

assistenza compaq

Compal confidential

Schematics Document

ClawHammer AMD K8 with nVIDIA Chrush K8

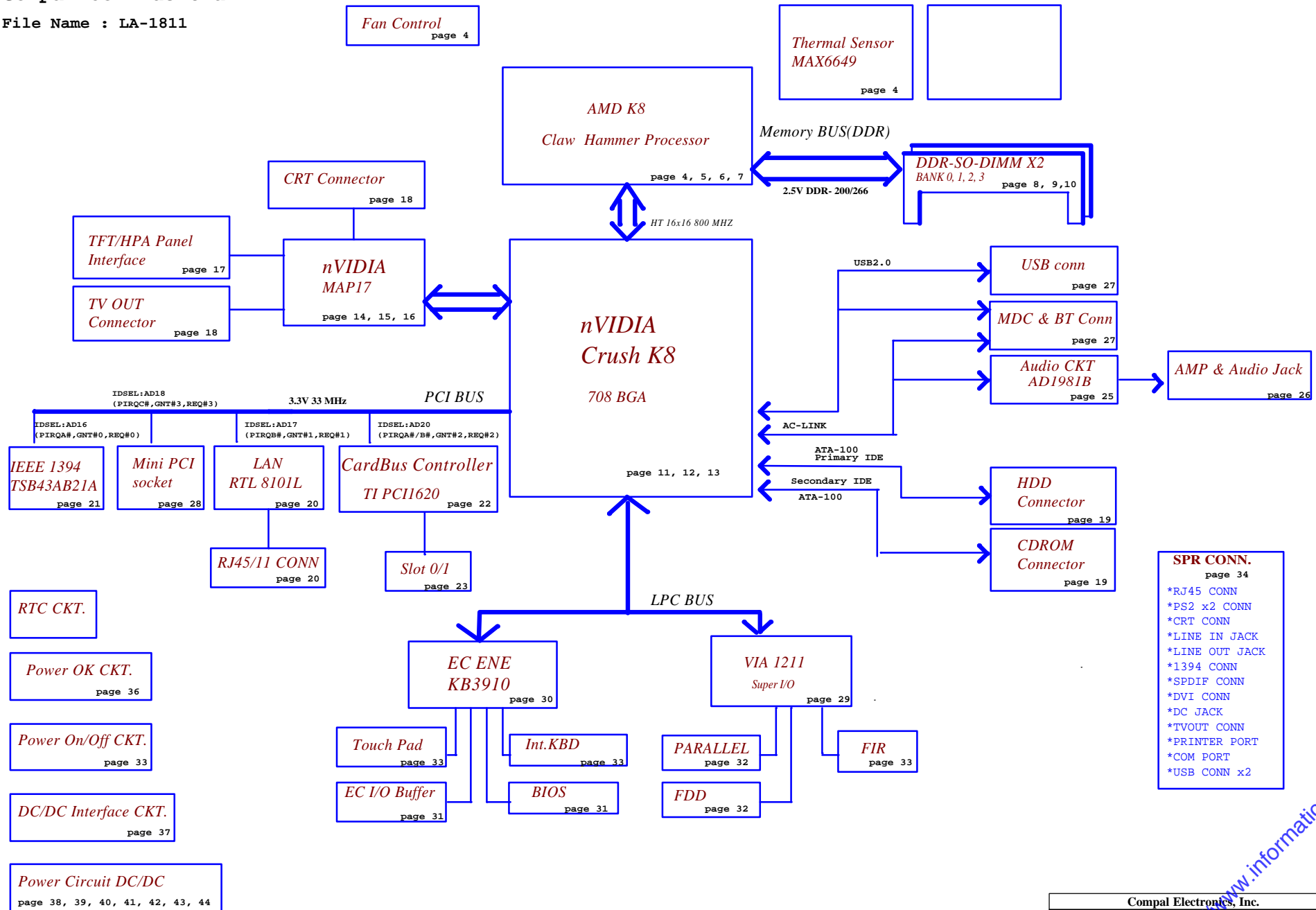
2003-10-15

REV:0.5

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.		
Title		
Cover Sheet		
Doc No	Document Number	Rev
	LA-1851	0.5
Date:	Thursday, October 16, 2003	Sheet 1 of 50

<http://www.informaticanapoli.it>



Compal Electronics, Inc.		
Title	Block Diagram	
Doc No	Document Number	Rev
	LA-1851	0.5
Date	Thursday, October 16, 2003	Sheet 2 of 50

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

<http://www.informaticanapoli.it>

Voltage Rails

power plane \ State	+1.2VALW +3VALW +5VALW 12VALW	+1.25V +2.5V +3V +5V	+1.2V_HT +1.2VS +1.5VS +2.5VS +3VS +5VS
S0	O	O	O
S1	O	O	O
S3	O	O	X
S5 S4/AC	O	X	X
S5 S4/AC don't exist	X	X	X

O MEANS ON
X MEANS OFF

PCI Devices

DEVICE	PCI Device ID	IDSEL #	REQ/GNT #	PIRQ
INTERNAL				
USB 2.0	2	AD13	N/A	G
AC97 MODEM	6	AD17	N/A	M
AC97	6	AD17	N/A	L
ATA 100	8	AD20	N/A	
ETHERNET	5	AD16	N/A	K
LPC I/F	1	AD12	N/A	
SMBUS	1	AD12	N/A	F
EXTERNAL				
VGA	0	AD16	N/A	E
1394	0	AD16	0	A
LAN	1	AD17	1	B
CARD BUS	4	AD20	2	A, B
Wireless LAN	2	AD18	3	C
Mini-PCI (no use)	3	AD19	4	D

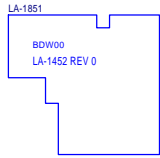
Compal Electronics, Inc.

Notes List

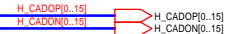
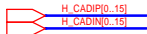
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Document Number	LA-1851	Rev	0.5
Date:	Thursday, October 18, 2003	Sheet	3 of 50

http://www.informaticanapoli.it



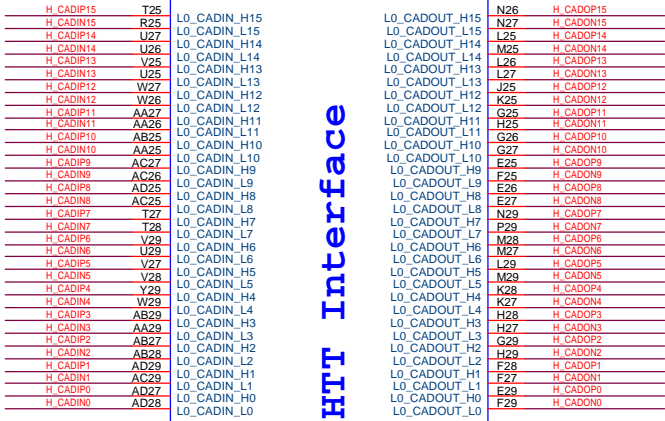
<11> H_CADIP[0..15]
<11> H_CADIN[0..15]



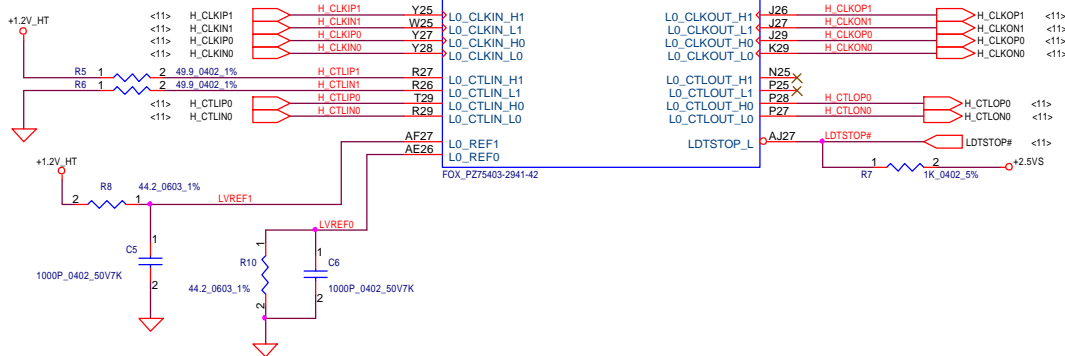
<11>

U1A

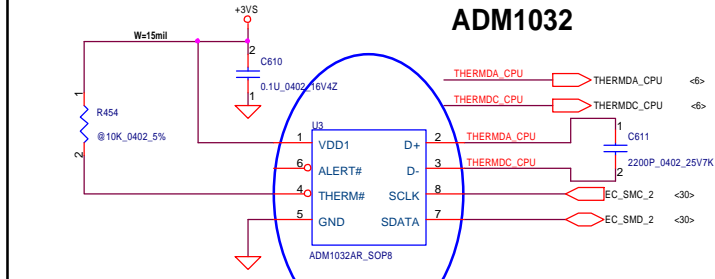
Claw Hammer-DTR



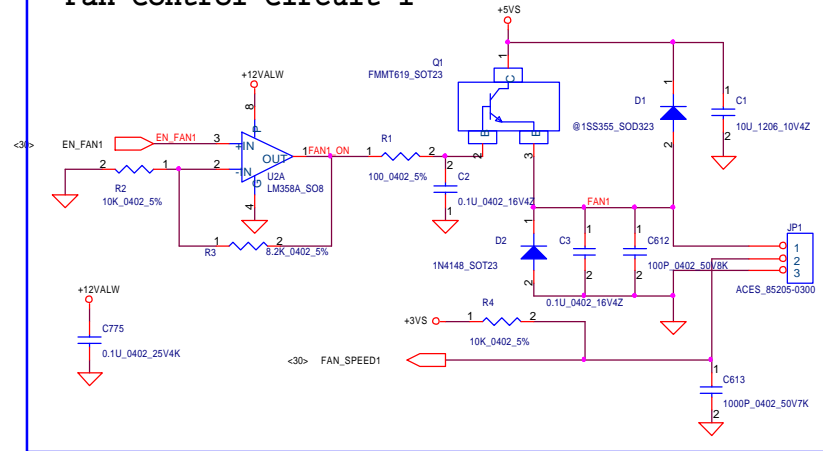
HTT Interface



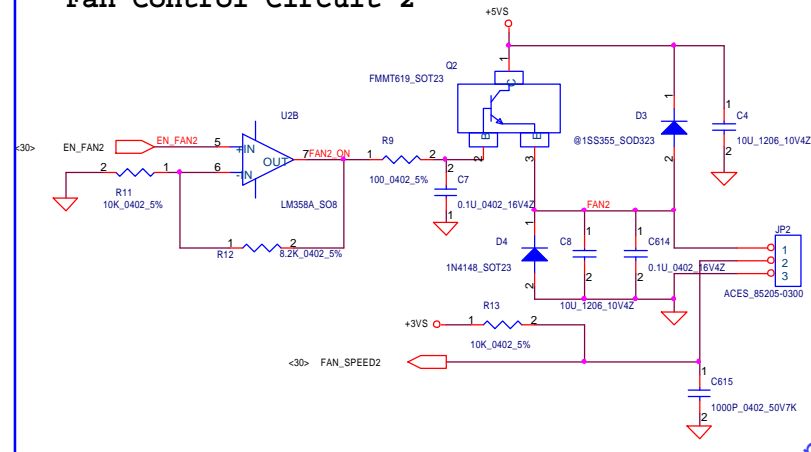
Thermal Sensor ADM1032



Fan Control Circuit 1



Fan Control Circuit 2

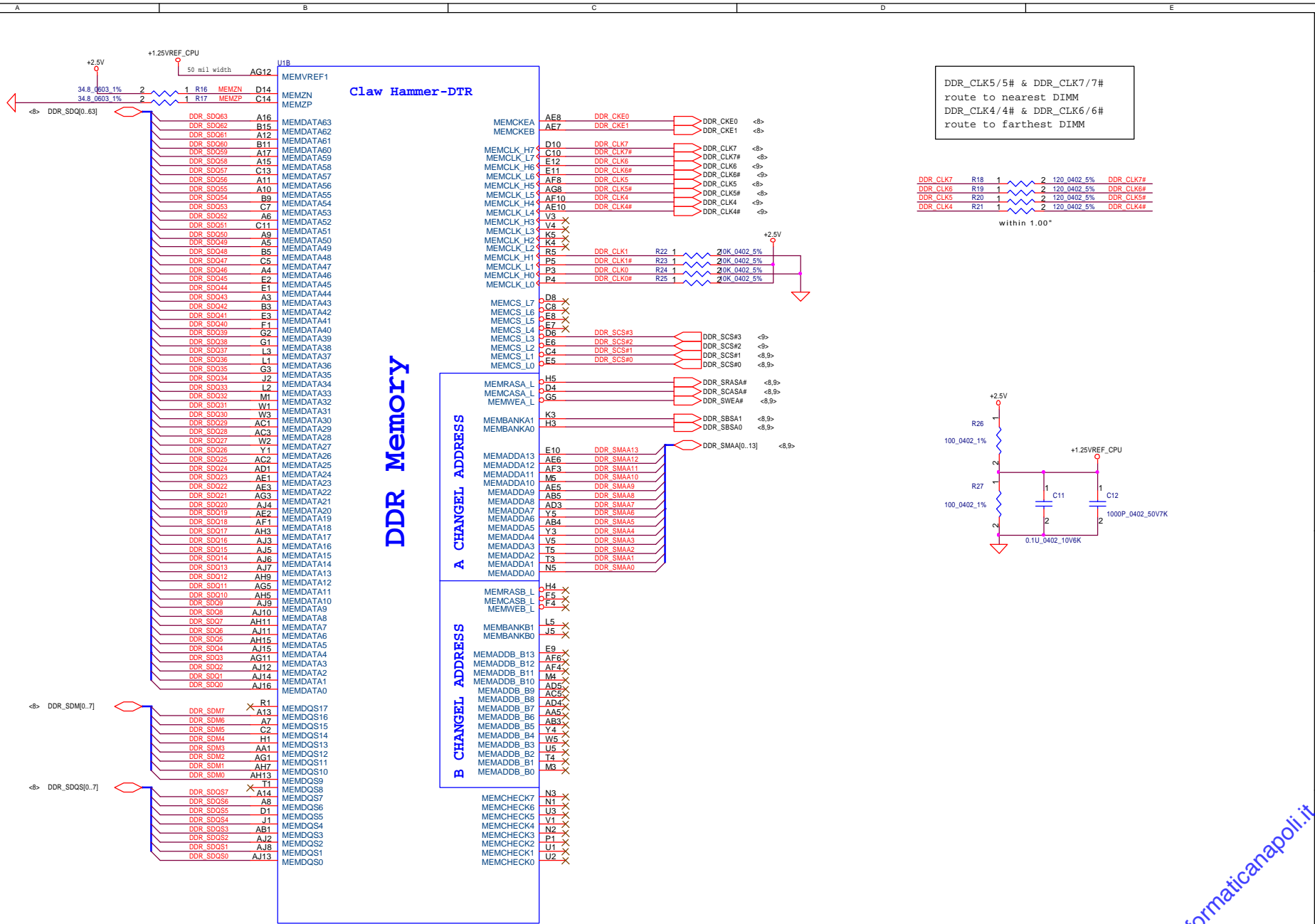


THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.

Claw Hammer CPU (Host Bus)

File	Document Number	Rev
Size	LA-1851	0.5
Custom		
Date	Thursday, October 16, 2003	Sheet 4 of 50



DDR_CLK5/5# & DDR_CLK7/7#
route to nearest DIMM
DDR_CLK4/4# & DDR_CLK6/6#
route to farthest DIMM

DDR_CLK7 R18 1 2 120 0402 5% DDR_CLK7#
DDR_CLK6 R19 1 2 120 0402 5% DDR_CLK6#
DDR_CLK5 R20 1 2 120 0402 5% DDR_CLK5#
DDR_CLK4 R21 1 2 120 0402 5% DDR_CLK4#

Claw Hammer-DTR

DDR Memory

A CHANGE ADDRESS

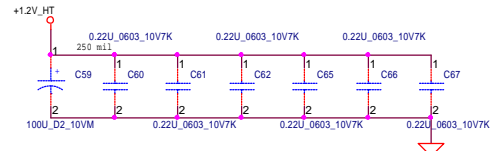
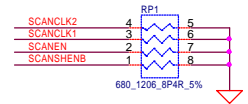
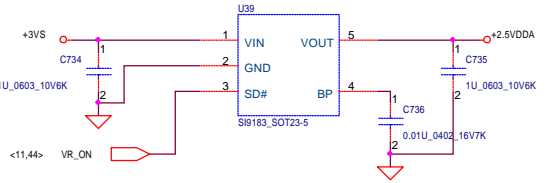
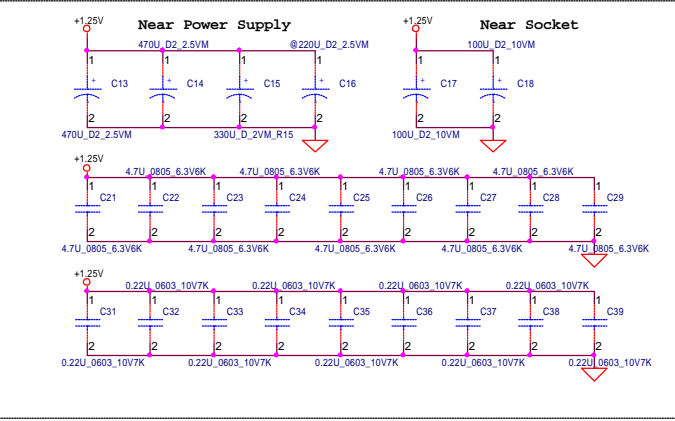
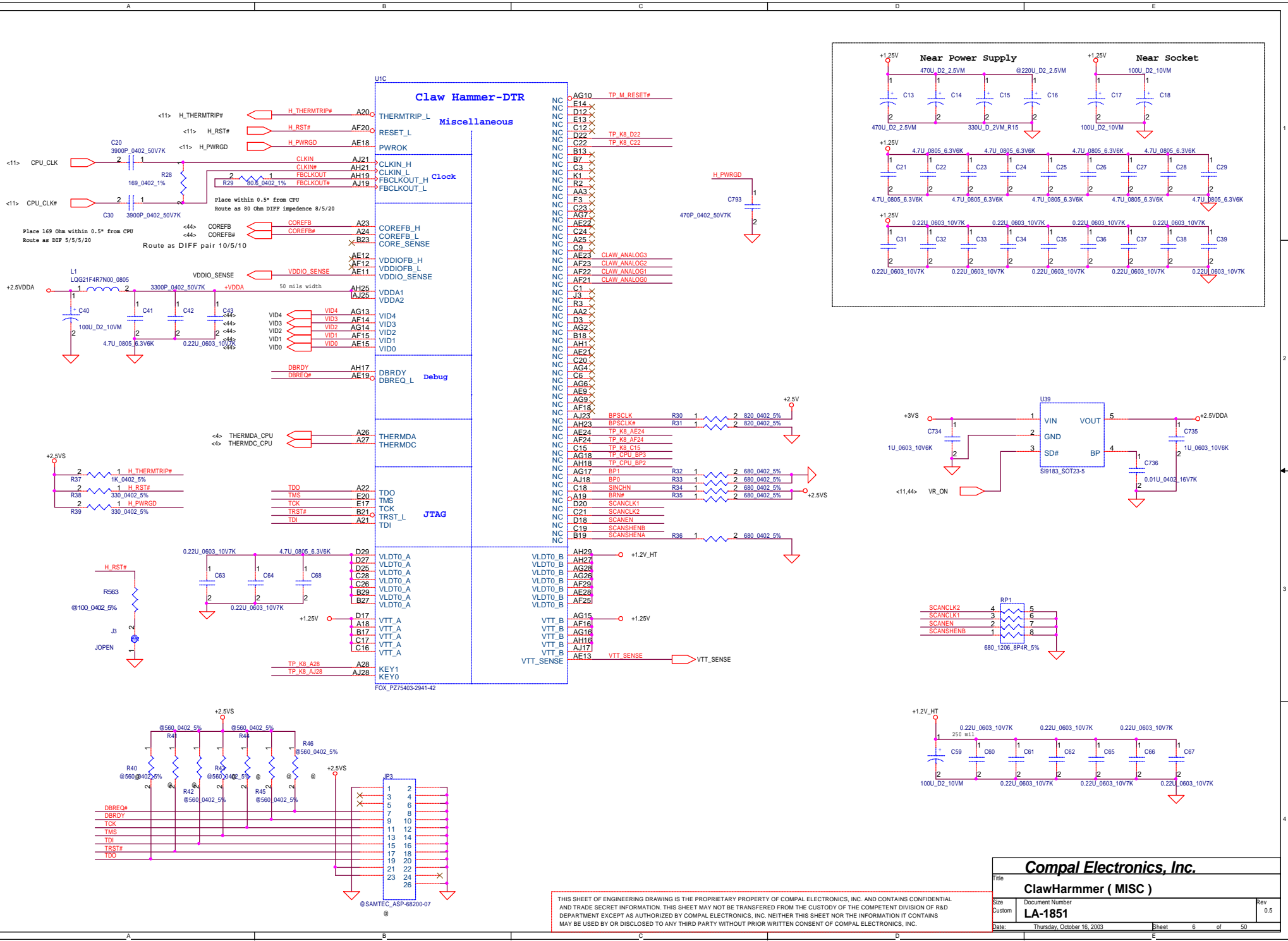
B CHANGE ADDRESS

FOX_P275403-2941-42

Compal Electronics, Inc.		
Claw Hammer (MEMORY BUS)		
File	Document Number	Rev
	LA-1851	0.5
Size	Date	
Custom	Thursday, October 16, 2003	
	Sheet	5 of 50

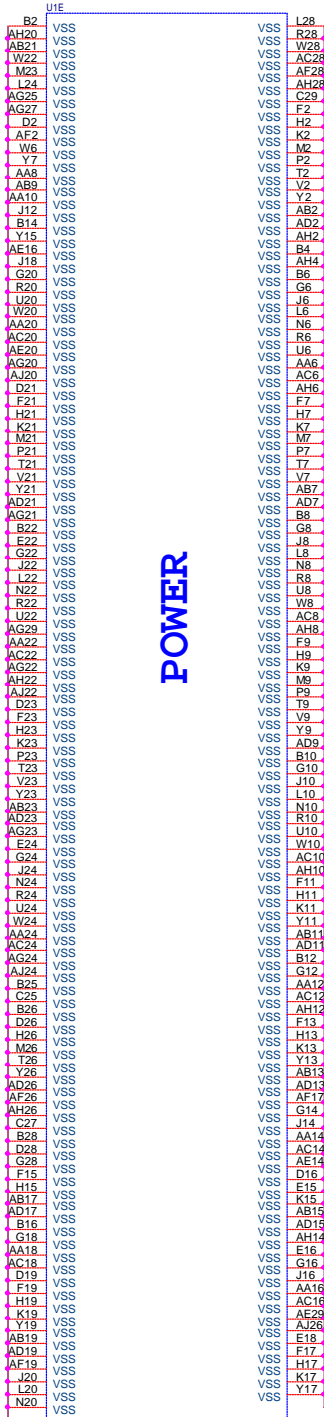
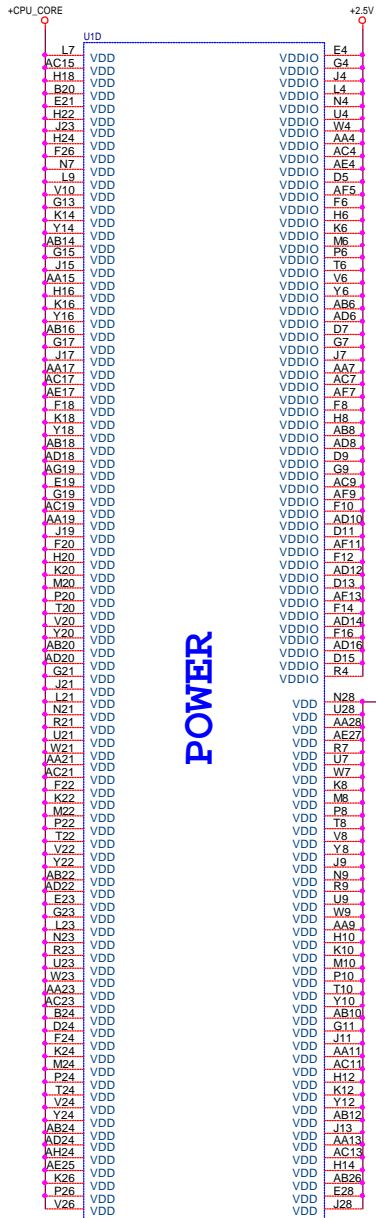
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

<http://www.informaticanapoli.it>

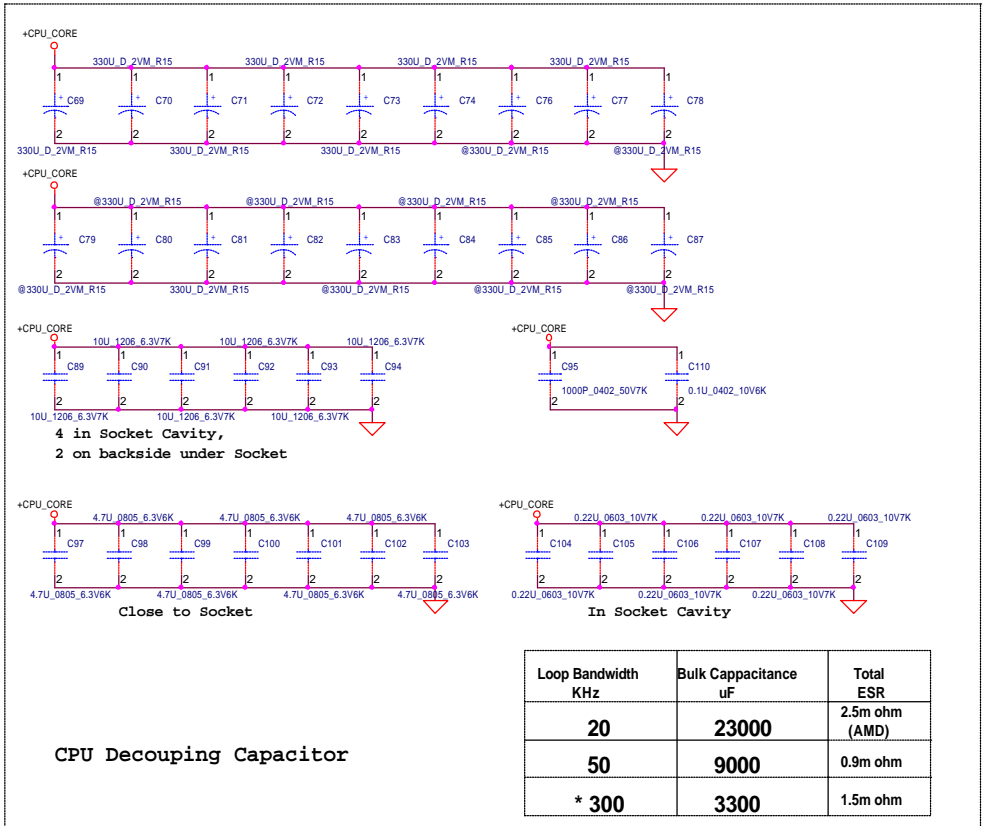


THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

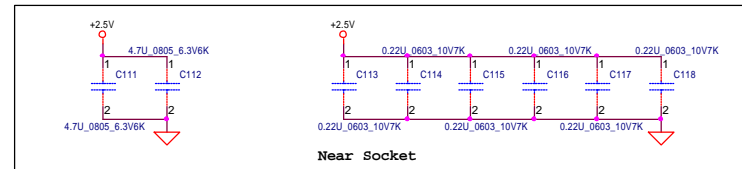
Compal Electronics, Inc.		
ClawHammer (MISC)		
File	Document Number	Rev
	LA-1851	0.5
Size		
Custom		
Date:	Thursday, October 16, 2003	Sheet 6 of 50



