

# ***BTQ00 Rev0.1 Schematics Document***

**Intel Prescott uFCPGA-478 / P4 Northwood**

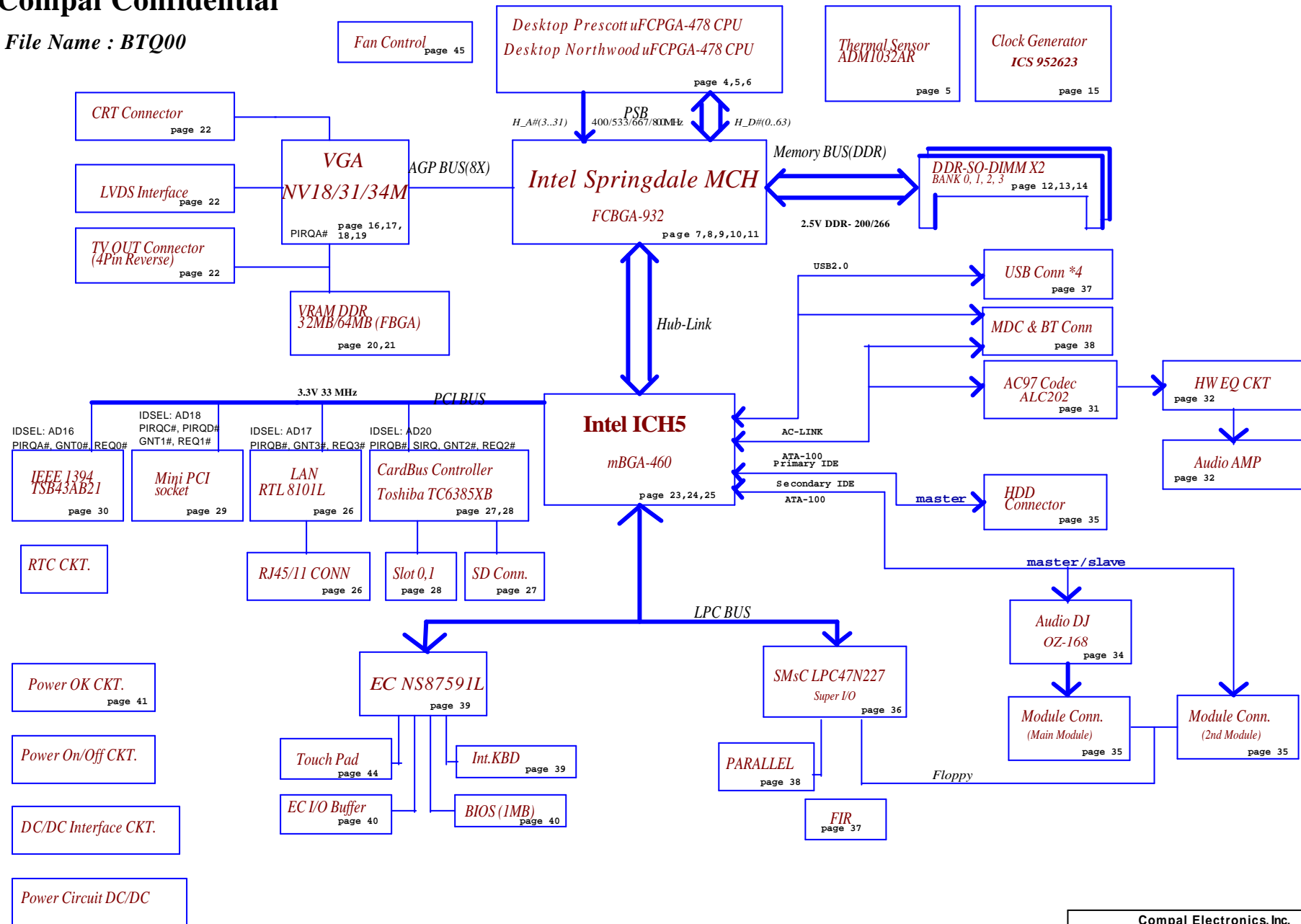
**with Springdale / ICH5 / nVIDIA NV18/34/31M chipset**

**2003/02/20**

Compal Electronics, Inc.			
Title			
Cover Sheet			
Size B	Document Number LA-1841		Rev 0.1
Date	Thursday, February 20, 2003		Sheet 1 of 57

# Compal Confidential

File Name : BTQ00



## Voltage Rails

Power Plane	Description	S1	S3	S5
VIN	Adapter powersupply(19V)	N/A	N/A	N/A
B+	AC or battery power rail for power circuit	N/A	N/A	N/A
+CPU_CORE	Core voltage for CPU	ON	OFF	OFF
+CPU_VID	1.2V switched power rail for CPU AGTL Bus	ON	OFF	OFF
+VTT_GMCH	+1.225V (Prescott) / +1.45V (Northwood)	ON	OFF	OFF
+VGA_CORE	1.2V switched power rail for VGA chip	ON	OFF	OFF
+1.25VS	1.25V switched power rail	ON	OFF	OFF
+1.5VS	AGP 4X/8X	ON	OFF	OFF
+2.5V	2.5V power rail	ON	ON	OFF
+2.5VS	2.5V switched power rail	ON	OFF	OFF
+3VALW	3.3V always on power rail	ON	ON	ON*
+3V	3.3V power rail	ON	ON	OFF
+3VS	3.3V switched power rail	ON	OFF	OFF
+5VALW	5V always on power rail	ON	ON	ON*
+5V	5V power rail	ON	ON	OFF
+5VS	5V switched power rail	ON	OFF	OFF
+12VALW	12V always on power rail	ON	ON	ON*
+RTC_VCC	RTC power	ON	ON	ON

Note : ON\* means that this power plane is ON only with AC power available, otherwise it is OFF.

## External PCI Devices

Device	IDSEL#	REQ#GNT#	Interrupts
VGA			PIRQA
CardBus	AD20	2	PIRQA/PIRQB
LAN	AD17	3	PIRQB
Mini-PCI	AD18	1/4	PIRQC/PIRQD
1394	AD16	0	PIRQA
SD	AD22		

## EC SM Bus1 address

Device	Address	Device	Address
Smart Battery	0001 011X b	ADM1032	1001 110X b
EEPROM(24C1602)	1010 000X b	OZ168	0011 0100 b
(24C04)	1011 000Xb		

## EC SM Bus2 address

## ICH4 SM Bus address

Device	Address
Clock Generator (ICS 952623)	1101 001Xb
DDR DIMM0	1001 000Xb
DDR DIMM1	1001 001Xb

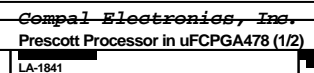
STATE \ SIGNAL	SLP_S1#	SLP_S3#	SLP_S4#	SLP_S5#	+VALW	+V	+VS	Clock
Full ON	HIGH	HIGH	HIGH	HIGH	ON	ON	ON	ON
S1 (Power On Suspend)	LOW	HIGH	HIGH	HIGH	ON	ON	ON	LOW
S3 (Suspend to RAM)	LOW	LOW	HIGH	HIGH	ON	ON	OFF	OFF
S4 (Suspend to Disk)	LOW	LOW	LOW	HIGH	ON	OFF	OFF	OFF
S5 (Soft OFF)	LOW	LOW	LOW	LOW	ON	OFF	OFF	OFF

## Board ID Table for AD channel

Vcc	3.3V +/- 5%			
Ra	100K +/- 5%			
Board ID	Rb	VAD_BID min	VAD_BID typ	VAD_BID max
0	0	0 V	0 V	0 V
1	8.2K +/- 5%	0.216 V	0.250 V	0.289 V
2	18K +/- 5%	0.436 V	0.503 V	0.538 V
3	33K +/- 5%	0.712 V	0.819 V	0.875 V
4	56K +/- 5%	1.036 V	1.185 V	1.264 V
5	100K +/- 5%	1.453 V	1.650 V	1.759 V
6	200K +/- 5%	1.935 V	2.200 V	2.341 V
7	NC	2.500 V	3.300 V	3.300 V

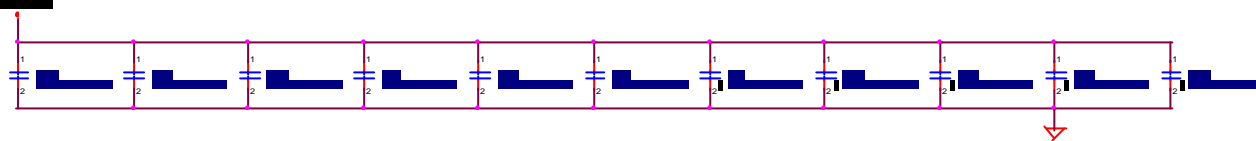
Board ID	PCB Revision
0	0.1
1	
2	
3	
4	
5	
6	
7	

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Title			
Notes			
Size B	Document Number	Rev	
	LA-1841	0.1	
Date:	Thursday, February 20, 2003	Sheet	3 of 57



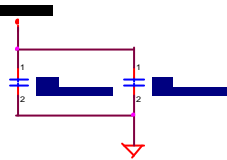
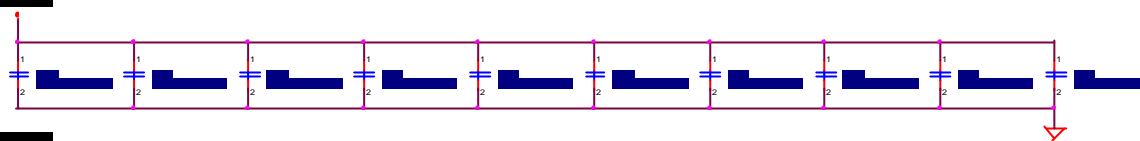
LA-1841

Place 11 North of Socket(Stuff 8)

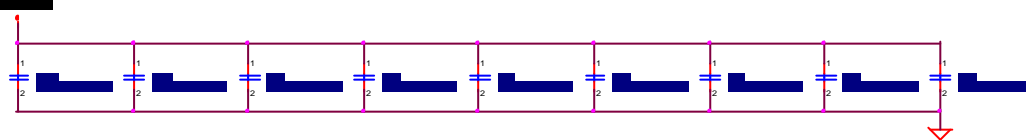


22uF depop reference  
Springdale Customer Schematic R1.2 page82

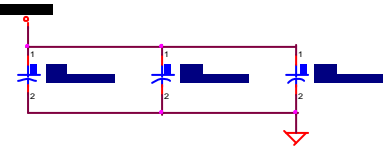
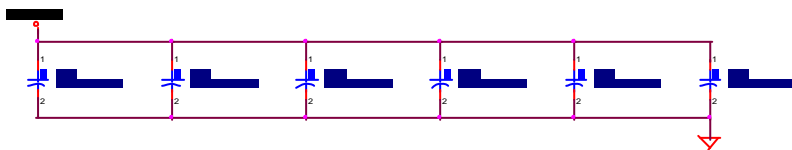
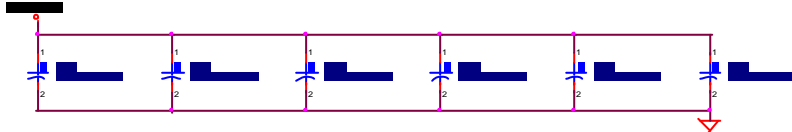
Place 12 Inside Socket(Stuff all)



Place 9 South of Socket(Unstuff all)



470uF \_ERS10m ohm\* 15, ESR=0.5m ohm



Decoupling Reference Document:  
Springdale Chipset Platform Design guide Rev1.11  
(12474)page239

Decoupling Reference Requirement:  
560uF Polymer, ESR:5m ohm(each) \* 10  
22uF X5R \* 32

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**CPU Decoupling**

LA-1841

Size B	Document Number <b>LA-1841</b>	Rev 0.1
Date: Thursday, February 20, 2003	Sheet 7 of 57	

12,14 DDRA\_SMA[0..12]

DDRA\_SMA[0..12]

U36B

DDRA\_SMA0 AJ34 SMAA\_A0  
DDRA\_SMA1 AL33 SMAA\_A1  
DDRA\_SMA2 AK26 SMAA\_A2  
DDRA\_SMA3 AN31 SMAA\_A3  
DDRA\_SMA4 AL30 SMAA\_A4  
DDRA\_SMA5 AL26 SMAA\_A5  
DDRA\_SMA6 AL28 SMAA\_A6  
DDRA\_SMA7 AN25 SMAA\_A7  
DDRA\_SMA8 AP26 SMAA\_A8  
DDRA\_SMA9 AP24 SMAA\_A9  
DDRA\_SMA10 AJ33 SMAA\_A10  
DDRA\_SMA11 AN23 SMAA\_A11  
DDRA\_SMA12 AN21 SMAA\_A12

SMAB\_A1  
SMAB\_A2  
SMAB\_A3  
SMAB\_A4  
SMAB\_A5

12,14 DDRA\_SWE#  
12,14 DDRA\_SCAS#  
12,14 DDRA\_SRAS#

SWE\_A#  
SCAS\_A#  
SRAS\_A#

12,14 DDRA\_SBS0  
12,14 DDRA\_SBS1

SBA\_A0  
SBA\_A1

12,14 DDRA\_SCS#0  
12,14 DDRA\_SCS#1

SCS\_A0#  
SCS\_A1#

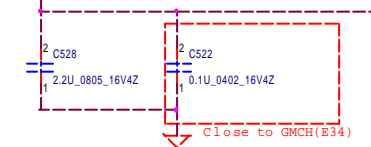
12,14 DDRA\_CKE0  
12,14 DDRA\_CKE1

SCKE\_A0  
SCKE\_A1

12 DDRA\_CLK1  
12 DDRA\_CLK1#  
12 DDRA\_CLK2  
12 DDRA\_CLK2#

SCMDCLK\_A0  
SCMDCLK\_A1#  
SCMDCLK\_A2  
SCMDCLK\_A3#

+SM\_VREF\_A  
+SM\_VREF\_A trace width of 12mils and space 12mils(min)



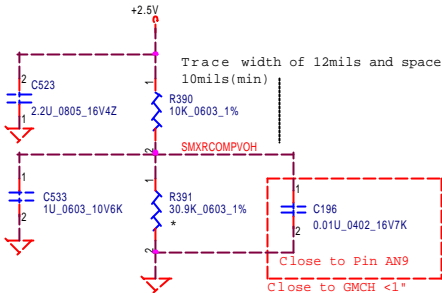
SMVREF\_A  
SMXRCOMP  
SMXRCOMPVOH  
SMXRCOMPVOL

DDR Channel A

SDQS\_A0 AN11 DDRA\_SDO0 12,14  
SDM\_A0 AP12 DDRA\_SDM0 12,14  
SDQ\_A0 AP10 DDRA\_SDO0  
SDQ\_A1 AM12 DDRA\_SDO2  
SDQ\_A2 AN13 DDRA\_SDO3  
SDQ\_A3 AM10 DDRA\_SDO4  
SDQ\_A4 AL10 DDRA\_SDO5  
SDQ\_A5 AL12 DDRA\_SDO6  
SDQ\_A6 AP13 DDRA\_SDO7  
SDQ\_A7  
SDQS\_A1 AP16 DDRA\_SDO8 12,14  
SDM\_A1 AP16 DDRA\_SDM1 12,14  
SDQ\_A8 AP14 DDRA\_SDO8  
SDQ\_A9 AL18 DDRA\_SDO10  
SDQ\_A10 AP19 DDRA\_SDO11  
SDQ\_A11 AL14 DDRA\_SDO12  
SDQ\_A12 AN15 DDRA\_SDO13  
SDQ\_A13 AP18 DDRA\_SDO14  
SDQ\_A14 AM16 DDRA\_SDO15  
SDQ\_A15  
SDQS\_A2 AP23 DDRA\_SDO16 12,14  
SDM\_A2 AM24 DDRA\_SDM2 12,14  
SDQ\_A16 AP22 DDRA\_SDO16  
SDQ\_A17 AM22 DDRA\_SDO17  
SDQ\_A18 AL24 DDRA\_SDO18  
SDQ\_A19 AN27 DDRA\_SDO19  
SDQ\_A20 AL22 DDRA\_SDO20  
SDQ\_A21 AP25 DDRA\_SDO21  
SDQ\_A22 AP27 DDRA\_SDO22  
SDQ\_A23  
SDQS\_A3 AM30 DDRA\_SDO23 12,14  
SDM\_A3 AP30 DDRA\_SDM3 12,14  
SDQ\_A24 AP28 DDRA\_SDO24  
SDQ\_A25 AP29 DDRA\_SDO25  
SDQ\_A26 AM33 DDRA\_SDO26  
SDQ\_A27 AN29 DDRA\_SDO27  
SDQ\_A28 AM28 DDRA\_SDO28  
SDQ\_A29 AN31 DDRA\_SDO29  
SDQ\_A30 AM34 DDRA\_SDO30  
SDQ\_A31  
SDQS\_A4 AF34 DDRA\_SDO31 12,14  
SDM\_A4 AF31 DDRA\_SDM4 12,14  
SDQ\_A32 AH32 DDRA\_SDO32  
SDQ\_A33 AG34 DDRA\_SDO33  
SDQ\_A34 AF32 DDRA\_SDO34  
SDQ\_A35 AD32 DDRA\_SDO35  
SDQ\_A36 AH31 DDRA\_SDO36  
SDQ\_A37 AG33 DDRA\_SDO37  
SDQ\_A38 AE34 DDRA\_SDO38  
SDQ\_A39 AD34 DDRA\_SDO39  
SDQS\_A5 V34 DDRA\_SDO40 12,14  
SDM\_A5 W33 DDRA\_SDM5 12,14  
SDQ\_A40 AC34 DDRA\_SDO40  
SDQ\_A41 AB31 DDRA\_SDO41  
SDQ\_A42 V32 DDRA\_SDO42  
SDQ\_A43 V31 DDRA\_SDO43  
SDQ\_A44 AD31 DDRA\_SDO44  
SDQ\_A45 AB22 DDRA\_SDO45  
SDQ\_A46 U34 DDRA\_SDO46  
SDQ\_A47 U33 DDRA\_SDO47  
SDQS\_A6 M32 DDRA\_SDO48 12,14  
SDM\_A6 M34 DDRA\_SDM6 12,14  
SDQ\_A48 T34 DDRA\_SDO48  
SDQ\_A49 K32 DDRA\_SDO49  
SDQ\_A50 K34 DDRA\_SDO50  
SDQ\_A51 K32 DDRA\_SDO51  
SDQ\_A52 T31 DDRA\_SDO52  
SDQ\_A53 P34 DDRA\_SDO53  
SDQ\_A54 L34 DDRA\_SDO54  
SDQ\_A55 L33 DDRA\_SDO55  
SDQS\_A7 H31 DDRA\_SDO56 12,14  
SDM\_A7 H32 DDRA\_SDM7 12,14  
SDQ\_A56 J33 DDRA\_SDO56  
SDQ\_A57 H34 DDRA\_SDO57  
SDQ\_A58 E33 DDRA\_SDO58  
SDQ\_A59 K31 DDRA\_SDO59  
SDQ\_A60 I34 DDRA\_SDO60  
SDQ\_A61 G34 DDRA\_SDO61  
SDQ\_A62 G34 DDRA\_SDO62  
SDQ\_A63 F34 DDRA\_SDO63

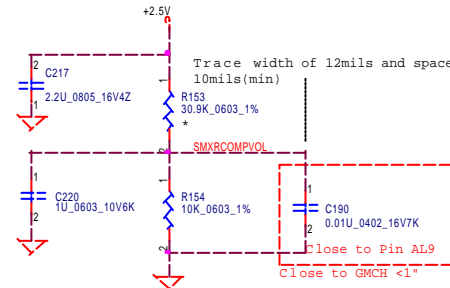
DDRA\_SDQ[0..63]

DDRA\_SDQ[0..63] 12,14



\* Change to 31.12K

Follow Intel design guide  
R1.1 (12474) page 124,125



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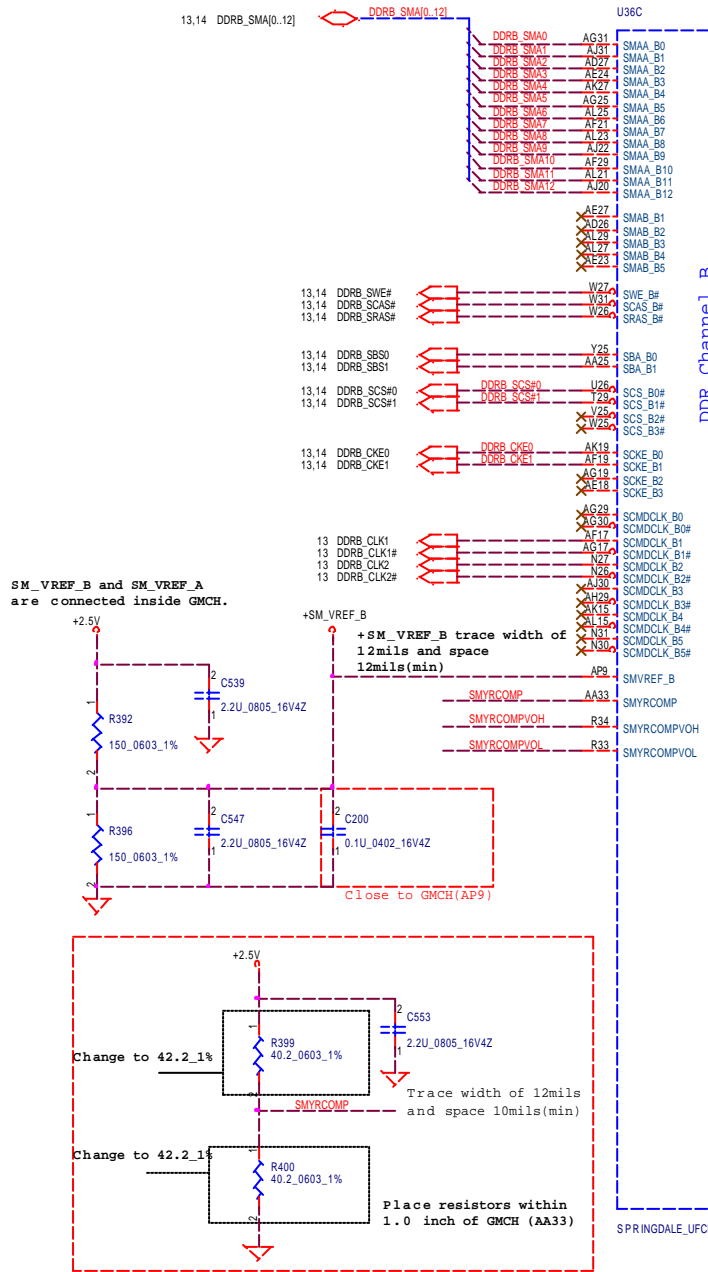
Springdale-DDR Interface-A(2/5)

LA-1841

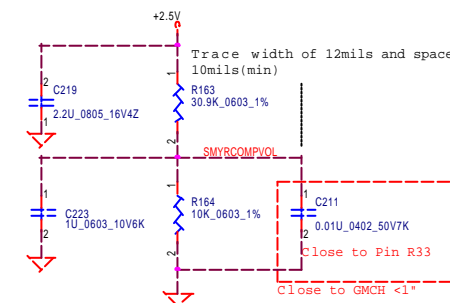
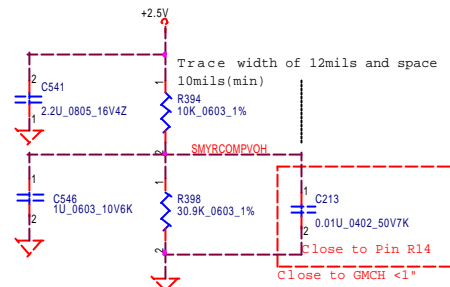
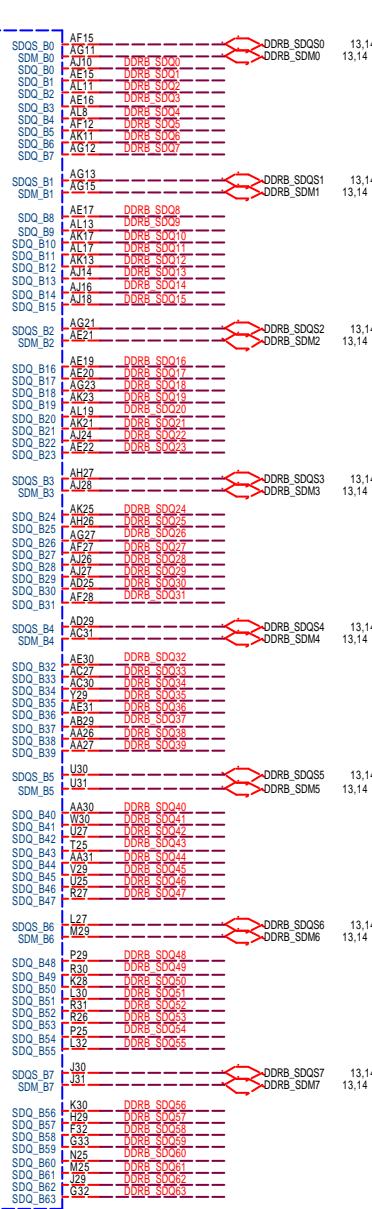
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Size B Document Number  
Date: Thursday, February 20, 2003 Sheet 8 of 57



