

COMPAL CONFIDENTIAL

MODEL NAME : *Ibiza*
COMPAL P/N :
PCB NO : *LA-1684*
Revision : *1.0*

Ibiza Schematics Document
uFCBGA/uFCPGA NorthWood MT

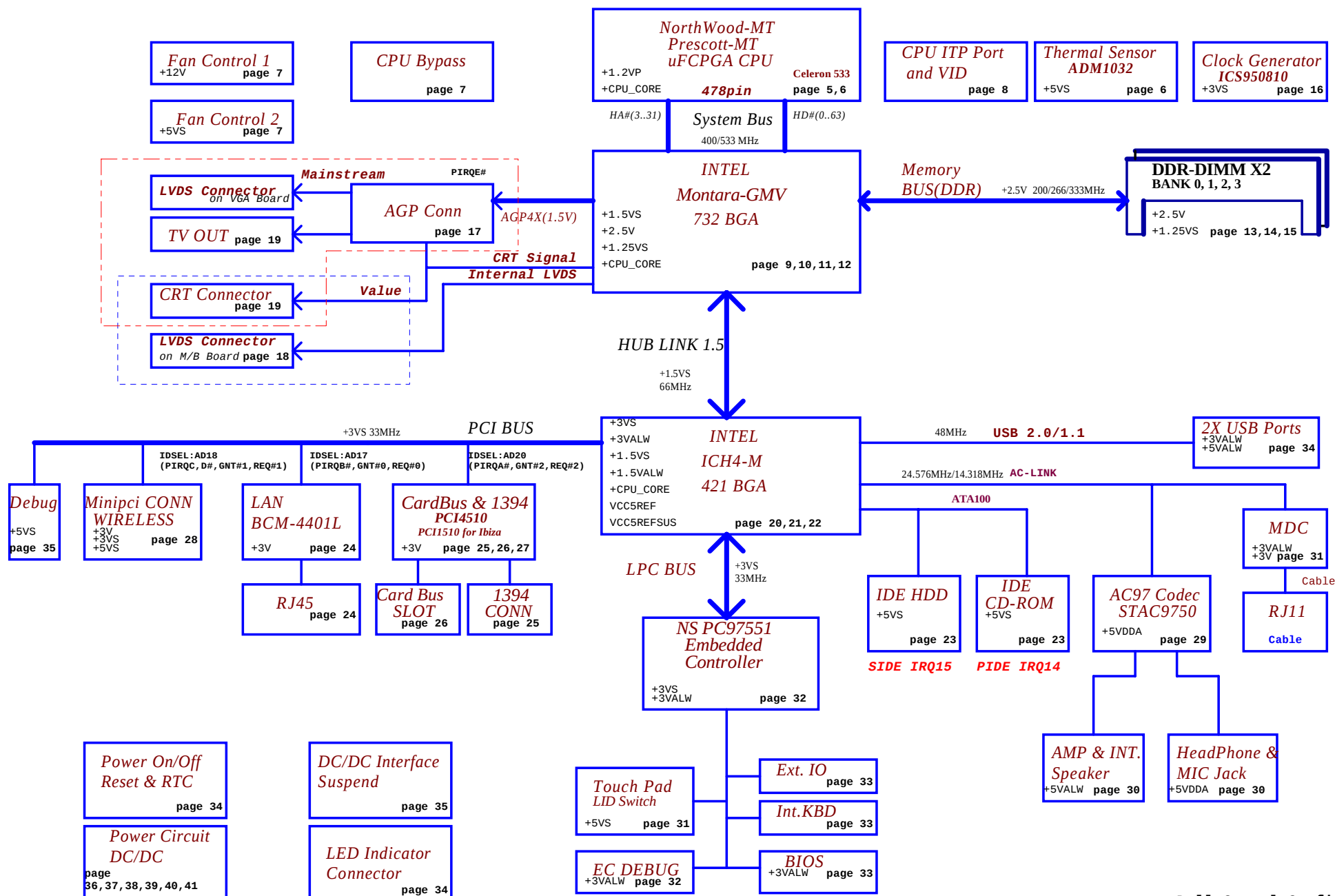
2004 - 01 - 09

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Title Cover Sheet		
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Model : Ibiza (Abacus MT for Ext. Gfx)



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ST2	FSB
L	400
H	533

Power Managment table

Signal State	+1.5VALW +3VALW +5VALW +12VALW +12V_FAN	+3V +2.5V	+3VS +5VS +1.5VS +1.2VP +CPU_CORE +1.25VS
S0	ON	ON	ON
S1	ON	ON	ON
S3	ON	ON	OFF
S5 S4/AC	ON	OFF	OFF
S5 S4/AC don't exist	OFF	OFF	OFF

SCHEMATICS VERSION LIST

VERSION	ISSUE DATE	REMARK
0.1	08/19/2003	SST Release
0.2	10/06/2003	PT Release
Seperate from Abacus-MT		
0.1	11/19/2003	ST Release
1.0	01/05/2004	QT Release

Ceramic Capacitor Spec Guide:

Temperature Characteristics:

Symbol	0	1	2	3	4	5	6	7
CODE	Z5U	Z5V	Z5P	Y5U	Y5V	Y5P	X5R	X7R

8	9	A	B	C	D	E	F	G
NP0	C0G		BJ	CH	CJ	CK	SH	SJ

H	I	J	
UJ	UK	SL	

Tolerance:

Symbol	A	B	C	D	F	G	H	J
CODE	+ -0.05PF	+ -0.1PF	+ -0.25PF	+ -0.5PF	+ -1PF	+ -2%	+ -3%	+ -5%

K	M	N	P	Q	V	X	Z	
+ -10%	+ -20%	+ -30%	+100, -0%	+30, -10%	+20, -10%	+40, -20%	+80, -20%	

SMBUS Control Table

	SOURCE	INVERTER	BATT	SERIAL EEPROM	THERMAL SENSOR (CPU)	THERMAL SENSOR (LM75)	SODIMM	CLK CHIP	MINI PCI	LCD	VGA Thermal ADM1032
SMB_EC_CK1 SMB_EC_DA1	PC87591L	✓	✓	✓	✗	✗	✗	✗	✗	✗	✓
SMB_EC_CK2 SMB_EC_DA2	PC87591L	✗	✗	✗	✓	✓	✗	✗	✗	✗	✗
SMB_CLK SMB_CDATA	ICH4-M	✗	✗	✗	✗	✗	✓	✓	✓	✗	✗
LCD_DDCCLK LCD_DDCCDATA	M-GT	✗	✗	✗	✗	✗	✗	✗	✗	✓	✗

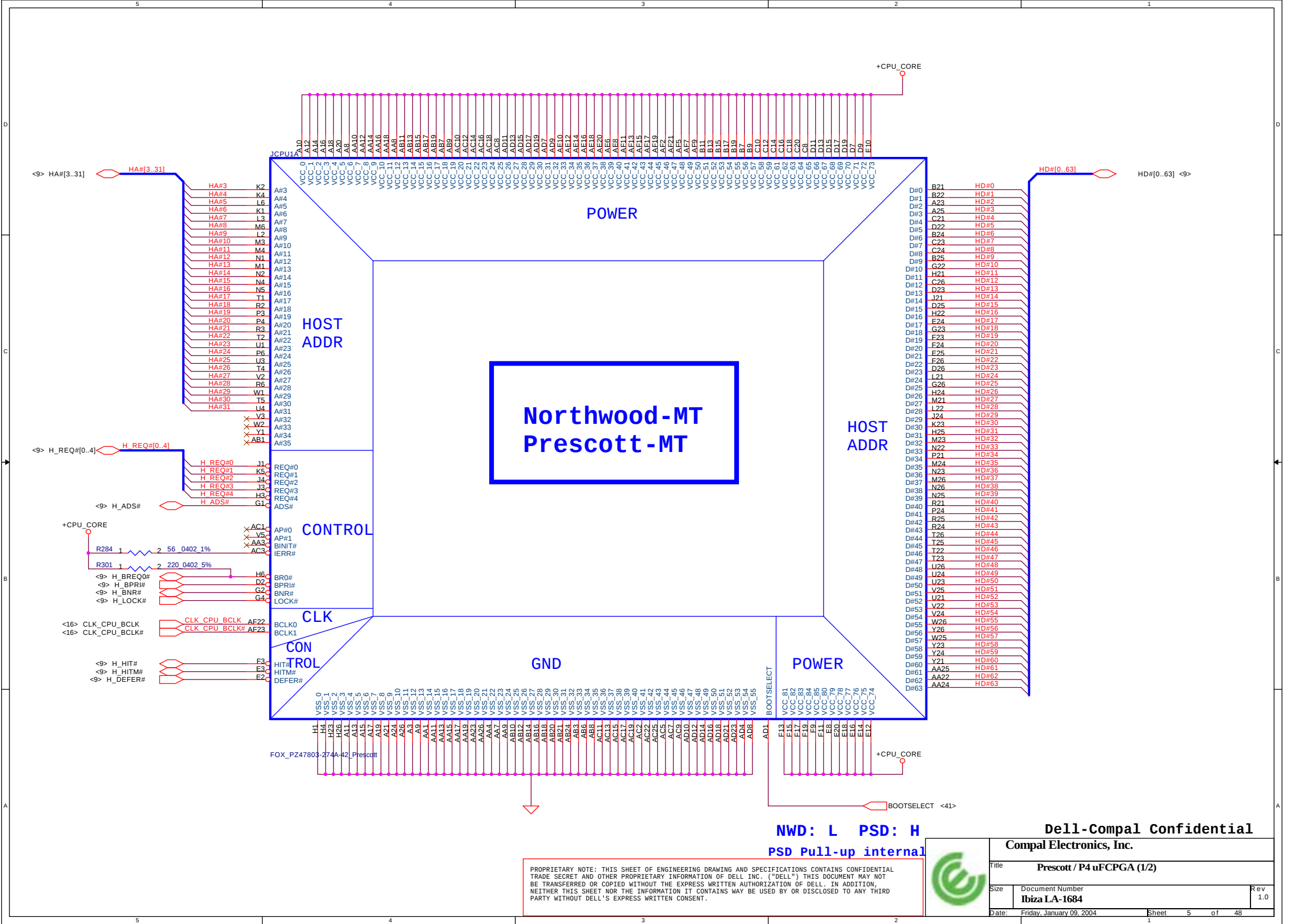
GMV supply 533 Celeron, and use the internal Gfx

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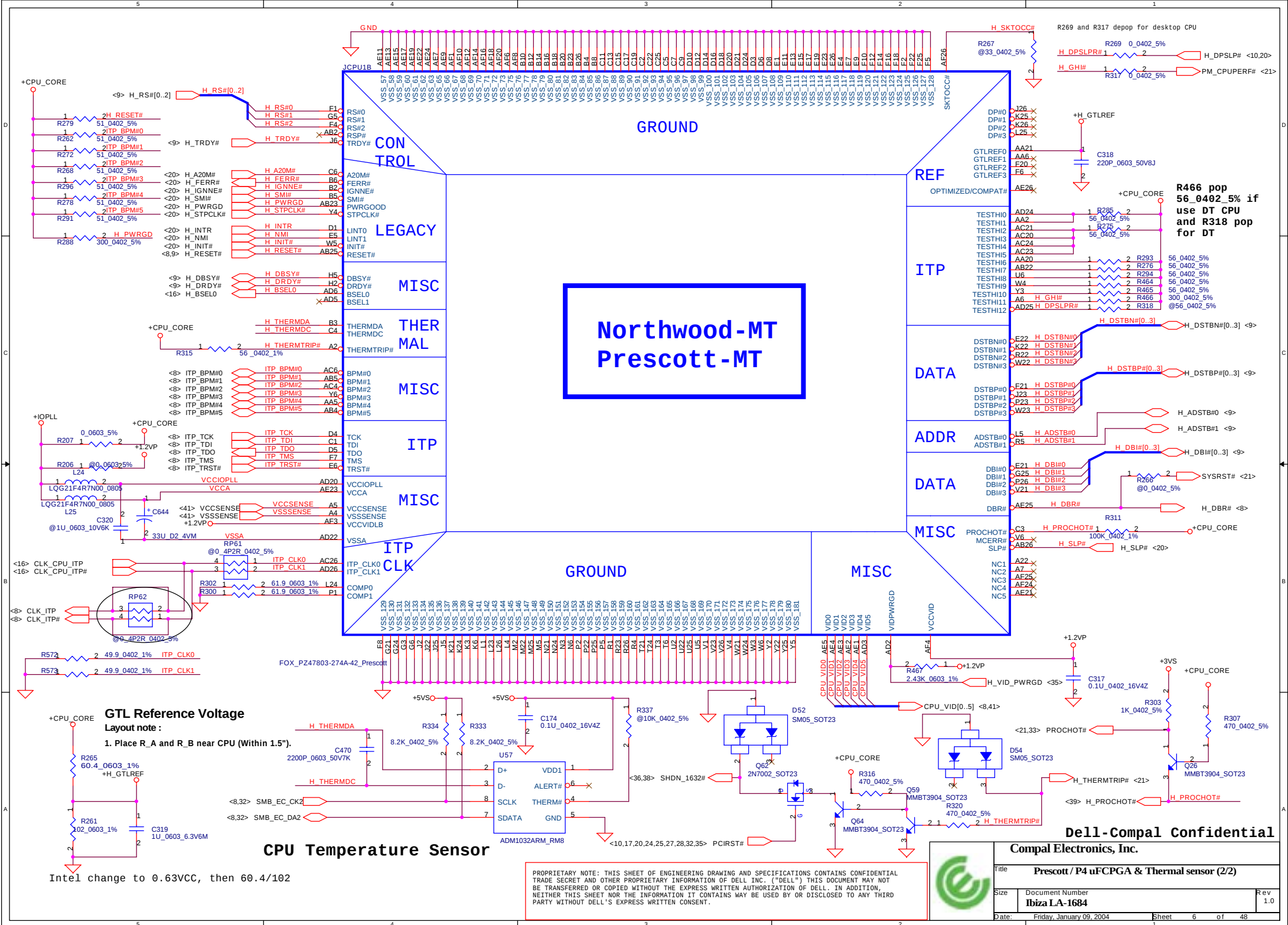
Note & Revision		
Title	Note & Revision	
Size	Document Number Ibiza LA-1684	Rev 0.1
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Title		
Prescott / P4 uFCPGA (1/2)		
Size		
Document Number		Rev
Ibiza LA-1684		1.0
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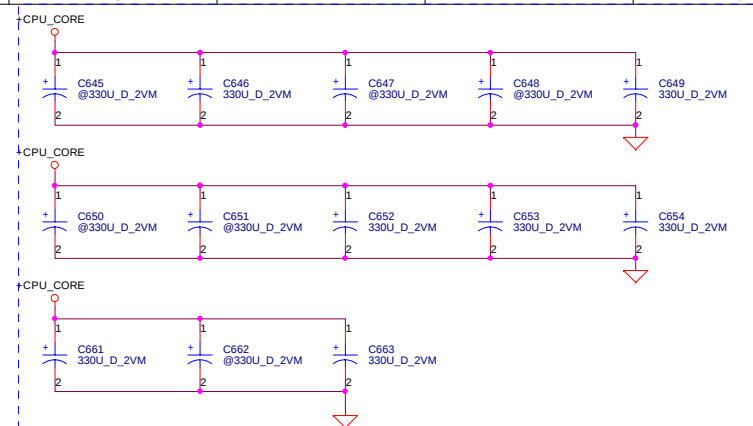


Place close to CPU, Use 2~3 vias per PAD.
Place 22uF caps x31 pcs, populated 14pcs.



