

Bryce Canyon

Rear Drive Plan Board 36 HDD

PCB P/N: 16317
Version: 1
Layer: 8Layers

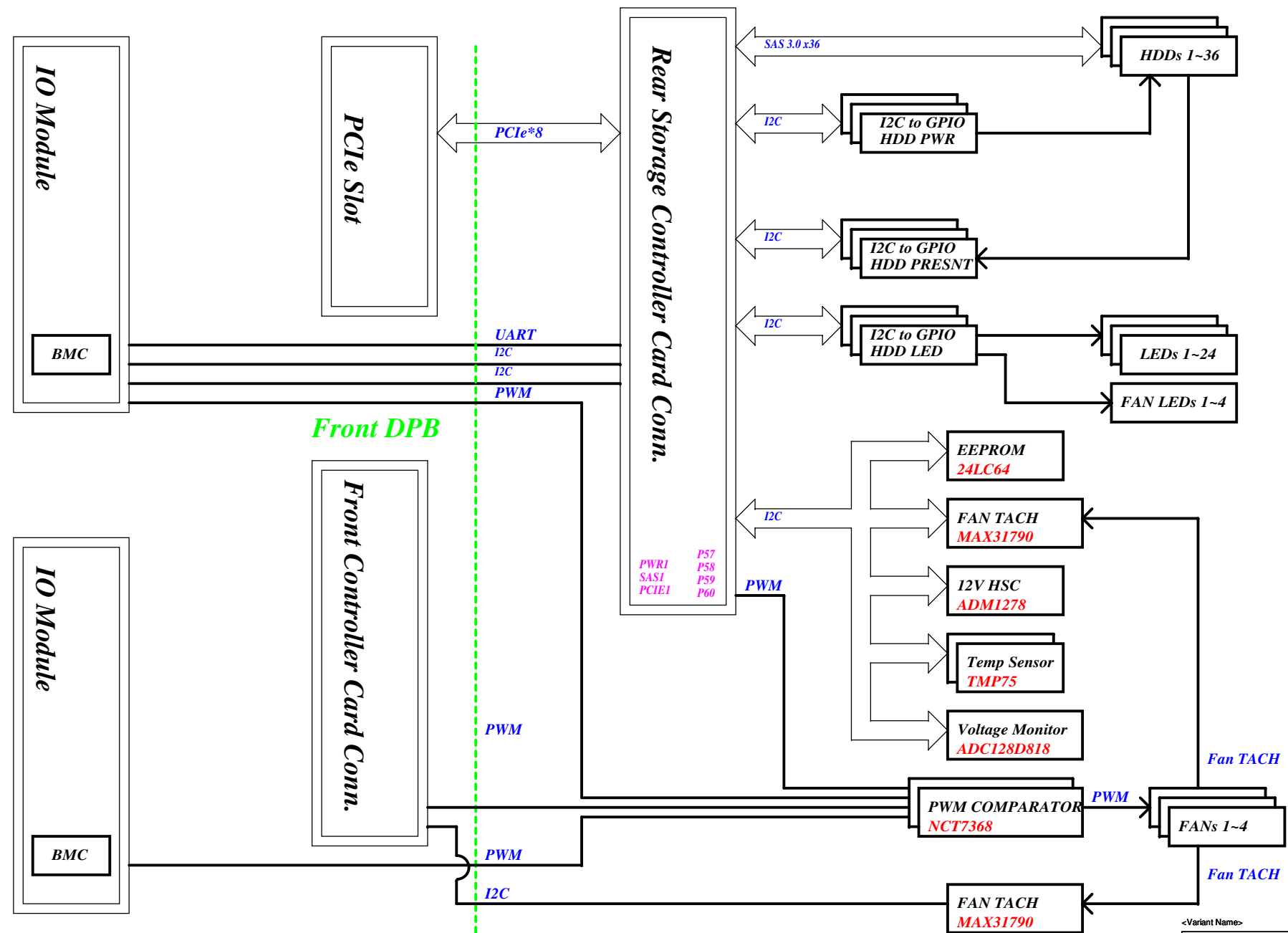
WIWYNN CONFIDENTIAL

		8F, 90, Sec.1, Xintai 5th Rd., Xizhi Dist., New Taipei City 22102, Taiwan (R.O.C.) http://www.wiwynn.com	
Title: COVER PAGE			
Size: A3	Document Number: Bryce Canyon_Rear_Drive Plane Board		Rev: 1
Date:	Wednesday, December 06, 2017	Sheet: 1	of 75

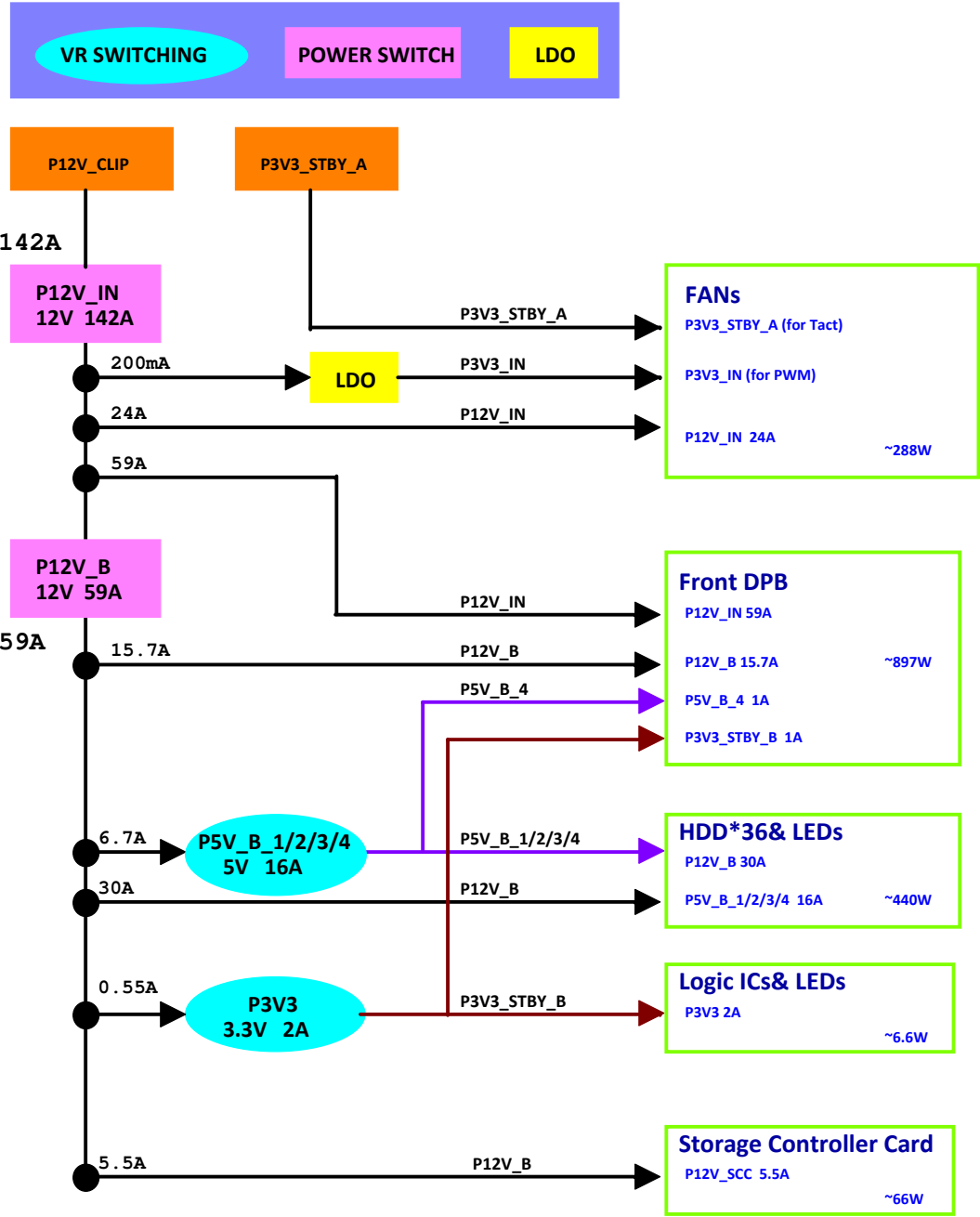
TABLE OF CONTENTS

PAGE	PAGE TITLE	PAGE	PAGE TITLE
01	COVER PAGE	41	HDD 23
02	TABLE OF CONTENTS	42	HDD 24
03	BLOCK DIAGRAM	43	HDD 25
04	POWER DISTRIBUTION	44	HDD 26
05	POWER FLOW	45	HDD 27
06	POWER SEQUENCE	46	HDD 28
07	CLOCK TREE	47	HDD 29
08	STACK-UP	48	HDD 30
09	I2C TOPOLOGY	49	HDD 31
10	UART TOPOLOGY	50	HDD 32
11	FAN CONTROLLER MAX31790	51	HDD 33
12	DRAWER DETECT	52	HDD 34
13	HDD LED CONTROL_I2C	53	HDD 35
14	HDD PRESENT CONTROL_I2C	54	HDD 36
15	HDD POWER CONTROL_I2C	55	DPB SIGNAL CONN
16	FAN PWM COMPARATOR	56	DPB PWR CONN
17	I2C DEVICES	57	SCC PWR CONN
18	I2C BUFFER	58	SCC SAS CONN_1
19	HDD 1	59	SCC SAS CONN_2
20	HDD 2	60	SCC PCIE CONN
21	HDD 3	61	BUSBAR CONN
22	HDD 4	62	FAN CONN_1
23	HDD 5	63	FAN CONN_2
24	HDD 6	64	FAN LEDS
25	HDD 7	65	HSC P12V_IN ADM1278_1
26	HDD 8	66	HSC P12V_IN ADM1278_2
27	HDD 9	67	HSC P12V_B ADM1278_1
28	HDD 10	68	HSC P12V_B ADM1278_2
29	HDD 11	69	PWRSW P5V_B_1 TPS53319
30	HDD 12	70	PWRSW P5V_B_2 TPS53319
31	HDD 13	71	PWRSW P5V_B_3 TPS53319
32	HDD 14	72	PWRSW P5V_B_4 TPS53319
33	HDD 15	73	PWRSW P3V3 TPS53318
34	HDD 16	74	SCREW & HOLE
35	HDD 17		
36	HDD 18		
37	HDD 19		
38	HDD 20		
39	HDD 21		
40	HDD 22		

Rear DPB Block Diagram

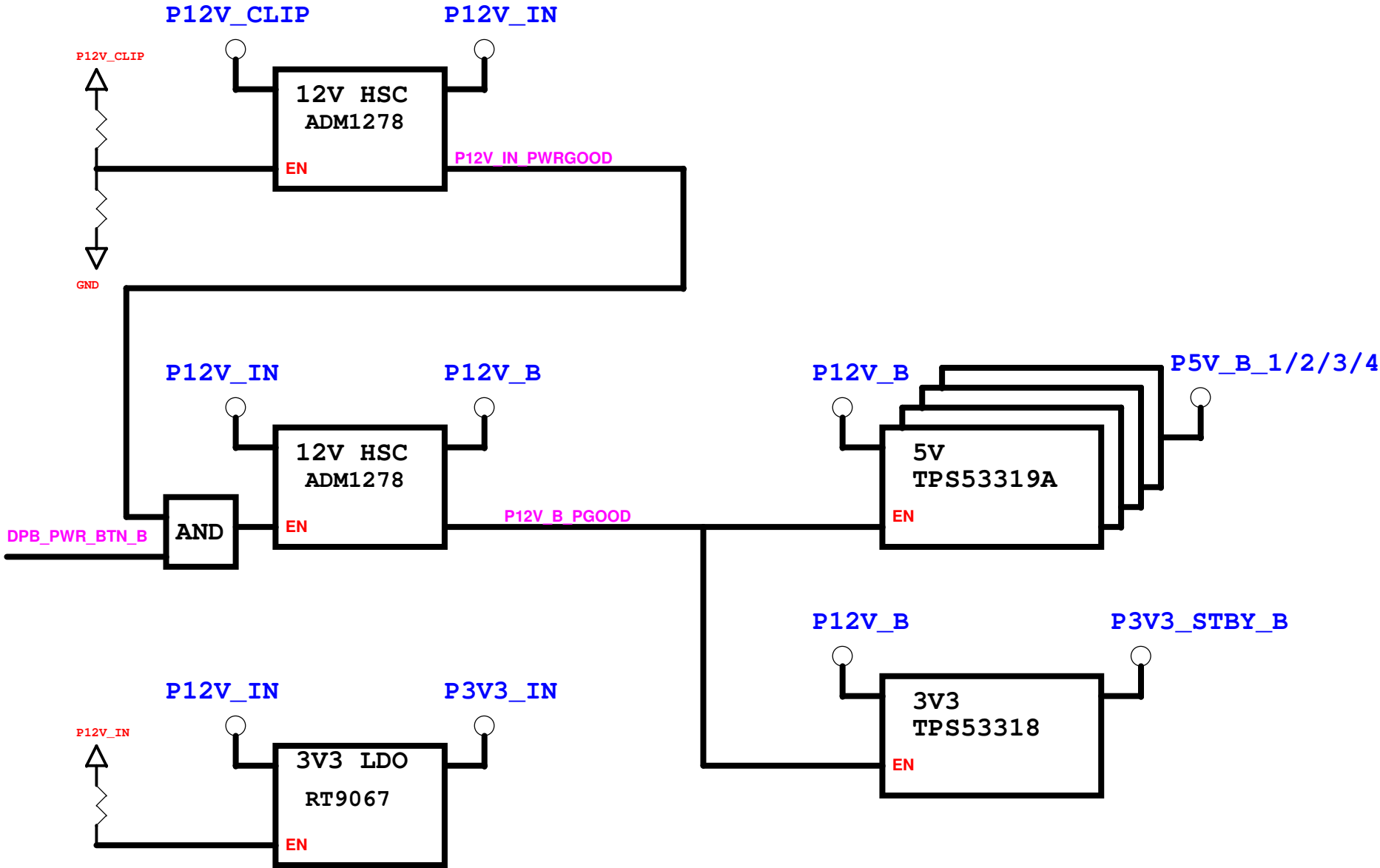


POWER DISTRIBUTION



Power Flow

[9/6] Add LDO and P3V3_STBY_A



Reserved

Reserved

<Variant Name>



8F, 90, Sec.1, Xintai 5th Rd., Xizhi Dist.,
New Taipei City 22102, Taiwan (R.O.C.)
<http://www.wiwynn.com>

Title

CLOCK TREE

Size

A3

Document Number

Bryce Canyon_Rear_Drive Plane Board

Rev

1

Date:

Wednesday, June 07, 2017

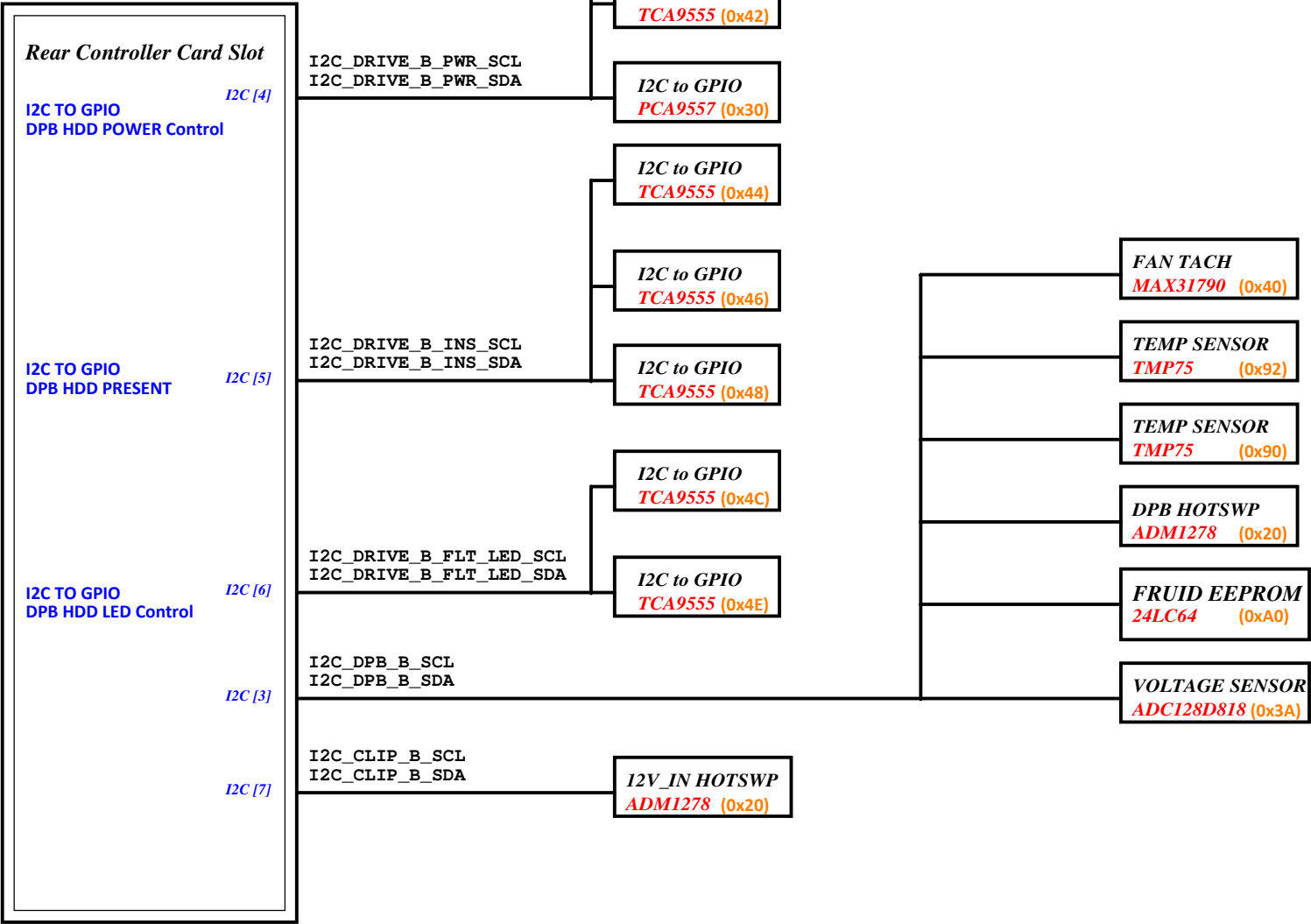
Sheet

7

of


74

I2C TOPOLOGY



Reserved

<Variant Name>



8F, 90, Sec.1, Xintai 5th Rd., Xizhi Dist.,
New Taipei City 22102, Taiwan (R.O.C.)
<http://www.wiwynn.com>

Title

UART TOPOLOGY

Size

A3

Document Number

Bryce Canyon_Rear_Drive Plane Board

Rev

1

Date:

Wednesday, June 07, 2017

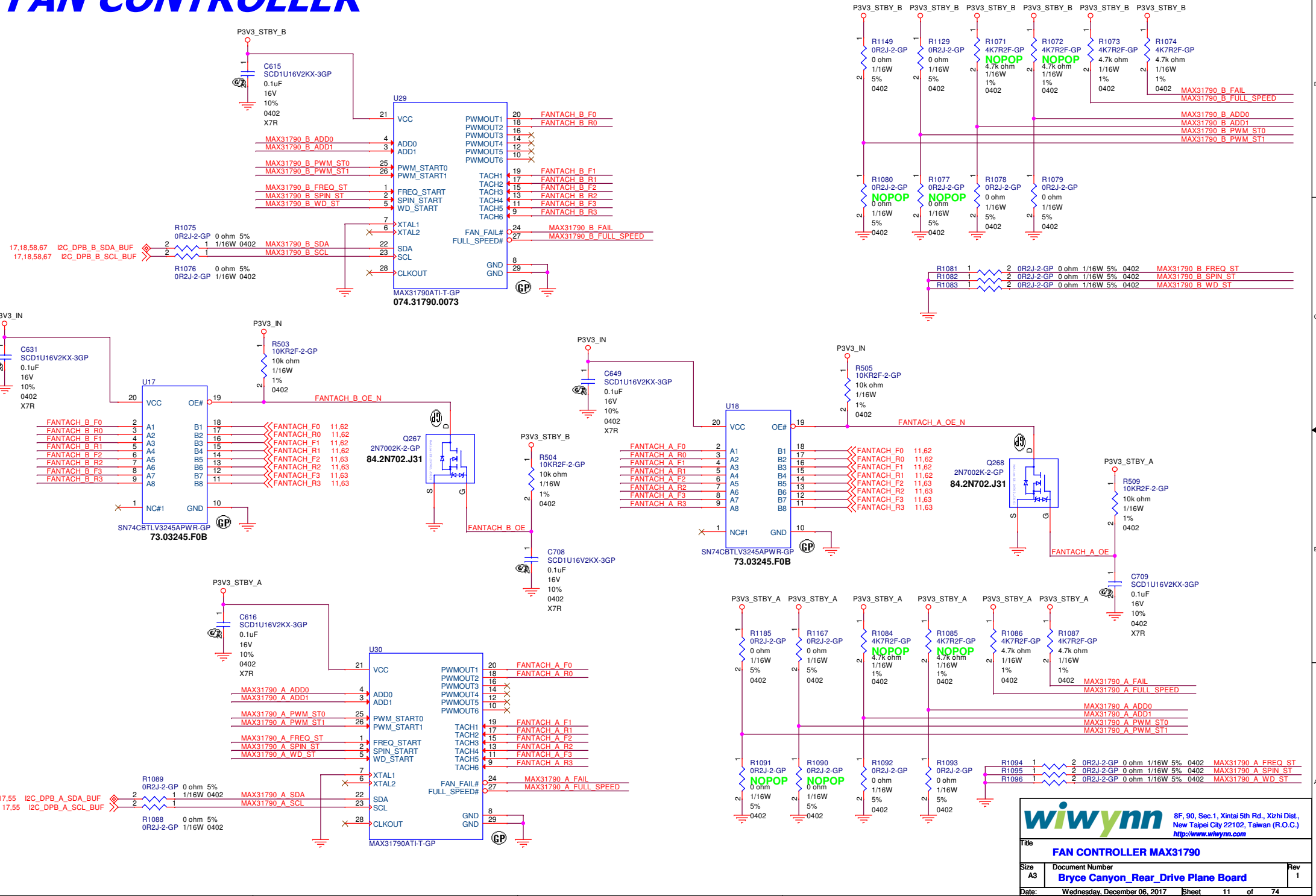
Sheet

10

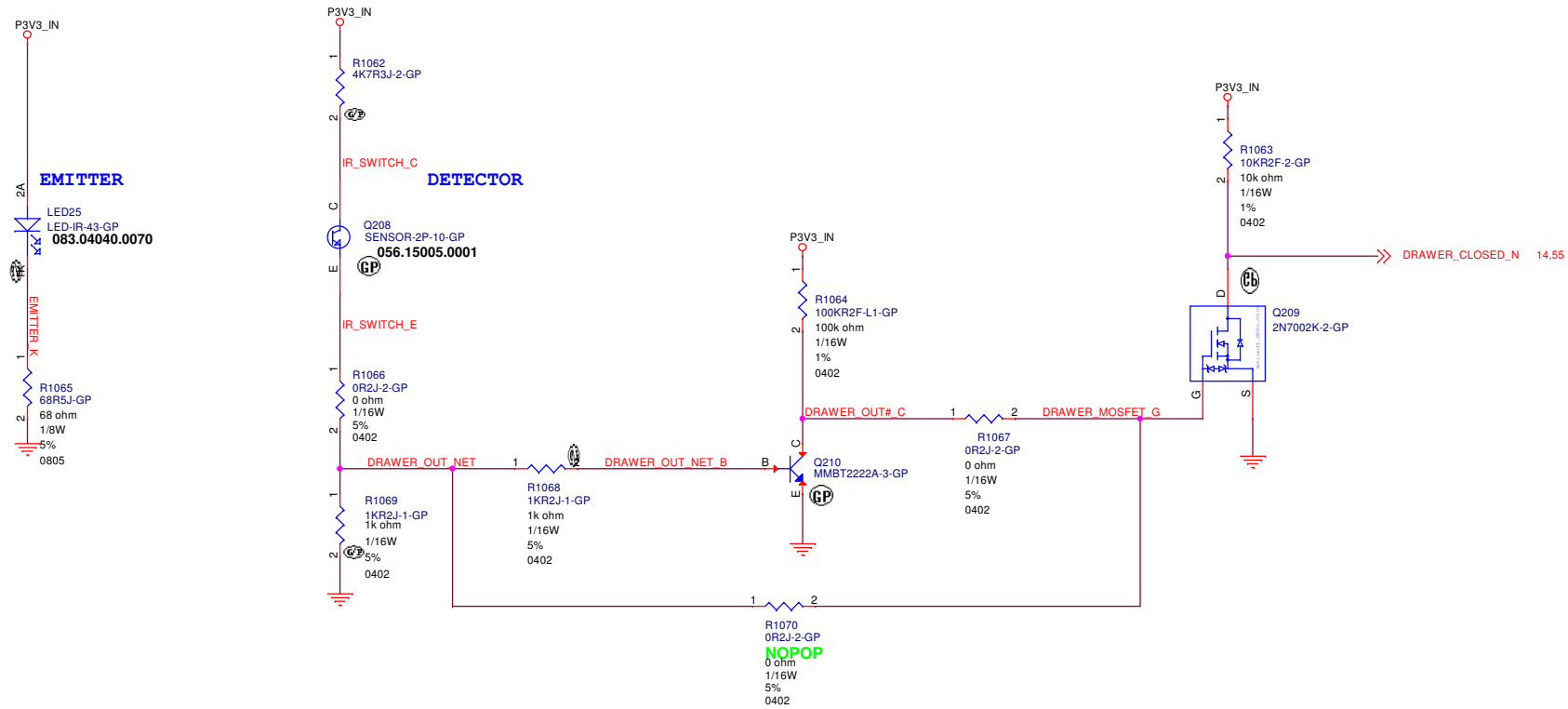
of

74

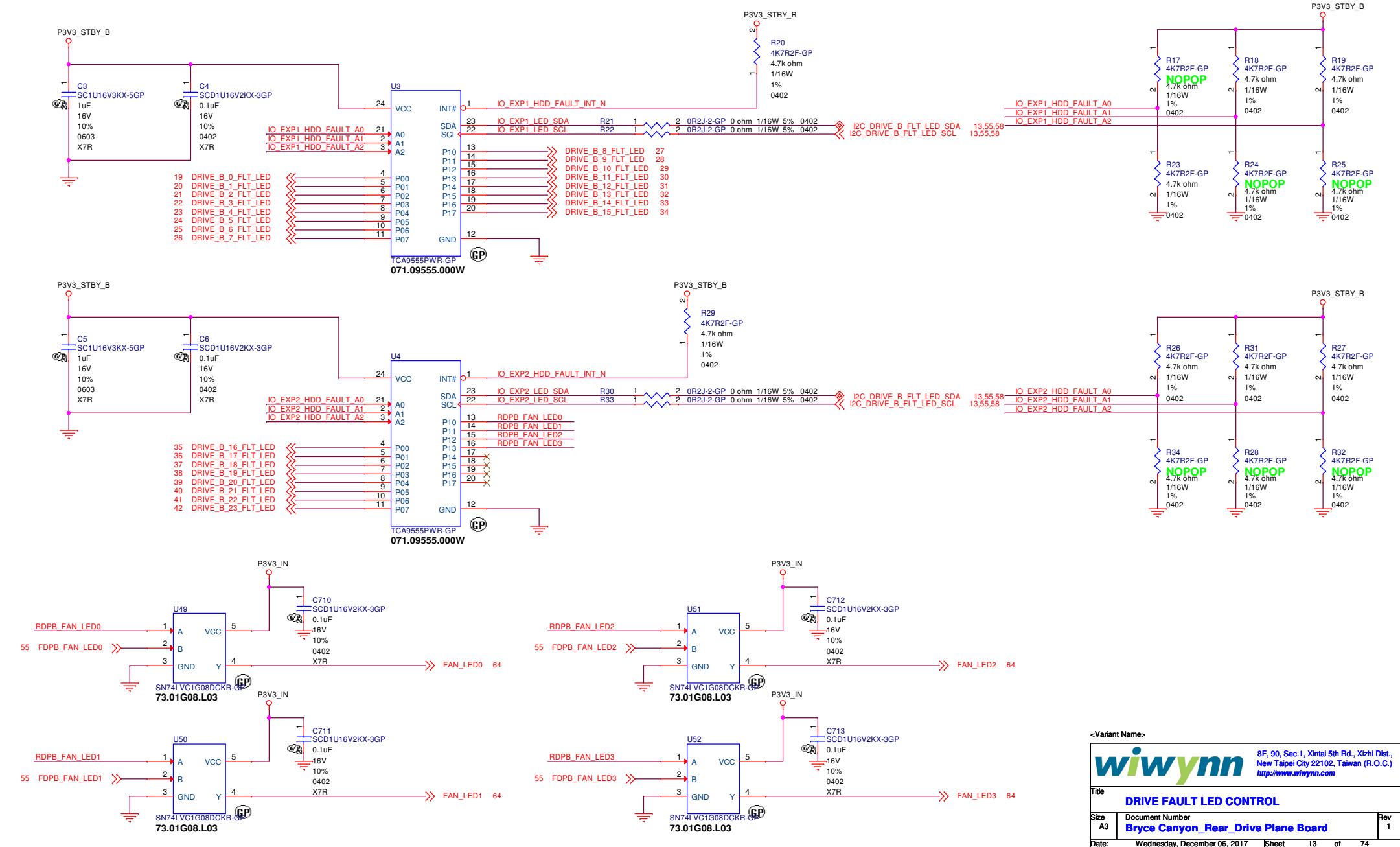
FAN CONTROLLER



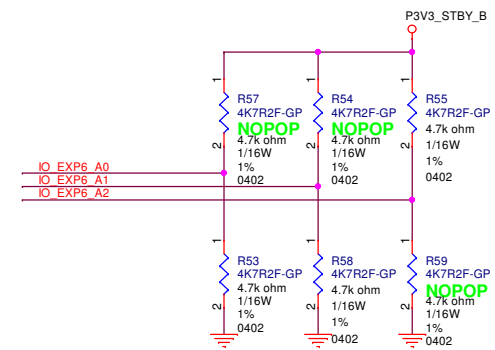
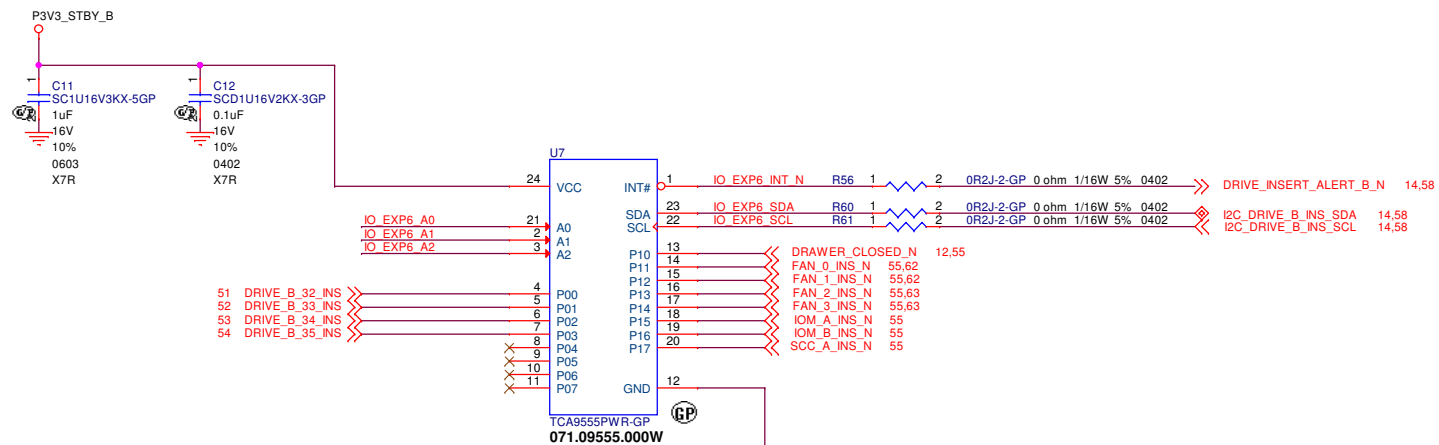
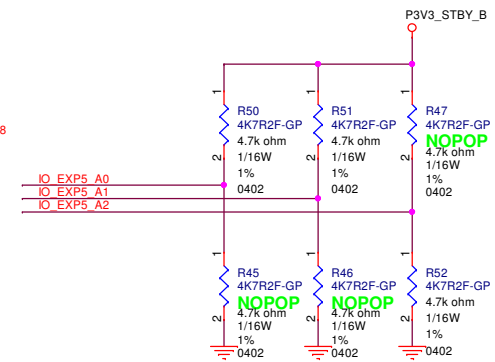
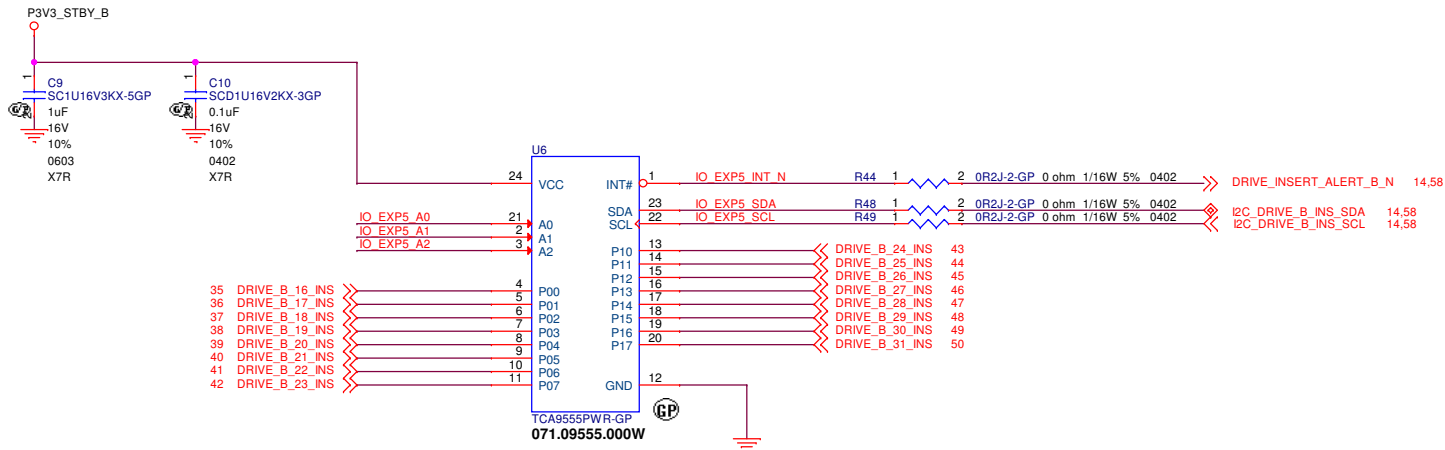
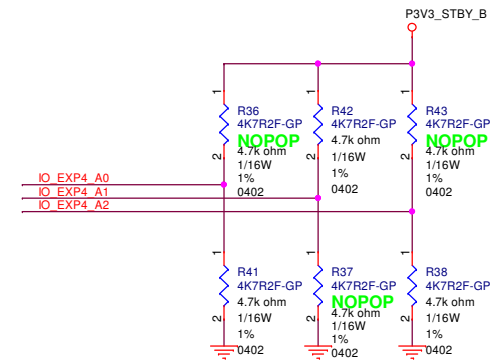
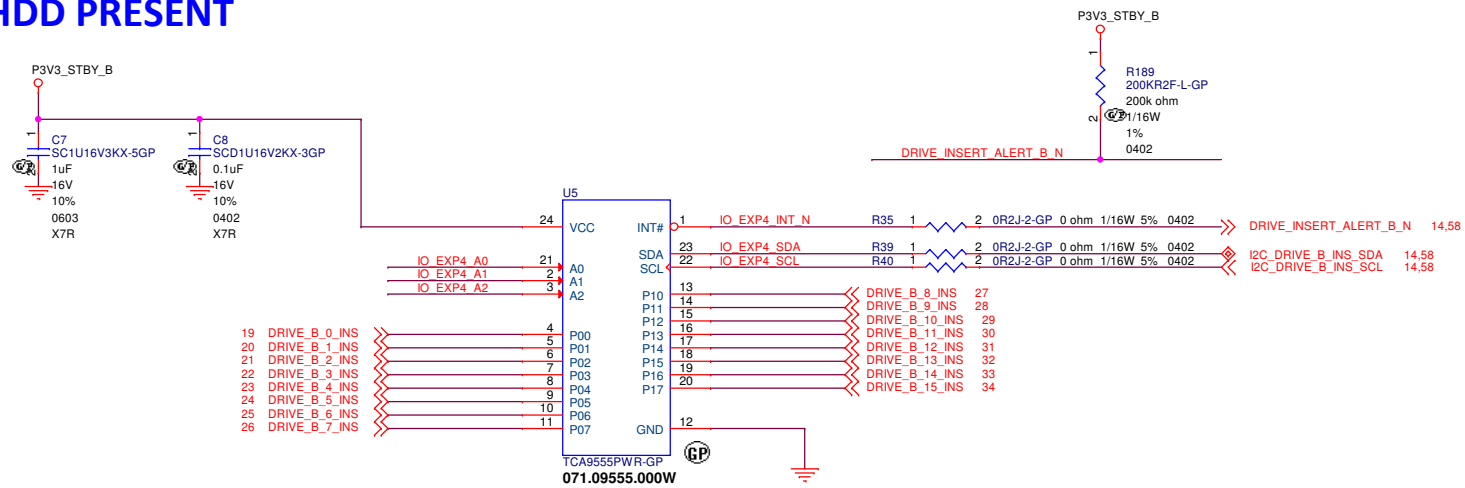
Drawer detect



DRIVE FAULT LED CONTROL



HDD PRESENT



<Variant Name>

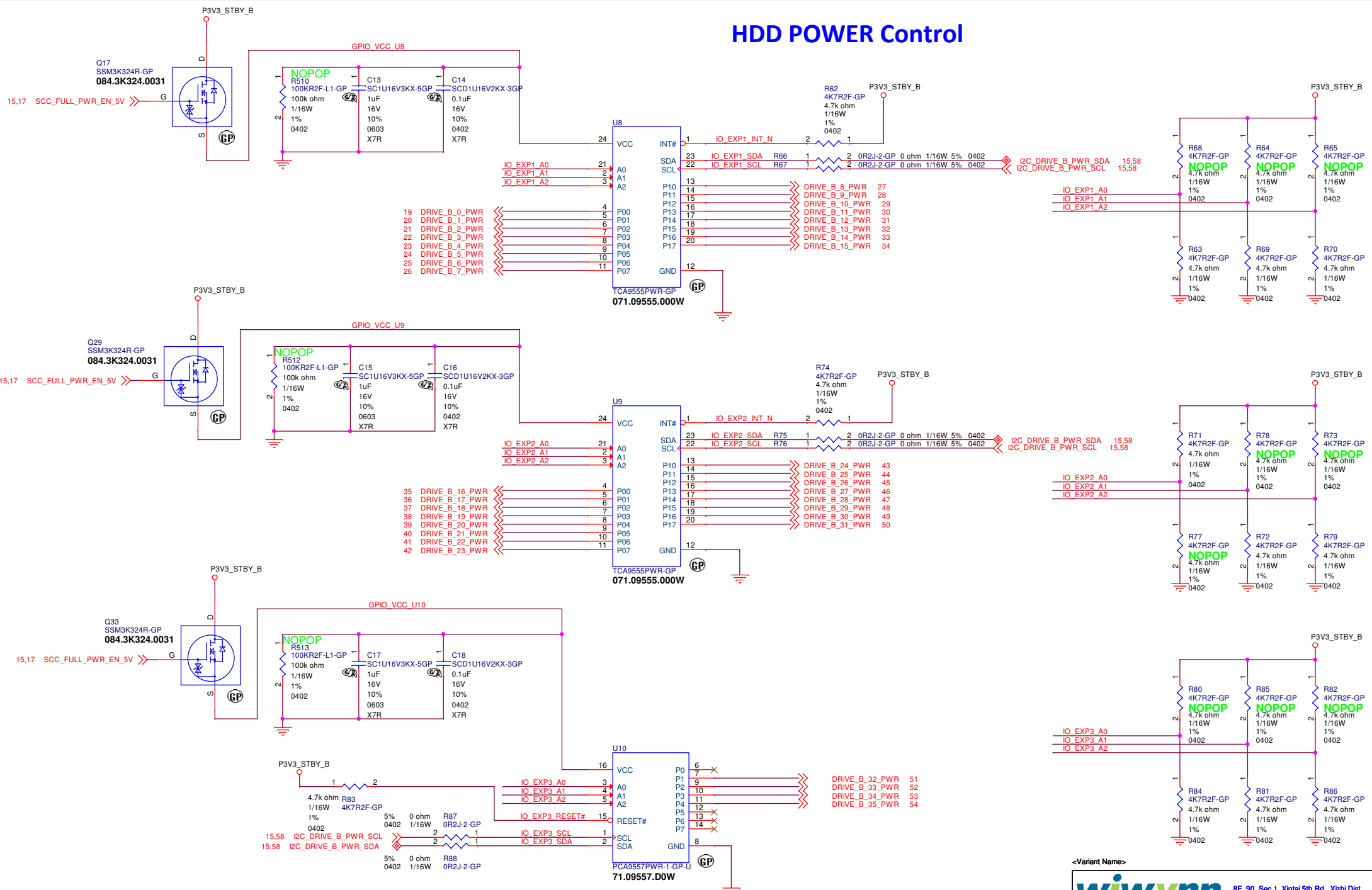
wiwynn 8F, 90, Sec.1, Xintai 5th Rd., Xizhi Dist.,
New Taipei City 22102, Taiwan (R.O.C.)
<http://www.wiwynn.com>

Title **DRIVE INSERT CONTROL**

Size A3	Document Number Bryce Canyon Rear Drive Plane Board	Rev 1
------------	---	----------

Date: Wednesday, December 06, 2017 Sheet 14 of 74

HDD POWER Control

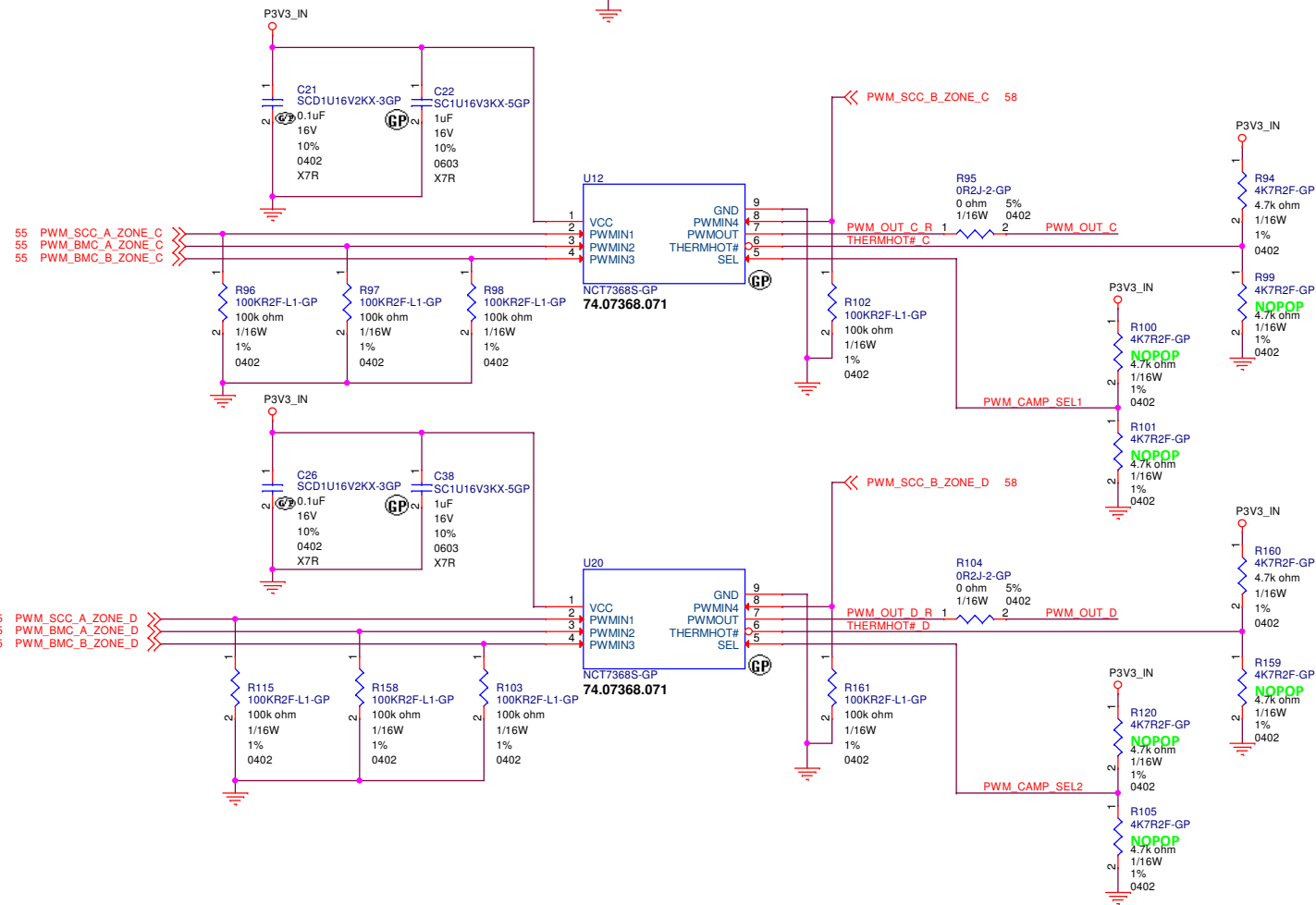
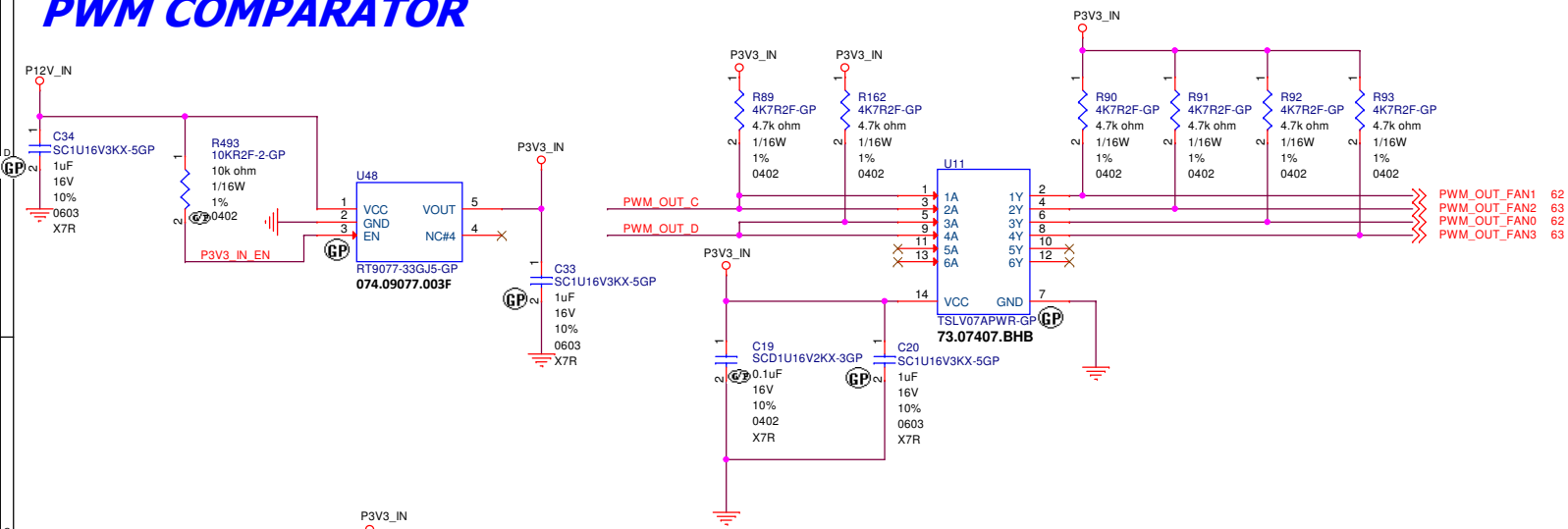


<Variant Name>

wiwynn 8F, 90, Sec.1, Xintai 5th Rd., Xizhi Dist.,
New Taipei City 22102, Taiwan (R.O.C.)
<http://www.wiwynn.com>

Title			DRIVE INSERT CONTROL
Size	Document Number	Rev 1	
A3	Bryce Canyon_Rear_Drive Plane Board		
Date:	Wednesday, December 06, 2017	Sheet	15 of 74

PWM COMPARATOR



<Variant Name>



8F, 90, Sec.1, Xintai 5th Rd., Xizhi Dist.,
New Taipei City 22102, Taiwan (R.O.C.)
<http://www.wiwyenn.com>

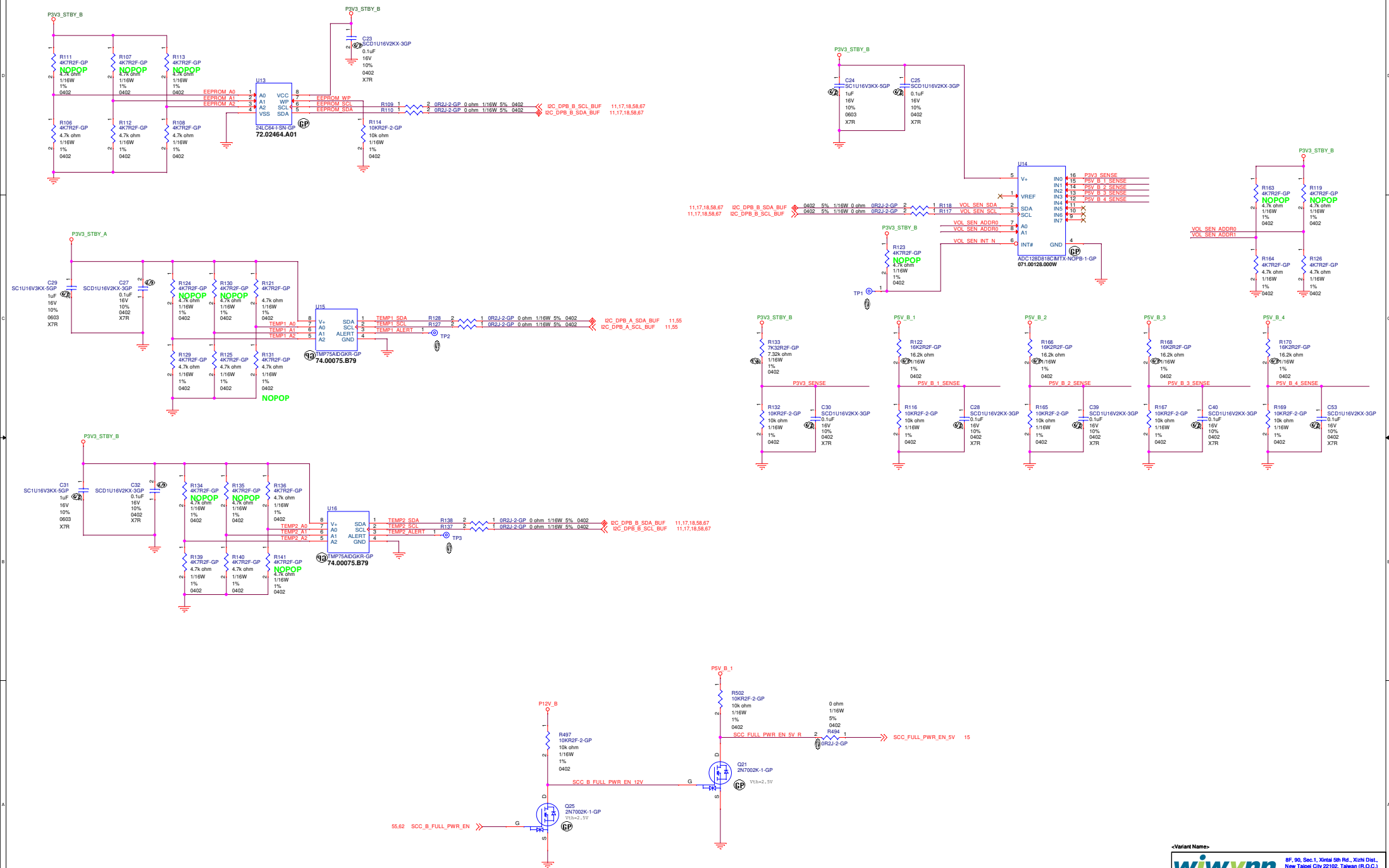
Title	FAN PWM COMPARATOR AND BUFFER
-------	-------------------------------

Size	Document Number
A3	Bryce Canyon Rear Drive Plane Board

Date: Wednesday, December 06, 2017 Sheet 16 of 74

Rev
1

I2C DEVICES

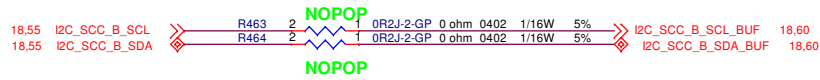
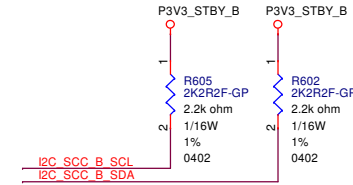
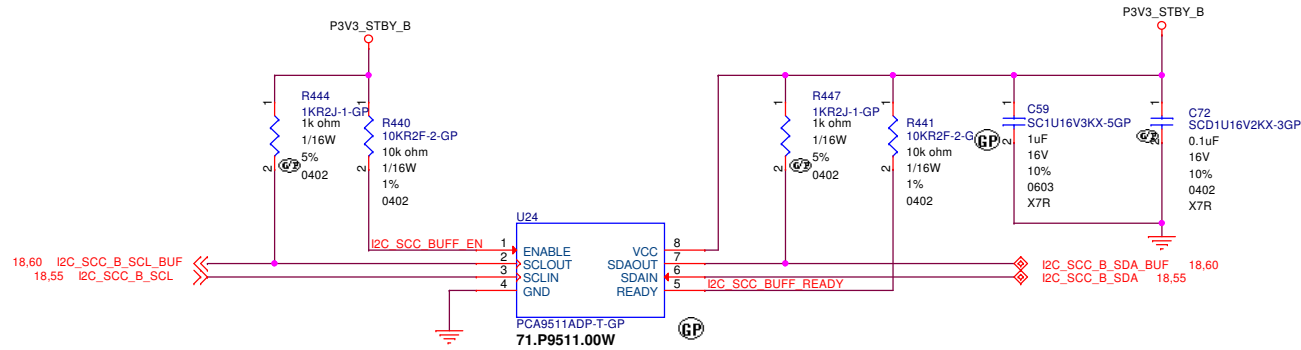
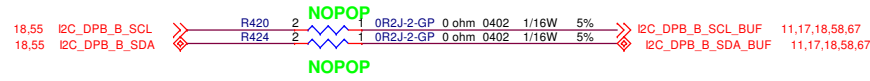
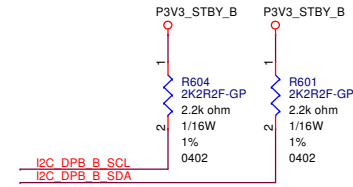
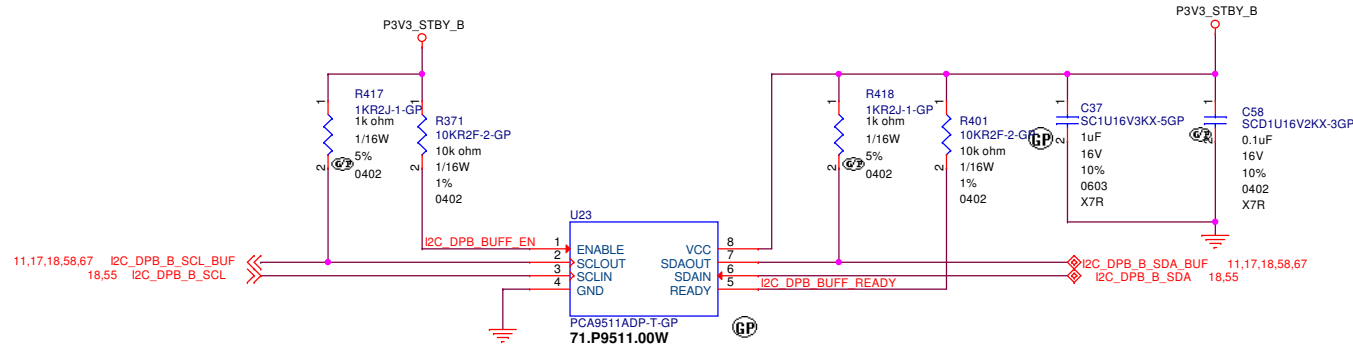


<Variant Name>

wiiwynn 8F, 90, Sec.1, Xintai 5th Rd., Xizhi Dist.,
New Taipei City 22102, Taiwan (R.O.C.)
<http://www.wiiwynn.com>

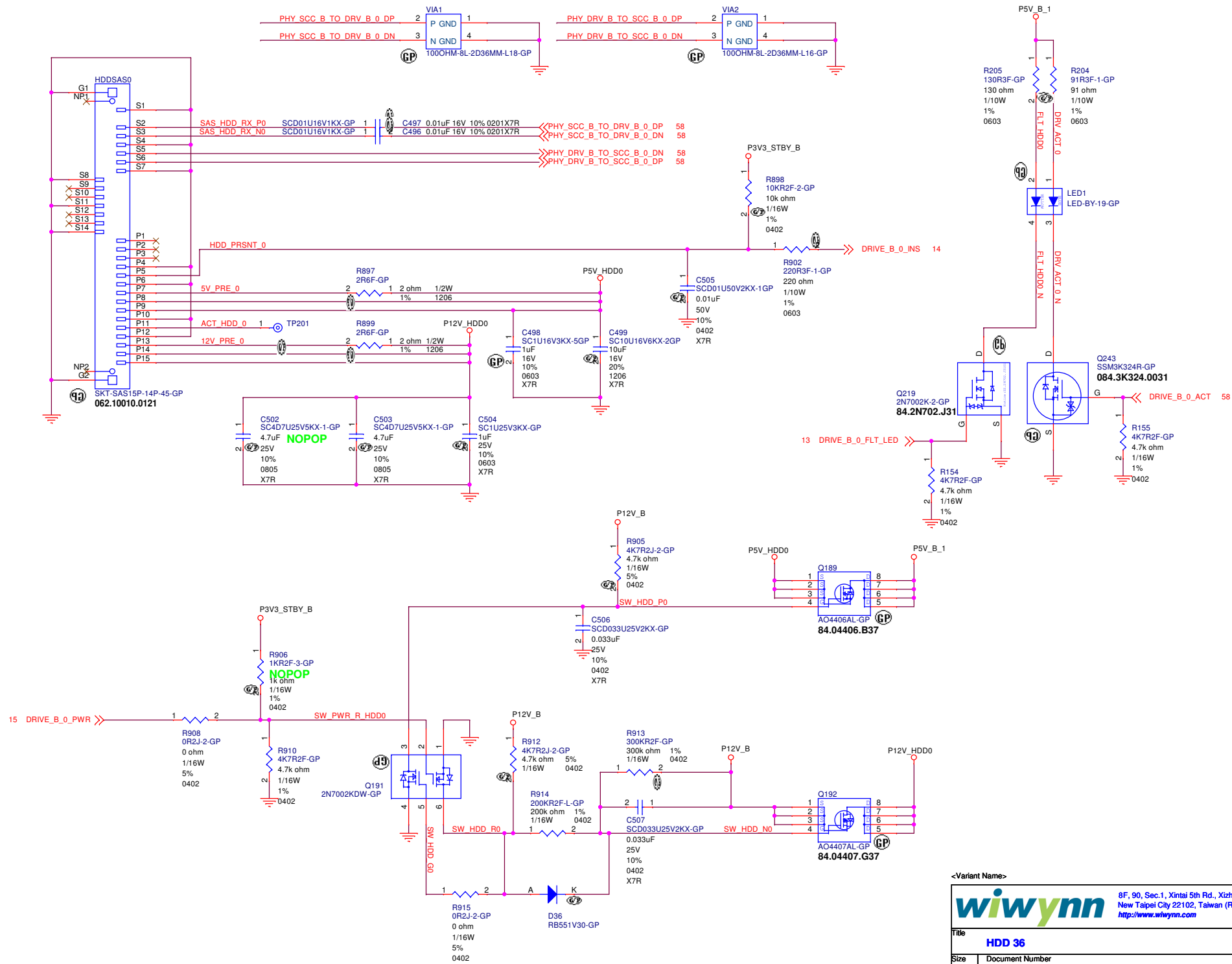
Title			
I2C Devices			
Size	Document Number		Rev
A2	Bryce Canyon_Rear_Drive Plane Board		1
Date:	Wednesday, December 06, 2017	Sheet	17 of 74

I2C BUFFER



<Variant Name>

HDD0



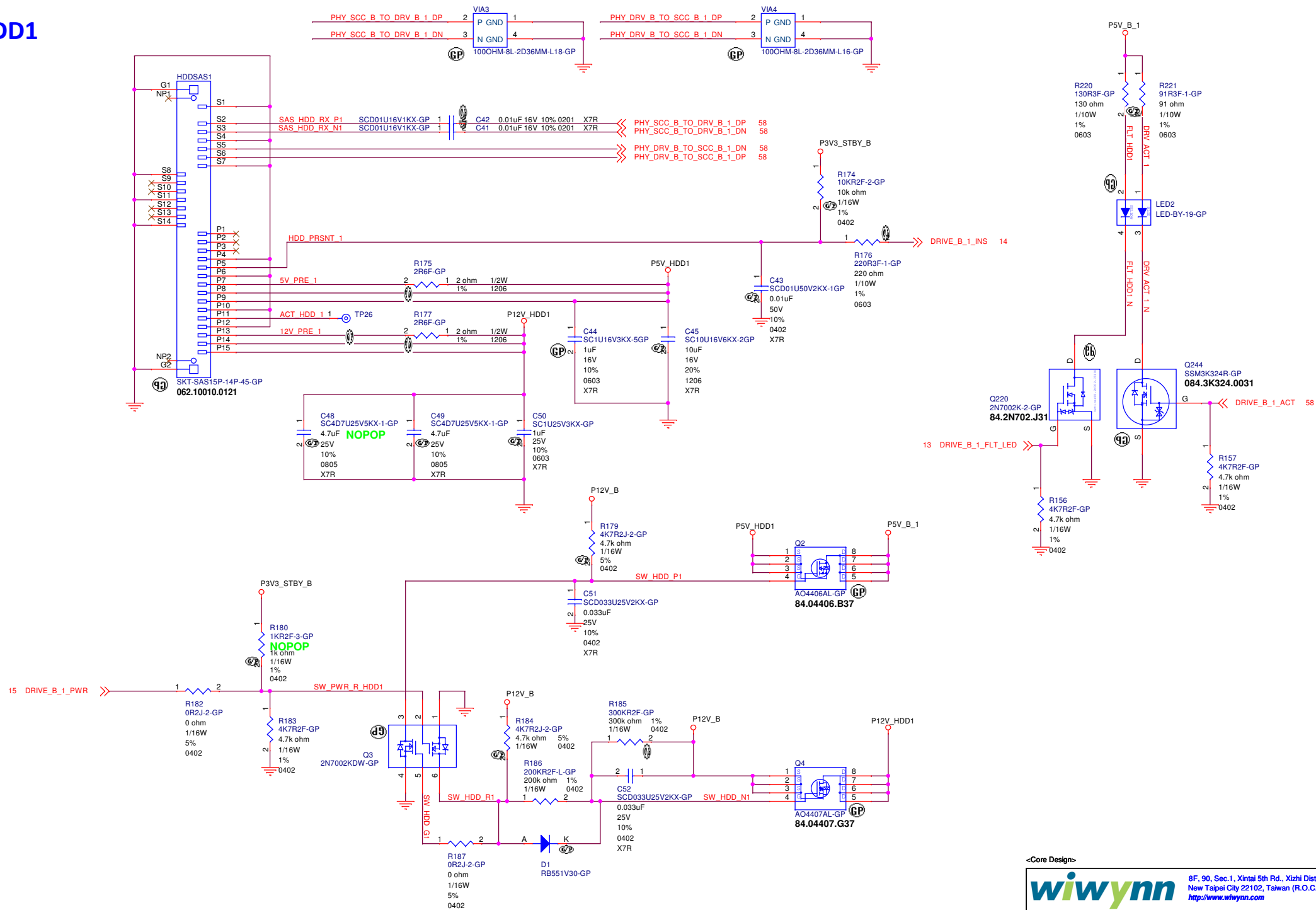
<Variant Name>

wiwynn 8F, 90, Sec.1, Xintai 5th Rd., Xizhi Dist.,
New Taipei City 22102, Taiwan (R.O.C.)
<http://www.wiwynn.com>

