Bryce Canyon

Storage Controller Card (Broadcom)

PCB P/N: 16316
Version: 1
Layer: 8Layers

WIWYNN CONFIDENTIAL

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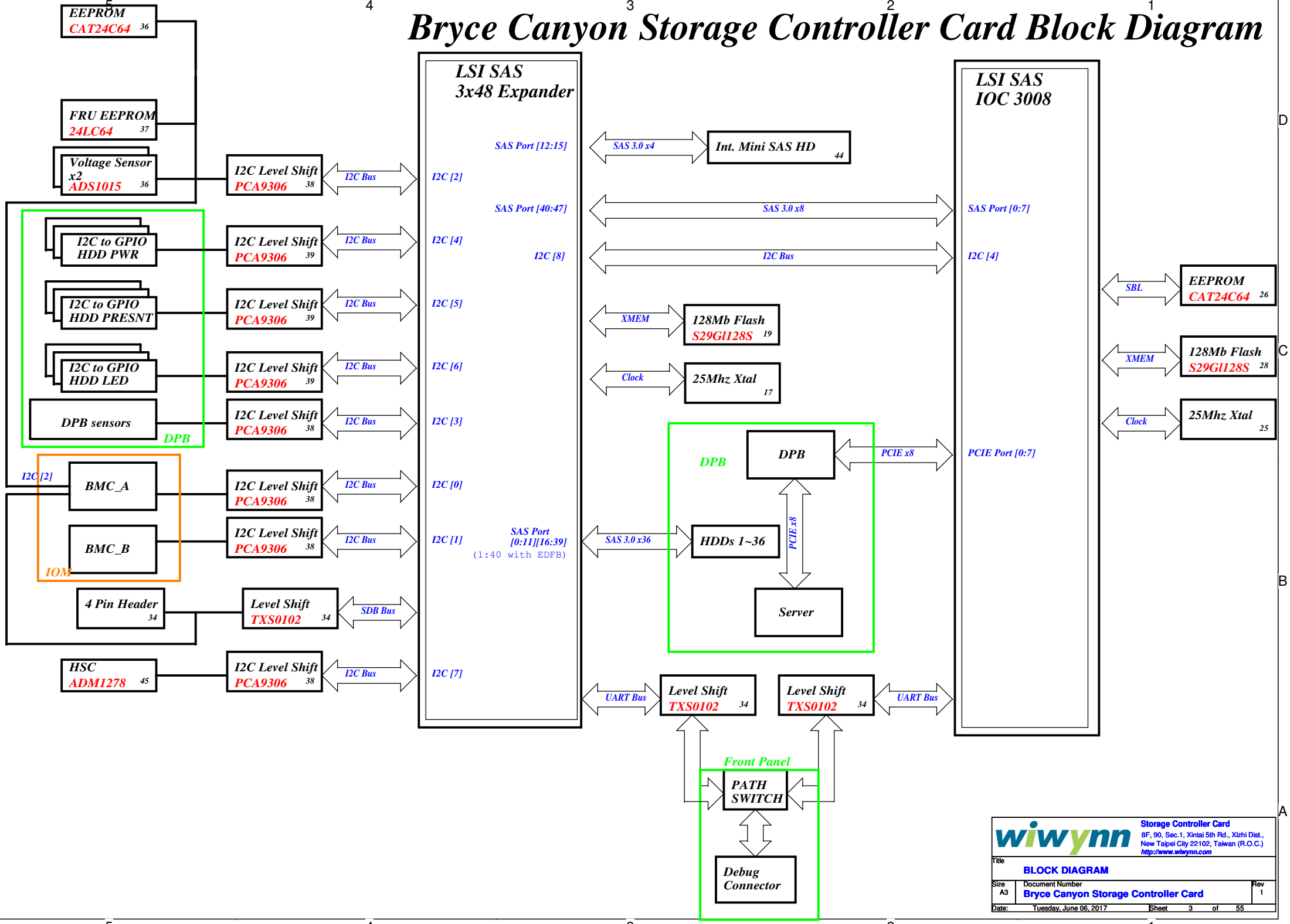
Bryce Canyon Storage Controller Card Block Diagram



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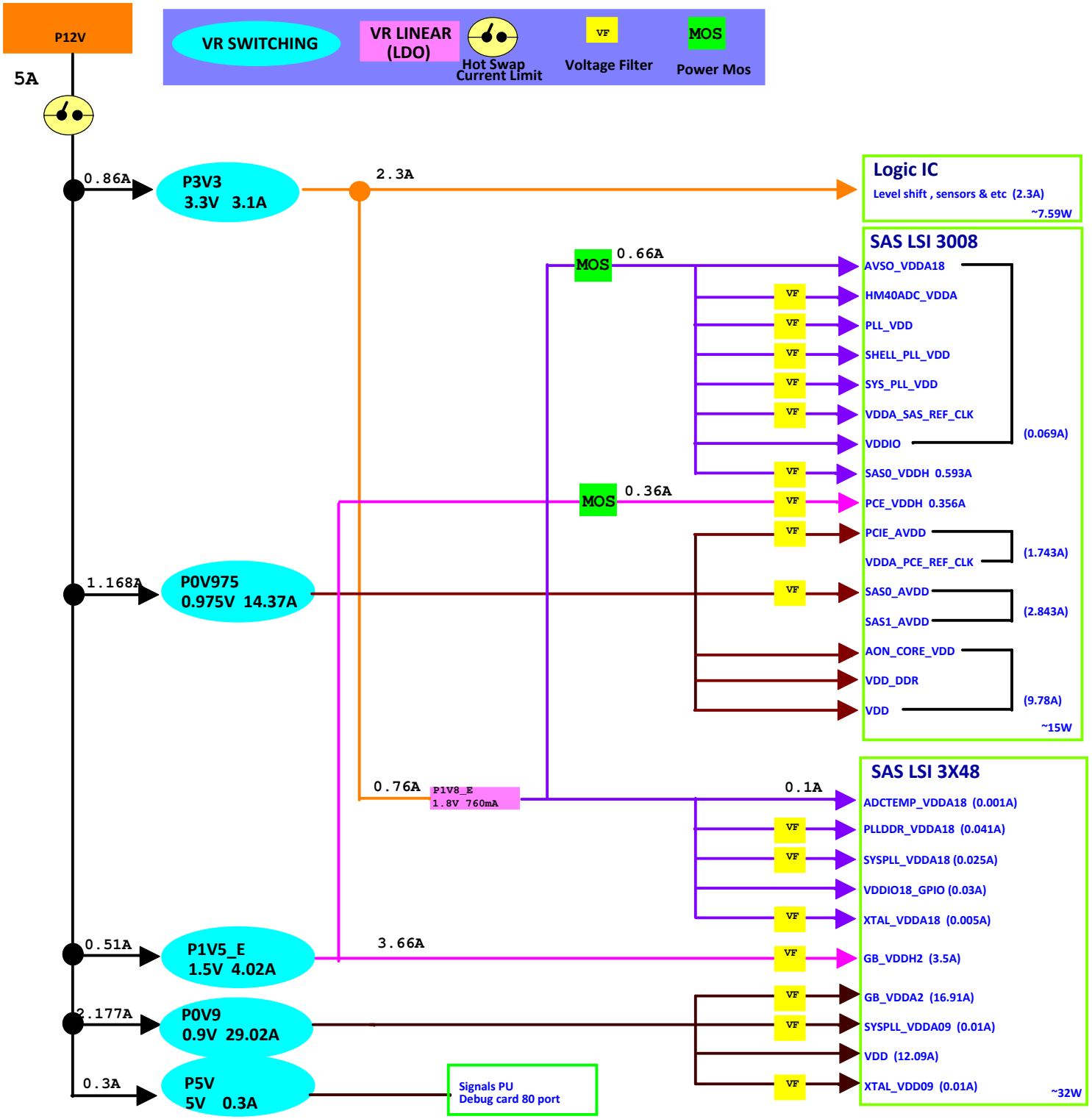

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Title: POWER DISTRIBUTION

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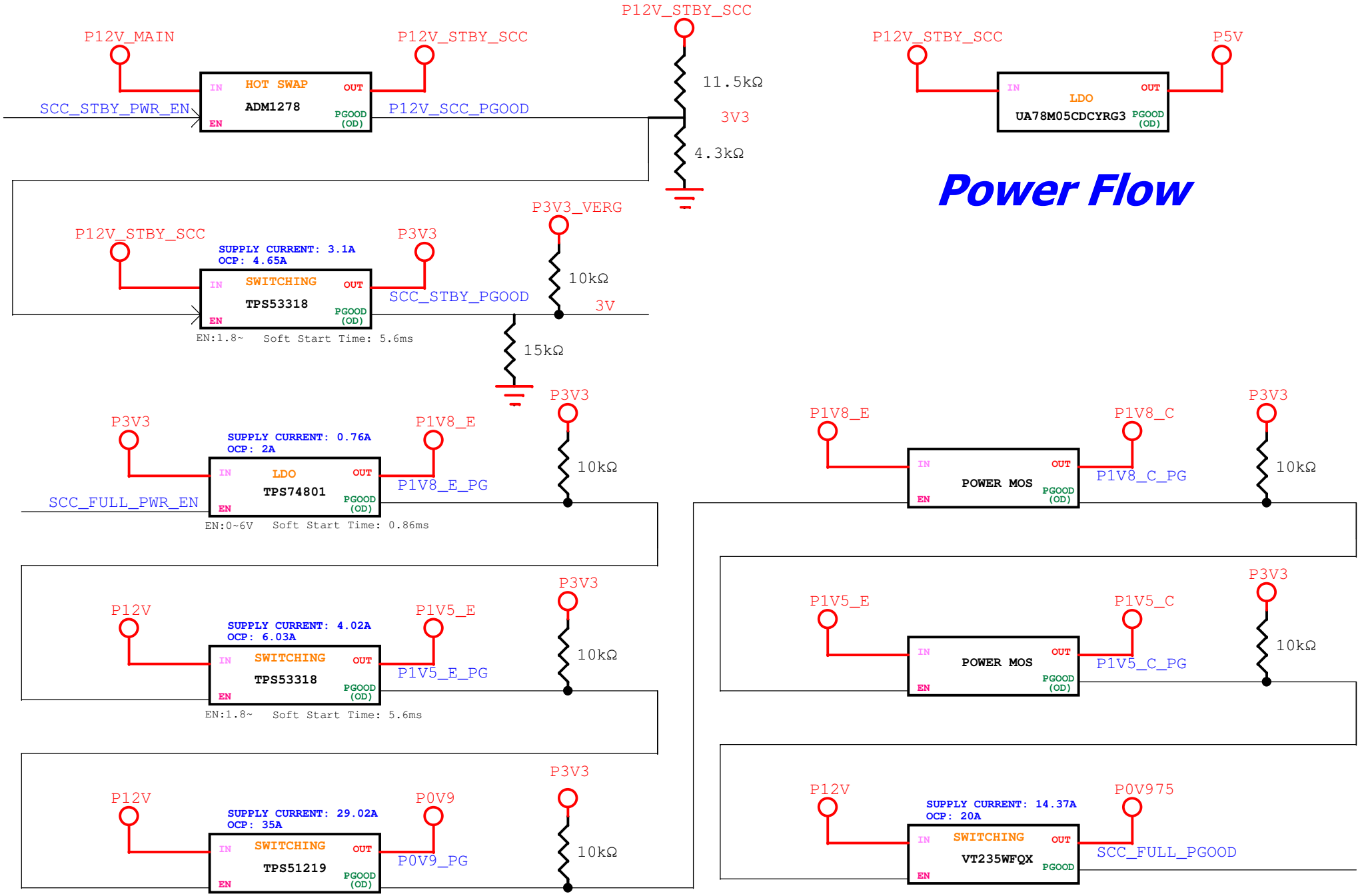

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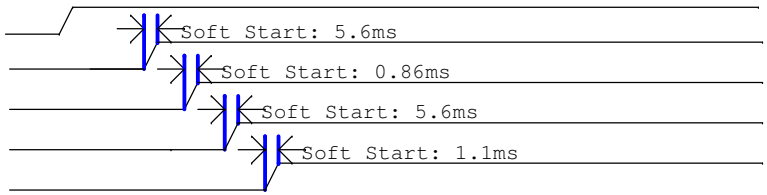
Power Sequence

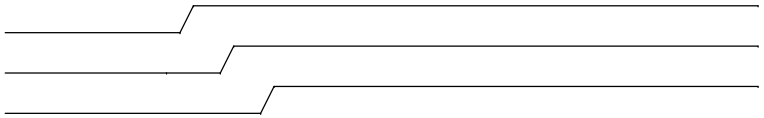
EXP

SOURCE	DESTINATION	SIG/PWR
DPB(P12V)	SCC	P12V
P12V	OTHERS	P3V3
P3V3	EXP	P1V8_E
P12V	EXP	P1V5_E
P12V	EXP	P0V9



IOC

SOURCE	DESTINATION	SIG/PWR
P1V8_E	IOC	P1V8_C
P1V5_E	IOC	P1V5_C
P12V	IOC	P0V975



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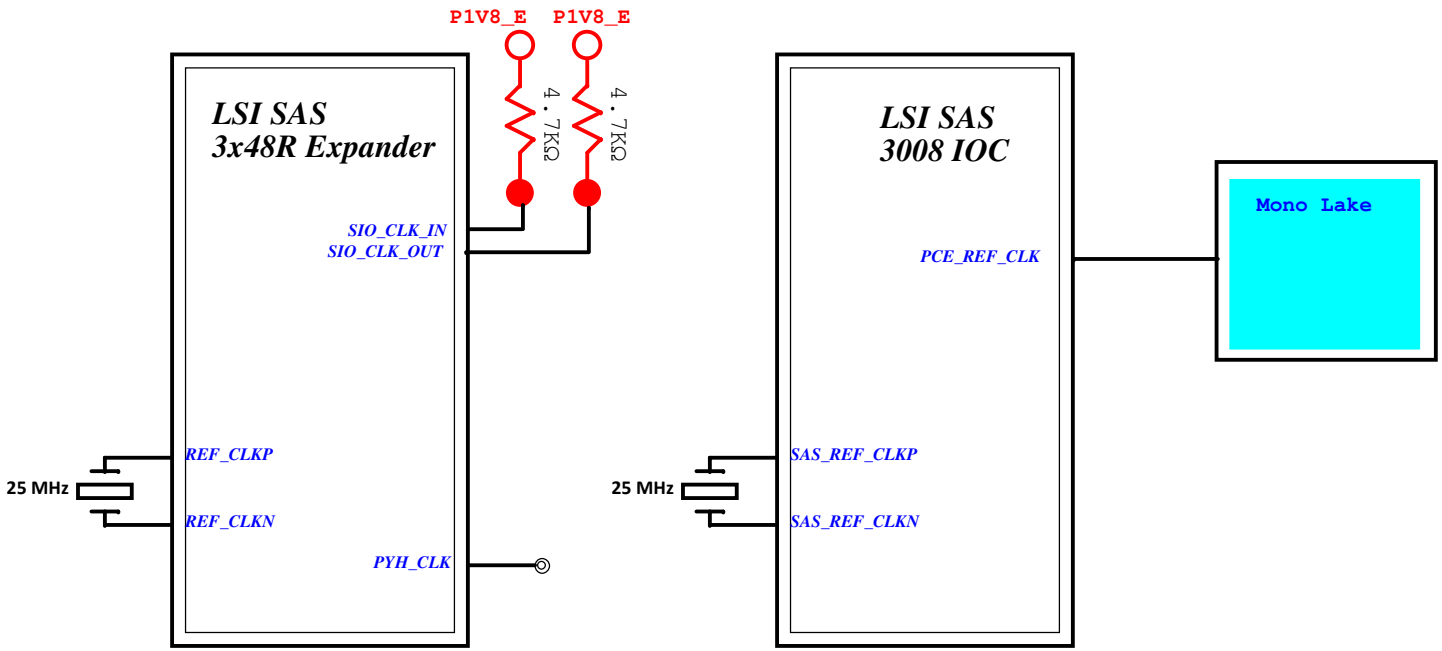
ClOCK TREE



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Title	CLOCK TREE	
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STACK-UP INFORMATION

Board Number:	16316-SD
Project name:	Bryce Canyon
Model Name:	Storage Controller Card
Layer Count:	8 Layer
Date:	2017/2/6
Medium Loss Material:	TU863+VLP (Tg : 170/Td : 320)
Gold Finger(Y/N):	N
Customer:	Fiona
EE engineer	Jeff Huang
SI Engineer	Harrison Lin

Version 01

	Layer	Cu oz	Thickness Wiwynn		Glass/Copper Style	Er Wiwynn	Df(1G)
	Mask		0.5			3.4	0.025
Top	Signal	3/8 oz+plating	1.7				
	Prepreg		3			3.9	0.006
L2	GND	1 oz	1.3				
	Core		4			3.9	0.006
L3	Signal	1 oz	1.3				
	Prepreg		16.4			4.2	0.006
L4	POWER	1 oz	1.3				
	Core		4			3.8	0.006
L5	POWER	1 oz	1.3	0.0	0		
	Prepreg		16.4	0	0	4.2	0.006
L6	Signal	1 oz	1.3	0	0		
	Core		4	0	0	3.9	0.006
L7	GND	1 oz	1.3	0	0		
	Prepreg		3	0	0	3.9	0.006
Bottom	Signal	3/8 oz+plating	1.7	0	0		
	Mask		0.5	0		3.4	0.025
Thickness requirement: 1.6 ± 10% mm		mil	63				
		mm	1.60				

Single Ended Type(mil)

	Imp Variation	50 Inner/Outer+/-5ohm			Imp Variation	85 Inner/Outer+/-10%						100 Inner/Outer+/-10%					
	Bus	MISC./I2C			Bus	PCIe/Clock/USB						Clock/SATA					
	Type	SE			Type	DP						DP					
	Layers	1,3,6,8			Layers	1,3,6,8						1,3,6,8					
		Wiwynn				Wiwynn						Wiwynn					
		Width	Imp	Width	Imp	Width	Space	Imp	Width	Space	Imp	Width	Space	Imp	Width	Space	Imp
S1		5(L2)	50.08			5.75(L2)	6.5	85.36				4.9(L2)	11.1	96.82			
P2		reference layer				reference layer						reference layer					
S3		5(L2/L4)	49.28			5.5(L2/L4)	7.5	84.9				4(L2/L4)	8	97.59			
P4		reference layer				reference layer						reference layer					
P5		reference layer				reference layer						reference layer					
S6		5(L5/L7)	49.28			5.5(L5/L7)	7.5	84.9				4(L5/L7)	8	97.59			
P7		reference layer				reference layer						reference layer					
S8		5(L7)	50.08			5.75(L7)	6.5	85.36				4.9(L7)	11.1	96.82			

Differential Type(mil)

	97 Outer+/-10%						88 Inner+/-10%						92 Outer+/-10%						83 Inner+/-10%					
	BGA Break out(SAS.SATA)						BGA Break out(SAS.SATA)						BGA Break out(PCIE)						BGA Break out(PCIE)					
	DP 1,8						DP 3,6						DP 1,8						DP 3,6					
	Wiwynn						Wiwynn						Wiwynn						Wiwynn					
	Width	Space	Imp	Width	Space	Imp	Width	Space	Imp	Width	Space	Imp	Width	Space	Imp	Width	Space	Imp	Width	Space	Imp	Width	Space	Imp
	3.5(L2)	4											3.75(L2)	3.5										
	reference layer						reference layer						reference layer						reference layer					
							3.5(L2/L4)	4											3.75(L2/L4)	3.5				
	reference layer						reference layer						reference layer						reference layer					
	reference layer						reference layer						reference layer						reference layer					
							3.5(L5/L7)	4											3.75(L5/L7)	3.5				
	reference layer						reference layer						reference layer						reference layer					
	3.5(L7)	4											3.75(L7)	3.5										

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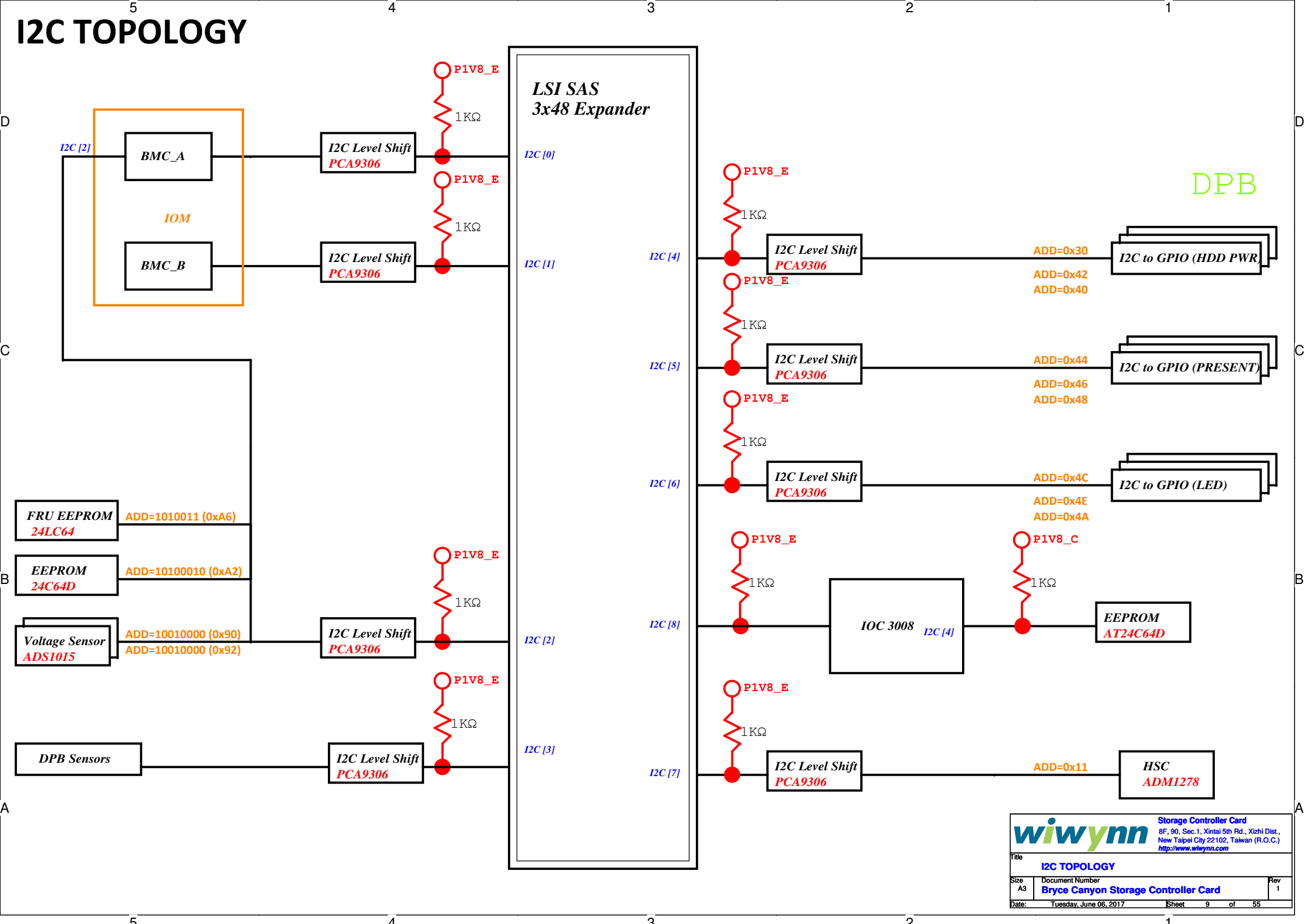
I2C TOPOLOGY



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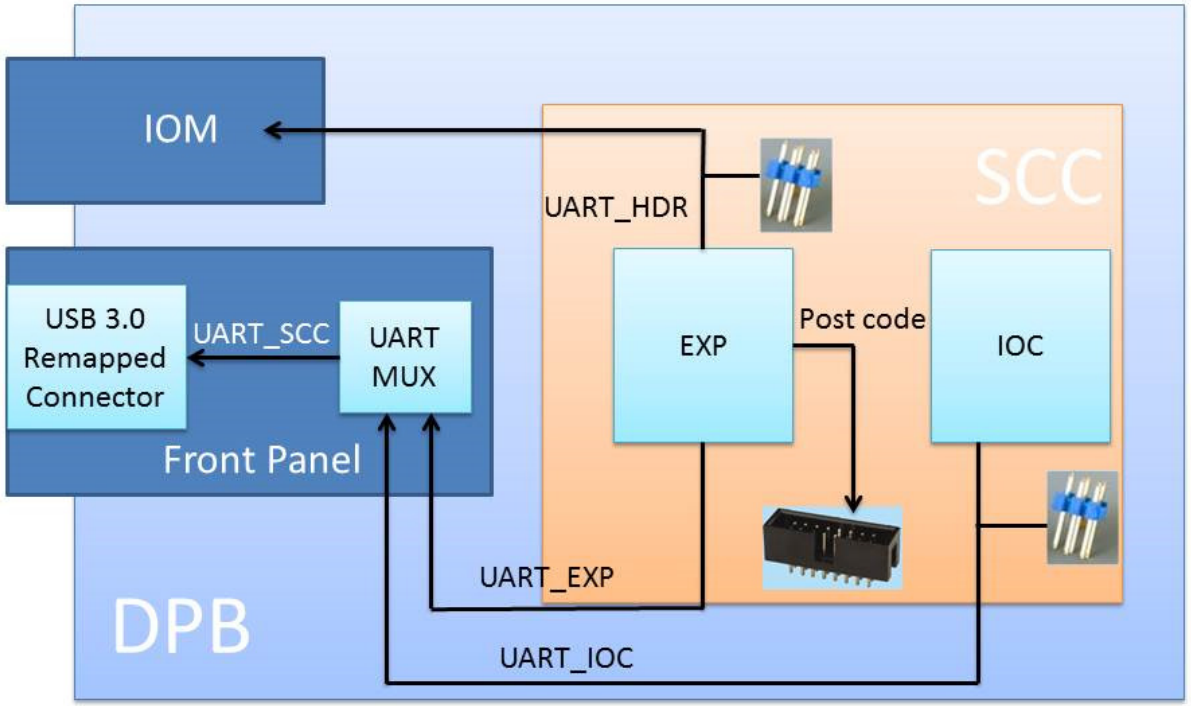

