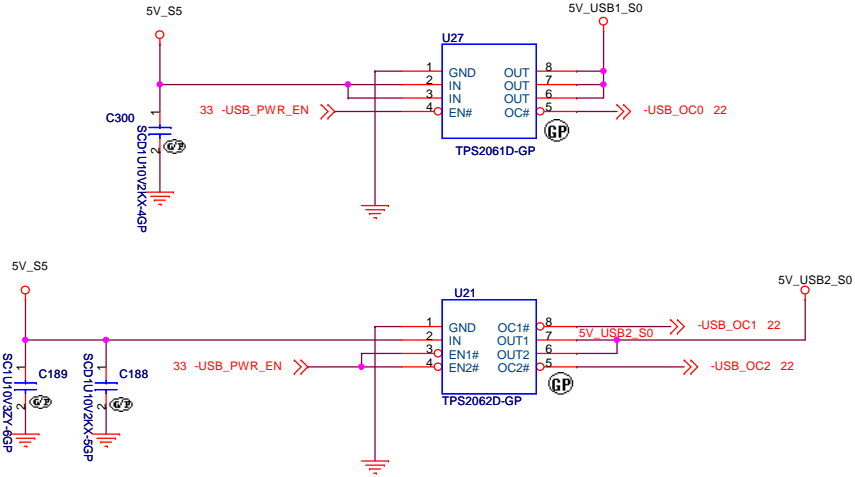
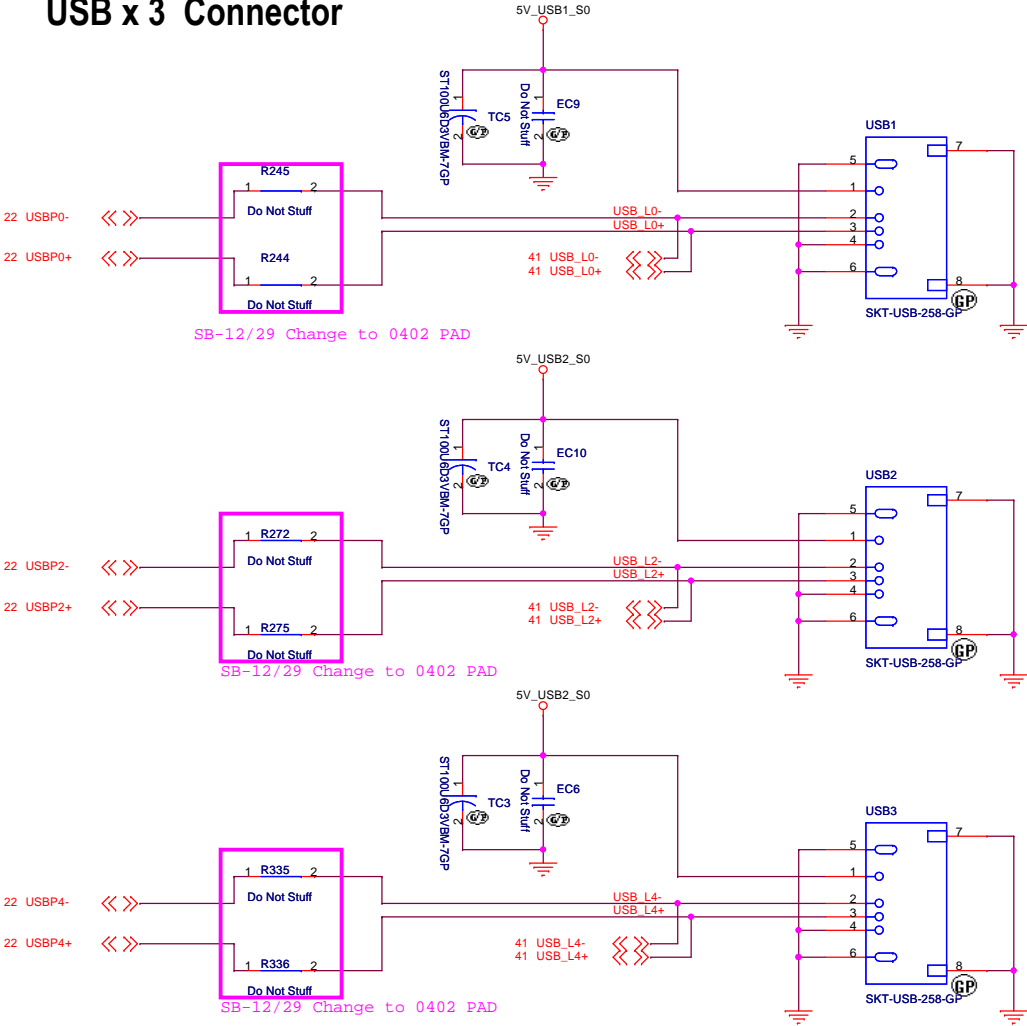
Bluetooth Power