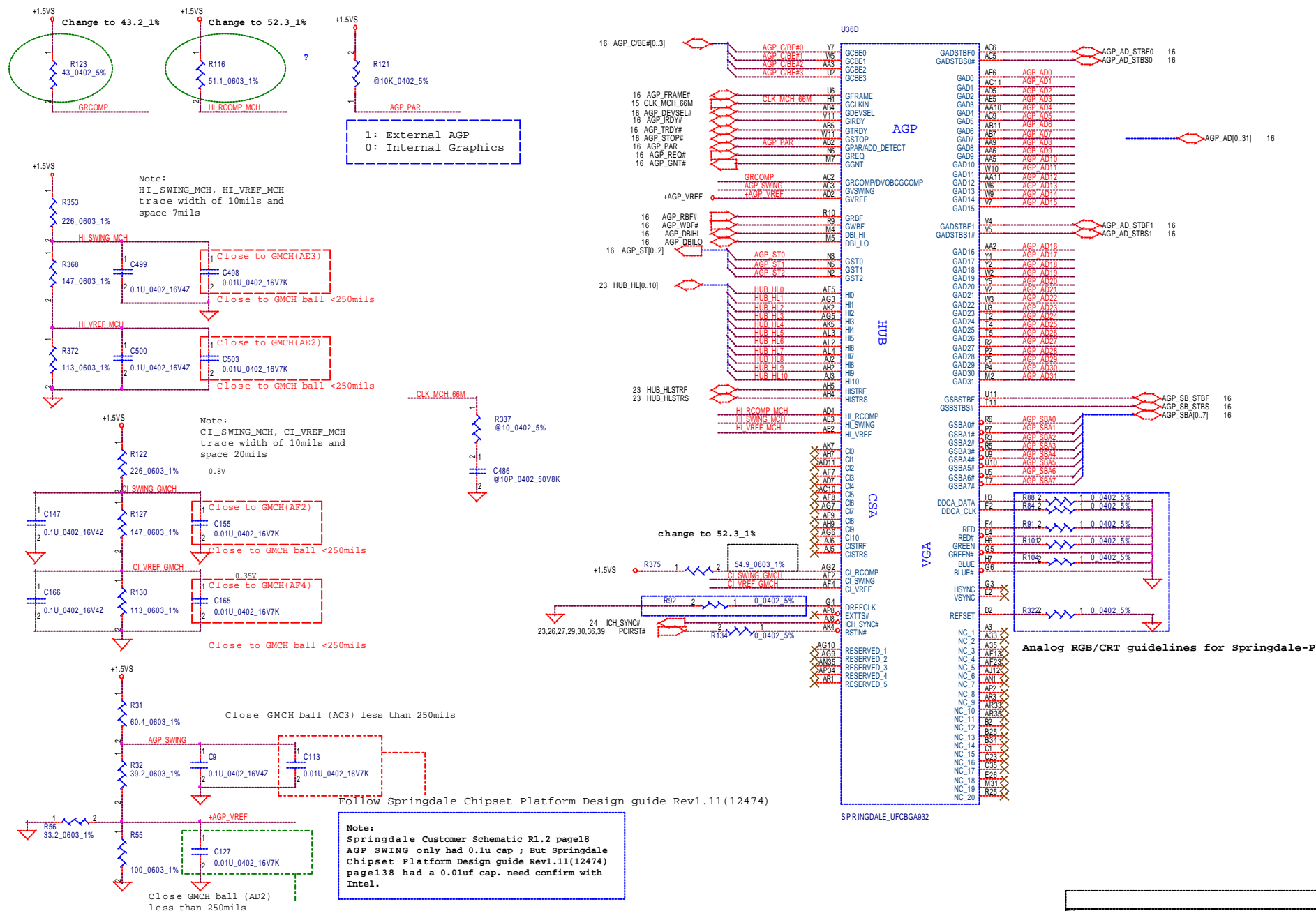


DDR Channel B



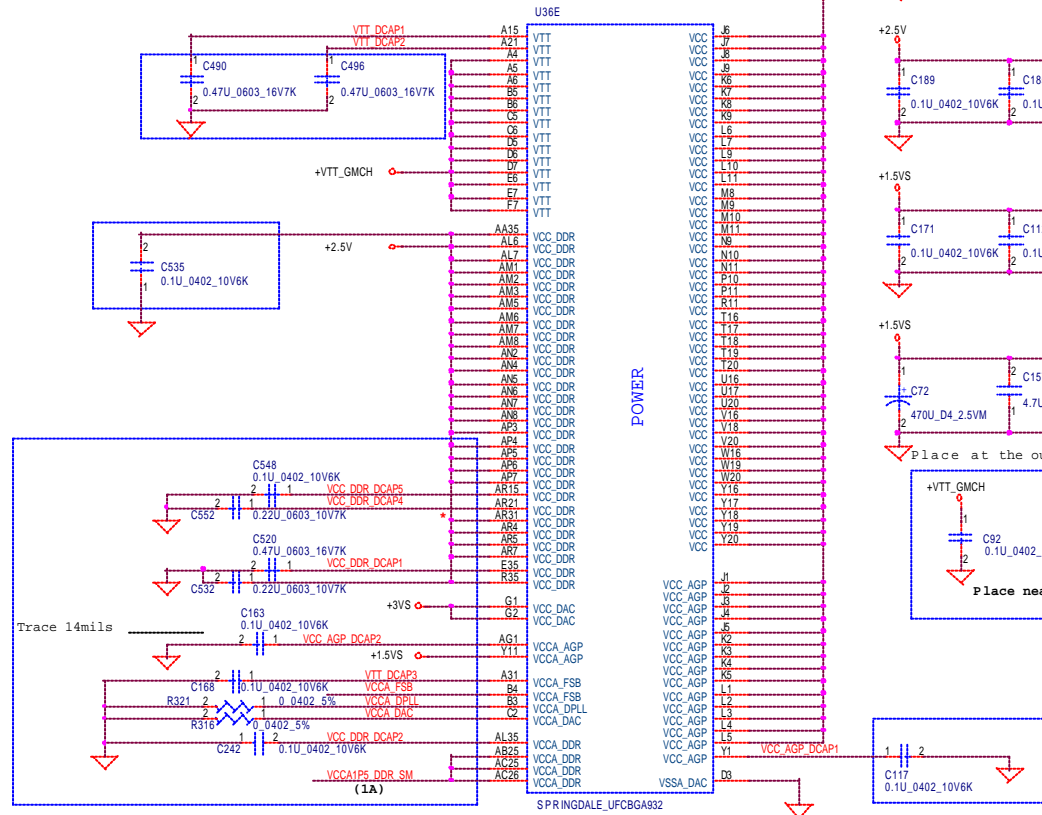
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Springdale-DDR Interface-B(3/5)			
Size B	Document Number LA-1841	Rev 0.1	
Date: Thursday, February 20, 2003	Sheet 3	of 57	

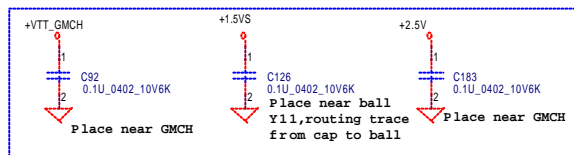
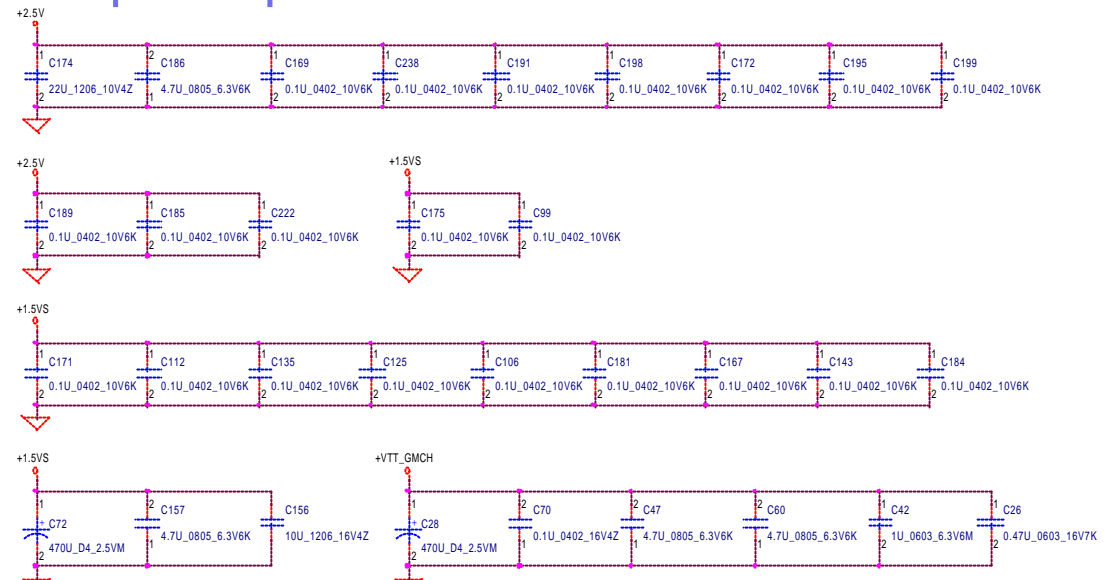


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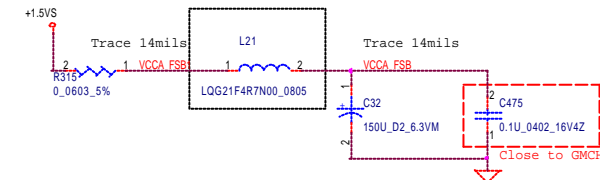
Note:  
Placed less than 100 mils from ball  
Route to GMCH ball without via



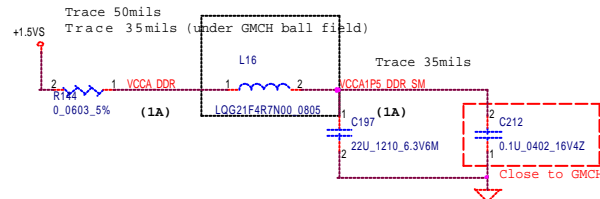
Note:  
Placed less than 100 mils from ball  
Route to GMCH ball without via

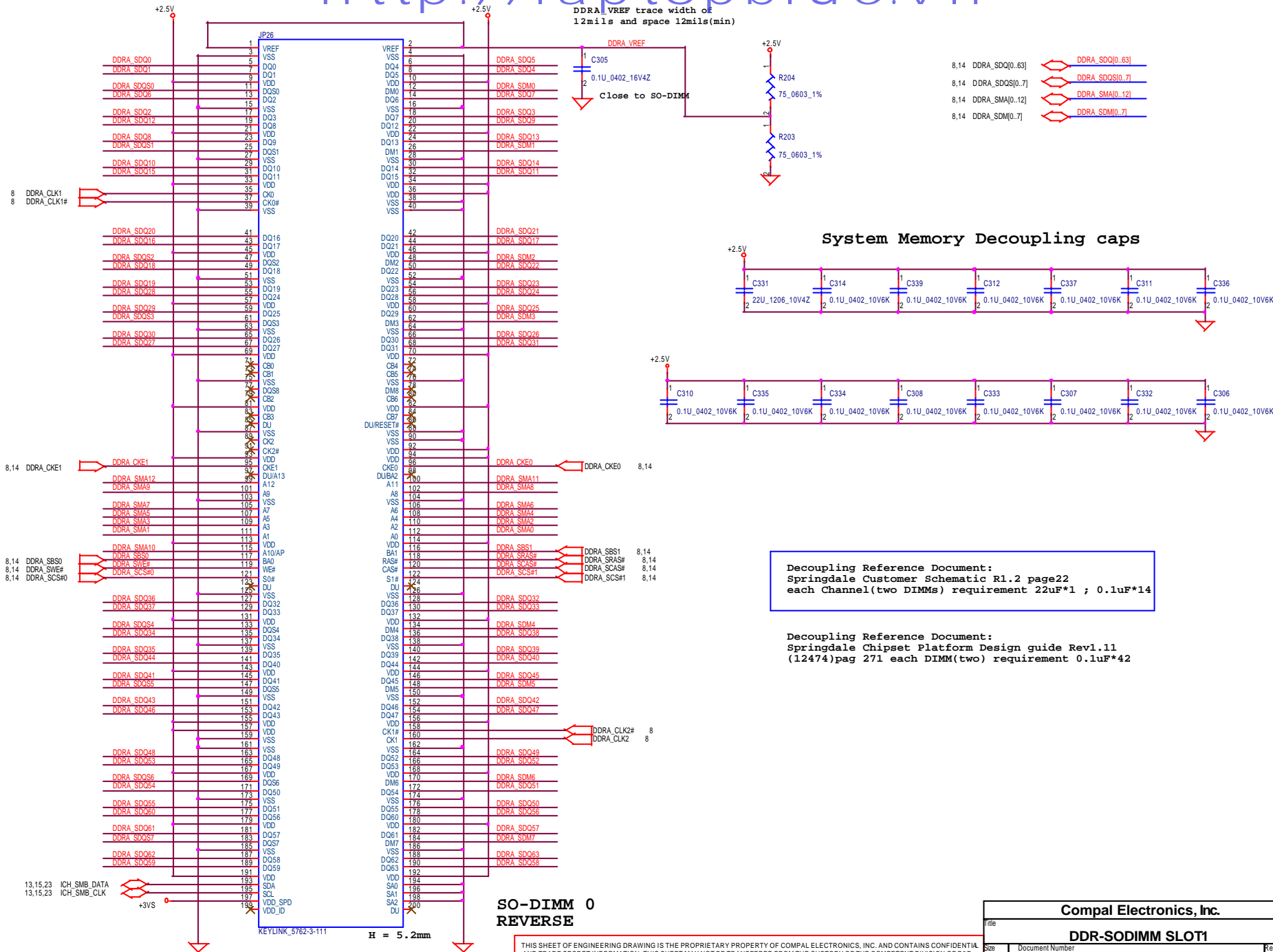


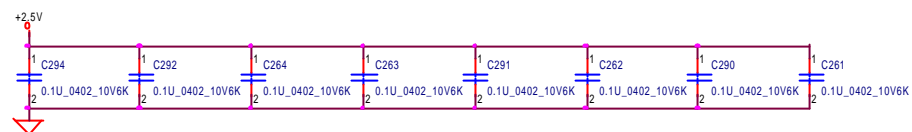
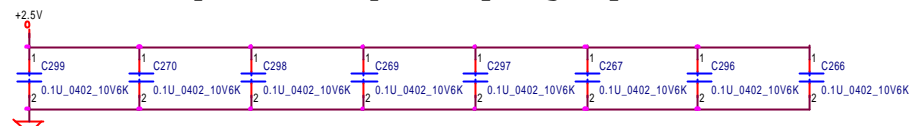
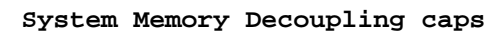
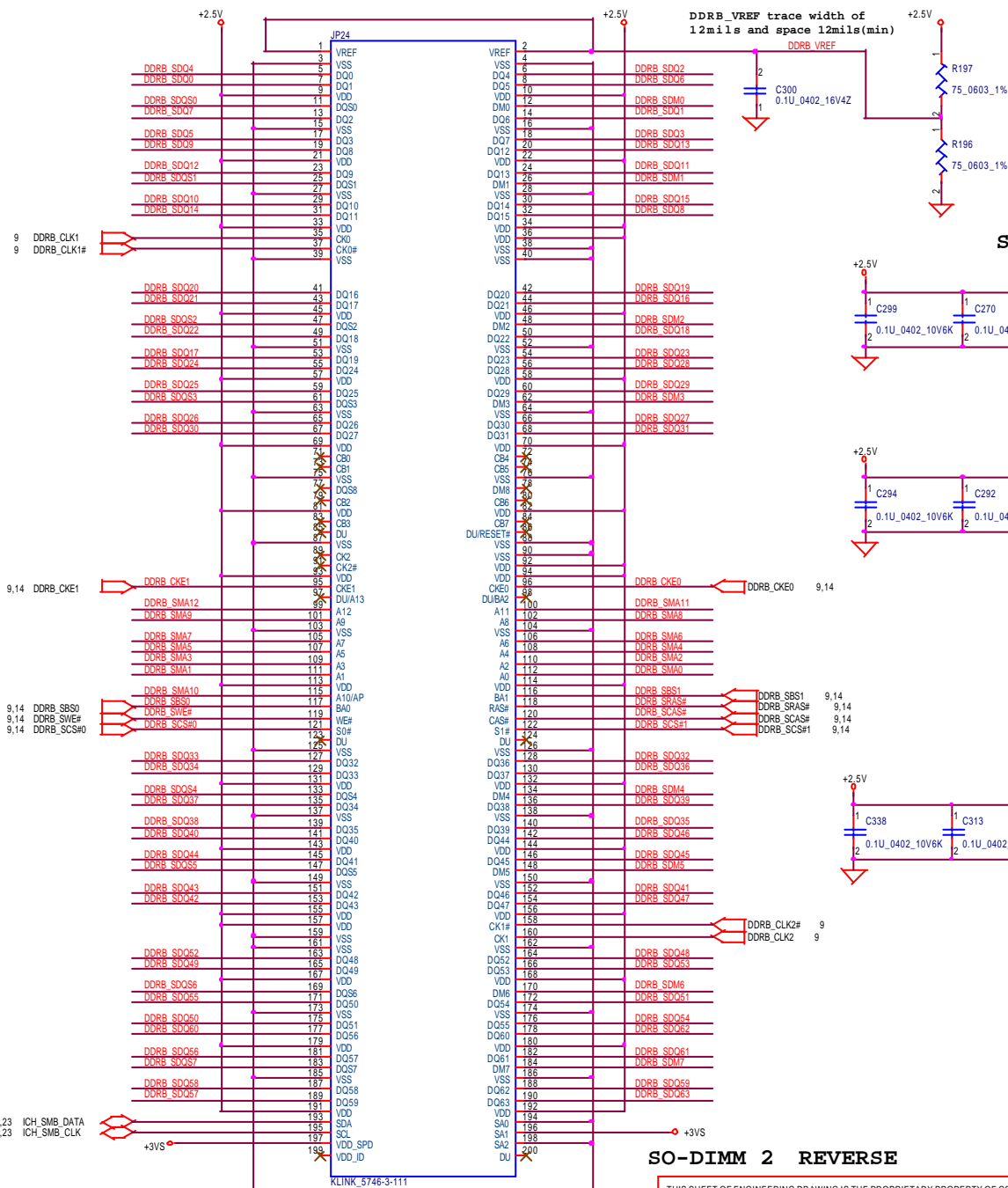
Note: Please change to 0.82uH, DC current  
of 30mA parts and close to cap



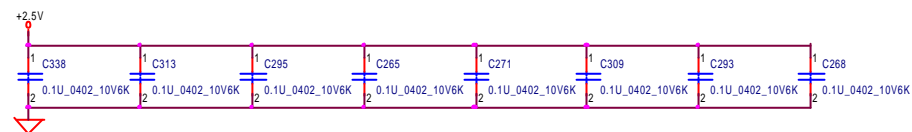
Note: Please change to 1uH(0.54uH-D-IN), DC current  
of 1000mA parts and close to cap







Decoupling Reference Document:  
Springdale Customer Schematic R1.2 page26  
each Channel(two DIMMs) requirement 0.1uF\*24

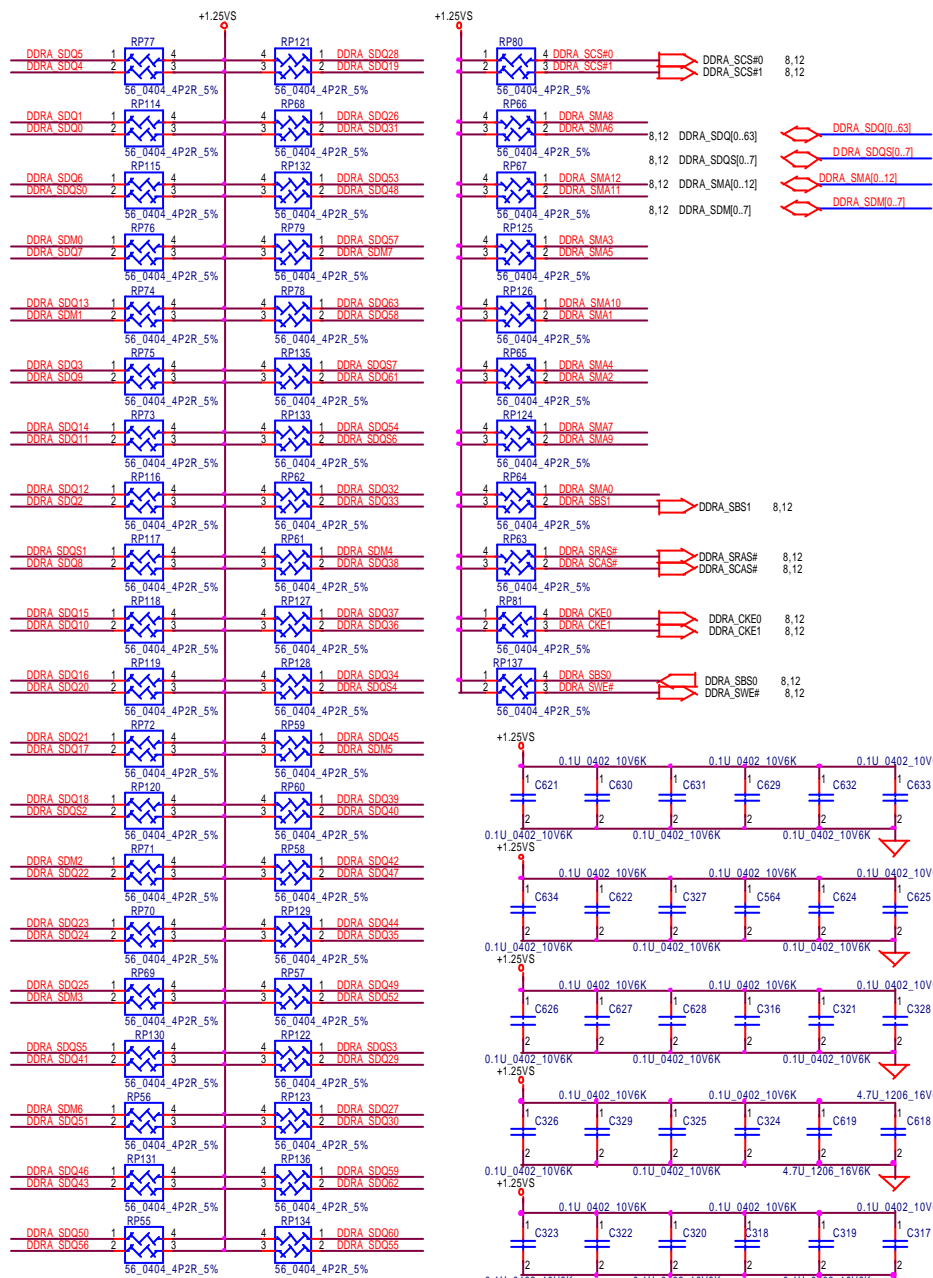


SO-DIMM 2 REVERSE

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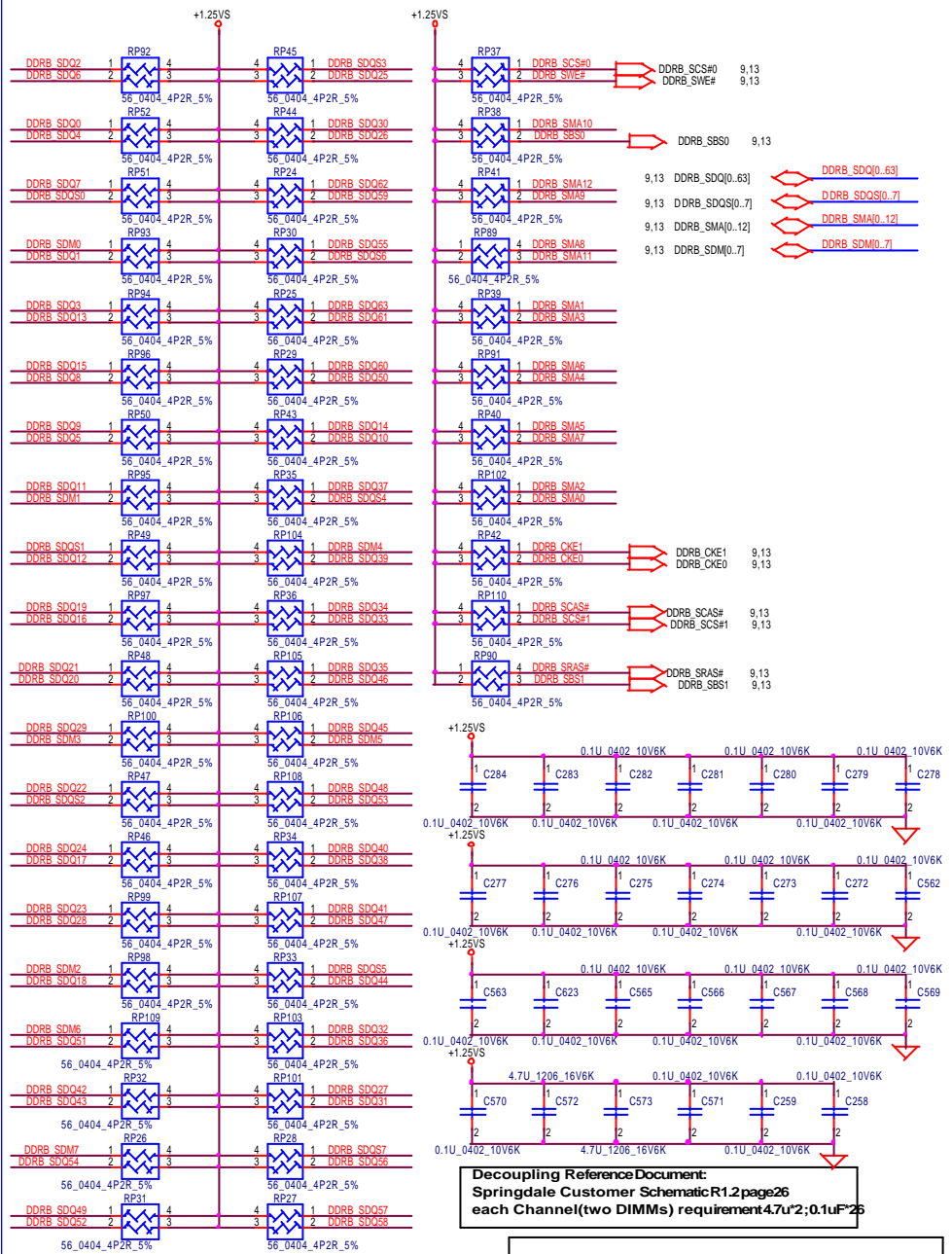
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Title			
<b>DDR-SODIMM SLOT2</b>			
Size	Document Number		Rev
	<b>LA-1841</b>		0
Date:	Thursday, February 20, 2003	Sheet	13 of 57

## Channel A(DIMM0) Termination resistors & Decoupling caps



Decoupling Reference Document:  
Springdale Customer Schematic R1.2 page 22  
each Channel (two DIMMs) requirement 4.7uF; 2.0; 0.1uF 28

## Channel B (DIMM1) Termination resistors & Decoupling caps



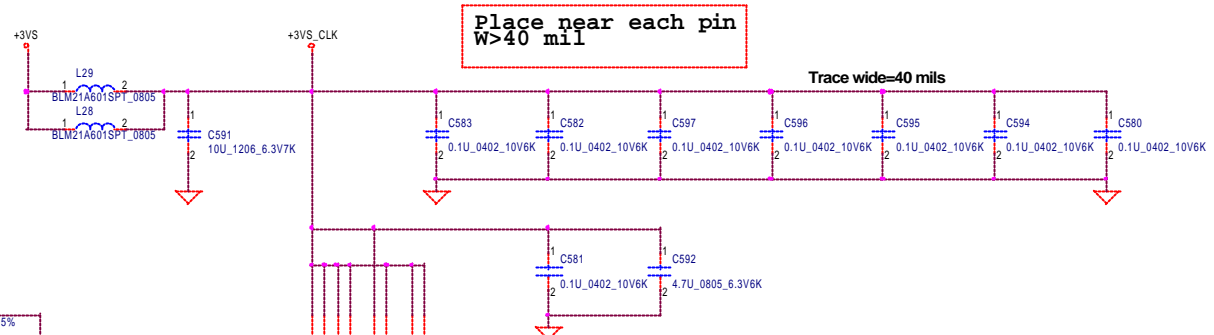
Decoupling Reference Document:  
Springdale Customer Schematic R1.2 page 26  
each Channel (two DIMMs) requirement 4.7uF; 2.0; 0.1uF 28

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Title			DDR Termination Resistors
Size	Document Number	Rev	
B	LA-1841	0.1	
Date:	Thursday, February 20, 2003	Sheet	14 of 57



SEL0	SEL1	CPU	V66[0..3]	REF0	REF1	SRC	USB/Dot
0	0	100	66	14.3	14.3	100/200	48
0	MID	REF	REF	REF	REF	REF	REF
0	1	200	66	14.3	14.3	100/200	48
1	0	133	66	14.3	14.3	100/200	48
1	1	166	66	14.3	14.3	100/200	48
1	MID	Hi-Z	Hi-Z	Hi-Z	Hi-Z	Hi-Z	Hi-Z