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Title: UART TOPOLOGY		
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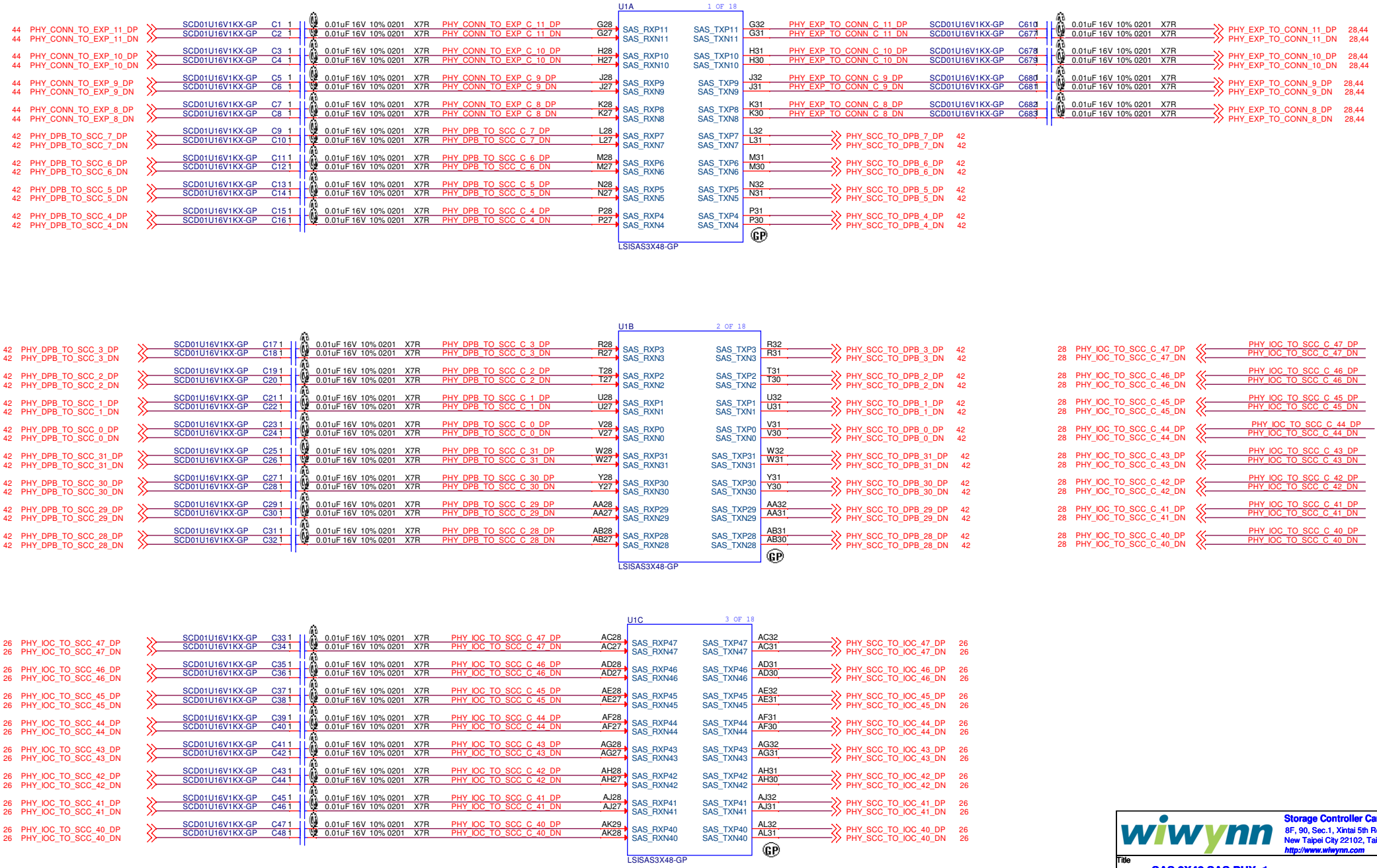

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Title: SAS 3X48 SAS PHY_1	
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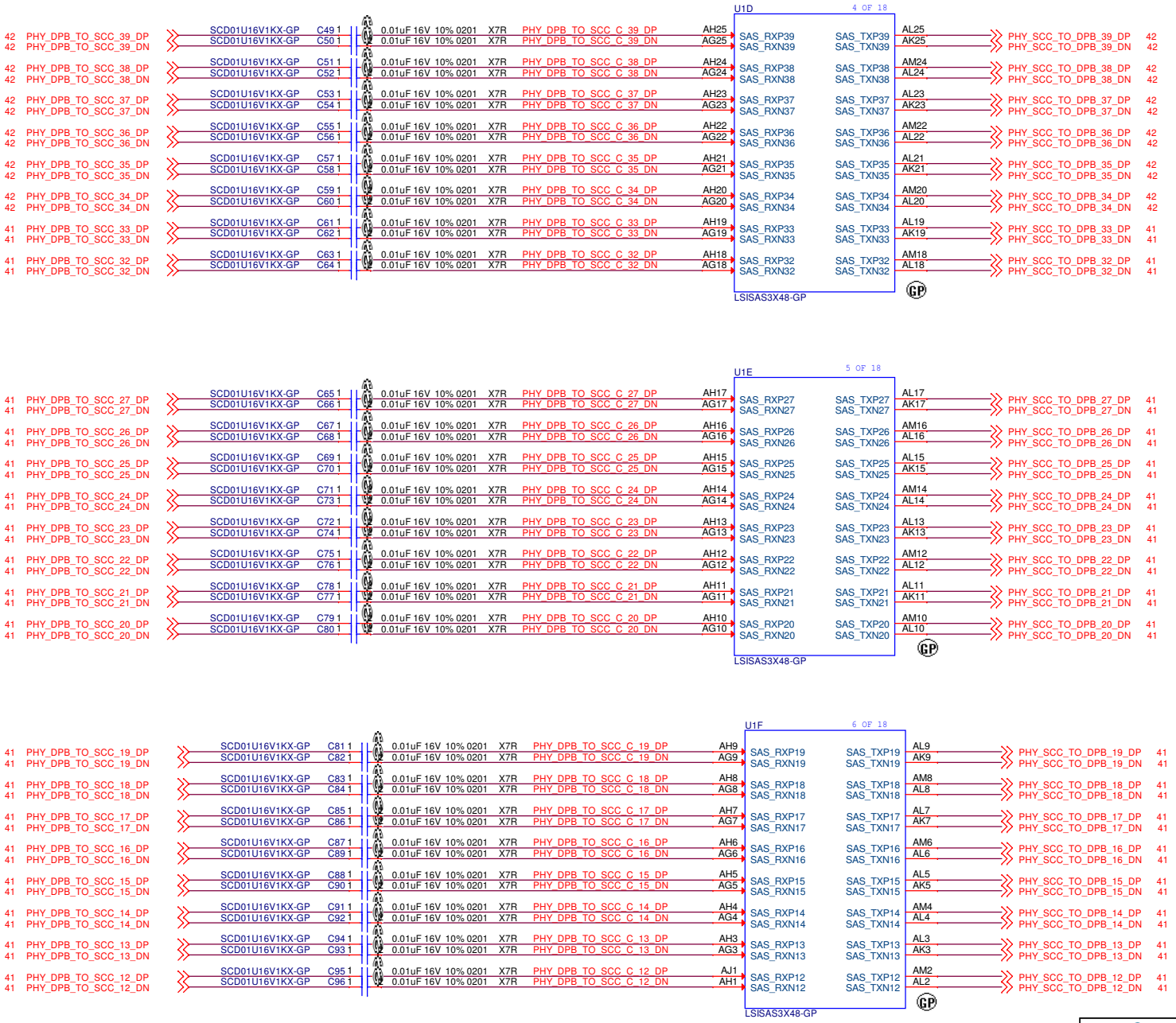

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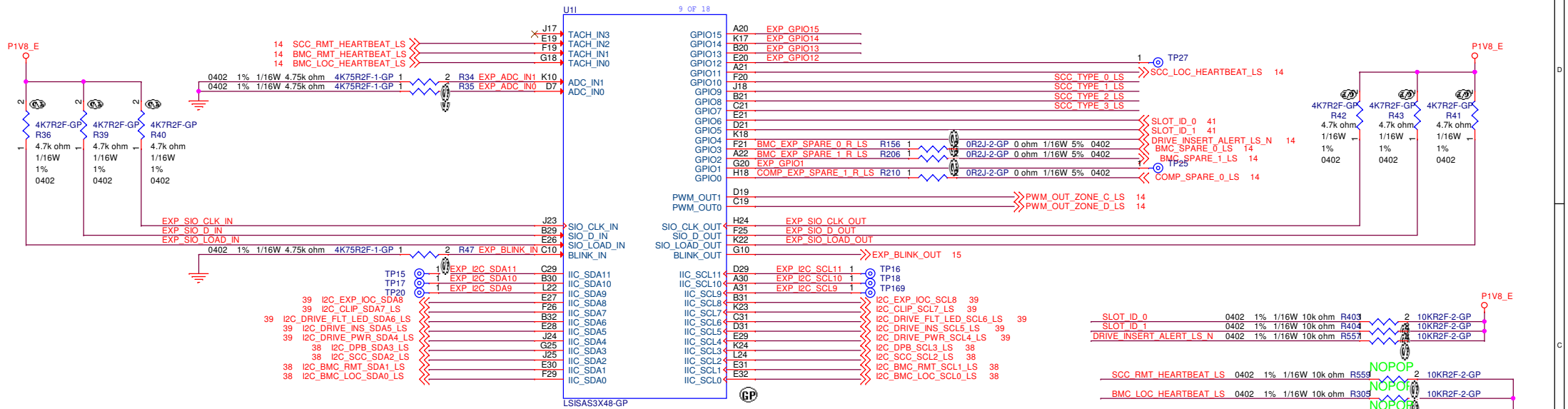
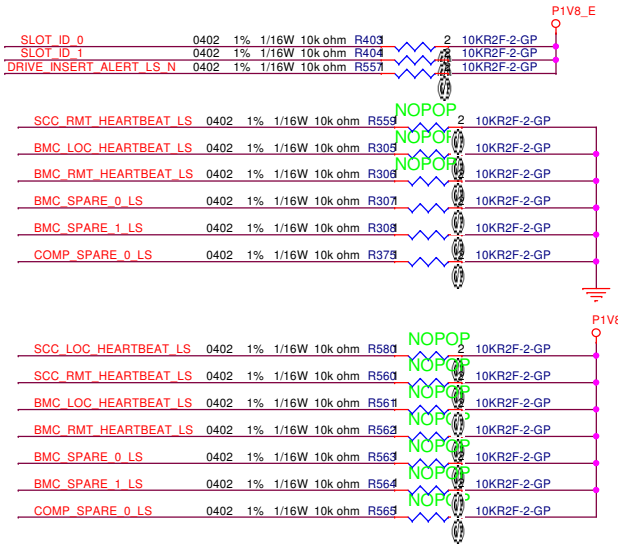
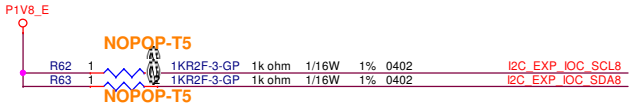
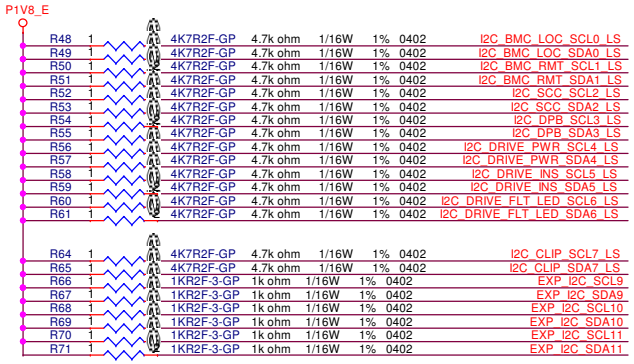
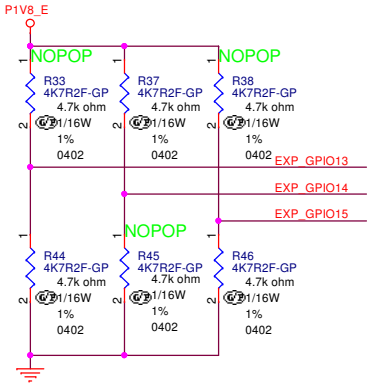
GPIO & I2C

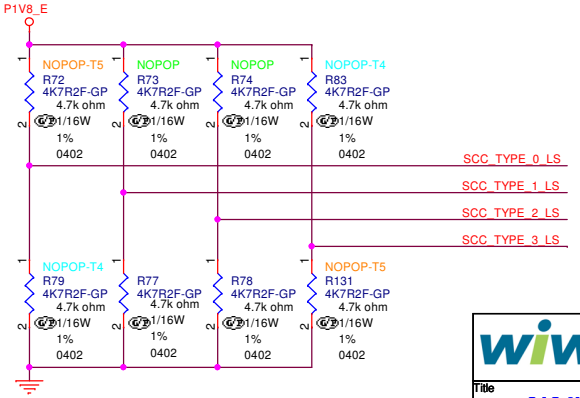












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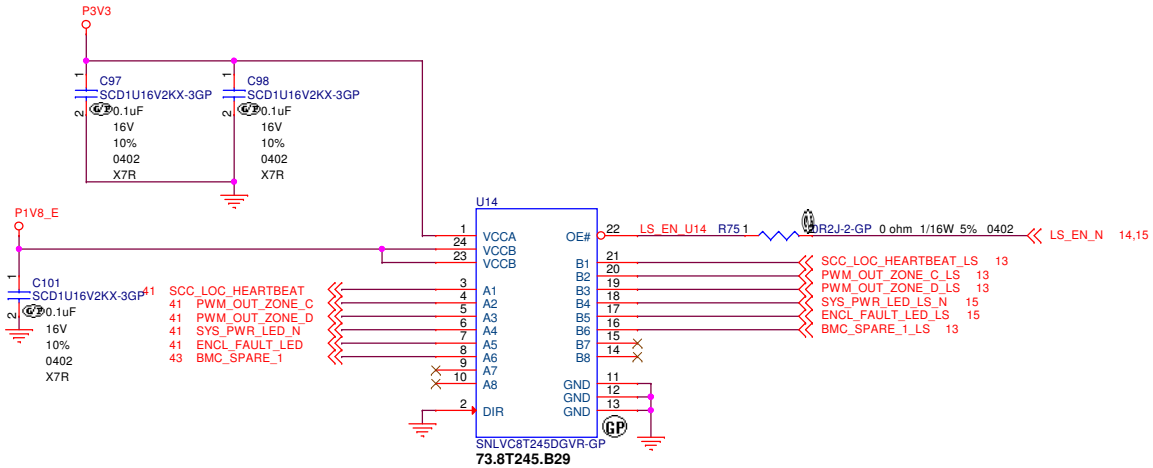

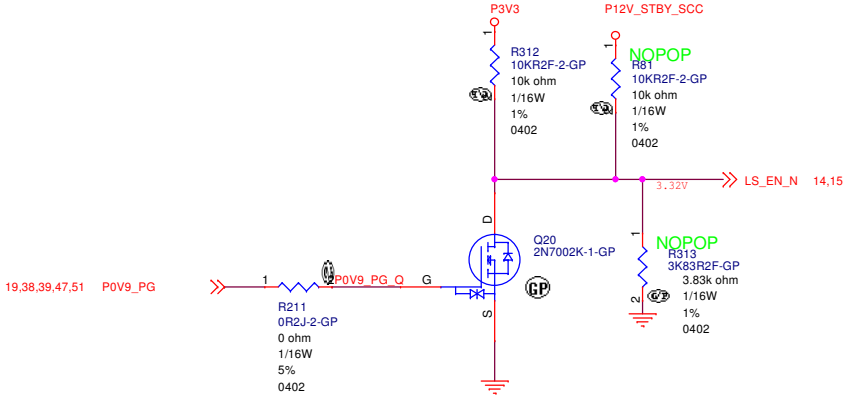

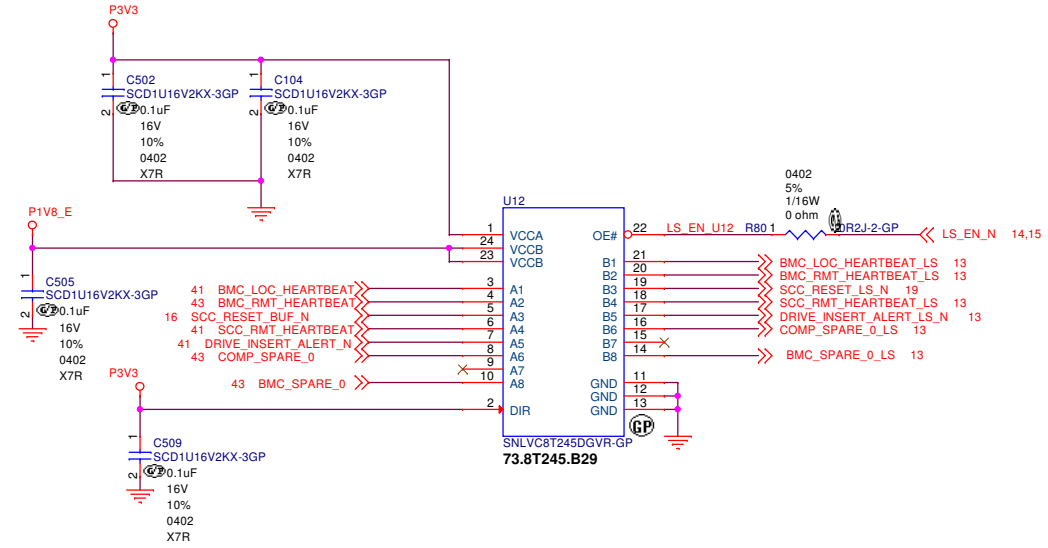

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Title: SAS 3X48 I2C & GPIO_2

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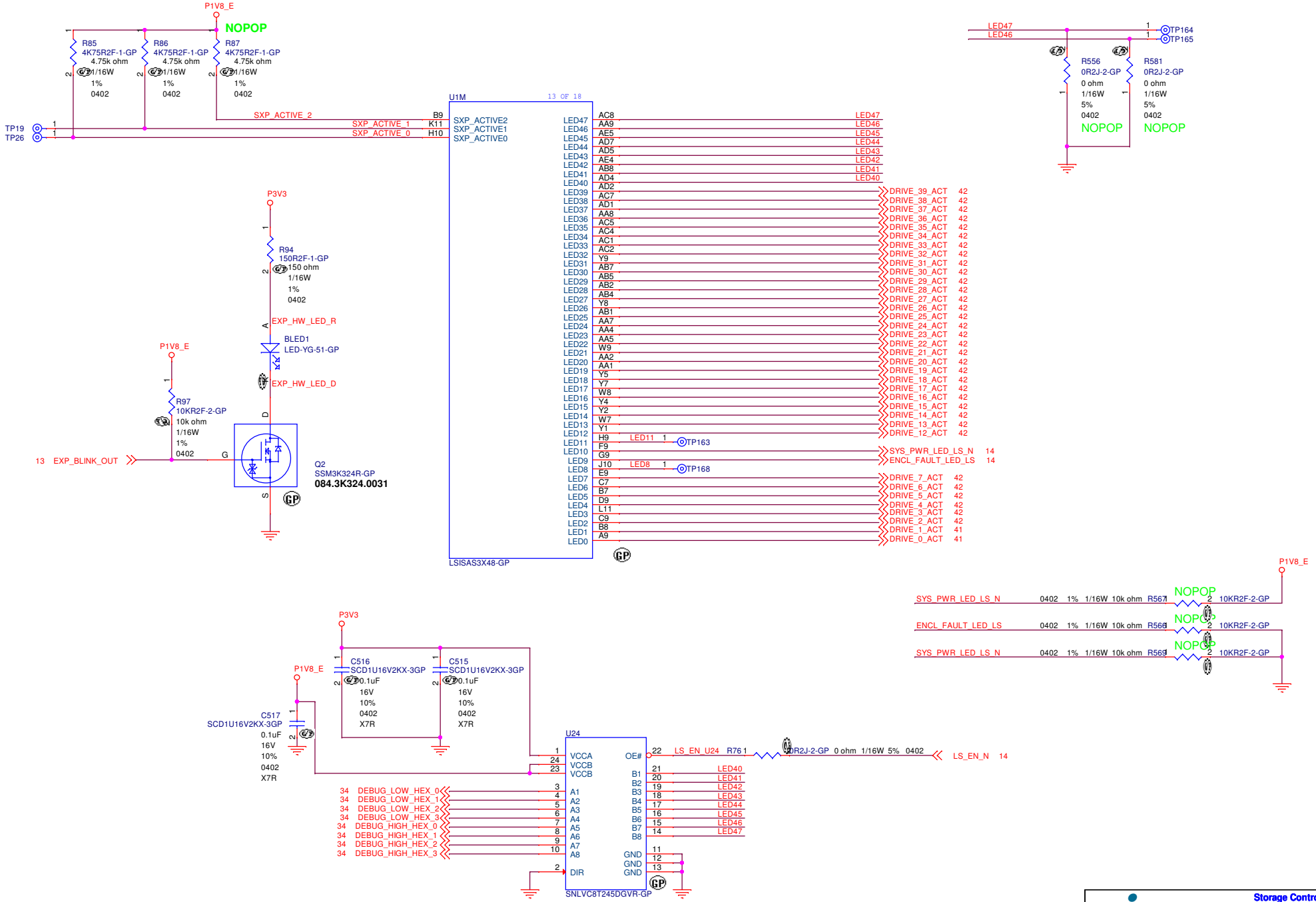

