

# Dasher-1 Block Diagram

LDB-1 91.4KH01.001

Jan. 10, 2011

## PCB Layer Stackup

L1:Component  
L2:GND  
L3:Signal 1  
L4:VCC  
L5:Signal 2  
L6:Signal 3  
L7:GND  
L8:Component

## Battery Charger/Selector

BQ24742 74  
INPUTS OUTPUTS  
DOCK\_PWR20 CHARGER\_OUT12

System DC/DC  
TPS51220ARSN 78  
VINT20 VCC5M  
VCC3M

CPU DC/DC  
VT1316/VT1317 79  
VCC5V\_OUT VCCCPUCORE

GMCH GFX CORE  
VT1317 81  
VCC5V\_OUT VCCGFXCORE

VCC1R5A  
VT357FCX 86  
VCC5V\_OUT VCC1R5A

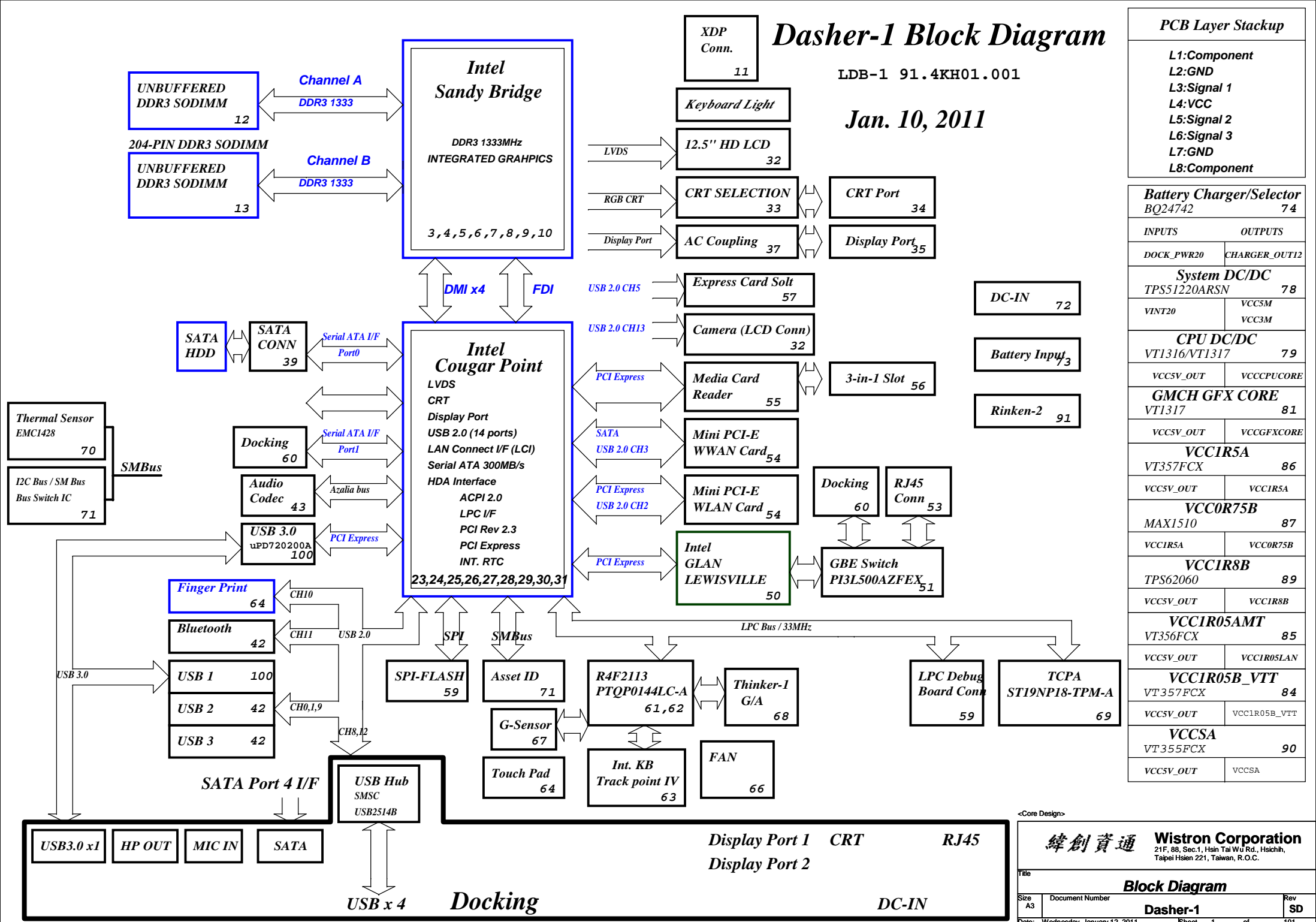
VCC0R75B  
MAX1510 87  
VCC1R5A VCC0R75B

VCC1R8B  
TPS62060 89  
VCC5V\_OUT VCC1R8B

VCC1R05AMT  
VT356FCX 85  
VCC5V\_OUT VCC1R05LAN

VCC1R05B\_VTT  
VT357FCX 84  
VCC5V\_OUT VCC1R05B\_VTT

VCCSA  
VT355FCX 90  
VCC5V\_OUT VCCSA



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Block Diagram			
File	Document Number	Dasher-1	Rev SD
Size A3	Sheet 1	of 101	Date: Wednesday, January 12, 2011

## RESISTOR

Symbol name	Value	Tolerance (J: 5%, F: 1%, D: 0.5%, B: 0.1 %)	Rating 0402=> 1/16W, 25V 0603 => 1/16W, 75V 0805 => 1/10W, 100V	Size 2=>0402, 3=>0603, 5=>0805, 6=>1206, 0=>1210
10KR3	10K Ohm	If no letter, it means J: 5%	1/16W, 75V	0603
33D3R5	33.3 Ohm	If no letter, it means J: 5%	1/10W, 100V	0805
1KR3F	1K Ohm	F: 1%	1/16W, 75V	0603

The naming rule is value + R + size + tolerance  
 For the value, it can be read by the number before R. (R means resistor)  
 For the tolerance, it can be read from the last letter.  
 For the rating, we don't show on the symbol name.  
 For the size, R2=>0402, R3=>0603, R5=>0805,....

## CAPACITOR

Symbol name	Value	Tolerance (M: +/-20, K: +/-10, Z: +80/-20)	Rating	Size 2=>0402, 3=>0603, 5=>0805, 6=>1206, 0=>1210
SCD1U10V2MX-1	0.1uF	M/X5R	10V	0402
SC10U6D3V5MX	10uF	M/X5R	6.3V	0805
SC2D2U16V5ZY	2.2uF	Z/Y5V	16V	0805

The naming rule is  
Capacitor type + value + rating + size + tolerance + material  
SCD1U10V2MX-1  
SC=> SMT Ceramic, TC=> POS cap or SP cap  
D1U => 0.1uF  
10V => the voltage rating is 10V  
2=> 0402, 3=>0603, 5=>0805  
M=>tolerance M, K, Z  
X=> X7R/X5R, Y=> Y5V  
-1 => symbol version, nonsense to EE characteristic

## PLANAR\_ID[3..0]

IBEXPEAK-M	39	38	48	49	Planar ID Version	Planar PCB Version
PLANAR_IDn	3	2	1	0		
	0	0	0	0		
	0	0	0	1		
	0	0	1	0	Dasher-1 Pre-DV	SA
	0	0	1	1	Dasher-1 SDV/UT	SB
	0	1	0	0	Dasher-1 MFVT	SC
	0	1	0	1	Dasher-1 FVT	SD
	0	1	1	0	Dasher-1 M-SIT	SE
	0	1	1	1	Dasher-1 SIT	SF
	1	0	0	0	Dasher-1 SVT	-1

## EC HISTORY

[illegible]

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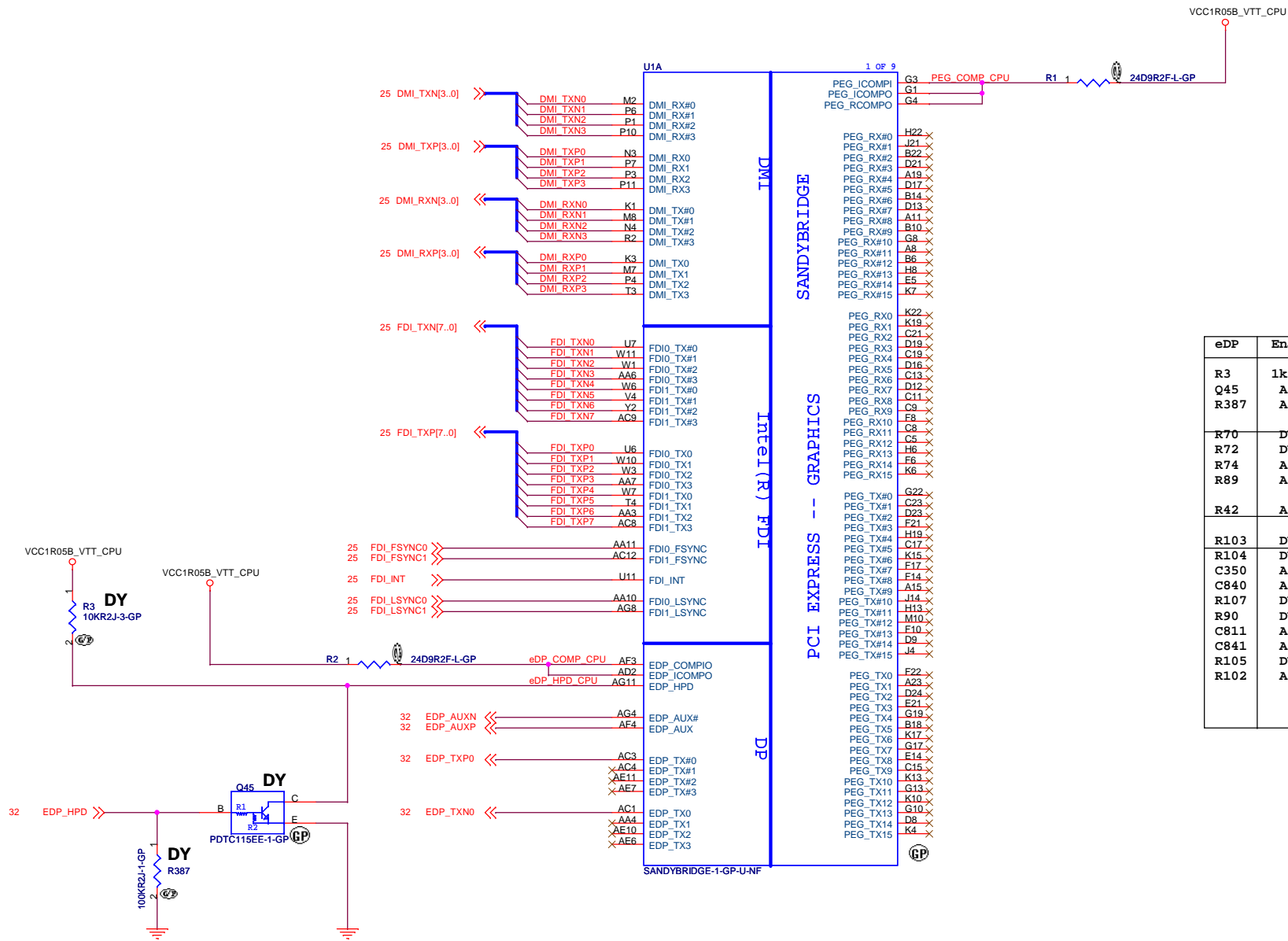
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## Dasher-1

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SD

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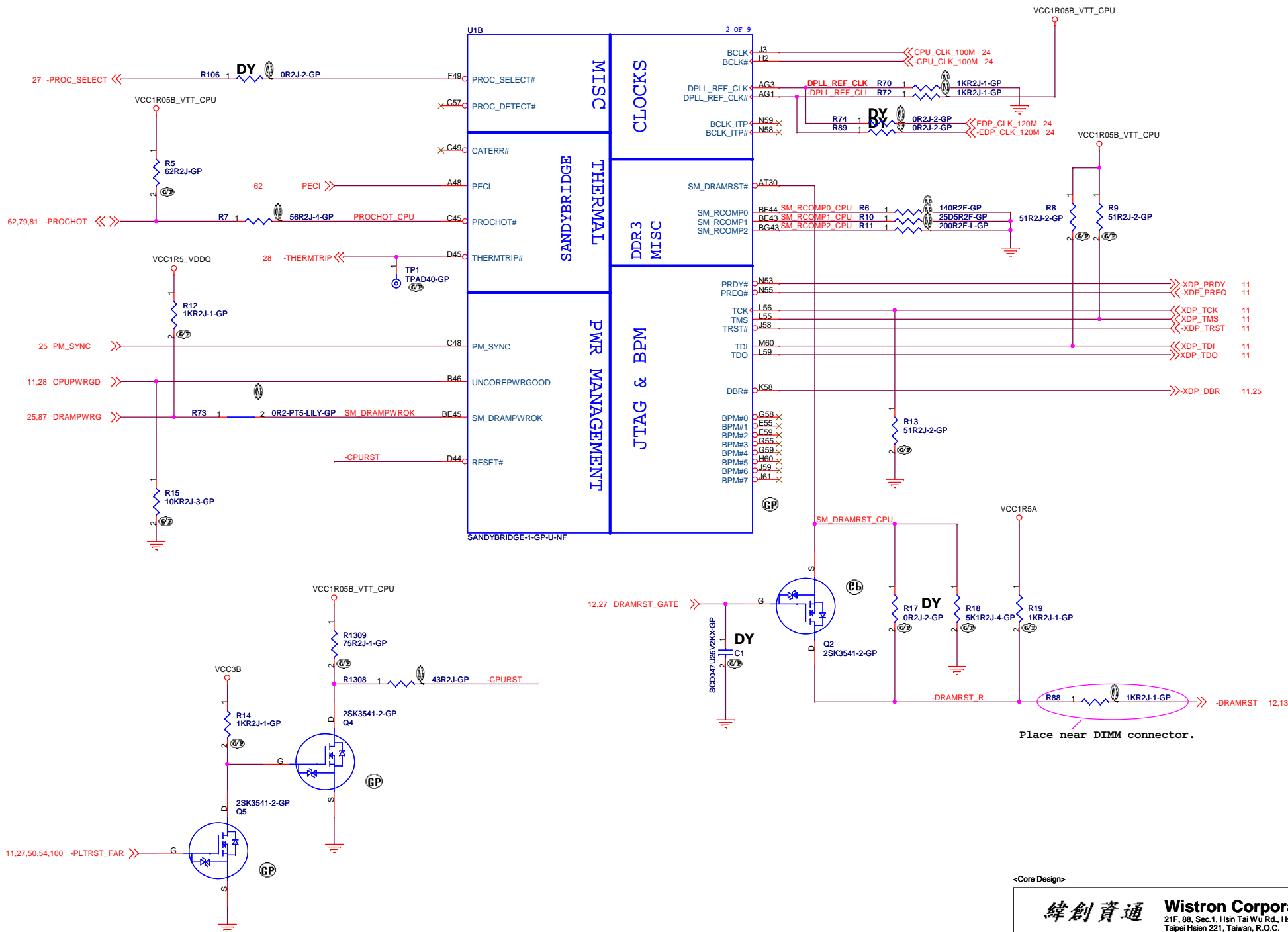
Logic

eDP	Enable	Disable
R3 Q45 R387	1k-ohm ASM ASM	10k-ohm DY DY
R70 R72 R74 R89	DY DY ASM ASM	ASM ASM DY DY
R42	ASM	DY
R103 R104 C350 C840 R107 R90 C811 C841 R105 R102	DY DY ASM ASM DY DY ASM ASM DY ASM	ASM ASM DY ASM DY DY DY ASM ASM DY

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Title <b>CPU(1/8):DMI/EDP/PEG/FDI</b>		
Size A3	Document Number <b>Dasher-1</b>	Rev <b>SD</b>
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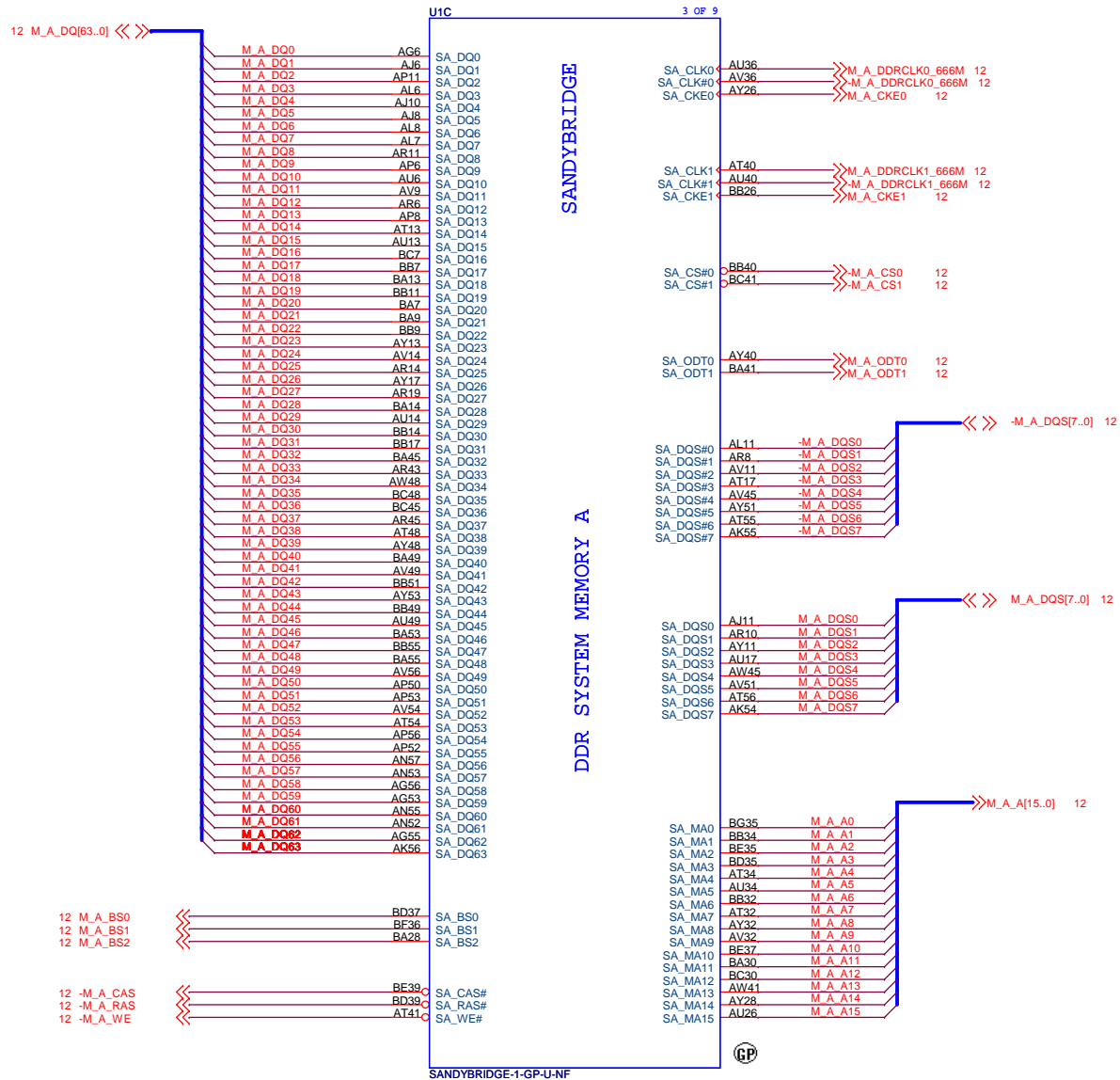
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Title **CPU(2/8):CLK/MISC/JTAG**

Size A3 Document Number **Dasher-1** Rev **SD**

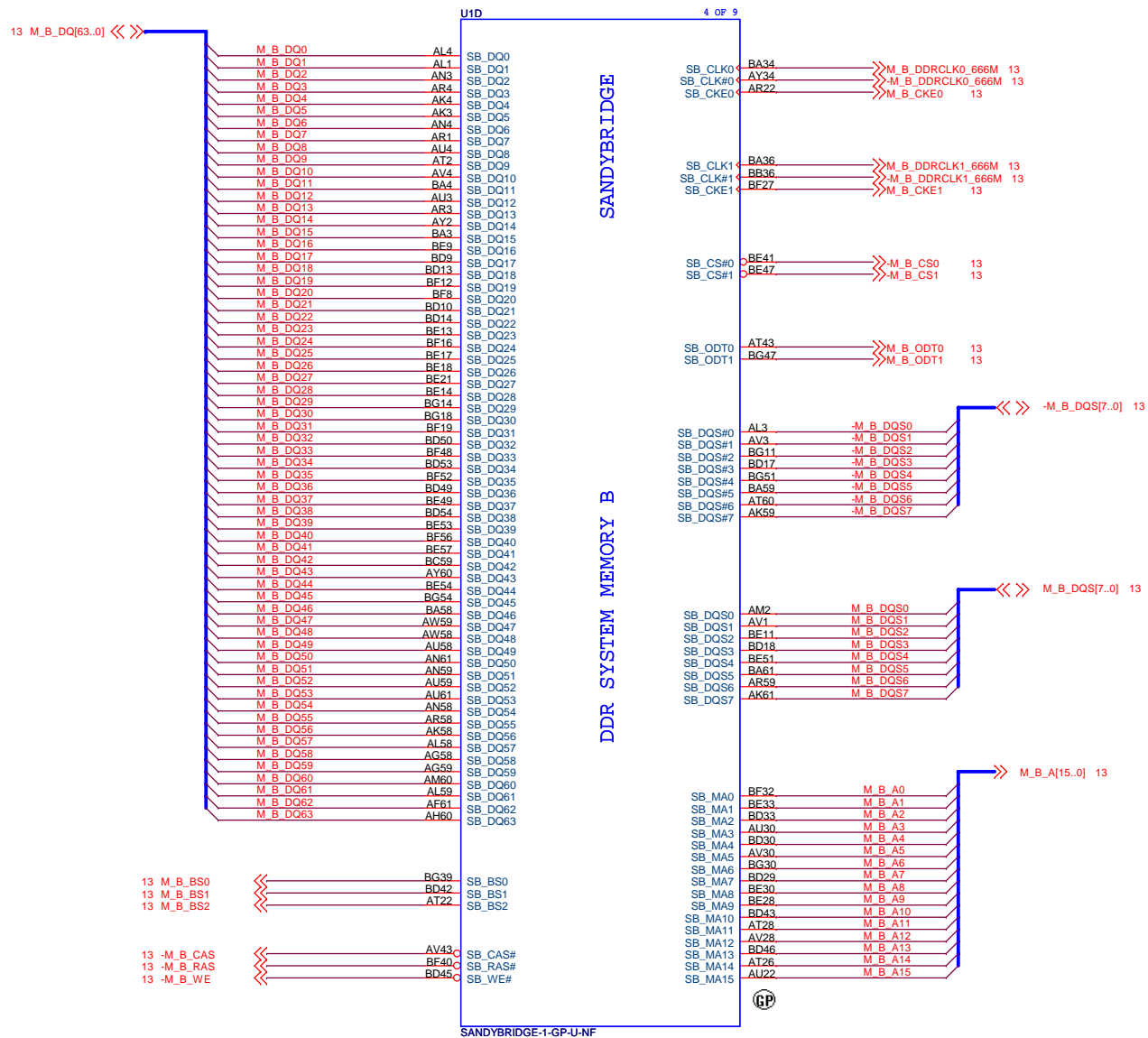
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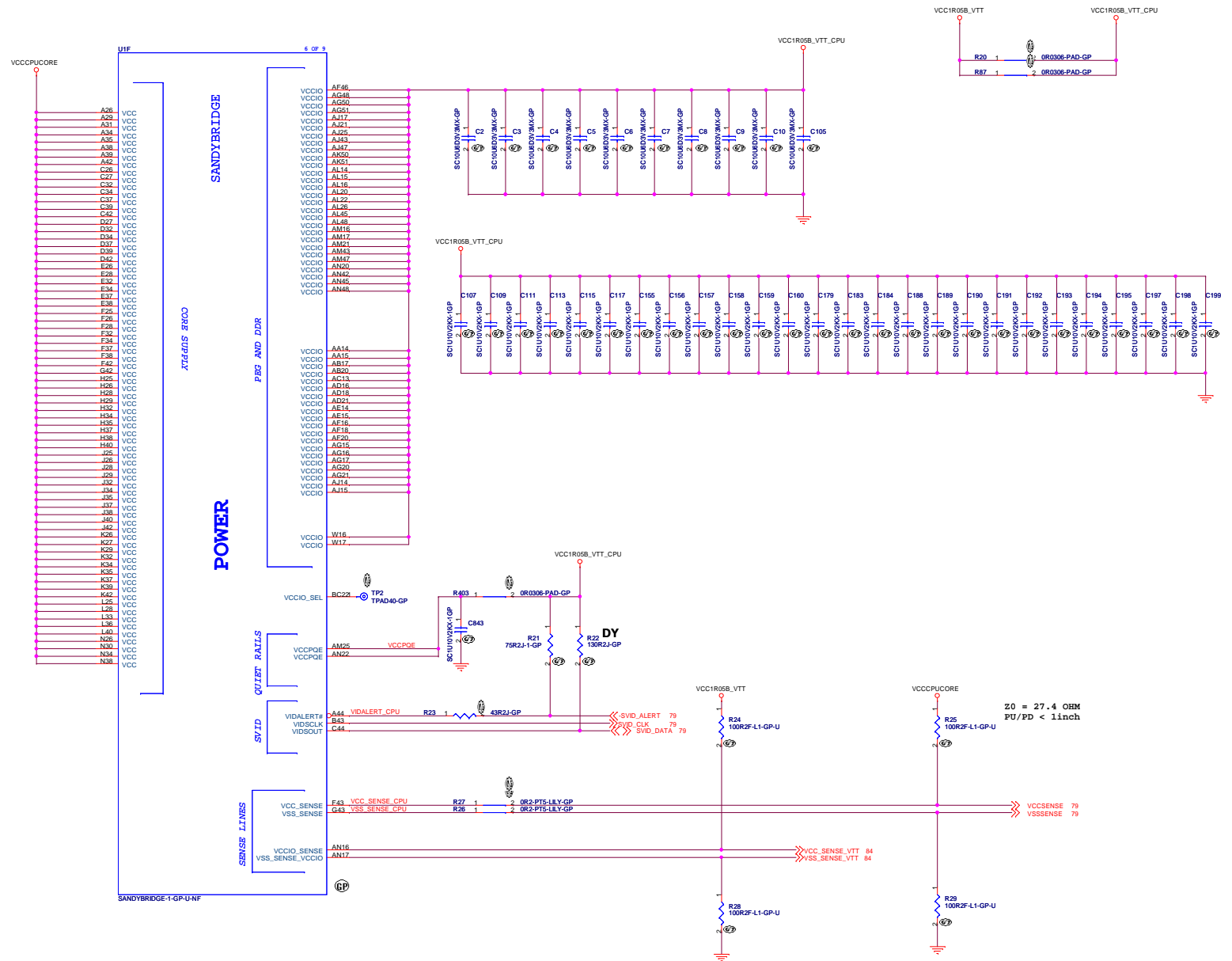
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Size	Document Number	Rev	
A3	Dasher-1	SD	
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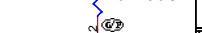
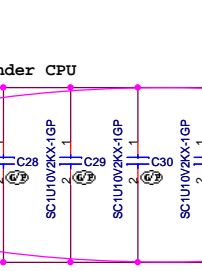
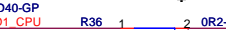
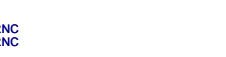
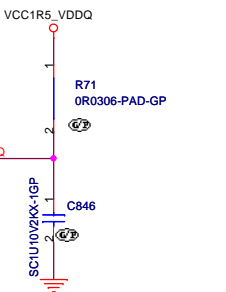
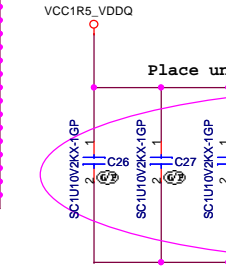
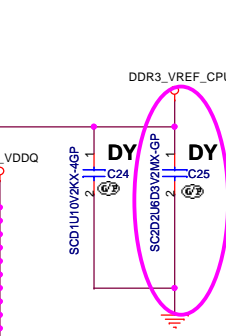
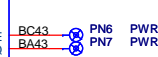
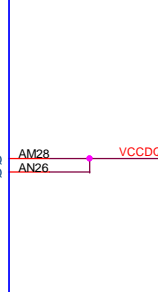
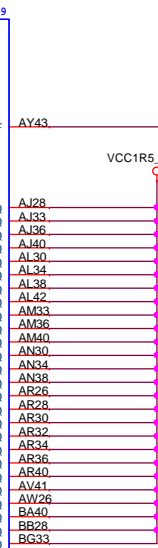
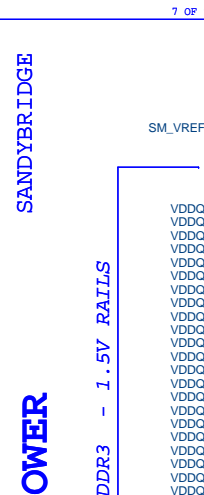
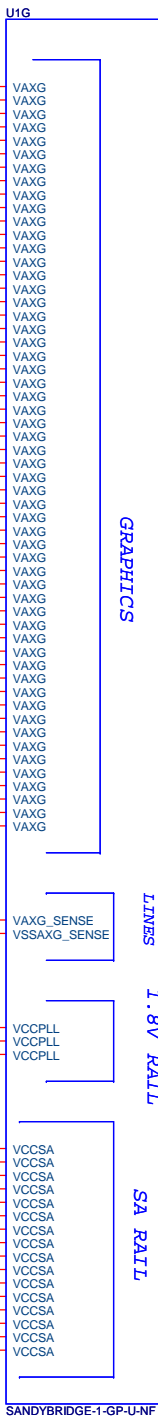
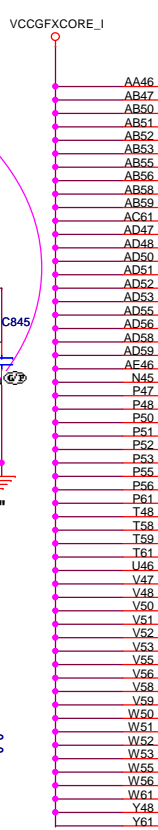
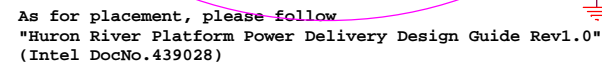