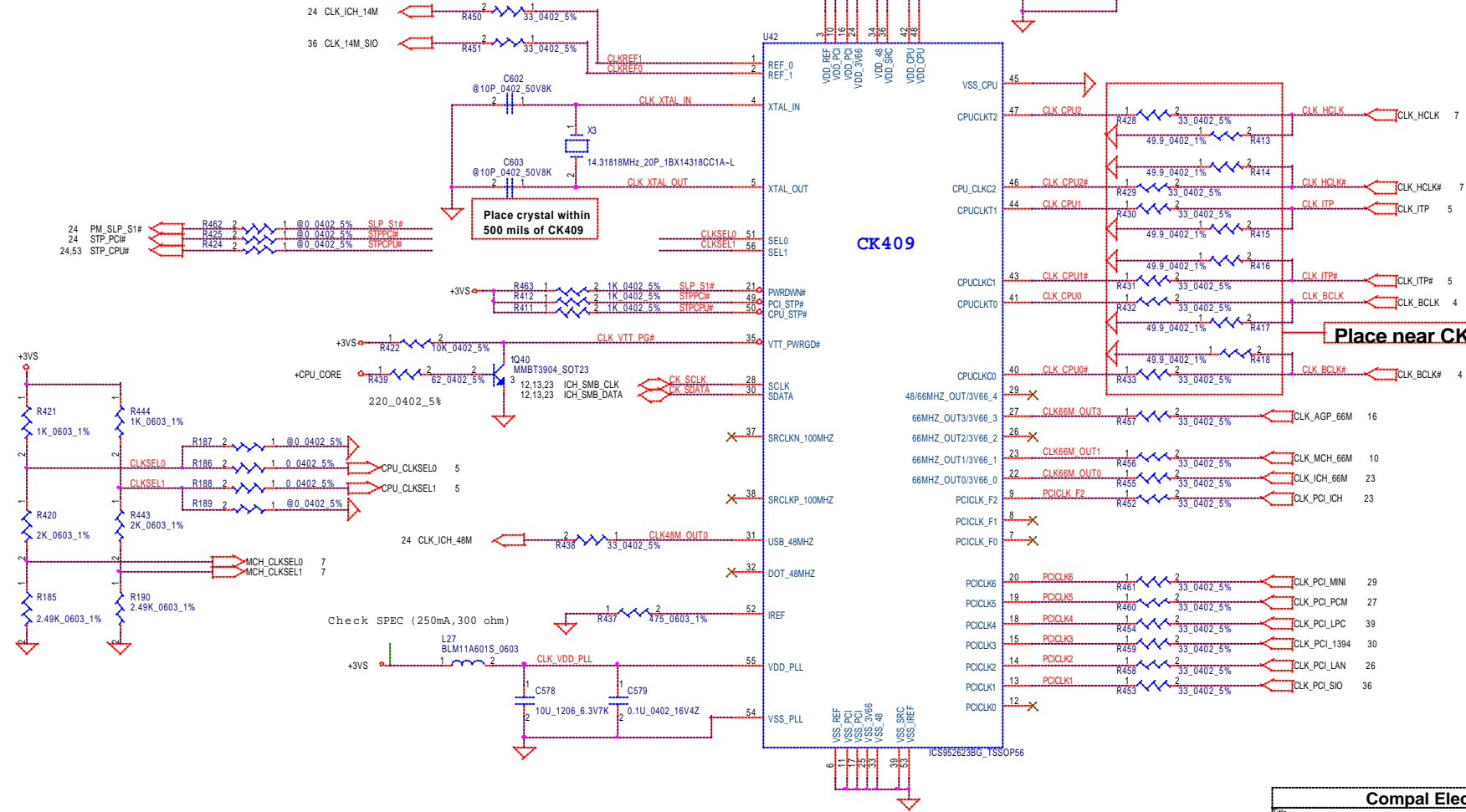
Place near each pin  
W>40 mil

Trace wide=40 mils

Place crystal within  
500 mils of CK409

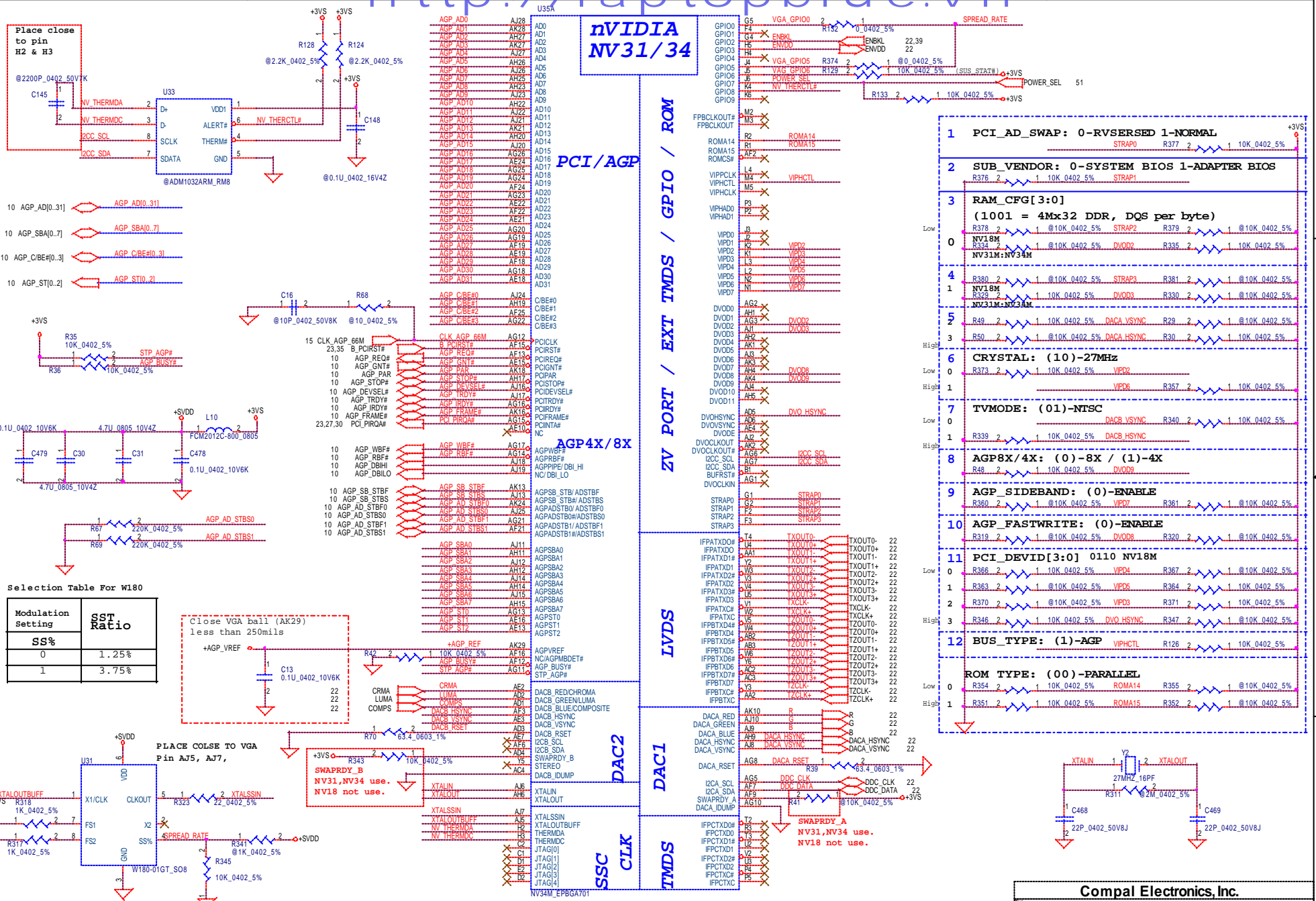
Place near CK409

CK409



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Clock Generator		
File	Document Number	Rev
	LA-1841	0.1
Date	Thursday, February 20, 2003	Sheet 15 of 57





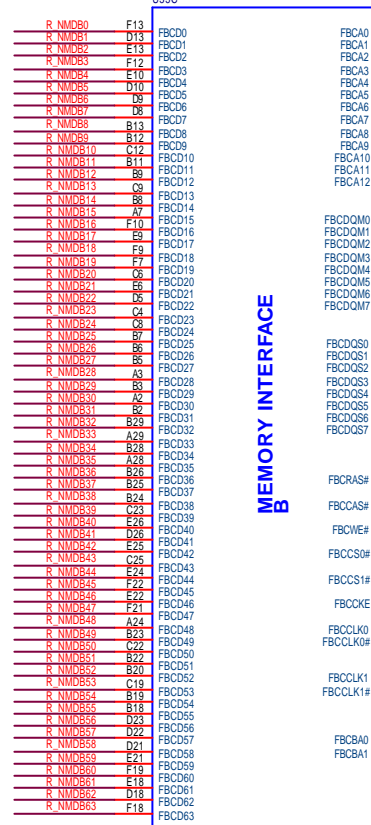
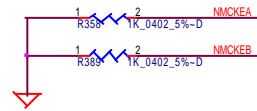
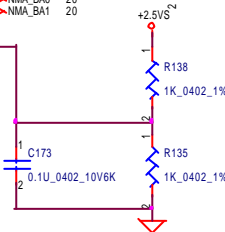
20 R\_NDMA[0..7] R\_NDMA[0..7]  
 20 R\_NDOS[0..7] R\_NDOS[0..7]  
 20 NMAA[0..11] NMAA[0..11]  
 20 R\_NMDA[0..63] R\_NMDA[0..63]

21 R\_NDMA[0..7] R\_NDMA[0..7]  
 21 R\_NDOS[0..7] R\_NDOS[0..7]  
 21 NMA[0..11] NMA[0..11]  
 21 R\_NMD[0..63] R\_NMD[0..63]



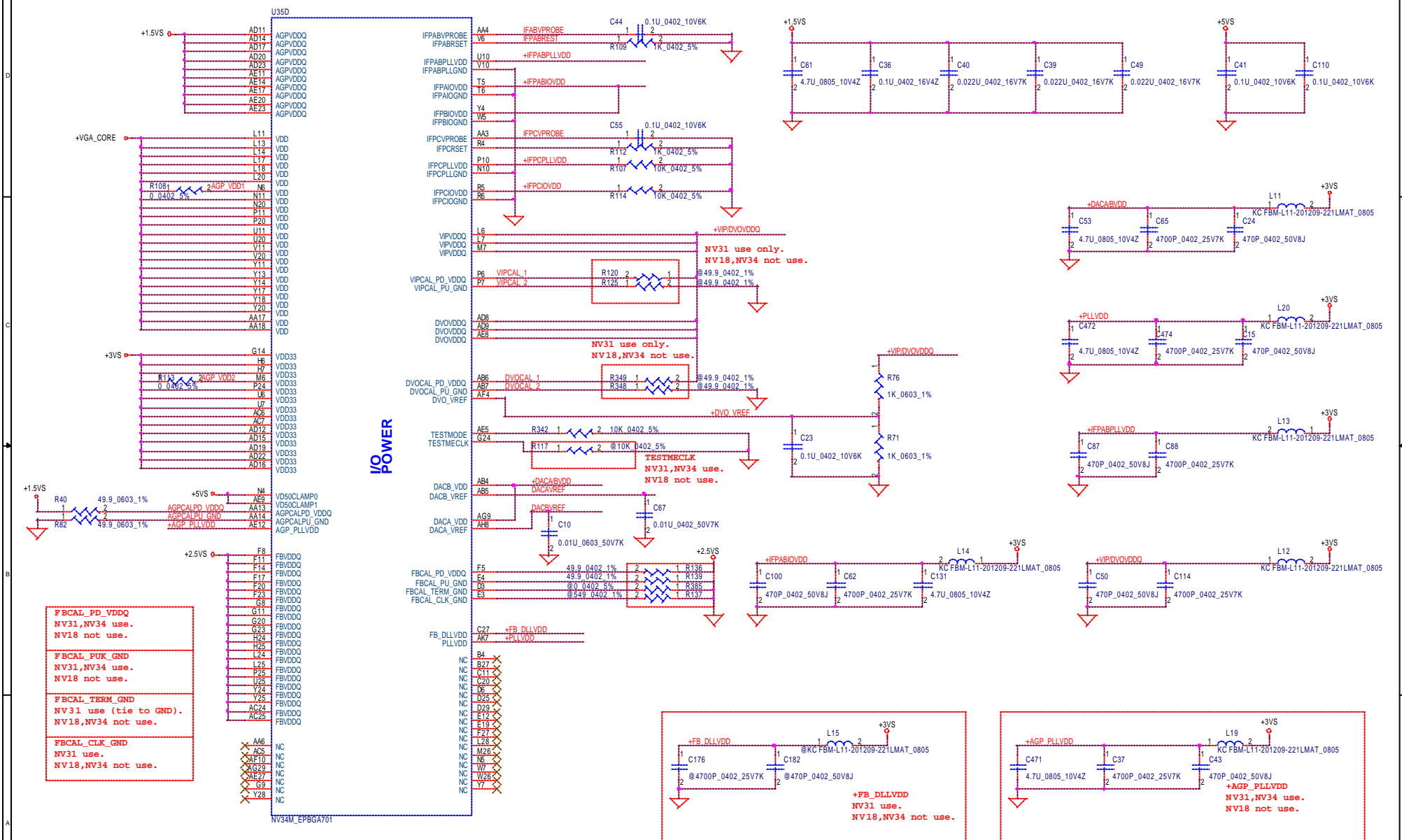
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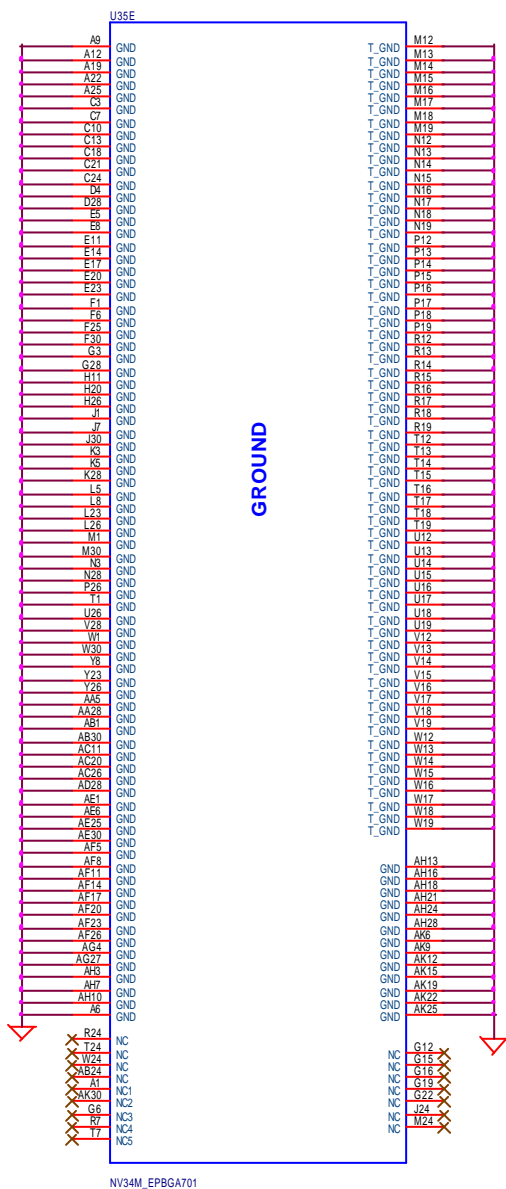
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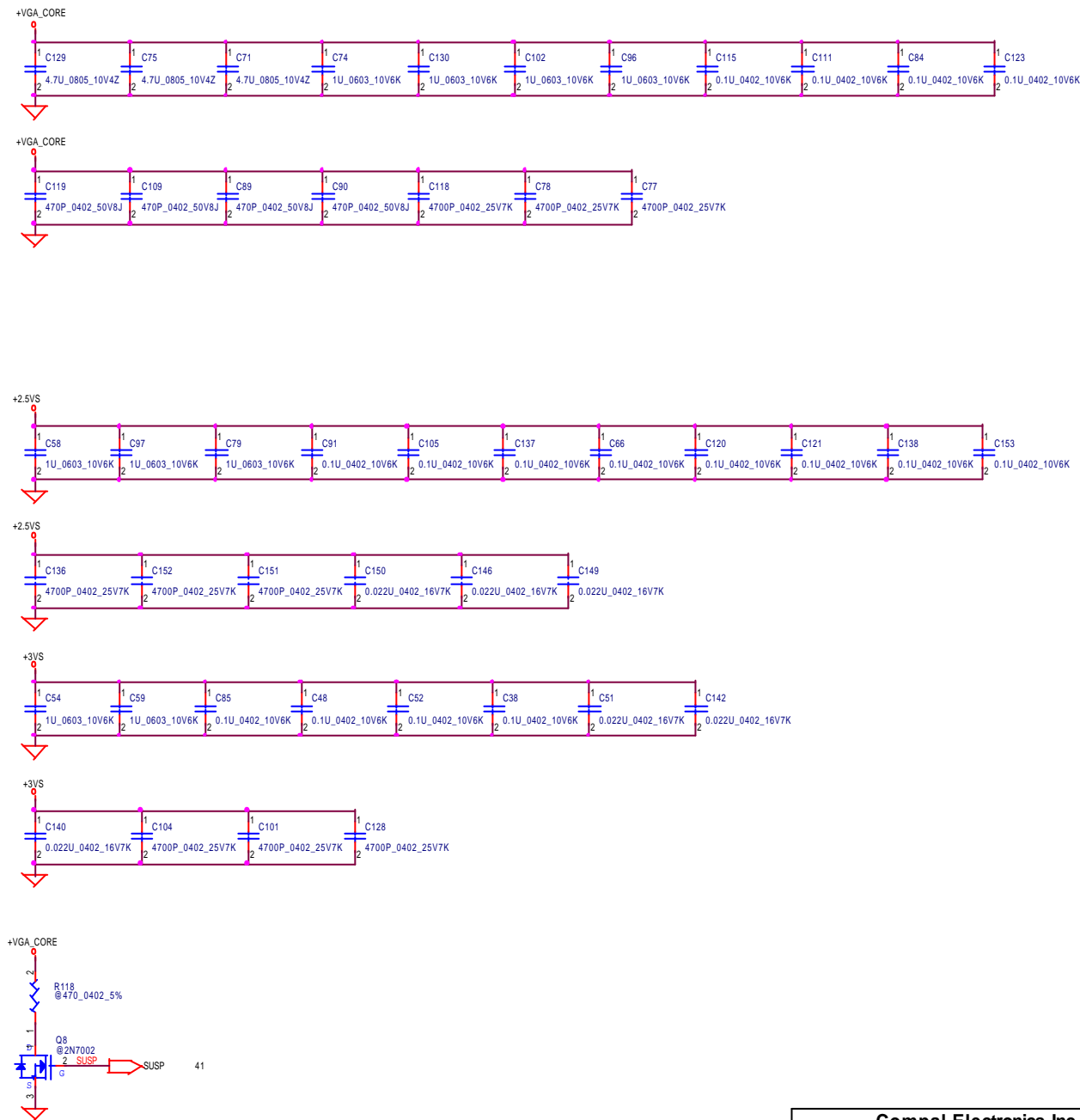
MEMORY INTERFACE B

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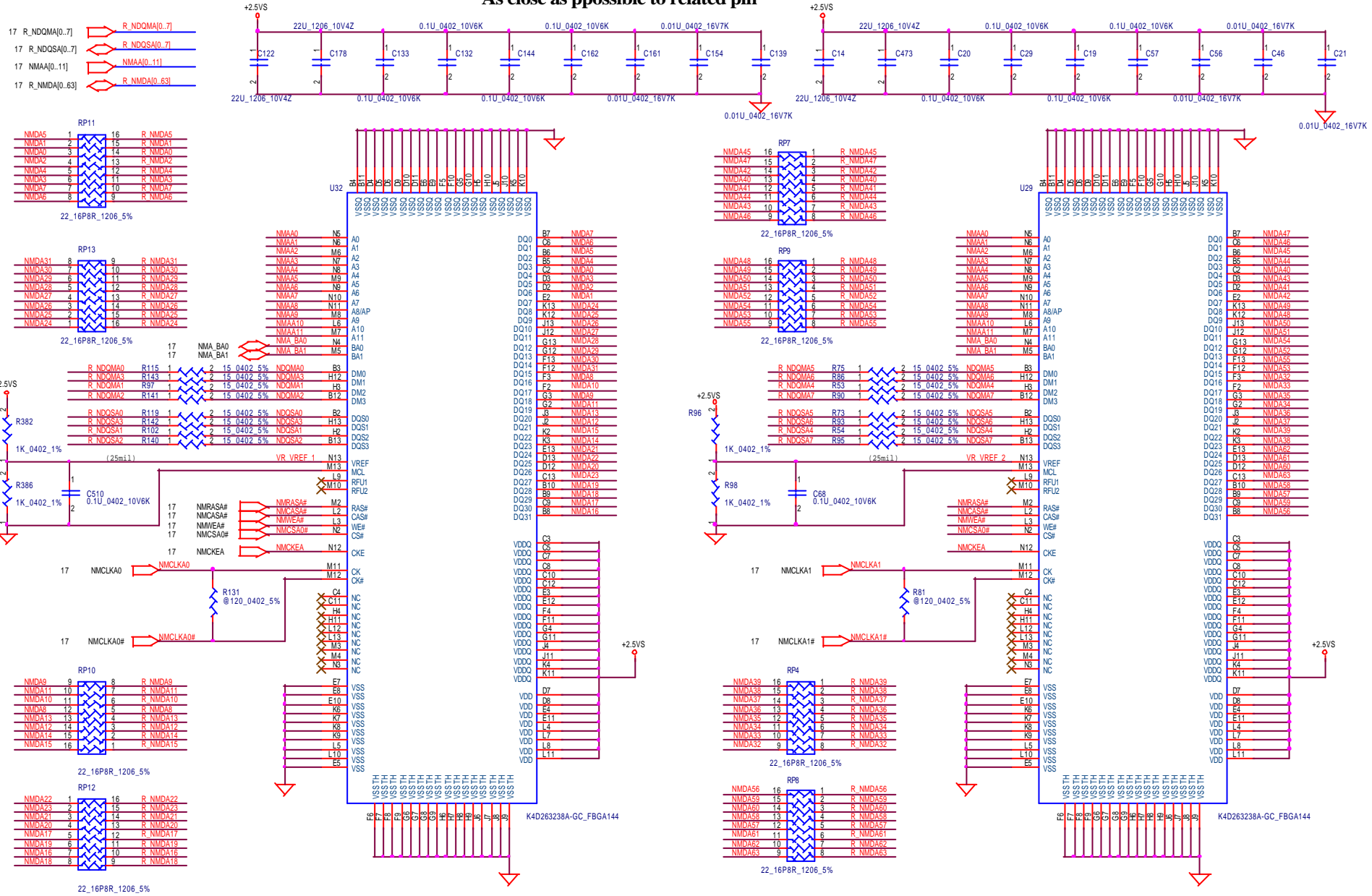




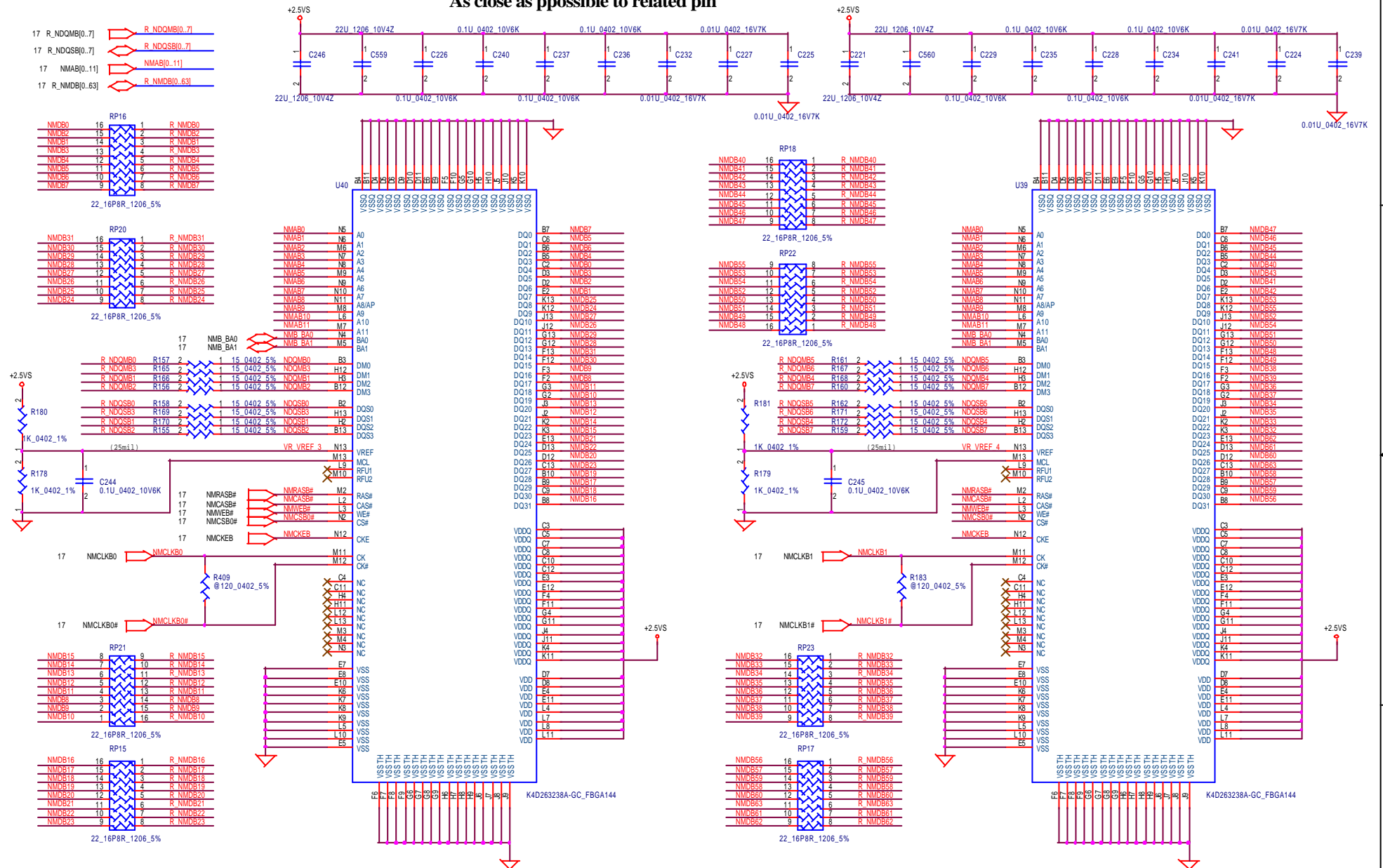
NV34M\_EPBGA701



As close as possible to related pin



**As close as ppossible to related pin**

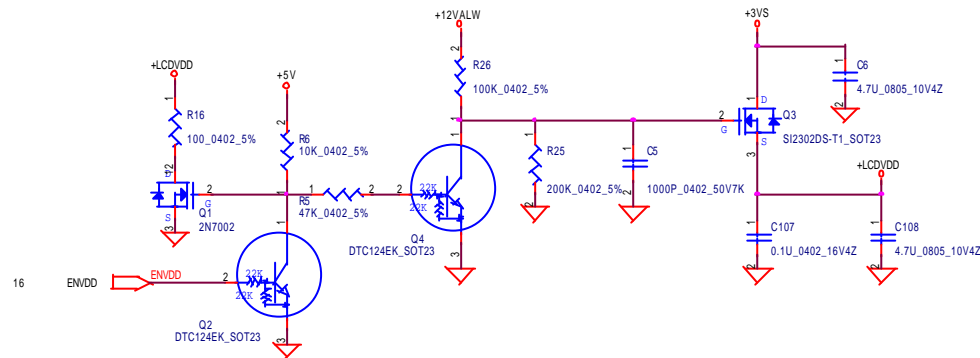
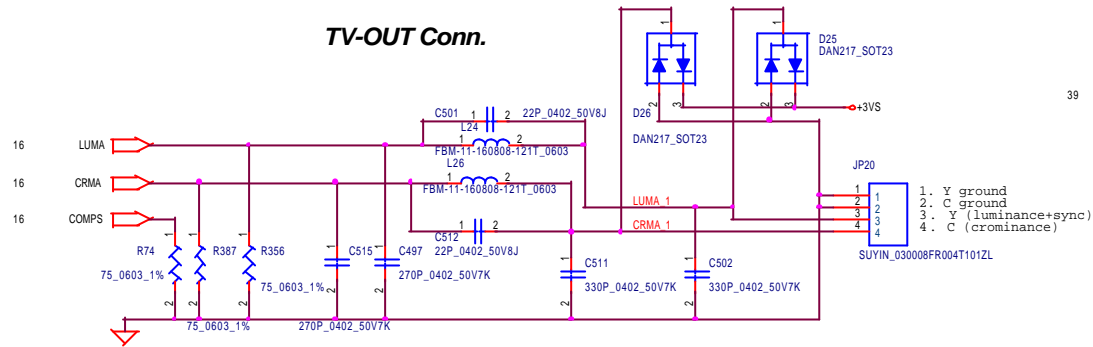


