

# Sakhir 10, 10C, 10G

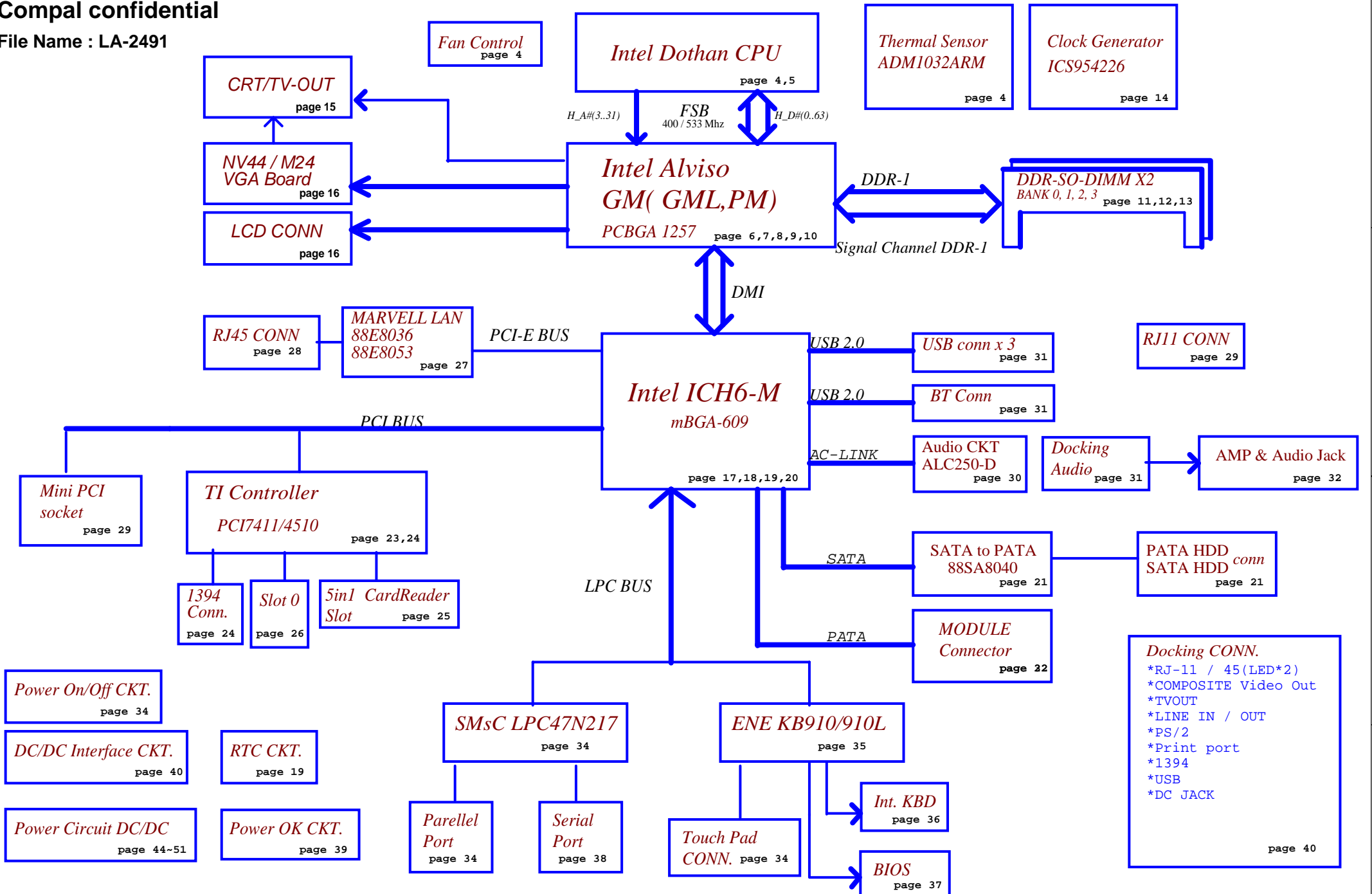
## *LA-2491 Schematics Document*

**Intel Dothan / Alviso GM(PM) / DDR-1 / ICH6-M / Fix Bay**

**(nVIDIA NV43M / NV44M / ATi M22 / M24)**

**2004 / 11 / 28**

**Rev:1.0**



**Docking CONN.**  
 \*RJ-11 / 45(LED\*2)  
 \*COMPOSITE Video Out  
 \*TVOUT  
 \*LINE IN / OUT  
 \*PS/2  
 \*Print port  
 \*1394  
 \*USB  
 \*DC JACK

## Voltage Rails

Power Plane	Description	S1	S3	S5
VIN	Adapter power supply (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
+1.05VS	1.05V switched power rail	ON	OFF	OFF
+DDRVTT	1.25V switched power rail for DDR terminator	ON	OFF	OFF
+1.5VALW	1.5V always on power rail	ON	ON	ON*
+1.5VS	1.5V switched power rail	ON	OFF	OFF
+1.8VS	1.8V switched power rail	ON	OFF	OFF
+DDRVCC	2.5V power rail for DDR	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*
+5VS	5V switched power rail	ON	OFF	OFF
+5VCD	5V switched power rail for Direct CD	ON	OFF	OFF
+5VMOD	5V switched power rail for Module Bay	ON	OFF	OFF
+12VALW	12V always on power rail	ON	ON	ON*
+RTCVCC	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
CardBus	AD20	2	PIRQA/PIRQB
1394	AD20	2	PIRQA/PIRQB
SD	AD20	2	PIRQA/PIRQB
Mini-PCI	AD18	1	PIRQG/PIRQH

## EC SM Bus1 address

Device	Address	Device	Address
Smart Battery	0001 011X b	ADM1032	1001 110X b
EEPROM(24C16/02)	1010 000X b	2'nd Battery	1001 011X b
(24C04)	1011 000Xb	Docking	1010 000X b

## EC SM Bus2 address

## ICH6M SM Bus address

Device	Address
Clock Generator ( ICS 952623)	1101 001Xb
DDR DIMM0	1001 000Xb
DDR DIMM2	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 / SKU ID Table for AD channel

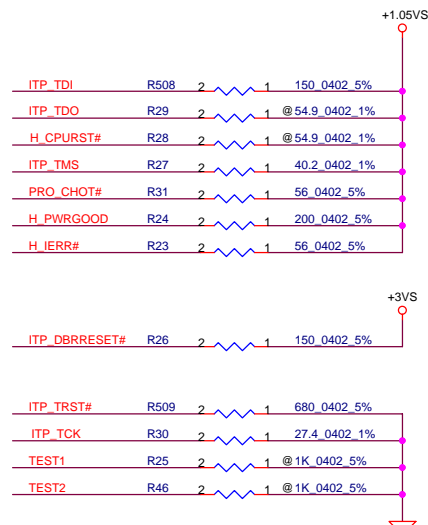
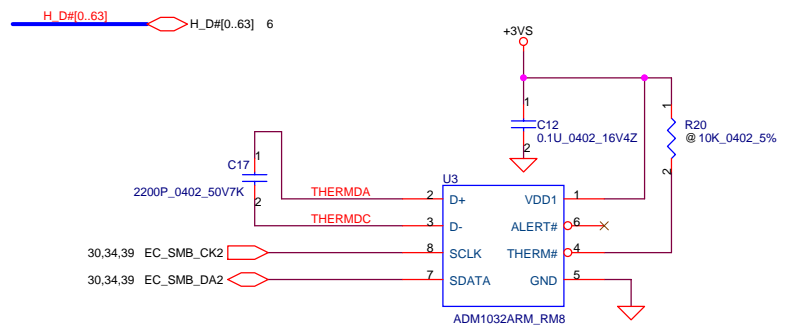
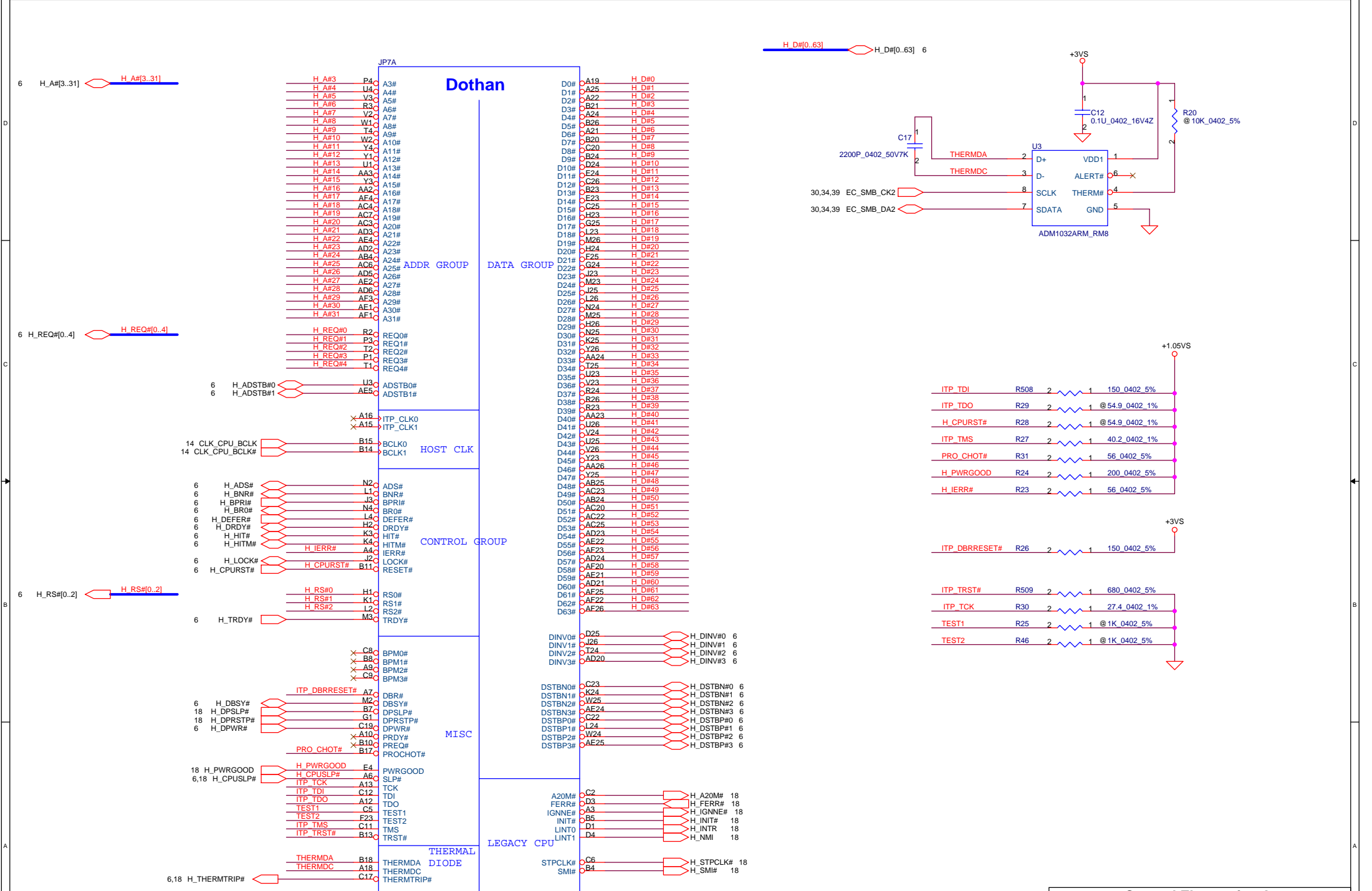
Vcc	3.3V +/- 5%			
Ra/Rc/Re	100K +/- 5%			
Board ID	Rb / Rd / Rf	V <sub>AD_BID</sub> min	V <sub>AD_BID</sub> typ	V <sub>AD_BID</sub> max
0	0	0 V	0 V	0 V
1	8.2K +/- 5%	0.216 V	0.250 V	0.289 V
2	18K +/- 5%	0.436 V	0.503 V	0.538 V
3	33K +/- 5%	0.712 V	0.819 V	0.875 V
4	56K +/- 5%	1.036 V	1.185 V	1.264 V
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 Table

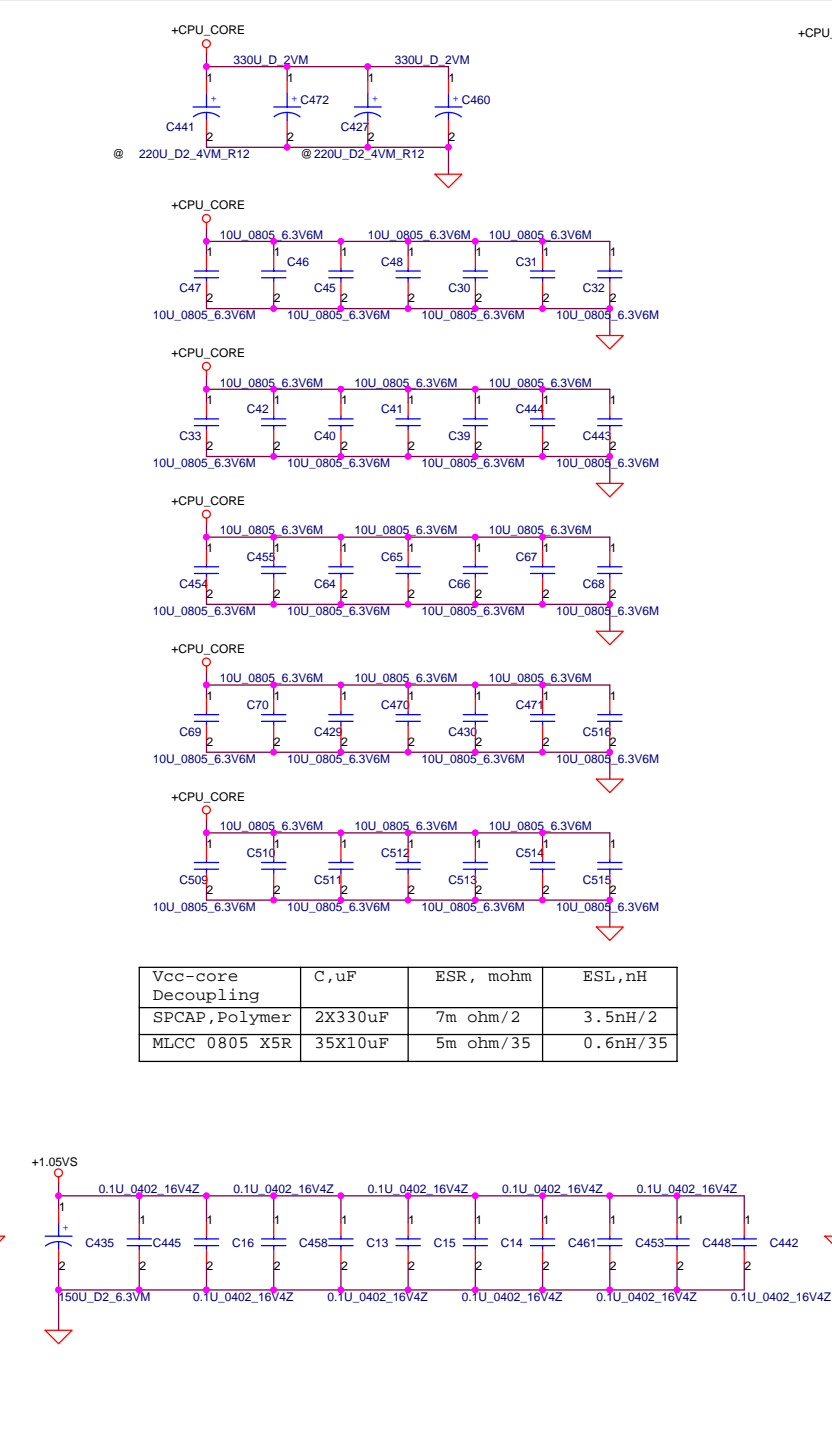
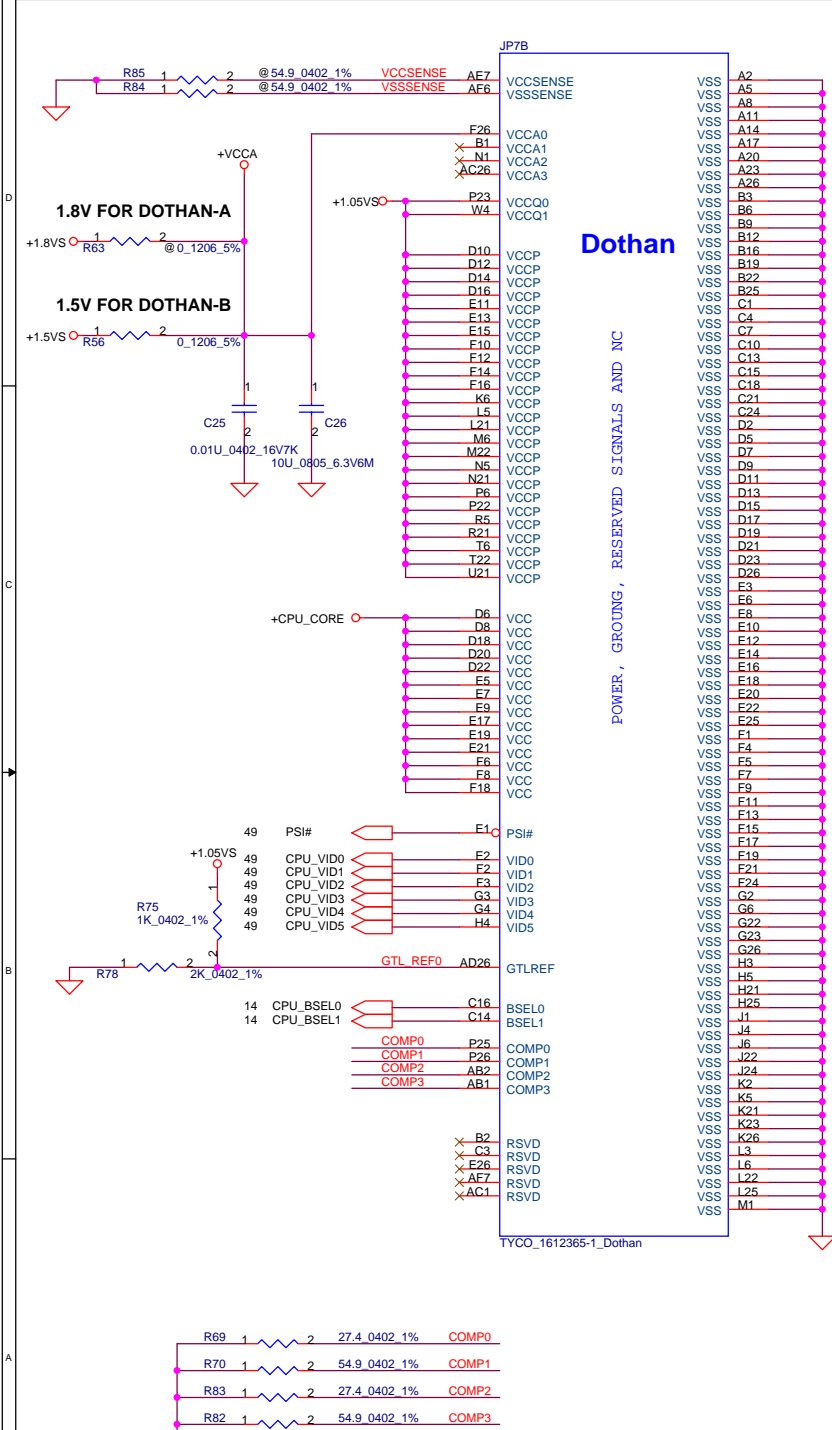
Board ID	PCB Revision
0	0.1
1	0.2
2	0.3
3	1.0
4	
5	
6	
7	

## SKU ID Table

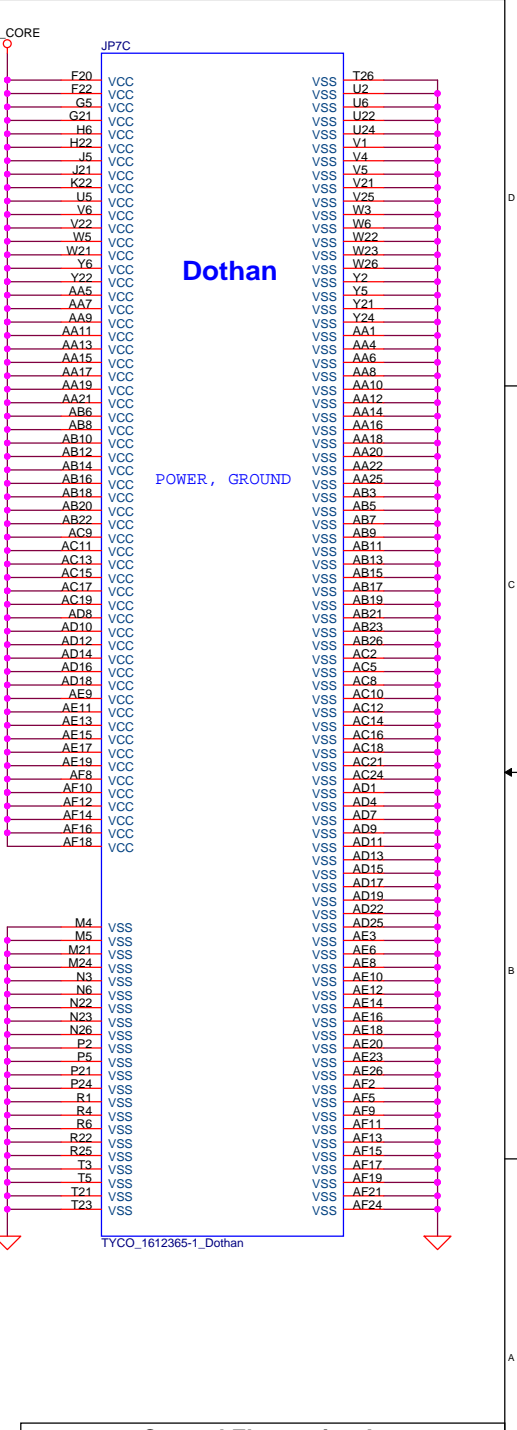
SKU_ID_CHECK_0	SKU_ID_CHECK_1	7	6	5
		1-Button	3-Buttons	7-Buttons
0	10	1		0
1	10C	3	12	2
2	10G	5		4
3	10GC	7	13	6
4	10J	11		10
5				
6				



THERMDA & THERMDC Trace / Space = 10 / 10 mil

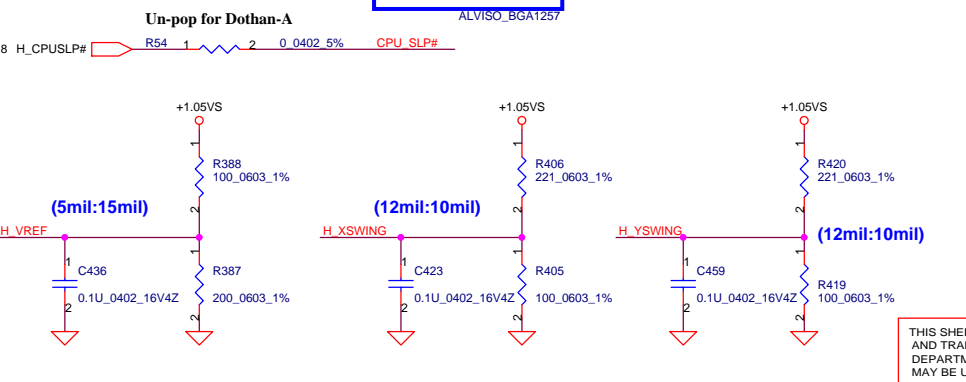
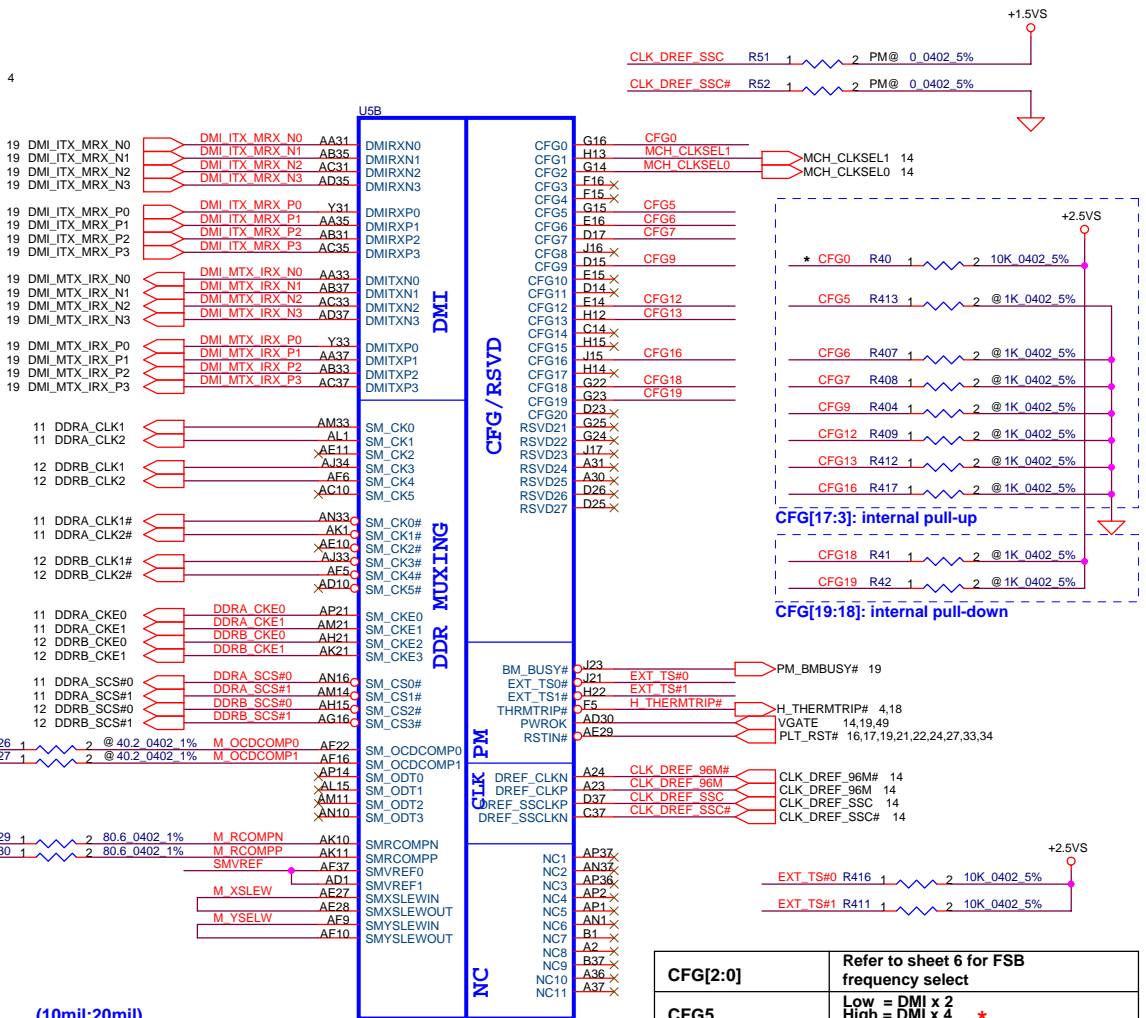
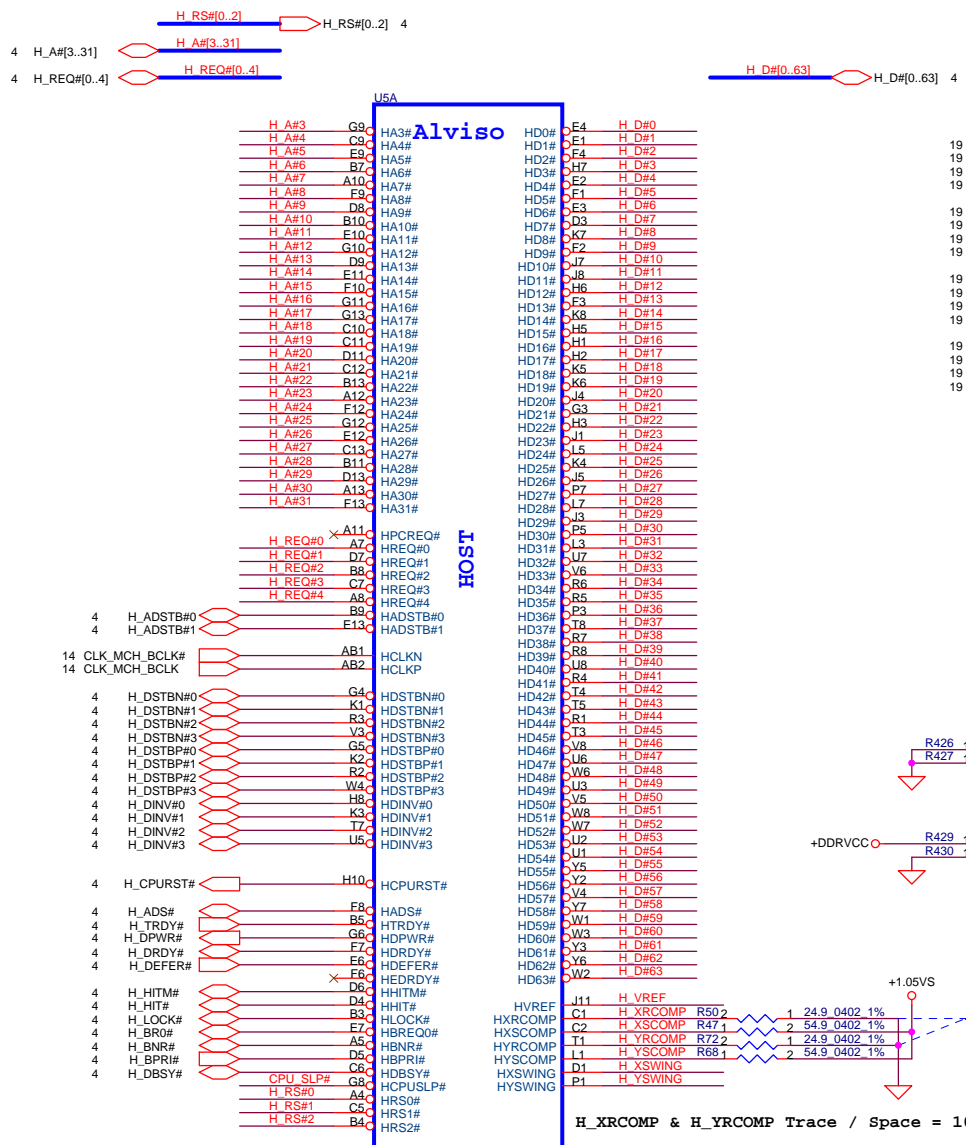


Vcc-core Decoupling	C, uF	ESR, mohm	ESL, nH
SPCAP, Polymer	2X330uF	7m ohm/2	3.5nH/2
MLCC 0805 X5R	35X10uF	5m ohm/35	0.6nH/35



**TRACE CLOSELY CPU < 0.5'**

COMP0, COMP2 layout : Width 18mils and Space 25mils  
 COMP1, COMP3 layout : Space 25mils



+DDRVC

+1.05VS

(10mil:20mil)

H\_XRCOMP & H\_YRCOMP Trace / Space = 10 / 20 mil

CFG[2:0]	Refer to sheet 6 for FSB frequency select
CFG5	Low = DMI x 2 High = DMI x 4 *
CFG6	Low = DDR-II High = DDR-I *
CFG7	Low = DT/Transportable CPU High = Mobile CPU *
CFG9	Low = Reverse Lane High = Normal Operation *
CFG[13:12]	00 = Reserved 01 = XOR Mode Enabled 10 = All 2 Mode Enabled 11 = Normal Operation (Default) *
CFG16 (FSB Dynamic ODT)	Low = Disabled High = Enabled *
CFG18 (VCC Select)	Low = 1.05V (Default) *
CFG19 (VTT Select)	Low = 1.05V (Default) *

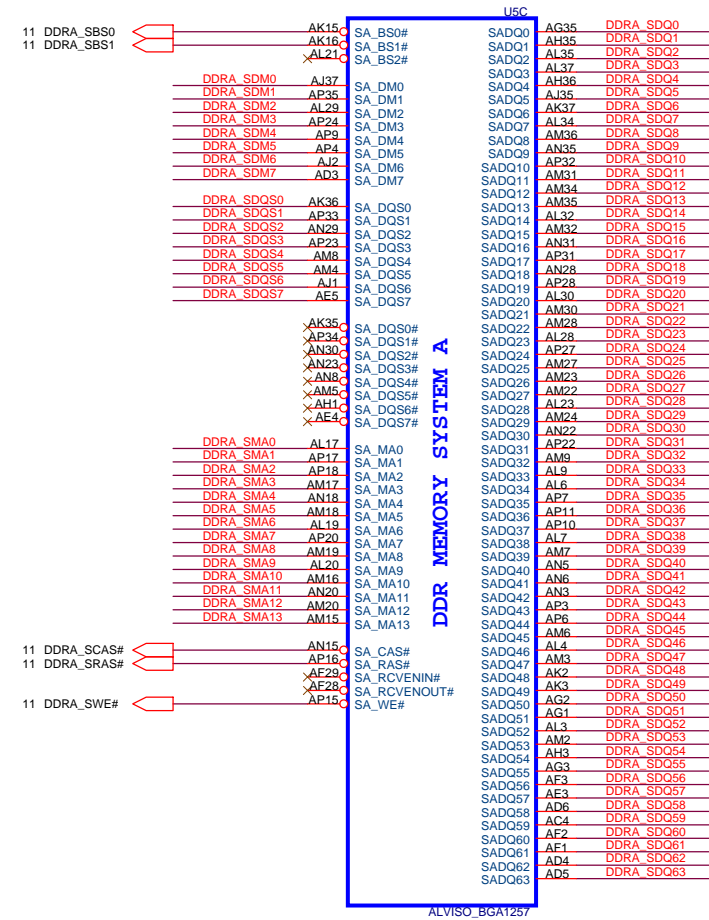
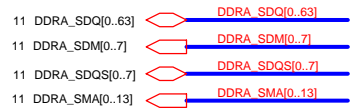
**Compal Electronics, Inc.**