BOM

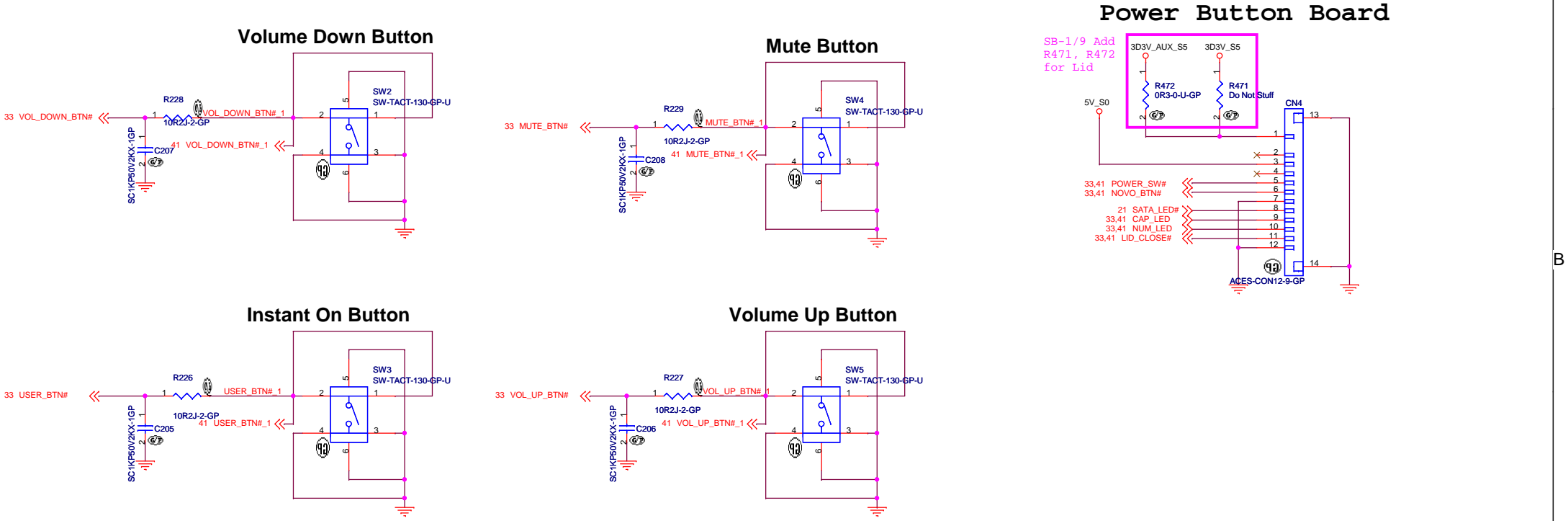
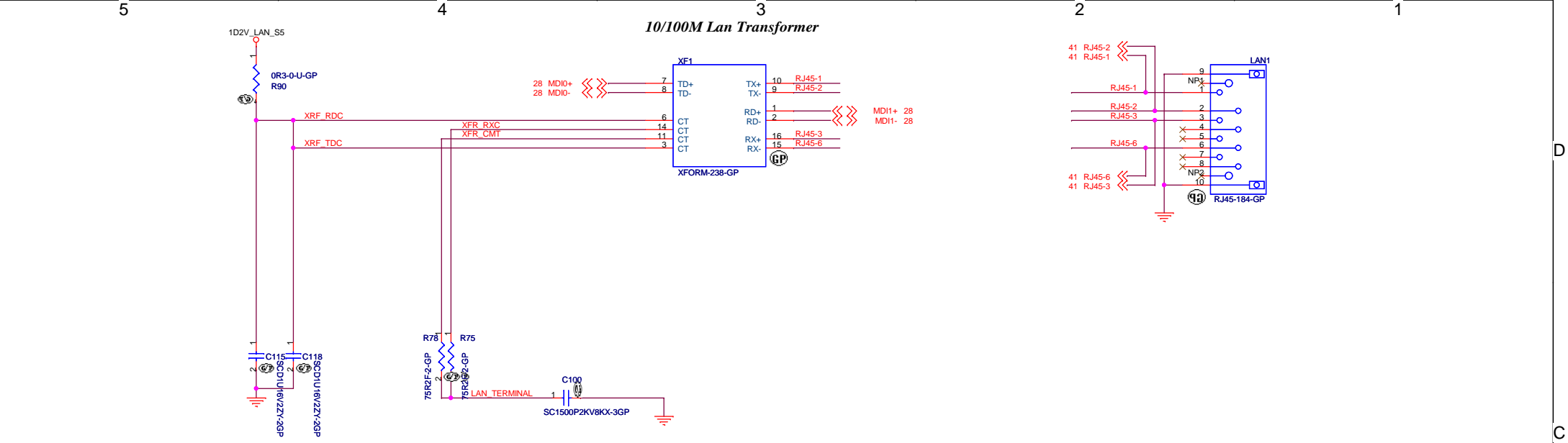
緯創資通 Wistron Corporation 21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C	
Title	LCD Conn/Camera/BT
Size	Document Number
Custom	LS20-VIA
Date:	Friday, January 16, 2009
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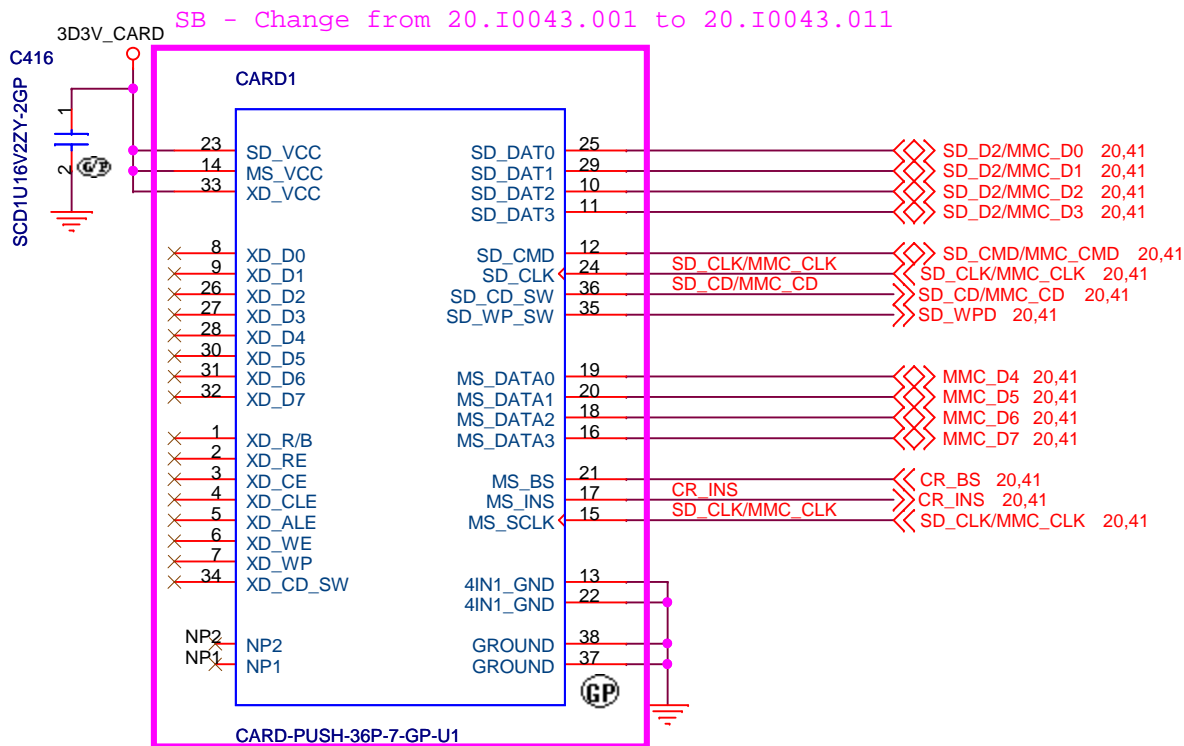
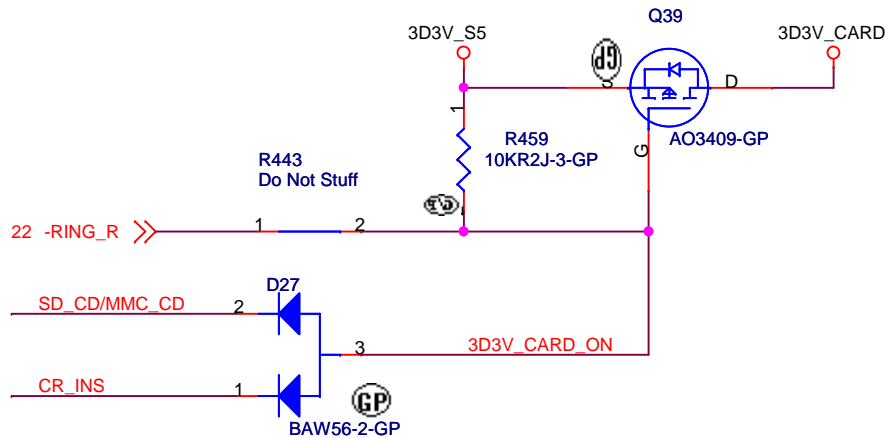
USB x 3 Connector



BOM	
緯創資通 Wistron Corporation 21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title USB connector	
Size Custom	Document Number LS20-VIA
Date: Friday, January 16, 2009	Rev SB

Title			
LAN BCM5906M(1/2)			
Size	Document Number		Rev
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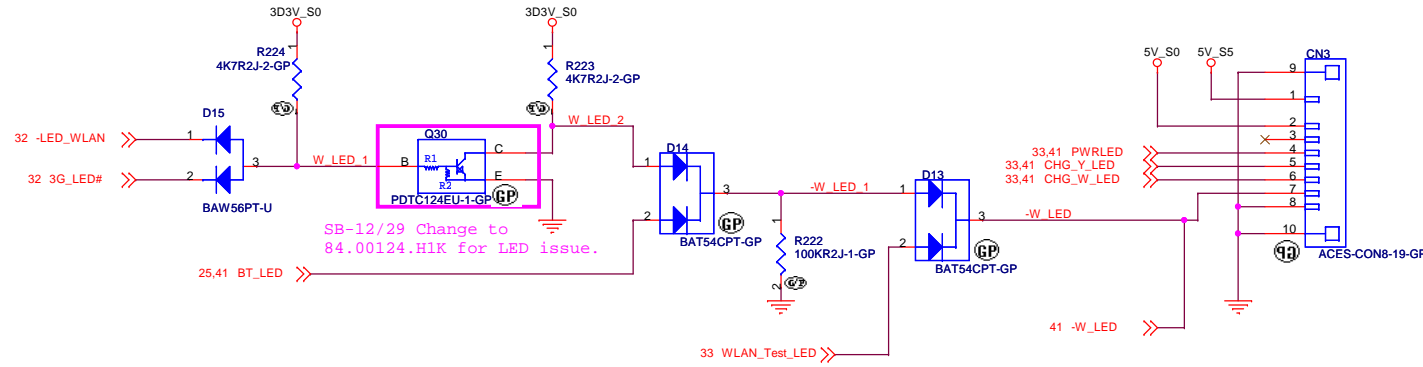