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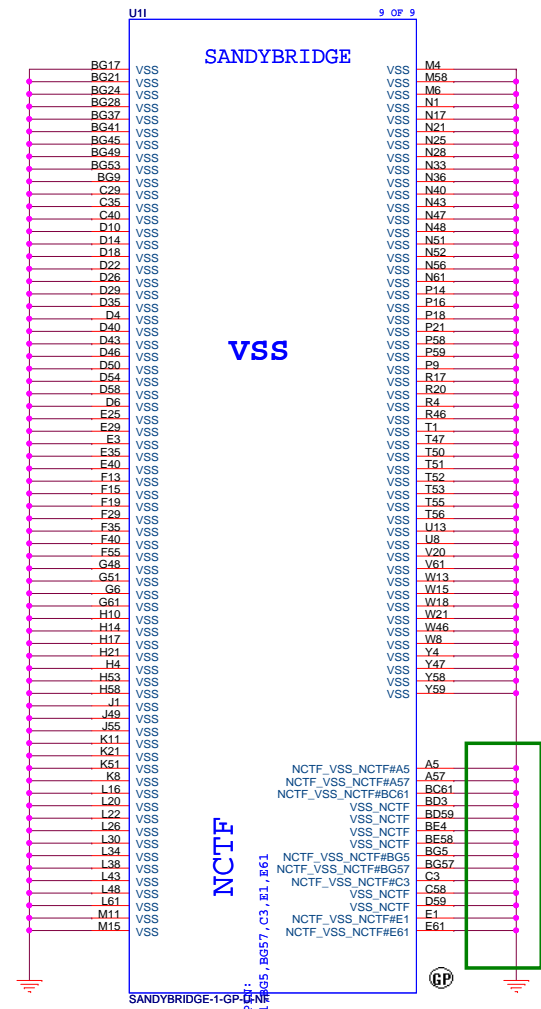
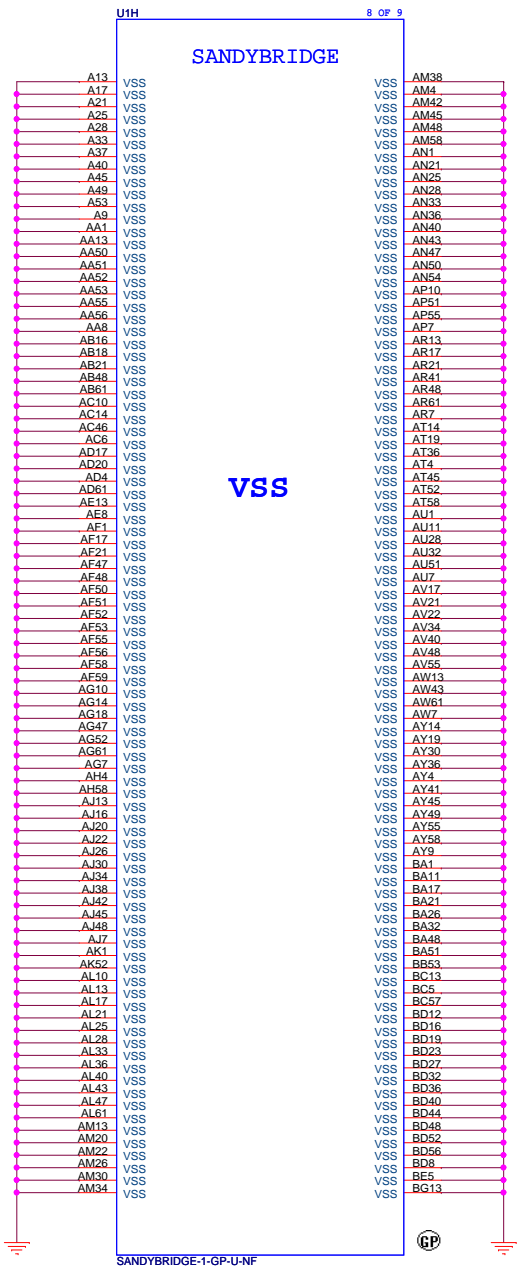




NEED SC2D2U4V2MX-1G  
78.22510.5FL

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Platform Power Delivery Design Guide Rev1.0"  
439028)





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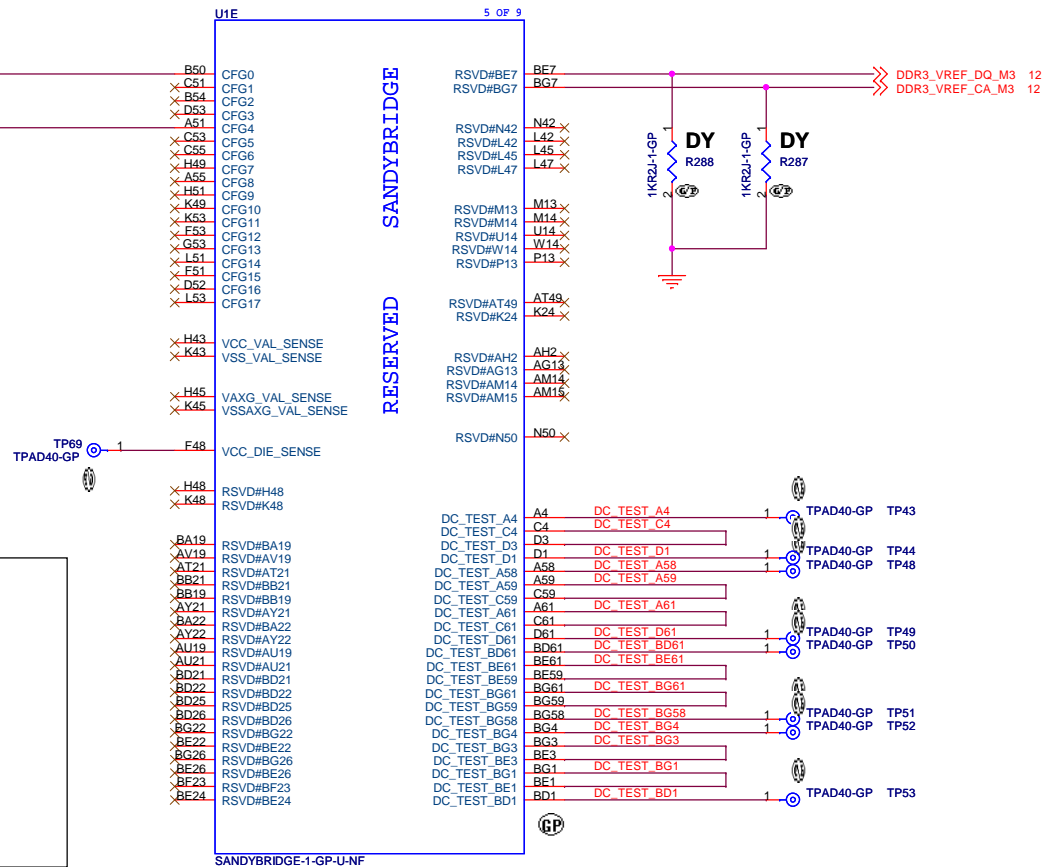
<b>緯創資通</b> <b>Wistron Corporation</b> 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
<b>Title</b> <b>CPU(7/8):GND</b>	
<b>Size</b> Custom	<b>Document Number</b> <b>Dasher-1</b>
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CFG2 PEG LANE REVERSAL  
1 NO-ASM : NORMAL  
0 ASM : REVERSE

CFG4 Embedded DISPLAY PORT PRESENCE  
1 NO-ASM : DISABLE  
0 ASM : ENABLE

CFG[6:5] PEG BIFURCATION CONFIG  
11 SINGLE 16 LANES  
10 2x8 LANES  
01 RESERVED  
00 8 LANES AND 2x4 LANES

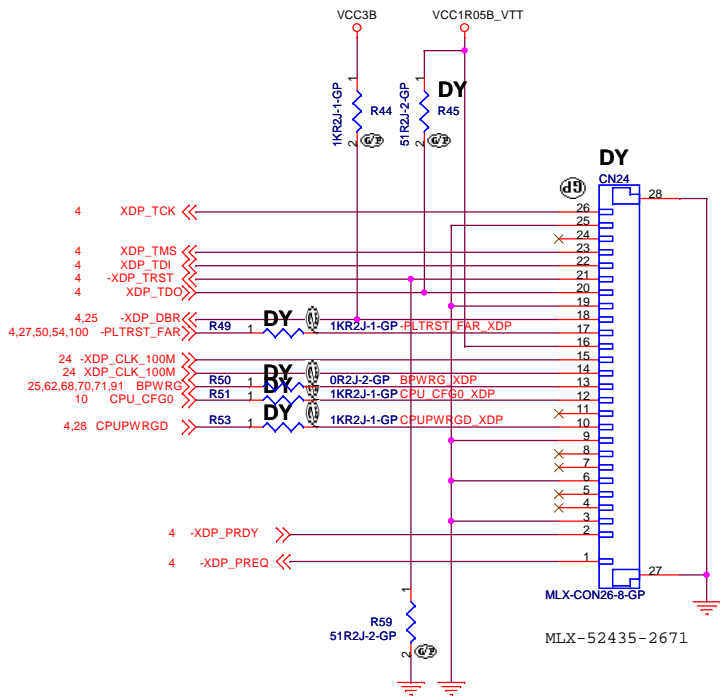
CFG7 PEG DEFER TRAINING  
1 NO\_ASM : TRAIN IMMEDIATELY FOLLOWING  
XXRESETB DEASSERTION  
0 ASM : WAIT FOR BIOS FOR TRAINING



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Size	Document Number	Dasher-1		Rev
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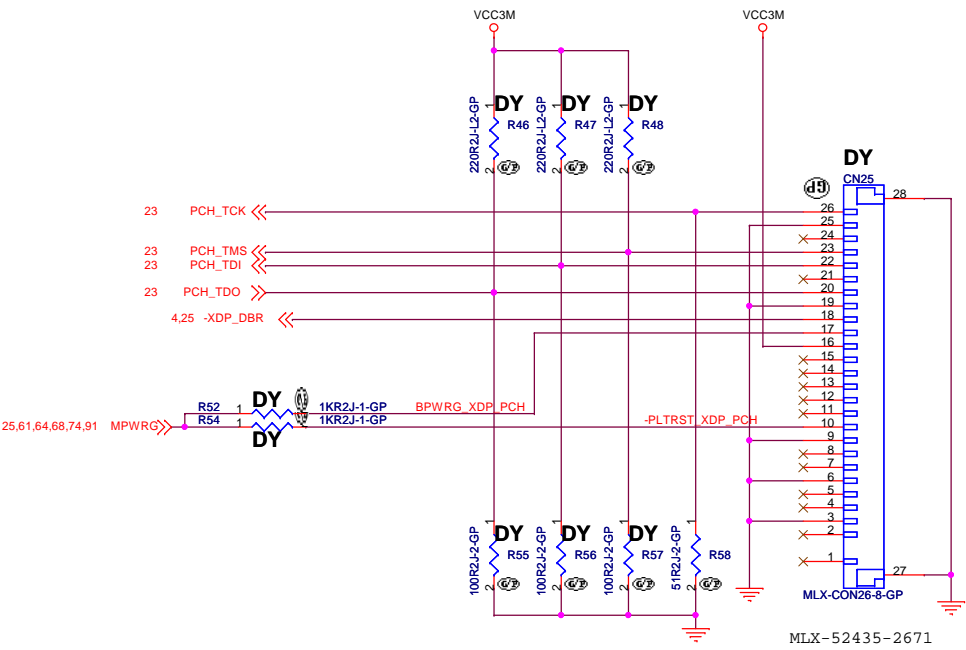


DEBUG Interface for Processor.

XDP1

		ENABLE	DISABLE
TDO	R45	ASM	DY
TRST#	R59	ASM	ASM
DBRST#	R44	ASM	ASM
RESET#	R49	ASM	DY
CFG0	R51	ASM	DY
PWRGD	R53	ASM	DY
BPWRG	R50	ASM	DY
	CN24	ASM	DY

↑  
SIT Logic

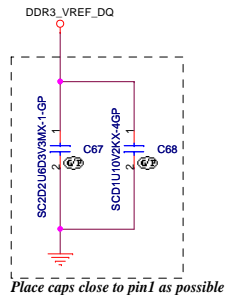
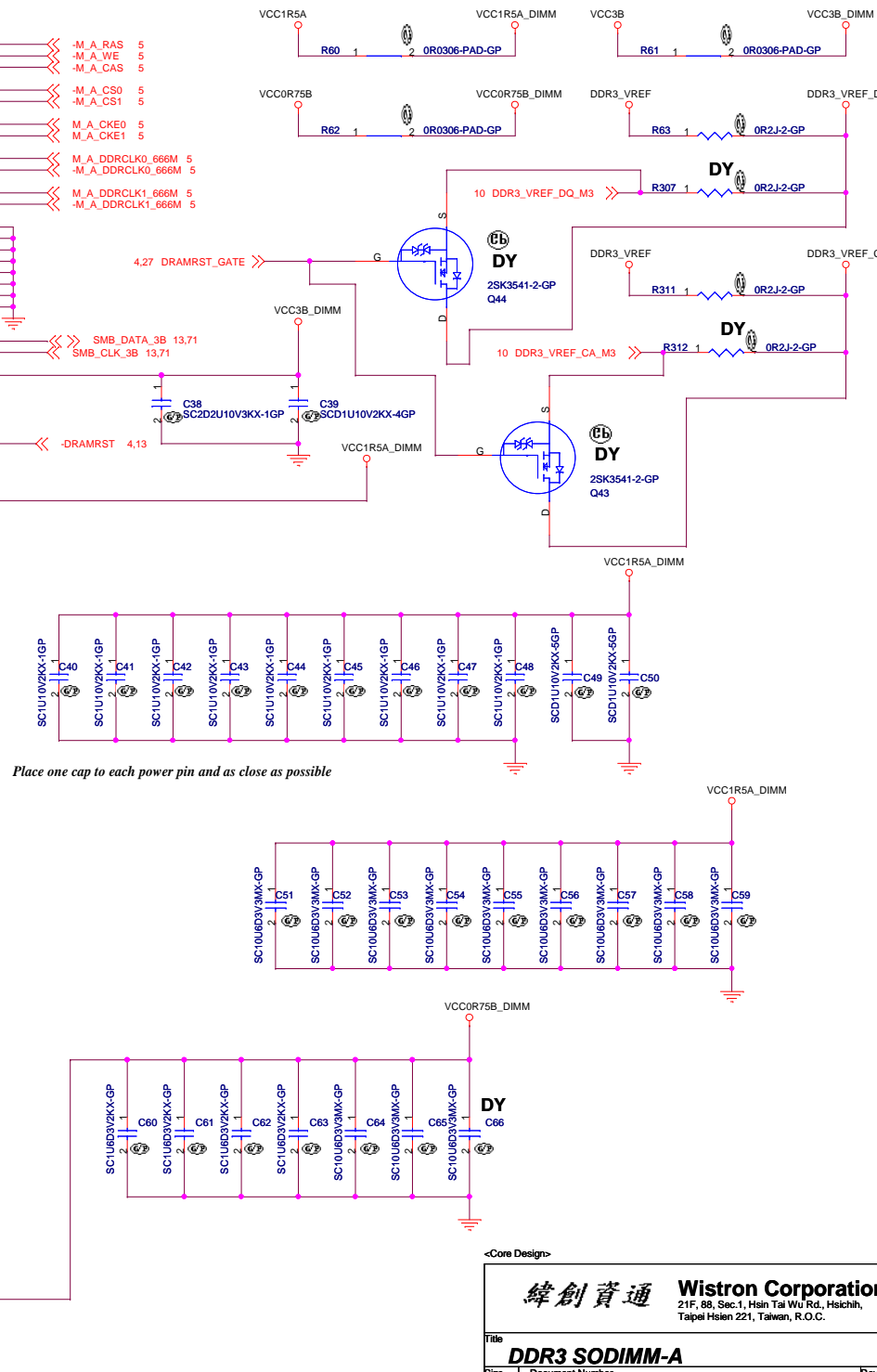
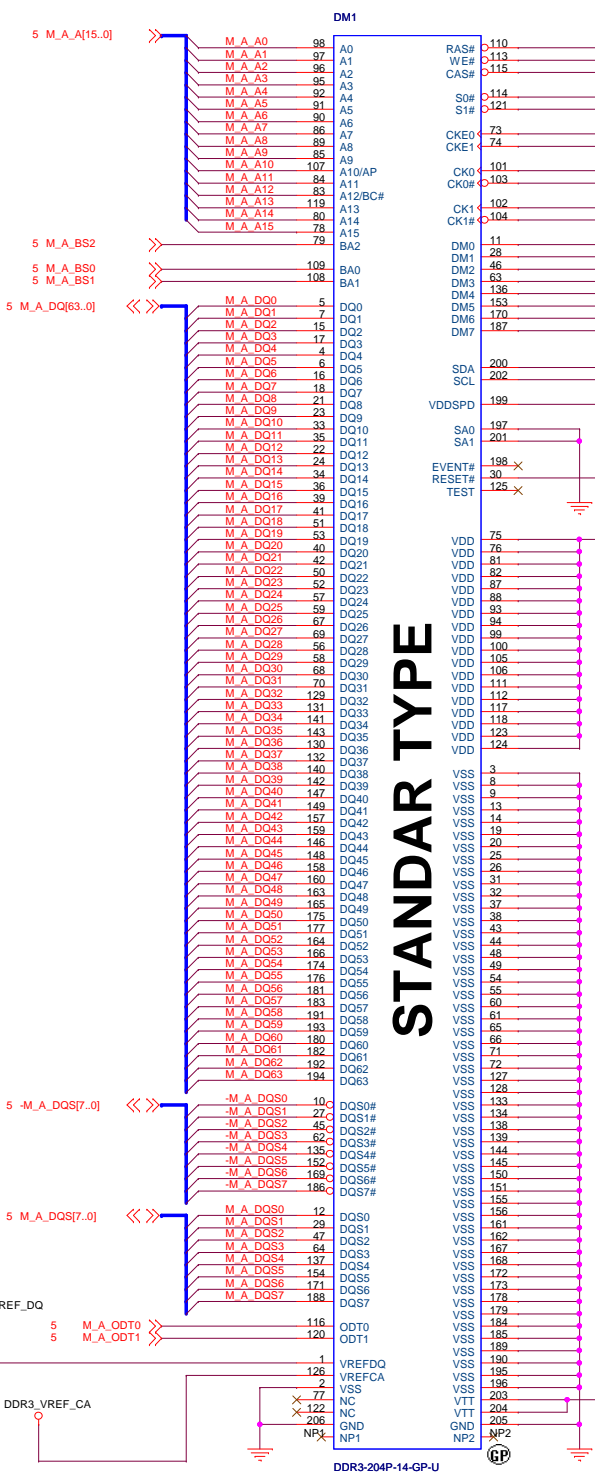


DEBUG Interface for PCH.

XDP2

		ENABLE	DISABLE
TDO	R46 R55	220 100	DY DY
TMS	R48 R57	220 100	DY DY
TDI	R47 R56	220 100	DY DY
TCK	R58	51	51
MPWRG	R52 R54	ASM ASM	DY DY
	CN25	ASM	DY

↑  
SIT Logic





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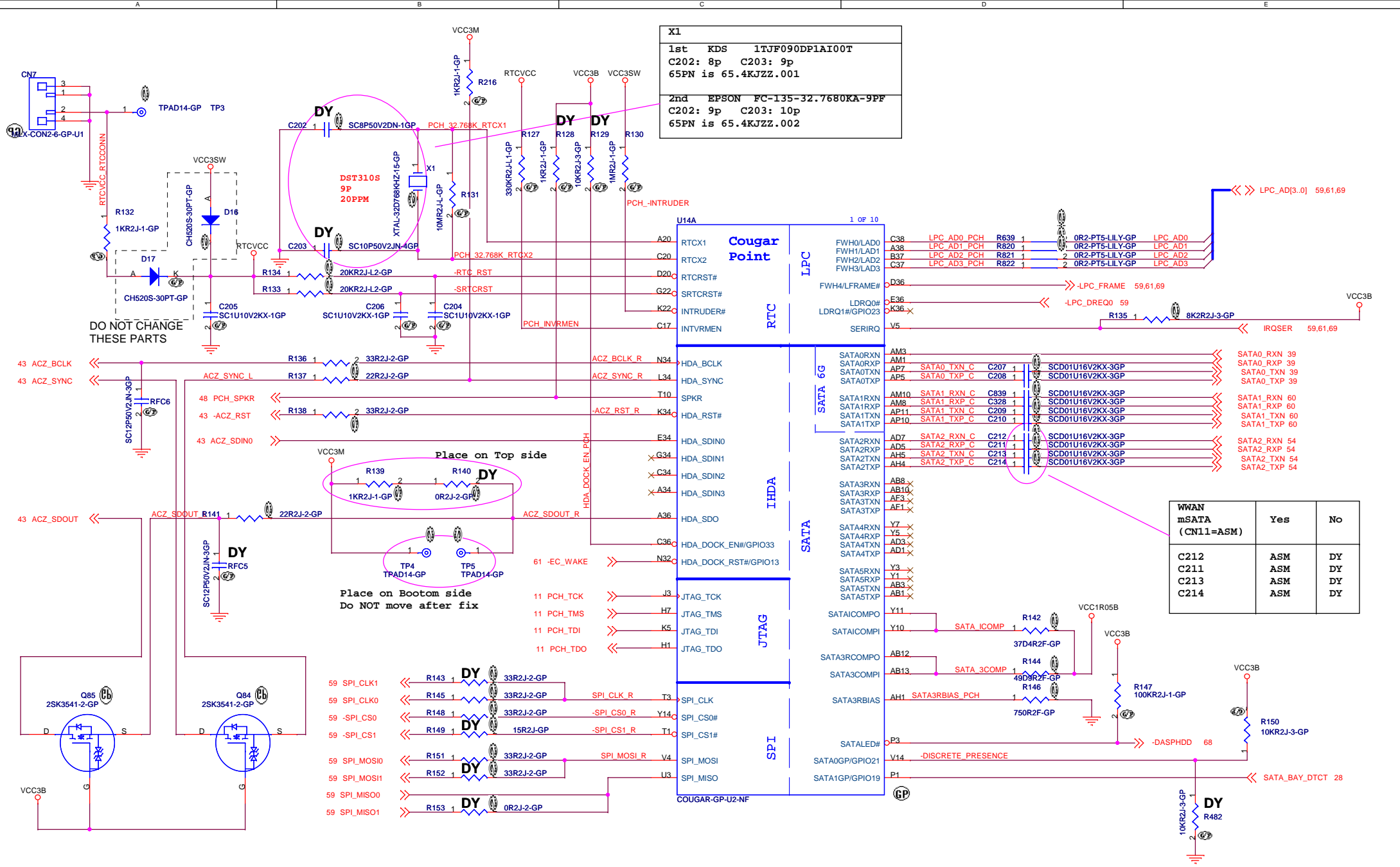
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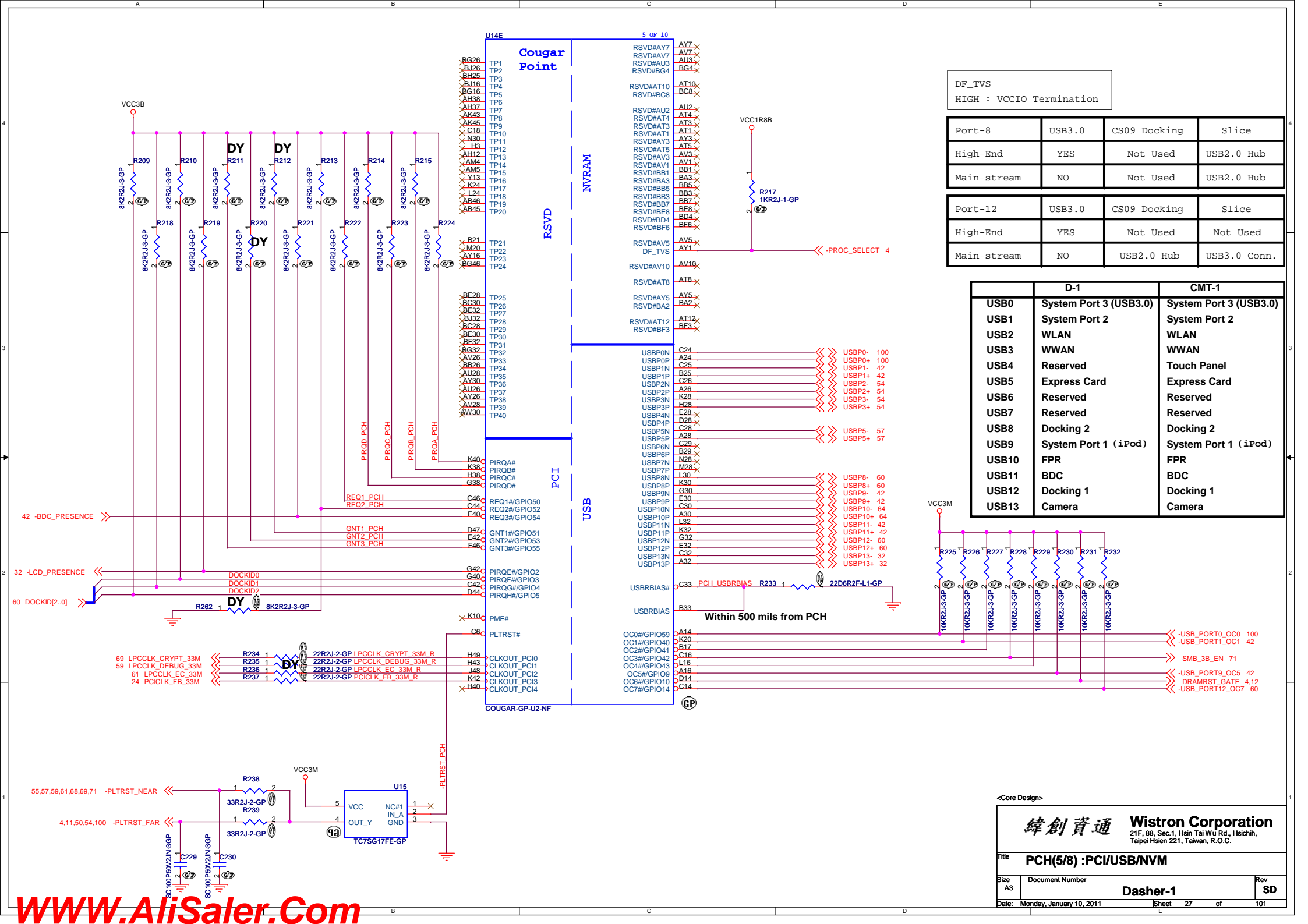










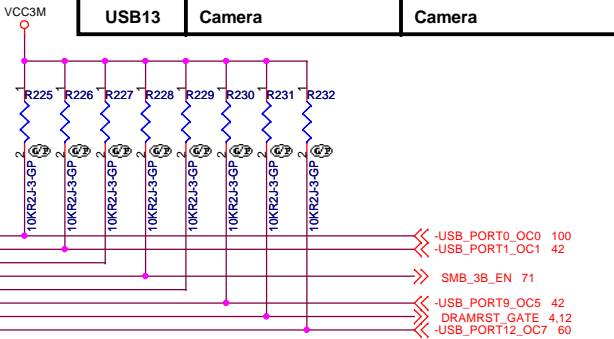


DF\_TVS  
HIGH : VCCIO Termination

Port-8	USB3.0	CS09 Docking	Slice
High-End	YES	Not Used	USB2.0 Hub
Main-stream	NO	Not Used	USB2.0 Hub

Port-12	USB3.0	CS09 Docking	Slice
High-End	YES	Not Used	Not Used
Main-stream	NO	USB2.0 Hub	USB3.0 Conn.

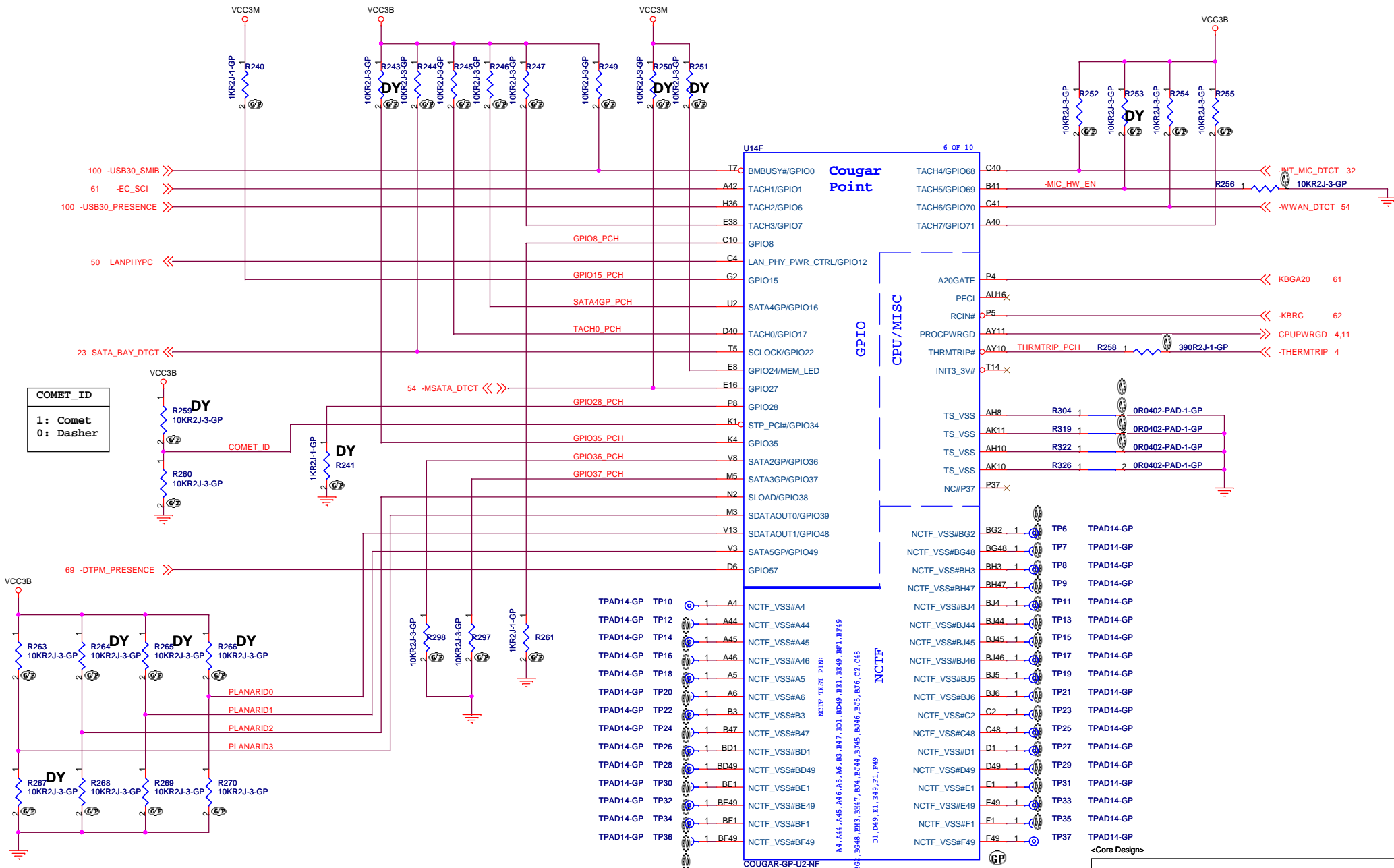
	D-1	CMT-1
USB0	System Port 3 (USB3.0)	System Port 3 (USB3.0)
USB1	System Port 2	System Port 2
USB2	WLAN	WLAN
USB3	WWAN	WWAN
USB4	Reserved	Touch Panel
USB5	Express Card	Express Card
USB6	Reserved	Reserved
USB7	Reserved	Reserved
USB8	Docking 2	Docking 2
USB9	System Port 1 (iPod)	System Port 1 (iPod)
USB10	FPR	FPR
USB11	BDC	BDC
USB12	Docking 1	Docking 1
USB13	Camera	Camera



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Title <b>PCH(5/8) : PCI/USB/NVM</b>		
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COMET\_ID  
1: Comet  
0: Dasher

PLANAR ID: 1000 for SVT

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Title

PCH(6/9):GPIO/NCTF/RSVD

Size

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Date

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Sheet

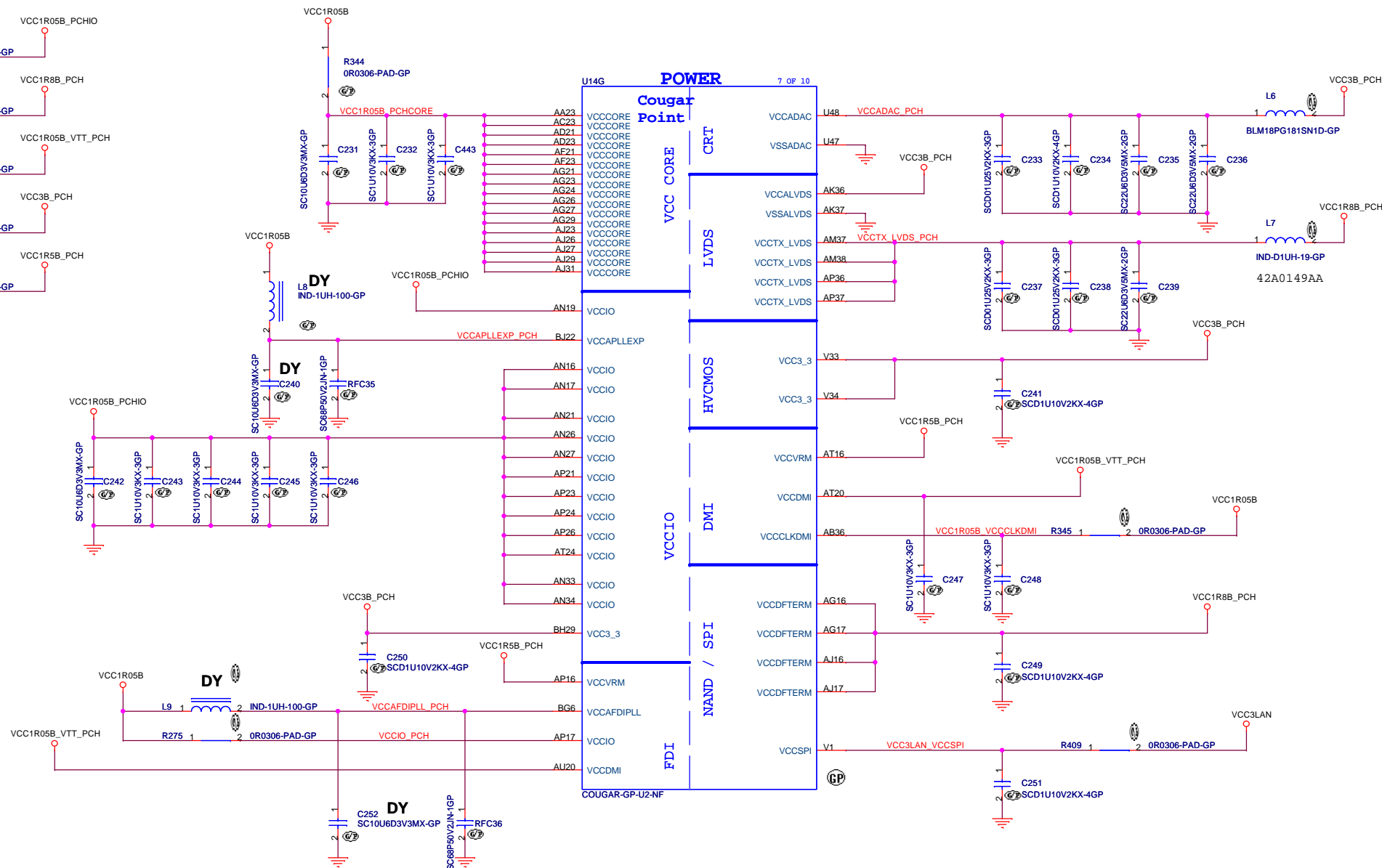
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Rev