Title		
HDD 36		
Size	Document Number	Rev
A3	Bryce Canyon Rear Drive Plane Board	1

Date: Wednesday, December 06, 2017 Sheet 19 of 74

HDD1



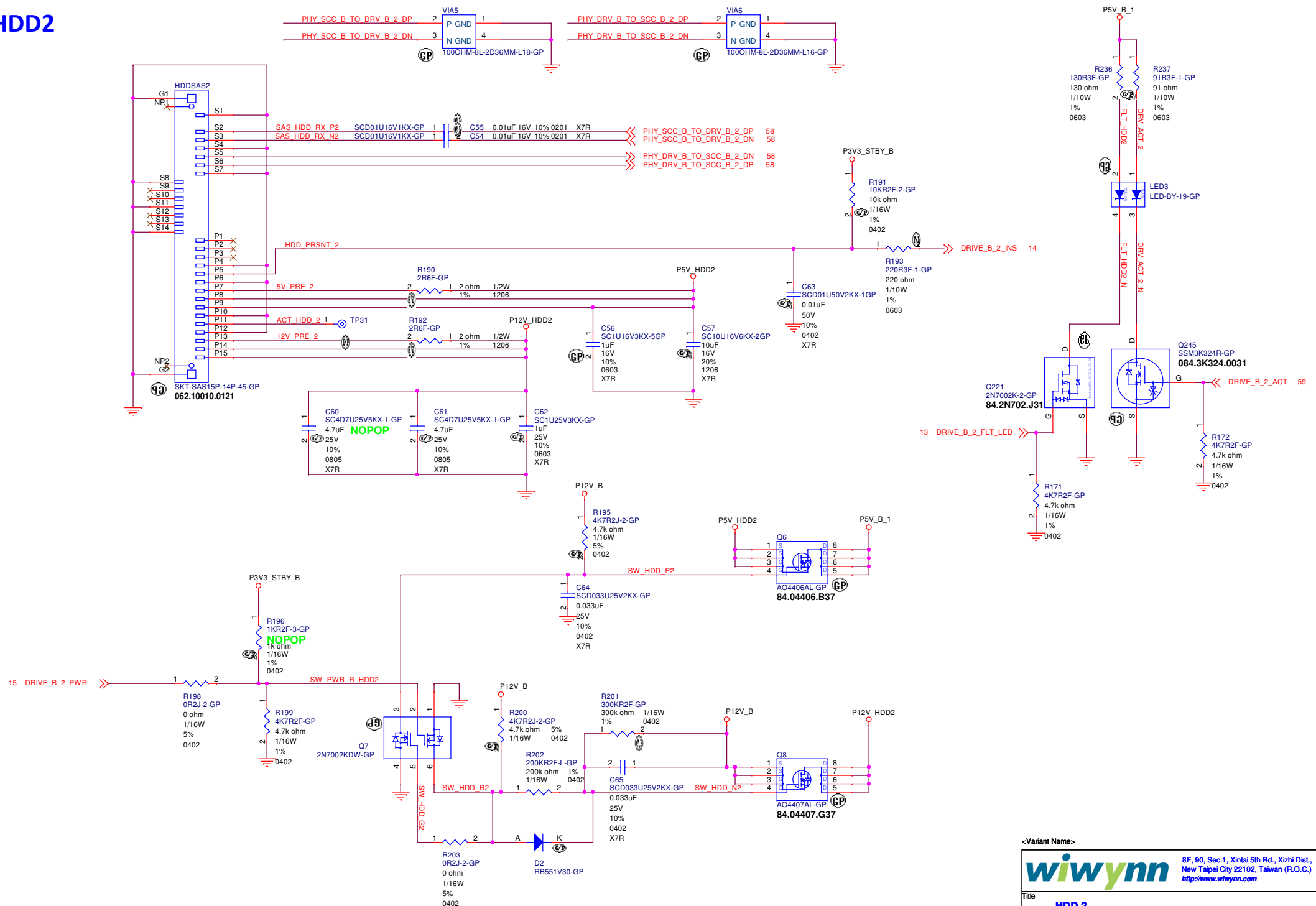
<Core Design>



8F, 90, Sec.1, Xintai 5th Rd., Xizhi Dist.,
New Taipei City 22102, Taiwan (R.O.C.)
<http://www.wiwyenn.com>

Title			
HDD 1			
Size A3	Document Number		Rev
	Bryce Canyon_Rear_Drive Plane Board		1
Date:	Wednesday, December 06, 2017	Sheet	20 of 74

HDD2



<Variant Name>

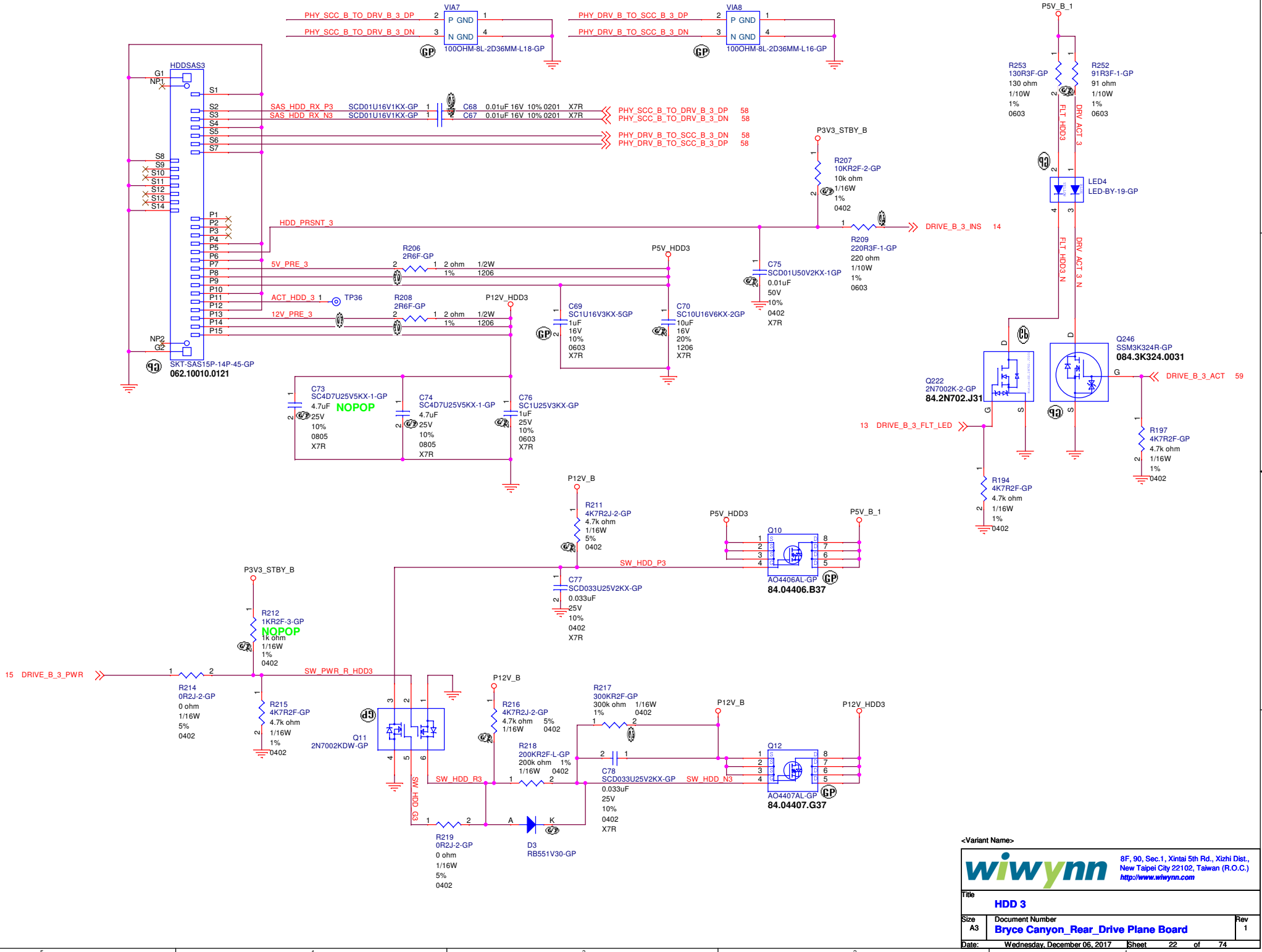
wiwynn 8F, 90, Sec.1, Xintai 5th Rd., Xizhi Dist.,
New Taipei City 22102, Taiwan (R.O.C.)
<http://www.wiwynn.com>

Title **HDD 2**

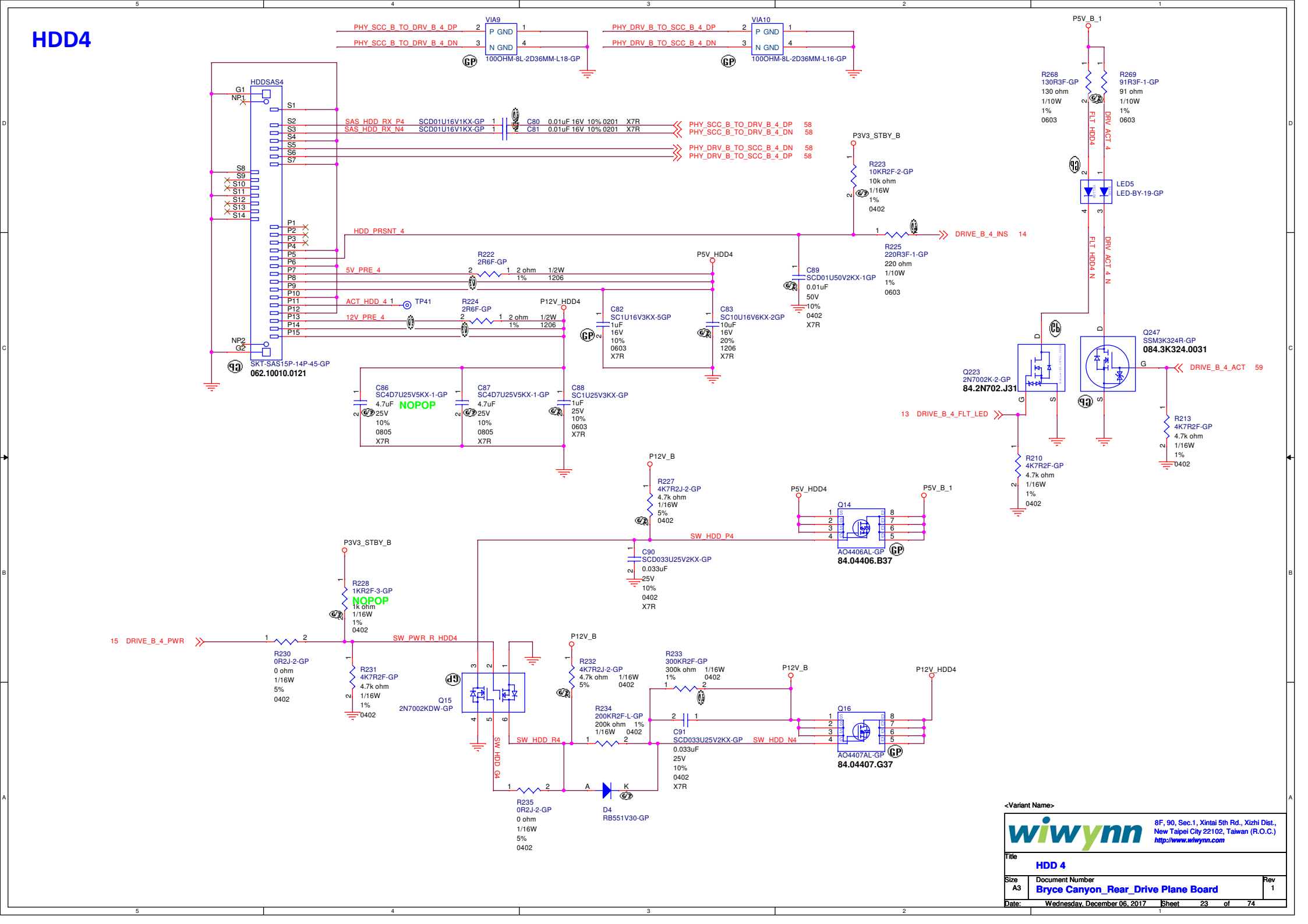
Size A3 Document Number **Bryce Canyon_Rear_Drive Plane Board** Rev 1

Date: Wednesday, December 06, 2017 Sheet 21 of 74

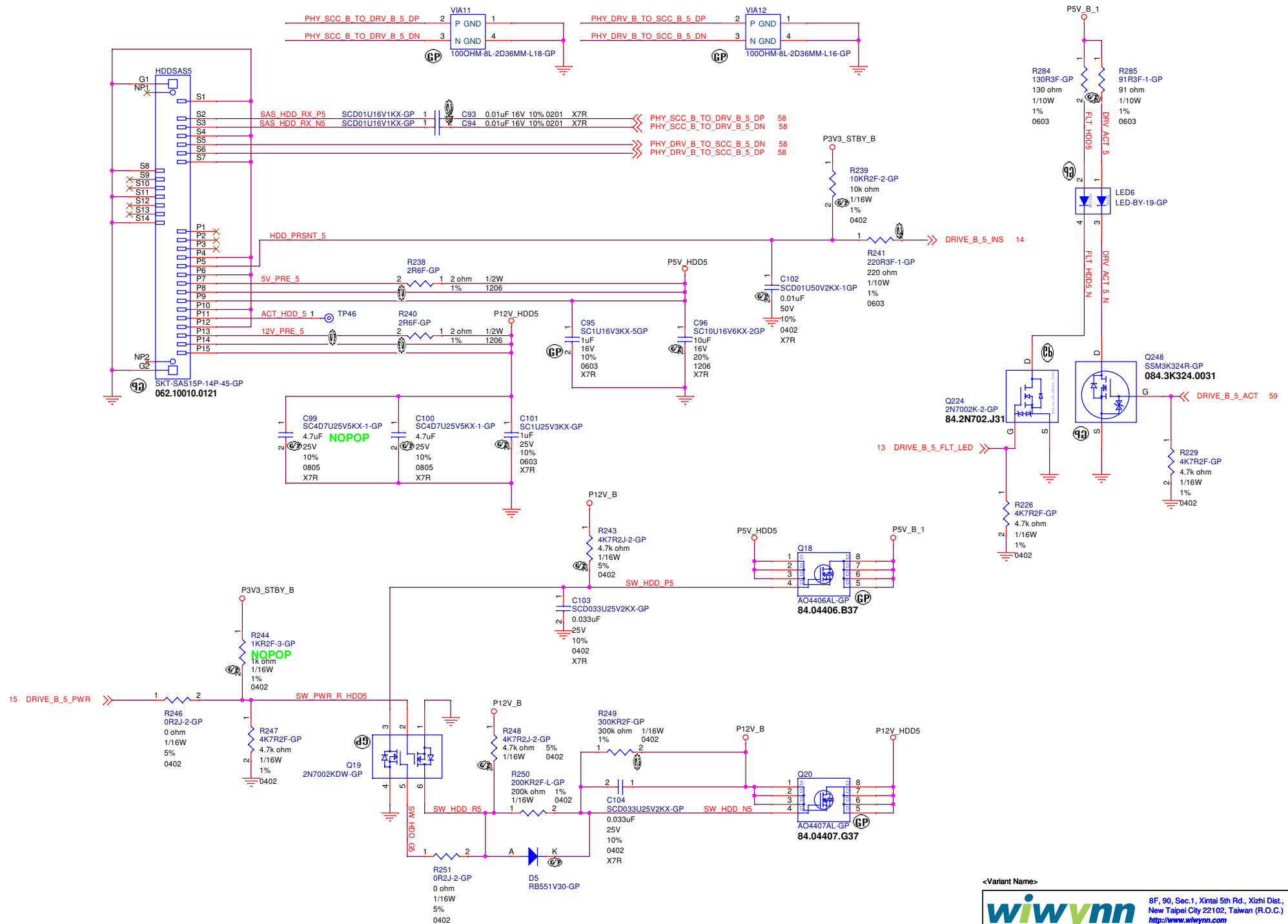
HDD3



HDD4



HDD5

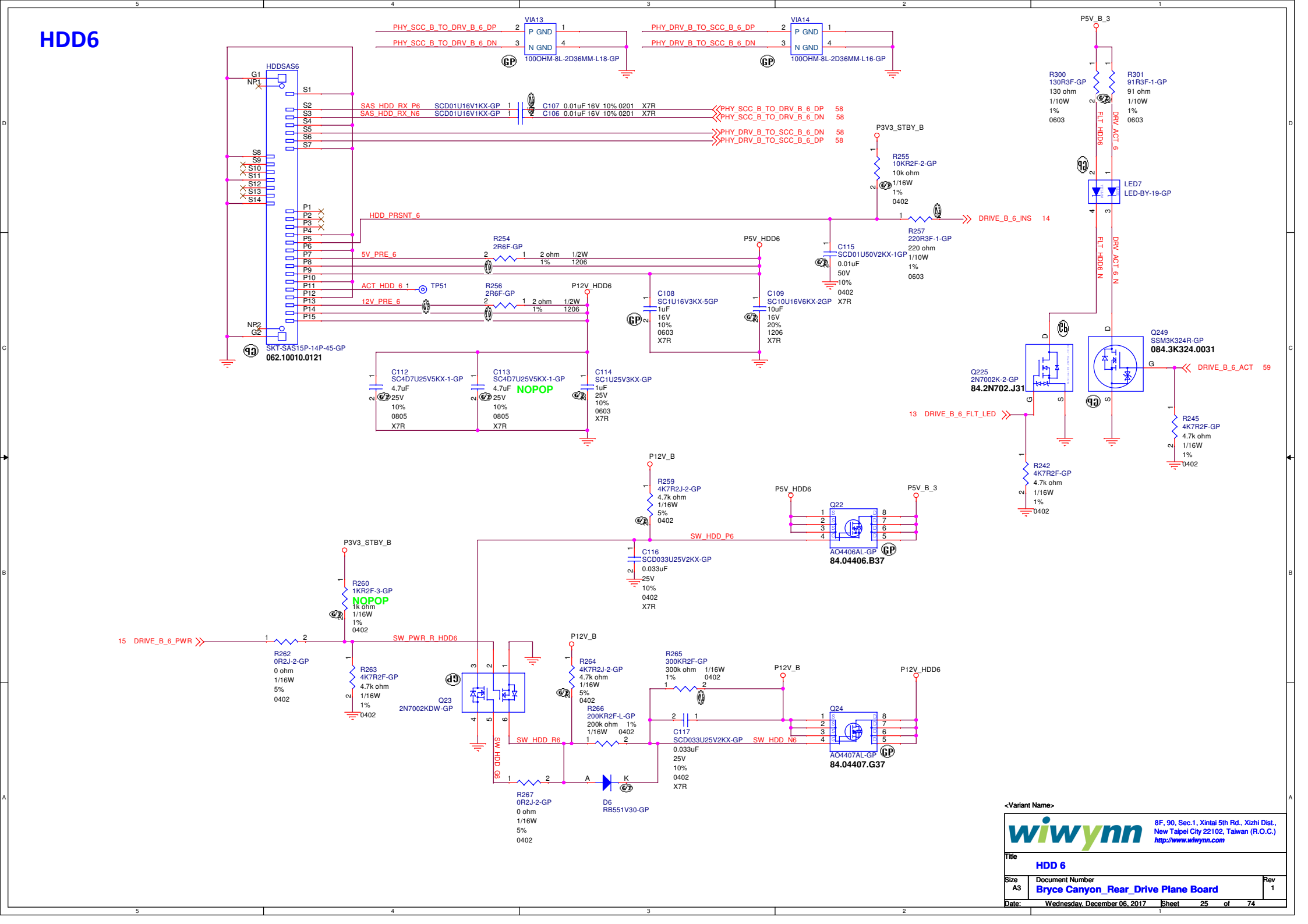


<Variant Name>

wiiwynn 8F, 90, Sec.1, Xintai 5th Rd., Xizhi Dist.,
New Taipei City 22102, Taiwan (R.O.C.)
<http://www.wiiwynn.com>

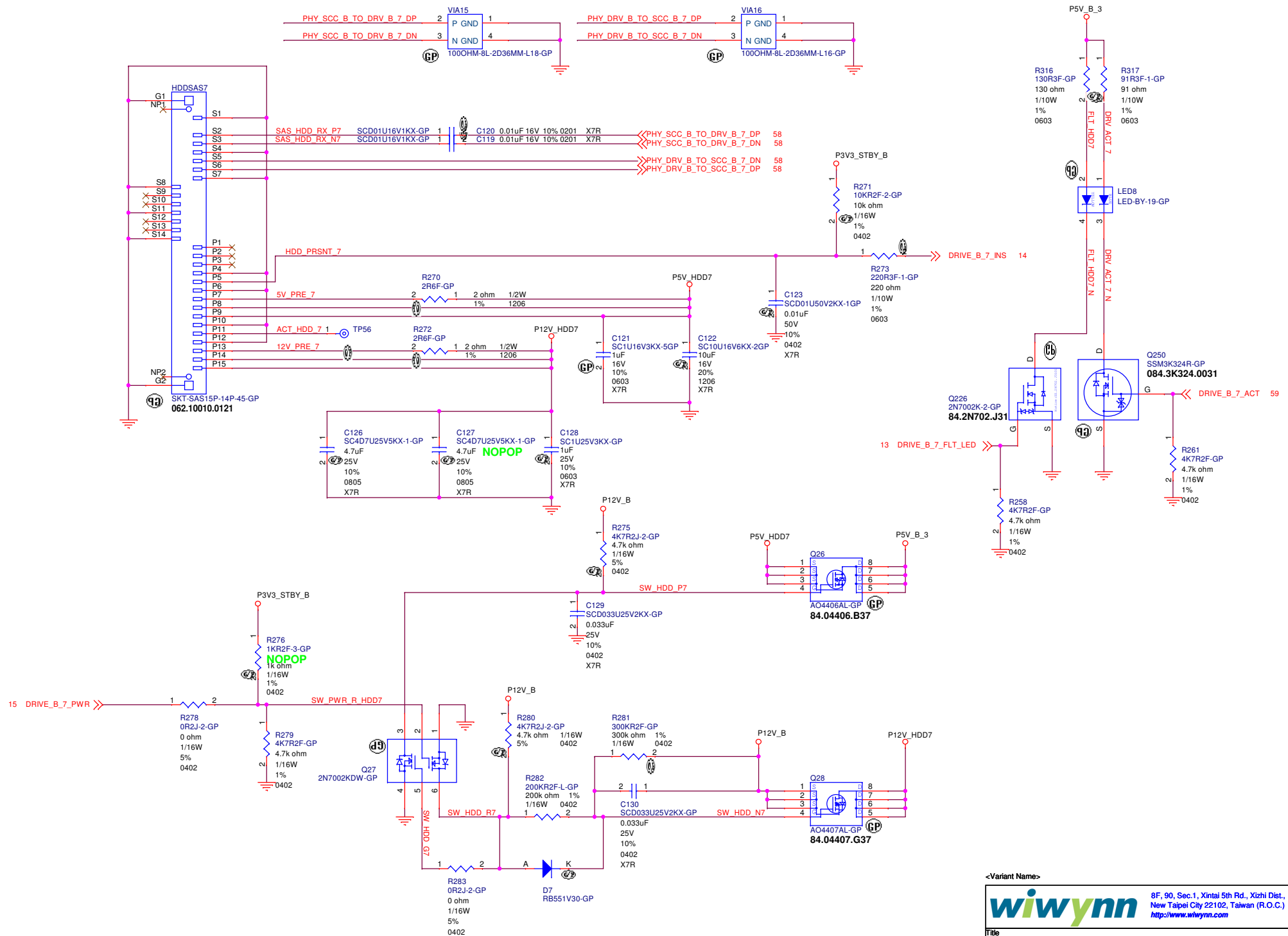
Title			
HDD 5			
Size	Document Number	Rev	
A3	Bryce Canyon_Rear_Drive Plane Board	1	
Date:	Wednesday, December 06, 2017	Sheet	24 of 74

HDD6

[illegible]

HDD6

HDD7



<Variant Name>

wiiwynn 8F, 90, Sec.1, Xintai 5th Rd., Xizhi Dist.,
New Taipei City 22102, Taiwan (R.O.C.)
<http://www.wiiwynn.com>

Title

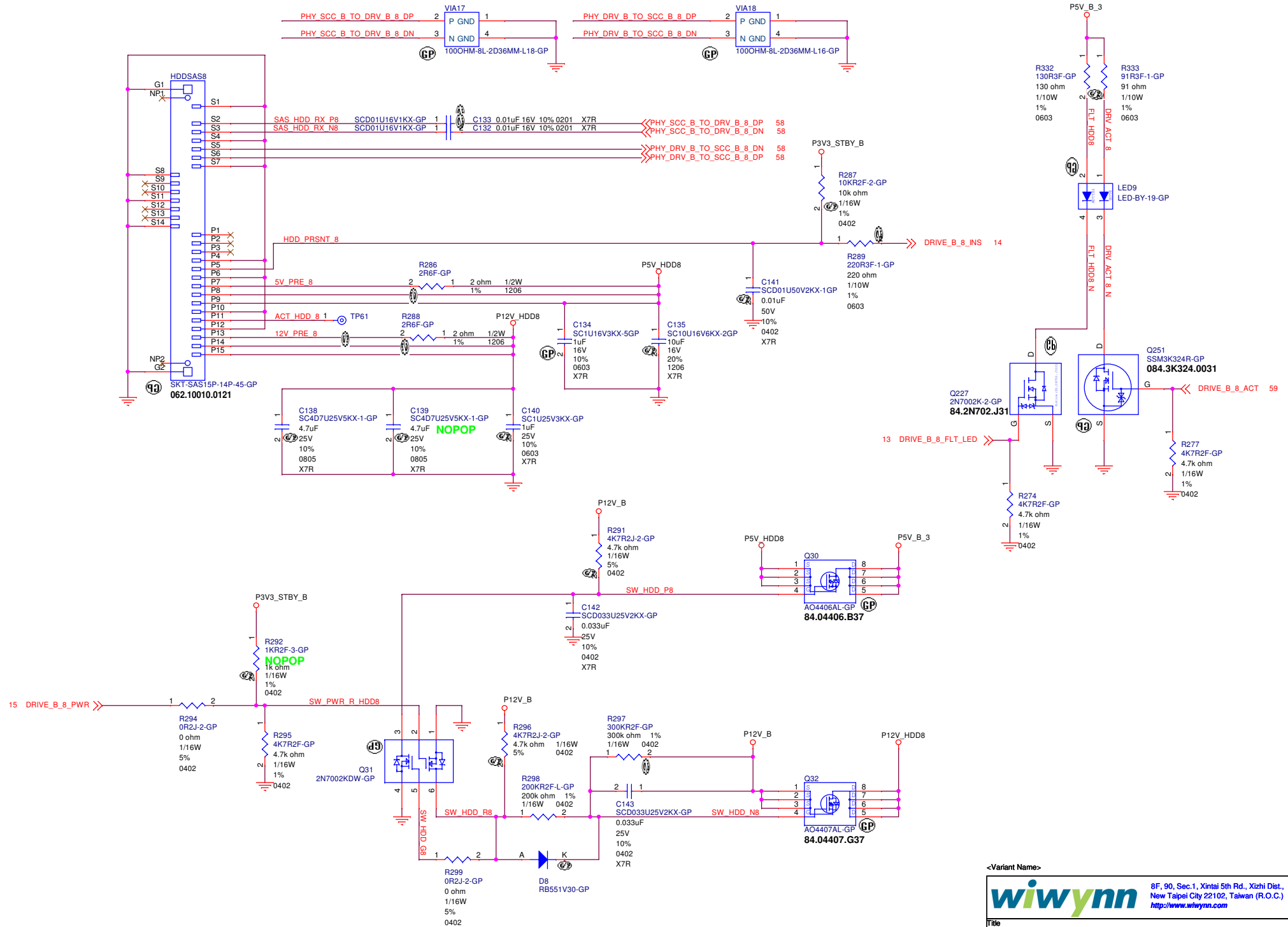
HDD 7

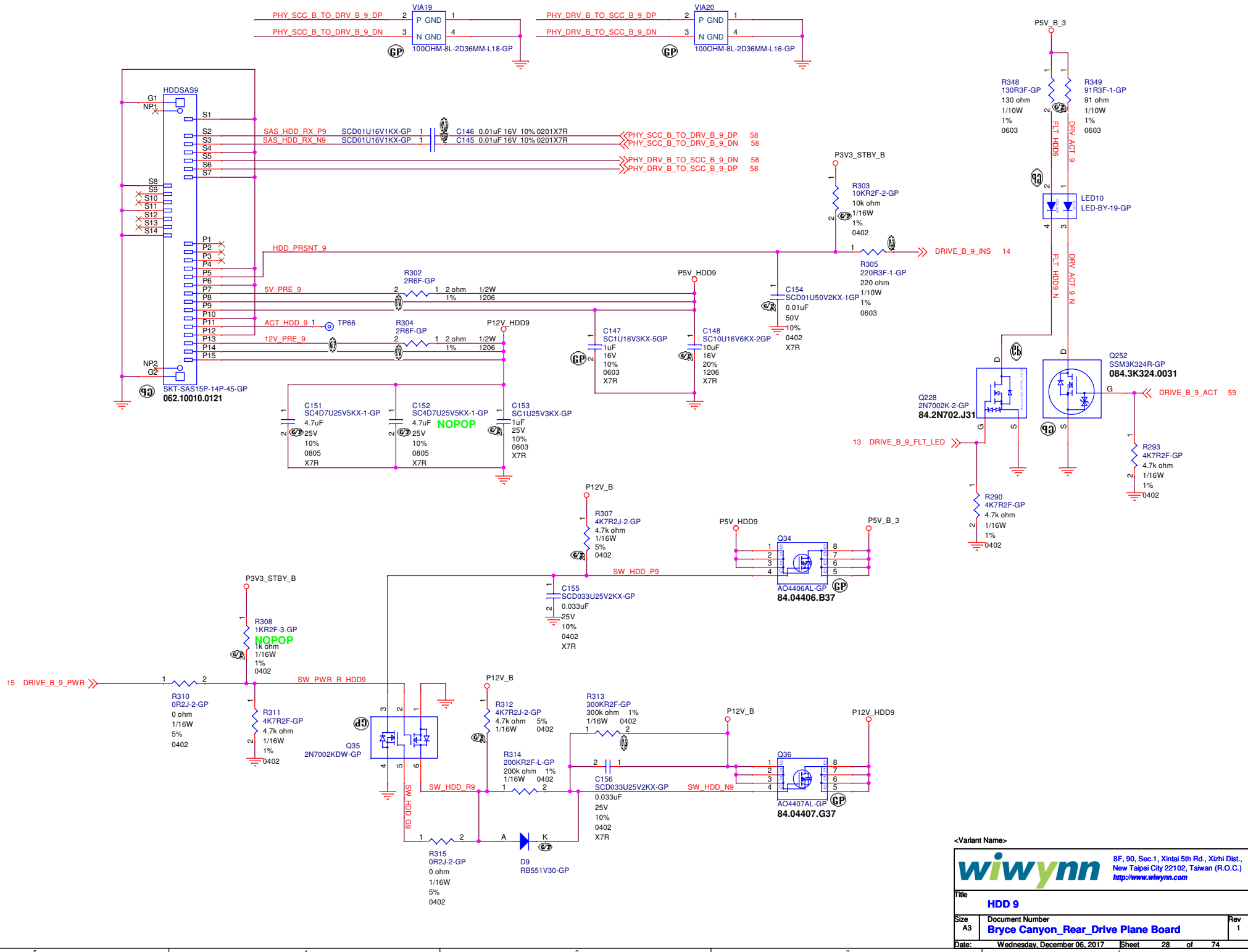
Size	Document Number	Rev
------	-----------------	-----