POWER



CPU Decoupling Capacitor



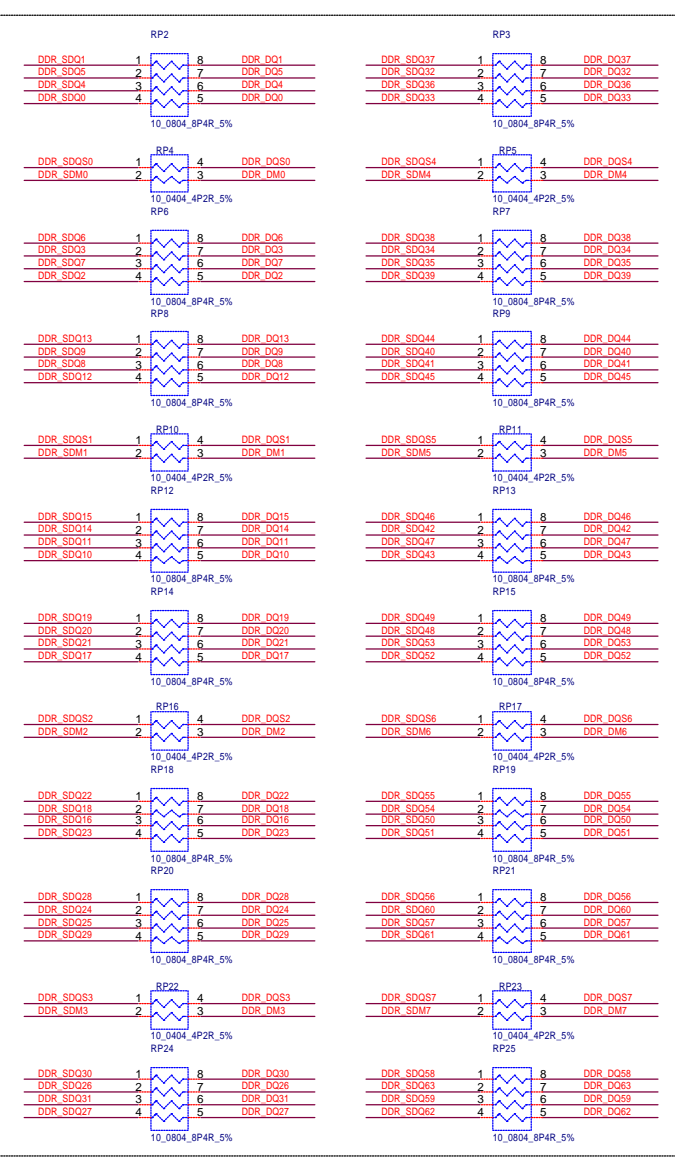
Near Socket

FOX_PZ75403-2941-42

FOX_PZ75403-2941-42

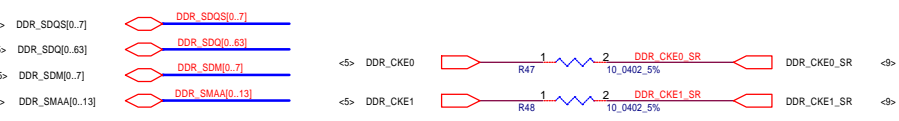
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.		
Claw Hammer (Power & Ground)		
File		
Size	Document Number	Rev
Custom	LA-1851	0.5
Date:	Thursday, October 16, 2003	Sheet 7 of 50



Note:
DDR_SMAA13 Recommend for AMD

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



Compal Electronics, Inc.

DDR-SODIMM SLOT0

File: _____

Size: _____ Document Number: _____ Rev: 0.5

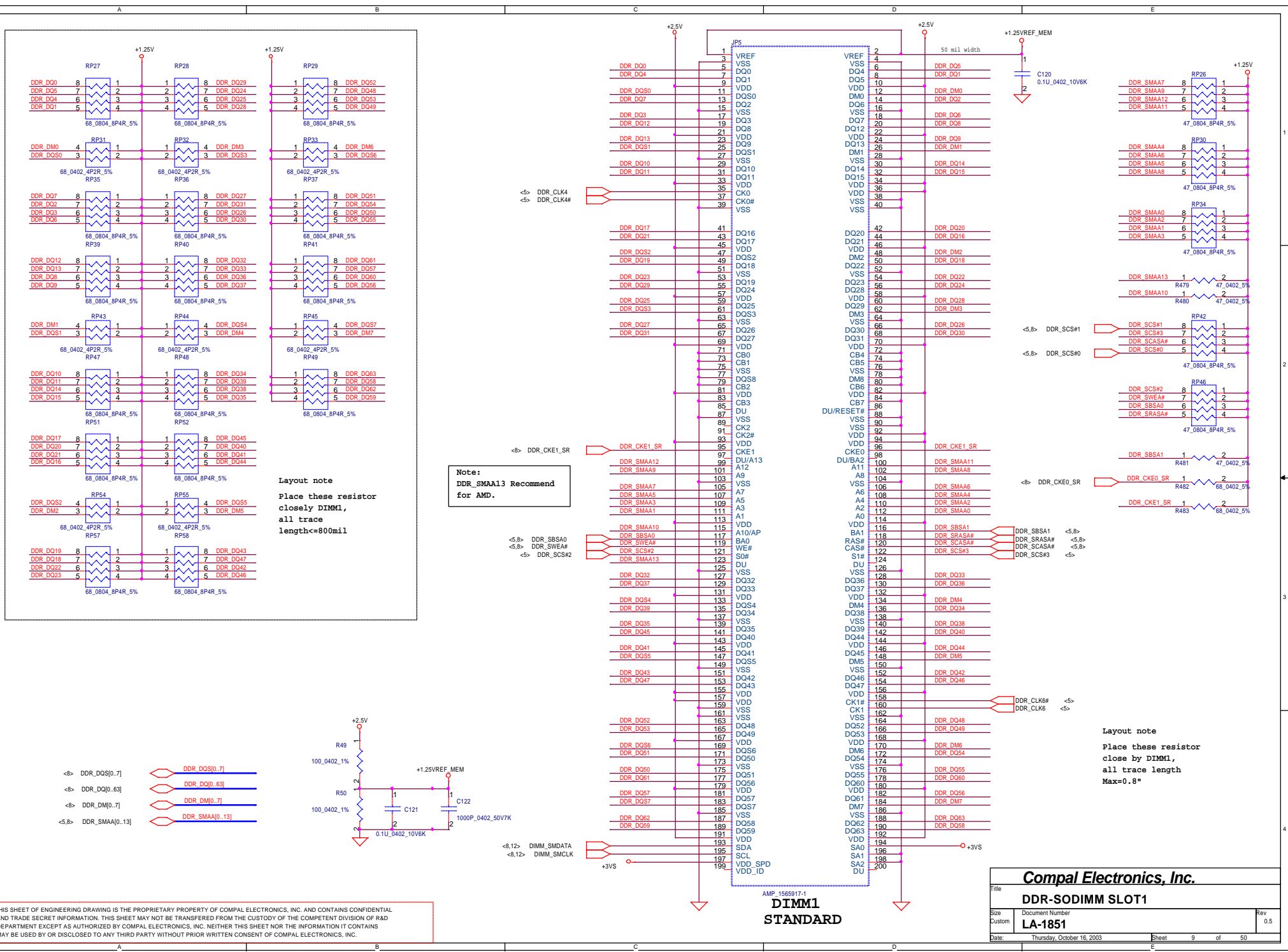
Custom: _____

LA-1851

Date: Thursday, October 16, 2003 Sheet 8 of 50

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

SO-DIMM0
REVERSE



Layout note
Place these resistor
closely DIMM1,
all trace
length<=800mil

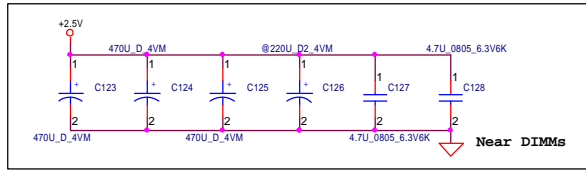
Note:
DDR SMAA13 Recommend
for AMD.

Layout note
Place these resistor
close by DIMM1,
all trace length
Max=0.8"

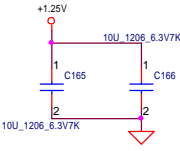
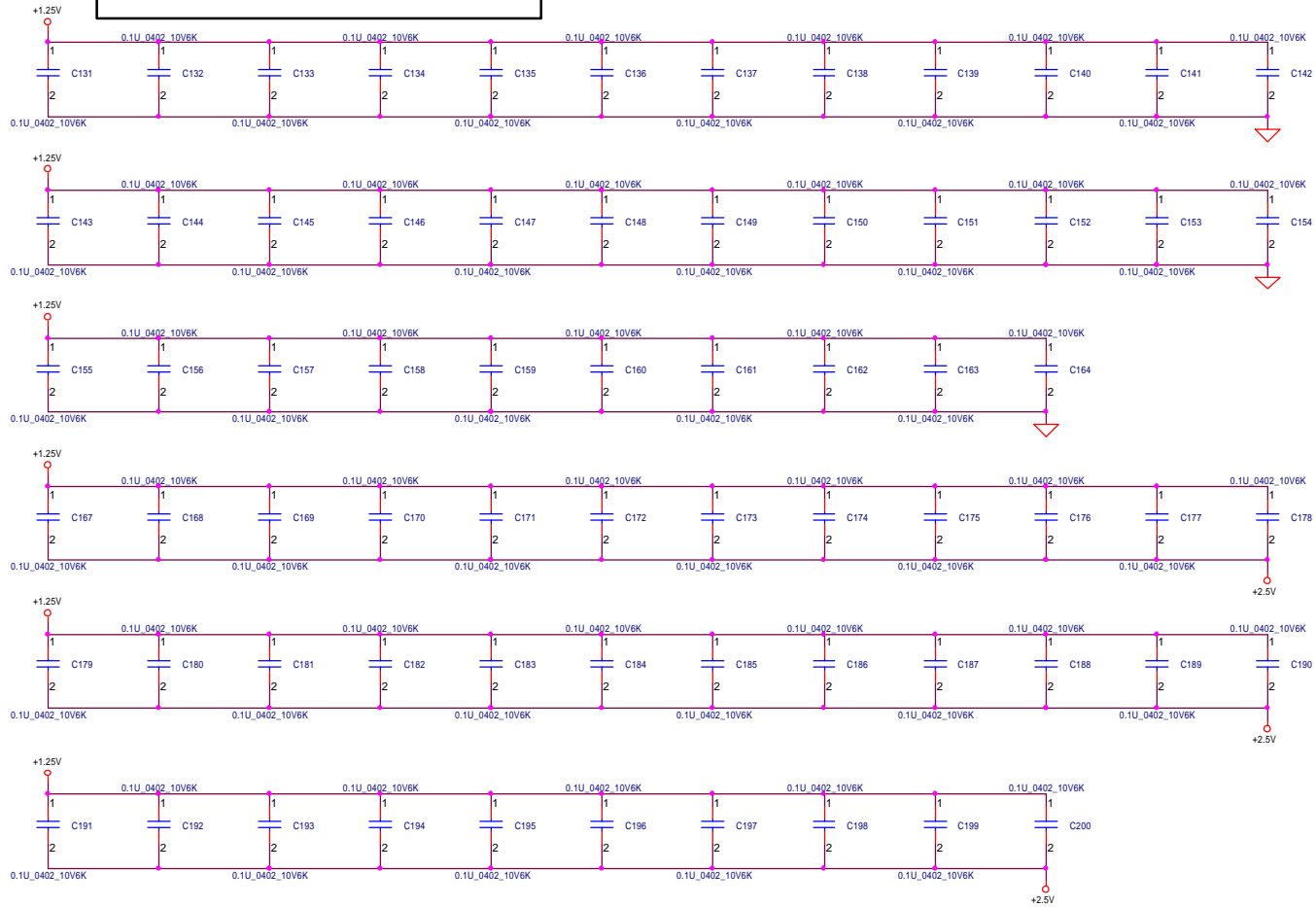
Compal Electronics, Inc.		
DDR-SODIMM SLOT1		
File	Document Number	Rev
Size	LA-1851	0.5
Custom		
Date:	Thursday, October 16, 2003	Sheet 9 of 50

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

AMP 1565917-1
**DIMM1
STANDARD**

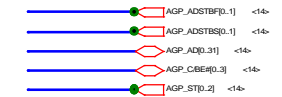


Layout note :
Place one cap close to every 2 pull up resistors termination to +1.25VS



THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.		
Title DDR SODIMM Decoupling		
Size Custom	Document Number LA-1851	Rev 0.5
Date: Thursday, October 16, 2003	Sheet 10	of 50

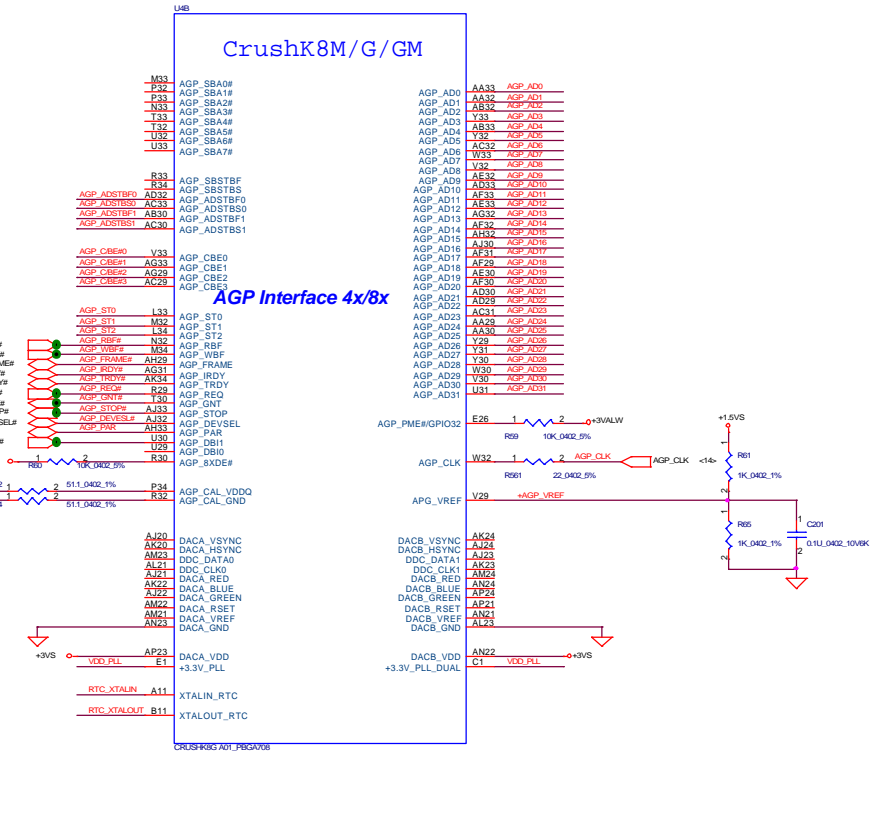
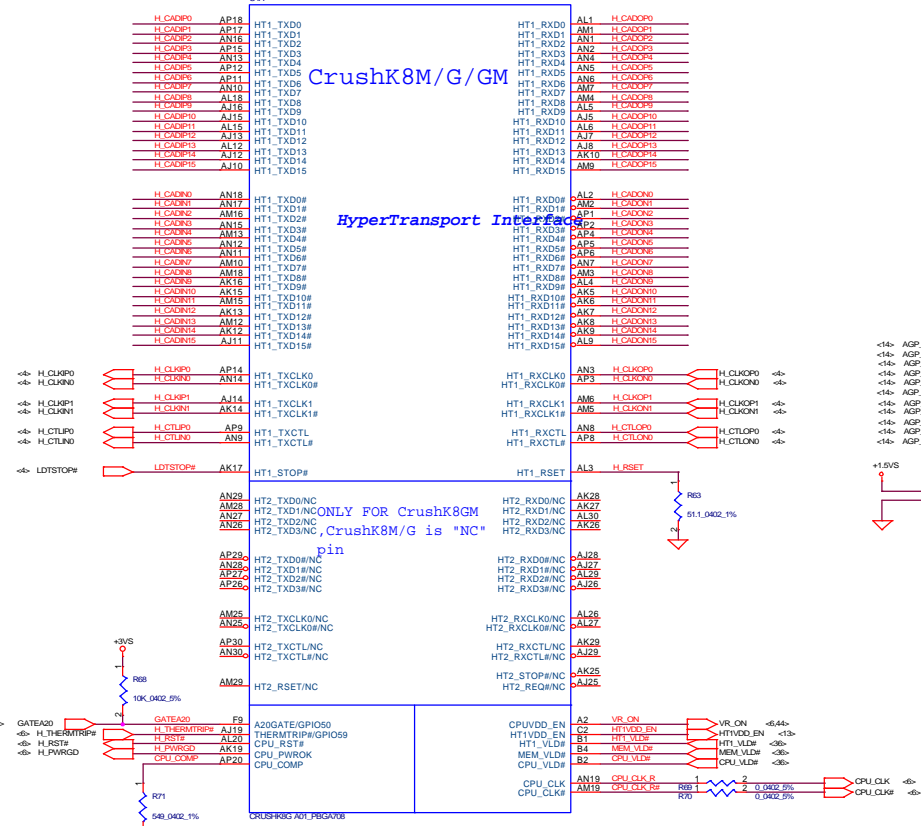


CrushK8M/G/GM

HyperTransport Interfacs

CrushK8M/G/GM

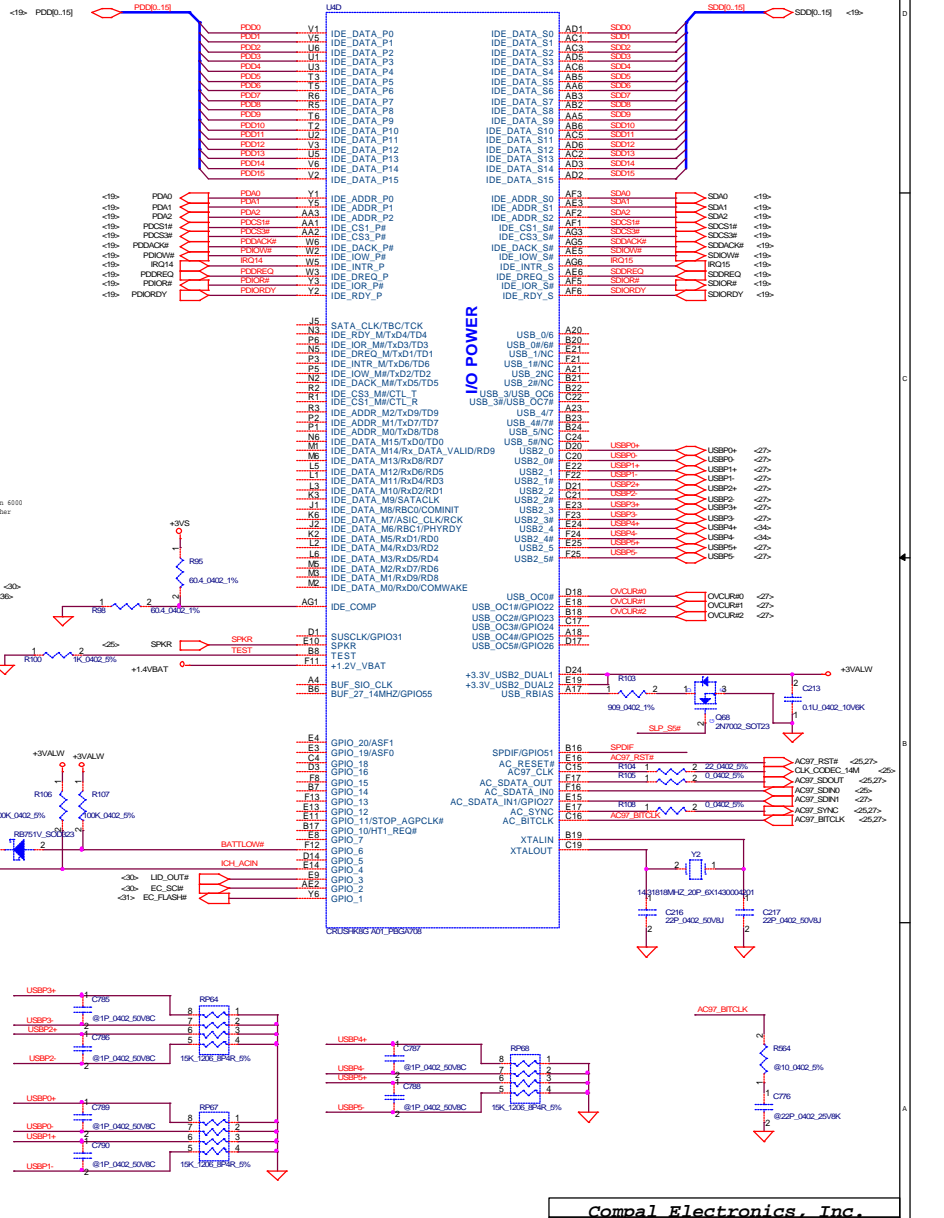
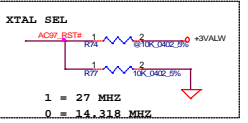
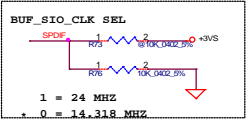
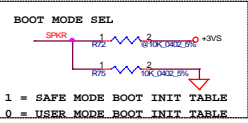
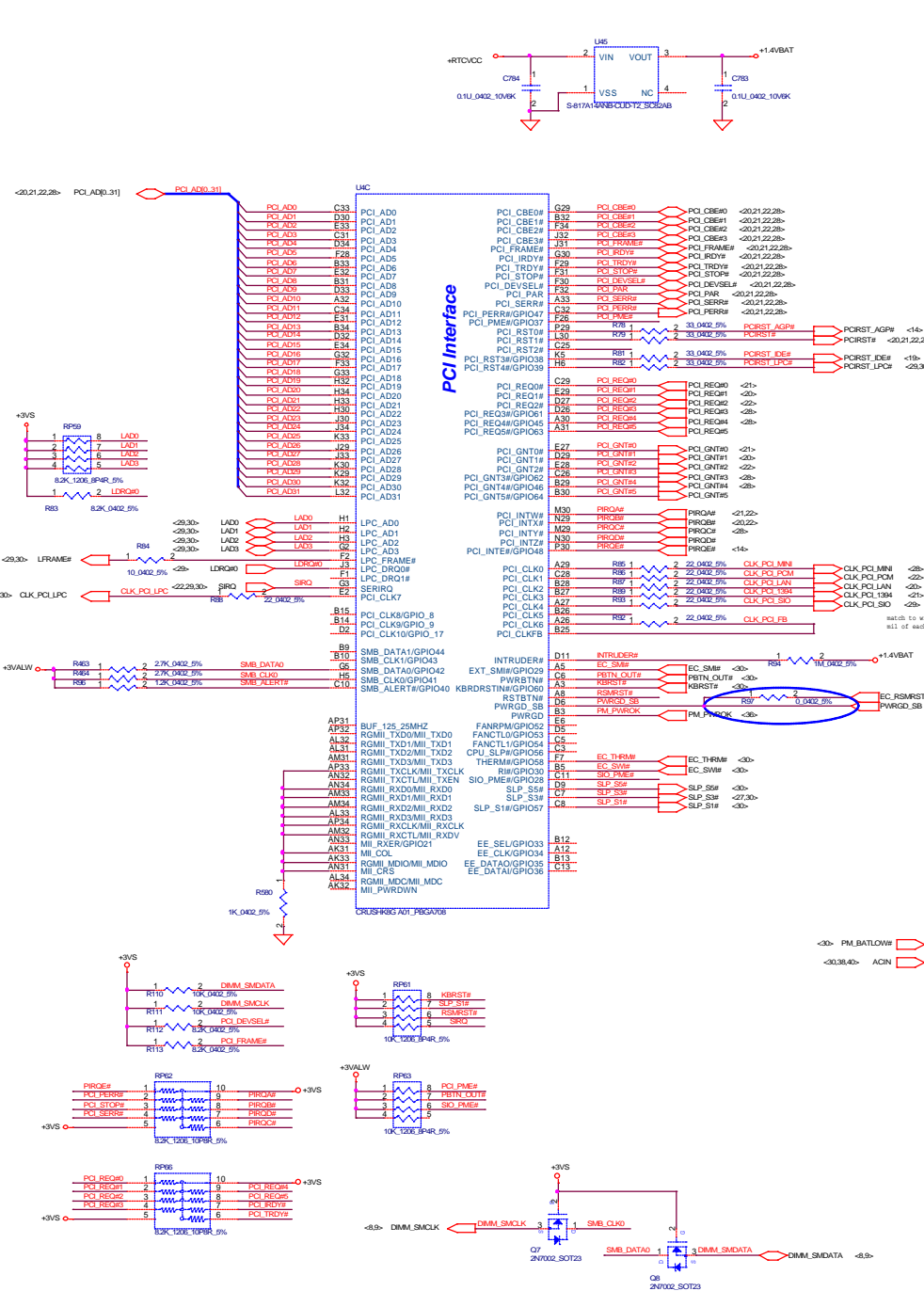
AGP Interface 4x/8x

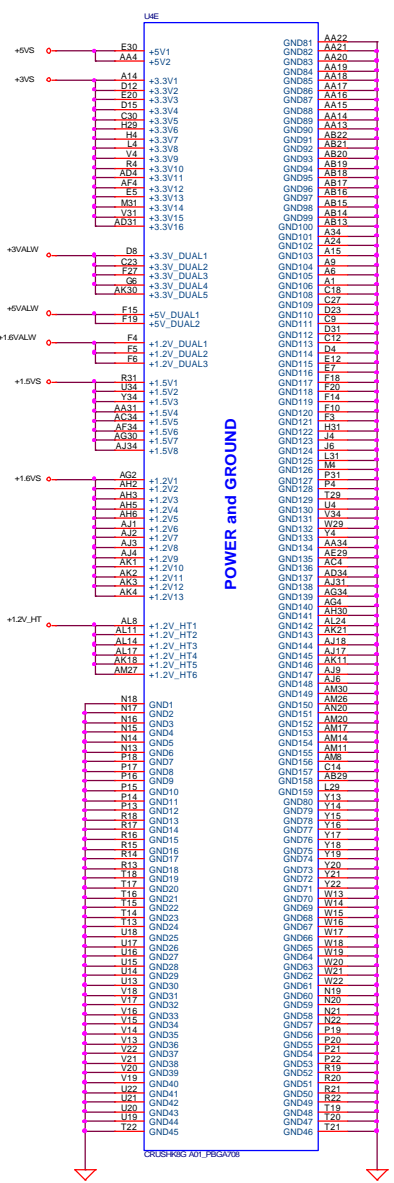


Compal Electronics, Inc.