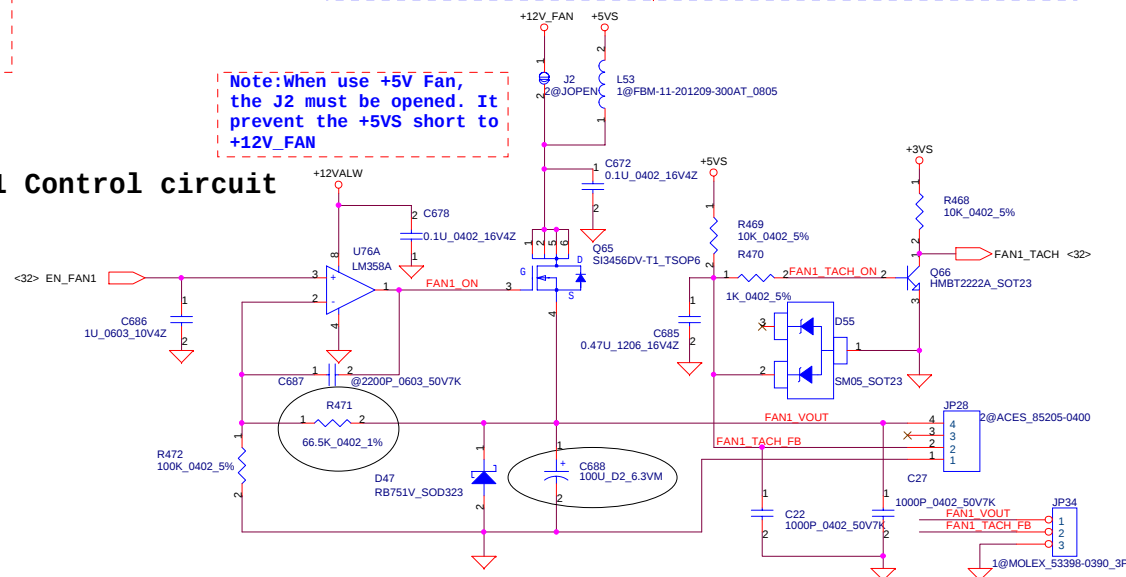
Place close to CPU power and ground pin as possible (<1inch)

For Desktop's CPU:
330uFx7/7m ohm each
depop 8pcs



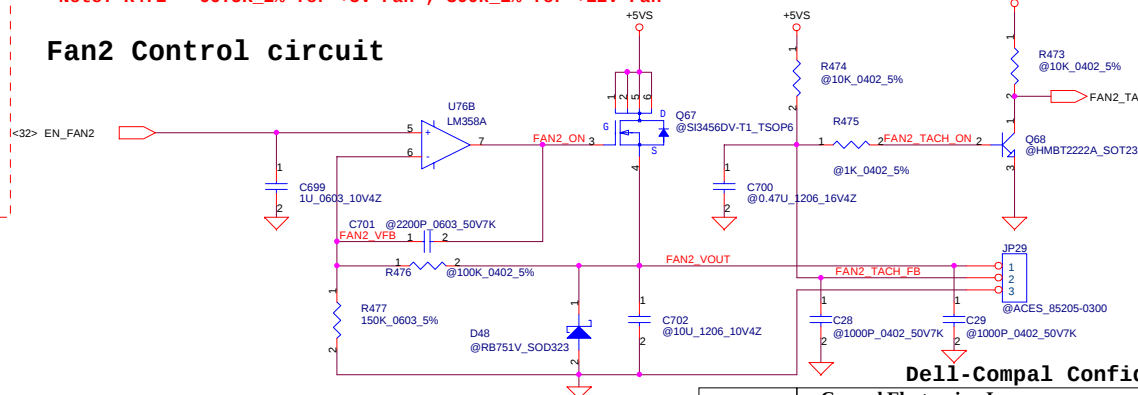
Note: When use +5V Fan, the J2 must be opened. It prevent the +5VS short to +12V FAN

Fan1 Control circuit



Note: R471 - 66.5K_1% for +5V Fan ; 300k_1% for +12V Fan

Fan2 Control circuit



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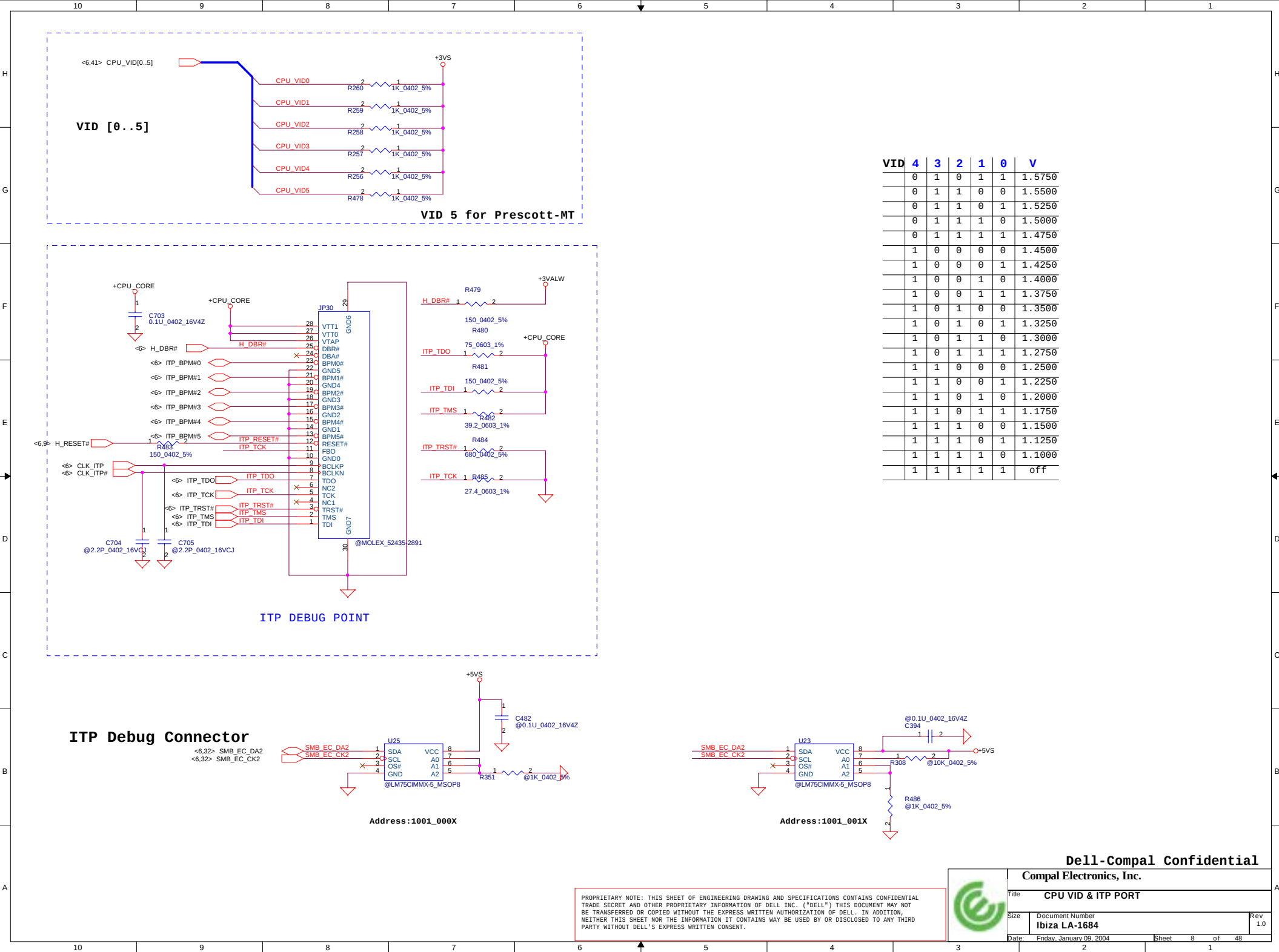
Title	CPU Decoupling CAP. & Fan control
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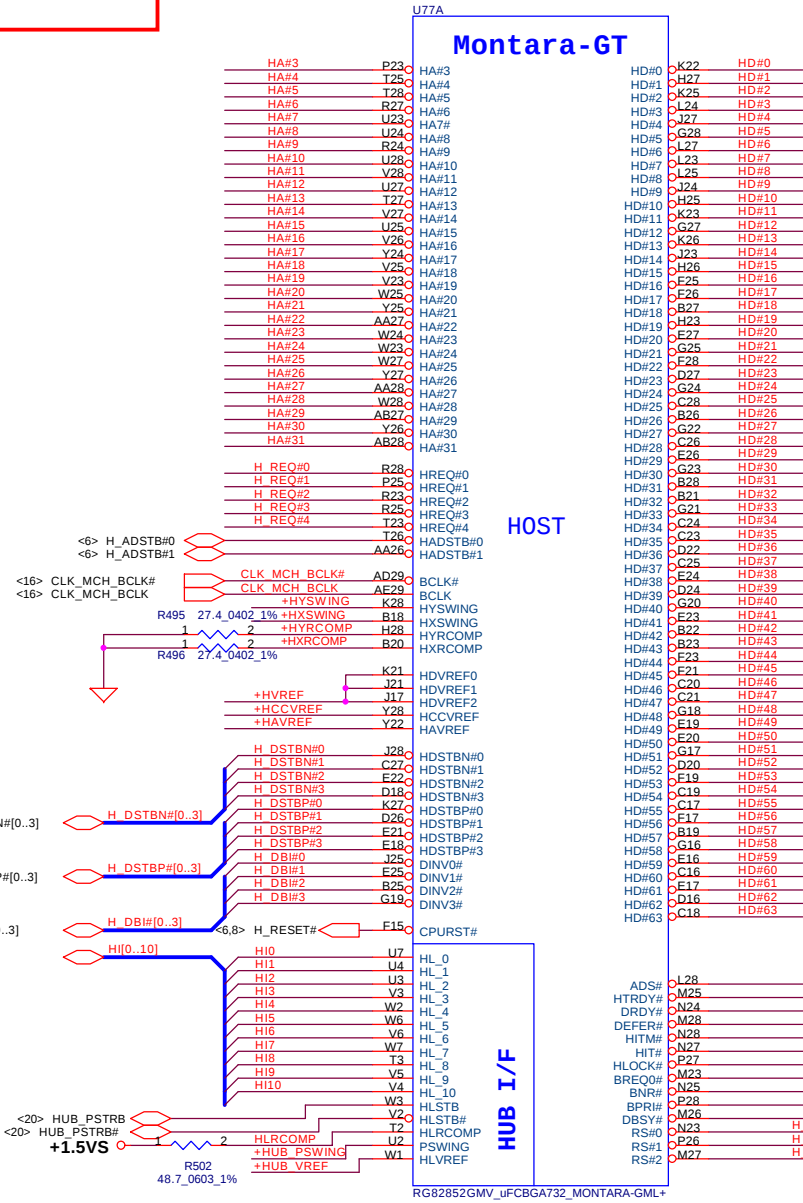
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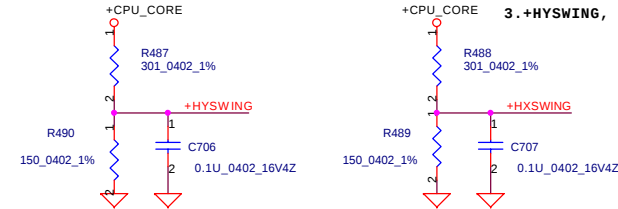
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U77 use Montara-GMV for Internal Gfx

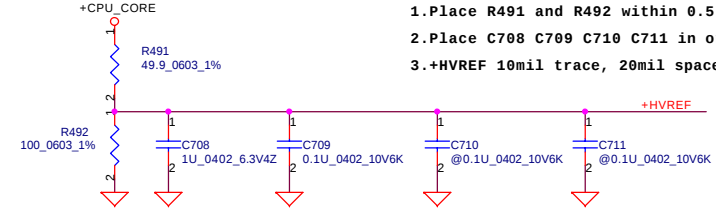


HXSWING and HYSWING Ref. Voltage

- 1.Place R487 and R490 within 0.5" of U77 pin K28
- 2.Place R488 and R489 within 0.5" of U77 pin B18
- 3.+HYSWING, +HXSING 10mil trace, 20mil space.

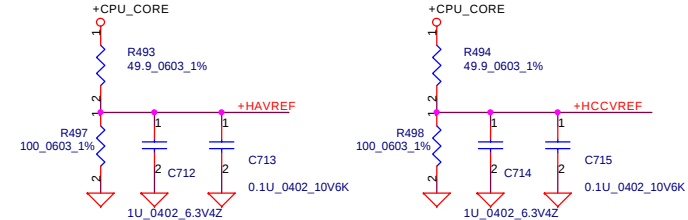
**Host data Ref. Voltage**

- 1.Place R491 and R492 within 0.5" of U77 pin K21 J21 J17
- 2.Place C708 C709 C710 C711 in order from U77 to divider
- 3.+HVREF 10mil trace, 20mil space.

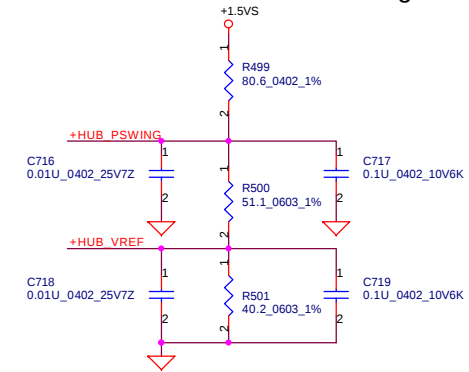


<i>Host Address</i>	<i>Ref. Voltage</i>
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- +CPU_CORE
R494
49.9_0603_1%