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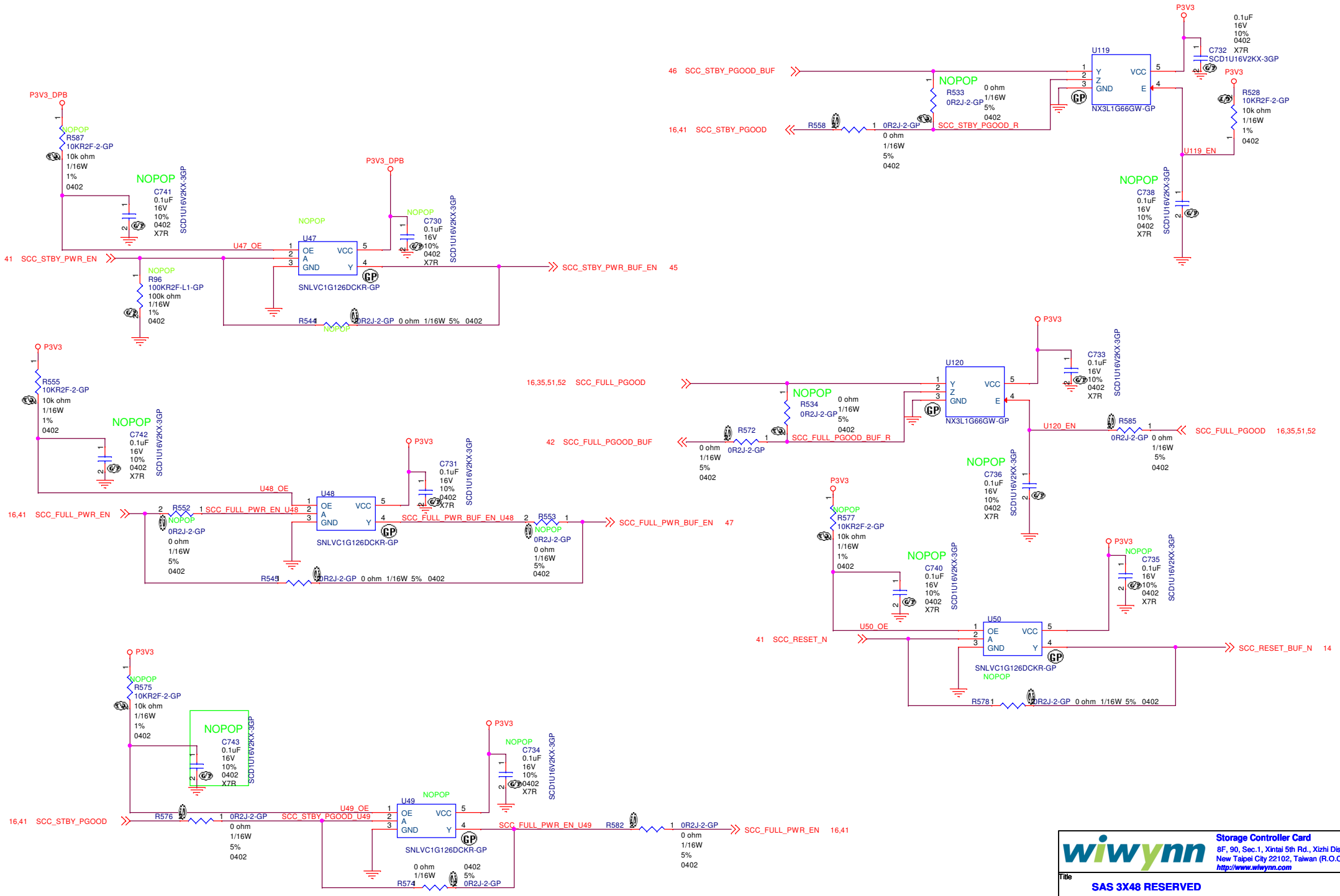
P3V3_DPB
R587 10KR2F-2-GP 10k ohm 1/16W 1% 0402
NOPOP
C741 0.1uF 16V 10% 0402 X7R SCD1U16V2KX-3GP
41 SCC_STBY_PWR_EN
U47_OE
U47
OE A GND VCC Y
SNLVC1G126DCKR-GP
NOPOP
R96 100KR2F-L1-GP 100k ohm 1/16W 1% 0402
R544 0R2J-2-GP 0 ohm 1/16W 5% 0402
NOPOP
C730 0.1uF 16V 10% 0402 X7R SCD1U16V2KX-3GP
SCC_STBY_PWR_BUF_EN 45
46 SCC_STBY_PGOOD_BUF
16,41 SCC_STBY_PGOOD
R533 0R2J-2-GP 0 ohm 1/16W 5% 0402
R558 0R2J-2-GP 0 ohm 1/16W 5% 0402
SCC_STBY_PGOOD_R
U119
Y Z GND VCC E
NX3L1G66GW-GP
C732 0.1uF 16V 10% 0402 X7R SCD1U16V2KX-3GP
R528 10KR2F-2-GP 10k ohm 1/16W 1% 0402
U119_EN
C738 0.1uF 16V 10% 0402 X7R SCD1U16V2KX-3GP
R555 10KR2F-2-GP 10k ohm 1/16W 1% 0402
C742 0.1uF 16V 10% 0402 X7R SCD1U16V2KX-3GP
U48_OE
16,41 SCC_FULL_PWR_EN
R552 0R2J-2-GP 0 ohm 1/16W 5% 0402
SCC_FULL_PWR_EN_U48
U48
OE A GND VCC Y
SNLVC1G126DCKR-GP
C731 0.1uF 16V 10% 0402 X7R SCD1U16V2KX-3GP
SCC_FULL_PWR_BUF_EN_U48
R553 NOPOP 0R2J-2-GP 0 ohm 1/16W 5% 0402
SCC_FULL_PWR_BUF_EN 47
R545 0R2J-2-GP 0 ohm 1/16W 5% 0402
16,35,51,52 SCC_FULL_PGOOD
42 SCC_FULL_PGOOD_BUF
R534 0R2J-2-GP 0 ohm 1/16W 5% 0402
R572 0R2J-2-GP 0 ohm 1/16W 5% 0402
SCC_FULL_PGOOD_BUF_R
U120
Y Z GND VCC E
NX3L1G66GW-GP
C733 0.1uF 16V 10% 0402 X7R SCD1U16V2KX-3GP
U120_EN
R585 0R2J-2-GP 0 ohm 1/16W 5% 0402
SCC_FULL_PGOOD 16,35,51,52
C736 0.1uF 16V 10% 0402 X7R SCD1U16V2KX-3GP
R577 10KR2F-2-GP 10k ohm 1/16W 1% 0402
C740 0.1uF 16V 10% 0402 X7R SCD1U16V2KX-3GP
U50_OE
41 SCC_RESET_N
U50
OE A GND VCC Y
SNLVC1G126DCKR-GP
C735 0.1uF 16V 10% 0402 X7R SCD1U16V2KX-3GP
SCC_RESET_BUF_N 14
R578 0R2J-2-GP 0 ohm 1/16W 5% 0402
R575 10KR2F-2-GP 10k ohm 1/16W 1% 0402
C743 0.1uF 16V 10% 0402 X7R SCD1U16V2KX-3GP
16,41 SCC_STBY_PGOOD
R576 0R2J-2-GP 0 ohm 1/16W 5% 0402
SCC_STBY_PGOOD_U49
U49_OE
U49
OE A GND VCC Y
SNLVC1G126DCKR-GP
C734 0.1uF 16V 10% 0402 X7R SCD1U16V2KX-3GP
SCC_FULL_PWR_EN_U49
R582 0R2J-2-GP 0 ohm 1/16W 5% 0402
SCC_FULL_PWR_EN 16,41
R574 0R2J-2-GP 0 ohm 1/16W 5% 0402
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Title: SAS3008 RESERVE

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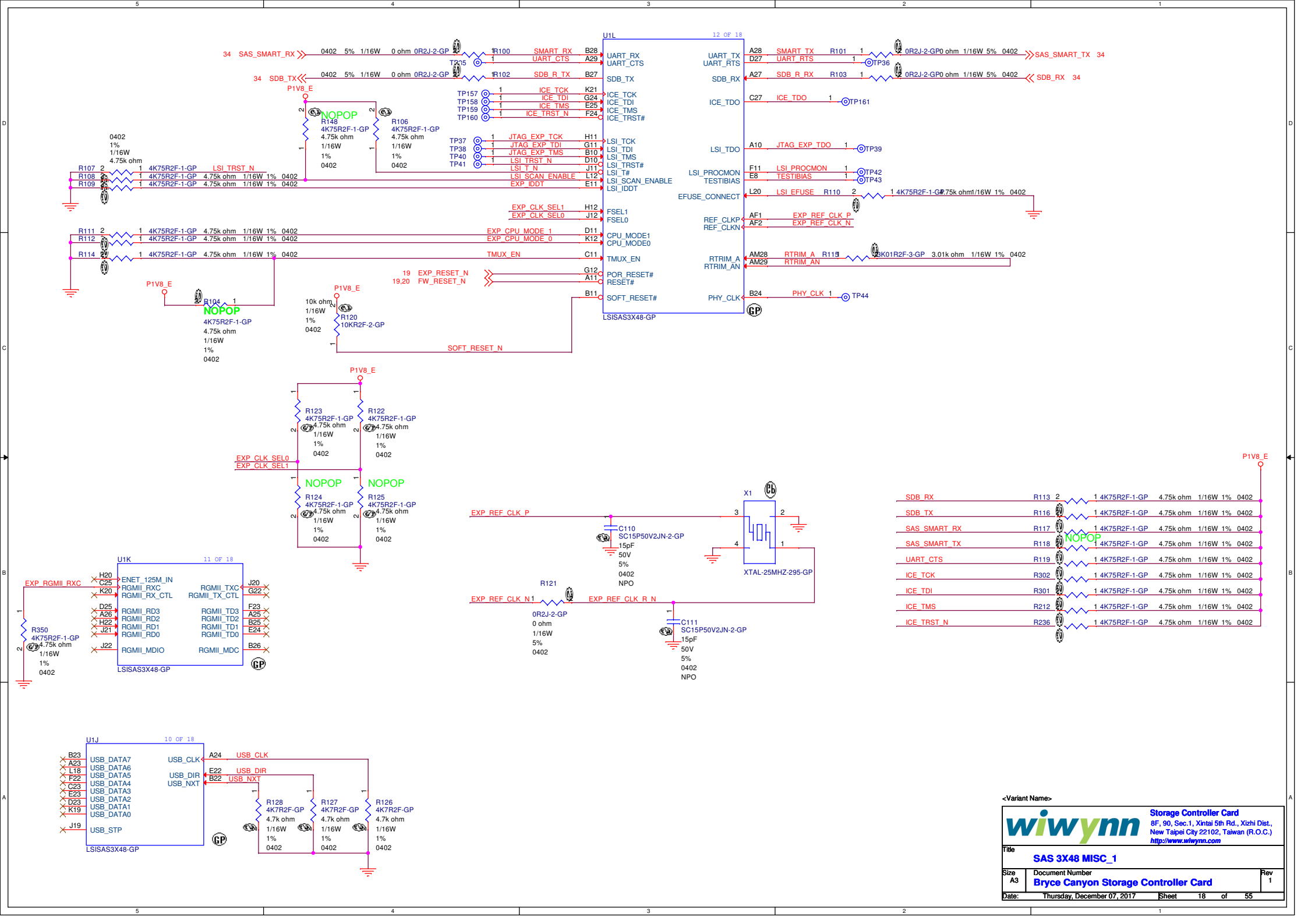
U1L
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LSISAS3X48-GP
SAS_SMART_RX
SAS_SMART_TX
SDB_TX
SDB_RX
SMART_RX
SMART_TX
UART_CTS
UART_RTS
SDB_R_TX
SDB_R_RX
ICE_TCK
ICE_TDI
ICE_TMS
ICE_TRST_N
ICE_TDO
JTAG_EXP_TCK
JTAG_EXP_TDI
JTAG_EXP_TMS
JTAG_EXP_TDO
LSI_TRST_N
LSI_T_N
LSI_SCAN_ENABLE
EXP_IDDT
LSI_PROCMON
TESTIBIAS
LSI_EFUSE
EXP_REF_CLK_P
EXP_REF_CLK_N
EXP_CLK_SEL1
EXP_CLK_SEL0
EXP_CPU_MODE_1
EXP_CPU_MODE_0
TMUX_EN
RTRIM_A
RTRIM_AN
EXP_RESET_N
FW_RESET_N
SOFT_RESET_N
PHY_CLK
P1V8_E
NOPOP
4K75R2F-1-GP
10KR2F-2-GP
0R2J-2-GP
4K7R2F-GP
4K01R2F-3-GP
SC15P50V2JN-2-GP
XTAL-25MHZ-295-GP
U1K
11 OF 18
ENET_125M_IN
RGMII_RXC
RGMII_RX_CTL
RGMII_RD3
RGMII_RD2
RGMII_RD1
RGMII_RD0
RGMII_MDIO
RGMII_TXC
RGMII_TX_CTL
RGMII_TD3
RGMII_TD2
RGMII_TD1
RGMII_TD0
RGMII_MDC
EXP_RGMII_RXC
U1J
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USB_DATA7
USB_DATA6
USB_DATA5
USB_DATA4
USB_DATA3
USB_DATA2
USB_DATA1
USB_DATA0
USB_STP
USB_CLK
USB_DIR
USB_NXT
<Variant Name>
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http://www.wiwynn.com
Title
SAS 3X48 MISC_1
Size
A3
Document Number
Bryce Canyon Storage Controller Card
Rev
1
Date:
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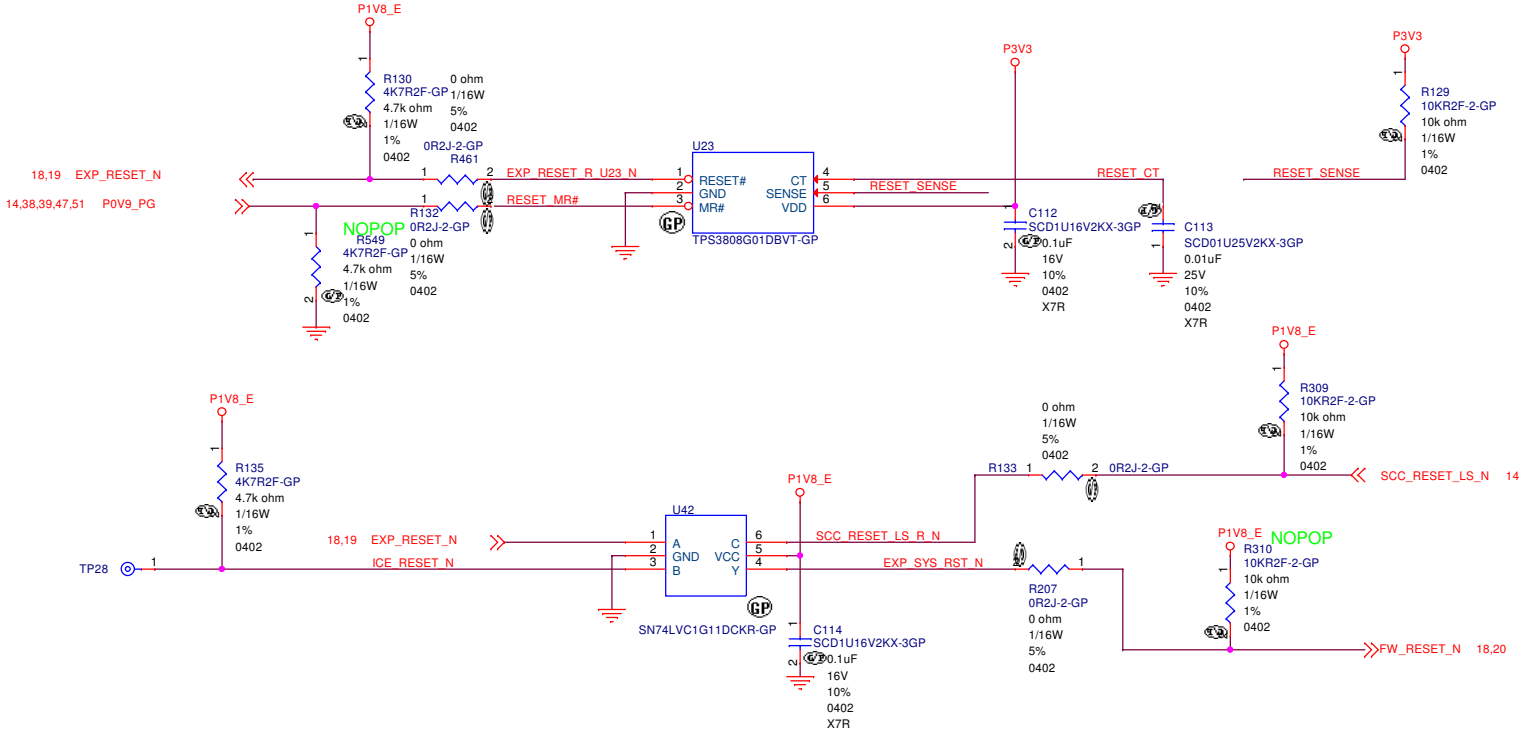

<Variant Name>

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Title	SAS 3X48 MISC_2	
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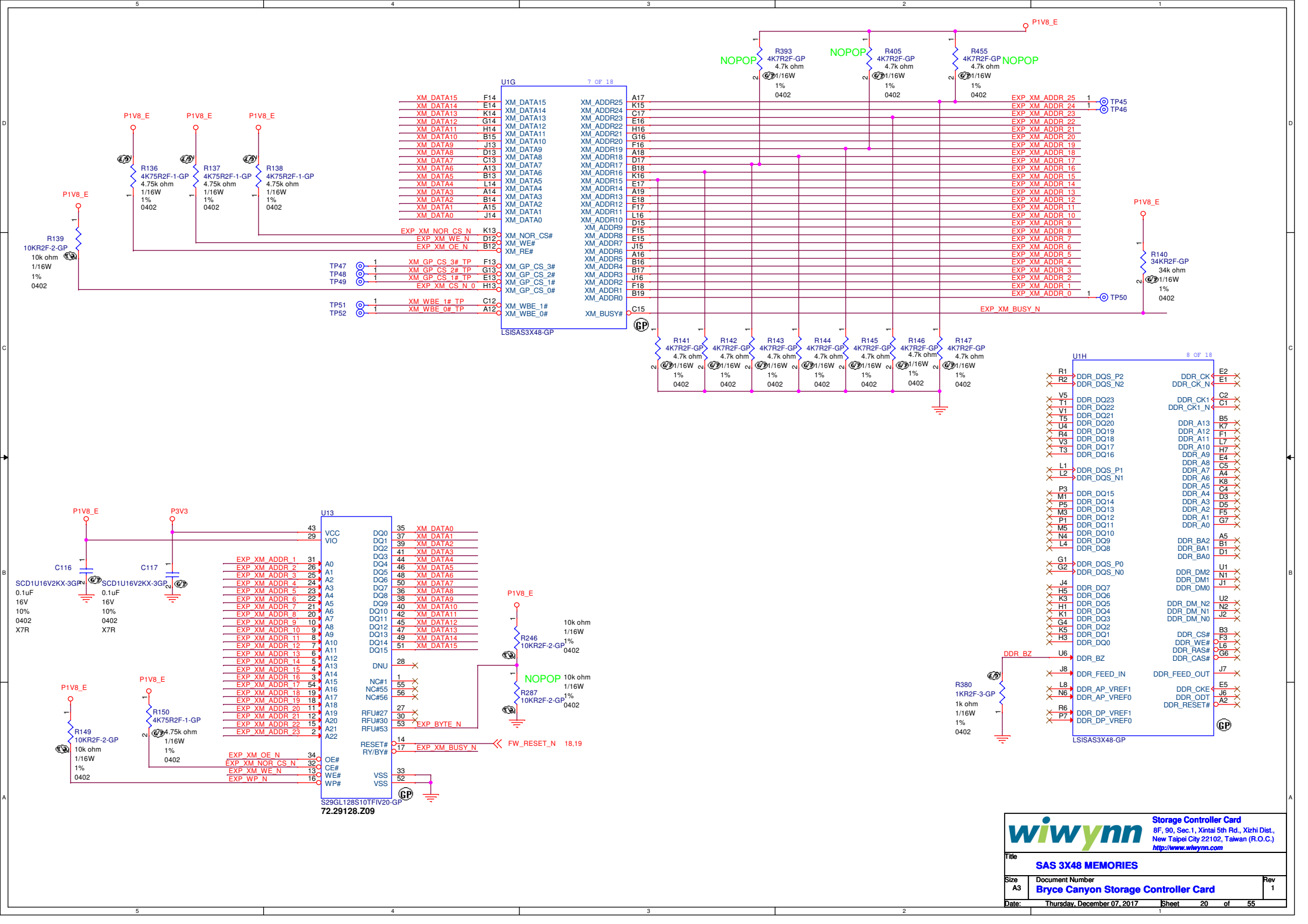

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Title	SAS 3X48 MEMORIES	
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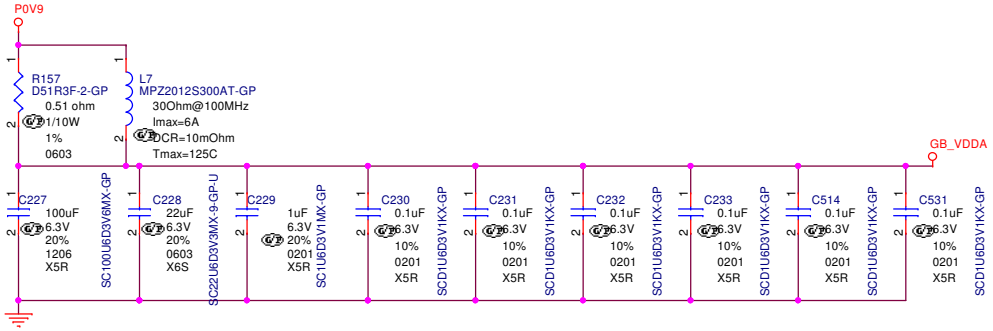

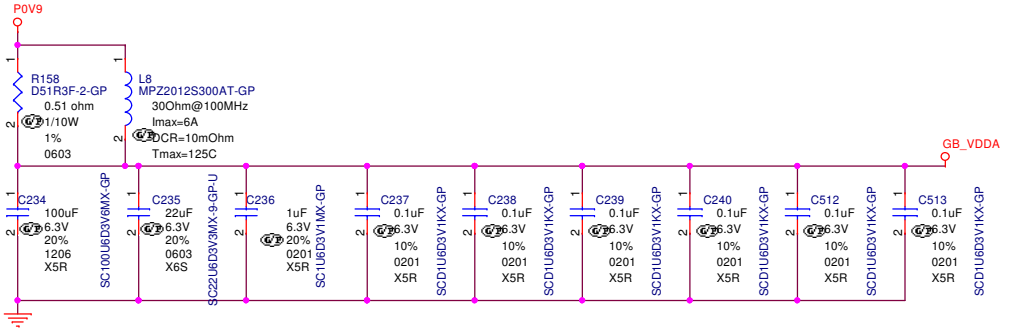

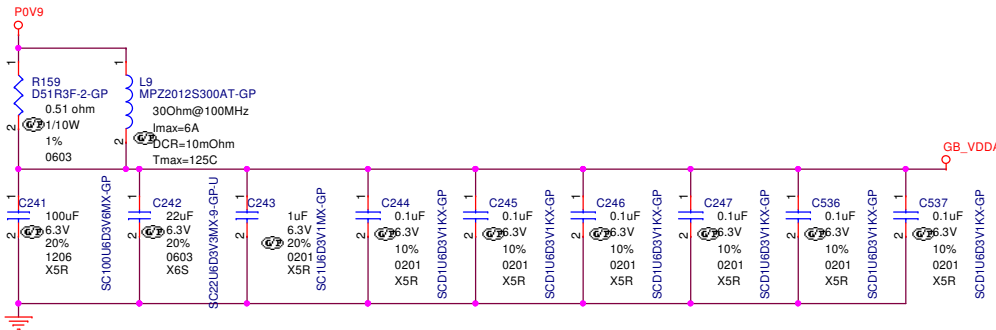

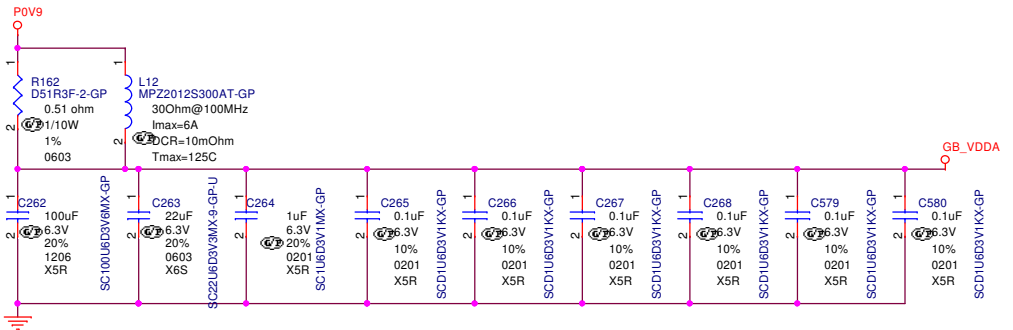

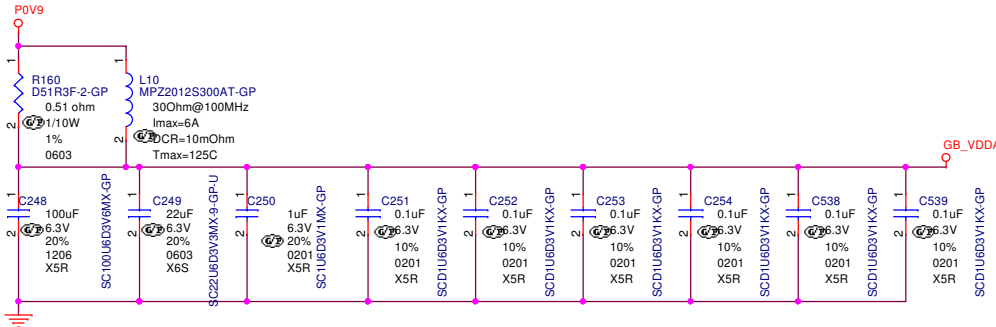

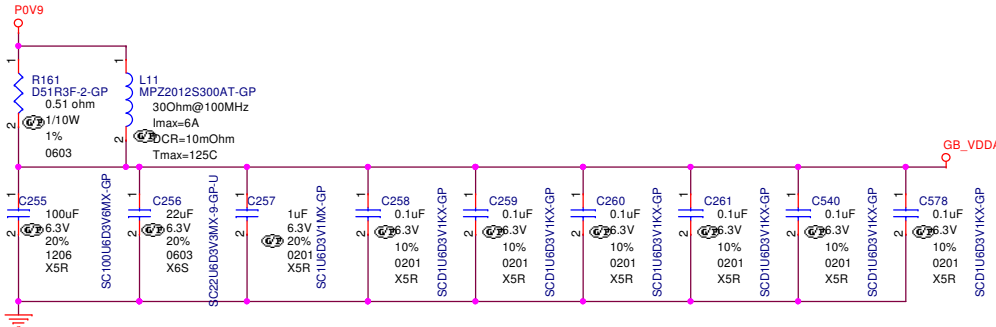

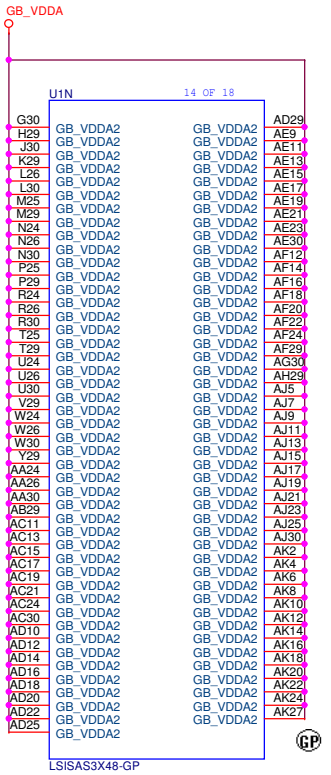

Storage Controller Card	wiwynn
8F, 90, Sec.1, Xintai 5th Rd., Xizhi Dist., New Taipei City 22102, Taiwan (R.O.C.)	
http://www.wiwynn.com	
Title: SAS 3X48 VOLTAGE FILTERS_2	
Size: A3	Document Number: Bryce Canyon Storage Controller Card
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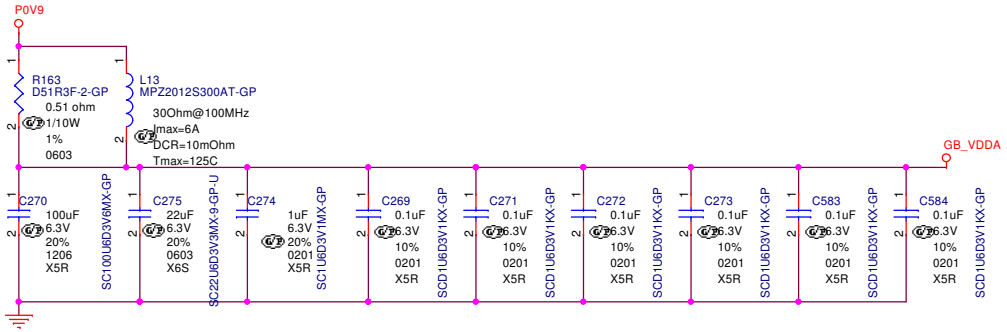