Title: Alviso HOST (1/5)

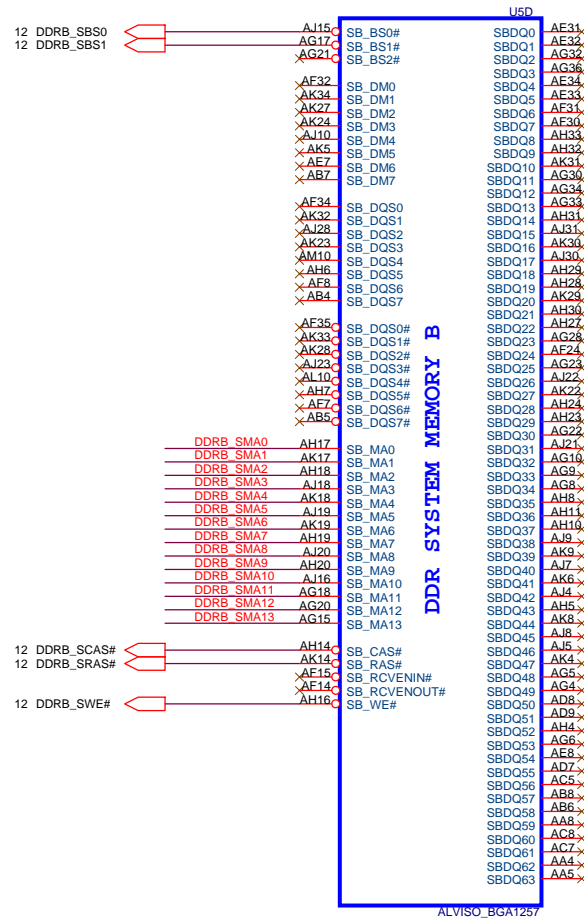
Sakhr LA-2491

Date: 2004.06.06

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DDR MEMORY SYSTEM A



DDR SYSTEM MEMORY B

**Compal Electronics, Inc.**

Title: Alviso DDR(2/5)

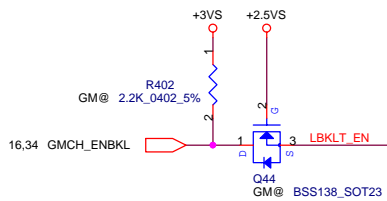
Revision: 1.0

Sakhir LA-2491

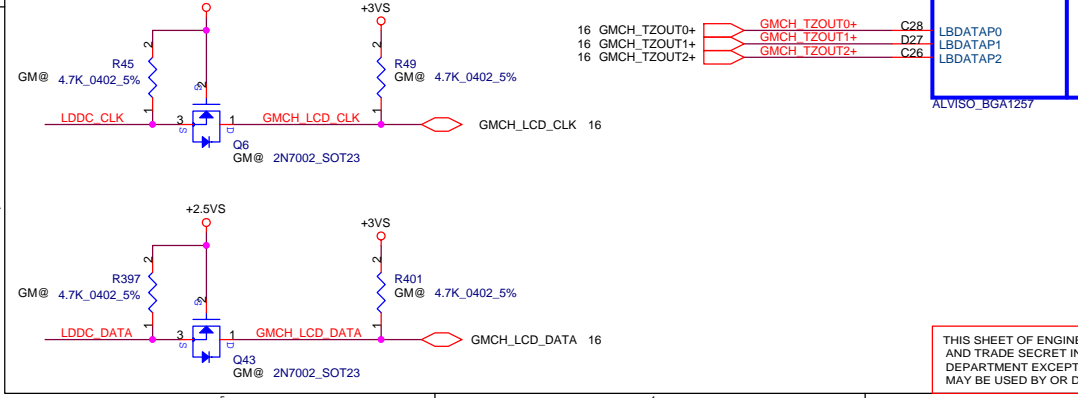
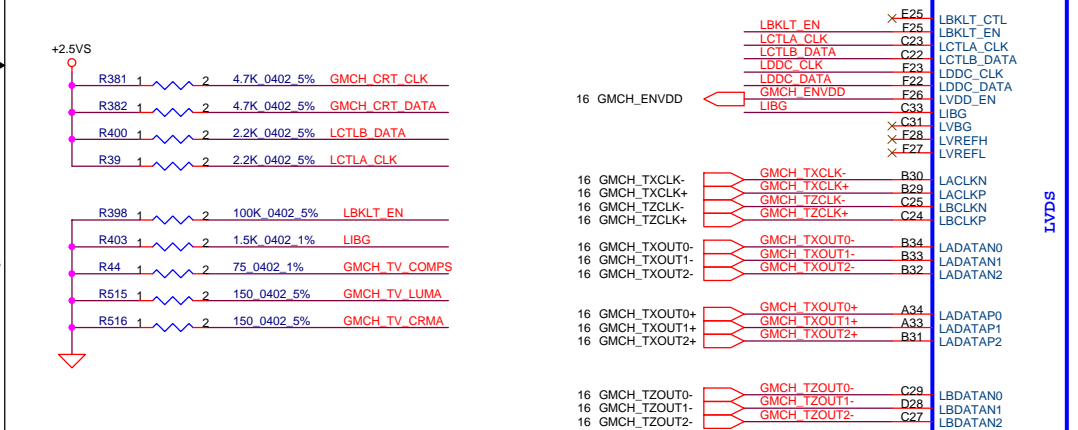
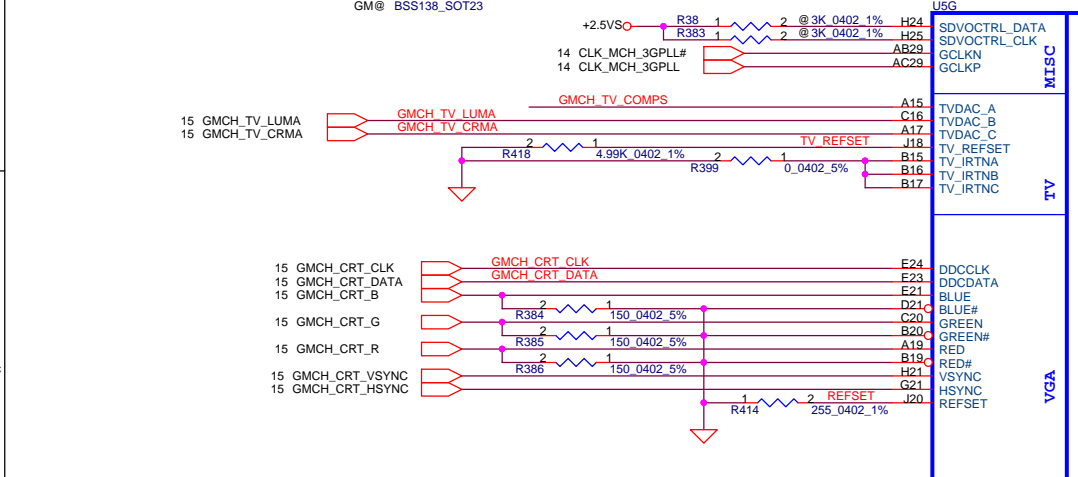
Date: 星期二, 十二月 06, 2004

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- 16 PCIE\_MTX\_C\_GRX\_N[0..15]
- 16 PCIE\_MTX\_C\_GRX\_P[0..15]
- 16 PCEI\_GTX\_C\_MRX\_N[0..15]
- 16 PCEI\_GTX\_C\_MRX\_P[0..15]

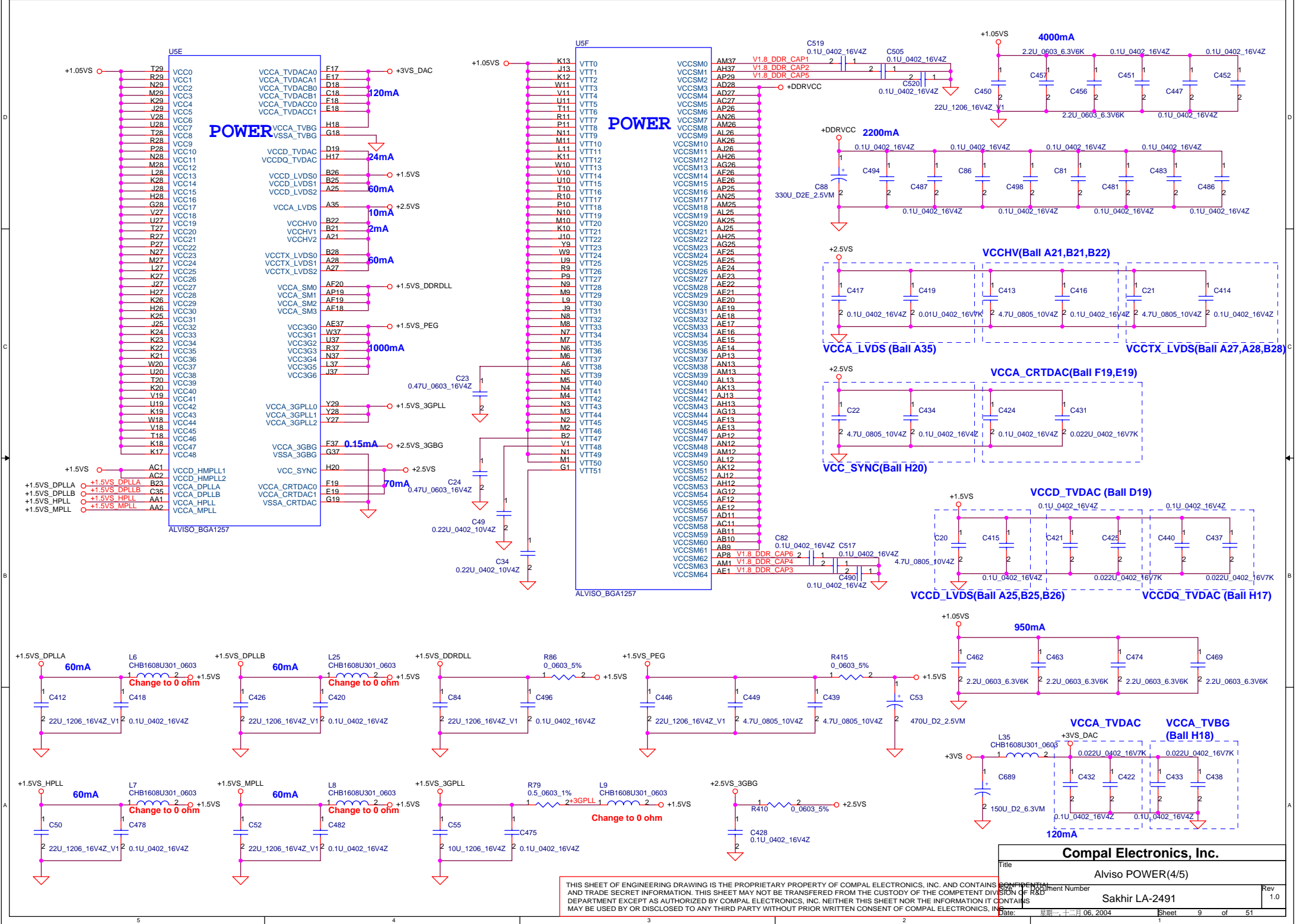


Signal	Pin	Component	Value	Notes
EXP_COMPI	D36	PEG COMP	1	
EXP_ICOMPO	D34		2	24.9_0402_1%
EXP_RXN0/SDVO_TVCLKN#	E30	PCIE GTX C MRX N0		
EXP_RXN1/SDVO_INT#	F34	PCIE GTX C MRX N1		
EXP_RXN2/SDVO_FLDSTALL#	G30	PCIE GTX C MRX N2		
EXP_RXN3	J30	PCIE GTX C MRX N4		
EXP_RXN4	K34	PCIE GTX C MRX N5		
EXP_RXN5	L30	PCIE GTX C MRX N6		
EXP_RXN6	M34	PCIE GTX C MRX N7		
EXP_RXN7	N30	PCIE GTX C MRX N8		
EXP_RXN8	P34	PCIE GTX C MRX N9		
EXP_RXN9	R30	PCIE GTX C MRX N10		
EXP_RXN10	T34	PCIE GTX C MRX N11		
EXP_RXN11	U30	PCIE GTX C MRX N12		
EXP_RXN12	V34	PCIE GTX C MRX N13		
EXP_RXN13	W30	PCIE GTX C MRX N14		
EXP_RXN14	Y34	PCIE GTX C MRX N15		
EXP_RXN15				
EXP_RXP0/SDVO_TVCLKN#	D30	PCIE GTX C MRX P0		
EXP_RXP1/SDVO_INT#	E34	PCIE GTX C MRX P1		
EXP_RXP2/SDVO_FLDSTALL#	F30	PCIE GTX C MRX P2		
EXP_RXP3	G34	PCIE GTX C MRX P3		
EXP_RXP4	H30	PCIE GTX C MRX P4		
EXP_RXP5	J34	PCIE GTX C MRX P5		
EXP_RXP6	K30	PCIE GTX C MRX P6		
EXP_RXP7	L34	PCIE GTX C MRX P7		
EXP_RXP8	M30	PCIE GTX C MRX P8		
EXP_RXP9	N34	PCIE GTX C MRX P9		
EXP_RXP10	P30	PCIE GTX C MRX P10		
EXP_RXP11	R34	PCIE GTX C MRX P11		
EXP_RXP12	T30	PCIE GTX C MRX P12		
EXP_RXP13	U34	PCIE GTX C MRX P13		
EXP_RXP14	V30	PCIE GTX C MRX P14		
EXP_RXP15	W34	PCIE GTX C MRX P15		
EXP_TXN0/SDVOB_RED#	E32	PCIE MTX GRX N0	C57	2 PM@ 0.1U 0402 16V4Z
EXP_TXN1/SDVOB_GREEN#	F36	PCIE MTX GRX N1	C59	2 PM@ 0.1U 0402 16V4Z
EXP_TXN2/SDVOB_BLUE#	G32	PCIE MTX GRX N2	C62	2 PM@ 0.1U 0402 16V4Z
EXP_TXN3/SDVOB_CLKN#	H36	PCIE MTX GRX N3	C71	2 PM@ 0.1U 0402 16V4Z
EXP_TXN4/SDVOB_RED#	J32	PCIE MTX GRX N4	C74	2 PM@ 0.1U 0402 16V4Z
EXP_TXN5/SDVOC_GREEN#	K36	PCIE MTX GRX N5	C76	2 PM@ 0.1U 0402 16V4Z
EXP_TXN6/SDVOC_BLUE#	L32	PCIE MTX GRX N6	C78	2 PM@ 0.1U 0402 16V4Z
EXP_TXN7/SDVOC_CLKN#	M36	PCIE MTX GRX N7	C80	2 PM@ 0.1U 0402 16V4Z
EXP_TXN8	N32	PCIE MTX GRX N8	C87	2 PM@ 0.1U 0402 16V4Z
EXP_TXN9	P36	PCIE MTX GRX N9	C91	2 PM@ 0.1U 0402 16V4Z
EXP_TXN10	R32	PCIE MTX GRX N10	C97	2 PM@ 0.1U 0402 16V4Z
EXP_TXN11	T36	PCIE MTX GRX N11	C100	2 PM@ 0.1U 0402 16V4Z
EXP_TXN12	U32	PCIE MTX GRX N12	C104	2 PM@ 0.1U 0402 16V4Z
EXP_TXN13	V36	PCIE MTX GRX N13	C109	2 PM@ 0.1U 0402 16V4Z
EXP_TXN14	W32	PCIE MTX GRX N14	C114	2 PM@ 0.1U 0402 16V4Z
EXP_TXN15	Y36	PCIE MTX GRX N15	C116	2 PM@ 0.1U 0402 16V4Z
EXP_TXP0/SDVOB_RED	D32	PCIE MTX GRX P0	C56	2 PM@ 0.1U 0402 16V4Z
EXP_TXP1/SDVOB_GREEN	E36	PCIE MTX GRX P1	C58	2 PM@ 0.1U 0402 16V4Z
EXP_TXP2/SDVOB_BLUE	F32	PCIE MTX GRX P2	C60	2 PM@ 0.1U 0402 16V4Z
EXP_TXP3/SDVOB_CLKN#	G36	PCIE MTX GRX P3	C63	2 PM@ 0.1U 0402 16V4Z
EXP_TXP4/SDVOC_RED	H32	PCIE MTX GRX P4	C73	2 PM@ 0.1U 0402 16V4Z
EXP_TXP5/SDVOC_GREEN	J36	PCIE MTX GRX P5	C75	2 PM@ 0.1U 0402 16V4Z
EXP_TXP6/SDVOC_BLUE	K32	PCIE MTX GRX P6	C77	2 PM@ 0.1U 0402 16V4Z
EXP_TXP7/SDVOC_CLKN#	L36	PCIE MTX GRX P7	C79	2 PM@ 0.1U 0402 16V4Z
EXP_TXP8	M32	PCIE MTX GRX P8	C83	2 PM@ 0.1U 0402 16V4Z
EXP_TXP9	N36	PCIE MTX GRX P9	C89	2 PM@ 0.1U 0402 16V4Z
EXP_TXP10	P32	PCIE MTX GRX P10	C92	2 PM@ 0.1U 0402 16V4Z
EXP_TXP11	R36	PCIE MTX GRX P11	C98	2 PM@ 0.1U 0402 16V4Z
EXP_TXP12	T32	PCIE MTX GRX P12	C101	2 PM@ 0.1U 0402 16V4Z
EXP_TXP13	U36	PCIE MTX GRX P13	C105	2 PM@ 0.1U 0402 16V4Z
EXP_TXP14	V32	PCIE MTX GRX P14	C110	2 PM@ 0.1U 0402 16V4Z
EXP_TXP15	W36	PCIE MTX GRX P15	C115	2 PM@ 0.1U 0402 16V4Z

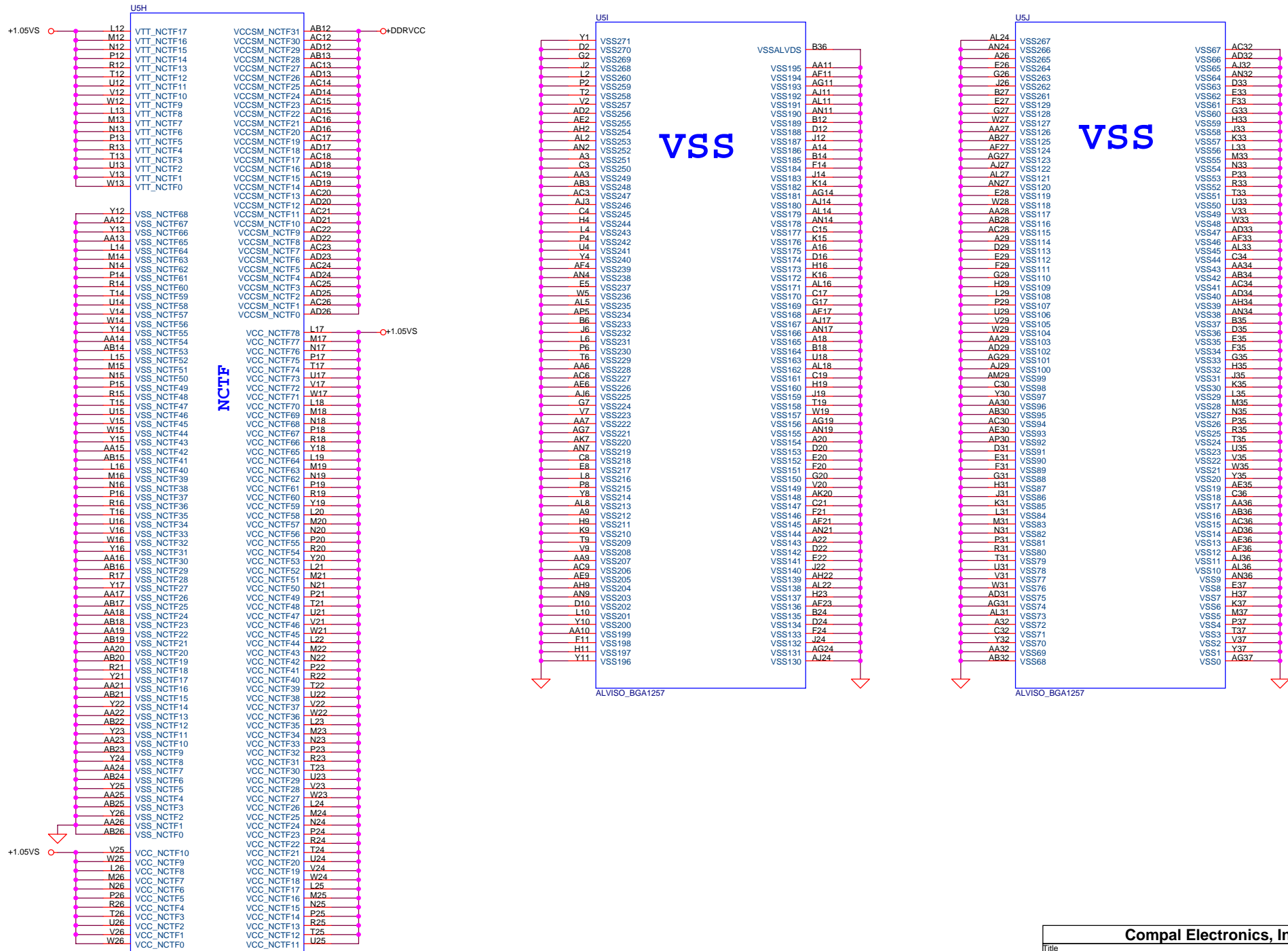
PCI - EXPRESS GRAPHICS

LVDS

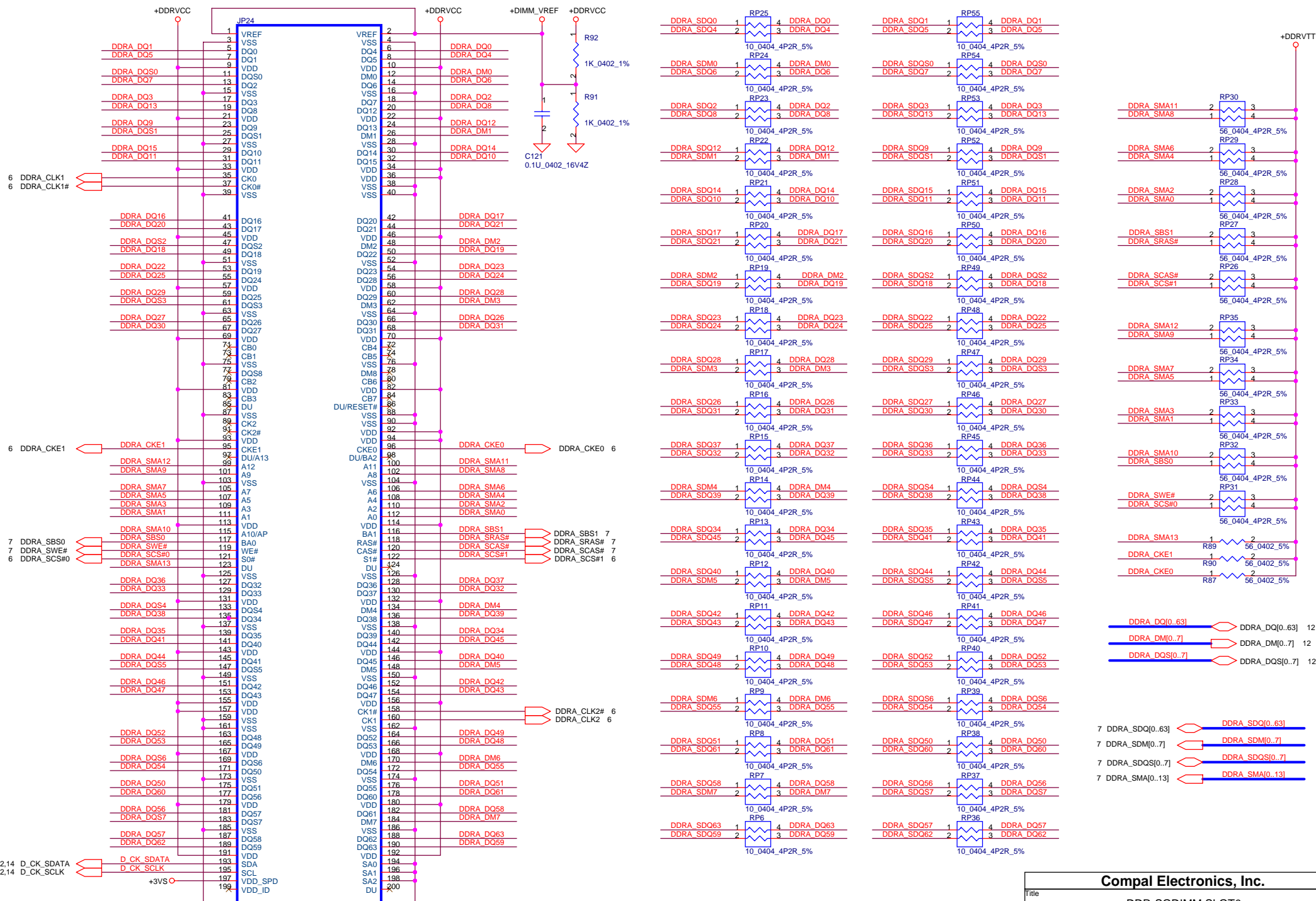




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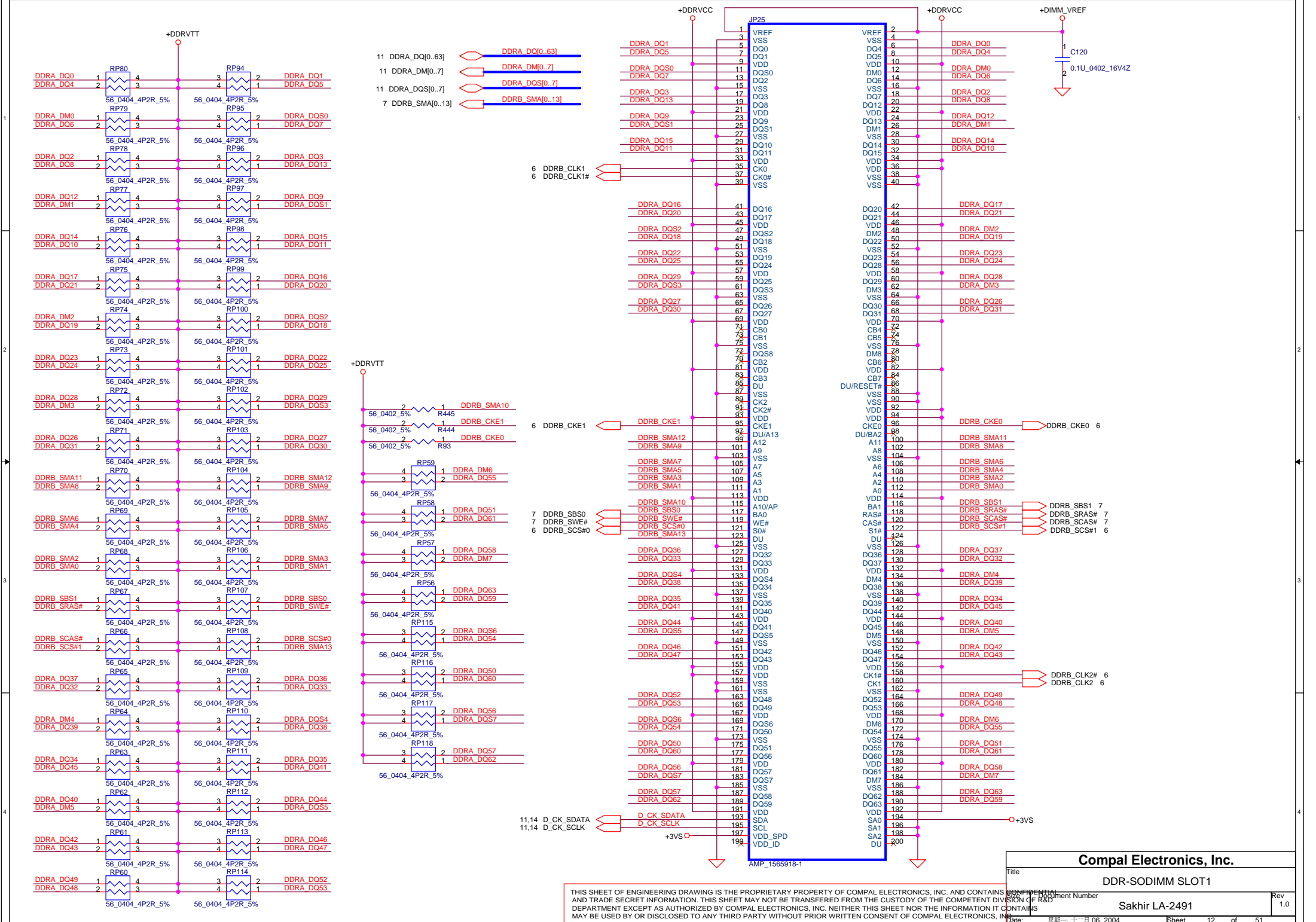
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AMP\_1565917-1  
**DIMM0**

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<b>Compal Electronics, Inc.</b>	
Title <b>DDR-SODIMM SLOT0</b>	
Revision Number <b>Sakhir LA-2491</b>	Rev <b>1.0</b>
Date: 星期二, 十二月 06, 2004	Sheet 11 of 51

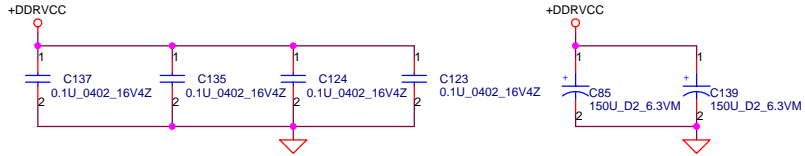
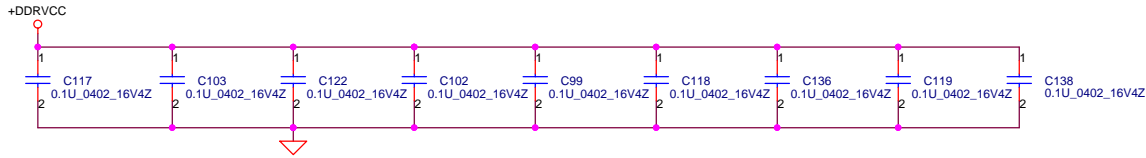


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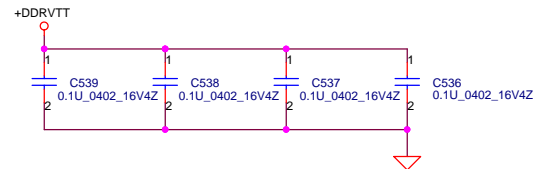
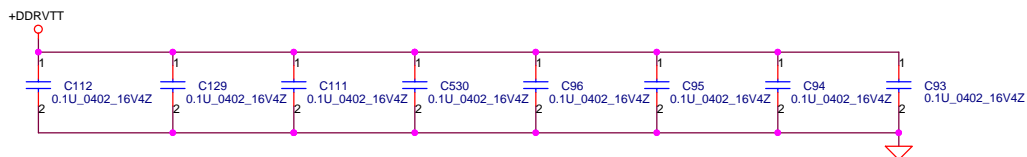
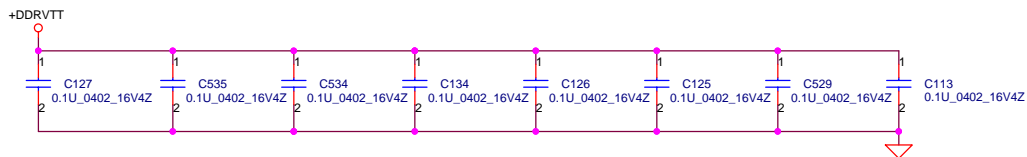
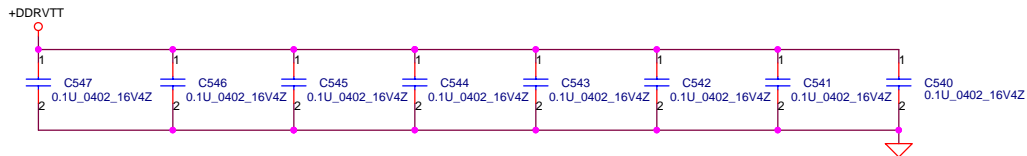
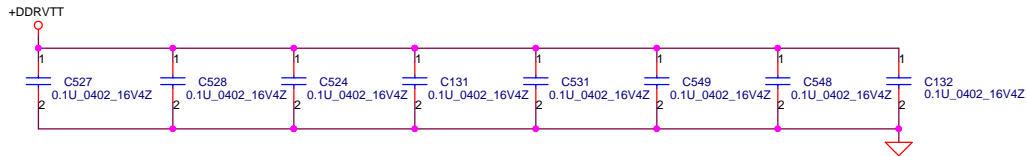
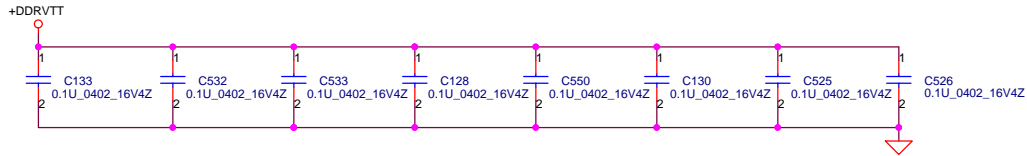
<b>Compal Electronics, Inc.</b>	
Title	DDR-SODIMM SLOT1
Revision	Sakhir LA-2491
Date	Date: 星期二, 十二月 06, 2004
Sheet	12 of 51