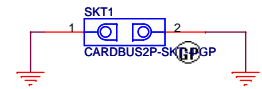
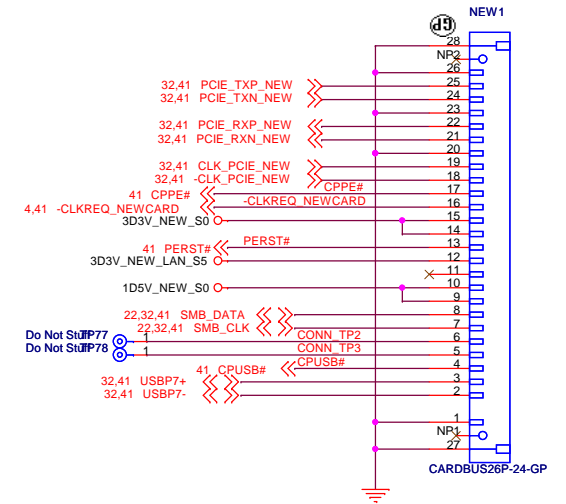
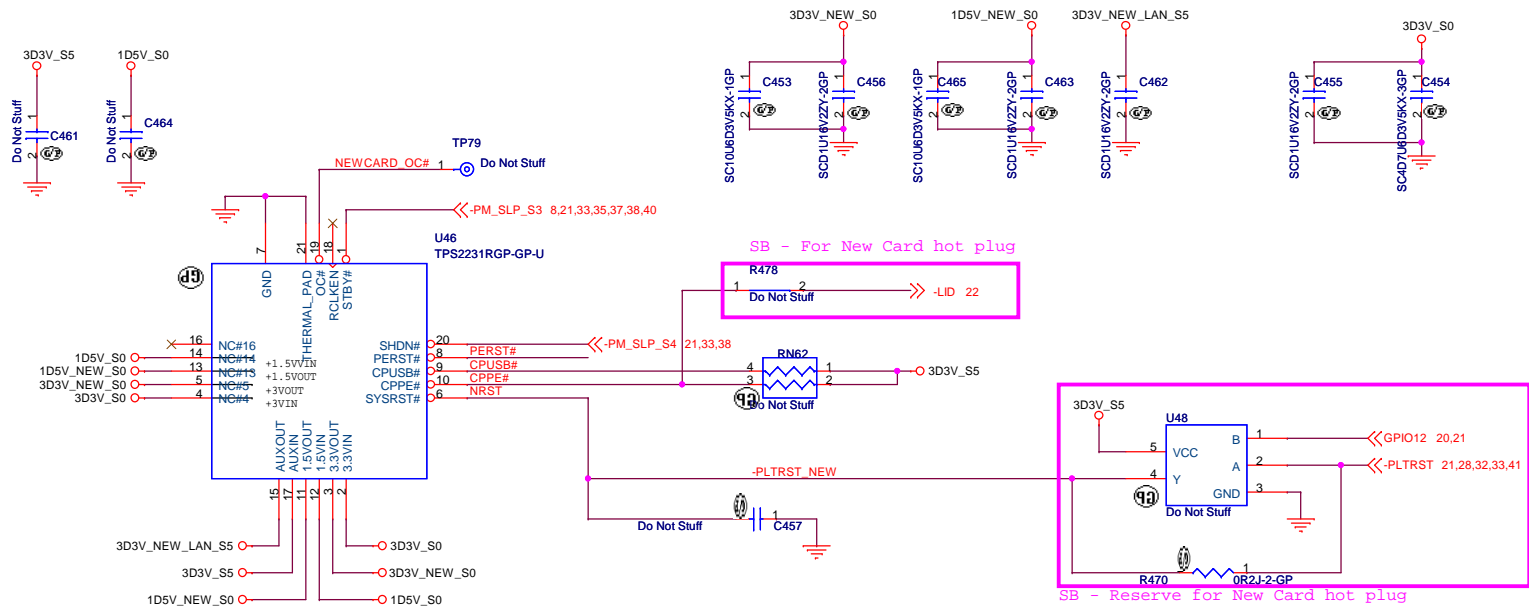
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緯創資通 Wistron Corporation 21F,88,Sec.1,Hsin Tai Wu Rd.,Hsichih, Taipei Hsien 221, Taiwan, R.O.C		
Title Card Reader CN		
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LED Board CONN.