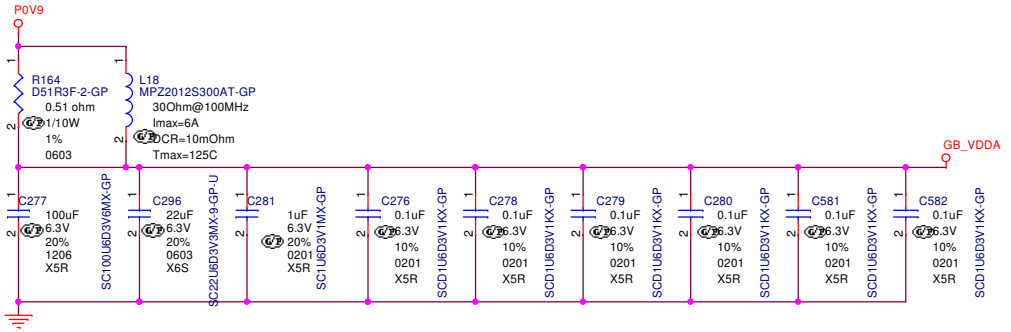

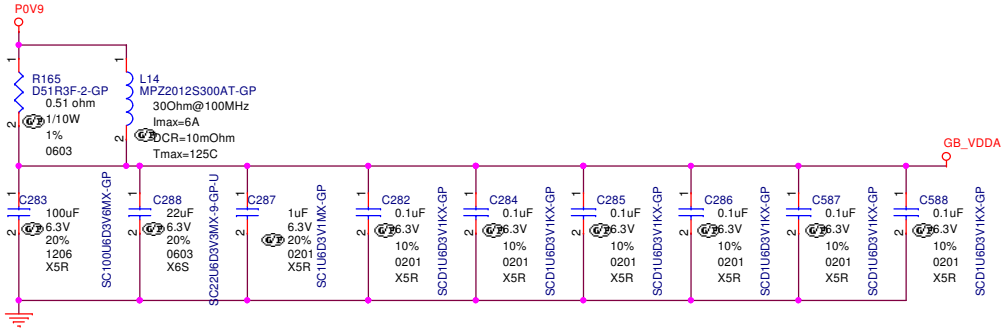

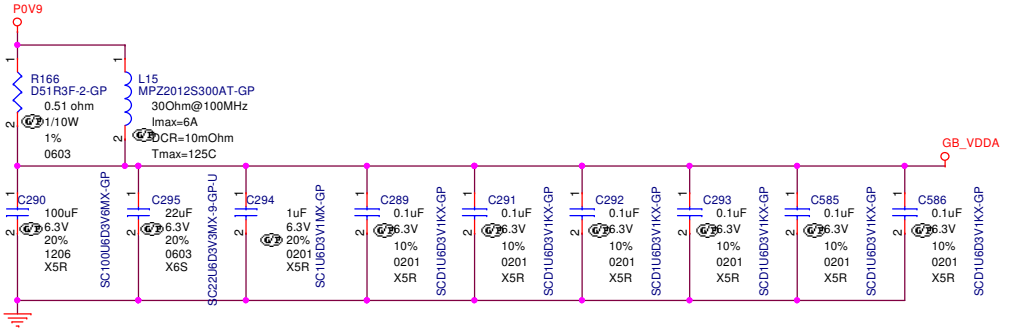

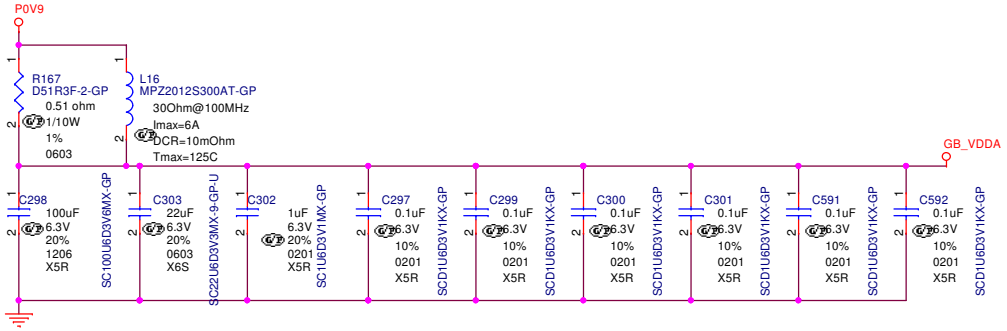

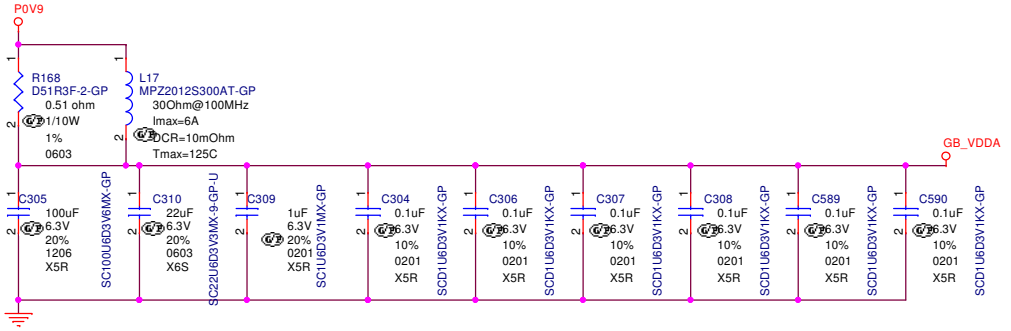

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Title	SAS 3X48 VOLTAGE FILTERS_2	
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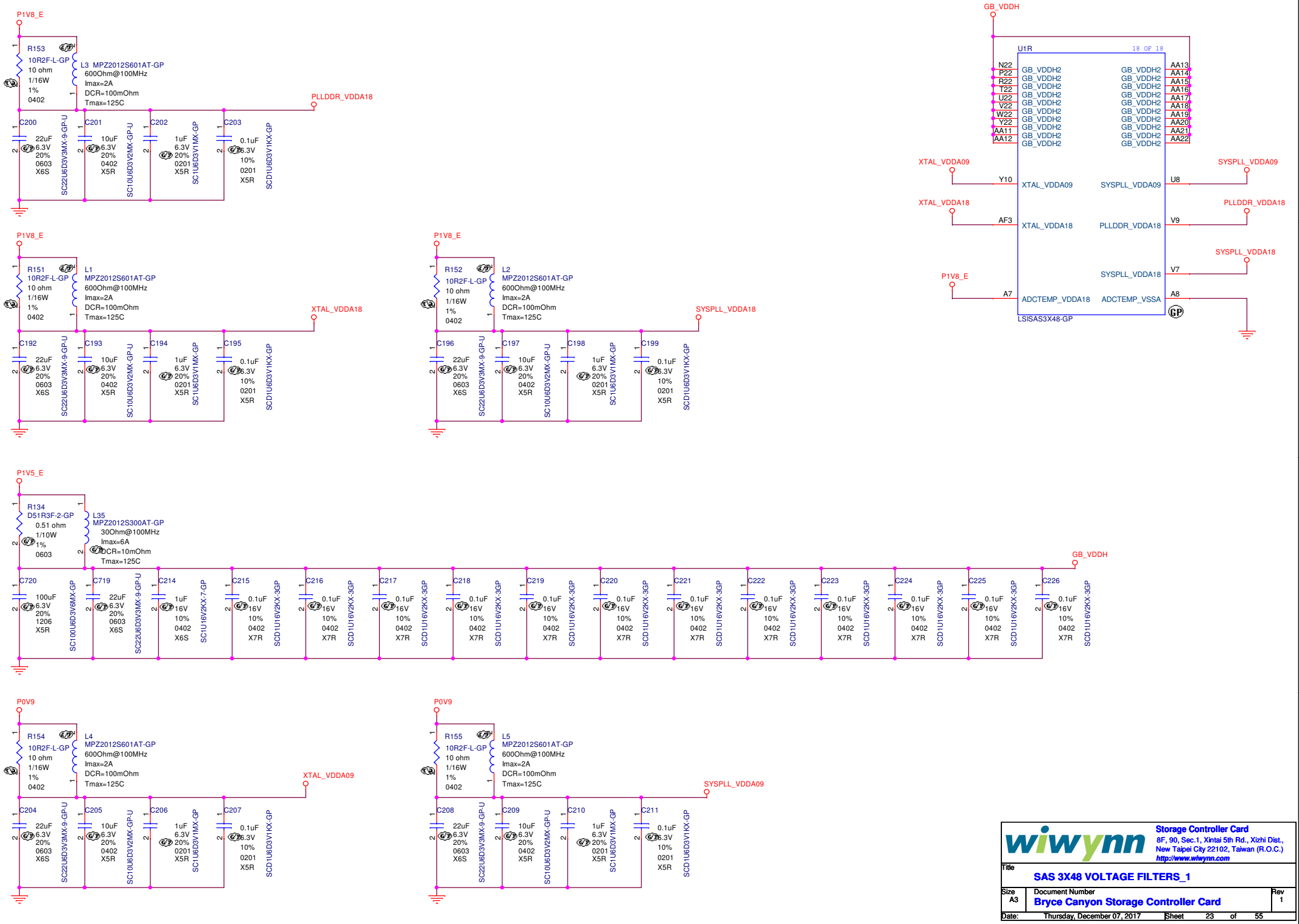
P1V8_E
R153
10R2F-L-GP
10 ohm
1/16W
1%
0402
L3 MPZ2012S601AT-GP
600Ohm@100MHz
Imax=2A
DCR=100mOhm
Tmax=125C
PLLDDR_VDDA18
C200 22uF 6.3V 20% 0603 X6S SC22U6D3V3MX-9-GP-U
C201 10uF 6.3V 20% 0402 X5R SC10U6D3V2MX-GP-U
C202 1uF 6.3V 20% 0201 X5R SC1U6D3V1MX-GP
C203 0.1uF 6.3V 10% 0201 X5R SCD1U6D3V1KX-GP
P1V8_E
R151
10R2F-L-GP
10 ohm
1/16W
1%
0402
L1
MPZ2012S601AT-GP
600Ohm@100MHz
Imax=2A
DCR=100mOhm
Tmax=125C
XTAL_VDDA18
C192 22uF 6.3V 20% 0603 X6S SC22U6D3V3MX-9-GP-U
C193 10uF 6.3V 20% 0402 X5R SC10U6D3V2MX-GP-U
C194 1uF 6.3V 20% 0201 X5R SC1U6D3V1MX-GP
C195 0.1uF 6.3V 10% 0201 X5R SCD1U6D3V1KX-GP
P1V8_E
R152
10R2F-L-GP
10 ohm
1/16W
1%
0402
L2
MPZ2012S601AT-GP
600Ohm@100MHz
Imax=2A
DCR=100mOhm
Tmax=125C
SYSPLL_VDDA18
C196 22uF 6.3V 20% 0603 X6S SC22U6D3V3MX-9-GP-U
C197 10uF 6.3V 20% 0402 X5R SC10U6D3V2MX-GP-U
C198 1uF 6.3V 20% 0201 X5R SC1U6D3V1MX-GP
C199 0.1uF 6.3V 10% 0201 X5R SCD1U6D3V1KX-GP
GB_VDDH
U1R
18 OF 18
N22 P22 R22 T22 U22 V22 W22 Y22 AA11 AA12 GB_VDDH2
AA13 AA14 AA15 AA16 AA17 AA18 AA19 AA20 AA21 AA22 GB_VDDH2
XTAL_VDDA09
Y10 XTAL_VDDA09
SYSPLL_VDDA09
U8 SYSPLL_VDDA09
XTAL_VDDA18
AF3 XTAL_VDDA18
PLLDDR_VDDA18
V9 PLLDDR_VDDA18
SYSPLL_VDDA18
V7 SYSPLL_VDDA18
P1V8_E
A7 ADCTEMP_VDDA18
ADCTEMP_VSSA
A8
LSISAS3X48-GP
P1V5_E
R134
D51R3F-2-GP
0.51 ohm
1/10W
1%
0603
L35
MPZ2012S300AT-GP
30Ohm@100MHz
Imax=6A
DCR=10mOhm
Tmax=125C
GB_VDDH
C720 100uF 6.3V 20% 1206 X5R SC100U6D3V6MX-GP
C719 22uF 6.3V 20% 0603 X6S SC22U6D3V3MX-9-GP-U
C214 1uF 16V 10% 0402 X6S SC1U16V2KX-7-GP
C215 0.1uF 16V 10% 0402 X7R SCD1U16V2KX-3GP
C216 0.1uF 16V 10% 0402 X7R SCD1U16V2KX-3GP
C217 0.1uF 16V 10% 0402 X7R SCD1U16V2KX-3GP
C218 0.1uF 16V 10% 0402 X7R SCD1U16V2KX-3GP
C219 0.1uF 16V 10% 0402 X7R SCD1U16V2KX-3GP
C220 0.1uF 16V 10% 0402 X7R SCD1U16V2KX-3GP
C221 0.1uF 16V 10% 0402 X7R SCD1U16V2KX-3GP
C222 0.1uF 16V 10% 0402 X7R SCD1U16V2KX-3GP
C223 0.1uF 16V 10% 0402 X7R SCD1U16V2KX-3GP
C224 0.1uF 16V 10% 0402 X7R SCD1U16V2KX-3GP
C225 0.1uF 16V 10% 0402 X7R SCD1U16V2KX-3GP
C226 0.1uF 16V 10% 0402 X7R SCD1U16V2KX-3GP
P0V9
R154
10R2F-L-GP
10 ohm
1/16W
1%
0402
L4
MPZ2012S601AT-GP
600Ohm@100MHz
Imax=2A
DCR=100mOhm
Tmax=125C
XTAL_VDDA09
C204 22uF 6.3V 20% 0603 X6S SC22U6D3V3MX-9-GP-U
C205 10uF 6.3V 20% 0402 X5R SC10U6D3V2MX-GP-U
C206 1uF 6.3V 20% 0201 X5R SC1U6D3V1MX-GP
C207 0.1uF 6.3V 10% 0201 X5R SCD1U6D3V1KX-GP
P0V9
R155
10R2F-L-GP
10 ohm
1/16W
1%
0402
L5
MPZ2012S601AT-GP
600Ohm@100MHz
Imax=2A
DCR=100mOhm
Tmax=125C
SYSPLL_VDDA09
C208 22uF 6.3V 20% 0603 X6S SC22U6D3V3MX-9-GP-U
C209 10uF 6.3V 20% 0402 X5R SC10U6D3V2MX-GP-U
C210 1uF 6.3V 20% 0201 X5R SC1U6D3V1MX-GP
C211 0.1uF 6.3V 10% 0201 X5R SCD1U6D3V1KX-GP
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Storage Controller Card
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New Taipei City 22102, Taiwan (R.O.C.)
http://www.wiwynn.com
Title
SAS 3X48 VOLTAGE FILTERS_1
Size A3
Document Number
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Rev 1
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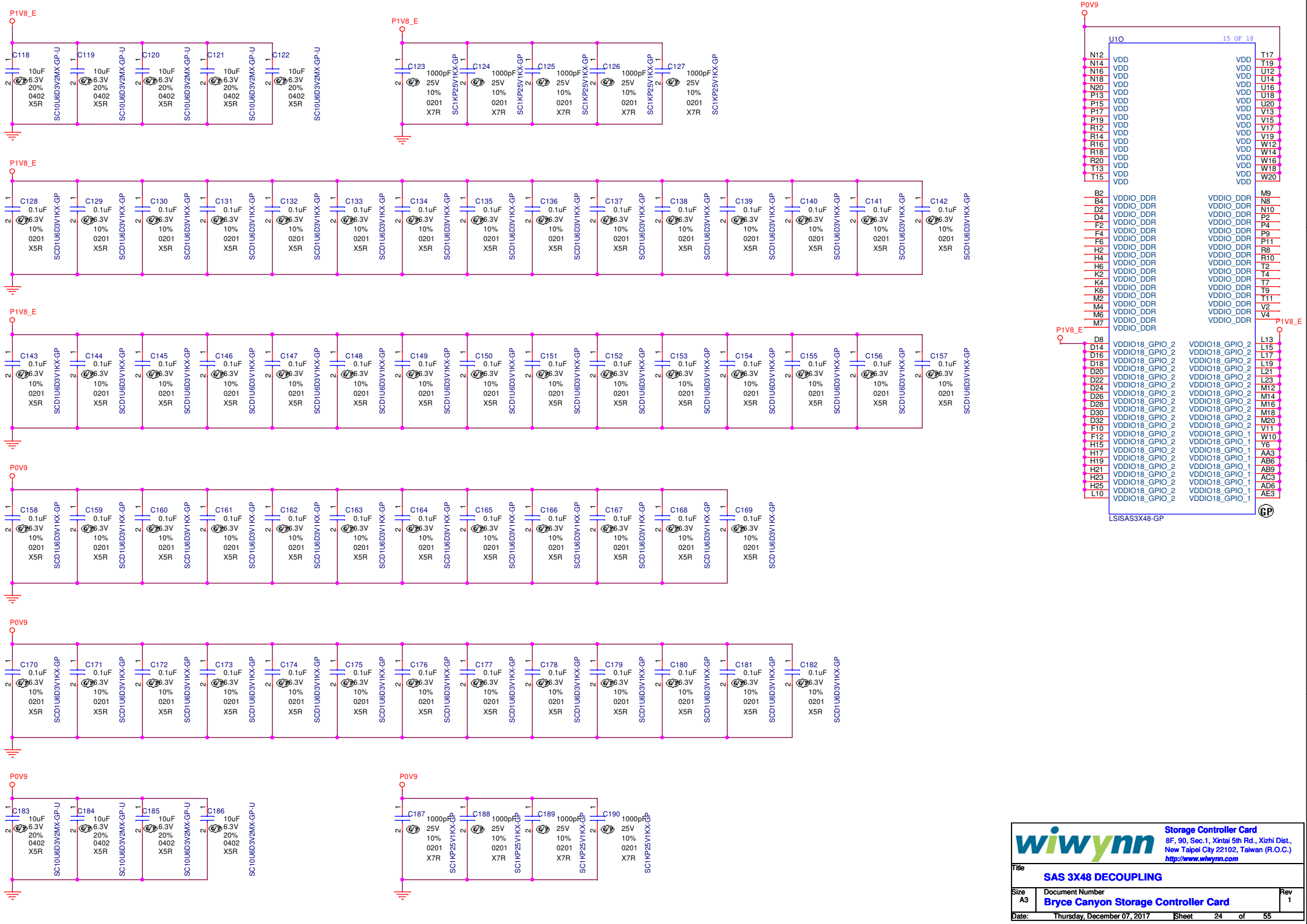

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Title	SAS 3X48 DECOUPLING	
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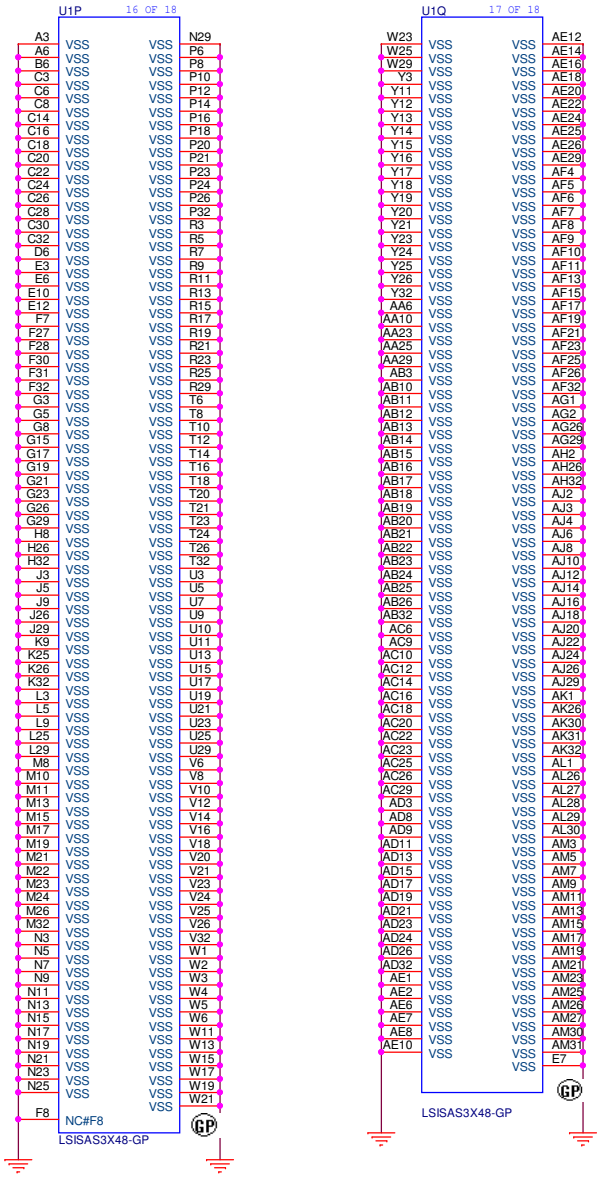

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http://www.wiwynn.com

Title: SAS 3X48 GND

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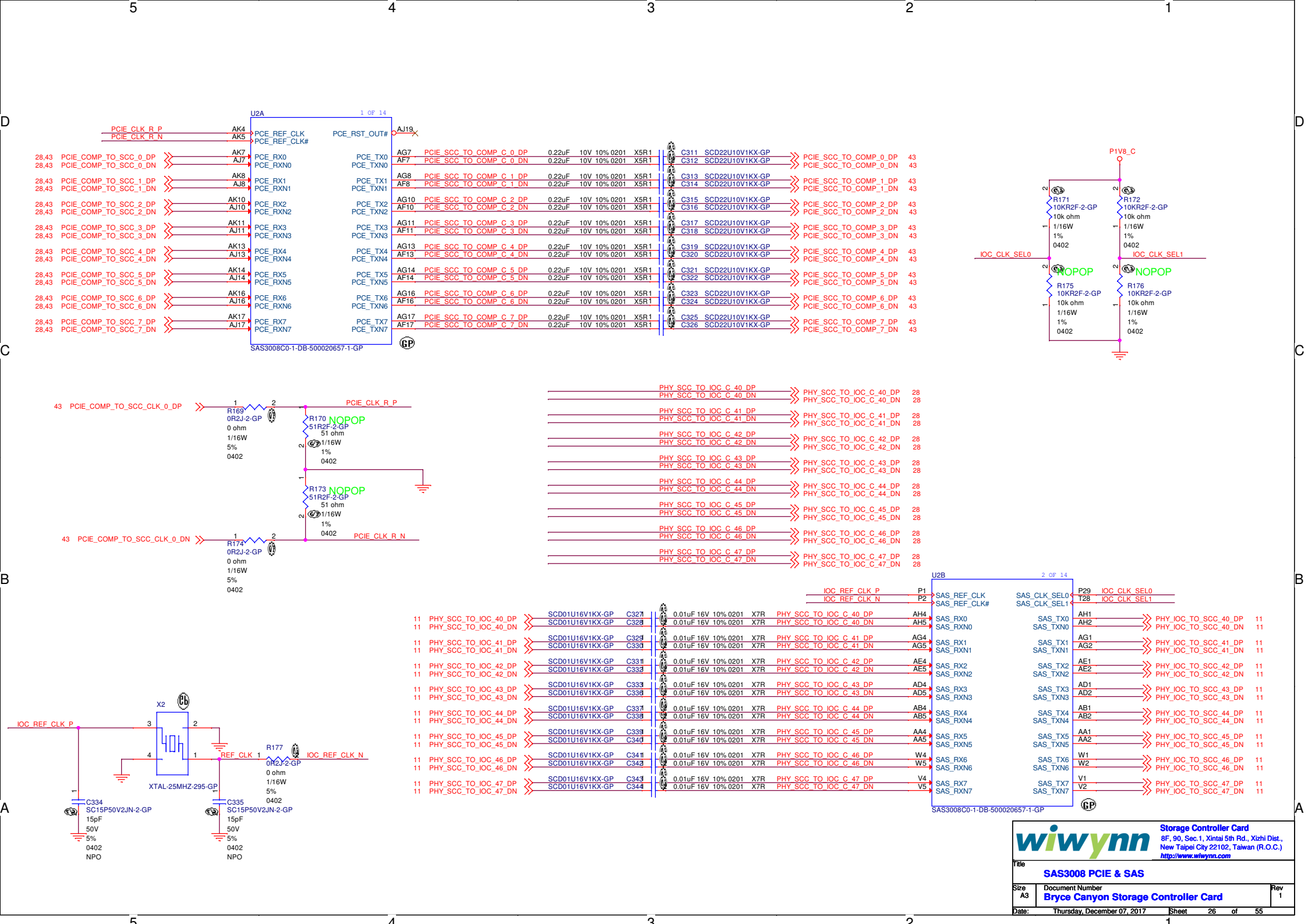