Rev 1.0

**Layout note :**  
Distribute as close as possible to DDR-SODIMM.



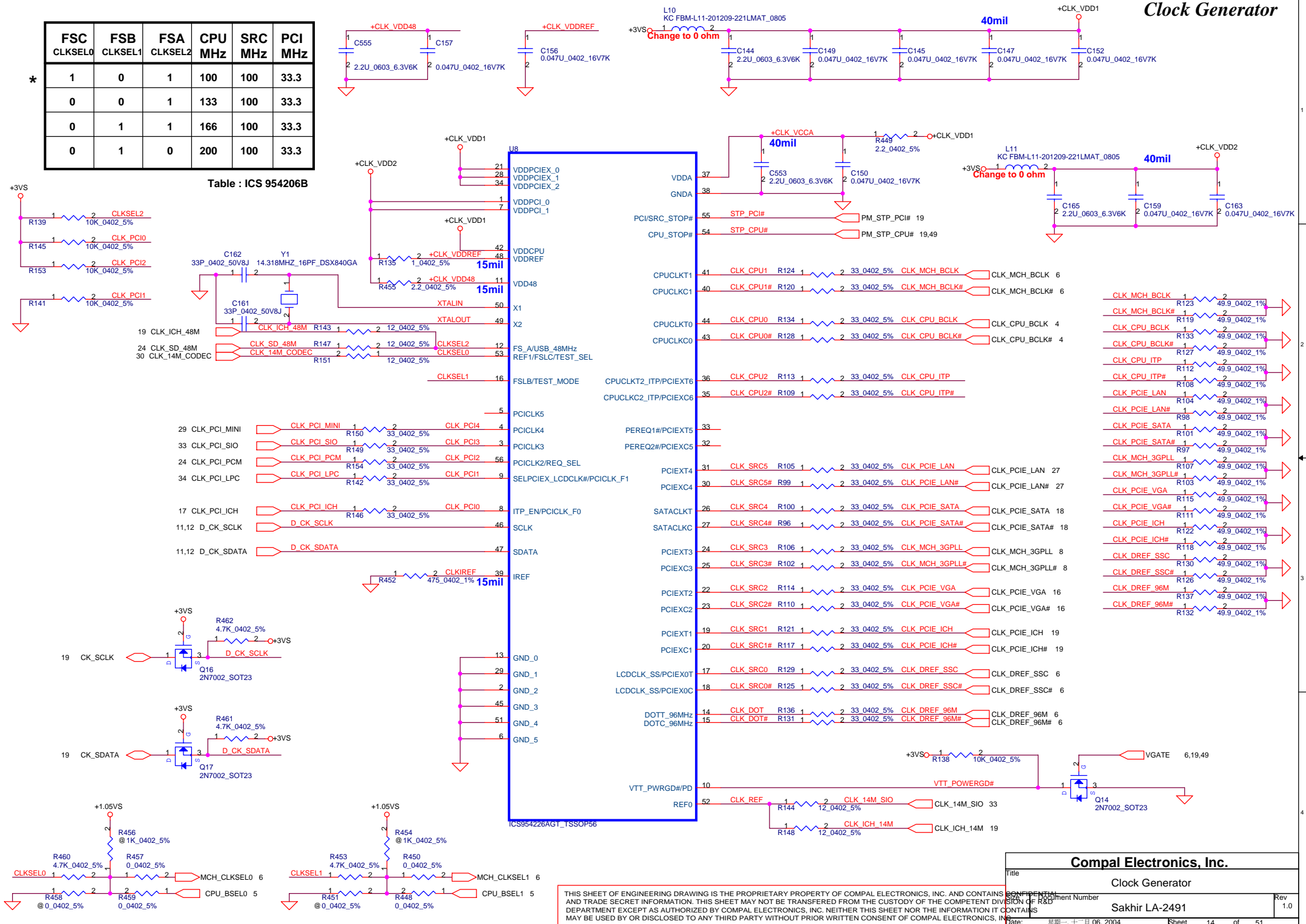
**Layout note :**  
Place one cap close to every 2 pull up resistors termination to +1.25V



# Clock Generator

FSC	FSB	FSA	CPU MHz	SRC MHz	PCI MHz
1	0	1	100	100	33.3
0	0	1	133	100	33.3
0	1	1	166	100	33.3
0	1	0	200	100	33.3

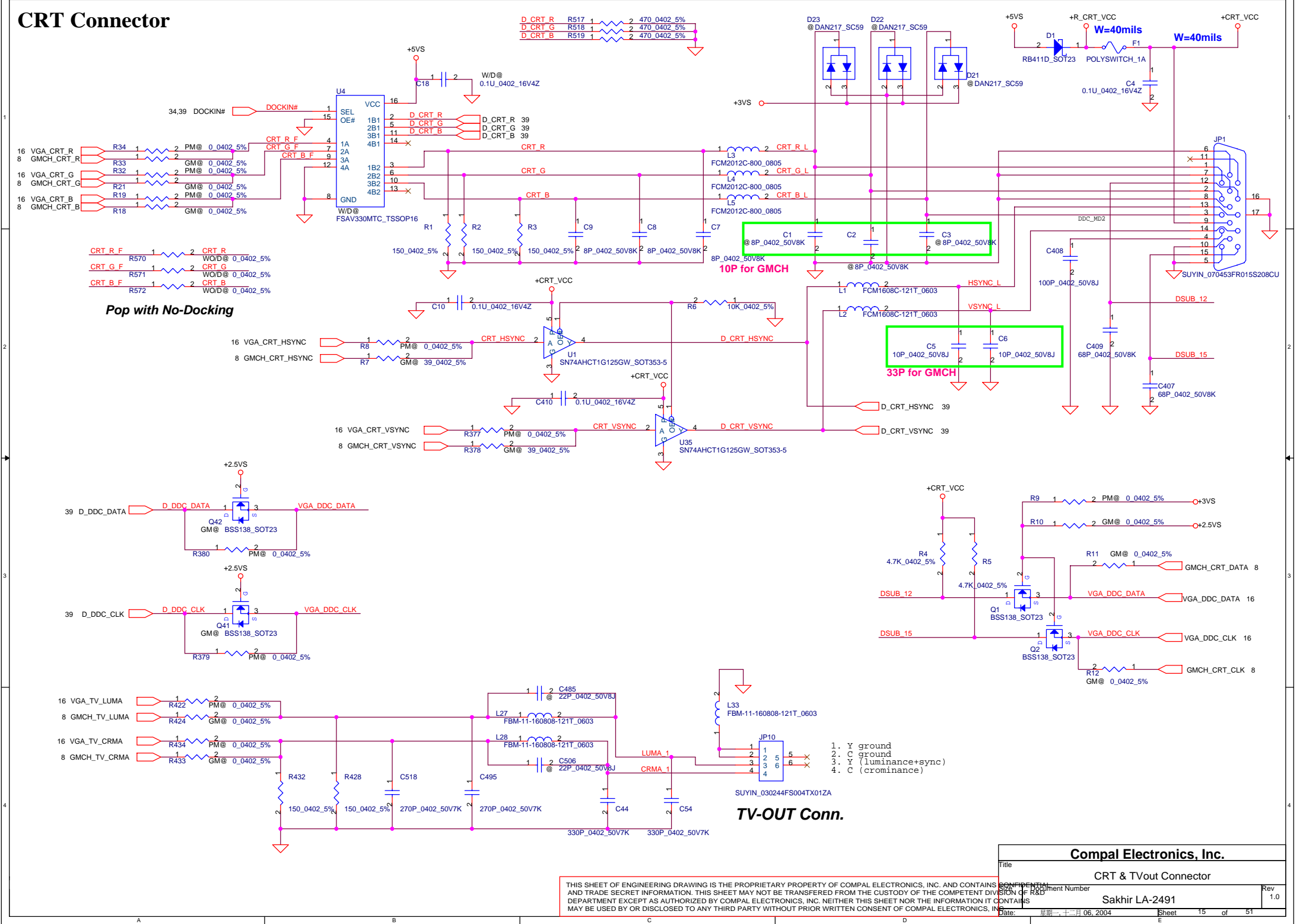
Table : ICS 954206B



<b>Compal Electronics, Inc.</b>	
Title <b>Clock Generator</b>	
Revision <b>Sakhir LA-2491</b>	
Date: 星期三, 十二月 06, 2004	Sheet 14 of 51

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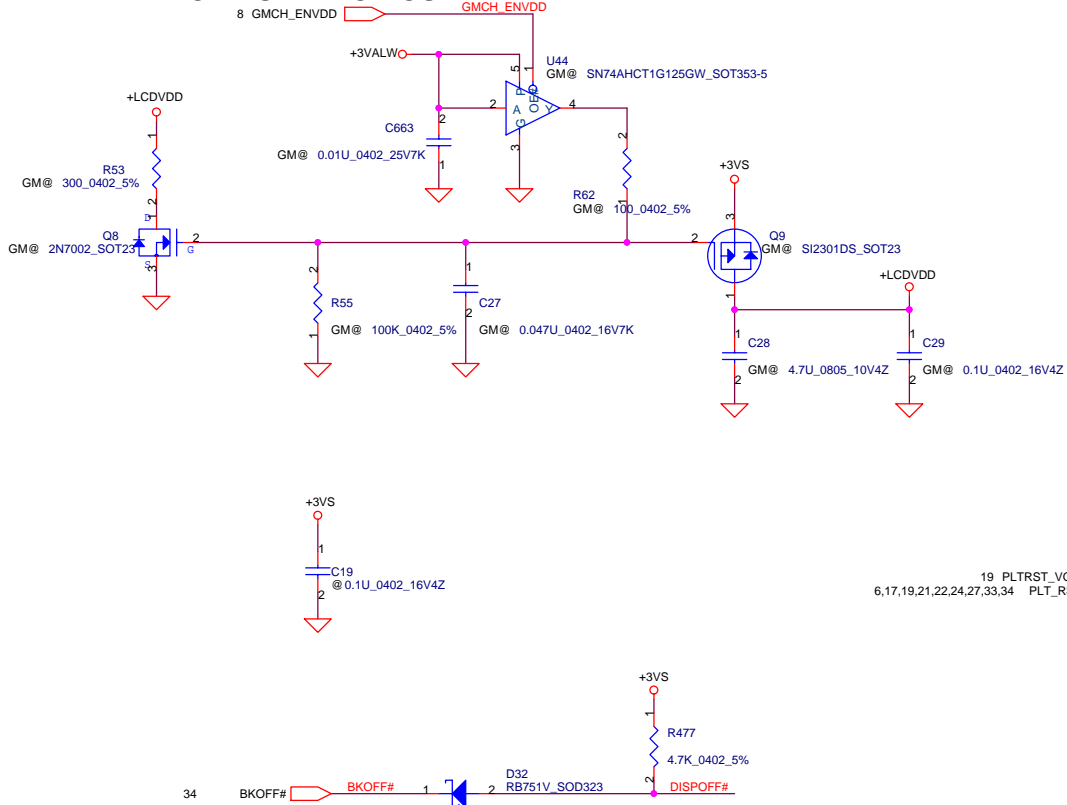
# CRT Connector



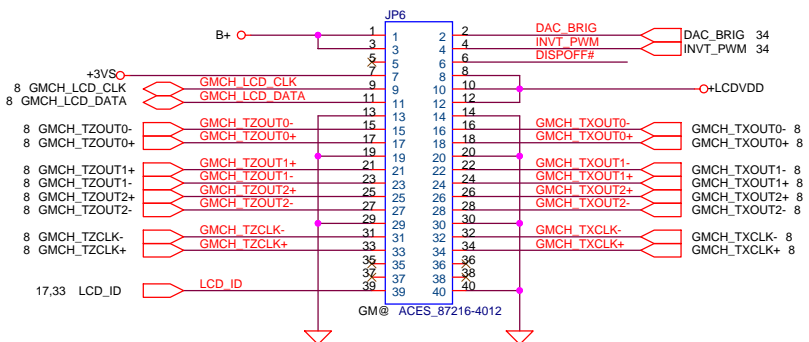
<b>Compal Electronics, Inc.</b>	
Title	CRT & TVout Connector
Part Number	Sakhir LA-2491
Rev	1.0
Date	星期二, 十二月 06, 2004
Sheet	15 of 51

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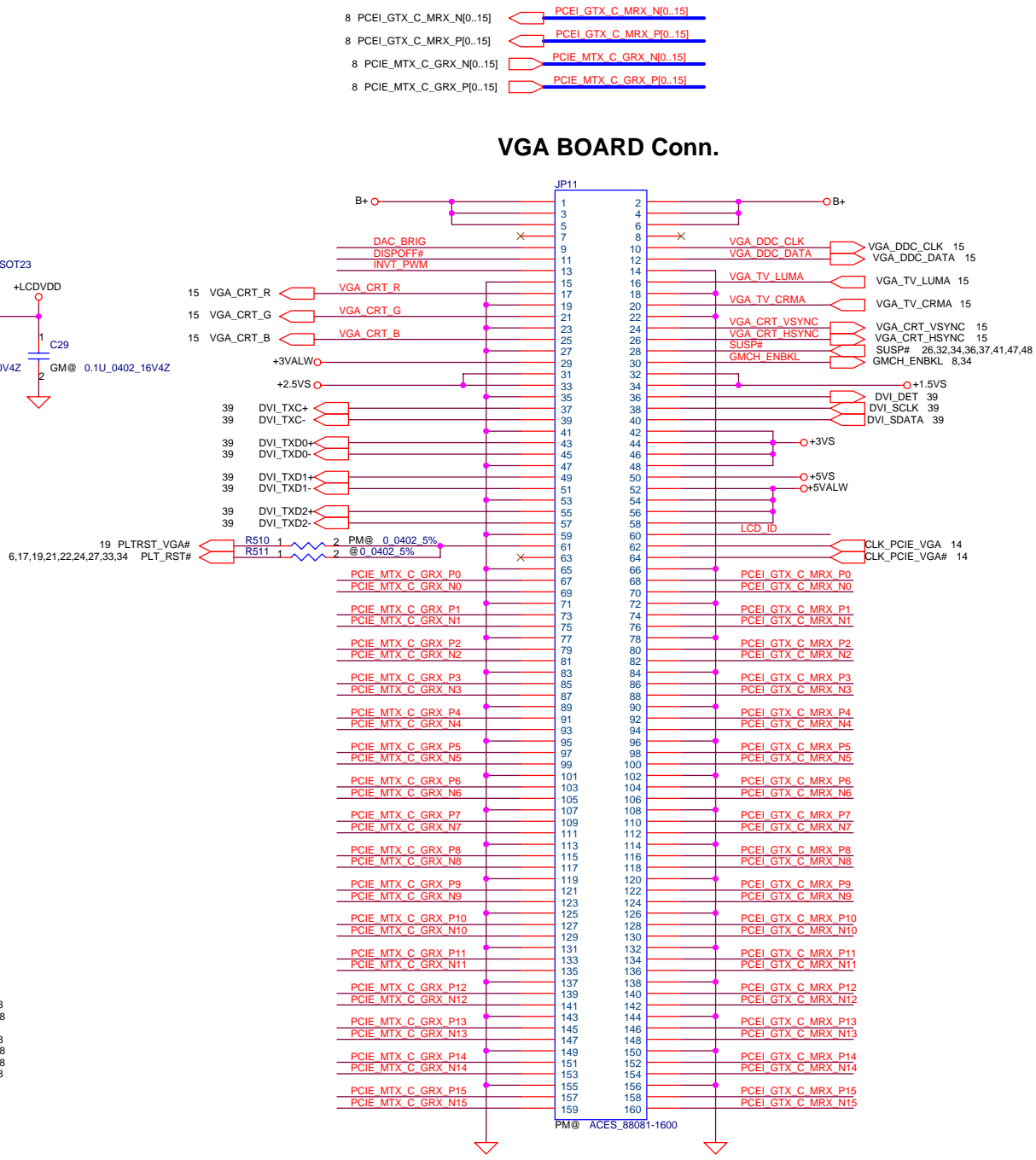
# LCD POWER CIRCUIT



# LCD/PANEL BD. Conn.



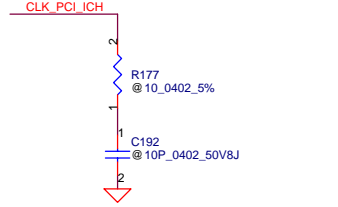
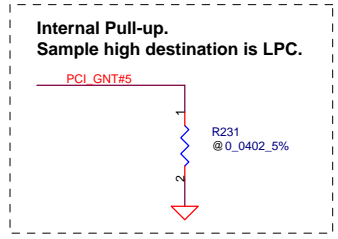
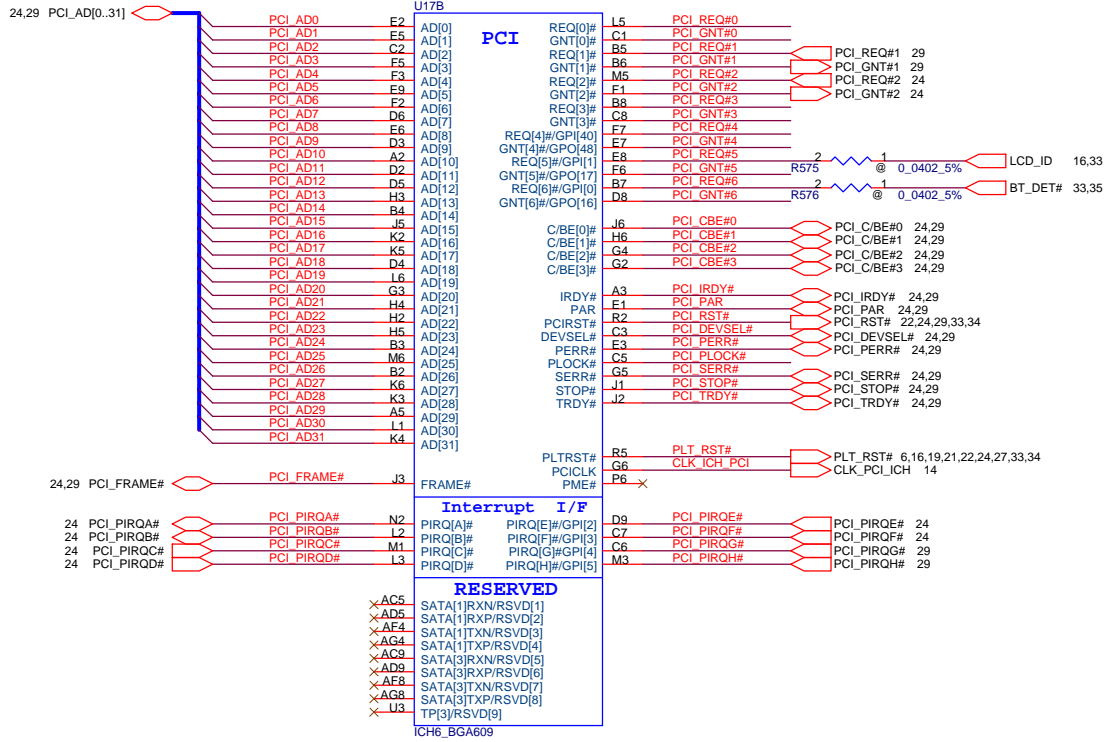
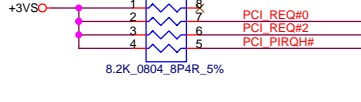
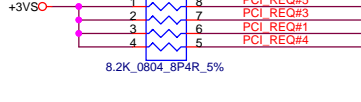
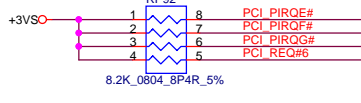
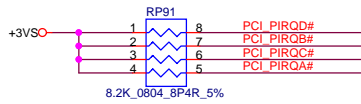
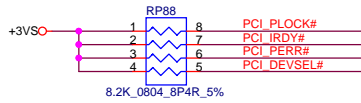
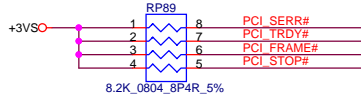
# VGA BOARD Conn.

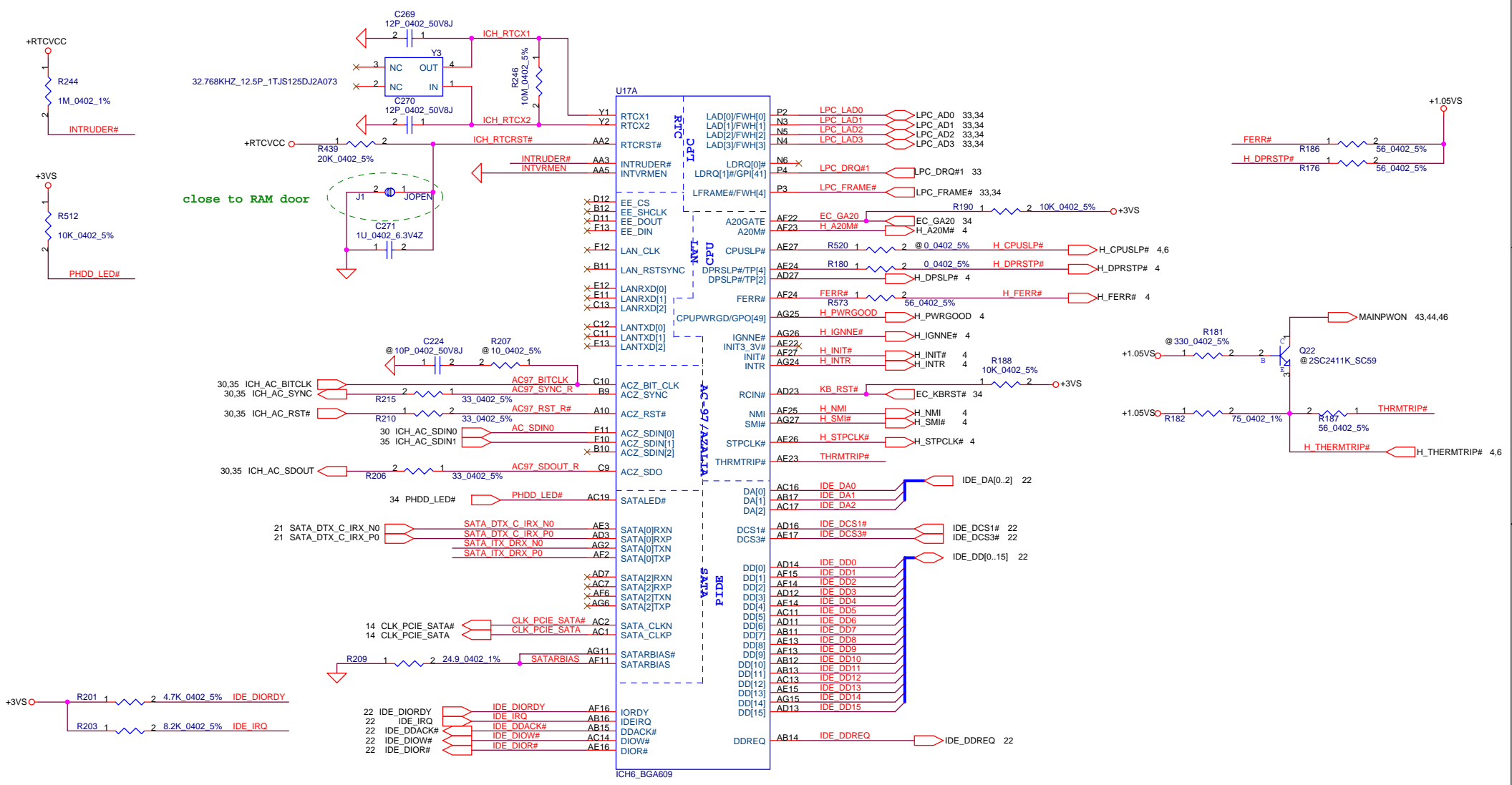


<b>Compal Electronics, Inc.</b>	
<b>VGA / LCD CONN.</b>	
Title	Revision Number
Sakhr LA-2491	
Date	Rev
星期二, 十二月 06, 2004	1.0
Sheet 16	of 51

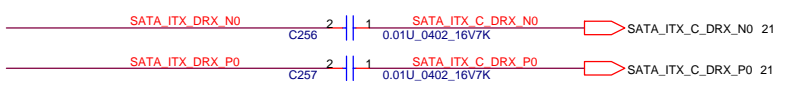
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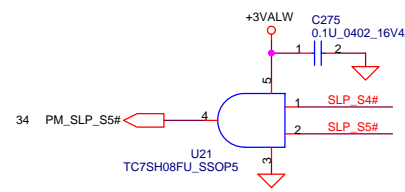
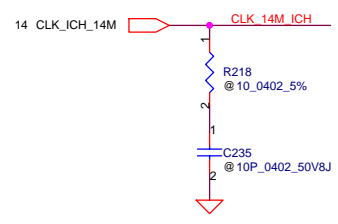
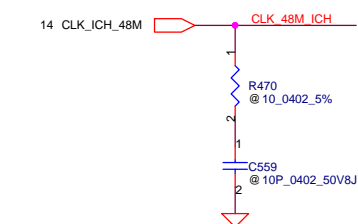
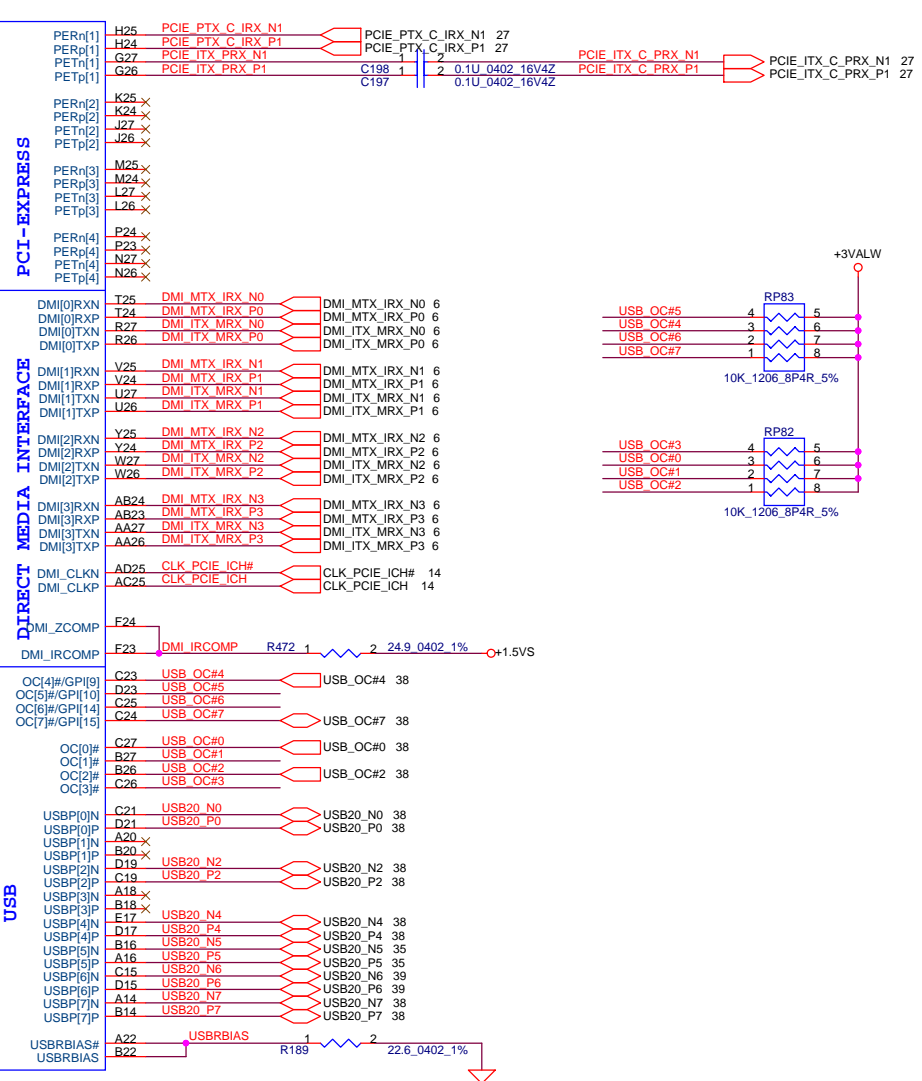
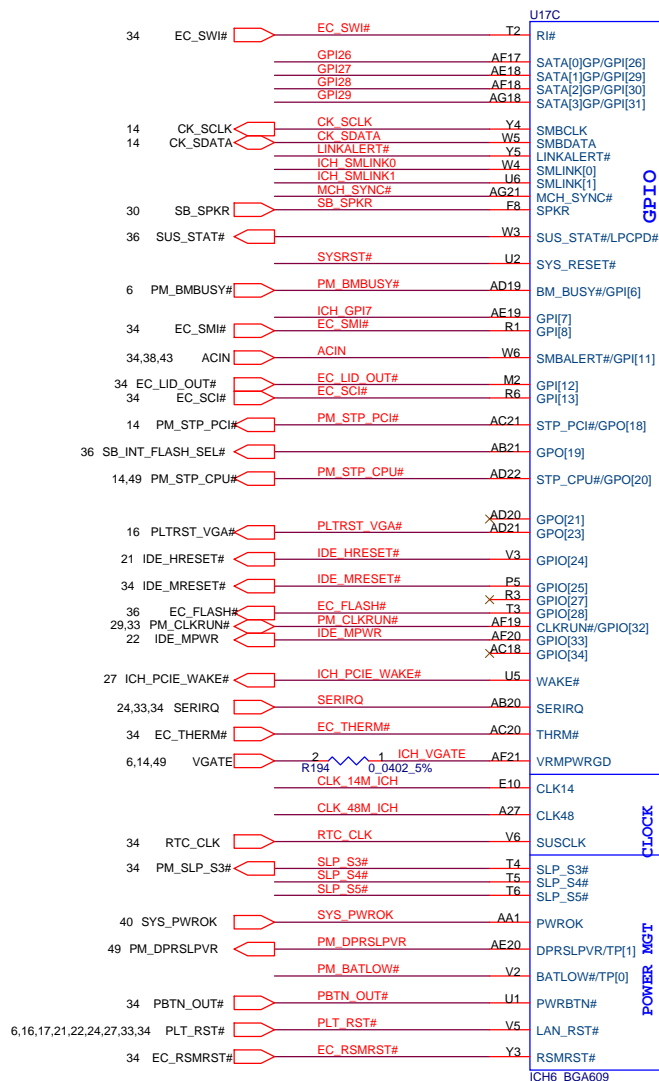
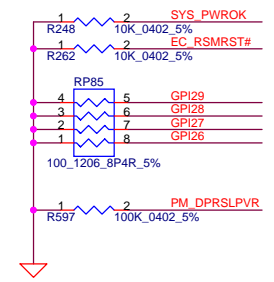
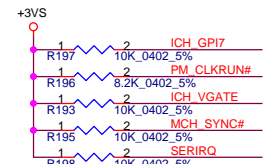
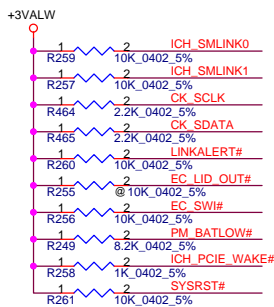




Place near ICH6 side.

