

Mocha-3 Block Diagram

08270-2 SOVP
January 27th 2010

PCB Layer Stackup

L1:Component
L2:GND
L3:Signal 1
L4:VCC
L5:Signal 2
L6:Signal 3
L7:GND
L8:Signal 4
L9:GND
L10:Component

Battery Charger/Selector

INPUTS	OUTPUTS
DOCK_PWR20_F	M-BAT-PWR

System DC/DC	
TPS51222	55
VINT20	VCC5M VCC3M

CPU DC/DC	
ADP3212	56
VINT20	VCCPUCORE

GMCH GFX CORE	
ADP3211	58
VINT20	VCCGFXCORE

VCC1R5A	
VT356FCX	59
VCC5V_OUT	VCC1R5A

VCC0R75B	
MAX1510	60
VCC1R5A	VCC0R75B

VCC1R8B	
BD3551HFN	61
VCC3M	VCC1R8B

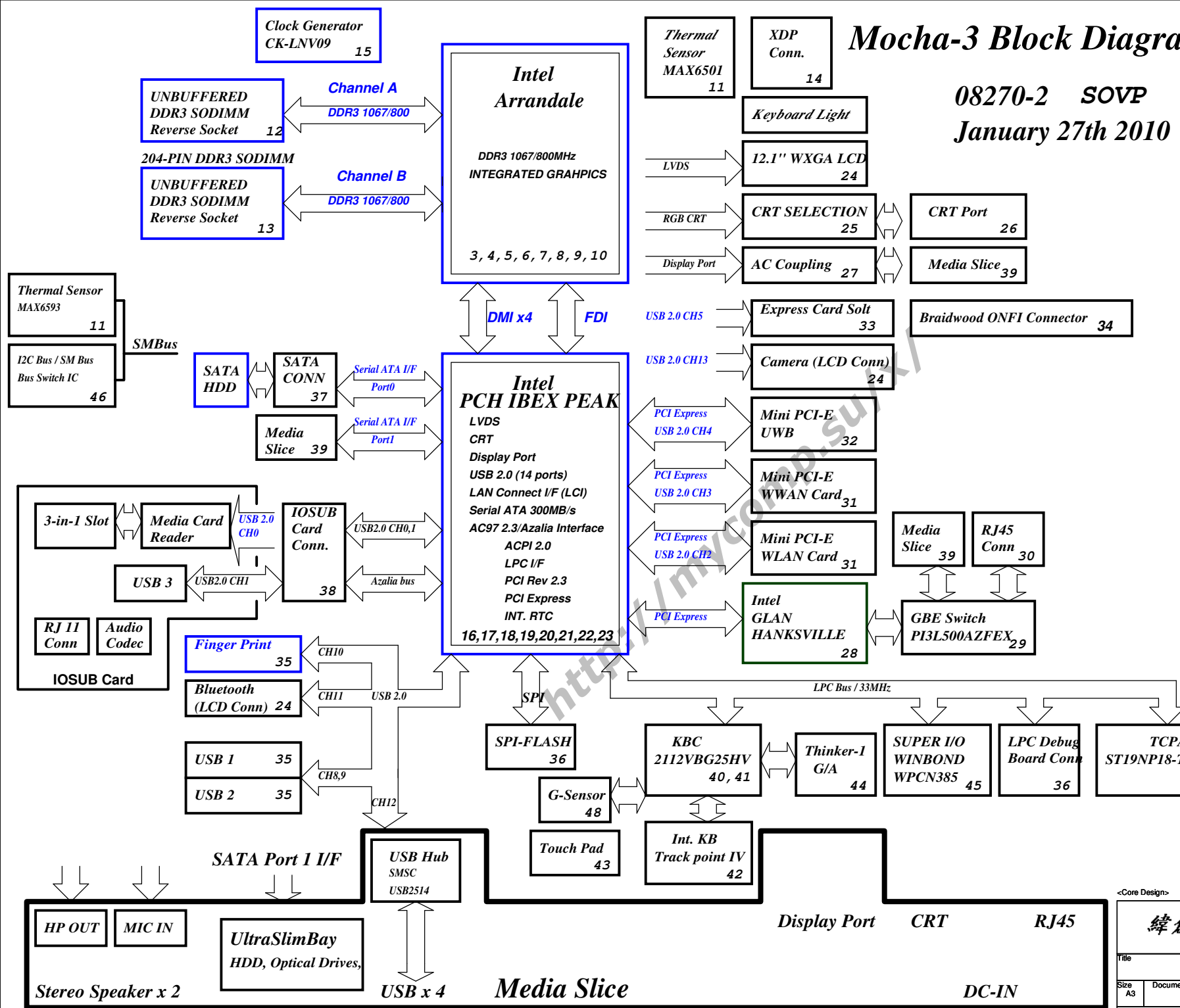
VCC1R05LAN	
VT356FCX	62
VCC5V_OUT	VCC1R05LAN

VCC1R05B_VTT	
VT357FCX	63
VCC5V_OUT	VCC1R05B_VTT

<Core Design>

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Block Diagram			
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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
 SC1U10V2MX-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	37	36	Planar ID Version	Planar PCB Version
PLANAR_IDn	3	2	1	0		
	0	0	0	0	Mocha-3 Pre-DV	SA
	0	0	0	1	Mocha-3 DV	SB
	0	0	1	0	Mocha-3 FVT	SC
	0	0	1	1	Mocha-3 SIV	SD
	0	1	0	0	Mocha-3 SIT	SE
	0	1	0	1	Mocha-3 SVT	-1
	0	1	1	0		-2
	0	1	1	1		

EC HISTORY

[illegible]

PCI TABLE

DEVICE	IDSEL	IRQ (Default)	REQ# / GNT#
USB UHCI	AD29	A, C, D	
USB 2.0 EHCI	AD29	H	
DMI-to-PCI/ AC97 Modem/ AC97 Audio	AD30	B B	
LPC Bridge IDE SATA SMBus	AD31	C C B	
PCI Express	AD28	A, B, C, D	

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Title

Reference

Size
A3

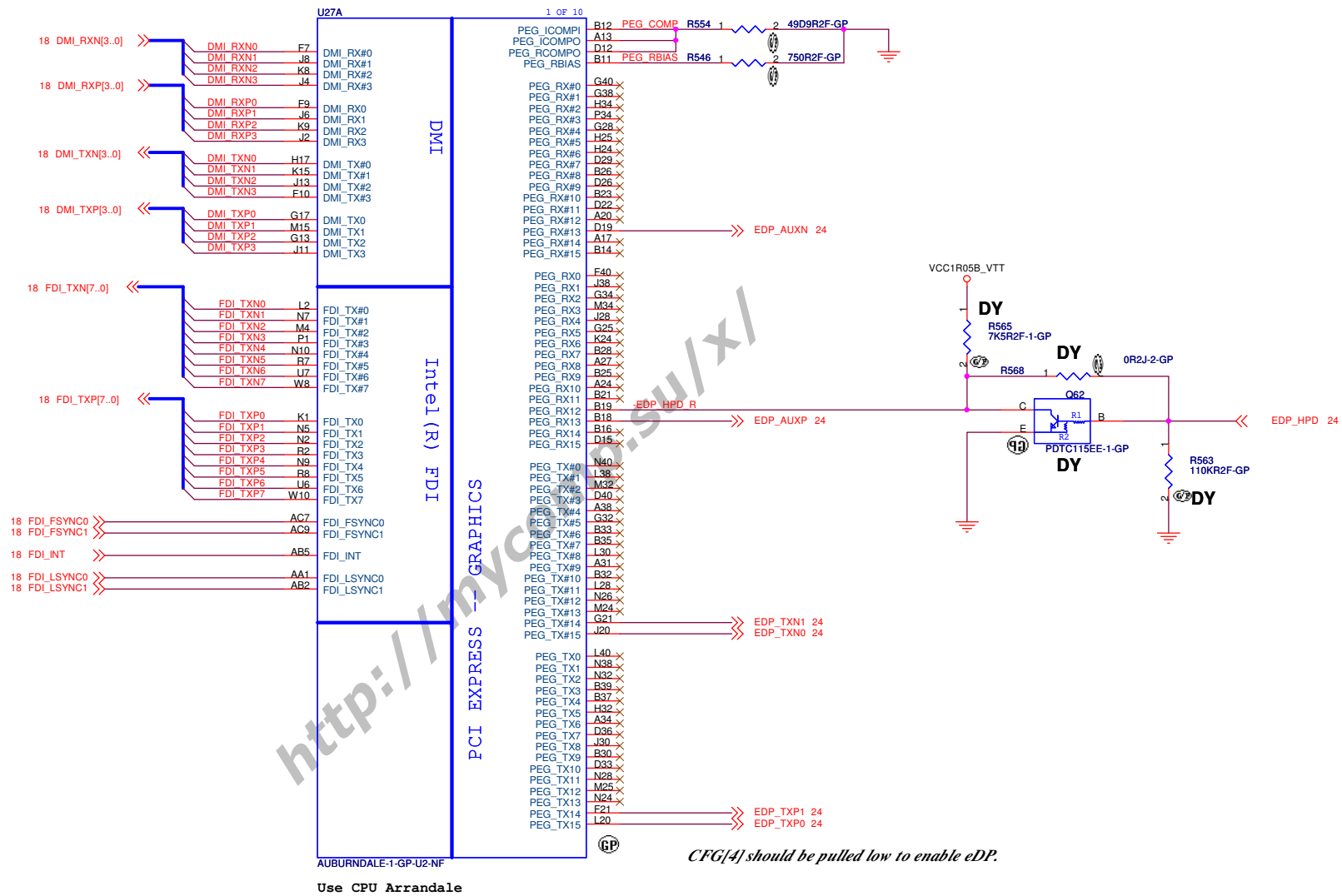
Document Number

Mocha-3

Rev
-2

Date: Wednesday, January 27, 2010

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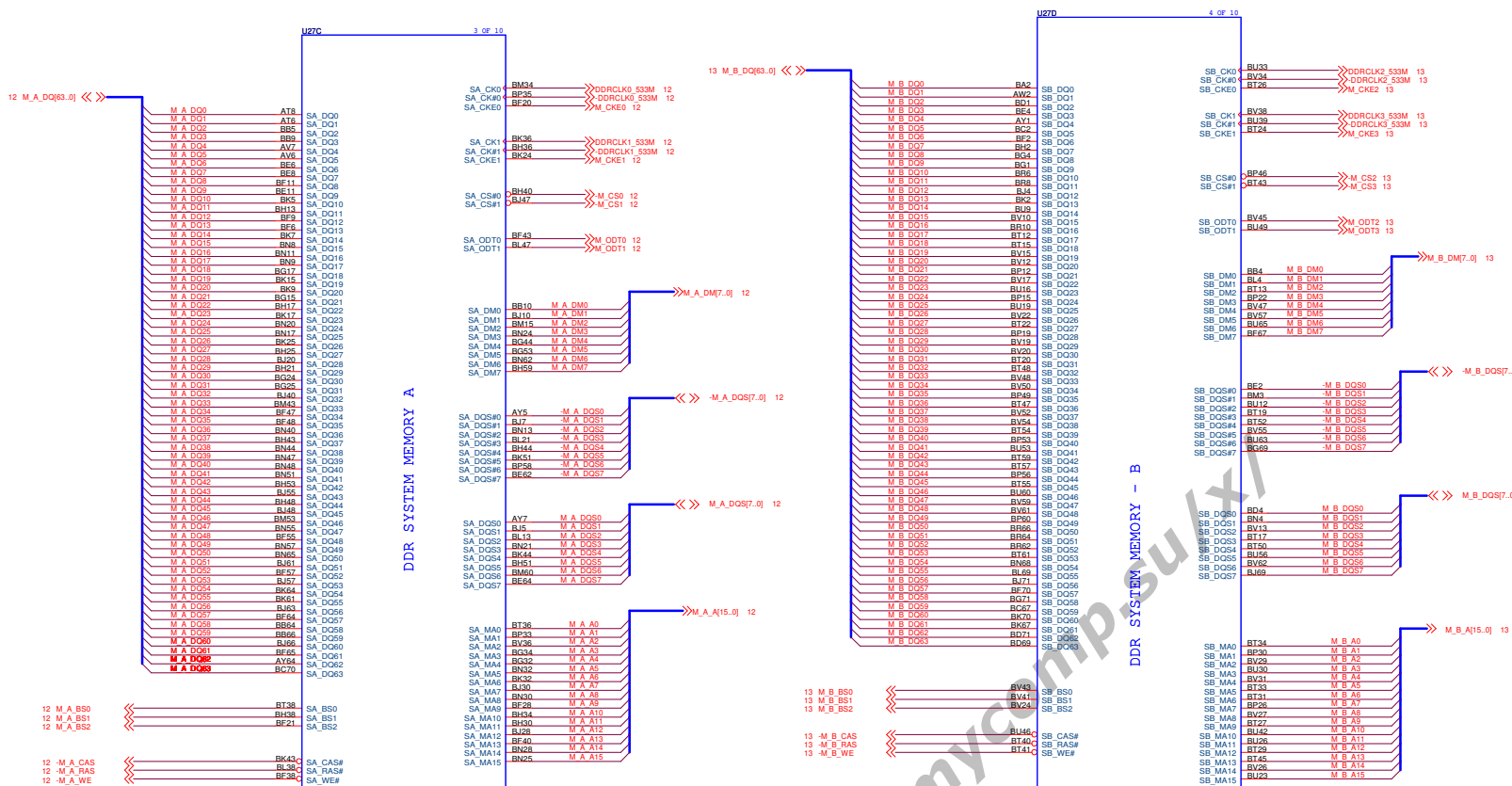
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Title Arrandale CPU(1/8): DMI /PEG/FDI

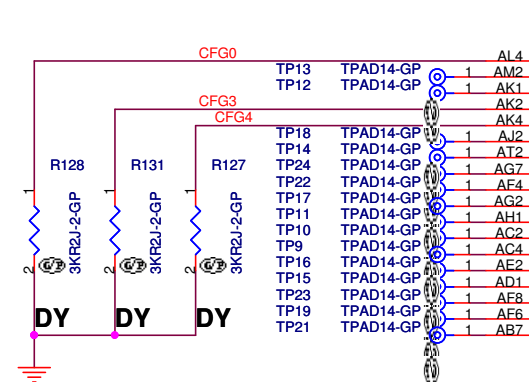
Size A3 Document Number Mocha-3 Rev -2

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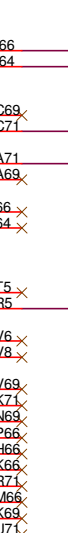
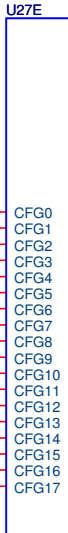
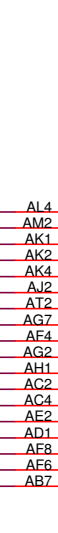


AUBURNDALE-1-GP-U2-NF
Use CPU Arrandale

AUBURNDALE-1-GP-U2-NF
Use CPU Arrandale



		ASM	DY
CFG[0]	PEG CONFIG	BIFURCATION	SINGLE
CFG[3]	PEG LANE REVERSAL	REVERSE	NORMAL
CFG[4]	DISPLAY PORT PRESENCE	ENABLE	DISABLE



RESERVED

RSVD_TP0
RSVD#T4
RSVD#T2
RSVD#U1
RSVD#V2
RSVD#AV71
RSVD#AW70
RSVD#AY69
RSVD#BB69
RSVD#D8
RSVD#B7
RSVD#A10
RSVD#B9
RSVD_NCTF#C5
RSVD_NCTF#A6
RSVD_NCTF#E3
RSVD_NCTF#F1

NCTF_TEST_PIN:
A5,A68,A69,A71,C3,C71,E1,E71,BR1,BR71,
BT1,BT71,BV1,BV3,BV5,BV68,BV69,BV71

AUBURNDAL-1-GP-U2-NF

Use CPU Arrandale

<Core Design>

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Title			
Arrandale CPU(4/8):CFG/RSVD			
Size	Document Number	Rev	
Custom		-2	
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Power On strap value is VID[6:0] = "LHLLHHH" = 1.0125 V

VCC1R05B_VTT

VCC1R05B_VTT

56 VID[6:0] << 56 -PSI << 56 DPRSLPVR << 56 CPU_IMON 56 VCORE_VCCSENSE 56 VCORE_VSSSENSE

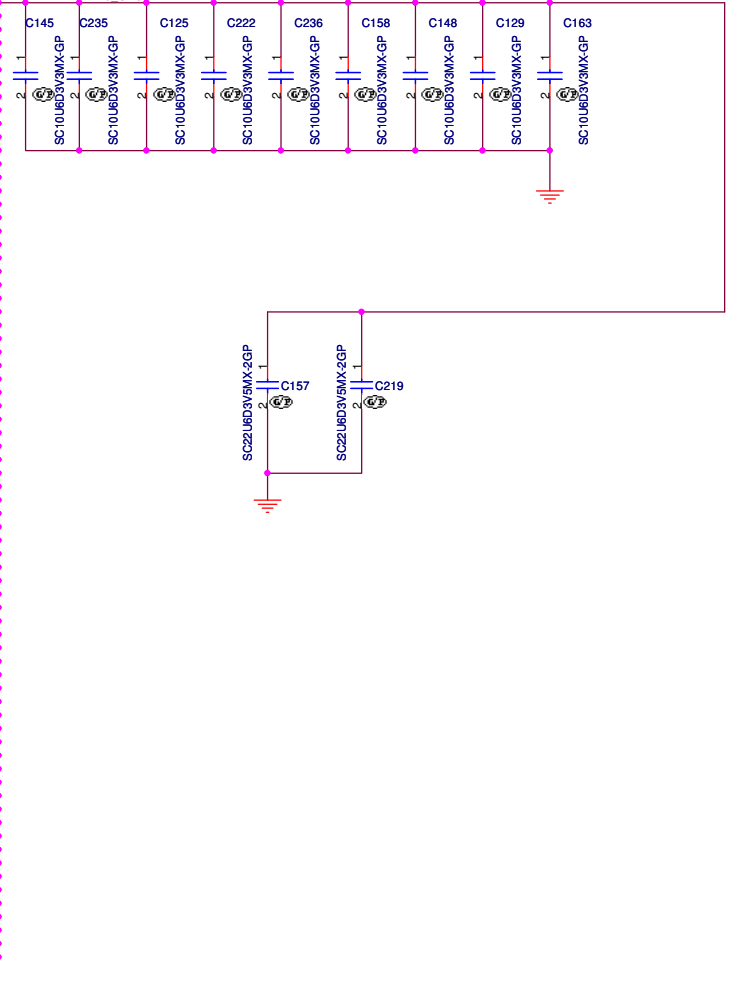
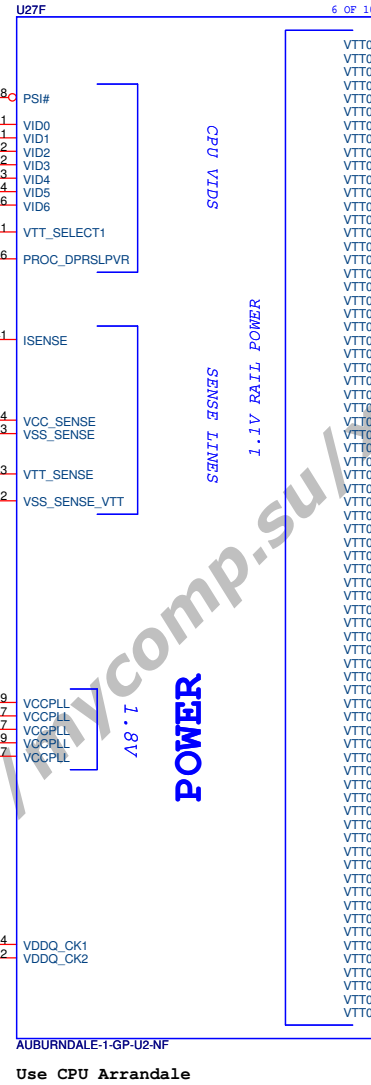
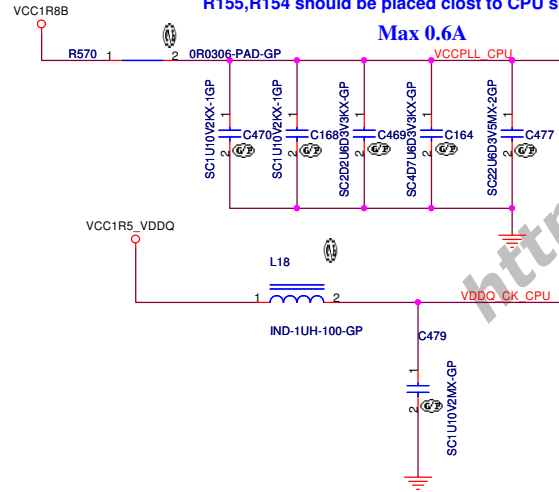
IMAX	VID<5..3>
DISABLE	000
20A	001
30A	010
40A	011
50A	100
60A	101
70A	110
90A	111

Current Sense Configuration
(CSC<2..0>)

CPU	VID<5..3>
SV	100
LV	011
ULV	010

63 VCC_SENSE_VTT << 63 VSS_SENSE_VTT <<

R155,R154 should be placed close to CPU side
Max 0.6A



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Title Arrandale CPU(5/8):Power

Size A3 Document Number

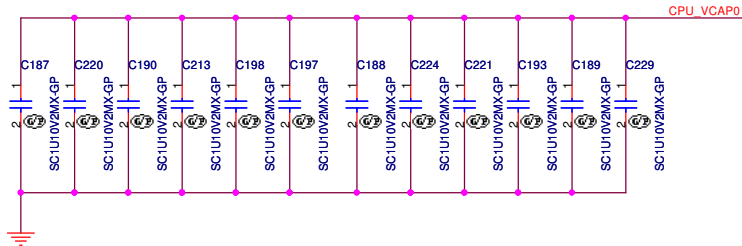
Mocha-3

Rev -2

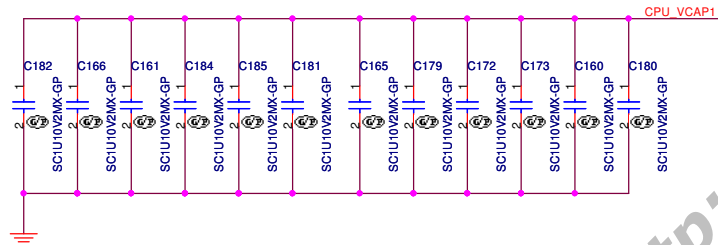
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12 X
1UF/10V/ ±20% 0402



12 X
1UF/10V/ ±20% 0402



U27H

8 OF 10

VCCCPUCORE

BD55 VCAP0
BD51 VCAP0
BD48 VCAP0
BB55 VCAP0
BB51 VCAP0
BB48 VCAP0
AY57 VCAP0
AY53 VCAP0
AY50 VCAP0
AW57 VCAP0
AW53 VCAP0
AW50 VCAP0
AU55 VCAP0
AU51 VCAP0
AL48 VCAP0
AR55 VCAP0
AR51 VCAP0
AR48 VCAP0
AN57 VCAP0
AN53 VCAP0
AN50 VCAP0
AL57 VCAP0
AL53 VCAP0
AL50 VCAP0
AK57 VCAP0
AK53 VCAP0
AK50 VCAP0

POWER

CPU CORE SUPPLY

BD44 VCAP1
BD41 VCAP1
BD37 VCAP1
BB44 VCAP1
BB41 VCAP1
BB37 VCAP1
AY46 VCAP1
AY42 VCAP1
AY39 VCAP1
AW46 VCAP1
AW42 VCAP1
AW39 VCAP1
AU44 VCAP1
AU41 VCAP1
AU37 VCAP1
AR44 VCAP1
AR41 VCAP1
AR37 VCAP1
AN46 VCAP1
AN42 VCAP1
AN39 VCAP1
AL46 VCAP1
AL42 VCAP1
AL39 VCAP1
AK46 VCAP1
AK42 VCAP1
AK39 VCAP1

VCC AF57
VCC AF55
VCC AF53
VCC AF51
VCC AF50
VCC AF48
VCC AF46
VCC AF44
VCC AF42
VCC AF41
VCC AD55
VCC AD51
VCC AD48
VCC AD44
VCC AD41
VCC AB55
VCC AB51
VCC AB48
VCC AB44
VCC AB41
VCC AA55
VCC AA51
VCC AA48
VCC AA44
VCC AA41
VCC W55
VCC W51
VCC W48
VCC W44
VCC W41
VCC U55
VCC U51
VCC U48
VCC U44
VCC U41
VCC R55
VCC R51
VCC R48
VCC R44
VCC R41
VCC P60
VCC N55
VCC N51
VCC N48
VCC N44
VCC N42
VCC M60
VCC M51
VCC M44
VCC L55
VCC K60
VCC K51
VCC K44
VCC J55
VCC H60
VCC H51
VCC H44
VCC G60
VCC G55
VCC G51
VCC G44
VCC F55
VCC F51
VCC E60
VCC E57
VCC E53
VCC E50
VCC E46
VCC E42
VCC D59
VCC D57
VCC D55
VCC D54
VCC D52
VCC D50
VCC D48
VCC D47
VCC D45
VCC D43
VCC B60
VCC B56
VCC B53
VCC B49
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VCC A50
VCC A47
VCC A43