HUBLink reference Voltage



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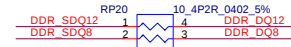
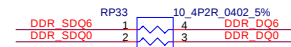
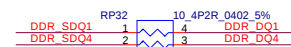
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Title	Montara-GT (1/4)
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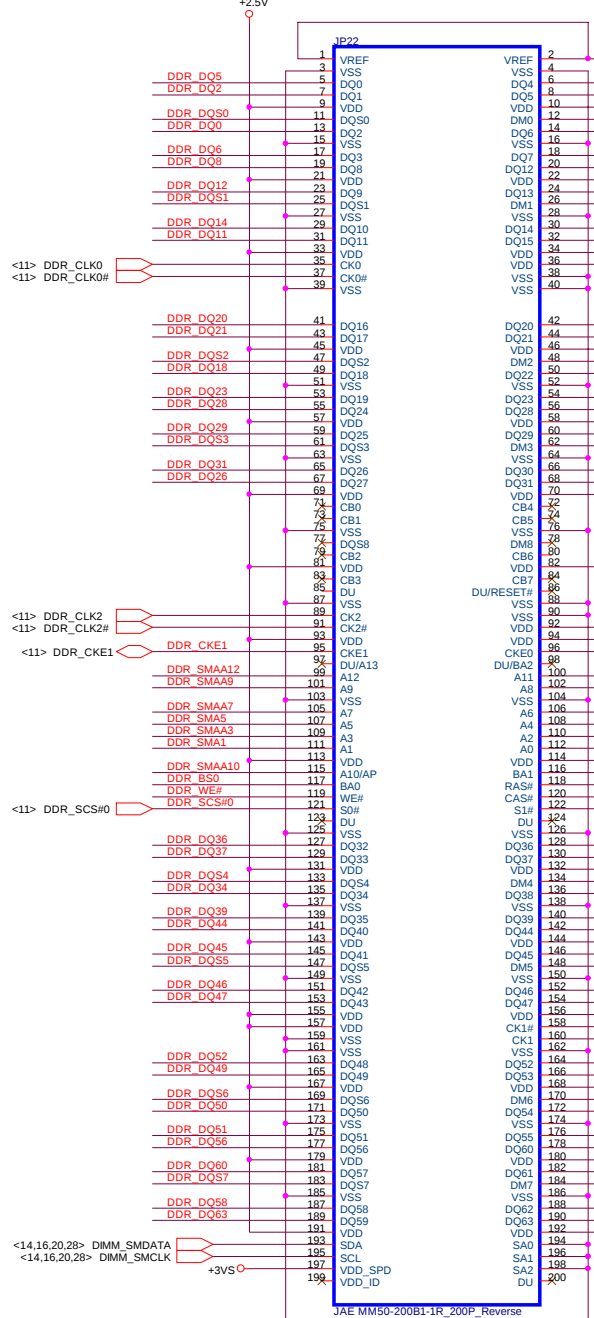
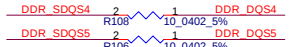
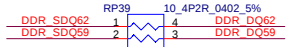
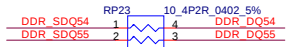
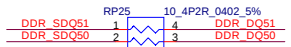
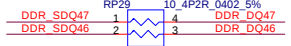
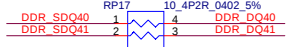
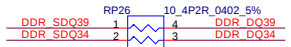
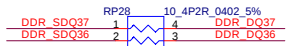
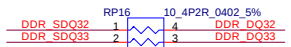
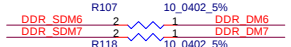
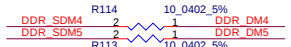
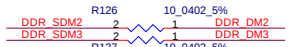
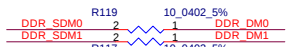
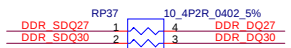
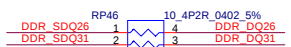
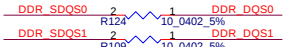
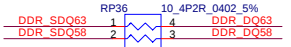
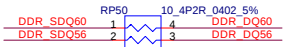
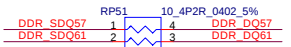


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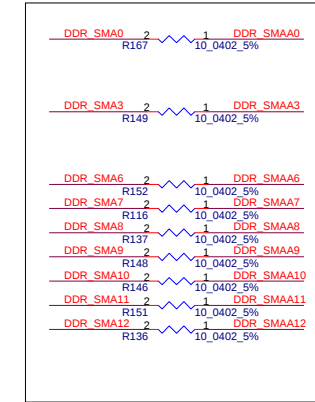
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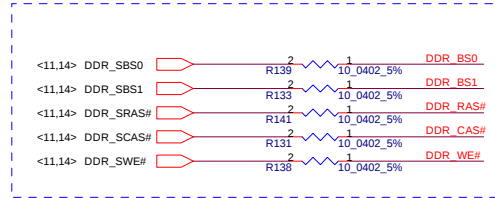
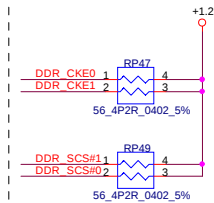


Layout note
Place these resistors
close to DIMM0,
all trace length<500 mil

DDR TOPOLOGY 2 FOR SMAA[0, 3, 6:12], SBA[1, 0], SRAS#, SCAS#, SWE#



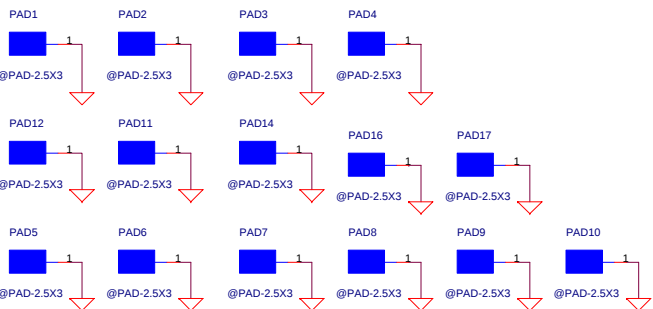
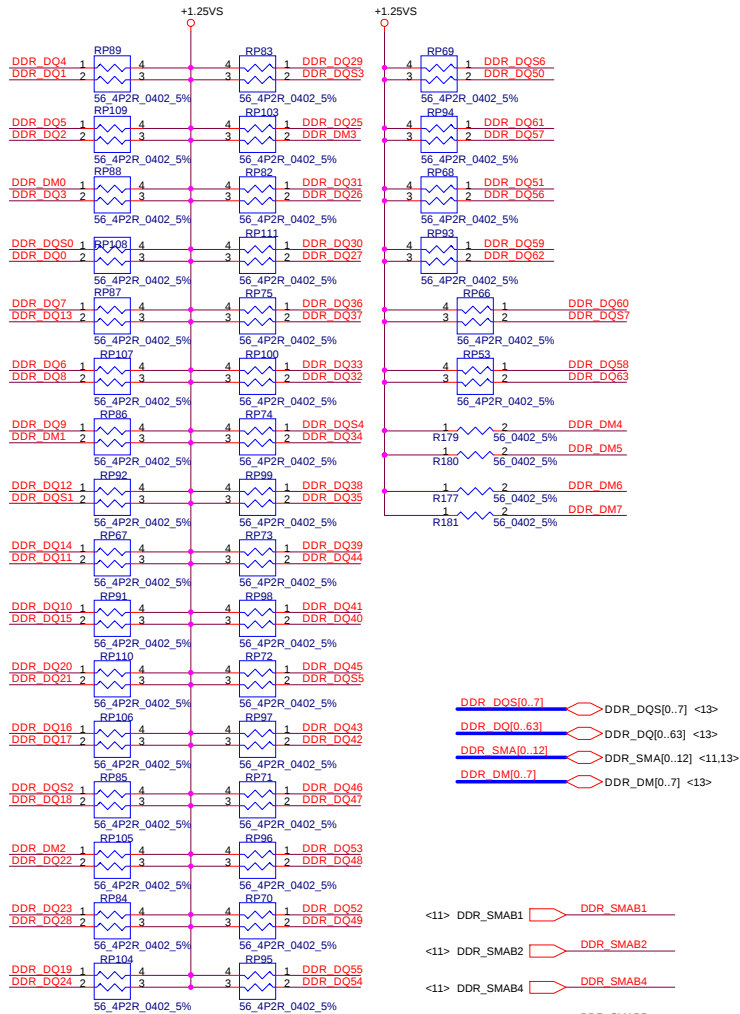
Layout note
Place these resistor
close by DIMM0,
all trace length
Max=1.4"



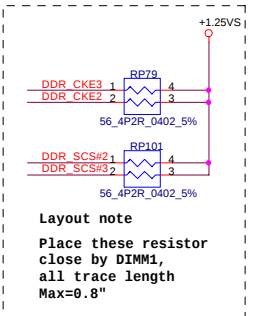
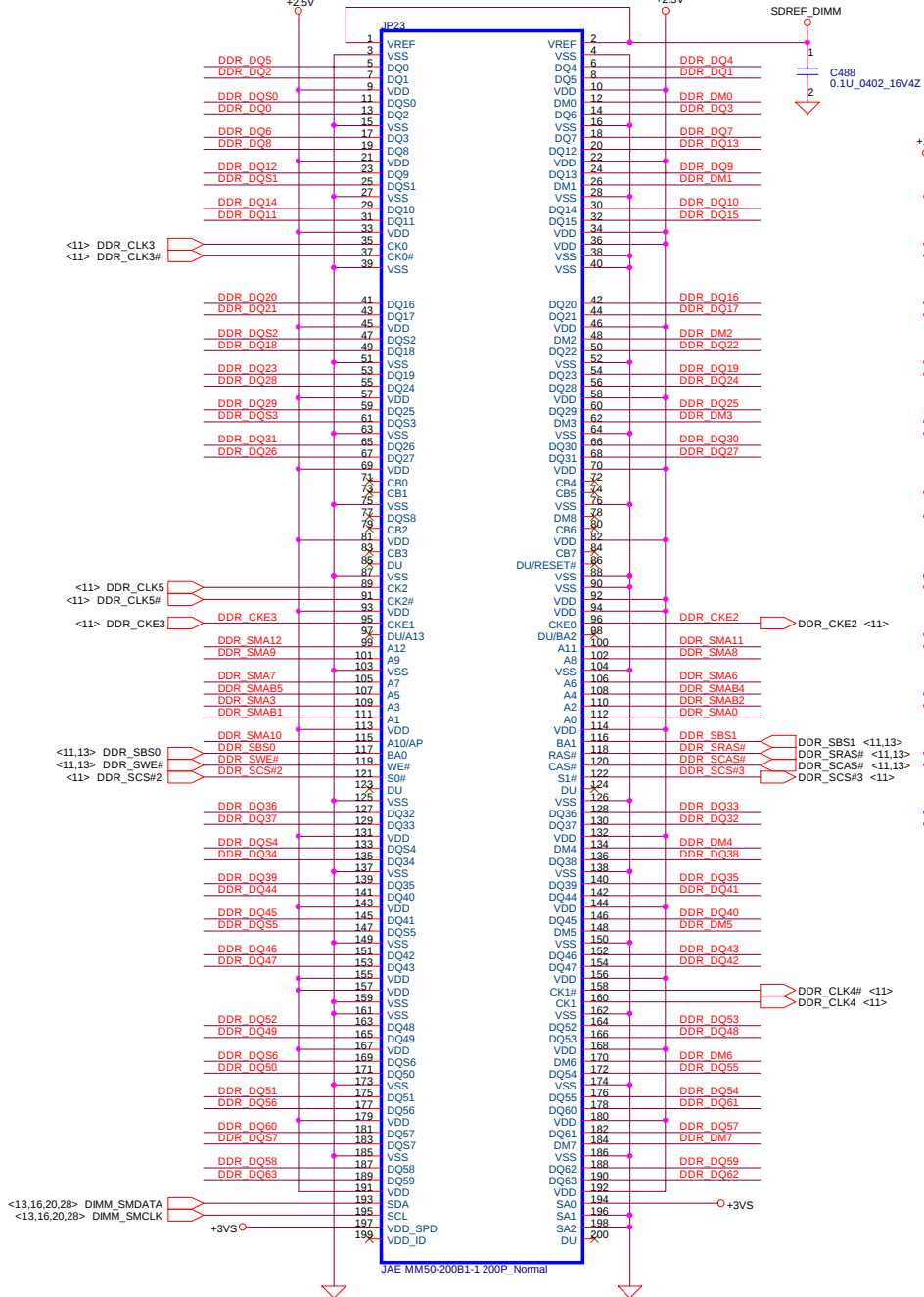
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Title DDR-SODIMM SLOT0			
Size	Document Number	Rev	
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DDR TOPOLOGY 2 FOR SMAA[0, 3, 6:12], SBA[1, 0], SRAS#, SCAS#, SWE#



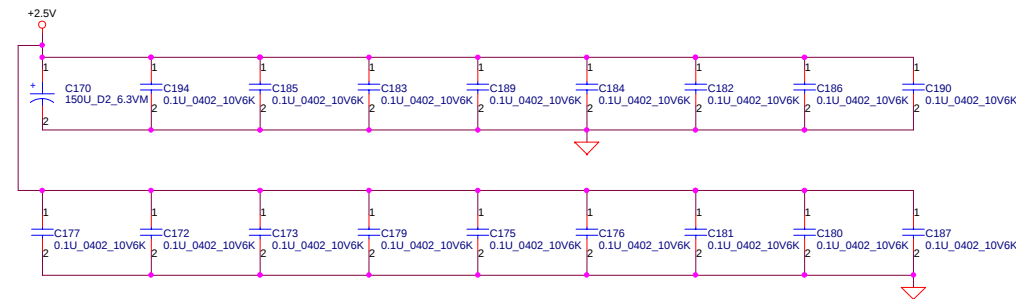
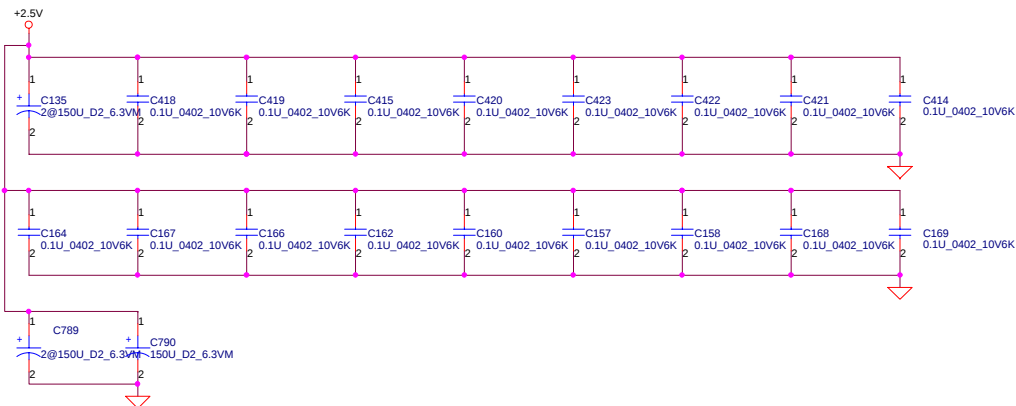
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Title: DDR-SODIMM SLOT1		
Size	Document Number Ibiza LA-1684	Rev 1.0
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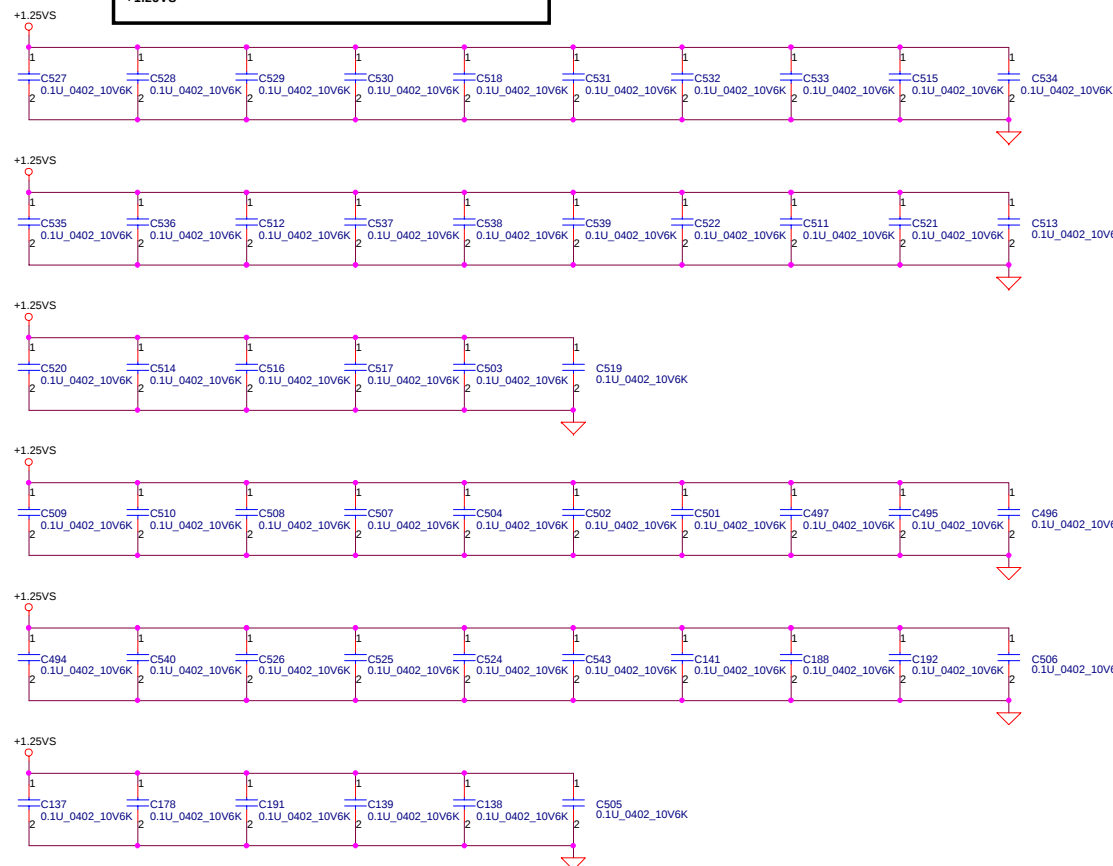
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Layout note :
Distribute as close as possible
to DDR-SODIMM0.