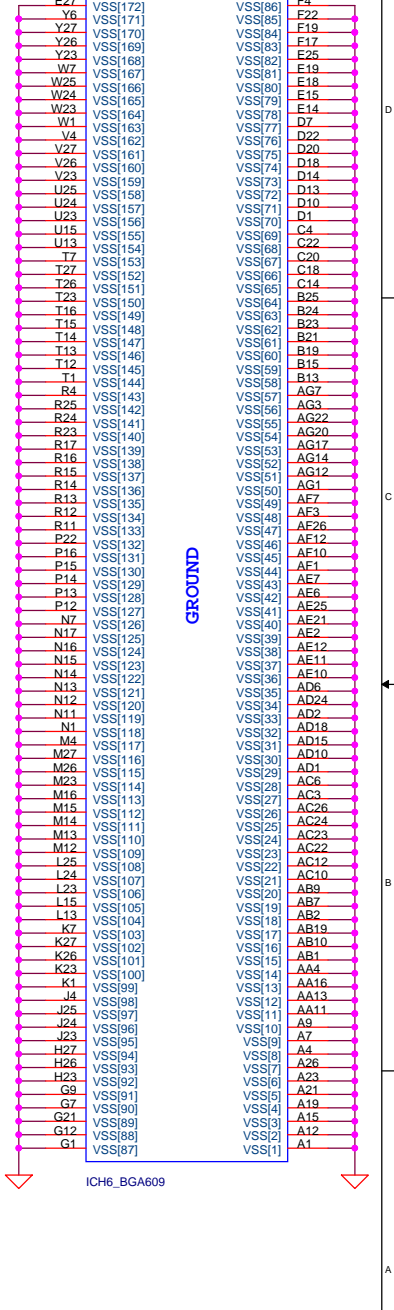
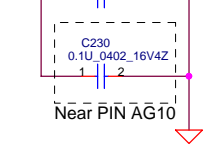
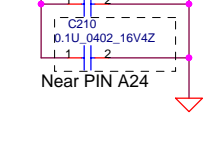
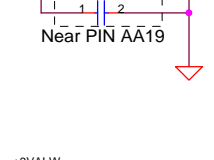
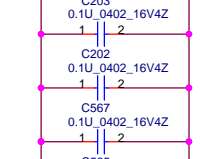
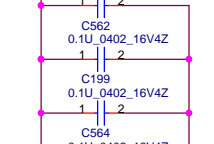
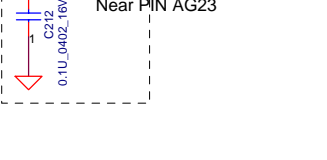
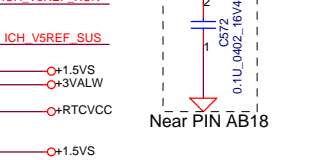
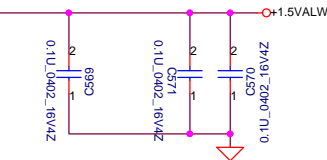
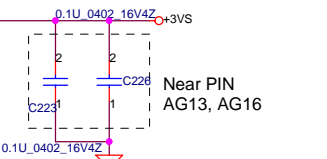
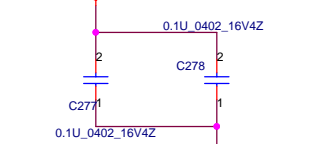
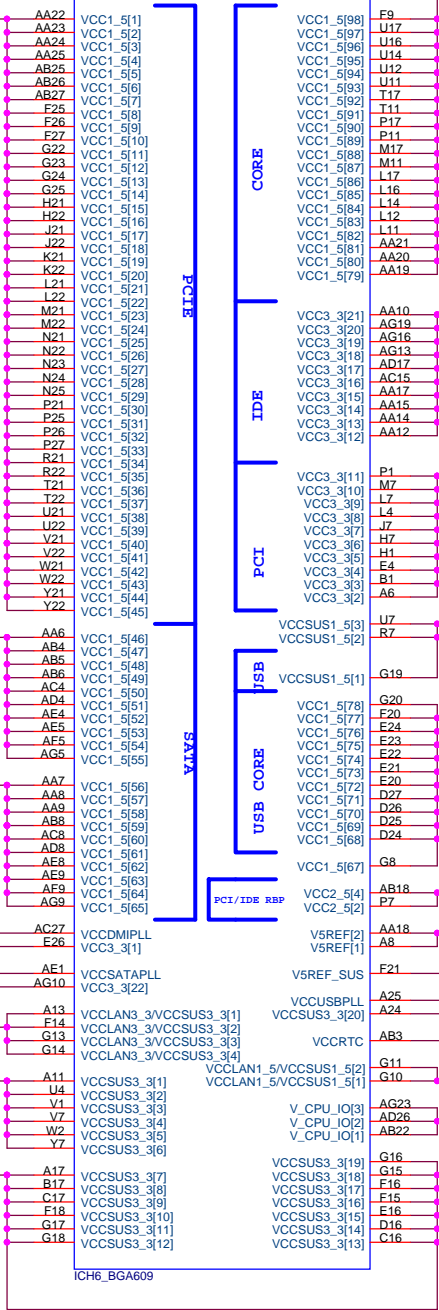
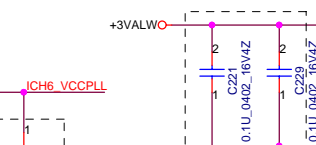
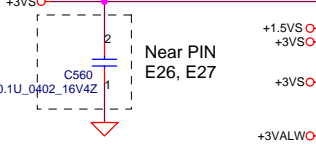
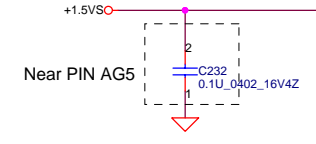
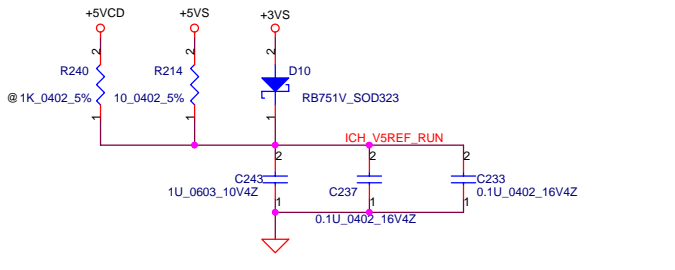
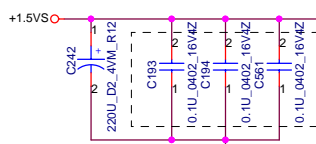


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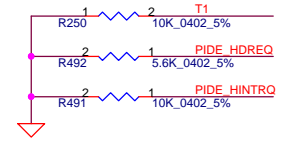
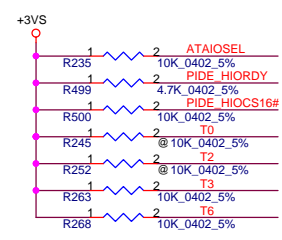
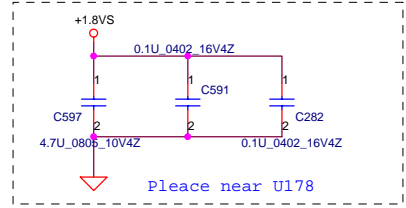
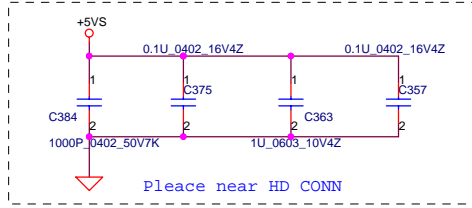


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Near PIN F27(C155),  
P27(C154), AB27(C157)



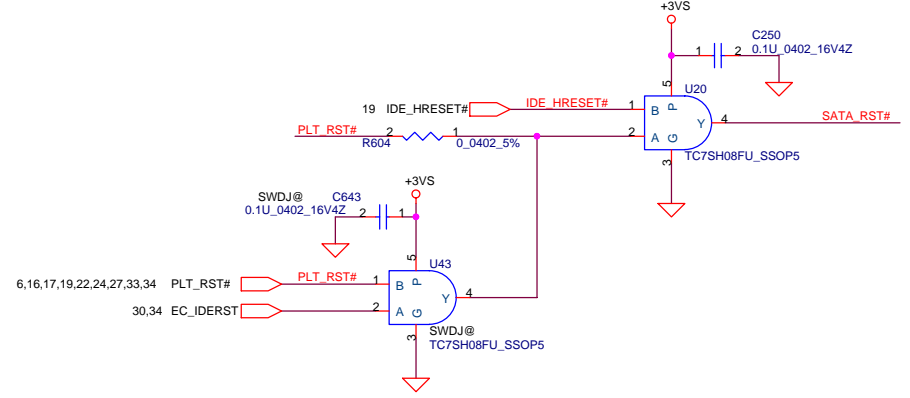
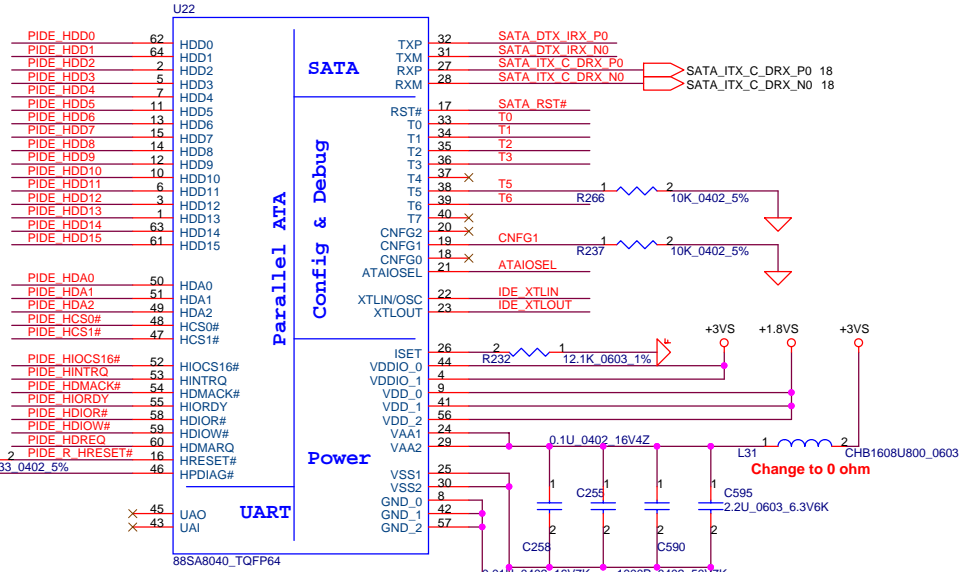
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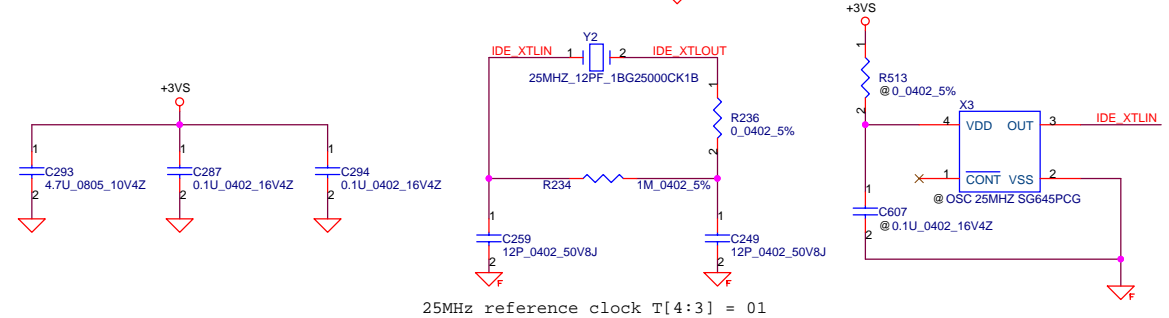
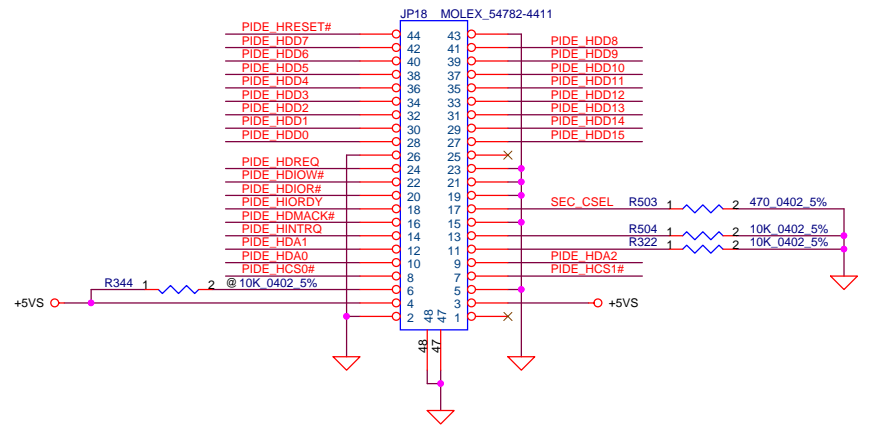
### SATA Module

Sets maximum transfer rate and UDMA mode

CNFG2 INT PD	CNFG1 INT PD	CNFG0 INT PD	NOTE
0	0	0	Device Mode 100MB/s
0	0	1	Device Mode 133MB/s
0	1	0	Device Mode 150MB/s
1	0	0	Host Mode 100MB/s
1	0	1	Host Mode 133MB/s
1	1	0	Host Mode 150MB/s
0	1	1	Reserved
1	1	1	Reserved



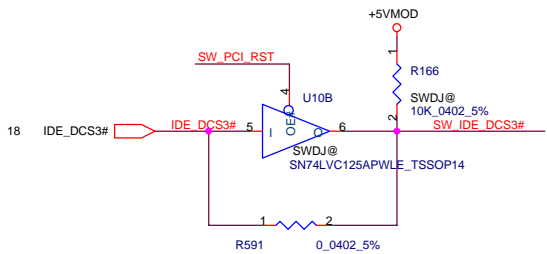
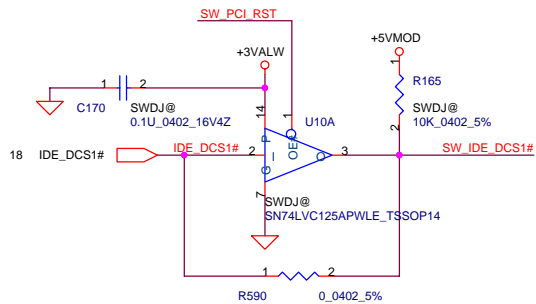
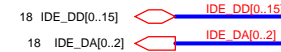
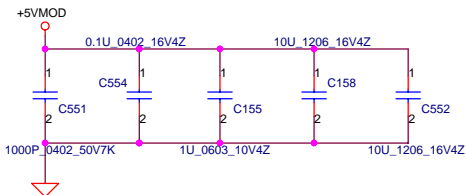
### P-ATA HDD Conn.



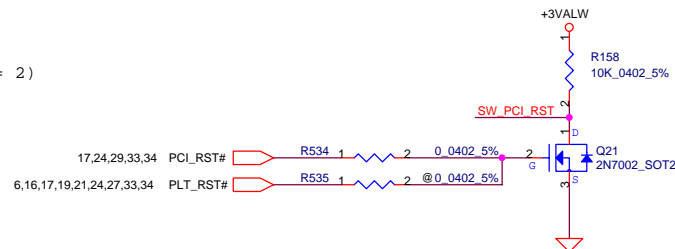
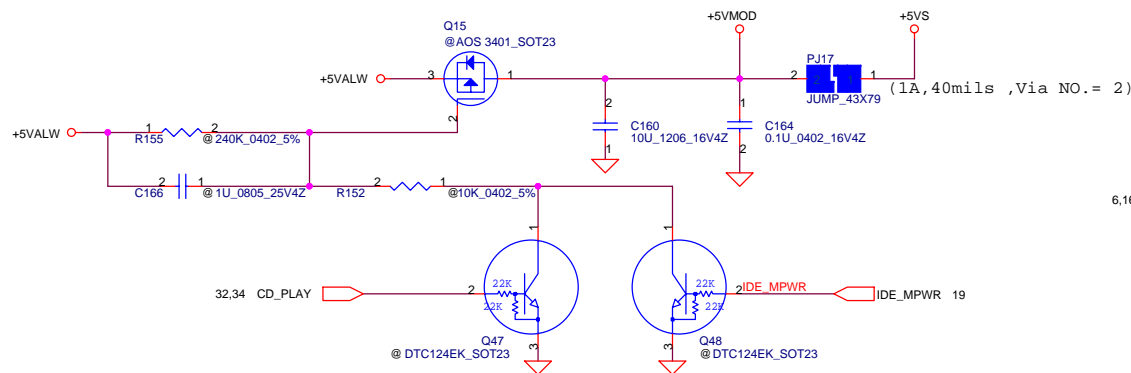
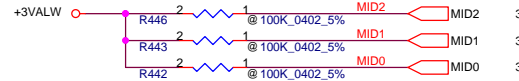
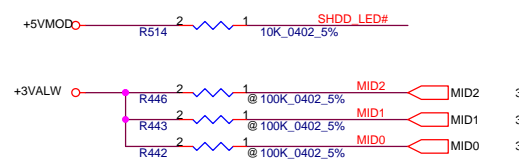
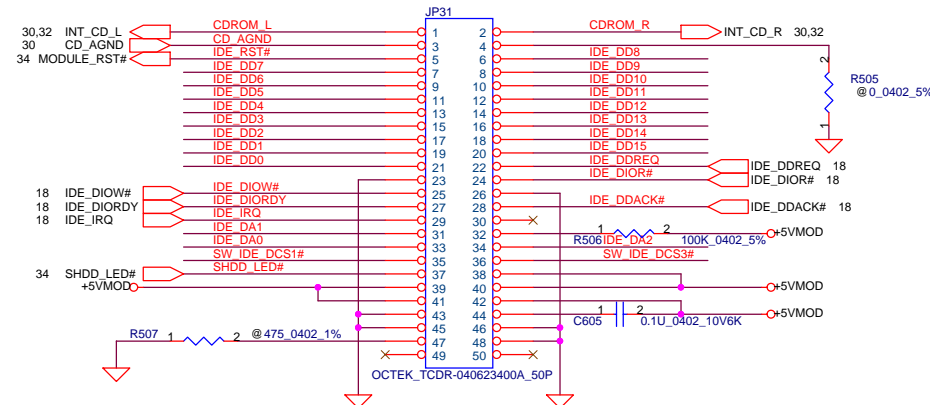
Place near connector side.



Placea caps. near ODD CONN.

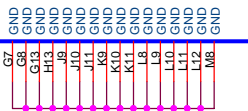
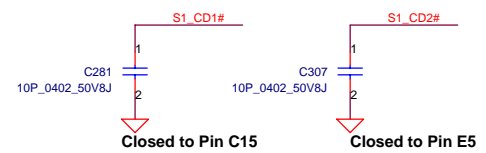
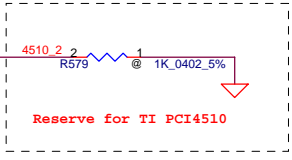
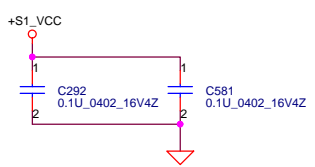
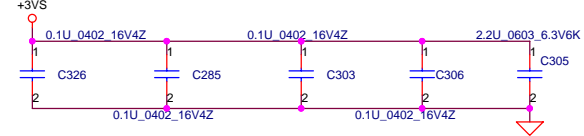
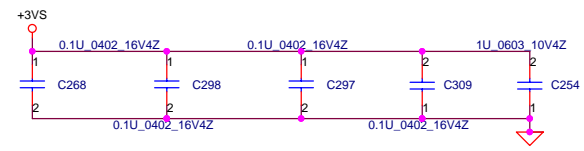
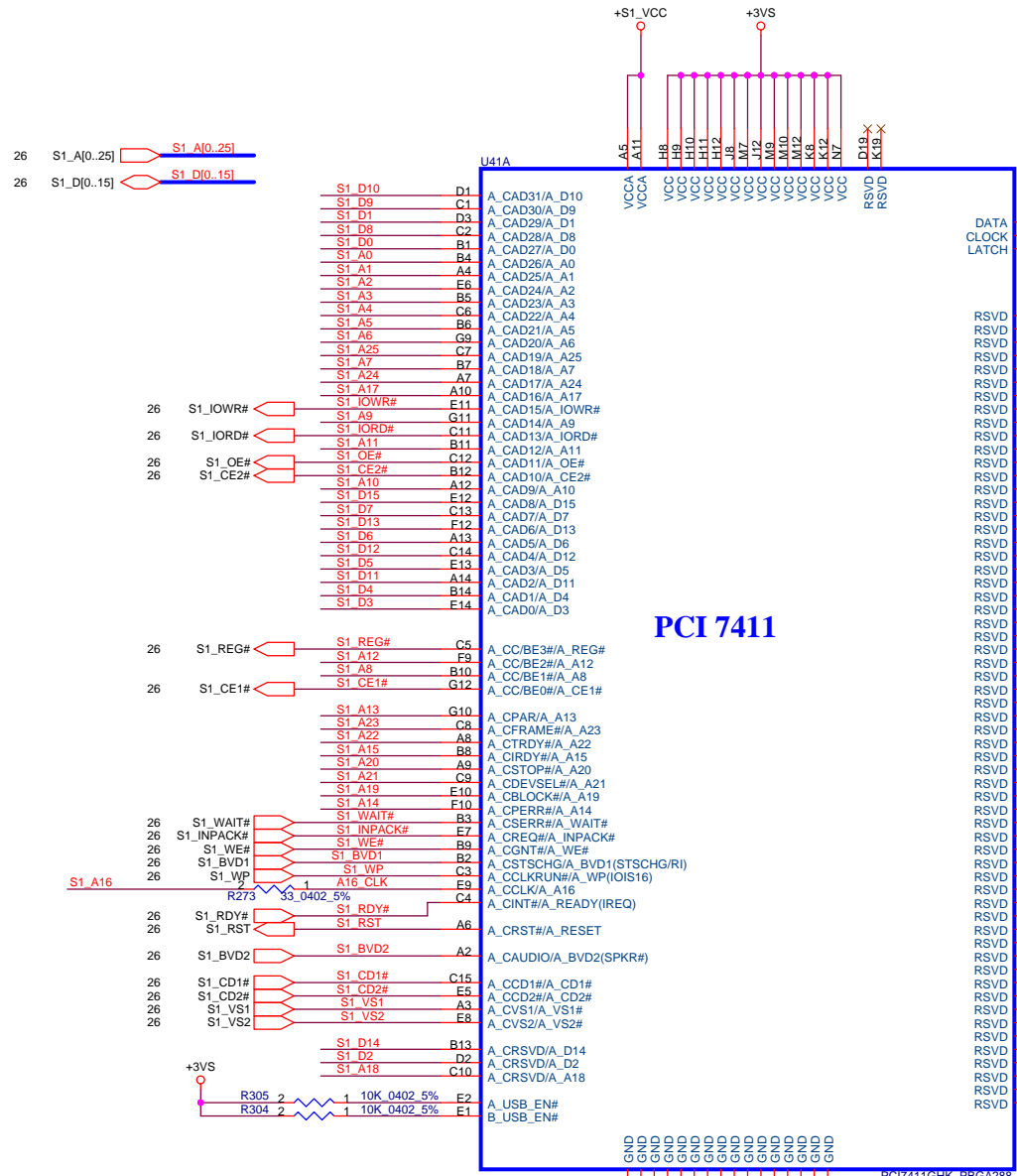


### Module Conn.



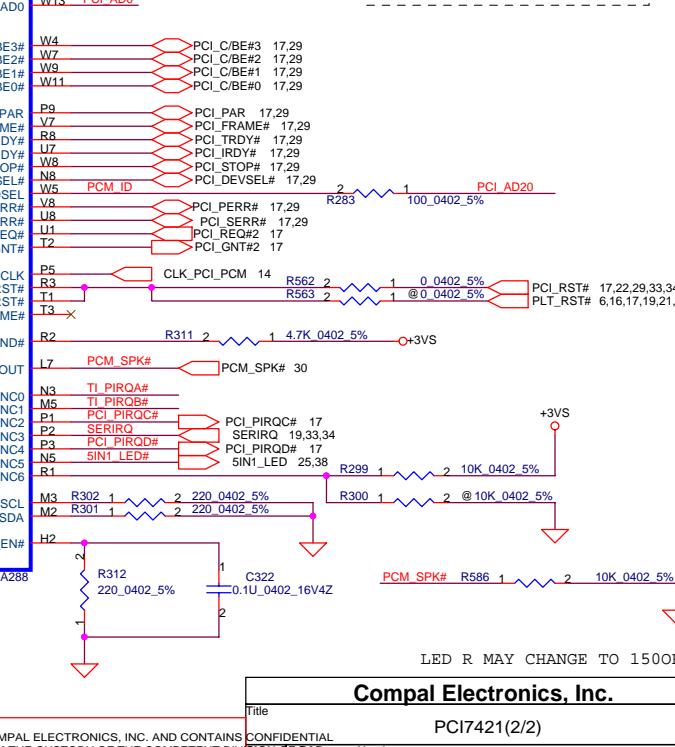
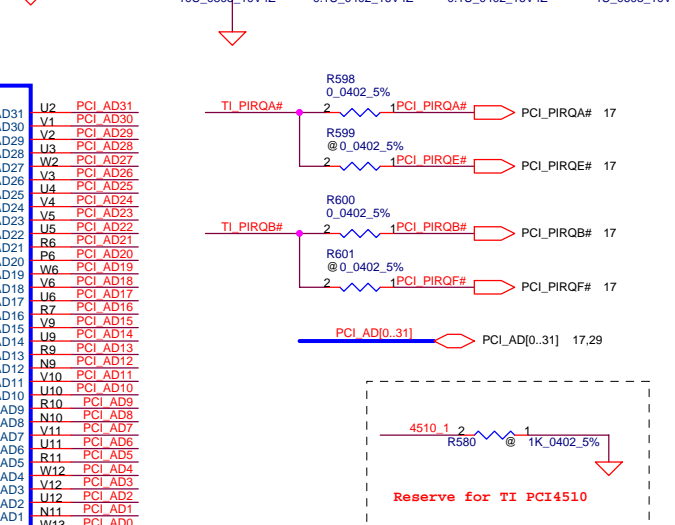
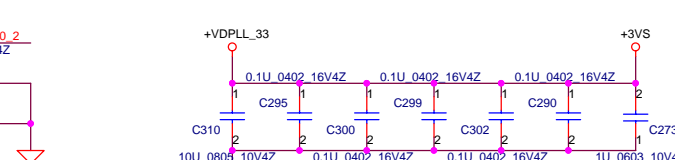
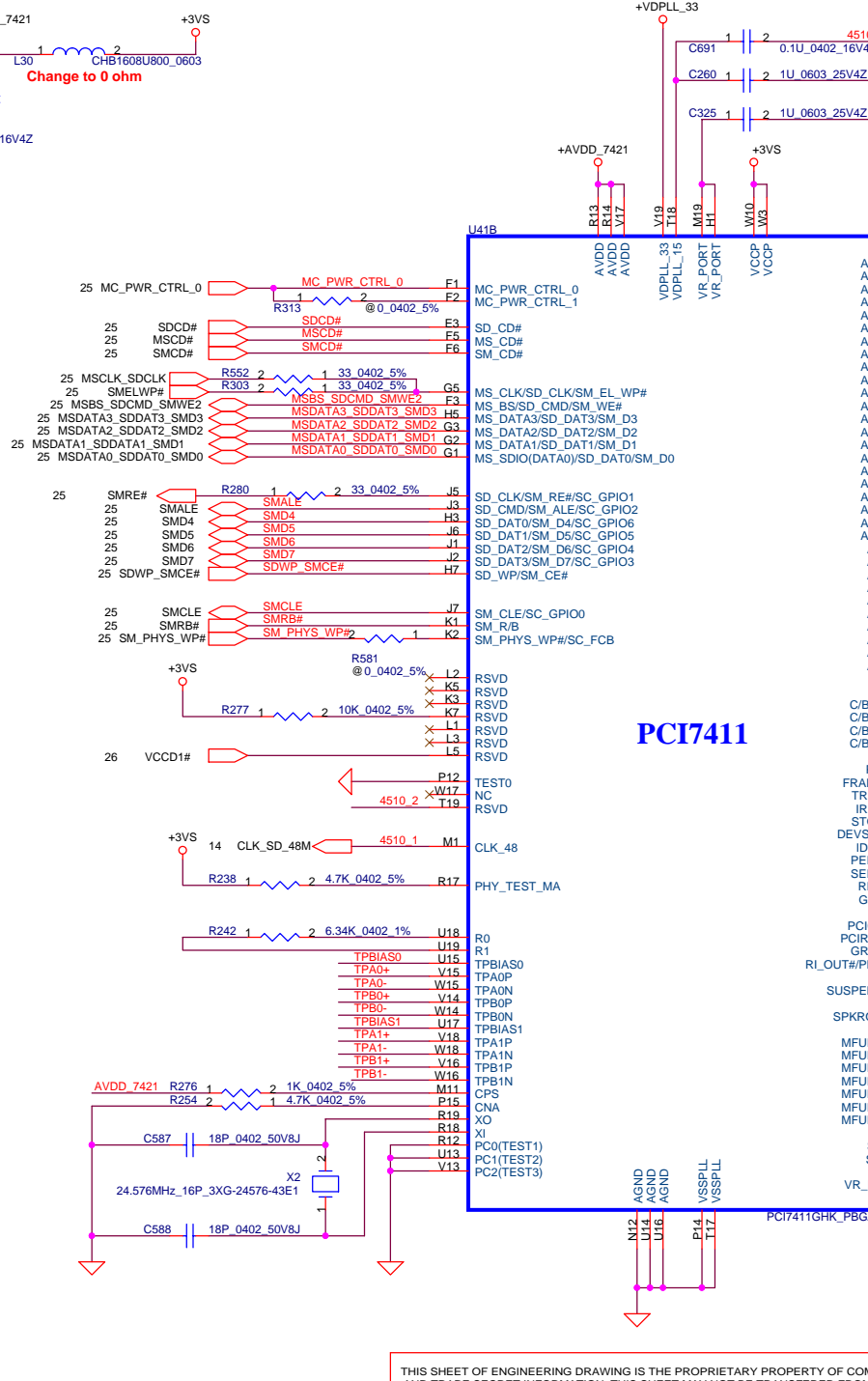
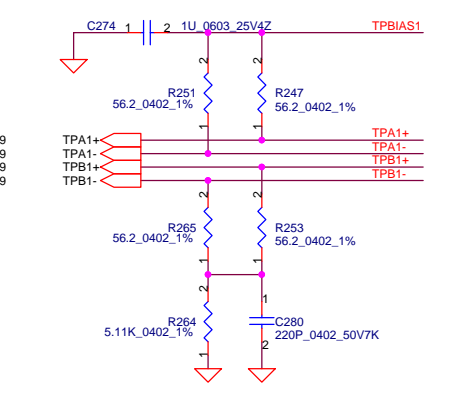
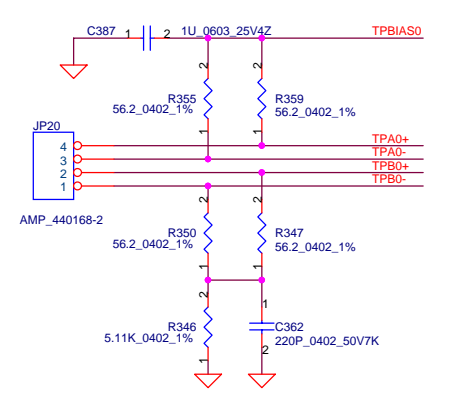
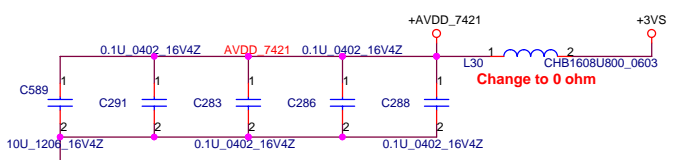
<b>Compal Electronics, Inc.</b>	
Title	HDD & CDROM Connector
Revision	1.0
Part Number	Sakhr LA-2491
Date	2004.06.06
Sheet	22 of 51

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PCI7411

PCI7411GHK\_P8GA288

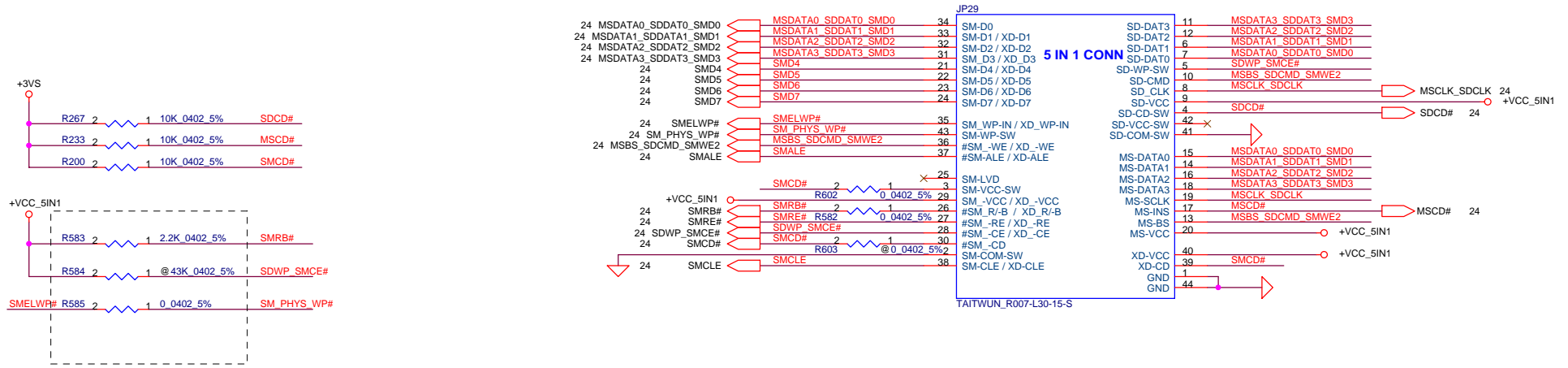


LED R MAY CHANGE TO 150OHM

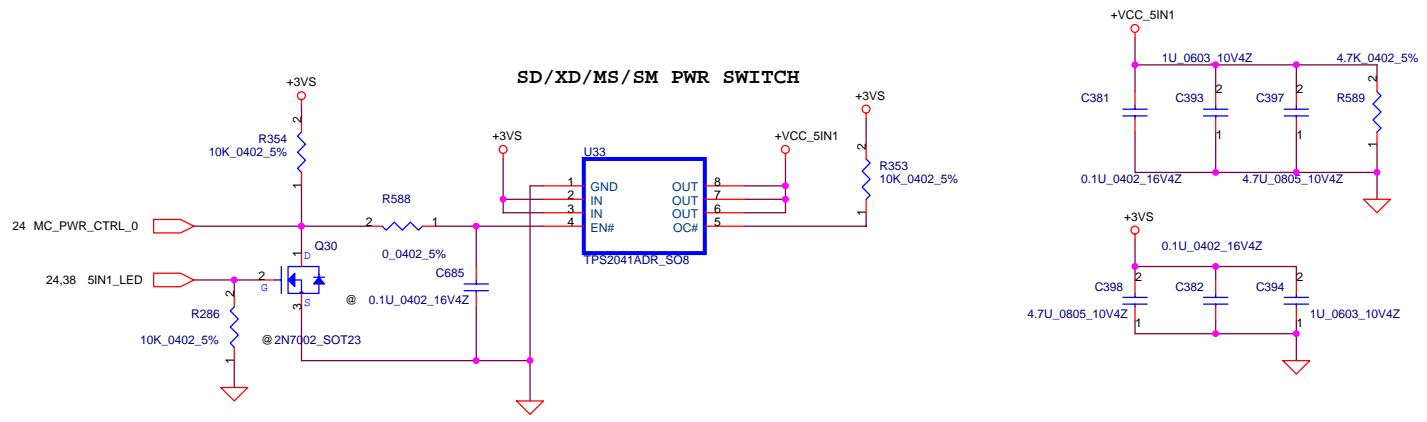
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### 5 in 1 CardReader Conn.