SD



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Title **PCH(7/9):Power**

Size A3 Document Number

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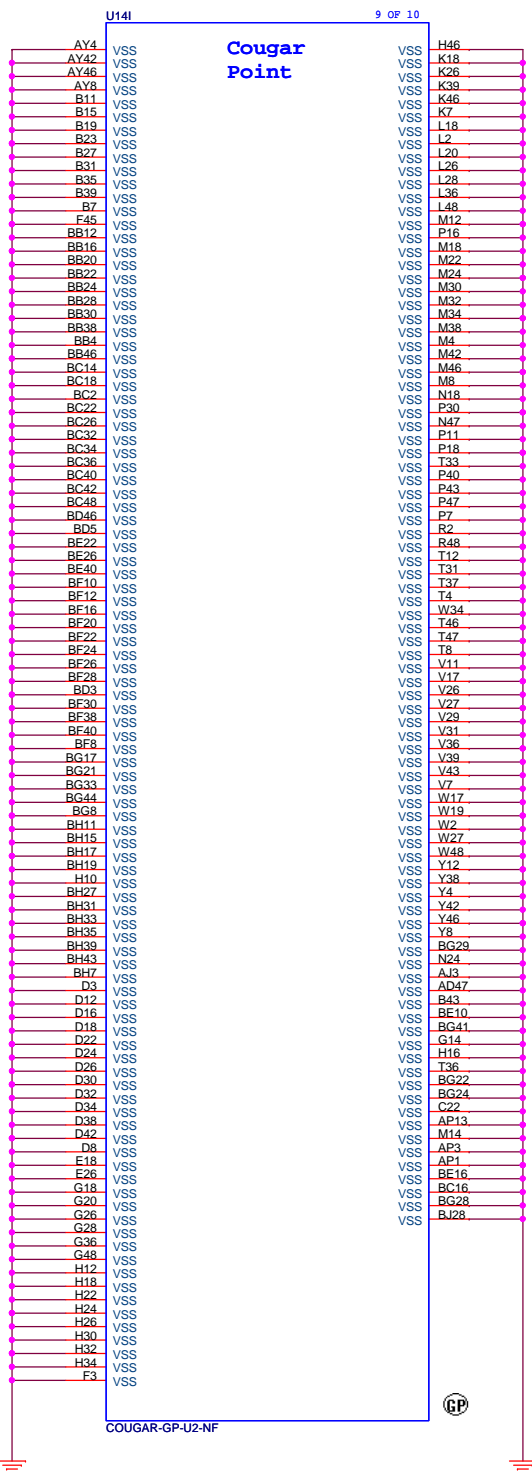
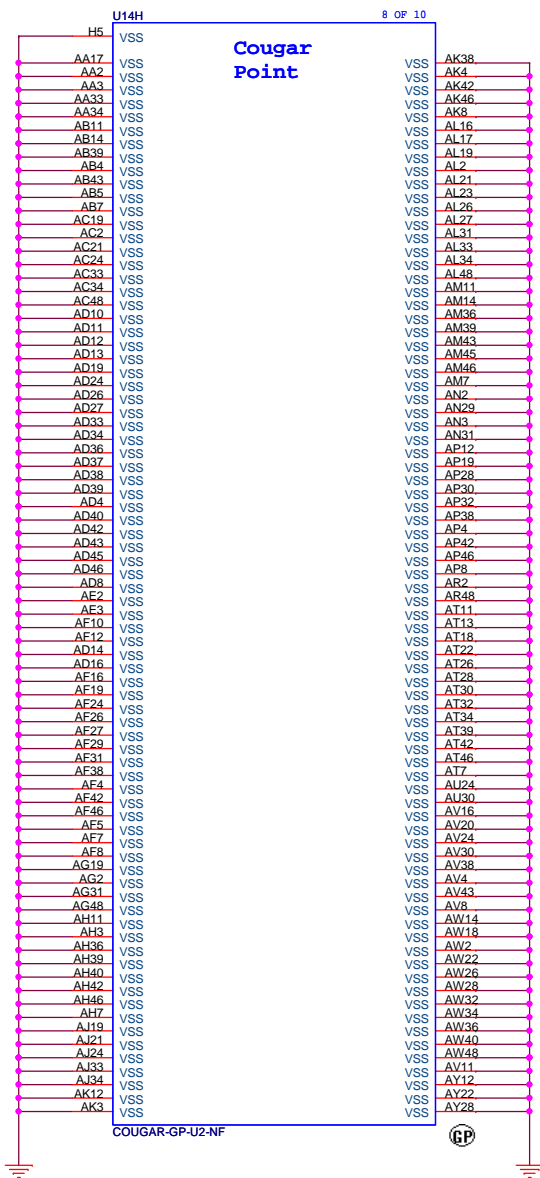
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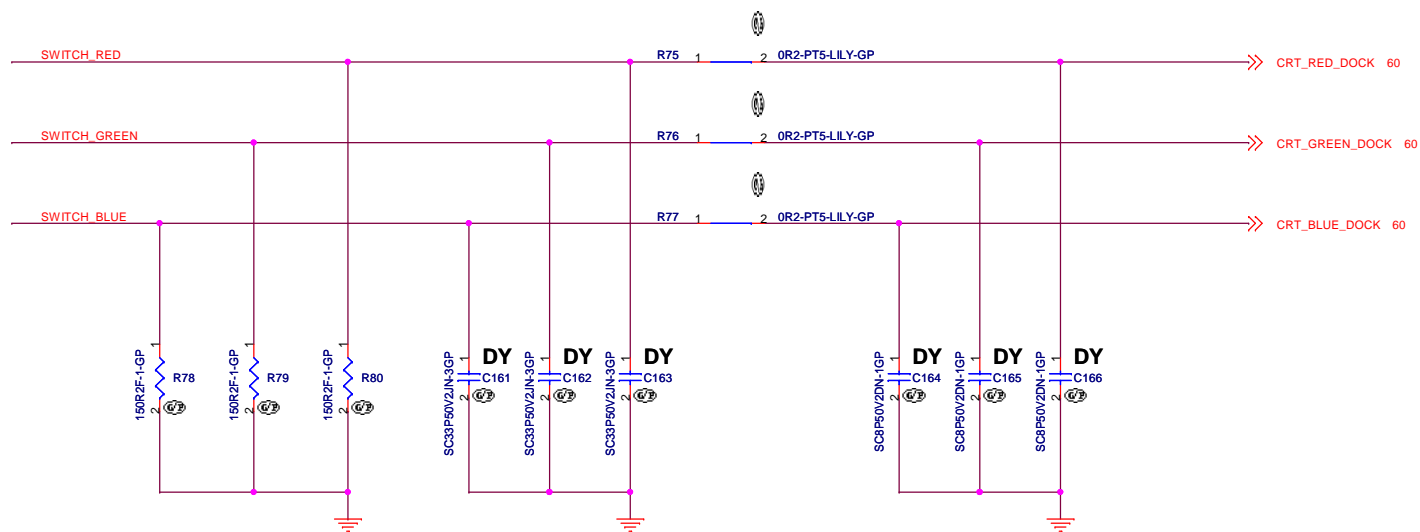
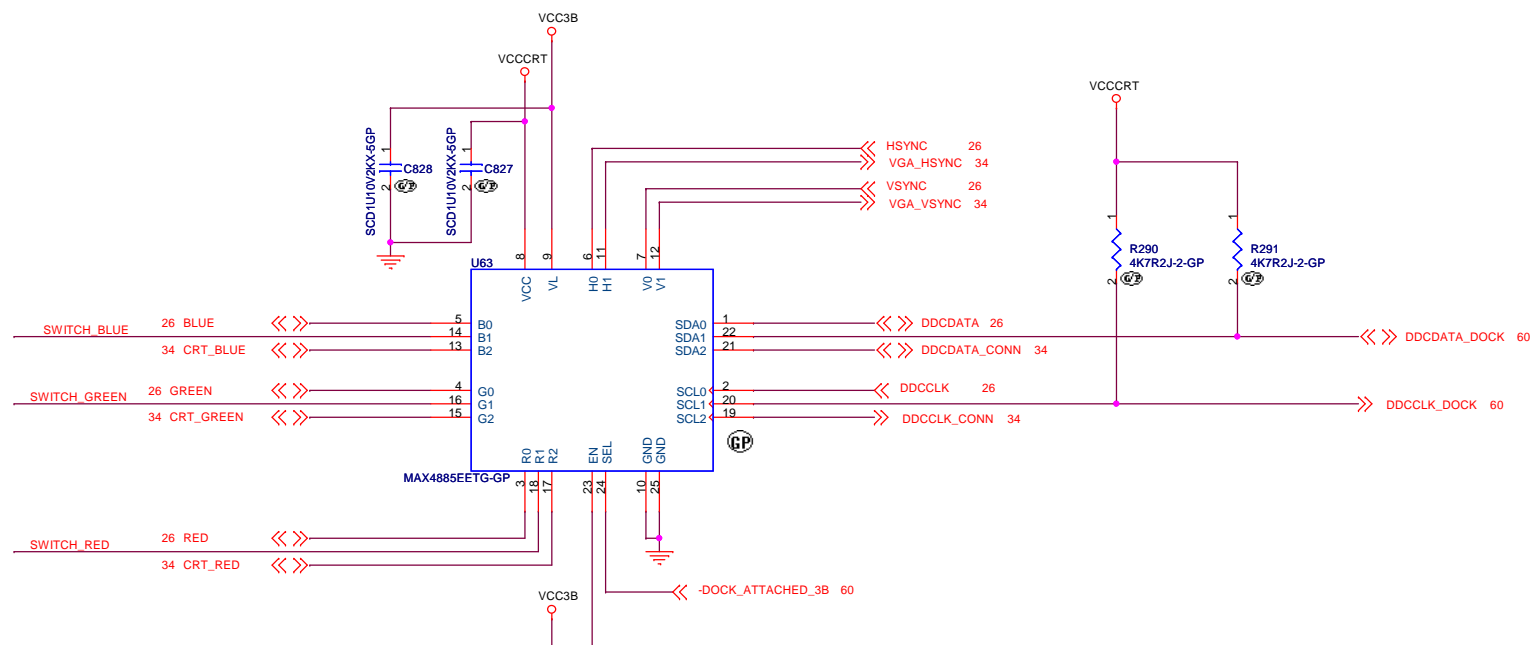
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Title			Rev
PCH (9/9):GND			SD
Size	Document Number	Dasher-1	
A3			
Date:	Monday, January 10, 2011	Sheet	31 of 101





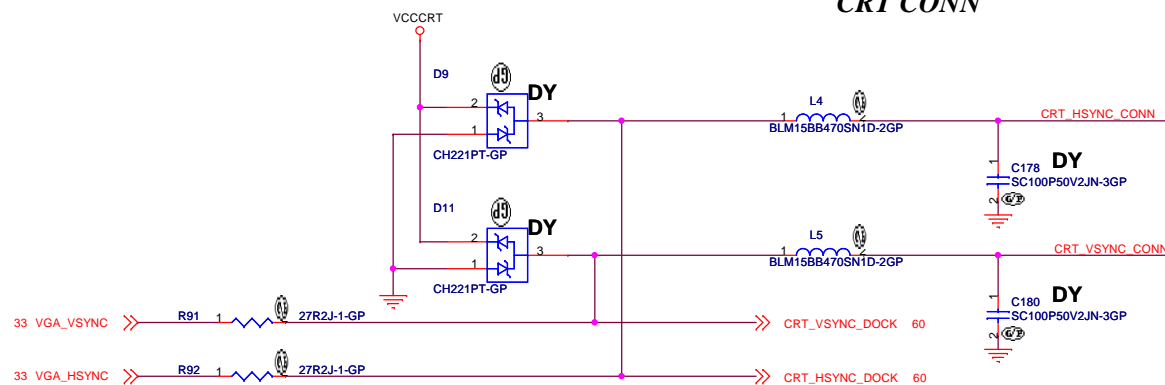
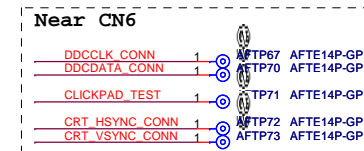
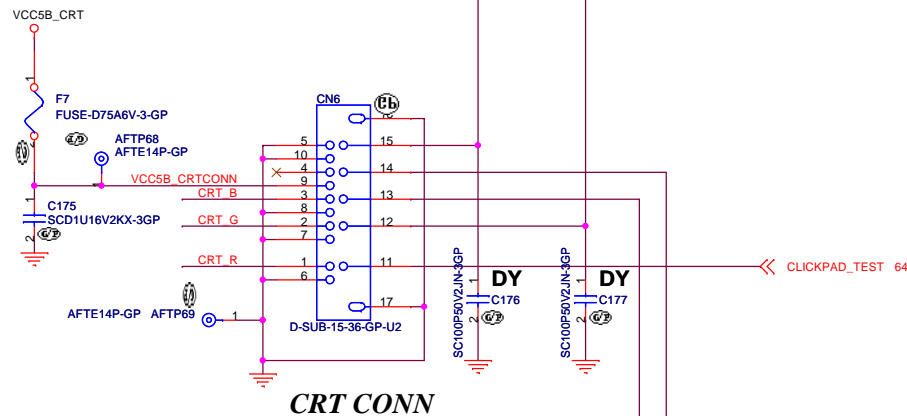
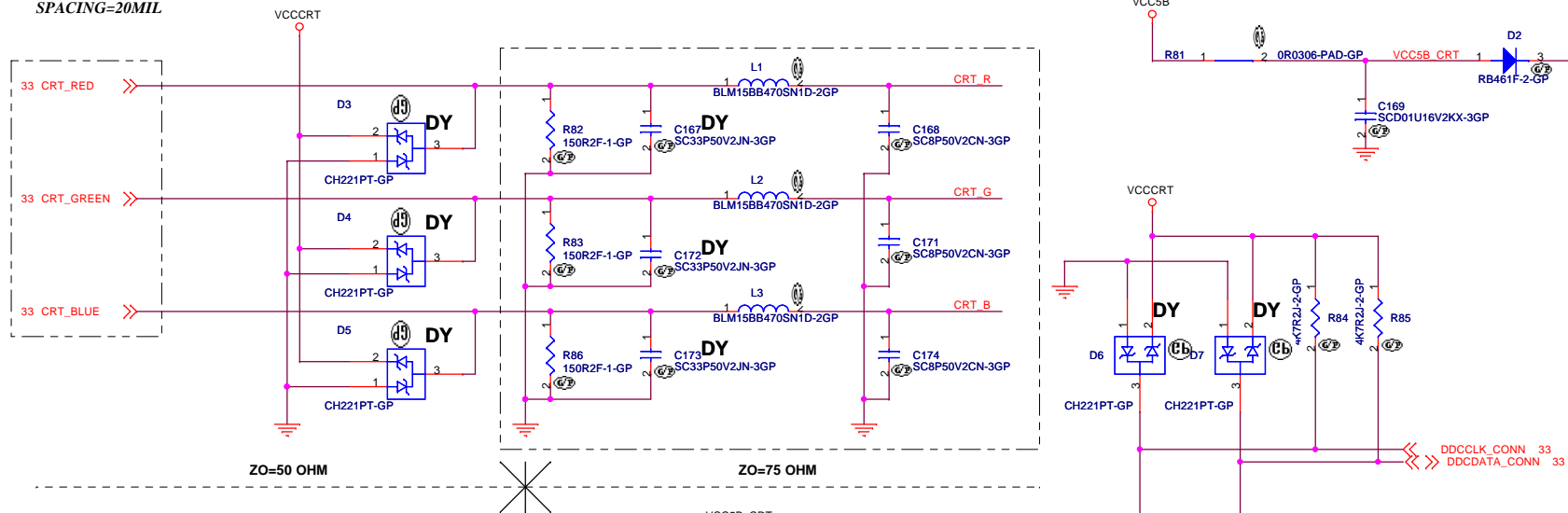


<Core Design>

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

Title			
CRT SELECTOR			
Size A3	Document Number	Dasher-1	Rev SD
Date: Monday, January 10, 2011	Sheet	33	of 101

GND GUARDING  
EACH SIGNAL WIDTH DEPENDS ON ZO(TRACE IMPEDANCE)  
SPACING=20MIL



<Core Design>

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

Ext CRT Interface			
Size A3	Document Number Dasher-1	Rev SD	
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<Core Design>

緯創資通

Wistron Corporation

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Taipei Hsien 221, Taiwan, R.O.C.

Title

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Size

A3

Document Number

Dasher-1

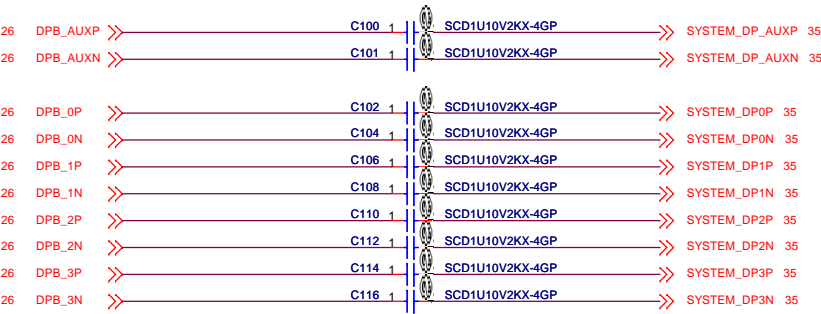
Rev

SD

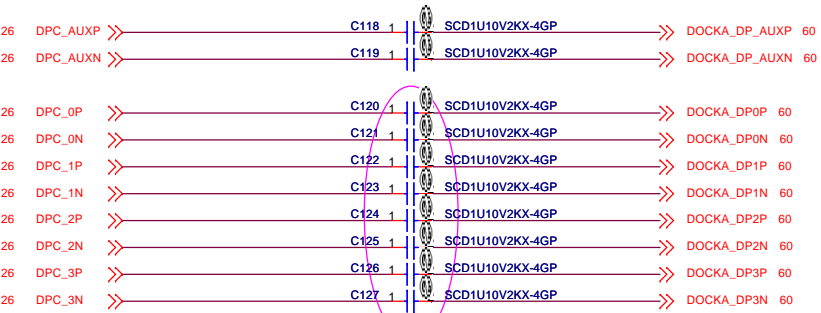
Date: Monday, January 10, 2011

Sheet 36 of 101

System DP Connector

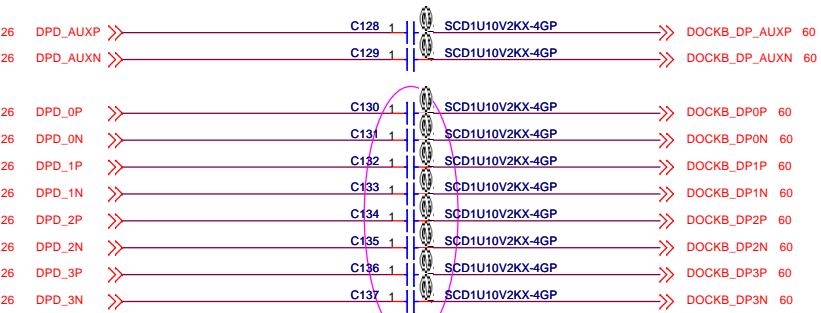


Docking DP Connector A



Place Near Docking Connector

Docking DP Connector B



Place Near Docking Connector

<Core Design>

緯創資通

Wistron Corporation  
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Taipei Hsien 221, Taiwan, R.O.C.

Title

Display Port AC Coupling

Size  
A3

Document Number  
Dasher-1

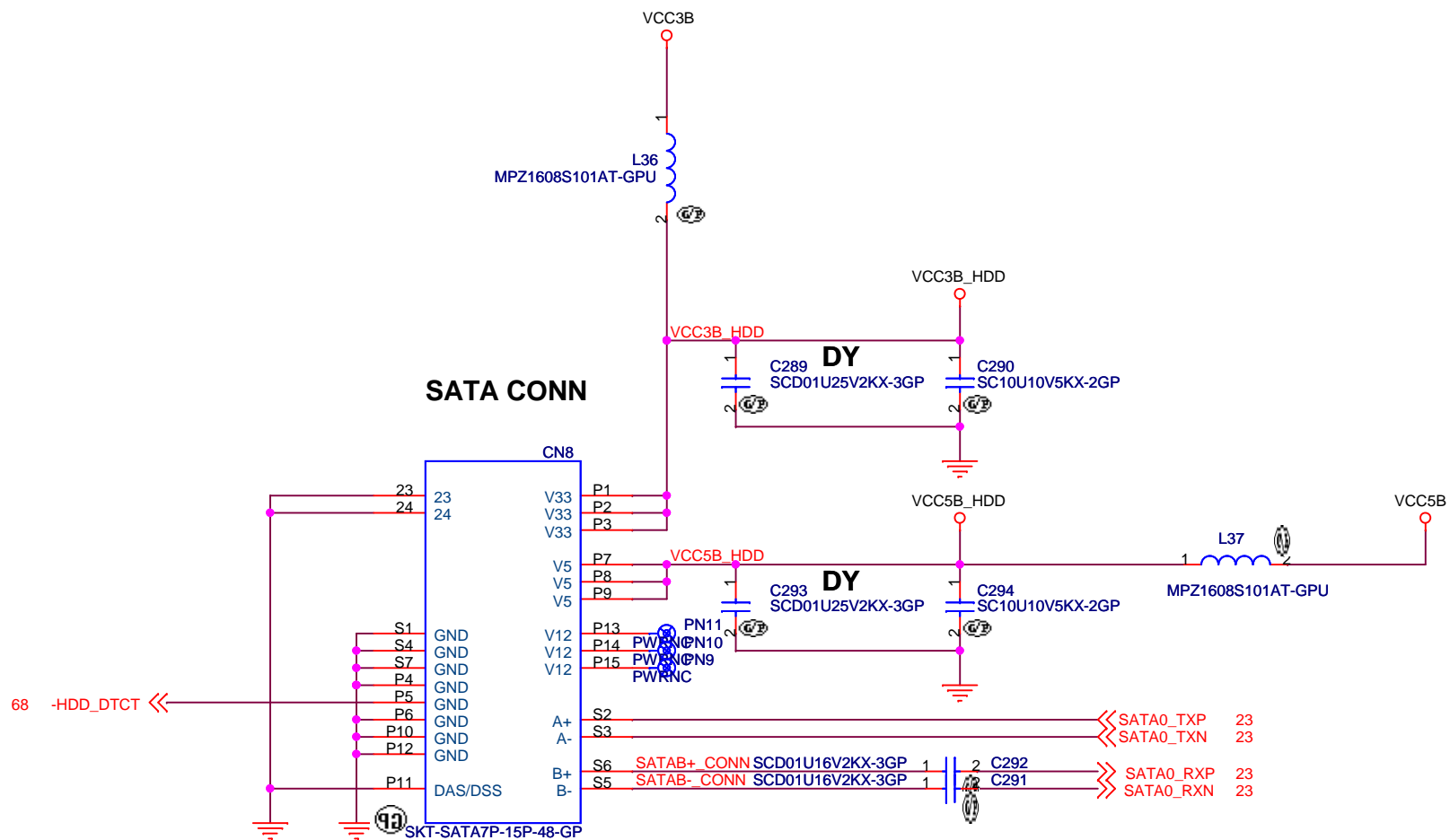
Rev  
SD

Date: Monday, January 10, 2011Sheet 37 of 101

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<Core Design>

<b>緯創資通</b>		<b>Wistron Corporation</b>	
		21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
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Size A3	Document Number  <b>Dasher-1</b>		Rev  <b>SD</b>
Date:	Monday, January 10, 2011	Sheet 38 of	101



<Core Design>

緯創資通

**Wistron Corporation**

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Title

**SATA Connector**

Size  
A4

Document Number

**Dasher-1**

Rev  
**SD**

Date: Monday, January 10, 2011

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<Core Design>

緯創資通

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

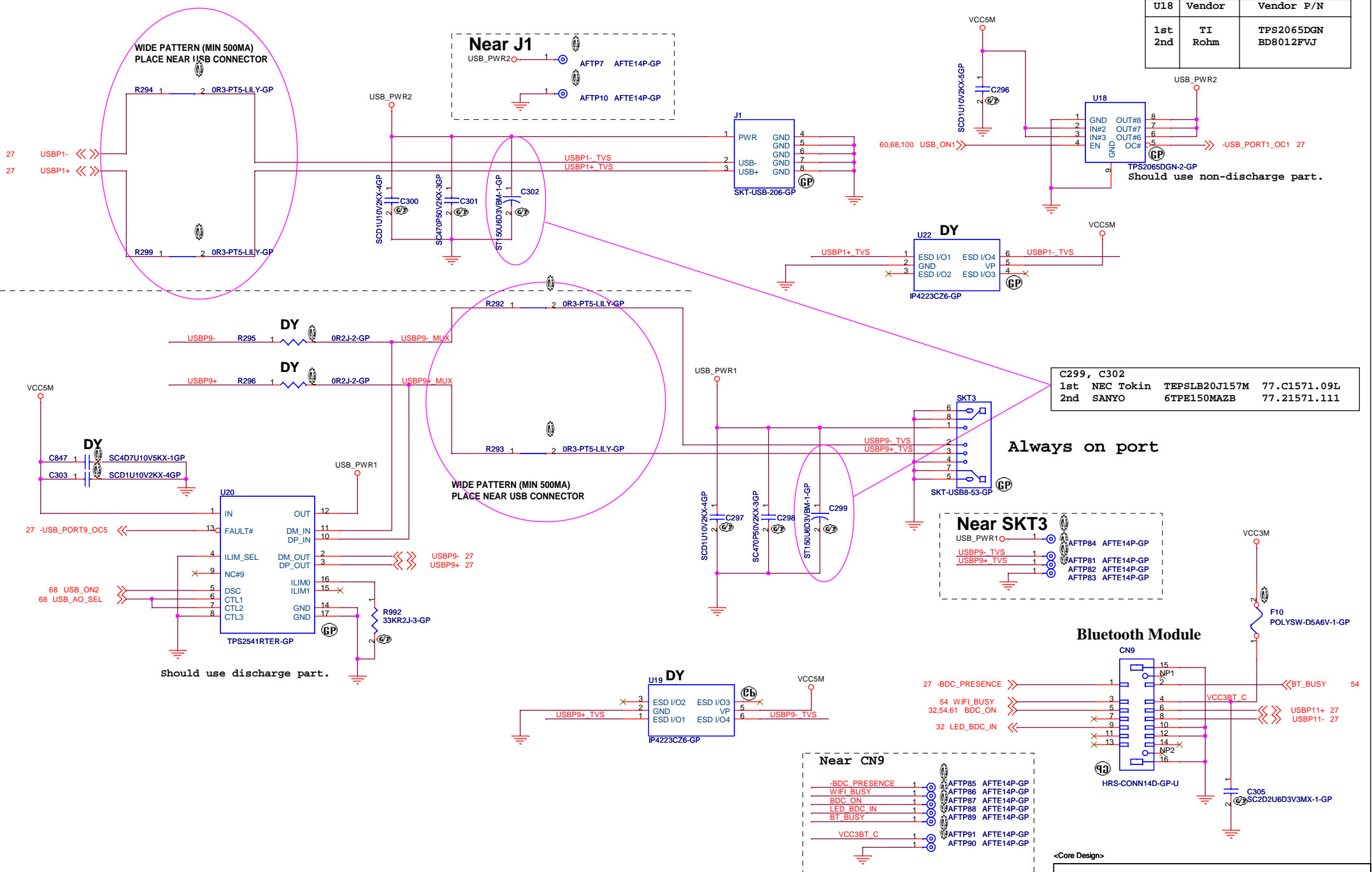
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Size	Document Number		Rev
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Date:	Monday, January 10, 2011	Sheet 40 of 101	



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Title <b>BLANK</b>			
Size A3	Document Number <b>Dasher-1</b>		Rev <b>SD</b>
Date: Monday, January 10, 2011	Sheet 41	of	101

U18	Vendor	Vendor P/N
1st	TI	TPS2065DGN
2nd	Rohm	BD8012FVJ



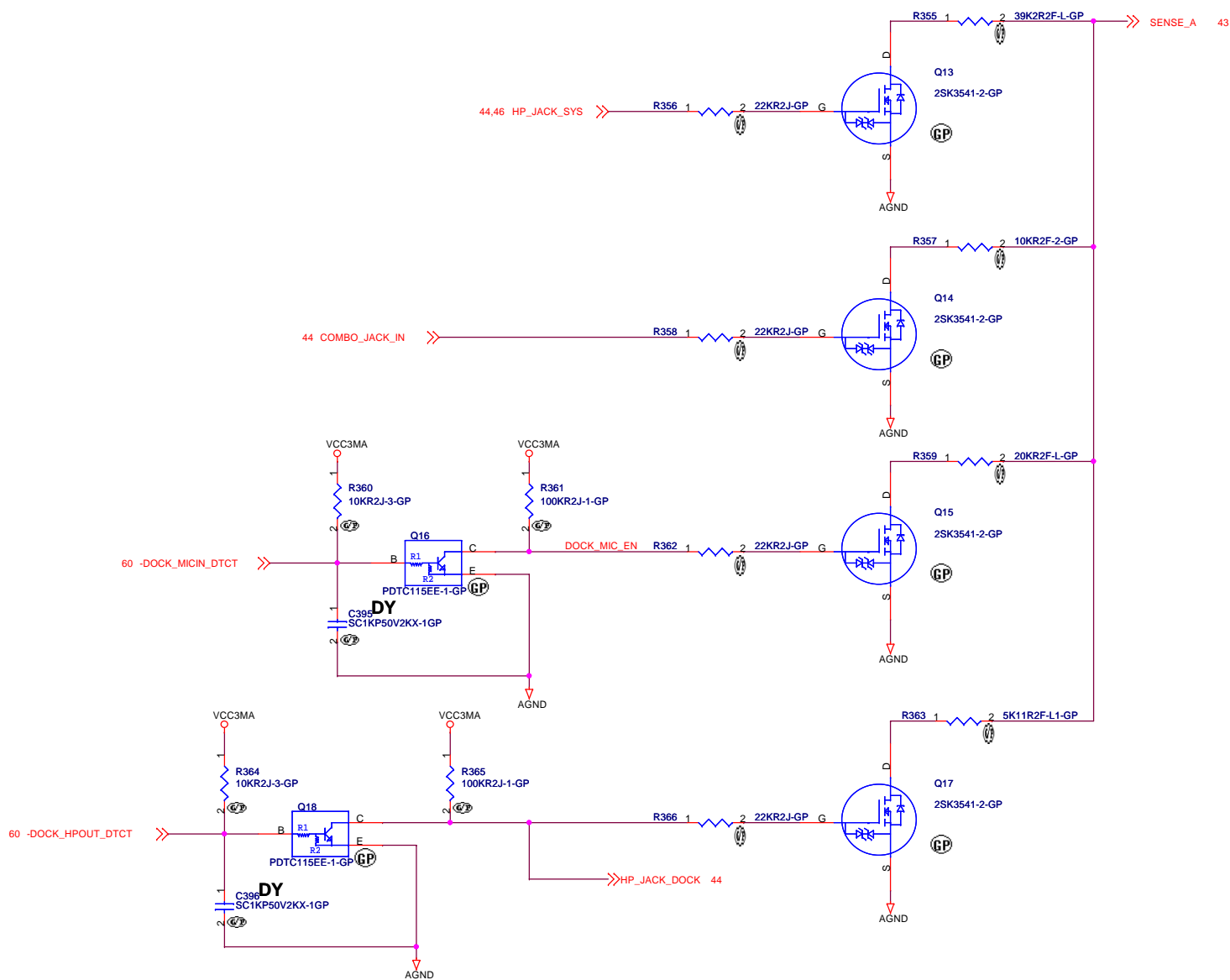
**緯創資通 Wistron Corporation**  
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,  
Taipei Hsien 221, Taiwan, R.O.C.