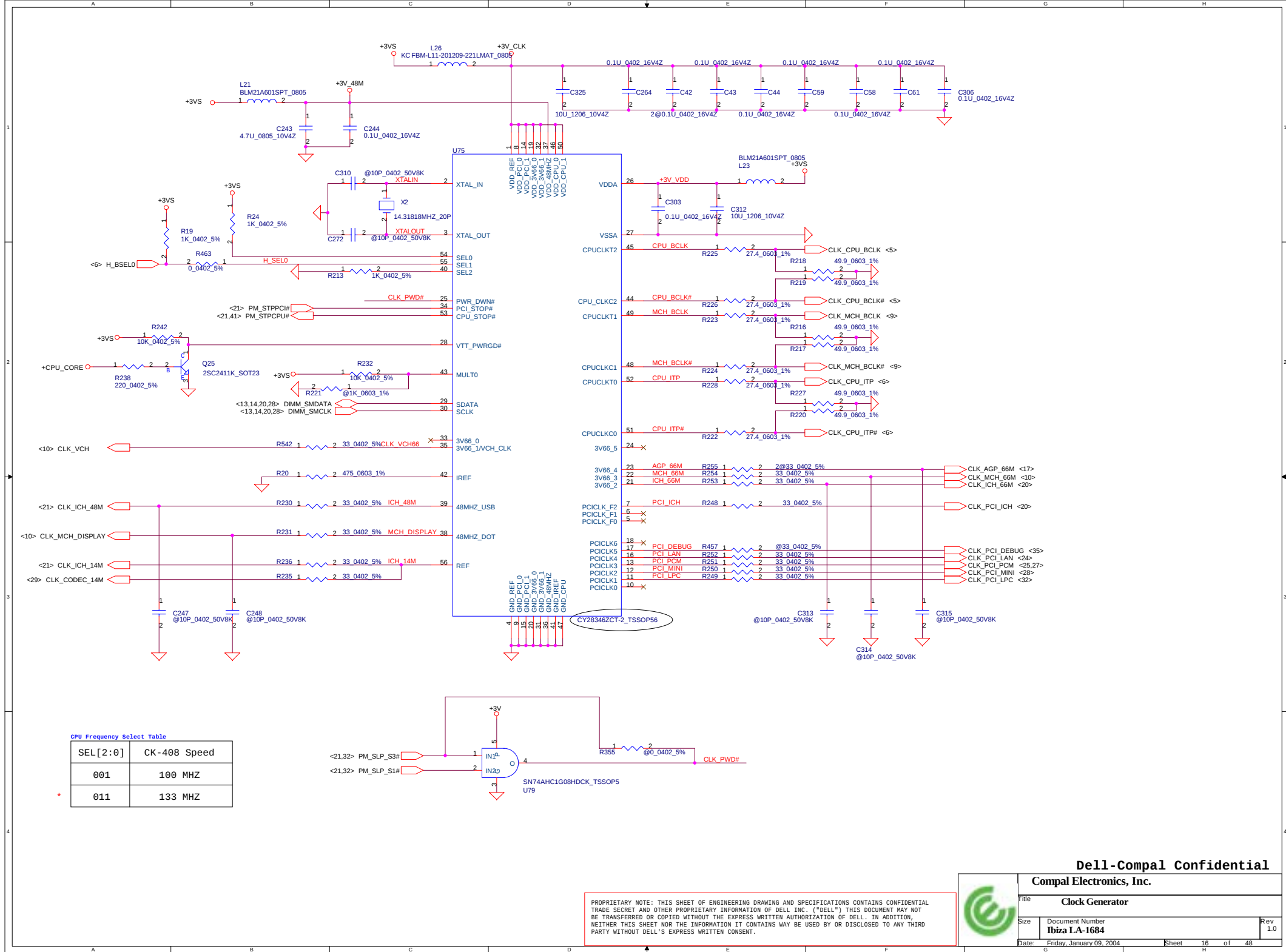
Layout note :
Distribute as close as possible
to DDR-SODIMM1.



Layout note :
Place one cap close to every 2 pull up resistors termination to
+1.25VS



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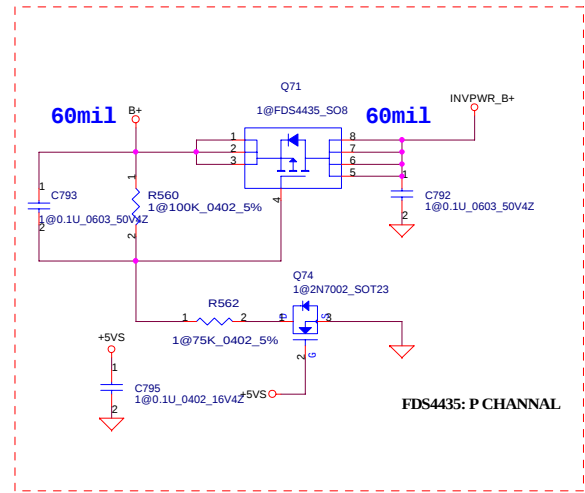
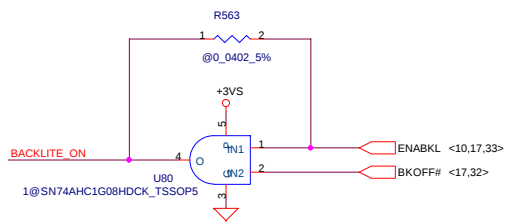
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Clock Generator

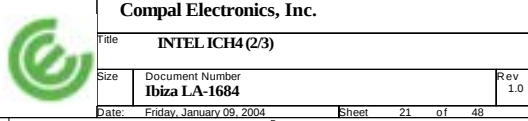
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 Size: **Document Number**
 Date: **Friday, January 09, 2004**
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 Rev: **1.0**

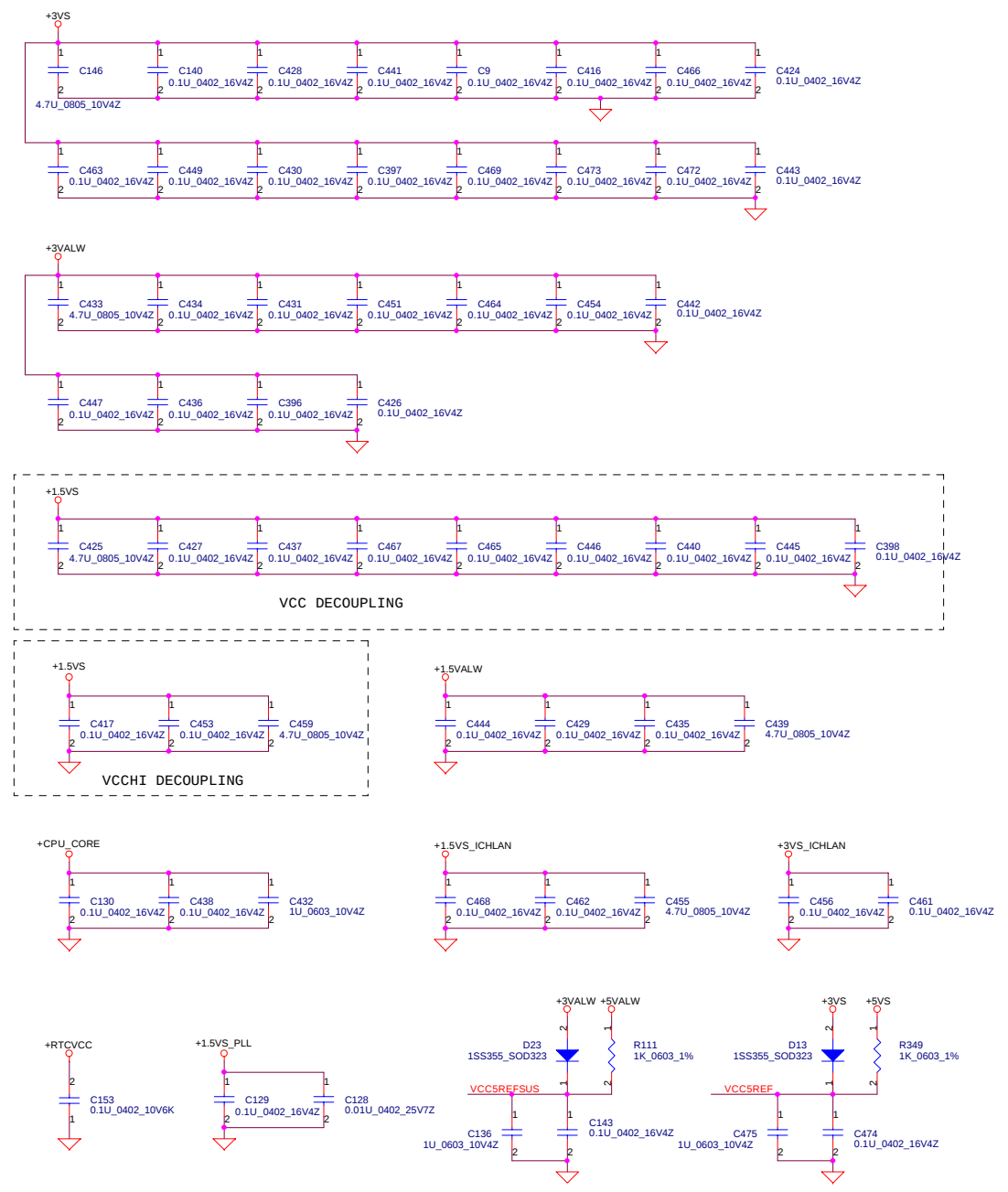
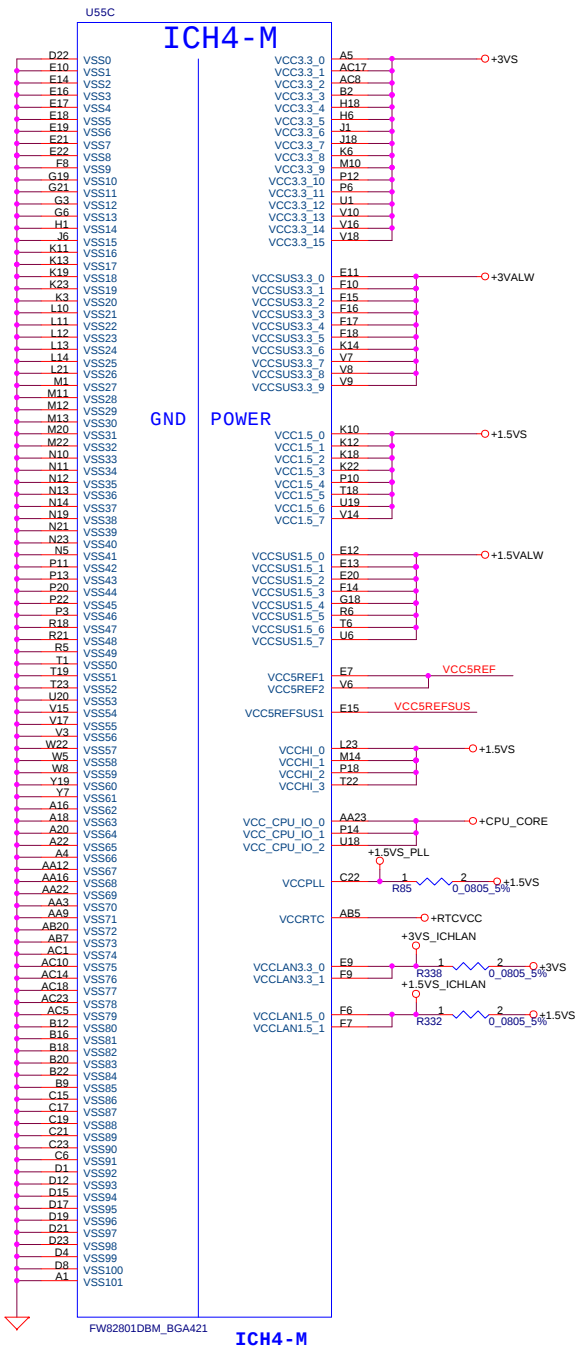




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	Title Internal LVDS			
	Size	Document Number Ibiza LA-1684		Rev 1.0
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Intel ICH4 (3/3)

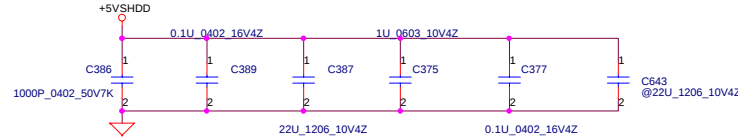
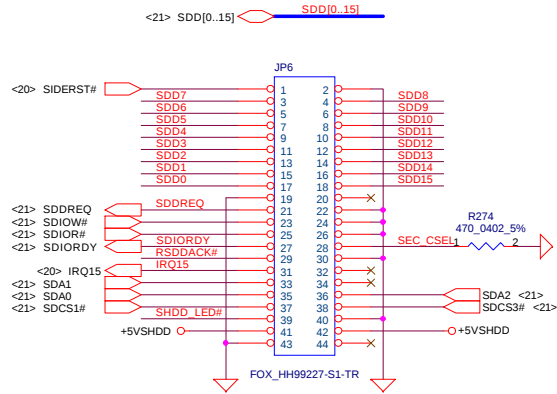
Document Number: **Ibiza LA-1684**

Date: Friday, January 09, 2004

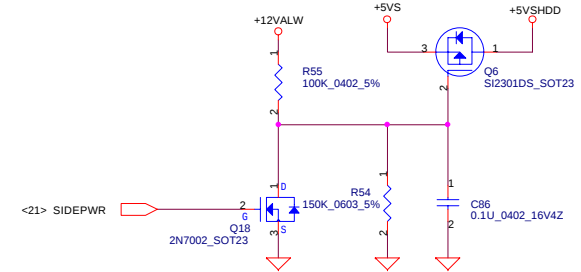
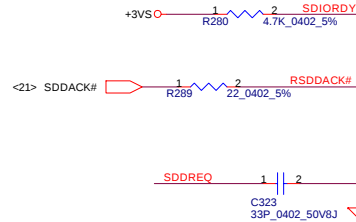
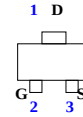
Sheet 22 of 48

Rev 1.0

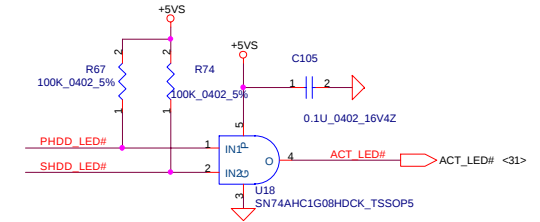
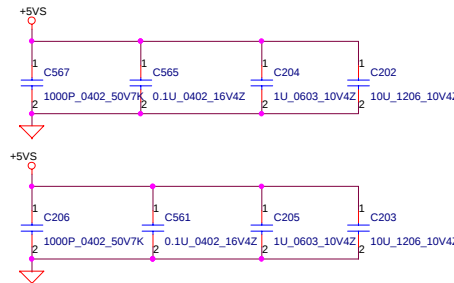
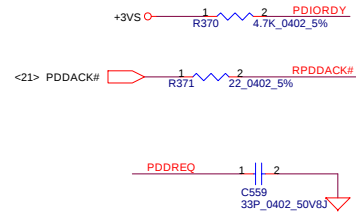
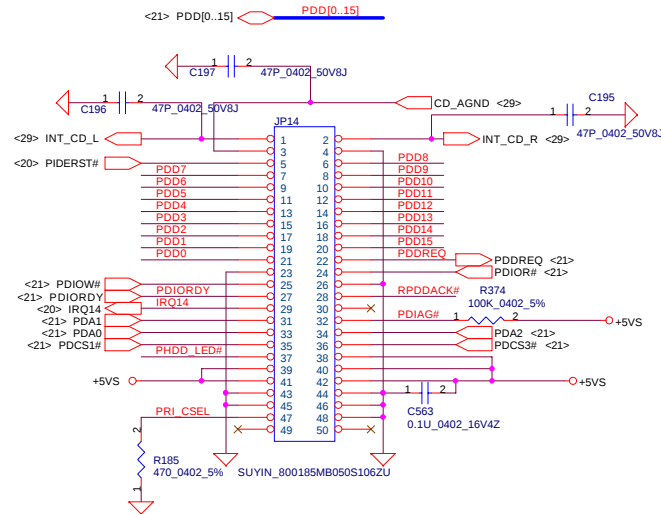
HDD Connector



SI2301DS: P CHANNEL
VGS: -4.5V, RDS: 130 mOHM
VGS: -2.5V, RDS: 190mOHM
Id(MAX): 2.3A
VGS(MAX): +-8V



CD-ROM Connector



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Compal Electronics, Inc.