AUBURNDAL-1-GP-U2-NF

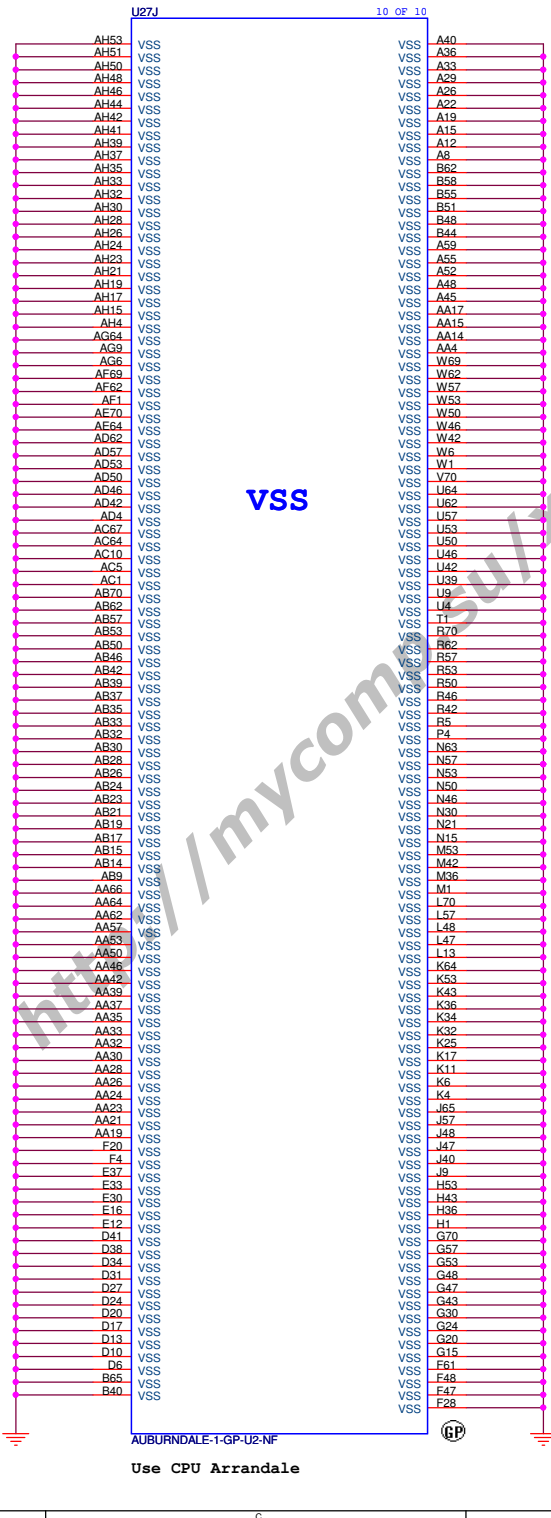
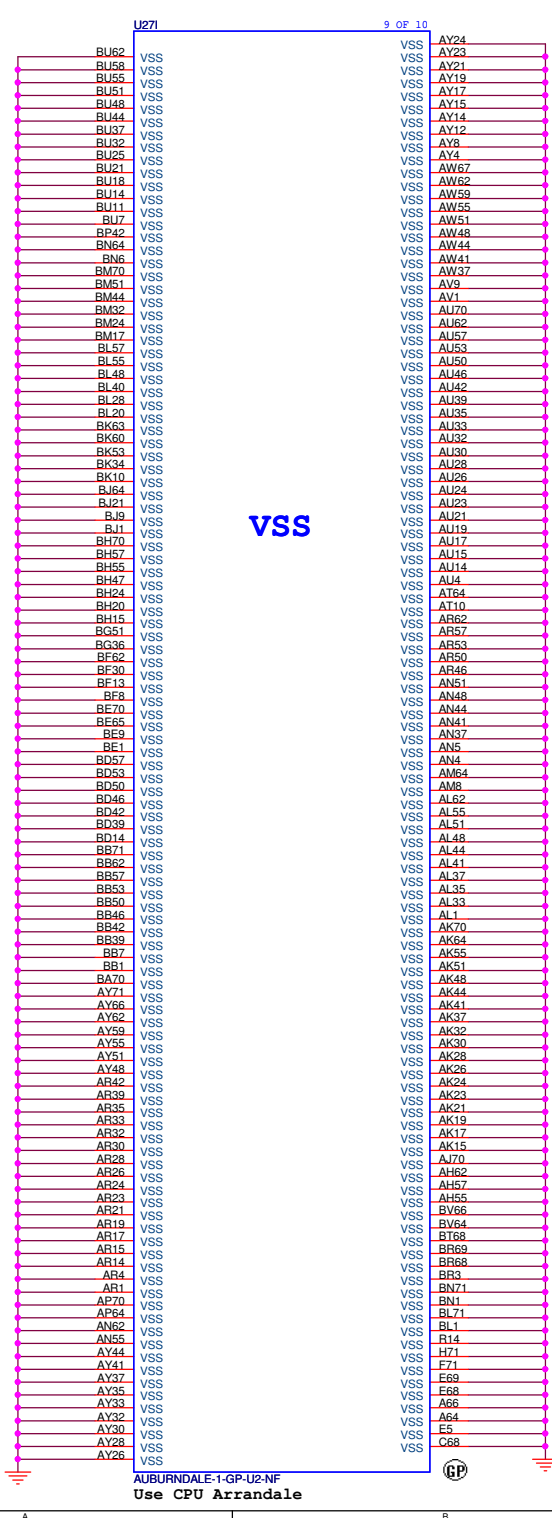
Use CPU Arrandale

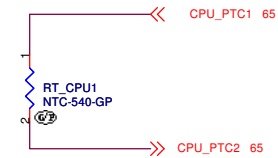
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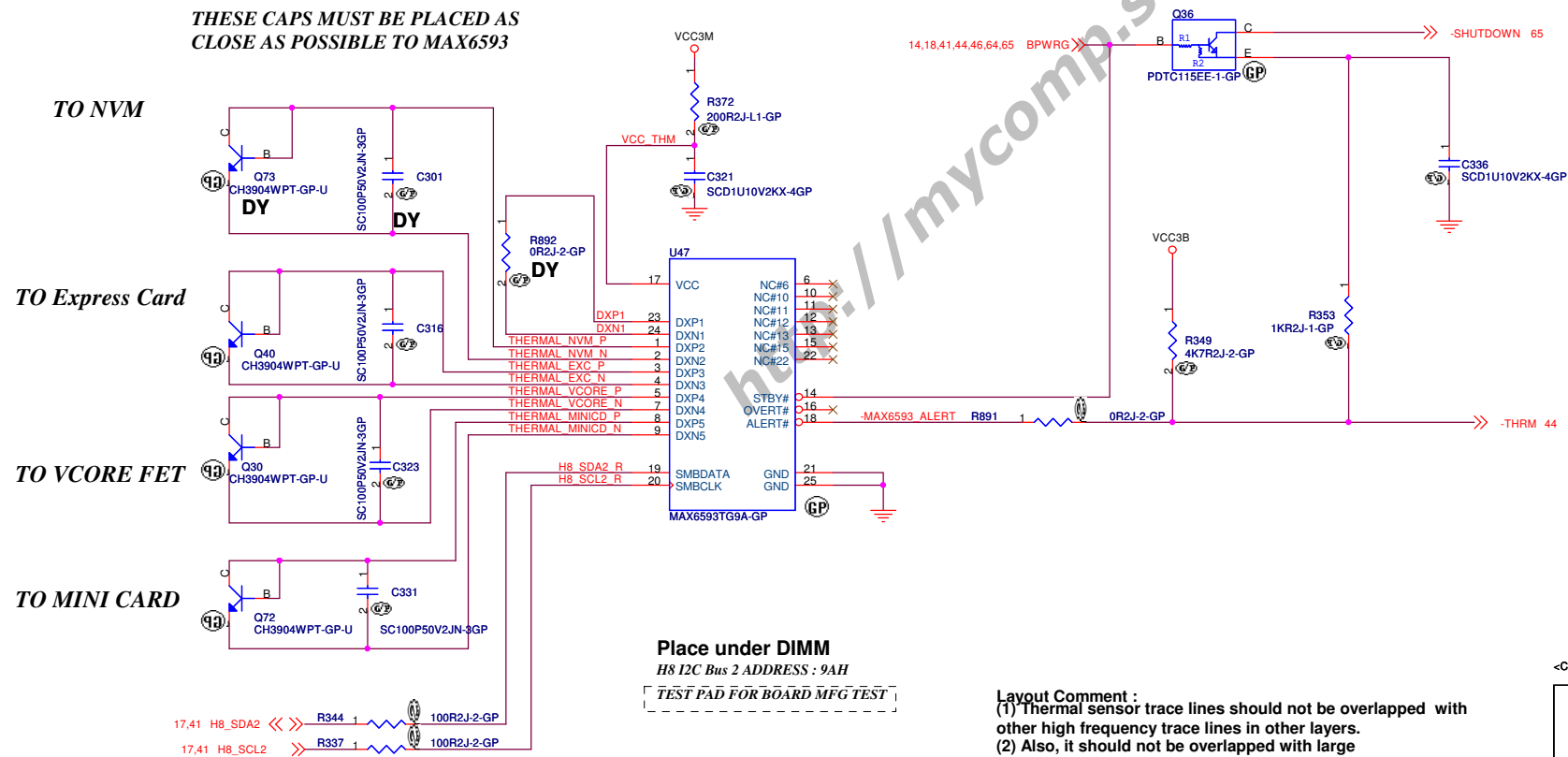
Title Arrandale CPU(7/8): VCC&VCAP

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It should be arranged near CPU instead of CPU thermal sensor



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Title

THERMAL SENSOR

Size
A3

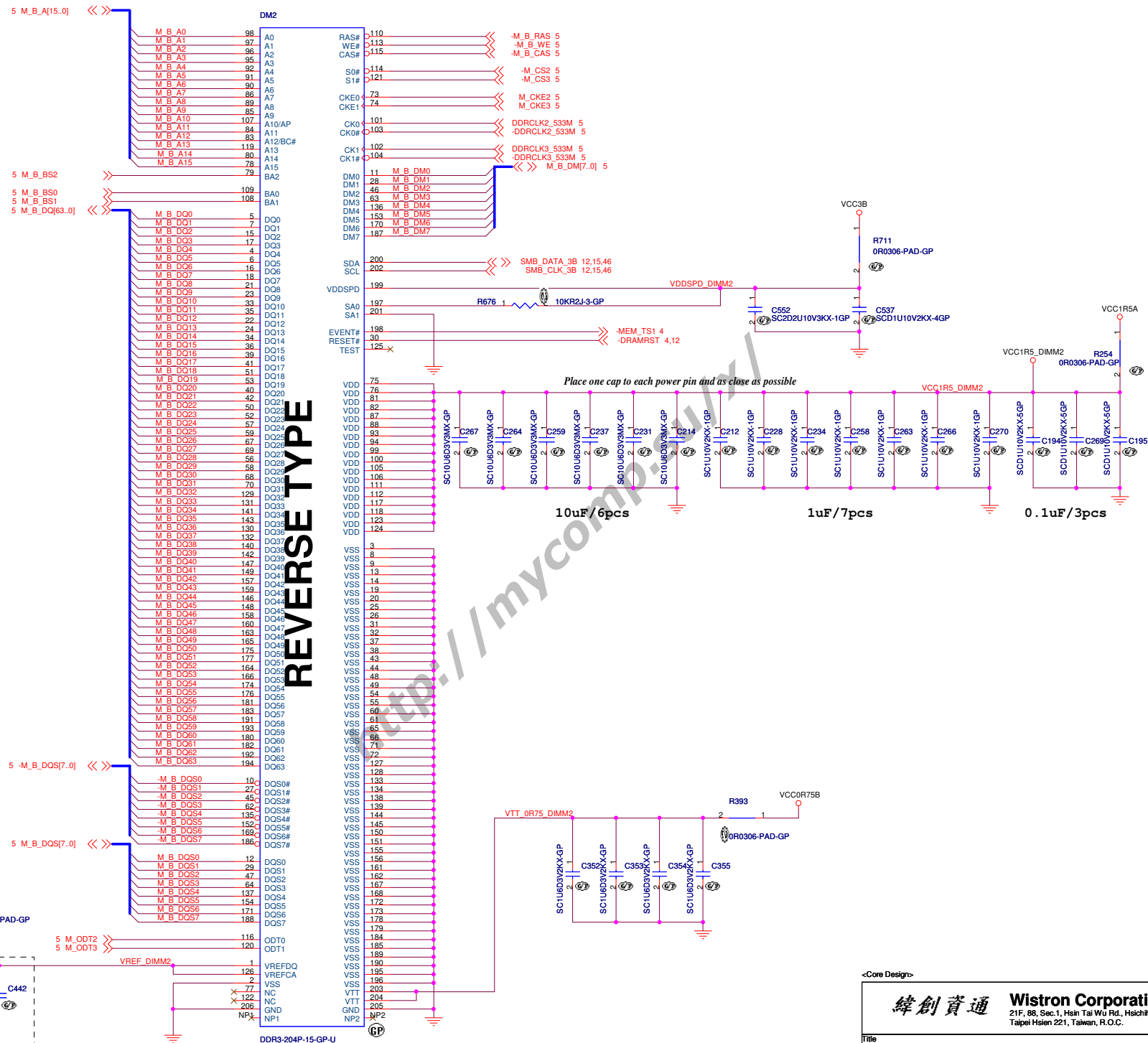
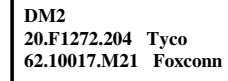
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Mocha-3

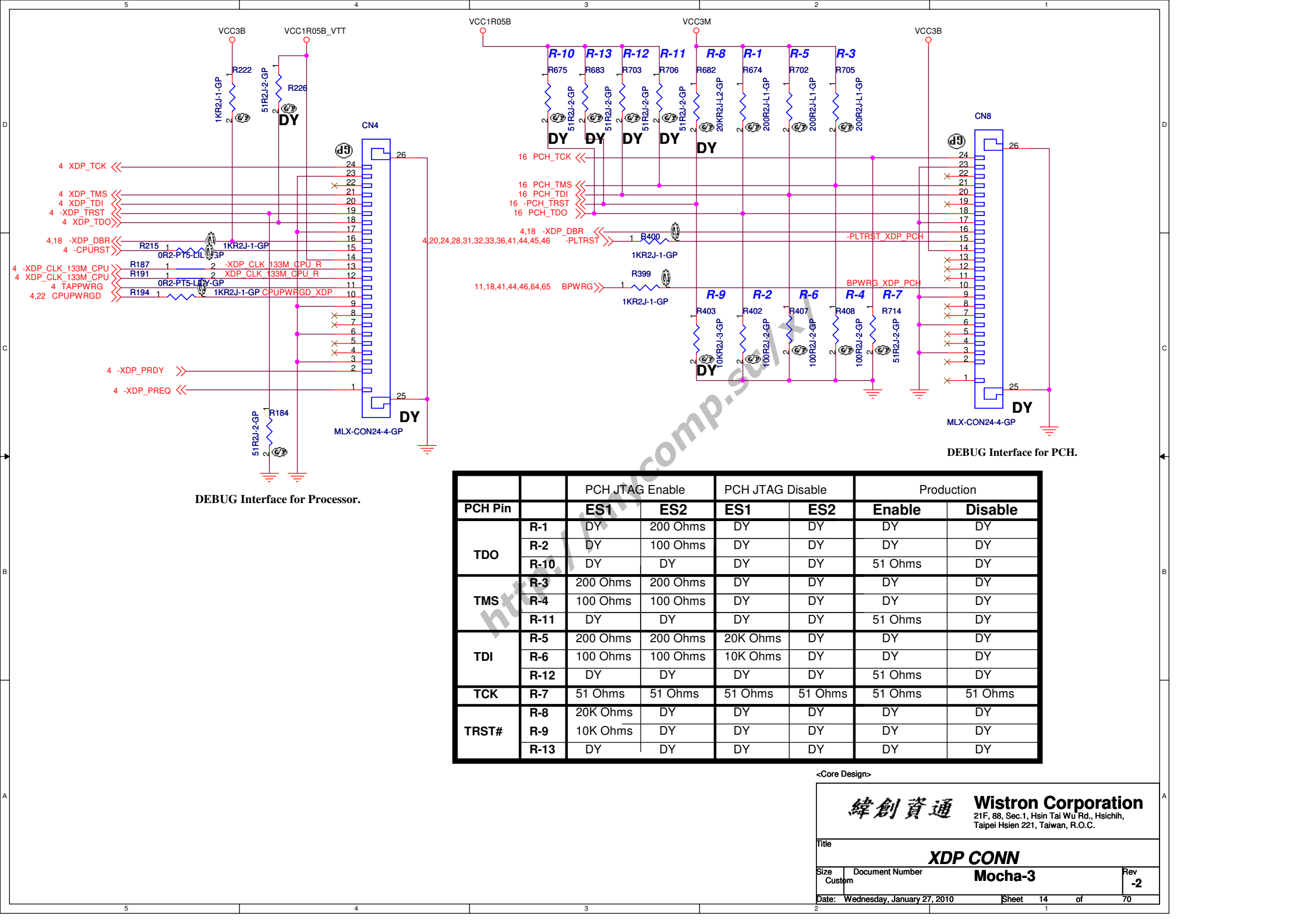
Rev	
-2	

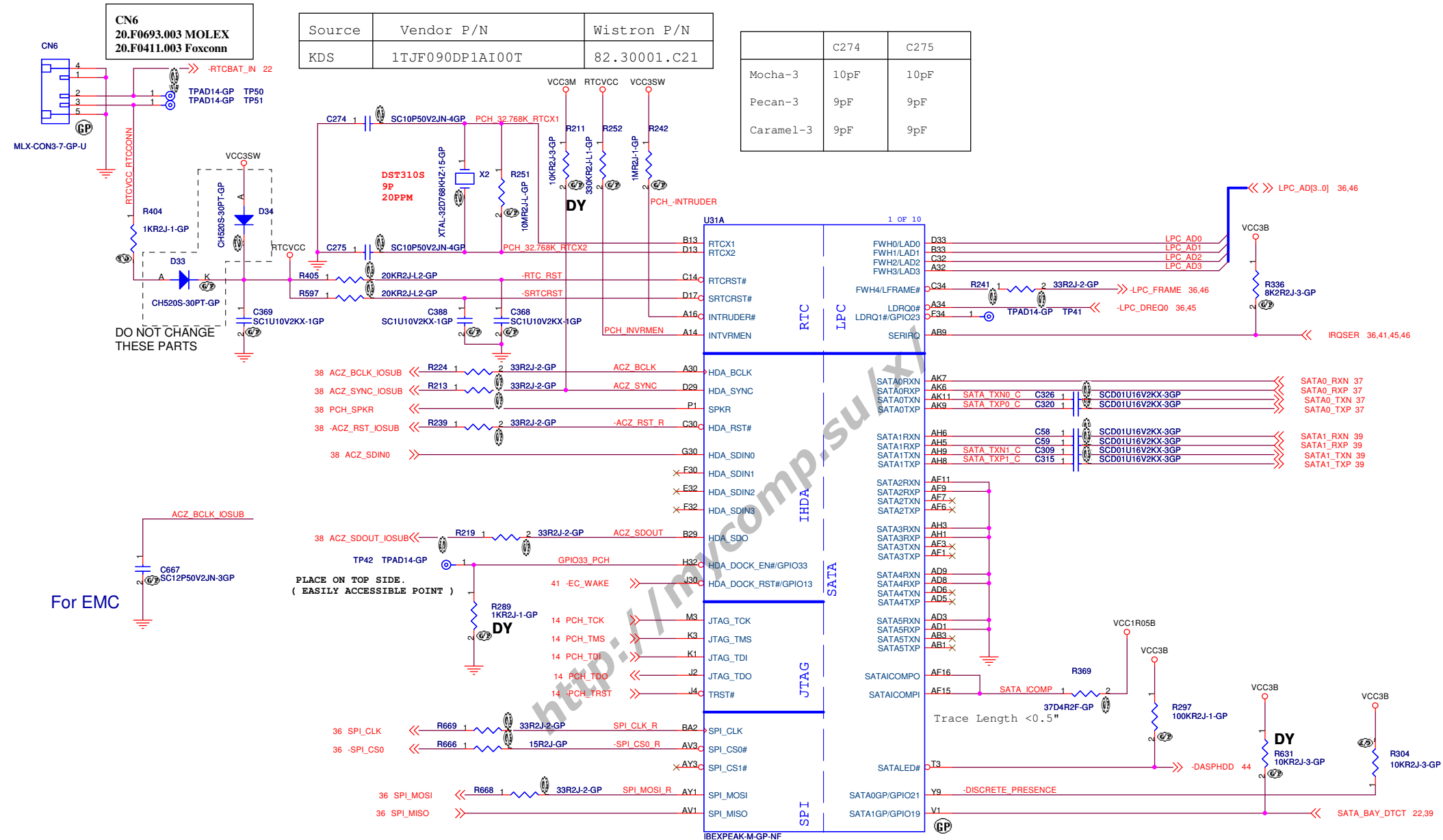
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Place caps close to pin 1 as possible

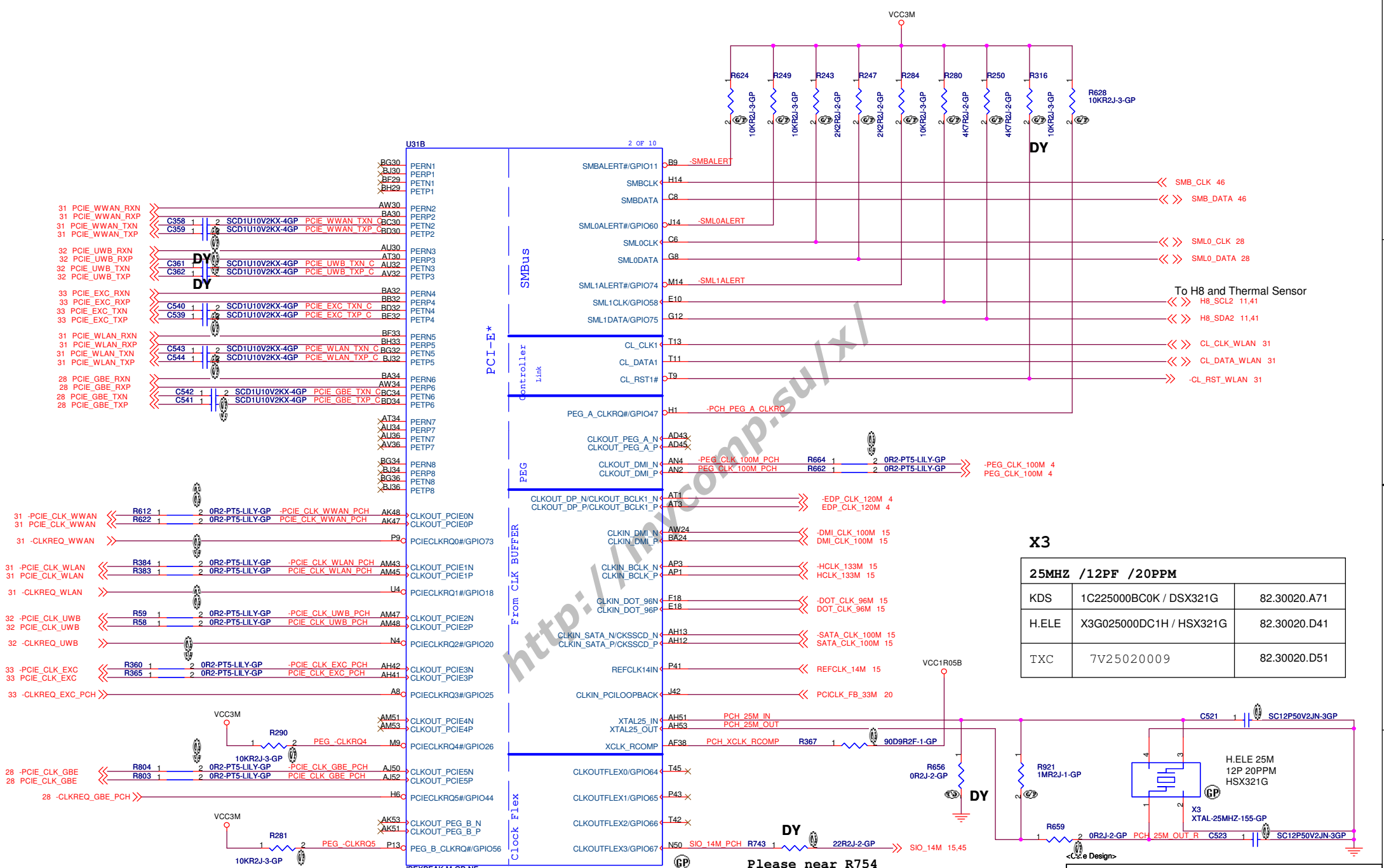




AMT	YES	NO	NO
Braidwood	YES	YES	NO
U31	QM57	HM57	HM55

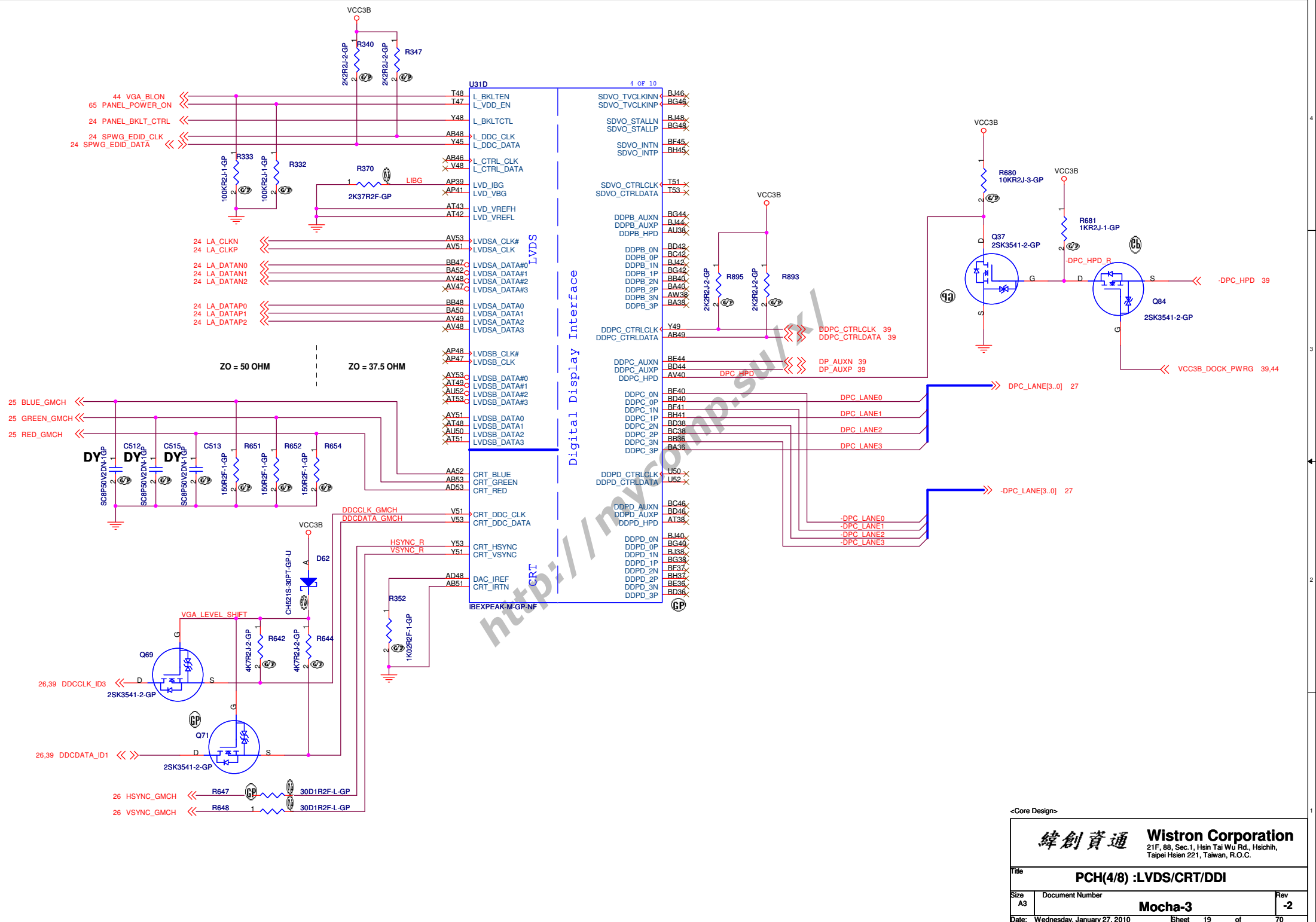
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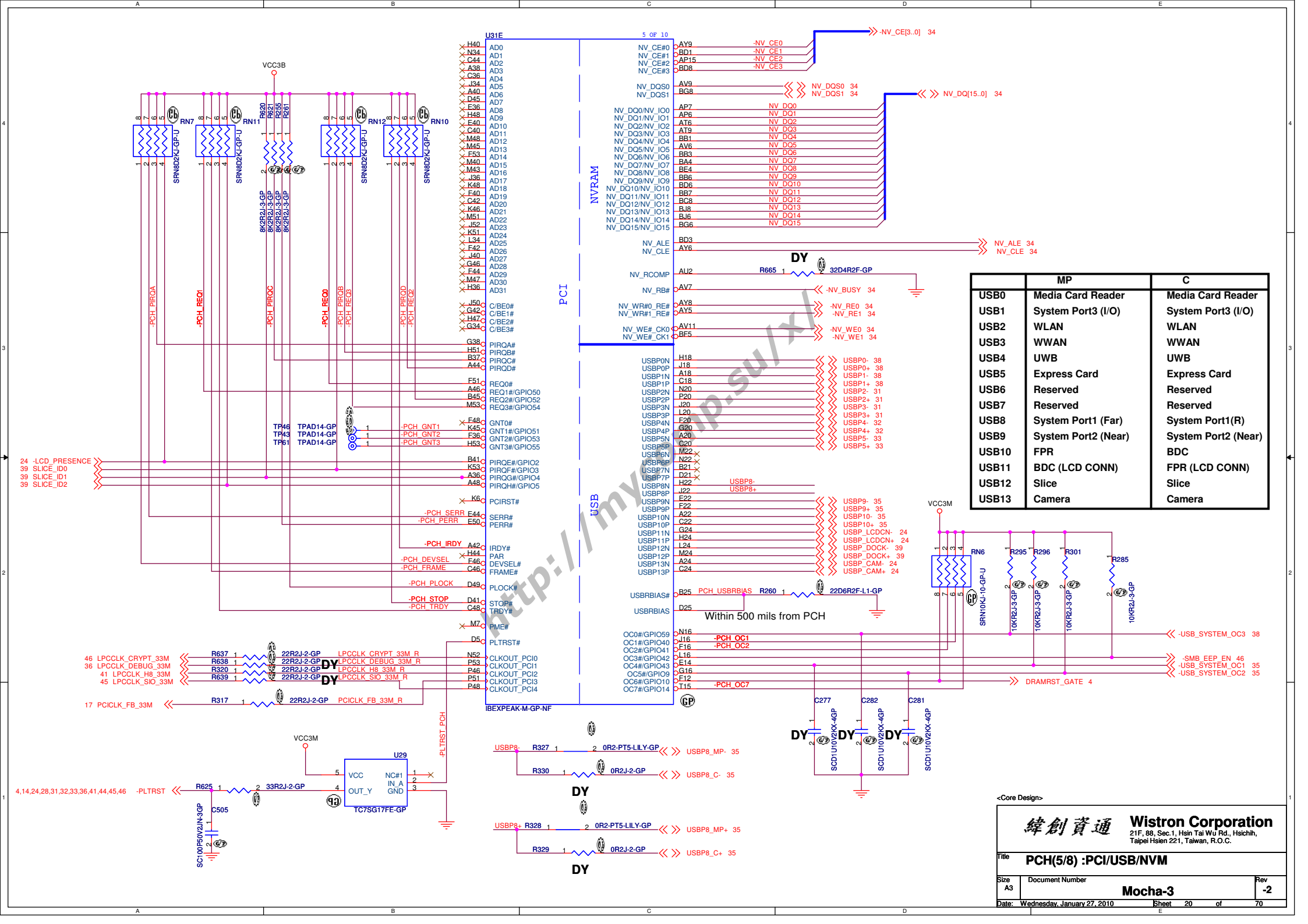
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Title PCH(1/8) : HDA/JTAG/SPI/SATA	
Size A3	Document Number
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X3