**Compal Electronics, Inc.**

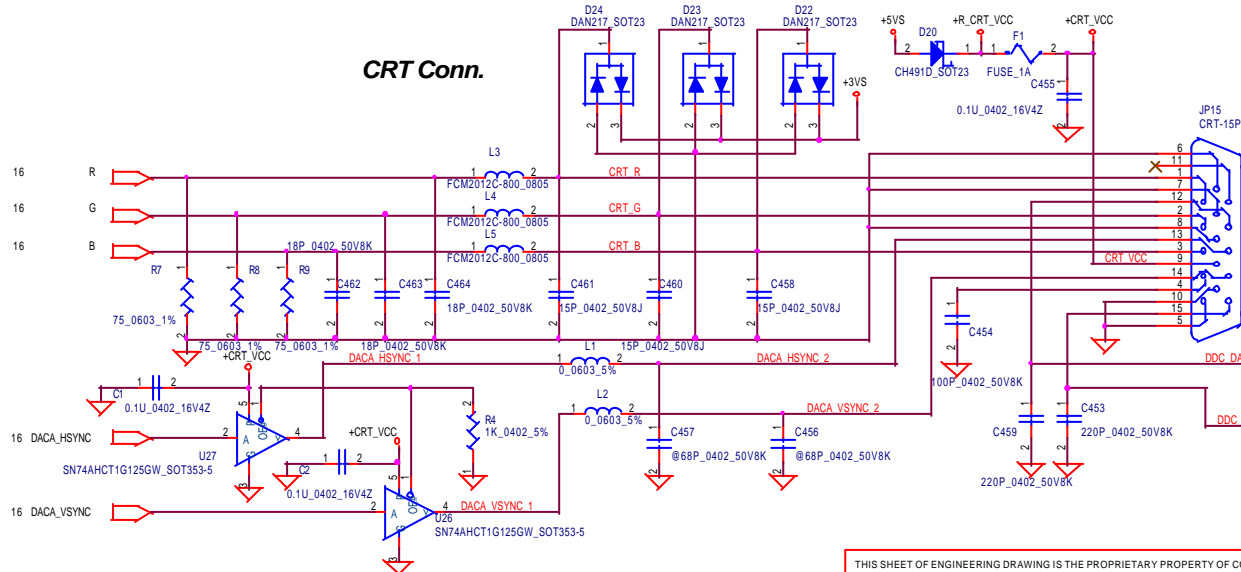
### VGA DDR FOR CHANNEL B

# CRT, TV-OUT & LVDS CONNECTOR

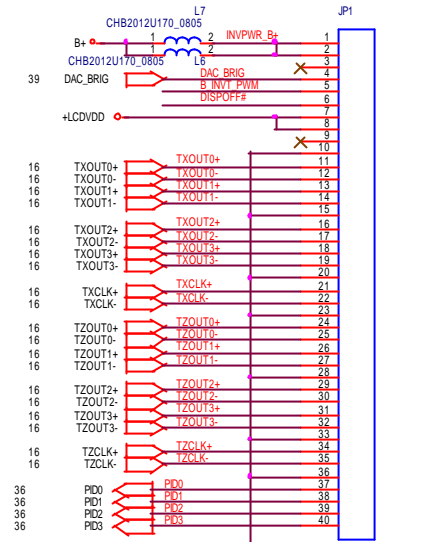
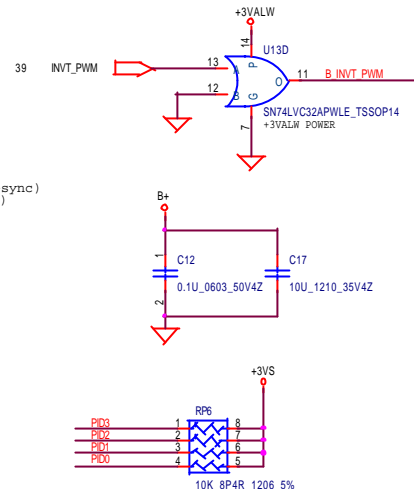
## TV-OUT Conn.



## CRT Conn.



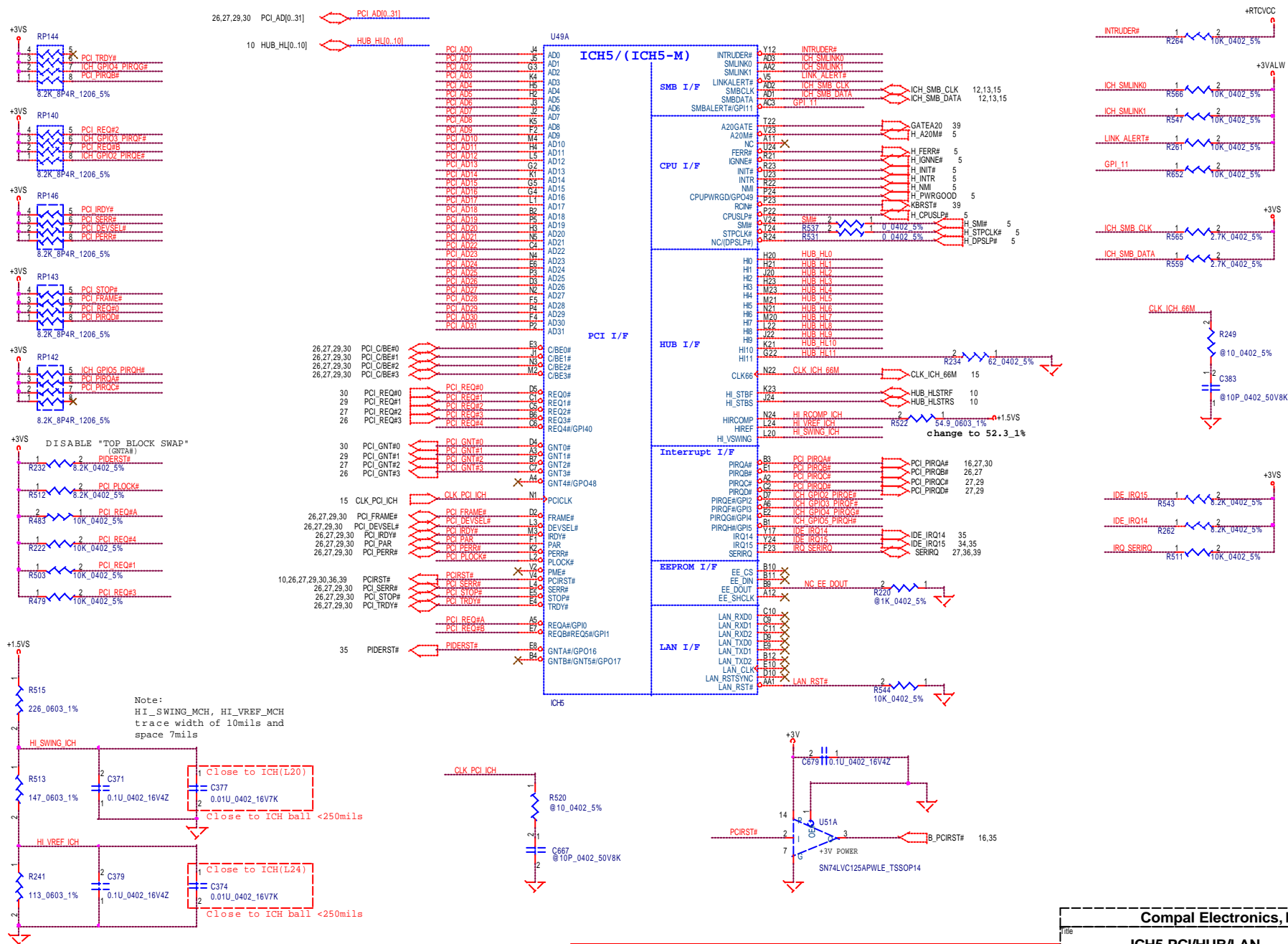
## LVDS Conn.



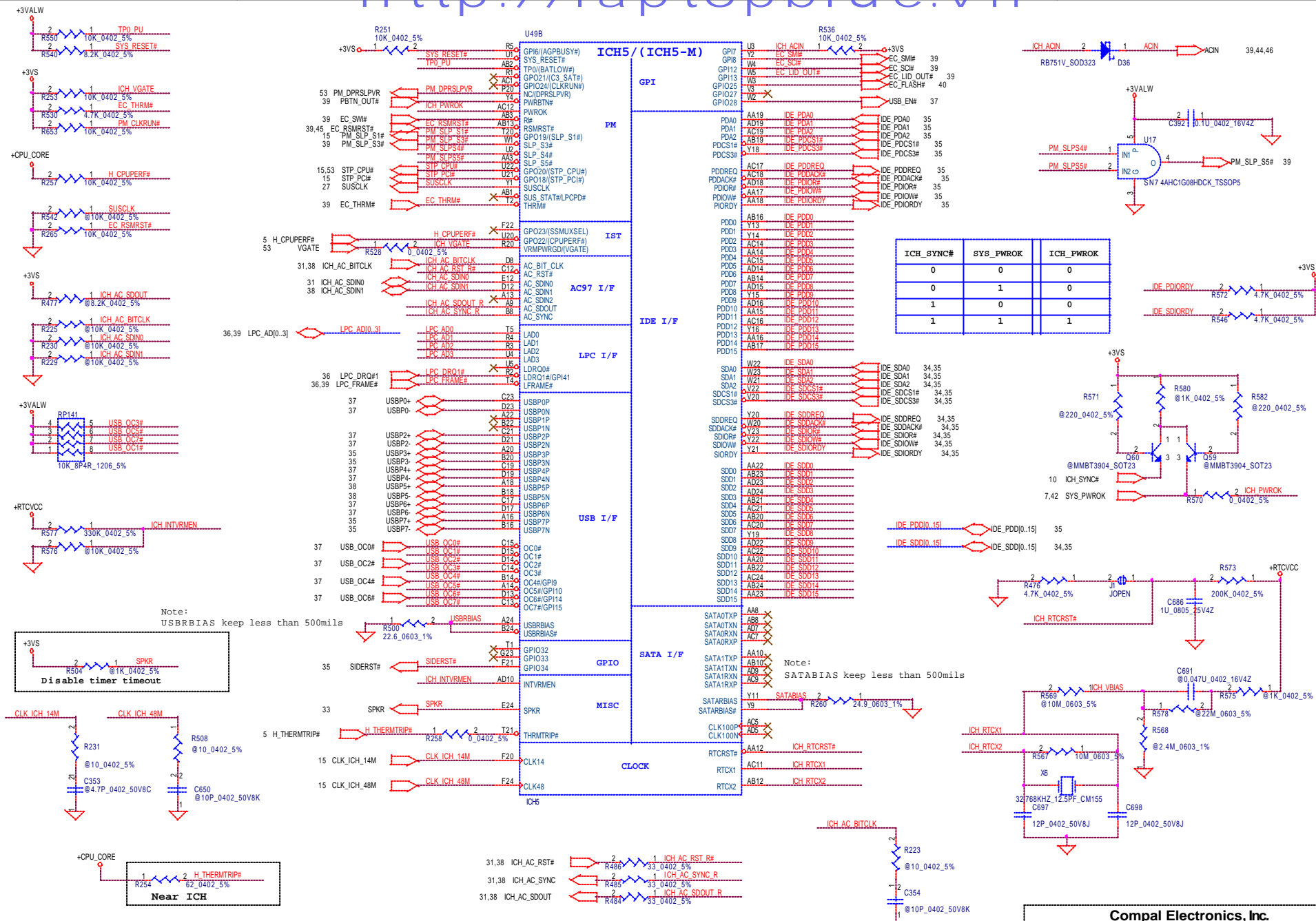
Compal Electronics, Inc.			
Title			
CRT,TV-OUT & LVDSConnector			
Size	Document Number	Rev	
B	LA-1841	0.1	
Date	Thursday, February 20, 2003	Sheet	22 of 57

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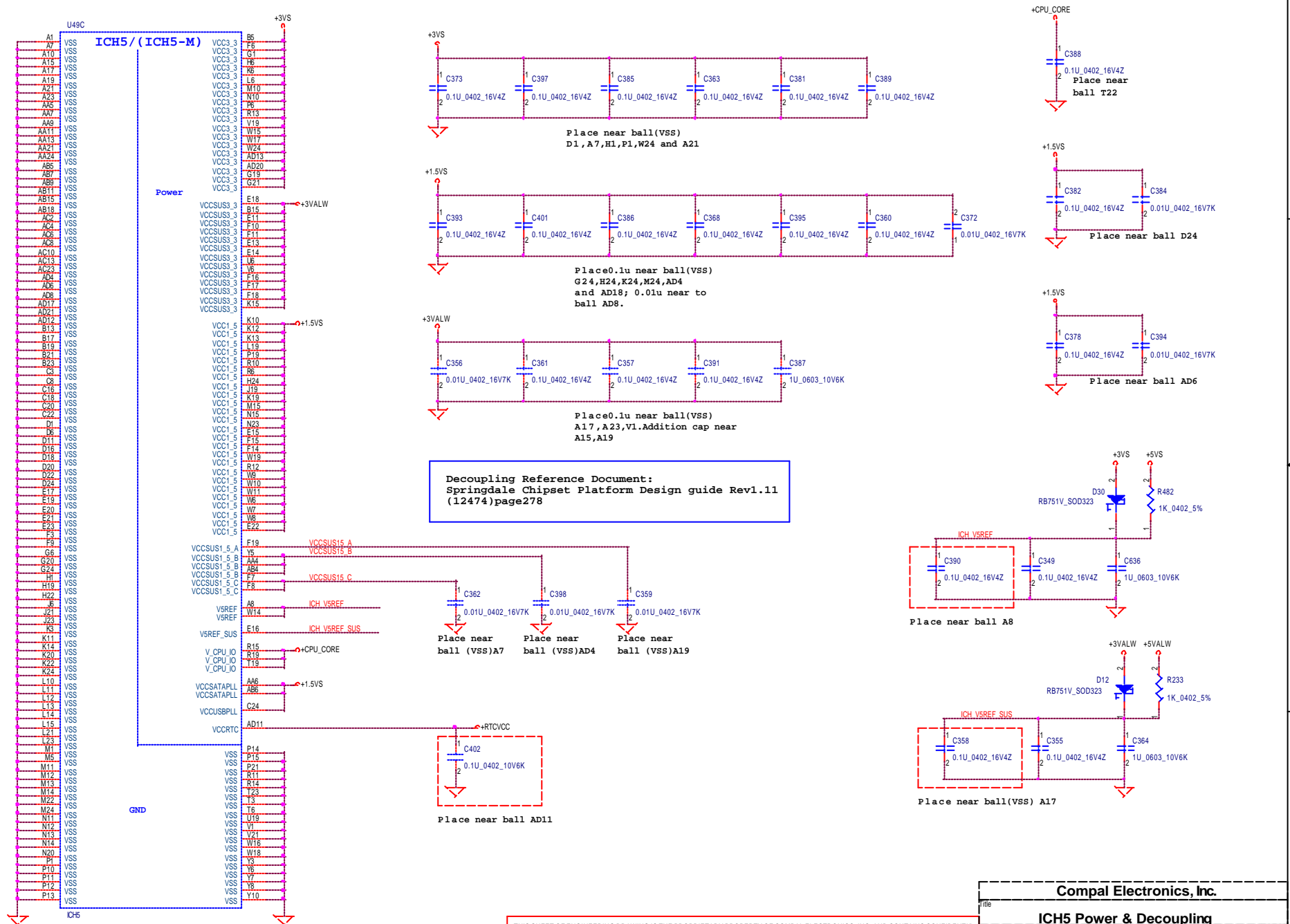




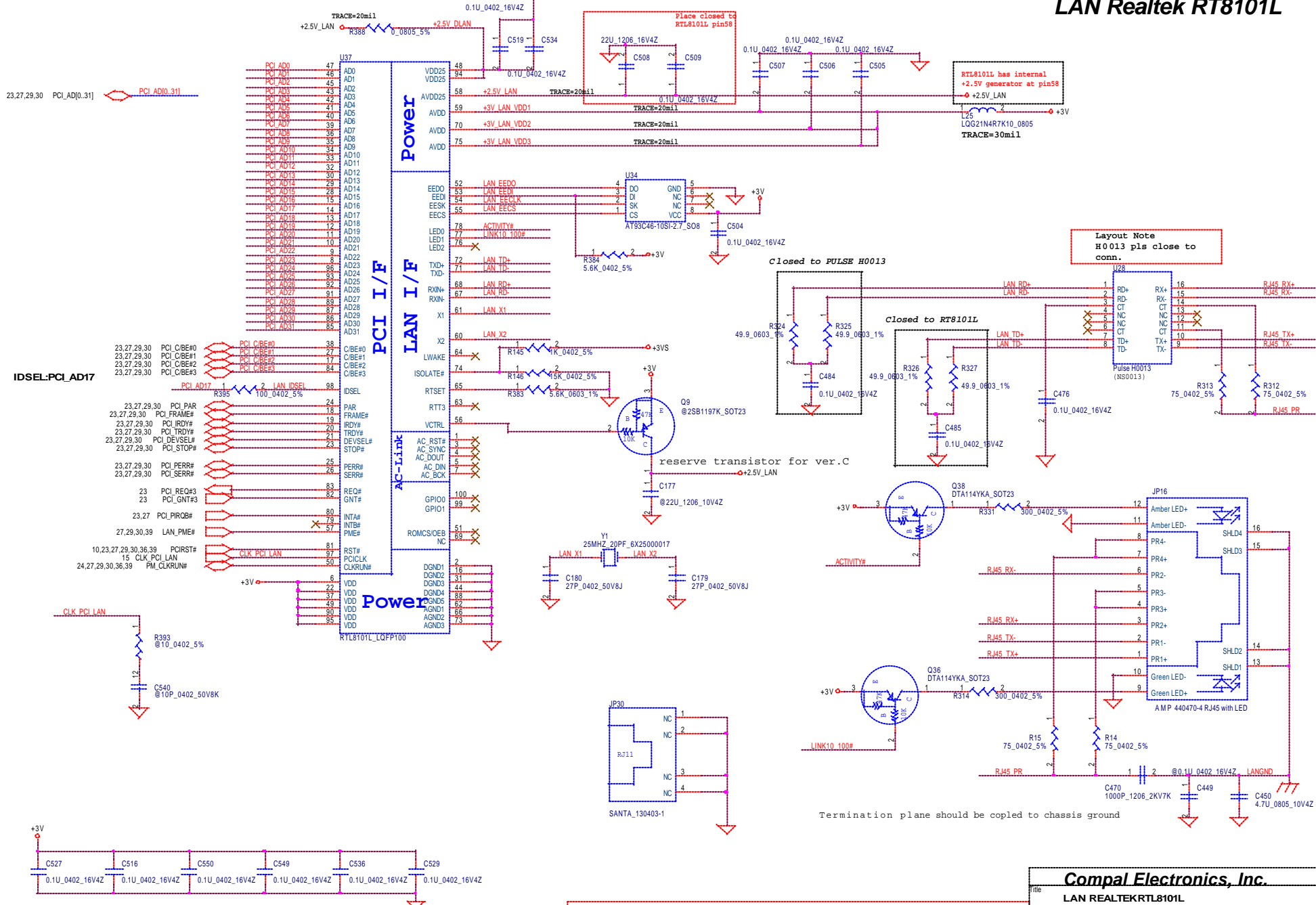
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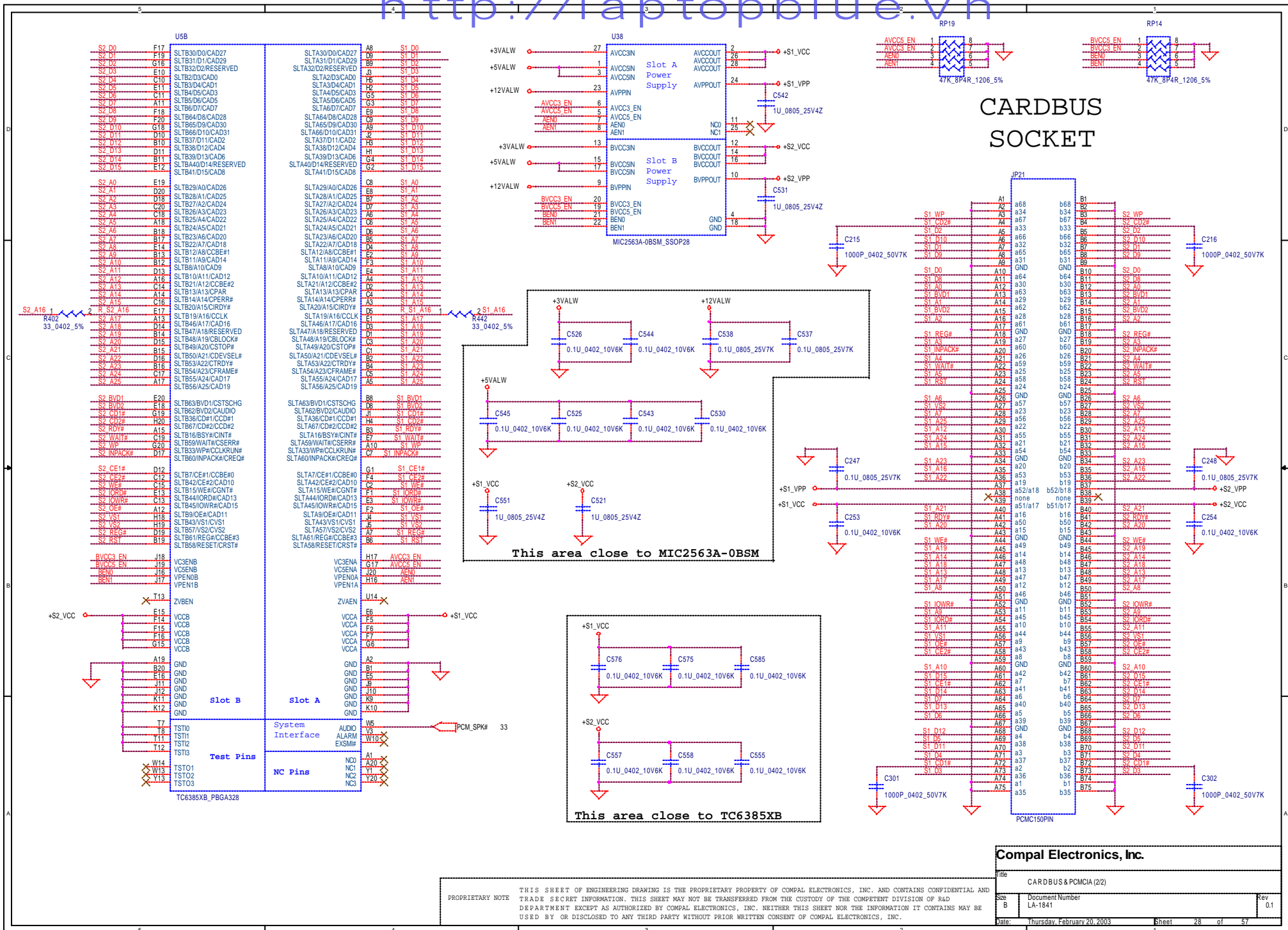
# LAN Realtek RT8101L

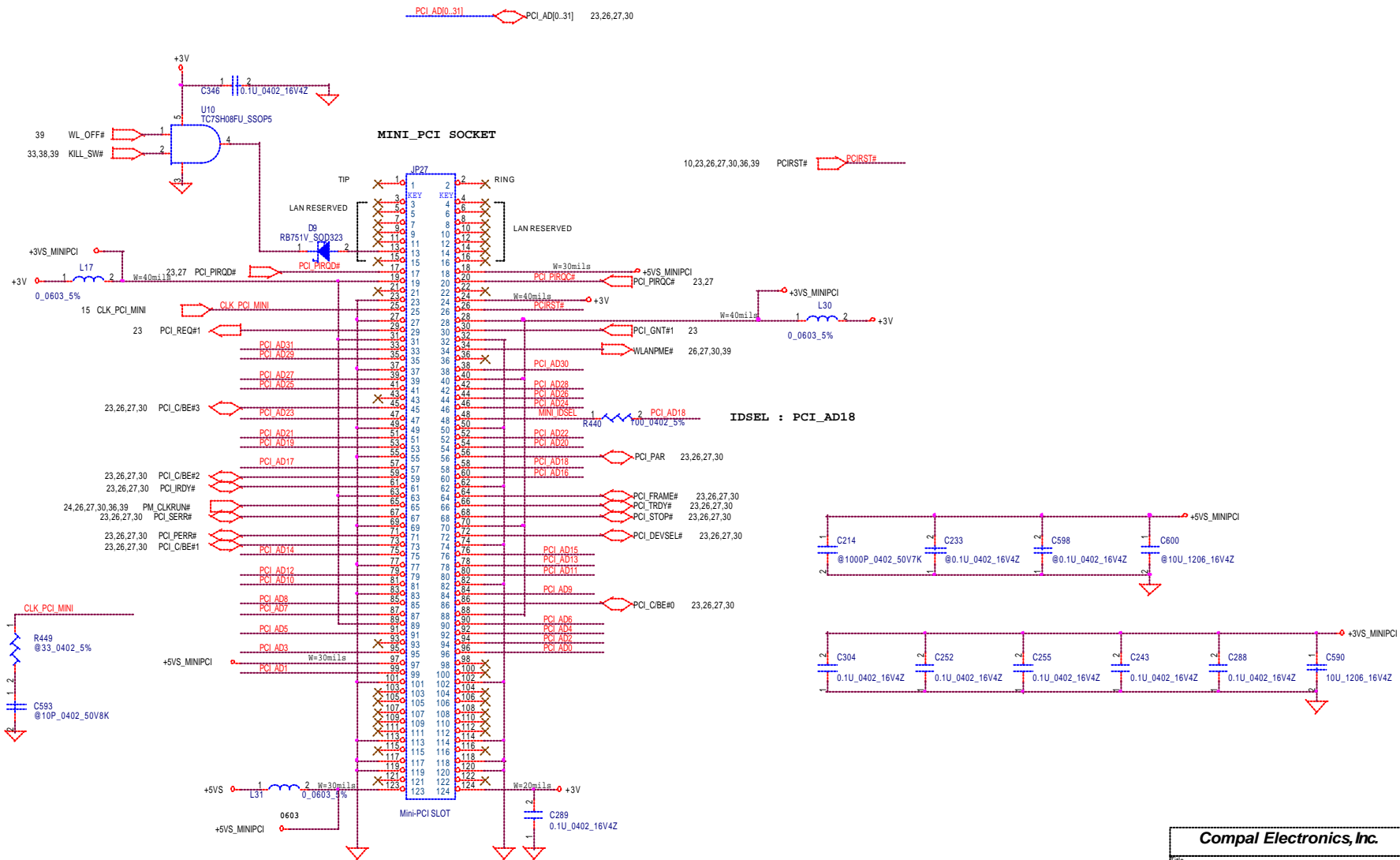


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LAN REALTEKRTL8101L			
Size	Document Number	Rev	
	LA-1841	0.1	
Date	Thursday, February 20, 2003	Sheet	26 of 57