File: IDE/FDD/CD-ROM Module

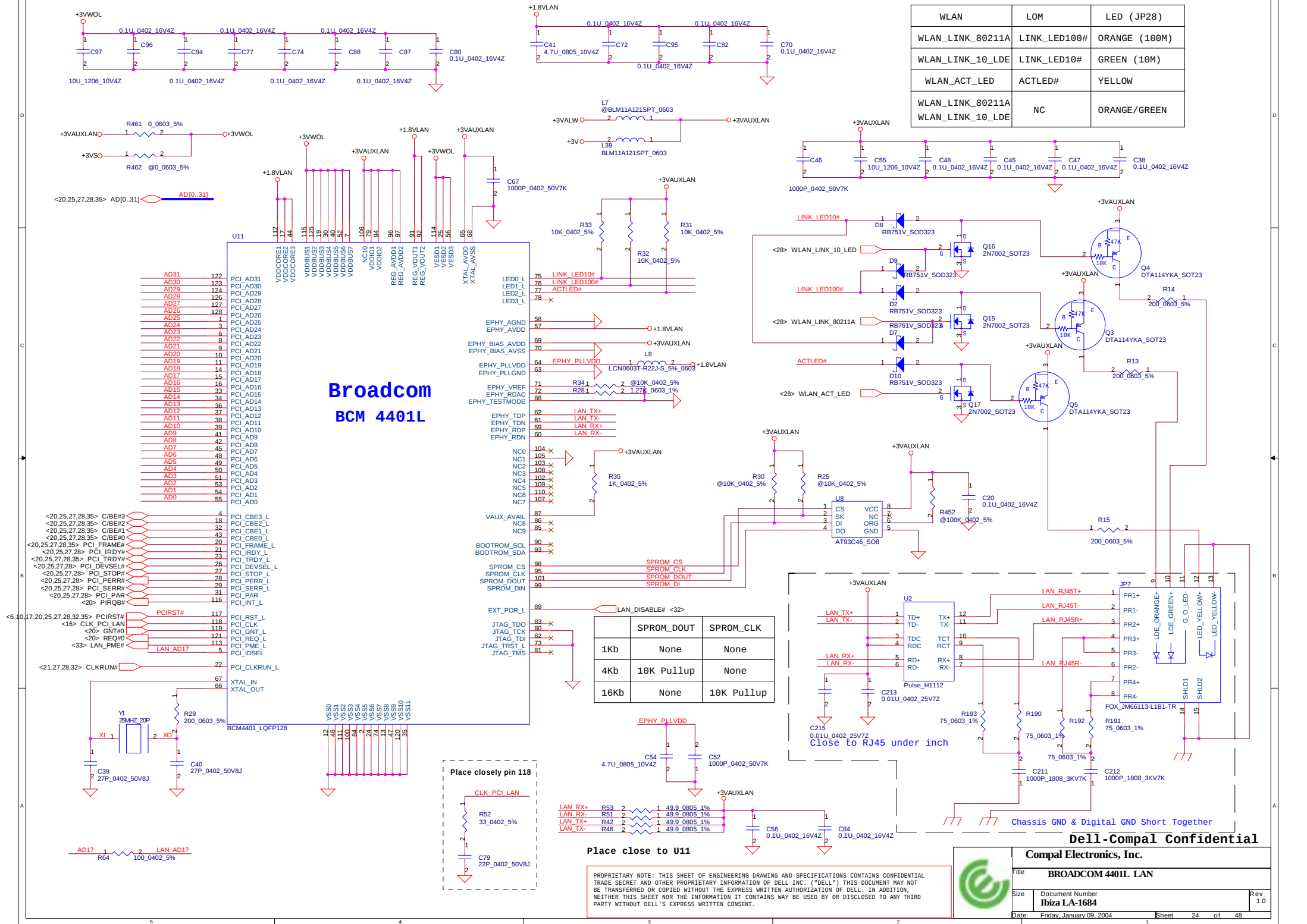
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Ibiza LA-1684

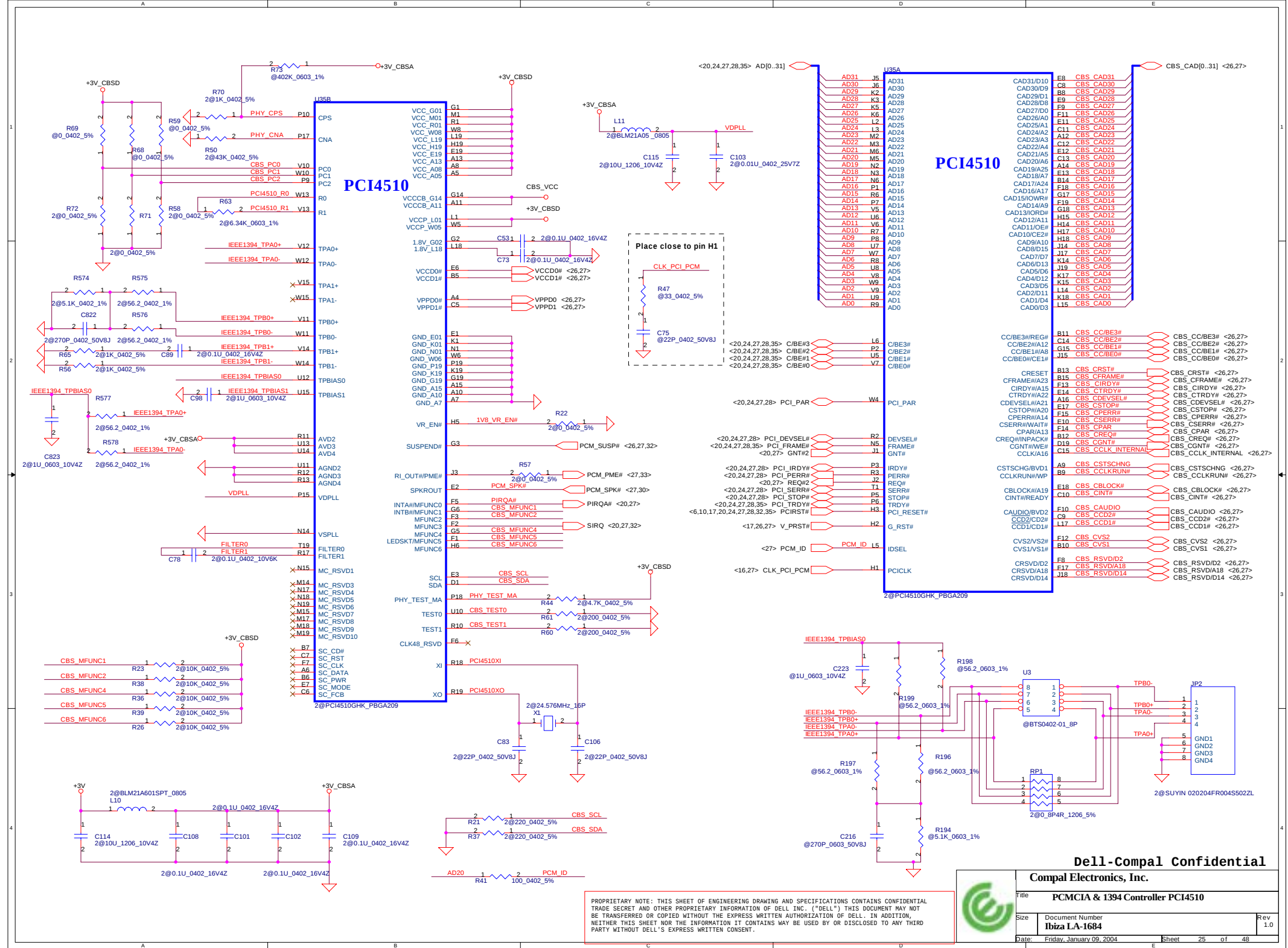
Rev
1.0

Date: Friday, January 09, 2004

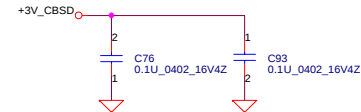
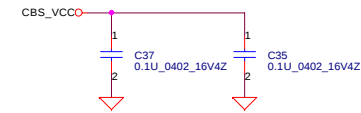
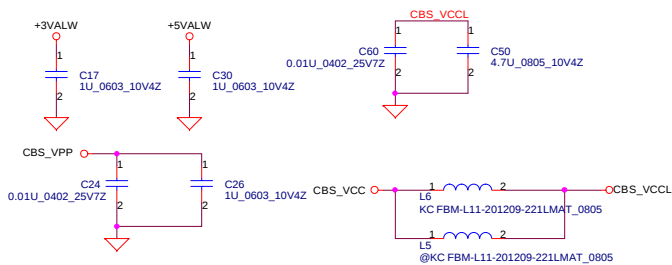
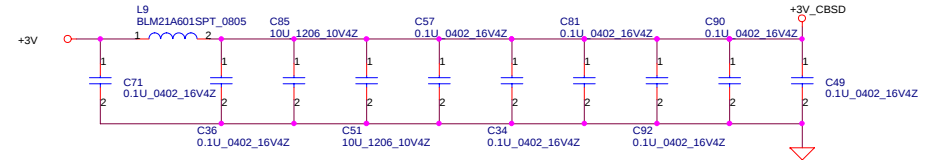
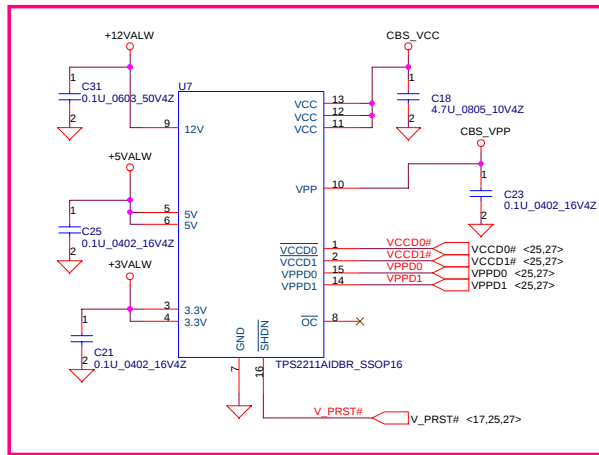
Sheet 23 of 48

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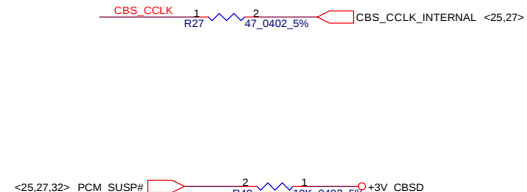
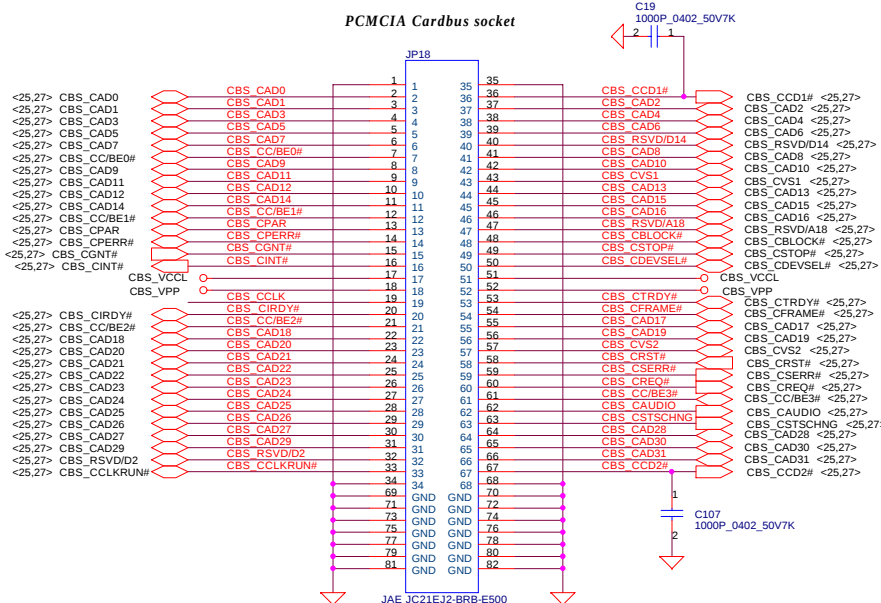




PCMCIA Power Controller



PCMCIA Cardbus socket



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Compal Electronics, Inc.