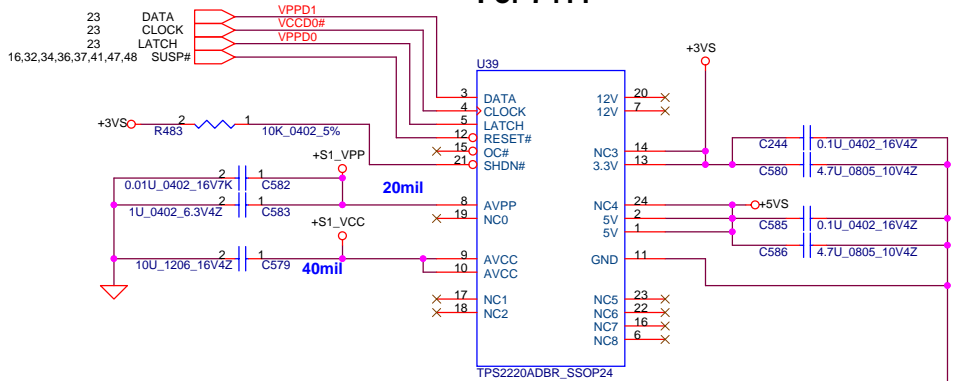
TI Workaround need check



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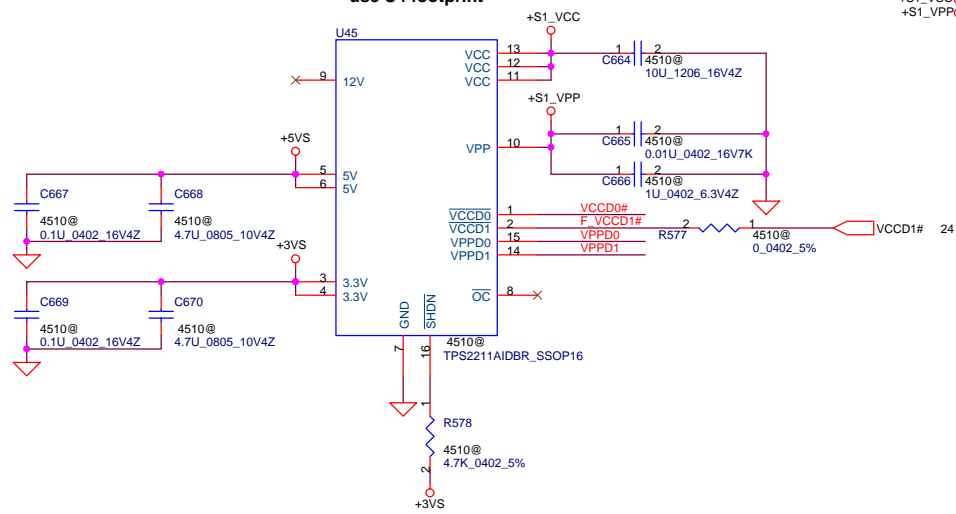
# Power Switch for PCMCIA

## For 7411

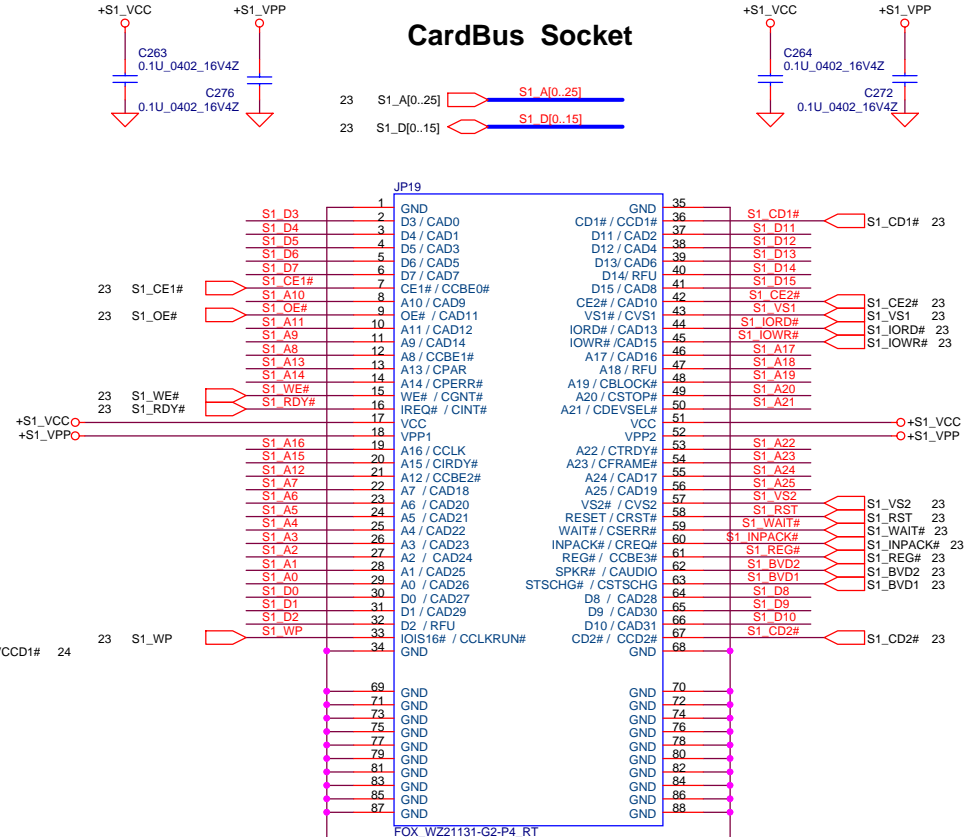


## For 4510

use U4 footprint



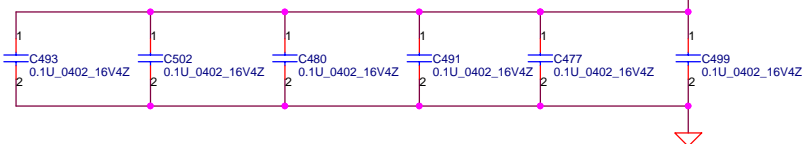
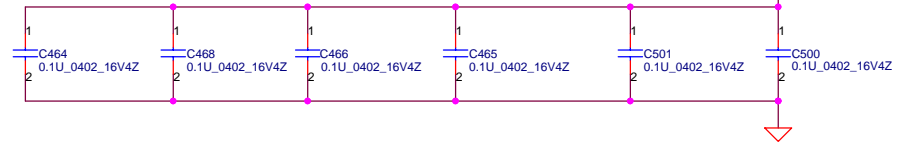
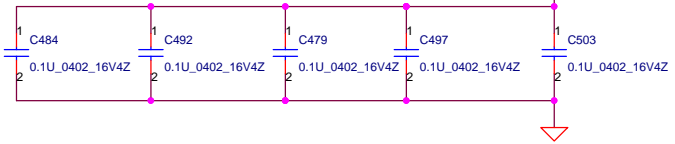
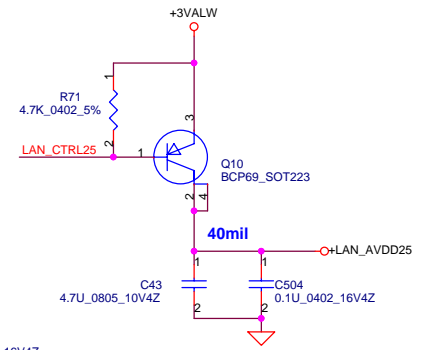
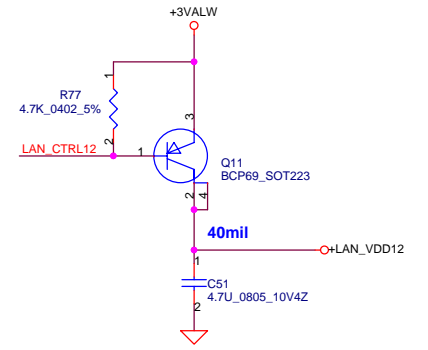
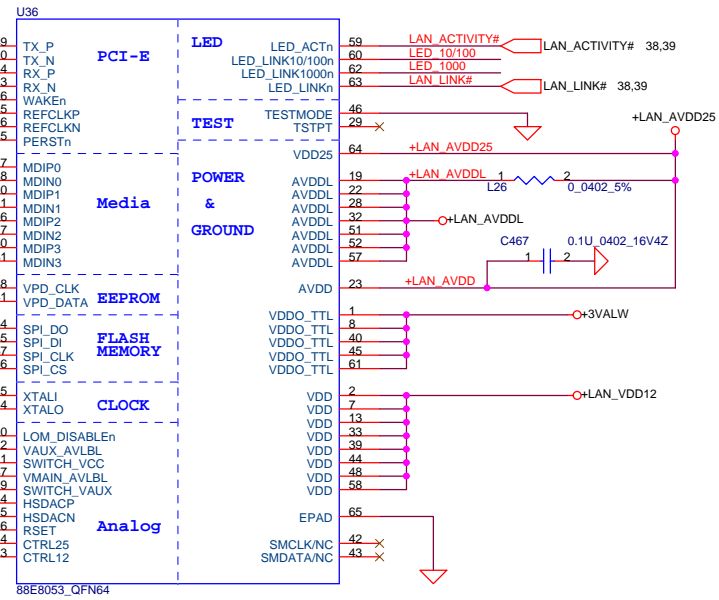
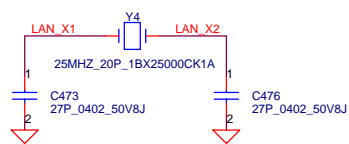
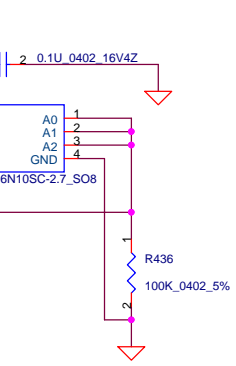
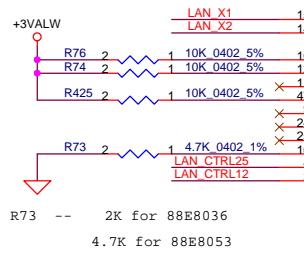
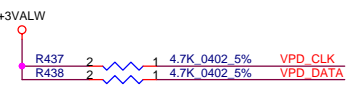
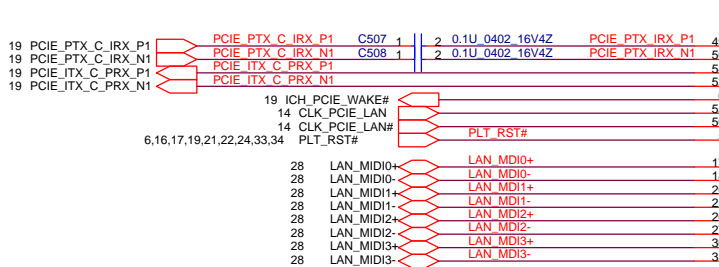
## CardBus Socket



Compal Electronics, Inc.

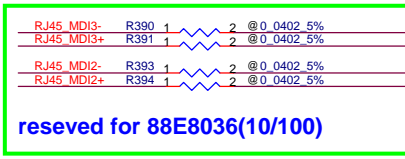
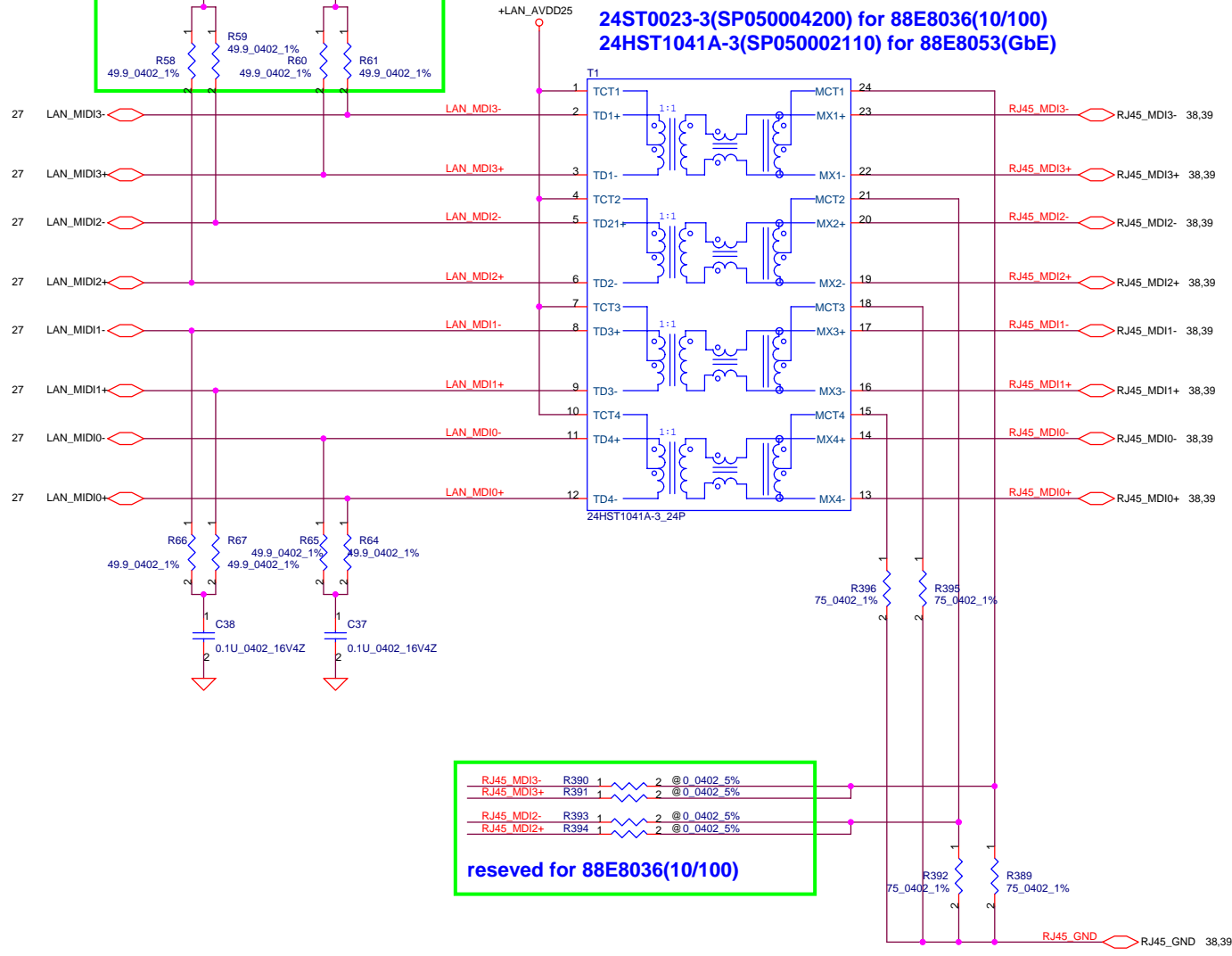
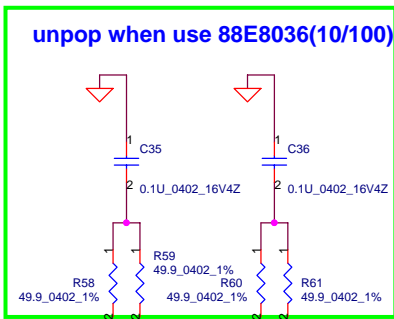
Title	CardBUS Socket
Document Number	Sakhir LA-2491
Date	星期二, 十二月 06, 2004
Sheet	26 of 51
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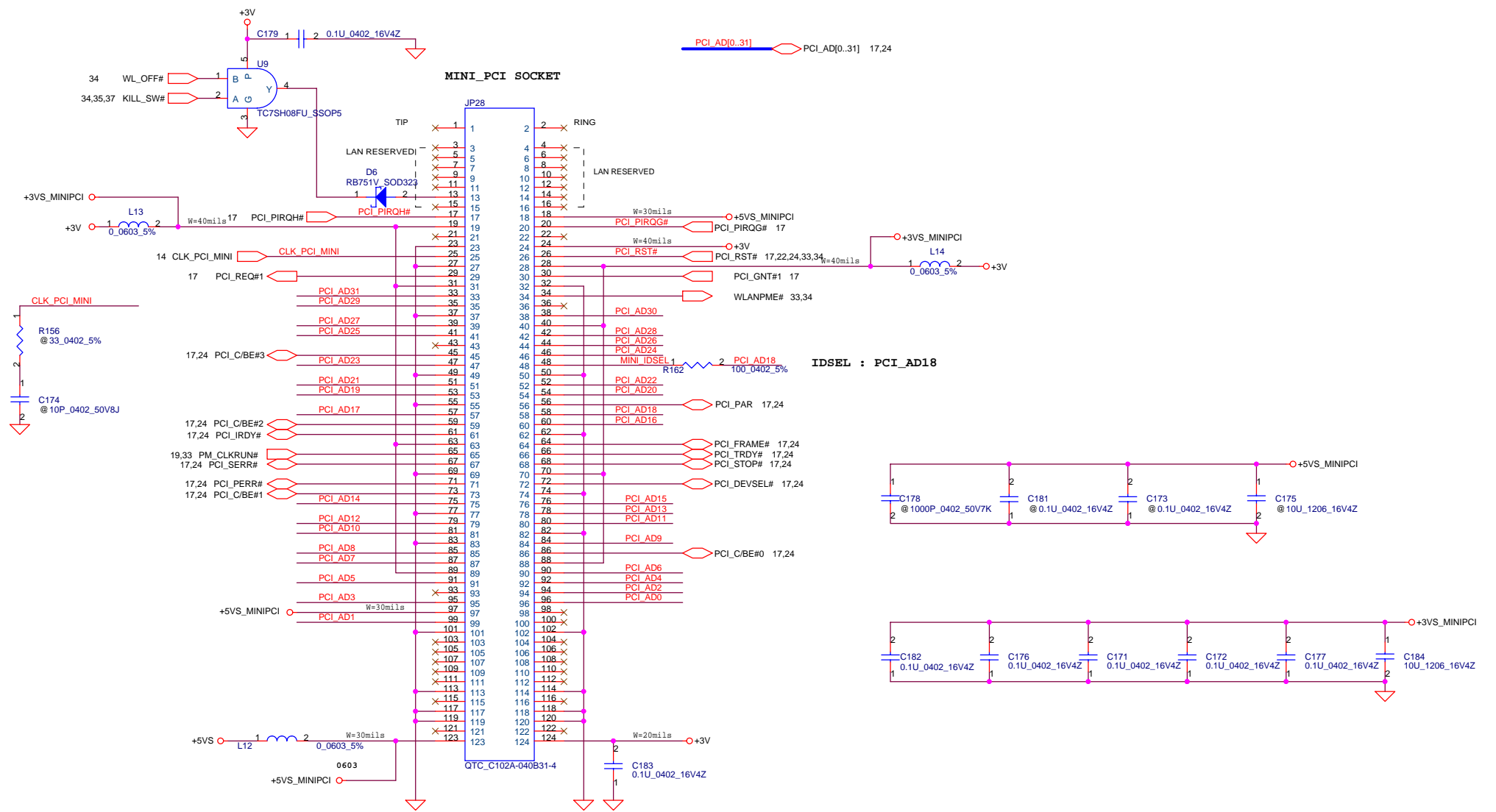
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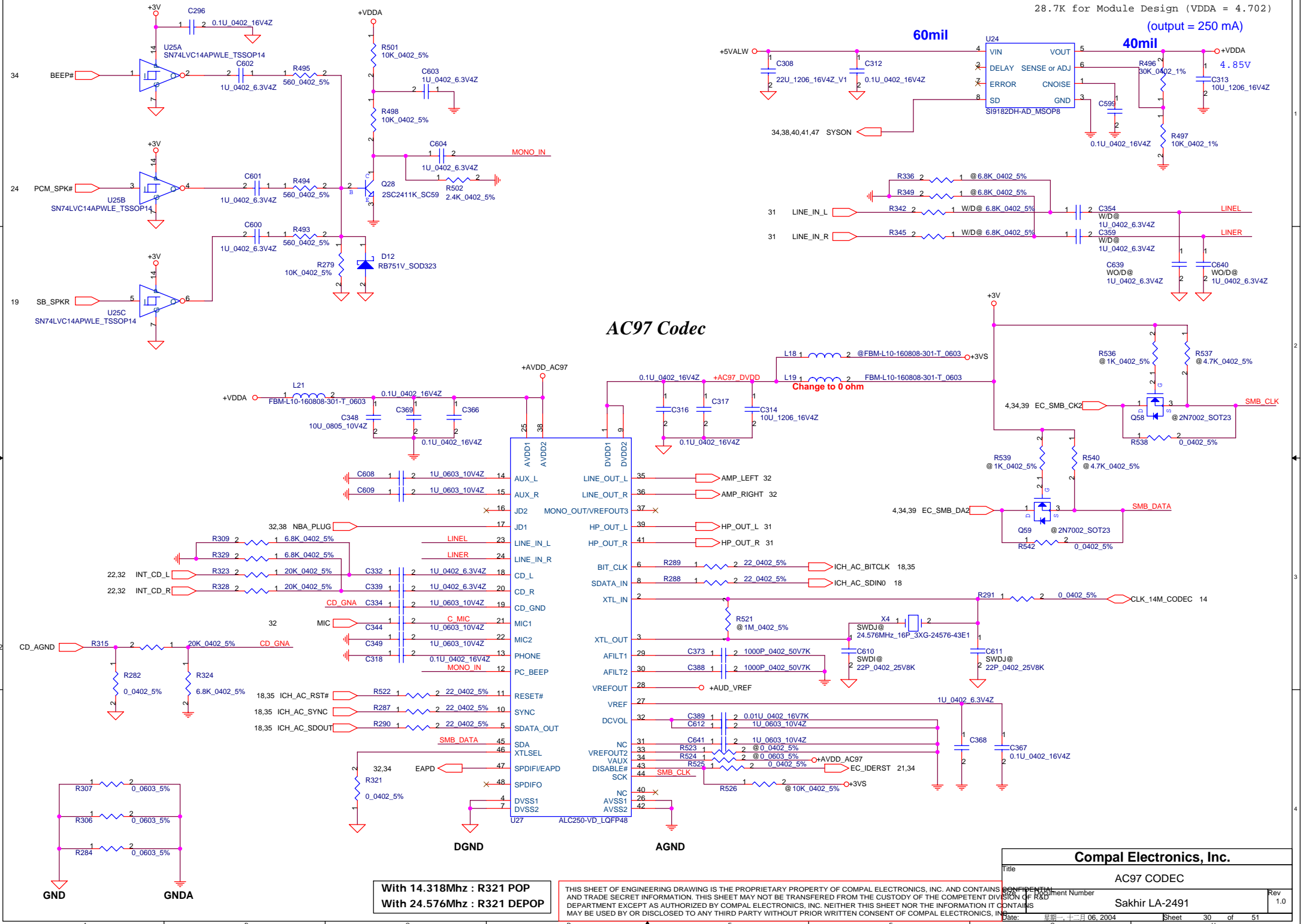
**Compal Electronics, Inc.**  
 Title: LAN Marvell 88E8053  
 Revision: 1.0  
 Date: 星期二, 十二月 06, 2004  
 Sheet: 27 of 51

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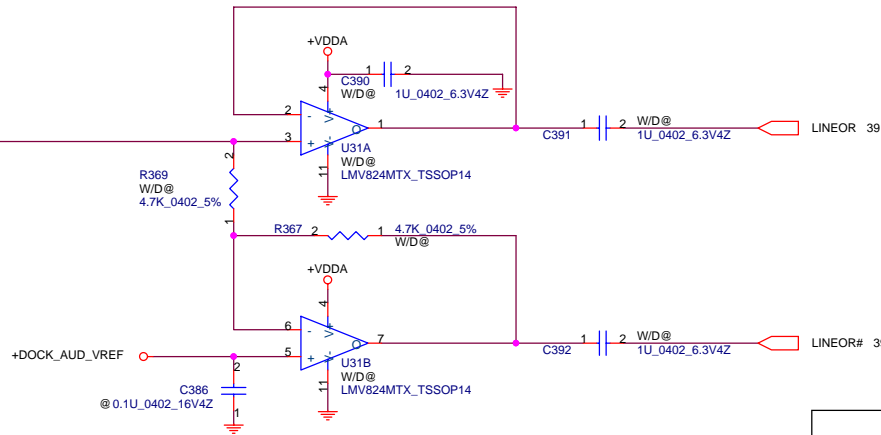
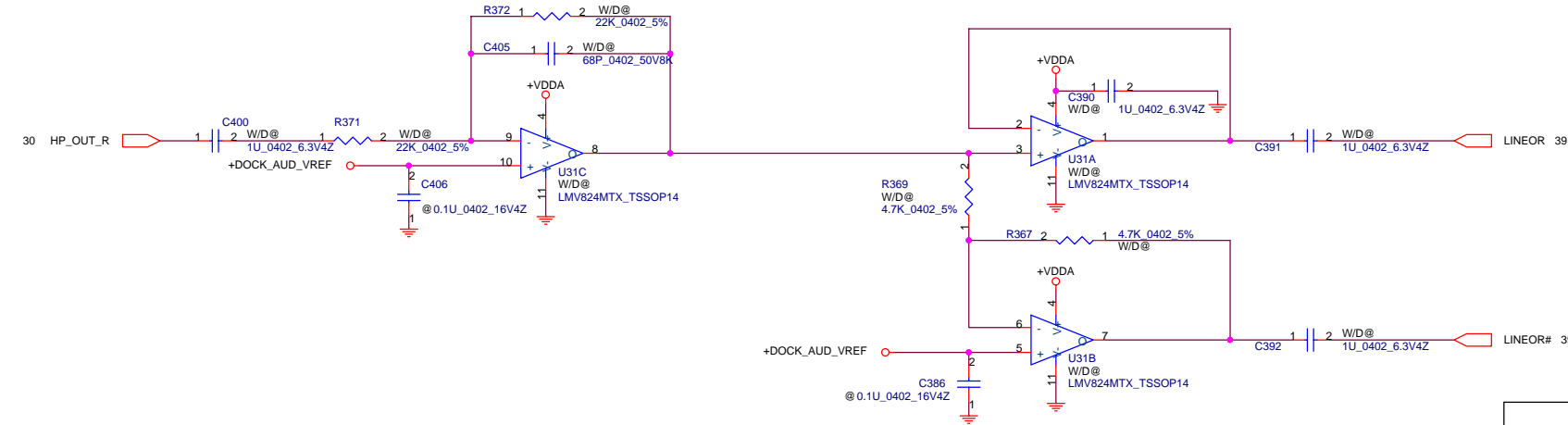
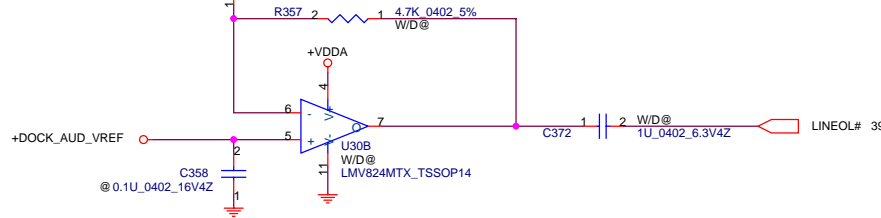
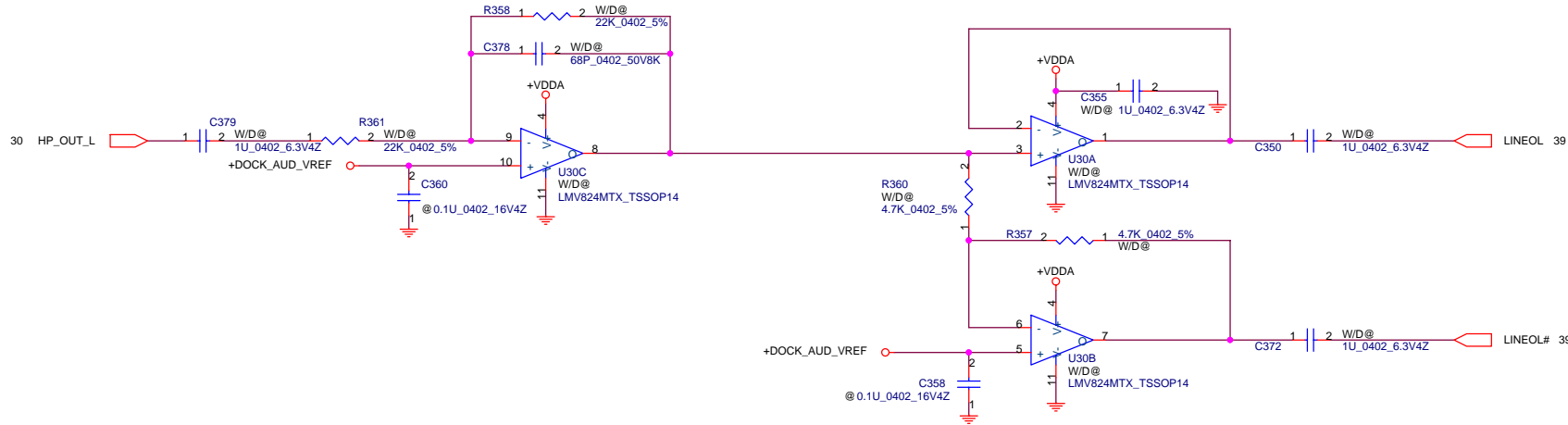
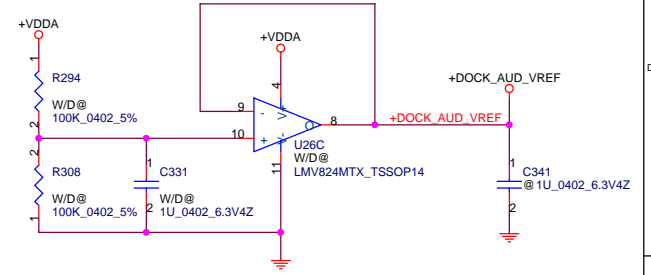
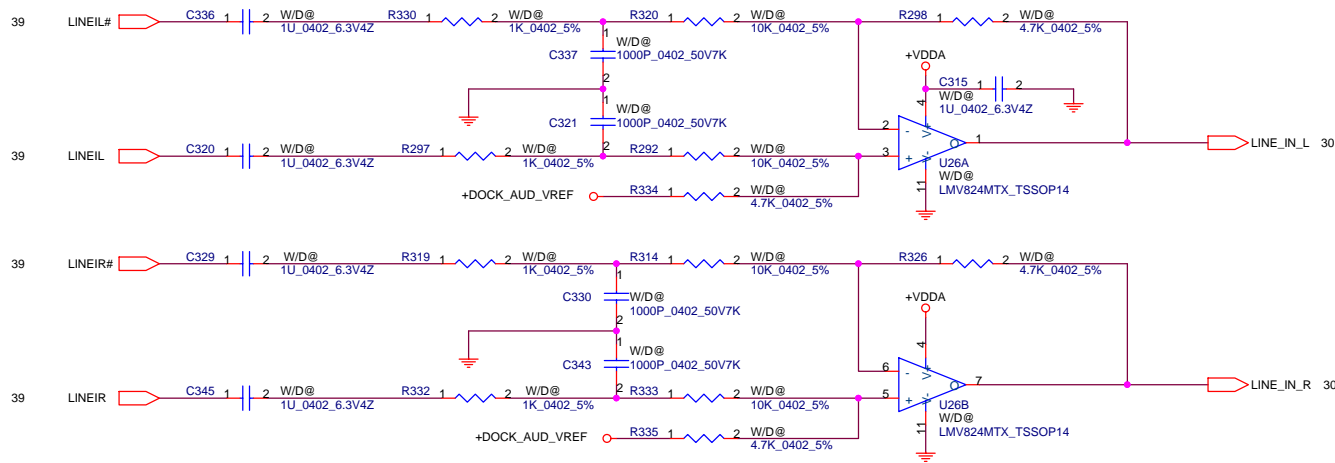