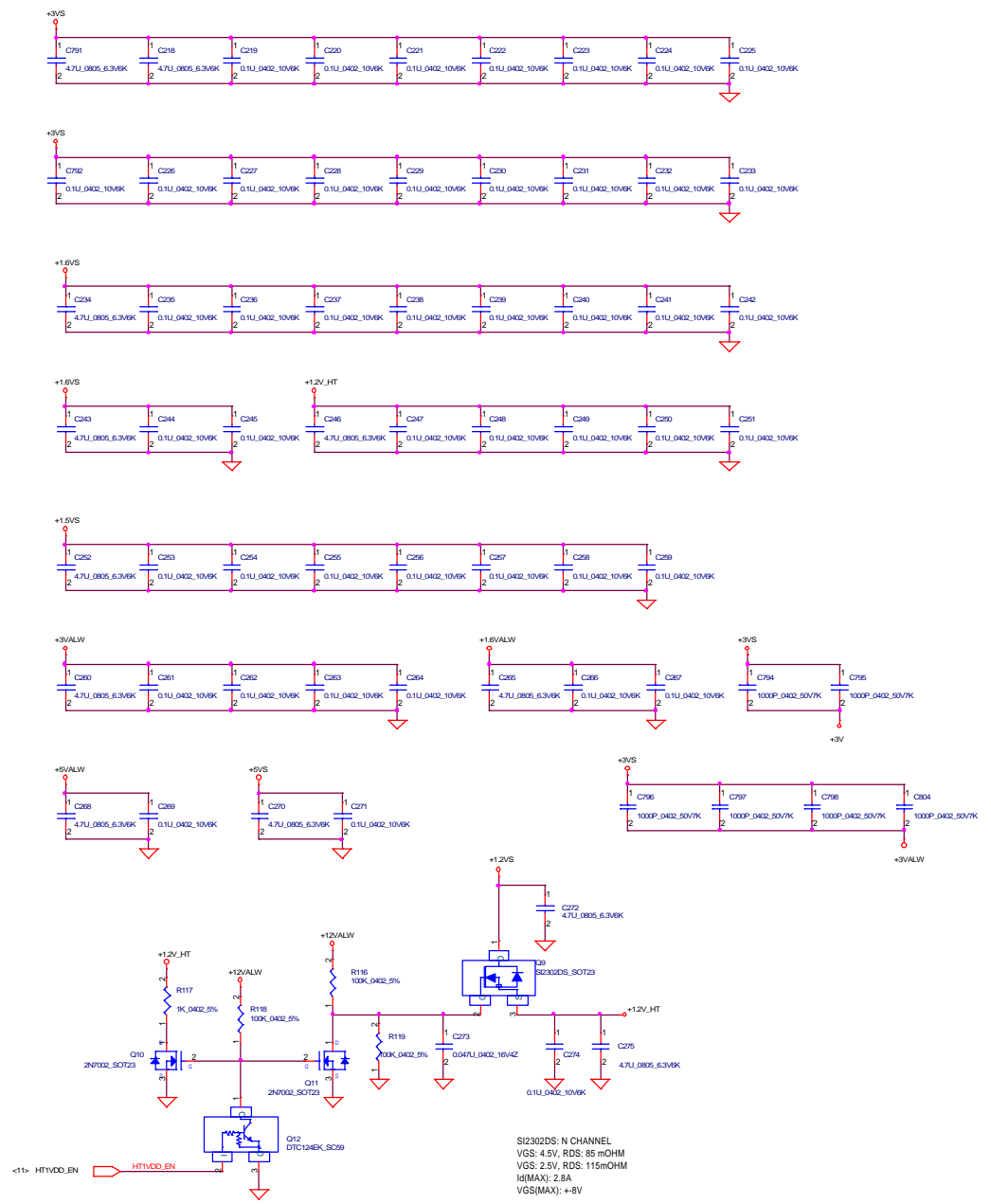
nVIDIA CrushK8 (Host & AGP Bus)

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.





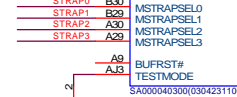
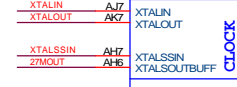
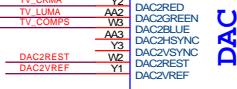
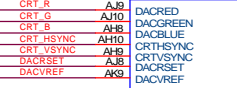
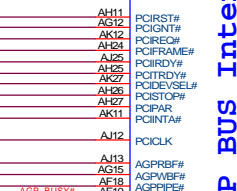
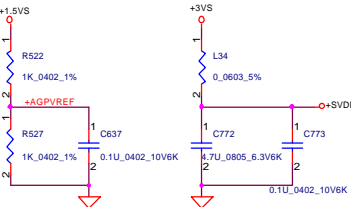
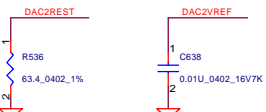
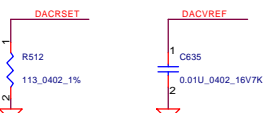
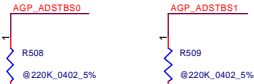
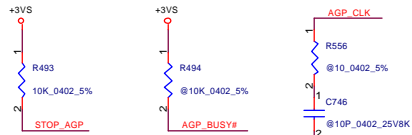
POWER and GROUND



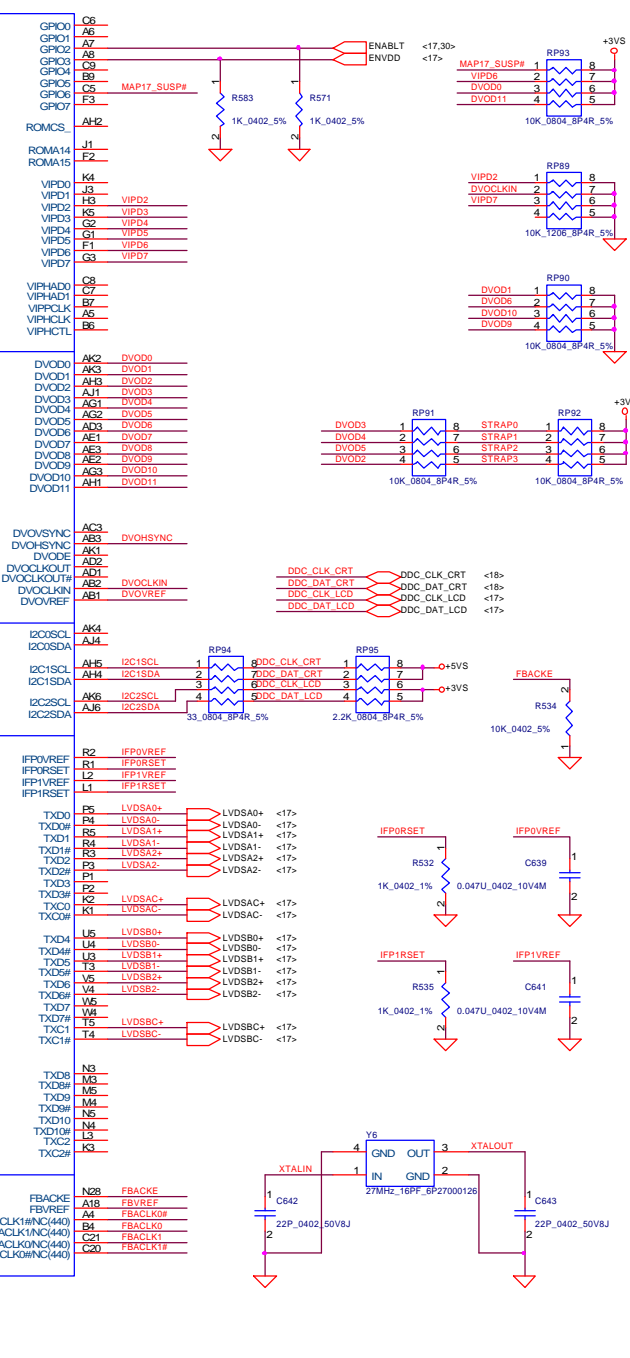
SI2302DS: N CHANNEL
 VGS: 4.5V, RDS: 85 mOHM
 VGS: 2.5V, RDS: 115mOHM
 I_D(MAX): 2.8A
 VGS(MAX): +8V

Compal Electronics, Inc.
 nVIDIA CrushK8 (Power & Ground)
 Document Number: LA-1851
 Date: Thursday, October 16, 2008
 Sheet: 13 of 30

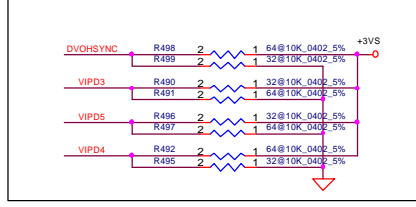
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.



GPIO/VIP Interface
DVO Interface
PCI/AGP BUS Interface
I2C
LVDS/TMDS
DAC
CLK

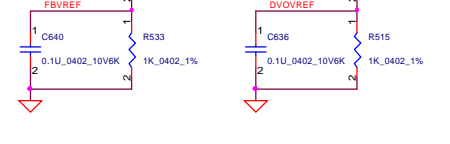
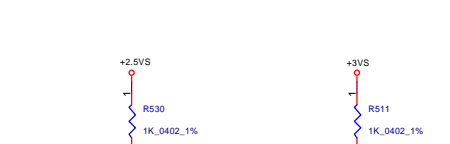
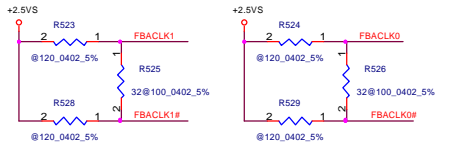
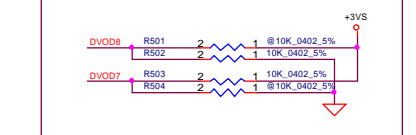


DVOHSYNC	VIPD3	VIPD5	VIPD4	DEVICE
1	1	0	1	MAP17-116 (16MB)
0	1	1	0	* MAP17-232 (32MB)
1	0	0	1	MAP17-464 (64MB)



CRYSTAL

DVOD8	DVOD7	TVMODE
0	0	SECAM
0	1	* NTSC
1	0	PAL
1	1	VGA

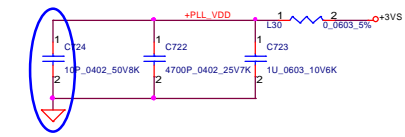
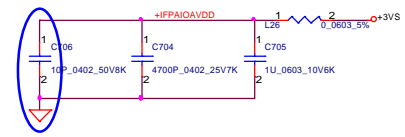
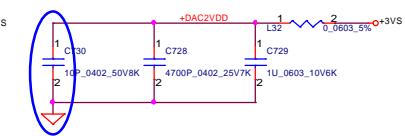
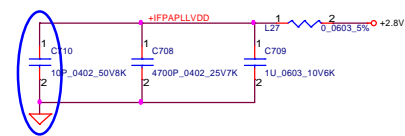
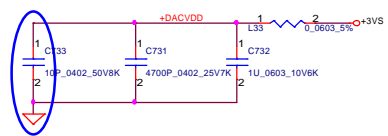
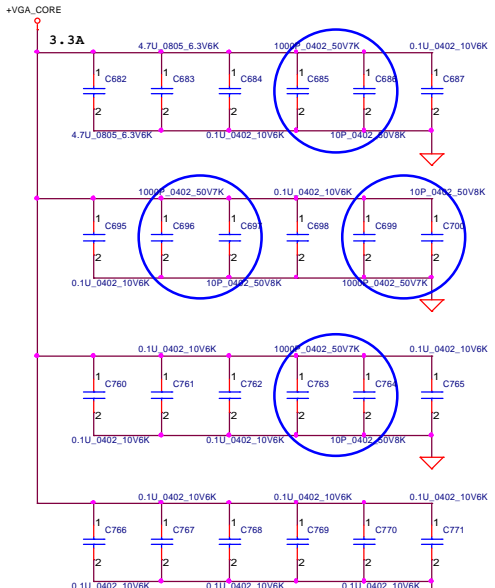
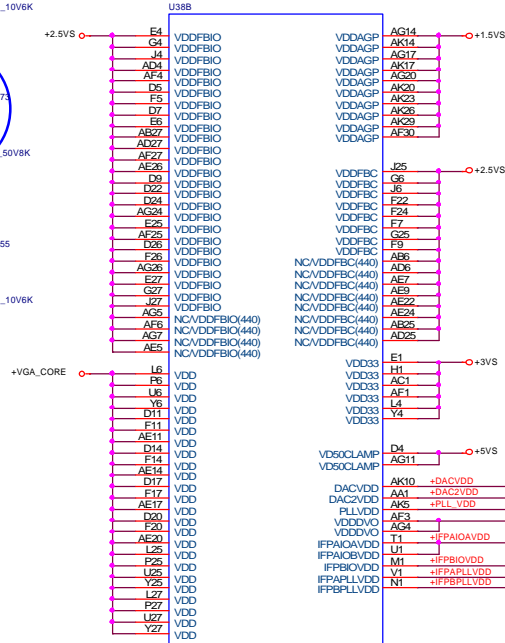
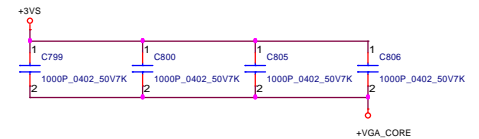
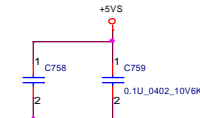
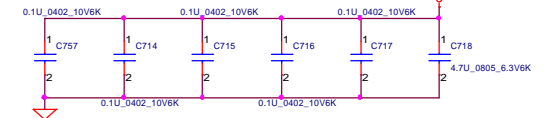
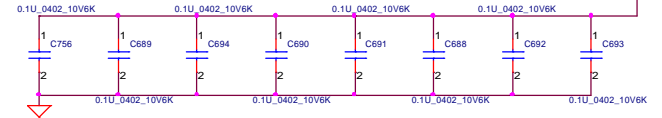
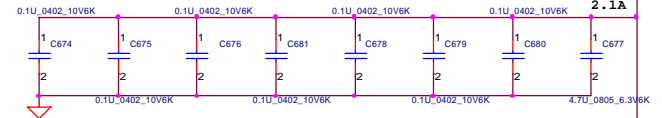
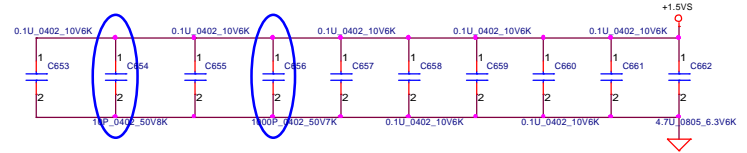
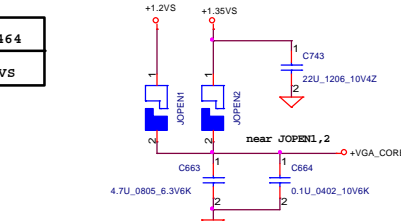
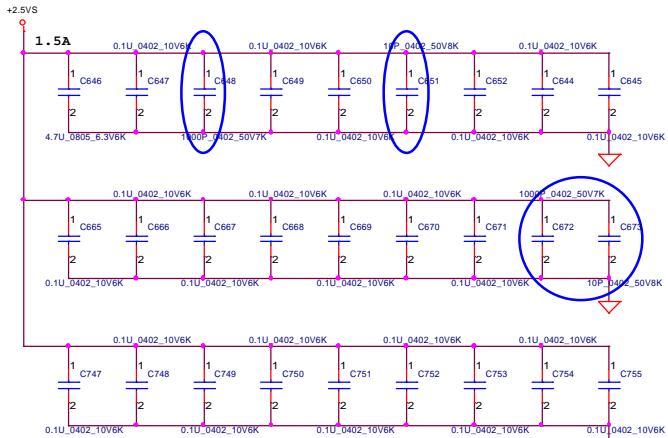


SST Ratio selection table for W180

Modulation setting	SST Ratio
0	1.25%
1	3.75%

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

	MAP17-116/232	MAP17-464
+VGA_CORE	* +1.2VS	+1.35VS



Compal Electronics, Inc.

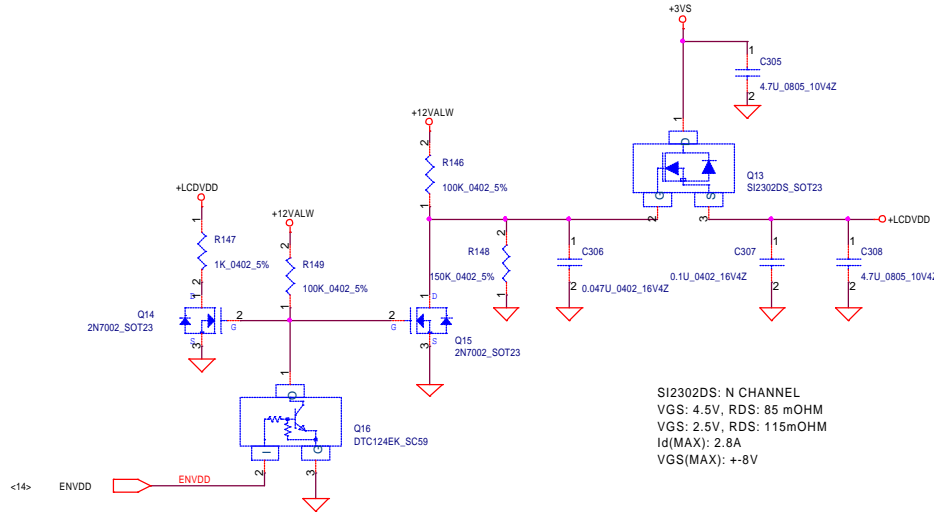
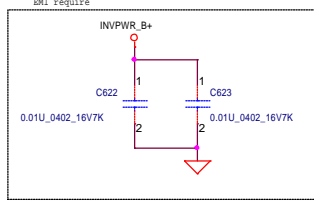
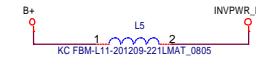
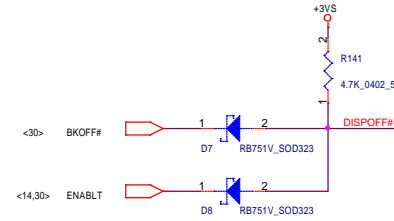
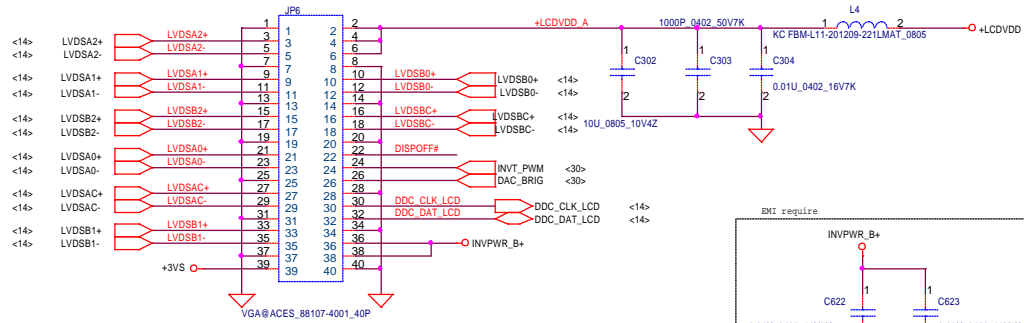
MAP17 Power (2/3)

Doc#	Document Number	Rev
LA-1851		0.5
Date:	Thursday, October 16, 2003	Sheet 15 of 50

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

LCD Panel Connector

The cap.'s colsely to LCD CONN.

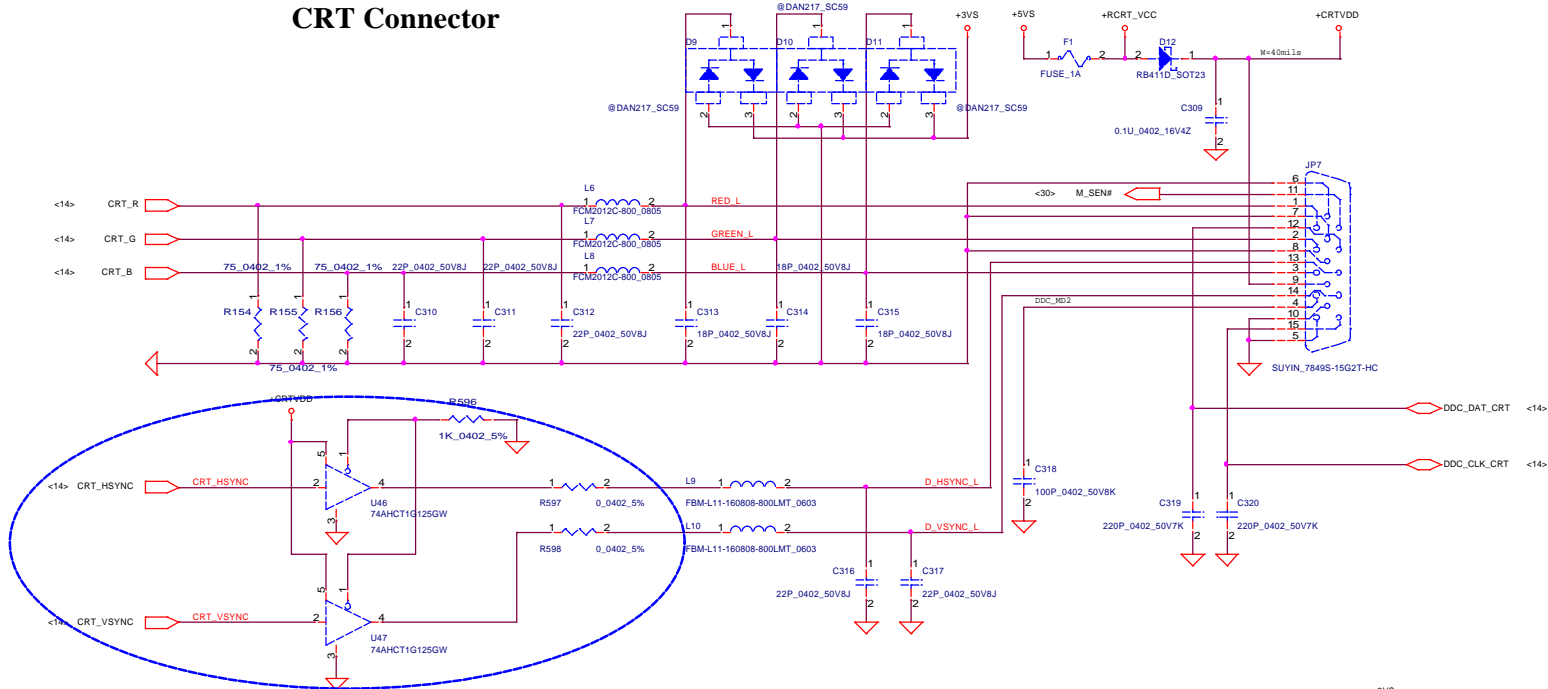


SI2302DS: N CHANNEL
 VGS: 4.5V, RDS: 85 mOHM
 VGS: 2.5V, RDS: 115mOHM
 Id(MAX): 2.8A
 VGS(MAX): +-8V

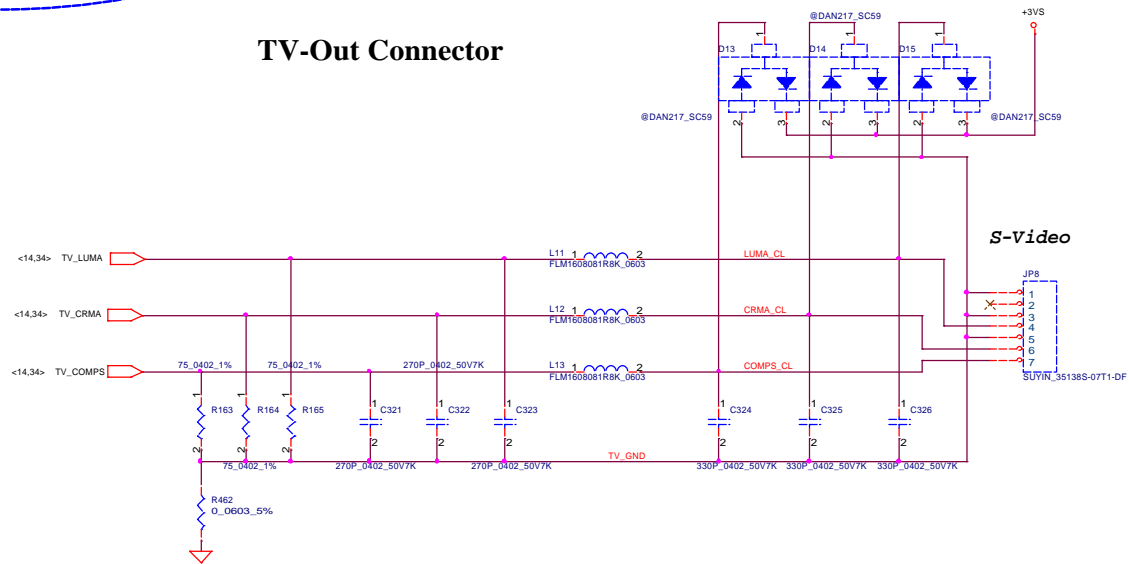
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.		
Title: LVDS Connector		
Size: LA-1851	Document Number: LA-1851	Rev: 0.5
Date: Thursday, October 16, 2003	Sheet: 17	of 50