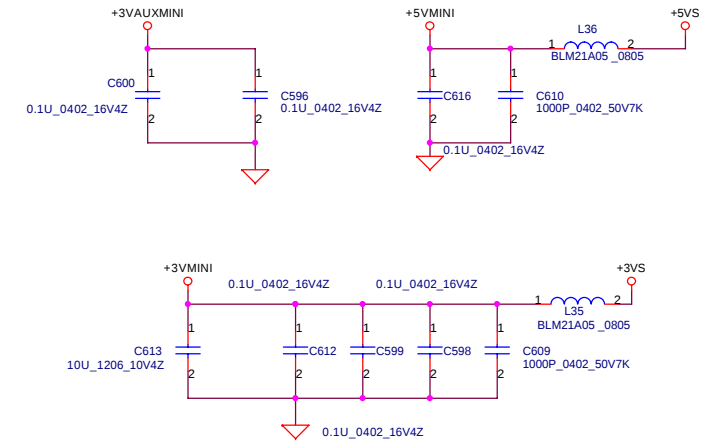
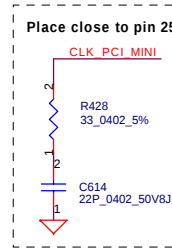
Title PCMCIA Socket

Size Document Number
Ibiza LA-1684

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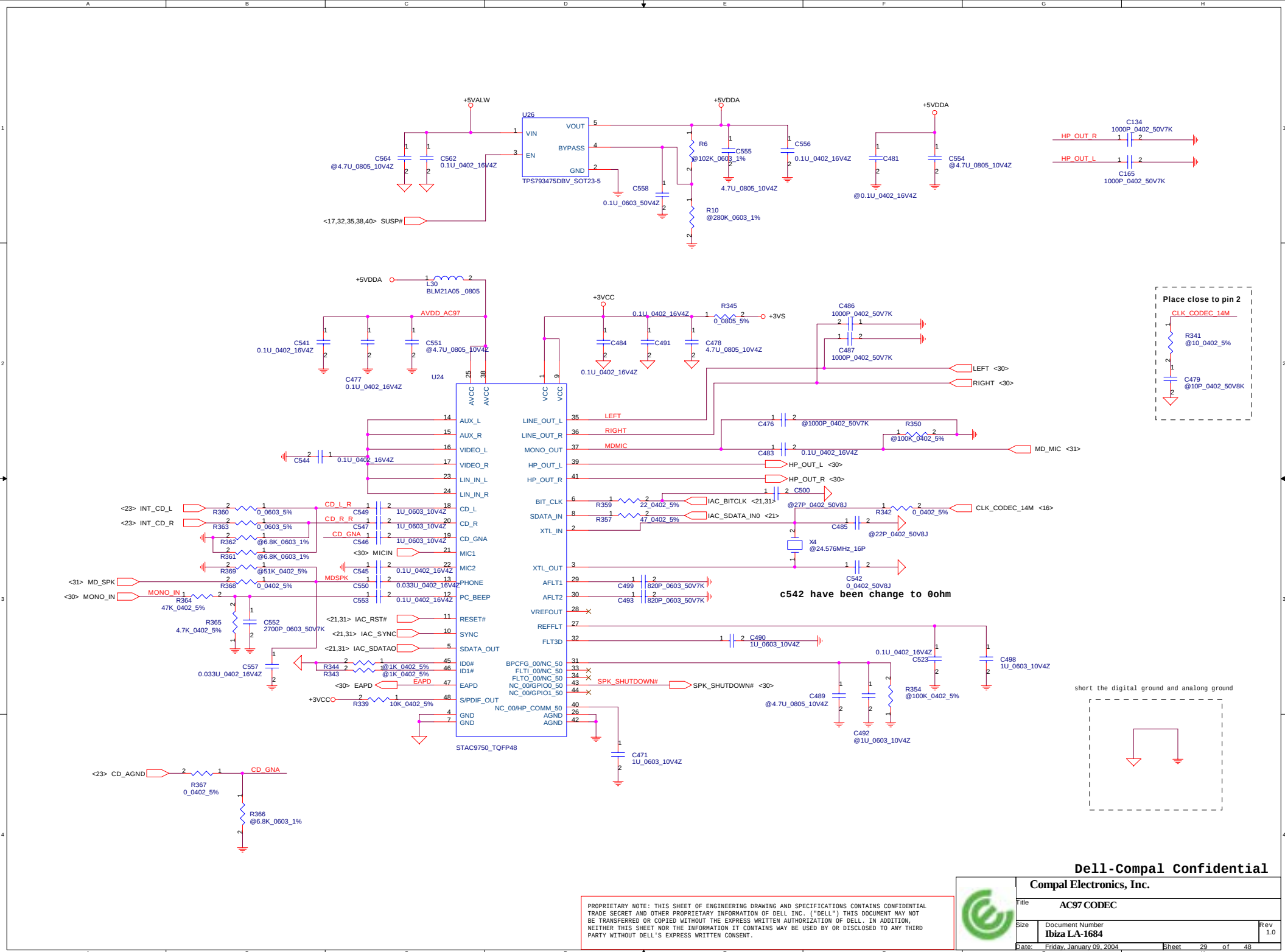
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WIRELESS SUPPORT ONLY



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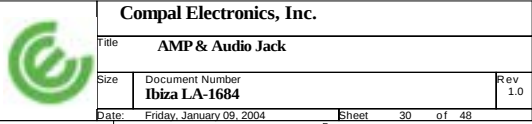
Compal Electronics, Inc.

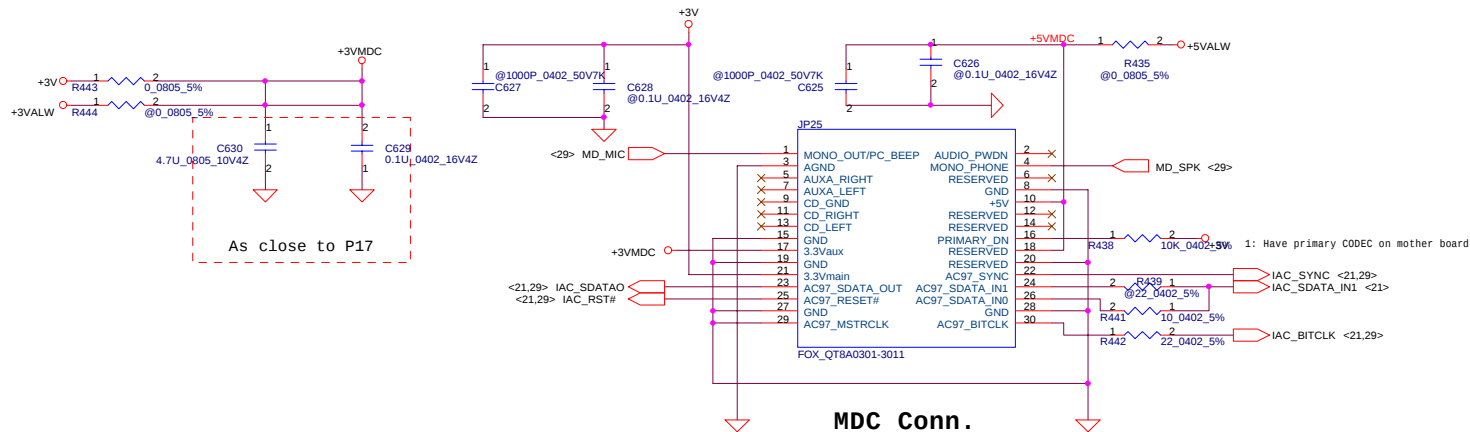
File AC97 CODEC

Size Document Number
Ibiza LA-1684

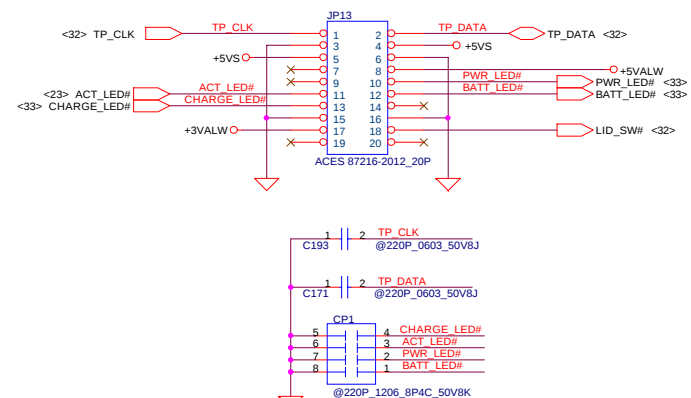
Date: Friday, January 09, 2004 Sheet 29 of 48

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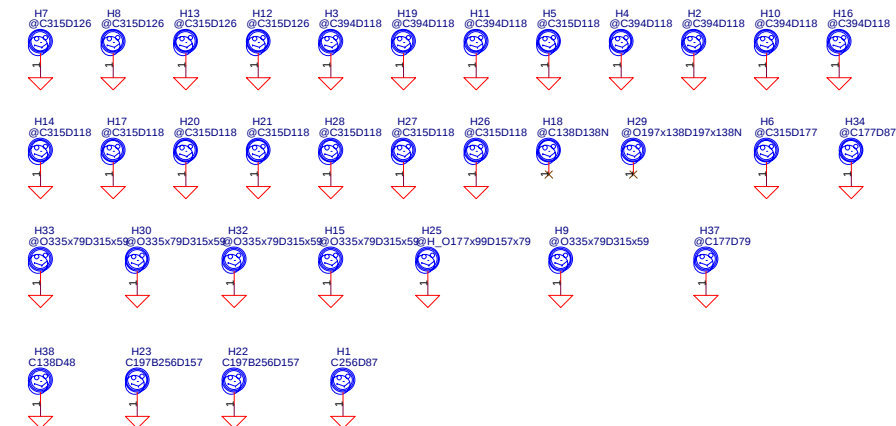
Touch Pad & Status LED Conn.



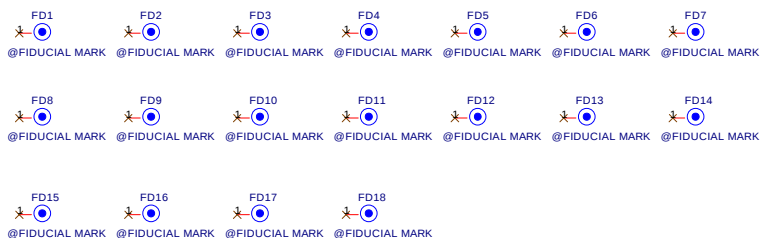
MDC Note

Pin 1 is NC for Pctel and connexant MDC modem
Pin 2 is NC for Pctel and connexant MDC modem

Screw Hole

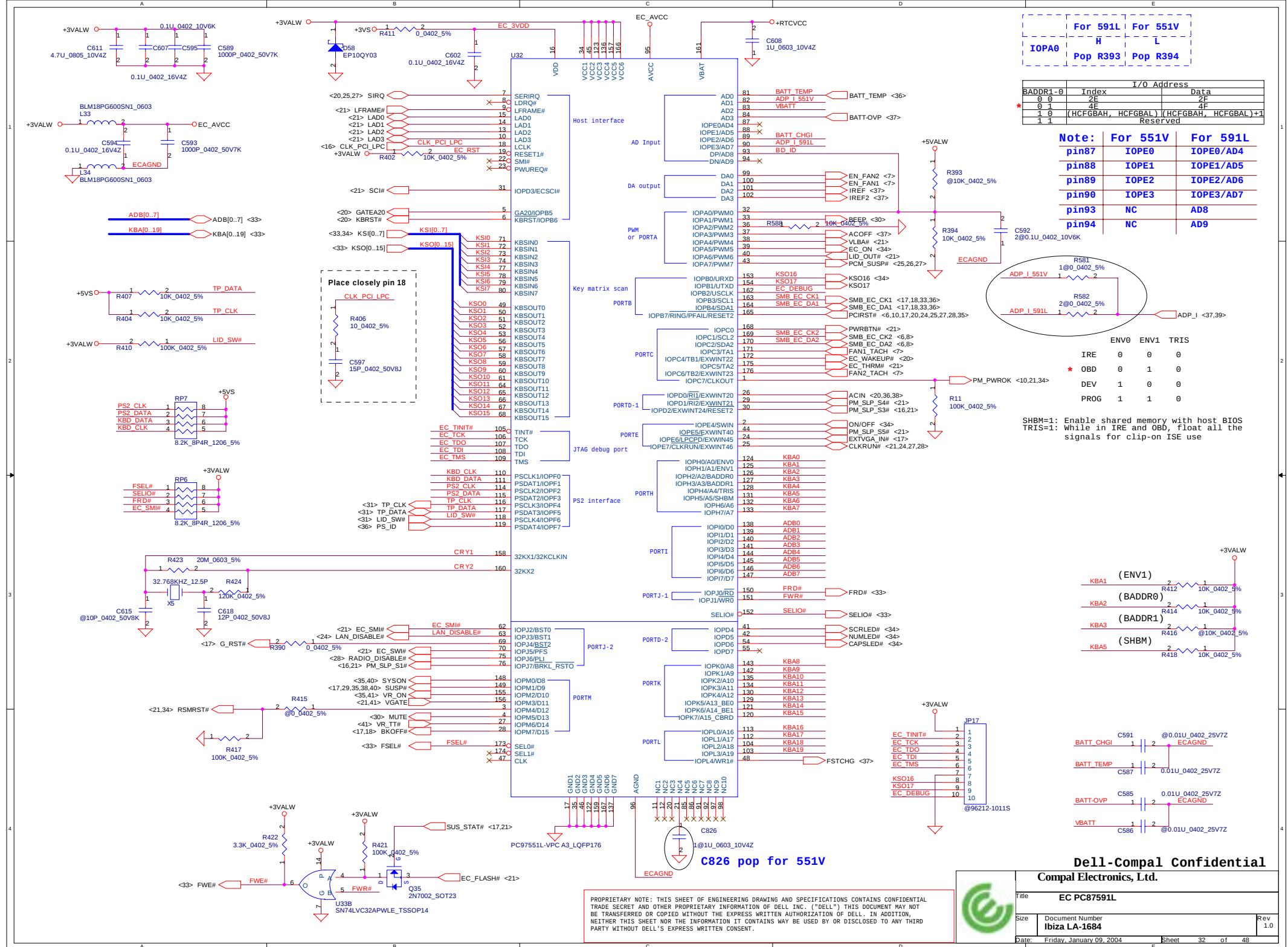


Fiducial Mark

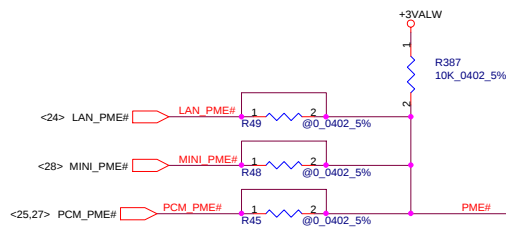
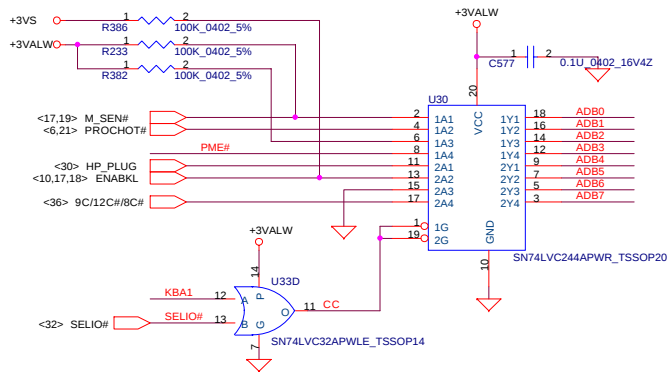


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Compal Electronics, Inc.			
Title		MDC/SWITCH Connector	
Size	Document Number	Rev	
	Ibiza LA-1684	1.0	
Date:	Friday, January 09, 2004	Sheet	31 of 48

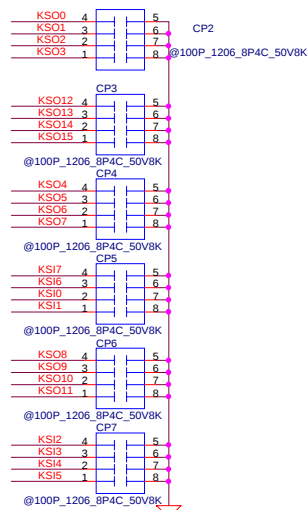
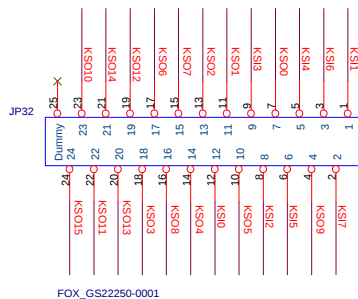


Input Port



Internal KB connector

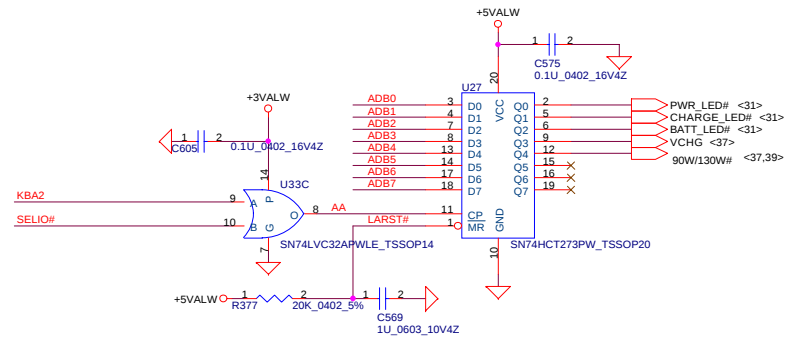
INT_KBD CONN.