A3	Bryce Canyon_Rear_Drive Plane Board	1
----	--	---

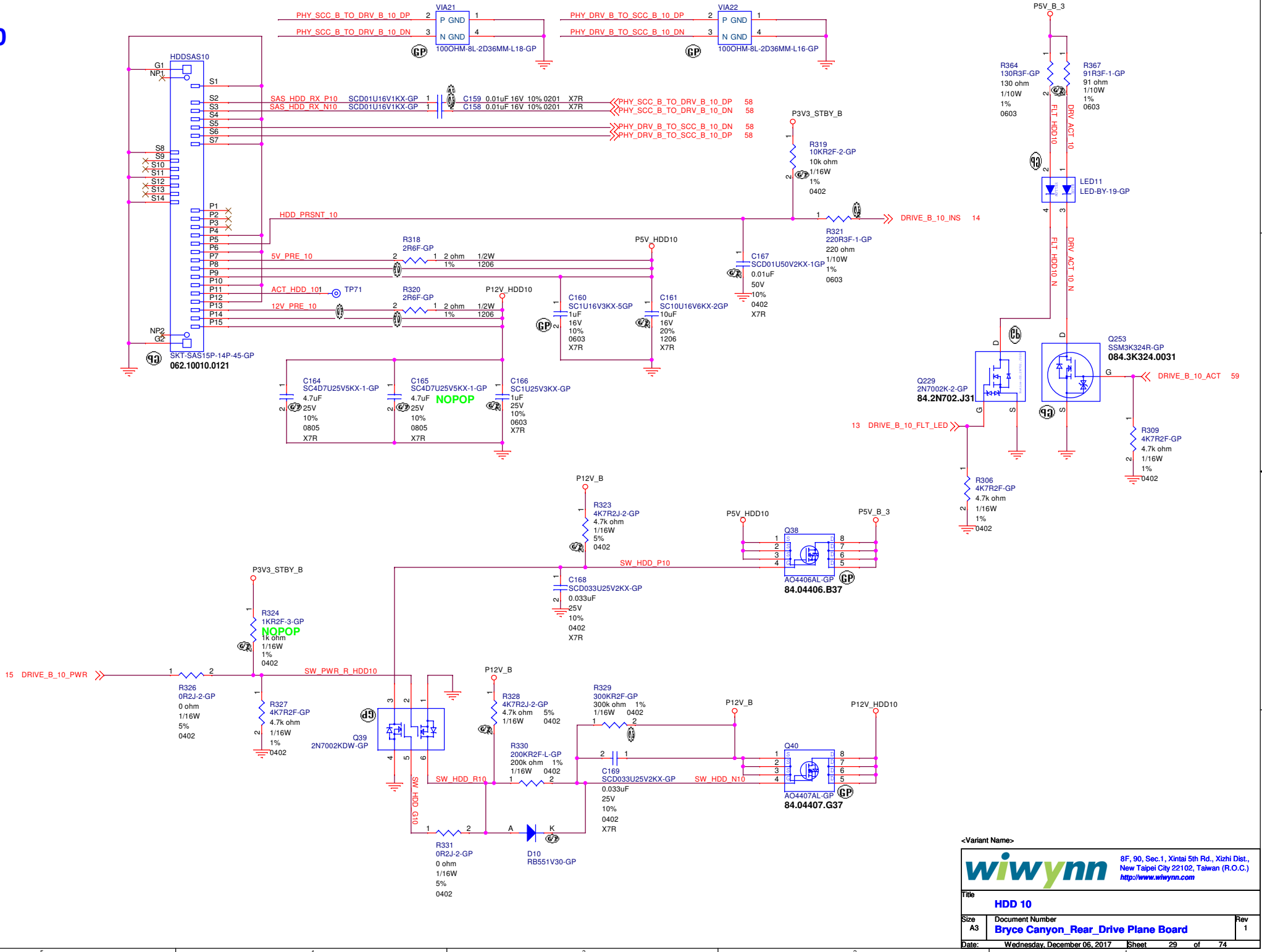
Date: Wednesday, December 06, 2017 Sheet 26 of 74

HDD8

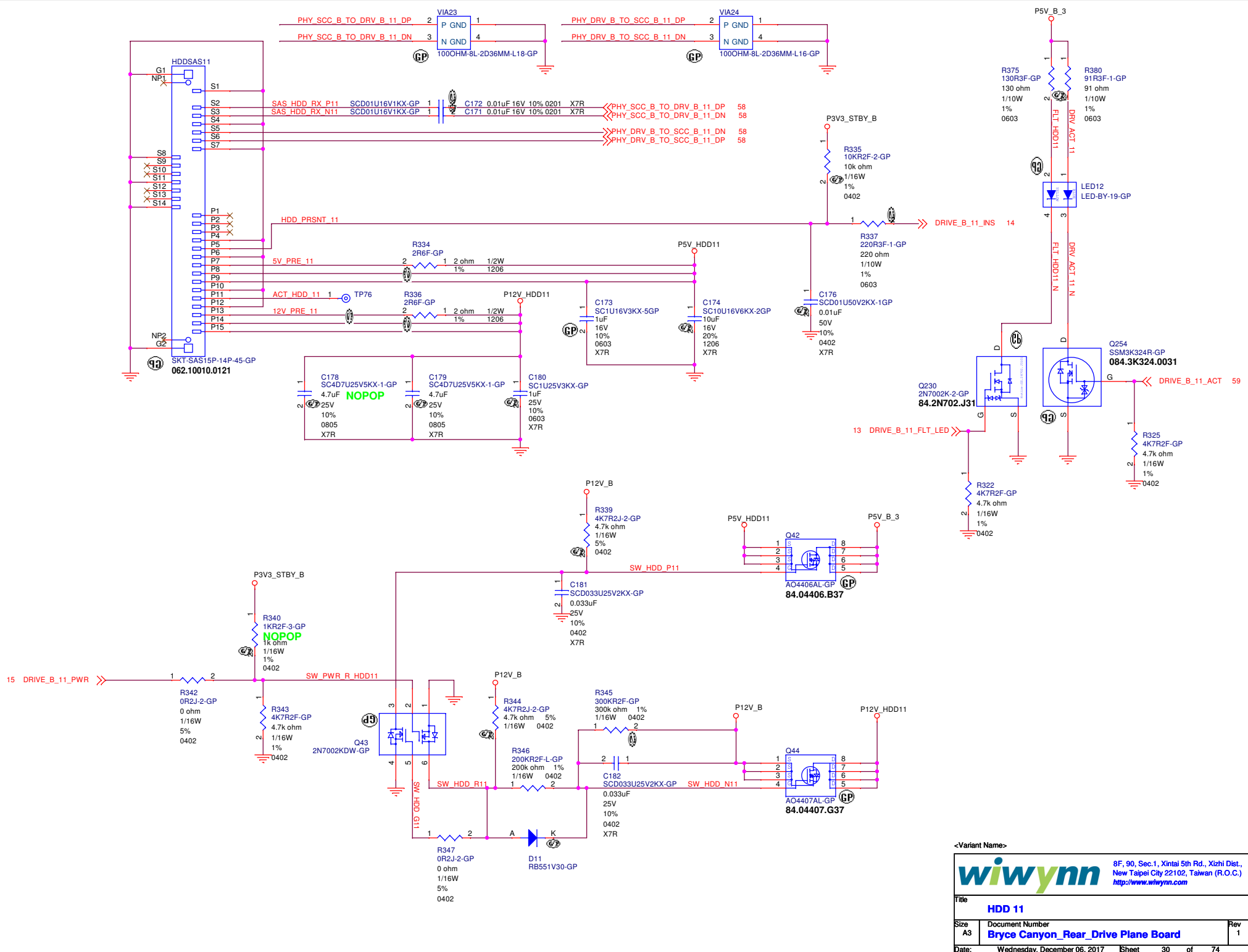




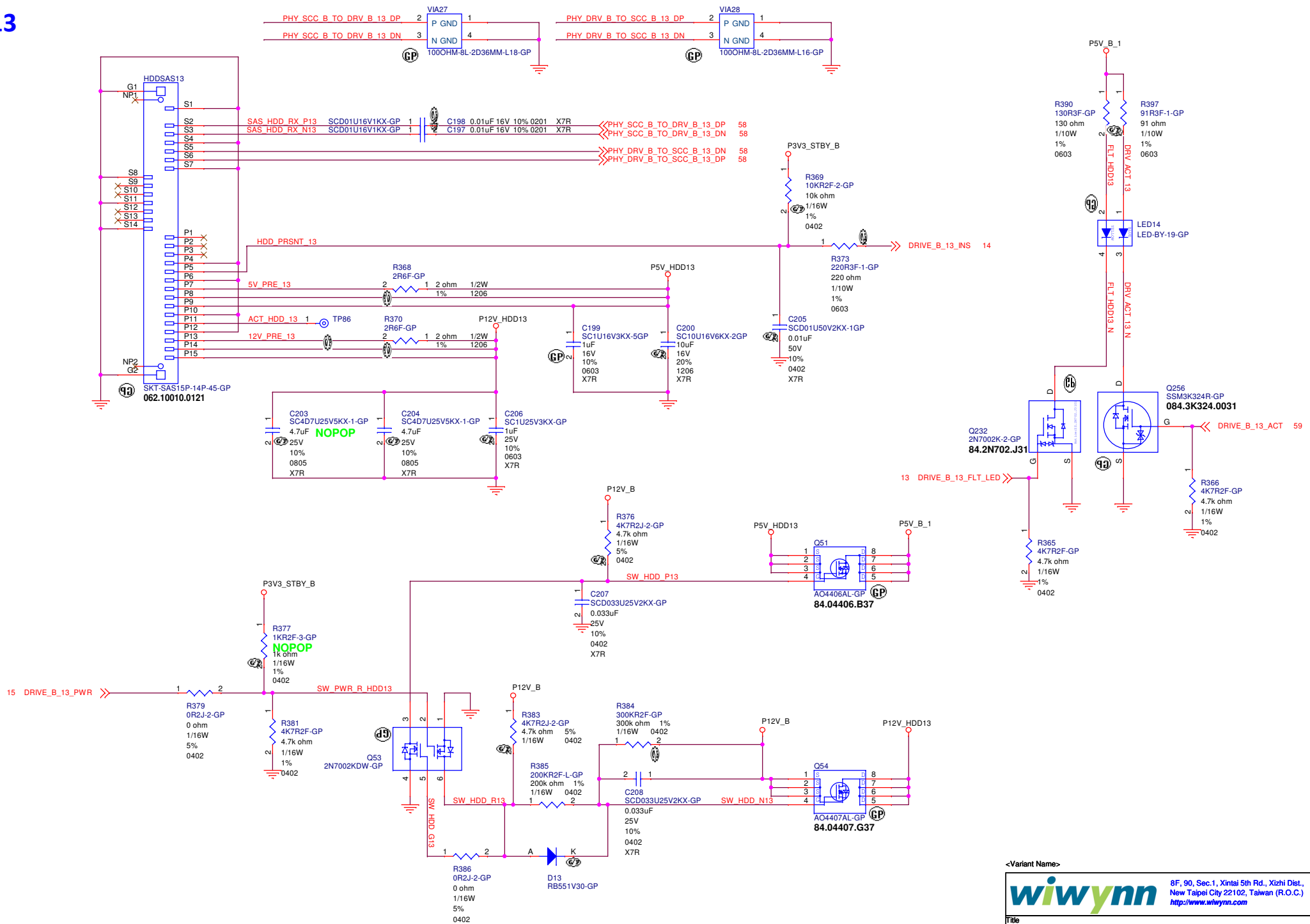
HDD10



HDD11



HDD13



<Variant Name>

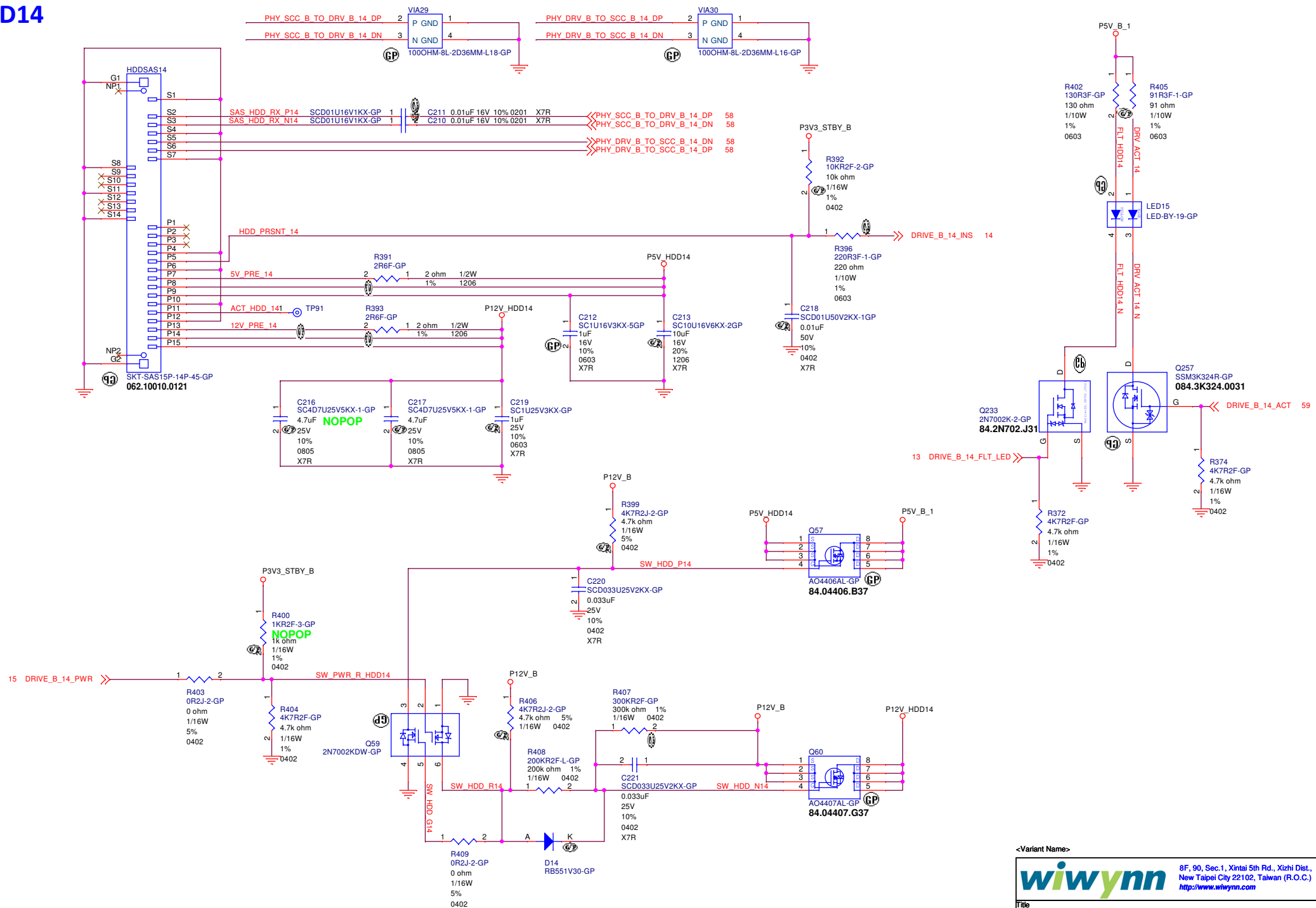
wiwynn 8F, 90, Sec.1, Xintai 5th Rd., Xizhi Dist.,
New Taipei City 22102, Taiwan (R.O.C.)
<http://www.wiwynn.com>

Title	HDD 13
-------	--------

Size A3	Document Number Bryce Canyon_Rear_Drive Plane Board	Rev 1
------------	---	----------

Date: Wednesday, December 06, 2017 Sheet 32 of 74

HDD14



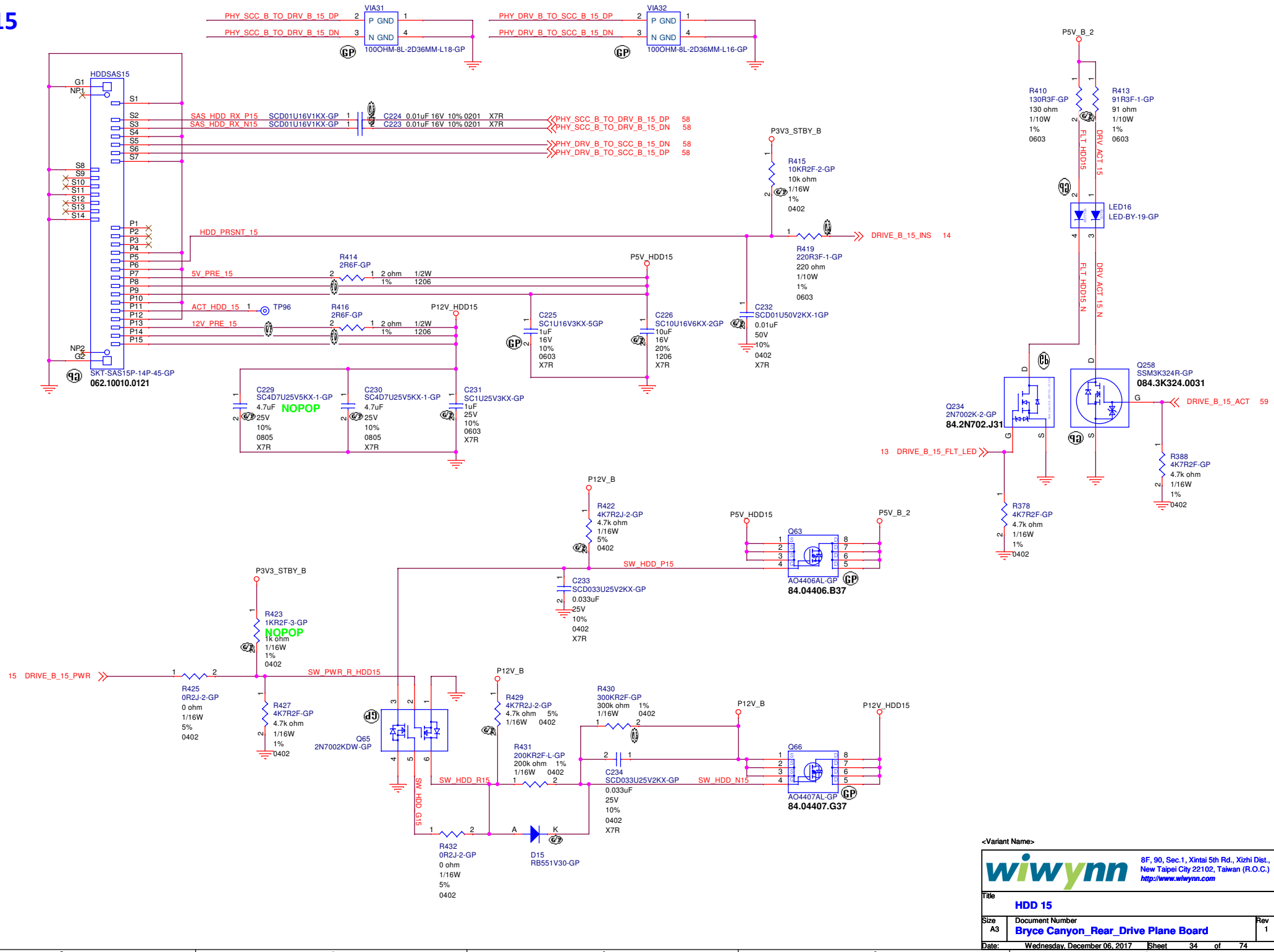
<Variant Name>

wiiwynn 8F, 90, Sec.1, Xintai 5th Rd., Xizhi Dist.,
New Taipei City 22102, Taiwan (R.O.C.)
<http://www.wiiwynn.com>

Title		
HDD 14		
Size	Document Number	Rev
A3	Bryce Canyon Rear Drive Plane Board	1

Date: Wednesday, December 06, 2017 Sheet 33 of 74

HDD15

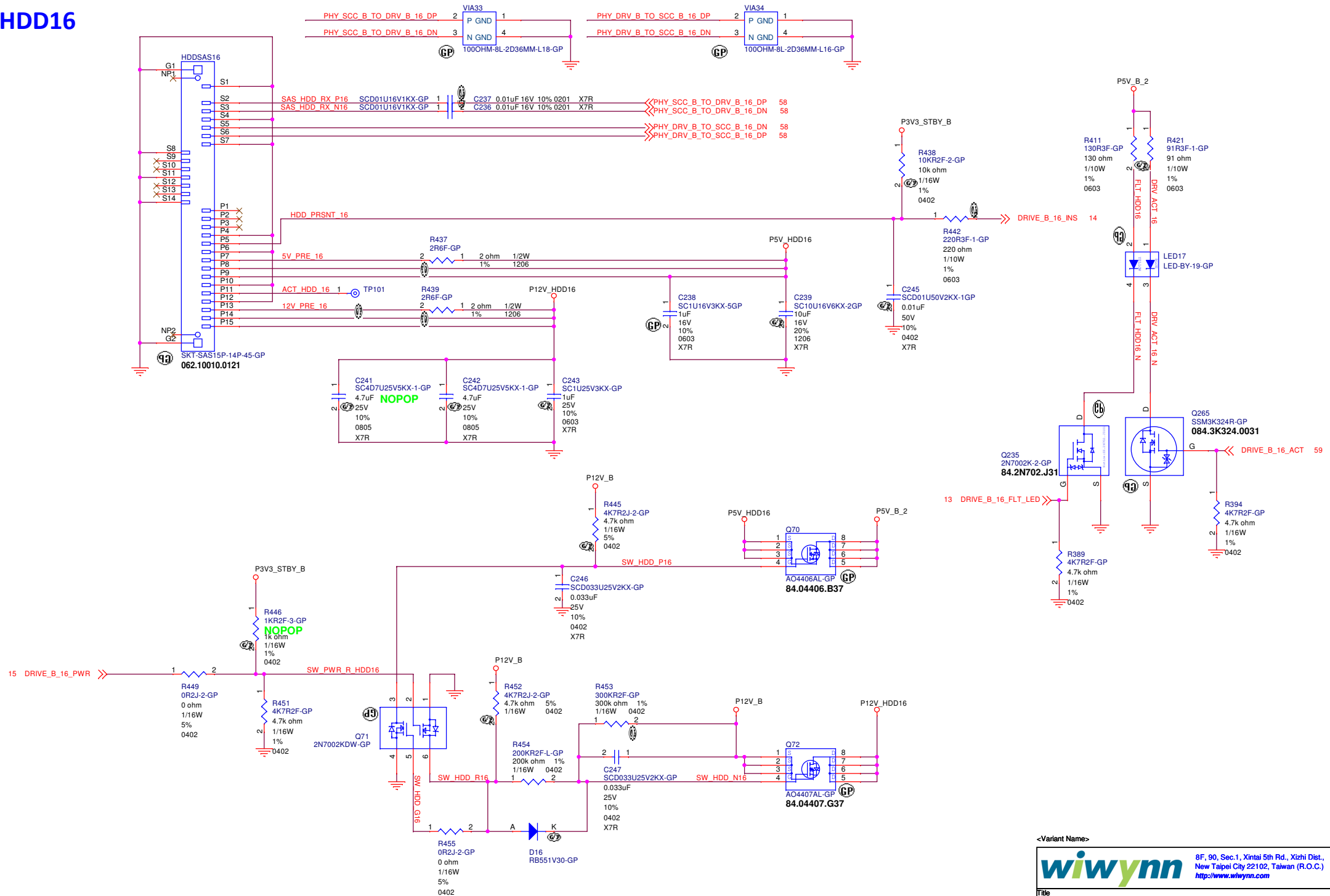


<Variant Name>

wiwynn 8F, 90, Sec.1, Xintai 5th Rd., Xizhi Dist.,
New Taipei City 22102, Taiwan (R.O.C.)
<http://www.wiwynn.com>

Title		HDD 15
Size	Document Number	Bryce Canyon_Rear_Drive Plane Board
A3	Rev	1
Date:	Wednesday, December 06, 2017	Sheet 34 of 74

HDD16

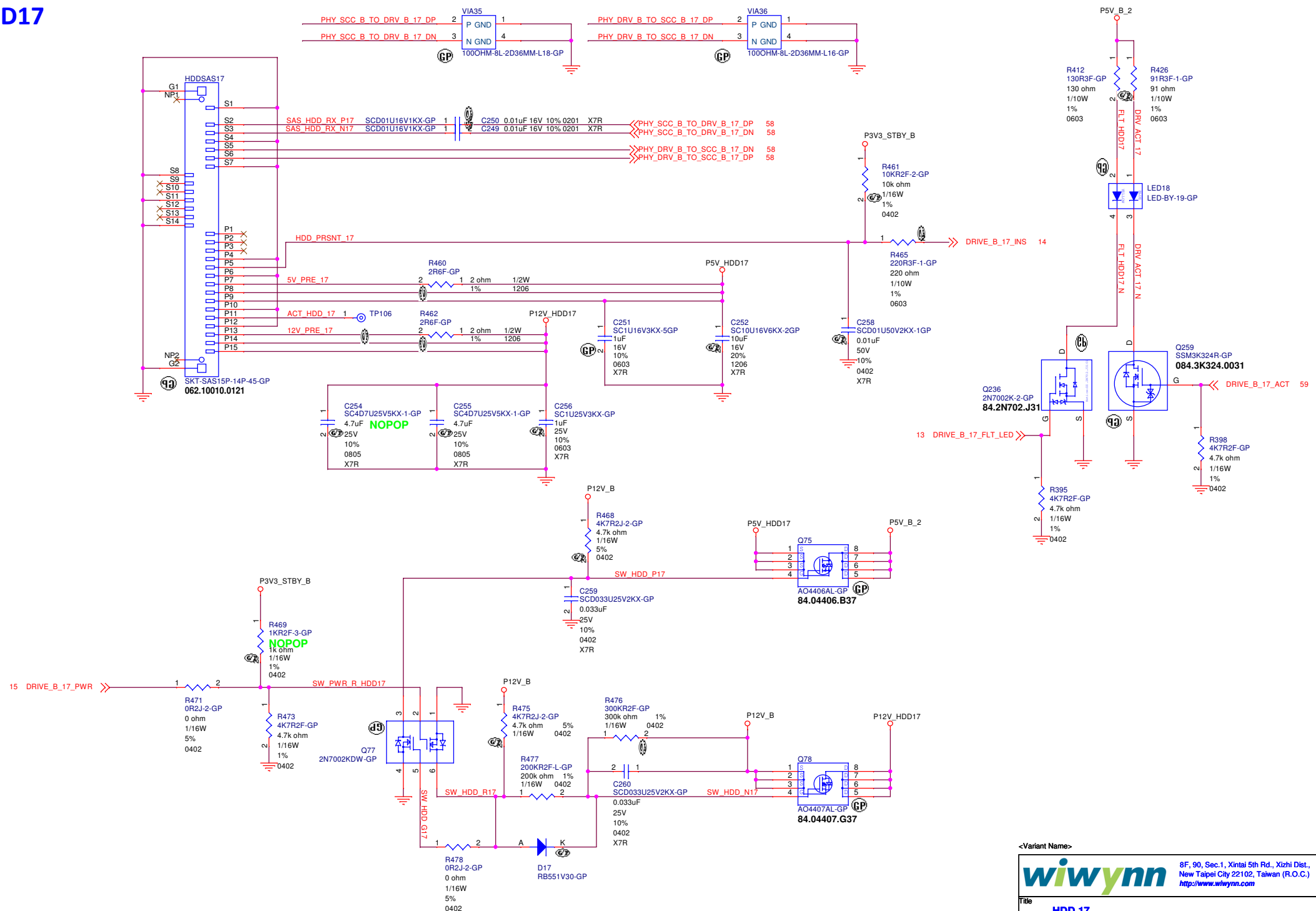


<Variant Name>

wiwynn 8F, 90, Sec.1, Xintai 5th Rd., Xizhi Dist.,
New Taipei City 22102, Taiwan (R.O.C.)
<http://www.wiwynn.com>

Title			
HDD 16			
Size	Document Number		Rev
A3	Bryce Canyon_Rear_Drive Plane Board		1
Date:	Wednesday, December 06, 2017	Sheet	35 of 74