USB Connector			
Size A3	Document Number	Dasher-1	Rev SD
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## WIDE PATTERN

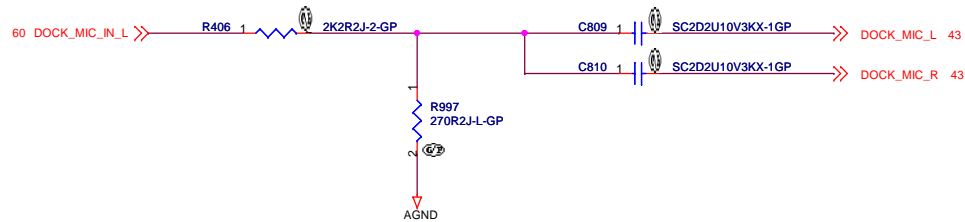
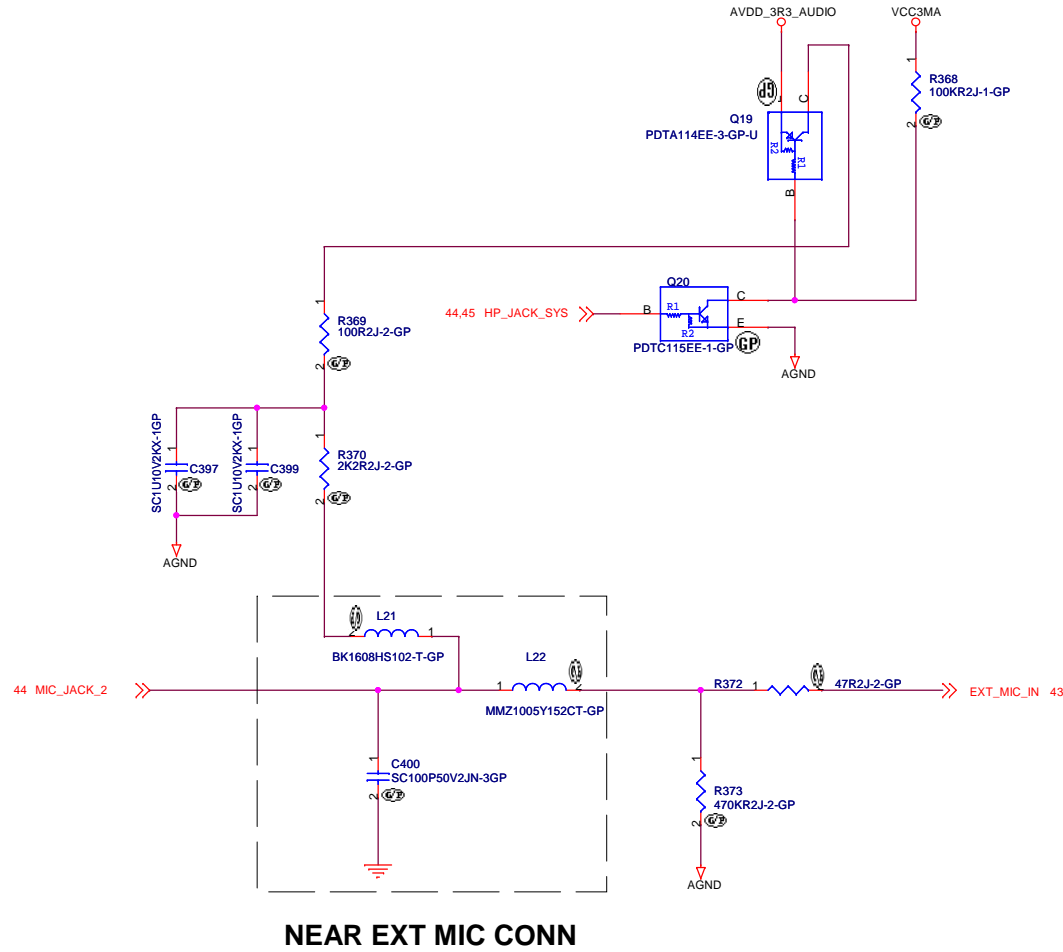




<Core Design>

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

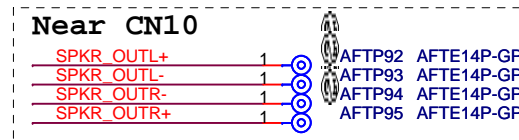
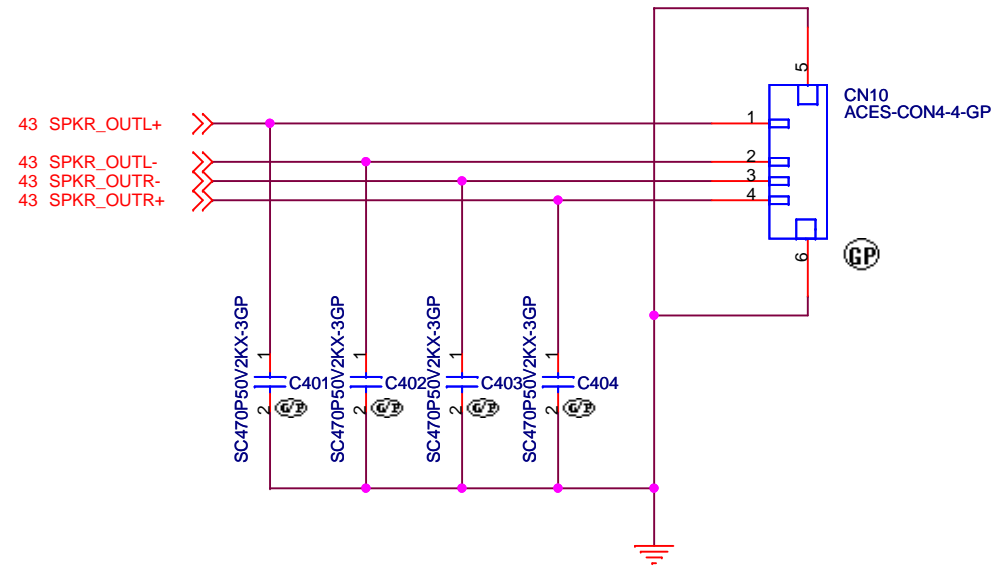
Title			<b>Audio Jack Sense</b>	
Size	Document Number	Dasher-1		Rev
A3				SD
Date:	Monday, January 10, 2011	Sheet	45	of 101



<Core Design>

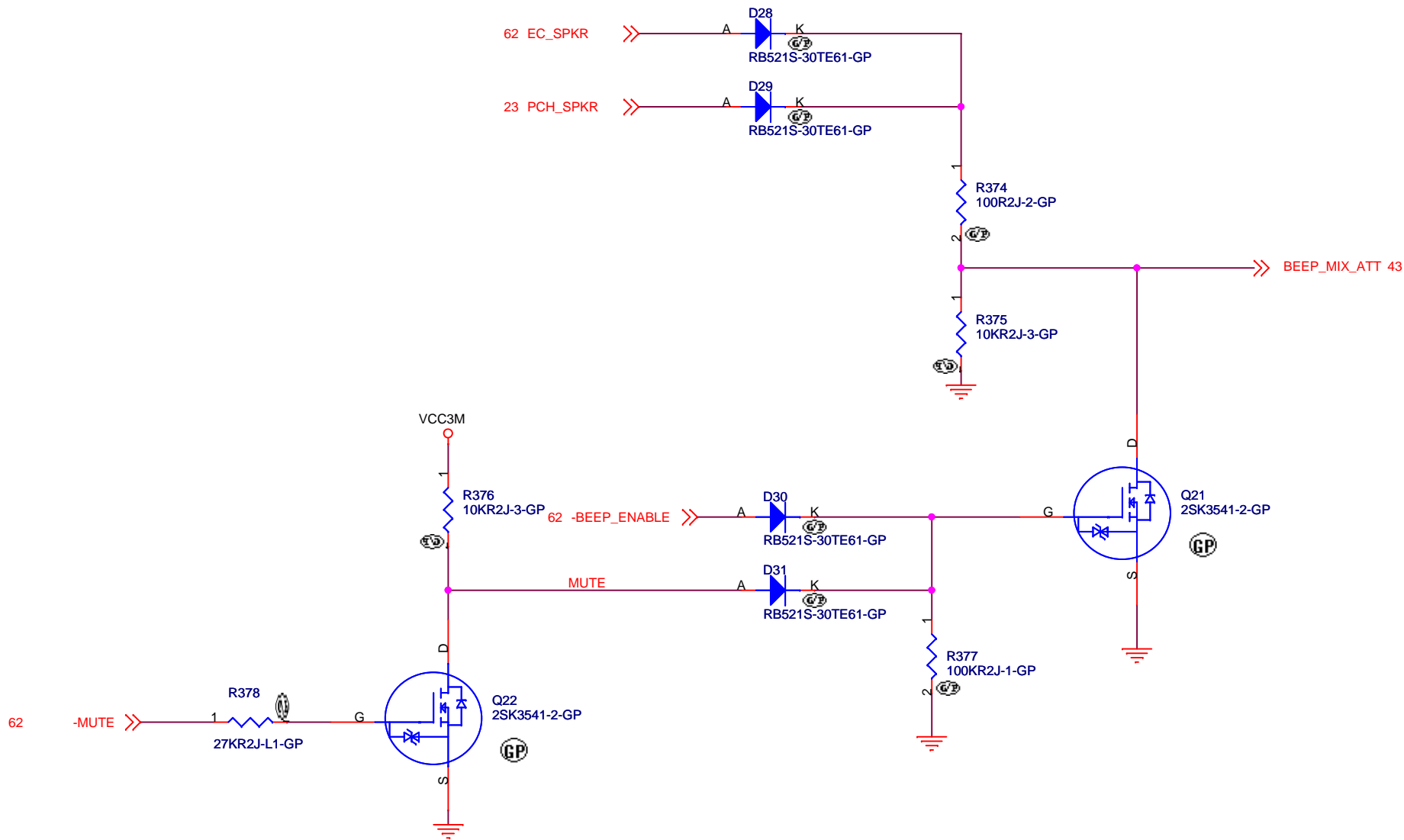
**緯創資通 Wistron Corporation**  
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,  
Taipei Hsien 221, Taiwan, R.O.C.

Title			<b>Audio Ext MIC I/F</b>	
Size	Document Number	Dasher-1		Rev
A3				SD
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<Core Design>

<b>緯創資通</b> <b>Wistron Corporation</b> 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
<b>TITLE</b> <b>AUDIO SPEAKER</b>	
<b>Size</b> A4	<b>Document Number</b> <b>Dasher-1</b>
<b>Date:</b> Monday, January 10, 2011	<b>Rev</b> <b>SD</b>
<b>Sheet</b> 47 <b>of</b> 101	



<Core Design>

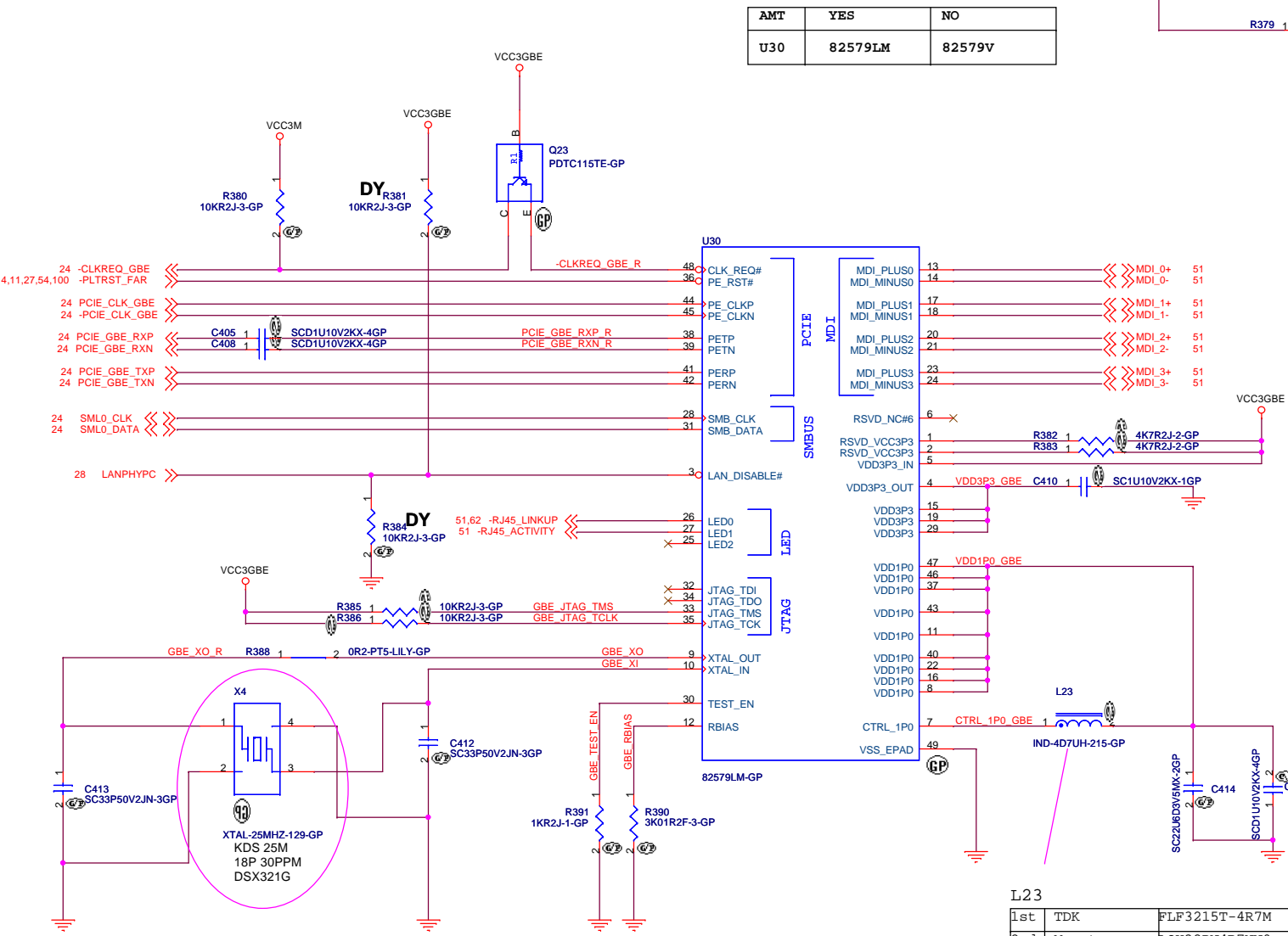
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Title			
Audio BEEP			
Size A4	Document Number Dasher-1		Rev SD
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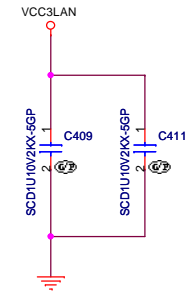
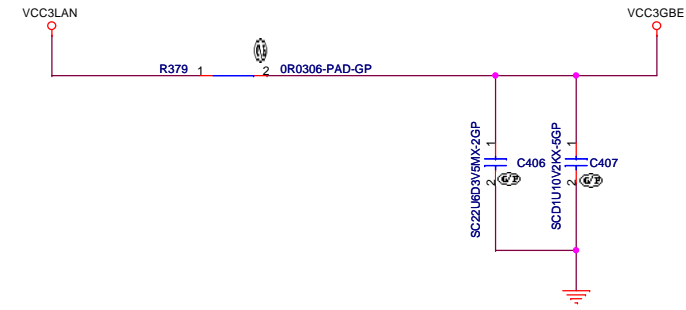
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<b>緯創資通</b>		<b>Wistron Corporation</b>	
		21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
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Size	Document Number		Rev
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AMT	YES	NO
U30	82579LM	82579V



X4			
1st	KDS	DSX321G 25M 18P 30PPM	82.30020.B11
2nd	H.ELE	HSX321S 25M 18P 30PPM	82.30020.B21
3rd	TXC	7V25020001 25M 18P 30PPM	41U6141AA

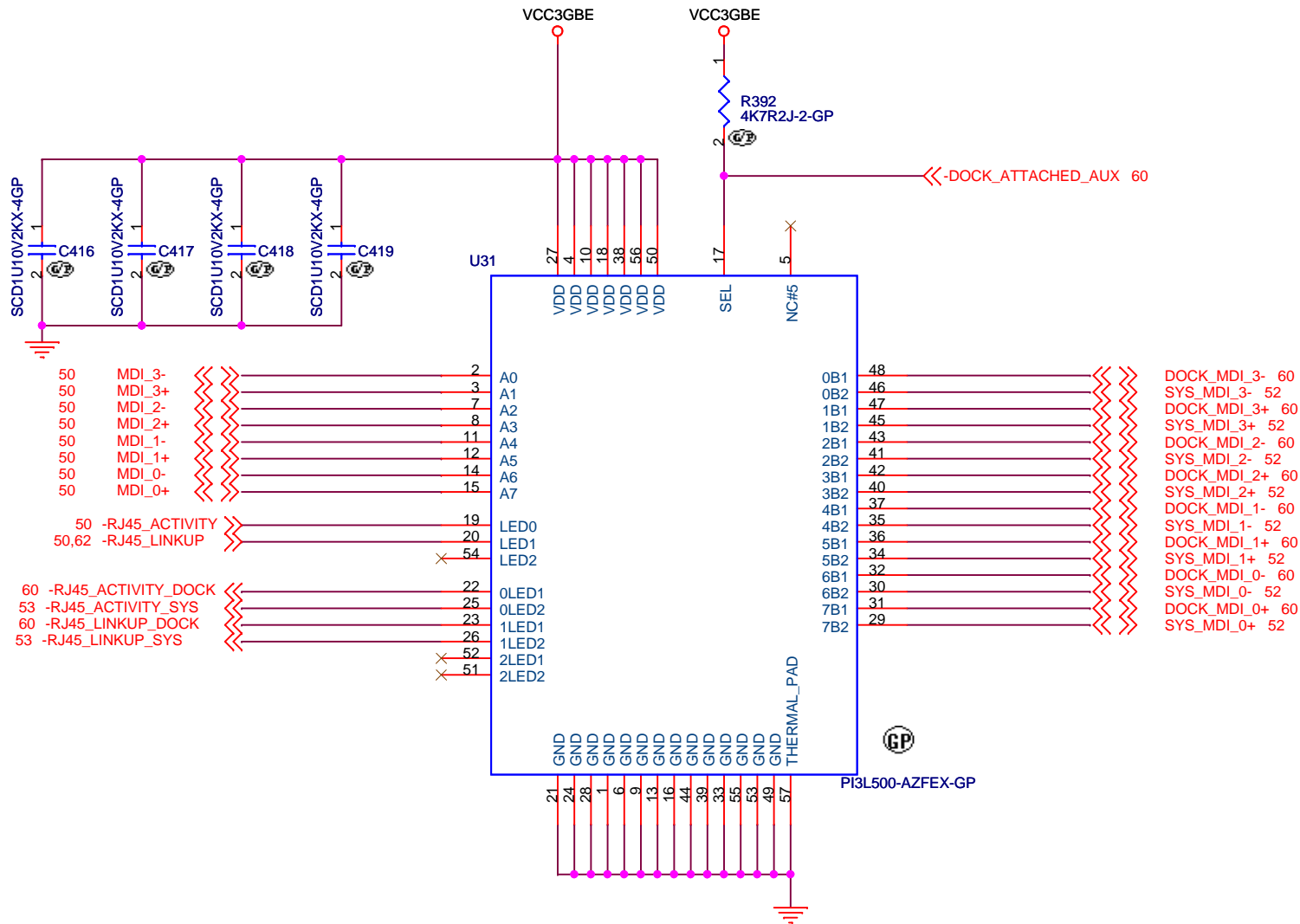
L23			
1st	TDK	FLF3215T-4R7M	68.4R71D.10Q
2nd	Murata	LQH32PN4R7NN0	68.4R750.20H
3rd	Taiyo Yuden	BRL3225T4R7M	68.4R71E.10I

<Core Design>

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Title: **GBE Lewisville**

Size A3	Document Number	Rev SD
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		Vendor P/N	Wistron P/N
1st	Pericom	PI3L500AZFEX	73.3L500.003
2nd	TI	TS3L500AERHUR	73.3L500.A0V
3rd	OnSemi	NS3L500	73.03500.003

<Core Design>

緯創資通

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

Title

**GBE LAN Switch**

Size  
A4

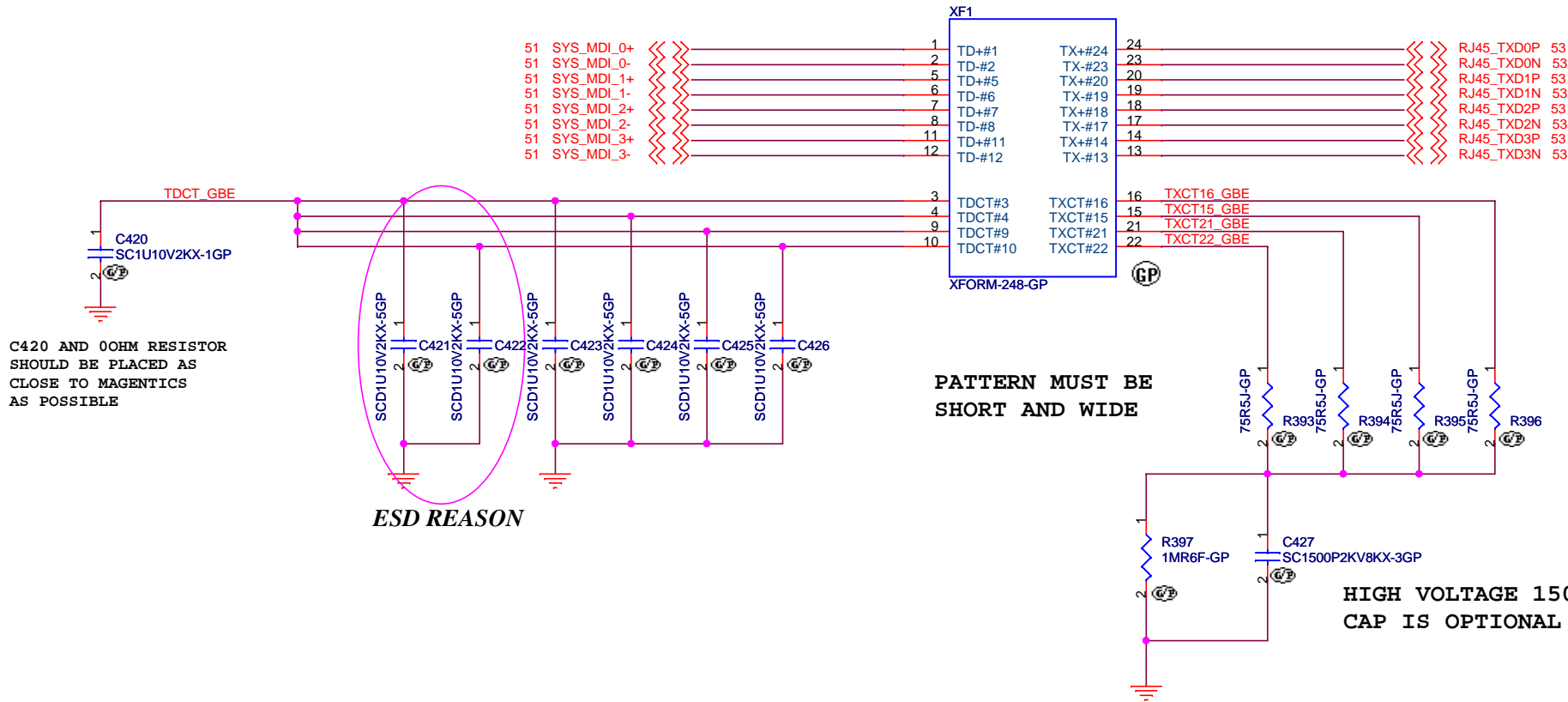
Document Number

**Dasher-1**

Rev  
**SD**

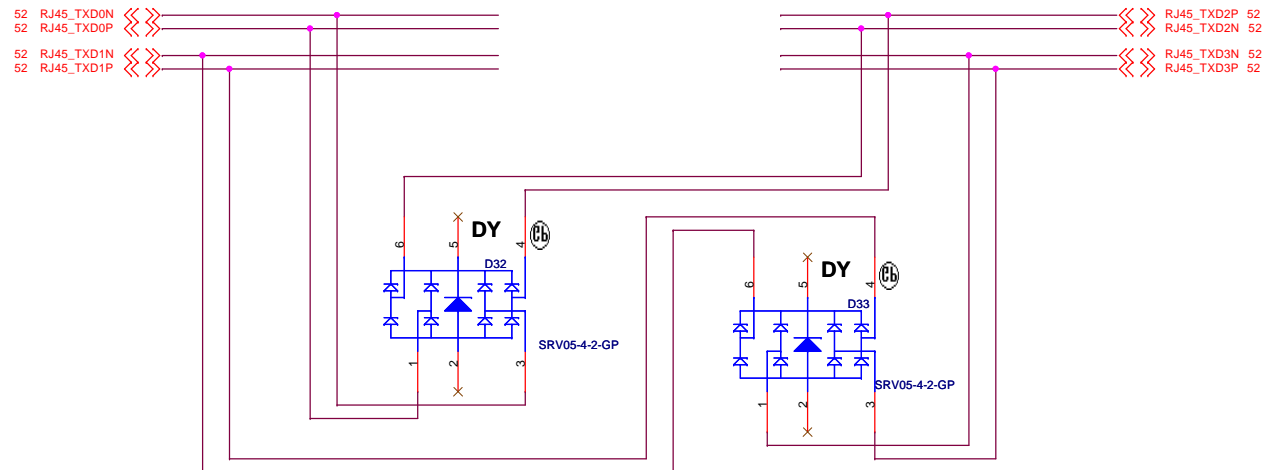
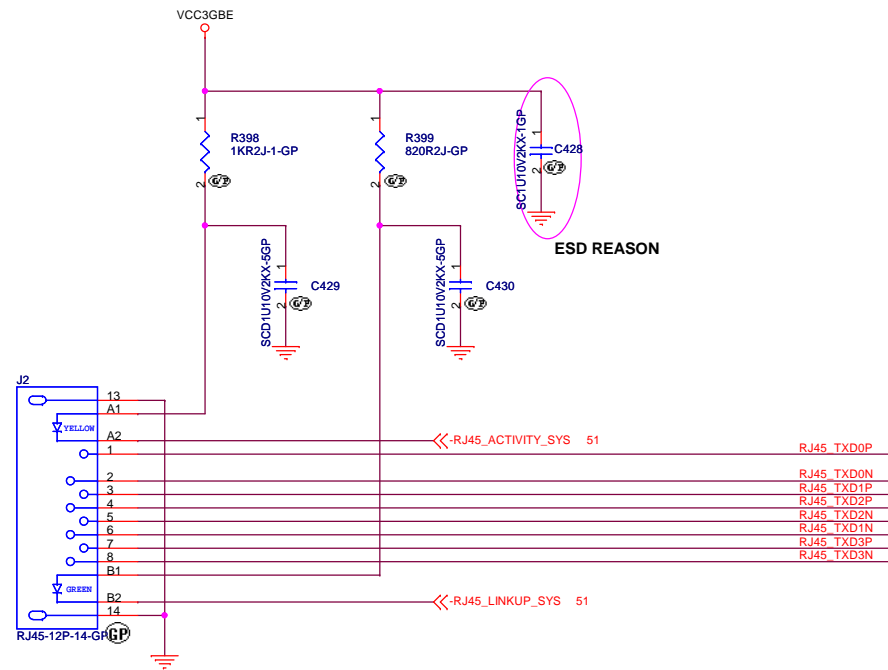
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<Core Design>

緯創資通		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
GBE MAGNETICS			
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Custom	Dasher-1		SD
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<Core Design>

緯創資通

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

Title			
<b>RJ45 CONNECTOR</b>			
Size A3	Document Number	Rev <b>SD</b>	
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## <Core Design>