CRT Connector



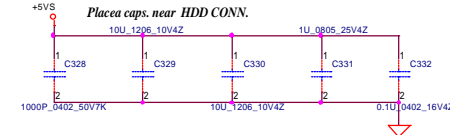
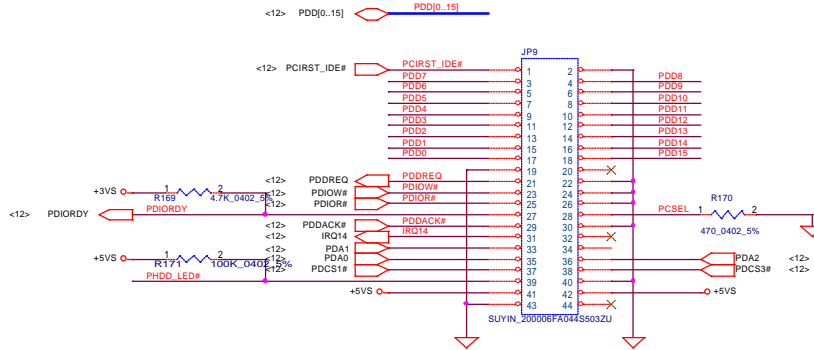
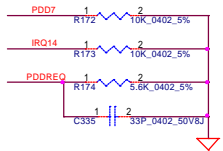
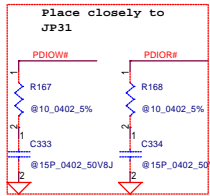
TV-Out Connector



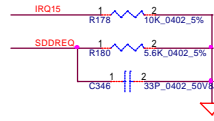
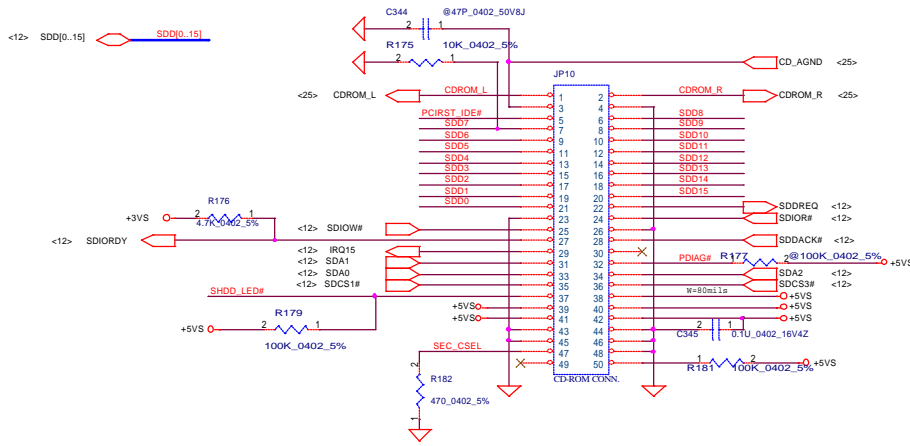
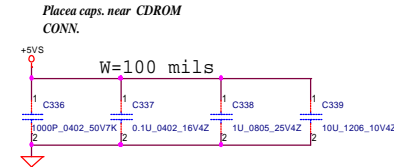
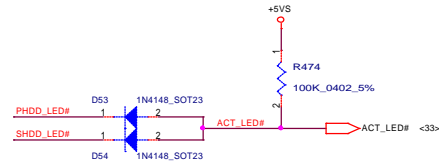
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.		
CRT & TVout Connector		
Doc No	Document Number	Rev
	LA-1851	0.5
Date:	Thursday, October 16, 2003	Sheet 18 of 50

HDD Connector



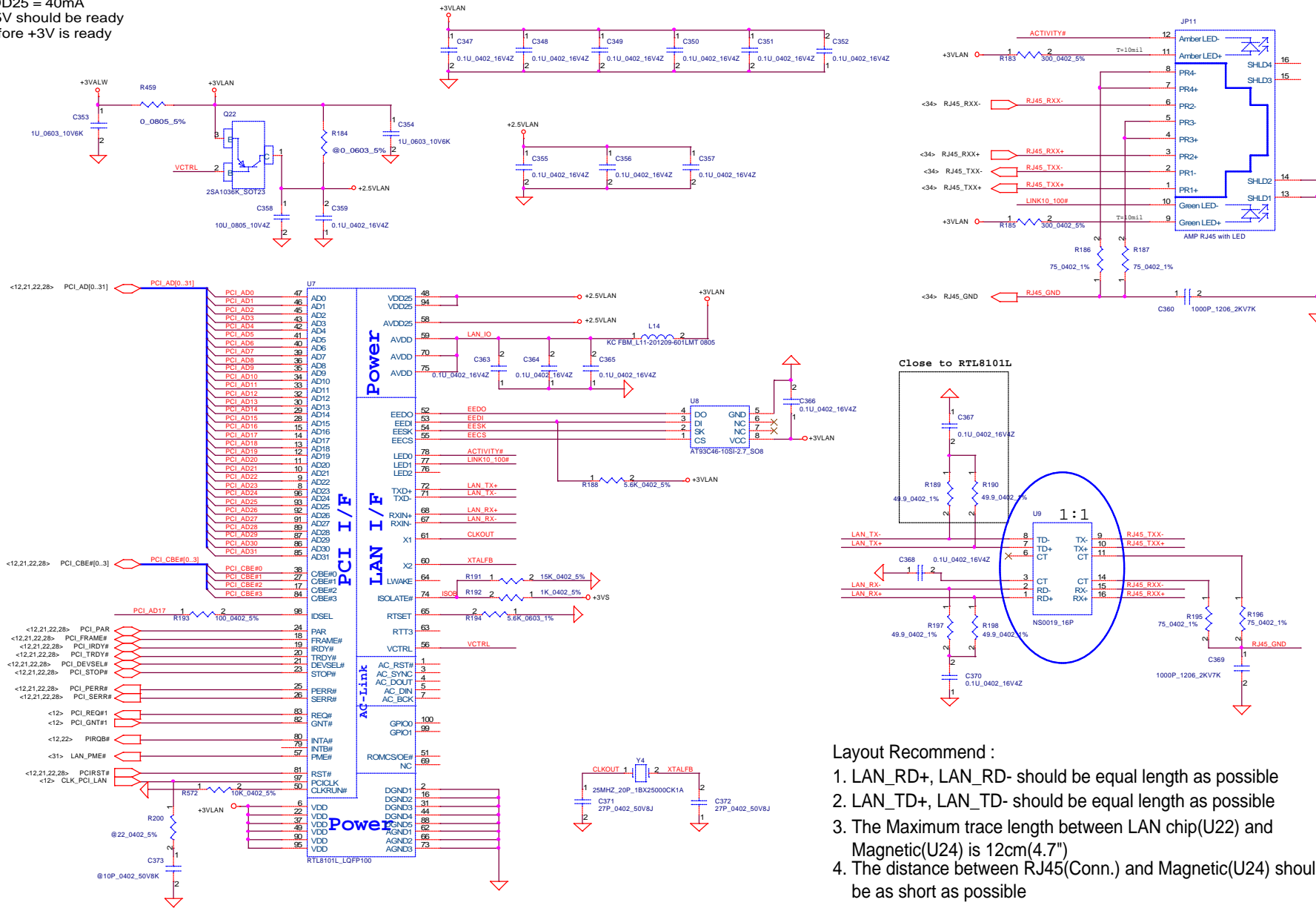
CD-ROM Connector



Compal Electronics, Inc.	
IDE/FDD/CD-ROM Module	
Size	Document Number
Custom	LA-1851
Date:	Thursday, October 16, 2003
Sheet	19 of 50

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

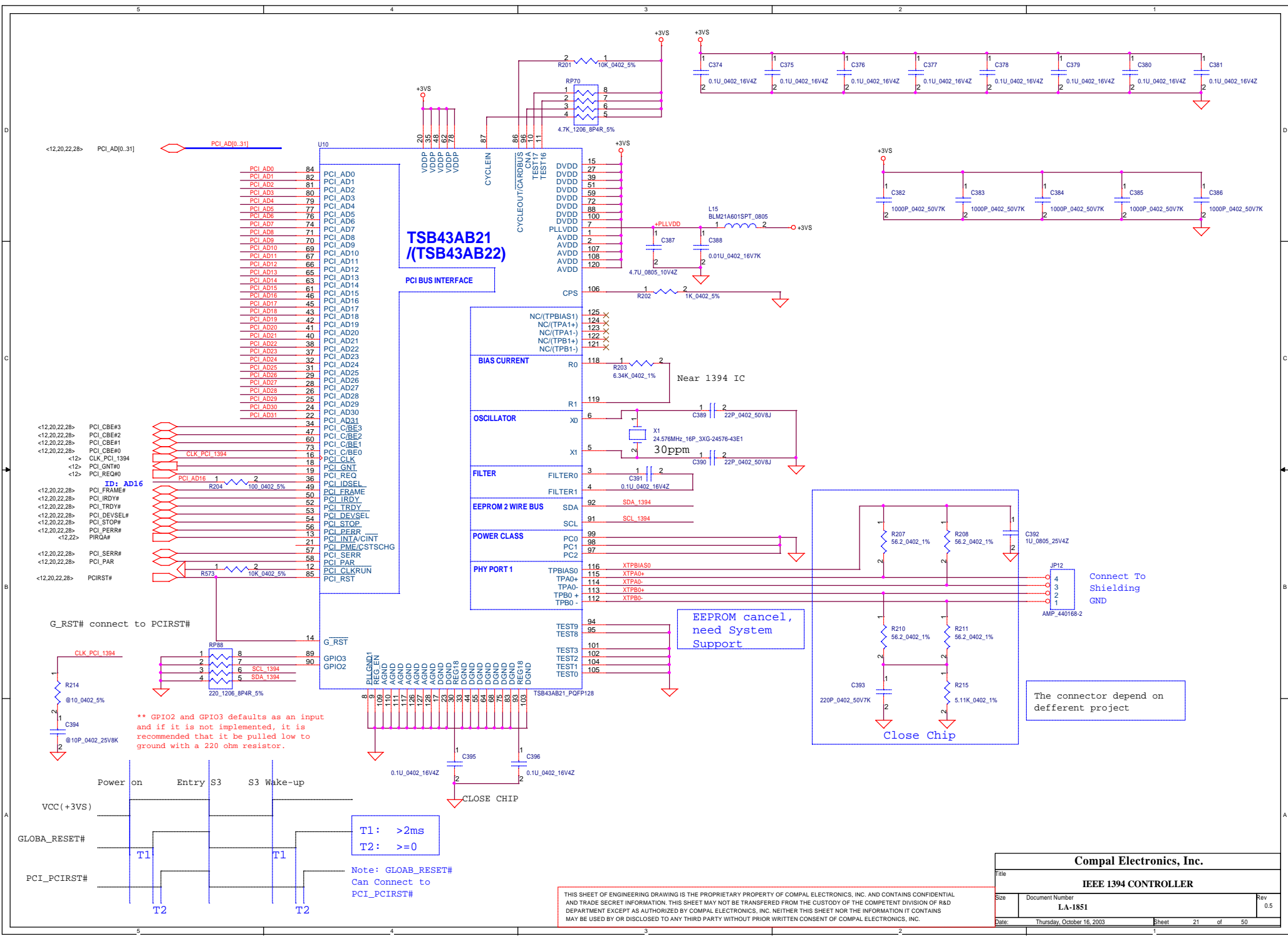
Note : I_{max} for VDD25 = 40mA
 2.5V should be ready before +3V is ready



- Layout Recommend :
1. LAN_RD+, LAN_RD- should be equal length as possible
 2. LAN_TD+, LAN_TD- should be equal length as possible
 3. The Maximum trace length between LAN chip(U22) and Magnetic(U24) is 12cm(4.7")
 4. The distance between RJ45(Conn.) and Magnetic(U24) should be as short as possible

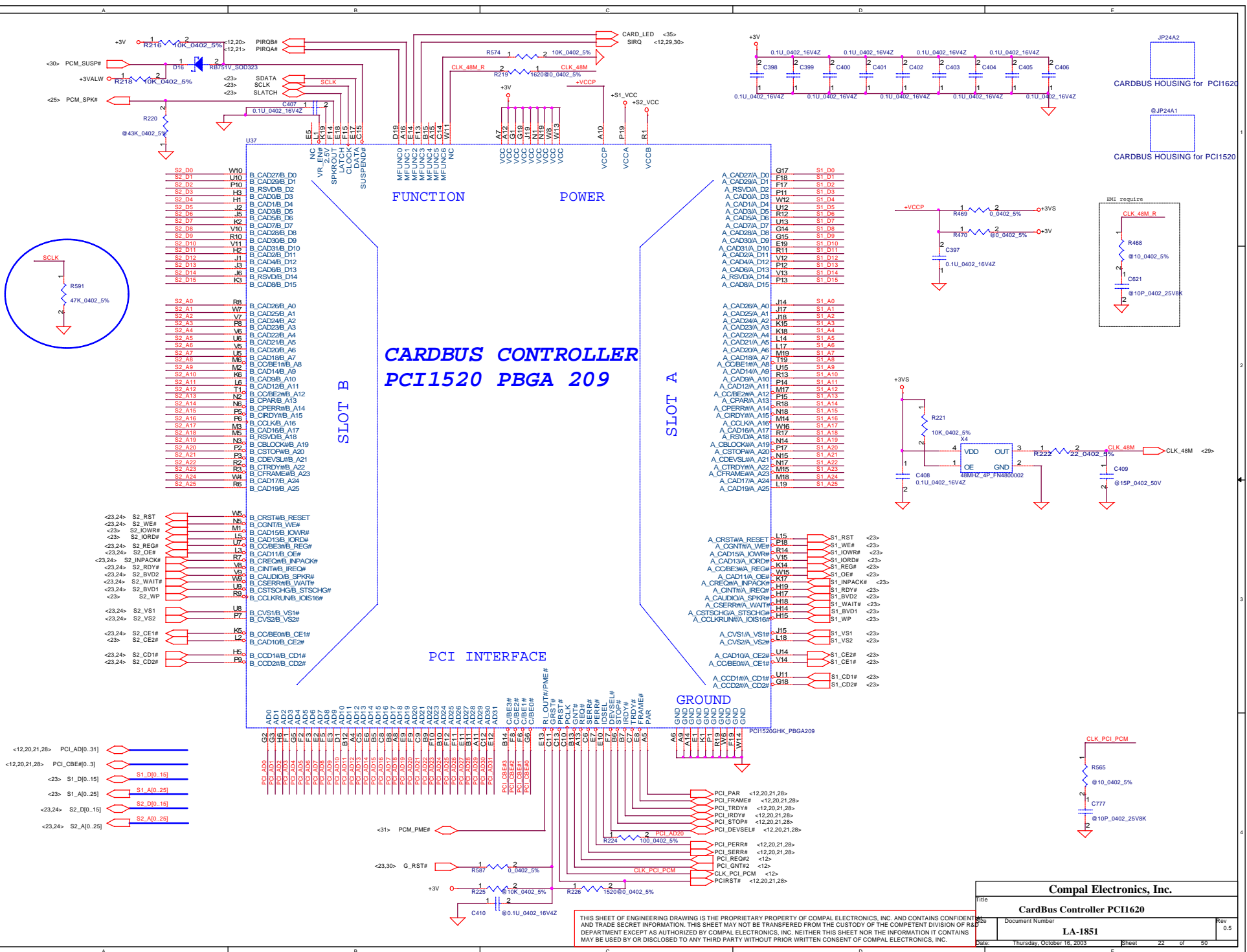
Compal Electronics, Inc.		
LAN RealTech8100BL		
Document Number	Rev	
LA-1851	0.5	
Date:	Thursday, October 16, 2003	Sheet 20 of 50

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.



THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.		
Title		
IEEE 1394 CONTROLLER		
Size	Document Number	Rev
	LA-1851	0.5
Date:	Thursday, October 16, 2003	Sheet 21 of 50

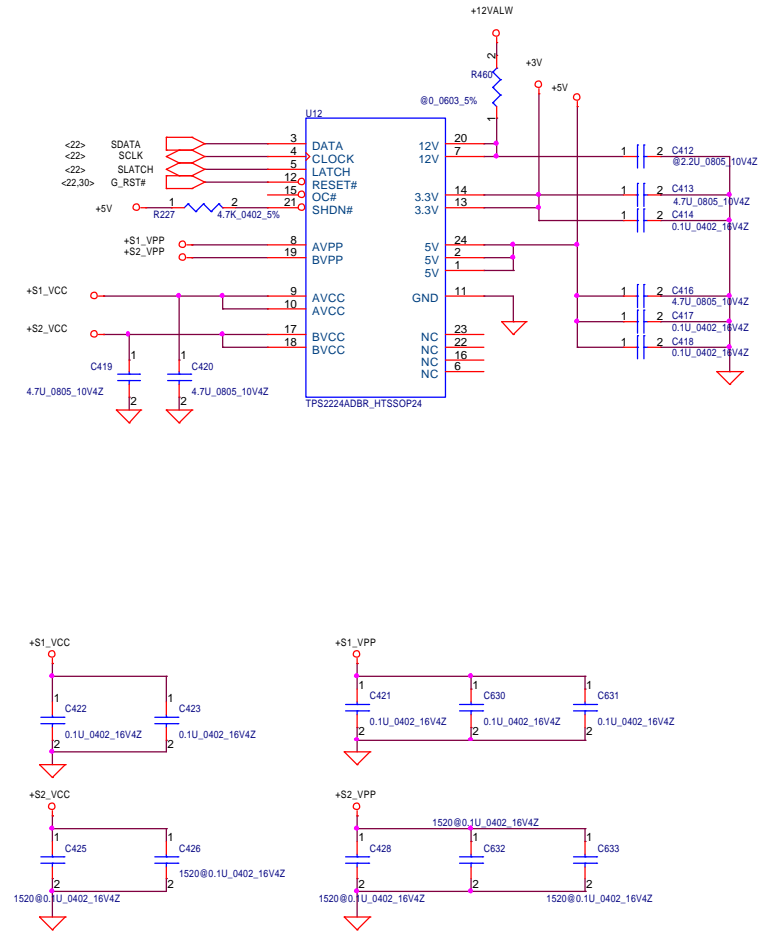
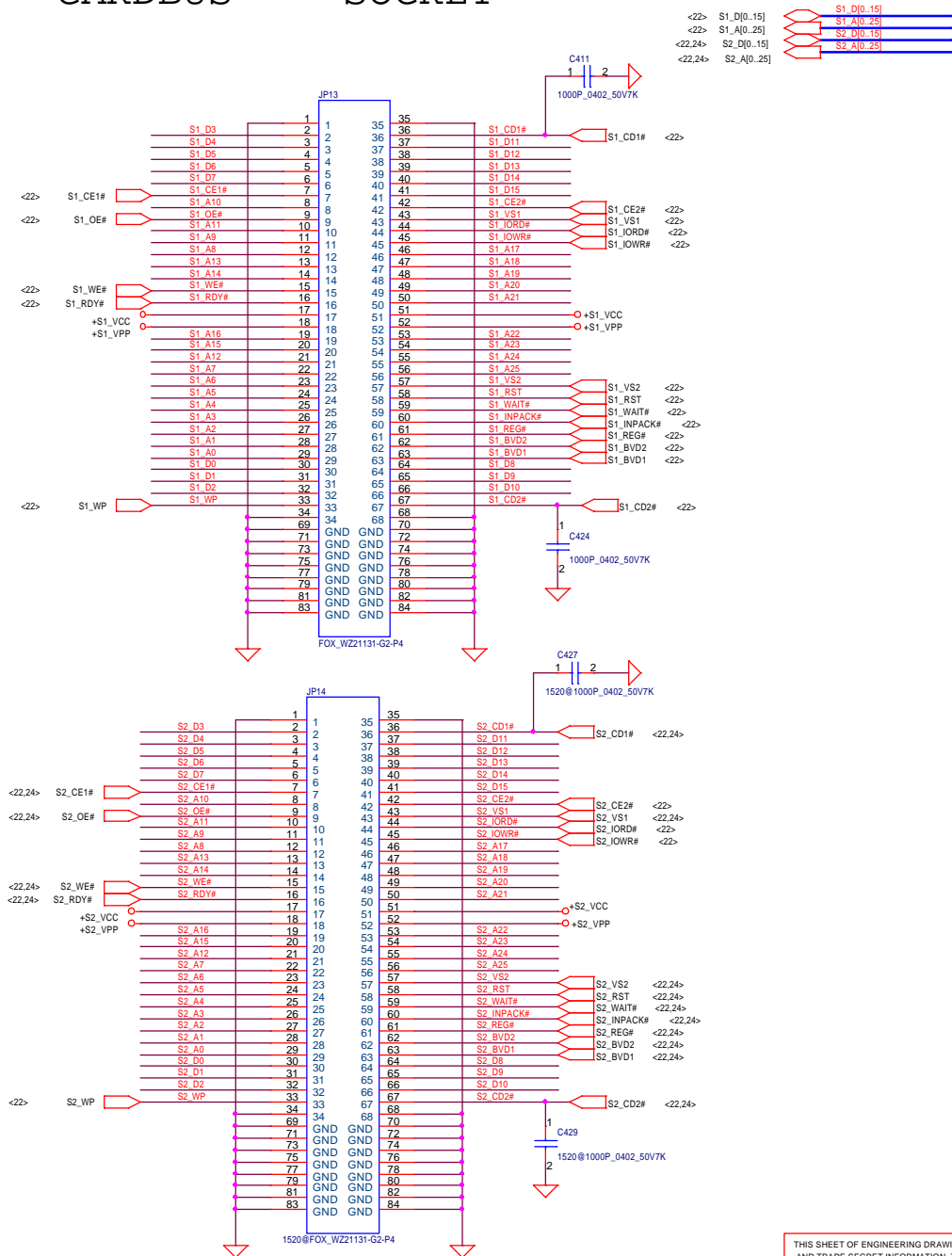


THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.			
CardBus Controller PCI1620			
Docu	Document Number	LA-1851	Rev 0.5
Date:	Thursday, October 16, 2003	Sheet	22 of 50

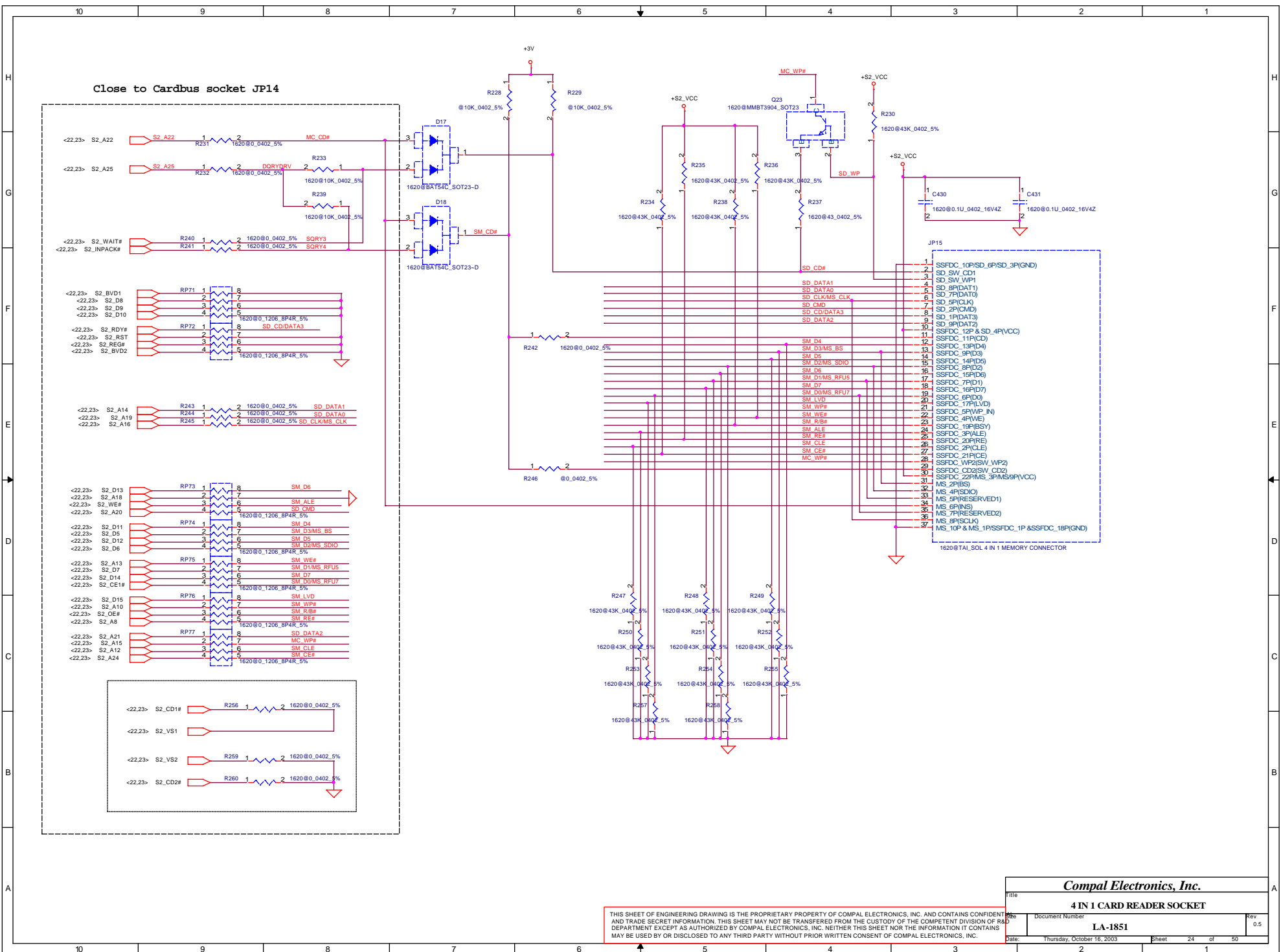
PCMCIA POWER CTRL.