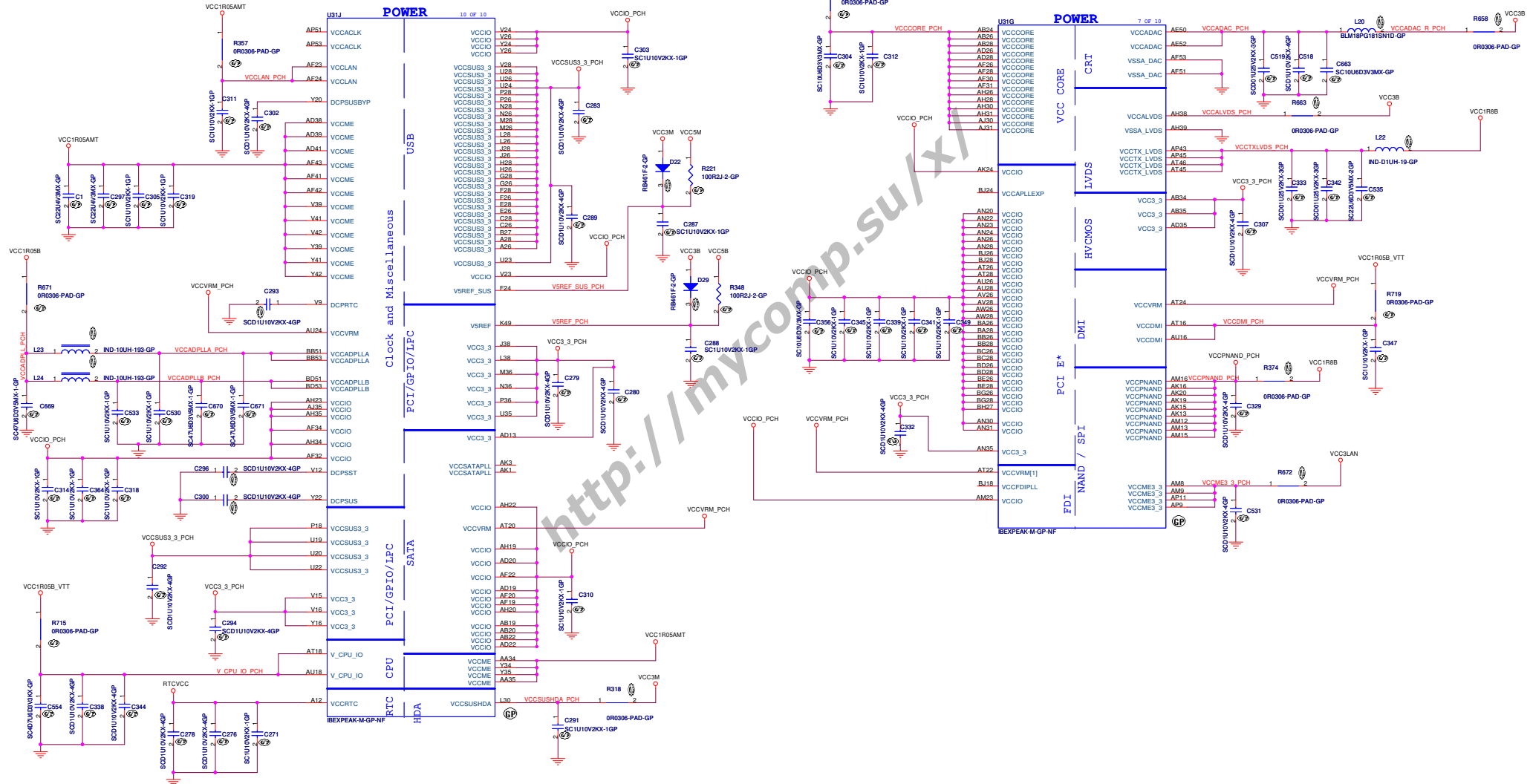
25MHZ /12PF /20PPM		
KDS	1C225000BC0K / DSX321G	82.30020.A71
H.ELE	X3G025000DC1H / HSX321G	82.30020.D41
TXC	7V25020009	82.30020.D51





Isolate the power supply for AF32, AF34, AH34 at bottom layer.
There should not be shorted to AH35 and AJ35 pins

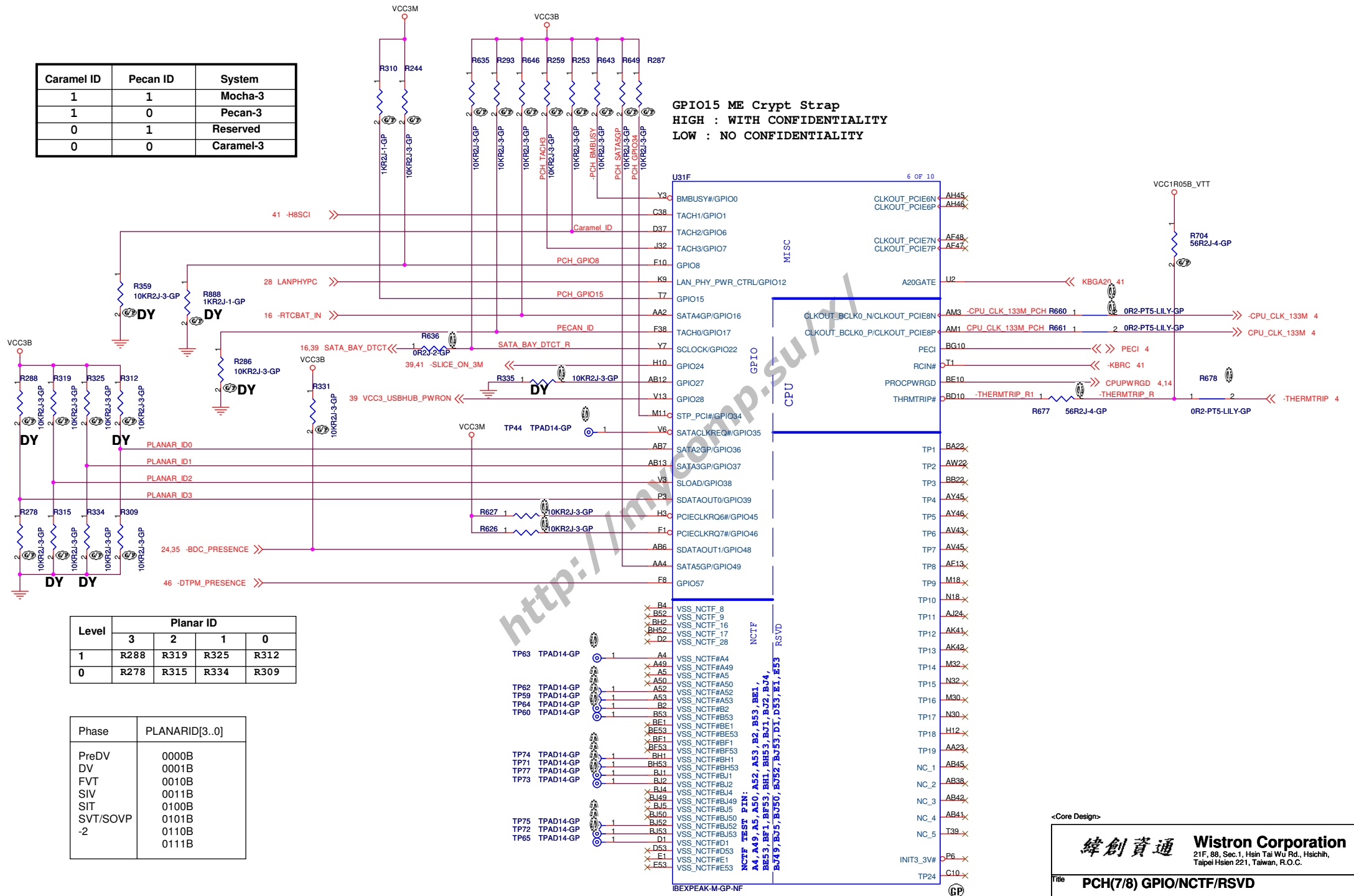
Refer to HDMI 1080P 60Hz Deep Color Mode Support
on Intel 5 Series Chipset (update to Ilex Peak Sighting #3306171)" issued at Aug 21st, 2009



Core Design

Caramel ID	Pecan ID	System
1	1	Mocha-3
1	0	Pecan-3
0	1	Reserved
0	0	Caramel-3

GPIO15 ME Crypt Strap
HIGH : WITH CONFIDENTIALITY
LOW : NO CONFIDENTIALITY



Level	Planar ID			
	3	2	1	0
1	R288	R319	R325	R312
0	R278	R315	R334	R309

Phase	PLANARID[3..0]
PreDV	0000B
DV	0001B
FVT	0010B
SIV	0011B
SIT	0100B
SVT/SOVP	0101B
-2	0110B
	0111B

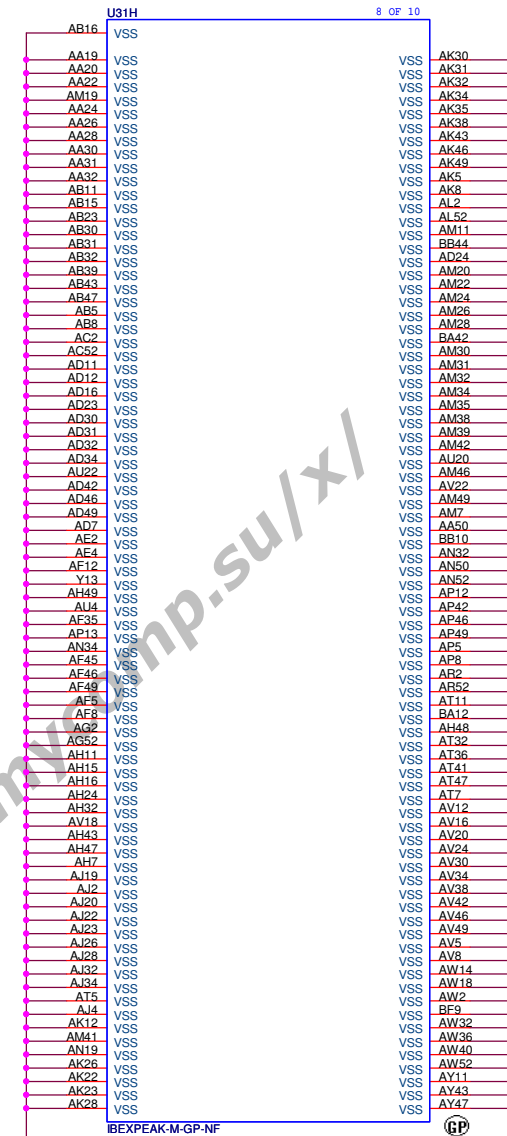
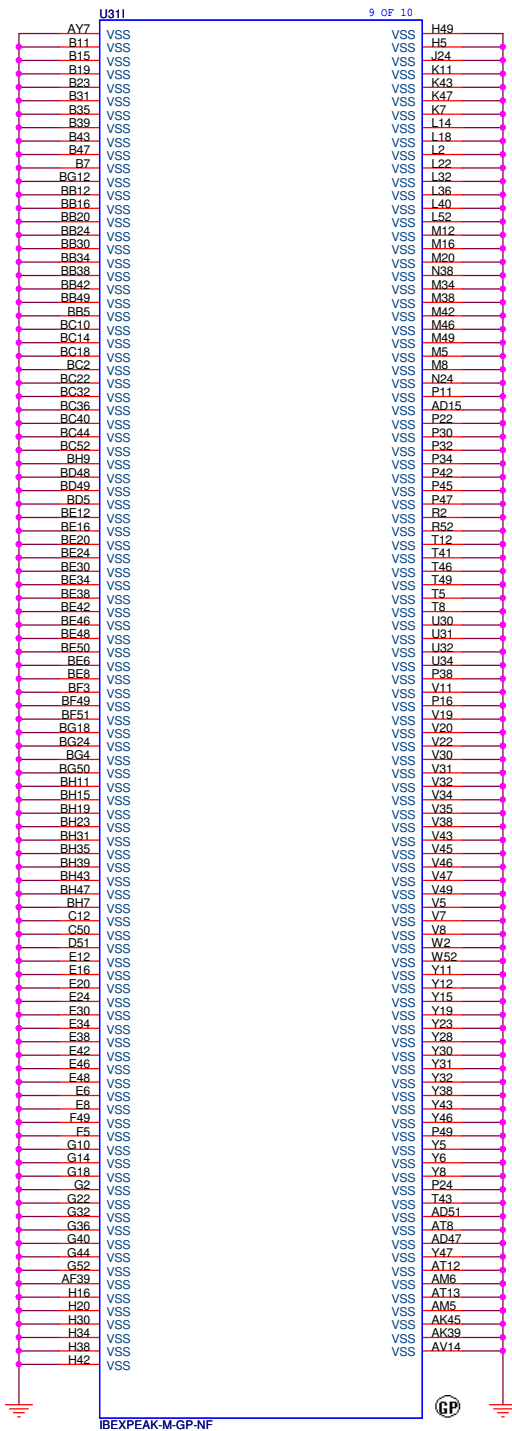
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Title **PCH(7/8) GPIO/NCTF/RSVD**

Size A3 Document Number **Mocha-3** Rev **-2**

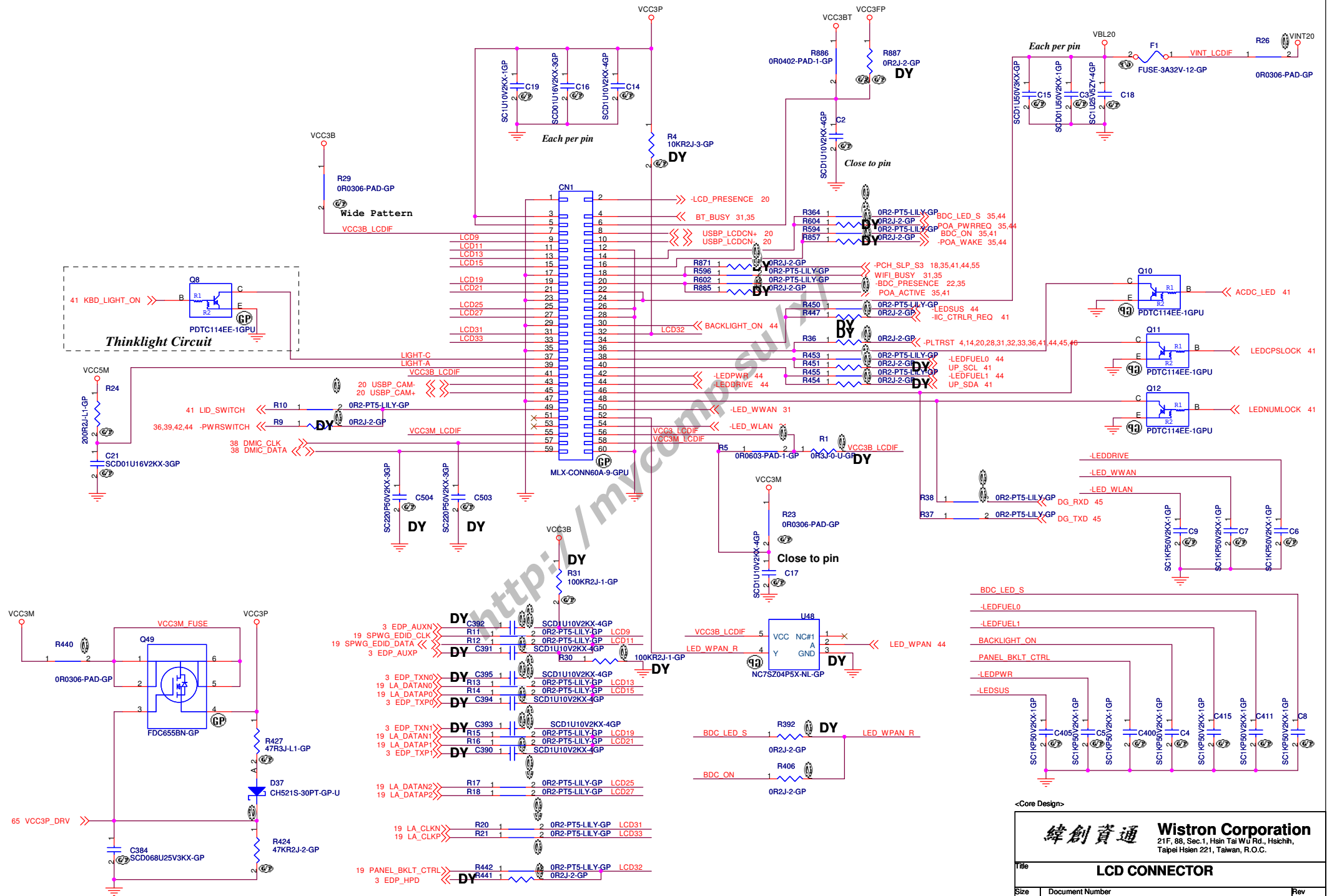
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Title PCH(8/8) :GND		
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LCD / Inverter Connector



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Title	LCD CONNECTOR
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Size
A3

Document Number

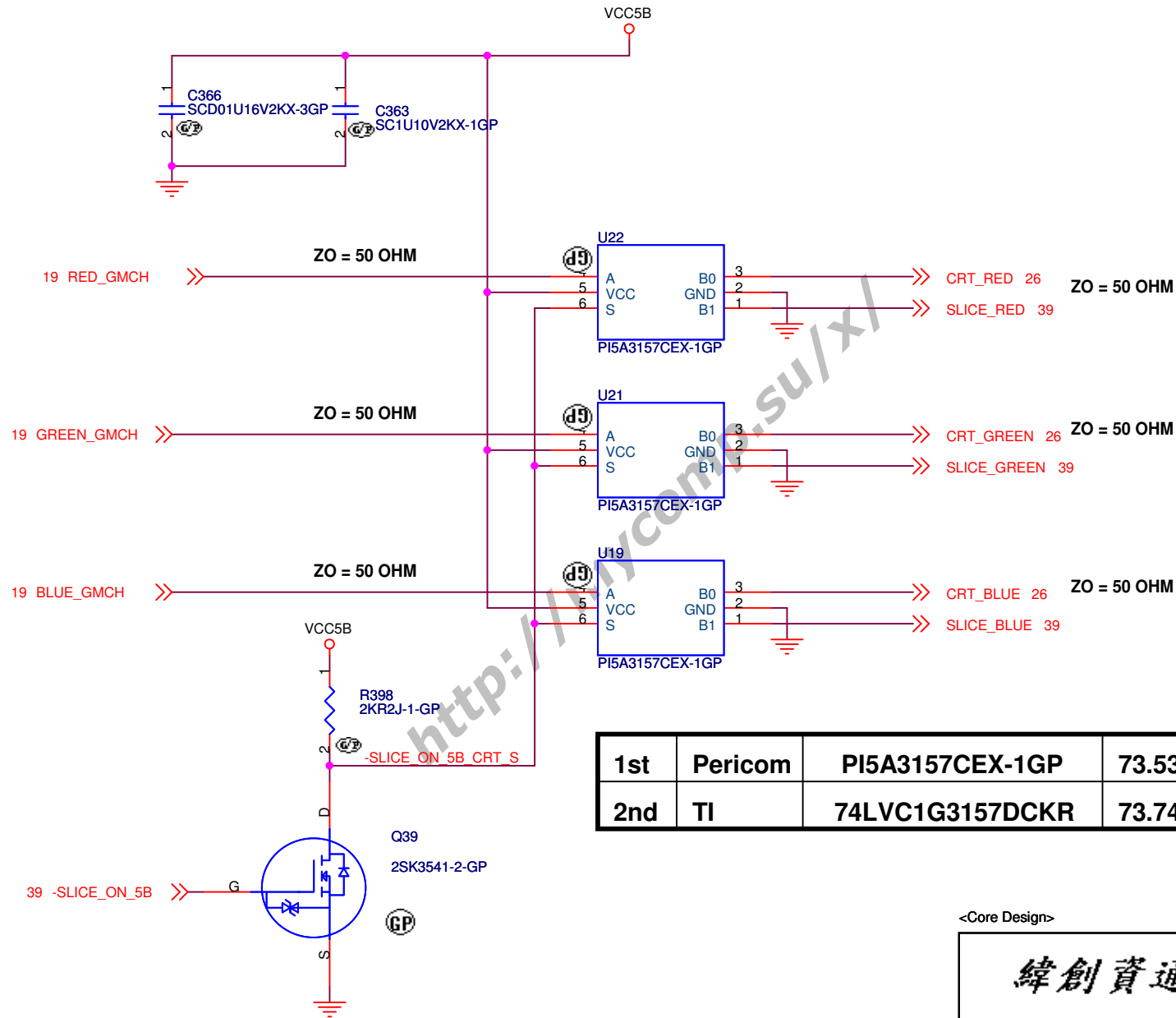
Mocha-3

Rev
-2

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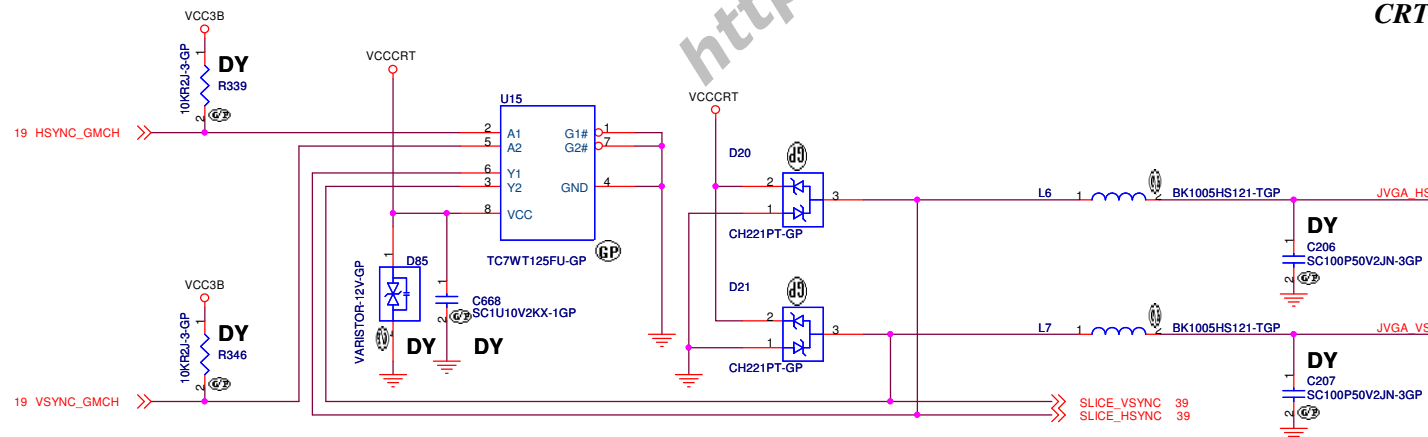
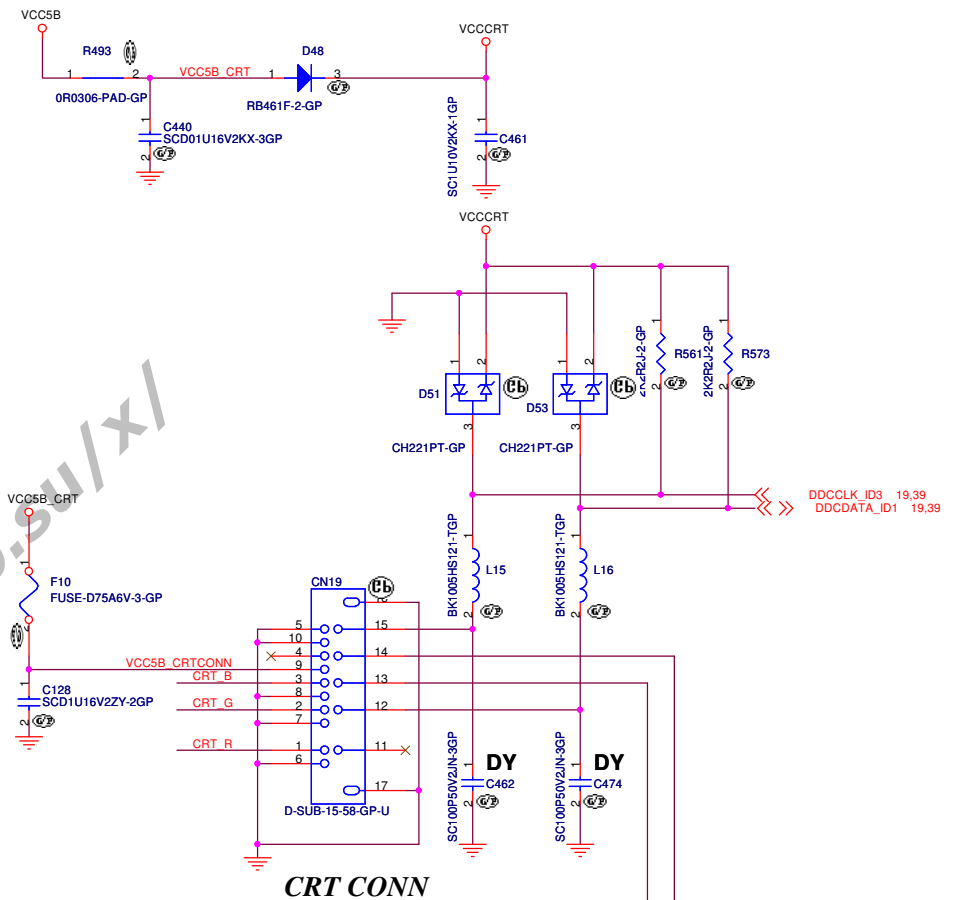
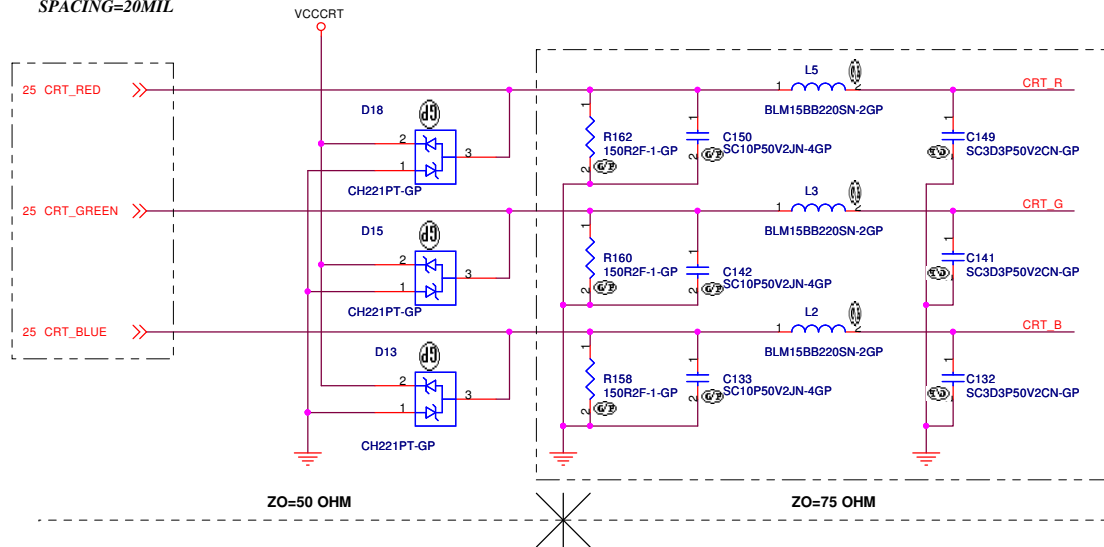