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

Title

### **MINI CARD SLOT**

Size

Document Number

## Dasher-1

Rev

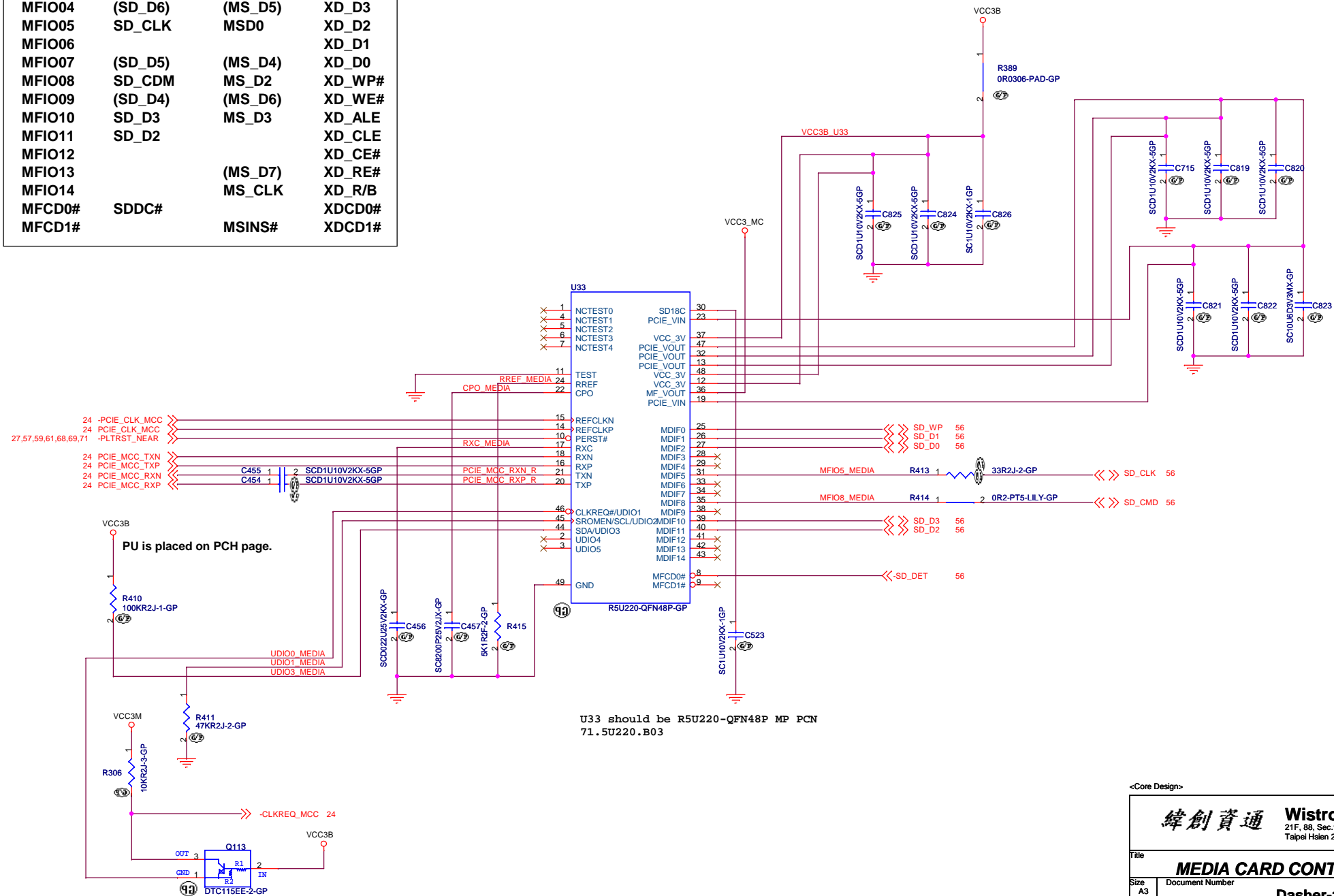
Date: Monday, January 10, 2011

Sheet

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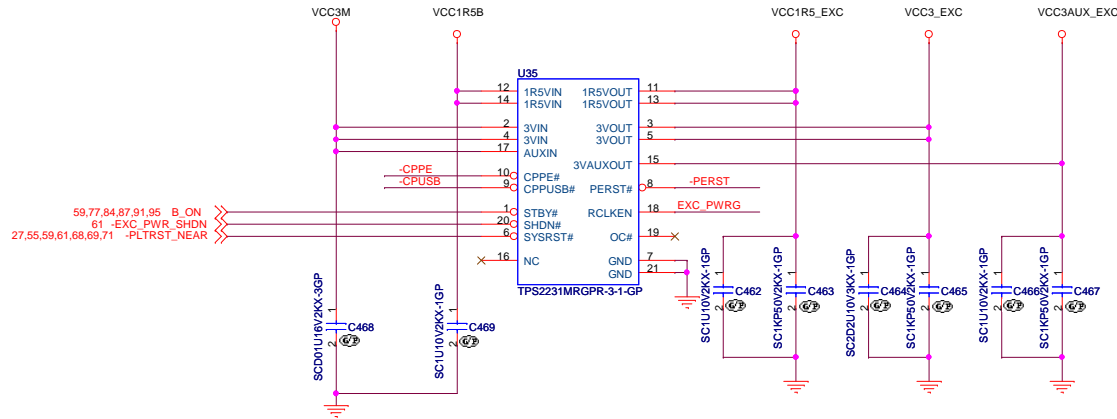
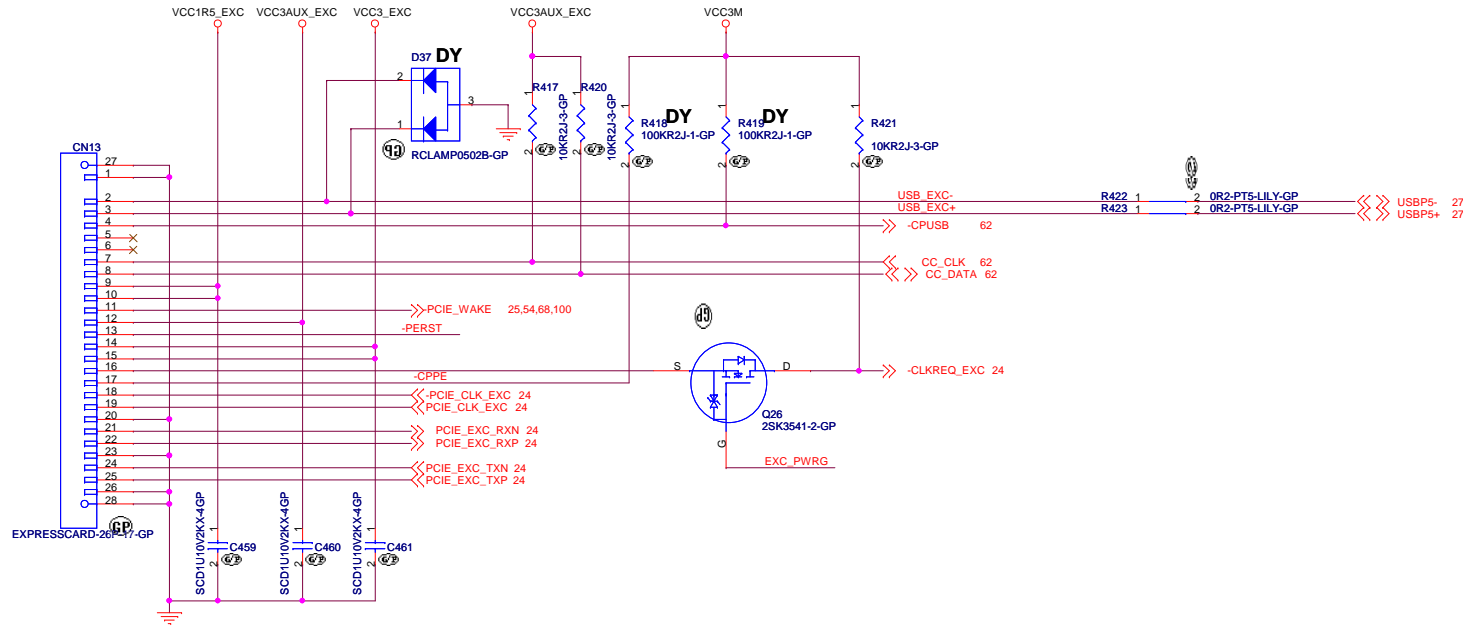
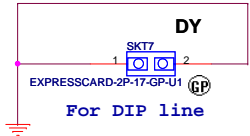
101

MEDIA I/F	SD/MMC	MEMORYSTICK	XD
MFIO00	SDWP#	MSBS	XD_D7
MFIO01	SD_D1		XD_D6
MFIO02	SD_D0	MS_D1	XD_D5
MFIO03	(SD_D7)		XD_D4
MFIO04	(SD_D6)	(MS_D5)	XD_D3
MFIO05	SD_CLK	MSD0	XD_D2
MFIO06			XD_D1
MFIO07	(SD_D5)	(MS_D4)	XD_D0
MFIO08	SD_CDM	MS_D2	XD_WP#
MFIO09	(SD_D4)	(MS_D6)	XD_WE#
MFIO10	SD_D3	MS_D3	XD_ALE
MFIO11	SD_D2		XD_CLE
MFIO12			XD_CE#
MFIO13		(MS_D7)	XD_RE#
MFIO14		MS_CLK	XD_R/B
MFCD0#	SDDC#		XDCD0#
MFCD1#		MSINS#	XDCD1#









U35	TI	TPS2231MRGP-3	45K0234BA
	Rohm	BD4156MUV-E2	74.04156.07T
	Rohm	BD4157MUV-E2	74.04157.073

<Core Design>

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

Title **Express Card Connector**

Size Custom Document Number **Dasher-1** Rev **SD**

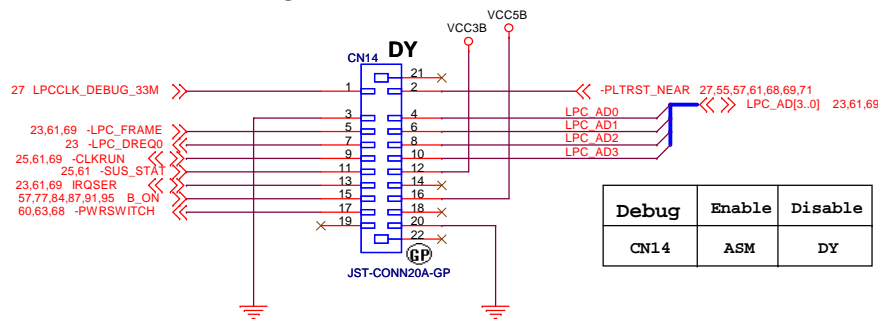
Date: Monday, January 10, 2011 Sheet 57 of 101

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Title <b>BLANK</b>			
Size A	Document Number <b>Dasher-1</b>		Rev <b>SD</b>
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## Debug card connector



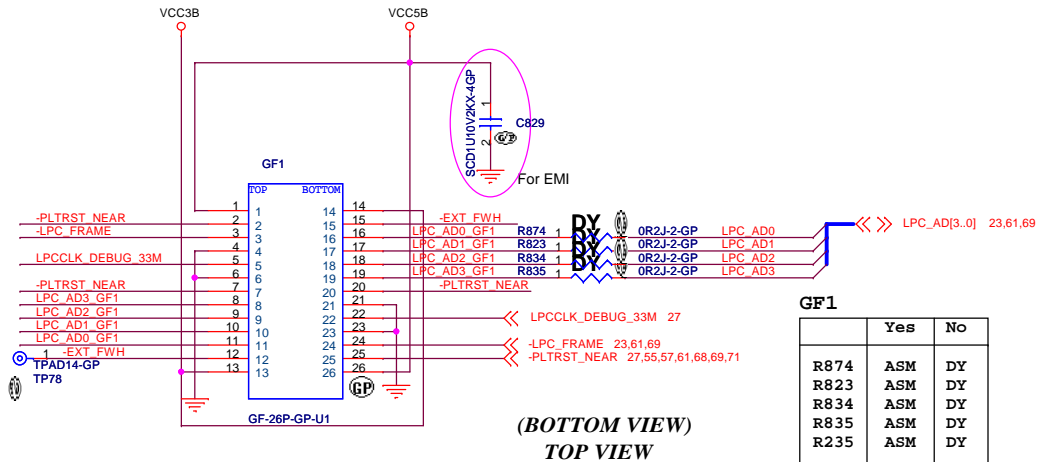
Put "easy-to -access" place

### 64Mbit SPI FLASH (for vPRO model)

SO8		
Marconix	MX25L6436EM2I-10G	72.25643.001
Marconix	MX25L6406EM2I-10G	
Winbond	W25Q64CVSSIG	72.25Q64.B01
Atmel	AT25DF641 or 641A	72.25641.003
MLP8		
Numonyx	M25PX64-VMD6TG	72.25P64.E01

Part Number wait confirm

## Golden Finger for Debug Board

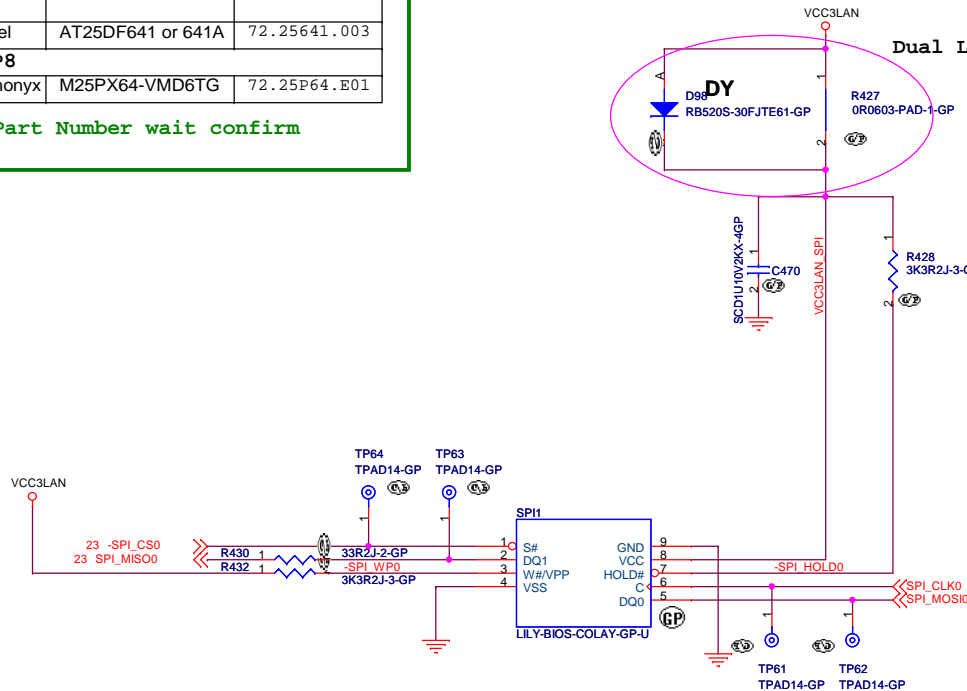


(BOTTOM VIEW)  
TOP VIEW

(26) (25)....(15) (14)  
13 12 .... 2 1

SVT Logic

### Dual Layout



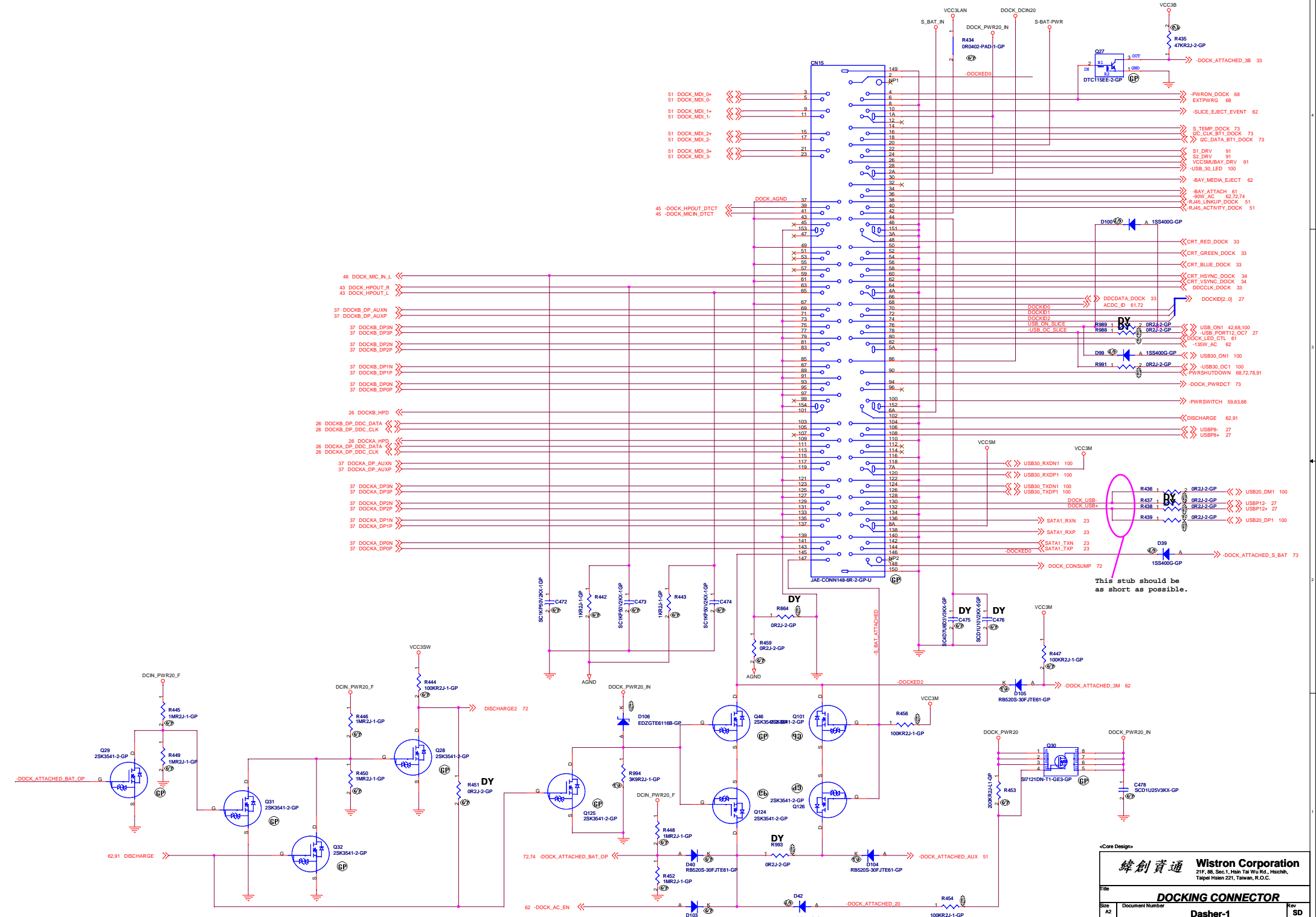
SO8 and WSON8 are both supported!

SF 100 PIN HEADER INTERFACE (Top View)							
1	VCC	R427.2	GND	GND	2		
3	CS#	R148.1	R145.1	CLK	4		
5	MISO	R430.2	R151.1	MOSI	6		
7	(KEY)	N/A	N/A	(RESET)	8		

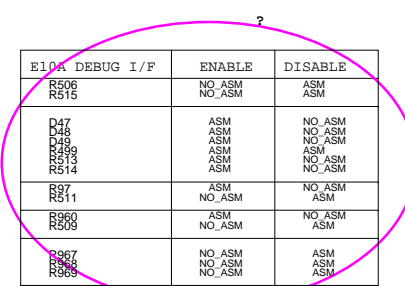
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緯創資通 Wistron Corporation  
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,  
Taipei Hsien 221, Taiwan, R.O.C.

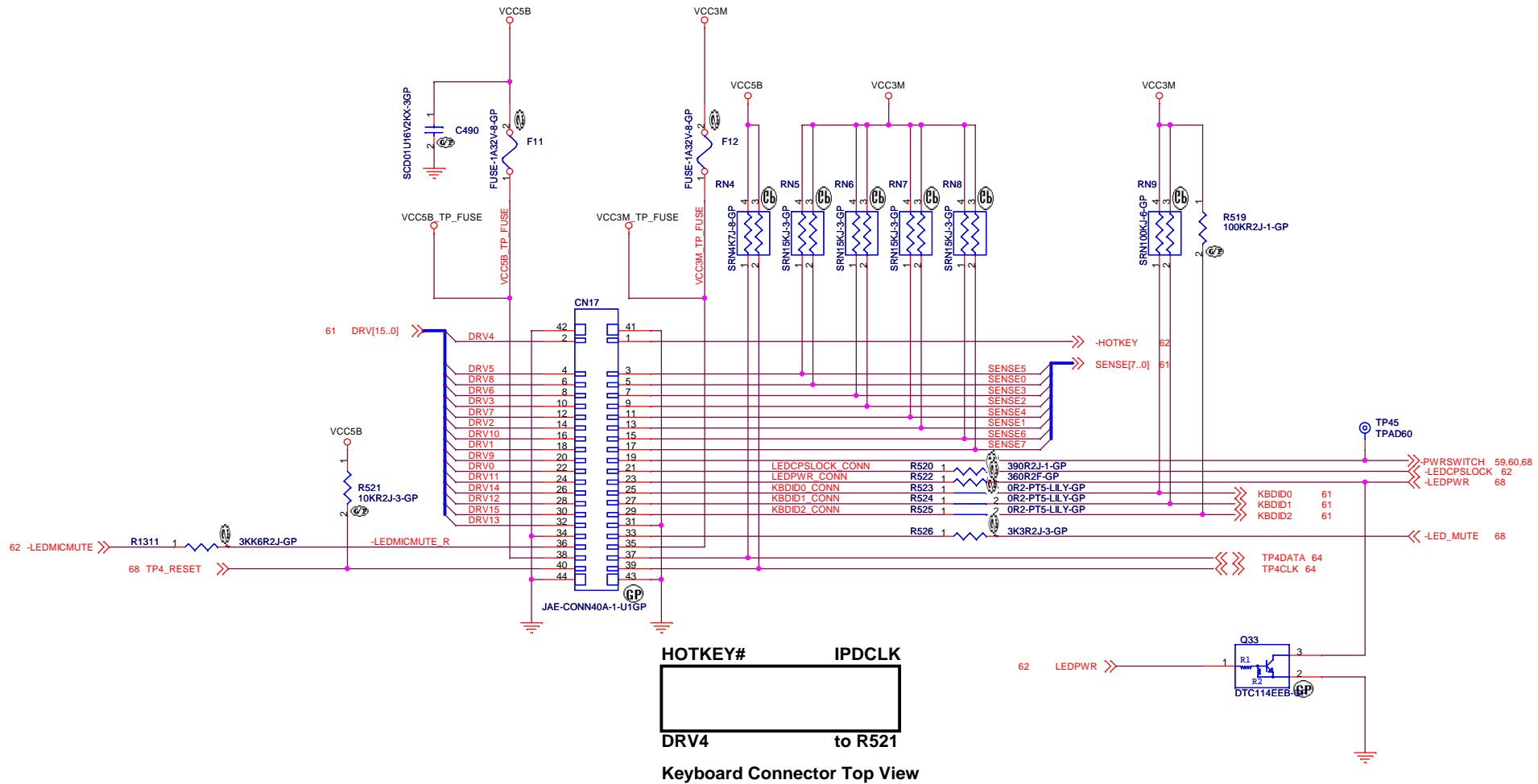
SPI&LPC debug card			
File	Size	Document Number	Rev
	A3	Dasher-1	SD
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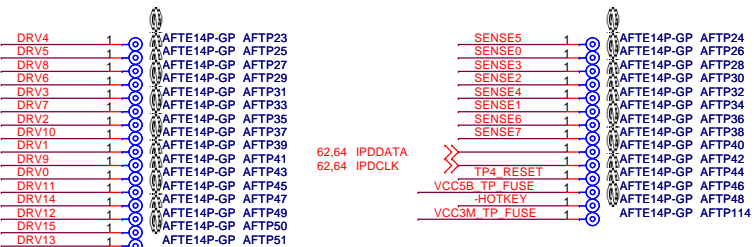




# Keyboard Connector



Near CN17

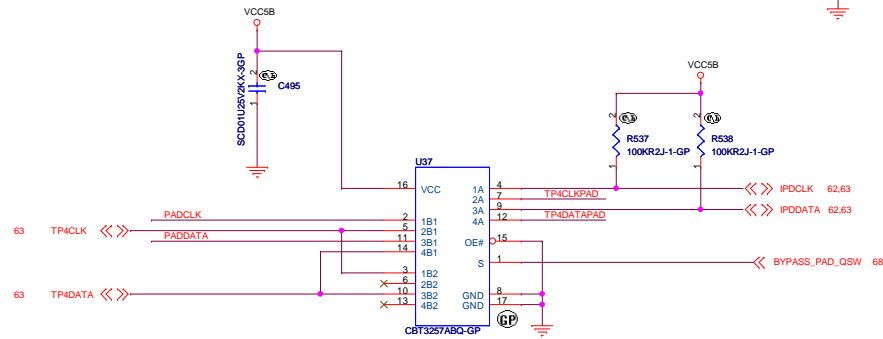
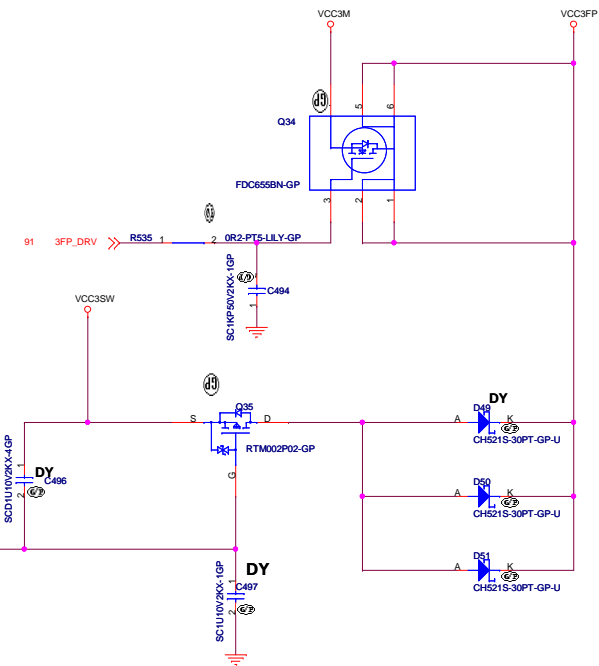
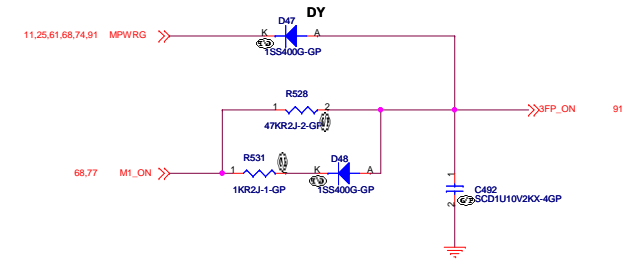
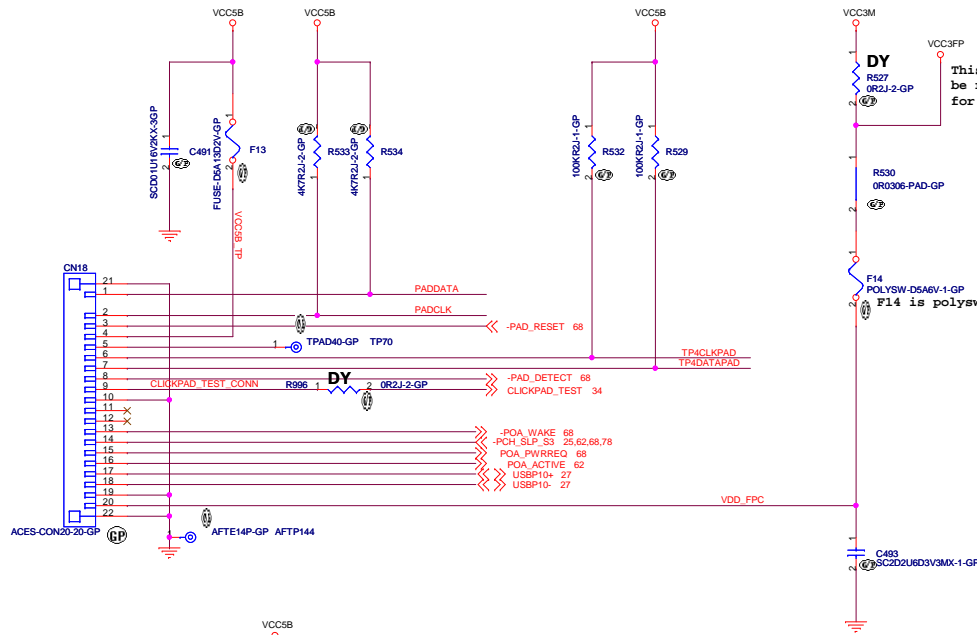


<Core Design>

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

Title			
KEYBOARD CONNECTOR			
Size	Document Number	Rev	
A3		SD	
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# Fingerprint Reader / Touch PAD



Near CN18

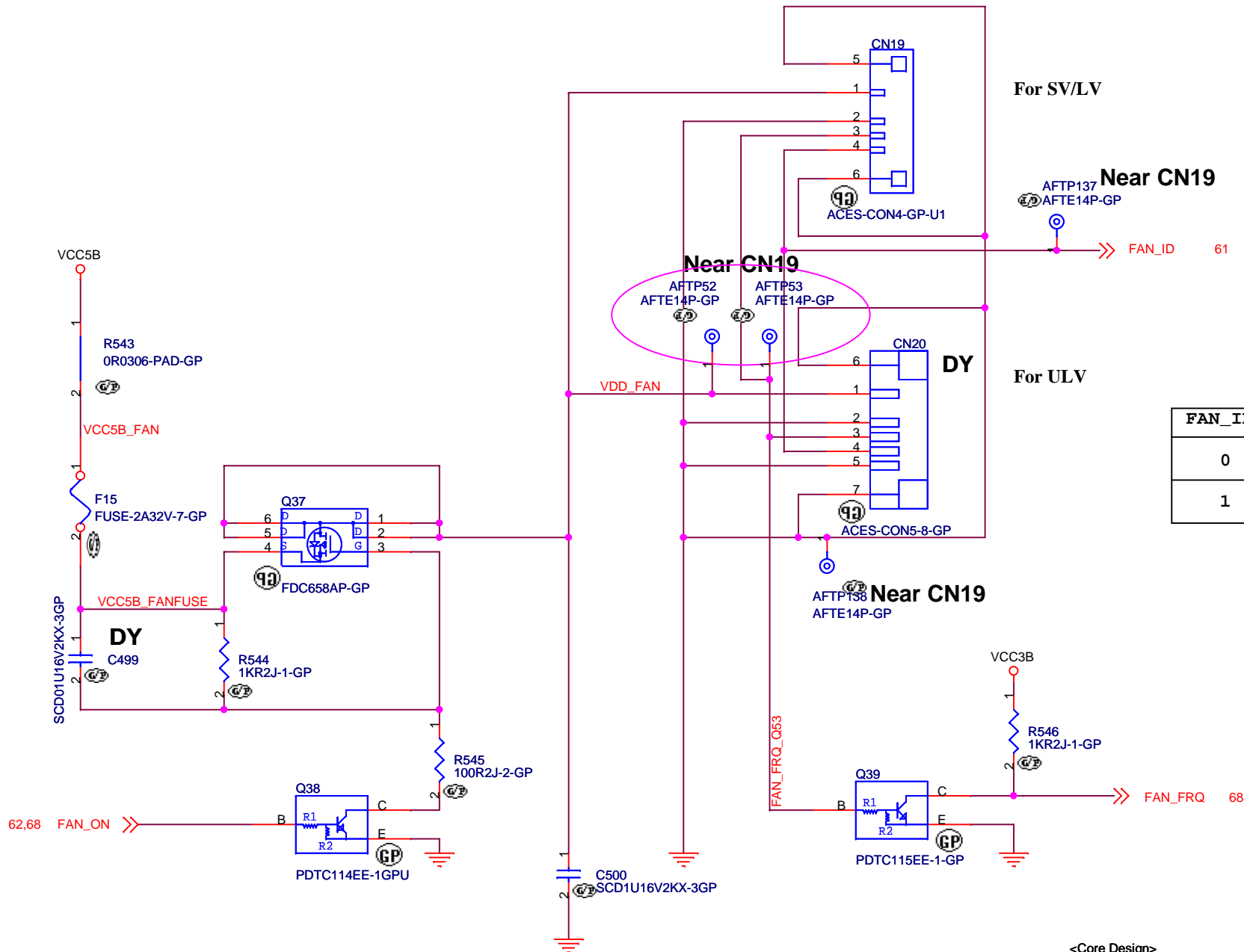
PADDATA	1	AFT14P-GP	AFTP124
PADCLK	1	AFT14P-GP	AFTP125
-PAD_RESET	1	AFT14P-GP	AFTP126
VCC5B_TP	1	AFT14P-GP	AFTP127
TP4CLKPAD	1	AFT14P-GP	AFTP128
TP4DATA PAD	1	AFT14P-GP	AFTP129
-PAD_DETECT	1	AFT14P-GP	AFTP130
CLICKPAD_TEST_CONN	1	AFT14P-GP	AFTP131
-POA_WAKE	1	AFT14P-GP	AFTP132
-POA_SLP_S3	1	AFT14P-GP	AFTP133
POA_PWRREQ	1	AFT14P-GP	AFTP134
POA_ACTIVE	1	AFT14P-GP	AFTP135
VDD_FPC	1	AFT14P-GP	AFTP136



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<Core Design>

		<b>Wistron Corporation</b> 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title <b>BLANK</b>			
Size A	Document Number <b>Dasher-1</b>		Rev <b>SD</b>
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<Core Design>