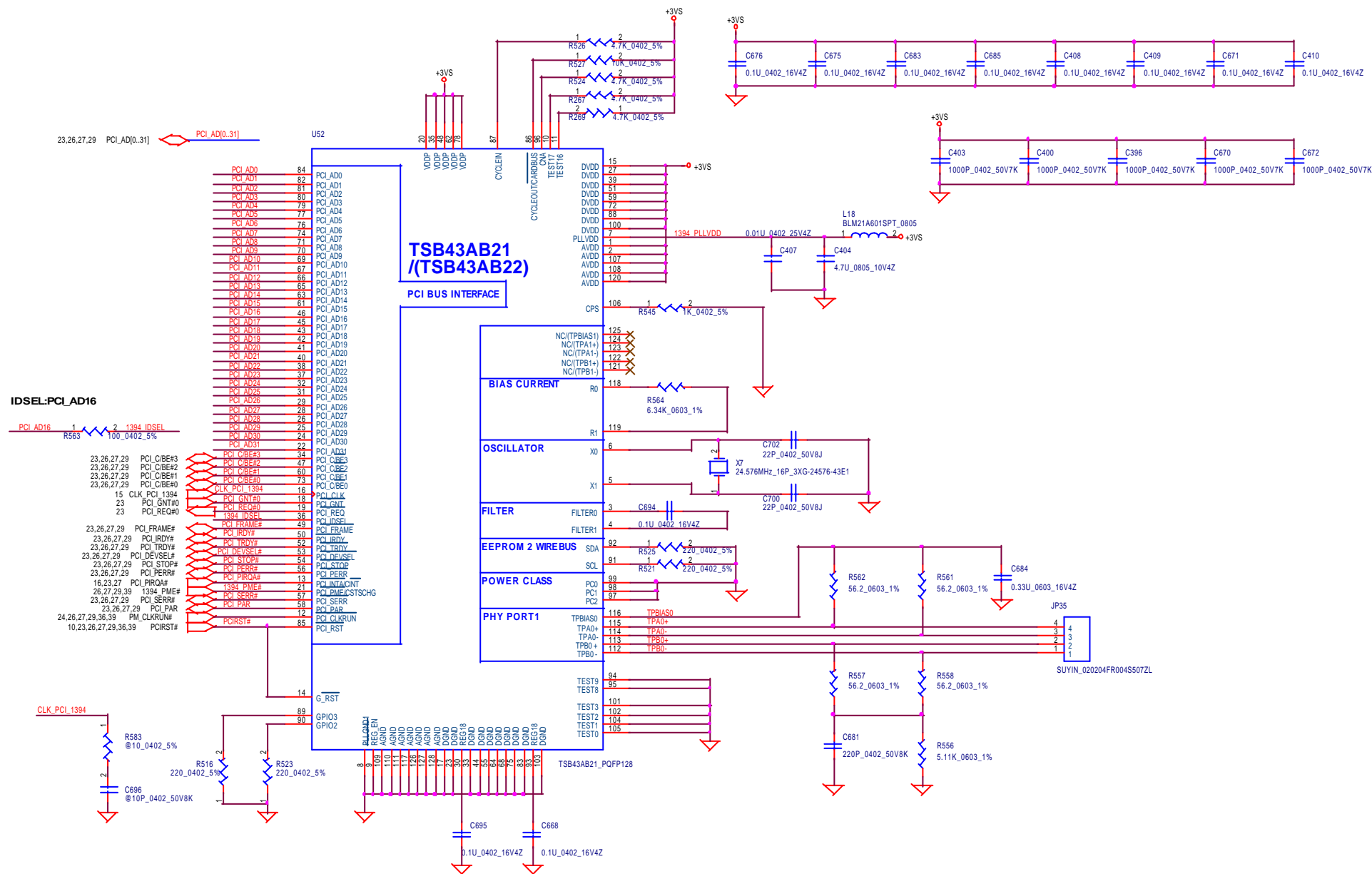






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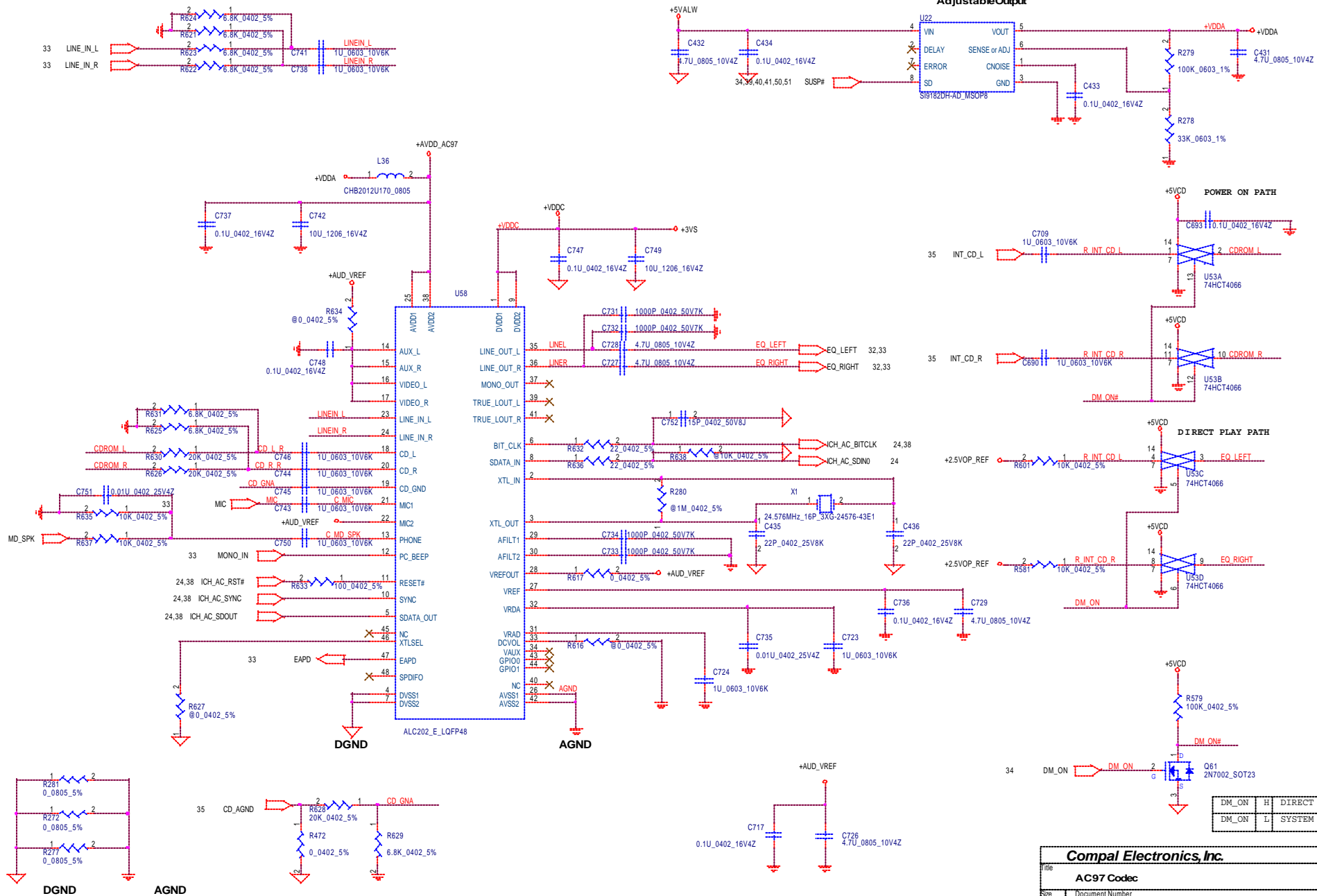
Compal Electronics, Inc.			
Title			
MINI_PCI			
Rev	Document Number	Rev	
B	LA-1841	0.1	
Date:	Thursday, February 20, 2003	Sheet	29 of 57





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DM_ON	H	DIRECT CD
DM_ON	L	SYSTEM ON

***Compal Electronics, Inc.***

Title		AC97 Codec	
Size	Document Number	Rev	
B	LA-1841	0.	
Date:	Thursday, February 20, 2003	Sheet	31 of 57

# BTQ00 EQ Circuit

## AUDIO LEFT CHANNEL

## OUTPUT TO AMPLIFIER LEFT CHANNEL

## AUDIO RIGHT CHANNEL

## OUTPUT TO AMPLIFIER RIGHT CHANNEL

## BY-PASS EQ CIRCUIT

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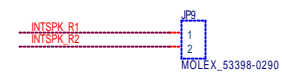
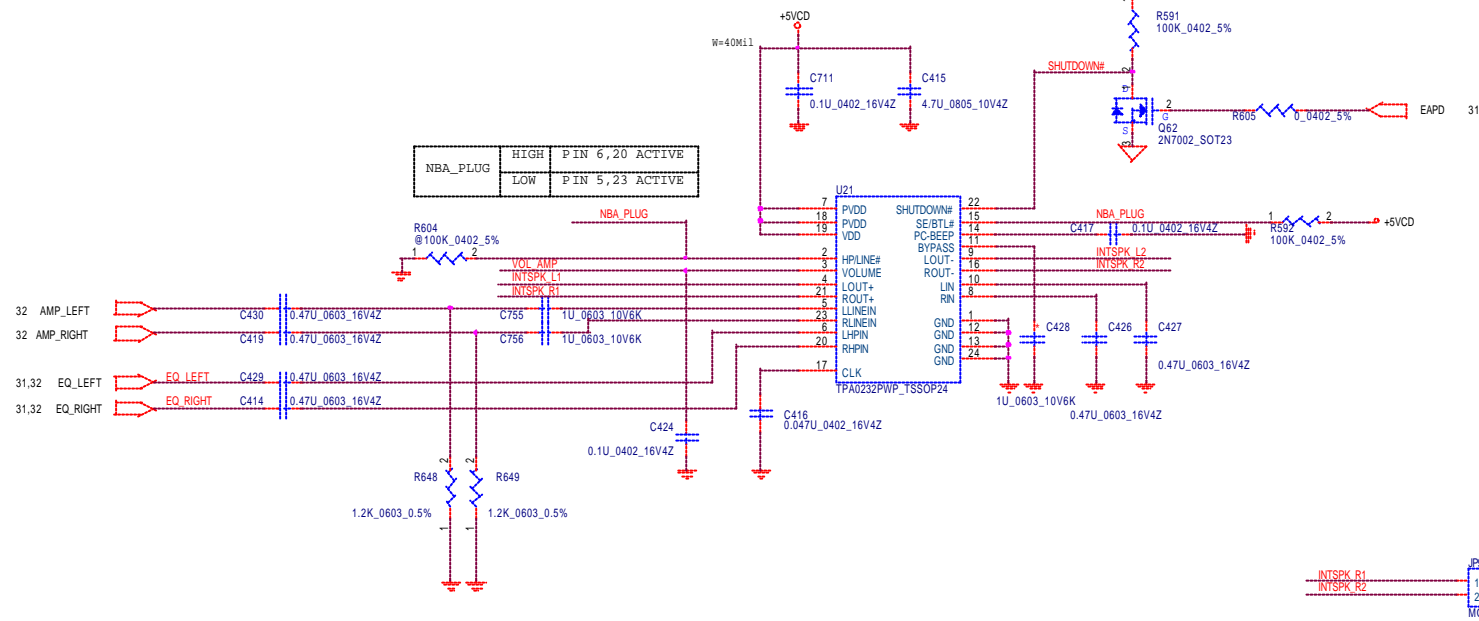
Compal Electronics, Inc.

HAREWAREEQ

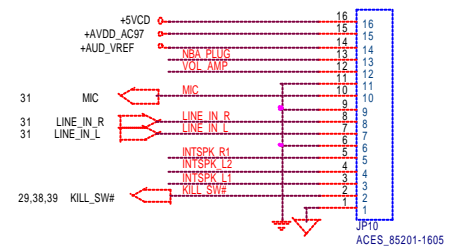
Size	Document Number	Rev
B	LA-1841	0.1
Date:	Thursday, February 20, 2003	Sheet 32 of 57



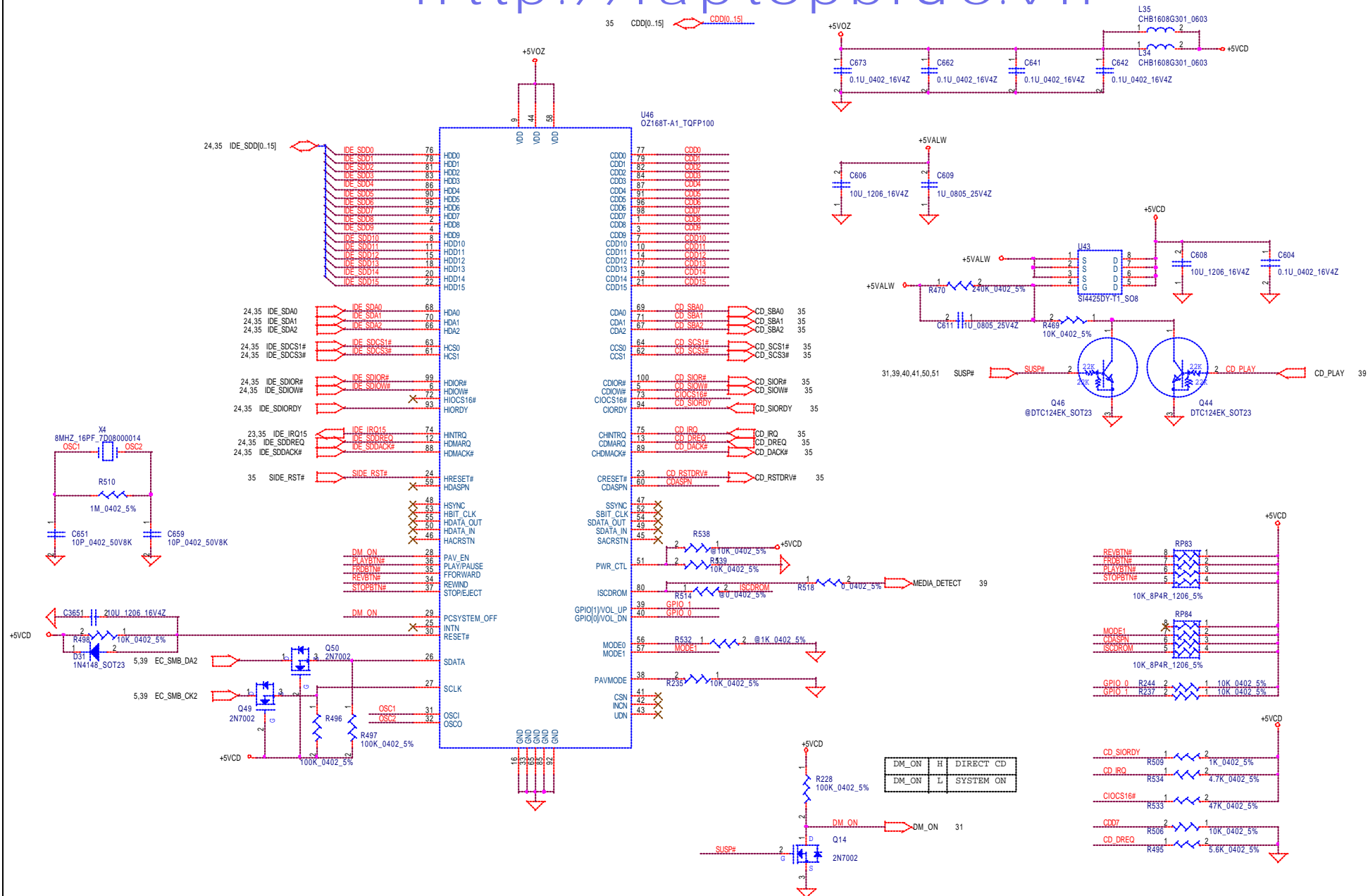
# Audio AMP



## AUDIO Board Conn.

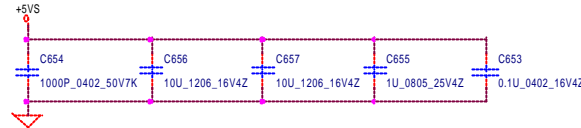
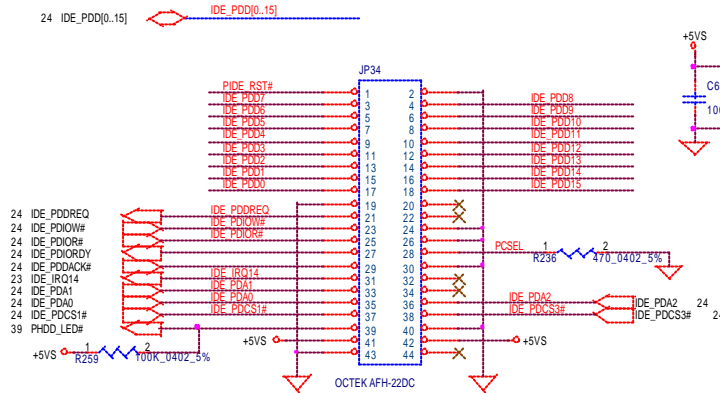


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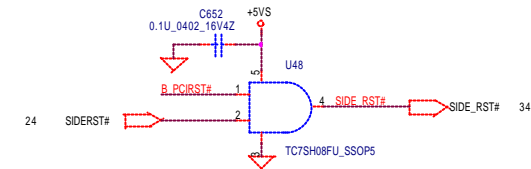
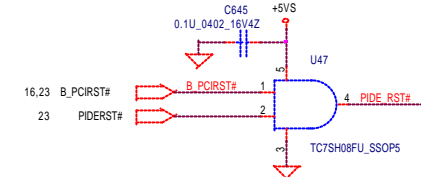
### HDD CONNECTOR

Place caps. near HDD  
CONN.

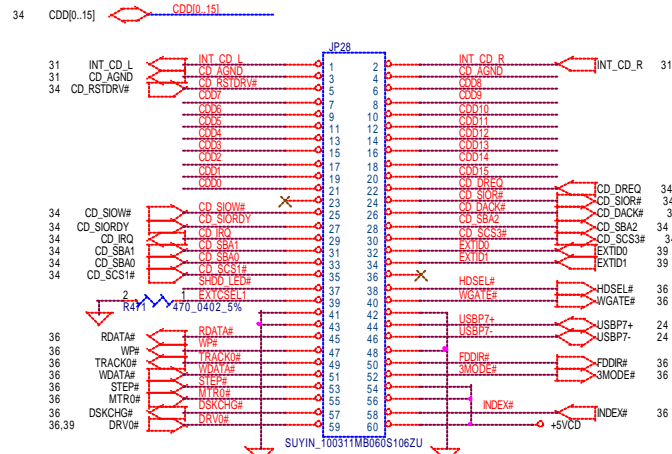


EXTID1	EXTID0	Module
0	0	CDROM
0	1	FDD
1	0	HDD
1	1	TV Tuner/No Module

EXTID3	EXTID2	Module
0	0	CDROM
0	1	FDD
1	0	HDD
1	1	TV Tuner/No Module

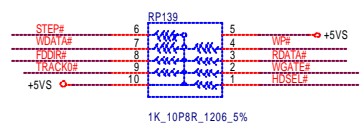
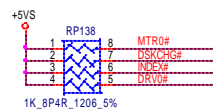
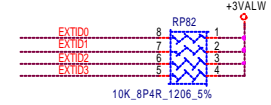
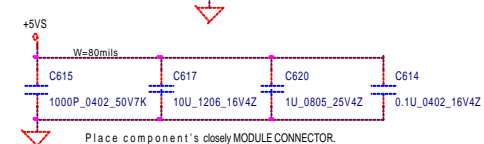
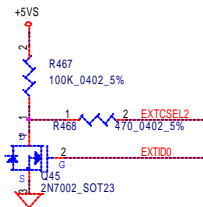
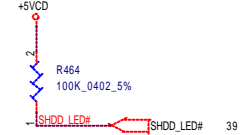
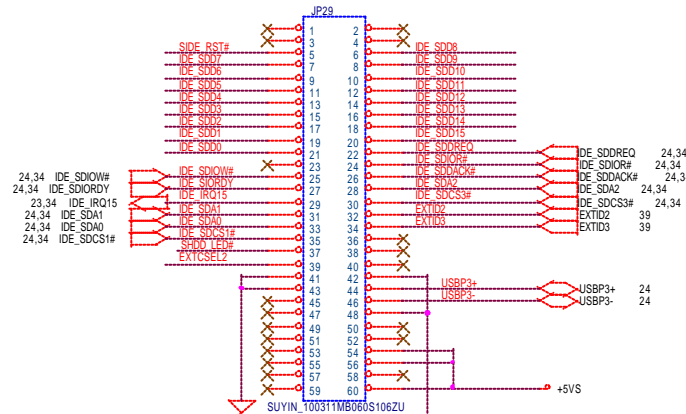


### Main Module Conn. (Master)



24,34 IDE\_SDD[0..15] IDE\_SDDIO\_151

### 2nd Module Conn. (Slave)



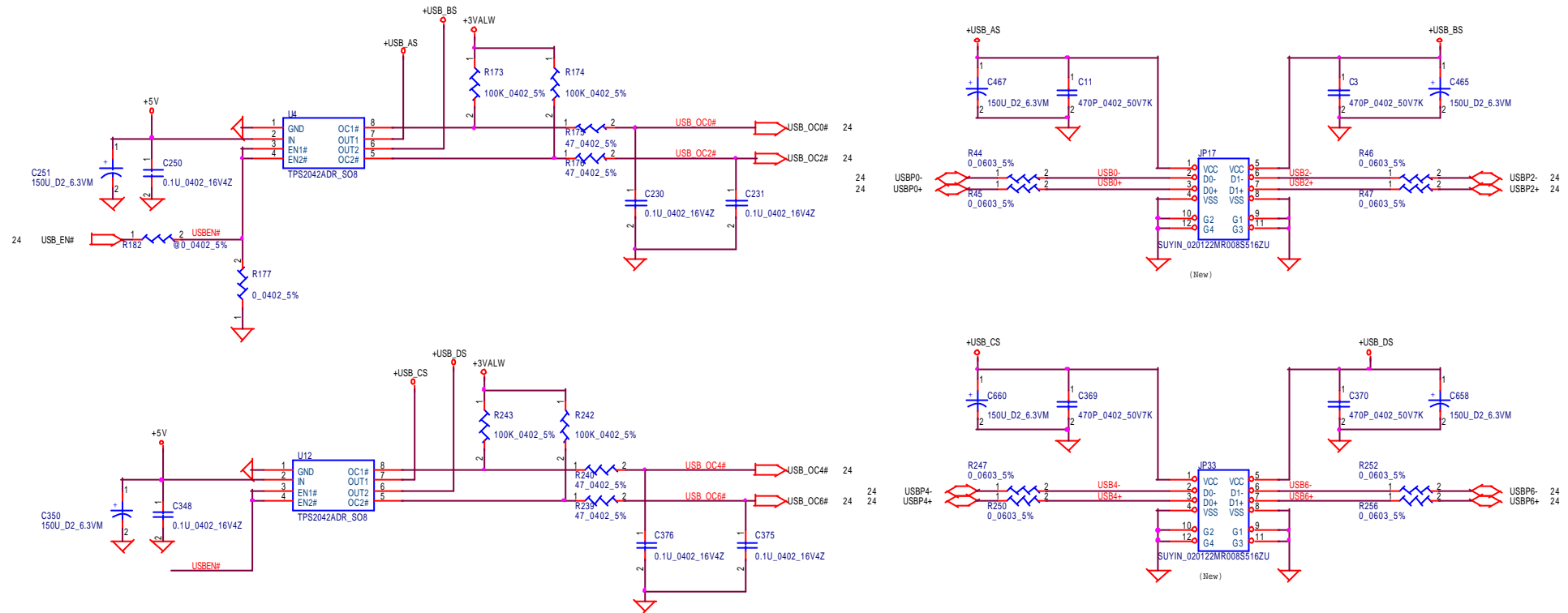
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IDE/ FDDMODULECONN.

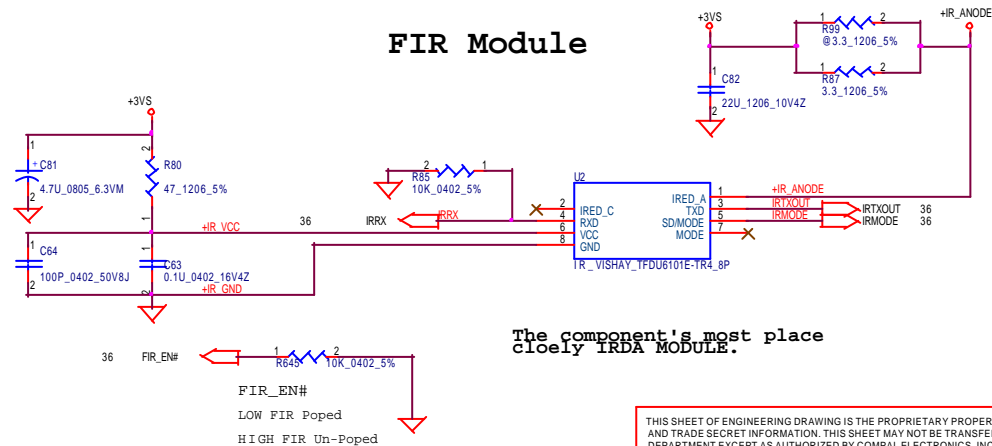
Doc Number LA-1841 Rev 0.1  
Date: Thursday, February 20, 2003 Sheet 35 of 57

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## FIR Module



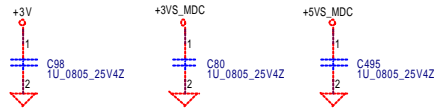
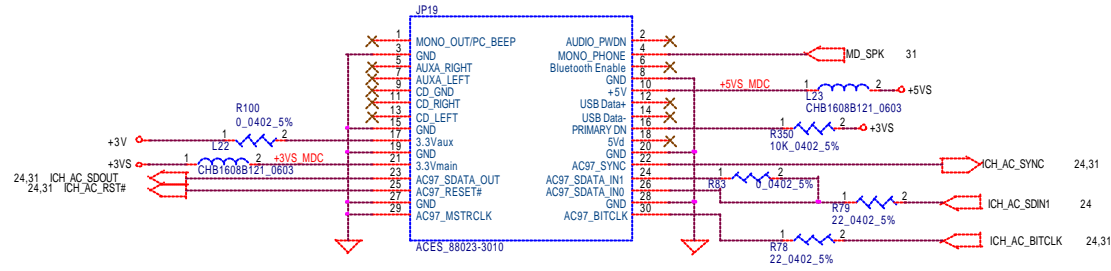
The component's most place  
closely IRDA MODULE.