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2nd	TI	74LVC1G3157DCKR	73.74157.CHH

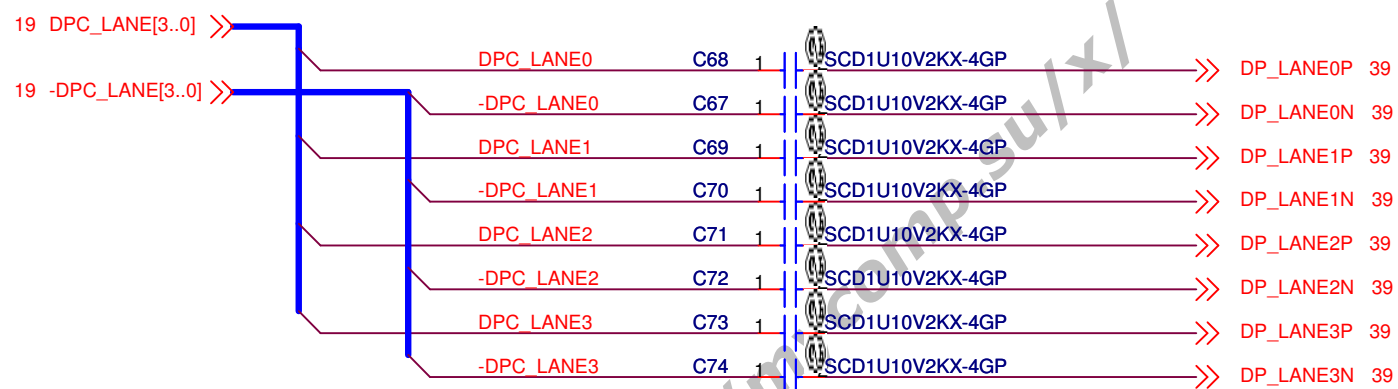
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Title	
CRT SELECTOR	
Size A4	Document Number Mocha-3
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GND GUARDING
EACH SIGNAL WIDTH DEPENDS ON ZO(TRACE IMPEDANCE)
SPACING=20MIL



System DP: GMCH to SLICE Connector



<Core Design>

緯創資通

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Title

Display Port AC Coupling

Size
A

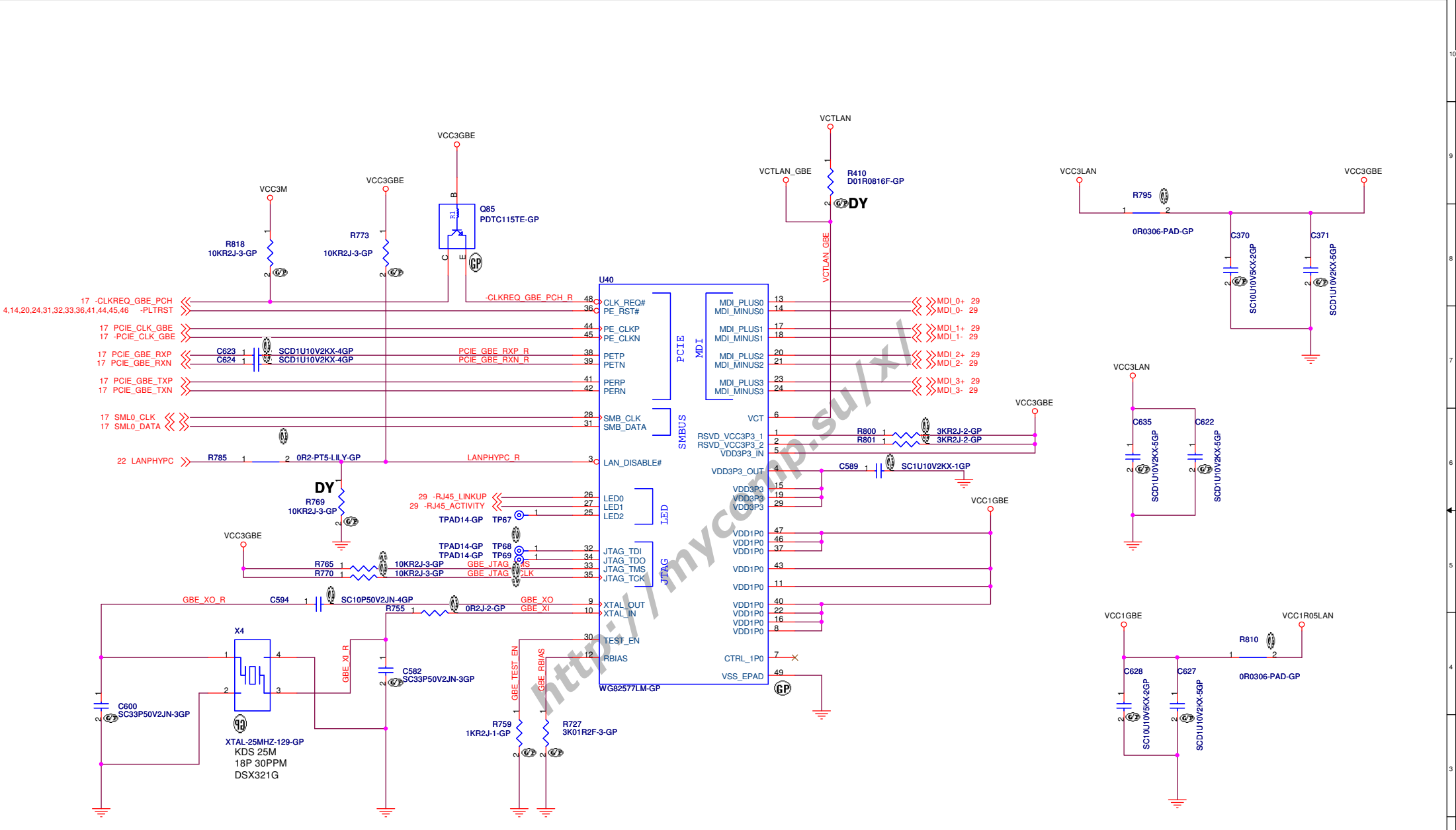
Document Number

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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

AMT	YES	NO
U40	82577LM	82577LC

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Title

GBE Hanksville

Size

A3

Document Number

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Rev

-2

Date

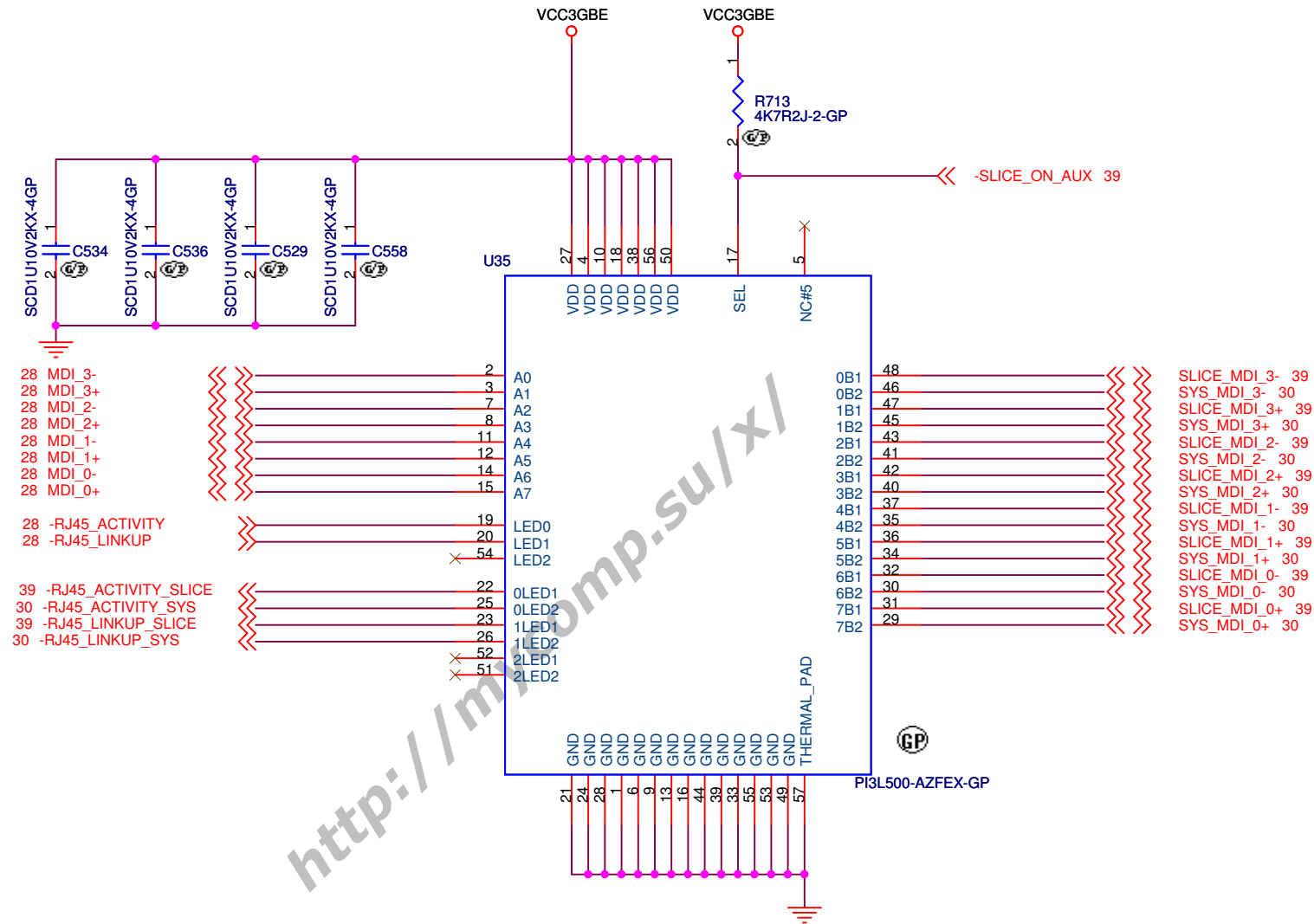
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		Vendor P/N	Wistron P/N
1st	Pericom	PI3L500AZFEX	73.3L500.003
2nd	TI	TS3L500AERHUR	73.3L500.A0V

<Core Design>

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Title

GBE LAN SW

Size
A4

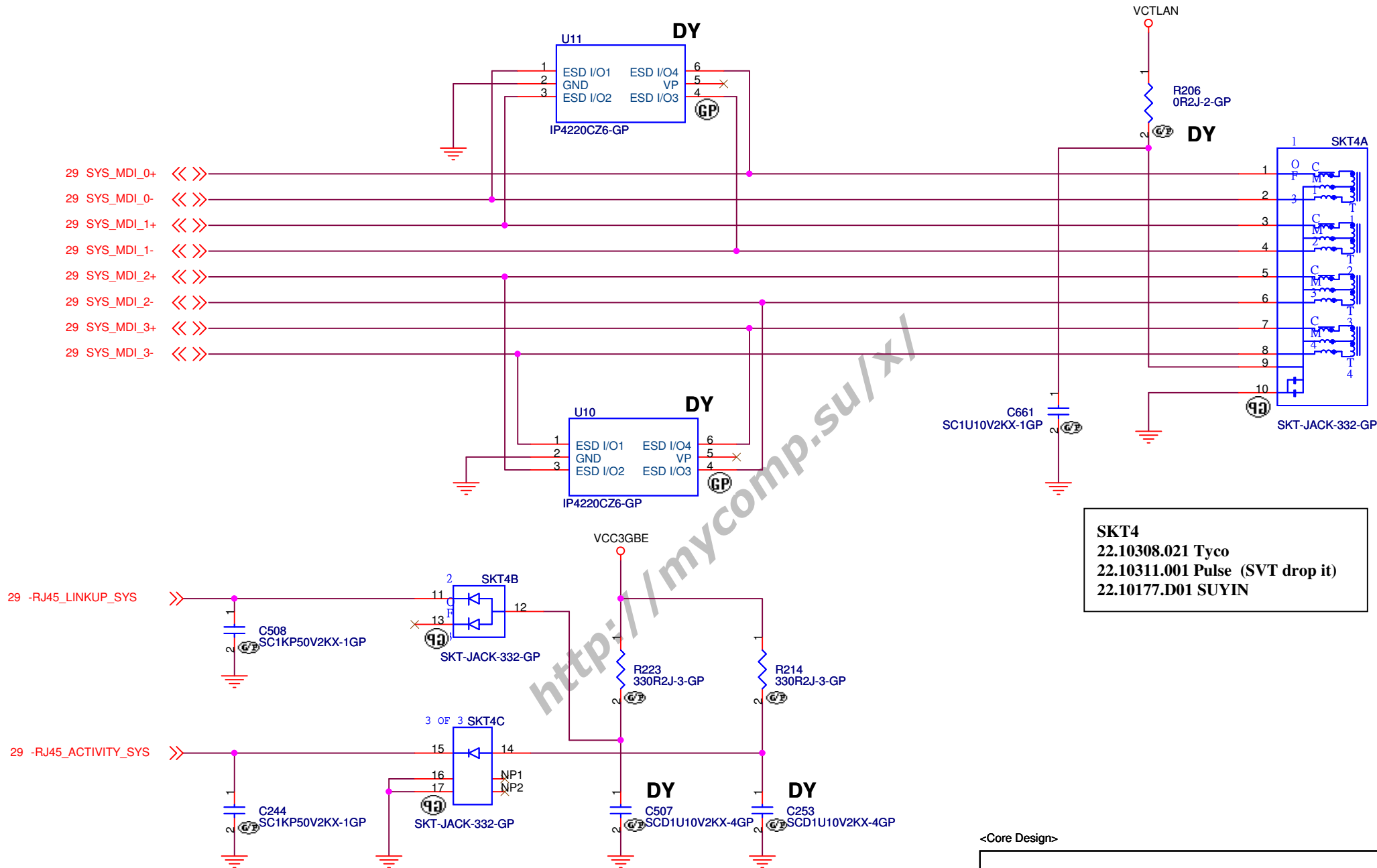
Document Number

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-2

Date: Wednesday, January 27, 2010

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Wistron Corporation

21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
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Title

RJ45 CONN

Size
 A4

Document Number

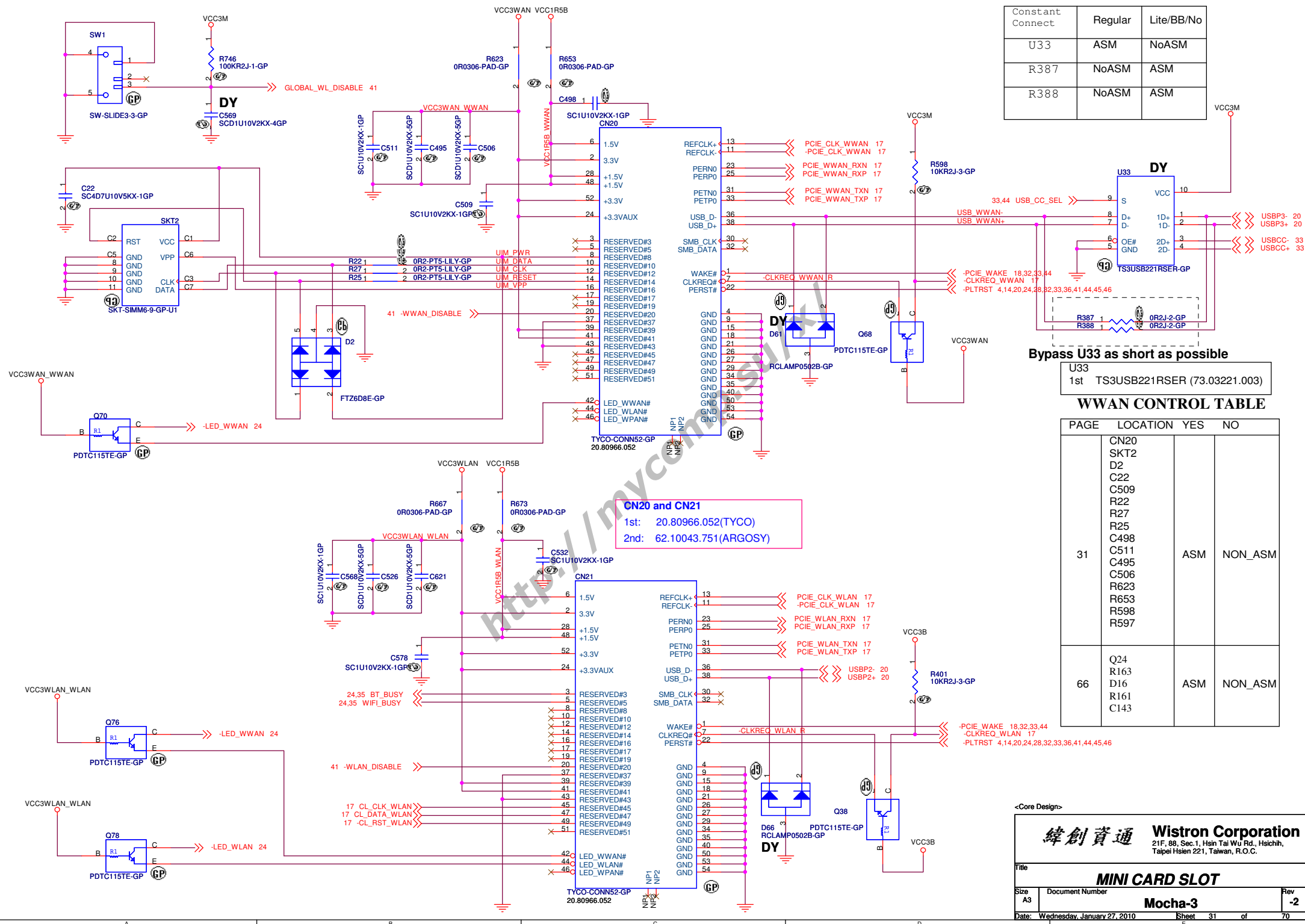
Mocha-3

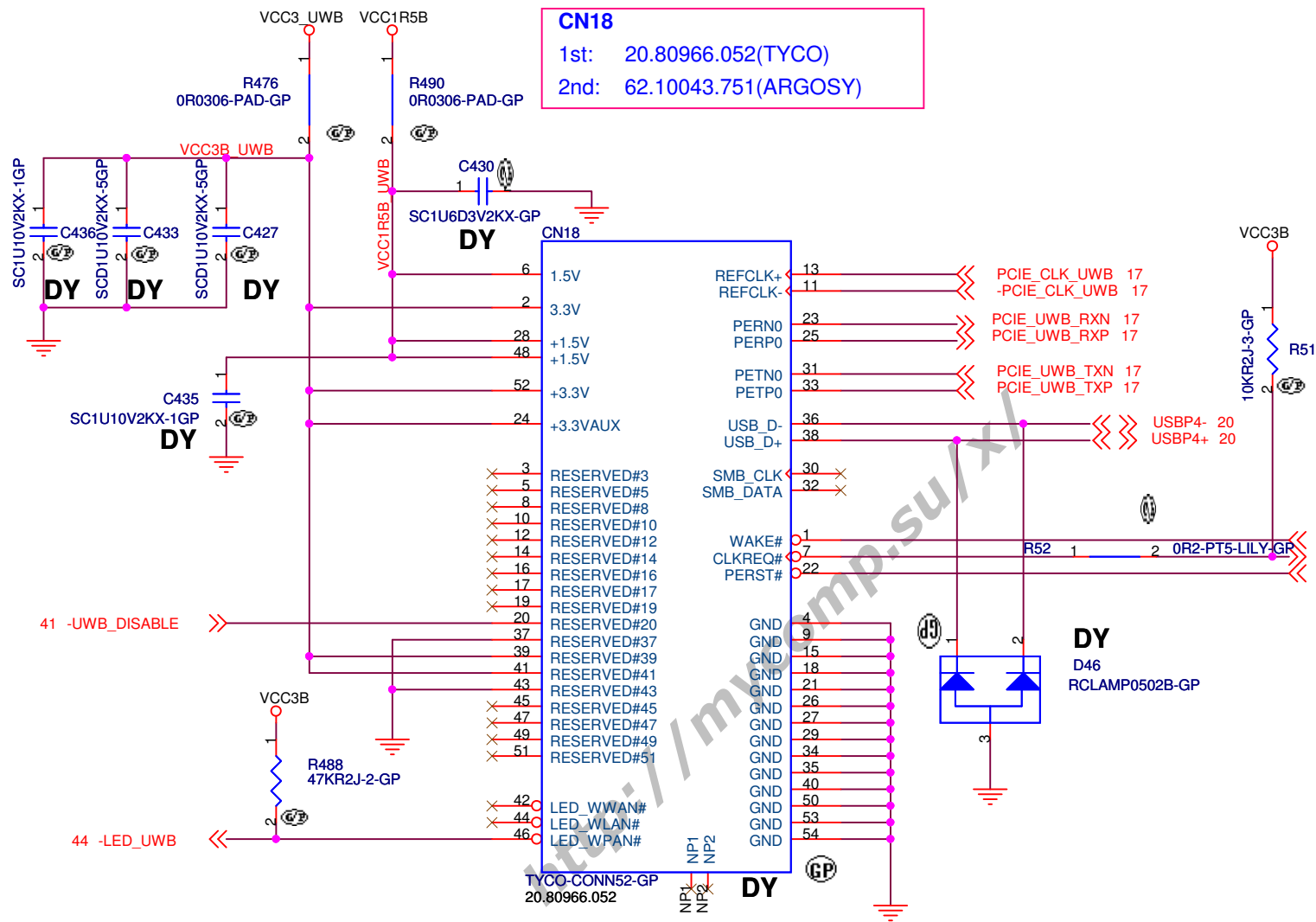
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Date: Wednesday, January 27, 2010

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Constant Connect	Regular	Lite/BB/No
U33	ASM	NoASM
R387	NoASM	ASM
R388	NoASM	ASM





UWB	YES	NO
CN18	ASM	DY
C427	ASM	DY
C433	ASM	DY
C436	ASM	DY
C430	ASM	DY
C435	ASM	DY
D46	DY	DY
R51	ASM	ASM
R52	ASM	DY
R488	ASM	ASM
R62	ASM	DY