緯創資通

**Wistron Corporation**

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

Title

**FAN Control**

Size  
A4

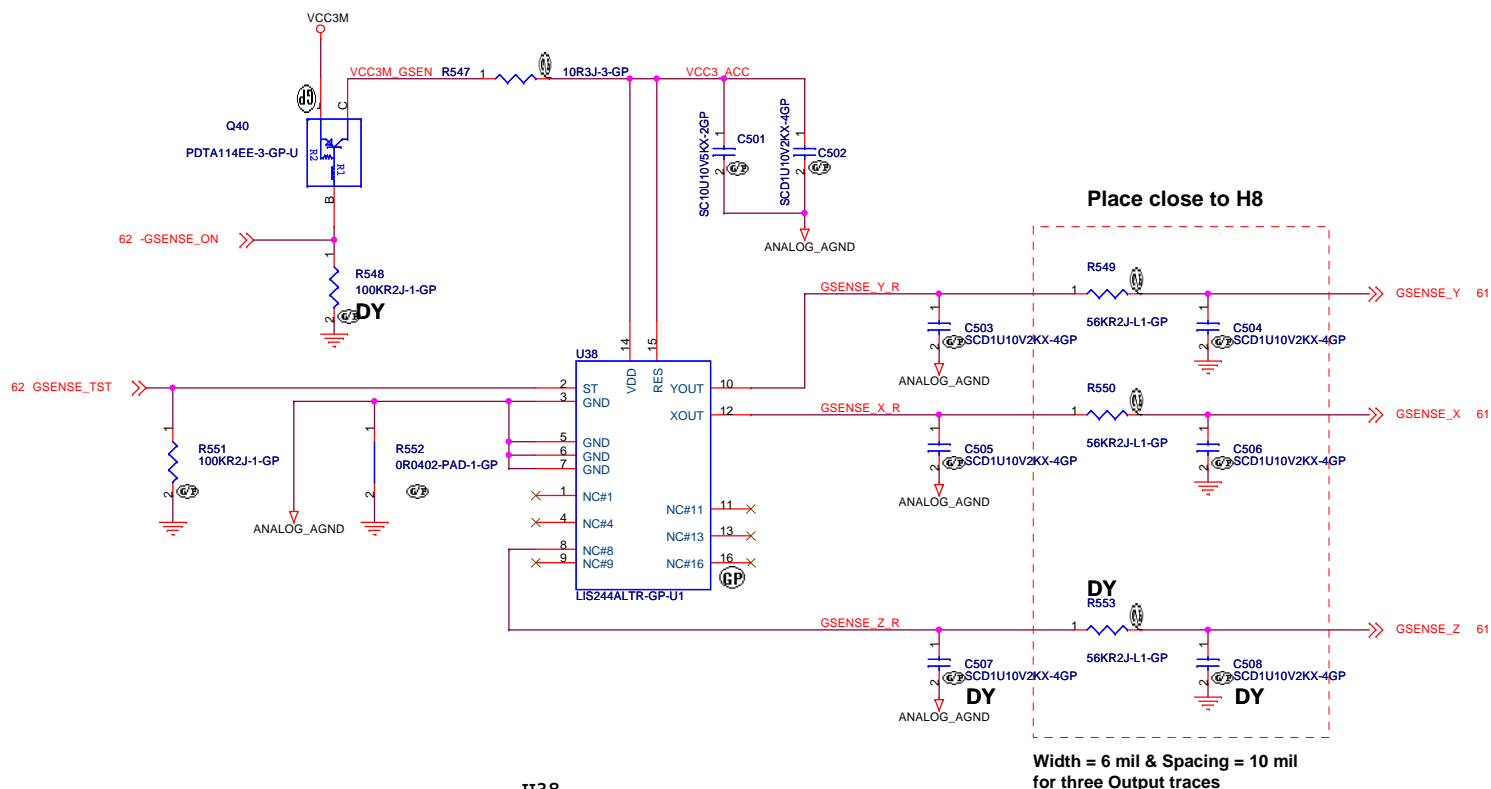
Document Number

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Rev  
SD

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	LIS244AL LIS34AL	No Accel
R548	DY	ASM
R551	ASM	ASM
U38	ASM	DY
Q40	ASM	DY
R547	ASM	DY
C501	ASM	DY
C502	ASM	DY
R552	ASM	DY
C503	ASM	DY
R549	ASM	DY
C504	ASM	DY
C505	ASM	DY
R550	ASM	DY
C506	ASM	DY
C507	DY	DY
R553	DY	DY
C508	DY	DY

U38

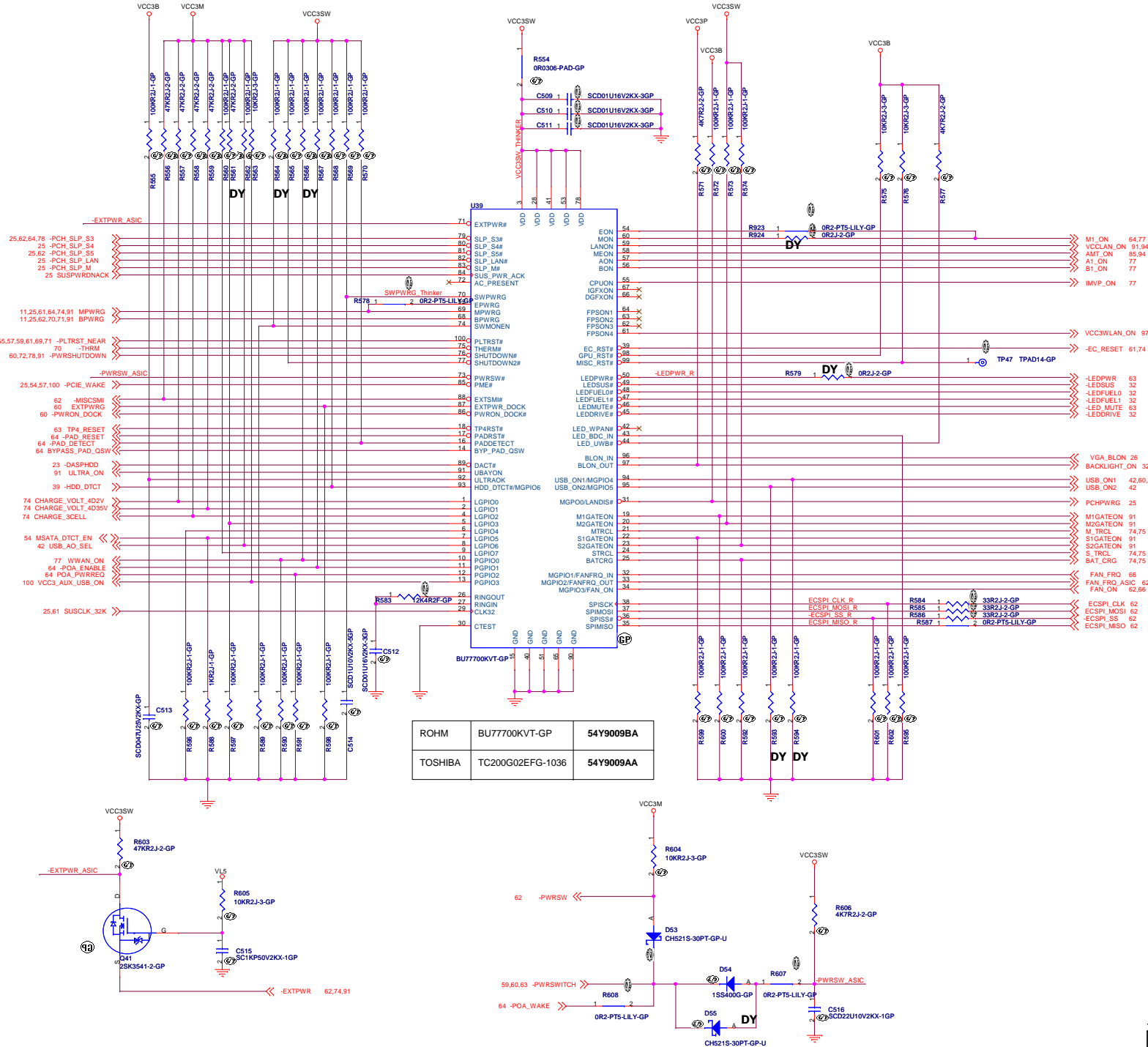
Primary	STMicro LIS244AL	74.00244.0BZ
Second	STMicro LIS34AL	74.00034.0BZ
Third	Kionix KXTC8-2850	74.KXTC8.0BZ

Layout Comment :

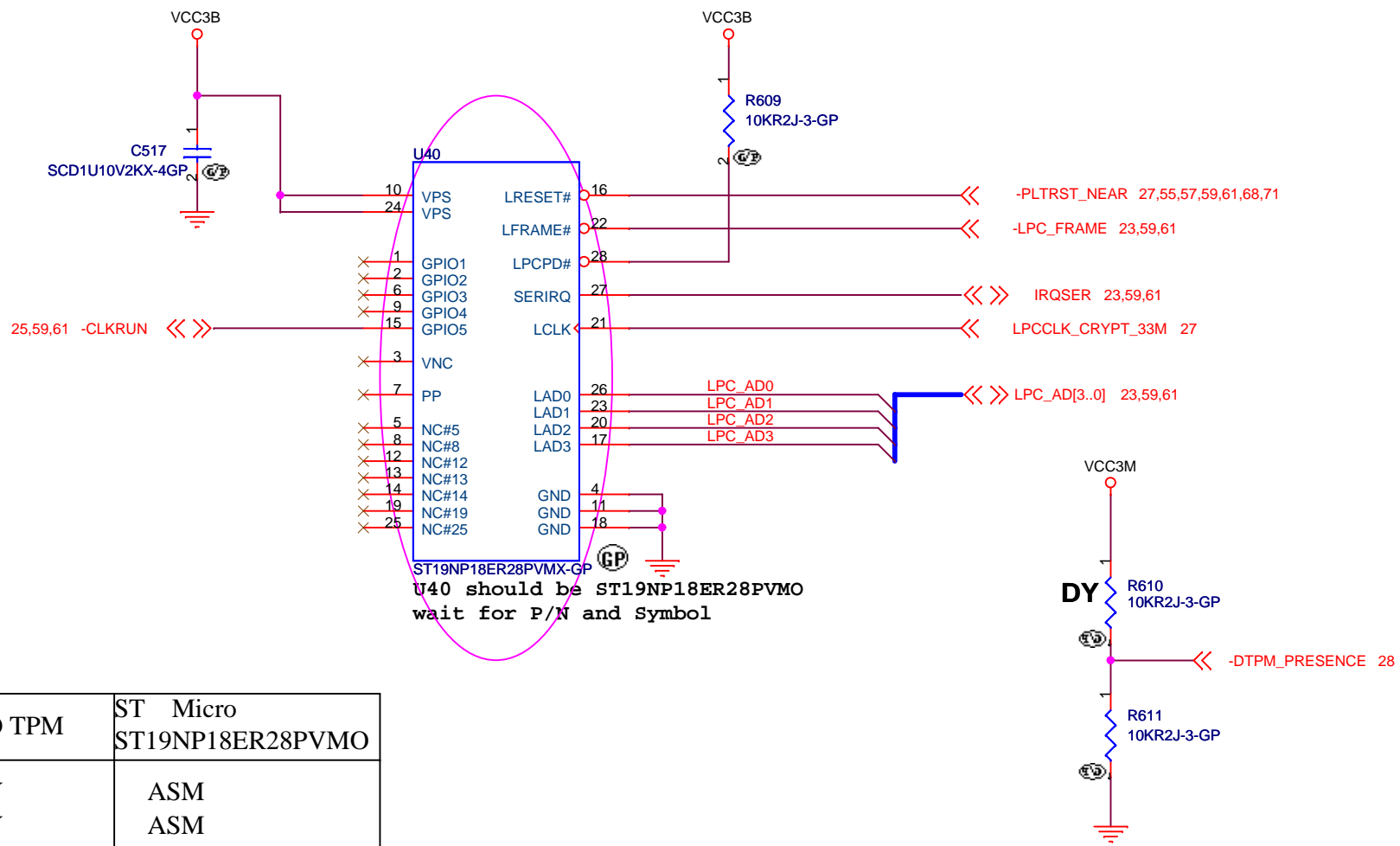
- (1) Place C475,C476,Q64,R572,R580 C464,C472,R564,R569 close to U26
- (2) Avoid routing under DCDC switching area.

<Core Design>

<b>緯創資通 Wistron Corporation</b> 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.		
Title		
G-SENSOR		
Size A3	Document Number	Rev SD
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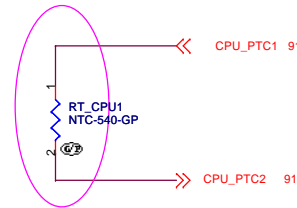
ROHM	BU77700KT-GP	54Y9009BA
TOSHIBA	TC200G02EFG-1036	54Y9009AA



	NO TPM	ST Micro ST19NP18ER28PVMO
U40	DY	ASM
C517	DY	ASM
R609	DY	ASM
R610	ASM	DY
R611	DY	ASM

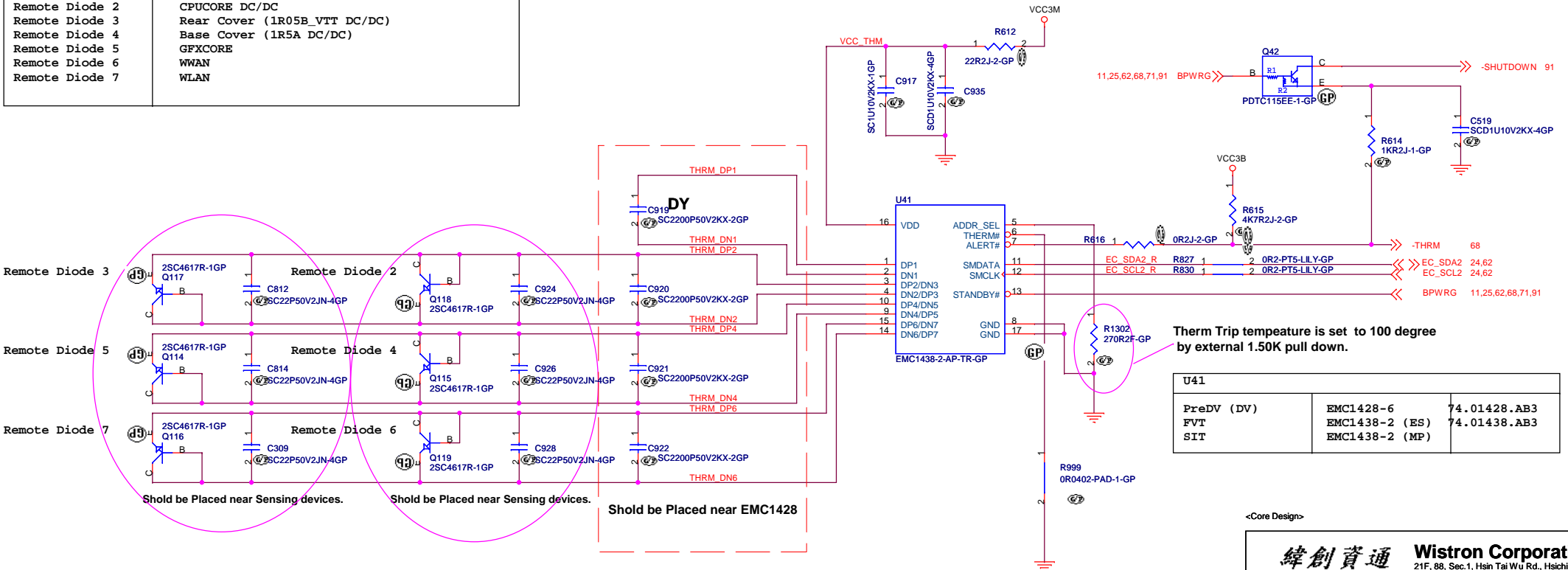
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Title <b>TPM</b>	
Size A4	Document Number <b>Dasher-1</b>
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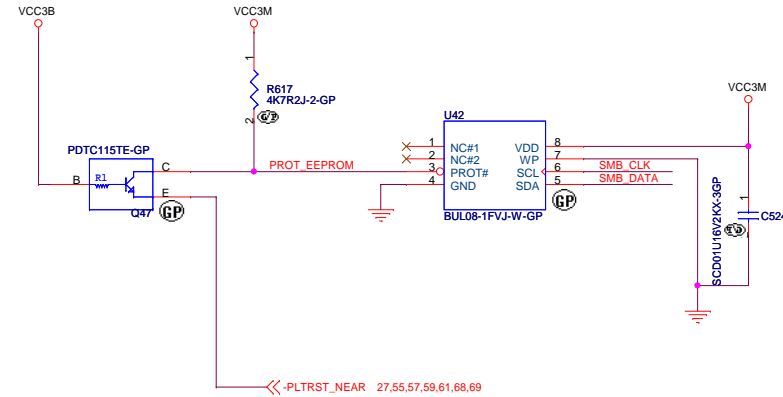
It should be arranged near CPU instead of CPU thermal sensor

Channel	Location
Local	MEMORY
Remote Diode 2	CPUCORE DC/DC
Remote Diode 3	Rear Cover (1R05B_VTT DC/DC)
Remote Diode 4	Base Cover (1R5A DC/DC)
Remote Diode 5	GFXCORE
Remote Diode 6	WWAN
Remote Diode 7	WLAN



U41		
PreDV (DV)	EMC1428-6	74.01428.AB3
FVT	EMC1438-2 (ES)	74.01438.AB3
SIT	EMC1438-2 (MP)	

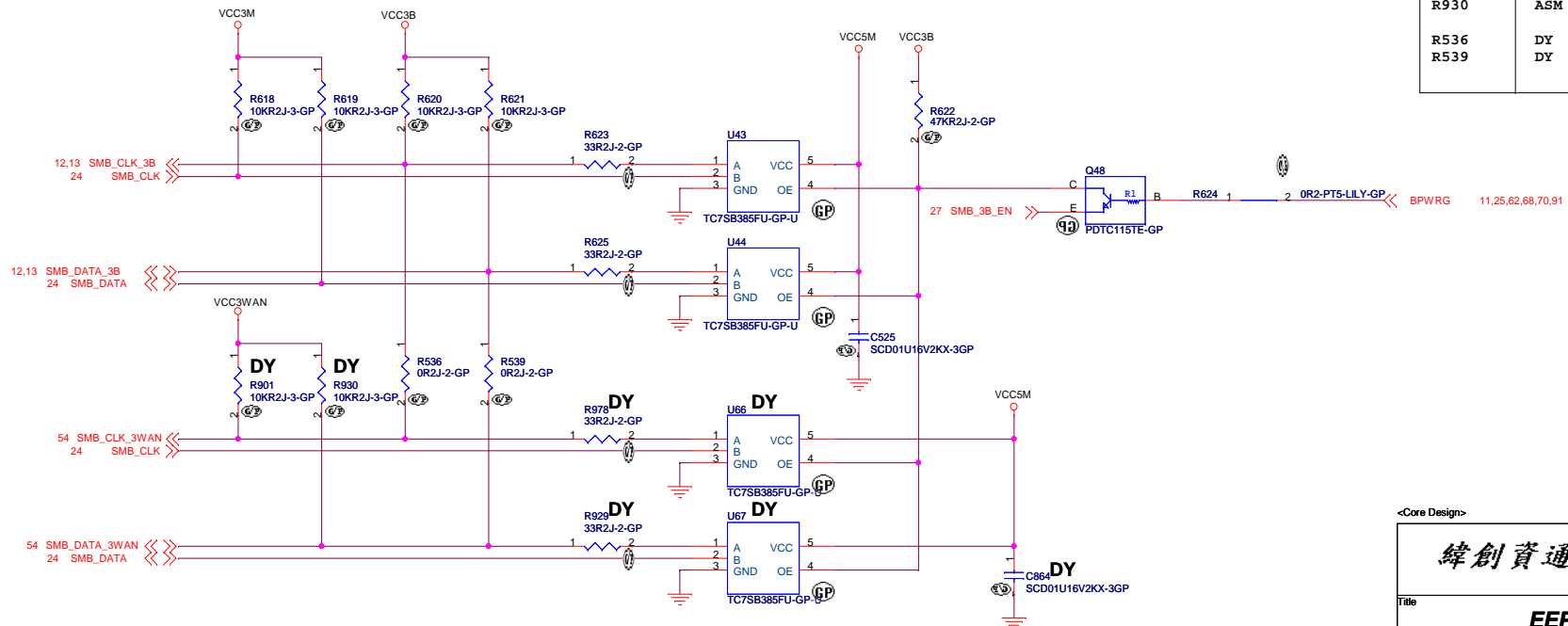
## ***EEPROM***



	Vendor	U42	Part Number
1st	ROHM	BUL08-1FVJ-W	72.BUL08.00Q
2nd	PHILIPS	PCA24S08ADP	72.24S08.A0Q
3rd	Sanyo	LE26CAP08TT	72.26C08.00R

CONSTANT SECURE	YES	NO
U66	ASM	DY
U67	ASM	DY
C864	ASM	DY
R978	ASM	DY
R929	ASM	DY
R901	ASM	DY
R930	ASM	DY
R536	DY	ASM
R539	DY	ASM

Logic



**<Core Design>**

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No.	Title	Date	Page
1	...	...	...
2	...	...	...
3	...	...	...
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7	...	...	...
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36	...	...	...
37	...		

**EEPROM/SMBUS SW**

Size	Document Number
Custom	

## Dasher-1

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Date: Monday, January 10, 2011

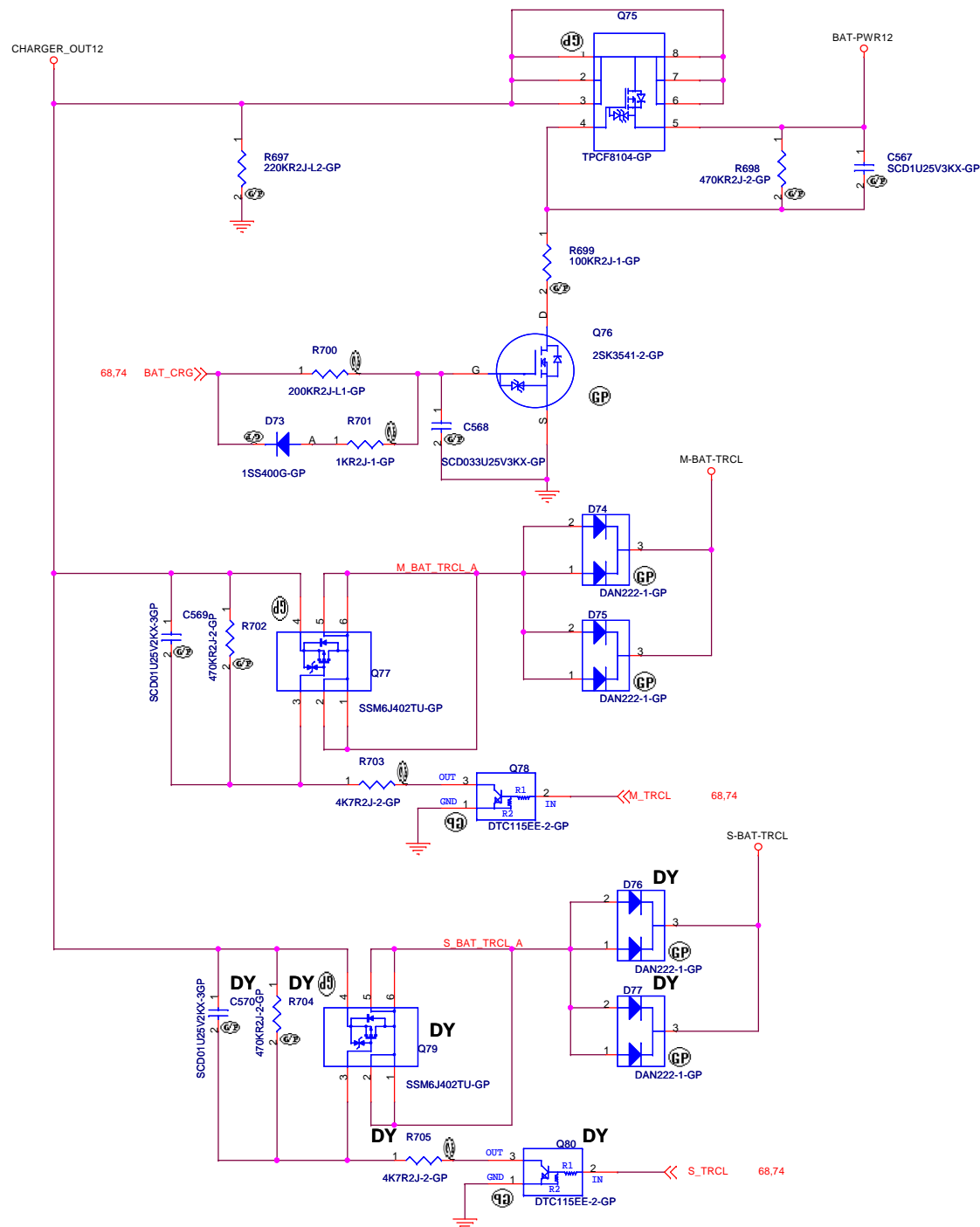
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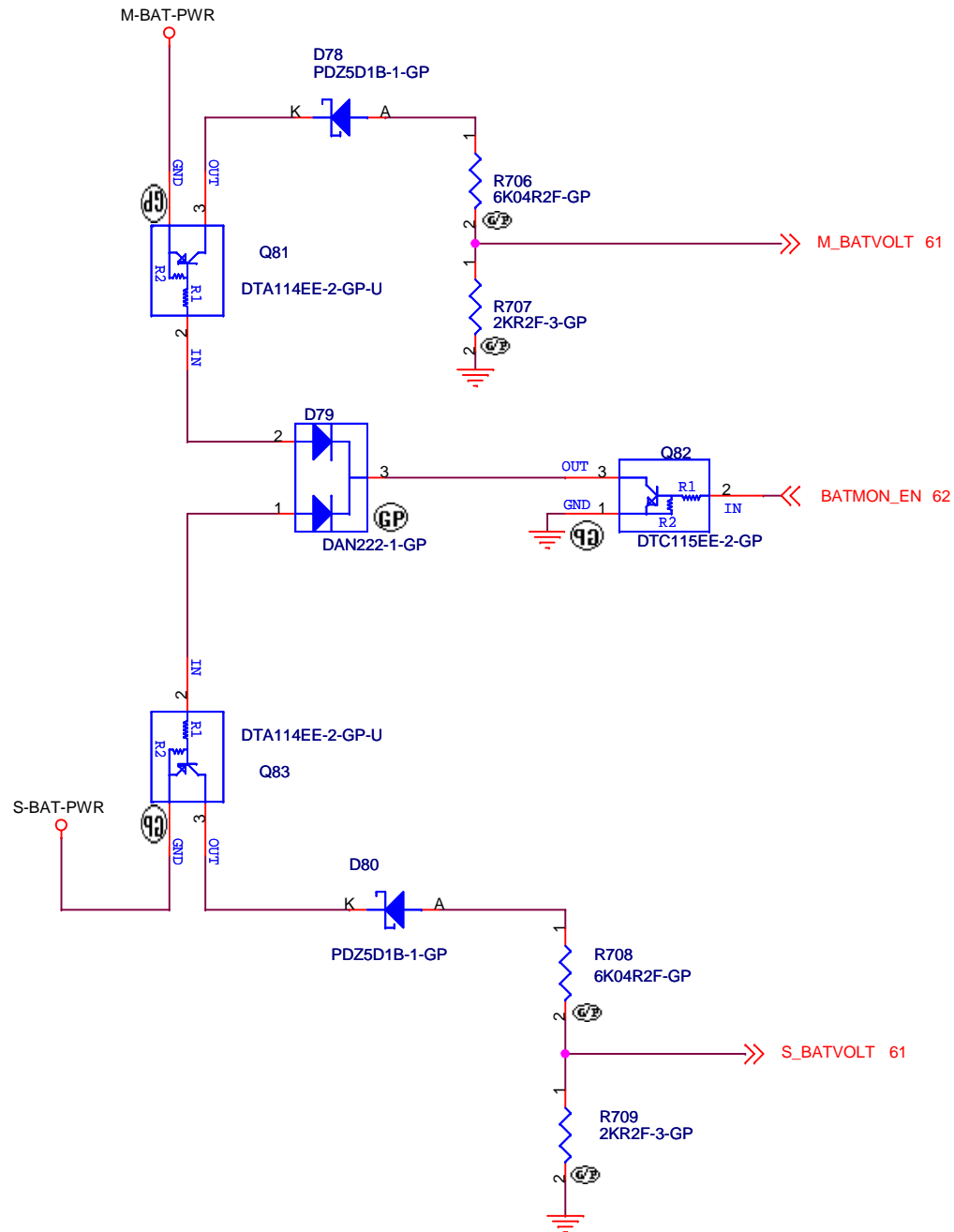


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Title		
CHARGER SELECT		
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$$V_{OUT} = 0.249 (V_{BAT} - 5)$$



<Core Design>

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Taipei Hsien 221, Taiwan, R.O.C.

Title

**BATTERY MONITOR**

Size  
A4

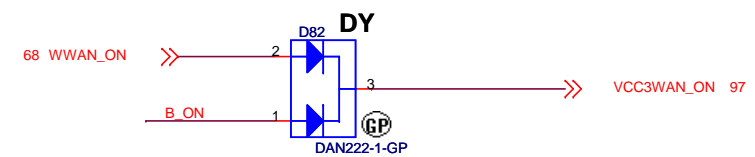
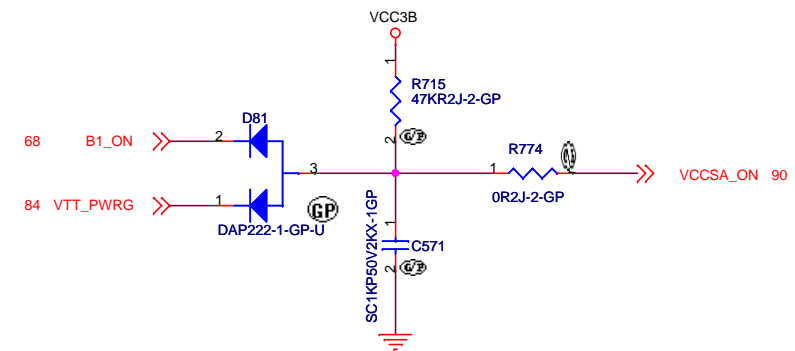
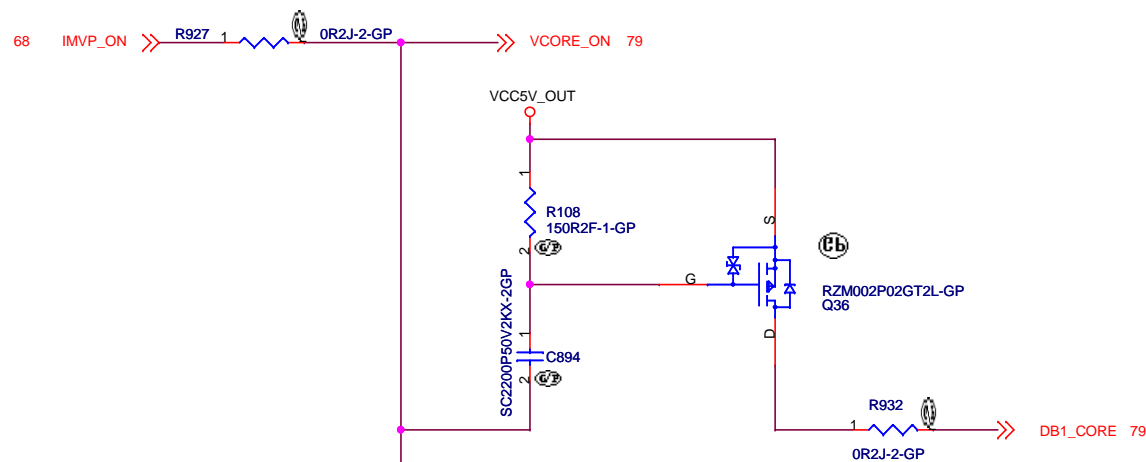
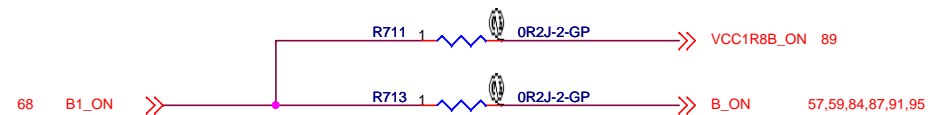
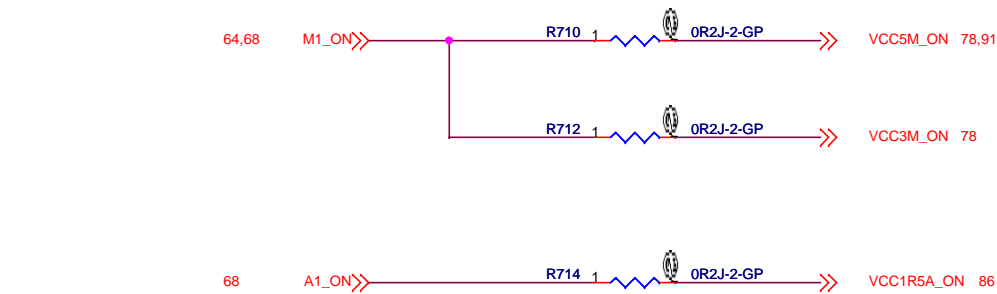
Document Number