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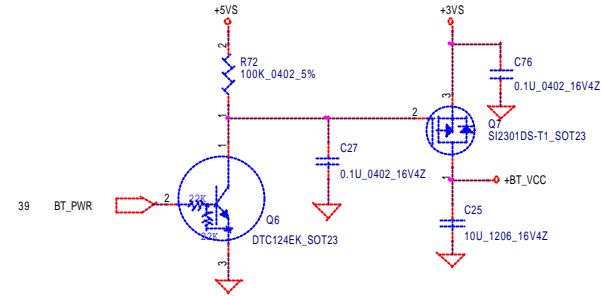
Compal Electronics, Inc.

Title		
USB Conn.		
Size	Document Number	Rev
B	LA-1841	0.1
Date:	Thursday, February 20, 2003	Sheet 37 of 57

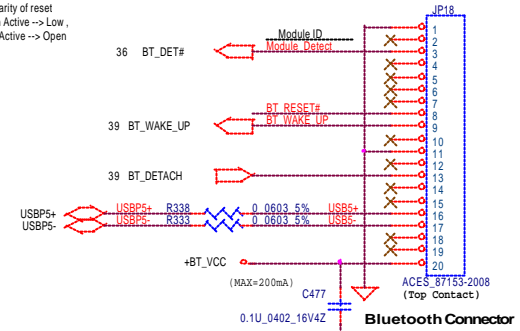
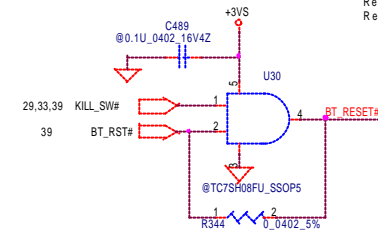
## MDC CONN.



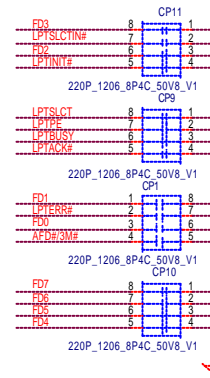
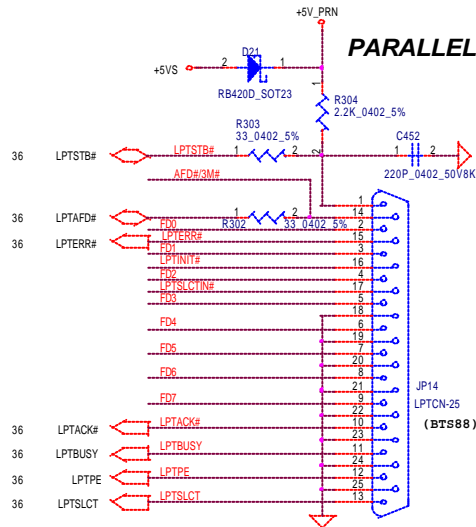
## BlueTooth Interface



Module ID  
Indication for polarity of reset  
Reset input High Active --> Low,  
Reset input Low Active --> Open



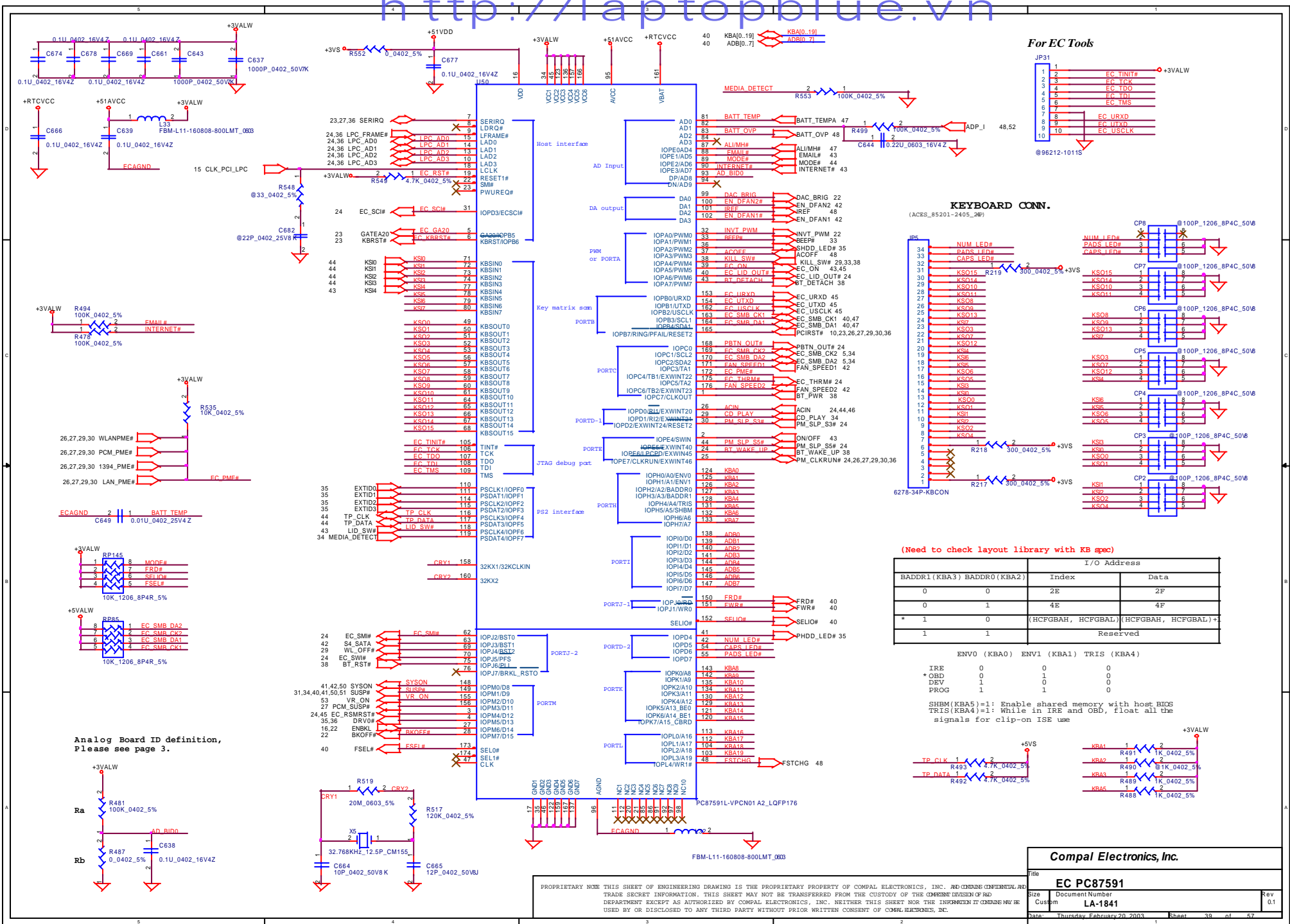
## PARALLEL PORT



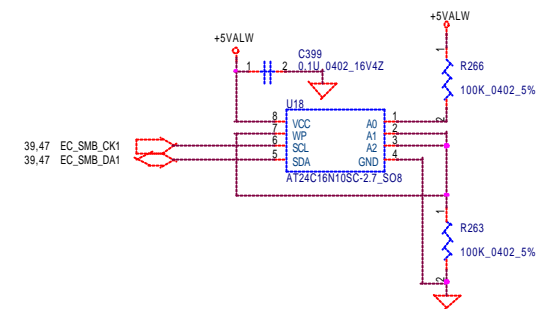
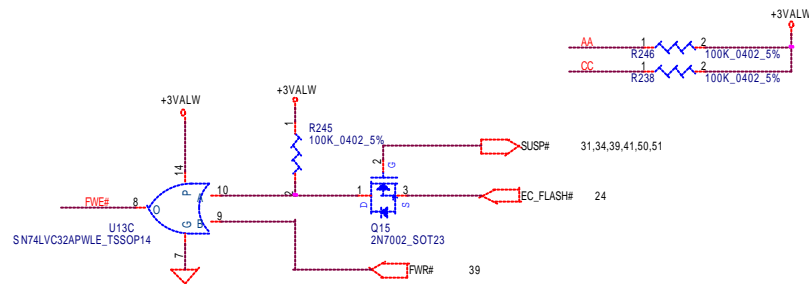
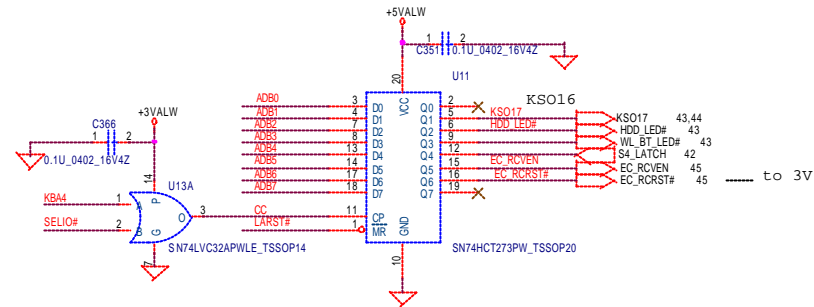
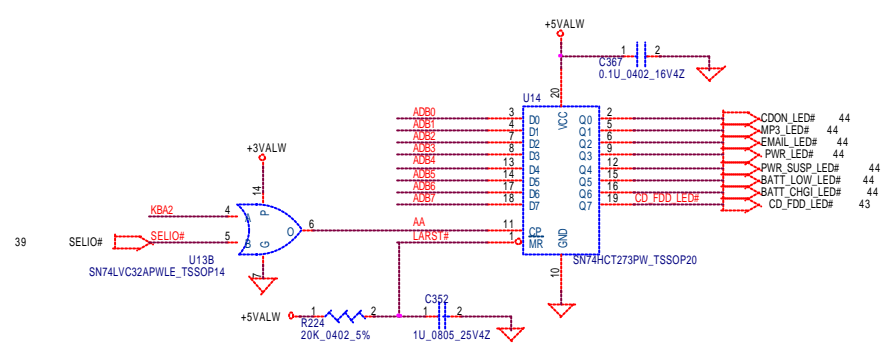
Compal Electronics, Inc.

Title		
PARALLEL/MDCPORT		
Size	Document Number	Rev
	LA-1841	0.1
Date:	Thursday, February 20, 2003	Sheet 38 of 57

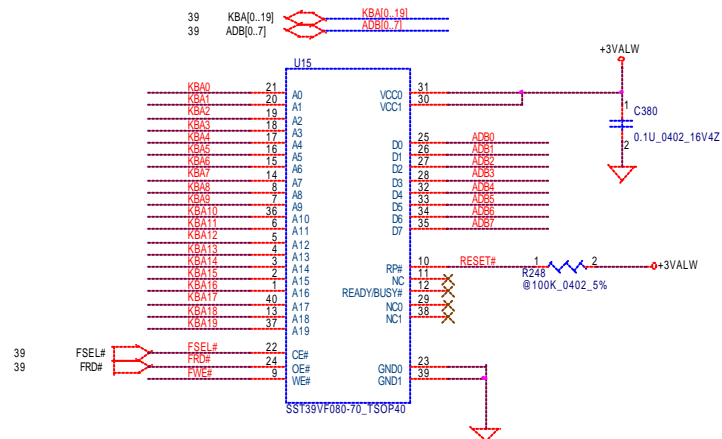
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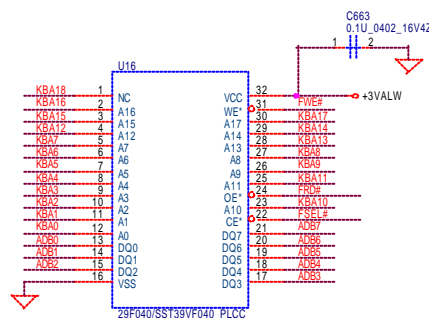




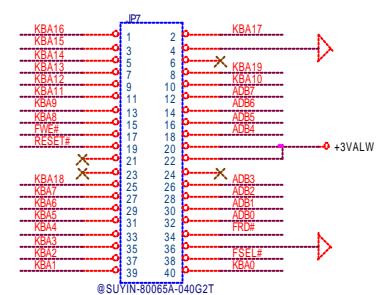
**1MB Flash ROM**



**512KB Flash ROM**



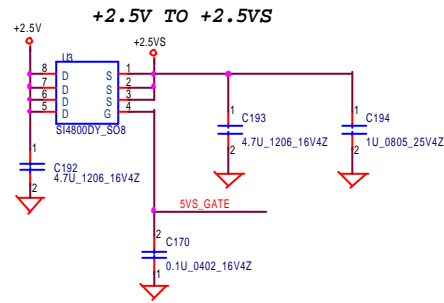
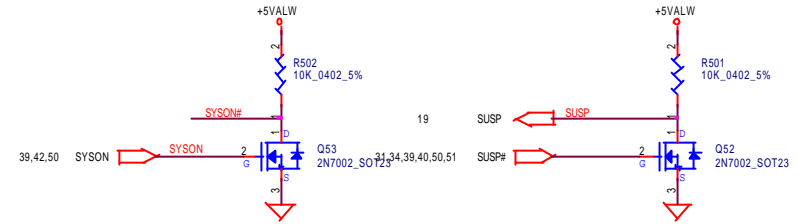
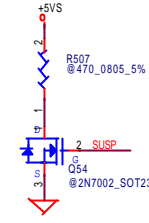
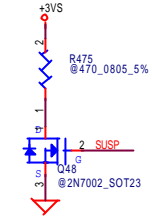
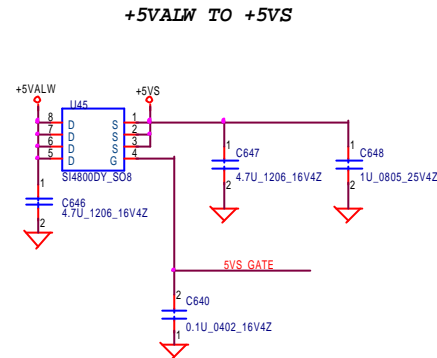
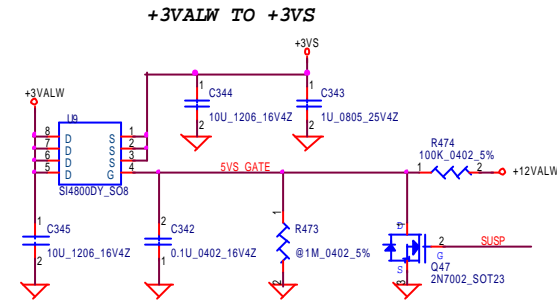
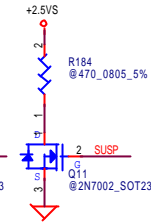
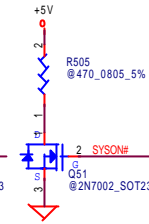
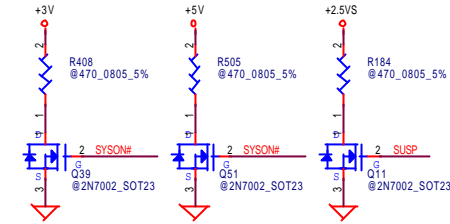
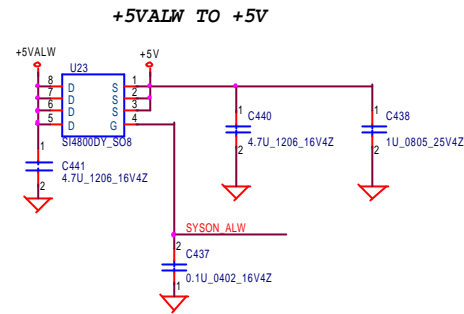
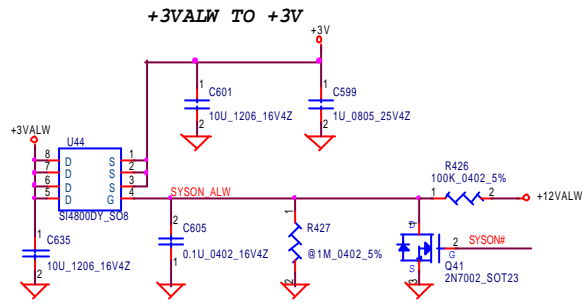
**Flash ROM Socket Conn.**



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Title			
<b>BIOS &amp; EXT. I/O PORT</b>			
Size B	Document Number <b>LA-1841</b>		Rev 0.1
Date	Thursday, February 20, 2003	Sheet	40 of 57

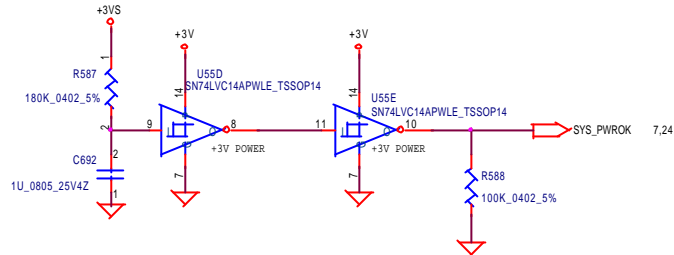




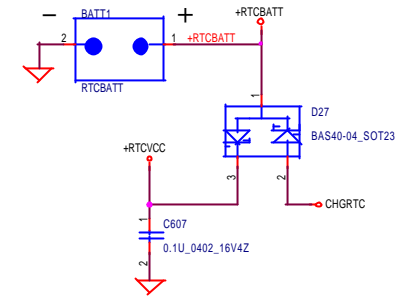
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Compal Electronics, Inc.			
POWER CONTROLCKT			
Size	Document Number	Rev	
B	LA-1841	0.1	
Date	Thursday, February 20, 2003	Sheet	41 of 57

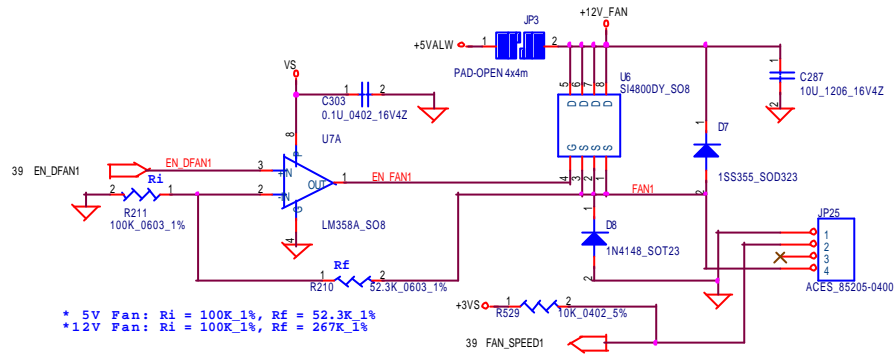
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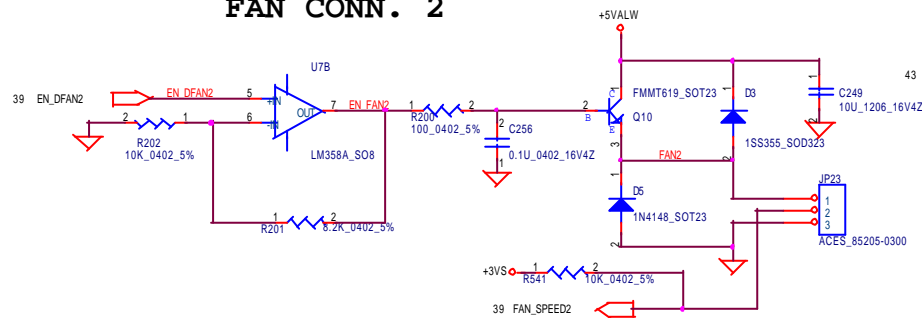
### RTC Battery



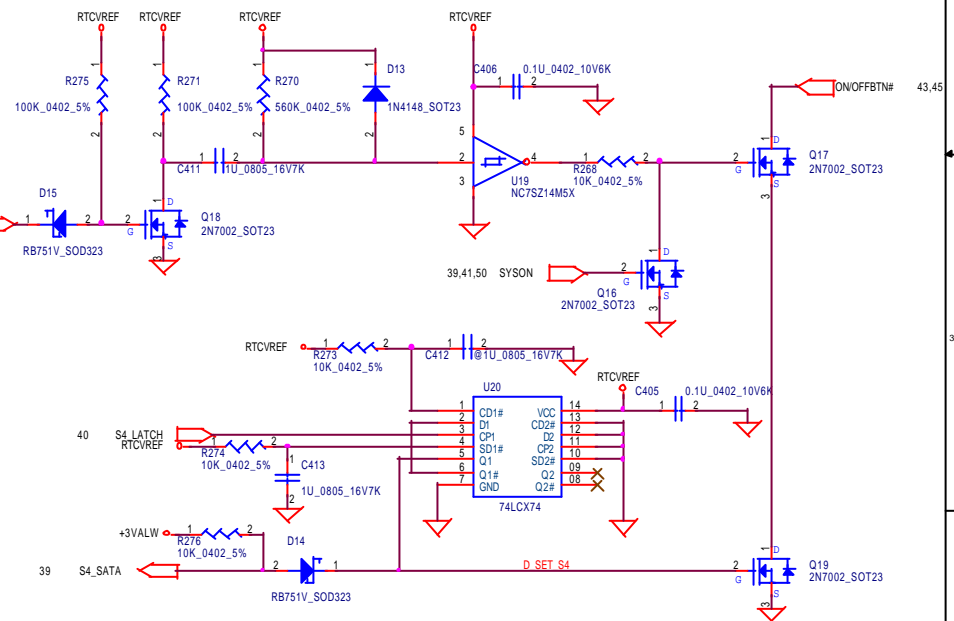
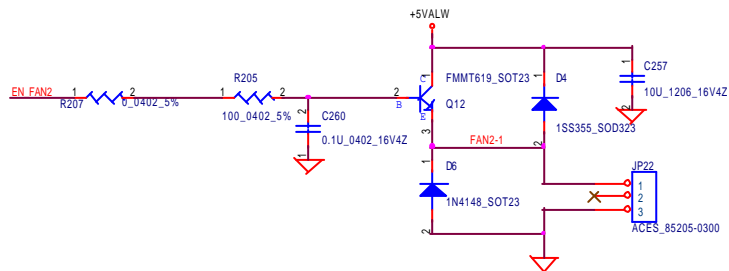
### FAN CONN. 1



### FAN CONN. 2



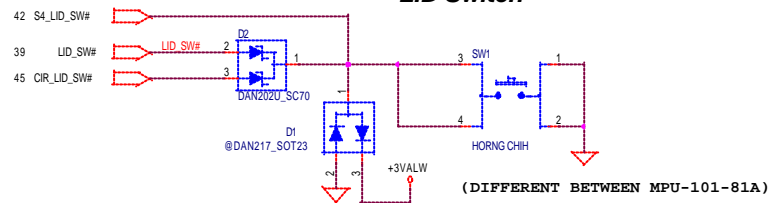
### FAN CONN. 3



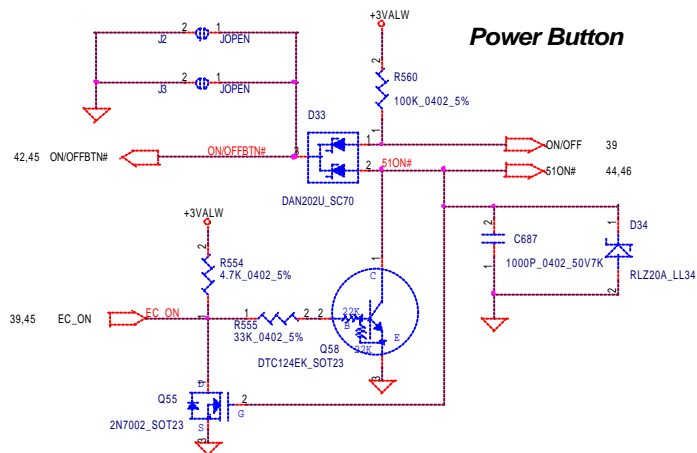
Compal Electronics, Inc.