### AC97 Codec

With 14.318Mhz : R321 POP  
 With 24.576Mhz : R321 DEPOP

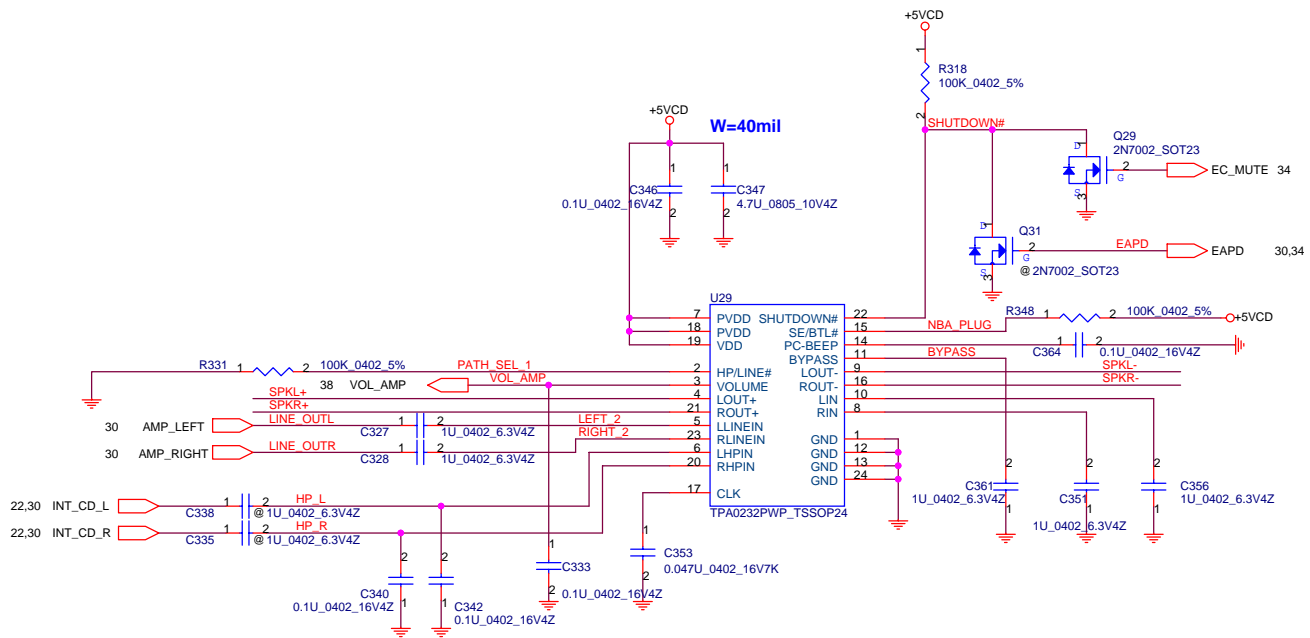
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<b>Compal Electronics, Inc.</b>	
Title	AC97 CODEC
Revision	Sakhir LA-2491
Date	Date: 星期二, 十二月 06, 2004
Sheet	30 of 51
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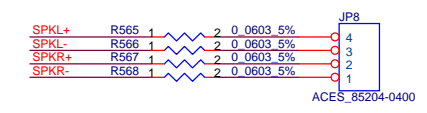


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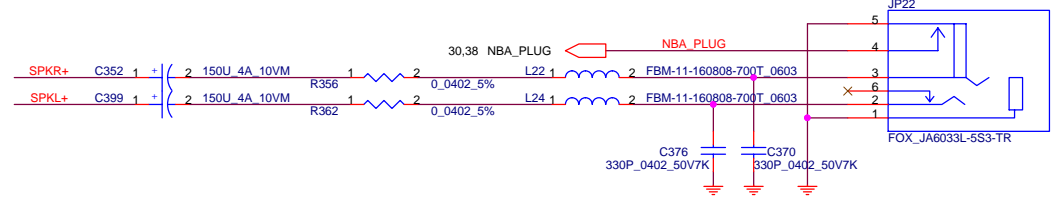
<b>Compal Electronics, Inc.</b>		
Title Docking Audio		
Size	Document Number Sakhir LA-2491	Rev 1.0
Date:	星期一, 十二月 06, 2004	Sheet 31 of 51



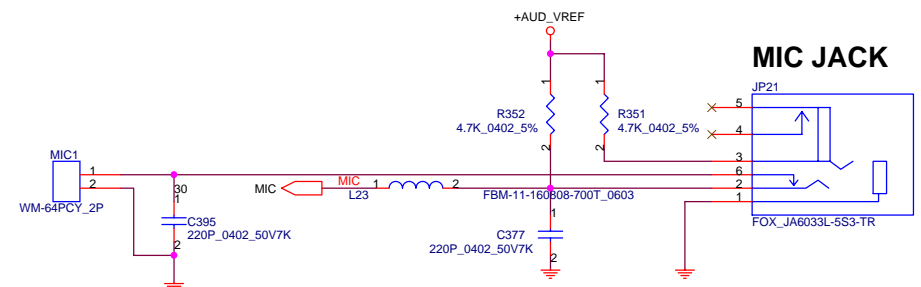
### Speaker Conn.



### HeadPhone JACK



### MIC JACK

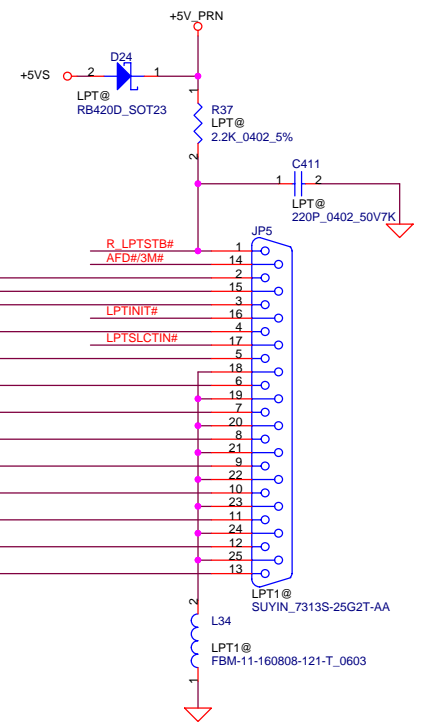
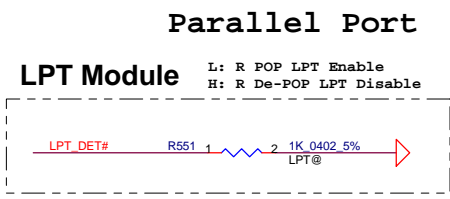
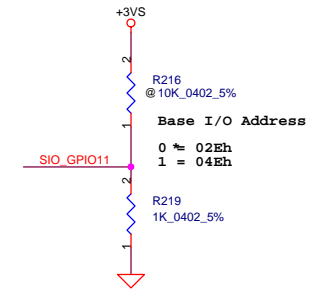
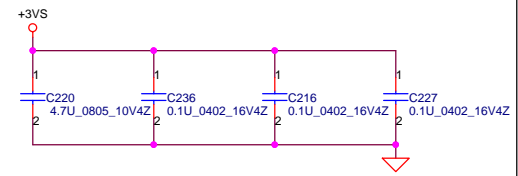
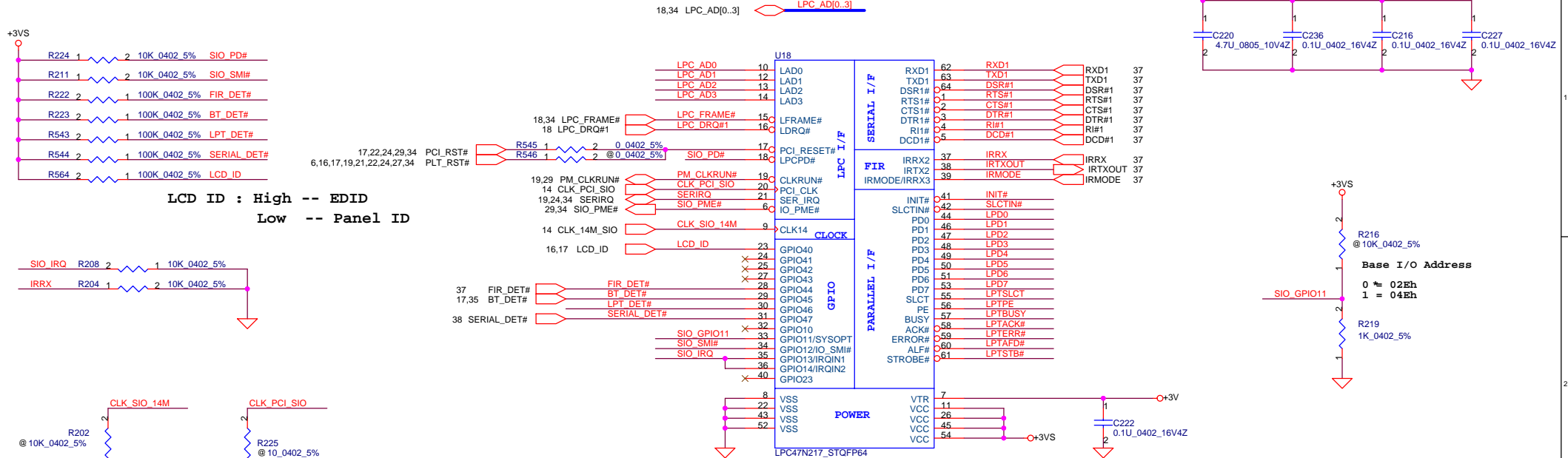


<b>Compal Electronics, Inc.</b>	
Title	AMP & Audio Jack
Revision	Sakhir LA-2491
Date	星期二, 十二月 06, 2004
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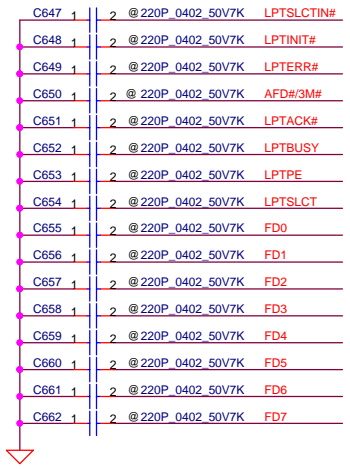
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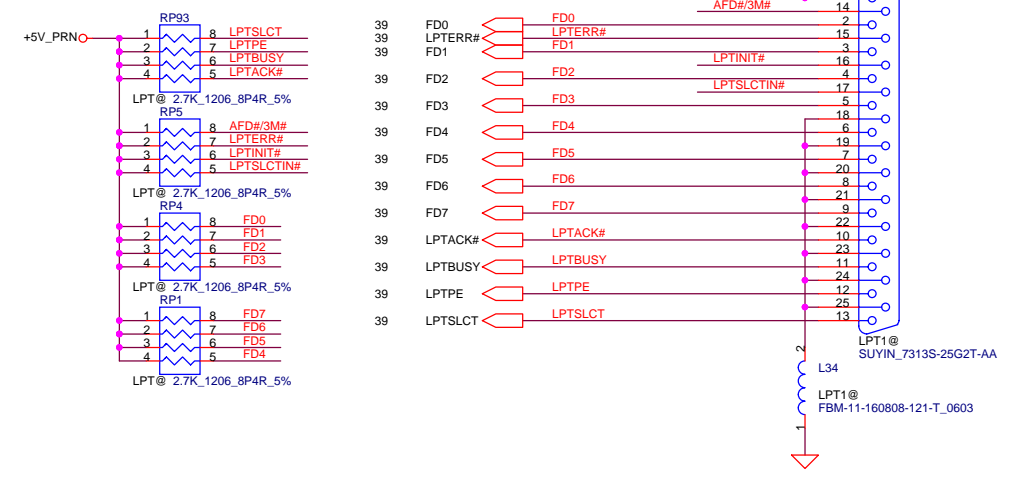
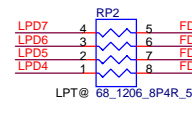
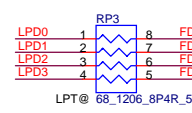
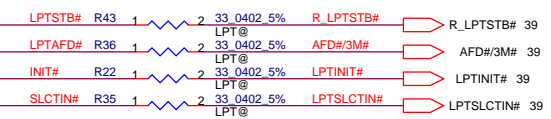
# SUPER I/O SMsC LPC47N217



## No Docking and Parallel Port ----->Del

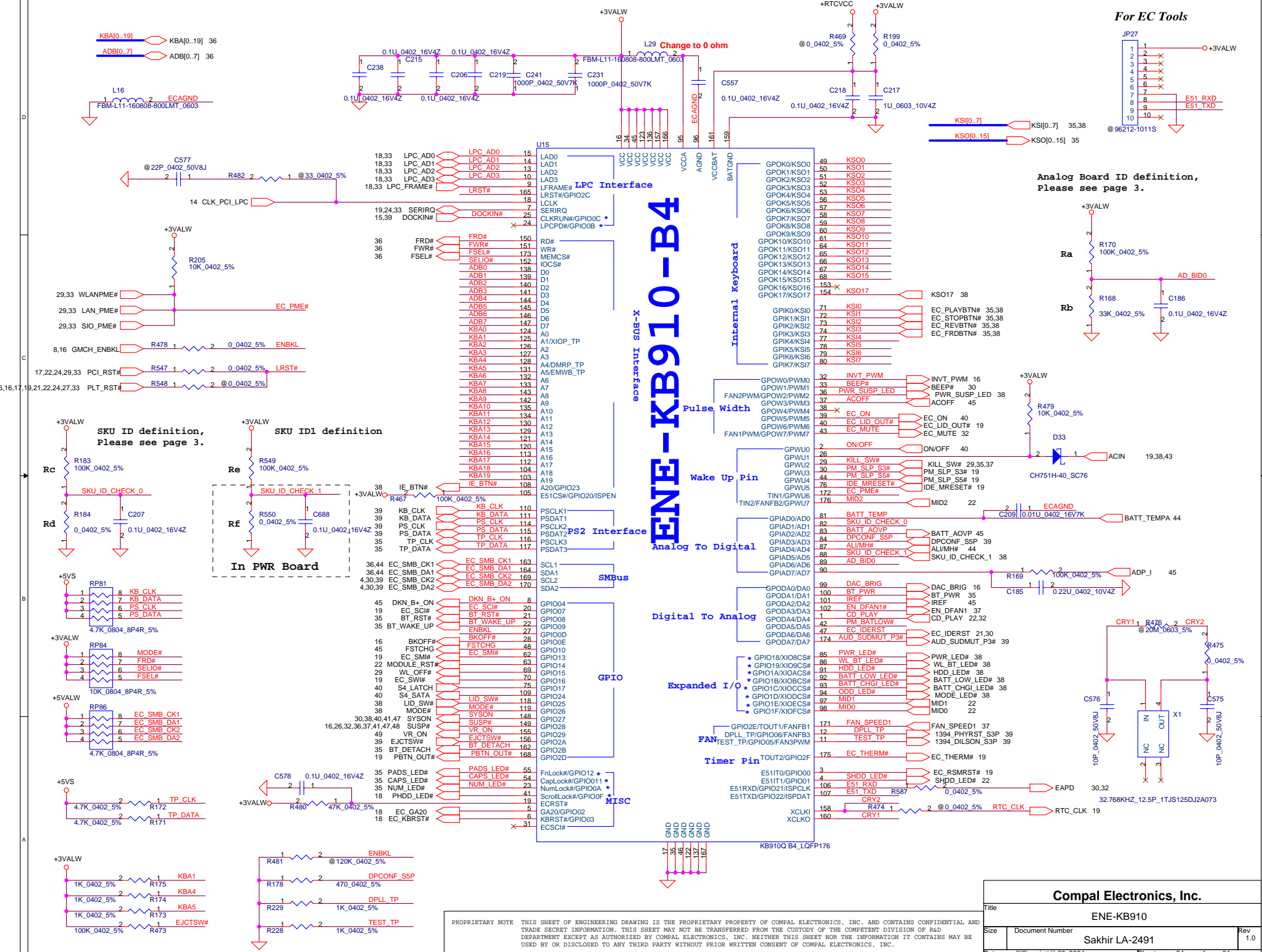


### Close to Docking



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# ENE-KB910-B4



Analog Board ID definition, Please see page 3.

SKU ID definition, Please see page 3.

SKU ID1 definition

SKU ID CHECK 1

SKU ID CHECK 0

In PWR Board

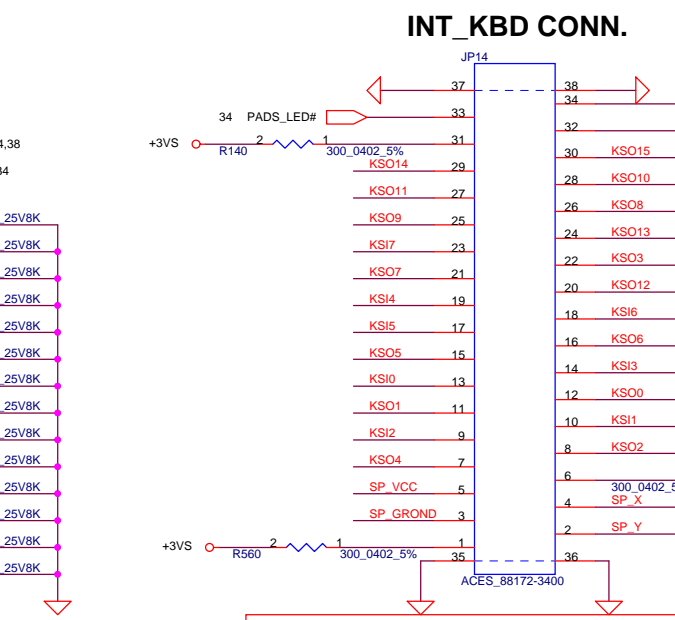
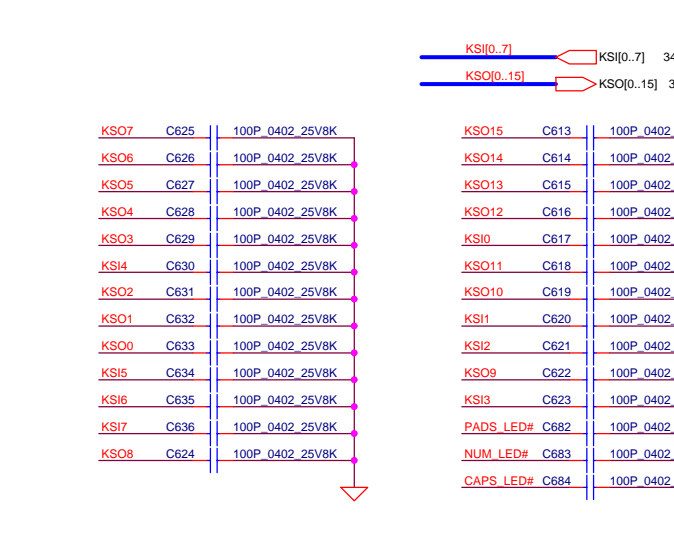
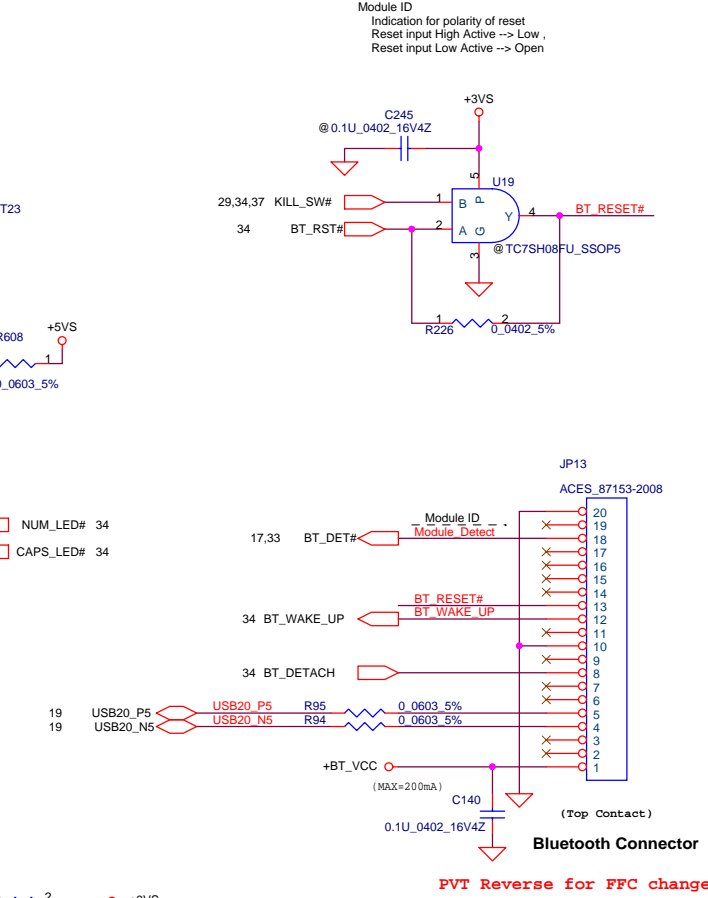
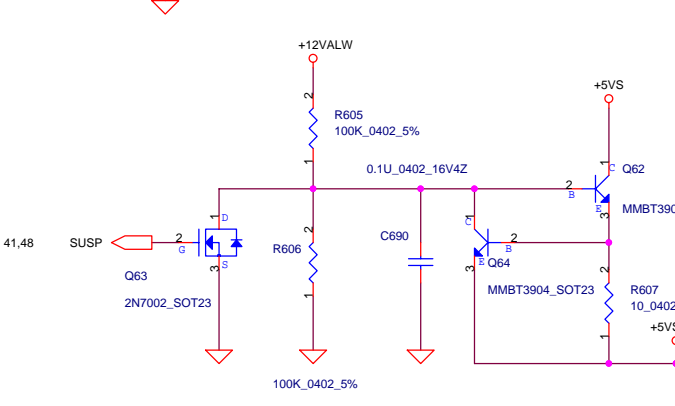
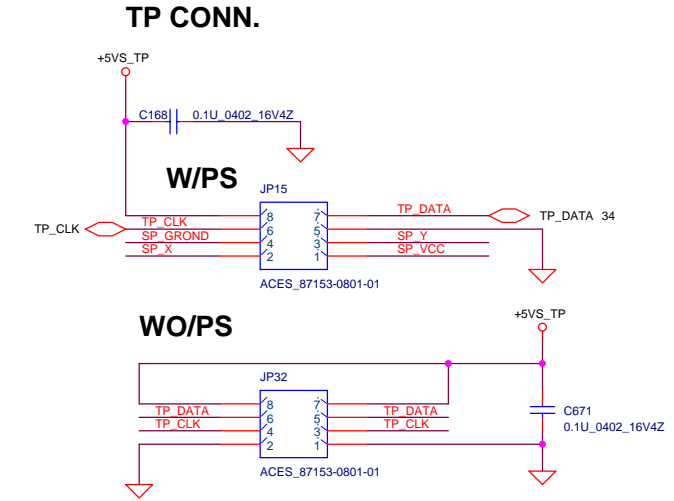
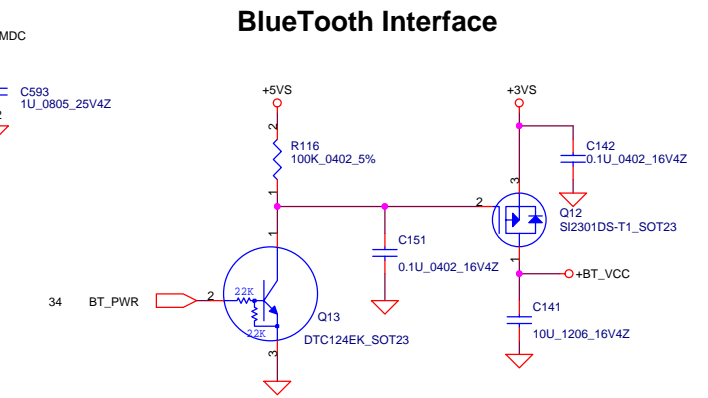
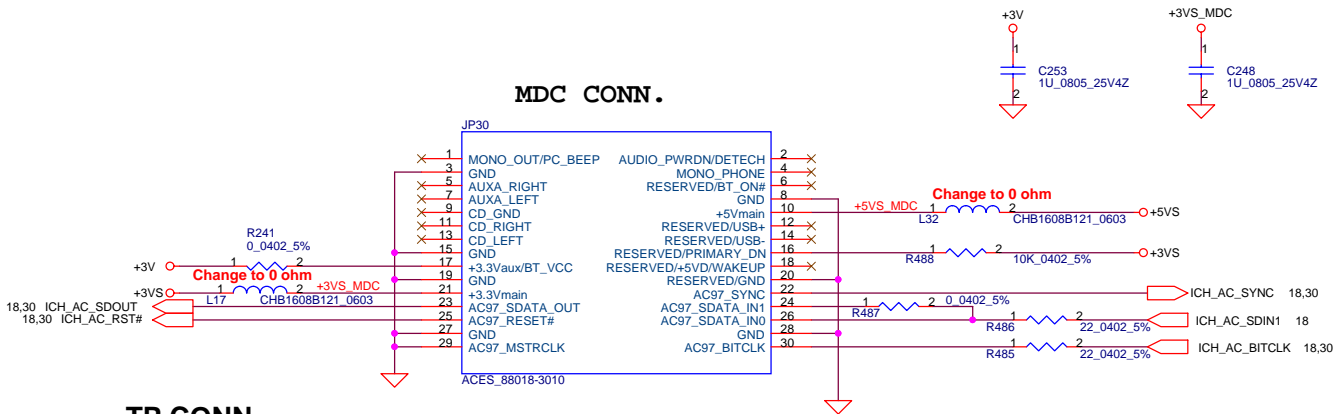
Compal Electronics, Inc.

ENE-KB910

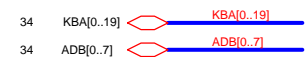
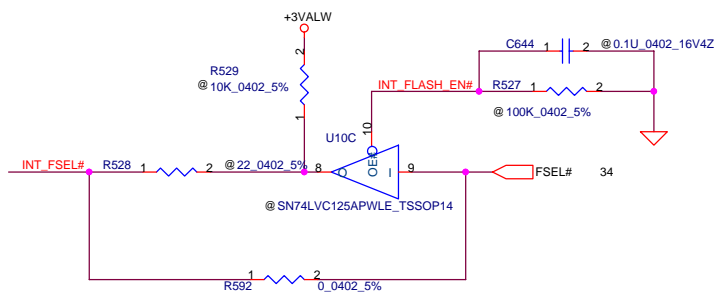
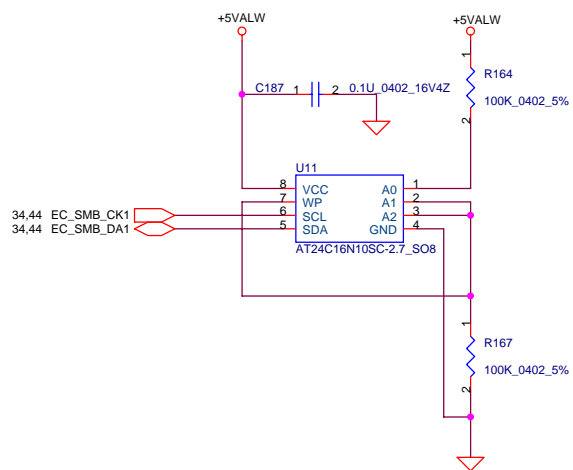
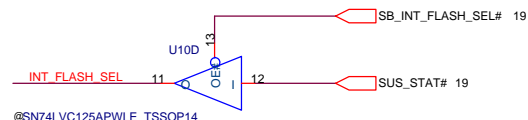
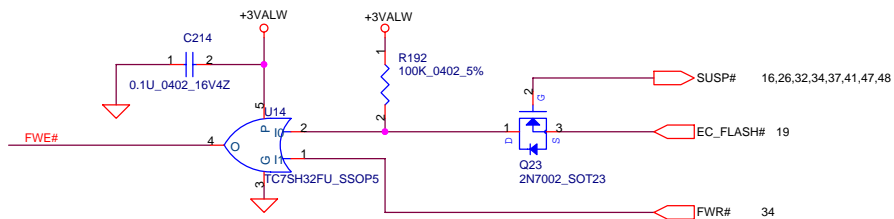
Sakhir LA-2941

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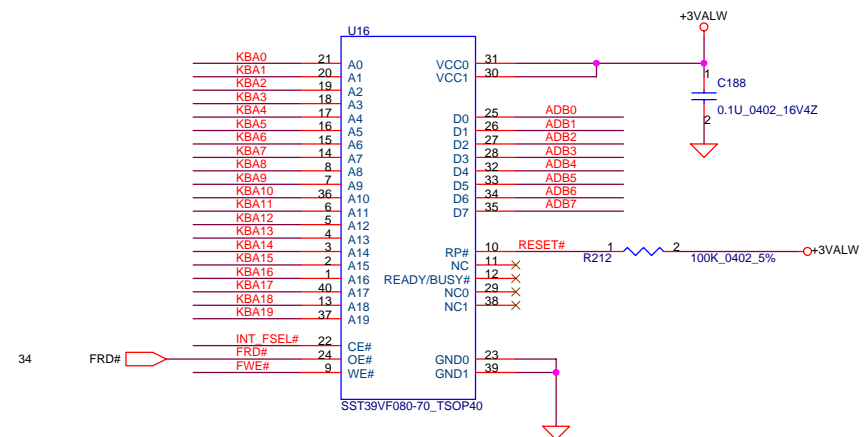
Title	ENE-KB910		Rev	1.0
Size	Document Number	Sakhir LA-2941		
Date:	星期一, 十二月 06, 2004	Sheet	34	of 51



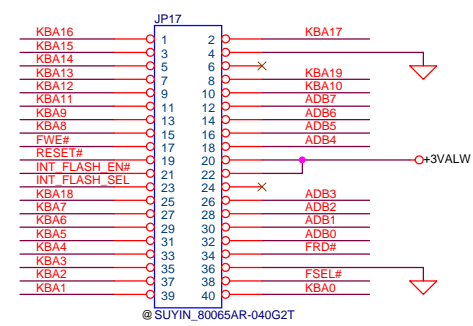
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### 1MB Flash ROM



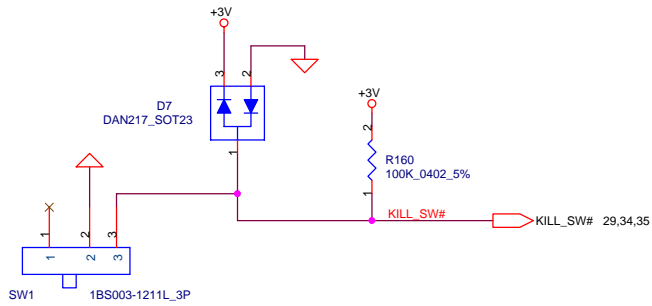
### 1MB ROM Socket



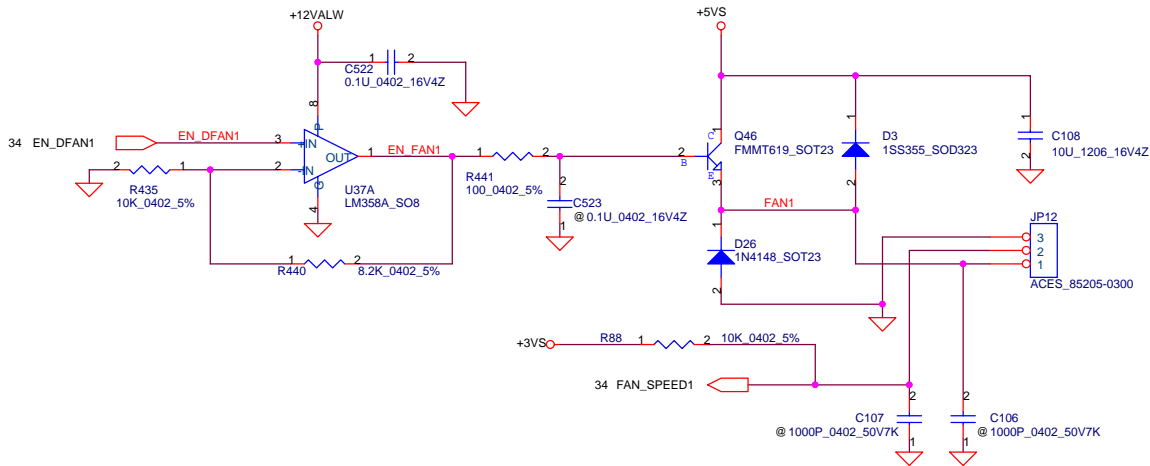
<b>Compal Electronics, Inc.</b>	
BIOS & EXT. I/O PORT	
Title	Document Number
Revision	Sakhir LA-2491
Date: 星期一, 十二月 06, 2004	Sheet 36 of 51

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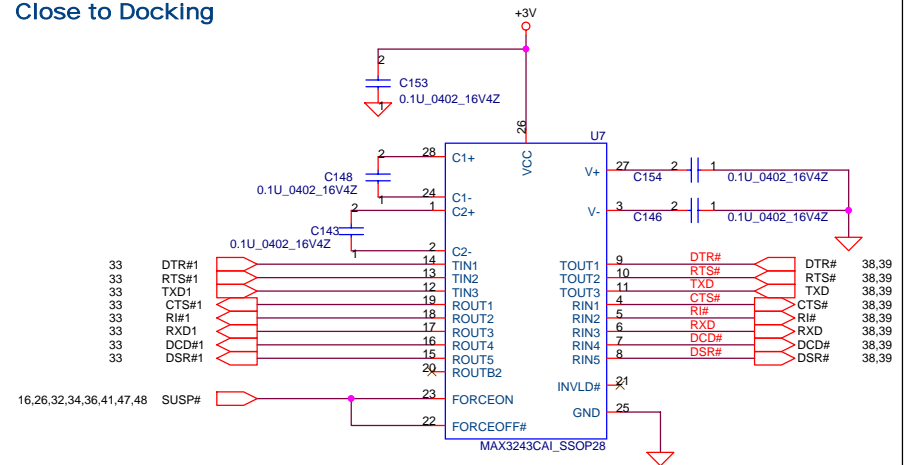
### Kill SWITCH



### FAN Conn



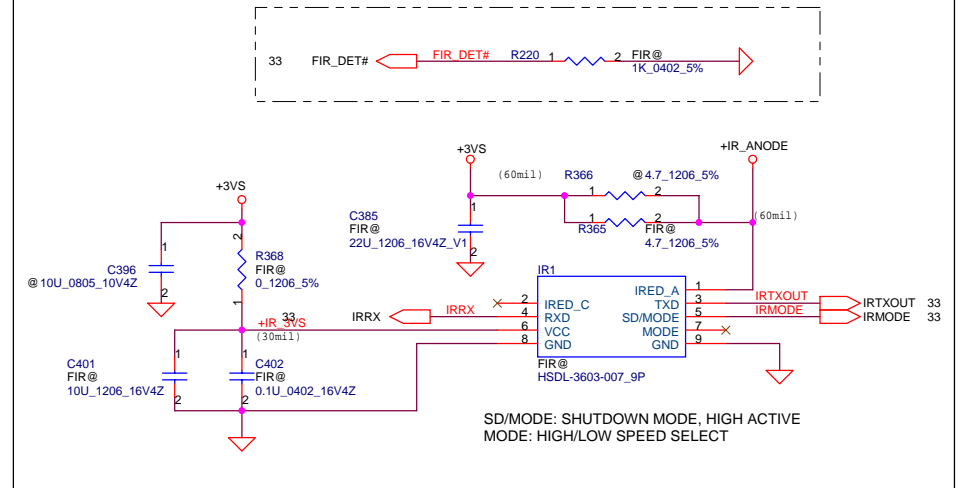
### Close to Docking



No Docking and Serial Port ---->Del

### FIR Module

L: R POP; FIR Enable  
H: R De-POP; FIR Disable

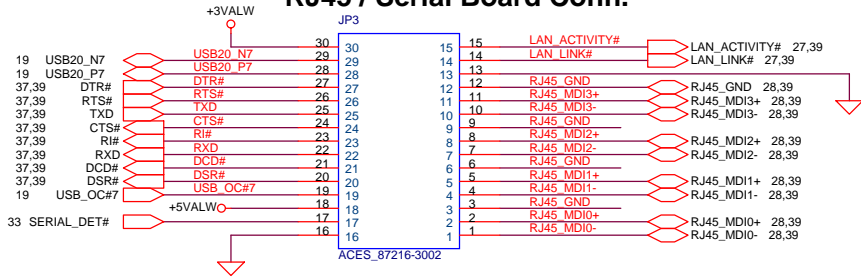


Compal Electronics, Inc.