**Dasher-1**

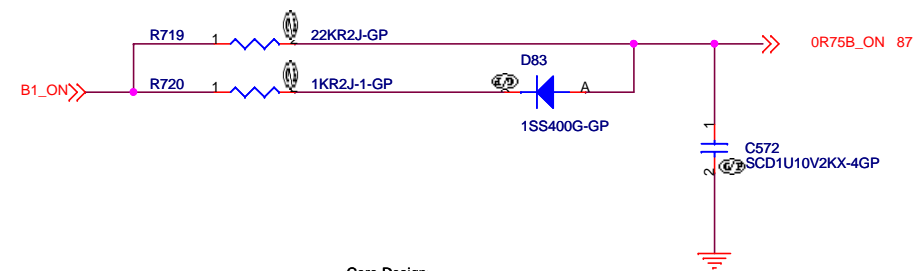
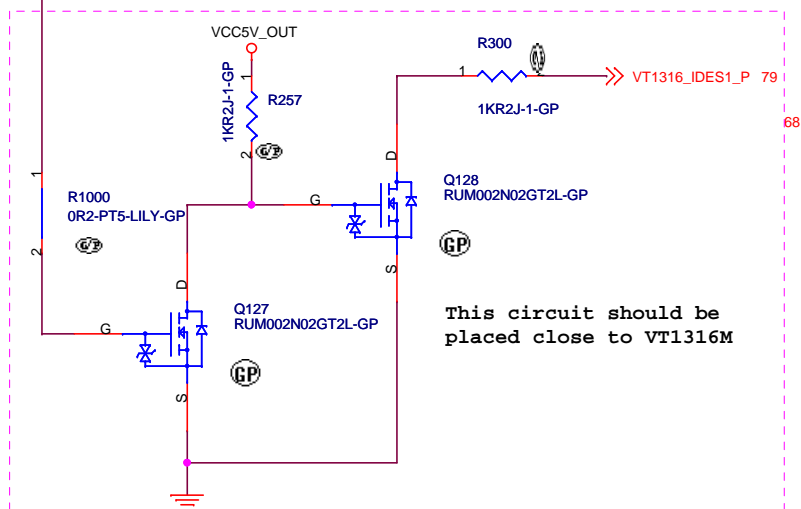
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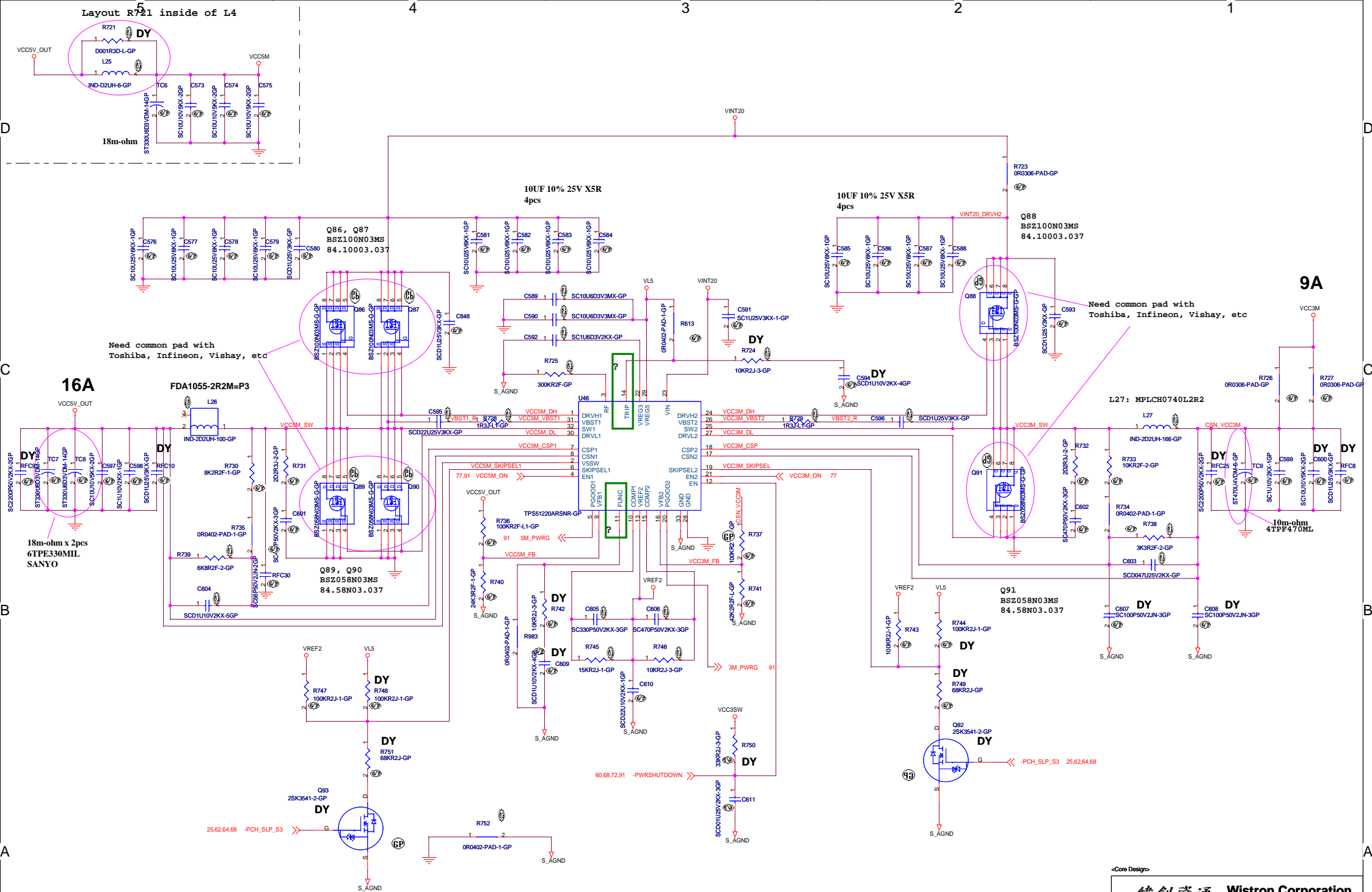


CONSTANT CONNECT	YES	NO
D82	ASM	NO-ASM

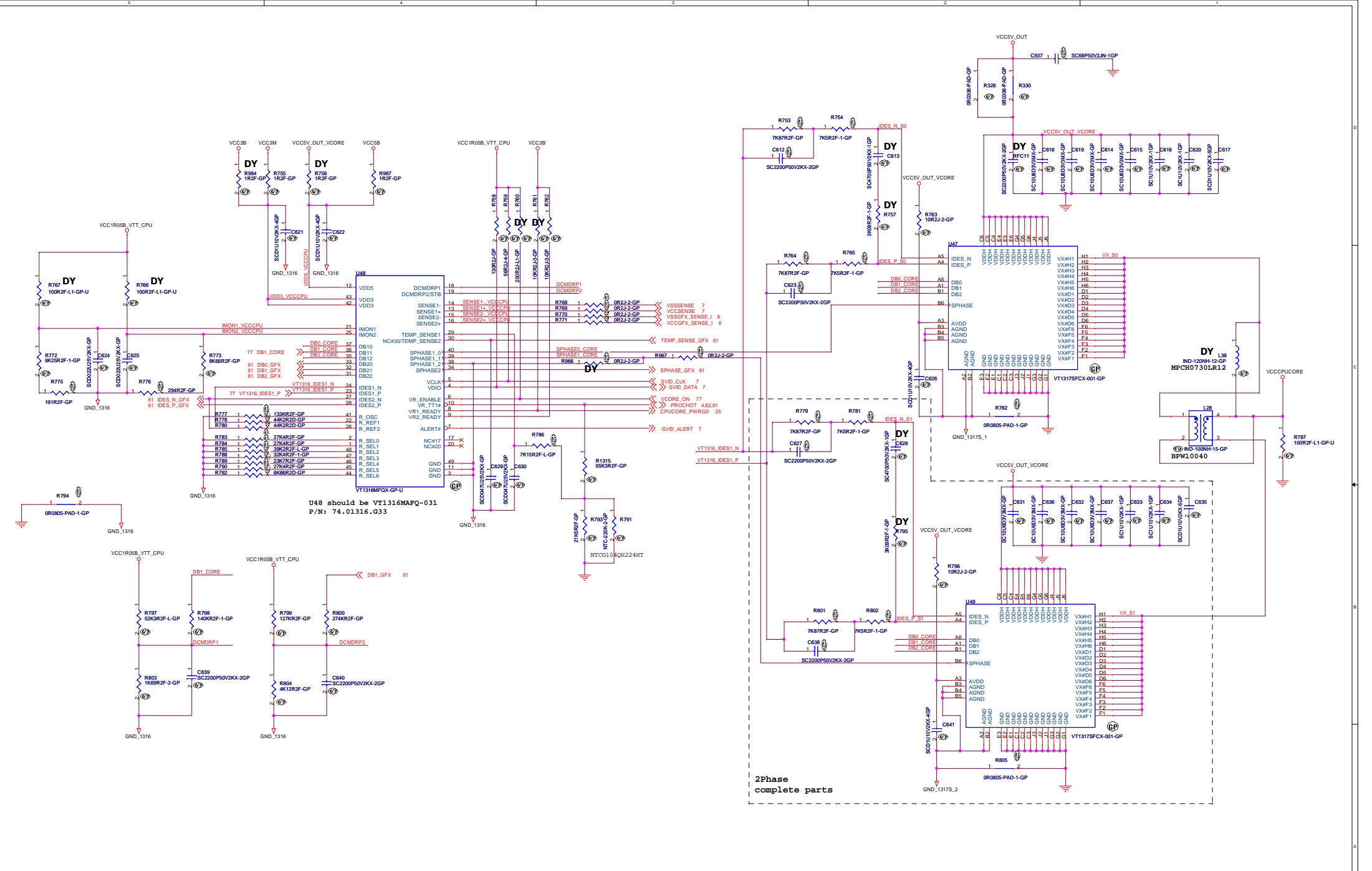


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<b>POWER SEQUENCE</b>	
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CPU/GFXCORE Table					
CPU	SV 2Phase(53A)		LV 2Phase(43A)	ULV 1Phase(33A)	Remark
GFX	GT1(24A)	GT2(33A)	GT2(33A)	GT2(33A)	
U47 U49	VT1317S VT1317S	VT1317S VT1317S	VT1314S VT1314S	VT1317S NO_ASM	Slave IC
R966 R967	NO_ASM 0	NO_ASM 0	NO_ASM 0	0 NO_ASM	Phase
L28 L28	NO_ASM ASM	NO_ASM ASM	NO_ASM ASM	ASM NO_ASM	Inductor
R783	27.4k	27.4k	39.2k	20.8k	R_SEL0
R784	27.4k	27.4k	6.57k	27.4k	R_SEL1
R785	39.2k	39.2k	39.2k	39.2k	R_SEL2
R788	27.4k	32.4k	32.4k	32.4k	R_SEL3
R789	11.4k(0.5%)	23.7k(1%)	23.7k(1%)	23.7k(1%)	R_SEL4
R790	27.4k	27.4k	27.4k	27.4k	R_SEL5
R792	8.66k(0.5%)	8.66k(0.5%)	8.66k(0.5%)	8.66k(0.5%)	R_SEL6
R779	7.87k	7.87k	7.87k	NO_ASM	RDES #2
C627	1000pF	NO_ASM	1000pF	NO_ASM	
R781	7.68k	7.68k	7.68k	NO_ASM	
R801	7.87k	7.87k	7.87k	NO_ASM	
C638	1000pF	1000pF	1000pF	NO_ASM	
R802	7.68k	7.68k	7.68k	NO_ASM	
C628	4700pF	4700pF	4700pF	NO_ASM	
R795	3.09k	3.09k	3.09k	NO_ASM	
R772	8.25k	8.25k	10.5k	8.06k	IMON1
R775	191	191	165	383	
R773	8.87k	8.66k	8.66k	8.66k	IMON2
R776	178	294	294	294	
R798	140k	140k	255k	221k	DCMDR1
R803	1.69k	1.69k	3.57k	3.16k	
R797	52.3k	52.3k	110k	97.6k	
R800	316k	274k	274k	274k	DCMDR1(prs)
R804	4.99k	4.12k	4.12k	4.12k	(drrp)
R799	154k	127k	127k	127k	(ofs)
C631	10uF	10uF	10uF	NO_ASM	GIN
C636	10uF	1uF	1uF	NO_ASM	
C633	1uF	1uF	1uF	NO_ASM	
C634	1uF	1uF	1uF	NO_ASM	
C635	0.1uF	0.1uF	0.1uF	NO_ASM	
C632	10uF	10uF	10uF	NO_ASM	
C637	10uF	10uF	10uF	NO_ASM	
R796	10	10	10	NO_ASM	AVDD
C641	0.1uF	0.1uF	0.1uF	NO_ASM	
R805	0	0	0	NO_ASM	
C684	2.2uF	2.2uF	10uF	10uF	Coutput(1603)
C685	22uF	22uF	10uF	22uF	
C686	22uF	22uF	NO_ASM	22uF	
C687	22uF	22uF	NO_ASM	22uF	
C688	2.2uF	10uF	10uF	10uF	
C689	22uF	22uF	NO_ASM	22uF	
C690	22uF	22uF	10uF	22uF	
C691	22uF	22uF	NO_ASM	22uF	
C692	2.2uF	2.2uF	10uF	10uF	
C693	22uF	22uF	10uF	10uF	
C694	22uF	22uF	10uF	22uF	
C695	22uF	22uF	NO_ASM	22uF	
C696	22uF	22uF	10uF	22uF	
C697	22uF	22uF	10uF	22uF	
C698	2.2uF	2.2uF	10uF	10uF	
U50	VT1314S	VT1317S	VT1317S	VT1317S	Slave IC
R806	3.4k	3.16k	3.16k	3.16k	RDES G
C653	2700pF	2700pF	2700pF	2700pF	
R807	12.4k	11.5k	11.5k	11.5k	
R810	3.4k	3.16k	3.16k	3.16k	
C662	2700pF	2700pF	2700pF	2700pF	
R811	12.4k	11.5k	11.5k	11.5k	
C654	4700pF	4700pF	4700pF	4700pF	
R808	3.09k	3.09k	3.09k	3.09k	
C642	22uF	22uF	22uF	22uF	Coutput
C643	22uF	22uF	22uF	22uF	
C644	22uF	22uF	22uF	22uF	
C645	22uF	22uF	22uF	22uF	
C646	22uF	22uF	22uF	22uF	
C647	22uF	22uF	22uF	22uF	
C648	22uF	22uF	22uF	22uF	
C649	22uF	22uF	22uF	22uF	
C650	22uF	22uF	22uF	22uF	
C651	22uF	22uF	22uF	22uF	
C652	22uF	22uF	22uF	22uF	
C663	22uF	22uF	22uF	22uF	
C664	22uF	22uF	22uF	22uF	
C665	22uF	22uF	22uF	22uF	
C666	22uF	22uF	22uF	22uF	
C667	22uF	22uF	22uF	22uF	
C20	10uF	22uF	22uF	22uF	Coutput
C21	10uF	10uF	10uF	10uF	CPU side
C22	10uF	22uF	22uF	22uF	
C23	10uF	22uF	22uF	22uF	
C933	10uF	22uF	22uF	22uF	
C934	10uF	10uF	10uF	10uF	

CPU	SV 2Phase(53A)		LV 2Phase(43A)	ULV 1Phase(33A)	Remark
R754	7.5k	7.5k	7.5k	6.98k	IDES (CPU)
R765	7.5k	7.5k	7.5k	6.98k	
R781	7.5k	7.5k	7.5k	NO_ASM	
R802	7.5k	7.5k	7.5k	NO_ASM	
R806	3.16k	3.16k	3.16k	6.2k	IDES (GFX)
R810	3.16k	3.16k	3.16k	6.2k	
R807	11.3k	11.3k	11.3k	8.06k	
R811	11.3k	11.3k	11.3k	8.06k	
C654	4700pF	4700pF	4700pF	NO_ASM	
R808	3.09k	3.09k	3.09k	NO_ASM	

Core Design

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Title

DC-DC VCCCPUCORE

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SD

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Date

Monday, January 10, 2011

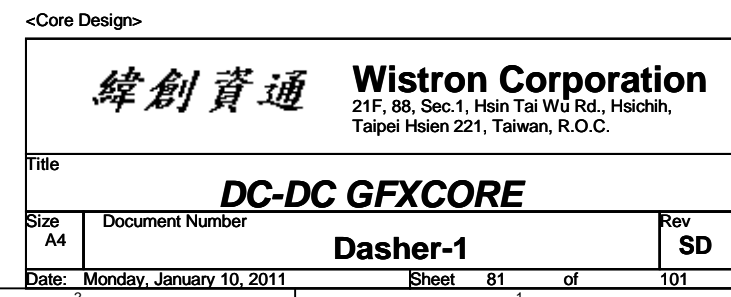
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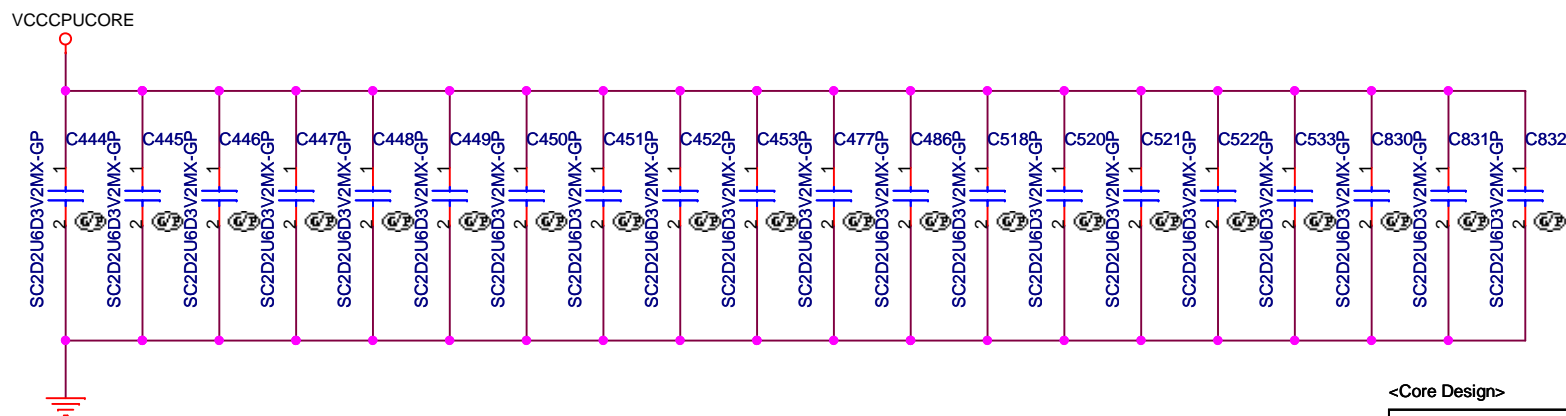
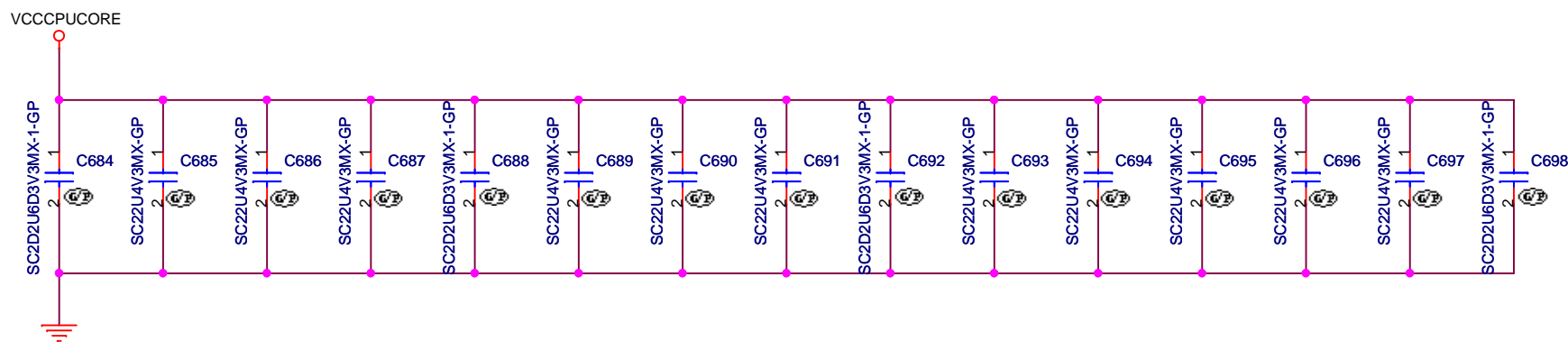
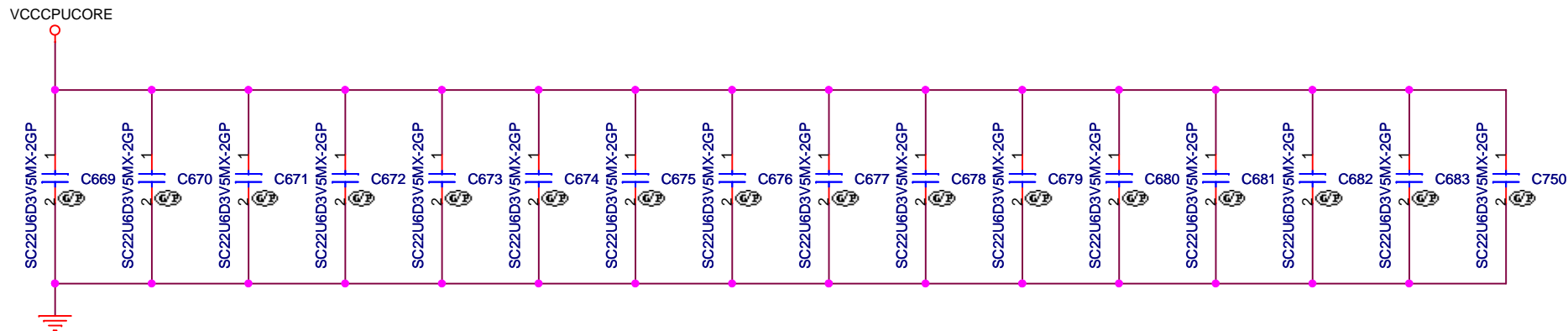
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Title

**DC-DC VCCCPUCORE**

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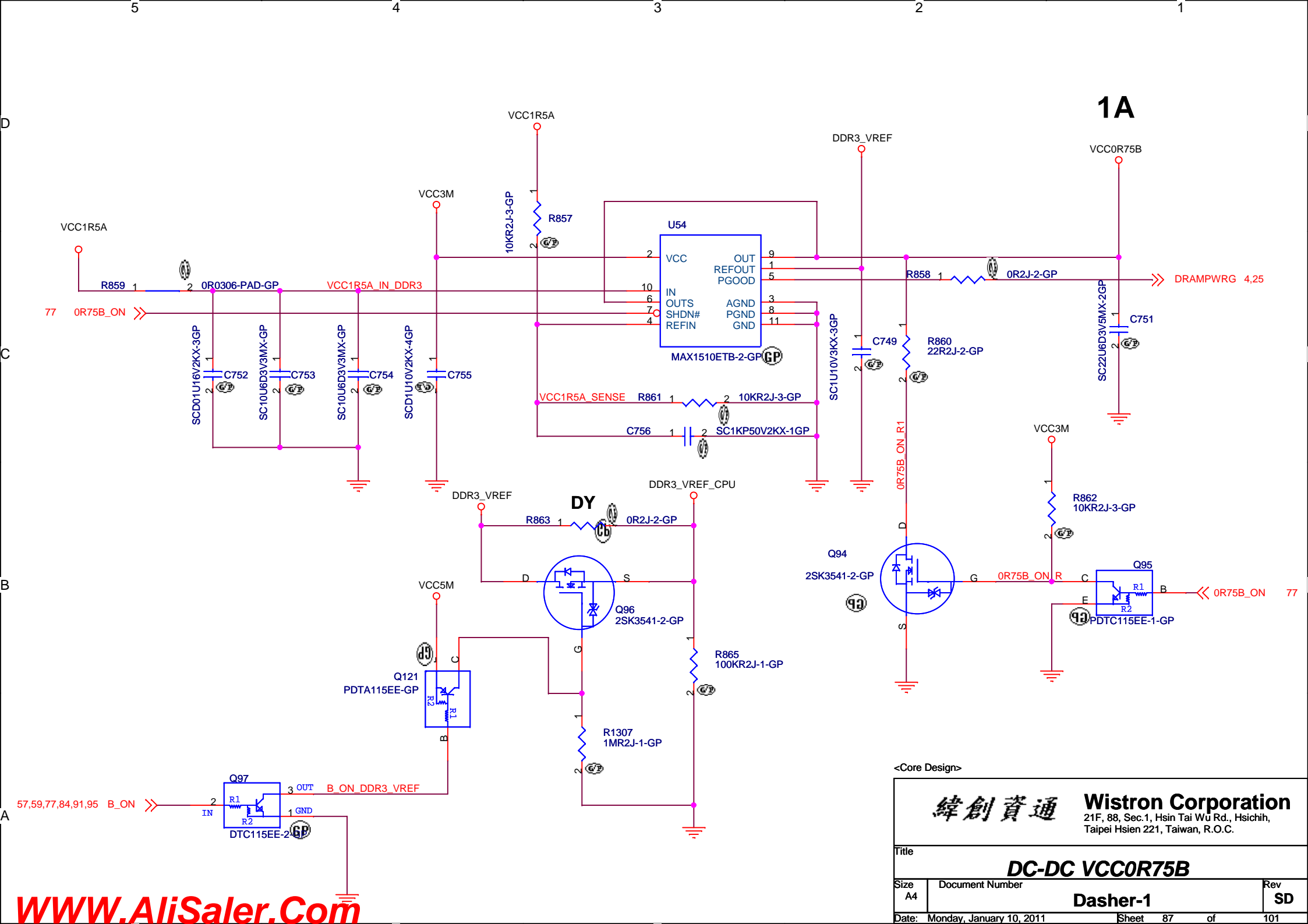
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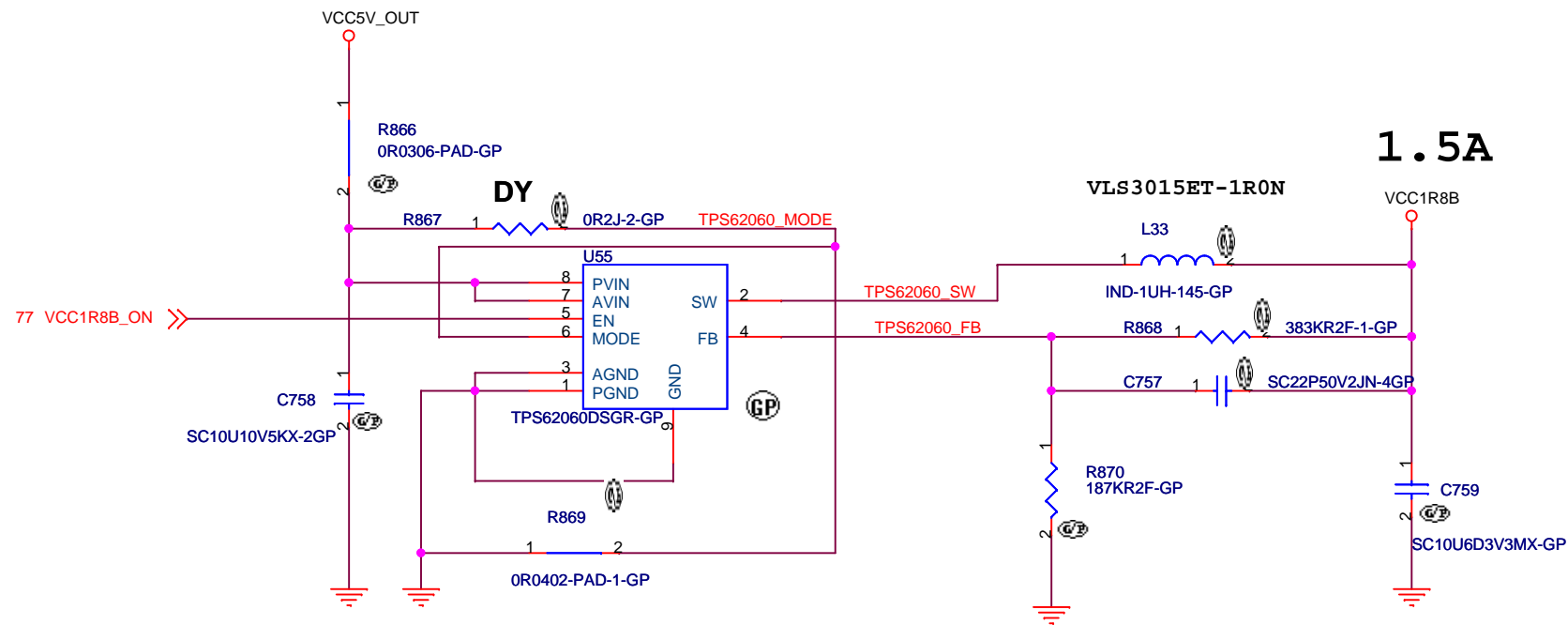


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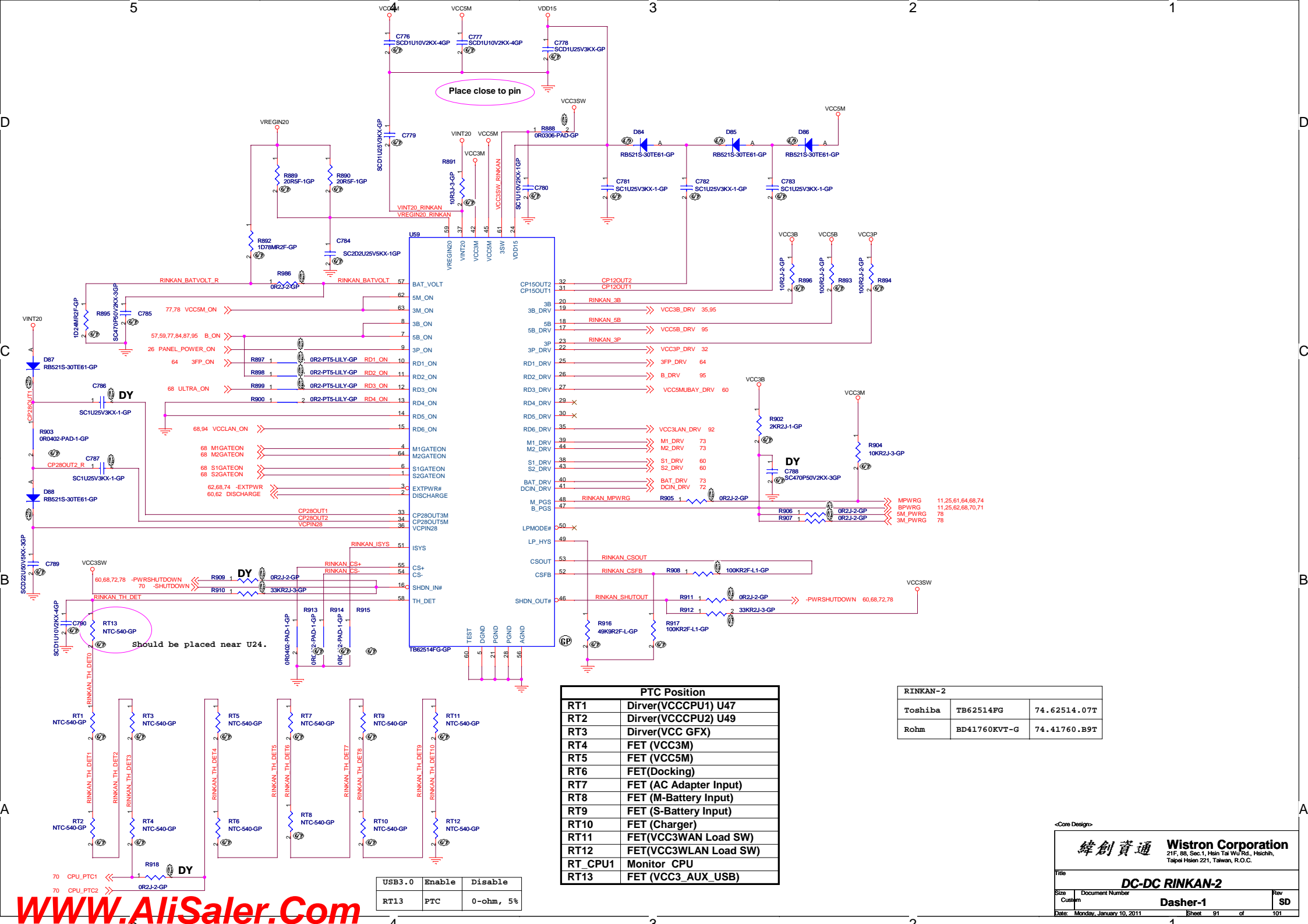
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Place close to pin

should be placed near U24.