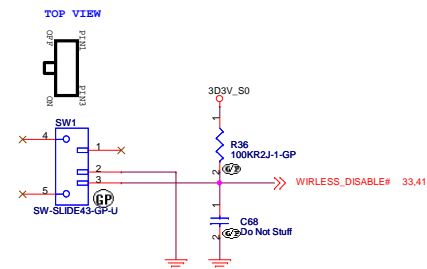
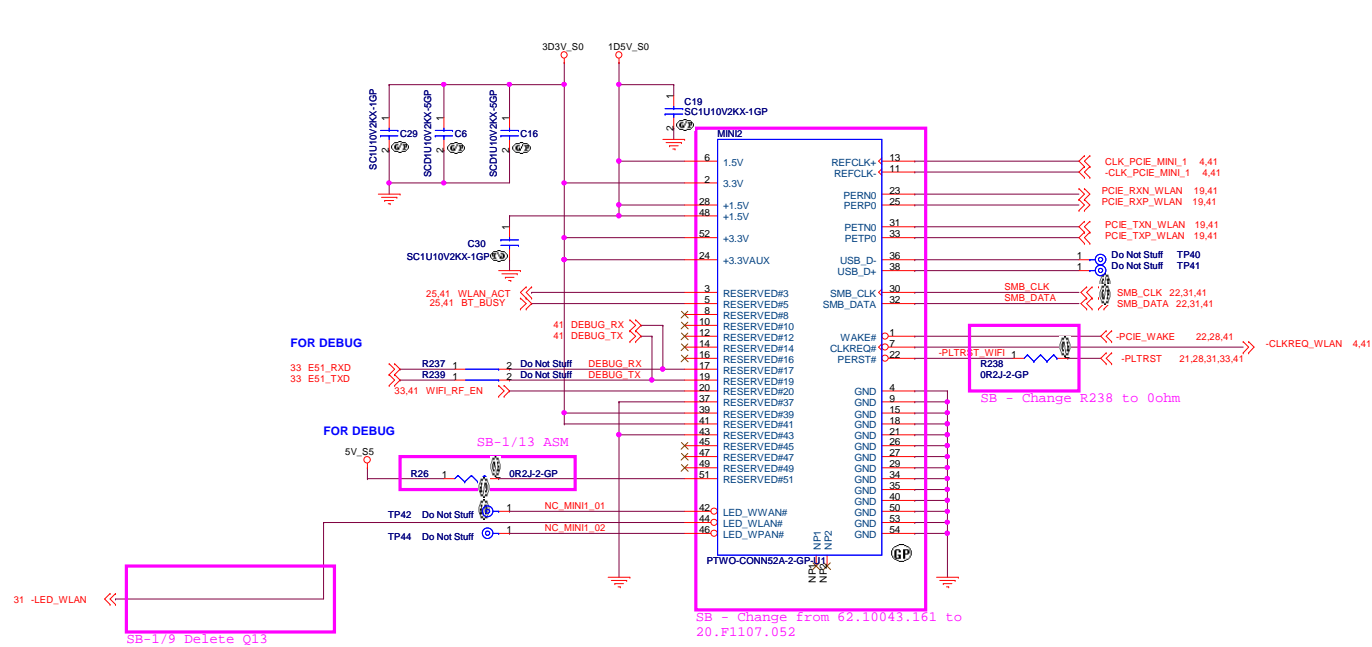
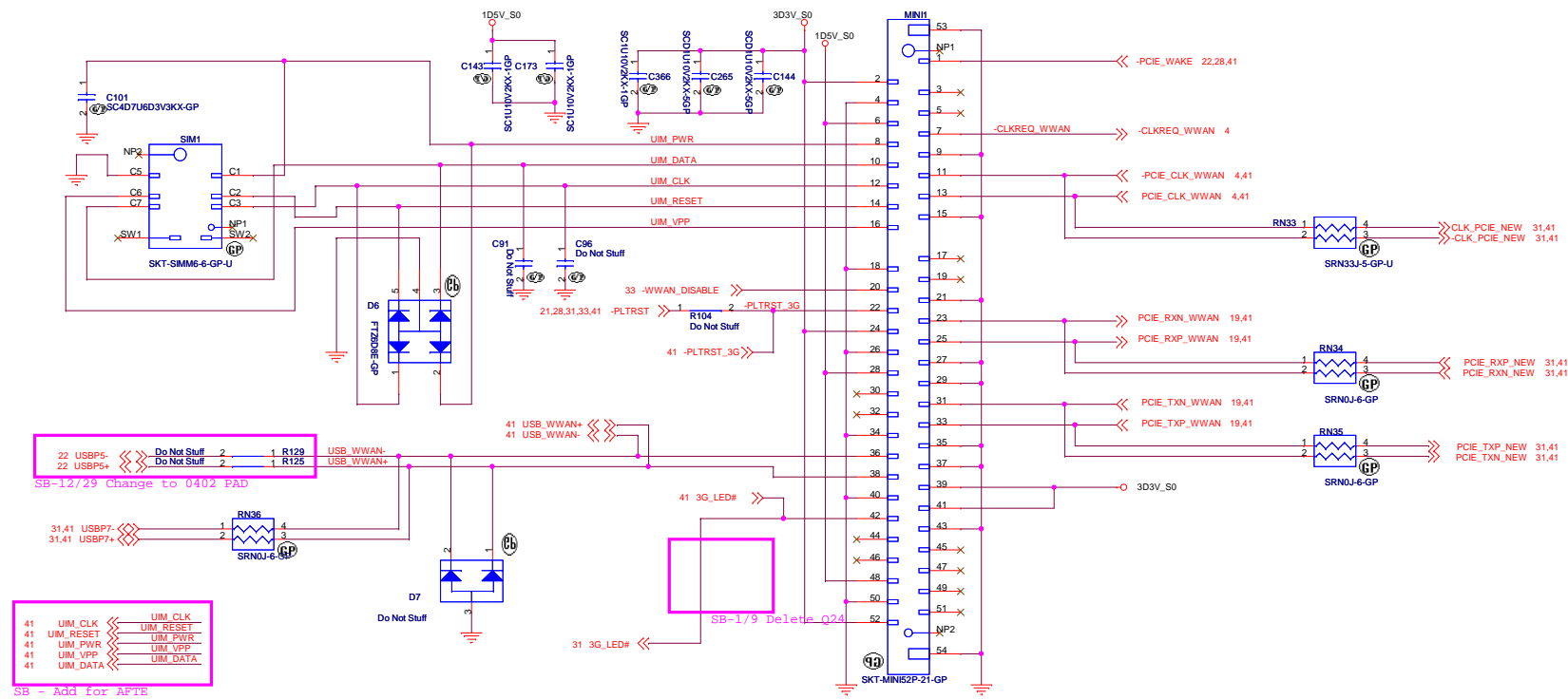