Storage Controller Card
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Title	SAS3008 PCIE & SAS	
Size A3	Document Number Bryce Canyon Storage Controller Card	Rev 1
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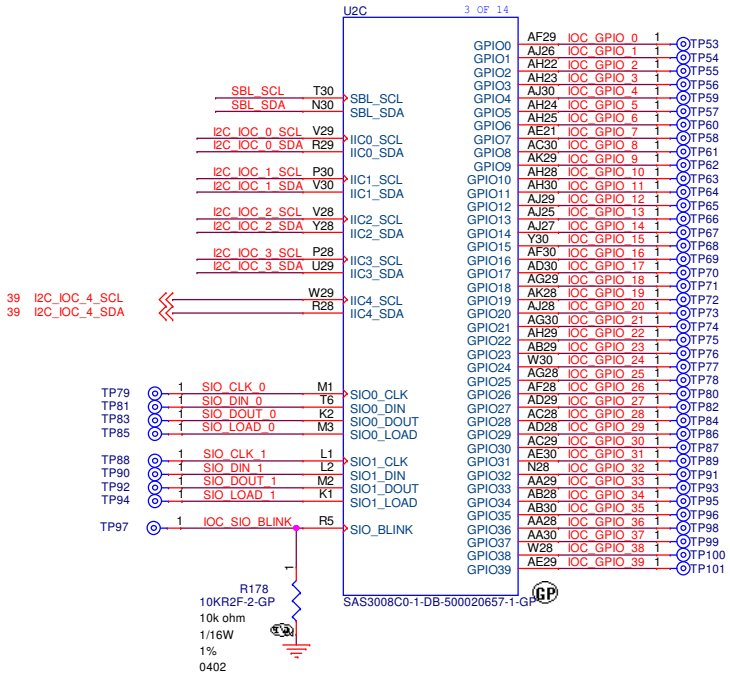

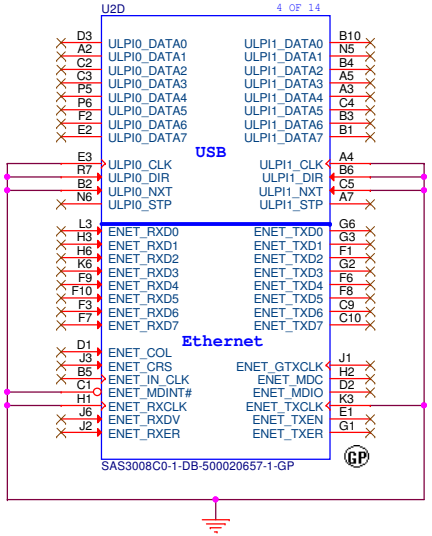

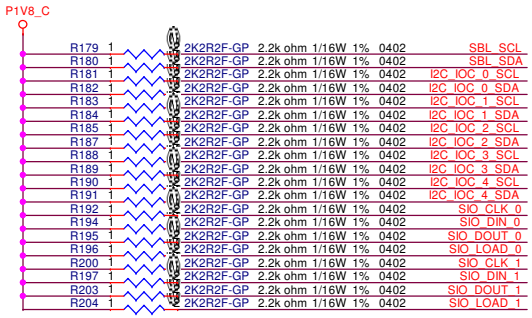

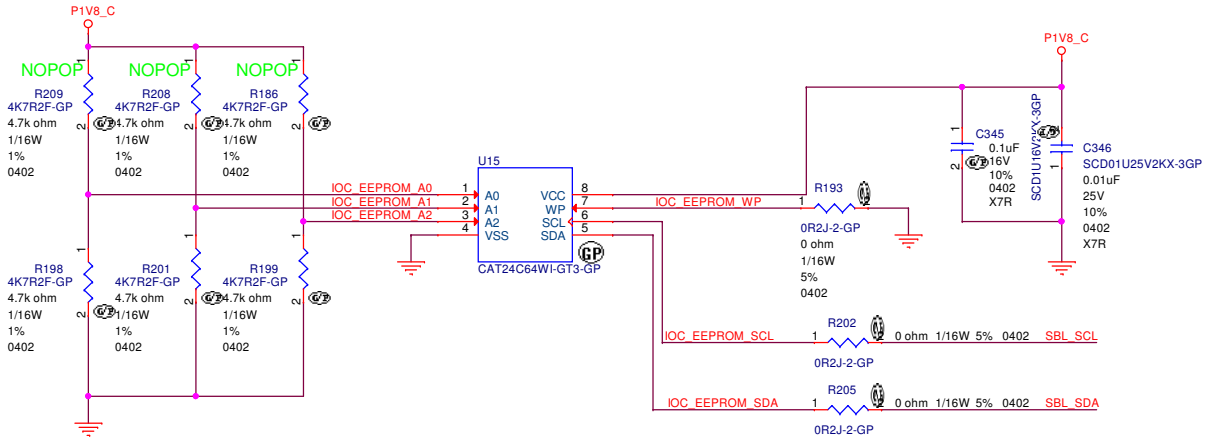

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Title	SAS3008 GPIO&USB&ETH	
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Title: HIGH SPEED VIA

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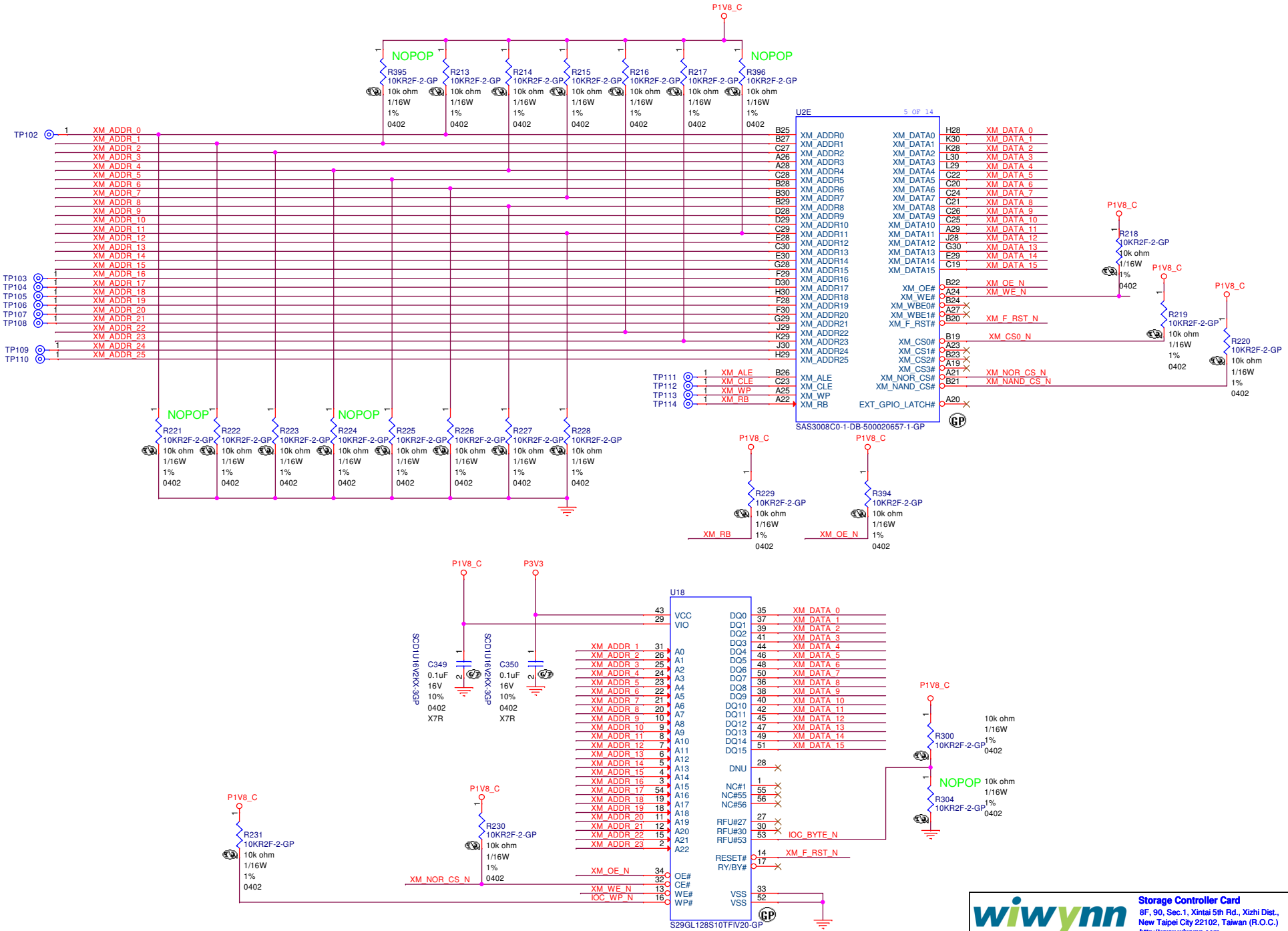

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Title	SAS3008 FLASH	
Size A3	Document Number: Bryce Canyon Storage Controller Card	Rev 1
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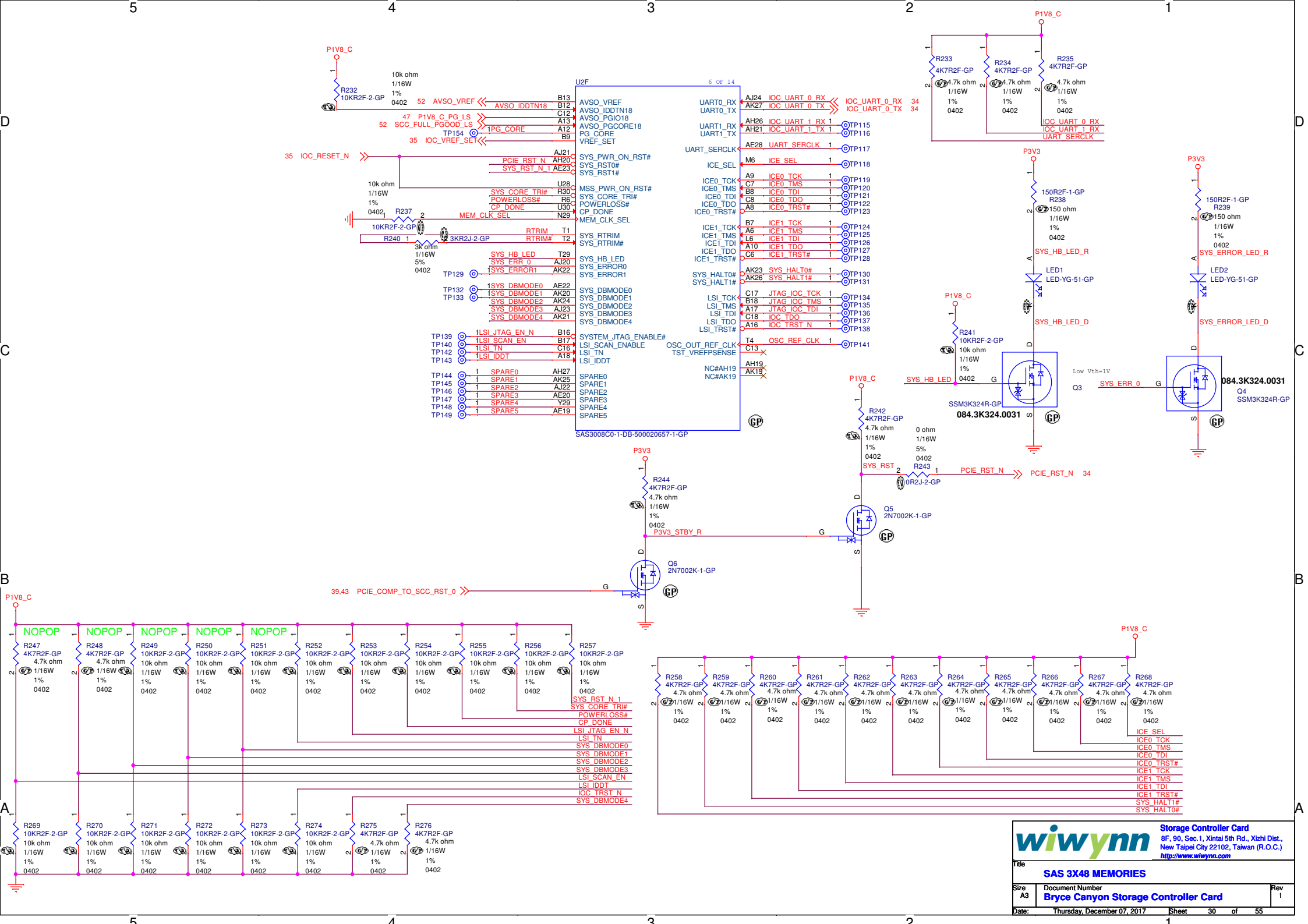
P1V8_C
R232 10KR2F-2-GP
10k ohm 1/16W 1% 0402
52 AVSO_VREF
U2F
6 OF 14
AVSO_VREF
AVSO_IDDTN18
AVSO_PGIO18
AVSO_PGCORE18
PG_CORE
VREF_SET
47 P1V8_C_PG_LS
52 SCC_FULL_PGOOD_LS
TP154
35 IOC_VREF_SET
35 IOC_RESET_N
PCIE_RST_N
SYS_RST_N_1
SYS_RST0#
SYS_RST1#
SYS_PWR_ON_RST#
10k ohm 1/16W 1%
R237 10KR2F-2-GP
R240 3K ohm 1/16W 5% 0402
3KR2J-2-GP
MEM_CLK_SEL
SYS_CORE_TRI#
POWERLOSS#
CP_DONE
MSS_PWR_ON_RST#
SYS_CORE_TRI#
POWERLOSS#
CP_DONE
MEM_CLK_SEL
RTRIM
RTRIM#
SYS_RTRIM
SYS_RTRIM#
SYS_HB_LED
SYS_ERR_0
SYS_ERROR1
SYS_HB_LED
SYS_ERROR0
SYS_ERROR1
TP129
TP132
TP133
SYS_DBMODE0
SYS_DBMODE1
SYS_DBMODE2
SYS_DBMODE3
SYS_DBMODE4
TP139
TP140
TP142
TP143
LSI_JTAG_EN_N
LSI_SCAN_EN
LSI_TN
LSI_IDDT
SYSTEM_JTAG_ENABLE#
LSI_SCAN_ENABLE
LSI_TN
LSI_IDDT
TP144
TP145
TP146
TP147
TP148
TP149
SPARE0
SPARE1
SPARE2
SPARE3
SPARE4
SPARE5
SAS3008C0-1-DB-500020657-1-GP
UART0_RX
UART0_TX
UART1_RX
UART1_TX
UART_SERCLK
ICE_SEL
ICE0_TCK
ICE0_TMS
ICE0_TDI
ICE0_TDO
ICE0_TRST#
ICE1_TCK
ICE1_TMS
ICE1_TDI
ICE1_TDO
ICE1_TRST#
SYS_HALT0#
SYS_HALT1#
LSI_TCK
LSI_TMS
LSI_TDI
LSI_TDO
LSI_TRST#
OSC_OUT_REF_CLK
TST_VREFPSENSE
NC#AH19
NC#AK19
IOC_UART_0_RX
IOC_UART_0_TX
IOC_UART_1_RX
IOC_UART_1_TX
UART_SERCLK
ICE_SEL
ICE0_TCK
ICE0_TMS
ICE0_TDI
ICE0_TDO
ICE0_TRST#
ICE1_TCK
ICE1_TMS
ICE1_TDI
ICE1_TDO
ICE1_TRST#
SYS_HALT0#
SYS_HALT1#
JTAG_IOC_TCK
JTAG_IOC_TMS
JTAG_IOC_TDI
IOC_TDO
IOC_TRST_N
OSC_REF_CLK
TP115
TP116
TP117
TP118
TP119
TP120
TP121
TP122
TP123
TP124
TP125
TP126
TP127
TP128
TP130
TP131
TP134
TP135
TP136
TP137
TP138
TP141
34
R233 4K7R2F-GP
R234 4K7R2F-GP
R235 4K7R2F-GP
4.7k ohm 1/16W 1% 0402
P3V3
150R2F-1-GP
R238
R239
150 ohm 1/16W 1% 0402
SYS_HB_LED_R
SYS_ERROR_LED_R
LED1
LED2
LED-YG-51-GP
SYS_HB_LED_D
SYS_ERROR_LED_D
R241 10KR2F-2-GP
10k ohm 1/16W 1% 0402
SYS_HB_LED
SYS_ERR_0
Low Vth=1V
Q3
Q4
084.3K324.0031
SSM3K324R-GP
R242 4K7R2F-GP
4.7k ohm 1/16W 1% 0402
0 ohm 1/16W 5% 0402
SYS_RST
R243 0R2J-2-GP
PCIE_RST_N
PCIE_RST_N 34
Q5
2N7002K-1-GP
P3V3_STBY_R
R244 4K7R2F-GP
4.7k ohm 1/16W 1% 0402
Q6
2N7002K-1-GP
39,43 PCIE_COMP_TO_SCC_RST_0
NOPOP
R247 4K7R2F-GP
R248 4K7R2F-GP
R249 10KR2F-2-GP
R250 10KR2F-2-GP
R251 10KR2F-2-GP
R252 10KR2F-2-GP
R253 10KR2F-2-GP
R254 10KR2F-2-GP
R255 10KR2F-2-GP
R256 10KR2F-2-GP
R257 10KR2F-2-GP
10k ohm 1/16W 1% 0402
SYS_RST_N_1
SYS_CORE_TRI#
POWERLOSS#
CP_DONE
LSI_JTAG_EN_N
LSI_TN
SYS_DBMODE0
SYS_DBMODE1
SYS_DBMODE2
SYS_DBMODE3
LSI_SCAN_EN
LSI_IDDT
IOC_TRST_N
SYS_DBMODE4
R258 4K7R2F-GP
R259 4K7R2F-GP
R260 4K7R2F-GP
R261 4K7R2F-GP
R262 4K7R2F-GP
R263 4K7R2F-GP
R264 4K7R2F-GP
R265 4K7R2F-GP
R266 4K7R2F-GP
R267 4K7R2F-GP
R268 4K7R2F-GP
4.7k ohm 1/16W 1% 0402
ICE_SEL
ICE0_TCK
ICE0_TMS
ICE0_TDI
ICE0_TRST#
ICE1_TCK
ICE1_TMS
ICE1_TDI
ICE1_TRST#
SYS_HALT1#
SYS_HALT0#
R269 10KR2F-2-GP
R270 10KR2F-2-GP
R271 10KR2F-2-GP
R272 10KR2F-2-GP
R273 10KR2F-2-GP
R274 10KR2F-2-GP
R275 4K7R2F-GP
R276 4K7R2F-GP
10k ohm 1/16W 1% 0402
4.7k ohm 1/16W 1% 0402
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Storage Controller Card
8F, 90, Sec.1, Xintai 5th Rd., Xizhi Dist., New Taipei City 22102, Taiwan (R.O.C.)
http://www.wiwynn.com
Title
SAS 3X48 MEMORIES
Size A3
Document Number
Bryce Canyon Storage Controller Card
Rev 1
Date: Thursday, December 07, 2017
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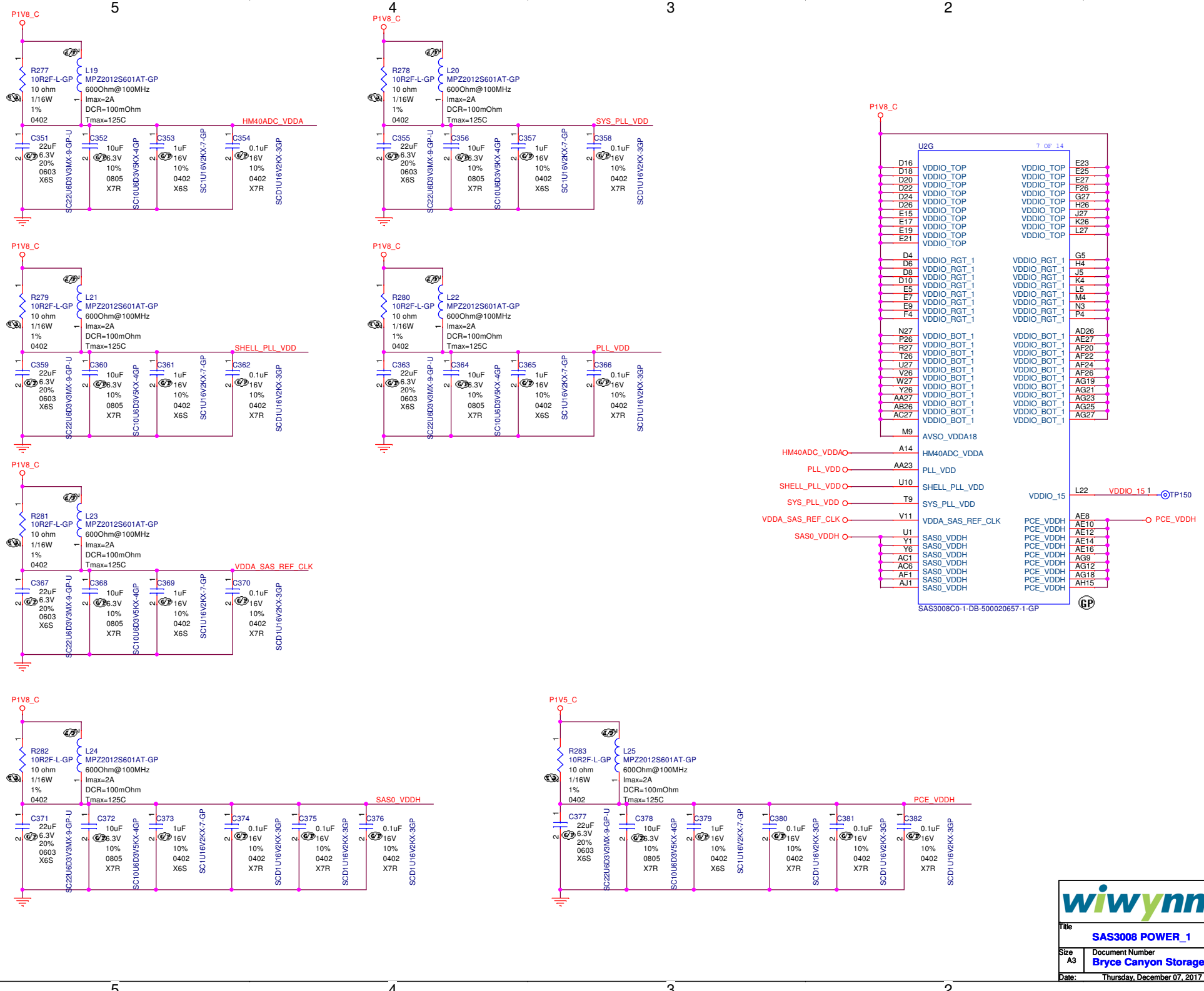
P1V8_C
R277 10R2F-L-GP 10 ohm 1/16W 1% 0402
L19 MPZ2012S601AT-GP 600Ohm@100MHz Imax=2A DCR=100mOhm Tmax=125C
HM40ADC_VDDA
C351 22uF 6.3V 20% 0603 X6S
C352 10uF 6.3V 10% 0805 X7R
C353 1uF 16V 10% 0402 X6S
C354 0.1uF 16V 10% 0402 X7R
SC22U6D3V3MX-9-GP-U
SC10U6D3V5KX-4GP
SC1U16V2KX-7-GP
SCD1U16V2KX-3GP
R278 10R2F-L-GP 10 ohm 1/16W 1% 0402
L20 MPZ2012S601AT-GP 600Ohm@100MHz Imax=2A DCR=100mOhm Tmax=125C
SYS_PLL_VDD
C355 22uF 6.3V 20% 0603 X6S
C356 10uF 6.3V 10% 0805 X7R
C357 1uF 16V 10% 0402 X6S
C358 0.1uF 16V 10% 0402 X7R
R279 10R2F-L-GP 10 ohm 1/16W 1% 0402
L21 MPZ2012S601AT-GP 600Ohm@100MHz Imax=2A DCR=100mOhm Tmax=125C
SHELL_PLL_VDD
C359 22uF 6.3V 20% 0603 X6S
C360 10uF 6.3V 10% 0805 X7R
C361 1uF 16V 10% 0402 X6S
C362 0.1uF 16V 10% 0402 X7R
R280 10R2F-L-GP 10 ohm 1/16W 1% 0402
L22 MPZ2012S601AT-GP 600Ohm@100MHz Imax=2A DCR=100mOhm Tmax=125C
PLL_VDD
C363 22uF 6.3V 20% 0603 X6S
C364 10uF 6.3V 10% 0805 X7R
C365 1uF 16V 10% 0402 X6S
C366 0.1uF 16V 10% 0402 X7R
R281 10R2F-L-GP 10 ohm 1/16W 1% 0402
L23 MPZ2012S601AT-GP 600Ohm@100MHz Imax=2A DCR=100mOhm Tmax=125C
VDDA_SAS_REF_CLK
C367 22uF 6.3V 20% 0603 X6S
C368 10uF 6.3V 10% 0805 X7R
C369 1uF 16V 10% 0402 X6S
C370 0.1uF 16V 10% 0402 X7R
R282 10R2F-L-GP 10 ohm 1/16W 1% 0402
L24 MPZ2012S601AT-GP 600Ohm@100MHz Imax=2A DCR=100mOhm Tmax=125C
SAS0_VDDH
C371 22uF 6.3V 20% 0603 X6S
C372 10uF 6.3V 10% 0805 X7R
C373 1uF 16V 10% 0402 X6S
C374 0.1uF 16V 10% 0402 X7R
C375 0.1uF 16V 10% 0402 X7R
C376 0.1uF 16V 10% 0402 X7R
P1V5_C
R283 10R2F-L-GP 10 ohm 1/16W 1% 0402
L25 MPZ2012S601AT-GP 600Ohm@100MHz Imax=2A DCR=100mOhm Tmax=125C
PCE_VDDH
C377 22uF 6.3V 20% 0603 X6S
C378 10uF 6.3V 10% 0805 X7R
C379 1uF 16V 10% 0402 X6S
C380 0.1uF 16V 10% 0402 X7R
C381 0.1uF 16V 10% 0402 X7R
C382 0.1uF 16V 10% 0402 X7R
U2G
7 OF 14
VDDIO_TOP
VDDIO_RGT_1
VDDIO_BOT_1
AVSO_VDDA18
HM40ADC_VDDA
PLL_VDD
SHELL_PLL_VDD
SYS_PLL_VDD
VDDA_SAS_REF_CLK
SAS0_VDDH
VDDIO_15
PCE_VDDH
SAS3008C0-1-DB-500020657-1-GP
TP150
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Storage Controller Card
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http://www.wiwynn.com
Title
SAS3008 POWER_1
Size A3
Document Number
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http://www.wiwynn.com