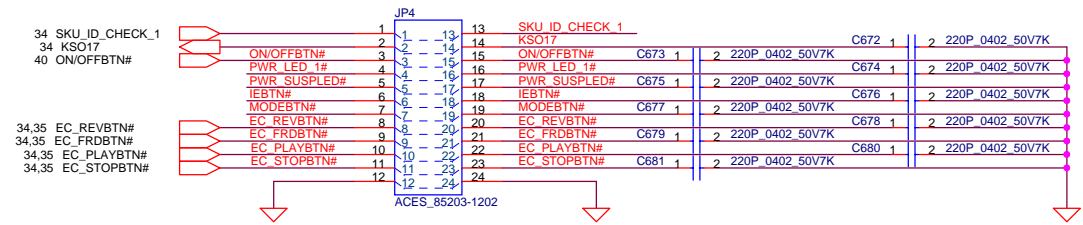
Title	FAN1 / FIR / Kill	
Document Number	Sakhir LA-2491	
Rev	1.0	
Date	日期: 2004.06.06	Sheet 37 of 51

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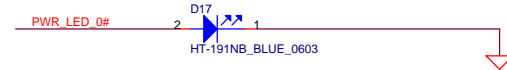
### RJ45 / Serial Board Conn.



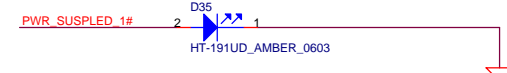
### Power / LED Board Conn.



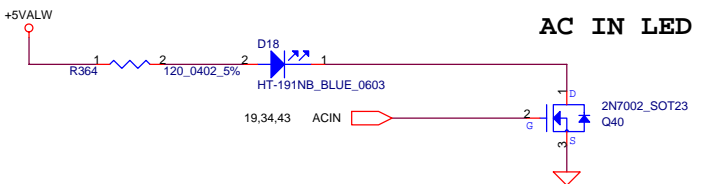
#### POWER/ON LED



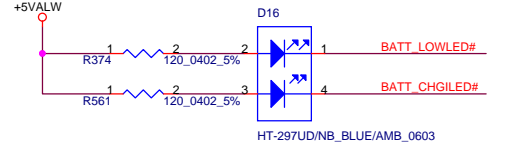
#### POWER/SUSP LED



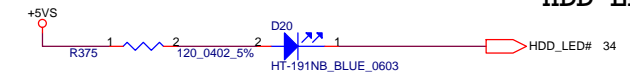
#### AC IN LED



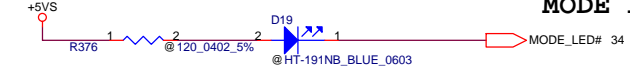
#### BATTERY CHG



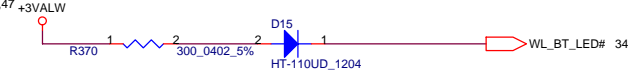
#### HDD LED



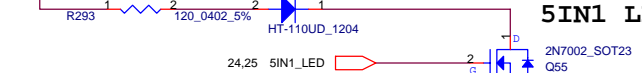
#### MODE LED



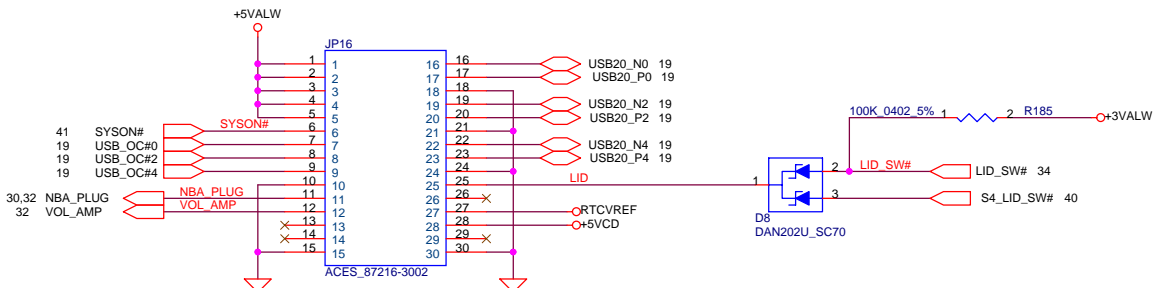
#### WL LED



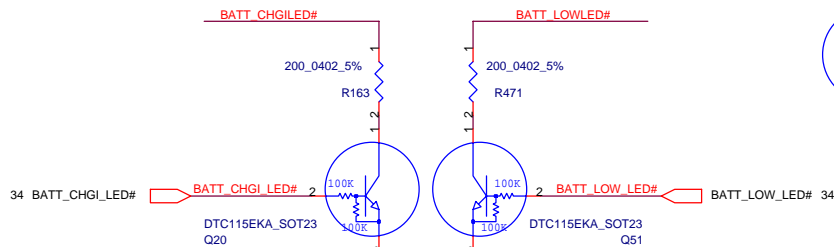
#### 5IN1 LED



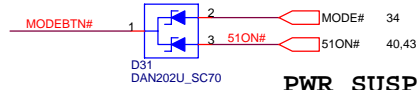
### USB Board Conn.



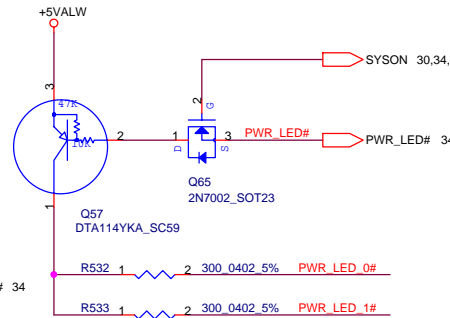
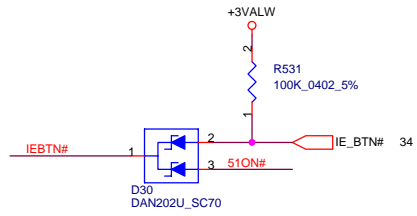
### BATTERY CHG/LOW LED



#### PWR SUSP LED



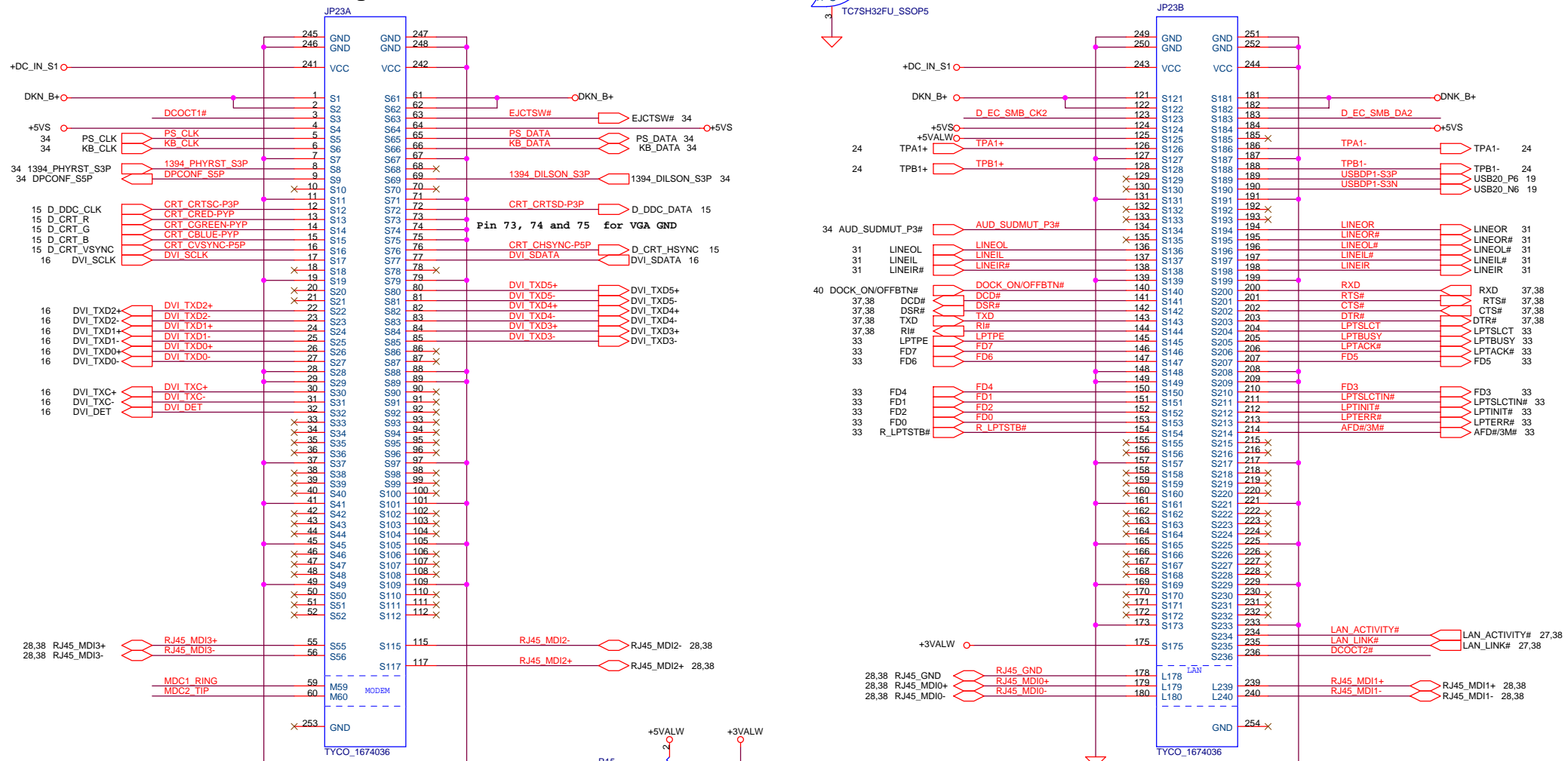
#### IE\_BTN#



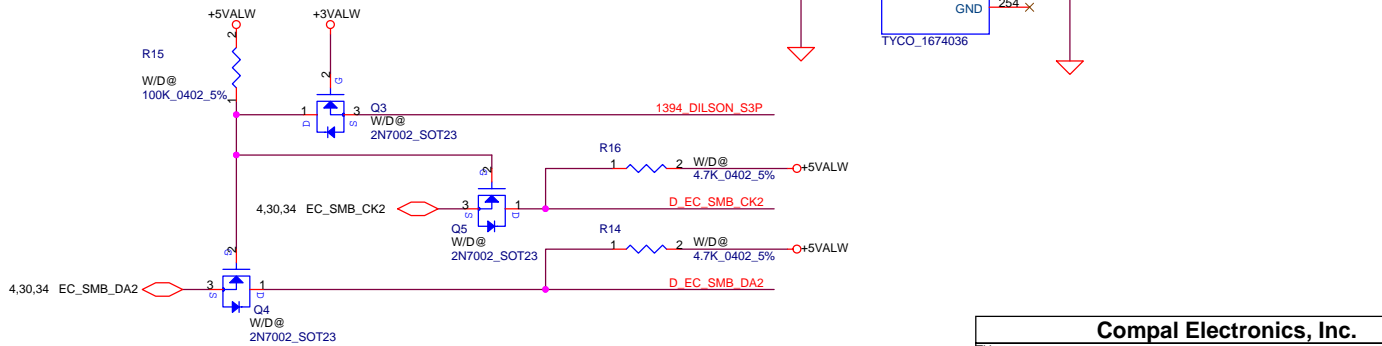
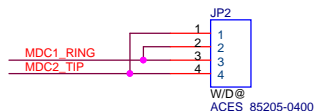
Compal Electronics, Inc.

Switches & LED

# Docking Conn.

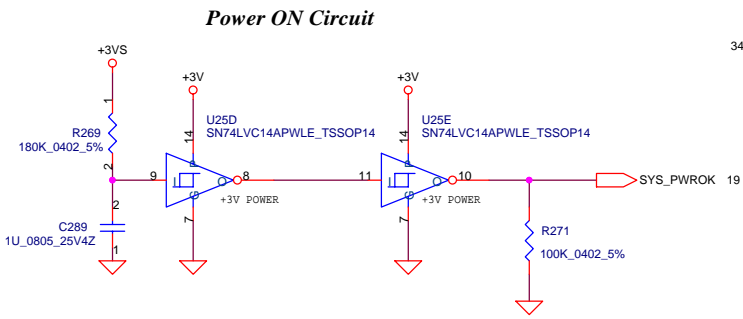
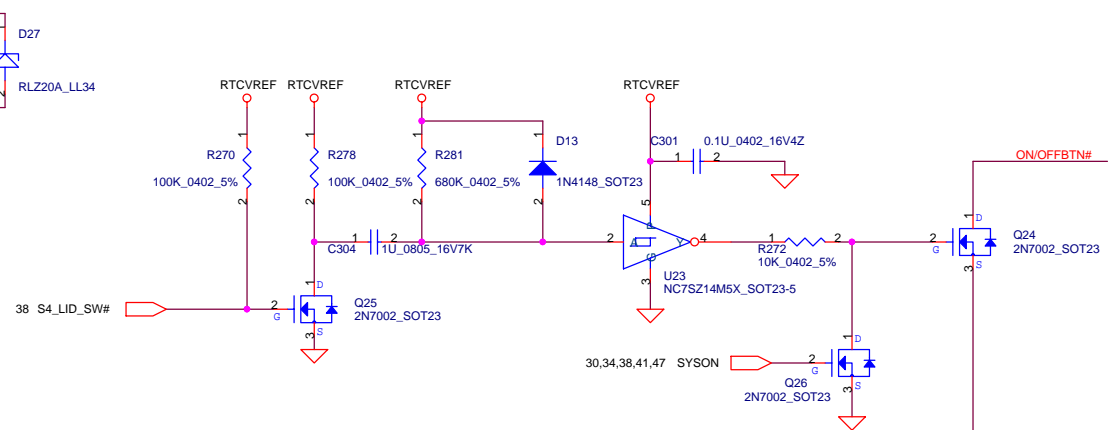
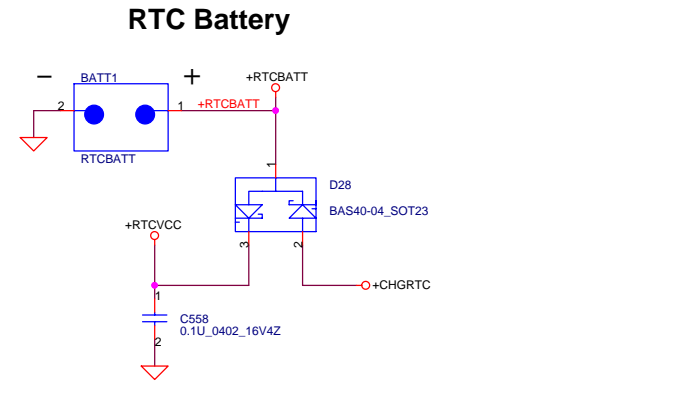
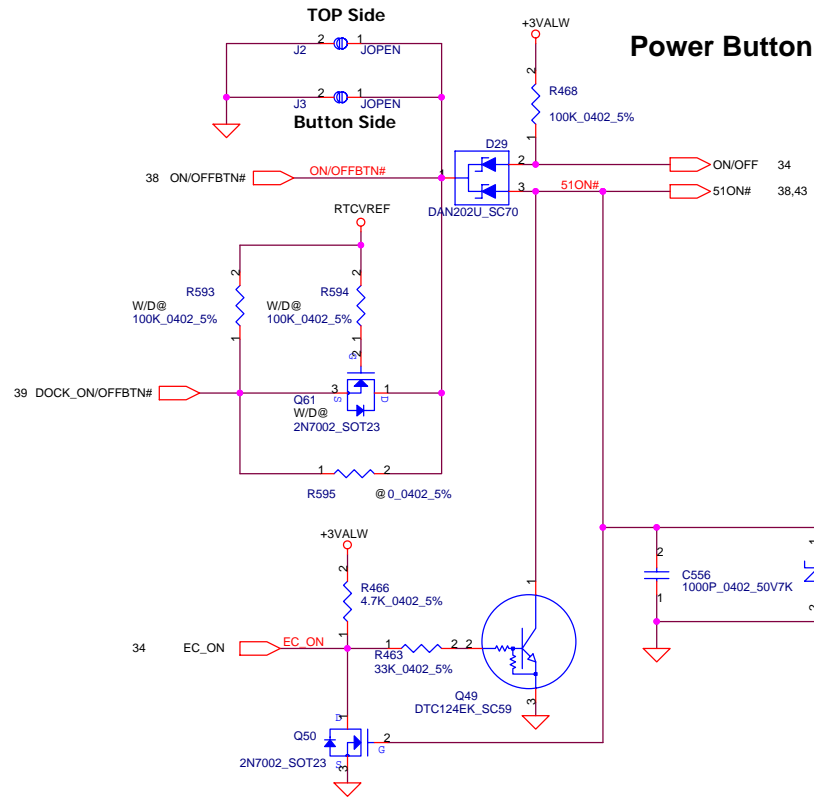


## MDC to Docking Conn.

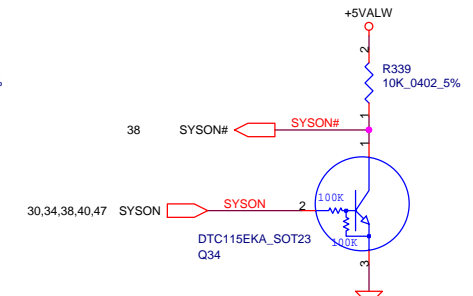
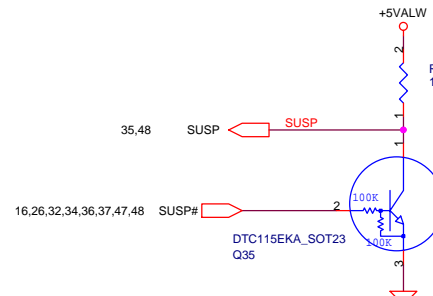
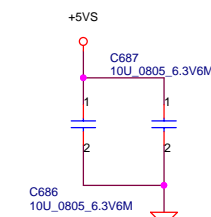
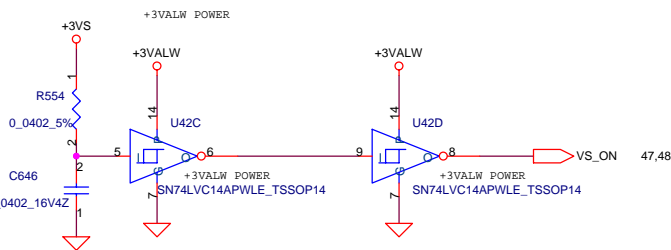
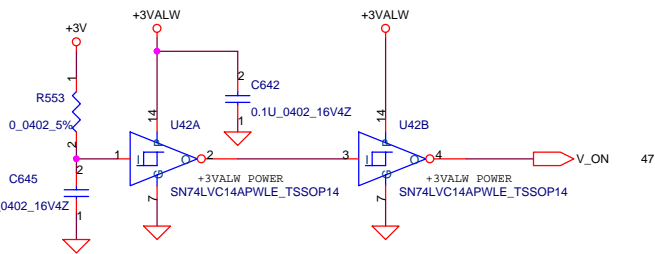
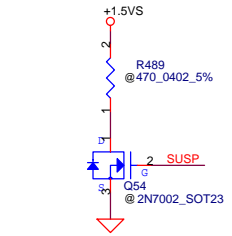
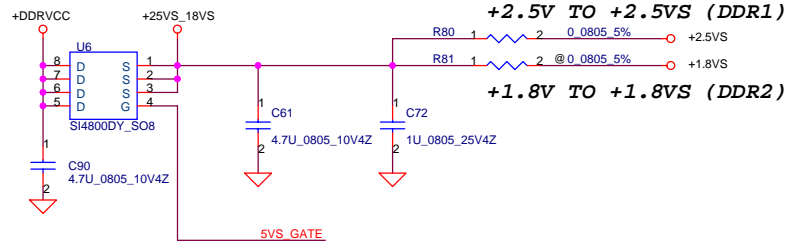
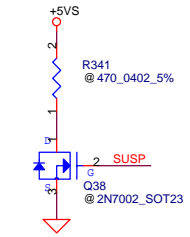
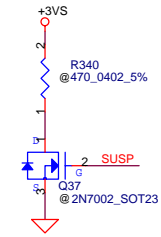
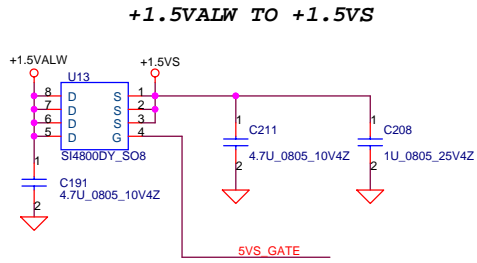
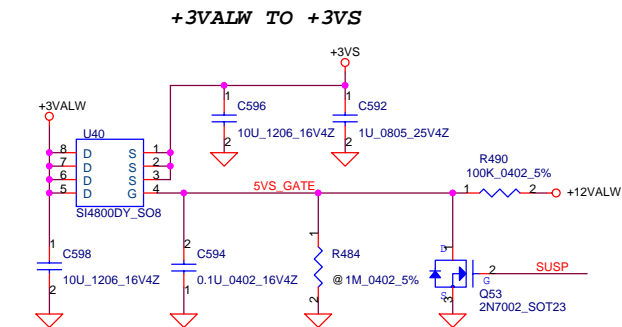
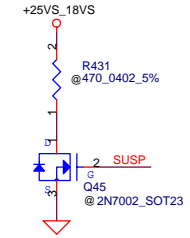
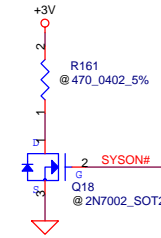
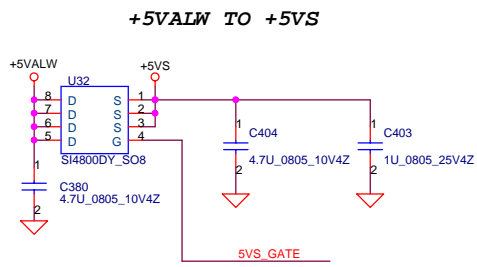
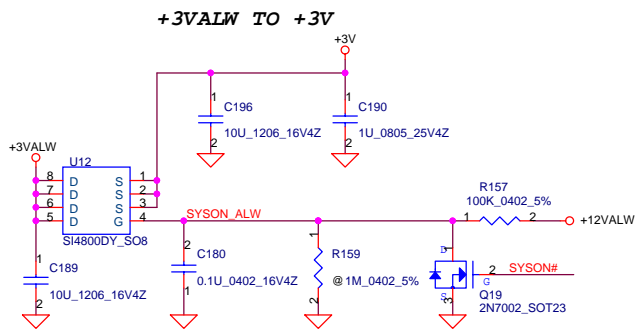


<b>Compal Electronics, Inc.</b>	
Title: Docking	
Revision Number	Rev 1.0
Sakhr LA-2491	
Date: 星期二, 十二月 06, 2004	Sheet 39 of 51

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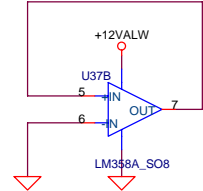
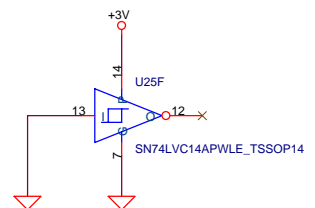
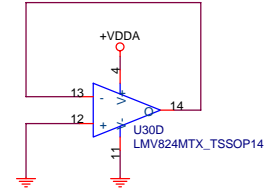
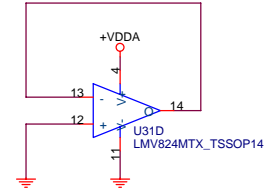
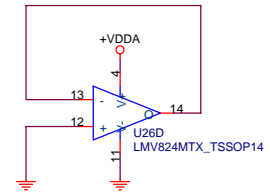
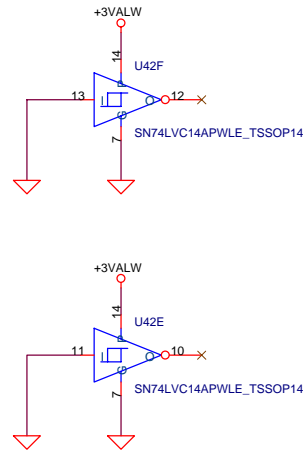
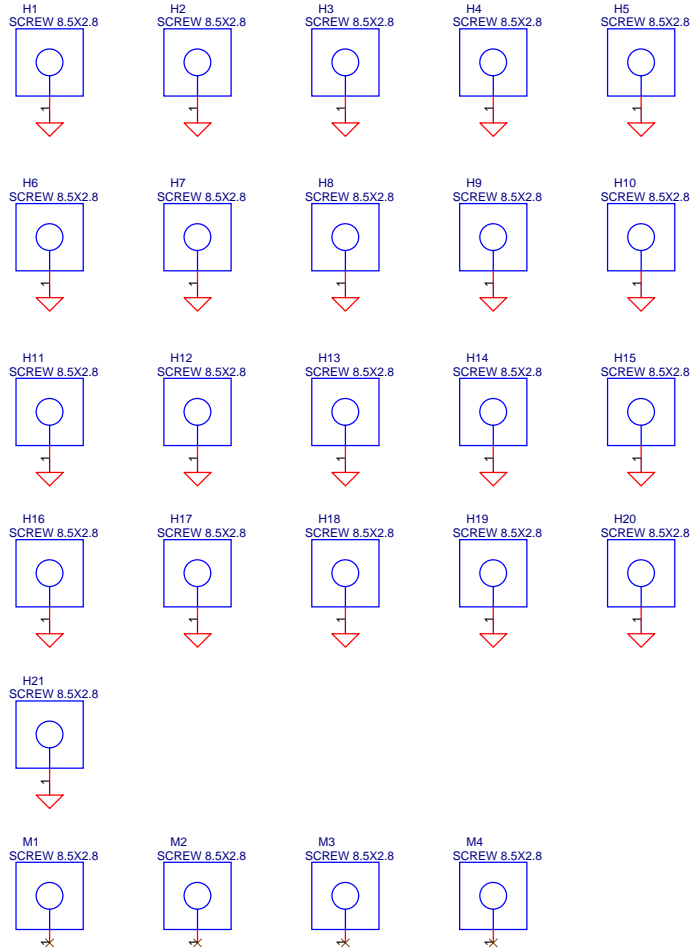
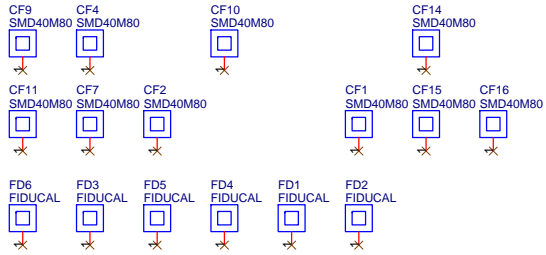






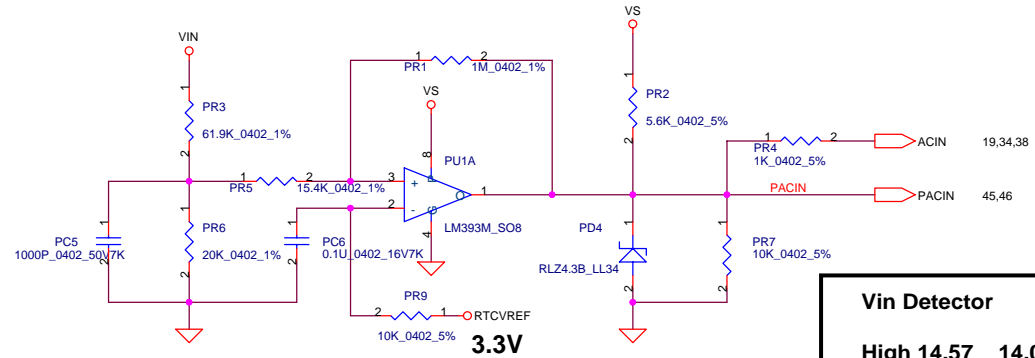
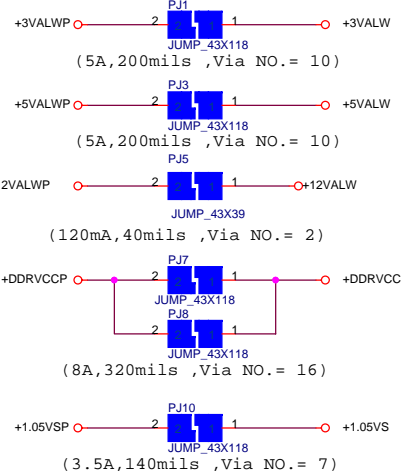
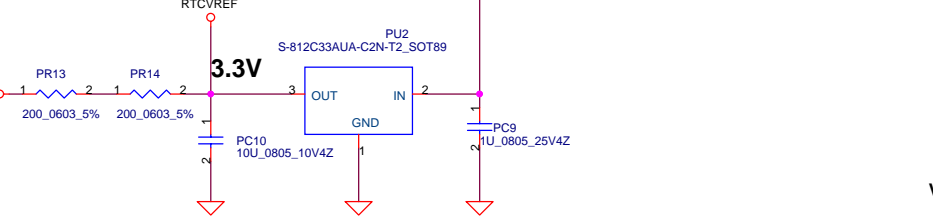
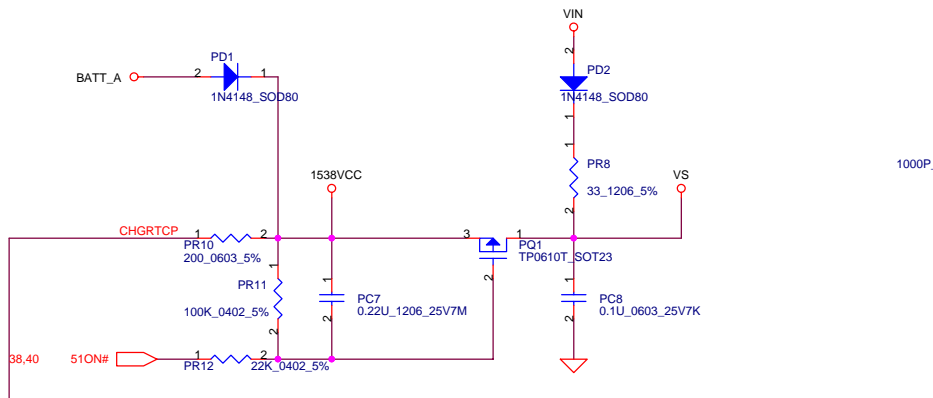
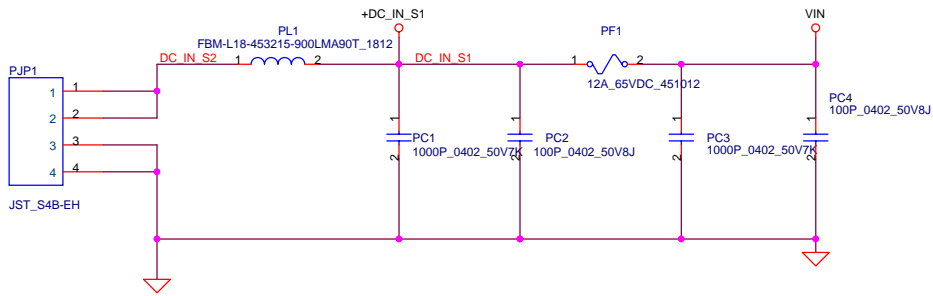
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Title			
Compal Electronics, Inc.			
POWER CONTROL CKT			
Size B	Document Number	Rev 1.0	
	Sakhir LA-2491		
Date:	星期二, 十二月 06, 2004	Sheet	41 of 51