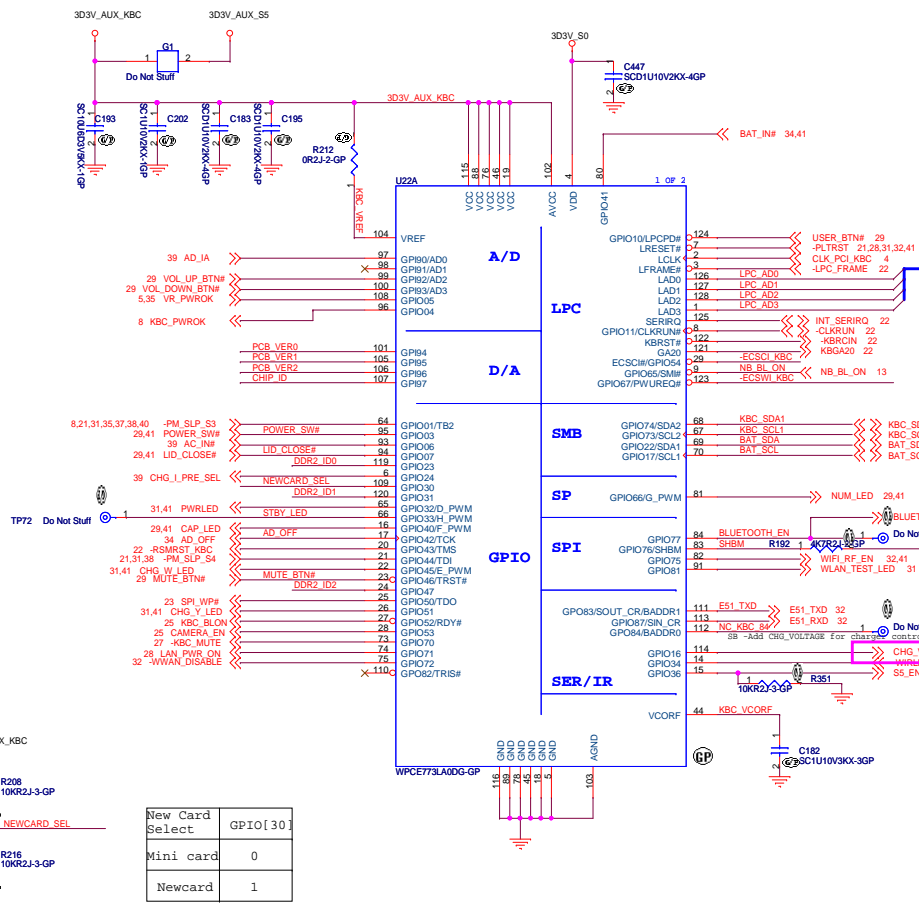
NEWCARD Connector



BOM

緯創資通 Wistron Corporation 21F,88,Sec.1,Hsin Tai Wu Rd.,Hsichih, Taipei Hsien 221, Taiwan, R.O.C	
Title	
New Card/ LED CONN	
Size	Document Number
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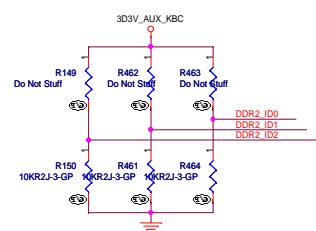
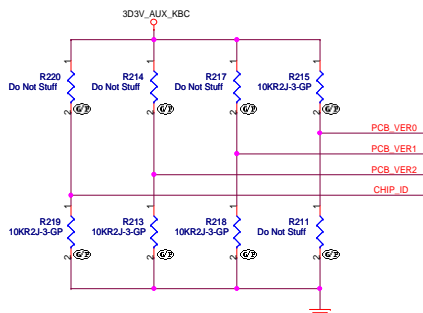
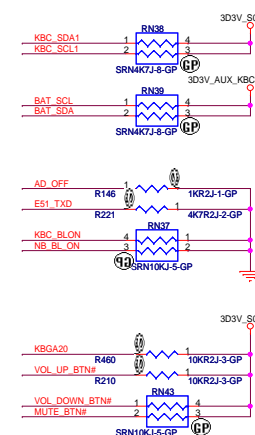
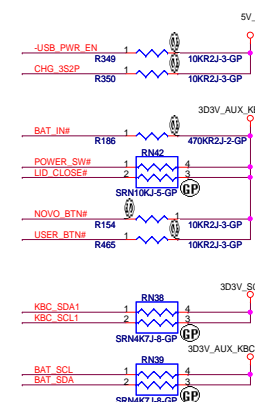
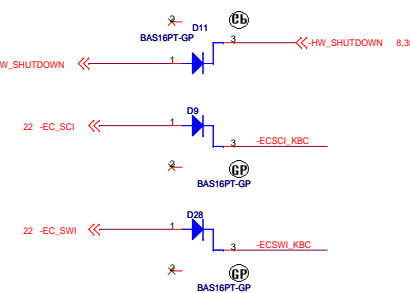
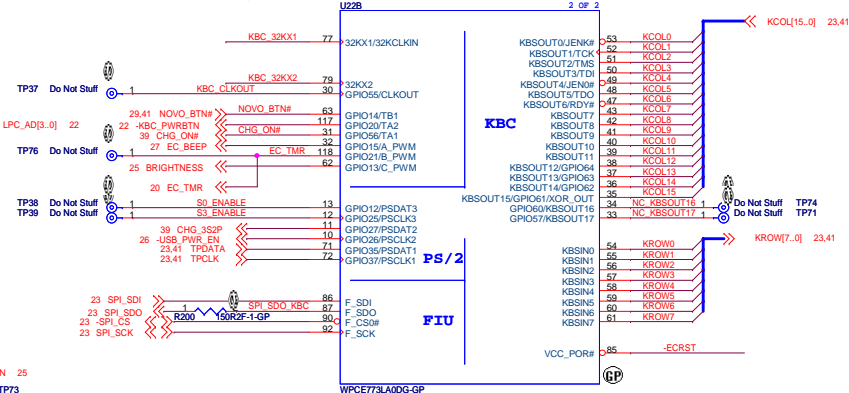
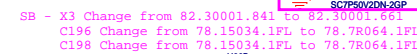
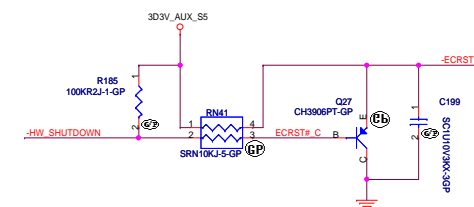
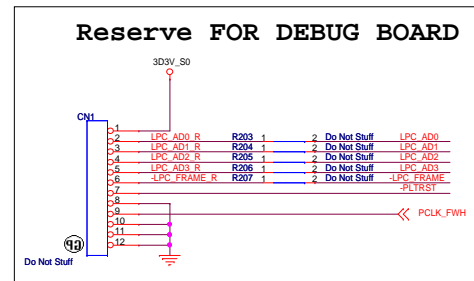


New Card Select	GPIO[30]
Mini card	0
Newcard	1

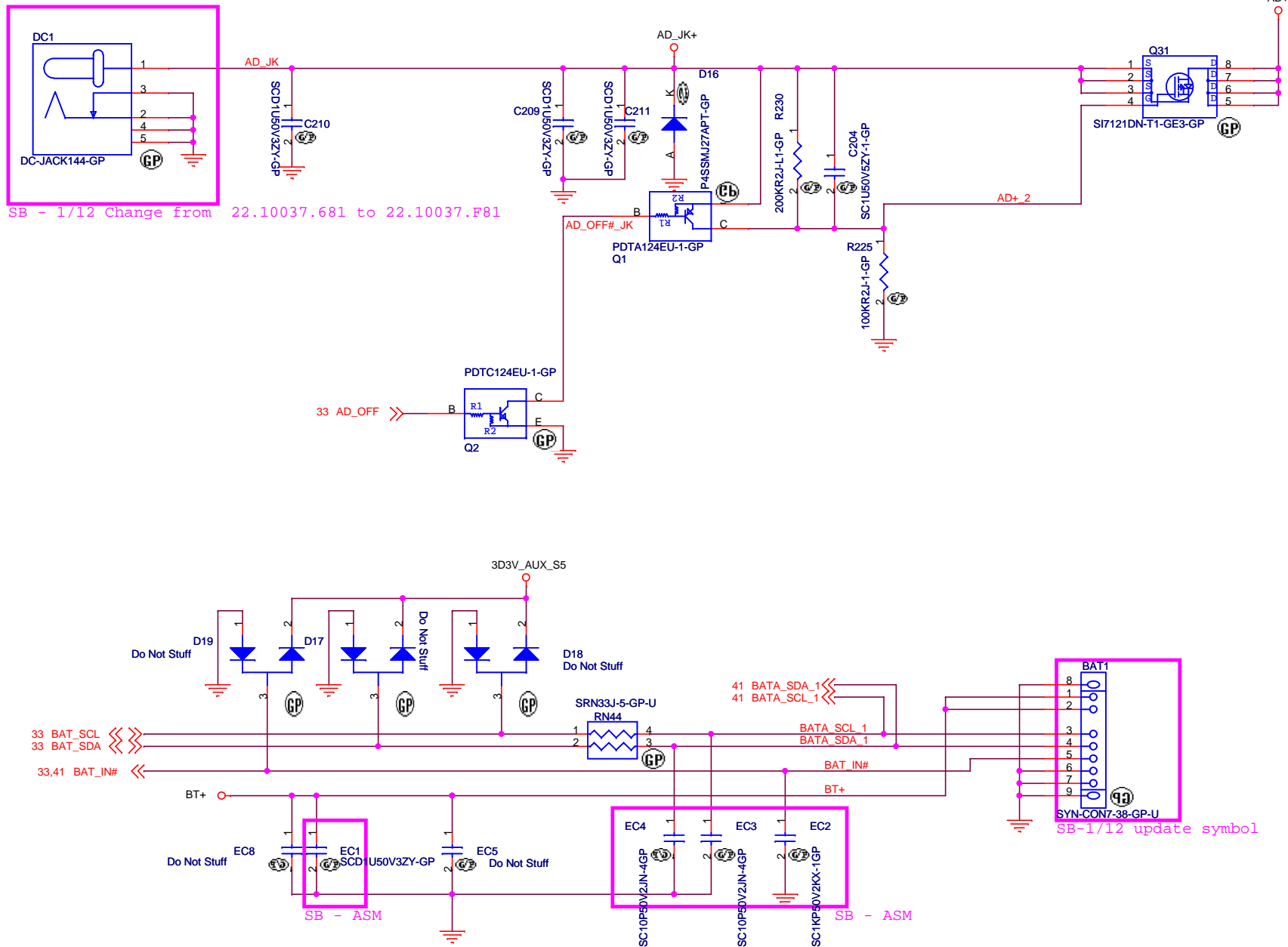
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SA:	0, 0, 0
SB:	0, 0, 1
SC:	0, 1, 0
-1:	0, 1, 1

CHIP ID	GPI[97]
VIA	0
Intel	1

KBC GPin	23	31	47		
DDR2_IDn	2	1	0	Vendor Part No.	Size
	0	0	0	HY5PS1G1631CFR-Y5	1G
	0	0	1	NT5TU128M8DE-ACI	1G
	0	1	0	MT47H128M8HQ-3:G	1G