CARDBUS SOCKET

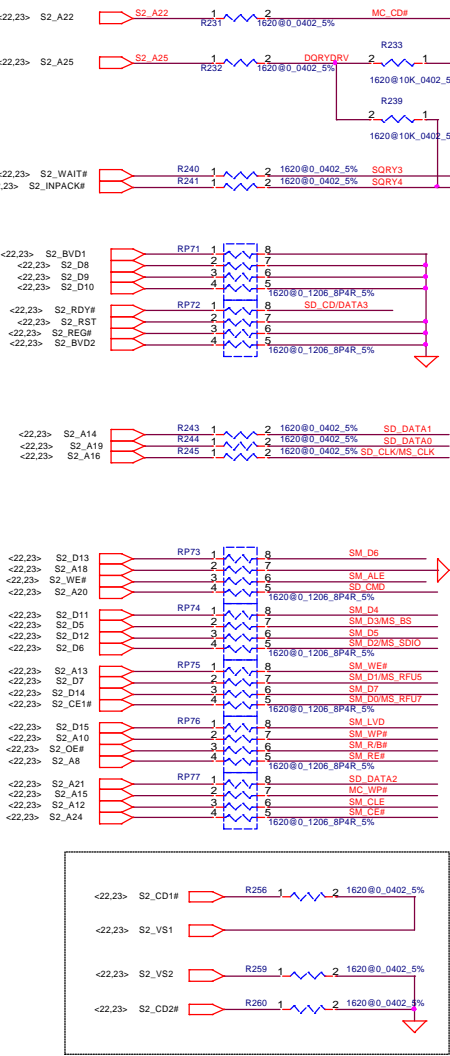


THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.		
File	CARD BUS SOCKET	
Size	Document Number	Rev
	LA-1851	0.5
Date:	Thursday, October 16, 2003	Sheet 23 of 50



Close to Cardbus socket JP14



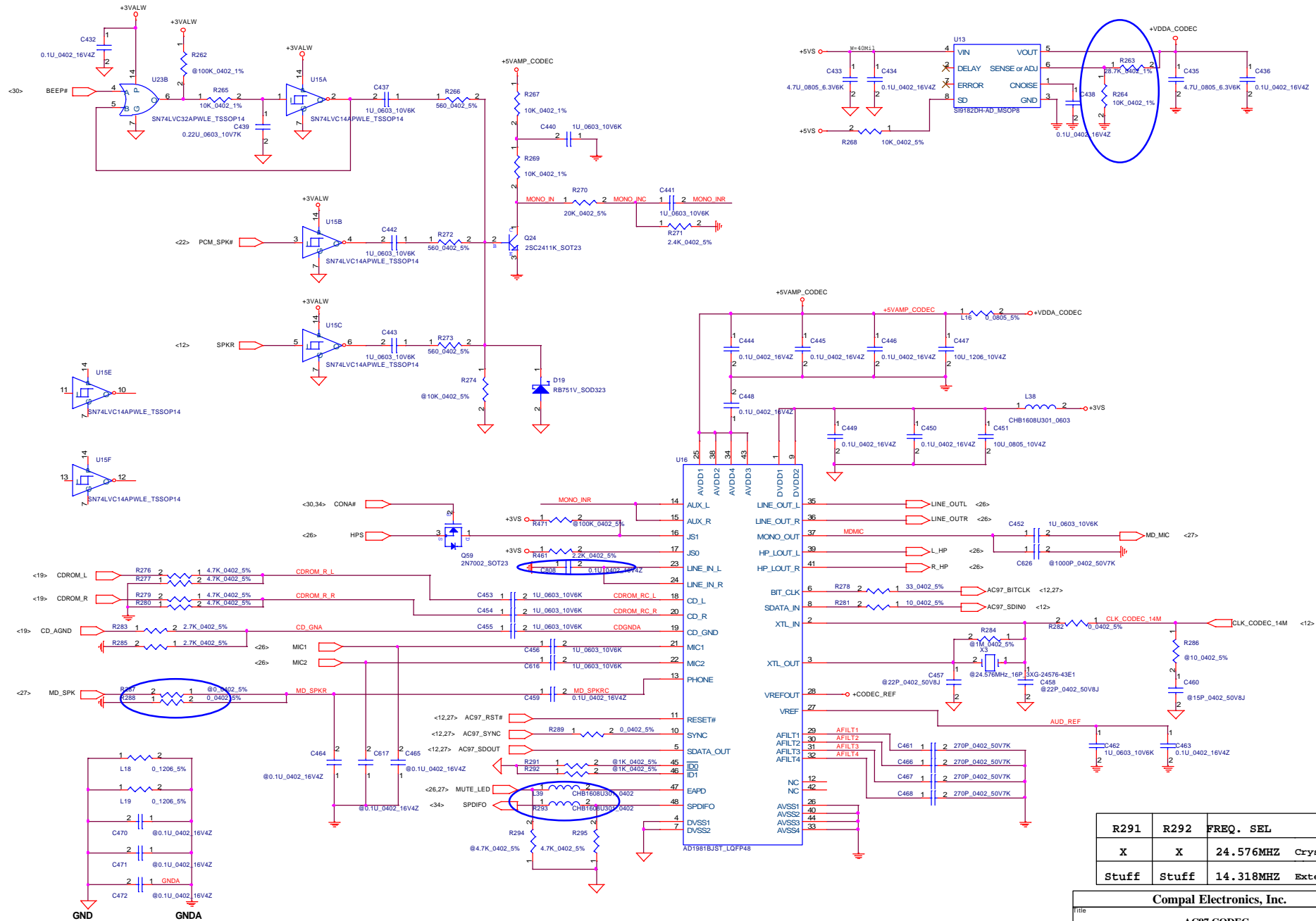
JP15

1	SSFDC_10P/SD_6P/SD_3P(GND)
2	SD_SW_CD1
3	SD_SW_WP1
4	SD_8P(DAT1)
5	SD_7P(DAT0)
6	SD_5P(CLK)
7	SD_2P(CMD)
8	SD_1P(DAT3)
9	SD_9P(DAT2)
10	SSFDC_12P & SD_4P(VCC)
11	SSFDC_11P(CD)
12	SSFDC_13P(D4)
13	SSFDC_9P(D3)
14	SSFDC_14P(D5)
15	SSFDC_8P(D2)
16	SSFDC_15P(D6)
17	SSFDC_7P(D1)
18	SSFDC_16P(D7)
19	SSFDC_6P(D0)
20	SSFDC_17P(LVD)
21	SSFDC_5P(WP_IN)
22	SSFDC_4P(WE)
23	SSFDC_13P(BSY)
24	SSFDC_3P(ALE)
25	SSFDC_20P(RE)
26	SSFDC_2P(CLE)
27	SSFDC_21P(CE)
28	SSFDC_WP2(SW_WP2)
29	SSFDC_CD2(SW_CD2)
30	SSFDC_22P(MS_3P(MS9P(VCC)
31	MS_2P(BS)
32	MS_4P(SDIO)
33	MS_5P(PRESERVED1)
34	MS_6P(IN)
35	MS_7P(PRESERVED2)
36	MS_8P(SCLK)
37	MS_10P & MS_1P(SSFDC_1P & SSFDC_18P(GND)

1620@TAL_SOL_4 IN 1 MEMORY CONNECTOR

Compal Electronics, Inc.	
4 IN 1 CARD READER SOCKET	
File	Document Number
LA-1851	
Date	Rev
Thursday, October 16, 2003	0.5
Sheet	of
24	50

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

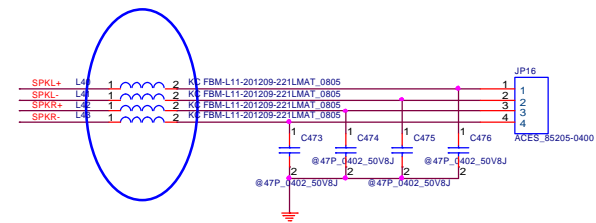
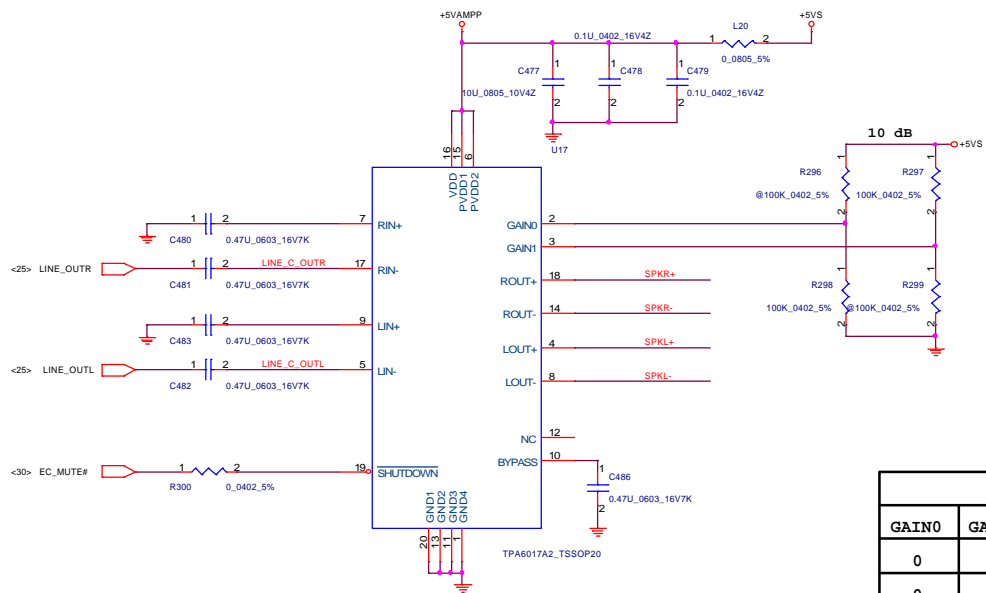


R291	R292	FREQ. SEL
X	X	24.576MHZ Crystal
Stuff	Stuff	14.318MHZ External

Compal Electronics, Inc.
AC97 CODEC

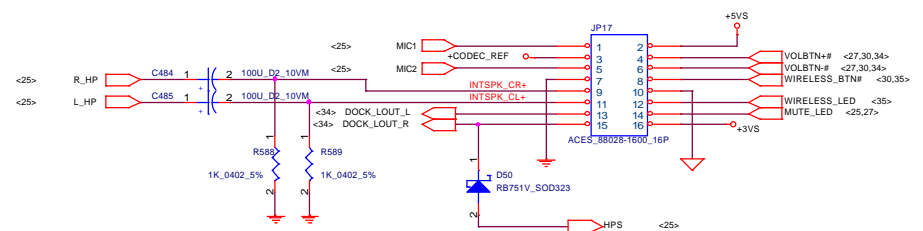
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Doc#	Document Number	Rev
LA-1851		0.5
Date:	Thursday, October 16, 2003	Sheet 25 of 50



Gain Settings		
GAIN0	GAIN1	Av(inv)
0	0	6 dB
0	1	10 dB
1	0	15.6 dB
1	1	21.6 dB

AUDIO CONNECTOR



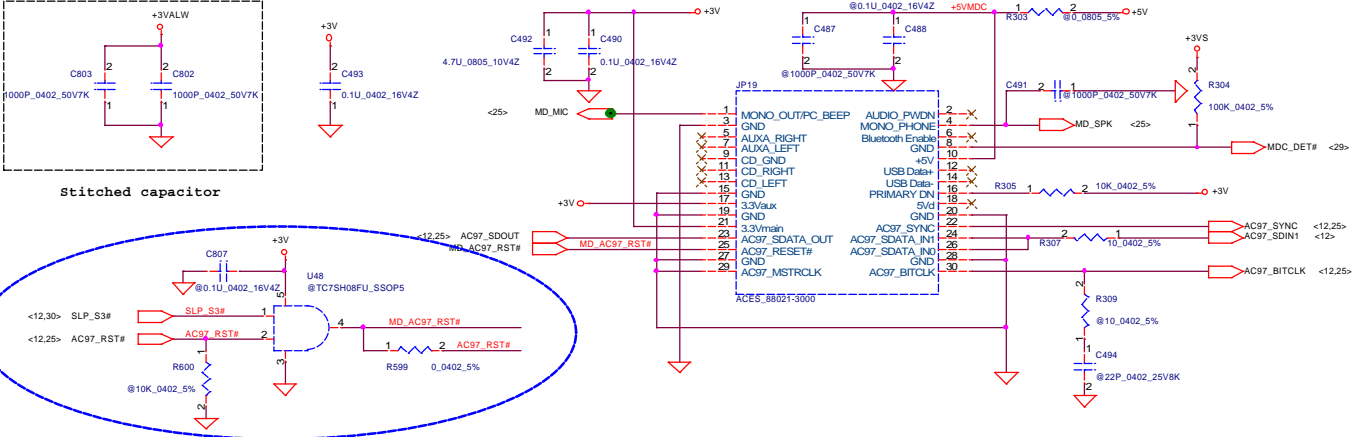
Compal Electronics, Inc.

AMP & Audio Jack

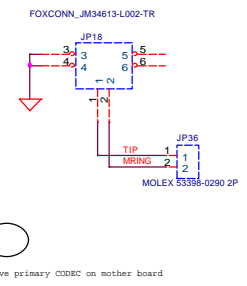
Title	Document Number	Rev
	LA-1851	0.5
Stamp	Thursday, October 16, 2003	Sheet 28 of 50

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

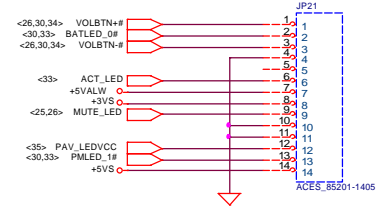
MDC Conn.



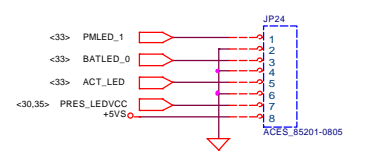
RJ11 CONN.



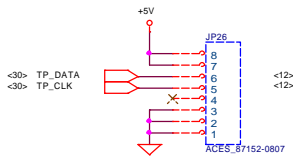
Front Board CONNECTOR Pavilion only



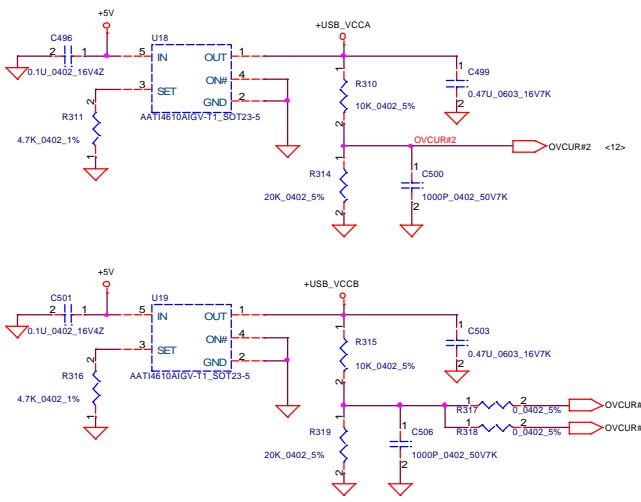
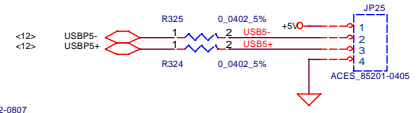
Front Board CONNECTOR PRESARIO only



TP CONNECTOR

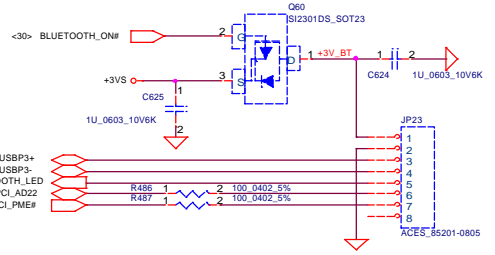


USB KEY

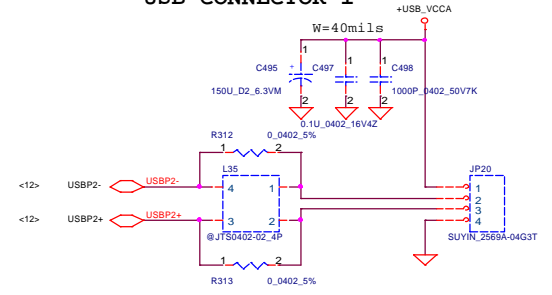


Note: PLACE CLOSE TO EACH USB PORT

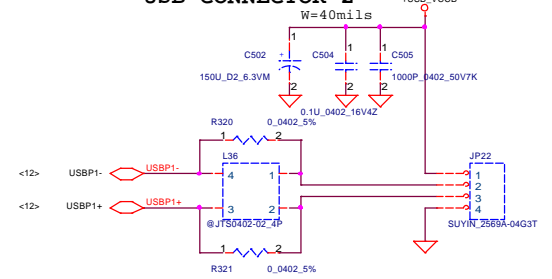
BT CONNECTOR



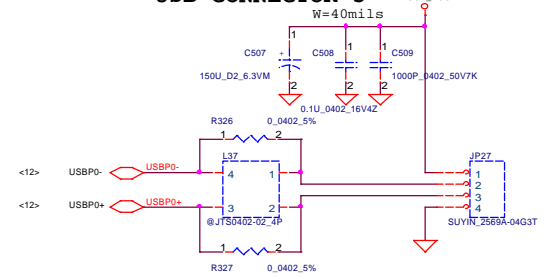
USB CONNECTOR 1



USB CONNECTOR 2

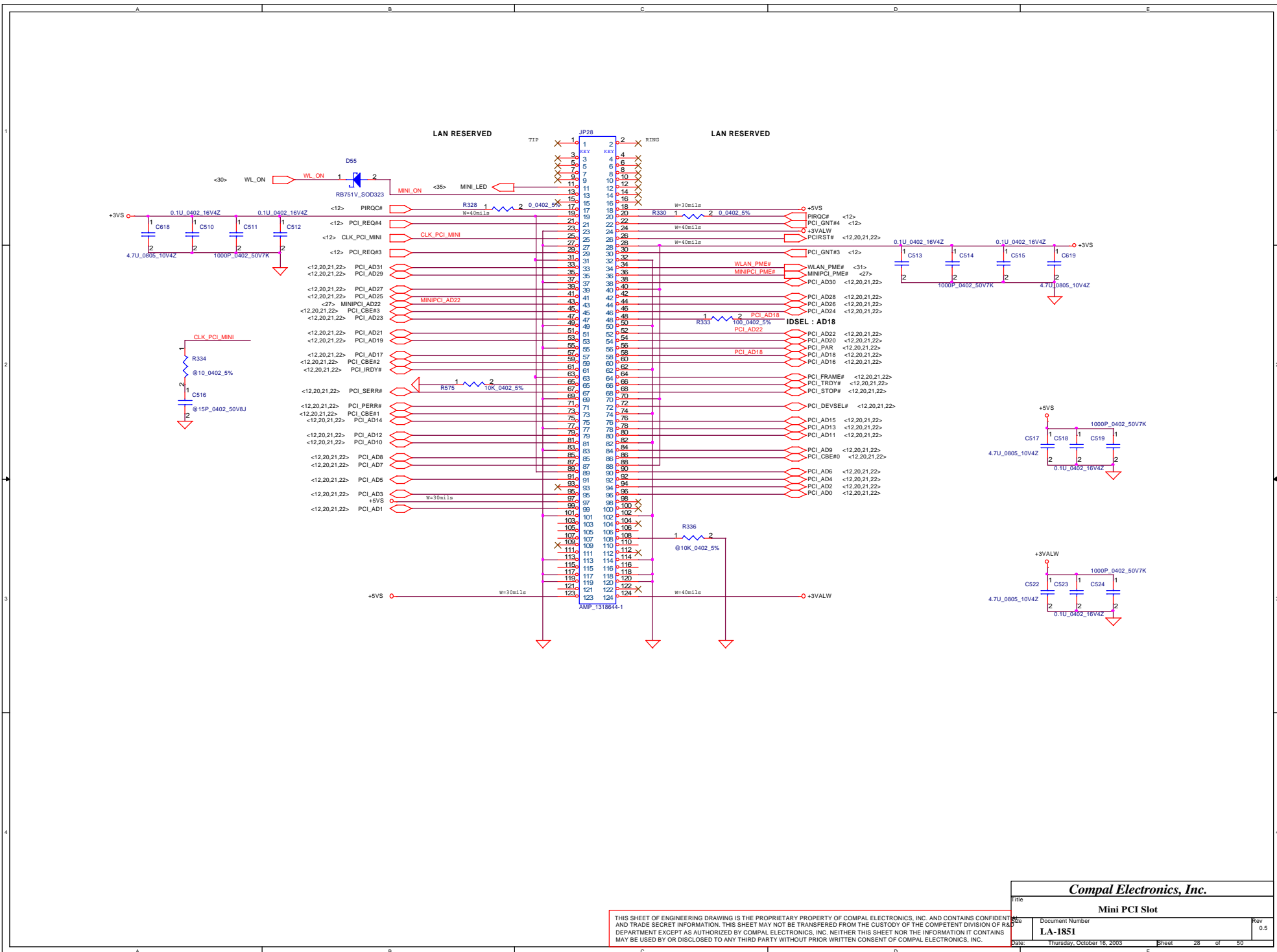


USB CONNECTOR 3



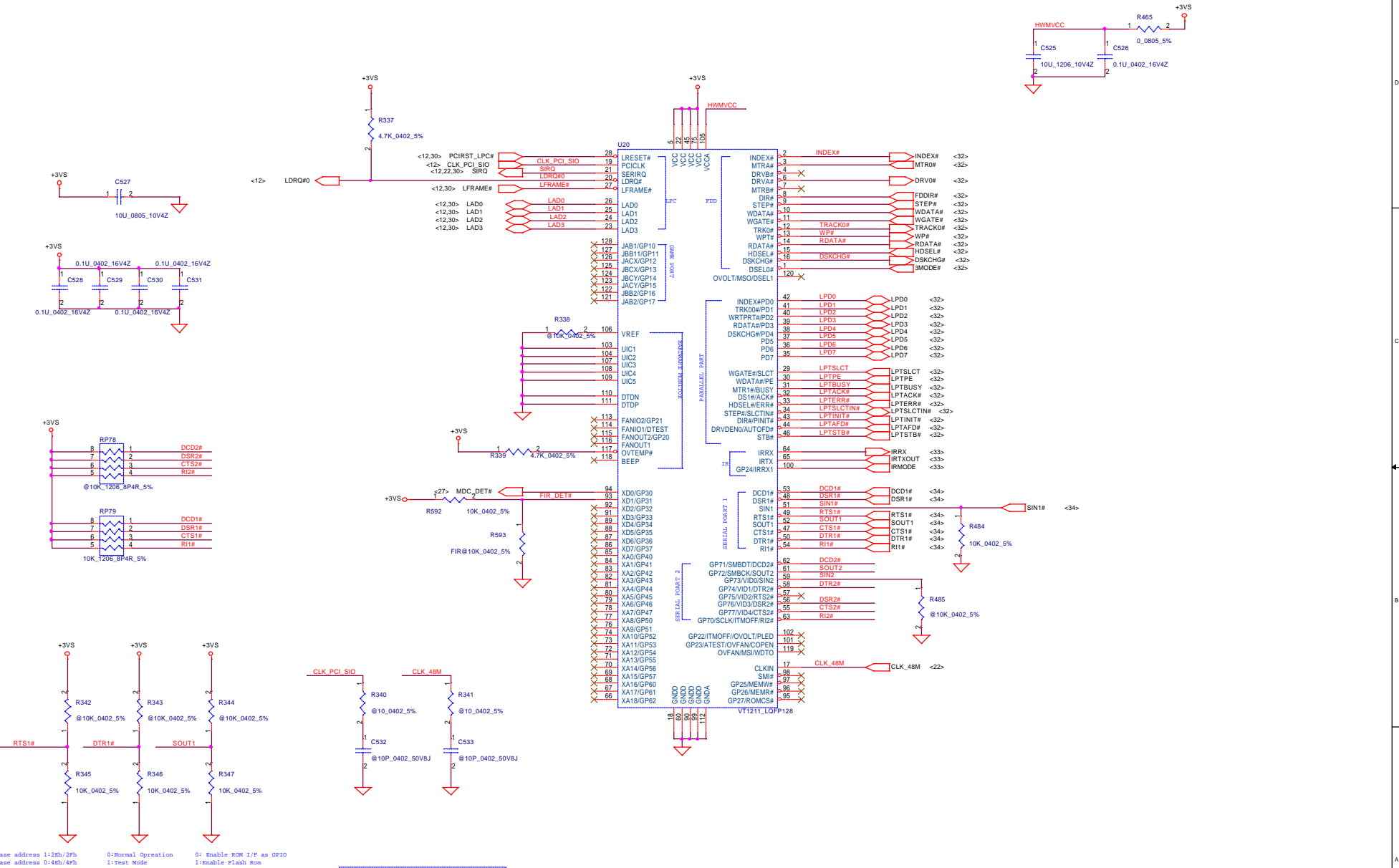
Compal Electronics, Inc.		
MDC , Bluetooth & USB CONN.		
File	Document Number	Rev
	LA-1851	0.5
Date	Friday, October 17, 2003	Sheet 27 of 50

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.



Compal Electronics, Inc.		
Mini PCI Slot		
Document Number	Rev	
LA-1851	0.5	
Date:	Sheet	of
Thursday, October 16, 2003	28	50

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

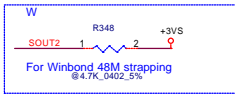


Base address 1:2Kh/3Ph
 Base address 0:4Kh/4Ph

0:Normal operation
 1:Test Mode

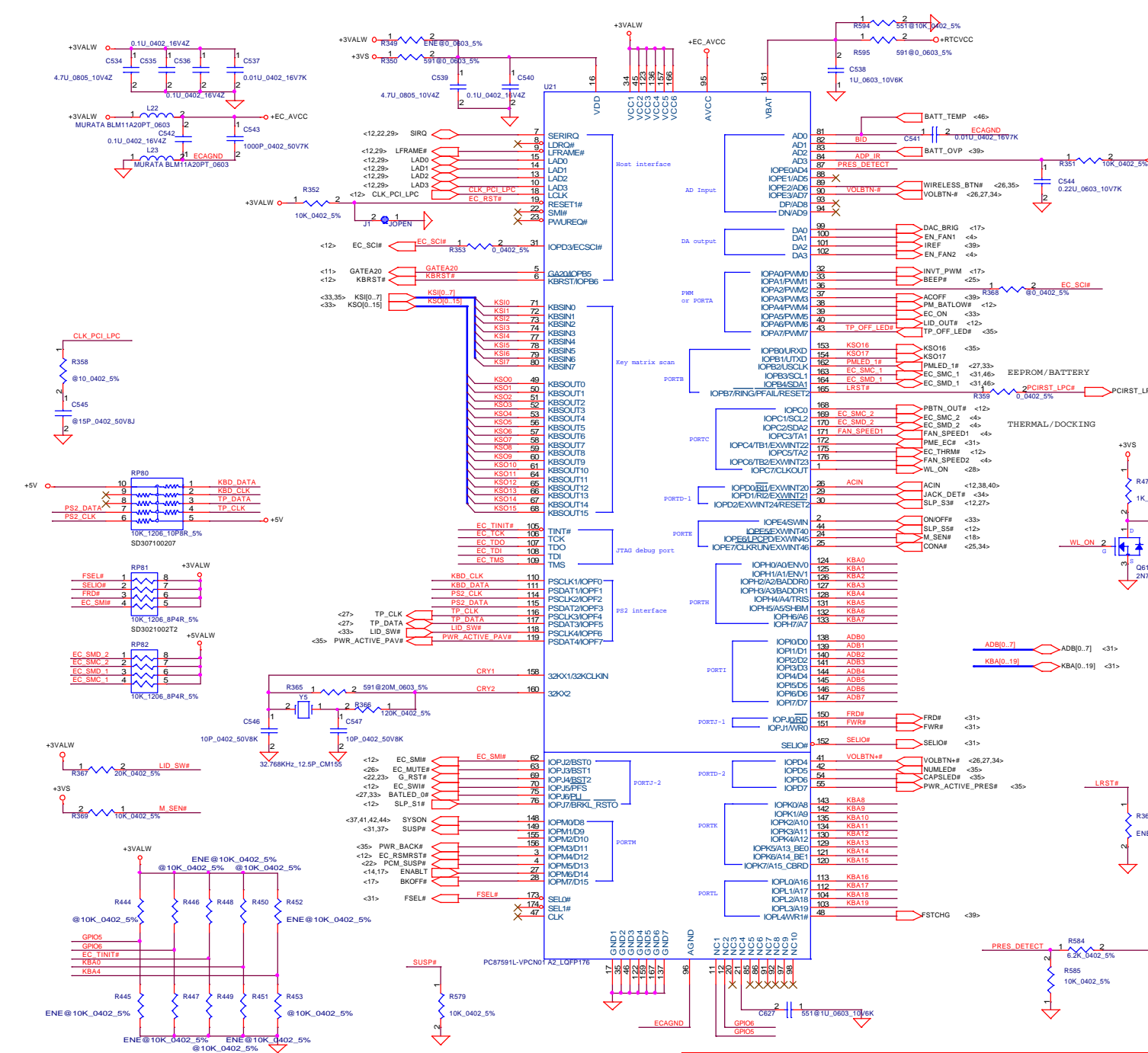
0: Enable ROM I/P as GP10
 1: Enable Flash Rom

Super I/O strapping for VT1211



Compal Electronics, Inc.		
Title: LPC SUPER I/O VIA VT1211		
Size	Document Number	Rev
LA-1851		0.5
Date	Thursday, October 16, 2003	Sheet 29 of 50

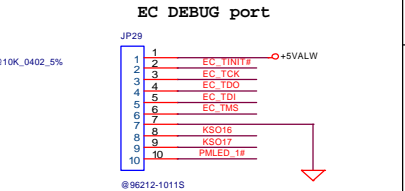
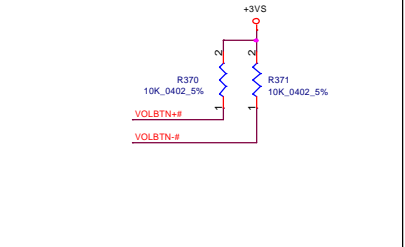
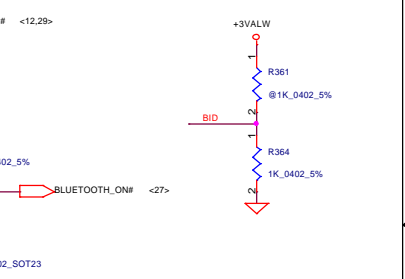
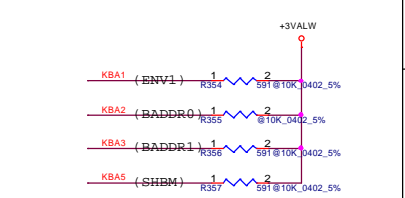
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF RAD DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.