-PCIE_WAKE 18,31,33,44
-CLKREQ_UWB 17
-PLTRST 4,14,20,24,28,31,33,36,41,44,45,46

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Title

MINI CARD SLOT 2

Size
A4

Document Number

Mocha-3

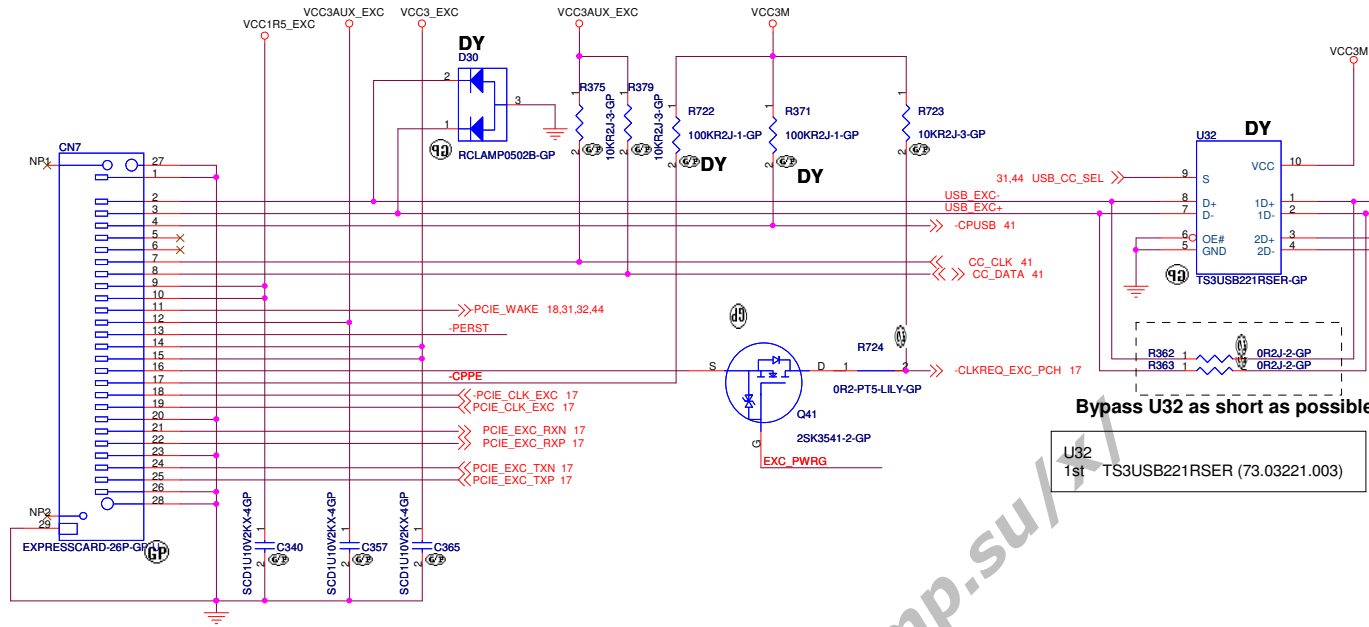
Rev
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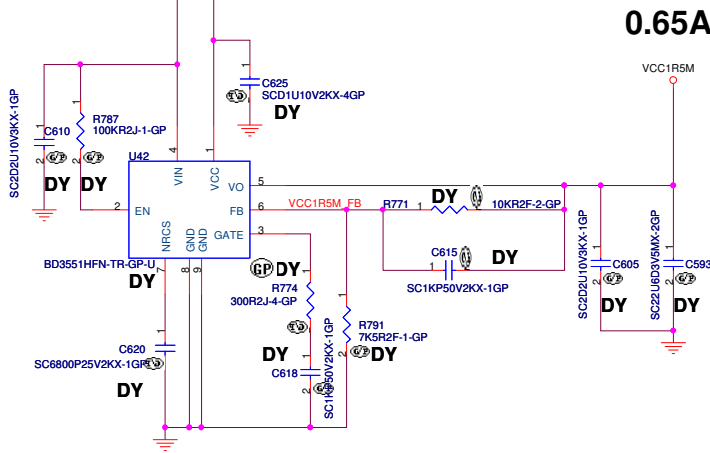
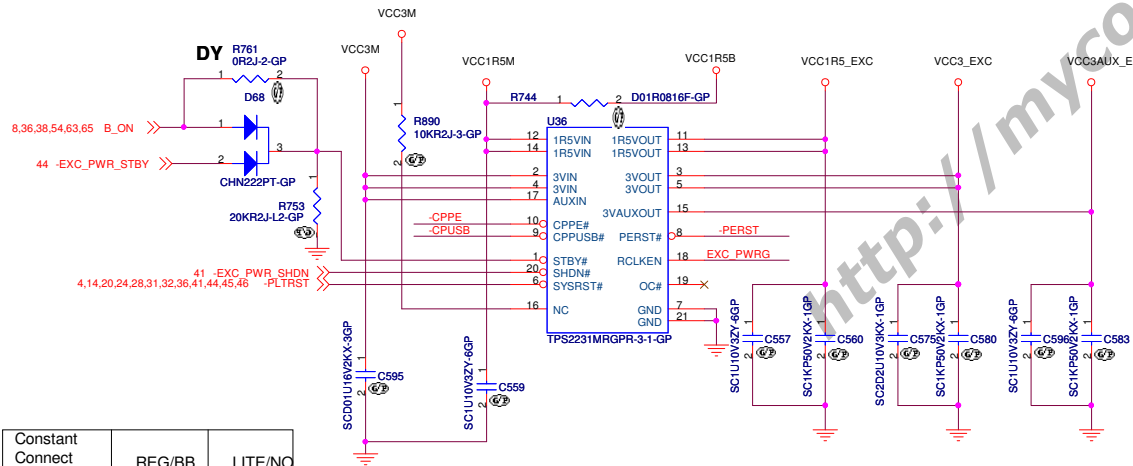
SKT1
NP1
CARDBUS-SKT99-GP-U1

For DIP line



Constant Connect	REG	LITE/BB/NO
U32	ASM	NoASM
R362	NoASM	ASM
R363	NoASM	ASM

Constant Connect	REG/BB	REG/BB	LITE/NO
U36	BD4156MUV TPS2231MRGPR-3	BD4156MUV TPS2231MRGPR	BD4156MUV TPS2231MRGPR
R890	ASM	DY	DY
R744	ASM	DY	ASM
U42	DY	ASM	DY
R787	DY	ASM	DY
C610	DY	ASM	DY
C625	DY	ASM	DY
C620	DY	ASM	DY
R774	DY	DY	DY
C618	DY	DY	DY
R771	DY	ASM	DY
R791	DY	ASM	DY
C615	DY	DY	DY
C605	DY	ASM	DY
C593	DY	ASM	DY



0.65A

Constant Connect	REG/BB	LITE/NO
D68	ASM	NoASM
R753	ASM	NoASM
R761	NoASM	ASM

		U36	Wistron P/N
1st	Ti	TPS2231MRGP-3	74.02231.D73
2nd	Rohm	BD4156MUV-E2	74.04156.07T
3rd			

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J2
62.10034.331

0.4A
VCC1R8B

0.4A

Turbo memory Braidwood Support	YES	NO
J2	ASM	DY
TC9	ASM	DY
C545	DY	DY
C579	DY	DY
C351	ASM	DY
C562	DY	DY
C538	DY	DY

Near SKT3

USB_PWR1 1

USBP8 MP- TVS 2

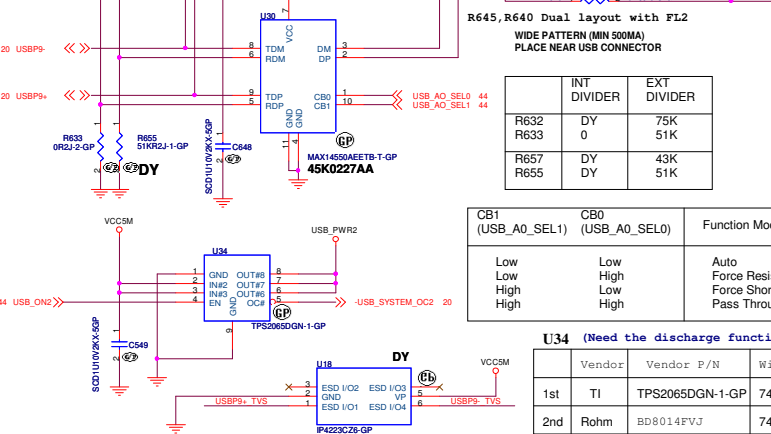
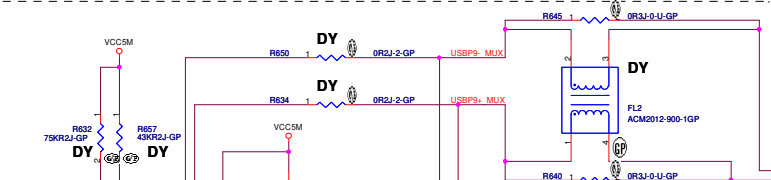
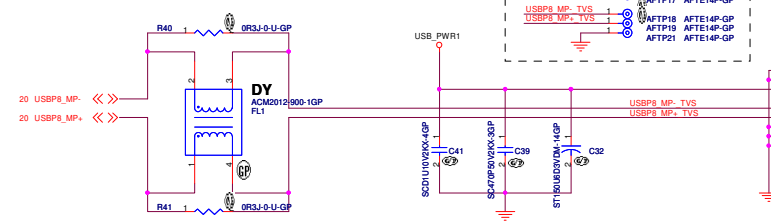
USBP8 MP- TVS 3

AFPT17 AFTE14P-GP

AFPT18 AFTE14P-GP

AFPT19 AFTE14P-GP

AFPT21 AFTE14P-GP

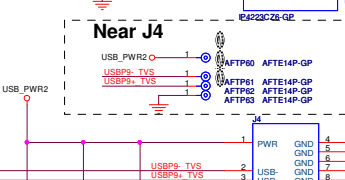


	INT DIVIDER	EXT DIVIDER
R632 R633	DY 0	75K 51K
R657 R655	DY DY	43K 51K

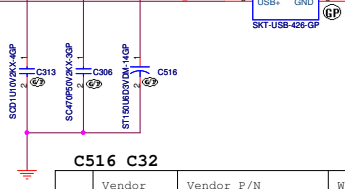
CB1 (USB_A0_SEL1)	CB0 (USB_A0_SEL0)	Function Mode
Low	Low	Auto
Low	High	Force Resistor
High	Low	Force Short
High	High	Pass Through

U34 (Need the discharge function)

	Vendor	Vendor P/N	Wistron P/N
1st	TI	TPS2065DGN-1-GP	74.02065.A79
2nd	Rohm	BD8014FVJ	74.08014.07G

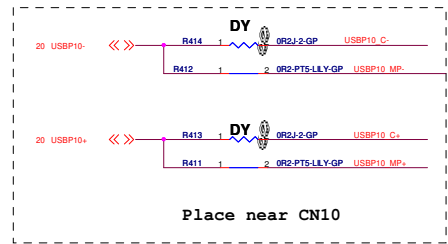
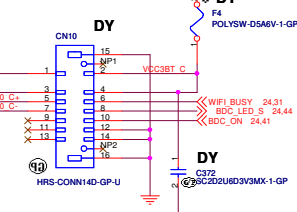
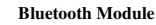
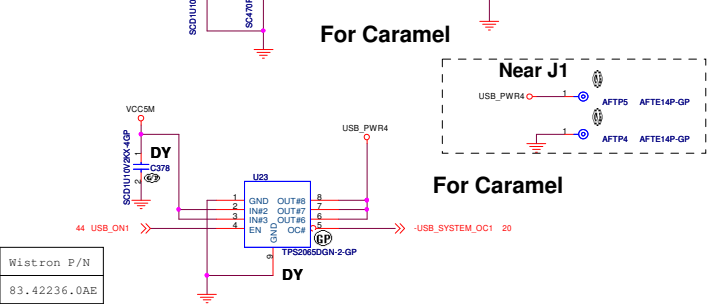
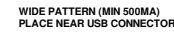


	Vendor	Vendor P/N	Wistron P/N
1st	NXP	IP4223CZ6	83.42236.0AE
2nd	SEMTECH	SRV05-4TCT	83.00005.BAE /41U5451AA
3rd	AOS	AOZ8904CIL	83.08904.0AE

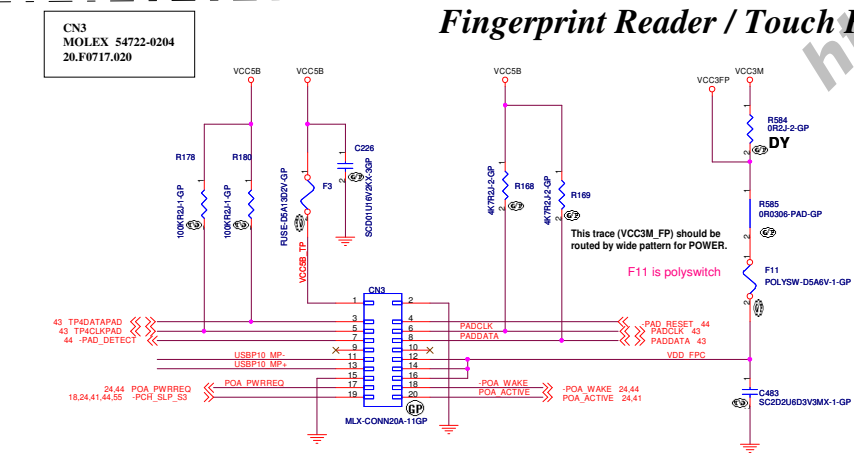


	Vendor	Vendor P/N	Wistron P/N
1st	NEC/TOKIN	TIPLSLV0J157M (40) 12RE	77.C1571.02
2nd	SANYO	6TPC150M	77.21571.03
3rd	PANASONIC	EEFCX0J151R	79.15710.2B

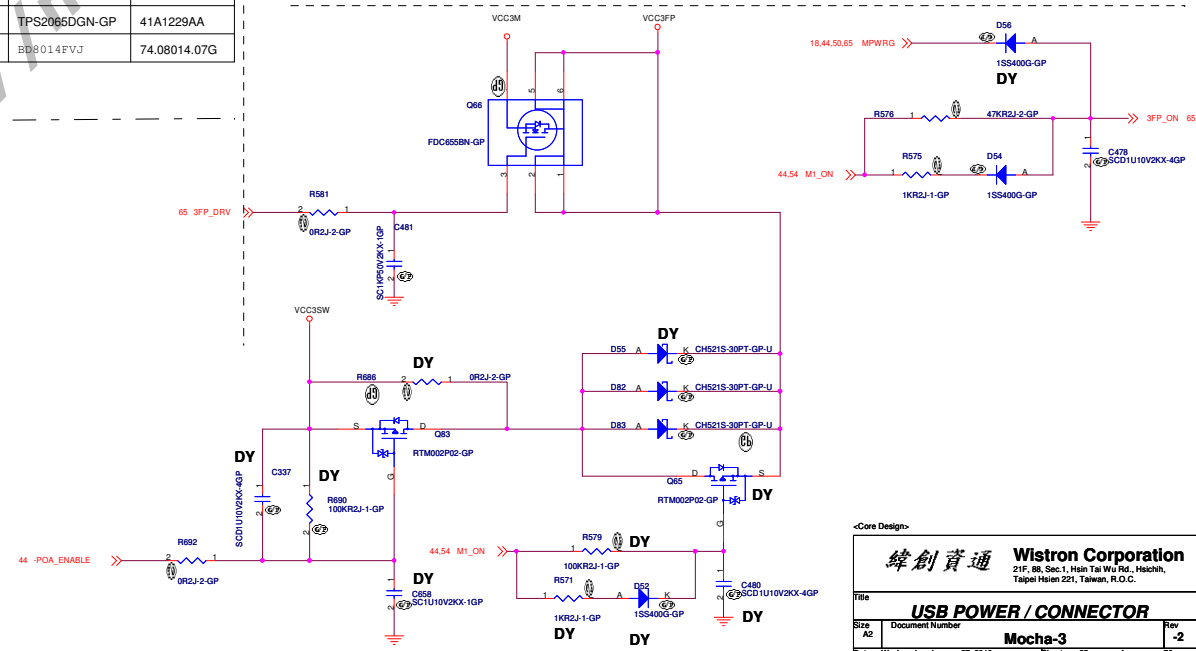
U23	U24		
	Vendor	Vendor P/N	Wistron P/N
1st	TI	TPS2065DGN-1-GP	74.02065.A79
2nd	TI	TPS2065DGN-GP	41A1229AA
3rd	Rohm	BD8014FVJ	74.08014.07G



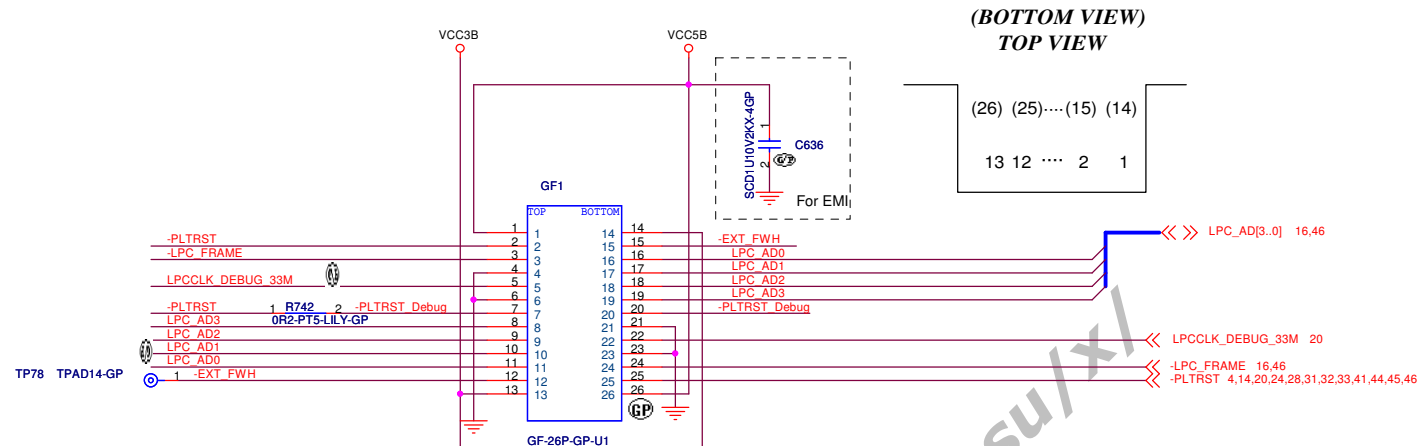
Fingerprint Reader / Touch PAD



Please put CN3 on TOP side



Golden Finger for Debug Board

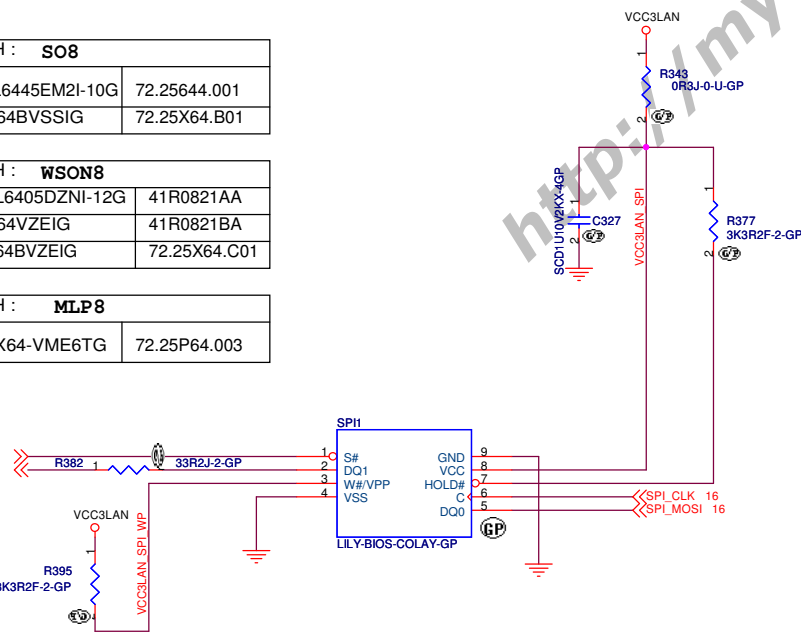


64Mbit SPI FLASH : SO8		
MXIC	MX25L6445EM2I-10G	72.25644.001
Winbond	W25X64BVSSIG	72.25X64.B01

64Mbit SPI FLASH : WSON8		
MXIC	MX25L6405DZNI-12G	41R0821AA
Winbond	W25X64VZEIG	41R0821BA
Winbond	W25X64BVZEIG	72.25X64.C01

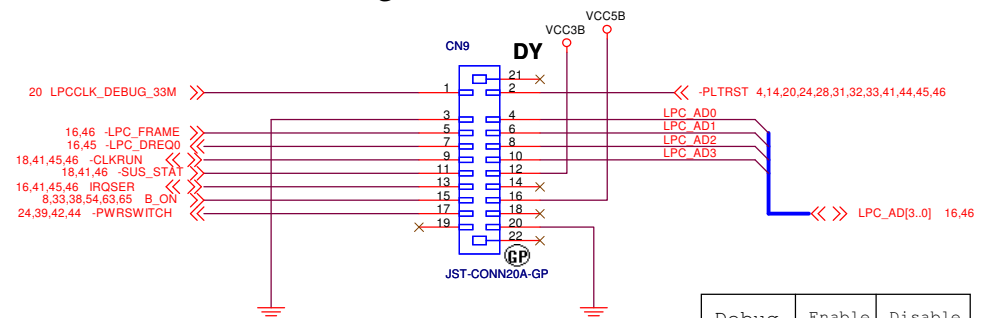
64Mbit SPI FLASH : MLP8		
Numonyx	M25PX64-VME6TG	72.25P64.003

ICP Enable		
R343	RB520S-30	
R666	470 5%	
R669	470 5%	
R668	470 5%	
R382	470 5%	



SO8 and WSON8 are both supported!

Debug card connector

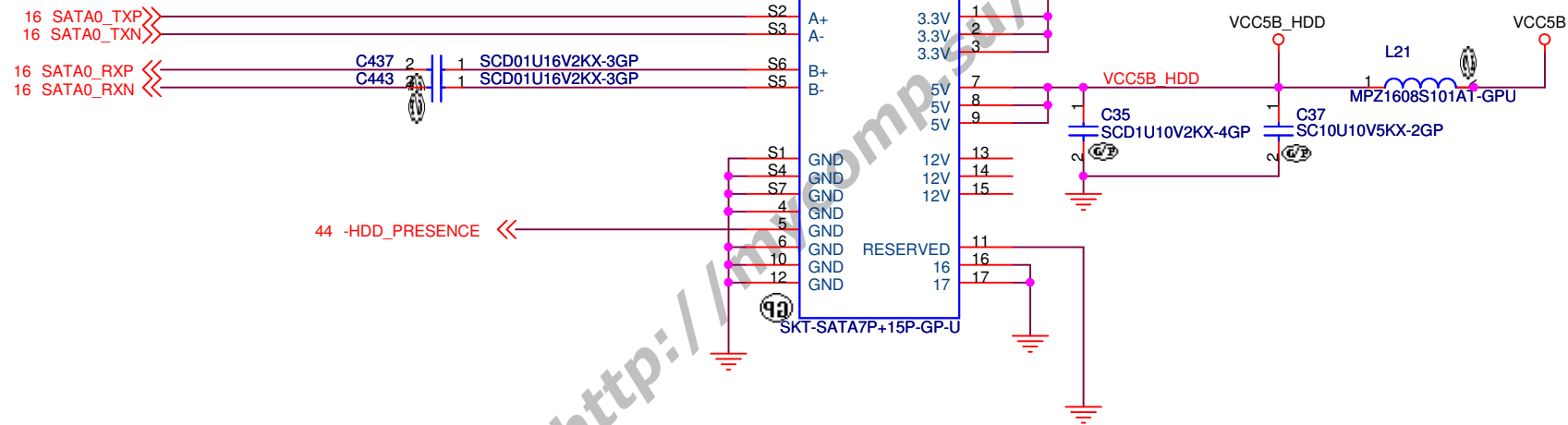


Debug	Enable	Disable
CN9	ASM	DY
R638	ASM	DY

SF 100 PIN HEADER INTERFACE (Top View)					
1	VCC	R343.2	GND	GND	2
3	CS#	R666.1	R669.1	CLK	4
5	MISO	R382.2	R668.1	MOSI	6
7	(KEY)	N/A	N/A	(RESET)	8

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Title			
SPI&LPC debug card			
Size A3	Document Number		Rev -2
Mocha-3			
Date: Wednesday, January 27, 2010		Sheet 36 of	70