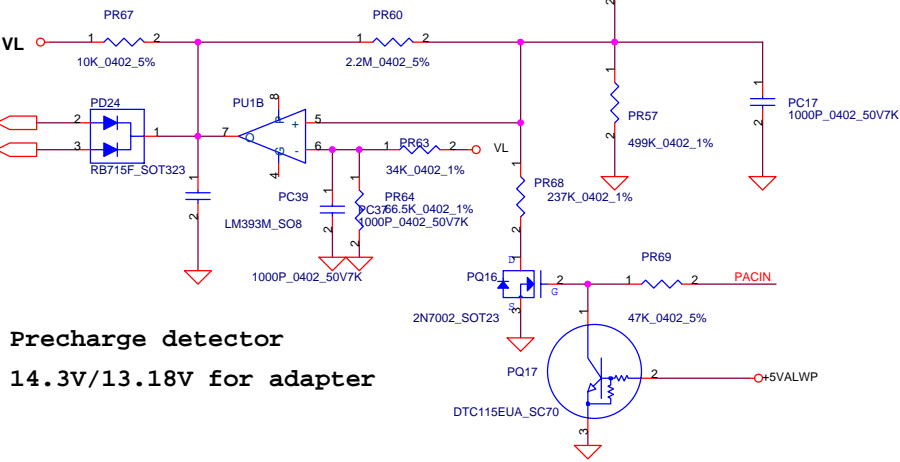
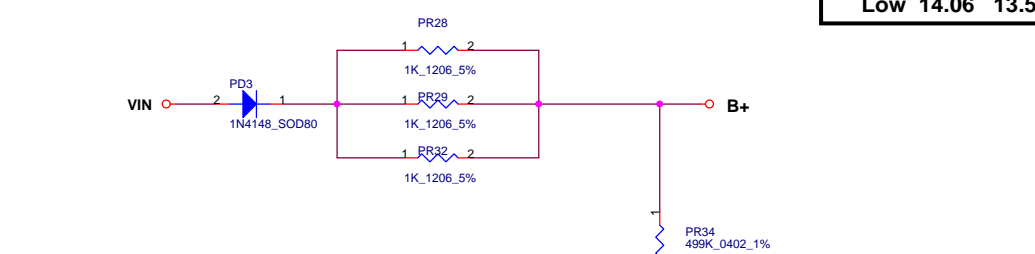


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<b>Compal Electronics, Inc.</b>		
Title Screws		
Size	Document Number	Rev
	Sakhir LA-2491	1.0
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Vin Detector			
High	14.57	14.01	13.46
Low	14.06	13.51	12.98

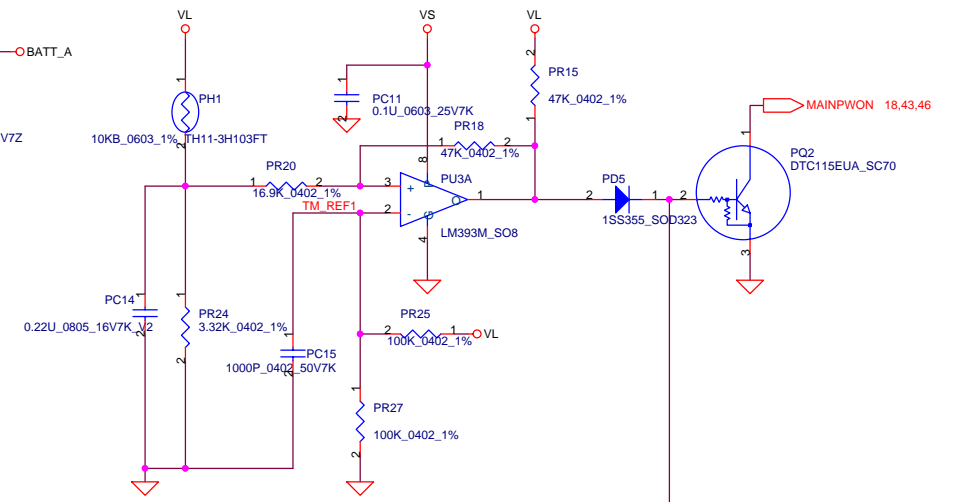
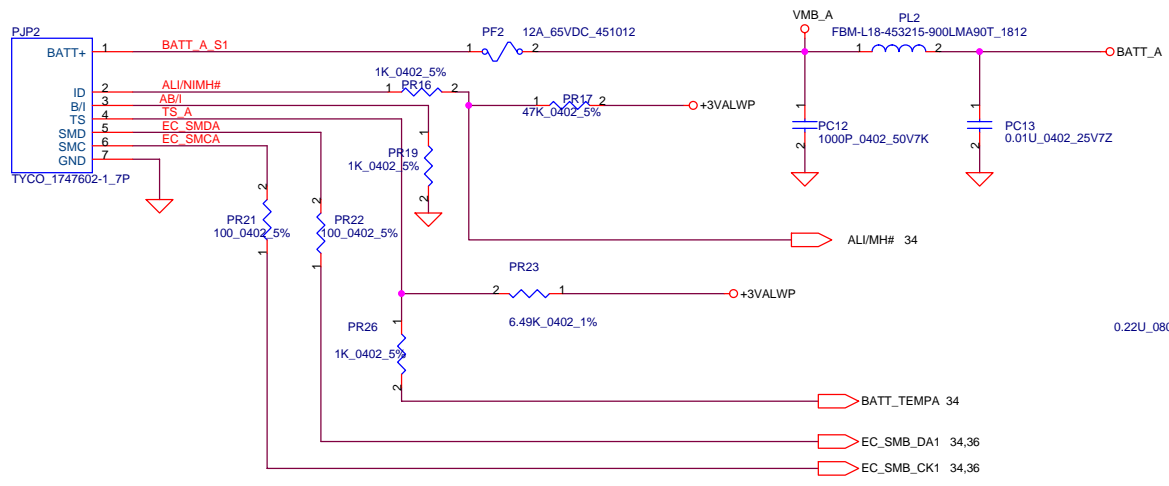


**Precharge detector**  
14.3V/13.18V for adapter

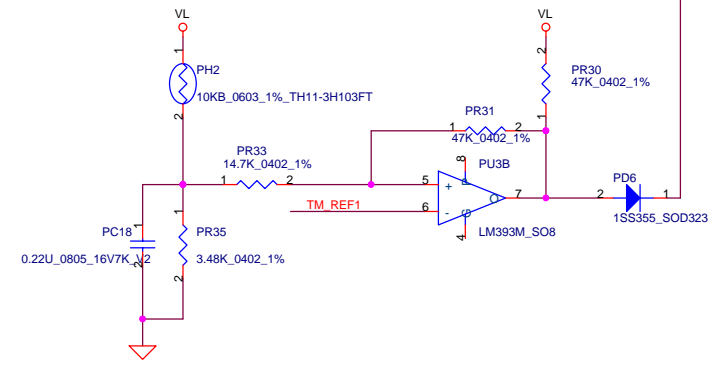
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Compal Electronics, Inc.			
Title <b>DCIN &amp; DETECTOR</b>			
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	<b>Sakhir LA-2491</b>	1.0	
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**PH1 under CPU botten side :**  
 CPU thermal protection at 84 degree C  
 Recovery at 45 degree C

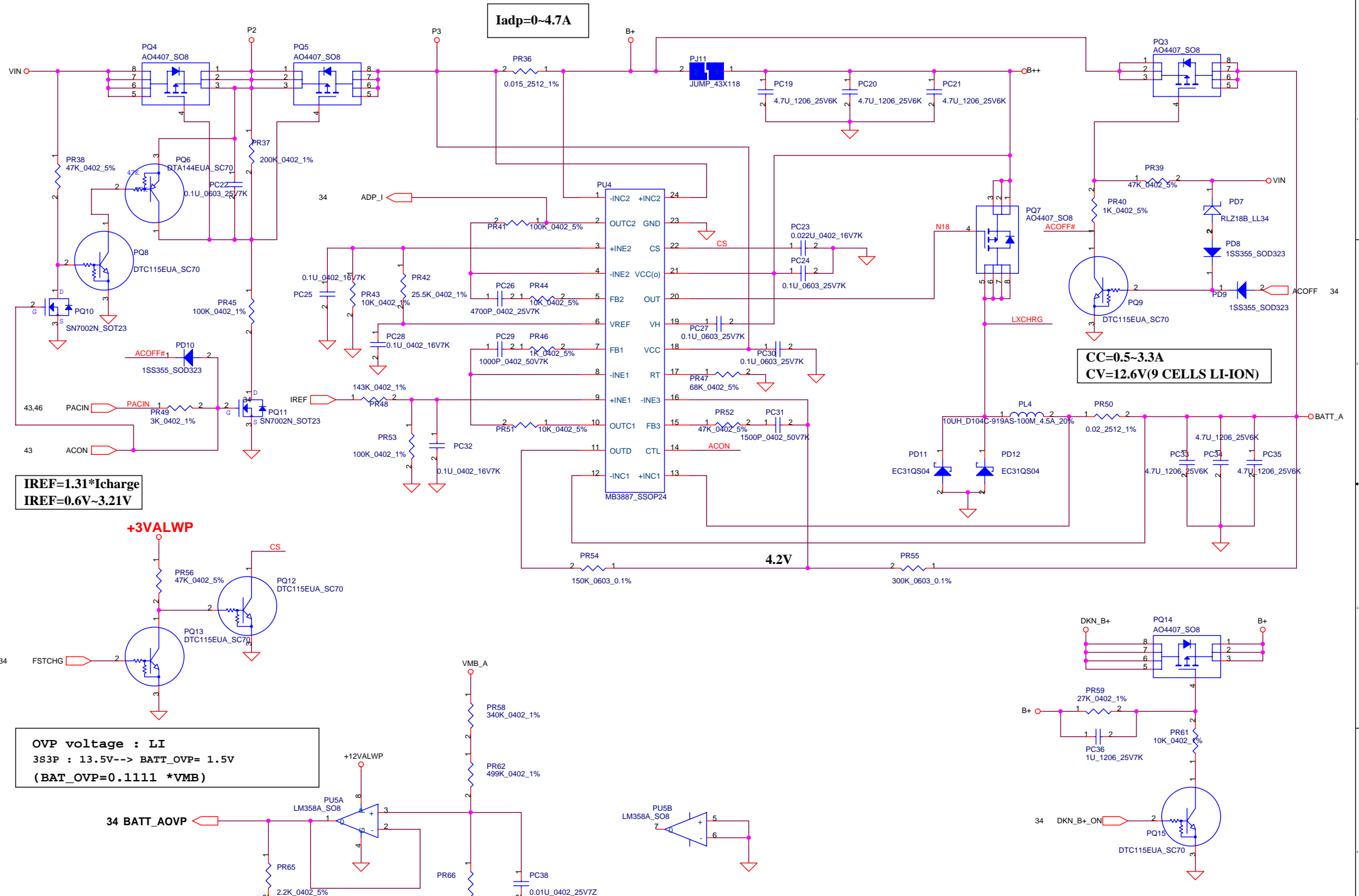


**PH2 near main Battery CONN :**  
 BAT. thermal protection at 79 degree C  
 Recovery at 45 degree C



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<b>Compal Electronics, Inc.</b>		
Title <b>BATTERY CONN / OTP</b>		
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**Iadp=0~4.7A**

**CC=0.5~3.3A**  
**CV=12.6V(9 CELLS LI-ION)**

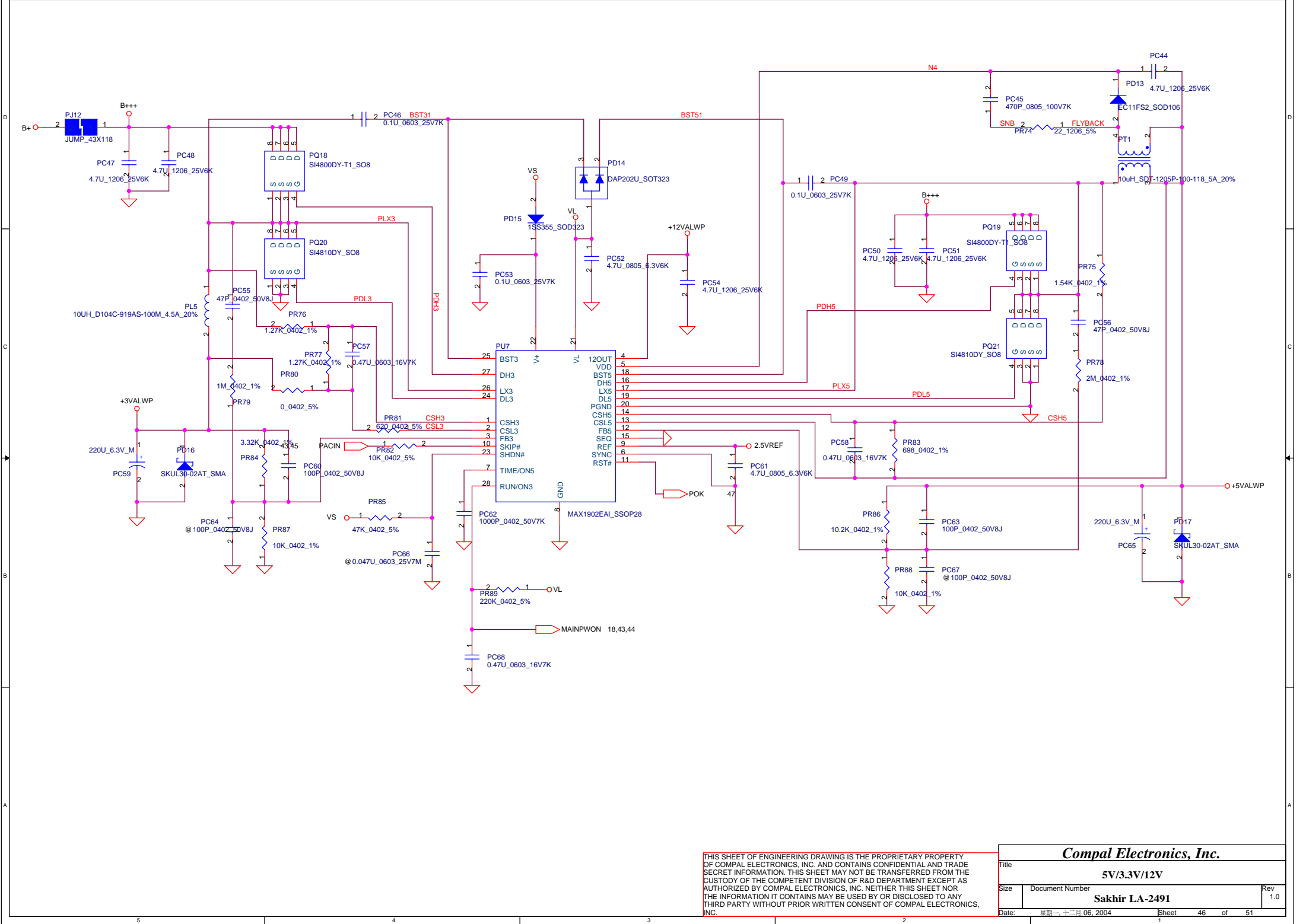
**IREF=1.31\*Icharge**  
**IREF=0.6V~3.21V**

**+3VALWP**

**OVP voltage : LI**  
**3S3P : 13.5V--> BATT\_OVP= 1.5V**  
**(BATT\_OVP=0.1111 \*VMB)**

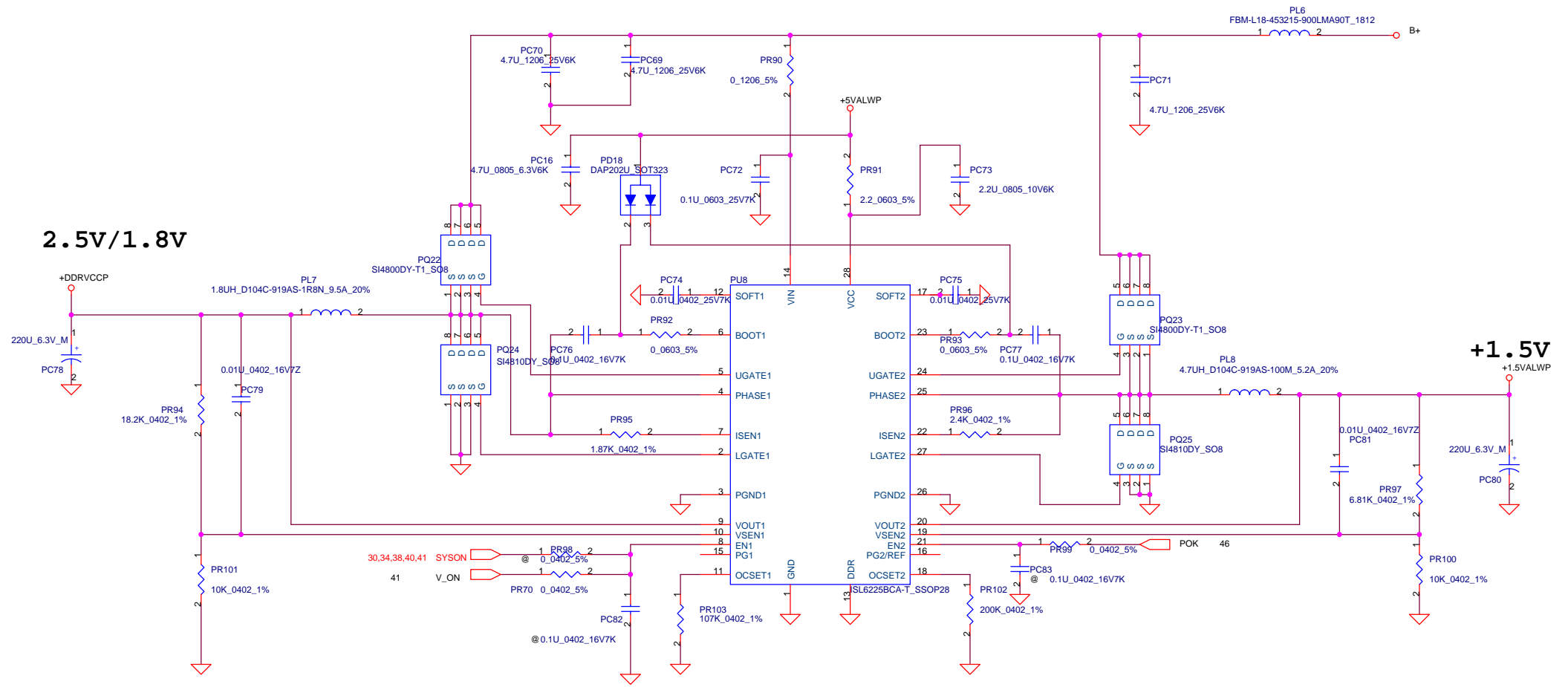
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<b>Compal Electronics, Inc.</b>		
<b>CHARGER</b>		
<b>Sakhir LA-2491</b>		
Date: 星期一, 十二月 06, 2004	Sheet 45 of 51	Rev 1.0

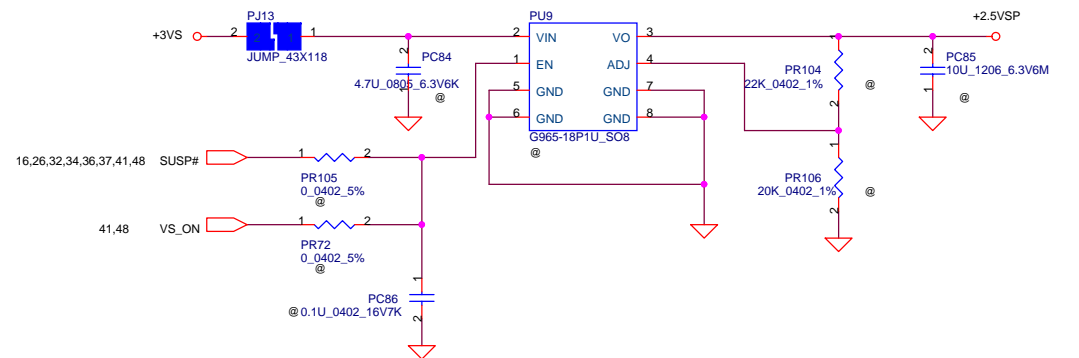


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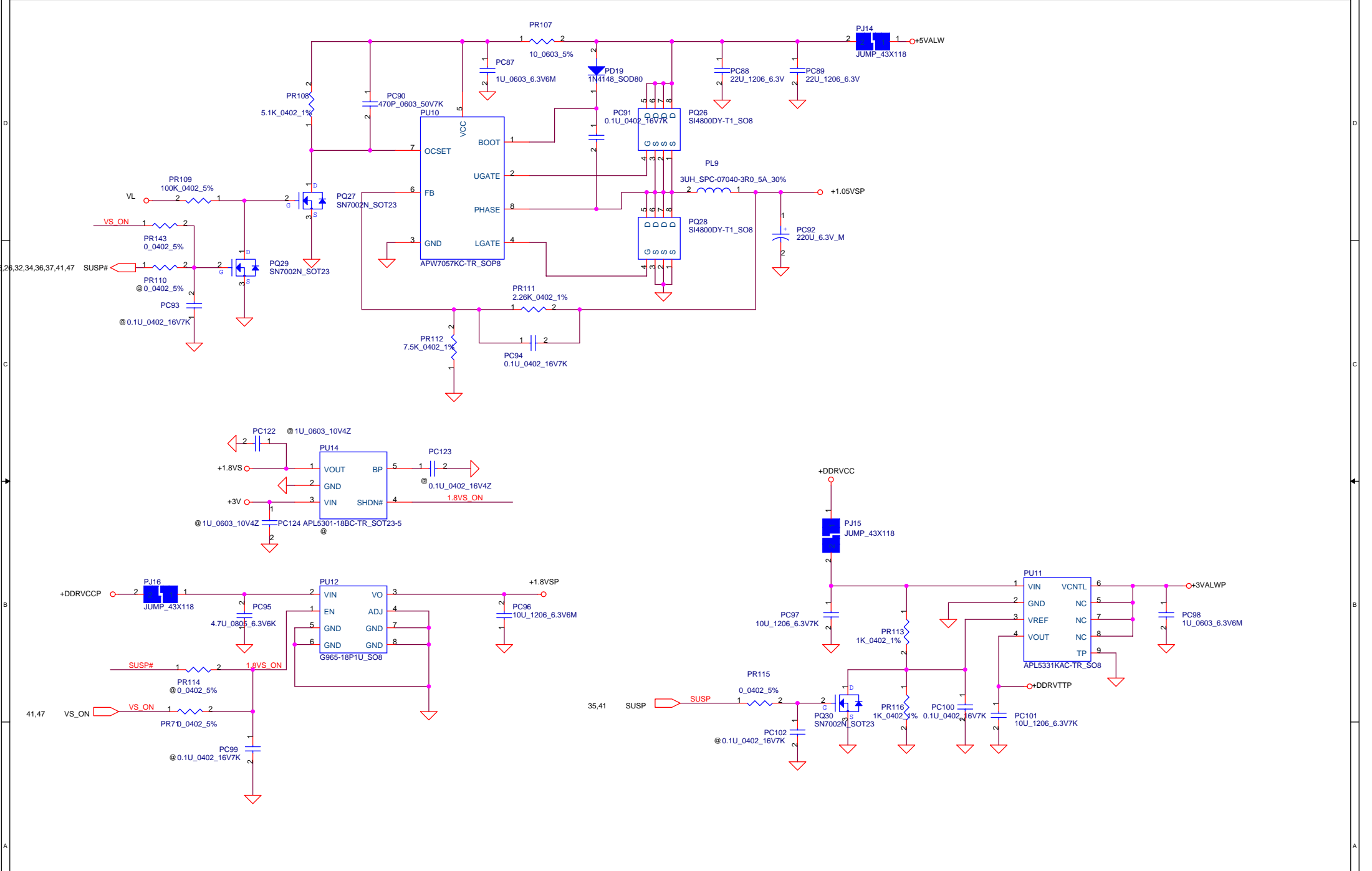
<b>Compal Electronics, Inc.</b>		
Title <b>5V/3.3V/12V</b>		
Size	Document Number <b>Sakhir LA-2491</b>	Rev 1.0
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	PR94	UNPOP
DDR I	18.2K_0402_1% (2.5V)	PU9, PC84, PR105, PR104, PR106, PC85
DDR II	10K_0402_1% (1.8V)	PU12, PC95, PR114, PC96



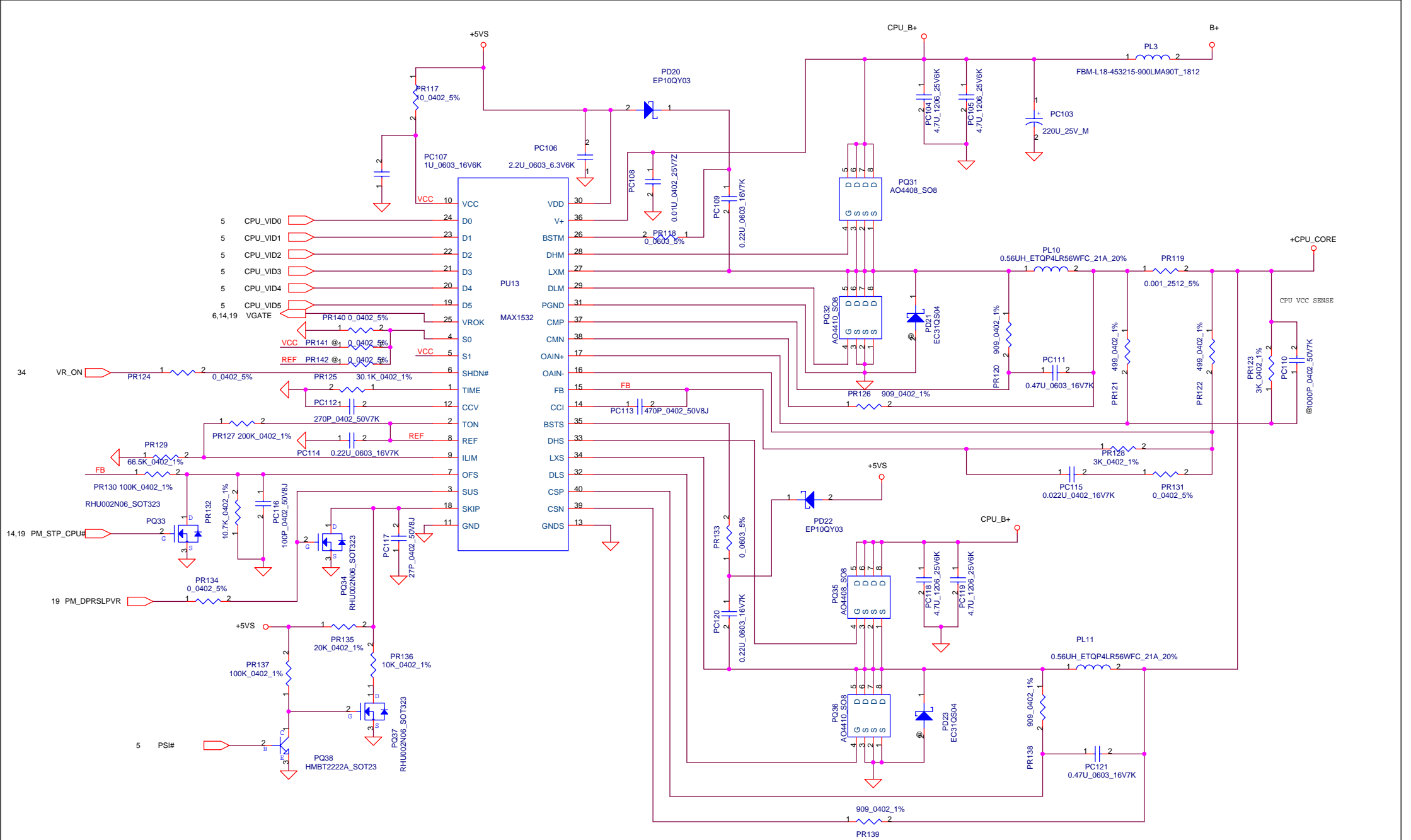
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<b>Compal Electronics, Inc.</b>		
Title <b>1.05V/1.8V/DDRVTT</b>		
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<b>Compal Electronics, Inc.</b>		
<b>CPU_CORE</b>		
Size	Document Number	Rev
	<b>Sakhir LA-2491</b>	1.0
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# EAT10 PIR List

\*\*\*\*\* Rev:0.2 PIR List 2004/08/10 Writer by Jason \*\*\*\*\*

P05:Add @ in R63  
Del @ in R56

P06:Del @ in R54  
Del JP9

P08:Q6, Q43, Q44 Horizontally  
"GMCH\_TXCLK-, GMCH\_TXCLK+" Swap

P12:+3VS change from JP25.194 to JP25.196

P15:Update U4 CIS lib

P16:Del JP9  
New add Q56

P21:New add R513  
New add X3  
New add C607

P22:New add R514, R534, @R535

P30:New add C639, C640  
Change U27 to ALC250D  
New add @R539, @R540, @R542, @Q59  
New add @R536, @R537, @R538, @R541, @Q58  
New add C608, C609, R522, R521, R526, C610, C611, C612, C641, X4  
New add @R523, @R524, @R525  
Del R295, R296, R310, R327, L20, @C311, C374

P33:New add R543, R544

P34:Del @ in R478  
New add R547, @R548, R549, R550

P35:Del CP2, CP3, CP4, CP5, CP6, CP7  
Modify JP14 Pin Define  
New add C613, C614, C615, C616, C617  
New add C618, C619, C620, C621, C622  
New add C623, C624, C625, C626, C627  
New add C628, C629, C630, C631, C632  
New add C633, C634, C635, C636

P36:Del @U42, @C608  
New add U43, U44, U45  
New add C637, C638  
New add R527, R528, R529

P37:Swap JP12.1, JP12.3  
Swap SW1.1, SW1.3

P38:Q52 change from 2N7002 to DTAL14  
New add R530, R531, R532, R533, Q57

\*\*\*\*\* Rev:0.3 PIR List 2004/10/26 Writer by Sam Tsai \*\*\*\*\*

P04:Add @ in R28 Intel Recommend

P06:Add @ in C441, C427  
D#I2JE9 C460 Change Value from 220U to 330U Power Team testing OK

P12:+3VS change from JP25.196 to JP25.194 Intel Recommend

P15:New add R570, R571 & R572 RGB without Docking  
New add L33 EMI  
Del D2 & D25 EMI

P16:Change U44 from 7404 to 74125 LCDVDD Soft-Start

P18:New add R573 Intel Recommend  
R439 Change Value from 180K to 20K Intel Recommend  
C271 Change Value from 0.1U to 1U Intel Recommend

P20:R214 Change Value from 1K to 10ohm Intel Recommend

P22:New add @R , @R& Q SWDJ testing

P24:New add R586 TI Recommend  
New add @R581

P25:New add R582, R583, @R584, R585, R588, R589 & @C685 TI Recommend

P27:R73 Change Value from 4.99K to 4.7K Marvlll Recommend

P31:R361 & R371 Change Value from 47K to 22K Design Change  
P33:New add R543, R544 Design Change  
P32:Modify C399 Net to SPKL+

P33:New add L34 EMI  
add@ in C647 ~ C662

P34:New add R587 Design Change

P35:New add JP32 & C671 Design Change  
New add C682 ~ C684 EMI  
JP13 reverse Design Change

P36:New add SWDJ testing

P37:SW1 change to 1BS003-1211L\_3P Design Change

P38:Q52.3 change from +3VALW to +3V Design Change  
Q57.3 change from +5VALW to +5VS  
Lid Switch IC Power change from JP16.26 +3VALW to JP16.27 RTCVREF  
New add C672 ~ C681 EMI

P39:New add R574 Design Change

P40:Del D11 Design Change

<b>Compal Electronics, Inc.</b>		
Title		
PIR		
Size	Document Number	Rev
	Sakhir LA-2491	1.0
Date:	星期一, 十二月 06, 2004	Sheet 50 of 51