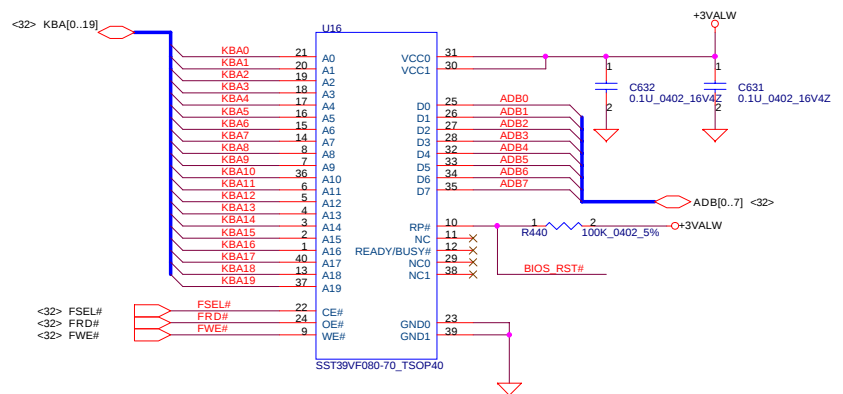
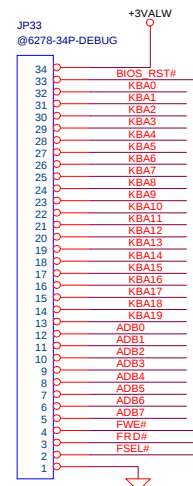
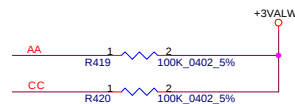
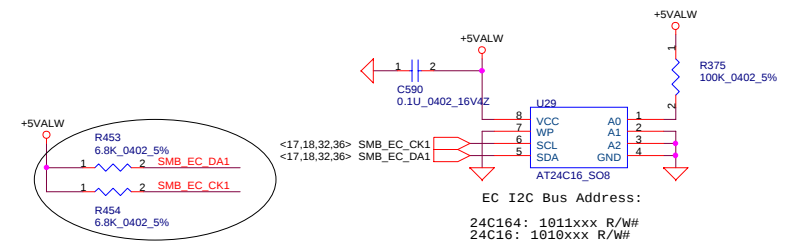
can swap



Output Port



NM24C164 Address definition: 1 A2 A1# A0 B2 B1 B0 R/W#



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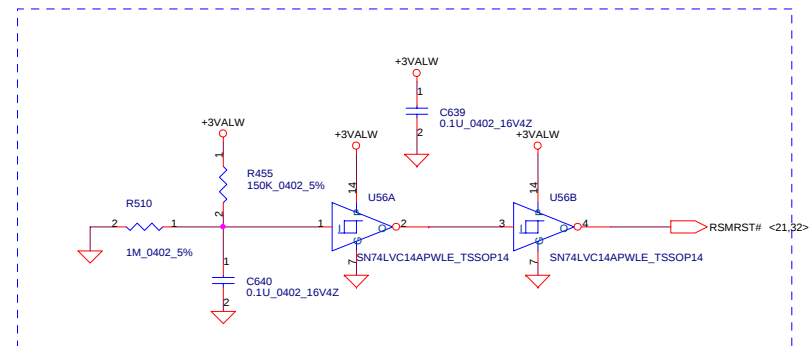
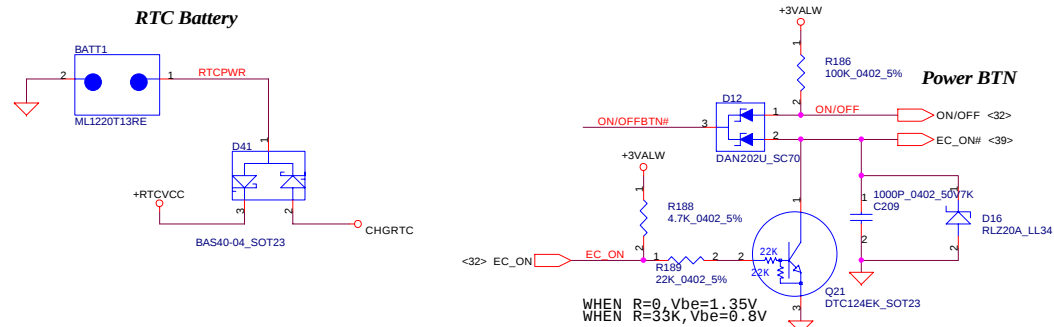
Compal Electronics, Inc.

Title	EC Extend I/O KB Conn. & BIOS
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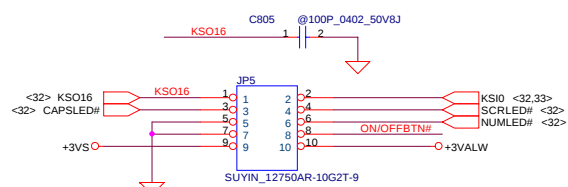
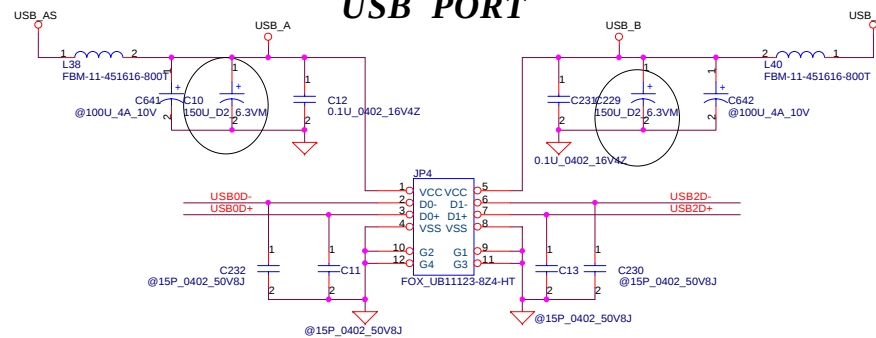
Size	Document Number	Rev
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USB PORT



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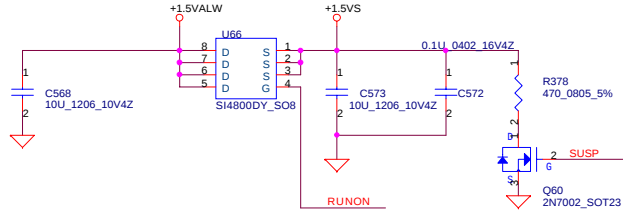
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Rev	1.0
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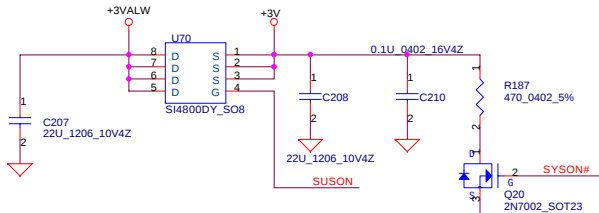
Date:	Friday, January 09, 2004	Sheet	34	of	48
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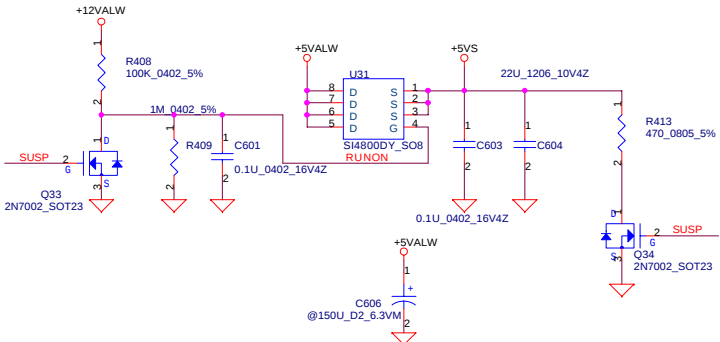
+1.5VALW to +1.5VS Transfer



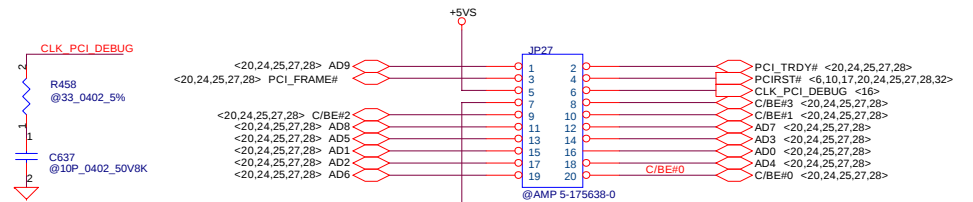
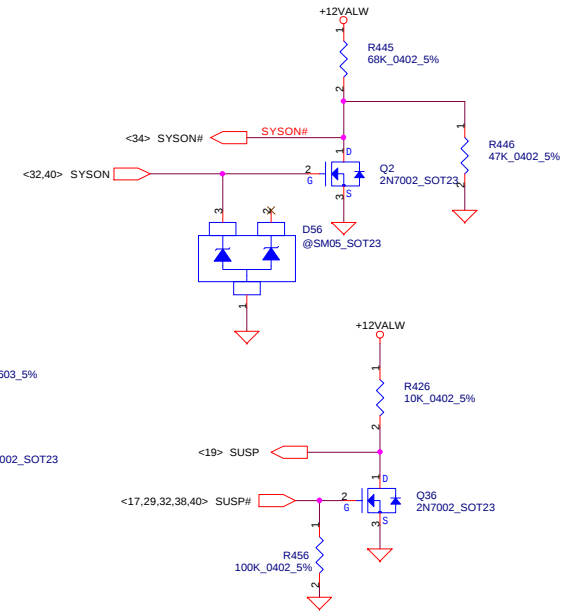
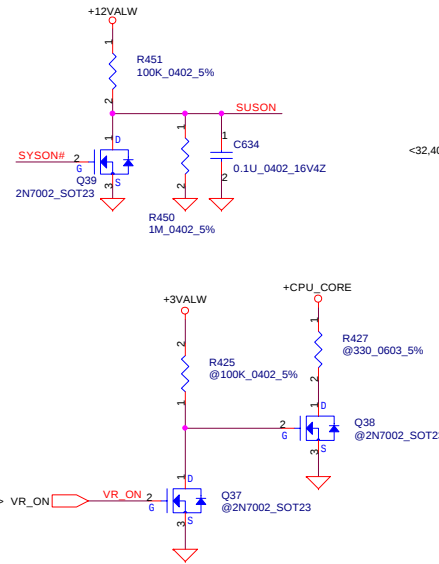
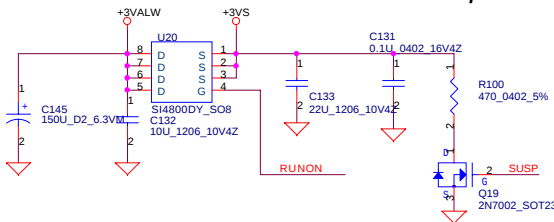
+3VALW to +3V Transfer



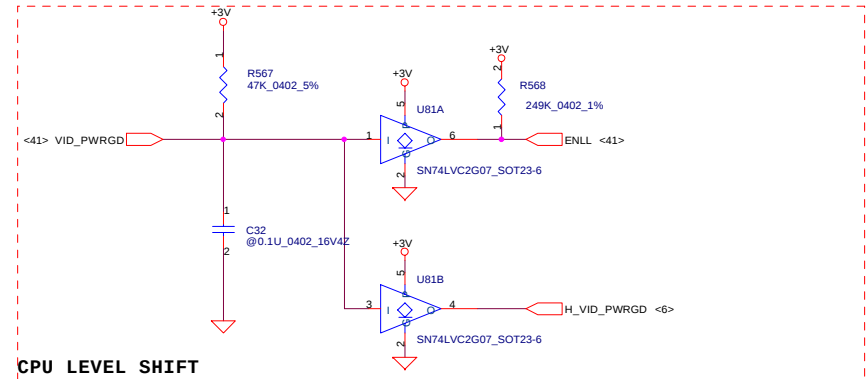
+5VALW to +5VS Transfer



+3VALW to +3VS Transfer



Debug PORT



CPU LEVEL SHIFT

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File: **DC/DC Circuit / Debug Port**