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Title

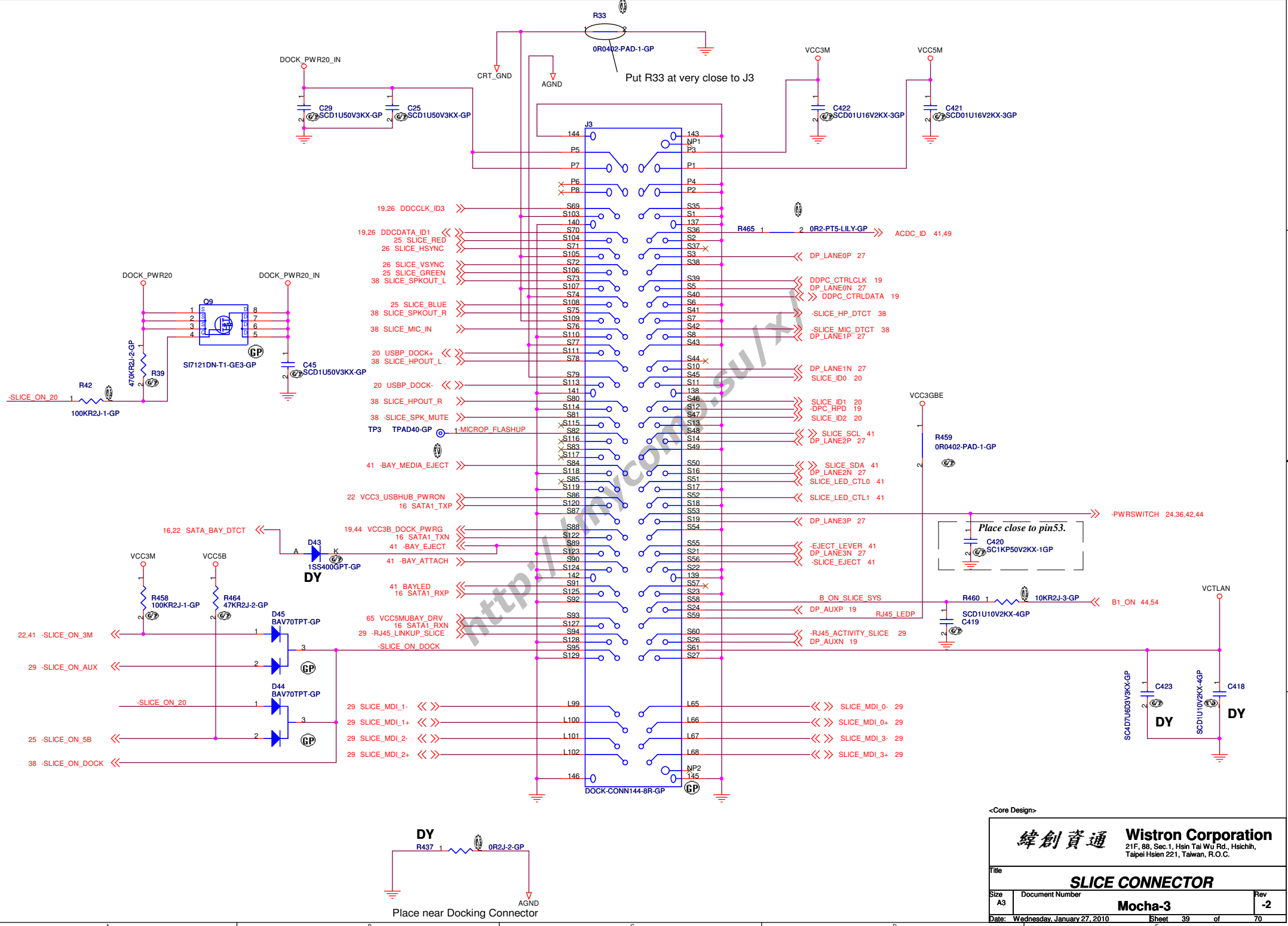
2.5 inch SATA ConnectorSize
A4

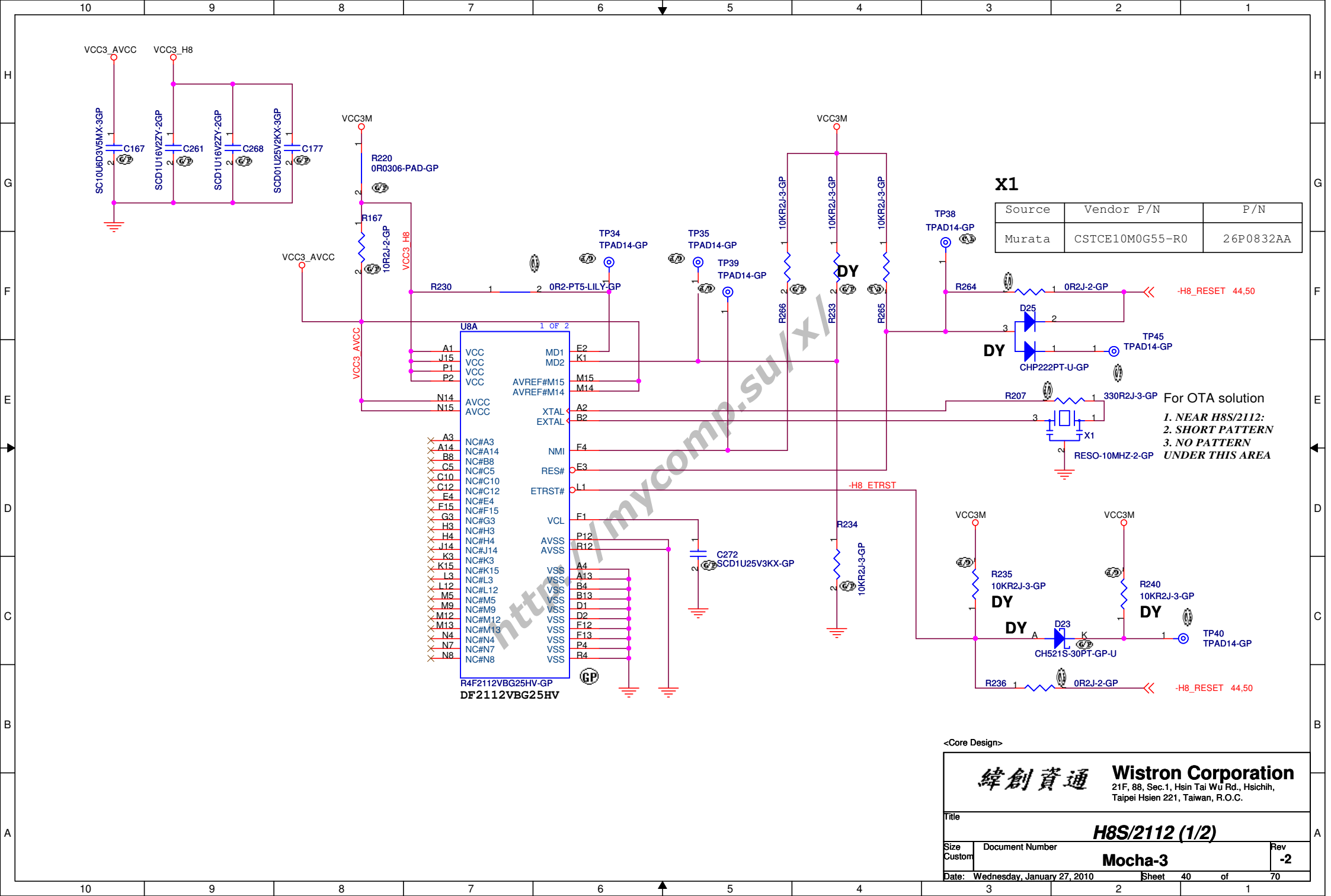
Document Number

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Source	Vendor P/N	P/N
Murata	CSTCE10M0G55-R0	26P0832AA

For OTA solution
1. NEAR H8S/2112;
2. SHORT PATTERN
3. NO PATTERN
UNDER THIS AREA

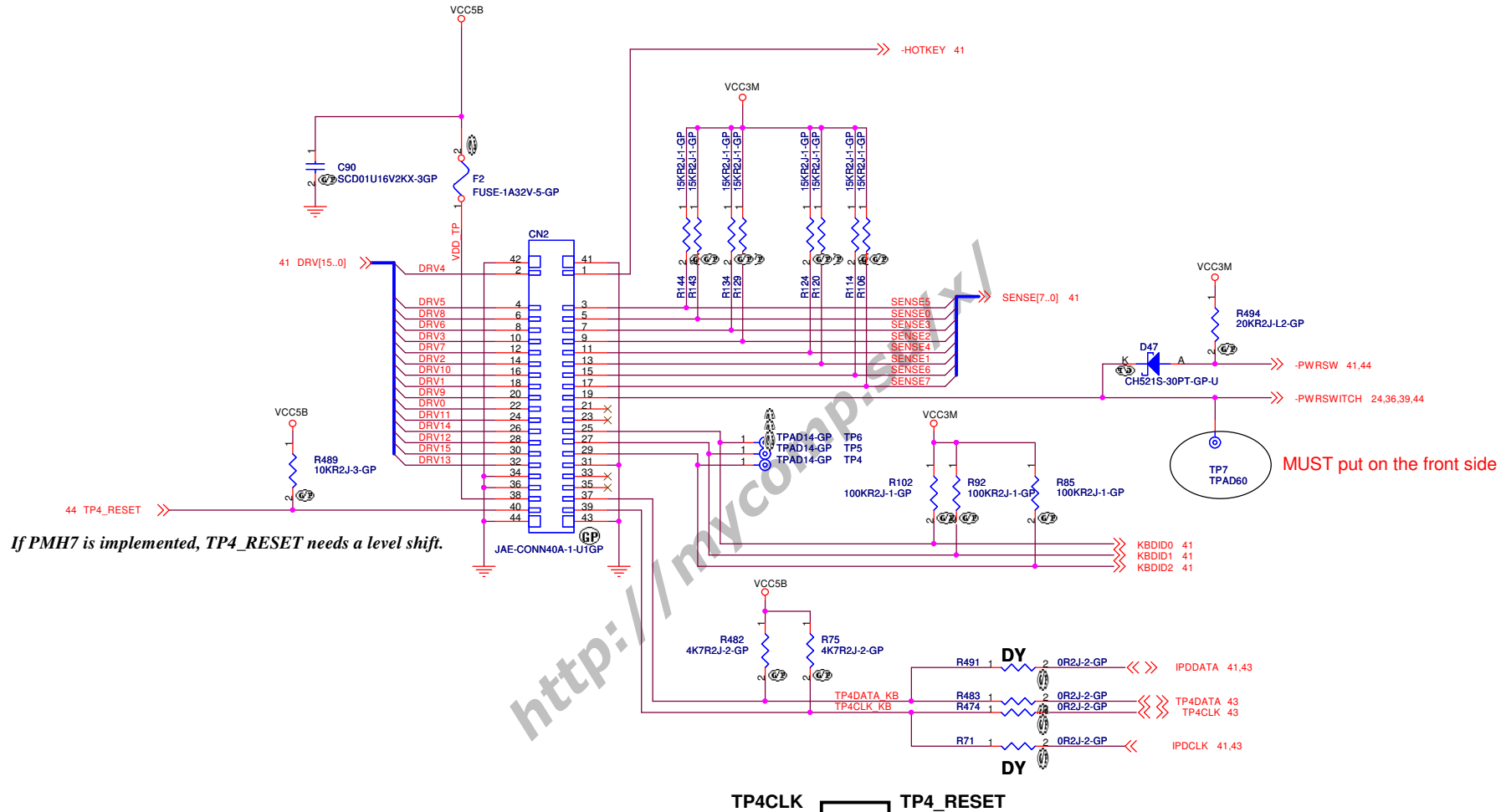
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Title	
H8S/2112 (1/2)	
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E10A Debug I/F	Enable	Disable
R264	NO ASM	ASM
R265	ASM	ASM
D25	ASM	NO ASM
R236	NO ASM	ASM
R235	ASM	NO ASM
R240	ASM	NO ASM
D23	ASM	NO ASM
R234	NO ASM	ASM
R233	ASM	NO ASM
R272	ASM	NO ASM
R271	NO ASM	ASM

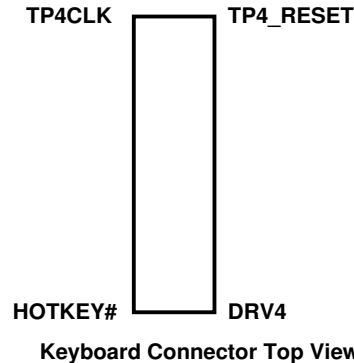
Keyboard Connector



Near CN2

DRV4	1	AFTE14P-GP	AFTP49
DRV5	1	AFTE14P-GP	AFTP48
DRV6	1	AFTE14P-GP	AFTP45
DRV7	1	AFTE14P-GP	AFTP42
DRV3	1	AFTE14P-GP	AFTP46
DRV2	1	AFTE14P-GP	AFTP39
DRV10	1	AFTE14P-GP	AFTP36
DRV9	1	AFTE14P-GP	AFTP43
DRV0	1	AFTE14P-GP	AFTP33
DRV11	1	AFTE14P-GP	AFTP34
DRV14	1	AFTE14P-GP	AFTP30
DRV12	1	AFTE14P-GP	AFTP32
DRV15	1	AFTE14P-GP	AFTP28
DRV13	1	AFTE14P-GP	AFTP27

SENSE5	1	AFTE14P-GP	AFTP50
SENSE0	1	AFTE14P-GP	AFTP47
SENSE3	1	AFTE14P-GP	AFTP44
SENSE2	1	AFTE14P-GP	AFTP41
SENSE4	1	AFTE14P-GP	AFTP37
SENSE1	1	AFTE14P-GP	AFTP35
SENSE6	1	AFTE14P-GP	AFTP31
SENSE7	1	AFTE14P-GP	AFTP29
IPDDATA	1	AFTE14P-GP	AFTP25
IPDCLK	1	AFTE14P-GP	AFTP24
TP4_RESET	1	AFTE14P-GP	AFTP23
VDD_TP	1	AFTE14P-GP	AFTP26
-HOTKEY	1	AFTE14P-GP	AFTP51



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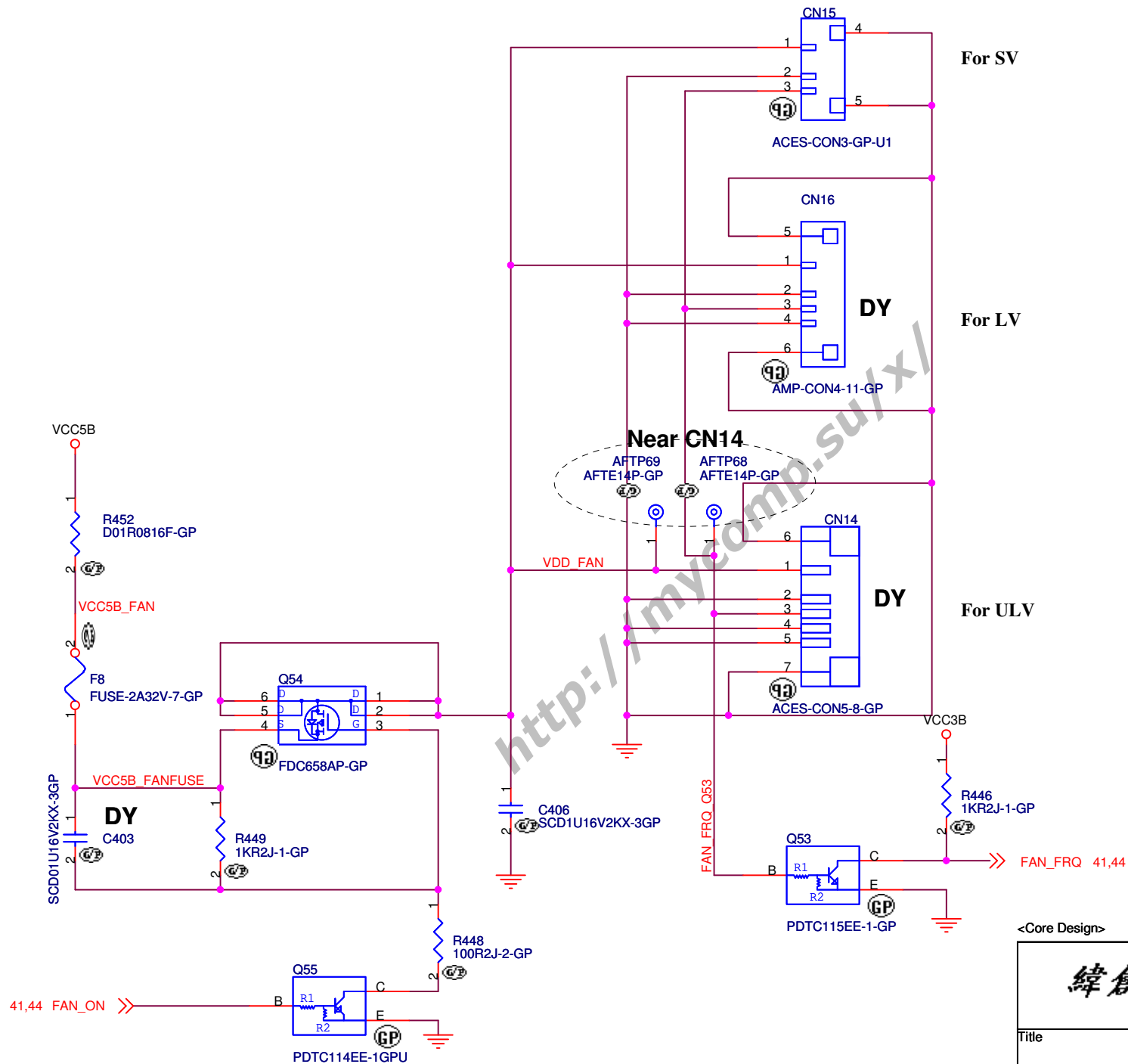
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KEYBOARD CONN			
Size	Document Number	Rev	
A3		-2	
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CN15		
1st	20.F0714.003	Aces
2nd	20.D0201.103	Tyco

CN16		
1st	20.D0201.104	Tyco
2nd	20.F0714.004	Aces

CN14		
1st	20.F0714.005	Aces
2nd		

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Title

FAN CONTROL

Size
A4

Document Number

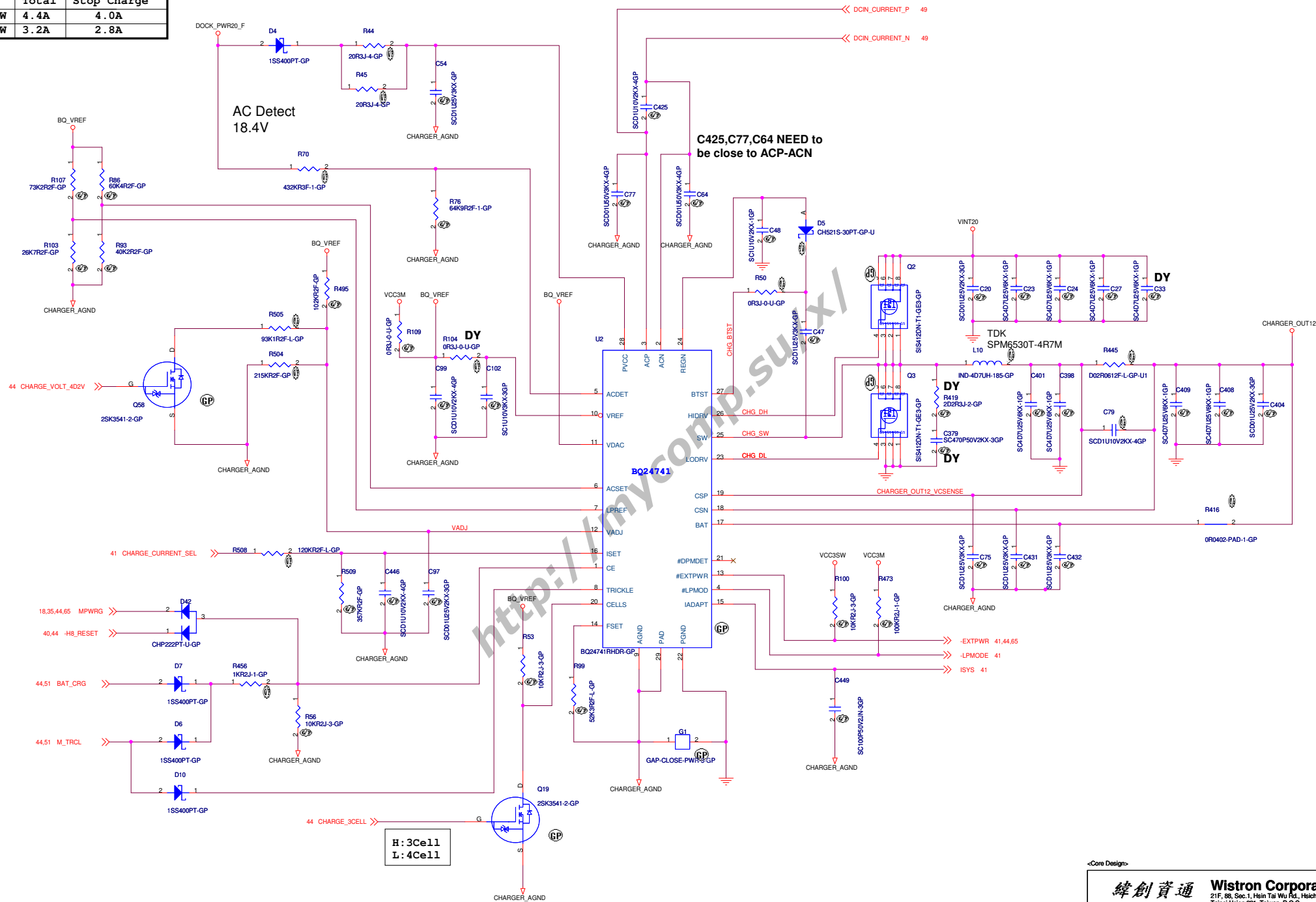
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	Total	Stop Charge
90W	4.4A	4.0A
65W	3.2A	2.8A

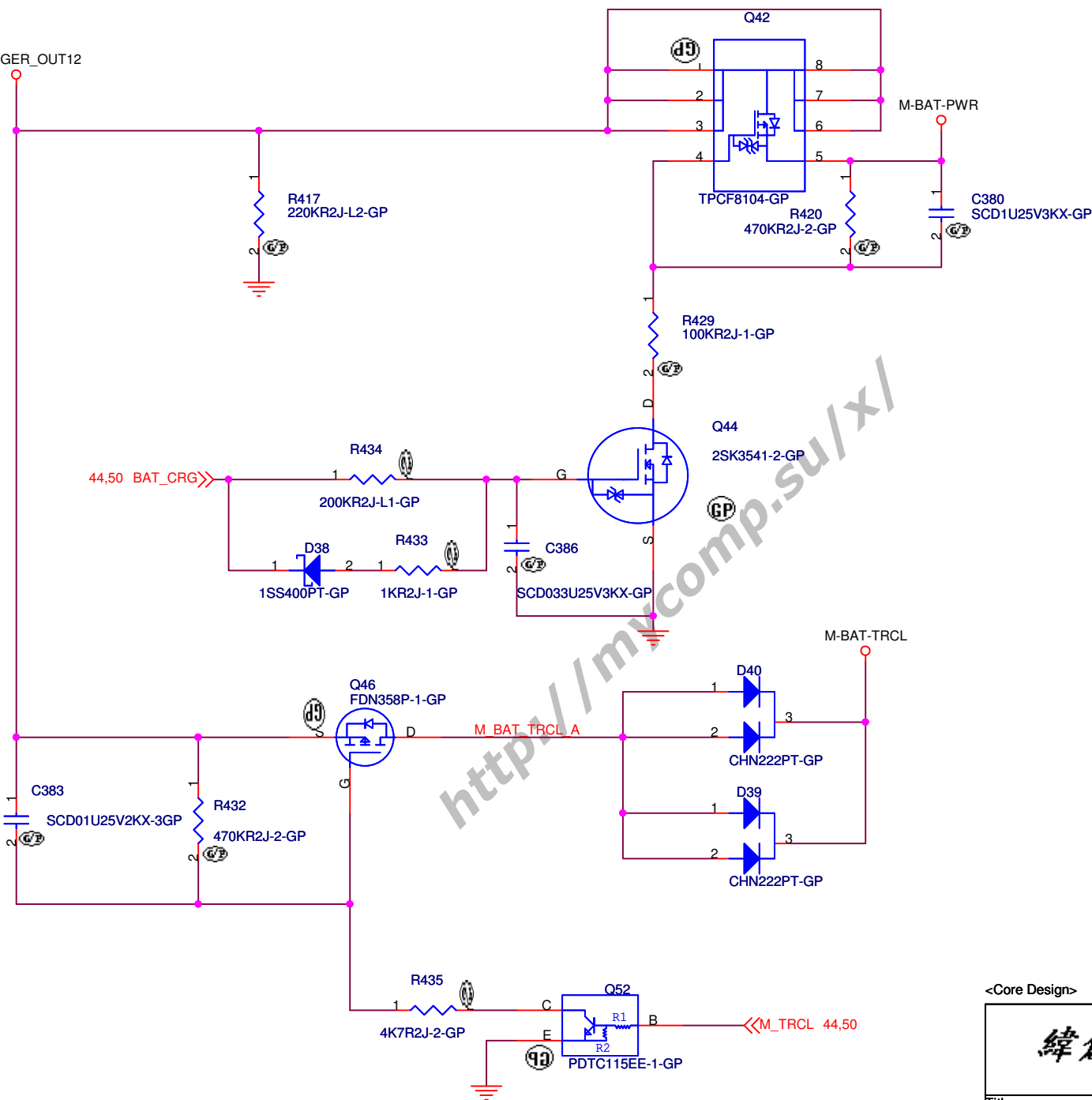


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CHARGER_OUT12



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Title

CHARGER SELECT

Size
A4

Document Number

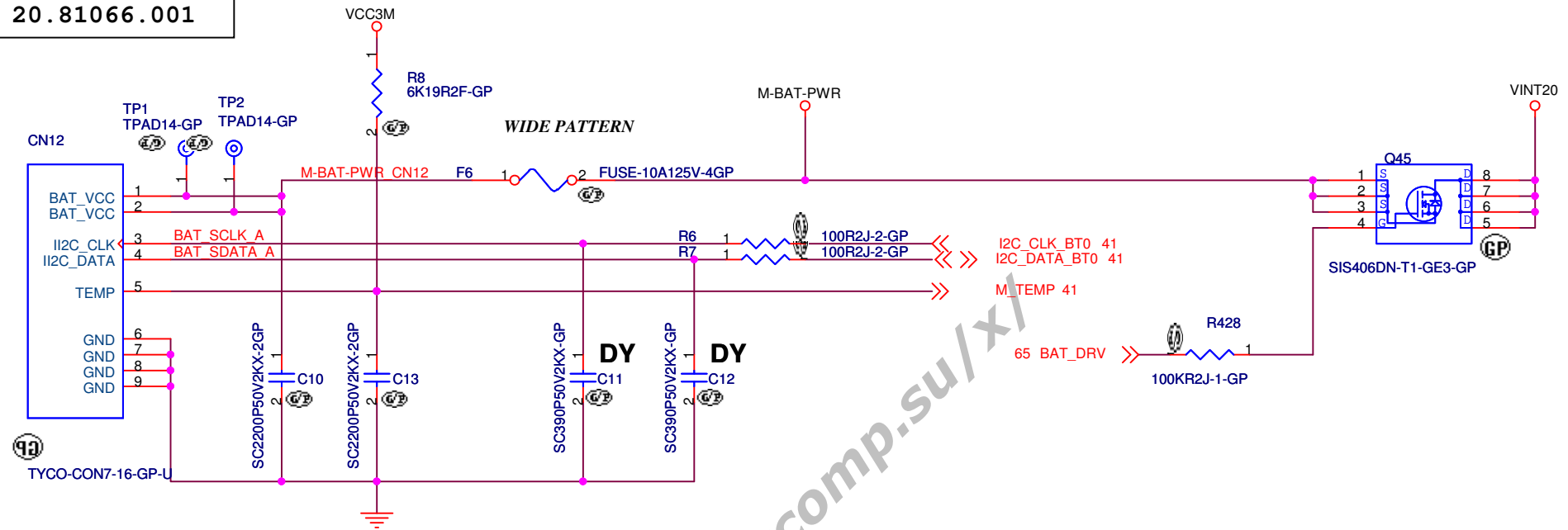
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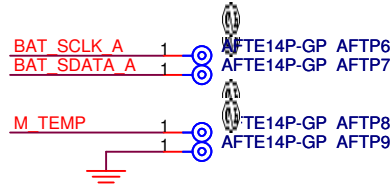
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CN12
AMP 2041614-1
20.81066.001



Near CN12



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Title

BATTERY INPUT

Size
A4

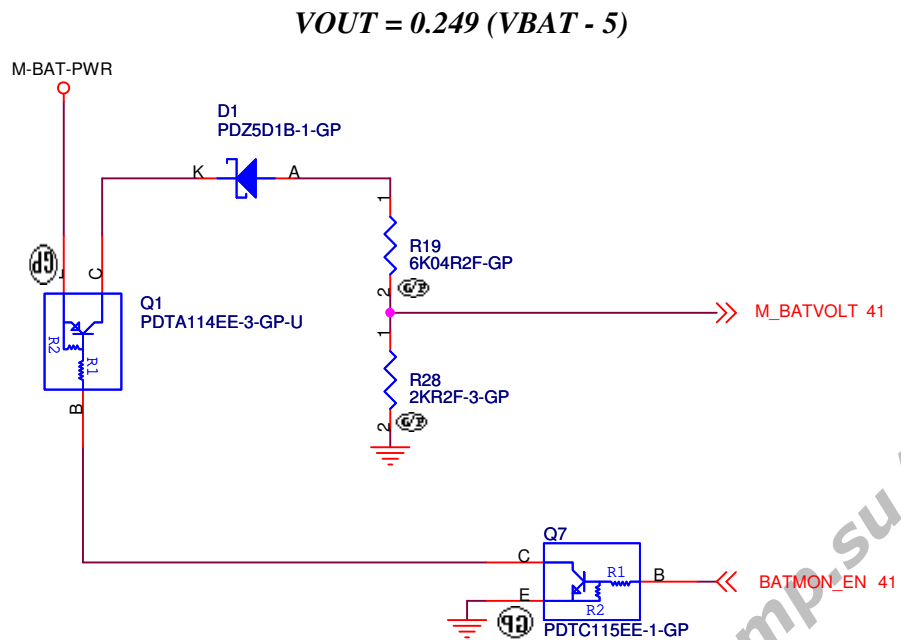
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Title