Title			Power OK/Reset/RTC battery/Lid Switch/Int. KB
Size	Document Number	LA-1841	Rev 0.1
Date:	Thursday, February 20, 2003	Sheet	42 of 57

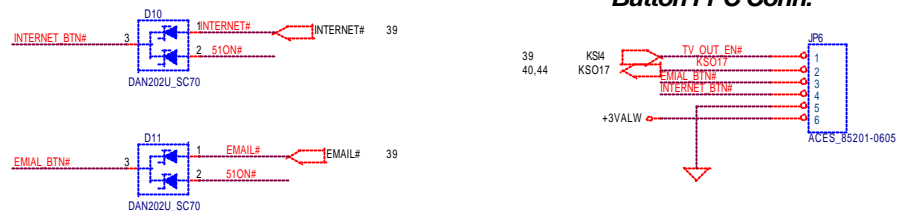
### LID Switch



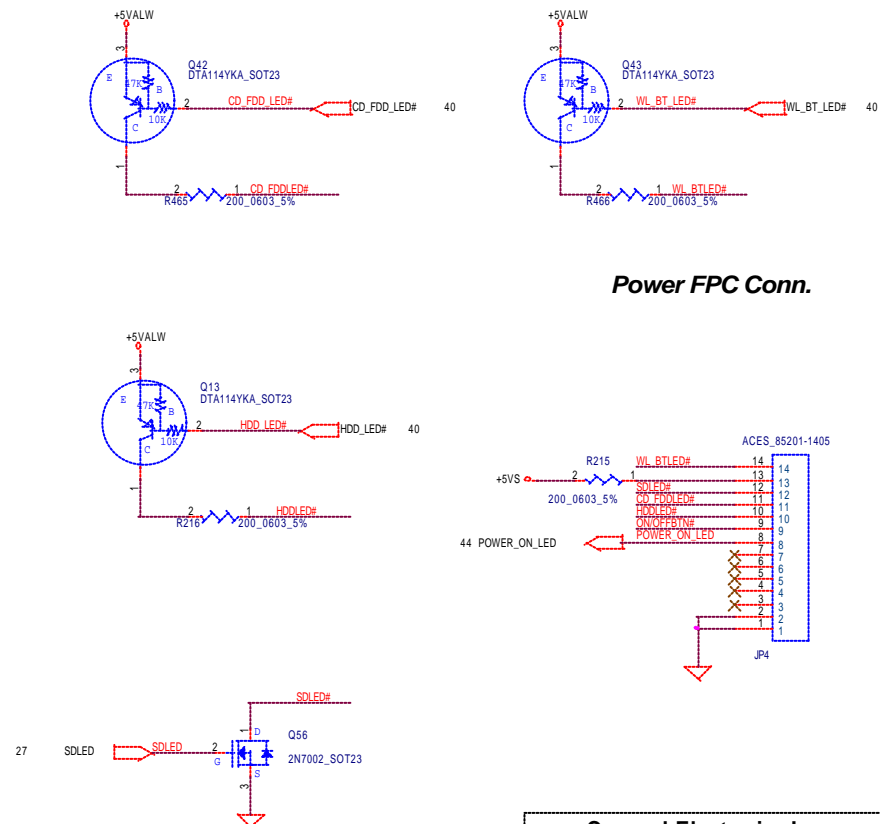
### Power Button



### Button FPC Conn.

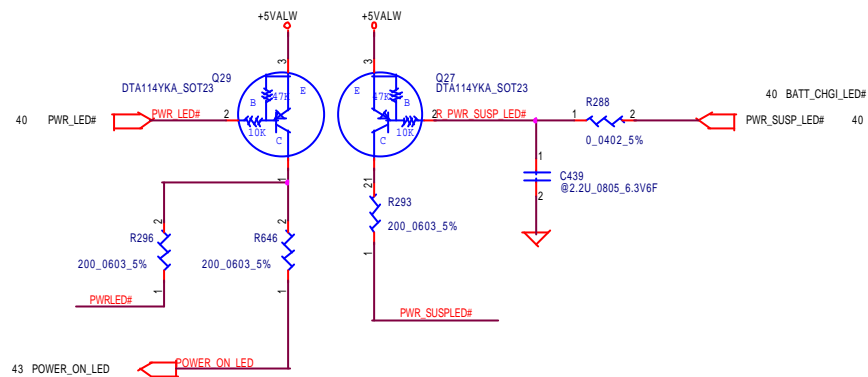


### Power FPC Conn.

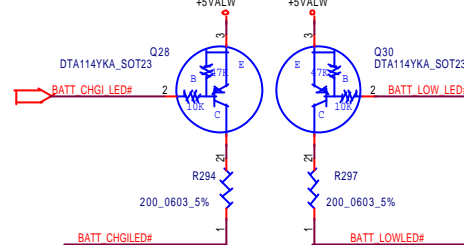


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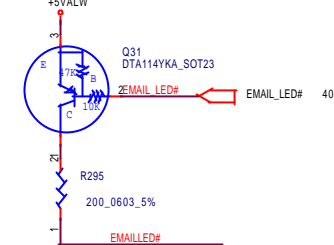
Compal Electronics, Inc.			
Switches & Connectors			
Size	Document Number	Rev	
B	LA-1841	0.1	
Date	Thursday, February 20, 2003	Sheet	43 of 57



POWER/SUSP LED

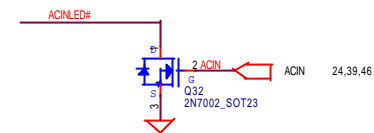
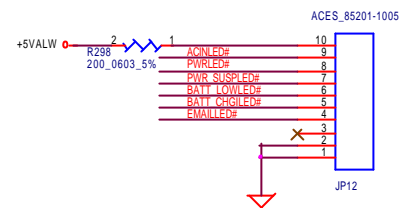


BATTERY CHGI/LOW LED

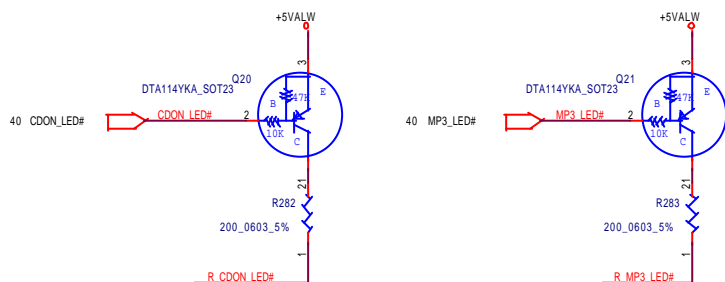


EMAIL LED

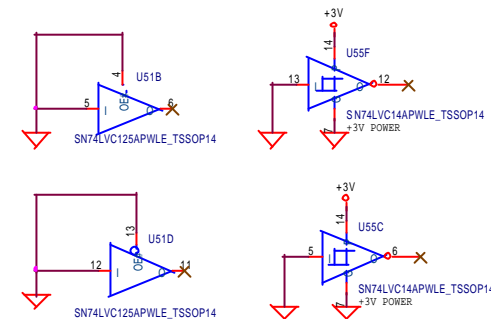
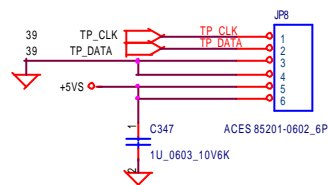
## LED FPC Conn.



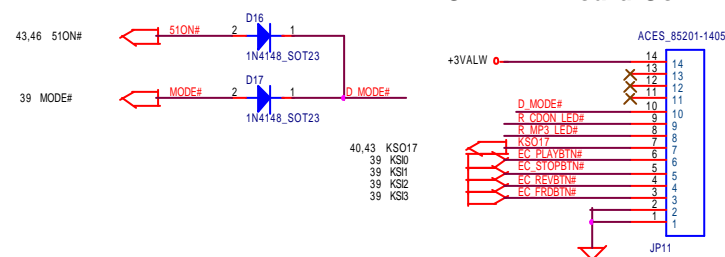
ACIN LED



## Touch Pad Connector

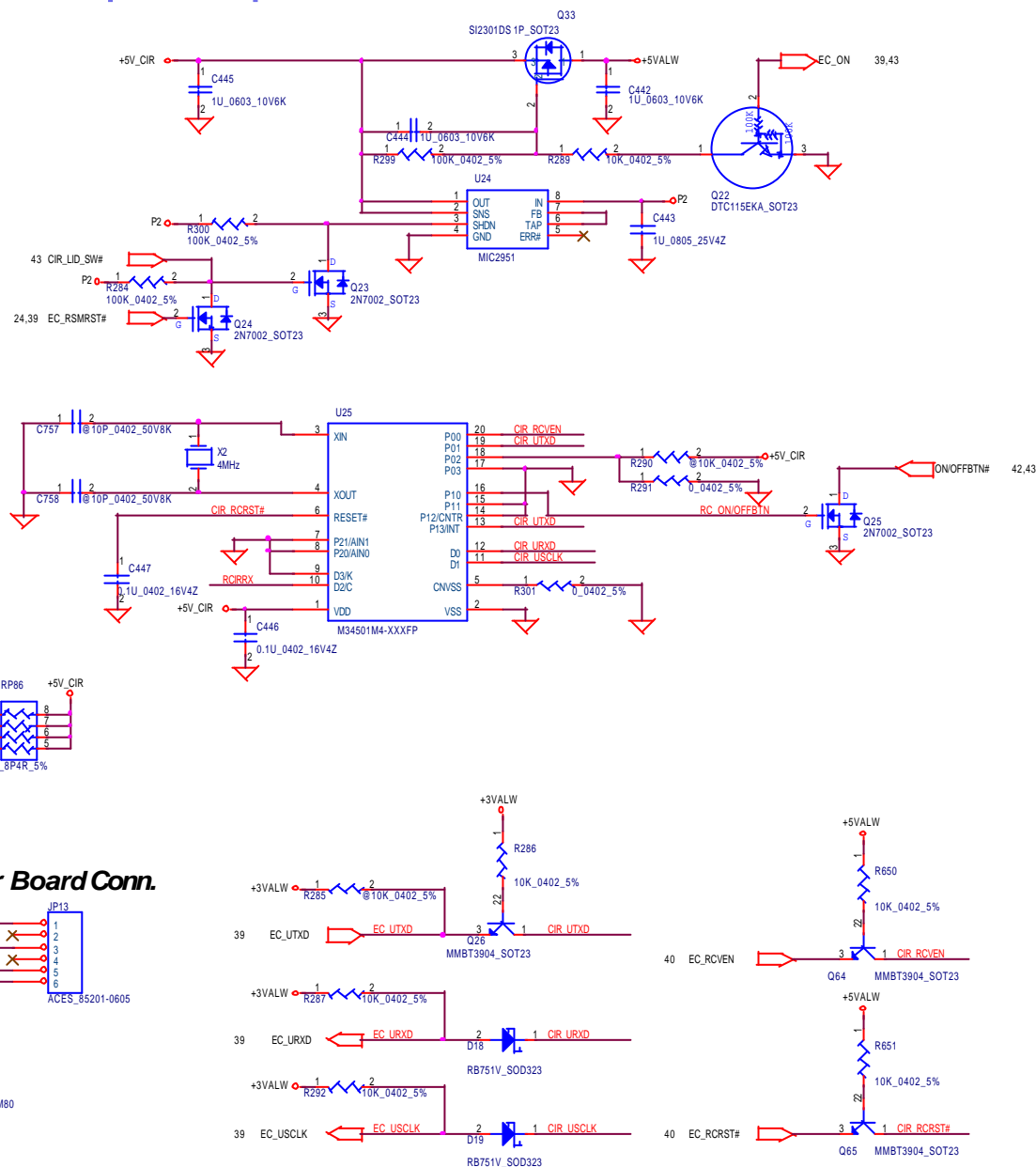
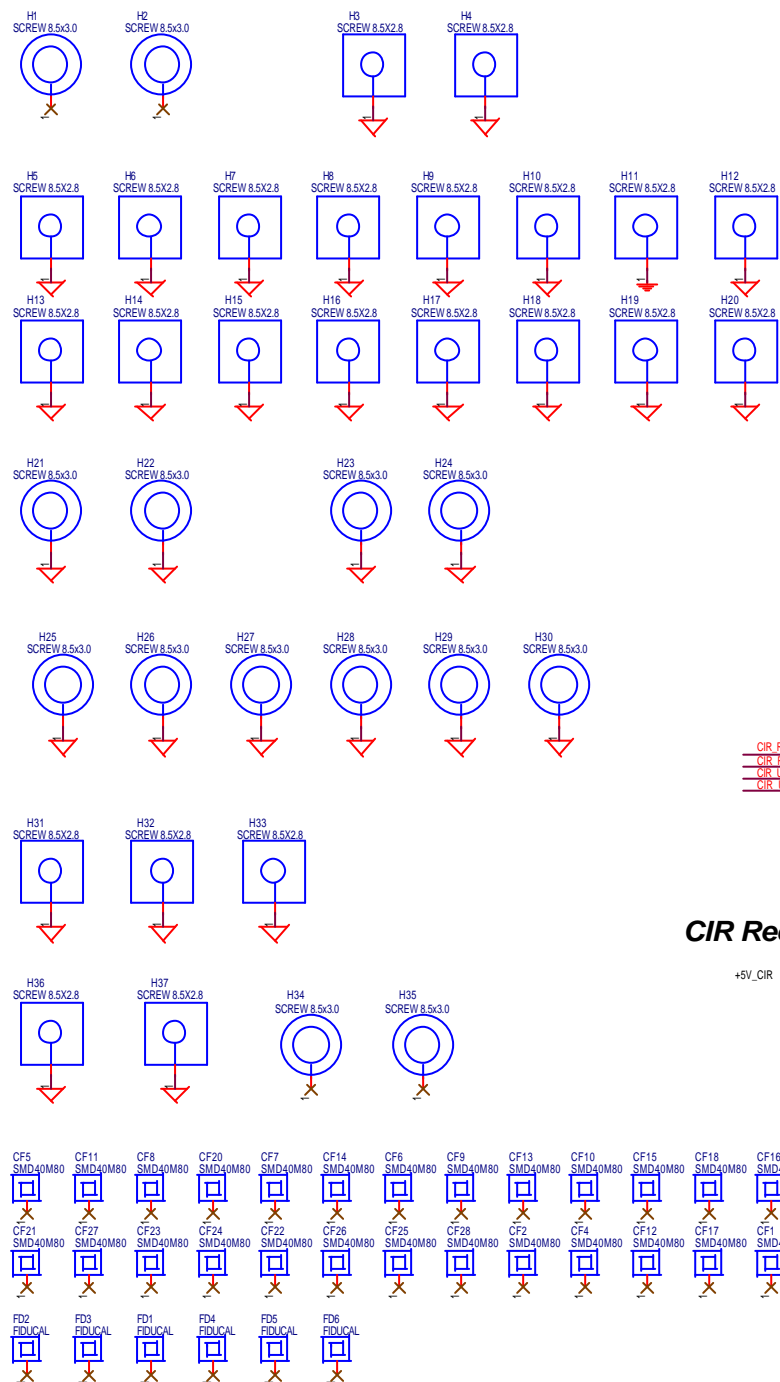


## CDPLAY Board Conn.

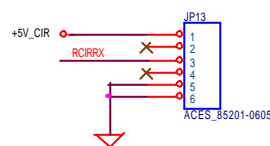


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Compal Electronics, Inc.		
Switches & Connectors		
Size	Document Number	Rev
B	LA-1841	0.1
Date:	Thursday, February 20, 2003	Sheet 44 of 57



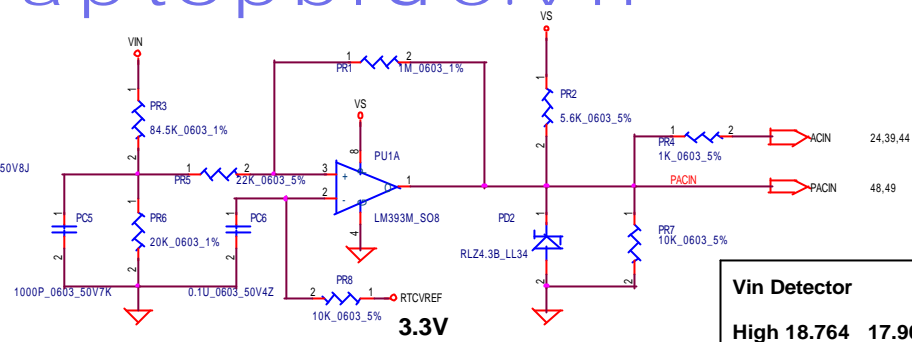
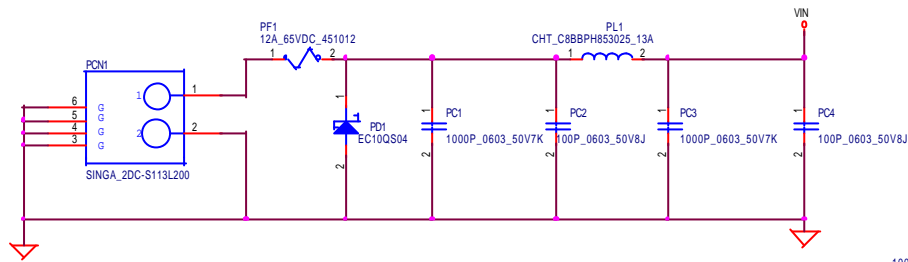
***CLR Reciever Board Conn.***



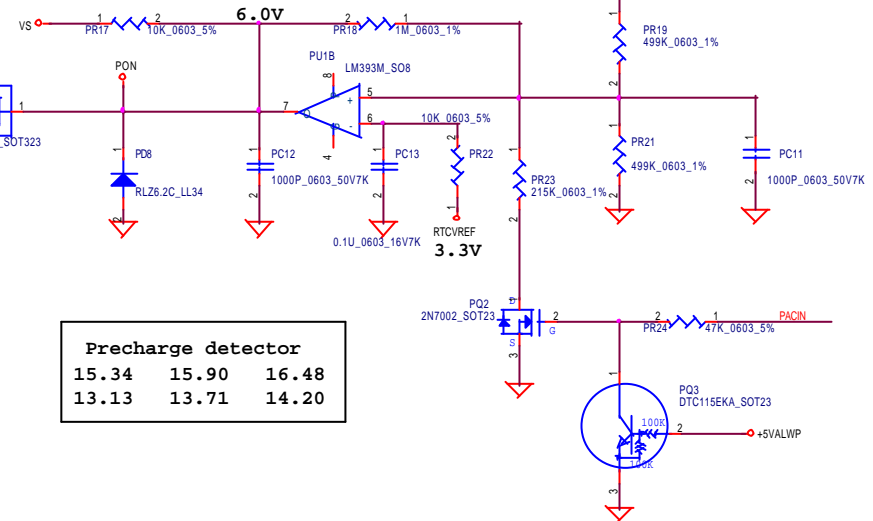
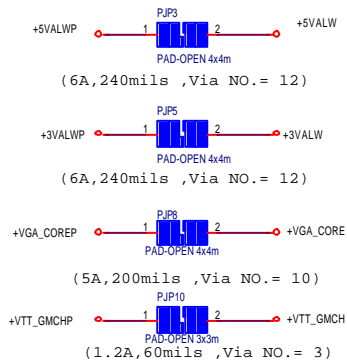
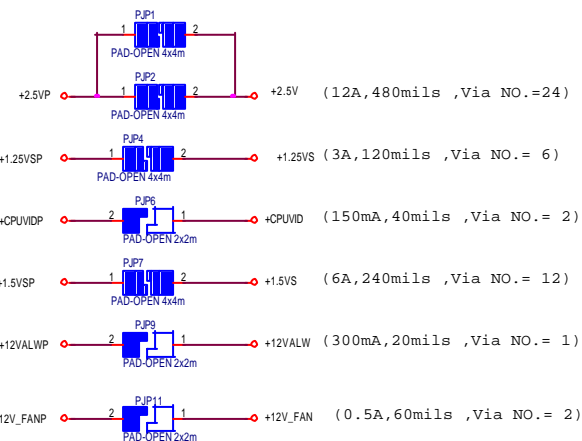
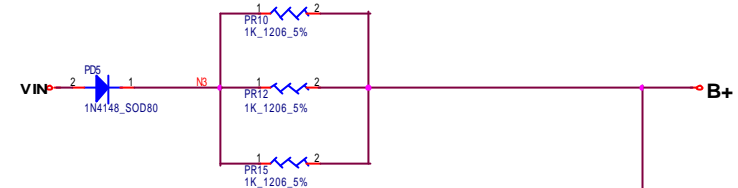
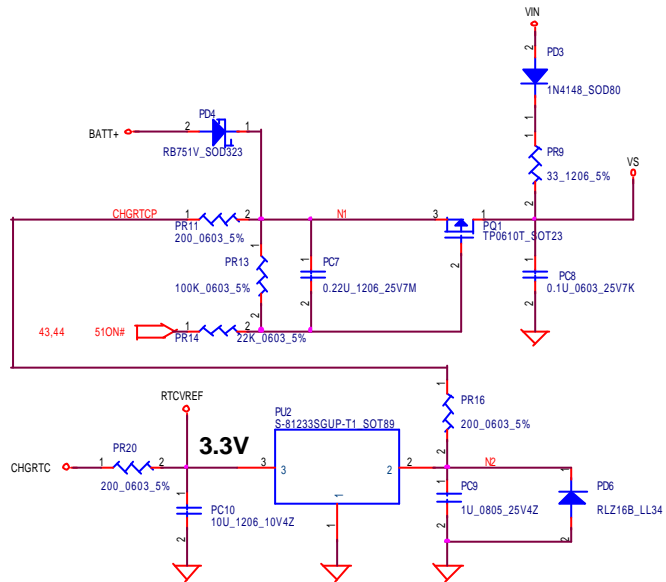
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**Compal Electronics, Inc.**

Title		CIR & Screws	
Size	Document Number	Rev	
B	LA-1841	0:	
Date:	Thursday, February 20, 2003	Sheet	45 of 57



Vin Detector		
High	18.764	17.901 17.063
Low	17.745	16.903 16.038

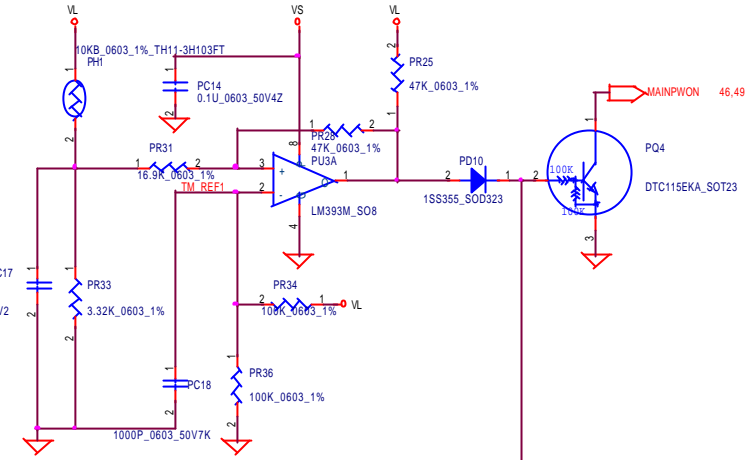
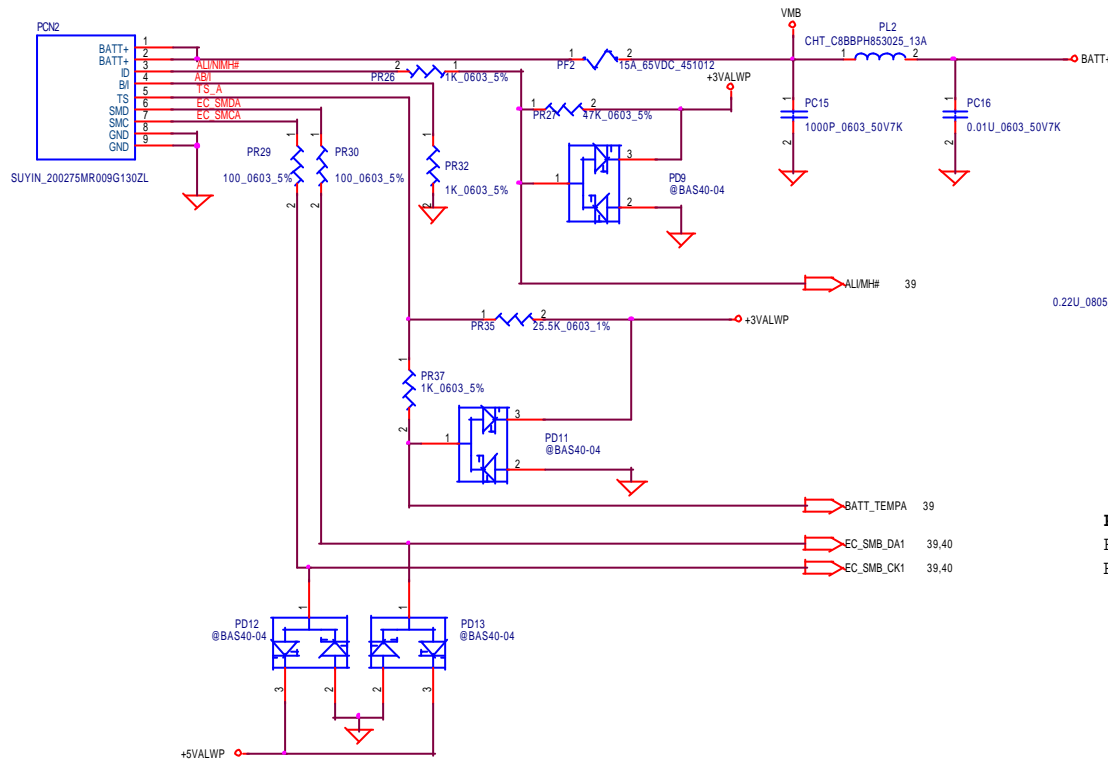


Precharge detector		
15.34	15.90	16.48
13.13	13.71	14.20

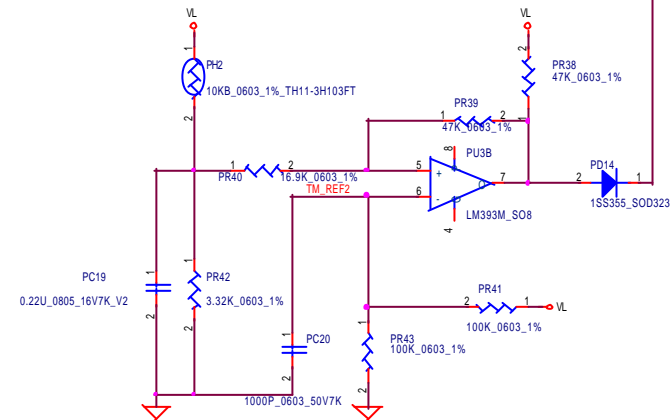
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Compal Electronics, Inc.		
Title	DCIN&DETECTOR	
Size	Document Number	Rev
	LA-1841	0.1
Date	Thursday, February 20, 2003	Sheet 46 of 57

**PH1 under CPU botten side :**  
CPU thermal protection at 84 degree C  
Recovery at 45 degree C



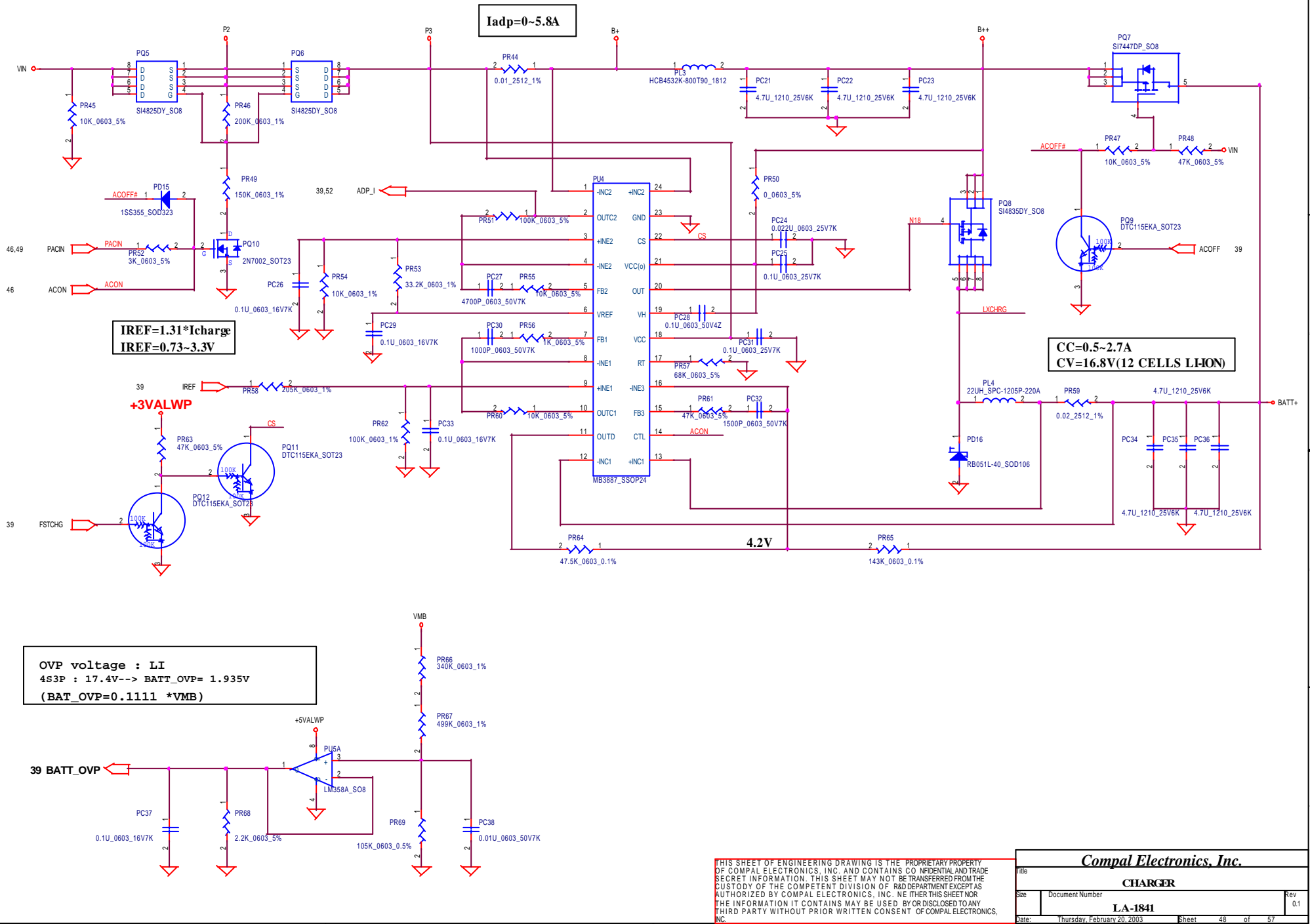
**PH2 near main Battery CONN :**  
BAT. thermal protection at 84 degree C  
Recovery at 45 degree C