		I/O Address	
BADDR1_0	Index	Data	
0	2E	2F	
0	4E	4F	
0	(HCFGBAH, HCFGBAL)	(HCFGBAH, HCFGBAL+1)	
1	1	Reserved	

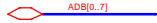
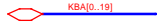
	ENV0	ENV1	TRIS
IRE	0	0	0
OBD	0	1	0
DEV	1	0	0
PROG	1	1	0

SHBM=1: Enable shared memory with host BIOS
 TRIS=1: While in IRE and OBD, float all the signals for clip-on ISE use

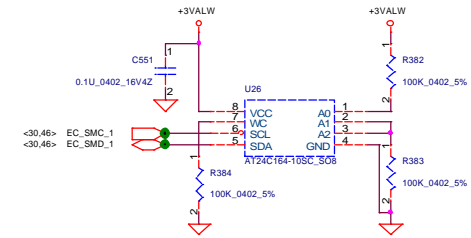
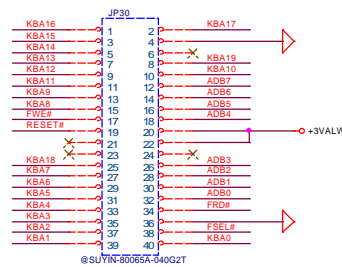
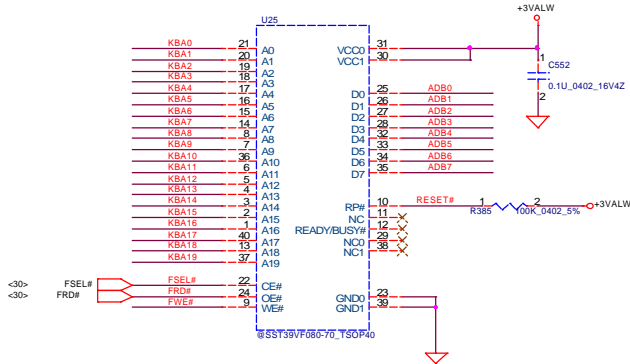
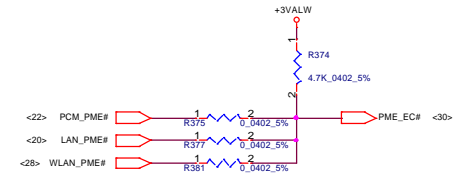
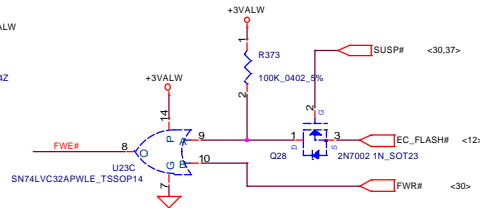
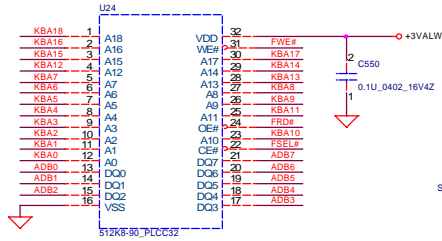
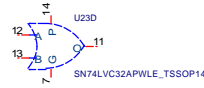
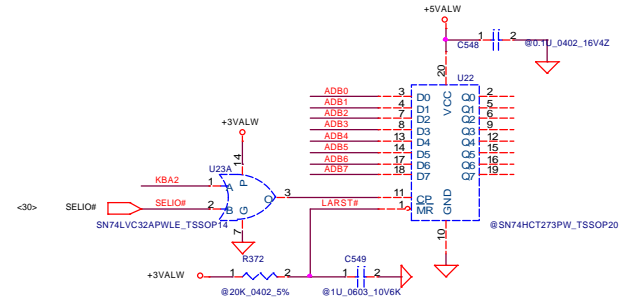


THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

INPUT

<30> ADB[0..7]  ADB[0..7]
 <30> KBA[0..19]  KBA[0..19]

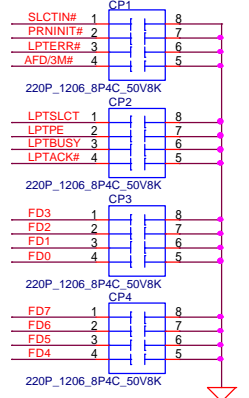
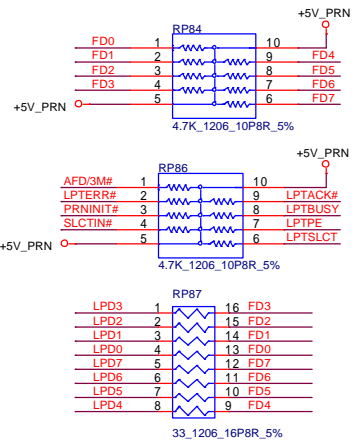
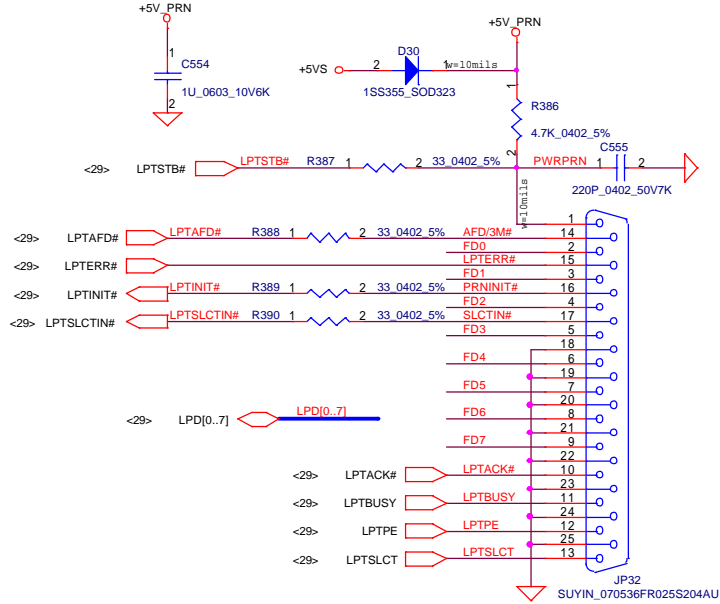
OUTPUT



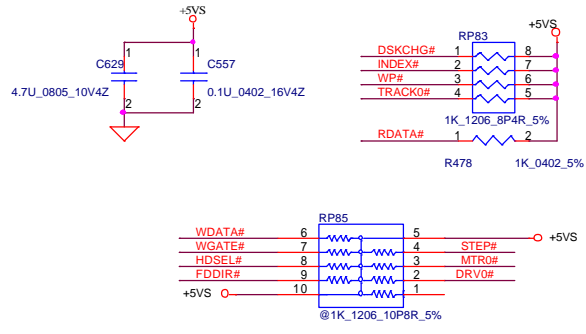
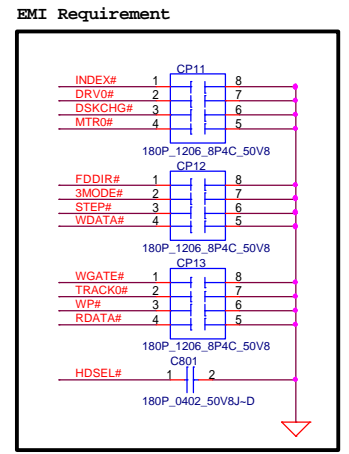
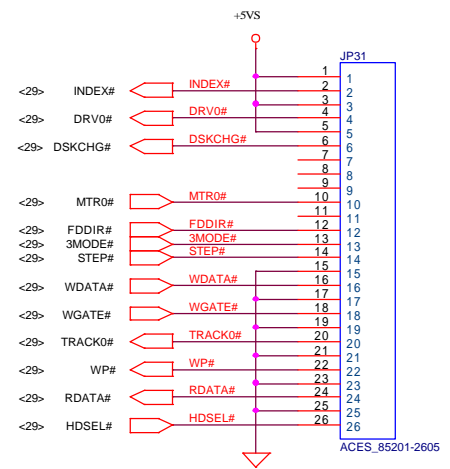
Compal Electronics, Inc.		
BIOS & EC I/O Port		
Part Number	Document Number	Rev
LA-1851		0.5
Date	Thursday, October 16, 2003	Sheet 31 of 50

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Parallel Port



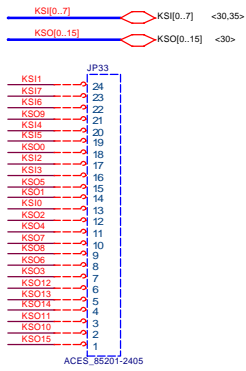
FDD CONN.



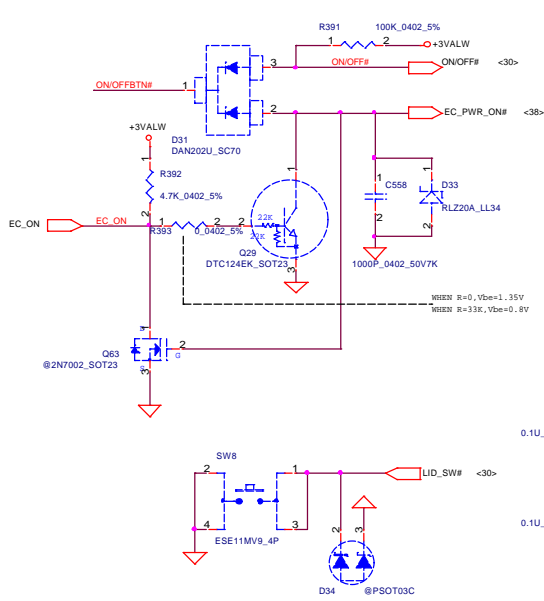
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Title		
Parallel port & FDD Connector		
Size	Document Number	Rev
B	LA-1851	0.5
Date:	Thursday, October 16, 2003	Sheet 32 of 50

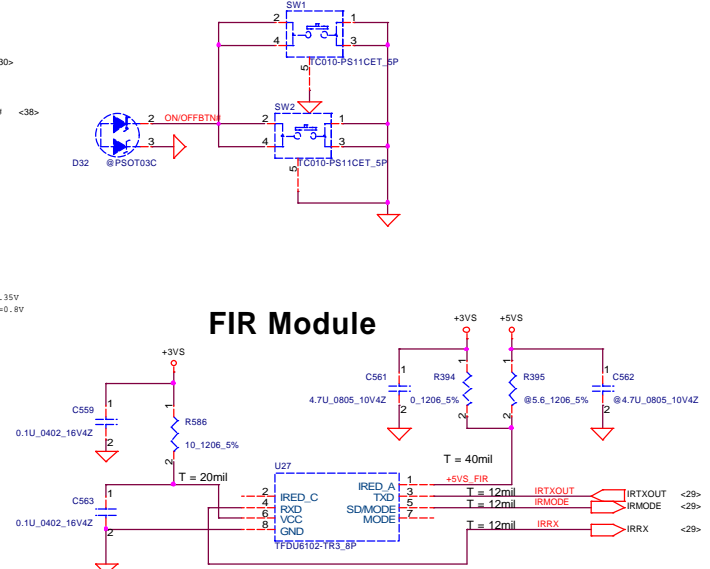
INT_KBD CONN.



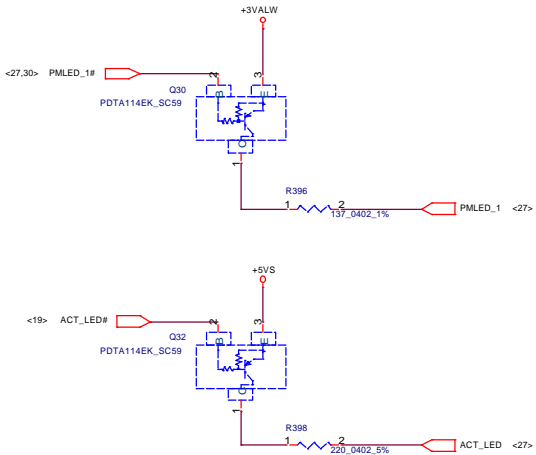
Power BTN



FIR Module

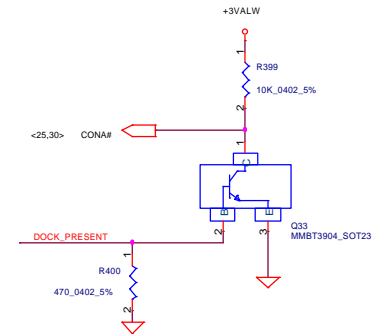
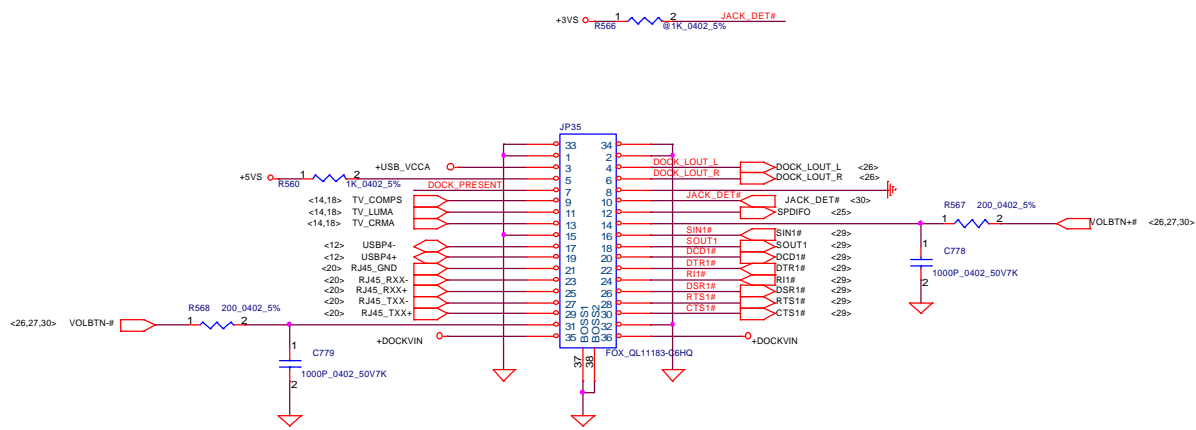


Touch Pad & Status LED Conn.

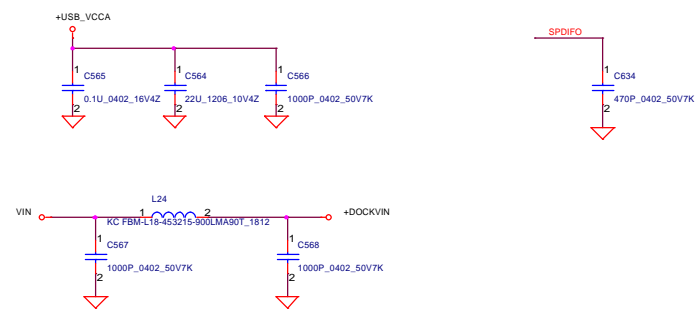
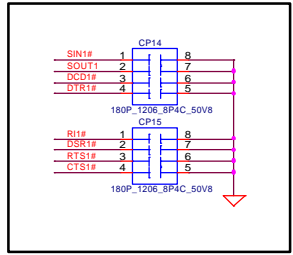


<p>Compal Electronics, Inc.</p>		
<p>KBD,ON/OFF,T/P,LED & FIR</p>		
<p>Doc#</p>	<p>Document Number</p>	<p>Rev</p>
<p>LA-1851</p>	<p>LA-1851</p>	<p>0.5</p>
<p>Date:</p>	<p>Thursday, October 16, 2003</p>	<p>Sheet 33 of 50</p>

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

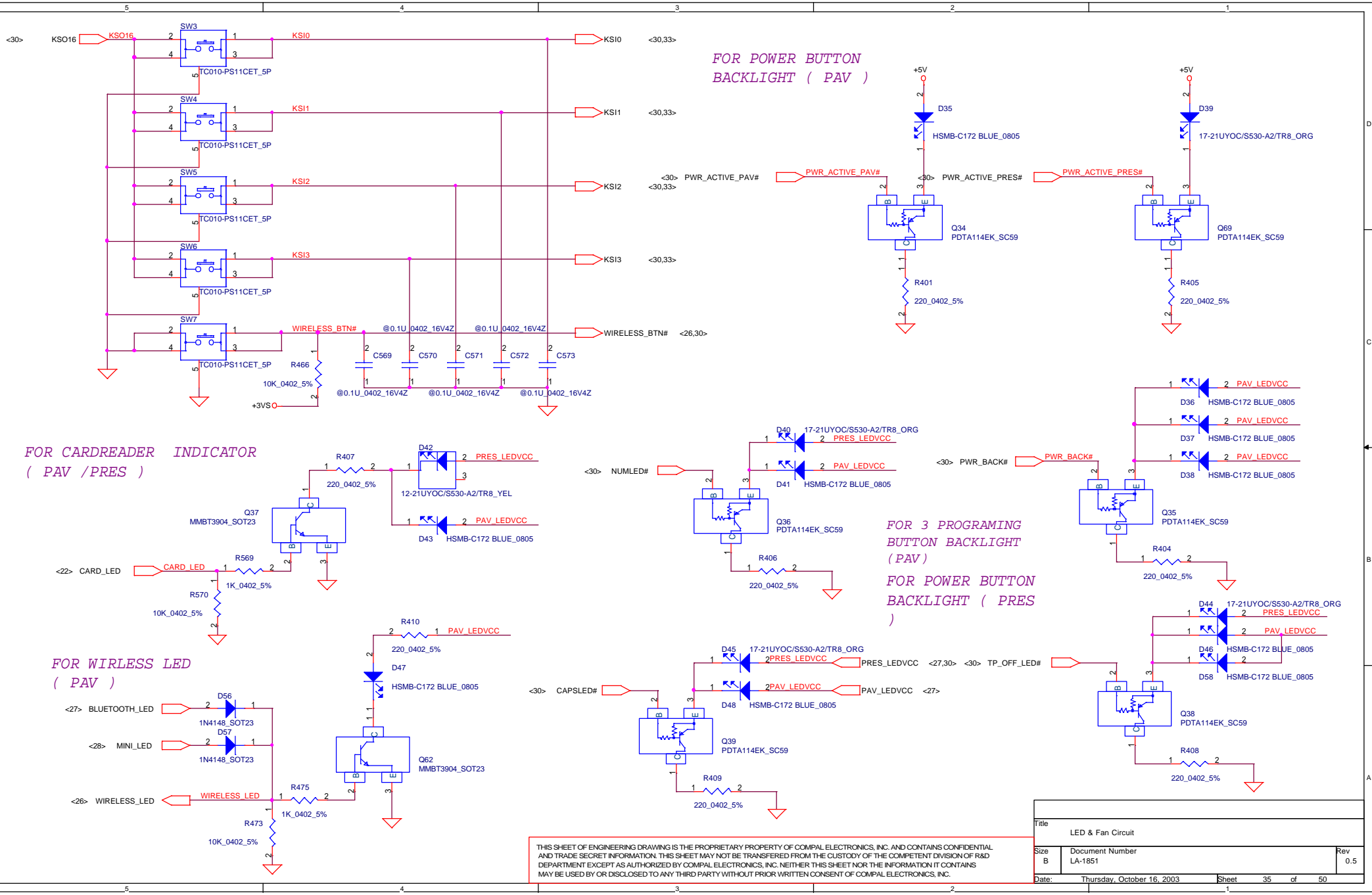


EMI Requirement



THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.		
SPR Connector		
Document Number	LA-1851	Rev 0.5
Date:	Thursday, October 16, 2003	Sheet 34 of 50



FOR POWER BUTTON
BACKLIGHT (PAV)

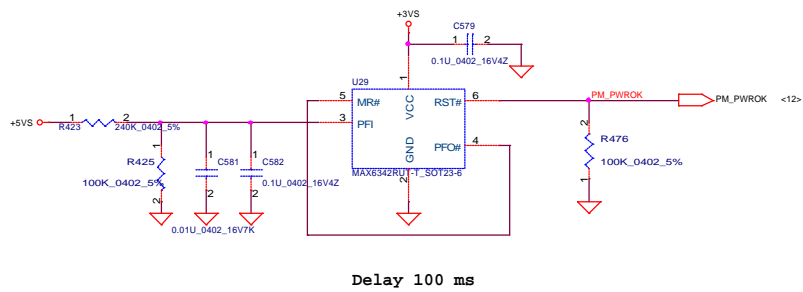
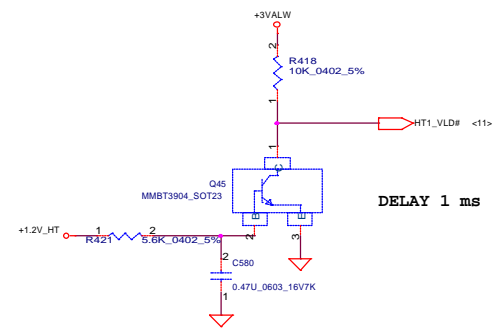
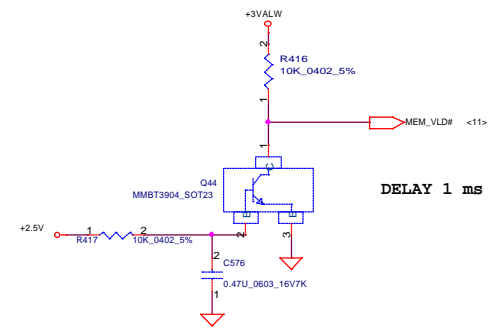
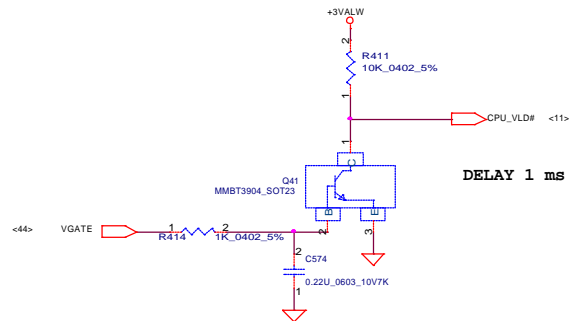
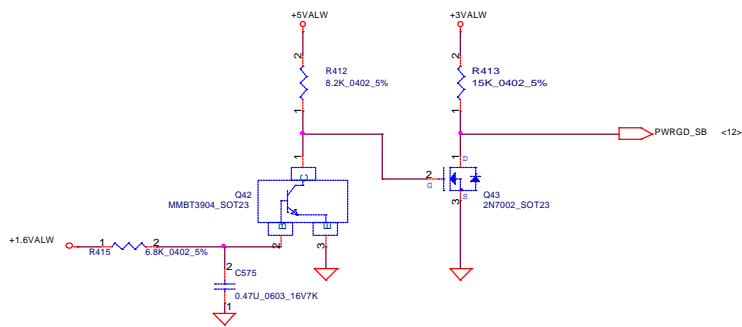
FOR CARDREADER INDICATOR
(PAV /PRES)

FOR 3 PROGRAMING
BUTTON BACKLIGHT
(PAV)
FOR POWER BUTTON
BACKLIGHT (PRES)

FOR WIRLESS LED
(PAV)