HDD17



<Variant Name>

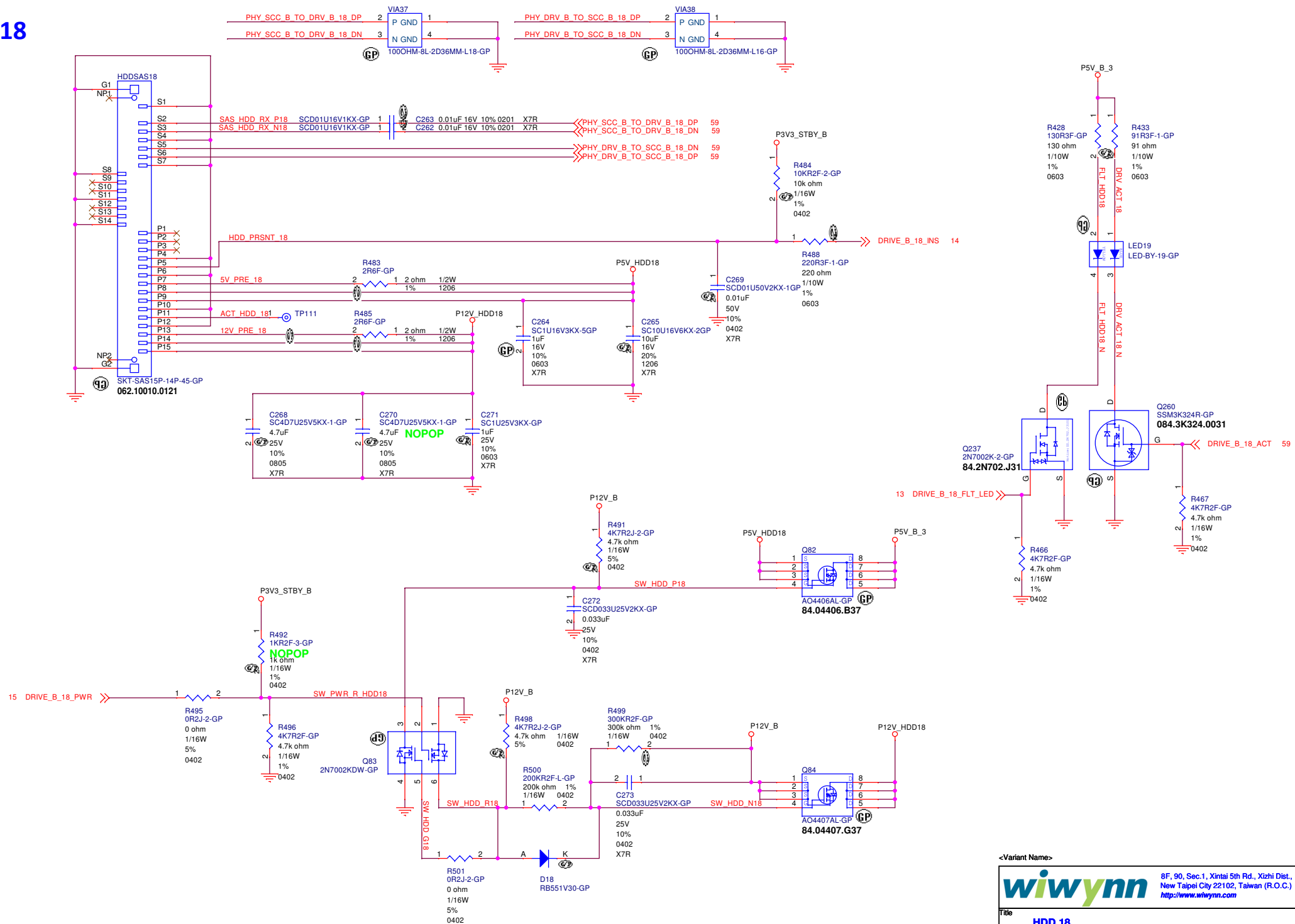
wiwynn 8F, 90, Sec.1, Xintai 5th Rd., Xizhi Dist.,
New Taipei City 22102, Taiwan (R.O.C.)
<http://www.wiwynn.com>

Title **HDD 17**

Size A3 Document Number **Bryce Canyon_Rear_Drive Plane Board** Rev 1

Date: Wednesday, December 06, 2017 Sheet 36 of 74

HDD18

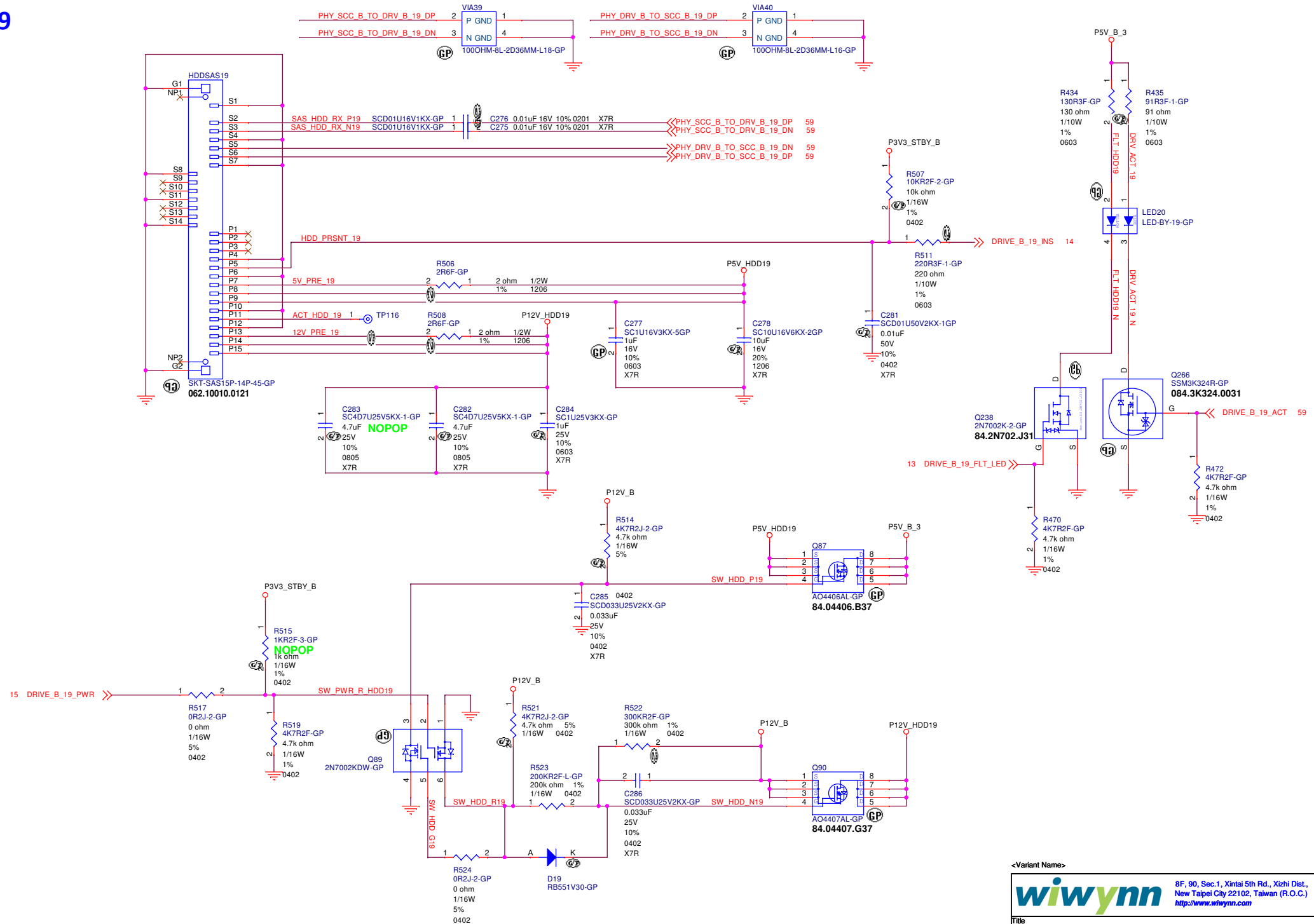


<Variant Name>

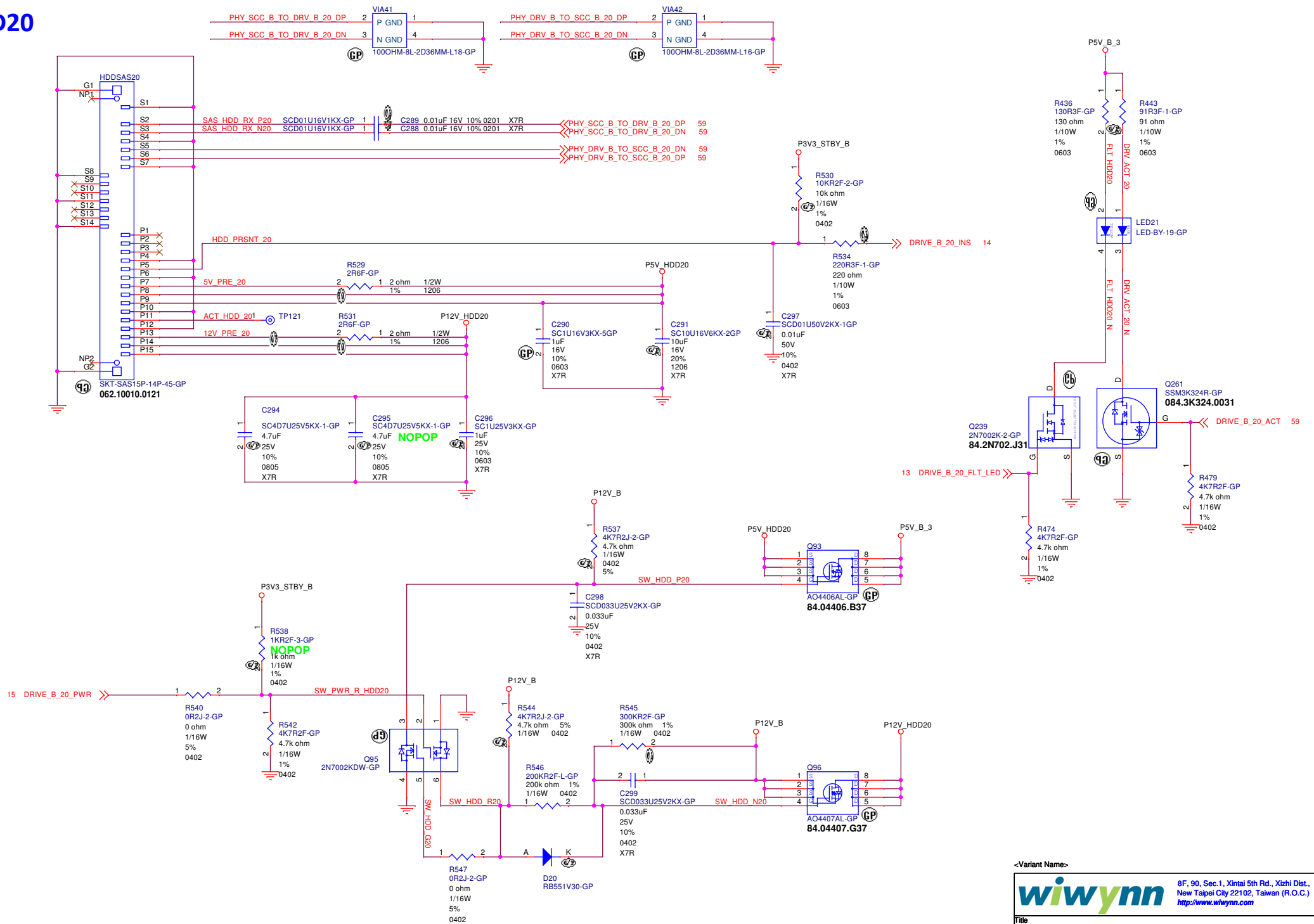
wiwynn 8F, 90, Sec.1, Xintai 5th Rd., Xizhi Dist.,
New Taipei City 22102, Taiwan (R.O.C.)
<http://www.wiwynn.com>

Title			
HDD 18			
Size	Document Number	Rev	
A3	Bryce Canyon_Rear_Drive Plane Board	1	
Date:	Wednesday, December 06, 2017	Sheet	37 of 74

HDD19



HDD20



<Variant Name>

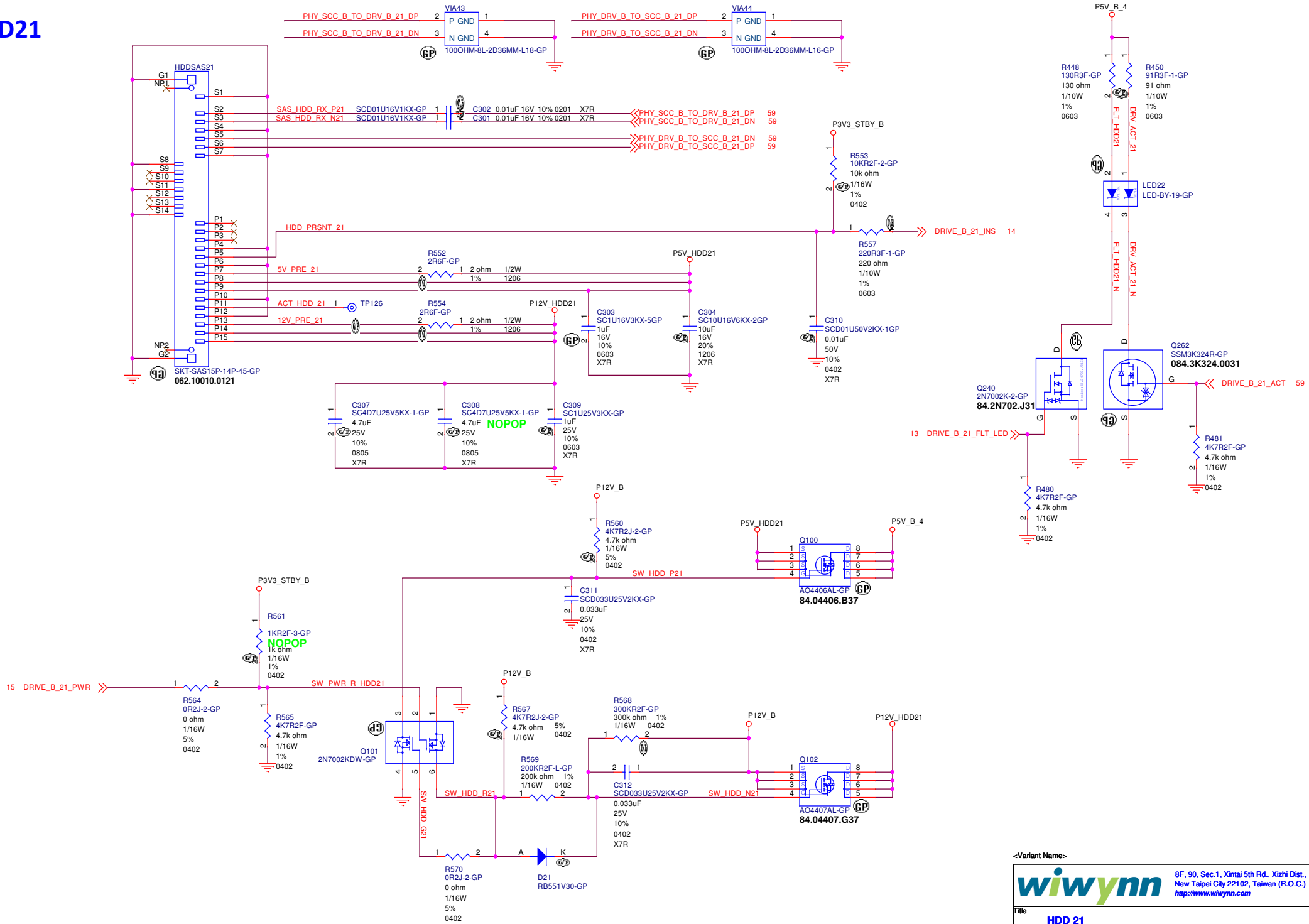
wiiwynn 8F, 90, Sec.1, Xintai 5th Rd., Xizhi Dist.,
New Taipei City 22102, Taiwan (R.O.C.)
<http://www.wiiwynn.com>

Title	HDD 20
-------	--------

Size	Document Number	Rev
A3	Bryce Canyon_Rear_Drive Plane Board	1

Date: Wednesday, December 06, 2017 Sheet 39 of 74

HDD21

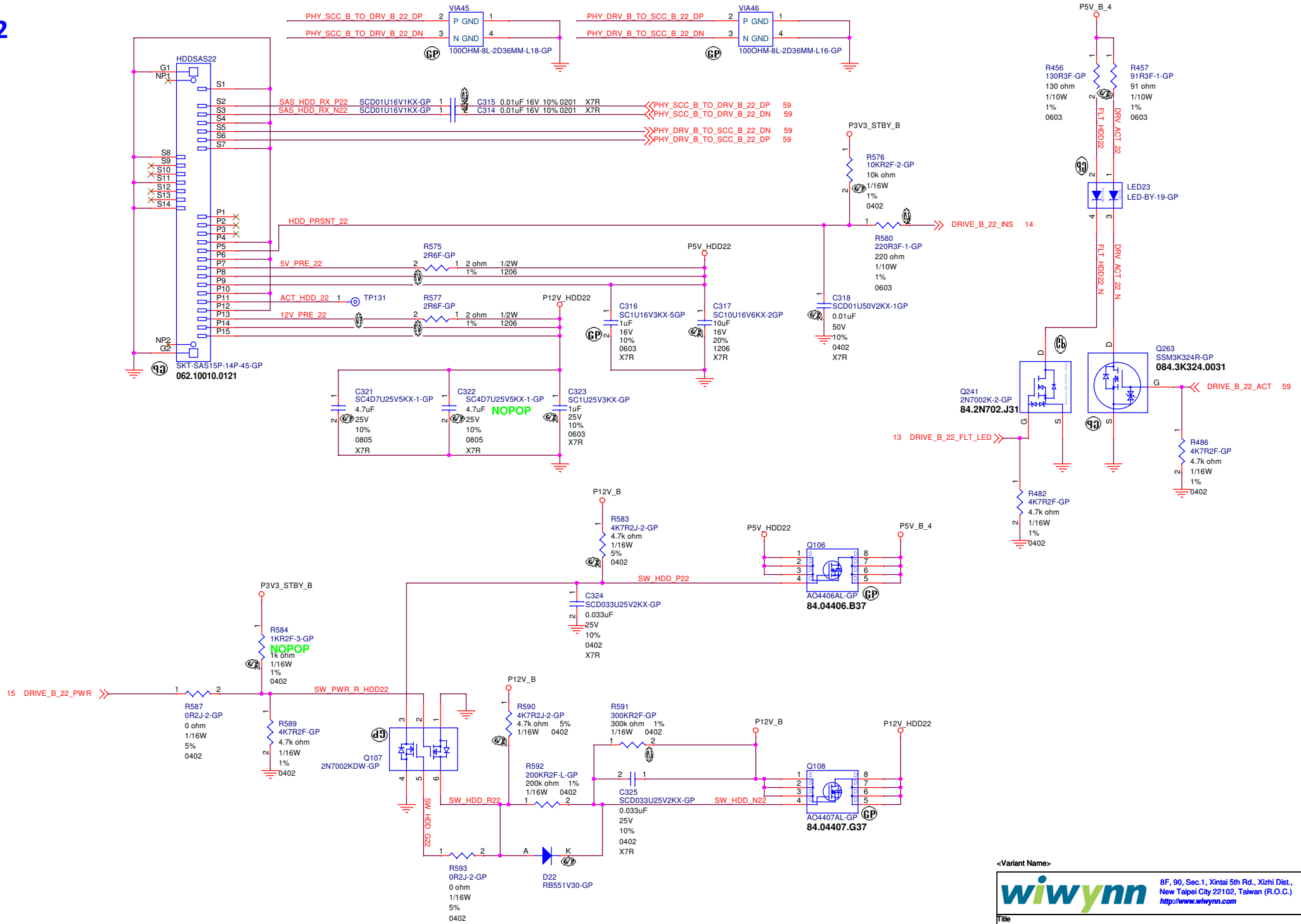


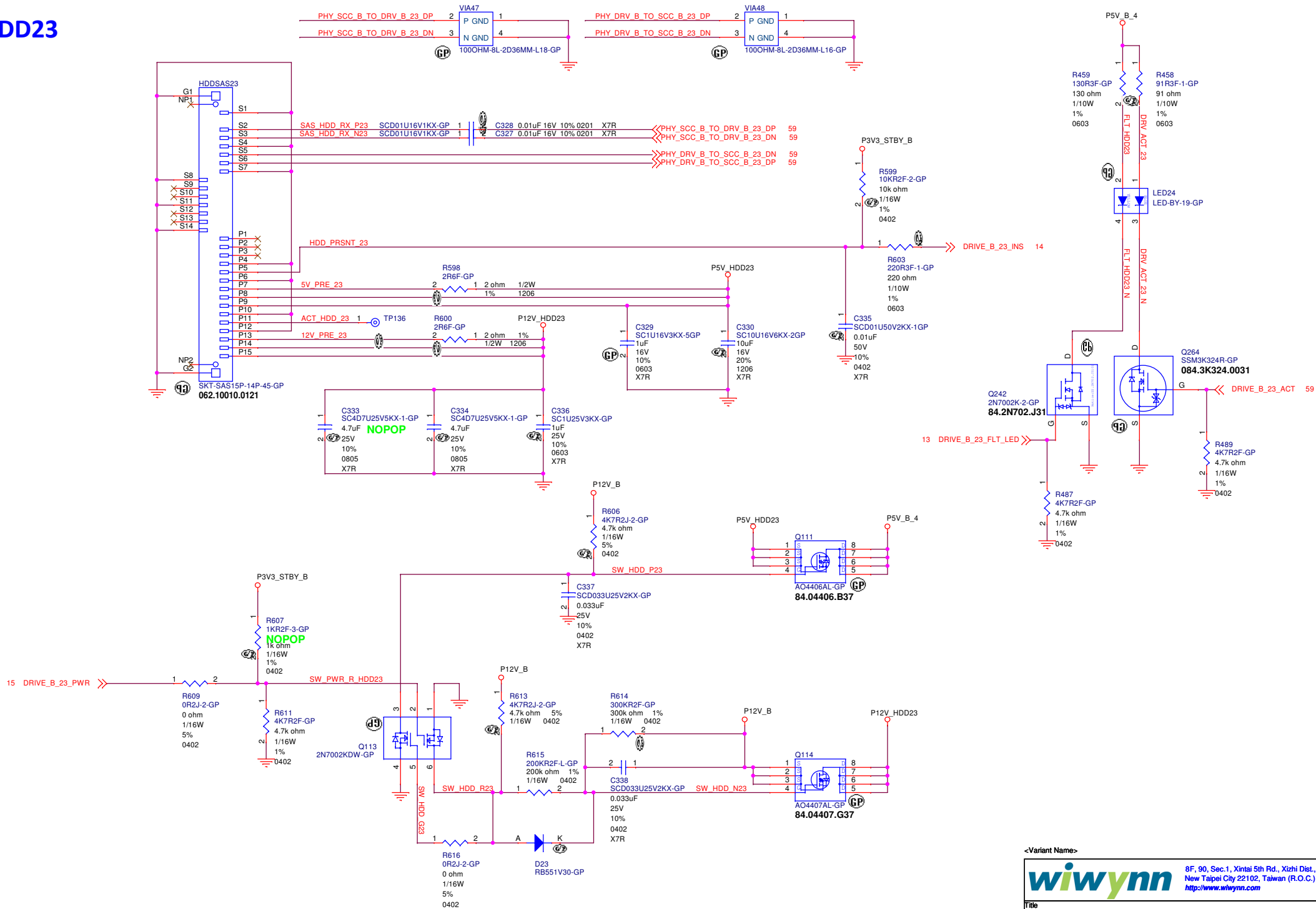
<Variant Name>

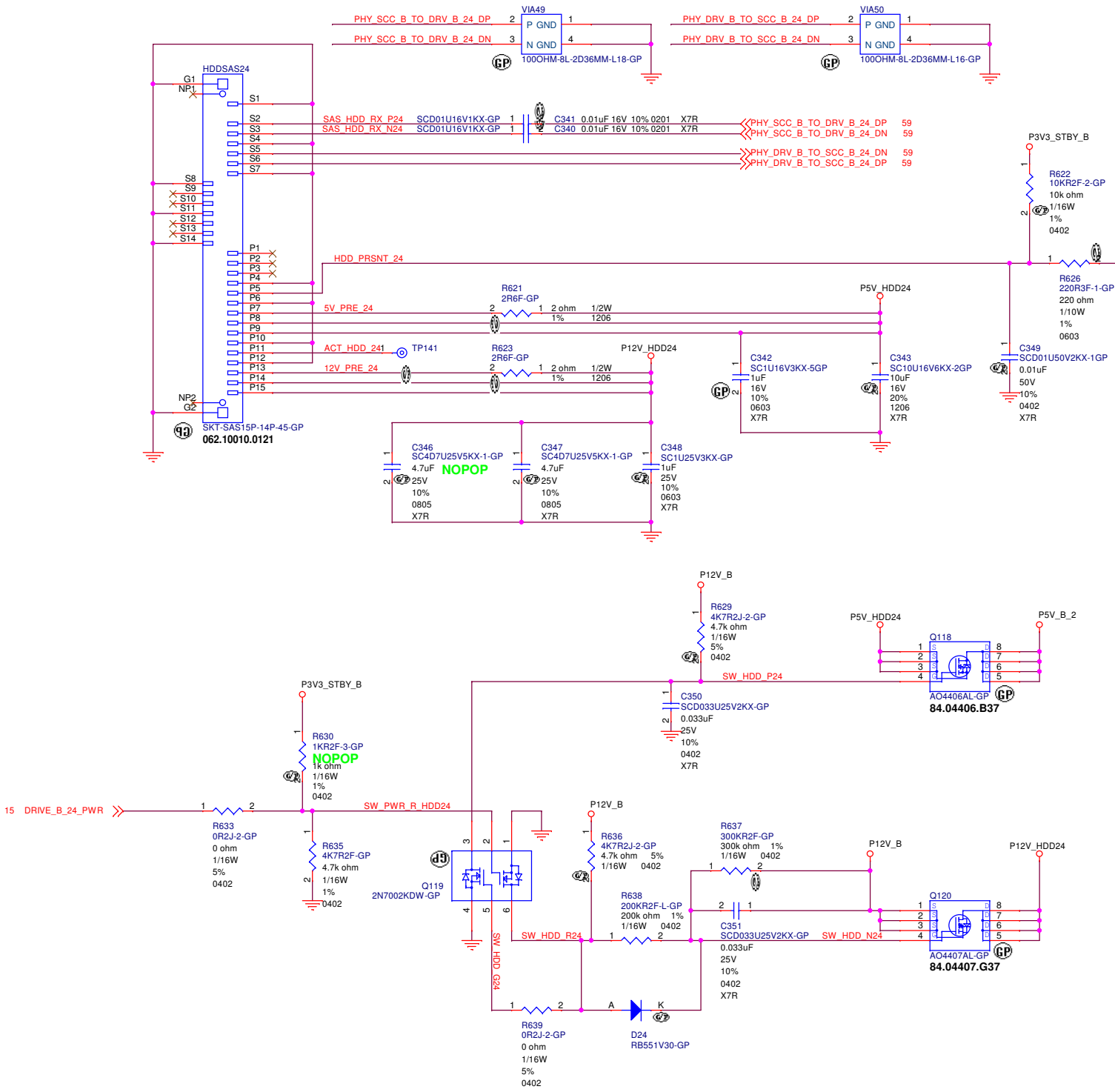


8F, 90, Sec.1, Xintai 5th Rd., Xizhi Dist.,
New Taipei City 22102, Taiwan (R.O.C.)
<http://www.wiwynn.com>

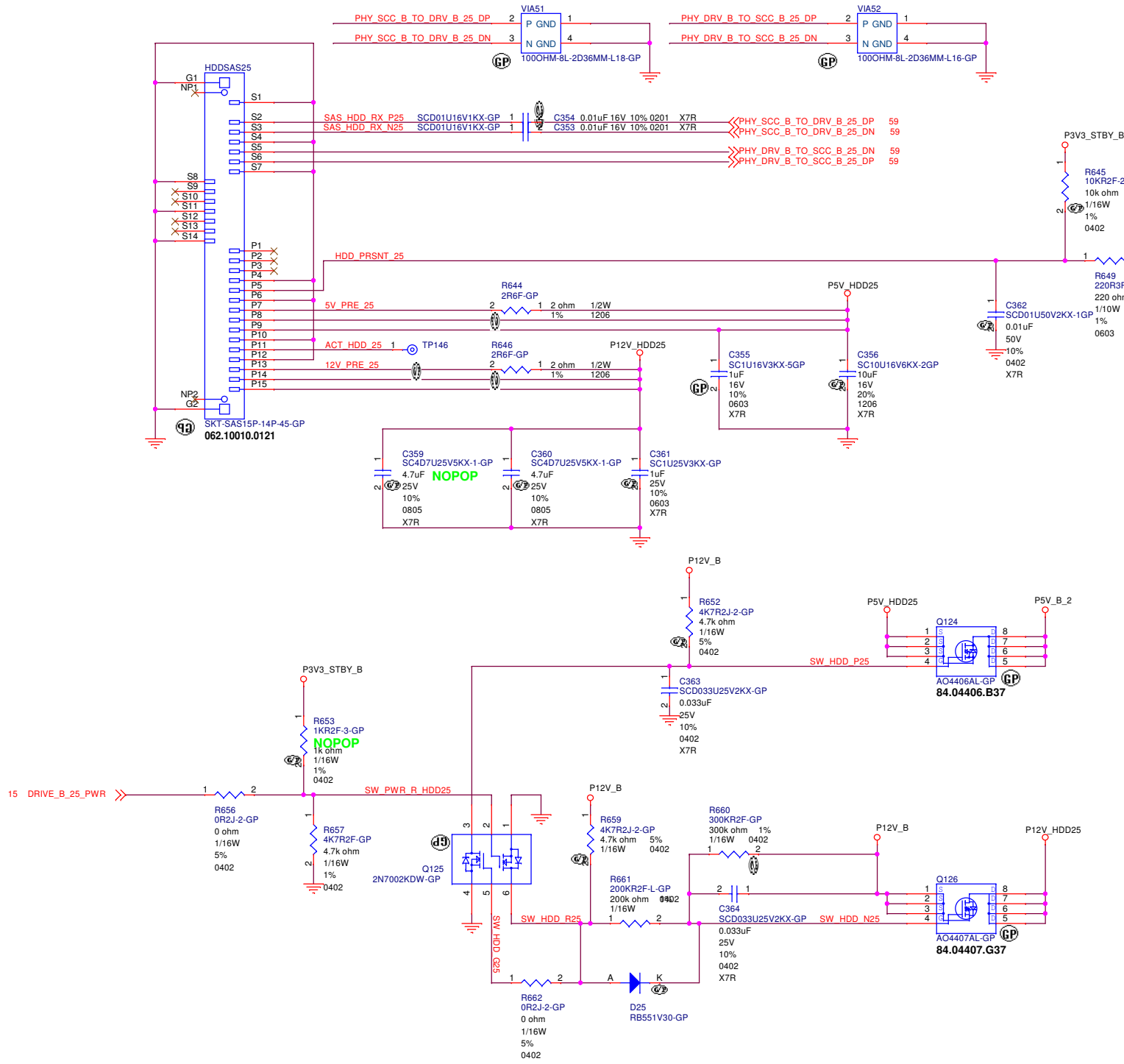
Title			
HDD 21			
Size	Document Number	Rev	
A3	Bryce Canyon_Rear_Drive Plane Board	1	
Date:	Wednesday, December 06, 2017	Sheet	40 of 74