BATTERY MONITOR

Size
A4

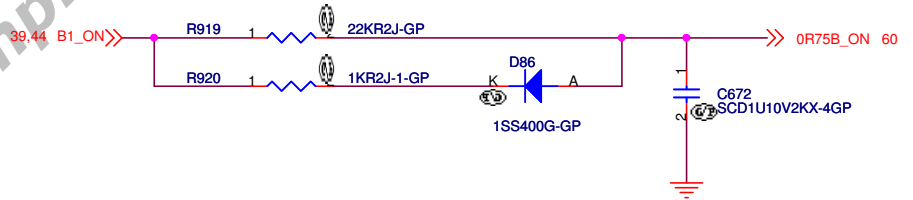
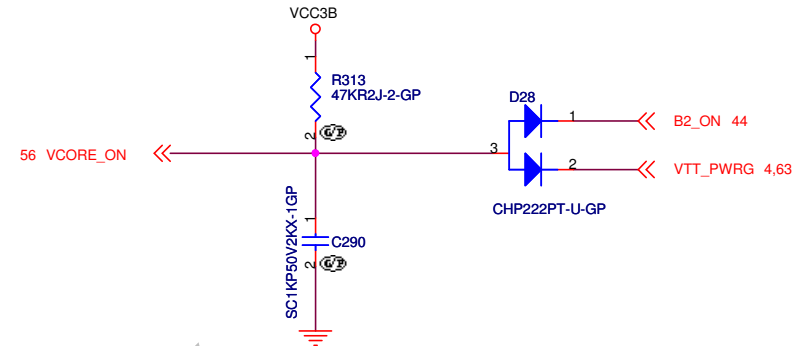
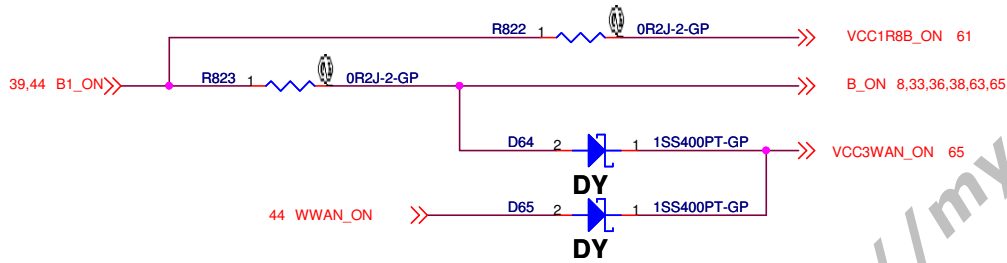
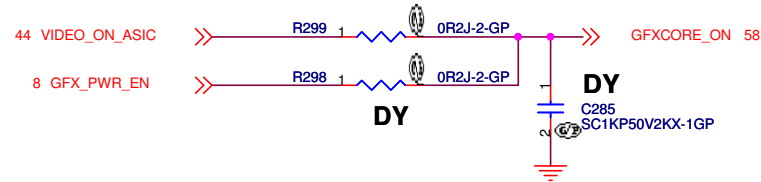
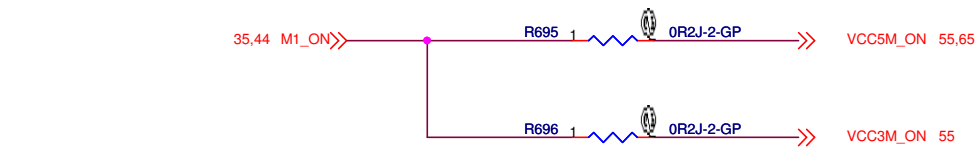
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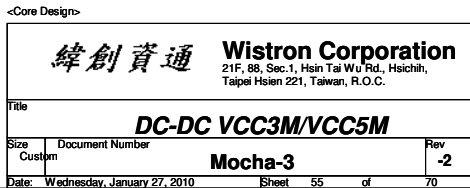
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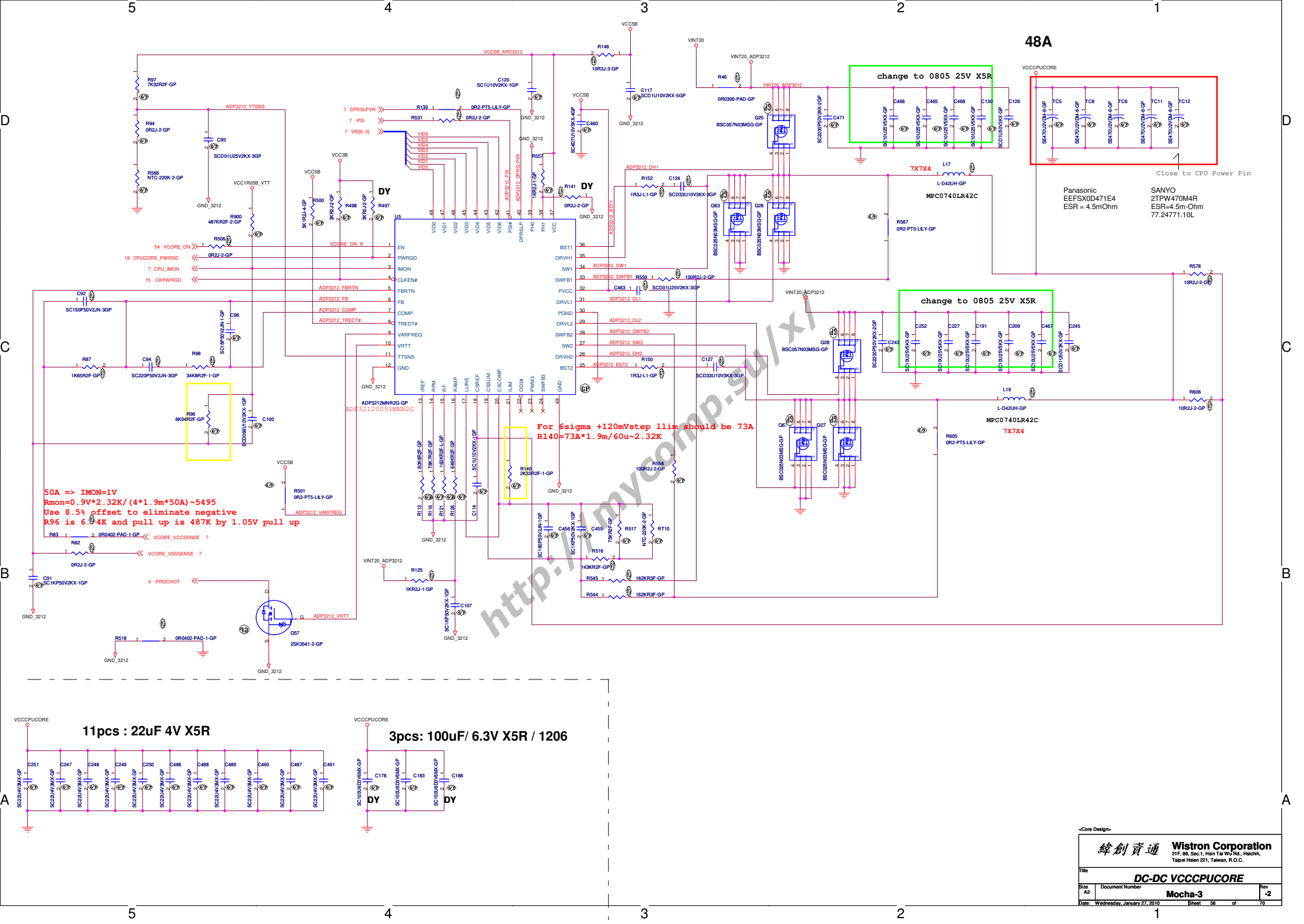


Constant Connect	Enable	Disable
D64	ASM	NoASM
D65	ASM	NoASM

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Title			
POWER SEQUENCE			
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	SV 2-phase(48A)	LV 2-phase(35A)	ULV 2-phase(27A)
OCP	73A	52A	42A
R96	6.04K	5.36K	5.76K
R140	2.32K	2.61K	2.1K
R545	162K	102K	102K
R544	162K	102K	102K
Q63	ASM	DY	DY
Q67	ASM	DY	DY
TC5	470uF / 4.5m-ohm	330uF / 6m-ohm	330uF / 6m-ohm
TC8	470uF / 4.5m-ohm	330uF / 6m-ohm	330uF / 6m-ohm
TC6	470uF / 4.5m-ohm	330uF / 6m-ohm	330uF / 6m-ohm
TC11	470uF / 4.5m-ohm	DY	DY
TC12	470uF / 4.5m-ohm	DY	DY
R900	487K	432K	464K

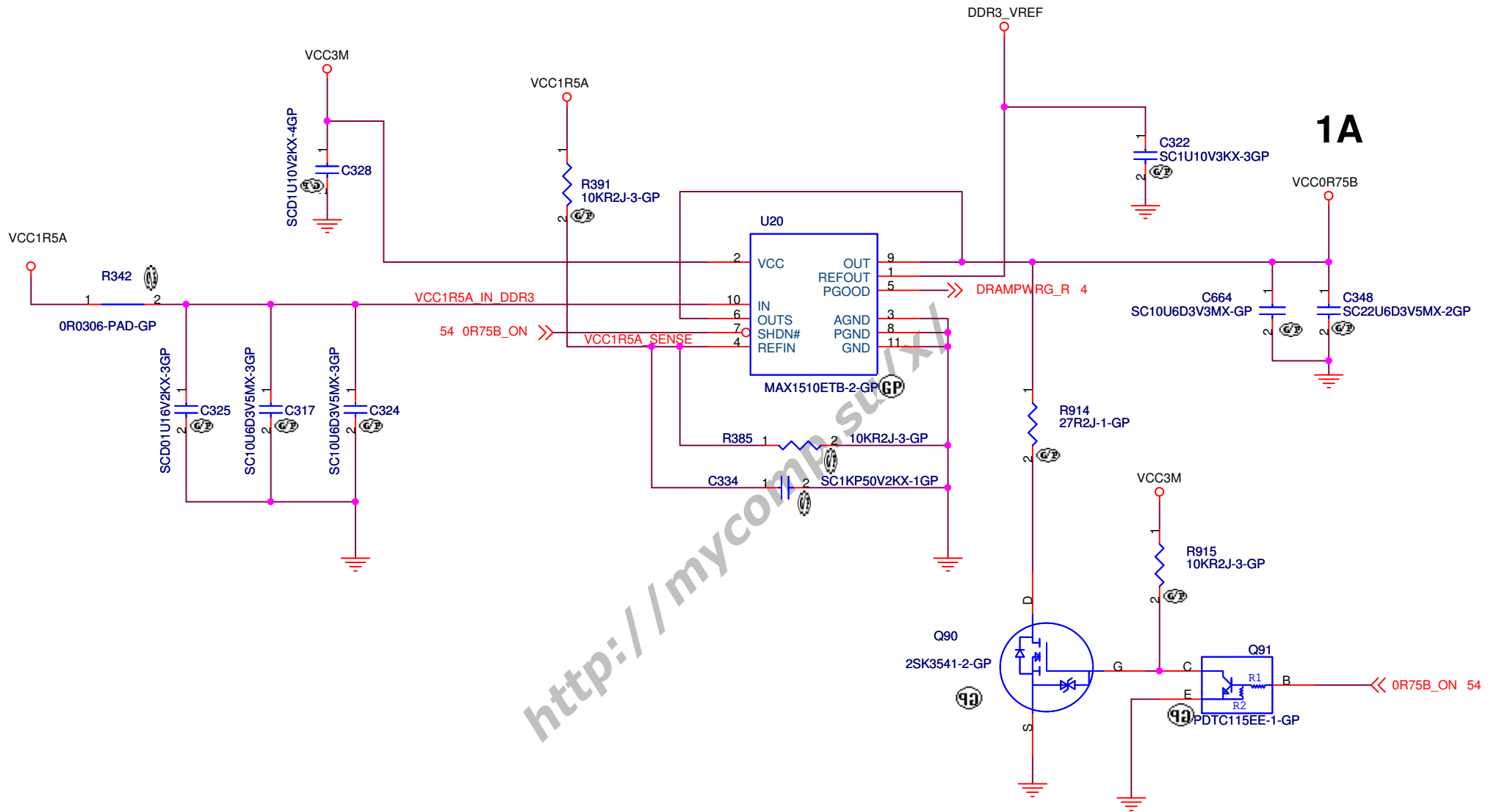
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Title			
DC-DC VCCCPUCORE			
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$I_{out}=22A \Rightarrow G_{FX_IMON}=1V$
Ideal $R_{mon}(900mV):0.9*13.3K/$
($10*7m-ohm*22A$)
Adding positive offset for 8.5%:
8.66K+681K pull-up

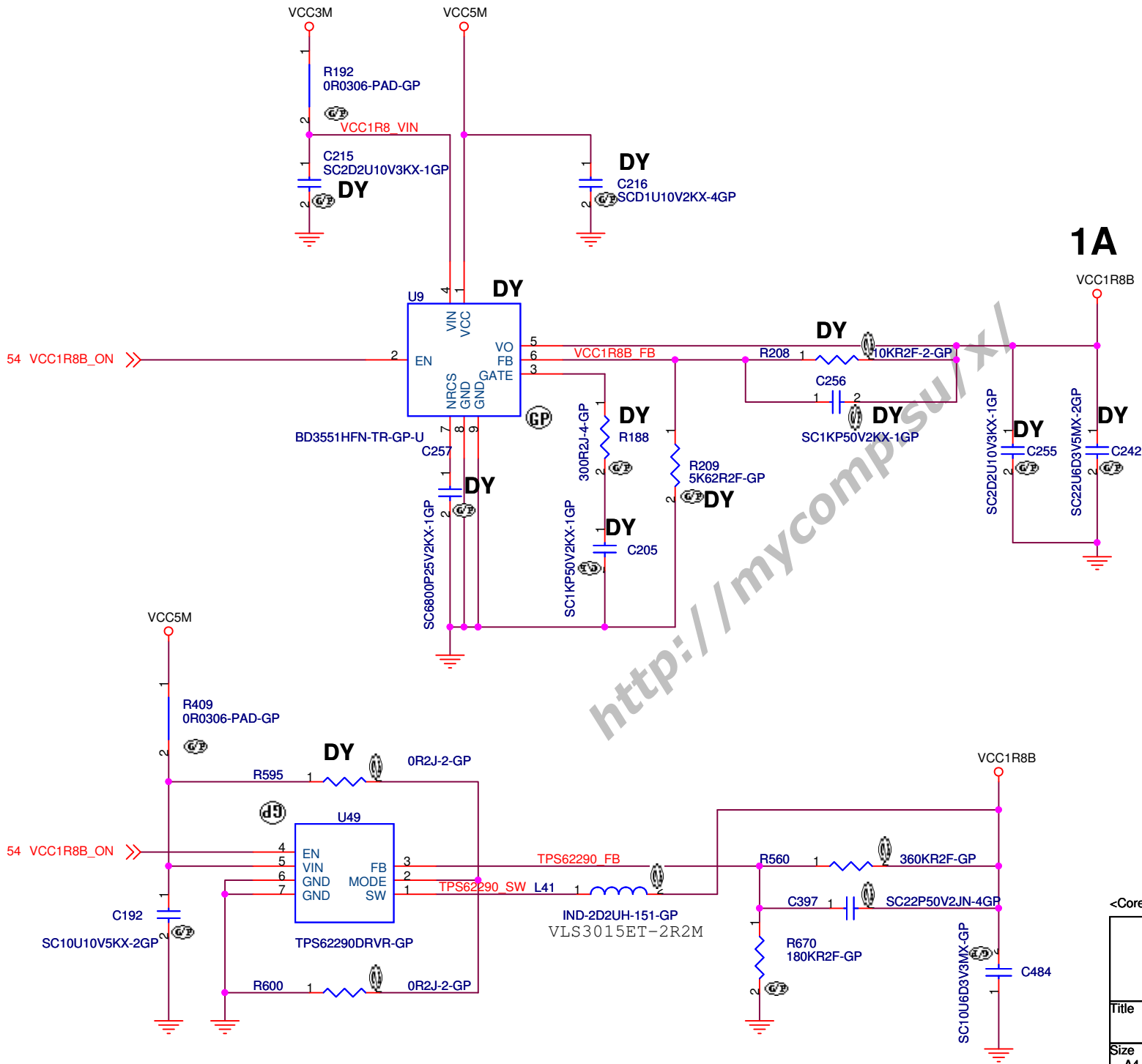
OCP setting should be 38A to cover 22A
with Max rush current for cap with 120mV
rising with regarding to max. spec,R535-13.3K

	SV(22A)	LV(15A)	ULV(12A)
OCF	38A	30A	23A
C52	ASM	DY	DY
R507	8.66K	10K	9.53K
R535	13.3K	10.5K	8.06K
R899	681K	787K	750K
TC2	470uF	330uF	220uF
TC3	470uF	330uF	220uF



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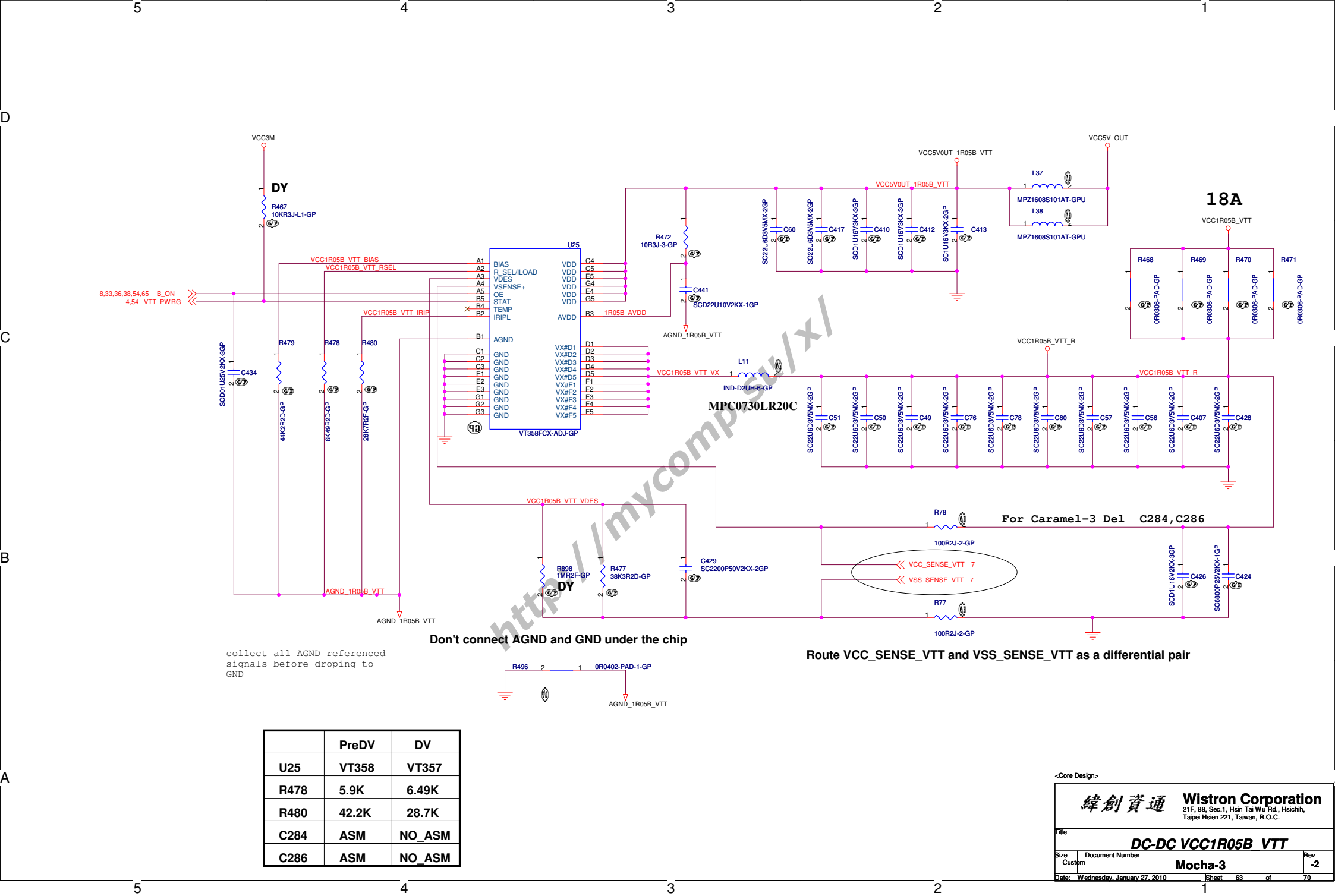
緯創資通 Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title	
DC-DC VCC0R75B	
Size A4	Document Number
Mocha-3	
Date: Wednesday, January 27, 2010	Sheet 60 of 70
Rev -2	



SOVP	NV/LV/ULV	
SIT-R		NV
SVT		NV/LV/ULV
C215	ASM	DY
C216	ASM	DY
U9	ASM	DY
C257	ASM	DY
R188	DY	DY
C205	DY	DY
R208	10K	DY
C256	1KpF (DY)	DY
R209	5.62K	DY
C255	ASM	DY
C242	22uF	DY
C192	DY	ASM
R595	DY	DY
U49	DY	ASM
R600	DY	ASM
L41	DY	ASM
R560	DY	360K
R670	DY	180K
C397	DY	22pF
C484	DY	10UF

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Title			
DC-DC VCC1R8B			
Size A4	Document Number Mocha-3		Rev -2
Date:	Wednesday, January 27, 2010	Sheet 61 of 70	



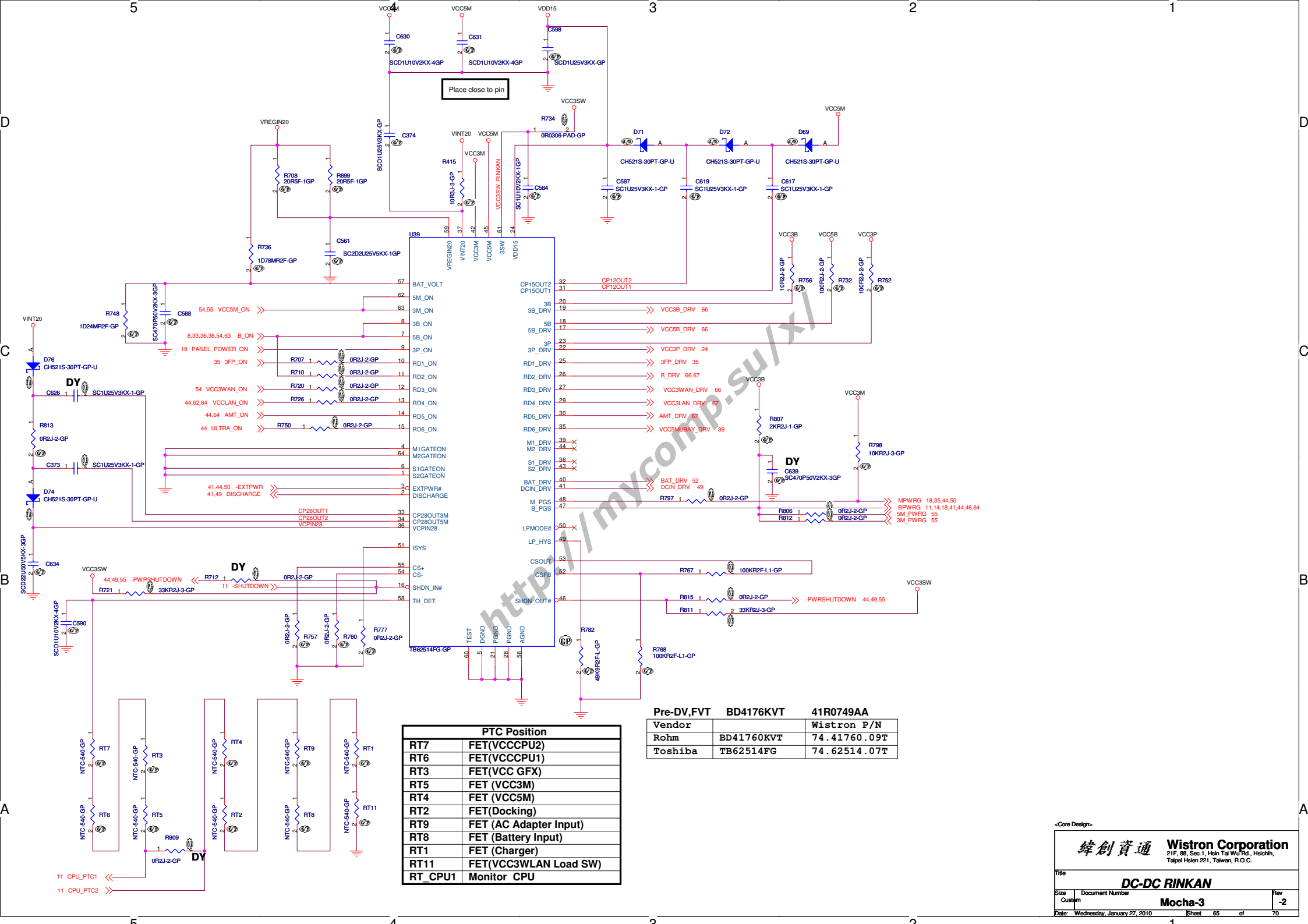
collect all AGND referenced signals before dropping to GND