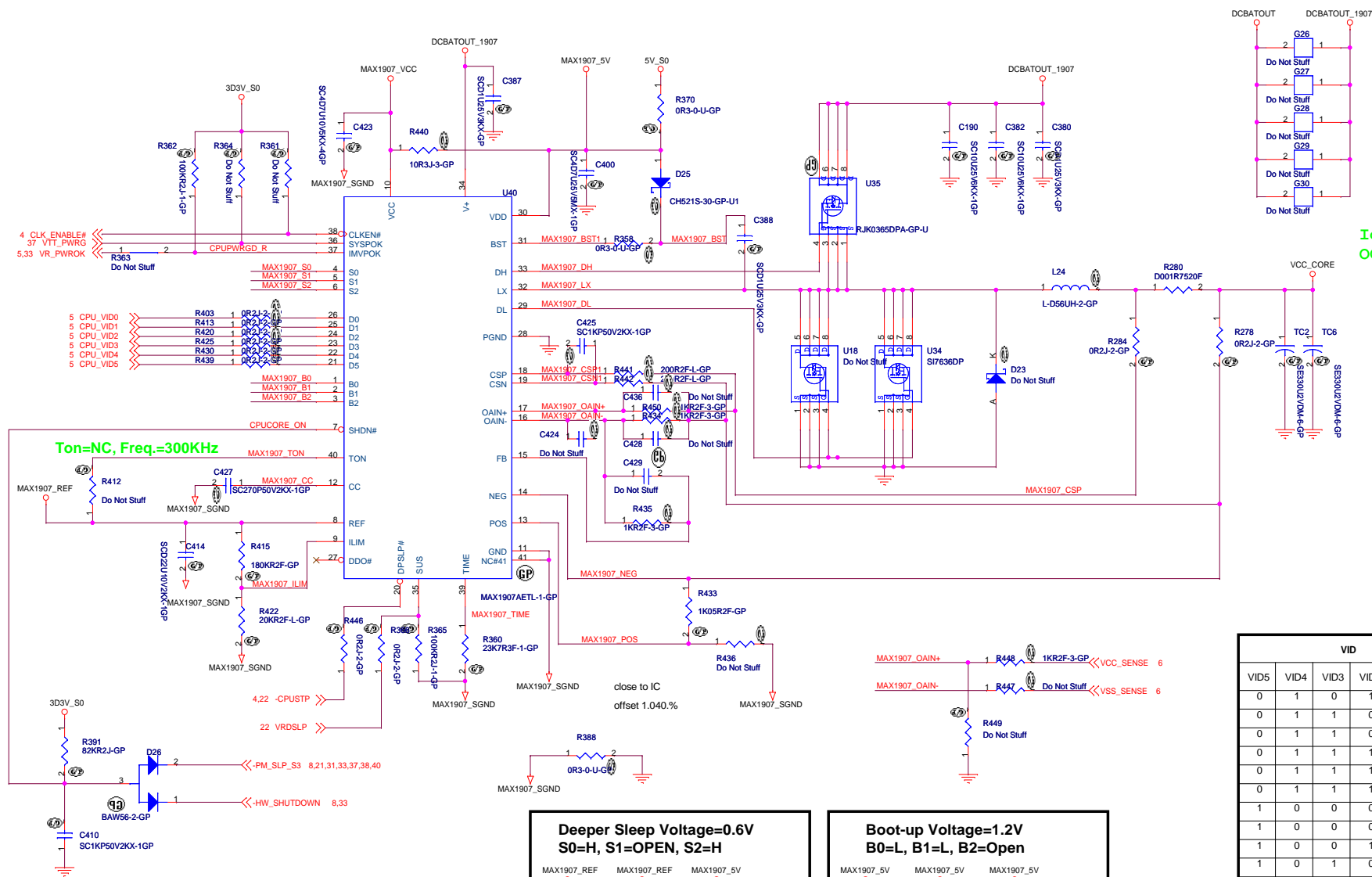
Adaptor in to generate DCBATOUT



BOM

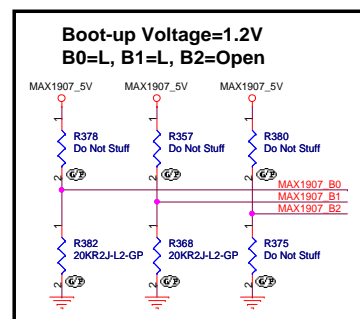
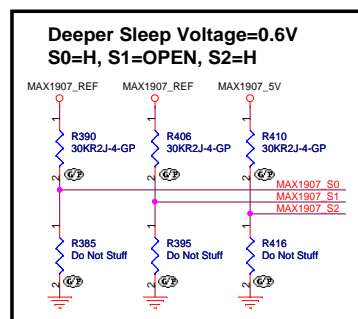
緯創資通 Wistron Corporation
 21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih,
 Taipei Hsien 221, Taiwan, R.O.C

Title		
AD / BATT CONN		
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I_{omax}=15.5A
OCP>=20A

VID						Vcor
VID5	VID4	VID3	VID2	VID1	VID0	V
0	1	0	1	1	1	1.340
0	1	1	0	0	0	1.324
0	1	1	0	1	0	1.292
0	1	1	1	0	0	1.260
0	1	1	1	0	1	1.244
0	1	1	1	1	1	1.212
1	0	0	0	0	1	1.180
1	0	0	0	1	1	1.148
1	0	0	1	1	0	1.100
1	0	1	0	0	1	1.052
1	0	1	0	1	1	1.020
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1	1	0	0	0	0	0.940

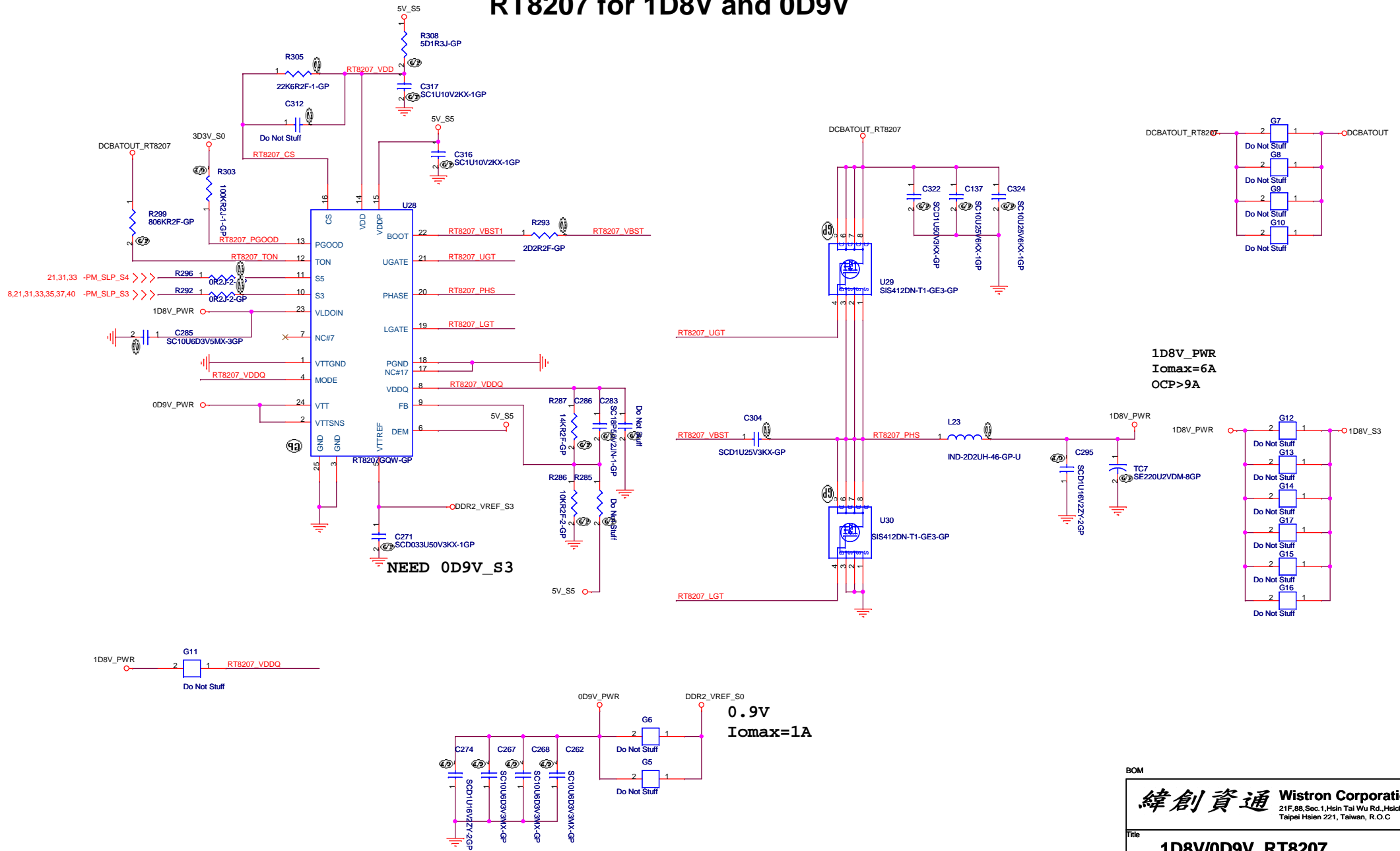


D



Title			
1D5V/1D05V_NX2139A			
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RT8207 for 1D8V and 0D9V