Title	SAS3008 POWER_2	
Size A3	Document Number Bryce Canyon Storage Controller Card	Rev 1
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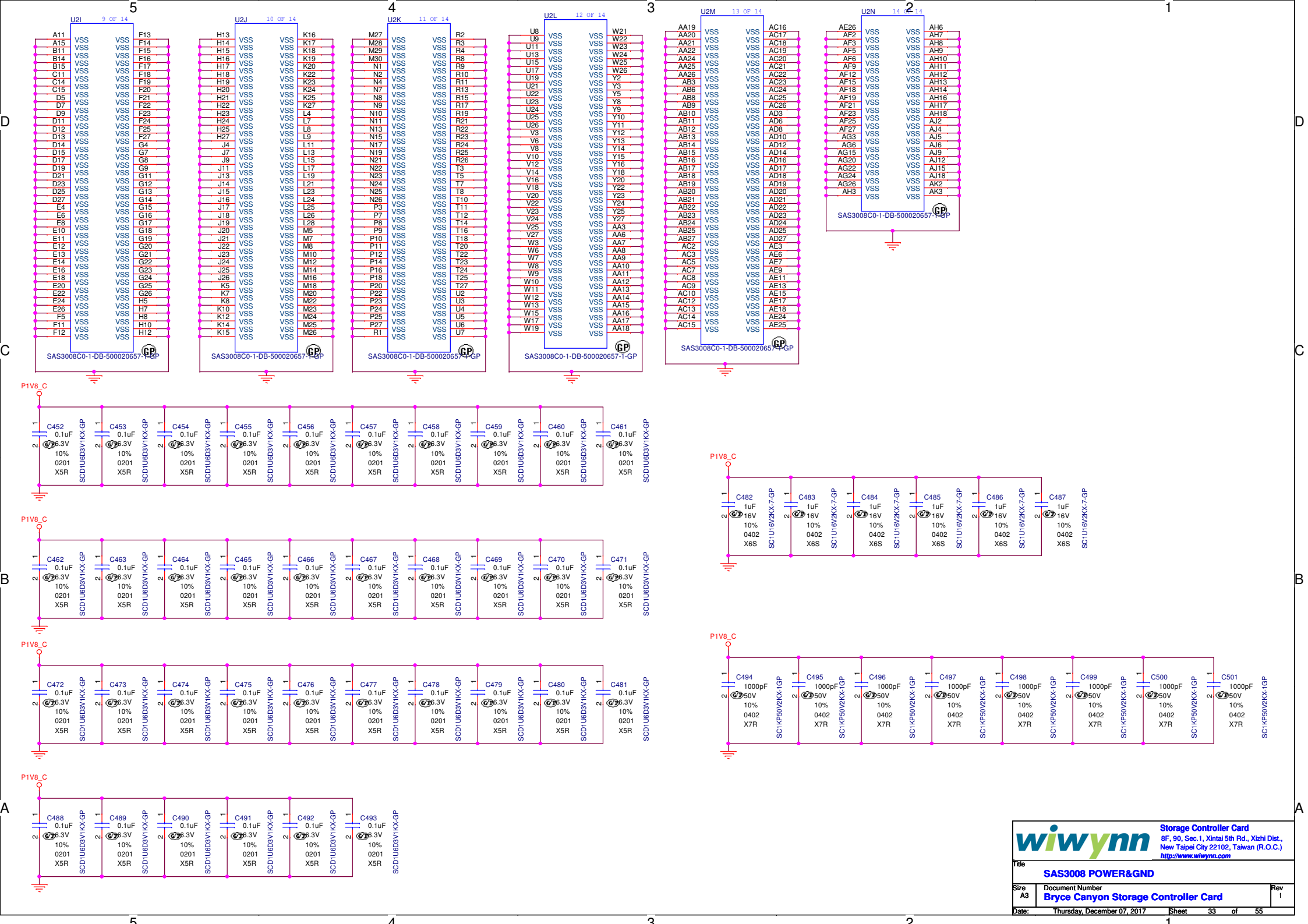

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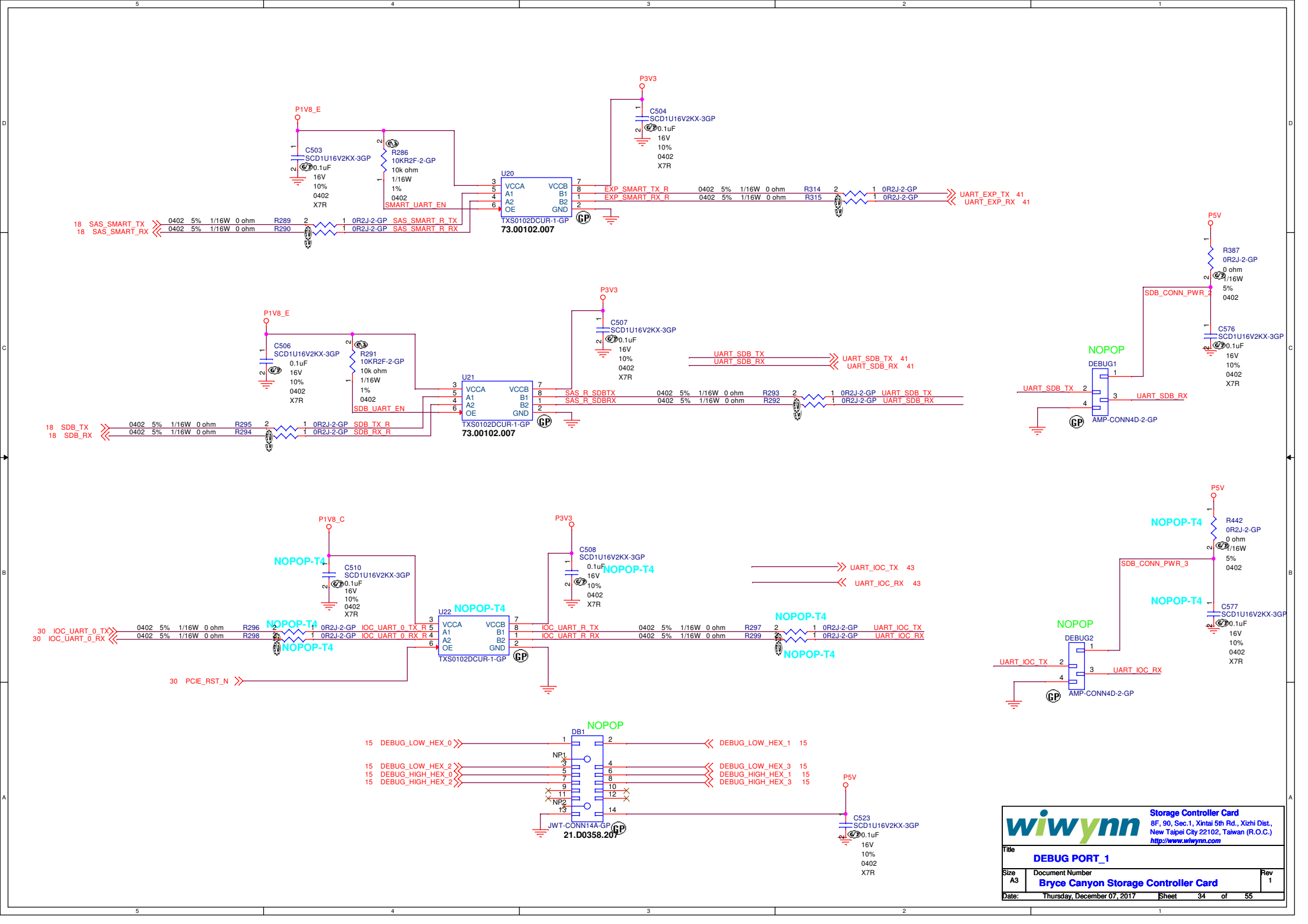
http://www.wiwynn.com

Title	SAS3008 POWER&GND	
Size A3	Document Number: Bryce Canyon Storage Controller Card	Rev 1
Date: Thursday, December 07, 2017	Sheet 33 of 55	



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Title	DEBUG PORT_1	
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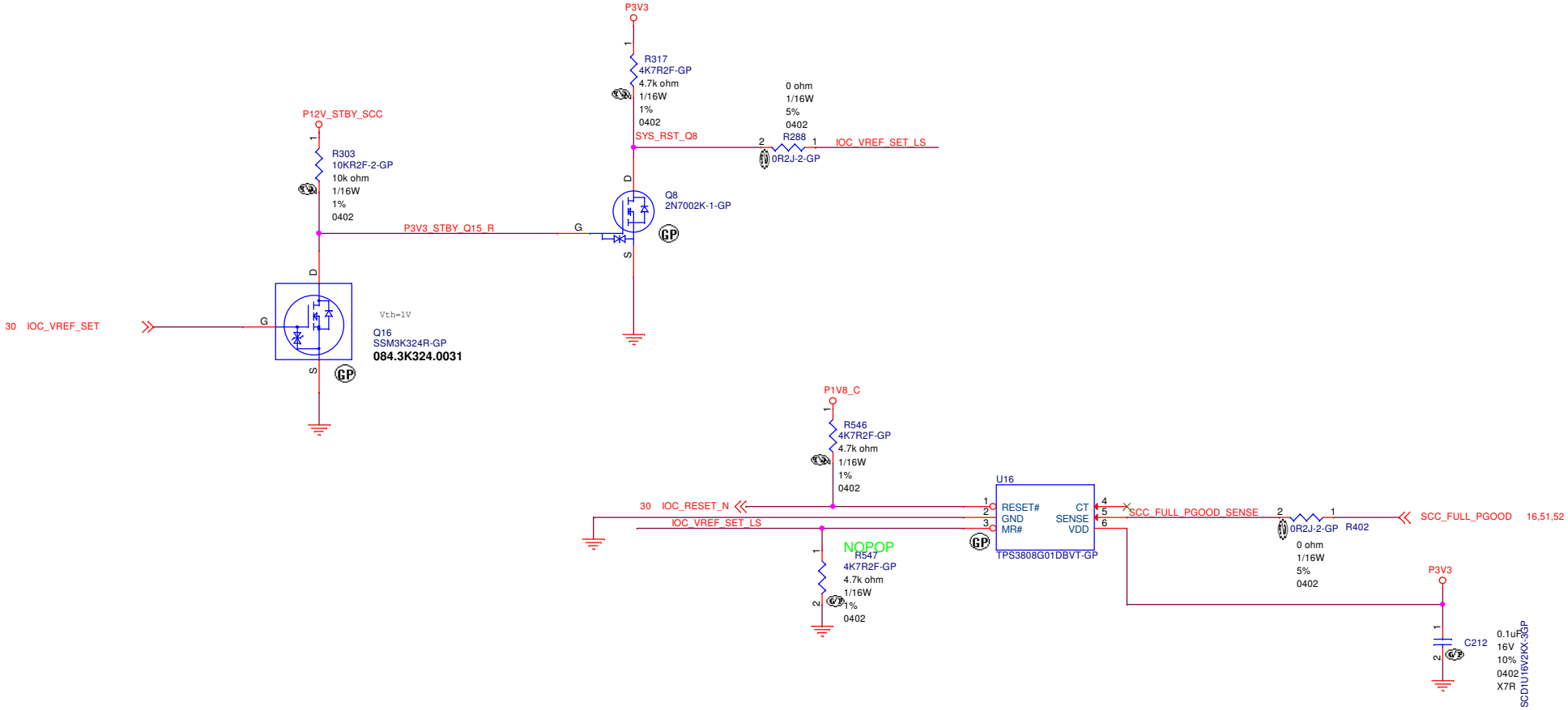
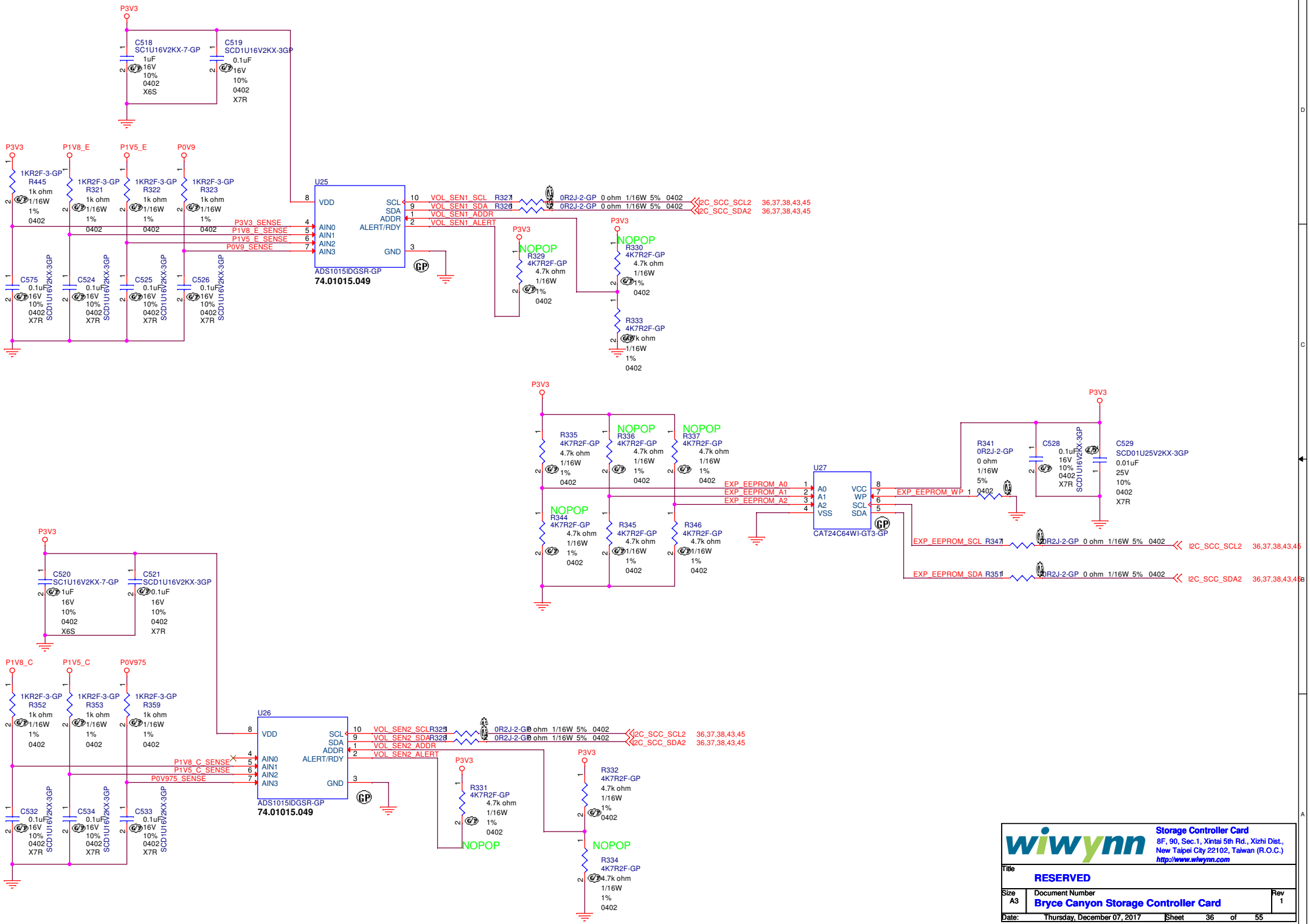


wiwynn	Storage Controller Card 8F, 90, Sec.1, Xintai 5th Rd., Xizhi Dist., New Taipei City 22102, Taiwan (R.O.C.) http://www.wiwynn.com	
Title: RESERVED		
Size: A3	Document Number: Bryce Canyon Storage Controller Card	Rev: 1
Date: Thursday, December 07, 2017	Sheet 35 of 55	



wiwynn	Storage Controller Card 8F, 90, Sec.1, Xintai 5th Rd., Xizhi Dist., New Taipei City 22102, Taiwan (R.O.C.) http://www.wiwynn.com	
Title	RESERVED	
Size A3	Document Number Bryce Canyon Storage Controller Card	Rev 1
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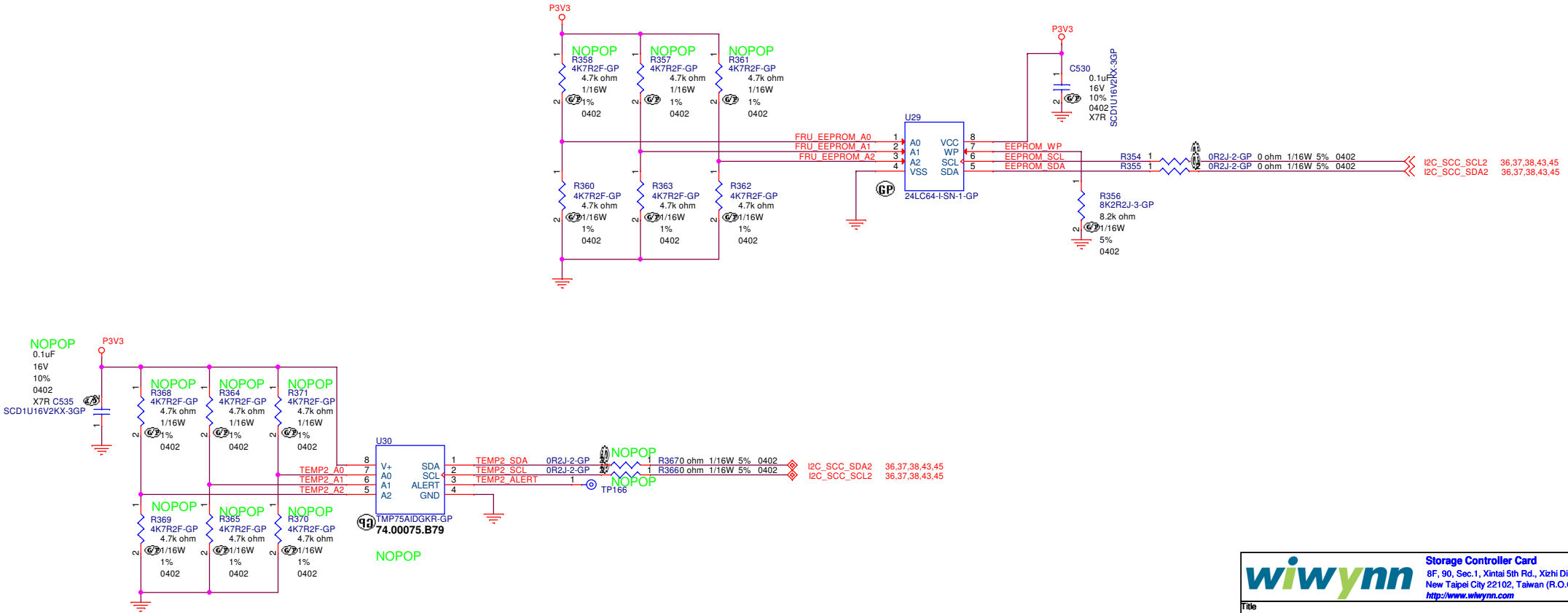

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8F, 90, Sec.1, Xintai 5th Rd., Xizhi Dist.,
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Title	I2C DEVICES	
Size A3	Document Number: Bryce Canyon Storage Controller Card	Rev 1
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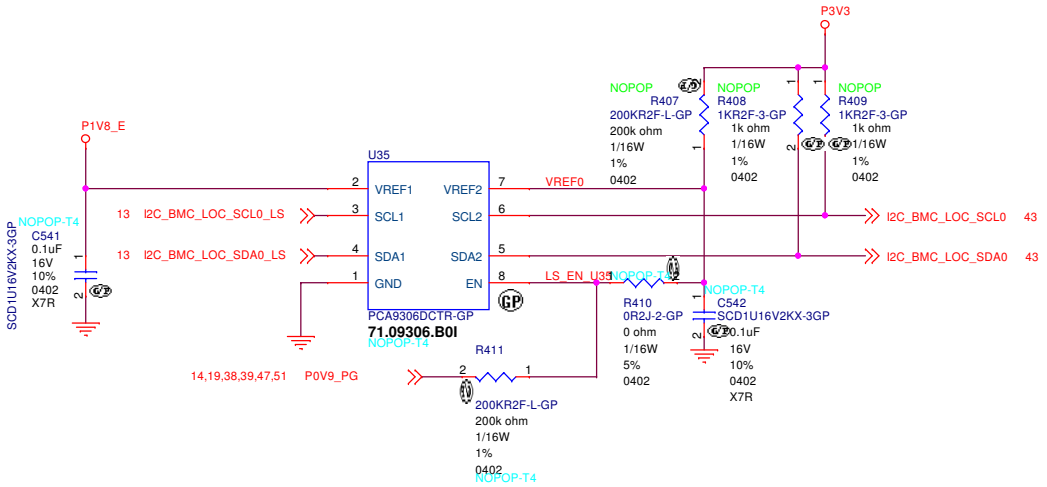
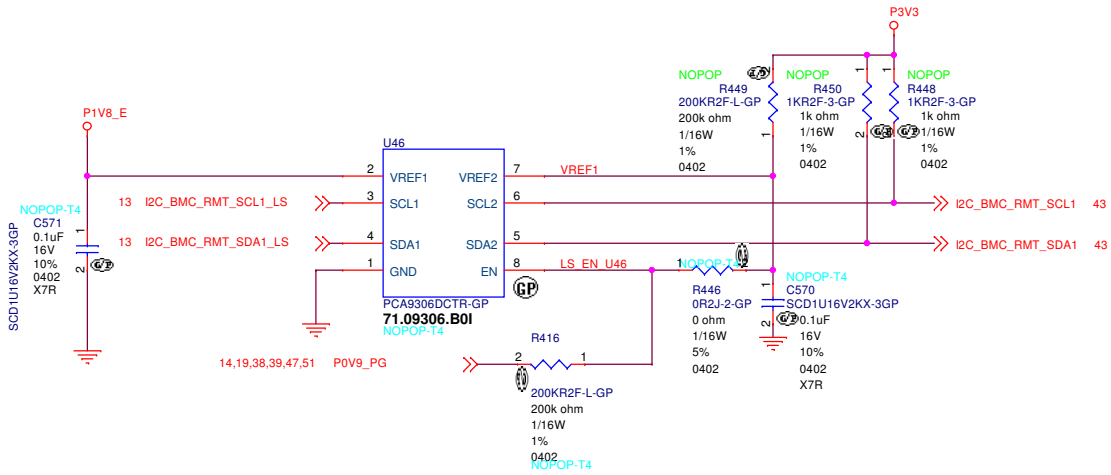
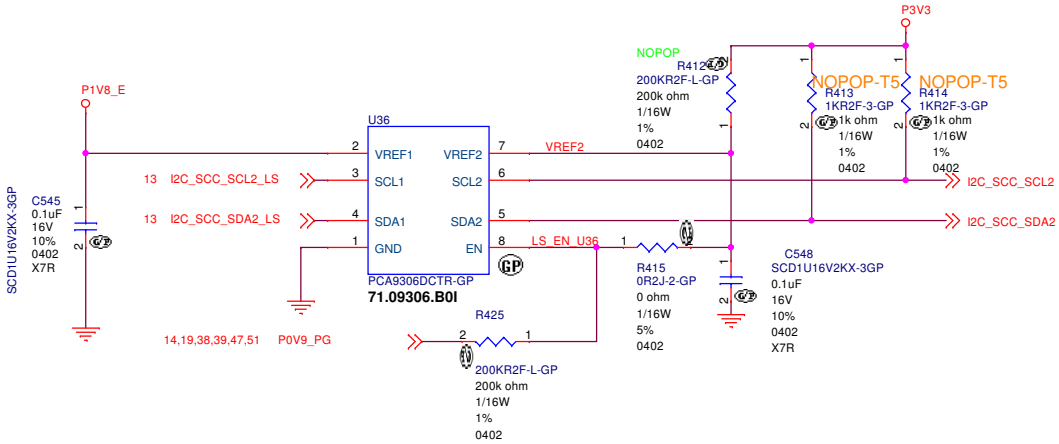
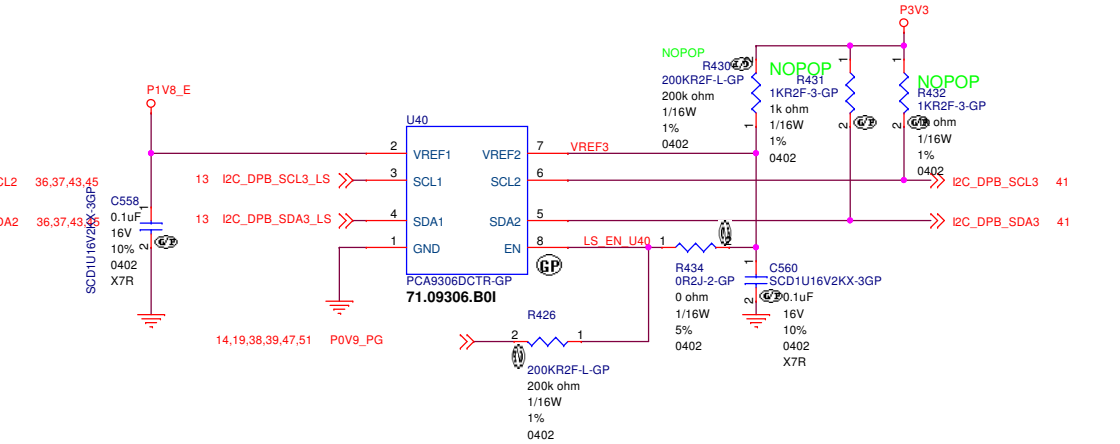
I2C Voltage Level Shift