Don't connect AGND and GND under the chip

Route VCC_SENSE_VTT and VSS_SENSE_VTT as a differential pair

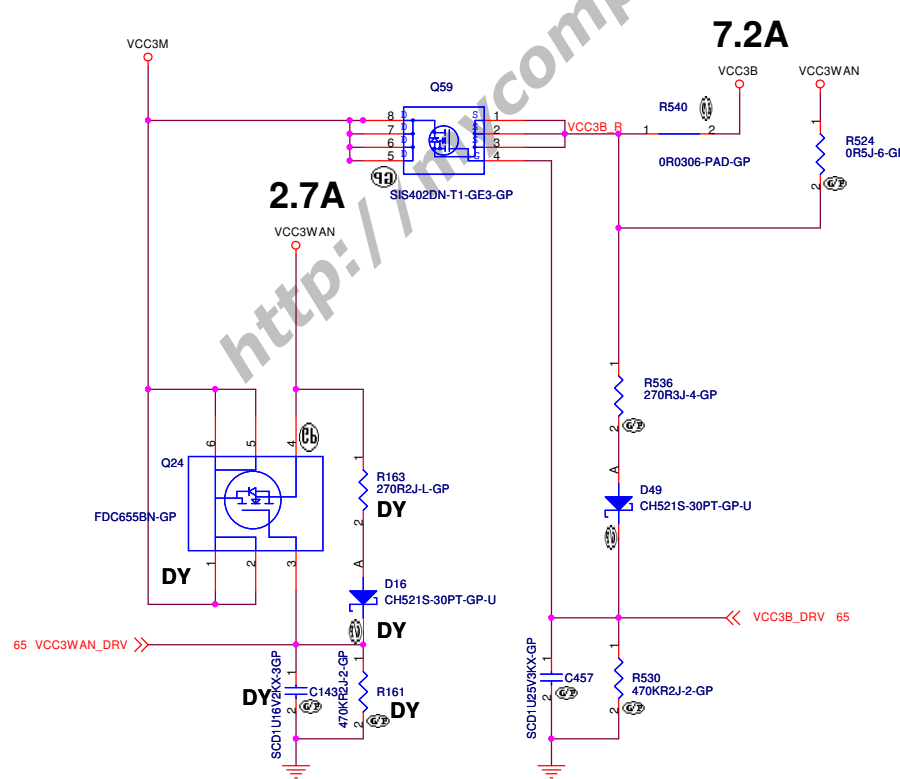
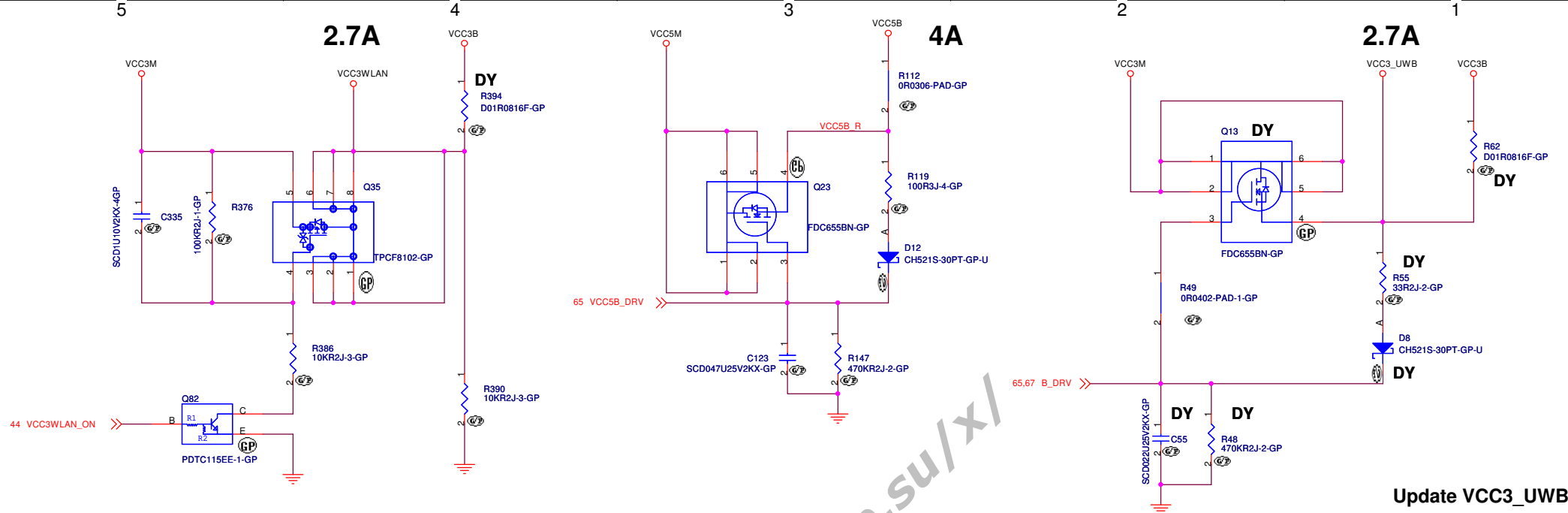
	PreDV	DV
U25	VT358	VT357
R478	5.9K	6.49K
R480	42.2K	28.7K
C284	ASM	NO_ASM
C286	ASM	NO_ASM

<Core Design>			
Title		Rev	
DC-DC VCC1R05B VTT		-2	
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Custom			
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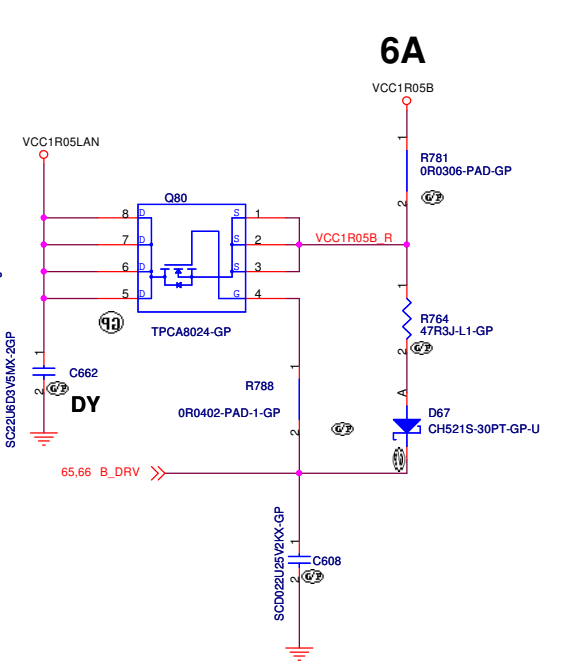
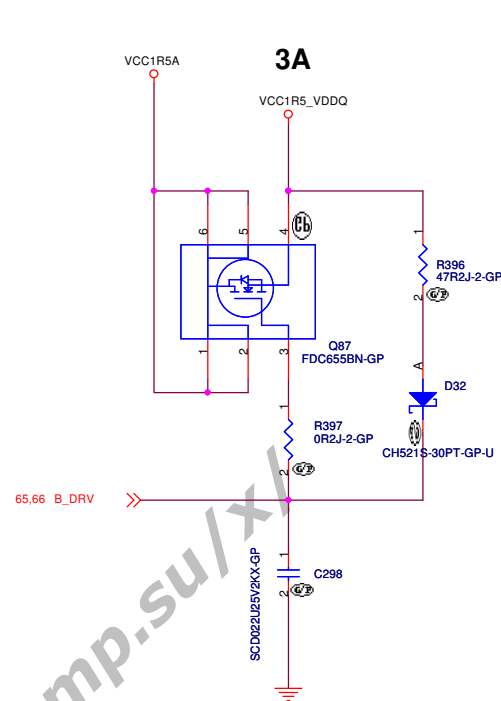
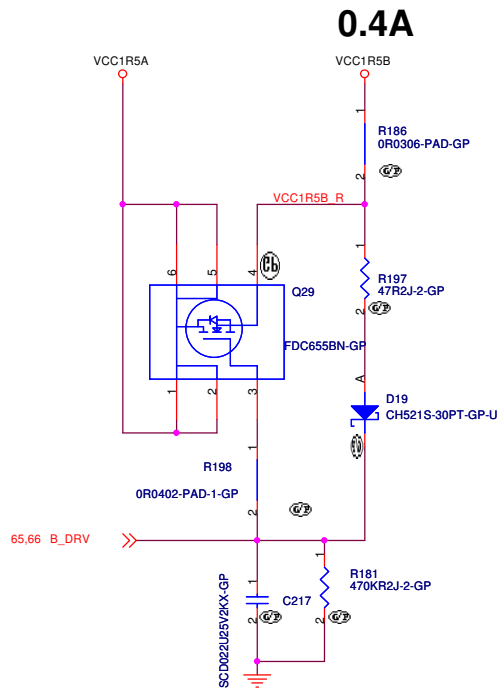
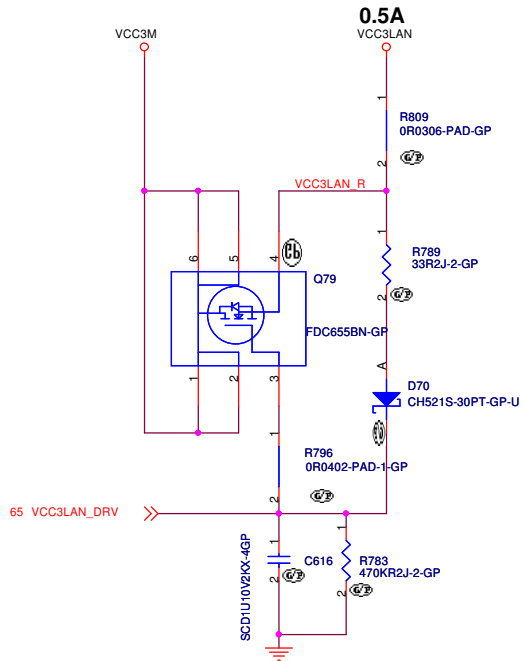
PTC Position	
RT7	FET(VCCCPU2)
RT6	FET(VCCCPU1)
RT3	FET(VCC GFX)
RT5	FET (VCC3M)
RT4	FET (VCC5M)
RT2	FET(Docking)
RT9	FET (AC Adapter Input)
RT8	FET (Battery Input)
RT1	FET (Charger)
RT11	FET(VCC3WLAN Load SW)
RT_CPU1	Monitor CPU

Pre-DV,FVT	BD4176KVT	41R0749AA
Vendor		Wistron P/N
Rohm	BD41760KVT	74.41760.09T
Toshiba	TB62514FG	74.62514.07T

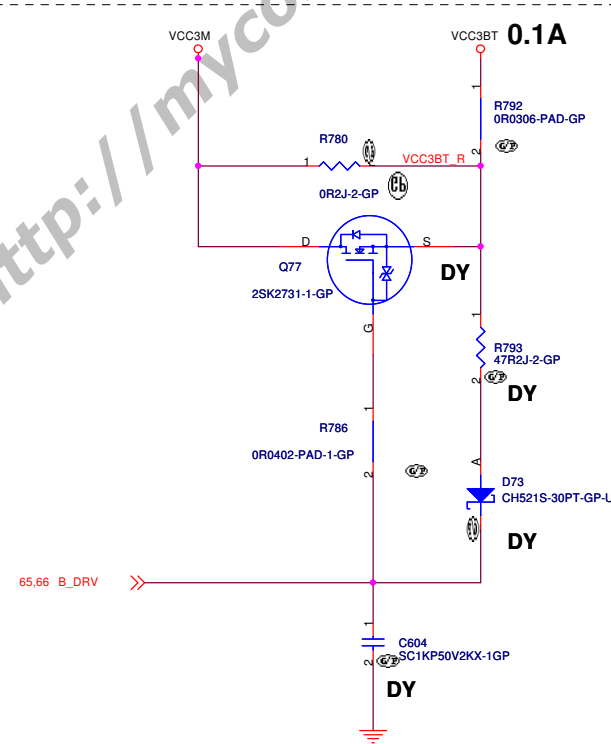
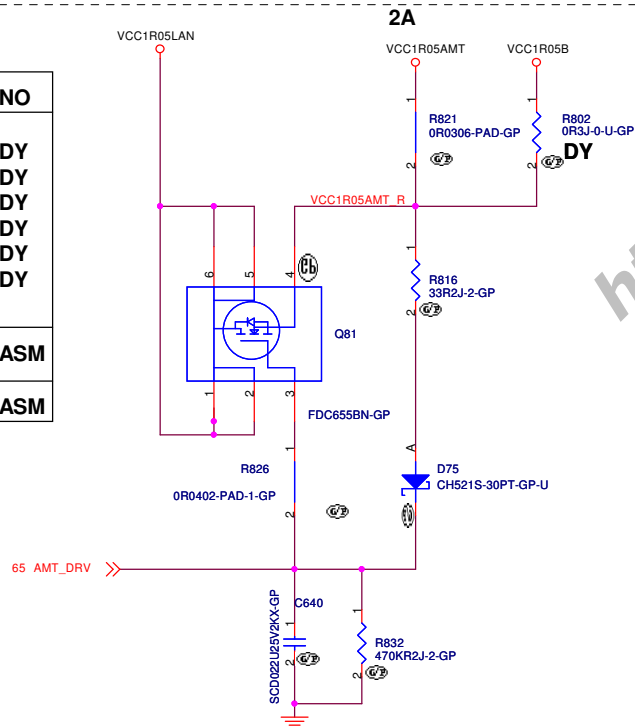


Always-ON	Enable	Disable
Q24	ASM	NoASM
R163	ASM	NoASM
D16	ASM	NoASM
R161	ASM	NoASM
C143	ASM	NoASM
R524	NOASM	ASM

No-asm for no WWAN CONN. MODEL



AMT	YES	NO
Q81	ASM	DY
R826	ASM	DY
R816	ASM	DY
R832	ASM	DY
D75	ASM	DY
C640	ASM	DY
R802	DY	ASM
R821	ASM	ASM

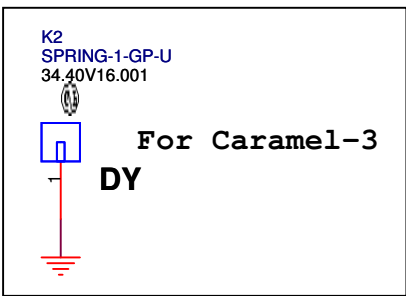
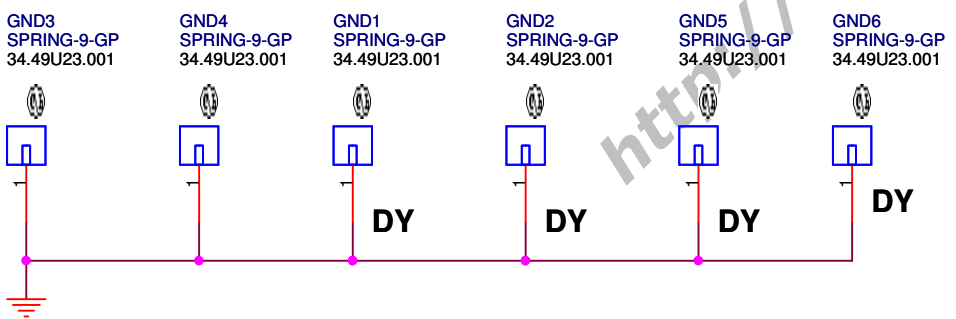
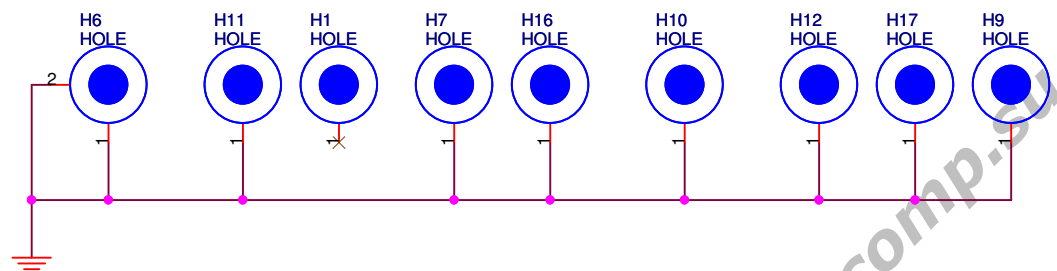
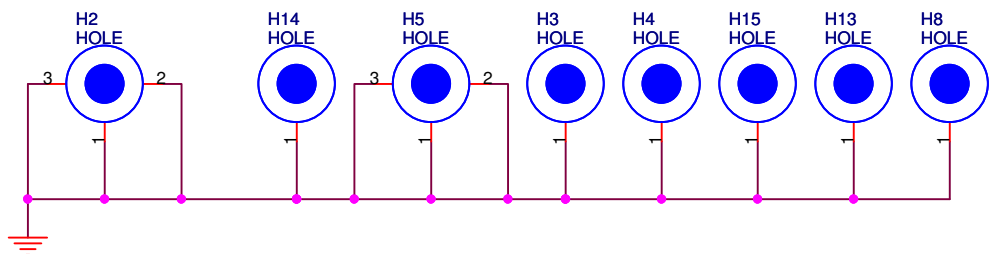


Q77

1st	ROHM	2SK2731	84.02731.A31	DY
2nd	TOSHIBA	2SK2009	84.22009.031	DY

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LOAD SW 2	
Size A3	Document Number
Mocha-3	
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For Caramel-3

H2	HOLE276R95-3P-S
H5	HT7B75R24-3P-S
H6	HOLE276R95-3P-S
H11	HOLE256R98
H12	HOLE315R95-2P-S
H3	HOLET295B236R138
H4	HOLET295B236R138

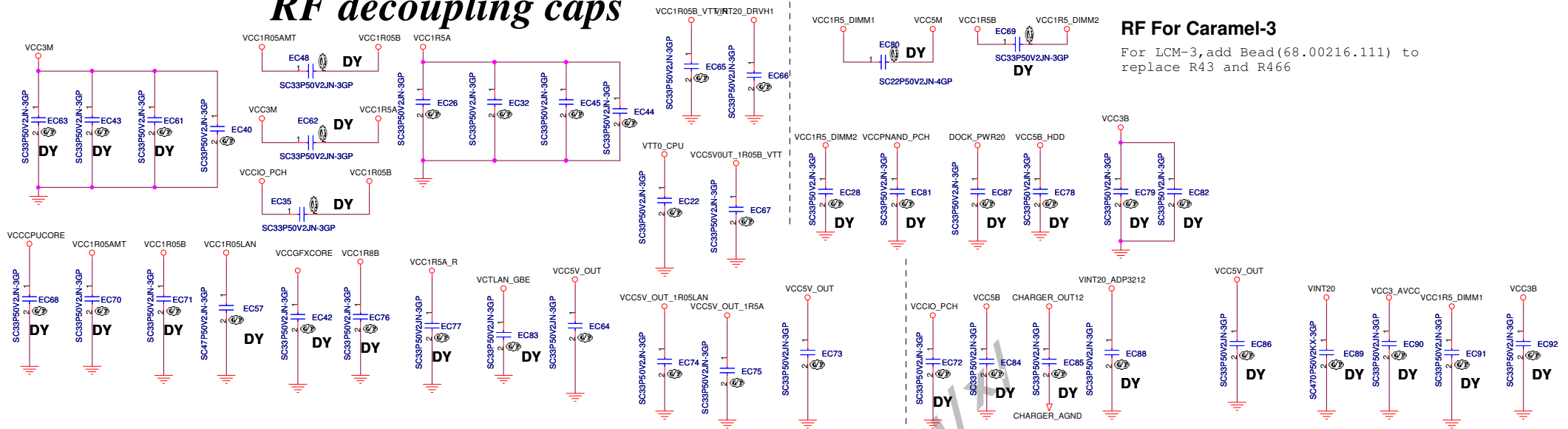
For Caramel-3

Standoff	34.4Y421.001	H3, H4	ASM
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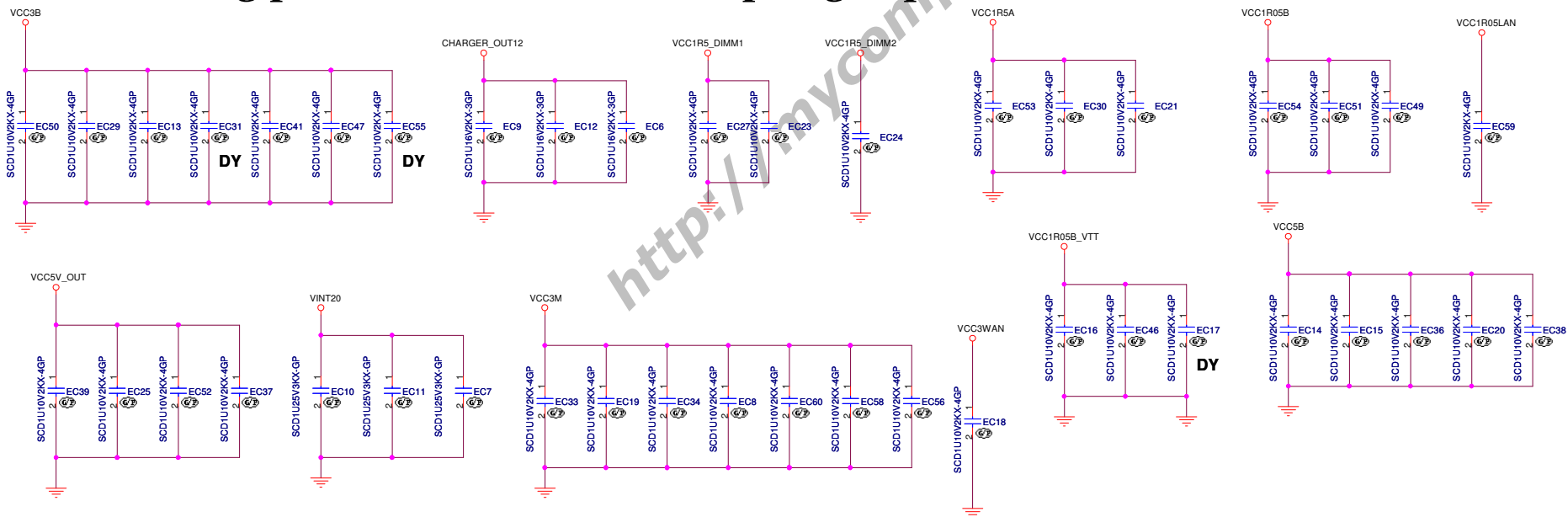
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Title			
HOLES/GND/PADS			
Size A4	Document Number		Rev
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RF decoupling caps



Long power trace EMI decoupling caps



<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

EMI DECOUPLING

Size	Document Number
Custom	

Mocha-3

Rev
-2

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Function	Location	Mocha-3	Pecan-3	Caramel-3	Function	Location	Mocha-3	Pecan-3	Caramel-3	Function	Location	Mocha-3	Pecan-3	Caramel-3
USB	R327	ASM	ASM	DY	Fingerprint	R584	DY	DY	DY	LCD Conn	R9	DY	DY	ASM
	R328	ASM	ASM	DY		R585	ASM	ASM	DY		R10	ASM	ASM	DY
	R329	DY	DY	ASM		F11	ASM	ASM	DY		R1	DY	DY	ASM
	R330	DY	DY	ASM		C483	ASM	ASM	DY		R5	ASM	ASM	DY
	C377	DY	DY	ASM	Touch PAD	R168	ASM	ASM	ASM		R450	ASM	ASM	DY
	C376	DY	DY	ASM		R169	ASM	ASM	ASM		R447	DY	DY	ASM
	J1	DY	DY	ASM		F3	ASM	ASM	ASM		R36	DY	DY	ASM
	U23	DY	DY	ASM		C226	ASM	ASM	ASM		R35	ASM	ASM	DY
	C378	DY	DY	ASM		R178	ASM	ASM	ASM		R453	ASM	ASM	DY
Bluetooth	R411	ASM	ASM	DY		R180	ASM	ASM	ASM		R451	DY	DY	ASM
	R412	ASM	ASM	DY		CN3	ASM	ASM	ASM		R455	ASM	ASM	DY
	R413	DY	DY	ASM		U6	ASM	ASM	ASM		R454	DY	DY	ASM
	R414	DY	DY	ASM		C473	ASM	ASM	ASM		R37	DY	DY	ASM
	CN10	DY	DY	ASM		R556	ASM	ASM	ASM		R38	DY	DY	ASM
	F4	DY	DY	ASM		R577	ASM	ASM	ASM		Q10	ASM	ASM	DY
	C372	DY	DY	ASM		R483	ASM	ASM	ASM		Q11	ASM	ASM	DY
						R474	ASM	ASM	ASM		Q12	ASM	ASM	DY
Super IO	U7	DY	DY	ASM	Pen Sensor	CN11	DY	DY	ASM		R886	ASM	ASM	DY
	C159	DY	DY	ASM		R418	DY	DY	ASM		R364	ASM	ASM	DY
	C146	DY	DY	ASM		C375	DY	DY	ASM		R594	ASM	ASM	DY
	C122	DY	DY	ASM							R596	ASM	ASM	DY
	R145	DY	DY	ASM							R602	ASM	ASM	DY
	R146	DY	DY	ASM							R887	DY	DY	ASM
	RN1	DY	DY	ASM							R604	DY	DY	ASM
	R574	DY	DY	ASM							R857	DY	DY	ASM
	C121	DY	DY	ASM	Pecan ID	R293	ASM	DY	ASM	uP	R599	DY	DY	ASM
	R743	DY	DY	ASM		R286	DY	ASM	ASM		R601	DY	DY	ASM
	R754	DY	DY	ASM						H8	R269	DY	DY	ASM
	R639	DY	DY	ASM							R270	ASM	ASM	DY

Support Caramel-3 TouchPAD for SIV

MP-3 change to Caramel-3 planar					
Cut off portion			HOLE Geometry		
Location	Location		Location	PCB FootPrint	
R40	DEL	U24	DEL	H2	HOLE276R95-3P-S
R41	DEL	C527	DEL	H5	HT7B75R24-3P-S
FL1	DEL	U1	DEL	H6	HOLE276R95-3P-S
C41	DEL	K1	DEL	H11	HOLE256R98
C39	DEL	C284	DEL	H12	HOLE315R95-2P-S
C32	DEL	C286	DEL	H3	HOLET295B236R138
SKT3	DEL			H4	HOLET295B236R138

Location	Mocha-3	Pecan-3	Caramel-3
L21 (VCC5B_HDD)	ASM	ASM	ASM
R43	DEL	DEL	DEL
L31	NO	NO	ADD
R47	ASM	ASM	DEL
L32	NO	NO	ADD
R220	ASM	ASM	DEL
L33	ASM	ASM	ASM
L34	ASM	ASM	ASM
R790	DEL	DEL	DEL
L35	ASM	ASM	ASM
R794	DEL	DEL	DEL
L36	NO	NO	ADD
R821	ASM	ASM	DEL
L37	ASM	ASM	ASM
L38	ASM	ASM	ASM
R457	DEL	DEL	DEL
L39	NO	NO	ADD
R587	ASM	ASM	DEL
L40	NO	NO	ADD
R502	ASM	ASM	DEL
L42	ASM	ASM	NO
R466	DEL	DEL	ASM

Location	Mocha-3	Pecan-3	Caramel-3
EC63	DY	DY	DY
EC43	DY	DY	DY
EC61	DY	DY	DY
EC48	DY	DY	DY
EC62	DY	DY	DY
EC35	DY	DY	DY
EC68	DY	DY	DY
EC70	DY	DY	DY
EC71	DY	DY	DY
EC57	DY	DY	DY
EC42	DY	DY	DY
EC46	DY	DY	DY
EC76	DY	DY	DY
EC77	DY	DY	DY
EC83	DY	DY	DY
EC40	ASM	ASM	ASM
EC64	ASM	ASM	ASM
EC22	ASM	ASM	ASM
EC66	ASM	ASM	ASM
EC26	ASM	ASM	ASM
EC32	ASM	ASM	ASM
EC45	ASM	ASM	ASM
EC44	ASM	ASM	ASM
EC65	ASM	ASM	ASM
EC67	DY	ASM	ASM
EC80	DY	DY	ASM
EC69	DY	DY	ASM
EC28	DY	DY	ASM
EC81	DY	DY	ASM
EC87	DY	DY	ASM
EC78	DY	DY	ASM
EC79	DY	DY	ASM
EC82	DY	DY	ASM
EC74	DY	DY	ASM
EC75	DY	DY	ASM
EC72	DY	DY	DY
EC84	DY	DY	ASM
EC85	DY	DY	ASM
EC88	DY	DY	ASM
EC73	DY	DY	ASM
EC86	DY	DY	ASM
EC89	DY	DY	ASM
EC90	DY	DY	ASM
EC91	DY	DY	ASM
EC92	DY	DY	ASM
K2	DY	DY	ASM
EC93	DEL	DEL	DY
EC94	DEL	DEL	DY
EC95	DEL	DEL	DY
EC96	DEL	DEL	DY
EC97	DEL	DEL	ASM
EC98	DEL	DEL	DY
EC99	DEL	DEL	DY
EC100	DEL	DEL	DY
EC102	DEL	DEL	ASM
EC103	DEL	DEL	ASM
EC104	DEL	DEL	ASM
EC105	DEL	DEL	ASM