HDD25



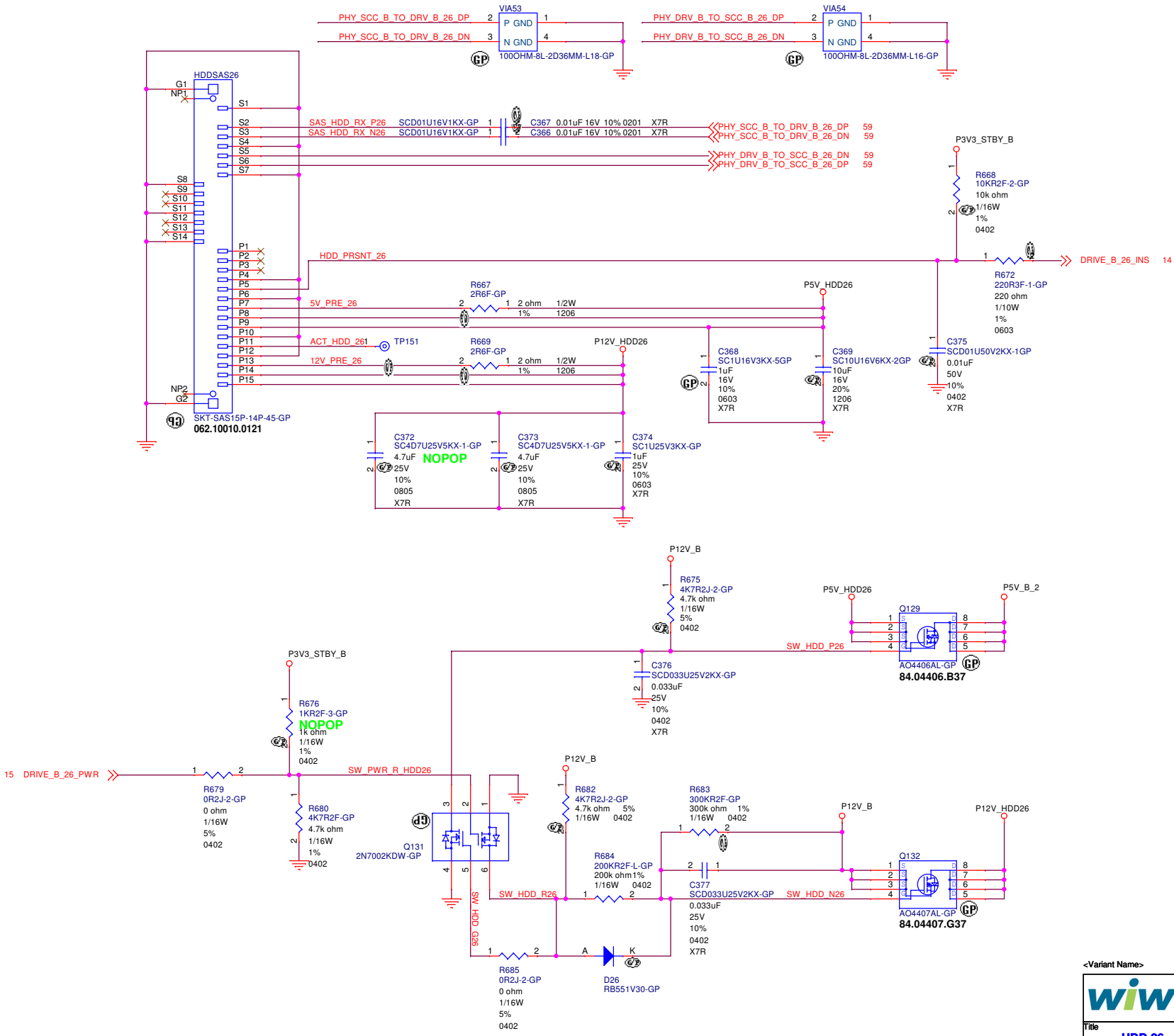
<Variant Name>



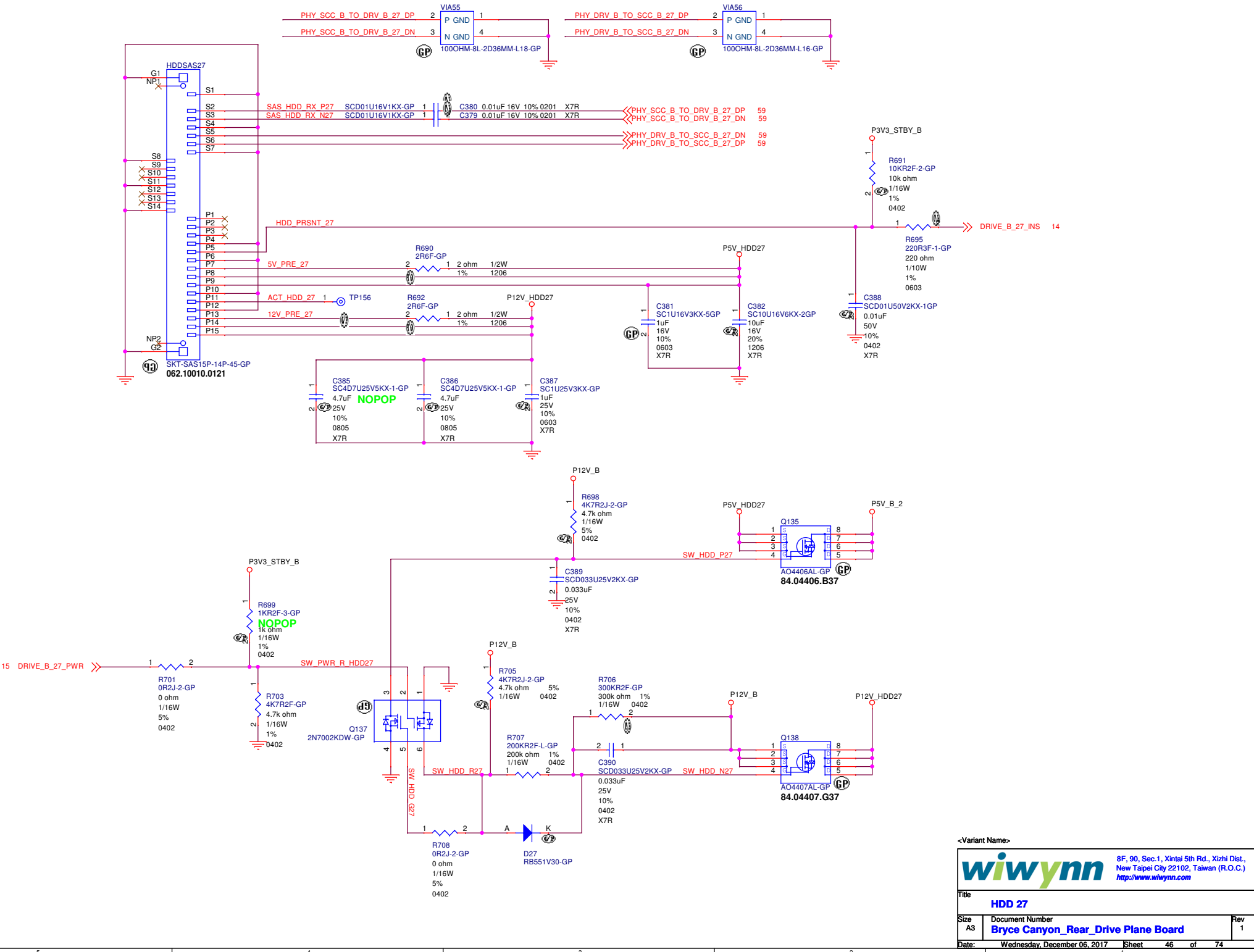
8F, 90, Sec.1, Xintai 5th Rd., Xizhi Dist.,
New Taipei City 22102, Taiwan (R.O.C.)
<http://www.wiwynn.com>

Title HDD 25		
Size A3	Document Number Bryce Canyon_Rear_Drive Plane Board	Rev 1
Date: Wednesday, December 06, 2017	Sheet 44	of 74

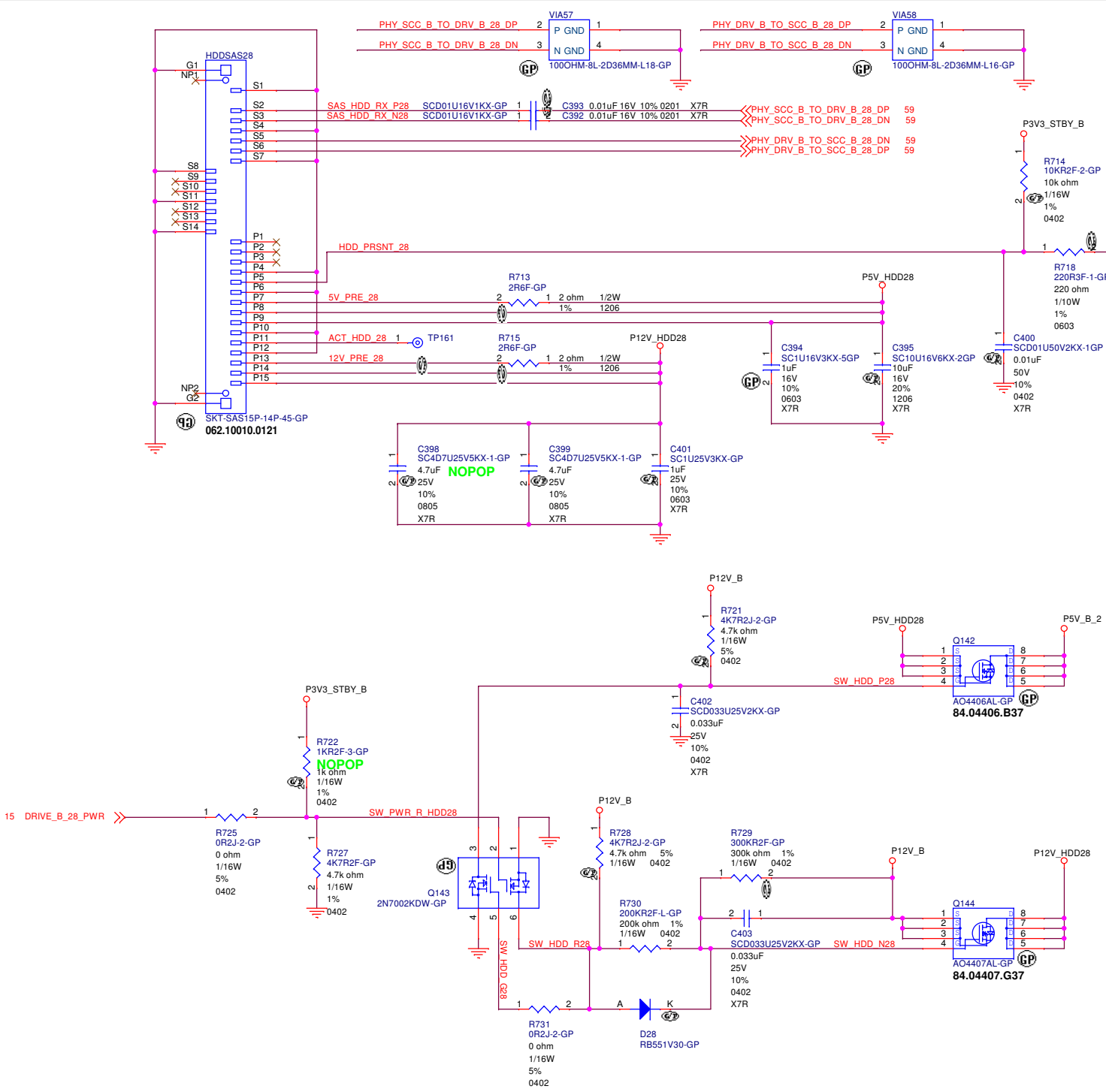
HDD26



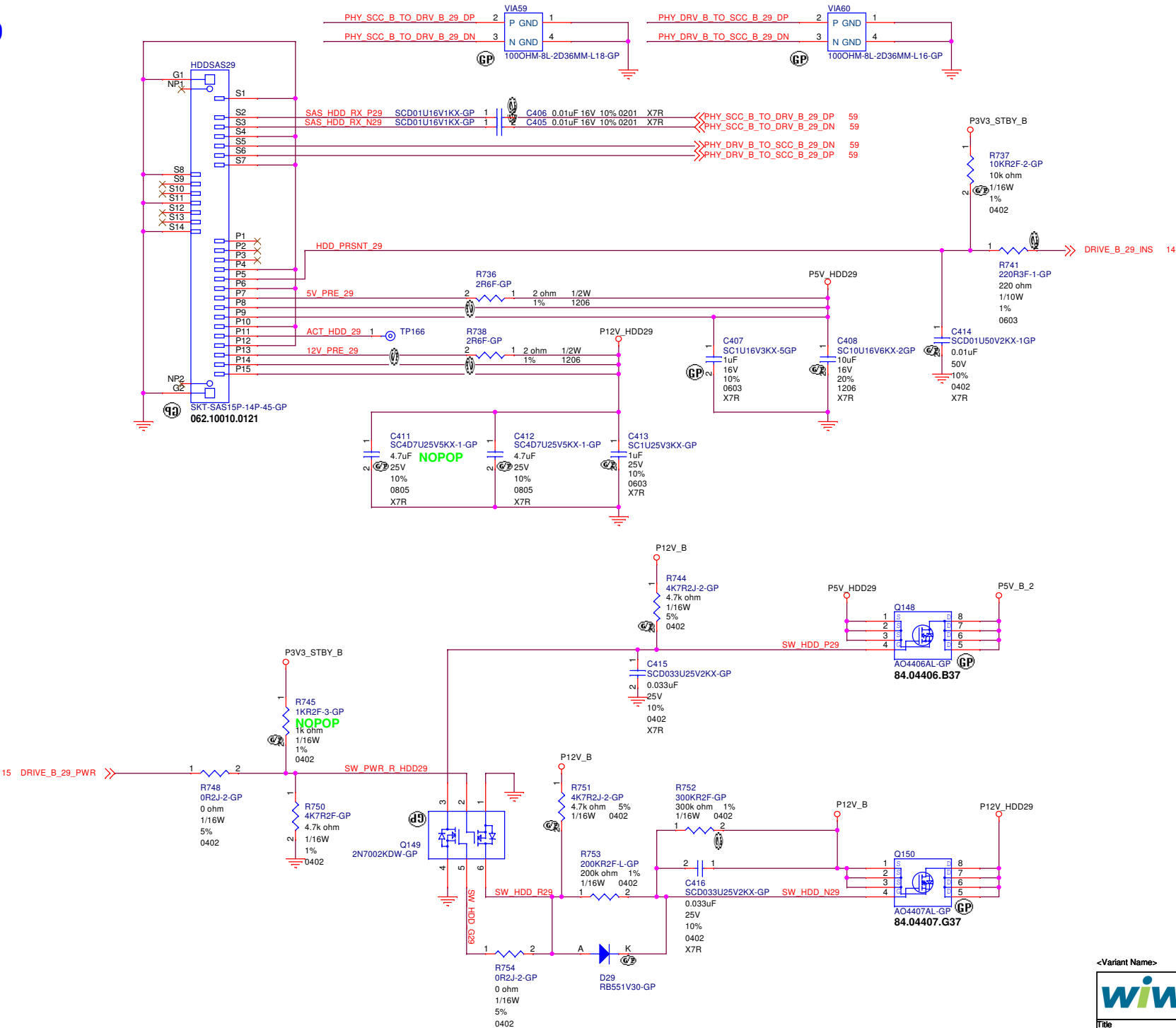
HDD27



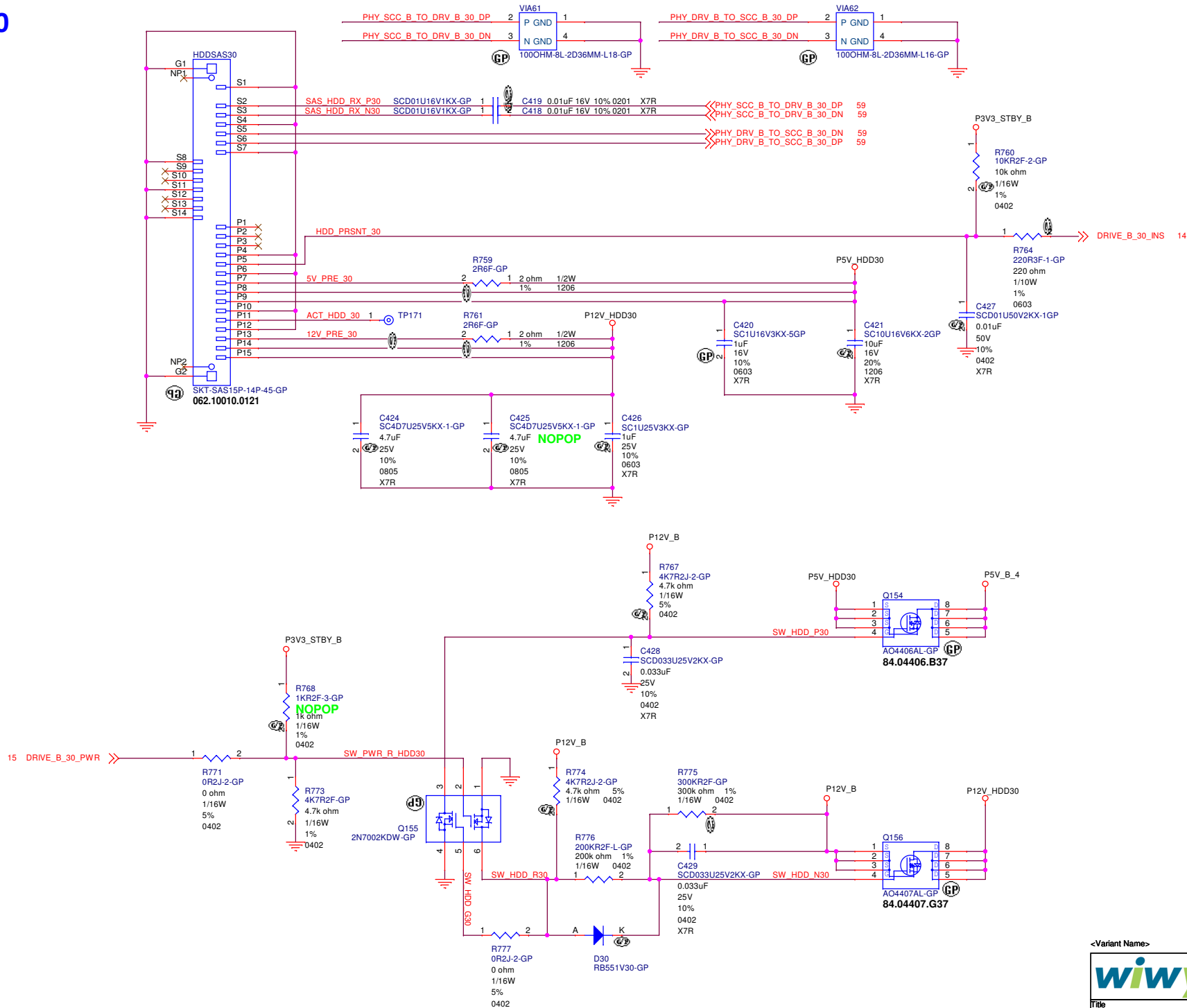
HDD28

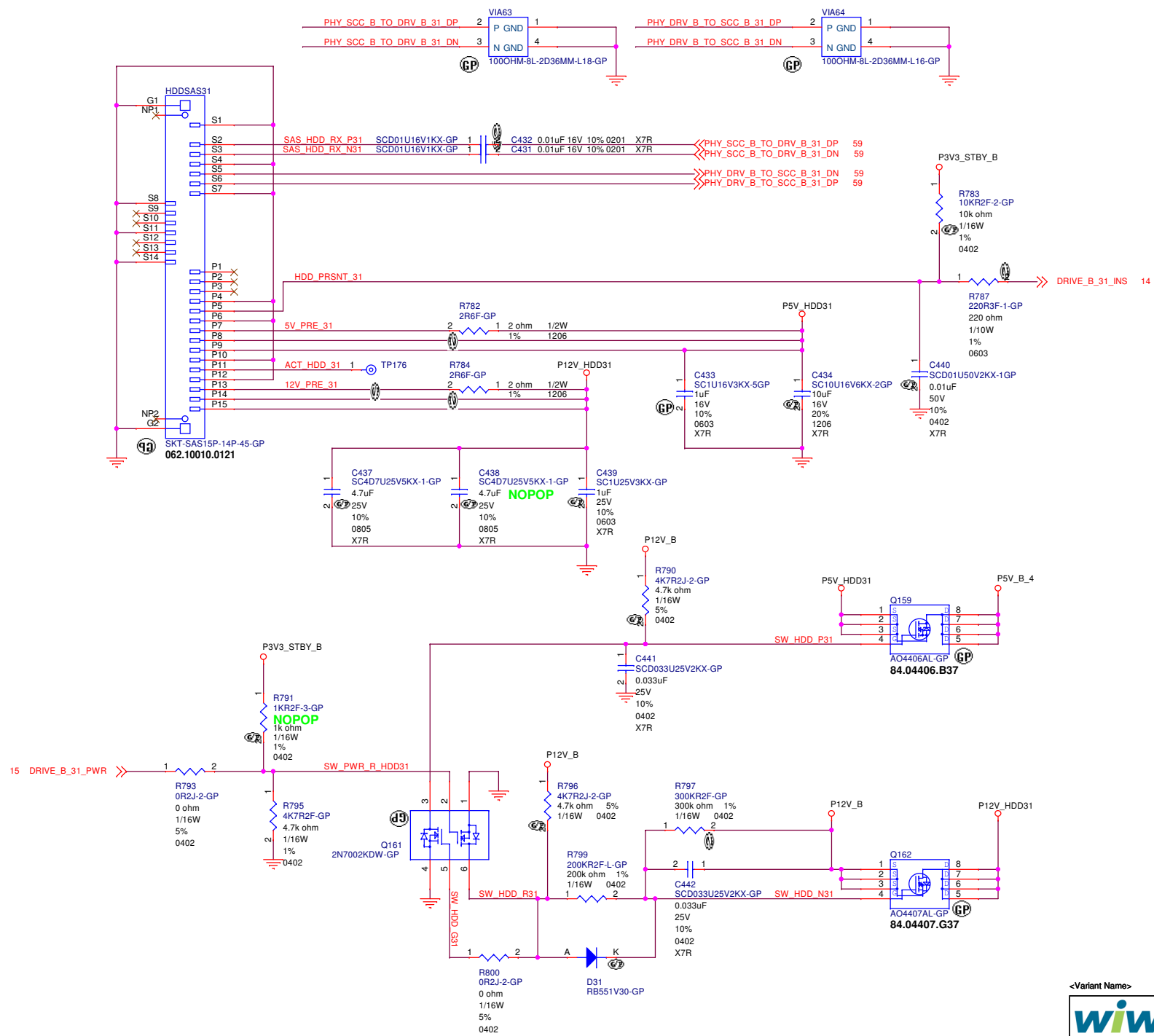


HDD29

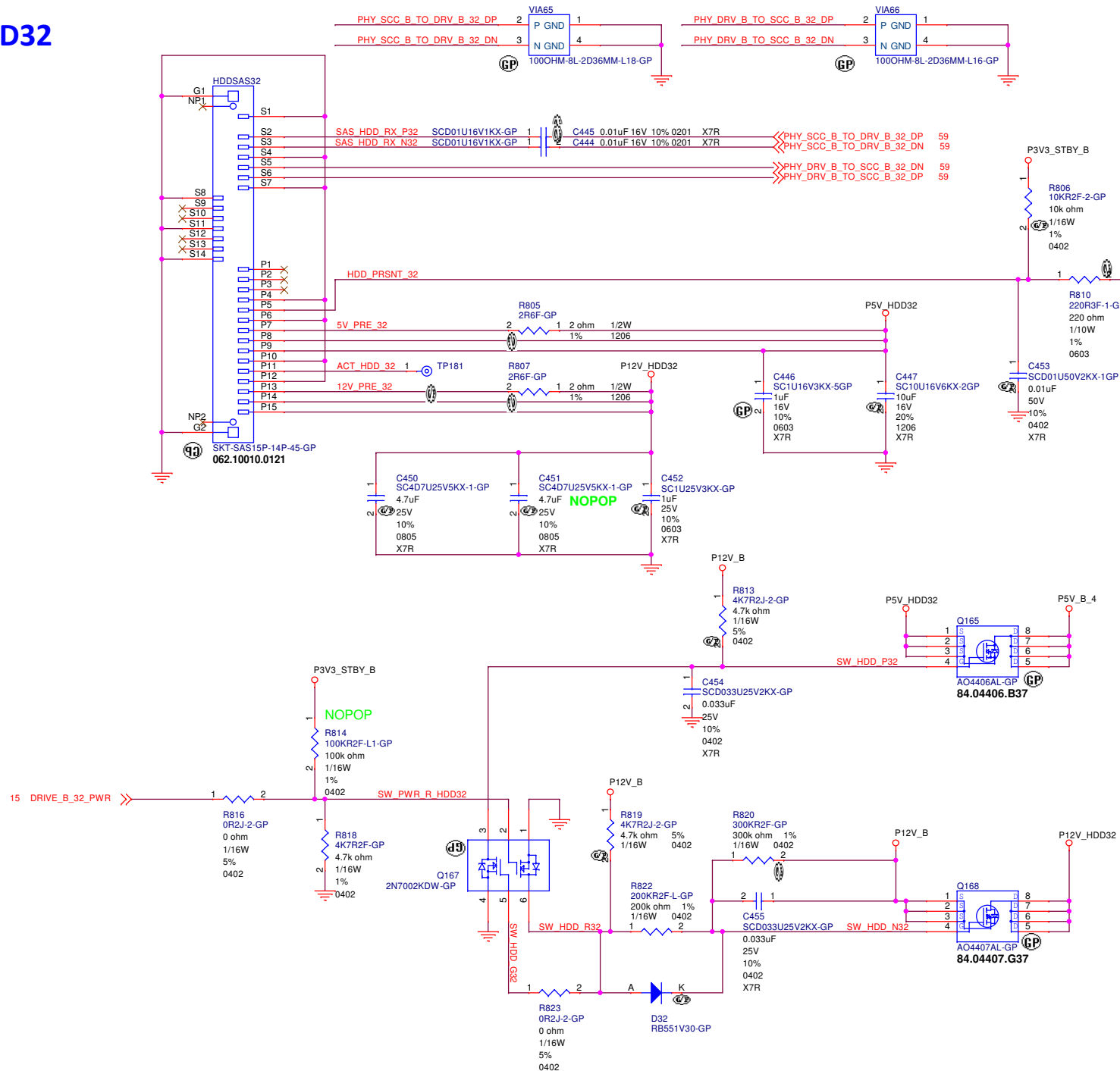


HDD30





HDD32

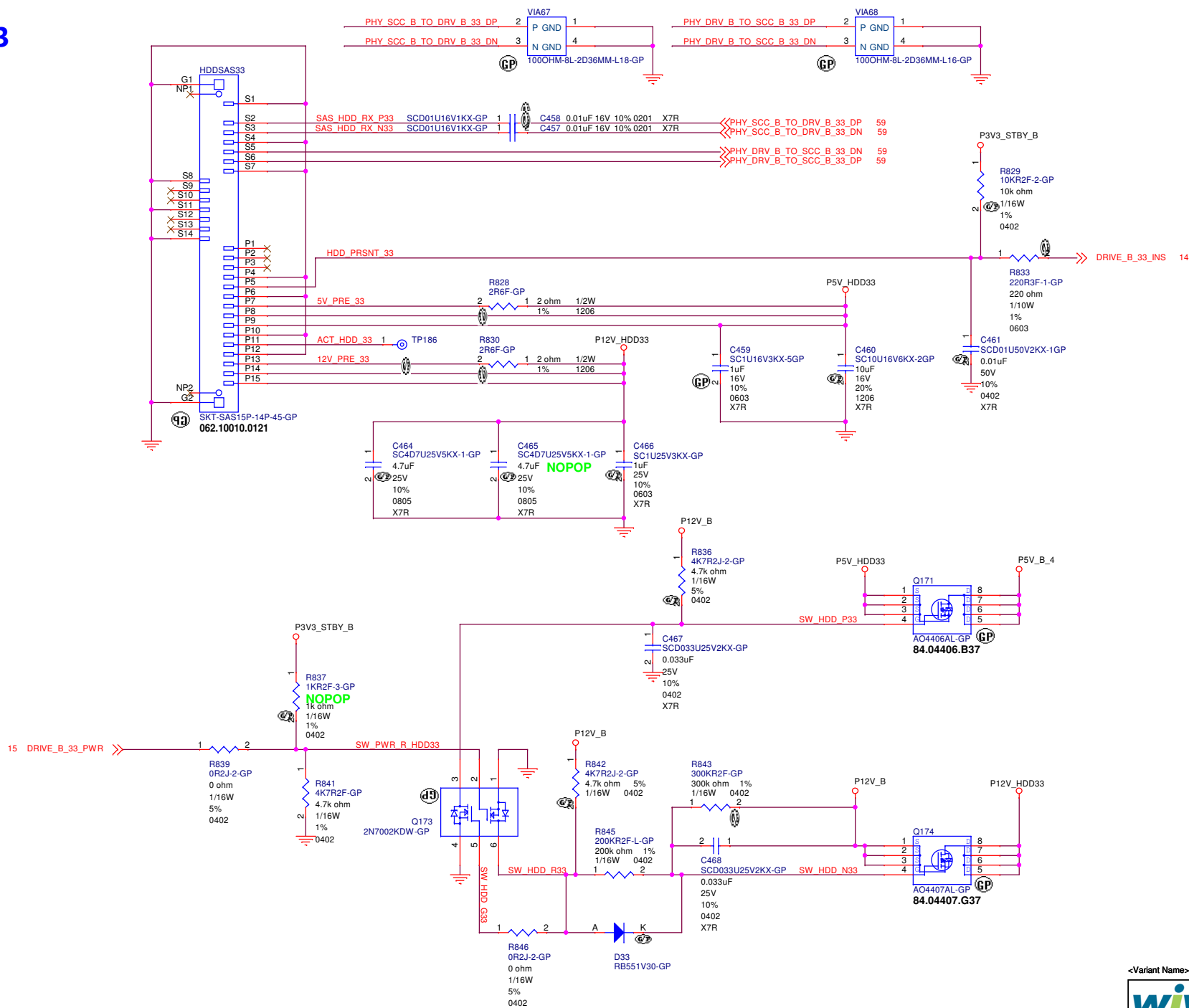


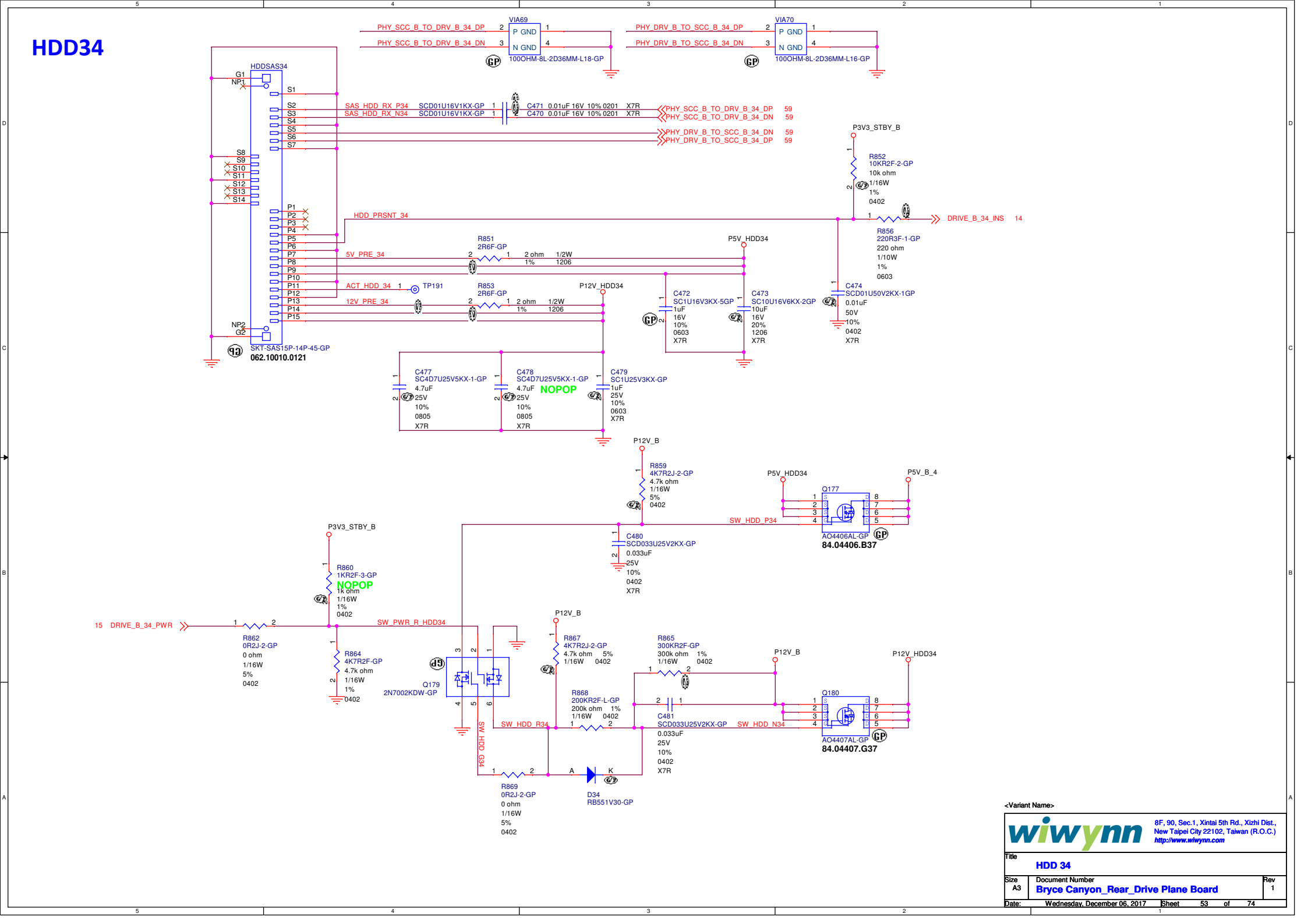
<Variant Name>

wiwynn 8F, 90, Sec.1, Xintai 5th Rd., Xizhi Dist.,
New Taipei City 22102, Taiwan (R.O.C.)
<http://www.wiwynn.com>