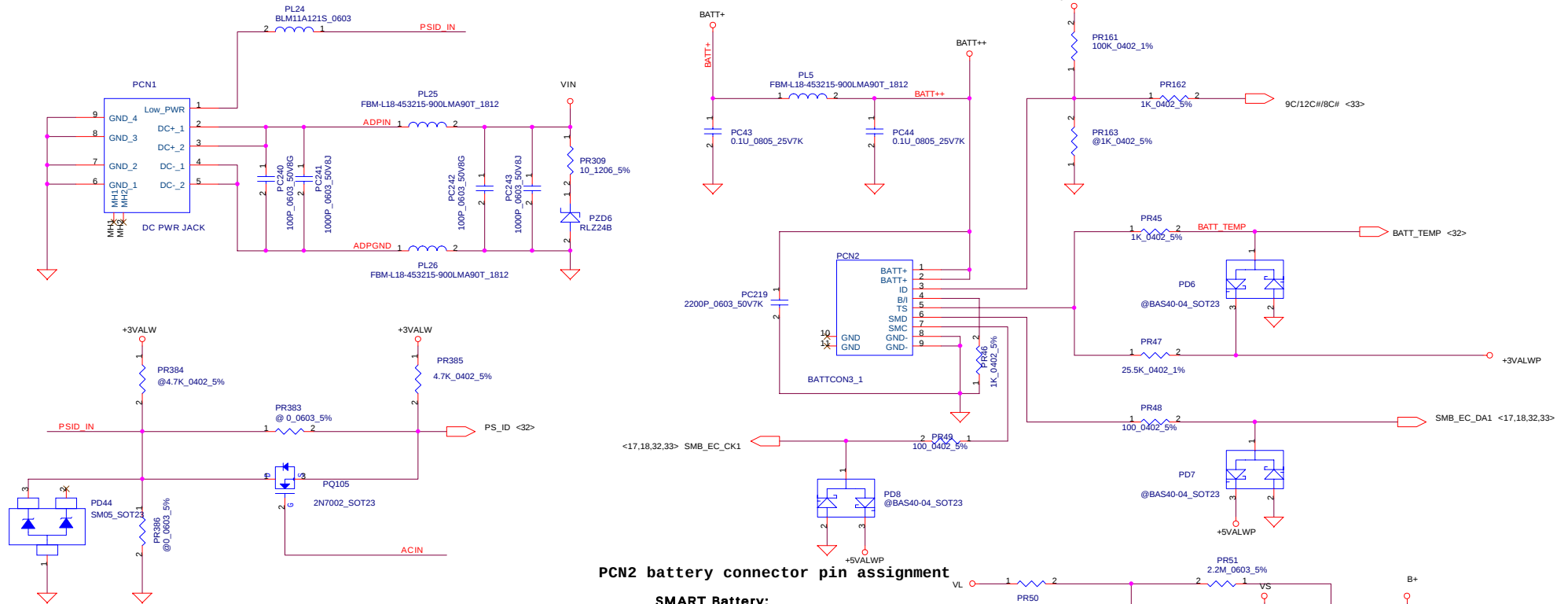
Size: **Document Number**
Ibiza LA-1684

Date: **Friday, January 09, 2004**

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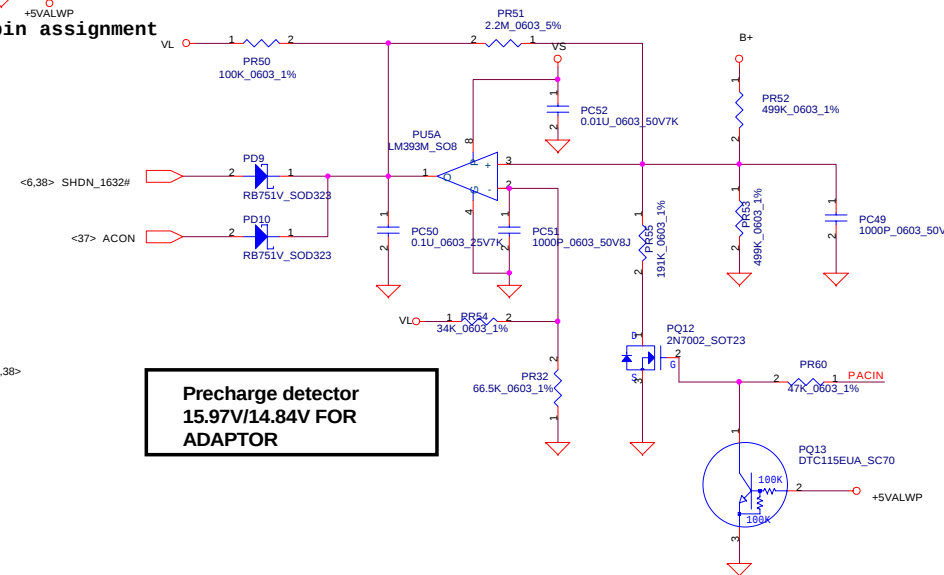
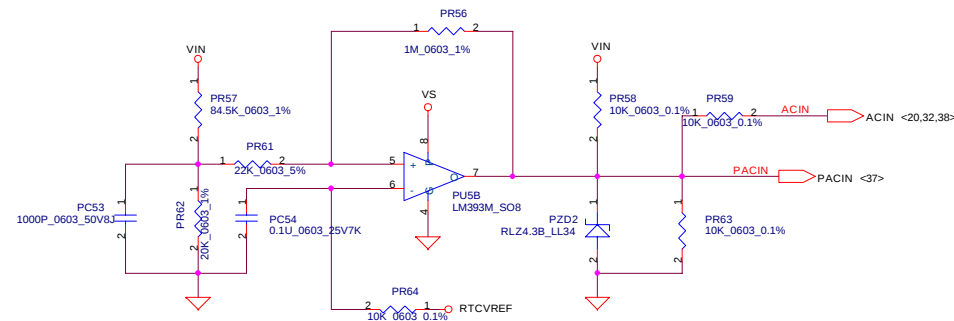


PCN2 battery connector pin assignment

SMART Battery:

- 1.BATT+
- 2.BATT-
- 3.9C/12C#/8C#
- 4.B/I
- 5.TS
- 6.SMB_EC_DA1
- 7.SMB_EC_CK1
- 8.GND
- 9.GND

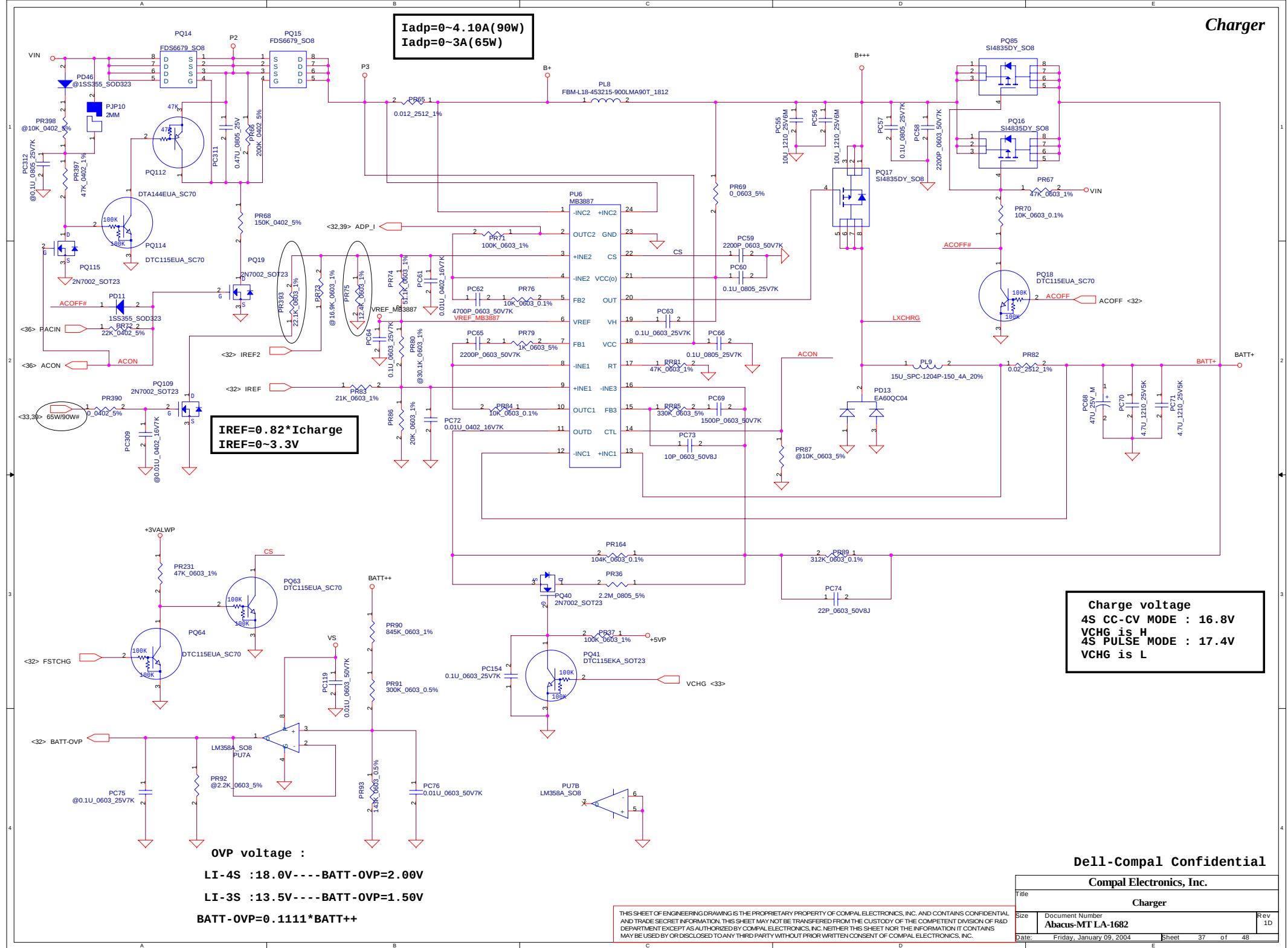
Vin Detector
17.90V/17.24V



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Compal Electronics, Inc.			
Detector			
Title	Document Number	Rev	1D
	Abacus-MT LA-1682		
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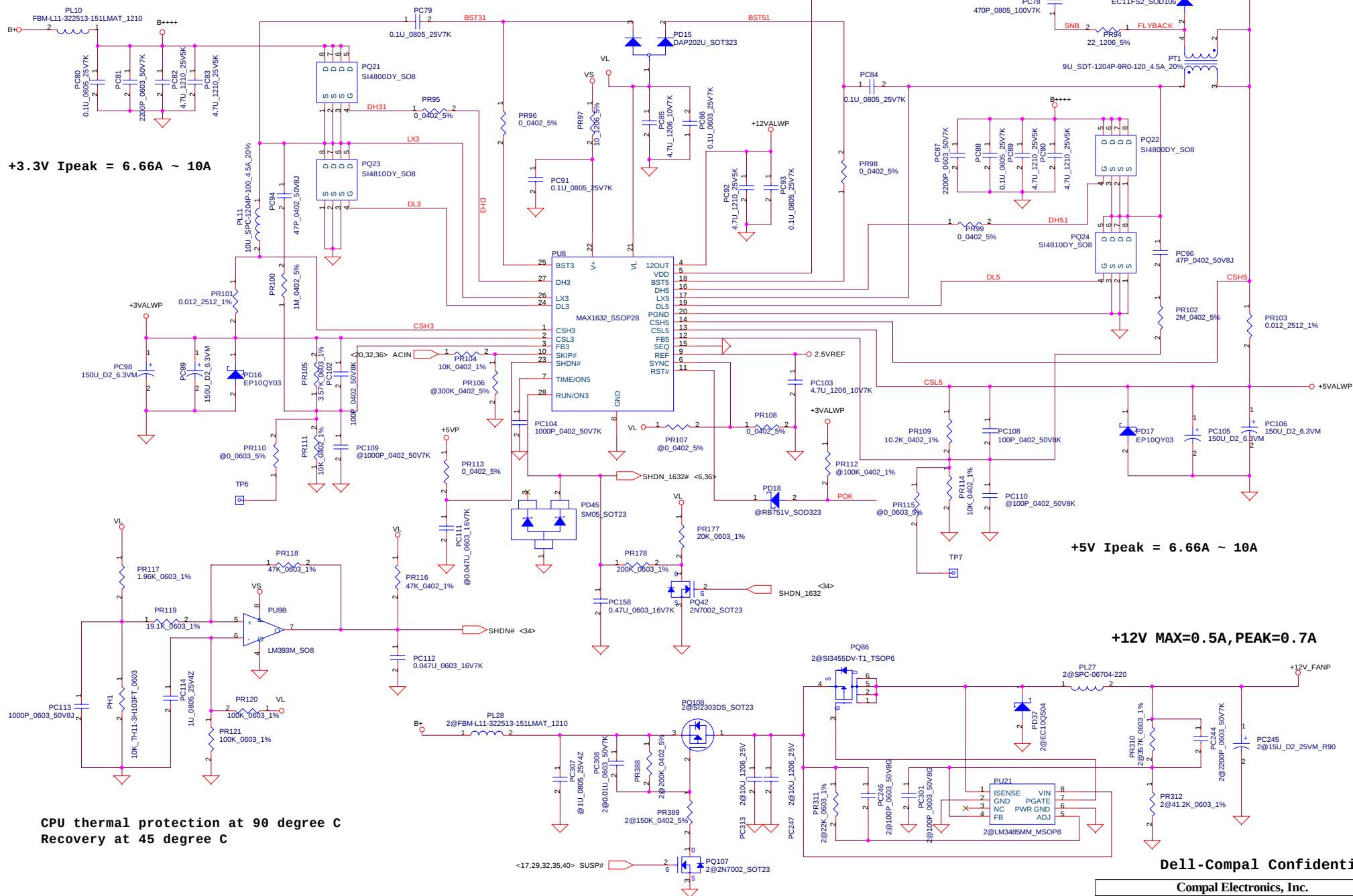


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Charger

Title			
Size	Document Number	Rev	
	Abacus-MT LA-1682	1D	
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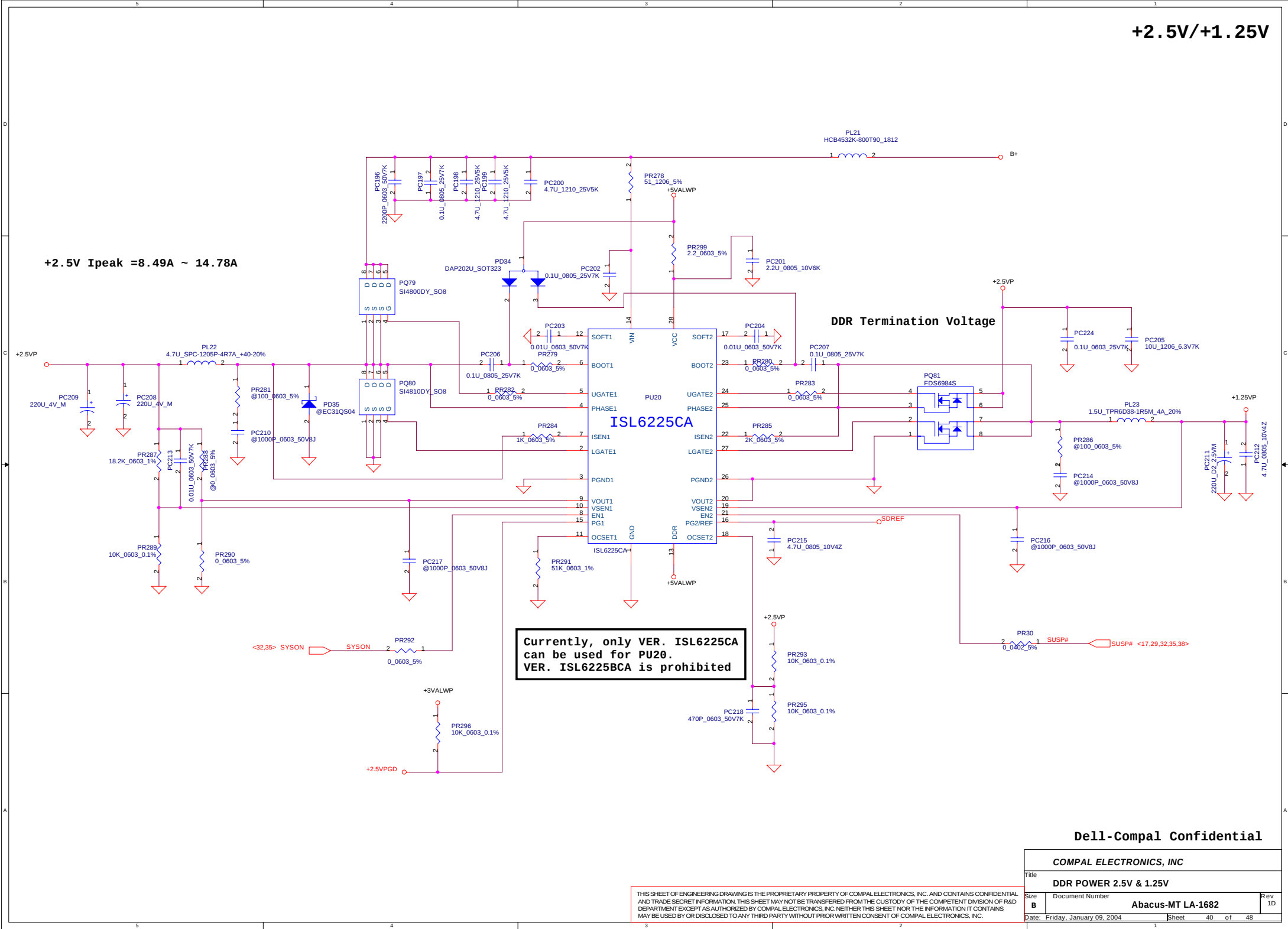
DDR POWER 2.5V & 1.25V

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Currently, only VER. ISL6225CA
can be used for PU20.
VER. ISL6225BCA is prohibited

DDR Termination Voltage



Rev
10

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