PTC Position	
RT1	Dirver(VCCCPU1) U47
RT2	Dirver(VCCCPU2) U49
RT3	Dirver(VCC GFX)
RT4	FET (VCC3M)
RT5	FET (VCC5M)
RT6	FET(Docking)
RT7	FET (AC Adapter Input)
RT8	FET (M-Battery Input)
RT9	FET (S-Battery Input)
RT10	FET (Charger)
RT11	FET(VCC3WAN Load SW)
RT12	FET(VCC3WLAN Load SW)
RT CPU1	Monitor CPU
RT13	FET (VCC3_AUX_USB)

RINKAN-2		
Toshiba	TB62514FG	74.62514.07T
Rohm	BD41760KVT-G	74.41760.89T

USB3.0		
Enable	Disable	
RT13	PTC	0-ohm, 5%

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Title

DC-DC RINKAN-2

Size

Document Number

Rev

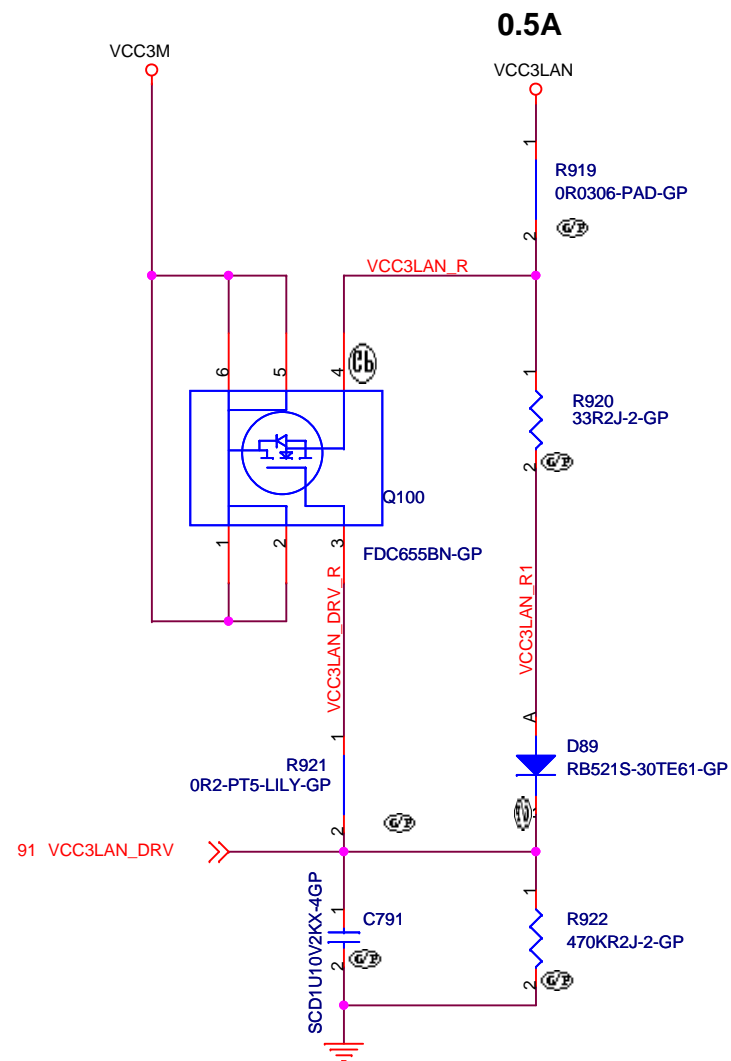
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**LOAD SW 1**

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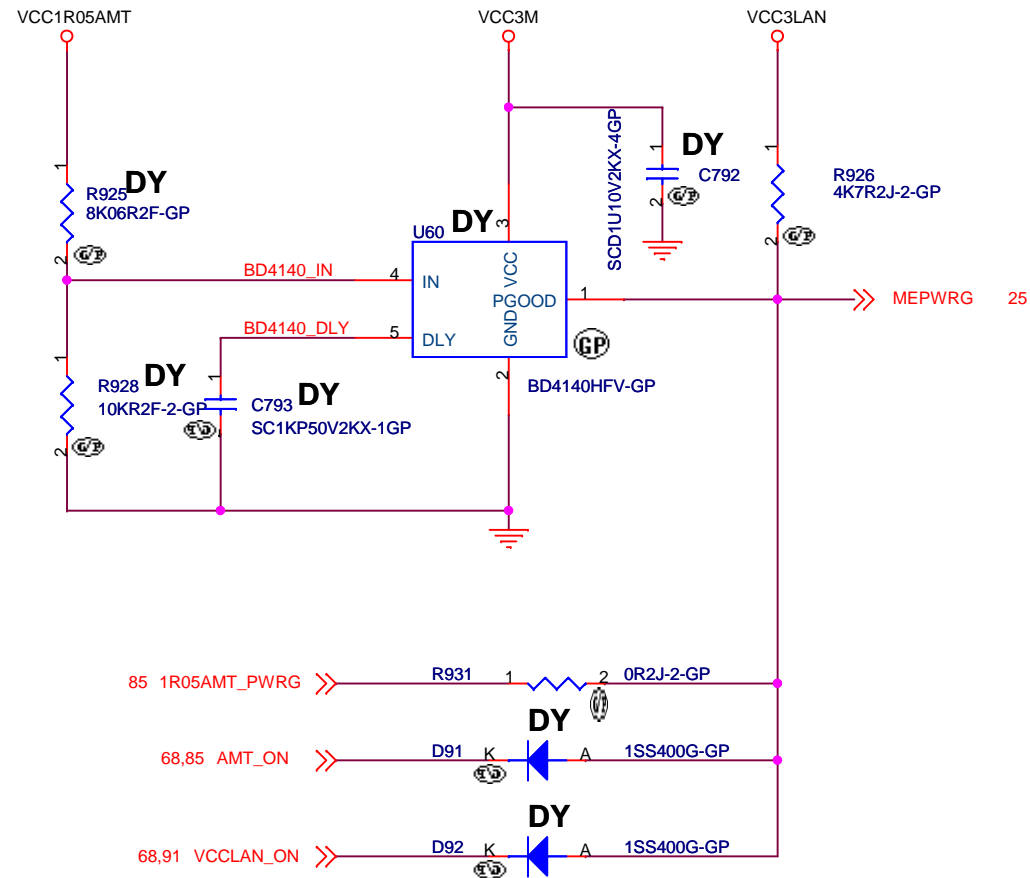
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Title

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Size  
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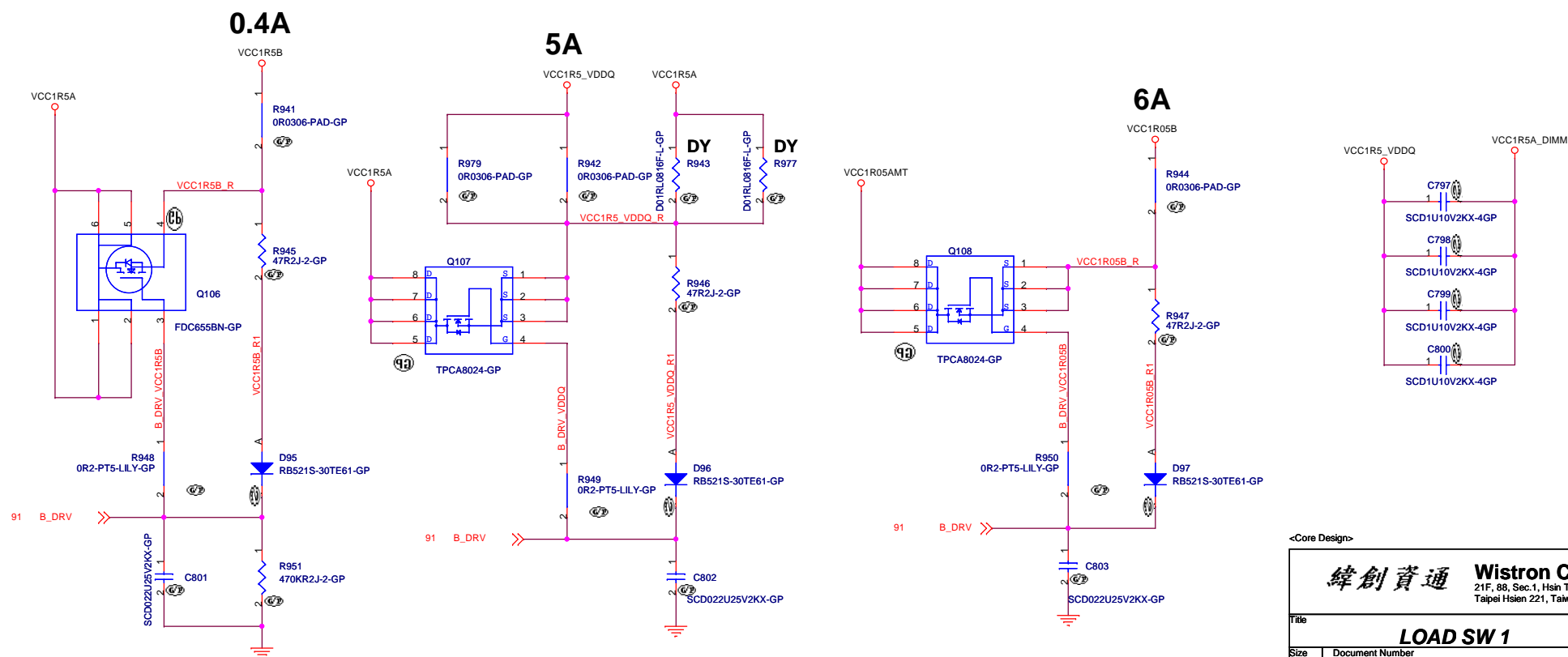
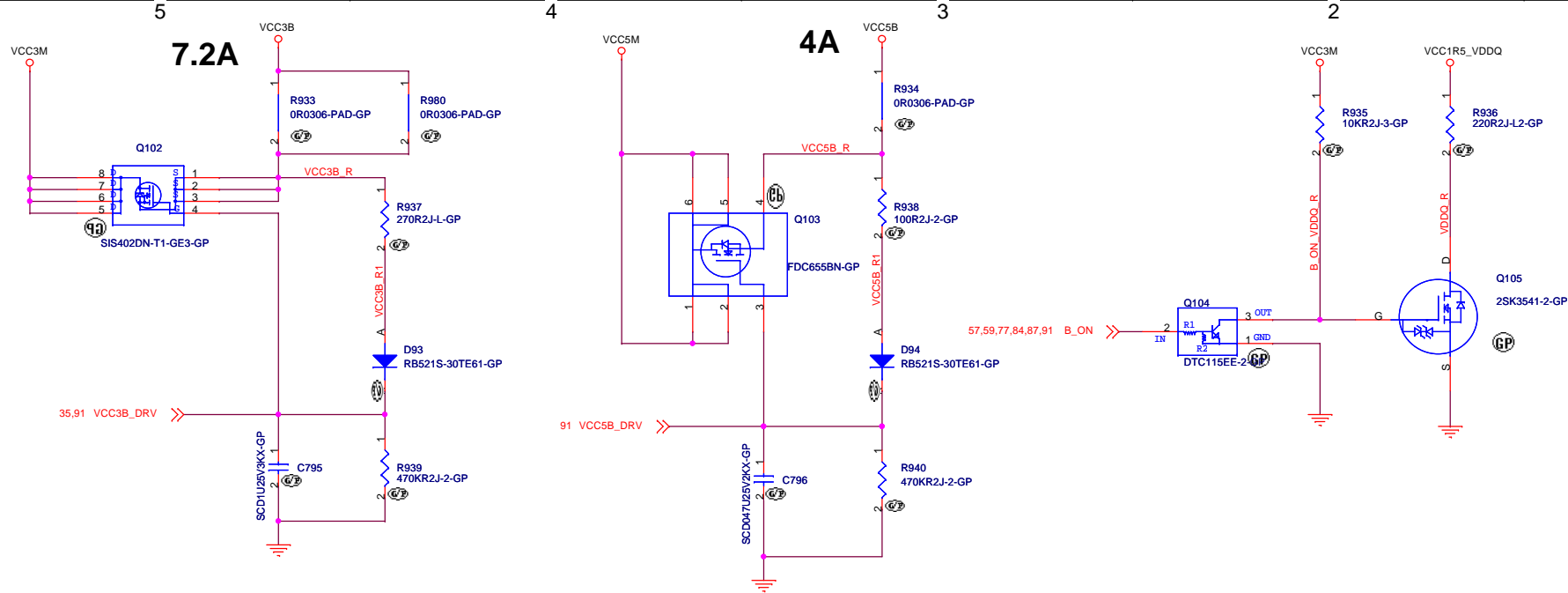
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Title

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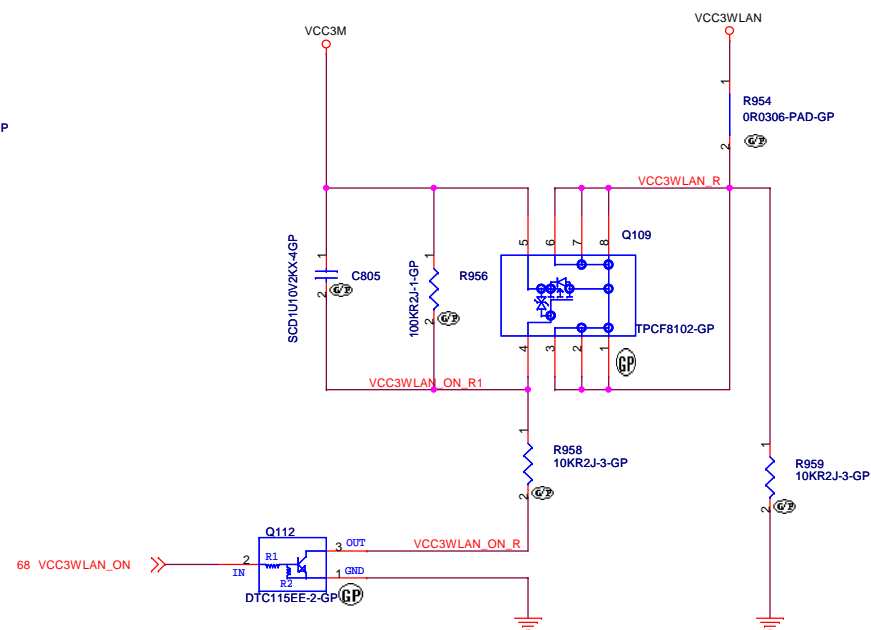
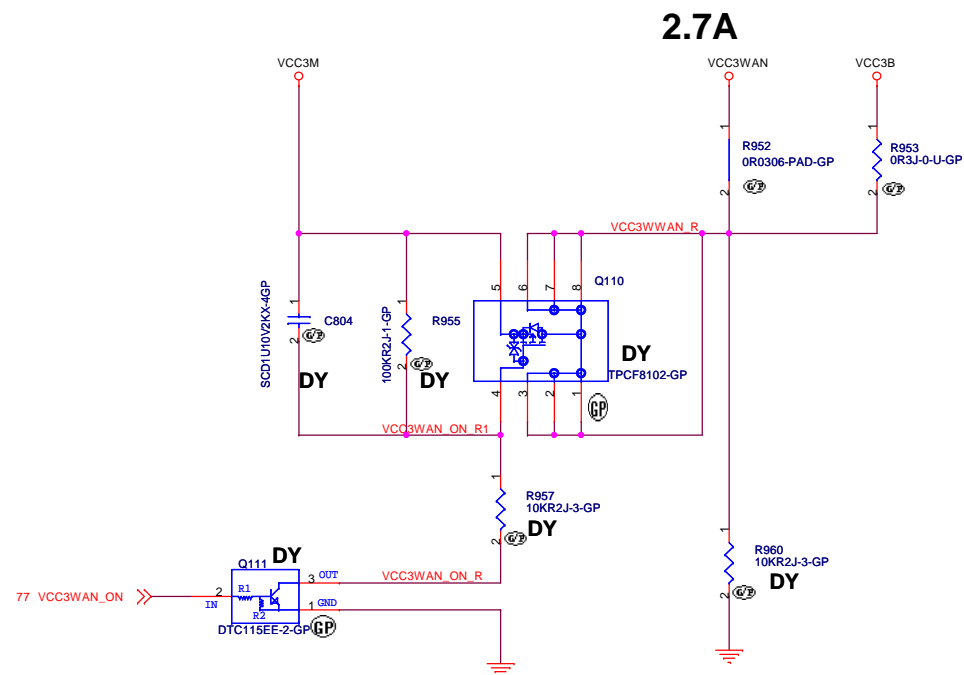
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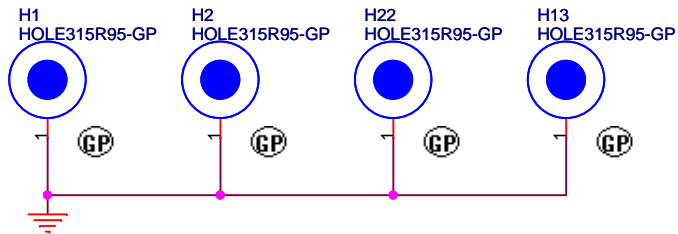


Constant Secure	YES	NO
R953	DY	ASM
C804 R955 Q110 R957 Q111 R960	ASM	DY
R952	ASM	ASM

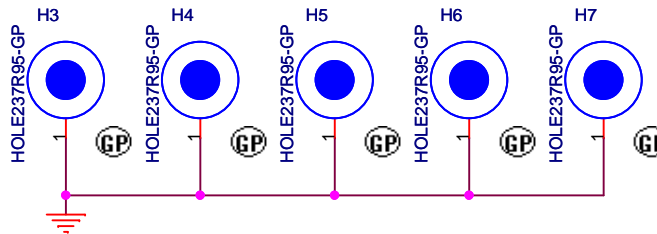
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<b>緯創資通 Wistron Corporation</b> 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
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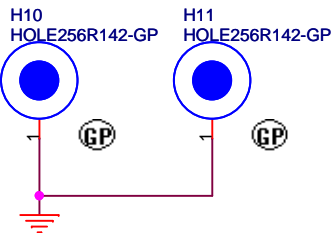
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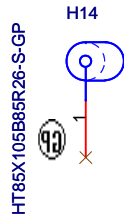
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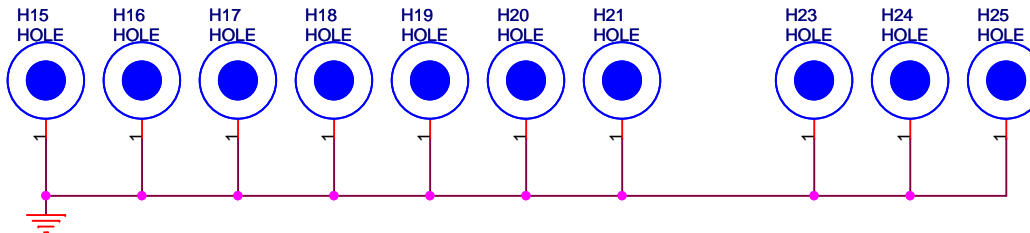
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ZZ.SCREW.191

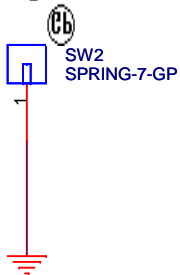


ZZ.0HOLE.XXX



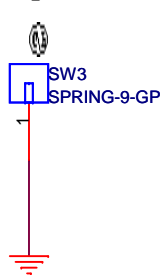
34.49U26.001

GND pad for docking connector



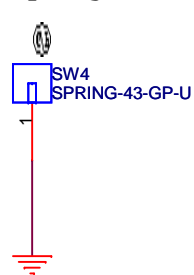
34.49U23.001

GND pad for docking connector



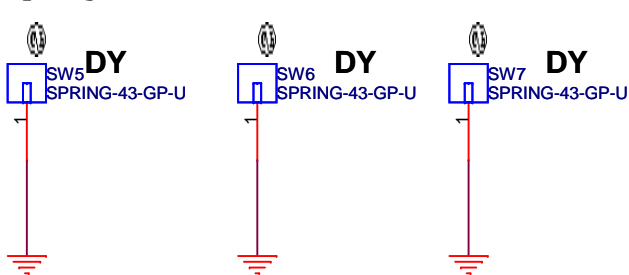
34.15J03.001

spring for EMI



34.15J03.001

spring for RF (SW5~SW7)



<Core Design>

緯創資通

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Title

HOLES/GND/PADS

Size  
A4

Document Number

Dasher-1

Rev  
SD

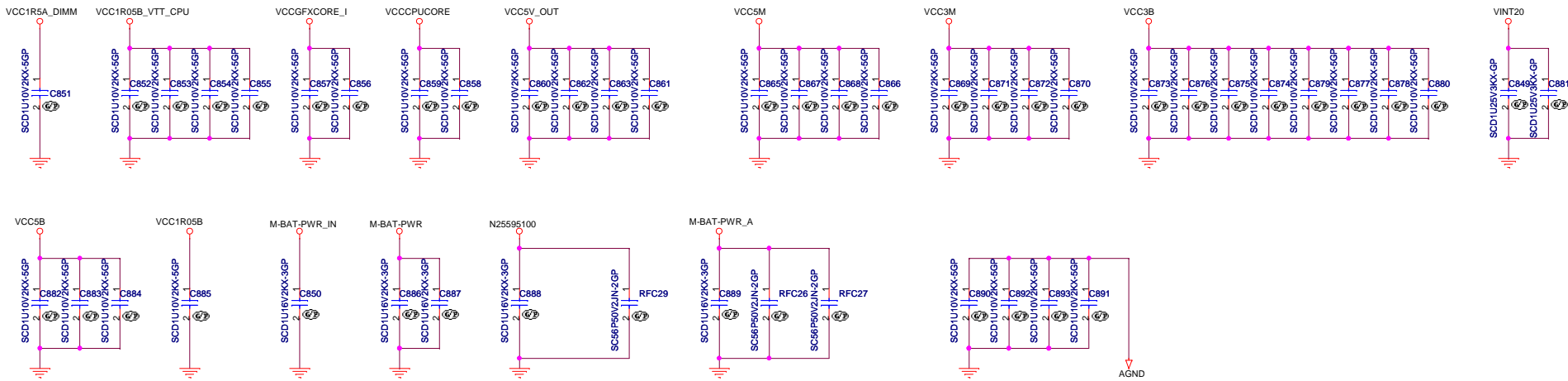
Date: Monday, January 10, 2011

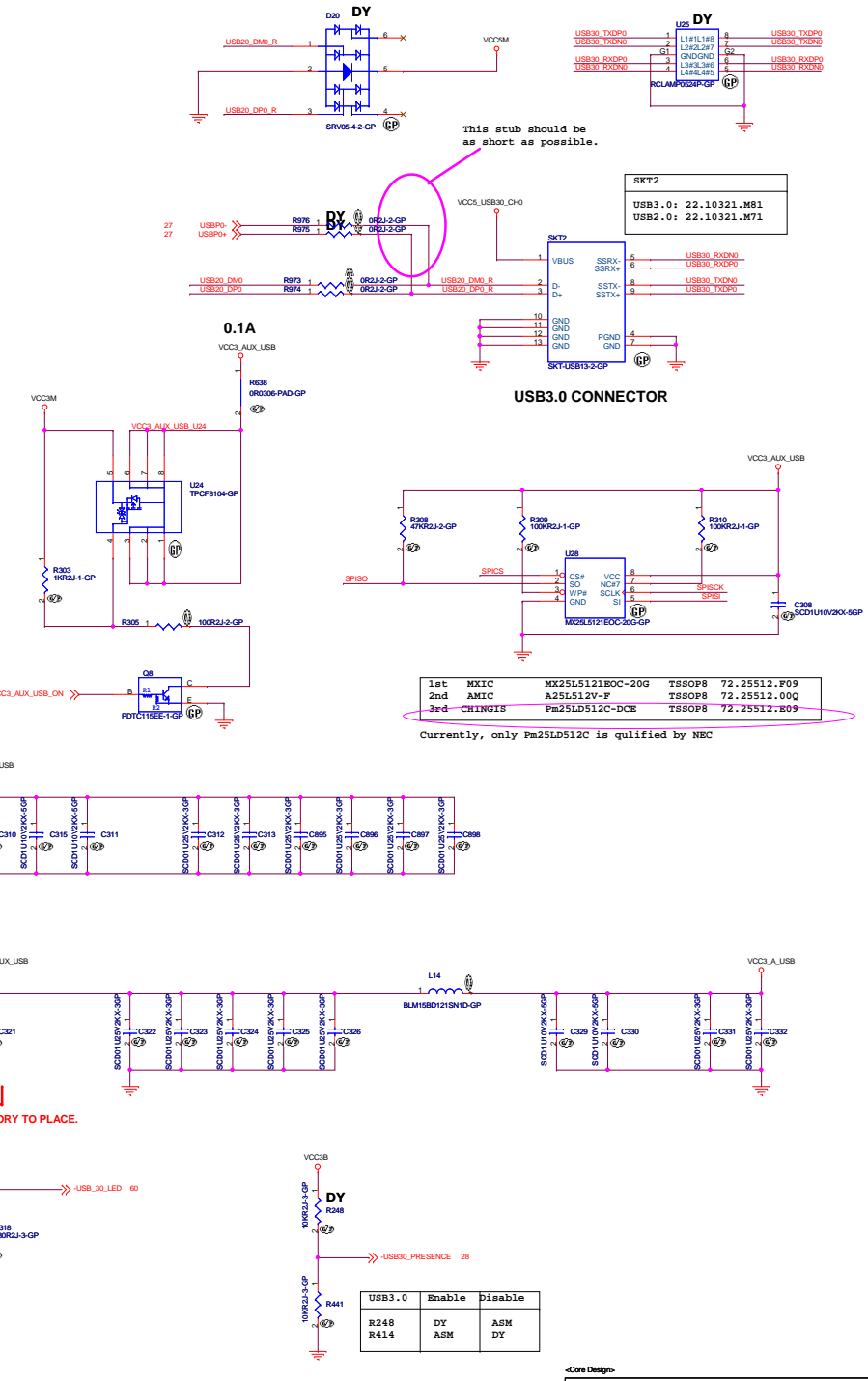
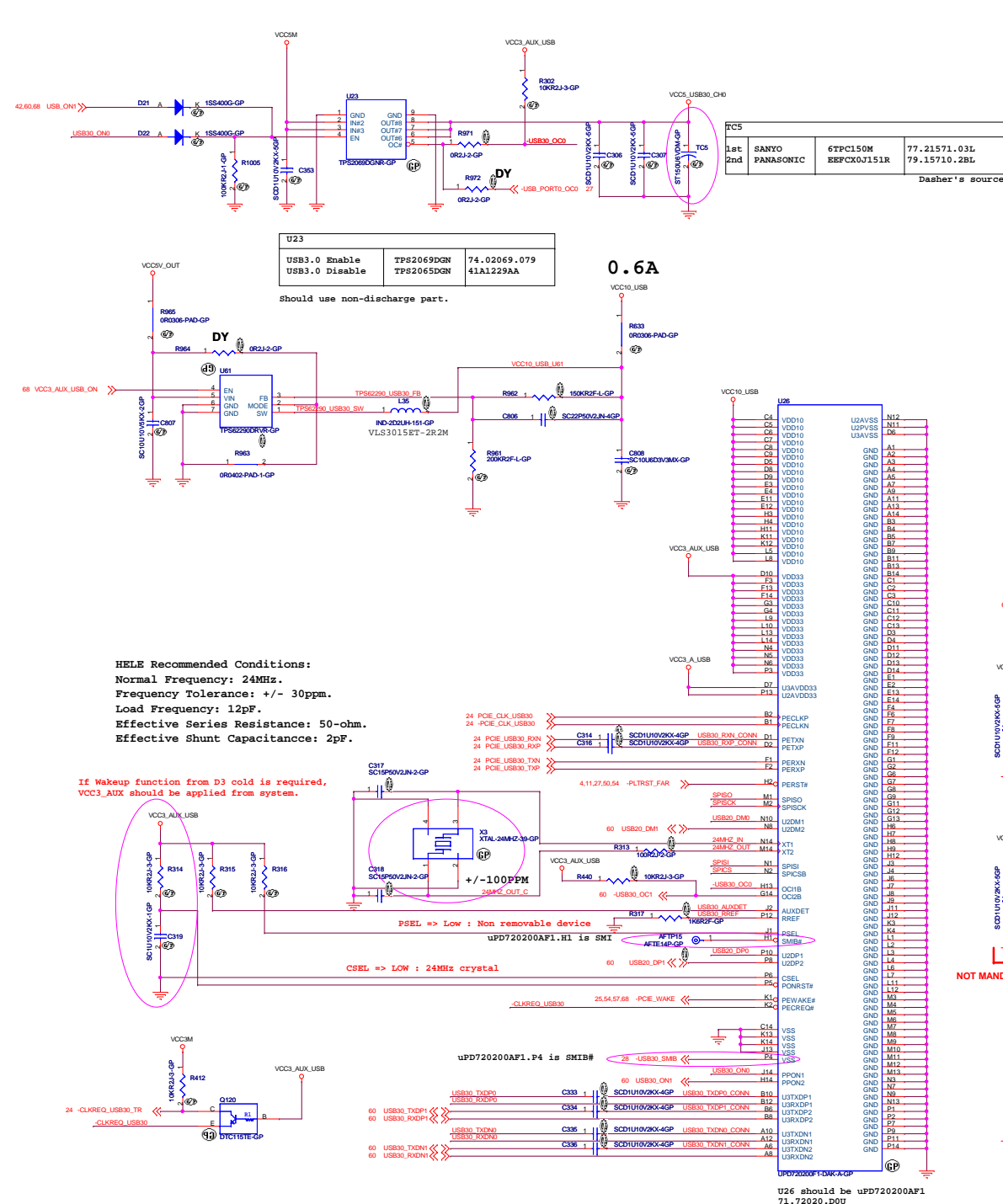
Sheet 98 of 101

# RF decoupling caps

named as RFCxxx

## Long power trace EMI decoupling caps





	USB3.0 Enable	USB3.0 Disable
U23	TPS2069DGN	TPS2065DGN
D21	ASM	ASM
D22	ASM	ASM
C353	ASM	ASM
R302	ASM	DY
R971	ASM	DY
R972	DY	ASM
C306	ASM	ASM
C307	ASM	ASM
TC5	ASM	ASM
U61	ASM	DY
R965	ASM	DY
R964	DY	DY
R963	ASM	DY
C807	ASM	DY
L35	ASM	DY
R961	ASM	DY
R962	ASM	DY
C806	ASM	DY
C808	ASM	DY
R633	ASM	DY
U26	ASM	DY
C314	ASM	DY
C316	ASM	DY
R313	ASM	DY
X3	ASM	DY
C317	ASM	DY
C318	ASM	DY
C319	ASM	DY
R440	ASM	DY
R314	ASM	DY
R315	ASM	DY
R316	ASM	DY
R317	ASM	DY
C310	ASM	DY
R412	ASM	ASM
Q120	ASM	DY
C333	ASM	DY
C334	ASM	DY
C335	ASM	DY
C336	ASM	DY
U28	ASM	DY
R308	ASM	DY
R309	ASM	DY
R310	ASM	DY
C308	ASM	DY
U24	ASM	DY
R638	ASM	DY
R303	ASM	DY
R305	ASM	DY
Q8	ASM	DY
SKT2	USB3.0 Conn.	USB2.0 Conn.
R973	ASM	DY
R974	ASM	DY
R975	DY	ASM
R976	DY	ASM
D20	DY	DY
D25	DY	DY
C310	ASM	DY
C311	ASM	DY
C312	ASM	DY
C313	ASM	DY
C315	ASM	DY
C320	ASM	DY
C321	ASM	DY
C322	ASM	DY
C323	ASM	DY
C324	ASM	DY
C325	ASM	DY
C326	ASM	DY
C327	ASM	DY
L14	ASM	DY
C329	ASM	DY
C330	ASM	DY
C331	ASM	DY
C332	ASM	DY
R318	ASM	DY
R248	DY	ASM
R441	ASM	DY

	USB3.0 Enable	USB3.0 Disable
R437	DY	ASM
R438	DY	ASM
R436	ASM	DY
R439	ASM	DY
D99	ASM	DY
D100	ASM	DY
R989	DY	ASM
R991	ASM	DY
R988	DY	ASM