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Title	I2C LEVEL SHIFT_1	
Size A3	Document Number: Bryce Canyon Storage Controller Card	Rev 1
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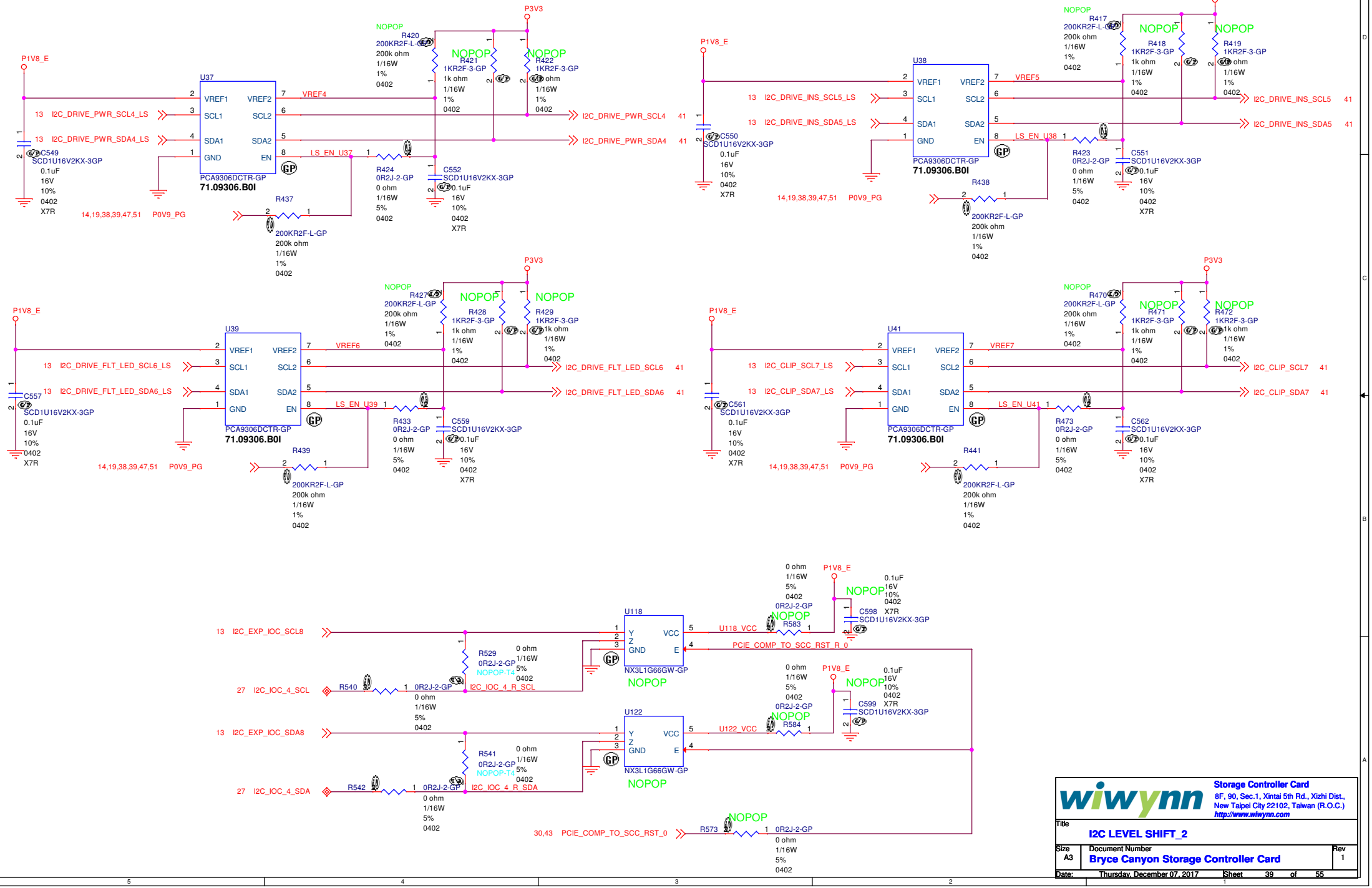
I2C Voltage shift



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Title	I2C LEVEL SHIFT_2	
Size A3	Document Number: Bryce Canyon Storage Controller Card	Rev 1
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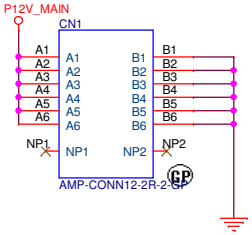

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Title	XCEDE PWR CONN	
Size: A3	Document Number: Bryce Canyon Storage Controller Card	Rev: 1
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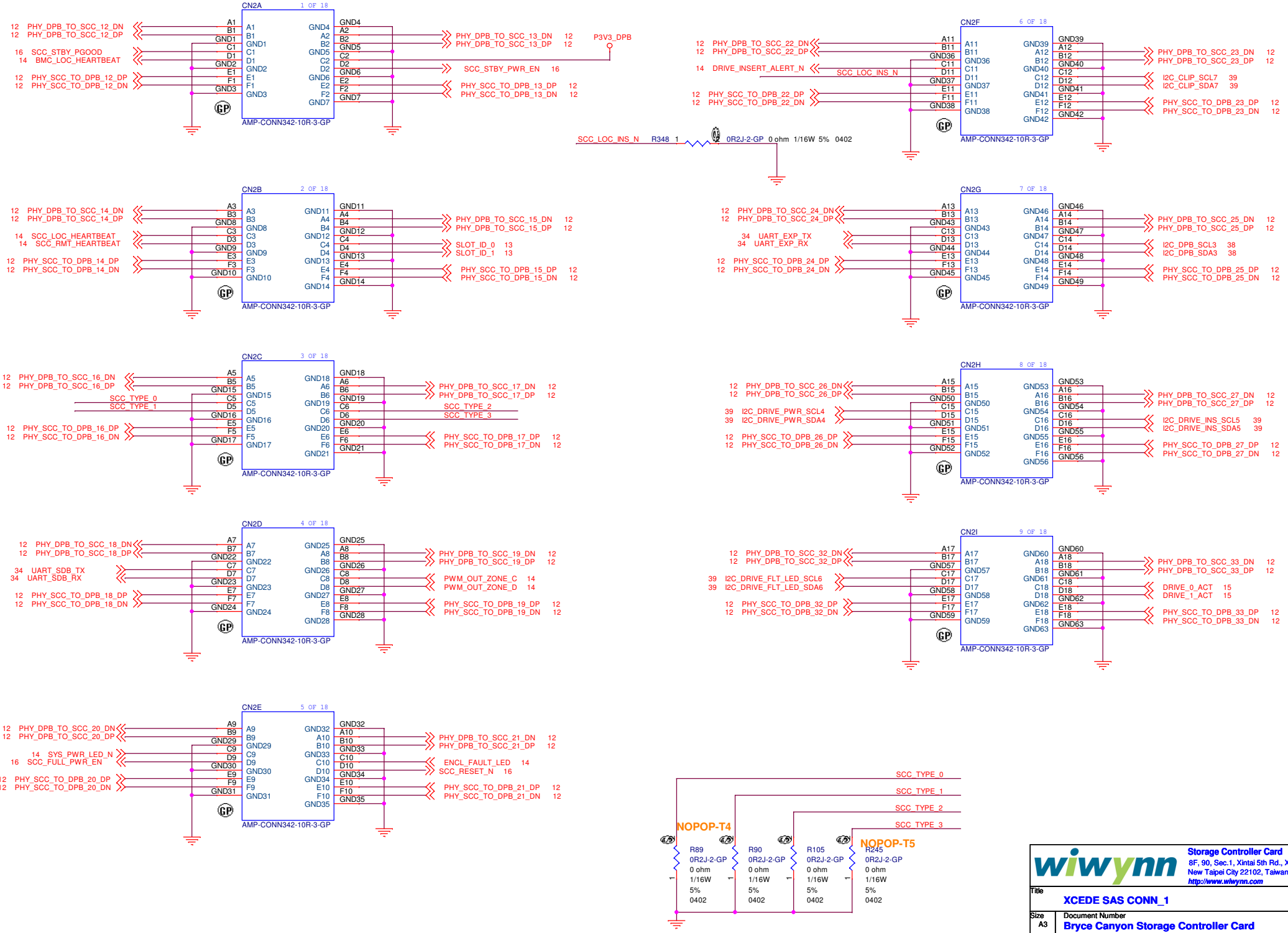
CN2A 1 OF 18
12 PHY_DPB_TO_SCC_12_DN
12 PHY_DPB_TO_SCC_12_DP
16 SCC_STBY_PGOOD
14 BMC_LOC_HEARTBEAT
12 PHY_SCC_TO_DPB_12_DP
12 PHY_SCC_TO_DPB_12_DN
PHY_DPB_TO_SCC_13_DN 12
PHY_DPB_TO_SCC_13_DP 12
P3V3_DPB
SCC_STBY_PWR_EN 16
PHY_SCC_TO_DPB_13_DP 12
PHY_SCC_TO_DPB_13_DN 12
AMP-CONN342-10R-3-GP
CN2B 2 OF 18
12 PHY_DPB_TO_SCC_14_DN
12 PHY_DPB_TO_SCC_14_DP
14 SCC_LOC_HEARTBEAT
14 SCC_RMT_HEARTBEAT
12 PHY_SCC_TO_DPB_14_DP
12 PHY_SCC_TO_DPB_14_DN
PHY_DPB_TO_SCC_15_DN 12
PHY_DPB_TO_SCC_15_DP 12
SLOT_ID_0 13
SLOT_ID_1 13
PHY_SCC_TO_DPB_15_DP 12
PHY_SCC_TO_DPB_15_DN 12
AMP-CONN342-10R-3-GP
CN2C 3 OF 18
12 PHY_DPB_TO_SCC_16_DN
12 PHY_DPB_TO_SCC_16_DP
SCC_TYPE_0
SCC_TYPE_1
12 PHY_SCC_TO_DPB_16_DP
12 PHY_SCC_TO_DPB_16_DN
PHY_DPB_TO_SCC_17_DN 12
PHY_DPB_TO_SCC_17_DP 12
SCC_TYPE_2
SCC_TYPE_3
PHY_SCC_TO_DPB_17_DP 12
PHY_SCC_TO_DPB_17_DN 12
AMP-CONN342-10R-3-GP
CN2D 4 OF 18
12 PHY_DPB_TO_SCC_18_DN
12 PHY_DPB_TO_SCC_18_DP
34 UART_SDB_TX
34 UART_SDB_RX
12 PHY_SCC_TO_DPB_18_DP
12 PHY_SCC_TO_DPB_18_DN
PHY_DPB_TO_SCC_19_DN 12
PHY_DPB_TO_SCC_19_DP 12
PWM_OUT_ZONE_C 14
PWM_OUT_ZONE_D 14
PHY_SCC_TO_DPB_19_DP 12
PHY_SCC_TO_DPB_19_DN 12
AMP-CONN342-10R-3-GP
CN2E 5 OF 18
12 PHY_DPB_TO_SCC_20_DN
12 PHY_DPB_TO_SCC_20_DP
14 SYS_PWR_LED_N
16 SCC_FULL_PWR_EN
12 PHY_SCC_TO_DPB_20_DP
12 PHY_SCC_TO_DPB_20_DN
PHY_DPB_TO_SCC_21_DN 12
PHY_DPB_TO_SCC_21_DP 12
ENCL_FAULT_LED 14
SCC_RESET_N 16
PHY_SCC_TO_DPB_21_DP 12
PHY_SCC_TO_DPB_21_DN 12
AMP-CONN342-10R-3-GP
CN2F 6 OF 18
12 PHY_DPB_TO_SCC_22_DN
12 PHY_DPB_TO_SCC_22_DP
14 DRIVE_INSERT_ALERT_N
SCC_LOC_INS_N
12 PHY_SCC_TO_DPB_22_DP
12 PHY_SCC_TO_DPB_22_DN
PHY_DPB_TO_SCC_23_DN 12
PHY_DPB_TO_SCC_23_DP 12
I2C_CLIP_SCL7 39
I2C_CLIP_SDA7 39
PHY_SCC_TO_DPB_23_DP 12
PHY_SCC_TO_DPB_23_DN 12
AMP-CONN342-10R-3-GP
SCC_LOC_INS_N R348 1 2 0R2J-2-GP 0 ohm 1/16W 5% 0402
CN2G 7 OF 18
12 PHY_DPB_TO_SCC_24_DN
12 PHY_DPB_TO_SCC_24_DP
34 UART_EXP_TX
34 UART_EXP_RX
12 PHY_SCC_TO_DPB_24_DP
12 PHY_SCC_TO_DPB_24_DN
PHY_DPB_TO_SCC_25_DN 12
PHY_DPB_TO_SCC_25_DP 12
I2C_DPB_SCL3 38
I2C_DPB_SDA3 38
PHY_SCC_TO_DPB_25_DP 12
PHY_SCC_TO_DPB_25_DN 12
AMP-CONN342-10R-3-GP
CN2H 8 OF 18
12 PHY_DPB_TO_SCC_26_DN
12 PHY_DPB_TO_SCC_26_DP
39 I2C_DRIVE_PWR_SCL4
39 I2C_DRIVE_PWR_SDA4
12 PHY_SCC_TO_DPB_26_DP
12 PHY_SCC_TO_DPB_26_DN
PHY_DPB_TO_SCC_27_DN 12
PHY_DPB_TO_SCC_27_DP 12
I2C_DRIVE_INS_SCL5 39
I2C_DRIVE_INS_SDA5 39
PHY_SCC_TO_DPB_27_DP 12
PHY_SCC_TO_DPB_27_DN 12
AMP-CONN342-10R-3-GP
CN2I 9 OF 18
12 PHY_DPB_TO_SCC_32_DN
12 PHY_DPB_TO_SCC_32_DP
39 I2C_DRIVE_FLT_LED_SCL6
39 I2C_DRIVE_FLT_LED_SDA6
12 PHY_SCC_TO_DPB_32_DP
12 PHY_SCC_TO_DPB_32_DN
PHY_DPB_TO_SCC_33_DN 12
PHY_DPB_TO_SCC_33_DP 12
DRIVE_0_ACT 15
DRIVE_1_ACT 15
PHY_SCC_TO_DPB_33_DP 12
PHY_SCC_TO_DPB_33_DN 12
AMP-CONN342-10R-3-GP
SCC_TYPE_0
SCC_TYPE_1
SCC_TYPE_2
SCC_TYPE_3
NOPOP-T4
R89 0R2J-2-GP 0 ohm 1/16W 5% 0402
R90 0R2J-2-GP 0 ohm 1/16W 5% 0402
R105 0R2J-2-GP 0 ohm 1/16W 5% 0402
NOPOP-T5
R245 0R2J-2-GP 0 ohm 1/16W 5% 0402
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Storage Controller Card
8F, 90, Sec.1, Xintai 5th Rd., Xizhi Dist.,
New Taipei City 22102, Taiwan (R.O.C.)
http://www.wiwynn.com
Title
XCEDE SAS CONN_1
Size A3
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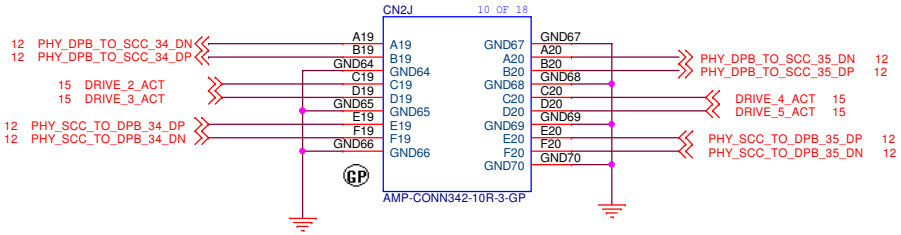

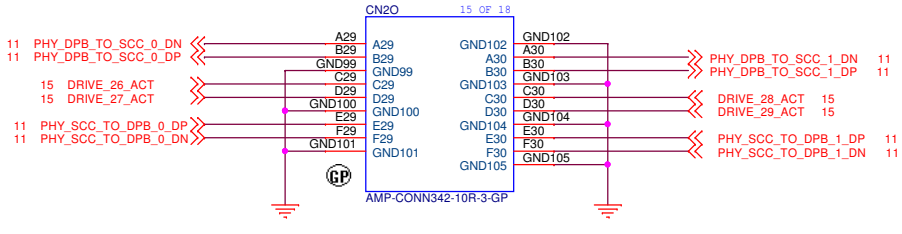

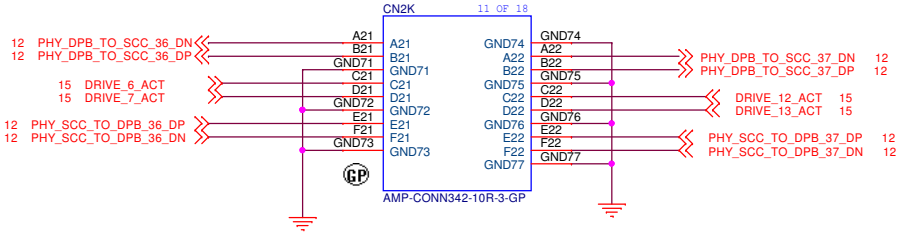

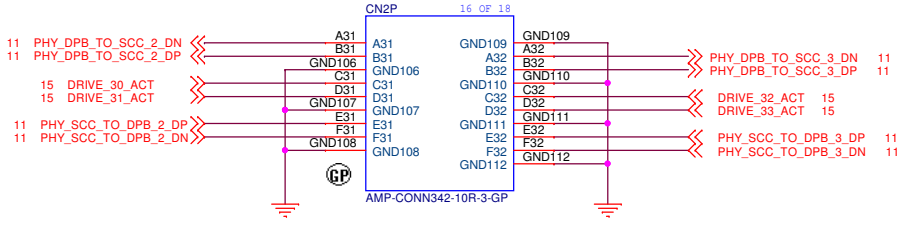

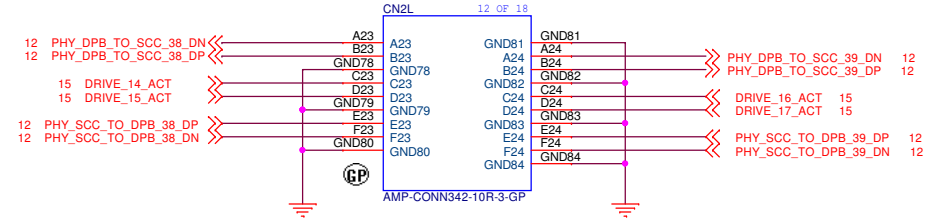

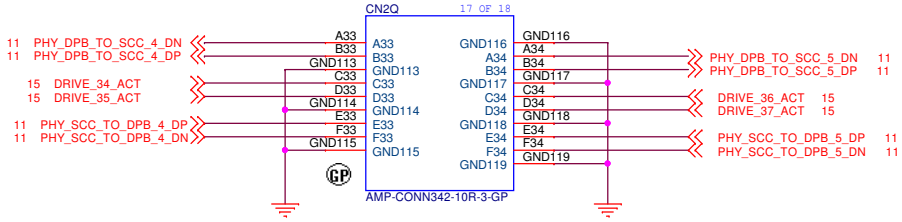

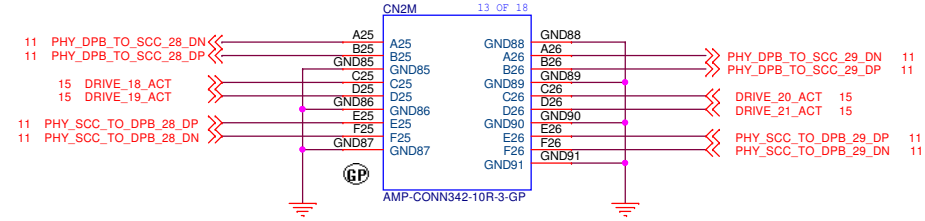

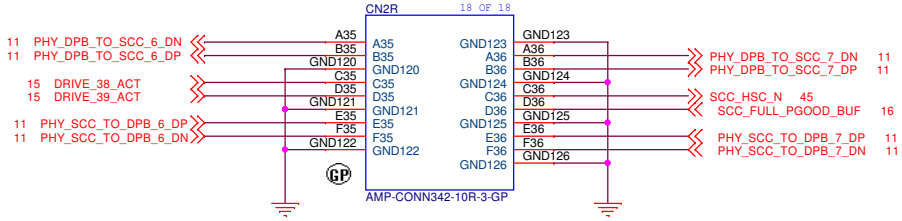

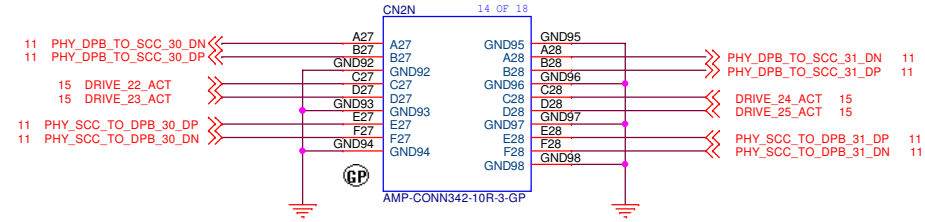

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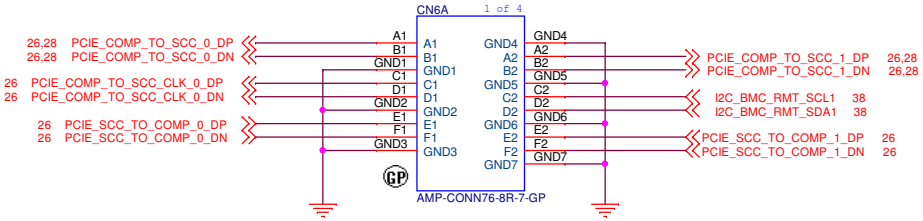

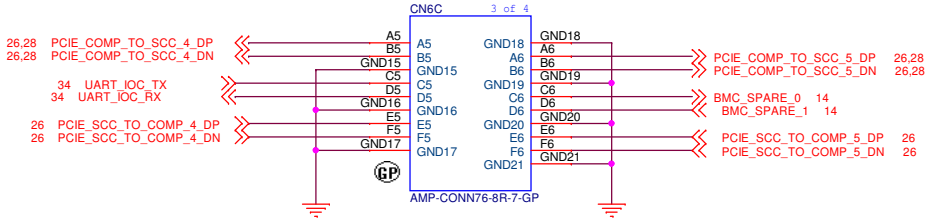

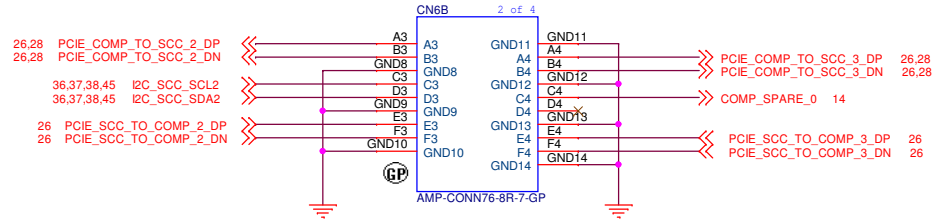

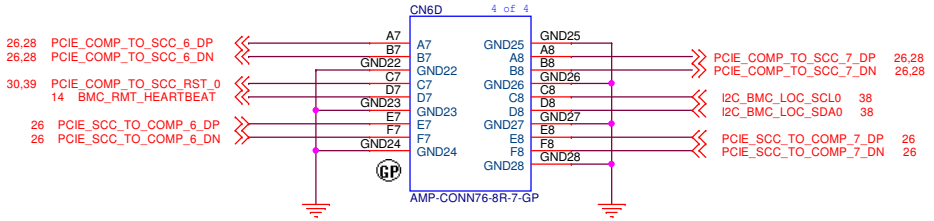

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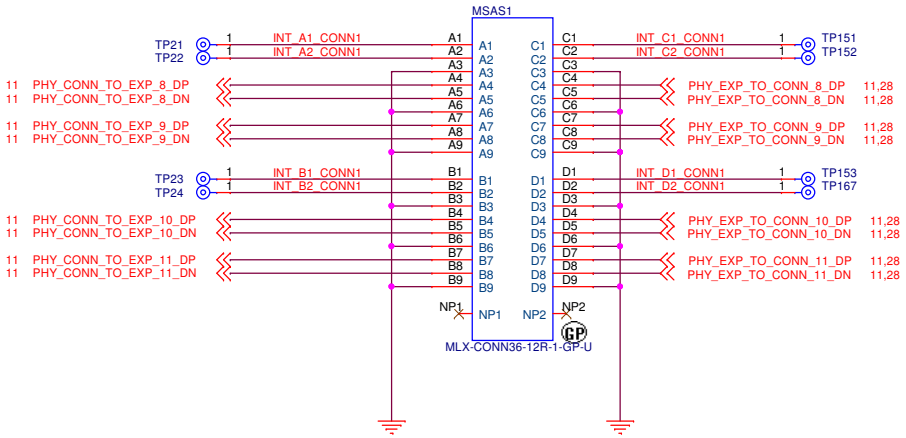