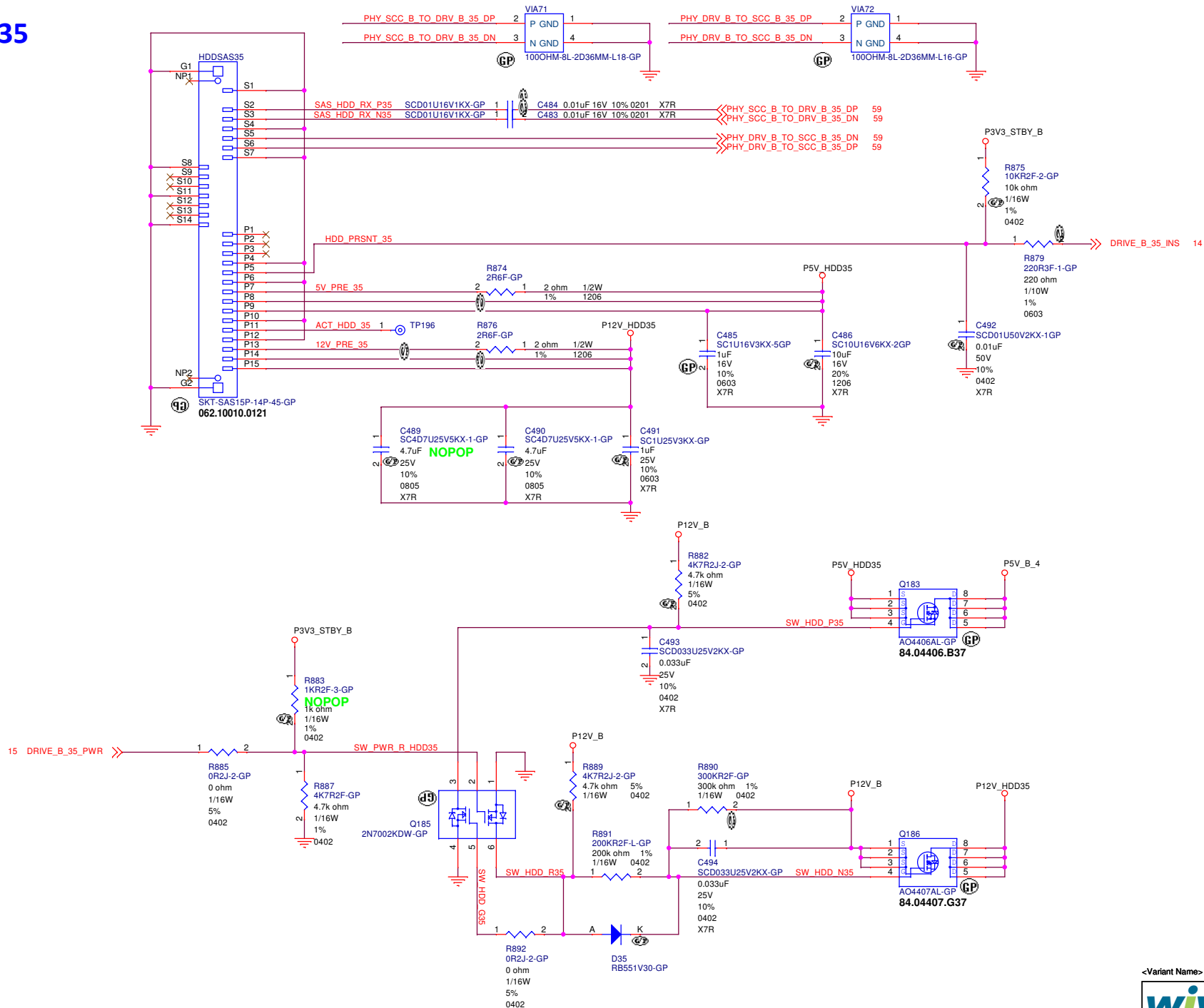
Title		HDD 32
Size	Document Number	Bryce Canyon_Rear_Drive Plane Board
A3	Rev	1
Date:	Wednesday, December 06, 2017	Sheet 51 of 74

HDD33



[illegible]

HDD35

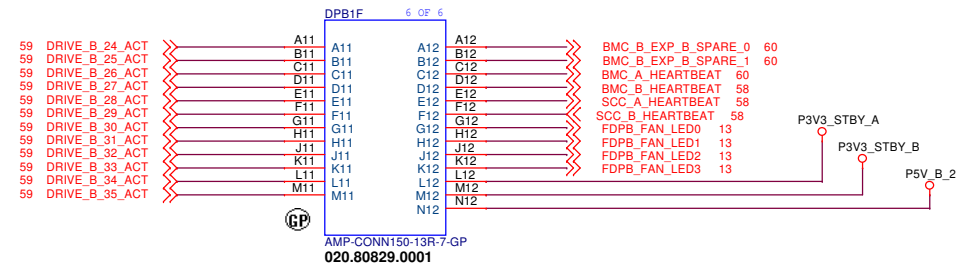
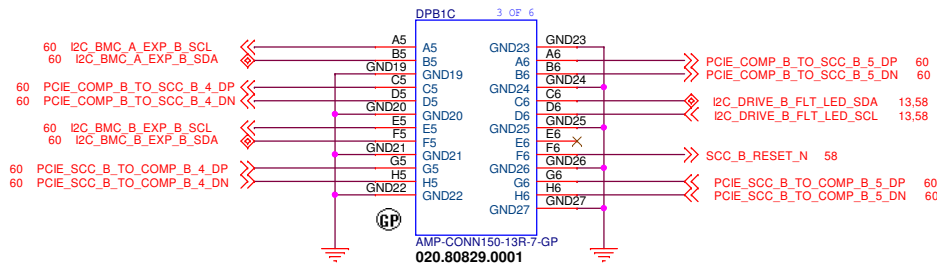
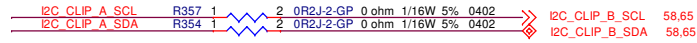
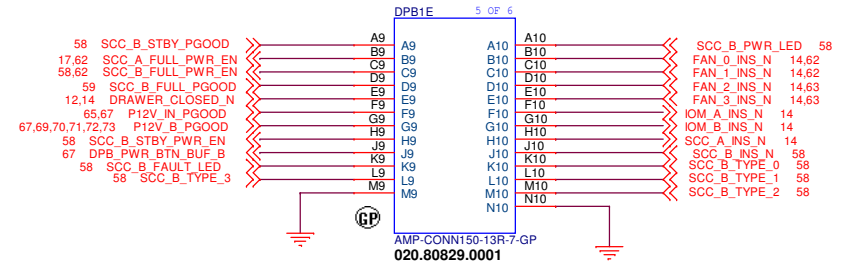
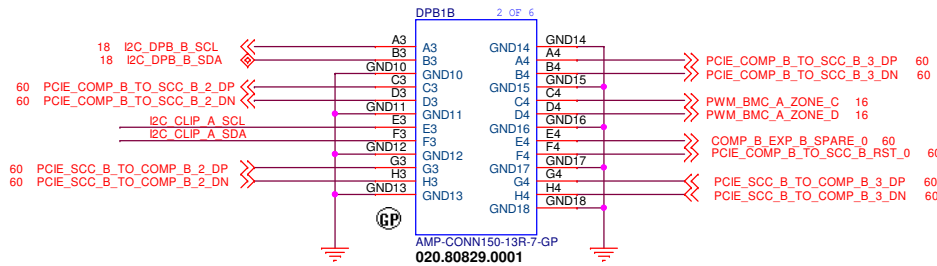
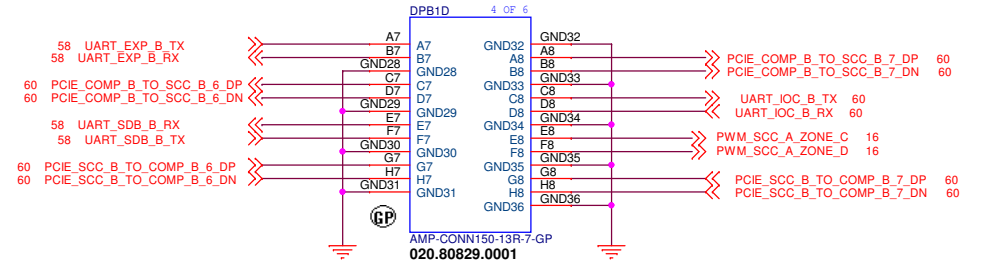
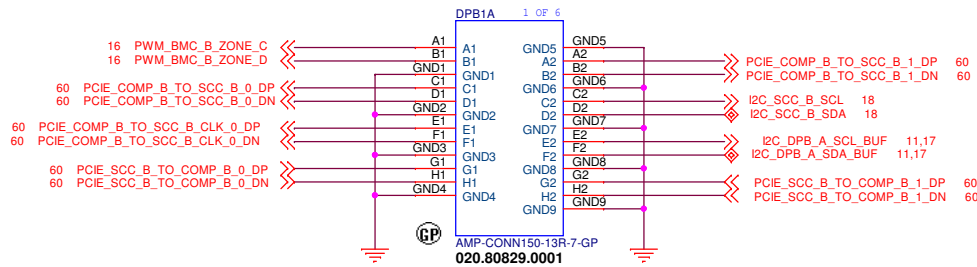


<Variant Name>

wiwynn 8F, 90, Sec.1, Xintai 5th Rd., Xizhi Dist.,
New Taipei City 22102, Taiwan (R.O.C.)
<http://www.wiwynn.com>

Title			HDD 35
Size			Document Number
A3			Bryce Canyon_Rear_Drive Plane Board
Date:			Wednesday, December 06, 2017
Sheet			54 of 74
Rev			1

DPB to DPB Signal CONN

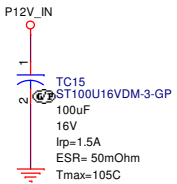
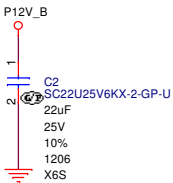
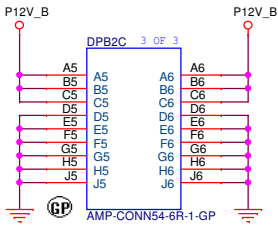
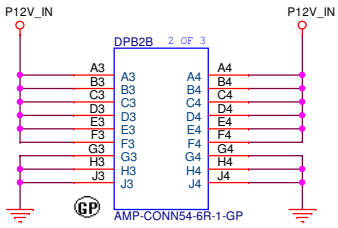
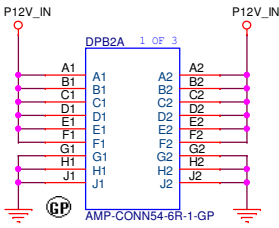


<Core Design>

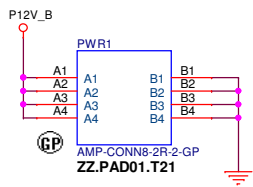
wiwynn 8F, 90, Sec.1, Xintai 5th Rd., Xizhi Dist.,
 New Taipei City 22102, Taiwan (R.O.C.)
<http://www.wiwynn.com>

Title		
DPB_TO_DPB_SIGNAL_CONN		
Size	Document Number	Rev
A3	Bryce Canyon_Rear_Drive_Plane_Board	1
Date:	Wednesday, December 06, 2017	Sheet 55 of 74

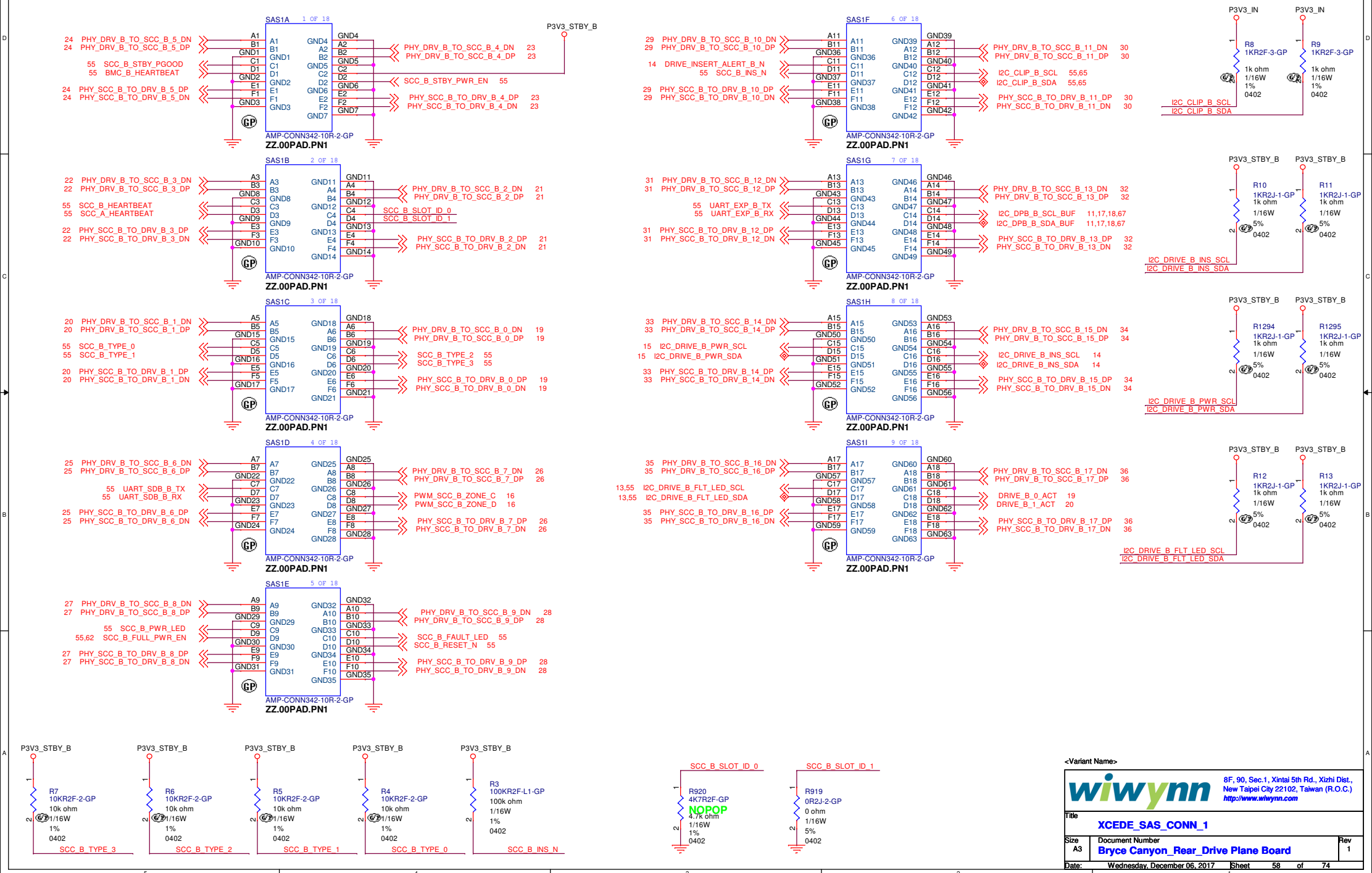
DPB to DPB PWR CONN



Storage Controller Card POWER CONN



Storage Controller Card SAS CONN



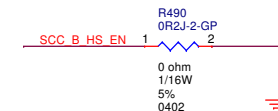
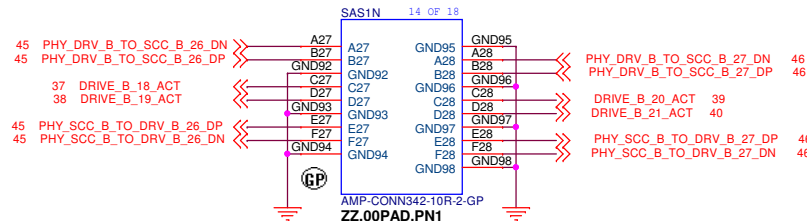
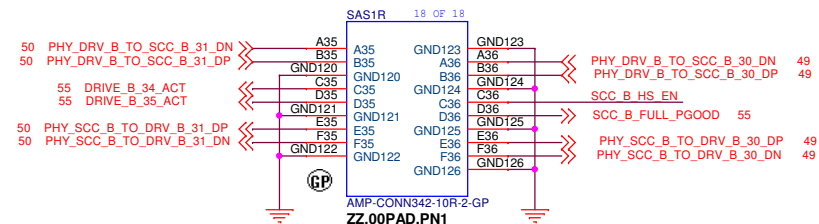
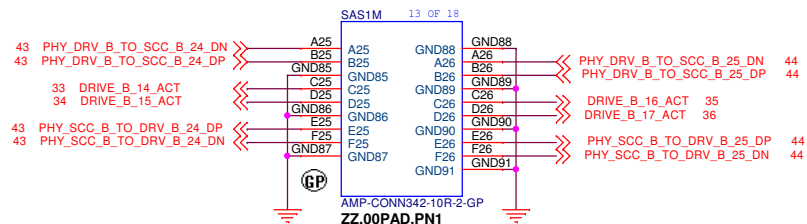
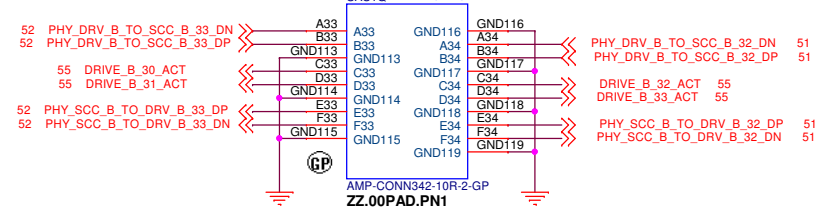
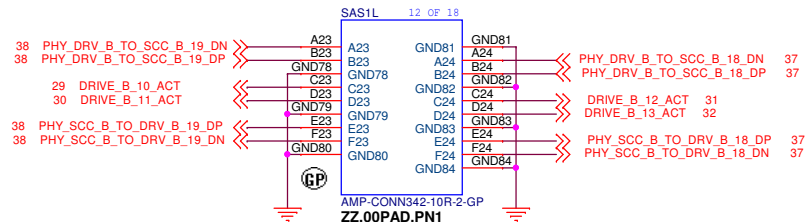
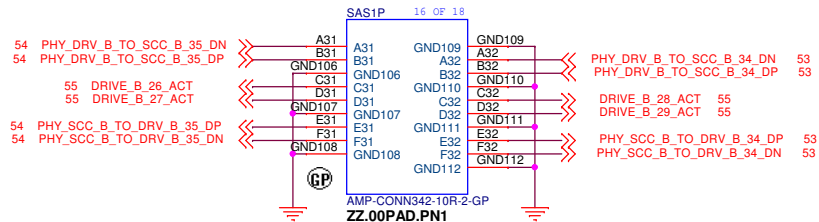
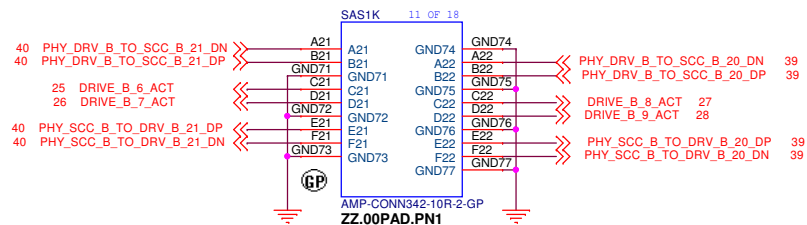
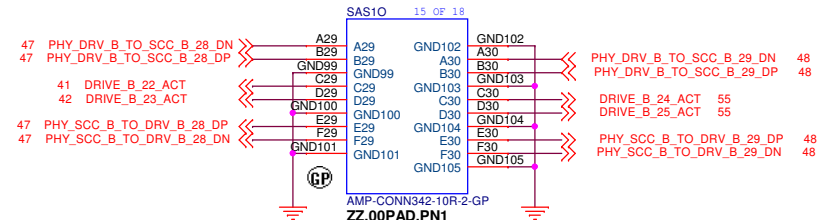
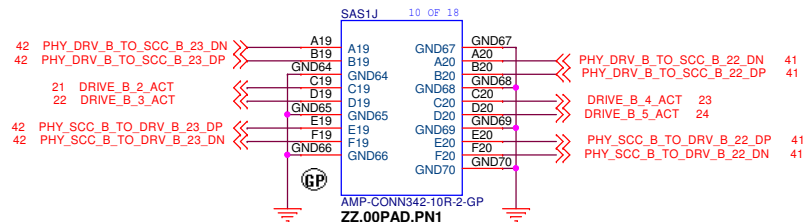
<Variant Name>

wiwynn

8F, 90, Sec.1, Xintai 5th Rd., Xizhi Dist.,
New Taipei City 22102, Taiwan (R.O.C.)
<http://www.wiwynn.com>

Title		XCEDS_SAS_CONN_1	
Size	A3	Document Number	Bryce Canyon_Rear_Drive Plane Board
Date:	Wednesday, December 06, 2017	Sheet	58 of 74
Rev		1	

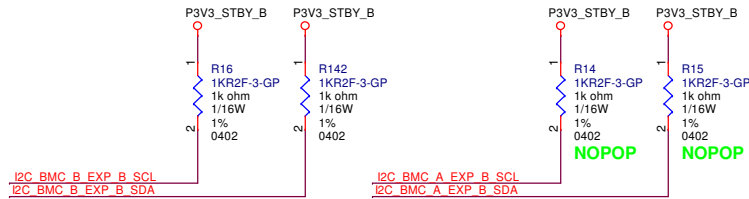
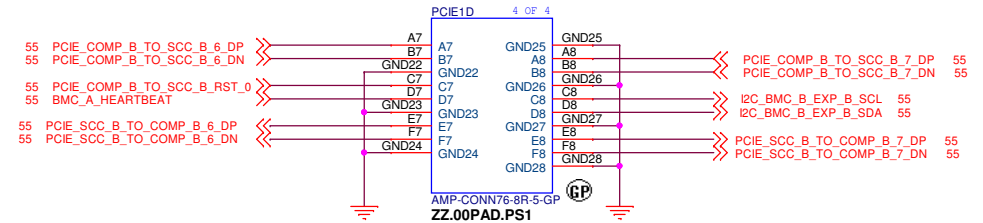
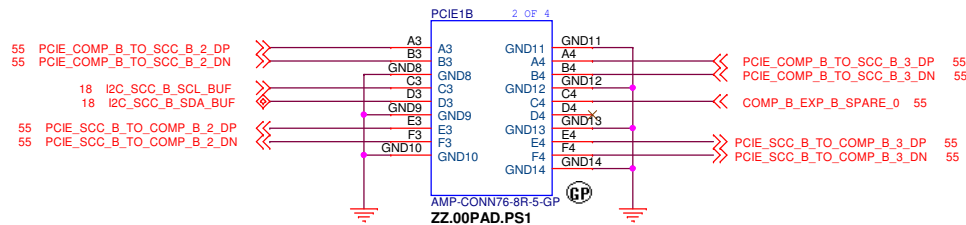
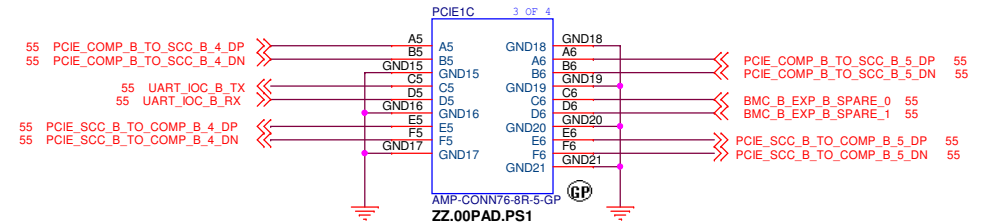
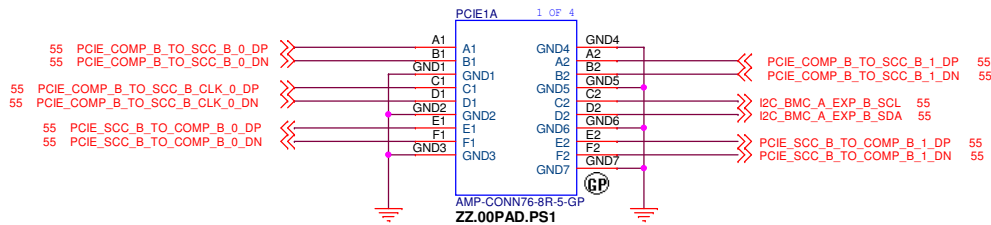
Storage Controller Card SAS CONN



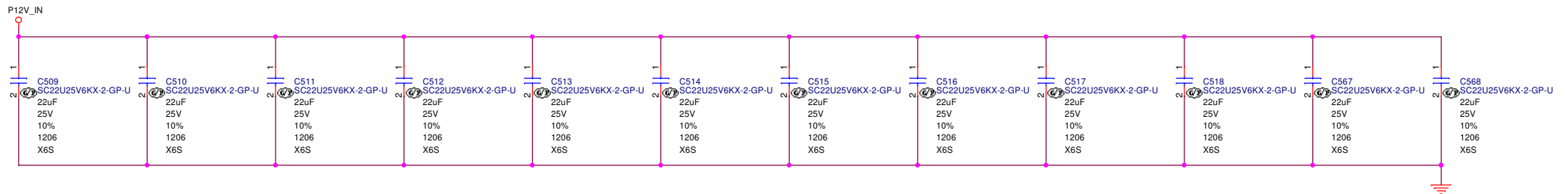
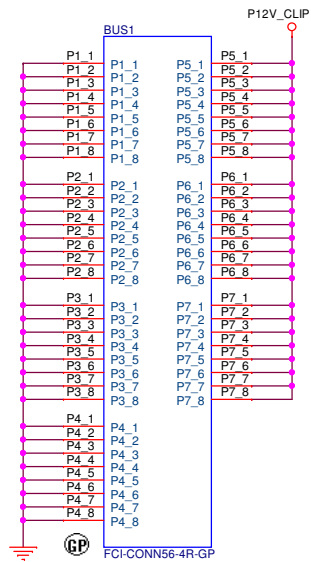
<Core Design>

wiwynn		8F, 90, Sec.1, Xintai 5th Rd., Xizhi Dist., New Taipei City 22102, Taiwan (R.O.C.) http://www.wiwynn.com
Title		
XCEDS_SAS_CONN_2		
Size	Document Number	Rev
A3	Bryce Canyon_Rear_Drive Plane Board	1
Date:	Wednesday, December 06, 2017	Sheet 59 of 74