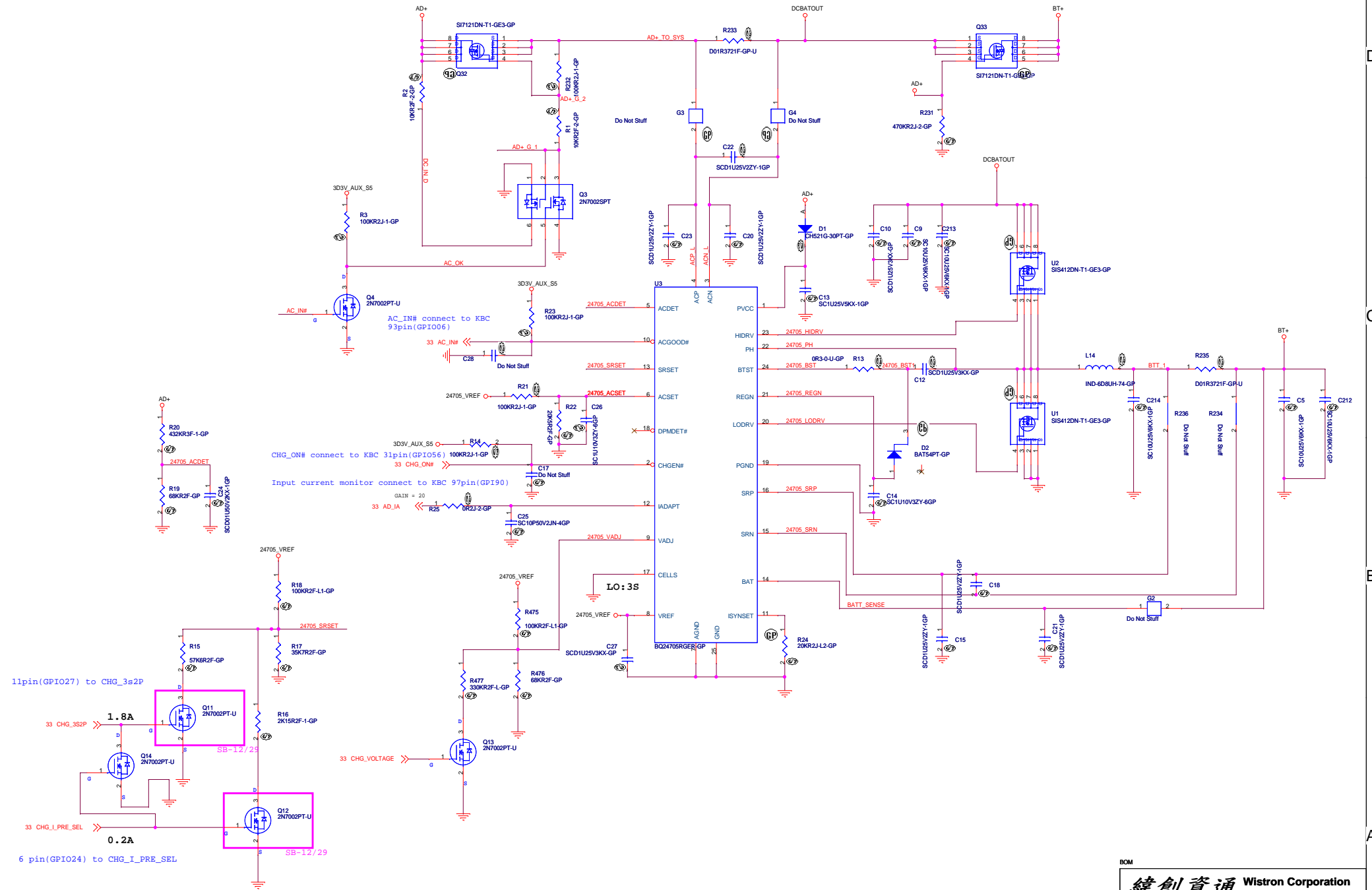


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Taipei Hsien 221, Taiwan, R.O.C

Title			
1D8V/0D9V_RT8207			
Size	Document Number	Rev	
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CHARGER



BOM

緯創資通 **Wistron Corporation**
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Taipei Hsien 221, Taiwan, R.O.C