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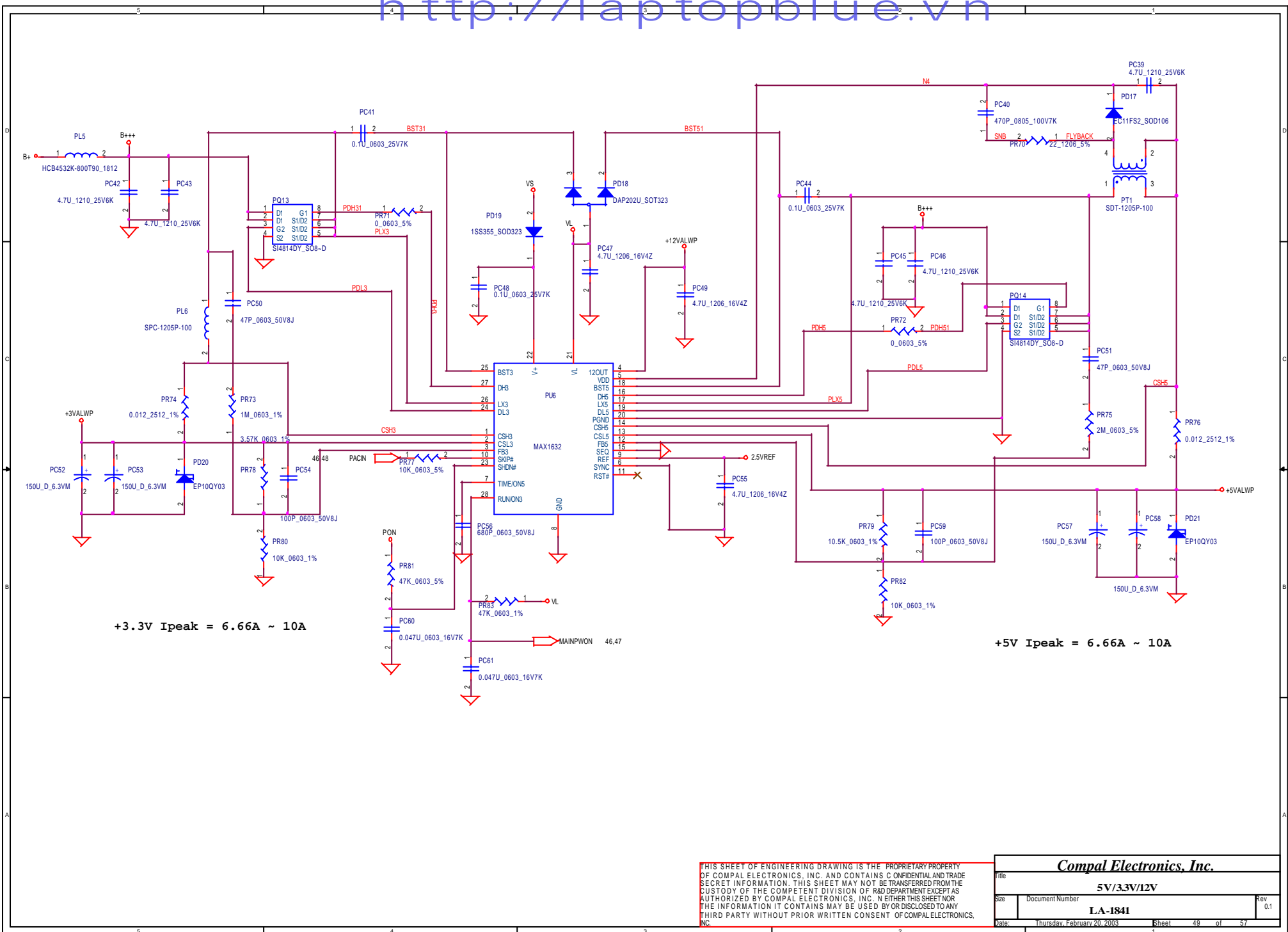
Compal Electronics, Inc.			
BATTERY CONN/OIP			
Size	Document Number	Rev	
	LA-1841	0.1	
Date	Thursday, February 20, 2003	Sheet	47 of 57

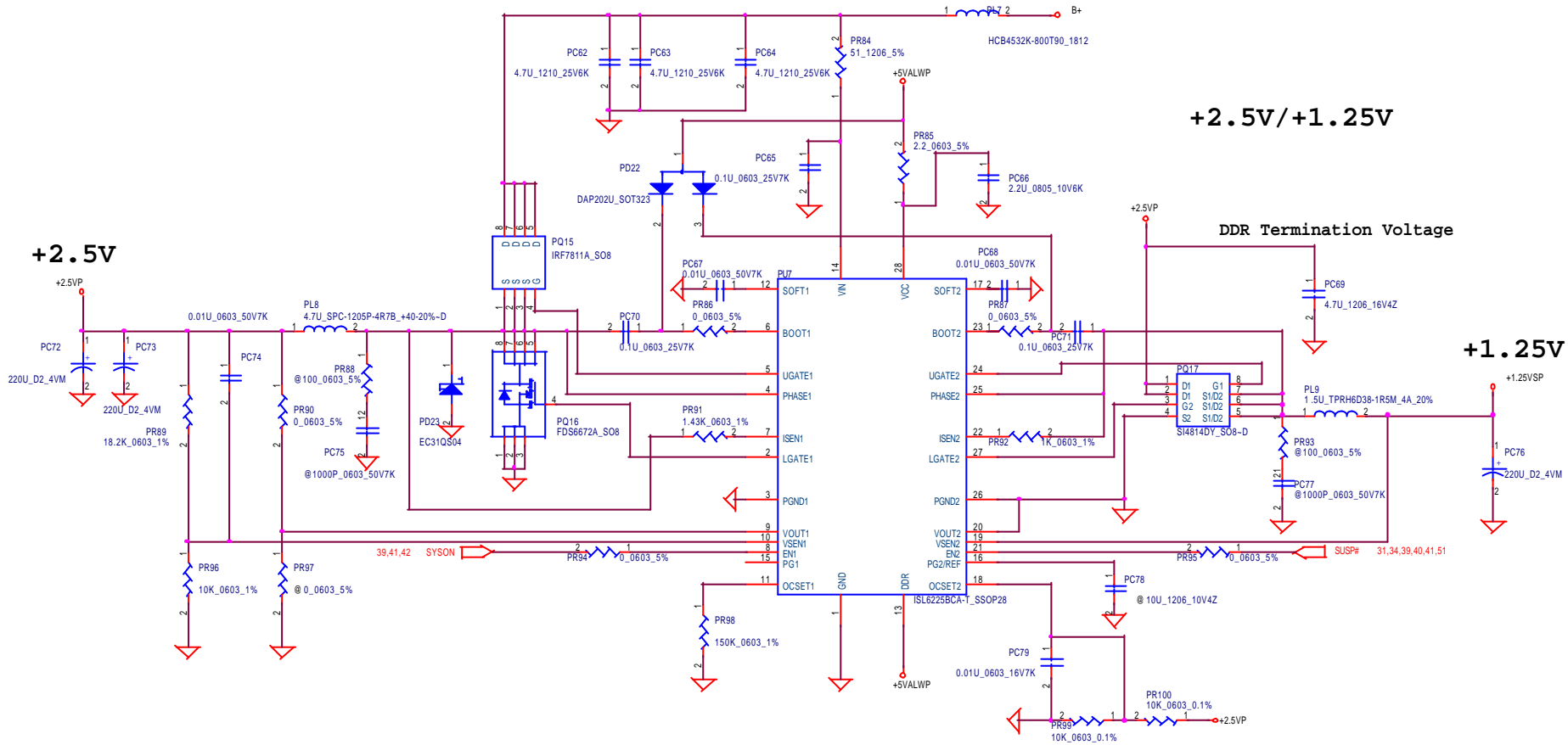




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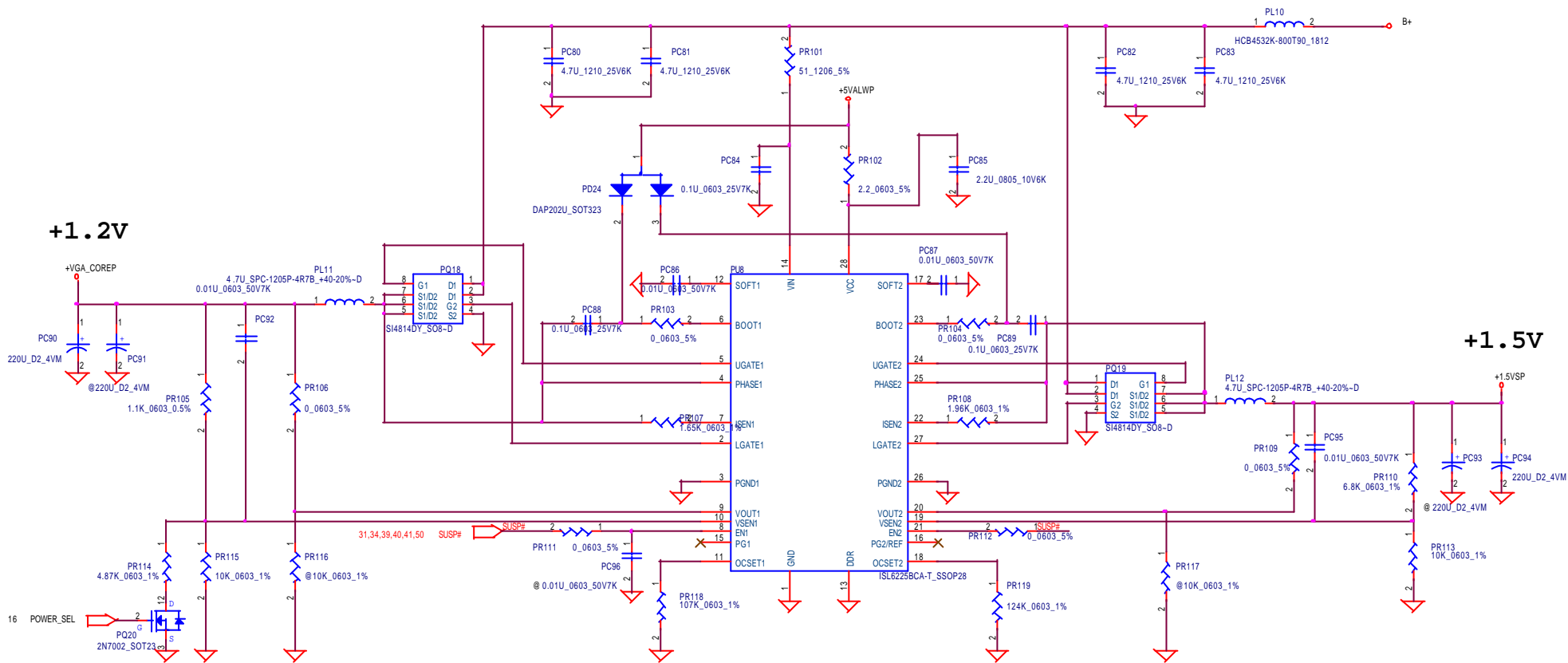
Compal Electronics, Inc.			
CHARGER			
File	Document Number	Rev	
	LA-1841	0.1	
Date	Thursday, February 20, 2003	Sheet	48 of 57





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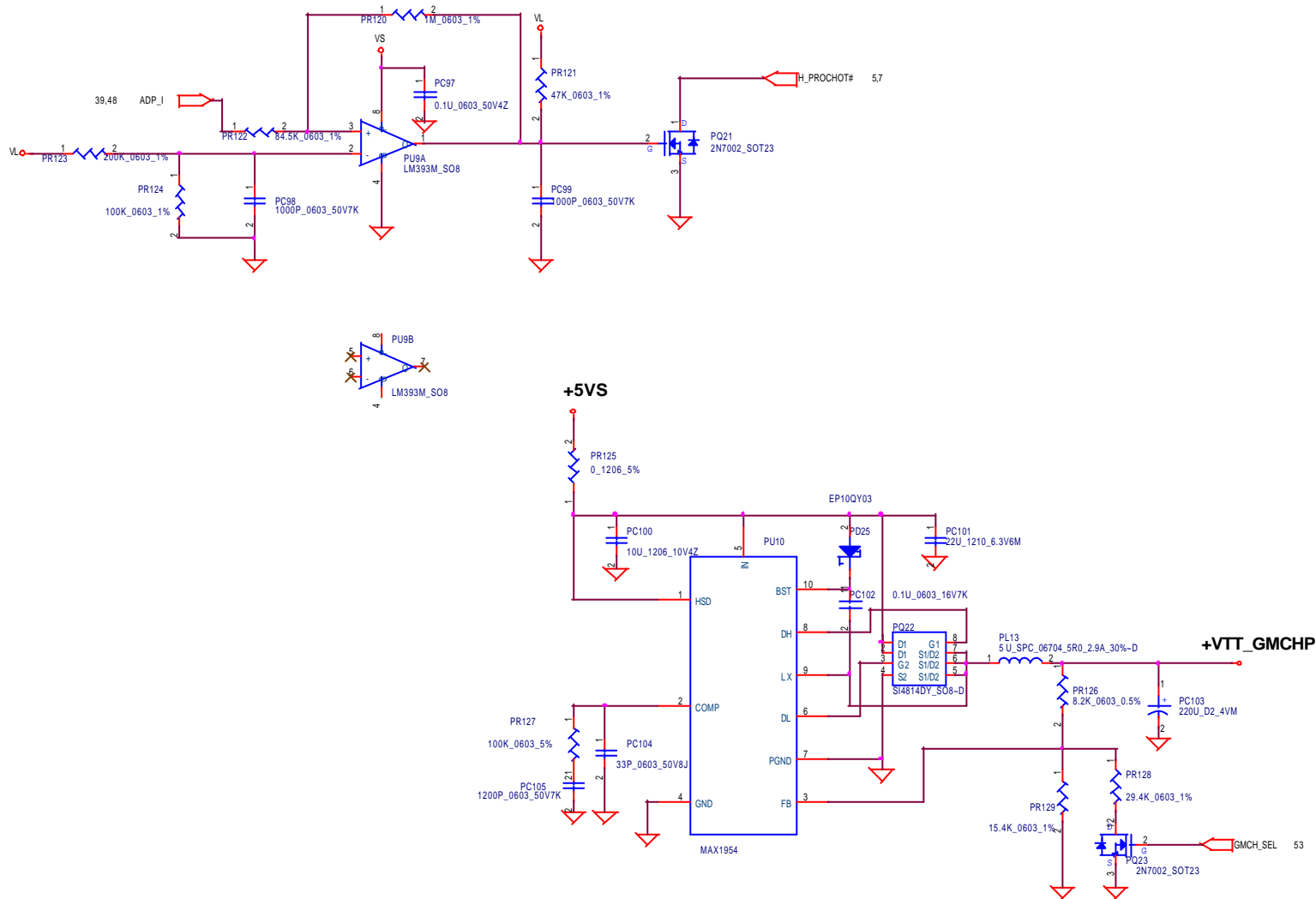
<b>Compal Electronics, Inc.</b>			
Title			
<b>DDR/2.5V/1.25V</b>			
Size	Document Number		Rev
	<b>LA-1841</b>		0.1
Date:	Thursdav, Februarv 20, 2003	Sheet	50 of 57



	NV18/NV34	NV31
FIX 1.2V	POWER_SEL=1 VOUT=1.2V POWER_SEL=0 VOUT=1.0V	POWER_SEL=1 VOUT=1.0V POWER_SEL=0 VOUT=0.95V
PR105=3.4K_0603_1%	PR105=1.1K_0603_0.5%	PR105=1.1K_0603_0.5%
PR115=10K_0603_1%	PR114=4.87K_0603_1%	PR114=20.5K_0603_1%
UNPOP PR114	PR115=10K_0603_1%	PR115=19.6K_0603_1%
UNPOP PQ20	POP PQ20	POP PQ20

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Compal Electronics, Inc.			
VGA_CORE/1.5V			
Size	Document Number	Rev	
	LA-1841	0.1	
Date:	Thursday, February 20, 2003	Sheet	51 of 57



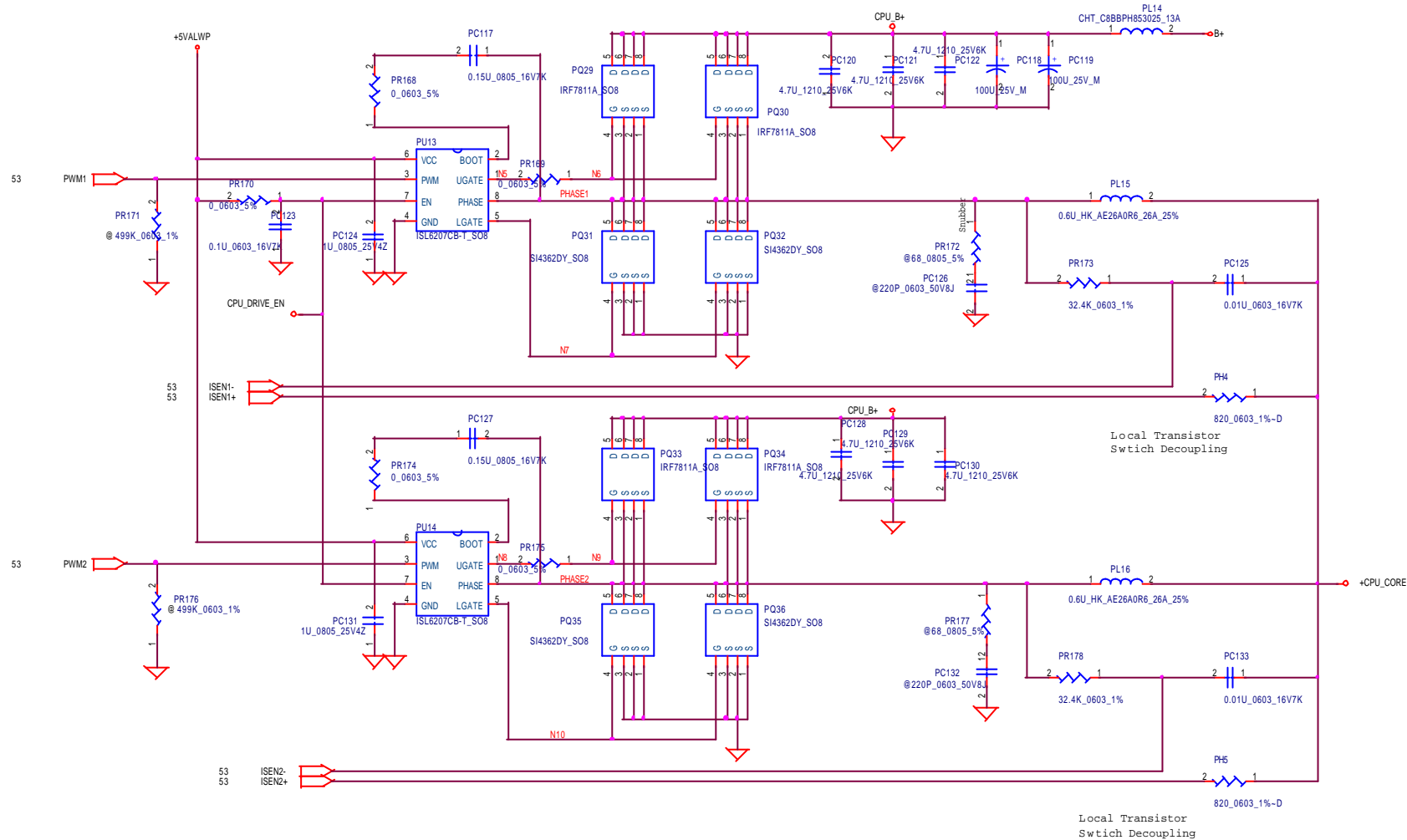
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Compal Electronics, Inc.			
Title: VTT_GMCH/CLOCK/THROWING			
Size	Document Number		Rev
	LA-1841		0.1
Date:	Thursday, February 20, 2003	Sheet	52 of 57

[illegible]

- ```
BOOTSELECT=0 NORTHWOOD
```

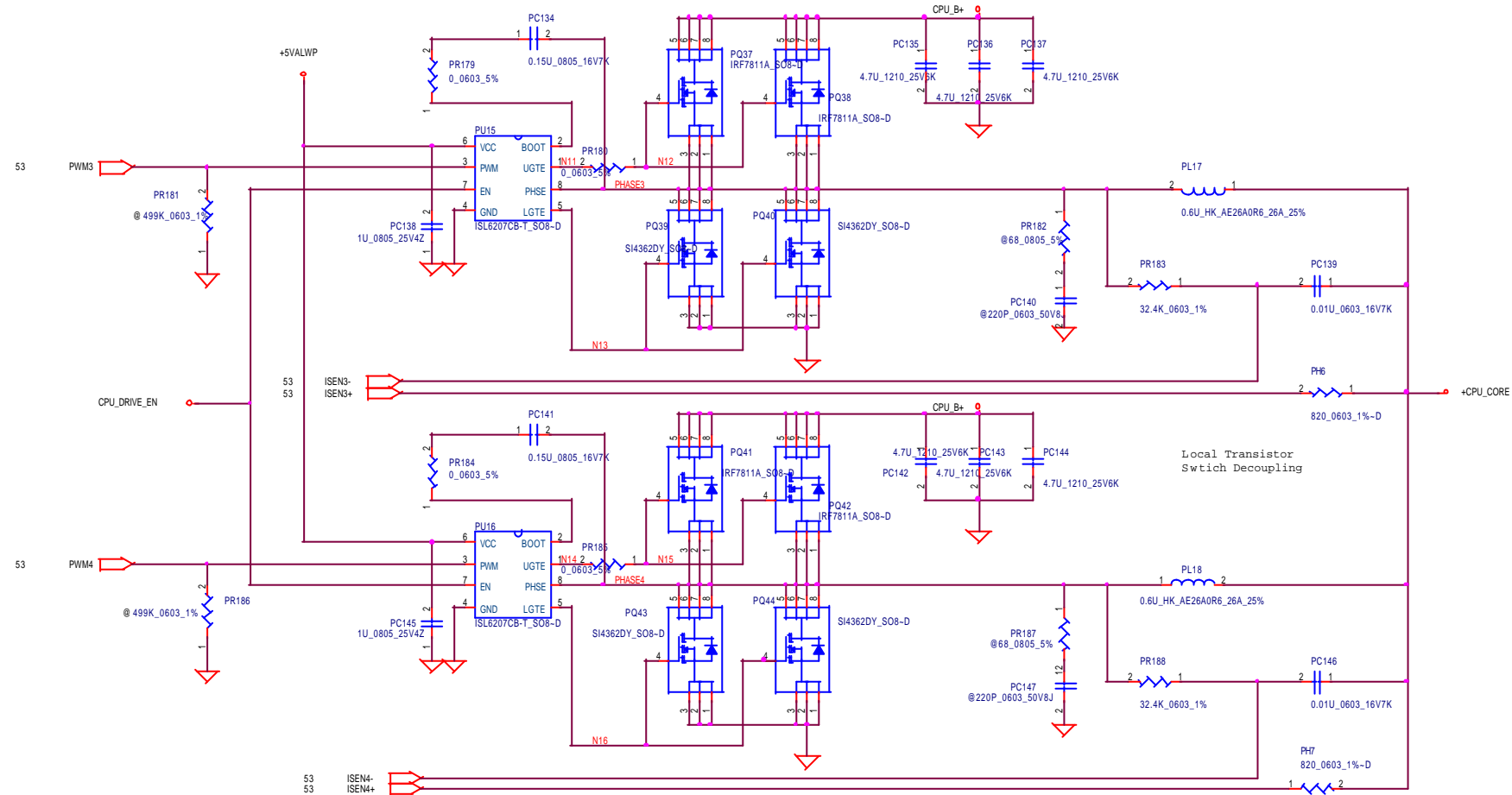
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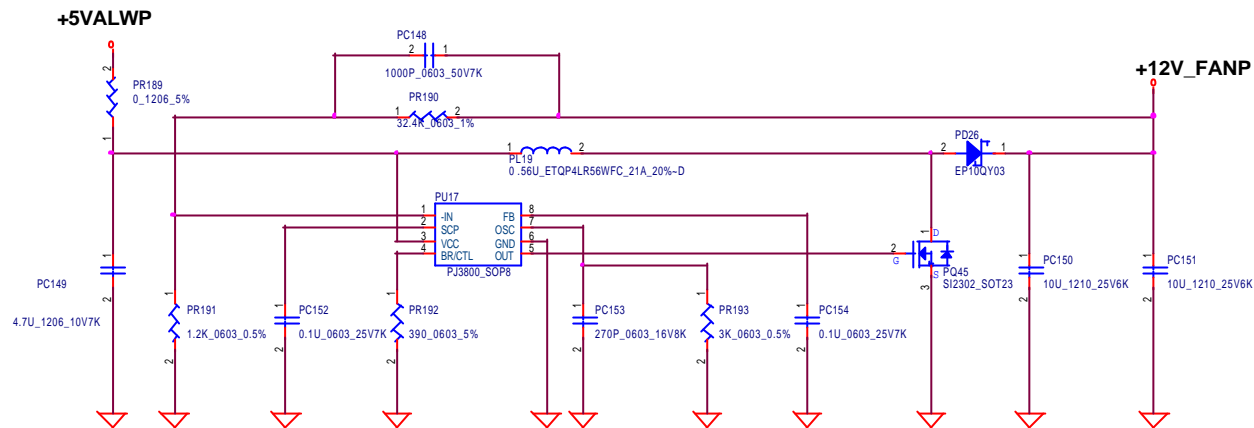
| Compal Electronics, Inc. |                             |       |          |
|--------------------------|-----------------------------|-------|----------|
| CPU_CORE Powerstage 1    |                             |       |          |
| Size                     | Document Number             | Rev   |          |
|                          | LA-1841                     | 0.1   |          |
| Date:                    | Thursday, February 20, 2003 | Sheet | 54 of 57 |





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| Compal Electronics, Inc. |                             |       |          |
|--------------------------|-----------------------------|-------|----------|
| CPU_CORE Powerstage2     |                             |       |          |
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| LA-1841                  |                             | 0.1   |          |
| Date                     | Thursday, February 20, 2003 | Sheet | 55 of 57 |



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| Compal Electronics, Inc. |                             |                |         |
|--------------------------|-----------------------------|----------------|---------|
| Title                    |                             | 12V_FAN        |         |
| Size                     | Document Number             | LA-1841        | Rev 0.1 |
| Date:                    | Thursday, February 20, 2003 | Sheet 56 of 57 |         |

BTQ00 PIR LIST

\*\*\*\*\* Rev0.1 PIR List \*\*\*\*\*

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|--------------------------|-----------------------------|----------------|
| Compal Electronics, Inc. |                             |                |
| Title                    |                             |                |
| BTQ00 PIR LIST           |                             |                |
| Size                     | Document Number             | Rev            |
| B                        | LA-1841                     | 0.1            |
| Date:                    | Thursday, February 20, 2003 | Sheet 57 of 57 |