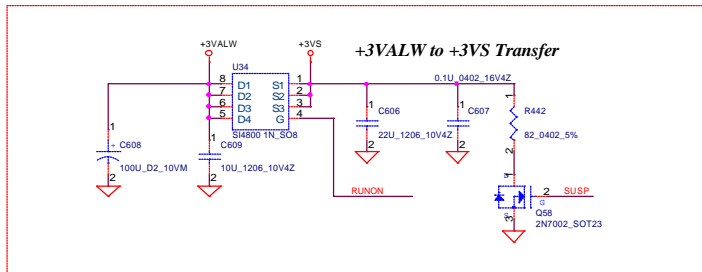
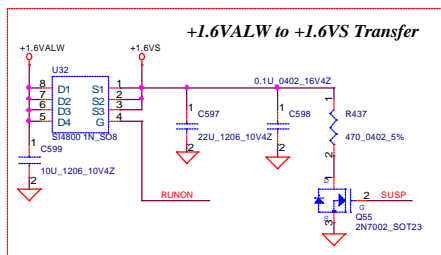
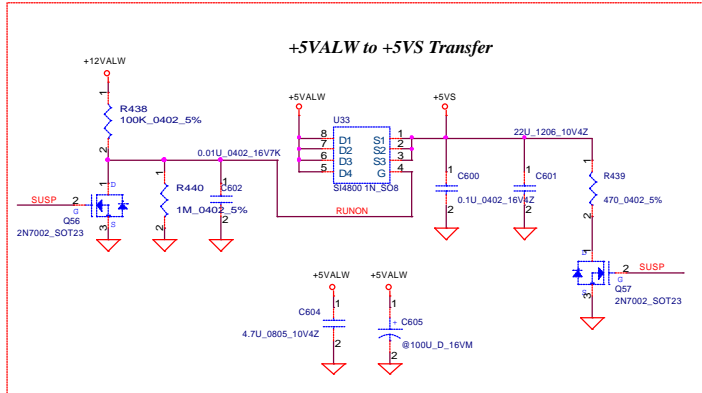
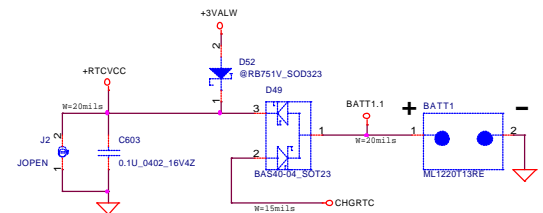
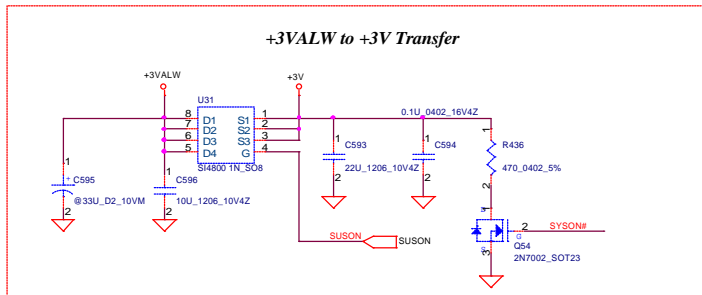
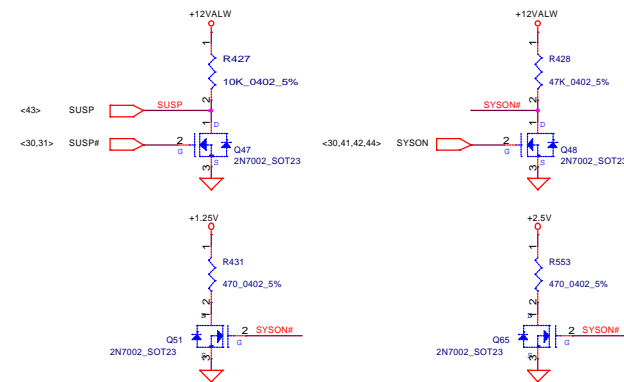
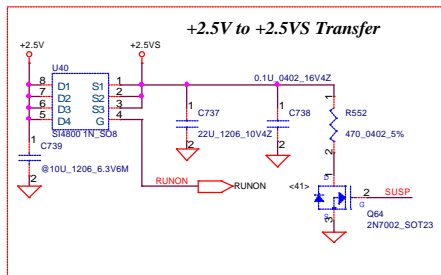
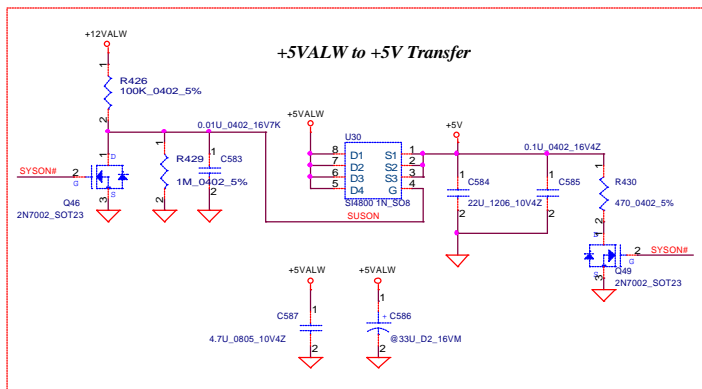
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Title		
LED & Fan Circuit		
Size	Document Number	Rev
B	LA-1851	0.5
Date:	Thursday, October 16, 2003	Sheet 35 of 50

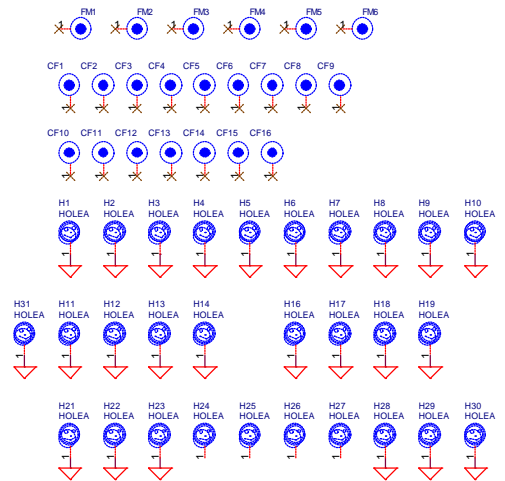


THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.	
Power OK/Reset Conn.& MUTE Switch	
File	Document Number
LA-1851	Rev 0.5
Date: Thursday, October 16, 2003	Sheet 36 of 50



For customer request
,they don't wanna
charge RTC

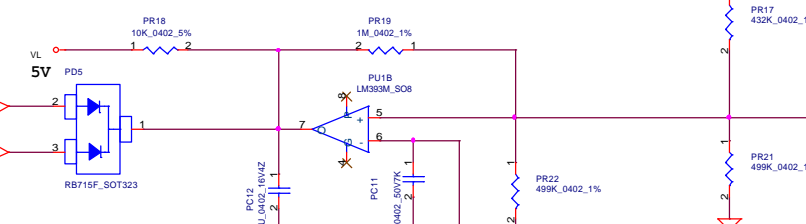
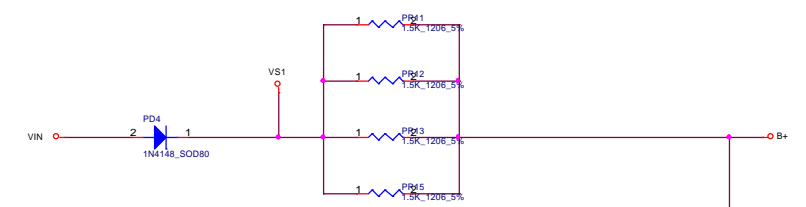
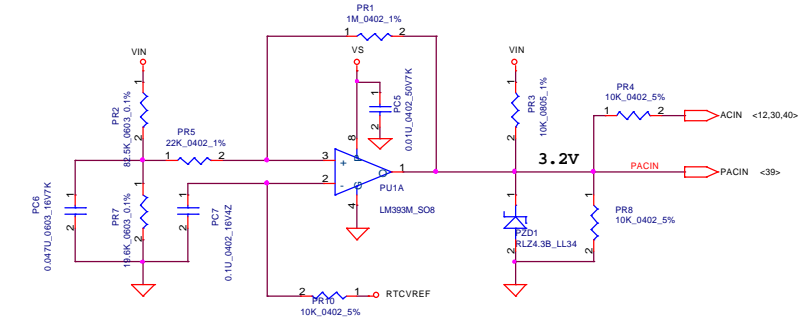


THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.			
DC/DC Circuit			
File	Document Number	Date	Rev
	LA-1851	Thursday, October 16, 2003	0.5
Sheet	37	of	50

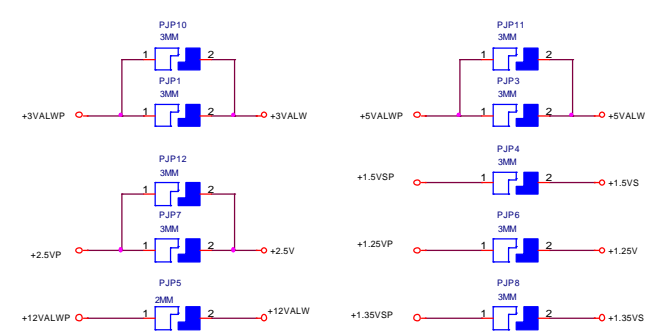
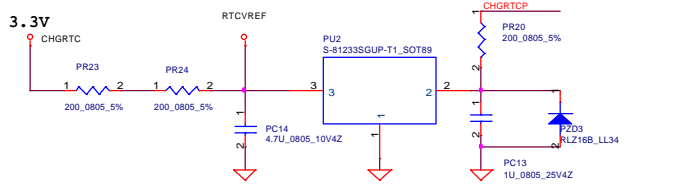
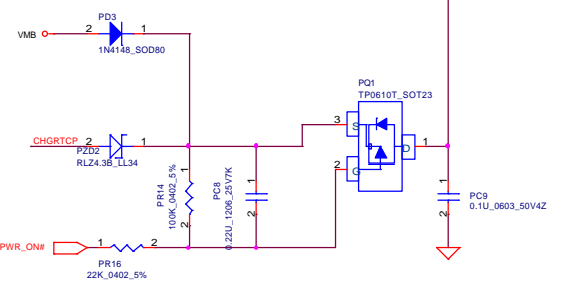
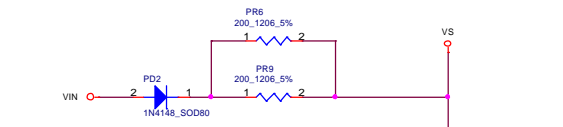
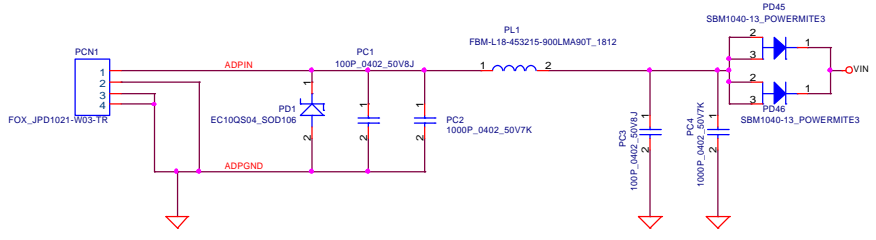
Detector

VIN detector
 17.945 17.343 16.757
 17.372 16.782 16.207



ACIN
Precharge detector
 16.421 15.817 15.229
 14.108 13.657 13.002

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.



Compal Electronics, Inc.		
Title	Detector	
Size	Document Number	Rev
B	LA-1851	0.5
Date:	Thursday, October 16, 2003	Sheet 38 of 50

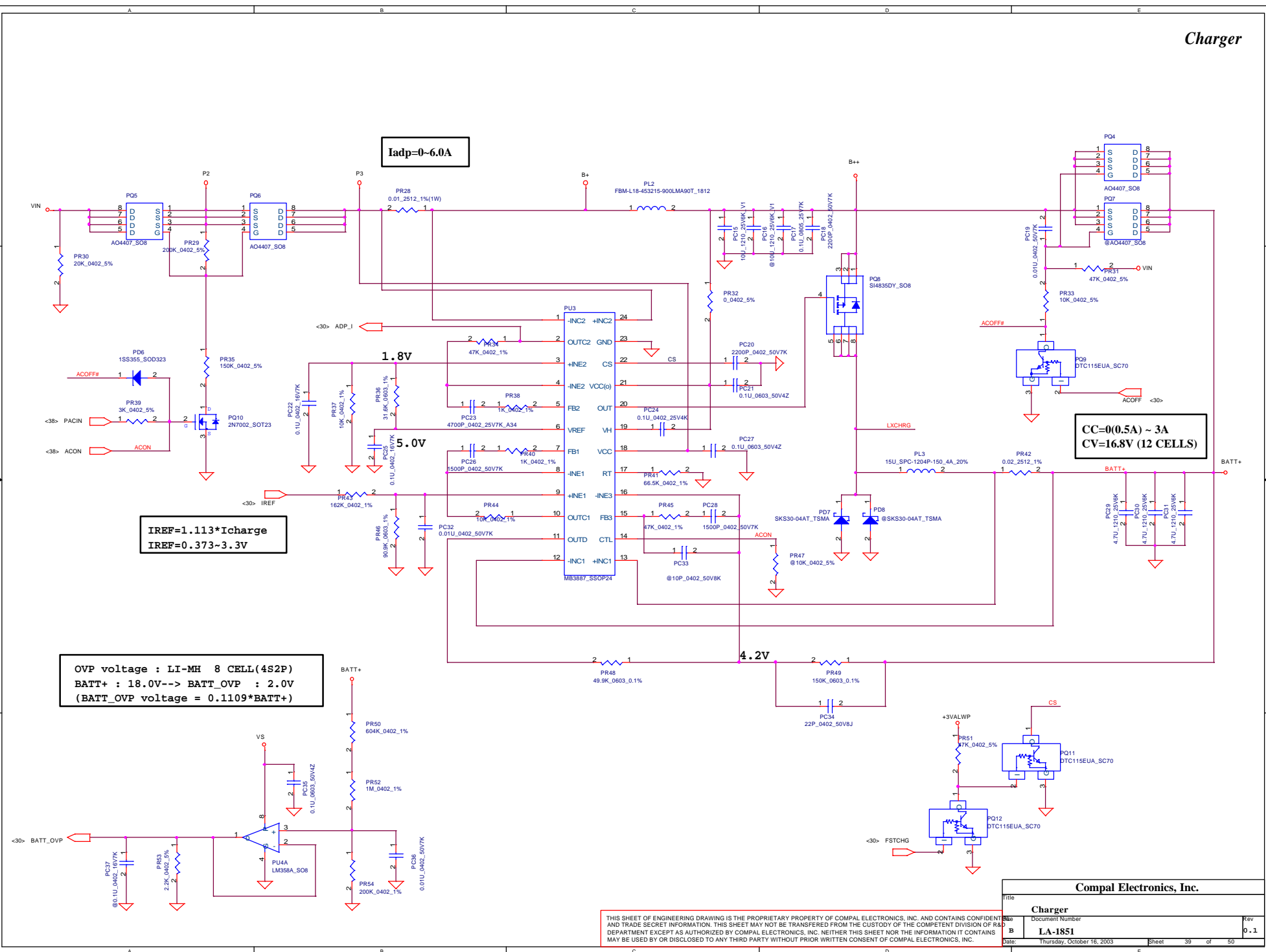
Charger

I_{adp}=0-6.0A

**CC=0(0.5A) ~ 3A
CV=16.8V (12 CELLS)**

**I_{REF}=1.113*I_{charge}
I_{REF}=0.373~3.3V**

**OVP voltage : LI-MH 8 CELL(4S2P)
BATT+ : 18.0V--> BATT_OVP : 2.0V
(BATT_OVP voltage = 0.1109*BATT+)**



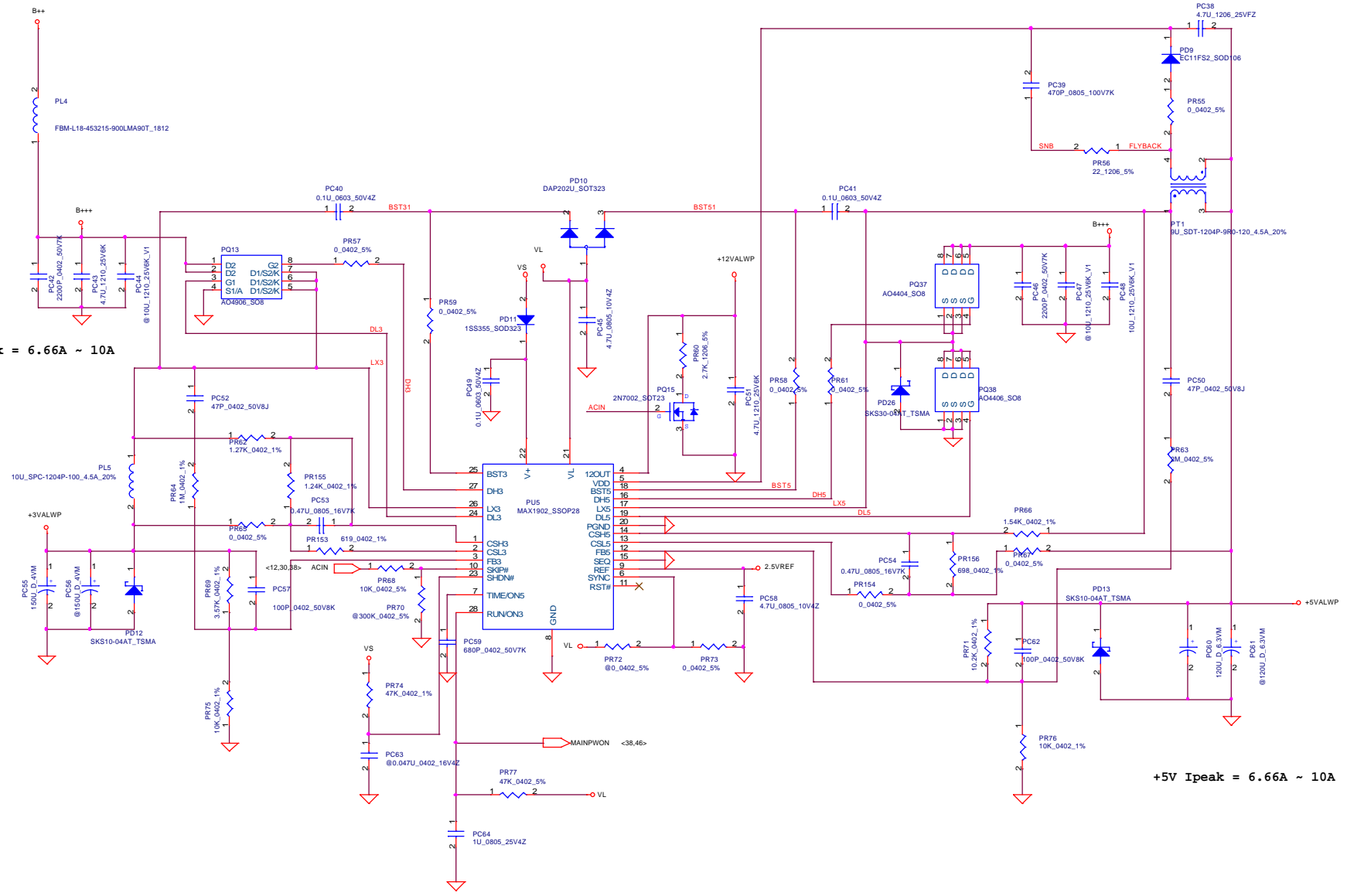
Compal Electronics, Inc.		
Charger		
File	Document Number	Rev
	LA-1851	0.1
Date:	Thursday, October 16, 2003	Sheet 39 of 50

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

+3.3V/+5V/+12V

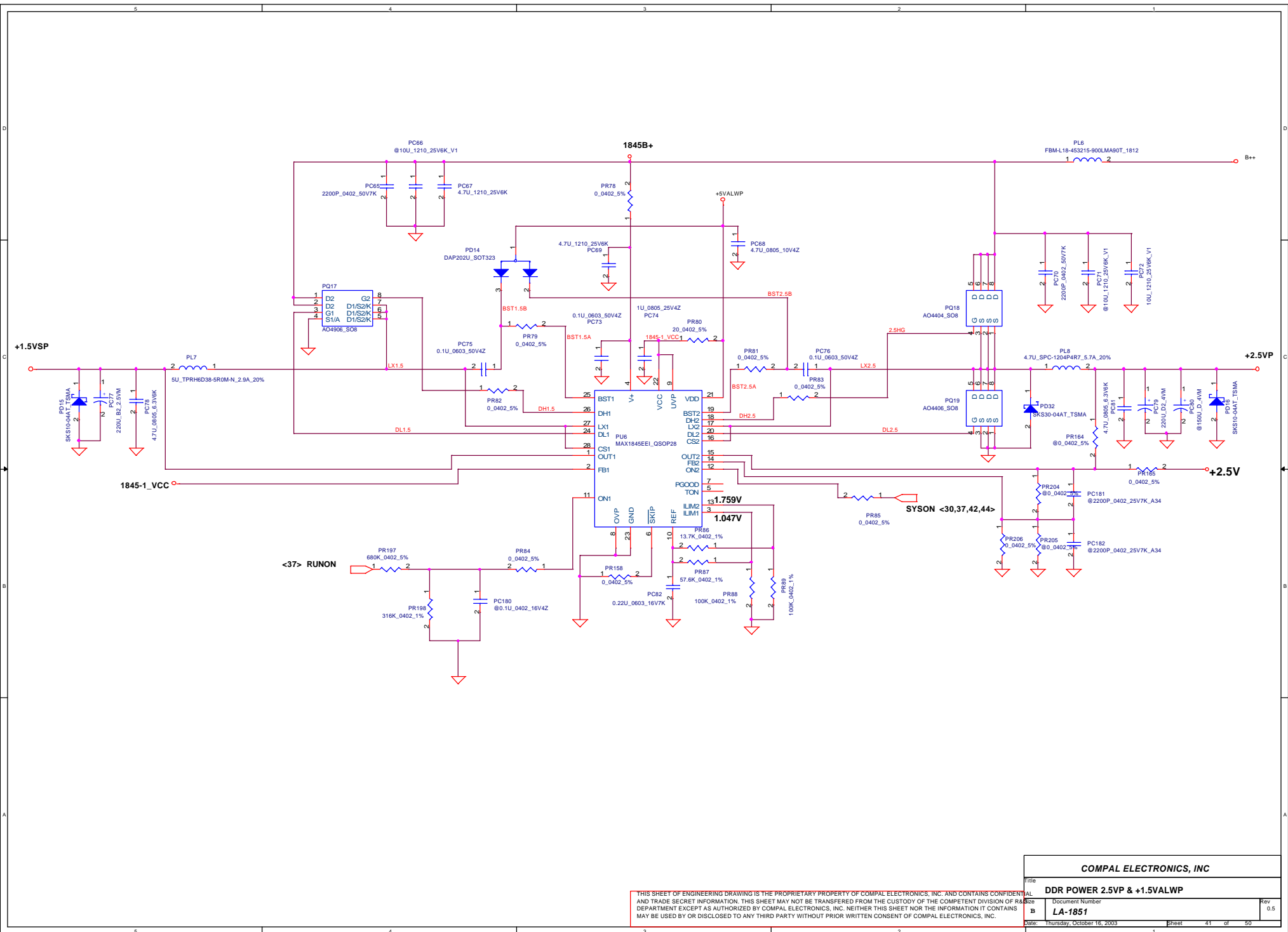
+3.3V Ipeak = 6.66A ~ 10A

+5V Ipeak = 6.66A ~ 10A



Compal Electronics, Inc.	
Title	3.3V / 5V / 12V
Rev	Document Number
B	LA-1851
Date:	Thursday, October 16, 2003
Sheet	40 of 50

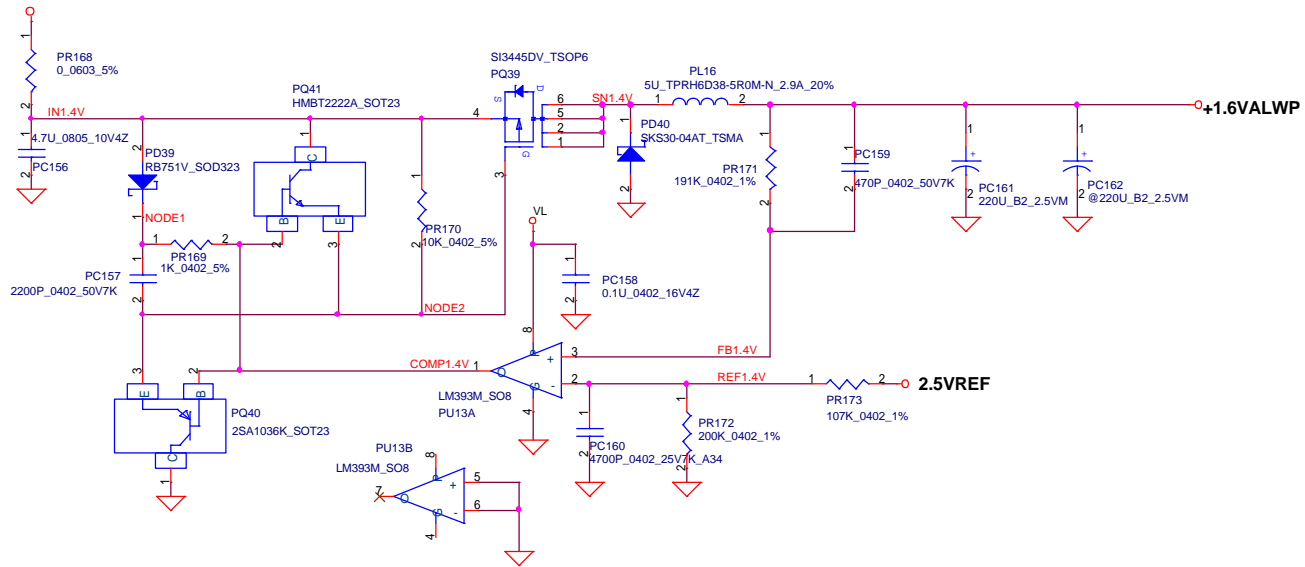
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.