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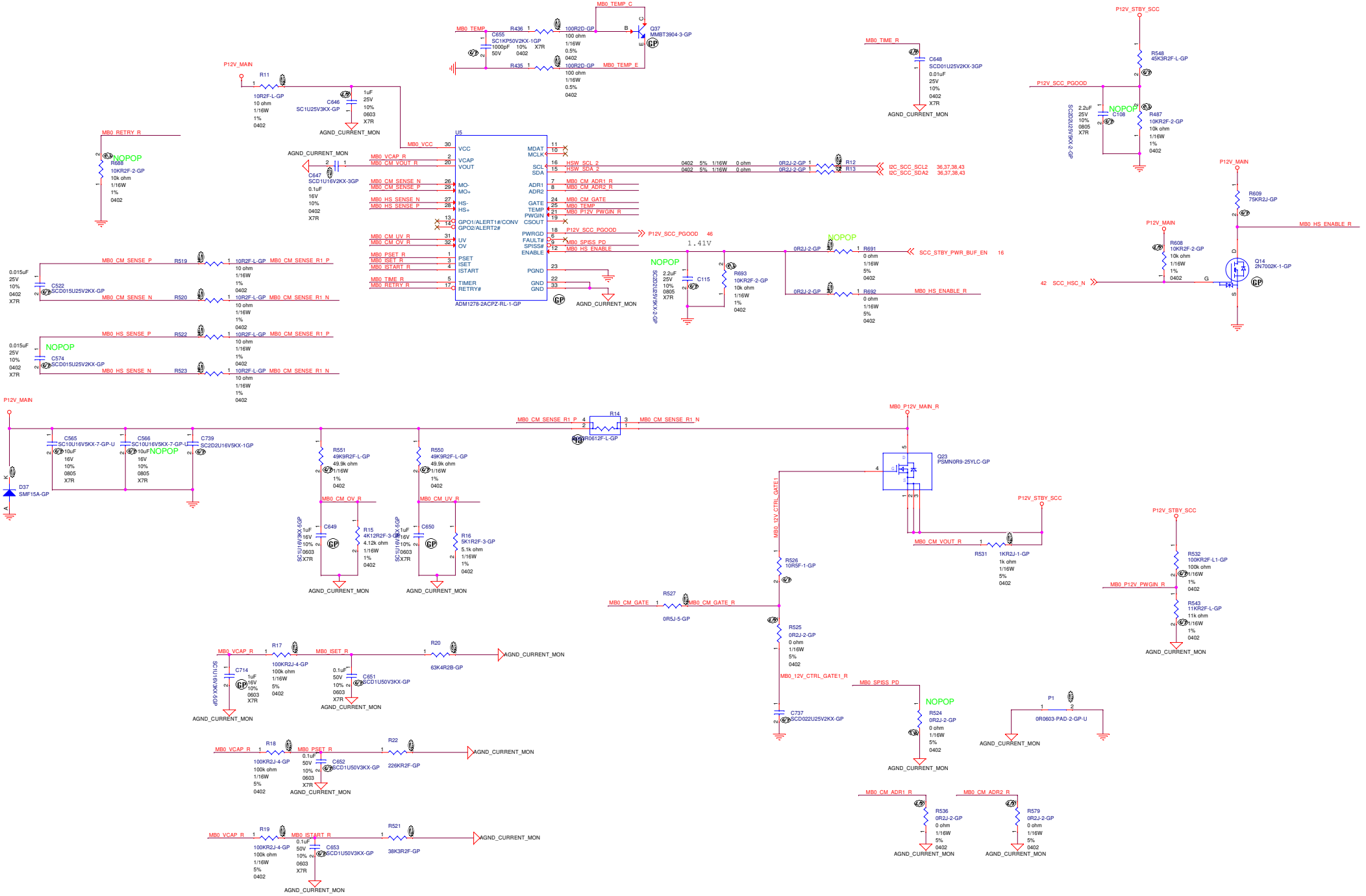

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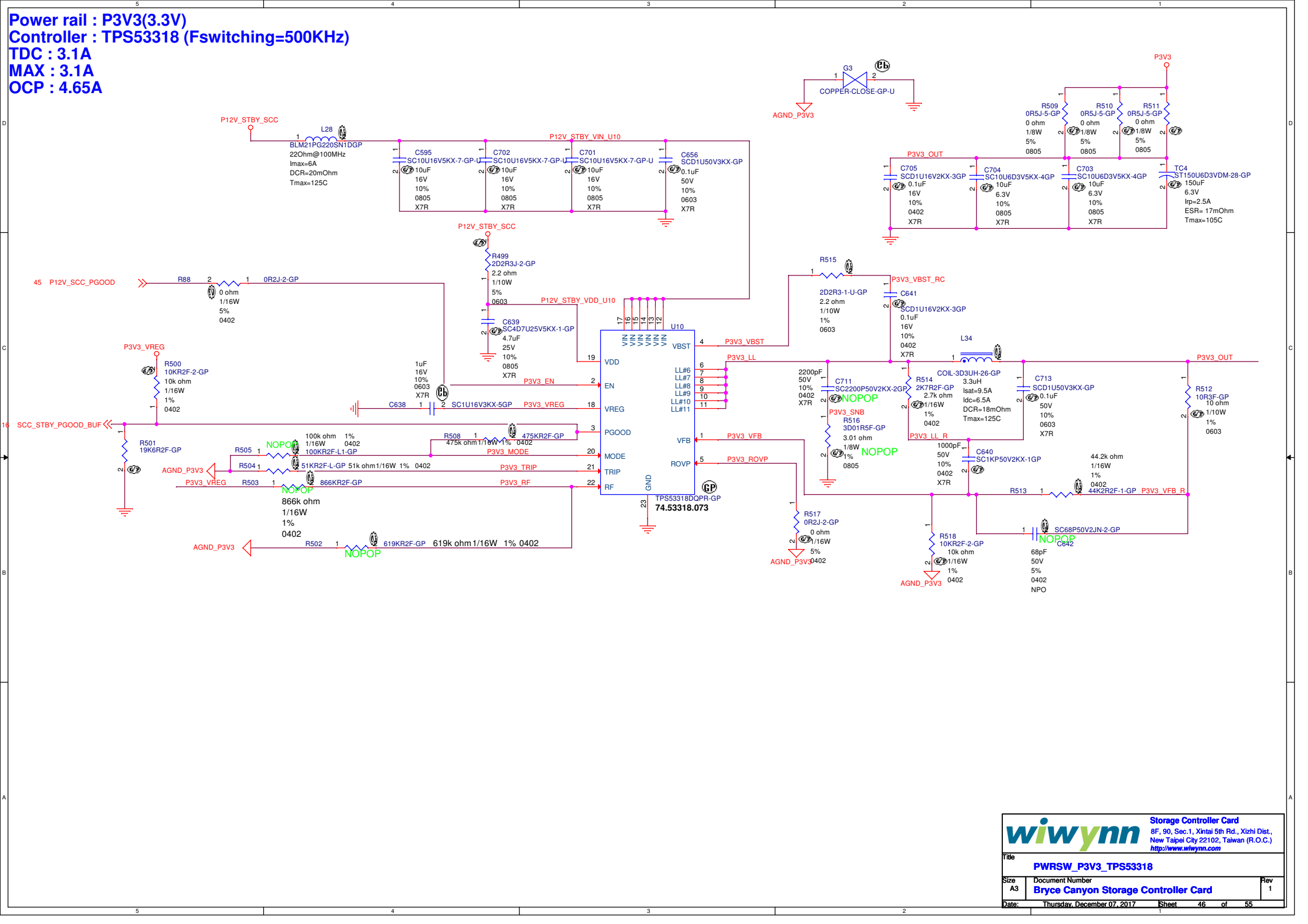
Power rail : P3V3(3.3V)
Controller : TPS53318 (Fswitching=500KHz)
TDC : 3.1A
MAX : 3.1A
OCP : 4.65A



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Title: PWRSW_P3V3_TPS53318

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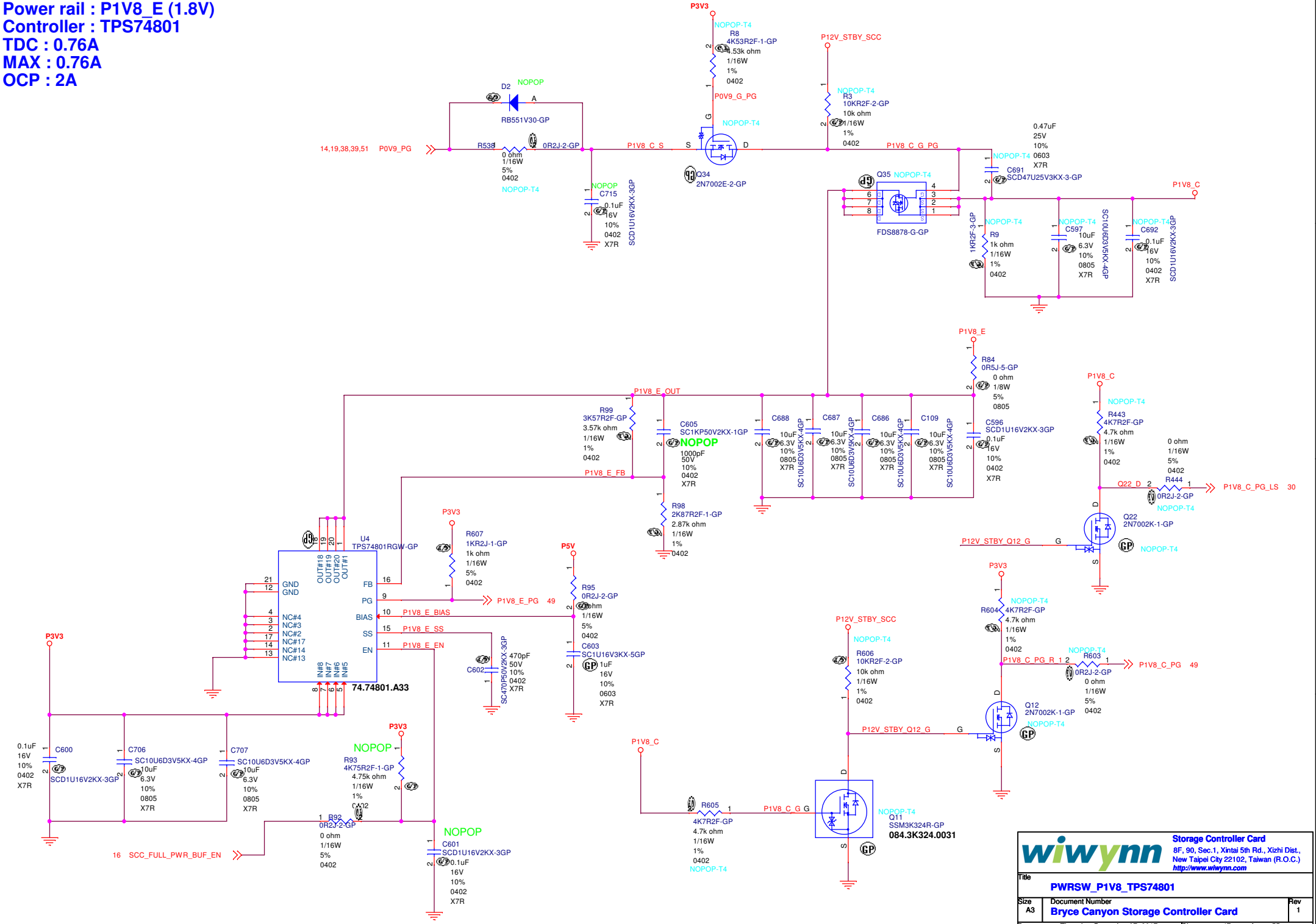
Power rail : P1V8_E (1.8V)
Controller : TPS74801
TDC : 0.76A
MAX : 0.76A
OCP : 2A



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Title	PWRSW_P1V8_TPS74801	
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<Variant Name>

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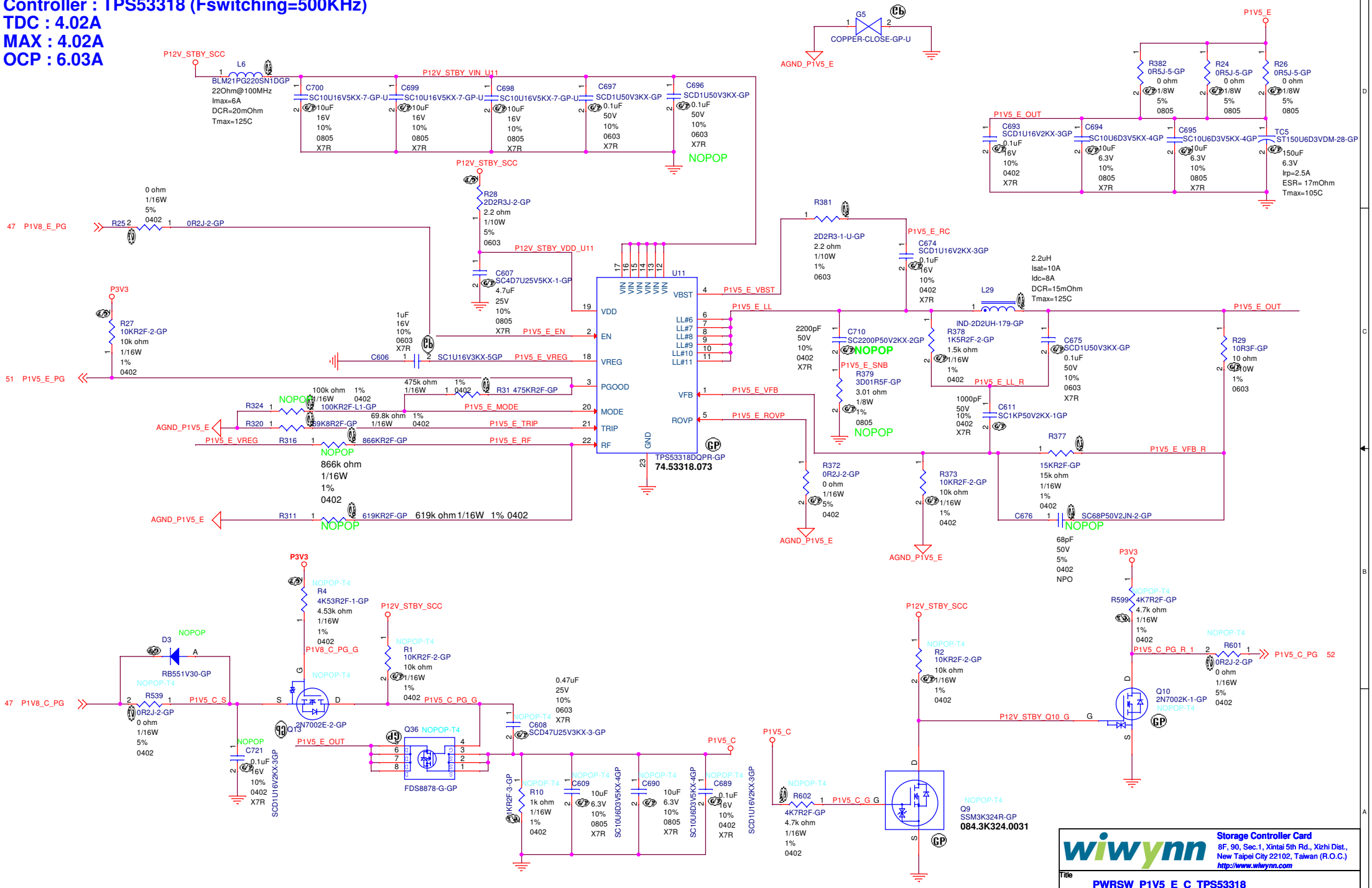
Power rail : P1V5_E(1.5V)
Controller : TPS53318 (Fswitching=500KHz)
TDC : 4.02A
MAX : 4.02A
OCP : 6.03A



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Title	PWRSW_P1V5_E_C_TPS53318	
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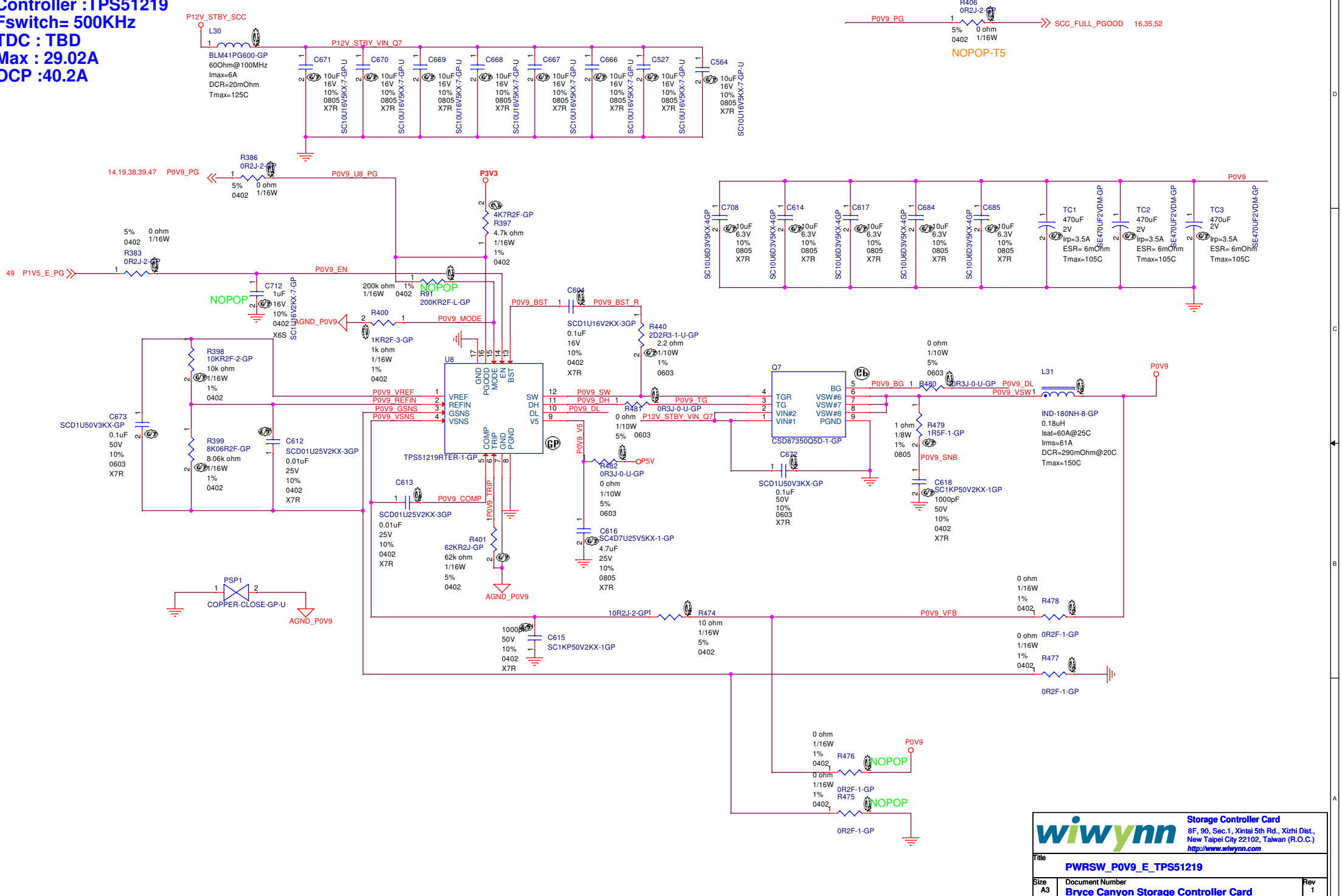
Power rail :VDD_CPU(0.9)
Controller :TPS51219
Fswitch= 500KHz
TDC : TBD
Max : 29.02A
OCP :40.2A



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Title	PWRSW_P0V9_E_TPS51219	
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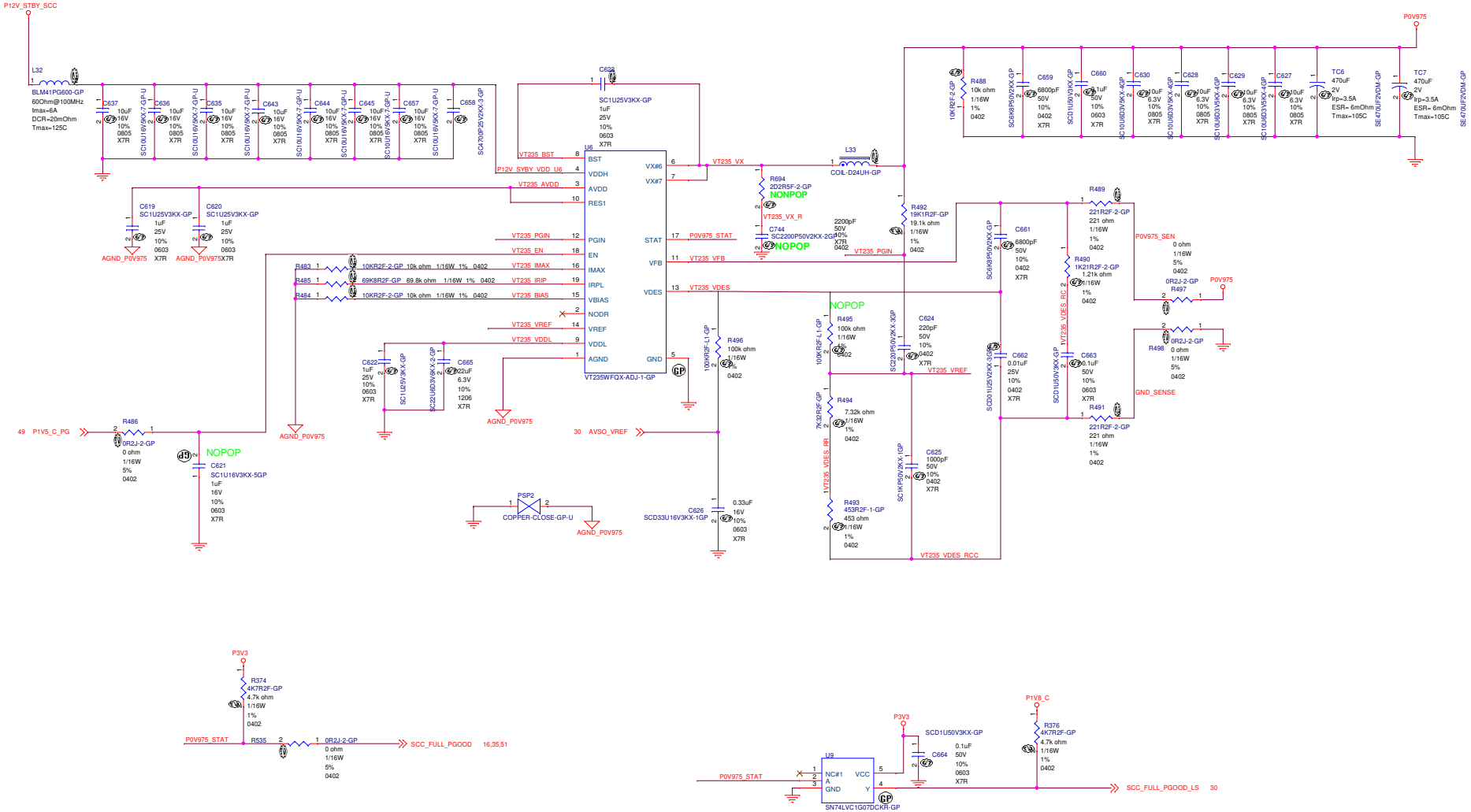
Power rail :P0V975(0.975V)
Controller :VT235WFQX
Fswitch= 600KHz
TDC : TBD
Max : 14.37A
OCP :20A



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Title	PWRSW_P0V975_VT235WFQX	
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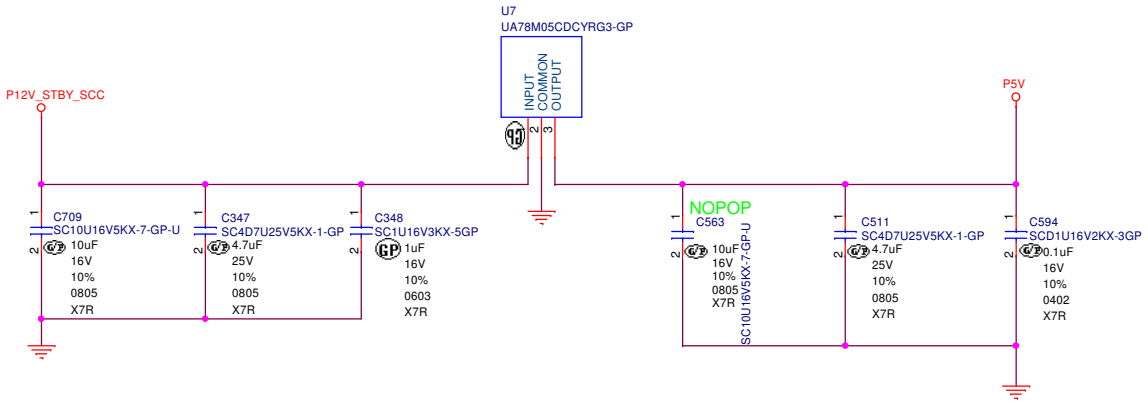

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Title	PWRLDO_P5V_UA78M05	
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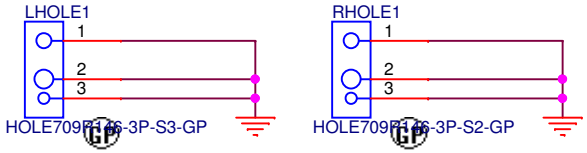

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Title: **SCREW**

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