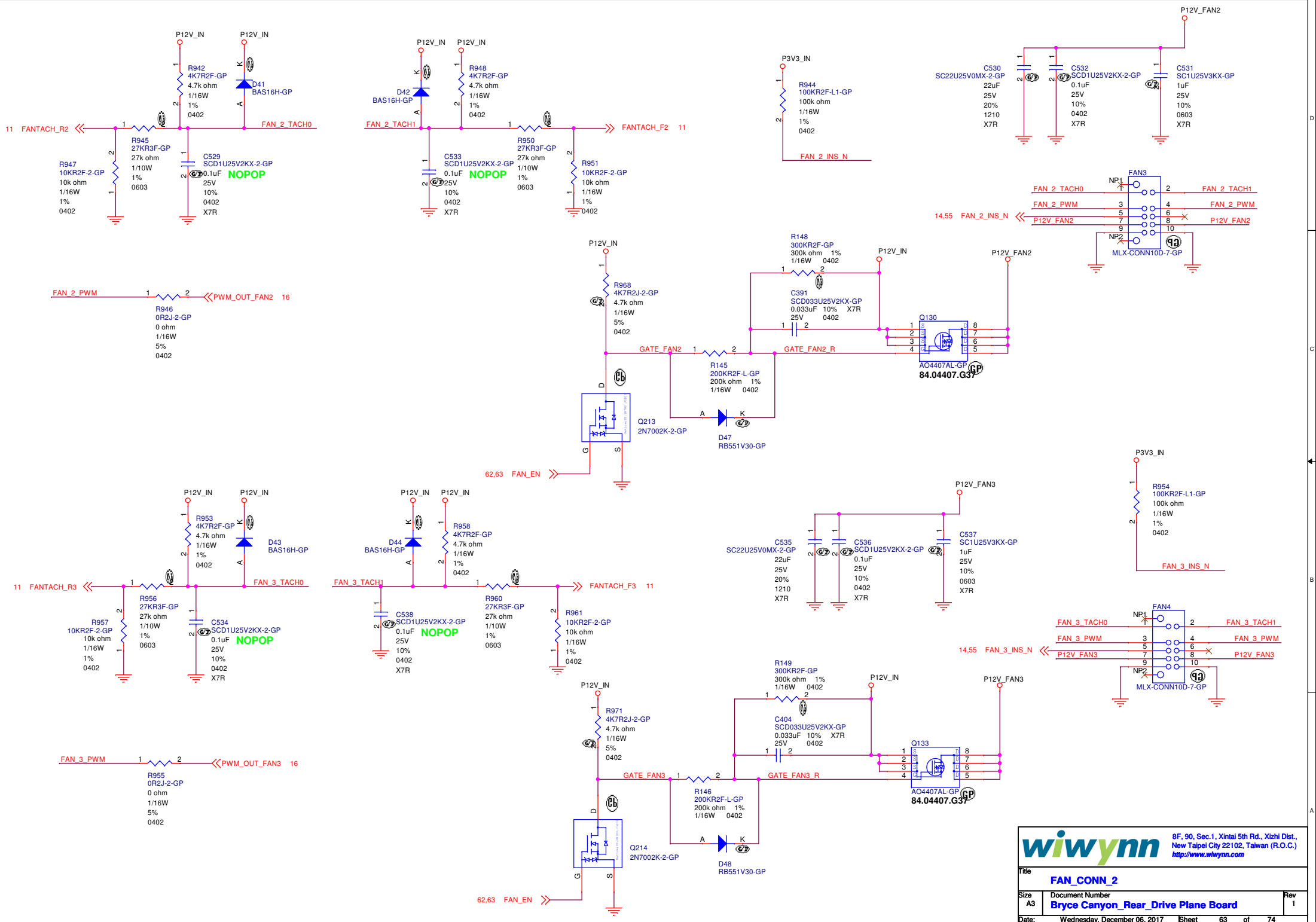
Storage Controller Card PCIe CONN



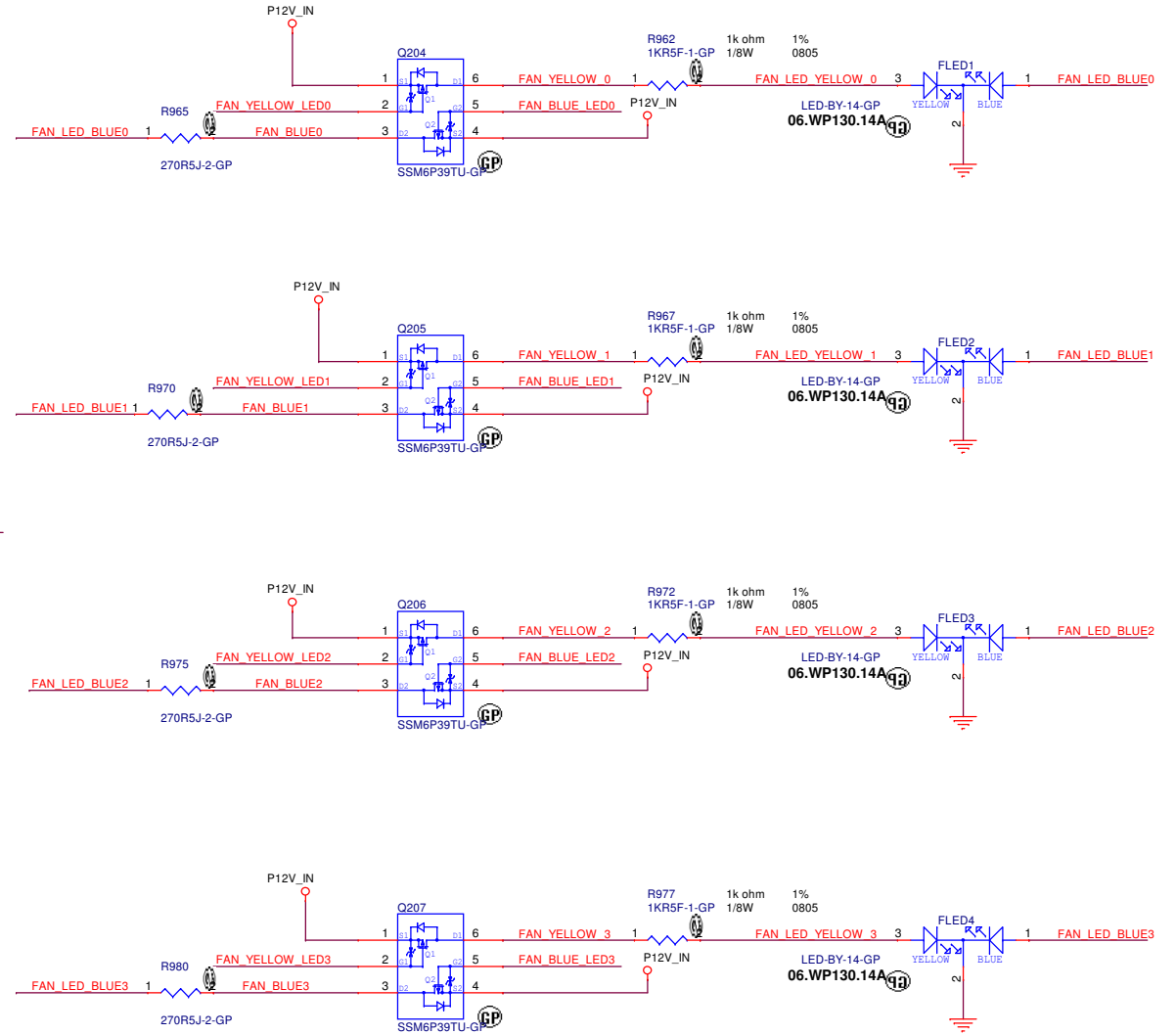
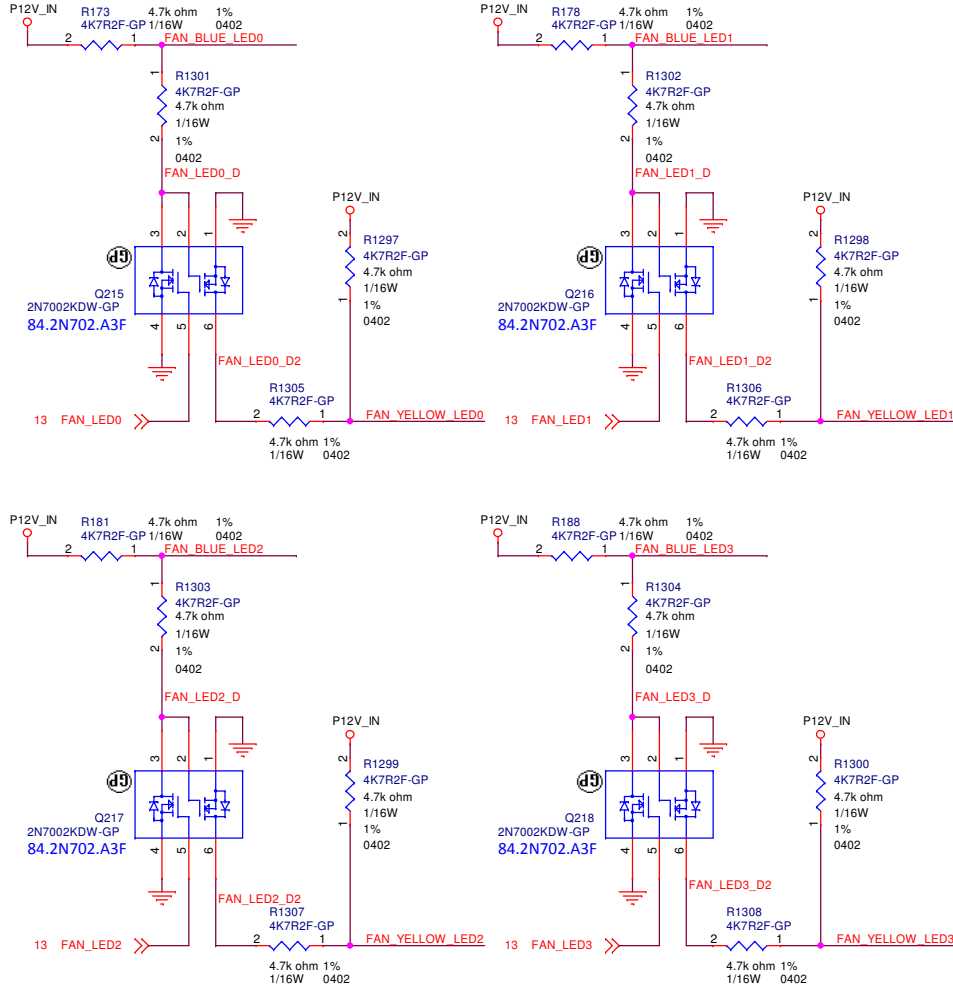
BUS BAR CONN.







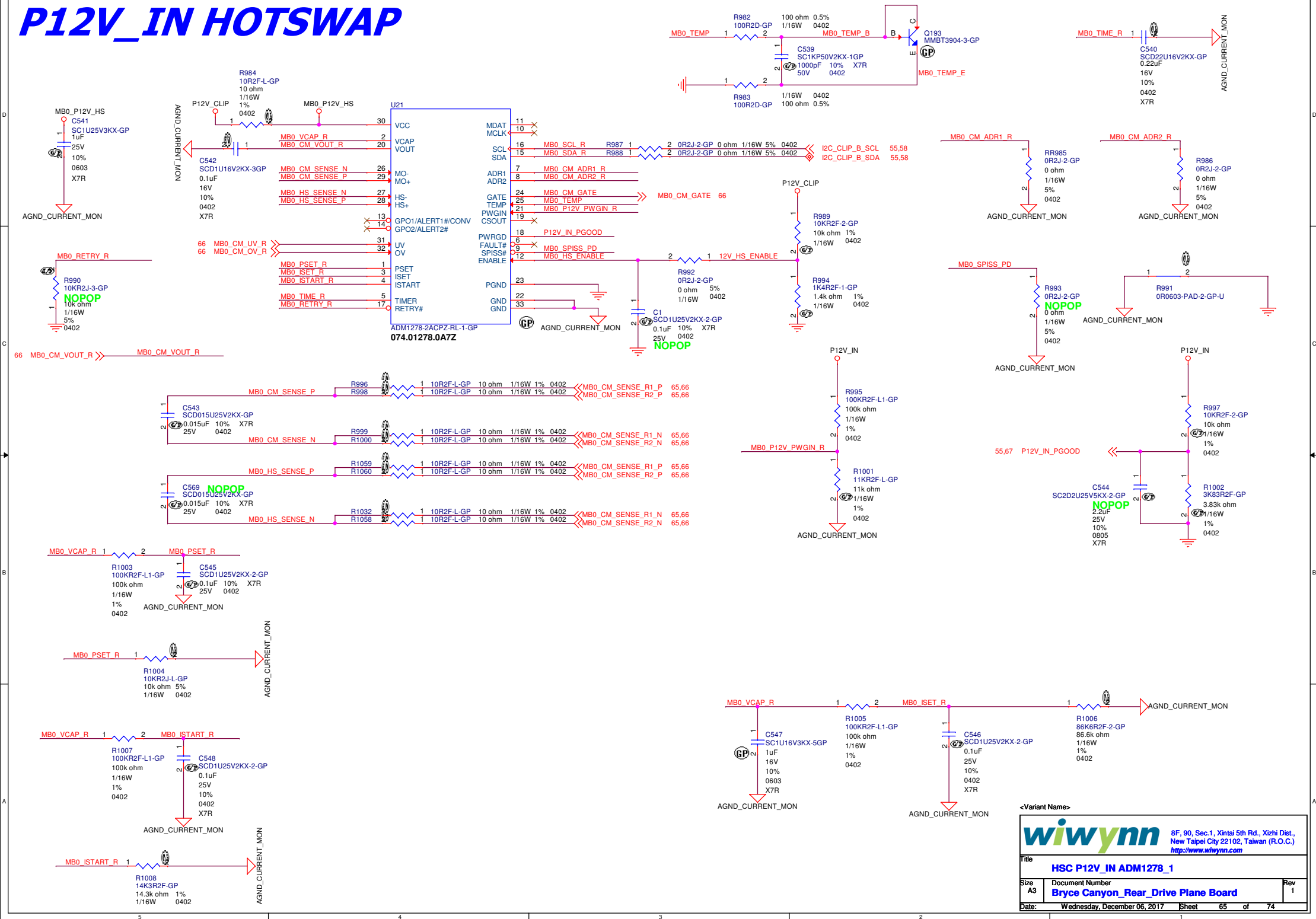
FAN LED



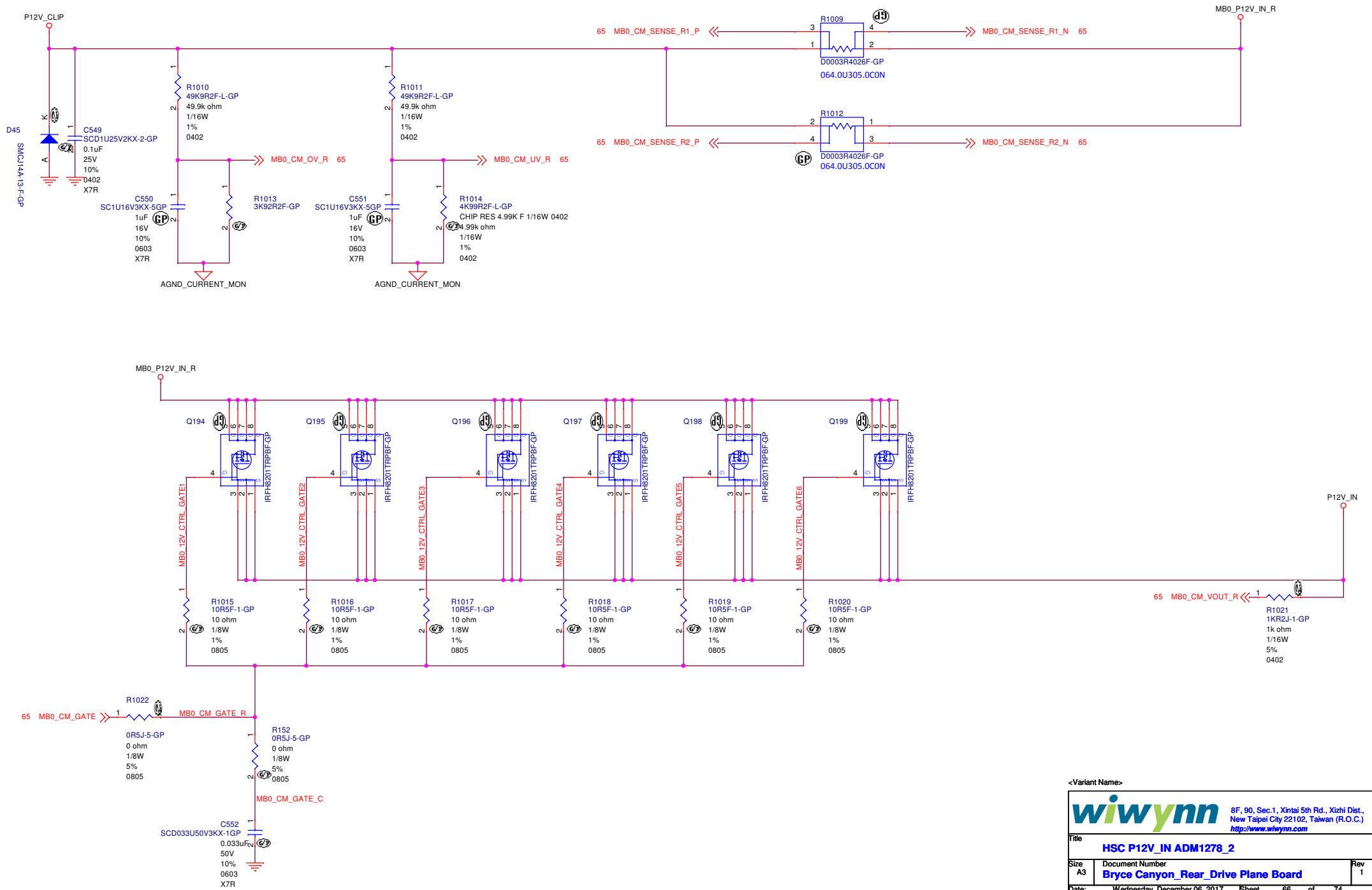
<Variant Name>

wiwynn		8F, 90, Sec.1, Xintai 5th Rd., Xizhi Dist., New Taipei City 22102, Taiwan (R.O.C.) http://www.wiwynn.com	
Title		HDD POWER CONTROL_2	
Size	Document Number	Rev	
A3	Bryce Canyon_Rear Drive Plane Board	1	
Date:	Wednesday, December 06, 2017	Sheet	64 of 74

P12V_IN HOTSWAP



P12V_IN HOTSWAP



<Variant Name>

wiwynn 8F, 90, Sec.1, Xintai 5th Rd., Xizhi Dist.,
New Taipei City 22102, Taiwan (R.O.C.)
<http://www.wiwynn.com>

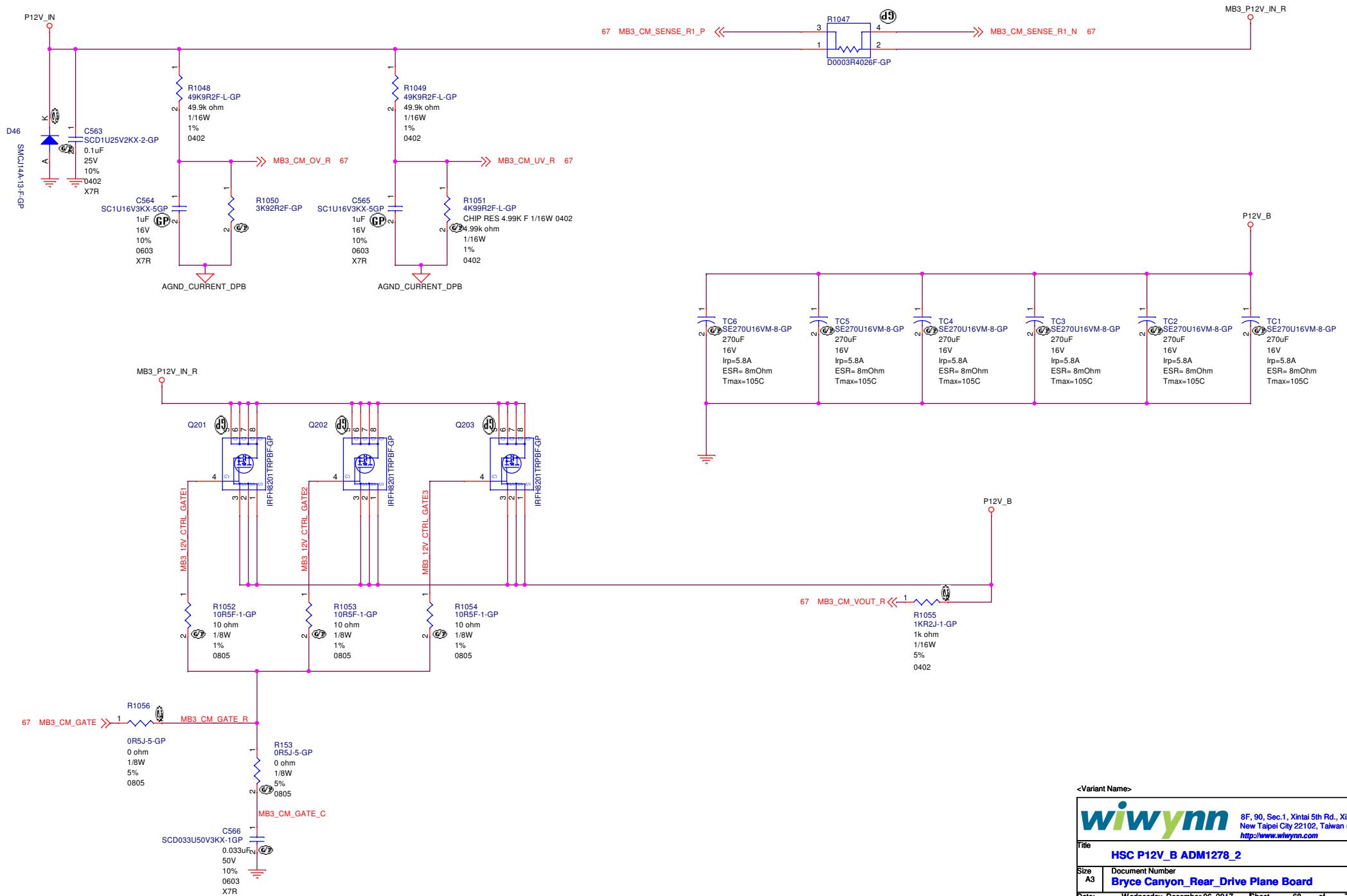
Title			HSC P12V_IN ADM1278_2
Size	Document Number		Rev
	Bryce Canyon_Rear_Drive Plane Board		1
Date:	Wednesday, December 06, 2017	Sheet	66 of 74

wiwynn 8F, 90, Sec.1, Xintai 5th Rd., Xizhi Dist.,
New Taipei City 22102, Taiwan (R.O.C.)
<http://www.wiwynn.com>

Size A3	Document Number Bryce Canyon Rear Drive Plane Board	Rev 1
------------	---	----------

Date: Wednesday, December 06, 2017 Sheet 67 of 74

P12V_B HOTSWAP

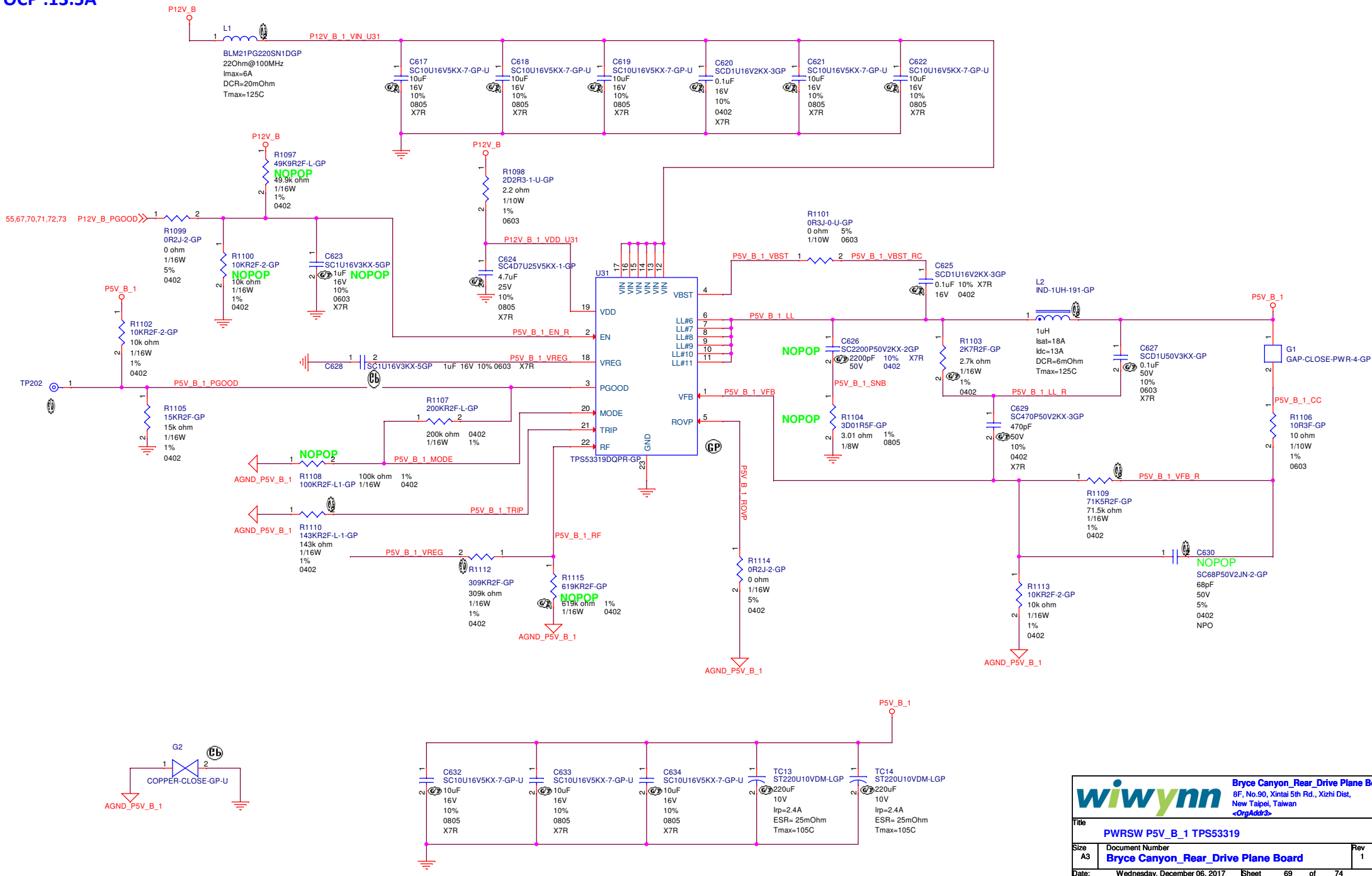


<Variant Name>

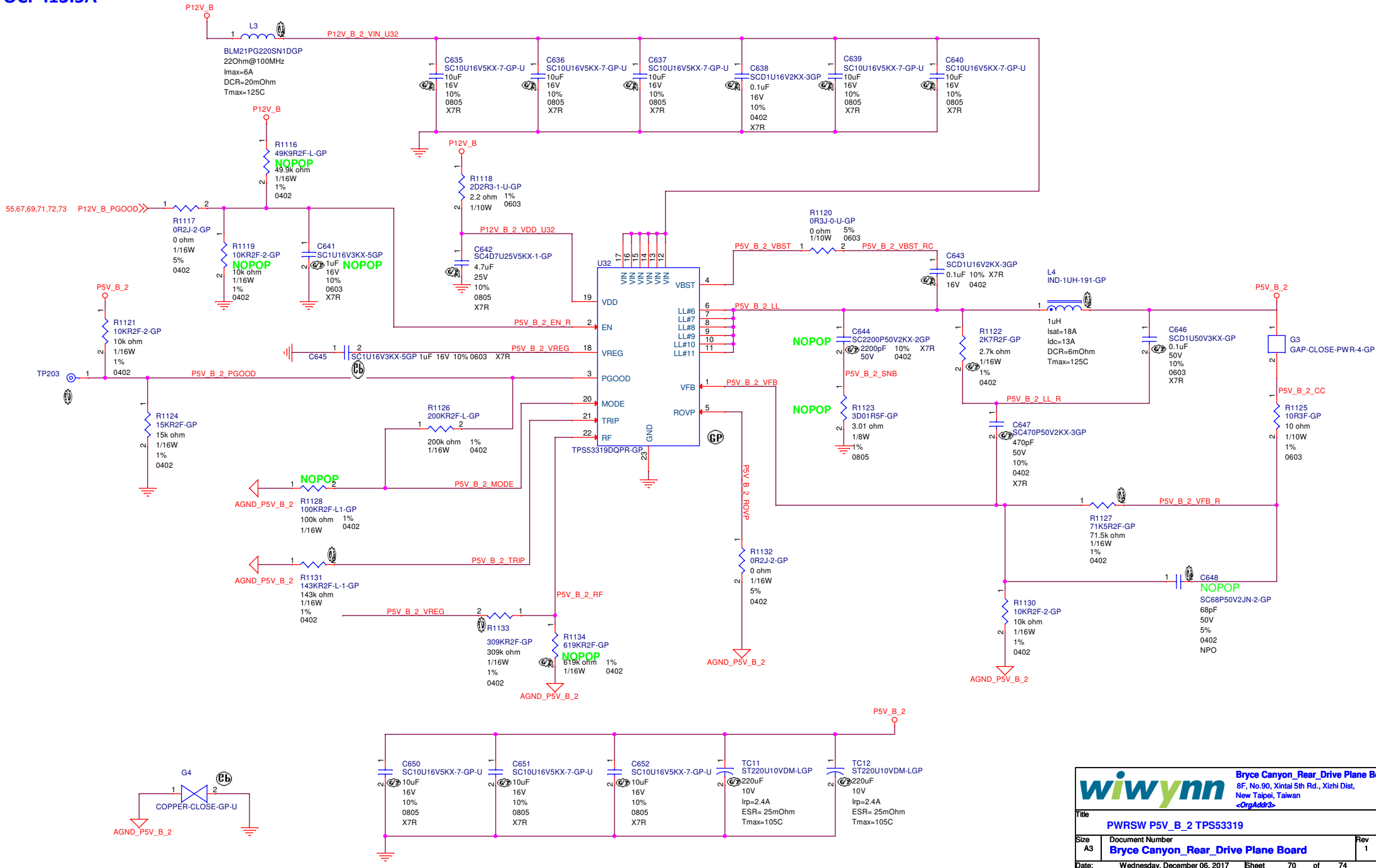
wiwynn 8F, 90, Sec.1, Xintai 5th Rd., Xizhi Dist.,
New Taipei City 22102, Taiwan (R.O.C.)
<http://www.wiwynn.com>

Title			HSC P12V_B ADM1278_2
Size	Document Number		Rev
A3	Bryce Canyon_Rear_Drive Plane Board		1
Date:	Wednesday, December 06, 2017	Sheet	68 of 74

Power rail : P5V_B_1(5V)
Controller : TPS53319 (Fswitching=750KHz)
TDC : 9.0A
MAX : 9.0A
OCP :13.5A



Power rail : P5V_B_2(5V)
Controller : TPS53319 (Fswitching=750KHz)
TDC :9.0A
MAX : 9.0A
OCP :13.5A



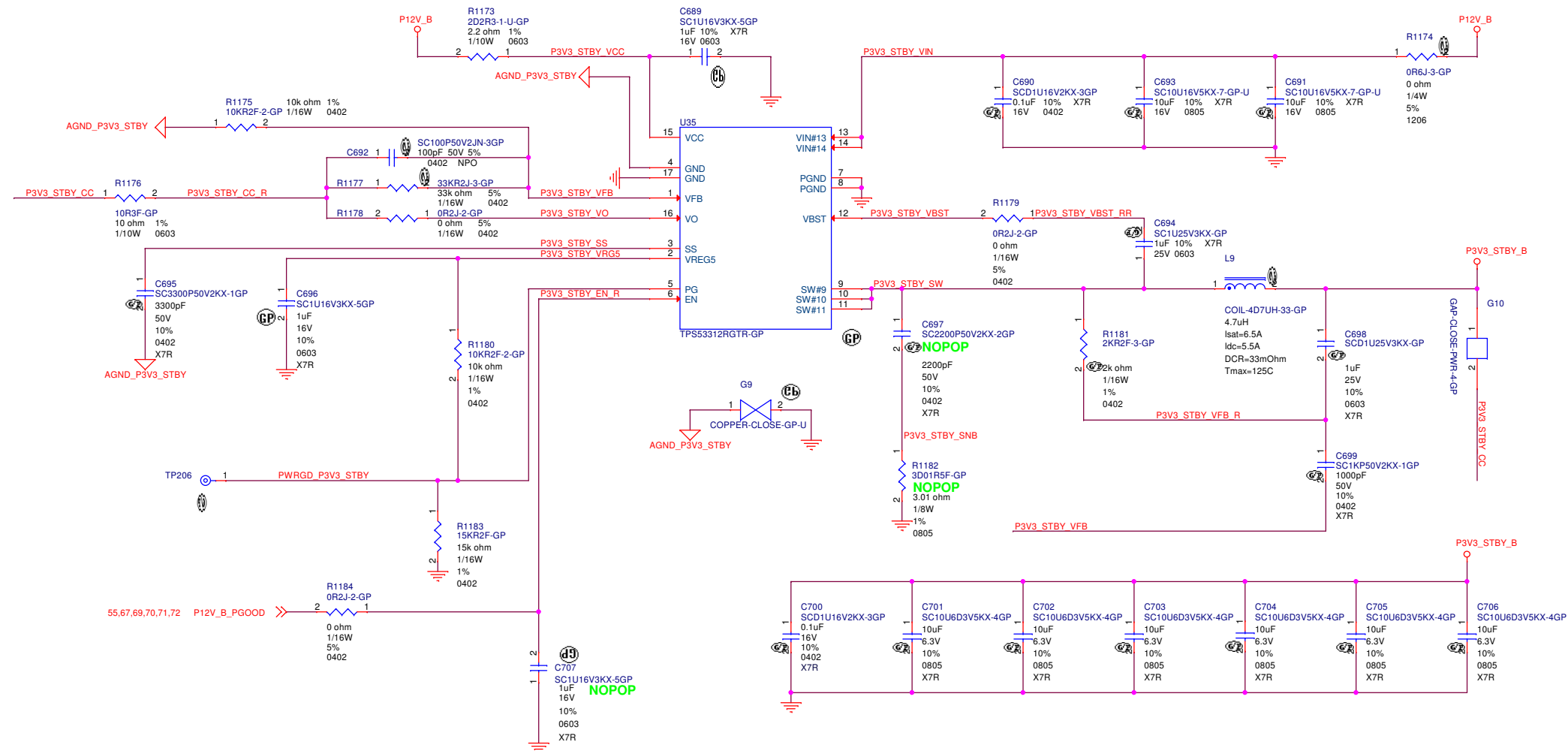
		Bryce Canyon_Rear_Drive Plane Board 8F, No.90, Xintai 5th Rd., Xizhi Dist, New Taipei, Taiwan <OrgAddr>	
Title			
PWR5V P5V_B_2 TPS53319			
Size	Document Number		Rev
A3	Bryce Canyon_Rear_Drive Plane Board		1
Date:	Wednesday, December 06, 2017	Sheet 70 of 74	

OCP :13.5A



		Bryce Canyon_Rear_Drive Plane Board 8F, No.90, Xintai 5th Rd., Xizhi Dist, New Taipei City, Taiwan <i>~OrgAddress~</i>	
Title			
PWRSW P5V_B_4 TPS53319			
Size	Document Number	Rev	
A3	Bryce Canyon_Rear_Drive Plane Board	1	
Date:	Wednesday, December 06, 2017	Sheet	72 of 74

Power rail : P3V3
Controller : TPS53312 (Fswitching=700KHz)
TDC : 2A
MAX : 2A
OCP : 4.1A



Screw & Hole



<Variant Name>

			8F, 90, Sec.1, Xintai 5th Rd., Xizhi Dist., New Taipei City 22102, Taiwan (R.O.C.) http://www.wiwynn.com		
Title Screw & Hole					
Size A3	Document Number Bryce Canyon_Rear_Drive Plane Board				Rev 1
Date:	Wednesday, December 06, 2017		Sheet	74	of 75