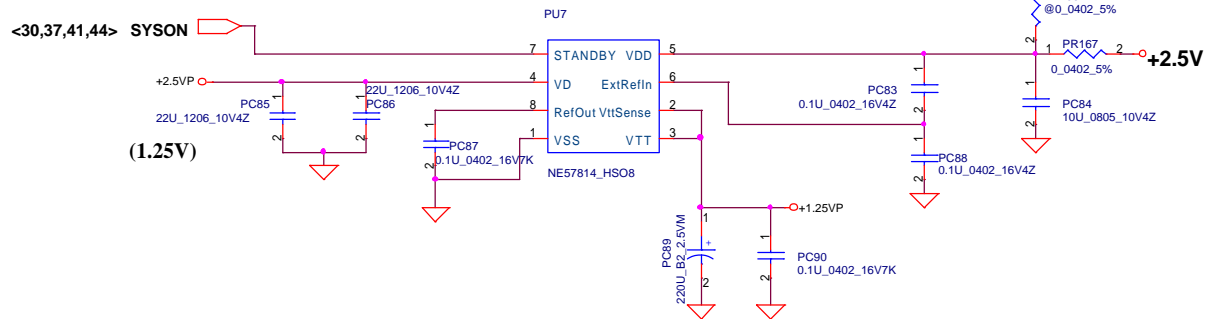
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

COMPAL ELECTRONICS, INC		
File	DDR POWER 2.5VP & +1.5VALWP	
Document Number	LA-1851	
Rev	0.5	
Date	Thursday, October 16, 2003	Sheet 41 of 50

+5VALWP

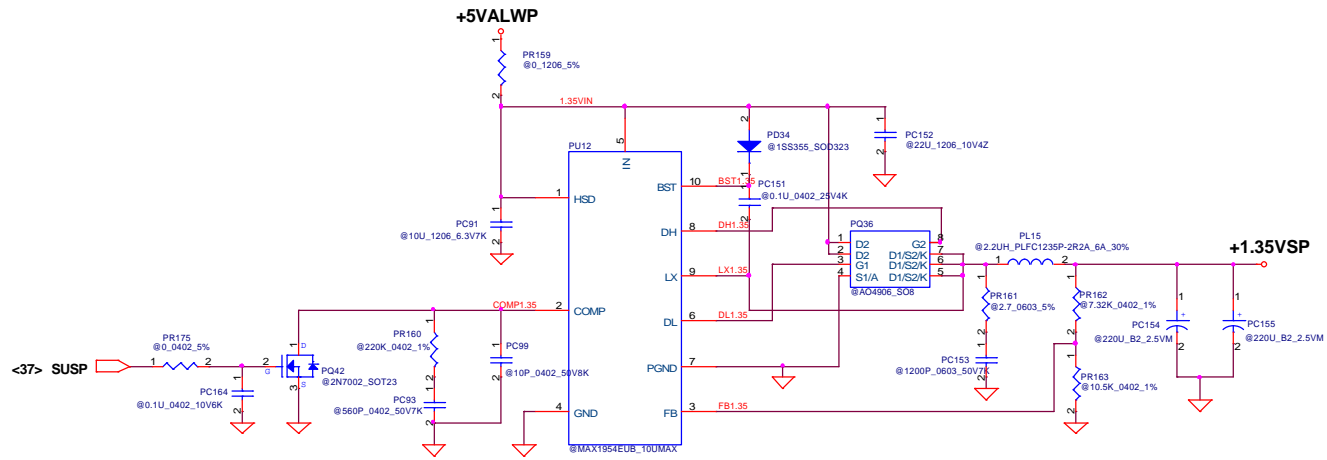
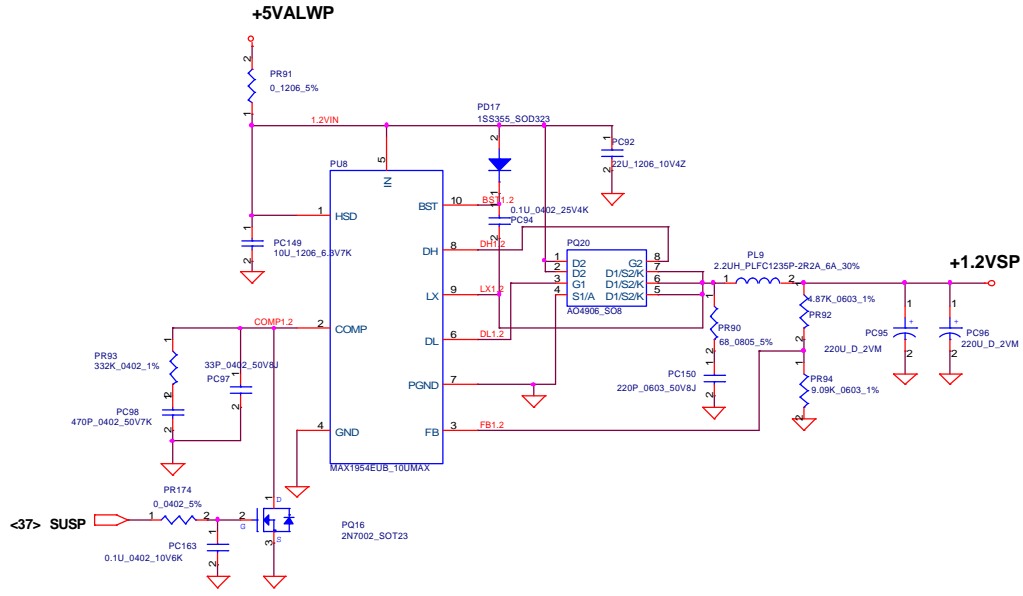


+2.5VP



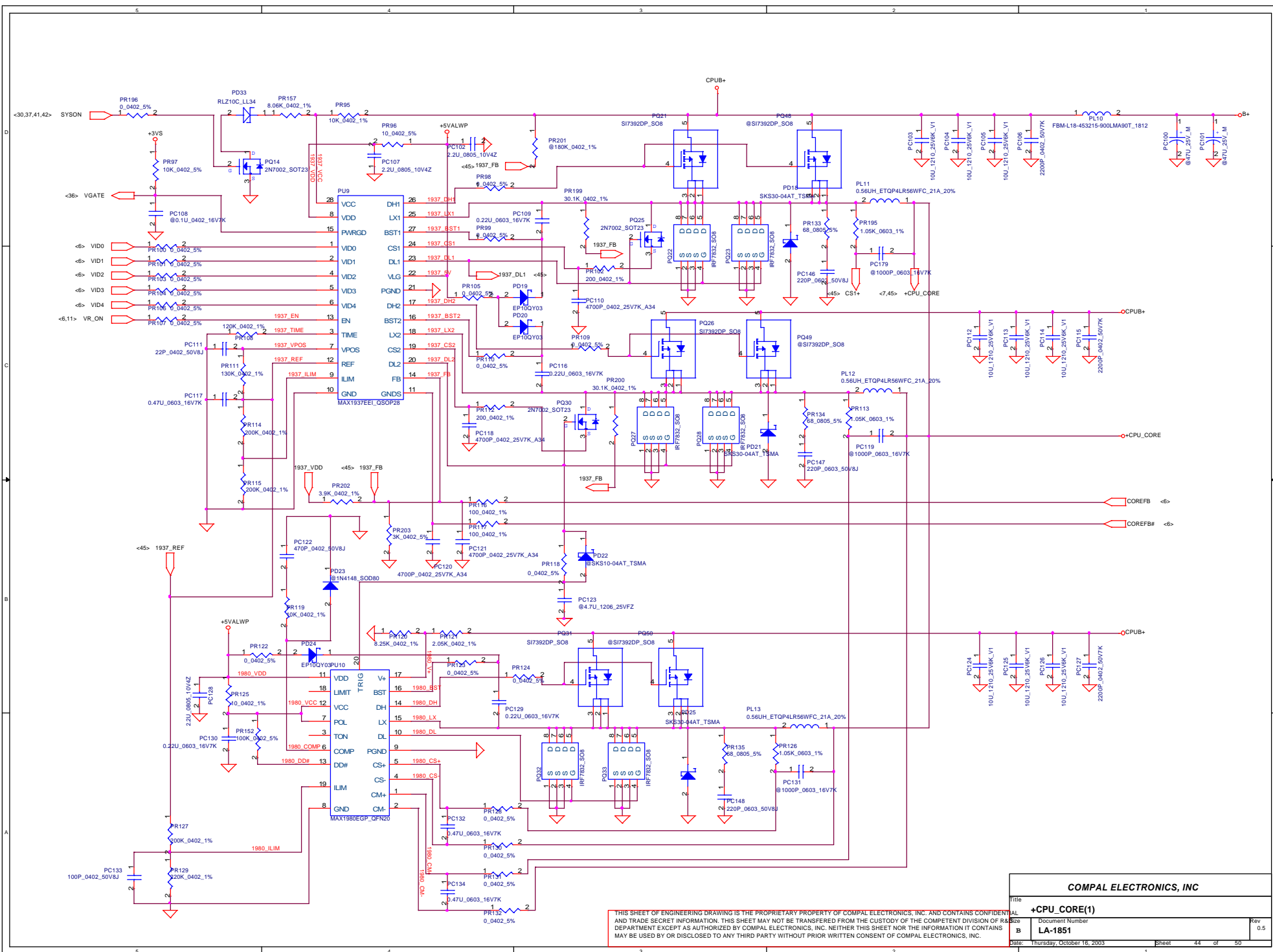
COMPAL ELECTRONICS, INC		
Title		
+1.6VALWP & +1.25VP		
Size B	Document Number LA-1581	Rev 0.5
Date:	Thursday, October 16, 2003	Sheet 42 of 50

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS



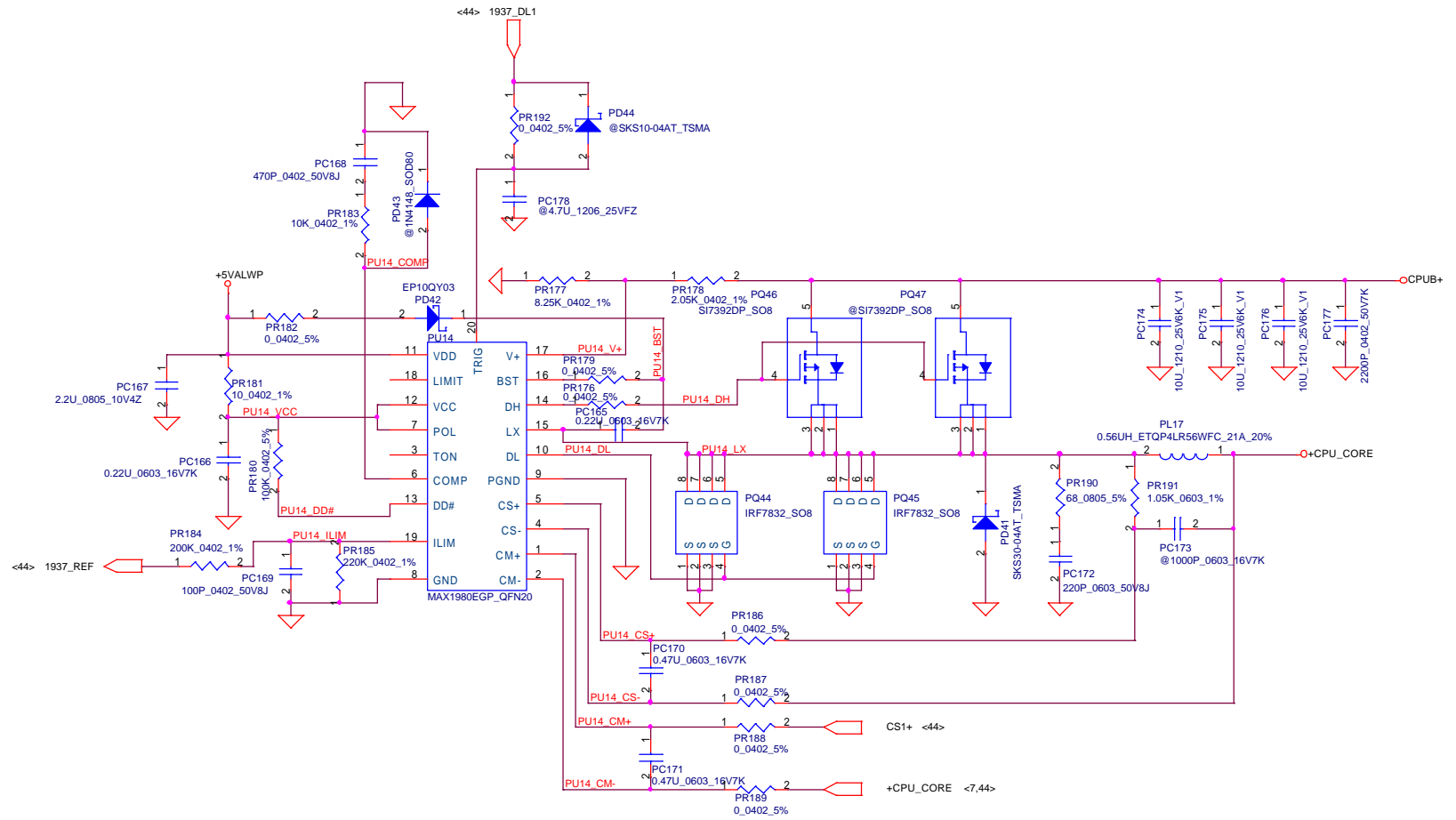
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS

COMPAL ELECTRONICS, INC		
File: 1.25V / VGA_CORE		
Doc No:	Document Number:	Rev: 0.5
Date:	Thursday, October 16, 2003	Sheet: 43 of 50



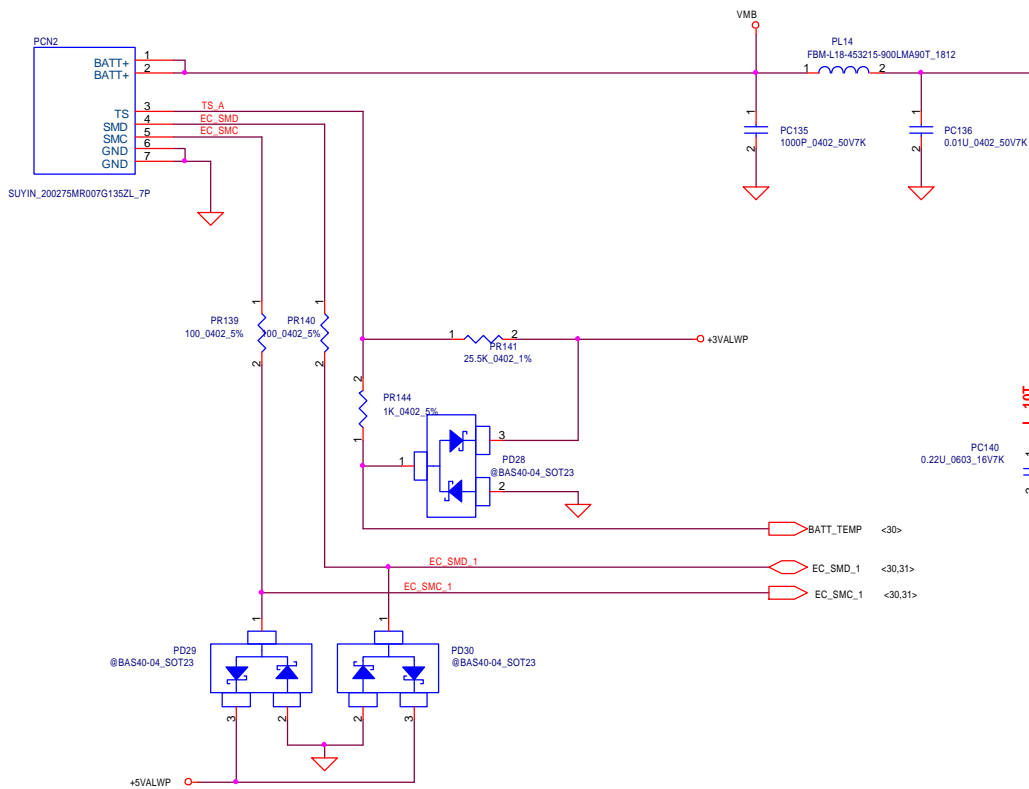
COMPAL ELECTRONICS, INC		
Title: +CPU_CORE(1)		
Document Number: LA-1851		Rev: 0.5
Date: Thursday, October 16, 2003	Sheet: 44	of 50

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF RA&B DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

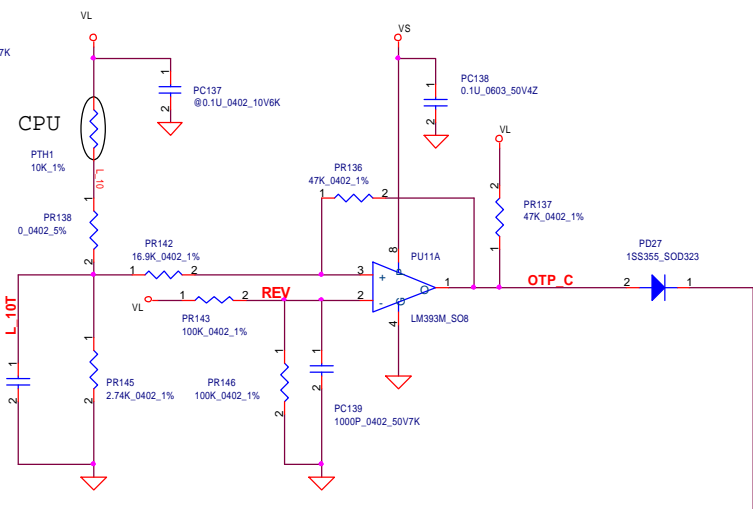


THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

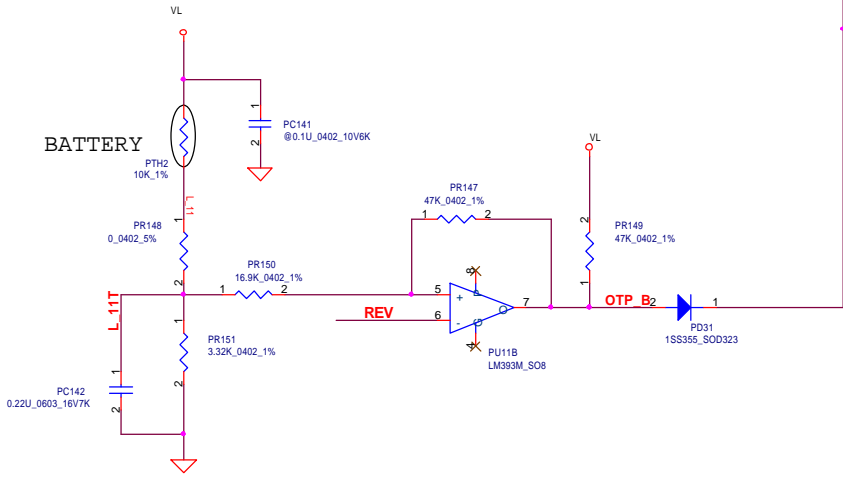
COMPAL ELECTRONICS, INC		
Title		
+CPU_CORE(2)		
Size	Document Number	Rev
	LA-1851	0.5
Date:	Thursday, October 16, 2003	Sheet 45 of 50



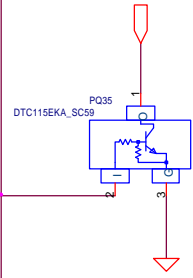
PH1 under CPU botten side :
 CPU thermal protection at 90 +-3 degree C
 Recovery at 50 +-3 degree C



PH2 near main Battery CONN :
 BAT. thermal protection at 84 +-3 degree C
 Recovery at 45 +-3 degree C



<38,40> MAINPWON



COMPAL ELECTRONICS, INC		
Title		
BATTERY CONN / OTP/1.8V		
Size	Document Number	Rev
B	LA-1851	0.1
Date:	Thursday, October 16, 2003	Sheet 46 of 50

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

POWER PIR LIST

PHASE	page	Reason for change	Modify list
DB2	40	Modify 3V / 5V Vout and OCP	Change PR66 from 6.49K_0603_1% to 1.54K_0603_1% Change PR156 from 11.8K_0402_1% to 698_0402_1% Change PR154 from 4.12K_0603_1% to 0_0603_5% Change PC54, PC53 from 0.1U_0805_25V7K to 0.47U_0805_25V4Z Change PR62 from 5.76K_0603_1% to 1.27K_0603_1% Change PR155 from 27K_0603_1% to 1.24K_0603_1% Change PR153 from 4.7K_0402_1% to 619_0402_1%
	44,45	For CPU_CORE thermal issue	Change PQ21, PQ26, PQ31, PQ46 From IRLR7821 to SI7392DP Delete PD23, PD43, SC11N4148T8
	42	For 1.6V voltage accuracy	Change PR173 from 113K_0402_1% to 107K_0402_1%
	42	For layout pad issue	Change PC85, PC86 from 22U_1210_10V4Z to 22U_1206_10V4Z
	41	For power sequence setting	Add PR197, 680K_0603_1% Add PR198, 316K_0603_1%
	38	For solving cable dock shutdown issue	Add PD45, SKS80-04CT
SI	38	For thermal issue	Change PD45 from SKS80-04CT to SBM1040
	38	Change VIN detector sensing point because of DOCK issue	Change PR2 from 174k_0603_1% to 150k_0603_0.1% Change PR7 from 75k_0402_1% to 66.5k_0402_1%
	39	Improvement noise issue	
	41	Modify 2.5V / 1.5V OCP	Change PR87 from 24.9k_0402_1% to 57.6k_0402_1% Change PR88 from 0_0603_1% to 13.7k_0402_1% Add PR89, 100k_0402_1%
	43	VGA with 32M VRAM	Remove 1.35V regulator that is for VGA with 64M VRAM
	44,45	Modify CPU_CORE current balance issue	Change the connection of PC122 and PC168 from 14 pin of PU9 to ground. Remove PD22 and PD44.
PV	38	Improve the VIN detector accuracy.	Change PR1, PR2, PR5, PR7, PC6, and re-connect the reference voltage that is VL connected to PR10 to RTC charger output.
	39	Improve the accuracy of Constant Voltage mode of charger.	Change PR48, PR49
	41	reserve devices for the adjustment of 2.5V	Add PR204, PR205, PR206, PC181, PC182
	44	Improve the transient response	Add PR203, PC111, and remove PR202

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

COMPAL ELECTRONICS, INC		
Title		
PIR		
Size	Document Number	Rev
	LA-1851	0.5
Date:	Thursday, October 16, 2003	Sheet 47 of 47

Version change list (P.I.R. List)

Item	Fixed Issue	Reason for change	PAGE	Modify List	M.B. Ver.
1		Fixed USB 1.1 rising/falling time error	P12	Delete C785, C786, C787, C788, C789, & C790	0.3
2		Fixed TV-out no display	P14	Swap TV_CRMA and TV_COMPS	0.3
3		Prevent PCI1620 latched up	P22	Reserve G_RST# to pin U37.C11	0.3
4		Design change (solve for HR60 audio issue)	P26	Move two load resistors from sub-board to M/B and swap JP17.2 and JP17.3	0.3
5		Supported wake up from TP	P27	Change TP connector JP26's power pin from +5VS to +5V	0.3
6		EMI required (solve for 48 MHz noise from FDD connector)	P32	Add CP11, CP12, CP13, and C801	0.3
7		Design change (TFDU6102 design guide)	P33	Delete C560 and C562 & add R586 Change C561 from 10uf to 4.7uf	0.3
8		EMI required (solve for 48 MHz noise from serial port)	P34	Add CP14, and CP15	0.3
9		ID required (for Pavillion)	P35	Add D58	0.3
10		EMI required	P25	Add L38, and L39	0.3
11		Add bypass cap. to solve for AC97 link cross a split plane	P27	Add C802, C803, C804, C805, and C806	0.3
12		Design change (reserve space for power placement and no need too many caps.)	P07	Delete C75, and C88	0.3
13		RealTech 8101L design guide	P20	Change R194 to 5.6K +/- 1%	0.3
14		Solve for SPDIF no output	P34	Delete C634	0.3
15		CPU_CLK is current drive from CK8. So, delete damping resistors.	P11	Change R69, and R70 from 15 ohm to 0 ohm	0.3
16		Solve for burst frequency error	P14	Change C642, and C643 from 18 pF to 22 pF	0.3
17		Solve for chrominance and burst level	P18	Change L11, L12, and L13 to 1.8uH	0.3

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.

P.I.R HISTORY

Document Number	Rev
LA-1851	0.5
Date: Thursday, October 16, 2003	Sheet 48 of 50

Version change list (P.I.R. List)

Item	Fixed Issue	Reason for change	PAGE	Modify List	M.B. Ver.
1		AMD change Tdiode spec up to 127 degree	P4	Change U3 from MAX6649 to ADM1032	0.4
2		Support wake from Lan	P20	Populate R188	0.4
3		To avoid PCI1620 unknow action	P22	Reserve R591	0.4
4		To restrain audio noise	P25	Change R267 pull up to +5VAMP_CODEEC, and delete C626	0.4
5		USB_OC# high should be between 2.5V to 5.5V	P27	Change R310 and R315 to 10K / R314 and R319 to 20K	0.4
6		To detect FIR	P29	Add R592 and R593	0.4
7		TP should be pull up to +5V	P30	RP80 pull up to +5V	0.4
8		In order to compatible with NS97551 -- changing pin87 - 90 to GPIO	P30	BID routed from pin88 to pin82	0.4
9		In order to compatible with NS97551 -- removing +RTCVCC	P30	Add R594 and R595	0.4
10		To prevent noise generated from FAN to +5VS cause audio noise while shut down	P4	Delete D1 and D3 / add C3, C8, C612, and C614	0.4
11		Solve for PCI1620 working abnormal -- fine tune G_RST# timing	P22	Populate R587, delete R225, C410	0.4
12		Double mount issue, already exist at audio board.	P30	Delete D28 and D29	0.4
13		Fast power on for battery only	P33	Change R392 from 100K to 4.7K	0.4
14		Presario LED color should be amber	P35	Change D39, D40, D42, D44, and D45 from XX_GRN to XX_ORG	0.4
15		To develop S19182 max effect	P25	Change C438 from 0.01UF to 0.1UF	0.4
16		For EMI	P26	Add L40, L41, L42, and L43 / delete C473, C474, C475, and C476	0.4
17		For VGA HSYNC/VSYNC average peak to peak issue	P18	Add R159 and R160	0.4
18		For 512MB non-JEDEC module (16 chips)	P9	Change RP42, RP46, and R481 from 68 Ohm to 47 Ohm	0.4

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.	
P.I.R HISTORY	
Document Number	Rev
LA-1851	0.5
Date: Thursday, October 16, 2003	Sheet 49 of 50

Version change list (P.I.R. List)

Item	Fixed Issue	Reason for change	PAGE	Modify List	M.B. Ver.
1		To use the same source as HR60	P4	Change U3 footprint to SOP8	0.5
2		To reset CK8 while boot up control by EC	P12	Add R97 to link EC_RSMRST# and PWRGD_SB	0.5
3		For EMI	P15	Change C648, C672, C685, C696, C699, C763, and C656 to 1000P Change C651, C673, C686, C697, C700, C764, C654, C733, C710, C730, C706, and C724 to 10P	0.5
4		To solve voltage level of HSYNC and VSYNC is over spec	P18	Add U46 and U47, and R596, R597, and R598 on CRT_HSYNC and CRT_VSYNC	0.5
5		Solve for data lost while transfer data from LAN	P20	Change U9 from NS0013 to NS0019	0.5
6		TI recommendation --- avoid unknow state while initiate	P22	Populate R591	0.5
7		Mechanical restricted area	P25	R263 and R264 change footprint to R_0402	0.5
8		For EMI	P25	L39 and R293 change to CHB1608U301_0402	0.5
9		For EMI	P26	L40, L41, L42, and L43 change to KC FBM-L11-201209-221LMAT_0805	0.5
10		nVIDIA recommendation for WOR	P27	Add U48, C807, R599, and R600	0.5
11		Due to MD_SPK is no longer use, so prevent input pin floating.	P25	Delete R287 and change R288 to 0_0402_5%. Also add C808.	0.5

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.	
P.I.R HISTORY	
Document Number	Rev
LA-1851	0.5
Date	Sheet
Thursday, October 16, 2003	50 of 50