Title

CHARGER_BQ24705

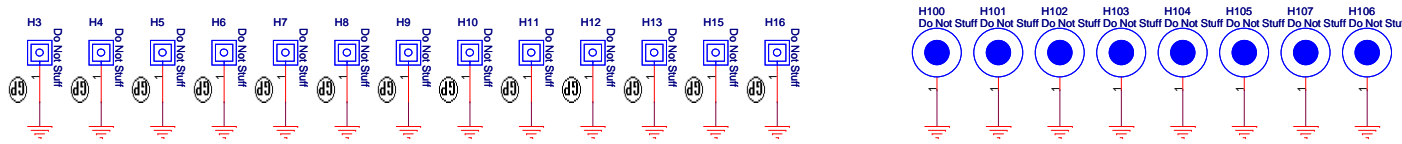
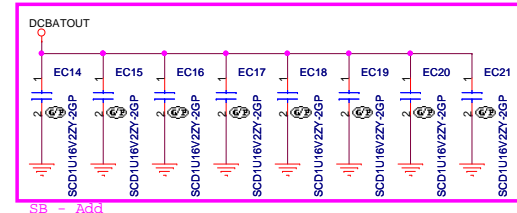
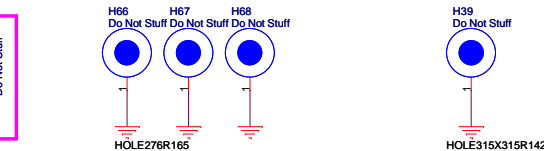
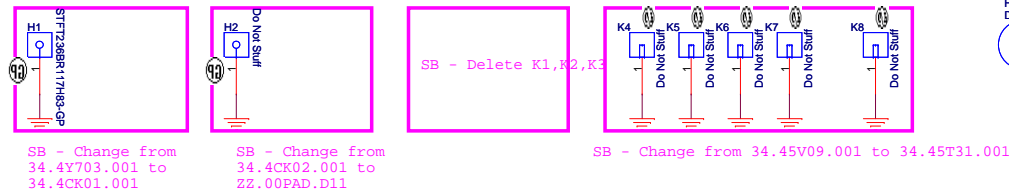
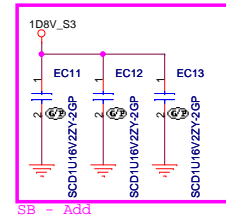
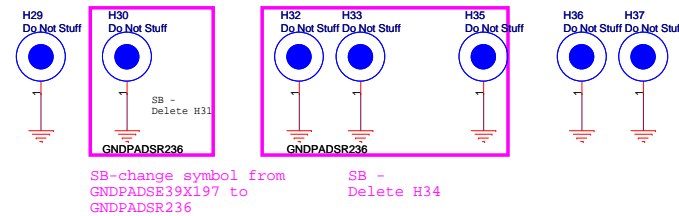
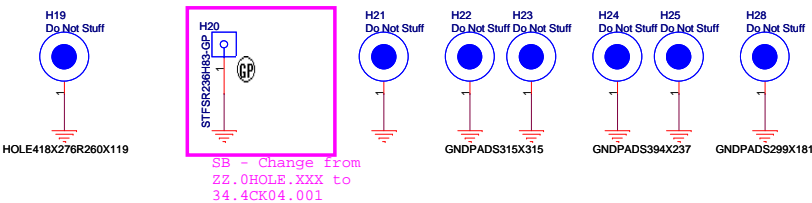
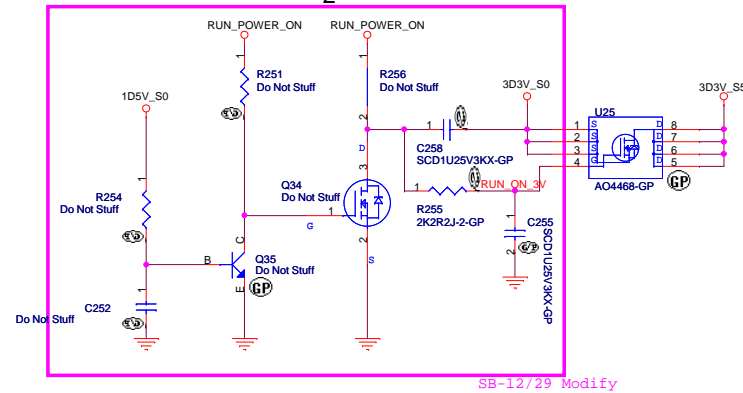
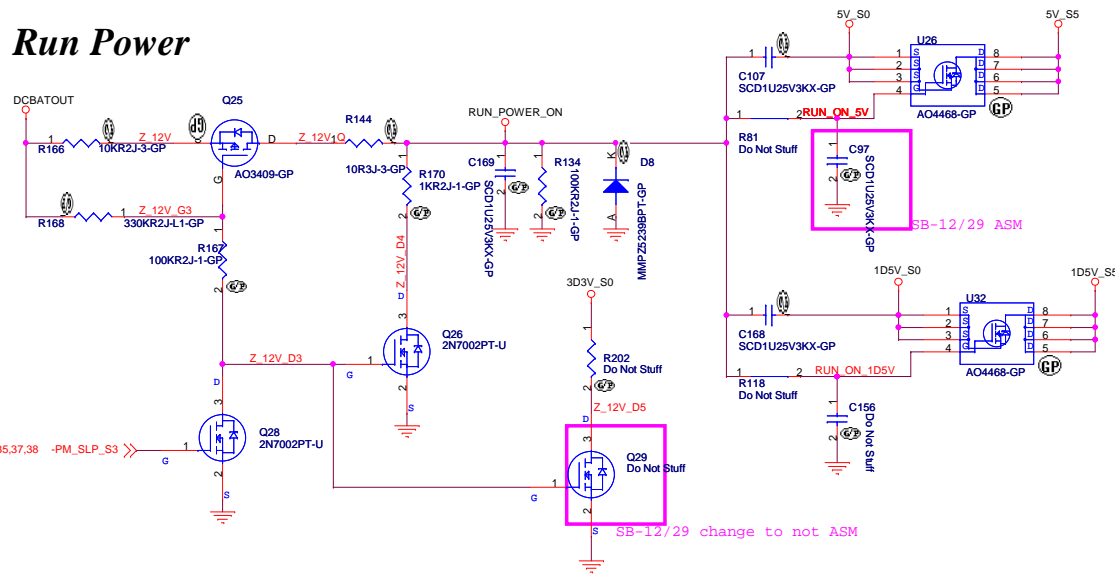
Size
CDocument Number
1620 VIA

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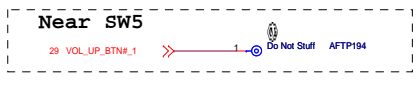
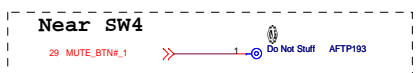
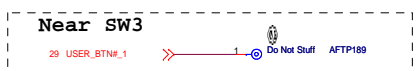
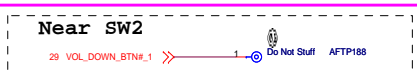
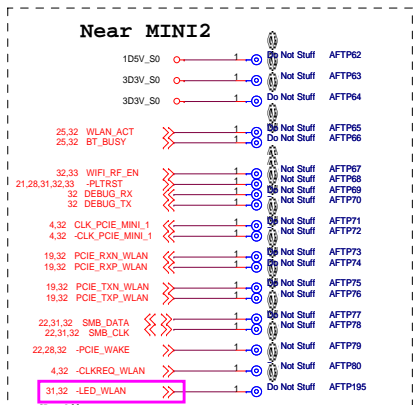
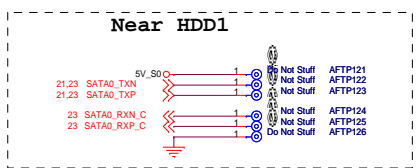
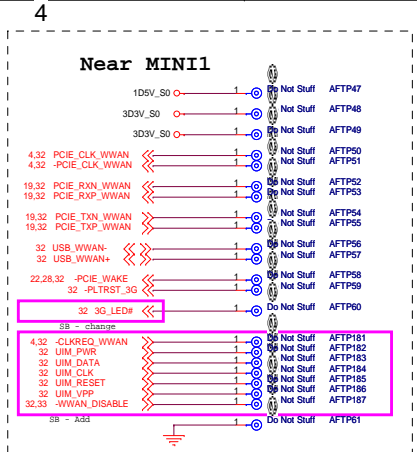
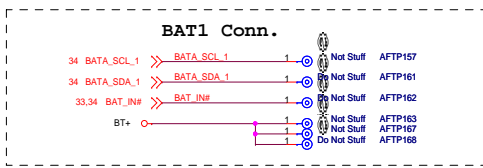
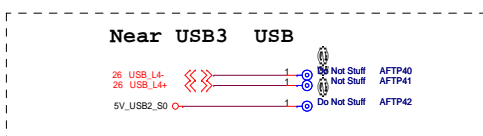
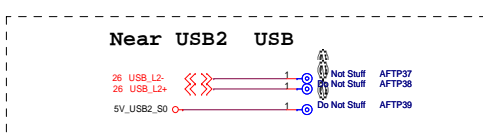
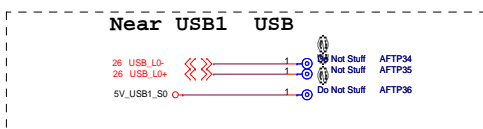
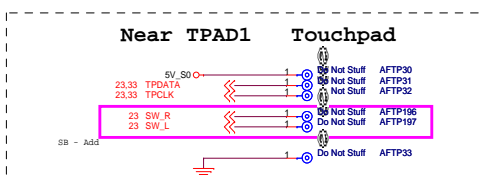
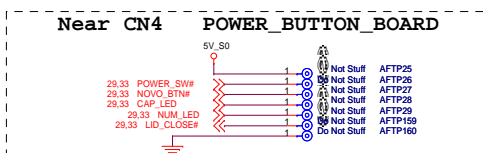
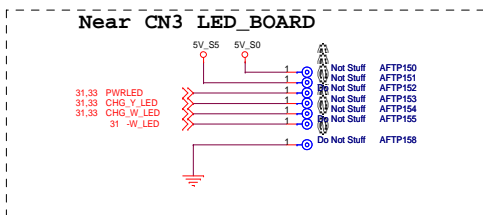
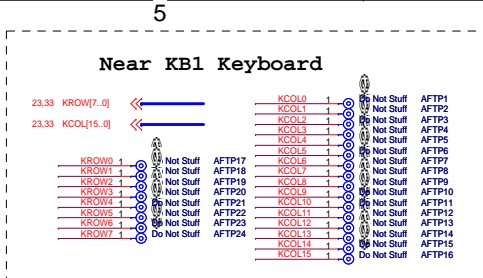
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